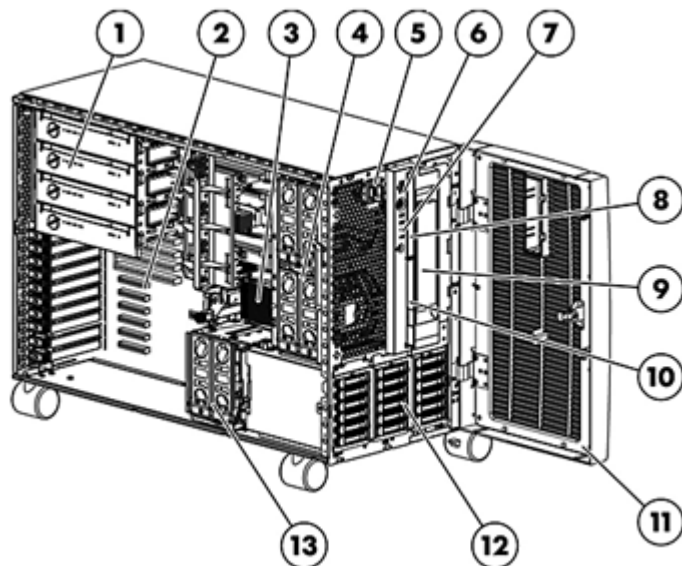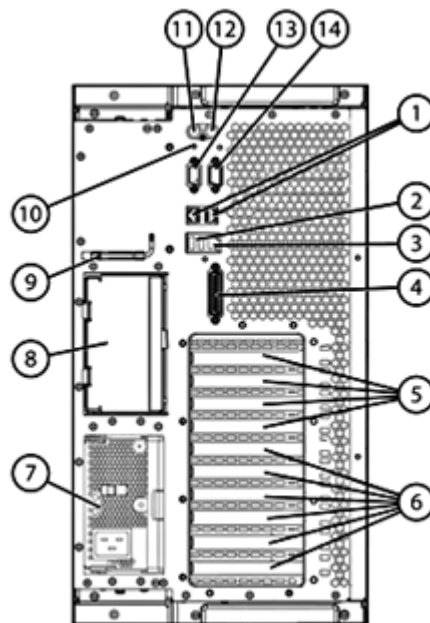*Overview*

HP ProLiant ML570 G4 Model (tower)

Front View:

1. Four Memory Boards
2. Ten PCI slots
3. Four Intel Xeon Processors
4. Four Hot Plug Fans
5. Front video
6. Two USB (on front)
7. Front Panel LEDs - Diagnostic Lighting
8. High Speed IDE Slimline DVD Combo Drive
9. 5.25-inch Removable Media Bay (optional)
10. 1.44-MB Diskette Drive (optional)
11. Front Bezel
12. Hot Plug Drive SFF SAS Bays (18 Standard)
13. Two Hot Plug Fans

Rear View:

1. Two Multifunction Gigabit NIC ports
2. 2 USB ports
3. Integrated Lights-Out 2 (iLO2) NIC port
4. Parallel port
5. PCI-X slot
6. PCI-Express x4 slot
7. Power supply
8. Optional redundant power supply
9. Service tool
10. Unit Identification LED
11. Keyboard port
12. Mouse port
13. Video port
14. Serial port

QuickSpecs

Overview

HP ProLiant ML570 G4 Model (Rack)

Front View:

1. Front video/USB ports
2. Front Panel LEDs - Diagnostic Lighting
3. 5.25-inch Removable Media Bay (optional)
4. High Speed IDE Slimline DVD Combo Drive
5. 1.44-MB Diskette Drive (optional)
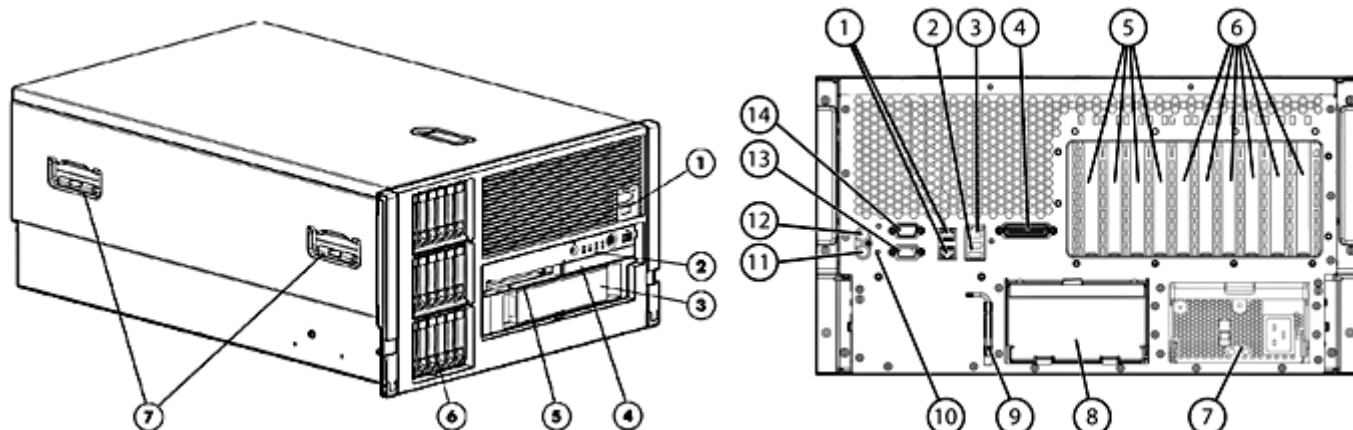6. Hot Plug Drive SFF SAS Bays (18 Standard)
7. Rack handles

Rear View:

1. Two Multifunction Gigabit NIC ports
2. 2 USB ports
3. Integrated Lights-Out 2 (iLO2) NIC port
4. Parallel port
5. PCI-X slot
6. PCI-Express x4 slot
7. Power supply
8. Optional redundant power supply
9. Service tool
10. Unit Identification LED
11. Keyboard port
12. Mouse port
13. Video port
14. Serial port

What's New

- New Processors
  - Dual-Core 64-bit Intel® Xeon® Processor 7140M (3.40GHz, 150 Watts, 800MHz FSB, 16 MB L3 Cache)
  - Dual-Core 64-bit Intel® Xeon® Processor 7130M (3.20GHz, 150 Watts, 800MHz FSB, 8 MB L3 Cache)
  - Dual-Core 64-bit Intel® Xeon® Processor 7120M (3.00GHz, 95 Watts, 800MHz FSB, 4 MB L3 Cache)
  - Dual-Core 64-bit Intel® Xeon® Processor 7110M (2.60GHz, 95 Watts, 800MHz FSB, 4 MB L3 Cache)
- Higher Capacity Internal Drive Support
  - Second generation small form factor (SFF) SAS hard disk drives with double the capacity of current SFF SAS drives up to 146GB
  - Internal mass storage capacity up to 2.628TB (18 x 146GB hot plug SFF SAS drives)

At A Glance

The HP ProLiant ML570 G4 server is the industry's first 4 processor expansion server that offers not only exceptional performance, but increased reliability with hot-plug RAID memory, powerful management capabilities, and unmatched internal expansion.

Overview

With expansion capabilities featuring up to 64GB max memory, support for up to 18 Small Form Factor (SFF) SAS drives, and up to 10 PCI I/O slots, the ProLiant ML570 G4 is a truly expandable and reliable server for a data center or remote enterprise environment. The ML570 G4 now supports Intel's new Xeon Dual-Core processor technology on an 800MHz front-side bus providing performance gains for multi-threaded applications, for example database, financial services, and supply-chain management.

- Processors:
    - Supports up to four Dual-Core 64-bit Intel® Xeon® Processors and HT Technology, with Dual Independent 800MHz Front Side Buses with L3 shared cache
    - Intel® Dual-Core 64-bit Xeon® processor 7000 sequence
    - Industry Standard Intel® E8501 chipset
- Memory:
    - Maximum 64 GB of 2-way interleaved PC2-3200 Registered Memory (DDR2-400) with Advanced ECC capabilities; 4 GB (4 x 1 GB) standard on High Performance models
    - Advanced Memory Protection including Hot-plug RAID Memory, Hot-plug Mirrored Memory and Online Spare Memory.
- Storage Controller:
    - HP Smart Array P400/256MB Controller (optional 512MB battery backed write cache)
    - HP Smart Array P400/512MB BBWC Controller standard on High Performance Models
- Internal Drive Support:
    - SFF SAS Drive Cage standard (18 drives)
    - Slimline DVD Combo Drive standard, Floppy Drive optional on all models (ejectable)
- Network Controller:
    - Two embedded NC371i Multifunction Gigabit Network Adapters with TCP/IP Offload Engine, including support for Accelerated iSCSI through an optional Licensing Kit
- Expansion Slots:
    - 4 Total 64-bit/100 MHz PCI-X slots: (2) full length; (2) half length
    - More PCI-Express slots with six standard PCI-Express x4 slots
    - Optional x4-x8 PCI-Express Bus Expander
- USB 2.0 Ports:
    - 5 Total: (2) front (2) rear (1) internal accessible ports
- Redundancy:
    - Optional hot plug redundant power supplies and cooling fans
    - High performance models: Hot plug redundant fans and power supplies standard
- Management:
    - Integrated Lights-Out 2 (iLO 2) featuring Integrated Remote Console with KVM over IP performance over shared network access
    - Systems Insight Display provides location of degraded component
    - Integrated Remote Console and Automatic Server Recovery-2 (ASR-2)
- Form Factor:
    - Dense form factor - 6U rack and tower models
- Deployment/Serviceability:
    - Front and rear video ports
    - Tool-free, spring loaded snap-on slide rails designed to accommodate both round and square hole racks
- Warranty:
    - This product is covered by a global limited warranty and supported by HP Services and a worldwide network of HP Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HP Care Pack services or customized service agreements.
    NOTE: Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. Additional information regarding worldwide limited warranty and technical support is available at:

