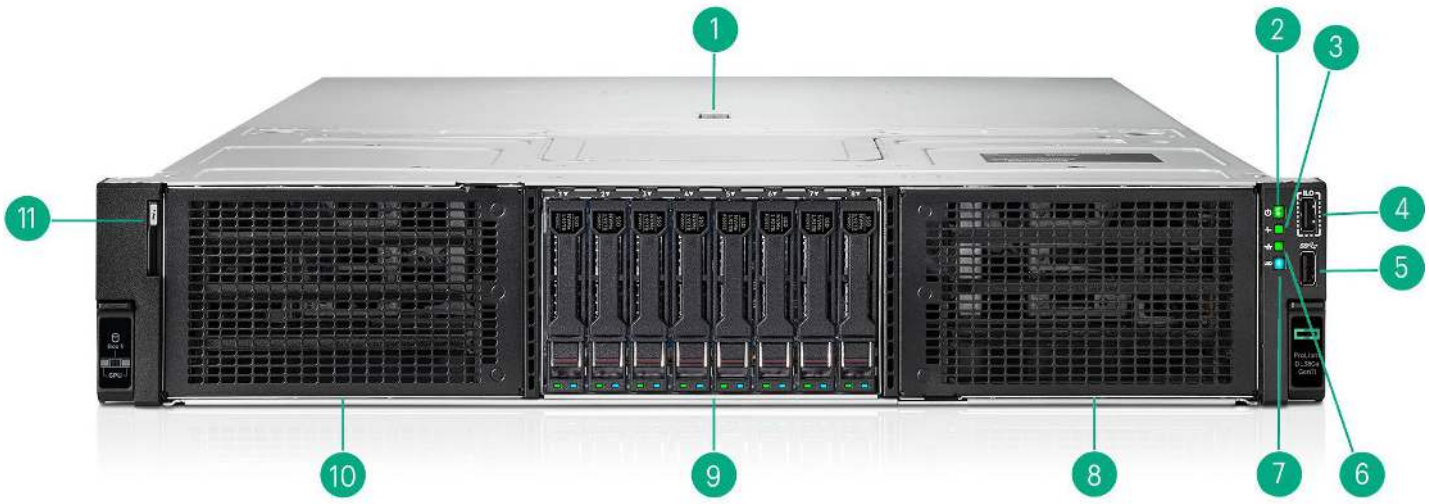
Have feedback on QuickSpecs? We're listening

