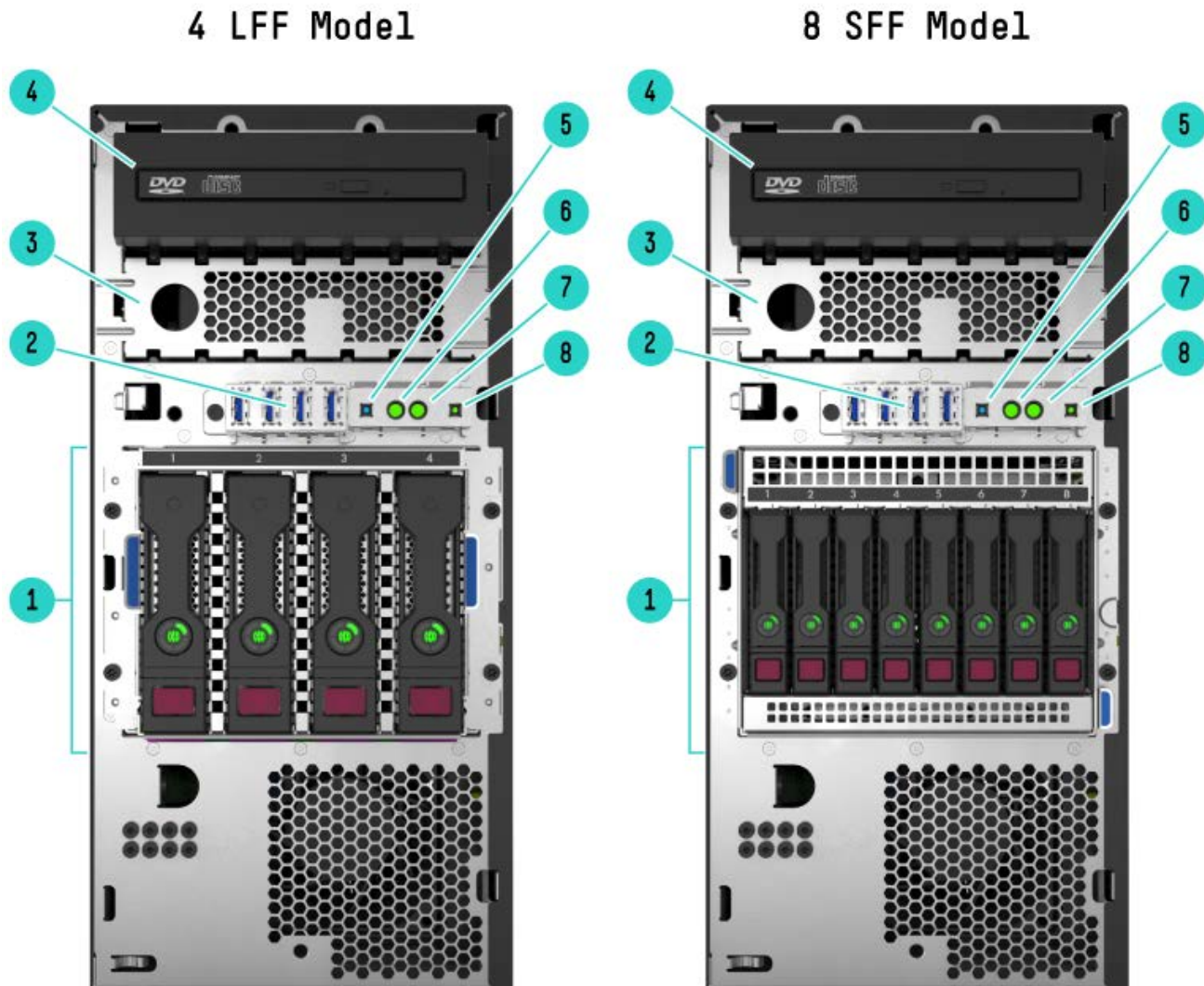# QuickSpecs

Overview

### HPE ProLiant ML30 Generation9 (Gen9)

HPE ProLiant ML30 Gen9, delivers a full featured single-socket tower server with the right features at a competitive price, easy to use and maintain for growing small businesses and remote branch offices.

Front View (details for 4LFF and 8SFF)

1	Four (4) LFF or Eight (8) SAS/SATA HDD cage	2	Four (4) USB 3.0 connectors
3	Media Drive Blank	4	9.5mm Slim SATA DVD-ROM or DVD RW Optical Drive
5	Power On/Standby button and system power LED button	6	NIC status LED
7	Health LED	8	UID (unit identification) button/LED

Hewlett Packard Enterprise
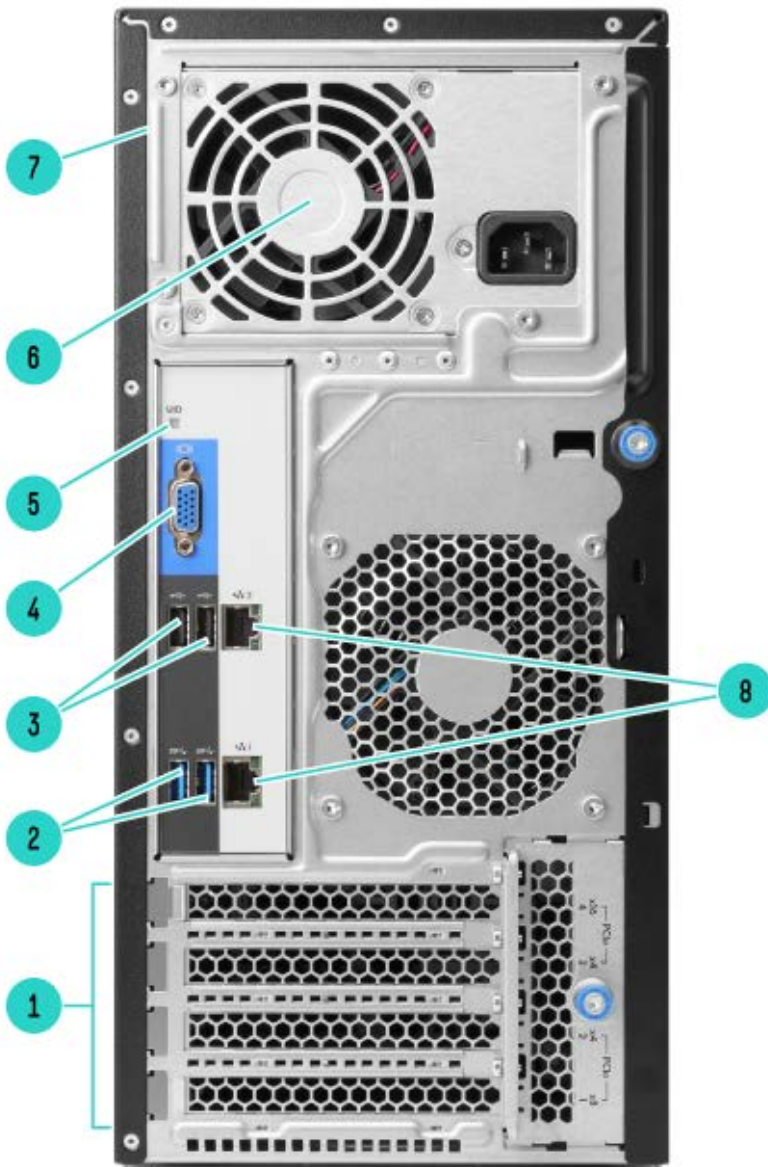
Overview

Rear View

1   PCI Slots (Slots 1-4)
2   USB 3.0 (2)
3   USB 2.0 (2)
4   Video Connector
5   UID LED
6   Power Supply Power Fan
7   HPE 350W Power Supply
8   NIC1/shared iLO port (lower), NIC2 (upper)

Overview

Internal View

1   One (1) processor and heatsink
3   Power Supply
5   Front PCIe fan (optional)
7   Gen9 Smart Storage Battery Holder Kit
9   Four (4) PCIe expansion slots

2   System Fan
4   Four (4) DDR4 DIMM slots
6   Two (2) Internal USB 2.0 connectors (USB Type A, Tape Drive Header)
8   MicroSD slot

Standard Features

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

Intel® Xeon® processor E3-1200v5 quad core processor family is designed to deliver the best combination of performance, built-in capabilities, and cost-effectiveness. The product also supports Intel® Pentium® and Intel® Core-i3 dual core processors. Choose one of the following processors based on the model:

Processor
One of the following depending on model

Model	CPU frequency	Cores	L3 Cache	Power	DDR4 Hz
G4400	3.3GHz	2	3MB	54W	2133
G4500	3.5GHz	2	3MB	51W	2133
i3-6100	3.7GHz	2	3MB	51W	2133
i3-6300	3.8GHz	2	4MB	51W	2133
E3-1220v5	3.0GHz	4	8MB	80W	2133
E3-1230v5	3.4GHz	4	8MB	80W	2133
E3-1240v5	3.5GHz	4	8MB	80W	2133
E3-1270v5	3.6GHz	4	8MB	80W	2133
E3-1240Lv5	2.1GHz	4	8MB	25W	2133

Cache Memory
One of the following depending on model

8MB (1x8MB) Level 3 cache
NOTE: For Quad-core Intel Xeon processors.
3MB (1 x 3MB) Level 3 Cache
NOTE: For Dual-core Intel Pentium® Core™ i3 processors.

