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Servidor HPE ProLiant ML30 Gen10

O servidor HPE ProLiant ML30 Gen10 é um servidor em torre acessível, porém poderoso, projetado para pequenos escritórios, para executar soluções de nuvem ou no local, oferecendo desempenho, segurança, confiabilidade e capacidade de expansão a um custo reduzido.

bztech.com.br

Overview

HPE ProLiant ML30 Gen10 Server

The HPE ProLiant ML30 Gen10 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.
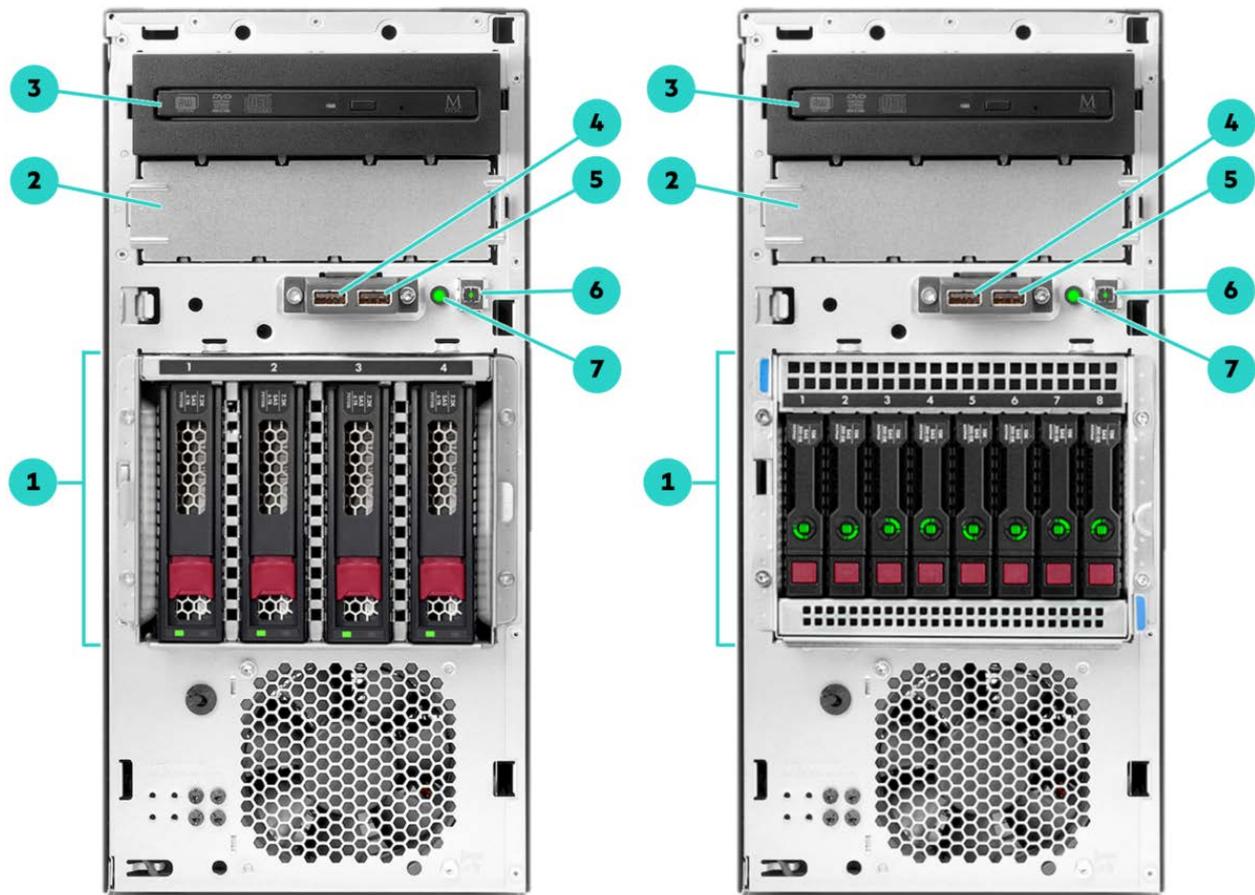

4 LFF Model　　　　　　　　　**8 SFF Model**

Front View (details for 4LFF and 8SFF)

1.	Four (4) LFF or Eight (8) SAS/SATA HDD cage	5.	USB 2.0 port
2.	Media drive bay 2 (blank shown)	6.	Power On/Standby button and system power LED
3.	Media drive bay 1 (optional slim-line DVD shown)	7.	Health LED
4.	USB 3.0 port		