Overview

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/4AA0-7326ENW.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	Dual-Core 64-bit Intel® Xeon® 7140M Processor (3.40 GHz, 150Watts, 800MHz FSB) Dual-Core 64-bit Intel® Xeon® 7130M Processor (3.20 GHz, 150 Watts, 800MHz FSB) Dual-Core 64-bit Intel® Xeon® 7120M Processor (3.00 GHz, 95 Watts, 800MHz FSB) Dual-Core 64-bit Intel® Xeon® 7110M Processor (2.60 GHz, 95 Watts, 800MHz FSB) **NOTE:** High Performance models ship standard with two processors while all other models ship with one processor as standard.
Cache Memory One of the following depending on Model	16MB Integrated Level 3 Cache **NOTE:** Dual-Core 7140M Model only. 8MB Integrated Level 3 Cache **NOTE:** Dual-Core 7130M Model only. 4MB Integrated Level 3 Cache **NOTE:** Dual-Core 7120M and 7110M Models only. 2x2MB Integrated Level 2 cache **NOTE:** Dual-Core 7041 Model only. 2x1MB Integrated Level 2 cache **NOTE:** Dual-Core 7030 Model only.
Upgradeability	HP ProLiant ML570 G4 servers with Intel® Xeon® 7041 and 7030 processors can be upgraded with Intel Xeon 71x0 processors. All HP ProLiant ML570 G4 servers can support up to 4 processors.
Chipset	Intel® E8501 chipset **NOTE:** For more information regarding Intel® chipsets, please see the following URL: http://www.intel.com/products/server/chipsets/.
Memory Protection	Advanced ECC Hot-Plug RAID Memory Hot-Plug Mirrored Memory Online Spare Memory

Standard Features

Memory	Type	PC2-3200 Registered Memory (DDR2-400)
	Standard (1P Base Models)	2 GB (2 X 1 GB)
	Standard (High Performance models)	4 GB (4 x 1 GB)
	Maximum	64 GB

NOTE: For more information regarding Advanced Memory Protection, please see the following URL: http://h18000.www1.hp.com/products/servers/technology/memoryprotection.html.

Network Controller Two embedded NC371i Multifunction Gigabit Network Adapters with TCP/IP Offload Engine, including support for Accelerated iSCSI through an optional Licensing Kit

Expansion Slots

Expansion Slot #	Technology	Width	Connector Width*	Bus Number**	Form Factor	Notes
1	PCI-X	64-bit	N/A	7	FH/FL	100MHz
2	PCI-X	64-bit	N/A	7	FH/FL	100MHz
3	PCI-X	64-bit	N/A	3	FH/FL	100MHz
4	PCI-X	64-bit	N/A	3	FH/FL	100MHz
5	PCI Express	x4	x8	11	FH/FL	
6	PCI Express	x4	x8	14	FH/FL	
7	PCI Express	x4	x8	17	FH/FL	

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

Bus Expansion The x4-x8 PCI Express Bus Expander is a half-length expansion board. When installed into a x4 PCI Express expansion slot, the x4-x8 PCI Express bus expander converts the adjacent x4 PCI Express expansion slot into a x8 PCI Express expansion slot.

NOTE: The HP ProLiant ML570 G4 Server can support up to three x4-x8 PCI Express bus expander cards. The card can only be installed in expansion slots 6, 8, and 10.

Storage Controllers
One of the following
depending on Model

HP Smart Array P400/256MB Controller (in a PCI-Express slot)
NOTE: Standard on 1P Base Models.

HP Smart Array P400/512MB BBWC Controller (in a PCI-Express slot)
NOTE: Standard on 2P High Performance Models.

Standard Features

Storage	Diskette Drives	1.44 MB Slimline Drive (optional)	
	Optical Drive	Slimline DVD/CD-RW Combo Drive	
	Hard Drives	None	

Maximum Internal Storage Type	Hot Plug SAS	2.628TB	18 x 146GB SFF SAS
	Hot Plug SATA	2.160TB	18 x 120GB SFF SATA

Interfaces	Parallel	1
	Serial	1
	Pointing Device (Mouse)	1
	Front video	1
	Rear video	1
	Keyboard	1
	iLO 2 Remote Management	1
	USB 2.0 Ports	5 total: 2 front, 2 rear, 1 internal dedicated port for tape drive **NOTE:** Please see the following URL for additional information regarding USB support: http://h18004.www1.hp.com/products/servers/platforms/usb-support.html
	Network RJ-45	2

Graphics	Integrated ATI-RN50 with 32MB DDR memory

Form Factor	Tower or Rack (6U)

Product Demo	To view the Product Demo, please see the following URL, then click on "PRODUCT TOUR": www.hp.com/servers/proliantml570.

HP Insight Control Management Suites

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:

- HP Systems Insight Manager
- HP iLO Advanced Pack
- HP Rapid Deployment Pack
- HP Insight Power Manager
- HP Performance Management Pack
- HP Vulnerability and Patch Management Pack

Additional ProLiant Essentials software and management tools included on the Insight Control

Standard Features

Management kit can be installed manually

- HP Server Migration Pack - Universal Edition
- HP Open Service Event Manager
- HP Instant Support Enterprise Edition

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.

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.
	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.
	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.

	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
	Integrated Lights-Out 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).

Standard Features

	ProLiant Essentials Accelerated iSCSI Pack	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.

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: http://www.hp.com/servers/smartstart. SmartStart version supported (minimum): SmartStart 7.50
	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 http://www.hp.com/servers/manage. |
| | 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 http://www.hp.com/go/subscriberschoice 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 http://www.hp.com/go/support. |

Industry Standard Compliance	ACPI 2.0 Compliant
	PCI 2.2 Compliant
	PXE Support
	WOL Support
	Physical Address Extension (PAE) Support
	Microsoft® Logo certifications

QuickSpecs

HP ProLiant ML570 Generation 4 (G4)

Standard Features

Availability

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

- **Advanced ECC (1 or More Memory Boards)**
  Advanced ECC Memory is the default memory protection mode for the HP ProLiant ML570 G4. In Advanced ECC, the server is protected against correctable memory errors. The server will provide notification if the level of correctable errors exceeds a predefined threshold rate. The server does not fail because of correctable memory errors.
  Advanced ECC provides additional protection over Standard ECC in that it is possible to correct certain memory errors that would otherwise be uncorrectable and result in server failure. Whereas Standard ECC can correct single-bit memory errors, Advanced ECC can correct single-bit and multi-bit memory errors if all failed bits are on the same DRAM device on the DIMM. Advanced ECC is the only mode in which hot-add operations are supported by adding a memory board with memory to the server while it is running.

- **Online Spare Memory (1 or More Memory Boards)**
  Offers a higher level of memory protection than Advanced ECC alone. If the number of single-bit correctable errors on a bank exceeds the pre-defined error threshold, that bank will fail over to the online spare bank without intervention or server interruption. The failed memory can then be replaced at the user's convenience during a scheduled maintenance window. Online Spare Memory is achieved by protecting active memory with online spare memory on the same memory board. No operating system support is required.

- **Hot Plug Mirrored Memory (2 or 4 Memory Boards)**
  Hot Plug Mirrored Memory provides a higher level of availability than Advanced ECC and Online Spare Memory. With Hot Plug Mirrored Memory, the server is protected against uncorrectable memory errors that would otherwise result in server failure. Hot Plug Mirrored Memory allows the server to keep two copies of all memory data on separate memory boards. If an uncorrectable error is encountered, the proper data is retrieved from the memory board that did not fail. In addition, Hot Plug Mirrored Memory allows failed or degraded DIMMs to be replaced while the server is running without requiring server downtime. The memory board with the failed DIMMs can be removed from the front of the server, failed DIMMs replaced, and the board re-inserted into the server without disengaging the server from the rack or interrupting the operating system.

- **Hot Plug RAID Memory (4 Memory Boards)**
  Hot Plug RAID Memory provides a similar level of protection as Hot Plug Mirrored Memory but obtains this protection using a smaller percentage of the installed memory. While Hot Plug Mirrored Memory keeps two copies of all memory data, Hot Plug RAID Memory keeps only one copy of all memory data and additional parity information. If an uncorrectable memory error is encountered, the server can create the proper data using data from the parity information and the other memory boards that contain no failures. In a Hot Plug RAID Memory configuration, 75% of the installed memory is available to the Operating System; 50% more than in a Hot Plug Mirrored Configuration. As with Hot Plug Mirrored Memory, Hot Plug RAID Memory allows failed DIMMs to be replaced while the server remains running and safely engaged in the rack.

<div align="center"># of Memory Boards Installed</div>

Supported Modes	1 Board	2 Boards	3 Boards	4 Boards
Number of DIMMs Supported (Dual Ranked / Single Ranked)	4 / 6	8 / 12	12 / 18	16 / 24
Maximum Memory Supported (4GB Dual Ranked / 2GB SingleRanked)	16 GB / 12 GB	32 GB / 24 GB	48 GB / 36 GB	64 GB / 48 GB

hp invent

Standard Features

Advanced ECC Memory Protection	Yes	Yes	Yes	Yes
Online Spare Memory	Yes	Yes	Yes	Yes
Hot Plug Mirrored Memory	No	Yes	No	Yes
Hot Plug RAID Memory	No	No	No	Yes

NOTE: All Advanced Memory Protection modes require the use of additional memory cards. All HP ProLiant ML570 G4 servers ship standard with one or two memory boards. Additional memory boards are optional (P/N 403702-B21).

NOTE: All Advanced Memory Protection modes are user configurable through the ROM-Based Setup Utility (RBSU) and viewable through Systems Insight Manager and the Integrated Management Log (IML.).

- Smart Array P400 Controller with optional Battery Backed Write Cache (BBWC) Enabler provides transportable data protection and increases overall controller performance. Up to 512MB Battery Backed Write Cache protection optional on HP ProLiant ML570 G4 (512MB BBWC ships standard with 2P models).
- Hot Plug Redundant Fans - Six Hot Plug Redundant Fans ship standard with all 2P High Performance Models (three Hot Plug Redundant Fans are optional with 1P base models).
- Hot Plug Universal Drives - Up to eighteen Hot Plug Universal SFF SAS drives are supported.
- Hot Plug Redundant Power Supplies - Two Hot Plug Redundant Power Supplies ship standard with all 2P High Performance Models (2nd Hot Plug Redundant Power Supply is optional with 1P base models).

