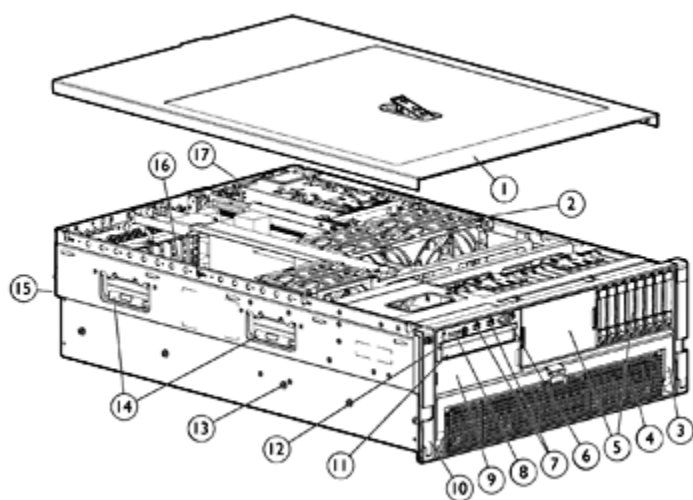
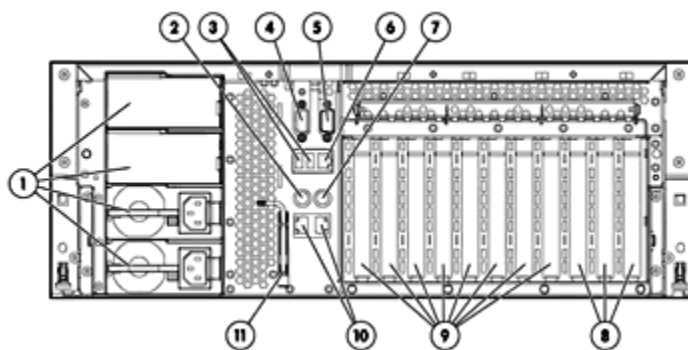


Overview



Front View:

1. Quick Removal Access Panel
2. Six Hot Plug Redundant Fans Standard on all models
3. Front accessible Processor and memory drawer
4. Support for up to four Quad-Core Intel® Xeon® Processors
5. Support for up to 16 Small Form-Factor (SFF) SAS or Serial ATA (SATA) drives
6. One front video port
7. Two front accessible USB 2.0 ports
8. Front Panel LED Display and Power Button
9. Half-height tape bay
10. Quick release levers for fast server access
11. Slimline Drive (DVD Drive standard)
12. Slide-out Systems Insight Display
13. Universal Tool-less "Snap In" Sliding Rail Solution
14. Server Lifting Handles
15. 4U (7" Height) Rack Form Factor
16. Up to eleven Available PCI Express/PCI-X Internal Expansion Slots. Eight Standard: (4) full length PCI-E x8, (1) full length PCI-E x4 and (3) half length PCI-Ex4 slots. Optional Expansion for up to (3) PCI-X or (3) PCI-E x8
17. Hot Plug Redundant Power Supplies (two standard with 2P Models, requires four for redundancy)



Rear View:

1. Power supplies (2 ship standard in 2P Models; 4 ship standard in 4P Models)
2. Keyboard port
3. Two USB ports
4. Video port
5. Serial port
6. Integrated Lights-Out 2 port
7. Mouse port
8. PCI-Express or PCI-X option (slots 1-3)
9. PCI-Express slots (slots 4-11)
10. Two Multifunction Gigabit NICs
11. Service tool

What's New

- Optional -48V DC power supply
- New 300GB SFF SAS drives supported

At A Glance

The HP ProLiant DL580 G5 is the best in class platform for virtualization, combining Intel's newest Xeon® processor technology, maximum scalability and high availability features. This 4-socket server offers unsurpassed flexibility and

Overview

serviceability in a versatile, 4U rack-optimized form factor. Based on the latest industry standard technologies, the DL580 G5 provides the highest levels of performance demanded by today's compute intensive applications.

- **Processors:**
 - 6-Core Intel® Xeon® 7400 or 7300 series processors
 - Supports up to four Intel® Xeon® 7400-, 7300-sequence or Intel® Dual-Core Xeon® processor E7220
 - Intel Core™ Microarchitecture with Intel Virtualization Technology FlexMigration
 - Industry Standard Intel® 7300 Chipset with four high-speed interconnects at 1066 MT/s
- **Memory:**
 - PC2-5300 Fully Buffered DIMMs (DDR2-667)
 - Can be configured in Mirrored, Online Spare, or Advanced ECC modes
- **Storage Controller:**
 - 2P Base Models: HP Smart Array P400i/256MB Controller (optional 512MB BBWC upgrade)
 - 4P Base Models: HP Smart Array P400i/512MB BBWC Controller
- **Internal Drive Support:**
 - Support for up to 16 hot plug SFF SAS drives
 - Slimline DVD Drive standard, Half-height Tape Drive optional on all models
- **Network Controller:**
 - Two embedded NC373i Multifunction Gigabit Network Adapters with TCP/IP Offload Engine, including support for Accelerated iSCSI through an optional Licensing Kit
- **Expansion Slots:**
 - More PCI-Express slots with up to eleven available with option card
 - Eight slots standard: (4) full length PCI-E x8, (1) full length PCI-E x4 and (3) half length PCI-E x4 slots; Optional card adds (3) PCI-X or (3) PCI-E x8
- **USB 2.0 Ports:**
 - 5 Total: (2) front, (2) rear, (1) internal
- **Redundancy:**
 - Rear accessible Hot Plug Power Supplies with option for Redundancy (Redundant power supplies are standard on some models)
 - Hot Plug Fans with full redundancy
- **Infrastructure Management:**
 - Convenient slide-out Systems Insight Display for quick and easy front view server diagnostics, along with status LEDs, Automatic Server Recovery (ASR), ROM Based Setup Utility (RBSU)
 - HP ProLiant Onboard Administrator (powered by the Integrated Light-Out 2 management processor) for simplified server setup, health monitoring and recovery, power and thermal control, and lights-out remote administration
 - HP Insight Control (ICE) suites, as product options, deliver essential infrastructure management that can help save time and money by making it easy to deploy, monitor, control and optimize your IT infrastructure through a single, simple management console. ICE suites support both Windows and Linux-based servers and management consoles.
 - HP Insight Dynamics - VSE suite for ProLiant servers, a product option, is an integrated command center that enables you to continuously analyze and optimize your adaptive infrastructure. This advanced infrastructure management software lets you reduce the cost of common data center tasks by as much as 40 percent while keeping pace with your changing business
- **Form Factor:**
 - Dense form factor - 4U rack models
- **Operating Systems:**
 - Supports Windows, RHEL, SLES, OEL, Solaris, NetWare VMware, and HP Citrix Essentials for XenServer
- **Deployment/Serviceability:**
 - Front and rear video ports
 - Front accessible Processor, Processor Power Modules and Memory allow server to stay safely secured in the rack during servicing
 - Quick Deploy Rail System includes sliding universal rails, an ambidextrous cable management arm and quick release levers for fast and easy serviceability and in-rack tool-less access to major components
 - Tool-less access to all system components for easy in rack serviceability
 - Customer Self Repair (CSR): HP products are designed with many CSR parts to minimize repair time and allow for greater flexibility in performing defective parts replacement
- **Warranty:**

Overview

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

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

Standard Features

NOTE: For a brief, printer friendly data sheet that describes this product and informs you of the essential capabilities and specifications, please visit: <http://h71028.www7.hp.com/ERC/downloads/4AA1-3911ENW.pdf>

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

Processor

One or more of the following depending on model

6-Core Processors

- 6-Core Intel® Xeon® X7460 Processor (2.67 GHz, 16MB cache, 130Watts)
- 6-Core Intel® Xeon® L7455 Processor (2.13 GHz, 12MB cache, 65Watts)
- 6-Core Intel® Xeon® E7450 Processor (2.40 GHz, 12MB cache, 90 Watts)

Quad-Core Processors

- Quad-Core Intel® Xeon® E7440 Processor (2.40 GHz, 16MB cache, 90 Watts)
- Quad-Core Intel® Xeon® E7430 Processor (2.13 GHz, 12MB cache, 90 Watts)
- Quad-Core Intel® Xeon® E7420 Processor (2.13 GHz, 8MB cache, 90 Watts)
- Quad-Core Intel® Xeon® X7350 Processor (2.93 GHz, 2x4M cache, 130 Watts)
- Quad-Core Intel® Xeon® E7340 Processor (2.40 GHz, 2x4M cache, 80 Watts)
- Quad-Core Intel® Xeon® E7330 Processor (2.40 GHz, 2x3M cache, 80 Watts)
- Quad-Core Intel® Xeon® E7320 Processor (2.13 GHz, 2x2M cache, 80 Watts)
- Quad-Core Intel® Xeon® E7310 Processor (1.60 GHz, 2x2M cache, 80 Watts)
- Quad-Core Intel® Xeon® L7345 Processor (1.86 GHz, 2x4M cache, 50 Watts)

Dual-Core Processors

- Dual-Core Intel® Xeon® E7220 Processor (2.93 GHz, 2x4M cache, 80 Watts)

Chipset

Industry Standard Intel® 7300 Chipset

NOTE: For more information regarding Intel chipsets, please see the following URL: <http://www.intel.com/products/server/chipsets/>

Memory Protection

- Advanced ECC
- Mirrored Memory
- Online Spare Memory

Memory

One of the following depending on Model

- | | |
|---------------------------------------|--|
| Type | PC2-5300 Fully Buffered DIMMs (DDR2-667) |
| Standard (2P Base Models) | 4 GB (4x 1 GB) |
| Standard (4P Base Models) | 8 GB (4 x 2 GB) |
| Standard (4P High Performance Models) | 16 GB (8 x 2 GB) |
| Maximum | 256 GB |

NOTE: 256 GB achieved with use of four memory cartridges and (32) 8 GB Memory Modules.

Network Controller

Two embedded NC373i Multifunction Gigabit Network Adapters with TCP/IP Offload Engine, including support for Accelerated iSCSI through an optional ProLiant Essentials Licensing Kit

Standard Features

| Expansion Slots | | | | | | | |
|-------------------------------------|------------------|-------------|-------|------------------|--------------|-------------|-------|
| Expansion Slots with No Option Card | Expansion Slot # | Technology | Width | Connector Width* | Bus Number** | Form Factor | Notes |
| | 1 | N/A | N/A | N/A | N/A | N/A | N/A |
| | 2 | N/A | N/A | N/A | N/A | N/A | N/A |
| | 3 | N/A | N/A | N/A | N/A | N/A | N/A |
| | 4 | PCI Express | x8 | x16 | 12h | FH/FL | |
| | 5 | PCI Express | x8 | x16 | 12h | FH/FL | |
| | 6 | PCI Express | x8 | x16 | 12h | FH/FL | |
| | 7 | PCI Express | x8 | x16 | 24h | FH/FL | |
| | 8 | PCI Express | x4 | x8 | 24h | FH/FL | |
| | 9 | PCI Express | x4 | x8 | 24h | LP | |
| | 10 | PCI Express | x4 | x8 | 24h | LP | |
| | 11 | PCI Express | x4 | x8 | 24h | LP | |

* Default bus assignment. Inserting cards with PCI bridges may alter the actual bus assignment number.
 ** Slots are enumerated differently based on OS. MS OS's enumerate from lowest to highest Device ID by bus (starting with the lowest bus).
 FL= Full length; FH = Full height; LP = low-profile.

| Expansion Slots | | | | | | | |
|--|------------------|-------------|--------|------------------|--------------|-------------|--------|
| Expansion Slots with PCI-X Option Card | Expansion Slot # | Technology | Width | Connector Width* | Bus Number** | Form Factor | Notes |
| | 1 | PCI-X | 64-bit | N/A | 41h | FH/FL | 100MHz |
| | 2 | PCI-X | 64-bit | N/A | 41h | FH/FL | 100MHz |
| | 3 | PCI-X | 64-bit | N/A | 41h | FH/FL | 100MHz |
| | 4 | PCI Express | x8 | x16 | 12h | FH/FL | |
| | 5 | PCI Express | x8 | x16 | 12h | FH/FL | |
| | 6 | PCI Express | x8 | x16 | 12h | FH/FL | |
| | 7 | PCI Express | x8 | x16 | 24h | FH/FL | |
| | 8 | PCI Express | x4 | x8 | 24h | FH/FL | |
| | 9 | PCI Express | x4 | x8 | 24h | FH/FL | |
| | 10 | PCI Express | x4 | x8 | 24h | LP | |
| | 11 | PCI Express | x4 | x8 | 24h | LP | |

* Default bus assignment. Inserting cards with PCI bridges may alter the actual bus assignment number.
 ** Slots are enumerated differently based on OS. MS OS's enumerate from lowest to highest Device ID by bus (starting with the lowest bus).
 FL= Full length; FH = Full height; LP = low-profile.