Chipset

Intel® C236 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 (Firmware HPE iLO4 2.0 or later), 4GB NAND
NOTE: 1GB USB user space configurable via UEFI and accessible via iLO. Read and learn more in the **iLO QuickSpecs**.

Memory

Type:
DDR4 Unbuffered (UDIMM)
DIMM Slots Available   4   4 DIMMs (2 Channels/ 2 DIMMs per channel)
 Maximum Capacity   64GB   (4 x 16GB UDIMM @2133MHz)
(UDIMM)
NOTE: For more information regarding HPE Server Memory
visit: **http://www.hp.com/products/memory**.

Memory Protection   ECC

Network Controller

HPE Ethernet 1Gb 2-port NC332i Adapter

Expansion Slots

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
4	PCIe 3.0	x16	x16		Full length/full height	
3	PCIe 3.0	x1	x4		Full length/full height	
2	PCIe 3.0	x1	x4		Full length/full height	

Standard Features

1	PCIe 3.0	x4	x8	Half Length/Full Height	

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

Storage Controller
One of the following depending on model

Base Models   HPE Dynamic Smart Array B140i Controller
NOTE: B140i can't mix with any standup internal controller.
Performance Models HPE Dynamic Smart Array B140i Controller
NOTE: B140i can't mix with any standup internal controller.

Internal Storage Devices
One of the following depending on model

Optical Drives   Optional SATA 9.5mm DVD-ROM Optical Drive
                    Optional SATA 9.5mm DVD RW Optical Drive
Hard Drives   None ship standard
Hard Drive Bays   4 LFF drive bays (non-hot-plug and hot-plug)
                    8 SFF hot-plug drive bays
NOTE: HPE ProLiant ML30 Series servers offer both SFF and LFF versions in CTO.
NOTE: All Pre-configured Models come populated with some hard drive blanks installed. Should the customer need additional hard drive blanks, they can order more using either P/N 666987-B21: HPE SFF HDD Blank Kit or P/N 666986-B21: HPE LFF HDD Blank Kit.

Maximum Internal Storage
One of the following depending on model

	CAPACITY	CONFIGURATION
Hot Plug LFF SAS	32TB	4 x 8TB
Hot Plug SFF SAS	16TB	8x 2TB
Hot Plug LFF SATA	32TB	4 x 8TB
Hot Plug SFF SATA	16TB	8 x 2TB
Non-Hot Plug LFF SATA	16TB	4 x 4TB
Hot Plug SFF SATA SSD	960GB	8 x 120GB
Hot Plug LFF SATA SSD	480GB	4 x 120GB

Power Supply
One of the following depending on model

HPE 350W ATX-Gen9 Power Supply FIO Kit
HPE 460W Redundant Power Supply
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 Gen9 Essential Series servers.

The HPE 350W FIO Power Supply is the standard, non-redundant AC power supply option for most HPE ProLiant Gen9 Essential servers. It features Bronze-level (85%) certified power efficiency with a set of features optimized for the Gen9 Essential-series rack and tower servers.

The HPE 460W (Redundant) AC Power Supply can be configured with redundancy enablement kit to support power redundancy in ProLiant ML30 Servers, providing additional protection against power loss. With an 80 Plus Gold power efficiency rating (up to 92%), this power option helps to reduce operating expenses while protecting against trapped power capacity in the data center.

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

Standard Features

To review the power requirements for your selected system, please use the HPE Power Advisor Tool located at **http://www.hp.com/go/hppoweradvisor**.

Power Specification and Technical Content for supported power supplies can be found at: **https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111541**.

Required Cabling	**Server Power Cords**
	The ProLiant ML30 server is a tower server that ships standard with a 6 country specific NEMA power cord that allows connection to wall outlets in a home or office. If customers require additional local power cords, they can check the power cord matrix for the appropriate country specific SKU.

System Fans
One of the following depending on model

	Non-redundant	**Redundant**
1P model system fan	One (1) Non-redundant system fan	
	Non-redundant	**Redundant**
1P model PCIe fan	One (1) Non-redundant PCIe fan	

Interfaces		
	Video	1 (rear)
	Network RJ-45 (Ethernet)	2 (1 shared for HPE Integrated Lights-Out)
	Micro SD Slot	1 (internal)

NOTE: The Micro-SD slot is not a hot-pluggable device. Customers should not attempt to plug a Micro-SD card into the Micro-SD slot while the server is powered.

	USB 3.0	6 (4 front, 2 rear)
	USB 2.0	4 (2 rear, 1 internal standard USB, 1 internal USB header)

Operating Systems and Virtualization Software Support for ProLiant Servers

Microsoft Windows Server

Red Hat Enterprise Linux (RHEL)

SUSE Linux Enterprise Server (SLES)

VMware

NOTE: VMWare availability is dependent on General availability from the vendor. HPE ProLiant ML30 supports VMWare 5.5 U3 and 6.0 U1.

NOTE: For more information on HPE's Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server, please visit our Support Matrix at: **http://www.hp.com/go/ossupport** and our driver download page: **http://h20566.www2.hpe.com/portal/site/hpsc?ac.admitted=1447391526103.125225703.1938120508**.

Upgradeability

Upgradeable to 4 cores

NOTE: Total 2 or 4 cores.

Up to 4 DIMM slots available for higher memory capacity

Up to 8 SFF Hard Drive Bays; or 4 LFF Hard Drive Bays

All PCIe3.0 I/O slots for additional communications and storage expansion

Redundant Power Supply

Optical Drive Bay

NOTE: Up to 2.

Industry Standard Compliance

ACPI 2.0b Compliant

PCIe 3.0 Compliant

PXE Support

Standard Features

WOL Support
Microsoft® Logo certifications
USB 2.0 /3.0 Support

Graphics	Integrated Matrox G200 video standard

Integrated Matrox G200 video standard
- 1280 x 1024 (32 bpp)
- 1920 x 1200 (16 bpp)

HPE iLO 4 On System Management Memory
- 16 MB Flash
- 256 MB DDR 3 with ECC (112 MB after ECC and video)

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 Gen9 platform defaults to UEFI and can be factory or field configured for Legacy BIOS Boot 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

- 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 RESTful API for iLO 4

- PXE boot support for IPv6 networks

- Boot support for option cards that only support a UEFI option ROM

- Network Stack configurations

NOTE: For UEFI Boot Mode, boot environment and OS image installations should be configured properly to support UEFI.
NOTE: UEFI FIO Setting (758959-B22) can be selected to configure the system in Legacy mode in the factory for your HPE ProLiant Gen9 Server.

Form Factor
One of the following depending on model

Micro ATX Tower (4U) chassis with feet/bezel:
14.5" (36.82cm) Height x 6.89" (17.5cm) Width x 18.71" (47.52cm) Length

8 SFF Drive Bay Cage:
4.6" (11.74cm) Height x 5.74" (14.57cm) Width x 4.79" (12.15cm) Length

4 LFF Drive Bay Cage:
4.6" (11.72cm) Height x 5.74" (14.57cm) Width x 6.90" (17.54cm) Length

Embedded Management

HPE Integrated Lights-Out (HPE iLO)   Monitor your servers for ongoing management, service alerting, reporting and remote management with HPE iLO. Not available on ML10 Gen9. 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**.	
RESTful API	RESTful API for iLO 4 is Redfish 1.0 conformance for simplified server management such as configuration and maintenance tasks based on modern industry standards. Learn more at **http://www.hpe.com/info/restfulapi**.	
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**.	
Embedded Remote Support	The Hewlett Packard Enterprise embedded remote support, when used with Insight Online direct connect or HPE Insight Remote Support, allows HPE ProLiant servers to transmit hardware events directly to Hewlett Packard Enterprise or a Hewlett Packard Enterprise Authorized Partner for automated phone home support. Learn more at **http://www.hpe.com/info/insightonline/explore**.	