Overview
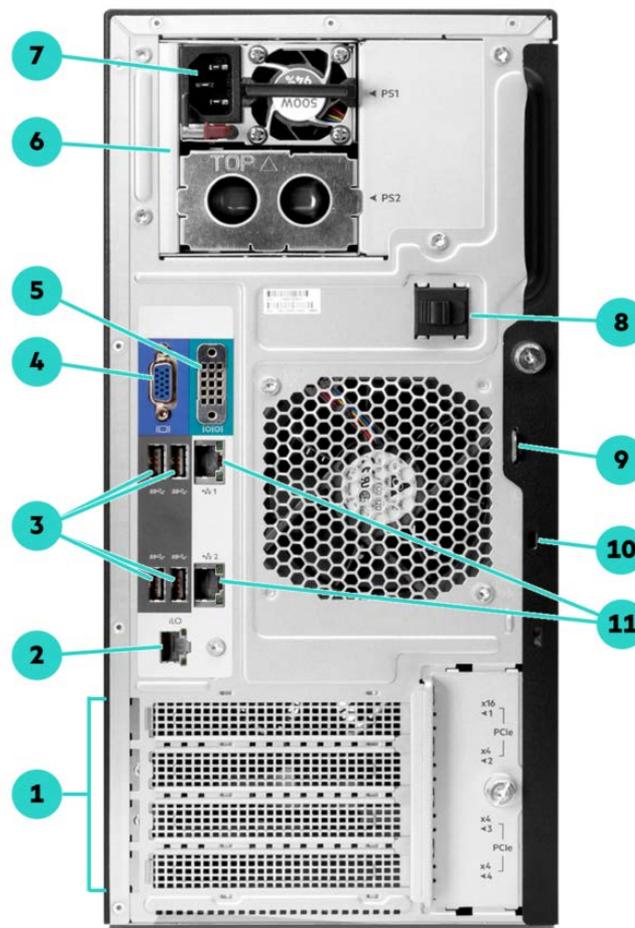
Rear View

1. PCI slots (slots 1-4)
2. Dedicated iLO management port (optional)
3. Four (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
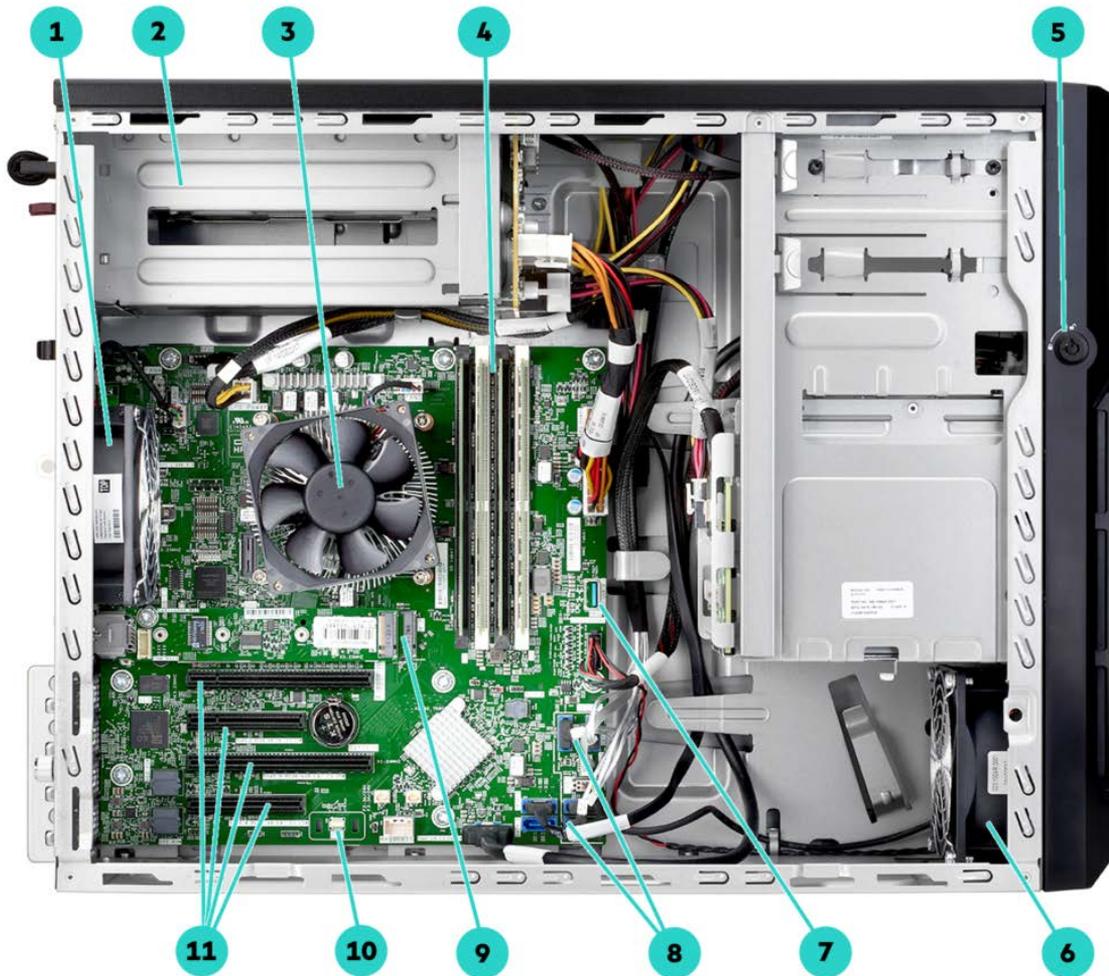
Internal View

1. System fan
2. Power supply
3. One (1) processor and heatsink/fan
4. Four (4) DDR4 DIMM slots
5. Bezel lock
6. Front PCI fan (optional or included, depending on models)

7. One (1) internal USB 3.0 port
8. Six (6) SATA ports
9. One (1) M.2 slot (optional module shown)
10. TPM connector
11. Four (4) PCIe expansion slots

What's New

- Supports Intel® Xeon® E processors up to 6 cores and up to 80W, 8th Core™ i3 and Pentium® G processors.
- 2666 MT/s HPE DDR4 Standard Memory UDIMM offering 8GB, 16GB. Max 64GB memory capacity.
- Four expansion slots for more flexible usage - two x16 and two x8 connectors.
- Onboard M.2 NVMe SSD support.
- Dedicated iLO port & serial port option kit.
- SMB Offering to match different workloads.
- ClearOS, an easy to use OS with an application marketplace, allows you to build a fully functional server that is just right for you at no upfront cost. To learn more on what you can do, please visit **http://www.hpe.com/servers/clearos**.

Overview

Platform Information
Form Factor
4U Tower
NOTE: Sliding Shelf - 874578-B21 is optional to support rack form factor.

Chassis Types
8 SFF chassis and 2 half-height (5.25") media drive bays with optional 1 slim-line DVD bay kit option
4 LFF chassis and 2 half-height (5.25") media drive bays with optional 1 slim-line DVD bay kit option
4 LFF NHP chassis and 2 half-height (5.25") media drive bays with optional 1 slim-line DVD bay kit option or up to 2 LFF NHP HDD cage kits

System Fans
1 Default system fan module (92 x 32 mm)
1 Default PCI fan module (92 x 32 mm) depending on models
NOTE: PCI fan module is part of HPE ML30 Gen10 PCI Fan and Baffle Kit (P06303-B21) which is included in SMB Performance and Solution Models.
NOTE: HPE ML30 Gen10 PCI Fan and Baffle Kit (P06303-B21) is required as follows:
1. Must be selected in 4LFF Hot Plug CTO Server and 8SFF Hot Plug CTO Server.
2. Must be selected in 4LFF NHP CTO Server and SMB Entry Model if M.2 SSD or any PCIe card (NIC, Smart Array Controller, graphic card, etc.) is selected except 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® and Intel® Core™ i3 processors.

Choose one of the following processors based on the model:

NOTE: For more information regarding Intel Xeon processors, please see the following **http://www.intel.com/xeon**.

Model	CPU Frequency	Cores	L3 Cache	Power	DDR4	SGX
Xeon E-2176G	3.7 GHz	6	12 MB	80W	2666 MT/s	Yes
Xeon E-2174G	3.8 GHz	4	8 MB	71W	2666 MT/s	Yes
Xeon E-2144G	3.6 GHz	4	8 MB	71W	2666 MT/s	No
Xeon E-2136	3.3 GHz	6	12 MB	80W	2666 MT/s	No
Xeon E-2134	3.5 GHz	4	8 MB	71W	2666 MT/s	No
Xeon E-2126G	3.3 GHz	6	12 MB	80W	2666 MT/s	No
Xeon E-2124	3.3 GHz	4	8 MB	71W	2666 MT/s	No
Core i3-8300	3.7 GHz	4	8 MB	62W	2400 MT/s	No
Pentium G5400	3.7 GHz	2	4 MB	58W	2400 MT/s	No

Chipset

Intel® C246 Chipset

NOTE: 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

NOTE: 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)	64GB	(4 x 16GB UDIMM @2666 MT/s)

NOTE: The maximum memory speed depends on processor model.

Memory Protection

ECC

Network Controller

Embedded 2-Port 1GbE HPE Ethernet 332i Adapter, optional 1/10Gb standup card

Standard Features

Expansion Slots

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

NOTE: Bus Width indicates the number of physical electrical lanes running to the connector.

Storage Controller
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**.

Software RAID
HPE Smart Array S100i SR Gen10 Software RAID
NOTE: HPE Smart Array S100i SR Gen10 SW RAID will operate in UEFI mode only. For legacy support an additional controller will be needed, and for CTO orders please also select the Legacy mode settings part, 758959-B22.
NOTE: For CTO orders, HPE Smart Array S100i SR Gen10 SW RAID is off by default and must be enabled. For enabling please select HPE FIO Enable Smart Array SW RAID (784308-B21).
NOTE: For BTO orders, HPE Smart Array S100i SR Gen10 SW RAID is on by default.
NOTE: The S100i supports 4 SATA ports for drive cage and additional 2 SATA ports for drives from media drive bays.
NOTE: The S100i only supports Windows. For Linux users, HPE offers a solution that uses in-distro open-source software to create a two-disk RAID 1 boot volume. For more information visit:
https://downloads.linux.hpe.com/SDR/project/lsrrb/

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
NOTE: Performance RAID Controllers require the HPE Smart Storage Battery (P01366-B21) which is sold separately.

