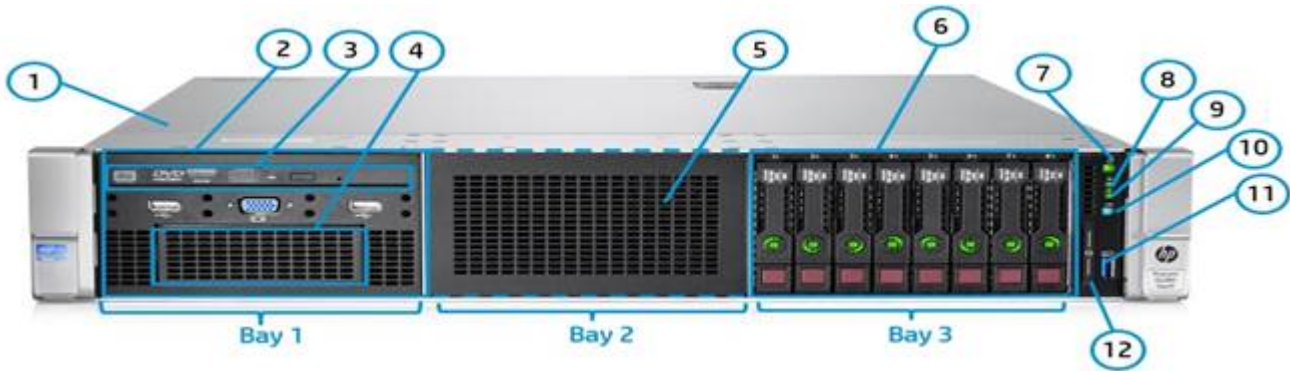Overview

HP ProLiant DL380 Generation9 (Gen9)

The HP ProLiant DL380 Gen9 Server delivers the best performance and expandability in the HP 2P rack portfolio. Reliability, serviceability and near continuous availability, backed by a comprehensive warranty, make it ideal for any environment. Deploy the data center standard.

**Front View - 8SFF Chassis with Optional Universal Media Bay shown**

1. Quick removal access panel
2. Universal Media bay. 2 USB 2.0 and VGA standard (8SFF bay optional)
3. Optional Optical drive. Requires Universal Media bay
4. Optional 2 SFF HDD, blank shown. Requires Universal Media bay
5. Drive Bay 2. Blank shown, 8SFF optional
6. 8 SFF Drive Cage Bay
7. Power On/Standby button and system power LED button
8. Health LED
9. NIC status
10. UID button
11. USB 3.0
12. Serial label pull tag

Rear view

Overview

1. PCI Slots (Slots 1-3 top to bottom, riser shipped standard)
2. PCI Slots (Slots 4-6top to bottom, requires second riser card, and second processor)
3. Optional serial port
4. Optional rear 2 SFF HDD (supported in 24 SFF or 12 LFF front end)
5. HP Flexible Slot Power Supply bay 1 (800w shown)
   NOTE: Optional Micro UPS option.
6. Power supply Power LED
7. Power supply Power connection
8. HP Flexible Slot Power Supply bay 2 (800w shown)
9. Power supply Power LED
10. Power supply Power connection
11. VGA connector
12. Embedded 4x1GbE Network Adapter
13. Dedicated iLO connector
14. USB 3.0 connectors (2)
15. Unit ID LED
16. Optional FlexibleLOM ports (Shown: 4x1GbE)
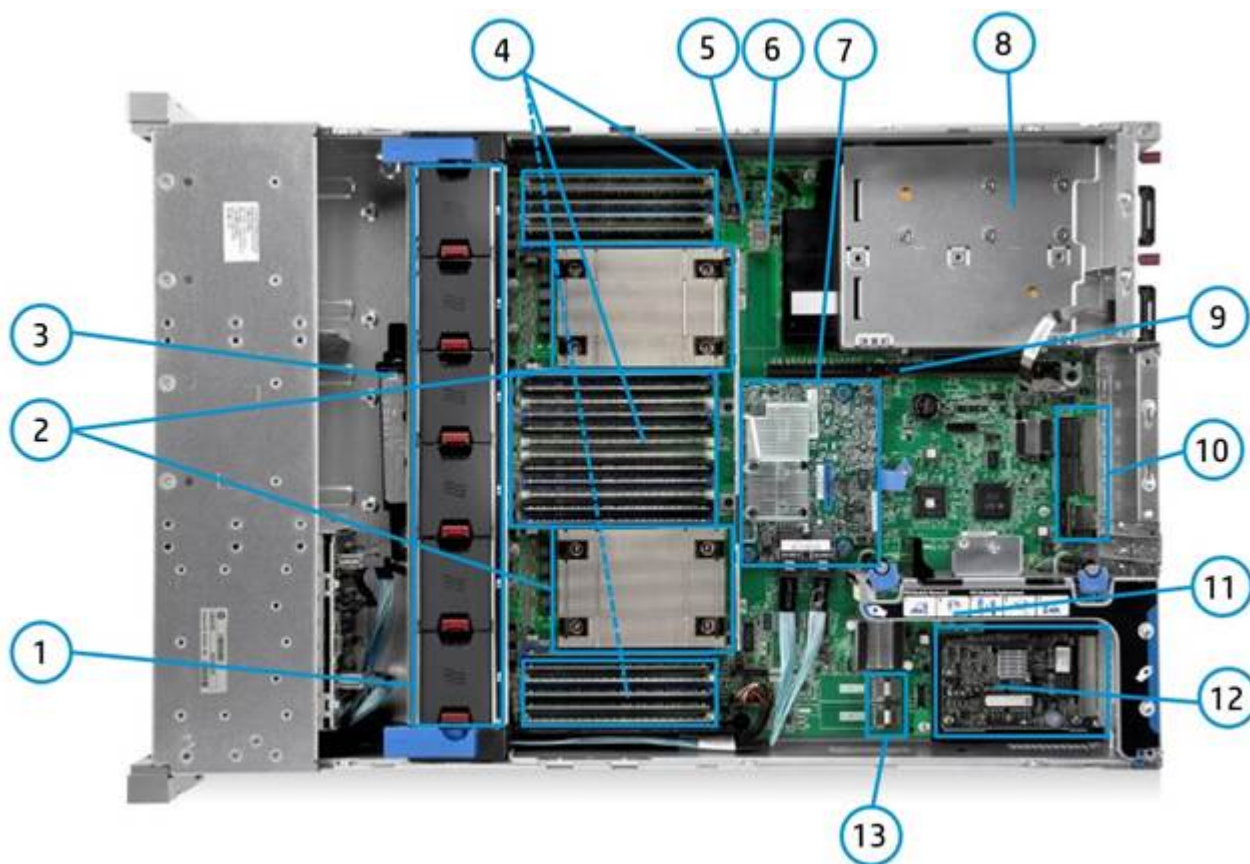
Internal View

Overview

1. Fan cage shown with 6 standard Hot-plug fans (High Performance fans optional)
2. 2 Processors, heatsink showing, with HP Smart Socket Guide
3. Optional HP Smart Storage Battery
4. DDR4 DIMM slots. Shown fully populated in 24 slots (12 per processor)
5. MicroSD card slot
   NOTE: Optional Dual MicroSD.
6. Internal USB 3.0 connector
7. Optional HP Flexible Smart Array or Smart HBA (H240ar shown)
8. (Under) Hot Plug redundant HP Flexible Slot Power supplies
   NOTE: Optional Micro UPS option.
9. Connection for second (optional) riser (Required second CPU)
10. Embedded 4x1Gbe NIC
11. Primary PCIe riser, standard (Optional double wide GPU riser)
12. Optional Flexible LOM slot
13. X4 SATA ports (1 and 2)

What's New

- New larger capacity HDDs (up to 8TB LFF), Max capacity 120TB
- New higher capacity memory (64GB), Max capacity 1.5TB
- New Networking options

Standard Features

Processor
Up to two of the following depending on model

Model	CPU frequency	Cores	L3 Cache	Power	QPI	DDR4 Hz
E5-2699v3	2.3GHz	18	45MB	145W	9.6GT/s	2133
E5-2698v3	2.3GHz	16	40MB	135W	9.6GT/s	2133
E5-2697v3	2.6GHz	14	35MB	145W	9.6GT/s	2133
E5-2695v3	2.3GHz	14	35MB	120W	9.6GT/s	2133
E5-2690v3	2.6GHz	12	30MB	135W	9.6GT/s	2133
E5-2687Wv3	3.1GHz	10	25MB	160W	9.6GT/s	2133
E5-2683v3	2.0GHz	14	35MB	120W	9.6GT/s	2133
E5-2680v3	2.5GHz	12	30MB	120W	9.6GT/s	2133
E5-2670v3	2.3GHz	12	30MB	120W	9.6GT/s	2133
E5-2667v3	3.2GHz	8	20MB	135W	9.6GT/s	2133
E5-2660v3	2.6GHz	10	25MB	105W	9.6GT/s	2133
E5-2650v3	2.3GHz	10	25MB	105W	9.6GT/s	2133
E5-2650Lv3	1.8GHz	12	30MB	65W	9.6GT/s	2133
E5-2643v3	3.4GHz	6	20MB	135W	9.6GT/s	2133
E5-2640v3	2.6GHz	8	20MB	90W	8.0GT/s	1866
E5-2637v3	3.5GHz	4	15MB	135W	9.6GT/s	2133
E5-2630v3	2.4Ghz	8	20MB	85W	8.0GT/s	1866
E5-2630Lv3	1.8GHz	8	20MB	55W	8.0GT/s	1866
E5-2623v3	3.0GHz	4	10MB	105W	8.0GT/s	1866
E5-2620v3	2.4GHz	6	15MB	85W	8.0GT/s	1866
E5-2609v3	1.9GHz	6	15MB	85W	6.4GT/s	1600
E5-2603v3	1.6GHz	6	15MB	85W	6.4GT/s	1600

NOTE: All processors above 120W use a high efficiency Heatsink. Doublewide PCIe cards are only supported with this Heatsink. For processors with a standard Heatsink that require double wide PCIe cards, the Graphics Enablement kit option is also required (719082-B21).

Chipset

Intel® C610 Series Chipset
Intel® E5-2600v3 Processor Family
NOTE: For more information regarding Intel chipsets, please see the following URL:
http://www.intel.com/products/server/chipsets/.

On System Management Chipset

HP iLO (Firmware HP iLO4 2.0) 4GB NAND
NOTE: 1GB USB user space configurable via UEFI and accessible via iLO. Read and learn more in the iLO QuickSpecs.

Memory
One of the following depending on model

Type:
HP SmartMemory
DDR4 Registered (RDIMM) or Load Reduced (LRDIMM)

DIMM Slots Available	24	(12 DIMM slots per processor, 4 channels per processor, 3 DIMMs per channel)
Maximum Capacity (LRDIMM)	1.5TB	(24 x 64GB LRDIMM @2133MHz)
Maximum Capacity (RDIMM)	768GB	(24 x 32GB RDIMM @2133MHz)

Standard Features

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

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

Expansion Slots

Primary Riser (Standard)

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
1	PCIe 3.0	x8	x16	7	Full-height, half-length slot	Proc 1
2	PCIe 3.0	x8	x16	10	Full-height, half-length slot	Proc 1
3	PCIe 3.0	x8	x8	13	Half Length/Full Height	Proc 1

* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number.

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

NOTE: All slots support PCIe cards to 150W or more depending on card, but an additional Power Cord Option is required (PN 669777-B21). See Option Section below for offering.

Slot 2 PCIe Riser (Optional 3-slot) 719073-B21

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Device Number	Form Factor	Notes
4	PCIe 3.0	x16	x16	16		Full-height, full-length slot	Proc 2
5	PCIe 3.0	x16	x16	20		Full-height, full-length slot	Proc 2
6	PCIe 3.0	x8	x8	23		Full-height, half-length slot	Proc 2

* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number.

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

NOTE: When populating the second optional riser slot, the second processor must be installed.

NOTE: All slots support PCIe cards to 150W or more depending on card but an additional Power Cord Option is required (PN 669777-B21). See Option Section below for offering.

Slot 1 PCIe Riser (Optional 2-slot) 719076-B21

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Device Number	Form Factor	Notes
2	PCIe 3.0	x16	x16	0x05		Full-height, full-length slot	Proc 1
3	PCIe 3.0	x8	x8	0x08		Full-height, half-length slot	Proc 1

* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number.

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

NOTE: This will replace the standard primary riser and supports double wide cards.

NOTE: All slots support PCIe cards to 150W or more depending on card, but an additional Power Cord Option is required (PN 669777-B21). See Option Section below for offering.

Storage Controller
One of the following depending on model

Entry Models   HP Dynamic Smart Array B140i Controller

NOTE: 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.

NOTE: The B140i defaults to AHCI off the chipset. Smart array needs to be enables on the SATA only models if required.

NOTE: The B140i will not operate in Legacy mode.

Base Models   HP Dynamic Smart Array B140i Controller
                        HP Flexible Smart Array P440ar/2G FIO Controller
                        HP Flexible Smart Array P840/4G FIO Controller

Performance Models   HP Dynamic Smart Array B140i Controller
                        HP Flexible Smart Array P440ar/2GB

QuickSpecs

HP ProLiant DL380 Generation9 (Gen9)

Standard Features

Internal Storage Devices	Optical Drive	Ships standard in Performance Models Optional: DVD-ROM, DVD-RW
One of the following depending on model	Hard Drives	None ship standard
	Hard Drive Bays	8 SFF with optional Universal Media bay or 8SFF bay options 24 SFF plus optional 2 SFF drives rear 12 LFF plus optional 3 LFF drives rear **NOTE:** The 3 LFF rear drives will consume space for the secondary riser. **NOTE:** The 12LFF chassis also supports 2SFF rear which allows for the second riser. 4 LFF drive bays total **NOTE:** The Universal Media Bay (724865-B21) not available with the LFF chassis or the 24SFF front end, and can only be populated in Bay1. **NOTE:** The 8SFF can be upgraded with a drive cage to 16 or 24 SFF with field upgrades. For optimal upgrade Bay2 should be populated second, with Bay 13 the last to be populated for a field upgrade to 24 SFF. **NOTE:** The 4LFF chassis cannot be upgraded to 12LFF in the field. **NOTE:** All Pre-configured Chassis come with an embedded 10-Port SATA controller. Optional HP Flexible Smart Array and Smart SAS HBA Controllers can be added.

