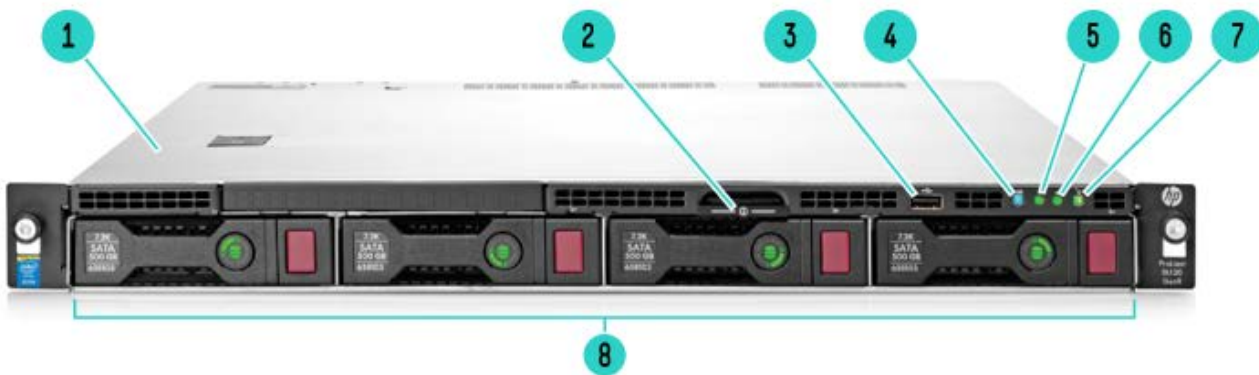


### Overview

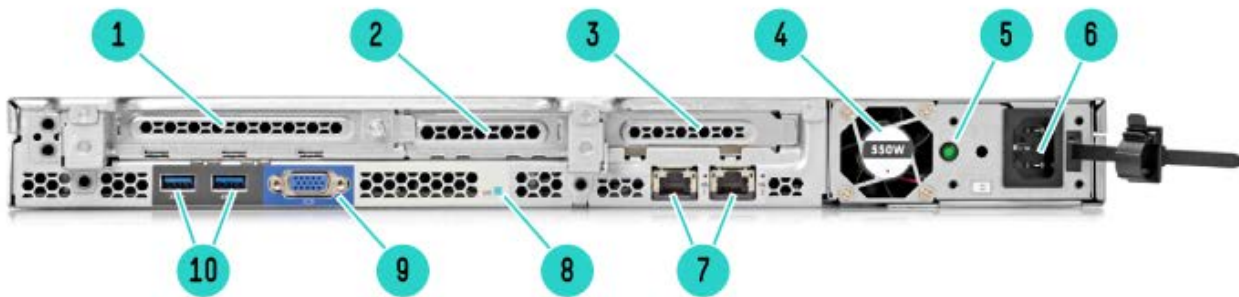
### HPE ProLiant DL120 Generation9 (Gen9)

The HPE ProLiant DL120 Gen9, an enterprise class design packed in a dense 1U/1-socket form factor, powered by an Intel® Xeon® E5-2600 v3 series processor. Offering a combination of performance, redundancy, expandability as compared to the traditional 1P servers making the DL120 Gen9 ideal for the growing needs of virtualization and general purpose workloads.



### Front View

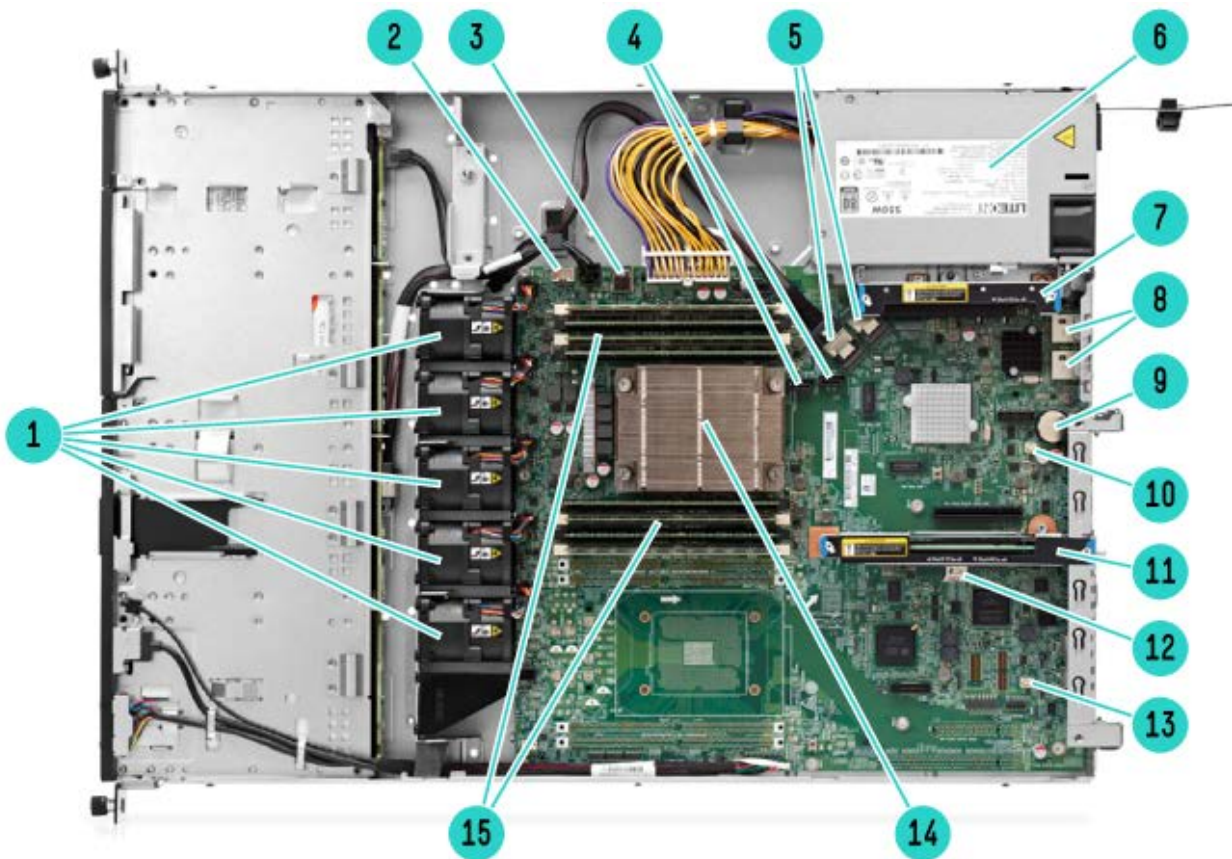
1. Access Panel
2. Serial label pull tab
3. USB 2.0 connector
4. UID LED
5. Health LED
6. NIC status LED
7. Power On/Standby button and system power LED
8. 4LFF drive



### Rear view

1. Slot 3 PCIe3 x8 (8, 4, 1)  
**NOTE: Slot 3 supports PCIe x16 (16, 8, 4, 1) if the GPU riser cage is installed.**
2. Slot 2 PCIe3 x8 (8, 4, 1)
3. Slot 1 PCIe3 x16 (16, 8, 4, 1)
4. Non-hot-plug power supply
5. Power supply power LED
6. Power supply power connection
7. Embedded 2x1GbE network adapter
8. UID LED
9. Video connector
10. USB 3.0 connectors

## Overview



### Internal View

- |                                        |                                                                                  |
|----------------------------------------|----------------------------------------------------------------------------------|
| 1. Hot swappable fans (up to 5)        | 9. System Battery                                                                |
| 2. HPE Smart Storage Battery connector | 10. Storage backup power connector for PCIe slots 1-2                            |
| 3. Internal USB 3.0                    | 11. Secondary PCIe riser slot                                                    |
| 4. SATA connector                      | 12. MicroSD slot                                                                 |
| 5. Mini-SAS connectors                 | 13. Storage backup power connector for PCIe slot 3                               |
| 6. Power supply bay                    | 14. Processor heat sink (processor with HPE Smart Socket placed below heat sink) |
| 7. Primary PCIe riser board connector  | 15. DDR4 DIMM slots (up to 8)                                                    |
| 8. Embedded 2x1GbE network adapter     |                                                                                  |

### What's New

- New HDD offering.

## Standard Features

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

<b>Processor</b>	<b>Model</b>	<b>CPU frequency</b>	<b>Cores</b>	<b>L3 Cache</b>	<b>Power</b>	<b>QPI</b>	<b>DDR4 Hz</b>
One of the following depending on model	E5-2699v3	2.3GHz	18	45MB	145W	9.6GT/s	2133
	E5-2698v3	2.3GHz	16	40MB	135W	9.6GT/s	2133
	E5-2695v3	2.3GHz	14	35MB	120W	9.6GT/s	2133
	E5-2660v3	2.6GHz	10	25MB	105W	9.6GT/s	2133
	E5-2650v3	2.3GHz	10	25MB	105W	9.6GT/s	2133
	E5-2650Lv3	1.8GHz	12	30MB	65W	9.6GT/s	2133
	E5-2640v3	2.6GHz	8	20MB	90W	8.0GT/s	1866
	E5-2630v3	2.4GHz	8	20MB	85W	8.0GT/s	1866
	E5-2630Lv3	1.8GHz	8	20MB	55W	8.0GT/s	1866
	E5-2623v3	3.0GHz	4	10MB	105W	8.0GT/s	1866
	E5-2620v3	2.4GHz	6	15MB	85W	8.0GT/s	1866
	E5-2609v3	1.9GHz	6	15MB	85W	6.4GT/s	1600
	E5-2603v3	1.6GHz	6	15MB	85W	6.4GT/s	1600
	E5-1650v3	3.5GHz	6	15MB	140W	0.0GT/s	2133
	E5-1620v3	3.5GHz	4	10MB	140W	0.0GT/s	2133

### Chipset

Intel® C610 Series Chipset

One of the following depending on model  
Intel® E5-2600v3 Processor Family

**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 2.3) 2GB NAND

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

### Memory

Type:

One of the following depending on model  
HPE SmartMemory  
DDR4 Registered (RDIMM) or Load Reduced (LRDIMM)

DIMM Slots Available 8 (8 DIMM slots per processor, 4 channels per processor, 2 DIMMs per channel)

Maximum Capacity (LRDIMM) 256GB (8 x 32GB LRDIMM @2133MHz)

Maximum Capacity (RDIMM) 256GB (8 x 32GB RDIMM @2133MHz)

### Memory Protection

Advanced ECC

Advanced ECC uses single device data correction to detect and correct single and all multibit error that occurs within a single DRAM chip.

## Standard Features

One of the following Online spare depending on model

Memory online spare mode detects a rank that is degrading and switches operation to the spare rank.

### Network Controller

HPE Ethernet 1Gb 2-port Adapter

The HPE ProLiant DL120 Gen9 server offers the customer a dual-port NIC standard with the option to upgrade with a variety of networking options.

