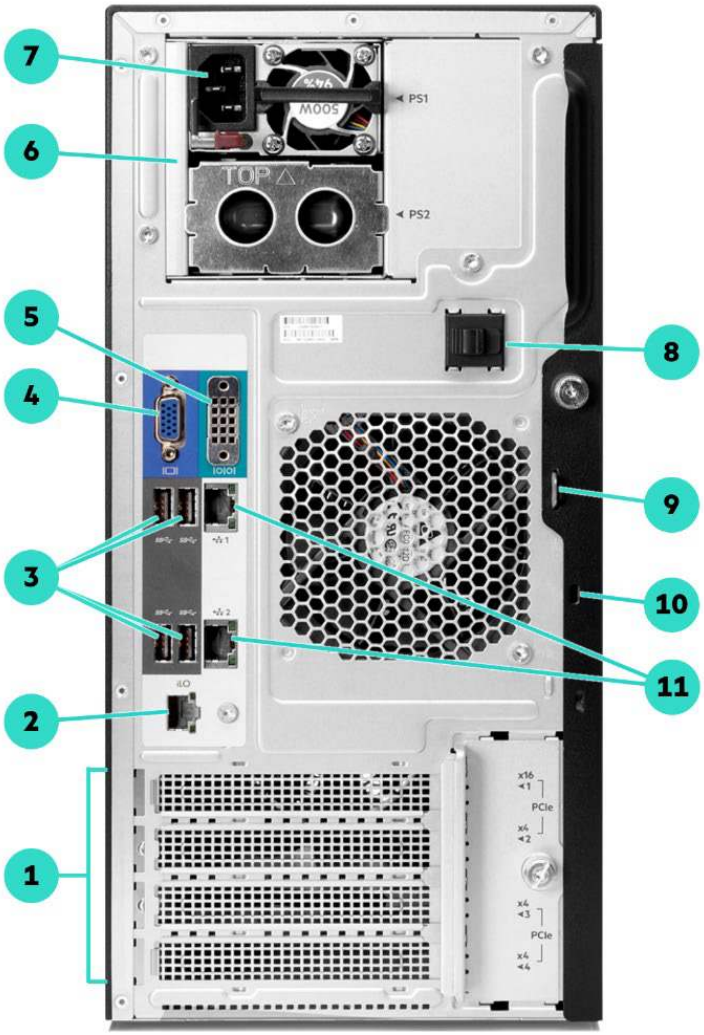
RETIRED: This document has been officially retired, and the base products listed herein are now considered obsolete and are no longer available for sale. Consequently, the information contained within may no longer be current. This document is provided exclusively for reference and informational purposes.

Overview

HPE ProLiant ML30 Gen10 Plus server

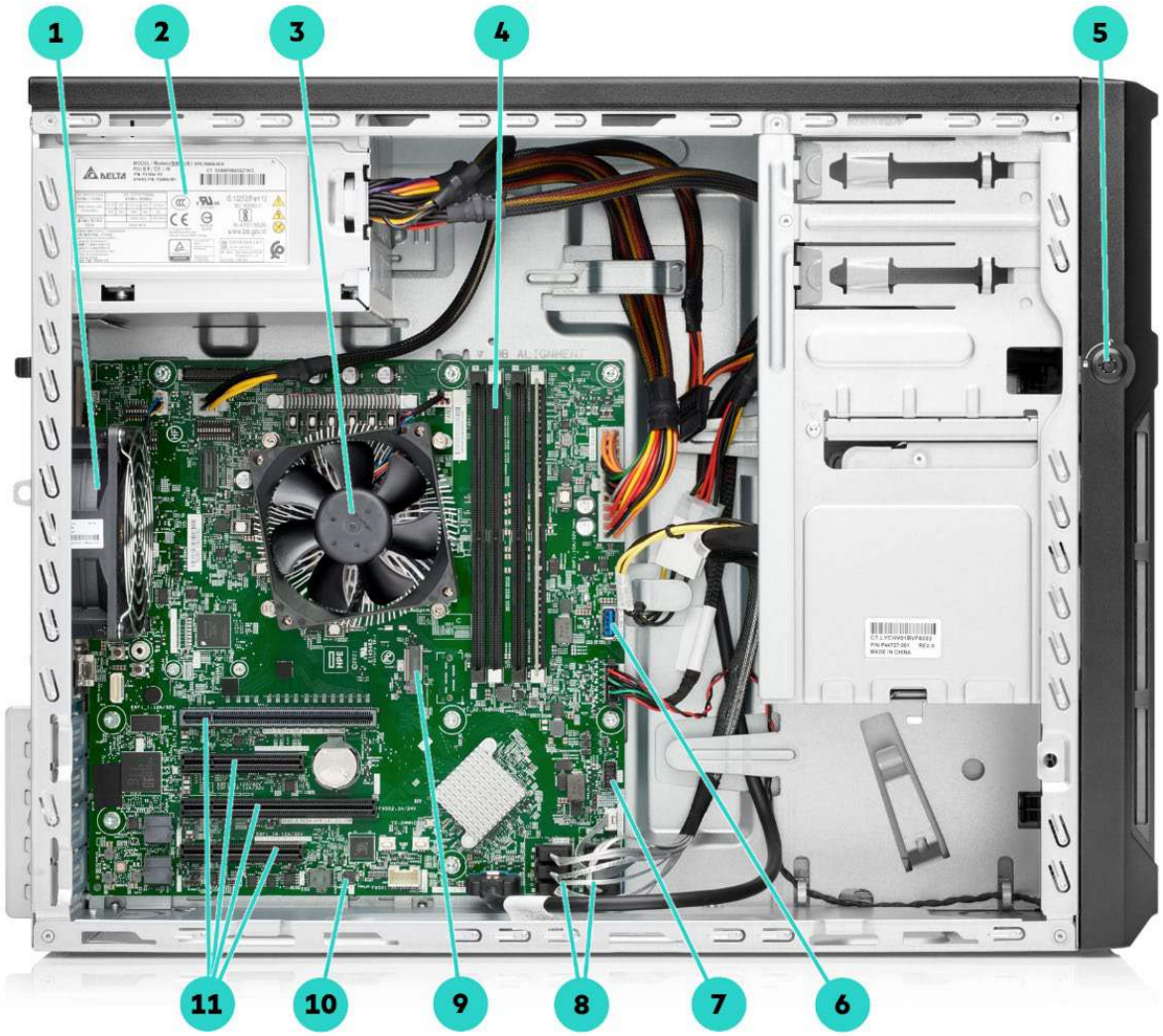
The HPE ProLiant ML30 Gen10 Plus server is a powerful yet affordable tower server designed for small offices, remote and branch offices to run on-premises and hybrid cloud solutions, delivering enterprise-class performance, security, reliability, and expandability at a lower cost.