Maximum Internal Storage		CAPACITY	CONFIGURATION
	Hot Plug SFF SAS	52.0TB	24+2 x 2TB (with optional rear SFF drive cage)
	Hot Plug SFF SATA	52.0TB	24+2 x 2TB (with optional SFF drive cage)
	Hot Plug LFF SAS	120.0TB	12+3 x 8TB (with optional rear LFF drive cage)
	Hot Plug LFF SATA	120.0TB	12+3 x 8TB (with optional rear LFF drive cage)
	Hot Plug SFF SAS SSD	49.92TB	24+2 x 1.92TB (with optional rear SFF drive cage)
	Hot Plug LFF SATA SSD	24.0TB	12+3 x 1.6TB (with optional rear LFF drive cage)

Power Supply
HP 500W Flex Slot Platinum Hot Plug Power Supply
NOTE: Available in 94% efficiency.
HP 800W Flex Slot Platinum Hot Plug Power Supply
NOTE: Available in 94% and 96% efficiency.
NOTE: Also available in -48VDC and 227VAC/380VDC power inputs.
HP 1400W Flex Slot Platinum Plus Hot Plug Power Supply
NOTE: Available in 94% efficiency.
HP Flexible Slot Battery Backup Unit Kits
NOTE: Flex Slot Battery Backup provides 750W output and 500W in paralleled configuration.
HP Flexible Slot (Flex Slot) Power Supplies share a common electrical and physical design that allows for hot plug, tool-less installation into HP ProLiant Gen9 Performance Servers. Flex Slot power supplies are certified for high-efficiency operation and offer multiple power output options, allowing users to "right-size" a power supply for specific server configurations. This flexibility helps to reduce power waste, lower overall energy costs, and avoid "trapped" power capacity in the data center.

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

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

Power specifications and technical content for all HP Server power supplies can be found at http://www.hp.com/go/proliant/powersupply.

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Standard Features

System Fans		Non-redundant	Redundant
One of the following depending on model	2P model		6 fans

NOTE: 1P models typically ship with 4 standard fans. The second processor option kit contains 2 additional fans.

NOTE: The 12LFF and 24SFF chassis ship with 6 High Performance fans as standard.

NOTE: High Performance Fan Kit is available to meet ambient temperature environments.

NOTE: High Performance Fan Kit is required for Passive GPU support.

NOTE: The 8SFF Bay1 kit (719067-B21) will ship with 6 High efficiency fans.

Interfaces	
Serial	Optional
Video	2 (1 front, optional via Universal Media Bay, 724865-B21), 1 back not active simultaneously
FlexibleLOM Network Ports	4 x 1Gb ports shipping standard with optional FlexibleLOM
HP iLO Remote Management Network Port	1 Gb Dedicated
Micro SD Slot	1 Micro SD

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

USB 3.0	Up to 5 total: 1 front, 2 rear, 2 internal (secure), 2 optional USB 2.0 front via Universal Media Bay
SID (Systems Insight Display)	Optional

NOTE: Not shipping as standard. Available as a CTO option or as a field upgrade (768900-B21).

Operating Systems and Virtualization Software Support for ProLiant Servers

Microsoft Windows Server
Canonical Ubuntu
Red Hat Enterprise Linux (RHEL)
SUSE Linux Enterprise Server (SLES)
Oracle Solaris
VMware
Citrix XenServer

NOTE: For more information on HP's Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server, please visit our Support Matrix at: http://www.hp.com/go/ossupport and our driver download page: http://www.hp.com/support/DL380Gen9.

Upgradeability

Upgradeable to two processors (36 Cores)

NOTE: Processor upgrade available from Intel® Xeon® Processors E5-2600v3. Please contact HP Technology Sales (http://www.hp.com/support), your local HP Re-seller.

Up to 24 DIMM slots available for higher Memory capacity
FlexibleLOM connector for 1 Gigabit or 10 Gigabit networking options
HP Flexible Smart Array or Smart HBA Controllers
Embedded 10-Port SATA, B140i as standard
Optional 3 slot riser (x16, x16, x8), or 2 slot primary riser (x16, x8)

NOTE: To take advantage of the additional 3 PCI slot upgrade, the second processor must be installed.

Redundant Power Supply
Optical Drive supported via Universal Media Bay

NOTE: The Universal Media bay provides front VGA and 2xUSB 2.0, plus ability to add 2SFF and Optical.

NOTE: Universal Media bay is only available with 8 or 8+8SFF chassis & can be populated in Bay1 only.

HP Legacy Mode (FIO only, 758959-B22)

NOTE: UEFI is the default mode for CTO and BTO SKUs. Can change default to legacy via CTO.

Standard Features

Industry Standard Compliance	ACPI 2.0b Compliant PCIe 3.0 Compliant PXE Support WOL Support Microsoft® Logo certifications USB 3.0 Support USB 2.0 Support **NOTE:** This support is on the optional Universal Media Bay. Energy Star ASHRAE A3/A4 **NOTE:** The DL380 Gen9 is now one of the first HP ProLiant Gen9 Servers with Extended Ambient Support up to 45 C for data center infrastructures designed for better energy efficiency such as but not limited to fresh air cooling. For additional technical thermal details regarding ambient temperatures, humidity and features support please visit: http://www.hp.com/servers/ASHRAE. UEFI (Unified Extensible Firmware Interface Forum) **NOTE:** UEFI is the default for the DL380 Gen9. Legacy model can be selected in the field or as a CTO option (758959-B22).
Graphics	Integrated Matrox G200eH2 video standard with 16MB of Video RAM • 1280 x 1024 (32 bpp) • 1920 x 1200 (16 bpp) HP iLO 4 On System Management Memory • 16 MB Flash • 256 MB DDR3 with ECC (112 MB after ECC and video)
HP Server UEFI/Legacy ROM	**HP Server UEFI /Legacy ROM** Unified Extensible Firmware Interface (UEFI) is an industry standard that provides better manageability and more secured configuration while interacting with your server at boot time. HP ProLiant Gen9 platform defaults to UEFI and can be factory or field configured for Legacy BIOS Boot Mode. **NOTE:** The UEFI System Utilities function is analogous to the HP ROM-Based Setup Utility (RBSU) of legacy BIOS. For more information, please visit http://www.hp.com/go/proliantuefi/docs. UEFI enables numerous new capabilities specific to HP ProLiant servers such as: • Secure Boot • Operating system specific functionality • Support for > 2.2 TB (using GPT) boot drives • USB 3.0 Stack • Embedded UEFI Shell • Mass Configuration Deployment Tool using HP RESTful API. • PXE boot support for IPv6 networks • Boot support for option cards that only support a UEFI option ROM For more information please visit http://www.hp.com/go/proliant/uefi. **NOTE:** For UEFI Boot Mode, boot environment and OS image installations should be configured properly to support UEFI. **NOTE:** HP Legacy FIO Mode Setting (758959-B22) can be selected to configure the system in Legacy mode in the factory.

Standard Features

Form Factor
One of the following
depending on model

2U Rack form factor
8 SFF & 24SFF Drive Bay Version:
3.44 x 17.54 x 26.75 in (8.73 x 44.55 x 67.94 cm)
4 LFF & 12LFF Drive Bay Version:
3.44 x 17.54 x 28.75 in (8.73 x 44.55 x 73.02 cm)
NOTE: Dimensions without bezel.

Embedded Management	**HP Integrated Lights-Out (HP iLO)**	Monitor your servers for ongoing management, service alerting, reporting and remote management with 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.
	HP RESTful API	RESTful API is an application programming interface. RESTful Web Service API served by iLO's web server. Learn more at http://www.hp.com/go/restfulapi.
	Intelligent Provisioning	Provision servers by discovering and deploying 1 to few servers with Intelligent Provisioning. Learn more at http://www.hp.com/go/intelligentprovisioning.
	Embedded Remote Support	HP's embedded remote support, used with Insight Online direct connect or HP Insight Remote Support, allows HP ProLiant servers to transmit hardware events directly to HP or an HP Authorized Partner for automated phone home support. Learn more at http://www.hp.com/go/insightonline/info.

Server utilities	**HP Smart Update**	Optimize firmware and driver updates with HP Smart Update solutions. Learn more at http://www.hp.com/go/smartupdate.
	HP Systems Insight Manager (HP SIM)	HP SIM allows you to monitor the health of your HP ProLiant Servers and HP Integrity Servers, and also provides you with basic support for non-HP servers. HP SIM also integrates with HP 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 HP Scripting Tool Kit for Windows and Linux or HP Scripting Tools for Windows PowerShell. Learn more at http://www.hp.com/go/ProLiantSTK or http://www.hp.com/go/powershell.
	HP RESTful Interface Tool	HP RESTful Interface tool is a scripting tool to provision servers using RESTful API Interface to discover and deploy servers at scale. Learn more at http://www.hp.com/go/restfulapi.
	HP 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.
	HP Insight Online	HP Insight Online, available at no additional cost as part of your HP warranty, Care Pack or contractual support agreement with HP, is a personalized dashboard for simplified tracking of IT operations and support information from anywhere, anytime. Learn more at http://www.hp.com/go/insightonline/info.

Standard Features

Security	Power-on password
	Serial interface control
	Administrator's password
	UEFI
	iLO 4 (Integrated Lights-Out 4) has 12 customizable user accounts and SSL encryption
	Integrated Lights-Out can be disabled via a Global Setting
	iLO Advanced supports directory services integration
	TPM 1.2

Warranty	This product is covered by a global limited warranty and supported by HP Services and a worldwide network of HP 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 HP 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 HP replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at: http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html.

Optional Features

Embedded Management	**iLO Advanced**	HP iLO Advanced licenses offer smart remote functionality without compromise, for all HP 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 HP iLO Advanced at http://www.hp.com/go/iloadvanced
Server Management	**HP Insight Control**	HP 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.
	HP OneView Advanced	HP 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.
	HP Insight Cluster Management Utility (CMU)	HP Insight Cluster Management Utility is a hyperscale-optimized management framework that includes software for the provisioning, control, performance management and monitoring of groups of nodes and infrastructure. Learn more at http://www.hp.com/go/cmu.
Rack and Power Infrastructure		HP Rack and Power Infrastructure products and services create highly efficient and intelligent solutions for existing or new IT data centers. HP 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, HP is uniquely positioned to address the key concerns of power, cooling, cable management and system access. Learn more at HP Rack and Power Infrastructure.
High Performance Clusters		HP 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 HPC Server. A Cluster Platform Configurator simplifies ordering. http://www.hp.com/go/clusters. **NOTE:** High Performance Computing (HPC) interconnect technologies are available for this server as part of the HP Cluster Platform portfolio. These high-speed InfiniBand and Gigabit interconnects are fully supported by HP when integrated within an HP cluster. Flexible, validated solutions can be defined with the help of configuration tools. http://www.hp.com/techservers/clusters/ucp/index.html.
HPC Interconnects		**NOTE:** High Performance Computing (HPC) interconnect technologies are available for this server under the HP Cluster Platform product portfolio. These high-speed interconnects are fully supported by HP 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 HPC Clusters with InfiniBand Interconnects: http://www.hp.com/techservers/clusters/ucp/index.html.

Optional Features

Storage Software Whether you need to solve a specific data protection, archiving, or storage command and control challenge, or deliver on strategic consolidation, compliance, or continuity initiatives, look no further than HP 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, HP data protection and recovery software will cost-effectively protect you against disaster and ensure business continuity.
- **Data Archive and Migration Software**
  HP's 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)**
  HP's 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**
  HP 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 HP storage and networking with software that enables hardware-specific configuration, performance tuning and connectivity management.
- **HP StoreVirtual VSA**
  With HP StoreVirtual VSA you can use the power of virtualization to create a virtual array within your host server. Manage it as a single pool of shared storage capacity, and scale it to match your evolving needs. HP ProLiant Gen9 servers include a 3-year limited license for HP StoreVirtual VSA software with 1TB of capacity at no extra cost. Simply select to install HP StoreVirtual VSA software during server setup within Intelligent Provisioning. More information, instructional videos, and free console management software are available at http://www.hp.com/go/vsa1TB.

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

One Config Simple (SCE) SCE is a guided self-service tool to help sales and non-technical people provide customers with initial configurations in 3 to 5 minutes. You may then send the configuration on for configuration help, or use in your existing ordering processes. If you require "custom" rack configuration or configuration for products not available in SCE, please contact HP's Customer Business Center or an Authorized Partner for assistance. http://www.hp.com/products/configurator.