### Expansion Slots

CPU PCIe riser slots

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
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1	PCIe 3.0	x16	x16		Low profile	
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**NOTE:** Bus Width data indicates the number of physical electrical lanes running to the connector.

FlexibleLOM riser slots (Option 1)

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Device Number	Form Factor	Notes
-------------------	------------	-----------	-----------------	------------	---------------	-------------	-------

2	PCIe 3.0	x8	x8			Low profile	
3	Flexible LOM	x8	x8			Flexible LOM	can only be used for flexibleLOMs

CPU riser PCIe slots (Option 2)

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Device Number	Form Factor	Notes
-------------------	------------	-----------	-----------------	------------	---------------	-------------	-------

2	PCIe 3.0	x8	x8			Low profile	
3	PCIe 3.0	x8	x8			Full-height, half-length slot	

GPU riser (Option 3)

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Device Number	Form Factor	Notes
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3	PCIe 3.0	x16	x16			Full-height, full-length slot	GPU
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### Storage Controller

Entry Models

HPE Dynamic Smart Array B140i Controller

One of the following depending on model

Base Models

HPE H240 FIO Smart Host Bus Adapter

**NOTE:** B140i provides support for up to 8 SATA drives and supports RAID 0, 1, 1+0 & 5.

**NOTE:** H240 provides support for up to 8 SAS/SATA drives and supports RAID 0, 1, 1+0 & 5.

### Internal Storage Devices

Optical Drives

Optional: DVD-ROM, DVD-RW

Hard Drives

None ship standard

One of the following depending on model

Hard Drive Bays

8 SFF drive bays total with Optical Bay

4 LFF drive bays total with Optical bay

**NOTE:** HPE ProLiant DL120 Gen9 server offers both SFF and LFF versions. The Optical Drive bay is available with both models.

**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 Gen9 Hard Drive Blank Kit or P/N 666986-B21: HPE LFF Gen9 Hard Drive Blank Kit.

## Standard Features

These part numbers for single HDD blanks below are also provided should the customer require replacement HDD blanks for their server.

Maximum Internal Storage		CAPACITY	CONFIGURATION
One of the following depending on model	Hot Plug SFF SAS	9.6TB	8x1.2TB
	Hot Plug SFF SATA	8.0TB	8x1TB
	Hot Plug LFF SAS	32.0TB	4x8TB
	Hot Plug LFF SATA	32.0TB	4x8TB
	Hot Plug SFF SAS SSD	12.8TB	8x1.6TB
	Hot Plug SFF SATA SSD	30.72TB	8x3.84TB
	Hot Plug LFF SATA SSD	15.36TB	4x3.84TB

Power Supply	
One of the following depending on model	HPE 550W FIO Power Supply
	HPE 800W/900W Gold AC Power Input Module

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 550W FIO Power Supply is the standard, non-redundant AC power supply option for most HPE ProLiant Gen9 Essential servers. It features Silver-level (89%) certified power efficiency with a set of features optimized for the Gen9 Essential-series rack and tower servers.

The HPE 800W Gold (Redundant)/900W (Non-Redundant) AC Power Input Module with Power Backplane can be configured to support power redundancy in ProLiant servers that offer only a single power supply bay, 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. Each power backplane option can support up to two (2) hot-plug AC power input modules.

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.

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

System Fans		Non-redundant	Redundant
One of the following depending on model	1P model	3 fans	5 fans
		<b>NOTE:</b> Redundant fan option kit (P/N: 765513-B21) can be bought separately if redundancy is required with configurations.	
		<b>NOTE:</b> Fan redundancy is not supported for processors exceeding 105W.	

Interfaces	
Video	1 (Vaux Support)

## Standard Features

USB	4 USB ports (standard) Front: 1xUSB 2.0 std Rear: 2xUSB 3.0 Internal: 1x USB 3.0
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Micro SD Slot	1 Micro SD
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**NOTE:** The SD slot is not a hot-pluggable device. Customers should not attempt to plug an SD card into the SD slot while the server is powered.

LOM Network Ports	2x1GbE ports
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### Operating Systems and Virtualization Software Support for ProLiant Servers

**Microsoft Windows Server**  
**Red Hat Enterprise Linux (RHEL)**  
**SUSE Linux Enterprise Server (SLES)**  
**VMware**

**NOTE:** For more information on Hewlett Packard Enterprise Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server, please visit our Support Matrix at: <http://www.hp.com/go/ossupport> and our driver download page <http://www.hp.com/support/DL120Gen9>.

### Upgradeability

FlexibleLOM slot for 1Gigabit or 10 Gigabit Ethernet or QDR/FDR InfiniBand networking options

One of the following depending on model

- Up to 8 SFF Hard Drive Bays; or 4 LFF Hard Drive Bays
- Up to 8 DIMM slots
- Redundant Power Supply
- Optical Drive Bay (8 SFF/4 LFF)

### Industry Standard Compliance

ACPI 2.0b Compliant  
PCIe 3.0 Compliant  
PXE Support  
WOL Support  
Microsoft® Logo certifications  
USB 3.0 Support  
ASHRAE A3

**NOTE:** Refer to technical specifications section for more details.

### Graphics

Integrated Matrox G200eH2 video standard

- 1280 x 1024 (32 bpp)
- 1920 x 1200 (16 bpp)

### HPE Server UEFI/Legacy ROM

#### HPE Server UEFI /Legacy ROM

Unified Extensible Firmware Interface (UEFI) is an industry standard that provides better manageability and more secured configuration 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.hp.com/go/proliantuefi/docs>.

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

## Standard Features

- 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 HPE RESTful API.
- PXE boot support for IPv6 networks
- Boot support for option cards that only support a UEFI option ROM

For more information please visit <http://www.hp.com/go/proliant/uefi>.

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

**NOTE:** HPE Legacy FIO Mode Setting (758959-B22) can be selected to configure the system in Legacy mode in the factory.

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<b>Form Factor</b>	1U Rack form factor
One of the following depending on model	8SFF and 4LFF version: 1.69" (4.29cm) Height x 17.11" (43.46cm) Width x 23.9" (60.7cm) Length

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<b>Embedded Management</b>	<b>HPE Integrated Lights-Out (HPE iLO)</b>	Monitor your servers for ongoing management, service alerting, reporting and remote management with HPE iLO. Learn more at <a href="http://www.hp.com/go/ilo">http://www.hp.com/go/ilo</a> .
	<b>UEFI</b>	Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI). Learn more at <a href="http://www.hp.com/go/ProLiant/uefi">http://www.hp.com/go/ProLiant/uefi</a> .
	<b>RESTful API</b>	A single programmatic web interface that allows you to manage and monitor your HPE ProLiant server using basic HTTP operations (GET, PUT, POST, DELETE and PATCH). RESTful API for iLO 4 conforms to the Redfish 1.0 DMTF standard (iLO firmware version v2.30 or higher required for Redfish conformance). Learn more at <a href="http://www.hp.com/go/restfulapi">http://www.hp.com/go/restfulapi</a> .
	<b>Intelligent Provisioning</b>	Provision servers by discovering and deploying 1 to few servers with Intelligent Provisioning. Learn more at <a href="http://www.hp.com/go/intelligentprovisioning">http://www.hp.com/go/intelligentprovisioning</a> .
	<b>Embedded Remote Support</b>	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 an HPE Authorized Partner for

## Standard Features

automated phone home support. Learn more at <http://www.hp.com/go/insightonline/info>.

**NOTE:** For more information, visit: <http://www.hp.com/go/ilo> or HPE iLO Management Engine technologies whitepaper.

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<b>Server utilities</b>	<b>Smart Update</b>	Optimize firmware and driver updates with Smart Update solutions including Smart Update Manager (SUM) and Service Pack for ProLiant (SPP). Learn more at <a href="http://www.hp.com/go/smartupdate">http://www.hp.com/go/smartupdate</a> .
	<b>HPE Systems Insight Manager (HPE SIM)</b>	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 SUM to provide quick and seamless firmware updates. Learn more at <a href="http://www.hp.com/go/sim">http://www.hp.com/go/sim</a> .
	<b>Scripting Tool Kit and Windows PowerShell</b>	Provision 1 to many servers using your own scripts to discover and deploy them with Scripting Tool Kit for Windows and Linux or Scripting Tools for Windows PowerShell. Learn more at <a href="http://www.hp.com/go/ProLiantSTK">http://www.hp.com/go/ProLiantSTK</a> or <a href="http://www.hp.com/go/powershell">http://www.hp.com/go/powershell</a> .
	<b>RESTful Interface Tool</b>	Scripting tool to provision servers using iLO 4 RESTful API to discover and deploy servers at scale. Learn more at <a href="http://www.hp.com/go/resttool">http://www.hp.com/go/resttool</a> .
	<b>HPE iLO Mobile Application</b>	Enables the ability to access, deploy, and manage your server anytime from anywhere from select smartphones and mobile devices. For additional information please visit: <a href="http://www.hp.com/go/ilo/mobileapp">http://www.hp.com/go/ilo/mobileapp</a> .
	<b>HPE Insight Online</b>	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 <a href="http://www.hp.com/go/insightonline/info">http://www.hp.com/go/insightonline/info</a> .

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<b>Security</b>	Power-on password Serial interface control Administrator's password TPM 1.2 UEFI
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<b>Warranty</b>	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
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## Standard Features

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 HPE 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

<b>Embedded Management</b>	<b>iLO Essentials</b>	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 <a href="http://www.hp.com/go/iLO/essentials">http://www.hp.com/go/iLO/essentials</a> .
	<b>iLO Scale-Out</b>	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. 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 <a href="http://www.hp.com/go/iLO/scale-out">http://www.hp.com/go/iLO/scale-out</a> .
	<b>iLO Advanced</b>	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 <a href="http://www.hp.com/go/ioloadvanced">http://www.hp.com/go/ioloadvanced</a> .

<b>Server Management</b>	<b>HPE Insight Control</b>	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 <a href="http://www.hp.com/go/insightcontrol">http://www.hp.com/go/insightcontrol</a> .
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<b>Rack and Power Infrastructure</b>	HPE Rack and Power Infrastructure products and services create highly efficient and intelligent solutions for existing or new IT data centers. HPE Rack and Power infrastructure solutions – rack infrastructure, power protection and management, performance optimized data centers (PODs) – are the foundation you are looking for to help secure your long-term IT success. These products are designed to help you react to changes in the industry. They deliver efficient, easy-to-use capabilities to manage, monitor, deploy and provision infrastructure from entry to enterprise. As an industry leader, Hewlett Packard Enterprise is uniquely positioned to address the key concerns of power, cooling, cable management and system access. Learn more at <a href="#">HPE Rack and Power Infrastructure</a> .
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<b>High Performance Clusters</b>	HPE Cluster Platforms are specifically engineered, factory-integrated large-scale ProLiant clusters optimized for High Performance Computing, with a choice of servers, networks and software. Operating system options include specially priced offerings for Red Hat Enterprise Linux and SUSE Linux Enterprise Server, as well as Microsoft Windows HPEC Server. A Cluster Platform Configurator simplifies ordering. <a href="http://www.hp.com/go/clusters">http://www.hp.com/go/clusters</a> .
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<b>HPC Interconnects</b>	<b>NOTE:</b> 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: <a href="http://www.hp.com/techservers/clusters/ucp/index.html">http://www.hp.com/techservers/clusters/ucp/index.html</a> .
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## Optional Features

**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.
- **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>.

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**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>.

