

### Overview

#### HPE ProLiant DL145 Gen11

Ready to Experience Exceptional Performance, Affordability, and Versatility with HPE's Latest Edge Computing Server Solution?

HPE ProLiant DL145 Gen11 server is a 2U, single processor, robust edge computing server designed to cater to the needs of Retail, Manufacturing, Telecommunications, and various other industries. It offers a compelling alternative to traditional servers with its sleek design, affordable pricing, and quiet operation.

Powered by the 4th Generation AMD® EPYC™ 8004 Zen4c architecture, this server provides up to 64 energy-efficient cores, PCIe Gen5 speed, and high-performance EDSFF storage. It can operate continuously in temperatures ranging up to 55°C and withstand high-dust and high-vibration environments. It is engineered for today's hybrid world, allowing enterprises to virtualize traditional IT applications to power their businesses and accelerate AI success.

#### Key Features

##### Get Robust Edge Processing Power with a Small Server Footprint

The HPE ProLiant DL145 Gen11 reduces the reliance on cloud infrastructure by tackling a variety of low-latency workloads with efficient processing powered by AMD Siena Processors. The server supports up to 64 cores and offers support for 3x single wide GPUs, customizing its performance for edge workloads while simultaneously delivering more energy efficiency through new EDSFF performance drives. Additionally, the HPE Integrated Lights Out and Compute Ops Management allow for ease of management in a variety of locations. The HPE ProLiant DL145 Gen11 small server footprint puts sustainability efforts top of mind for users.

##### Customized for Diverse Portfolio of Edge Computing Environments

The HPE ProLiant DL145 leverages a 2U form factor, providing better cooling operation, airflow, and quiet acoustics. Measuring approximately 15 inches wide and 16 inches deep, the HPE ProLiant DL145 Gen11 can be rack, wall, or desk mounted, providing flexibility for your unique business environment. Designed to accommodate a variety of environmental constraints, this server can handle up to 55 degree Celsius operating temperature and can withstand moderate to extreme shocks and vibration. In locations with heavy amounts of dust and debris, the HPE ProLiant DL145 Gen11's large air filter is able to filter out harmful airborne material, keeping your device running efficiently.

##### Keeping your Data and Property Safe with Enhanced Security Features

Hewlett Packard Enterprise cares about keeping your property and data safe, especially at the edge, where data and property is more vulnerable to attack. The HPE ProLiant DL145 Gen11 has the high-quality security features needed to ensure your peace of mind. Built on the Hewlett Packard Enterprise signature Silicon Root of Trust, Integrated Lights Out 6, iDevID, and Platform Certificates, you can be sure your data is being protected from outside threats. Chassis Intrusion detection with Bezel and Kensington locks keep your device safe from unwarranted theft or intrusions.

## Overview

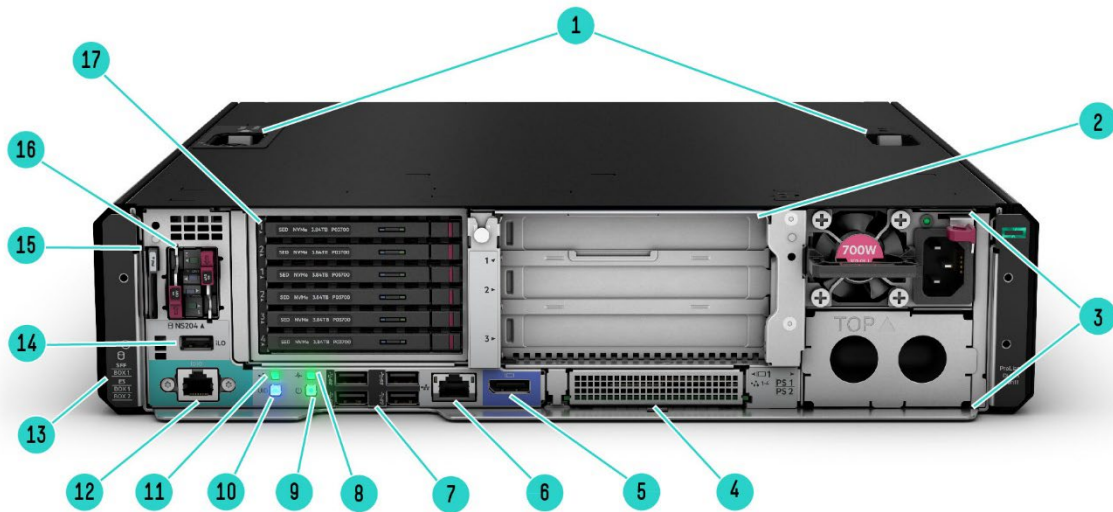


**HPE ProLiant DL145 Gen11 Server – Front View (Bezel)**

1. Bezel Filter



Overview

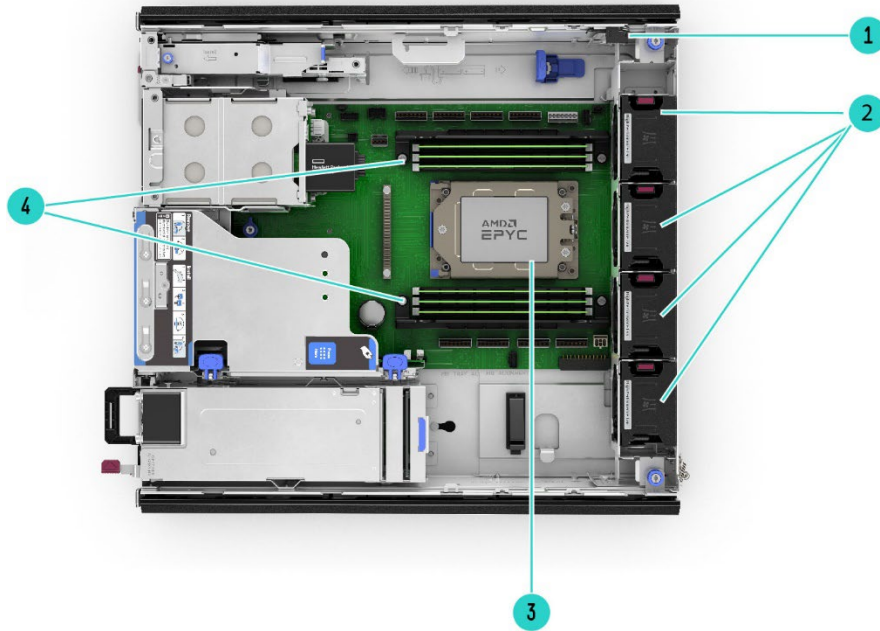


Front View

- |  |  |
|--|--|
| 1. Quick Removal Access Panel<br>Slot 1: PCIe 5.0 x16 Full Height Full Length (Optional)<br>Slot 2: PCIe 5.0 x16 Full Height Full Length (Optional)<br>Slot 3: PCIe 5.0 x16 Full Height Half Length Base Riser | 11. NIC Status LED   |
| 2. Flex-Slot Power Supply 1<br>Flex-Slot Power Supply 2 (Optional)   | 12. Optional: Serial Port  |
| 3. Slot 21 OCP 3.0 PCIe 5.0 x16  | 13. Drive Support Label  |
| 4. Display Port  | 14. iLO Service Port   |
| 5. iLO Management Port   | 15. Serial Number/iLO Information Pull Tab   |
| 6. USB 3.2 Gen1 Ports  | 16. Optional: NS204i-u Boot Device   |
| 7. Health LED  | 17. Drive Bays<br>Option 1: Up to 2SFF SATA/NVMe<br>Option 2: Up to 6EDSFF E3.S EC1 NVMe (shown) |
| 8. Power On/Standby Button and System Power LED  |  |
| 9. Unit ID Button/LED  |  |



## Overview

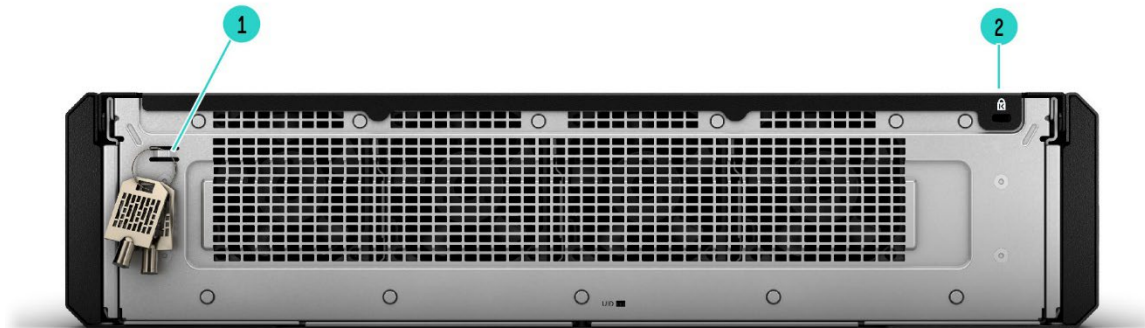


### Internal View

1. Chassis Intrusion Detection Switch
2. 4 Hot Pluggable 2U Standard Fans.  
Optional: 2U Performance Fans.
3. Processor is shown with 2U Heat Sink (Up to 1)
4. 6 DDR5 DIMM Slots



## Overview



### Rear View

1. Access Panel Keys
2. Kensington Lock

**Notes:** 4 Hot Pluggable 2U Standard Fans. Optional: 2U Performance Fans

### What's New

- Compact Size, 15 inch wide, 16 inch deep (without Bezel Filter), 20 inch (with Bezel Filter)
- Support for 8 to 64 cores and TDP rating of up to 200W
- **Hot-pluggable NS204i-u Boot Device**
- Up to 2 SFF or 6 EDSFF E3.S Drive support, up to 92.16TB Storage, support for Self Encrypting Drives
- DDR5, 4800MTs, 6 DIMM Slots, up to 768 GB memory capacity (using 128 GB DIMMs)
- 3x PCIe Gen 5 slots for GPU/Accelerator and other full-size cards
- Support for Nvidia L4
- 1x OCP 3.0 PCIe Gen 5 slot to support various Network Adapters
- Operating Temp support from -5° to 55° Celsius
- Bezel with large air filter for dust protection
- HPE's Silicon Root of Trust, iDevID, Platform Certificates, TPM 2.0
- Chassis Intrusion detection, Bezel lock, Kensington lock
- Support for Wall, Desk, and Rack mount



## Overview

- Up to two redundant AC or DC power supply unit
- iLO Standard with Intelligent Provisioning, HPE OneView Standard, HPE iLO Advanced, HPE iLO Advanced Premium Security Edition, and HPE OneView Advanced, HPE GreenLake for Compute Ops Management
- OpenBMC Capable through iLO6 Transfer of Ownership Process
- Designed to qualify for NEBS Level 3\*