Service and Support

HP Technology Services	HP Technology Services delivers confidence, reduces risk and helps customers realize agility and stability. Connect to HP 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 HP Care Pack Services	HP 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.
Optimized Support recommendation	**HP Proactive Care - Call to Repair commitment, 24x7 coverage, three year Care Pack Service** Prevent problems and stabilize IT by utilizing secure, real-time, predictive analytics and proactive consultations when your products are connected to HP. Includes enhanced escalation management and the industry's highest level of hardware support commitment – hardware will be returned to operating conditions within six (6) hours after you open your case. Comes with collaborative software call management with two hour call back to reduce troubleshooting. As a leading global support provider for Microsoft, Red Hat, VMware, SUSE and other operating systems, HP is able to simplify and shorten your time to resolution with one call for hardware or software questions. http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf. **HP ProLiant Server Hardware Installation** Help ensure your new HP ProLiant hardware is installed smoothly, efficiently and with minimal disruption to your IT and business operations. http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN.pdf.
Standard Support recommendation	**HP Proactive Care - 24x7 coverage, three year Care Pack Service** This service helps prevent problems and stabilize IT by utilizing secure, real-time, predictive analytics and proactive consultations when your products are connected to HP. Includes four hour response for hardware, and collaborative call management for software with a two hour callback. http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf. **HP ProLiant Hardware Installation** Help ensure your new HP ProLiant hardware is installed smoothly, efficiently and with minimal disruption to your IT and business operations. http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN.pdf.
Related Services	**Data Center Platform Consulting Services** These services help modernize key systems and leverage new technology to support a changing business climate and prepare you for the new style of IT. HP understands the needs of the data center of the future and will serve as your guide for the journey. http://www.hp.com/services/consulting

Service and Support

Data Privacy Services
Protect your data through better media management.   HP Data privacy services help manage and protect sensitive data. http://www.hp.com/services/dataprivacy

Factory Express for Servers and storage
HP Factory Express offers configuration, customization, integration and deployment services for HP servers and storage products. Choose how your factory solutions are built, tested, integrated, shipped and deployed. http://www.hp.com/go/factory-express.

HP Foundation Care
Hardware and software support services provide easy connection to HP to resolve support issues quickly. Includes collaborative call management for industry leading software; full software support may also be purchased, giving you one place to call for help. http://www.hp.com/services/foundationcare.

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

Parts and Materials

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

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

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

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. HP 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 HP 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: HP SFF Hard Drive Blank Kit or P/N666986-B21: HP 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: HP recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation.

	Entry Models		Base Models	
[SKU Number]	766342-B21	752686-B21	752688-B21	752687-B21
Model Name	HP ProLiant DL380 Gen9 E5-2609v3 1P 8GB-R B140i 4LFF SATA 500W PS Entry Server	HP ProLiant DL380 Gen9 E5-2609v3 1P 8GB-R B140i 8SFF SATA 500W PS Entry Server	HP ProLiant DL380 Gen9 E5-2620v3 2.4GHz 6-core 1P 16GB-R P840ar/4GB 12LFF 2x800W PS Base Server	HP ProLiant DL380 Gen9 E5-2620v3 1P 16GB-R P440ar 8SFF 500W PS Base Server
Processor	Intel® Xeon® E5-2609v3		Intel® Xeon® E5-2620v3	
Number of Processors	One			
Memory	8GB (1x8GB Registered DIMMs, 2133 MHz) **NOTE:** With the E5-2609v3 this memory DIMM will only operate at 1600MHz.		16GB (1x16GB Registered DIMMs, 2133 MHz) **NOTE:** with the E5-2620v3 this memory DIMM will only operate at 1866MHz	
Network Controller	HP Embedded 1Gb Ethernet 4-port 331i Adapter			
Storage Controller	HP Dynamic Smart Array B140i **NOTE:** Default is AHCI off chipset, Smart Array needs to be enabled on SATA model.		HP Flexible Smart Array P840/4G Controller	HP Flexible Smart Array P440ar/2GB
Hard Drive	None ship standard		None ship standard; includes 10 LFF hard drive blanks	None ship standard
Internal Storage	4 LFF HDD Bays	8 SFF HDD Bays	12 LFF HDD Bays	8 SFF HDD Bays
Optical Drive Bay	Not Available	Optional Universal Media Bay (724865-B21)	Not Available	Optional Universal Media Bay (724865-B21)
Optical Drive	Optional via HP Mobile USB DVDRW Drive (701498-B21)	Optional DVD-ROM (726536-B21) or DVD-RW (726537-B21) via the Universal Media Bay (724865-B21)	Optional via HP Mobile USB DVDRW Drive (701498-B21)	Optional DVD-ROM (726536-B21) or DVD-RW (726537-B21) via the Universal Media Bay (724865-B21)
PCI-Express Slots	3 PCIe slots (+3 PCI slots available with upgrade option, second processor required)			
Power Supply	(1) HP 500W Flex Slot Platinum Power Supply		(2) HP 800W Flex Slot Platinum Power Supply	(1) HP 500W Flex Slot Platinum Power Supply
Fans	4 hot plug fans, redundant		6 hot plug high performance fans, redundant	4 hot plug fans, redundant
Management	iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (optional), Insight Control (optional), HP OneView (optional)			
Form Factor	Rack (2U), HP Easy Install Rails		Rack (2U), HP Easy Install Rails with CMA	
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response			

QuickSpecs

Pre-configured Models

	Performance Models	High Performance Models	
[SKU Number]	752689-B21	803860-B21	803861-B21
Model Name	HP ProLiant DL380 Gen9 E5-2650v3 2P 32GB-R P440ar 8SFF 2x10Gb 2x800W Perf Server	HP ProLiant DL380 Gen9 E5-2690v3 2P 32GB P440ar 8SFF 2x10Gb 2x800W High Perf Server	HP ProLiant DL380 Gen9 E5-2690v3 2P 32GB-R P440ar 8SFF 2x10Gb 2x800W OneView Server
Processor	Intel® Xeon® E5-2650v3	Intel® Xeon® E5-2690v3	
Number of Processors	Two		
Memory	32GB (2x16GB Registered DIMMs, 2133 MHz)		
Network Controller	HP Embedded 4x1Gb, plus 2x10Gb-T Flexible LOM		
Storage Controller	HP Flexible Smart Array P440ar/2GB		
Hard Drive	None ship standard		
Internal Storage	8 SFF HDD Bays		
Optical Drive Bay	Optional Universal Media Bay (724865-B21)		Optional via Universal Media Bay
Optical Drive	HP Half-Height SATA DVD-RW Optical Drive		
PCI-Express Slots	6 PCIe slots (includes second riser slot upgrade option)		
Power Supply	(2) HP 800W Flex Slot Platinum Power Supply		
Fans	6 hot plug fans, redundant	6 hot plug high performance fans, redundant	
Management	iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (standard), HP OneView (optional)		iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (standard), HP OneView Advanced (Standard)
Energy Star	Meets Energy Star requirements		
Form Factor	Rack (2U), HP Easy Install Rails with CMA		
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response		

NOTE: UEFI is the standard default for all Predefined models.

Country Code Key   xx1 = B21   Worldwide
                        NOTE: The -B21 WW   SKU is to be ordered in all countries other than Japan or PRC.
                        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, recommends the use of an HP 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 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 DL380 Gen9 8SFF Configure-to-order Server	HP ProLiant DL380 Gen9 24SFF Configure-to-order Server	HP ProLiant DL380 Gen9 4LFF Configure-to-order Server	HP ProLiant DL380 Gen9 12LFF Configure-to-order Server
SKU Number	719064-B21	767032-B21	767033-B21	719061-B21
Processor	2 (optional) x HP Smart Socket Guide			
DIMMSlots	24 DIMM slots for RDIMM, LRDIMM DDR4 Memory			
Storage Controller	HP Dynamic Smart Array B140i, plus optional HP Flexible Smart Array or Smart HBA controller			
PCIe	3 PCIe slots (+3 PCI slots available with upgrade option, second processor required)			
Drive Cage	8SFF Hot Plug	24SFF Hot Plug	4LFF Hot Plug	12LFF Hot Plug
Network Controller	HP Embedded 1Gb Ethernet 4-port 331i Adapter, plus optional HP Flexible LOM or stand up card			
Fans	4 hot plug fans, redundant	6 hot plug high performance fans, redundant	4 hot plug fans, redundant	6 hot plug high performance fans, redundant
Management	iLO Management (standard), Intelligent Provisioning (standard), iLO Advanced (optional), Insight Control (optional), HP OneView (optional)			
USB	1 front, 2 internal, 2 rear		No front USB support	
Ears	HP Quick Release Ears			

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

HP 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.

HP 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.
- HP memory from previous generation servers are not qualified or warranted with this HP ProLiant Server. HP 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 Efficien 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.

Configuration Information - Factory Integrated Models

HP 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 HP Power Advisor tool to determine the right size power supply for your server configuration. The HP 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

HP 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.

HP 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 HP I/O Expansion Options section below.
- FIO indicates that this option is only available as a factory installable option.

HP Drives   Select one or more drives from Core options-HP 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 HP 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 HP Qualified Hard Drives and Solid State Drives. These new carriers provide status and activity indicators as well as caution indicators for "Do Not Remove".

HP 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.

HP 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.

HP 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 HP Storage Controllers section below.
- FIO indicates that this option is only available as a factory installable option.

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

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

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

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

HP Rail Kits   Select one type of rail kit from Additional options section below.

Configuration Information - Factory Integrated Models

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

Caution: HP 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.

QuickSpecs

Core Options

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

HP Unique Options	HP DL380 Gen9 Universal Media Bay Kit	724865-B21

NOTE: The HP DL380 Gen9 Universal Media bay provides front VGA and 2xUSB 2.0; plus support for 2xSFF front drives (724864-B21) and ODD support (No included); and can only be located in Bay1 in either a 8SFF or 8+8SFF front end.

HP DL380 Gen9 Graphics Enablement Kit	719082-B21

NOTE: This kit includes alternative 2 heatsinks plus6 cables to enable GPU support. Other limitations apply, see Graphic section for more details.

NOTE: We support up to 2 Double wide and 3 single wide Graphics cards, limitations apply

HP DL380 Gen9 High Performance Fan Kit	719079-B21

NOTE: This kit is required for specific Ambient temperature environments, more details here: http://www.hp.com/servers/Ashrae.

NOTE: This kit is also required to support Passive GPUs.

HP DL380 Gen9 2SFF Front/Rear SAS/SATA Kit	724864-B21

NOTE: For 2SFF front the Universal Media Bay (724865-B21) is required.

NOTE: 2SFF in the rear is only supported with a 24SFF (CTO chassis or field upgraded) or 12LFF (719061-B21) front end.

NOTE: 2SFF Rear drives are not supported with 160W Processors

HP DL380 Gen9 3LFF Rear SAS/SATA Kit	768856-B21

NOTE: This is only supported in the 12LFF chassis (719061-B21).

NOTE: 3LFF rear drives will consume the 2nd riser expansion slot.

NOTE: 3LFF Rear drives are not supported with 160W Processors

HP DL380 Gen9 Primary 2 Slot GPU Ready Riser Kit	719076-B21

Slot1: 1x Gen3 x16 FH/FL, 1xGen3 x8 FH/HL.

NOTE: This replaces the standard Primary riser in slot1.

HP DL380 Gen9 Secondary 3 Slot GPU Ready Riser Kit	719073-B21

Slot2: 2xGen3 x16 FH/FL, 1xGen3 x8 FH/HL

HP DL380 Gen9 8SFF Bay1 Cage/Backplane Kit	719067-B21

NOTE: To add an additional 8SFF drive cage in Bay1.

NOTE: To get to 16SFF total please populate bay 2 with 768857-B21 (from an 8SFF starting point).

NOTE: This ships with 6 High Efficiency Fans.

NOTE: Selecting this option does not allow you to select the Universal Media Bay.

HP DL380 Gen9 Additional 8SFF Bay2 Cage/Backplane Kit	768857-B21

NOTE: To add an additional 8SFF drive cage in Bay 2. This is the optimal solution to upgrade to 16SFF total and allows the flexibility to add the Universal Media Bay (724865-B21) for 2 additional SFF or Optical.

HP 12Gb SAS Expander Card with Cables for DL380 Gen9	727250-B21

NOTE: SAS expander to enable 24SFF field upgrade.

HP DL380 Gen9 Systems Insight Display Kit	768900-B21

NOTE: The Systems Insight Display no longer ships as standard but is available as a Factory Integrated or field upgrade option.

HP Legacy FIO Mode Setting	758959-B22

NOTE: UEFI is the default, this FIO part can be used for CTO to enable Legacy mode.

HP DL380 Gen9 Rear Serial Port and Enablement Kit	768896-B21

HP Processors   **Entry Processors - E5-2600v3 series Processors**

Core Options

HP DL380 Gen9 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) FIO Processor Kit	719053-L21
NOTE: FIO indicates factory integrated option via CTO.	
HP DL380 Gen9 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) Processor Kit	719053-B21
HP DL380 Gen9 Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) FIO Processor Kit	719052-L21
NOTE: FIO indicates factory integrated option via CTO.	
HP DL380 Gen9 Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) Processor Kit	719052-B21
Base Processors - E5-2600v3 series Processors	
HP DL380 Gen9 Intel® Xeon® E5-2620v3 (2.4GHz/6-core/15MB/85W) FIO Processor Kit	719051-L21
NOTE: FIO indicates factory integrated option via CTO.	
HP DL380 Gen9 Intel® Xeon® E5-2620v3 (2.4GHz/6-core/15MB/85W) Processor Kit	719051-B21
HP DL380 Gen9 Intel® Xeon® E5-2623v3 (3GHz/4-core/10MB/105W) FIO Processor Kit	779556-L21
NOTE: FIO indicates factory integrated option via CTO.	
HP DL380 Gen9 Intel® Xeon® E5-2623v3 (3GHz/4-core/10MB/105W) Processor Kit	779556-B21
HP DL380 Gen9 Intel® Xeon® E5-2630v3 (2.4GHz/8-core/20MB/85W) FIO Processor Kit	719050-L21
NOTE: FIO indicates factory integrated option via CTO.	
HP DL380 Gen9 Intel® Xeon® E5-2630v3 (2.4GHz/8-core/20MB/85W) Processor Kit	719050-B21
HP DL380 Gen9 Intel® Xeon® E5-2630Lv3 (1.8GHz/8-core/20MB/55W) FIO Processor Kit	719060-L21
NOTE: FIO indicates factory integrated option via CTO.	
HP DL380 Gen9 Intel® Xeon® E5-2630Lv3 (1.8GHz/8-core/20MB/55W) Processor Kit	719060-B21
HP DL380 Gen9 Intel® Xeon® E5-2637v3 (3.5GHz/4-core/15MB/135W) FIO Processor Kit	719058-L21
NOTE: Ships with a High Performance Heatsink.	
NOTE: FIO indicates factory integrated option via CTO.	
HP DL380 Gen9 Intel® Xeon® E5-2637v3 (3.5GHz/4-core/15MB/135W) Processor Kit	719058-B21
NOTE: Ships with a High Performance Heatsink.	
HP DL380 Gen9 Intel® Xeon® E5-2640v3 (2.6GHz/8-core/20MB/90W) FIO Processor Kit	719049-L21
NOTE: FIO indicates factory integrated option via CTO.	
HP DL380 Gen9 Intel® Xeon® E5-2640v3 (2.6GHz/8-core/20MB/90W) Processor Kit	719049-B21
Performance Processors - E5-2600v3 series Processors	
HP DL380 Gen9 Intel® Xeon® E5-2643v3 (3.4GHz/6-core/20MB/135W) FIO Processor Kit	719057-L21
NOTE: Ships with a High Performance Heatsink.	
NOTE: FIO indicates factory integrated option via CTO.	
HP DL380 Gen9 Intel® Xeon® E5-2643v3 (3.4GHz/6-core/20MB/135W) Processor Kit	719057-B21
NOTE: Ships with a High Performance Heatsink.	
HP DL380 Gen9 Intel® Xeon® E5-2650v3 (2.3GHz/10-core/25MB/105W) FIO Processor Kit	719048-L21
NOTE: FIO indicates factory integrated option via CTO.	
HP DL380 Gen9 Intel® Xeon® E5-2650v3 (2.3GHz/10-core/25MB/105W) Processor Kit	719048-B21
HP DL380 Gen9 Intel® Xeon® E5-2650Lv3 (1.8GHz/12-core/30MB/65W) FIO Processor Kit	719059-L21
NOTE: FIO indicates factory integrated option via CTO.	
HP DL380 Gen9 Intel® Xeon® E5-2650Lv3 (1.8GHz/12-core/30MB/65W) Processor Kit	719059-B21
HP DL380 Gen9 Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/105W) FIO Processor Kit	762764-L21
NOTE: FIO indicates factory integrated option via CTO.	

