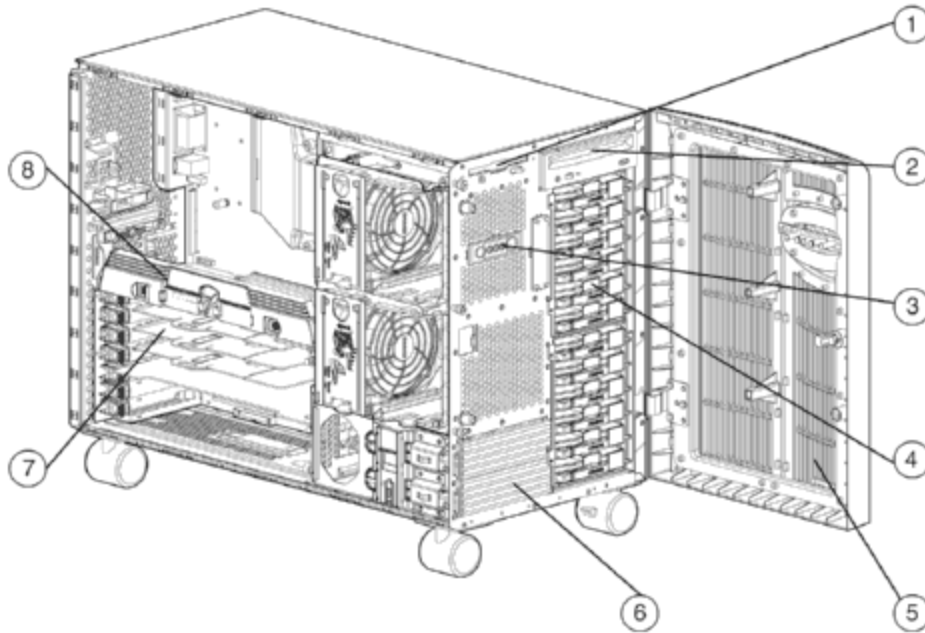
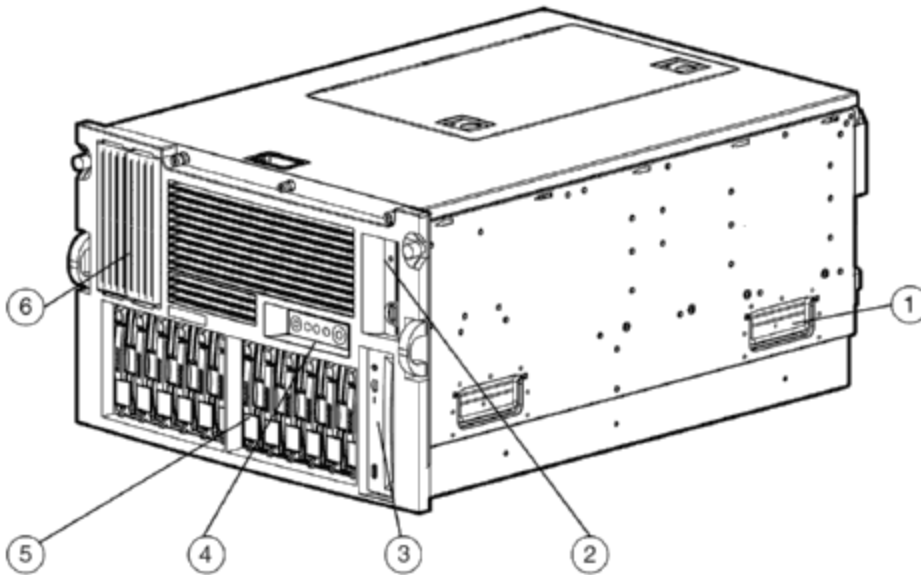


### Overview



1. 1.44MB Diskette Drive
2. High Speed IDE CD-ROM
3. Diagnostic Lighting
4. Wide Ultra3/Ultra320 Hot Plug Drive Bays (12 x 1" Standard)