Server utilities	**Smart Update**	Optimize firmware and driver updates with Smart Update solutions including Smart Update Manager (SUM) and Service Pack for ProLiant (SPP) and smart components. Learn more at **http://www.hpe.com/servers/smartupdatemanager**.
	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**.
	Scripting Tool Kit and Windows PowerShell	Provision 1 to many servers using your own scripts to discover and deploy them with Scripting Tool Kit (STK) for Windows and Linux or Scripting Tools for Windows PowerShell. Learn more at **http://www.hpe.com/servers/proliant/stk** or**http://www.hpe.com/servers /powershell**.
	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**.
	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**.
	HPE Insight Online	HPE Insight Online, available at no additional cost as part of your Hewlett Packard Enterprise warranty, Care Pack or contractual support agreement with Hewlett Packard Enterprise, is a personalized dashboard for simplified tracking of IT operations and support information from anywhere, anytime. Learn more at **http://www.hpe.com/info/insightonline/explore**.

Security	Power-on password
	Setup password

Standard Features

Power switch security
Administrator's password
TPM 1.2
TPM 2.0
UEFI

Warranty	This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of HPE 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 Care Pack 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. Additional information regarding worldwide limited warranty and technical support is available at: **http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html**.

Optional Features

Embedded Management	**iLO Essentials**	HPE iLO Essentials is the preferred license for small and medium business that offers full remote server management capabilities for small and medium business via the Integrated Remote Console (IRC), virtual media, and e-mail based alerts. Learn more about HPE iLO Essentials at **http://www.hpe.com/servers/iLO/essentials**.
	iLO Scale-Out	HPE iLO Scale-Out is the preferred license built for web hosting, cloud service providers, and high performance computing data centers, managing massive scale out environments for the DL 100 and 10 series servers, not available for ML servers. This license offers sophisticated scripting tools that provides remote access through Text Console via SSH, Dynamic power capping, Email-based Alerting and proactive notifications. For more information, visit **http://www.hpe.com/servers/iLO/scale-out**.
	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**.

Server Management	**HPE Insight Control**	HPE Insight Control, lets you deploy, migrate, monitor, remote control, and optimize your IT infrastructure through a single, simple management console. For more information, see **http://www.hpe.com/info/insightcontrol**.

HPC Interconnects   **NOTE:** High Performance Computing (HPC) interconnect technologies are available for this server under the HPE Cluster Platform product portfolio. These high-speed interconnects are fully supported by Hewlett Packard Enterprise when they are part of these configure to order clusters. Solutions can be defined with a lot of flexibility with the help of configuration tools. Please visit the following URL to configure HPEC Clusters with InfiniBand Interconnects: **http://www.hp.com/techservers/clusters/ucp/index.html**.

Storage Software   Whether you need to solve a specific data protection, archiving, or storage command and control challenge, or deliver on strategic consolidation, compliance, or continuity initiatives, look no further than Hewlett Packard Enterprise storage software. Our storage software helps you reduce costs, simplify storage infrastructure, protect vital assets and respond faster to business opportunities.
Storage software that gets the job done:

- **Data Protection and Recovery Software**
  Whether you're a large enterprise or a smaller business, Hewlett Packard Enterprise data protection and recovery software will cost-effectively protect you against disaster and ensure business continuity.
- **Data Archive and Migration Software**
  Hewlett Packard Enterprise storage software enables you to comply with data retention and retrieval requirements, improve application performance, and reduce costs by efficiently migrating infrequently accessed or less valuable data to lower cost storage.
- **Storage Resource Management Software (SRM)**
  Hewlett Packard Enterprise storage resource management software reduces operational costs and provides the command and control foundation you need to efficiently manage and visualize your physical and virtual environments.

Optional Features

- **Data Replication Software**
  Hewlett Packard Enterprise offers array-based and host-based replication software for use in disaster recovery, testing, application development and reporting.
- **Storage Device Management Software**
  Maximize your investment in Hewlett Packard Enterprise storage and networking with software that enables hardware-specific configuration, performance tuning and connectivity management.
- **HPE StoreVirtual VSA**
  With HPE StoreVirtual VSA you can use the power of virtualization to create a virtual array within your host server. Manage it as a single pool of shared storage capacity, and scale it to match your evolving needs. HPE ProLiant Gen9 servers include a 3-year limited license for HPE StoreVirtual VSA software with 1TB of capacity at no extra cost. Simply select to install HPE StoreVirtual VSA software during server setup within Intelligent Provisioning. More information, instructional videos, and free console management software are available at **http://www.hp.com/go/vsa1TB**.

  NOTE: For more information about Storage Software including QuickSpecs, please see: **http://www.hp.com/go/storage/software**.

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. **https://h22174.www2.hp.com/SimplifiedConfig/Index**.

Service and Support

HPE Support Services

HPE Technology Services delivers confidence, reduces risk and helps customers realize agility and stability. Connect to Hewlett Packard Enterprise to help prevent problems and solve issues faster. HPE Support Services enable you to choose the right service level, length of coverage and response time as you purchase your new server, giving you full entitlement to the support for need for your IT and business.

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. By connecting, you will receive 24x7monitoring, pre-failure alerts, automatic call logging, and automatic parts dispatch. HPE Proactive Care Service and HPE Datacenter Care Service customers will also benefit from proactive activities to help prevent issues and increase optimization. All of these benefits are already available to you with your server storage and networking products, securely connected to Hewlett Packard Enterprise support.

1- IDC   2 – HP CSC reports 2014 - 2015

Recommended Support

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 Hewlett Packard Enterprise, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice. This service combines three years proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem. This service also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat, VMWare, Microsoft, etc.) running on your HPE servers.

Parts and Materials

Hewlett Packard Enterprise will provide Hewlett Packard Enterprise-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 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 to malfunction.

Related Services

HPE Server Hardware Installation

Provides for the basic hardware installation of Hewlett Packard Enterprise branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner.

https://www.hpe.com/h20195/V2/GetPDF.aspx/5981-9356EN.pdf

Service and Support

HPE Installation and Startup Service
Provides for the installation and startup of Hewlett Packard Enterprise technology including BladeSystems, C-Class enclosure, HPE ProLiant c-Class and Integrity server blades, storage blades, SAN switch blades, HPE Virtual Connect modules (Ethernet and Fibre Channel), Ethernet network interconnects, and InfiniBand, as well as the installation of one supported operating system type (Windows® or Linux).

HPE Technology Services Support Credits
Offer 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**

HPE Support Center

The HPE Support Center is a personalized online support portal with access to information, tools and experts to support Hewlett Packard Enterprise business products. Submit support cases online, chat with Hewlett Packard Enterprise experts, access support resources or collaborate with peers.

Learn more **http://www.hpe.com/support/hpesc**

The Hewlett Packard Enterprise 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 Hewlett Packard Enterprise warranty, HPE Support Service or Hewlett Packard Enterprise contractual support agreement.

*HPE Support Center Mobile App is subject to local availability.

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

Pre-configured Models

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

2. Not all models are available in all regions. Check with your local country Hewlett Packard Enterprise offices for availability.

	Base Models	**Performance Models**
[SKU Number]	824379-xx1	830893-xx1
Model Name	HPE ProLiant ML30 Gen9 E3-1220v5 1P 4GB-U B140i 4LFF SATA 350W PS Base Server	HPE ProLiant ML30 Gen9 E3-1240v5 1P 8GB-U B140i 4LFF SATA 460W RPS Perf Server
Processor	Intel® Xeon® E3-1220v5	Intel® Xeon® E3-1240v5
Number of Processors	One	
Memory	4GB (1x4GB UDIMMs, 2133 MHz)	8GB (1x8GB UDIMMs, 2133 MHz)
Network Controller	Broadcom 5720 Dual-port 1GbE	
Storage Controller	HPE Dynamic Smart Array B140i	
Hard Drive	None ship standard; includes 2 LFF hard drive blanks	
Internal Storage	4 LFF HDD Bays (Hot Plug)	
Optical Drive Bay	1; (Optional: DVD-ROM, DVD-RW)	
Optical Drive	None	
PCI-Express Slots	4 PCIe 3.0 slots	
Power Supply	(1) 350W ATX Power Supply	(1) 460W Redundant Power Supply
Fans	1 non hot plug, non-redundant	
Management	iLO Management (standard), Intelligent Provisioning (standard), iLO Essentials (optional), iLO Scale-out (optional only for DL), iLO Advanced (optional)	
Form Factor	Tower (4U)	
Warranty	Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response.	
	NOTE: APJ Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.	

