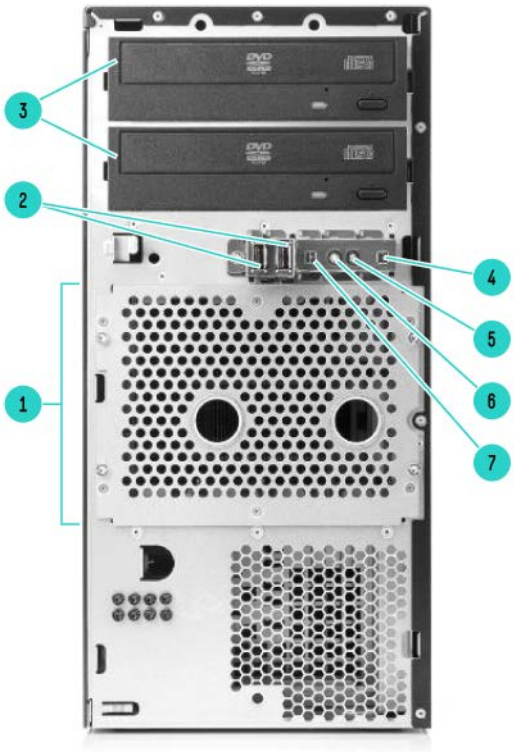
RETIRED: This document has been officially retired, and the base products listed herein are now considered obsolete and are no longer available for sale. Consequently, the information contained within may no longer be current. This document is provided exclusively for reference and informational purposes.

Overview

HPE ProLiant ML10 v2 Server

HPE ProLiant ML10 v2, a single-socket 4U tower server, delivers essential availability and expansion needed to accommodate changing business needs. It is ideal for remote sites and corporate branch offices running file/print, web messaging, and small vertical applications or databases.



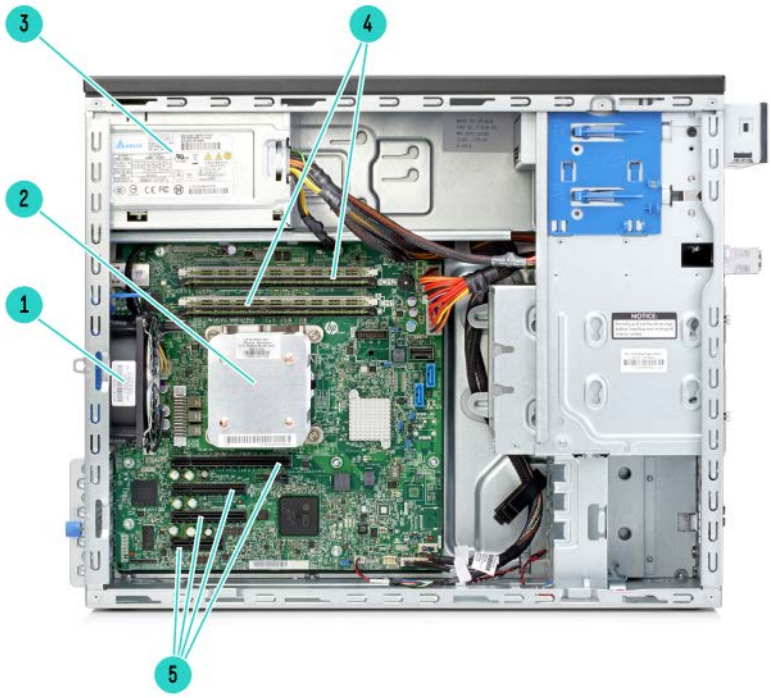
Front View:

1. HDD cage – NHP 4LFF
2. Two (2) USB connectors
3. Half Height SATA DVD-ROM or DVD RW Optical Drive
4. Power Button
5. System Health
6. NIC Activity LED
7. UID LED Button

Rear View:

1. Four (4) PCIe expansion slots
2. VGA connector
3. Two (2) USB 3.0 Connectors
4. NIC Connectors
5. Power Supply
6. Power Supply power connector

Overview



Internal View:

1. System Fans: One NHP fan
2. One (1) processors and Heat sink
3. Power Supply
4. Four (4) DDR3 DIMM slots, shown fully populated in 4 slots
5. Four (4) PCIe expansion slots

What's New

- New HDD offering.

Standard Features

Processor
One of the following depending on model

Entry Processors
NOTE: All support up to 1333MT/s DDR3 memory speeds.
Intel® Pentium® G3240 (3.1GHz/2-core/3MB/54W)

Base Processors
NOTE: All support up to 1600MT/s DDR3 memory speeds.
Intel® Core™ i3-4150 (3.5GHz/2-core/3MB/54W, HT)

Performance Processors
NOTE: All support up to 1600MT/s DDR3 memory speeds.
Intel® Xeon® E3-1220v3 (3.1GHz/4-core/8MB/80W)
Intel® Xeon® E3-1241v3 (3.5GHz/4-core/8MB/80W, HT)

Cache Memory
One of the following depending on model

8MB (1 x 8MB) L3 Cache
NOTE: For Quad-core Xeon processors.
3MB (1 x 3MB) L3 Cache
NOTE: For Dual-core Pentium® Core™ i3 processors.

Chipset

Intel® C222 Chipset
NOTE: For more information regarding Intel® chipsets, please see the following URL: http://www.intel.com/products/server/chipsets/.

Upgradeability

Upgradeable to 4 cores
NOTE: Total 2 or 4 cores
Up to 4 DIMM slots available for higher memory capacity
Up to 6 LFF Hard Drive Bays
NOTE: Requires purchase of HPE ML10 v2 Drive Enablement Kit (#812248-B21)
1 x8 and 1 x16 PCIe 3.0 and 1 x8 and 1x4 PCIe 2.0 I/O slots for additional communications and storage expansion
Optical Drive Bay (up to 2)
NOTE: No Optical drive with 6 LFF drive support

On System Management Processor

HPE iLO (Firmware: HPE iLO4)
NOTE: For more information, visit: http://www.hp.com/go/ilo

Memory Protection

ECC

Memory
One of the following depending on model

Type	HPE SmartMemory DDR3 Unbuffered (UDIMM)
DIMM Slots Available	4
Maximum Capacity (UDIMM)	32GB (4 x 8GB UDIMM)

NOTE: HPE memory from previous generation servers are not fully compatible with the HPE ProLiant ML10 v2 Server.

NOTE: Depending on the memory configuration and processor model, the memory speed may run at 1600MT/s or 1333MT/s. Please see Memory Population Table or the Online Memory Configuration Tool at: http://www.hp.com/go/ddr3memory-configurator.

Standard Features

Network Controller HPE Ethernet 1Gb 2-port 332i Adapter

Expansion Slots

Expansion Slot #	Technology	Bus Width*	Connector Width	Form Factor	Notes
4	PCIe 3.0	X8	X16	Full Length/Full Height	
3	PCIe 3.0	X8	X8	Full Length/Full Height	
2	PCIe 2.0	X1	x8	Full Length/Full Height	
1	PCIe 2.0	X1	X4	Half Length/Full Height	

***Indicates the number of physical electrical lanes running to the connector.**

HPE Server ROM

HPE ROM (Read Only Memory) is now digitally signed using the HPE Corporate Signing Service. This signature is verified before the flash process starts, reducing accidental programming and preventing malicious efforts to corrupt system ROM.

HPE ROM provides for essential initialization and validation of hardware components before control is passed to the customer-installed operating system. The ROM also provides the capability of booting from various fixed media (HDD, CD-ROM) and removable media (USB), to continue operation to the operating system.

HPE ROM performs very early configuration of the video controller, to allow monitoring of initialization progress via an attached monitor. If configuration or hardware errors are discovered during this early phase of hardware initialization, suitable messages are now displayed on the connected monitor. Additionally, these configuration or hardware errors are logged to the Integrated Management Log (IML) to assist in diagnosis.

The HPE ProLiant ROM is used to configure the following:

- Processor and chipset status registers
- System memory, memory map, and memory initialization
- System hardware configuration (Integrated PCI devices and optional PCIe cards).
- Customer-specific BIOS configuration (using the HPE ROM-Based Setup Utility (RBSU).

NOTE: For further information, please refer to the HPE ROM-Based Setup Utility User Guide: http://www.hp.com/support/rbsu.