5. Front Bezel
6. 5.25-inch Removable Media Bays
7. Seven PCI-X slots
8. Memory Board



1. Rack Handles
2. 1.44MB Diskette Drive
3. High Speed IDE CD-ROM

4. Diagnostic Lighting
5. Wide Ultra3/Ultra320 Hot Plug Drive Bays (12 x 1" Standard)
6. 5.25-inch Removable Media Bays

### What's New

- Intel® Xeon 3.0GHz Processors with 400MHz system bus

### Overview

#### At A Glance

- Designed for maximum application performance and user workload, the ML530 Generation 2 (G2) offers customers the first 2P expansion server with Mirrored Memory
- Intel Xeon 3.0 GHz, 2.80 GHz or 2.40 GHz Processors with 400MHz system bus
- 512-KB level 2 cache per processor
- Enterprise Class chipset: ServerWorks GC HE
- PC1600 ECC SDRAM memory expandable to 16 GB (Advanced ECC memory standard)
- 2:1 interleaved memory
- Seven 64-Bit/100 MHz PCI-X slots; 4 Hot Plug Slots
- Two Ultra3 SCSI Drive Cages standard support up to 12 1" hot plug hard drives
- Internal mass storage capacity up to 4.20 TB (12 x 300 GB + 2 x 300 GB 1" hot plug drives) with optional ML5xx Internal Two Bay Hot Plug SCSI Drive Cage (with fan)
- Advanced Memory Protection including Mirrored Memory and Online Spare Memory
- 600-Watt Hot Plug Power Supply with optional 1+ 1 redundancy
- Hot Plug System Fans with optional redundancy
- Embedded NC3163 Fast Ethernet NIC PCI 10/100 WOL (Wake On LAN) and PXE support
- Integrated Dual Channel Wide Ultra3 SCSI Adapter
- Protected by HP Services, including a three-year, Next Business Day on-site, limited, Global warranty and extended Pre-Failure Warranty that covers processors, memory and disk drives - Certain restrictions and exclusions apply. Consult the HP Customer Support Center at 1-800-345-1518 for details.

### Standard Features

<b>Processor</b> <i>One of the following depending on Model:</i>	Intel Xeon 3.0 GHz/512 KB Processor (with 400 MHz system bus) <b>NOTE:</b> 1P Models ship with one processor standard. 2P Models ship with two processors standard.
	Intel Xeon 2.80 GHz/512 KB Processor (with 400 MHz system bus) <b>NOTE:</b> 1P Models ship with one processor standard. 2P Models ship with two processors standard.
	Intel Xeon 2.40 GHz/512 KB Processor (with 400 MHz system bus) <b>NOTE:</b> 1P Models ship with one processor standard. 2P Models ship with two processors standard.

**Cache Memory** 512-KB level 2 cache per processor

**Upgradability** Upgradable to dual processing  
**NOTE:** 1P Models only.

**Chipset** Enterprise Class chipset: ServerWorks GC HE  
**NOTE:** For more information regarding ServerWorks, please see the following URL:  
<http://www.serverworks.com/products/overview.html>.

<b>Memory</b>	Standard	1024 MB (2 x 512 MB) PC1600-MHz Registered ECC SDRAM
	Maximum	16 GB

**Network Controller** Embedded NC3163 Fast Ethernet NIC PCI 10/100 with full WOL (Wake On LAN) and PXE support

Expansion Slots	Bus Speed	Bus Number	Hot Plug	PCI Voltage	Notes
1	64-bit/100MHz PCI-X	1	Yes	3.3V	-
2	64-bit/100MHz PCI-X	1	Yes	3.3V	SA6402/6404 not recommended
3	64-bit/100MHz PCI-X	5	Yes	3.3V	-
4	64-bit/100MHz PCI-X	5	Yes	3.3V	-
5	64-bit/100MHz PCI-X	9	No	3.3V	-
6	64-bit/100MHz PCI-X	9	No	3.3V	-
7	64-bit/100MHz PCI-X	13	No	3.3V	Preferred RILOE slot

