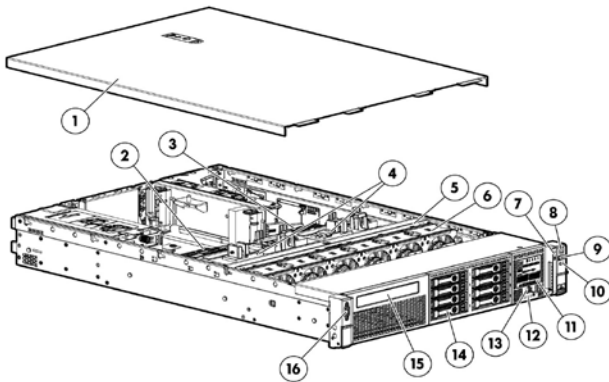


Overview

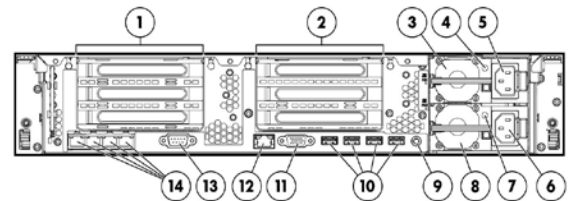
HPE ProLiant DL385p Generation 8 (Gen8)

With enhanced innovations in performance, feature flexibility, and management capabilities, the DL385p Gen8 is the price/performance choice for your virtualization, database, and high performance computing workloads.



Front View:

1. Quick removal access panel
2. Second AMD Processor
3. First AMD Processor
4. (24) DDR3 DIMM slots
5. Air Baffle
6. Hot-plug fans, full N+1 redundancy
7. Health LED
8. Power On/Standby button & system power LED button
9. USB connector
10. UID LED
11. Systems Insight Display
12. Asset Tag
13. USB connector
14. 8 SFF HDD Bays
15. Optional Slim Optical Bay
16. Video connector



Rear View:

1. PCIe Slots (Slots 1-3 top to bottom)
2. PCIe Slots (Slots 4-6 top to bottom)
3. Power supply 1
4. Power supply 1 Power LED
5. Power supply 1 Power connection
6. Power supply 2 Power connection
7. Power supply 2 Power LED
8. Power supply 2
9. UID LED
10. USB connectors (4)
11. Video connector
12. iLO connector
13. Serial connector
14. FlexibleLOM ports (Shown: 4 ports 1Gb each-Port 1-4 starting Right to Left)

What's New

- Support for PCIe Accelerators.
- New HDD offering.

Standard Features

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

Processor

One of the following depending on model

Sixteen-Core Processors

AMD Opteron™ 6386SE (2.8GHz/16-core/16MB/140W TDP) Processor
 AMD Opteron™ 6380 (2.5GHz/16-core/16MB/115W TDP) Processor
 AMD Opteron™ 6378 (2.4GHz/16-core/16MB/115W TDP) Processor
 AMD Opteron™ 6376 (2.3GHz/16-core/16MB/115W TDP) Processor
 AMD Opteron™ 6366HE (1.8GHz/16-core/16MB/85W TDP) Processor

Twelve-Core Processors

AMD Opteron™ 6348 (2.8GHz/12-core/16MB/115W TDP) Processor
 AMD Opteron™ 6344 (2.6GHz/12-core/16MB/115W TDP) Processor

Eight-Core Processors

AMD Opteron™ 6328 (3.2GHz/8-core/16MB/115W TDP) Processor
 AMD Opteron™ 6320 (2.8GHz/8-core/16MB/115W TDP) Processor

Quad-Core Processors

AMD Opteron™ 6308 (3.5GHz/4-core/16MB/115W TDP) Processor

NOTE: Mixing different processor models is not supported.

NOTE: All processors support up to 1600MHz DDR3 memory speeds.

Cache Memory

16MB (2x8MB) Level 3

Chipset

AMD SR5690 Northbridge and SP5100 Southbridge

Upgradeability

Upgradeable to 2 processors
 Up to 24 DIMM slots available for higher memory capacities
 FlexibleLOM connector for 1Gb or 10Gb networking options
 8SFF (plus optional upgrade of 8SFF for up to 16SFF drives-requires second Smart Array) and other Models with 8LFF, 12LFF, or 25SFF hard drive bays
 Optional 3-slot PCIe 2.0 riser (x16, x8, x8)
NOTE: The second processor must be installed to take advantage of the optional 3-slot riser.
 Redundant Power Supply
 Optical Drive (available on 8SFF and 8LFF Models only)

On System Management

HPE iLO (Firmware: HPE iLO 4)

Chipset

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

Memory Protection

Advanced ECC
 Online Spare

Memory

One of the following depending on model

| | |
|-----------------------|---|
| Type | HPE SmartMemory DDR3 Load Reduced (LRDIMM) and Registered (RDIMM) |
| DIMM Slots Available | 24 (12 DIMM slots per processor/4 channels per processor/3 DIMMs per channel) |
| Storage Centric Model | 16GB (2x8GB) PC3-10600R (DDR3-1333) Registered DIMMS |

Standard Features

| | |
|-------------------------------|---|
| Dedicated Workload Model | 32GB (4x8GB) PC3-10600R (DDR3-1333) Registered DIMMS |
| Maximized Consolidation Model | 32GB (4x8GB) PC3-10600R (DDR3-1333) Registered DIMMS |
| Maximum Capacity (LDIMM) | 768GB (24 x 32GB LRDIMM @ 800MHz) |
| Maximum Capacity (RDIMM) | 364GB (24 slots x 16GB RDIMM @1600MHz) NOTE: Requires 2nd processor installed |

NOTE: HPE memory from previous generation servers may not provide the same performance with the HPE ProLiant DL385p Gen8 Servers as HPE SmartMemory will.

NOTE: To realize the performance memory capabilities listed in this document, HPE SmartMemory is required. For additional information, please see the [HPE SmartMemory QuickSpecs](#).

NOTE: If only one processor is installed, only half the DIMM slots are available.

NOTE: Depending on the memory configuration, the memory speed may run at 1600MHz, 1333MHz, 1066MHz or lower. Please see Memory Population Table or the Online Memory Configuration Tool at: <http://www.hp.com/go/ddr3memory-configurator>.

Network Controller

One of the following depending on model

HPE ProLiant Gen8 servers offer a new networking technology - FlexibleLOM. The HPE ProLiant DL385p Gen8 server offers the customer the choice of 1 Gigabit and/or 10 Gigabit networking solutions. For additional details see the Networking Section of this document. Only one FlexibleLOM may fit on a single server - see PCIe solutions for additional networking.

HPE Ethernet 1Gb 4-port 331FLR Adapter

Expansion Slots

PCIe Riser #1

(Standard)

| Expansion Slots # | Technology | Bus Width** | Connector Width | Bus Number* | Form Factor | Notes |
|-------------------|------------|-------------|-----------------|-------------|-------------------------------|-----------------|
| 1 | PCIe 2.0 | X8 | X16 | 5 | Full Length, Full Height Slot | For Processor 1 |
| 2 | PCIe 2.0 | X8 | X8 | 8 | Half Length, Full Height Slot | For Processor 1 |
| 3 | PCIe 2.0 | X4 | X8 | 11 | Half Length, Full Height Slot | For Processor 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: When populating the second optional riser slot, the second processor must be installed.

PCIe Riser #2

(Optional - Requires 2nd Processor)

| Expansion Slots # | Technology | Bus Width** | Connector Width | Bus Number* | Form Factor | Notes |
|-------------------|------------|-------------|-----------------|-------------|-------------------------------|-----------------|
| 4 | PCIe 2.0 | X16 | X16 | 65 | Full length, full height slot | For Processor 2 |
| 5 | PCIe 2.0 | X8 | X16 | 68 | Half length, full height slot | For Processor 2 |

Standard Features

| | | | | | | |
|---|----------|----|----|----|-------------------------------------|--------------------|
| 6 | PCIe 2.0 | X8 | X8 | 71 | Half length, full height slot | For Processor 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.

HPE Server ROM

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

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

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

The HPE ProLiant ROM is used to configure the following:

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

NOTE: For further information, please refer to the HPE RBSU (ROM based setup utility) user guide: <http://www.hp.com/support/rbsu>.

Storage Controller

One of the following depending on model

| | |
|-------------------------------|---|
| Entry Model | HPE Smart Array P420i/ZM (RAID 0/1) |
| Storage Centric Model | HPE Smart Array P420i/512MB FBWC (RAID 0/1/1+0/5/5+0/6/6+0) |
| Dedicated Workload Model | HPE Smart Array P420i/1GB FBWC (RAID 0/1/1+0/5/5+0/6/6+0) |
| Maximized Consolidation Model | HPE Smart Array P420i/2GB FBWC (RAID 0/1/1+0/5/5+0/6/6+0) |

Internal Storage Devices

| | |
|---|---|
| Diskette Drive | None |
| Optical Drive | Optional: DVD-ROM, DVD-RW NOTE: Not Available on 8+8 LFF, 12LFF or 25SFF Models. |
| Hard Drives | None ship standard |
| Drive Bays | Entry Model 8-SFF drive bays (additional 8-SFF option) |
| One of the following depending on model | Storage Centric Model 12-LFF drive bays |
| | Dedicated Workload Model 8-SFF drive bays total with options for DVD OR optional second 8-SFF drive bay set (total of 16SFF drive bays, no DVD) |
| | NOTE: Optional 2nd 8-SFF drive kit requires 2nd Smart Array Controller (PCIe) for support |

Standard Features

recommend HPE Smart Array P420 PCI card).

Maximized Consolidation 25-SFF drive bays total Model

NOTE: For best performance on the 25 Small Form Factor drive cage where less than 25 drives are installed you will need to balance the drives on the backplane's two expanders. Drive bays 1-12 are on routed to expander 1 and drive bays 13-25 are routed to expander number 2. Example: if a customer purchases 16 drives, they should split 8 drives on expander 1 and 8 drives on expander 2 for optimal performance.

NOTE: HPE ProLiant DL385p series servers offer both LFF and SFF versions. The optical drive bay is not available with +8SFF drive bay upgrade, 12-LFF, or 25-SFF drive bay models.

NOTE: 8-LFF, 12-LFF, and 25-SFF versions are not upgradeable options from the standard 8SFF model, or vice versa.

NOTE: All Pre-configured Models come populated with some hard drive blanks installed. Should the customer need additional hard drive blanks, they can order more using either P/N 666987-B21: HPE SFF Gen8 Hard Drive Blank Kit or P/N 666986-B21: HPE LFF Gen8 Hard Drive Blank Kit. These part numbers for single HDD blanks below are also provided should the customer require replacement HDD blanks for their server.

NOTE: All Factory Integrated Models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the server.

| | | | |
|---------------------------------|-----------------------|--------|--|
| Maximum Internal Storage | Hot Plug SFF SAS | 50.0TB | 25 x 2.0TB (on 25 SFF Drive Bay Models) |
| | Hot Plug SFF SATA | 50.0TB | 25 x 2.0TB (on 25 SFF Drive Bay Models) |
| | Hot Plug LFF SAS | 96.0TB | 12 x 8TB (on 12 LFF Drive Bay Models) |
| | Hot Plug LFF SATA | 96.0TB | 12 x 8TB (on 12 LFF Drive Bay Models) |
| | Hot Plug SFF SAS SSD | 48.0TB | 25 x 1.92TB (on 25 SFF Drive Bay Models) |
| | Hot Plug LFF SATA SSD | 19.2TB | 12 x 1.6TB (on 12 LFF Drive Bay Models) |

NOTE: Storage capacities may vary depending on Models/Drive Cages and Hard Drives selected.

| | | |
|-------------------|--|--|
| Interfaces | Serial | 1 (Back) |
| | Video | 2 (1 front, 1 back) not active simultaneously |
| | FlexibleLOM Network Ports | All pre-configured models come standard with 4 x 1GB ports (See HPE Networking section below for more details and options) |
| | HPE iLO Remote Management Network Port | 1 Gb Dedicated |
| | SD Slot | 1 Internal Secure |
| | USB 2.0 Ports | Up to 8 total: up to 2 front, 4 back, 2 internal |

| | |
|-------------------------------------|--------------------------------|
| Industry Standard Compliance | ACPI 2.0b Compliant |
| | PCIe 2.0 Compliant |
| | PXE Support |
| | WOL Support |
| | Microsoft® Logo certifications |
| | USB 2.0 Compliant |

Standard Features

Server Power Cords

All Pre-configured Models servers ship with a high voltage server to PDU power cord.

NOTE: HPE ProLiant DL servers no longer ship standard with a 12-foot NEMA 5-15P to C13 power cord that connects to 110V US wall outlets in a home or office. ProLiant DL servers are primarily connected to power distribution units (PDUs) in data center racks and now ship standard with a PDU 6-foot C-14 to C13 power cord (A0K02A). If a user wishes to power a ProLiant DL server using a 110V receptacle (NEMA-15), the 6-foot NEMA 5-15 to C13 power cord must be ordered separately (AF556A). See Power Cords section for Worldwide Power Cord options.

Power Specifications

To review typical system power ratings use the HPE Power Advisor which is available via the online tool located at URL: <http://www.hp.com/go/proliant-energy-efficient> or <http://www.hp.com/go/hppoweradvisor>.

NOTE: Power Specification and Technical Content for supported power supplies can be found at: <https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111541>

Common Slot Power Supply

NOTE: Mixing of power supplies in the same server is not supported. All power supplies inside a server must be exactly the same model. Mixing Gold, Platinum, and Platinum Plus certified power supplies is not supported.

The HPE Common Slot (CS) power supplies allow for commonality of power supplies across a wide range of ProLiant and Integrity servers, as well as HPE Storage solutions, and are designed to provide the highest power supply efficiency without degrading system performance. HPE CS power supplies are tested by the Electric Power Research Institute (EPRI) and certified through the ECOS 80 Plus power supply program. HPE CS power supply options provide efficiency ratings of up to 94% (80 Plus Platinum) and are available in three power output options - 460W, 750W, and 1200W - allowing the customer to "right-size" a power supply for their specific server configuration. All HPE Common Slot power sources are UL, CE Mark Compliant, hot-plug and support redundant configurations.

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

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

It is highly recommended that you use the HPE Power Advisor in defining the "Right-Size" power supply for your needs. HPE Power Advisor can be accessed at: <http://www.hp.com/go/hppoweradvisor>.

NOTE: The 80 PLUS program is a unique forum that unites electric utilities, the computer industry, and consumers in an effort to bring energy efficient technology solutions to the marketplace. 80 Plus independently tests power supply efficiency and publicly posts the results on <http://www.80plus.org>.

Redundant Power: Optional (1+ 1 or n+n redundant) power supplies can be purchased through power supply option kits (see Power Supplies for part numbers).

NOTE: Power Specification and Technical Content for supported power supplies can be found at:

Standard Features

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111541>

System Fans

One of the following depending on model

2P Models have (6) (N+1 redundancy standard)

1P Models have (4) (N+1 redundancy standard)

Required Cabling

For required cabling information, refer to the Hewlett Packard Enterprise Web site at:

<http://www.hp.com/servers/dl385p-gen8>

Operating Systems and Virtualization Software Support for ProLiant Servers

Microsoft Windows Server

Red Hat Enterprise Linux (RHEL)

SUSE Linux Enterprise Server (SLES)

VMware

Citrix XenServer

NOTE: For more information on the HPE Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server, please visit our Support Matrix at: <http://www.hp.com/go/ossupport> and our driver download page: <http://www.hp.com/support/DL385pGen8>

Graphics

Integrated Matrox G200 video standard

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

HPE iLO 4 On System Management Memory

- 16 MB Flash
- 256 MB DDR 3 with ECC (112 MB after ECC and video)

Form Factor

One of the following depending on model

2U Rack form factor

NOTE: All pre-configured BTO Models ship with Ball-Bearing sliding rails and cable management arm. Any customer configured models through HPE CTO must select the appropriate Rail Kit when configuring.