Standard Features

| Expansion Slots | | | | | | | |
|--|------------------|-------------|-------|------------------|--------------|-------------|-------|
| Expansion Slots with PCI Express x8 Card | Expansion Slot # | Technology | Width | Connector Width* | Bus Number** | Form Factor | Notes |
| | 1 | PCI Express | x8 | x16 | 42h | FH/FL | |
| | 2 | PCI Express | x8 | x16 | 42h | FH/FL | |
| | 3 | PCI Express | x8 | x16 | 42h | FH/FL | |
| | 4 | PCI Express | x8 | x16 | 12h | FH/FL | |
| | 5 | PCI Express | x8 | x16 | 12h | FH/FL | |
| | 6 | PCI Express | x8 | x16 | 12h | FH/FL | |
| | 7 | PCI Express | x8 | x16 | 24h | FH/FL | |
| | 8 | PCI Express | x4 | x8 | 24h | FH/FL | |
| | 9 | PCI Express | x4 | x8 | 24h | LP | |
| | 10 | PCI Express | x4 | x8 | 24h | LP | |
| | 11 | PCI Express | x4 | x8 | 24h | LP | |

* Default bus assignment. Inserting cards with PCI bridges may alter the actual bus assignment number.
 ** Slots are enumerated differently based on OS. MS OS's enumerate from lowest to highest Device ID by bus (starting with the lowest bus).
 FL= Full length; FH = Full height; LP = low-profile.

| | | |
|--|----------------|---|
| Storage Controller One of the following depending on Model | 2P Base Models | HP Smart Array P400i/256 MB Controller |
| | 4P Base Models | HP Smart Array P400i/512 MB BBWC Controller |

| | |
|--------------------------------|---|
| Storage Data Protection | The Battery-Backed Write Cache (BBWC) Enabler for the Smart Array P400i Controller protects up to 512-MB write cache memory from hard boot, power, controller, or system board failures. <ul style="list-style-type: none"> • Standard on 4P Base Models, optional with others • Battery charge/life: Up to 72 hours/3 years • Transportable data protection • Increases overall controller performance |
|--------------------------------|---|

| | | |
|----------------|---------------------------|--|
| Storage | Optical Drive | Slimline DVD Drive standard |
| | Hard Drives | None ship standard |
| | Hard Disk Drive Backplane | Internal SAS backplane supports up to eight SFF hard disk drives. Optional second SAS backplane supports additional eight SFF hard drives. |

| | | | |
|--------------------------------------|-------------------|-------|------------|
| Maximum Internal Storage Type | Hot Plug SFF SAS | 8.0TB | 16 x 500GB |
| | Hot Plug SFF SATA | 8.0TB | 16 x 500GB |

Standard Features

| | | |
|-------------------|-------------------------|--|
| Interfaces | Serial | 1 |
| | Pointing Device (Mouse) | 1 |
| | Video | 1 front; 1 rear |
| | Keyboard | 1 |
| | USB 2.0 Ports | 5 total: 2 front; 2 rear; 1 internal |
| | | NOTE: Please see the following URL for additional information regarding USB support: http://h18004.www1.hp.com/products/servers/platforms/usb-support.html |
| | iLO2 Remote Management | 1 |
| Network RJ-45 | 2 | |

| | |
|-----------------|--|
| Graphics | Integrated ATI ES1000 with 32MB embedded video SDRAM Max Resolution 1280 x 1024 x 16M color |
|-----------------|--|

| | |
|--------------------|--|
| Form Factor | Rack (4U = 7 inches), ships with Quick Deploy Sliding Rail System, an ambidextrous cable management arm and quick release levers for fast and easy serviceability and in-rack tool-less access to major components. Space saving form factor (4U) provides space efficiencies while providing maximum deployment flexibility. |
|--------------------|--|

| | | |
|----------------------------|--------------------------------|---|
| HP Insight Software | HP Insight Foundation | Managing the growing number of servers can be complex and expensive for your organization. IT managers need to address changing business needs with tools that meet the challenges of managing today's complex Datacenters. HP provides management solutions that are designed to simplify a server's installation, configuration and maintenance throughout the entire server lifecycle. This provides the customer with higher levels of operational efficiency and highly reliable systems: www.hp.com/go/foundation . The foundation pack includes: <ul style="list-style-type: none"> ● HP SmartStart ● HP Management ● HP ProLiant Firmware Maintenance SmartStart version supported (minimum): SmartStart 7.91. http://www.hp.com/servers/smartstart |
| | ProLiant Onboard Administrator | HP ProLiant Onboard Administrator (powered by the HP Integrated Lights-Out 2 management processor) simplifies server setup, health monitoring, power and thermal control, and lights-out remote administration of ProLiant ML, DL, and BL servers. HP ProLiant Onboard Administrator functions without additional software, and can be accessed from any location via a web browser. It works hand-in-hand with HP Systems Insight Manager, Insight Control suites, and the Insight Dynamics-VSE suite helping customers unlock the value of the ProLiant platform and deliver the highest possible quality of IT service to the business. See www.hp.com/go/ProLiantOA |
| | HP Insight Control suites | HP Insight Control suites, as product options, deliver essential infrastructure management that can help save time and money by making it easy to deploy, monitor, remote control, and optimize your IT |

Standard Features

infrastructure through a single, simple management console. Insight Control suites install and license software modules that are integrated into HP System Insight Manager.

Two Insight Control suites are available, to serve environments requiring either Linux-based or Windows-based central management servers: HP Insight Control suite for Linux, and HP Insight Control suite. See www.hp.com/go/insightcontrol

HP Insight Control suites include one year of 24 x 7 HP Software Technical Support and Update Service ensuring rapid access to HP support staff and proactive delivery of software updates. For more information about this service, please visit: <http://www.hp.com/services/insight>.

HP Insight Dynamics - VSE suite

The HP Insight Dynamics - VSE suite for ProLiant, a product option, is an integrated command center that enables you to continuously analyze and optimize your adaptive infrastructure. This advanced infrastructure management software that allows you to analyze and optimize your adaptive infrastructure to manage physical and virtual resources in the same way. HP Insight Dynamics - VSE gives you a powerful toolkit to accelerate complex technology projects and simplify daily operations. It enables you to plan capacity and power continuously, balance across physical and virtual resources, ensure cost-effective high availability, and provision infrastructure consistently.

HP Insight Orchestration, an optional extension to Insight Dynamics - VSE, enables IT organizations to provision infrastructure consistently and automatically from pools of shared resources using a self-service portal. Resources provisioned can range from a single virtual machine to complex multi-tier environments and their associated physical and virtual resource requirements.

HP Insight Recovery, also an optional extension for Insight Dynamics - VSE, enables cost-effective disaster recovery for physical and virtual environments. Application environments can be reactivated in minutes with the touch of a button to a remote location

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

Industry Standard Compliance

ACPI 2.0. Compliant
PCIe 1.0a Compliant
PXE Support
WOL Support
Physical Address Extension (PAE) Support
Microsoft® Logo certifications
USB 2.0 Support

Standard Features

Intelligent Manageability

HP Systems Insight Manager
SmartStart
Redundant ROM
Remote Flash ROM
Management Agents
Integrated Management Log (IML)
Automatic Server Recovery-2 (ASR-2)
ROM-Based Setup Utility (RBSU)
Dynamic Sector Repairing (with Smart Array Controllers)
Drive Parameter Tracking (with Smart Array Controllers)
Pre-Failure Warranty (covers processors, SAS hard drives and memory)
Redundant/adaptive load balancing NIC Support
Hot Spare Boot

NOTE: Upon the event of a failed processor or Processor Power Module (PPM) in a multi-processing environment, the system will automatically reboot and use the remaining good processor(s).

Availability

HP Advanced Memory Protection Technology - delivers unsurpassed memory protection and server availability with the following supported modes of operation:

- **Advanced ECC**
Advanced ECC Memory is the default memory protection mode for the HP ProLiant DL580 G5. In Advanced ECC, the server is protected against correctable memory errors. The server will provide notification if the level of correctable errors exceeds a predefined threshold rate. The server does not fail because of correctable memory errors. Advanced ECC provides additional protection over Standard ECC in that it is possible to correct certain memory errors that would otherwise be uncorrectable and result in server failure. Whereas Standard ECC can correct single-bit memory errors, Advanced ECC can correct single-bit and multi-bit memory errors if all failed bits are on the same DRAM device on the DIMM.
- **Online Spare Memory**
Offers a higher level of memory protection than Advanced ECC alone. If the number of single-bit correctable errors on a bank exceeds the pre-defined error threshold, that bank will fail over to the online spare bank without intervention or server interruption. The failed memory can then be replaced at the user's convenience during a scheduled maintenance window.
Online Spare Memory is achieved by protecting active memory with online spare memory on the same memory board. No operating system support is required.
- **Mirrored Memory**
Mirrored Memory provides a higher level of availability than Advanced ECC and Online Spare Memory. With Mirrored Memory, the server is protected against uncorrectable memory errors that would otherwise result in server failure. Mirrored Memory allows the server to keep two copies of all memory data. If an uncorrectable error is encountered, the proper data is retrieved from the copy of memory that did not fail.
- Smart Array P400i Controller with optional Battery Backed Write Cache (BBWC) Enabler provides transportable data protection and increases overall controller performance. Up to 512MB Battery Backed Write Cache protection optional on HP ProLiant DL580 G5 (512MB BBWC ships standard with 4P Base Models).
- Hot Plug Redundant Fans - Six Hot Plug Redundant Fans ship standard with all models.
- Front Accessible Chassis - Redesigned chassis allows access to memory, processors and hard drives from the front of the server while it remains safely engaged in the rack. This provides easier serviceability and lowers the chance of interfering with neighboring servers' cables and components.
- Hot Plug Universal Drives - Up to sixteen Hot Plug Universal SFF SAS drives are supported.
- Hot Plug Redundant Power Supplies - Four Hot Plug Redundant Power Supplies ship standard with all 4P Base Models (Hot Plug Redundant Power Supplies are optional with 2P Base models).

Standard Features

Serviceability

- Front and Rear accessibility provides unsurpassed serviceability by allowing the server to remain safely secured in the rack while maintaining Hot Plug Universal Hard Drives, Hot Plug Redundant Power Supplies, Memory, as well as Processors and Processor Power Modules.
 - Innovative Diagnostic Lighting
 - Systems Insight Display - precisely depicts all major subsystems of the server (Processors, Memory, CPU, Fans, Processor Power Modules (PPMs), circuit board Interlock, over-temperature status) and gives instant visual indication of fault status.
 - Tool-less interior design
 - Tool-less access to interior of server
 - Rear Access to Hot Plug Redundant Power Supplies
 - PCI Card Guides locks full length PCI cards in place
 - Six individually removable fans connect without cables to the system board
 - Processor Retention Cage securely locks Processors into their sockets
 - Tool-less removal of system board
 - Quick Deploy Rails
 - Tool-less design "snap in" rail and ambidextrous cable management arm
-

Security

Power-on password
Keyboard password
External USB port enable/disable
Network Server Mode
Serial interface control
Administrator's password
Removable CD-ROM or DVD drive

Server Power Cords

NOTE: If customers require a local power cord, they can check the power cord matrix for the appropriate county specific sku. Please see the following power cord matrix for details:
<http://www.hp.com/go/powercordmatrix>

Power Supply

800/1200W AC Power Supply

NOTE: Two Hot Plug Power Supplies ships standard with 2P Base Models (optional Redundant Hot Plug Power Supply Option Kit). Four Hot Plug Power Supplies ship standard with 4P Base Models. Configurations with 3 or 4 processors that will use lowline (110V) input power require four Hot Plug Power Supplies.

Power Supply Requirement Override

NOTE: Customers unable to support four power supply configurations may be power redundant with two power supplies. HP has implemented a selection in ROM set up (RBSU) that lets the customer that has verified their two supply configuration is redundant with the Active Answers Power Calculator the option to override the four power supply redundancy enforced rules. The Active Answers Power Calculator is available via the online tool located at URL:
<http://h30099.www3.hp.com/configurator/calc/Power%20Calculator%20Catalog.xls>

UPS and PDU Power Cord Matrix

Please see the UPS and PDU cable matrix's on the HP Power Protection and Management page. Under Power Cords, click on the "HP Power Cord Matrix" link. That link will list cable descriptions, requirements, and specifications for UPS and PDU units. Please see the following link:
www.hp.com/products/powercords.

Standard Features

System Fans 6 Hot plug, redundant fans (individually removable) ship standard

Required Cabling For required cabling information, refer to the HP Web site at: www.hp.com/servers/dl580.

Operating Systems and Virtualization Software Support for ProLiant Servers [Microsoft Windows Server](#)
[Microsoft Windows Server Hyper V](#)
[Red Hat Enterprise Linux \(RHEL\)](#)
[SUSE Linux Enterprise Server \(SLES\)](#)
[Oracle Enterprise Linux \(OEL\)](#)
[Solaris 10 for x86/x64 based Systems](#)
[NetWare](#)
[VMware](#)
[Citrix Essentials for XenServer](#)

NOTE: For more information on HP's Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server, please visit our Support Matrix at: <http://www.hp.com/go/ossupport> and our driver download page www.hp.com/support/DL580G5.

Rack Airflow Requirements

Rack 10000 G2 series Cabinets

The increasing power of new high-performance processor technology requires increased cooling efficiency for rack-mounted servers. The 10000 G2 Series Racks provide enhanced airflow for maximum cooling, allowing these racks to be fully loaded with servers using the latest processors.

CAUTION: If a third-party rack is used, observe the following additional requirements to ensure adequate airflow and to prevent damage to the equipment:

- **Front and rear doors:** If your 42U server rack includes closing front and rear doors, you must allow 830 square inches (5,350 sq cm) of holes evenly distributed from top to bottom to permit adequate airflow (equivalent to the required 64 percent open area for ventilation).
- **Side:** The clearance between the installed rack component and the side panels of the rack must be a minimum of 2.75 inches (7 cm).

CAUTION: Always use blanking panels to fill all remaining empty front panel U-spaces in the rack. This arrangement ensures proper airflow. Using a rack without blanking panels results in improper cooling that can lead to thermal damage.

NOTE: For additional information, refer to the Setup and Installation Guide or the Documentation CD provided with the server, or to the server documentation located in the Support section at the following URL: <http://www.hp.com/servers/dl580>.

Rack Kit

Quick deploy rail system provides tool-free support for racks with square or round mounting holes (including Compaq/HP 7000, 9000, 10000 G2 and HP series), with an adjustment range of 24" - 36". The ambidextrous cable management arm can be mounted on either the left or right side for improved cable management.

NOTE: Cable management arm must be removed to access Hot Plug Power Supplies when the cable management arm is mounted on the right.

Telco Rack Support

Support for all 2-post Telco racks requires the use of the standard rack kit and an additional option kit from Rack Solutions at: <http://www.racksolutions.com/hp/>

Standard Features

Factory Express Portfolio for Servers and Storage

HP Factory Express offers configuration, customization, integration and deployment services for HP 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. HP products supported through Factory Express include a wide array of servers and storage: HP Integrity, HP ProLiant, HP ProLiant Server Blades, HP BladeSystem, HP 9000 servers as well as the MSAxxxx, VA7xxx, EVA, XP, rackable tape libraries and configurable network switches.

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

HP Enterprise Configurator

The HP eConfigure-Enterprise Configurator now provides factory default racking for our HP hardware portfolio. This approach is aligned with our strategic direction to meet the needs and expectations of our valued customers. If you require "custom" rack configuration, please contact HP's Customer Business Center or an Authorized Partner for assistance.
<http://www.hp.com/products/configurator>.

Service and Support

HP Care Pack services provide total care and support expertise with committed response designed to meet your IT and business needs.

HP Care Pack services include coverage for the HP branded hardware options qualified for the server and purchased at the same time or afterward that are internal to the enclosure. This also includes the 22" and smaller external monitors and tower UPS options up to 3kVA. These items will be covered at the same service level and for the same coverage period as the server. Coverage of UPS Battery is not included, and standard warranty terms & conditions apply. For servers or storage systems installed within a rack, service also covers all HP qualified rack options installed within the same rack.

To fully capitalizing on your HP ProLiant servers' capabilities requires a service partner who thoroughly understands your server technology and systems environment. HP Services, an industry leader in provision of multi vender support solutions, provides a range of support services designed to meet the varying needs of your business. Whether an SMB, or large global corporation, HP has a ProLiant server support offer to help you speedily deploy and maximize system uptime.

Recommended Service - simplify ProLiant solution implementation, maintenance, and management.

