## Overview

HPE ProLiant DL20 Generation9 (Gen9)

The dense and compact HPE ProLiant DL20 Gen9 Server powered by Intel Pentium, Core i3 and E3-1200v5 processors provides a unique blend of enterprise class capabilities & value. It offers outstanding configuration flexibility to cater to a wide variety of business requirements at an affordable price point.
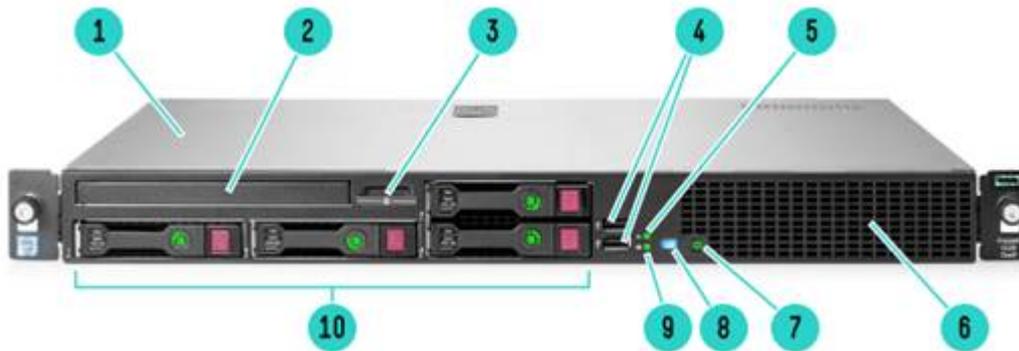
Front View

1. Access Panel
2. Optical Drive
3. Serial number/iLO information pull tab
4. 2 USB 2.0 connectors
5. Health LED
6. Front 2 Fan Assembly
7. Power On/Standby button and system power LED button
8. UID LED
9. NIC status LED
10. Hard Drive Bays

Overview
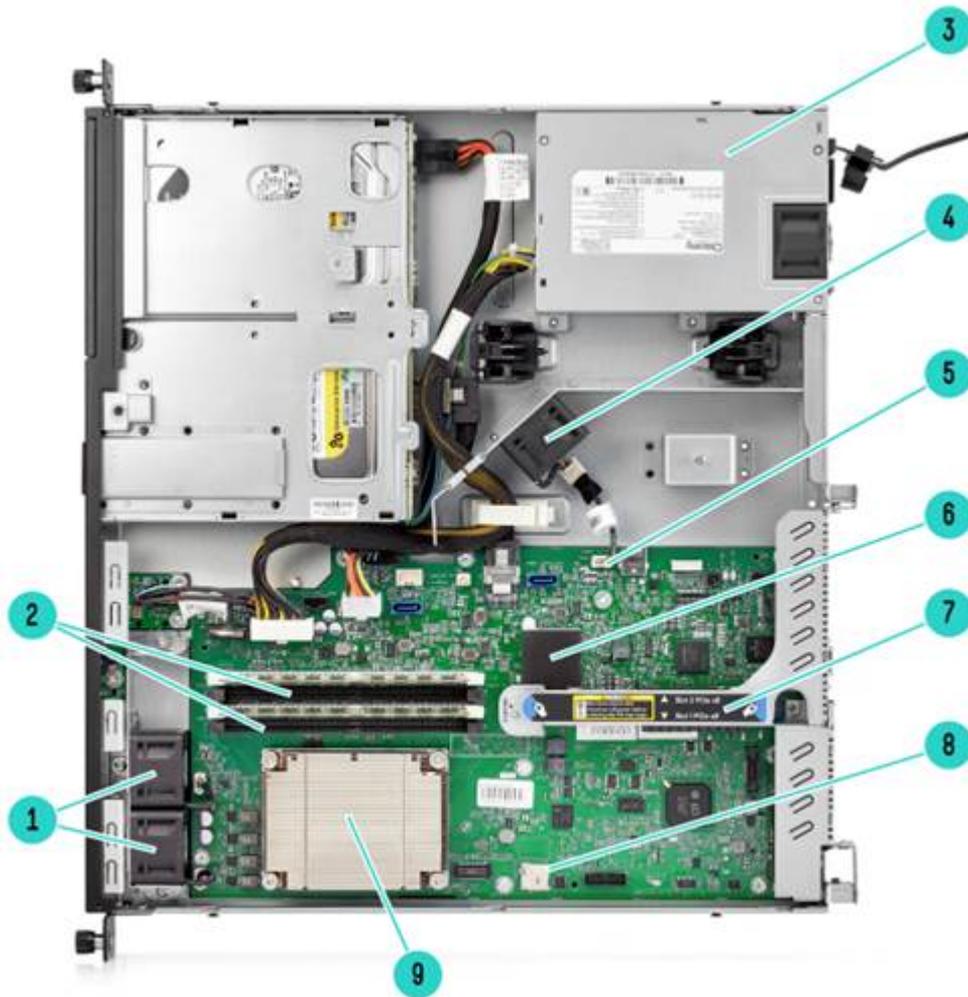
Internal view

1. Fan cage shown with 2 fans
2. DDR4 DIMM slots. 4 slots
3. (Under) Power supply (1x 290W power supply shown)
4. Central Fan Assembly
5. Internal USB 3.0 connector
6. Embedded HPE Smart Array B140i controller
7. PCIe Riser
8. MicroSD card slot
9. 1 Processor, heatsink showing, with HP Smart Socket Guide

Overview
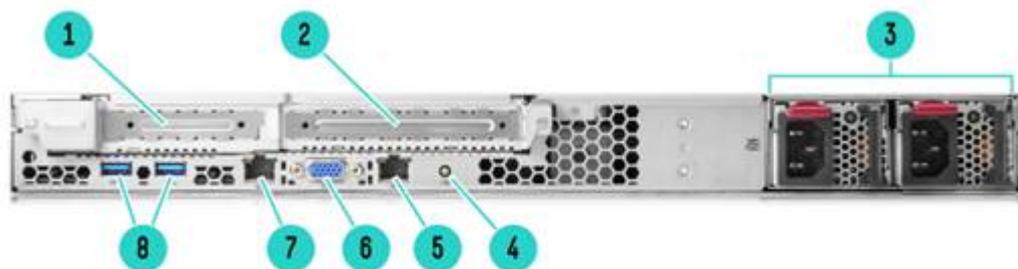
Rear View

1. Expansion Slot 1, PCIe x 8
2. Expansion Slot 2, PCIe x 16
3. Redundant Power Supply (only on SFF Chassis)
4. UID LED
5. NIC Connector 2
6. Video Connector
7. NIC1/shared iLO connector
8. USB 3.0 Connector

Standard Features

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

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

Processor One of the following depending on model	Model	CPU frequency	Cores	L3 Cache	Power	DDR4 Hz
	G4400	3.3GHz	2	3MB	54W	2133
	G4500	3.5GHz	2	3MB	51W	2133
	i3-6100	3.7GHz	2	3MB	51W	2133
	i3-6300	3.8GHz	2	4MB	51W	2133
	E3-1220v5	3.0GHz	4	8MB	80W	2133
	E3-1225v5	3.3GHz	4	8MB	80W	2133
	E3-1230v5	3.4GHz	4	8MB	80W	2133
	E3-1240v5	3.5 GHz	4	8MB	80W	2133
	E3-1270v5	3.6GHz	4	8MB	80W	2133
	E3-1280v5	3.7GHz	4	8MB	80W	2133
	E3-1240Lv5	2.1GHz	4	8MB	25W	2133
	E3-1260Lv5	2.9GHz	4	8MB	45W	2133

Chipset	Intel® C232 Chipset **NOTE:** For more information regarding Intel chipsets, please see the following URL: http://www.intel.com/products/server/chipsets/.
On System Management Chipset	HPE iLO (Firmware HPE iLO4 2.3) 4GB NAND **NOTE:** For more information, visit: http://www.hp.com/go/ilo.
Memory	Type: DDR4 Unbuffered (UDIMM) Unbuffered (UDIMM) DIMM Slots Available 4 4 DIMM slots per processor; 2 channels per processor, 2 DIMMs per channel Maximum Capacity 64GB (4 x 16GB UDIMM @2133MHz) (UDIMM)
Memory Protection One of the following depending on model	ECC

Standard Features

Network Controller	HPE Ethernet 1Gb 2-port 332i network Adapter or BCM5720

The HPE ProLiant DL20 Gen9 server offers the customer a dual-port NIC standard with the option to upgrade with a variety of networking options.

