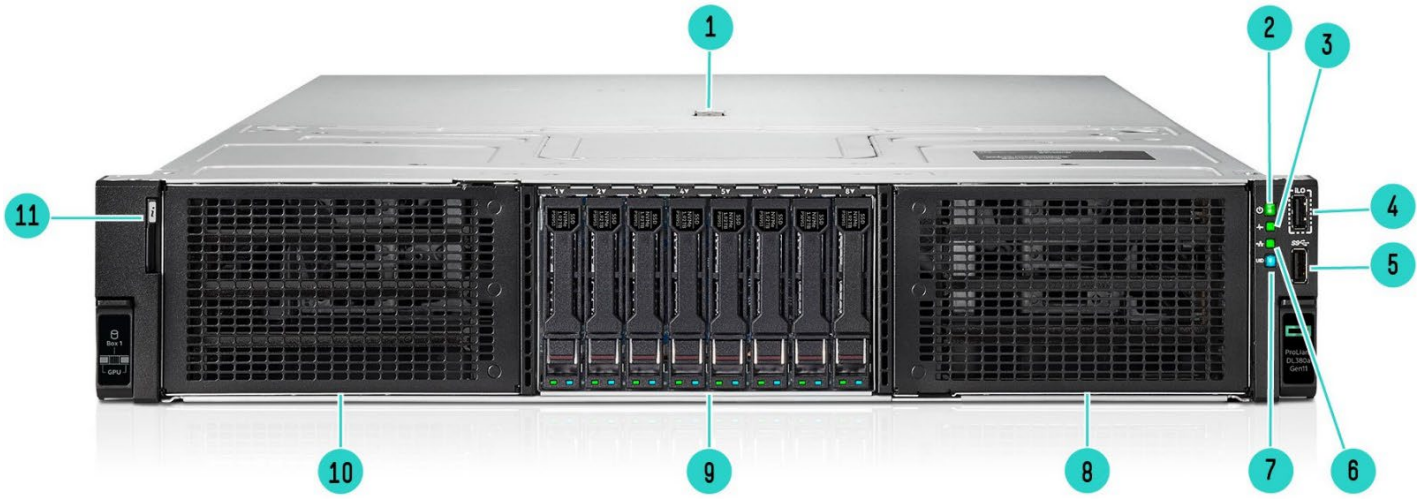
## Overview

### HPE ProLiant DL380a Gen11

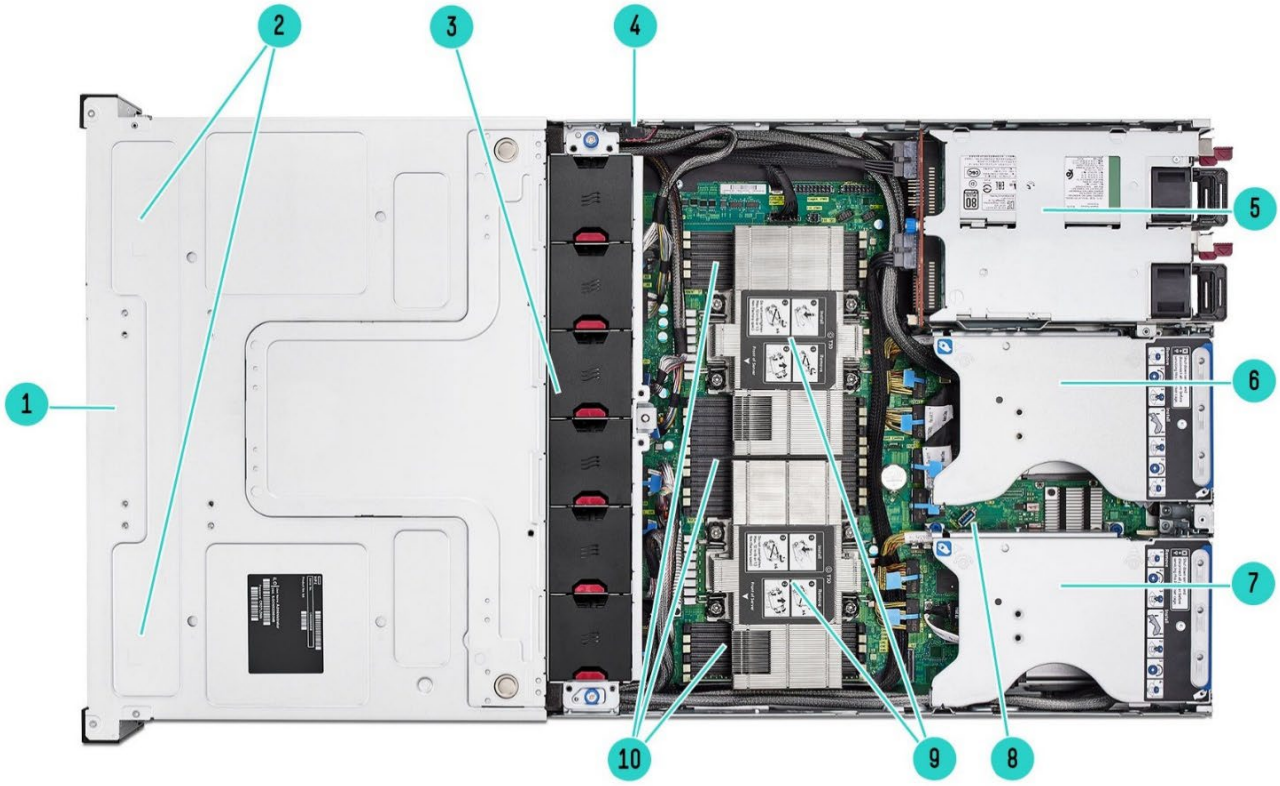
The HPE ProLiant DL380a Gen11 server is a GPU server built for the growing demands of enterprise AI, with the support for 4 double-wide or 8 single-wide accelerators in a standard 2U 2P form factor. The "a" stands for accelerator optimized, which provides excellent cooling performance for dense GPUs. Powered by 4th and 5th Generation Intel® Xeon® Scalable Processors and cutting-edge GPUs, the HPE ProLiant DL380a Gen11 server can accelerate machine learning, deep learning, AI training and inference workloads, as well as advanced engineering applications or graphic intensive workloads.




**Front View – 8SFF drive bay shown**

1. Quick removal access panel
2. Power On/Standby button and system power LED
3. Health LED
4. iLO front service port
5. USB 3.0 port
6. NIC status LED
7. UID button/LED
8. GPU cage 2 (1 or 2 DW or 4 SW GPUs)
9. Drive Box 1 (8 SFF or EDSFF drives)
10. GPU cage 1 (1 or2 DW or 4 SW GPUs)
11. Serial number label pull tab

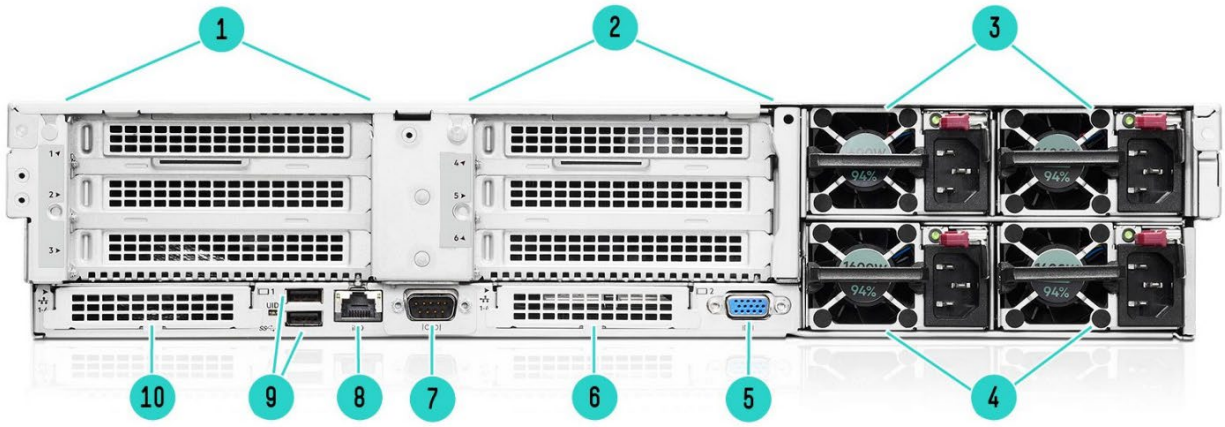
## Overview




**Internal View**

1. 8 SFF NVMe or EDSFF drive bay
2. GPU cages for 4 double-wide or 8 single-wide GPUs
3. 6 hot-plug fans with N+1 redundancy
4. Chassis intrusion detection (optional)
5. Up to 4 hot-plug, redundant power supplies
6. Secondary Riser
7. Primary Riser
8. Internal USB 3.0 port
9. 2 processors (heatsinks showing)
10. DDR5 DIMM slots (support up to 24 DIMMs)

## Overview




**Rear View**

1. Primary Riser. PCIe 5.0 slots (slots 2 & 3)
2. Secondary Riser. PCIe 5.0 slots (slots 5 & 6)
3.. Power supply 3 and 4 (for DW GPU auxiliary power)
4. Power supply 1 and 2 (for the system board)
5. VGA connector
6. OCP 3.0 slot 18/OCP2 (optional)
7. Optional serial port
8. Dedicated iLO management port
9. 2 USB 3.0 ports
10. OCP 3.0 slot 17/OCP1 (PCIe 5.0 x8, upgradable to x16)

## What's New

- Supports 4th and 5th Generation Intel® Xeon® Scalable Processors.
- Support for up to 4 double-wide or 8 single-wide GPUs in a 2U server for intensive compute acceleration.
- Support for PCIe 5.0 for improved bandwidth and throughput.
- Support for well-balanced I/O performance across processors.
- Support for HPE DDR5 Smart Memory.

## Platform Information

### Form Factor

- 2U rack

### Chassis Types

- 4DW (double-wide GPU) chassis with one drive bay for drive cage options.
- 8SW (single-wide GPU) chassis with one drive bay for drive cage options.