Country Code Key

xx1 = B21	Worldwide
xx1 = 001	US
xx1 = 421	EU
xx1 = 031	UK
xx1 = 371	AP
xx1 = 291	Japan
xx1 = AA1	PRC

NOTE: Not all models are available in all regions. Check with your local country Hewlett Packard Enterprise offices for availability.

Configuration Information - Factory Integrated Models

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)

[Chassis]	HPE ProLiant ML30 Gen9 Non-hot Plug 4LFF Configure-to-order Server	HPE ProLiant ML30 Gen9 Hot Plug 4LFF Configure-to-order Server	HPE ProLiant ML30 Gen9 Hot Plug 8SFF Configure-to-order Server
SKU Number	823401-B21	823402-B21	823403-B21
Processor	1	1	1
DIMM Slots	4 DIMM slots for UDIMM DDR4 Memory		
Storage Controller	HPE Dynamic Smart Array B140i		
PCIe	4 PCIe 3.0 slots		
Drive Cage	4LFF Non Hot Plug	4LFF Hot Plug	8SFF Hot Plug
Network Controller	Broadcom 5720 Dual-port 1GbE		
Fans	1 non hot plug, non-redundant		
Management	iLO Management (standard), Intelligent Provisioning (standard)		
USB	4 front, 4 rear, 2 internal		

Step 2: Choose Required Options (only one of the following from each list unless otherwise noted)

HPE Processors

Select one processor from Core Options-Processor section below

- Select one xxxxxx-L21.
- Only one processor supported.
- DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

For the Intel® C236 Chipset E3-1200 Series, the letter preceding the model number indicates the Product Line (E3, E5, E7); 1200x v#, 1 is the number of CPU, 2 is socket type/segment designation, 00 = Processor SKU, x = L for low power SKUs and v# (not yet designated) is the version number.

HPE Memory

Select one or more types of memory from Core Options-Memory section below,

- HPE memory from previous generation servers is not qualified or warranted with this HPE ProLiant Server.
- HPE Standard Memory (UDIMM) is required to realize the memory performance improvements and enhanced functionality listed in this document for this HPE ProLiant Server.
- With one processor installed, four DIMMs slots are available.
- For more information on ProLiant Energy Efficient Features, see: **http://www.hp.com/go/proliant-energy-efficient**.

Configuration Information - Factory Integrated Models

- Depending on the memory configuration and processor model, the memory speed would run at 2133MHz. Please see Memory Population Table or the Online Memory Configuration Tool at: **http://www.hpe.com/go/ddr4config**.

HPE Power Supplies   Select one or more power supplies from Core Options-Power Supplies section below:

- Prior to selecting a power supply option, it is highly recommended that you review your server configuration in the HPE Power Advisor tool to determine the right size power supply for your server configuration. The HPE Power Advisor is located at: **http://www.hpe.com/go/hpepoweradvisor**.
- Mixing of power supplies in the same server is not supported. All power supplies must be of the same input voltage, output rating, and efficiency rating. If non-matching power supplies are installed, you may receive an error message and/or experience operational issues with your server.

Step 3: Choose Additional Factory Integratable Options

HPE Networking   Select a standup NIC adapter from Core Options-Networking section below,

- Please see the QuickSpecs for Technical Specifications and additional information: **http://www.hpe.com/go/ProLiantNICs**.
- These options are upgradeable and can be changed from the original configuration after the server is shipped.
- For 10Gb adapters, a minimum of two Gigabytes (2 GB) of server memory is required per each adapter.

HPE Drives   Select one or more drives from Core Options-HPE Drives section below:

- The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.
- Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.
- The HPE ProLiant Gen9 Smart Storage solutions are equipped with re-designed Small Form Factor (SFF 2.5 in) and Large Form Factor (LFF 3.5 in) hot plug carriers for HPE Qualified Hard Drives and Solid State Drives. These new carriers provide status and activity indicators as well as caution indicators for "Do Not Remove."

HPE Graphics Options   Select one or more graphics adapter from Additional Options section below.

- 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/go/hpepoweradvisor**.

- This section may contain FIO options, please see HPE Computation & Graphics Accelerators section below.

HPE Unique Options   Select one or more Unique options from Core Options section below.

- This section may contain FIO options, please see the Unique options section below.

Configuration Information - Factory Integrated Models

- FIO indicates that this option is only available as a factory installable option.

HPE Cooling Options   Select one or more Fan Kits from Core Options section below.

- This section may contain FIO options, please see HPE Cooling Options section below.
- FIO indicates that this option is only available as a factory installable option.

HPE Storage Controllers   Select one or more Storage options from Additional Options section below.

- The embedded B140i controller will operate in UEFI only mode. For legacy support an additional controller will be needed, and for CTO orders please also select the Legacy mode settings part, 758959-B22.
- This section may contain FIO options, please see HPE Storage Controllers section below.
- FIO indicates that this option is only available as a factory installable option.

Core Options

HPE Unique Options	HPE ML30 Gen9 Slim Optical Disk Drive Enablement Kit	820288-B21
	HPE ML30 Gen9 Front PCI Redundant Fan Kit	820290-B21
	NOTE: Required for any PCI-E card.	
	HPE ML30 Gen9 350W E-star 2.0 Power Supply Kit	822384-B21
	HPE ML30 Gen9 4U Redundant Power Supply Enablement Kit	822607-B21
	HPE ML30 Gen9 4 Large Form Factor Hot Plug Hard Drive Cage Kit	822608-B21
	NOTE: The LFF Kit is a backplane kit designed for going from NHP LFF to hot-plug LFF.	
	HPE ML30 Gen9 8 Small Form Factor Hot Plug Hard Drive Cage Kit	822756-B21
	NOTE: The SFF Kit is the cage plus backplane and designed to convert from any LFF configuration to SFF.	
	HP Tower to Rack Conversion Tray Universal Kit	417705-B21
	NOTE: Require HPE ML30 Gen9 Front PCI Fan Kit (820290-B21).	
	NOTE: ML30 Gen9 is not designed for a data center rack application environment, the Tower to Rack setting can be located in the office environment up to 35C ambient.	
	HPE ML30 Gen9 Tape Drive Cable Kit	851615-B21
	NOTE: Max=2 1pc required per LTO int tape drive or per RDX USB int disk backup sys if selected together with 350W ES1.0 or ES2.0 power supply. 1pc required when 2pcs of Optical Drives were selected together with 350W ES1.0 or ES2.0 power supply. This cable is not required when only 1pc of Optical drive is selected.	

HPE Processors	**E3-1200v5 series Processors**	
	HPE ML30 Gen9 Intel® Xeon® E3-1220v5 (3.0GHz/4-core/8MB/80W) FIO Processor Kit	820293-L21
	HPE ML30 Gen9 Intel® Xeon® E3-1230v5 (3.4GHz/4-core/8MB/80W) FIO Processor Kit	823371-L21
	HPE ML30 Gen9 Intel® Xeon® E3-1240Lv5 (2.1GHz/4-core/8MB/25W) FIO Processor Kit	820299-L21
	HPE ML30 Gen9 Intel® Xeon® E3-1240v5 (3.5GHz/4-core/8MB/80W) FIO Processor Kit	823373-L21
	HPE ML30 Gen9 Intel® Xeon® E3-1270v5 (3.6GHz/4-core/8MB/80W) FIO Processor Kit	823375-L21
	Intel® Core i3-6000 series Processors	
	HPE ML30 Gen9 Intel® Core™ i3-6300 (3.8GHz/2-core/4MB/51W) FIO Processor Kit	823379-L21
	HPE ML30 Gen9 Intel® Core™ i3-6100 (3.7GHz/2-core/3MB/51W) FIO Processor Kit	837095-L21
	Intel® Pentium® G4000 series Processors	
	HPE ML30 Gen9 Intel® Pentium® G4400 (3.3GHz/2-core/3MB/54W) FIO Processor Kit	820295-L21
	HPE ML30 Gen9 Intel® Pentium® G4500 (3.5GHz/2-core/3MB/51W) FIO Processor Kit	823389-L21

Core Options

HPE Memory	**Unbuffered DIMMs (UDIMMs)**	
	HPE 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Unbuffered Standard Memory Kit	805667-B21
	HPE 8GB (1x8GB) Dual Rank x8 DDR4-2133 CAS-15-15-15 Unbuffered Standard Memory Kit	805669-B21
	HPE 16GB (1x16GB) Dual Rank x8 DDR4-2133 CAS-15-15-15 Unbuffered Standard Memory Kit	805671-B21
	HPE 8GB (1x8GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Unbuffered Standard Memory Kit	819880-B21

HPE Optical Drives	HP 9.5mm SATA DVD-ROM JackBlack Gen9 Optical Drive	726536-B21
	HP 9.5mm SATA DVD-RW JackBlack G9 Optical Drive	726537-B21
	HPE ML30 Gen9 Slim Optical Disk Drive Enablement Kit	820288-B21
	NOTE: Max=1 if selected together with 460W Hot Plug Power Supply.	