Expansion Slots

Dual side Low profile riser

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
1	PCIe 3.0	x8	x8		Half length/half height	
2	PCIe 3.0	x8	x8		Half Length/Full Height	

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

FlexibleLOM Riser

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Device Number	Form Factor	Notes
1	Flexible LOM	x8	x8			Half length/half height	
2	PCIe 3.0	x8	x8			Half Length/Full Height	

NOTE: This riser is mandatory for installing flexibleLOMs

GPU Riser

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Device Number	Form Factor	Notes
1							
2	PCIe 3.0	x16	x16			Half Length/Full Height	

NOTE: It is mandatory to choose one of the above risers.

Storage Controller
One of the following depending on model

Entry Models	HPE Dynamic Smart Array B140i Controller
Base Models	HPE Dynamic Smart Array B140i Controller
Performance Models	HPE H240 FIO Smart Host Bus Adapter

NOTE: B140i provides support for up to 4 SATA drives, data transmission speeds up to 6Gb/s and supports RAID 0, 1 & 5 on DL20 Gen9.
NOTE: H240 provides support for up to 4 SAS/SATA drives, data transmission speeds up to 12Gb/s and supports RAID 0, 1 & 5 on DL20 Gen9.
NOTE: HPE ProLiant DL20 Gen9 also supports other controller options like P440; read additional option to know more.

Standard Features

Internal Storage Devices One of the following depending on model	Optical Drives	Optional: DVD-ROM, DVD-RW
	Hard Drives	None ship standard
	Hard Drive Bays	4 SFF drive bays total with Optical Bay
		2 LFF drive bays total with Optical Bay
		NOTE: HPE ProLiant DL20 Gen9 server offers Hot plug LFF, Non hot plug LFF and SFF versions in CTO. The Optical Drive bay is available with both models.
		NOTE: Drive cage changes are not supported.
		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 654961-B21: HPE SFF Gen9 Hard Drive Blank Kit or P/N 689745-B21: HPE LFF Gen9 Hard Drive Blank Kit or P/N 654963-B21: HPE LFF Gen9 Hard Drive Blank kit. These part numbers for single HDD blanks below are also provided should the customer require replacement HDD blanks for their server.

Maximum Internal Storage One of the following depending on model	CAPACITY	CONFIGURATION
Hot Plug SFF SAS	8TB	4 x 2TB
Hot Plug SFF SATA	8TB	4 x 2TB
Hot Plug LFF SAS	16TB	2 x 8TB
Hot Plug LFF SATA	16TB	2 x 8TB
Hot Plug SFF SAS SSD	7.68TB	4 x1.92TB
Hot Plug SFF SATA SSD	15.36TB	4 x3.84TB
Hot Plug LFF SATA SSD	15.36TB	4 x3.84TB
Non Hot Plug LFF SATA	8TB	2 x 4TB

Power Supply One of the following depending on model	HPE 290W FIO Power Supply
	HPE 900W AC 240V DC Redundant Power Supply
	NOTE: The 900W RPS would only be available in Jan 2016.
	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. The above mentioned Entry-Level power supply options have been designed specifically for HPE ProLiant DL20 Gen9 Server.
	The HPE 290W FIO Power Supply is the standard, non-redundant AC power supply. It features 92% power efficiency with a set of features optimized for the DL20 Gen9 rack server.
	The HPE 900W Gold (Redundant) AC/240V DC 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. The power backplane option can support up to two (2) hot-plug AC power input modules. This

Standard Features

Redundant power supply option is only supported on DL20 Gen9 SFF chassis model.

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 located at http://h18004.www1.hp.com/products/servers/proliantstorage/power-protection/options/power-cable.html

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 One of the following depending on model		Non-redundant	Redundant
	1P model	3 fans	NA

HPE ProLiant DL20 has 3 fans, 2 front fan assemblies and 1 center fan assembly which ship standard, non-redundant.

Interfaces		
	Video	1 rear video connector
	USB	5 USB ports (standard)
		Front: 2xUSB 2.0
		Rear: 2xUSB 3.0
		Internal: 1x USB 3.0
	Micro SD Slot	1 Micro SD

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

NOTE: Customers can upgrade to next generation network (10GbE) by installing a FlexibleLOM riser.

Operating Systems and Virtualization Software Support for ProLiant Servers

Microsoft Windows Server
Red Hat Enterprise Linux (RHEL)
SUSE Linux Enterprise Server (SLES)
VMware
NOTE: VMWare availability is dependent on General availability from the vendor. HPE ProLiant DL20 supports VMWare 5.5U3 and 6.0 U1.
NOTE: For more information on HPE's Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server, please visit our Support Matrix at: http://www.hp.com/go/ossupport and our driver download page http://h20566.www2.hpe.com/portal/site/hpsc?ac.admitted=1447391526103.125225703.1938120508.

Upgradeability One of the following depending on model

FlexibleLOM connector for 1 Gigabit or 10 Gigabit networking options
Up to 4 DIMM slots available for higher memory capacity
Up to 4SFF Drive bays or 2LFF Drive bays
HPE Flexible Smart Array or Smart HBA Controllers
Redundant Power Supply
NOTE: RPS is only compatible with HPE DL20 SFF Chassis.

Standard Features

Industry Standard Compliance	UEFI (Unified Extensible Firmware Interface Forum) 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	HPE NVIDIA Quadro K2200 GPU Module **NOTE:** Install GPU riser option to support GPU card. A GPU enablement kit 811271-B21 is mandatory to support GPU.
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: - 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.
Form Factor One of the following depending on model	1U Rack form factor 4SFF and 2LFF version: 1.70" (4.32cm) Height x 15.05" (38.22cm) Depth x 17.11" (43.46cm) Length **NOTE:** Depth of the chassis is measured from rear to ear at 15.05". Depth from rear to bezel is 15.5".

Standard Features

Embedded Management	HPE Integrated Lights-Out (HPE iLO)	Monitor your servers for ongoing management, service alerting, reporting and remote management with HPE iLO. Learn more at http://www.hp.com/go/ilo.
	UEFI	Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI). Learn more at http://www.hp.com/go/ProLiant/uefi.
	RESTful API	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 http://www.hp.com/go/restfulapi.
	Intelligent Provisioning	Provision servers by discovering and deploying 1 to few servers with Intelligent Provisioning. Learn more at http://www.hp.com/go/intelligentprovisioning.
	Embedded Remote Support	Hewlett Packard Enterprise's embedded remote support, when used with Insight Online direct connect or HPE Insight Remote Support, allows HPE ProLiant servers to transmit hardware events directly to Hewlett Packard Enterprise or a Hewlett Packard Enterprise Authorized Partner for automated phone home support. Learn more at http://www.hp.com/go/insightonline/info.

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

Server utilities	Smart Update	Optimize firmware and driver updates with Smart Update solutions including Smart Update Manager (SUM) and Service Pack for ProLiant (SPP). Learn more at http://www.hp.com/go/smartupdate.
	HPE Systems Insight Manager (HPE SIM)	HPE SIM allows you to monitor the health of your HPE ProLiant Servers and HPE Integrity Servers, and also provides you with basic support for non-HPE servers. HPE SIM also integrates with SUM to provide quick and seamless firmware updates. Learn more at http://www.hp.com/go/sim.
	Scripting Tool Kit and Windows PowerShell	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 http://www.hp.com/go/ProLiantSTK or http://www.hp.com/go/powershell.
	RESTful Interface Tool	Scripting tool to provision servers using iLO 4 RESTful API to discover and deploy servers at scale. Learn more at http://www.hp.com/go/resttool

Standard Features

	HPE iLO Mobile Application	Enables the ability to access, deploy, and manage your server anytime from anywhere from select smartphones and mobile devices. For additional information please visit: http://www.hp.com/go/ilo/mobileapp.
	HPE Insight Online	HPE Insight Online, available at no additional cost as part of your Hewlett Packard Enterprise warranty, Care Pack or contractual support agreement with Hewlett Packard Enterprise, is a personalized dashboard for simplified tracking of IT operations and support information from anywhere, anytime. Learn more at http://www.hp.com/go/insightonline/info.

Security   Power-on password
Serial interface control
Administrator's password
TPM 1.2
APCI 2.0b
UEFI

Warranty   This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of Hewlett Packard Enterprise Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HPE 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 1-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

Embedded Management	iLO Essentials	HPE iLO Essentials is the preferred license for small and medium business that offers full remote server management capabilities for small and medium business via the Integrated Remote Console (IRC), virtual media, and e-mail based alerts. Learn more about HPE iLO Essentials at http://www.hp.com/go/iLO/essentials.
	iLO Scale-Out	HPE iLO Scale-Out is the preferred license built for web hosting, cloud service providers, and high performance computing data centers, managing massive scale out environments. This license offers sophisticated scripting tools that provides remote access through Text Console via SSH, Dynamic power capping, Email-based Alerting and proactive notifications. For more information, visit http://www.hp.com/go/iLO/scale-out.
	iLO Advanced	HPE iLO Advanced licenses offer smart remote functionality without compromise, for all HPE ProLiant servers. The license includes the full integrated remote console, virtual keyboard, video, and mouse (KVM), multi-user collaboration, console record and replay, and GUI-based and scripted virtual media and virtual folders. You can also activate the enhanced security and power management functionality. Learn more about HPE iLO Advanced at http://www.hp.com/go/iloadvanced.