Manageability   Integrated Lights-Out (iLO 2) Management 2

- Virtual Text Remote Console (pre-OS only)
- Remote Serial Console
- Virtual Power Button Control
- Virtual Unit ID control
- Integrated Remote Console (ActiveX Control client)
- Dedicated & full function shared network connectivity with VLAN
- Embedded system health
- Present power consumption
- Browser, command line and scripted access
- Automatic IP Configuration via DHCP/DNS/WINS
- Industry Standard 128-bit Secure Sockets Layer (SSL) and Secure Shell security (SSH)
- Advanced Encryption Standard (AES)/Triple Data Encryption Standard (3DES)
- OS independent hardware health status
- IML and iLO Event Logging
- Support for 12 user accounts with customizable access privilege

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Standard Features

Intelligent Manageability	HP Systems Insight Manager SmartStart Redundant ROM Remote Flash ROM Management Agent Integrated Management Log Automatic Server Recovery (ASR) Dynamic Sector Repairing (with Smart Array Controllers) Drive Parameter Tracking (with Smart Array Controllers) Pre-Failure Warranty (covers processors, SAS hard drives and memory)

Security	Power-on password Hot plug keyboard password External USB port enable/disable QuickLock, Network Server Mode Parallel and serial interface control Administrator's password Locking tower bezel door Lockable access hood

Server Power Cords

Tower Models
- -001US, -011AUS, -031UK, -041GR, -051FR, -201 BRZL, -291JPN, -371AP, -421EURO, -AA1PRC
- US, Europe, UK, Germany, France, Brazil, Japan, and Australia tower models ship with one local power cord. Asia Pacific tower model ships with UK, and Europe power cords. PRC tower model ships with Taiwan, UK, and China power cords.
- Localized cables included with geographic specific models in other world regions

Rack Models
- -001US, -291JPN, -371AP, -421EURO, -AA1PRC
- Japan rack models ship with one local power cord and one C19 to C14 jumper cable. US, Asia Pacific, Europe and PRC rack models all ship with one C19 to C14 jumper cable.
- Localized cables included with geographic specific models in other world regions

NOTE: For HP ProLiant ML570 rack models, a C19 to C20 2.8m jumper cord ships standard and the Japan model also includes a local power cord. For HP ProLiant ML570 tower models, local power cord(s) are included. Please see the following power cord matrix for details:
http://www.hp.com/go/powercordmatrix

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: http://h18004.www1.hp.com/products/servers/proliantstorage/power-protection/index.html.

Standard Features

Power Supply	One 910W/1300W Hot Plug Power Supply ships standard. Second power supply is needed for redundancy. Two 910W/1300W Hot Plug Power Supplies ship standard in High Performance Models.

System Fans	Three fans ship standard with three additional fans for redundancy NOTE: High Performance models ship standard with redundant fans

Required Cabling	For required cabling information, refer to the Web site at: www.hp.com/servers/proliantml570.

OS Support

Microsoft Windows 2000 Server
Microsoft Windows 2003 Server
Microsoft Windows 2008 Server
Red Hat Enterprise Linux
SuSE Linux Enterprise Server
Novell NetWare
SCO OpenServer, UnixWare
Sun Solaris Intel Platform Edition
VMware Virtualization Software

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&prodTypeId=15351&prodCatId=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 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.

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 hole 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.

Standard Features

NOTE: For additional information, refer to the Setup and Installation Guide or the Documentation CD provided with the server, or to the server documentation located in the Support section at the following URL: http://www.hp.com/servers/proliantml570.

Rack Kit	HP ProLiant ML570 G4 rack models have universal sliding rails which provide tool-free support for square and round hole racks (including Compaq/HP 7000, 9000, 10000, HP/E series and H9 series) with an adjustment range from 23 ¾" to 36" depth. The snap-on cable management arm is now ambidextrous.
Telco Rack Support	Support for all 2-post Telco racks requires an additional option kit from Rack Solutions. The Rack Solutions brackets can be purchased at: http://www.racksolutions.com/hp.
HP Factory Express Capabilities	HP Factory Express offers configuration, customization, integration and deployment services for HP servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed. Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HP products supported through Factory Express include a wide array of servers and storage: HP Integrity, HP ProLiant, HP ProLiant Server Blades, HP BladeSystem, HP 9000 servers as well as the MSAxxxx, VA7xxx, EVA, XP, rackable tape libraries and configurable network switches. For more information on Factory Express services for your specific server model please contact your sales representative or go to: http://www.hp.com/go/factory-express.
HP Enterprise Configurator	The HP 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

Models

HP ProLiant ML570 G4 High Performance Models ML570R04 X7140M, 4GB (2P) 430056-xx1 ML570R04 X7130M, 4GB (2P) 430054-xx1	**Processor(s)** Two of the following depending on Model. Up to 4 supported.	(2) Dual-Core 64-bit Intel® Xeon® 7140M Processor (3.40 GHz, 150Watts, 800MHz FSB) (2) Dual-Core 64-bit Intel® Xeon® 7130M Processor (3.20 GHz, 150 Watts, 800MHz FSB)
	Cache Memory One of the following depending on Model.	16MB Integrated Level 3 Cache 8MB Integrated Level 3 Cache 2x2MB Integrated Level 2 Cache 2x1MB Integrated Level 2 Cache
	Memory	(1) Memory Cartridges (up to 4 supported) 4 GB PC2-3200 Registered Memory (DDR2-400) (Standard) to 64 GB (Maximum) (2x1 interleaved memory and Advanced Memory Protection Technology) NOTE: Four memory boards would be required to configure up to 64 GB using 4 GB DIMMs
	Network Controller	Two embedded NC371i Multifunction Server Adapters
	Storage Controller	HP Smart Array P400/512MB BBWC Controller
	Hard Drive	None ship standard
	Internal Storage	2.628TB maximum (with optional hard drives)
	Optical Drive	DVD/CD-RW combo drive
	Diskette Drive	Optional
	Power Supplies	Two 910W/1300W Power Supplies standard (second power supply for redundancy)
	Fans	Three Hot-Plug Fans plus three Hot-Plug Fans for redundancy standard
	Form Factor	Rack (6U)

HP ML570 G4 Base Models ML570R04 X7120M, 2GB (1P) 430046-xx1 ML570R04 X7110M, 2GB (1P) 430369-xx1 ML570T04 X7140M, 2GB (1P) 430057-xx1 ML570T04 X7130M, 2GB (1P) 430055-xx1 ML570T04 X7120M, 2GB (1P) 430050-xx1 ML570T04 X7110M, 2GB (1P) 430372-xx1	**Processor(s)** One of the following depending on Model.	Dual-Core 64-bit Intel® Xeon® 7140M Processor (3.40 GHz, 150Watts, 800MHz FSB) Dual-Core 64-bit Intel® Xeon® 7130M Processor (3.20 GHz, 150 Watts, 800MHz FSB) Dual-Core 64-bit Intel® Xeon® 7120M Processor (3.00 GHz, 95 Watts, 800MHz FSB) Dual-Core 64-bit Intel® Xeon® 7110M Processor (2.60 GHz, 95 Watts, 800MHz FSB)
	Cache Memory One of the following depending on Model.	16MB Integrated Level 3 Cache 8MB Integrated Level 3 Cache 4MB Integrated Level 3 Cache 2x2MB Integrated Level 2 Cache 2x1MB Integrated Level 2 Cache
	Memory	(1) Memory Cartridges (up to 4 supported) 2 GB PC2-3200 Registered Memory (DDR2-400) (Standard) to 64 GB (Maximum) (2x1 interleaved memory and Advanced Memory Protection Technology) NOTE: Four memory boards would be required to configure up to 64 GB using 4 GB DIMMs
	Network Controller	Two embedded NC371i Multifunction Server Adapters
	Storage Controller	HP Smart Array P400/256MB Controller

Models

Hard Drive	None ship standard
Internal Storage	2.628TB maximum (with optional hard drives)
Optical Drive	DVD/CD-RW combo drive
Diskette Drive	Optional
Power Supplies	One 910W/1300W Power Supply standard (second power supply for redundancy)
Fans	Three Hot-Plug Fans standard (three hot-plug redundant fans optional)
Form Factor	Tower or Rack (6U)

Country Code Key		TOWER MODELS	RACK MODELS
	XX=00	U.S. English	U.S. English
	XX=01	Australia	N/A
	XX=03	UK	N/A
	XX=04	Germany	N/A
	XX=05	France	N/A
	XX=20	Brazil	N/A
	XX=29	Japan	Japan
	XX=37	APD	APD
	XX=42	Europe	Europe
	XX=AA	PRC	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 ML570 G4 Highly Serviceable Tower Chassis	410006-B21
	Factory Integrated Model ships with:	
	Two embedded NC371i Multifunction Server Adapters	
	Ten Standard I/O Expansion slots	
	Tower models ship with one Hot Plug Power Supply and one local power cord.	
	Three Hot Plug Fans	
	SFF SAS Drive Cage	
	Integrated Lights-Out 2 (iLO2) Standard Management	
	Keyboard and Mouse	
	Tower (6U)	
	HP ProLiant ML570 G4 Highly Serviceable Rack Chassis	410007-B21
	Factory Integrated Model ships with:	
	Two embedded NC371i Multifunction Server Adapters	
	Ten Standard I/O Expansion slots	
	Rack models ship with one Hot Plug Power Supply, and local power cord(s)	
	Three Hot Plug Fans	
	SFF SAS Drive Cage	
	Integrated Lights-Out 2 (iLO2) Standard Management	
	Rack (6U)	

QuickSpecs

Configuration Information - Factory Integrated Models

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

Processors	HP X7140M DC 570 G4 Kit, Factory Integrated Only	430816-L21
	HP X7130M DC 570 G4 Kit, Factory Integrated Only	430817-L21
	HP X7120M DC 570 G4 Kit, Factory Integrated Only	430818-L21
	HP X7110M DC 570 G4 Kit, Factory Integrated Only	430819-L21
	HP X7041 DC 570 G4 Kit, Factory Integrated Only	404752-L21
	HP X7030 DC 570 G4 Kit, Factory Integrated Only	404753-L21

NOTE: Up to 3 additional xxxxxx-B21 processors for each HP ProLiant ML570 G4 server may be ordered. If selecting a Performance Pack option, a second processor is included and should not be ordered.