- Support: 3-Year 4-Hour response 24x7 Same Business Day Coverage only
- Deployment Service: Installation and Start up only

Enhanced Service - optimize service level to increase IT performance and availability.

- Support: 3-Year Support Plus 24 only

Refer to the information on "Installation & Start-Up" for service on ProLiant server and Microsoft or Linux O/S per the Customer Description and/or Data Sheet; to be delivered on a scheduled basis 8am-5pm, M-F, excluding HP holidays.

NOTE: For a complete listing of service offerings and information visit:

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

<http://www.hp.com/go/proliant/carepack>

Solutions

Solutions

The ProLiant DL580 G5 server is an enterprise class, 4 socket server designed for maximum scalability and high availability. Its innovative chassis offers unsurpassed flexibility and serviceability in a versatile form factor. Based upon the latest industry standard processing, memory, I/O and networking technologies, the ProLiant DL580 G5 provides the highest levels of performance demanded by today's compute intensive applications. Unparalleled high availability features, including hot-plug and redundant components, guarantee maximum uptime. Integrated Lights-Out 2 (iLO2) technology allows remote administration from a standard web browser without ever having to visit the server. Within the 4U dense form factor, it's highly expandable architecture provides maximum application deployment flexibility with the ability to add PCI-Express, PCI-X or battery-backed write cache options. Innovative features, such as the ability to access processors, memory, hard drives, and power supplies while the unit remains secured in the rack, enable rapid response to service events, radically decreasing overall IT costs and server downtime.

Typical Usage:

Space-constrained corporate data centers and service providers

- With up to 4 TB of internal storage, 32 DIMM sockets and PCI-Express or PCI-X options; the HP ProLiant DL580 G5 packs the storage, memory, and I/O you need in a versatile, 4U chassis
- Ambidextrous cable management and a quick deploy rail solution make racking a snap
- Availability features including hot plug redundant power, hot plug redundant fans, and hot plug RAID hard drives keep environments up and running and users productive

Database, Messaging and Business Applications

- The latest Intel® Xeon® processors with FBDIMMs and large internal storage capacity provide scalability for everything from web apps to mail servers to databases
- Eight standard PCI-Express slots and the ability to add either three additional x8 PCI Express or three PCI-X slots, provide powerful and flexible I/O alternatives
- Two integrated multi-function gigabit NICs give you the connectivity and bandwidth needed in today's database or business applications environments
- Easily attach to SAN or NAS and manage from one location

Server Consolidation

- Scalability, availability and built-in serviceability make the HP ProLiant DL580 G5 the perfect platform for server consolidation solutions
- The ProLiant HP DL580 G5 and ProLiant Essentials make it easy to deploy, manage, and migrate virtualized servers with VMware or Microsoft Virtual Server
- Integrated Lights-Out 2 enables administrators to manage the HP ProLiant DL580 G5 from remote locations

For more solutions visit: <http://www.hp.com/solutions/proliantdl580>.

Models

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

| | | |
|--|--|---|
| <p>HP DL580 G5 High Performance Models</p> <p>HP DL580 G5 X7460 16GB 4P 487362-xx1</p> <p>HP DL580 G5 E7450 8GB 4P 487363-xx1</p> <p>HP DL580 G5 E7440 8GB 4P 487364-xx1</p> <p>HP DL580 G5 X7350 8GB 4P 451993-xx1</p> <p>HP DL580 G5 E7340 8GB 4P 438084-xx1</p> | <p>Processor(s) Four of the following depending on model</p> <p>Memory</p> <p>Network Controller</p> <p>Storage Controller</p> <p>Manageability</p> <p>Hard Drives</p> <p>Internal Storage</p> <p>Power Supplies</p> <p>Optical Drive</p> <p>Form Factor</p> | <p>(4) 6-Core Intel® Xeon® X7460 Processor (2.67GHz, 16MB L3 cache, 130 Watts)</p> <p>(4) 6-Core Intel® Xeon® E7450 Processor (2.40GHz, 12MB L3 cache, 90 Watts)</p> <p>(4) 4-Core Intel® Xeon® E7440 Processor (2.40GHz, 16MB L3 cache, 90 Watts)</p> <p>(4) Quad-Core Intel® Xeon® X7350 Processor (2.93GHz, 2x4M cache, 130Watts)</p> <p>(4) Quad-Core Intel® Xeon® E7340 Processor (2.40GHz, 2x4M cache, 80 Watts)</p> <p>X7460 models: 16 GB PC2-5300 Fully Buffered DIMMs (DDR2-667) All others: 8 GB PC2-5300 Fully Buffered DIMMs (DDR2-667)</p> <p>NOTE: Memory expansion boards option required to configure up to 256 GB using 8 GB DIMMs</p> <p>Two embedded NC373i Multifunction Gigabit Server Adapters</p> <p>HP Smart Array P400i/512 MB BBWC Controller</p> <p>HP ProLiant Onboard Administrator (powered by the Integrated Lights-Out 2 management processor: Integrated on system board)</p> <p>None ship standard</p> <p>8TB max (with optional 500GB SFF SATA hot-plug hard drives)</p> <p>Four Power Supplies standard (third and fourth power supplies for redundancy)</p> <p>Slimline DVD</p> <p>Rack 4U</p> |
|--|--|---|

| | | |
|---|---|---|
| <p>HP DL580 G5 Base Models</p> <p>HP DL580 G5 E7430 4GB 2P 487365-xx1</p> <p>HP DL580 G5 E7420 4GB 2P 487366-xx1</p> <p>HP DL580 G5 E7330 4GB 2P 438087-xx1</p> <p>HP DL580 G5 E7320 4GB 2P 438088-xx1</p> <p>HP DL580 G5 E7310 4GB 2P 438089-xx1</p> | <p>Processor(s) Two of the following depending on model Up to 4 supported</p> <p>Memory</p> <p>Network Controller</p> <p>Storage Controller</p> <p>Manageability</p> <p>Hard Drives</p> <p>Internal Storage</p> <p>Power Supplies</p> <p>Optical Drive</p> <p>Form Factor</p> | <p>(2) 4-Core Intel® Xeon® E7430 Processor (2.13GHz, 12MB L3 cache, 90 Watts)</p> <p>(2) 4-Core Intel® Xeon® E7420 Processor (2.13GHz, 8MB L3 cache, 90 Watts)</p> <p>(2) Quad-Core Intel® Xeon® E7330 Processor (2.4 GHz, 2x3M cache, 80 Watts)</p> <p>(2) Quad-Core Intel® Xeon® E7320 Processor (2.13 GHz, 2x2M cache, 80 Watts)</p> <p>(2) Quad-Core Intel® Xeon® E7310 Processor (1.6 GHz, 2x2M cache, 80 Watts)</p> <p>4 GB PC2-5300 Fully Buffered DIMMs (DDR2-667) (Standard) to 256 GB (Maximum)</p> <p>NOTE: Memory expansion boards option would be required to configure up to 256 GB using 8 GB DIMMs</p> <p>Two embedded NC373i Multifunction Gigabit Server Adapters</p> <p>HP Smart Array P400i/256 MB Controller</p> <p>HP ProLiant Onboard Administrator (powered by the Integrated Lights-Out 2 management processor: Integrated on system board)</p> <p>None ship standard</p> <p>Up to sixteen (16) small form factor SAS/SATA hot-plug hard drive bays</p> <p>Two power supplies standard (third and fourth power supplies optional for redundancy)</p> <p>Slimline DVD</p> <p>Rack 4U</p> |
|---|---|---|

Models

| Country Code Key | | |
|------------------|-------|---------------|
| | XX=00 | US |
| | XX=20 | Brazil |
| | XX=29 | Japan |
| | XX=37 | APD |
| | XX=42 | Int'l, 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, HP recommends the use of an HP approved configurator. Contact your local sales representative for information on CTO product offerings and requirements.

NOTE: HP does not allow factory integration of options into standard models listed above. Configure-to-order servers must start with a CTO Chassis.

NOTE: FIO indicates that this option only available as a Factory Installable Option.

Step 1: Base Configuration

| | |
|---------------|--|
| Models | <p>HP ProLiant DL580 G5 highly serviceable rack chassis 487381-B21 NOTE: 487381-B21 is for use when configuring the DL580 with 7400 series processors.</p> <p>HP ProLiant DL580 G5 highly serviceable rack chassis 452291-B21 NOTE: 452291-B21 is for use when configuring the DL580 with 7300 or 7200 series processors.</p> <p>HP ProLiant DL580 G5 highly serviceable tower chassis 456521-B21 NOTE: 456521-B21 may be configured with any supported processor.</p> <p>Factory Integrated Model ships with:</p> <ul style="list-style-type: none"> Two embedded NC373i Multifunction Gigabit Server Adapters Eight standard PCI-express slots HP Smart Array P400i Controller Two hot-plug power supplies with two high-line IEC power cords Six (6) redundant hot-plug fans SFF SAS/SATA drive cage HP ProLiant Onboard Administrator (powered by the Integrated Lights-Out 2 management processor: integrated on system board) tower or rack (4U), 7-inch |
|---------------|--|

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

| | |
|-------------------|--|
| Processors | <p>HP DL580G5 X7460 6-core 2.67GHz 16MB kit, FIO 487373-L21 NOTE: If more than one processor is desired, additional processor selections would be 487373-B21.</p> <p>HP DL580G5 L7455 6-core 2.13GHz 12MB kit, FIO 506157-L21 NOTE: If more than one processor is desired, additional processor selections would be 506157-B21.</p> <p>HP DL580G5 E7450 6-core 2.40GHz 12MB kit, FIO 487375-L21 NOTE: If more than one processor is desired, additional processor selections would be 487375-B21.</p> <p>HP DL580G5 E7440 4-core 2.40GHz 16MB kit, FIO 487377-L21 NOTE: If more than one processor is desired, additional processor selections would be 487377-B21.</p> <p>HP DL580G5 E7430 4-core 2.13GHz 12MB kit, FIO 487378-L21 NOTE: If more than one processor is desired, additional processor selections would be 487378-B21.</p> <p>HP DL580G5 E7420 4-core 2.13GHz 8MB kit, FIO 487380-L21 NOTE: If more than one processor is desired, additional processor selections would be 487380-B21.</p> <p>HP DL580G5 2.93 2x4M QC X7350 kit, FIO 451999-L21 NOTE: If more than one processor is desired, additional processor selections would be 451999-B21.</p> |
|-------------------|--|

Configuration Information - Factory Integrated Models

| | | |
|----------------------------|---|------------|
| | HP DL580G5 2.4 2x4M QC E7340 kit, FIO | 438090-L21 |
| | NOTE: If more than one processor is desired, additional processor selections would be 438090-B21. | |
| | HP DL580G5 2.4 2x3M QC E7330 kit, FIO | 438091-L21 |
| | NOTE: If more than one processor is desired, additional processor selections would be 438091-B21. | |
| | HP DL580G5 2.13 2x2M QC E7320 kit, FIO | 438092-L21 |
| | NOTE: If more than one processor is desired, additional processor selections would be 438092-B21. | |
| | HP DL580G5 1.6 2x2M QC E7310 kit, FIO | 438093-L21 |
| | NOTE: If more than one processor is desired, additional processor selections would be 438093-B21. | |
| | HP DL580G5 1.86 2x4M QC 50W L7345 kit, FIO | 438100-L21 |
| | NOTE: If more than one processor is desired, additional processor selections would be 438100-B21. | |
| | Dual-Core HP DL580G5 2.93 2x4M 80W E7220 kit, FIO | 438101-L21 |
| | NOTE: If more than one processor is desired, additional processor selections would be 438101-B21. | |
| Base Memory | 2 GB FBD PC2-5300 2 x 1 GB dual rank kit | 397411-B21 |
| | 2 GB FBD PC2-5300 2 x 1 GB low power single rank kit | 461826-B21 |
| | 4 GB FBD PC2-5300 2 x 2 GB dual rank kit | 397413-B21 |
| | 4 GB FBD PC2-5300 2 x 2 GB low power dual rank kit | 461828-B21 |
| | 8 GB FBD PC2-5300 2 x 4 GB dual rank kit | 397415-B21 |
| | 8 GB FBD PC2-5300 2 x 4 GB low power dual rank kit | 466440-B21 |
| | 16 GB FBD PC2-5300 2 x 8 GB dual rank kit | 413015-B21 |
| | 64 GB FBD PC2-5300 8 x 8 GB dual rank kit | 495604-B21 |
| | NOTE: Memory Option Kits include Low Power DIMMs. For more information on ProLiant Energy Efficient Features, please visit: http://h18004.www1.hp.com/products/servers/platforms/energyefficient/ . | |
| Storage Controllers | 512MB Battery-backed write cache upgrade | 405148-B21 |
| | HP Smart Array P400 256MB FIO cache | 405139-B21 |
| | NOTE: Supports Smart Array P400 Controller and Smart Array P400i Controller only. | |

Step 3: 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.

| | | |
|-----------------------|---|------------|
| Unique Options | DL580 G5 tower kit | 453744-B21 |
| | DL580 G5 SAS SFF 8-bay drive cage option | 452180-B21 |
| | NOTE: This option provides an additional 8 SFF drives for the DL580G5. This option requires an additional storage controller. | |
| | PCI Express x8 3-slot option card | 452181-B21 |
| | NOTE: Adds three PCI Express (X8) I/O slots. | |
| | PCI-X 3-slot option card | 452182-B21 |
| | NOTE: Adds three PCI-X I/O slots (2 64bit 100MHz slots, and 1 64bit 133MHz slot) | |
| | DL580 G5 Memory expansion boards option | 452179-B21 |
| | NOTE: This option consists of 4 memory expansion boards with 4 DIMM sockets each for a total of 16 additional DIMM sockets. This brings the DL580G5 to a total of 32 DIMM sockets. | |

Processors

6-Core Processors

| | |
|--|------------|
| Intel® Xeon® X7460 processor (6-core, 2.67GHz, 16MB L3 cache, 130 watts) | 487373-B21 |
| Intel® Xeon® L7455 processor (6-core, 2.13GHz, 12MB L3 cache, 65 watts) | 506157-B21 |
| Intel® Xeon® E7450 processor (6-core, 2.40GHz, 12MB L3 cache, 90 watts) | 487375-B21 |