**Notes:** The DL380a Gen11 comes with an 8SFF x4 U.3 NVMe drive bay by default.

### System Fans

- 6 dual-rotor hot-plug fans with N+1 redundancy by default

## Standard Features

**Processors –** 2 of the following depending on model.

The 2nd digit of the processor model number "x4xx" is used to denote the processor generation (i.e. 4=4th generation Intel Scalable Series Processors)
For more information regarding Intel Xeon processors, please see the following **http://www.intel.com/xeon.**

This table covers the public Intel offering only.

| Intel Xeon processors | | |
|---|---|---|
| **Processor Suffix** | **Description** | **Offering** |
| **P** | IaaS Optimized | Optimized for high performance IaaS for orchestration efficiency. Higher frequency for VM environments. |
| **S** | Storage Workload Optimized | Designed to provide maximum inter-socket bandwidth with lower core counts and TDPs. Data Movement and Transformation Operations Offload with DSA, free up CPU cycles to enable efficient core utilization. |
| **V** | VM Optimized | Fosters enhanced VM density, allowing to support more/larger virtual machines per host and lower power VM environment. |
| **Y** | Speed Select | Intel® SST-PP increases base frequency when fewer cores are enabled. Allows greater flexibility, deployment options and platform longevity. |

| 4th Generation Intel® Xeon® Scalable Processor Family | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Intel Xeon Models** | **CPU Frequency** | **Cores** | **L3 Cache (MB)** | **Power** | **UPI** | **DDR5** | **SGX Enclave size** |
| Platinum 9462 Processor[4] | 2.7 GHz | 32 | 75 | 350W | 3 @ 16 GT/s | 4800 MT/s | 128GB |
| Platinum 8480+ Processor | 2.0 GHz | 56 | 105 | 350W | 4 @ 16 GT/s | 4800 MT/s | 512GB |
| Platinum 8470 Processor | 2.0 GHz | 52 | 105 | 350W | 4 @ 16 GT/s | 4800 MT/s | 512GB |
| Platinum 8468 Processor | 2.1 GHz | 48 | 105 | 350W | 4 @ 16 GT/s | 4800 MT/s | 512GB |
| Platinum 8468V Processor[2] | 2.4 GHz[1,3]<br>2.1 GHz[1]<br>1.8 GHz[1] | 48[3]<br>48<br>48 | 97.5 | 330W[3]<br>300W<br>270W | 3 @ 16 GT/s | 4800 MT/s | 128GB |
| Platinum 8460Y+ Processor | 2.0 GHz<br>2.1 GHz<br>2.3 GHz | 40[3]<br>36<br>32 | 105 | 300W[3]<br>300W<br>300W | 4 @ 16 GT/s | 4800 MT/s | 128GB |
| Platinum 8458P Processor[2] | 2.7 GHz[1,3]<br>2.7 GHz[1]<br>3.0 GHz[1] | 44[3]<br>40<br>32 | 82.5 | 350W[3]<br>330W<br>330W | 3 @ 16 GT/s | 4800 MT/s | 512GB |
| Platinum 8452Y Processor | 2.0 GHz[3]<br>1.9 GHz<br>2.1 GHz | 36[3]<br>32<br>24 | 67.5 | 300W[3]<br>270W<br>250W | 4 @ 16 GT/s | 4800 MT/s | 128GB |
| Gold 6454S Processor[2] | 2.2 GHz[3]<br>2.4 GHz<br>2.6 GHz | 32[3]<br>24<br>16 | 60 | 270W[3]<br>250W<br>225W | 4 @ 16 GT/s | 4800 MT/s | 128GB |
| Gold 6430 Processor | 2.1 GHz | 32 | 60 | 270W | 3 @ 16 GT/s | 4400 MT/s | 128GB |
| Gold 6426Y Processor | 2.5 GHz | 16 | 37.5 | 185W | 3 @ 16 GT/s | 4800 MT/s | 128GB |
| Gold 6442Y Processor | 2.6 GHz | 24 | 60 | 225W | 3 @ 16 GT/s | 4800 MT/s | 128GB |
| Gold 6448Y Processor | 2.1 GHz | 32 | 60 | 225W | 3 @ 16 GT/s | 4800 MT/s | 128GB |
| Gold 6434 Processor | 3.7 GHz | 8 | 22.5 | 195W | 3 @ 16 GT/s | 4800 MT/s | 128GB |
| Gold 6444Y Processor | 3.6 GHz | 16 | 45 | 270W | 3 @ 16 GT/s | 4800 MT/s | 128GB |
| Platinum 8462Y+ Processor | 2.8 GHz | 32 | 60 | 300W | 3 @ 16 GT/s | 4800 MT/s | 128GB |

## Standard Features

| Intel Xeon Models | CPU Frequency | Cores | L3 Cache (MB) | Power | UPI | DDR5 | SGX Enclave size |
|---|---|---|---|---|---|---|---|
| Silver 4416+ Processor | 2 GHz | 20 | 37.5 | 165W | 2 @ 16 GT/s | 4000 MT/s | 64GB |
| Gold 5418Y Processor | 2 GHz | 24 | 45 | 185W | 3 @ 16 GT/s | 4400 MT/s | 128GB |
| Gold 5420+ Processor | 2 GHz | 28 | 52.5 | 205W | 3 @ 16 GT/s | 4400 MT/s | 128GB |
| Gold 6438Y+ Processor | 2 GHz | 32 | 60 | 205W | 3 @ 16 GT/s | 4800 MT/s | 128GB |
| Gold 6438M Processor | 2.2 GHz | 32 | 60 | 205W | 3 @ 16 GT/s | 4800 MT/s | 128GB |
| Gold 6418H Processor | 2.2 GHz | 24 | 60 | 185W | 3 @ 16 GT/s | 4800 MT/s | 512GB |
| Gold 6448H Processor | 2.2 GHz | 32 | 60 | 250W | 3 @ 16 GT/s | 4800 MT/s | 512GB |
| Platinum 9462 Processor | 2.7 GHz | 32 | 75 | 350W | 3 @ 16 GT/s | 4800 MT/s | 128GB |
| Gold 6438M Processor | 2.2 GHz | 32 | 60 | 205W | 3 @ 16 GT/s | 4800 MT/s | 128GB |
| Gold 5515+ Processor | 3.2 GHz | 8 | 22.5 | 165W | 3 @ 20 GT/s | 4800 MT/s | 128GB |
| Gold 6526Y Processor | 2.8 GHz | 16 | 37.5 | 195W | 3 @ 20 GT/s | 5200 MT/s | 128GB |
| Gold 6542Y Processor | 2.9 GHz | 24 | 60 | 250W | 3 @ 20 GT/s | 5200 MT/s | 128GB |
| Gold 6548Y+ Processor | 2.5 GHz | 32 | 60 | 250W | 3 @ 20 GT/s | 5200 MT/s | 128GB |
| Gold 6534 Processor | 3.9 GHz | 8 | 22.5 | 195W | 3 @ 20 GT/s | 4800 MT/s | 128GB |
| Gold 6544Y Processor | 3.6 GHz | 16 | 45 | 270W | 3 @ 20 GT/s | 5200 MT/s | 128GB |
| Platinum 8562Y+ Processor | 2.8 GHz | 32 | 60 | 300W | 3 @ 20 GT/s | 5600 MT/s | 512GB |
| Platinum 8568Y+ Processor | 2.3 GHz | 48 | 300 | 350W | 4 @ 20 GT/s | 5600 MT/s | 512GB |
| Platinum 8570 Processor | 2.1 GHz | 56 | 300 | 350W | 4 @ 20 GT/s | 5600 MT/s | 512GB |
| Platinum 8580 Processor | 2.0 GHz | 60 | 300 | 350W | 4 @ 20 GT/s | 5600 MT/s | 512GB |
| Platinum 8592+ Processor | 1.9 GHz | 64 | 320 | 350W | 4 @ 20 GT/s | 5600 MT/s | 512GB |
| Silver 4509Y Processor | 2.6 GHz | 8 | 22.5 | 125W | 2 @ 20 GT/s | 4400 MT/s | 64GB |
| Silver 4514Y Processor | 2.0 GHz | 16 | 30 | 150W | 2 @ 20 GT/s | 4400 MT/s | 64GB |
| Silver 4516Y+ Processor | 2.2 GHz | 24 | 45 | 185W | 2 @ 20 GT/s | 4400 MT/s | 64GB |
| Gold 5520+ Processor | 2.2 GHz | 28 | 52.5 | 205W | 3 @ 20 GT/s | 4800 MT/s | 128GB |
| Gold 6530 Processor | 2.1 GHz | 32 | 160 | 270W | 3 @ 20 GT/s | 4800 MT/s | 128GB |
| Gold 6538Y+ Processor | 2.2 GHz | 32 | 60 | 225W | 3 @ 20 GT/s | 5200 MT/s | 128GB |
| Platinum 8558 Processor | 2.1 GHz | 48 | 260 | 330W | 4 @ 20 GT/s | 5200 MT/s | 512GB |

**Notes:**

- [1]Deterministic base frequency rating only applicable to VM workloads. Other workloads may see throttling.
- [2]Supports Intel® Speed Select Performance Profile (SST-P), even though not being a "Y" processor.
- [3]Default Speed Select Performance Profile value.
- [4]HBM Die processor.

### Chipset

Intel C741 Chipset

**Notes:**For more information regarding Intel® chipsets, please see the following URL:
**https://www.intel.com/content/www/us/en/products/chipsets/server-chipsets.html**

### On System Management Chipset

HPE iLO 6 ASIC

Read and learn more in the **iLO QuickSpecs**.

# Standard Features

## Memory

One of the following depending on model.

| | |
|---|---|
| **Type** | HPE DDR5 Smart Memory, Registered (RDIMM) |
| **DIMM Slots Available** | 24 DIMM slots (12 DIMM slots per processor),<br>8 channels per processor (4 channels with 2 DIMM slots and 4 channels with 1 DIMM slot) |
| **Maximum capacity (RDIMM)** | 3.0 TB (24 x 128 GB RDIMM @4400 MT/s, 2DPC)<br>2.0 TB (16 x 128 GB RDIMM @4800 MT/s, 1DPC) |

**Notes:** The maximum memory speed is limited by the processor selection.

## Expansion Slots

### Primary Riser

**Notes:** Bus width indicates the number of physical electrical lanes running to the connector.

| Primary Riser | | | | | |
|---|---|---|---|---|---|
| **Slots #** | **Technology** | **Bus Width** | **Connector Width** | **Slot Form Factor** | **Notes** |
| 1 | N/A | N/A | N/A | N/A | N/A |
| 2* | PCIe 5.0 | x16 | x16 | Full height, half length | Processor 1 |
| 3 | PCIe 5.0 | x16 | x16 | Full height, half length | Processor 1 |

**Notes:** * Default slot 2 on the Primary Riser is empty and not available. It requires the Stacking Riser (P54305-B21) to enable x16 PCIe 5.0 in slot 2.