Core Options

HP DL380 Gen9 Intel® Xeon® E5-2660v3 (2.6GHz/10-core/25MB/105W) Processor Kit	762764-B21
HP DL380 Gen9 Intel® Xeon® E5-2667v3 (3.2GHz/8-core/20MB/135W) FIO Processor Kit	719056-L21

NOTE: Ships with a High Performance Heatsink.
NOTE: FIO indicates factory integrated option via CTO.

HP DL380 Gen9 Intel® Xeon® E5-2667v3 (3.2GHz/8-core/20MB/135W) Processor Kit	719056-B21

NOTE: Ships with a High Performance Heatsink.

HP DL380 Gen9 Intel® Xeon® E5-2670v3 (2.3GHz/12-core/30MB/120W) FIO Processor Kit	719046-L21

NOTE: Ships with a High Performance Heatsink.
NOTE: FIO indicates factory integrated option via CTO.

HP DL380 Gen9 Intel® Xeon® E5-2670v3 (2.3GHz/12-core/30MB/120W) Processor Kit	719046-B21

NOTE: Ships with a High Performance Heatsink.

HP DL380 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) FIO Processor Kit	762766-L21

NOTE: Ships with a High Performance Heatsink.
NOTE: FIO indicates factory integrated option via CTO.

HP DL380 Gen9 Intel® Xeon® E5-2680v3 (2.5GHz/12-core/30MB/120W) Processor Kit	762766-B21

NOTE: Ships with a High Performance Heatsink.

HP DL380 Gen9 Intel® Xeon® E5-2683v3 (2GHz/14-core/35MB/120W) FIO Processor Kit	719055-L21

NOTE: Ships with a High Performance Heatsink.
NOTE: FIO indicates factory integrated option via CTO.

HP DL380 Gen9 Intel® Xeon® E5-2683v3 (2GHz/14-core/35MB/120W) Processor Kit	719055-B21

NOTE: Ships with a High Performance Heatsink.

HP DL380 Gen9 Intel® Xeon® E5-2690v3 (2.6GHz/12-core/30MB/135W) FIO Processor Kit	719044-L21

NOTE: Ships with a High Performance Heatsink.
NOTE: FIO indicates factory integrated option via CTO.

HP DL380 Gen9 Intel® Xeon® E5-2690v3 (2.6GHz/12-core/30MB/135W) Processor Kit	719044-B21

NOTE: Ships with a High Performance Heatsink.

HP DL380 Gen9 Intel® Xeon® E5-2695v3 (2.3GHz/14-core/35MB/120W) FIO Processor Kit	762760-L21

NOTE: Ships with a High Performance Heatsink.
NOTE: FIO indicates factory integrated option via CTO.

HP DL380 Gen9 Intel® Xeon® E5-2695v3 (2.3GHz/14-core/35MB/120W) Processor Kit	762760-B21

NOTE: Ships with a High Performance Heatsink.

HP DL380 Gen9 Intel® Xeon® E5-2697v3 (2.6GHz/14-core/35MB/145W) FIO Processor Kit	719054-L21

NOTE: Ships with a High Performance Heatsink.
NOTE: FIO indicates factory integrated option via CTO.

HP DL380 Gen9 Intel® Xeon® E5-2697v3 (2.6GHz/14-core/35MB/145W) Processor Kit	719054-B21

NOTE: Ships with a High Performance Heatsink.

HP DL380 Gen9 Intel® Xeon® E5-2698v3 (2.3GHz/16-core/40MB/135W) FIO Processor Kit	781913-L21

NOTE: Ships with a High Performance Heatsink.
NOTE: FIO indicates factory integrated option via CTO.

HP DL380 Gen9 Intel® Xeon® E5-2698v3 (2.3GHz/16-core/40MB/135W) Processor Kit	781913-B21

NOTE: Ships with a High Performance Heatsink.

Core Options

HP DL380 Gen9 Intel® Xeon® E5-2699v3 (2.3GHz/18-core/45MB/145W) FIO Processor Kit	781915-L21

NOTE: Ships with a High Performance Heatsink.
NOTE: FIO indicates factory integrated option via CTO.

HP DL380 Gen9 Intel® Xeon® E5-2699v3 (2.3GHz/18-core/45MB/145W) Processor Kit	781915-B21

NOTE: Ships with a High Performance Heatsink.

HP DL380 Gen9 Intel® Xeon® E5-2687Wv3 (3.1GHz/10-core/25MB/160W) FIO Processor Kit	762768-L21

NOTE: Ships with a High Performance Heatsink.
NOTE: FIO indicates factory integrated option via CTO.
NOTE: This processor is not supported in a 12LFF or 24SFF Chassis + Rear drives

HP DL380 Gen9 Intel® Xeon® E5-2687Wv3 (3.1GHz/10-core/25MB/160W) Processor Kit	762768-B21

NOTE: Ships with a High Performance Heatsink.
NOTE: This processor is not supported in a 12LFF or 24SFF Chassis + Rear drive.
NOTE: Up to 2 processors supported. Performance and Energy Star Model configurations include two processors.
NOTE: HT indicates that the processor model supports Intel® Hyper-Threading Technology.
NOTE: Turbo2: Intel® Turbo Boost Technology 2.0 provides more computing power when you need it with performance that adapts to spikes in your workload and delivers more performance upside than then previous generation turbo technology.
NOTE: DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.
NOTE: The xxxxxx-L21 is the first processor shipped, the xxxxxx-B21 is the 2nd processor and ships with 2 additional FANs for factory of field installation.
NOTE: Double wide PCIe cards are only supported in risers with the Processors leveraging the High Performance Heatsink. For Processors requiring double wide GPU support please order the GPU enablement kit (719082-B21).

HP Memory	**Registered DIMMs (RDIMMs) for E5-2600v3 Series**	
	NOTE: The following memory is supported by the E5-2600v3 series Processors.	
	HP 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit	726717-B21
	HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	726718-B21
	HP 8GB (1x8GB) Dual Rank x8 DDR4-2133 CAS-15-15-15 Registered Memory Kit	759934-B21
	HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	726719-B21
	HP 32GB (1x32GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	728629-B21
	NOTE: Depending on Processor selected this memory will run at 1600, 1866 or 2133MHz.	
	Load Reduced DIMMs (LRDIMMs) for E5-2600v3 Series	
	NOTE: The following memory is supported by the E5-2600v3 series Processors.	
	HP 64GB (1x64GB) Quad Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit	726724-B21
	HP 32GB (1x32GB) Quad Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit	726722-B21
	HP 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Load Reduced Memory Kit	726720-B21
	NOTE: Depending on Processor selected this memory will run at 1600, 1866 or 2133MHz.	

HP Optical Drives	HP 9.5mm SATA DVD-ROM JackBlack Gen9 Optical Drive	726536-B21
	NOTE: The Universal Media Bay (724865-B21) is required for this option.	
	HP 9.5mm SATA DVD-RW JackBlack G9 Optical Drive	726537-B21
	NOTE: The Universal Media Bay (724865-B21) is required for this option.	
	HP Mobile USB Non Leaded System DVD RW Drive	701498-B21

Core Options

HP Drives	**SAS Hot Plug SFF (2.5-inch) Enterprise (ENT) Drives**	
	HP 1.8TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 512e 3yr Warranty Hard Drive	791034-B21
	HP 1.2TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	781518-B21
	HP 1.2TB 6G SAS 10K rpm SFF (2.5-inch) SC Dual Port Enterprise 3yr Warranty Hard Drive	718162-B21
	HP 900GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	785069-B21
	HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652589-B21
	HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC 512e Enterprise 3yr Warranty Hard Drive	748387-B21
	HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759212-B21
	HP 600GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	781516-B21
	HP 600GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652583-B21
	HP 450GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759210-B21
	HP 450GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652572-B21
	HP 300GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759208-B21
	HP 300GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	785067-B21
	HP 300GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652611-B21
	HP 300GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652564-B21
	HP 146GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652605-B21
	SAS Hot Plug SFF (2.5-inch) Midline (MDL) Drives	
	HP 2TB 12G SAS 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765466-B21
	HP 1TB 12G SAS 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765464-B21
	HP 1TB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	652749-B21
	HP 500GB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	652745-B21
	SAS Hot Plug LFF (3.5-inch) Enterprise (ENT) Drives	
	HP 600GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive	765424-B21
	HP 450GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive	737394-B21
	HP 300GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive	737261-B21
	SAS Hot Plug LFF (3.5-inch) Midline (MDL) Drives	
	HP 8TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793703-B21
	HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793699-B21
	HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765259-B21
	HP 6TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	761477-B21
	HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive	793671-B21
	HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765257-B21
	HP 4TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	695510-B21
	HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive	793669-B21
	HP 3TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652766-B21
	HP 2TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652757-B21
	HP 1TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652753-B21
	SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives	
	HP 2TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765455-B21
	HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765453-B21
	HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	655710-B21
	HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	655708-B21
	SATA Hot Plug LFF (3.5-inch) Midline (MDL) Drives	

Core Options

HP 8TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793695-B21
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793683-B21
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765255-B21
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	753874-B21
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive	793667-B21
HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765253-B21
HP 4TB 6G SATA 7.2k rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	693687-B21
HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drives	793665-B21
HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	628061-B21
HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	658079-B21
HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	657750-B21
HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	658071-B21
12G SAS Hot Plug SFF (2.5-inch) Enterprise Performance Solid State Drives	
HP 400GB 12G SAS High Endurance SFF 2.5-in SC Enterprise Performance 3yr Wty Solid State Drive	741155-B21
12G SAS Hot Plug SFF (2.5-inch) Enterprise Mainstream Solid State Drives	
HP 1.6TB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive	779176-B21
HP 800GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive	779172-B21
HP 400GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive	779168-B21
HP 200GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive	779164-B21
HP 200GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802578-B21
HP 400GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802582-B21
HP 800GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802586-B21
HP 1.92TB 12G SAS Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802891-B21
12G SAS Hot Plug SFF (2.5-inch) Enterprise Value Solid State Drives	
HP 1.6TB 12G SAS Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	762263-B21
HP 800GB 12G SAS Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	762261-B21
12G SAS Hot Plug LFF (3.5-inch) Enterprise Value Solid State Drives	
HP 1.6TB 12G SAS Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	762272-B21
HP 800GB 12G SAS Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	762270-B21
6G SATA 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 Hot Plug SFF (2.5-inch) Enterprise Value Solid State Drives	

Core Options

HP 1.6TB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	757339-B21
HP 800GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	717973-B21
HP 600GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	739898-B21
HP 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	717971-B21
HP 300GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	739888-B21
HP 240GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	717969-B21
6G SATA Hot Plug SFF Value Endurance (2.5-inch) Enterprise Value G1 Solid State Drives	
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
HP 120GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty G1 Solid State Drive	756621-B21
6G SATA Hot Plug SFF (2.5-inch) Enterprise Light G1 Solid State Drives	
HP 960GB 6G SATA Light Endurance SFF 2.5-in SC Enterprise Light 3yr Wty G1 Solid State Drive	756601-B21
6G SATA Hot Plug SFF Value Endurance (2.5-inch) Enterprise Value M1 Solid State Drives	
HP 800GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive	764929-B21
HP 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive	764927-B21
HP 240GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive	764925-B21
HP 120GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive	764923-B21
6G SATA 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 Hot Plug SFF (2.5-inch) SC Read Intensive Solid State Drives	
HP 240GB 6G SATA Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	789135-B21
HP 480GB 6G SATA Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	789145-B21
HP 960GB 6G SATA Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	789155-B21
6G SATA Hot Plug LFF (3.5-inch) Enterprise Mainstream Solid State Drives	
HP 800GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691860-B21
HP 400GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691856-B21
HP 200GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691854-B21
HP 100GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691852-B21
6G SATA Hot Plug LFF Value Endurance (3.5-inch) Converter Enterprise Value G1 Solid State Drives	
HP 480GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty G1 Solid State Drive	756660-B21
HP 240GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty G1 Solid State Drive	756639-B21
HP 120GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty G1 Solid State Drive	756624-B21
6G SATA Hot Plug LFF Value Endurance (3.5-inch) Converter Enterprise Value M1 Solid State Drives	