**NOTE:** For more information regarding PCI-X, please see the following URL: <http://www.HP.com/pci-x>.

**NOTE:** All slots can accept universal keyed PCI cards.

**Storage Controllers** Integrated Dual Channel Wide Ultra3 SCSI Adapter

<b>Storage</b>	Diskette Drive	1.44 MB Diskette Drive
	Optical Drive	40x IDE CD-ROM Drive
	Hard Drives	None
	Internal Storage	4.20 TB (with optional ML5xx Internal Two Bay Hot Plug Wide SCSI Drive Cage (with fan) (12 x 300 GB 1" + 2 x 300 GB 1"))
	Half Height Bays	2 bays for optional tape backup, DVD, or SCSI devices

### Standard Features

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<b>Interfaces</b>	Parallel	1
	Serial	2
	Pointing Device (Mouse)	1
	Graphics	1
	Keyboard	1
	Network RJ-45	1
	USB	2
	External SCSI	1

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

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<b>Graphics</b>	Integrated Rage XL Video Controller with 8 MB SDRAM Video Memory
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<b>Form Factor</b>	Tower or Rack (7U)
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### Standard Features

#### ProLiant Essentials Foundation Pack Software

HP Systems Insight Manager	HP's new HP Systems Insight Manager (HP SIM) helps maximize system uptime and performance and reduce system maintenance costs by providing proactive notification of problems before those problems result in unplanned downtime or reduced productivity. HP SIM are both easy to set up work with the Insight Management Agents, integrated Light-Out and Remote Insight Light-Outs Edition, and Version Control Agents to deliver robust fault, configuration, and asset management as well as remote administration. With HP SIM customers will also be able to take advantage of role-based security; the ability to manage ProLiant, Integrity, and HP 9000 systems; and plug-ins for storage, client, printer, and power management as well as server rapid deployment, performance management, and workload management. For more details on HP SIM visit <a href="http://www.hp.com/go/hpsim">http://www.hp.com/go/hpsim</a> .
Management Agents	The Management Agents form the foundation for HP's Intelligent Manageability strategy. They provide direct, browser-based access to in-depth instrumentation built into HP servers, workstations, desktops, and portables, and send alerts to Insight Manager 7 and other enterprise management applications in case of subsystem or environmental failures. For additional information about the Management Agents and other management products from HP, please visit the management Web site at <a href="http://www.hp.com/servers/manage">http://www.hp.com/servers/manage</a> .
SmartStart	SmartStart is a tool that simplifies server setup, providing a rapid way to deploy reliable and consistent server configurations. For more information, please visit the SmartStart Web site at <a href="http://www.hp.com/servers/smartstart">http://www.hp.com/servers/smartstart</a> . SmartStart version supported (minimum): SmartStart 6.40.
Subscriber's Choice	Subscriber's Choice Driver and Support Alerts/Notifications is a web-based email subscription service that provides automatic delivery of software and driver change notifications for ProLiant products. Sign up at <a href="http://www.hp.com/go/subscriberschoice">http://www.hp.com/go/subscriberschoice</a> and customize your profile to receive various new alerts as they become available, on a weekly or monthly basis.
ROMPaq, support software, and configuration utilities	The latest software, drivers, and firmware fully optimized and tested for your ProLiant server and options available in SmartStart or downloadable from Software and Drivers download pages, linked from the SmartStart website at <a href="http://www.hp.com/servers/smartstart">http://www.hp.com/servers/smartstart</a> .
Survey Utility and diagnostics utilities	The most advanced configuration analysis, reporting and troubleshooting utilities used by HP and at your fingertips, available in SmartStart.
Optional ProLiant Essentials Value Packs	Optional software offerings that selectively extend the functionality of an Adaptive Infrastructure to address specific business problems and needs: <ul style="list-style-type: none"><li>● Rapid Deployment Pack – an automated solution for multi-server deployment and provisioning, enabling companies to quickly and easily adapt to changing business demands.</li><li>● Workload Management Pack – provides easier management of complex environments, improving overall server utilization and enabling Windows 2000 customers for the first time to confidently deploy multiple applications on a single multiprocessor ProLiant Server.</li><li>● Performance Management Pack – 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..</li></ul>

**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.

**NOTE:** For more information regarding ProLiant Essentials Software, please see the following URL: <http://www.hp.com/servers/proliantessentials>.

