Have feedback on QuickSpecs? We're listening

HPE ProLiant ML30 Gen11 QuickSpecs

The HPE ProLiant Compute ML30 Gen11 is an enterprise-class server with an affordable starting price for SMB and ROBO budgets running on-premises or hybrid cloud workloads.

Performance, security, and expansion capabilities make the ML30 a perfect fit for point of sale, printing, storage applications, and security monitoring workloads needed in franchise, remote or branch office locations.

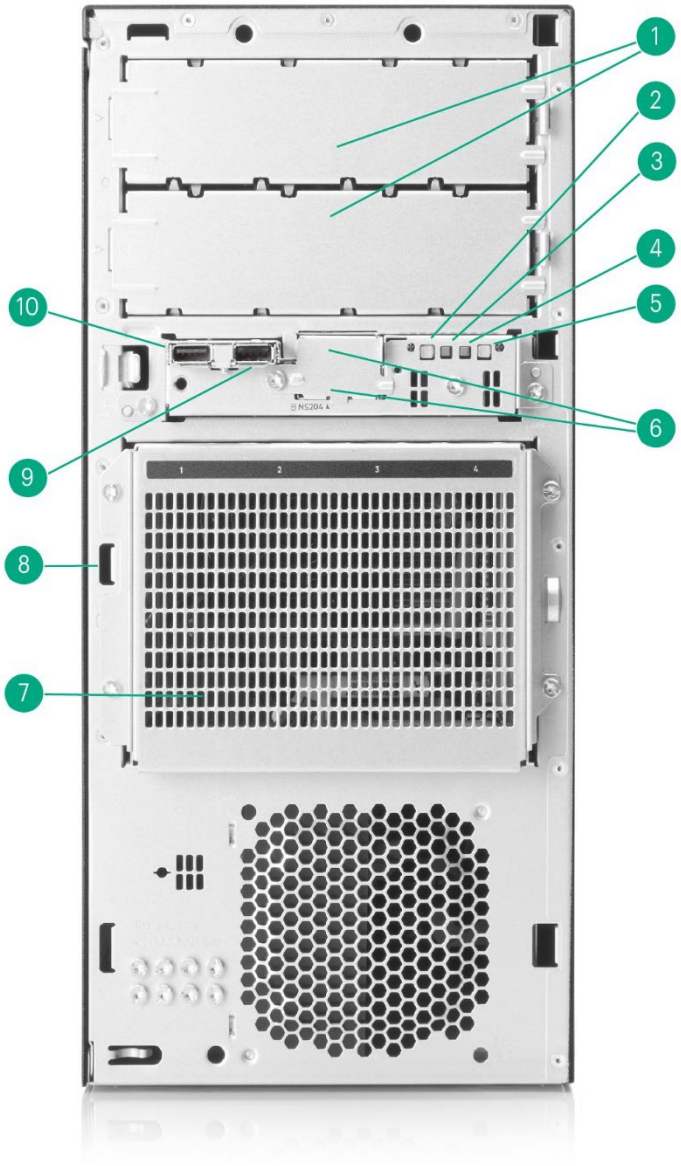
HPE ProLiant ML30 Gen11



4LFF Front View Gen11

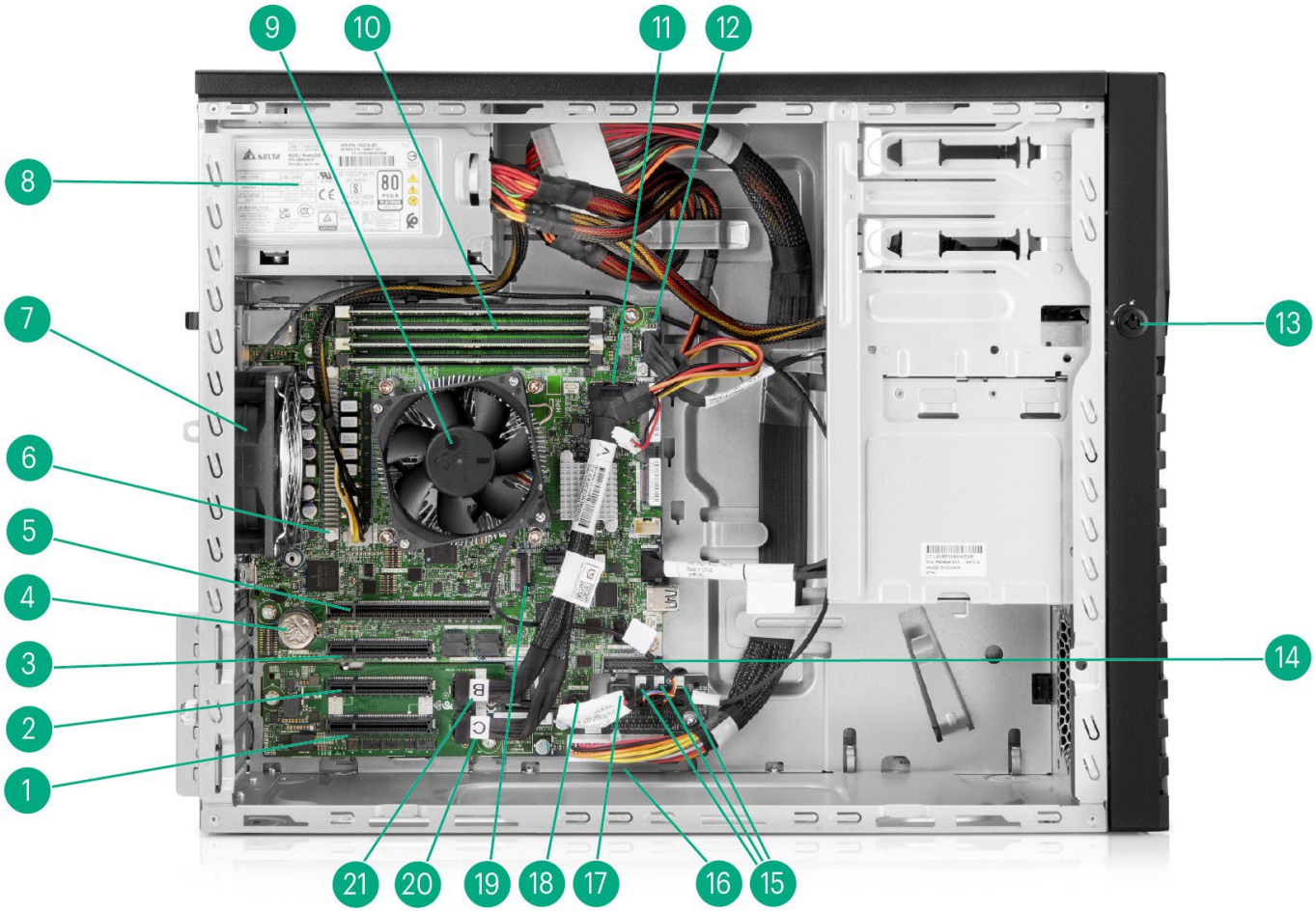
Item	Description	Item	Description
1.	Bezel	5.	NIC status LED[1]
2.	iLO Service Port	6.	Health LED
3.	USB 3.2 Gen1 port	7.	Power On/Standby button and system power LED
4.	UID button/LED		

Notes: [1]Front NIC LED display does not support NIC LED ACT/LINK indication from ALOM/PCIE/FLOM NICs.



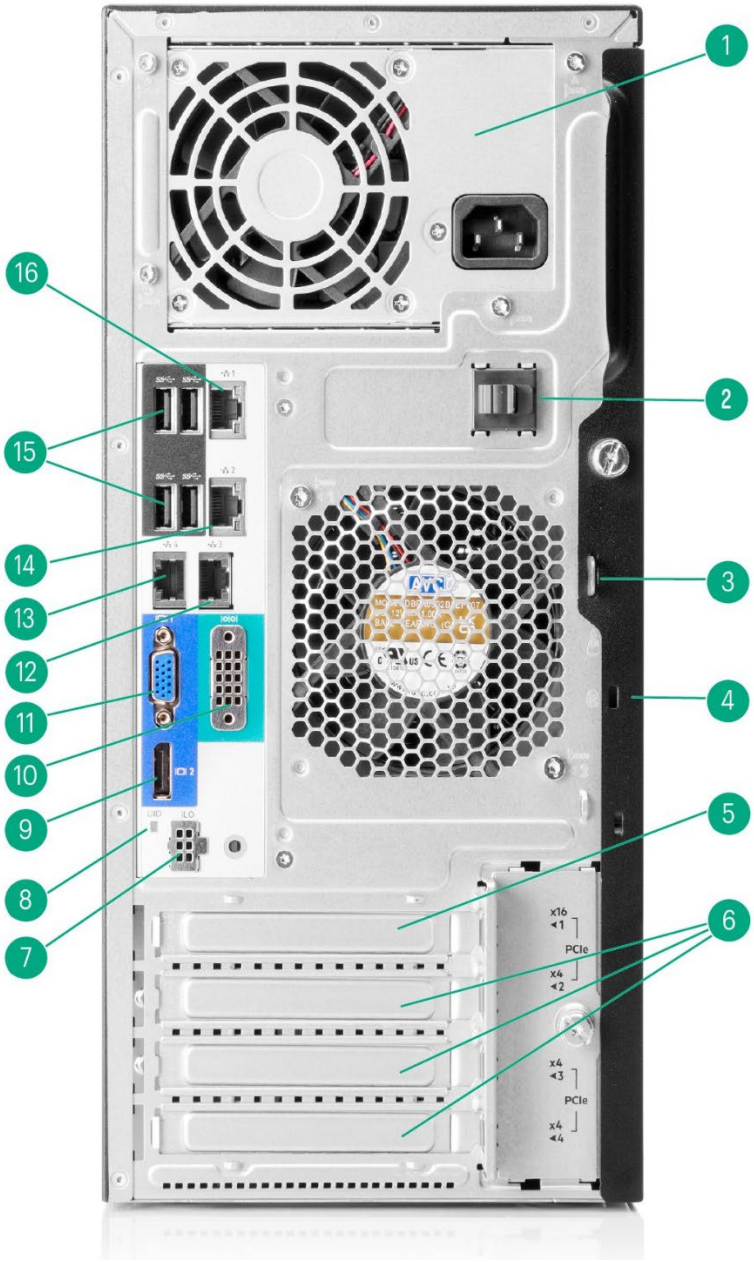
Front View 4LFF Gen11

Item	Description	Item	Description
1.	Media Bays	6.	NS204i-u device slot 1 & 2 (optional, not shown)
2.	UID button/LED	7.	Hot Plug SFF drives -> NHP, LFF and SFF
3.	NIC status LED	8.	iLO Service Port
4.	Health LED	9.	USB 3.2 Gen 1 port
5.	Power On/Standby button and system power LED		