HPE Drives	**NOTE:** The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.	
	NOTE: Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.	
	SAS Hot Plug SFF (2.5-inch) Enterprise (ENT) Drives	
	HP 1.2TB 6G SAS 10K rpm SFF (2.5-inch) SC Dual Port Enterprise 3yr Warranty Hard Drive	718162-B21
	HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652589-B21
	HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759212-B21
	HP 600GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652583-B21
	HP 450GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759210-B21
	HP 450GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652572-B21
	HP 300GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759208-B21
	HP 300GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652564-B21
	HP 146GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652605-B21
	HP 600GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	781516-B21
	HP 1.2TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	781518-B21
	HP 1.8TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 512e 3yr Warranty Hard Drive	791034-B21
	HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive	628065-B21
	HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive	659339-B21
	NOTE: User may select any combination of SAS or SATA Hard Drives.	

Core Options

SAS drives require the selection of a SAS controller. See card lists in Controllers section.
If B140i is the primary controller, user can only select SATA drives.

HP 300GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	785067-B21
HP 900GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	785069-B21
HP 1TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Standard 1yr Warranty Hard Drive	801882-B21
HP 2TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Standard 1yr Warranty Hard Drive	801884-B21
HP 3TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Standard 1yr Warranty Hard Drive	801886-B21
HP 4TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Standard 1yr Warranty Hard Drive	801888-B21
HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive	659337-B21
HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive	659341-B21

SAS Hot Plug SFF (2.5-inch) Midline (MDL) Drives

HP 1TB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	652749-B21
HP 500GB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	652745-B21
HPE 1TB 12G SAS 7.2K rpm SFF (2.5in) SC Midline 1yr Warranty Hard Drive	832514-B21
HP 1TB 12G SAS 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765464-B21
HP 2TB 12G SAS 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765466-B21

NOTE: User may select any combination of SAS or SATA Hard Drives.
SAS drives require the selection of a SAS controller. See card lists in Controllers section.
If B140i is the primary controller, user can only select SATA drives.

SAS Hot Plug LFF (3.5-inch) Enterprise (ENT) Drives

HP 450GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive	737394-B21
HP 300GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive	737261-B21
HP 600GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive	765424-B21
HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793699-B21
HP 8TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793703-B21

NOTE: User may select any combination of SAS or SATA Hard Drives.
SAS drives require the selection of a SAS controller. See card lists in Controllers section.
If B140i is the primary controller, user can only select SATA drives.

SAS Hot Plug LFF (3.5-inch) Midline (MDL) Drives

HP 6TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	761477-B21
HP 4TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	695510-B21
HP 3TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652766-B21
HP 2TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652757-B21

Core Options

HP 1TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652753-B21
HPE 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	818367-B21
HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765257-B21
HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765259-B21
HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive	793671-B21
HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive	793669-B21
HPE 2TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	818365-B21

NOTE: User may select any combination of SAS or SATA Hard Drives.
SAS drives require the selection of a SAS controller. See card lists in Controllers section.
If B140i is the primary controller, user can only select SATA drives.

SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives

HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	655710-B21
HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	655708-B21
HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765453-B21
HP 2TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765455-B21

NOTE: User may select any combination of SAS or SATA Hard Drives.
SAS drives require the selection of a SAS controller. See card lists in Controllers section.
If B140i is the primary controller, user can only select SATA drives.

SATA Hot Plug LFF (3.5-inch) Midline (MDL) Drives

HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	753874-B21
HP 4TB 6G SATA 7.2k rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	693687-B21
HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	628061-B21
HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	658079-B21
HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	657750-B21
HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	658071-B21
HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765253-B21
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765255-B21
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive	793667-B21
HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drives	793665-B21
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793683-B21
HP 8TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793695-B21

NOTE: User may select any combination of SAS or SATA Hard Drives.
If B140i is the primary controller, user can only select SATA drives. SAS drives require the selection of a SAS controller. See card lists in Controllers section.

6G SATA SC Hot Plug LFF 7.2K (3.5-inch) Standard Drives

HPE 1TB 6G SATA 7.2K rpm LFF (3.5in) SC Standard 1yr Warranty Hard Drive	858594-B21
HPE 2TB 6G SATA 7.2K rpm LFF (3.5in) SC Standard 1yr Warranty Hard Drive	858596-B21

Core Options

6G SATA Hot Plug SFF Value Endurance (2.5-inch) Enterprise Value M1 Solid State Drives

HP 120GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive	764923-B21

6G SATA Hot Plug SFF (2.5-inch) Enterprise Mainstream Solid State Drives

HP 100GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691862-B21

6G SATA Hot Plug RI-3 SFF (2.5-inch) SC Solid State Drives

HP 480GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816899-B21

6G SATA Hot Plug LFF (3.5-inch) MU-3 SCC SSD

HP 960GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816995-B21
HP 480GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816985-B21

Hard Drive Kits

HPE ML30 Gen9 8 Small Form Factor Hot Plug Hard Drive Cage Kit	822756-B21
HPE ML30 Gen9 4 Large Form Factor Hot Plug Hard Drive Cage Kit	822608-B21
HP Large Form Factor Hard Drive Blank Kit	666986-B21
HP Small Form Factor Hard Drive Blank Kit	666987-B21
HP ML10v2 Drive Enablement Kit	812248-B21

NOTE: Compatible with all chassis and supports NHP LFF Hard Disk. If ATX PSU is installed, system support up to 2x. If RPS is installed, system support up to 1x.

M.2 SSD

HP Dual 120GB Value Endurance Solid State M.2 Enablement Kit for ProLiant ML/DL Servers	777894-B21
HP 120GB Value Endurance Solid State M.2 Enablement Kit for ProLiant ML/DL Servers	788028-B21

HPE Networking

1 Gigabit Ethernet adapters

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

10 Gigabit Ethernet adapters

HP Ethernet 10Gb 2-port 560SFP+ Adapter	665249-B21
HP Ethernet 10Gb 2-port 557SFP+ Adapter	788995-B21
HP Ethernet 10Gb 2-port 530T Adapter	656596-B21
HP Ethernet 10Gb 2-port 530SFP Adapter	652503-B21
HP Ethernet 10Gb 2-port 561T Adapter	716591-B21

NOTE: Max=1 if selected with another x8 device.

HPE Power Supplies

HPE Entry-Level Power Supplies

HPE ML30 Gen9 350W E-star 1.0 FIO Power Supply Kit	820303-B21

NOTE: Max=1
NOTE: The HPE ML30 Gen9 350W E-star 1.0 FIO Power Supply Kit supports Bronze-level efficiency (no less than 82%) at all load

HPE ML30 Gen9 350W E-star 2.0 Power Supply Kit	822384-B21

NOTE: Max=1
NOTE: The HPE ML30 Gen9 350W E-star 2.0 Power Supply Kit supports Silver-level efficiency (no less than 85%) at all load

HPE 460W Common Slot Gold Hot Plug Power Supply Kit	503296-B21

Core Options

NOTE: Must select 4U RPS Enablement Kit.
Max=2
Customer can select:
460W Hot Plug Power Supply x1 + 4U RPS Enablement Kit x1
460W Hot Plug Power Supply x2 + 4U RPS Enablement Kit x1

	HPE ML30 Gen9 4U Redundant Power Supply Enablement Kit	822607-B21

NOTE: Required for 460W Hot Plug Power Supply.
Max=1

HPE Computation and Graphics Accelerators	HP NVIDIA Quadro K2200 Graphics Accelerator	J0G89A

NOTE: An x16 device cannot be selected together with GPU.

HPE Cooling Options	HPE ML30 Gen9 Front PCI Redundant Fan Kit	820290-B21

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.

HPE Insight Software	**HPE Insight Control**	
	HPE Insight Control including 1yr 24x7 TSU E-LTU	C6N28ABE
	HPE Insight Control including 1yr 24x7 Technical Support and Updates 1-server LTU	C6N27A
	HPE Insight Management Media Kit	C6N31A
	HPE Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO LTU	C6N36A
	HPE Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle FIO E-LTU	C6N36ABE

NOTE: Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key.

