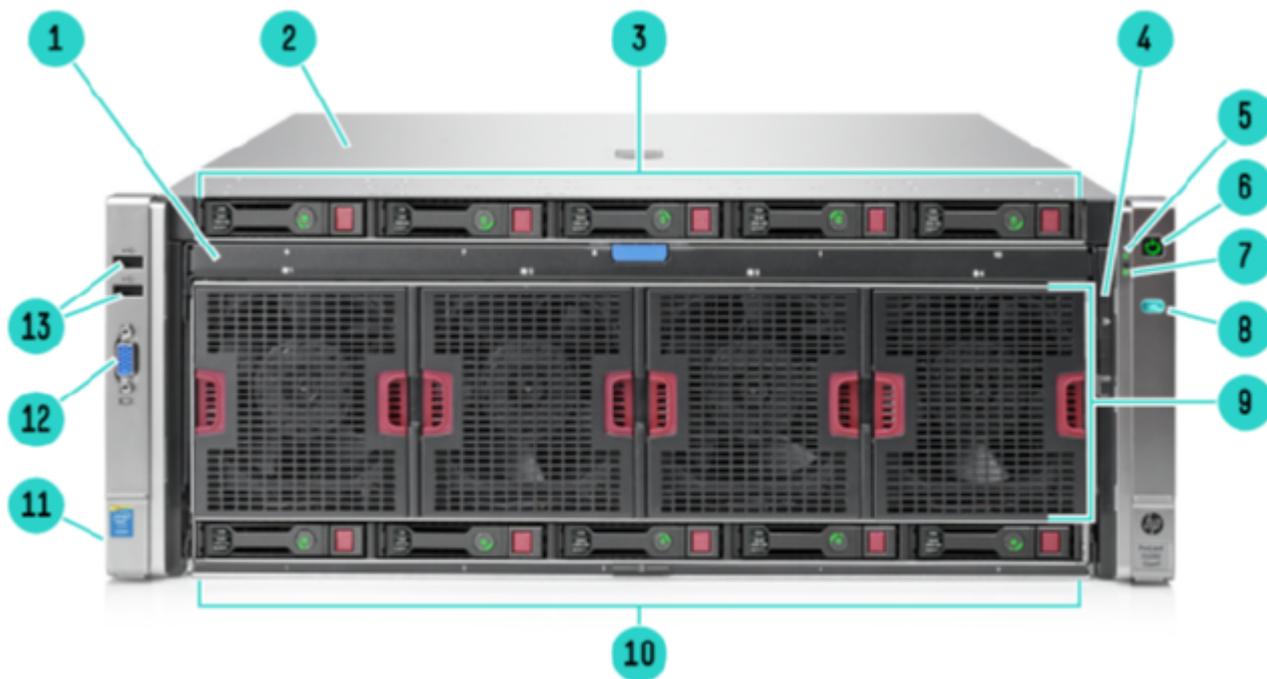Overview

HPE ProLiant DL580 Generation9 (Gen9)

The HPE ProLiant DL580 Gen9 Server is The Hewlett Packard Enterprise four socket (4S) enterprise standard x86 server offering commanding performance, rock-solid reliability and availability, and compelling consolidation and virtualization efficiencies.

Supporting Intel® Xeon® E7-4800/8800 v3 processors, the HPE DL580 Gen9 offers enhanced processor performance, up to 6 TBs of memory, greater IO bandwidth (9 PCIe Gen3.0 slots), and 12 Gb/s of SAS speeds. HPE ProLiant DL580 Gen9 has security and data protection features for system resiliency that your business can depend on. All, making it ideal for mission-critical enterprise, business intelligence, and database applications.
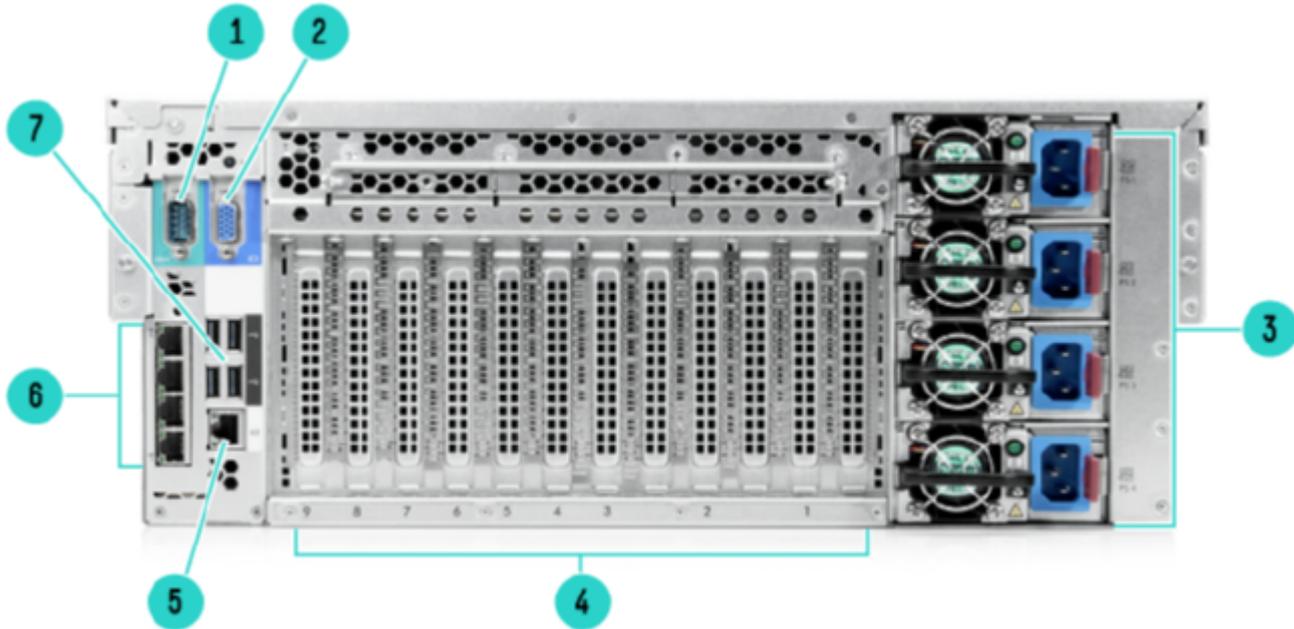
Whether needed for highly virtualized or cloud based deployments, with intelligence and simplicity of automated management with HPE OneView and HPE iLO 4 your business can achieve agile and lower cost infrastructure management.
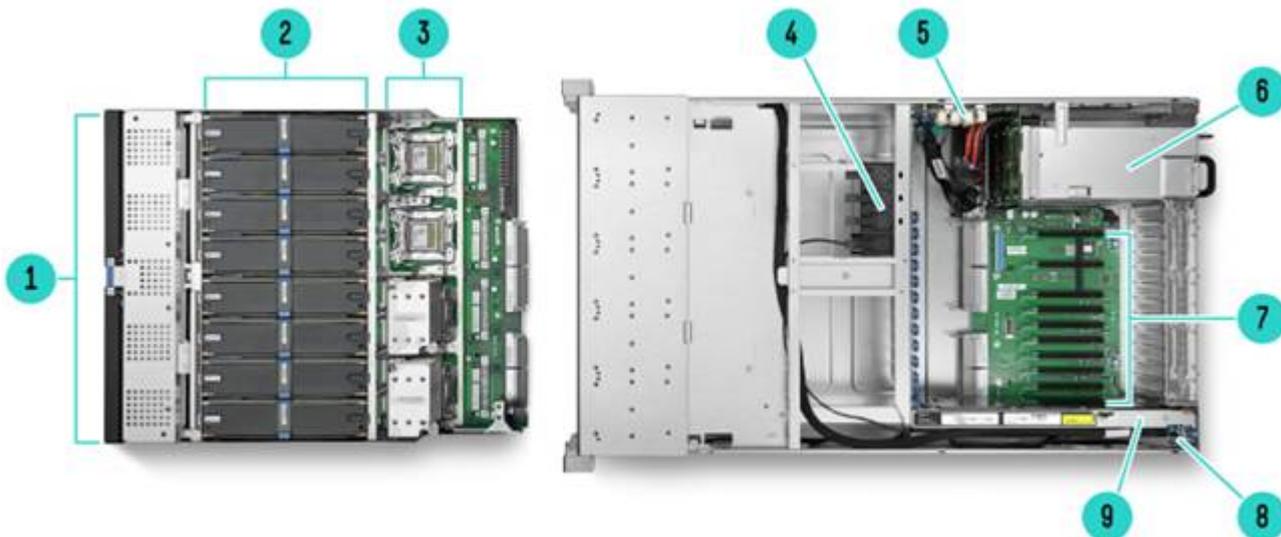

Front View

1. CPU Memory Drawer Handle
2. Quick removal access panel
3. Drive bays 6-10
   NOTE: Drives installed in these bays require the optional SAS backplane and cables.
   NOTE: Optional NVMe drives are only supported in Drive bays 6-10.
4. Systems Insight Display
5. Health Status LED
6. Power On/Standby button and system power LED button
7. NIC status LED

8. UID button
9. Fans 1-4
10. Drive bays 1-5
11. Discovery services connectors
12. Video connector
13. USB connectors (2)

Overview

Rear View

1. Serial connector
2. Video connector
3. Power Supplies 1-4
4. PCI expansion slots 1-9
5. Dedicated iLO connector
6. FlexibleLOM ports 1-4
   NOTE: Port configuration is dependent on the installed FlexibleLOM and may differ from what is shown in the illustration.
7. USB connectors (4)

Internal View

1. CPU Memory Drawer
2. Memory Cartridges 1-8
3. Processors 1-4
4. FBWC capacitor slots 1-4
5. I/O Card Auxiliary Power Connectors
6. Power Supplies
7. PCI expansion slots 1-9
8. SPI board (houses iLO chip, FBWC, microSD slot, 2x USB slots, TPM, top SAS backplane connector)
9. FlexibleLOM connector

Overview

What's New

- New HDD offering.