### Secondary Riser

**Notes:** Bus Width Indicates the number of physical electrical lanes running to the connector.

| Secondary Riser | | | | | |
|---|---|---|---|---|---|
| **Slots #** | **Technology** | **Bus Width** | **Connector Width** | **Slot Form Factor** | **Notes** |
| 4 | N/A | N/A | N/A | N/A | N/A |
| 5* | PCIe 5.0 | x16 | x16 | Full height, half length | Processor 2 |
| 6 | PCIe 5.0 | x16 | x16 | Full height, half length | Processor 2 |

**Notes:** * Default slot 5 on the Primary Riser is empty and not available. It requires the Stacking Riser (P54305-B21) to enable x16 PCIe 5.0 in slot 5.

## Graphics

### Integrated Video Standard

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

### HPE iLO 6 on system management memory

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

## Maximum Internal Storage

| Drive | Capacity | Configuration |
|---|---|---|
| Hot Plug SFF NVMe PCIe SSD | 122.88 TB | 8 x 15.36 TB |
| Hot Plug E3.S NVMe PCIe SSD | 61.44 TB | 8 x 7.68 TB |

# Standard Features

## Power Supply

- HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
  **Notes:** 1 available in 94% efficiency.
- HPE 1800W-2200W Flex Slot Titanium Hot Plug Power Supply Kit
  **Notes:** 1 available in 96% efficiency.

HPE Flexible Slot (Flex Slot) Power Supplies share a common electrical and physical design that allows for hot plug, tool-less installation into HPE ProLiant Gen11 Performance 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.

The standard 6-foot IEC C-13/C-14 jumper cord (A0K02A) is included with each standard AC power supply option kit. If a different power cord is required, please check the **ProLiant Power Cables** web page.

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**.

### European Union Erp Lot 9 Regulation

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 Flexible Slot power supplies are single-output, and part numbers 865438-B21, P03178-B21, and P44712-B21 are 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.

---

## Storage Controllers

### NVMe Boot Devices

- HPE NS204i-u Gen11 NVMe Hot Plug Boot Optimized Storage Device
  **Notes:**
  - Bus Width Indicates the number of physical electrical lanes running to the connector.
  - Two 480GB M.2 NVMe SSDs are included for RAID 1 OS boot.
  - Can be configured to be rear accessible or internal accessible.
  - Does not occupy PCIe slots on the DL380a Gen11 server

### Software RAID

- Intel® Virtual RAID on CPU (Intel® VROC)
  **Notes:**
  - Supports up to 8 direct attach NVMe bays on the DL380a Gen11 server.
  - Intel VROC NVMe is off by default and requires licensing, see options for details.
  - RAID support – 0/1/5/10, depending on licensing options.
  - Intel VROC for HPE ProLiant Gen10 Plus is an enterprise, hybrid Software RAID solution specifically designed for NVMe SSDs connected directly to the CPU. Intel VROC is a software-based solution utilizing Intel CPU to RAID or HBA direct connected drives and supports both Intel® SFF SSDs and HPE SFF SSDs.

### Tri-Mode Controller

- HPE MR416i-p Gen11 12G Controller
- HPE MR416i-o Gen11 12G Controller
- HPE SR932i-p Gen11 24G Controller

---

# Standard Features

## Interfaces

| | |
|---|---|
| **Serial Port** | 1 optional (rear) |
| **VGA Port** | 1 standard (rear) |
| **Network Ports** | None standard. Choice of OCP networking card or stand-up networking card required. |
| **HPE iLO Remote Management Network Port** | 1 Gb dedicated (rear) |
| **Front iLO Service Port** | 1 standard (front) |
| **USB 3.0** | 4 (1 front, 2 rear, 1 internal) |

## Operating Systems and Virtualization Software Support for ProLiant Servers

See **HPE Servers Support & Certification Matrices**

- **Microsoft Windows Server**
- **VMware ESXi**
- **Red Hat Enterprise Linux (RHEL)**
- **SUSE Linux Enterprise Server (SLES)**
- **Canonical Ubuntu**

## HPE Server UEFI

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

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

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

- Secure Boot and Secure Start enable for enhanced security
- Embedded UEFI Shell
- Operating system specific functionality
- Mass Configuration Deployment Tool using iLO RESTful API that is Redfish API Conformant
- Support for > 2.2 TB (using GPT) boot drives
- PXE boot support for IPv6 networks
- USB 3.0 Stack
- Workload Profiles for simple performance optimization

### UEFI Boot Mode only

- TPM 2.0 Support
- iSCSI Software Initiator Support.
- NVMe Boot Support
- HTTP/HTTPs Boot support as a PXE alternative.
- Platform Trust Technology (PTT) can be enabled.
- Boot support for option cards that only support a UEFI option ROM

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

## 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.

## Standard Features

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**

### Industry Standard Compliance

- ACPI 6.3 Compliant
- Advanced Encryption Standard (AES)
- Active Directory v1.0
- ASHRAE A3/A4
  **Notes:** For additional technical, thermal details regarding ambient temperature, humidity, and feature support, please visit **https://www.hpe.com/support/ASHRAEGen11**
- DMTF Systems Management Architecture for Server Hardware Command Line Protocol (SMASH CLP)
- Energy Star
- EU Lot9
  **Notes:**
  - 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 Flexible Slot power supplies are single-output, and part numbers 865438-B21, P03178-B21, and P44712-B21 are 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.
  - Please visit: **https://www.hpe.com/us/en/about/environment/msds-specs-more.html** for more information regarding HPE Lot 9 conformance.
- IPMI 2.0
- Microsoft® Logo certifications
- PCIe 3.0 Compliant
- PCIe 4.0 Compliant
- PCIe 5.0 Compliant
- PXE Support
- Redfish API
- Secure Digital 4.0
- SMBIOS 3.2
- SNMP v3
- TLS 1.2
- TPM 2.0 Support
- Triple Data Encryption Standard (3DES)
- UEFI (Unified Extensible Firmware Interface Forum) 2.6
- USB 2.0 Compliant
- USB 3.0 Compliant
- VGA Port

## Standard Features

### 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).
Learn more at **http://www.hpe.com/servers/uefi**.

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

**iLO RESTful API**
iLO RESTful API is Redfish API conformance 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**

### 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**.

**Active Health System Viewer**
Use the Active Health System Viewer, a web-based portal, to easily read AHS logs and speed problem resolution with HPE self-repair recommendations, to learn more visit: **http://www.hpe.com/servers/ahsv**.

**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).

**HPE iLO Mobile Application**
Enables the ability to access, deploy, and manage your server anytime from anywhere from select smartphones and mobile devices. For additional information please visit: **http://www.hpe.com/info/ilo/mobileapp**.

**RESTful Interface Tool**
RESTful Interface tool (iLO REST) 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 Standard can be used for inventory, health monitoring, alerting, and reporting without additional fees. It can monitor multiple HPE server generations. The user interface is similar to the HPE OneView Advanced version, but the software-defined functionality is not available. Learn more at **http://www.hpe.com/info/oneview.**

**HPE Systems Insight Manager (HPE SIM)**
Ideal for environments already using HPE SIM, it allows you to monitor the health of your HPE ProLiant Servers and HPE Integrity Servers. Also provides you with basic support for non-HPE servers. HPE SIM also integrates with Smart Update Manager to provide quick and seamless firmware updates. Learn more at **http://www.hpe.com/info/hpesim.**

# Standard Features

## Security

- UEFI Secure Boot and Secure Start support
- Tamper-free updates – components digitally signed and verified
- Immutable Silicon Root of Trust
- Ability to rollback firmware
- FIPS 140-2 validation
- Secure erase of NAND/User data
- Common Criteria certification
- iLO Security Modes
- Granular control over iLO interfaces
- Configurable for PCI DSS compliance
- TPM (Trusted Platform Module) 2.0 option
- Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser
- Bezel Locking Kit option
- Support for Commercial National Security Algorithms (CNSA)
- Chassis Intrusion detection option
- Secure Recovery – recover critical firmware to known good state on detection of compromised firmware

## Warranty

This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of Hewlett Packard Enterprise Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HPE 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, 3-Year Onsite support with next business day response. Warranty repairs may be accomplished using 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**

# Optional 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 full 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 brings a new level of automation to infrastructure management by taking a template driven approach to provisioning, updating, and integrating compute, storage, and networking infrastructure. It provides full-featured licenses which can be purchased for managing multiple HPE server.
To learn more visit **http://www.hpe.com/info/oneview**.

### HPE InfoSight for Servers

HPE InfoSight for Servers combines the cloud-based machine learning of InfoSight with the health and performance monitoring of Active Health System (AHS) and iLO to optimize performance and predict and prevent problems. The end result is an intelligent environment that modernizes IT operations and enhances the support experience by predicting and preventing the infrastructure issues that lead to application disruptions, wasted IT staff time, and missed business opportunities.
Learn more at **https://www.hpe.com/servers/infosight**

### HPE Insight Cluster Management Utility (CMU)

HPE Insight Cluster Management Utility is a HyperScale management framework that includes software for the centralized provisioning, management and monitoring of nodes and infrastructure. Learn more at **http://www.hpe.com/info/cmu**.

## One Config Simple (OCS/SCE)

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 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**

## Rack and Power Infrastructure

The story may end with servers, but it starts with the foundation that makes compute go – and business grow. We've reinvented our entire portfolio of rack and power products to make IT infrastructure more secure, more practical, and more efficient. In other words, we've 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've 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**.