NOTE: Customer will receive a license entitlement certificate. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HPE Software Technical Support and Update Service.

NOTE: Licenses ship without media. The HPE Insight Control Media Kit can be ordered separately, or can be downloaded at: **http://www.hp.com/go/insightupdates**.

NOTE: For additional license options please see the **HPE Insight Control QuickSpecs**.

Embedded Management	**HPE iLO Advanced**	
	HPE iLO Advanced including 3yr 24x7 Technical Support and Updates E-LTU	E6U64ABE
	HPE iLO Advanced including 1yr 24x7 Technical Support and Updates 1-server LTU	512485-B21
	HPE iLO Advanced including 3yr 24x7 Tech Support and Updates 1-server LTU	BD505A
	HPE iLO Advanced including 3yr 24x7 Tech Support and Updates Flexible Quantity LTU	BD506A
	HPE iLO Advanced including 3yr 24x7 Tech Support and Updates Tracking LTU	BD507A
	HPE iLO Advanced including 1yr 24x7 Technical Support and Updates E-LTU	E6U59ABE
	HPE iLO Essentials	
	HPE iLO Essentials including 3yr 24x7 Tech Support and Updates 1-server LTU	BD774A
	HPE iLO Essentials including 1yr 24x7 Tech Support and Updates 1-server LTU	BD775A
	HPE iLO Essentials including 3yr 24x7 Technical Support and Updates E-LTU	E6U61ABE
	HPE iLO Essentials including 1yr 24x7 Technical Support and Updates E-LTU	E6U62ABE

NOTE: For additional license kits, including electronic delivery options, please see the **HPE Integrated Lights-Out (iLO) QuickSpecs**.

NOTE: For more information, visit: **http://www.hp.com/go/ilo**.

HPE Security	HP Trusted Platform Module 2.0 Kit	745823-B21

NOTE: HPE Trusted Platform Module 2.0 Option works with Gen9 servers with UEFI Mode not Legacy Mode. It is not compatible with HPE ProLiant Gen8 servers or earlier generation variants.

NOTE: HPE Gen9 servers purchased earlier may need the latest firmware update to be compatible with the TPM 2.0 Option.

NOTE: HPE server systems can have a TPM module (of any type) installed only once. It cannot be replaced with any other TPM module.

HPE Storage Controllers	**SAS Controllers**
	SAS Controller

Additional Options

HP Smart Array P440/2GB FBWC 12Gb 1-port Int SAS Controller	820834-B21
NOTE: Device Count - This controller can support up to 8 internal SAS/SATA devices	
Must select P440/P840 Cable Kit x1	
Max=1	
Must select Megacell battery x1 + battery holder kit x1 if no other P-series controllers are selected.	
HP Smart Array P440/4GB FBWC 12Gb 1-port Int SAS Controller	726821-B21
NOTE: Device Count - This controller can support up to 8 internal SAS/SATA devices	
Must select P440/P840 Cable Kit x1	
Must select Megacell battery x1 + battery holder kit x1 if no other P-series controllers are selected.	
Max=1	
HP Smart Array P441/4GB FBWC 12Gb 2-ports Ext SAS Controller	726825-B21
NOTE: Must select Megacell battery x1 + battery holder kit x1 if no other P-series controllers are selected.	
Max=1	
HP ML110 Gen9 Mini SAS P440/P840 Cable Kit	789651-B21
NOTE: 1pcs required per P440/4G or P440/2G controller.	

SAS Controller Options

HP 96W Smart Storage Battery with 145mm Cable for DL/ML/SL Servers	727258-B21
NOTE: Max=1.	

Battery Holder

HP ML150 Gen9 Smart Storage Battery Holder Kit	786710-B21
NOTE: Max=1.	

HPE Smart Host Bus Adapters

HP H240 12Gb 2-ports Int Smart Host Bus Adapter	726907-B21
NOTE: Device Count - This controller can support up to 8 internal SAS/SATA devices	
1pc required per H240 controller for HPE 4LFF Mod-X	
2pcs required per H240 controller for 8SFF Mod-X	
Max=1	
HP H241 12Gb 2-ports Ext Smart Host Bus Adapter	726911-B21
NOTE: Max=1	
HP ML110 Gen9 Mini SAS H240 Cable Kit	789648-B21
NOTE: 1pc required per H240 controller for HPE 4LFF Mod-X.	
NOTE: 2pcs required per H240 controller for 8SFF Mod-X.	

HPE Tape Backup	**NOTE:** For the complete range of tape drives, autoloaders, libraries and media see: **http://www.hp.com/go/tape**. For hardware and software compatibility of HPE tape backup products see: **http://www.hp.com/storage/SPOCK** and **http://www.hp.com/go/ebs**.	
	NOTE: Must select SAS controller to support internal SAS tape drives.	
	NOTE: Tape drive and HDD total amount can't exceed SAS controller support qty.	
	NOTE: Limited to H240 when select Tape Drive.	
	Tape Drives	
	HPE StoreEver LTO-7 Ultrium 15000 External Tape Drive	BB874A
	HPE StoreEver LTO-6 Ultrium 6650 SAS External Tape Drive	EH964A
	HPE StoreEver LTO-6 Ultrium 6650 SAS Internal Tape Drive	EH963A
	HPE StoreEver LTO-6 Ultrium 6250 External Tape Drive	EH970A

Additional Options

HPE StoreEver LTO-6 Ultrium 6250 Internal Tape Drive	EH969A
HPE StoreEver LTO-5 Ultrium 3280 SAS External Tape Drive	EH900B
HPE StoreEver LTO-5 Ultrium 3000 SAS External Tape Drive	EH958B
HPE StoreEver LTO-4 Ultrium 1760 SAS External Tape Drive	EH920B
HPE StoreEver LTO-3 Ultrium 920 SAS External Tape Drive	EH848B
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 ML30 Gen9 Tape Drive Cable Kit	851615-B21

NOTE: Required per RDX/LTO internal disk backup system if selected together with 350W ES1.0 or ES2.0 power supply.

NOTE: HPE ML30 Gen9 server requires HPE ML30 Gen9 Tape Drive Cable Kit (851615-B21) for internal tape drive support.

SAS Rack-Mount Tape Solutions

HPE StoreEver 1U SAS Rack Mount Kit	AE459B
HPE StoreEver LTO-6 Ultrium 6250 Tape Drive in a 1U Rack Mount Kit	C0L99A
HPE StoreEver LTO-4 Ultrium 1760 SAS (1) in a 1U Rack Mount Kit	EH946C
HPE StoreEver LTO-5 Ultrium 3000 SAS Tape Drive in a 1U Rack Mount Kit	EJ014B

HPE MSL2024 Tape Library

HPE StoreEver MSL2024 0-drive Tape Library	AK379A

HPE MSL4048 Tape Library

HPE StoreEver MSL4048 0-drive Tape Library	AK381A

HPE 1/8 G2 Tape Autoloader

HPE StoreEver 1/8 G2 LTO-6 Ultrium 6250 Fibre Channel Tape Autoloader	C0H19A

HPE StoreEver MSL6480

HPE StoreEver MSL6480 Scalable Base Module	QU625A
HPE StoreEver MSL6480 Scaleable Expansion Module	QU626A

HPE Disk Backup	**HPE RDX Removable Disk Backup System**	
	HPE RDX1000 USB3.0 Internal Disk Backup System	B7B67A
	HPE RDX500 USB3.0 Internal Disk Backup System	B7B64A
	HPE RDX USB 3.0 Internal Docking Station	C8S06A
	HPE D3700 Enclosure	QW967A
	HPE D3600 Enclosure	QW968A
	HPE RDX 2TB USB3.0 Internal Disk Backup System	E7X52A

NOTE: HPE ML30 Gen9 server requires HPE ML30 Gen9 Tape Drive Cable Kit (851615-B21) for internal tape drive support.

HPE StoreOnce Backup systems

HPE StoreOnce 5100 48TB System	BB915A
HP StoreOnce 4700 24TB Backup	BB879A
HP StoreOnce 4500 24TB Backup	BB878A
HPE StoreOnce 3540 24TB System	BB914A
HPE StoreOnce 3520 12TB System	BB922A
HPE StoreOnce 3100 8TB System	BB913A

HPE Disk Storage Systems	**Disk Enclosures**	
	HP D6000 Dual I/O Module Disk Enclosure	QQ695A

Additional Options

NOTE: See the **HPE D6000 Disk Enclosure QuickSpecs** for additional information including configuration steps and additional options needed for a complete solution.