Rear View

1. PCI slots (slots 1-4)
2. Dedicated iLO management port (optional)
3. 4 USB 3.0 ports
4. VGA port
5. Serial port (optional)
6. Power supply bay (one optional redundant power supply with enablement kit and blank shown)
7. Power supply power connector
8. Power cord clip
9. Padlock eye
10. Kensington security slot
11. NIC1/shared iLO port (upper), NIC2 port (lower)

Overview



Internal View

1. System fan
2. Power supply
3. Processor and heatsink/fan
4. 4 DDR4 DIMM slots
5. Bezel lock
6. Internal USB 3.0 port
7. Front PCI fan connector
8. 6 SATA ports
9. M.2 slot
10. Embedded TPM
11. 4 PCIe expansion slots

What's New

- Support Intel® Xeon® E-2300 processors up to 8 cores and Pentium processors.
- 3200 MT/s HPE DDR4 Standard Memory UDIMM offering 8GB, 16GB, and 32GB. Max 128GB memory capacity.
- Four expansion slots for flexible usage – two x16 and two x8 connectors, one powered by PCIe 4.0 x16.
- Support for one onboard M.2 NVMe/SATA SSD.
- Dedicated iLO port & serial port option kit.

Overview

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, RDX, or LTO options
- 4 LFF hot plug chassis with 2 half-height (5.25") media bays for optional internal slim-line DVD bay kit, RDX, or LTO options
- 4 LFF non-hot plug chassis with 2 half-height (5.25") media bays for optional internal slim-line DVD bay kit, RDX, or LTO options

System Fans

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

  Notes:
  - PCI fan module is part of HPE ML30 Gen10 PCI Fan and Baffle Kit (P06303-B21) which is included in pre-configured Performance Models.
  - HPE ML30 Gen10 PCI Fan and Baffle Kit (P06303-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.) is selected except the E208e-p controller and 1Gb network adapters.

Standard Features

Processor

Intel® Xeon® E Processor is 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**.

Intel Xeon E-2300 Series / Pentium G							
Model	**CPU Base Frequency**	**Cores**	**L3 Cache**	**Power**	**DDR4**	**ENERGY STAR® 4.0 Certified**	**SGX**
Xeon E-2388G	3.2 GHz	8	16 MB	95W	3200 MT/s	Yes	Yes
Xeon E-2378G	2.8 GHz	8	16 MB	80W	3200 MT/s	Yes	Yes
Xeon E-2378	2.6 GHz	8	16 MB	65W	3200 MT/s	Yes	Yes
Xeon E-2386G	3.5 GHz	6	12 MB	95W	3200 MT/s	Yes	Yes
Xeon E-2356G	3.2 GHz	6	12 MB	80W	3200 MT/s	Yes	Yes
Xeon E-2336	2.9 GHz	6	12 MB	65W	3200 MT/s	Yes	Yes
Xeon E-2374G	3.7 GHz	4	8 MB	80W	3200 MT/s	Yes	Yes
Xeon E-2334	3.4 GHz	4	8 MB	65W	3200 MT/s	Yes	Yes
Xeon E-2324G	3.1 GHz	4	8 MB	65W	3200 MT/s	No	Yes
Xeon E-2314	2.8 GHz	4	8 MB	65W	3200 MT/s	No	Yes
Pentium G6405	4.1 GHz	2	4 MB	58W	2666 MT/s	No	No

Chipset

Intel® C256 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 5 ASIC

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

Memory

Type	HPE DDR4 Standard Memory, Unbuffered (UDIMM)
DIMM Slots Available	4 4 DIMMs (2 Channels/ 2 DIMMs per channel)
Maximum Capacity (UDIMM)	128GB (4 x 32GB UDIMM @3200 MT/s)

Notes: The maximum memory speed depends on processor model.

Memory Protection

ECC

Standard Features

Expansion Slots

Expansion Slots #	Technology	Bus Width	Connector Width	Form Factor	Notes
1	PCIe 4.0	x16	x16	Full height, full length	Processor
2	PCIe 3.0	X4	X8	Full height, full length	PCH
3	PCIe 3.0	X4	X16	Full height, half length	PCH
4	PCIe 3.0	X4	X8	Full height, half length	PCH

Notes:

- Bus Width indicates the number of physical electrical lanes running to the connector.
- Slot 1 supports only PCIe 3.0 when a Pentium processor is installed.

Network Controller

Embedded Broadcom BCM5720 Ethernet 1Gb 2-port BASE-T Adapter

The HPE ProLiant ML30 Gen10 Plus server offers the customer a dual-port NIC as standard with the option to upgrade with a variety of networking options.

Notes: Support document and downloads including firmware and drivers for the Broadcom BCM5720 Ethernet 1Gb 2-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 Controller

Software RAID

Intel® VROC SATA (formerly known as Intel® RSTe)

Notes:

- The embedded Intel Virtual RAID on CPU (Intel VROC) is the SATA software RAID controller supported in this server.
- All models feature an embedded storage controller Intel VROC SATA. This product supports 4 SATA ports for drive bays, 2 SATA ports for media bays or HPE Universal SATA AIC HHHL M.2 SSD Kit (878783-B21), and additional 1 SATA via onboard M.2 slot.
- BIOS Default is SATA AHCI. Embedded Intel SATA VROC is disabled by default. Embedded Intel SATA VROC can be enabled in BIOS/Platform Configuration (RBSU) for SW RAID features.
- RAID support – 0/1/5/10.
- RAID setting cannot be factory ordered/configured for use with Intel VROC SATA as Intel VROC SATA must be enabled in BIOS by customer.
- Intel VROC SATA does not support RAID volume creation with different form factors of drives (e.g., SFF + M.2)
- Intel VROC SATA RAID supports Windows Server and Linux, but does not support VMware.
- Intel VROC SATA will operate in UEFI mode, Windows OS environment, and Linux OS environment.
- 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**
  - **VMware Edition**
  - **Linux Edition**

Standard Features

- Intel VROC SATA RAID cannot be created in Intelligent Provisioning. It must be installed manually.
- Intel VROC 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://www.hpe.com/support/IntelVROC-Gen10Plus-docs**
- Intel VROC supports RAID management though 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 E208i-p SR Gen10 Controller
- HPE Smart Array E208e-p SR Gen10 Controller

Performance RAID Controller

- HPE Smart Array P408i-p SR Gen10 Controller
- HPE Smart Array P408e-p SR Gen10 Controller

Notes:

- Performance RAID Controllers require the HPE Smart Storage Battery (P01366-B21) or the HPE Smart Hybrid Capacitor (P02377-B21) which are sold separately.
- ML30 Gen10 Plus does not support internal RAID Controller E208i-p and P408i-p in NHP models.
- For additional details of HPE Smart Array, please see **HPE Smart Array Gen10 Controllers QuickSpecs**.

Maximum Internal Storage		
Drive	**Capacity**	**Configuration**
Hot Plug LFF SAS	72 TB	4 x 18 TB
Hot Plug LFF SATA	72 TB	4 x 18 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	7.68 TB	8 x 960 GB
Hot Plug SFF SATA SSD	61.44 TB	8 x 7.68 TB
M.2 SATA SSD	2.88 GB	3 x 960 GB (with HPE Universal SATA 6G AIC HHHL M.2 SSD Enablement Kit)
M.2 NVMe SSD	1.92 TB	1 x 1.92 TB

Notes: M.2 SSD is applicable to all models.

Graphics

Integrated Video Standard

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

HPE iLO 5 On System Management Memory

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

Standard Features

Power Supply

- HPE 350W Gold-level Power Supply FIO Kit
  Notes: Available in 92% and 94% efficiency.
- HPE 500W Flex Slot Platinum Hot Plug Low Halogen Redundant Power Supply
  Notes: Available in 94% efficiency.
- **HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit**
  Notes: Available in 96% efficiency.