Internal View 4LFF Gen11

Item	Description	Item	Description
1.	Slot 4 PCIe4 x8 mechanical, x4 electrical.	12.	Front I/O & USB 3.2 Gen 1 & iLO service port connector
2.	Slot 3 PCIe4 x8 mechanical, x4 electrical	13.	Bezel Lock
3.	Slot 2 PCIe4 x8 mechanical, x4 electrical	14.	Power supply sideband connector
4.	System battery	15.	Fan Connectors
5.	Slot 1 PCIe5 x16 mechanical, x16 electrical	16.	24-pin power supply connector
6.	4-pin processor power connector	17.	PDB: System power connector
7.	System Fan	18.	Mainboard: System power connector
8.	Power Supply	19.	M.2 Slot (Supports the iLO/NIC/M.2/COM Port Kit option)
9.	Processor and heatsink/fan	20.	Slot 4 SlimSAS x4 port
10.	4 DDR5 DIMM slots	21.	Slot 3 SlimSAS x4 port
11.	SlimSAS x8 port		



Rear View 4LFF Gen11

Item	Description	Item	Description
1.	Non-hot-plug power supply	9.	DisplayPort
2.	Power cord clip	10.	Serial port (optional)
3.	Padlock eye	11.	VGA port
4.	Kensington security slot	12.	NIC port 3 (1 GbE)
5.	Slot 1 PCIe5 x16 mechanical, x16 electrical	13.	NIC port 4 (1 GbE)
6.	Slots 2-4 PCIe4 x4 electrical, x8 mechanical	14.	NIC port 2 (1 GbE)
7.	iLO dedicated network port (optional)	15.	USB 3.2 Gen 1 ports (4)
8.	UID LED	16.	NIC port 1 / iLO shared port (1 GbE)

What's New

- Supports latest Intel® Xeon® 6300 processors up to 8 cores 95W TDP.
- New HPE Software as a Service (SaaS) management.
- New PCIe 5.0 support.
- New HPE DDR5 Standard Memory (UDIMM), 4800 MT/s maximum speed offering in 16GB and 32GB. Max 128GB memory capacity.
- Embedded 1GbE 4-port NIC with support of PCIe NICs.
- New HPE Gen11 Storage Controllers.
- New HPE NS204i-u Gen11 NVMe Hot Plug Boot Optimized Storage Device.
- New HPE Storage SSD and HDD support.
- New HPE iLO 6 support.
- HPE 1000W Flex Slot Titanium Hot Plug Power Supply Kit.

Platform Information

- Form Factor
- 4U Tower

Notes: Sliding Shelf - 874578-B21 is optional to support rack form factor.

Chassis Types

- 8 SFF hot plug chassis with 2 half-height (5.25") media bays for optional internal slim-line DVD bay kit.
- RDX4 LFF hot plug chassis with 2 half-height (5.25") media bays for optional internal slim-line DVD bay kit.

System Fans

- 1 Default system fan module (92 x 32 mm)
- 1 PCIe fan module (92 x 32 mm) depending on model.

Notes:

- PCIe fan module is part of HPE ML30 Gen11 PCI Fan and Baffle Kit (P65106-B21) which is included in pre-configured Performance Models.
- HPE ML30 Gen11 PCI Fan and Baffle Kit (P65106-B21) is required as follows:
  Must be selected in 4LFF Hot Plug CTO Server and 8SFF Hot Plug CTO Server.
  Must be selected in 4LFF NHP CTO Server and pre-configured Entry Model if any PCIe card (NIC, Smart Array Controller, graphic card, etc.).

Processor

Intel® Xeon® 6300 and Intel® Xeon® E Processors are designed to deliver the best combination of performance, built-in capabilities, and cost-effectiveness. This product also supports Intel® Pentium® processors. Choose one of the following processors based on the model:

Notes:

- This product does not support processor graphics.
- For more information regarding Intel® Xeon® processors, please see the following http://www.intel.com/xeon.
- Pentium® G7400 does not comply with Energy Star 4.0.

Intel® Models	CPU Base Frequency	Cores	L3 Cache	Power	DDR5
Intel® Xeon® 6377P	3.1 GHz	12	36 MB	95 W	4400 MT/s
Intel® Xeon® 6369P	3.3 GHz	8	24 MB	95 W	4400 MT/s
Intel® Xeon® 6357P	3.0 GHz	8	24 MB	80 W	4400 MT/s
Intel® Xeon® 6353P	2.7 GHz	8	24 MB	65 W	4400 MT/s
Intel® Xeon® 6349P	3.6 GHz	8	24 MB	65 W	4400 MT/s
Intel® Xeon® 6337P	3.5 GHz	6	18 MB	80 W	4400 MT/s
Intel® Xeon® 6333P	3.1 GHz	6	18 MB	65 W	4400 MT/s
Intel® Xeon® 6325P	3.5 GHz	4	12 MB	55 W	4400 MT/s
Intel® Xeon® 6315P	2.8 GHz	4	12 MB	55 W	4400 MT/s
Intel® Xeon® E-2488	3.2 GHz	8	24 MB	95 W	4400 MT/s
Intel® Xeon® E-2478	2.8 GHz	8	24 MB	80 W	4400 MT/s
Intel® Xeon® E-2468	2.6 GHz	8	24 MB	65 W	4400 MT/s
Intel® Xeon® E-2486	3.5 GHz	6	18 MB	95 W	4400 MT/s
Intel® Xeon® E-2456	3.3 GHz	6	18 MB	80 W	4400 MT/s
Intel® Xeon® E-2436	2.9 GHz	6	18 MB	65 W	4400 MT/s
Intel® Xeon® E-2434	3.4 GHz	4	12 MB	55 W	4400 MT/s
Intel® Xeon® E-2414	2.6 GHz	4	12 MB	55 W	4400 MT/s
Intel® Pentium® G7400	3.7 GHz	2	6 MB	46 W	4400 MT/s

Chipset

Intel® C262 Chipset

Notes: For more information regarding Intel® chipsets, please see the following URL:
http://www.intel.com/products/server/chipsets/

On System Management Chipset

HPE iLO 6 ASIC

Notes: Read and learn more in the HPE iLO QuickSpecs.

Memory	
Type	HPE DDR5 Standard Memory, Unbuffered (UDIMM)
DIMM Slots Available	4 (4 DIMM slots per processor, 2 channels per processor, 2 DIMMs per channel)
Maximum Capacity (UDIMM)	128GB (4 x 32GB UDIMM @ 4800 MT/s)

Notes:

- The maximum memory speed depends on the processor model.
- The maximum speed capability of the memory system is governed by the combination of the CPU and any other DIMMs installed in the server. If higher speed DIMMs are installed with a CPU that only supports a lower memory speed, the DIMMs will only run at the (lower) memory speed supported by the processor. Likewise, if memory DIMMs are mixed with slower DIMMs within a server, all DIMMs will run at the slower memory speed. For further information please refer to the Memory Population Rules for your specific server.
- 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.
- For Server Memory Population Rules for HPE ProLiant Gen11 Servers with Intel® Xeon® 6300 and E-2400 Processors see details here: http://www.hpe.com/docs/server-memory.

Memory Protection

- ECC

Expansion Slots

Expansion Slots #	Technology	Bus Width	Connector Width	Form Factor	Notes
1	PCIe 5.0	x16	x16	Full height, full length	Processor
2	PCIe 4.0	X4	X8	Full height, full length	Processor
3	PCIe 4.0	X4	X8	Full height, half length	PCH
4	PCIe 4.0	X4	X8	Full height, half length	PCH

Notes:

- Bus Width indicates the number of physical electrical lanes running to the connector.
- If installing any PCIe card (including controller card and NIC card) that are PCIe x8 electrically, suggest PCIe controller card be installed in Slot 1 and PCIe NIC be installed in Slot 2 for optimal performance results.

Network Controller

Embedded Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T Adapter

The HPE ProLiant ML30 Gen11 offers the customer a quad-port NIC as standard with the option to upgrade with a variety of networking options.

Notes: The support documents and downloads including firmware and drivers for the Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T LOM Adapter can be downloaded from the supplier's support and services webpage.

Internal Storage Devices

- **Optical Drives**
  None ship standard.
  Optional: SATA 9.5mm DVD-RW/DVD-ROM Optical Drive
- **Hard Drives**
  None ship standard.

Storage Controllers

Hybrid RAID

Intel® VROC SATA Hybrid RAID.