HP D6000 w/35 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 140TB Bundle	E7W30A
HP D6000 w/70 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 280TB Bundle	E7W31A
HP D6000 w/35 2TB 6G SAS 7.2K LFF Dual port MDL HDD 70TB Bundle	QQ697A
HP D6000 w/70 2TB 6G SAS 7.2K LFF Dual port MDL HDD 140TB Bundle	QQ698A
HP D6000 w/35 3TB 6G SAS 7.2K LFF Dual port MDL HDD 105TB Bundle	QQ699A
HP D6000 w/70 3TB 6G SAS 7.2K LFF Dual port MDL HDD 210TB Bundle	QQ700A
HPE D6000 w/35 8TB 12G SAS 7.2K LFF (3.5in) Dual Port MDL HDD 280TB Bundle	M0T58A
HPE D6000 w/70 8TB 12G SAS 7.2K LFF (3.5in) Dual Port MDL HDD 560TB Bundle	M0T59A

HPE Uninterruptible Power Systems (UPS)

HPE Tower UPS

HPE T750 G4 UPS Models

HP T750 G4 NA/JP Uninterruptible Power System	J2P85A

HPE T1000 G4 UPS Models

HP T1000 G4 NA/JP Uninterruptible Power System	J2P86A

HPE T1500 G4 UPS Models

HP T1500 G4 NA/JP Uninterruptible Power System	J2P87A

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

HPE USB and SD Options

HPE Enterprise Mainstream Flash Media Kits for Memory Cards

HP 8GB microSD Enterprise Mainstream Flash Media Kit	726116-B21
HP 32GB microSD Enterprise Mainstream Flash Media Kit	700139-B21
HP 8GB USB Enterprise Mainstream Flash Media Drive Key Kit	737953-B21
HP Dual 8GB microSD Enterprise Midline USB Kit	741279-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 3 year Foundation Care Next business day ML30 Gen9 Service	H1AS0E
HPE 3 year Foundation Care Next business day with DMR ML30 Gen9 Service	H1AS1E
HPE 3 year Foundation Care 24x7 ML30 Gen9 Service	H1AS6E
HPE 3 year Foundation Care 24x7 with DMR ML30 Gen9 Service	H1AS7E
HPE 3 year Foundation Care Next business day with CDMR ML30 Gen9 Service	H1AX4E
HPE 3 year Foundation Care 24x7 with CDMR ML30 Gen9 Service	H1AX7E

Proactive Care

HPE 3 year Proactive Care 24x7 ML30 Gen9 Service	H1AS8E
HPE 3 year Proactive Care 24x7 with DMR ML30 Gen9 Service	H1AS9E
HPE 3 year Proactive Care 24x7 with CDMR ML30 Gen9 Service	H1AX8E

Memory

NOTE: Memory configurations listed do not apply to "Factory Integrated Models".

HPE Standard Memory

HPE Standard Memory is unique technology which is designed to work on 10/100 series Rack and Tower server. In Gen9 Server HPE Standard Memory has passed HPE's rigorous qualification and test processes. HPE Standard Memory is a certified HPE options and will provide a platform to allow future memory-related support enhancements through HPE Active Health System, System Insight Management and Insight Control management software.

DDR4 memory population guidelines

For detailed memory configuration rules and guidelines, please use the Online DDR4 Memory Configuration Tool: **http://www.hp.com/go/ddr4memory-configurator**.

Memory Population guidelines

General Memory Population Rules and Guidelines:

. The HPE ProLiant ML30 Gen9 Server has four memory slots

. There are two channels per server with two DIMM slots per channel

. Memory channel 1 consists of the two (2) DIMMs that are closest to the processor

. Memory channel 2 consists of the two (2) DIMMs that are furthest from the processor

. Support for single/dual-rank 2133 MT/s ECC UDIMM (unbuffered DIMMS)

. The server supports up to 64 GB (4 x 16-GB) for Unbuffered DIMMs

. No support for LRDIMMs; RDIMMs; Non-ECC UDIMMs

. Do not install DIMMs if the processor is not installed

. Populate DIMMs from heaviest load (double-rank) to lightest load (single-rank)

. Non-ECC DIMMs are not supported

. Always use HPE qualified DIMMs

Intel Gen9 Supported Memory Bandwidth for HPE ProLiant Gen9 Intel® Xeon® E3-1200v5 Series Processor Family

Memory Bandwidth and Capacity				
[DIMM Type]	**Unbuffered with ECC DIMMs (UDIMMs)**			
HPE SKU P/N	805667-B21	819880-B21	805669-B21	805671-B21
DIMM Rank	Single Rank	Single Rank	Dual Rank	Dual Rank
DIMM Capacity	4GB	8GB	8GB	16GB

Memory

Voltage	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V
DIMM Native Speed (MT/s)	2133	2133	2133	2133
SLOTS THAT CAN BE POPULATED				
4 slot servers	4	4	4	4
MAXIMUM CAPACITY (GB)				
	16	32	32	64
POPULATED DIMM SPEED (MT/s)				
1 DIMM Per Channel	2133	2133	2133	2133
2 DIMM Per Channel	2133	2133	2133	2133
3 DIMM Per Channel				

DIMM slot and configuration diagram	**Standard memory replaced with optional memory (1 CPU model)**

- Population order; start with "A" first, "B" second, "C" third, etc.
- Population order; start with "A" first, "B" second, "C" third, etc.
- When two processors are installed, install DIMMs in sequential alphabetic order: CPU1-A, CPU2-A,CPU1-B,CPU2-B,CPU1-C, CP2-C

	CPU 1		**CPU 2**		
	Slot #	population order	Slot #	population order	
Chnl 1	1	C	1		
	2	A	2		

	CPU 1		**CPU 2**		
	Slot #	population order	Slot #	population order	
Chnl 2	3	D	3		
	4	B	4		

Memory Speed by Processor Model	**Processor Models**	**Supported Memory Speeds**
	E3-1220v5, E3-1230v5, E3-1240Lv5, E3-1240v5, E3-1270v5, i3-6300, i3-6100, G4400, G4500	2133MT/s

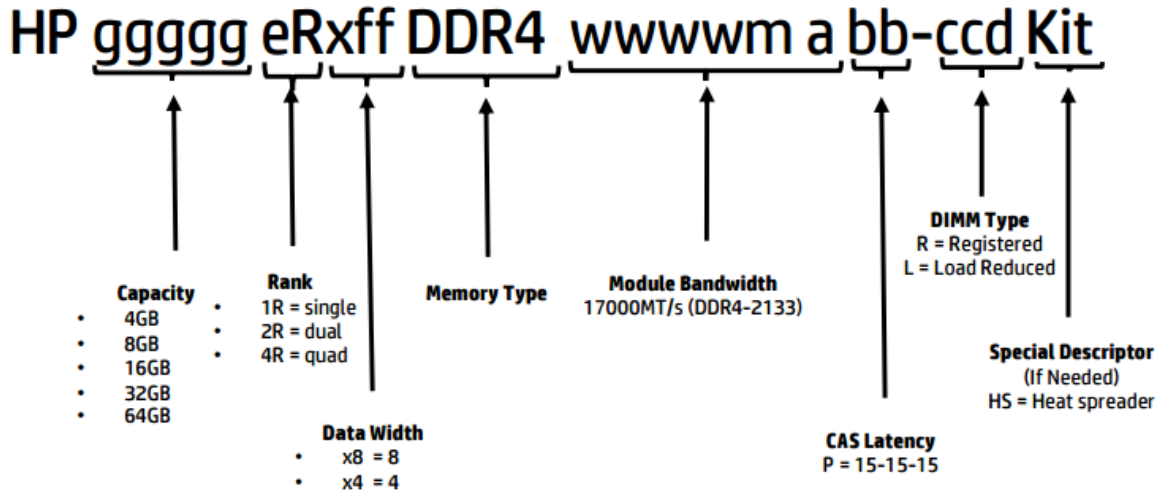| Standard and Maximum Memory Capacity (Pre-configured Models)	**Pre Configured Models**	**Standard Memory**	**Maximum Memory Plus Optional Memory**	**Standard Memory Replaced with Optional Memory**
	E3-1240v5	8GB (1x8GB)	56GB (3x16GB, 1x8GB)	64GB (4x16GB)
	E3-1220v5	4GB (1x4GB)	52GB (3x16GB, 1x4GB)	64GB (4x16GB)