8 SFF Drive Bay Version:

3.44 (8.74 cm) Height x 17.54" (44.55 cm) Width x 27.5" (69.85 cm) Length

8 LFF Drive Bay Version:

3.44 (8.74 cm) Height x 17.54" (44.55 cm) Width x 29.5" (74.94cm) Length

12 LFF Drive Bay Version:

3.44 (8.74 cm) Height x 17.54" (44.55 cm) Width x 29.5" (74.94cm) Length

25 SFF Drive Bay Version:

3.44 (8.74 cm) Height x 17.54" (44.55 cm) Width x 27.5" (69.85 cm) Length

On System Management

HPE iLO Management Engine

HPE iLO Management Engine is a comprehensive set of embedded management features supporting the complete lifecycle of the server, from initial deployment, through ongoing management, to service alerting and remote support. HPE iLO Management Engine comes standard on all HPE ProLiant Gen8 servers. The HPE iLO Management Engine portfolio includes:

- **HPE iLO:** The HPE iLO (Integrated Lights-Out) management processor is the core foundation for the HPE iLO Management

Standard Features

Engine

- **HPE Agentless Management:** Provides built in server health monitoring and alerting capability without OS agents, that starts working the moment a power cord and an Ethernet cable are connected.
- **HPE Active Health System:** Always on, continuous monitoring for increased stability and shorter downtimes; 100% configuration history; Health and service alerts and easy export and upload to Service and Support.
- **HPE Intelligent Provisioning:** Lets customers provision and configure a single server without any separate media. No more SmartStart CDs or Smart Update Firmware DVD are needed.
 - To start Intelligent Provisioning:
 - Press the F10 key during the ProLiant Gen8 server boot process (also known as power on self-test or POST).
 - Please go to the Intelligent Provisioning website at <http://www.hp.com/go/intelligentprovisioning> for additional information and to view usage videos.
 - Use the Service Pack for ProLiant (SPP) at <http://www.hp.com/go/spp> to get firmware and software updates.
- HPE iLO Mobile App: Enables the ability to access, deploy, and manage your server anytime from anywhere from select smartphones and mobile devices. For additional information please visit: <http://www.hp.com/go/ilo/mobileapp>

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

HPE Insight management

HPE Service Pack for ProLiant

HPE Service Pack for ProLiant (SPP) and HPE Smart Update Manager (HPE SUM) provide a comprehensive approach to firmware and system software maintenance. Together they provide better operating stability and ensure maximum uptime. The SPP will be updated at a predictable cadence, typically coinciding with new Hewlett Packard Enterprise server hardware launches. By enabling firmware to be updated online and integrating firmware and system software updates in one operation, HPE SUM and the SPP offer faster updates of individual servers and dramatically faster updates of entire BladeSystem enclosures. Further improving system uptime and stability is the fact that Hewlett Packard Enterprise provides 12 months of support for each Service Pack for ProLiant release.

The user experience around HPE SUM and the SPP has been improved in several ways, starting with the web download. A single web page provides access to a single download containing both the latest version of HPE SUM and the latest SPP. Optional smaller subsets with only specific types of servers or specific operating systems are offered to save on download time. The HPE SUM application provides a straightforward, intuitive user interface that guides the user through the steps of discovery, analyses and update, providing comprehensive information on available updates, criticality and interdependencies. This information is also available in reports. By providing the option of multiple local or shared repositories which can be easily updated from hpe.com, HPE SUM provides the tools to

Standard Features

optimize stability and consistency throughout the company. While HPE SUM and the SPP recommend the combinations of firmware and system software that Hewlett Packard Enterprise has found to be the best practice, the application gives customers the flexibility to set their own specific baseline.

The Service Pack for ProLiant has been rigorously tested with specific attention for interaction between firmware, drivers and agents. This testing ensures the highest quality as well as providing the input for HPE SUM to deploy updates taking into account all interdependencies, when determining the correct updates and order of update deployment.

NOTE: The Service Pack for ProLiant (which includes HPE SUM) can be downloaded from <http://www.hp.com/go/spp/download>. More information can be found: <http://www.hp.com/go/SmartUpdate>, <http://www.hp.com/go/spp> and <http://www.hp.com/go/hpsum>

Security

Power-on password
Serial interface control
Administrator's password

Warranty

This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of Hewlett Packard Enterprise Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HPE Pointnext operational services or customized service agreements. Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

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

<http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html>

Optional Features

HPE Insight management

HPE Insight Control

HPE Insight Control, a product option, delivers essential infrastructure management that can help save time and money by making it easy to deploy, migrate, monitor, remote control, and optimize your IT infrastructure through a single, simple management console. HPE InsightControl also supports Location and Power Discovery Services to automate many configuration, asset tracking, and power management tasks to speed implementation and prevent downtime. For more information, see <http://www.hp.com/go/insightcontrol>.

HPE Insight Control includes one year of 24 x 7 HPE Software Technical Support and Update Service ensuring rapid access to Hewlett Packard Enterprise support staff and proactive delivery of software updates. For more information about this service, see:

<http://www.hp.com/services/insight>

HPE iLO Advanced

HPE Integrated Lights-Out Advanced License a product option, providing smart remote server management without compromise. iLO Advanced unlocks the full set of remote administration functionality for all HPE ProLiant servers by activating the full Virtual Keyboard Video and Mouse remote console, multi-user collaboration, console record and replay, GUI-based and scripted virtual media and virtual folders, and enhanced security and power management functionality. For more information, see:

<http://www.hp.com/go/iloadvanced>

HPE Matrix Operating Environment

The HPE Matrix Operating Environment (Matrix OE) for ProLiant and Integrity servers is an integrated command center that helps you instantly adjust to dynamic business demands. This advanced infrastructure management software lets you reduce the cost of common data center tasks by up to 40 percent while keeping pace with your changing business.

The HPE Matrix OE includes the automated provisioning, optimization, and recovery management capabilities for HPE CloudSystem Matrix, the ideal platform for private cloud and Infrastructure as a Service (IaaS).

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

High Performance Clusters

HPE Cluster Platforms

HPE Cluster Platforms are specifically engineered, factory-integrated large-scale ProLiant clusters optimized for High Performance Computing, with a choice of servers, networks and software. Operating system options include specially priced offerings for Red Hat Enterprise Linux and SUSE Linux Enterprise Server, as well as Microsoft Windows HPC Server. A Cluster Platform Configurator simplifies ordering. <http://www.hp.com/go/clusters>

HPE HPC Interconnects

High Performance Computing (HPC) interconnect technologies are available for this server as part of the HPE Cluster Platform portfolio. These high-speed InfiniBand and Gigabit interconnects are fully supported by Hewlett Packard Enterprise when integrated within an HPE cluster. Flexible, validated solutions can be defined with the help of configuration tools.

<http://www.hp.com/techservers/clusters/ucp/index.html>

HPE Insight Cluster Management Utility

HPE Insight Cluster Management Utility (CMU) is an HPE-licensed and HPE-supported suite of tools that are used for lifecycle management of hyperscale clusters of Linux ProLiant systems. CMU includes software for the centralized provisioning, management and monitoring of nodes. CMU makes the administration of clusters user friendly, efficient, and effective.

<http://www.hp.com/go/cmu>

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 HPE storage software. Our storage software helps you reduce costs, simplify storage infrastructure, protect vital assets and respond faster to business opportunities.

Storage software that gets the job done:

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

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

HPE Insight Online

HPE Insight Online is a new addition to the HPE Support Center for one stop, secure access to product and HPE support information personalized to your IT environment. Insight Online can automatically display devices remotely monitored by HPE Insight Remote Support. With Insight Online's easy navigation you can efficiently track your IT support contracts and device status from anywhere and at anytime. <http://www.hp.com/go/insightonline>

HPE Proactive Insight experience

Prevent problems with innovative, automated monitoring tools and proactive services. The HPE Proactive Insight experience consist of using Insight Online, Insight Remote Support, and Proactive Care Support Service as one integrated solution. The Proactive Insight experience provides you with expert advice and personalized, cloud-based automated IT support, helping to prevent unplanned down time and solve problems quickly. For more information, visit: <http://www.hp.com/go/proactiveinsightexperience>

Factory Express Portfolio for Servers and Storage

HPE Factory Express offers configuration, customization, integration and deployment services for Hewlett Packard Enterprise servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed.

Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. Hewlett Packard Enterprise products supported through Factory Express include a wide array of servers and storage: HPE Integrity, HPE ProLiant, HPE ProLiant Server

Optional Features

Blades, HPE BladeSystem, HPE 9000 servers as well as the MSAxxxx, EVA7xxx, EVA, XP, rackable tape libraries and configurable network switches.

For more information on Factory Express services for your specific server model please contact your sales representative or go to: <http://www.hp.com/go/factory-express>.

HPE Simple Configurator

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

Service and Support

Service and Support

HPE Technology Services for Industry Standard Servers

HPE Technology Services delivers confidence, reduces risk and helps customers realize agility and stability. Connect to Hewlett Packard Enterprise to help prevent problems and solve issues faster. Our support technology lets you to tap into the knowledge of millions of devices and thousands of experts to stay informed and in control, anywhere, any time.

Protect your business beyond warranty with HPE Pointnext operational services

HPE Pointnext operational services enable you to order the right service level, length of coverage and response time as you purchase your new server, giving you full entitlement for the term you select.

Optimized Care

Optimized Care : Supports maintaining servers at optimum performance availability

HPE Proactive Care with 6 hour call-to-repair commitment, three year Care Pack Service

HPE Proactive Care helps prevent problems and stabilize IT by utilizing secure, real-time, predictive analytics and proactive consultations when your products are connected to Hewlett Packard Enterprise. This Care Pack Service combines three years' proactive reporting and advice with our highest level reactive coverage and enhanced escalation management, the Hewlett Packard Enterprise 24x7, six hour call-to-repair hardware commitment. Hewlett Packard Enterprise is the only leading manufacturer who makes this level of coverage available as a standard service offering for your most valuable servers. Service includes 24x7 collaborative software support for leading industry standard software running on your HPE ProLiant server.

<https://www.hpe.com/h20195/v2/getpdf.aspx/4aa3-8855enw.pdf>

Standard Care

Standard Care : Service recommendation that maintains high level of server availability

HPE Proactive Care with 24x7 coverage, three year Care Pack Service

HPE Proactive Care helps prevent problems and stabilize IT by utilizing secure, real-time, predictive analytics and proactive consultations when your products are connected to Hewlett Packard Enterprise. This Care Pack Service combines three years' proactive reporting and advice with our 24x7 coverage and enhanced escalation management, four hour hardware response time and two hour call back for software questions on leading industry standard software running on your HPE ProLiant server.

<https://www.hpe.com/h20195/v2/getpdf.aspx/4aa3-8855enw.pdf>

Related Services

HPE ProLiant Server Hardware Installation

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

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

Factory Express for Servers and storage

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

<http://www.hp.com/go/factory-express>

Data Privacy Services

Protect your data through better media management. HPE Data privacy services help manage and protect sensitive data to reduce the risk of unauthorized access to private information and help meet compliance requirements. Our retention services allow you to keep drives and other devices upon failure, our removal services provide convenient data sanitization and our recovery services allow you

Service and Support

to safely retire IT assets and capture any remaining value from the hardware.

<http://www.hp.com/services/dataprivacy>

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

Get connected to Hewlett Packard Enterprise to improve your support experience

Connecting products to Hewlett Packard Enterprise will help prevent problems with 24x7 monitoring, prefailure alerts, automatic call logging, and parts dispatch. With Connected products, you can have a dashboard to manage your IT anywhere, anytime, from any device.

HPE Support Center

Personalized online support portal with access to information, tools and experts to support Hewlett Packard Enterprise business products. Submit support cases online, chat with Hewlett Packard Enterprise experts, access support resources or collaborate with peers. Learn more

<http://www.hp.com/go/hpsc>

The HPE Support Center Mobile App* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime. HPE Insight Remote Support and HPE Support Center are available at no additional cost with a Hewlett Packard Enterprise warranty, HPE Care Pack or Hewlett Packard Enterprise contractual support agreement.

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

Warranty / Service Coverage

For ProLiant servers and storage systems, the services cover HPE-branded hardware options qualified for the server, purchased at the same time or afterward, internal to the enclosure, as well as external monitors up to 22"; these items will be covered at the same service level and for the same coverage period as the server unless the maximum supported lifetime and/or the maximum usage limitation has been exceeded. Coverage of the UPS battery is not included; standard warranty terms and conditions apply.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction. It does not apply to any exchange of Disk or SSD/Flash Drives that have not failed. SSD/Flash Drives that are specified by Hewlett Packard Enterprise as consumable parts and/or that have exceeded maximum supported lifetime and/or the maximum usage limit as set forth in the manufacturer's operating manual or the technical data sheet are not eligible for the defective media retention service feature option.

For more information

To learn more on HPE ProLiant servers, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Or visit:

<http://www.hp.com/services/proliant>

Parts and Materials

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

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

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

Pre-configured Models

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

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

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

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

NOTE: All Pre-configured Models come populated with some hard drive blanks installed. Should the customer need additional hard drive blanks, they can order more using either P/N 666987-B21: HPE SFF Gen8 Hard Drive Blank Kit or P/N 666986-B21: HPE LFF Gen8 Hard Drive Blank Kit.

NOTE: Not all models are available in all regions. Check with your local country Hewlett Packard Enterprise offices for availability.

Entry Model

**HP ProLiant DL385p
Gen8 6320 1P 4GB-R
P420i/ZM Hot Plug 8
SFF 460W PS Server**
710723-xx1

| | |
|---------------------------|--|
| Processor(s) | (1) AMD Opteron™ 6320 (2.8GHz/8-core/16MB/115W TDP) Processor |
| Cache Memory | 16MB (2x8MB) Level 3 |
| Memory | 4GB (1x4GB) PC3-10600R (DDR3-1333) Registered DIMMS NOTE: Up to 24 DIMM slots available with 2nd Processor installed (12 DIMM Slots per processor). |
| Network Controller | HPE Ethernet 1Gb 4-port 331FLR Adapter |
| Storage Controller | HPE Smart Array P420i/ZM (RAID 0/1) |
| Hard Drive | None ship standard; includes 6 SFF hard drive blanks, 2 open drive bays for drives(P/N 666987-B21: HPE SFF Gen8 Hard Drive Blank Kit available for additional blanks) |
| Internal Storage | 8SFF SAS/SATA/SSD HDD Bays |
| Optical Drive Bay | Optional Slim Optical Bay (SATA DVD-RW/ROM Optical Drive) |
| PCI-Express Slots | 3 PCIe slots NOTE: 3 additional PCIe slots available with optional PCIe Riser Cage #2-requires second processor. |
| Power Supply | (1) HPE 460W CS Gold Hot Plug Power Supply (92% Efficient) |
| Fans | (4) (N+1 redundancy standard) |
| Management | HPE iLO Management Engine (standard) Optional: HPE iLO Advanced or HPE Insight Control |
| Form Factor | Rack (2U), HPE Friction Rail Kit Standard/ No Cable Management Arm included NOTE: The HPE 1U Gen8 Cable Management Arm is not available when using Friction Rails. 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: Hewlett Packard Enterprise recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation. |
| Warranty | Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support |

Pre-configured Models

with next business day response.

Storage Centric Models

| | | |
|--|--|---|
| <p>HP ProLiant DL385p Gen8 6320 1P 16GB-R P420i/512 Hot Plug 12 LFF 750W PS Server 703930-xx1</p> | <p>Processor(s)</p> <p>Cache Memory</p> <p>Memory</p> <p>Network Controller</p> <p>Storage Controller</p> <p>Hard Drive</p> <p>Internal Storage</p> <p>Optical Drive Bay</p> <p>PCI-Express Slots</p> <p>Power Supply</p> <p>Fans</p> <p>Management</p> <p>Form Factor</p> <p>Warranty</p> | <p>(1) AMD Opteron™ 6320 (2.8GHz/8-core/16MB/115W TDP) Processor</p> <p>16MB (2x8MB) Level 3</p> <p>16GB (2x8GB) PC3-10600R (DDR3-1333) Registered DIMMS</p> <p>NOTE: Up to 24 DIMM slots available with 2nd Processor installed (12 DIMM Slots per processor).</p> <p>HPE Ethernet 1Gb 4-port 331FLR Adapter</p> <p>HPE Smart Array P420i/512MB FBWC (RAID 0/1/1+0/5/5+0/6/6+0)</p> <p>None ship standard; drive cage includes 10 LFF hard drive blanks, 2 open drive bays for drives(P/N 666986-B21: HPE LFF Gen8 Hard Drive Blank Kit available for additional blanks)</p> <p>12 LFF SAS/SATA HDD Bays</p> <p>None available</p> <p>3 PCIe slots</p> <p>NOTE: 3 additional PCIe slots available with optional PCIe Riser Cage #2-requires second processor.</p> <p>(1) HPE 750W CS Platinum Plus Hot Plug Power Supply (94% Efficient)</p> <p>(4) (N+1 redundancy standard)</p> <p>HPE iLO Management Engine (standard) Optional: HPE iLO Advanced or HPE Insight Control</p> <p>Rack (2U), HPE Ball Bearing Rail Kit /Cable Management Arm standard</p> <p>NOTE: The HPE 1U Gen8 Cable Management Arm is not available when using Friction Rails. 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).</p> <p>CAUTION: Hewlett Packard Enterprise recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation.</p> <p>Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.</p> |
|--|--|---|

Dedicated Workload Models

NOTE: This Model is Energy Star Certified.

| | | |
|--|---|--|
| <p>HP ProLiant DL385p Gen8 6344 2P 32GB-R P420i/1GB Hot Plug 8 SFF 2x750W PS Svr 703931-xx1</p> | <p>Processor(s)</p> <p>Cache Memory</p> <p>Memory</p> <p>Network Controller</p> <p>Storage Controller</p> <p>Hard Drive</p> | <p>(2) AMD Opteron™ 6344 (2.6GHz/12-core/16MB/115W TDP) Processors</p> <p>16MB (2x8MB) Level 3</p> <p>32GB (4x8GB) PC3-10600R (DDR3-1333) Registered DIMMS</p> <p>NOTE: Up to 24 DIMM slots available with 2nd Processor installed (12 DIMM Slots per processor).</p> <p>HPE Ethernet 1Gb 4-port 331FLR Adapter</p> <p>HPE Smart Array P420i/1GB FBWC (RAID 0/1/1+0/5/5+0/6/6+0)</p> <p>None ship standard; includes 6 SFF hard drive blanks, 2 open drive bays for drives(P/N 666987-B21: HPE SFF Gen8 Hard Drive Blank Kit available for additional blanks)</p> |
|--|---|--|