Internal Storage Devices

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

Hard Drives None ship standard

Standard Features

Maximum Internal Storage

	Capacity	Configuration
Hot Plug LFF SAS	48 TB	4 x 12 TB
Hot Plug LFF SATA	48 TB	4 x 12 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	24 TB	4 x 4 TB + 2 x 4 TB (with additional optional LFF drive enablement kits)
Hot Plug LFF SATA SSD	7.68 TB	4 x 1.92 TB
Hot Plug SFF SAS SSD	3.2 TB	8 x 400 GB
Hot Plug SFF SATA SSD	61.44 TB	8 x 7.68 TB
M.2 NVMe SSD	480 GB	1 x 480 GB

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

Power Supply
HPE 350W E-star 1.0 Power Supply FIO Kit
HPE 500W Flex Slot Platinum Hot Plug Low Halogen Redundant Power Supply
NOTE: Available in 94% 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 lowest possible hardware costs. All Entry-Level power supply options have been designed specifically for HPE ProLiant Gen10 Essential Series servers.

The HPE 350W FIO Power Supply is the standard, non-redundant AC power supply option for most HPE ProLiant Gen10 Essential servers. It features Bronze-level (85%) certified power efficiency with a set of features optimized for the Gen10 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 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**.

Standard Features

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)

Operating Systems and Virtualization Software Support for ProLiant Servers

Microsoft Windows Server 2016

Red Hat Enterprise Linux (RHEL) 7.5

SUSE Linux Enterprise Server (SLES) 12 SP3 and 15

VMware ESXi 6.5 U2 and 6.7

NOTE: VMware supported only with Intel® Xeon® E processors, not supported with Intel® Core™ or Pentium® processors.

ClearOS

HPE and ClearCenter will help you lower the cost of building on-premise solutions without sacrificing security and ease of use. HPE ProLiant servers with ClearOS give you a simple, secure, and affordable operating system with an intuitive web-based graphical user interface that provides a cloud-like experience on-premise, and an Application Marketplace with over 100 apps and growing. Whether you're starting out or scaling, you decide what applications you need and pay as you grow.

NOTE: ClearOS allows you to build a fully functional server that is just right for you at no upfront cost. For more information on ClearOS, please visit **http://www.hpe.com/servers/clearos**.

CentOS

NOTE: CentOS not directly supported / Community Supported (Based on RHEL so RHEL testing and enablement applicable to CentOS) CentOS 7.5.

NOTE: For more information on Hewlett Packard Enterprise Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server.

https://www.hpe.com/us/en/servers/server-operating-systems.html.

Industry Standard Compliance

ACPI 6.1 Compliant
PCIe 3.0 Compliant
PXE Support
WOL Support
Microsoft® Logo certifications
VGA Port
USB 3.0 Compliant
USB 2.0 Compliant
SMBIOS 3.1
UEFI 2.6
ASHRAE A3/A4

NOTE: For additional technical thermal details regarding ambient temperatures, humidity and features support please visit:

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

UEFI (Unified Extensible Firmware Interface Forum)

NOTE: UEFI is the default for the ML30 Gen10. Legacy mode can be selected in the field or as a CTO option (758959-B22)

Standard Features

Upgradeability
One of the following depending on model
Up to 4 DIMM slots available for higher memory capacity
Up to 4LFF (+2LFF optional) non hot-plug, 4LFF hot-plug, or 8SFF hot-plug drive bays
HPE Smart Array or Smart HBA Controller
Redundant Power Supply
Dedicated iLO Management Port
M.2 NVMe SSDs for boot

Graphics
Integrated Vdeo 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

HPE Server UEFI/Legacy 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 servers have a UEFI Class 2 implementation and support both UEFI Mode (default) and Legacy BIOS Mode.
NOTE: 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

NOTE: For UEFI Boot Mode, boot environment and OS image installations should be configured properly to support UEFI.
NOTE: Legacy FIO Setting (758959-B22) can be selected to configure the system in Legacy mode in the factory for your HPE ProLiant Gen10 Server.

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**.

Standard Features

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**.

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/stk or**http://www.hpe.com/servers/powershell**.

Standard Features

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**.

NOTE: HPE OneView Standard support on ML30 Gen10 will begin in early 2019.

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. Learn more at **http://www.hpe.com/servers/hpsim**.

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
Ability to rollback firmware
Secure erase of NAND/User data
TPM (Trusted Platform Module) 1.2 option
TPM (Trusted Platform Module) 2.0 option
Front bezel key-lock feature, standard
Padlock slot, standard
Kensington Lock slot, standard
Intel® SGX (Software Guard Extensions)
NOTE: Intel® SGX is supported in selective processors, please refer to the Standard Features – Processor section.

Warranty

This product is covered by a global limited warranty and supported by HPE Pointnext 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 Pointnext 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.

NOTE: 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: **http://h17007.www1.hpe.com/us/en/enterprise/servers/warranty/**.

NOTE: Warranty does not cover support for ClearOS. Support for ClearOS is provided by ClearCenter.

Optional Features

Server Management

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. Learn more about HPE iLO Advanced at **http://www.hpe.com/servers/iloadvanced**.

HPE iLO Advanced Premium Security Edition

HPE iLO Advanced Premium Security Edition for iLO 5 includes iLO Advanced License plus high-end security modes, unique security capabilities, like Automatic FW recovery; Runtime FW verification, and Secure erase. Learn more about HPE iLO Advanced Premium Security Edition at: **http://www.hpe.com/servers/ilopremium**.

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 Pointnext - Service and Support

Protect your business beyond warranty with HPE Pointnext Operational Service

HPE Pointnext provides a comprehensive portfolio including Advisory and Transformational, Professional, and Operational Services to help accelerate your digital transformation. From the onset of your transformation journey, Advisory andTransformational Services focus on designing the transformation and creating a solution roadmap. Professional Servicesspecializes in creative configurations with flawless and on-time implementation, and on-budget execution. Finally, operationalservices provides innovative new approaches like Flexible Capacity and Datacenter Care, to keep your business at peakperformance. HPE is ready to bring together all the pieces of the puzzle for you, with an eye on the future, and make thecomplex simple.

Connect your devices:

Unlock all of the benefits of your technology investment by connecting your products to Hewlett Packard Enterprise. Achieve up to 77%[1] reduction in down time, near 100%[2] diagnostic accuracy and a single consolidated view of your environment. Byconnecting, you will receive 24x7monitoring, pre-failure alerts, automatic call logging, and automatic parts dispatch. HPEProactive Care Service and HPE Datacenter Care Service customers will also benefit from proactive activities to help preventissues and increase optimization. All of these benefits are already available to you with your server storage and networkingproducts, securely connected to HPE support.1-IDC 2 – HP CSC reports 2014 – 2015Learn more about getting connected at **http://www.hpe.com/services/getconnected**.