Storage Controller HPE Dynamic Smart Array B120i Controller

NOTE: Supports up to 6.0Gb/s SATA. (SATA port 0/1 support 6Gb/s and SATA port 2/3 support 3Gb/s)
NOTE: Supports RAID 0/1/10 only. No FBWC support. For FBWC, a standup Smart Array Controller card must be configured.
NOTE: For set up instructions, please refer to the HPE ProLiant ML10 v2 series server user guide.
NOTE: For general information about HPE Smart Array B120i SATA RAID Controller, please go to: http://h18013.www1.hp.com/products/servers/proliantstorage/arraycontrollers/dynamicsmartarray/index.html

Internal Storage Devices Optical Drives HPE Half-Height SATA DVD-ROM Optical Drive

Standard Features

	One of the following depending on model	HPE Half-Height SATA DVD-RW Optical Drive
	Hard Drives	
	Hard Drive Bays One of the following depending on model	4 LFF drive bays (non-hot-plug) **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 P/N 666986-B21: HPE LFF Gen8 Hard Drive Blank Kit.**
Maximum Internal Storage One of the following depending on model	Non Hot Plug LFF SATA	24TB 6 x 4TB
Interfaces	Video	1 (rear)
	Network RJ-45 (Ethernet)	2 (1 shared for HPE Integrated Lights-Out)
	USB	4 2 front, 2 rear(USB3.0)
Industry Standard Compliance	ACPI 2.0b Compliant PCIe 3.0 Compliant PXE Support WOL Support Microsoft® Logo certifications USB 2.0 /3.0 Support	
Server Power Cords	The ProLiant ML10v2 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. Please see the following power cord matrix: **http://www.hp.com/go/powercordmatrix**.	
Power Specifications	To review typical system power requirements, use the HPE Power Advisor which is available via download at URL: **http://www.hp.com/go/proliant-energy-efficient** or **http://www.hp.com/go/hppoweradvisor**. **NOTE: Power Specification and Technical Content for supported power supplies can be found at: https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111541**	
Power Supplies	The ML10 v2 supports one power supply, a 350W Multi-Output Power Supply, the 350W Multi-Output Power Supply is a non-redundant power supply with an efficiency rating of 85%. It is highly recommended that you use the HPE Power Advisor in defining the "Right-Size" power supply for your needs. HPE Power Advisor can be accessed at: **http://www.hp.com/go/hppoweradvisor**. **NOTE: The 80 PLUS program is a unique forum that unites electric utilities, the computer industry, and consumers in an effort to bring energy efficient technology solutions to the marketplace. 80 Plus independently tests power supply efficiency and publicly posts the results on http://www.80plus.org/.** **NOTE: Power Specification and Technical Content for supported power supplies can be found**	

Standard Features

	at: **https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111541**
System Fans	One (1) Non-redundant system fan ships standard
Operating Systems and Virtualization Software Support for ProLiant Servers	**Microsoft Windows Server** **Canonical Ubuntu** **Red Hat Enterprise Linux (RHEL)** **SUSE Linux Enterprise Server (SLES)** **VMware** **NOTE: For more information on the HPE 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://www.hp.com/support/ML10v2.**
Graphics	Integrated Matrox G200 video standard • 1280 x 1024 (32 bpp) • 1920 x 1200 (16 bpp) HPE iLO 4 On System Management Memory • 256 MB DDR 3 with ECC (112 MB after ECC and video)
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" (11.72cm) Height x 5.74" (14.57cm) Width x 4.79" (12.16cm) Length 4 LFF Drive Bay Cage: 4.6" (11.72cm) Height x 5.74" (14.57cm) Width x 6.90" (17.54cm) Length
On System Management	HPE iLO Management Engine HPE iLO Management Engine is a comprehensive set of embedded management features supporting the complete lifecycle of the server, from initial deployment, through ongoing management, to service alerting and remote support. HPE iLO Management Engine comes standard on all HPE ProLiant Gen8 servers. The HPE iLO Management Engine portfolio includes: • **HPE iLO:** The HPE iLO (Integrated Lights-Out) management processor is the core foundation for the HPE iLO Management Engine • **HPE Agentless Management:** Provides built in server health monitoring and alerting capability without OS agents, that starts working the moment a power cord and an Ethernet cable are connected. • **HPE iLO Mobile App:** 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.hp.com/go/ilo/mobileapp** **NOTE: For more information, visit: http://www.hp.com/go/ilo or HPE iLO Management Engine technologies whitepaper.**

Standard Features

HPE Insight Management	HPE Service Pack for ProLiant (SPP)	HPE Service Pack for ProLiant (SPP) and HPE Smart Update Manager (HPE SUM) provide a comprehensive approach to firmware and system software maintenance. Together they provide better operating stability and ensure maximum uptime. The SPP will be updated at a predictable cadence, typically coinciding with new Hewlett Packard Enterprise server hardware launches. By enabling firmware to be updated online and integrating firmware and system software updates in one operation, HPE SUM and the SPP offer faster updates of individual servers and dramatically faster updates of entire BladeSystem enclosures. Further improving system uptime and stability is the fact that Hewlett Packard Enterprise provides 12 months of support for each Service Pack for ProLiant release. The user experience around HPE SUM and the SPP has been improved in several ways, starting with the web download. A single web page provides access to a single download containing both the latest version of HPE SUM and the latest SPP. Optional smaller subsets with only specific types of servers or specific operating systems are offered to save on download time. The HPE SUM application provides a straightforward, intuitive user interface that guides the user through the steps of discovery, analyses and update, providing comprehensive information on available updates, criticality and interdependencies. This information is also available in reports. By providing the option of multiple local or shared repositories which can be easily updated from hp.com, HPE SUM provides the tools to optimize stability and consistency throughout the company. While HPE SUM and the SPP recommend the combinations of firmware and system software that Hewlett Packard Enterprise has found to be the best practice, the application gives customers the flexibility to set their own specific baseline. The Service Pack for ProLiant has been rigorously tested with specific attention for interaction between firmware, drivers and agents both within the server as well as in interaction with the BladeSystem enclosure components (Onboard Administrator and Virtual Connect). This testing ensures the highest quality as well as providing the input for HPE SUM to deploy updates taking into account all interdependencies, when determining the correct updates and order of update deployment. **NOTE: The Service Pack for ProLiant (which includes HPE SUM) can be downloaded from http://www.hp.com/go/spp/download. More information can be found: http://www.hp.com/go/SmartUpdate, http://www.hp.com/go/spp and http://www.hp.com/go/hpsum**
Security	Power-on password Administrator's password	
Warranty	This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of Hewlett Packard Enterprise Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HPE 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 1-Year Parts. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Mandatory CSR**	

Standard Features

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

HPE Insight Management	HPE Insight Control	HPE Insight Control, a product option, delivers essential infrastructure management that can help save time and money by making it easy to deploy, migrate, monitor, remote control, and optimize your IT infrastructure through a single, simple management console. HPE Insight Control also supports Location and Power Discovery Services to automate many configuration, asset tracking, and power management tasks to speed implementation and prevent downtime. For more information, see **http://www.hp.com/go/insightcontrol**. HPE Insight Control includes one year of 24 x 7 HPE Software Technical Support and Update Service ensuring rapid access to Hewlett Packard Enterprise support staff and proactive delivery of software updates. For more information about this service, see: **http://www.hp.com/services/insight**.
	HPE iLO Advanced	HPE Integrated Lights-Out Advanced License a product option, providing smart remote server management without compromise. iLO Advanced unlocks the full set of remote administration functionality for all HPE ProLiant servers by activating the full Virtual Keyboard Video and Mouse remote console, multi-user collaboration, console record and replay, GUI-based and scripted virtual media and virtual folders, and enhanced security and power management functionality. For more information, see: **http://www.hp.com/go/iloadvance**
	HPE iLO Essentials	HPE iLO Essentials license ideal for small and medium business customers. The specially created HPE iLO Essentials (a subset of iLO Advanced functionality) saves SMB customers time and money, by ease of remote server set up through the interactive virtual media, lowering operational costs with remote access via the Integrated Remote Console, and faster time to resolution with email-based proactive notifications. With this newly designed HPE iLO Essentials license SMB customers now have the option of a server management package solely design and priced just right for their IT environments. HPE iLO Essentials is available on all HPE ProLiant Gen8 e-series making this an ideal solution for small business owners. For more information, see: **http://www.hp.com/go/iLO/essentials**

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 HPE 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, HPE data protection and recovery software will cost-effectively protect you against disaster and ensure business continuity.
- **Data Archive and Migration Software**
  The HPE 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)**
  The HPE 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 HPE 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 turn a set of heterogeneous and disconnected physical disk drives in your servers and storage devices into a single pool of logical storage capacity.

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

HPE Insight Online	HPE Insight Online is a new addition to the HPE Support Center for one stop, secure access to product and HPE support information personalized to your IT environment. Insight Online can automatically display devices remotely monitored by HPE Insight Remote Support. With Insight Online's easy navigation you can efficiently track your IT support contracts and device status from anywhere and at anytime. **http://www.hp.com/go/insightonline**
Factory Express Portfolio for Servers and Storage	HPE Factory Express offers configuration, customization, integration and deployment services for Hewlett Packard Enterprise servers and storage products. 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. Hewlett Packard Enterprise products supported through Factory Express include a wide array of servers and storage: HPE Integrity, HPE ProLiant, HPE ProLiant Server Blades, HPE BladeSystem, HPE 9000 servers as well as the MSAxxxx, VA7xxx, EVA, XP, rackable tape libraries and configurable network switches. For more information on Factory Express services for your specific server model please contact your sales representative or go to: **http://www.hp.com/go/factory-express**
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 the HPE Customer Business Center or an Authorized Partner for assistance. **http://www.hp.com/products/configurator**.

