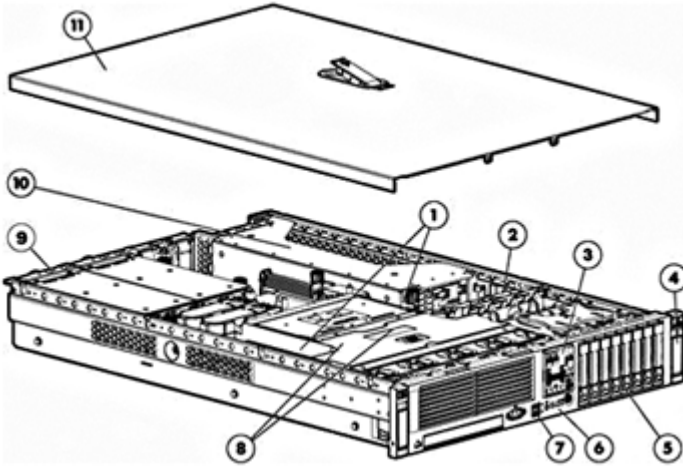
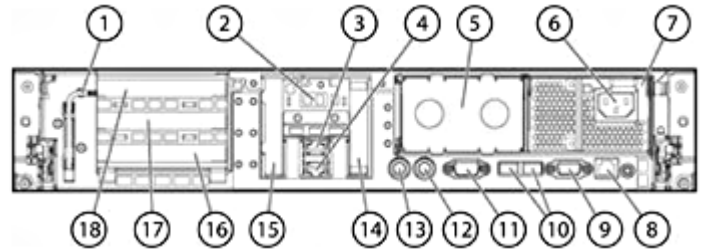


### Overview



#### Front View:

1. Eight sockets for PC2-5300 DIMMs (DDR2-667) with Advanced ECC
2. Hot-plug fans, full redundancy
3. Systems Insight Display
4. Quick release lever for rapid server access
5. Support for eight Small Form Factor hot plug hard drives bays
6. Front LEDs (show server status) and Unit Identification button/LED (for easy in rack server identification)
7. Two front USB ports (+two rear, one internal USB port)
8. AMD Dual Core Rev. F Processor (Performance models include two processors)
9. Hot plug power supply, redundancy option (High performance models include redundant power supply)
10. Three PCI-E non-hot plug expansion slots (or optional mixed PCI-X/E expansion cage or optional x16 PCI-E expansion cage). Two additional PCI-E slots embedded on system board. This provides Four available PCI-E non-hot plug expansion slots for use; one consumed by Smart Array Controller
11. Quick removal access panel



#### Rear View:

1. T-10/T-15 Torx screwdriver
2. External option blank
3. NIC 2 connector
4. NIC 1 connector
5. Power supply bay 2
6. Power cord connector
7. Power supply bay 1 (populated)
8. Integrated Lights-Out 2 (iLO 2) connector
9. Video connector
10. USB connectors (2)
11. Serial connector
12. Mouse connector
13. Keyboard connector
14. Expansion slot 1
15. Expansion slot 2
16. Expansion slot 3
17. Expansion slot 4
18. Expansion slot 5

### What's New

- New Quad-Core AMD Opteron™ Processor 2356 (2.3 GHz / 75 Watts) upgrade kit
- New Quad-Core AMD Opteron™ Processor 2352 (2.1 GHz / 75 Watts) upgrade kit

### At A Glance

The HP ProLiant DL385, the world's largest selling AMD server, delivers on its history of design excellence with enterprise-class uptime and manageability, proven 2-way, dual core AMD Opteron™ performance, and 2U density for a variety of rack deployments

### Overview

and applications.

- **Processors:**
  - AMD Dual-Core Rev F, 2200 series processors with 2MB (2 x 1MB) Level 2 cache for blazing performance; systems support up to 2 processors (2 processors standard on all Performance models)
  - AMD Quad-Core, 2300 series processors with 2MB (4 x 512KB) Level 2 cache and 2MB (1 x 2MB) Level 3 cache
  - Preconfigured Performance models save valuable deployment time at a discounted bundle price
  - Serverworks HT-2100 Northbridge and HT1000 Southbridge chipset
- **Memory:**
  - Up to 32 GB PC2-5300 DIMMs (DDR2-667). Standard models support 2:1 Interleaving. Bank Interleaving (Data saved across 2 pairs of DIMMs) and Node interleaving supported (data saved across 2 processors memory sets) also available.
- **Storage Controller:**
  - Performance Models: Smart Array P400/512MB BBCW Controller (RAID 0/1/5/6)
  - Base Models: Smart Array P400/256MB Controller (RAID 0/1/1+0/5)
    - Upgrade to 512 MB cache w/o Battery Backed Cache module, optional BBWC
    - The Smart Array P400/256MB Controller ships installed in slot 1 (slots 2-5 are available)
  - Entry Model: Smart Array E200/64MB Controller (RAID 0/1)
    - Upgrade to 128 MB cache, adds Raid 5 and BBWC
    - The Smart Array E200/64MB Controllers ships installed in slot 3
- **Internal Drive Support:**
  - (8) small form factor (SFF) hot-plug drive bays to support Serial-attached SCSI (SAS) and Serial ATA (SATA) drives
- **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:**
  - 4 Total PCI-Express slots: three x8 and one x4.
  - Optional mixed 2 PCI-X / two x8 PCI-Express and Optional cage with PCI-Express with one x8, one x16 and one x4 configurations available.
- **USB 2.0 Ports:**
  - 5 total ports: (2) ports up front; (2) ports in back; (1) port internal
- **Redundancy:**
  - Fully redundant hot plug fans
  - Hot plug power supply with optional redundancy (Included in Performance models)
- **Management:**
  - Integrated Lights-Out 2 featuring Integrated Remote Console with KVM over IP performance over shared network access
  - Automatic Server Recovery (ASR), ROM Based Setup Utility (RBSU), HP System Insight Manager, Status LEDs including system health and UID and SmartStart
  - System Insight Display on the front bezel for quick and easy server diagnostics
- **Form Factor:**
  - Rack (2U), (3.5-inch)
- **Deployment/Serviceability:**
  - Quick Deploy Rail System includes sliding universal rails, an ambidextrous cable management arm and quick release levers for fast and easy serviceability
  - 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:**
  - 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

### Overview

warranty services are available through HP Care Pack services or customized service agreements. SATA hard drives have a one-year warranty.

**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/4AA0-8261enw.pdf>.

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

#### Processor

One of the following depending on Model

AMD Opteron™ Processor 2356 (2.3 GHz, 75 Watts)

AMD Opteron™ Processor 2352 (2.1 GHz, 75 Watts)

AMD Opteron™ Processor 2222 (3.0 GHz, 75 Watts)

**NOTE:** CTO only.

AMD Opteron™ Processor 2220 (2.8 GHz, 75 Watts)

AMD Opteron™ Processor 2218 (2.6 GHz, 75 Watts)

AMD Opteron™ Processor 2218 HE (2.6 GHz, 55 Watts)

**NOTE:** CTO only.

AMD Opteron™ Processor 2216 HE (2.4 GHz, 55 Watts)

AMD Opteron™ Processor 2216 (2.4 GHz, 75 watts)

**NOTE:** CTO only.

AMD Opteron™ Processor 2214 HE (2.2 GHz, 55 Watts)

AMD Opteron™ Processor 2212 HE (2.0 GHz, 55 Watts)

**NOTE:** CTO only.

AMD Opteron™ Processor 2210 HE (1.8 GHz, 55 Watts)

AMD Opteron™ Processor 2210 (1.8 GHz, 75 Watts)

**NOTE:** CTO only.

**NOTE:** Up to 2 processors supported. High Performance Model configurations include two processors, Upgraded memory to 512, BBWC, DVD/CDRW and Redundant Power Supply.

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#### Cache Memory

2MB (2 x 1MB) Level 2 cache (2200 series)

2MB (4 x 512KB) Level 2 cache and 2MB (1 x 2MB) Level 3 cache (2300 series)

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#### Chipset

Serverworks HT-2100 Northbridge and HT1000 Southbridge Chipset

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#### Upgradeability

Upgradeable to 2 processors

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#### Memory Protection

Advanced ECC

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### Standard Features

Memory	Type	PC2-5300 DIMMs (DDR2-667) Standard models support 2:1 Interleaving, with Bank Interleaving (Data saved across 2 pairs of DIMMs) and Node interleaving supported (data saved across 2 processors memory sets) available. <b>NOTE:</b> DIMM banks are active only when the corresponding processor socket is populated.
	Standard (Entry Models)	1 GB (2 x 512 MB)
	Standard (Base Models)	2 GB (2 x 1 GB)
	Standard (Performance Models)	4 GB (4 x 1 GB)
	Maximum	32 GB (8 x 4 GB)

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

With Standard PCIe Riser Installed <b>NOTE:</b> For PCIe only situations.	Expansion Slots #	Technology	Bus Width**	Connector Width	Bus Number*	Form Factor	Notes
	1	PCIe	x8	x8	70	Low profile slot	Reserved slot for Smart Array P400 Controller
	2	PCIe	x8	x8	67	Low profile slot	
	3	PCIe	x4	x8	11	Full length, full height slot	
	4	PCIe	x8	x16	8	Full length, full height slot	
	5	PCIe	x8	x16	5	Full length, full height slot	

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

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

### Standard Features

#### With Optional PCIe x16 150 W Riser Installed

**NOTE:** For PCIe only situations.

Expansion Slots #	Technology	Bus Width**	Connector Width	Bus Number*	Form Factor	Notes
1	PCIe	x8	x8	70	Low profile slot	Reserved slot for Smart Array P400 Controller
2	PCIe	x8	x8	67	Low profile slot	
3	PCIe	x4	x8	8	Full length, full height slot	
4	PCIe	x16	x16	5	Full length, full height slot	Supports 150W card

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

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

#### With Optional PCIe/PCI-X Riser Installed

**NOTE:** For PCI-X mixed situations.

Expansion Slots #	Technology	Bus Width**	Connector Width	Bus Number*	Form Factor	Notes
1	PCIe	x8	x8	70	0	Low profile slot
2	PCIe	x8	x8	67	0	Low profile slot
3	PCIe	x8	x16	10	0	Full length, full height slot
4	PCI-X (133MHz, 3.3 Volt)	64-bit	Not applicable	6	1	Full length, full height slot
5	PCI-X (133MHz, 3.3 Volt)	64-bit	Not applicable	6	2	Full length, full height slot

\* Default bus assignment (in decimal). 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).

\*\*\* Indicates the number of physical electrical lanes running to a PCI-e connector.

#### Storage Controller One of the following depending on Model

Performance Models:	HP Smart Array P400/512MB BBWC Controller (RAID 0/1/5/6)
Base Models:	HP Smart Array P400/256MB Controller (RAID 0/1/1+0/5) <b>Available upgrades:</b> 512MB memory module for RAID 0/1/5/6, battery for battery-backed write cache (BBWC).
Entry Models:	HP Smart Array E200/64MB Controller (RAID 0/1) <b>Available upgrades:</b> 128MB memory module for RAID 0/1/5, battery for battery-backed write cache (BBWC).