### Standard Features

<b>Industry Standard Compliance</b>	ACPI 1.0b Compliant
	PCI 2.2 Compliant
	PCI-X 1.0 Compliant
	WOL Support
	Microsoft® Logo certifications
	Novell certified

### Availability

Advanced Memory Protection Technology – delivers unsurpassed memory protection and server availability:

- Advanced ECC Memory

ECC protection provides the ability to detect and correct single bit memory errors while Advanced ECC extends this coverage to include protection against multiple simultaneous errors on a DIMM. Advanced ECC detects and corrects 4bit memory errors that occur within a single DRAM chip on a DIMM. Advanced ECC algorithms work in combination with industry standard ECC DIMMS.

#### Advanced Memory Protection Configurations

- Online Spare Memory

Offers a higher level of memory protection than Advanced ECC alone. The system is configured with a spare bank of memory. If the number of single-bit correctable errors on a bank exceeds the pre-defined error threshold, the failing 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.

- Single-Board Mirrored Memory

Single-board mirrored memory provides a higher level of availability than Advanced ECC and Online Spare Memory because it protects against multi-bit errors. Single-board Mirrored Memory uses a single memory board that is configured with a mirrored/redundant set of memory. The system writes to both sets of memory, but reads from one. If a memory bank has a multi-bit error or full DIMM failure, the system simply reads from the mirrored bank instead. This process occurs without intervention or server interruption, and the failed DIMM can be replaced during a regularly scheduled shutdown.

**NOTE:** All Advanced Memory Protection modes are configured in the ROM-Based Setup Utility (RBSU) and viewable through Insight Manager 7 (CIM 7) and the Integrated Management Log (IML).

- PCI-X Hot Plug Technology (Four 64bit/100MHz PCI-X hot plug slots available)
- One 600W Hot Plug Power Supply standard
- Two Hot Plug System Fans standard

### Intelligent Manageability

Insight Manager 7  
HP Systems Insight Manager  
Redundant ROM  
Remote Flash ROM Utility  
Remote Lights-Out Edition (optional)  
Automatic Server Recovery-2 (ASR-2)  
Integrated Management Log  
Server Health Logging  
Drive Parameter Tracking (with Smart Array Controller)  
Dynamic Sector Repairing (with Smart Array Controller)  
Pre-Failure Warranty (covers processors, hard drives and memory)