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 & Gen10 Plus Essential Series servers.

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

VGA Port	1 standard (rear)
Serial Port	1 optional (rear)
Network Port (RJ-45)	2 x 1 Gb ports as standard (rear, 1 shared for HPE iLO)
Dedicated iLO Management Port (RJ-45)	1 optional (rear)
USB 3.0 Port	6 (1 front, 4 rear, 1 internal)
USB 2.0 Port	1 (1 front)
MicroSD Slot	Optional via HPE 32GB microSD RAID1 USB Boot Device **Notes:** MicroSD cards are not hot-pluggable, server must be powered down before removal.

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**

Standard Features

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 temperatures, humidity and features support please visit: **http://www.hpe.com/servers/ashrae**
- DMTF Systems Management Architecture for Server Hardware Command Line Protocol (SMASH CLP)
- Energy Star
- EU Lot 9
  Notes: European Union (EU) eco-design regulations for server and storage products, known as Lot 9, establishes power thresholds for idle state, as well as efficiency and performance in active state which vary among configurations. HPE ProLiant Gen10 Plus servers are compliant with Lot9 requirements.
  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
- PXE Support
- Redfish API
- SMBIOS 3.2
- SNMP v3
- TLS 1.2
- TPM 2.0 Support
- Triple Data Encryptions Standard (3DES)
- UEFI (Unified Extensible Firmware Interface Forum) 2.6
  Notes: UEFI is the default for the ML30 Gen10 Plus.
- USB 2.0 Compliant
- USB 3.0 Compliant
- VGA Port
- WOL Support

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 Gen10 Plus servers have a UEFI Class 2 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 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

Standard Features

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 at **http://www.hpe.com/servers/intelligentprovisioning**.

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

Server Utilities

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

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

Smart Update
Keep your servers up to date with the HPE Smart Update solution by using Smart Update Manager (SUM) to optimize the firmware and driver updates of the Service Pack for ProLiant (SPP). 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**.

Standard Features

RESTful Interface Tool

RESTful Interface tool is a scripting tool to provision using RESTful API for iLO 4 to discover and deploy servers at scale.
Learn more at **http://www.hpe.com/info/resttool**.

Scripting Tools

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

HPE OneView Standard

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

HPE Systems Insight Manager (HPE SIM)

HPE SIM allows you to monitor the health of your HPE ProLiant Servers and HPE Integrity Servers, and also provides you with basic support for non-HPE servers. HPE SIM also integrates with Smart Update Manager to provide quick and seamless firmware updates.

Security

- UEFI Secure Boot and Secure Start support.
- Immutable Silicon Root of Trust
- Tamper-free updates – components digitally signed and verified.
- Secure Recovery – recover critical firmware to known good state on detection of compromised FW.
- FIPS 140-2 validation
- Common Criteria certification
- Configurable for PCI DSS compliance
- Ability to rollback firmware
- Secure erase of NAND/User data
- TPM (Trusted Platform Module) 2.0 option
- Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser
- Front bezel key-lock, standard
- Padlock slot, standard
- Kensington Lock slot, standard
- Intel® SGX (Software Guard Extensions)
  Notes: Intel® SGX is supported in selective processors, please refer to the Standard Features – Processor section.
- Intel® TXT (Trusted Execution Technology)

Standard Features

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 accomplished through the use of 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

Optional Features

Server Management

HPE iLO Advanced

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

HPE GreenLake for Compute Ops Management

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

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

For a complete list of software as-a-service subscription SKUs and more information, visit the HPE GreenLake for Compute Ops Management QuickSpecs: **https://www.hpe.com/psnow/doc/a50004263enw**

For information on supported HPE servers, the complete list can be found here:
https://www.hpe.com/info/com-supported-servers

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**.

HPE InfoSight for Servers

HPE InfoSight for Servers combines the cloud-based machine learning of InfoSight with the health and performance monitoring of Active Health System (AHS) and iLO to optimize performance and predict and prevent problems. The end result is an intelligent environment that modernizes IT operations and enhances the support experience by predicting and preventing the infrastructure issues that lead to application disruptions, wasted IT staff time and missed business opportunities.
Learn more at **https://www.hpe.co4m/servers/infosight**

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

HPE Services

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

https://www.hpe.com/services

Consulting Services

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

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

HPE Managed Services

HPE runs your IT operations, providing services that monitor, operate, and optimize your infrastructure and applications, delivered consistently and globally to give you unified control and let you focus on innovation.

HPE Managed Services | HPE

Operational services

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

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

HPE Complete Care Service

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

- A complete coverage approach -- edge to cloud
- An assigned HPE team
- Modular and fully personalized engagement
- Enhanced Incident Management experience with priority access
- Digitally enabled and AI driven customer experience

https://www.hpe.com/services/completecare

HPE Tech Care Service

HPE Tech Care Service is the operational support service experience for HPE products. The service goes beyond traditional support by providing access to product specific experts, an AI driven digital experience, and general technical guidance to not only reduce risk but constantly search for ways to do things better. HPE Tech Care Service delivers a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Tech Care Service is available in three response levels. Basic, which provides 9x5 business hour availability and a 2-hour response time. Essential which provides a 15-minute response time 24x7 for most enterprise level customers, and Critical which includes a 6-hour repair commitment where available and outage management response for severity 1 incidents.

https://www.hpe.com/services/techcare

Service and Support

HPE Lifecycle Services

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

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

Notes: To review the list of Lifecycle Services available for your product go to:
https://www.hpe.com/services/lifecycle

For a list of the most frequently purchased services using service credits, see the **HPE Service Credits Menu**

Other Related Services from HPE Services:

HPE Education Services

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

Defective Media Retention

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

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

Parts and Materials

HPE will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

How to Purchase Services

Services are sold by Hewlett Packard Enterprise and Hewlett Packard Enterprise Authorized Service Partners:

- Services for customers purchasing from HPE or an enterprise reseller are quoted using HPE order configuration tools.
- Customers purchasing from a commercial reseller can find services at **https://ssc.hpe.com/portal/site/ssc/**

Service and Support

AI Powered and Digitally Enabled Support Experience

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

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

Consume IT On Your Terms

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

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

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

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

Pre-configured Models

Pre-Configured models ship with the configurations below.