## 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**

### 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**

### 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**

### 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**

### 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/completecare**

### 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**

# 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**

---

## 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/**

## 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

Sign into the HPE Support Center experience, featuring streamlined self-serve case creation and management capabilities with inline knowledge recommendations. You will also find personalized task alerts and powerful troubleshooting support through an intelligent virtual agent with seamless transition when needed to a live support agent.
**https://support.hpe.com/hpesc/public/home/signin**

### Consume IT On Your Terms

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

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

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

For more information
**http://www.hpe.com/services**

## Configuration Information

### Smart Templates from HPE

HPE is releasing new Smart Template technology in the One Config Advanced (OCA) configurator. These Templates represent the CTO equivalents of the top-selling BTO configurations. They are intended to provide simple starting points to assist you in easily creating and customizing your desired Server solutions. HPE Servers that have Platform Templates, developed by HPE Product Managers, will have a separate tab in the HPE OCA configurator.

### Workload Solutions Templates from HPE

The Workload Solutions Templates build on the Smart Templates technology to easily develop working configurations of the most compelling Workload Solutions. The templates complement the Reference Builds developed by HPE. Workload Solutions templates preconfigure some of the key architecture decisions and make it easier for Sellers to get started and complete a differentiated server solution for your customer's specific workload.

### Mainstream SKUs

HPE launched the Mainstream SKU initiative as a market-driven approach to Demand Steering. It is a simplified portfolio of our top selling options that meet the current and future market trends. HPE has committed to provide a more predictable and faster experience for these options. Mainstream SKUs enjoy higher safety stock levels and have higher fulfilment service levels than non-Mainstream SKUs. Mainstream orders are fulfilled +30% faster than non-Mainstream orders, have fewer shortages and better recovery dates. This platform has Mainstream SKUs in the options portfolio and is eligible for the improved Mainstream experience. Mainstream SKUs are designated with a Mainstream symbol in our configurators.

### Mainstream Configurations

HPE is using the new Smart Templates technology to present Mainstream configurations. All the options in a Mainstream configuration are pre-selected Mainstream SKUs to optimize the performance, predictability, and fulfilment experience. Check the Template section in our configurators for eligible Mainstream configurations.

---

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.
- All Factory Integrated Models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the server.
- Some options may not be integrated at the factory. Contact your local sales representative for additional information.

## Configuration Information

### Step 1: Base Configuration

| | |
|---|---|
| **CTO Server Models** | HPE ProLiant DL380a Gen11 4 Double Wide Configure-to-order Server |
| **SKU Number** | P54903-B21 |
| **TAA SKU*** | P54903-B21#GTA |
| **Processor** | Not included as standard |
| **DIMM Slots** | 24 DIMM slots |
| **Storage Controller** | Embedded Intel VROC NVMe RAID (requires licenses for non-Intel NVMe SSDs), choice of HPE Tri-Mode controllers |
| **PCIe** | Two standard and two optional |
| **Drive Cage** | Not included as standard |
| **Network Controller** | Choice of OCP 3.0 or stand-up network adapters for primary networking selection plus additional/optional stand-up network adapters<br>Choice of OCP 3.0 or stand-up network adapters<br>**Notes:** No embedded networking |
| **Fans** | 6 dual-rotor redundant system fans |
| **Management** | HPE iLO with Intelligent Provisioning (standard), iLO Advanced and OneView (optional)<br>HPE iLO Standard with Intelligent Provisioning (embedded),<br>HPE OneView Standard (requires download),<br>HPE iLO Advanced, HPE iLO Advanced Premium Security Edition, and HPE OneView Advanced (require licenses) |
| **USB** | 4 USB 3.0 (1 front, 2 rear, 1 internal) plus iLO front service port |
| **Trusted Platform Module (TPM)** | Embedded TPM<br>**Notes:** Disabled on shipments to China |

| | |
|---|---|
| **CTO Server Models** | HPE ProLiant DL380a Gen11 8 Single Wide Configure-to-order Server |
| **SKU Number** | P54902-B21 |
| **TAA SKU*** | P54902-B21#GTA |
| **Processor** | Not included as standard |
| **DIMM Slots** | 24 DIMM slots |
| **Storage Controller** | Embedded Intel VROC NVMe RAID (requires licenses for non-Intel NVMe SSDs), choice of HPE Tri-Mode controllers |
| **PCIe** | Two standard and two optional |
| **Drive Cage** | Not included as standard |
| **Network Controller** | Choice of OCP 3.0 or stand-up network adapters for primary networking selection plus additional/optional stand-up network adapters<br>Choice of OCP 3.0 or stand-up network adapters<br>**Notes:** No embedded networking |
| **Fans** | 6 dual-rotor redundant system fans |
| **Management** | HPE iLO with Intelligent Provisioning (standard), iLO Advanced and OneView (optional)<br>HPE iLO Standard with Intelligent Provisioning (embedded),<br>HPE OneView Standard (requires download),<br>HPE iLO Advanced, HPE iLO Advanced Premium Security Edition, and HPE OneView Advanced (require licenses) |
| **USB** | 4 USB 3.0 (1 front, 2 rear, 1 internal) plus iLO front service port |
| **Trusted Platform Module (TPM)** | Embedded TPM<br>**Notes:** Disabled on shipments to China |

**Notes:**

- *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).
- All CTO servers are Energy Star 3.0 compliant. After January 11, 2024, Energy Star 3.0 compliance is no longer valid. Energy Star 4.0 certification will be valid upon publication.

## Configuration Information

### Step 2: Choose Processors

Please select two processors from below.

**Notes:**

- DL380a Gen11 only supports dual processor configurations, not single processor configurations.
- Mixing of 2 different processor models is NOT supported.
- All SKUs below ship with processor only. Adequate heatsinks must be selected.
- Processors with TDP equal to or greater than 270W require High Performance Heatsink (P51832-B21).
- DDR5 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.
- Each processor feeds 2 x8 front NVMe connectors, supporting up to 4 drives. Sockets must be populated for NVMe connectors to be usable.

#### 4th Generation Intel Xeon Sapphire Rapids (Platinum, Gold, and Silver)

| E-Star Certified | **Notes:** Sapphire Rapids processors supports only PC5-4800B memory. | |
|---|---|---|
| Yes | Intel Xeon-Platinum 8480+ 2.0GHz 56-core 350W Processor for HPE | P49607-B21 |
| Yes | Intel Xeon-Platinum 8470 2.0GHz 52-core 350W Processor for HPE | P49606-B21 |
| Yes | Intel Xeon-Platinum 8468 2.1GHz 48-core 350W Processor for HPE | P49605-B21 |
| Yes | Intel Xeon-Platinum 8468V 2.4GHz 48-core 330W Processor for HPE | P49631-B21 |
| Yes | Intel Xeon-Platinum 8460Y+ 2.0GHz 40-core 300W Processor for HPE | P49604-B21 |
| Yes | Intel Xeon-Platinum 8458P 2.7GHz 44-core 350W Processor for HPE | P49632-B21 |
| Yes | Intel Xeon-Platinum 8452Y 2.0GHz 36-core 300W Processor for HPE | P49616-B21 |
| Yes | Intel Xeon-Gold 6454S 2.2GHz 32-core 270W Processor for HPE | P49654-B21 |
| Yes | Intel Xeon-Gold 6430 2.1GHz 32-core 270W Processor for HPE | P49614-B21 |
| No | Intel Xeon-Gold 6444Y 3.6GHz 16-core 270W Processor for HPE | P49602-B21 |
| | **Notes:** Above processors (270W or greater) require High Performance Heatsink (P51832-B21). | |
| Yes | Intel Xeon-Platinum 9462 2.7GHz 32-core 350W Processor for HPE | P49645-B21 |
| | **Notes:**<br>– HBM die<br>– Processor (270W or greater) require High Performance Heatsink (P51832-B21).<br>– Operating System support for HBM processor, see **HPE Servers Support & Certification Matrices** | |
| No | Intel Xeon-Gold 6426Y 2.5GHz 16-core 185W Processor for HPE | P49598-B21 |
| No | Intel Xeon-Gold 6442Y 2.6GHz 24-core 225W Processor for HPE | P49599-B21 |
| Yes | Intel Xeon-Gold 6448Y 2.1GHz 32-core 225W Processor for HPE | P49600-B21 |
| No | Intel Xeon-Gold 6434 3.7GHz 8-core 195W Processor for HPE | P49601-B21 |
| Yes | Intel Xeon-Platinum 8462Y+ 2.8GHz 32-core 300W Processor for HPE | P49603-B21 |
| No | Intel Xeon-Silver 4416+ 2.0GHz 20-core 165W Processor for HPE | P49611-B21 |
| No | Intel Xeon-Gold 5418Y 2.0GHz 24-core 185W Processor for HPE | P49612-B21 |
| No | Intel Xeon-Gold 5420+ 2.0GHz 28-core 205W Processor for HPE | P49613-B21 |
| No | Intel Xeon-Gold 6418H 2.1GHz 24-core 185W Processor for HPE | P49621-B21 |
| Yes | Intel Xeon-Gold 6448H 2.4GHz 32-core 250W Processor for HPE | P49622-B21 |
| Yes | Intel Xeon-Gold 6438Y+ 2.0GHz 32-core 205W Processor for HPE | P49615-B21 |
| Yes | Intel Xeon-Gold 6438M 2.2GHz 32-core 205W Processor for HPE | P49648-B21 |
| | **Notes:** Above processors (below 270W) are defaulted to Standard Heatsink (P51833-B21). However, customer may select High Performance Heatsink (P51832-B21) instead. | |