Recommended Services

Basic: HPE Foundation Care NBD, three-year Support Service

HPE Foundation Care Next Business Day connects you to Hewlett Packard Enterprise during business hours for assistance on resolving issues – This service features need based next business day hardware onsite response and software call back within two hours. In addition, Collaborative software support and provides troubleshooting assistance on industry leading software running on your HPE server. Simplify your support experience and make Hewlett Packard Enterprise your first call to help resolve hardware or software problems.**https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en**

Standard: HPE Foundation Care 24x7, three-year Support Service

HPE Foundation Care 24x7 gives you access to Hewlett Packard Enterprise 24 hours a day, seven days a week for assistance on resolving issues. This service includes need based Hardware onsite response within four hours. In addition, collaborative software support is included in this service that provides troubleshooting assistance on industry leading software running on your HPE server. Simplify your support experience and make Hewlett Packard Enterprise your first call to help resolve hardware or software problems.**https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en**

Optimized: HPE Proactive Care* with 24x7 coverage, three year Support Service

HPE Proactive Care gives customers an enhanced call experience. When your products are connected to HPE, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice.This service combines three years of Hardware Support where an HPE authorized representative will arrive at the Customer'ssite during the onsite coverage window to begin hardware maintenance service the next coverage day after the service requesthas been logged. This service also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat,VMWare, Microsoft, etc.) running on your HPE servers

.**https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf**

*HPE Proactive Care and HPE Proactive Care Advanced require that the customer connect their devices to make the most of these services and receive all the deliverables.

Service and Support

Parts and Materials
Hewlett Packard Enterprise will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product inoperating 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 forthin the manufacturer's operating manual, product QuickSpecs, or the technical product data sheet will not be provided, repaired,or replaced as part of these services.
The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due tomalfunction.

Other related Services

HPE Server Hardware Installation
Provides for the basic hardware installation of HPE branded servers, storage devices and networking options to assist you inbringing your new hardware into operation in a timely and professional manner
.**https://www.hpe.com/h20195/V2/GetPDF.aspx/5981-9356EN.pdf**

HPE Installation and Startup Service
Provides for the installation of your HPE hardware according to product specifications including options. The HPE servicedelivery technician will connect the product to a LAN as appropriate and enable remote support to allow for automatic casecreation for hardware failures. Installation and start up services also includes the installation of one supported operating systemtype (Windows® or Linux).
NOTE: HPE Startup services does not include support for ClearOS. ClearOS is supported by ClearCenter.

HPE Factory Express for Servers and storage
HPE Factory Express offers configuration, customization, integration and deployment services for HPE servers and storageproducts. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed. Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HPE products supported through Factory Express include a wide array of servers and storage: HPE Integrity, HPE ProLiant, HPE Apollo, HPE ProLiant Server Blades, HPE BladeSystem, HPE 9000 servers as well as the MSAxxxx3PAR suite, XP, rackable tape libraries and configurable network switches.

HPE Service Credits
HPE Service Credits offers flexible services and technical skills to meet your changing IT demands. With a menu of service that is tailored to suit your needs, you get additional resources and specialist skills to help you maintain peak performance of your IT. Offered as annual credits, you can plan your budgets while proactively responding to your dynamic business.

HPE Education Services
Keep your IT staff trained making sure they have the right skills to deliver on your business outcomes. Book on a class today and learn how to get the most from your technology investment.**http://www.hpe.com/ww/learn**

Service and Support

HPE Support Center
The HPE Support Center is a personalized online support portal with access to information, tools and experts to support HPEbusiness products. Submit support cases online, chat with HPE experts, access support resources or collaborate with peers. Learn more **http://www.hpe.com/support/hpesc.**

HPE's Support Center Mobile App* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime.HPE Insight Remote Support and HPE Support Center are available at no additional cost with a HPE warranty, HPE SupportService or HPE contractual support agreement.*HPE Support Center Mobile App is subject to local availability.For more information: **http://www.hpe.com/services.**
NOTE: HPE ProLiant ML30 Gen10 Server is covered under the HPE Service Contract applied to the HPE ProLiant Server. No separate HPE support services need to be purchased.
Warranty and Support Services will extend to include HPE options configured with your server or storage device. The price of support service is not impacted by configuration details. HPE sourced options that are compatible with your product will becovered under your server support at the same level of coverage allowing you to upgrade freely. Installation for HPE options isavailable as needed. To keep support costs low for everyone, some high value options will require additional support. Additional
support is only required on select high value workload accelerators, fibre switches, InfiniBand and UPS batteries over 12KVA. See the specific high value options that require additional support **HERE**.

Pre-configured Models

For the Standard Features shipped in the "Factory Integrated Models", please see the "Configuration Information - Factory Integrated Models" section.

1. Pre-configured models ship with the configurations below. Options can be selected from the Core or Additional options section of this QuickSpecs.

2. Hewlett Packard Enterprise does not allow factory integration of options into pre-configured models. Any additional options purchased will be shipped separately.

3. If you desire a custom configuration please see "Configuration Information - Factory Integrated Models" section of this QuickSpecs.

	Entry Models	Performance Models		Solution Models
[SKU Number]	P06781-S01	P06785-S01	P06789-S01	P06793-S01
Model Name	HPE ProLiant ML30 Gen10 E-2124 3.3GHz 4-core 1P 8GB-U S100i 4LFF NHP 350W PS Entry Server	HPE ProLiant ML30 Gen10 E-2124 3.3GHz 4-core 1P 16GB-U S100i 4LFF 350W PS Perf Server	HPE ProLiant ML30 Gen10 E-2134 3.5GHz 4-core 1P 16GB-U S100i 4LFF 500W RPS Perf Server	HPE ProLiant ML30 Gen10 E-2134 3.5GHz 4-core 1P 16GB-U S100i 8SFF 500W RPS Solution Server
Processor	Intel® Xeon® E-2124 (4-Core, 3.3 GHz, 71W)	Intel® Xeon® E-2124 (4-Core, 3.3 GHz, 71W)	Intel® Xeon® E-2134 (4-Core, 3.5 GHz, 71W)	Intel® Xeon® E-2134 (4-Core, 3.5 GHz, 71W)
Number of Processors	One			
Memory	8 GB UDIMM DDR4 2666 MT/s (1 x 8 GB)	16 GB UDIMM DDR4 2666 MT/s (1 x 16 GB)	16 GB UDIMM DDR4 2666 MT/s (1 x 16 GB)	16 GB UDIMM DDR4 2666 MT/s (1 x 16 GB)
Network Controller	Embedded 2-Port 1GbE HPE Ethernet 332i Adapter			
Storage Controller	Embedded S100i SW RAID with 4 SATA ports **NOTE:** Field upgradeable to 6 ports by selecting drive enablement kits (812248-B21).	Embedded S100i SW RAID with 4 SATA ports **NOTE:** Field upgradeable to SAS by selecting HPE Smart Array controller.		Embedded S100i SW RAID with 4 SATA ports **NOTE:** Field upgradeable to SAS/8 ports by selecting HPE Smart Array controller.
Hard Drive	None ship as standard			
Internal Storage	4 LFF HDD Bays (Non Hot Plug) 1x M.2 PCIe 3.0 x2 slot	4 LFF HDD Bays (Hot Plug) 1x M.2 PCIe 3.0 x2 slot		8 SFF HDD Bays (Hot Plug) 1x M.2 PCIe 3.0 x2 slot
Optical Drive Bay	Optional Slimline ODD Bay Kit (P06309-B21) for SATA DVD-ROM/DVD-RW optical drive up to 1, Media drive bay for internal RDX or tape/LTO devices up to 1			
Optical Drive	None ship as standard			
PCI-Express Slots	4 PCIe 3.0 slots			
Power Supply	(1) 350W ATX Power Supply	(1) 500W HPE Flex Slot Power Supply **NOTE:** Add a second 500W Flex Slot Power Supply to get 1+1 power redundancy feature.		
Fans	1 non-hot plug, non-redundant system fan	1 non-hot plug, non-redundant system fan 1 non-hot plug, non-redundant PCI 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) **NOTE:** HPE OneView support on ML30 Gen10 begin in early 2019.			
Form Factor	Tower (4U)			
Warranty	3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response.			