QuickSpecs

HPE ProLiant DL580 Gen9

Standard Features

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

Processor	Model	CPU frequency	Cores	L3 Cache	Power
One or more of the following depending on model	E7-8893v3	3.2GHz	4	45MB	140W
	E7-8891v3	2.8GHz	10	45MB	165W
	E7-8890v3	2.5GHz	18	45MB	165W
	E7-8880v3	2.3GHz	18	45MB	150W
	E7-8880Lv3	2.0GHz	18	45MB	115W
	E7-8870v3	2.1GHz	18	45MB	140W
	E7-8867v3	2.5GHz	16	45MB	165W
	E7-8860v3	2.2GHz	16	40MB	140W
	E7-4850v3	2.2GHz	14	35MB	115W
	E7-4830v3	2.1GHz	12	30MB	115W
	E7-4820v3	1.9GHz	10	25MB	115W
	E7-4809v3	2.0GHz	8	20MB	115W

Cache Memory One of the following depending on model	45MB (1 x 45MB) Level 3 cache (E7-8890 v3, E7-8880Lv3, E7-8880v3, E7-8870v3, E7-8891v3, E7-8893v3, E7-8867v3) 40MB (1 x 40MB) Level 3 cache (E7-8860v3) 35MB (1 x 35MB) Level 3 cache (E7-4850v3) 30MB (1 x 30MB) Level 3 cache (E7-4830v3) 25MB (1 x 25MB) Level 3 cache (E7-4820v3) 20MB (1 x 20MB) Level 3 cache (E7-4809v3)
Chipset	Intel® C602J Chipset Intel® Xeon® E7-4800/8800v3 Processor Family **NOTE:** For more information regarding Intel chipsets, please see the following URL: http://www.intel.com/products/server/chipsets/
On System Management Chipset	HPE iLO (Firmware HPE iLO4 2.3) 4GB NAND **NOTE:** 4GB NAND with 1GB USB user space configurable via UEFI and accessible via iLO. Read and learn more in the HPE iLO QuickSpecs.

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Standard Features

Memory One of the following depending on model	Type: HPE SmartMemory DDR4 Registered (RDIMM) and Quad Rank Load Reduced (LRDIMM) DIMM Slots Available 96 Maximum 6TB (96x4GB)

NOTE: HPE memory from previous generation servers are not qualified or warranted with this HPE ProLiant Server. HPE SmartMemory is required to realize the memory performance improvements and enhanced functionality listed in this document for Gen9. For additional information, please see the HPE SmartMemory QuickSpecs .
NOTE: LRDIMM and RDIMM are distinct memory technologies and cannot be mixed within a server.
NOTE: Depending on the memory configuration and processor model, the memory speed may run at 1866MHz, 1600MHz, or 1333MHz. Please see Memory Population Table below or the Online Memory Configuration Tool at: http://www.hp.com/go/ddr4config.

Network Controller	FlexibleLOM

HPE ProLiant Gen9 servers offer a new flexible network technology - FlexibleLOMs, which offers customers a choice of 1Gb, 10Gb, or 10Gb base-T Ethernet or converged networking in their embedded adapter.
HPE Ethernet 1Gb 4-port 331FLR FIO Adapter
HPE Ethernet 1Gb 4-port 366FLR FIO Adapter
HPE Ethernet 10Gb 2-port 533FLR-T FIO Adapter
HPE FlexFabric 10Gb 2-port 534FLR-SFP+ FIO Adapter
HPE Ethernet 10Gb 2-port 560FLR-SFP+ FIO Adapter
HPE Ethernet 10Gb 2-port 561FLR-T FIO Adptr
HPE Ethernet 10G 2P 546FLR-SFP+ FIO Adptr

NOTE: For additional details see the Networking Section of this document.
NOTE: Wake-on-Lan feature is not supported on the DL580 Gen9 with FlexLOMs.

Expansion Slots Primary Riser (Standard)	Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
	1	PCIe 3.0	x16	x16	C0/03/0	Full length/full height	Proc 4
	2	PCIe 3.0	x16	x16	C0/02/0	Full length/full height	Proc 4
	3	PCIe 3.0	x16	x16	80/03/0	Full length/full height	Proc 3
	4	PCIe 3.0	x8	x16	80/02/0	Full length/full height	Proc 3
	5	PCIe 3.0	x8	x16	80/02/1	Full length/full height	Proc 3
	6	PCIe 3.0	x16	x16	40/03/0	Full length/full height	Proc 2
	7	PCIe 3.0	x8	x16	40/02/0	Full length/full height	Proc 2
	8	PCIe 3.0	x8	x16	40/02/1	Full length/full height	Proc 2

Standard Features

9	PCIe 3.0	x16	x16	00/03/0	Full length/full height	Proc 1

NOTE: PCIe slot availability is dependent on the number of processors installed.

* Default bus assignment. Inserting cards with PCI bridges may alter the actual bus assignment number.

** Slots are enumerated differently based on OS. MS OS's enumerate from lowest to highest Device ID by bus (starting with the lowest bus).

FL= Full length; FH = Full height.

NOTE: Up to 9 slots supported; all full-length/full-height. Standard: 4 PCI-E 3.0 x8, 5 PCI-E 3.0 x16.

Internal Storage Devices One of the following depending on model	Hard Disk Drive Backplane	Internal SAS lower and upper backplanes support up to ten SFF hard disk drives or solid state drives or Express Bays (NVMe drives) **NOTE:** For Factory Integrated models, five (5) lower drive bays ship standard and five (5) upper drive bays can be ordered separately with a drive backplane kits. For Pre-configured models, please refer to the pre-configured models section below.
	Diskette Drive	None
	Optional Optical Drive	External
	Hard Drives	None ship standard

Maximum Internal Storage	CAPACITY	CONFIGURATION
Hot Plug SFF SAS	20TB	10 x 2.0TB
Hot Plug SFF SAS SSD	38.4TB	10 x 3.84TB
Hot Plug SFF SATA SSD	38.4TB	10 x 3.84TB
Hot Plug SFF NVMe PCIe SSD	8TB	5 x 1.6TB

NOTE: Optional support for 5 NVMe PCIe SSDs or 5 SFF drives are also available.

Power Supply One of the following depending on model	HPE 1500W Common Slot Platinum Plus Hot Plug Power Supply HPE 1500W Common Slot 48VDC Hot Plug Power Supply HPE 1200W Common Slot Platinum Plus Hot Plug Power Supply **NOTE:** 1500W power supply supports high line voltage only.

NOTE: A minimum of two (2) power supplies are required. Four (4) 1500W power supplies offers N+N redundancy for highly loaded configurations.

Prior to making a power supply selection it is highly recommended that the HPE Power Advisor is run to determine the right size power supply for your server configuration. The HPE Power Advisor is located at: http://www.hp.com/go/hppoweradvisor.

The Hewlett Packard Enterprise Common Slot (CS) power supplies allow for commonality of power supplies across a wide range of ProLiant and Integrity servers, as well as HPE Storage solutions, and are designed to provide the highest power supply efficiency without degrading system performance. HPE CS power supplies are tested by the Electric Power Research Institute (EPRI) and certified

Standard Features

through the ECOS 80 Plus power supply program. HPE CS power supply options provide efficiency ratings of up to 94% (80 Plus Platinum) and are available. All HPE Common Slot power sources are UL, CE Mark Compliant, hot-plug and support redundant configurations.

HPE CS Platinum Plus power supplies are required when enabling The Hewlett Packard Enterprise Intelligent Power Discovery (IPD) solution. IPD is the first technology to create an automated, energy-aware network between IT systems and facilities. This allows your company to reclaim millions of dollars in wasted power capacity and downtime costs across data centers. For more information on The Hewlett Packard Enterprise IPD solution, go to http://www.hp.com/go/ipd.

NOTE: Mixing of power supplies in the same server is not supported. All power supplies must be of the same output and efficiency rating. If non-matched power supplies are inserted you will get errors and operation will fail.

Required Cabling	Server Power Cords Server ships with high-voltage server to PDU power cord. **NOTE:** If customers require a local power cord, they can check the power cord matrix for the appropriate county specific SKU. Please see the following power cord matrix for details: http://www.hp.com/go/powercordmatrix.

System Fans		Non-redundant	Redundant
	4 Hot Plug Fans (eight rotors with N+1 redundancy)		

Interfaces		
	Serial	1 back
	Video	1 front; 1 back
	FlexibleLOM Network Ports	Selection of FlexibleLOM options
	iLO 4 Remote Management	1 x 1Gbe dedicated
	Micro SD Slot	1 internal
	NOTE: Dual microSD USB option kit also available (741279-B21).	
	USB 2.0 Ports	8 total: 2 front; 4 back; 2 internal

Operating Systems and Virtualization Software Support for ProLiant Servers	Microsoft Windows Server Red Hat Enterprise Linux (RHEL) SUSE Linux Enterprise Server (SLES) VMware **NOTE:** For more information on The Hewlett Packard Enterprise Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server, please visit our Support Matrix at: http://www.hp.com/go/ossupport and our driver download page http://www.hp.com/support/DL580Gen9.

Standard Features

Upgradeability	Upgradeable to four (4) processors Up to 96 DDR4 DIMM slots Nine (9) PCIe Gen3 expansion slots **NOTE:** PCIe slot availability is dependent on the number of processors installed. Please refer to the "Expansion Slots" section for more details. Ten (10) SFF internal HDD/SSD SAS drive bays or Five (5) SFF Internal Express Bays + Five (5) SFF Internal HDD/SSD drive bays **NOTE:** Five drive bays come standard. An optional five SAS drive or five Express backplane kit with five drive bays can be ordered for ten drives. Five NVMe SSD drive bay Four (4) redundant hot-plug power supplies
Industry Standard Compliance	ACPI 2.0. Compliant PCIE 2.0 Compliant PXE Support WOL Support **NOTE:** Not supported with FlexLOMs on DL580 Gen9. Physical Address Extension (PAE) Support Microsoft® Logo certifications USB 2.0 Support ASHRAE A3/A4 **NOTE:** For additional technical thermal details regarding ambient temperatures, humidity and features support please visit: http://www.hp.com/servers/ASHRAE.
Graphics	Integrated Matrox G200 video standard • 1280 x 1024 (32 bpp) • 1920 x 1200 (16 bpp) HPE iLO 4 On System Management Memory • 16 MB Flash • 256 MB DDR 3 with ECC (112 MB after ECC and video)
HPE Server UEFI/Legacy ROM	Legacy Mode or Unified Extensible Firmware Interface (UEFI) Mode The Hewlett Packard Enterprise ProLiant System BIOS is an EDK2 UEFI solution, and adheres to the latest revisions of UEFI Class 2 specifications which supports both legacy boot and UEFI boot operation. The HPE ProLiant DL580 Gen9 defaults to UEFI boot operation and can be factory or field configured for legacy boot operation. **NOTE:** For UEFI boot operation, boot environment and OS image installations should be configured properly to support UEFI. **NOTE:** For more information on The Hewlett Packard Enterprise ProLiant System BIOS and UEFI, see the UEFI Information Library: http://www.hp.com/go/uefi/docs. **NOTE:** HPE Legacy FIO Mode Setting (758959-B22) can be selected to configure the system in Legacy mode in the factory. To modify the server configuration ROM default settings, press F9 in the HPE ProLiant POST screen to enter the UEFI System Utilities screen. By default, the System Utilities menus are in the English language. UEFI enables numerous new capabilities, including both industry standard

Standard Features

functionality and features specific to HPE ProLiant servers. Following are some of the features that UEFI enables and that the HPE ProLiant DL580 Gen9 can support when configured for UEFI boot operation:

- Secure Boot - A new feature in which the system firmware, option card firmware, operating systems, and software collaborate to greatly enhance platform security.
- Operating system specific functionality - Microsoft Windows 2012 supports several features only when installed in UEFI mode.
- Support for > 2.2 TB (using GPT) boot drives - Such drives could previously only be used for boot drives when using RAID solutions such as HPE Smart Array.
- UEFI Shell - Provides a pre-boot environment for running scripts and tools. The HPE ProLiant UEFI Shell provides both standard capabilities as well as numerous enhancements.
- PXE boot support for IPv6 networks.
- PXE Multicast Boot allowing for faster PXE deployments for large numbers of servers.
- Boot support for option cards that only support a UEFI option ROM.