Core Options

HP 800GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive	764945-B21
HP 480GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive	764943-B21
HP 240GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive	764941-B21
HP 120GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive	764939-B21
6G SATA Hot Plug LFF (3.5-inch) Enterprise Value Solid State Drives	
HP 1.6TB 6G SATA Value Endurance LFF 3.5-in SC Converter Enterprise Value 3yr Wty Solid State Drive	757342-B21
HP 800GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	718189-B21
HP 600GB 6G SATA Value Endurance LFF 3.5-in SC Conveter Enterprise Value 3yr Wty Solid State Drive	739900-B21
HP 480GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	718183-B21
HP 300GB 6G SATA Value Endurance LFF 3.5-in SC Converter Enterprise Value 3yr Wty Solid State Drive	739890-B21
HP 240GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	718177-B21
6G SATA Hot Plug LFF (3.5-inch) Enterprise Light G1 Solid State Drives	
HP 960GB 6G SATA Light Endurance LFF 3.5-in SC Converter ENT Light 3yr Wty G1 Solid State Drive	756604-B21
6G SATA Hot Plug LFF (3.5-inch) Enterprise Boot Solid State Drives	
HP 120GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Boot 3yr Wty Solid State Drive	718171-B21
HP 80GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Boot 3yr Wty Solid State Drive	734362-B21
6G SATA Hot Plug LFF (3.5-inch) SC Read Intensive Solid State Drives	
HP 240GB 6G SATA Read Intensive LFF 3.5-in SC Converter 3yr Wty Solid State Drive	789137-B21
HP 480GB 6G SATA Read Intensive LFF 3.5-in SC Converter 3yr Wty Solid State Drive	789147-B21
HP 960GB 6G SATA Read Intensive LFF 3.5-in SC Converter 3yr Wty Solid State Drive	789157-B21
M.2 SSD	
HP Dual 120GB Value Endurance Solid State M.2 Enablement Kit for ProLiant ML/DL Servers	777894-B21
HP 120GB Value Endurance Solid State M.2 Enablement Kit for ProLiant ML/DL Servers	788028-B21

NOTE: M.2 drives go in PCIe slots and use B140i SATA controller only.

Hard Drive Blank Kits	
HP Large Form Factor Hard Drive Blank Kit	666986-B21
HP Small Form Factor Hard Drive Blank Kit	666987-B21
Hard Drive Kits	
HP DL380 Gen9 8SFF Bay1 Cage/Backplane Kit	719067-B21
HP DL380 Gen9 Additional 8SFF Bay2 Cage/Backplane Kit	768857-B21
HP DL380 Gen9 2SFF Front/Rear SAS/SATA Kit	724864-B21
HP DL380 Gen9 3LFF Rear SAS/SATA Kit	768856-B21

NOTE: For a complete list of the drive, Controller and cable options please check the compatibility matrix: http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=4AA5-4154ENW&cc=us&lc=en.

Media Bay Kits	
HP DL380 Gen9 Universal Media Bay Kit	724865-B21

NOTE: The Universal Media Bay offers front VGA and 2xUSB 2.0, plus ability to add optional Optical drive, and 2SFF.

NOTE: This is only compatible with the 8SFF or 8+8 SFF front end configurations and can only be populated in Bay1.

Core Options

HP Networking	**1 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 530T Adapter	656596-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 561T Adapter	716591-B21

NOTE: The DL380 Gen9 chassis ships with 4x1Gb Embedded.

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

NOTE: Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately. Please see the related NIC QuickSpecs for Technical Specifications and additional information: http://www.hp.com/go/ProLiantNICs.

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 Ethernet 10Gb 2-port 560FLR-SFP+ Adapter		665243-B21
HP Ethernet 10Gb 2-port 561FLR-T Adapter		700699-B21
HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter		700751-B21
HP Ethernet 10Gb 2-port 546FLR-SFP+ Adapter		779799-B21
HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter		727060-B21

NOTE: The DL380 Gen9 chassis ships with 4x1Gb Embedded.

NOTE: 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.

NOTE: Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately. Please see the related NIC QuickSpecs for Technical Specifications and additional information: http://www.hp.com/go/ProLiantNICs.

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

NOTE: The RHEL6.5 driver is not part of SPP, but may be downloaded here: http://downloads.linux.hp.com/SDR/downloads/MLNX_OFED/.

	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	764284-B21
	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	764285-B21
	HP InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	764286-B21
	QLogic InfiniBand 4X QDR PCI-E G2 Dual Port HCA	583211-B21

HP I/O Expansion Options	HP DL380 Gen9 Primary 2 Slot GPU Ready Riser Kit	719076-B21

NOTE: This is for slot 1 and supports double wide GPGPUs.

NOTE: For Graphics cards please also order the DL380 Gen9 Graphics Enablement kit, 719082-B21

Slot1: 1xGen3 x16 FH/FL, 1xGen3 x8 FH/HL

	HP DL380 Gen9 Secondary 3 Slot GPU Ready Riser Kit	719073-B21

NOTE: This is for slot 2 and supports double wide GPGPUs.

NOTE: For Graphics cards please also order the DL380 Gen9 Graphics Enablement kit, 719082-B21

Slot2: 2xGen3 x16 FH/FL, 1xGen3 x8 FH/HL.

Core Options

HP Power Supplies	**HP Flex Slot Platinum Hot-plug Power supplies**	
	HP 500W Flex Slot Platinum Hot Plug Power Supply Kit	720478-B21
	NOTE: Flex Slot Platinum power supplies support power efficiency of up to 94% and include a standard C-14 power inlet connector.	
	HP 800W Flex Slot Titanium Hot Plug Power Supply Kit	720482-B21
	NOTE: Flex Slot Titanium power supplies support power efficiency of up to 96% and include a standard C-14 power inlet connector.	
	HP 800W Flex Slot Platinum Hot Plug Power Supply Kit	720479-B21
	NOTE: Flex Slot Platinum power supplies support power efficiency of up to 94% and include a standard C-14 power inlet connector.	
	HP 800W Flex Slot Universal Hot Plug Power Supply Kit	720484-B21
	NOTE: Flex Slot universal power supplies support power efficiency of up to 94% and support both 277VAC/380VDC power inputs.	
	HP 800W Flex Slot -48VDC Hot Plug Power Supply Kit	720480-B21
	NOTE: Flex Slot -48VDC power supplies support power efficiency of up to 94%.	
	HP 1400W Flex Slot Platinum Plus Hot Plug Power Supply Kit	720620-B21
	NOTE: Flex Slot Platinum Plus power supplies support power efficiency of up to 94% and include a C-14 power inlet connector that can support HP Power Discovery Services (blue connector).	
	HP 750W Flex Slot Hot Plug Battery Backup Module	738024-B21
	NOTE: Flex Slot Battery Backup provides 750W output and 500W in paralleled configuration.	
	NOTE: Only 1 Battery Backup module per server, and a Flex Slot Power Supply needed in parallel.	
	NOTE: 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.	
	NOTE: Mixing different power supplies in the same server may limit or disable some power supply features including support for power redundancy. To ensure access to all available features, all power supplies within the same server should have the same output and efficiency ratings	
	NOTE: Prior to selecting a power supply option, it is highly recommended that you review your server configuration in the HP Power Advisor tool to determine the right size power supply for your server configuration. The HP Power Advisor is located at: http://www.hp.com/go/hppoweradvisor.	
	NOTE: Support for HP Power Discovery Services is included with the 1400W Flex Slot option. Power specifications and technical content for all HP Server power supplies can be found at http://www.hp.com/go/proliant/powersupply.	
	NOTE: Maximum of 2 Flex Slot PS per platform.	
HP Computation and Graphics Accelerators	HP DL380 Gen9 Graphics Enablement Kit	719082-B21
	NOTE: This GPU enablement kit includes 2 Heatsinks and 6 cables to enable double wide GPUs to be supported.	
	NOTE: For doublewide GPU support you are required to have at least 1x1400W Power Supply (720620-B21), per card.	
	NOTE: There are limitations on the chassis and processor supported when adding Graphics accelerators.	
	NOTE: Passive cards will require the addition of the High Performance Fan Kit (719079-B21).	
	NOTE: We support up to 2 Double wide and 3 single wide Graphics cards, limitations apply	

Core Options

HP NVIDIA GRID K1 Quad GPU PCIe Graphics Accelerator   J0G94A

NOTE: For doublewide GPU support you are required to have at least 1x1400W Power Supply (720620-B21), per card.

NOTE: This card only runs at PCIeGen2 speeds.

NOTE: The Primary GPU riser (719076-B21) is required to support this in slot1.

NOTE: The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

NOTE: There are limitations on the chassis and processor supported when adding Graphics accelerators.

NOTE: This card will require the addition of the High Performance Fan Kit (719079-B21).

NVIDIA GRID K2 Reverse Air Flow Dual GPU PCIe Graphics Accelerator   753958-B21

NOTE: For doublewide GPU support you are required to have at least 1x1400W Power Supply (720620-B21), per card.

NOTE: This card only runs at PCIeGen2 speeds.

NOTE: The Primary GPU riser (719076-B21) is required to support this in slot1.

NOTE: The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

NOTE: There are limitations on the chassis and processor supported when adding Graphics accelerators.

NOTE: This card will require the addition of the High Performance Fan Kit (719079-B21).

NOTE: Max cooling setting required to support in RSBU

NVIDIA Tesla K40C 12GB Computational Accelerator   753960-B21

NOTE: This is supported in all chassis.

NOTE: The Primary GPU riser (719076-B21) is required to support this in slot1.

NOTE: The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

NOTE: For doublewide GPU support you are required to have at least 1x1400W Power Supply (720620-B21), per card.

HP NVIDIA Tesla K80 Dual GPU PCIe Computational Accelerator   J0G95A

NOTE: This cards is limited to 1 per system.

NOTE: For doublewide GPU support you are required to have at least 1x1400W Power Supply (720620-B21), per card.

NOTE: The Primary GPU riser (719076-B21) is required to support this in slot1.

NOTE: The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

NOTE: There are limitations on the chassis and processor supported when adding Graphics accelerators.

NOTE: This card will require the addition of the High Performance Fan Kit (719079-B21).

NOTE: Max cooling setting required to support in RSBU.

HP NVIDIA Quadro K2200 Graphics Accelerator   J0G89A

NOTE: This is supported in all chassis.

NOTE: The Primary GPU riser (719076-B21) is required to support this in slot1.

NOTE: The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

NOTE: For doublewide GPU support you are required to have at least 1x1400W Power Supply (720620-B21), per card.

HP NVIDIA Quadro K4200 Graphics Accelerator   J0G90A

NOTE: This is supported in all chassis.

NOTE: The Primary GPU riser (719076-B21) is required to support this in slot1.

NOTE: The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).

NOTE: For doublewide GPU support you are required to have at least 1x1400W Power Supply (720620-B21), per card.

Core Options

HP NVIDIA Quadro K5200 GPU Graphics Accelerator	J0G91A

NOTE: This is supported in all chassis.
NOTE: The Primary GPU riser (719076-B21) is required to support this in slot1.
NOTE: The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).
NOTE: For doublewide GPU support you are required to have at least 1x1400W Power Supply (720620-B21), per card.

NVIDIA Quadro K6000 PCI-E Graphics Adapter	730874-B21

NOTE: This is supported in all chassis.
NOTE: The Primary GPU riser (719076-B21) is required to support this in slot1.
NOTE: The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).
NOTE: For doublewide GPU support you are required to have at least 1x1400W Power Supply (720620-B21), per card.

Intel® Xeon® Phi 5110P Coprocessor Kit	C1P87A

NOTE: This card only runs at PCIeGen2 speeds.
NOTE: This is supported in the 728543-B21 riser in the secondary position (second processor required) or in the 752803-B21, primary position. Maximum 2 supported with both risers, support for 2 cards requires the 1400W Power Supply (720620-B21) to be selected.
NOTE: Max cooling setting required to support in RSBU.

HP AMD FirePro W7100 Accelerator Kit	J0H10A

NOTE: This is supported in all chassis.
NOTE: The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).
NOTE: Up to 3 of these single wide cards are supported.

HP AMD FirePro S9150 Accelerator Kit	J0H11A

NOTE: For doublewide GPU support you are required to have at least 1x1400W Power Supply (720620-B21), per card.
NOTE: The Primary GPU riser (719076-B21) is required to support this in slot1.
NOTE: The secondary GPU riser (719073-B21) is required to support this in slot2 (2nd processor required).
NOTE: There are limitations on the chassis and processor supported when adding Graphics accelerators.
NOTE: This card will require the addition of the High Performance Fan Kit (719079-B21).

HP 150W PCI-E Power Cable Kit	669777-B21

NOTE: Each DL380 Gen9 server will accommodate up to three single-width or two double width PCIe cards for Computational Graphics support. Note that 11.25" is the max length for a card to also allow for cabling. This applies to primary slots 1 & 2 or secondary slots 4 & 5.
NOTE: The NVIDIA Tesla, GRID and Quadro modules are supported only on 64-bit versions of Linux and Windows operating systems as well as on Virtual Machine client operating systems. The supported bare metal operating systems are RHEL6, SLES 11 and Windows Server 2012 R2.
NOTE: There are limitations on fan types, setting, and chassis support by card.
NOTE: Mixing of GPUs is not supported.

HP Cooling Options	HP DL380 Gen9 High Performance Fan Kit	719079-B21

NOTE: High Performance Fan kit consists of 6 fans, these will need to replace all the standard Fans in the unit, and fill all 6-Fan cages.
NOTE: The 12LFF and 24SFF chassis (including field upgrades to 24SFF) will already include 6 High Performance Fan kits.
NOTE: The High Performance Fan Kit is needed to support certain Passive GPGPU (Graphics cards) configurations; or ASHRAE operating environments.
NOTE: For elevated ambient temperature support please see:
http://www.hp.com/servers/ASHRAE.