Pre-configured Models

| | |
|--------------------------|--|
| Internal Storage | 8 SFF SAS/SATA HDD Bays Optional: +8 SFF (total of 16) SFF SAS/SATA HDD Bays (requires additional PCI controller) |
| Optical Drive Bay | Optional Slim Optical Bay (SATA DVD-RW /ROM Optical Drive) |
| PCI-Express Slots | 6 PCIe slots NOTE: Includes PCIe Riser Cage #2. |
| Power Supply | (2) HPE 750W CS Platinum Plus Hot Plug Power Supplies (94% Efficient) |
| Fans | (6) (N+1 redundancy standard) |
| Management | HPE iLO Management Engine (standard) Optional: HPE iLO Advanced or HPE Insight Control |
| Form Factor | Rack (2U), HPE Ball Bearing Rail Kit /Cable Management Arm standard NOTE: The HPE 1U Gen8 Cable Management Arm is not available when using Friction Rails. 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: Hewlett Packard Enterprise recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation. |
| Warranty | Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. |

Maximized Consolidation Models

NOTE: These Models are Energy Star Certified.

| | | |
|--|---------------------------|--|
| HP ProLiant DL385p Gen8 6376 2P 32GB-R P420i/2GB Hot Plug 25 SFF 2x750W PS Svr 703932-xx1 | Processor(s) | (2) AMD Opteron™ 6376 (2.3GHz/16-core/16MB/115W TDP) Processors |
| | Cache Memory | 16MB (2x8MB) Level 3 |
| | Memory | 32GB (4x8GB) PC3-10600R (DDR3-1333) Registered DIMMS NOTE: Up to 24 DIMM slots available with 2nd Processor installed (12 DIMM Slots per processor). |
| | Network Controller | HPE Ethernet 1Gb 4-port 331FLR Adapter |
| | Storage Controller | HPE Smart Array P420i/2GB FBWC (RAID 0/1/1+0/5/5+0/6/6+0) |
| | Hard Drive | None ship standard; includes 23 SFF hard drive blanks, 2 open drive bays for drives (P/N 666987-B21: HPE SFF Gen8 Hard Drive Blank Kit available for additional blanks) |
| | Internal Storage | 25 SFF SAS/SATA HDD Bays |
| | Optical Drive Bay | None Available |
| | PCI-Express Slots | 6 PCIe slots NOTE: Includes PCIe Riser Cage #2. |
| | Power Supply | (2) HPE 750W CS Platinum Plus Hot Plug Power Supplies (94% Efficient) |
| | Fans | (6) (N+1 redundancy standard) |
| | Management | HPE iLO Management Engine (standard) Optional: HPE iLO Advanced or HPE Insight Control |
| | Form Factor | Rack (2U), HPE Ball Bearing Rail Kit /Cable Management Arm standard NOTE: The HPE 1U Gen8 Cable Management Arm is not available when using Friction Rails. To assist in the installation of the server into the rack an optional installation tool is available by contacting your local |

Pre-configured Models

services representative (p/n 695539-001).

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

Warranty

Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.

Country Code Key

| | |
|---------|--------|
| xx = 00 | U.S. |
| xx = 29 | Japan |
| xx = 37 | APD |
| xx = 42 | Europe |
| xx = AA | PRC |

Configuration Information - Factory Integrated Models

NOTE: This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of an Hewlett Packard Enterprise approved configurator. Contact your local sales representative for information on configurable product offerings and requirements.

NOTE: Factory Integrated Models must start with a CTO Server.

NOTE: FIO indicates that this option is only available as a factory installable option.

NOTE: All Factory Integrated Models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the server.

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

HPE Models

HP ProLiant DL385 Gen8 8 SFF Configure-to-order Server

653203-B21

Factory Integrated Model ships with:

Drive Cage - 8-SFF Drive Bays available (See hard drives in Section 4 for options)

SID-Systems Insight Display Included

24 DIMM slots for RDIMM or LRDIMM memory installation

Smart Array P420i Controller w/ Zero Memory (ZM)

I/O slots - 3 Slots come standard:

- Slot 1 - FL/FH x8 PCIe 2.0 (x16 connector)
- Slot 2 - HL/FH x8 PCIe 2.0 (x8 connector)
- Slot 3 - HL/FH x4 PCIe 2.0 (x8 connector)
- Additional PCIe Slots may be added with the 2nd Riser Cage option.

System Fans - 4 standard (2 additional fans included with second processor)

Drive Cage - 8SFF (drive blanks installed dependent on number of drives ordered)

USB - 4 Rear, 2 Front, 2 Internal, 1 SD slot

HPE iLO Management Engine (iLO4)

NOTE: Smart Array Cache options, Hard drives, Optical drives, Flexible NICs*, Power Supply* and Rail/CMA Kits not included in the base configuration - choose these from Steps 2 or 4 below in Options section. Additional 8-SFF Drive option requires additional HPE Smart Array Controller.

*** This is a required selection.**

HP ProLiant DL385p Gen8 8 LFF Configure-to-order Server

669804-B21

Factory Integrated Model ships with:

Drive Cage - 8-LFF Drive Bays available (See hard drives in Section 4 for options)

Pop Out SID-Systems Insight Display Included

24 DIMM slots for RDIMM or LRDIMM memory installation

Smart Array P420i Controller w/ Zero Memory (ZM)

I/O slots - 3 Slots come standard:

- Slot 1 - FL/FH x8 PCIe 2.0 (x16 connector)
- Slot 2 - HL/FH x8 PCIe 2.0 (x8 connector)
- Slot 3 - HL/FH x4 PCIe 2.0 (x8 connector)
- Additional PCIe Slots may be added with the 2nd Riser Cage option.

System Fans - 4 standard (2 additional fans included with second processor)

Drive Cage - 8LFF (drive blanks installed dependent on number of drives ordered)

USB - 4 Rear, 2 Front, 2 Internal, 1 SD slot

HPE iLO Management Engine (iLO4)

NOTE: Smart Array Cache options, Hard drives, Optical drives, Flexible NICs*,

Configuration Information - Factory Integrated Models

Power Supply* and Rail/CMA Kits not included in the base configuration - choose these from Steps 2 or 4 below in Options section.

*** Required selection.**

HP ProLiant DL385p Gen8 12 LFF Configure-to-order Server

669805-B21

Factory Integrated Model ships with:

Drive Cage - 12-LFF Drive Bays available (See hard drives in Section 4 for options)
 NO SID-Systems Insight Display Included
 24 DIMM slots for RDIMM and LRDIMM memory installation
 Smart Array P420i Controller w/ Zero Memory (ZM)
 I/O slots - 3 Slots come standard:

- Slot 1 - FL/FH x8 PCIe 2.0 (x16 connector)
- Slot 2 - HL/FH x8 PCIe 2.0 (x8 connector)
- Slot 3 - HL/FH x4 PCIe 2.0 (x8 connector)
- Additional PCIe Slots may be added with the 2nd Riser Cage option.

System Fans - 4 standard (2 additional fans included with second processor)
 USB - 4 Rear, 2 Front, 2 Internal, 1 SD slot
 HPE iLO Management Engine (iLO4)

NOTE: Customers can only choose from 135W processors or lower in this configure-to-order model.

NOTE: Smart Array Cache options, Hard drives, Flexible NICs*, Power Supply* and Rail/CMA Kits not included in the base configuration - choose these from Steps 2 or 4 below in Options section.

*** Required selection.**

HP ProLiant DL385p Gen8 25 SFF Configure-to-order Server

669803-B21

Factory Integrated Model ships with:

Drive Cage - 25-SFF Drive Bays available (See hard drives in Section 4 for options)
 NO SID-Systems Insight Display Included
 24 DIMM slots for RDIMM, LRDIMM, and UDIMM memory installation
 1 FlexibleLOM connector (see Step2: HPE Flexible NIC section below for NIC choices to populate the embedded connector)
 Smart Array P420i Controller w/ Zero Memory (ZM)
 I/O slots - 3 Slots come standard:

- Slot 1 - FL/FH x8 PCIe 2.0 (x16 connector)
- Slot 2 - HL/FH x8 PCIe 2.0 (x8 connector)
- Slot 3 - HL/FH x4 PCIe 2.0 (x8 connector)
- Additional Slots may be added via selection from the "PCI Information and Options" subsection

System Fans - 4 standard (2 additional fans included with second processor)
 Drive Cage - 12LFF (drive blanks installed dependent on number of drives ordered)
 USB - 4 Rear, 2 Front, 2 Internal, 1 SD slot
 HPE iLO Management Engine (iLO4)

NOTE: Customers can only choose from 135W processors or lower in this configure-to-order model.

NOTE: Smart Array Cache options, Hard drives, Flexible NICs*, Power Supply* and Rail/CMA Kits not included in the base configuration - choose these from Steps 2 or 4 below in Options section.

*** Required selection.**

Configuration Information - Factory Integrated Models

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

HPE Processors

NOTE: All processors support up to 1600MHz DDR3 memory speeds.

NOTE: The 12LFF and 25SFF CTO chassis do not support processor greater than 135W

Sixteen-Core Processors

HP DL385p Gen8 AMD Opteron 6386SE (2.8GHz/16-core/16MB/140W) FIO Processor Kit 703939-L21

HP DL385p Gen8 AMD Opteron 6380 (2.5GHz/16-core/16MB/115W) FIO Processor Kit 703941-L21

HP DL385p Gen8 AMD Opteron 6378 (2.4GHz/16-core/16MB/115W) FIO Processor Kit 703943-L21

HP DL385p Gen8 AMD Opteron 6376 (2.3GHz/16-core/16MB/115W) FIO Processor Kit 703946-L21

HP DL385p Gen8 AMD Opteron 6366HE (1.8GHz/16-core/16MB/85W) FIO Processor Kit 703950-L21

Twelve-Core Processors

HP DL385p Gen8 AMD Opteron 6348 (2.8GHz/12-core/16MB/115W) FIO Processor Kit 703952-L21

HP DL385p Gen8 AMD Opteron 6344 (2.6GHz/12-core/16MB/115W) FIO Processor Kit 703954-L21

Eight-Core Processors

HP DL385p Gen8 AMD Opteron 6328 (3.2GHz/8-core/16MB/115W) FIO Processor Kit 703958-L21

HP DL385p Gen8 AMD Opteron 6320 (2.8GHz/8-core/16MB/115W) FIO Processor Kit 703960-L21

Quad-Core Processors

HP DL385p Gen8 AMD Opteron 6308 (3.5GHz/4-core/16MB/115W) FIO Processor Kit 703962-L21

HPE Memory

NOTE: To realize the performance memory capabilities listed in this document, HPE SmartMemory is recommended. For additional information, please see the [HPE SmartMemory QuickSpecs](#).

Registered DIMMs (RDIMMs)

HPE 8GB (1x8GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit 647879-B21

HPE 16GB (1x16GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 LV Memory Kit 647883-B21

HPE 16GB (1x16GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory 672633-B21

Configuration Information - Factory Integrated Models

Load Reduced DIMMs(LRDIMMs)

HP 32GB (1x32GB) Quad Rank x4 PC3L-10600L (DDR3-1333) LR CAS-9 LV Memory Kit 647885-B21

NOTE: HPE memory from previous generation servers may not provide the same performance with the HPE ProLiant DL385p Gen8 Servers as HPE SmartMemory will.

NOTE: If only one processor is installed, only half the DIMM slots are available.

NOTE: Depending on the memory configuration, the memory speed may run at 1600MHz, 1333MHz, 1066MHz or lower. Please see Memory Population Table or the Online Memory Configuration Tool at: <http://www.hp.com/go/ddr3memory-configurator>.

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

HPE Networking

FlexibleLOM Adapters

NOTE: The HPE ProLiant DL385p Gen8 server requires one FlexibleLOM to be installed in the FlexibleLOM slot.

HPE Ethernet 1Gb 4-port 331FLR FIO Adapter 684208-B21

HP Ethernet 10Gb 2-port 530FLR-SFP+ FIO Adapter 684210-B21

HP FlexFabric 10Gb 2-port 554FLR-SFP+ FIO Adapter 684213-B21

HPE Ethernet 1Gb 4-port 366FLR FIO Adapter 684217-B21

HPE Ethernet 10Gb 2-port 560FLR-SFP+ FIO Adapter 684218-B21

HP FlexFabric 10Gb 2-port 526FLR-SFP+ FIO Adapter 684219-B21

HP Ethernet 10Gb 2-port 561FLR-T FIO Adapter 700700-B21

HPE FlexFabric 10Gb 2-port 534FLR-SFP+ FIO Adapter 700752-B21

HP FlexFabric 10Gb 2-port 533FLR-T FIO Adapter 700760-B21

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

HPE Power Supplies

NOTE: Mixing of power supplies in the same server is not supported. All power supplies inside a server must be exactly the same model. Mixing Gold, Platinum, and Platinum Plus certified power supplies is not supported.

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

HPE Common Slot Platinum Plus Power Supply Kits

NOTE: The following Power Supplies offer 94% Efficiency with support for Intelligent Power Discovery.

HPE 460W Common Slot Platinum Plus Hot Plug Power Supply Kit 656362-B21

HPE 750W Common Slot Platinum Plus Hot Plug Power Supply Kit 656363-B21

Configuration Information - Factory Integrated Models

HPE 1200W Common Slot Platinum Plus Hot Plug Power Supply Kit 656364-B21

HPE Common Slot Gold Power Supplies

NOTE: The following Power Supplies offer 92% efficiency.

HPE 460W Common Slot Gold Hot Plug Power Supply Kit 503296-B21

HPE 750W Common Slot Gold Hot Plug Power Supply Kit 512327-B21

HPE Common Slot -48VDC Power Supplies

HPE 750W Common Slot -48VDC Hot Plug Power Supply Kit 636673-B21

NOTE: The HPE 750W Common Slot -48VDC power supply does not ship with a power cable. It has been designed with a terminal block connection allowing for custom design of power cords by the user.

NOTE: Option Kits for AC power supplies include the power supply and one PDU IEC cable.

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

NOTE: Power Specification and Technical Content for supported power supplies can be found at:

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111541>

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

HPE Rack Kits

NOTE: Rail kits are optional for Gen8 and are no longer included standard with the server (except pre-configured/BTO Models). The customer has the choice to not include rail kits with their server purchase, but it is recommended.

NOTE: HPE 2U Ball Bearing Rail Kits and Easy Install Rail Kits provide full serviceability of the server while in the Rack and have the option to include a CMA. HPE 2U Friction Rail Kits ARE NOT serviceable in the Rack and must be removed from the rack and do not include CMA.

NOTE: Additional HPE Rack Kit options can be found in "Step 4: Additional Options, HPE Rack Options - Rail Kits" section of this QuickSpecs. Only FIO options are listed here.

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

HP 2U FIO Friction Rail Kit 663476-B21

NOTE: No in-rack serviceability.

HPE 2U Small Form Factor Ball Bearing Gen8 Rail Kit with CMA 663478-B21

HPE 2U Large Form Factor Ball Bearing Gen8 Rail Kit with CMA 663480-B21

Configuration Information - Factory Integrated Models

NOTE: In custom configurations - No Rails can be selected

| | | |
|---|--|----------|
| HPE Insight Software | HPE Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle Single Server FIO LTU | C6N36A |
| | HPE Insight Control including 1yr 24x7 Support ProLiant ML/DL/BL-bundle FIO E-LTU NOTE:NOTE: The Electronic software license is available in EMEA only. | C6N36ABE |
| Converged Infrastructure Management Software | HPE OneView with iLO Advanced - Server hardware required on same purchase order | |
| | HPE OneView w/o iLO including 3yr 24x7 Support 1-server LTU | P8B24A |
| | HPE OneView w/o iLO including 3yr 24x7 Support Track 1-server LTU | P8B25A |
| | HPE OneView w/o iLO including 3yr 24x7 Support Flexible Quantity E-LTU | P8B26AAE |
| | HPE OneView w/o iLO including 3yr 24x7 Support 1-server FIO LTU | P8B31A |

Step 4: Choose Additional Options for Factory Integration

NOTE: For additional options, please refer to the "Core Options and Additional Options" section below.