- 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	P44720-001 P44720-371 P44720-421 P44720-AA1	P44722-001 P44722-371	P66396-421
Model Name	HPE ProLiant ML30 Gen10 Plus E-2314 2.8GHz 4-core 1P 16GB-U 4LFF 350W PS Server	HPE ProLiant ML30 Gen10 Plus E-2314 2.8GHz 4-core 1P 16GB-U 8SFF 500W RPS Server	HPE ProLiant ML30 Gen10 Plus E-2314 2.8GHz 4-core 1P 16GB-U 8SFF 800W RPS Server
Chassis	HPE ProLiant ML30 Gen10 Plus 4LFF Hot Plug Configure-to-order Server	HPE ProLiant ML30 Gen10 Plus 8SFF Hot Plug Configure-to-order Server	HPE ProLiant ML30 Gen10 Plus 8SFF Hot Plug Configure-to-order Server
Processor	E-2314 (4 core, 2.8 GHz, 65W)		
Number of Processors	One		
Memory	16 GB (1x16 GB UDIMM, 3200 MT/s)		
Network Controller	Embedded 1Gb 2-Port Ethernet Adapter		
Storage Controller	Embedded Intel VROC SATA software RAID **Notes:** 4 SATA ports support drive bays, 2 SATA ports support optional HPE Universal SATA AIC HHHL M.2 SSD Kit (878783-B21), and additional 1 SATA via onboard M.2 slot.		
Included Hard Drives	None ship standard, 4 LFF supported	None ship standard, 8 SFF supported	None ship standard, 8 SFF supported
Internal Storage	4 LFF HDD Bays (Non-Hot Plug) 1 M.2 PCIe 3.0 x2/SATA slot	8 SFF HDD Bays (Hot Plug) 1 M.2 PCIe 3.0 x2/SATA slot	8 SFF HDD Bays (Hot Plug) 1 M.2 PCIe 3.0 x2/SATA slot
Optical Drive Bay	Optional Slimline ODD Bay Kit (P06309-B21) consumes 1 media bay. **Notes:** Up to 1 optical drive bay		
Optical Drive	None included (Optional)	None included (Optional)	Optional
Expansion Slots	1 PCIe 4.0 slots, 3 PCIe 3.0 slots		
Power Supply	1x HPE ML30 Gen10 Plus 350W FIO Power Supply Kit	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.	1x HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit **Notes:** Add a second 800W Flex Slot Power Supply to get 1+1 power redundancy feature.
Fans	1x non-hot plug non-redundant system fan		

Pre-configured Models

Management	Included - HPE iLO Standard with intelligent provisioning (embedded), HPE OneView Standard (requires download) Optional - HPE iLO Advanced, HPE iLO Advanced Premium Security Edition, HPE OneView Advanced (requires download)		
Security	TPM (Trusted Platform Module) (-001 & -371 & -421) TPM disabled for shipments to China (-AA1)	TPM (Trusted Platform Module)	TPM (Trusted Platform Module)
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 include 3-year parts, 3-year labor, 3-year onsite support with next business day response.		

Entry Models			
SKU Number	P44718-001 P44718-371 P44718-421 P44718-AA1	P44719-001 P44719-371	P60050-001
Model Name	HPE ProLiant ML30 Gen10 Plus E-2314 2.8GHz 4-core 1P 16GB-U 4LFF-NHP 350W PS Server	HPE ProLiant ML30 Gen10 Plus E-2314 2.8GHz 4-core 1P 16GB-U 4LFF-NHP 1TB 350W PS Server	HPE ProLiant ML30 Gen10 Plus E-2314 2.8GHz 4-core 1P 16GB-U 4LFF-NHP 1TB 350W PS Server
Chassis	HPE ProLiant ML30 Gen10 Plus 4LFF Non-hot Plug Configure-to-order Server		
Processor	E-2314 (4 core, 2.8 GHz, 65W)		
Number of Processors	One		
Memory	16 GB (1x16 GB UDIMM, 3200 MT/s)		
Network Controller	Embedded 1Gb 2-Port Ethernet Adapter		
Storage Controller	Embedded Intel VROC SATA software RAID **Notes:** 4 SATA ports support drive bays, 2 SATA ports support optional HPE Universal SATA AIC HHHL M.2 SSD Kit (878783-B21), and additional 1 SATA via onboard M.2 slot.		
Included Hard Drives	None ship standard, 4 LFF supported	1TB SATA HDD	1TB SATA HDD
Internal Storage	4 LFF HDD Bays (Non-Hot Plug) 1 M.2 PCIe 3.0 x2/SATA slot		
Optical Drive Bay	Optional Slimline ODD Bay Kit (P06309-B21) consumes 1 media bay. **Notes:** Up to 1 optical drive bay		
Optical Drive	None included (Optional)		
Expansion Slots	1 PCIe 4.0 slots, 3 PCIe 3.0 slots		
Power Supply	1x HPE ML30 Gen10 Plus 350W FIO Power Supply Kit		
Fans	1x non-hot plug non-redundant system fan		

Pre-configured Models

Management	Included - HPE iLO Standard with intelligent provisioning (embedded), HPE OneView Standard (requires download) Optional - HPE iLO Advanced, HPE iLO Advanced Premium Security Edition, HPE OneView Advanced (requires download)		
Security	TPM (Trusted Platform Module) (-001 & -371 & -421)	TPM (Trusted Platform Module)	TPM (Trusted Platform Module)
	TPM disabled for shipments to China (-AA1)		
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 include 3-year parts, 3-year labor, 3-year onsite support with next business day response.		

SKU Number	P44718-291	P44720-291	P44722-291
Model Name	HPE ProLiant ML30 Gen10 Plus E-2314 2.8GHz 4-core 1P 16GB-U 4LFF-NHP 350W PS Server	HPE ProLiant ML30 Gen10 Plus E-2314 2.8GHz 4-core 1P 16GB-U 4LFF 350W PS Server	HPE ProLiant ML30 Gen10 Plus E-2314 2.8GHz 4-core 1P 16GB-U 8SFF 500W RPS Server
Chassis	HPE ProLiant ML30 Gen10 Plus 4LFF Non-hot Plug Configure-to-order Server	HPE ProLiant ML30 Gen10 Plus 4LFF Hot Plug Configure-to-order Server	HPE ProLiant ML30 Gen10 Plus 8SFF Hot Plug Configure-to-order Server
Processor	E-2314 (4 core, 2.8 GHz, 65W)		
Number of Processors	One		
Memory	16 GB (1x16 GB UDIMM, 3200 MT/s)		
Network Controller	Embedded 1Gb 2-Port Ethernet Adapter		
Storage Controller	Embedded Intel VROC SATA software RAID **Notes:** 4 SATA ports support drive bays, 2 SATA ports support optional HPE Universal SATA AIC HHHL M.2 SSD Kit (878783-B21), and additional 1 SATA via onboard M.2 slot.		
Included Hard Drives	None ship standard, 4 LFF supported	None ship standard, 4 LFF supported	None ship standard, 8 SFF supported
Optical Drive Bay	Optional Slimline ODD Bay Kit (P06309-B21) consumes 1 media bay. **Notes:** Up to 1 optical drive bay		
Expansion Slots	1 PCIe 4.0 slots, 3 PCIe 3.0 slots		
Power Supply	1x HPE ML30 Gen10 Plus 350W FIO Power Supply Kit	1x HPE ML30 Gen10 Plus 350W FIO Power Supply Kit	1x HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
Fans	1x non-hot plug non-redundant system fan		
Management	Included - HPE iLO Standard with intelligent provisioning (embedded), HPE OneView Standard (requires download) Optional - HPE iLO Advanced, HPE iLO Advanced Premium Security Edition, HPE OneView Advanced (requires download)		
Security	TPM (Trusted Platform Module)		

Pre-configured Models

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 include 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

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 additional information on the HPE Smart Choice purchase program, please visit:
https://www.hpe.com/psnow/doc/a50009219enw

Configuration Information

This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of an HPE approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.

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.
1. Some options may not be integrated at the factory. Contact your local sales representative for additional information.

Notes:

– Beginning on January 1st, 2024, the European Union's (EU's) Lot 9 eco-design regulations for servers and storage products will enforce minimum efficiency for AC power supplies: 94% for multi-output and 96% for single-output. HPE power supplies that meet Lot 9 requirements are: 865438-B21 and P03178-B21 (single-output & 96% efficient), in addition to P45212-B21 (multi-output and 94% efficient).