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

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

CTO Server	HPE ProLiant ML30 Gen10 4 LFF Non Hot Plug CTO Server	HPE ProLiant ML30 Gen10 4 LFF Hot Plug CTO Server	HPE ProLiant ML30 Gen10 8 SFF Hot Plug CTO Server
SKU Number	P06760-B21	P06761-B21	P06762-B21
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 S100i SW RAID with 4 SATA ports	Embedded S100i SW RAID with 4 SATA ports, choice of HPE Smart Array controller	
PCIe	4 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 slot	1 M.2 PCIe 3.0 x2 slot	1 M.2 PCIe 3.0 x2 slot
Network Controller	Embedded 2-Port 1GbE HPE Ethernet 332i Adapter, optional 1/10Gb standup card		
Fans	1 non hot plug, non-redundant system fan		
Management	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download, available in early 2019), HPE iLO Advanced, HPE iLO Advanced Premium Security Edition, and HPE OneView Advanced (require licenses)		
USB	2 front, 4 rear, 1 internal		

Step 2a: Choose Required Options - Processors

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

Intel® Xeon® E Processor

HPE ML30 Gen10 Intel Xeon E-2124 (3.3GHz/4-core/71W) FIO Processor Kit	P06535-L21
HPE ML30 Gen10 Intel Xeon E-2134 (3.5GHz/4-core/71W) FIO Processor Kit	P06537-L21
HPE ML30 Gen10 Intel Xeon E-2136 (3.3GHz/6-core/80W) FIO Processor Kit	P06547-L21
HPE ML30 Gen10 Intel Xeon E-2144G (3.6GHz/4-core/71W) FIO Processor Kit	P06539-L21
HPE ML30 Gen10 Intel Xeon E-2126G (3.3GHz/6-core/80W) FIO Processor Kit	P06543-L21
HPE ML30 Gen10 Intel Xeon E-2174G (3.8GHz/4-core/71W) FIO Processor Kit	P06541-L21
HPE ML30 Gen10 Intel Xeon E-2176G (3.7GHz/6-core/80W) FIO Processor Kit	P06549-L21

Intel® 8th Gen Core™ i3 Processors

HPE ML30 Gen10 Intel Core i3-8300 (3.7GHz/4-core/62W) FIO Processor Kit	P06557-L21

Intel® Pentium® Processor G Series

HPE ML30 Gen10 Intel Pentium G5400 (3.7GHz/2-core/54W) FIO Processor Kit	P06551-L21

Configuration Information

Step 2b: Choose Memory Options

Please select one or more memory from below.

NOTE: With one processor installed, four DIMMs slots are available.
NOTE: The maximum memory speed is a function of the memory type, memory configuration, and processor model.

Memory

HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Unbuffered Standard Memory Kit	879505-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Unbuffered Standard Memory Kit	879507-B21

Step 2c: Choose Power Supplies

NOTE: Mixing of 2 different power supplies is NOT allowed.
NOTE: Selection of two HPE Flex Slot power supplies provides 1+1 power redundancy.
NOTE: To review the power requirements for your selected configuration, please use the **HPE Power Advisor Tool**.

Power Supplies

HPE ML30 Gen9 350W E-star 1.0 FIO Power Supply Kit	820303-B21
HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865408-B21
HPE ML30 Gen10 4U RPS Enablement Kit	P06305-B21

Step 2d: Choose SAS Controller

NOTE: Selection of SAS Controller required if 8SFF Hot Plug CTO Server (P06762-B21) selected in Step 1.

HPE Smart Array E208i-p SR Gen10 Controller	804394-B21
HPE Smart Array P408i-p SR Gen10 Controller	830824-B21

NOTE: Selection of either HPE Smart Array E208i-p SR Gen10 Controller (804394-B21) or HPE Smart Array P408i-p SR Gen10 Controller (830824-B21) requires a total of two HPE ML30 Gen10 Mini SAS Cable Kits.

SAS Cable Kit Option

HPE ML30 Gen10 Mini SAS Cable Kit	P06307-B21

Step 2e: Choose Cooling Option

NOTE: Required if 4LFF Hot Plug CTO Server (P06761-B21) or 8SFF Hot Plug CTO Server (P06762-B21) selected in Step 1. This option is also required if 4 LFF Non Hot Plug CTO Server (P06760-B21) is selected in Step 1 above when M.2 SSD or any PCIe card (NIC, Smart Array controller, graphic card, etc.) is also on the order.

HPE ML30 Gen10 PCI Fan and Baffle Kit	P06303-B21

Step 3: Choose additional Factory Integration Options

TPM Mode Setting

HPE Gen10 TPM 2.2 FIO Setting	872108-B21

NOTE: Selection of this option requires selection of TPM 2.0 Gen10 Kit (864279-B21). When this option is selected, Legacy FIO Mode Setting (758959-B22) is also required.

BIOS Mode

HPE Legacy FIO Mode Setting	758959-B22

NOTE: If this option is selected then default UEFI BIOS setting changes to Legacy BIOS setting.

Controller State

HPE FIO Enable Smart Array SW RAID	784308-B21

NOTE: If this option is selected then embedded SATA controller will operate in S100i Mode. This option cannot be selected if HPE Legacy FIO Mode Setting (758959-B22) is selected.

Battery Upgrade Removal Setting

HPE FIO No Smart Storage Battery	P06141-B21

Configuration Information

Step 4: Choose additional options for Factory Integration from Core and Additional Options sections below

Core Options

HPE Unique Options

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

NOTE: Required if ODD is in the order.

HPE ML30 Gen10 Front PCI Fan and Baffle Kit	P06303-B21

NOTE: Included in SMB Performance and Solution Models.

HPE ML30 Gen10 Mini SAS Cable Kit	P06307-B21

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

HPE ML30 Gen10 4U RPS Enablement Kit	P06305-B21

NOTE: Required for HPE 500W Flex Slot Power Supply.

HPE DL20/ML30 Gen10 M.2/Dedicated iLO and Serial Port Kit	P06687-B21

NOTE: 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.
NOTE: M.2 SSD is supported with or without this option on ML30 Gen10.

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

NOTE: Easy install rack rail tray which takes up 1U height in a standard rack facility. This conversion kit only provides shelf function for ML30 Gen10 and does not support Cable Management Arm.

HPE ML30 Gen9 Tape Drive Cable Kit	851615-B21

NOTE: 1pc required per LTO int tape drive or per RDX USB int disk backup sys if selected together with 350W ES1.0 power supply (820303-B21).

Memory Selection

To streamline the configuration process for HPE ProLiant Gen10 servers and to provide the best product availability,HPE recommends memory from the list located here: **http://www.hpe.com/products/recommend**.