Notes:

- Intel® Virtual RAID on CPU (Intel® VROC) is the SATA hybrid RAID controller supported in this server.
- All server models support Intel® VROC SATA RAID. Quick Install Guide click here.
- BIOS Default is SATA AHCI. Intel® VROC SATA RAID is disabled by default. Intel® VROC SATA RAID can be enabled in BIOS/Platform Configuration (RBSU) or iLO Redfish API.
- Intel® VROC SATA RAID OS drivers are not included in the HPE Support Pack for ProLiant (SPP) and must be downloaded from support.hpe.com.
- Intel® VROC SATA RAID supports RAID 0,1,5,10.
- Intel® VROC SATA RAID cannot be factory ordered, as Intel® VROC SATA RAID must be enabled in BIOS by the customer.
- Intel® VROC SATA RAID does not support different form factors of drives (e.g., RAID sets cannot span across distinct types of storage like SFF + M.2 nor can the RAID sets span across different drive cages)
- Intel® VROC SATA RAID supports Windows Server and Linux but does not support VMware.
- Required to install HPE Agentless Management (AMS) in OS for supporting drives thermal sensor reading for thermal fan control, otherwise may experience acoustic noise impact.
- Both Intel® Xeon® E processors and Intel® Pentium® processors support Intel® VROC SATA RAID.
- See HPE Support Center for additional information regarding installation of Intel® VROC (SATA RAID): Enabling Intel® VROC (SATA RAID) for SATA or SATA on BIOS/Platform configuration (RBSU)
  - Windows Edition.
  - Linux Edition.
- Intel® VROC SATA RAID volumes cannot be created in Intelligent Provisioning. Volumes must be created manually.
- Intel® VROC SATA RAID requires the server boot mode to be set to UEFI Mode.
- Obtain the Intel® VROC downloads (drivers, GUI) specific for your system OS. For direct download links, see the OS-specific VROC guide: https://hpe.com/support/VROC-Gen11-UG
- Intel® VROC supports RAID management through the following tools:
  - Non-OS specific: UEFI System Utilities.
  - Windows: Intel® VROC GUI, Intel® VROC CLI.
  - Linux: mdadm CLI.

Essential RAID Controller

- HPE Smart Array E208e-p SR Gen10 Controller.

Tri-Mode Controllers

- HPE MR216i-p Gen11 SPDM Storage Controller.
- HPE MR408i-p Gen11 SPDM Storage Controller.
- HPE MR416i-p Gen11 SPDM Storage Controller.

Notes: For additional details, please visit:

- HPE Compute MR Gen11 Controllers QuickSpecs
- HPE Compute SR Gen11 Controllers QuickSpecs

Maximum Internal Storage

Drive	Capacity	Configuration
Hot Plug LFF SAS	80 TB	4 x 20 TB
Hot Plug LFF SATA	80 TB	4 x 20 TB
Hot Plug SFF SAS	19.2 TB	8 x 2.4 TB
Hot Plug SFF SATA	16 TB	8 x 2 TB
Non-Hot Plug LFF SATA	16 TB	4 x 4 TB
Hot Plug LFF SATA SSD	3.84 TB	4 x 960 GB
Hot Plug SFF SAS SSD	122.88 TB	8 x 15.36 TB
Hot Plug SFF SATA SSD	61.44 TB	8 x 7.68 TB

Graphics

Integrated Video Standard

1. Video modes up to 1920 x 1200 @85Hz (16 bpp).
2. 16MB Video Memory.

HPE iLO 6 On System Management Memory

3. 32 MB Flash.
4. 8 Gbit DDR 4.

Power Supply

- HPE 350W Non-redundant FIO Power Supplies
  - **P45212-B21,** HPE ML30 Gen10 Plus 350W FIO Power Supply Kit.
    Notes: Power efficiency at 94% Multi-output.
- HPE Redundant Power Supplies
  - **865408-B21**, HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit.
    Notes: Power efficiency at 94% single output.
  - **865438-B21**, HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit.
    Notes: Power efficiency at 96% single output.
  - **P03178-B21**, HPE 1000W Flex Slot Titanium Hot Plug Power Supply Kit.
    Notes: Power efficiency at 96% single output.

HPE Entry-Level Power Supplies provide lower-cost options for customers trying to balance their need for enterprise class efficiency and reliability while maintaining the lowest possible hardware costs. All Entry-Level power supply options have been designed specifically for HPE ProLiant Gen10 Plus and Gen11 Essential Series servers.

The HPE 350W FIO Power Supply is the standard, non-redundant AC power supply option for most HPE ProLiant Gen10 Plus and Gen11 Essential servers. It features Gold-level (92%) and Platinum-level (94%) certified power efficiency with a set of features optimized for the Gen10 Plus and Gen11 Essential-series tower servers.

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 Gen10 Plus and 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.

All pre-configured servers ship standard with one or more country-specific 6 ft./1.83m C-13 power cords depending on regions. If a different power cord is required, please check the HPE Power Cords and Cables web page.

To review the power requirements for your selected system, please use the HPE Power Advisor Tool.

For information on power specifications and technical content visit HPE Server power supplies.

Interfaces	
Video	1 Rear - VGA port (standard on all chassis types) 1 Rear - DisplayPort
Serial Port	1 port - Optional (Rear)
Network Port (RJ-45)	4x 1GbE embedded NIC (standard on all chassis types)
ILO Remote Management Port	Network port 1 is shared for production and iLO data. 1 Gb Dedicated NIC (Optional RJ45 Connector, used if dedicated management network port is required)
USB	8 USB ports (standard) Front: 2x USB Type-A ports with 1x USB 3.2 Gen 1x1 and 1x USB 2.0 (iLO service port) Rear: 4x USB Type-A Ports, 3.2 Gen 1x1 Internal: 2x USB 3.2 Gen 2x1

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

Upgradeability

One of the following depends on model

- Up to 4 DIMM slots available for higher memory capacity.
- HPE Smart Array or Smart HBA Controller.
- Redundant Power Supply.
- Optional iLO Management Port (required if a dedicated iLO port is required, otherwise use network port1 in shared mode).
- M.2 NVMe SSDs or NS204i-u for boot.

Industry Standard Compliance

- ACPI 6.3 Compliant.
- PCIe 5.0 Compliant.
- WOL Support.
- Microsoft® Logo certifications.
- PXE Support.
- USB 3.2 Compliant.
- SMBIOS 3.2.
- UEFI 2.9 (Unified Extensible Firmware Interface Forum).
  Notes: UEFI is Class 3.
- Redfish API.
- IPMI 2.0.
- Secure Digital 4.0.
- TPM 2.0 Support.
- Advanced Encryption Standard (AES).
- Triple Data Encryption Standard (3DES).
- SNMP v3.
- TLS 1.2.
- DMTF Systems Management Architecture for Server Hardware Command Line Protocol (SMASH CLP).
- Active Directory v1.0.
- ASHRAE A3/A4.
  Notes: For additional technical thermal details regarding ambient temperatures, humidity and features support please visit: http://www.hpe.com/servers/ashrae
- Energy Star 4.0.
  Notes: Pentium® G7400 does not comply with Energy Star 4.0.
- EU Lot 9.
  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.

  For more information regarding HPE Lot 9 conformance, please visit:
  https://www.hpe.com/us/en/about/environment/msds-specs-more.html

HPE Server UEFI ROM

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

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

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

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

UEFI Boot Mode only

- TPM 2.0 Support.
- iSCSI Software Initiator Support.
- HTTP/HTTPs Boot support as a PXE alternative.
- Boot support for option cards that only support a UEFI option ROM.

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

Embedded Management

HPE Integrated Lights-Out (HPE iLO)

Monitor your servers for ongoing management, service alerting, reporting and remote management with HPE iLO. Learn more at http://www.hpe.com/info/ilo.

UEFI

Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI). Learn more at http://www.hpe.com/servers/uefi.

Intelligent Provisioning

Hassle free server and OS provisioning for 1 or few servers with Intelligent Provisioning.
Learn more here.

iLO RESTful API

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

Server Utilities

Active Health System

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

Active Health System Viewer

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

Smart Update

Keep your servers up to date with the HPE Smart Update solution by using Smart Update Manager (SUM) to optimize the firmware and driver updates of the Service Pack for ProLiant (SPP). Learn more at http://www.hpe.com/info/smartupdate.

iLO Amplifier Pack

Designed for large enterprise and service provider environments with hundreds of HPE servers, the iLO Amplifier Pack is a free, downloadable open virtual application (OVA) that delivers the power to discover, inventory and update Gen8, Gen9 and Gen10 HPE servers at unmatched speed and scale. Use with an iLO Advanced License to unlock full capabilities.
Learn more at http://www.hpe.com/servers/iLOamplifierpack.

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 is a scripting tool to provision using RESTful API for iLO 6 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 like 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.
- Immutable Silicon Root of Trust.
- FIPS 140-2 validation.
- Common Criteria certification.
- Configurable for PCI DSS compliance.
- Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser.
- Support for Commercial National Security Algorithms (CNSA).
- iLO Security Modes.
- Granular control over iLO interfaces.
- Smart card (PIV/CAC) and Kerberos based 2-factor Authentication.
- Tamper-free updates are ensured through digitally signed and verified components.
- Secure Recovery – recover critical firmware to known good state on detection of compromised FW.
- Ability to rollback firmware.
- Secure erase of NAND/User data.
- TPM (Trusted Platform Module) 2.0.

  Notes: Enabling TPM 2.0 no longer requires TPM module option kit for Gen11. It is an embedded feature yet disabled for shipments to China.
- Front bezel key-lock, standard.
- Padlock slot, standard.
- Kensington Lock slot, standard.
- Intel® TXT (Trusted Execution Technology).

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, 1-Year Labor, 1-Year Onsite support with next business day response. Warranty repairs may be completed 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. 3) Non-CSR parts must be serviced by a trained authorized service engineer. 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 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

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 Gen8, Gen9, Gen10 and Gen10 Plus servers. To learn more visit https://www.hpe.com/info/oneview.

One Config Simple (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.
http://ocs.ext.hpe.com/.

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.

HPE Smart Choice Purchase Program

The HPE Smart Choice Purchase Program features popular fully configured products that can be quoted in minutes and shipped quickly through HPE Authorized Partners. Products are configured and tested in an HPE factory and stocked at HPE Authorized Distributors and Partners. The products arrive in a single box, making onsite integration easier and more efficient for partners and customers. Additionally, there are aggressively priced HPE Tech Care Services available only through the HPE Smart Choice program when you purchase an HPE Smart Choice product.