– HPE is on target to fulfil compliant systems ahead of time and will begin enforcing these requirements in advance to satisfy requests with the current power supplies by the set deadline. 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 Gen10 Plus 4LFF Non-hot Plug Configure-to-order Server	HPE ProLiant ML30 Gen10 Plus 4LFF Hot Plug Configure-to-order Server	HPE ProLiant ML30 Gen10 Plus 8SFF Hot Plug Configure-to-order Server
SKU Number	P44723-B21	P44724-B21	P44725-B21
TAA SKU *	P44723-B21#GTA	P44724-B21#GTA	P44725-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 DDR4 Memory		
Storage Controller	Embedded Intel VROC SATA software RAID	Embedded Intel VROC SATA software RAID, choice of HPE Smart Array controller	
PCIe	1 PCIe 4.0 slots, 3 PCIe 3.0 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/SATA slot	1 M.2 PCIe 3.0 x2/SATA slot	1 M.2 PCIe 3.0 x2/SATA slot
Network Controller	Embedded 1Gb 2-Port Ethernet Adapter 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	2 front, 4 rear, 1 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.

Configuration Information

Step 2: Choose Required Options

(Only one of the following from each list unless otherwise noted)

Step 2a: Choose Processors

Intel® Xeon® E-2300 Series

Intel Xeon E-2314 2.8GHz 4-core 65W FIO Processor for HPE	P45248-B21
Intel Xeon E-2324G 3.1GHz 4-core 65W FIO Processor for HPE	P45250-B21
Intel Xeon E-2334 3.4GHz 4-core 65W FIO Processor for HPE	P45252-B21
Intel Xeon E-2336 2.9GHz 6-core 65W FIO Processor for HPE	P45254-B21
Intel Xeon E-2356G 3.2GHz 6-core 80W FIO Processor for HPE	P45256-B21
Intel Xeon E-2374G 3.7GHz 4-core 80W FIO Processor for HPE	P45258-B21
Intel Xeon E-2378 2.6GHz 8-core 65W FIO Processor for HPE	P45260-B21
Intel Xeon E-2378G 2.8GHz 8-core 80W FIO Processor for HPE	P45262-B21
Intel Xeon E-2386G 3.5GHz 6-core 95W FIO Processor for HPE	P45264-B21

Notes: Requires High Performance Heatsink (P45221-B21).

Intel Xeon E-2388G 3.2GHz 8-core 95W FIO Processor for HPE	P45266-B21

Notes: Requires High Performance Heatsink (P45221-B21).

Intel® Pentium® Processor G Series

Intel Pentium G6405 4.1GHz 2-core 58W FIO Processor for HPE	P45390-B21

Step 2b: Choose Memory Options

Please select one or more memory from below.

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.

Memory

Notes: All SKUs below running at up to 2666 MT/s with Intel® Pentium® G processors due to processor limitation.

HPE 8GB (1x8GB) Single Rank x8 DDR4-3200 CAS-22-22-22 Unbuffered Standard Memory Kit	P43016-B21
HPE 16GB (1x16GB) Single Rank x8 DDR4-3200 CAS-22-22-22 Unbuffered Standard Memory Kit	P43019-B21
HPE 32GB (1x32GB) Dual Rank x8 DDR4-3200 CAS-22-22-22 Unbuffered Standard Memory Kit	P43022-B21

Notes:

- Running at up to 2933 MT/s with Intel® Xeon® processors when 3 or 4 dual-rank DIMMs are installed.
- 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

Notes:

- 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**.

Configuration Information

Power Supplies

HPE ML30 Gen10 Plus 350W FIO Power Supply Kit	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

Notes:

- Flex Slot power supplies requires RPS Enablement Kit (P45209-B21)
- P45212-B21 currently available in EMEA only

Step 3: Choose additional options for Factory Integration from Core and Additional Options sections below

Core Options

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

HPE Unique Options

HPE ML30 Gen10 Slimline Optical Disk Drive Enablement Kit P06309-B21

Notes: Required if ODD is selected.

HPE ML30 Gen10 Front PCI Fan and Baffle Kit P06303-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 networ adapters.

HPE ML30 Gen10 Mini SAS Cable Kit P06307-B21

Notes: Required if P408i-p/E208i-p is selected. Select one cable kit for 4LFF Hot Plug Server, two for 8SFF Hot Plug Server.

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

Notes:

- Required if either MR216i-p or MR416i-p controllers are selected; 1 pc for 4LFF model server and 2 pcs for 8SFF model server.
- The cable cannot be used with Non Hot Plug model server

HPE ProLiant ML30 Gen10 Plus 4U RPS Enablement Kit P45209-B21

Notes: Required for HPE 500W and 800W Flex Slot Power Supply.

HPE DL20/ML30 Gen10 M.2/Dedicated iLO and Serial Port Kit P06687-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.
- M.2 SSD is supported with or without this option on ML30 Gen10 Plus.

HPE ProLiant ML30 Gen10 Plus CPU High Performance FIO Heat Sink Kit P45221-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 ML30 Gen9 Tape Drive Cable Kit 851615-B21

Notes: 1pc required per LTO internal tape drive or per RDX USB internal disk backup system for power connection if selected together with 350W Power Supply (P21652-B21).

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)

Notes: All SKUs below running at up to 2666 MT/s with Intel® Pentium® G processors due to processor limitation.

HPE 8GB (1x8GB) Single Rank x8 DDR4-3200 CAS-22-22-22 Unbuffered Standard Memory Kit P43016-B21

HPE 16GB (1x16GB) Single Rank x8 DDR4-3200 CAS-22-22-22 Unbuffered Standard Memory Kit P43019-B21

HPE 32GB (1x32GB) Dual Rank x8 DDR4-3200 CAS-22-22-22 Unbuffered Standard Memory Kit P43022-B21

- **Notes:** Running at up to 2933 MT/s with Intel® Xeon® processors when 3 or 4 dual-rank DIMMs are installed.

Core Options

– 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 Drives

HPE 9.5mm SATA DVD-ROM Optical Drive	726536-B21
Notes: The HPE ML30 Gen10 Slim Optical Disk Drive Enablement Kit (P06309-B21) is required for this option.	
HPE 9.5mm SATA DVD-RW Optical Drive	726537-B21
Notes: The HPE ML30 Gen10 Slim Optical Disk Drive Enablement Kit (P06309-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 2TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	833926-B21
HPE 4TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	833928-B21
HPE 6TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD	861746-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 14TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD	P09155-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 - SFF Basic Carrier Drives

HPE 1TB SATA 6G Business Critical 7.2K SFF BC 1-year Warranty HDD	P28610-B21
HPE 2TB SATA 6G Business Critical 7.2K SFF BC 1-year Warranty 512e HDD	P28500-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 6TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD	861742-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 18TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	P37678-B21

Core Options

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.