NOTE: When the server is configured for UEFI Boot Mode, PXE servers must be configured with a UEFI boot image.
When the server boots in UEFI mode, it does not boot media with a legacy OS installation. This includes DOS targets and Windows or Linux systems installed in Legacy mode. The reverse is also true for servers that boot in Legacy mode.

Form Factor	4U rack

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 server infrastructure 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). For more details visit: 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	The Hewlett Packard Enterprise embedded remote support, used with Insight Online direct connect or HPE Insight Remote Support, allows HPE ProLiant servers to transmit hardware events directly to HPE or a Hewlett Packard Enterprise Authorized Partner for automated phone home support. Learn more at http://www.hp.com/go/insightonline/info.

Standard Features

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-Hewlett Packard Enterprise 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
	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 is a new capability available through the HPE Support Center portal for one stop, secure access to product and HPE support information specific to your IT environment. Insight Online can automatically display devices remotely monitored by HPE Insight Remote Support. With Insight Online's easy navigation you can efficiently track your IT support contracts and device status from anywhere and at anytime. http://www.hp.com/go/insightonline
	HPE OneView Standard	HPE OneView Standard can inventory, monitor, alert, and report on your G6, G7, Gen8, and Gen9 servers, while using the HPE OneView user interface. Annual support is optionally available. Learn more at http://www.hp.com/go/oneview.
	HPE Proactive Insight experience	Prevent problems with innovative, automated monitoring tools and proactive services. The HPE Proactive Insight experience consist of using Insight Online, Insight Remote Support, and Proactive Care Support Service as one integrated solution. The Proactive Insight experience provides you with expert advice and personalized, cloud-based automated IT support, helping to prevent unplanned down time and solve problems quickly. For more information, visit: http://www.hp.com/go/proactiveinsightexperience.

Standard Features

Security	Power-on password
	Keyboard password
	External USB port enable/disable
	Network Server Mode
	Serial interface control
	Administrator's password
	Trusted Platform Module (TPM)
	Intel® Secure Key
	HPE Secure Encryption (Smart Array Controller)
	HPE Advanced Data Guard (Smart Array Controller)

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 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Mandatory CSR parts are designed for easy replacement. A travel and labor charge will result when customers decline to replace a Mandatory CSR part; 2) Optional CSR parts are also designed for easy replacement but may involve added complexity. Customers may choose to have Hewlett Packard Enterprise replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at:
http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html.

Optional Features

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.
	HPE 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
	HPE OneView Advanced	HPE OneView Advanced is converged management that eliminates infrastructure complexity with automation simplicity. This modern architecture is designed to accelerate your IT operations across servers, storage, and network resources using software-defined approaches and automation, see http://www.hp.com/go/oneview.

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	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
	HPE HPEC Interconnects	High Performance Computing (HPC) interconnect technologies are available for this server as part of the HPE Cluster Platform portfolio. These high-speed InfiniBand and Gigabit interconnects are fully supported by Hewlett Packard Enterprise when integrated within an HPE cluster. Flexible, validated solutions can be defined with the help of configuration tools. http://www.hp.com/techservers/clusters/ucp/index.html
	HPE Insight Cluster Management Utility	HPE Insight Cluster Management Utility (CMU) is an HPE-licensed and HPE-supported suite of tools that are used for lifecycle management of hyperscale clusters of Linux ProLiant systems. CMU includes software for the centralized

Optional Features

provisioning, management and monitoring of nodes. CMU makes the administration of clusters user friendly, efficient, and effective. http://www.hp.com/go/cmu

HPC Interconnects	**NOTE:** High Performance Computing (HPC) interconnect technologies are available for this server under the HPE Cluster Platform product portfolio. These high-speed interconnects are fully supported by Hewlett Packard Enterprise when they are part of these configure to order clusters. Solutions can be defined with a lot of flexibility with the help of configuration tools. Please visit the following URL to configure HPEC Clusters with InfiniBand Interconnects: http://www.hp.com/techservers/clusters/ucp/index.html.
Storage Software	Whether you need to solve a specific data protection, archiving, or storage command and control challenge, or deliver on strategic consolidation, compliance, or continuity initiatives, look no further than HPE storage software. Our storage software helps you reduce costs, simplify storage infrastructure, protect vital assets and respond faster to business opportunities. Storage software that gets the job done:

- Data Protection and Recovery Software
  Whether you're a large enterprise or a smaller business, HPE data protection and recovery software will cost-effectively protect you against disaster and ensure business continuity.
- Data Archive and Migration Software
  The Hewlett Packard Enterprise storage software enables you to comply with data retention and retrieval requirements, improve application performance, and reduce costs by efficiently migrating infrequently accessed or less valuable data to lower cost storage.
- Storage Resource Management Software (SRM)
  The Hewlett Packard Enterprise storage resource management software reduces operational costs and provides the command and control foundation you need to efficiently manage and visualize your physical and virtual environments.
- Data Replication Software
  Hewlett Packard Enterprise offers array-based and host-based replication software for use in disaster recovery, testing, application development and reporting.
- Storage Device Management Software
  Maximize your investment in HPE storage and networking with software that enables hardware-specific configuration, performance tuning and connectivity management.
- HPE StoreVirtual VSA
  With HPE StoreVirtual VSA you can use the power of virtualization to turn a set of heterogeneous and disconnected physical disk drives in your servers and storage devices into a single pool of logical storage capacity.

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

Optional Features

Solutions	Factory Express Portfolio for Servers and Storage
	HPE Factory Express offers configuration, customization, integration and deployment services for Hewlett Packard Enterprise servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed.
	Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. Hewlett Packard Enterprise products supported through Factory Express include a wide array of servers and storage: HPE Integrity, HPE ProLiant, HPE ProLiant Server Blades, HPE BladeSystem, HPE 9000 servers as well as the MSAxxxx, VA7xxx, EVA, XP, rackable tape libraries and configurable network switches.
	For more information on Factory Express services for your specific server model please contact your sales representative or go to: http://www.hp.com/go/factory-express.
One Config Simple (SCE)	SCE is a guided self-service tool to help sales and non-technical people provide customers with initial configurations in 3 to 5 minutes. You may then send the configuration on for configuration help, or use in your existing ordering processes. If you require "custom" rack configuration or configuration for products not available in SCE, please contact The Hewlett Packard Enterprise 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. Connect to Hewlett Packard Enterprise to help prevent problems and solve issues faster. Our support technology lets you to tap into the knowledge of millions of devices and thousands of experts to stay informed and in control, anywhere, any time. Protect your business beyond warranty with HPE Care Pack Services HPE Care Pack Services enable you to order the right service level, length of coverage and response time as you purchase your new server, giving you full entitlement for the term you select.

Recommended HPE Care Pack Services for your HPE product

Optimized Care	HPE Proactive Care with 6 hour call-to-repair commitment, three year Care Pack Service HPE Proactive Care helps prevent problems and stabilize IT by utilizing secure, real-time, predictive analytics and proactive consultations when your products are connected to HPE. This Care Pack Service combines three years' proactive reporting and advice with our highest level reactive coverage and enhanced escalation management, The Hewlett Packard Enterprise 24x7, six hour call-to-repair hardware commitment. Hewlett Packard Enterprise is the only leading manufacturer who makes this level of coverage available as a standard service offering for your most valuable servers. Service includes 24x7 collaborative software support for leading industry standard software running on your HPE ProLiant server. http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf
Standard Care	HPE Proactive Care with 24x7 coverage, three year Care Pack Service HPE Proactive Care helps prevent problems and stabilize IT by utilizing secure, real-time, predictive analytics and proactive consultations when your products are connected to HPE. This Care Pack Service combines three years' proactive reporting and advice with our 24x7 coverage and enhanced escalation management, four hour hardware response time and two hour call back for software questions on leading industry standard software running on your HPE ProLiant server. http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf
Related Services	HPE ProLiant Server Hardware Installation Provides for the basic hardware installation of Hewlett Packard Enterprise branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner. http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN.pdf Factory Express for Servers and storage HPE Factory Express offers configuration, customization, integration and deployment services for Hewlett Packard Enterprise servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed. For more information on Factory Express services for your specific server model please contact your sales representative or go to: http://www.hp.com/go/factory-express. Data Privacy Services Protect your data through better media management. HPE Data privacy services help manage and protect sensitive data to reduce the risk of unauthorized access to private information and help meet compliance requirements. Our retention services

Service and Support

	allow you to keep drives and other devices upon failure, our removal services provide convenient data sanitization and our recovery services allow you to safely retire IT assets and capture any remaining value from the hardware. http://www.hp.com/services/dataprivacy Additional HPE Care Pack services can be found at: http://www.hp.com/go/cpc
Get connected to Hewlett Packard Enterprise to improve your support experience	Prevent problems with innovative, automated monitoring tools and proactive services. Combining Proactive Care Services with our remote support technology such as Insight Online provides you with expert advice and personalized, cloud-based automated IT support, helping to prevent unplanned down time and solve problems quickly. For more information, visit: http://www.hp.com/go/proactiveinsightexperience
HPE Support Center	Personalized online support portal with access to information, tools and experts to support Hewlett Packard Enterprise business products. Submit support cases online, chat with Hewlett Packard Enterprise experts, access support resources or collaborate with peers. Learn more http://www.hp.com/go/hpsc The Hewlett Packard Enterprise Support Center Mobile App allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalize IT support anywhere, anytime. HPE Insight Remote Support and HPE Support Center are available at no additional cost with a Hewlett Packard Enterprise warranty, HPE Care Pack or Hewlett Packard Enterprise contractual support agreement. **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 maximum usage limitations as set forth in the manufacturer's operating manual, product QuickSpecs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services. The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction.
For more information	To learn more on HPE ProLiant servers and HPE BladeSystem servers, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Or visit: http://www.hp.com/services/proliant

Pre-configured Models

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

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

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

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

4. Not all models are available in all regions. Check with your local country Hewlett Packard Enterprise 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.