## Configuration Information

| E-Star Certified | 5th Generation Intel Xeon Emerald Rapids (Platinum, Gold, and Silver) | SKU |
|---|---|---|
| | **Notes:** Emerald Rapids processors supports only PC5-5600B / PC5-5200B memory. | |
| No | Intel Xeon-Gold 5515+ 3.2GHz 8-core 165W Processor for HPE | P67079-B21 |
| No | Intel Xeon-Gold 6526Y 2.8GHz 16-core 195W Processor for HPE | P67080-B21 |
| Yes | Intel Xeon-Gold 6542Y 2.9GHz 24-core 250W Processor for HPE | P67081-B21 |
| Yes | Intel Xeon-Gold 6548Y+ 2.5GHz 32-core 250W Processor for HPE | P67082-B21 |
| No | Intel Xeon-Gold 6534 3.9GHz 8-core 195W Processor for HPE | P67083-B21 |
| No | Intel Xeon-Silver 4509Y 2.6GHz 8-core 125W Processor for HPE | P67090-B21 |
| No | Intel Xeon-Silver 4514Y 2.0GHz 16-core 150W Processor for HPE | P67092-B21 |
| No | Intel Xeon-Silver 4516Y+ 2.2GHz 24-core 185W Processor for HPE | P67093-B21 |
| No | Intel Xeon-Gold 5520+ 2.2GHz 28-core 205W Processor for HPE | P67094-B21 |
| Yes | Intel Xeon-Gold 6538Y+ 2.2GHz 32-core 225W Processor for HPE | P67096-B21 |
| | **Notes:** Above processors (below 270W) are defaulted to Standard Heatsink (P51833-B21). However, customer may select High Performance Heatsink (P51832-B21) instead. | |
| No | Intel Xeon-Gold 6544Y 3.6GHz 16-core 270W Processor for HPE | P67084-B21 |
| Yes | Intel Xeon-Platinum 8562Y+ 2.8GHz 32-core 300W Processor for HPE | P67085-B21 |
| Yes | Intel Xeon-Platinum 8568Y+ 2.3GHz 48-core 350W Processor for HPE | P67086-B21 |
| Yes | Intel Xeon-Platinum 8570 2.1GHz 56-core 350W Processor for HPE | P67087-B21 |
| Yes | Intel Xeon-Platinum 8580 2.0GHz 60-core 350W Processor for HPE | P67088-B21 |
| Yes | Intel Xeon-Platinum 8592+ 1.9GHz 64-core 350W Processor for HPE | P67089-B21 |
| Yes | Intel Xeon-Gold 6530 2.1GHz 32-core 270W Processor for HPE | P67095-B21 |
| Yes | Intel Xeon-Platinum 8558 2.1GHz 48-core 330W Processor for HPE | P67097-B21 |
| | **Notes:** Above processors (270W or greater) require High Performance Heatsink (P51832-B21). | |

### Step 3: Choose GPUs

Please select the GPU from the options below.
For new Gen11 memory population rule whitepaper and optimal memory performance guidelines, please go to:
**HPE Memory Population Rules**

**Notes:**

- Double Wide GPU can be selected in multiples of 2 only (i.e. Qty2 or Qty4).
- Mixing of different GPU models is not supported.
- System memory capacity is recommended to be 2x GPU memory capacity.

#### Computation and Graphics Accelerators

| | |
|---|---|
| NVIDIA H100 NVL 94GB PCIe Accelerator for HPE | S2D86C |
| NVIDIA H100 80GB PCIe Accelerator for HPE | R9S41C |
| NVIDIA L40 48GB PCIe Accelerator for HPE | S0K90C |
| NVIDIA L40S 48GB PCIe Accelerator | S2L70C |
| Intel Data Center GPU Max 1100 48GB Accelerator for HPE | S1T66C |

**Notes:**

- Supported in front GPU cages of DL380a Gen11 4 Double Wide CTO Server (P54903-B21) only.
- Must select 2 or 4 pcs. 0-GPU configurations are not allowed.
- GPU display ports are not externally accessible once installed. Chassis front grille is not removeable.
- H100, L40, L40S and Max 1100 require one DL380a Gen11 GPU 16p Pwr Cbl Kit (P59578-B21).
- H100 NVL requires one DL380a Gen11 GPU 16p HW Pwr Cbl Kit (P70192-B21).

## Configuration Information

NVIDIA L4 24GB PCIe Accelerator for HPE S0K89C

- Supported in the front GPU cages of DL380a Gen11 8 Single Wide CTO Server (P54902-B21) only.
- Must select 8 pcs.
- No power cable needed to be added.

NVIDIA Ampere 2-way 2-slot Bridge for HPE R6V66A

**Notes:** Select 3 pcs for every pair of H100 GPUs.

Intel Xe Link Bridge for HPE S1T67C

**Notes:** Select 1 pcs for every pair of Intel Max Series 1100 GPUs. (2 pcs if 4 GPUs selected)

HPE ProLiant DL380a Gen11 GPU 16-pin FIO Power Cable Kit P59578-B21

**Notes:** This GPU power cable kit is used to support up to (4) pcs of NVIDA H100, L40(s), or Max Series 1100 GPU.

HPE ProLiant DL380a Gen11 GPU 16-pin FIO HW Power Cable Kit P70192-B21

**Notes:** This GPU power cable kit is used to support up to (4) pcs of NVIDA H100 NVL.

HPE ProLiant DL380a Gen11 GPU 8-pin FIO Power Cable Kit P59579-B21

**Notes:** This GPU power cable kit is used to support up to (4) pcs of NVIDA A100.

### GPU Information

| Part Number | Card | TDP | PCIe Speed | Qty. Support | DL380a Gen11 Configuration | |
|---|---|---|---|---|---|---|
| | | | | | Intel XCC | Intel MCC |
| S2D86C | NVIDIA H100 NVL 94GB PCIe Accelerator for HPE | 400W | Gen5 | 2 or 4 | PCIe or OCP cards, QSFP28 or lower (DAC cables only): 25C | PCIe or OCP cards, QSFP28 or lower (DAC cables only): 25C |
| R9S41C | NVIDIA H100 80GB PCIe Accelerator for HPE | 350W | Gen5 | 2 or 4 | PCIe or OCP cards, QSFP28 or lower (DAC cables only): 25C | PCIe or OCP cards, QSFP28 or lower (DAC cables only): 25C |
| S0K90C | NVIDIA L40 48GB PCIe Accelerator for HPE | 300W | Gen4 | 2 or 4 | PCIe or OCP cards, QSFP28 or lower: 25C | PCIe or OCP cards, QSFP28 or lower: QuickSpec Compliant |
| S2L70C | NVIDIA L40S 48GB PCIe Accelerator for HPE | 350W | Gen4 | 2 or 4 | PCIe or OCP cards, QSFP28 or lower (DAC cables only): 25C | PCIe or OCP cards, QSFP28 or lower (DAC cables only): 25C |
| S0K89C | NVIDIA L4 24GB PCIe Accelerator for HPE | 72W | Gen4 | 8 | PCIe or OCP cards, QSFP28 or lower: 25C | PCIe or OCP cards, QSFP28 or lower: QuickSpec Compliant |
| S1T66C | Intel Max Series 1100 GPU for HPE | 300W | Gen5 | 2 or 4 | PCIe or OCP cards, QSFP28 or lower: 25C | PCIe or OCP cards, QSFP28 or lower: QuickSpec Compliant |

## Configuration Information

### Step 4: Choose Memory Options

Please select two or more memory kits from below.
For new Gen11 memory population rule whitepaper and optimal memory performance guidelines, please go to:
**HPE Memory Population Rules**

**Notes:**

- Quantity of memory DIMMs selected per socket must be 1, 2, 4, 6, 8, or 12. For DL380a Gen11, select 2, 4, 8, 12, 16, or 24 DIMMs.
- Mixing of 3DS memory and non-3DS memory is not supported.
- Rank mixing is not allowed.
- No x4 mixing with x8 across a socket.
- 4800 MT/s memory SKUs offer a transfer rate of up to 4800 MT/s at 1 DIMM per channel and up to 4400 MT/s at 2 DIMMs per channel, depending on CPU selection. The maximum memory speed and capacity is a function of the memory type, memory configuration, and processor model.
- If 96GB PC5-4800 memory is selected then Qty 16 of 96GB DIMM must be selected. No other quantities of this memory is supported.
- If 96GB PC5-5600 memory is selected then only Qty 2, 12, 16, 24 allowed for selection. No other quantities of this memory is supported.
- HPE Server Memory compatibility for a specific server platform may vary or be limited within a server platform depending upon the specific configuration being requested. Because each server environment and requirements can vary, memory compatibility is based not only upon the server family but may also be affected by the amount and type of additional hardware options installed within a specific server configuration. For this reason, some HPE memory DIMMs may be qualified for an HPE server model or family and yet occasionally not be supported with some configurations within that server family.

**Registered DIMMs (RDIMMs)**

| | |
|---|---|
| HPE 16GB (1x16GB) Single Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit | P43322-B21 |
| HPE 32GB (1x32GB) Dual Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit | P43328-B21 |
| HPE 64GB (1x64GB) Dual Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit | P43331-B21 |
| HPE 96GB (1x96GB) Dual Rank x4 DDR5-4800 CAS-46-45-45 EC8 Registered Smart Memory Kit | P66675-B21 |
| HPE 128GB (1x128GB) Quad Rank x4 DDR5-4800 CAS-46-39-39 EC8 Registered 3DS Smart Memory Kit | P43334-B21 |
| HPE 16GB (1x16GB) Single Rank x8 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit | P64705-B21 |
| HPE 32GB (1x32GB) Dual Rank x8 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit | P64706-B21 |
| HPE 64GB (1x64GB) Dual Rank x4 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit | P64707-B21 |
| HPE 96GB (1x96GB) Dual Rank x4 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit | P64708-B21 |
| HPE 128GB (1x128GB) Quad Rank x4 DDR5-5600 CAS-52-45-45 EC8 Registered 3DS Smart Memory Kit | P64709-B21 |

### Step 5: Choose Storage Options

Please select one drive cage from below.

DL380a Gen11 supports balanced storage configuration via direct connection or dual controllers, delivering consistent high performance across two processors

**Notes:**

- DL380a Gen11 CTO Servers do not include drive cages.
- DL380a Gen11 only supports NVMe SSDs – U.3, E3.S
- Mixing of storage controllers is not supported.