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

Rack and Power Infrastructure	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 HPE Rack and Power Infrastructure.

High Performance Clusters	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. http://www.hp.com/go/clusters.

Storage Software	Whether you're a large enterprise or a smaller business, HPE data protection and recovery software will cost-effectively protect you against disaster and ensure business continuity.

Optional Features

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's Customer Business Center or an Authorized Partner for assistance. https://h22174.www2.hp.com/SimplifiedConfig/Index.

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 powered by a rich portfolio of consulting and support services designed to add value to our core products and solutions 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 support services offer complete care and support expertise with committed response choices that are designed to meet your IT and business needs.
Optimized Care	Supports maintaining servers at optimum performance availability **HPE Proactive Care with 24x7 coverage, three year Support Service** HPE Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice when your products are connected to Hewlett Packard Enterprise. This Service combines three years' proactive reporting and advice with our 24x7 coverage, four hour hardware response time. In addition, this service includes collaborative software support for Independent Software Vendors software (Red Hat, VMWare, Microsoft, etc.) running on your HPE ProLiant/Apollo server. http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf
Standard Care Package	Supports maintaining high level of server availability **HPE Foundation Care 24x7, three-year Support 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 Support 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
Related Services	**HPE 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 **HPE 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

Service and Support

	HPE 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. Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HPE products supported through Factory Express include a wide array of servers and storage: HPE Integrity, HPE ProLiant, HPE Apollo, HPE ProLiant Server Blades, HPE BladeSystem, HPE 9000 servers as well as the MSAxxxx3PAR suite, XP, rackable tape libraries and configurable network switches. For more information on Factory Express services for your specific server model please contact your sales representative or go to: http://www.hp.com/go/factory-express. Additional Support Services can be found at HPE Support Services Central http://ssc.hpe.com
Connect your devices to HPE	Unlock all of the benefits of your technology investment by connecting your products to Hewlett Packard Enterprise. Achieve up to 77%[1] reduction in down time, near 100%[2] diagnostic accuracy and a single consolidated view of your environment. By connecting, you will receive 24x7monitoring, pre-failure alerts, automatic call logging, and automatic parts dispatch. HPE Proactive Care Service and HPE Datacenter Care Service customers will also benefit from proactive activities to help prevent issues and increase optimization. All of these benefits are already available to you with your server storage and networking products, securely connected to Hewlett Packard Enterprise support. **NOTE:** 1- IDC whitepaper 2 – HPE CSC reports 2014 - 2015
HPE Support Center	Personalized online support portal with access to information, tools and experts to support HPE 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 HPE's Support Center Mobile App** allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime. HPE Insight Remote Support and HPE Support Center are available at no additional cost with a Hewlett Packard Enterprise warranty, HPE Support Services or Hewlett Packard Enterprise contractual support agreement. **NOTE:** ** HPE Support Center Mobile App is subject to local availability
Parts and Materials	Hewlett Packard Enterprise will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements. Parts and components that have reached their maximum supported lifetime and/or the

Service and Support

maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

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

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

For the Standard Features shipped in the "Factory Integrated Models", please see the "Configuration Information - Factory Integrated Models" section.
1. Pre-configured models ship with the configurations below. Options can be selected from the Core or Additional options section of this QuickSpecs.
2. HPE does not allow factory integration of options into pre-configured models. Any additional options purchased will be shipped separately.
3. If you desire a custom configuration please see "Configuration Information - Factory Integrated Models" section of this QuickSpecs.
4. Not all models are available in all regions. Check with your local country HPE offices for availability.

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

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.

	Entry Models	Base Models
[SKU Number]	829889-B21	823556-B21
Model Name	HPE ProLiant DL20 Gen9 G4400 4GB-U Non-hot Plug 2LFF 290W PS Entry Server	HPE ProLiant DL20 Gen9 E3-1220v5 8GB-U B140i 2LFF 290W PS Base Server
Processor	Intel® Pentium® G4400	Intel® Xeon® E3-1220v5
Number of Processors	One	
Memory	4GB (1x4GB UDIMMs, 2133 MHz)	8GB (1x8GB UDIMMs, 2133 MHz)
Network Controller	HPE embedded 1Gb 2-port 332i network Adapter	
Storage Controller	HPE Dynamic Smart Array B140i	
Hard Drive	None ship standard; includes 2 LFF hard drive blanks	None ship standard
Internal Storage	2 LFF HDD Bays (Non Hot Plug)	2 LFF HDD Bays (Hot Plug)
Optical Drive Bay	1; (Optional: DVD-ROM, DVD-RW)	
Optical Drive	None	
PCI-Express Slots	2 PCIe 3.0 slots	
Power Supply	(1) 290W Non Hot Plug Power Supply	
Fans	3 non hot plug, non-redundant	
Management	Integrated Lights-Out 4 (iLO 4) ships standard	
Form Factor	Rack (1U), HPE Short Friction Rail kit	
Warranty	Server Warranty includes 1-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response	

Pre-configured Models

	Performance Models	
[SKU Number]	823559-B21	823562-B21
Model Name	HPE ProLiant DL20 Gen9 E3-1240v5 8GB-U H240 4SFF 290W PS Performance Server	HPE ProLiant DL20 Gen9 E3-1240v5 8GB-U H240 4SFF 900W RPS Performance Server
Processor	Intel® Xeon® E3-1240v5	
Number of Processors	One	
Memory	8GB (1x8GB UDIMMs, 2133 MHz)	
Network Controller	HPE embedded 1Gb 2-port 332i network Adapter	
Storage Controller	HPE H240 Smart Host Bus Adapter	
Hard Drive	None ship standard	
Internal Storage	4 SFF HDD Bays	
Optical Drive Bay	1; (Optional: DVD-ROM, DVD-RW)	
Optical Drive	None	
PCI-Express Slots	2 PCIe 3.0 slots	
Power Supply	(1) 290W Non Hot Plug Power Supply	(1) HPE 900W Redundant Power Supply and RPS Backplane kit
Fans	3 non hot plug, non-redundant	
Management	Integrated Lights-Out 4 (iLO 4) ships standard	
Energy Star		Meets Energy Star requirements
Form Factor	Rack (1U), HPE Short Friction Rail kit	
Warranty	Server Warranty includes 1-Year Parts, 1-Year Labor, 1-Year Onsite support with next business day response	

NOTE: For 823562-B21 Model, add additional 900W Redundant Power supply input module for redundancy. The BTO includes the backplane cable kit and need not be additionally added.

NOTE: 823562-B21 - BTO with Redundant Power Supply would be available in Jan 2016.

Country Code	xx1 = B21	Worldwide
Key	xx1 = 291	Japan
	xx1 = AA1	PRC

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 a Hewlett Packard Enterprise approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.

1. Factory Integrated Models must start with a CTO Server.
2. FIO indicates that this option is only available as a factory installable option.
3. All Factory Integrated Models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the server.
4. Some options may not be integrated at the factory. Contact your local sales representative for additional information.

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

[Chassis]	HPE ProLiant DL20 Gen9 Non-hot Plug 2LFF Configure-to-order Server	HPE ProLiant DL20 Gen9 2LFF Configure-to-order Server	HPE ProLiant DL20 Gen9 4SFF Configure-to-order Server
SKU Number	819784-B21	819785-B21	819786-B21
Processor	1	1	1
DIMM Slots	4 DIMM slots for UDIMM DDR4 Memory		
Storage Controller	HPE Dynamic Smart Array B140i		
PCIe	2 PCIe 3.0 Slots		
Drive Cage	2LFF Non Hot Plug	2LFF Hot Plug	4SFF Hot Plug
Network Controller	HPE embedded 1Gb 2-port 332i network Adapter		
Fans	3 non hot plug, non-redundant		
Management	Integrated Lights-Out 4 (iLO 4) ships standard		
USB	2 front, 1 internal, 2 rear		
Ears	HPE Thumbscrew Ears		

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

Configuration Information - Factory Integrated Models

HPE Processors   Select one processor from Core options-Processor section below

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

For the Intel® C232 Chipset E3-1200 Series, the letter preceding the model number indicates the Product Line (E3, E5, E7); 1200x v#, 1 is the number of CPU, 2 is socket type/segment designation, 00 = Processor SKU, x = L for low power SKUs and v# (not yet designated) is the version number.