**Notes:** \*Typical NEBS certification is 90 days post-production manufacture.

## Platform Information

### Form Factor

- 2U rack

### Chassis Types

- Front cabled chassis

### System Fans

- Standard Fans and Performance Fans

#### Notes:

- The DL145 Gen11 supports up to 4 fans with fan redundancy built in. One fan rotor failure will place the server in degraded mode but fully functional. Two fan rotor failures could provide a warning and imminent server shutdown.
  - Each Fan kit is designated to operate under different configurations. Please refer to the cooling option message in the unique option section for more information.
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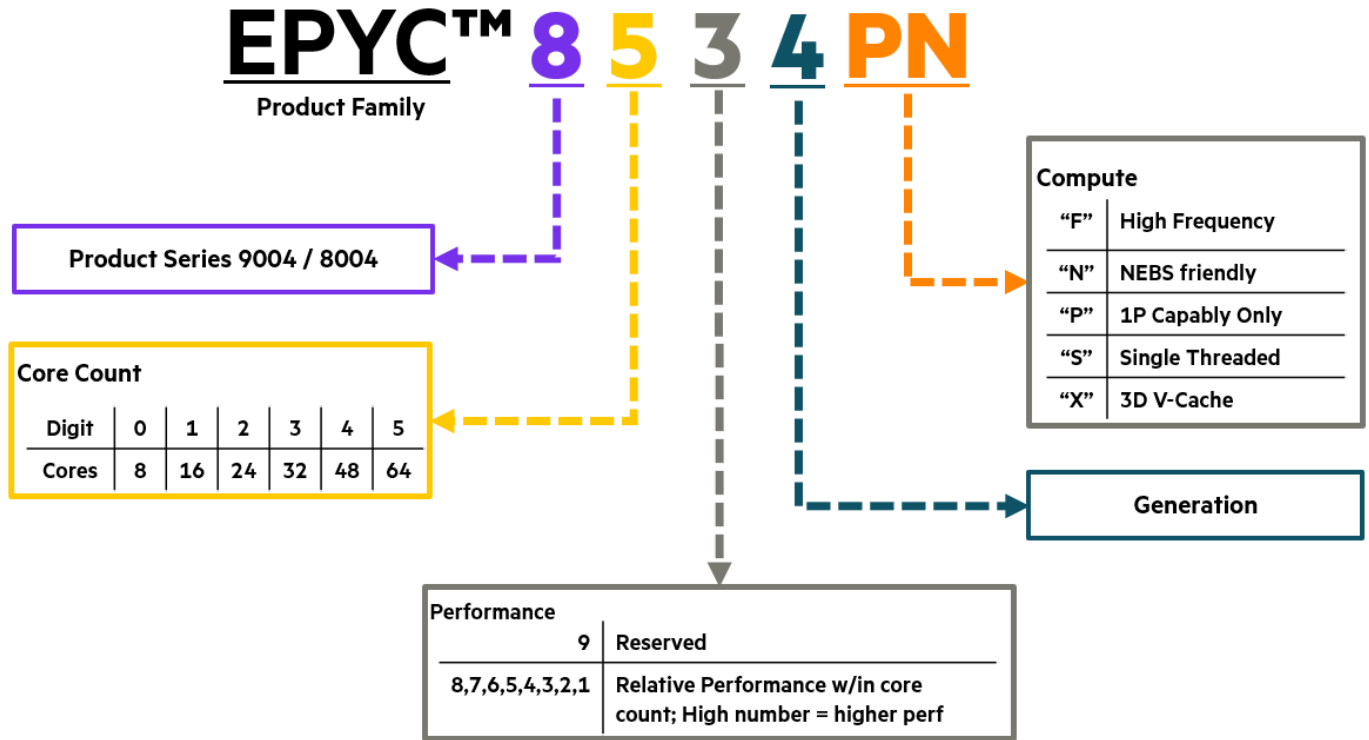


## Standard Features

**Processors** – One of the following, depending on the model.

**Notes:** For more information regarding AMD EPYC processors, please see the following:

<https://www.amd.com/en/processors/epyc-server-cpu-family>



EPYC Model	Cores	Base Frequency	Max Frequency	DDR5 Channels	Default TDP	L3 Cache (MB)	Memory
8534P	64	2.3	3.1	6	200W	128	4800 MT/s
8434P	48	2.5	3.1	6	200W	128	4800 MT/s
8324P	32	2.65	3	6	180W	128	4800 MT/s
8224P	24	2.55	3	6	160W	64	4800 MT/s
8124P	16	2.45	3	6	125W	64	4800 MT/s
8024P	8	2.4	3	6	90W	32	4800 MT/s
8534PN	64	2	3.1	6	175W	128	4800 MT/s
8434PN	48	2	3	6	155W	128	4800 MT/s
8324PN	32	2.05	3	6	130W	128	4800 MT/s
8224PN	24	2	3	6	120W	64	4800 MT/s
8124PN	16	2	3	6	100W	64	4800 MT/s
8024PN	8	2.05	3	6	80W	32	4800 MT/s

**Notes:**

- The wattage information indicates the processor's default cTDP (Configurable TDP)
- The processors with the "PN" suffix are NEBS Level 3 compliant



## Standard Features

### Chipset

No chipset – System on Chip (SoC) design.

### On System Management Chipset

HPE iLO 6 ASIC

**Notes:** Read and learn more in the [iLO QuickSpecs](#).

### Memory

<b>Type</b>	HPE DDR5 Smart Memory Registered (RDIMM)
<b>DIMM Slots Available</b>	6 6 DIMM slots per processor, 6 channels per processor, 1 DIMM per channel
<b>Maximum capacity (RDIMM)</b>	768 GB 6 x 128 GB RDIMM @ 4800 MT/s at 1 DPC

#### Notes:

- LRDIMM and Persistent Memory are not supported
- For additional information, please see the [HPE DDR5 Smart Memory QuickSpecs](#)
- For the Memory Population Rules and Guidelines with AMD EPYC 8004 series processors, see details here: <https://www.hpe.com/psnow/doc/a50007481enw>

### Memory Protection

#### Advanced ECC

Advanced ECC uses single-device data correction to detect and correct single and all multibit error that occurs within a single DRAM chip.

#### Online Spare

Memory online spare mode detects a rank that is degrading and switches operation to the spare rank.

**Notes:** For more information see our [Memory RAS feature technical whitepaper](#)

### Expansion Slots

Slots #	Technology	Bus Width	Connector Width	Slot Form Factor
1	PCIe 5.0	X16	X16	Full-height, Full-length slot
2	PCIe 5.0	X16	X16	Full-height, Full-length slot
3 (Default Slot)	PCIe 5.0	X16	X16	Full-height, half-length slot
Slot 21	PCIe 5.0	X16	X16	OCP 3.0

### Storage Devices

Maximum Storage		
	Capacity	Configuration
Hot Plug SFF SATA SSD	7.68	2 x 3.84TB
Hot Plug SFF NVMe U.3 SSD	30.72	2 x 15.36 TB
Hot Plug EDSFF E3.S 1T NVMe SSD	92.16	6 x 15.36 TB
M.2 NVMe SSD	960 GB	2 x 480 GB (shipped with optional HPE NS204i-u Gen11 NVMe Hot Plug Boot Optimized Storage Device)





## Standard Features

### Storage Controllers

#### Boot Device

- HPE NS204i-u Gen11 NVMe Hot Plug Boot Optimized Storage Device
- HPE ProLiant DL145 Gen11 NS204i-u Enablement Kit

#### Notes:

- Includes Hot Plug capable dual 480GB NVMe M.2 automatically configured into a RAID 1 Mirror
- Externally accessible but does not occupy a PCIe slot
- For additional information, please see the [HPE OS Boot Device QuickSpecs](#)

#### MR Gen11 Storage Controller

- HPE MR216i-p Gen11 x16 Lanes without Cache PCI SPDM Plug-in Storage Controller
- HPE MR408i-o Gen11 x8 Lanes 4GB Cache OCP SPDM Storage Controller
- HPE MR416i-p Gen11 x16 Lanes 8GB Cache PCI SPDM Plug-in Storage Controller

#### [HPE Compute MR Gen11 Controllers QuickSpecs](#)

#### MR Gen11 Storage Controller Cables

- HPE ProLiant DL145 Gen11 MR216i-p 2SFF Storage Controller Cable Kit
- HPE ProLiant DL145 Gen11 MR408i-o 4EDSFF Storage Controller Cable Kit
- HPE ProLiant DL145 Gen11 MR216i-p/MR416i-p 4EDSFF Storage Controller Cable Kit
- HPE ProLiant DL145 Gen11 MR216i-p/MR416i-p 6EDSFF Storage Controller Cable Kit

## Front Interfaces

<b>Serial Port</b>	1 x RJ45 optional
<b>Display Port</b>	1 x Display
<b>Network Port</b>	None. Choice of OCP or stand-up card, supporting a wide arrange of NIC adapters
<b>HPE iLO Remote Mgmt Port</b>	1 x 1Gb Dedicated
<b>Front iLO Service Port</b>	1 x standard
<b>USB 3.2 Gen1</b>	4 x standard

## Graphics

### Integrated Video Standard

- Video modes up to 1920 x 1200 (24 bpp)
- 16MB Video Memory

### HPE iLO 6 on system management memory

- 64 MB Flash
- 8 Gbit DDR 4 with ECC protection



## Standard Features

### Bezel Filter

HPE ProLiant DL145 Gen11 FIO Bezel Filter Kit

**Notes:**

- The Bezel filter kit includes one bezel and one air filter
- Air filter is a consumable part and is not covered under HPE warranty
- HPE highly recommends replacing the air filter every three to six months. For detailed maintenance, please refer to the HPE ProLiant DL145 [User Guide](#) and [Maintenance Service Guide](#)
- Additional replacement air filters are orderable

HPE ProLiant DL145 Gen11 Filter Replacement Kit

**Notes:** Includes two individual air filters

### Mounting Options

HPE ProLiant DL145 Gen11 Desk/Wall Mounting Kit

**Notes:** The Desk/Wall Mounting Kit allows system installation on a wall/desk instead of a rack

HPE ProLiant DL145 Gen11 Rack Enablement Kit

**Notes:**

- The rack enablement kit allows system installation in a 4-post rack
- Rack enablement kit can be used with all HPE 4-post racks
- 2-post rack installation support is coming soon

### Power Supply

- HPE ProLiant DL110 700W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit  
**Notes:** Available in 94% efficiency
- HPE ProLiant DL110 700W Flex Slot Platinum Hot Plug Low Halogen AC Power Supply Kit  
**Notes:** Available in 94% efficiency
- HPE ProLiant DL110 900W-1000W Titanium Hot Plug AC Power Supply Kit  
**Notes:** Available in 96% efficiency

All power supply kits have reverse airflow to support front cabled design of DL145

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

To review the power requirements for your selected system, please use the [HPE Power Advisor Tool](#).

For information on power specifications and technical content visit [HPE Server power supplies](#).

### Operating Systems and Virtualization Software Support for HPE Servers

HPE servers are designed for seamless integration with partner Operating Systems and Virtualization Software. By collaborating closely with our partners, we ensure that their products are optimized, certified, and fully supported within your HPE server environment.

Access the certified and supported servers for each of the OS and Virtualization software: [HPE Servers Support & Certification](#)

### Matrices

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## Standard Features

### Industry Standard Compliance

- ACPI 6.1 Compliant
- PCIe 5.0 Compliant
- WOL Support
- Microsoft® Logo certifications
- PXE Support
- VGA/Display Port
- USB 3.2 Gen1 Compliant
- USB 2.0 Compliant
- Energy Star 4.0
- SMBIOS 3.1
- UEFI 2.7
- UEFI Class 3
- Redfish API
- IPMI 2.0
- Secure Digital 2.0
- Advanced Encryption Standard (AES)
- Triple Data Encryption Standard (3DES)
- SNMP v3
- TLS 1.2
- DMTF Systems Management Architecture for Server Hardware Command Line Protocol (SMASH CLP)
- Active Directory v1.0
- UEFI (Unified Extensible Firmware Interface Forum)
- APML 1.0
- ASHRAE A3/A4
- UL 62368-1
- NEBS (Post launch)

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### Embedded Management

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

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).

#### Intelligent Provisioning

Hassle-free server and OS provisioning for 1 or more servers with Intelligent Provisioning.

Learn more at [https://support.hpe.com/hpesc/public/docDisplay?docId=c04465280&docLocale=en\\_US](https://support.hpe.com/hpesc/public/docDisplay?docId=c04465280&docLocale=en_US)

#### iLO RESTful API

iLO RESTful API is DMTF Redfish API implementation and offers simplified server management automation such as configuration and maintenance tasks based on modern industry standards. Learn more at <http://www.hpe.com/info/restfulapi>.

#### OpenBMC Support

OpenBMC Capable through iLO6 Transfer of Ownership Process.

Learn more at [OpenBMC Support](#)

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## Standard Features

### HPE Server UEFI

Unified Extensible Firmware Interface (UEFI) is an industry standard that provides better manageability and more secure configuration than the legacy ROM while interacting with your server at boot time. HPE ProLiant Gen11 servers have a UEFI Class 3 implementation.