### Standard Features

Storage	Diskette Drive	None Standard	
	Optical Drive	None Standard	
	One of the following depending on Model	IDE DVD-ROM/CDRW Combo included on Performance models	
	Hard Drives	None Standard	

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Maximum Internal Storage	Hot Plug SAS	1.168TB	8 x 146GB with standard internal hot plug SFF SAS drive cage
	Hot Plug SATA	960GB	8 x 120GB

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Remote Management	Integrated Lights Out 2 (iLO2) Standard Management: <ul style="list-style-type: none"><li>● Virtual Text Remote Console (pre-OS only)</li><li>● Remote Serial Console</li><li>● Virtual Power Button Control</li><li>● Virtual Unit ID control</li><li>● Integrated Remote Console</li><li>● Dedicated &amp; full function shared network connectivity</li><li>● Embedded system health</li><li>● Browser, command line and scripted access</li><li>● Automatic IP Configuration via DHCP/DNS/WINS</li><li>● Industry Standard 128-bit Secure Sockets Layer (SSL) and Secure Shell security (SSH)</li><li>● OS independent hardware health status</li><li>● IML and iLO Event Logging</li><li>● Support for 12 user accounts with customizable access privilege</li></ul>
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Intelligent Manageability	HP Systems Insight Manager SmartStart Management Agent Redundant ROM Remote Flash ROM ROM-Based Setup Utility (RBSU) Integrated Management Log Automatic Server Recovery (ASR) Dynamic Sector Repairing (with Smart Array controller) Drive Parameter Tracking (with Smart Array controller) <b>NOTE:</b> Upon the event of a failed processor in a multi-processing environment, the system will automatically reboot and attempt to use the remaining good processor. Pre-Failure Warranty (covers processors, SAS hard drives and memory)
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### Standard Features

Interfaces	Serial	1
	Pointing Device (Mouse)	1
	Graphics	1
	Keyboard	1
	VGA	2 (1 front, 1 back)
	Network RJ-45	2
	iLO 2 remote management port	1
	USB 2.0 Ports	5 (2 front, 2 back, 1 inside)

**NOTE:** Please see the following URL for additional information regarding USB support:  
<http://h18004.www1.hp.com/products/servers/platforms/usb-support.html>.

Graphics	Integrated ATI ES1000, 32 MB video standard
	<ul style="list-style-type: none"><li>● 16 bit color: maximum resolution of 1600 x 1200</li><li>● 32 bit color: maximum resolution of 1280 x 1024</li></ul>
	<b>NOTE:</b> Maximum resolution available via iLO 2 remote console is 1280 x 1024.

Form Factor	Rack (2U), (3.5-inch)
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HP Insight Control Environment Management Suite	HP Insight Control Environment delivers foundation management, including remote monitoring, hardware resource deployment, health monitoring, software version control, performance monitoring, vulnerability scanning and patch management, and power management. HP Insight Control Environment installs and licenses the following components by default using a wizard-based integrated installer:
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- HP Systems Insight Manager
- HP iLO Advanced Pack
- HP Insight Power Manager
- HP Rapid Deployment Pack
- HP Performance Management Pack
- HP Vulnerability and Patch Management Pack
- HP Virtual Machine Management Pack

Additional ProLiant Essentials software and management tools included on the Insight Control Management kit can be installed manually:

- HP Server Migration Pack - Universal Edition  
**NOTE:** HP Server Migration Pack - Universal Edition is licensed separately from the Insight Control Environment Suite.
- HP Open Service Event Manager
- HP Service Essentials Remote Support Pack  
**NOTE:** Server Migration Pack - Universal Edition can be installed from the SMP Universal CD included in the Insight Control Management media kit.  
**NOTE:** For additional product and licensing information about HP Insight Control Environment, visit: <http://www.hp.com/go/ice>.



### Standard Features

HP iLO Power Management Pack is energy-efficient management software that delivers centralized control, reliable security, and energy savings for your BladeSystem infrastructure. iPMP combines the total control of iLO 2 Advanced in the area of remote management with the energy monitoring and control of the Insight Power Manager to deliver a robust solution capable of full remote control and power management of ProLiant servers through a unified interface within HP Systems Insight Manager.

HP Insight Control management suites and most HP ProLiant Essentials include a 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>.

#### Server Management Stand Alone Software Product - ProLiant Essentials

HP Systems Insight  
Manager

HP Systems Insight Manager (HP SIM) provides a unified, secure and extensible standards-based environment to centrally manage servers, storage and other infrastructure devices, (both HP and non-HP) across multiple operating system platforms.

HP ProLiant Essentials  
Rapid Deployment Pack

Rapid Deployment Pack (RDP) extends HP Systems Insight Manager with a complete deployment solution for HP ProLiant servers. RDP provides a central location to configure server hardware, deploy Windows, Linux and VMware ESX operating environments and install HP ProLiant Support Pack drivers using images and scripted profiles. For more information, visit:  
<http://www.hp.com/go/rdp>.

HP ProLiant Essentials  
Server Migration Pack -  
Universal Edition

Upgrading, replacing, or virtualizing your existing server? Effortlessly transition to new virtual or physical HP ProLiant servers or BladeSystem with automated, accurate and affordable migration of OS, application and data. SMP Universal automates the manual processes required for migrating servers between physical or virtual platforms, whether migrating to VMware or Microsoft virtual machines. SMP Universal allows all of the following migrations:

- physical to ProLiant
- physical to virtual
- virtual to virtual
- virtual to ProLiant

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

HP ProLiant Essentials  
Performance Management  
Pack

Performance Management Pack (offered exclusively through the Insight Control suites) - a performance management solution that identifies and explains hardware performance bottlenecks on ProLiant servers and attached options enabling users to better utilize their valuable resources

HP ProLiant Essentials  
Integrated Lights-Out (iLO  
2) Advanced Pack

Upgrades the iLO 2 processor with comprehensive remote control including Virtual KVM remote graphical console, enhanced console sharing and replay, virtual media (floppy, CD/DVD, USB key), virtual folders, and enterprise security (directory services and two-factor authentication).

HP iLO Power  
Management Pack

Energy-efficient management software that delivers centralized control, reliable security, and energy savings for your BladeSystem infrastructure. iPMP combines the total control of iLO 2 Advanced in the area of remote management with the energy monitoring and control of the Insight Power Manager to deliver a robust solution capable of full remote control and power management of ProLiant servers through a unified interface within HP

### Standard Features

HP ProLiant Essentials Accelerated iSCSI Pack	Systems Insight Manager. Enables the embedded Multifunction network controller to serve as both a NIC and an iSCSI HBA providing access to SAN storage over the same connection used for networking. Processing of the protocol stack is offloaded to the NIC reducing CPU utilization and greatly improving the speed with which the requests are processed and sent to the network.
HP Insight Power Manager (IPM)	Upgrades the single-server remote management capabilities of iLO Select/Advanced to include centralized reporting and policy-based management of power consumption and thermal output provided by the Insight Power Manager. IPM unifies all of this functionality within a single user interface - HP Systems Insight Manager.

**NOTE:** Flexible and volume quantity license kits are available for ProLiant Essentials Value Packs. Refer to: <http://www.hp.com/servers/proliantessentials> or the various ProLiant Essentials Value Pack product QuickSpecs for more information.

### Core Infrastructure Management

SmartStart	SmartStart is a tool that simplifies server setup, providing a rapid way to deploy reliable and consistent server configurations. For more information, please visit the SmartStart Web site at: <a href="http://www.hp.com/servers/smartstart">http://www.hp.com/servers/smartstart</a> . SmartStart version supported (minimum): SmartStart 7.51.
Insight Management Agents	The Insight Management Agents should be installed on all HP servers to present system instrumentation, health and configuration information into HP Systems Insight Manager and the HP System Management Homepage. The HP System Management Homepage aggregates systems data from Insight Management Agents and other HP management tools, providing a consolidated browser-based interface for managing individual servers.  Insight Management Agents and The HP System Management Homepage are included on ProLiant Support Packs, and can also be installed using the server profiles provided with the ProLiant Essentials Rapid Deployment Pack.  For additional information about the Management Agents and the HP System Management Homepage please visit the management Web site at: <a href="http://www.hp.com/servers/manage">http://www.hp.com/servers/manage</a> .
Subscriber's Choice	Subscriber's Choice Driver and Support Alerts/Notifications is a web-based email subscription service that provides software and driver change notifications for ProLiant products. Sign up at: <a href="http://www.hp.com/go/subscriberschoice">http://www.hp.com/go/subscriberschoice</a> and customize your profile to receive various new alerts as they become available, on a weekly or monthly basis.
ProLiant Support Packs and ROMPaq, software	The latest software, drivers, and firmware fully optimized and tested for your ProLiant server and options, available through ProLiant Support Packs the ProLiant Essentials Rapid Deployment Pack, SmartStart or downloaded from software and drivers download pages website at: <a href="http://www.hp.com/go/support">http://www.hp.com/go/support</a> .

**HP Serviceguard for Linux (SGLX)** HP Serviceguard for Linux is a high availability clustering solution designed to protect applications and services from a wide variety of software and hardware failures, monitoring the health of each server (node) and quickly responding to failures such as those that affect system processes, system memory,

### Standard Features

LAN media and adapters, and application processes.

The following is a quick summary of HP Serviceguard for Linux features and support. For the most recent list of Linux distributions & kernels, servers and storage supported with Serviceguard for Linux, see the Serviceguard for Linux Datasheet, available at: <http://www.hp.com/go/sglx/info>.

- Supported Linux Distributions:
  - Red Hat EL 4
  - Red Hat EL 5
  - SUSE SLES10
- Supported Server Platforms
  - HP Integrity BladeSystem to Superdome
  - HP ProLiant BladeSystem p-Class & c-Class
  - HP ProLiant DL
  - HP ProLiant ML
  - IBM System x
  - Dell PowerEdge
  - Sun x64
  - Fujitsu Siemens PRIMERGY
- Hypervisors
  - HP Integrity Virtual Machines
  - VMware ESX
- Application Integration Toolkits
  - HP Serviceguard for Linux Oracle Database Toolkit
  - HP Serviceguard Extension for SAP on Linux (SGeSAP/LX)
  - Free Application Integration Toolkits:
    - Apache
    - MySQL
    - NFS
    - PostgreSQL
    - Samba
    - Tomcat
    - Sendmail
- Disaster Tolerant Solutions
  - HP Serviceguard for Linux Extended Distance Cluster (XDC) extends cluster distances up to 100 km, utilizes software RAID mirroring for data replication and is storage array independent
  - HP StorageWorks XP/EVA Cluster Extension Software for Linux (CLX) works seamlessly with HP Serviceguard for Linux, HP StorageWorks Continuous Access, and HP Disk Arrays to automate failover and failback between sites
- Software updates are distributed by HP Services to customers with support contracts

**NOTE:** For additional information on HP Serviceguard for Linux, visit: <http://www.hp.com/go/sglx> or see the HP Serviceguard for Linux QuickSpecs.

**NOTE:** HP Serviceguard for Linux products for HP ProLiant and select 3rd party x86 class servers 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/swsupport>.