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## 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 Care Pack Services**

HPE Care Pack 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.

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### 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 HPE. 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. <http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf>

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### Standard Care Package

#### **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 HPE server. Simplify your support experience and make Hewlett Packard Enterprise your first call for hardware or software questions.

<http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en>

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### Related Services

#### **HPE ProLiant Server Hardware Installation**

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

<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 HPE servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed. For more information on Factory Express

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## Service and Support

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 Care Pack services can be found at: <http://www.hp.com/go/cpc>.

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### 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>

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### 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 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 Care Pack or Hewlett Packard Enterprise contractual support agreement.

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

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### 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 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.

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## Service and Support

**For more information**

To learn more on HPE ProLiant 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

	<b>Entry Models</b>	
<b>[SKU Number]</b>	777424-B21	777425-B21
<b>Model Name</b>	HP ProLiant DL120 Gen9 E5-2603v3 4GB-R B140i 4LFF 550W PS Entry Server	HP ProLiant DL120 Gen9 E5-2630v3 8GB-R H240 8SFF 550W PS Entry Server
<b>Processor</b>	Intel® Xeon® E5-2603v3	Intel® Xeon® E5-2630v3
<b>Number of Processors</b>	One	
<b>Memory</b>	4GB (1x4GB Registered DIMMs, 2133 MHz)	8GB (1x8GB Registered DIMMs, 2133 MHz)
<b>Network Controller</b>	HPE Embedded Dual Port 361i Adapter Network Interface	
<b>Storage Controller</b>	HPE Dynamic Smart Array B140i	HPE H240 Smart Host Bus Adapter
<b>Hard Drive</b>	None ship standard	
<b>Internal Storage</b>	4 LFF HDD Bays	8 SFF HDD Bays
<b>Optical Drive Bay</b>	1; (Optional: DVD-ROM, DVD-RW)	
<b>PCI-Express Slots</b>	1 PCIe LP standard/up to 3 PCIe slots (optional)	
<b>Power Supply</b>	(1) HPE 550W FIO Power Supply	
<b>Fans</b>	3 hot swap fans, non-redundant	
<b>Management</b>	iLO Management (standard), Intelligent Provisioning (standard), iLO Essentials (optional)	
<b>Form Factor</b>	Rack (1U), HPE Easy Install Rails	
<b>Warranty</b>	Server Warranty includes 3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response.	

## Smart Buy Models

<b>[SKU Number]</b>	788090-S01	788091-S01
<b>Model Name</b>	HP ProLiant DL120 Gen9 E5-2609v3 1.9GHz 6-core 8GB-R B140i 4LFF 550W PS USServer/S-Buy	HP ProLiant DL120 Gen9 E5-2620v3 2.4GHz 6-core 8GB-R H240 8SFF 550W PS USServer/S-Buy
<b>Processor</b>	Intel® Xeon® E5-2609v3	Intel® Xeon® E5-2620v3
<b>Number of Processors</b>	One	
<b>Memory</b>	8GB (1x8GB Registered DIMMs, 2133 MHz) <b>NOTE: DIMMs will operate at 1600MHz with this processor</b>	8GB (1x8GB Registered DIMMs, 2133 MHz) <b>NOTE: DIMMs will operate at 1866MHz with this processor</b>
<b>Network Controller</b>	HPE Embedded Dual Port 361i Adapter Network Interface	
<b>Storage Controller</b>	HPE Dynamic Smart Array B140i	HPE H240 Smart Host Bus Adapter
<b>Hard Drive</b>	None ship standard	
<b>Internal Storage</b>	4 LFF HDD Bays	8 SFF HDD Bays
<b>Optical Drive Bay</b>	None Included; (Optional: DVD-ROM, DVD-RW)	
<b>PCI-Express Slots</b>	1 PCIe LP standard/up to 3 PCIe slots (optional)	
<b>Power Supply</b>	(1) HPE 550W FIO Power Supply	
<b>Fans</b>	3 hot swap fans, non-redundant	
<b>Management</b>	Standard: iLO Management Optional: iLO Essentials, iLO Advanced, Insight Control	
<b>Form Factor</b>	Rack (1U), HPE Easy Install Rails	
<b>Warranty</b>	3-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response.	



## 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)

<b>CTO Server</b>	HP ProLiant DL120 Gen9 8SFF Configure-to-order Server	HP ProLiant DL120 Gen9 4LFF Configure-to-order Server	HP ProLiant DL120 Gen9 Non-hot Plug 4LFF Configure-to-order Server
<b>SKU Number</b>	777426-B21	777427-B21	777428-B21
<b>Processor</b>	1	1	1
<b>DIMM Slots</b>	8 DIMM slots for RDIMM, LRDIMM DDR4 Memory		
<b>Storage Controller</b>	HPE Dynamic Smart Array B140i		
<b>PCIe</b>	1 PCIe LP standard/up to 3 PCIe slots (optional)		
<b>Drive Cage</b>	8SFF Hot Plug	4LFF Hot Plug	4LFF Non Hot Plug
<b>Network Controller</b>	HPE Embedded Dual Port 361i Adapter Network Interface		
<b>Fans</b>	3 hot swap fans, non-redundant		
<b>Management</b>	iLO Management (standard), Intelligent Provisioning (standard), iLO Essentials (optional)		
<b>USB</b>	1 front, 1 internal, 2 rear		
<b>Ears</b>	HPE Thumbscrew Ears		

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

#### HPE Processors

##### Entry Processors – E5-2600v3 series Processors

HP DL120 Gen9 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) FIO Processor Kit	764005-L21
HP DL120 Gen9 Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) FIO Processor Kit	764007-L21

##### Entry Processors – E5-1600v3 series Processors

HP DL120 Gen9 Intel® Xeon® E5-1650v3 (3.5GHz/6-core/15MB/140W) FIO Processor Kit	783968-L21
HP DL120 Gen9 Intel® Xeon® E5-1620v3 (3.5GHz/4-core/10MB/140W) FIO Processor Kit	783968-L21

##### Base Processors – E5-2600v3 series Processors

HP DL120 Gen9 Intel® Xeon® E5-2620v3 (2.4GHz/6-core/15MB/85W) FIO Processor Kit	764009-L21
HP DL120 Gen9 Intel® Xeon® E5-2630v3 (2.4GHz/8-core/20MB/85W) FIO Processor Kit	764010-L21
HP DL120 Gen9 Intel® Xeon® E5-2640v3 (2.6GHz/8-core/20MB/90W) FIO Processor Kit	765566-L21
HP DL120 Gen9 Intel® Xeon® E5-2630Lv3 (1.8GHz/8-core/20MB/55W) FIO Processor Kit	765568-L21

## Configuration Information - Factory Integrated Models

HP DL120 Gen9 Intel® Xeon® E5-2623v3 (3GHz/4-core/10MB/105W) FIO Processor Kit 779926-L21

### Performance Processors – E5-2600v3 series Processors

HP DL120 Gen9 Intel® Xeon® E5-2650v3 (2.3GHz/10-core/25MB/105W) FIO Processor Kit 764012-L21

HP DL120 Gen9 Intel® Xeon® E5-2650Lv3 (1.8GHz/12-core/30MB/65W) FIO Processor Kit 765567-L21

HP DL120 Gen9 Intel® Xeon® E5-2698v3 (2.3GHz/16-core/40MB/135W) FIO Processor Kit 783973-L21

HP DL120 Gen9 Intel® Xeon® E5-2695v3 (2.3GHz/14-core/35MB/120W) FIO Processor Kit 783974-L21

HP DL120 Gen9 Intel® Xeon® E5-2699v3 (2.3GHz/18-core/45MB/145W) FIO Processor Kit 783972-L21

HP DL120 Gen9 Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/105W) FIO Processor Kit 764013-L21

**NOTE:** Only one processor is supported on the HPE ProLiant DL120 Gen9

**NOTE:** DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

**NOTE:** For the Intel® C600 Chipset E5-2600 series, the letter preceding the model number indicates the Product Line (E3, E5, E7); 2600x v#, 2 = number of CPUs in a Node, 6 is socket/segment designation, 00 = Processor SKU, x = L for low power SKUs and v# (not yet designated) = version number.

### HPE Memory

**NOTE:** Select one or more memory kits from below.

**NOTE:** LRDIMM, RDIMM are all distinct memory technologies and cannot be mixed within a server. The majority of ProLiant Gen9 servers support LRDIMM and RDIMM.

**NOTE:** HPE memory from previous generation servers are not qualified or warranted with this HPE ProLiant Server. HPE SmartMemory is required to realize the memory performance improvements and enhanced functionality listed in this document for Gen9.

**NOTE:** If only one processor is installed, only half of the total DIMM slots are available. When populating with two processors all DIMM slots are available.

**NOTE:** Kits described as LP include Low Power DIMMs. For more information on ProLiant Energy Efficient Features, see: <http://www.hp.com/go/proliant-energy-efficient>.

**NOTE:** Depending on the memory configuration and processor model, the memory speed may run at 2133MHz, 1866MHz, 1600MHz or 1333MHz. Please see Memory Population Table or the Online Memory Configuration Tool at: <http://www.hp.com/go/ddr4config>.

### Registered DIMMs (RDIMMs) for E5-2600v3 Series

HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit 726717-B21

HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit 726718-B21

HP 8GB (1x8GB) Dual Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit 759934-B21

HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit 726719-B21

HP 32GB (1x32GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit 728629-B21

### Load Reduced DIMMs (LRDIMMs) for E5-2600v3 Series

HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit 726720-B21

HP 32GB (1x32GB) Quad Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit 726722-B21

### HPE Standard Memory

HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Standard Memory Kit 803026-B21

HP 8GB (1x8GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Standard Memory Kit 803028-B21

## Configuration Information - Factory Integrated Models

**NOTE:** These are standard memory DIMMs with no SmartMemory features.

### HPE Power Supplies

**NOTE:** 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.hp.com/go/hppoweradvisor>.

**NOTE:** By selecting RPS Enablement Kit power options, mixing of power supplies in the same RPS enablement kit 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

#### HPE Entry-Level Power Supplies

HP 550W FIO Power Supply Kit 730941-B21

HP 800W Gold (Redundant)/900W (Non-Redundant) AC Power Input FIO Module 813534-B21

**NOTE:** HP Server RPS FIO Backplane Kit (P/N: 813535-B21) is required for this power supply.

**NOTE:** Up to two of these option kits can be installed in one system.

**NOTE:** With just one power supply module installed, up to 900W wattage is supported while with both power supply modules installed in RPS mode, up to 800W is supported.