For HPE Smart Choice configuration and product details, please visit the Smart Choice Supplemental QuickSpecs: https://www.hpe.com/psnow/doc/a50009219enw

Pre-Configured models ship with the configurations below.

- Options can be selected from the Core or Additional options section of this QuickSpecs.
- Hewlett Packard Enterprise does not allow factory integration of options into pre-configured models. Any additional options purchased will not be shipped inside the server.
- Network Choice models do not include embedded LOM.

Performance Models	
SKU Number	P65397-AA1
Model Name	HPE ProLiant ML30 Gen11 E-2434 3.4GHz 4-core 1P 16GB-U 8SFF 500W PS CN Server
Chassis	HPE ProLiant ML30 Gen11 8SFF Hot Plug Configure-to-order Server
Processor	E-2434 (4 core, 3.4 GHz, 55W)
Number of Processors	One
Memory	16 GB (1x16 GB UDIMM, 4800 MT/s)
Network Controller	Embedded 1Gb 4-Port Ethernet Adapter
Storage Controller	Embedded Intel® VROC SATA Hybrid RAID **Notes:** SATA Only

Pre-configured Models

Included Hard Drives	None ship standard, 8 SFF supported
Optical Drive Bay	Optional Slimline ODD Bay Kit (P65102-B21) consumes 1 media bay **Notes:** Up to 1 optical drive bay
Optical Drive	None ship standard; ODD Optional
Power Supply	1x HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit **Notes:** Add a second 500W Flex Slot Power Supply to get 1+1 power redundancy feature.
Fans	1x non-hot plug non-redundant system fan
Security	TPM disabled for shipments to China
Form Factor	4U Tower
Warranty	Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response **Notes:** APAC, Japan, and PRC Server Warranty includes 3-Year parts, 3-Year Labor, 3-Year Onsite support with next business day response

Pre-configured Models

Entry Models	
SKU Number	P65093-AA1
Model Name	HPE ProLiant ML30 Gen11 E-2414 2.6GHz 4-core 1P 16GB-U 4LFF-NHP 350W PS Server
Chassis	HPE ProLiant ML30 Gen11 4LFF Non-hot Plug Configure-to-order Server
Processor	E-2414 (4 core, 2.6 GHz, 55W)
Number of Processors	One
Memory	16 GB (1x16 GB UDIMM, 4800 MT/s)
Network Controller	Embedded 1Gb 4-Port Ethernet Adapter
Storage Controller	Embedded Intel® VROC SATA Hybrid RAID **Notes:** – SATA Only. – NHP models do not support internal Smart Array controllers.
Included Hard Drives	None ship standard, 4 LFF supported
Optical Drive Bay	Optional Slimline ODD Bay Kit (P65102-B21) consumes 1 media bay **Notes:** Up to 1 optical drive bay
Optical Drive	None ship standard; ODD Optional
Power Supply	1x HPE ML30 Gen10 Plus 350W FIO Power Supply Kit
Fans	1x non-hot plug non-redundant system fan
Security	TPM disabled for shipments to China
Form Factor	4U Tower
Warranty	Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response **Notes:** APAC, Japan, and PRC Server Warranty includes 3-Year parts, 3-Year Labor, 3-Year Onsite support with next business day response.

Country Code Key

- -001 = North America.
- -291 = Japan.
- -371 = Asia Pacific.
- -421 = Europe, the Middle East and Africa.
- -AA1 = China.

Notes: Model availability may vary by region. Check with your local country Hewlett Packard Enterprise offices for availability.

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.

1. Factory Integrated Models must start with a CTO Server.
2. FIO indicates that this option is only available as a factory installable option.
3. All Factory Integrated Models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the server.
4. Some options may not be integrated at the factory. Contact your local sales representative for additional information.

Notes: European Union (EU) eco-design regulations for server and storage products, known as Lot 9, go into effect on March 1st, 2020. Among other requirements, for servers this directive establishes power thresholds for idle state, as well as efficiency and performance in active state which vary among configurations. HPE ProLiant ML30 Gen10 and Gen10 Plus servers are compliant with Lot 9 requirements. For more information regarding HPE Lot 9 conformance, please visit: https://www.hpe.com/us/en/about/environment/msds-specs-more/erp-lot9-servers.html.

Step 1: Base Configuration (choose one of the following configurable models)

CTO Server	HPE ProLiant ML30 Gen11 4LFF Non-hot Plug Configure-to-order Server	HPE ProLiant ML30 Gen11 4LFF Hot Plug Configure-to-order Server	HPE ProLiant ML30 Gen11 8SFF Hot Plug Configure-to-order Server
SKU Number	P65090-B21	P65091-B21	P65092-B21
TAA SKU*	P65090-B21#GTA	P65091-B21#GTA	P65092-B21#GTA
Processor Socket	1	1	1
Processor	Not included as standard	Not included as standard	Not included as standard
DIMM Slots	4 DIMM slots for UDIMM DDR5 Memory		
Storage Controller	Embedded Intel® VROC SATA Hybrid RAID	Embedded Intel® VROC SATA Hybrid RAID, choice of HPE Smart Array controller	
PCIe	1 PCIe 5.0 slots, 3 PCIe 4.0 slots		
Drive Cage	4 LFF Non-Hot Plug	4 LFF Hot Plug	8 SFF Hot Plug
M.2 Slot	1 M.2 PCIe 3.0 x2/NVMe slot	1 M.2 PCIe 3.0 x2/NVMe slot	1 M.2 PCIe 3.0 x2/NVMe slot
Network Controller	HPE embedded 1Gb 4-port BCM5719 network adapter, choice of optional standup cards		
Fans	1 non-hot plug non-redundant system fan		
Management	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download), HPE iLO Advanced, HPE iLO Advanced Premium Security Edition, and HPE OneView Advanced (require licenses)		
USB**	8 standard: 2 front (1 optional for iLO Mgmt only), 4 rear, 2 internal		
Security	Embedded TPM **Notes:** Disabled on shipments to China		

Notes: *HPE offers multiple Trade Agreement Act (TAA) compliant configurations to meet the needs of US Federal Government customers. These products are either manufactured or substantially transformed in a designated country.

** When the server is in standby mode, the rear USB ports will have no power. Connected devices will not charge nor be able to wake the server from standby mode.

Step 2: Choose Required Options

Please select one processor required below.

Notes:

- Only one processor is supported.
- DDR5 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.
- DL20 Gen11 with new Intel® Xeon® 6300 and E-2400 processors come with BCM 5719 quad port 4Gb network controller on board and supports 4x 1Gb Ethernet ports. An additional CPU baffle will be integrated in server if 95W processor is selected.

Step 2a: Choose Processors

Intel® Xeon® 6300 Series

Intel® Xeon® 6377P 3.1GHz 12-core 95W FIO Processor for HPE	P93292-B21
Intel® Xeon® 6369P 3.3GHz 8-core 95W FIO Processor for HPE	P77162-B21
Notes: Requires High Performance Heatsink (P65108-B21).	
Intel® Xeon® 6357P 3.0GHz 8-core 80W FIO Processor for HPE	P77163-B21
Intel® Xeon® 6353P 2.7GHz 8-core 65W FIO Processor for HPE	P77164-B21
Notes: Requires High Performance Heatsink (P65108-B21).	
Intel® Xeon® 6349P 3.6GHz 6-core 95W FIO Processor for HPE	P77165-B21
Intel® Xeon® 6337P 3.5GHz 6-core 80W FIO Processor for HPE	P77166-B21
Intel® Xeon® 6333P 3.1GHz 6-core 65W FIO Processor for HPE	P77167-B21
Intel® Xeon® 6325P 3.5GHz 4-core 55W FIO Processor for HPE	P77168-B21
Intel® Xeon® 6315P 2.8GHz 4-core 55W FIO Processor for HPE	P77169-B21

Intel® Xeon® E-2400 Series

Intel® Xeon® E-2488 3.2GHz 8-core 95W FIO Processor for HPE	P65218-B21
Notes: Requires High Performance Heatsink (P65108-B21).	
Intel® Xeon® E-2478 2.8GHz 8-core 80W FIO Processor for HPE	P65219-B21
Intel® Xeon® E-2486 3.5GHz 6-core 95W FIO Processor for HPE	P65221-B21
Notes: Requires High Performance Heatsink (P65108-B21).	
Intel® Xeon® E-2468 2.6GHz 8-core 65W FIO Processor for HPE	P65220-B21
Intel® Xeon® E-2456 3.3GHz 6-core 80W FIO Processor for HPE	P65222-B21
Intel® Xeon® E-2436 2.9GHz 6-core 65W FIO Processor for HPE	P65223-B21
Intel® Xeon® E-2434 3.4GHz 4-core 55W FIO Processor for HPE	P65224-B21
Intel® Xeon® E-2414 2.6GHz 4-core 55W FIO Processor for HPE	P65225-B21
Intel® Xeon® E-2488 3.2GHz 8-core 95W FIO Processor for HPE	P65218-B21

Step 2b: Choose Memory Options

Please select one or more memory from below.