### Standard Features

<b>Security</b>	Power-on password Hot plug keyboard password Diskette drive control Diskette boot control QuickLock, Network Server Mode Parallel and serial interface control Administrator's password Disk configuration lock
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<b>Server Power Cords</b>	One Lowline power cord ships standard
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<b>Power Supply</b>	One 600W Hot Plug Power Supply standard <ul style="list-style-type: none"><li>● Optional 2nd Power Supply for 1+ 1 redundancy</li></ul> <p><b>NOTE:</b> Redundant Hot Plug Power Supplies standard on 2P servers. <b>NOTE:</b> Ships with IEC320-C13 to Nema 5-15P detachable power cord. (Rack models only).</p>
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<b>System Fans</b>	Two Hot Plug System Fans standard <ul style="list-style-type: none"><li>● Optional Hot Plug Redundant Fan kit includes two more</li></ul> <p><b>NOTE:</b> Hot Plug Redundant Fans standard on 2P servers.</p>
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<b>Required Cabling</b>	For required cabling information, refer to the HP Web site at <a href="http://h18000.www1.hp.com/products/servers/proliantML530/">http://h18000.www1.hp.com/products/servers/proliantML530/</a> .
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<b>OS Support</b>	Microsoft Windows NT® Server Microsoft Windows NT Enterprise Edition Microsoft Windows 2000 Windows Server 2003 Novell NetWare SCO UnixWare LINUX (Red Hat, SuSE) Sun Solaris Intel Platform Edition Caldera OpenUnix OS/2 e-Business <p><b>NOTE:</b> For a more complete and up-to-date listing of supported OS's and versions, please visit our OS Support Matrix at: <a href="http://www.hp.com/go/supportos">http://www.hp.com/go/supportos</a>.</p> <p><b>NOTE:</b> For an up-to-date listing of the latest drivers available for the HP ProLiant ML530 G2, please see: <a href="http://h18023.www1.hp.com/support/files/server/us/index.html">http://h18023.www1.hp.com/support/files/server/us/index.html</a>.</p> <p><b>NOTE:</b> For a more complete and up-to-date information on Linux support, please visit HP Linux Web site at <a href="http://h18000.www1.hp.com/products/servers/linux/hpLinuxcert.html">http://h18000.www1.hp.com/products/servers/linux/hpLinuxcert.html</a>.</p> <p><b>NOTE:</b> For more complete and up-to-date information on how to buy server operating systems from HP please visit the OS product site at: <a href="http://h18004.www1.hp.com/products/servers/software/OEM.html">http://h18004.www1.hp.com/products/servers/software/OEM.html</a></p>
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### Standard Features

#### 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.

**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://h18000.www1.hp.com/products/servers/ProLiantML530/index.html>.

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#### Installation of HP servers into Third Party Round Hole Racks

If a Third Party rack is used, an additional rack kit will need to be used with the rack kit that comes with the server. The additional rack kit part number is Compaq part number 274739-B21. The rack kit comes with all necessary brackets, hardware and installation instructions.

**NOTE:** Third party square-holed racks are supported using the standard rack rail kit that ships with the rack server models.

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#### Installation of HP servers into Telco Racks

If a Telco is used, an additional rack kit and brackets will need to be used with the rack kit that comes with the server (optional Third Party Rack Kit (PN: 274739-B21)). Please see the following URL to purchase the brackets (rack kit and brackets come with all necessary brackets, hardware, and installation instructions:

<http://www.racksolutions.com/compaq/products.htm>.

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#### HP Factory Express Capabilities

HP Factory Express gives you the flexibility to choose from a full menu of factory capabilities all in one manufacturing facility, in one process, with one touch giving you full control and access to HP's World class manufacturing facility anytime. This approach provides you the speed to deploy your IT needs, with total quality assurance, reliability, and predictability to lower your total cost of ownership by letting HP install, rack, and customize your software and hardware options for you.

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### Standard Features

#### Service and Support

Three-year limited warranty, including hardware diagnostic support, pre-failure warranty (coverage of hard drives, memory and processors). The warranty is fully supported by HP Services and a worldwide network of resellers and service providers. In addition 90-day's getting started software telephone support may be covered under the warranty or available for an additional fee. Enhancements to warranty services are available through HP Care Pack services.

**NOTE:** Limited warranty includes 3 year parts, 3 year labor, 3-year on-site support

Care Pack services provide a range of life cycle support options that let you choose the service levels that meet your business requirements, from basic to mission-critical.

A full range of HP Care Pack hardware and software services are available including:

- Installation and start up
- Education courses
- Extended onsite hardware coverage hours from same business day 13 hours, 5 day to 24 hours, 7 days call window with options including 4-hour response or 6-hour Call To Repair
- Comprehensive range of software technical support for Microsoft, Linux, ProLiant Essentials and VMWare-based IT solutions helping to deliver high level of application availability. Response times range from 30 mins for critical problems to 2 hours.
- System Management, Performance Services and Mission Critical Support Solution

HP Care Pack Services include HP branded hardware options qualified for the server, purchased at the same time or afterwards, internal to the enclosure, as well as 22" and smaller external monitors and tower UPS options up to 3KVA. 22" and smaller external monitors will be covered at the same service level and coverage period as the server. For servers or storage systems installed within a rack, service also covers all HP qualified rack options installed within the same rack.