	High Performance Models		Database Models
[SKU Number]	793312-B21	793310-B21	793314-B21
Model Name	HP ProLiant DL580 Gen9 E7-8890v3 4P 256GB-R P830i/4G 534FLR-SFP+ 1500W RPS Server	HP ProLiant DL580 Gen9 E7-4850v3 4P 128GB-R P830i/4G 534FLR-SFP+ 1200W RPS Server	HP ProLiant DL580 Gen9 E7-8893v3 4P 256GB-R P830i/4G 534FLR-SFP+ 1500W RPS Server
Processor	Intel® Xeon® E7-8890v3	Intel® Xeon® E7-4850v3	Intel® Xeon® E7-8893v3
Number of Processors	Four		
Memory	256GB (16x16GB DIMMs) PC4-2133P-R DIMMs (DDR4) installed in (8) Memory Cartridges	128GB (8x16GB DIMMs) PC4-2133P-R DIMMs (DDR4) installed in (4) Memory Cartridges	256GB (16x16GB DIMMs) PC4-2133P-R DIMMs (DDR4) installed in (8) Memory Cartridges
Network Controller	HPE FlexFabric 10Gb 2P 534FLR-SFP+ Adapter		
Storage Controller	HPE Smart Array P830/4GB FBWC 12 Gbps SAS controller		
Hard Drive	Five (5) SFF HDD/SSD drive bays. No drives ship standard.		
Optical Drive	None		
PCI-Express Slots		(9) PCIe Gen3.0 I/O Expansion slots (5x16 slots, 4x8 slots)	(9) PCIe Gen3.0 I/O Expansion slots (5x16 slots; 4x8 slots)
Power Supply	(4) HPE 1500W Common Slot Platinum Plus Hot Plug Power Supplies	(4) HPE 1200W Common Slot Platinum Plus Hot Plug Power Supplies	(4) HPE 1500W Common Slot Platinum Plus Hot Plug Power Supplies
Fans	4 hot plug fans (eight rotors with N+1 redundancy)	4 Hot Plug Fans (eight rotors with N+1 redundancy)	

Pre-configured Models

Management	HPE OneView Advanced Integrated server license, including 3 year of 24x7Technical Support and Updates (also provides usage rights for Insight Control with 1 year of 24 x 7 support)	
Form Factor	Rack (4U), rail kit and cable management arm are included	Rack 4U (rail kit and cable management arm is included)
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response	

	Base Models
[SKU Number]	793308-B21
Model Name	HP ProLiant DL580 Gen9 E7-4809v3 2P 64GB-R P830i/2G 331FLR-SFP+ 1200W RPS Server
Processor	Intel® Xeon® E7-4809v3
Number of Processors	Two
Memory	64GB (4x16GB DIMMs) PC4-2133P-R DIMMs (DDR4) installed in (2) Memory Cartridges
Network Controller	HPE Ethernet 1Gb 4P 331FLR Adapter
Storage Controller	HPE Smart Array P830i/2GB FBWC 12 Gbps SAS controller
Hard Drive	Five (5) lower drive bays. No drives ship standard.
Optical Drive	None
PCI-Express Slots	(9) PCIe Gen3.0 I/O Expansion slots (5x16 slots; 4x8 slots)
Power Supply	(2) HPE 1200W Common Slot Platinum Plus Hot Plug Power Supplies
Fans	4 Hot Plug Fans (eight rotors with N+1 redundancy)
Management	Integrated Lights-Out 4 (iLO 4) ships standard
Form Factor	Rack (4U), rail kit and cable management arm are included
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response

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

Country Code Key	xx1 = B21	Worldwide
	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]	HP ProLiant DL580 Gen9 Configure-to-order Server
SKU Number	793161-B21
Processor	4U Server Chassis with front-accessible processor and memory drawer
Storage Controller	Embedded HPE Smart Array 12G P830i Controller
PCIe	9 PCIe Gen3.0 I/O Expansion slots (5x16 slots, 4x8 slots)
Drive Cage	5 Hot-plug SAS/SATA SFF SSD or HDD Bays (Lower)
Fans	4 hot plug fans (eight rotors with N+1 redundancy), front accessible
Management	HPE Integrated Lights-Out 4 (iLO4) standard management, HPE iLO4 Embedded Remote Support Technology, Intelligent Provisioning, HPE Insight Control Server Provisioning, HPE Insight Online, HPE Active Health System, System Insight Display
USB	8 USB 2.0 ports (2 front, 4 rear, 2 internal)

(Base Configuration Continued)
Intel® 602J Chipset
(2) video ports (1 front, 1 rear)
(1) microSD card slot
(1) Trusted Platform Module (TPM) connector
BIOS Legacy mode (field configurable) or Unified Extensible Firmware Interface (UEFI) mode (default)
Rack rails and cable management arm

NOTE: PCIe slot availability is dependent on the number of processors installed. Please refer to the "Expansion slots" section for more details.
NOTE: A minimum of two processors are required. The system may have three or four processors installed.
NOTE: A minimum of two memory cartridges are required (one per processor).
NOTE: A minimum of two memory DIMMs are required per cartridge (minimum of four DIMMs per server).
NOTE: A minimum of two power supplies are required.

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 or two processors from Core options-Processor section below,

- If one processor is desired, select one xxxxxx-L21
- If two processors are desired, select one xxxxxx-L21 and one xxxxxx-B21.
- Up to 2 processors supported. Mixing different processor models is not 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® C600 Chipset E5-2600 Series, the letter preceding the model number indicates the Product Line (E3, E5, E7); 2600x v#, 2 = number of CPUs in a Node, 6 is socket/segment designation, 00 = Processor SKU, x = L for low power SKUs and v# (not yet designated) = version number.

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

- LRDIMM, RDIMM are all distinct memory technologies and cannot be mixed within a server. The majority of ProLiant Gen9 servers support LRDIMM and RDIMM.
- HPE memory from previous generation servers are not qualified or warranted with this HPE ProLiant Server. HPE SmartMemory is required to realize the memory performance improvements and enhanced functionality listed in this document for Gen9.
- If only one processor is installed, only half of the total DIMM slots are available. When populating with two processors all DIMM slots are available.
- Kits described as LP include Low Power DIMMs. For more information on ProLiant Energy Efficient Features, see: http://www.hp.com/go/proliant-energy-efficient.
- Depending on the memory configuration and processor model, the memory speed may run at 2133MHz, 1866MHz, 1600MHz or 1333MHz. Please see Memory Population Table or the Online Memory Configuration Tool at: http://www.hp.com/go/ddr4config.

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

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

Step 3: Choose Additional Factory Integratable Options

HPE 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 I/O Expansion Options   Select one or more Riser Kit options from Core options section below.

- To take advantage of the additional PCI slot upgrade, the second processor must be installed.
- 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.

Configuration Information – Factory Integrated Models

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

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

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

- Please see the HPE Power Advisor for estimated power consumption of your individual system configuration prior to installing GPUs. The HPE Power Advisor is located at: http://www.hp.com/go/hppoweradvisor.
- This section may contain FIO options, please see HPE Computation & Graphics Accelerators section below.

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

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

HPE Rail Kits   Select one type of rail kit from Additional options section 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.
- To assist in the installation of the server into the rack, an optional installation tool is available by contacting your local services representative (p/n 695539-001).
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Configuration Information - Factory Integrated Models

- See HPE Rack Options in Additional Options section of this QuickSpecs for more rack kit choices.

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

Core Options

NOTE: Some options may not be integrated at the factory. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the
use of a Hewlett Packard Enterprise approved configurator. Contact your local sales representative for additional information.

HPE Processors Performance Processors - E5-4600v3 series Processors

HP DL580 Gen9 Intel® Xeon® E7-4850v3 (2.2GHz/14-core/35MB/115W) Processor Kit	788325-B21
HP DL580 Gen9 Intel® Xeon® E7-4850v3 (2.2GHz/14-core/35MB/115W) FIO Processor Kit	788325-L21
HP DL580 Gen9 Intel® Xeon® E7-4830v3 (2.1GHz/12-core/30MB/115W) Processor Kit	788327-B21
HP DL580 Gen9 Intel® Xeon® E7-4830v3 (2.1GHz/12-core/30MB/115W) FIO Processor Kit	788327-L21
HP DL580 Gen9 Intel® Xeon® E7-4820v3 (1.9GHz/10-core/25MB/115W) Processor Kit	788329-B21
HP DL580 Gen9 Intel® Xeon® E7-4820v3 (1.9GHz/10-core/25MB/115W) FIO Processor Kit	788329-L21
HP DL580 Gen9 Intel® Xeon® E7-4809v3 (2.0GHz/8-core/20MB/115W) Processor Kit	788331-B21
HP DL580 Gen9 Intel® Xeon® E7-4809v3 (2.0GHz/8-core/20MB/115W) FIO Processor Kit	788331-L21

NOTE: 1, 2, 3 or 4 processors are supported.

HPE Memory **NOTE:** HPE memory from previous generation servers are not qualified or warranted with this HPE ProLiant Server. HPE SmartMemory is required to realize the memory performance improvements and enhanced functionality listed in this document for Gen9. For additional information, please see the HPE SmartMemory QuickSpecs.
NOTE: LRDIMM and RDIMM are distinct memory technologies and cannot be mixed within a server.
NOTE: Depending on the memory configuration and processor model, the memory speed may run at 1866MHz, 1600MHz, or 1333MHz. Please see Memory Population Table below or the Online Memory Configuration Tool at:
http://www.hp.com/go/ddr4config.