Service and Support

Service and Support	**HPE Technology Services for Industry Standard Servers** 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. Our support technology lets you to tap into the knowledge of millions of devices and thousands of experts to stay informed and in control, anywhere, any time. **Protect your business beyond warranty with HPE Pointnext operational services** HPE Pointnext operational services enable you to order the right service level, length of coverage and response time as you purchase your new server, giving you full entitlement for the term you select.
Optimized Care	**Supports maintaining servers at optimum performance availability** **HPE Proactive Care with 24x7 coverage, three year Care Pack Service** HPE Proactive Care helps prevent problems and stabilize IT by utilizing secure, real-time, predictive analytics and proactive consultations when your products are connected to Hewlett Packard Enterprise. This Care Pack Service combines three years' proactive reporting and advice with our 24x7 coverage and enhanced escalation management, four hour hardware response time and two hour call back for software questions on leading industry standard software running on your HPE ProLiant server. **https://www.hpe.com/h20195/v2/getpdf.aspx/4aa3-8855enw.pdf**
Standard Care	**Supports maintaining high level of server availability** **Foundation Care 24x7, three-year Care Pack Service** HPE Foundation Care 24x7 connects you to Hewlett Packard Enterprise 24 hours a day, seven days a week for assistance on resolving issues. Hardware onsite response within four hours if needed; collaborative software included in this Care Pack service provides troubleshooting assistance on industry leading software running on your Hewlett Packard Enterprise server. Simplify your support experience and make Hewlett Packard Enterprise your first call for hardware or software questions. **https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en**
Basic Care	**Delivers minimum recommended support service level** **Foundation Care NBD, three-year Care Pack Service** HPE Foundation Care Next Business Day connects you to Hewlett Packard Enterprise during business hours for assistance on resolving issues – features next business day hardware onsite response if needed and software call back within two hours. Collaborative software support is included and provides troubleshooting assistance on industry leading software running on your server. Simplify your support experience and make Hewlett Packard Enterprise your first call for hardware or software questions. **https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en**
Get connected to Hewlett Packard Enterprise to improve your support experience	Prevent problems with innovative, automated monitoring tools and proactive services. Combining Proactive Care Services with our remote support technology such as Insight Online provides you with expert advice and personalized, cloud-based automated IT support, helping to prevent unplanned down time and solve problems quickly. For more information, visit: **http://www.hp.com/go/proactiveinsightexperience**
Related Services	**HPE ProLiant 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.

Service and Support

http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN.pdf

Factory Express for Servers and storage
HPE Factory Express offers configuration, customization, integration and deployment services for Hewlett Packard Enterprise servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed. For more information on Factory Express services for your specific server model please contact your sales representative or go to: **http://www.hp.com/go/factory-express**.

Data Privacy Services
Protect your data through better media management. HPE Data privacy services help manage and protect sensitive data to reduce the risk of unauthorized access to private information and help meet compliance requirements. Our retention services allow you to keep drives and other devices upon failure, our removal services provide convenient data sanitization and our recovery services allow you to safely retire IT assets and capture any remaining value from the hardware.
http://www.hp.com/services/dataprivacy

Additional HPE Pointnext operational services can be found at: **http://www.hp.com/go/cpc**

HPE Support Center

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.hp.com/go/hpsc**

Hewlett Packard Enterprise'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 Care Pack or HPE contractual support agreement.

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

Parts and Materials

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

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

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction.

For more information

To learn more on HPE ProLiant servers and HPE BladeSystem servers, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Or visit: **http://www.hp.com/services/proliant**

Pre-configured Models

NOTE: Pre-configured models ship with the configurations below. Options can be selected from the Core or Additional options section of this QuickSpecs.
NOTE: Hewlett Packard Enterprise does not allow factory integration of options into pre-configured models. Any additional options purchased will be shipped separately.
NOTE: Maximum speed supported depends on the CPU installed.
Please see Memory Population Table or the Online Memory Configuration Tool at: **http://www.hp.com/go/ddr3memory-configurator**.
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 P/N 666986-B21: HPE LFF Gen8 Hard Drive Blank Kit.
NOTE: Not all models are available in all regions. Check with your local country Hewlett Packard Enterprise offices for availability.

Entry Models

HPE ProLiant ML10 v2 G32401P 4GB-U NHP 4 LFF 350W PS Entry Svr
814483-xx1

Processor(s)	(1) Intel® PentiumG3240 (3.1GHz/2-core/3MB/54W, HT) Processor
Cache Memory	3MB (1 x 3MB) L3 cache
Memory	4GB (1 x 4GB) PC3-12800E DDR3 UDIMM
Network Controller	HPE Ethernet 1Gb 2-port 332i Adapter
Storage Controller	HPE Dynamic Smart Array B120i Controller
Hard Drive	None
Internal Storage	4 LFF SATA HDD cage; includes 4 LFF hard drive blanks
Optical Drive	None
Power Supply	HPE 350W Multi-Output Power Supply
Fans	One (1) Non-redundant system fan ships standard
Management	HPE iLO Management Engine (standard on system NIC) Optional: HPE iLO Essentials or HPE Insight Control
Form Factor	Micro ATX Tower (4U)
Warranty	Server Warranty includes 1-Year Parts.

NOTE: Server model PN (812126-375) available in Asia Pacific only.

HP ProLiant ML10 v2 G3240 4GB-U B120i 4LFF NHP 350W PS Server/Promo
812126-375

Processor(s)	(1) Intel® PentiumG3240 (3.1GHz/2-core/3MB/54W, HT) Processor
Cache Memory	3MB (1 x 3MB) L3 cache
Memory	4GB (1 x 4GB) PC3-12800E DDR3 UDIMM
Network Controller	HPE Ethernet 1Gb 2-port 332i Adapter
Storage Controller	HPE Dynamic Smart Array B120i Controller
Hard Drive	None
Internal Storage	4 LFF SAS/SATA HDD cage; includes 4 LFF hard drive blanks
Optical Drive	None
Power Supply	HPE 350W Multi-Output Power Supply
Fans	One (1) Non-redundant system fan ships standard
Management	HPE iLO Management Engine (standard on system NIC) Optional: HPE iLO Essentials or HPE Insight Control
Form Factor	Micro ATX Tower (4U)

Pre-configured Models

	Warranty	Server Warranty includes 3-3-3 TS Foundation Care

NOTE: Server model PN (814484-xx1) not available in EMEA.

HPE ProLiant ML10 v2 G32401P 4GB-U B120i NHP 4LFF 1x1TB 350W PS Entry Server 814484-xx1	**Processor(s)**	(1) Intel® PentiumG3240 (3.1GHz/2-core/3MB/54W, HT)Processor
	Cache Memory	3MB (1 x 3MB) L3 cache
	Memory	4GB (1 x 4GB) PC3-12800E DDR3 UDIMM
	Network Controller	HPE Ethernet 1Gb 2-port 332i Adapter
	Storage Controller	HPE Dynamic Smart Array B120i Controller
	Hard Drive	1x1TB SATA drive and 3 LFF hard drive blanks
	Internal Storage	4 LFF SATA HDD cage
	Optical Drive	None
	Power Supply	HPE 350W Multi-Output Power Supply
	Fans	One (1) Non-redundant system fan ships standard
	Management	HPE iLO Management Engine (standard on system NIC) Optional: HPE iLO Essentials or HPE Insight Control
	Form Factor	Micro ATX Tower (4U)
	Warranty	Server Warranty includes 1-Year Parts

NOTE: Server model PN (812127-375) available in Asia Pacific only.

HP ProLiant ML10 v2 G3240 4GB-U B120i 4LFF 1x1TB 350W PS Server/Promo 812127-375	**Processor(s)**	(1) Intel® PentiumG3240 (3.1GHz/2-core/3MB/54W, HT)Processor
	Cache Memory	3MB (1 x 3MB) L3 cache
	Memory	4GB (1 x 4GB) PC3-12800E DDR3 UDIMM
	Network Controller	HPE Ethernet 1Gb 2-port 332i Adapter
	Storage Controller	HPE Dynamic Smart Array B120i Controller
	Hard Drive	1x1TB SATA drive and 3 LFF hard drive blanks
	Internal Storage	4 LFF SAS/SATA HDD cage
	Optical Drive	None
	Power Supply	HPE 350W Multi-Output Power Supply
	Fans	One (1) Non-redundant system fan ships standard
	Management	HPE iLO Management Engine (standard on system NIC) Optional: HPE iLO Essentials or HPE Insight Control
	Form Factor	Micro ATX Tower (4U)
	Warranty	Server Warranty includes 3-3-3 TS Foundation Care

Base Models

HPE ProLiant ML10 v2 i3 4150 1P 4GB-U B120i 350W PS Svr 814485-xx1	**Processor(s)**	(1) Intel® Core™ i3-4150 (3.5GHz/2-core/3MB/54W, HT)Processor
	Cache Memory	3MB (1 x 3MB) L3 cache
	Memory	4GB (1 x 4GB) PC3-12800E DDR3 UDIMM
	Network Controller	HPE Ethernet 1Gb 2-port 332i Adapter
	Storage Controller	HPE Dynamic Smart Array B120i Controller

Pre-configured Models

Hard Drive	1x1TB SATA drive and 3 LFF hard drive blanks
Internal Storage	4 LFF SATA HDD cage
Optical Drive	None
Power Supply	HPE 350W Multi-Output Power Supply
Fans	One (1) Non-redundant system fan ships standard
Management	HPE iLO Management Engine (standard on system NIC) Optional: HPE iLO Essentials or HPE Insight Control
Form Factor	Micro ATX Tower (4U)
Warranty	Server Warranty includes 1-Year Parts.

Performance Models

NOTE: Server model PN (812129-375) available in Asia Pacific only.

HP ProLiant ML10 v2 E3-1220v3 4GB-U B120i 4LFF 1x1TB NHP 350W PS Server/Promo
812129-375

Processor(s)	(1) Intel® Xeon® E3-1220v3 (3.1GHz/4-core/8MB/80W) Processor
Cache Memory	3MB (1 x 3MB) L3 cache
Memory	4GB (1 x 4GB) PC3-12800E DDR3 UDIMM
Network Controller	HPE Ethernet 1Gb 2-port 332i Adapter
Storage Controller	HPE Dynamic Smart Array B120i Controller
Hard Drive	1x1TB SATA drive and 3 LFF hard drive blanks
Internal Storage	4 LFF SATA HDD cage
Optical Drive	None
Power Supply	HPE 350W Multi-Output Power Supply
Fans	One (1) Non-redundant system fan ships standard
Management	HPE iLO Management Engine (standard on system NIC) Optional: HPE iLO Essentials or HPE Insight Control
Form Factor	Micro ATX Tower (4U)
Warranty	Server Warranty includes 3-3-3 TS Foundation Care

NOTE: Server model PN (822447-375) available in Asia Pacific only.