HP Server Redundant Power Supply Backplane FIO Kit 813535-B21

**NOTE:** Required for RPS capability.

**NOTE:** The above power supply option is 80Plus Gold-certified with an efficiency rating of up to 92%. Each power backplane kit (813535-B21) can support up to two (2) AC power input modules (813534-B21). Power specifications and technical content for all HP Server power supplies can be found

at <http://www.hp.com/go/proliant/powersupply>.

**HPE I/O Expansion Options** HP DL60/120 Gen9 CPU1 Riser FIO Kit 765508-B21

**HPE Security Kits** HP DL120 Gen9 Quick Release Ear FIO Kit 787194-B21

HP DL120 Gen9 Thumbscrew Ear FIO Kit 787198-B21

## Step 3: Choose Additional Factory Integratable Options (only one of the following from each list unless otherwise noted)

### HPE Storage Controllers

**NOTE:** If not using the embedded B140i controller as primary controller, must select one of the following HP Storage Controllers noted below depending on CTO Server model selected in Step 1.

#### HPE Smart Array Controllers

HP Smart Array P440/4GB FBWC 12Gb 1-port Int FIO SAS Controller 761872-B21

**NOTE:** If HPE ProLiant DL120 Gen9 4LFF CTO Server (P/N: 777427-B21) or HPE ProLiant DL120 Gen9 8SFF CTO Server (P/N: 777426-B21) is selected in Step 1.

#### HPE Smart Host Bus Adapters

HP H240 12Gb 1-port Int FIO Smart Host Bus Adapter 761873-B21

**NOTE:** May be selected instead of embedded B140i controller.

#### HPE Cable Options

HP DL60/80/120 Gen9 4LFF Cable FIO Kit 777331-B21

**NOTE:** Must be selected with HPE ProLiant DL120 Gen9 4LFF CTO Server (P/N: 777427-B21) if using the embedded B140i controller as the primary storage controller

## Configuration Information - Factory Integrated Models

	HP DL120 Gen9 8SFF Smart Array B140i Cable FIO Kit	777415-B21
	<b>NOTE:</b> Must be selected with HPE ProLiant DL120 Gen9 8SFF CTO Server (P/N: 777426-B21) if using the embedded B140i controller as the primary storage controller	
<b>BIOS Mode</b>	HP Legacy FIO Mode Setting	758959-B22
	<b>NOTE:</b> If B140i is the primary storage controller, then this option cannot be selected.	
	<b>NOTE:</b> Selecting this option will change the default UEFI BIOS Setting into Legacy BIOS Setting.	
<b>Controller State</b>	HP Mfg FIO Enable HBA Mode Setting	792962-B21
	<b>NOTE:</b> Can only be selected with H240 FIO Smart Host Bus Adapter.	
	<b>NOTE:</b> If H240 is the primary controller then RAID is not allowed with this selection.	
	HP AHCI-Enable FIO Setting	801845-B21
	<b>NOTE:</b> If B140i is the primary controller then RAID is not allowed with this selection.	
<b>HPE Converged Infrastructure Management Software</b>	<b>HPE OneView Advanced (with HPE iLO Advanced)</b>	
	HP OneView for ProLiant DL Server incl 3yr 24x7 Supp FIO Bundle Physical 1 Svr Lic	E5Y43A
	<b>HPE OneView Advanced (without HPE iLO Advanced)</b>	
	HP OneView w/o iLO including 3yr 24x7 Support FIO 1 Server LTU	P8B31A
<b>HPE Insight Software</b>	<b>HPE Insight Control</b>	
	HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO License	C6N36A
	HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO E-LTU	C6N36ABE

### Step 4: Choose Additional Options for Factory Integration from Core and Additional Options Sections below

**CAUTION:** Hewlett Packard Enterprise recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation.

## Core 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.

<b>HPE Unique Options</b>	HP DL60/120 Gen9 FlexibleLOM Riser Kit	765509-B21
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### HPE Memory **Registered DIMMs (RDIMMs) for E5-2600v3 Series**

HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit	726717-B21
HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Standard Memory Kit	803026-B21
HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	726718-B21
HP 8GB (1x8GB) Dual Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit	759934-B21
HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Standard Memory Kit	803028-B21
HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	726719-B21
HP 32GB (1x32GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	728629-B21

### **Load Reduced DIMMs (LRDIMMs) for E5-2600v3 Series**

HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit	726720-B21
HP 32GB (1x32GB) Quad Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit	726722-B21

<b>HPE Optical Drives</b>	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 Drives **SAS Hot Plug SFF (2.5-inch) Enterprise (ENT) Drives**

HP 1.2TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	781518-B21
HP 1.2TB 6G SAS 10K rpm SFF (2.5-inch) SC Dual Port Enterprise 3yr Warranty Hard Drive	718162-B21
HP 900GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	785069-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 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	781516-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 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	785067-B21

## Core Options

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 1.8TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 512e 3yr Warranty Hard Drive	791034-B21
<b>SAS Hot Plug SFF (2.5-inch) Midline (MDL) Drives</b>	
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
<b>SAS Hot Plug LFF (3.5-inch) Enterprise (ENT) Drives</b>	
HP 600GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive	765424-B21
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
<b>SAS Hot Plug LFF (3.5-inch) Midline (MDL) Drives</b>	
HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765259-B21
HP 6TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	761477-B21
HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765257-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
HP 1TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652753-B21
HPE 2TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	818365-B21
HPE 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	818367-B21
<b>SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives</b>	
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
<b>SATA Hot Plug LFF (3.5-inch) Midline (MDL) Drives</b>	
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 Midline 1yr Warranty Hard Drive	753874-B21
HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765253-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
<b>SATA Non-Hot Plug LFF (3.5-inch) Midline (MDL) Drives</b>	
HP 4TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Standard 1yr Warranty Hard Drive	801888-B21

## Core Options

HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive	628065-B21
HP 3TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Standard 1yr Warranty Hard Drive	801886-B21
HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive	659339-B21
HP 2TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Standard 1yr Warranty Hard Drive	801884-B21
HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive	659337-B21
HP 1TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Standard 1yr Warranty Hard Drive	801882-B21
HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive	659341-B21
<b>6G SATA Hot Plug SFF (2.5-inch) SC 512e Drives</b>	
HP 2TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765455-B21
HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765453-B21
<b>6G SATA Hot Plug LFF (3.5-inch) SC 512e Performance Drives</b>	
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
<b>12G SAS Hot Plug SFF (2.5-inch) Enterprise Value Solid State Drives</b>	
HP 1.6TB 12G SAS Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	762263-B21
HP 800GB 12G SAS Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	762261-B21
<b>12G SAS Hot Plug LFF (3.5-inch) Enterprise Value Solid State Drives</b>	
HP 1.6TB 12G SAS Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	762272-B21
HP 800GB 12G SAS Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	762270-B21
<b>12G SAS Value Endurance Hot Plug SFF (2.5-inch) Enterprise Value Solid State</b>	
HPE 3.84TB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816576-B21
HPE 1.92TB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816572-B21
HPE 960GB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816568-B21
HPE 480GB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816562-B21
<b>12G SAS Hot Plug SFF (2.5-inch) MU-3 SC SSD</b>	
HPE 3.2TB 12G SAS Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	822567-B21
HPE 1.6TB 12G SAS Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	822563-B21

## Core Options

HPE 800GB 12G SAS Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	822559-B21
HPE 400GB 12G SAS Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	822555-B21
<b>12G SAS Hot Plug SFF (3.5-inch) SC Midline 512e Drives</b>	
HP 2TB 12G SAS 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765466-B21
HP 1TB 12G SAS 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765464-B21
HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC 512e Enterprise 3yr Warranty Hard Drive	748387-B21
<b>12G SAS Hot Plug LFF (3.5-inch) SC 512e Performance Drives</b>	
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
HP 8TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793703-B21
HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793699-B21
<b>12G SAS Hot Plug SFF (2.5-inch) SC Read/Write Intensive Solid State Drives</b>	
HP 1.92TB 12G SAS Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802891-B21
HP 800GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802586-B21
HP 400GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802582-B21
HP 200GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802578-B21
<b>6G SATA Hot Plug SFF (2.5-inch) Enterprise Mainstream Solid State Drives</b>	
HP 200GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804639-B21
HP 400GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804665-B21
HP 800GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804671-B21
HP 1.2TB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804677-B21
<b>6G SATA Hot Plug SFF (2.5-inch) Enterprise Value Solid State Drives</b>	
HP 1.6TB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	757339-B21
HP 800GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	717973-B21
HP 600GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	739898-B21
HP 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	717971-B21
HP 300GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	739888-B21
HP 240GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	717969-B21
<b>6G SATA Hot Plug SFF Value Endurance (2.5-inch) Enterprise Value G1 Solid State Drives</b>	
HP 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty G1 Solid State Drive	756657-B21
<b>6G SATA Hot Plug SFF Value Endurance (2.5-inch) Enterprise Value M1 Solid State Drives</b>	



## Core Options

HP 800GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive	764929-B21
HP 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive	764927-B21
HP 240GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive	764925-B21
HP 120GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive	764923-B21
HP 200GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804613-B21
HP 800GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804625-B21
HP 1.6TB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804631-B21
HP 480GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	832414-B21
<b>6G SATA Hot Plug SFF (2.5-inch) Enterprise Boot Solid State Drives</b>	
HP 120GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Boot 3yr Wty Solid State Drive	717965-B21
HP 80GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Boot 3yr Wty Solid State Drive	734360-B21
<b>6G SATA Hot Plug LFF (3.5-inch) Enterprise Mainstream Solid State Drives</b>	
HP 200GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804642-B21
HP 400GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804668-B21
HP 800GB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804674-B21
HP 1.2TB 6G SATA Write Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804680-B21
<b>6G SATA Hot Plug LFF Value Endurance (3.5-inch) Converter Enterprise Value G1 Solid State Drives</b>	
HP 480GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty G1 Solid State Drive	756660-B21
<b>6G SATA Hot Plug LFF Value Endurance (3.5-inch) Converter Enterprise Value M1 Solid State Drives</b>	
HP 800GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive	764945-B21
HP 480GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive	764943-B21
HP 240GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive	764941-B21
HP 120GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive	764939-B21
HP 200GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804616-B21
HP 800GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804628-B21
HP 1.6TB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804634-B21
HP 480GB 6G SATA Mixed Use-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	832417-B21
<b>6G SATA Hot Plug LFF (3.5-inch) Enterprise Value Solid State Drives</b>	
HP 1.6TB 6G SATA Value Endurance LFF 3.5-in SC Converter Enterprise Value 3yr Wty Solid State Drive	757342-B21