# HPE ProLiant DL380a Gen11 QuickSpecs

**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.

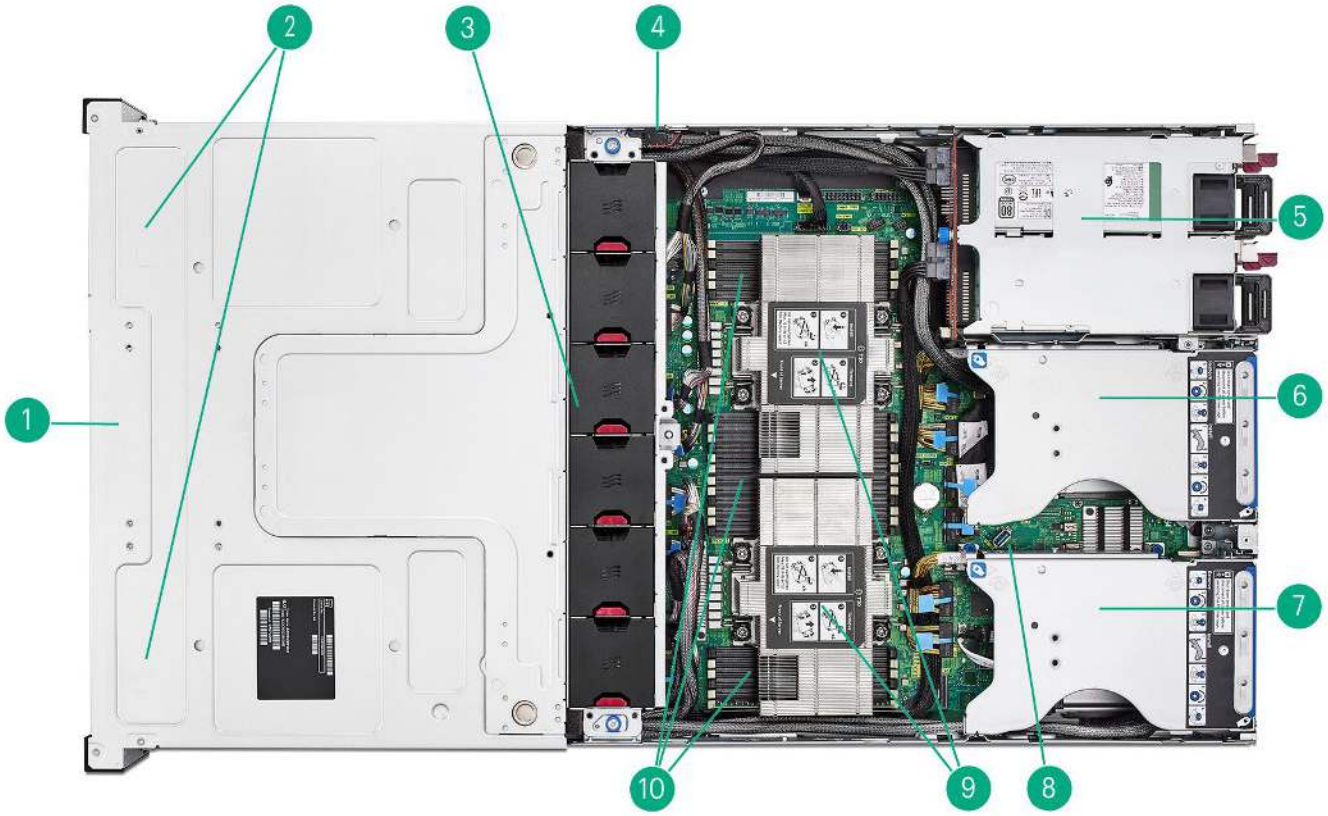
# HPE ProLiant DL380a Gen11




**Front View – 8SFF drive bay shown**

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

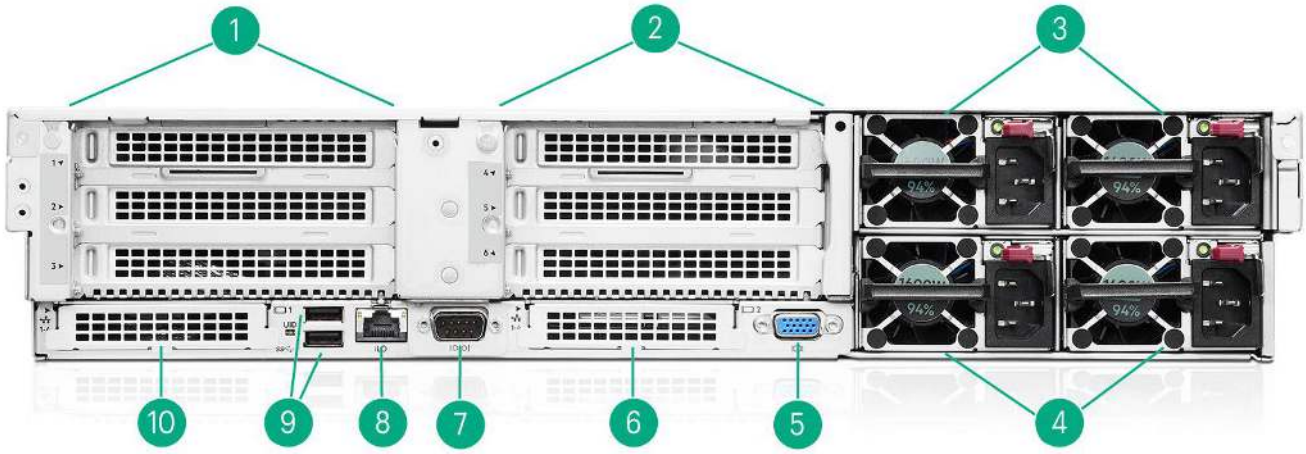
**Notes:** [1] Front NIC LED display doesn't support NIC LED ACT/LINK indication from ALOM/PCIE/FLOM NICs.




**Internal View**

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

**Notes:** 0-GPU configurations are not allowed. GPU installation after shipment must be performed by HPE Services.




**Rear View**

| Item | Description | Item | Description |
|---|---|---|---|
| 1. | Primary Riser. PCIe 5.0 slots (slots 2 & 3) | 6. | OCP 3.0 slot 18/OCP2 (optional) |
| 2. | Secondary Riser. PCIe 5.0 slots (slots 5 & 6) | 7. | Optional serial port |
| 3. | Power supply 3 and 4 (for DW GPU auxiliary power) | 8. | Dedicated iLO management port |
| 4. | Power supply 1 and 2 (for the system board) | 9. | 2 USB 3.0 ports |
| 5. | VGA connector | 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.

## 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, Refer to the following: http://www.intel.com/xeon.
Field upgrade from the 4th Generation Intel® Xeon® Processors to the 5th Generation is not supported.

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 support for more or 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 | 350 W | 3 @ 16 GT/s | 4800 MT/s | 128 GB |
| Platinum 8480+ Processor | 2.0 GHz | 56 | 105 | 350 W | 4 @ 16 GT/s | 4800 MT/s | 512 GB |
| Platinum 8470 Processor | 2.0 GHz | 52 | 105 | 350 W | 4 @ 16 GT/s | 4800 MT/s | 512 GB |
| Platinum 8468 Processor | 2.1 GHz | 48 | 105 | 350 W | 4 @ 16 GT/s | 4800 MT/s | 512 GB |
| 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 | 330 W[3]<br>300 W<br>270 W | 3 @ 16 GT/s | 4800 MT/s | 128 GB |
| Platinum 8460Y+ Processor | 2.0 GHz<br>2.1 GHz<br>2.3 GHz | 40[3]<br>36<br>32 | 105 | 300 W[3]<br>300 W<br>300 W | 4 @ 16 GT/s | 4800 MT/s | 128 GB |
| 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 | 350 W[3]<br>330 W<br>330 W | 3 @ 16 GT/s | 4800 MT/s | 512 GB |
| Platinum 8452Y Processor | 2.0 GHz[3]<br>1.9 GHz<br>2.1 GHz | 36[3]<br>32<br>24 | 67.5 | 300 W[3]<br>270 W<br>250 W | 4 @ 16 GT/s | 4800 MT/s | 128 GB |
| Gold 6454S Processor[2] | 2.2 GHz[3]<br>2.4 GHz<br>2.6 GHz | 32[3]<br>24<br>16 | 60 | 270 W[3]<br>250 W<br>225 W | 4 @ 16 GT/s | 4800 MT/s | 128 GB |
| Gold 6430 Processor | 2.1 GHz | 32 | 60 | 270 W | 3 @ 16 GT/s | 4400 MT/s | 128 GB |
| Gold 6426Y Processor | 2.5 GHz | 16 | 37.5 | 185 W | 3 @ 16 GT/s | 4800 MT/s | 128 GB |
| Gold 6442Y Processor | 2.6 GHz | 24 | 60 | 225 W | 3 @ 16 GT/s | 4800 MT/s | 128 GB |
| Gold 6448Y Processor | 2.1 GHz | 32 | 60 | 225 W | 3 @ 16 GT/s | 4800 MT/s | 128 GB |
| Gold 6434 Processor | 3.7 GHz | 8 | 22.5 | 195 W | 3 @ 16 GT/s | 4800 MT/s | 128 GB |
| Gold 6444Y Processor | 3.6 GHz | 16 | 45 | 270 W | 3 @ 16 GT/s | 4800 MT/s | 128 GB |
| Platinum 8462Y+ Processor | 2.8 GHz | 32 | 60 | 300 W | 3 @ 16 GT/s | 4800 MT/s | 128 GB |
| Silver 4416+ Processor | 2 GHz | 20 | 37.5 | 165 W | 2 @ 16 GT/s | 4000 MT/s | 64 GB |
| Gold 5418Y Processor | 2 GHz | 24 | 45 | 185 W | 3 @ 16 GT/s | 4400 MT/s | 128 GB |
| Gold 5420+ Processor | 2 GHz | 28 | 52.5 | 205 W | 3 @ 16 GT/s | 4400 MT/s | 128 GB |
| Gold 6438Y+ Processor | 2 GHz | 32 | 60 | 205 W | 3 @ 16 GT/s | 4800 MT/s | 128 GB |
| Gold 6438M Processor | 2.2 GHz | 32 | 60 | 205 W | 3 @ 16 GT/s | 4800 MT/s | 128 GB |
| Gold 6418H Processor | 2.2 GHz | 24 | 60 | 185 W | 3 @ 16 GT/s | 4800 MT/s | 512 GB |
| Gold 6448H Processor | 2.2 GHz | 32 | 60 | 250 W | 3 @ 16 GT/s | 4800 MT/s | 512 GB |
| Platinum 9462 Processor | 2.7 GHz | 32 | 75 | 350 W | 3 @ 16 GT/s | 4800 MT/s | 128 GB |
| Gold 6438M Processor | 2.2 GHz | 32 | 60 | 205 W | 3 @ 16 GT/s | 4800 MT/s | 128 GB |