Core Options

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

| | | |
|---------------------------|--|------------|
| HPE Unique Options | HPE DL380/DL385 Gen8 8 Small Form Factor Hard Drive Backplane Cage Kit NOTE:NOTE: With upgrade of 8SFF Cage/Bkpln, there is no Optical Drive support. NOTE:NOTE: All cables necessary for proper installation of the 8SFF Cage are included with this Kit. NOTE:NOTE: With upgrade of 8SFF Cage/Bkpln, an additional storage controller is required. Please go to the Storage Controller section for options available. | 662883-B21 |
| | HPE DL385p Gen8 x16 2x8 PCI-E Riser Kit NOTE:NOTE: 2nd Riser Cage requires 2nd Processor. | 653214-B21 |

HPE Processors

Sixteen-Core Processors

NOTE: All support up to 1600MHz DDR3 memory speeds.

| | |
|---|------------|
| HPE DL385p Gen8 AMD Opteron 6386SE (2.8GHz/16-core/16MB/140W) Processor Kit | 703939-B21 |
| HPE DL385p Gen8 AMD Opteron 6380 (2.5GHz/16-core/16MB/115W) Processor Kit | 703941-B21 |
| HPE DL385p Gen8 AMD Opteron 6378 (2.4GHz/16-core/16MB/115W) Processor Kit | 703943-B21 |
| HPE DL385p Gen8 AMD Opteron 6376 (2.3GHz/16-core/16MB/115W) Processor Kit | 703946-B21 |
| HPE DL385p Gen8 AMD Opteron 6366HE (1.8GHz/16-core/16MB/85W) Processor Kit | 703950-B21 |

Twelve-Core Processors

| | |
|---|------------|
| HPE DL385p Gen8 AMD Opteron 6348 (2.8GHz/12-core/16MB/115W) Processor Kit | 703952-B21 |
| HPE DL385p Gen8 AMD Opteron 6344 (2.6GHz/12-core/16MB/115W) Processor Kit | 703954-B21 |

Eight-Core Processors

| | |
|--|------------|
| HPE DL385p Gen8 AMD Opteron 6328 (3.2GHz/8-core/16MB/115W) Processor Kit | 703958-B21 |
| HPE DL385p Gen8 AMD Opteron 6320 (2.8GHz/8-core/16MB/115W) Processor Kit | 703960-B21 |

Quad-Core Processors

| | |
|--|------------|
| HPE DL385p Gen8 AMD Opteron 6308 (3.5GHz/4-core/16MB/115W) Processor Kit | 703962-B21 |
|--|------------|

NOTE: Up to 2 processors supported in all models.

NOTE: DDR3 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.

HPE Memory

NOTE: To realize the performance memory capabilities listed in this document, HPE SmartMemory is recommended. For additional information, please see the [HPE SmartMemory QuickSpecs](#).

Core Options

Registered DIMMs (RDIMMs)

HPE 8GB (1x8GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit 647879-B21

HPE 16GB (1x16GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 LV Memory Kit 647883-B21

HPE 16GB (1x16GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory 672633-B21

Load Reduced DIMMs (LRDIMMs)

HP 32GB (1x32GB) Quad Rank x4 PC3L-10600L (DDR3-1333) LR CAS-9 LV Memory Kit 647885-B21

NOTE: HPE memory from previous generation servers may not provide the same performance with the HPE ProLiant DL385p Gen8 Servers as HPE SmartMemory will.

NOTE: If only one processor is installed, only half the DIMM slots are available.

NOTE: Depending on the memory configuration, the memory speed may run at 1600MHz, 1333MHz, 1066MHz or lower. Please see Memory Population Table or the Online Memory Configuration Tool at: <http://www.hp.com/go/ddr3memory-configurator>.

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

HPE Optical Drives

HPE 12.7mm Slim SATA DVD-ROM JackBlack Optical Drive 652232-B21

HPE 12.7mm Slim SATA DVD-RW JackBlack Optical Drive 652235-B21
NOTE:NOTE: Not Available on 8+8 LFF, 12LFF or 25SFF Models.

HPE Hard Drives

NOTE: The HPE ProLiant DL385p Gen8 Smart Storage solutions are equipped with entirely re-designed Small Form Factor (SFF 2.5 in) and Large Form Factor (LFF 3.5 in) hot plug carriers for HPE Qualified Hard Drives and Solid State Drives. These new carriers provide status, location and activity indicators as well as caution indicators for "Do Not Remove".

NOTE: The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.

NOTE: Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

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

HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty HDD 759212-B21

HPE 450GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty HDD 759210-B21

HPE 300GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty HDD 759208-B21

Core Options

| | |
|--|------------|
| HPE 1.2TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty HDD | 781518-B21 |
| HPE 900GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty HDD | 785069-B21 |
| HPE 600GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty HDD | 781516-B21 |
| HPE 300GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty HDD | 785067-B21 |
| 12G SAS Hot Plug SmartDrive LFF (3.5-inch) Converter Enterprise Drives | |
| HPE 600GB SAS 12G Enterprise 15K LFF (3.5in) SC 3yr Wty HDD | 765424-B21 |
| HPE 450GB SAS 12G Enterprise 15K LFF (3.5in) SCC 3yr Wty HDD | 737394-B21 |
| HPE 300GB SAS 12G Enterprise 15K LFF (3.5in) SCC 3yr Wty HDD | 737261-B21 |
| 12G SAS Hot Plug LFF (3.5in) 7.2K MDLSC HDD | |
| HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD | 818367-B21 |
| HPE 2TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD | 818365-B21 |
| 12G SAS Hot Plug SFF (2.5-inch) SC 512e Drives | |
| HPE 2TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e HDD | 765466-B21 |
| HPE 1TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD | 765464-B21 |
| HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty 512e HDD | 748387-B21 |
| 12G SAS Hot Plug SFF (2.5-inch) Midline (MDL) Drives | |
| HPE 1TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty Digitally Signed Firmware HDD | 832514-B21 |
| 12G SAS Hot Plug LFF (3.5-inch) Midline (MDL) 512e Drives | |
| HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD | 765259-B21 |
| HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD | 765257-B21 |
| 12G SAS Hot Plug LFF (3.5-inch) SC 512e Performance Drives | |
| HPE 8TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e HDD | 793703-B21 |
| HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e HDD | 793699-B21 |
| HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD | 793671-B21 |
| HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive | 793669-B21 |
| 6G SAS Hot Plug with SmartDrive SFF (2.5-inch) Enterprise Drives | |

Core Options

| | |
|--|------------|
| HPE 1.8TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e HDD | 791034-B21 |
| HP 1.2TB 6G SAS 10K rpm SFF (2.5-inch) SC Dual Port Enterprise 3yr Warranty Hard Drive | 718162-B21 |
| HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652589-B21 |
| HP 600GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652583-B21 |
| HP 450GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652572-B21 |
| HP 300GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652564-B21 |
| HP 300GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652611-B21 |
| HP 146GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive | 652605-B21 |
| 6G SAS Hot Plug SmartDrive SFF (2.5-inch) Midline Drives | |
| HPE 1TB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive | 652749-B21 |
| HPE 500GB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive | 652745-B21 |
| 12G SAS SFF (2.5in) RI-3 SC Solid State Drives | |
| HPE 3.84TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty SSD | 816576-B21 |
| HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty SSD | 816572-B21 |
| HPE 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty SSD | 816568-B21 |
| HPE 480GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty SSD | 816562-B21 |
| 12G SAS SFF (2.5in) MU-3 SC Solid State Drives | |
| HPE 3.2TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty SSD | 822567-B21 |
| HPE 1.6TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty SSD | 822563-B21 |
| HPE 800GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty SSD | 822559-B21 |
| HPE 400GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty SSD | 822555-B21 |
| 6G SAS Hot Plug SmartDrive LFF (3.5-inch) Midline Drives | |
| HP 6TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 761477-B21 |
| HP 4TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 695510-B21 |
| HP 3TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 652766-B21 |
| HP 2TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 652757-B21 |
| HP 1TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 652753-B21 |
| 6G SATA 2.5in WI-PLP SCC Solid State Drives | |
| HPE 1.2TB SATA 6G Write Intensive LFF (3.5in) SCC 3yr Wty SSD | 804680-B21 |
| HPE 800GB SATA 6G Write Intensive LFF (3.5in) SCC 3yr Wty SSD | 804674-B21 |
| HPE 400GB SATA 6G Write Intensive LFF (3.5in) SCC 3yr Wty SSD | 804668-B21 |
| HPE 200GB SATA 6G Write Intensive LFF (3.5in) SCC 3yr Wty SSD | 804642-B21 |

Core Options

HPE 800GB SATA 6G Write Intensive LFF (3.5in) SCC 3yr Wty SSD 831725-B21

6G SATA 2.5in MU-PLP SCC Solid State Drives

HPE 1.6TB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty SSD 804634-B21

HPE 800GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty SSD 804628-B21

HPE 480GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty SSD 832417-B21

HPE 200GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty SSD 804616-B21

6G SATA 2.5in RI-PLP SCC Solid State Drives

HPE 1.6TB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty SSD 804608-B21

HPE 800GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty SSD 804602-B21

HPE 480GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty SSD 804596-B21

HPE 240GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty SSD 804590-B21

HPE 120GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty SSD 804584-B21

HPE 80GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty SSD 804578-B21

6G SATA 2.5in WI-PLP SC Solid State Drives

HPE 1.2TB SATA 6G Write Intensive SFF (2.5in) SC 3yr Wty SSD 804677-B21

HPE 800GB SATA 6G Write Intensive SFF (2.5in) SC 3yr Wty SSD 804671-B21

HPE 400GB SATA 6G Write Intensive SFF (2.5in) SC 3yr Wty SSD 804665-B21

HPE 200GB SATA 6G Write Intensive SFF (2.5in) SC 3yr Wty SSD 804639-B21

6G SATA 2.5in MU-PLP SC Solid State Drives

HPE 1.6TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty SSD 804631-B21

HPE 800GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty SSD 804625-B21

HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty SSD 832414-B21

HPE 200GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty SSD 804613-B21

6G SATA 2.5in RI-PLP SC Solid State Drives

HPE 1.6TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty SSD 804605-B21

HPE 800GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty SSD 804599-B21

HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty SSD 804593-B21

Core Options

HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty SSD 804587-B21

HPE 120GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty SSD 804581-B21

HPE 80GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty SSD 804575-B21

6G SATA Hot Plug SFF (2.5-inch) SC 512e Drives

HPE 2TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD 765455-B21

HPE 1TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD 765453-B21

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

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111744>

6G SATA Hot Plug with SmartDrive SFF (2.5-inch) Midline (MDL) Drives

HPE 1TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty Digitally Signed Firmware HDD 655710-B21

HPE 500GB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive 655708-B21

6G SATA Hot Plug MU-3 SFF (2.5-inch) SC Solid State Drives

HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty SSD 817011-B21

HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty SSD 816995-B21

HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty SSD 816985-B21

HPE 240GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty SSD 816975-B21

HPE 120GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty SSD 816965-B21

6G SATA Hot Plug RI-3 SFF (2.5-inch) SC Solid State Drives

HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty SSD 816929-B21

HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty SSD 816919-B21

HPE 960GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty SSD 816909-B21

HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty SSD 816899-B21

HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty SSD 816889-B21

HPE 120GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty SSD 816879-B21

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

HPE 3.84TB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty SSD 816933-B21

Core Options

| | |
|---|------------|
| HPE 1.92TB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty SSD | 816923-B21 |
| HPE 960GB SATA 6G Read Intensive LFF (2.5in) SC 3yr Wty SSD | 816913-B21 |
| HPE 480GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty SSD | 816903-B21 |
| HPE 240GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty SSD | 816893-B21 |
| HPE 120GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty SSD | 816883-B21 |

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

| | |
|--|------------|
| HPE 1.92TB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty SSD | 817015-B21 |
| HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty SSD | 816999-B21 |
| HPE 480GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty SSD | 816989-B21 |
| HPE 240GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty SSD | 816979-B21 |
| HPE 120GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty SSD | 816969-B21 |

6G SATA Hot Plug with SmartDrive LFF (3.5-inch) Midline (MDL) Drives

| | |
|---|------------|
| HPE 8TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e HDD | 793695-B21 |
| HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e HDD | 793683-B21 |
| HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 753874-B21 |
| HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD | 693687-B21 |
| HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive | 628061-B21 |
| HPE 2TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD | 658079-B21 |
| HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD | 657750-B21 |
| HPE 500GB SATA 6G Midline 7.2k LFF (3.5in) SC 1yr Wty HDD | 658071-B21 |

6G SATA Hot Plug LFF (3.5-inch) Midline (MDL) 512e Drives

| | |
|---|------------|
| HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drives | 793665-B21 |
| HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive | 793667-B21 |
| HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD | 765255-B21 |
| HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD | 765253-B21 |

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

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111725>

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

Core Options

Drives

| | |
|---|------------|
| HP 1.6TB 12G SAS Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive | 762263-B21 |
| HPE 800GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty SSD | 762261-B21 |

12G SAS Hot Plug Value Endurance LFF (3.5-inch) Enterprise Value Solid State Drives

| | |
|--|------------|
| HPE 1.6TB 12G SAS Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive | 762272-B21 |
| HPE 800GB 12G SAS Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive | 762270-B21 |

12G SAS Mainstream Endurance Hot Plug SFF (2.5-inch) Enterprise Mainstream H2 Solid State Drives

| | |
|--|------------|
| HPE 1.6TB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty SSD | 779176-B21 |
| HPE 800GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty SSD | 779172-B21 |
| HPE 400GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty SSD | 779168-B21 |
| HPE 200GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty SSD | 779164-B21 |

12G SAS Hot Plug SFF (2.5-inch) SC Read/Write Intensive Solid State Drives

| | |
|--|------------|
| HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty SSD | 802891-B21 |
| HPE 800GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty SSD | 802586-B21 |
| HPE 400GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty SSD | 802582-B21 |
| HPE 200GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty SSD | 802578-B21 |

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

| | |
|---|------------|
| HP 800GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive | 764945-B21 |
| HP 480GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive | 764943-B21 |
| HP 240GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive | 764941-B21 |
| HP 120GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive | 764939-B21 |

6G SATA Hot Plug Value Endurance LFF (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 |
|---|------------|

6G SATA Hot Plug Value Endurance SFF (2.5-inch) Enterprise Value G1 Solid State Drives

Core Options

HP 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty G1 Solid State Drive 756657-B21

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

HP 600GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive 739898-B21

6G SATA Value Endurance Hot Plug SFF (2.5-inch) Enterprise Value M1 Solid State Drive

HPE 800GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty SSD 764929-B21

HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty SSD 764927-B21

HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty SSD 764925-B21

HPE 120GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty SSD 764923-B21

6G SATA Hot Plug SFF (2.5-inch) SC Read Intensive Solid State Drives

HP 480GB 6G SATA Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive 789145-B21

6G SATA Hot Plug LFF (3.5-inch) SC Read Intensive Solid State Drives

HP 480GB 6G SATA Read Intensive LFF 3.5-in SC Converter 3yr Wty Solid State Drive 789147-B21

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

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04154378>

Hard Drive Kits

NOTE: All Factory Integrated Models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the server.

HPE Small Form Factor Hard Drive Blank Kit 666987-B21

HPE Large Form Factor Hard Drive Blank Kit 666986-B21

HPE DL380/DL385 Gen8 8 Small Form Factor Hard Drive Backplane Cage Kit 662883-B21

HPE Networking

Gigabit Server adapters

HPE NC365T 4-port Ethernet Server Adapter 593722-B21

HPE Ethernet 1Gb 4-port 331T Adapter 647594-B21

HPE Ethernet 1Gb 2-port 332T Adapter 615732-B21

HPE Ethernet 1Gb 2-port 361T Adapter 652497-B21

10 Gigabit Server Adapters

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.

HP NC523SFP 10Gb 2-port Server Adapter 593717-B21

Core Options

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| HP NC552SFP 10Gb 2-port Ethernet Server Adapter | 614203-B21 |
| HP FlexFabric 10Gb 2-port 526FLR-SFP+ Adapter | 629138-B21 |
| HPE Ethernet 10Gb 2-port 530SFP Adapter | 652503-B21 |

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| HPE Ethernet 10Gb 2-port 530T Adapter | 656596-B21 |
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| HPE FlexFabric 10Gb 2-port 533FLR-T Adapter | 700759-B21 |
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| HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter | 700751-B21 |
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| HPE FlexFabric 10Gb 2-port 556FLR-SFP+ FIO Adapter | 732456-B21 |
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NOTE: This is a FIO only part.

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| HPE Ethernet 10Gb 2-port 560SFP+ Adapter | 665249-B21 |
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|---|------------|
| HPE Ethernet 10Gb 2-port 561FLR-T Adapter | 700699-B21 |
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|---------------------------------------|------------|
| HPE Ethernet 10Gb 2-port 561T Adapter | 716591-B21 |
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| HPE Ethernet 10Gb 2-port 570SFP+ Adapter | 718904-B21 |
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FlexibleLOM Adapters

| | |
|---------------------------------------|------------|
| HP Ethernet 1Gb 4-port 331FLR Adapter | 629135-B21 |
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| HPE Ethernet 1Gb 4-port 366FLR Adapter | 665240-B21 |
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| HPE Ethernet 10Gb 2-port 530FLR-SFP+ Adapter | 647581-B21 |
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|---|------------|
| HP FlexFabric 10Gb 2-port 554FLR-SFP+ Adapter | 629142-B21 |
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| HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter | 665243-B21 |
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| HPE Ethernet 10Gb 2-port 570FLR-SFP+ Adapter | 717491-B21 |
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NOTE: Please see the QuickSpecs for Technical Specifications and additional information: <http://www.hp.com/go/ProLiantNICs>

HPE InfiniBand

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|---|------------|
| HP Infiniband FDR/Ethernet 10Gb/40Gb 2-port 544QSFP Adapter | 649281-B21 |
|---|------------|

NOTE: For the following two InfiniBand Adapters, only 1 FlexibleLOM can be added to the server, which is selected in Step 2 for the "Configuration Information - Factory Integrated Models" section. These two options are for upgrade or change from original configuration.

| | |
|---|------------|
| HP Infiniband FDR/Ethernet 10Gb/40Gb 2-port 544FLR-QSFP Adapter | 649282-B21 |
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| HPE InfiniBand FDR 2-port 545QSFP Adapter | 702211-B21 |
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NOTE: FLR Indicates new HPE FlexibleLOM Adapter series.