## Configuration Information

### Drive Cage

HPE ProLiant DL380a Gen11 8SFF x4 U.3 NVMe BC Drive Cage Kit P54302-B21

**Notes:**

- Requires selection of Direct Attach Cable or PCIe Tri Mode (TM) Cable or OROC Tri Mode (TM) Cable
- Supports up to 8 U.3 NVMe drives balanced across two processors.
- Maximum quantity = 1
- Balanced direct NVMe config: Requires selection of Direct Connected Cable Kit (P55704-B21) to support 8 drives balanced across two processors.
- Balanced NVMe with type-p controllers: Requires selection of Type-p Prim TM Cbl Kit (P55706-B21) and Type-p Sec TM Cbl Kit (P56362-B21) to support 8 drives balanced across two processors via two type-p tri-mode controllers.
- Balanced NVMe with OROC controllers: Requires selection of OROC Prim TM Cbl Kit (P55708-B21) and OROC Sec TM Cbl Kit (P58715-B21) to support 8 drives balanced across two processors via two OROC tri-mode controllers.
- Unbalanced NVMe with single SR932i-p controller: Requires selection of 2 Type-p Prim TM Cbl Kit (P55706-B21).
- Unbalanced NVMe with single MR416i-p controller: Requires selection of 1 Type-p Prim TM Cbl Kit (P55706-B21) to support 4 drives.
- Unbalanced NVMe with single OROC (MR416i-o or SR416i-o): Requires selection of OROC Prim TM Cbl Kit (P55708-B21) to install on OCP1 to support 4 drives.

HPE ProLiant DL380a Gen11 8EDSFF x4 NVMe Drive Cage Kit P54304-B21

**Notes:** If this Drive Cage is selected then Direct Attach Cable must be selected and defaulted.

### HPE Tri-Mode Controllers

**Notes:**

- All tri-mode controllers require the selection of either the Smart Storage Battery (P01367-B21) or Smart Hybrid Capacitor (P02381-B21), which support multiple devices and are sold separately.
- MegaRAID tools cannot be used to script and configure SmartRAID controllers.
- No tri-mode controllers can be selected with the 8EDSFF drive cage (P54304-B21)
- Mixing of storage controllers is not supported.

HPE MR416i-o Gen11 x16 Lanes 8GB Cache OCP SPDM Storage Controller P47781-B21

**Notes:**

- Maximum quantity = 2
- 1pc of MR416i-o can support up to 4 NVMe Gen4x4 with unbalanced I/O performance from one processor:
  - Must select 1pc of OROC Prim TM Cbl Kit (P55708-B21).
- To achieve balanced I/O performance across two processors and support up to 8 NVMe drives, select 2pcs of MR416i-o:
  - Must select OCP2 Upgrade Cbl Kit (P51943-B21).
  - Must select 1 pc of OROC Prim TM Cbl Kit (P55708-B21) and 1pc of OROC Sec TM Cbl Kit (P58715-B21).
- Both OCP slots will be occupied.

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

**Notes:**

- Maximum quantity = 2
- 1pc of MR416i-p can support up to 4 NVMe Gen4x4 with unbalanced I/O performance from one processor:
  - Must select 1pc of Type-p Prim TM Cbl Kit (P55706-B21).

## Configuration Information

- To achieve balanced I/O performance across two processors and support up to 8 NVMe drives, select 2pcs of MR416i-p:
  - Installed on PCIe slot 2 and 5, or slot 3 and 6.
  - When installed on slot 2 and 5, 2pcs of Stacking Riser (P54305-B21) are required.
- Must select 1 pc of Type-p Prim TM Cbl Kit (P55706-B21) and 1pc of Type-p Sec TM Cbl Kit (P56362-B21).

HPE SR932i-p Gen11 x32 Lanes 8GB Wide Cache PCI SPDM Plug-in Storage Controller P47184-B21

**Notes:**
- Maximum quantity = 1
- 1pc of MR416i-p can support up to 8 NVMe Gen4x4 with unbalanced I/O performance from one processor.
  - Must select 2 pcs of Type-p Prim TM Cbl Kit (P55706-B21).

### HPE Energy Packs

HPE 96W Smart Storage Lithium-ion Battery with 260mm Cable Kit P01367-B21

HPE Smart Storage Hybrid Capacitor with 260mm Cable Kit P02381-B21

### Software RAID Controllers

Intel Virtual RAID on CPU Premium FIO Software for HPE R7J57A

Intel Virtual RAID on CPU Standard FIO Software for HPE S0E37A

### HPE Boot Controller

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

**Notes:**
- Two 480GB M.2 NVMe SSDs are included for RAID 1 OS boot.
- Maximum quantity = 1
- Requires either DL380a Gen11 NS204i-u Rear Enable Kit (P55710-B21) or HPE DL380a G11 NS204i-u Int Enable Kit (P58716-B21).
- Can be configured to be rear accessible by selecting P55710-B21 for better serviceability.
- Can be configured to be internal accessible by selecting P58716-B21 for better security.
- Does not occupy PCIe slots.

### HPE DL380a Gen11 Storage Cables

HPE ProLiant DL380a Gen11 Direct Connected NVMe Cable Kit P55704-B21

**Notes:**
- Qty 1 is used to support 8 NVMe drives directly from the system board to drive backplanes.
- Supports 8SFF U.3 (P54302-B21), and 8EDSFF (P54304-B21) drive cage kits.
- When this cable kit is selected, Stacking Riser Kit (P54305-B21) cannot be selected, and PCIe slot 2 and 5 will not be available.

HPE ProLiant DL380a Gen11 Type-p Controller Primary Tri-Mode Cable Kit P55706-B21

**Notes:** Qty 1 is used to connect 8SFF U.3to tri-mode controller on Primary Riser to support 4 x4 NVMe SSDs.

HPE ProLiant DL380a Gen11 Type-p Controller Secondary Tri-Mode Cable Kit P56362-B21

**Notes:** Qty 1 is used to connect 8SFF U.3 to tri-mode controller on Secondary Riser to support 4 x4 NVMe SSDs.

HPE ProLiant DL380a Gen11 OROC Primary Tri-Mode Cable Kit P55708-B21

**Notes:** Qty 1 is used to connect 8SFF U.3 to tri-mode controller on OCP1 to support 4 x4 NVMe SSDs.

HPE ProLiant DL380a Gen11 OROC Secondary Tri-Mode Cable Kit P58715-B21

**Notes:** Qty 1 is used to connect 8SFF U.3 to tri-mode controller on OCP2 to support 4 x4 NVMe SSDs.

## Configuration Information

### Step 6: Choose Power Supplies

**Notes:**

- DL380a Gen11 4DW CTO Server requires 4 power supplies to be selected.
- DL380a Gen11 8SW CTO Server requires 2 power supplies (identical) to be selected.
- Select 2 identical power supplies for power domain 1 (PSU 1 & 2).
- Select 2 identical power supplies for power domain 2 (PSU 3 & 4).
- Mixing of 2 different power supplies in the same power domain is not supported.
- Prior to making a power supply selection it is highly recommended that the HPE Power Advisor is run to determine the right size power supply for your server configuration. The HPE Power Advisor is located at: **http://www.hpe.com/info/hppoweradvisor**.

**HPE Flex Slot Power Supplies**

| | |
|---|---|
| HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit | P38997-B21 |
| HPE 1800W-2200W Flex Slot Titanium Hot Plug Power Supply Kit | P44712-B21 |

### Step 7: Choose additional options for Factory Integration from Core and Additional Options sections below

## Core 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.

### Software as a Service Management

#### HPE GreenLake for Compute Ops Management

**Base SKU**

| | |
|---|---|
| HPE GreenLake for Compute Ops Management Enhanced 3-year Upfront ProLiant SaaS | R7A11AAE |

**Upgrade SKUS**

| | |
|---|---|
| HPE GreenLake for Compute Ops Management Enhanced 1-year Upfront ProLiant SaaS | R7A10AAE |
| HPE GreenLake for Compute Ops Management Enhanced 5-year Upfront ProLiant SaaS | R7A12AAE |

#### HPE OneView

| | |
|---|---|
| HPE OneView including 3yr 24x7 Support Flexible Quantity E-LTU | E5Y35AAE |
| HPE OneView w/o iLO including 3yr 24x7 Support Flexible Quantity E-LTU | P8B26AAE |

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**

### HPE Cooling Options

| | |
|---|---|
| HPE Alletra Storage Server 4120 Standard Heat Sink Kit | P51833-B21 |
| HPE Alletra Storage Server 4120 High Performance Heat Sink Kit | P51832-B21 |

**Notes:** High performance heak sink required for processors with TDP equal to or greater than 270W.

### HPE I/O Expansion Options

**Notes:** The Primary Riser with PCIe slot 3 and the Secondary Riser with PCIe slot 6 are included in the server by default.

| | |
|---|---|
| HPE ProLiant DL380a Gen11 Stacking Riser Kit | P54305-B21 |

**Notes:**

- Qty 1 is used to enable either PCIe slot 2 or PCIe slot 5.
- Maximum quantity = 2

### OCP 3.0 Enablement

| | |
|---|---|
| HPE Alletra Storage Server 4120 OCP1 Upgrade Cable Kit | P51942-B21 |

**Notes:** Qty 1 is used to upgrade OCP1 from PCIe 5.0 x8 to x16.

| | |
|---|---|
| HPE Alletra Storage Server 4120 OCP2 Upgrade Cable Kit | P51943-B21 |

**Notes:** Qty 1 is used to enable OCP2 PCIe 5.0 x16.

### HPE Optical Drives

| | |
|---|---|
| HPE Mobile USB DVD-RW Optical Drive | 701498-B21 |

### HPE Solid State Drives

For SSD selection guidance, please visit **https://ssd.hpe.com/**

#### Read Intensive – NVMe – EDSFF – Solid State Drives

| | |
|---|---|
| HPE 1.92TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 EDSFF CD7 SSD | P56585-B21 |
| HPE 3.84TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 EDSFF CD7 SSD | P56586-B21 |
| HPE 7.68TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 EDSFF CD7 SSD | P56587-B21 |
| HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM PM1743 SSD | P57799-B21 |

## Core Options

| | |
|---|---|
| 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 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 3.2TB 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 |

**Notes:** EDSFF drives can be selected with EDSFF Drive Cage only.

### Read Intensive - NVMe - SFF - Solid State Drives

| | |
|---|---|
| HPE 15.36TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 CM7 SSD | P63841-B21 |
| HPE 15.36TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD | P50224-B21 |
| HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 CM7 SSD | P63837-B21 |
| HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD | P50222-B21 |
| HPE 7.68TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static V2 Multi Vendor SSD | P64848-B21 |
| HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 CM7 SSD | P63833-B21 |
| HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD | P50219-B21 |
| HPE 3.84TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static V2 Multi Vendor SSD | P64846-B21 |
| HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 CM7 SSD | P63829-B21 |
| HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD | P50216-B21 |
| HPE 1.92TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static V2 Multi Vendor SSD | P64844-B21 |
| HPE 960GB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static V2 Multi Vendor SSD | P64842-B21 |