| 5th Generation Intel® Xeon® Scalable Processor Family | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Intel® Xeon Models** | **CPU Frequency** | **Cores** | **L3 Cache (MB)** | **Power** | **UPI** | **DDR5** | **SGX Enclave size** |
| Gold 5515+ Processor | 3.2 GHz | 8 | 22.5 | 165 W | 3 @ 20 GT/s | 4800 MT/s | 128 GB |
| Gold 6526Y Processor | 2.8 GHz | 16 | 37.5 | 195 W | 3 @ 20 GT/s | 5200 MT/s | 128 GB |
| Gold 6542Y Processor | 2.9 GHz | 24 | 60 | 250 W | 3 @ 20 GT/s | 5200 MT/s | 128 GB |
| Gold 6548Y+ Processor | 2.5 GHz | 32 | 60 | 250 W | 3 @ 20 GT/s | 5200 MT/s | 128 GB |
| Gold 6534 Processor | 3.9 GHz | 8 | 22.5 | 195 W | 3 @ 20 GT/s | 4800 MT/s | 128 GB |
| Gold 6544Y Processor | 3.6 GHz | 16 | 45 | 270 W | 3 @ 20 GT/s | 5200 MT/s | 128 GB |
| Platinum 8562Y+ Processor | 2.8 GHz | 32 | 60 | 300 W | 3 @ 20 GT/s | 5600 MT/s | 512 GB |
| Platinum 8568Y+ Processor | 2.3 GHz | 48 | 300 | 350 W | 4 @ 20 GT/s | 5600 MT/s | 512 GB |
| Platinum 8570 Processor | 2.1 GHz | 56 | 300 | 350 W | 4 @ 20 GT/s | 5600 MT/s | 512 GB |
| Platinum 8580 Processor | 2.0 GHz | 60 | 300 | 350 W | 4 @ 20 GT/s | 5600 MT/s | 512 GB |
| Platinum 8592+ Processor | 1.9 GHz | 64 | 320 | 350 W | 4 @ 20 GT/s | 5600 MT/s | 512 GB |
| Silver 4509Y Processor | 2.6 GHz | 8 | 22.5 | 125 W | 2 @ 20 GT/s | 4400 MT/s | 64 GB |
| Silver 4514Y Processor | 2.0 GHz | 16 | 30 | 150 W | 2 @ 20 GT/s | 4400 MT/s | 64 GB |
| Silver 4516Y+ Processor | 2.2 GHz | 24 | 45 | 185 W | 2 @ 20 GT/s | 4400 MT/s | 64 GB |
| Gold 5520+ Processor | 2.2 GHz | 28 | 52.5 | 205 W | 3 @ 20 GT/s | 4800 MT/s | 128 GB |
| Gold 6530 Processor | 2.1 GHz | 32 | 160 | 270 W | 3 @ 20 GT/s | 4800 MT/s | 128 GB |
| Gold 6538Y+ Processor | 2.2 GHz | 32 | 60 | 225 W | 3 @ 20 GT/s | 5200 MT/s | 128 GB |
| Platinum 8558 Processor | 2.1 GHz | 48 | 260 | 330 W | 4 @ 20 GT/s | 5200 MT/s | 512 GB |

**Notes:**

- [1]Deterministic base frequency rating only applicable to VM workloads. Other workloads may experience 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]High-Bandwidth Memory Die processor.

## Chipset

Intel® C741 Chipset

**Notes:** For more information regarding Intel® chipsets, Refer to 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.

| 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) for SPR CPUs** | 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) |
| **Maximum capacity (RDIMM) for EMR CPUs** | 3.0 TB (24 x 128 GB RDIMM @4400 MT/s, 2DPC)<br>2.0 TB (16 x 128 GB RDIMM @5600 MT/s, 1DPC) |

**Notes:** The maximum memory speed is limited by the processor selection.
The -B21 memory SKUs shown in this document are to be used when ordering stand-alone memory only. For each -B21 SKU, there is a corresponding -F21 SKU which is to be used when configuring servers with integrated memory DIMMs.