Base Memory	8 GB (2 x 4 GB 2RANK) PC2-3200 Registered Memory (DDR2-400) Option Kit	348106-B21
	4 GB (2 x 2 GB 2RANK) PC2-3200 Registered Memory (DDR2-400) Option Kit	375004-B21
	4 GB (2 x 2 GB 1RANK) PC2-3200 Registered Memory (DDR2-400) Option Kit	343057-B21
	2 GB (2 x 1 GB 1RANK) PC2-3200 Registered Memory (DDR2-400) Option Kit	343056-B21
	1 GB (2 x 512 MB 1RANK) PC2-3200 Registered Memory (DDR2-400) Option Kit	343055-B21
Storage Controllers	HP Smart Array P400/256MB Controller	405132-B21
	HP Smart Array P400/512MB BBWC Controller	411064-B21
	HP Smart Array P600/256 BBWC Controller	337972-B21
	Smart Array 642 Controller	291967-B21
	HP Smart Array 6402/512 FIO Cntrlr	441508-B21
	HP Smart Array 6404/512 FIO CNTRLR	452240-B21
Optical Drive	Slimline CD-RW/DVD-ROM Combo Drive Option Kit	331903-B21
	Slimline DVD-ROM Drive (8X/24X) Option Kit (Servers)	264007-B21

Step 3: Choose Additional Factory Integratable Options

High Performance Model Options

The HP ProLiant ML570 G4 performance packs are necessary to configure a HP ProLiant ML570 G4 High Performance Model. HP ProLiant ML570 G4 High Performance models include the latest performance technologies and enterprise class availability features pre-installed for convenience and value. In addition to the standard features listed in Step 1, the High Performance Model includes the following:

- Second Intel Xeon Processor
- Redundant Power Supplies and Fans

ML570G4 X7140M Rack Optimized Pack	435282-B21
ML570G4 X7130M Rack Optimized Pack	435283-B21
ML570G4 X7041 Rack Optimized Pack	405383-B21
ML570G4 X7030 Rack Optimized Pack	405384-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 integrated at the factory. Contact your local sales representative for additional information.

HP ProLiant ML570 G4 Unique Options	ML570 G4 Hot-plug Memory Expansion Board	403702-B21
	Hot-plug Redundant Fan Kit NOTE: Includes three fans. Included in 2P models.	348108-B21
	ProLiant Tower to Rack Conversion Kit NOTE: This Tower to Rack Conversion Kit (PN 407318-B21) supports the HP ProLiant ML570 G4.	407318-B21
	ProLiant Rack to Tower Conversion Kit NOTE: This Rack to Tower Conversion Kit (PN 348113-B21) supports the HP ProLiant ML570 G4.	348113-B21

HP Insight Control Management Suites

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 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.	452148-B22
HP Insight Control Management Software Media Kit 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.	436222-B21

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

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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

ProLiant Essentials Rapid Deployment Pack

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

HP Server Migration Pack - Universal Edition

Options

HP Server Migration Pack - Universal Edition, No Media, Physical / Virtual to ProLiant Single Migration License, including 1 year of 24x7 Technical Support and Updates 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.	460750-B21
HP Server Migration Pack - Universal Edition, No Media, Physical / Virtual to Virtual Single Migration License, including 1 year of 24x7 Technical Support and Updates 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.	460753-B21
HP Server Migration Pack - Universal Edition, No Media, 1-Year Unlimited Migration License, including 1 year of 24x7 Technical Support 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	460756-B21

Control

Integrated Lights-Out Select Pack

ProLiant Essentials Integrated Lights-Out Select Pack, No Media, 1-Server License NOTE: For additional License Kits, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12362_div/12362_div.html	452158-B21

Integrated Lights-Out Advanced Pack

Integrated Lights-Out Advanced Pack, No Media ,1 Server License NOTE: For additional License Kits, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/10861_div/10861_div.html	452141-B21

Optimize

Accelerated iSCSI Pack

ProLiant Essentials Accelerated iSCSI Pack, No Media, Single License NOTE: For use with a single NIC port. Contains one license with a unique license activation key and documentation. NOTE: For additional License Kits, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12466_div/12466_div.html	452679-B21

RDMA Pack

RDMA Pack for Embedded Multifunction Gigabit Server Adapters, No Media, 1-Server License NOTE: For additional License Kits, please see the QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/12573_div/12573_div.html	452681-B21

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 QuickSpecs for more information.

QuickSpecs

Options

Processor	Dual-Core 64-bit Intel® Xeon®7140M Processor (3.40 GHz, 150Watts, 800MHz FSB) NOTE: This processor option kit (PN 430816-B21) supports the HP ProLiant ML570 G4 and the HP ProLiant DL580 G4.	430816-B21
	Dual-Core 64-bit Intel® Xeon®7130M Processor (3.20 GHz, 150 Watts, 800MHz FSB) NOTE: This processor option kit (PN 430817-B21) supports the HP ProLiant ML570 G4 and the HP ProLiant DL580 G4.	430817-B21
	Dual-Core 64-bit Intel® Xeon®7120M Processor (3.00 GHz, 95 Watts, 800MHz FSB) NOTE: This processor option kit (PN 430818-B21) supports the HP ProLiant ML570 G4 and the HP ProLiant DL580 G4.	430818-B21
	Dual-Core 64-bit Intel® Xeon®7110M Processor (2.60 GHz, 95 Watts, 800MHz FSB) NOTE: This processor option kit (PN 430819-B21) supports the HP ProLiant ML570 G4 and the HP ProLiant DL580 G4.	430819-B21
	Dual-Core 64-bit Intel® Xeon®7041 Processor (3.00 GHz, 165 Watts, 800MHz FSB) NOTE: This processor option kit (PN 404752-B21) supports the HP ProLiant ML570 G4 and the HP ProLiant DL580 G4.	404752-B21
	Dual-core 64-bit Intel® Xeon® 7030 (2.80GHz, 800MHz FSB) Processor Option Kit NOTE: This processor option kit (PN 404753-B21) supports the HP ProLiant ML570 G4 and the HP ProLiant DL580 G4.	404753-B21
Memory (DIMMs)	8 GB (2 x 4 GB 2RANK) PC2-3200 Registered Memory (DDR2-400) Option Kit	348106-B21
	4 GB (2 x 2 GB 2RANK) PC2-3200 Registered Memory (DDR2-400) Option Kit	375004-B21
	4 GB (2 x 2 GB 1RANK) PC2-3200 Registered Memory (DDR2-400) Option Kit	343057-B21
	2 GB (2 x 1 GB 1RANK) PC2-3200 Registered Memory (DDR2-400) Option Kit	343056-B21
	1 GB (2 x 512 MB 1RANK) PC2-3200 Registered Memory (DDR2-400) Option Kit	343055-B21
	ML570 G4 Hot-plug Memory Expansion Board	403702-B21
Optical Drives	Slimline DVD-ROM Drive (8X/24X) Option Kit (Servers) NOTE: This drive is supported in the removable media bay.	264007-B21
	Slimline CD-RW/DVD-ROM Combo Drive Option Kit NOTE: This drive is supported in the DVD-ROM bay and floppy bay	331903-B21
	HP DVD+R/RW 8X Slim	383975-B21
	Slimline CD-ROM Drive 24X	356963-B21
Diskette Drive	Slimline Floppy Diskette Drive Option Kit	390164-B21

Options

Hard Drives	**Serial Attached SCSI (SAS) SFF Hot Plug**	
	HP 146GB 3G SAS 10K SFF SP HDD	431958-B21
	HP 146GB 3G SAS 10K SFF DP HDD	418367-B21
	HP 72GB 3G SAS 10K SFF SP HDD	375861-B21
	HP 72GB 3G SAS 10K SFF DP HDD	384842-B21
	HP 72GB 3G SAS 15K SFF SP HDD	431935-B21
	HP 72GB 3G SAS 15K SFF DP HDD	418371-B21
	HP 36GB 3G SAS 15K SFF SP HDD	431933-B21
	HP 36GB 3G SAS 15K SFF DP HDD	418369-B21

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/12244_div/12244_div.html
(Worldwide)

PCI Option	HP x4-x8 PCI-E Bus Expander Option Kit	403724-B21

NOTE: When installed into a x4 PCI Express expansion slot, the optional x4-x8 PCI-Express Bus Expander converts an adjacent x4 PCI Express expansion slot into a x8 PCI Express expansion slot.
The HP ProLiant ML570 G4 Server can support up to three x4-x8 PCI Express bus expander cards. The card can only be installed in expansion slots 6, 8, and 10.

Storage Controllers	**SAS Controllers**	
	HP Smart Array E500 Controller	
	HP Smart Array E500/256MB Controller	435129-B21
	HP Smart Array P400 Controller	
	HP Smart Array P400/256MB Controller	405132-B21

NOTE: The Smart Array P400 Controller supports internal Serial Attached SCSI and Serial ATA drives. This controller model ships standard on 1P Models.

	HP Smart Array P400/512MB BBWC Controller	411064-B21

NOTE: The Smart Array P400 Controller supports internal Serial Attached SCSI and Serial ATA drives. This controller model ships standard on 2P Models.

	512MB DDR BBWC Upgrade	405148-B21

NOTE: For Smart Array P400 Controller only.

	Battery-backed write cache upgrade	383280-B21

NOTE: For Smart Array P400 Controller only.