Notes:

- HPE memory from previous generation servers is not qualified or warranted with this HPE ProLiant Server.
- HPE Standard Memory (UDIMM) is required to realize the memory performance improvements and enhanced functionality listed in this document for this HPE ProLiant Server.
- The maximum speed capability of the memory system is governed by the combination of the CPU and any other DIMMs installed in the server. If higher speed DIMMs are installed with a CPU that only supports a lower memory speed, the DIMMs will only run at the (lower) memory speed supported by the processor. Likewise, if memory DIMMs are mixed with slower DIMMs within a server, all DIMMs will run at a slower memory speed. For further information please refer to the Memory Population Rules for your specific server.
- With one processor installed, four DIMMs slots are available, two slots per channel. Each channel can be populated with one DIMM (1DPC) or two DIMMs (2DPC).
- The quantity of memory DIMMS selected is recommended to be 1, 2 or 4 for balanced performance.
- Symmetric configurations are required within each channel (e.g., 1R/1R, 2R/2R), meaning the same DIMM capacity (16GB or 32GB) is required when populating within each channel.
- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- For Server Memory Population Rules for HPE ProLiant Gen11 Servers with Intel® Xeon® 6300 and E-2400 Processors see details here: http://www.hpe.com/docs/server-memory

Intel® Xeon® E-2486 3.5GHz 6-core 95W FIO Processor for HPE	P65221-B21
Notes: Requires High Performance Heatsink (P65108-B21).	
Intel® Xeon® E-2468 2.6GHz 8-core 65W FIO Processor for HPE	P65220-B21
Intel® Xeon® E-2456 3.3GHz 6-core 80W FIO Processor for HPE	P65222-B21
Intel® Xeon® E-2436 2.9GHz 6-core 65W FIO Processor for HPE	P65223-B21
Intel® Xeon® E-2434 3.4GHz 4-core 55W FIO Processor for HPE	P65224-B21
Intel® Xeon® E-2414 2.6GHz 4-core 55W FIO Processor for HPE	P65225-B21
Intel® Pentium® Processor G Series	
Intel® Pentium® G7400 3.7GHz 2-core 46W FIO Processor for HPE	P65226-B21
Notes: Pentium® G7400 does not comply with Energy Star 4.0.	

Memory

HPE 16GB (1x16GB) Single Rank x8 DDR5-4800 CAS-40-39-39 Unbuffered Standard FIO Memory Kit	P64336-F21
HPE 16GB (1x16GB) Single Rank x8 DDR5-4800 CAS-40-39-39 Unbuffered Standard Memory Kit	P64336-B21
HPE 32GB (1x32GB) Dual Rank x8 DDR5-4800 CAS-40-39-39 Unbuffered Standard FIO Memory Kit	P64339-F21
HPE 32GB (1x32GB) Dual Rank x8 DDR5-4800 CAS-40-39-39 Unbuffered Standard Memory Kit	P64339-B21

Notes:

- 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.
- Running at up to 4400 MT/s with Intel® Xeon® processors when two dual-rank DIMMS are installed in different channels.
- 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.

Step 2c: Choose Power Supplies

Please select one or two power supplies from below.

Notes:

- The mixing of 2 different power supplies is NOT allowed.
- Selection of two HPE Flex Slot power supplies provide 1+1 power redundancy.
- To review the power requirements for your selected configuration, please use the HPE Power Advisor Tool.

Power Supplies

HPE ProLiant ML30 Gen10 Plus 350W Platinum ATX FIO Power Supply	P45212-B21
HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865408-B21
HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit	865438-B21
HPE 1000W Flex Slot Titanium Hot Plug Power Supply Kit	P03178-B21
HPE ProLiant ML30 Gen11 4U RPS Enablement Kit	P65104-B21

Notes: Selection of Flex Slot Redundant power supplies requires selection of the RPS Enablement Kit (P65104-B21)

- Flex Slot Platinum power supplies support power efficiency of up to 96% and include a standard C-14 power inlet connector. 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.
- If a second power supply is order for redundancy, its part number must be the same as the first power supply. Mixing power supplies is not supported.
- The RPS Enablement Kit (P65104-B21) is required to support Flex Slot power supplies.
- If HPE ProLiant ML30 Gen11 GPU Power Cable Kit (P74449-B21) is selected then HPE ProLiant ML30 Gen10 Plus 350W Platinum ATX FIO Power Supply (P45212-B21) cannot be selected.

Step 3: 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.

HPE Unique Options

HPE ProLiant ML30 Optical Disk Drive Slimline Enablement Kit P65102-B21

Notes: Required if ODD is selected.

HPE ProLiant ML30 Gen11 Front PCI Fan and Baffle Kit P65106-B21

Notes:

- Included in pre-configured Performance Models.
- Must be selected in 4LFF Hot Plug CTO Server and 8SFF Hot Plug CTO Server.
- Must be selected in 4LFF NHP CTO Server and pre-configured Entry Models if M.2 SSD or any PCIe card (NIC, Smart Array Controller, graphic card, etc.) is selected except the E208e-p controller and 1Gb network adapters.

HPE ProLiant ML30 Gen10 Plus BCM Controller Cable Kit P57104-B21

Notes:

- Required if MR216i-p controller is selected; 1 pc for 4LFF model server.
- The cable cannot be used with Non-Hot Plug model server.

HPE ProLiant ML30 Gen10 Plus 350W Platinum ATX FIO Power Supply P45212-B21

Notes: Required for HPE 350W Non-Redundant ATX Power Supplies.

HPE ProLiant ML30 Gen11 4U RPS Enablement Kit P65104-B21

Notes: Required for HPE 500W, 800W and 1000W Redundant Flex Slot Power Supplies.

HPE ProLiant ML30 Gen11 iLO/NIC/M.2/COM Port Kit P65741-B21

Notes: This kit includes one dedicated iLO module and one serial port cable, with one M.2 slot on the module for M.2 SSD installation. This network port is required if a dedicated iLO management port is required. iLO supports shared management and production data on the embedded network port 1.

HPE ProLiant ML30 Gen11 Plus CPU High Performance FIO Heat Sink Kit P65108-B21

Notes: Required for processors with TDP equal to 95W.

HPE ML Gen10 Tower to Rack Conversion Kit with Sliding Rail Rack Shelf and Cable Management Arm 874578-B21

Notes: Easy to install rack rail tray which takes up 1U height in a standard rack facility. This conversion kit only provides shelf function for ML30 Gen10 Plus and does support the Cable Management Arm.

HPE ProLiant ML30 Gen11 SFF PCIe Cable Kit P67850-B21

Notes: Required for 8SFF model with controller only.

HPE ProLiant ML30 Gen11 NS204i-u Cable Kit P65098-B21

Notes: Required to support NC204i-u OS Boot Device.

HPE Memory

Notes:

- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- See the General Memory Population Rules and Guidelines section for more details.

Unbuffered DIMMs (ECC UDIMMs)

HPE 16GB (1x16GB) Single Rank x8 DDR5-4800 CAS-40-39-39 Unbuffered Standard Memory Kit	P64336-B21
HPE 32GB (1x32GB) Dual Rank x8 DDR5-4800 CAS-40-39-39 Unbuffered Standard Memory Kit	P64339-B21

Notes: 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.

HPE Optical Disk Drives

HPE 9.5mm SATA DVD-ROM Optical Drive	726536-B21

Notes: The HPE ML30 Gen11 Slim Optical Disk Drive Enablement Kit (P65102-B21) is required for this option.

HPE 9.5mm SATA DVD-RW Optical Drive	726537-B21

Notes: The HPE ML30 Gen11 Slim Optical Disk Drive Enablement Kit (P65102-B21) is required for this option.

HPE Mobile USB DVD-RW Optical Drive	701498-B21

HPE Hard Disk Drives

Notes: For the most up to date HDD & SSDs options available Hewlett Packard Enterprise recommends the use of a Hewlett Packard Enterprise approved configurator.

Enterprise - 12G SAS – SFF Basic Carrier Drives

HPE 300GB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD	P40430-B21
HPE 600GB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD	P53561-B21
HPE 1.2TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD	P28586-B21
HPE 1.8TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Multi Vendor HDD	P53562-B21
HPE 2.4TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Multi Vendor HDD	P28352-B21

Midline - 12G SAS - LFF Low Profile Carrier Drives

HPE 4TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	833928-B21
HPE 8TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD	834031-B21
HPE 12TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD	881781-B21
HPE 16TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	P23608-B21
HPE 20TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	P53553-B21

Midline - 6G SATA - LFF Low Profile Carrier Drives

HPE 1TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	861686-B21
HPE 2TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	861681-B21

HPE 4TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	861683-B21
HPE 8TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD	834028-B21
HPE 12TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD	881787-B21
HPE 16TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	P23449-B21
HPE 20TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	P53554-B21
6G SATA - LFF NHP/Raw Drives	
HPE 1TB SATA 6G Business Critical 7.2K LFF RW 1-year Warranty Multi Vendor HDD	801882-B21
HPE 4TB SATA 6G Business Critical 7.2K LFF RW 1-year Warranty Multi Vendor HDD	801888-B21

Notes: ML30 Gen10 Plus supports up to SAS 12G. Performance downgraded to 12G is expected once SAS 24G drive is installed in ML30 Gen10 Plus system.

HPE Solid State Drives

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

Notes: For the most up to date HDD & SSDs options available Hewlett Packard Enterprise recommends the use of a Hewlett Packard Enterprise approved configurator.