## 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 DDR3 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 |

## 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 https://www.hpe.com/psnow/doc/4AA6-6836ENW.

### 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, Ireland, Switzerland or Turkey, 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 fulfill 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.

| Interfaces | |
|---|---|
| **Serial Port** | 1 optional (rear) |
| **VGA Port** | 1 standard (rear) |
| **Network Ports** | Nonstandard. 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 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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## 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.

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## HPE Compute Ops Management

Transform compute lifecycle management with a cloud experience that delivers greater simplicity, agility, and speed across your entire server environment, wherever it lives. This software-as-a-service tool provides a dashboard with global visibility and intuitive management of server health, security and compliance status to help you easily identify areas that need immediate attention. Users can update tens to thousands of servers faster through intelligent delta-based firmware downloads and on-demand HPE iLO firmware updates.

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

A 3-year subscription to HPE Compute Ops Management is added by default when ordering an HPE ProLiant Gen11 rack, tower, or micro server.
For more information, visit the HPE 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®.
- ErP EU Lot9 regulation.
  **Notes:**
  - Beginning on January 1st, 2024, units sold into the European Union (EU), European Economic Area (EEA), the United Kingdom, Ireland, Switzerland or Turkey, 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 fulfill 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.

## 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 one 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

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## 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.

## Security

- UEFI Secure Boot and Secure Start support.
- Tamper-free updates – components digitally signed and verified.
- Immutable Silicon Root of Trust.
- Ability to roll back 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

## 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 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 servers.
To learn more visit http://www.hpe.com/info/oneview.

## 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

For the most up-to-date information on HPE Services, please refer to the HPE Services – Supplemental QuickSpecs, which provides a comprehensive and regularly updated overview of available services.

## 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 are built 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 providing a more predictable and faster experience for these options. Mainstream SKUs enjoy higher safety stock levels and have higher fulfillment 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 fulfillment experience. Check the Template section in our configurators for eligible Mainstream configurations.

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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.

### Step 1: Base Configuration

| CTO Server Models | HPE ProLiant DL380a Gen11 4 Double Wide Configure-to-order Server |
|---|---|
| **HPE ProLiant DL380a Gen11 4 Double Wide Configure-to-order Server** | 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 |

**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 into 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.

## 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 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 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>– Processors (270W or greater) require High Performance Heatsink (P51832-B21).<br>– Operating System support for HBM processors, 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 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 |
| | **Notes:** Above processors (below 270W) are defaulted to Standard Heatsink (P51833-B21). However, customers may select High Performance Heatsink (P51832-B21) instead. | |

| E-Star Certified | 5th Generation Intel® Xeon Emerald Rapids (Platinum, Gold, and Silver) | SKU |
|---|---|---|
| | **Notes:** Emerald Rapids processors support 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, customers 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.

**Notes:**

- 0-GPU configurations are not allowed.  GPU installation after shipment must be done through HPE Services.
- Double Wide GPU can be selected in multiples of 2 only (i.e. Qty 2 or Qty 4).
- Mixing of different GPU models is not supported.
- System memory capacity is recommended to be 2x GPU memory capacity.

### Computation and Graphics Accelerators

| | |
|---|---|
| NVIDIA L40 48GB PCIe Accelerator for HPE | S0K90C |
| NVIDIA L40S 48GB PCIe Accelerator | S2L70C |
| NVIDIA L4 24GB PCIe Accelerator for HPE | S0K89C |

**Notes:**

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

| | |
|---|---|
| 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 NVIDIA H100, L40(s), or Max Series 1100 GPU.
- If this kit needs to be ordered outside of a server BOM (e.g. standalone order), use part number P84273-B21 for ordering. GPU cable kit (P84273-B21) will also support up to 4 of the previously mentioned GPUs.

| | |
|---|---|
| HPE ProLiant DL380a Gen11 GPU 16-pin v3 FIO Cable | P80885-B21 |

**Notes:**

- This GPU power cable kit is used to support up to (4) pcs of NVIDIA H100 NVL.
- If this kit needs to be ordered outside of a server BOM (e.g. standalone order), use part number P84274-B21 for ordering. GPU cable kit (P84274-B21) will also support up to 4 of the previously mentioned GPU.

### GPU Information

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

## 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:**

- Note – The -B21 memory SKUs shown in this document are to be used when ordering stand-alone memory only. For each -B21 SKU, there is a corresponding -F21 SKU which is to be used when configuring servers with integrated memory DIMMs.
- 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.
- Do not mix x4 and x8 DIMMs within the same 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 are supported.
- If 96GB PC5-5600 memory is selected then only Qty 2, 12, 16, 24 allowed for selection. No other quantities of this memory are 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) Dual Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit | P69974-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) Dual Rank x4 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit | P69976-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.

### 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 Cable Kit (P55706-B21) and Type-p Sec TM Cable 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 Cable Kit (P55708-B21) and OROC Sec TM Cable 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 Cable Kit (P55706-B21).
- Unbalanced NVMe with single MR416i-p controller: Requires selection of 1 Type-p Prim TM Cable Kit (P55706-B21) to support 4 drives.
- Unbalanced NVMe with single OROC (MR416i-o or SR416i-o): Requires selection of OROC Prim TM Cable 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 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 Cable 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 Cable Kit (P51943-B21).
  - Must select 1 pc of OROC Prim TM Cable Kit (P55708-B21) and 1pc of OROC Sec TM Cable 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 Cable Kit (P55706-B21).
– 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 Cable Kit (P55706-B21) and 1pc of Type-p Sec TM Cable 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 Cable 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