	HP Smart Array P600 Controller	
	HP Smart Array P600/256 BBWC Controller	337972-B21
	512MB DDR BBWC Upgrade	372538-B21

NOTE: For Smart Array P600 Controller only.

	HP Smart Array P800 Controller	
	HP Smart Array P800/512 BBWC Controller	381513-B21

NOTE: Please see the following Controller QuickSpecs for additional information including Technical Specifications:

Options

SAS HBA

HP SC44Ge Host Bus Adapter	416096-B21
HP 8 Internal Port SAS HBA with RAID	347786-B21

NOTE: Please see the HBA QuickSpecs for additional information:
http://h18004.www1.hp.com/products/quickspecs/12617_div/12617_div.html
(SC44Ge HBA)
http://h18004.www1.hp.com/products/quickspecs/12332_div/12332_div.html
(8 Internal Port SAS HBA)

SCSI Controllers for External Drive/Storage Support

Smart Array 6402/128 Controller	273915-B21
Smart Array 6404/256 Controller	273914-B21
Ultra320 Expansion Module for SA-6402	273911-B21
Smart Array 642 Controller	291967-B21
128-MB BBWC (Battery-Backed Write Cache) Enabler	351580-B21

NOTE: Supports the Smart Array 642 Controller.

64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2	374654-B21

NOTE: Please see the following QuickSpecs for Technical Specifications and
additional information:
http://h18000.www1.hp.com/products/quickspecs/11587_div/11587_div.html
(Smart Array 6400 Series)
http://h18000.www1.hp.com/products/quickspecs/12069_div/12069_div.html
(Smart Array 642)
http://h18000.www1.hp.com/products/quickspecs/11943_div/11943_div.html
(U320 G2 Adapter)

Options

Communications		
	HP NC110T PCI Express Gigabit Server Adapter	434905-B21
	NOTE: Does not support Windows 2000.	
	HP NC364T PCI Express Quad Port Gigabit Server Adapter	435508-B21
	NOTE: Does not support Windows 2000.	
	HP NC373F PCI Express Multifunction Gigabit Server Adapter	394793-B21
	HP NC373T PCI Express Multifunction Gigabit Server Adapter	394791-B21
	HP NC373F PCI Express Multifunction Gigabit Server Adapter	394793-B21
	HP NC380T PCI Express Dual Port Multifunction Gigabit Server Adapter	394795-B21
	NOTE: Supported on a full length-full height slot only.	
	HP NC510F PCIe 10 Gigabit Server Adapter	414126-B21
	NOTE: 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
	NOTE: A minimum of 1 gigabyte (1 GB) of server memory is required per each NC510C adapter.	

Redundant Options		
	Hot-plug Redundant Fan Kit	348108-B21
	NOTE: Includes three fans. Included in 2P models.	
	910W (low line), 1300W (high line) Hot Plug Redundant Power Supply US	348114-001
	910W (low line), 1300W (high line) Hot Plug Redundant Power Supply AUST	348114-011
	910W (low line), 1300W (high line) Hot Plug Redundant Power Supply EURO	348114-021
	910W (low line), 1300W (high line) Hot Plug Redundant Power Supply UK	348114-031
	910W (low line), 1300W (high line) Hot Plug Redundant Power Supply JPN2	348114-291
	910W (low line), 1300W (high line) Hot Plug Redundant Power Supply	348114-B21
	NOTE: Includes C14 to C19 IEC cable.	

Tape Drives		
	NOTE: For the complete listing of Tape Drive offerings, please see: http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html	
	USB Tape Drives	
	HP DAT160 USB Internal Tape Drive for ProLiant	Q1580A
	SAS Tape Drives	
	NOTE: For the ML570 G4, HP recommends purchasing the HP SC44Ge HBA (416096-B21) for a dedicated SAS HBA for tape.	
	HP StorageWorks LTO-2 Ultrium 448 SAS Internal Tape Drive	DW085A
	HP StorageWorks LTO-3 Ultrium 920 SAS Internal Tape Drive	EH847A
	HP StorageWorks 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.	
	Ultrium Tape Drives	
	HP StorageWorks LTO-1 Ultrium 232 Internal Tape Drive (Carbonite)	DW064A
	NOTE: HP recommends combining this tape drive with the 1U SCSI Rack-Mount kit (A7445B) for a complete rack-mount solution.	
	HP StorageWorks LTO-2 Ultrium 448 SCSI Internal Tape Drive (Carbonite)	DW016A
	HP StorageWorks LTO-3 Ultrium 920 SCSI Internal Tape Drive	EH841A

Options

HP StorageWorks 3U SCSI Rack-Mount with 1 LTO-4 Ultrium 1840 Tape Drive	EH926A

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

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

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 and LTO-3 Ultrium 920 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 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 DAT 160 SAS, LTO-2 Ultrium 448 SAS, LTO-3 Ultrium 920 SAS tape drives.

HP StorageWorks 3U Rack-mount kit	274338-B22

NOTE: The 3U Rack-mount Kit can support up to (2) full-height or (4) half-height tape drives and compatible with multiple LVD SCSI tape drives including DAT 40, DAT 72, DLT VS160, SDLT 600, LTO-1 Ultrium 232, LTO-2 Ultrium 460, LTO-2 Ultrium 448, LTO-3 Ultrium 920, LTO-3 Ultrium 960 and LTO-4 Ultrium 1840 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 (Worldwide)

HP D2D Backup System	HP StorageWorks D2D110 Backup System	EH880A
	NOTE: 1TB of Disk Storage	
	HP StorageWorks D2D110 Backup System with Data Protector Express Software Kit	EH923A
	NOTE: 1TB of Disk Storage	
	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.	

Options

NOTE: Please see the HP D2D Backup Systems QuickSpecs for additional information:
http://h18000.www1.hp.com/products/quickspecs/12651_div/12651_div.html
(Worldwide)

Tape Autoloaders	**HP StorageWorks DAT Autoloader**	
	HP StorageWorks DAT 72x10 tape autoloader	AE313B
	HP StorageWorks 1/8 Tape Autoloader	
	HP StorageWorks 1/8 G2 LTO-4 Ultrium 1760 SAS Tape Autoloader	AK377A
	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 LTO-1 Ultrium 232 Tape Autoloader	AH163A
	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; reference current compatibility information at: http://www.hp.com/go/ebs

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-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 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
	HP StorageWorks MSL4048 1 LTO-2 Ultrium 448 SCSI Drive Library	AG320A

NOTE: Please reference the MSL2024, MSL4048, MSL8096 and MSL6000 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.

Options

High Availability Cluster Options	HP Serviceguard Linux x86 Server License & Media including One Year 24x7 Software Support & Updates	463831-B21
	HP Serviceguard Linux Oracle Single Instance Database Toolkit x86 Cluster License & Media including One Year 24x7 Software Support & Updates	463833-B21
	HP Serviceguard Linux Extension for SAP (SGeSAP/LX) x86 Server License & Media including One Year 24x7 Software Support & Updates	463834-B21
	HP Serviceguard Linux Extended Distance Cluster (XDC) x86 Server License & Media including 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 HP Serviceguard for Linux, please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11518_div/11518_div.html (Worldwide)

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

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

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

NOTE: Please see the Modular Smart Array 20 QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: http://h18000.www1.hp.com/products/quickspecs/11942_div/11942_div.html (Worldwide)

Options

HP StorageWorks Modular Smart Array 30	HP StorageWorks Modular Smart Array 30 SB **NOTE:** Rack-mountable 14 drive enclosure with single bus, redundant power supplies.	302969-B21
	HP StorageWorks Modular Smart Array 30 DB **NOTE:** Rack-mountable 14 drive enclosure with dual bus, redundant power supplies.	302970-B21
	NOTE: Please see the Modular Smart Array 30 QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: http://h18000.www1.hp.com/products/quickspecs/11738_div/11738_div.html (Worldwide)	

HP StorageWorks Modular Smart Array 50	HP StorageWorks Modular Smart Array 50 Enclosure **NOTE:** Please see the Modular Smart Array 50 QuickSpecs for additional options and configuration information at: http://h18000.www1.hp.com/products/quickspecs/12245_div/12245_div.html (Worldwide)	364430-B21

HP Uninterruptible Power Systems - Tower	HP, T1000 UPS NA	AF403A
	HP, T1000 UPS JPN	AF404A
	HP, T1000 UPS INTL	AF405A
	HP, T1500 UPS NA	AF406A
	HP, T1500 UPS JPN	AF407A
	HP, T1500 UPS INTL	AF408A
	HP, R/T 2200 UPS NA	AF409A
	HP, R/T 2200 UPS JPN	AF410A
	HP, R/T 2200 UPS INTL	AF411A

Uninterruptible Power Systems – Rack	HP, R1.5kVA UPS, 1U, NA	AF419A
	HP, R1.5kVA UPS, 1U, INTL	AF418A
	HP, R1.5kVA UPS, 1U, JPN/TW	AF421A
	HP R3000 VA UPS, 2U, DTC, INTL	AF414A
	HP R3000 VA UPS, 2U, L5-30, NA	AF422A
	HP R3000 VA UPS, 2U, L6-20, NA	AF423A
	HP R3000 VA UPS, 2U, L6-20, JPN	AF424A
	HP R3000 VA UPS, 2U, L5-30, JPN	AF425A
	HP R5500 VA UPS, INTL	AF416A
	HP R5500 VA UPS, NA/JPN	AF426A