## Core Options

HP 800GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	718189-B21
HP 600GB 6G SATA Value Endurance LFF 3.5-in SC Converter Enterprise Value 3yr Wty Solid State Drive	739900-B21
HP 480GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	718183-B21
HP 300GB 6G SATA Value Endurance LFF 3.5-in SC Converter Enterprise Value 3yr Wty Solid State Drive	739890-B21
HP 240GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	718177-B21
<b>6G SATA Hot Plug LFF (3.5-inch) Enterprise Boot Solid State Drives</b>	
HP 120GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Boot 3yr Wty Solid State Drive	718171-B21
HP 80GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Boot 3yr Wty Solid State Drive	734362-B21
<b>6G SATA Hot Plug SFF (2.5-inch) SC Read Intensive Solid State Drives</b>	
HP 480GB 6G SATA Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	789145-B21
HP 80GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804575-B21
HP 120GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804581-B21
HP 240GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804587-B21
HP 480GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804593-B21
HP 800GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804599-B21
HP 1.6TB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804605-B21
<b>6G SATA Hot Plug MU-3 SFF (2.5-inch) SC Solid State Drives</b>	
HP 1.92TB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	817011-B21
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
HP 240GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816975-B21
HP 120GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816965-B21
<b>6G SATA Hot Plug RI-3 SFF (2.5-inch) SC Solid State Drives</b>	
HP 3.84TB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816929-B21
HP 1.92TB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816919-B21
HP 960GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816909-B21
HP 480GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816899-B21
HP 240GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816889-B21
HP 120GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816879-B21
<b>6G SATA Hot Plug LFF (3.5-inch) SC Read Intensive Solid State Drives</b>	
HP 480GB 6G SATA Read Intensive LFF 3.5-in SC Converter 3yr Wty Solid State Drive	789147-B21
HP 80GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804578-B21
HP 120GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804584-B21
HP 240GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804590-B21

## Core Options

HP 480GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804596-B21
HP 800GB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804602-B21
HP 1.6TB 6G SATA Read Intensive-2 LFF 3.5-in SCC 3yr Wty Solid State Drive	804608-B21

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

HP 3.84TB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816933-B21
HP 1.92TB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816923-B21
HP 960GB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816913-B21
HP 480GB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816903-B21
HP 240GB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816893-B21
HP 120GB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816883-B21

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

HP 1.92TB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	817015-B21
HP 960GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816999-B21
HP 480GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816989-B21
HP 240GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816979-B21
HP 120GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816969-B21

### 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

**NOTE: M.2 drives go in PCIe slot and use B140i SATA controller.**

### Hard Drive Blank Kits

HP Large Form Factor Hard Drive Blank Kit	666986-B21
HP Small Form Factor Hard Drive Blank Kit	666987-B21

## HPE Networking

### 1 Gigabit Ethernet adapters

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

### 10 Gigabit Ethernet adapters

## Core Options

HP Ethernet 10Gb 2-port 530T Adapter	656596-B21
HP Ethernet 10Gb 2-port 561T Adapter	716591-B21
HP Ethernet 10Gb 2-port 530SFP Adapter	652503-B21
HP Ethernet 10Gb 2-port 546SFP+ Adapter	779793-B21
HP Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	779799-B21
HP Ethernet 10Gb 2-port 560SFP+ Adapter	665249-B21

**NOTE:** A minimum of two Gigabytes (2GB) of server memory is required per each adapter.

**NOTE:** Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately. See cables/options below.

### FlexibleLOM Adapters

HP FlexFabric 10Gb 2-port 533FLR-T Adapter	700759-B21
HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter	700751-B21
HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter	665243-B21
HP Ethernet 10Gb 2-port 561FLR-T Adapter	700699-B21
HP Ethernet 1Gb 4-port 331FLR Adapter	629135-B22
HP Ethernet 1Gb 4-port 366FLR Adapter	665240-B21

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information: <http://www.hp.com/go/ProLiantNICs>.

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<b>HPE InfiniBand</b>	HP InfiniBand FDR 2-port 545QSFP Adapter	702211-B21
	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	764284-B21

**NOTE:** Please see the **HPE InfiniBand Options for HPE ProLiant and Integrity Servers QuickSpecs** for additional information.

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<b>HPE I/O Expansion Options</b>	HP DL60/120 Gen9 CPU1 Riser Kit	765508-B21
	HP DL60/120 Gen9 FlexibleLOM Riser Kit	765509-B21
	HP DL60/120 Gen9 Full Height Half Length PCIe Riser Kit	765510-B21
	HP DL120 Gen9 GPU Enablement Kit	779611-B21

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<b>HPE Power Supplies</b>	<b>HPE Entry-Level Power Supplies</b>	
	HP 800W Gold (Redundant)/900W (Non-Redundant) AC Power Input Module	744689-B21
	HP Server Redundant Power Supply Backplane Kit	745813-B21

**NOTE:** Required to be bought when 900W/800W power supply (P/N: 744689-B21) is selected.

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<b>HPE Computation and Graphics Accelerators</b>	HP NVIDIA Quadro K2200 Graphics Accelerator	J0G89A
	HP NVIDIA Quadro K4200 Graphics Accelerator	J0G90A

**NOTE:** 1 GPU supported per Server.

**NOTE:** Must select 800W / 900W power supply when graphics card is selected.

**NOTE:** 1 GPU Enablement kit 779611-B21 must be selected when adding a GPU option.

**NOTE:** Only the above listed Graphics cards are HPE standard supported options in this server.

## Core Options

**NOTE:** The NVIDIA Quadro modules are supported only on 64-bit versions of Linux and Windows operating systems as well as on Virtual Machine client operating systems. The supported bare metal operating systems are RHEL6, SLES 11 and Windows Server 2012 R2.

**NOTE:** Please see the HPE Power Advisor for estimated power consumption of your individual system configuration prior to installing GPUs. The HPE Power Advisor is located at: <http://www.hp.com/go/hppoweradvisor>.

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### HPE Cooling Options

HP DL60/120 Gen9 Redundant Fan Kit

765513-B21

**NOTE:** Includes two fans and is required to move from non-redundant to redundant configurations.

**NOTE:** Fan redundancy is not supported for processors exceeding 105W.

## 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

HP Insight Control including 1yr 24x7 Technical Support and Updates Single Server License	C6N27A
HP Insight Control including 1yr 24x7 Technical Support and Updates Electronic License	C6N28ABE
HP Insight Control Server Provisioning Media Kit	BD883A
HP 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 24x7 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

HP iLO Advanced including 1yr 24x7 Technical Support and Updates Single Server License	512485-B21
HP iLO Advanced 1 Server License with 3yr 24x7 Tech Support and Updates	BD505A
HP iLO Advanced including 1yr 24x7 Technical Support and Updates E-LTU	E6U59ABE
HP iLO Advanced including 3yr 24x7 Technical Support and Updates E-LTU	E6U64ABE

#### HPE iLO Essentials

HP Integrated Lights-Out Essentials including 3yr 24x7 Technical Support and Updates E-LTU	E6U61ABE
HP Integrated Lights-Out Essentials including 3yr 24x7 Tech Support and Updates Single Svr License	BD774A
HP Integrated Lights-Out Essentials including 1yr 24x7 Tech Support and Updates Single Svr License	BD775A
HP Integrated Lights-Out Essentials including 1yr 24x7 Technical Support and Updates E-LTU	E6U62ABE

#### HPE iLO Scale-out

HP Integrated Lights-Out Scale-Out 3yr 24x7 Tech Support and Updates Flex Quantity License	BD776A
HP Integrated Lights-Out Scale-Out including 3yr 24x7 Tech Support and Updates Tracking License	BD777A
HP Integrated Lights-Out Scale-Out 1yr 24x7 Tech Support and Updates Flex Quantity License	BD778A
HP Integrated Lights-Out Scale-Out including 1yr 24x7 Tech Support and Updates Flex Qty E-LTU	BD778AAE

## Additional Options

HP Integrated Lights-Out Scale-Out including 1yr 24x7 Tech Support and Updates Tracking License BD779A

### HPE Converged Infrastructure Management Software

#### HPE OneView Advanced (with HPE iLO Advanced)

HP OneView incl 3yr 24x7 Supp Phys 1 Svr Lic E5Y34A

HP OneView incl 3yr 24x7 Supp Flex Qty E-LTU E5Y35AAE

#### HPE OneView Advanced (without HPE iLO Advanced)

HP OneView w/o iLO including 3yr 24x7 Support 1 Server LTU P8B24A

HP OneView w/o iLO including 3yr 24x7 Support Flex Quantity E-LTU P8B26AAE

HP OneView Media Kit Phys No Lic E5Y37A

HP Operations Analytics for HP OneView LTU K8G29A

HP Operations Analytics for HP OneView E-LTU K8G29AAE

**NOTE: Full licenses of HPE OneView Advanced also provide the right-to-use HPE Insight Control without additional charge.**

**NOTE: Server provisioning (via 'HPE Insight Control server provisioning') is licensed as part of HPE OneView Advanced and provides multi-server OS and driver provisioning. Media kit #BD883A can be ordered for a physical copy of this software (USB flash drive).**

**NOTE: Licenses ship without media. The HPE OneView Media Kit can be ordered separately, or can be downloaded**

**at: <http://www.hp.com/go/oneview>.**

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

### HPE Security

HP Trusted Platform Module Option 488069-B21

HP 1U Security Bezel Kit 664918-B21

**NOTE: Quick Release Ear option kit (P/N 787194-B21) is required for installing security bezel.**

### HPE Storage Controllers

#### SAS Controllers

##### HPE Smart Array Controllers

HP Smart Array P440/2GB FBWC 12Gb 1-port Int SAS Controller 820834-B21

**NOTE: Includes the HPE Smart Storage Battery.**

HP Smart Array P440/4GB FBWC 12Gb 1-port Int SAS Controller 726821-B21

HP Smart Array P441/4GB FBWC 12Gb 2-ports Ext SAS Controller 726825-B21

##### HPE Smart Host Bus Adapters

HP H240 12Gb 2-ports Int Smart Host Bus Adapter 726907-B21

HP H241 12Gb 2-ports Ext Smart Host Bus Adapter 726911-B21

##### HPE Cable Options

HP DL60/120 Gen9 4LFF Smart Array P440 SAS Cable Kit 777382-B21

HP DL60/120 Gen9 4LFF Smart HBA H240 SAS Cable Kit 777385-B21

HP DL120 Gen9 8SFF Smart Array P440 SAS Cable Kit 777418-B21

HP DL120 Gen9 8SFF Smart HBA H240 SAS Cable Kit 777421-B21

## Additional Options

**NOTE:** One of the above cables is required to be selected depending on the combination of server and storage controller. Cable option kit descriptions include the right server and storage controller names.

**NOTE:** NHP server includes SATA cables required to connect drives to embedded B140i SATA controller.

### Optional Software

HP SmartCache No Media 24x7 Technical Support 1 Svr License	D7S26A
HP SmartCache No Media 24x7 Technical Support Flexible License	D7S27A
HP SmartCache No Media 24x7 Technical Support Electronic License	D7S27AAE

**NOTE:** HPE SmartCache is supported when one of the supported Smart Array Controllers is installed in the server.

**NOTE:** HPE SmartCache comes standard (no licensing is required) if the HPE Smart Array P840 Controller is installed in the server.