NOTE: Please see the QuickSpecs for additional information: <https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04154440>

HPE I/O Expansion

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|---|------------|
| HPE DL385p Gen8 x16 2x8 PCI-E Riser Kit | 653214-B21 |
|---|------------|

Core Options

Options

NOTE:NOTE: 2nd Riser Cage requires 2nd Processor.

HPE Power Supplies

NOTE: Mixing of power supplies in the same server is not supported. All power supplies inside a server must be exactly the same model. Mixing Gold, Platinum, and Platinum Plus certified power supplies is not supported.

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

<http://www.hp.com/go/hppoweradvisor>.

HPE Common Slot Platinum Plus Power Supply Kits

NOTE: The following Power Supplies offer 94% Efficiency with support for Intelligent Power Discovery.

HPE 460W Common Slot Platinum Plus Hot Plug Power Supply Kit 656362-B21

HPE 750W Common Slot Platinum Plus Hot Plug Power Supply Kit 656363-B21

HPE 1200W Common Slot Platinum Plus Hot Plug Power Supply Kit 656364-B21

HPE Common Slot Gold Power Supplies

NOTE: The following Power Supplies offer 92% Efficiency.

HPE 460W Common Slot Gold Hot Plug Power Supply Kit 503296-B21

HPE 750W Common Slot Gold Hot Plug Power Supply Kit 512327-B21

HPE Common Slot -48VDC Power Supplies

NOTE: The following Power Supplies offer 92% Efficiency.

HPE 750W Common Slot -48VDC Hot Plug Power Supply Kit 636673-B21

NOTE:NOTE: The HPE 750W Common Slot -48VDC power supply does not ship with a power cable. It has been designed with a terminal block connection allowing for custom design of power cords by the user.

NOTE: Option Kits contain optional power supply, an IEC power cable and PDU IEC cables.

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

NOTE: Power Specification and Technical Content for supported power supplies can be found at:

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111541>

Additional Options

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

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

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

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

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

NOTE: For additional license options please see the QuickSpecs at:
<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04123391>

HPE Integrated Lights-Out (iLO) Advanced for ProLiant

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| | HPE iLO Advanced including 1yr 24x7 Technical Support and Updates E-LTU NOTE:NOTE: The Electronic software license is available in EMEA only. | E6U59ABE |
| | HPE iLO Advanced including 3yr 24x7 Technical Support and Updates E-LTU NOTE:NOTE: The Electronic software license is available in EMEA only. | E6U64ABE |
| | HPE iLO Advanced including 1yr 24x7 Technical Support and Updates 1-server LTU | 512485-B21 |
| | HPE iLO Advanced including 3yr 24x7 Tech Support and Updates 1-server LTU | BD505A |

NOTE: For additional license options please see the QuickSpecs at:
<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04154343>

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

| | | |
|---|--|--------|
| Converged Infrastructure Management Software | HPE OneView | |
| | HPE OneView with iLO Advanced | |
| | HPE OneView for ProLiant DL Server including 3yr 24x7 Support FIO Bundle Physical 1-server LTU | E5Y43A |
| | HPE OneView Physical Media Kit LTU | E5Y37A |
| | HPE OneView including 3yr 24x7 Support Physical 1-server LTU | E5Y34A |

Additional Options

HPE OneView including 3yr 24x7 Support Flexible Quantity E-LTU E5Y35AAE

HPE Operations Analytics for HPE OneView LTU K8G29A

HPE Operations Analytics for HPE OneView E-LTU K8G29AAE

HPE OneView without iLO Advanced

HPE OneView w/o iLO including 3yr 24x7 Support 1-server LTU P8B24A

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

HPE OneView w/o iLO including 3yr 24x7 Support 1-server FIO LTU P8B31A

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

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111367>

High Performance Clusters

HPE Cluster Management Utility

HPE Insight Cluster Management Utility 1yr 24x7 Flexible LTU QL803B

HPE Insight Cluster Management Utility 3yr 24x7 Flexible LTU BD476A

HPE Insight Cluster Management Utility for ConvergedSystem 3yr 24x7 Flexible LTU G2E81A

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.

HPE Insight Cluster Management Utility Media BD477A

NOTE: For additional license kits please see the QuickSpecs at

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111735>

HPE I/O Accelerator Options

Second Generation Accelerators

HP 1205GB Multi Level Cell G2 PCIe ioDrive2 for ProLiant Servers 673646-B21

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

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111683>

HPE PCIe Workload Accelerator Options

Light Endurance (LE) PCIe Workload Accelerators

HPE 5.2TB FH/HL Light Endurance (LE) PCIe Workload Accelerator 775672-B21

HPE 2.6TB HH/HL Light Endurance (LE) PCIe Workload Accelerator 775670-B21

HPE 1.3TB HH/HL Light Endurance (LE) PCIe Workload Accelerator 775668-B21

HPE 1.0TB HH/HL Light Endurance (LE) PCIe Workload Accelerator 775666-B21

Additional Options

Value Endurance (VE) PCIe Workload Accelerators

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|---|------------|
| HP 1.3TB HH/HL Value Endurance (VE) PCIe Workload Accelerator | 763834-B21 |
| HP 1.6TB HH/HL Value Endurance (VE) PCIe Workload Accelerator | 763836-B21 |
| HP 3.2TB HH/HL Value Endurance (VE) PCIe Workload Accelerator | 763838-B21 |
| HP 6.4TB FH/HL Value Endurance (VE) PCIe Workload Accelerator | 763840-B21 |

Read Intensive (RI) PCIe Workload Accelerators

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| HPE 1.3TB Read Intensive-2 HH/HL PCIe Workload Accelerator | 831733-B21 |
| HPE 1.6TB Read Intensive-2 HH/HL PCIe Workload Accelerator | 831735-B21 |
| HPE 3.2TB Read Intensive-2 HH/HL PCIe Workload Accelerator | 831737-B21 |
| HPE 6.4TB Read Intensive-2 FH/HL PCIe Workload Accelerator | 831739-B21 |

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

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04123190>

HPE Security

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| HPE Trusted Platform Module Option | 488069-B21 |
| <p>NOTE: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.</p> <p>NOTE:NOTE: ProLiant OS pre-installed units will come with the partition required for TPM deployment.</p> <p>NOTE: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.</p> | |
| HPE 2U Security Bezel Kit | 666988-B21 |

HPE Storage Controllers

SAS Controllers

Smart Array P222 Controller

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| HPE Smart Array P222/512 FBWC 6Gb 1-port Int/1-port Ext SAS Controller | 631667-B21 |
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Smart Array P420 Controller

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| HPE Smart Array P420/1GB FBWC 6Gb 2-ports Int SAS Controller | 631670-B21 |
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| HPE Smart Array P420/2GB FBWC 6Gb 2-ports Int SAS Controller | 631671-B21 |
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Smart Array P421 Controller

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| HP Smart Array P421/1GB FBWC 6Gb 2-ports Ext SAS Controller | 631673-B21 |
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Smart Array P430 Controller

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| HPE Smart Array P430/4GB FBWC 12Gb 1-port Int SAS Controller | 698530-B21 |
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| HPE Smart Array P430/2GB FBWC 12Gb 1-port Int SAS Controller | 698529-B21 |
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Additional Options

Smart Array P431 Controller

HPE Smart Array P431/4GB FBWC 12Gb 2-ports Ext SAS Controller 698532-B21

HPE Smart Array P431/2GB FBWC 12Gb 2-ports Ext SAS Controller 698531-B21

Smart Array P830 Controller

HPE Smart Array P830/4GB FBWC 12Gb 2-ports Int SAS Controller 698533-B21

Optional Upgrades

HPE 1GB P-series Smart Array Flash Backed Write Cache 631679-B21

HPE 2GB P-series Smart Array Flash Backed Write Cache 631681-B21

HPE 512MB P-series Smart Array Flash Backed Write Cache 661069-B21

HPE Smart Array SR SmartCache (Single Key/Single Server) LTU D7S26A

HPE Smart Array SR SmartCache (Single Key/Multiple Servers) LTU D7S27A

HPE Smart Array SR SmartCache (Single Key/Multiple Servers) E-LTU D7S27AAE

HP Secure Encryption per Svr Entitlement C9A82AAE

HPE Cable Options

HPE DL38x/DL360 Gen8 Embedded SATA Cable Kit 664009-B21

HPE Mini SAS/Straight to Straight 25 SFF Bypass Cable Assembly 726974-B21

HPE Mini SAS Straight to Straight 37in Cable Assembly 662897-B21

HPE Mini SAS/Straight to Straight Offset Bypass Cable Assembly 697611-B21

HPE Mini SAS/Straight to Straight Short Bypass Cable Assembly 697691-B21

HP DL38Xp Gen8 8 Large Form Factor (LFF) P430/830 Cable Kit 729270-B21

HP DL38Xp Gen8 12 Large Form Factor (LFF) P430/830 Cable Kit 729272-B21

HP DL38Xp Gen8 25 Small Form Factor (SFF) P430/830 Cable Kit 729274-B21

HP 6G SAS P430/830 Secondary Cable Kit 729276-B21

HP 6G SAS P430/830 Primary Cable Kit 729278-B21

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

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111474>

(Smart Array P222 Controller)

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111382>

(Smart Array P430 Controller)

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111365>

(Smart Array P431 Controller)

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111534>

(Smart Array P420 Controller)

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111533>

Additional Options

(Smart Array P421 Controller)

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04227582>

(Smart Array P830 Controller)

Host Bus Adapter

HP H220 Host Bus Adapter

650933-B21

HPE H221 PCIe 3.0 SAS Host Bus Adapter

729552-B21

HPE H222 Host Bus Adapter

650926-B21

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

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111455>

(HBA 220)

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111475>

(HBA 221)

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111514>

(HBA 222)

HPE Disk Enclosures

HPE D3600 Enclosure

QW968A

HPE D3700 Enclosure

QW967A

NOTE: See the D3000 Disk Enclosure QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at:

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04227611>

HP D2600 Disk Enclosure

AJ940A

HPE D2700 Disk Enclosure

AJ941A

NOTE: See the D2000 Disk Enclosure QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at:

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111697>

HPE D6000 Dual I/O Module Disk Enclosure

QQ695A

NOTE: See the D6000 Disk Enclosure QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at:

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111505>

HPE Tape Backup

NOTE: For the complete range of tape drives, autoloaders, libraries and media see: <http://www.hp.com/go/tape>. For hardware and software compatibility of HPE tape backup products see: <http://www.hp.com/storage/SPOCK>

NOTE: For Internal drives to be connected to DL servers please make sure that

Additional Options

you order rack mount kit as well.

HPE StoreEver LTO-5 Ultrium 3000 SAS External Tape Drive EH958B

HPE StoreEver LTO-6 Ultrium 6250 Tape Drive in a 1U Rack Mount Kit COL99A

HPE StoreEver LTO-6 Ultrium 6650 SAS External Tape Drive EH964A

HPE StoreEver LTO-6 Ultrium 6250 External Tape Drive EH970A

HPE StoreEver 1/8 G2 LTO-6 Ultrium 6250 Fibre Channel Tape Autoloader COH19A

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

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111633>

HPE Tape Storage Systems

HPE StoreEver MSL6480

HPE StoreEver MSL6480 Scalable Base Module QU625A

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

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111416>

HPE Disk Backup

NOTE: For the complete range of RDX drives and media see:

<http://www.hp.com/go/rdx>. For hardware and software compatibility of HPE disk backup products see: <http://www.hp.com/storage/SPOCK>.

HPE RDX Removable Disk Backup System

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

HP RDX+ 1TB External Backup System B7B69B

HP RDX+ 500GB External Backup System B7B66B

HPE RDX+ External Docking System C8S07B

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

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111633>

HPE Storage Options

Storage Fibre Channel HBA

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>

Brocade Fibre Channel HBAs

HP 81B 8Gb 1-port PCIe Fibre Channel Host Bus Adapter AP769B

HP 82B 8Gb 2-port PCIe Fibre Channel Host Bus Adapter AP770B

Emulex Fibre Channel HBAs

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

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

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

Additional Options

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

QLogic Fibre Channel HBAs

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

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

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

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

Converged Network Adapter

HPE StoreFabric CN1200E 10Gb Converged Network Adapter E7Y06A

HP CN1100E Dual Port Converged Network Adapter BK835A

HPE CN1000Q Dual Port Converged Network Adapter BS668A

HPE StoreFabric CN1100R Dual Port Converged Network Adapter QW990A

HPE Uninterruptible Power Systems

HPE DirectFlow Three Phase UPS

Power Unit (1U UPS)

NOTE: #0D1 will appear after the part number on the sales order if HPE factory integration is indicated.

HPE R12000 DirectFlow - 1U Rackmount Uninterruptible Power System G9Y75A

HPE R12000 DirectFlow - POD 1U Rackmount Uninterruptible Power System AF478A

Input/Output Module Options for 1U UPS

NOTE: Choose one I/O Module per UPS.

NOTE: #0D1 will appear after the part number on the sales order if HPE factory integration is indicated.

HPE 32A 400-415 Volt Three Phase INTL R12000 DirectFlow UPS IEC309 Input/Output Module AF488A

HPE 30A 400-415 Volt Three Phase NA R10000 DirectFlow UPS IEC309 Input/Output Module AF489A

HPE 32A 380 Volt Three Phase China R12000 DirectFlow UPS Unterminated Input/Output Module AF490A

HPE 30A 480 Volt Three Phase NA R12000 DirectFlow UPS L22-30 Input/Output Module AF491A

HPE 30A 480 Volt Three Phase NA R12000 DirectFlow UPS IEC309 Input/Output Module AF492A

Additional Options

HPE 30A 400-415 Volt Three Phase NA R12000 DirectFlow UPS IEC309 Input/Output Module G9Y76A

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

HPE Tower UPS

HPE T750 G4 UPS Models

HPE T750 G4 NA/JP Uninterruptible Power System J2P85A

HPE T750 G4 INTL Uninterruptible Power System J2P88A

HPE T1000 G4 UPS Models

HPE T1000 G4 NA/JP Uninterruptible Power System J2P86A

HPE T1000 G4 INTL Uninterruptible Power System J2P89A

HPE T1500 G4 UPS Models

HPE T1500 G4 NA/JP Uninterruptible Power System J2P87A

HPE T1500 G4 INTL Uninterruptible Power System J2P90A

HPE Rack/Tower UPS

HPE R/T2200 G4 UPS Models

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

HPE R/T2200 G4 Extended Runtime Module J2R09A

HPE R/T3000 G4 UPS Models

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

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

HPE R/T3000 G4 High Voltage INTL Uninterruptible Power System J2R04A

HPE R/T3000 G4 Extended Runtime Module J2R10A

HPE R1500 G4 Uninterruptible Power Supply (UPS)

HPE R1500 G4 NA Uninterruptible Power System J2Q99A

HPE R1500 G4 INTL Uninterruptible Power System J2R03A

HPE R1500 G4 JP/TWN Uninterruptible Power System J2R05A

R5000 Uninterruptible Power System (UPS)

HPE R5000 3U IEC309-32A High Voltage INTL Uninterruptible Power System AF461A

Additional Options

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

NOTE: Please see the QuickSpecs for additional information:

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04154372>

R7000 Uninterruptible Power System (UPS)

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

HPE R7000 4U IEC-32A High Voltage INTL Uninterruptible Power System AF463A

NOTE: Please see the QuickSpecs for additional information:

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04154371>

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

NOTE: For additional information on sizing your server, please reference:

<http://www.upssizer.com>.

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

<http://www.hp.com/products/powercords>.