HPE 16W Smart Hybrid Capacitor with 260mm Cable P65042-B21

### Software RAID Controllers

Intel Virtual RAID on CPU Premium FIO Software for HPE R7J57A

### 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.

## 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: https://poweradvisorext.it.hpe.com/.

**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

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 Compute Ops Management

**Base SKU**

| | |
|---|---|
| HPE Compute Ops Management Standard 3-year Upfront ProLiant SaaS | R7A11AAE |

**Upgrade SKUS**

| | |
|---|---|
| HPE Compute Ops Management Standard 1-year Upfront ProLiant SaaS | R7A10AAE |
| HPE Compute Ops Management Standard 5-year Upfront ProLiant SaaS | R7A12AAE |
| HPE Compute Ops Management Advanced 1-year Upfront ProLiant SaaS | S5E58AAE |
| HPE Compute Ops Management Advanced 3-year Upfront ProLiant SaaS | S5E59AAE |
| HPE Compute Ops Management Advanced 5-year Upfront ProLiant SaaS | S5E60AAE |
| HPE Compute Ops Management Advanced 7-year Upfront ProLiant SaaS | S5E61AAE |
| HPE Compute Ops Management Advanced Flex with ProLiant Enablement | S6C28AAE |

**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 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 heat 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/

**Mixed Use– NVMe – EDSFF – Solid State Drives**

HPE 6.4TB NVMe Gen5 High Performance Mixed Use E3S EC1 Self-encrypting FIPS 140-3 CM7 SSD P70672-B21
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
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
HPE 1.6TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 SPDM 7600 SSD P85114-B21
HPE 3.2TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 SPDM 7600 SSD P85117-B21
HPE 6.4TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 SPDM 7600 SSD P85119-B21
HPE 1.6TB NVMe Gen5 Mainstream Performance Mixed Use E3.S EC1 Self-encrypting 7600 SSD P87715-B21
HPE 3.2TB NVMe Gen5 Mainstream Performance Mixed Use E3.S EC1 Self-encrypting 7600 SSD P87717-B21
HPE 1.6TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 EDSFF SPDM PE1030 SSD P77262-B21
HPE 3.2TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 EDSFF SPDM PE1030 SSD P77265-B21
HPE 6.4TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 EDSFF SPDM PE1030 SSD P77267-B21
HPE 3.2TB NVMe Gen5 High Performance Mixed Use E3.S EC1 PM1755 SSD P78784-B21
HPE 6.4TB NVMe Gen5 High Performance Mixed Use E3.S EC1 PM1755 SSD P78787-B21
HPE 1.6TB NVMe Gen5 Mainstream Performance Mixed Use E3.S EC1 E3 Thin Multi Vendor SSD P91084-B21
HPE 3.2TB NVMe Gen5 Mainstream Performance Mixed Use E3.S EC1 E3 Thin Multi Vendor SSD P91086-B21
HPE 6.4TB NVMe Gen5 Mainstream Performance Mixed Use E3.S EC1 E3 Thin Multi Vendor SSD P91088-B21
HPE 3.2TB NVMe Gen5 High Performance Mixed Use E3.S EC1 E3 Thin Multi Vendor SSD P91098-B21
HPE 6.4TB NVMe Gen5 High Performance Mixed Use E3.S EC1 E3 Thin Multi Vendor SSD P91100-B21
HPE 12.8TB NVMe Gen5 High Performance Mixed Use E3.S EC1 E3 Thin Multi Vendor SSD P91102-B21
HPE 1.6TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 SPDM 7600 SSD P85114-B21
HPE 3.2TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 SPDM 7600 SSD P85117-B21
HPE 6.4TB NVMe Gen5 Mainstream Performance Mixed Use E3S EC1 SPDM 7600 SSD P85119-B21
HPE 1.6TB NVMe Gen5 Mainstream Performance Mixed Use E3.S EC1 Self-encrypting 7600 SSD P87715-B21
HPE 3.2TB NVMe Gen5 Mainstream Performance Mixed Use E3.S EC1 Self-encrypting 7600 SSD P87717-B21
HPE 3.2TB NVMe Gen5 High Performance Mixed Use E3.S EC1 E3 Thin PQC27 CM9 SSD P85731-B21
HPE 6.4TB NVMe Gen5 High Performance Mixed Use E3.S EC1 E3 Thin PQC27 CM9 SSD P85733-B21
HPE 12.8TB NVMe Gen5 High Performance Mixed Use E3.S EC1 E3 Thin PQC27 CM9 SSD P85735-B21

### Very Read Optimized– NVMe – EDSFF – Solid State Drives

| | |
|---|---|
| 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 |
| HPE 30.72TB NVMe Gen5 Mainstream Performance Very Read Optimized EC1 EDSFF Self-encrypting 6550 SSD | P79620-B21 |
| HPE 61.44TB NVMe Gen5 Mainstream Performance Very Read Optimized EC1 EDSFF Self-encrypting 6550 SSD | P79623-B21 |