Unbuffered DIMMs (UDIMMs)

HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Unbuffered Standard Memory Kit	879505-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Unbuffered Standard Memory Kit	879507-B21

NOTE: Running at 2400 MT/s with i3-8300 and G5400 due to processor limitation.

HPE Optical Drives

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

NOTE: 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

NOTE: 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 Drives

Enterprise - 12G SAS - SFF Drives

HPE 300GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870753-B21
HPE 300GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872475-B21

Core Options

HPE 600GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872477-B21
HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870759-B21
HPE 1.2TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872479-B21
HPE 1.8TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	872481-B21
HPE 2.4TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	881457-B21

Enterprise - 12G SAS - LFF Drives

HPE 900GB SAS 12G Enterprise 15K LFF (3.5in) LPC 3yr Wty Digitally Signed Firmware HDD	870761-B21

Midline - 12G SAS - SFF Drives

HPE 1TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty Digitally Signed Firmware HDD	832514-B21
HPE 1TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	765464-B21
HPE 2TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e HDD	765466-B21

Midline - 12G SAS - LFF Drives

HPE 1TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	846526-B21
HPE 2TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	833926-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	833928-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e HDD	861748-B21
HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e HDD	861746-B21
HPE 8TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e Digitally Signed Firmware HDD	834031-B21
HPE 10TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty Helium 512e Digitally Signed Firmware HDD	857646-B21
HPE 12TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty Helium 512e Digitally Signed Firmware HDD	881781-B21

Midline - 6G SATA - SFF Drives

HPE 1TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty Digitally Signed Firmware HDD	655710-B21
HPE 2TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	765455-B21

Midline - 6G SATA - LFF Drives

HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	861686-B21
HPE 2TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	861681-B21
HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	861683-B21
HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e HDD	861742-B21
HPE 8TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e Digitally Signed Firmware HDD	834028-B21
HPE 12TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Helium 512e Digitally Signed Firmware HDD	881787-B21

6G SATA - LFF NHP/Raw Drives

HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) RW 1yr Wty HDD	801882-B21
HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) RW 1yr Wty HDD	801888-B21

SSD Selection

To streamline the configuration process for HPE ProLiant Gen10 servers and to provide the best product availability,HPE recommends memory from the list located here: **http://www.hpe.com/products/recommend**. To further assist with configuration, HPE also offers an SSD Selector Tool located here: **http://ssd.hpe.com**.

Write Intensive – 12G SAS - SFF - Solid State Drives

HPE 400GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09098-B21
HPE 400GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04541-B21
HPE 400GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	873351-B21

Read Intensive - 6G SATA - SFF - Solid State Drives

HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04556-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04474-B21

Core Options

HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06194-B21
HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04560-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04476-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06196-B21
HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04564-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04478-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06198-B21
HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04566-B21
HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04480-B21
HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04570-B21
HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06200-B21
HPE 7.68TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04482-B21

Read Intensive - 6G SATA - LFF - Solid State Drives

HPE 480GB SATA 6G Read Intensive LFF (3.5in) LPC 3yr Wty Digitally Signed Firmware SSD	P04499-B21
HPE 960GB SATA 6G Read Intensive LFF (3.5in) LPC 3yr Wty Digitally Signed Firmware SSD	P09691-B21
HPE 1.92TB SATA 6G Read Intensive LFF (3.5in) LPC 3yr Wty Digitally Signed Firmware SSD	P04501-B21

Mixed Use - 6G SATA - SFF - Solid State Drives

HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09712-B21
HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09716-B21
HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09722-B21

Mixed Use - 6G SATA - LFF - Solid State Drives

HPE 1.92TB SATA 6G Mixed Use LFF (3.5in) LPC 3yr Wty Digitally Signed Firmware SSD	P09726-B21

Mixed Use - 12G SAS - SFF - Solid State Drives

HPE 400GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09088-B21
HPE 400GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04525-B21
HPE 400GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	873359-B21

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

HPE 400GB NVMe x4 Lanes Mixed Use M.2 22110 3yr Wty Digitally Signed Firmware SSD	875583-B21

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

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

HPE 480GB NVMe x4 Lanes Read Intensive M.2 22110 3yr Wty Digitally Signed Firmware SSD	875579-B21

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

Hard Drive Kits

HPE Small Form Factor Hard Drive Blank Kit	666987-B21
HPE Gen9 LFF HDD Spade Blank Kit	807878-B21
HPE ML10v2 Drive Enablement Kit	812248-B21

NOTE: Only compatible with Non Hot Plug chassis and supports additional NHP LFF Hard Disk up to 2 pcs.

HPE Networking

NOTE: Max 2 pcs of HPE Networking Adapters can be selected for better performance.

Core Options

1 Gigabit Ethernet adapters

HPE Ethernet 1Gb 4-port 331T Adapter	647594-B21
HPE Ethernet 1Gb 4-port 366T Adapter	811546-B21
HPE Ethernet 1Gb 2-port 332T Adapter	615732-B21
HPE Ethernet 1Gb 2-port 361T Adapter	652497-B21

10 Gigabit Ethernet adapters

NOTE: HPE ML30 Gen10 Front PCI Fan and Baffle Kit (P06303-B21) is required.

HPE Ethernet 10Gb 2-port 530T Adapter	656596-B21
HPE Ethernet 10Gb 2-port 535T Adapter	813661-B21
HPE Ethernet 10Gb 2-port 530SFP Adapter	652503-B21

NOTE: HPE ML30 Gen10 Front PCI Fan and Baffle Kit (P06303-B21) is required.

HPE Ethernet 10Gb 2-port 521T Adapter	867707-B21
HPE Ethernet 10Gb 2-port 562T Adapter	817738-B21
HPE Ethernet 10Gb 2-port 562SFP+ Adapter	727055-B21

HPE Power Supplies

HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865408-B21

NOTE: Flex Slot Platinum power supplies support power efficiency of up to 94% and include a standard C-14 power inlet connector.

HPE ML30 Gen10 4U RPS Enablement Kit	P06305-B21

NOTE: Required for HPE 500W Flex Slot Power Supply.

HPE Cooling Options

HPE ML30 Gen10 Front PCI Fan and Baffle Kit	P06303-B21

NOTE: Included in SMB Performance and Solution Models.

GPGPU Information

Part Number	Card	TDP	PCIe Speed	Processor Support	Qty. Support	ML30 Gen10 Configuration		
						4LFF NHP	4LFF HP	8SFF HP
Q0V77A	HPE NVIDIA Quadro P2000 GPU Module	75W	Gen3	Xeon E processors only	1	n/a	35°C	35°C
Q1P47A	HPE AMD Radeon Pro WX2100 GPU Module	35W	Gen3	Xeon E processors only	1	n/a	35°C	35°C

NOTE: Please see the HPE Power Advisor for estimated power consumption of your individual system configuration prior to installing GPUs. The HPE Power Advisor is located at: **http://www.hpe.com/info/hppoweradvisor**.
NOTE: Only the above listed Graphics cards are HPE standard supported options in this server.

HPE Computation and Graphics Accelerators

NOTE: HPE ML30 Gen10 Front PCI Fan and Baffle Kit (P06303-B21) is required.
NOTE: HPE 500W Flex Slot Power Supply Kit (865408-B21) is required.