### Optional Upgrades

HP 96W Smart Storage Battery with 145mm Cable for DL/ML/SL Servers	727258-B21
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**NOTE:** This option is mandatorily required with HPE Smart Array controllers. One server can accommodate only 1 Smart Storage Battery that would suffice the requirement of all HPE Smart Array controllers.

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**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 Hewlett Packard Enterprise tape backup products see: <http://www.hp.com/storage/SPOCK> and <http://www.hp.com/go/ebs>.

**NOTE:** For Internal drives to be connected to DL servers please make sure that you order rack mount kit as well.

### Tape Drives

#### SAS Rack-Mount Tape Solutions

HPE StoreEver LTO-7 Ultrium 15000 External Tape Drive	BB874A
HPE StoreEver LTO-7 Ultrium 15000 Internal Tape Drive	BB873A
HP StoreEver LTO-6 Ultrium 6650 SAS External Tape Drive	EH964A
HP StoreEver LTO-6 Ultrium 6250 Tape Drive in 1U Rack-mount Kit	COL99A
HP StoreEver LTO-6 Ultrium 6250 External Tape Drive	EH970A
HP StoreEver LTO-5 Ultrium 3000 SAS Tape Drive in 1U Rack-mount	EJ014B
HP StoreEver LTO-5 Ultrium 3000 SAS External Tape Drive	EH958B
HP StoreEver LTO-5 Ultrium 3280 SAS External Tape Drive	EH900B
HP StoreEver LTO-4 Ultrium 1760 SAS (1) in 1U Rack-mount Kit	EH946C
HP StoreEver LTO-4 Ultrium 1760 SAS External Tape Drive	EH920B
HP StoreEver LTO-3 Ultrium 920 SAS External Tape Drive	EH848B
HP StoreEver 1U SAS Rack-mount Kit	AE459B
HP Mini SAS High Density to 4-lane Mini SAS External Fanout 2 Meter Cable	K2R09A
HP Mini SAS High Density to 4-lane Mini SAS External Fanout 4 Meter Cable	K2R10A

#### HPE DAT Autoloader

HP StoreEver 1/8 G2 LTO-6 Ultrium 6250 FC Tape Autoloader	COH19A
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#### HPE MSL2024 Tape Library

HP MSL2024 0-Drive Tape Library	AK379A
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## Additional Options

### HPE MSL4048 Tape Library

HP MSL4048 0-Drive Tape Library AK381A

### HPE StoreEver MSL6480

HP StoreEver MSL6480 Scaleable Expansion Module QU626A

HP StoreEver MSL6480 Scalable Base Module QU625A

### HPE Disk Backup HPE RDX Removable Disk Backup System

HP RDX+ 1TB External Backup System B7B69B

HP RDX+ 500GB External Backup System B7B66B

HP RDX 2TB USB3.0 External Disk Backup System E7X53B

HP D3700 Enclosure QW967A

HP D3600 Enclosure QW968A

HP RDX+ External Docking System C8S07B

### HPE StoreOnce Backup systems

HPE StoreOnce 5100 48TB System BB915A

HPE StoreOnce 3540 24TB System BB914A

HPE StoreOnce 3520 12TB System BB922A

HPE StoreOnce 3100 8TB System BB913A

**NOTE:** For the complete range of RDX drives and media see: <http://www.hp.com/go/rdx>. For hardware and software compatibility of Hewlett Packard Enterprise disk backup products see: <http://www.hp.com/storage/SPOCK>.

### HPE Storage Options

**NOTE:** These adapters are only supported with Windows Server 2012 R2 operating system as of now. Support for other operating systems will follow later.

#### Emulex Fibre Channel HBAs

HP 81E 8Gb 1-port PCIe Fibre Channel Host Bus Adapter AJ762B

HP 82E 8Gb 2-port PCIe Fibre Channel Host Bus Adapter AJ763B

HP StoreFabric SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter C8R38A

HP StoreFabric SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter C8R39A

#### QLogic Fibre Channel HBAs

HP 81Q 8Gb 1-port PCIe Fibre Channel Host Bus Adapter AK344A

HP 82Q 8Gb 2-port PCIe Fibre Channel Host Bus Adapter AJ764A

HP StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter QW971A

HP StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter QW972A

#### Converged Network Adapter

HP StoreFabric CN1200E 10Gb Converged Network Adapter E7Y06A

HP StoreFabric CN1100R Dual Port Converged Network Adapter QW990A

### 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

HP D6000 Dual I/O Module Disk Enclosure QQ695A

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

## Additional Options

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
HP D2600 w/12 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 48TB Bundle	E7W32A
HP D6000 w/70 8TB 12G SAS 7.2K LFF (3.5in) Dual Port MDL HDD 560TB Bundle	M0T59A
HP D6000 w/70 6TB 12G SAS 7.2K LFF (3.5in) Dual Port MDL HDD 420TB Bundle	M0T57A
HP D6000 w/35 8TB 12G SAS 7.2K LFF (3.5in) Dual Port MDL HDD 280TB Bundle	M0T58A

### HPE Data Center Racks

#### HPE Advanced Series Racks

HPE 11648 1075mm Pallet Universal Rack	H6J87A
HPE 11648 1075mm Shock Universal Rack	H6J88A
HPE 11642 1075mm Pallet Universal Rack	H6J65A
HPE 11642 1075mm Shock Universal Rack	H6J66A
HPE 11642 1200mm Pallet Universal Rack	H6J67A
HPE 11642 1200mm Shock Universal Rack	H6J68A
HPE 11636 1075mm Pallet Universal Rack	H6J77A
HPE 11636 1075mm Shock Universal Rack	H6J78A
HPE 11622 G2 1075mm Shock Universal Rack	H6J83A
HPE 11622 G2 1075mm Shock Universal Rack	H6J84A
HPE 11614 1075mm Shock Universal Rack	H6J82A

**NOTE:** Please see the [HPE Advanced Series Racks QuickSpecs](#) for information on additional racks options and rack specifications.

#### HPE Enterprise Series Racks

HPE 647 1075mm Pallet Intelligent Series Rack	BW911A
HPE 647 1075mm Shock Intelligent Series Rack	BW912A
HPE 647 1200mm Pallet Intelligent Series Rack	BW913A
HPE 647 1200mm Shock Intelligent Series Rack	BW914A
HPE 642 1075mm Pallet Intelligent Series Rack	BW903A
HPE 642 1075mm Shock Intelligent Series Rack	BW904A
HPE 642 1200mm Pallet Intelligent Series Rack	BW907A
HPE 642 1200mm Shock Intelligent Series Rack	BW908A
HPE 636 1075mm Pallet Intelligent Series Rack	BW895A
HPE 636 1075mm Shock Intelligent Series Rack	BW896A
HPE 842 1075mm Pallet Intelligent Series Rack	BW917A
HPE 842 1075mm Shock Intelligent Series Rack	BW918A

**NOTE:** Please see the [HPE Enterprise Series Racks QuickSpecs](#) for information on additional racks options and rack specifications.

#### HPE Standard Series Rack

HPE V142 1075mm deep Pallet 100 series Rack	AF046A
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**NOTE:** Please see the [HPE Standard Series Racks QuickSpecs](#) for information on additional racks options and rack specifications.

## Additional Options

<b>HPE Power Distribution Units (PDUs)</b>	<b>HPE Basic Power Distribution Units (PDU)</b>	
	HP 1.9kVA 120 Volt L5-20 Input (12xNEMA 5-20R) NA/JP Basic PDU	H5M54A
	HP 3.6kVA 200-240 Volt Detachable C20 Input ( 12xC13) WW Basic PDU	H5M56A
	HP 2.8kVA 120 Volt L5-30 Input (18xNEMA 5-20R) NA/JP Basic PDU	H5M55A
	HP 3.6kVA 200-240 Volt Detachable C20 Input (18xC13) WW Basic PDU	H5M57A
	HP 4.9kVA 208 Volt L6-30 Input (20xC13) NA/JP Basic PDU	H5M58A
	HP 8.6kVA 208 Volt L15-30 3-Phase Input (18xC13) NA/JP Basic PDU	H5M61A
	HP 4.9kVA 208 Volt L6-30 Input (24xC13/6xC19) NA/JP Basic PDU	H5M59A
	HP 8.3kVA 208 Volt CS8265C Input (30xC13/6xC19) NA/JP Basic PDU	H5M60A
	HP Hardwired 200-240 Volt Input (30xC13/6xC19) WW Basic PDU	H5M75A
	HP 5.7kVA 208 Volt L21-20 3-Phase Input (24xC13/3xNEMA 5-20R) NA/JP Basic PDU	H5M63A
	HP 8.6kVA 208 Volt L21-30 3-Phase Input (24xC13/3xC19/3xNEMA 5-20R) NA/JP Basic PDU	H5M64A
	HP 8.6kVA 208 Volt L15-30 3-Phase Input (24xC13/6xC19) NA/JP Basic PDU	H5M62A
	HP 11kVA 400 Volt IEC309 30A 3-Phase Input (36xC13/6xC19) NA Basic PDU	H5M67A
	HP 2.8kVA 24A Low Voltage NA/JP Modular Power Distribution Unit	252663-D71
	HP 4.9kVA 24A High Voltage NA/JP Core Modular Power Distribution Unit	252663-D74
	HP 8.3kVA 40A High Voltage NA/JP Core Modular Power Distribution Unit	252663-D75
	HP 8.6kVA 24A Three Phase NA/JP Modular Power Distribution Unit	AF512A
	HP 14.4kVA 40A Three Phase NA/JP Modular Power Distribution Unit	AF519A
	HP 17.3kVA 48A Three Phase NA/JP Modular Power Distribution Unit	AF511A
	HP 800VA - 277V Input / 230V Output NA Rack Mount Transformer	H3X09A
	<b>NOTE: Please see the <a href="#">HPE Basic Power Distribution Units (PDU) QuickSpecs</a> for information on additional options and product specifications.</b>	
	<b>HPE Metered Power Distribution Units (PDU)</b>	
	HP 2.8kVA 120 Volt L5-30 Input (12xNEMA 5-20R)NA/JP Monitored PDU	D9N43A
	HP 3.6kVA 200-240 Volt Detachable C20 Input (12xC13) WW Monitored PDU	D9N46A
	HP 4.9kVA 208 Volt L6-30 Input (12xC13) NA/JP Monitored PDU	D9N44A
	HP 3.6kVA 200-240 Volt Detachable C20 Input (16xC13) WW Monitored PDU	D9N45A
	HP 4.9kVA 208 Volt L6-30 Input (12xC13) NA/JP Monitored PDU	G9Z05A
	HP 4.9kVA 208 Volt L6-30 Input (20xC13/4xC19) NA/JP Monitored PDU	D9N47A
	HP 8.6kVA 208 Volt L15-30 3-Phase Input (18xC13/3xC19) NA/JP Monitored PDU	D9N51A
	HP 5.7kVA 208 Volt L21-20 3-Phase Input (18xC13/3xNEMA 5-20R) NA/JP Monitored PDU	D9N52A
	HP 8.6kVA 208 Volt L21-30 3-Phase Input (20xC13/3xC19/3xNEMA 5-20R) NA/JP Monitored PDU	D9N53A
	HP 8.3kVA 208 Volt CS8265C Input (30xC13/3xC19) NA Monitored PDU	D9N49A
	HP 14.4kVA 208 Volt CS8365C 3-Phase Input (12xC13/12xC19)NA Monitored PDU	D9N58A
	HP 16.6kVA 400 Volt IEC309 30A 3-Phase Input (30xC13/3xC19) NA Monitored PDU	D9N61A
	HP 16.6kVA 400 Volt IEC309 30A 3-Phase Input (12xC13/12xC19) NA Monitored PDU	D9N62A
	HP 17.3kVA 208 Volt IEC309 60A 3-Phase Input (24xC13/3xC19) NA/JP Monitored PDU	D9N54A