Quad-Core Processors

| | |
|--|------------|
| Intel® Xeon® E7440 processor (4-core, 2.40GHz, 16MB L3 cache, 90 watts) | 487377-B21 |
| Intel® Xeon® E7430 processor (4-core, 2.13GHz, 12MB L3 cache, 90 watts) | 487378-B21 |
| Intel® Xeon® E7420 processor (4-core, 2.13GHz, 8MB L3 cache, 90 watts) | 487380-B21 |
| Quad-Core Intel® Xeon® X7350 processor (2.93 GHz, 2x4M cache, 130 watts) | 451999-B21 |
| Quad-Core Intel® Xeon® E7340 processor (2.40 GHz, 2x4M cache, 80 watts) | 438090-B21 |
| Quad-Core Intel® Xeon® E7330 processor (2.40 GHz, 2x3M cache, 80 watts) | 438091-B21 |
| Quad-Core Intel® Xeon® E7320 processor(2.13 GHz, 2x2M cache, 80 watts) | 438092-B21 |
| Quad-Core Intel® Xeon® E7310 processor(1.60 GHz, 2x2M cache, 80 watts) | 438093-B21 |
| Quad-Core Intel® Xeon® L7345 processor(1.86 GHz, 2x4M cache, 50 watts) | 438100-B21 |

Dual-Core Processors

| | |
|--|------------|
| Dual-Core Intel® Xeon® E7220 processor(2.93 GHz, 2x4M cache, 80 watts) | 438101-B21 |
|--|------------|

Core Options

| | | | |
|---|--|------------|--|
| Memory | 2 GB FBD PC2-5300 2 x 1 GB dual rank kit | 397411-B21 | |
| | 2 GB FBD PC2-5300 2 x 1 GB low power single rank kit | 461826-B21 | |
| | 4 GB FBD PC2-5300 2 x 2 GB dual rank kit | 397413-B21 | |
| | 4 GB FBD PC2-5300 2 x 2 GB low power dual rank kit | 461828-B21 | |
| | 8 GB FBD PC2-5300 2 x 4 GB dual rank kit | 397415-B21 | |
| | 8 GB FBD PC2-5300 2 x 4 GB low power dual rank kit | 466440-B21 | |
| | 16 GB FBD PC2-5300 2 x 8 GB dual rank kit | 413015-B21 | |
| | 64 GB FBD PC2-5300 8 x 8 GB dual rank kit | 495604-B21 | |
| | DL580 G5 memory expansion boards option | 452179-B21 | |
| | <p>NOTE: This option consists of 4 memory expansion boards with 4 DIMM sockets each for a total of 16 additional DIMM sockets. This brings the DL580G5 to a total of 32 DIMM sockets.</p> <p>NOTE: Memory Option Kits include Low Power DIMMs. For more information on ProLiant Energy Efficient Features, please visit: http://h18004.www1.hp.com/products/servers/platforms/energyefficient/.</p> | | |
| Optical Drives | Slimline DVD-ROM Drive (8X/24X) Option Kit (Servers) | 264007-B21 | |
| | NOTE: For models equipped with 7200 and 7300-series CPUs. | | |
| | HP DVD±R/RW 8X Slim | 383975-B21 | |
| | NOTE: For models equipped with 7200 and 7300-series CPUs. | | |
| | HP Slim SATA DVD-ROM Optical Drive | 481041-B21 | |
| NOTE: For models equipped with 7400-series CPUs. | | | |
| | HP Slim SATA DVD RW Optical Drive | 481043-B21 | |
| NOTE: For models equipped with 7400-series CPUs. | | | |
| Hard Drives | NOTE: The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components. | | |
| | NOTE: Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details. | | |
| | SAS Hot Plug SFF Enterprise (ENT) Drives | | |
| | HP 300GB 6G SAS 10K SFF DP ENT HDD | 507127-B21 | |
| | HP 300GB 3G SAS 10K SFF DP ENT HDD | 492620-B21 | |
| | HP 146GB 6G SAS 15K SFF DP ENT HDD | 512547-B21 | |
| | HP 146GB 6G SAS 10K SFF DP ENT HDD | 507125-B21 | |
| | HP 146GB 3G SAS 15K SFF DP ENT HDD | 504062-B21 | |
| | HP 146GB 3G SAS 10K SFF DP ENT HDD | 418367-B21 | |
| | HP 72GB 6G SAS 15K SFF DP ENT HDD | 512545-B21 | |
| | HP 72GB 3G SAS 15K SFF DP ENT HDD | 418371-B21 | |
| | HP 72GB 3G SAS 10K SFF DP ENT HDD | 384842-B21 | |
| | SAS Hot Plug SFF Midline (MDL) Drives | | |
| | HP 500GB 6G SAS 7.2K SFF DP MDL HDD | 507610-B21 | |
| | NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18004.www1.hp.com/products/quickspecs/12244_div/12244_div.html (Worldwide) | | |
| | SATA Hot Plug SFF Midline (MDL) Drives | | |
| | HP 500GB 3G SATA 7.2K 2.5in MDL HDD | 507750-B21 | |

Core Options

| | |
|---|------------|
| HP 160GB 3G SATA 7.2K 2.5in MDL HDD | 530888-B21 |
| SATA Hot Plug SFF Entry (ETY) Drives | |
| HP 250GB 3G SATA 5.4K SFF ETY HDD | 460355-B21 |
| HP 120GB 1.5G SATA 5.4K SFF ETY HDD | 458924-B21 |
| SATA Hot Plug Midline (MDL) Solid State Drives | |
| HP 60GB 3G SATA 2.5in MDL 1y Wty SSD | 572071-B21 |
| HP 120GB 3G SATA 2.5in MDL 1y Wty SSD | 572073-B21 |
| NOTE: Please see the QuickSpecs for Technical Specifications and additional information: http://h18000.www1.hp.com/products/quickspecs/13021_div/13021_div.html (Worldwide) | |

Communications

Gigabit Ethernet Adapters

| | |
|--|------------|
| HP NC112T PCIe Gigabit Server Adapter | 503746-B21 |
| HP NC360T PCI Express Dual Port Gigabit Server Adapter | 412648-B21 |
| HP NC364T PCI Express Quad Port Gigabit Server Adapter | 435508-B21 |
| NOTE: There is a maximum of five NC364T PCI Express Quad Port Gigabit Server Adapter NICs allowed in this server. | |
| HP NC373F PCI Express Multifunction Gigabit Server Adapter | 394793-B21 |
| HP NC373T PCI Express Multifunction Gigabit Server Adapter | 394791-B21 |
| HP NC382T PCI Express Dual Port Multifunction Gigabit Server Adapter | 458492-B21 |

10 Gigabit Ethernet Adapters

| | |
|--|------------|
| HP NC522SFP Dual Port 10GbE Server Adapter | 468332-B21 |
| NOTE: A minimum of two gigabyte (2 GB) of server memory is required per each NC522SFP adapter. | |
| NOTE: Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately. | |
| NOTE: Please see the QuickSpecs for Technical Specifications and additional information: www.hp.com/go/ProLiantNICs | |

Power Supplies

| | |
|---|------------|
| 800/1200W AC Power Supply | 437572-B21 |
| HP 1200W-48V DC Common Slot Power Supply | 437573-B21 |
| NOTE: DC power supplies contain a -48V DC power cord designed for in rack DC power rectifiers. | |
| NOTE: Two Hot Plug Power Supplies needed for standard operation. Four Hot Plug Power Supplies needed to add redundancy. Configurations with 3 or 4 processors that will use lowline (110V) input power require four Hot Plug Power Supplies. | |

Additional Options

| | | |
|----------------------------------|---|---|
| HP Insight Control suites | <p>HP Insight Control suite</p> <p>HP Insight Control suite, No Media 1-Server License including 1 year of 24x7 Technical Support and Updates</p> <p>NOTE: Customer will receive a license entitlement certificate, which must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service.</p> <p>HP Insight Control Management Software Media Kit</p> <p>NOTE: Insight Software DVD media without licenses. Contains HP System Insight Manager and Insight software products and components licensed by the Insight Control and Insight Dynamics suites. Uses an integrated installer to perform quick and accurate software installation and updates.</p> <p>NOTE: For additional License Kits, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12631_div/12631_div.html</p> <p>HP Insight Control suite for Linux (ICE-LX)</p> <p>HP Insight Control suite for Linux, Media pack (DVD) - No licenses included</p> <p>NOTE: This optional Media pack DVD contains the ISO image for HP Insight Control Environment for Linux, HP System Insight Manager, HP Insight Power Manager, HP Insight Virtual Machine Management software, and an integrated installer. Servers must be acquired separately.</p> <p>NOTE: This Media pack is optional because the latest ISO image and latest updates may be downloaded at no cost from: http://www.hp.com/go/ice-linux (click on Download button).</p> <p>HP Insight Control suite for Linux, No Media, 1-Server license, including one year of 24x7 Technical Support and Updates</p> <p>NOTE: This part number can be used to purchase one (1) license with a single activation key. Customer will receive a printed license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support and Update Service.</p> <p>NOTE: One certificate is shipped for each license.</p> <p>NOTE: For additional License Kits, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/13019_div/13019_div.html</p> <p>HP Integrated Lights-Out Advanced</p> <p>HP Integrated Lights-Out Advanced, No Media, 1-Server License, including 1 year of 24x7 Technical Support and Updates</p> <p>NOTE: This license allows 1 server to be deployed and managed via HP iLO Advanced. Customer will receive a printed license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support Service</p> <p>NOTE: For additional license kits, including electronic delivery options, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12362_div/12362_div.html</p> <p>HP Insight Rapid Deployment software</p> <p>HP Insight Rapid Deployment software No Media 1-Server License, including 1 year of 24x7 Technical Support and Updates</p> <p>NOTE: This license allows 1 server to be deployed and managed via RDP. Customer will receive a printed license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24 x 7 HP Software Technical Support Service</p> <p>NOTE: For additional license kits, including electronic delivery options, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11053_div/11053_div.html</p> | <p>452148-B22</p> <p>436222-B21</p> <p>464422-B22</p> <p>464423-B22</p> <p>512485-B21</p> <p>452151-B21</p> |
|----------------------------------|---|---|

Additional Options

| Storage Controllers | SAS Controllers | |
|---------------------|---|------------|
| | Smart Array E200 Controller | |
| | HP Smart Array E200/128 BBWC Controller | 411508-B21 |
| | Smart Array E500 Controller | |
| | HP Smart Array E500/256MB Controller | 435129-B21 |
| | Smart Array P400 Controller | |
| | HP Smart Array P400/256MB Controller | 405132-B21 |
| | HP Smart Array P400/512MB BBWC Controller | 411064-B21 |
| | Smart Array P600 Controller | |
| | HP Smart Array P600/256 BBWC Controller | 337972-B21 |
| | Smart Array P800 Controller | |
| | HP Smart Array P800/512 BBWC Controller | 381513-B21 |
| | Smart Array P212 Controller | |
| | HP Smart Array P212/Zero Memory Controller | 462828-B21 |
| | HP Smart Array P212/256 MB Controller | 462834-B21 |
| | Smart Array P410 Controller | |
| | HP Smart Array P410/256 MB Controller | 462862-B21 |
| | HP Smart Array P410/512 MB with BBWC Controller | 462864-B21 |
| | Smart Array P411 Controller | |
| | HP Smart Array P411/256 MB Controller | 462830-B21 |
| | HP Smart Array P411/512 MB with BBWC Controller | 462832-B21 |
| | Optional Upgrades | |
| | 128MB Battery-Backed Write Cache | 351580-B21 |
| | NOTE: Supports the Smart Array E200 Controller and Smart Array 642 Controller. | |
| | HP SA-P400 and SA-E500 24 In Battery Cable Kit | 417836-B21 |
| | NOTE: This option kit contains a 24" battery cable and adhesive material for installing a battery into the server if a Smart Array P400 is integrated outside of the factory or if the BBWC is not pre-installed from the factory. For all solutions, please refer to the server QuickSpecs and User's Manual for detailed installation instructions. | |
| | 512MB Battery-backed write cache upgrade | 405148-B21 |
| | NOTE: For Smart Array P400 Controller only. | |
| | Battery-backed write cache upgrade | 383280-B21 |
| | NOTE: For Smart Array P400 Controller only. | |
| | 256 MB Cache Module | 462968-B21 |
| | NOTE: Supported on HP Smart Array P212 Controller only. | |
| | 512MB BBWC | 462967-B21 |
| | NOTE: Supported on HP Smart Array P410 Controller and HP Smart Array P411 Controller only. | |
| | HP Smart Array Advanced Pack No Media 1-Server license including 1yr 24x7 Technical Support | 516471-B21 |
| | NOTE: This part number can be used to purchase a single license or to order multiple licenses with a single activation key. Customers will receive a license entitlement certificate via e-mail. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Include one year of 24x7 HP Software Technical Support Services. | |
| | NOTE: Please see the QuickSpecs for Technical Specifications and additional information: | |

Additional Options

http://h18000.www1.hp.com/products/quickspecs/12460_div/12460_div.html

(Smart Array E200 Controller)

http://h18000.www1.hp.com/products/quickspecs/12700_div/12700_div.html

(Smart Array E500 Controller)

http://h18000.www1.hp.com/products/quickspecs/12400_div/12400_div.html

(Smart Array P400 Controller)

http://h18000.www1.hp.com/products/quickspecs/12247_div/12247_div.html

(Smart Array P600 Controller)

http://h18000.www1.hp.com/products/quickspecs/12616_div/12616_div.html

(Smart Array P800 Controller)

http://h18000.www1.hp.com/products/quickspecs/13203_div/13203_div.html

(Smart Array P212 Controller)

http://h18000.www1.hp.com/products/quickspecs/13201_div/13201_div.html

(Smart Array P410 Controller)

http://h18000.www1.hp.com/products/quickspecs/13202_div/13202_div.html

(Smart Array P411 Controller)

http://h18000.www1.hp.com/products/quickspecs/13200_div/13200_div.html

(Smart Array Advanced Pack)

SAS Controller Options

HP SAS Expander Card

468406-B21

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

http://h18004.www1.hp.com/products/quickspecs/13232_na/13232_na.html

(SAS Expander Card)

SAS HBA

HP SC08Ge Host Bus Adapter

488765-B21

HP SC44Ge Host Bus Adapter

416096-B21

NOTE: When using the SC44Ge with SATA hard drives, 1.5G SATA models are required.

HP 8 Internal Port SAS HBA with RAID

347786-B21

NOTE: When using the 8 Internal Port SAS HBA with SATA hard drives, 1.5G SATA models are required.

NOTE: Please see the QuickSpecs for Technical Specifications and additional information: www.hp.com/products/hba

SCSI Controllers for External Drive/Storage Support

Smart Array 6404/256 Controller

273914-B21

128-MB BBWC (Battery-Backed Write Cache) Enabler

351580-B21

NOTE: Supports the Smart Array 641, and Smart Array 642 Controller.

64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2

374654-B21

SCSI HBA

HP SC11Xe Host Bus Adapter

412911-B21

NOTE: Recommended HBA for SCSI tape drive connect.