HPE NVIDIA Quadro P2000 Graphics Accelerator	Q0V77A
HPE AMD Radeon Pro WX2100 Graphics Accelerator	Q1P47A

Additional Options

NOTE: 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 Advanced Security

HPE iLO Advanced Premium Security Upgrade Electronic License with 3yr Support on Licensed Features	Q7E12AAE
HPE iLO Advanced Premium Security Edition License with 1yr Support on Licensed Features	Q7E31A
HPE iLO Advanced Premium Security Flex Qty License with 1yr Support on Licensed Features	Q7E32A
HPE iLO Advanced Premium Security Edition Electronic License with 1yr Support on Licensed Features	Q7E32AAE
HPE iLO Advanced Premium Security Edition License with 3yr Support on Licensed Features	Q7E33A
HPE iLO Advanced Premium Security Flex Qty License with 3yr Support on Licensed Features	Q7E34A
HPE iLO Advanced Premium Security Edition Electronic License with 3yr Support on Licensed Features	Q7E34AAE
HPE iLO Advanced Premium Security AKA Tracking License with 1yr Support on Licensed Features	Q7E35A
HPE iLO Advanced Premium Security AKA Tracking License with 3yr Support on Licensed Features	Q7E36A

HPE Security

HPE Trusted Platform Module 2.0 Gen10 Option	864279-B21

NOTE: HPE Trusted Platform Module 2.0 option works with Gen10 servers with UEFI Mode not LegacyMode. It is not compatible with HPE ProLiant Gen8 servers or earlier generation variants.
NOTE: HPE server systems can have a TPM module (of any type) installed only once. It cannot be replacedwith any other TPM module.

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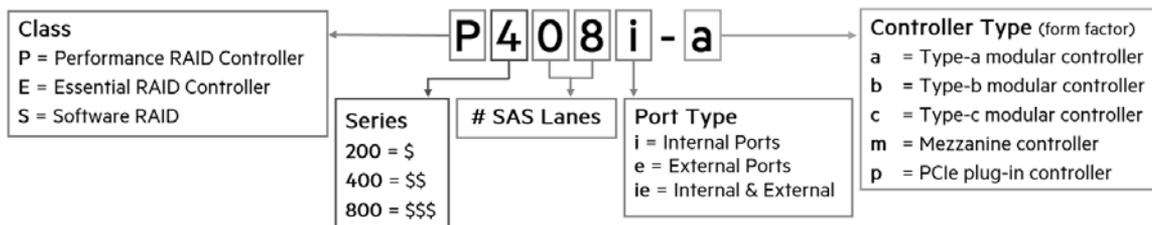
NOTE: Max 2 pcs of HPE Smart Array Controllers can be selected for better performance.

Additional Options

Performance RAID Controllers

NOTE: All performance RAID controllers require the HPE Smart Storage Battery (P01366-B21), which supports 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

NOTE: Max 1 pc of P408i-p can be selected for better performance.
NOTE: Must select 1pc of Mini SAS Cable Kit (P06307-B21) for 4LFF Hot Plug Server.
NOTE: Must select 2pcs of Mini SAS Cable Kit (P06307-B21) for 8SFF 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

NOTE: Must select 1pc of Mini SAS Cable Kit (P06307-B21) for 4LFF Hot Plug Server.
NOTE: Must select 2pcs of Mini SAS Cable Kit (P06307-B21) for 8SFF Hot Plug Server.

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

Optional Upgrades

HPE 96W Smart Storage Battery (up to 20 Devices) with 145mm Cable Kit	P01366-B21

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

HPE Tape Backup

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

HPE Tape Drives

HPE StoreEver LTO-5 Ultrium 3000 SAS Internal Tape Drive	EH957B
HPE StoreEver LTO-5 Ultrium 3000 SAS External Tape Drive	EH958B
HPE LTO-6 Ultrium 6250 Internal Tape Drive	EH969A
HPE StoreEver LTO-6 Ultrium 6250 External Tape Drive	EH970A
HPE LTO-7 Ultrium 15000 Internal Tape Drive	BB873A
HPE StoreEver LTO-7 Ultrium 15000 External Tape Drive	BB874A

NOTE: Only 1pc of internal tape drive is supported.
NOTE: Internal LTO tape drive requires 1pc of HPE ML30 Gen9 Tape Drive Cable Kit (851615-B21) with a 350W Power Supply (820303-B21) configuration.
NOTE: Cannot share SAS controller with SAS drives. Must select additional internal SAS controller E208i-p to support internal SAS tape drive.
NOTE: Internal LTO tape drive cannot be selected in Non Hot Plug Server.

HPE Tape Backup Products

HPE StoreEver MSL2024 0-drive Tape Library	AK379A
HPE StoreEver 1/8 G2 LTO-5 Ultrium 3000 SAS Tape Autoloader	BL536B
HPE StoreEver MSL LTO-5 Ultrium 3000 SAS Drive Upgrade Kit	BL540B
HPE StoreEver 1/8 G2 LTO-6 Ultrium 6250 SAS Tape Autoloader	C0H18A
HPE StoreEver MSL LTO-6 Ultrium 6250 SAS Drive Upgrade Kit	C0H27A
HPE StoreEver 1/8 G2 LTO-7 Ultrium 15000 SAS Tape Autoloader	N7P35A
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

Additional Options

HPE StoreEver Mini-SAS High Density to 4-lane Mini-SAS External Fanout 4m Cable   K2R10A

HPE Disk Backup

NOTE: 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**.
NOTE: Please see the **HPE RDX Removable Disk Backup System QuickSpecs** for additional part numbers, technical specifications, and additional information.

HPE RDX Removable Disk Backup System

HPE RDX External Docking Station	C8S07B
HPE RDX 1TB External Disk Backup System	B7B69B
HPE RDX 2TB External Disk Backup System	E7X53B
HPE RDX 3TB External Disk Backup System	P9L72A
HPE RDX 4TB External Disk Backup System	Q2R33A
HPE RDX Internal Docking Station	C8S06A
HPE RDX 1TB Internal Disk Backup System	B7B67A
HPE RDX 2TB Internal Disk Backup System	E7X52A
HPE RDX 3TB Internal Disk Backup System	P9L71A

NOTE: Only 1pc of internal RDX is supported, sharing the same internal USB port with USB flash drives.
NOTE: Internal RDX requires 1pc of HPE ML30 Gen9 Tape Drive Cable Kit (851615-B21) with a 350W Power Supply (820303-B21) configuration.

HPE USB Options

HPE Enterprise Mainstream Flash Media Kits for Memory Cards

HPE 8GB microSD Flash USB Drive	737953-B21
HPE 8GB Dual microSD Flash USB Drive	741279-B21

HPE Uninterruptible Power Systems (UPS)

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

HPE Rack Options

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 Installation ML/DL Series 10 Service	U7WZ5E
HPE Startup ML/DL Series 10 Service	U7WZ7E

Foundation Care

HPE 3Y FC NBD ML30 Gen10 SVC	HC5X5E
HPE 3Y FC NBD wDMR ML30 Gen10 SVC	HC5X6E
HPE 3Y FC NBD wCDMR ML30 Gen10 SVC	HC5X7E
HPE 3Y FC 24x7 ML30 Gen10 SVC	HC5Y6E
HPE 3Y FC 24x7 wDMR ML30 Gen10 SVC	HC5Y7E
HPE 3Y FC 24x7 wCDMR ML30 Gen10 SVC	HC5Y8E