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

- Secure Boot and Secure Start enable enhanced security
- Operating system specific functionality
- Support for > 2.2 TB (using GPT) boot drives
- USB 3.1 Gen1 Stack
- Embedded UEFI Shell
- Mass Configuration Deployment Tool using iLO RESTful API that is Redfish API Conformant
- PXE boot support for IPv6 networks
- Workload Profiles for simple performance optimization
- TPM 2.0 Support

#### UEFI Boot Mode only

- NVMe Boot Support
- iSCSI Software Initiator Support
- HTTP/HTTPS Boot support as a PXE alternative
- Boot support for option cards that only support a UEFI option ROM

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

### Server Utilities

#### Active Health System

The HPE Active Health System (AHS) is an essential component of the iLO management portfolio that provides continuous, proactive health monitoring of HPE servers. Learn more at <http://www.hpe.com/servers/ahs>.

#### Smart Update

Keep your servers up to date with the HPE Smart Update solution by using Smart Update Manager (SUM) to optimize the firmware and driver updates of the Service Pack for ProLiant (SPP). Learn more at <https://www.hpe.com/us/en/servers/smart-update.html>

#### RESTful Interface Tool

RESTful Interface tool (iLOREST) is a single scripting tool to provision using iLO RESTful API to discover and deploy servers at scale. Learn more at <http://www.hpe.com/info/resttool>.

#### Scripting Tools

Provision one to many servers using your own scripts to discover and deploy with Scripting Tool (STK) for Windows and Linux or Scripting Tools for Windows PowerShell. Learn more at <http://www.hpe.com/servers/powershell>.

#### HPE OneView Standard

HPE OneView is an on-premises, multi-generational server monitoring, and management solution. HPE OneView Standard can be used for inventory, health monitoring, alerting, and reporting without additional fees. Customers can upgrade their management experience with an HPE OneView Advanced license, all provided by the same tool. Learn more at <http://www.hpe.com/info/oneview>.



## Standard Features

### Server Management

#### HPE iLO Advanced

HPE iLO Advanced licenses offer smart remote functionality without compromise, for all HPE ProLiant servers. The license includes the fully integrated remote console, virtual keyboard, video, and mouse (KVM), multi-user collaboration, console record and replay, and GUI-based and scripted virtual media and virtual folders. You can also activate the enhanced security and power management functionality.

#### HPE OneView Advanced

HPE OneView Advanced offers a sophisticated level of automation to infrastructure management by taking a template driven approach to provisioning, updating, and integrating compute, storage, and networking infrastructure. It builds upon the base features of HPE OneView Standard and provides full-featured licenses which can be purchased for managing multiple HPE server generations. To learn more visit <http://www.hpe.com/info/oneview>.

#### HPE GreenLake for Compute Ops Management

HPE is intelligently transforming compute management with an intuitive cloud operating experience through HPE GreenLake cloud platform to streamline and secure operations from edge-to-cloud. Automated key lifecycle tasks, for onboarding, updating, managing, and monitoring HPE servers, brings agility and greater efficiencies to wherever compute devices reside via a unified single browser-based interface. Manage single locations or multiple, distributed sites. Keep tens to thousands of servers secure with batch policy controls and automated updates.

Compute Ops Management is cloud-native software that is continually updated with new services, features, patches, and fixes. The management application resides in the HPE GreenLake cloud platform (access via <https://console.greenlake.hpe.com>) and leverages the HPE GreenLake architecture, security, and unified operations.

A 3-year subscription to HPE GreenLake for Compute Ops Management is added by default when ordering an HPE ProLiant Gen11 rack, tower, or micro server.

For more information, visit the HPE GreenLake for Compute Ops Management QuickSpecs:

<https://www.hpe.com/psnow/doc/a50004263enw>

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## Security

- UEFI Secure Boot and Secure Start support
  - Immutable Silicon Root of Trust
  - FIPS 140-3 validation (iLO 6 certification in progress)
  - Common Criteria certification (iLO 6 certification in progress)
  - Configurable for PCI DSS compliance
  - Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser
  - Support for Commercial National Security Algorithms (CNSA)
  - Tamper-free updates – components digitally signed and verified
  - Secure Recovery – recover critical firmware to a known good state on detection of compromised firmware
  - Ability to rollback firmware
  - Secure erase of NAND/User data
  - Chassis Intrusion detection
  - TPM (Trusted Platform Module) 2.0 option
  - Bezel Locking Kit option
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## Standard Features

### Warranty

This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of HPE Authorized Channel Partners resellers. Hardware diagnostic support and repair are available for three years from the date of purchase. Support for software and initial setup is available for 90 days (about 3 months) from the date of purchase. Enhancements to warranty services are available through HPE Services 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, and 3-Year Onsite support with next business day response. Warranty repairs may be done through Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Mandatory CSR parts are designed for easy replacement. A travel and labor charge will result when customers decline to replace a Mandatory CSR part; 2) Optional CSR parts are also designed for easy replacement but may involve added complexity. Customers may choose to have Hewlett Packard Enterprise replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at:

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

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## Optional Features

### Rack and Power Infrastructure

The story may end with servers, but it starts with the foundation that makes compute go – and business grow. We have reinvented our entire portfolio of rack and power products to make IT infrastructure more secure, more practical, and more efficient. In other words, we have created a stronger, smarter, and simpler infrastructure to help you get the most out of your IT equipment. As an industry leader, Hewlett Packard Enterprise is uniquely positioned to address the key concerns of power, cooling, cable management, and system access.

HPE G2 Advanced and Enterprise Racks are perfect for the server room or today's modern data center with enhanced airflow and thermal management, flexible cable management, and a 10-year Warranty to support higher-density computing.

HPE G2 PDUs offer reliable power in flexible form factors that operate at temperatures up to 60°C, include color-coded outlets and load segments, and a low-profile design for optimal access to the rack and support for dense rack environments.

HPE Uninterruptible Power Systems are cost-effective power protection for any type of workload. Some UPSs include options for remote management and extended runtime modules, so your critical dense data center is covered in power outages.

HPE KVM Solutions include a console and switches designed to work with your server and IT equipment reliably. We have got a cost-effective KVM switch for your first rack and multiple connection IP switches with remote management and security capabilities to keep your data center rack up and running.

Learn more about HPE Racks, KVM, PDUs, and UPSs at [HPE Rack and Power Infrastructure](#).

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### One Config Simple (OCS/SCE)

OCS/SCE is a guided self-service tool to help sales and non-technical people provide customers with initial configurations in 3 to 5 minutes. You may then send the configuration on for configuration help or use it in your existing ordering processes. If you require "custom" rack configuration or configuration for products not available in SCE, please contact Hewlett Packard Enterprise Customer Business Center or an Authorized Partner for assistance. <https://h22174.www2.hpe.com/SimplifiedConfig/Welcome>

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## Service and Support

### HPE Services

No matter where you are in your digital transformation journey, you can count on HPE Services to deliver the expertise you need when, where and how you need it. From planning to deployment, ongoing operations and beyond, our experts can help you realize your digital ambitions.

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

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### Consulting Services

No matter where you are in your journey to hybrid cloud, experts can help you map out your next steps. From determining what workloads should live where, to handling governance and compliance, to managing costs, our experts can help you optimize your operations.

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

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### HPE Managed Services

HPE runs your IT operations, providing 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.

[HPE Managed Services | HPE](#)

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### Operational services

Optimize your entire IT environment and drive innovation. Manage day-to-day IT operational tasks while freeing up valuable time and resources. Meet service-level targets and business objectives with features designed to drive better business outcomes.

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

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### HPE Complete Care Service

HPE Complete Care Service is a modular, edge-to-cloud IT environment service designed to help optimize your entire IT environment and achieve agreed upon IT outcomes and business goals through a personalized experience. All delivered by an assigned team of HPE Services experts. HPE Complete Care Service 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/complecare>

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### HPE Tech Care Service

HPE Tech Care Service is the operational support service experience for HPE products. The service 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 Tech Care Service delivers a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Tech Care Service 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>

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## Service and Support

### HPE Lifecycle Services

HPE Lifecycle Services provide a variety of options to help maintain your HPE systems and solutions at all stages of the product lifecycle. A few popular examples include:

- Lifecycle Install and Startup Services: Various levels for physical installation and power on, remote access setup, installation and startup, and enhanced installation services with the operating system.
- HPE Firmware Update Analysis Service: Recommendations for firmware revision levels for selected HPE products, taking into account the relevant revision dependencies within your IT environment.
- HPE Firmware Update Implementation Service: Implementation of firmware updates for selected HPE server, storage, and solution products, taking into account the relevant revision dependencies within your IT environment.
- Implementation assistance services: Highly trained technical service specialists to assist you with a variety of activities, ranging from design, implementation, and platform deployment to consolidation, migration, project management, and onsite technical forums.
- HPE Service Credits: Access to prepaid services for flexibility to choose from a variety of specialized service activities, including assessments, performance maintenance reviews, firmware management, professional services, and operational best practices.

**Notes:** To review the list of Lifecycle Services available for your product go to:

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

For a list of the most frequently purchased services using service credits, see the [HPE Service Credits Menu](#)

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### Other Related Services from HPE Services:

#### HPE Education Services

Training and certification designed for IT and business professionals across all industries. Broad catalogue of course offerings to expand skills and proficiencies in topics ranging from cloud and cybersecurity to AI and DevOps. Create learning paths to expand proficiency in a specific subject. Schedule training in a way that works best for your business with flexible continuous learning options.

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

#### Defective Media Retention

An option available with HPE Complete Care Service and HPE Tech Care Service and applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

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

#### Parts and Materials

HPE 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.

#### How to Purchase Services

Services are sold by Hewlett Packard Enterprise 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 services at <https://ssc.hpe.com/portal/site/ssc/>



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## Service and Support

### AI Powered and Digitally Enabled Support Experience

Achieve faster time to resolution with access to product-specific resources and expertise through a digital and data driven customer experience

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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 an HPE approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.

- Factory Integrated Models must start with a CTO Server.
- FIO indicates that this option is only available as a factory installable option.
- Some options may not be integrated at the factory. Contact your local sales representative for additional information.

For NEBS Level 3 and ETSI Certified DL145 configurations, please see the Carrier Grade Supplement

### Step 1: Acoustics

HPE ProLiant DL145 supports two acoustics mode, achieved by closely monitoring components to ensure they operate within the available cooling capacity.

Please select ONE acoustics model

Range: 45 to 49dBA at 23°C ± 2°C	HPE ProLiant DL145 Gen11 Mode 1 Optimized Acoustics FIO Configuration	P72891-B21
Range: 50 to 55dBA at 23°C ± 2°C	HPE ProLiant DL145 Gen11 Mode 2 Optimized Acoustics FIO Configuration	P73006-B21

#### Notes:

- The configurator will limit configuration choices to ensure the acoustic target is met
- Sound pressure levels of the acoustic mode are declared while the system is operating normally with an ambient temperature not exceeding 25°C. An increase in the system's operating ambient temperature may result in higher fan speed and increased noise emission.
- If no acoustic mode is selected, then acoustic mode will be disabled.

The following table lists the options that are supported in the acoustic modes.

**Notes:** Options listed as 'No Support' in the below table often generate excessive heat, when stressed, thereby increasing fan speed and system noise. However, if the option is lightly stressed, quieter operation might be achievable.