NOTE: Please see the QuickSpecs for Technical Specifications and additional information: www.hp.com/products/smartarray

HPC Specific Options

HP IB 4X DDR Conn-X PCI-e Dual Port HCA

448397-B21

HP IB 4X DDR PCI-e DUAL PORT 0 mem HCA

483513-B21

NOTE: Please see the QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/13078_div/13078_div.html

Additional Options

Tape Storage

NOTE: For the complete listing of Tape Drive offerings, please see:
<http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html>

Tape Drives

SAS Tape Drives

NOTE: For the DL580 G5, HP recommends purchasing the HP SC44Ge HBA (416096-B21) for a dedicated SAS HBA for tape.

HP StorageWorks LTO-2 Ultrium 448 SAS Internal Tape Drive DW085A

HP StorageWorks LTO-3 Ultrium 920 SAS Internal Tape Drive EH847A

HP StorageWorks LTO-4 Ultrium 1760 SAS Internal Tape Drive EH919A

NOTE: Please refer to the "Tape Drives, Tape Autoloaders & Tape Libraries" table in the Storage section of this document for a list of SAS controllers with tape support.

NOTE: For an up-to-date listing of the latest O/S and software support details for HP Ultrium tape drives, please visit: <http://www.hp.com/go/connect>.

HP StorageWorks 1/8 G2 Tape Autoloader

HP StorageWorks 1/8 G2 LTO-4 Ultrium 1760 SAS Tape Autoloader AK377A

HP StorageWorks 1/8 G2 LTO-3 Ultrium 920 SAS Tape Autoloader AH558A

HP StorageWorks 1/8 G2 Tape Autoloader Rack Kit AH166A

NOTE: Required to install the 1/8 G2 Autoloaders in a standard 19-inch rack; includes rails and rackmount instructions.

NOTE: Please reference the Tape Autoloader QuickSpecs at:
<http://www.hp.com/go/automation> for additional information needed to create a complete solution.

HP StorageWorks MSL2024 Tape Library

HP StorageWorks MSL2024 1 LTO-4 Ultrium 1760 SAS Drive Library AK378A

HP StorageWorks MSL2024 1 LTO-3 Ultrium 920 SAS Drive Library AH559A

HP StorageWorks MSL4048 Tape Library

HP StorageWorks MSL4048 2 LTO-4 Ultrium 1760 SAS Drive Library AK380A

HP StorageWorks MSL4048 1 LTO-3 Ultrium 920 SAS Drive Library AH560A

NOTE: Please reference the MSL Tape Library QuickSpecs at:
<http://www.hp.com/go/automation> for additional information needed to create a complete solution; reference current compatibility information at:
<http://www.hp.com/go/ebs>.

Disk-Based Backup

RDX Removable Disk Backup

HP StorageWorks RDX500 Internal Removable Disk Backup System AJ934A

NOTE: 500GB of Disk Storage.

NOTE: Please see the HP RDX Removable Disk Backup System QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/13036_div/13036_div.html

D2D Backup

HP StorageWorks D2D2502i Backup System EJ001A

NOTE: 2 TB raw capacity/1.5 TB useable capacity.

HP StorageWorks D2D2504i Backup System EJ002A

NOTE: 4 TB raw capacity/3 TB useable capacity.

NOTE: Please see the HP D2D Backup Systems QuickSpecs for additional information: <http://www.hp.com/go/d2d>

Additional Options

StorageWorks Options **StorageWorks Fibre Channel HBA**

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

Brocade Fibre Channel HBAs

| | |
|--|--------|
| HP StorageWorks 81B PCI-e FC HBA Single Port | AP769A |
| HP StorageWorks 82B PCI-e FC HBA Dual Port | AP770A |
| HP StorageWorks 41B 4Gb PCI-e FC HBA | AP767A |
| HP StorageWorks 42B 4Gb Dual-Port PCI-e FC HBA | AP768A |

Emulex Fibre Channel HBAs

| | |
|---|--------|
| HP StorageWorks 81E PCI-e FC HBA Single Port | AJ762A |
| HP StorageWorks 82E PCI-e FC HBA Dual Port | AJ763A |
| HP StorageWorks FC2142 4Gb PCI-e HBA | A8002A |
| HP StorageWorks FC2242 Dual Channel 4Gb PCI-e HBA | A8003A |

QLogic Fibre Channel HBAs

| | |
|---|--------|
| HP StorageWorks 81Q PCI-e FC HBA Single Port | AK344A |
| HP StorageWorks 82Q PCI-e FC HBA Dual Port | AJ764A |
| HP StorageWorks FC1142 4Gb PCI-e HBA | AE311A |
| HP StorageWorks FC1242 Dual Channel 4Gb PCI-e HBA | AE312A |

StorageWorks SCSI HBA

| | |
|--------------------------------|--------|
| HP U320e SCSI Host Bus Adapter | AH627A |
|--------------------------------|--------|

NOTE: Recommended HBA for MSL SCSI Tape Library connect.

HP StorageWorks Modular Smart Array

MSA SAN Storage Arrays

| | |
|--|------------|
| HP StorageWorks 20 Modular Smart Array | 335921-B21 |
|--|------------|

NOTE: Rack-mountable 12 (SATA) drive enclosure with U320 Host connectivity, redundant power supplies.

NOTE: Please see the QuickSpecs for additional options and configuration information at:

http://h18000.www1.hp.com/products/quickspecs/11942_div/11942_div.html (Worldwide)

| | |
|--|------------|
| HP StorageWorks 50 Modular Smart Array | 364430-B21 |
|--|------------|

NOTE: Please see the QuickSpecs for additional options and configuration information at:

http://h18000.www1.hp.com/products/quickspecs/12245_div/12245_div.html (Worldwide)

| | |
|--|------------|
| HP StorageWorks 60 Modular Smart Array | 418408-B21 |
|--|------------|

NOTE: Please see the QuickSpecs for additional options and configuration information at:

http://h18000.www1.hp.com/products/quickspecs/12627_div/12627_div.html (Worldwide)

| | |
|--|------------|
| HP StorageWorks 70 Modular Smart Array | 418800-B21 |
|--|------------|

NOTE: Please see the QuickSpecs for additional options and configuration information at:

http://h18000.www1.hp.com/products/quickspecs/12652_div/12652_div.html (Worldwide)

| | |
|---|--------|
| HP 2012sa Single Controller Modular Smart Array | AJ752A |
|---|--------|

| | |
|---|--------|
| HP 2012sa Dual Controller Modular Smart Array | AJ753A |
|---|--------|

Additional Options

NOTE: Please see the QuickSpecs for additional options and configuration information at:

http://h18000.www1.hp.com/products/quickspecs/13045_div/13045_div.html
(Worldwide)

Uninterruptible Power Systems

HP Rack-mountable UPS

HP R3000 UPS

| | |
|--|--------|
| HP R3000 VA UPS, 2U, DTC, INTL | AF414A |
| HP R3000 VA UPS, 2U, Low voltage L5-30, NA | AF422A |
| HP R3000 VA UPS, 2U, High voltage L6-20, NA | AF423A |
| HP R3000 VA UPS, 2U, High voltage L6-20, JPN | AF424A |
| HP R3000 VA UPS, 2U, Low voltage L5-30, JPN | AF425A |

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

http://h18000.www1.hp.com/products/quickspecs/10671_div/10671_div.html
(Worldwide)

HP R/T3000 Uninterruptible Power System (UPS)

| | |
|--|--------|
| HP R/T3000 UPS, Low voltage NA/JPN | AF452A |
| HP R/T3000 UPS, High voltage, NA/JPN | AF453A |
| HP R/T3000 UPS, High voltage, detachable inlet cord INTL | AF454A |

NOTE: Please see the QuickSpecs for additional information:

http://h18000.www1.hp.com/products/quickspecs/13417_div/13417_div.html
(Worldwide)

HP Rack-Mountable R5500 UPS

| | |
|-------------------------|--------|
| HP R5500 VA UPS, INTL | AF416A |
| HP R5500 VA UPS, NA/JPN | AF426A |

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

http://h18000.www1.hp.com/products/quickspecs/11871_div/11871_div.html
(Worldwide)

NOTE: For additional information on HP Uninterruptible Power Systems please go to: www.hp.com/servers/rackups.

Additional Options

Power Distribution Unit Monitored PDUs

HP Monitored Power Distribution Unit: Half Rack Version

HP 17.3 kVA S348 Monitored PDU- single input, 3Ø, 48A (NA/JPN) AF916A

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

http://h18000.www1.hp.com/products/quickspecs/12118_div/12118_div.html
(Worldwide)

Power Distribution Units 1U/0U (Up to 32 outlets)

NOTE: 1U/0U mounting brackets shipped with the unit (optimized for 10000 G2 and 9000 series racks).

3.6kVA Model - mPDU, 16A, High (WW) 252663-B24

2.8 kVA Model - mPDU, 24A, Low (NA/JPN) 252663-D71

4.9kVA Model - mPDU, 24A, High (NA/JPN) 252663-D72

7.3kVA Model - mPDU, 32A, High (INT'L) 252663-B31

8.3kVA Model - mPDU, 40A, High (WW) 252663-B21

8.3kVA Model - mPDU, 40A, High (power cord attached) (NA/JPN) 252663-D73

9.2kVA Model - mPDU, 40A, High (power cord attached) (INTL) 252663-B32

NOTE: Please see the following Modular Power Distribution Unit (Zero-U/1U Modular PDUs) QuickSpecs for additional options including cables:

http://h18000.www1.hp.com/products/quickspecs/11041_div/11041_div.html
(Worldwide)

HP Rack Series

HP Rack 10000 G2 Series (Carbon/Graphite Metallic)

S10614 (14U) Rack Cabinet - Shock Pallet 292302-B22

10642 G2 (42U) Rack Cabinet - Pallet AF001A

10642 G2 (42U) Rack Cabinet - Shock Pallet AF002A

10642 G2 (42U) Rack Cabinet - Crated AF003A

10642 G2 (42U) Rack Cabinet, with Extension - Shock Pallet AF004A

10636 G2 (36U) Rack Cabinet - Pallet AF011A

10636 G2 (36U) Rack Cabinet - Shock Pallet AF012A

10636 G2 (36U) Rack Cabinet - Crated AF013A

10636 G2 (36U) Rack Cabinet, with Extension - Shock Pallet AF014A

10622 G2 (22U) Rack Cabinet - Pallet AF021A

10622 G2 (22U) Rack Cabinet - Shock Pallet AF022A

10642 G2 (42U) Rack Cabinet 1200mm Deep - Shock Pallet AF034A

10642 G2 (42U) Rack Cabinet 1200mm Deep - Pallet AF038A

10842 G2 (42U) 800mm Wide Rack Cabinet - Pallet AF041A

10842 G2 (42U) 800mm Wide Rack Cabinet - Shock Pallet AF042A

10647 G2 (47U) Rack Cabinet - Pallet AF031A

10647 G2 (47U) Rack Cabinet 1200mm Deep - Shock Pallet AF044A

NOTE: Due to handling and shipping requirements, AF044A is only orderable through HP Factory Express. It is not for direct sales. Customer site surveys are required before an order is approved. CTO orders may require additional lead time.

10647 G2 (47U) Rack Cabinet 1200mm Deep - Pallet AF045A

NOTE: It is mandatory to use a shock pallet when shipping racks with equipment installed.

NOTE: xxxxxx-B22 (shock pallet) used to ship racks with equipment installed (by custom systems, VARs and Channels).

Additional Options

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

http://h18000.www1.hp.com/products/quickspecs/12402_div/12402_div.html
(Worldwide)

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

HP Rack Options

Keyboards and Monitors

| | |
|--|--------|
| TFT7600 Rackmount Keyboard Monitor US | AG052A |
| TFT7600 Rackmount Keyboard Monitor GR | AG053A |
| TFT7600 Rackmount Keyboard Monitor FR | AG054A |
| TFT7600 Rackmount Keyboard Monitor IT | AG055A |
| TFT7600 Rackmount Keyboard Monitor SP | AG056A |
| TFT7600 Rackmount Keyboard Monitor DEN | AG057A |
| TFT7600 Rackmount Keyboard Monitor NOR | AG058A |
| TFT7600 Rackmount Keyboard Monitor SE/FI | AG059A |
| TFT7600 Rackmount Keyboard Monitor SWI | AG060A |
| TFT7600 Rackmount Keyboard Monitor PORT | AG061A |
| TFT7600 Rackmount Keyboard Monitor BEL | AG062A |
| TFT7600 Rackmount Keyboard Monitor JPN2 | AG063A |
| TFT7600 Rackmount Keyboard Monitor RUS | AG064A |
| TFT7600 Rackmount Keyboard Monitor INTL | AG065A |
| TFT7600 Rackmount Keyboard Monitor UK | AG066A |
| 1U Rackmount Keyboard with USB, US | AG072A |
| 1U Rackmount Keyboard with USB, UK | AG073A |
| 1U Rackmount Keyboard with USB, GR | AG074A |
| 1U Rackmount Keyboard with USB, FR | AG075A |

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

HP KVM Switch Options

| | |
|--|------------|
| 2x1x16 IP Console Switch with Virtual Media | AF601A |
| 4x1x16 IP Console Switch with Virtual Media | AF602A |
| 2x16 Server Console Switch with Virtual Media | AF600A |
| PS/2 Virtual Media Interface Adapter, 1 pack | AF604A |
| NOTE: Requires PS/2 and one USB port on server. | |
| Server console switch 0x2x8 | AF616A |
| Server console switch 0x2x16 | AF617A |
| PS/2 Interface Adapter, 1 pack | 262588-B21 |
| PS/2 Interface Adapter, 8 pack | 262587-B21 |

NOTE: Cat5e cables are required to connect Interface Adapters to Console Switches. Cat5e cables can be found at the following URL:

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

| | |
|--|--------|
| HP 1x4 Console Switch | AF611A |
| PS2 Server Console Cable, 6 ft, 2 pack | AF612A |
| USB Server Console Cable, 6 ft, 2 pack | AF613A |

NOTE: For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL: <http://www.hp.com/go/kvm>.