Additional Options

Proactive Care

HPE 3Y PC 24x7 ML30 Gen10 SVC	HC5Y9E
HPE 3Y PC 24x7 wDMR ML30 Gen10 SVC	HC5Z0E
HPE 3Y PC 24x7 wCDMR ML30 Gen10 SVC	HC5Z1E

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

Storage

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
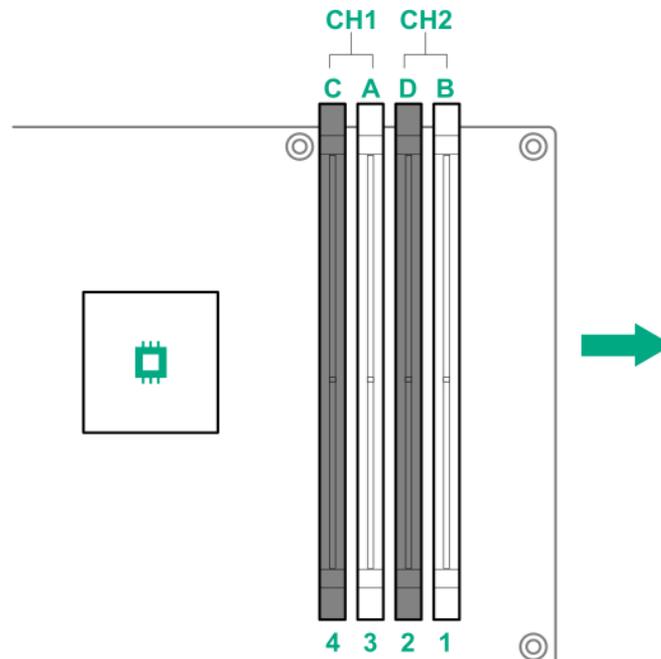
HPE ProLiant ML30 Gen10 Server memory slots

General Memory Population Rules and Guidelines:

- The HPE ProLiant ML30 Gen10 Server has four memory slots.
- Only ECC UDIMMs are supported on ML30 Gen10. 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 2666 MT/s ECC UDIMMs (Unbuffered DIMMS).
- The server supports up to 64 GB (4 x 16 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.

Storage

DIMM Type	Unbuffered with ECC DIMMs (UDIMMs)	
HPE SKU P/N	879505-B21	879507-B21
SKU Description	HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Unbuffered Standard Memory Kit	HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Unbuffered Standard Memory Kit
DIMM Rank	Single Rank (1R)	Dual Rank (2R)
DIMM Capacity	8 GB	16 GB
Voltage	1.2V	1.2V
CAS Latency	19-19-19	19-19-19
DIMM Native Speed	2666 MT/s	2666 MT/s
Maximum Capacity	32 GB (4 x 8 GB)	64 GB (4 x 16 GB)
HPE Server Memory Speed: Intel® Xeon® E processors		
1 DIMM Per Channel	2666 MT/s	2666 MT/s
2 DIMM Per Channel	2666 MT/s	2666 MT/s
HPE Server Memory Speed: Intel® Core™ i3-8300, Pentium® G5400 processors		
1 DIMM Per Channel	2400 MT/s	2400 MT/s
2 DIMM Per Channel	2400 MT/s	2400 MT/s

DDR4 memory options part number decoder
NOTE: Capacity references are rounded to the common gigabyte (GB) values.

o 8GB = 8,192 MB
o 16GB = 16,384 MB
o 32GB = 32,768 MB
o 64GB = 65,536 MB
For more information on memory, please visit the **HPE DDR4 Standard Memory web site**.

4 LFF Non-Hot-Plug Drive Model   **4 LFF Hot-Plug Drive Model**   **8 SFF Hot-Plug Drive Model**
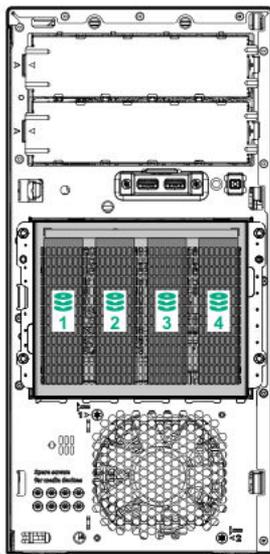
1-4
4 x LFF SATA
non-hot-plug hard drive bays
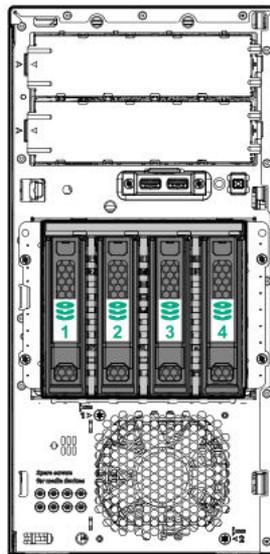
1-4
4 x LFF SAS/SATA/SSD
hot pluggable hard drive bays
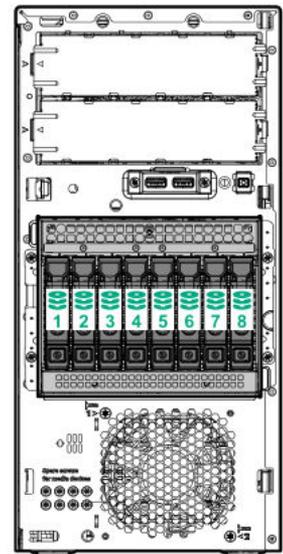
1-8
8 x SFF SAS/SATA/SSD
hot pluggable hard drive bays

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: 1452 BTU/hr (at 100 VAC), 1544 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)
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. 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 systeminlet 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 900 m(2953 ft) to a maximum of 3050 m (10,000 ft). The approvedhardware configurations for this system are listed at the URL:**http://www.hpe.com/servers/ashrae** For approved hardware configurations, the supported systeminlet range is extended to be: 40° to 45°C (104° to 113°F) atsea 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 maximumof 3050 m (10,000 ft). The approved hardware configurationsfor this system are listed at the URL: **http://www.hpe.com/servers/ashrae** System performance may be reduced if operating in theextended 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 bulbtemperature, non-condensing.
	Non-operating		5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulbtemperature, non-condensing..

Technical Specifications

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

Acoustic Noise — Listed are the declared A-Weighted sound power levels (L_{WAd}) 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.

Idle

LWAd	4.3 Bels (Entry)
	3.6 Bels (Performance)
LpAm	28 dBA (Entry)
	23 dBA (Performance)

Operating

LWAd	4.3 Bels (Entry)
	3.8 Bels (Performance)
LpAm	28 dBA (Entry)
	23 dBA (Performance)

NOTE: Acoustics levels presented here are generated by the test configuration only. Acoustics levelswill vary depending on system configuration. Values are subject to change without notification andare for reference only.
NOTE: 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 appropriatecompliance logos and statements.
NOTE: 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 Informationfor Server, Storage, Power, Networking, and Rack Products, available at the Hewlett PackardEnterprise Support Center:
http://www.hpe.com/support/Safety-Compliance-EnterpriseProducts

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

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

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

Summary of Changes

Date	Version History	Action	Description of Change
07-Jan-2019	Version 3	Changed	Update Standard Features - Upgradeability Update Country Code Key Standard Features, SMB Models, Service and Support, Core Options, Aditional Options sections were updated
03-Dec-2018	Version 2	Changed	SKUs were Added and deleted in Core Options Service and Support and Technical Specifications were updated
05-Nov-2018	Version 1	New	New QuickSpecs.

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