Registered DIMMs (RDIMMs)

HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	726718-B21
HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	726719-B21
HP 32GB (1x32GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	728629-B21

Load Reduced DIMMs (LRDIMMs)

HP 32GB (1x32GB) Quad Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit	726722-B21
HP 64GB (1x64GB) Quad Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit	726724-B21

Memory Expansion Options

Core Options

	HP DL580 Gen9 12 DDR4 DIMM Slots Memory Cartridge	788360-B21

NOTE: Up to Eight (8) memory cartridges are supported for 96 DIMM slots.
NOTE: A minimum of two memory cartridges are required (one per processor).
NOTE: A minimum of two memory DIMMs are required per cartridge (minimum of four DIMMs per server).

HPE Optical Drives	HP Mobile USB Non Leaded System DVD RW Drive	701498-B21

HPE Drives

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

12G SAS Hot Plug with SmartDrive SFF (2.5-inch) Enterprise Drives

Drive	PN
HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759212-B21
HP 450GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759210-B21
HP 300GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759208-B21

12G SAS Hot Plug SFF (2.5-inch) Enterprise Drives

Drive	PN
HP 1.2TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	781518-B21
HP 900GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	785069-B21
HP 600GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	781516-B21
HP 300GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	785067-B21

12G SAS Value Endurance Hot Plug SFF (2.5-inch) Enterprise Value Solid State Drives

Drive	PN
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 SFF (2.5-inch) SC 512e Drives

Drive	PN
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 SFF (2.5-inch) SC Write Intensive Solid State Drives

Core Options

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
HP 1.8TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 512e 3yr Warranty Hard Drive	791034-B21
12G SAS Read Intensive Hot Plug SFF (2.5-inch) Solid State Drives	
HPE 3.84TB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty FIO Solid State Drive	816576-B21
HP 1.92TB 12G SAS Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802891-B21
HPE 1.92TB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty FIO Solid State Drive	816572-B21
HPE 960GB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty FIO Solid State Drive	816568-B21
HPE 480GB 12G SAS Read Intensive-3 SFF 2.5-in SC 3yr Wty FIO Solid State Drive	816562-B21
12G SAS Mixed Use Hot Plug SFF (2.5-inch) Solid State Drives	
HPE 3.2TB 12G SAS Mixed Use-3 SFF 2.5-in SC 3yr Wty FIO Solid State Drive	822567-B21
HPE 1.6TB 12G SAS Mixed Use-3 SFF 2.5-in SC 3yr Wty FIO Solid State Drive	822563-B21
HPE 800GB 12G SAS Mixed Use-3 SFF 2.5-in SC 3yr Wty FIO Solid State Drive	822559-B21
HPE 400GB 12G SAS Mixed Use-3 SFF 2.5-in SC 3yr Wty FIO Solid State Drive	822555-B21
6G SAS Hot Plug with SmartDrive SFF (2.5-inch) Enterprise Drives	
HP 1.2TB 6G SAS 10K rpm SFF (2.5-inch) SC Dual Port Enterprise 3yr Warranty Hard Drive	718162-B21
HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652589-B21
HP 600GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652583-B21
HP 450GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652572-B21
HP 300GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652564-B21
HP 300GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652611-B21
HP 146GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652605-B21
6G SAS Hot Plug SmartDrive SFF (2.5-inch) Midline 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
6G SAS ME Hot Plug SFF (2.5-inch) Enterprise Mainstream H2 Solid State Drives	

Core Options

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 Value Endurance Hot Plug SFF (2.5-inch) Enterprise Boot Solid State Drives	
HP 120GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Boot 3yr Wty Solid State Drive	717965-B21
HP 80GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Boot 3yr Wty Solid State Drive	734360-B21
6G SATA Value Endurance 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 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	717971-B21
HP 600GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	739898-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
6G SATA ME Hot Plug SFF (2.5-inch) Enterprise Mainstream Solid State Drives	
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 Value Endurance Hot Plug SFF (2.5-inch) SC 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
6G SATA Value Endurance Hot Plug SFF (2.5-inch) SC Enterprise Value G1 Solid State Drives	

Core Options

HP 960GB 6G SATA Light Endurance SFF 2.5-in SC Enterprise Light 3yr Wty G1 Solid State Drive	756601-B21
HP 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty G1 Solid State Drive	756657-B21
HP 240GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty G1 Solid State Drive	756636-B21
6G SATA Hot Plug SFF (2.5-inch) SC Write Intensive Solid State Drives	
HP 1.2TB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804677-B21
HP 800GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804671-B21
HP 400GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804665-B21
HP 200GB 6G SATA Write Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804639-B21
6G SATA Hot Plug SFF (2.5-inch) SC Mixed Use Solid State Drives	
HP 1.92TB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	817011-B21
HP 1.6TB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804631-B21
HP 960GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816995-B21
HP 800GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804625-B21
HP 480GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816985-B21
HP 480GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	832414-B21
HP 240GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816975-B21
HP 200GB 6G SATA Mixed Use-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804613-B21
HP 120GB 6G SATA Mixed Use-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816965-B21
6G SATA Hot Plug SFF (2.5-inch) SC Read Intensive Solid State Drives	
HP 3.84TB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816929-B21
HP 1.92TB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816919-B21
HP 1.6TB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804605-B21
HP 960GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816909-B21
HP 800GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804599-B21
HP 480GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804593-B21
HP 480GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816899-B21
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

Core Options

HP 240GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804587-B21
HP 120GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816879-B21
HP 120GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804581-B21
HP 80GB 6G SATA Read Intensive-2 SFF 2.5-in SC 3yr Wty Solid State Drive	804575-B21
HP 240GB 6G SATA Read Intensive-3 SFF 2.5-in SC 3yr Wty Solid State Drive	816889-B21
HPE NVMe PCIe Mixed Use SFF (2.5 inch) Solid State Drives	
HP 1.6TB NVMe PCIe Mixed Use SFF 2.5-in SC2 3yr Wty Solid State Drive	765038-B21
HP 800GB NVMe PCIe Mixed Use SFF 2.5-in SC2 3yr Wty Solid State Drive	765036-B21
HP 400GB NVMe PCIe Mixed Use SFF 2.5-in SC2 3yr Wty Solid State Drive	765034-B21
HPE NVMe PCIe Write Intensive SFF (2.5-inch) Solid State Drives	
HP 1.6TB NVMe PCIe Write Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive	764892-B21
HP 800GB NVMe PCIe Write Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive	736939-B21
HP 400GB NVMe PCIe Write Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive	736936-B21
HPE NVMe PCIe Read Intensive SFF (2.5 inch) Solid State Drives	
HP 1.2TB NVMe PCIe Read Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive	764906-B21
HP 400GB NVMe PCIe Read Intensive SFF 2.5-in SC2 3yr Wty Solid State Drive	764904-B21

NOTE: To support NVMe PCIe SSDs you need to select the SSD Express Bay Kit (788359-B21), maximum of 5 drives supported.
NOTE: Hewlett Packard Enterprise has qualified the NVMe drive portfolio using the Operating System inbox drivers. For full details please see the Solid State Drive QuickSpecs:
http://www8.hp.com/h20195/v2/GetDocument.aspx?docname=c04154378

Hard Drive Kits	
HP DL580 Gen9 NVMe 5 Solid State Drive Express Bay Enablement Kit	788359-B21
HP ProLiant DL580 5 Small Form Factor Drive Backplane Cage Kit	739405-B21
HP Small Form Factor Hard Drive Blank Kit	666987-B21

Core Options

HPE Networking	Gigabit Ethernet Adapters	
	HP Ethernet 1Gb 4-port 331T Adapter	647594-B21
	HP Ethernet 1Gb 2-port 332T Adapter	615732-B21
	HP Ethernet 1Gb 2-port 361T Adapter	652497-B21
	HP Ethernet 1Gb 4-port 366T Adapter	811546-B21
	10 Gigabit Ethernet adapters	
	HP Ethernet 10Gb 2-port 530SFP Adapter	652503-B21
	HP Ethernet 10Gb 2-port 546SFP+ Adapter	779793-B21
	HP Ethernet 10Gb 2-port 557SFP+ Adapter	788995-B21
	HP Ethernet 10Gb 2-port 560SFP+ Adapter	665249-B21
	HP Ethernet 10Gb 2-port 530T Adapter	656596-B21
	HP Ethernet 10Gb 2-port 561T Adapter	716591-B21

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

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

NOTE: This adapter does not support FCOE Boot from SAN functionality on VMWare and FCOE functionality with RHEL 5.9.

	HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter	665243-B21
	HP Ethernet 10Gb 2-port 561FLR-T Adapter	700699-B21
	HP Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	779799-B21
	HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter	727060-B21

NOTE: Wake-On-LAN not supported with FlexLOMs on DL580 Gen9.

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

HPE InfiniBand	HP InfiniBand FDR 2-port 545QSFP Adapter	702211-B21

NOTE: Legacy and UEFI modes are supported.

	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	764284-B21

NOTE: UEFI and Legacy modes are supported with Ethernet and Infiniband functionality.

	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	764285-B21

NOTE: UEFI and Legacy modes are supported with Ethernet and Infiniband functionality.

	HP InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	764286-B21

Core Options

HPE Power Supplies	HPE Common Slot Platinum Plus Power Supply Kits	
	HP 1500W Common Slot Platinum Plus Hot Plug Power Supply Kit	684532-B21
	HP 1500W Common Slot 48VDC Hot Plug Power Supply Kit	746708-B21
	HP 1200W Common Slot Platinum Hot Plug Power Supply Kit	748287-B21
	HP 1200W Common Slot Platinum Plus Hot Plug Power Supply Kit	656364-B21

NOTE: 94% efficiency with support for HPE Power Discovery Services.

NOTE: Prior to making a power supply selection it is highly recommended that the HPE Power Advisor is run to determine the right size power supply for your server configuration. The HPE Power Advisor is located at: http://www.hp.com/go/hppoweradvisor.

NOTE: Minimum of two (2) power supplies are required.
All power supplies in a server should match. Mixing Power Supplies is not supported.

NOTE: Option Kits contain the specified power supply and a PDU IEC cable.

NOTE: 1500W Power Supplies only support High Line Voltage.

NOTE: HPE ProLiant servers ship with an IEC-IEC power cord used for rack mounting with Power Distribution Units (PDUs). For a full list of optional HPE power cords please go to http://www.hp.com/products/powercords.