HPE Memory   Select one or more memory from Core options-Memory section below,

- HPE memory from previous generation servers are not qualified or warranted with this HPE ProLiant Server.
- HPE Standard Memory (UDIMM) is required to realize the memory performance improvements and enhanced functionality listed in this document for this HPE ProLiant Server.
- With one processor installed, four DIMMs slots are available.
- For more information on ProLiant Energy Efficient Features, see: http://www.hp.com/go/proliant-energy-efficient.
- Depending on the memory configuration and processor model, the memory speed would run at 2133MHz. Please see Memory Population Table or the Online Memory Configuration Tool at: http://www.hp.com/go/ddr4config.

HPE Power
Supplies   Select power supply from Core Options-Power Supplies section below:

- Prior to selecting a power supply option, it is highly recommended that you review your server configuration in the HPE Power Advisor tool to determine the right size power supply for your server configuration. The HPE Power Advisor is located at: http://www.hp.com/go/hppoweradvisor.

On 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 RPS require Redundant backplane kit and an RPS cable kit option for redundancy

Step 3: Choose Additional Factory Integratable Options

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

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

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

- The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.
- Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.
-

Configuration Information - Factory Integrated Models

	• The HPE ProLiant Gen9 Smart Storage solutions are equipped with re-designed Small Form Factor (SFF 2.5 in) and Large Form Factor (LFF 3.5 in) hot plug carriers for HPE Qualified Hard Drives and Solid State Drives. These new carriers provide status and activity indicators as well as caution indicators for "Do Not Remove".
HPE Flexible LOM	Select a FlexibleLOM from Core options-Networking section below,
	• Only one FlexibleLOM can be added to the server. These options are upgradeable and can be changed from the original configuration after the server is shipped. • For 10Gb adapters, a minimum of two Gigabytes (2 GB) of server memory is required per each adapter. • Please see the QuickSpecs for Technical Specifications and additional information: http://www.hp.com/go/ProLiantNICs.
HPE Networking	Select a standup NIC adapter from Core options-Networking section below,
	• Please see the QuickSpecs for Technical Specifications and additional information: http://www.hp.com/go/ProLiantNICs. • These options are upgradeable and can be changed from the original configuration after the server is shipped. • For 10Gb adapters, a minimum of two Gigabytes (2 GB) of server memory is required per each adapter.
HPE Storage Controllers	Select one or more Storage options from Additional options section below.
	• The embedded B140i controller will operate in UEFI only mode. For legacy support an additional controller will be needed, and for CTO orders please also select the Legacy mode settings part, 758959-B22 • This section may contain FIO options, please see HPE Storage Controllers section below. • FIO indicates that this option is only available as a factory installable option.
HPE I/O Expansion Options	Select one Riser Kit options from Core options section below.
	• It is mandatory to choose one riser kit option for DL20 Gen9 configurations • This section may contain FIO options, please see HPE I/O Expansion Options section below. • FIO indicates that this option is only available as a factory installable option
HPE Rail Kits	One short friction rail kit option is supported on this HPE ProLiant Server as given below.
	• Please take a moment to review the installation documentation that comes with the server to help you with the installation of your Gen9 server. • See HPE Rack Options in Additional Options section of this QuickSpecs for more rack kit choices.

CAUTION: Please refer to your installation instructions for proper tools and number of people to use for any installation.

Hewlett Packard Enterprise recommends that a minimum of two people are required for all Rack Server installations.

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 a Hewlett Packard Enterprise approved configurator. Contact your local sales representative for additional information.

HPE Unique Options	HPE DL20 Gen9 2LFF Mini SAS P440 Cable Kit	811279-B21
	NOTE: This cable kit is required to support P440 controller on 2LFF chassis.	
	HPE DL20 Gen9 4SFF Mini SAS P440 Cable Kit	811282-B21
	NOTE: This cable kit is required to support P440 controller on 4SFF chassis.	
	HPE DL20 Gen9 Smart Storage Battery Holder	822451-B21
	NOTE: This holder is required to install the HPE Smart Storage battery (727258-B21) on P440 controller with FBWC (820834-B21, 726821-B21).	
	HPE DL20 Gen9 Redundant Power Supply Cable Kit	820306-B21
	NOTE: It is mandatory to choose this back plane cable kit to support 828734-B21, 775595-B21 Redundant Power Supply Input Module. This cable kit is required in instances of single or double 900W PSU unit.	
	HPE DL20 Gen9 M.2 RA and Optical Disk Drive Power Cable Kit	816284-B21
	NOTE: This cable kit is required to support M.2 and or ODD.	
	HPE DL20 Gen9 Flexible LOM Riser Kit	811259-B21
	NOTE: This option is required to upgrade to next generation networking capabilities like 10GbE.	
	HPE DL20 Gen9 PCIe Low Profile Riser Kit	811265-B21
	NOTE: It is mandatory to choose a riser kit to enable PCIe slots.	
	HPE DL20 Gen9 GPU Enablement Kit	811271-B21
	NOTE: It is mandatory to choose the GPU enablement kit to support qualified GPU card.	

HPE Processors	Entry Processors	
	HPE ProLiant DL20 Gen9 Intel® Core™ i3-6100 (3.7GHz/2-core/3MB/51W) FIO Processor Kit	840010-L21
	HPE ProLiant DL20 Gen9 Intel® Core™ i3-6300 (3.8GHz/2-core/3MB/51W) FIO Processor Kit	840012-L21
	HPE ProLiant DL20 Gen9 Intel® Pentium® G4500 (3.5GHz/2-core/3MB/51W) FIO Processor Kit	840016-L21
	HPE ProLiant DL20 Gen9 Intel® Pentium® G4400 (3.3GHz/2-core/3MB/54W) FIO Processor Kit	840018-L21
	Base Processors	
	HPE DL20 Gen9 E3-1220v5 (3.0GHz/4-core/8MB/80W) FIO Processor Kit	822425-L21
	HPE DL20 Gen9 E3-1225v5 (3.3GHz/4-core/8MB/80W) FIO Processor Kit	836037-L21
	NOTE: We do not support embedded graphics capability	
	HPE DL20 Gen9 E3-1230v5 (3.4GHz/4-core/8MB/80W) FIO Processor Kit	822427-L21
	Performance Processors	

Core Options

HPE DL20 Gen9 E3-1240v5 (3.5GHz/4-core/8MB/80W) FIO Processor Kit	822429-L21
HPE DL20 Gen9 E3-1270v5 (3.6GHz/4-core/8MB/80W) FIO Processor Kit	822431-L21
HPE DL20 Gen9 E3-1280v5 (3.7GHz/4-core/8MB/80W) FIO Processor Kit	822433-L21
HPE DL20 Gen9 E3-1260Lv5 (2.9GHz/4-core/8MB/45W) FIO Processor Kit	822437-L21
HPE DL20 Gen9 E3-1240Lv5 (2.1GHz/4-core/8MB/25W) FIO Processor Kit	822435-L21

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

NOTE: Depending on the processor selected these memory will run at 2133MHz.

HPE Optical Drives	HP 9.5mm SATA DVD-ROM JackBlack Gen9 Optical Drive	726536-B21
	HP 9.5mm SATA DVD-RW JackBlack G9 Optical Drive	726537-B21

NOTE: It is mandatory to choose a cable kit 816284-B21 with the above options.

HPE Drives	SATA Non-Hot Plug LFF (3.5-inch) Midline (MDL) Drives	
	HP 4TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Standard 1yr Warranty Hard Drive	801888-B21
	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
	SATA Hot Plug LFF (3.5-inch) Midline (MDL) Drives	

Core Options

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
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
HP 300GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652611-B21
HP 300GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652564-B21
HP 146GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652605-B21
HP 1.8TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 512e 3yr Warranty Hard Drive	791034-B21

Core Options

SAS Hot Plug SFF (2.5-inch) Midline (MDL) Drives	
HP 1TB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	652749-B21
HP 500GB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	652745-B21
SAS Hot Plug LFF (3.5-inch) Enterprise (ENT) Drives	
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
SAS Hot Plug LFF (3.5-inch) Midline (MDL) Drives	
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
SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives	
HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	655710-B21
HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	655708-B21
6G SATA Hot Plug SFF (2.5-inch) SC 512e Drives	
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
6G SATA Hot Plug LFF (3.5-inch) SC 512e Performance Drives	
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
6G SATA Hot Plug SFF (2.5-inch) SC Mixed Use Solid State Drives	