Mixed Use – 24G SAS - SFF Basic Carrier Solid State Drives

HPE 1.6TB SAS Mixed Use SFF BC Self-encrypting FIPS 140-2 PM7 SSD	P63871-B21

Read Intensive – 24G SAS - SFF Basic Carrier Solid State Drives

HPE 3.84TB SAS Read Intensive SFF BC Self-encrypting FIPS 140-3 PM7 SSD	P63875-B21
HPE 7.68TB SAS Read Intensive SFF BC Self-encrypting FIPS 140-2 PM7 Private SSD	P63879-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 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 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 1.92TB SATA 6G Mixed Use SFF BC Self-encrypting 5400M SSD	P58248-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 240GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P40496-B21
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 1.92TB SATA 6G Read Intensive SFF BC Self-encrypting 5400P SSD	P58240-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 PM9A3 SSD	P69543-B21
HPE 480GB NVMe Gen3 Mainstream Performance Read Intensive M.2 Multi Vendor SSD	P40513-B21
HPE 960GB NVMe Gen3 Mainstream Performance Read Intensive M.2 Multi Vendor SSD	P40514-B21

Core Options

HPE 1.92TB NVMe Gen3 Mainstream Performance Read Intensive M.2 Multi Vendor SSD P40515-B21

Notes:

- M.2 NVMe SSD can be installed either on system board or on dedicated iLO module (P06687-B21) up to 1 pc.
- Running at PCIe 3.0 x2 speed on ML30 Gen10 Plus.
- HPE ML30 Gen10 Front PCI Fan and Baffle Kit (P06303-B21) is required to support these drives.
- Not supported by HPE Smart Array controllers and Intel VROC SATA.

Read Intensive – 6G SATA - M.2 - Solid State Drives

HPE 480GB SATA 6G Read Intensive M.2 Multi Vendor SSD P47818-B21

Notes:

- M.2 SATA SSD can be installed either on system board or on dedicated iLO module (P06687-B21) up to 1 pc.
- Additional two M.2 SATA SSD can be installed via M.2 SSD Enablement Kit (878783-B21).
- HPE ML30 Gen10 Front PCI Fan and Baffle Kit (P06303-B21) is required to support these drives.
- Supported by Intel VROC SATA.

Internal Dual M.2 Kit

HPE Universal SATA 6G AIC HHHL M.2 SSD Enablement Kit 878783-B21

Notes:

- The M.2 SSD Enablement Kit above occupies a PCIe slot and two SATA ports on the system board, supporting up to two M.2 SATA SSDs.
- ML30 Gen10 Plus supports up to one M.2 SSD Enablement Kit.
- HPE ML30 Gen10 Front PCI Fan and Baffle Kit (P06303-B21) is required.

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-p x2 Lanes NVMe PCIe3 x8 OS Boot Device P12965-B21

Notes:

- Two 480GB M.2 NVMe SSDs are included for RAID 1 OS Boot Device.
- Occupies one PCIe slot.
- HPE ML30 Gen10 Front PCI Fan and Baffle Kit (P06303-B21) is required.
- P12965-B21 will require the server be set with UEFI boot mode enabled. Legacy boot mode is not supported.

HPE Enterprise Mainstream Flash Media Kits for Memory Cards

HPE 32GB microSD RAID 1 USB Boot Drive P21868-B21

Notes:

- Two 32GB microSDs are included for RAID 1 OS Boot Device.
- Occupies one USB port.
- In vSphere 7.0, VMware made changes that impact the use of an SD Card/USB media as a standalone boot device and will be removing support for them after version 7.x. SD Card/USB media can still be used as a standalone boot option through all 7.x releases via published Customer Advisory **Usage of SD Card/USB Devices as Standalone Boot Devices Has Changed Due to System Storage Changes For VMware ESXi 7.0 (Or Later)**. For any major release beyond VMware ESXi 7.x, VMware will require M.2 or another local persistent device as the standalone boot option

Core Options

HPE Smart Array Controllers

The Gen10 controller naming framework has been updated to simplify identification as depicted below. For a more detailed breakout of the available Gen10 Smart Array controllers visit the **HPE Smart Array Gen10 Controllers Data Sheet**.

Notes: Max 2 pcs of HPE Smart Array Controllers can be selected for better performance.

Performance RAID Controllers

Notes: All Performance RAID Controllers require the HPE Energy Packs (P01366-B21 or P02377-B21), which support multiple devices and is sold separately.

HPE Smart Array P408i-p SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS PCIe Plug-in Controller 830824-B21

Notes:

- Max 1 pc of P408i-p or MR416i-p or MR216i-p can be selected for better performance.
- 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 Smart Array P408e-p SR Gen10 (8 External Lanes/4GB Cache) 12G SAS PCIe Plug-in Controller 804405-B21

Essential RAID Controllers

HPE Smart Array E208i-p SR Gen10 (8 Internal Lanes/No Cache) 12G SAS PCIe Plug-in Controller 804394-B21

Notes:

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

HPE Tri-Mode Controllers

HPE MR216i-p Gen10 Plus x16 Lanes without Cache NVMe/SAS 12G Controller P26324-B21

HPE MR416i-p Gen10 Plus x16 Lanes 4GB Cache NVMe/SAS 12G Controller P06367-B21

Notes:

- Tri-Mode controllers do not support Non-Hot Plug Server.
- Max 1 pc of P408i-p or MR416i-p or MR216i-p can be selected for better performance.
- Must select HPE ML30 G10P 4LFF/8SFF HP TM CABLE kit (P57104-B21); 1 pc for 4LFF model server and 2 pcs for 8SFF model server.

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 96W Smart Storage Lithium-ion Battery with 145mm Cable Kit P01366-B21

HPE Smart Storage Hybrid Capacitor with 145mm Cable Kit P02377-B21

Notes:

- Provides backup power for multiple HPE Smart Array controllers or other devices. Is required with performance RAID controllers.
- A Battery holder is required: HPE Gen9 Smart Storage Battery Holder Kit (786710-B21).

HPE Networking

1 Gigabit Ethernet adapters

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

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

Core Options

10 Gigabit Ethernet adapters

Notes: HPE ML30 Gen10 Front PCI Fan and Baffle Kit (P06303-B21) is required for 10Gb 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
Intel X710-DA2 Ethernet 10Gb 2-port SFP+ Adapter for HPE	P28787-B21

25 Gigabit Ethernet adapters

Notes: HPE ML30 Gen10 Front PCI Fan and Baffle Kit (P06303-B21) is required for 25Gb adapters.

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

HPE Power Supplies

HPE ML30 Gen10 Plus 350W FIO Power Supply Kit	P45212-B21

Notes: Up to one is allowed.

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

Notes:

- Flex Slot Platinum power supplies support power efficiency of up to 94% 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**.
- The RPS Enablement Kit (P45209-B21) is required to support Flex Slot power supplies.

HPE Cooling Options

HPE ML30 Gen10 Front PCI Fan and Baffle Kit	P06303-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.

Additional Options

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

Embedded Management

HPE iLO Advanced

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

HPE iLO 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 GreenLake for Compute Ops Management

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

Additional Options

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

Notes: For customers purchasing HPE GreenLake for Compute Ops Management, without a hardware purchase or a BTO purchase, use this base SKU within ASQ order:

HPE GreenLake for Compute Ops Management Base SaaS	R6Z73AAE

HPE Security

HPE ProLiant ML30 Gen10 Plus Server ships with embedded Trusted Platform Module (TPM) 2.0 enabled by default. For servers shipping to China, the TPM is disabled.