HPE Computation and Graphics Accelerators	NVIDIA Tesla K40C 12GB Computational Accelerator	753960-B21

NOTE: Up to five cards are supported on the DL580 Gen9. Supporting multiple number of cards on the DL580 Gen9 blocks some active IO cards as follows due to space constraints:
For 2P config: Max of 2 double-wide cards are supported on slot 6 and slot 9 (slot 8 is blocked)
For 3P config: Max of 3 double-wide cards are supported on slot 3, slot 6 and slot 9 (slot 5 and slot 8 are blocked)
For 4P config: Max of 5 double wide cards are supported on Slot 1, Slot 3, Slot 2, Slot 6 and Slot 9 (slot 5 and slot 8 are blocked).

NOTE: HPE DL580/DL585/DL980 Power Cable Kit (631660-B21) is required for Graphics cards. Each cable kit has two 8-pin connectors (one 150W and other 225W) and can support up to two cards. For three cards, two cable kits are required. For five cards, three cable kits are required. The cards pull up to 75W of power from the IO slot and the rest from the auxiliary power connectors.

NOTE: Supported at Gen2 speeds.

HP NVIDIA Quadro M6000 Graphics Accelerator   J0G92A

NOTE: Only four M6000 graphic cards are supported on DL580 Gen9.

NOTE: If any HPE ProLiant server is configured with an NVIDIA Graphics Processor Unit (GPU), it must have less than 1 TB of server host memory. If the memory equals or exceeds 1 TB, the GPU options will not function properly due to a memory addressing design limitation with the NVIDIA GPU.
See HPE Service advisory for more details.

NOTE: The DL580 Gen9 supports six auxiliary power connectors.

Additional Options

NOTE: Some options may not be integrated at the factory. To ensure only valid configurations are ordered, Hewle
Enterprise recommends the
use of a Hewlett Packard Enterprise approved configurator. Contact your local sales representative for additional i

HPE Insight Software	**HPE Insight Control**	
	HP Insight Control including 1yr 24x7 Technical Support and Updates Single Server License	C6N27A
	HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO License	C6N36A
	HP Insight Control Server Provisioning Media Kit	BD883A

NOTE: Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key.
NOTE: Customer will receive a license entitlement certificate. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HPE Software Technical Support and Update Service.
NOTE: Licenses ship without media. The HPE Insight Control Media Kit can be ordered separately, or can be downloaded at: http://www.hp.com/go/insightupdates.
NOTE: For additional license options please see the HPE Insight Control QuickSpecs.

HPE Converged Infrastructure Management Software	**HPE OneView Advanced (with HPE iLO Advanced)**	

NOTE: Full licenses of HPE OneView Advanced also provide the right-to-use HPE Insight Control without additional charge.
NOTE: Server provisioning (via 'HPE Insight Control server provisioning') is licensed as part of HPE OneView Advanced and provides multi-server OS and driver provisioning. Media kit #BD883A can be ordered for a physical copy of this software (USB flash drive).
NOTE: Licenses ship without media. The HPE OneView Media Kit can be ordered separately, or can be downloaded at: http://www.hp.com/go/oneview
NOTE: Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key.

HP OneView Media Kit Phys No Lic	E5Y37A
HP OneView incl 3yr 24x7 Supp Phys 1 Svr Lic	E5Y34A
HP OneView incl 3yr 24x7 Supp Flex Qty E-LTU	E5Y35AAE
HPE OneView Advanced (without HPE iLO Advanced)	
HP OneView w/o iLO including 3yr 24x7 Support 1 Server LTU	P8B24A
HP OneView w/o iLO including 3yr 24x7 Support Flex Quantity E-LTU	P8B26AAE
HP OneView w/o iLO including 3yr 24x7 Support FIO 1 Server LTU	P8B31A
HP OneView for ProLiant DL Server incl 3yr 24x7 Supp FIO Bundle Physical 1 Svr Lic	E5Y43A
HP Operations Analytics for HP OneView LTU	K8G29A
HP Operations Analytics for HP OneView E-LTU	K8G29AAE

NOTE: OneView is supported in Legacy BIOS mode only. Please see the HPE OneView QuickSpecs for Technical Specifications and additional information.

Additional Options

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

HPE PCIe Workload Accelerator Options	Value Endurance (VE) PCIe Workload Accelerators	
	HP 6.4TB FH/HL Value Endurance (VE) PCIe Workload Accelerator	763840-B21
	HP 3.2TB HH/HL Value Endurance (VE) PCIe Workload Accelerator	763838-B21
	HP 1.6TB HH/HL Value Endurance (VE) PCIe Workload Accelerator	763836-B21
	HP 1.3TB HH/HL Value Endurance (VE) PCIe Workload Accelerator	763834-B21
	Light Endurance (LE) PCIe Workload Accelerators	
	HP 5.2TB FH/HL Light Endurance (LE) PCIe Workload Accelerator	775672-B21
	HP 2.6TB HH/HL Light Endurance (LE) PCIe Workload Accelerator	775670-B21
	HP 1.3TB HH/HL Light Endurance (LE) PCIe Workload Accelerator	775668-B21
	HP 1.0TB HH/HL Light Endurance (LE) PCIe Workload Accelerator	775666-B21
	HPE Read Intensive PCIe Workload Accelerator	
	HPE 6.4TB Read Intensive-2 FH/HL PCIe Workload Accelerator	831739-B21
	NVME PCIe Workload Accelerators	
	HP 2.0TB NVMe Mixed Use HH/HL PCIe Workload Accelerator	803204-B21
	HP 1.6TB NVMe Mixed Use HH/HL PCIe Workload Accelerator	803202-B21
	HP 1.6TB NVMe Write Intensive HH/HL PCIe Workload Accelerator	803197-B21
	HP 800GB NVMe Mixed Use HH/HL PCIe Workload Accelerator	803200-B21
	HP 800GB NVMe Write Intensive HH/HL PCIe Workload Accelerator	803195-B21

NOTE: Both Legacy and UEFI BIOS modes are supported. Please see the HPE PCIe Workload Accelerators for ProLiant Servers QuickSpecs for Technical Specifications and additional information.

Additional Options

HPE Storage Controllers	SAS Controllers	
	HPE Smart Array Controllers	
	HP Smart Array P430/2GB FBWC 12Gb 1-port Int SAS Controller	698529-B21
	HP Smart Array P430/4GB FBWC 12Gb 1-port Int SAS Controller	698530-B21
	NOTE: Please see the HPE Smart Array P430 Controller QuickSpecs for Technical Specifications and additional information.	
	HP Smart Array P431/2GB FBWC 12Gb 2-ports Ext SAS Controller	698531-B21
	HP Smart Array P431/4GB FBWC 12Gb 2-ports Ext SAS Controller	698532-B21
	NOTE: Please see the HPE Smart Array P431 Controller QuickSpecs for Technical Specifications and additional information.	
	HP Smart Array P830/4GB FBWC 12Gb 2-ports Int SAS Controller	698533-B21
	NOTE: Please see the HPE Smart Array P830 Controller QuickSpecs for Technical Specifications and additional information.	
	NOTE: A maximum of four HPE Smart Array Controllers (including embedded controller) can be installed.	
	HPE Smart Host Bus Adapters	
	HP H240 12Gb 2-ports Int Smart Host Bus Adapter	726907-B21
	NOTE: Please see the HPE H240 Smart Host Bus Adapter QuickSpecs for Technical Specifications and additional information.	
	HP H241 12Gb 2-ports Ext Smart Host Bus Adapter	726911-B21
	NOTE: Please see the HPE H241 Smart Host Bus Adapter QuickSpecs for Technical Specifications and additional information.	
	NOTE: For more information about HPE SmartCache, go to: http://www.hp.com/go/smartcache	
	NOTE: Both Legacy and UEFI modes are supported.	

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 kits as well.	
	HP StoreEver LTO-4 Ultrium 1760 SAS (1) in 1U Rack-mount Kit	EH946C
	HPE StoreEver LTO-7 Ultrium 15000 Internal Tape Drive	BB873A
	HPE StoreEver LTO-7 Ultrium 15000 External Tape Drive	BB874A
	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 External Tape Drive	EH920B
	HP StoreEver LTO-3 Ultrium 920 SAS External Tape Drive	EH848B
	HP StoreEver 1U SAS Rack-mount Kit	AE459B
	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	

Additional Options

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

NOTE: Please see the HPE StoreEver MSL6480 Tape Library QuickSpecs for Technical Specifications and additional information.

HPE Disk Backup		
	HP D3700 Enclosure	QW967A
	HP D3600 Enclosure	QW968A

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.

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

HPE Storage Options		
	HPE Converged Network Adapters	
	HP StoreFabric CN1100R Dual Port Converged Network Adapter	QW990A

NOTE: FCOE boot from SAN is not supported with VMWare.

	HP StoreFabric CN1200E 10Gb Converged Network Adapter	E7Y06A

NOTE: Both UEFI and Legacy mode are supported.

Storage Fibre Channel HBA

NOTE: The following is a list of all Fibre Channel Host Bus Adapters for Windows and Linux. For detailed compatibility information please see: http://h18006.www1.hp.com/storage/saninfrastructure/hba.html.

QLogic Fibre Channel HBAs

HP 81Q 8Gb 1-port PCIe Fibre Channel Host Bus Adapter		AK344A
HP 82Q 8Gb 2-port PCIe Fibre Channel Host Bus Adapter		AJ764A
HP StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter		QW971A
HP StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter		QW972A

Emulex Fibre Channel HBAs

HP 81E 8Gb 1-port PCIe Fibre Channel Host Bus Adapter		AJ762B
HP 82E 8Gb 2-port PCIe Fibre Channel Host Bus Adapter		AJ763B
HP StoreFabric SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter		C8R38A
HP StoreFabric SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter		C8R39A

Additional Options

HPE Disk Storage Systems	Disk Enclosures	
	HP D6000 Dual I/O Module Disk Enclosure	QQ695A
	HP D6000 w/70 3TB 6G SAS 7.2K LFF Dual port MDL HDD 210TB Bundle	QQ700A
	HP D6000 w/35 3TB 6G SAS 7.2K LFF Dual port MDL HDD 105TB Bundle	QQ699A
	HP D6000 w/70 2TB 6G SAS 7.2K LFF Dual port MDL HDD 140TB Bundle	QQ698A
	HP D6000 w/35 2TB 6G SAS 7.2K LFF Dual port MDL HDD 70TB Bundle	QQ697A
	HP D6000 w/70 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 280TB Bundle	E7W31A
	HP D6000 w/35 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 140TB Bundle	E7W30A
	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

NOTE: Please see the HPE D6000 Disk Enclosure QuickSpecs for Technical Specifications and additional information.