Core Options

HP 200GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804613-B21
HP 1.6TB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804631-B21
HP 120GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816965-B21
HP 800GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804625-B21
12G SAS Hot Plug SFF (2.5-inch) Enterprise Value Solid State Drives	
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
12G SAS Hot Plug LFF (3.5-inch) Enterprise Value Solid State Drives	
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
12G SAS Hot Plug SFF (3.5-inch) SC Midline 512e Drives	
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
12G SAS Hot Plug LFF (3.5-inch) SC 512e Performance Drives	
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
12G SAS Hot Plug SFF (2.5-inch) SC Read/Write Intensive Solid State Drives	
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
6G SATA Hot Plug SFF (2.5-inch) Enterprise Mainstream Solid State Drives	

Core Options

HP 800GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691868-B21
HP 400GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691866-B21
HP 200GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691864-B21
HP 100GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691862-B21
6G SATA Hot Plug SFF (2.5-inch) Enterprise Value Solid State Drives	
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
12G SAS Mainstream Endurance Hot Plug SFF (2.5-inch) Enterprise Mainstream H2 Solid State Drives	
HP 1.6TB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive	779176-B21
HP 800GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive	779172-B21
HP 400GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive	779168-B21
HP 200GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive	779164-B21
6G SATA Hot Plug SFF Value Endurance (2.5-inch) Enterprise Value G1 Solid State Drives	
HP 240GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty G1 Solid State Drive	756636-B21
HP 960GB 6G SATA Light Endurance SFF 2.5-in SC Enterprise Light 3yr Wty G1 Solid State Drive	756601-B21
6G SATA Hot Plug SFF Value Endurance (2.5-inch) Enterprise Value M1 Solid State Drives	
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

Core Options

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

HP 80GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Boot 3yr Wty Solid State Drive	734360-B21
HP 120GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Boot 3yr Wty Solid State Drive	717965-B21

6G SATA Hot Plug LFF (3.5-inch) Enterprise Mainstream Solid State Drives

HP 800GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691860-B21
HP 400GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691856-B21
HP 200GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691854-B21
HP 100GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691852-B21

6G SATA Hot Plug LFF Value Endurance (3.5-inch) Converter Enterprise Value G1 Solid State Drives

HP 240GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty G1 Solid State Drive	756639-B21
HP 480GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty G1 Solid State Drive	756660-B21

6G SATA Hot Plug LFF Value Endurance (3.5-inch) Converter Enterprise Value M1 Solid State Drives

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

6G SATA Hot Plug LFF (3.5-inch) Enterprise Value Solid State Drives

Core Options

HP 1.6TB 6G SATA Value Endurance LFF 3.5-in SC Converter Enterprise Value 3yr Wty Solid State Drive	757342-B21
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 Conveter 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
HP 120GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty G1 Solid State Drive	756624-B21
6G SATA Hot Plug LFF (3.5-inch) Enterprise Boot Solid State Drives	
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
6G SATA Hot Plug SFF (2.5-inch) SC Read Intensive Solid State Drives	
HP 480GB 6G SATA Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	789145-B21
HP 240GB 6G SATA Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	789135-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
6G SATA Hot Plug LFF (3.5-inch) SC Read Intensive Solid State Drives	

Core Options

HP 480GB 6G SATA Read Intensive LFF 3.5-in SC Converter 3yr Wty Solid State Drive	789147-B21
HP 240GB 6G SATA Read Intensive LFF 3.5-in SC Converter 3yr Wty Solid State Drive	789137-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
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 Value Endurance Hot Plug SFF (2.5-inch) SC Enterprise Value G1 Solid State Drives	
HP 120GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty G1 Solid State Drive	756621-B21
HP 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty G1 Solid State Drive	756657-B21
6G SATA Hot Plug RI-3 SFF (2.5-inch) SC Solid State Drives	
HP 120GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816879-B21
HP 240GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816889-B21
HP 480GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816899-B21
HP 960GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816909-B21
HP 1.92TB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816919-B21
HP 3.84TB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816929-B21
6G SATA Hot Plug LFF (3.5-inch) MU-3 SCC SSD	
HP 120GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816969-B21
HP 240GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816979-B21
HP 480GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816989-B21
HP 960GB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816999-B21
HP 1.92TB 6G SATA Mixed Use-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	817015-B21
6G SATA Hot Plug MU-3 SFF (2.5-inch) SC Solid State Drives	

Core Options

HP 240GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816975-B21
HP 480GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816985-B21
HP 960GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816995-B21
HP 1.92TB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	817011-B21
6G SATA Hot Plug LFF (3.5-inch) RI-3 SCC SSD	
HP 120GB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816883-B21
HP 240GB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816893-B21
HP 480GB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816903-B21
HP 960GB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816913-B21
HP 1.92TB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816923-B21
HP 3.84TB 6G SATA Read Intensive-3 LFF 3.5-in SC Converter 3yr Wty Solid State Drive	816933-B21
6G SATA Hot Plug SFF (2.5-inch) SC Write Intensive Solid State Drives	
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
6G SATA Hot Plug LFF (3.5-inch) SC Write Intensive Solid State Drives	
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
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

Core Options

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
	HP PS1810-24G Switch	J9834A
	10 Gigabit Ethernet adapters	
	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 FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter	727060-B21
	HP Ethernet 10Gb 2-port 557SFP+ Adapter	788995-B21
	HP Ethernet 10Gb 2-port 560SFP+ Adapter	665249-B21
	HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter	665243-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 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.

HPE I/O Expansion Options	HPE DL20 Gen9 PCIe Low Profile Riser Kit	811265-B21
	HPE DL20 Gen9 Flexible LOM Riser Kit	811259-B21
	HPE DL20 Gen9 GPU Enablement Kit	811271-B21

NOTE: It is mandatory to choose any of the above riser kit for CTO configurations.

Core Options

HPE Power Supplies	HPE Entry-Level Power Supplies	
	HPE DL20 Gen9 290W FIO Power Supply Unit Kit	816283-B21

NOTE: 290W PSU is a Non hot plug power supply.
NOTE: This FIO option can only be bought integrated in the server.
It cannot be ordered as a standalone option after server purchase.

HPE 900W AC 240VDC Power Input Module   775595-B21
NOTE: This part number is a BTO only option and hence can only
be bought standalone.

HPE 900W AC 240VDC RPS Power Backplane   814835-B21
NOTE: This part number is a BTO only option and hence can only
be bought standalone.

HPE DL20 Gen9 Redundant Power Supply Cable Kit   820306-B21
NOTE: This RPS backplane Cable kit is mandatory to be chosen
along with 900W RPS input module.

HPE 900W DC Power Input Module FIO Kit   828734-B21
HPE 900W DC RPS Power Backplane FIO Kit   828735-B21
NOTE: The backplane kit and the backplane cable kit is required for
RPS capability.
NOTE: This FIO option can only be bought integrated in the server.
It cannot be ordered as a standalone option after server purchase.

HPE 900W AC 240VDC Redundant Power Supply Kit   820792-B21
NOTE: This Redundant Power supply kit includes 2 power supply
input module and 1 backplane kit.
NOTE: The Redundant Power Supply will be available in January 2016.

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

NOTE: 1 GPU supported per Server.
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.
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.

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 represent for additional information.

HPE Insight Software	HPE Insight Control	
	HP Insight Control Server Provisioning Media Kit	BD883A
	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 Management Media Kit	C6N31A
	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 FIO Electronic License	C6N36ABE

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

NOTE: Customer will receive a license entitlement certificate. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 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 QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12631_div/12631_div.html.

Embedded Management	HPE iLO Advanced	
	HP iLO Advanced including 1yr 24x7 Technical Support and Updates Single Server License	512485-B21
	HP iLO Advanced including 1yr 24x7 Technical Support and Updates Flexible Quantity License	512486-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 Tracking License	512487-B21
	HP iLO Advanced Flexible Qty License with 3yr 24x7 Tech Support and Updates	BD506A
	HP iLO Advanced Tracking License with 3yr 24x7 Tech Support and Updates	BD507A
	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	