Read Intensive – 24G SAS - SFF Basic Carrier Solid State Drives	
HPE 15.36TB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49045-B21
HPE 7.68TB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49041-B21
Mixed Use – 12G Value SAS - SFF Basic Carrier Solid State Drives	
HPE 1.6TB SAS Mixed Use SFF BC Self-encrypting FIPS 140-3 PM7 SSD	P83344-B21
HPE 960GB SAS 12G Mixed Use SFF BC Value SAS Multi Vendor SSD	P40510-B21
Read Intensive – 12G Value SAS - SFF Basic Carrier Solid State Drives	
HPE 7.68TB SAS Read Intensive SFF BC Self-encrypting FIPS 140-3 PM7 SSD	P83350-B21
HPE 3.84TB SAS Read Intensive SFF BC Self-encrypting FIPS 140-3 PM7 SSD	P83347-B21
HPE 960GB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD	P40506-B21
Mixed Use – 6G SATA - SFF Basic Carrier Solid State Drives	
HPE 480GB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40502-B21
HPE 960GB SATA 6G Mixed Use SFF BC Self-encrypting 5400M SSD	P58244-B21
HPE 960GB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40503-B21
HPE 1.92TB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40504-B21
HPE 3.84TB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P40505-B21
Read Intensive – 6G SATA - SFF Basic Carrier Solid State Drives	
HPE 480GB SATA 6G Read Intensive SFF BC Self-encrypting 5400P SSD	P58236-B21
HPE 480GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40497-B21
HPE 960GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40498-B21
HPE 1.92TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40499-B21
HPE 3.84TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40500-B21
HPE 7.68TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40501-B21
Read Intensive – 6G SATA - LFF Low Profile Carrier Solid State Drives	
HPE 960GB SATA 6G Read Intensive LFF LPC Multi Vendor SSD	P47808-B21

Read Intensive - NVMe - M.2 - Solid State Drives

HPE 480GB NVMe Gen4 Mainstream Performance Read Intensive M.2 2280 PE9010 SSD	P80318-B21

Hard Drive Kits

HPE Small Form Factor Hard Drive Blank Kit	666987-B21
HPE Gen9 LFF HDD Spade Blank Kit	807878-B21

HPE Boot Devices

HPE Boot Controllers

HPE NS204i-u Gen11 NVMe Hot Plug Boot Optimized Storage Device	P48183-B21
HPE ProLiant ML30 Gen11 NS204i-u Cable Kit	P65098-B21

Notes:

- The N204i-u Boot device includes 2x 480GB M.2 NVMe SSDs, with preconfigured hardware RAID1. For additional information, please see the HPE OS Boot Device QuickSpecs.
- Selection of the HPE NS204i-u Gen11 NVMe Hot Plug Boot Optimized Storage Device requires selection of the HPE ProLiant ML30 Gen11 NS204i-u Hot Plug Boot Optimized Storage Device Cable Kit. Both the device and the enablement kit are required to be selected together.
- The HPE N204i-u Boot device and Optical Disk Drives cannot be selected together.

HPE Storage Controllers

The Gen11 storage controller portfolio has been updated to include new technology.

Essential RAID Controllers

HPE Smart Array E208e-p SR Gen10 (8 External Lanes/No Cache) 12G SAS PCIe Plug-in Controller	804398-B21

Notes:

- To be used for external storage only.
- Must select 1pc of Mini SAS Cable Kit (P06307-B21) for 4LFF Hot Plug Server.
- Must select 2pcs of Mini SAS Cable Kit (P06307-B21) for 8SFF Hot Plug Server.
- Does not support Non-Hot Plug Server.

HPE Tri-Mode Controllers

HPE MR408i-p Gen11 x8 Lanes 4GB Cache PCI SPDM Plug-in Storage Controller	P74775-B21
HPE MR416i-p Gen11 x16 Lanes 8GB Cache PCI SPDM Plug-in Storage Controller	P47777-B21
HPE MR216i-p Gen11 x16 Lanes without Cache PCI SPDM Plug-in Storage Controller	P47785-B21

Notes:

- Tri-Mode controllers are not supported on the 4LFF Non-Hot Plug Model Server.
- Max 1 pc of MR416i-p or MR216i-p can be selected for better performance.
- Must select 1pc HPE ML30 Gen10+ BCM Cable Kit (P57104-B21) for 4LFF Hot Plug Server.
- Must select 1pc HPE ML30 Gen11 SFF PCIe Cable Kit (P67850-B21) for 8SFF Hot Plug Server.
- Tri-Mode controller selection requires selection of either P01367-B21 - HPE 96W Smart Storage Lithium-ion Battery with 260mm Cable Kit or P02381-B21 - HPE Smart Storage Hybrid Capacitor with 260mm Cable Kit.

Optional Software

HPE Smart Array SR Secure Encryption (Data at Rest Encryption/per Server Entitlement) E-LTU	Q2F26AAE

Notes: SmartCache is offered on HPE Smart Array performance RAID controllers.

HPE Energy Packs

HPE 16W Smart Hybrid Capacitor with 260mm Cable	P65042-B21
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 ML150 Gen9 Smart Storage Battery Holder Kit	786710-B21

Notes:

- Provides backup power for multiple HPE Smart Array controllers or other devices. Is required with performance RAID controllers.
- Max storage battery qty to be one per DL20 Gen11 server.
- HPE 96W Smart Storage Battery 260mm Cable (P01367-B21) and HPE Smart Hybrid Capacitor w/ 260mm Cable P02381-B21) cannot be selected together.
- A Battery holder is required: HPE Gen9 Smart Storage Battery Holder Kit (786710-B21).

HPE Networking

1 Gigabit Ethernet adapters

Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T Adapter for HPE	P51178-B21

10 Gigabit Ethernet adapters

Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T Adapter for HPE	P26253-B21
Broadcom BCM57412 Ethernet 10Gb 2-port SFP+ Adapter for HPE	P26259-B21

25 Gigabit Ethernet adapters

Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P26262-B21
Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	P26264-B21
Intel® E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P08443-B21
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

Notes:

- Any PCIe card selection requires selection of the HPE ML30 Gen11 Front PCI Fan and Baffle Kit (P65106-B21).
- SAS controllers (internal and external) and PCIe Gen5 x16 card cannot be selected together as both need to be installed on slot 1.
- If controller x8 and PCIe x8 card is selected together, then the controller should be installed on Slot 1 and PCIe x8 card on slot 2.

HPE Computation and Graphics Accelerators

NVIDIA RTX A400 4GB PCIe ATX Bracket Accelerator for HPE	S7K99C

Notes: If RTX A400 GPU is installed, iLO video port is disabled so use the iLO Web GUI.

NVIDIA RTX A1000 8GB PCIe Accelerator for HPE	S5T74C

Notes: If RTX A1000 GPU is installed, iLO video port is disabled so use the iLO Web GUI.

HPE Cooling Options

HPE ProLiant ML30 Gen11 Front PCI Fan and Baffle Kit P65106-B21

Notes:

- Included in pre-configured Performance Models.
- Must be selected in 4LFF Hot Plug CTO Server and 8SFF Hot Plug CTO Server.
- Must be selected in 4LFF NHP CTO Server and pre-configured Entry Models if an M.2 SSD or any PCIe card (NIC, Smart Array Controller, graphic card, etc.) is selected except the E208e-p controller and 1Gb network adapters.

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

Embedded Management

HPE iLO Advanced

HPE iLO Advanced 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 1yr Support on iLO Licensed Features	E6U59ABE
HPE iLO Advanced Electronic License with 3yr Support on iLO Licensed Features	E6U64ABE
HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features	BD505A
HPE iLO Advanced AKA Tracking License with 3yr Support on iLO Licensed Features	BD507A

HPE iLO Common Password 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.

Software as a Service Management

HPE Compute Ops Management

HPE Compute Ops Management Standard 3-year SaaS for Smart Choice	S7P76AAE
HPE Compute Ops Management Standard 5-year SaaS for Smart Choice	S7P77AAE
HPE Compute Ops Management Standard 7-year SaaS for Smart Choice	S7P78AAE
HPE Compute Ops Management Advanced 3-year SaaS for Smart Choice	S7P79AAE
HPE Compute Ops Management Advanced 5-year SaaS for Smart Choice	S7P80AAE
HPE Compute Ops Management Advanced 7-year SaaS for Smart Choice	S7P81AAE
HPE Compute Ops Management Advanced Flex with ProLiant Enablement	S6C28AAE
HPE Compute Ops Management Standard 3-year Upfront ProLiant SaaS	R7A11AAE
HPE Compute Ops Management Standard 5-year Upfront ProLiant SaaS	R7A12AAE
HPE Compute Cloud Management Server FIO Enablement	S1A05A
HPE Compute Ops Management Standard with ProLiant Enablement	S2R34AAE
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 Standard 7-year Upfront ProLiant SaaS	S2E10AAE

Notes: For more information, visit the HPE Compute Ops Management QuickSpecs: https://www.hpe.com/psnow/doc/a50004263enw

HPE Security

HPE ProLiant ML30 Gen11 ships with embedded Trusted Platform Module (TPM) 2.0 enabled by default. For servers shipping to China, the TPM is disabled.

Notes:

- Only 1pc of internal RDX is supported.
- Removable disk cartridge can be installed in either External Docking station or Internal Docking station.
- Internal RDX docking station requires 1pc of HPE ML30 Gen9 Tape Drive Cable Kit 851615-B21.

HPE Uninterruptible Power Systems (UPS)

To learn more, please visit the HPE Uninterruptible Power Systems (UPS) web page.

HPE Rack Options

Rail Kits

Notes: HPE rail kits are designed to work with HPE racks in compliance with industry standard EIA-310-E. In the event a customer elects to purchase a third-party rack for use with an HPE rail kit, any such use is at customer's own risk. HPE makes no express or implied warranties with respect to such third-party racks and specifically disclaims any implied warranties of merchantability and fitness for a particular purpose. Furthermore, HPE has no obligation and assumes no liability for the materials, design, specifications, installation, safety, and compatibility of any such third-party racks with any rail kits, including HPE rail kits.

HPE ML Gen10 Tower to Rack Conversion Kit with Sliding Rail Rack Shelf and Cable Management Arm	874578-B21

HPE Support Services

Installation & Start-up Services

HPE ProLiant DL/ML Install Service	U4554E
HPE ProLiant DL/ML Startup Service	U4555E

Notes: For a full list of packaged support services, please visit http://www.hpe.com/services/ssc

HPE Tape Backup

For the complete range of tape drives, autoloaders, libraries and media see: LTO Ultrium tape QuickSpecs For hardware and software compatibility of Hewlett Packard Enterprise tape backup products https://h20272.www2.hpe.com/SPOCK/Pages/spock2Html.aspx?htmlFile=hw_storeever.html

HPE Internal Tape Drives

HPE StoreEver LTO-8 Ultrium 30750 Internal Tape Drive	BC022A
HPE StoreEver LTO-9 Ultrium 45000 Internal Tape Drive	BC040A

Notes:

- Only 1pc of internal RDX is supported.
- Max = 1 and will occupy Bay 1
- Total combined Qty of Optical Drive, LTO int Tape Drive and Internal Docking Station together should NOT exceed 2.
- For NHP CTO server, internal SAS controllers (MR216i-p/MR416i-p) can be selected only when tape drives are selected.
- When LTO Internal tape drive is selected, then Qty 1 Internal SAS controller (MR216i-p/MR416i-p) and Qty 1 of HPE ML30 Gen11 LTO Cable kit MUST be selected
- When LTO Internal tape drive is selected with a 350W ATX FIO PS kit, then Qty 1 Internal SAS controller (MR216i-p/MR416i-p), Qty 1 of HPE ML30 Gen11 LTO Cable kit and Qty 1 of Gen9 Tape Drive Cable Kit MUST be selected.