QuickSpecs

Options

HP Monitored Power Distribution Unit (PDU)	**HP Monitored Power Distribution Unit: Full Rack Version**	
	HP 17.3 kVA S2324 Monitored PDU- dual input, 3U, 24A (NA/JPN)	AF503A
	HP 8.3 kVA S1324 Monitored PDU- single input, 3U, 24A (NA/JPN)	AF504A
	HP 16.6 kVA S2140 Monitored PDU- dual input, 1U, 40A (NA/JPN)	AF505A
	HP 8.6 S1140 Monitored PDU- single input, 1U, 40A (NA/JPN)	AF506A
	HP 22.1 kVA S2316 Monitored PDU- dual input, 3U, 16A (INTL)	AF507A
	HP 11 kVA S1316 Monitored PDU- single input, 3U, 16A (INTL)	AF508A
	HP 14.7 kVA S2132 Monitored PDU- dual input, 1U, 32A (INTL)	AF509A
	HP 7.3kVA S1132 Monitored PDU- single input, 1U, 32A (INTL)	AF510A
	HP Monitored Power Distribution Unit: Half Rack Version	
	HP 17.3 kVA S348 Monitored PDU- single input, 3Ø, 48A (NA/JPN)	AF916A
	HP 22 kVA S332 Monitored PDU- single input, 3-phase, 32A (INTL)	AF917A
	HP 4.9kVA S124 Monitored PDU- single input, 1U, 24A (NA/JPN)	AF914A
	HP 7.3kVA S132 Monitored PDU- single input, 1U, 32A (INTL)	AF915A

Modular PDUs 1U/0U (Up to 32 outlets) **NOTE:** 1U/0U mounting brackets shipped with the unit (optimized for 10000 and 9000 series racks).	3.6kVA Model - mPDU, 16A, High (WW)	252663-B24
	2.8 kVA Model - mPDU, 24A, Low (NA/JPN)	252663-D71
	4.9kVA Model - mPDU, 24A, High (NA/JPN)	252663-D72
	7.3kVA Model - mPDU, 32A, High (INT'L)	252663-B31
	8.3kVA Model - mPDU, 40A, High (WW)	252663-B21
	8.3kVA Model - mPDU, 40A, High (power cord attached) (NA/JPN)	252663-D73
	9.2kVA Model - mPDU, 40A, High (power cord attached) (INTL)	252663-B32
	8.3kVA Model - mPDU 40A, High (core only) (NA/JPN)	252663-D75
	9.2kVA Model - mPDU 40 A, High (core only) (Int'l)	252663-B34
	8.3kVA Model - mPDU 32A, High (core only) (Int'l)	252663-B33
	4.9kVA Model - mPDU 24A, High (core only) (NA/JPN)	252663-D74

NOTE: Please see the following Modular Power Distribution Unit (Zero-U/1U Modular PDUs) QuickSpecs for additional options including shorter jumper cables and country specific power cords: http://h18000.www1.hp.com/products/quickspecs/11041_div/11041_div.html (Worldwide)

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

QuickSpecs

Options

Tower/Rack Conversion Kits	ProLiant Tower to Rack Conversion Kit NOTE: This Tower to Rack Conversion Kit (PN 407318-B21) supports the HP ProLiant ML570 G4.	407318-B21
	ProLiant Rack to Tower Conversion Kit NOTE: This Rack to Tower Conversion Kit (PN 348113-B21) supports the HP ProLiant ML570 G4.	348113-B21
HP Rack 5000 Series (Graphite Metallic)	HP 5642 Rack-Unassembled NOTE: Please see the HP Rack 5642 QuickSpecs for additional part numbers and Technical Specifications such as height, width, depth, weight, and color: http://h18000.www1.hp.com/products/quickspecs/12074_div/12074_div.html (Worldwide) NOTE: For additional information regarding Rack Cabinets, please see the following URL: http://www.hp.com/go/rackandpower.	358254-B21
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
	NOTE: It is mandatory to use a shock pallet when shipping racks with equipment installed.	
	NOTE: Please see the Rack 10000 G2 QuickSpecs for Technical Specifications such as height, width, depth, weight, and color: http://h18000.www1.hp.com/products/quickspecs/12402_div/12402_div.html (Worldwide)	
	NOTE: For additional information regarding Rack Cabinets, please see the following URL: http://www.hp.com/go/rackandpower.	

Options

HP Rack 10000 Series
(Graphite Metallic)

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

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

NOTE: It is mandatory to use a shock pallet in order to ship racks with equipment installed. Not all HP equipment is qualified to be shipped in the Rack 10000 series

NOTE: Please see the Rack 10000 QuickSpecs for Technical Specifications such as height, width, depth, weight, and color: http://h18000.www1.hp.com/products/quickspecs/10995_div/10995_div.html (Worldwide)

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

Keyboards and Monitors

TFT7210R Rack Mounted 17" Monitor	348373-B21
TFT7600 Rackmount Keyboard Monitor US	AG052A
TFT7600 Rackmount Keyboard Monitor GR	AG053A
TFT7600 Rackmount Keyboard Monitor FR	AG054A
TFT7600 Rackmount Keyboard Monitor IT	AG055A
TFT7600 Rackmount Keyboard Monitor SP	AG056A
TFT7600 Rackmount Keyboard Monitor DEN	AG057A
TFT7600 Rackmount Keyboard Monitor NOR	AG058A
TFT7600 Rackmount Keyboard Monitor SE/FI	AG059A
TFT7600 Rackmount Keyboard Monitor SWI	AG060A
TFT7600 Rackmount Keyboard Monitor PORT	AG061A
TFT7600 Rackmount Keyboard Monitor BEL	AG062A
TFT7600 Rackmount Keyboard Monitor JPN2	AG063A
TFT7600 Rackmount Keyboard Monitor RUS	AG064A
TFT7600 Rackmount Keyboard Monitor INTL	AG065A
TFT7600 Rackmount Keyboard Monitor UK	AG066A
1U Rackmount Keyboard with USB, US	AG072A
1U Rackmount Keyboard with USB, UK	AG073A
1U Rackmount Keyboard with USB, GR	AG074A
1U Rackmount Keyboard with USB, FR	AG075A
1U Rackmount Keyboard with USB, ITL	AG076A
1U Rackmount Keyboard with USB, SP	AG077A
1U Rackmount Keyboard with USB, DEN	AG078A
1U Rackmount Keyboard with USB, NOR	AG079A
1U Rackmount Keyboard with USB, SE/FI	AG080A
1U Rackmount Keyboard with USB, SWI	AG081A
1U Rackmount Keyboard with USB, PORT	AG082A
1U Rackmount Keyboard with USB, BEL	AG083A
1U Rackmount Keyboard with USB, JPN2	AG084A
1U Rackmount Keyboard with USB, RUS	AG085A

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
	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
	USB Interface Adapter, 1 pack	336047-B21
	Serial Interface adapter - 1 Pack with power supply	373035-B21

NOTE: Cat5e cables are required to connect Interface Adapters to Console Switches. Cat5e cables can be found at the following URL: http://www.hp.com/go/kvm.

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

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

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

Service and Support Offerings (HP Care Pack Services)	**Hardware Services On-site Service**	
	4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic	U4591E
	4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	U4592E
	6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	U4593E
	Installation & Start-up Services	
	Hardware Installation, Electronic	U4601E
	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	U4602E
	Support Plus	
	Onsite HW support, 8am-9pm, M-F, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays, Electronic	U4603E
	Support Plus 24	
	Onsite HW support 24x7, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic	U4604E
	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	U6314E
	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	U9237E

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

QuickSpecs

Memory

HP ProLiant ML570 G4 1P Tower Models
NOTE: Memory configurations listed do not apply to "Factory Integrated Models".
Standard Memory
2 GB PC2-3200 Registered Memory (DDR2-400) DIMM installed (2 x 1 GB SDRAM DIMM)

Standard Memory Plus Optional Memory
Up to 58 GB of memory is available with the optional installation of 4 GB DIMMs.

Standard Memory Replaced with Optional Memory
Up to 64 GB of memory is available with the removal of the standard 2048 MB of memory and the optional installation of 4 GB
DIMMs.

- Loads:
    - Single rank (SR) DIMM => 1 load
    - Dual rank (DR) DIMM => 2 loads
- DIMMs must be installed in pairs on board.
    - Each DIMM pair must be identical, e.g. both SR or both DR, and same capacity, technology and density.
- Each HP ProLiant ML570 G4 memory board supports 8 loads, thus valid maximum DIMM configurations per memory board
  for the HP ProLiant ML570 G4 are:
    - 6 SR DIMMs = 6 loads, or
    - 4 DR DIMMs = 8 loads, or
    - 2 DR DIMMS + 4 SR DIMMs = 8 loads
- Advance Memory Protection support
    - Online Spare is supported with 1, 2, 3 or 4 boards
        - Each board can failover to its Online Spare Bank independent of the other memory boards.
        - The minimum valid Online Spare configuration for a memory board requires at least one bank of dual-rank
          DIMMs or two banks of single-rank DIMMs.
        - HP Recommends (for maximum memory usage efficiency):
            - If only single -rank DIMMs are used on a memory board, all DIMMs should be of the same size on that
              memory board.
            - If only dual-rank DIMMs are used on a memory board, all DIMMs should be of the same size on that
              memory board.
            - If a mixture of single- and dual-rank DIMMs are used on a memory board, the dual-rank DIMMs should
              be two times (2x) the size of any single-rank DIMM
    - Hot-Plug Mirrored Memory is supported with 2 or 4 boards
        - Memory boards within a mirrored pair must have the same amount of total memory. However, each board of the
          mirrored pair may have different DIMM configurations as long as they have equal total size.
        - The amount of memory between mirrored pairs can be different in quadboard Mirrored Memory mode.
    - Hot-Plug RAID Memory is only supported with 4 boards
        - All four memory boards must have the same amount of total memory. However, each board may have different
          DIMM configurations as long as they have equal total size

NOTE: This chart does not represent all possible memory configurations.
NOTE: Four memory boards would be required to configure up to 58GB or maximum memory using 4GB DIMMs.