HP ProLiant ML10 v2 E3-1220v3 8GB-U B120i 4LFF 1x1TB NHP ODD 350W PS Server/TV
822447-375

Processor(s)	(1) Intel® Xeon® E3-1220v3 (3.1GHz/4-core/8MB/80W) Processor
Cache Memory	3MB (1 x 3MB) L3 cache
Memory	8GB (1 x 8GB) PC3-12800E DDR3 UDIMM
Network Controller	HPE Ethernet 1Gb 2-port 332i Adapter
Storage Controller	HPE Dynamic Smart Array B120i Controller
Hard Drive	1x1TB SATA drive and 3 LFF hard drive blanks
Internal Storage	4 LFF SATA HDD cage
Optical Drive	DVD-ROM
Power Supply	HPE 350W Multi-Output Power Supply
Fans	One (1) Non-redundant system fan ships standard
Management	HPE iLO Management Engine (standard on system NIC) Optional: HPE iLO Essentials or HPE Insight Control
Form Factor	Micro ATX Tower (4U)

Pre-configured Models

Warranty	Server Warranty includes 3-3-3 TS Foundation Care.

Country Code Key	**Tower Code Key**
xx=00	US
xx=01	Australia
xx=03	UK
xx=37	APD
xx=42	Europe
xx=AA	PRC

Core Options

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

HPE Unique Options	HP ML10v2 Drive Enablement Kit	812248-B21
HPE Memory	**Unbuffered with ECC DIMMs (UDIMMs)**	
	NOTE: The following memory is supported by the E3-1200 series Processors	
	HPE 4GB (1x4GB) Dual Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit	669322-B21
	HPE 4GB (1x4GB) Single Rank x4 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit	820077-B21
	HPE 8GB (1x8GB) Dual Rank x8 PC3- 12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit	669324-B21
	HPE 8GB (1x8GB) Dual Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit	815371-B21
HPE Optical Drives	HPE Half-Height SATA DVD ROM JackBlack Optical Drive	624189-B21
	HPE Half-Height SATA DVD RW JackBlack Optical Drive	624192-B21
HPE Hard 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.	
	6G SATA Non-hot Plug LFF (3.5-inch) Midline (MDL) Drives	
	HPE 3TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive	628065-B21
	HPE 2TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive	659339-B21
	HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) RW 1yr Wty HDD	659337-B21
	HPE 500GB SATA 6G Midline 7.2K LFF (3.5in) RW 1yr Wty HDD	659341-B21
	6G SATA Non-hot Plug LFF (3.5-inch) Entry (ETY) Drives	
	HPE 4TB SATA 6G Entry 5.9K LFF (3.5in) RW 1yr Wty HDD	815635-B21
	6G SATA Non-hot Plug LFF (3.5-inch) STY Hard Drives	
	HPE 3TB SATA 6G Midline 7.2K LFF (3.5in) RW 1yr Wty HDD	843270-B21

Core Options

	HPE 2TB SATA 6G Midline 7.2K LFF (3.5in) RW 1yr Wty HDD	843268-B21
	HPE 1TB SATA 6G Entry 7.2K LFF (3.5in) RW 1yr Wty HDD	843266-B21
	HPE 500GB SATA 6G Midline 7.2K LFF (3.5in) RW 1yr Wty HDD	843264-B21

NOTE: Maximum supported lifetime/maximum usage:
Parts and components that have exceeded 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 this service.
NOTE: Data Retentive components that are specified by HPE as consumable parts and/or that have exceeded the maximum supported lifetime and/or the maximum usage limit as set forth in the manufacturer's operating manual, the product QuickSpecs, or the technical data sheet are not eligible for the defective media retention or the comprehensive defective material retention service feature option.

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:
https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111725
(Worldwide)

Hard Drive Kits

NOTE: All Factory Integrated Models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the server.
NOTE: The part numbers for single HDD blanks below are provided should the customer require replacement HDD blanks for their server

	HPE Large Form Factor Hard Drive Blank Kit	666986-B21

HPE Networking

Gigabit Ethernet adapters

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

Switches

	HPE PS110 Wireless 802.11n VPN AM Router	JL065A
	HPE PS110 Wireless 802.11n VPN WW Router	JL066A

NOTE: HPE PS110 Wireless VPN Router Series deliver high-performance internet access and wired/wireless connectivity for offices and remote/mobile employees.
NOTE: Please see the QuickSpecs for Technical Specifications and additional information:
https://www.hpe.com/h20195/v2/Gethtml.aspx?docname=c04519011
(Worldwide)

	HPE PS1810-8G Switch	J9833A

Core Options

	HPE PS1810-24G Switch	J9834A
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111385 (Worldwide)	
HPE Computation and Graphics Accelerators	NVIDIA Quadro K2000 PCIe Graphics Adapter	753959-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 a Hewlett Packard Enterprise approved configurator. Contact your local sales representative for additional information.

HPE Insight Software

HPE Insight Control

HPE Insight Control including 1yr 24x7 Technical Support and Updates 1-server LTU	C6N27A
HPE Insight Control including 1yr 24x7 TSU E-LTU NOTE:NOTE: The Electronic software license is available in EMEA only.	C6N28ABE
HP Insight Control Server Provisioning Media Kit	BD883A
HPE Insight Management Media Kit	C6N31A

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 QuickSpecs at: https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04123391

HPE Integrated Lights-Out (iLO)

HPE iLO Essentials

HPE iLO Essentials including 3yr 24x7 Technical Support and Updates E-LTU NOTE:NOTE: The Electronic software license is available in EMEA only.	E6U61ABE
HPE iLO Essentials including 1yr 24x7 Technical Support and Updates E-LTU NOTE:NOTE: The Electronic software license is available in EMEA only.	E6U62ABE
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 Integrated Lights-Out (iLO) Advanced for ProLiant

HPE iLO Advanced including 1yr 24x7 Technical Support and Updates E-LTU NOTE:NOTE: The Electronic software license is available in EMEA only.	E6U59ABE
HPE iLO Advanced including 3yr 24x7 Technical Support and Updates E-LTU NOTE:NOTE: The Electronic software license is available in EMEA only.	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	BD506A

Additional Options

	LTU	
	HPE iLO Advanced including 3yr 24x7 Tech Support and Updates Tracking LTU	BD507A
	HPE iLO Advanced including 1yr 24x7 Technical Support and Updates Flexible Quantity LTU	512486-B21
	HPE iLO Advanced including 1yr 24x7 Technical Support and Updates Tracking LTU	512487-B21
	NOTE: For additional license kits, including electronic delivery options, please see the QuickSpecs at: https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04154343 **NOTE: For more information, visit: http://www.hp.com/go/ilo.**	
HPE Security	HPE Trusted Platform Module Option	488069-B21
	NOTE: The TPM (Trusted Platform Module) is a microcontroller chip that can securely store artifacts used to authenticate the server platform. These artifacts can include passwords, certificates and encryption keys. Windows® BitLocker™ Drive Encryption (BitLocker) is a data protection feature available in Windows Server® 2008. BitLocker leverages the enhanced security capabilities of a Trusted Platform Module (TPM) version 1.2. The TPM works with BitLocker to help protect user data and to ensure that a server running Windows Server 2008 has not been tampered with while the system was offline. For more information about TPM, including a white paper, go to: http://www.hp.com/go/TPM. **NOTE: ProLiant OS pre-installed units will come with the partition required for TPM deployment.** **NOTE: The TPM key is unique to every TPM deployed server and must be retained. Misplacing or losing the key could result in data loss.**	
HPE Storage Controllers	**HPE Host Bus Adapters**	
	HP H220 Host Bus Adapter	650933-B21
	HPE H221 PCIe 3.0 SAS Host Bus Adapter	729552-B21
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111455(HBA H220) https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111475(HBA H221)	
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.**	
	SAS Rack-Mount Tape Solutions	
	HPE StoreEver LTO-6 Ultrium 6650 SAS External Tape Drive	EH964A

Additional Options

	HPE StoreEver LTO-6 Ultrium 6250 Tape Drive in a 1U Rack Mount Kit	C0L99A
	HPE StoreEver LTO-6 Ultrium 6250 Internal Tape Drive	EH969A
	HPE StoreEver LTO-6 Ultrium 6250 External Tape Drive	EH970A
	HPE StoreEver LTO-5 Ultrium 3000 SAS Tape Drive in a 1U Rack Mount Kit	EJ014B
	HPE StoreEver LTO-5 Ultrium 3000 SAS External Tape Drive	EH958B
	HPE StoreEver LTO-5 Ultrium 3280 SAS External Tape Drive	EH900B
	HPE StoreEver LTO-4 Ultrium 1760 SAS (1) in a 1U Rack Mount Kit	EH946C
	HPE StoreEver LTO-4 Ultrium 1760 SAS External Tape Drive	EH920B
	HPE StoreEver LTO-3 Ultrium 920 SAS External Tape Drive	EH848B
	HPE StoreEver 1U SAS Rack Mount Kit	AE459B
	HPE DAT Autoloader	
	HPE StoreEver 1/8 G2 LTO-6 Ultrium 6250 Fibre Channel Tape Autoloader	C0H19A
	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 StoreEver MSL6480	
	HPE StoreEver MSL6480 Scaleable Expansion Module	QU626A
	HPE StoreEver MSL6480 Scalable Base Module	QU625A
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111416 (Worldwide)	
HPE Disk Backup	**NOTE: For the complete range of RDX drives and media see: http://www.hp.com/go/rdx. For hardware and software compatibility of HPE disk backup products see: http://www.hp.com/storage/SPOCK.**	
	HPE RDX Removable Disk Backup System	
	HPE RDX500 USB3.0 Internal Disk Backup System	B7B64A
	HP RDX+ 500GB External Backup System	B7B66B
	HPE RDX1000 USB3.0 Internal Disk Backup System	B7B67A