Additional Options

	HP Integrated Lights-Out Essentials including 3yr 24x7 Tech Support and Updates Single Svr License	BD774A
	HP Integrated Lights-Out Essentials including 3yr 24x7 Technical Support and Updates E-LTU	E6U61ABE
	HP Integrated Lights-Out Essentials including 1yr 24x7 Technical Support and Updates E-LTU	E6U62ABE
	HP Integrated Lights-Out Essentials including 1yr 24x7 Tech Support and Updates Single Svr License	BD775A
	HPE iLO Scale-out	
	HP Integrated Lights-Out Scale-Out 1yr 24x7 Tech Support and Updates Flex Quantity License	BD778A
	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 Flex Qty E-LTU	BD776AAE
	HP Integrated Lights-Out Scale-Out including 3yr 24x7 Tech Support and Updates Tracking License	BD777A
	HP Integrated Lights-Out Scale-Out including 1yr 24x7 Tech Support and Updates Flex Qty E-LTU	BD778AAE
	HP Integrated Lights-Out Scale-Out including 1yr 24x7 Tech Support and Updates Tracking License	BD779A
HPE iLO Advanced License	HPE iLO Advanced	
	HP iLO Advanced including 1yr 24x7 Technical Support and Updates Single Server License	512485-B21
	HP iLO Advanced including 1yr 24x7 Technical Support and Updates Flexible Quantity License	512486-B21
	HP iLO Advanced including 1yr 24x7 Technical Support and Updates Tracking License	512487-B21
	HP iLO Advanced 1 Server License with 3yr 24x7 Tech Support and Updates	BD505A
	HP iLO Advanced Flexible Qty License with 3yr 24x7 Tech Support and Updates	BD506A
	HP iLO Advanced Tracking License with 3yr 24x7 Tech Support and Updates	BD507A
	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
High Performance Clusters	HPE Cluster Management Utility	
	HP Insight Cluster Management Utility 3yr 24x7 Flexible License	BD476A
	HP Insight Cluster Management Utility 1yr 24x7 Flexible License	QL803B
	HP Insight Cluster Management Utility Media	BD477A

Additional Options

HPE Security	HP Trusted Platform Module Option	488069-B21
	HP 1U Security Bezel Kit	664918-B21
	NOTE: Quick Release Ear option kit (P/N 811254-B21) is mandatory for installing security bezel.	
	HPE DL20 Gen9 Quick Release Ear FIO Kit	811254-B21
	NOTE: HPE ProLiant DL20 Gen9 ships with thumbscrew ear attachments (BTO and CTO) as standard. The Quick Release Ear kit needs to be purchased if you want to have a security bezel installed.	

HPE Storage Controllers	SAS Controllers	
	HPE Smart Array Controllers	
	HP Smart Array P440/2GB FBWC 12Gb 1-port Int SAS Controller	820834-B21
	NOTE: The above SKUs include 96W Smart Storage Battery.	
	HP Smart Array P440/4GB FBWC 12Gb 1-port Int SAS Controller	726821-B21
	NOTE: The option requires a 96W Smart Storage Battery p/n 727258-B21.	
	HP Smart Array P440/4GB FBWC 12Gb 1-port Int FIO SAS Controller	761872-B21
	NOTE: The above SKUs include 96W Smart Storage Battery.	
	HP Smart Array P441/4GB FBWC 12Gb 2-ports Ext SAS Controller	726825-B21
	HP Smart Array P841/4GB FBWC 12Gb 4-ports Ext SAS Controller	726903-B21
	NOTE: P440 needs to be populated in slot 2 (Full Height).	
	HPE Smart Host Bus Adapters	
	HP H240 12Gb 2-ports Int Smart Host Bus Adapter	726907-B21
	HP H240 12Gb 2-ports Int FIO Smart Host Bus Adapter	761873-B21
	HP H241 12Gb 2-ports Ext Smart Host Bus Adapter	726911-B21
	NOTE: H240 needs to be populated in slot 2 (Full Height).	
	HPE Cable Options	
	HPE DL20 Gen9 2LFF Mini SAS P440 Cable Kit	811279-B21
	HPE DL20 Gen9 4SFF Mini SAS P440 Cable Kit	811282-B21
	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: FIO indicates that this option is only available as a factory installable option. Please select FIO option if you want the option to be factory installed.	
	NOTE: All the server chassis (Mod-x) includes min-SAS cables required to connect drives to embedded B140i SATA controller or HBA240 controller (HBA240 is optional).	
	Optional Software	
	HP Secure Encryption per Svr Entitlement	C9A82AAE
	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
	Optional Upgrades	

Additional Options

	HP 96W Smart Storage Battery with 145mm Cable for DL/ML/SL Servers	727258-B21
	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.	
	Battery Holder	
	HPE DL20 Gen9 Smart Storage Battery Holder	822451-B21
	NOTE: This holder is mandatorily required with Smart Storage Battery.	

HPE Tape Backup	**NOTE:** For the complete range of tape drives, autoloaders, libraries and media see: http://www.hp.com/go/tape. For hardware and software compatibility of HPE tape backup products see: http://www.hp.com/storage/SPOCK and http://www.hp.com/go/ebs.	
	NOTE: 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	
	HP StoreEver LTO-6 Ultrium 6650 SAS External Tape Drive	EH964A
	HP StoreEver LTO-6 Ultrium 6250 Tape Drive in 1U Rack-mount Kit	C0L99A
	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	C0H19A
	HPE MSL2024 Tape Library	
	HP MSL2024 0-Drive Tape Library	AK379A
	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

Additional Options

HPE Disk Backup	HPE RDX Removable Disk Backup System	
	HP D3700 Enclosure	QW967A
	HP D3600 Enclosure	QW968A
	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 HPE disk backup products see:
http://www.hp.com/storage/SPOCK.

HPE Disk Storage Systems	Disk Enclosures	
	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
	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
	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

Additional Options

HPE Data Center Racks	HPE 11000 G2 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 11000 G2 Series Racks QuickSpecs for information on additional racks options and rack specifications.

	HPE Intelligent Series Rack	
	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 Intelligent Series Racks QuickSpecs for information on additional racks options and rack specifications.

	HPE Value Series Rack	
	HPE V142 1075mm deep Pallet 100 series Rack	AF046A

NOTE: Please see the HPE Value Series Rack QuickSpecs for information on additional racks options and rack specifications.

HPE Power	HPE Basic Power Distribution Unit (bPDU)

Additional Options

Distribution Units (PDUs)	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 7.3kVA 230 Volt IEC309 32A Input (20xC13) INTL Basic PDU	H5M68A
	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 7.3kVA 230 Volt IEC309 32A Input (24xC13/6xC19) INTL Basic PDU	H5M70A
	HP 8.3kVA 208 Volt CS8265C Input (30xC13/6xC19) NA/JP Basic PDU	H5M60A
	HP 11kVA 230 Volt IEC309 63A Input (30xC13/6xC19) INTL Basic PDU	H5M71A
	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 16A 3-Phase Input (30xC13/6xC19) INTL Basic PDU	H5M72A
	HP 11kVA 400 Volt IEC309 16A 3-Phase Input (36xC13/6xC19) INTL Basic PDU	H5M73A
	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 7.3kVA 32A High Voltage INTL Core Modular Power Distribution Unit	252663-B33
	HP 9.2kVA 40A High Voltage INTL Core Modular Power Distribution Unit	252663-B34
	HP 8.6kVA 24A Three Phase NA/JP Modular Power Distribution Unit	AF512A
	HP 11kVA 16A Three Phase INTL Modular Power Distribution Unit	AF513A
	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 22kVA 32A Three Phase INTL Core Modular Power Distribution Unit	AF518A

NOTE: To learn more about HPE Basic Power Distribution Units (bPDU), please visit the HPE website at http://www.hp.com/go/pdu.

HPE Monitored Power Distribution Units (mPDU)

Additional Options

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 7.3kVA 230 Volt IEC309 32A Input (12xC13) INTL Monitored PDU	G9Z06A
HP 4.9kVA 208 Volt L6-30 Input (20xC13/4xC19) NA/JP Monitored PDU	D9N47A
HP 7.3kVA 230 Volt IEC309 32A Input (20xC13/4xC19) INTL Monitored PDU	D9N48A
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 11kVA 400 Volt IEC309 16A 3-Phase Input (18xC13/3xC19) INTL Monitored PDU	D9N55A
HP 8.3kVA 208 Volt CS8265C Input (30xC13/3xC19) NA Monitored PDU	D9N49A
HP 7.3kVA 230 Volt IEC309 32A Input (32xC13/4xC19) INTL Monitored PDU	D9N50A
HP 11kVA 400 Volt IEC309 16A 3-Phase Input (30xC13/3xC19) INTL Monitored PDU	D9N57A
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
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 22kVA 400 Volt IEC309 32A 3-Phase Input (30xC13/3xC19) INTL Monitored PDU	D9N56A
HP 22kVA 400 Volt IEC309 32A 3-Phase Input (12xC13/12xC19) INTL Monitored PDU	D9N60A
HP 22kVA 400 Volt IEC309 32A 3-Phase Watertight Input (12xC13/12xC19) INTL Monitored PDU	G9Z08A
HP Environmental Sensor for Remote Monitored and Managed PDUs	E2D53A

NOTE: Please see the HPE Monitored Power Distribution Units QuickSpecs for

Additional Options

information on additional options and product specifications.