### Standard Features

Industry Standard Compliance	ACPI 2.0 Compliant PCI 2.2 Compliant WOL Support Microsoft® Logo certifications USB 2.0 Support
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Security	Power-on password Keyboard password Diskette drive control Diskette boot control QuickLock, Network Server Mode Parallel and serial interface control Administrator's password
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Server Power Cords	One Highline IEC Power cord ships standard (6') <b>NOTE:</b> ProLiant DL servers no longer ship standard with NEMA power cords (187335-001) that allow connection to 110V US wall outlets in a home or office. ProLiant DL servers are primarily connected to PDU's in data center racks so they now ship standard with only a PDU power cord (416151-B21). If a user wishes to power a ProLiant DL server using a 110V receptacle (NEMA-15), the NEMA power cord (187335-001) must be ordered separately.
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UPS and PDU Power Cord Matrix	Please see the UPS and PDU cable matrix that lists cable descriptions, requirements, and specifications for UPS and PDU units: <a href="ftp://ftp.compaq.com/pub/products/servers/ProLiantstorage/power-protection/powercordmatrix.pdf">ftp://ftp.compaq.com/pub/products/servers/ProLiantstorage/power-protection/powercordmatrix.pdf</a> .
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Power Supply	800 Watt, CE Mark Compliant Optional Hot Plug AC Redundant Power Supply
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System Fans	Hot plug fans ship standard, fully redundant Fully redundant hot plug fans ship standard (N+1)
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Required Cabling	For required cabling information, refer to the Web site at: <a href="http://www.hp.com/servers/dl385-g2">www.hp.com/servers/dl385-g2</a>
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### Standard Features

#### OS Support

Microsoft Windows Server 2003  
Microsoft Windows Small Business Server 2003, R2  
Microsoft Windows 2008  
Novell NetWare  
Red Hat Enterprise Linux  
SUSE Linux Enterprise Server  
SCO UnixWare, OpenServer  
VMware Virtualization Software  
Solaris 10 32/64-bit

**NOTE:** For more complete and up-to-date information on how to buy server operating systems from HP please visit the OS product site at: <http://h18004.www1.hp.com/products/servers/software/oem.html>.

**NOTE:** For a more complete and up-to-date listing of supported OSs and versions, please visit our OS Support Matrix at: <http://www.hp.com/go/supportos>.

**NOTE:** For an up-to-date listing of the latest software and drivers available for your server, please select your server: <http://h20000.www2.hp.com/bizsupport/TechSupport/Product.jsp?lang=en&cc=us&taskId=135&prodTypeld=15351&prodCatld=241435>.

**NOTE:** For more Linux OS support & certification information, please visit our the ProLiant & BladeSystem Server Linux matrix: <http://h18004.www1.hp.com/products/servers/linux/hpLinuxcert.html>

**NOTE:** For more information on HP's Certified and Supported ProLiant Servers, please visit the VMware Server Support Matrix at: <http://h18004.www1.hp.com/products/servers/software/vmware/hpvmwarecert.html>.

#### Rack Airflow Requirements

##### Rack 10000 series Cabinets

The increasing power of new high-performance processor technology requires increased cooling efficiency for rack-mounted servers. The 10000 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: [www.hp.com/servers/dl385-g2](http://www.hp.com/servers/dl385-g2).

### Standard Features

#### Rack Kit

The HP ProLiant DL385 quick deploy rail system provides tool-free support for racks with square or round mounting holes (including Compaq/HP 7000\*, 9000, 10000 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.

\* High Airflow Inserts (High Air Flow Rack Door Insert for the 7142 Rack (single) - PN: 327281-B21; or High Air Flow Rack Door Insert for the 7142 Rack (6-pack) - PN: 327281-B22) are required to support the HP ProLiant DL385 G2 in 7000 series racks. The DL385 G2 Cable Management Arm is not supported on 7000 series racks.

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#### Telco Rack Support

DL385 G2 Telco Rack Kit:

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

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#### 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>.

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#### HP Enterprise Configurator

The HP eCo-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>.

### Standard Features

#### 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>

## HPC Interconnects

**NOTE:** High Performance Computing (HPC) interconnect technologies are available for the DL385 under the Cluster Platform product portfolio. These high-speed interconnects are fully supported by HP when they are part of these configure to order clusters. Solutions can be defined with a lot of flexibility with the help of configuration tools. Please visit the following URL to configure HPC Clusters with InfiniBand, Gigabit Ethernet or Myrinet Interconnects: <http://www.hp.com/techservers/clusters/ucp/index.html>

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HPC Interconnect	InfiniBand	PCI-X and PCI-Express adapters
	Gigabit Ethernet	Use embedded ports
	Myrinet XP	PCI-X Rev D and Rev E adapters



### Models

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

<b>HP DL385 G2 Performance Models</b> HPM 432195-xx1	<b>Processor(s)</b> One of the following depending on Model	(2) Dual-Core AMD Opteron™ 2218 Processors (2.6 GHz, 75 Watts) (2) Dual-Core AMD Opteron™ 2220 Processors (2.8 GHz, 75 Watts)
	<b>Cache Memory</b> <b>Memory</b>	2MB (2 x 1MB) Level 2 cache - 2200 Series 4 GB (4 x 1 GB) of 2:1 interleaved PC2-5300 DIMMs (DDR2-667) with Advanced ECC capabilities
<b>HP DL385G2 2218 4G HPM</b> 438816-xx1	<b>Network Controller</b>	Two Embedded NC373i Multifunction Gigabit Server Adapters
	<b>Storage Controller</b>	HP Smart Array P400/512 MB BBWC Controller (RAID 0/1/5/6)
	<b>Hard Drive</b>	None ship standard
	<b>Internal Storage</b>	1.168TB max - 8 x 146 GB SAS drives (with optional hard drives)
	<b>Optical Drive</b>	IDE DVD-ROM/CDRW combo
	<b>Form Factor</b>	Rack (2U), (3.5-inch)
	<b>Availability</b>	Hot Plug Fully Redundant Fans and Redundant Power Supplies

<b>HP DL385 G2 Base Models</b> HP DL385G2 2218 2G 407424-xx1 HP DL385G2 2216 2G 408838-xx1 HP DL385G2 2214 2G 407429-xx1 HP DL385G2 2220 2G 438815-xx1	<b>Processor(s)</b> One of the following depending on Model	(1) Dual-Core AMD Opteron™ 2218 Processor (2.6 GHz, 75 Watts) (1) Dual-Core AMD Opteron™ 2216 HE Processor (2.4 GHz, 55 Watts) (1) Dual-Core AMD Opteron™ 2214 HE Processor (2.2 GHz, 55 Watts) (1) Dual-Core AMD Opteron™ 2220 Processor (2.8 GHz, 75 watts)
	<b>Cache Memory</b> <b>Memory</b>	2MB (2 x 1MB) Level 2 cache - 2200 Series 2 GB (2 x 1 GB) PC2-5300 DIMMs (DDR2-667) with Advanced ECC capabilities
	<b>Network Controller</b>	Two Embedded NC373i Multifunction Gigabit Server Adapters
	<b>Storage Controller</b>	HP Smart Array P400/256 MB Controller (RAID 0/1/1+0/5)
	<b>Hard Drive</b>	None ship standard
	<b>Internal Storage</b>	1.168TB max - 8 x 146 GB SAS drives (with optional hard drives)
	<b>Optical Drive</b>	Optional DVD, DVD/CD-RW combo, DVD+R/RW
	<b>Form Factor</b>	Rack (2U), (3.5-inch)
	<b>Availability</b>	Hot Plug Fully Redundant Fans Standard

### Models

HP DL385 G2 Entry Models	Processor(s)	(1) Dual-Core AMD Opteron™ 2210 HE Processor (1.8 GHz, 55 Watts)
	Cache Memory	2MB (2 x 1MB) Level 2 cache - 2200 Series
HP DL385G2 2210 1G 434940-xx1	Memory	1 GB (2 x 512 MB) PC2-5300 DIMMs (DDR2-667) with Advanced ECC capabilities
	Network Controller	Two Embedded NC373i Multifunction Gigabit Server Adapters
	Storage Controller	HP Smart Array E200/64 MB Controller (RAID 0/1)
	Hard Drive	None ship standard
	Internal Storage	1.168TB max - 8 x 146 GB SAS drives (with optional hard drives)
	Optical Drive	Optional DVD, DVD/CD-RW combo, DVD+R/RW
	Form Factor	Rack (2U), (3.5-inch)
	Availability	Hot Plug Fully Redundant Fans Standard

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Country Code Key	XX=00	U.S.
	XX=20	Brazil
	XX=29	Japan
	XX=37	APD
	XX=42	Euro
	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:** This product offering does not support HP Factory Express Server Configuration Level 1.

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

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

Models	HP ProLiant DL385G2 Rack CTO Chassis	414109-B21
	<b>Factory Integrated Model ships with:</b>	
	(8) SFF Serial Attached SCSI (SAS) Drive Bays	
	Two Embedded NC373i Multifunction Gigabit Server Adapters	
	PCI-Express Riser Cage	
	800 Watt hot plug power supply, CE Mark Compliant	
	One IEC Power cord	
	Hot plug fans (fully redundant)	
	Rack (2U), (3.5-inch)	

### Step 1A: Choose SAS Controller (must choose only one of the following)

SAS Controllers	HP Smart Array P400/256 for DL380 G5/ DL385 G2 FIO Controller	405160-B21
	<b>NOTE:</b> PCI Express	
	HP Smart Array P400/512 BBWC for DL380 G5/ DL385 G2 FIO Controller	405162-B21
	<b>NOTE:</b> PCI Express	
	HP Smart Array E200/128 BBWC Controller	411508-B21
	<b>NOTE:</b> PCI Express	
	HP Smart Array P600/256 BBWC Controller	337972-B21
	<b>NOTE:</b> PCI-X. SA-P600 Controller supports both internal and external drives.	
	HP Smart Array P800/512 BBWC Controller	381513-B21
	<b>NOTE:</b> PCI Express	
	HP Smart Array P800/512 BBWC Controller	381513-B21
	<b>NOTE:</b> PCI Express	
	HP Smart Array E200/64 FIO Controller	405528-B21
	HP Smart Array 6402/512 FIO Controller	441508-B21
	HP Smart Array 6404/512 FIO CNTRLR	452240-B21

### Configuration Information - Factory Integrated Models

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

Processors	AMD Opteron™ Processor 2222 (3.0 GHz, 75 Watts) FIO	451649-L21
	AMD Opteron™ Processor 2220 (2.8 GHz, 75 Watts) FIO	438825-L21
	AMD Opteron™ Processor 2218 (2.6 GHz, 75 Watts) FIO	407433-L21
	AMD Opteron™ Processor 2218 HE (2.6 GHz, 55 Watts) FIO	438824-L21
	AMD Opteron™ Processor 2216 (2.4 GHz, 75 Watts) FIO	434945-L21
	AMD Opteron™ Processor 2216 HE (2.4 GHz, 55 Watts) FIO	408840-L21
	AMD Opteron™ Processor 2214 HE (2.2 GHz, 55 Watts) FIO	407435-L21
	AMD Opteron™ Processor 2212 HE (2.0 GHz, 55 Watts) FIO	408837-L21
	AMD Opteron™ Processor 2210 HE (1.8 GHz, 55 Watts) FIO	434943-L21
	AMD Opteron™ Processor 2210 (1.8 GHz, 75 Watts) FIO	434947-L21
Base Memory	<b>NOTE:</b> DIMM banks are active only when the corresponding processor socket is populated.	
	1 GB REG PC2-5300 2 x 512 MB Single Rank Kit	408850-B21
	2 GB REG PC2-5300 2 x 1 GB Single Rank Kit	408851-B21
	4 GB REG PC2-5300 2 x 2 GB Dual Rank Kit	408853-B21
	8 GB REG PC2-5300 2 x 4 GB Dual Rank Kit	408854-B21

#### Step 3: Choose Additional Factory Integratable Options

Performance Packs	The HP ProLiant DL385 G2 performance packs are necessary to configure a HP ProLiant DL385 G2 Performance Model. HP ProLiant DL385 G2 Performance model includes the latest performance technologies and enterprise class availability features pre-installed for convenience and value. The performance pack includes a 2nd processor and a redundant power supply. To complete the configuration of a Performance model, select the Slimline CD-RW/DVD-ROM Combo Option Kit (331903-B21).	
	HP DL385G2 2220 HPM FIO Perf Pack	442239-B21
	HP DL385G2 2218 HPM FIO Perf Pack	432858-B21

#### Step 4: Choose Additional Options for Factory Integration

**NOTE:** For additional options, please refer to the "Options" section below.

### Options

**NOTE:** Some options may not be factory integratable. Contact your local sales representative for additional information.