Additional Options

	HPE RDX 2TB USB3.0 External Disk Backup System	E7X53B
	HP RDX+ 1TB External Backup System	B7B69B
	HPE RDX+ External Docking System	C8S07B
	HPE D3700 Enclosure	QW967A
	HPE D3600 Enclosure	QW968A
	NOTE: Please see the QuickSpecs for additional part numbers, Technical Specifications, and additional information: https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111633 (Worldwide)	
HPE Disk Storage Systems	**Disk Enclosures**	
	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
	HPE D6000 Dual I/O Module Disk Enclosure	QQ695A
	HPE D6000 w/35 2TB 6G SAS 7.2K LFF Dual port MDL HDD 70TB Bundle	QQ697A
	HPE D6000 w/70 2TB 6G SAS 7.2K LFF Dual port MDL HDD 140TB Bundle	QQ698A
	HPE D6000 w/35 3TB 6G SAS 7.2K LFF Dual port MDL HDD 105TB Bundle	QQ699A
	HPE D6000 w/70 3TB 6G SAS 7.2K LFF Dual port MDL HDD 210TB Bundle	QQ700A
	HP D2600 w/12 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 48TB Bundle	E7W32A
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111697 (Worldwide)	
HPE KVM Switches	HP USB Remote Access Key for G3 KVM Console Switches	AF650A
	HP 0x1x8 G3 KVM Console Switch	AF651A
	HP 0x2x16 G3 KVM Console Switch	AF652A
	HP TAA 0x2x16 G3 KVM Console Switch	AF653A
	HP KVM Console USB Interface Adapter	AF628A
	HP 0x2x16 KVM Server Console Switch G2 with Virtual Media CAC Software	AF618A
	HP 0x2x32 KVM Server Console Switch G2 with Virtual Media CAC Software	AF619A
	HP KVM Console USB 2.0 Virtual Media CAC Interface Adapter	AF629A
	HP 1x4 USB/PS2 KVM Console Switch	AF611A
	HP 1x1Ex8 KVM IP Console Switch G2 with Virtual Media CAC Software	AF620A
	HP 2x1Ex16 KVM IP Console Switch G2 with Virtual Media CAC Software	AF621A
	HP 4x1Ex32 KVM IP Console Switch G2 with Virtual Media CAC Software	AF622A
	HPE Other Options	
	HP Advanced Power Manager Kit	741192-B21
	HP ConvergedSystem Door Branding Kit	TK815A

Additional Options

	HP ConvergedSystem Rack Light Kit	TK816A
	HP ConvergedSystem Rack Side Panel 1075mm Kit	TK817A
HPE Uninterruptible Power Systems (UPS)	**HPE DirectFlow Three Phase UPS**	
	Power Unit (1U UPS)	
	NOTE: #0D1 will appear after the part number on the sales order if HPE factory integration is indicated.	
	HPE R12000 DirectFlow - 1U Rackmount Uninterruptible Power System	G9Y75A
	HPE R12000 DirectFlow - POD 1U Rackmount Uninterruptible Power System	AF478A
	Input/Output Module Options for 1U UPS	
	NOTE: Choose one I/O Module per UPS. **NOTE: #0D1 will appear after the part number on the sales order if HPE factory integration is indicated.**	
	HPE 32A 400-415 Volt Three Phase INTL R12000 DirectFlow UPS IEC309 Input/Output Module	AF488A
	HPE 30A 400-415 Volt Three Phase NA R10000 DirectFlow UPS IEC309 Input/Output Module	AF489A
	HPE 32A 380 Volt Three Phase China R12000 DirectFlow UPS Unterminated Input/Output Module	AF490A
	HPE 30A 480 Volt Three Phase NA R12000 DirectFlow UPS L22-30 Input/Output Module	AF491A
	HPE 30A 480 Volt Three Phase NA R12000 DirectFlow UPS IEC309 Input/Output Module	AF492A
	HPE 30A 400-415 Volt Three Phase NA R12000 DirectFlow UPS IEC309 Input/Output Module	G9Y76A
	HPE DirectFlow UPS Management Card	AF493A
	Power Unit (2U UPS)	
	HPE R18000 DirectFlow - 2U Rackmount Uninterruptible Power System	AF479A
	Input/Output Module Options for 2U UPS	
	HPE 32A 400-415 Volt Three Phase INTL R18000 DirectFlow UPS IEC309 Input/Output Module	AF483A
	HPE 30A 380 Volt Three Phase China R18000 DirectFlow UPS Unterminated Input/Output Module	AF485A
	HPE 30A 480 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module	AF486A

Additional Options

HPE 30A 480 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module	AF487A
HPE 30A 400 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module	D9Q02A
HPE 30A 400-415V Three Phase NA R18000 DirectFlow UPS 1:1 IEC309 Input/Output Module	AF484A

NOTE: All Input/Output Modules support dual output outlets except the AF484A.

Battery Pack Options

HPE DirectFlow UPS - 1U Rackmount Lithium-ion Battery Pack	AF480A
HPE DirectFlow UPS - 3U Rackmount VRLA Battery Pack	AF482A
HPE WW DirectFlow Secondary Battery Cable	AF497A

NOTE: Please see the HPE DirectFlow Three Phase Uninterruptible Power System QuickSpecs for information on additional options and product specifications.

HPE Tower UPS

HPE T750 G4 UPS Models

HPE T750 G4 NA/JP Uninterruptible Power System	J2P85A
HPE T750 G4 INTL Uninterruptible Power System	J2P88A

HPE T1000 G4 UPS Models

HPE T1000 G4 NA/JP Uninterruptible Power System	J2P86A
HPE T1000 G4 INTL Uninterruptible Power System	J2P89A

HPE T1500 G4 UPS Models

HPE T1500 G4 NA/JP Uninterruptible Power System	J2P87A
HPE T1500 G4 INTL Uninterruptible Power System	J2P90A

HPE Rack/Tower UPS

HPE R/T2200 G4 UPS Models

HPE R/T2200 G4 NA/JP Uninterruptible Power System	J2R00A

HPE R/T3000 G4 UPS Models

HPE R/T3000 G4 Low Voltage NA/JP Uninterruptible Power System	J2R01A
HPE R/T3000 G4 High Voltage NA/JP Uninterruptible Power System	J2R02A
HPE R/T3000 G4 High Voltage INTL Uninterruptible Power System	J2R04A

Additional Options

HPE Tower UPS	
HPE T1000 G3 UPS Models	
HP T1000 G3 1000VA NA Tower Uninterruptible Power System	AF448A
HPE Rack-mountable UPS	
HPE R1500 G4 Uninterruptible Power Supply (UPS)	
HPE R1500 G4 NA Uninterruptible Power System	J2Q99A
HPE R1500 G4 INTL Uninterruptible Power System	J2R03A
HPE R1500 G4 JP/TWN Uninterruptible Power System	J2R05A
R5000 Uninterruptible Power System (UPS)	
HPE R5000 3U IEC309-32A High Voltage INTL Uninterruptible Power System	AF461A
HPE R5000 3U L630 High Voltage NA/JP Uninterruptible Power System	AF460A
R7000 Uninterruptible Power System (UPS)	
HPE R7000 4U 50A High Voltage NA/JP Uninterruptible Power System	AF462A
HPE R7000 4U IEC-32A High Voltage INTL Uninterruptible Power System	AF463A
Expansion Upgrade for HPE RPS36000/3	
HPE RP12000/3 12000VA Three Phase INTL 6U Rackmount Uninterruptible Power System	AF437A
HPE UPS Options	
HPE R/T2200 G4 Extended Runtime Module	J2R09A
HPE R/T3000 G4 Extended Runtime Module	J2R10A
HPE 2U Rack/Tower UPS Shipping Kit	L4Q11A

NOTE: Please see the HPE Line Interactive Single Phase UPS QuickSpecs for information on additional options and product specifications.

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

NOTE: For additional information on sizing your server, please reference: http://www.upssizer.com.

NOTE: Please see the UPS and PDU cable matrix's on the HPE Power Protection and Management page. Under Power Cords, click on the "HPE Power Cord Matrix" link. That link will list cable descriptions, requirements, and specifications for UPS and PDU units. Please see the following link: http://www.hp.com/products/powercords.

NOTE: For additional information on HPE Uninterruptible Power Systems please go to: http://www.hp.com/servers/rackups.