Additional Options

| | | |
|---------------------------|--|------------|
| USB and SD Options | USB 2-Button Optical Scroll Mouse (Carbonite/Silver) | DC172B |
| | 1.44MB External USB Floppy Drive | DC141B |
| | HP USB 04 Standard Keyboard | DT528A#ABA |
| | HP 1GB USB 2.0 Floppy Drive Key | 442085-B21 |
| | HP 4GB USB Flash Media Key Kit | 580385-B21 |

NOTE: Blank USB media device is supported for use with ProLiant iVirtualization. USB media must be installed in the internal slot of the ProLiant server. Learn more at <http://www.hp.com/go/proliantvirtualization>.

| | | |
|---|--|--------|
| Service and Support Offerings (HP Care Pack Services) | Hardware Services On-site Service | |
| | 4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic | U4607E |
| | 4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic | U4608E |
| | 6-Hour Call to Repair, On-site Service 7-Day x 24-Hour Coverage, 3 Years (U.S. Part Number) | |
| | 6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic | U4609E |
| | Installation & Start-up Services | |
| | Hardware Installation, Electronic | U4617E |
| | Installation & Start-Up of a ProLiant server and Microsoft or Linux O/S per the Customer Description and/or Data Sheet. To be delivered on a scheduled basis 8am-5pm, M-F, excl. HP holidays, Electronic | U4618E |
| | Installation and Startup for Essentials Rapid Deployment Pack, Electronic | U5683E |
| | Support Plus | |
| | Onsite HW support, 8am-9pm, M-F, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays, Electronic | U4619E |
| | Support Plus 24 | |
| | Onsite HW support 24x7, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic | U4620E |
| Onsite HW support 24x7, 4hr response and RedHat AS O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic | U9239E | |
| Onsite HW support 24x7, 4hr response and SuSE O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic | U6316E | |

NOTE: For more information, customer/resellers can contact: <http://www.hp.com/services/carepack>

Memory

NOTE: Memory configurations listed do not apply to "Factory Integrated Models".

NOTE: For additional memory information and configuration rules, please see the memory section of the DL580 G5 User Guide at: http://www.hp.com/support/DL580G5_UG_en.

HP ProLiant DL580 G5 - Base memory configuration for 16 DIMM sockets in the 4 GB configuration

Standard Memory

4 GB PC2-5300 Fully Buffered DIMMs (DDR2-667) (4 x 1 GB)

All HP ProLiant DL580 G5 systems come standard with 4 banks of memory sockets spanning 4 memory channels for a total of 16 DIMM sockets on board memory. Memory slots xA and xB already populated with memory (2P models with 4x 1GB FBDIMM memory modules and 4P models with 4x 2GB FB DIMM memory modules) to help achieve maximum performance.

Upgrading Memory and Memory Interleaving

To achieve maximum memory performance and flexibility, the HP ProLiant DL580 G5 requires memory to be upgraded in groups of four identical FBDIMMs populated across the four memory channels. In simple terms, the two FBDIMM locations at xC and the two xD locations must be populated with four identical part numbered FBDIMMs. Memory population continues by populating locations xE and xF, then xG and xH. FBDIMM architecture does not allow any gaps in this sequence such that if locations xE and xF were populated and xC and xD were not, the memory at xE and xF would not be recognized by the system.

Standard Memory Plus Optional Memory

Up to 128 GB memory is available with the removal of the standard memory and the installation of 1 GB, 2 GB, 4 GB, and/or 8 GB PC2-5300 Fully Buffered DIMMs. Up to 256 GB memory is available with the removal of the standard memory, the installation of the DL580 G5 Memory Expansion Boards Option, and the installation of 8 GB PC2-5300 Fully Buffered DIMMs.

Standard Memory Replaced with Optional Memory and Utilizing the Optional Memory Expansion Boards

Up to 128 GB memory is available with the removal of the standard memory and the optional installation of PC2-5300 Fully Buffered DIMMs (DDR2-667) memory kits. When utilizing the Optional Memory Expansion boards the FBDIMM population rules apply. Four identical FBDIMMs must be populated across the four memory channels. The FBDIMM locations on the Expansion boards are labeled so that four FBDIMMs should be populated in the A locations on each board, followed by populating the four B locations continuing this sequence through locations D. eq.

| Memory | | Embedded DIMM Sockets | | | | | | | |
|---|---|-----------------------|-------|-------|-------|------|-------|-------|-------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | | 1A | 2C | 3E | 4G | 5A | 6C | 7E | 8G |
| Standard | 4 GB | 1 GB | Empty | Empty | Empty | 1 GB | Empty | Empty | Empty |
| Standard + Optional | Maximum: 100 GB Shown: 28 GB | 1 GB | 2 GB | 2 GB | 2 GB | 1 GB | 2 GB | 2 GB | 2 GB |
| Maximum (Without Memory Expansion Boards Option) | 128 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB |

| Memory | | Embedded DIMM Sockets | | | | | | | |
|----------------------------|---|-----------------------|-------|-------|-------|------|-------|-------|-------|
| | | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | | 9B | 10D | 11F | 12H | 13B | 14D | 15F | 16H |
| Standard | 4 GB | 1 GB | Empty | Empty | Empty | 1 GB | Empty | Empty | Empty |
| Standard + Optional | Maximum: 100 GB Shown: 28 GB | 1 GB | 2 GB | 2 GB | 2 GB | 1 GB | 2 GB | 2 GB | 2 GB |

Memory

| | | | | | | | | | |
|---|---------------|------|------|------|------|------|------|------|------|
| Maximum (Without Memory Expansion Boards Option) | 128 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB |
|---|---------------|------|------|------|------|------|------|------|------|

NOTE:

- Memory channel 1 includes slots 1-4
- Memory channel 2 includes slots 5-8
- Memory channel 3 includes slots 9-12
- Memory channel 4 includes slots 13-16

HP ProLiant DL580 G5 - Base memory configuration for 16 DIMM sockets in the 8 GB configuration

Standard Memory

8 GB PC2-5300 Fully Buffered DIMMs (DDR2-667) (4 x 2 GB)

All HP ProLiant DL580 G5 systems come standard with 4 banks of memory sockets spanning 4 memory channels for a total of 16 DIMM sockets on board memory. Memory slots xA and xB already populated with memory (2P models with 4x 1GB FBDIMM memory modules and 4P models with 4x 2GB FB DIMM memory modules) to help achieve maximum performance.

Upgrading Memory and Memory Interleaving

To achieve maximum memory performance and flexibility, the HP ProLiant DL580 G5 requires memory to be upgraded in groups of four identical FBDIMMs populated across the four memory channels. In simple terms, the two FBDIMM locations at xC and the two xD locations must be populated with four identical part numbered FBDIMMs. Memory population continues by populating locations xE and xF, then xG and xH. FBDIMM architecture does not allow any gaps in this sequence such that if locations xE and xF were populated and xC and xD were not, the memory at xE and xF would not be recognized by the system.

Standard Memory Plus Optional Memory

Up to 104 GB memory is available with the standard memory and the optional installation of 1 GB, 2 GB, 4 GB, and/or 8 GB PC2-5300 Fully Buffered DIMMs. One possible configuration is shown below, in which 48 GB is added to the standard 8 GB for a total of 56 GB.

Standard Memory Replaced with Optional Memory and Utilizing the Optional Memory Expansion Boards

Up to 128 GB memory is available with the removal of the standard memory and the optional installation of 1 GB, 2 GB, 4 GB, and/or 8 GB PC2-5300 Fully Buffered DIMMs. Up to 256 GB memory is available with the removal of the standard memory, the installation of the DL580 G5 Memory Expansion Boards Option, and the installation of 8 GB PC2-5300 Fully Buffered DIMMs.

| Memory | | Embedded Slots | | | | | | | |
|---|---|----------------|-------|-------|-------|------|-------|-------|-------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | | 1A | 2C | 3E | 4G | 5A | 6C | 7E | 8G |
| Standard | 8 GB | 2 GB | Empty | Empty | Empty | 2 GB | Empty | Empty | Empty |
| Standard + Optional | Maximum: 104 GB Shown: 56 GB | 2 GB | 4 GB | 4 GB | 4 GB | 2 GB | 4 GB | 4 GB | 4 GB |
| Maximum (Without Memory Expansion Boards Option) | 128 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB |

| Memory | | Embedded Slots | | | | | | | |
|-----------------|-------------|----------------|-------|-------|-------|------|-------|-------|-------|
| | | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | | 9B | 10D | 11F | 12H | 13B | 14D | 15F | 16H |
| Standard | 8 GB | 2 GB | Empty | Empty | Empty | 2 GB | Empty | Empty | Empty |



Memory

| | | | | | | | | | |
|---|---|------|------|------|------|------|------|------|------|
| Standard + Optional | Maximum: 104 GB Shown: 56 GB | 2 GB | 4 GB | 4 GB | 4 GB | 2 GB | 4 GB | 4 GB | 4 GB |
| Maximum (Without Memory Expansion Boards Option) | 128 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB |

NOTE:

- Memory channel 1 includes slots 1-4
- Memory channel 2 includes slots 5-8
- Memory channel 3 includes slots 9-12
- Memory channel 4 includes slots 13-16

HP ProLiant DL580 G5 - For 32 DIMM configurations with the standard shipping 4 GB of memory

Standard Memory

4 GB PC2-5300 Fully Buffered DIMMs (DDR2-667) (4 x 1 GB)

All HP ProLiant DL580 G5 systems come standard with 4 banks of memory sockets spanning 4 memory channels for a total of 16 DIMM sockets on board memory. The optional DL580 G5 Memory Expansion Boards Option adds an additional 16 DIMM sockets, which brings the DL580 G5 to a total of 32 DIMM sockets.

Upgrading Memory and Memory Interleaving

To achieve maximum memory performance and flexibility, the HP ProLiant DL580 G5 requires memory to be upgraded in groups of four identical FBDIMMs populated across the four memory channels. In simple terms, the two FBDIMM locations at xC and the two xD locations must be populated with four identical part numbered FBDIMMs. Memory population continues by populating locations xE and xF, then xG and xH. FBDIMM architecture does not allow any gaps in this sequence such that if locations xE and xF were populated and xC and xD were not, the memory at xE and xF would not be recognized by the system.

Standard Memory Plus Optional Memory

Up to 228 GB memory is available with the standard memory of 4 GB and the optional installation of 1 GB, 2 GB, 4 GB, and/or 8 GB PC2-5300 Fully Buffered DIMMs (DDR2-667) in all embedded DIMM sockets as well as the memory expansion boards slots. One possible configuration is shown below, in which 56 GB is added to the standard 4 GB for a total of 60 GB.

Standard Memory Replaced with Optional Memory

Up to 256 GB of memory is available with the removal of the standard 4 GB of memory and the optional installation of PC2-5300 Fully Buffered DIMMs in all the embedded slots as well as the memory expansion boards slots.

Memory

| Memory | | Embedded Slots | | | | | | | |
|----------------------------|--|----------------|-------|-------|-------|------|-------|-------|-------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | | 1A | 2C | 3E | 4G | 5A | 6C | 7E | 8G |
| Standard | 4 GB | 1 GB | Empty | Empty | Empty | 1 GB | Empty | Empty | Empty |
| Standard + Optional | Maximum: 228GB Shown: 60 GB | 1 GB | 2 GB | 2 GB | 2 GB | 1 GB | 2 GB | 2 GB | 2 GB |
| Maximum | 256 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB |

| Memory | | Embedded Slots | | | | | | | |
|----------------------------|---|----------------|-------|-------|-------|------|-------|-------|-------|
| | | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | | 9B | 10D | 11F | 12H | 13B | 14D | 15F | 16H |
| Standard | 4 GB | 1 GB | Empty | Empty | Empty | 1 GB | Empty | Empty | Empty |
| Standard + Optional | Maximum: 228 GB Shown: 60 GB | 1 GB | 2 GB | 2 GB | 2 GB | 1 GB | 2 GB | 2 GB | 2 GB |
| Maximum | 256 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB |

| Expansion Board Memory | | Optional DL580 G5 Memory Expansion Boards Option Slots | | | | | | | |
|----------------------------|---|--|-------|-------|-------|-------|-------|-------|-------|
| | | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| | | 1A | 2B | 3C | 4D | 1A | 2B | 3C | 4D |
| Standard | 4 GB | Empty | Empty | Empty | Empty | Empty | Empty | Empty | Empty |
| Standard + Optional | Maximum: 228 GB Shown: 60 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB |
| Maximum | 256 GB | 4 GB | 4 GB | 4 GB | 4 GB | 4 GB | 4 GB | 4 GB | 4 GB |

| Expansion Board Memory | | Optional DL580 G5 Memory Expansion Boards Option Slots | | | | | | | |
|----------------------------|---|--|-------|-------|-------|-------|-------|-------|-------|
| | | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| | | 1A | 2B | 3C | 4D | 1A | 2B | 3C | 4D |
| Standard | 4 GB | Empty | Empty | Empty | Empty | Empty | Empty | Empty | Empty |
| Standard + Optional | Maximum: 228 GB Shown: 60 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB |
| Maximum | 256 GB | 4 GB | 4 GB | 4 GB | 4 GB | 4 GB | 4 GB | 4 GB | 4 GB |

NOTE:

- Memory channel 1 includes slots 1-4 (on board) and 17-21 (expansion board #1)
- Memory channel 2 includes slots 5-8 (on board) and 21-24 (expansion board #2)
- Memory channel 3 includes slots 9-12 (on board) and 25-28 (expansion board #3)
- Memory channel 4 includes slots 13-16 (on board) and 29-32 (expansion board #4)

Memory

HP ProLiant DL580 G5 - For 32 DIMM configurations with the standard shipping 8 GB of memory

Standard Memory

8 GB PC2-5300 Fully Buffered DIMMs (DDR2-667) (4 x 2 GB)

All HP ProLiant DL580 G5 systems come standard with 4 banks of memory sockets spanning 4 memory channels for a total of 16 DIMM sockets on board memory. The optional DL580 G5 Memory Expansion Boards Option adds an additional 16 DIMM sockets, which brings the DL580 G5 to a total of 32 DIMM sockets.

Upgrading Memory and Memory Interleaving

To achieve maximum memory performance and flexibility, the HP ProLiant DL580 G5 requires memory to be upgraded in groups of four identical FBDIMMs populated across the four memory channels. In simple terms, the two FBDIMM locations at xC and the two xD locations must be populated with four identical part numbered FBDIMMs. Memory population continues by populating locations xE and xF, then xG and xH. FBDIMM architecture does not allow any gaps in this sequence such that if locations xE and xF were populated and xC and xD were not, the memory at xE and xF would not be recognized by the system.

Standard Memory Plus Optional Memory

Up to 232 GB memory is available with the standard memory of 8 GB and the optional installation of 1 GB, 2 GB, 4 GB, and/or 8 GB PC2-5300 Fully Buffered DIMMs in all embedded DIMM sockets as well as the memory expansion boards slots. One possible configuration is shown below, in which 56 GB is added to the standard 8 GB for a total of 64 GB.