HP ProLiant DL385 G2 Unique Options    HP 2 Slot PCI-Express x16 & x4 Riser DL385G2 ALL    410571-B21

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#### HP Insight Control Environment Management Suite

**NOTE:** Electronic licensing options are available for Insight Control suites software products. Please see the appropriate Insight Control QuickSpecs for additional information.

##### HP Insight Control Environment

HP Insight Control Environment, No Media 1-Server License including 1 year of 24x7 Technical Support and Updates    452148-B22

**NOTE:** This part number can be purchased as a single license or as multiple licenses with a single activation key. Customer 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). Includes one year of 24 x 7 HP Software Technical Support and Update Service. Only available directly from HP and select resellers in the Americas region.

HP Insight Control Management Software Media Kit    436222-B21

**NOTE:** Insight Control Management DVD media without licenses. Contains Insight Manager and Essentials software products and components licensed by Insight Control Management suites. Uses an integrated installer to perform quick and accurate software installation and updates.

**NOTE:** For additional License Kits, please see the QuickSpecs at:  
[http://h18000.www1.hp.com/products/quickspecs/12631\\_div/12631\\_div.html](http://h18000.www1.hp.com/products/quickspecs/12631_div/12631_div.html)

##### HP Insight Control Linux Edition

HP Insight Control Environment for Linux v2.0, Media pack (CD) - No licenses included    464422-B21

**NOTE:** This optional Media pack CD contains the ISO image for HP Insight Control Environment for Linux, HP System Insight Manager, and an integrated installer. Servers must be acquired separately. 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).

HP Insight Control Environment for Linux v2.0, No Media, 1-Server license, including One year of 24x7 Technical Support and Updates    464423-B21

**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. One certificate is shipped for each license.

**NOTE:** For additional License Kits, please see the QuickSpecs at:  
[http://h18000.www1.hp.com/products/quickspecs/13019\\_div/13019\\_div.html](http://h18000.www1.hp.com/products/quickspecs/13019_div/13019_div.html)

HP Integrated Lights-Out Power Management Pack

### Options

HP iLO Power Management Pack, No Media, 1-Server License, including 1 year of 24x7 Technical Support and Updates 452145-B21

**NOTE:** This option kit includes 1 license for iLO Advanced and Insight Power Manager.

**NOTE:** For additional License Kits, please see the QuickSpecs at:  
[http://h18000.www1.hp.com/products/quickspecs/12632\\_div/12632\\_div.html](http://h18000.www1.hp.com/products/quickspecs/12632_div/12632_div.html)

### Server Management Stand Alone Software Product - ProLiant Essentials

**NOTE:** Electronic licensing options are available for select ProLiant Essentials software products. Please see the appropriate ProLiant Essentials QuickSpecs for additional information.

#### Deploy

#### HP ProLiant Essentials Rapid Deployment Pack

HP ProLiant Essentials Rapid Deployment Pack No Media 1-Server License including 1 year of 24x7 Technical Support and Updates 452151-B21

**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

**NOTE:** For additional License Kits, please see the QuickSpecs at:  
[http://h18000.www1.hp.com/products/quickspecs/11053\\_div/11053\\_div.html](http://h18000.www1.hp.com/products/quickspecs/11053_div/11053_div.html)

#### HP Server Migration Pack - Universal Edition

HP Server Migration Pack - Universal Edition, No Media, Physical / Virtual to ProLiant Single Migration License, including 1 year of 24x7 Technical Support and Updates 460750-B21

**NOTE:** This license allows 1 physical to ProLiant or virtual to ProLiant migration. Customer will receive a printed license entitlement certificate and documentation 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.

HP Server Migration Pack - Universal Edition, No Media, Physical / Virtual to Virtual Single Migration License, including 1 year of 24x7 Technical Support and Updates 460753-B21

**NOTE:** This license allows 1 physical to virtual or virtual to virtual migration. Customer will receive a printed license entitlement certificate and documentation 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.

HP Server Migration Pack - Universal Edition, No Media, 1-Year Unlimited Migration License, including 1 year of 24x7 Technical Support 460756-B21

**NOTE:** This license allows unlimited migrations (physical to ProLiant, physical to virtual, virtual to virtual, and virtual to ProLiant) for one year. Customer will receive a printed license entitlement certificate and documentation 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.

**NOTE:** For additional License Kits, please see the QuickSpecs at:  
[http://h18000.www1.hp.com/products/quickspecs/12855\\_div/12855\\_div.html](http://h18000.www1.hp.com/products/quickspecs/12855_div/12855_div.html)

#### Control

#### HP Integrated Lights-Out Select Pack

### Options

HP ProLiant Essentials Integrated Lights-Out Select Pack, No Media, 1-Server License <b>NOTE:</b> For additional License Kits, please see the QuickSpecs at: <a href="http://h18000.www1.hp.com/products/quickspecs/12362_div/12362_div.html">http://h18000.www1.hp.com/products/quickspecs/12362_div/12362_div.html</a>	452158-B21
<b>HP Integrated Lights-Out Advanced Pack</b> HP Integrated Lights-Out Advanced Pack, No Media, 1 Server License <b>NOTE:</b> For additional License Kits, please see the QuickSpecs at: <a href="http://h18000.www1.hp.com/products/quickspecs/10861_div/10861_div.html">http://h18000.www1.hp.com/products/quickspecs/10861_div/10861_div.html</a>	452141-B21
<b>Optimize</b>	
<b>HP Accelerated iSCSI Pack</b> HP ProLiant Essentials Accelerated iSCSI Pack, No Media, Single License <b>NOTE:</b> For use with a single NIC port. Contains one license with a unique license activation key and documentation. <b>NOTE:</b> For additional License Kits, please see the QuickSpecs at: <a href="http://h18000.www1.hp.com/products/quickspecs/12466_div/12466_div.html">http://h18000.www1.hp.com/products/quickspecs/12466_div/12466_div.html</a>	452679-B21
<b>HP Insight Power Manager (IPM)</b> HP Insight Power Manager, No Media, 1-Server License, including 1 year of 24x7 Technical Support and Updates <b>NOTE:</b> Customers purchasing this upgrade must already have an iLO Advanced or Select license on each managed server. 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. <b>NOTE:</b> For additional License Kits, please see the QuickSpecs at: <a href="http://h18000.www1.hp.com/products/quickspecs/12623_div/12623_div.html">http://h18000.www1.hp.com/products/quickspecs/12623_div/12623_div.html</a>	452677-B21
<b>HP ProLiant Essentials Virtual Machine Management Pack</b> HP ProLiant Essentials Virtual Machine Management Pack, No Media, 1-Server License, including 1 year of 24x7 Technical Support and Updates <b>NOTE:</b> 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. <b>NOTE:</b> For additional License Kits, please see the QuickSpecs at: <a href="http://h18000.www1.hp.com/products/quickspecs/12328_div/12328_div.html">http://h18000.www1.hp.com/products/quickspecs/12328_div/12328_div.html</a> <b>NOTE:</b> Flexible and volume quantity license kits are available for ProLiant Essentials Value Packs. Refer to: <a href="http://www.hp.com/servers/proliantessentials">http://www.hp.com/servers/proliantessentials</a> or the various ProLiant Essentials QuickSpecs for more information.	452153-B21

### Options

<b>Processors</b>	AMD Opteron™ Processor 2356 (2.3 GHz, 75 Watts)	449774-B21
	AMD Opteron™ Processor 2352 (2.1 GHz, 75 Watts)	449776-B21
	<b>NOTE:</b> 2300 Series processor quad-core upgrade requires purchase of a VRM kit for second socket (453059-B21) only if second socket not already populated.	
	AMD Opteron™ Processor 2222 (3.0 GHz, 75 Watts)	451649-B21
	AMD Opteron™ Processor 2220 (2.8 GHz, 75 Watts)	438825-B21
	AMD Opteron™ Processor 2218 (2.6 GHz, 75 Watts)	407433-B21
	AMD Opteron™ Processor 2218 HE (2.6 GHz, 55 Watts)	438824-B21
	AMD Opteron™ Processor 2216 (2.4 GHz, 75 Watts)	434945-B21
	AMD Opteron™ Processor 2216 HE (2.4 GHz, 55 Watts)	408840-B21
	AMD Opteron™ Processor 2214 HE (2.2 GHz, 55 Watts)	407435-B21
	AMD Opteron™ Processor 2212 HE (2.0 GHz, 55 Watts)	408837-B21
	AMD Opteron™ Processor 2210 (1.8 GHz, 75 Watts)	434947-B21
AMD Opteron™ Processor 2210 HE (1.8 GHz, 55 Watts)	434943-B21	
<b>Voltage Regulator Module</b>	HP DL385G2/DL585G2 VRM Kit	453059-B21
	<b>NOTE:</b> 2300 Series processor quad-core upgrade requires purchase of a VRM kit for second socket only if second processor not already populated.	
<b>Memory</b>	1 GB REG PC2-5300 2 x 512 MB Single Rank Kit	408850-B21
	2 GB REG PC2-5300 2 x 1 GB Single Rank Kit	408851-B21
	4 GB REG PC2-5300 2 x 2 GB Dual Rank Kit	408853-B21
	8 GB REG PC2-5300 2 x 4 GB Dual Rank Kit	408854-B21
<b>Optical Drives</b>	Slimline CD-RW/DVD-ROM Combo Option Kit	331903-B21
	<b>NOTE:</b> Included in performance models.	
	Slimline DVD-ROM Drive (8x/24x) Option Kit	264007-B21
	HP DVD+R/RW 8X Slim	383975-B21
	Slimline CD-ROM Drive 24X	356963-B21
<b>Riser Cage Options</b>	HP 2 Slot PCI-Express x16 & x4 Riser DL385G2 ALL	410571-B21
	Mixed Riser Cage Option Kit (PCI-E/PCI-X)	410570-B21