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

| | |
|---|---|
| HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM PM1743 SSD | P57799-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 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 Self-encrypting FIPS 140-3 CM7 SSD | P70674-B21 |
| HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3S EC1 Self-encrypting FIPS 140-3 CM7 SSD | P79122-B21 |
| HPE 1.92TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD | P69234-B21 |
| HPE 15.36TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 CD8P SSD | P69546-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 |
| HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3.S EC1 PM1753 SSD | P78789-B21 |
| HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3.S EC1 PM1753 SSD | P78791-B21 |
| HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3.S EC1 PM1753 SSD | P78793-B21 |
| HPE 1.92TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 EDSFF SPDM PE1010 SSD | P77269-B21 |
| HPE 3.84TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 EDSFF SPDM PE1010 SSD | P77271-B21 |
| HPE 15.36TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 EDSFF SPDM PE1010 SSD | P77275-B21 |
| HPE 1.92TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 SPDM 7600 SSD | P85121-B21 |
| HPE 3.84TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 SPDM 7600 SSD | P85124-B21 |
| HPE 7.68TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 SPDM 7600 SSD | P85126-B21 |
| HPE 15.36TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 SPDM 7600 SSD | P85128-B21 |
| HPE 1.92TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 Self-encrypting 7600 SSD | P87719-B21 |
| HPE 3.84TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 Self-encrypting 7600 SSD | P87721-B21 |
| HPE 7.68TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 Self-encrypting 7600 SSD | P87723-B21 |
| HPE 1.92TB NVMe Gen5 Mainstream Performance Read Intensive E3.S EC1 E3 Thin Multi Vendor SSD | P91090-B21 |
| HPE 3.84TB NVMe Gen5 Mainstream Performance Read Intensive E3.S EC1 E3 Thin Multi Vendor SSD | P91092-B21 |
| HPE 7.68TB NVMe Gen5 Mainstream Performance Read Intensive E3.S EC1 E3 Thin Multi Vendor SSD | P91094-B21 |
| HPE 15.36TB NVMe Gen5 Mainstream Performance Read Intensive E3.S EC1 E3 Thin Multi Vendor SSD | P91096-B21 |
| HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3.S EC1 E3 Thin Multi Vendor SSD | P91229-B21 |
| HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3.S EC1 E3 Thin Multi Vendor SSD | P91231-B21 |
| HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3.S EC1 E3 Thin Multi Vendor SSD | P91233-B21 |
| HPE 1.92TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 SPDM 7600 SSD | P85121-B21 |
| HPE 3.84TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 SPDM 7600 SSD | P85124-B21 |
| HPE 7.68TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 SPDM 7600 SSD | P85126-B21 |
| HPE 15.36TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 SPDM 7600 SSD | P85128-B21 |

| | |
|---|---|
| HPE 1.92TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 Self-encrypting 7600 SSD | P87719-B21 |
| HPE 3.84TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 Self-encrypting 7600 SSD | P87721-B21 |
| HPE 7.68TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 Self-encrypting 7600 SSD | P87723-B21 |
| HPE 3.84TB NVMe Gen5 High Performance Read Intensive E3.S EC1 E3 Thin PQC27 CM9 SSD | P85739-B21 |
| HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3.S EC1 E3 Thin PQC27 CM9 SSD | P85741-B21 |
| HPE 15.36TB NVMe Gen5 High Performance Read Intensive E3.S EC1 E3 Thin PQC27 CM9 SSD | P85743-B21 |
| HPE 30.72TB NVMe Gen5 High Performance Read Intensive E3.S EC1 E3 Thin PQC27 CM9 SSD | P85745-B21 |

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

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

| | |
|---|---|
| HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 CM7 SSD | P63833-B21 |
| HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 CM7 SSD | P63837-B21 |
| HPE 15.36TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 CM7 SSD | P63841-B21 |
| HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD | P50216-B21 |
| HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD | P50222-B21 |
| HPE 15.36TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD | P50224-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 3.84TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 SPDM 7500 SSD | P84244-B21 |
| HPE 7.68TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 SPDM 7500 SSD | P84242-B21 |
| HPE 15.36TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 SPDM 7500b SSD | P84239-B21 |
| HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 Self-encrypting FIPS 140-3 CM7 SSD | P61019-B21 |
| HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 Self-encrypting FIPS 140-3 CM7 SSD | P61027-B21 |
| HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 Self-encrypting FIPS 140-3 CM7 SSD | P61035-B21 |
| HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 Static PM1753 SSD | P78806-B21 |
| HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 Static PM1753 SSD | P78808-B21 |
| HPE 15.36TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 Static PM1753 SSD | P78810-B21 |
| HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 Multi Vendor SSD | P91243-B21 |
| HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 Multi Vendor SSD | P91245-B21 |
| HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 Multi Vendor SSD | P91247-B21 |
| HPE 15.36TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 Multi Vendor SSD | P91249-B21 |
| HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PQC27 CM9 SSD | P85668-B21 |
| HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PQC27 CM9 SSD | P85670-B21 |
| HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PQC27 CM9 SSD | P85672-B21 |
| HPE 15.36TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PQC27 CM9 SSD | P85674-B21 |
| HPE 30.72TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PQC27 CM9 SSD | P85676-B21 |

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

| | |
|---|---|
| HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 CM7 SSD | P63845-B21 |
| HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 CM7 SSD | P63849-B21 |
| HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 CM7 SSD | P63853-B21 |
| HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD | P50227-B21 |
| HPE 6.4TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static V2 Multi Vendor SSD | P65023-B21 |
| HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 Self-encrypting FIPS 140-3 CM7 SSD | P61043-B21 |
| HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 Self-encrypting FIPS 140-3 CM7 SSD | P61051-B21 |
| HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 Self-encrypting FIPS 140-3 CM7 SSD | P61059-B21 |

| | |
|---|---|
| HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 Static PM1755 SSD | P78801-B21 |
| HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 Static PM1755 SSD | P78804-B21 |
| HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 Multi Vendor SSD | P91237-B21 |
| HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 Multi Vendor SSD | P91239-B21 |
| HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 Multi Vendor SSD | P91241-B21 |
| HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PQC27 CM9 SSD | P85662-B21 |
| HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PQC27 CM9 SSD | P85664-B21 |
| HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PQC27 CM9 SSD | P85666-B21 |

### 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 |
| Broadcom BCM57608 Ethernet 100Gb 2-port QSFP112 OCP3 Adapter for HPE | P73114-B21 |
| Broadcom BCM57608 Ethernet 100Gb 2-port QSFP112 Adapter for HPE | P73111-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 NDR200/Ethernet 200Gb 1-port OSFP PCIe5 x16 MCX75310AAS-HEAT Generic Adapter | P45642-H23 |
| HPE InfiniBand NDR/Ethernet 400Gb 1-port OSFP PCIe5 x16 MCX75310AAS-NEAT Generic Adapter | P45641-H24 |

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 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 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 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 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

- Refer to the HPE Advanced Series Racks QuickSpecs for information on additional racks options and rack specifications. HPE G2 Advanced Series Racks
- Refer to 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)

- Refer to the HPE Basic Power Distribution Units (PDU) QuickSpecs for information on these products and their specifications.
- Refer to the HPE Metered Power Distribution Units (PDU) QuickSpecs for information on these products and their specifications. Refer to 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.
- Refer to the HPE Direct Flow Three Phase Uninterruptible Power System QuickSpecs for information on these products and their specifications.
- Refer to the HPE Line Interactive Single-Phase UPS QuickSpecs for information on these products and their specifications.