Memory

Memory		Slot					
		1	2	3	4	5	6
Standard	2 GB	1 GB	1 GB	Empty	Empty	Empty	Empty
Optional	58 GB	1 GB	1 GB	4 GB	4 GB	Empty	Empty
Maximum	64 GB	4 GB	4 GB	4 GB	4 GB	Empty	Empty
Memory		Slot					
		7	8	9	10	11	12
Standard	2 GB	Empty	Empty	Empty	Empty	Empty	Empty
Optional	58 GB	4 GB	4 GB	4 GB	4 GB	Empty	Empty
Maximum	64 GB	4 GB	4 GB	4 GB	4 GB	Empty	Empty
Memory		Slot					
		13	14	15	16	17	18
Standard	2 GB	Empty	Empty	Empty	Empty	Empty	Empty
Optional	58 G8	4 GB	4 GB	4 GB	4 GB	Empty	Empty
Maximum	64 GB	4 GB	4 GB	4 GB	4 GB	Empty	Empty
Memory		Slot					
		19	20	21	22	23	24
Standard	2 GB	Empty	Empty	Empty	Empty	Empty	Empty
Optional	58 GB	4 GB	4 GB	4 GB	4 GB	Empty	Empty
Maximum	64 GB	4 GB	4 GB	4 GB	4 GB	Empty	Empty

Following are memory options available from HP:

8 GB (2 x 4 GB 2RANK) PC2-3200 Registered Memory (DDR2-400) Option Kit	348106-B21
4 GB (2 x 2 GB 2RANK) PC2-3200 Registered Memory (DDR2-400) Option Kit	375004-B21
4 GB (2 x 2 GB 1RANK) PC2-3200 Registered Memory (DDR2-400) Option Kit	343057-B21
2 GB (2 x 1 GB 1RANK) PC2-3200 Registered Memory (DDR2-400) Option Kit	343056-B21
1 GB (2 x 512 MB 1RANK) PC2-3200 Registered Memory (DDR2-400) Option Kit	343055-B21
ML570G4 Hot-plug Memory Expansion Board	403702-B21

NOTE: Memory is interchangeable between the HP ProLiant ML570 G3 and HP ProLiant ML570 G4, but the memory boards are not.

HP ProLiant ML570 G4 2P High Performance Models
NOTE: Memory configurations listed do not apply to "Factory Integrated Models".
Standard Memory
4 GB PC2-3200 Registered Memory (DDR2-400) installed (4 x 1 GB SDRAM DIMMs)

Standard Memory Plus Optional Memory
Up to 52 GB of memory is available with the optional installation of 4 GB DIMMs.

Standard Memory Replaced with Optional Memory
Up to 64 GB of memory is available with the removal of the standard 4GB of memory and the optional installation of 4 GB DIMMs.

NOTE: This chart does not represent all possible memory configurations.
NOTE: Four memory boards would be required to configure up to 52 GB or maximum memory using 4 GB DIMMs.
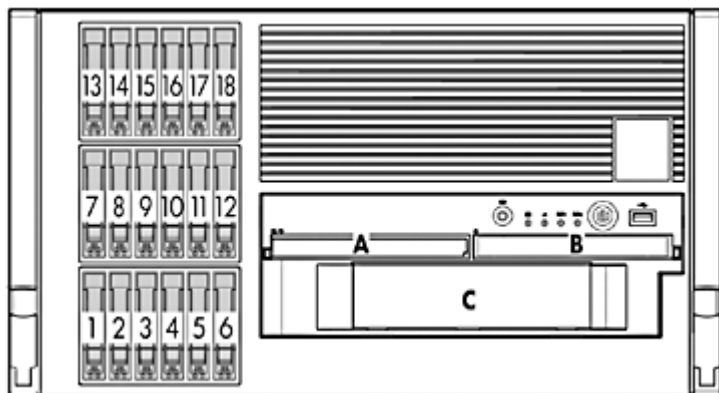
Memory

Memory		Slot					
		1	2	3	4	5	6
Standard	4 GB	1 GB	1 GB	1 GB	1 GB	Empty	Empty
Optional	52 GB	1 GB	1 GB	1 GB	1 GB	Empty	Empty
Maximum	64 GB	4 GB	4 GB	4 GB	4 GB	Empty	Empty
Memory		Slot					
		7	8	9	10	11	12
Standard	4 GB	Empty	Empty	Empty	Empty	Empty	Empty
Optional	52 GB	4 GB	4 GB	4 GB	4 GB	Empty	Empty
Maximum	64 GB	4 GB	4 GB	4 GB	4 GB	Empty	Empty
Memory		Slot					
		13	14	15	16	17	18
Standard	4 GB	Empty	Empty	Empty	Empty	Empty	Empty
Optional	52 GB	4 GB	4 GB	4 GB	4 GB	Empty	Empty
Maximum	64 GB	4 GB	4 GB	4 GB	4 GB	Empty	Empty
Memory		Slot					
		19	20	21	22	23	24
Standard	4 GB	Empty	Empty	Empty	Empty	Empty	Empty
Optional	52 GB	4 GB	4 GB	4 GB	4 GB	Empty	Empty
Maximum	64 GB	4 GB	4 GB	4 GB	4 GB	Empty	Empty

Following are memory options available from HP:

8 GB (2 x 4 GB 2RANK) PC2-3200 Registered Memory (DDR2-400) Option Kit	348106-B21
4 GB (2 x 2 GB 2RANK) PC2-3200 Registered Memory (DDR2-400) Option Kit	375004-B21
4 GB (2 x 2 GB 1RANK) PC2-3200 Registered Memory (DDR2-400) Option Kit	343057-B21
2 GB (2 x 1 GB 1RANK) PC2-3200 Registered Memory (DDR2-400) Option Kit	343056-B21
1 GB (2 x 512 MB 1RANK) PC2-3200 Registered Memory (DDR2-400) Option Kit	343055-B21
ML570G4 Hot-plug Memory Expansion Board	403702-B21

NOTE: Memory is interchangeable between the HP ProLiant ML570 G3 and HP ProLiant ML570 G4, but the memory boards are not.

Storage

1-18 Eighteen SFF SAS Drive Bays

A 1.44-MB Slimline Diskette Drive (optional)

B Slimline DVD/CD-RW

C One available removable media bay for storage. A half-height tape drive, or a USB tape drive may be installed in the removable media bay.

Drive Support

Hard Drives

Hot Plug SFF SAS 2.5" Drives

	Quantity Supported	Position Supported	Controller
146GB 3G SAS 10K SP	Up to 18	1-18	HP Smart Array E500/256MB Controller
146GB 3G SAS 10K DP			HP Smart Array P400/256MB Controller
72GB 3G SAS 10K SP			HP Smart Array P400/512MB BBWC Controller
72GB 3G SAS 10K DP			HP Smart Array P600/256 BBWC Controller
72GB 3G SAS 15K SP			HP Smart Array P800/512 BBWC Controller
72GB 3G SAS 15K DP			
36GB 3G SAS 15K SP			
36GB 3G SAS 15K DP			

External Storage

	Quantity Supported	Position Supported	Host Controller or Adapter
Modular Smart Array 20 Family	1 per SCSI VHDCI connector	External	Smart Array 6404/256 Controller
Modular Smart Array 30 Family	Up to 28	External	Smart Array 6402/128 Controller Smart Array 6404/256 Controller Smart Array 642 Controller
Modular Smart Array 50 Enclosure	Up to 32	External	HP Smart Array P600/256 BBWC Controller HP Smart Array P800/512 BBWC Controller

Storage

Maximum Storage Capacity - (ML570 SFF SAS Drive Cage, 8 port SAS controller in 4 slots & MSA50 enclosures)

Internal	2.628TB (18 x 146 GB SFF SAS Drives)
External	40.880TB (28 MSA50 Enclosures x 10 drive bays each x 146GB SFF SAS Drives)
Total	43.508TB

Tape Drives, Tape Autoloaders, Tape Libraries & D2D 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 LTO-1 Ultrium 232 LTO-2 Ultrium 448 LTO-2 Ultrium 460 LTO-3 Ultrium 920 LTO-3 Ultrium 960 LTO-4 Ultrium 1840 DAT 40 DAT 72 DAT 160 DLT VS160 SDLT 600 1U Rack-Mount Kit 3U Rack-Mount Kit	External	HP SC11Xe Host Bus Adapter	412911-B21
HP StorageWorks USB Tape Drives, External DAT 40 USB DAT 72 USB DAT 160 USB 1U USB Rack-Mount Kit	External	USB 2.0 Port	N/A
HP StorageWorks SAS Tape Drives, External DAT 160 SAS LTO 2 Ultrium 448 SAS	External	HP SC44Ge Host Bus Adapter **NOTE:** Recommended. HP Smart Array E500 Controller	416096-B21 435129-B21

Storage

LTO-2 Ultrium 448 SAS LTO-3 Ultrium 920 SAS LTO-4 Ultrium 1840 SAS 1U Rack-Mount Kit 3U Rack-Mount Kit		NOTE: The following SAS Smart Array controllers require ROM Flash version 2.04 or higher for SAS tape support HP Smart Array P400/256MB Controller HP Smart Array P400/512MB Controller	405132-B21 411064-B21
HP StorageWorks SCSI Tape Automation, External DAT 72x10 Autoloader 1/8 G2 Autoloader MSL2024 MSL4048 MSL8096 MSL6000	External	HP SC11Xe Host Bus Adapter HP U320e SCSI Host Bus Adapter NOTE: Only valid for MSL tape libraries.	412911-B21 AH627A
HP StorageWorks SAS Tape Automation, External 1/8 G2 Autoloader MSL2024 MSL4048 MSL8096	External	HP SC44Ge Host Bus Adapter NOTE: Please visit: http://www.hp.com/go/connect for details about minimum SAS controller firmware version and SAS cabling requirements.	416096-B21
HP StorageWorks Fibre Tape Automation, External MSL2024 MSL4048 MSL6000	External	NOTE: Please consult the EBS connectivity matrix at: http://www.hp.com/go/ebs for detailed connectivity information.	N/A
HP StorageWorks D2D Backup Systems D2D110 D2D120 D2D130	External	Embedded Network Controller	N/A

QuickSpecs

Power Specifications

Part Number	337867-001
Spare Kit	364360-001
Operational Input Voltage Range (Vrms)	90 to 264
Frequency Range (Nominal) (Hz)	47 to 63 (50/60)

Nominal Input Voltage (Vrms)	100	115	208	220	230	240
Max Rated Output Wattage Rating	910	910	1300	1300	1300	1300
Nominal Input Current (A rms)	11.9	10.2	7.7	7.3	6.9	6.6
Max Rated Input Wattage Rating (Watts)	1163	1148	1566	1566	1548	1548
Max. Rated VA (Volt-Amp)	1186	1172	1598	1598	1579	1579
Efficiency (%)	80	81	83	83	84	84
Power Factor	0.98	0.98	0.98	0.98	0.98	0.98
Leakage Current (mA)	0.43	0.50	0.90	0.96	1.00	1.04
Maximum Inrush Current (A peak)	100	100	100	100	100	100
Maximum Inrush Current duration (mS)	10	10	10	10	10	10

System Specifications

To determine power specifications for various system configurations, please use the online HP Power Calculator Tool referenced below.