### Options

#### Hard Drives

##### Hot Plug SFF SAS 2.5" Drives

HP 146GB 3G SAS 10K SFF DP HDD	418367-B21
HP 146GB 3G SAS 10K SFF SP HDD	431958-B21
HP 72GB 3G SAS 15K SFF DP HDD	418371-B21
HP 72GB 3G SAS 15K SFF SP HDD	431935-B21
HP 72GB 3G SAS 10K SFF DP HDD	384842-B21
HP 72GB 3G SAS 10K SFF SP HDD	375861-B21
HP 36GB 3G SAS 15K SFF DP HDD	418369-B21
HP 36GB 3G SAS 15K SFF SP HDD	431933-B21

**NOTE:** Please see the QuickSpecs for Technical Specifications such as capacity, height, width, interface, transfer rate, seek time, physical configuration, and operating temperature:

[http://h18000.www1.hp.com/products/quickspecs/12244\\_div/12244\\_div.html](http://h18000.www1.hp.com/products/quickspecs/12244_div/12244_div.html)  
(Worldwide)

##### SATA Hot Plug Entry (ETY) Drives

HP 120 GB 1.5 G SATA 5.4K SFF ETY HDD	458924-B21
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**NOTE:** SATA drives have a 1 year warranty. Please see the QuickSpecs for Technical Specifications such as capacity, height, width, interface, transfer rate, seek time, physical configuration, and operating temperature:

[http://h18000.www1.hp.com/products/quickspecs/13021\\_div/13021\\_div.html](http://h18000.www1.hp.com/products/quickspecs/13021_div/13021_div.html)  
(Worldwide)

#### Storage Controllers

##### SAS Controllers

###### Smart Array E200 Controller

HP Smart Array E200/128 BBWC Controller	411508-B21
128-MB BBWC (Battery-Backed Write Cache) Enabler	351580-B21

**NOTE:** Supports the Smart Array E200 Controller, Smart Array 641 Controller, and Smart Array 642 Controller.

###### Smart Array P400 Controller

HP Smart Array P400/256MB Controller	405132-B21
HP Smart Array P400/512MB BBWC Controller	411064-B21
512MB Battery-backed cache upgrade	405148-B21

**NOTE:** For Smart Array P400 Controller.

Battery-backed write cache upgrade	383280-B21
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**NOTE:** For Smart Array P400 Controller.

HP SA-P400 and SA-E500 24 In Battery Cable Kit	417836-B21
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**NOTE:** This option kit contains a 24" battery cable and adhesive material for installing a batter into the server if a Smart Array P400 is integrated outside of the factory. For all solutions, please refer to the server QuickSpecs and User's Manual for detailed installation instructions.

###### Smart Array P600 Controller

HP Smart Array P600/256 BBWC Controller	337972-B21
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**NOTE:** Requires Mixed PCI-E/X riser cage.

### Options

512 MB Battery-Backed Cache Upgrade	372538-B21
<b>NOTE:</b> This 512-MB Battery-Backed Cache Module upgrade kit supports the Smart Array P600 Controller and the Smart Array 6400 series Controller.	
<b>Smart Array P800 Controller</b>	
HP Smart Array P800/512 BBWC Controller	381513-B21
<b>NOTE:</b> Please see the following Controller QuickSpecs for Technical Specifications such as PCI Bus, PCI Peak Data Transfer Rate, SCSI Protocols supported, SCSI Peak Data Transfer Rate, Channels, SCSI Ports, Drives supported, Cache, RAID support, and additional information:	
<a href="http://h18000.www1.hp.com/products/quickspecs/12460_div/12460_div.html">http://h18000.www1.hp.com/products/quickspecs/12460_div/12460_div.html</a> (Smart Array E200 Controller)	
<a href="http://h18000.www1.hp.com/products/quickspecs/12400_div/12400_div.html">http://h18000.www1.hp.com/products/quickspecs/12400_div/12400_div.html</a> (Smart Array P400 Controller)	
<a href="http://h18000.www1.hp.com/products/quickspecs/12247_div/12247_div.html">http://h18000.www1.hp.com/products/quickspecs/12247_div/12247_div.html</a> (Smart Array P600 Controller)	
<a href="http://h18000.www1.hp.com/products/quickspecs/12616_div/12616_div.html">http://h18000.www1.hp.com/products/quickspecs/12616_div/12616_div.html</a> (Smart Array P800 Controller)	
<b>SAS HBA</b>	
HP SC44Ge Host Bus Adapter	416096-B21
HP 8 Internal Port SAS HBA with RAID	347786-B21
<b>NOTE:</b> Please see the following QuickSpecs for additional information:	
<a href="http://h18004.www1.hp.com/products/quickspecs/12617_div/12617_div.html">http://h18004.www1.hp.com/products/quickspecs/12617_div/12617_div.html</a> (SC44Ge HBA)	
<a href="http://h18004.www1.hp.com/products/quickspecs/12332_div/12332_div.html">http://h18004.www1.hp.com/products/quickspecs/12332_div/12332_div.html</a> (SAS HBA)	
<b>SCSI Controllers for External Drive/Storage Support</b>	
<b>NOTE:</b> All Ultra320 controllers are PCI-X and require the Mixed Riser Cage Option Kit (PCI-E/PCI-X).	
Smart Array 6402/128 Controller	273915-B21
<b>NOTE:</b> Ultra320 SCSI.	
Smart Array 6404/256 Controller	273914-B21
<b>NOTE:</b> Ultra320 SCSI.	
Smart Array 642 Controller	291967-B21
<b>NOTE:</b> Ultra320 SCSI.	
128-MB Battery-Backed Write Cache (BBWC)	351580-B21
<b>NOTE:</b> Supports the Smart Array E200 Controller, Smart Array 641 Controller, and Smart Array 642 Controller.	
Ultra320 Expansion Module for SA-6402	273911-B21
64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2	374654-B21
<b>SCSI HBA</b>	
HP SC11Xe Host Bus Adapter	412911-B21
<b>NOTE:</b> Please see the following QuickSpecs for Technical Specifications and additional information:	
<a href="http://h18000.www1.hp.com/products/quickspecs/11943_div/11943_div.html">http://h18000.www1.hp.com/products/quickspecs/11943_div/11943_div.html</a> (Single Channel Ultra320 SCSI HBA)	
<a href="http://h18000.www1.hp.com/products/quickspecs/11587_div/11587_div.html">http://h18000.www1.hp.com/products/quickspecs/11587_div/11587_div.html</a> (Smart Array 6400 Series)	
<a href="http://h18000.www1.hp.com/products/quickspecs/12069_div/12069_div.html">http://h18000.www1.hp.com/products/quickspecs/12069_div/12069_div.html</a>	

### Options

(Smart Array 642)

[http://h18000.www1.hp.com/products/quickspecs/12566\\_div/12566\\_div.html](http://h18000.www1.hp.com/products/quickspecs/12566_div/12566_div.html)  
(SC11Xe HBA)

<b>Communications</b>	HP NC110T PCI Express Gigabit Server Adapter	434905-B21
	HP NC360T PCI Express Dual Port Gigabit Server Adapter	412648-B21
	HP NC364T PCI Express Quad Port Gigabit Server Adapter	435508-B21
	HP NC373F PCI Express Multifunction Gigabit Server Adapter	394793-B21
	HP NC373T PCI Express Multifunction Gigabit Server Adapter	394791-B21
	HP NC380T PCI Express Dual Port Multifunction Gigabit Server Adapter	394795-B21
	<b>NOTE:</b> Supported on a full length-full height slot only.	
	HP NC510F PCIe 10 Gigabit Server Adapter	414126-B21
<b>NOTE:</b> A minimum of 1 gigabyte (1 GB) of server memory is required per each NC510F adapter.		
HP NC510C PCIe 10 Gigabit Server Adapter	414129-B21	
<b>NOTE:</b> A minimum of 1 gigabyte (1 GB) of server memory is required per each NC510C adapter.		

<b>HPC Specific Options</b>	HP IB 4X SDR PCI-e single PORT HCA	431038-B21
	HP IB 4X DDR PCI-e Single PORT HCA	431039-B21
	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

<b>Redundant Options</b>	Redundant Power Supply 350/370/380 G5 AU Kit	399771-011
	Redundant Power Supply 350/370/380 G5 EU Kit	399771-021
	Redundant Power Supply 350/370/380 G5 JP Kit	399771-291
	Redundant Power Supply 350/370/380 G5 Worldwide Kit	399771-B21
	Redundant Power Supply 350/370/380 G5 UK Kit	399771-031
	Redundant Power Supply 350/370/380 G5 US Kit	399771-001
	Redundant Power Supply 380 G5 Worldwide Kit - 48Volt DC	433634-B21

### Tape Drives

**NOTE:** For the complete listing of Tape Drive offerings, please see:

<http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html>

For recommended tape drive offerings for this ProLiant server see the following:

#### USB Tape Drives

HP StorageWorks 1U USB Rack-Mount Kit with one DAT 160 USB Tape Drive AG703A

#### SAS Tape Drives

**NOTE:** For the DL385 G2, HP recommends purchasing the HP SC44Ge HBA (416096-B21) for a dedicated SAS HBA for tape.

HP StorageWorks DAT 160 SAS Internal Tape Drive Q1587A

**NOTE:** HP recommends combining this tape drive with the 1U SAS Rack-Mount kit (AE459A) for a complete rack-mount solution.

### Options

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

**NOTE:** HP recommends combining this tape drive with the 1U SAS Rack-Mount kit (AE459A) for a complete rack-mount solution.

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

**NOTE:** HP recommends combining this tape drive with the 1U SAS Rack-Mount kit (AE459A) for a complete rack-mount solution.

HP StorageWorks 1U SAS Rack-mount kit with one LTO-4 Ultrium 1760 EH946A

**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.

#### SCSI Tape Drives

HP StorageWorks 1U SCSI Rack-mount kit with one LTO-2 Ultrium 448 SCSI Tape Drive (Carbonite) DW028B

HP StorageWorks 1U SCSI Rack-mount kit with one LTO-3 Ultrium 920 EH903A

**NOTE:** Please see the HP StorageWorks Ultrium Tape Drive QuickSpecs for additional options such as controllers, media, and other related items:

[http://h18006.www1.hp.com/products/quickspecs/11739\\_div/11739\\_div.html](http://h18006.www1.hp.com/products/quickspecs/11739_div/11739_div.html)  
(Worldwide)

[http://h18006.www1.hp.com/products/quickspecs/12128\\_div/12128\\_div.html](http://h18006.www1.hp.com/products/quickspecs/12128_div/12128_div.html)  
(Worldwide)

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>.

#### Rack-Mount Tape Drive Enclosures

HP StorageWorks 1U SCSI Rack-Mount kit A7445B

**NOTE:** The 1U Rack-Mount Kit can support up to (2) half-height tape drives and is compatible with multiple Single-Ended and LVD SCSI tape drives including the DAT 40, DAT 72, DAT 160, DLT VS160, LTO-1 Ultrium 232, LTO-2 Ultrium 448, LTO-3 Ultrium 920 and LTO-4 Ultrium 1760 tape drives.