## Additional Options

HP 17.3kVA 208 Volt IEC309 60A 3-Phase Input (12xC13/12xC19) NA/JP Monitored PDU	D9N59A
HP 17.3kVA 208 Volt IEC309 60A 3-Phase Watertight Input (12xC13/12xC19) NA/JP Monitored PDU	G9Z07A
HP 19.9kVA 480 Volt 3-Phase (30 Outlet) NA Monitored PDU	D9N63A
HP Environmental Sensor for Remote Monitored and Managed PDUs	E2D53A

**NOTE:** Please see the [HPE Metered Power Distribution Units \(PDU\) QuickSpecs](#) for information on additional options and product specifications.

### HPE Intelligent Power Distribution Unit (PDU)

HP 4.9kVA 24A Single Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF520A
HP 8.3kVA 40A Single Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF521A
HP 8.6kVA 24A Three Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF522A
HP 17.3kVA 48A Three Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF523A
HP 11.4kVA 16A 415V Three Phase L22-20 NA Core Intelligent Power Distribution Unit	AF900A
HP 17.3kVA 24A 415V Three Phase IEC309 NA Core Intelligent Power Distribution Unit	AF901A
HP 17.3kVA 48A 208V Three Phase 12 Outlet Core NA/JP Intelligent Power Distribution Unit	AF535A
HP 17.3kVA 24A 415V Three Phase 12 Outlet Core NA/JP Intelligent Power Distribution Unit	AF537A
HP 4.9kVA 24A Single Phase NA/JP Intelligent Modular Power Distribution Kit	AF531A
HP 8.6kVA 24A Three Phase NA/JP Intelligent Modular Power Distribution Kit	AF532A
HP 14.4kVA 40A Three Phase NA/JP Intelligent Modular Power Distribution Unit	AF533A
HP 5xC13 Intelligent PDU Extension Bar G2 Kit	AF547A
HP 5xC13 Outlets Power and UID LEDs Pair Standard Extension Bar	AF528A

**NOTE:** Please see the [HPE Intelligent Power Distribution Unit \(PDU\) QuickSpecs](#) for information on additional options and product specifications.

### HPE Metered and Switched Power Distribution Units (PDU)

HP 2.8kVA 120 Volt L5-30 Input (24x NEMA 5-20) NA/JP Managed PDU	H8B48A
HP 3.6kVA 200-240 Volt Detachable C20 Input (7xC13/1xC19) WW Managed PDU	H8B49A
HP 4.9kVA 208 Volt L6-30 Input (20xC13/4xC19) NA/JP Managed PDU	H8B50A
HP 8.6kVA 208 Volt L15-30 3 Phase Input (18xC13/6xC19) NA/JP Managed PDU	H8B52A
HP 8.6kVA 208 Volt L21-30 3 Phase Input (20xC13/3xC19/1x NEMA 5-20) NA/JP Managed PDU	H8B53A
HP 14.4kVA 208V CS8365C 3 Phase Input (12xC13/12xC19) NA/JP Managed PDU	H8B55A
HP 17.3kVA 208V IEC309 60A 3 Phase Input (12xC13/12xC19) NA/JP Managed PDU	H8B56A

**NOTE:** Please see the [HPE Metered and Switched Power Distribution Units \(PDU\) QuickSpecs](#) for information on additional options and product specifications.

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

## Additional Options

<b>HPE Rack Mount Consoles, KVM Switches, and Keyboards</b>	<b>HPE Location Discovery Services</b>	
	HP Location Discovery Services LCD8500 Kit	TL052A
	<b>NOTE:</b> Please see the <b>HPE Location Discovery Services QuickSpecs</b> for information on additional options and product specifications.	
	<b>HPE Rack Mount Consoles</b>	
	HP LCD8500 1U US Rackmount Console Kit	AF630A
	HP LCD8500 1U US TAA Rackmount Console Kit	AF645A
	<b>HPE KVM Switches</b>	
	HP 0x1x8 G3 KVM Console Switch	AF651A
	HP 0x2x16 G3 KVM Console Switch	AF652A
	HP TAA 0x2x16 G3 KVM Console Switch	AF653A
	HP USB Remote Access Key for G3 KVM Console Switches	AF650A
	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
<b>NOTE:</b> To learn more, please visit the <b>HPE KVM Switches web page</b> .		
<b>HPE USB Keyboard and Mouse</b>		
HP USB BFR with PVC Free US Keyboard/Mouse Kit	631341-B21	
<b>HPE Other Options</b>		
HP Rack LED Light Kit	BW939A	
HP Kit LCD 1.83m Latch Display Port Cable	G7T29A	
HP Advanced Power Manager Kit	741192-B21	
HP ConvergedSystem Door Branding Kit	TK815A	
HP ConvergedSystem Rack Light Kit	TK816A	
HP ConvergedSystem Rack Side Panel 1075mm Kit	TK817A	

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### HPE Uninterruptible HPE DirectFlow Three Phase UPS

<b>Power Systems (UPS)</b>	<b>Power Unit (1U UPS)</b>	
	HP R12000 DirectFlow - 1U Rackmount Uninterruptible Power System	G9Y75A
	HP R12000 DirectFlow - POD 1U Rackmount Uninterruptible Power System	AF478A
	<b>Input/Output Module Options for 1U UPS</b>	
	HP 30A 400-415 Volt Three Phase NA R10000 DirectFlow UPS IEC309 Input/Output Module	AF489A
	HP 30A 480 Volt Three Phase NA R12000 DirectFlow UPS L22-30 Input/Output Module	AF491A
	HP 30A 480 Volt Three Phase NA R12000 DirectFlow UPS IEC309 Input/Output Module	AF492A
	HP 30A 400-415 Volt Three Phase NA R12000 DirectFlow UPS IEC309 Input/Output Module	G9Y76A
	<b>Power Unit (2U UPS)</b>	

## Additional Options

HP R18000 DirectFlow - 2U Rackmount Uninterruptible Power System AF479A

### Input/Output Module Options for 2U UPS

HP 30A 480 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module AF486A

HP 30A 480 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module AF487A

HP 30A 400 Volt Three Phase NA R18000 DirectFlow UPS IEC309 Input/Output Module D9Q02A

HP 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

HP DirectFlow UPS - 1U Rackmount Lithium-ion Battery Pack AF480A

HP DirectFlow UPS - 3U Rackmount VRLA Battery Pack AF482A

HP 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

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

### HPE Rack/Tower UPS

#### HPE R/T2200 G4 UPS Models

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

#### HPE R/T3000 G4 UPS Models

HP R/T3000 G4 Low Voltage NA/JP Uninterruptible Power System J2R01A

HP R/T3000 G4 High Voltage NA/JP Uninterruptible Power System J2R02A

#### R1500 G4 Models

HP R1500 G4 NA Uninterruptible Power System J2Q99A

#### R7000 Uninterruptible Power System (UPS)

HP R7000 4U 50A High Voltage NA/JP Uninterruptible Power System AF462A

#### R5000 Uninterruptible Power System (UPS)

HP R5000 3U L630 High Voltage NA/JP Uninterruptible Power System AF460A

### HPE UPS Options

HP DirectFlow UPS Management Card AF493A

HP R/T2200 G4 Extended Runtime Module J2R09A

HP R/T3000 G4 Extended Runtime Module J2R10A

HP 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](#).**

## Additional Options

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<b>HPE USB and SD Options</b>	<b>HPE Enterprise Mainstream Flash Media Kits for Memory Cards</b>	
	HP 32GB microSD Enterprise Mainstream Flash Media Kit	700139-B21
	HP 8GB microSD Enterprise Mainstream Flash Media Kit	726116-B21
	HP 8GB USB Enterprise Mainstream Flash Media Drive Key Kit	737953-B21
	HP Dual 8GB microSD Enterprise Midline USB Kit	741279-B21

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<b>HPE Care Pack Services</b>	<b>Installation &amp; Start-up Services</b>	
	HPE Installation DL320e/DL120 Service	U6F51E
	HPE Startup DL320e/DL120 Service	U6F53E
	<b>Foundation Care</b>	
	HPE 3 year Foundation Care 24x7 DL120 Gen9 Service	U7VP0E
	HPE 3 year Foundation Care 24x7 wDMR DL120 Gen9 Service	U7VP1E
	HPE 3 year Foundation Care 24x7 wCDMR DL120 Gen9 Service	U7VP2E
	<b>Proactive Care</b>	
	HPE 3 year Proactive Care 24x7 DL120 Gen9 Service	U7VR7E
HPE 3 year Proactive Care 24x7 with DMR DL120 Gen9 Service	U7VR8E	
HPE 3 year Proactive Care 24x7 with CDMR DL120 Gen9 Service	U7VR9E	

# Memory

## Memory Population guidelines



### General Memory Population Rules and Guidelines:

- Place the DIMMs with the highest number of ranks in the white slot when mixing DIMMs of different ranks on the same channel.
- Do not mix RDIMMs or LRDIMMs.
- Quad rank RDIMMs are not supported in HPE ProLiant DL120 Gen9 servers.
- Quad rank LRDIMMs are capable of up to two DIMMs per channel.
- DIMMs of different speeds may be mixed in any order; the server will select a common optimal speed.
- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- The maximum memory capacity is a function of the memory type and number of installed processors.
- To realize the performance memory capabilities listed in this document, HPE SmartMemory is required.