HPE Basic Power Distribution Units (PDU)

HPE Basic Power Distribution Unit: 1U/0U Version

HPE Basic 1.9kVA/L5-20P 16A/120V Outlets (12) 5-20R/Horizontal NA/JP PDU H5M54A

HPE Basic 3.6kVA/60320 C20 Detachable 16A/230V Outlets (12) C13/Horizontal WW PDU H5M56A

HPE Basic Power Distribution Unit: Half Height Version

HPE Basic 2.8kVA/L5-30P 24A/120V Outlets (18) 5-20R/Vertical NA/JP PDU H5M55A

HPE Basic 4.9kVA/60320 C20 Detachable 16A/230V Outlets (20) C13/Vertical WW PDU H5M57A

HPE Basic 4.9kVA/L6-30P 24A/208V Outlets (20) C13/Vertical NA/JP PDU H5M58A

HPE Basic 7.3kVA/60309 5-wire 32A/230V Outlets (20) C13/Vertical INTL PDU H5M68A

HPE Basic 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13/Vertical NA/JP PDU H5M61A

HPE Basic Power Distribution Unit: Mid Height Version

HPE Basic 4.9kVA/L6-30P 24A/208V Outlets (24) C13 (6) C19/Vertical NA/JP PDU H5M59A

HPE Basic 7.3kVA/60309 3-wire 32A/230V Outlets (24) C13 (6) C19/Vertical INTL PDU H5M70A

HPE Basic 8.3kVA/CS8265C 40A/208V Outlets (30) C13 (6) C19/Vertical NA PDU H5M60A

HPE Basic 11kVA/60309 63A 3-wire 48A/230V Outlets (30) C13 (6) C19/Vertical INTL PDU H5M71A

HPE Basic 9.2kVA/50A Terminal Block 40A/230V Outlets (30) C13 (6) C19/Vertical WW PDU H5M75A

HPE Basic 3Ph 5.7kVA/ L21-20P 16A/120-208V Outlets (24) C13 (3) 5-20R/Vertical NA/JP PDU H5M63A

HPE Basic 3Ph 8.6kVA/L21-30P 24A/120-208V Outlets (24) C13 (3) C19 (3) 5-20R/Vertical NA/JP PDU H5M64A

HPE Basic 3Ph 8.6kVA/L15-30P 24A/208V Outlets (24) C13 (6) C19/Vertical NA/JP PDU H5M62A

HPE Basic 3Ph 11kVA/60309 5-wire 16A/230V Outlets (24) C13 (6) C19/Vertical INTL H5M72A

Additional Options

PDU

HPE Basic Power Distribution Unit: Full Height Version

HPE Basic 3Ph 11kVA/60309 5-wire 16A/230V Outlets (36) C13 (6) C19/Vertical INTL PDU H5M73A

HPE Basic 3Ph 11kVA/60309 16A/240V Outlets (36) C13 (6) C19/Vertical NA PDU H5M67A

HPE Basic Power Distribution Unit: 480/277 Volt Version

HPE 800VA - 277V Input / 230V Output NA Rack Mount Transformer H3X09A

NOTE: Please see the QuickSpecs for additional information:

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111392>

NOTE: Additional HPE Power Distribution Units are available. For a complete list of all HPE PDUs and additional information please visit

<http://www.hp.com/go/rackandpower>

HPE Metered Power Distribution Units (PDU)

HPE Remote Monitored Power Distribution Unit: 1U Version

HPE Metered 2.8kVA/L5-30P 24A/120V Outlets (12) 5-20R/Horizontal NA/JP PDU D9N43A

HPE Metered 3.6kVA/60320 C20 Detachable 16A/230V Outlets (12) C13/Horizontal WW PDU D9N46A

HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (12) C13/Horizontal NA/JP PDU D9N44A

HPE Remote Monitored Power Distribution Unit: Half Height Version

HPE Metered 3.6kVA/60320 C20 Detachable 16A/230V Outlets (16) C13/Vertical WW PDU D9N45A

HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (12) C13/Vertical NA/JP PDU G9Z05A

HPE Metered 7.3kVA/60309 3-wire 32A/230V Outlets (12) C13/Vertical INTL PDU G9Z06A

HPE Remote Monitored Power Distribution Unit: Mid Height Version

HPE Metered 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (4) C19/Vertical NA/JP PDU D9N47A

HPE Metered 7.3kVA/60309 32A 3-wire/230V Outlets (20) C13 (4) C19/Vertical INTL PDU D9N48A

HPE Metered 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13 (3) C19/Vertical NA/JP PDU D9N51A

HPE Metered 3Ph 5.7kVA/L21-20P 16A/120-208V Outlets (13) C13 (3) 5-20R/Vertical NA/JP PDU D9N52A

HPE Metered 3Ph 8.6kVA/L21-30P 24A/120-208V Outlets (18) C13 (3) C19 (3) 5-20R/Vertical NA/JP PDU D9N53A

HPE Metered 3Ph 11kVA/60309 5-wire 16A/230V Outlets (18) C13 (3) C19/Vertical INTL PDU D9N55A

HPE Remote Monitored Power Distribution Unit: Full Height Version

HPE Metered 8.3kVA/CS8265C 40A/208V Outlets (30) C13 (3) C19/Vertical NA PDU D9N49A

HPE Metered 7.3kVA/60309 32A 3-wire/230V Outlet (32) C13 (4) C19/Vertical INTL PDU D9N50A

HPE Metered 3Ph 11kVA/60309 5-wire 16A/230V Outlets (30) C13 (3) C19/Vertical INTL PDU D9N57A

HPE Metered 3Ph 14.4kVA/CS8365C 40A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU D9N58A

HPE Metered 3Ph 16.6kVA/60309 32A-30A 5-wire 24A/230V Outlets (30) C13 (3) C19/Vertical NA/JP PDU D9N61A

Additional Options

| | |
|--|--------|
| HPE Metered 3Ph 16.6kVA/60309 32A-30A 5-wire 24A/230V Outlets (12) C13 (12) C19/Vertical NA/JP PDU | D9N62A |
| HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (24) C13 (3) C19/Vertical NA/JP PDU | D9N54A |
| HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU | D9N59A |
| HPE Metered 3Ph 17.3kVA/60309 60A 4-wire 48A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU | G9Z07A |
| HPE Metered 3Ph 19.9kVA/L22-30P 24A/277V Outlets (30) RF-203P-HP/Vertical NA PDU | D9N63A |
| HPE Metered 3Ph 22kVA/60309 5-wire 32A/230V Outlets (12) C13 (12) C19/Vertical INTL PDU | D9N60A |
| HPE Metered 3Ph 22kVA/60309 5-wire 32A/230V Outlet (30) C13 (3) C19/Vertical INTL PDU | D9N56A |

| | |
|--|--------|
| HPE Metered 3Ph 22kVA/60309 5-wire WT 32A/230V Outlets (12) C13 (12) C19/Vertical INTL PDU | G9Z08A |
|--|--------|

HPE Environmental Sensor for Remote Monitored PDUs

| | |
|---|--------|
| HP Environmental Sensor for Remote Monitored and Managed PDUs | E2D53A |
|---|--------|

HPE Remote Monitored Power Distribution Unit: 1U Version

| | |
|---|--------|
| HPE Metered 2.8kVA/L5-30P 24A/120V Outlets (12) 5-20R/Horizontal NA/JP PDU | D9N43A |
| HPE Metered 3.6kVA/60320 C20 Detachable 16A/230V Outlets (12) C13/Horizontal WW PDU | D9N46A |

NOTE: Please see the QuickSpecs for additional information:

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04229509>

HPE Intelligent Power iPDU Core Units

Distribution Unit (PDU)

| | |
|---|--------|
| HPE Intelligent Modular 4.9kVA/L6-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU | AF520A |
| HPE Intelligent Modular 8.3kVA/CS8265C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU | AF521A |
| HPE Intelligent Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (6) C19/Horizontal NA/JP PDU | AF522A |
| HPE Intelligent Modular 3Ph 14.4kVA/CS8365C 40A/208V Outlets (6) C19/Horizontal NA/JP PDU | AF533A |
| HPE Intelligent Modular 3Ph 17.3kVA/60309 60A 4-wire 48A/208V (6) C19/Horizontal NA/JP PDU | AF523A |
| HPE Intelligent Modular 7.3kVA/60309 3-wire 32A/230V Outlets (6) C19/Horizontal INTL PDU | AF525A |
| HPE Intelligent Modular 3Ph 11kVA/60309 5-wire 16A/230V Outlets (6) C19/Horizontal INTL PDU | AF526A |
| HPE Intelligent Modular 3Ph 22kVA/60309 5-wire 32A/230V Outlets (6) C19/Horizontal INTL PDU | AF527A |
| HPE Intelligent Modular 3Ph 17.3kVA/IEC 60309 60A 4-wire 48A/208V (12) C19/Horizontal NA/JP PDU | AF535A |
| HPE Intelligent Modular 3Ph 17.3kVA/IEC 60309 30A 5-wire 24A/240V (12) C19/Horizontal NA/JP PDU | AF537A |
| HPE Intelligent Modular 3Ph 22kVA/60309 5-wire 32A/230V Outlets (12) C19/Horizontal INTL PDU | AF538A |

Additional Options

iPDU Kits with Standard Extension Bars

| | |
|---|--------|
| HPE Intelligent Modular 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (6) C19/Horizontal NA/JP PDU | AF531A |
| HPE Intelligent Modular 3Ph 8.6kVA/L15-30P 24A/208V Outlets (20) C13 (6) C19/Horizontal NA/JP PDU | AF532A |
| HPE Intelligent Modular 7.3kVA/60309 3-wire 32A/230V Outlets (6) C19/Horizontal INTL PDU Kit | AF534A |

iPDU Extension Bars

| | |
|--|--------|
| HPE 5xC13 Intelligent PDU Extension Bar G2 Kit | AF547A |
| HPE 5xC13 Outlets Power and UID LEDs Pair Standard Extension Bar | AF528A |

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

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04123329>

NOTE: Additional HPE Power Distribution Units are available. For a complete list of all HPE PDUs and additional information please visit:

<http://www.hp.com/go/rackandpower>.

HPE Metered and Switched Power Distribution Units (PDU)

Half Height Models

| | |
|---|--------|
| HPE Metered Switched 3.6kVA/60320 C20 Detachable 16A/230V Outlets (7) C13 (1) C19/Vertical WW PDU | H8B49A |
|---|--------|

Full Height Models

| | |
|---|--------|
| HPE Metered Switched 2.8kVA/L5-30P 24A/120V Outlets (24) 5-20R /Vertical NA/JP PDU | H8B48A |
| HPE Metered Switched 4.9kVA/L6-30P 24A/208V Outlets (20) C13 (4) C19/Vertical NA/JP PDU | H8B50A |
| HPE Metered Switched 7.3kVA/60309 3-wire 32A/230V Outlets (20) C13 (4) C19/Vertical INTL PDU | H8B51A |
| HPE Metered Switched 3Ph 8.6kVA/L15-30P 24A/208V Outlets (18) C13 (6) C19/Vertical NA/JP PDU | H8B52A |
| HPE Metered Switched 3Ph 8.6kVA/L21-30P 24A/208V Outlets (20)C13 (3)C19 (1)5-20R/Vertical NA/JP PDU | H8B53A |

| | |
|---|--------|
| HPE Metered Switched 3Ph 11kVA/60309 5-wire 16A/230V Outlets (21) C13 (3) C19/Vertical INTL PDU | H8B54A |
|---|--------|

| | |
|--|--------|
| HPE Metered Switched 3Ph 14.4kVA/CS8365C 40A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU | H8B55A |
|--|--------|

| | |
|---|--------|
| HPE Metered Switched 3Ph 17.3kVA/60309 4-wire 48A/208V Outlets (12) C13 (12) C19/Vertical NA/JP PDU | H8B56A |
|---|--------|

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

<https://www.hpe.com/h20195/v2/GetHtml.aspx?docname=c04376673>

HPE Rack Series

HPE Intelligent Series Rack

| | |
|---|--------|
| HP 36U 600mm x 1075mm Enterprise Pallet Rack | BW895A |
| HP 36U 600mm x 1075mm Enterprise Shock Rack | BW896A |
| HPE 42U 600mm x 1075mm Enterprise Pallet Rack | BW903A |

Additional Options

| | |
|--|--------|
| HP 42U 600mm x 1075mm Enterprise Shock Rack | BW904A |
| HP 47U 600mm x 1075mm Enterprise Pallet Rack | BW911A |
| HP 47U 600mm x 1075mm Enterprise Shock Rack | BW912A |

NOTE: Please see the QuickSpecs for Technical Specifications such as height, width, depth, weight, and color:

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04123237>

NOTE: For additional information regarding Rack Cabinets, please see the following URL: <http://www.hp.com/go/rackandpower>.

HPE Rack Options

HPE LCD8500 1U Rackmount Console Kit Models

| | |
|--|--------|
| HP LCD8500 1U US Rackmount Console Kit | AF630A |
| HP LCD8500 1U UK Rackmount Console Kit | AF631A |
| HP LCD8500 1U DE Rackmount Console Kit | AF632A |
| HP LCD8500 1U FR Rackmount Console Kit | AF633A |
| HP LCD8500 1U JP Rackmount Console Kit | AF642A |
| HP LCD8500 1U RU Rackmount Console Kit | AF643A |
| HP LCD8500 1U INTL Rackmount Console Kit | AF644A |
| HP LCD8500 1U US TAA Rackmount Console Kit | AF645A |

HPE LCD8500 1U Rackmount Console Kit Options

| | |
|---|--------|
| HP Kit LCD 1.83m Latch Display Port Cable | G7T29A |
| HPE Location Discovery Services LCD8500 Kit | TL052A |
| HPE Rack LED Light Kit | BW939A |

HPE Location Discovery Services

| | |
|--------------------------------|--------|
| HPE 36U Location Discovery Kit | BW945A |
| HPE 42U Location Discovery Kit | BW946A |
| HPE 47U Location Discovery Kit | BW947A |

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

<https://www.hpe.com/h20195/v2/gethtml.aspx?docname=c04123199>

HPE USB Keyboard and Mouse

| | |
|-------------------------------|------------|
| HPE USB US Keyboard/Mouse Kit | 631341-B21 |
| HPE USB UK Keyboard/Mouse Kit | 631344-B21 |
| HPE USB FR Keyboard/Mouse Kit | 631346-B21 |
| HPE USB ES Keyboard/Mouse Kit | 631348-B21 |
| HPE USB DE Keyboard/Mouse Kit | 631358-B21 |
| HPE USB JP Keyboard/Mouse Kit | 631360-B21 |

Additional Options

| | |
|------------------------------------|------------|
| HPE USB IT Keyboard/Mouse Kit | 631362-B21 |
| HPE USB CN Keyboard/Mouse Kit | 631364-B21 |
| HPE USB AE Keyboard/Mouse Kit | 638212-B21 |
| HPE USB RU Keyboard/Mouse Kit | 638214-B21 |
| HPE USB AP/INTL Keyboard/Mouse Kit | 672097-373 |
| HPE USB INTL Keyboard/Mouse Kit | 672097-B33 |
| HPE USB PT Keyboard/Mouse Kit | 672097-133 |
| HPE USB TR Keyboard/Mouse Kit | 672097-143 |
| HPE USB CZ Keyboard/Mouse Kit | 672097-223 |
| HPE USB FI Keyboard/Mouse Kit | 672097-353 |
| HPE USB SE Keyboard/Mouse Kit | 672097-103 |
| HPE USB CH Keyboard/Mouse Kit | 672097-113 |
| HPE USB IN Keyboard/Mouse Kit | 672097-D63 |
| HPE USB KR Keyboard/Mouse Kit | 672097-KD3 |

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

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04168349>

HPE Server Console Switches

| | |
|--|--------|
| 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 |

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

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04123433>

HPE Server Console Switch G2 with Virtual Media & CAC

| | |
|--|--------|
| 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 |

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

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04168373>

HPE IP Console Switch G2 with Virtual Media & CAC

| | |
|--|--------|
| HP 1x4 USB/PS2 KVM Console Switch | AF611A |
| HP 1x1Ex8 KVM IP Console Switch G2 with Virtual Media CAC Software | AF620A |

Additional Options

| | |
|---|--------|
| 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: Please see the QuickSpecs for Technical Specifications and additional information:

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04168374>

Rail Kits

NOTE: Rail kits are optional for Gen8 and are no longer included standard with the server (except pre-configured/BTO Models). The customer has the choice to not include rail kits with their server purchase, but it is recommended.

NOTE: HPE 2U Ball Bearing and Easy Install Rail Kits provide full serviceability of the server while in the Rack and are available with a CMA. HPE 2U Friction Rail Kits ARE NOT serviceable in the Rack and must be removed from the rack and do not include CMA.