### Mixed Use - NVMe - SFF - Solid State Drives

| | |
|---|---|
| HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 CM7 SSD | P63853-B21 |
| HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD | P50233-B21 |
| HPE 6.4TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD | P65023-B21 |
| HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 CM7 SSD | P63849-B21 |
| HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD | P50230-B21 |
| HPE 3.2TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD | P65015-B21 |
| HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 CM7 SSD | P63845-B21 |
| HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD | P50227-B21 |
| HPE 1.6TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD | P65007-B21 |
| HPE 800GB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD | P64999-B21 |

### Mixed Use - NVMe - SFF – FIPS Solid State Drives

| | |
|---|---|
| HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC Self-encrypting FIPS U.3 CM6 SSD | P41405-B21 |
| HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF BC Self-encrypting FIPS U.3 CM6 SSD | P41404-B21 |

### Read Intensive - NVMe - SFF – FIPS Solid State Drives

| | |
|---|---|
| HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC Self-encrypting FIPS U.3 CM6 SSD | P41403-B21 |
| HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC Self-encrypting FIPS U.3 CM6 SSD | P41402-B21 |

**Notes:**

- With CM6 FIPS drives: If any of the NVMe SED drive is selected then either direct NVMe config (with Direct Connected Cable Kit) or any MR series tri mode controller (MR416i-p, MR416i-o) must be selected.
- iLO Advanced is required for Remote Key Management. Key is stored in remote key manager.
- With direct connected SED drives, TPM 2.0 (embedded in the server) is required for Local Key Management. Keys will be encrypted locally by TPM and stored locally.
- With MR controller SED drives, TPM is not required for Local Key Management as Key is stored in controller.

## Core Options

### Hard Drive Blank Kits

| | |
|---|---|
| HPE Small Form Factor Hard Drive Blank Kit | 666987-B21 |

### HPE Networking

The DL380a Gen11 CTO server does not come with embedded networking, hence the requirement to configure with either a PCIe or OCP networking adapter.

#### 1 Gigabit Ethernet adapters

| | |
|---|---|
| Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T Adapter for HPE | P51178-B21 |
| Intel I350-T4 Ethernet 1Gb 4-port BASE-T Adapter for HPE | P21106-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 |

#### 25 Gigabit Ethernet adapters

| | |
|---|---|
| Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE | P26264-B21 |
| Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE | P26262-B21 |
| Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE | P08443-B21 |
| Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE | P08458-B21 |
| Mellanox MCX631102AS-ADAT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE | P42044-B21 |

#### 100 Gigabit Ethernet Adapters

| | |
|---|---|
| Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 Adapter for HPE | P25960-B21 |
| Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE | P21112-B21 |

#### 200 Gigabit Ethernet Adapters

| | |
|---|---|
| Mellanox MCX623105AS-VDAT Ethernet 200Gb 1-port QSFP56 Adapter for HPE | P10180-B21 |

#### OCP 3.0 Adapters

| | |
|---|---|
| Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE | P51181-B21 |
| Intel I350-T4 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE | P08449-B21 |
| Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T OCP3 Adapter for HPE | P10097-B21 |
| Broadcom BCM57412 Ethernet 10Gb 2-port SFP+ OCP3 Adapter for HPE | P26256-B21 |
| Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE | P26269-B21 |
| Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE | P10115-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 |
| Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 OCP3 Adapter for HPE | P22767-B21 |

### HPE InfiniBand

| | |
|---|---|
| HPE InfiniBand HDR100/Ethernet 100Gb 1-port QSFP56 PCIe4 x16 MCX653105A-ECAT Adapter | P23665-B21 |
| HPE InfiniBand HDR100/Ethernet 100Gb 2-port QSFP56 PCIe4 x16 MCX653106A-ECAT Adapter | P23666-B21 |
| HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 MCX653105A-HDAT Adapter | P23664-B21 |
| HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 MCX653106A-HDAT Adapter | P31324-B21 |
| HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 OCP3 MCX653435A-HDAI Adapter | P31323-B21 |
| HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 OCP3 MCX653436A-HDAI Adapter | P31348-B21 |
| HPE InfiniBand NDR 1-port OSFP PCIe5 x16 MCX75310AAS-NEAT Adapter | P45641-B21 |
| HPE InfiniBand NDR200 1-port OSFP PCIe5 x16 MCX75310AAS-HEAT Adapter | P45642-B21 |

### HPE Omni-Path

| | |
|---|---|
| HPE 100Gb 1-port OP101 QSFP28 x16 PCIe Gen3 with Intel Omni-Path Architecture Adapter | 829335-B21 |

**Notes:** Following Message to be displayed as warning message in OCA and CLIC: “Ambient Temp to be 25deg C. Please refer to Quickspecs for more details on Ambient Temperature requirements.”

# 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.

## HPE Storage Options

### Emulex Fibre Channel HBAs

| | |
|---|---|
| HPE SN1610E 32Gb 1-port Fibre Channel Host Bus Adapter | R2J62A |
| HPE SN1610E 32Gb 2-port Fibre Channel Host Bus Adapter | R2J63A |
| HPE SN1700E 64Gb 1-port Fibre Channel Host Bus Adapter | R7N77A |
| HPE SN1700E 64Gb 2-port Fibre Channel Host Bus Adapter | R7N78A |

### QLogic Fibre Channel HBAs

| | |
|---|---|
| HPE SN1610Q 32Gb 1-port Fibre Channel Host Bus Adapter | R2E08A |
| HPE SN1610Q 32Gb 2-port Fibre Channel Host Bus Adapter | R2E09A |
| HPE SN1700Q 64Gb 1-port Fibre Channel Host Bus Adapter | R7N86A |
| HPE SN1700Q 64Gb 2-port Fibre Channel Host Bus Adapter | R7N87A |

## Embedded Management

### HPE iLO Common Password FIO Setting

| | |
|---|---|
| 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

### HPE iLO Advanced

| | |
|---|---|
| HPE iLO Advanced Electronic License with 1yr Support on iLO Licensed Features | E6U59ABE |
| HPE iLO Advanced 1-server License with 1yr Support on iLO Licensed Features | 512485-B21 |
| HPE iLO Advanced Flexible Quantity License with 1yr Support on iLO Licensed Features | 512486-B21 |
| HPE iLO Advanced AKA Tracking License with 1yr Support on iLO Licensed Features | 512487-B21 |
| HPE iLO Advanced 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 Converged Infrastructure Management Software

### HPE OneView Advanced (with HPE iLO Advanced)

| | |
|---|---|
| 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 |
| HPE OneView including 3yr 24x7 Support Physical 1-server LTU | E5Y34A |
| HPE OneView including 3yr 24x7 Support Flexible Quantity E-LTU | E5Y35AAE |

### HPE OneView Advanced (without HPE iLO Advanced)

| | |
|---|---|
| HPE OneView w/o iLO including 3yr 24x7 Support 1-server FIO LTU | P8B31A |
| HPE OneView w/o iLO including 3yr 24x7 Support 1-server LTU | P8B24A |

## Additional Options

| | |
|---|---|
| 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 |

**Notes:** Licenses ship without media. The HPE OneView Media Kit can be ordered separately or can be **downloaded**.

### HPE Security

| | |
|---|---|
| HPE Gen11 2U Bezel Kit | P50400-B21 |
| HPE Bezel Lock Kit | 875519-B21 |

**Notes:** Requires the bezel kit

| | |
|---|---|
| HPE ProLiant DL385 Gen11 Intrusion Cable Kit | P55713-B21 |

**Notes:** This provides a physical connection from the chassis board and hood and detects any physical intrusion into the chassis, providing security during the entire supply chain process of shipping, receiving, distribution, and operation.

### HPE Cable Options

| | |
|---|---|
| HPE ProLiant DL3X5 Serial Port Enablement Kit | P50887-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.

### HPE Uninterruptible Power Systems (UPS)

- To learn more, please visit the **HPE Uninterruptible Power Systems (UPS)** web page.
- Please see the **HPE Direct Flow 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 Rail Kits

Ball bearing 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:**

- 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 number of people to use for any installation.
- 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.

| | |
|---|---|
| HPE Ball Bearing Rail 8 Kit | P52345-B21 |

**Notes:** This rail kit does not include the cable management arm (P28726-B21).

| | |
|---|---|
| HPE Apollo 4200 Gen10 Plus Cable Management Arm | P28726-B21 |

## HPE Support Services

### Installation & Start-up Services

| | |
|---|---|
| HPE Proliant DL/ML Install Service | U4554E |
| HPE Proliant DL/ML Startup Service | U4555E |

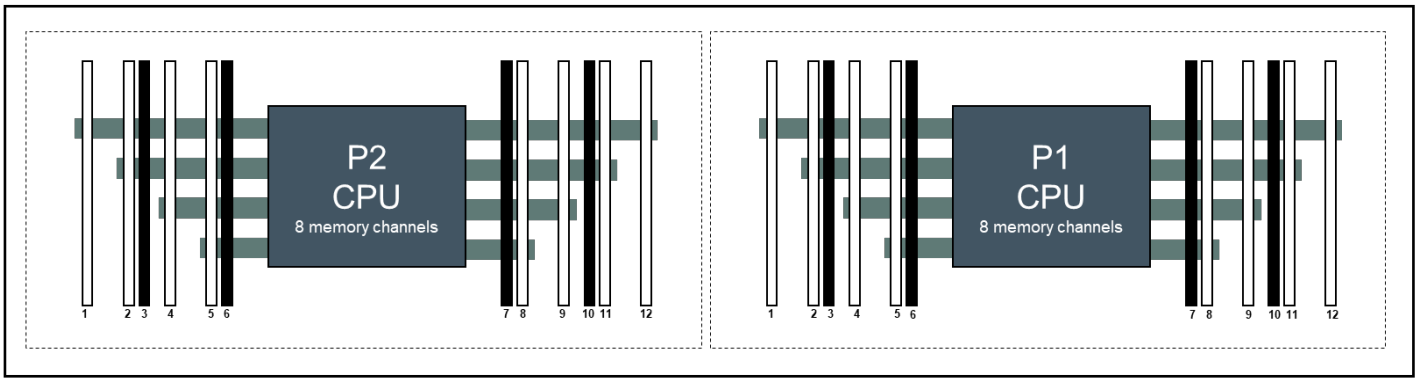
### Tech Care

| | |
|---|---|
| HPE 3 Year Tech Care Essential DL380a Gen11 HW Service | H38YKE |
| HPE 3 Year Tech Care Essential wDMR DL380a Gen11 HW Service | H38YLE |
| HPE 5 Year Tech Care Essential DL380a Gen11 HW Service | H38ZQE |
| HPE 5 Year Tech Care Essential wDMR DL380a Gen11 HW Service | H38ZRE |

**Notes:** For a full listing of support services available for this server, please visit **http://www.hpe.com/services**.