#### Processor:

Description	SKU	Acoustic M1 (45 to 49dBA)	Acoustic M2 (50 to 55dBA)
AMD EPYC 8024P 2.4GHz 8-core 90W Processor for HPE	P69258-B21	Support	Support
AMD EPYC 8124P 2.45GHz 16-core 125W Processor for HPE	P69259-B21	Support	Support
AMD EPYC 8224P 2.55GHz 24-core 160W Processor for HPE	P69260-B21	Support	Support
AMD EPYC 8324P 2.65GHz 32-core 180W Processor for HPE	P69261-B21	No support	Support
AMD EPYC 8434P 2.5GHz 48-core 200W Processor for HPE	P69262-B21	No support	No support
AMD EPYC 8534P 2.3GHz 64-core 200W Processor for HPE	P69263-B21	No support	No support
AMD EPYC 8024PN 2.05GHz 8-core 75W Processor for HPE	P71859-B21	Support	Support
AMD EPYC 8124PN 2GHz 16-core 100W Processor for HPE	P71862-B21	Support	Support
AMD EPYC 8224PN 2.05GHz 24-core 115W Processor for HPE	P71865-B21	Support	Support
AMD EPYC 8324PN 2.05GHz 32-core 130W Processor for HPE	P71868-B21	Support	Support
AMD EPYC 8434PN 2GHz 48-core 150W Processor for HPE	P71871-B21	Support	Support
AMD EPYC 8534PN 2.05GHz 64-core 175W Processor for HPE	P71874-B21	No support	Support



## Configuration Information

### Memory:

Description	SKU	Acoustic M1 (45 to 49dBA)	Acoustic M2 (50 to 55dBA)
HPE 16GB (1x16GB) Single Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P50309-B21	Support	Support
HPE 32GB (1x32GB) Dual Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P50311-B21	Support	Support
HPE 64GB (1x64GB) Dual Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P50312-B21	Support	Support
HPE 96GB (1x64GB) Dual Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P66676-B21	No support	Support
HPE 128GB (1x128GB) Quad Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart Memory Kit	P69982-B21	No support	Support

### GPU:

Description	SKU	Acoustic M1 (45 to 49dBA)	Acoustic M2 (50 to 55dBA)
NVIDIA L4 24GB PCIe Accelerator for HPE	S0K89C	No support	Support* (QTY 1, Limited to location – Slot 2 & 3)

### NIC:

Description	SKU	Acoustic M1 (45 to 49dBA)	Acoustic M2 (50 to 55dBA)
BCM 5719 1Gb 4p BASE-T Adptr	P51178-B21	Support	Support
BCM 57416 10GbE 2p BASE-T Adptr	P26253-B21	Support	Support
BCM 57412 10GbE 2p SFP+ Adptr	P26259-B21	Support	Support
BCM 57414 10/25GbE 2p SFP28 Adptr	P26262-B21	Support	Support
BCM 57504 10/25GbE 4p SFP28 Adptr	P26264-B21	Support	Support
INT E810 10/25GbE 2p SFP28 Adptr	P08443-B21	Support	Support
MLX MCX631102 10/25GbE 2p SFP28 Adptr	P42044-B21	Support	Support
Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	P08458-B21	Support	Support
INT I350 1GbE 4p BASE-T OCP3 Adptr	P08449-B21	Support	Support
BCM 5719 1Gb 4p BASE-T OCP Adptr	P51181-B21	Support	Support
BCM 57412 10GbE 2p SFP+ OCP3 Adptr	P26256-B21	Support	Support
BCM 57416 10GbE 2p BASE-T OCP3 Adptr	P10097-B21	Support	Support
BCM 57414 10/25GbE 2p SFP28 OCP3 Adptr	P10115-B21	Support	Support
BCM 57504 10/25GbE 4p SFP28 OCP3 Adptr	P26269-B21	Support	Support
INT E810 10/25GbE 2p SFP28 OCP3 Adptr	P10106-B21	Support	Support
MLX MCX6314 10/25GbE 2p SFP28 OCP3 Adptr	P42041-B21	Support	Support

### Storage Controller:

Description	SKU	Acoustic M1 (45 to 49dBA)	Acoustic M2 (50 to 55dBA)
HPE NS204i-u Gen11 NVMe Hot Plug Boot Optimized Storage Device	P48183-B21	Support	Support



## Configuration Information

HPE MR216i-p Gen11 x16 Lanes without Cache PCI SPDM Plug-in Storage Controller	P47785-B21	Support	Support
HPE MR416i-p Gen11 x16 Lanes 8GB Cache PCI SPDM Plug-in Storage Controller	P47777-B21	Support	Support
HPE MR408i-o Gen11 x8 Lanes 4GB Cache OCP SPDM Storage Controller	P58335-B21	Support	Support

### Storage – SFF:

Type	Description	SKU	Acoustic M1 (45 to 49dBA)	Acoustic M2 (50 to 55dBA)
SFF SATA	HPE 480GB SATA RI SFF BC MV SSD	P40497-B21	Support	Support
	HPE 960GB SATA RI SFF BC MV SSD	P40498-B21	Support	Support
	HPE 1.92TB SATA RI SFF BC MV SSD	P40499-B21	Support	Support
	HPE 3.84TB SATA RI SFF BC MV SSD	P40500-B21	Support	Support
	HPE 480GB SATA MU SFF BC MV SSD	P40502-B21	Support	Support
	HPE 960GB SATA MU SFF BC MV SSD	P40503-B21	Support	Support
	HPE 1.92TB SATA MU SFF BC MV SSD	P40504-B21	Support	Support
	HPE 480GB SATA RI SFF BC SED 5400P SSD	P58236-B21	Support	Support
SFF NVME	HPE 960GB SATA MU SFF BC SED 5400M SSD	P58244-B21	Support	Support
	HPE 960GB NVMe RI SFF BC U.3ST MV SPDM SSD	P64842-B21	No support	Support
	HPE 1.92TB NVMe RI SFF BC U.3ST MV SPDM SSD	P64844-B21	No support	No support
	HPE 3.84TB NVMe RI SFF BC U.3ST MV SPDM SSD	P64846-B21	No support	No support
	HPE 7.68TB NVMe RI SFF BC U.3ST MV SPDM SSD	P64848-B21	No support	No support
	HPE 15.36TB NVMe RI BC U.3ST SPDM MV SSD	P69255-B21	No support	No support
	HPE 800GB NVMe MU SFF BC U.3ST MV SPDM SSD	P64999-B21	No support	Support
	HPE 1.6TB NVMe MU SFF BC U.3ST MV SPDM SSD	P65007-B21	No support	No support
	HPE 3.2TB NVMe MU SFF BC U.3ST MV SPDM SSD	P65015-B21	No support	No support
	HPE 6.4TB NVMe MU SFF BC U.3ST MV SPDM SSD	P65023-B21	No support	No support



## Configuration Information

### Storage – EDSFF:

Type	Description	SKU	Acoustic	Acoustic	Acoustic	Acoustic
			M1 (45 to 49dBA) With Controller	M2 (50 to 55dBA)	M1 (45 to 49dBA) *Direct Attach	M2 (50 to 55dBA)
EDSFF NVME	HPE 3.84TB NVMe Gen4 Mainstream Performance Very Read Optimized E3S EC1 EDSFF P5430 SSD	P63930-B21	No support	Support	No support	Support
	HPE 7.68TB NVMe Gen4 Mainstream Performance Very Read Optimized E3S EC1 EDSFF P5430 SSD	P63934-B21	No support	Support	No support	Support
	HPE 15.36TB NVMe Gen4 Mainstream Performance Very Read Optimized E3S EC1 EDSFF P5430 SSD	P63938-B21	No support	No support	No support	Support
	HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF PM1743 SSD	P57799-B21	No support	No support	No support	Support
	HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF PM1743 SSD	P57803-B21	No support	No support	No support	Support
	HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF PM1743 SSD	P57807-B21	No support	No support	No support	Support
	HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3S EC1 PS1010 SSD	P70392-B21	No support	Support	No support	Support
	HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 PS1010 SSD	P70395-B21	No support	Support	No support	Support
	HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3S EC1 PS1010 SSD	P70397-B21	No support	Support	No support	Support
	HPE 3.2TB NVMe Gen5 High Performance Mixed Use E3S EC1 PS1030 SSD	P70399-B21	No support	Support	No support	Support
	HPE 6.4TB NVMe Gen5 High Performance Mixed Use E3S EC1 PS1030 SSD	P70401-B21	No support	Support	No support	Support
	HPE 12.8TB NVMe Gen5 High Performance Mixed Use E3S EC1 PS1030 SSD	P70403-B21	No support	Support	No support	Support
	HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM CM7 SSD	P61179-B21	No support	No support	No support	No support
	HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM CM7 SSD	P61183-B21	No support	No support	No support	No support
	HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM CM7 SSD	P61187-B21	No support	No support	No support	No support
	HPE 3.2TB NVMe Gen5 High Performance Mixed Use E3S EC1 EDSFF SPDM CM7 SSD	P61191-B21	No support	No support	No support	No support
	HPE 6.4TB NVMe Gen5 High Performance Mixed Use E3S EC1 EDSFF SPDM CM7 SSD	P61195-B21	No support	No support	No support	No support
	HPE 1.92TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69234-B21	No support	No support	No support	No support
	HPE 3.84TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69237-B21	No support	No support	No support	No support
	HPE 7.68TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69239-B21	No support	No support	No support	No support
HPE 15.36TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69546-B21	No support	No support	No support	No support	

## Configuration Information

Type	Description	SKU	Acoustic M1 With Controller	Acoustic M2	Acoustic M1 *Direct Attach	Acoustic M2
	HPE 1.6TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 CD8P SSD	P69241-B21	No support	No support	No support	No support
	HPE 3.2TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 CD8P SSD	P69243-B21	No support	No support	No support	No support
	HPE 6.4TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 CD8P SSD	P69245-B21	No support	No support	No support	No support

**Notes:** \*For Direct attach, power capping will occur.

### Step 2: Operating Temperature

HPE ProLiant DL145 Gen11 -5C° – 40C°/23F° – 104F° Degrees Operational Temperature FIO Configuration	P73018-B21
HPE ProLiant DL145 Gen11 -5C° – 45C°/23F° – 113F° Degrees Operational Temperature FIO Configuration	P73021-B21
HPE ProLiant DL145 Gen11 -5C° – 50C°/23F° – 122F° Degrees Operational Temperature FIO Configuration	P73024-B21
HPE ProLiant DL145 Gen11 -5C° – 55C°/23F° – 131F° Degrees Operational Temperature FIO Configuration	P73027-B21

**Notes:** The configurator will restrict configuration options and adjust system settings to support high operating temperature

The following table lists the options that are recommended in the Operating Temperature.

### Processor:

Description	SKU	40C	45C	50C	55C
AMD EPYC 8024P 2.4GHz 8-core 90W Processor for HPE	P69258-B21	Support	Support	Support	Support
AMD EPYC 8124P 2.45GHz 16-core 125W Processor for HPE	P69259-B21	Support	Support	Support	Support
AMD EPYC 8224P 2.55GHz 24-core 160W Processor for HPE	P69260-B21	Support	Support	Support	Support
AMD EPYC 8324P 2.65GHz 32-core 180W Processor for HPE	P69261-B21	Support	Support	Support	No support
AMD EPYC 8434P 2.5GHz 48-core 200W Processor for HPE	P69262-B21	Support	Support	No support	No support
AMD EPYC 8534P 2.3GHz 64-core 200W Processor for HPE	P69263-B21	Support	Support	No support	No support
AMD EPYC 8024PN 2.05GHz 8-core 75W Processor for HPE	P71859-B21	Support	Support	Support	Support
AMD EPYC 8124PN 2GHz 16-core 100W Processor for HPE	P71862-B21	Support	Support	Support	Support
AMD EPYC 8224PN 2.05GHz 24-core 115W Processor for HPE	P71865-B21	Support	Support	Support	Support
AMD EPYC 8324PN 2.05GHz 32-core 130W Processor for HPE	P71868-B21	Support	Support	Support	Support
AMD EPYC 8434PN 2GHz 48-core 150W Processor for HPE	P71871-B21	Support	Support	Support	Support
AMD EPYC 8534PN 2.05GHz 64-core 175W Processor for HPE	P71874-B21	Support	Support	Support	Support

## Configuration Information

### Memory:

Description	SKU	40C	45C	50C	55C
HPE 16GB (1x16GB) Single Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P50309-B21	Support	Support	Support	Support
HPE 32GB (1x32GB) Dual Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P50311-B21	Support	Support	Support	Support
HPE 64GB (1x64GB) Dual Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P50312-B21	Support	Support	Support	Support
HPE 96GB (1x64GB) Dual Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P66676-B21	Support	Support	No support	No support
HPE 128GB (1x128GB) Quad Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart Memory Kit	P69982-B21	Support	Support	No support	No support