DDR4 memory options part number decoder

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

Memory

- 2GB = 2,048MB
- 4GB = 4,096MB
- 8GB = 8,192MB
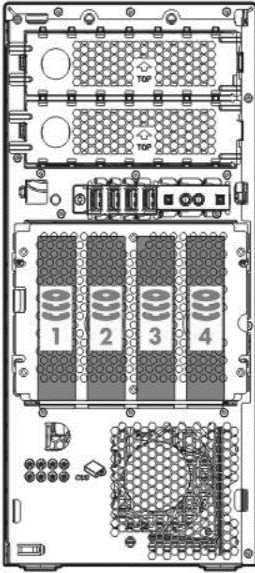- 16GB = 16,384MB
- 32GB = 32,768MB
- 64GB = 65,536MB

HP ggggg eRxff DDR4 wwwwm a bb-ccd Kit

Capacity
- 4GB
- 8GB
- 16GB
- 32GB
- 64GB

Rank
- 1R = single
- 2R = dual
- 4R = quad

Data Width
- x8 = 8
- x4 = 4

Memory Type

Module Bandwidth
17000MT/s (DDR4-2133)

CAS Latency
P = 15-15-15

DIMM Type
R = Registered
L = Load Reduced

Special Descriptor
(If Needed)
HS = Heat spreader

Storage

4-Bay LFF non-hot-plug drive model

1-4   4 x LFF SATA/SSD Non-hot-plug Hard Drive Bays

4-bay LFF hot-plug drive model

1-4   4 x LFF SAS/SSD Hot Pluggable Hard Drive Bays
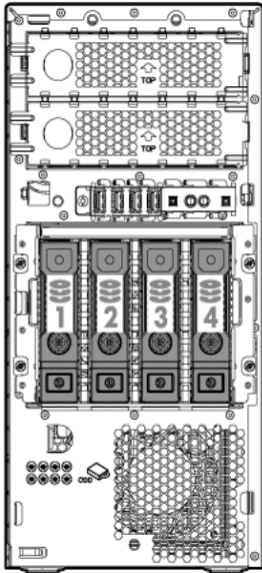
8-bay SFF hot-plug drive model

1 x 8   8 x SFF SATA/SSD Hot Pluggable Hard Drive
             Bays

Storage
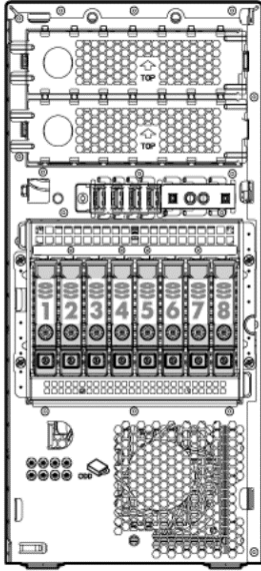
Maximum Storage Capacity

Total (4 LFF Drive)   32TB
Total (8 SFF Drive)   16TB

Technical Specifications

System Unit	Tower Dimensions	14.50(H) x 6.89(W) x 18.7(D) in (36.82 x 17.5 x 47.52 cm)	
	Tower Weight	Minimum:	27.1lb(13.56kg)
		Maximum:	30.8lb(15.4kg)
	Input Requirements	Range Line Voltage	100 to 120 VAC
		Rated Input Current	2.5 to 6 Amps
		Rated Input Frequency	47 to 63 Hz
		Rated Input Power	412W to 526W at 115 V AC input 412W to 523W at 230 V AC input
	BTU Rating	Maximum	460W - 1773 BTU / hr (at 120 VAC), 1715 (at 240 VAC)
	Power Supply Output	Rated Steady-State Power	350 W (at 115 VAC) 350 W (at 230 VAC)
		Maximum Peak Power	350 W (at 115 VAC) 350 W (at 230 VAC)
	System Inlet Temperature	Standard Operating Support	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).
		Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
	Relative Humidity	Operating	10 to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature.
		Non-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, noncondensing.
	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 (LWAd) 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).

Idle

L WAd	4.2 Bels (1P LFF Base)
	3.7 Bels (1P LFF Performance)
L pAm	27 dBA (1P LFF Base)
	23 dBA (1P LFF Performance)

Operating

L WAd	4.2 Bels (1P LFF Base)
	3.8 Bels (1P LFF Performance)
L pAm	27 dBA (1P LFF Base)
	23 dBA (1P LFF Performance)

Technical Specifications

NOTE: Configurations tested for 1P LFF Base models include one (1) 1TB LFF SATA Midline HDD and Windows 2012 Enterprise 64-bit.

NOTE: Configurations tested for 1P LFF Performance models include one (1) 1TB LFF SATA Midline HDD and Windows 2012 Enterprise 64-bit.

NOTE: The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.

NOTE: Levels presented do not account for non-Hewlett Packard Enterprise installed hardware.

Emissions Classification	FCC Rating	Class B
	Normative Standards	CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1

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 appropriate compliance logos and statements.

HPE Dynamic Smart Array B140i Controller	**Number of PCI links**	Four
	PCI link rate	4 Gb/s
	Storage protocol support	SATA
	SAS/SATA peak data transfer rate	6 Gb/s
	Number of SAS/SATA links	10 links
	SAS/SATA connectivity	2x4 connectors; 2x1 connectors
	Expander support	No
	Drives supported (max)	Up to 10 Internal Drives
	RAID support	0, 1, 10, 5 SATA
	Software management	HPE SSA, SMH, SIM
	Warranty	Server warranty
	HPE Secure Encryption license	Not Supported
	HPE SmartCache License	Not Supported
	HPE Smart Storage Administrator	Supported

HPE Ethernet 1Gb 2-port 332i Adapter	**Network Interface**	10Base-T/100Base-TX/1000Base-TX
	Compatibility	IEEE 802.3 10Base-T IEEE 802.3ab 1000Base-T IEEE 802.3u 100Base-TX

Technical Specifications

Data Transfer Method	PCI Express, two lanes (x2)	
Controller	BCM5720	
Network Transfer Rate	10Base-T (Half-Duplex)	10 Mb/s per port, 40 Mb/s combined
	10Base-T (Full-Duplex)	20 Mb/s per port, 80 Mb/s combined
	100Base-TX (Half-Duplex)	100 Mb/s per port, 400 Mb/s combined
	100Base-TX (Full-Duplex)	200 Mb/s per port, 800 Mb/s combined
	1000Base-TX (Half-Duplex)	1000Mb/s per port, 4000 Mb/s combined
	1000Base-TX (Full-Duplex)	2000Mb/s per port, 8000 Mb/s combined
Connector	RJ-45	
Cable Support	10 Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)
	10/100/1000 Base-TX	Category 5 or higher UTP; up to 328 ft (100 m)

Environment-friendly Products and Approach	**End-of-life Management and Recycling**	Hewlett-Packard offers end-of-life Hewlett Packard Enterprise product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: **http://www.hp.com/go/green**. To recycle your product, please go to: **http://www.hp.com/go/green** or contact your nearest Hewlett Packard Enterprise sales office. 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 at: **http://www.hp.com/go/green**. These instructions may be used by recyclers and other WEEE treatment facilities as well as HPE OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment. |

Summary of Changes

Date	Version History	Action	Description of Change
28-Oct-2016	From Version 8 to 9	Removed	Obsolete Hard Drives were removed from the QuickSpecs.
15-Aug-2016	From Version 7 to 8	Added	Added HPE ML30 Gen9 Tape Drive Cable Kit to the Unique Options section. Added T750, T1000, and T1500 G4 Tower UPS models.
		Changed	HPE Hard Drives section was revised.
8-Jul-2016	From Version 6 to 7	Changed	Smart Buy models section was revised for the NA version only.
6-Jun-2016	From Version 5 to 6	Added	Added new HDD offering to the HPE Drives section.
8-Apr-2016	From Version 4 to 5	Changed	HPE Processors section was revised.
31-Mar-2016	From Version 3 to 4	Added	Added new HPE TMP 2.0 module, and new RDX Disk Backup Systems.
		Changed	Embedded Management, Security, Service and Support, and Pre-configured Models sections were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
16-Feb-2016	From Version 2 to 3	Added	New HDD offering was added to HPE Drives.
		Changed	HPE Unique Options and HPE Tape Backup were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
17-Dec-2015	From Version 1 to 2	Added	Smart Buy models were added to the NA version.
		Changed	Chipset, Pre-Configure Models, HPE Drives, HPE Power Supplies, HPE Tape Backup, Maximum Storage Capacity, and Technical Specifications were revised.

hpe.com/qref/ml30gen9

Summary of Changes

Hewlett Packard Enterprise