**NOTE:** For more information on HP Care Pack services, contact any of our worldwide sales offices or resellers or visit our worldwide Web site on the internet at: <http://www.hp.com/hps/carepack>

**NOTE:** For more complete information on HP Services offerings, customers and resellers, please visit us at: <http://www.hp.com/hps>

**NOTE:** Additional information regarding worldwide limited warranty and technical support is available at: <http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html>

### Models

**ML530T02 X3.0-512KB,  
1024MB, 1P**  
271243-001

<b>Processor</b>	One Intel Xeon 3.0 GHz Processor standard (up to 2 supported)
<b>Processor System Bus</b>	400 MHz system bus
<b>Processor Memory</b>	512-KB level 2 cache per processor
<b>Memory</b>	1024 MB (Standard) 16,384 MB (Maximum) PC1600 Advanced ECC SDRAM; 2:1 interleaved memory <b>NOTE:</b> Maximum memory achieved using 2048 MB DIMMs.
<b>Network Controller</b>	Embedded NC3163 Fast Ethernet NIC PCI 10/100 with WOL (Wake On LAN)
<b>Storage Controller</b>	Integrated Dual Channel Wide Ultra3 SCSI Adapter
<b>Hard Drive</b>	None ship standard
<b>Internal Storage</b>	12 1" hot plug hard drive bays standard
<b>Power Supplies</b>	One 600W Hot Plug Power Supply
<b>System Fan</b>	Hot Plug System Fans
<b>Drive Cages</b>	Two 6 x 1" Drive Cages standard
<b>Optical Drive</b>	40x or higher IDE CD-ROM Drive
<b>Diskette Drive</b>	1.44 MB Diskette Drive
<b>Form Factor</b>	Tower

**ML530T02 X3.0-512KB,  
1024MB, 2P**  
271245-001

<b>Processor</b>	Two Intel Xeon 3.0 GHz Processor standard
<b>Processor System Bus</b>	400 MHz system bus
<b>Processor Memory</b>	512-KB level 2 cache per processor
<b>Memory</b>	1024 MB (Standard) 16,384 MB (Maximum) PC1600 Advanced ECC SDRAM; 2:1 interleaved memory <b>NOTE:</b> Maximum memory achieved using 2048 MB DIMMs.
<b>Network Controller</b>	Embedded NC3163 Fast Ethernet NIC PCI 10/100 with WOL (Wake On LAN)
<b>Storage Controller</b>	Integrated Dual Channel Wide Ultra3 SCSI Adapter
<b>Hard Drive</b>	None ship standard
<b>Internal Storage</b>	12 1" hot plug hard drive bays standard
<b>Power Supplies</b>	Redundant 600W Hot Plug Power Supplies (1 + 1 redundancy)
<b>System Fan</b>	Redundant Hot Plug System Fans
<b>Drive Cages</b>	Two 6 x 1" Drive Cages standard
<b>Optical Drive</b>	40x or higher IDE CD-ROM Drive
<b>Diskette Drive</b>	1.44 MB Diskette Drive
<b>Form Factor</b>	Tower