### Storage Controller:

Description	SKU	40C	45C	50C	55C
HPE NS204i-u Gen11 NVMe Hot Plug Boot Optimized Storage Device	P48183-B21	Support	Support	Support	Support
HPE MR216i-p Gen11 x16 Lanes without Cache PCI SPDM Plug-in Storage Controller	P47785-B21	Support	Support	Support	Support
HPE MR416i-p Gen11 x16 Lanes 8GB Cache PCI SPDM Plug-in Storage Controller	P47777-B21	Support	Support	Support	Support
HPE MR408i-o Gen11 x8 Lanes 4GB Cache OCP SPDM Storage Controller	P58335-B21	Support	Support	Support	Support





## Configuration Information

### Storage:

Type	Description	SKU	40C	45C	50C	55C
SFF SATA	HPE 480GB SATA RI SFF BC MV SSD	P40497-B21	Support	Support	Support	Support
	HPE 960GB SATA RI SFF BC MV SSD	P40498-B21	Support	Support	Support	Support
	HPE 1.92TB SATA RI SFF BC MV SSD	P40499-B21	Support	Support	Support	Support
	HPE 3.84TB SATA RI SFF BC MV SSD	P40500-B21	Support	Support	Support	Support
	HPE 480GB SATA MU SFF BC MV SSD	P40502-B21	Support	Support	Support	Support
	HPE 960GB SATA MU SFF BC MV SSD	P40503-B21	Support	Support	Support	Support
	HPE 1.92TB SATA MU SFF BC MV SSD	P40504-B21	Support	Support	Support	Support
	HPE 480GB SATA RI SFF BC SED 5400P SSD	P58236-B21	Support	Support	Support	Support
	HPE 960GB SATA MU SFF BC SED 5400M SSD	P58244-B21	Support	Support	Support	Support
SFF NVME	HPE 960GB NVMe RI SFF BC U.3ST MV SPDM SSD	P64842-B21	Support	Only DA	No support	No support
	HPE 1.92TB NVMe RI SFF BC U.3ST MV SPDM SSD	P64844-B21	Support	Only DA	No support	No support
	HPE 3.84TB NVMe RI SFF BC U.3ST MV SPDM SSD	P64846-B21	Only DA	No support	No support	No support
	HPE 7.68TB NVMe RI SFF BC U.3ST MV SPDM SSD	P64848-B21	Only DA	No support	No support	No support
	HPE 15.36TB NVMe RI BC U.3ST SPDM MV SSD	P69255-B21	Only DA	No support	No support	No support
	HPE 800GB NVMe MU SFF BC U.3ST MV SPDM SSD	P64999-B21	Support	Only DA	No support	No support
	HPE 1.6TB NVMe MU SFF BC U.3ST MV SPDM SSD	P65007-B21	Support	Only DA	No support	No support
	HPE 3.2TB NVMe MU SFF BC U.3ST MV SPDM SSD	P65015-B21	Only DA	No support	No support	No support
	HPE 6.4TB NVMe MU SFF BC U.3ST MV SPDM SSD	P65023-B21	No support	No support	No support	No support

Notes: DA = Direct Attach



## Configuration Information

### Storage – EDSFF:

Type	Description	SKU	40C	45C	50C	55C
With Controller						
EDSFF NVMe	HPE 3.84TB NVMe Gen4 Mainstream Performance Very Read Optimized E3S EC1 EDSFF P5430 SSD	P63930-B21	Support	Support	Support	Support
	HPE 7.68TB NVMe Gen4 Mainstream Performance Very Read Optimized E3S EC1 EDSFF P5430 SSD	P63934-B21	Support	Support	Support	Support
	HPE 15.36TB NVMe Gen4 Mainstream Performance Very Read Optimized E3S EC1 EDSFF P5430 SSD	P63938-B21	Support	Support	Support	No support
	HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF PM1743 SSD	P57799-B21	Support	Support	Support	Support
	HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF PM1743 SSD	P57803-B21	Support	Support	Support	Support
	HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF PM1743 SSD	P57807-B21	Support	Support	Support	Support
	HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3S EC1 PS1010 SSD	P70392-B21	Support	Support	Support	Support
	HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 PS1010 SSD	P70395-B21	Support	Support	Support	Support
	HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3S EC1 PS1010 SSD	P70397-B21	Support	Support	Support	Support
	HPE 3.2TB NVMe Gen5 High Performance Mixed Use E3S EC1 PS1030 SSD	P70399-B21	Support	Support	Support	Support
	HPE 6.4TB NVMe Gen5 High Performance Mixed Use E3S EC1 PS1030 SSD	P70401-B21	Support	Support	Support	Support
	HPE 12.8TB NVMe Gen5 High Performance Mixed Use E3S EC1 PS1030 SSD	P70403-B21	Support	Support	Support	Support
	HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM CM7 SSD	P61179-B21	Support	No support	No support	No support
	HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM CM7 SSD	P61183-B21	Support	No support	No support	No support
	HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM CM7 SSD	P61187-B21	Support	No support	No support	No support
	HPE 3.2TB NVMe Gen5 High Performance Mixed Use E3S EC1 EDSFF SPDM CM7 SSD	P61191-B21	Support	No support	No support	No support
	HPE 6.4TB NVMe Gen5 High Performance Mixed Use E3S EC1 EDSFF SPDM CM7 SSD	P61195-B21	Support	No support	No support	No support
	HPE 1.92TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69234-B21	Support	Support	No support	No support
	HPE 3.84TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69237-B21	Support	Support	No support	No support
	HPE 7.68TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69239-B21	Support	No support	No support	No support
	HPE 15.36TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69546-B21	Support	No support	No support	No support
	HPE 1.6TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 CD8P SSD	P69241-B21	Support	Support	No support	No support
	HPE 3.2TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 CD8P SSD	P69243-B21	Support	Support	No support	No support



## Configuration Information

	HPE 6.4TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 CD8P SSD	P69245-B21	Support	No support	No support	No support
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Type	Description	SKU	40C	45C	50C	55C
*Direct Attach						
EDSFF NVMe	HPE 3.84TB NVMe Gen4 Mainstream Performance Very Read Optimized E3S EC1 EDSFF P5430 SSD	P63930-B21	Support	Support	Support	Support
	HPE 7.68TB NVMe Gen4 Mainstream Performance Very Read Optimized E3S EC1 EDSFF P5430 SSD	P63934-B21	Support	Support	Support	Support
	HPE 15.36TB NVMe Gen4 Mainstream Performance Very Read Optimized E3S EC1 EDSFF P5430 SSD	P63938-B21	Support	Support	Support	Support
	HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF PM1743 SSD	P57799-B21	Support	Support	Support	Support
	HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF PM1743 SSD	P57803-B21	Support	Support	Support	Support
	HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF PM1743 SSD	P57807-B21	Support	Support	Support	Support
	HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3S EC1 PS1010 SSD	P70392-B21	Support	Support	Support	Support
	HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 PS1010 SSD	P70395-B21	Support	Support	Support	Support
	HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3S EC1 PS1010 SSD	P70397-B21	Support	Support	Support	Support
	HPE 3.2TB NVMe Gen5 High Performance Mixed Use E3S EC1 PS1030 SSD	P70399-B21	Support	Support	Support	Support
	HPE 6.4TB NVMe Gen5 High Performance Mixed Use E3S EC1 PS1030 SSD	P70401-B21	Support	Support	Support	Support
	HPE 12.8TB NVMe Gen5 High Performance Mixed Use E3S EC1 PS1030 SSD	P70403-B21	Support	Support	Support	Support
	HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM CM7 SSD	P61179-B21	Support	Support	No support	No support
	HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM CM7 SSD	P61183-B21	Support	Support	No support	No support
	HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM CM7 SSD	P61187-B21	Support	Support	No support	No support
	HPE 3.2TB NVMe Gen5 High Performance Mixed Use E3S EC1 EDSFF SPDM CM7 SSD	P61191-B21	Support	Support	No support	No support
	HPE 6.4TB NVMe Gen5 High Performance Mixed Use E3S EC1 EDSFF SPDM CM7 SSD	P61195-B21	Support	Support	No support	No support
	HPE 1.92TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69234-B21	Support	Support	Support	No support
	HPE 3.84TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69237-B21	Support	Support	No support	No support
	HPE 7.68TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69239-B21	Support	Support	No support	No support
HPE 15.36TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69546-B21	Support	Support	No support	No support	
HPE 1.6TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 CD8P SSD	P69241-B21	Support	Support	Support	No support	

## Configuration Information

	HPE 3.2TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 CD8P SSD	P69243-B21	Support	Support	No support	No support
	HPE 6.4TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 CD8P SSD	P69245-B21	Support	Support	No support	No support

**Notes:** \*For Direct Attach, power capping will occur.

### Step 3 Base Configuration

CTO Server	HPE ProLiant DL145 Gen11 Configure-to-order Server
SKU #	P71964-B21
TAA SKU	P71964-B21#GTA
Processor	Not included as standard
Heatsink	2U Standard, Included
DIMM Slots	6, 1 DIMM per Slot
Drive cage	Not included, Choice of SFF or EDSFF Drive Cage
Storage controller	Not included, Choice of HPE storage controllers
PCIe Slot	1 X PCIe 5.0slot (x 16 FHHL)
OCP3.0 Slot	1x OCP 3.0 PCIe 5.0 (x16)
Network controller	Not included, Choice of HPE Network controllers
Fans	4 X Standard Fans
USB	4 X USB 3.2 Gen1 + 1 X iLO service port
Video output	1 X Display port
Serial port	Not included, Optional RJ45 Serial port
Management	HPE iLO with Intelligent Provisioning (standard), iLO Advanced (optional), OneView (optional) and HPE GreenLake for Compute Ops Management (optional)
Security	Embedded TPM 2.0 (Trusted Platform Module), Chassis Intrusion Detection, Kensington Lock
Mounting	Not included, Choice of mounting options
Rail Kit	Not included, Optional Easy Install rails and CMA
Form factor	2U Rack
Warranty	3-year parts, 3-year labor, 3-year onsite support with next business day response.

#### Notes:

- DL145 CTO Server require the selection of Processor, Memory and Power Supply.
- HPE offers multiple Trade Agreement Act (TAA) compliant configurations to meet the needs of US Federal Government customers. These products are either manufactured or substantially transformed in a designated country. TAA compliance is only provided when HPE options are included as part of factory integrated orders (CTO).
- TAA compliant configuration requires TAA versions of the CTO Server SKUs.
- All CTO servers are Energy Star 4.0 compliant.



## Additional Options

### Choice of Core Options

#### Processor

**Please select ONE 4th Generation AMD EPYC Processor**

AMD EPYC 8534P 2.3GHz 64-core 200W Processor for HPE	P69263-B21
AMD EPYC 8434P 2.5GHz 48-core 200W Processor for HPE	P69262-B21
AMD EPYC 8324P 2.65GHz 32-core 180W Processor for HPE	P69261-B21
AMD EPYC 8224P 2.55GHz 24-core 160W Processor for HPE	P69260-B21
AMD EPYC 8124P 2.45GHz 16-core 125W Processor for HPE	P69259-B21
AMD EPYC 8024P 2.4GHz 8-core 90W Processor for HPE	P69258-B21
AMD EPYC 8534PN 2.0GHz 64-core 175W Processor for HPE	P71874-B21
AMD EPYC 8434PN 2.0GHz 48-core 155W Processor for HPE	P71871-B21
AMD EPYC 8324PN 2.05GHz 32-core 130W Processor for HPE	P71868-B21
AMD EPYC 8224PN 2.0GHz 24-core 120W Processor for HPE	P71865-B21
AMD EPYC 8124PN 2.0GHz 16-core 100W Processor for HPE	P71862-B21
AMD EPYC 8024PN 2.05GHz 8-core 80W Processor for HPE	P71859-B21

#### Memory

Please select one or more memory from below.

For new DDR5 memory, please go to [HPE DDR5 Smart Memory QuickSpecs](#)

For details on the Memory Population Rules and Guidelines with AMD EPYC 9004 series processors, please go to:

<https://www.hpe.com/psnow/doc/a50007481enw>

**Notes:** Quantity of memory DIMMs selected per socket must be 1, 2, 4 and 6.

#### Registered DIMMs (RDIMMs)

HPE 16GB (1x16GB) Single Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P50309-B21
HPE 32GB (1x32GB) Dual Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P50311-B21
HPE 64GB (1x64GB) Dual Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P50312-B21
HPE 96GB (1x96GB) Dual Rank x4 DDR5-4800 CAS-46-45-45 EC8 Registered Smart Memory Kit	P66676-B21
HPE 128GB (1x128GB) Dual Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit	P69982-B21

**Notes:** All DIMMs selected in a server configuration must be of the same part number, capacity size, rank etc.

#### Power Supplies

Select one or two power supplies from below.