HPE External Tape Drives

HPE ML30 Gen9 Tape Drive Cable Kit	851615-B21
HPE ProLiant ML30 Gen11 LTO Cable Kit	P65100-B21

HPE Tape Drive Cables

HPE ProLiant ML30 Gen11 LTO Cable Kit	P65100-B21
HPE ML30 Gen9 Tape Drive Cable Kit	851615-B21

HPE Standard Memory

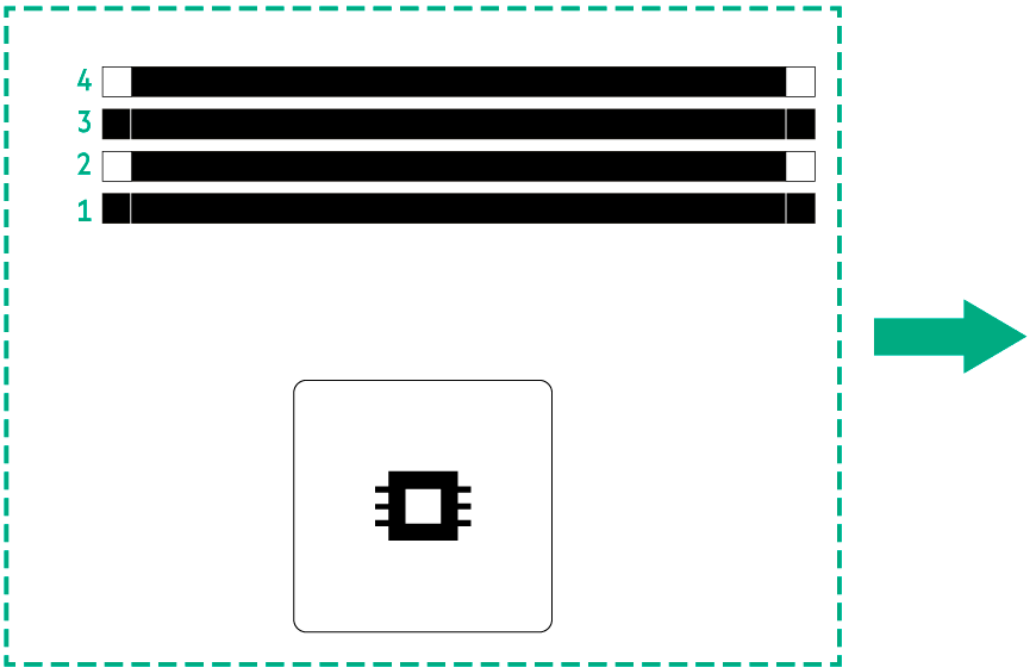
HPE Standard Memory offers the best combination of pricing, quality, reliability and compatibility for HPE ProLiant servers; designed to help your business achieve powerful results with right-sized affordable solutions. It delivers the ideal value that small businesses require to smoothly run a small network server environment and provides entry-level businesses with affordable server memory that has been optimized for HPE entry-level servers. HPE Standard Memory is outstanding for businesses looking for memory with a low acquisition cost, exceptional performance, optimized compatibility, assured reliability, and comprehensive management.

HPE Standard Memory UDIMMs has passed the rigorous Hewlett Packard Enterprise qualification and testing processes.

The memory subsystem in this server supports UDIMMs. The server supports single-rank and dual-rank DDR5 UDIMMs operating at up to 4400 MT/s DIMM speeds.

Memory Population guidelines

The server supports two channels per processor with two DIMMs per channel for a total of four DIMMs per ML30 Gen11 Server.



HPE ProLiant ML30 Gen11 memory slots

Notes:

- UDIMM maximum configuration (1 CPU model).
- Population order; start with "A" first, "B" second, "C" third, etc.

CPU 1		
	Slot #	**Population order**
Channel 2	4 3	B D
Channel 1	2 1	A C

General Memory Population Rules and Guidelines:

- 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, the number and model of installed processors qualified on the platform.
- The maximum speed capability of the memory system is governed by the combination of the CPU and any other DIMMs installed in the server. If higher speed DIMMs are installed with a CPU that only supports a lower memory speed, the DIMMs will only run at the (lower) memory speed supported by the processor. Likewise, if memory DIMMs are mixed with slower DIMMs within a server, all DIMMs will run at the slower memory speed. For further information please refer to the Memory Population Rules for your specific server.
- Only ECC UDIMMs are supported on ML30 Gen11. No support for non-ECC UDIMMs.
- There are two channels per processor with two DIMM slots per channel.
- Memory channel 1 consists of the two DIMMs that are closest to the processor.
- Memory channel 2 consists of the two DIMMs that are farthest from the processor.
- A white DIMM slot indicates the first slot of a channel (3-A, 1-B).
- The server supports up to 4400 MT/s ECC UDIMMs (Unbuffered DIMMs).
- The server supports up to 128 GB (4 x 32 GB) UDIMMs.
- The server does not support non-ECC UDIMMs, RDIMMs, and LRDIMMs
- Populate the DIMM on slots in this sequence: 2A, 4B, 1C, 3D.
- Always use HPE qualified DIMMs.
- Cannot mix memory DIMMs of different capacities in the same channel.
- Mixing memory DIMMs of different capacities in the server is not recommended.
- For Server Memory Population Rules for HPE ProLiant Servers with Intel® Xeon® 6300 and E-2400 Processors see details here: https://www.hpe.com/docs/server-memory
- For details on the HPE Server Memory Options Population Rules, visit: https://www.hpe.com/docs/memory-population-rules
- To realize the performance memory capabilities listed in this document, HPE DDR5 Smart Memory is required. For additional information, please see the HPE DDR5 Smart Memory QuickSpecs.

Notes:

- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- For details on the HPE Server Memory speed, visit: https://www.hpe.com/docs/server-memory
- 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.

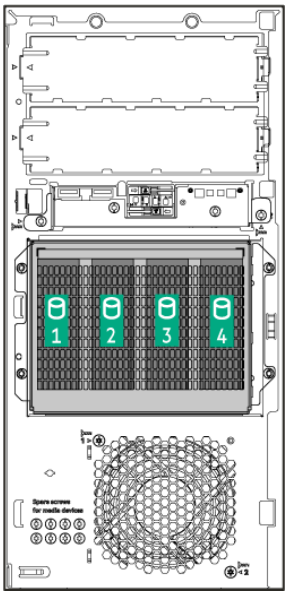
DIMM Type	Unbuffered with ECC DIMMs (UDIMMs)	
HPE SKU P/N	**P64336-B21**	**P64339-B21**
SKU Description	HPE 16GB (1x16GB) Single Rank x8 DDR5-4800 CAS-40-39-39 Unbuffered Standard Memory Kit	HPE 32GB (1x32GB) Dual Rank x8 DDR5-4800 CAS-40-39-39 Unbuffered Standard Memory Kit
DIMM Rank	Single Rank (1R)	Dual Rank (2R)
DIMM Capacity	16GB	32GB
Voltage	Std Voltage 1.1V VDDQ, 1.8V VPP	Std Voltage 1.1V VDDQ, 1.8V VPP
CAS Latency	36-36-36	36-36-36
DIMM Native Speed (MT/S)	5600 MT/s	5600 MT/s
Slots That Can Be Populated	4	4
Maximum Capacity (Gb)	64 GB (4 x 16 GB)	128 GB (4 x 32 GB)
HPE Server Memory Speed: Intel® Xeon® E processors		
1 DIMM Per Channel	4400 MT/s	4400 MT/s
2 DIMM Per Channel	4000 MT/s	3600 MT/s
HPE Server Memory Speed: Intel® Pentium® G7400 processor		
1 DIMM Per Channel	4400 MT/s	4400 MT/s
2 DIMM Per Channel	4000 MT/s	3600 MT/s

DDR5 memory options part number decoder

Capacity references are rounded to the common gigabyte (GB) values.

- 16GB = 16,384 MB.
- 32GB = 32,768 MB.
- 64GB = 65,536 MB.
- 128GB = 131,072 MB.

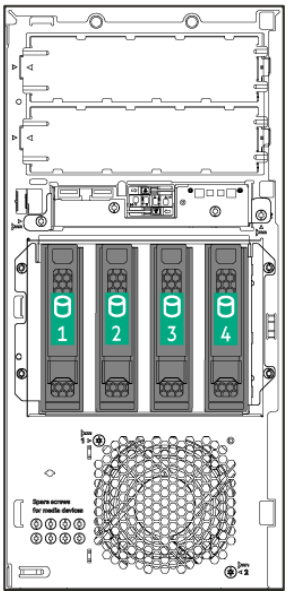
For more information on memory, please visit the HPE DDR5 Standard Memory web site.