Standard Memory Replaced with Optional Memory

Up to 256 GB of memory is available with the removal of the standard 8 GB of memory and the optional installation of PC2-5300 Fully Buffered DIMMs in all the embedded slots as well as the memory expansion boards slots.

| Memory | | Embedded Slots | | | | | | | |
|----------------------------|--|----------------|-------|-------|-------|------|-------|-------|-------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | | 1A | 2C | 3E | 4G | 5A | 6C | 7E | 8G |
| Standard | 8 GB | 2 GB | Empty | Empty | Empty | 2GB | Empty | Empty | Empty |
| Standard + Optional | Maximum: 232GB Shown: 64 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB |
| Maximum | 256 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB |

| Memory | | Embedded Slots | | | | | | | |
|----------------------------|---|----------------|-------|-------|-------|------|-------|-------|-------|
| | | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | | 9B | 10D | 11F | 12H | 13B | 14D | 15F | 16H |
| Standard | 8 GB | 2 GB | Empty | Empty | Empty | 2 GB | Empty | Empty | Empty |
| Standard + Optional | Maximum: 232 GB Shown: 64 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB |
| Maximum | 256 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB |

| Expansion Board Memory | | Optional DL580 G5 Memory Expansion Boards Option Slots | | | | | | | |
|----------------------------|---|--|-------|-------|-------|-------|-------|-------|-------|
| | | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| | | 1A | 2B | 3C | 4D | 1A | 2B | 3C | 4D |
| Standard | 8 GB | Empty | Empty | Empty | Empty | Empty | Empty | Empty | Empty |
| Standard + Optional | Maximum: 232 GB Shown: 64 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB |
| Maximum | 256 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB |

Memory

| Expansion Board Memory | | Optional DL580 G5 Memory Expansion Boards Option Slots | | | | | | | |
|----------------------------|---|--|-------|-------|-------|-------|-------|-------|-------|
| | | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| | | 1A | 2B | 3C | 4D | 1A | 2B | 3C | 4D |
| Standard | 8 GB | Empty | Empty | Empty | Empty | Empty | Empty | Empty | Empty |
| Standard + Optional | Maximum: 232 GB Shown: 64 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB | 2 GB |
| Maximum | 256 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB | 8 GB |

NOTE:

- Memory channel 1 includes slots 1-4 (on board) and 17-21 (expansion board #1)
- Memory channel 2 includes slots 5-8 (on board) and 21-24 (expansion board #2)
- Memory channel 3 includes slots 9-12 (on board) and 25-28 (expansion board #3)
- Memory channel 4 includes slots 13-16 (on board) and 29-32 (expansion board #4)

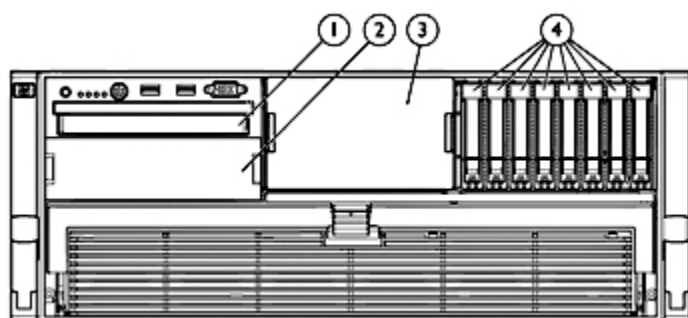
The following memory options are available from HP:

| | |
|--|------------|
| 2 GB FBD PC2-5300 2 x 1 GB Dual Rank Kit | 397411-B21 |
| 2 GB FBD PC2-5300 2 x 1 GB Low Power Single Rank Kit | 461826-B21 |
| 4 GB FBD PC2-5300 2 x 2 GB Dual Rank Kit | 397413-B21 |
| 4 GB FBD PC2-5300 2 x 2 GB Low Power Dual Rank Kit | 461828-B21 |
| 8 GB FBD PC2-5300 2 x 4 GB Dual Rank Kit | 397415-B21 |
| 8 GB FBD PC2-5300 2 x 4 GB Low Power Dual Rank Kit | 466440-B21 |
| 16 GB FBD PC2-5300 2 x 8 GB Dual Rank Kit | 413015-B21 |
| 64 GB FBD PC2-5300 8 x 8 GB Dual Rank Kit | 495604-B21 |
| DL580 G5 Memory Expansion Boards Option | 452179-B21 |

NOTE: This option consists of 4 memory expansion boards with 4 DIMM sockets each for a total of 16 additional DIMM sockets. This brings the DL580 G5 to a total of 32 DIMM sockets.

NOTE: Memory Option Kits include Low Power DIMMs. For more information on ProLiant Energy Efficient Features, please visit: <http://h18004.www1.hp.com/products/servers/platforms/energyefficient/>.

Storage



- 1 Slimline media bay
- 2 Half-height bay
- 3 Second SAS drive bay (supports up to 8 additional SFF SAS/SATA drives)
- 4 8 SFF hot-plug SAS/SATA drives

Drive Support

| | Quantity Supported | Position Supported | Controller |
|--|--------------------|--------------------|-----------------|
| Slimline Drives | | | |
| Slimline DVD-ROM Drive (8X/24X) Option Kit | 1 | 1 | Integrated IDE |
| Slimline DVD-ROM drive | 1 | 1 | Integrated SATA |
| HP Slim SATA DVD RW Optical Drive | 1 | 1 | Integrated SATA |

Hard Drives

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

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

SAS Hot Plug SFF Enterprise (ENT) Drives

| | Quantity Supported | Position Supported | Controller |
|---------------------|--------------------|--------------------|---|
| 300GB 6G SAS 10K DP | Up to 16 | 3,4 | HP Smart Array E200/128 BBWC Controller |
| 300GB 3G SAS 10K DP | | | HP Smart Array E500/256 MB Controller |
| 146GB 6G SAS 15K DP | | | HP Smart Array P400i/256 MB Controller |
| 146GB 6G SAS 10K DP | | | HP Smart Array P400i/512 MB BBWC Controller |
| 146GB 3G SAS 15K DP | | | HP Smart Array P600/256 BBWC Controller |
| 146GB 3G SAS 10K DP | | | HP Smart Array P800/512 BBWC Controller |
| 72GB 6G SAS 15K DP | | | HP Smart Array P212/Zero Memory Controller |
| 72GB 3G SAS 15K DP | | | HP Smart Array P212/ 256 MB Controller |
| 72GB 3G SAS 10K DP | | | HP Smart Array P410/256 MB Controller |
| 72GB 3G SAS 10K DP | | | HP Smart Array P410/512 MB BBWC Controller |
| | | | HP Smart Array P411/256 MB Controller |
| | | | HP Smart Array P411/512 MB BBWC Controller |

SAS Hot Plug SFF Midline (MDL) Drives

| | Quantity Supported | Position Supported | Controller |
|----------------------|--------------------|--------------------|---|
| 500GB 6G SAS 7.2K DP | Up to 16 | 3,4 | HP Smart Array E200/128 BBWC Controller |
| | | | HP Smart Array E500/256 MB Controller |
| | | | HP Smart Array P400i/256 MB Controller |
| | | | HP Smart Array P400i/512 MB BBWC Controller |
| | | | HP Smart Array P600/256 BBWC Controller |

Storage

HP Smart Array P800/512 BBWC Controller
 HP Smart Array P212/Zero Memory Controller
 HP Smart Array P212/ 256 MB Controller
 HP Smart Array P410/256 MB Controller
 HP Smart Array P410/512 MB BBWC Controller
 HP Smart Array P411/256 MB Controller
 HP Smart Array P411/512 MB BBWC Controller

SATA Hot Plug SFF Midline (MDL) Drives

| | Quantity Supported | Position Supported | Controller |
|--------------------|--------------------|--------------------|---|
| 500GB 3G SATA 7.2K | Up to 16 | 3,4 | HP Smart Array E200/128 BBWC Controller |
| 160GB 3G SATA 7.2K | | | HP Smart Array E500/256 MB Controller |
| | | | HP Smart Array P400i/256 MB Controller |
| | | | HP Smart Array P400i/512 MB BBWC Controller |
| | | | HP Smart Array P600/256 BBWC Controller |
| | | | HP Smart Array P800/512 BBWC Controller |
| | | | HP Smart Array P212/Zero Memory Controller |
| | | | HP Smart Array P212/ 256 MB Controller |
| | | | HP Smart Array P410/256 MB Controller |
| | | | HP Smart Array P410/512 MB BBWC Controller |
| | | | HP Smart Array P411/256 MB Controller |
| | | | HP Smart Array P411/512 MB BBWC Controller |

SATA Hot Plug SFF Entry (ETY) Drives

| | Quantity Supported | Position Supported | Controller |
|----------------------|--------------------|--------------------|---|
| 250GB 3G SATA 5.4K | Up to 16 | 3,4 | HP Smart Array E200/128 BBWC Controller |
| 120GB 1.5G SATA 5.4K | | | HP Smart Array E500/256 MB Controller |
| | | | HP Smart Array P400i/256 MB Controller |
| | | | HP Smart Array P400i/512 MB BBWC Controller |
| | | | HP Smart Array P600/256 BBWC Controller |
| | | | HP Smart Array P800/512 BBWC Controller |
| | | | HP Smart Array P212/Zero Memory Controller |
| | | | HP Smart Array P212/ 256 MB Controller |
| | | | HP Smart Array P410/256 MB Controller |
| | | | HP Smart Array P410/512 MB BBWC Controller |
| | | | HP Smart Array P411/256 MB Controller |
| | | | HP Smart Array P411/512 MB BBWC Controller |

SATA Hot Plug Midline (MDL) Solid State Drives

| | Quantity Supported | Position Supported | Controller |
|---------------------|--------------------|--------------------|---|
| 60GB 3.0G SATA SSD | Up to 16 | 3,4 | HP Smart Array E200/128 BBWC Controller |
| 120GB 3.0G SATA SSD | | | HP Smart Array E500/256 MB Controller |
| | | | HP Smart Array P400i/256 MB Controller |
| | | | HP Smart Array P400i/512 MB BBWC Controller |
| | | | HP Smart Array P600/256 BBWC Controller |
| | | | HP Smart Array P800/512 BBWC Controller |
| | | | HP Smart Array P212/Zero Memory Controller |
| | | | HP Smart Array P212/ 256 MB Controller |
| | | | HP Smart Array P410/256 MB Controller |
| | | | HP Smart Array P410/512 MB BBWC Controller |
| | | | HP Smart Array P411/256 MB Controller |

Storage

HP Smart Array P411/512 MB BBWC Controller

External Storage

| | Quantity Supported | Position Supported | Host Controller or Adapter |
|--|----------------------------|--------------------|--|
| 20 Modular Smart Array | 1 per SCSI VHDCI connector | External | Smart Array 6404/256 Controller |
| 50 Modular Smart Array | Up to 26 | External | HP Smart Array P600/256 BBWC Controller HP Smart Array P800/512 BBWC Controller |
| 60 Modular Smart Array | Up to 4 Up to 8 | External | HP Smart Array P600/256 BBWC Controller |
| | | External | HP Smart Array E500/256MB Controller HP Smart Array P212/Zero Memory Controller HP Smart Array P212/ 256 MB Controller HP Smart Array P411/256 MB Controller HP Smart Array P411/512 MB BBWC Controller |
| | | External | HP Smart Array P600/256 BBWC Controller |
| | | External | HP Smart Array E500/256MB Controller HP Smart Array P800/512 BBWC Controller HP Smart Array P212/Zero Memory Controller HP Smart Array P212/ 256 MB Controller HP Smart Array P411/256 MB Controller HP Smart Array P411/512 MB BBWC Controller |
| | | External | HP SC08Ge Host Bus Adapter |
| 70 Modular Smart Array | Up to 2 Up to 4 | External | HP Smart Array P600/256 BBWC Controller |
| | | External | HP Smart Array E500/256MB Controller HP Smart Array P800/512 BBWC Controller HP Smart Array P212/Zero Memory Controller HP Smart Array P212/ 256 MB Controller HP Smart Array P411/256 MB Controller HP Smart Array P411/512 MB BBWC Controller |
| HP 2000sa Modular Smart Array Controller | Up to 4 | External | HP SC08Ge Host Bus Adapter |

Maximum Storage Capacity - (External SAS Enclosure Attached)

| | |
|----------|--|
| Internal | 8.0TB (16 x 500GB SFF SAS Drives) |
| External | 960TB (80 MSA60 enclosures x 12 drive bays each x 1TB SATA Drives) |

Tape and Disk-Based Backup

NOTE: For a complete listing of compatible tape and disk-based backup offerings, please visit www.hp.com/go/connect

| | Position Supported | Controller | Controller Part Number |
|---|--------------------|----------------------------|------------------------|
| HP StorageWorks SCSI Tape Drives, Internal LTO-1 Ultrium 232 LTO-2 Ultrium 448 LTO-3 Ultrium 920 LTO-4 Ultrium 1760 DAT 40 DAT 72 DAT 160 | 2 | HP SC11Xe Host Bus Adapter | 412911-B21 |
| HP StorageWorks SCSI Tape Drives, External LTO-1 Ultrium 232 LTO-2 Ultrium 448 LTO-3 Ultrium 920 LTO-3 Ultrium 960 LTO-4 Ultrium 1760 | External | HP SC11Xe Host Bus Adapter | 412911-B21 |



Storage

LTO-4 Ultrium 1840
 DAT 40
 DAT 72
 DAT 160
 1U Rack-Mount Kit
 3U Rack-Mount Kit

| | | | |
|--|---|--------------|-----|
| HP StorageWorks USB Tape Drives, Internal | 2 | USB 2.0 Port | N/A |
| DAT 40 USB DAT 72 USB DAT 160 USB | | | |

| | | | |
|--|----------|--------------|-----|
| HP StorageWorks USB Tape Drives, External | External | USB 2.0 Port | N/A |
| DAT 40 USB DAT 72 USB DAT 160 USB 1U USB Rack-Mount Kit | | | |

| | | | |
|---|---|----------------------------|------------|
| HP StorageWorks SAS Tape Drives, Internal | 2 | HP SC44Ge Host Bus Adapter | 416096-B21 |
| DAT 160 SAS LTO-2 Ultrium 448 SAS LTO-3 Ultrium 920 SAS LTO-4 Ultrium 1760 SAS | | | |

| | | | |
|---|----------|----------------------------|------------|
| HP StorageWorks SAS Tape Drives, External | External | HP SC44Ge Host Bus Adapter | 416096-B21 |
| DAT 160 SAS LTO-2 Ultrium 448 SAS LTO-3 Ultrium 920 SAS LTO-4 Ultrium 1760 SAS LTO-4 Ultrium 1840 SAS 1U Rack-Mount Kit 3U Rack-Mount Kit | | | |

| | | | |
|---|----------|--|------------|
| HP StorageWorks SCSI Tape Automation, External | External | HP SC11Xe Host Bus Adapter | 412911-B21 |
| DAT 72x10 Autoloader 1/8 G2 Autoloader MSL2024 MSL4048 MSL8096 MSL6000 | | HP U320e SCSI Host Bus Adapter NOTE: Recommended for MSL tape libraries. | AH627A |

| | | | |
|--|----------|--|------------|
| HP StorageWorks SAS Tape Automation, External | External | HP SC44Ge Host Bus Adapter | 416096-B21 |
| 1/8 G2 Autoloader MSL2024 MSL4048 MSL8096 | | NOTE: Please visit: http://www.hp.com/go/connect for details about minimum SAS controller firmware version and SAS cabling requirements. | |