HP StorageWorks 1U USB Rack-Mount Kit A8007A

**NOTE:** The 1U USB Rack-Mount Kit can support up to (2) half-height tape drives and is compatible with the DAT 40 USB, DAT 72 USB and DAT 160 USB tape drives.

HP StorageWorks 1U SAS Rack-Mount Kit AE459A

**NOTE:** The 1U SAS Rack-Mount Kit can support up to (2) half-height tape drives and is compatible with the LTO-2 Ultrium 448 SAS, LTO-3 Ultrium 920 SAS and LTO-4 Ultrium 1760 SAS tape drives.

**NOTE:** Please see the Rack-Mount Tape Drive Kits QuickSpecs for additional information regarding these kits:

[http://h18000.www1.hp.com/products/quickspecs/10854\\_div/10854\\_div.html](http://h18000.www1.hp.com/products/quickspecs/10854_div/10854_div.html)  
(Worldwide)

### Options

#### Disk-Based Backup

##### RDX Removable Disk Backup

HP StorageWorks RDX160 External Removable Disk Backup System

**NOTE:** 160GB of Disk Storage.

HP StorageWorks RDX320 External Removable Disk Backup System

**NOTE:** 320GB 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](http://h18000.www1.hp.com/products/quickspecs/13036_div/13036_div.html).

##### D2D Backup

HP StorageWorks D2D120 Backup System

EH884A

**NOTE:** 2TB of Disk Storage.

HP StorageWorks D2D120 Backup System with Data Protector Express Software Kit

EH924A

**NOTE:** 2TB of Disk Storage.

HP StorageWorks D2D130 Backup System

EH950A

**NOTE:** 3TB of Disk Storage.

HP StorageWorks D2D130 Backup System with Data Protector Express Software Kit

EH951A

**NOTE:** 3TB of Disk Storage.

HP StorageWorks D2D130 Backup System with LTO-3 Ultrium 920 SAS Tape Drive

EH952A

**NOTE:** 3TB of Disk Storage.

HP StorageWorks D2D2503i Backup System

**NOTE:** 3TB of Disk Storage.

HP StorageWorks D2D4004i Backup System

**NOTE:** 4.5TB of Disk Storage.

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

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#### Tape Autoloaders

##### HP StorageWorks DAT Autoloader

HP StorageWorks DAT 72x10 tape autoloader

AE313B

##### 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-4 Ultrium 1760 SCSI Tape Autoloader

AJ816A

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

AH165A

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

AH558A

HP StorageWorks 1/8 G2 LTO-2 Ultrium 448 Tape Autoloader

AH164A

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.

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### Options

#### Tape Libraries

##### HP StorageWorks MSL2024 Tape Library

HP StorageWorks MSL2024 1 LTO-4 Ultrium 1840 SCSI Drive Library	AJ033A
HP StorageWorks MSL2024 1 LTO-4 Ultrium 1840 4GB FC Library	AJ034A
HP StorageWorks MSL2024 1 LTO-4 Ultrium 1760 SAS Drive Library	AK378A
HP StorageWorks MSL2024 1 LTO-4 Ultrium 1760 SCSI Drive Library	AJ817A
HP StorageWorks MSL2024 1 LTO-3 Ultrium 960 SCSI Drive Library	AG115A
HP StorageWorks MSL2024 1 LTO-3 Ultrium 960 4GB FC Library	AG326B
HP StorageWorks MSL2024 1 LTO-3 Ultrium 920 SAS Drive Library	AH559A
HP StorageWorks MSL2024 1 LTO-3 Ultrium 920 SCSI Drive Library	AH169A
HP StorageWorks MSL2024 1 LTO-2 Ultrium 448 SCSI Drive Library	AG116A

##### HP StorageWorks MSL4048 Tape Library

HP StorageWorks MSL4048 1 LTO-4 Ultrium 1840 SCSI Drive Library	AJ035A
HP StorageWorks MSL4048 1 LTO-4 Ultrium 1840 4GB FC Library	AJ036A
HP StorageWorks MSL4048 2 LTO-4 Ultrium 1760 SAS Drive Library	AK380A
HP StorageWorks MSL4048 2 LTO-4 Ultrium 1760 SCSI Drive Library	AJ818A
HP StorageWorks MSL4048 1 LTO-3 Ultrium 960 SCSI Drive Library	AG322A
HP StorageWorks MSL4048 1 LTO-3 Ultrium 960 4GB FC Library	AG324B
HP StorageWorks MSL4048 1 LTO-3 Ultrium 920 SAS Drive Library	AH560A
HP StorageWorks MSL4048 1 LTO-3 Ultrium 920 SCSI Drive Library	AH171A

**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>.

#### High Availability Cluster Options

##### HP Serviceguard for Linux

HP Serviceguard Linux for HP ProLiant/x86 Servers Licensed per physical server Includes media and One Year 24x7 Software Support & Updates	463831-B21
HP Serviceguard Linux Oracle Database Toolkit for HP ProLiant/x86 Servers Licensed per cluster Includes media and One Year 24x7 Software Support & Updates	463833-B21
HP Serviceguard Extension for SAP on Linux for HP ProLiant/x86 Servers Licensed per physical server Includes media and One Year 24x7 Software Support & Updates	463834-B21
HP Serviceguard Linux Extended Distance Cluster (XDC) for HP ProLiant/x86 Servers Licensed per physical server Includes media and One Year 24x7 Software Support & Updates	463835-B21

**NOTE:** For a detailed list of supported configuration/certification options for HP Serviceguard for Linux please refer to the HP Serviceguard for Linux Certification Matrix at: <http://www.hp.com/go/sglx/info>

**NOTE:** HP Serviceguard for Linux products running on x86 platforms now include one year of 24 x 7 Software Technical Support and Updates. Please see the Support Information section of the HP Serviceguard for Linux QuickSpecs for details.

**NOTE:** For additional information including a complete list of Product Numbers for

### Options

HP Serviceguard for Linux, please see the following QuickSpecs at:  
[http://h18000.www1.hp.com/products/quickspecs/11518\\_div/11518\\_div.html](http://h18000.www1.hp.com/products/quickspecs/11518_div/11518_div.html)  
 (Worldwide)

<b>StorageWorks Options</b>	<b>StorageWorks Fibre Channel HBA</b> <b>NOTE:</b> For the complete listing of Fibre Channel Host Bus Adapters for Windows 2000, Windows Server 2003 and Linux, please see: <a href="http://h18006.www1.hp.com/storage/saninfrastructure/hba.html">http://h18006.www1.hp.com/storage/saninfrastructure/hba.html</a> HP StorageWorks FC2142SR 4Gb PCI-e HBA A8002A HP StorageWorks FC2242SR Dual Channel 4 Gb PCI-e HBA A8003A HP StorageWorks FC1142SR 4Gb PCI-e HBA AE311A HP StorageWorks FC1242SR Dual Channel 4 Gb PCI-e HBA AE312A HP StorageWorks FC2143 4Gb PCI-X 2.0 -to-Fibre Channel HBA AD167A HP StorageWorks FC2243 Dual Channel 4Gb PCI-X 2.0 HBA AD168A HP StorageWorks FC1143 4Gb PCI-X 2.0 HBA AB429A HP StorageWorks FC1243 Dual Channel 4Gb PCI-X 2.0 HBA AE369A HP StorageWorks 81Q PCI-e FC HBA AK344A <b>StorageWorks SCSI HBA</b> HP U320e SCSI Host Bus Adapter AH627A <b>NOTE:</b> Recommended Dual Channel Ultra320 SCSI Controller for connecting multi-drive MSL tape libraries to ProLiant servers.
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<b>HP StorageWorks Modular Smart Array 50</b>	HP StorageWorks Modular Smart Array 50 Enclosure 364430-B21 <b>NOTE:</b> Please see the <a href="#">Modular Smart Array 50 QuickSpecs</a> for additional information including configuration steps and additional options needed for a complete solution at: <a href="http://h18000.www1.hp.com/products/quickspecs/12245_div/12245_div.html">http://h18000.www1.hp.com/products/quickspecs/12245_div/12245_div.html</a> (Worldwide)
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<b>HP StorageWorks Modular Smart Array 500 G2</b>	HP StorageWorks Modular Smart Array 500 Generation 2 335880-B21 <b>NOTE:</b> Please see the <a href="#">Modular Smart Array 500 Generation 2 QuickSpecs</a> for additional information including configuration steps and additional options needed for a complete solution at: <a href="http://h18000.www1.hp.com/products/quickspecs/11956_div/11956_div.html">http://h18000.www1.hp.com/products/quickspecs/11956_div/11956_div.html</a> (Worldwide)
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<b>Uninterruptible Power Systems - Rack</b>	HP R1.5 VA 1U UPS INTL AF418A HP R1.5 VA 1U UPS JPN AF421A HP R1.5 VA 1U UPS NA AF419A HP R/T2200 2-U ERM AF412A
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### Options

USB Options	HP USB 2-Button Optical Scroll Mouse (Carbonite/Silver)	DC172B
	USB 1.44-MB External Diskette Drive (Carbonite)	DC141B
	HP USB 04 Standard Keyboard	DT528A#ABA
	HP 1GB USB 2.0 Floppy Drive Key	442085-B21
	HP 256MB USB 2.0 Floppy Drive Key	442084-B21

Third Party Rack Adapter Kit (for wide racks)	Rack Adapter Kit	332815-B21
	<b>NOTE:</b> Not required for most racks. This kit allows HP rack servers to fit in racks that are 24" wide.	

HP Rack 5000 Series (Graphite Metallic)	HP 5642 Rack-Unassembled	358254-B21
	<b>NOTE:</b> Please see the HP Rack 5642 QuickSpecs for additional part numbers and Technical Specifications such as height, width, depth, weight, and color: <a href="http://h18000.www1.hp.com/products/quickspecs/12074_div/12074_div.html">http://h18000.www1.hp.com/products/quickspecs/12074_div/12074_div.html</a> (Worldwide) <b>NOTE:</b> For additional information regarding Rack Cabinets, please see the following URL: <a href="http://www.hp.com/go/rackandpower">http://www.hp.com/go/rackandpower</a> .	

HP Rack 10000 G2 Series (Carbon/Graphite Metallic)	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
	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
	<b>NOTE:</b> It is mandatory to use a shock pallet when shipping racks with equipment installed.	
<b>NOTE:</b> Please see the Rack 10000 G2 QuickSpecs for Technical Specifications such as height, width, depth, weight, and color: <a href="http://h18000.www1.hp.com/products/quickspecs/12402_div/12402_div.html">http://h18000.www1.hp.com/products/quickspecs/12402_div/12402_div.html</a> (Worldwide) <b>NOTE:</b> For additional information regarding Rack Cabinets, please see the following URL: <a href="http://www.hp.com/go/rackandpower">http://www.hp.com/go/rackandpower</a> .		