Additional Options

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

HP Insight Software HP Insight Control

HP Insight Control including 1yr 24x7 Technical Support and Updates Single Server License	C6N27A
HP Insight Control including 1yr 24x7 Technical Support and Updates Electronic License	C6N28ABE
HP Insight Control Server Provisioning Media Kit	BD883A
HP Insight Management Media Kit	C6N31A

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

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

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

NOTE: For additional license options please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12631_div/12631_div.html.

HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO License	C6N36A
HP Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle FIO Electronic License	C6N36ABE

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

HP Converged Infrastructure Management Software	**HP OneView Advanced (with HP iLO Advanced)**	
	HP OneView incl 3yr 24x7 Supp Phys 1 Svr Lic	E5Y34A
	HP OneView incl 3yr 24x7 Supp Flex Qty E-LTU	E5Y35AAE
	HP OneView for ProLiant DL Server incl 3yr 24x7 Supp FIO Bundle Physical 1 Svr Lic	E5Y43A
	HP OneView Advanced (without HP iLO Advanced)	
	HP OneView w/o iLO Adv incl 3yr 24x7 Supp Phys 1 Svr Lic	E5Y38A
	HP OneView w/o iLO Adv inc 3yr 24x7 Supp Flex Qty E-LTU	E5Y39AAE
	HP OneView Media Kit Phys No Lic	E5Y37A
	HP Operations Analytics for HP OneView LTU	K8G29A
	HP Operations Analytics for HP OneView E-LTU	K8G29AAE

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

NOTE: Server provisioning (via 'HP Insight Control server provisioning') is licensed as part of HP 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 HP 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.

Additional Options

High Performance Clusters	**HP Cluster Management Utility**	
	HP Insight Cluster Management Utility 1yr 24x7 Flexible License	QL803B
	HP Insight Cluster Management Utility 3yr 24x7 Flexible License	BD476A

NOTE: These part numbers can be used to purchase one certificate for multiple licenses and support with a single activation key. Each license is for one node (server). Customer will receive a printed end user license agreement and license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online in order to obtain a license key. Customer also will receive a support agreement.

	HP Insight Cluster Management Utility Media	BD477A

NOTE: For additional license kits please see the QuickSpecs at: http://h18004.www1.hp.com/products/quickspecs/12612_div/12612_div.html.

HP 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
	NVME PCIe Workload Accelerators	
	HP 2.0TB NVMe Mixed Use HH/HL PCIe Workload Accelerator	803204-B21
	HP 1.6TB NVMe Write Intensive HH/HL PCIe Workload Accelerator	803197-B21
	HP 1.6TB NVMe Mixed Use HH/HL PCIe Workload Accelerator	803202-B21
	HP 800GB NVMe Write Intensive HH/HL PCIe Workload Accelerator	803195-B21
	HP 800GB NVMe Mixed Use HH/HL PCIe Workload Accelerator	803200-B21

HP Security	HP 2U Security Bezel Kit	666988-B21
	HP Trusted Platform Module Option	488069-B21

NOTE: The TPM (Trusted Platform Module) is a microcontroller chip that can securely store artifacts used to authenticate the server platform. These artifacts can include passwords, certificates and encryption keys. Windows® BitLocker™ Drive Encryption (BitLocker) is a data protection feature available in Windows Server® 2008. BitLocker leverages the enhanced security capabilities of a Trusted Platform Module (TPM) version 1.2. The TPM works with BitLocker to help protect user data and to ensure that a server running Windows Server 2008 has not been tampered with while the system was offline. For more information about TPM, including a white paper, go to: http://www.hp.com/go/TPM.

NOTE: ProLiant OS pre-installed units will come with the partition required for TPM deployment.

NOTE: The TPM key is unique to every TPM deployed server and must be retained. Misplacing or losing the key could result in data loss.

HP Storage Controllers	**SAS Controllers**	
	HP Flexible Smart Array Controllers	
	HP Smart Array P440ar/2GB FBWC 12Gb 2-ports Int SAS Controller	726736-B21

NOTE: Provides support for up to 8 internal SAS/SATA drives without using a PCIe slot.

NOTE: Includes the HP Smart Storage Battery.

	HP Smart Array P440ar/2GB FBWC 12Gb 2-ports Int FIO SAS Controller	749974-B21

NOTE: Provides support for up to 8 internal SAS/SATA drives without using a PCIe slot.

NOTE: Includes the HP Smart Storage Battery.

NOTE: FIO indicates factory integrated option via CTO.

HP Smart Array Controllers

Additional Options

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

NOTE: Provides support for up to 8 internal SAS/SATA drives without using a PCIe slot.

HP Smart Array P840/4GB FBWC 12Gb 2-ports Int SAS Controller	726897-B21
HP Smart Array P841/4GB FBWC 12Gb 4-ports Ext SAS Controller	726903-B21
HP Smart Array P441/4GB FBWC 12Gb 2-ports Ext SAS Controller	726825-B21
HP Smart Array P440/4GB FBWC 12Gb 1-port Int FIO SAS Controller	761872-B21

NOTE: Provides support for up to 8 internal SAS/SATA drives without using a PCIe slot.

NOTE: Includes the HP Smart Storage Battery.

NOTE: FIO indicates factory integrated option via CTO.

HP Smart Array P840/4GB FBWC 12Gb 2-ports Int FIO SAS Controller	761874-B21

NOTE: Includes the HP Smart Storage Battery.

NOTE: When ordering controllers, please reference the HP Cable Options below for the required cable.

NOTE: FIO indicates factory integrated option via CTO.

HP Smart Host Bus Adapters

HP H241 12Gb 2-ports Ext Smart Host Bus Adapter	726911-B21
HP H240 12Gb 2-ports Int Smart Host Bus Adapter	726907-B21
HP H240ar 12Gb 2-ports Int Smart Host Bus Adapter	726757-B21

NOTE: Provides support for up to 8 internal SAS/SATA drives without using a PCIe slot.

HP H240ar 12Gb 2-ports Int FIO Smart Host Bus Adapter	749976-B21

NOTE: Provides support for up to 8 internal SAS/SATA drives without using a PCIe slot.

NOTE: FIO indicates factory integrated option via CTO.

HP Cable Options

HP DL380 Gen9 12LFF Rear 2SFF or 3LFF P840/440 SAS Cable Kit	783007-B21

NOTE: 12LFF port 3 to 2SFF or 3LFF to P440/840 PCIe.

HP DL380 Gen9 2SFF Front SAS x4 Cable Kit	783008-B21

NOTE: For front mount 2SFF to H240/P440ar, H240 or embedded   B140i SATA.

HP DL380 Gen9 8SFF SAS Cable Kit	783009-B21

NOTE: 8/16/24 SFF to P840/440 bay 3.

HP DL380 Gen9 2SFF x8 Front Cable Kit	785989-B21

NOTE: For front/rear mount 2SFF to P440/840 PCIe).

HP DL380 Gen9 12LFF SAS Cable Kit	785991-B21

NOTE: For 12LFF to P440/840 PCIe cables- ports 1/2/3.

HP DL380 Gen9 8SFF H240 Cable Kit	786092-B21

NOTE: 8/16/24SFF to 240/440ar, H240 PCIe or embedded B140i SATA.

HP DL380 Gen9 12LFF H240 SAS Cable Kit	786215-B21

NOTE: For 12LFF ports 1&2 to H240/P440ar, H240 or embedded B140i SATA.

NOTE: For details on cabling options, additional information available here: Cabling Matrix.

Optional Software

Additional Options

HP Secure Encryption No Media Flexible License per Drive	D8S84A
HP Secure Encryption No Media E-LTU per Drive	D8S85AAE

NOTE: HP Secure Encryption is supported when one of the supported Smart Array Controllers or the supported Smart SAS HBA (configured in a RAID mode) is installed in the server.

HP Secure Encryption licensing is based on the number of physical drives requiring encryption.

NOTE: For more information about HP Secure Encryption, go to http://www.hp.com/go/hpsecureencryption.

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

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

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

Optional Upgrades

HP 96W Smart Storage Battery with 145mm Cable for DL/ML/SL Servers	727258-B21

NOTE: Provides backup power for multiple HP Smart Array controllers or other devices (up to 16).

NOTE: Ships as standard with some HP Flexible Smart Array Controllers.

HP 12Gb SAS Expander Card with Cables for DL380 Gen9	727250-B21

HP 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 HP tape backup products see: http://www.hp.com/storage/SPOCK and http://www.hp.com/go/ebs.

Tape Drives

HP StoreEver LTO-6 Ultrium 6650 SAS External Tape Drive	EH964A
HP StoreEver 1/8 G2 LTO-6 Ultrium 6250 FC Tape Autoloader	C0H19A
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 Tape Drive in 3U Rack-mount	EJ013B
HP StoreEver LTO-5 Ultrium 3280 SAS External Tape Drive	EH900B
HP StoreEver LTO-4 Ultrium 1760 SAS (1) in 1U Rack-mount Kit	EH946C
HP StoreEver LTO-4 Ultrium 1760 SAS External Tape Drive	EH920B
HP StoreEver LTO-3 Ultrium 920 SAS External Tape Drive	EH848B
HP StoreEver 1U SAS Rack-mount Kit	AE459B

HP Tape Storage Systems
HP StoreEver MSL6480

HP StoreEver MSL6480 Scaleable Expansion Module	QU626A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/14604_div/14604_div.html (Worldwide).

HP StoreEver MSL6480 Scalable Base Module	QU625A
HP MSL2024 0-Drive Tape Library	AK379A
HP MSL4048 0-Drive Tape Library	AK381A

QuickSpecs

Additional Options

HP Disk Backup	**HP RDX Removable Disk Backup System**	
	HP RDX1000 USB 3.0 External Disk Backup System	B7B69A
	HP RDX+ 1TB External Backup System	B7B69B
	HP RDX500 USB 3.0 External Disk Backup System	B7B66A
	HP RDX+ 500GB External Backup System	B7B66B
	HP RDX320 USB3.0 External Disk Backup System	B7B63A
	HP RDX 2TB USB3.0 External Disk Backup System	E7X53A
	HP RDX 2TB USB3.0 External Disk Backup System	E7X53B
	HP D3700 Enclosure	QW967A
	HP D3600 Enclosure	QW968A
	HP RDX+ External Docking System	C8S07B

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

HP Storage Options **NOTE:** For the complete listing of Fibre Channel Host Bus Adapters for Windows 2000, Windows Server 2003 and Linux, please see: http://h18006.www1.hp.com/storage/saninfrastructure/hba.html.

Emulex Fibre Channel HBAs		
HP 81E 8Gb 1-port PCIe Fibre Channel Host Bus Adapter		AJ762B
HP 82E 8Gb 2-port PCIe Fibre Channel Host Bus Adapter		AJ763B
HP StoreFabric SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter		C8R38A
HP StoreFabric SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter		C8R39A
QLogic Fibre Channel HBAs		
HP 81Q 8Gb 1-port PCIe Fibre Channel Host Bus Adapter		AK344A
HP 82Q 8Gb 2-port PCIe Fibre Channel Host Bus Adapter		AJ764A
HP StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter		QW971A
HP StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter		QW972A
Converged Network Adapter		
HP StoreFabric CN1100R Dual Port Converged Network Adapter		QW990A
HP StoreFabric CN1200E 10Gb Converged Network Adapter		E7Y06A

HP Disk Storage Systems	**Disk Enclosures**	
	HP D6000 Dual I/O Module Disk Enclosure	QQ695A
	HP D6000 w/35 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 140TB Bundle	E7W30A
	HP D6000 w/70 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 280TB Bundle	E7W31A
	HP D6000 w/35 2TB 6G SAS 7.2K LFF Dual port MDL HDD 70TB Bundle	QQ697A
	HP D6000 w/70 2TB 6G SAS 7.2K LFF Dual port MDL HDD 140TB Bundle	QQ698A
	HP D6000 w/35 3TB 6G SAS 7.2K LFF Dual port MDL HDD 105TB Bundle	QQ699A
	HP D6000 w/70 3TB 6G SAS 7.2K LFF Dual port MDL HDD 210TB Bundle	QQ700A
	HP D2600 w/12 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 48TB Bundle	E7W32A

Additional Options

HP Data Center Racks	**HP 11000 G2 Series Racks**	
	HP 11648 1075mm Pallet Universal Rack	H6J87A
	HP 11648 1075mm Shock Universal Rack	H6J88A
	HP 11642 1075mm Pallet Universal Rack	H6J65A
	HP 11642 1075mm Shock Universal Rack	H6J66A
	HP 11642 1200mm Pallet Universal Rack	H6J67A
	HP 11642 1200mm Shock Universal Rack	H6J68A
	HP 11636 1075mm Pallet Universal Rack	H6J77A
	HP 11636 1075mm Shock Universal Rack	H6J78A
	HP 11622 G2 1075mm Pallet Universal Rack	H6J83A
	HP 11622 G2 1075mm Shock Universal Rack	H6J84A
	HP 11614 1075mm Shock Universal Rack	H6J82A

NOTE: Please see the HP 11000 G2 Series Racks QuickSpecs for information on additional racks options and rack specifications.

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

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

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

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

HP Power Distribution Units (PDUs)	**HP 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
	HP 19.9kVA 480 Volt IEC309 30A 3-Phase Input (30 Outlet) NA Basic PDU	H3X08A
	HP 800VA - 277V Input / 230V Output NA Rack Mount Transformer	H3X09A
	HP 2.8kVA 24A Low Voltage NA/JP Modular Power Distribution Unit	252663-D71

Additional Options

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 HP Basic Power Distribution Units (bPDU), please visit the HP website at http://www.hp.com/go/pdu.