HPE ProLiant DL110 700W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit	P43150-B21
<b>Notes:</b> Available in 94% efficiency.	
HPE ProLiant DL110 700W Flex Slot Platinum Hot Plug Low Halogen AC Power Supply Kit	P44975-B21
<b>Notes:</b> Available in 94% efficiency.	
HPE ProLiant DL110 900W-1000W Titanium Hot Plug Low Halogen AC Power Supply Kit	P54290-B21
<b>Notes:</b> Available in 96% efficiency.	

All power supply kits have reverse airflow to support front cabled design of DL145.

Beginning on January 1st, 2024, units sold into the European Union (EU), European Economic Area (EEA), the United Kingdom, or Switzerland must include more efficient AC power supplies: 94% for multi-output and 96% for single-output. HPE power supply P54290-B21 is single-output & 96% efficient thus meeting requirements.

HPE is on target to fulfil compliant systems ahead of time and will begin enforcing these requirements in advance to satisfy requests with the current power supplies by the set deadline.



## Additional Options

### Storage

HPE ProLiant DL145 Gen11 can support 2 SFF Drives or up to 6 EDSFF Drives using the drive cages and cables listed below.

#### Select the below drive cage kit for 2 SFF drive support

HPE ProLiant DL145 Gen11 2SFF Drive Cage Kit P71977-B21

##### Notes:

- Includes 2SFF drive cage, backplane and direct attach cable.
- Drives supported are either SATA or NVMe
- HPE ProLiant DL145 Gen11 2SFF Drive Cage Kit cannot be selected with HPE ProLiant DL145 Gen11 4EDSFF Drive Cage Kit or HPE ProLiant DL145 Gen11 6EDSFF Cable Kit
- Max = 1

#### Select the below drive cage kit for 4 EDSFF drives support

HPE ProLiant DL145 Gen11 4EDSFF Drive Cage Kit P71985-B21

##### Notes:

- Includes EDSFF drive cage, 4 EDSFF backplane and direct attach cable
- Drives supported are NVMe only
- HPE ProLiant DL145 Gen11 2SFF Drive Cage Kit cannot be selected with HPE ProLiant DL145 Gen11 4EDSFF Drive Cage Kit or HPE ProLiant DL145 Gen11 6EDSFF Cable Kit
- Minimum 1 Drive Cage must be selected from " HPE ProLiant DL145 Gen11 2SFF Drive Cage Kit " or " HPE ProLiant DL145 Gen11 4EDSFF Drive Cage Kit ".
- Max = 1

#### Select the below drive cage kit for 6 EDSFF drives support

HPE ProLiant DL145 Gen11 6EDSFF Cable Kit P71981-B21

##### Notes:

- Includes direct attach cable to support additional 2 EDSFF drives
- Drives supported are NVMe only
- If " HPE ProLiant DL145 Gen11 6EDSFF Cable Kit " is selected, then " HPE ProLiant DL145 Gen11 4EDSFF Drive Cage Kit must be selected
- Max = 1

### Storage Controller

HPE MR216i-p Gen11 x16 Lanes without Cache PCI SPDM Plug-in Storage Controller P47785-B21

**Notes:** Supports both SATA/NVMe SFF and EDSFF Drives.

HPE MR408i-o Gen11 x8 Lanes 4GB Cache OCP SPDM Storage Controller P58335-B21

##### Notes:

- Supports both SATA/NVMe SFF and EDSFF Drives.
- Requires 96W Smart Stg Li-ion Batt 145mm Kit (P01366-B21)

HPE MR416i-p Gen11 x16 Lanes 8GB Cache PCI SPDM Plug-in Storage Controller P47777-B21

##### Notes:

- Supports both SATA/NVMe SFF and EDSFF Drives.
- Requires 96W Smart Stg Li-ion Batt 145mm Kit (P01366-B21)

The Gen11 storage controller portfolio has been updated to include new technology like OCP3.0 as well as PCIe adapters. For a more detailed breakout of the available Gen11 controllers visit the storage controllers

QuickSpecs site: [HPE Compute MR Gen11 Controllers QuickSpecs](#)



## Additional Options

### Storage Controller Cables

HPE ProLiant DL145 Gen11 MR216i-p 2SFF Storage Controller Cable Kit P72000-B21

**Notes:** If MR216i-p controller is selected with “HPE ProLiant DL145 Gen11 2SFF Drive Cage Kit”, then “HPE ProLiant DL145 Gen11 MR216i-p 2SFF Storage Controller Cable Kit” must be selected

HPE ProLiant DL145 Gen11 MR408i-o 4EDSFF Storage Controller Cable Kit P72002-B21

**Notes:** If MR408i-o controller is selected with “HPE ProLiant DL145 Gen11 4EDSFF Drive Cage Kit”, then “HPE ProLiant DL145 Gen11 MR408i-o 4EDSFF Storage Controller Cable Kit” must be selected

HPE ProLiant DL145 Gen11 MR216i-p/MR416i-p 4EDSFF Storage Controller Cable Kit P73003-B21

**Notes:** If MR216i-p or MR416i-p controller is selected with “HPE ProLiant DL145 Gen11 4EDSFF Drive Cage Kit”, then “HPE ProLiant DL145 Gen11 MR216i-p/MR416i-p 4EDSFF Storage Controller Cable Kit” must be selected

HPE ProLiant DL145 Gen11 MR216i-p/MR416i-p 6EDSFF Storage Controller Cable Kit P72004-B21

**Notes:** If MR216i-p or MR416i-p controller is selected with “HPE ProLiant DL145 Gen11 6EDSFF Cable Kit”, then “HPE ProLiant DL145 Gen11 MR216i-p/MR416i-p 6EDSFF Storage Controller Cable Kit” must be selected

### HPE Drives

#### Hot Plug SFF

##### SFF SATA - Read Intensive

HPE 480GB SATA 6G Read Intensive SFF BC Multi Vendor SSD P40497-B21

HPE 960GB SATA 6G Read Intensive SFF BC Multi Vendor SSD P40498-B21

HPE 1.92TB SATA 6G Read Intensive SFF BC Multi Vendor SSD P40499-B21

HPE 3.84TB SATA 6G Read Intensive SFF BC Multi Vendor SSD P40500-B21

##### SFF SATA – Mixed Use

HPE 480GB SATA 6G Mixed Use SFF BC Multi Vendor SSD P40502-B21

HPE 960GB SATA 6G Mixed Use SFF BC Multi Vendor SSD P40503-B21

HPE 1.92TB SATA 6G Mixed Use SFF BC Multi Vendor SSD P40504-B21

##### SED (Self-Encryption Drive) SFF SATA

HPE 480GB SATA 6G Read Intensive SFF BC Self-encrypting 5400P SSD P58236-B21

HPE 960GB SATA 6G Mixed Use SFF BC Self-encrypting 5400M SSD P58244-B21

HPE 1.92TB SATA 6G Mixed Use SFF BC Self-encrypting 5400M SSD P58248-B21

##### SFF NVMe – Read Intensive

HPE 1.92TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static V2 Multi Vendor SSD P64844-B21

HPE 3.84TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static V2 Multi Vendor SSD P64846-B21

HPE 7.68TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static V2 Multi Vendor SSD P64848-B21

HPE 15.36TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static SPDM Multi Vendor SSD P69255-B21

##### SFF NVMe - Mixed Use

HPE 800GB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD P64999-B21

HPE 1.6TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD P65007-B21

HPE 3.2TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD P65015-B21

HPE 6.4TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD P65023-B21





## Additional Options

### Hot Plug EDSFF

#### EDSFF NVMe Mainstream Performance – Very Read Optimized

HPE 3.84TB NVMe Gen4 Mainstream Performance Very Read Optimized E3S EC1 EDSFF P5430 SSD	P63930-B21
HPE 7.68TB NVMe Gen4 Mainstream Performance Very Read Optimized E3S EC1 EDSFF P5430 SSD	P63934-B21
HPE 15.36TB NVMe Gen4 Mainstream Performance Very Read Optimized E3S EC1 EDSFF P5430 SSD	P63938-B21

#### EDSFF NVMe Mainstream Performance - Read Intensive

HPE 1.92TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69234-B21
HPE 3.84TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69237-B21
HPE 7.68TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69239-B21
HPE 15.36TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD	P69546-B21

#### EDSFF NVMe Mainstream Performance – Mixed Use

HPE 1.6TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 CD8P SSD	P69241-B21
HPE 3.2TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 CD8P SSD	P69243-B21
HPE 6.4TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 CD8P SSD	P69245-B21

#### EDSFF NVMe High Performance - Read Intensive

HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM CM7 SSD	P61179-B21
HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM CM7 SSD	P61183-B21
HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM CM7 SSD	P61187-B21
HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM PM1743 SSD	P57799-B21
HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM PM1743 SSD	P57803-B21
HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM PM1743 SSD	P57807-B21
HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3S EC1 PS1010 SSD	P70392-B21
HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 PS1010 SSD	P70395-B21
HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3S EC1 PS1010 SSD	P70397-B21

#### EDSFF NVMe High Performance – Mixed Use

HPE 3.2TB NVMe Gen5 High Performance Mixed Use E3S EC1 EDSFF SPDM CM7 SSD	P61191-B21
HPE 6.4TB NVMe Gen5 High Performance Mixed Use E3S EC1 EDSFF SPDM CM7 SSD	P61195-B21
HPE 3.2TB NVMe Gen5 High Performance Mixed Use E3S EC1 PS1030 SSD	P70399-B21
HPE 6.4TB NVMe Gen5 High Performance Mixed Use E3S EC1 PS1030 SSD	P70401-B21
HPE 12.8TB NVMe Gen5 High Performance Mixed Use E3S EC1 PS1030 SSD	P70403-B21

### Cooling Options

HPE ProLiant DL145 Gen11 2U Performance Fan Kit	P72581-B21
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#### Notes:

- if “HPE ProLiant DL145 Gen11 4EDSFF Drive Cage Kit” or/and “HPE ProLiant DL145 Gen11 6EDSFF Cable Kit” is selected, then “HPE ProLiant DL145 Gen11 2U Performance Fan Kit” must be selected
- If performance fan is selected, then it must be in Qty =4

### Boot Controllers

HPE NS204i-u Gen11 NVMe Hot Plug Boot Optimized Storage Device	P48183-B21
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#### Notes:

- Includes 2x 480GB M.2 NVMe SSDs, with preconfigured hardware RAID1
- Does not consume PCIe slot or OCP slot

For additional information, please visit [HPE OS Boot Device QuickSpecs](#)





## Additional Options

HPE ProLiant DL145 Gen11 NS204i-u Enablement Kit

P71992-B21

### Notes:

- If "HPE NS204i-u Gen11 Ht Plg Boot Opt Dev" is selected" then "HPE DL145 Gen11 NS204i-u Enable Kit" must be selected
- Max = 1

## PCIe Expansion slots

**Notes:** PCIe Gen5 x16 FHFL Slot 3 shipping default in ALL CTO server

HPE ProLiant DL145 Gen11 x16 FHFL PCIe Gen5 Slot 2 Riser Kit

P71989-B21

HPE ProLiant DL145 Gen11 x16 FHFL PCIe Gen5 Slot 1 Riser Kit

P71991-B21

**Notes:** If "HPE ProLiant DL145 Gen11 x16 FHFL PCIe Gen5 Slot 1 Riser Kit " is selected, then " HPE ProLiant DL145 Gen11 x16 FHFL PCIe Gen5 Slot 2 Riser Kit " must be selected (NOT VICE VERSA).