### Intel Gen9 Supported Memory Bandwidth for HPE ProLiant Gen9 Intel® Xeon® E5-2600v3 Series Processor Family

Memory Bandwidth and Capacity							
[DIMM Type]	Registered DIMMs (RDIMMs)					Load Reduced (LRDIMMs)	
DIMM Rank	Single Rank	Single Rank	Dual Rank	Dual Rank	Dual Rank	Dual Rank	Quad Rank
DIMM Capacity	4GB	8GB	8GB	16GB	32GB	16GB	32GB
DIMM Native Speed (MT/s)	2133	2133	2133	2133	2133	2133	2133



**Memory**

<b>Voltage</b>	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V
<b>SLOTS THAT CAN BE POPULATED</b>							
8 slot servers	8	8	8	8	8	8	8
<b>MAXIMUM CAPACITY (GB)</b>							
	32	64	64	128	256	128	256
<b>POPULATED DIMM SPEED (MT/s)</b>							
<b>1 DIMM Per Channel</b>	2133	2133	2133	2133	2133	2133	2133
<b>2 DIMM Per Channel</b>	2133	2133	2133	2133	2133	2133	2133
<b>3 DIMM Per Channel</b>	1600	1600	1600	1600	1600	1866	1866

**DIMM slot and configuration diagram**

**DIMM slot and configuration diagrams**

**Basic memory slot & population diagram**

- Population order; start with "A" first, "B" second, "C" third, etc.

	<b>CPU 1</b>		<b>CPU 2</b>	
	Slot #	population order	Slot #	population order
Chnl 1	1	A1	1	A1
	2	E2	2	E2
	<b>CPU 1</b>		<b>CPU 2</b>	
	Slot #	population order	Slot #	population order
Chnl 2	3	B3	3	B3
	4	F4	4	F4
	<b>CPU 1</b>		<b>CPU 2</b>	
	Slot #	population order	Slot #	population order
Chnl 4	5	H5	5	H5
	6	D6	6	D6
	<b>CPU 1</b>		<b>CPU 2</b>	
	Slot #	population order	Slot #	population order
Chnl 3	7	G7	7	G7
	8	C8	8	C8

## Memory

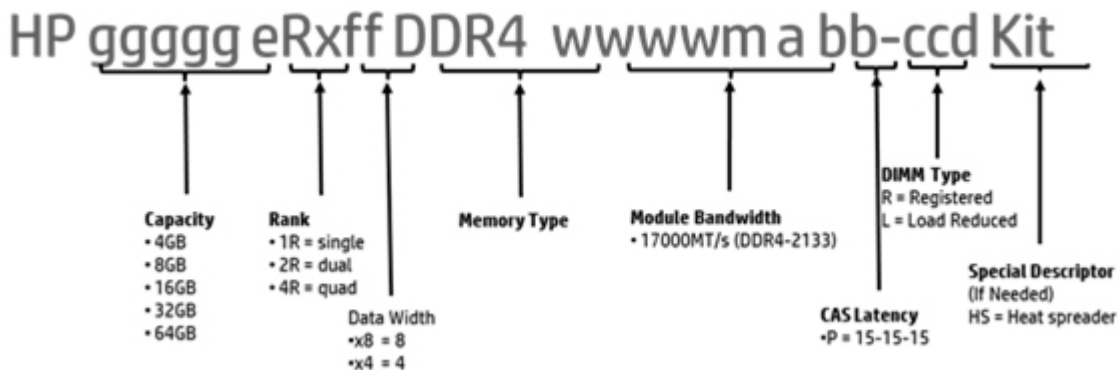
Memory Speed by Processor Model	Processor Models	Supported Memory Speeds
	E5-2603v3, E5-2609v3	1600MHz
	E5-2620v3, E5-2630v3, E5-2640v3, E5-2630Lv3, E5-2623v3	1866MHz
	E5-1650v3, E5-1620v3, E5-2650v3, E5-2660v3, E5-2650Lv3, E5-2699v3, E5-2698v3, E5-2695v3	2133MHz

Standard and Maximum Memory Capacity (Pre-configured Models)	Pre Configured Models	Standard Memory	Maximum Memory Plus Optional Memory	Standard Memory Replaced with Optional Memory
	E5-2603v3	4GB (1x4GB)	228GB (7x32GB, 1x4GB)	256GB (8x32GB)
	E5-2630v3	8GB (1x8GB)	232GB (7x32GB, 1x8GB)	256GB (8x32GB)

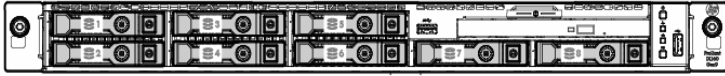
### DDR4 memory options part number decoder

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

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



Storage



1-8

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



1-4

4 x LFF SATA/SAS/SSD Hot Pluggable Hard Drives Bays

## Technical Specifications

<b>System Unit</b>	<b>Dimensions</b> (H x W x D)	8 SFF - 1.69 x 17.11 x 23.90 inches (4.29 x 43.46 x 60.76 cm) 4 LFF - 1.69 x 17.11 x 23.90 inches (4.29 x 43.46 x 60.76 cm)
	<b>Weight</b> (approximate)	Maximum: 37.44 lb (17kg) <b>(all hard drives, power supplies, and processors installed)</b> Minimum: 19.82 lb (9kg) <b>(one hard drive, power supply, and processor installed)</b>
<b>Input Requirements</b>	Rated Line Voltage	100 to 240 VAC
	Rated Input Current	For 550W Power Supply: 6.7 A (at 100 VAC) 3.3 A (at 200 VAC)
	Rated Input Frequency	47 to 63 Hz
	Rated Input Power	For 550 W Power Supply: < 670 W (at 100 VAC), < 660 W (at 200 VAC),
	<b>BTU Rating</b>	Maximum For 550 W Power Supply: 2201 BTU/hr (at 100 VAC), 2153 BTU/hr (at 200 VAC)
<b>Power Specifications</b>	To review typical system power ratings use the Power Advisor which is available via the online tool located at URL: <a href="http://www.hp.com/go/proliant-energy-efficient">http://www.hp.com/go/proliant-energy-efficient</a> or <a href="http://www.hp.com/go/hppoweradvisor">http://www.hp.com/go/hppoweradvisor</a> - Click on the system of interest. Example: DL120 Gen9- Follow the instructions of the next screens.	
<b>Power Supply Output</b>	Rated Steady-State Power	For 550 W Power Supply: 550 W (at 100 VAC), 550 W (at 200 VAC),
	Maximum Peak Power	For 550 W Power Supply: 550 W (at 100 VAC), 550 W (at 200 VAC),
<b>System Inlet Temperature</b>	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 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and number of options installed. System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F).

## Technical Specifications

Extended Ambient For approved hardware configurations, the supported system  
Operating Support inlet range is extended to be: 5° to 10°C (41° to 50°F) and 35°  
to 40°C (95° to 104°F) at sea level with an altitude derating of  
1.0°C per every 175 m (1.8°F per every 574 ft) above 900 m  
(2953 ft) to a maximum of 3048 m (10,000 ft). The approved  
hardware configurations for this system are listed at the URL:  
**<http://www.hp.com/servers/ashrae>**.

System performance may be reduced if operating in the  
extended ambient operating range or with a fan fault.

**NOTE: Supports A3 extended ambient.**

	Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
<b>Relative Humidity</b>	Operating	Minimum to be the higher (more moisture) of -12°C (10.4°F) dew point or 8% relative humidity. Maximum to be the lower (less moisture) of 24°C (75.2°F) dew point or 90% relative humidity.
(non-condensing)	Non-operating	5% to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
<b>Altitude</b>	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 457.2 m/min (1500 ft/min).
<b>Acoustic Noise</b>	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).	
	<b>Idle</b>	
	L WAd	Entry 4.9 B Base 5.4 B
	L pAm	Entry 33.0 dBA Base 35.0 dBA
	<b>Operating</b>	
	L WAd	Entry 5.7 B Base 5.8 B
	L pAm	Entry 38.0 dBA Base 39.0 dBA
<b>Emissions Classification (EMC)</b>	FCC Rating	Class A
	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

## Technical Specifications

**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.

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

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<b>HPE Embedded Dual Port 361i Adapter</b>	<b>Network Interface</b>	10Base-T/100Base-TX/1000Base-TX
	<b>Compatibility</b>	IEEE 802.3 10Base-T IEEE 802.3ab 1000Base-T IEEE 802.3u 100Base-TX IEEE 1588, IEEE 802.1AS IEEE 802.3az - Energy Efficient Ethernet (EEE)
	<b>Data Transfer Method</b>	PCI Express v 2.0, 5.0 GT/s, two lanes (x2)
	<b>Controller</b>	Intel I350 Powerville
	<b>Network Transfer Rate</b>	10Base-T (Half-Duplex) 10 Mb/s per port, 40 Mb/s combined

## Technical Specifications

	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 and Full-Duplex)	1000Mb/s per port, 4000 Mb/s combined
<b>Connector</b>	Two RJ-45	
<b>Cable Support</b>	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
16-Feb-2016	From Version 10 to 11	Added	New HDD offering was added to HPE Drives.
		Changed	HPE Power Supplies, HPE Disk Backup, HPE Data Center Racks, and HPE Power Distribution Units (PDUs) were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
1-Dec-2015	From Version 9 to 10	Added	New HDD offering was added to HPE Drives.  New options were added to HPE Security, HPE Tape Backup, HPE Rack Mount Consoles, and KVM Switches, and Keyboards.
		Changed	On System Management Chipset, Maximum Internal Storage, Embedded Management, and Server utilities were revised.  Product images were updated.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
23-Oct-2015	From Version 8 to 9	Changed	System Fans, HP Cooling Options, and HP Security were revised.
28-Sep-2015	From Version 7 to 8	Added	Added new 6Gb SATA Solid State Drives.  Added new HPE OneView management software.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
17-Aug-2015	From Version 6 to 7	Added	New Solid State Drives offering was added to Core Options.
		Changed	Maximum Internal Storage was revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
1-Jun-2015	From Version 5 to 6	Added	New Hard Drives were added to Core Options.  New options added to HPE Power Supplies.  HPE OneView LTUs added to HPE Converged Infrastructure Management Software.  New RDX+ external backup options were added.
		Changed	Pre-configured Models section was revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
24-Apr-2015	From Version 4 to 5	Added	Added 813534-B21 and 813535-B21 to HPE Power Supplies.
16-Apr-2015	From Version 3 to 4	Changed	PCIe slots was changed to "1 PCIe LP standard / up to 3 PCIe slots (optional)" for Entry models and CTO models.
30-Mar-2015	From Version 2 to 3	Added	Added HPE Storage Options to Additional Options.  Added new Hard Drives to Core Options.



Summary of Changes

			Added Optional Software to HPE Storage Controllers.
		Changed	HPE Processors, HPE Memory, HPE Hard Drives, HPE Networking, and HPE USB and SD Options were revised.
9-Feb-2015	From Version 1 to 2	Added	Added HPE Insight Software section and Network controller sections.  Added new HPE Drives, HPE Disk Backup, and new G4 UPS models.
		Changed	HPE Memory, HPE Drives, HPE Tape Backup, HPE Rack Mount Consoles, KVM Switches, and Keyboards, and HPE Uninterruptible Power Systems (UPS) sections were revised.



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

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