Additional Options

HPE Basic Power Distribution Units (bPDU)	HPE 1.9kVA 120 Volt L5-20 Input (12xNEMA 5-20R) NA/JP Basic PDU	H5M54A
	HPE Basic 3.6kVA/60320 C20 Detachable 16A/230V Outlets (12) C13/Horizontal WW PDU	H5M56A
	HPE Basic 2.8kVA/L5-30P 24A/120V Outlets (18) 5-20R/Vertical NA/JP PDU	H5M55A
	HPE Basic 4.9kVA/60320 C20 Detachable 16A/230V Outlets (20) C13/Vertical WW PDU	H5M57A
	HPE Basic 4.9kVA/L6-30P 24A/208V Outlets (20) C13/Vertical NA/JP PDU	H5M58A
	HPE Basic 7.3kVA/60309 5-wire 32A/230V Outlets (20) C13/Vertical INTL PDU	H5M68A
	HPE Basic 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13/Vertical NA/JP PDU	H5M61A
	HPE Basic 4.9kVA/L6-30P 24A/208V Outlets (24) C13 (6) C19/Vertical NA/JP PDU	H5M59A
	HPE Basic 7.3kVA/60309 3-wire 32A/230V Outlets (24) C13 (6) C19/Vertical INTL PDU	H5M70A
	HPE Basic 8.3kVA/CS8265C 40A/208V Outlets (30) C13 (6) C19/Vertical NA PDU	H5M60A
	HPE Basic 11kVA/60309 63A 3-wire 48A/230V Outlets (30) C13 (6) C19/Vertical INTL PDU	H5M71A
	HPE Basic 9.2kVA/50A Terminal Block 40A/230V Outlets (30) C13 (6) C19/Vertical WW PDU	H5M75A
	HPE Basic 3Ph 5.7kVA/ L21-20P 16A/120-208V Outlets (24) C13 (3) 5-20R/Vertical NA/JP PDU	H5M63A
	HPE Basic 3Ph 8.6kVA/L21-30P 24A/120-208V Outlets (24) C13 (3) C19 (3) 5-20R/Vertical NA/JP PDU	H5M64A
	HPE Basic 3Ph 8.6kVA/L15-30P 24A/208V Outlets (24) C13 (6) C19/Vertical NA/JP PDU	H5M62A
	HPE Basic 3Ph 11kVA/60309 5-wire 16A/230V Outlets (24) C13 (6) C19/Vertical INTL PDU	H5M72A
	HPE Basic 3Ph 11kVA/60309 5-wire 16A/230V Outlets (36) C13 (6) C19/Vertical INTL PDU	H5M73A
	HPE Basic 3Ph 11kVA/60309 16A/240V Outlets (36) C13 (6) C19/Vertical NA PDU	H5M67A
	HPE 800VA - 277V Input / 230V Output NA Rack Mount Transformer	H3X09A
	HPE Basic Modular 2.8kVA/L5-30P 24A/120V Outlets (4) C19/Horizontal NA/JP PDU	252663-D71
	HPE Basic Modular 4.9kVA/L6-30P 24A/208V Outlets (4) C19/Horizontal NA/JP Core Only PDU	252663-D74

Additional Options

	HPE Basic Modular 8.3kVA/CS8265C 40A/208V Outlets (4) C19/Horizontal NA/JP PDU	252663-D75
	HPE Basic Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF512A
	HPE Basic Modular 3Ph 14.4kVA/CS8365C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF519A
	HPE Basic Modular 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF511A
	HPE Basic Modular 7.3kVA/60309 3-wire 32A/230V Outlets (4) C19/Horizontal INTL Core Only PDU	252663-B33
	HPE Basic Modular 9.2kVA/60309 63A 3-wire 40A/230V Outlets (4) C19/Horizontal INTL PDU	252663-B34
	HPE Basic Modular 3Ph 11kVA/60309 5-wire 16A/230V Outlets (6) C19/Horizontal INTL PDU	AF513A
	HPE Basic Modular 3Ph 22kVA/60309 5-wire 32A/230V Outlets (6) C19/Horizontal INTL PDU	AF518A
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111392 (Worldwide)	
	NOTE: Additional HPE Power Distribution Units are available. For a complete list of all HPE PDUs and additional information please visit http://www.hp.com/go/rackandpower.	
HPE Remote Monitored Power Distribution Units (mPDU)	**HPE Remote Monitored Power Distribution Unit: 1U Version**	
	HPE Metered 2.8kVA/L5-30P 24A/120V Outlets (12) 5-20R/Horizontal NA/JP PDU	D9N43A
	HPE Metered 3.6kVA/60320 C20 Detachable 16A/230V Outlets (12) C13/Horizontal WW PDU	D9N46A
	HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (12) C13/Horizontal NA/JP PDU	D9N44A
	HPE Remote Monitored Power Distribution Unit: Half Height Version	
	HPE Metered 3.6kVA/60320 C20 Detachable 16A/230V Outlets (16) C13/Vertical WW PDU	D9N45A
	HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (12) C13/Vertical NA/JP PDU	G9Z05A
	HPE Metered 7.3kVA/60309 3-wire 32A/230V Outlets (12) C13/Vertical INTL PDU	G9Z06A
	HPE Remote Monitored Power Distribution Unit: Mid Height Version	

Additional Options

HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (4) C19/Vertical NA/JP PDU	D9N47A
HPE Metered 7.3kVA/60309 32A 3-wire/230V Outlets (20) C13 (4) C19/Vertical INTL PDU	D9N48A
HPE Metered 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13 (3) C19/Vertical NA/JP PDU	D9N51A
HPE Metered 3Ph 5.7kVA/L21-20P 16A/120-208V Outlets (13) C13 (3)5-20R/Vertical NA/JP PDU	D9N52A
HPE Metered 3Ph 8.6kVA/L21-30P 24A/120-208V Outlets (18) C13 (3) C19 (3) 5-20R/Vertical NA/JP PDU	D9N53A
HPE Metered 3Ph 11kVA/60309 5-wire 16A/230V Outlets (18) C13 (3) C19/Vertical INTL PDU	D9N55A
HPE Remote Monitored Power Distribution Unit: Full Height Version	
HPE Metered 8.3kVA/CS8265C 40A/208V Outlets (30) C13 (3) C19/Vertical NA PDU	D9N49A
HPE Metered 7.3kVA/60309 32A 3-wire/230V Outlet (32) C13 (4) C19/Vertical INTL PDU	D9N50A
HPE Metered 3Ph 11kVA/60309 5-wire 16A/230V Outlets (30) C13 (3) C19/Vertical INTL PDU	D9N57A
HPE Metered 3Ph 14.4kVA/CS8365C 40A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	D9N58A
HPE Metered 3Ph 16.6kVA/60309 32A-30A 5-wire 24A/230V Outlets (30) C13 (3) C19/Vertical NA/JP PDU	D9N61A
HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (24) C13 (3) C19/Vertical NA/JP PDU	D9N54A
HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	D9N59A
HPE Metered 3Ph 22kVA/60309 5-wire 32A/230V Outlets (12) C13 (12) C19/Vertical INTL PDU	D9N60A
HPE Metered 3Ph 22kVA/60309 5-wire 32A/230V Outlet (30) C13 (3) C19/Vertical INTL PDU	D9N56A
HPE Metered 3Ph 16.6kVA/60309 32A-30A 5-wire 24A/230V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	D9N62A
HPE Metered 3Ph 19.9kVA/L22-30P 24A/277V Outlets (30) RF-203P-HP/Vertical NA PDU	D9N63A
HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (12) C13 (12)	G9Z07A

Additional Options

	C19/Vertical NA/JP PDU	
	HPE Metered 3Ph 22kVA/60309 5-wire WT 32A/230V Outlets (12) C13 (12) C19/Vertical INTL PDU	G9Z08A
	HPE Environmental Sensor for Remote Monitored PDUs	
	HP Environmental Sensor for Remote Monitored and Managed PDUs	E2D53A
	NOTE: Please see the QuickSpecs for additional information: https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04229509 (Worldwide)	
HPE Intelligent Power Distribution Units (iPDU)	**iPDU Core Units**	
	HPE Intelligent Modular 4.9kVA/L6-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF520A
	HPE Intelligent Modular 8.3kVA/CS8265C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF521A
	HPE Intelligent Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF522A
	HPE Intelligent Modular 3Ph 14.4kVA/CS8365C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU	AF533A
	HPE Intelligent Modular 3Ph 17.3kVA/60309 60A 4-wire 48A/208V (6) C19/Horizontal NA/JP PDU	AF523A
	HPE Intelligent Modular 3Ph 11kVA/L22-20P 16A/240V Outlets (6) C19/Horizontal NA/JP PDU	AF900A
	HPE Intelligent Modular 3Ph 17.3kVA/60309 30A 5-wire 24A/240V (6) C19/Horizontal NA/JP PDU	AF901A
	HPE Intelligent Modular 7.3kVA/60309 3-wire 32A/230V Outlets (6) C19/Horizontal INTL PDU	AF525A
	HPE Intelligent Modular 3Ph 11kVA/60309 5-wire 16A/230V Outlets (6) C19/Horizontal INTL PDU	AF526A
	HPE Intelligent Modular 3Ph 22kVA/60309 5-wire 32A/230V Outlets (6) C19/Horizontal INTL PDU	AF527A
	HPE Intelligent Modular 3Ph 17.3kVA/IEC 60309 60A 4-wire 48A/208V (12) C19/Horizontal NA/JP PDU	AF535A
	HPE Intelligent Modular 3Ph 17.3kVA/IEC 60309 30A 5-wire 24A/240V (12) C19/Horizontal NA/JP PDU	AF537A
	HPE Intelligent Modular 3Ph 22kVA/60309 5-wire 32A/230V Outlets (12) C19/Horizontal INTL PDU	AF538A