Power cord requirements	Tower model comes with local power cord	Option no. See chart below Spare no. See chart below
	Rack models come with PDU jumper cord and/or local power cord.	Option no. See chart below Spare no. See chart below
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 - Click on the Power Calculator for the server of interest. Example: ML570 G4 - There are certain Dual-Core, lowline, max configurations that are not supported. All highline configurations are supported. Consult the Power Calculator to determine if your lowline configuration is supported.		

Power Specifications

Standard Tower Model Power Cords	Description	
Asia Pacific	CEE 7-VII to IEC320-C19	
	BS1363 to IEC320-C19	
Australia	AS/NZS 3112 to IEC320-C19	
Brazil	Nema 5-15P to IEC320-C19	
Europe	CEE 7-VII to IEC320-C19	
France	CEE 7-VII to IEC320-C19	
Germany	CEE 7-VII to IEC320-C19	
Japan	JIS C8303 to IEC320-C19	
UK	BS1363 to IEC320-C19	
USA	Nema 5-15P to IEC320-C19	
PRC	GB1002 to IEC320-C19	
	CNS 690 to IEC320-C19	
	BS1363 to IEC320-C19	
Standard Rack Model Power Cords	**Description**	
Asia Pacific	IEC320-C14 to IEC320-C19	
Europe	IEC320-C14 to IEC320-C19	
Japan	JIS C8303 to IEC320-C19	
	IEC320-C14 to IEC320-C19	
PRC	IEC320-C14 to IEC320-C19	
USA	IEC320-C14 to IEC320-C19	
Optional Country Power Cords and Jumper Cords	**Description**	**Option Power Cord Part Number**
Australia/New Zealand	AS/NZS 3112 to IEC320-C19	305340-011
Denmark/Switzerland	IEC320-C19, Industrial	305340-081
Europe	CEE 7-VII to IEC320-C19	305340-021
Italy	IEC320-C19, Italy	305340-061
South Africa/India	IEC320-C19, SA	305340-AR1
UK	BS1363 to IEC320-C19	305340-031
US	Nema 5-15P to IEC320-C19	235603-001
US	Nema 6-20P to IEC320-C19	235604-001
US	IEC320-C19, 20A, 250V, US	340653-001
WW	IEC320-C14 to IEC320-C19 Jumper (10A, IEC, 6ft/2.0m)	313227-B21
WW	IEC320-C14 to IEC320-C19 Jumper (10A, IEC, 8ft/2.5m)	291034-B21
WW	IEC320-C14 to IEC320-C19 Jumper (10A, IEC, 10ft/3.0m)	310927-B21
WW	IEC320-C14 to IEC320-C19 Jumper (10A, IEC, 12ft/3.6m)	313228-B21
WW	IEC320-C19 to IEC320-C20 Jumper (16A, IEC, 8ft/2.5m)	295633-B22

Technical Specifications

System Unit	Tower Dimensions (H x W x D) (with feet/bezel)		20.0 x 11.11 x 28.80 in (50.8 x 28.2 x 73.2 cm)
	Rack Dimensions (H x W x D) (with bezel)		11.11 x 19.00 x 28.80 in (28.2 x 48.3 x 71.1 cm)
	Weight (approximate)	Maximum (all hard drives, power supplies, and processors installed)	137 lb (62.14 kg)
		Minimum (one hard drive, power supply, and processor installed)	93 lb (42.18 kg)
	Input Requirements (per power supply)	Rated Line Voltage	90 -- 132 VAC, 180 - 264 VAC
		Rated Input Current	12A (at 100 VAC), 8 A (at 200 VAC)
		Rated Input Frequency	47 to 63 Hz
		Rated Input Power	1161 W (at 100 VAC), 1598 W (at 200 VAC)
	BTU Rating	Maximum	3985 BTU/hr (at 100 VAC), 5457 BTU/hr (at 200 VAC)

Power Specifications — To review typical system power ratings use the Power Calculator which is available via the online tool located at URL:

http://h30099.www3.hp.com/configurator/calc/Power%20Calculator%20Catalog.xls

- Click on the system of interest. Example: ML570 G4
- Follow the instructions of the next screens.

	Power Supply Output Power (per power supply)	Rated Steady-State Power	910 W (at 100 VAC), 1300 W (at 200 VAC)
		Maximum Peak Power (10 sec max)	960 W (at 100 VAC), 1420 W (at 200 VAC)
	System Inlet Temperature	Operating	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 10°C/hr (18°F/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 30°C (86°F).
		Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
	Relative Humidity	Operating	10 to 90% relative humidity (Rh), 28°C (82.4°F)

Technical Specifications

	(non-condensing)			maximum wet bulb temperature, non-condensing.	
		Storage		5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.	
	Altitude	Operating		3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).	
		Non-Operating		9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).	

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

Idle

LWAd	7.7 B
LpAm	60 dBA

Operating

LWAd	7.7 B
LpAm	60 dBA

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

Technical Specifications

	DVD-R		3.95 GB/side
	DVD-RAM		2.6 GB/side and 5.2 GB
	CD-ROM	Mode-1	650 MB (550 MB)
		Mode-2	742 MB (640 MB)
	DVD		2,048 bytes
	CD		2,352 (Mode-0)
			2352, 2340, 2336, 2048 bytes (Mode-1)
			2352, 2340, 2336, 2048 bytes (Mode-2)
	Diameter		120 mm (4.7 in), 80 mm (3.1 in)(with adapter at vertical mounting mode)
Loading Mechanism	Tray type		
Interface	EIDE (ATAPI)		
Access Times (typical)	Random		DVD-ROM < 120 ms, CD-ROM < 110 ms
	Full-Stroke		DVD-ROM < 240 ms, CD-ROM < 160 ms
Audio Output Level (typical)	Line-out		CD 0.7 Vrms at 47 Kohms Load
Data Transfer Rate (sustained)	DVD-ROM	Single Layer	10.8 MB/sec. Max.
	DVD-RAM		2.77 MB/sec. Max
	CD-ROM		7.2 MB/sec. Max.
Cache Buffer	2 MB		
Spin-up Time (typical)	less than 10 seconds		
MTBF	120,000 Power On Hours (POH)		
Ambient Temperature	Operating		-22° to 140° F (-30° to 60° C)
Relative Humidity	Operating		10% to 80%
	Storage/Transportation		5% to 95%
Dimensions	(HxWxD, maximum)		0.5 x 5.04 x 5.1 in (12.7 x 128 x 129.4 mm)
Option Kit Contents	DVD-ROM drive with installation guide, warranty card, registration card		

Technical Specifications

Integrated Lights-Out 2 Standard (integrated on system board)	Architecture	32-bit PCI-based health and remote management ASIC (Application Specific Integrated Circuit)
	Processor	32-bit RISC processor core running at 66 MHz
	Upgradability	Option firmware upgradable via flash ROM.
	Video Support	Utilizes the host server's embedded video chip. Supports VGA/SVGA, 640 x 480 (256 to 16.7M colors), 800 x 600 (256 to 16.7M colors), 1024 x 768 (256 to 65K colors), 1280 x 1024 (256 colors)
	Interfaces	One Ethernet network connection (10/100 Mb/s)
	Memory	2-MB Flash ROM
		8-MB SDRAM
	Operating System Support	Microsoft Windows NT 4.0 Server
		Windows NT 4.0 Enterprise Edition
		Windows 2000 Server
		Windows 2000 Advanced Server
		Red Hat 7.x
		SuSE 7.0
		Novell NetWare 5.x, 6.x
	Client Browser Support	Microsoft Internet Explorer 5.5 or later.
	iLO 2 Standard Features	Virtual Text Remote Console
		Virtual KVM
		Virtual Power Button Control
		Virtual UID Control
		Power Regulator Control
		Dedicated LAN Connectivity
		Secure access using web browser
		Secure access using Secure Shell (SSH) client
		Serial connectivity
		Automatic IP Configuration via DHCP/DNS/WINS
		Industry Standard 128-bit Secure Sockets Layer (SSL) Security
		IML and iLO2 Event Logging
		Support for up to 12 user accounts with customizable access privileges
	iLO 2 Advanced Features (optional)	Virtual Graphical Remote Console
		Virtual Floppy/USB Key drive
		Virtual CD-ROM drive
		Directory Services Integration
		Processor States Reporting
		Terminal Services Integration

QuickSpecs

Technical Specifications

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

Two embedded NC371i Multifunction Server Adapters	Network Interface	10Base-T/100Base-TX/1000Base-TX	
	Compatibility	IEEE 802.3 10Base-T	
		IEEE 802.3ab 1000Base-T	
		IEEE 802.3u 100Base-TX	
	Data Transfer Method	64-bit/133MHz PCI-X	
	Network Transfer Rate	10Base-T (Half-Duplex)	10 Mb/s
		10Base-T (Full-Duplex)	20 Mb/s
		100Base-TX (Half-Duplex)	100 Mb/s
		100Base-TX (Full-Duplex)	200 Mb/s
		1000Base-TX (Half and Full-Duplex)	2000 Mb/s
	Connector	Two RJ-45	
	Cable Support	10Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)
		100Base-TX	Category 5 or higher UTP; up to 328 ft (100 m)
		1000BaseTX	Category 5 or higher UTP; up to 328 ft (100 m)

Environment-friendly Products and Approach	End-of-life Management and Recycling	Hewlett-Packard 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.

Technical Specifications

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.