4 LFF Non-Hot-Plug Drive Model

1-4

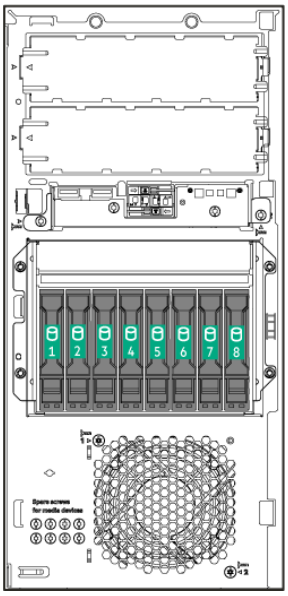
4 x LFF SATA
non-hot-plug hard drive bays



4 LFF Hot-Plug Drive Model

1-4

4 x LFF SAS/SATA/SSD
hot pluggable hard drive bays



8 SFF Hot-Plug Drive Model

1-8

8 x SFF SAS/SATA/SSD
hot pluggable hard drive bays

System Unit

Dimensions

– 14.50 (H) x 6.90 (W) x 18.70 (D) in.
(36.83 x 17.53 x 47.50 cm)

Weight

(approximate)

– Minimum:
22.5 lb.
10.2 kg
  - 4 NHP LFF chassis with 1x LFF HDD, 1x processor including heatsink, 1x DIMM, 1x ATX power supply, cables for the above.
– Maximum:
41.2lb
18.7 kg
  - Fully loaded - 4 Hot-plug LFF chassis with 4x LFF HDDs, 1x DVD-RW, 1x tape drive, 1x processor including heatsink, 4x DIMMs, 2x power supplies, cables for the above.

Input Requirements (per power supply)

Rated Line Voltage

– 100 to 120 VAC.
– 200 to 240 VAC.

BTU Rating

Maximum

– For 500W Power Supply: 1902 BTU/hr. (at 100 VAC), 1840 BTU/hr. (at 200 VAC), 1832 BTU/hr. (at 240 VAC).

Power Supply Output (per power supply)

- **Rated Steady-State Power**
  - For 350W Power Supply: 350W (at 100 to 230 VAC).
  - For 500W Power Supply: 500W (at 100 VAC to 240 VAC).
  - For 800W Power Supply: 800W (at 200 VAC to 240 VAC).
    Notes: For 800W Titanium PSU only.
  - For 1000W Power Supply: 1000W (at 100 VAC TO 240 VAC).
- **Maximum Peak Power**
  - For 350W Power Supply: 350W (at 100 to 230 VAC).
  - For 500W Power Supply: 500W (at 100 VAC to 240 VAC).
  - For 800W Power Supply: 800W (at 200 VAC to 240 VAC).
    Notes: For 800W Titanium PSU only.
  - For 1000W Power Supply: 1000W (at 100 VAC TO 240 VAC).

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 304.8 m (1.8°F per every 1000 ft.) above sea level to a maximum of 3048 m (10,000 ft.), no direct sustained sunlight. The maximum rate of change is 10°C/hr. (18°F/hr.). The upper limit may be limited by the type and number of options installed.

  System performance 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 of1.0°C per every 175 m (1.8°F per every 574 ft.) above 900m (2953 ft.) to a maximum of 3050 m (10,000 ft.). The approved hardware configurations for this system are listed at the URL:http://www.hpe.com/servers/ashrae

  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: http://www.hpe.com/servers/ashrae

  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.).

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.

Altitude

- **Operating**
  3048 m (10,000 ft.). This value may be limited by the type and number of options installed. The maximum allowable altitude change rate is 457 m/min (1500 ft./min).
- **Non-operating**
  9144 m (30,000 ft.). Maximum allowable altitude change rate is 457 m/min (1500 ft./min).

Acoustic Noise

Listed are the declared mean A-Weighted sound power levels ($L_{WA,m}$), declared average bystander position A-Weighted sound pressure levels (L_{pAm}) and the statistical adder for verification, Kv, is a quantity to be added to the declared mean A-weighted sound power level, $L_{WA,m}$ 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.

	Entry	Performance
Idle		
$L_{WA,m}$	3.8 B	3.8 B
L_{pAm}	22 dBA	24 dBA
Kv	0.4 B	0.4 B
Operating		
$L_{WA,m}$	3.8 B	3.8 B
L_{pAm}	22 dBA	24 dBA
Kv	0.4 B	0.4 B

Notes:

- Acoustics levels presented here are generated by the test configurations (Entry and Performance SKUs) only. Acoustics levels will vary depending on system configuration. Values are subject to change without notification and are for reference only. A system with additional configuration components or increased operating functionality may increase the noise emission values.
- The declared mean A-weighted sound power level, LWA,m, is computed as the arithmetic average of the measured.
- A-weighted sound power levels for a randomly selected sample, rounded to the nearest 0,1 B.

- The declared mean A-weighted emission sound pressure level, LpA,m, is computed as the arithmetic average of the measured A-weighted emission sound pressure levels at the bystander positions for a randomly selected sample, rounded to the nearest 1 dB.
- The statistical adder for verification, Kv, is a quantity to be added to the declared mean A-weighted sound power level, LWA,m, such that there will be a 95 % probability of acceptance, when using the verification procedures of ISO 9296, if no more than 6,5 % of the batch of new equipment has A-weighted sound power levels greater than (LWA,m + Kv).
- The quantity, LWA,c (formerly called LWAd), can be computed from the sum of LWA,m and Kv.
- All measurements made to conform to ISO 7779 / ECMA-74 and declared to conform to ISO 9296 / ECMA-109.
- B, dB, abbreviations for bels and decibels, respectively, where 1 B = 10 dB.

What Happens When iLO Doesn’t Recognize a Component's Temperature Sensor

When HPE iLO cannot detect a temperature sensor from a component—such as a third-party OCP card or optional hardware—it assumes the worst-case scenario to protect the server. In this case, iLO will run the fans at full speed using fallback sensors to avoid overheating. This results in higher acoustic levels, meaning the server will be louder than usual.

About Fallback Sensors

Fallback sensors are backup temperature sensors that activate when the main sensor fails or is not recognized. They allow iLO to continue managing fan speeds, even if only in a limited or degraded mode.

IMPORTANT

Notes:

HPE does not recommend disabling fallback sensors, as they play a critical role in maintaining safe operating temperatures. However, if you choose to disable them—typically to reduce noise caused by unrecognized components—please refer to the following documentation and use the Redfish method to do so:
Changing iLO Fallback Sensor setting with Redfish

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

Environmentally 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 27	Changed	Standard Features and Core Options sections were updated.
		Added	Intel Xeon 6377P Processor.
		Removed	HPE ProLiant ML30 Gen11 GPU Power Cable Kit, Read Intensive – 6G SATA - SFF Basic Carrier Solid State Drives, HPE Computation and Graphics Accelerators, and HPE Internal Tape Drives obsolete SKUs.
06-Apr-2026	Version 26	Changed	Pre-Configured Models and Core Options sections were updated
		Added	HPE Energy Packs
		Removed	Pre-Configured Models obsolete SKUs.
02-Mar-2026	Version 25	Changed	Overview, Service and Support, Pre-Configured Models and Core Options sections were updated.
		Added	Updated GreenLake statement.
		Removed	Pre-Configured Models and HDD obsolete SKUs.
01-Dec-2025	Version 24	Changed	Core Options and Technical Specifications sections were updated.
		Added	Read Intensive – 12G SAS – SFF Basic Carrier – Solid State Drives, Mixed Use - 12G SAS - SFF Basic Carrier - Solid State Drives SKUs and iLO Temperature Sensor rules.
10-Nov-2025	Version 23	Changed	Standard Features section was updated.
		Added	Intel® Processors Matrix.
02-Sep-2025	Version 22	Changed	Standard Features, Core Options and Additional Options sections were updated.
		Added	Quick Install Guide, NVIDIA RTX A1000 8GB PCIe Accelerator for HPE and HPE Tape Backup SKUs.
14-Jul-2025	Version 21	Changed	Configuration Information section was updated. Added: CTO Server DIMM slots capacity.
02-Jun-2025	Version 20	Changed	Core Options section was updated. Added: Read Intensive - NVMe - M.2 - Solid State Drives SKU.
05-May-2025	Version 19	Changed	Additional Options section was updated. Added: European Union ErP Lot 9 Regulation section to include Turkey and Ireland and Software as a Service Management Enablement SKU.
07-Apr-2025	Version 18	Changed	Overview, Standard Features and Additional Options sections were updated. Processors DDR5 specs were updated. Added: COM Advanced SKUs and QuickSpecs Survey. Removed: HPE Disk Backup SKUs.
24-Feb-2025	Version 17	Changed	Overview, Standard Features and Configuration Information sections were updated.
13-Jan-2025	Version 16	Changed	Standard Features, Pre-Configured Models, Pre-Configured Models, Configuration Information and Core Options sections were updated.
02-Dec-2024	Version 15	Changed	Standard Features and Core Options sections were updated.
04-Nov-2024	Version 14	Changed	Core Options section was updated.
07-Oct-2024	Version 13	Changed	Overview, Core Options and Additional Options sections were updated.
03-Sep-2024	Version 12	Changed	Standard Features (Operating Systems and Virtualization Software Support for HPE Servers), Pre-Configured Models, Core Options and Technical Specifications sections were updated.

Summary of Changes

Date	Version History	Action	Description of Change
05-Aug-2024	Version 11	Changed	Overview and Standard Features sections were updated.
15-Jul-2024	Version 10	Changed	Pre-Configured Models section was updated.
03-Jun-2024	Version 9	Changed	Pre-Configured Models section was updated.
06-May-2024	Version 8	Changed	Additional Options section was updated.
15-Apr-2024	Version 7	Changed	Pre-Configured Models section was updated.
01-Apr-2024	Version 6	Changed	Standard Features, Configuration Information Core Options and Additional Options sections were updated.
18-Mar-2024	Version 5	Changed	Pre-Configured section was updated.
04-Mar-2024	Version 4	Changed	Core Option section was updated.
05-Feb-2024	Version 3	Changed	Core Option section was updated.
08-Jan-2024	Version 2	Changed	Configuration information section was updated.
14-Dec-2023	Version 1	New	New QuickSpecs.

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