Additional Options

	iPDU Kits with Standard Extension Bars	
	HPE Intelligent Modular 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (6) C19/Horizontal NA/JP PDU	AF531A
	HPE Intelligent Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (20) C13 (6) C19/Horizontal NA/JP PDU	AF532A
	HPE Intelligent Modular 7.3kVA/60309 3-wire 32A/230V Outlets (6) C19/Horizontal INTL PDU Kit	AF534A
	iPDU Extension Bars	
	HPE 5xC13 Intelligent PDU Extension Bar G2 Kit	AF547A
	HPE 5xC13 Outlets Power and UID LEDs Pair Standard Extension Bar	AF528A
	NOTE: Please see the QuickSpecs for Technical Specifications and additional information: https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04123329 (Worldwide)	
HPE Managed Power Distribution Units (maPDU)	**Half Height Models**	
	HPE Metered Switched 3.6kVA/60320 C20 Detachable 16A/230V Outlets (7) C13 (1) C19/Vertical WW PDU	H8B49A
	Full Height Models	
	HPE Metered Switched 2.8kVA/L5-30P 24A/120V Outlets (24) 5-20R /Vertical NA/JP PDU	H8B48A
	HPE Metered Switched 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (4) C19/Vertical NA/JP PDU	H8B50A
	HPE Metered Switched 7.3kVA/60309 3-wire 32A/230V Outlets (20) C13 (4) C19/Vertical INTL PDU	H8B51A
	HPE Metered Switched 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13 (6) C19/Vertical NA/JP PDU	H8B52A
	HPE Metered Switched 3Ph 8.6kVA/L21-30P 24A/208V Outlets (20)C13 (3)C19 (1)5-20R/Vertical NA/JP PDU	H8B53A
	HPE Metered Switched 3Ph 11kVA/60309 5-wire 16A/230V Outlets (21) C13 (3) C19/Vertical INTL PDU	H8B54A
	HPE Metered Switched 3Ph 14.4kVA/CS8365C 40A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	H8B55A
	HPE Metered Switched 3Ph 17.3kVA/60309 4-wire 48A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU	H8B56A
	NOTE: Please see the QuickSpecs for Technical Specifications and additional	

Additional Options

	information: https://www.hpe.com/h20195/v2/GetHtml.aspx?docname=c04376673 (Worldwide)	
HPE Rack Options	**HPE Location Discovery Services**	
	HPE Location Discovery Services LCD8500 Kit	TL052A
	NOTE: Please see the HPE Location Discovery Services QuickSpecs for information on additional options and product specifications.	
	HPE LCD8500 1U Rackmount Console Kit Models	
	HP LCD8500 1U US Rackmount Console Kit	AF630A
	HP LCD8500 1U UK Rackmount Console Kit	AF631A
	HP LCD8500 1U DE Rackmount Console Kit	AF632A
	HP LCD8500 1U FR Rackmount Console Kit	AF633A
	HP LCD8500 1U JP Rackmount Console Kit	AF642A
	HP LCD8500 1U RU Rackmount Console Kit	AF643A
	HP LCD8500 1U INTL Rackmount Console Kit	AF644A
	HP LCD8500 1U US TAA Rackmount Console Kit	AF645A
	HPE LCD8500 1U Rackmount Console Kit Options	
	HP Kit LCD 1.83m Latch Display Port Cable	G7T29A
	HPE Rack LED Light Kit	BW939A
	NOTE: Please see the HPE Rack Console QuickSpecs for information on additional options and product specifications.	
	HPE USB Keyboard and Mouse	
	HPE USB US Keyboard/Mouse Kit	631341-B21
	HPE USB PT Keyboard/Mouse Kit	672097-133
	HPE USB CZ Keyboard/Mouse Kit	672097-223
	HPE USB FI Keyboard/Mouse Kit	672097-353
	HPE USB AP/INTL Keyboard/Mouse Kit	672097-373
	HPE USB INTL Keyboard/Mouse Kit	672097-B33
	HPE USB IN Keyboard/Mouse Kit	672097-D63
	HPE USB KR Keyboard/Mouse Kit	672097-KD3
	HPE USB UK Keyboard/Mouse Kit	631344-B21
	HPE USB FR Keyboard/Mouse Kit	631346-B21
	HPE USB ES Keyboard/Mouse Kit	631348-B21
	HPE USB DE Keyboard/Mouse Kit	631358-B21

Additional Options

	HPE USB JP Keyboard/Mouse Kit	631360-B21
	HPE USB IT Keyboard/Mouse Kit	631362-B21
	HPE USB CN Keyboard/Mouse Kit	631364-B21
	HPE USB AE Keyboard/Mouse Kit	638212-B21
	HPE USB RU Keyboard/Mouse Kit	638214-B21
	HPE USB TR Keyboard/Mouse Kit	672097-143
	HPE USB SE Keyboard/Mouse Kit	672097-103
	HPE USB CH Keyboard/Mouse Kit	672097-113
	NOTE: Please see the HPE USB Keyboard and Mouse QuickSpecs for information on additional options and product specifications.	
HPE USB and SD Options	**HPE Flash Media Kits for USB Drives**	
	HPE 8GB USB Enterprise Mainstream Flash Media Drive Key Kit	737953-B21
	HPE Enterprise Mainstream Flash Media Kits for Memory Cards	
	HPE 8GB microSD Enterprise Mainstream Flash Media Kit	726116-B21
	NOTE: Please see the HPE Flash Media Kits QuickSpecs for information on additional options and product specifications.	
HPE Pointnext operational services	**Proactive Care**	
	HPE 3 year Proactive Care 24x7 ML10v2 Service	U0SC5E
	HPE 3 year Proactive Care 24x7 with DMR ML10v2 Service	U0SC6E
	HPE 3 year Proactive Care 24x7 with CDMR ML10v2 Service	U0SC7E
	Foundation Care	
	HPE 3 year Foundation Care Next business day ML10v2 Service	U2GU0E
	HPE 3 year Foundation Care Next business day with DMR ML10v2 Service	U2GU1E
	HPE 3 year Foundation Care Next business day with CDMR ML10v2 Service	U2GU2E
	HPE 3 year Foundation Care 24x7 ML10v2 Service	U2GU3E
	HPE 3 year Foundation Care 24x7 wDMR ML10v2 Service	U2GU4E
	HPE 3 year Foundation Care 24x7 wCDMR ML10v2 Service	U2GU5E
	Installation Services	
	NOTE: Reduce the time required to get your system up and running and help minimize disruptions to your business.	
	HPE Install ProLiant ML110 Service	U4444E

Additional Options

NOTE: For more information, customer/resellers can contact:
http://www.hp.com/services/carepack

Memory

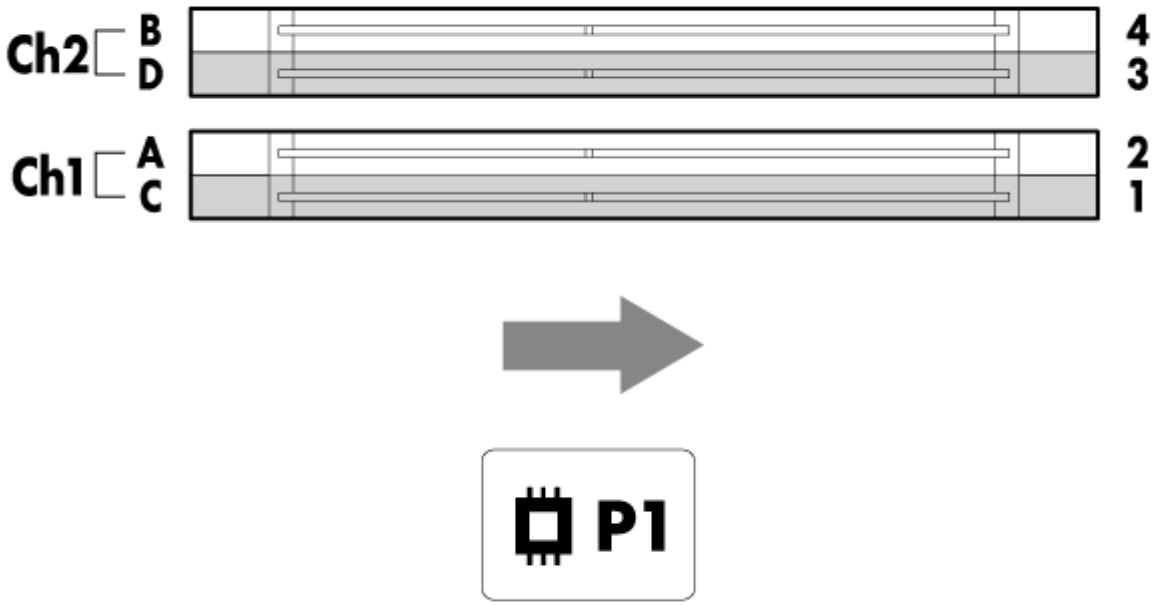
NOTE: Memory configurations listed do not apply to "Factory Integrated Models".

HPE SmartMemory

New HPE SmartMemory now provides additional protection for your servers. With HPE Authentication it can verify that you have true HPE Qualified Memory in your HPE ProLiant Gen8 server.