### Options

<b>HP Rack 10000 Series</b> (Graphite Metallic)	HP S10614 (14U) Rack Cabinet - Shock Pallet <b>NOTE:</b> xxxxx-B21 (pallet) used to ship empty racks shipped on a truck. -B22 (shock pallet) used to ship racks with equipment installed (by custom systems, VARs and Channels). xxxxx-B23 (crated) used for air shipments of empty racks. <b>NOTE:</b> It is mandatory to use a shock pallet in order to ship racks with equipment installed. Not all HP or Compaq equipment is qualified to be shipped in the Rack 10000 series. <b>NOTE:</b> Please see the Rack 10000 QuickSpecs for Technical Specifications such as height, width, depth, weight, and color: <a href="http://h18000.www1.hp.com/products/quickspecs/10995_div/10995_div.html">http://h18000.www1.hp.com/products/quickspecs/10995_div/10995_div.html</a> (Worldwide) <b>NOTE:</b> For additional information regarding Rack Cabinets, please see the following URL: <a href="http://www.hp.com/go/rackandpower">http://www.hp.com/go/rackandpower</a> .	292302-B22
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<b>Keyboards and Monitors</b>	TFT7600 Rackmount Keyboard Monitor US TFT7600 Rackmount Keyboard Monitor UK TFT7600 Rackmount Keyboard Monitor GR TFT7600 Rackmount Keyboard Monitor FR TFT7600 Rackmount Keyboard Monitor IT TFT7600 Rackmount Keyboard Monitor SP TFT7600 Rackmount Keyboard Monitor DEN TFT7600 Rackmount Keyboard Monitor NOR TFT7600 Rackmount Keyboard Monitor SE/FI TFT7600 Rackmount Keyboard Monitor SWI TFT7600 Rackmount Keyboard Monitor PORT TFT7600 Rackmount Keyboard Monitor BEL TFT7600 Rackmount Keyboard Monitor JPN2 TFT7600 Rackmount Keyboard Monitor RUS TFT7600 Rackmount Keyboard Monitor INTL 1U Rackmount Keyboard with USB, US 1U Rackmount Keyboard with USB, UK 1U Rackmount Keyboard with USB, GR 1U Rackmount Keyboard with USB, FR 1U Rackmount Keyboard with USB, ITL 1U Rackmount Keyboard with USB, SP 1U Rackmount Keyboard with USB, DEN 1U Rackmount Keyboard with USB, NOR 1U Rackmount Keyboard with USB, SE/FI 1U Rackmount Keyboard with USB, SWI 1U Rackmount Keyboard with USB, PORT 1U Rackmount Keyboard with USB, BEL 1U Rackmount Keyboard with USB, JPN2 1U Rackmount Keyboard with USB, RUS	AG052A AG053A AG054A AG055A AG056A AG057A AG058A AG059A AG060A AG061A AG062A AG063A AG064A AG065A AG066A AG072A AG073A AG074A AG075A AG076A AG077A AG078A AG079A AG080A AG081A AG082A AG083A AG084A AG085A
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### Options

1U Rackmount Keyboard with USB, INTL AG086A

**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 (KVM), 0 x 1 x 8 port 336044-B21

Server Console Switch (KVM), 0 x 2 x 16 port 336045-B21

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 (ALL) AF611A

PS2 Server Console Cable, 6 ft, 2 pack AF612A

USB Server Console Cable, 6 ft, 2 pack AF613A

**NOTE:** required for supporting USB peripherals.

**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>.

**HP Serial Console Server Options** HP 16 Port Serial Console Server (worldwide) AF101A

HP 48 Port Serial Console Server (worldwide) AF102A

Serial Adapter, RJ45-DB9 DCE Female, 1 Pack AF103A

Serial Adapter, RJ45-DB9 DCE Female, 8 Pack AF110A

**NOTE:** Cat5e cables are required to connect Serial Adapters to Serial Console Servers. Additional Serial Adapters and Cat5e cables can be found at the following URL: <http://www.hp.com/go/kvm>.

**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>.

### Options

<b>Service and Support Offerings</b> (HP Care Pack Services)	<b>Hardware Services On-site Service</b>	
	4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic	U4544E
	4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	U4545E
	<b>Hardware Services 6-Hour Call to Repair On-site Service</b>	
	6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	U4546E
	<b>Installation &amp; Start-up Services</b>	
	Hardware Installation, Electronic	U4554E
	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	U4555E
	Installation and Startup for Essentials Rapid Deployment Pack, Electronic	U5683E
	<b>Support Plus</b>	
	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	U4556E
	<b>Support Plus 24</b>	
	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	U4557E
Onsite HW support 24x7, 4hr response and SuSE Linux SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic	U6312E	
Onsite HW support 24x7, 4hr response and Red Hat ES Linux SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic	U8334E	
<b>NOTE:</b> For more information, customer/resellers can contact: <a href="http://www.hp.com/services/carepack">http://www.hp.com/services/carepack</a>		

### Memory

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

#### HP ProLiant DL385 G2 Base Models

##### Standard Memory

2 GB PC2-5300 DDR2 DIMMs (667 MHz) installed (2 x 1 GB)

##### Upgrading Memory and Memory Interleaving

DIMMs must be installed in identical pairs. Bank interleaving is automatically enabled on a processor node under the following conditions:

- 1) Four single ranked DIMMs populated per node (4 x 512 MB or 4 x 1 GB for example) yields 2-way bank interleaving.
- 2) Two dual ranked DIMMs populated per node (2 x 2 GB or 2 x 4 GB for example) yields 2-way bank interleaving.
- 3) Four dual ranked DIMMs populated per node (4 x 2 GB for example) yields 4-way bank interleaving.

If single and dual ranked DIMMs are mixed on the same node, bank interleaving will not be enabled.

Node interleaving can be configured via RBSU if both processors have the same memory footprint and it is independent of bank interleaving.

DIMMs must be installed in decreasing capacity with the largest DIMMs installed in the banks furthest away from each processor.

##### Standard Memory Plus Optional Memory

Up to 26 GB memory is available with the standard memory of 1GB and the optional installation of PC2-5300 DDR2 DIMMs (667 MHz) memory kits. - 6 slots would be available, and potentially could be filled with 4GB DIMMs.

##### Standard Memory Replaced with Optional Memory

Up to 32 GB of memory is available with the removal of the standard 1GB of memory and the optional installation of PC2-5300 DDR2 4 GB DIMMs (667 MHz) memory kits.

**NOTE:** Chart does not represent all possible configurations.

**NOTE:** DIMM banks are active only when the corresponding processor socket is populated.

Memory		Slot							
		1	2	3	4	5	6	7	8
Standard	2 GB	1 GB	1 GB	Empty	Empty	Empty	Empty	Empty	Empty
Optional	26 GB	4 GB	4 GB	1 GB	1 GB	4 GB	4 GB	4 GB	4 GB
Maximum	32 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB

## Memory

### HP ProLiant DL385 G2 Performance Models

#### Standard Memory

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

#### Upgrading Memory and Memory Interleaving

DIMMs must be installed in identical pairs. Bank interleaving is automatically enabled on a processor node under the following conditions:

- 1) Four single ranked DIMMs populated per node (4 x 512 MB or 4 x 1 GB for example) yields 2-way bank interleaving.
- 2) Two dual ranked DIMMs populated per node (2 x 2 GB or 2 x 4 GB for example) yields 2-way bank interleaving.
- 3) Four dual ranked DIMMs populated per node (4 x 2 GB or 4 x 4 GB for example) yields 4-way bank interleaving.

If single and dual ranked DIMMs are mixed on the same node, bank interleaving will not be enabled.

Node interleaving can be configured via RBSU if both processors have the same memory footprint and it is independent of bank interleaving.

DIMMs must be installed in decreasing capacity with the largest DIMMs installed in the banks furthest away from each processor.

#### Standard Memory Plus Optional Memory

Up to 20 GB memory is available with the standard memory of 4\*1 GB and the optional installation PC2-5300 DDR2 DIMMs (667 MHz) memory kits. - 4 slots available (4\*4 GB + 4\*1 GB standard = 20 GB).

#### Standard Memory Replaced with Optional Memory

Up to 32 GB of memory is available with the removal of the standard 1GB of memory and the optional installation of PC2-5300 DDR2 4 GB DIMMs (667 MHz) memory kits.

**NOTE:** Chart does not represent all possible configurations.

Memory		Slot							
		1	2	3	4	5	6	7	8
Standard	4 GB	1 GB	1 GB	Empty	Empty	1 GB	1 GB	Empty	Empty
Optional	20 GB	4 GB	4 GB	1 GB	1 GB	4 GB	4 GB	1 GB	1 GB
Maximum	32 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB

Following are memory options available from HP:

1 GB REG PC2-5300 2 x 512 MB Single Rank Kit	408850-B21
2 GB REG PC2-5300 2 x 1 GB Single Rank Kit	408851-B21
4 GB REG PC2-5300 2 x 2 GB Dual Rank Kit	408853-B21
8 GB REG PC2-5300 2 x 4 GB Dual Rank Kit	408854-B21

### Storage



1-8 Eight SFF SAS hot plug hard drive bays

### Drive Support

	Quantity Supported	Position Supported	Controller
<b>Removable Media</b>			
Slimline CD-RW/DVD-ROM Combo Option Kit <b>NOTE:</b> Included in performance models.	Only 1 available removable media bay	Slimline bay	Integrated IDE <b>NOTE:</b> Optional
Slimline DVD-ROM Drive (8x/24x) Option Kit	Only 1 available removable media bay	Slimline bay	Integrated IDE <b>NOTE:</b> Optional
HP DVD±R/RW 8X Slim	Only 1 available removable media bay	Slimline bay	Integrated IDE <b>NOTE:</b> Optional

### Hard Drives

#### SAS - Hot Plug Drives

	Quantity Supported	Position Supported	Controller
146GB 3G SAS 10K SP	Up to 8	1-8	HP Smart Array E200/64MB Controller
146GB 3G SAS 10K DP			HP Smart Array E200/128 BBWC Controller
72GB 3G SAS 10K SP			HP Smart Array P400/256MB Controller
72GB 3G SAS 10K DP			HP Smart Array P400/512MB BBWC Controller
72GB 3G SAS 15K SP			HP Smart Array P600/256 BBWC Controller
72GB 3G SAS 15K DP			<b>NOTE:</b> Optional mixed PCI-X/E required for SA-P600.
36GB 3G SAS 15K SP			HP Smart Array P800/512 BBWC Controller
36GB 3G SAS 15K DP			

#### SFF SATA Hot Plug Entry (ETY) Drives

	Quantity Supported	Position Supported	Controller
120GB 1.5G SATA 5.4K	Up to 8	1-8	HP Smart Array E200/64MB Controller HP Smart Array E200/128 BBWC Controller HP Smart Array P400/256MB Controller HP Smart Array P400/512MB BBWC Controller HP Smart Array P600/256 BBWC Controller <b>NOTE:</b> Optional mixed PCI-X/E required for SA-P600. HP Smart Array P800/512 BBWC Controller

### Storage

#### External Storage

	Quantity Supported	Position Supported	Host Controller or Adapter
Modular Smart Array 50 Enclosure	2 per connector (supports 1+1 cascading)	External	HP Smart Array P600/256 BBWC Controller <b>NOTE:</b> Optional mixed PCI-X/E cage required.
Modular Smart Array 500 G2	1 per SCSI	External	Please see the Modular Smart Array 500 or 500 G2 QuickSpecs for the latest list of supported HBAs: <a href="http://www.hp.com/go/msa500">http://www.hp.com/go/msa500</a> .