NOTE: The HPE 1U Gen8 Cable Management Arm is not available when using Friction Rails. 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: Hewlett Packard Enterprise recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation.

| | |
|---|------------|
| HPE 2U Large Form Factor Ball Bearing Gen8 Rail Kit with CMA | 663480-B21 |
| NOTE:NOTE: HPE 2U Ball Bearing Rail Kits provide full serviceability of the server while in the Rack and include a CMA. | |

| | |
|---|------------|
| HPE 2U Small Form Factor Ball Bearing Gen8 Rail Kit with CMA | 663478-B21 |
| NOTE:NOTE: HPE 2U Ball Bearing Rail Kits provide full serviceability of the server while in the Rack and include a CMA. | |

| | |
|--|------------|
| HP 2U Cable Management Arm for Easy Install Rail Kit | 733664-B21 |
| HP 2U Small Form Factor Easy Install Rail Kit with CMA | 733668-B21 |
| HP 2U Large Form Factor Easy Install Rail Kit with CMA | 733670-B21 |
| HP 2U Small Form Factor Easy Install Rail Kit | 733660-B21 |
| HP 2U Large Form Factor Easy Install Rail Kit | 733662-B21 |

HPE USB and SD Options

HPE Flash Media Kits for USB Drives

NOTE: HPE qualified blank USB key for use with HPE ProLiant servers that support the VMware virtualization environment and other HPE value-add software. Hewlett Packard Enterprise recommends this industry standard USB flash device for use with VMware ESXi. USB device must be installed in the internal slot of the ProLiant server for use with VMware ESXi. Refer to HPE VMware Getting Started Guide for installation instructions.

| | |
|---|------------|
| HPE 8GB USB Enterprise Mainstream Flash Media Drive Key Kit | 737953-B21 |
|---|------------|

HPE Enterprise Mainstream Flash Media Kits for Memory Cards

| | |
|--|------------|
| HP 8GB SD Enterprise Mainstream Flash Media Kit | 726113-B21 |
| HP 32GB SD Enterprise Mainstream Flash Media Kit | 700136-B21 |

NOTE: Please see the QuickSpecs for Technical Specifications and additional

Additional Options

information:

<https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04123175>

HPE Pointnext operational services

Proactive Care

NOTE: Collaborative Support plus Proactive services delivered by the onshore, local language Advanced Solution Center (ASC), end-to-end case ownership from a Technical Solution Specialists and Technical Account Manager who remotely delivers firmware/software revision management, proactive scans and incident trend reports. Recommended for customers running a virtualized infrastructure and/or customers who desire an enhanced call support experience.

| | |
|--|--------|
| HPE 3 year Proactive Care 24x7 ProLiant DL38x(p) Service | U2Z50E |
| HPE 3 year Proactive Care 24x7 with DMR ProLiant DL38x(p) Service | U2Z53E |
| HPE 3 year Proactive Care Call to Repair ProLiant DL38x(p) Service | U2Z56E |
| HPE 3 year Proactive Care Call to Repair 24x7 with DMR ProLiant DL38x(p) Service | U2Z59E |
| HPE 3 year Proactive Care 24x7 ProLiant DL38x(p) with Insight Control Service | U3N23E |
| HPE 3 year Proactive Care 24x7 with DMR DL38x(p) with Insight Control Service | U3N26E |
| HP 3y 6h CTR 24x7 DL38x w/IC ProCare SVC | U3N29E |
| | |
| HP 3y6hCTR24x7wDMR DL38xw/IC ProCare SVC | U3N32E |
| | |
| HPE 3 year Proactive Care 24x7 with CDMR DL38x(p) Service | U9B55E |
| HPE 3 year Proactive Care Call to Repair with CDMR DL38x(p) Service | U9B58E |
| HPE 3 year Proactive Care 24x7 with CDMR DL38x(p) w/IC Service | U9B73E |
| HPE 3 year Proactive Care Call to Repair with CDMR DL38x(p)wIC Service | U9B76E |
| HP 3y 6h CTR 24x7 DL38x w/IC ProCare SVC | U3N29E |
| | |
| HP 3y6hCTR24x7wDMR DL38xw/IC ProCare SVC | U3N32E |

Installation Services

NOTE: Reduce the time required to get your system up and running and help minimize disruptions to your business.

| | |
|---|--------|
| HPE Install ProLiant DL38x(p) Service | U4554E |
| HPE Installation and Startup DL38x(p) Service | U4555E |

NOTE: For more information, customer/resellers can contact:

<http://www.hp.com/services/carepack>

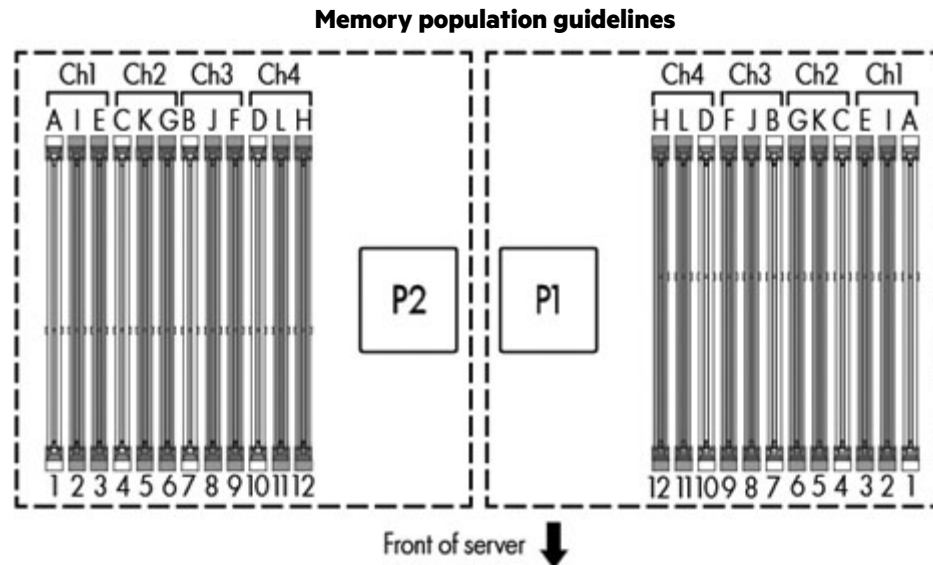
Memory

For detailed memory configuration rules and guidelines, please use the Online DDR3 Memory Configuration Tool:

<http://www.hp.com/go/ddr3memory-configurator>

Memory Subsystem Architecture

Each AMD Opteron family processor socket contains four memory channels that support three DIMMs each for a total of twelve (12) DIMM per installed processor or a grand total of twenty-four (24) DIMMs for the server. Up to 32GB capacity DIMMs are supported for 768GB of memory (24 DIMM slots x 32GB per DIMM).



General Memory Population Rules and Guidelines:

- White DIMM slots denote the first slot of a channel. For 1 DPC (DIMM per channel) populate white slots only.
- 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.
- RDIMMs operating at either 1.35V or 1.5V may be mixed in any order, but the system will power them at the higher voltage.
- RDIMMs and LRDIMMs are supported up to 3 DIMMs per channel.
- The DL385p Gen8 RBSU has options to set memory for Performance or Power modes. In Performance Mode all memory whether 1.35V DIMMs or 1.5V DIMMs will be set to 1.5V. In Power Mode all memory whether 1.35V or 1.5V will be set to 1.35V for power savings.
- 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 and memory configuration.
- The maximum memory capacity is a function of the memory type and number of installed processors.
- HPE memory from previous generation servers is not qualified on the DL385p Gen8 Server. Certain HPE SmartMemory features such as memory authentication and enhanced performance may not be supported.
- To realize the performance memory capabilities listed in this document, HPE SmartMemory is required. For additional information, please see the HPE SmartMemory QuickSpecs at: <https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111535>.
- For memory population rules and additional memory guidelines, please see the DL385p Gen8 user guide at <http://www.hpe.com/support>.

Memory

| DL385p Gen8 Supported Memory Bandwidth and Capacity | | | | |
|--|------------------|------------------------|------|------------------------|
| DIMM Type | Registered DIMMS | | | Load Reduced (LRDIMMs) |
| DIMM Rank | Single Rank (1R) | Dual Rank (2R) | | Quad Rank (4R) |
| DIMM Capacity | 8GB | 16GB | 16GB | 32GB |
| DIMM Native Speed (MHz) | 1600 | 1333 | 1600 | 1066 |
| Voltage | Std | LV | Std | LV |
| SLOTS THAT CAN BE POPULATED | | | | |
| 24 slot servers | 24 | 24 | 24 | 24 |
| MAXIMUM CAPACITY (GB)¹ | | | | |
| 24 slot servers | 192 | 384 | 384 | 768 |
| POPULATED DIMM SPEED (MHz) | | | | |
| 1 DIMM Per Channel | 1600 | 1333 | 1600 | 1333 |
| 2 DIMM Per Channel | 1600 | 1333/1066 ² | 1600 | 1333 |
| 3 DIMM Per Channel | 1066 | 1066/800 ³ | 1066 | 800 ⁴ |
| ¹ Maximum capacity will vary based on individual server platform. ² Ultra Low Voltage 8GB and 16GB dual rank operate at 1066MT/s speed in 2 DPC configurations. ³ Ultra Low Voltage 8GB and 16GB dual rank operate at 800MT/s speed in 3 DPC configurations. ⁴ LRDIMM capable of 3 DIMMs per channel. | | | | |

DIMM slot and configuration diagram

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

When one processor is installed, install DIMMs in sequential alphabetic order: A, B, C, D, E, F ...

When two processors are installed, install DIMMs in sequential alphabetic order: CPU1-A, CPU2-A, CPU1-B, CPU2-B, CPU1-C, CPU2-C

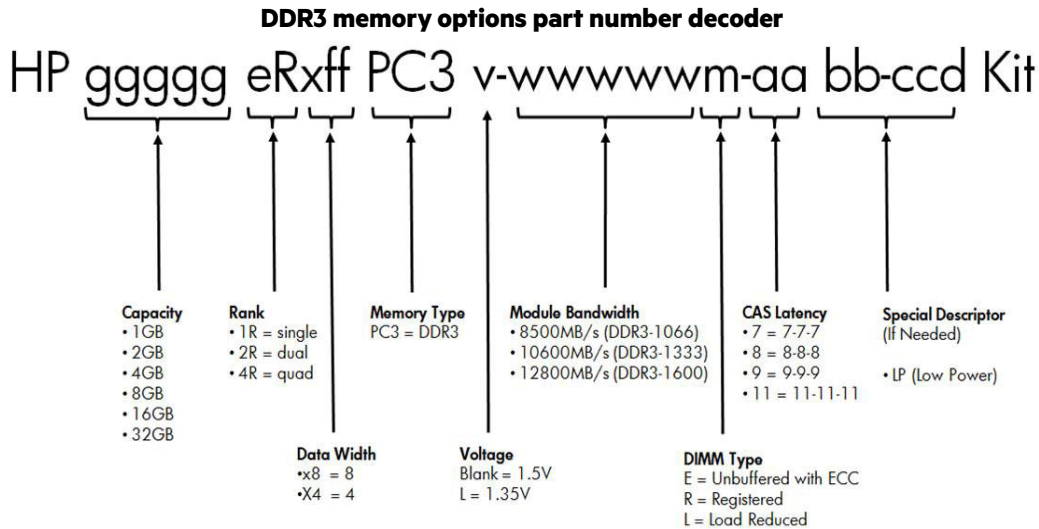
| 24 DIMM SLOTS (12 per CPU node) | | | | | |
|--|--------|------------------|-------------|------------------|--------|
| | slot # | population order | slot # | population order | |
| Chnl 1 | 1 | A | 1 | A | Chnl 1 |
| | 2 | I | 2 | I | |
| | 3 | E | 3 | E | |
| Chnl 2 | 4 | C | 4 | C | Chnl 2 |
| | 5 | K | 5 | K | |
| | 6 | G | 6 | G | |
| CPU1 | | | CPU2 | | |
| Chnl 3 | 7 | B | 7 | B | Chnl 3 |
| | 8 | J | 8 | J | |
| | 9 | F | 9 | F | |
| Chnl 4 | 10 | D | 10 | D | Chnl 4 |
| | 11 | L | 11 | L | |
| | 12 | H | 12 | H | |

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

- 1GB = 1024MB

Memory

- 2GB = 2048MB
- 4GB = 4096MB
- 8GB = 8192MB
- 16GB = 16384MB
- 32GB = 32768MB



Following are memory options available from HPE:

HPE Memory

NOTE: To realize the performance memory capabilities listed in this document, HPE SmartMemory is recommended. For additional information, please see the HPE SmartMemory QuickSpecs at: <https://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111535>

Registered DIMMs (RDIMMs)

HPE 8GB (1x8GB) Single Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory Kit 647879-B21

HPE 16GB (1x16GB) Dual Rank x4 PC3L-10600R (DDR3-1333) Registered CAS-9 LV Memory Kit 647883-B21

HPE 16GB (1x16GB) Dual Rank x4 PC3-12800R (DDR3-1600) Registered CAS-11 Memory 672633-B21

Load Reduced DIMMs (LRDIMMs)

HP 32GB (1x32GB) Quad Rank x4 PC3L-10600L (DDR3-1333) LR CAS-9 LV Memory Kit 647885-B21

NOTE: HPE memory from previous generation servers may not provide the same performance with the HPE ProLiant DL385p Gen8 Servers as HPE SmartMemory will.

NOTE: If only one processor is installed, only half the DIMM slots are available.

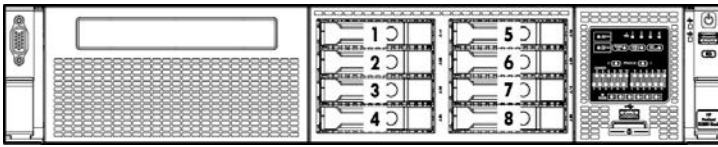
NOTE: Depending on the memory configuration, the memory speed may run at 1600MHz, 1333MHz, 1066MHz or lower. Please see Memory Population Table or the Online Memory Configuration Tool at: <http://www.hp.com/go/ddr3memory->

Memory

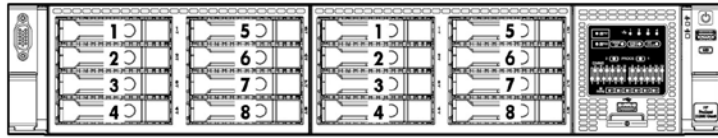
configurator.

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

Storage

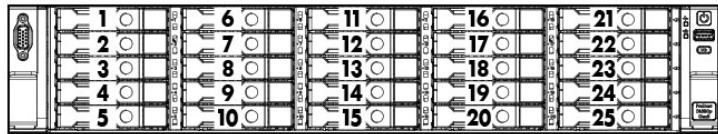


1-8 Eight SFF SAS hot plug drive bays

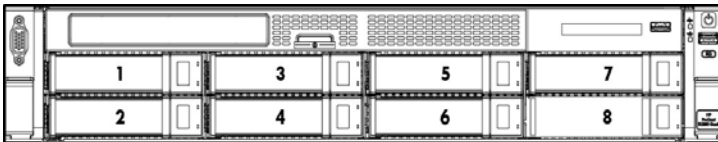


1-8, 1-8 Sixteen SFF SAS hot plug drive bays. Built-In Smart Array manages first 8 drives. Requires 2nd Smart Array Controller for second option of 8 drives.

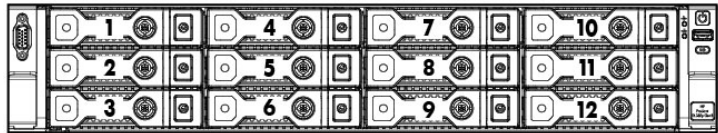
NOTE: This configuration does not support optical drive.



1-25 Twenty Five SFF SAS hot plug drive bays
NOTE: This configuration does not support SID or optical drive.



1-8 Eight LFF SAS hot plug drive bays.
NOTE: This configuration supports a pop-out SID.



1-12 Twelve LFF SAS hot plug drive bays
NOTE: This configuration does not support SID or optical drive.