	HP D2600 w/12 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 48TB Bundle	E7W32A

NOTE: Please see the HPE D2000 Disk Enclosures QuickSpecs for Technical Specifications and additional information.

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

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

HPE Enterprise Series Racks

Additional Options

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

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

HPE Standard Series Rack

HPE V142 1075mm deep Pallet 100 series Rack	AF046A

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

HPE Power Distribution Units (PDUs)	HPE Basic Power Distribution Unit (bPDU)	
	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

Additional Options

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)

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

Additional Options

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 22kVA 400 Volt IEC309 32A 3-Phase Input (12xC13/12xC19) INTL Monitored PDU	D9N60A
HP 22kVA 400 Volt IEC309 32A 3-Phase Input (30xC13/3xC19) INTL Monitored PDU	D9N56A
HP 16.6kVA 400 Volt IEC309 30A 3-Phase Input (12xC13/12xC19) NA Monitored PDU	D9N62A
HP 19.9kVA 480 Volt 3-Phase (30 Outlet) NA Monitored PDU	D9N63A
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 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 14.4kVA 40A Three Phase NA/JP Intelligent Modular Power Distribution Unit	AF533A
HP 17.3kVA 48A Three Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF523A
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 11.4kVA 16A 415V Three Phase L22-20 NA Core Intelligent Power Distribution Unit	AF900A
HP 17.3kVA 24A 415V Three Phase IEC309 NA Core Intelligent Power Distribution Unit	AF901A
HP 17.3kVA 48A 208V Three Phase 12 Outlet Core NA/JP Intelligent Power Distribution Unit	AF535A
HP 17.3kVA 24A 415V Three Phase 12 Outlet Core NA/JP Intelligent Power Distribution Unit	AF537A
HP 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 7.3kVA 32A Single Phase INTL Intelligent Modular Power Distribution Kit	AF534A
HP 5xC13 Intelligent PDU Extension Bar G2 Kit	AF547A

Additional Options

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)

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

NOTE: Please see the HPE Managed Power Distribution Units 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	HPE Location Discovery Services	
	HP Location Discovery Services LCD8500 Kit	TL052A

NOTE: Please see the HPE Location Discovery Services QuickSpecs for information on additional options and product specifications.

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

NOTE: Please see the HPE LCD8500 Console Kit QuickSpecs for information on additional options and product specifications.

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

NOTE: Please see the HPE USB Keyboard and Mouse QuickSpecs for information on additional options and product specifications.

HPE Other Options

HP Rack LED Light Kit	BW939A
HP Kit LCD 1.83m Latch Display Port Cable	G7T29A
HP Advanced Power Manager Kit	741192-B21
HP ConvergedSystem Door Branding Kit	TK815A
HP ConvergedSystem Rack Light Kit	TK816A
HP ConvergedSystem Rack Side Panel 1075mm Kit	TK817A

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
	HP DirectFlow UPS Management Card	AF493A
	Power Unit (2U UPS)	
	HP R18000 DirectFlow - 2U Rackmount Uninterruptible Power System	AF479A
	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 Tower UPS	

Additional Options

HPE T750 G4 UPS Models	
HP T750 G4 NA/JP Uninterruptible Power System	J2P85A
HP T750 G4 INTL Uninterruptible Power System	J2P88A
HPE T1000 G4 UPS Models	
HP T1000 G4 NA/JP Uninterruptible Power System	J2P86A
HP T1000 G4 INTL Uninterruptible Power System	J2P89A
HPE T1500 G4 UPS Models	
HP T1500 G4 NA/JP Uninterruptible Power System	J2P87A
HP T1500 G4 INTL Uninterruptible Power System	J2P90A
HPE T750 G2 UPS Models	
HP T750 G2 750VA INTL Tower Uninterruptible Power System	AF447A
HPE Rack-mountable UPS	
HPE R/T2200 G4 UPS Models	
HP R/T2200 G4 NA/JP Uninterruptible Power System	J2R00A
HPE R/T3000 G4 UPS Models	
HP R/T3000 G4 Low Voltage NA/JP Uninterruptible Power System	J2R01A
HP R/T3000 G4 High Voltage NA/JP Uninterruptible Power System	J2R02A
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

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

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

HPE Power Cords	HP C13 - SEV 1011 CH 250V 10Amp 1.83m Power Cord	AF565A
	HP C13 - DK-2.5A DK 250V 10Amp 1.83m Power Cord	AF566A
	HP C13 - SABS-164 ZA 250V 10Amp 2.5m Power Cord	AF567A
	HP C13 - CEE-VII EU 250V 10Amp 1.83m Power Cord	AF568A
	HP C13 - BS-1363A UK/HK/SG 250V 10Amp 1.83m Power Cord	AF570A
	HP C13 - CEI-23-50 IT/CL 250V 10Amp 1.83m Power Cord	AF571A
	HP 8AWG W/Ground Lug 48V DC 3.0m Power Cord	J6X42A

Additional Options

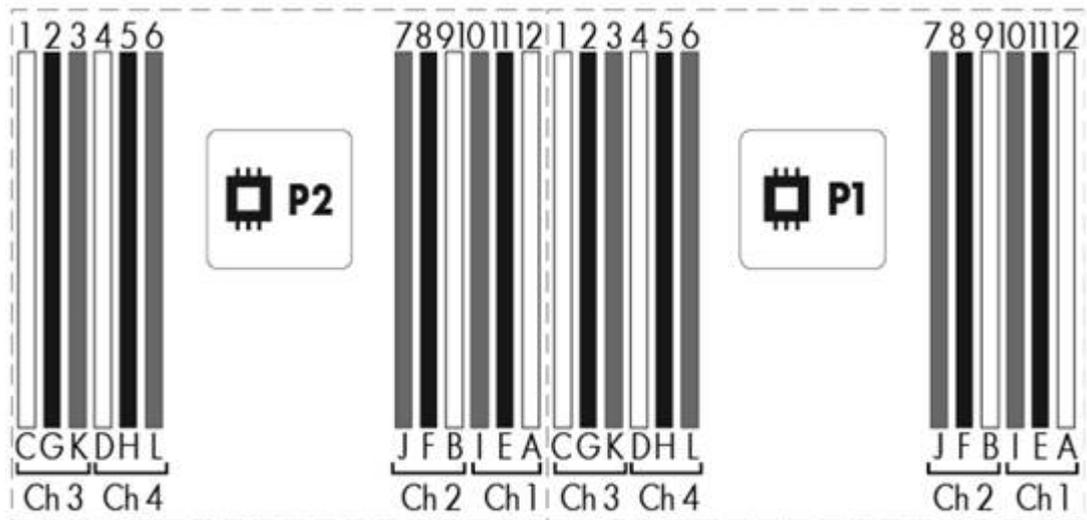| HPE USB and SD Options	HPE Flash Media Kits for USB Drives	
	HP 8GB USB Enterprise Mainstream Flash Media Drive Key Kit	737953-B21
	HP Dual 8GB microSD Enterprise Midline USB Kit	741279-B21
	HPE Enterprise Mainstream Flash Media Kits for Memory Cards	
	HP 32GB microSD Enterprise Mainstream Flash Media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

Memory

HPE SmartMemory

New HPE SmartMemory now provides additional protection for your servers. With HPE Authentication it can verify that you have true HPE Qualified Memory in your HPE ProLiant Gen9 server. With HPE SmartMemory your new HPE ProLiant server can take advantage of additional Gen9 enhancements in performance, durability and future manageability support through HPE Active Health System.

For detailed memory configuration rules and guidelines, please use the Online DDR4 Memory Configuration Tool:
http://www.hp.com/go/ddr4config.

Memory Population guidelines

General Memory Population Rules and Guidelines:

Memory

- To maximize performance, install two memory cartridges per processor and balance the total memory capacity between all installed processors.
- When multiple processors are installed, Hewlett Packard Enterprise recommends installing the DIMMs in sequential alphabetical order: 4A, 9B, 1C, 12D, and so on.
- LRDIMMs support higher densities than single- and dual-rank RDIMMs, and higher speeds than quad-rank RDIMMs. This support enables you to install more high capacity DIMMs, resulting in higher system capacities and higher bandwidth.
- Do not mix LRDIMMs with any other DIMM type (RDIMM, LVDIMM).
- RDIMM population is limited to a maximum of eight logical ranks per channel. Therefore, only two quad rank RDIMMs are supported per channel. If there are more than eight physical ranks per channel, LRDIMMs rank multiplication provides support for three DIMMs per channel.
- • Lockstep mode requires specific population requirements. See lock-step configuration below for more information.
  NOTE: UDIMMs are not supported. This server does not support mixing LRDIMMs, RDIMMs, or UDIMMs. Attempting to mix any combination of these DIMMs can cause the server to halt during BIOS initialization. For detailed memory configuration rules and guidelines, use the Online DDR4 Memory Configuration Tool on the HPE website (http://www.hp.com/go/ddr3memory-configurator).