HPE Intelligent Power Distribution Units (iPDU)

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 7.3kVA 32A Single Phase INTL Core Intelligent Modular Power Distribution Unit	AF525A
HP 11kVA 16A Three Phase INTL Core Intelligent Modular Power Distribution Unit	AF526A
HP 22kVA 32A Three Phase INTL Core Intelligent Modular Power Distribution Unit	AF527A
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 22kVA 32A 400V Three Phase 12 Outlet Core INTL Intelligent Power Distribution Unit	AF538A
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 7.3kVA 32A Single Phase INTL Intelligent Modular Power Distribution Kit	AF534A
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 Units QuickSpecs for information on additional options and product specifications.

HPE Managed Power Distribution Units (maPDU)

Additional Options

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 7.3kVA 200-240 Volt IEC309 32A Input (20xC13/4xC19) INTL Managed PDU	H8B51A
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 11kVA 400 Volt IEC309 16A 3 Phase Input (21xC13/3xC19) INTL Managed PDU	H8B54A
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
HP 800VA - 277V Input / 230V Output NA Rack Mount Transformer	H3X09A

NOTE: Please see the HPE Managed Power Distribution Units (maPDU) QuickSpecs for information on additional options and product specifications.

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

HPE Rack Mount Consoles, KVM Switches, and Keyboards		
	Rail Kits	
	HP 1U Short Friction Rail Kit	775612-B21
	HPE Location Discovery Services	
	HP Location Discovery Services LCD8500 Kit	TL052A
	HPE Rack Mount Consoles	
	HP LCD8500 1U US Rackmount Console Kit	AF630A
	HP LCD8500 1U UK Rackmount Console Kit	AF631A
	HP LCD8500 1U DE Rackmount Console Kit	AF632A
	HP LCD8500 1U FR Rackmount Console Kit	AF633A
	HP LCD8500 1U JP Rackmount Console Kit	AF642A
	HP LCD8500 1U RU Rackmount Console Kit	AF643A
	HP LCD8500 1U INTL Rackmount Console Kit	AF644A
	HP LCD8500 1U US TAA Rackmount Console Kit	AF645A
	HPE KVM Switches	

Additional Options

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

NOTE: To learn more, please visit the HPE KVM Switches web page.

HPE USB Keyboard and Mouse

HP USB BFR with PVC Free US Keyboard/Mouse Kit	631341-B21
HP USB BFR with PVC Free UK Keyboard/Mouse Kit	631344-B21
HP USB BFR with PVC Free FR Keyboard/Mouse Kit	631346-B21
HP USB BFR with PVC Free ES Keyboard/Mouse Kit	631348-B21
HP USB BFR with PVC Free DE Keyboard/Mouse Kit	631358-B21
HP USB BFR with PVC Free JP Keyboard/Mouse Kit	631360-B21
HP USB BFR with PVC Free IT Keyboard/Mouse Kit	631362-B21
HP USB BFR with PVC Free CN Keyboard/Mouse Kit	631364-B21
HP USB BFR with PVC Free AE Keyboard/Mouse Kit	638212-B21
HP USB BFR with PVC Free RU Keyboard/Mouse Kit	638214-B21
HP USB BFR with PVC Free IN Keyboard/Mouse Kit	672097-D63
HP USB BFR with PVC Free AP-Intl Keyboard/Mouse Kit	672097-373
HP USB BFR with PVC Free Intl Keyboard/Mouse Kit	672097-B33
HP USB BFR with PVC Free PT Keyboard/Mouse Kit	672097-133
HP USB BFR with PVC Free TR Keyboard/Mouse Kit	672097-143
HP USB BFR with PVC Free CZ Keyboard/Mouse Kit	672097-223
HP USB BFR with PVC Free FI Keyboard/Mouse Kit	672097-353
HP USB BFR with PVC Free SE Keyboard/Mouse Kit	672097-103
HP USB BFR with PVC Free CH Keyboard/Mouse Kit	672097-113
HP USB BFR with PVC Free KR Keyboard/Mouse Kit	672097-KD3

HPE Other Options

HP Rack LED Light Kit	BW939A
HP Kit LCD 1.83m Latch Display Port Cable	G7T29A
HP ConvergedSystem Door Branding Kit	TK815A
HP ConvergedSystem Rack Light Kit	TK816A
HP ConvergedSystem Rack Side Panel 1075mm Kit	TK817A

HPE Uninterruptible HPE DirectFlow Three Phase UPS

Additional Options

Power Systems (UPS)	Power Unit (1U UPS)	
	HP R12000 DirectFlow - 1U Rackmount Uninterruptible Power System	G9Y75A
	HP R12000 DirectFlow - POD 1U Rackmount Uninterruptible Power System	AF478A
	HP RP12000/3 12000VA Three Phase INTL 6U Rackmount Uninterruptible Power System	AF437A
	Input/Output Module Options for 1U UPS	
	HP 32A 400-415 Volt Three Phase INTL R12000 DirectFlow UPS IEC309 Input/Output Module	AF488A
	HP 30A 400-415 Volt Three Phase NA R10000 DirectFlow UPS IEC309 Input/Output Module	AF489A
	HP 32A 380 Volt Three Phase China R12000 DirectFlow UPS Unterminated Input/Output Module	AF490A
	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
	Power Unit (2U UPS)	
	HP R18000 DirectFlow - 2U Rackmount Uninterruptible Power System	AF479A
	HP DirectFlow UPS Management Card	AF493A
	Input/Output Module Options for 2U UPS	
	HP 32A 400-415 Volt Three Phase INTL R18000 DirectFlow UPS IEC309 Input/Output Module	AF483A
	HP 30A 380 Volt Three Phase China R18000 DirectFlow UPS Unterminated Input/Output Module	AF485A
	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 Rack/Tower UPS	

Additional Options

	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
	HP R/T3000 G4 High Voltage INTL Uninterruptible Power System	J2R04A
	R1500 G4 Models	
	HP R1500 G4 NA Uninterruptible Power System	J2Q99A
	HP R1500 G4 JP/TWN Uninterruptible Power System	J2R05A
	HP R1500 G4 INTL Uninterruptible Power System	J2R03A
	R7000 Uninterruptible Power System (UPS)	
	HP R7000 4U 50A High Voltage NA/JP Uninterruptible Power System	AF462A
	HP R7000 4U IEC-32A High Voltage INTL Uninterruptible Power System	AF463A
	R5000 Uninterruptible Power System (UPS)	
	HP R5000 3U L630 High Voltage NA/JP Uninterruptible Power System	AF460A
	HP R5000 3U IEC309-32A High Voltage INTL Uninterruptible Power System	AF461A
	HPE UPS Options	
	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.

HPE USB and SD Options	HPE Enterprise Mainstream Flash Media Kits for Memory Cards	
	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

Additional Options

HPE Care Pack Services	Installation & Start-up Services	
	HPE Installation ML/DL Series 10 Service	U7WZ5E
	HPE Startup ML/DL Series 10 Service	U7WZ7E
	Foundation Care	
	HPE 3 year Foundation Care Next business day DL20 Gen9 Service	H1AH3E
	HPE 3 year Foundation Care Next business day with DMR DL20 Gen9 Service	H1AH4E
	HPE 3 year Foundation Care 24x7 DL20 Gen9 Service	H1AH9E
	HPE 3 year Foundation Care 24x7 with DMR DL20 Gen9 Service	H1AJ0E
	HPE 3 year Foundation Care 24x7 with CDMR DL20 Gen9 Service	H1AP0E
	HPE 3 year Foundation Care Next business day with CDMR DL20 Gen9 Service	H1AN7E
	Proactive Care	
	HPE 3 year Proactive Care 24x7 DL20 Gen9 Service	H1AJ1E
	HPE 3 year Proactive Care 24x7 with DMR DL20 Gen9 Service	H1AJ2E
	HPE 3 year Proactive Care 24x7 with CDMR DL20 Gen9 Service	H1AP1E

Memory

HPE Standard Memory UDIMMs has passed the rigorous HPE qualification and testing processes.
The memory subsystem in this server supports UDIMMs. The server supports single-rank and dual-rank DDR4 UDIM
at up to 2133 MHz DIMM speeds.

Memory Population guidelines	The server supports two channels per processor with two DIMMs per channel for a total of four DIMMs per DL20 Gen9 Server.