Storage

| | | | |
|--|----------|--|-----|
| HP StorageWorks Fibre Tape Automation, External MSL2024 MSL4048 MSL8096 MSL6000 | External | NOTE: Please consult the EBS connectivity matrix at: http://www.hp.com/go/ebs for detailed connectivity information. | N/A |
| HP StorageWorks RDX Removable Disk Backup System, Internal RDX160 RDX320 RDX500 | 2 | USB 2.0 Port | N/A |
| HP StorageWorks RDX Removable Disk Backup System, External RDX160 RDX320 RDX500 | External | USB 2.0 Port | N/A |
| HP StorageWorks D2D Backup Systems D2D120 D2D130 D2D2500i D2D4000i | External | Embedded Network Controller | N/A |

Power Specifications

| | |
|--|------------------|
| Part Number | 437508-B21 |
| Operational AC Input Voltage Range (Vrms) | 90 - 264 |
| Frequency Range (Nominal) (Hz) | 47 to 63 (50/60) |

| Nominal Input Voltage (Vrms) | 100 | 120 | 208 | 220 | 230 | 240 |
|--|------|------|------|------|------|------|
| Max Rated Output Wattage Rating | 800 | 900 | 1200 | 1200 | 1200 | 1200 |
| Nominal Input Current (A rms) | 9.50 | 8.80 | 6.70 | 6.30 | 6.05 | 5.80 |
| Max Rated Input Wattage Rating (Watts) | 964 | 1071 | 1412 | 1412 | 1412 | 1412 |
| Max. Rated VA (Volt-Amp) | 984 | 1093 | 1441 | 1441 | 1441 | 1441 |
| Nominal Efficiency (%) | 86 | 87 | 88 | 88 | 88 | 88 |
| Power Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Leakage Current (mA) | .42 | .50 | 0.86 | 0.92 | 0.96 | 1.00 |
| Maximum Inrush Current (A peak) | 30 | 30 | 100 | 100 | 100 | 100 |
| Maximum Inrush Current duration (msec) | 5 | 5 | 5 | 5 | 5 | 5 |

NOTES:

NOTE: To review typical system power ratings use the HP Power Advisor which is available online located at url: www.hp.com/go/proliant-energy-efficient or www.hp.com/go/hppoweradvisor

To drill down to calculators:

- Click on: "ProLiant Servers"
- Click on the Server of interest. Example: DL580 G5
- Click on: "Power Calculator" link. (You may need to scroll down to see it)
- There are certain Dual-Core, lowline, max configurations that are not supported. All highline configurations are supported. Consult the Power Calculator to determine if your lowline configuration is supported.

NOTE: If customers require a local power cord, they can check the power cord matrix for the appropriate county specific sku. Please see the following power cord matrix for details: <http://www.hp.com/go/powercordmatrix>

Table 1 outlines the default DL580 G5 system power redundancy behavior.

| Default - Power Supply Override Disabled (2+2 Redundancy) | | | | | | |
|---|--------------------------------|------------------------|--------------------------------|------------------------|----------------------|------------------------|
| Number of Power Supplies | Hi-Line (208VAC and higher) | | Low-Line (115VAC and lower) | | | |
| | 1 to 4 Processors | | 1 to 2 Processors | | 3 to 4 Processors | |
| | Supported at POST | Redundant | Supported at POST | Redundant | Supported at POST | Redundant |
| 1 | No | No | No | No | No | No |
| 2 | Yes | No | Yes | No | Halt/F9 ¹ | No |
| 3 | Yes | DC output ² | Yes | DC output ² | Yes | DC output ² |
| 4 | Yes | Yes | Yes | Yes | Yes | See note ³ |

Table 1

NOTES:

- The server will halt with a 'power not sufficient' message when it has three or more processors and only two power supplies. This is a caution to customers who wish to run in this configuration that it is possible to exceed the power output of two supplies when the system is heavily loaded and connected to low-line AC. See note 3 below.
- DC output - in this configuration if one supply fails the DC output power of the two remaining supplies will be sufficient to keep the server running. If one of the AC input feeds fail (in a two AC power feed per rack environment) this configuration can not guarantee redundancy if the feed supplying two of the three power supplies fails.
- In a fully optioned server with four power supplies and four 130 Watt processors it is possible to exceed the rated

Power Specifications

output power of two supplies when powered by low-line AC (110 VAC). In this scenario the system is non-redundant. If one of the two AC power feeds fail and brings down two power supplies the remaining two supplies may not supply enough power to keep the system running. Customers who are running low line with configurations approaching fully optioned servers should check their power redundancy using the Active Answers Power Calculator.

Table 2 outlines the power redundancy behavior of the DL580 G5 when this option is set in RBSU. Customers interested in this option need to first consult the Active Answers Power Calculator to confirm their power is redundant with their system configuration.

Power Supply Override Enabled¹ (1+ Redundancy)

Customers must consult the power calculator with their system configuration to verify if the server configuration is redundant before enabling this option.

| Number of Power Supplies | Hi-Line (208VAC and higher) | | Low-Line (115VAC and lower) | | | |
|--------------------------|--------------------------------|--------------------------|--------------------------------|--------------------------|-------------------|--------------------------|
| | 1 to 4 Processors | | 1 to 2 Processors | | 3 to 4 Processors | |
| | Supported at POST | Redundant | Supported at POST | Redundant | Supported at POST | Redundant |
| 1 | Yes ² | No | Yes ² | No | Yes ² | No |
| 2 | Yes | Consult Power Calculator | Yes | Consult Power Calculator | Yes | Consult Power Calculator |
| 3 | Yes | | Yes | | Yes | |
| 4 | Yes | | Yes | | Yes | |

Table 2

NOTES:

- When this selection has been set in RBSU, a "Power Supply Requirements Override has been enabled" message will be displayed during POST.
- In a one supply configuration, the external health LED will flash to warn that system is not redundant.

Technical Specifications

| | | | | |
|--|--|--|---|--|
| System Unit Rack | Dimensions (H x W x D) (with bezel) | 6.94 x 19.0 x 26.5 in (17.6 x 48.3 x 67.3 cm) | | |
| | Weight (approximate) | Maximum | 100.0 lb (45.4 kg) (all hard drives, power supplies, and processors installed) | |
| | | Minimum | 71.0 lb (32.2 kg) (one hard drive, power supply, and processor installed) | |
| | Input Requirements (per power supply) | Rated Line Voltage | 90 - 132 VAC, 180 - 264 VAC | |
| | | Rated Input Current | 10 A (at 100 VAC), 7.8 A (at 200 VAC) | |
| | | Rated Input Frequency | 47 to 63 Hz | |
| | | Rated Input Power | 964 W (at 100 VAC), 1412 W (at 240 VAC) | |
| | BTU Rating | Maximum | 3355 BTU/hr (at 100 VAC), 4914 BTU/hr (at 200 VAC) | |
| | Power Specifications | <p>NOTE: To review typical system power ratings use the HP Power Advisor which is available online located at url: www.hp.com/go/proliant-energy-efficient or www.hp.com/go/hppoweradvisor</p> <ul style="list-style-type: none"> - Click on the system of interest. Example: DL580 G5 - Follow the instructions of the next screens. | | |
| | Power Supply Output (per power supply) | Rated Steady-State Power | 800 W (at 100 VAC), 1200 W (at 200 VAC) | |
| Maximum Peak Power | | 800 W (at 100 VAC), 1200 W (at 200 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 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 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 | 3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min). | | |

Technical Specifications

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| | Non-operating | 9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min). |
| Acoustic Noise | Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109). | |
| | Idle | |
| | L WAd | 6.9 B |
| | L pAm | 52 dBA |
| Emissions Classification (EMC) | Operating | |
| | L WAd | 6.9 B |
| | L pAm | 52 dBA |
| | FCC Rating | Class A |
| Normative Standards | CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1 | |

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.

| | | | | |
|--|----------------------------|--|--------------|-------------------------|
| Slimline CD-RW/DVD-ROM 24X Combo Drive (Multibay) | Shipping Dimensions | 13.88 x 11.38 x 9.25 in (35.26 x 28.91 x 23.50 cm) | | |
| | Shipping Weight | 5 lb (2.27 kg) | | |
| Disk | Applicable Disk | DVD-ROM DVD-R (Read Only) 2.6 GB/side DVD-RAM (Read Only) 5.2 GB/side DVD-RAM (Read Only) CD-ROM Mode-1 data disc CD-ROM Mode-2 data disc CD Audio disc CD-Extra CD-RW CD-R CD Text PhotoCD CD-I (mode 2) CD-I Ready CD-Bridge | | |
| | Capacity | DVD-ROM | DVD-SL | 4.7 GB/side |
| | | | DVD-DL | 8.5 GB/side |
| | | | Double Sided | 9.40 GB/side |
| | | DVD-R | | 3.95 GB/side |
| | | DVD-RAM | | 2.6 GB/side and 5.2 GB/ |

Technical Specifications

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|---------------------------------------|---|---|-------------------|---------------------------------------|
| | | CD-ROM | Mode-1 | 650 MB (550 MB) |
| | | | Mode-2 | 742 MB (640 MB) |
| | Block Size | DVD | | 2,048 bytes |
| | | CD | | 2,352 (Mode-0) |
| | | | | 2352, 2340, 2336, 2048 bytes (Mode-1) |
| | | | | 2352, 2340, 2336, 2048 bytes (Mode-2) |
| | Diameter | 120 mm (4.7 in), 80 mm (3.1 in)(with adapter at vertical mounting mode) | | |
| Loading Mechanism | Tray type | | | |
| Interface | EIDE (ATAPI) | | | |
| Access Times (typical) | Random | DVD-ROM < 120 ms, CD-ROM < 110 ms | | |
| | Full-Stroke | DVD-ROM < 240 ms, CD-ROM < 160 ms | | |
| Audio Output Level (typical) | Line-out | CD 0.7 Vrms at 47 Kohms Load | | |
| Data Transfer Rate (sustained) | DVD-ROM | Single Layer | 10.8 MB/sec. Max. | |
| | DVD-RAM | | 2.77 MB/sec. Max | |
| | CD-ROM | | 7.2 MB/sec. Max. | |
| Cache Buffer | 2 MB | | | |
| Spin-up Time (typical) | less than 10 seconds | | | |
| MTBF | 120,000 Power On Hours (POH) | | | |
| Ambient Temperature | Operating | -22° to 140° F (-30° to 60° C) | | |
| Relative Humidity | Operating | 10% to 80% | | |
| | Storage/Transportation | 5% to 95% | | |
| Dimensions | (HxWxD, maximum) | 0.5 x 5.04 x 5.1 in (12.7 x 128 x 129.4 mm) | | |
| Option Kit Contents | DVD-ROM drive with installation guide, warranty card, registration card | | | |

Technical Specifications

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|---|---|
| Integrated Lights-Out 2 Architecture Standard (integrated on system board) | 32-bit PCI-based health and remote management ASIC (Application Specific Integrated Circuit) |
| Processor | 32-bit RISC processor core running at 66 MHz |
| Upgradability | Option firmware upgradable via flash ROM. |
| Video Support | Utilizes the host server's embedded video chip. Supports VGA/SVGA, 640 x 480 (256 to 16.7M colors), 800 x 600 (256 to 16.7M colors), 1024 x 768 (256 to 65K colors), 1280 x 1024 (256 colors) |
| Interfaces | One Ethernet network connection (10/100 Mb/s) |
| Memory | 2-MB Flash ROM 8-MB SDRAM |
| Operating System Support | Microsoft Windows 2000 Server and Advanced Server Microsoft Windows Server 2003 and Windows Server 2003 R2, and Windows Server 2003 for Extended Systems Standard Edition, Enterprise Edition Red Hat Enterprise Linux 3 (x86), (AMD64/EM64T) Red Hat Enterprise Linux 4.0 SUSE LINUX Enterprise Server 9 SUSE LINUX Enterprise Server 10 Novell NetWare 6.5 |
| Client Browser Support | Microsoft Internet Explorer 6.0 SP1 or later. Mozilla Firefox 2.0 or later (on supported Windows and Linux client systems) Mozilla Firefox 1.75 or later (for supported Linux client systems) |
| iLO 2 Standard Features | Virtual Text Remote Console Virtual KVM Virtual Power Button Control Virtual UID Control Dedicated LAN Connectivity Secure access using web browser Secure access using Secure Shell (SSH) client Serial connectivity Automatic IP Configuration via DHCP/DNS/WINS Industry Standard 128-bit Secure Sockets Layer (SSL) Security IML and iLO2 Event Logging Support for up to 12 user accounts with customizable access privileges |
| iLO 2 Advanced Features (optional) | Virtual Graphical Remote Console Virtual Floppy/USB Key drive Virtual CD-ROM drive Directory Services Integration Processor States Reporting Terminal Services Integration |

Technical Specifications

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|-------------------------------------|---|---|
| Smart Array P400i Controller | Disk Drive and Enclosure Interface | 3G SAS (Serial Attached SCSI) 1.5G SATA (Serial Advanced Technology Attachment) |
| | SAS Connectors | 2 internal (SFF8484) x4 wide port connectors |
| | Cache Memory Speed | DDR2-533MHz with 40 or 72-bit wide bus provides up to 4.2 GB/s maximum bandwidth. |
| | Server Interface | x8 2.5G PCIe provides 2GB/s maximum bandwidth. |
| | SAS Speed | x8 3G SAS provides 2.4GB/s maximum bandwidth. |
| | Cache Memory | 40-bit 256MB cache (72-bit 512MB module upgrades available); ECC protection, battery-backed, and transportable |
| | Logical Drives Supported | Up to 32 logical drives |
| | Maximum Logical Drive Capacity | 2TB |
| | Host Memory Addressing | 64-bit, supporting greater than 4GB server memory space |
| | RAID Support | RAID 6 with ADG (Advanced Data Guarding) requires Battery Backed Write Cache Upgrade RAID 5 (Distributed Data Guarding) RAID 1, 1+0 (Striping & Mirroring) RAID 0 (Striping) |

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| Two embedded NC373i Multifunction Gigabit Server Adapters | Network Interface Compatibility | 10Base-T/100Base-TX/1000Base-TX | |
| | Data Transfer Method | PCI-Express x4 | |
| | 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) | 2000 Mb/s |
| | Connector | RJ-45 | |
| | 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) |
| 1000Base-TX | | Category 5 or higher UTP; up to 328 ft (100 m) | |

Technical Specifications

Environment-friendly Products and Approach

End-of-life Management and Recycling

Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to <http://www.hp.com/go/green>. To recycle your product, please go to: <http://www.hp.com/go/green> or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

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

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