Maximum Storage Capacity - (SAS/SATA HDD)

| | |
|----------|---|
| Internal | 48TB (12 x 4TB SATA LFF with twelve LFF drive bays) |
| External | 200TB (200 x 1TB SAS SFF) |
| Total | 248TB |

Technical Specifications

| | | | | |
|--|--|---|--|--|
| System Unit | Dimensions (H x W x D) (with bezel) | SFF Drives: 3.44 x 17.54 x 27.50 in (8.73 x 44.55 x 69.85 cm) | | |
| | | LFF Drives: 3.44 x 17.54 x 29.50 in (8.73 x 44.55 x 74.93 cm) | | |
| | Weight (approximate) | Maximum | 61.00 lb (27.66 kg) | |
| | | (all LFF hard drives, power supply, and processor installed) | | |
| | | Minimum | 41.0 lb (18.59 kg) | |
| | | (one SFF hard drive, power supply, and processor installed, ODD not installed) | | |
| | Input Requirements (per power supply) | Rated Line Voltage | 100 to 120 VAC | |
| | | | 200 to 240 VAC | |
| | | Rated Input Current | For 1200 W Power Supply: 10 A (at 100 VAC), 4.9 A (at 200 VAC) | |
| | | | For 750 W Power Supply: 8.9 A (at 100 VAC), 4.3 A (at 200 VAC) | |
| For 460 W Power Supply: 5.5 A (at 100 VAC), 2.6 A (at 200 VAC) | | | | |
| Rated Input Frequency | | | 50 to 60 Hz | |
| Rated Input Power | For 1200 W Power Supply: 930 W (at 100 VAC), 1348 W (at 200 VAC) | | | |
| | For 750 W Power Supply: 857 W (at 100 VAC), 824 W (at 200 VAC) | | | |
| | For 460 W Power Supply: 526 W (at 100 VAC), 505 W (at 200 VAC) | | | |
| BTU Rating | Maximum | For 1200 W Power Supply: 3530 BTU/hr (at 100 VAC), 4600 BTU/hr (at 200 VAC) For 750 W Power Supply: 2925 BTU/hr (at 100 VAC), 2812 BTU/hr (at 200 VAC) For 460 W Power Supply: 1794 BTU/hr (at 100 VAC), 1725 BTU/hr (at 200 VAC) | | |
| Power Supply Output (per power supply) | Rated Steady-State Power | For 1200 W Power Supply: 800 W (at 100 VAC), 900 W (at 120 VAC), 1200 W (at 200 to 240 VAC) | | |
| | | For 750 W Power Supply: 750 W (at 100 to 120 VAC), 750 W (at 200 to 240 VAC) For 460 W Power Supply: 460 W (at 100 to 120 VAC), 460 W (at 200 to 240 VAC) | | |
| | Maximum Peak Power | For 1200 W Power Supply: | | |

Technical Specifications

| | | |
|--|--|---|
| | | 800 W (at 100 VAC), 900 W (at 120 VAC), 1200 W (at 200 to 240 VAC) For 750 W Power Supply: 750 W (at 100 to 120 VAC), 750 W (at 200 to 240 VAC) For 460 W Power Supply: 460 W (at 100 to 120 VAC), 460 W (at 200 to 240 VAC) |
| System Inlet Temperature | Operating | 10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 304.8 m (1.8°F per every 1000 ft) above sea level to a maximum of 3048 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 10°C/hr (18°F/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 30°C (86°F). |
| | Non-operating | -30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr). |
| Relative Humidity (non-condensing) | Operating | 10% to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing. |
| | Non-operating | 5% to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing. |
| Altitude | Operating | 3048 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min). |
| | Non-operating | 9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min). |
| Acoustic Noise | Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109). The listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels. NOTE: The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels. | |
| | Idle | |
| | LWAd | 5.5 B |
| | LpAm | 37 dBA |
| | Operating | |
| | LWAd | 5.5 B |
| | LpAm | 37 dBA |
| Emissions Classification (EMC) | FCC Rating | Class A |
| | Normative Standards | CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC |

Technical Specifications

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.

| | | |
|---|---|--|
| HPE Smart Array P420i Controller | Dimensions | Embedded |
| | Disk Drive and Enclosure Interface - Transfer Rate | 6Gb/s SAS (Serial Attached SCSI) 3Gb/s SATA (Serial ATA) |
| | SAS Connectors | 2 internal 4X connectors |
| | Cache Memory Speed | DDR2-800MHz with 40 or 72-bit wide bus |
| | Server Interface | x4 PCIe 2.0 provides 2GB/s maximum bandwidth |
| | SAS Speed | (8) 6Gb/s SAS links provide 4.8GB/s maximum bandwidth |
| | Cache Memory | Zero Memory RAID has no cache memory 40-bit 256MB ECC protected cache (battery upgrade available) 72-bit 512MB BBWC or 72-bit 512MB and 1G FBWC Zero Memory, Up to 2 logical volumes (8 physical drives) |
| | Logical Drives Supported | Up to 64 logical drives with cache |
| | Host Memory Addressing | 64-bit, supporting greater than 4GB server memory space |
| | RAID Support | RAID 6, 60 (Advanced Data Guarding) RAID 5, 50 (Distributed Data Guarding) NOTE: A minimum of 512 MB cache is required to enable RAID 5, 50, 6, 60. NOTE: HPE Smart Array Advanced Pack (SAAP 2.0) is no longer required to enable RAID 6 & 60 (Advanced Data Guarding). However, controller must be in firmware version 4.68 (or later). RAID 1+0 (Striping & Mirroring) RAID 0 (Striping), RAID 1 (Mirroring) |
| | HPE Ethernet 1Gb 4-port 331FLR Adapter | Network Interface Compatibility |
| Data Transfer Method | | PCI Express, four lanes (x4) |
| Number of Ports | | 4 |
| Controller | | BCM5719 |
| Network Transfer Rate | | 10Base-T (Half-Duplex) 10 Mb/s per port, 40 Mb/s Combined |

Technical Specifications

| | | | |
|---|---|--|--|
| | | 10Base-T (Full-Duplex) | 20 Mb/s per port, 80 Mb/s Combined |
| | | 100Base-TX (Half-Duplex) | 100 Mb/s per port, 400 Mb/s Combined |
| | | 100Base-TX (Full-Duplex) | 200 Mb/s per port, 800 Mb/s Combined |
| | | 1000Base-TX (Half Duplex) | 1000Mb/s per port, 4000 Mb/s Combined |
| | | 1000Base-TX (Full Duplex) | 2000Mb/s per port, 8000 Mb/s Combined |
| | Connector | Two RJ-45 | |
| | Cable Support | 10Base-T | Categories 3, 4 or 5 UTP; up to 328 ft (100 m) |
| | | 10/100/1000Base-TX | Category 5 or higher UTP; up to 328 ft (100 m) |
| HPE Ethernet 10Gb 2-port 530FLR-SFP+ Adapter | Network Interface Compatibility | 10Base-T/100Base-TX/1000Base-TX | |
| | | EEE 802.3 10Base-T | |
| | | IEEE 802.3ab 1000Base-T | |
| | | IEEE 802.3u 100Base-TX | |
| | | IEEE 802.3ad 1000Base-TX | |
| | | IEEE 802.1p 100Base-TX | |
| | | IEEE 802.1q 100Base-TX | |
| | Data Transfer Method | PCI Express, four lanes (x4) | |
| | Controller | BCM57810S | |
| | Network Transfer Rate | 10Base-T (Half-Duplex) | 10 Mb/s |
| | | 10Base-T (Full-Duplex) | 20 Mb/s |
| | | 100Base-TX (Half-Duplex) | 100 Mb/s |
| | | 100Base-TX (Full-Duplex) | 200 Mb/s |
| | | 1000Base-TX (Half and Full-Duplex) | 2000Mb/s |
| | Connector | Two SFP+ | |
| | Cable Support | 10Base-T | Categories 3, 4 or 5 UTP; up to 328 ft (100 m) |
| | | 100Base-TX | Category 5 or higher UTP; up to 328 ft (100 m) |
| | | 1000BaseTX | Category 5 or higher UTP; up to 328 ft (100 m) |
| Environment-friendly Products and Approach | End-of-life Management and Recycling | Hewlett Packard Enterprise offers end-of-life HPE product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: http://www.hp.com/go/green . To recycle your product, please go to: http://www.hp.com/go/green or contact your nearest Hewlett Packard Enterprise sales office. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner. | |

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard Enterprise web site at: <http://www.hp.com/go/green>. These instructions may be used by recyclers and other WEEE treatment

Technical Specifications

facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

Summary of Changes

| Date | Version History | Action | Description of Change |
|-------------|------------------------|---------------|--|
| 23-Oct-2017 | From Version 47 to 48 | Changed | Care Pack naming and Service and Support- Parts and Materials updated. |
| 31-Mar-2016 | From Version 46 to 47 | Changed | Memory section was revised. |
| | | Removed | Obsolete SKUs were removed from the QuickSpecs. |
| 16-Feb-2016 | From Version 45 to 46 | Added | New Hard Drives offering was added to the HPE Hard Drives section. New HPE PCIe Workload Accelerator and HPE Disk Backup options were added. |
| | | Changed | Additional Options section was revised. |
| | | Removed | Obsolete SKUs were removed from the QuickSpecs. |
| | | Added | Smart Buy models were added to the NA version. |
| 17-Dec-2015 | From Version 44 to 45 | Added | Smart Buy models were added to the NA version. |
| 01-Dec-2015 | From Version 43 to 44 | Added | New Hard Drives offering was added to HPE Hard Drives section. Added new HPE PCIe Workload Accelerators. |
| | | Changed | What's New was updated. |
| | | Removed | Obsolete SKUs were removed from the QuickSpecs. |
| 28-Sep-2015 | From Version 42 to 43 | Added | Added new 6Gb SATA Solid State Drives. Added new HPE OneView management software. |
| | | Removed | Obsolete SKUs were removed from the QuickSpecs. |
| 17-Aug-2015 | From Version 41 to 42 | Added | New Solid State Drives offering was added to HPE Hard Drives section. |
| 01-Jun-2015 | From Version 40 to 41 | Added | New Hard Drives were added to Core Options. |
| | | Changed | Maximum Internal Storage section was revised. |
| | | Removed | Obsolete SKUs were removed from Core Options and Additional Options. |
| 30-Mar-2015 | From Version 39 to 40 | Added | Added new Hard Drives to Core Options. |
| | | Changed | What's New and Standard Features were revised. |
| | | Removed | Obsolete processors were removed from QuickSpecs. |
| 09-Feb-2015 | From Version 38 to 39 | Added | New Hard Drives, DirectFlow UPS, Rack and Tower G4 Models, LCD8500 1U Rackmount Models and Options were added to the Additional Options section. |
| | | Changed | Service and Support section was revised. HPE Uninterruptible Power Systems and HPE Rack Options in Additional Options section were revised. |
| 01-Dec-2014 | From Version 37 to 38 | Added | HPE 1.6TB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive and HPE 1.6TB 6G SATA Value Endurance LFF 3.5-in SC Converter Enterprise Value 3yr Wty Solid State Drive were added to HPE Hard Drives. |
| | | Removed | Proactive Care Services (U3N17E, U3N29E, and U3N32E), Collaborative Support, and Installation support (UD940E) were removed from HPE Pointnext operational services. |
| 01-Nov-2014 | From Version 36 to 37 | Changed | Version number was increased in sequence to match Product Bulletin version number. |
| 01-Nov-2014 | From Version 35 to 36 | Changed | Service and Support section was revised. |
| 29-Sep-2014 | From Version 34 to 35 | Added | New Solid State Drives were added. HPE Managed Power Distribution Units (maPDU) was added to Additional Options. |
| | | Changed | Service and Support section was revised. HPE Hard Drives was revised in Core Options section. |
| | | Removed | Obsolete part numbers were removed. |
| 09-Sep-2014 | From Version 33 to 34 | Changed | Minor change made to the Memory section. |
| 18-Aug-2014 | From Version 32 to 33 | Added | New Hard Drives were added. |

Summary of Changes

| | | | |
|-------------|-----------------------|---------|--|
| | | | HPE Remote mPDUs half height version were added. |
| | | Changed | Core Options, Additional Options |
| 10-Jun-2014 | From Version 31 to 32 | Added | Configuration Information – Factory Integrated Models – Note added to HPE ProLiant DL385p Gen8 12 LFF Configure-to-order Server and HPE ProLiant DL385p Gen8 25 SFF Configure-to-order Server. 12G SAS VE SFF (2.5-inch) SC EV Solid State Drives and 12G SAS VE LFF (3.5-inch) SCC EV Solid State Drives were added to Hard Drives. Light Endurance (LE) PCIe Workload Accelerators was added to HPE PCIe Workload Accelerator Options. HPE RDX500 USB3.0 External Disk Backup System, HPE RDX1000 USB3.0 External Disk Backup System, HPE RDX 2TB USB3.0 External Disk Backup System and HPE RDX USB3.0 External Docking Station were added to HPE RDX Removable Disk Backup System. HPE RDX Removable Disk Backup Systems DL Module was added to HPE Disk Backup. |
| | | Changed | Core Options, Additional Options and Memory were revised. HPE Remote Monitoring Power Distribution Units (mPDU) was revised. |
| | | Removed | HPE 8GB (1x8GB) Dual Rank x4 PC3U-10600R (DDR3-1333) Registered CAS-9 Ultra Low Voltage Memory Kit and HPE 16GB (1x16GB) Dual Rank x4 PC3U-10600R (DDR3-1333) Registered CAS-9 Ultra Low Voltage Memory Kit were removed from Memory. 800GB 6G SAS Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive, 200GB 6G SAS Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive, 400GB 6G SAS SLC SFF (2.5-inch) SC Enterprise Performance 3yr Warranty Solid State Drive and 200GB 6G SAS SLC SFF (2.5-inch) SC Enterprise Performance 3yr Warranty Solid State Drive were removed from Hard Drives. |
| 09-May-2014 | From Version 30 to 31 | Changed | Service and Support, Storage Controllers, Disk Enclosures, and Basic and Remote Monitoring Power Distribution Units were revised. |
| 31-Mar-2014 | From Version 29 to 30 | Changed | Hard Drives, HPE InfiniBand, Insight Software, Storage Controllers, Tape Backup, Storage Options, Rack Options, and HPE Care Pack Series were revised. |
| 07-Mar-2014 | From Version 28 to 29 | Changed | Changes were made in the North America and Canada versions. |
| 01-Mar-2014 | From Version 27 to 28 | Changed | Changes were made in the North America and Canada versions. |
| 18-Feb-2014 | From Version 26 to 27 | Changed | Hard Drives, HPE InfiniBand, HPE Rack Options, and Storage Controllers were revised. |
| 23-Jan-2014 | From Version 25 to 26 | Changed | Changes made to the North America and Canada versions only. |
| 13-Dec-2013 | From Version 24 to 25 | Changed | Processors and Converged Infrastructure Management Software were revised HPE 1.2TB 6G SAS 10k rpm SFF SC Dual Port Enterprise 3yr Warranty Hard Drive was added and 3G SATA MLC Hot Plug SFF and LFF Enterprise Mainstream Solid State Drives were removed from Hard Drives HPE Basic Power Distribution Units and HPE Remote Monitoring Power Distribution Units were revised in Additional Options First Generation Accelerators were removed from I/O Accelerator Options |

Summary of Changes

| | | | |
|-------------|-----------------------|---------|--|
| | | | HPE Power Distribution Units was removed from Additional Options HPE SmartCache and HPE H221 PCIe 3.0 SAS Host Bus Adapter were added to Storage Controllers |
| 15-Nov-2013 | From Version 23 to 24 | Changed | Minor change made to the Core Options/ Hard Drives Section. |
| 10-Oct-2013 | From Version 22 to 23 | Added | Converged Infrastructure Management Software was added HPE 600GB 6G SATA Value Endurance SFF and LFF SC Enterprise Value Solid State Drives and HPE 300GB 6G SATA Value Endurance SFF and LFF SC Enterprise Value Solid State Drives were added to Hard Drives HPE Ethernet 10Gb 2-port 570SFP+ Adapter and HPE Ethernet 10Gb 2-port 570FLR-SFP+ Adapter were added to Networking Mainstream Endurance (ME) PCIe Workload Accelerators were added to HPE PCIe Workload Accelerator Options HPE Remote Monitoring Power Distribution Units were added to Additional Options HPE 8GB SD Enterprise Mainstream Flash Media Kit was added to HPE USB and SD Options |
| 10-Sep-2013 | From Version 21 to 22 | Changed | Models, Core Options, and Additional Options were revised. |
| 24-Jul-2013 | From Version 20 to 21 | Changed | Supported Memory and Bandwidth chart was revised in the Memory section. |
| 15-Jul-2013 | From Version 19 to 20 | Changed | HPE Disk Backup was revised in Additional Options. |
| 17-May-2013 | From Version 18 to 19 | Changed | Changes made to the following Sections Standard Features- Maximum Internal Storage Configuration Information- Step 3, HPE Insight Software Core Options- HPE Unique Options, HPE Hard Drives, HPE Infiniband, HPE I/O Expansion Options Additional Options- HPE PCIe Workload Accelerator, HPE Storage Controllers, HPE Intelligent Power Distribution Units (iPDU), HPE Basic Power Distribution Units, HPE Rack Options, HPE USB and SD Options, HPE Pointnext operational services |
| 05-Apr-2013 | From Version 17 to 18 | Added | Additional Options: Added Note to HPE Tape Backup section. |
| 25-Mar-2013 | From Version 16 to 17 | Added | Configurations Options: Added a NOTE to the HPE Power Supplies section. Core Options: Added a NOTE to the HPE Power Supplies section. |
| | | Removed | Additional Options: Removed 641027-B21, 600282-B21 and 600279-B21 from the HPE I/O Accelerator Options section. |
| 15-Mar-2013 | From Version 15 to 16 | Changed | Changes made to the following sections: Models Configuration Information - Step 1 Core - HPE Optical Drives |
| 27-Feb-2013 | From Version 14 to 15 | Changed | Changes made to the Optional Features, Core and Additional options sections. |
| 19-Feb-2013 | From Version 13 to 14 | Changed | Changes made to the Models, Configuration Information and Options sections. |
| 12-Dec-2012 | From Version 12 to 13 | Changed | Changes made to the North America and Canada versions only. |
| 10-Dec-2012 | From Version 11 to 12 | Changed | Correction was made to remove a duplication in the Processors section of Standard Features. |
| 04-Dec-2012 | From Version 9 to 11 | Changed | Changes were made throughout the QuickSpecs. |
| 28-Sep-2012 | From Version 8 to 9 | Changed | Change made throughout the Quick Spec. |
| 24-Sep-2012 | From Version 7 to 8 | Changed | Change made in Standard Features, Optional Features and Technical Specifications sections. |
| 31-Aug-2012 | From Version 6 to 7 | Changed | Change made in Models, Configuration Information and Additional Options sections. |
| 27-Aug-2012 | From Version 5 to 6 | Changed | Change made in Standard Features section. |

Summary of Changes

| | | | |
|-------------|---------------------|---------|---|
| 22-Aug-2012 | From Version 4 to 5 | Changed | Changes made in Technical Specifications. |
| 17-Aug-2012 | From Version 3 to 4 | Changed | Changes made throughout the QuickSpecs. |
| 09-Jul-2012 | From Version 2 to 3 | Changed | Changes made in the North America and Canada versions only. |
| 15-Jun-2012 | From Version 1 to 2 | Changed | Changes made in Configuration Information and Core Options. |



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

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