General Memory Population Rules and Guidelines:
- Only UDIMMs are supported on DL20 Gen9. No support for RDIMMs and LRDIMMs
- All the channels in a system run at the fastest common frequency
- Mixing ECC and non-ECC UDIMMs on the platform are not supported
- Both single DIMM per channel and dual DIMMs per channel are supported at 2133MHz

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

Memory Bandwidth and Capacity				
[DIMM Type]	Unbuffered with ECC DIMMs (UDIMMs)			
DIMM Rank	Single Rank	Single Rank	Dual Rank	Dual Rank
DIMM Capacity	4GB	8GB	8GB	16GB
DIMM Native Speed (MT/s)	2133	2133	2133	2133
Voltage	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V
SLOTS THAT CAN BE POPULATED				
4 slot servers	4	4	4	4
MAXIMUM CAPACITY (GB)				
	16	32	32	64
POPULATED DIMM SPEED (MT/s)				
1 DIMM Per Channel	2133	2133	2133	2133
2 DIMM Per Channel	2133	2133	2133	2133
3 DIMM Per Channel				

Memory

DIMM slot and configuration diagram	DIMM slot and configuration diagrams UDIMM maximum configuration (1 CPU model) • Population order; start with "A" first, "B" second, "C" third, etc.

	CPU 1		CPU 2		
	Slot #	population order	Slot #	population order	
Chnl 2	1	B	1		
	2	D	2		

	CPU 1		CPU 2		
	Slot #	population order	Slot #	population order	
Chnl 1	3	A	3		
	4	C	4		

Memory Speed by Processor Model	Processor Models	Supported Memory Speeds
	i3-6100, i3-6300, G4500, G4400, E3-1220v5, E3-1225v5, E3-1230v5, E3-1240v5, E3-1270v5, E3-1280v5, E3-1260Lv5, E3-1240Lv5	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
	G4400	4GB (1x4GB)	52GB (3x16GB, 1x4GB)	64GB (4x16GB)
	E3-1220v5, E3-1240v5	8GB (1x8GB)	56GB (3x16GB, 1x8GB)	64GB (4x16GB)

Memory

DDR4 memory options part number decoder

NOTE: Capacity references are rounded to the common gigabyte (GB) values.
- 4GB = 4,096MB
- 8GB = 8,192MB
- 16GB = 16,384MB
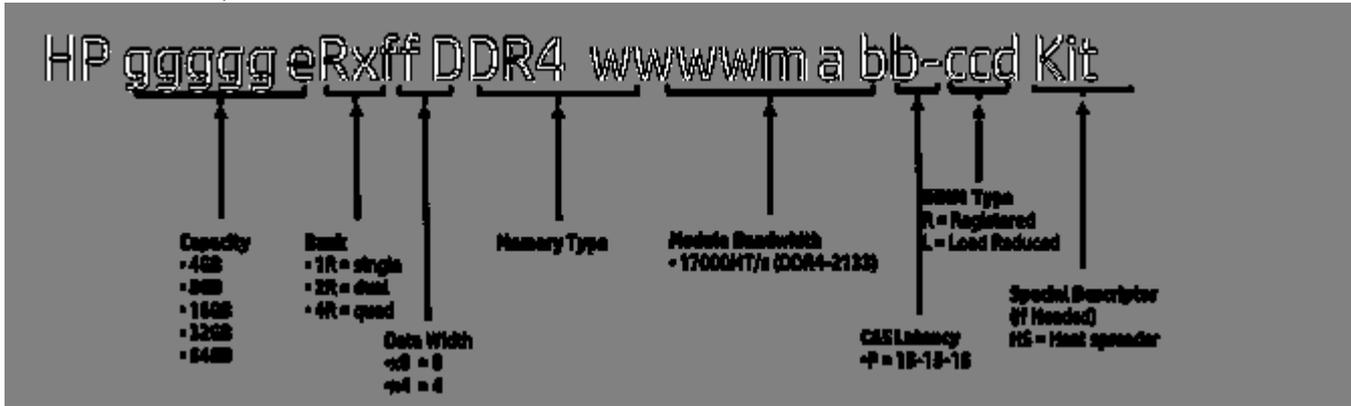
Storage
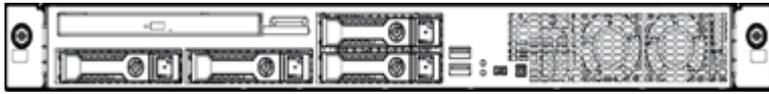
	1 - 4	4 x SFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays
	1 - 2	2 x LFF SATA/SAS/SSD Hot Pluggable and Non hot Pluggable Hard Drives Bays
	1 - 2	2 x LFF SATA Non hot Pluggable Hard Drives Bays
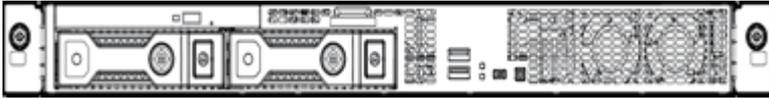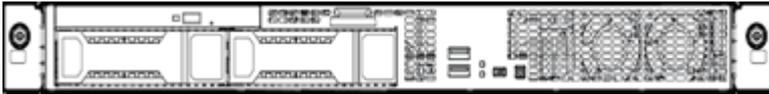
Technical Specifications

System Unit	Dimensions (H x W x D)	4 SFF - 1.70 x 17.11 x 15.05 inches (4.32 x 43.46 x 38.22 cm) 2 LFF - 1.70 x 17.11 x 15.05 inches (4.32 x 43.46 x 38.22 cm) **NOTE:** Depth of the chassis from rear to bezel is 15.5".	
	Weight (approximate)	Non hot Plug 2 LFF fully loaded (all hard drives, power supplies, and processors installed)	17.37lb (7.88kg)
		Hot Plug 2LFF fully loaded (one hard drive, power supply, and processor installed)	17.41lb (7.9kg)
		4 SFF Fully loaded	19.18lb (8.7kg)

290W Non-hot Plug Power Supply

Input Requirements	Range Input Voltage	100 to 240 VAC	
	Rated Input Current	5.5 A max (at 100 VAC)	
	Rated Input Frequency	50 to 60 Hz	
	Rated Input Power	550 W (at 100 VAC)	
BTU Rating	Maximum	1130 BTU per hr (at 115 VAC) 1126 BTU per hr (at 230 VAC)	
Power Specifications	To review typical system power ratings use the Power Advisor which is available via the online tool located at URL: http://www.hp.com/go/proliant-energy-efficient or http://www.hp.com/go/hppoweradvisor - Click on the system of interest. Example: DL20 Gen9- Follow the instructions of the next screens.		
Power Supply Output	Rated Steady-State Power	290 W Max	
	Maximum Peak Power	366 W within 10 seconds	
System Inlet Temperature	Standard Operating Support	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 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).	
	Extended		

Technical Specifications

	Ambient Operating Support	system inlet range is extended to be: 5° to 10°C (41° to 50°F) and 35° to 40°C (95° to 104°F) at sea level with an altitude derating of 1.0°C per every 175 m (1.8°F per every 574 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: http://www.hp.com/go/proliant/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°C to 65°C (-22°F to 149°F)
Relative Humidity	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
Altitude	Operating	3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min)
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
Acoustic Noise		Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).
	Idle	
	L WAd	Entry 3.7 B Base 3.8 B Performance 3.4B
	L pAm	Entry 20.0 dBA Base 20.0 dBA Performance 18.0 dBA
	Operating	
	L WAd	Entry 3.7 B Base 4.7 B Performance 5.6 B
	L pAm	Entry 20.0 dBA Base 30.0 dBA Performance 34.0 dBA
Emissions Classification (EMC)	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.

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

HPE Ethernet 1Gb 2-port 332i	Network Interface	10Base-T/100Base-TX/1000Base-TX

Technical Specifications

Adapter	Compatibility	IEEE 802.3 10Base-T IEEE 802.3ab 1000Base-T IEEE 802.3u 100Base-TX Energy Efficient Ethernet (EEE) compliant with IEEE Std 802.3az (default is disabled)	
	Ports		
	Data Transfer Method	PCI Express, two lanes (x2)	
	Controller	BCM5720	
	Network Transfer Rate	10Base-T (Half-Duplex)	10 Mb/s per port, 20 Mb/s Combined
		10Base-T (Full-Duplex)	20 Mb/s per port, 40 Mb/s Combined
		100Base-TX (Half-Duplex)	100 Mb/s per port, 200 Mb/s Combined
		100Base-TX (Full-Duplex)	200 Mb/s per port, 400 Mb/s Combined
		1000Base-TX (Half-Duplex)	1000Mb/s per port, 2000 Mb/s Combined
		1000Base-TX (Full-Duplex)	2000Mb/s per port, 4000 Mb/s Combined
	Connector	RJ-45	
	Cable Support	10 Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)
		10/100/1000 Base-TX	Category 5 or higher UTP; up to 328 ft (100 m)

Environment-friendly Products and Approach	End-of-life Management and Recycling	Hewlett Packard Enterprise offers end-of-life HPE product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: http://www.hp.com/go/green. To recycle your product, please go to: http://www.hp.com/go/green or contact your nearest Hewlett Packard Enterprise office. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner. The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard Enterprise web site at: http://www.hp.com/go/green. These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

Technical Specifications

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