## HPE Rack Options

Refer to the HPE KVM Switches web page for information on these products and their specifications.

## 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

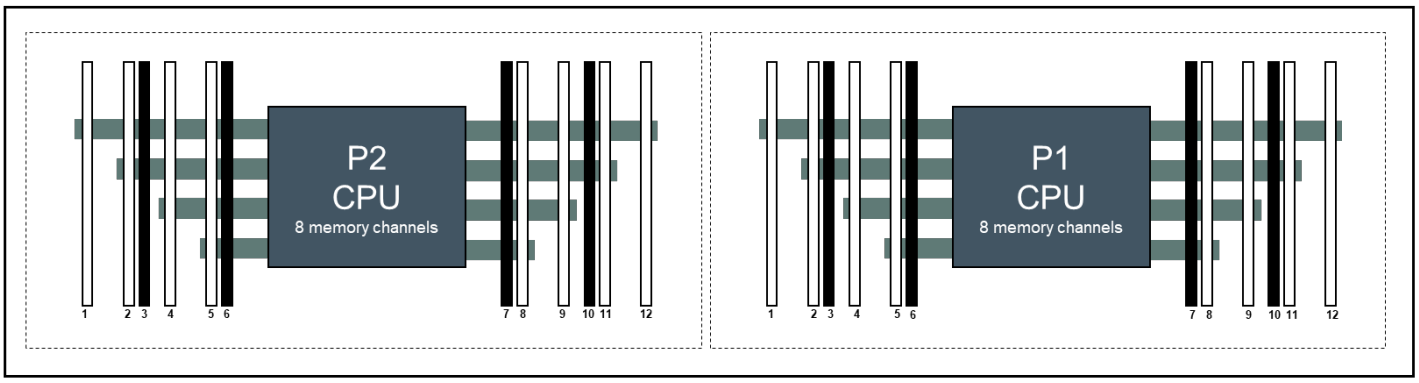
| | |
|---|---|
| HPE ProLiant DL/ML Install Service | U4554E |
| HPE ProLiant DL/ML Onsite Startup Service | U4555E |

### 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 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: http://www.hpe.com/docs/server-memory
- To realize the performance memory capabilities listed in this document, HPE DDR5 Smart Memory is required.
- For additional information, Refer to the HPE DDR5 Smart Memory QuickSpecs.

| Registered DIMM (RDIMM) | | | | |
|---|---|---|---|---|
| **HPE SKU P/N** | **P43322-B21** | **P43328-B21** | **P43331-B21** | **P66675-B21** |
| **SKU Description** | HPE 16GB (1x16GB) Single Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit | HPE 32GB (1x32GB) Dual Rank x8 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit | HPE 64GB (1x64GB) Dual Rank x4 DDR5-4800 CAS-40-39-39 EC8 Registered Smart Memory Kit | HPE 96GB (1x96GB) Dual Rank x4 DDR5-4800 CAS-46-45-45 EC8 Registered Smart Memory Kit |
| **DIMM Capacity** | 16 GB | 32 GB | 64 GB | 96 GB |
| **DIMM Rank** | Single Rank (1R) | Dual Rank (2R) | Dual Rank (2R) | Dual Rank (2R) |
| **Voltage** | 1.1V | 1.1V | 1.1V | 1.1V |
| **DRAM Depth [bit]** | 2G | 2G | 4G | 6G |
| **DRAM Width [bit]** | x8 | x8 | x4 | X4 |
| **DRAM Density** | 16 Gb | 16 Gb | 16 Gb | 24 Gb |
| **CAS Latency** | 40-39-39 | 40-39-39 | 40-39-39 | 46-45-45 |
| **DIMM Native Speed** | 4800 MT/s | 4800 MT/s | 4800 MT/s | 4800 MT/s |

| **HPE SKU P/N** | **P69974-B21** | **P69976-B21** |
|---|---|---|
| **SKU Description** | HPE 128 GB 2Rx4 PC5-4800B-R Smart Kit | HPE 128 GB 2Rx4 PC5-5600B-R Smart Kit |
| **DIMM Capacity** | 128 GB | 128 GB |
| **DIMM Rank** | Dual Rank (2R) | Dual Rank (2R) |
| **Voltage** | 1.1V | 1.1V |
| **DRAM Depth [bit]** | | |
| **DRAM Width [bit]** | x4 | x4 |
| **DRAM Density** | 16 Gb | 16 Gb |
| **CAS Latency** | 46-45-45 | 46-45-45 |
| **DIMM Native Speed** | 4800 MT/s | 5600 MT/s |

| HPE SKU P/N | P64705-B21 | P64706-B21 | P64707-B21 | P64708-B21 |
|---|---|---|---|---|
| **SKU Description** | HPE 16GB (1x16GB) Single Rank x8 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit | HPE 32GB (1x32GB) Dual Rank x8 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit | HPE 64GB (1x64GB) Dual Rank x4 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit | HPE 96GB (1x96GB) Dual Rank x4 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit |
| **DIMM Capacity** | 16 GB | 32 GB | 64 GB | 96 GB |
| **DIMM Rank** | Single Rank (1R) | Dual Rank (2R) | Dual Rank (2R) | Dual Rank (2R) |
| **Voltage** | 1.1V | 1.1V | 1.1V | 1.1V |
| **DRAM Depth [bit]** | 2G | 2G | 4G | 6G |
| **DRAM Width [bit]** | x8 | x8 | x4 | X4 |
| **DRAM Density** | 16 Gb | 16 Gb | 16 Gb | 24 Gb |
| **CAS Latency** | 46-45-45 | 46-45-45 | 46-45-45 | 46-45-45 |
| **DIMM Native Speed** | 5600 MT/s | 5600 MT/s | 5600 MT/s | 5600 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: http://www.hpe.com/docs/server-memory