## HPE Networking

### PCIe Adapters

#### 1 Gigabit Ethernet adapter

Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T Adapter for HPE

P51178-B21

#### 10 Gigabit Ethernet adapters

Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T Adapter for HPE

P26253-B21

Broadcom BCM57412 Ethernet 10Gb 2-port SFP+ Adapter for HPE

P26259-B21

#### 10/25 Gigabit Ethernet adapters

Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE

P26262-B21

Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE

P26264-B21

Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE

P08443-B21

Mellanox MCX631102AS-ADAT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE

P42044-B21

Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE

P08458-B21

### OCP 3.0 Adapter

#### 1 Gigabit Ethernet OCP adapters

Intel I350-T4 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE

P08449-B21

Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE

P51181-B21

#### 10 Gigabit Ethernet OCP Adapters

Broadcom BCM57412 Ethernet 10Gb 2-port SFP+ OCP3 Adapter for HPE

P26256-B21

Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T OCP3 Adapter for HPE

P10097-B21

#### 10/25 Gigabit Ethernet OCP adapters

Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE

P10115-B21

Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE

P26269-B21

Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE

P10106-B21

Mellanox MCX631432AS-ADAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE

P42041-B21

## HPE Computation and Graphics Accelerators

NVIDIA L4 24GB PCIe Accelerator for HPE

S0K89C

### Notes:

- For best performance across common workloads, HPE recommends system main memory at least twice the memory of all GPU.
- Max = 3

## Additional Options

### HPE Security

HPE ProLiant DL145 Gen11 FIO Bezel Filter Kit P72582-B21

**Notes:**

- The Bezel filter kit includes one Bezel and one air filter
- Air filter is a consumable part and is not covered under HPE warranty.
- HPE highly recommends replacing the air filter every three to six months or following the prescribed preventative maintenance schedule. This helps ensure optimal performance and prevent overheating and downtime. For detailed maintenance, please refer to the HPE ProLiant DL145 User Guide
- Upon installation of the Bezel Filter, iLO triggers a 90-day timer and issues two reminders for the customer to check and, if needed, replace the air filter. The first reminder is sent on the 85<sup>th</sup> day of the operation, and the second reminder is issued on the 90<sup>th</sup> day, at which point the customer can reset the timer. Timer can be customized.

HPE ProLiant DL145 Gen11 Filter Replacement Kit P72583-B21

**Notes:** Includes two individual air filters

HPE Bezel Lock Kit 875519-B21

**Notes:** If "HPE Bezel Lock Kit" is selected, then " HPE ProLiant DL145 Gen11 FIO Bezel Filter Kit" must be selected

HPE ProLiant DL145 Gen11 Disabled External USB Port FIO System Setting P73214-B21

**Notes:** To disable the USB ports for security

HPE iLO Common Password FIO Setting P08040-B21

**Notes:**

- Replaces iLO default randomized password by an HPE defined common password. HPE highly recommends changing this password immediately after the initial onboarding process.
- Customers who want to choose their own custom iLO default password should use the HPE Factory Express Integration Services

### Additional Option

HPE ProLiant DL145 Gen11 RJ45 Serial Port Cable Kit P71998-B21

**Notes:** This cable kit supports an optional RJ45 serial port

### Mounting Options

HPE ProLiant DL145 Gen11 Desk/Wall Mounting Kit P72006-B21

**Notes:** The Desk/Wall Mounting Kit allows system installation on a wall/desk instead of a rack.

HPE ProLiant DL145 Gen11 Rack Enablement Kit P72008-B21

**Notes:**

- The rack enablement kit allows system installation in a rack.
- It can be used with all HPE 4-post racks
- If DL145 Gen11 Rack Enablement Kit is selected, then it is recommended to select HPE Easy Install Rail 1 Kit (P52349-B21)



## Additional Options

### Rail Kits

Easy Install rail kits contain telescoping rails which allow for in-rack serviceability.

To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative.

#### Notes:

- HPE rail kits are designed to work with HPE racks in compliance with industry standard EIA-310-E. In the event a customer elects to purchase a third-party rack for use with an HPE rail kit, any such use is at customer's own risk. HPE makes no express or implied warranties with respect to such third-party racks and specifically disclaims any implied warranties of merchantability and fitness for a particular purpose. Furthermore, HPE has no obligation and assumes no liability for the materials, design, specifications, installation, safety, and compatibility of any such third-party racks with any rail kits, including HPE rail kits.
- Hewlett Packard Enterprise recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and the number of people to use for any installation

HPE Easy Install Rail 1 Kit

P52349-B21

**Notes:** If "HPE ProLiant DL145 Gen11 Rack Enablement Kit" is selected, then "HPE Easy Install Rail 1 Kit" should be selected

HPE DL38X Gen10 Plus 2U Cable Management Arm for Rail Kit

P22020-B21

**Notes:** If "HPE Gen11 2U CMA Kit" is selected, then "HPE Easy Install Rail 1 Kit" must be selected

### Software as a Service Management

#### HPE GreenLake for Compute Ops Management

HPE GreenLake for Compute Ops Management Enhanced 3-year Upfront ProLiant SaaS

R7A11AAE

HPE GreenLake for Compute Ops Management Enhanced 5-year Upfront ProLiant SaaS

R7A12AAE

HPE Compute Cloud Management Server FIO Enablement

S1A05A

#### HPE OneView

HPE OneView w/o iLO including 3yr 24x7 Support Track 1-server LTU

P8B25A

HPE OneView w/o iLO including 3yr 24x7 Support Flexible Quantity E-LTU

P8B26AAE

HPE OneView w/o iLO including 3yr 24x7 Support 1-server FIO LTU

P8B31A

HPE OneView including 3yr 24x7 Support Flexible Quantity E-LTU

E5Y35AAE

HPE OneView including 3yr 24x7 Support Track 1-server LTU

E5Y36A

HPE OneView for ProLiant DL Server including 3yr 24x7 Support FIO Bundle Physical 1-server LTU

E5Y43A

HPE OneView for ProLiant DL Server including 3yr 24x7 Support Bundle Track 1-server LTU

E5Y44A

For more information, visit the HPE GreenLake for Compute Ops Management QuickSpecs:

<https://www.hpe.com/psnow/doc/a50004263enw>

Supported Servers – CTO only. No OEM. – Complete list can be found here: Latest Supported Server List:

<https://www.hpe.com/info/com-supported-servers>



## Additional Options

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

### Embedded Management

#### HPE iLO Advanced

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

### HPE Racks

- Please see the HPE Advanced Series Racks QuickSpecs for information on additional racks options and rack specifications. [HPE G2 Advanced Series Racks](#)
- Please see the HPE Enterprise Series Racks QuickSpecs for information on additional racks options and rack specifications. [HPE G2 Enterprise Series Racks](#)

### HPE Power Distribution Units (PDUs)

- Please see the [HPE Basic Power Distribution Units \(PDU\) QuickSpecs](#) for information on these products and their specifications.
- Please see the [HPE Metered Power Distribution Units \(PDU\) QuickSpecs](#) for information on these products and their specifications.
- Please see the [HPE Intelligent Power Distribution Unit \(PDU\) QuickSpecs](#) for information on these products and their specifications.
- Please see the [HPE Metered and Switched Power Distribution Units \(PDU\) QuickSpecs](#) for information on these products and their specifications.

### HPE Uninterruptible Power Systems (UPS)

- To learn more, please visit the [HPE Uninterruptible Power Systems \(UPS\) web page](#).
- Please see the [HPE DirectFlow Three Phase Uninterruptible Power System QuickSpecs](#) for information on these products and their specifications.
- Please see the [HPE Line Interactive Single Phase UPS QuickSpecs](#) for information on these products and their specifications.

### HPE Rack Options

- Please see the [HPE KVM Switches web page](#) for information on these products and their specifications



## Additional Options

### HPE Support Service

#### Tech Care Services

HPE 3 Year Tech Care Basic ProLiant DL145 HW Service	H46HWE
HPE 3 Year Tech Care Basic wDMR ProLiant DL145 HW Service	H46HXE
HPE 3 Year Tech Care Basic wCDMR ProLiant DL145 HW Service	H46HYE
HPE 3 Year Tech Care Basic Same Business Day ProLiant DL145 Service	H46HZE
HPE 3 Year Tech Care Basic Same Business Day wDMR ProLiant DL145 Service	H46JBE
HPE 3 Year Tech Care Basic Same Business Day wCDMR ProLiant DL145 Service	H46JCE
HPE 3 Year Tech Care Essential ProLiant DL145 HW Service	H46JDE
HPE 3 Year Tech Care Essential wDMR ProLiant DL145 HW Service	H46JFE
HPE 3 Year Tech Care Essential wCDMR ProLiant DL145 HW Service	H46JGE
HPE 3 Year Tech Care Critical for ProLiant DL145 HW Service	H46JHE
HPE 3 Year Tech Care Critical wDMR ProLiant DL145 HW Service	H46JJE
HPE 3 Year Tech Care Critical wCDMR ProLiant DL145 HW Service	H46JKE
HPE 4 Year Tech Care Basic ProLiant DL145 HW Service	H46JLE
HPE 4 Year Tech Care Basic wDMR ProLiant DL145 HW Service	H46JME
HPE 4 Year Tech Care Basic wCDMR ProLiant DL145 HW Service	H46JNE
HPE 4 Year Tech Care Basic Same Business Day ProLiant DL145 Service	H46JQE
HPE 4 Year Tech Care Basic Same Business Day wDMR ProLiant DL145 Service	H46JRE
HPE 4 Year Tech Care Basic Same Business Day wCDMR ProLiant DL145 Service	H46JSE
HPE 4 Year Tech Care Essential ProLiant DL145 HW Service	H46JTE
HPE 4 Year Tech Care Essential wDMR ProLiant DL145 HW Service	H46JVE
HPE 4 Year Tech Care Essential wCDMR ProLiant DL145 HW Service	H46JWE
HPE 4 Year Tech Care Critical for ProLiant DL145 HW Service	H46JXE
HPE 4 Year Tech Care Critical wDMR ProLiant DL145 HW Service	H46JYE
HPE 4 Year Tech Care Critical wCDMR ProLiant DL145 HW Service	H46JZE
HPE 5 Year Tech Care Basic ProLiant DL145 HW Service	H46KBE
HPE 5 Year Tech Care Basic wDMR ProLiant DL145 HW Service	H46KCE
HPE 5 Year Tech Care Basic wCDMR ProLiant DL145 HW Service	H46KDE
HPE 5 Year Tech Care Basic Same Business Day ProLiant DL145 Service	H46KFE
HPE 5 Year Tech Care Basic Same Business Day wDMR ProLiant DL145 Service	H46KGE
HPE 5 Year Tech Care Basic Same Business Day wCDMR ProLiant DL145 Service	H46KHE
HPE 5 Year Tech Care Essential ProLiant DL145 HW Service	H46KJE
HPE 5 Year Tech Care Essential wDMR ProLiant DL145 HW Service	H46KKE
HPE 5 Year Tech Care Essential wCDMR ProLiant DL145 HW Service	H46KLE
HPE 5 Year Tech Care Critical for ProLiant DL145 HW Service	H46KME
HPE 5 Year Tech Care Critical wDMR ProLiant DL145 HW Service	H46KNE
HPE 5 Year Tech Care Critical wCDMR ProLiant DL145 HW Service	H46KQE
HPE 6 Year Tech Care Basic ProLiant DL145 Service	H46KRE
HPE 6 Year Tech Care Basic wDMR ProLiant DL145 Service	H46KSE
HPE 6 Year Tech Care Basic Same Business Day ProLiant DL145 Service	H46KTE
HPE 6 Year Tech Care Basic Same Business Day wDMR ProLiant DL145 HW Service	H46KVE
HPE 6 Year Tech Care Basic Same Business Day wDMR ProLiant DL145 Service	H46KWE
HPE 6 Year Tech Care Essential ProLiant DL145 Service	H46KXE
HPE 6 Year Tech Care Essential wDMR ProLiant DL145 Service	H46KYE
HPE 7 Year Tech Care Basic ProLiant DL145 Service	H46KZE
HPE 7 Year Tech Care Basic wDMR ProLiant DL145 Service	H46LBE
HPE 7 Year Tech Care Basic Same Business Day ProLiant DL145 Service	H46LCE