DDR3 memory population guidelines

For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool:
http://www.hp.com/go/ddr3memory-configurator



General Guidelines:

- The HPE ProLiant ML10 v2 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
- Different types of processors have different types of memory support.
- Support for single/dual-rank 1333/1600 MT/s ECC UDIMM (unbuffered DIMMS)
- The server supports up to 32GB (4 x 8-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

ML10 v2 Supported Memory Bandwidth and Capacity

DIMM Type	Unbuffered with ECC DIMMs (UDIMMs)		
DIMM Rank		Single Rank (1R)	Dual Rank (2R)

Memory

DIMM Capacity				4GB	4GB	4GB	8GB	8GB	8GB
DIMM Native Speed (MT/s)				1333	1600	1600	1333	1600	1600
Voltage				LV	Std	LV	LV	Std	LV
SLOTS THAT CAN BE POPULATED									
4 slot servers				4	4	4	4	4	4
MAXIMUM CAPACITY (GB)*									
				16	16	16	32	32	32
POPULATED DIMM SPEED (MT/s)									
1 DIMM Per Channel				1333	1600	1600	1333	1600	1600
2 DIMM Per Channel				1333**	1600	1600	1333**	1600	1600

NOTE: Memory speed is a function of the processor QPI bus speed. To realize the performance memory capabilities listed above HPE SmartMemory is required.
*** Maximum capacity will vary based on individual server platform qualification schedule.**
**** For HPE SmartMemory, UDIMM is supported at 2DPC@1333 at 1.35V. Third party memory may only support up to 2DPC@1066 at 1.5V.**

Memory		**Slot**			
		DIMM1C	**DIMM2A**	**DIMM3D**	**DIMM4B**
Standard (Performance Model)	**8GB**	Empty	8GB	Empty	Empty
Maximum	**32GB**	8GB	8GB	8GB	8GB

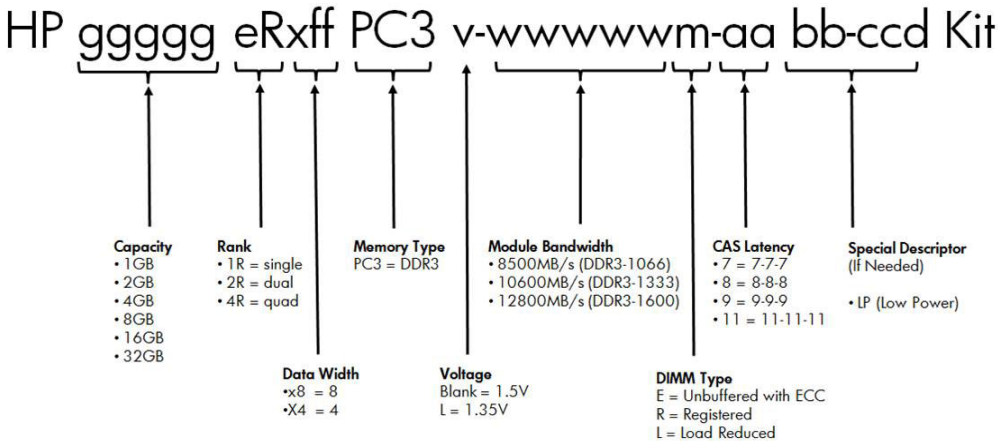
Memory Speed by Processor Model	
Processor Models	Supported Memory Speeds
E3-1220v3, E3-1230v3, E3-1240v4, E3-1270v3	1600/1333

NOTE: Capacity references are rounded to the common Gigabyte values.

- **2GB = 2048MB**
- **4GB = 4096MB**
- **8GB = 8192MB**

DDR3 memory options part number decoder

Memory



Following are memory options available from Hewlett Packard Enterprise:

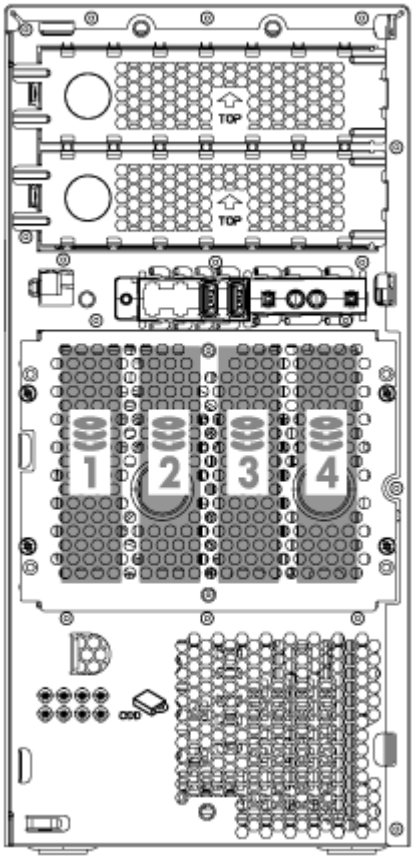
HPE Memory

Unbuffered with ECC DIMMs (UDIMMs)

HPE 4GB (1x4GB) Dual Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit	669322-B21
HPE 4GB (1x4GB) Single Rank x4 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit	820077-B21
HPE 8GB (1x8GB) Dual Rank x8 PC3- 12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit	669324-B21
HPE 8GB (1x8GB) Dual Rank x8 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit	815371-B21

NOTE: All DDR3 memory option kits consist of one DIMM per kit. For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool: http://www.hp.com/go/ddr3memory-configurator.

Storage



1 - 4 Four-bay LFF drive model

Technical Specifications

System Unit	**Tower Dimensions** (H x W x D) (with feet/bezel)	14.5.x 6.89 x 18.71 in (36.82 x17.5 x 47.52 cm)	
	Tower Weight (approximate)	Maximum (all hard drives, power supplies, and processors installed)	33.51 lb (15.20 kg)
		Minimum (one hard drive, power supply, and processor installed)	23.81 lb (10.80 kg)
	Input Requirements (per power supply)	Rated Line Voltage	100 to 240 VAC
		Rated Input Current	6 Amps
		Rated Input Frequency	47 to 63 Hz
		Rated Input Power	440W at 100 V AC input 440W at 200V AC input
	BTU Rating	Maximum	460W - 1773 BTU / hr (at 120 VAC), 1715 (at 240 VAC)
	Power Supply Output (per power supply)	Rated Steady-State Power	350 W (at 100 VAC), 350 W (at 200 VAC)
		Maximum Peak Power	350 W (at 100 VAC), 350 W (at 200 VAC)
	System Inlet Temperature	Operating	0° to 40°C (32° to 104°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 65°C (-22° to 149°F). Maximum rate of change is 20°C/hr (36°F/hr).
	Relative Humidity (non-condensing)	Operating	10 to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.
		Non-operating	0 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
	Altitude	Operating	3048 m (10,000 ft). This value may be limited by the type and number of options installed. 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)	

Technical Specifications

		and declared in accordance with ISO 9296 (ECMA 109). Idle **L** WAd 4.2 B **L** pAm 27dB-A Operating **L** WAd 4.2 B **L** pAm 27dB-A **NOTE: The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.**
	Emissions Classification (EMC)	**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 B120i Controller	**Dimensions**	Embedded
	Disk Drive and Enclosure Interface - Transfer rate	Up to 6Gb/s SATA (Serial ATA)
	Connectors	6 internal SATA connectors
	Server Interface	x4 PCIe 2.0
	SATA Speed	6Gb/s SATA links
	Cache Memory	Zero Memory RAID has no cache memory
	Logical Drives Supported	Up to 8 logical volumes (6 physical drives)
	Host Memory Addressing	64-bit, supporting greater than 4GB server memory space
	Hot Plug Support	Yes
	RAID Support	RAID 0 (Striping), RAID 1 (Mirroring) RAID 1+0 (Striping & Mirroring)
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 Energy Efficient Ethernet (EEE) compliant with IEEE Std 802.3az (default is disabled)
	Data Transfer Method	PCI-e, two lanes (x2)
	Controller	BCM5720
	Network Transfer Rate	10Base-T (Half-Duplex) 10 Mb/s per port, 20 Mb/s Combined 10Base-T (Full-Duplex) 20 Mb/s per port, 40 Mb/s Combined

Technical Specifications

		100Base-TX (Half-Duplex)	100 Mb/s per port, 200 Mb/s Combined
		100Base-TX (Full-Duplex)	200 Mb/s per port, 400 Mb/s Combined
		1000Base-TX (Half-Duplex)	1000Mb/s per port, 2000 Mb/s Combined
		1000 Base-TX (Full-Duplex)	2000Mb/s per port, 4000 Mb/s Combined
	Connector	RJ-45	
	Cable Support	10Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)
		10/100/1000Base-TX	Category 5 or better; up to 328 ft (100 m)
Environment-friendly Products and Approach	**End-of-life Management and Recycling**	Hewlett Packard Enterprise offers end-of-life HPE 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 Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.	

Summary of Changes

Date	Version History	Action	Description of Change
23-Oct-2017	From Version 7 to 8	Changed	Care Pack naming and Service and Support- Parts and Materials updated.
17-Dec-2015	From Version 6 to 7	Added	Smart Buy models were added to the NA version.
01-Dec-2015	From Version 5 to 6	Added	New Hard Drives offering was added to HPE Hard Drives section.
		Changed	Product images were updated.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
28-Sep-2015	From Version 4 to 5	Changed	Pre-Configured Models section was revised.
10-Jun-2015	From Version 3 to 4	Added	New options added to HPE Rack Options (Worldwide version only).
		Changed	Pre-Configured Models section was revised (Worldwide version only).
01-Jun-2015	From Version 2 to 3	Added	Added HPE Unique Options section. HPE 4GB (1x4GB) Single Rank x4 PC3-12800E (DDR3-1600) Unbuffered CAS-11 Memory Kit was added to HPE Memory. HPE KVM Switches section was added to QuickSpecs.
		Changed	Upgradeability, Maximum Internal Storage, HPE Tape Backup, HPE Disk Backup, HPE Disk Storage Systems, HPE Uninterruptible Power Systems (UPS), HPE Basic Power Distribution Units (bPDU), HPE Remote Monitored Power Distribution Units (mPDU), HPE Intelligent Power Distribution Units (iPDU), HPE Pointnext operational services, and HPE Memory sections were revised.
06-Apr-2015	From Version 1 to 2	Added	New models added to Pre-configured Models in the WW version only.
		Changed	Pre-configured Models and HPE Disk Backup were revised.
		Removed	HPE Unique Options was removed from the QuickSpecs.

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

c04567801 - 15220 - Worldwide - V8 - 23-October-2017

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