## 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.
- 96GB = 98,304 MB.
- 128GB = 131072 MB.

### Memory Speed Table for HPE ProLiantDL380a Gen11

For details on the HPE Server Memory speed, please visit: http://www.hpe.com/docs/server-memory

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.

Technical Specifications

## 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.

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## 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.).

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Technical Specifications

## 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.

| **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.

Technical Specifications

- 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 European Union Waste Electrical and Electronic Equipment Directive [EU WEEE] (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 |
|---|---|---|---|
| 03-Aug-2026 | Version 34 | Changed | Additional Options section was updated. |
| | | Removed | HPE Omni-Path obsolete SKUs. |
| 06-Jul-2026 | Version 33 | Changed | Core Options section was updated. |
| | | Added | Mixed Use– NVMe – EDSFF – Solid State Drives<br>Read Intensive – NVMe – EDSFF – Solid State Drives<br>Read Intensive - NVMe - SFF - Solid State Drives<br>Mixed Use - NVMe - SFF - Solid State Drives |
| 01-Jun-2026 | Version 32 | Changed | Additional Options section was updated. |
| | | Added | Mixed Use– NVMe – EDSFF – Solid State Drives<br>Read Intensive – NVMe – EDSFF – Solid State Drives<br>Mixed Use - NVMe - SFF - Solid State Drives |
| 04-May-2026 | Version 31 | Changed | Configuration Information, Additional Options, section was updated. |
| | | Added | Mixed Use– NVMe – EDSFF – Solid State Drives and Read Intensive – NVMe – EDSFF – Solid State Drives. |
| 06-Apr-2026 | Version 30 | Changed | Standard Features section was updated. |
| | | Added | F21 Memory rule. HPE Energy Pack and HPE Solid State Drives (Very Read Optimized– NVMe – EDSFF – Solid State Drives and Mixed Use– NVMe – EDSFF – Solid State Drives) SKUs. |
| 02-Mar-2026 | Version 29 | Changed | Service and Support and Core Options sections were updated. |
| | | Added | Updated GreenLake statement. |
| | | Removed | HPE InfiniBand obsolete SKUs |
| 02-Feb-2026 | Version 28 | Changed | Additional Options sections was updated |
| | | Added | HPE InfiniBand SKU. |
| | | Removed | Registered DIMMs (RDIMMs) obsolete SKUs. |
| 05-Jan-2025 | Version 27 | Changed | Additional Options section was updated. |
| | | Removed | Read Intensive – NVMe – EDSFF – Solid State Drives and HPE InfiniBand obsolete SKUs. |
| 08-Dec-2025 | Version 26 | Changed | Additional Options section was updated. |
| | | Removed | Read Intensive - NVMe - SFF - Solid State Drives and HPE InfiniBand obsolete SKUs. |
| 03-Nov-2025 | Version 25 | Changed | Additional Options section was updated. |
| | | Added | Read Intensive - NVMe - SFF - Solid State Drives SKUs |
| | | Removed | HPE InfiniBand obsolete SKUs. |
| 02-Sep-2025 | Version 24 | Changed | Additional Options section was updated. |
| | | Added | HPE 3.84TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 SPDM 7500 SSD P84244-B21<br>HPE 7.68TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 SPDM 7500 SSD P84242-B21 |
| 28-Jul-2025 | Version 23 | Changed | Survey link updated. |

Summary of Changes

| Date | Version History | Action | Description of Change |
|---|---|---|---|
| 05-May-2025 | Version 22 | Changed | Standard Features and Additional Option sections were updated.<br>Added: Software as a Service Management Enablement SKU (COM), European Union ErP Lot 9 Regulation section to include Turkey and Ireland.<br>Removed: HPE Converged Infrastructure Management Software obsolete SKUs (OneView). |
| 07-Apr-2025 | Version 21 | Changed | Configuration Information section was updated.<br>Computation and Graphics Accelerators notes, FIO Power Cable Kit SKU, Mixed Use– NVMe – EDSFF – Solid State Drives SKUs, Read Intensive – NVMe – EDSFF – Solid State Drives, COM Advanced SKUs and QuickSpecs Survey. |
| 10-Mar-2025 | Version 20 | Changed | Core Options section was updated. Added two SKUs of Broadcom 100 Gigabit Ethernet Adapters. |
| 06-Jan-2025 | Version 19 | Changed | Optional Features section was updated. |
| 02-Dec-2024 | Version 18 | Changed | Core Options section was updated. (OBS SKUs) |
| 04-Nov-2024 | Version 17 | Changed | Memory section was updated. (Formatting) |
| 07-Oct-2024 | Version 16 | Changed | Configuration Information and Memory sections were updated. |
| 03-Sep-2024 | Version 15 | Changed | Standard Features (Operating Systems and Virtualization Software Support for HPE Servers) and Configuration Information sections were updated. |
| 05-Aug-2024 | Version 14 | Changed | Configuration Information (TPM China) and Core Options sections were updated |
| 03-Jun-2024 | Version 13 | Changed | Standard Features, Configuration Information, Core Options and Memory sections were updated. |
| 06-May-2024 | Version 12 | Changed | Overview, Configuration Information and Core Options sections were updated. |
| 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 |

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