Additional Options

HPE Tape Backup

For the complete range of tape drives, autoloaders, libraries and media please see:
https://www.hpe.com/us/en/storage/storeever-tape-storage.html.
For hardware and software compatibility of Hewlett Packard Enterprise tape backup products
http://www.hpe.com/storage/BURAcompatibility.

HPE Tape Drives

HPE LTO-7 Ultrium 15000 Internal Tape Drive	BB873A
HPE StoreEver LTO-7 Ultrium 15000 External Tape Drive	BB874A

Notes:

- Only 1pc of internal tape drive is supported.
- Internal LTO tape drive requires 1pc of HPE ML30 Gen9 Tape Drive Cable Kit (851615-B21) for power connection if configured with a 350W Power Supply (P21652-B21)
- Cannot share SAS controller with SAS drives. Must select additional internal SAS controller E208i-p to support internal SAS tape drive.
- Internal LTO tape drive cannot be selected in Non-Hot Plug 4LFF Server.

HPE Tape Backup Products

HPE StoreEver MSL2024 0-drive Tape Library	AK379A
HPE StoreEver MSL LTO-7 Ultrium 15000 SAS Drive Upgrade Kit	N7P37A
HPE StoreEver Mini-SAS High Density to 4-lane Mini-SAS External Fanout 2m Cable	K2R09A
HPE StoreEver Mini-SAS High Density to 4-lane Mini-SAS External Fanout 4m Cable	K2R10A

HPE Disk Backup

For the complete range of RDX drives and media see:
https://www.hpe.com/us/en/product-catalog/storage/disk-based-backup-systems.html.
For hardware and software compatibility of HPE disk backup products see: **http://www.hpe.com/storage/spock.**
Please see the **HPE RDX Removable Disk Backup System QuickSpecs** for additional part numbers, technical specifications, and additional information.

HPE RDX Removable Disk Backup Products

HPE RDX External Docking Station	C8S07B
HPE RDX Internal Docking Station	C8S06A
HPE RDX 500GB Removable Disk Cartridge	Q2042A
HPE RDX 1TB Removable Disk Cartridge	Q2044A
HPE RDX 2TB Removable Disk Cartridge	Q2046A
HPE RDX 4TB Removable Disk Cartridge	Q2048A

Notes:

- Only 1pc of internal RDX is supported, sharing the same internal USB port with USB flash drives.
- Internal RDX requires 1pc of HPE ML30 Gen9 Tape Drive Cable Kit (851615-B21) for power connection if configured with a 350W Power Supply.

HPE Uninterruptible Power Systems (UPS)

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

Additional Options

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

HPE ServicesHPE Tech Care Service

HPE 3 Year Tech Care Basic ML30 Gen10 Plus Service	H75J8E
HPE 3 Year Tech Care Basic wDMR ML30 Gen10 Plus Service	H75U3E
HPE 3 Year Tech Care Basic wCDMR ML30 Gen10 Plus Service	H75U4E
HPE 3 Year Tech Care Essential ML30 Gen10 Plus Service	H75V7E
HPE 3 Year Tech Care Essential wDMR ML30 Gen10 Plus Service	H76K0E
HPE 3 Year Tech Care Essential wCDMR ML30 Gen10 Plus Service	H76K1E
HPE 5 Year Tech Care Basic ML30 Gen10 Plus Service	HS8G6E
HPE 5 Year Tech Care Basic wDMR ML30 Gen10 Plus Service	HS8G7E
HPE 5 Year Tech Care Basic wCDMR ML30 Gen10 Plus Service	HS8G8E
HPE 5 Year Tech Care Essential ML30 Gen10 Plus Service	H77V8E
HPE 5 Year Tech Care Essential wDMR ML30 Gen10 Plus Service	H77V9E
HPE 5 Year Tech Care Essential wCDMR ML30 Gen10 Plus Service	H77W0E

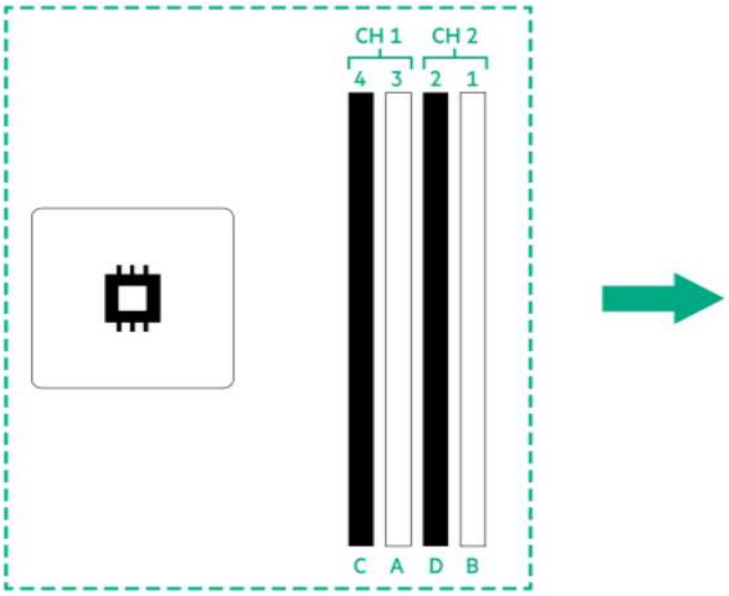
Notes: For a full list of packaged support services, please visit **http://www.hpe.com/services/ssc**

Memory

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.

Memory Population guidelines



HPE ProLiant ML30 Gen10 Plus server memory slots

General Memory Population Rules and Guidelines:

- The HPE ProLiant ML30 Gen10 Plus server has four memory slots.
- Only ECC UDIMMs are supported on ML30 Gen10 Plus. 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).
- Memory speed support depends on the type of processor installed. For more information, see the technical specification of the installed processor.
- The server supports up to 3200 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: 3-A, 1-B, 4-C, 2-D.
- Always use HPE qualified DIMMs.
- Cannot mix memory DIMMs of different capacities when including 32GB UDIMM in the same channel.
- Mixing memory DIMMs of different capacities in the server is not recommended when including 32GB UDIMM.
- For Server Memory Population Rules for HPE ProLiant Gen10 Plus Servers with Intel® Xeon® E-2300 Processors see details here: **www.hpe.com/docs/server-memory**
- For details on the HPE Server Memory Options Population Rules, visit: **http://www.hpe.com/docs/memory-population-rules**

Memory

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.