Intel Gen9 Supported Memory Bandwidth for HPE ProLiant Gen9 Intel® Xeon® E7-4800v3 Series Processor Family

Memory Bandwidth and Capacity					
[DIMM Type]	Registered DIMMs (RDIMMs)			Load Reduced (LRDIMMs)	
DIMM Rank	Single Rank	Dual Rank	Dual Rank	Quad Rank	Quad Rank
DIMM Capacity	8GB	16GB	32GB	32GB	64GB
DIMM Native Speed (MT/s)	2133	2133	2133	2133	2133
Voltage	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V	Std Voltage 1.2V
SLOTS THAT CAN BE POPULATED					
96 slot servers	96	96	96	96	96
MAXIMUM CAPACITY (GB)					
	768	1536	3072	3072	6144
POPULATED DIMM SPEED (MT/s)					
1 DIMM Per Channel	1600	1600	1600	1600	1600
2 DIMM Per Channel	1600	1600	1600	1600	1600
3 DIMM Per Channel	1600	1333	1333	1866	1866

Memory

Memory Speed by Processor Model	Processor Models	Supported Memory Speeds		
	E7-4850v3, E7-4830v3, E7-4820v3, E7-4809v3	1600MHz		

| Standard and Maximum Memory Capacity (Pre-configured Models)	Pre-Configured Models	Standard Memory	Maximum Memory Plus Optional Memory	Standard Memory Replaced with Optional Memory
	E7-8890v3, E7-8893v3	256GB (16x16GB)	5376GB (80x64GB, 16x16GB)	6144GB (96x64GB)
	E7-4850v3	128GB (8x16GB)	5760GB (88x64GB, 8x16GB)	6144GB (96x64GB)
	E7-4809v3	64GB (4x16GB)	5952GB (92x64GB, 4x16GB)	6144GB (96x64GB)

DDR4 memory options part number decoder

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

- 2GB = 2,048MB
- 4GB = 4,096MB
- 8GB = 8,192MB
- 16GB = 16,384MB
- 32GB = 32,768MB
- 64GB = 65,536MB
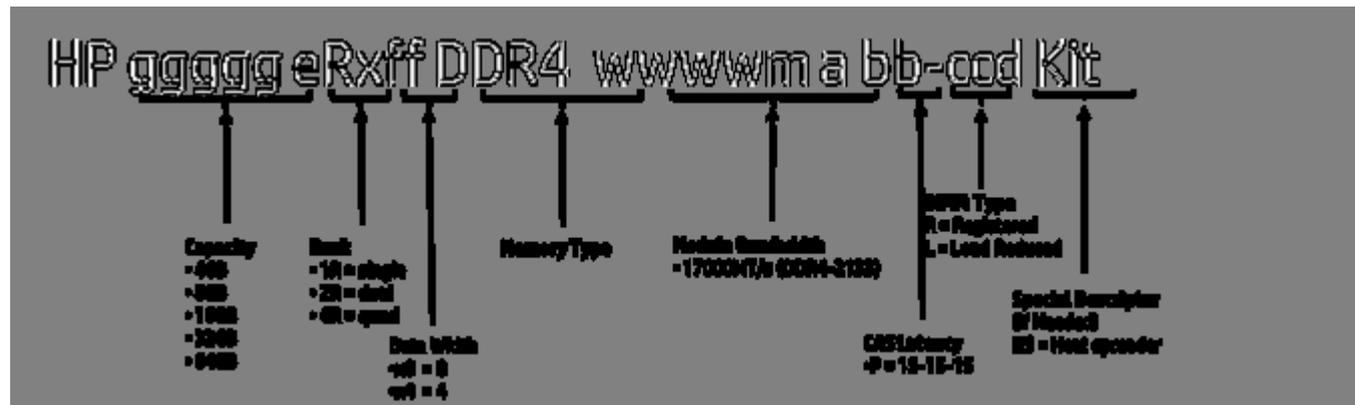
Storage
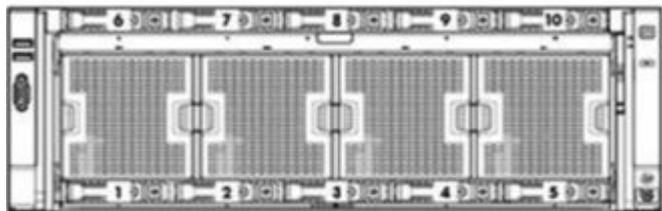
1-10   Ten (10) SFF Hot-plug HDD/SSD drive bays
NOTE: Drives installed in bays 6-10 require the optional SAS backplane kit.
NOTE: Optional NVMe drives are only supported in Drive bays 6-10.

Maximum Storage Capacity -
NOTE: Optional support for 5 NVMe PCIe SSDs or 5 SFF drives are also available.
Hot Plug SFF SAS   20TB (10 x 2.0TB)
Hot Plug SFF SAS   19.2TB (10 x 1.92TB)
SSD
Hot Plug SFF   38.4TB (10 x 3.84TB)
SATA SSD
Hot Plug SFF   8TB (5 x 1.6TB)
NVMe PCIe SSD

Technical Specifications

System Unit	Dimensions (H x W x D) (with bezel)		6.88" x 17.48" x 29" (17.5cm x 44.4cm x 73.6cm)
	Weight (approximate)	Maximum: (all hard drives, power supplies, DIMMs and processors installed)	116.56 lb (52.87 kg)
		Minimum: (one hard drive, two power supplies, four DIMMs, and two processors installed)	70.94 lb (32.18 kg)
	Input Requirements (per power supply)	Range Line Voltage	100 - 120 VAC (1200W PS only) 200 - 240 VAC (1200W & 1500W PS)
		Rated Input Current	9.2A (100 VAC), 6.6A (200 VAC) - 1200W PS8.3A (200 VAC) - 1500W PS
		Rated Input Frequency	50 to 60 Hz
		Rated Input Power	1000 W (120 VAC), 1320 W (230VAC)- 1200W PS 1652 W (at 230 VAC) - 1500W PS
	BTU Rating	Maximum	3408 BTU/hr (120 VAC), 4500 BTU/hr (at 230 VAC) - 1200W PS5637 BTU/hr (230 VAC) - 1500W PSVAC), 3112 BTU/hr (at 240 VAC) for China Only
	Power Supply Output (per power supply)	Rated Steady-State Power	For 1400W Power Supply: 1400W (at 100 VAC), 1400W (at 240 VAC), 1400W (at 240 VAC) For 800W Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VAC) input for China only For 500W Power Supply: 500W (at 100 VAC), 500W (at 240 VAC), 500W (at 240 VAC) input for China only
		Maximum Peak Power	For 1400W Power Supply: 1400W (at 100 to 127 VAC), 1400W (at 200 to 240 1VAC), 1400W (at 240 VAC) input for China only For 800W Power Supply: 800W (at 100 to 127 VAC), 800W (at 200 to 240 1VAC), 800W (at 240 VAC) input for China only For 500W Power Supply: 500W (at 100 to 127 VAC), 500W (at 200 to 240 VAC), 500W (at 240 VAC) input for China only **NOTE:** To review typical system power ratings use the HPE Power Advisor which is available online located at url: http://www.hp.com/go/proliant-energy-efficient or http://www.hp.com/go/hppoweradvisor.
	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

Technical Specifications

		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 Ambient Operating Support	For approved hardware configurations, the supported 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/servers/Ashrae

For approved hardware configurations, the supported system inlet range is extended to be: 40° to 45° C (104° to 113° F) at sea level with an altitude derating of 1.0° C per every 125 m (1.8° F per every 410 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: http://www.hp.com/servers/Ashrae

System performance may be reduced if operating in the extended ambient operating range or with a fan fault. |
	Non-operating	-30˚ to 60˚ C (-22˚ to 140˚ F). Maximum rate of change is 20˚ C/hr (36˚ F/hr).
Relative Humidity (non-condensing)	Operating	10% to 90% relative humidity (Rh), 28° C (82.4° F) maximum wet bulb temperature, non-condensing.
	Non-operating	5 to 95% relative humidity (Rh), 38.7° C (101.7° F) maximum wet bulb temperature, non-condensing.
Altitude	Operating	3048 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
Acoustic Noise		Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23° C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).
	Idle	
	L WAd	6.8 B
	L pAm	51.2
	Operating	
	L WAd	6.9 B
	L pAm	51.2
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 Smart Array P830i	Disk Drive and Enclosure Interface - Transfer rate	12Gb/s SAS, 6 Gb/s SAS & SATA
	SAS Connectors	2 internal x8 Mini-SAS double-wide internal
	Cache Memory Speed	DDR2-1866MHz with 72-bit wide bus at 14.9 GB/s (4 GiBytes Cache Module) 12Gb/s per physical link
	Cache Memory	FBWC cache is required. 2GB is included with BTO models. For CTO, 2GB or 4GB FBWC cache is required.
	Logical Drives Supported	Up to 64 logical volumes
	Host Memory Addressing	64-bit, supporting greater than 4GB server memory space
	RAID Support	RAID 6, 60 (Advanced Data Guarding) RAID 5, 50 (Distributed Data Guarding) RAID 1, 10 (Drive Mirroring), RAID 1 ADM, 10 ADM (Advanced Data Mirroring) RAID 0 (Striping)

HPE Ethernet 1Gb 4-port 331FLR Adapter	Network Interface	10Base-T/100Base-TX/1000Base-TX	
	Compatibility	IEEE 802.3 10Base-T IEEE 802.3ab 1000Base-T IEEE 802.3u 100Base-TX IEEE 802.3x IEEE 802.3ad 1000Base-TX IEEE 802.3az IEEE 1588	
	Ports		
	Data Transfer Method	PCI-Express 2.0 x4	
	Controller	BCM5719	
	Network Transfer Rate	10Base-T (Full-Duplex)	20 Mb/s
		100Base-TX (Full-Duplex)	200 Mb/s
		1000Base-TX (Full-Duplex)	2000 Mb/s
	Connector	RJ-45	
	Cable Support	10 Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)
		100 Base-TX	Category 5 or higher UTP; up to 328 ft (100 m)
		1000 Base-TX	Category 5 or higher UTP; up to 328 ft (100 m)

Technical Specifications

HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter	Network Interface	IEEE 802.3 SFP+ (SX, SR & LR)
	Compatibility	IEEE 802.3

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

Summary of Changes

Date	Version History	Action	Description of Change
17-Dec-2015	From Version 6 to 7	Added	Smart Buy models were added to the NA version.
01-Dec-2015	From Version 5 to 6	Added	New SSD offering was added to HPE Drives. New options added to HPE Infiniband, HPE PCIe Workload Accelerator Options, and HPE Tape Backup.
		Changed	On System Management Chipset, Maximum Internal Storage, Embedded Management, Server Utilities,
		Removed	Obsolete SKUs were removed from the QuickSpecs.
09-Oct-2015	From Version 4 to 5	Changed	Memory, Maximum Internal Storage, HP USB and SD Options, Storage, and Dimensions in Technical Specifications were revised.
02-Oct-2015	From Version 3 to 4	Changed	HP Memory section was revised.
28-Sep-2015	From Version 2 to 3	Added	Added new 6Gb SATA Solid State Drives. Added new HP OneView management software.
		Changed	Maximum Internal Storage, Interfaces, and HP Memory were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
17-Aug-2015	From Version 1 to 2	Added	New Hard Drives offering was added to Core Options.
		Changed	Upgradeability and FlxibleLOM under Standard Features were revised. HP Memory, HP Networking, and HP Graphic Options under Core Options were revised. Memory section was revised.

Summary of Changes

hp.com/qref/dl580gen9

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

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