#### Maximum Storage Capacity - (SAS with MSA50)

Internal	1.168TB (8 x 146 GB SAS SFF)
External	2.920TB (20 x 146 GB SAS SFF)
Total	4.088TB

#### Tape and Disk-Based Backup

**NOTE:** For an up-to-date listing of the latest O/S Support details for each of the Tape Drives listed below, please see the following: <http://h18000.www1.hp.com/products/quickspecs/division/10233.html> (Worldwide)

**NOTE:** For an up-to-date listing of the latest O/S Support details for each of the Tape Autoloaders and Tape Libraries listed below, please see the following: <http://h18000.www1.hp.com/products/quickspecs/division/10809.html> (Worldwide)

**NOTE:** For complete listing of tape drive offerings see: <http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html>

**NOTE:** SAS Tape Drives: Connecting hard drive cage and SAS tape to the same SAS Controller using split cable (supplied with tape drive) deactivates 1 of the hard drive bays. Actual hard drive bay deactivated depends on where split cable plugs into SAS drive connector. Example: 3x SAS cable connector plugged into SAS drive connector (5-8) on the back of the hard drive cage would mean drive bay 8 is deactivated.

	Position Supported	Controller	Controller Part Number
HP StorageWorks SCSI Tape Drives, External	External	HP SC11Xe Host Bus Adapter	412911-B21
LTO-1 Ultrium 232			
LTO-2 Ultrium 448			
LTO-3 Ultrium 960			
LTO-3 Ultrium 920			
LTO-4 Ultrium 1760			
LTO-4 Ultrium 1840			
DAT 40			
DAT 72			
DAT 160			
1U Rack-Mount Kit			
3U Rack-Mount Kit			

### Storage

<b>HP StorageWorks USB Tape Drives, External</b> DAT 40 USB DAT 72 USB DAT 160 USB 1U Rack-Mount Kit	External	USB 2.0 Port	N/A
<b>HP StorageWorks SAS Tape Drives, External</b> DAT 160 SAS LTO-2 Ultrium 448 SAS LTO-3 Ultrium 920 SAS LTO-4 Ultrium 1840 SAS 1U Rack-Mount Kit 3U Rack-Mount Kit	External	HP SC44Ge Host Bus Adapter	416096-B21
<b>HP StorageWorks SCSI Tape Automation, External</b> DAT 72x10 Autoloader 1/8 G2 Autoloader MSL2024 MSL4048 MSL8096 MSL6000	External	HP SC11Xe Host Bus Adapter  HP U320e SCSI Host Bus Adapter <b>NOTE:</b> Recommended for MSL tape libraries.	412911-B21  AH627A
<b>HP StorageWorks SAS Tape Automation, External</b> 1/8 G2 Autoloader MSL2024 MSL4048 MSL8096	External	HP SC44Ge Host Bus Adapter  <b>NOTE:</b> Please visit <a href="http://www.hp.com/go/connect">http://www.hp.com/go/connect</a> for details about minimum SAS controller firmware version and SAS cabling requirements.	416096-B21
<b>HP StorageWorks Fibre Tape Automation, External</b> MSL2024 MSL4048 MSL8096 MSL6000	External	Please consult the EBS connectivity matrix at: <a href="http://www.hp.com/go/ebs">http://www.hp.com/go/ebs</a> for detailed connectivity information.	N/A
<b>HP StorageWorks RDX Removable Disk Backup System, External</b> RDX160 RDX320	External	USB 2.0 Port	N/A



## Storage

HP StorageWorks D2D Backup Systems	External	Embedded Network Controller	N/A
D2D120			
D2D130			
D2D2503i			
D2D4004i			

## Power Specifications

<b>Power Supply Specification - AC</b>	<b>Part number</b>		<b>380622-001</b>			
	<b>Spare Kit</b>		<b>403781-001</b>			
Operational Input Voltage Range (Vrms)	90 to 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	850	1000	1000	1000	1000
Nominal Input Current (A rms)	10.0	8.8	5.85	5.5	5.2	4.97
Max Rated Input Wattage Rating (Watts)	980	1035	1193	1186	1172	1169
Max. Rated VA (Volt-Amp)	1000	1056	1217	1210	1196	1193
Efficiency (%)	81.5	82	84	84	85	85.5
Power Factor	0.98	0.98	0.98	0.98	0.98	0.98
Leakage Current (mA)	0.44	0.52	0.91	0.96	1.00	1.04
Max. Inrush Current (A peak)	30	30	30	30	30	30
Max. Inrush Current duration (mS)	3	3	3	3	3	3
<b>Power Supply Specification - DC</b>						
	<b>Part number</b>		<b>412837-001</b>			
	<b>Spare Kit</b>		<b>419613-001</b>			
Operational Input Voltage Range (V)	-36.0 to -72.0V DC					
Frequency Range (Nominal) (Hz)	DC					
Nominal Input Voltage (V)	-36	-48	-72			
Max Rated Output Wattage Rating	1200	1200	1200			
Nominal Input Current (A)	38	29	20			
Max Rated Input Wattage Rating (Watts)	1368	1392	1440			
Efficiency (%)	87.6	87.6	86			
Max. Inrush Current (A peak)	60	60	60			
Max. Inrush Current duration (mS)	100	100	100			

### NOTES:

- To review typical system power ratings use the Active Answers Power Calculator which is available via the online tool located at url: <http://h30099.www3.hp.com/configurator/calc/Power%20Calculator%20Catalog.xls>

To drill down to calculators:

- Click on: "ProLiant Servers"
- Click on the Server of interest. Example: DL385 G2
- Click on: "Power Calculator" link. (You may need to scroll down to see it)

### Technical Specifications

<b>System Unit</b>	<b>Dimensions (H x W x D)</b> (with bezel)	3.38 x 17.54 x 26.01 in (8.59 x 44.54 x 66.07 cm)	
	<b>Weight</b> (approximate)	Maximum	60 lb (27.22 kg) (all hard drives, power supplies, and processors installed)
		Minimum	47.18 lb (20.41 kg) (one hard drive, power supply, and processor installed)
	<b>Input Requirements</b> (per power supply)	Rated Line Voltage	100 VAC, 120VAC, 200-240 VAC
		Rated Input Current	10 A (at 100 VAC), 9 A (at 120 VAC), 6.1 A (at 200 VAC)
		Rated Input Frequency	50 to 60 Hz
		Rated Input Power	980 W (at 100 VAC), 1035 W (at 120 VAC), 1170 W (at 240 VAC)
	<b>BTU Rating</b>	Maximum	3350 BTU/hr (at 100 VAC), 3530 BTU/hr (at 120 VAC), 3990 BTU/hr (at 240 VAC)
	<b>Power Specifications</b>	To review typical system power ratings use the Power Calculator which is available via the online tool located at URL: <a href="http://h30099.www3.hp.com/configurator/calc/Power%20Calculator%20Catalog.xls">http://h30099.www3.hp.com/configurator/calc/Power%20Calculator%20Catalog.xls</a>	
		- Click on the system of interest. Example: DL385 G2 - Follow the instructions of the next screens.	
	<b>Power Supply Output</b> (per power supply)	Rated Steady-State Power	800 W (at 100 VAC), 850 W (at 120 VAC), 1000 W (at 200-240 VAC)
		Maximum Peak Power	800 W (at 100 VAC), 850 W (at 120 VAC), 1000 W (at 200-240 VAC)
	<b>System Inlet Temperature</b>	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).

### Technical Specifications

<b>Relative Humidity</b> (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.
<b>Altitude</b>	Operating	3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
<b>Acoustic Noise</b>	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	
	LWAd	6.3 B
	LpAm	47 dBA
	Operating	
LWAd	6.3 B	
LpAm	47 dBA	

<b>Smart Array P400 Controller</b>	<b>Disk Drive and Enclosure Interface</b>	3 G SAS (Serial Attached SCSI) 1.5 G SATA (Serial Advanced Technology Attachment)	
	<b>SAS Connectors</b>	2 internal (SFF8484) x4 wide port connectors	
	<b>Cache Memory Speed</b>	DDR2-533MHz with 40 or 72-bit wide bus provides up to 4.2 GB/s maximum bandwidth.	
	<b>Server Interface</b>	x8 2.5G PCIe provides 2GB/s maximum bandwidth.	
	<b>SAS Speed</b>	x8 3G SAS provides 2.4GB/s maximum bandwidth.	
	<b>Cache Memory</b>	40-bit 256MB cache (72-bit 512MB module upgrades available); ECC protection, battery-backed, and transportable	
	<b>Logical Drives Supported</b>	Up to 32 logical drives	
	<b>Maximum Logical Drive Capacity</b>	3TB (6 x 500 GB)	
	<b>Host Memory Addressing</b>	64-bit, supporting greater than 4GB server memory space	
	<b>RAID Support</b>	RAID 6 with ADG (Advanced Data Guarding) requires Battery Backed Write Cache Upgrade	
		RAID 5 (Distributed Data Guarding)	
		RAID 1+0 (Striping & Mirroring)	
		RAID 0 (Striping)	

### Technical Specifications

<b>Smart Array E200 Controller</b>	<b>Disk Drive and Enclosure Interface</b>	3 G SAS (Serial Attached SCSI) 1.5 G SATA (Serial Advanced Technology Attachment)
	<b>SAS Connectors</b>	2 internal (SFF8484) x4 wide port connectors
	<b>Cache Memory Speed</b>	DDR1-266 MHz provides up to 4.2 GB/s maximum bandwidth.
	<b>Server Interface</b>	x8 2.5 G PCIe provides 2GB/s maximum bandwidth.
	<b>SAS Speed</b>	x8 3 G SAS provides 2.4GB/s maximum bandwidth.
	<b>Cache Memory</b>	40-bit 64MB cache or a 128MB battery backed cache: ECC protection, battery-backed, and transportable
	<b>Logical Volumes Supported</b>	Up to 32 logical volumes
	<b>Maximum Volume Capacity</b>	3 TB (6 x 500 GB)
	<b>Host Memory Addressing</b>	64-bit, supporting greater than 4GB server memory space
	<b>RAID Support</b>	RAID 5 (Distributed Data Guarding) RAID 1+0 (Striping & Mirroring) RAID 0 (Striping)

<b>Two Embedded NC373i Multifunction Gigabit Server Adapters</b>	<b>Network Interface</b>	10Base-T/100Base-TX/1000Base-TX		
	<b>Compatibility</b>	IEEE 802.3 10Base-T		
		IEEE 802.3ab 1000Base-T		
		IEEE 802.3u 100Base-TX		
	<b>Data Transfer Method</b>	PCI Express, four lanes (x4)		
	<b>Network Transfer Rate</b>	10Base-T (Half-Duplex)	10 Mb/s	
		10Base-T (Full-Duplex)	20 Mb/s	
		100Base-TX (Half-Duplex)	100 Mb/s	
		100Base-TX (Full-Duplex)	200 Mb/s	
		1000Base-TX (Half and Full-Duplex)	2000Mb/s	
<b>Connector</b>	Two RJ-45			
<b>Cable Support</b>	10Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)		
	100Base-TX	Category 5 or higher UTP; up to 328 ft (100 m)		
	1000BaseTX	Category 5 or higher UTP; up to 328 ft (100 m)		

### 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.