DIMM Type	**Unbuffered with ECC DIMMs (UDIMMs)**		
HPE SKU P/N	P43016-B21	P43019-B21	P43022-B21
SKU Description	HPE 8GB (1x8GB) Single Rank x8 DDR4-3200 CAS-22-22-22 Unbuffered Standard Memory Kit	HPE 16GB (1x16GB) Single Rank x8 DDR4-3200 CAS-22-22-22 Unbuffered Standard Memory Kit	HPE 32GB (1x32GB) Dual Rank x8 DDR4-3200 CAS-22-22-22 Unbuffered Standard Memory Kit
DIMM Rank	Single Rank (1R)	Single Rank (1R)	Dual Rank (2R)
DIMM Capacity	8 GB	16 GB	32 GB
Voltage	1.2V	1.2V	1.2V
CAS Latency	22-22-22	22-22-22	22-22-22
DIMM Native Speed	3200 MT/s	3200 MT/s	3200 MT/s
Maximum Capacity	32 GB (4 x 8 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	3200 MT/s	3200 MT/s	3200 MT/s
2 DIMM Per Channel	3200 MT/s	3200 MT/s	2933 MT/s
HPE Server Memory Speed: Intel® Pentium® G6405 processor			
1 DIMM Per Channel	2666 MT/s	2666 MT/s	2666 MT/s
2 DIMM Per Channel	2666 MT/s	2666 MT/s	2400 MT/s

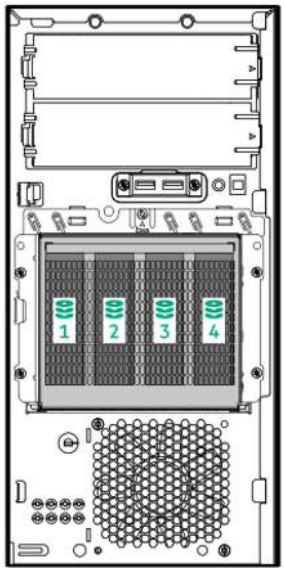
DDR4 memory options part number decoder

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

- 8GB = 8,192 MB
- 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 DDR4 Standard Memory web site**.

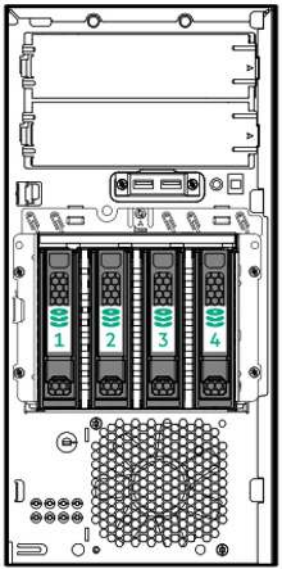
Storage



4 LFF Non-Hot-Plug Drive Model

1-4

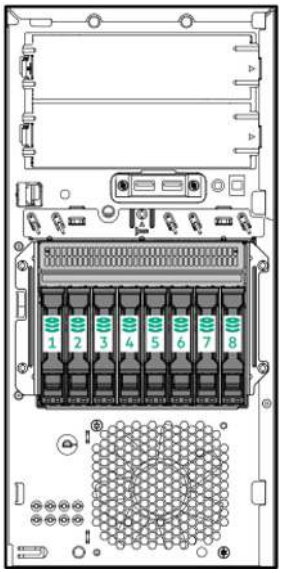
4 x LFF SATA
non-hot-plug hard drive bays



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

Technical Specifications

System Unit

Dimensions

- 14.50 (H) x 6.89 (W) x 18.70 (D) in
  (36.83 x 17.50 x 47.50 cm)

Weight

(approximate)

- Minimum:
  22.1 lb
  10.1 kg
  - 4 NHP LFF chassis with 1x LFF HDD, 1x processor including heatsink, 1x DIMM, 1x ATX power supply, cables for the above.
- Maximum:
  38.7 lb
  17.6 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 350W Power Supply (P21652-B21): 1474 BTU/hr (at 100 VAC), 1419 BTU/hr (at 200 VAC)
- 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), 500W (at 240 VAC)
- **Maximum Peak Power**
  - For 350W Power Supply: 350W (at 100 to 230 VAC)
  - For 500W Power Supply: 500W (at 100 to 127 VAC), 500W (at 200 to 240 VAC)

Technical Specifications

System Inlet Temperature

- **Standard Operating Temperature**
  10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 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 125m (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).

Technical Specifications

Acoustic Noise

Listed are the declared A-Weighted sound power levels (*LW*Ad) and declared average bystander position A-Weighted sound pressure levels (LpAm) 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.

Test case	**1**	**2**	**3**
Reference SKU	Entry - P44718-xx1	Performance - P44720-xx1	Performance - P44722-xx1
Idle			
LWAd	4.3 Bels	4.4 Bels	4.4 Bels
LpAm	27 dBA	28 dBA	26 dBA
Operating			
LWAd	4.3 Bels	4.4 Bels	4.4 Bels
LpAm	27 dBA	29 dBA	26 dBA

Notes:

- Test case 1: non-hot plug 4LFF server, Xeon E-2314, 1x 16GB memory, 1x SATA HDD, 350W PSU.
- Test case 2: Hot plug 4LFF server, Xeon E-2314, 1x 16GB memory, 2x SATA HDD, 350W PSU, PCI Fan and Baffle kit.
- Test case 3: Hot plug 8SFF server, Xeon E-2314, 1x 16GB memory, 2x SAS HDD, 1x E208i-p, 1x 500W PSU, PCI Fan and Baffle kit.
- Acoustics levels presented here are generated by the test configuration only. Acoustics levels will vary depending on system configuration. Values are subject to change without notification and are for reference only.
- Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.
- The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.

Emissions Classification (EMC) – Regulatory Information

To view the regulatory information for your product, view the Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products, available at the Hewlett Packard Enterprise Support Center:
http://www.hpe.com/support/Safety-Compliance-EnterpriseProducts

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

Hewlett Packard Enterprise offers **end-of-life product return, trade-in, and recycling programs**, in many geographic areas, for our products. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner.

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

Summary of Changes

Date	Version History	Action	Description of Change
03-Sep-2024	Version 22	Changed	Standard Features (Operating Systems and Virtualization Software Support for HPE Servers)
06-May-2024	Version 21	Changed	Core Options and Additional Options sections were updated.
04-Mar-2024	Version 20	Changed	Core Options section was updated.
05-Feb-2024	Version 19	Changed	Standard Features and Core Options sections were updated.
08-Jan-2024	Version 18	Changed	Updated Processor table with Energy Star 4.0 status.
11-Dec-2023	Version 17	Changed	Pre-Configured Models Section was updated.
04-Dec-2023	Version 16	Changed	Overview and Service and Support sections were updated
13-Nov-2023	Version 15	Changed	Pre-Configured Models Section was updated.
06-Nov-2023	Version 14	Changed	Pre- Configured Models and Core Options sections were updated.
05-Sep-2023	Version 13	Changed	Reviewed and Updated Content
10-Jul-2023	Version 12	Changed	Reviewed and Updated Content
05-Jun-2023	Version 11	Changed	Standard Features, Core Options and Configuration Information sections were updated.
01-May-2023	Version 10	Changed	Optional Features and Additional Options sections were updated.
13-Mar-2023	Version 9	Changed	Standard Features, Pre- Configured Models and Core Options sections were updated.
10-Jan-2023	Version 8	Changed	Overview and Core Options sections were updated
05-Dec-2022	Version 7	Changed	Standard Features, Optional Features and Core Options sections were updated.
07-Nov-2022	Version 6	Changed	Standard Features, Optional Features and Core Options sections were updated.
15-Aug-2022	Version 5	Changed	Standard Features and Core Options sections were updated.
08-Aug-2022	Version 4	Changed	Standard Features and Core Options sections were updated. Obsolete SKUs were removed.
06-Jun-2022	Version 3	Changed	Core Options section was updated. Obsolete SKU was removed.
04-Apr-2022	Version 2	Changed	Standard Features, Core Options and Memory sections were updated. Obsolete SKU was removed.
07-Mar-2022	Version 1	New	New QuickSpecs.

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

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