## Additional Options

HPE 7 Year Tech Care Essential ProLiant DL145 Service	H46LDE
HPE 7 Year Tech Care Essential wDMR ProLiant DL145 Service	H46LFE
HPE 3 Year Tech Care Telco 24x7 Remote Technical Support DL145 Gen11 Service	H46LGE
HPE 4 Year Tech Care Telco 24x7 Remote Technical Support DL145 Gen11 Service	H46LHE
HPE 5 Year Tech Care Telco 24x7 Remote Technical Support DL145 Gen11 Service	H46LJE
HPE 6 Year Tech Care Telco 24x7 Remote Technical Support DL145 Gen11 Service	H46LKE
HPE 7 Year Tech Care Telco 24x7 Remote Technical Support DL145 Gen11 Service	H46LLE
HPE 3 Year Tech Care Telco 24x7 Remote Technical Support wDMR DL145 Gen11 Service	H46LME
HPE 4 Year Tech Care Telco 24x7 Remote Technical Support wDMR DL145 Gen11 Service	H46LNE
HPE 5 Year Tech Care Telco 24x7 Remote Technical Support wDMR DL145 Gen11 Service	H46LQE
HPE 6 Year Tech Care Telco 24x7 Remote Technical Support wDMR DL145 Gen11 Service	H46LRE
HPE 7 Year Tech Care Telco 24x7 Remote Technical Support wDMR DL145 Gen11 Service	H46LSE
HPE 3 Year Tech Care Telco 24x7 Remote Technical Support wCDMR DL145 Gen11 Service	H46LTE
HPE 4 Year Tech Care Telco 24x7 Remote Technical Support wCDMR DL145 Gen11 Service	H46LVE
HPE 5 Year Tech Care Telco 24x7 Remote Technical Support wCDMR DL145 Gen11 Service	H46LWE

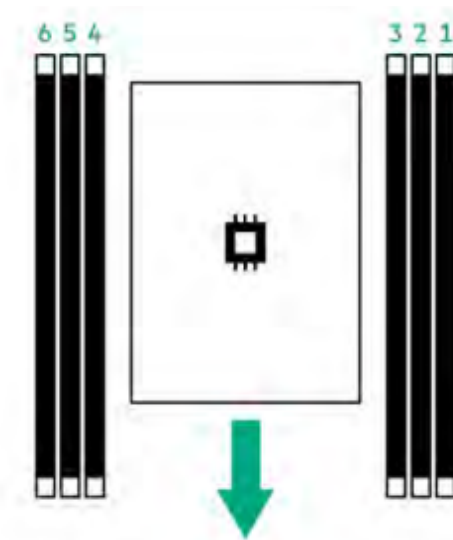
**Notes:** For a full listing of support services available for this server, please visit

<http://www.hpe.com/services>

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## Memory



The arrow points to the front of the server

### General Memory Population Rules and Guidelines

- Install DIMMs only after the corresponding processor is installed.
- To maximize performance, it is recommended to balance the total memory capacity between all installed processors.
- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- The maximum memory capacity is a function of the number of DIMM slots on the platform, the largest DIMM capacity qualified on the platform, and the number and model of installed processors qualified on the platform.
- To realize the performance memory capabilities listed in this document, HPE DDR5 Smart Memory is required. For additional information, please see the: [HPE DDR5 Smart Memory QuickSpecs](#)
- For the Memory Population Rules and Guidelines with AMD EPYC 8004 series processors, see details here: <https://www.hpe.com/psnow/doc/a50007481enw>



## Technical Specifications

### System Unit

#### Dimensions

System configuration	Dimensions (Height x Width x Depth)
System without Bezel Filter	3.44 in X 14.14 in X 16 in 8.75 cm X 35.94 cm X 40.66 cm
System with Bezel Filter	3.44 in X 15.13 in X 19.98 in 8.75 cm X 38.44 cm X 50.74 cm

#### Weight (Approximate)

DL145 G11	Config type	Weight (kg) / (lbs)	Config
Rack	EDSFF	Light load	11.31 kg / 24.93 lbs 1x processor, 1x primary riser, 1x Memory, 1x EDSFF, 1x PSU, 1x heat sink, 4x fan
		Full load	15.18 kg / 33.47 lbs 1x processor, 1x primary riser, 2x risers, 6x Memory, 6x EDSFF, 2x PSU, 1x heat sink, 4x fan
	SFF	Light load	11.38 kg / 25.09 lbs 1x processor, 1x primary riser, 1x Memory, 1x SFF, 1x PSU, 1x heat sink, 4x fan
		Full load	14.76 kg / 32.54 lbs 1x processor, 1x primary riser, 2x risers, 6x Memory, 2x SFF, 2x PSU, 1x heat sink, 4x fan
Desk	EDSFF	Light load	11.74kg / 25.88 lbs 1x processor, 1x primary riser, 1x Memory, 1x EDSFF, 1x PSU, 1x heat sink, 4x fan
		Full load	15.61 kg / 34.41 lbs 1x processor, 1x primary riser, 2x risers, 6x Memory, 6x EDSFF, 2x PSU, 1x heat sink, 4x fan
	SFF	Light load	11.81 kg / 26.04 lbs 1x processor, 1x primary riser, 1x Memory, 1x SFF, 1x PSU, 1x heat sink, 4x fan
		Full load	15.19 kg / 33.49 lbs 1x processor, 1x primary riser, 2x risers, 6x Memory, 2x SFF, 2x PSU, 1x heat sink, 4x fan

#### Input Requirements (per power supply)

##### Rated Line Voltage

- For 700W (-48VDC): -40 Vdc to -72 Vdc
- For 700W (Platinum): 100-240 VAC
- For 900W-1000W (Titanium): 100-240 VAC

#### BTU Rating

##### Maximum

- For 700W (-48VDC) Power Supply: 2593 BTU/hr at -40VDC, 2537 BTU/hr at -72VDC
- For 700W (Platinum) Power Supply: 2660 BTU/hr at 100VAC, 2570 BTU/hr at 200VAC, 2570 BTU/hr at 240VAC
- For 900W-1000W (Titanium) Power Supply: 3368 BTU/hr at 100VAC, 3640 BTU/hr at 200VAC, 3625 BTU/hr at 240 VAC





## Technical Specifications

### Power Supply Output (per power supply)

#### Rated Steady-State Power

- For 700W (-48VDC) Power Supply: 700W at -40VDC, 700W at -72VDC
- For 700W (Platinum) Power Supply: 700W at 100VAC, 700W at 200VAC, 700W at 240VAC
- For 900W-1000W (Titanium) Power Supply: 900W at 100VAC, 1000W at 200VAC, 1000W at 240 VAC

#### Maximum Peak Power

- For 700W (-48VDC) Power Supply: 700W at -40VDC, 700W at -72VDC
- For 700W (Platinum) Power Supply: 700W at 100VAC, 700W at 200VAC, 700W at 240VAC
- For 900W-1000W (Titanium) Power Supply: 900W at 100VAC, 1000W at 200VAC, 1000W at 240 VAC

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### System Inlet Temperature

- **Extended Operating Temperature**

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.

For NEBS Level 3 and ETSI Certified DL145 configurations please see the Carrier Grade Supplement.

- **Standard Operating Temperature**

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

System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F).

- **Non-Operating**

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

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### Relative Humidity(non-condensing)

- **Operating**

8% to 90% - Relative humidity (Rh), 28°C maximum wet bulb temperature, non-condensing.

- **Non-operating**

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

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### Altitude

- **Operating**

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

- **Non-operating**

9144 m (30,000 ft). The maximum allowable altitude change rate is 457 m/min (1500 ft/min).

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### Emissions Classification (EMC) – Regulatory Information

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

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=c03471072](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=c03471072)

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## Technical Specifications

### Acoustic Noise

Listed are the declared mean A-Weighted sound power levels (LWA,m), declared average bystander position A-Weighted sound pressure levels (LpAm) and the statistical adder for verification, Kv, is a quantity to be added to the declared mean A-weighted sound power level, LWA,m when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109). The listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels. Please have your HPE representative provide information from the HPE EMESC website for further technical details regarding the configurations listed below.

<b>Idle</b>	
LWA,m	4.3 B Test case 1 (light Config) 5.1 B Test case 2 (Medium Config) 5.1 B Test case 3 (Heavy Config)
LpAm	34 dBA Test case 1 (Light Config) 40 dBA Test case 2 (Medium Config) 40 dBA Test case 3 (Heavy Config)
Kv	0.4 B Test case 1 (Light Config) 0.4 B Test case 2 (Medium Config) 0.4 B Test case 3 (Heavy Config)
<b>Operating</b>	
LWA,m	4.3 B Test case 1 (Light Config) 5.1 B Test case 2 (Medium Config) 5.1 B Test case 3 (Heavy Config)
LpAm	35 dBA Test case 1 (Light Config) 41 dBA Test case 2 (Medium Config) 40 dBA Test case 3 (Heavy Config)
Kv	0.4 B Test case 1 (Light Config) 0.4 B Test case 2 (Medium Config) 0.4 B Test case 3 (Heavy Config)

#### Notes:

- Operating mode: 50% of CPU TDP
- The declared mean A-weighted sound power level, LWA,m, is computed as the arithmetic average of the measured.
- A-weighted sound power levels for a randomly selected sample, rounded to the nearest 0,1 B.
- The declared mean A-weighted emission sound pressure level, LpA,m, is computed as the arithmetic average of the measured A-weighted emission sound pressure levels at the bystander positions for a randomly selected sample, rounded to the nearest 1 dB.
- The statistical adder for verification, Kv, is a quantity to be added to the declared mean A-weighted sound power level, LWA,m, such that there will be a 95% probability of acceptance, when using the verification procedures of ISO 9296, if no more than 6,5 % of the batch of new equipment, has A-weighted sound power levels greater than (LWA,m + Kv).
- The quantity, LWA,c (formerly called LWAd), can be computed from the sum of LWA,m and Kv.
- All measurements made to conform to ISO 7779 / ECMA-74 and declared to conform to ISO 9296 / ECMA-109.
- B, dB, abbreviations for bels and decibels, respectively, where 1 B = 10 dB.
- The results in this declaration apply only to the model numbers listed above when operating and tested according to the indicated modes and standards. A system with additional configuration components or increased operating functionality may increase the noise emission values.
- System under abnormal conditions may increase the noise level, persons in the vicinity of the product [cabinet] for extended periods of time should consider wearing hearing protection or using other means to reduce noise exposure.

## Technical Specifications

### Shock and Vibration

The server has the following shock and vibration limits:

#### Shock:

Operating: 20 G for 10 milliseconds in each direction (positive and negative X, Y, and Z axes)

Non-operating package shock:

Free fall drop in height 36 in (914mm)

Six face shock pulses in the x,y, and z axis

#### Shock (Rack Load):

Incline impact: speed of 3.28 ft./sec[1 m/sec] to each vertical face.

Rotational flap drop: lift one side to 8 in [203 mm] and drop to each vertical face.

Free-fall drop: 2 in [51 mm] for one time.

#### Vibration:

Operating: 0.31 Grms at 5 Hz to 500 Hz for 10 minutes across 3 axes

Non-operating (in packaging): 1.2G rms at 5Hz to 300Hz for 60min across 3 axes

#### Random Vibration (Rack Load):

Vertical (x-axis & y-axis): 0.84 Grms, at 5 Hz to 200 Hz, 60 min. to each axis

Horizontal (z-axis): 1.2 Grms, at 5 Hz to 200 Hz, 60 min

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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 (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard Enterprise website. 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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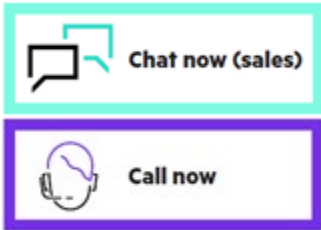
## Summary of Changes

<b>Date</b>	<b>Version History</b>	<b>Action</b>	<b>Description of Change</b>
04-Nov-2024	Version 3	Changed	Configuration Information section was updated.
07-Oct-2024	Version 2	Changed	Overview, Configuration Information, Additional Options and Technical Specifications sections were updated.
03-Sep-2024	Version 1	New	New QuickSpecs.



## Copyright

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

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