HP 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
HP 16.6kVA 400 Volt IEC309 30A 3-Phase Input (12xC13/12xC19) NA Monitored PDU	D9N62A
HP 17.3kVA 208 Volt IEC309 60A 3-Phase Input (24xC13/3xC19) NA/JP Monitored PDU	D9N54A
HP 17.3kVA 208 Volt IEC309 60A 3-Phase Input (12xC13/12xC19) NA/JP Monitored PDU	D9N59A
HP 17.3kVA 208 Volt IEC309 60A 3-Phase Watertight Input (12xC13/12xC19) NA/JP Monitored PDU	G9Z07A
HP 19.9kVA 480 Volt 3-Phase (30 Outlet) NA Monitored PDU	D9N63A
HP 22kVA 400 Volt IEC309 32A 3-Phase Input (30xC13/3xC19) INTL Monitored PDU	D9N56A
HP 22kVA 400 Volt IEC309 32A 3-Phase Input (12xC13/12xC19) INTL Monitored PDU	D9N60A
HP 22kVA 400 Volt IEC309 32A 3-Phase Watertight Input (12xC13/12xC19) INTL Monitored PDU	G9Z08A
HP Environmental Sensor for Remote Monitored and Managed PDUs	E2D53A

NOTE: Please see the HP Monitored Power Distribution Units QuickSpecs for information on additional options and product specifications.

HP Intelligent Power Distribution Units (iPDU)

Additional Options

HP 4.9kVA 24A Single Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF520A
HP 8.3kVA 40A Single Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF521A
HP 8.6kVA 24A Three Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF522A
HP 17.3kVA 48A Three Phase NA/JP Core Intelligent Modular Power Distribution Unit	AF523A
HP 11.4kVA 16A 415V Three Phase L22-20 NA Core Intelligent Power Distribution Unit	AF900A
HP 17.3kVA 24A 415V Three Phase IEC309 NA Core Intelligent Power Distribution Unit	AF901A
HP 7.3kVA 32A Single Phase INTL Core Intelligent Modular Power Distribution Unit	AF525A
HP 11kVA 16A Three Phase INTL Core Intelligent Modular Power Distribution Unit	AF526A
HP 22kVA 32A Three Phase INTL Core Intelligent Modular Power Distribution Unit	AF527A
HP 17.3kVA 48A 208V Three Phase 12 Outlet Core NA/JP Intelligent Power Distribution Unit	AF535A
HP 17.3kVA 24A 415V Three Phase 12 Outlet Core NA/JP Intelligent Power Distribution Unit	AF537A
HP 22kVA 32A 400V Three Phase 12 Outlet Core INTL Intelligent Power Distribution Unit	AF538A
HP 4.9kVA 24A Single Phase NA/JP Intelligent Modular Power Distribution Kit	AF531A
HP 8.6kVA 24A Three Phase NA/JP Intelligent Modular Power Distribution Kit	AF532A
HP 14.4kVA 40A Three Phase NA/JP Intelligent Modular Power Distribution Unit	AF533A
HP 7.3kVA 32A Single Phase INTL Intelligent Modular Power Distribution Kit	AF534A
HP 5xC13 Intelligent PDU Extension Bar G2 Kit	AF547A
HP 5xC13 Outlets Power and UID LEDs Pair Standard Extension Bar	AF528A

NOTE: Please see the HP Intelligent Power Distribution Units QuickSpecs for information on additional options and product specifications.

HP 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 HP Managed Power Distribution Units QuickSpecs for information on additional options and product specifications.

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

HP Rack Mount Consoles, KVM Switches, and Keyboards	**HP Location Discovery Services**	
	HP 36U Location Discovery Kit	BW945A
	HP 42U Location Discovery Kit	BW946A
	HP 47U Location Discovery Kit	BW947A
	HP DL380 Gen9 Location Discovery Services Ear Kit	768884-B21
	HP Location Discovery Services LCD8500 Kit	TL052A

NOTE: Please see the QuickSpecs for Technical Specifications and additional information:

http://h18000.www1.hp.com/products/quickspecs/14429_div/14429_div.html (Worldwide)

HP Rack Mount Consoles

Additional Options

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
HP TFT7600 G2 KVM Console Rackmount Keyboard UK Monitor	AZ871A
HP TFT7600 G2 KVM Console Rackmount Keyboard DE Monitor	AZ872A
HP TFT7600 G2 KVM Console Rackmount Keyboard FR Monitor	AZ873A
HP TFT7600 G2 KVM Console Rackmount Keyboard IT Monitor	AZ874A
HP TFT7600 G2 KVM Console Rackmount Keyboard ES Monitor	AZ875A
HP TFT7600 G2 KVM Console Rackmount Keyboard DK Monitor	AZ876A
HP TFT7600 G2 KVM Console Rackmount Keyboard NO Monitor	AZ877A
HP TFT7600 G2 KVM Console Rackmount Keyboard SE/FI Monitor	AZ878A
HP TFT7600 G2 KVM Console Rackmount Keyboard CH Monitor	AZ879A
HP TFT7600 G2 KVM Console Rackmount Keyboard PT Monitor	AZ880A
HP TFT7600 G2 KVM Console Rackmount Keyboard BE Monitor	AZ881A
HP TFT7600 G2 KVM Console Rackmount Keyboard JP Monitor	AZ882A
HP TFT7600 G2 KVM Console Rackmount Keyboard RU Monitor	AZ883A
HP KVM Switches	
HP Server Console 0x2x8 Port Analog Switch	AF616A
HP Server Console 0x2x16 Port Analog Switch	AF617A
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 HP KVM Switches web page.

HP 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

Additional Options

HP USB BFR with PVC Free KR Keyboard/Mouse Kit	672097-KD3
HP 1U INT Rackmount Keyboard with USB	AG086A
HP 1U US Rackmount Keyboard with USB	AG072A

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

Rail Kits

NOTE: Gen9 rail kits have changed significantly from prior generation rail kits. Please take a moment to review the installation documentation that comes with the server to help you with the installation of your Gen9 server.

NOTE: Rail kits are optional for DL380 Gen9 and are no longer included standard with the server. Customers have the option to purchase their server without a rail kit.

NOTE: Ball bearing and Easy Install rail kits contain telescoping rails which allow for in-rack serviceability.

NOTE: 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).

Caution: HP 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.

HP 2U Small Form Factor Easy Install Rail Kit	733660-B21

NOTE: Does not include CMA (733664-B21).

HP 2U Large Form Factor Easy Install Rail Kit	733662-B21

NOTE: Does not include CMA (733664-B21).

HP 2U Cable Management Arm for Easy Install Rail Kit	733664-B21
HP 2U Small Form Factor Ball Bearing Rail Kit	720863-B21

NOTE: Does not include CMA (720865-B21).

HP 2U Large Form Factor Ball Bearing Rail Kit	720864-B21

NOTE: Does not include CMA (720865-B21).

HP 2U Cable Management Arm for Ball Bearing Rail Kit	720865-B21
HP Other Options	
HP Rack LED Light Kit	BW939A
HP Kit LCD 1.83m Latch Display Port Cable	G7T29A

HP Uninterruptible Power Systems (UPS)	**HP DirectFlow Three Phase UPS**	
	Power Unit (1U UPS)	
	HP R12000 DirectFlow - 1U Rackmount Uninterruptible Power System	G9Y75A
	HP R12000 DirectFlow - POD 1U Rackmount Uninterruptible Power System	AF478A
	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	

Additional Options

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 HP DirectFlow Three Phase Uninterruptible Power System QuickSpecs for information on additional options and product specifications.

HP Tower UPS

HP T750 G4 UPS Models

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

HP T1000 G4 UPS Models

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

HP T1500 G4 UPS Models

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

HP T750 G2 UPS Models

HP T750 G2 750VA NA Tower Uninterruptible Power System	AF446A
HP T750 G2 750VA INTL Tower Uninterruptible Power System	AF447A
HP T750J JP Uninterruptible Power System	AF456A

HP T1000 G3 UPS Models

HP T1000 G3 1000VA INTL Tower Uninterruptible Power System	AF449A

HP T1500 G3 UPS Models

HP T1500 G3 1400VA NA Tower Uninterruptible Power System	AF450A
HP T1500 G3 1400VA INTL Tower Uninterruptible Power System	AF451A

HP Rack-mountable UPS

HP R/T2200 G4 UPS Models

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

HP 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

HP R/T3000 G2 Uninterruptible Power System (UPS)

HP R/T3000 G2 2U L530 Low Voltage NA/JP Uninterruptible Power System	AF466A
HP R/T3000 G2 2U L620 High Voltage NA/JP Uninterruptible Power System	AF467A
HP R/T3000 G2 2U Detachable Cord High Voltage INTL Uninterruptible Power System	AF468A

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

R1.5kVA G3 Models

HP R1.5kVA G3 1U NA Uninterruptible Power System	AF469A
HP R1.5kVA G3 1U JP/TW Uninterruptible Power System	AF470A
HP R1.5kVA G3 1U INTL Uninterruptible Power System	AF471A

Additional Options

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 HP Line Interactive Single Phase UPS QuickSpecs for information on additional options and product specifications.	
Expansion modules for RP36000/3 UPS	
HP RP12000/3 12000VA Three Phase INTL 6U Rackmount Uninterruptible Power System	AF437A
HP 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 theHP Uninterruptible Power Systems (UPS) web page.	

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

HP Care Pack Services		
	Installation & Start-up Services	
	HP Install ProLiant DL38x(p) Service	U4554E
	HP Startup ProLiant DL38x(p) Service	U4555E
	Proactive Care	
	HP 3 year 24x7 DL380 Gen9 w/IC Proactive Care Service	U5HW1E
	HP 3 year 24x7 with Defective Media Retention DL380 Gen9 w/IC Proactive Care Service	U5HW2E
	HP 3 year 24x7 w/ Comprehensive Defective Material Retention DL380 Gen9 w/IC Proactive Care Service	U5HW3E
	HP 3 year Call to Repair DL380 Gen9 w/IC Proactive Care Service	U5HX0E
	HP 3 year Call to Repair with Defective Media Retention DL380 Gen9 w/IC Proactive Care Service	U5HX1E
	HP 3 year CTR with Comprehensive Defective Material Retention DL380 Gen9 w/IC Proactive Care Service	U5HX2E
	HP 3 year 24x7 DL380 Gen9 Proactive Care Service	U7AE8E
	HP 3 year 24x7 with Defective Media Retention DL380 Gen9 Proactive Care Service	U7AE9E
	HP 3 year 24x7 with Comprehensive Defective Material Retention DL380 Gen9 Proactive Care Service	U7AF0E
	HP 3 year Call to Repair DL380 Gen9 Proactive Care Service	U7AF4E
	HP 3 year Call to Repair with Defective Media Retention DL380 Gen9 Proactive Care Service	U7AF5E
	HP 3 year CTR with Comprehensive Defective Material Retention DL380 Gen9 Proactive Care Service	U7AF6E

Memory

Memory Subsystem Architecture	Each Intel® Xeon® E5-2600v3 family processor socket contains four memory channels per installed processor with three DIMMs per channel for a total of twelve (12) DIMMs or a grand total of twenty-four (24) DIMMs for the server.

Memory Population guidelines

General Memory Population Rules and Guidelines:

Memory

- White DIMM slots denote the first slot of a channel. For 1 DPC (DIMM per channel) populate white slots only.
- A minimum of one DIMM is required per server.
- Install DIMMs only if the corresponding processor is installed.
- If only one processor is installed in a two processor system, only half of the DIMM slots are available.
- To maximize performance, it is recommended to balance the total memory capacity between all installed processors and to load the channels similarly whenever possible.
- When two processors are installed, balance the DIMMs across the two processors.
- Populate DIMMs from heaviest load (quad-rank) to lightest load (single-rank) within a channel. Heaviest load
  (DIMM with most ranks) within a channel goes furthest from the processor.
- Do not mix RDIMMs or LRDIMMs.
- LRDIMMs are supported up to 3 DIMMs per channel.
- DIMMs of different speeds may be mixed in any order; the server will select a common optimal speed.
- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- The maximum memory capacity is a function of the memory type and number of installed processors.
- HP memory from previous generation servers is not compatible with the DL380 Gen9 Server. Certain HP SmartMemory features such as memory authentication and enhanced performance may not be supported.
- To realize the performance memory capabilities listed in this document, HP SmartMemory is required. For additional information, please see the HP SmartMemory QuickSpecs at:
  http://h18000.www1.hp.com/products/quickspecs/14225_div/14225_div.html (Worldwide).
- For memory population rules and additional memory guidelines, please see the DL380 Gen9 user guide at http://www.hp.com/support.
- There are four (4) Memory channels per processor; eight (8) channels per 2 processor server.
- There are three (3) DIMM slots for each memory channel; twenty four (24) total slots for 2 processor server.
- Memory channels1 and 3 consists of the three (3) DIMMs that are furthest from the processor.
- Memory channel 2 and 4 consists of the three (3) DIMMs that are closest to the processor.