# Memory

## Memory Population guidelines




**Front of Server**
**HPE ProLiant DL380a Gen11**

| HPE ProLiant DL380a Gen11 per CPU DIMM population order | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DIMM population order** | | | | | | | | | | | | |
| **DIMM slot** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** |
| **1 DIMM** | | | | | | | | 8 | | | | |
| **2 DIMMs**[2] | | 2 | | | | | | 8 | | | | |
| **4 DIMMs**[2] | | 2 | | | 5 | | | 8 | | | 11 | |
| **6 DIMMs** | | 2 | | 4 | 5 | | | 8 | | | 11 | 12 |
| **8 DIMMs**[1,2] | 1 | 2 | | 4 | 5 | | | 8 | 9 | | 11 | 12 |
| **12 DIMMs** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

**Notes:**

- Cells without entries represent configurations not supported, and if populated, the server may result in non-optimal memory performance or other unexpected behavior.
- [1] Support SGX (Software Guard Extensions).
- [2] Support Hemi (hemisphere mode).

### General Memory Population Rules and Guidelines:

- Install DIMMs only if the corresponding processor is installed.
- If only one processor is installed in a two-processor system, only half of the DIMM slots are available.
- To maximize performance, it is recommended to balance the total memory capacity between all installed processors.
- When two processors are installed, balance the DIMMs across the two processors.
- White DIMM slots denote the first slot to be populated in a channel.
- Mixing of RDIMM types is not supported.
- 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.
- For details on the HPE Server Memory Options Population Rules, visit: **https://hpe.seismic.com/Link/Content/DCjjRTHfP6C8HGFRbjWJ7B37H43d**
- 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**.

## Memory

| Registered DIMM (RDIMM) | | | | |
|---|---|---|---|---|
| **HPE SKU P/N** | **P43322-B21** | **P43328-B21** | **P43331-B21** | **P43334-B21** |
| **SKU Description** | HPE 16GB 1Rx8 PC5-4800B-R Smart Kit | HPE 32GB 2Rx8 PC5-4800B-R Smart Kit | HPE 64GB 2Rx4 PC5-4800B-R Smart Kit | HPE 128GB 4Rx4 PC5-4800B-R 3DS Smart Kit |
| **DIMM Capacity** | 16GB | 32GB | 64GB | 128GB |
| **DIMM Rank** | Single Rank (1R) | Dual Rank (2R) | Dual Rank (2R) | Quad Rank (4R) |
| **Voltage** | 1.1V | 1.1V | 1.1V | 1.1V |
| **DRAM Depth [bit]** | 2G | 2G | 4G | 4G |
| **DRAM Width [bit]** | x8 | x8 | x4 | x4 |
| **DRAM Density** | 16Gb | 16Gb | 16Gb | 16Gb |
| **CAS Latency** | 40-39-39 | 40-39-39 | 40-39-39 | 46-39-39 |
| **DIMM Native Speed** | 4800 MT/s | 4800 MT/s | 4800 MT/s | 4800 MT/s |

**Notes:** The maximum memory speed is a function of the memory type, memory configuration, and processor model.
For details on the HPE Server Memory speed, visit: **https://hpe.seismic.com/Link/Content/DCjjRTHfP6C8HGFRbjWJ7B37H43d**

### DDR5 memory options part number decoder

**Notes:**

- Capacity references are rounded to the common gigabyte (GB) values.
  - 16GB = 16,384 MB
  - 32GB = 32,768 MB
  - 64GB = 65,536 MB
  - 128GB = 131072 MB

For more information on memory, please see the Memory Quickspecs: **HPE DDR5 Smart Memory**

### Memory Speed Table for HPE ProLiantDL380a Gen11

For details on the HPE Server Memory speed, please visit:
**https://hpe.seismic.com/Link/Content/DCjjRTHfP6C8HGFRbjWJ7B37H43d**

# Technical Specifications

## System Unit

**Dimensions** (Height x Width x Depth)

- **Server**
  8.75 x 44.8 x 81.6 cm
  3.44 x 17.64 x 32.13 in
- **Package**
  27.3 x 60 x 106 cm
  10.75 x 23.6 x 41.73 in

**Weight** (approximate)

- **Server**
  35.96 kg (79.11 lb)[1]
- **With Package:**
  48.33 kg (106.33 lb)[2]

**Notes:**

– [1] 4 Double Wide chassis with 1x drive cage, 4x double-wide GPUs, 2x processors and heatsinks, 24x DIMMs, 8x SSDs, 4x power supplies, 1x NS204i-u, 2x Stacking Risers, 4x PCIe cards, 2x OCP cards, 1x storage battery.

– [2] Server plus rail kit, CMA, power cords.

---

## Input Requirements (per power supply)

### Rated Line Voltage

- For 1600W (Platinum) Power Supply: 200-240 VAC
- For 1800W-2200W (Titanium) Power Supply: 200-240 VAC

---

## BTU Rating

### Maximum

- For 1600W Power Supply: 5918 BTU/hr (at 200 VAC), 5888 BTU/hr (at 220 VAC), 5884 BTU/hr (at 240 VAC)
- For 1800W-2200W Power Supply: 6497 BTU/hr (at 200 VAC), 7230 BTU/hr (at 220 VAC), 7962 BTU/hr (at 240 VAC)

---

## 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..

---

## Power Supply Output (per power supply)

### Rated Steady-State Power

- For 1600W (Platinum) Power Supply: 1600W (at 240 VAC), 1600W (at 240 VDC) for China only
- For 1800W-2200W (Titanium) Power Supply: 1800W-2200W (at 200-240 VAC), 2200W (at 240 VDC) for China only

### Maximum Peak Power

- For 1600W(Platinum) Power Supply: 1600W (at 240 VAC), 1600W (at 240 VDC) for China only
- For 1800W-2200W (Titanium) Power Supply: 1800W-2200W (at 200-240 VAC), 2200W (at 240 VDC) for China only

---

# Technical Specifications

## System Inlet Temperature

- **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).

- **Extended Ambient Operating Temperature**
  For approved hardware configurations, the supported system inlet range is extended to be: 5° to 10°C (41° to 50°F) and 35° to 40°C (95° to 104°F) at sea level with an altitude derating of 1.0°C per every 175 m (1.8°F per every 574 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: **https://www.hpe.com/support/ASHRAEGen11**

  For approved hardware configurations, the supported system inlet range is extended to be: 40° to 45°C (104° to 113°F) at sea level with an altitude derating of 1.0°C per every 125 m (1.8°F per every 410 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: **https://www.hpe.com/support/ASHRAEGen11**

  System performance may be reduced if operating in the extended ambient operating range or with a fan fault.

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

## Altitude

- **Operating**
  3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
- **Non-operating**
  9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).

## 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.

## Technical Specifications

| Acoustic Noise | |
|---|---|
| **Idle** | |
| LWA,m | 6.3 B Entry<br>6.3 B Base<br>6.2 B Perf |
| LpAm | 49 dBA Entry<br>48 dBA Base<br>48 dBA Perf |
| Kv | 0.4 B Entry<br>0.4 B Base<br>0.4 B Perf |
| **Operating** | |
| LWA,m | 6.9 B Entry<br>7.2 B Base<br>6.9 B Perf |
| LpAm | 52 dBA Entry<br>58 dBA Base<br>53 dBA Perf |
| Kv | 0.4 B Entry<br>0.4 B Base<br>0.4 B Perf |

**Notes:**

- Acoustics levels presented here are generated by the test configuration only. Acoustics levels will vary depending on system configuration. Values are subject to change without notification and are for reference only.
- Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.
- The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.
- 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.

### 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:
**http://www.hpe.com/support/Safety-Compliance-EnterpriseProducts**

### 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.

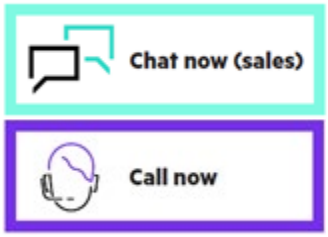
The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard Enterprise web site. These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

## Summary of Changes

| Date | Version History | Action | Description of Change |
|---|---|---|---|
| 08-Apr-2024 | Version 11 | Changed | Overview, Configuration Information and Additional Options sections were updated. |
| 04-Mar-2024 | Version 10 | Changed | Standard Features,, Configuration Information and Storage sections were updated. |
| 05-Feb-2024 | Version 9 | Changed | Configuration Information and Core Options sections were updated. |
| 08-Jan-2024 | Version 8 | Changed | Configuration Information section was updated. |
| 14-Dec-2023 | Version 7 | Changed | Standard Features, Service and Support, Configuration Information and Core Options sections were updated. |
| 06-Nov-2023 | Version 6 | Changed | Overview, Configuration Information and Storage sections were updated. |
| 02-Oct-2023 | Version 5 | Changed | Standard Features and Configuration Information sections were updated. |
| 05-Sep-2023 | Version 4 | Changed | Standard Features, Configuration Information and Core Options sections were updated. |
| 01-May-2023 | Version 3 | Changed | Core Options section was updated |
| 03-Apr-2023 | Version 2 | Changed | Standard Features, Configuration Information and Core Options sections were updated. |
| 06-Mar-2023 | Version 1 | New | New QuickSpecs |

## Copyright

**Make the right purchase decision.**
**Contact our presales specialists.**




**Get updates**



a50004309enw - 16913 - Worldwide - V11 - 08-April-2024

Hewlett Packard Enterprise