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

Memory Bandwidth and Capacity					

[DIMM Type]	Registered DIMMs (RDIMMs)				Load Reduced (LRDIMMs)	
DIMM Rank	Single Rank	Dual Rank			Quad Rank	
DIMM Capacity	4GB	8GB	16GB	32GB	16GB	32GB
DIMM Native Speed (MT/s)	2133					
Voltage	Std Voltage 1.2V					
SLOTS THAT CAN BE POPULATED						
24 slot servers	24				24	
MAXIMUM CAPACITY (GB)						
	96	192	384		384	768
1 DIMM Per Channel	2133					
2 DIMM Per Channel	2133					
3 DIMM Per Channel	1600					

Memory

Memory Speed by Processor Model	Processor Models	Supported Memory Speeds
	E5-2603v3, E5-2609v3,	1600MHz
	E5-2620v3, E5-2623v3, E5-2630v3, E5-2630Lv3, E5-2640v3,	1866MHz
	E5-2637v3, E5-2643v3, E5-2650v3, E5-2650Lv3, E5-2660v3, E5-2667v3, E5-2670v3, E5-2680v3, E5-2683v3, E5-2690v3, E5-2695v3, E5-2697v3, E5-2698v3, E5-2699v3, E5-2687Wv3,	2133MHz

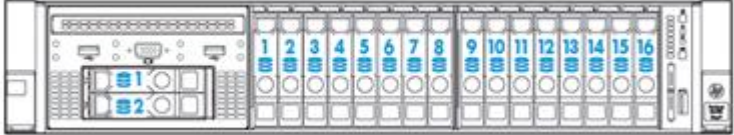| Standard and Maximum Memory Capacity (Pre-configured Models)	Pre-Configured Models	Standard Memory	Maximum Memory Plus Optional Memory	Standard Memory Replaced with Optional Memory
	E5-2609v3,	8GB (1x8GB)	744GB (23x32GB, 1x8GB)	768GB (24x32GB)
	E5-2620v3,	16GB (1x16GB)	752GB (23x32GB, 1x16GB)	768GB (24x32GB)
	E5-2650v3, E5-2690v3,	32GB (2x16GB)	736GB (22x32GB, 2x16GB)	768GB (24x32GB)
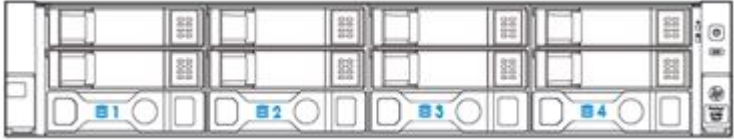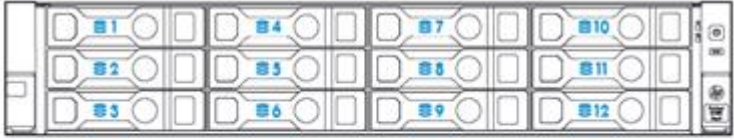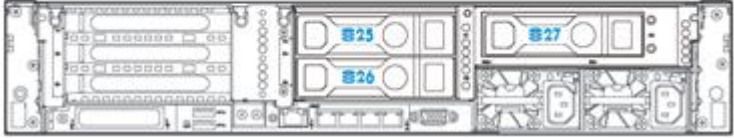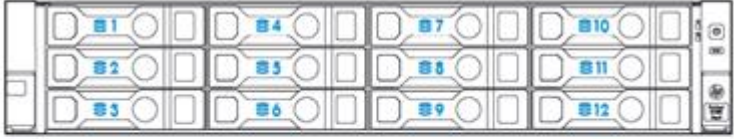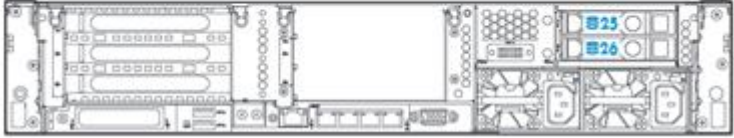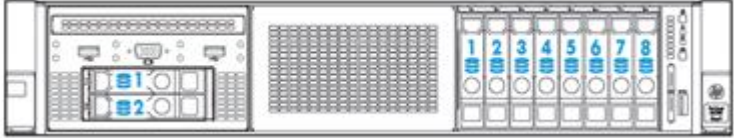
DDR4 memory options part number decoder

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

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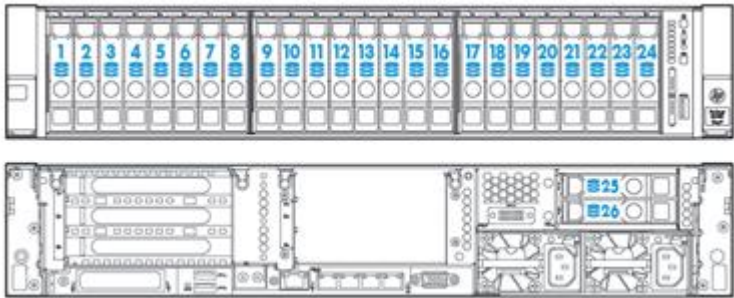- 32GB = 32,768MB
- 64GB = 65,536MB

HP ggggg eRxff DDR4 wwwwm a bb-ccd Kit

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

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

Data Width
- x8 = 8
- x4 = 4

Memory Type

Module Bandwidth
- 17000MT/s (DDR4-2133)

CAS Latency
- P = 15-15-15

DIMM Type
- R = Registered
- L = Load Reduced

Special Descriptor (If Needed)
- HS = Heat spreader
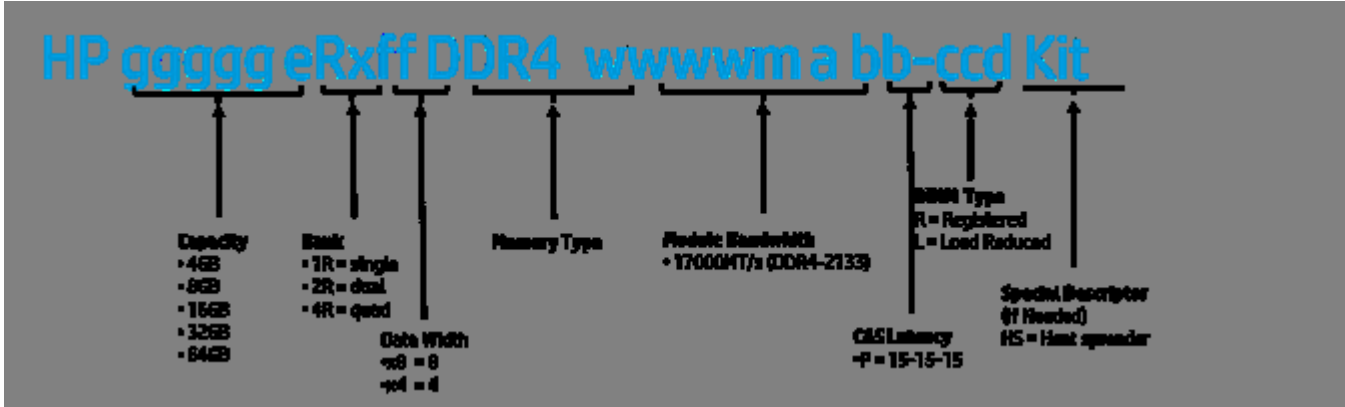
Storage

| 4LFF hot-plug drive model | 1-4 | 4 x LFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays |

| 12 LFF + 3 rear LFF hot-plug drive model | 1-12 | 12 x LFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays |
| | 25-27 | 3 x LFF SATA/SAS/SSD Hot Pluggable Rear Hard Drive Bays |

| 12 LFF + 2 rear SFF hot-plug drive model | 1-12 | 12 x LFF SATA/SAS/SDD Hot Pluggable Hard Drive Bays |
| | 25-26 | 2 x SFF SATA/SAS/SSD Hot Pluggable Rear Hard Drive Bays |

| 8 SFF (+2 SFF) hot-plug drive model with Universal Media Bay | 1-8 | 8 x SFF SATA/SAS/SDD Hot Pluggable Hard drive bays |
| | 1-2 | 2 x SFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays |

| 16 SFF (+2 SFF) hot-plug drive model with Universal Media Bay | 9-24 | 16 x SFF SATA/SAS/SDD Hot Pluggable Hard drive bays |
| | 1-2 | 2 x SFF SATA/SAS/SSD Hot Pluggable Hard Drive Bays |

Storage

24 SFF + rear 2 SFF hot-plug drive model

1-24   24 x SFF SATA/SAS/SDD Hot Pluggable Hard drive bays

25-26   2 x SFF SATA/SAS/SSD Hot Pluggable Rear Hard Drive Bays

QuickSpecs

Technical Specifications

System Unit	**Dimensions**	SFF Drives: 3.44 x 17.54 x 26.75 in (8.73 x 44.55 x 67.94 cm) LFF Drives: 3.44 x 17.54 x 28.75 in (8.73 x 44.55 x 73.02 cm) **NOTE:** Dimensions without Bezel.	
	Weight (approximate)	Minimum: (Minimum - 8SFF chassis with 1xSFF HDD and 7 HDD blanks, 1x processor, 1x power supply (plus blank), 1x Flexible Smart Array, 1x Riser installed)	32.6 lb (14.759 kg)
		Maximum: (Maximum - 12 LFF hard drives (No rear drives), 2x processors, 2x power supplies, 1x Flexible Smart Array, 2x Risers installed)	51.5 lb (23.6 kg)
	Input Requirements (per power supply)	Range Line Voltage	100 to 120 VAC 200 to 240 VAC
	BTU Rating	Maximum	For 800W Power Supply: 3207 BTU/hr (at 100 VAC), 3071 BTU/hr (at 200 VAC), 3112 BTU/hr (at 240 VAC) for China Only For 500W Power Supply: 1979 BTU/hr (at 100 VAC), 1911 BTU/hr (at 200 VAC), 1965 BTU/hr (at 240 VAC) for China Only
	Power Supply Output (per power supply)	Rated Steady-State Power	For 1400W Power Supply: 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 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
	System Inlet Temperature	Standard Operating Support	10° to 35° C (50° to 95° F) at sea level with an altitude derating of 1.0° C per every 305 m (1.8° F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20° C/hr (36° F/hr). The upper limit and rate of change may be limited by the type and number of options installed. System performance during standard operating support may be reduced if operating with a fan fault or above 30° C (86° F).
		Extended 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:

Technical Specifications

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	Operating	Minimum to be the higher (more moisture) of -12° C (10.4° F) dew point or 8% relative humidity. Maximum to be the lower (less moisture) of 24° C (75.2° F) dew point or 90% relative humidity.
(non-condensing)	Non-operating	5 to 95% relative humidity (Rh), 38.7° C (101.7° F) maximum wet bulb temperature, non-condensing.
Altitude	Operating	3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).

Acoustic Noise   Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23° C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).

Idle

L WAd	4.0 B Entry LFF
	4.1 B Entry
	4.2 B Base
	5.7 B Base LFF
	4.3 B Perf
L pAm	23 dBA Entry LFF
	24 dBA Entry
	24 dBA Base
	39 dBA Base LFF
	25 dBA Perf

Operating

L WAd	4.3 B Entry LFF
	4.6 B Entry
	4.8 B Base
	5.9 B Base LFF
	5.6 B Perf
L pAm	25 dBA Entry LFF
	29 dBA Entry
	30 dBA Base
	31 dBA Base LFF
	39 dBA Perf

NOTE: The Listed sound levels apply to standard shipping configurations (Entry LFF, Entry, Base, Base LFF and Performance models)   additional options may result in increased sound levels. The Base LFF model leverages our High Efficiency Fans, other models are shipping with standard fan options.

Emissions	FCC Rating	Class A

Technical Specifications

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

NOTE: Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.
NOTE: The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.

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

HP Ethernet 1Gb 4-port 331i 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	
Data Transfer Method	PCI Express, two lanes (x2)	
Controller	BCM5719	
Network Transfer Rate	10Base-T (Half-Duplex)	10 Mb/s per port, 40 Mb/s combined
	10Base-T (Full-Duplex)	20 Mb/s per port, 80 Mb/s combined
	100Base-TX (Half-Duplex)	100 Mb/s per port, 400 Mb/s combined
	100Base-TX (Full-Duplex)	200 Mb/s per port, 800 Mb/s combined
	1000Base-TX (Half and Full-Duplex)	1000Mb/s per port, 4000 Mb/s combined
	1000Base-TX (Full-Duplex)	2000Mb/s per port, 8000 Mb/s combined
Connector	Four RJ-45	
Cable Support	10 Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)
	10/100/1000 Base-TX	Category 5 or higher UTP; up to 328 ft (100 m)

Technical Specifications

Environment-friendly Products and Approach	**End-of-life Management and Recycling**	Hewlett-Packard offers end-of-life HP 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 HP sales office. Products returned to HP 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 web site at: http://www.hp.com/go/green. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment. |

hp.com/qref/dl380gen9

Summary of Changes

Date	Version History	Action	Description of Change
06/01/2015	From Version 8 to 9	Added	New larger capacity HDDs (up to 8TB LFF), Max capacity 120TB were added. New higher capacity memory (64GB), Max capacity 1.5TB was added. New Networking options were added. Optional Software added to HP Storage Controllers.
		Changed	Updated max HDD and memory capacity due to new options added. HP SmartCache Software, HP Disk Backup System, HP Uninterruptible Power Systems (UPS) were updated.
03/30/2015	From Version 7 to 8	Added	New Hard Drives offering. Optical Software added to HP Storage Controllers. Added new HP Care Pack Services. Added new HP PCIe Workload Accelerator Options.
		Changed	What's New, Standard Features, Unique Options, Power Supplies, HP Storage Controllers, HP Disk Storage Systems, and Technical Specifications were revised.
		Removed	Removed obsolete HP Care Pack Services.
02/17/2015	From Version 6 to 7	Added	Added Smart Buy Models to the NA version only.
02/09/2015	From Version 5 to 6	Added	What's new section was added. Added new HDD offering, new computational Graphics options, and new G4 UPS models.
		Changed	HP Drives, HP Computation and Graphics Accelerators, HP Tape Backup, HP Disk Backup, HP Rack Mount, Consoles, KVM Switches, and Keyboards, and HP Uninterruptible Power Systems (UPS) sections were revised.
12/01/2014	From Version 4 to 5	Changed	Changes made throughout the entire QuickSpecs.
10/13/2014	From Version 3 to 4	Changed	Corrected inconsistencies between Product Bulletin and Concentra versions.
10/13/2014	From Version 2 to 3	Added	6G SATA Enterprise Value G1 Solid State Drives were added to Core Option section. HP PCIe Workload Accelerator Options, HP USB and SD options, and HP Care Pack Services were added to the Additional Options section.
		Changed	Standard Features, Optional Features, Pre-Configured Models, Configuration Information - Factory Integrated Models, Core Options, Additional Options, and Memory sections were revised.

Summary of Changes

9/19/2014	From Version 1 to 2	Changed	Changes made throughout the entire QuickSpecs.