### Models

<b>ML530T02 X2.80-512KB, 1024MB, 1P</b> 306487-001	<b>Processor</b>	One Intel Xeon 2.80 GHz Processor standard (up to 2 supported)
	<b>Processor System Bus</b>	400 MHz system bus
	<b>Processor Memory</b>	512-KB level 2 cache per processor
	<b>Memory</b>	1024 MB (Standard) 16,384 MB (Maximum) PC1600 Advanced ECC SDRAM; 2:1 interleaved memory <b>NOTE:</b> Maximum memory achieved using 2048 MB DIMMs.
	<b>Network Controller</b>	Embedded NC3163 Fast Ethernet NIC PCI 10/100 with WOL (Wake On LAN)
	<b>Storage Controller</b>	Integrated Dual Channel Wide Ultra3 SCSI Adapter
	<b>Hard Drive</b>	None ship standard
	<b>Internal Storage</b>	12 1" hot plug hard drive bays standard
	<b>Power Supplies</b>	One 600W Hot Plug Power Supply
	<b>System Fan</b>	Hot Plug System Fans
	<b>Drive Cages</b>	Two 6 x 1" Drive Cages standard
	<b>Optical Drive</b>	40x or higher IDE CD-ROM Drive
	<b>Diskette Drive</b>	1.44 MB Diskette Drive
<b>Form Factor</b>	Tower	

<b>ML530T02 X2.80-512KB, 1024MB, 2P</b> 306489-001	<b>Processor</b>	Two Intel Xeon 2.80 GHz Processor standard
	<b>Processor System Bus</b>	400 MHz system bus
	<b>Processor Memory</b>	512-KB level 2 cache per processor
	<b>Memory</b>	1024 MB (Standard) 16,384 MB (Maximum) PC1600 Advanced ECC SDRAM; 2:1 interleaved memory <b>NOTE:</b> Maximum memory achieved using 2048 MB DIMMs.
	<b>Network Controller</b>	Embedded NC3163 Fast Ethernet NIC PCI 10/100 with WOL (Wake On LAN)
	<b>Storage Controller</b>	Integrated Dual Channel Wide Ultra3 SCSI Adapter
	<b>Hard Drive</b>	None ship standard
	<b>Internal Storage</b>	12 1" hot plug hard drive bays standard
	<b>Power Supplies</b>	Redundant 600W Hot Plug Power Supplies (1 + 1 redundancy)
	<b>System Fan</b>	Redundant Hot Plug System Fans
	<b>Drive Cages</b>	Two 6 x 1" Drive Cages standard
	<b>Optical Drive</b>	40x or higher IDE CD-ROM Drive
	<b>Diskette Drive</b>	1.44 MB Diskette Drive
<b>Form Factor</b>	Tower	

### Models

<b>ML530T02 X2.40-512KB, 1024MB, 1P</b> 180285-001	<b>Processor</b>	One Intel Xeon 2.40 GHz Processor standard (up to 2 supported)
	<b>Processor System Bus</b>	400 MHz system bus
	<b>Processor Memory</b>	512-KB level 2 cache per processor
	<b>Memory</b>	1024 MB (Standard) 16,384 MB (Maximum) PC1600 Advanced ECC SDRAM; 2:1 interleaved memory <b>NOTE:</b> Maximum memory achieved using 2048 MB DIMMs.
	<b>Network Controller</b>	Embedded NC3163 Fast Ethernet NIC PCI 10/100 with WOL (Wake On LAN)
	<b>Storage Controller</b>	Integrated Dual Channel Wide Ultra3 SCSI Adapter
	<b>Hard Drive</b>	None ship standard
	<b>Internal Storage</b>	12 1" hot plug hard drive bays standard
	<b>Power Supplies</b>	One 600W Hot Plug Power Supply
	<b>System Fan</b>	Hot Plug System Fans
	<b>Drive Cages</b>	Two 6 x 1" Drive Cages standard
	<b>Optical Drive</b>	40x or higher IDE CD-ROM Drive
	<b>Diskette Drive</b>	1.44 MB Diskette Drive
	<b>Form Factor</b>	Tower

<b>ML530T02 X2.40-512KB, 1024MB, 2P</b> 226608-001	<b>Processor</b>	Two Intel Xeon 2.40 GHz Processors standard
	<b>Processor System Bus</b>	400 MHz system bus
	<b>Processor Memory</b>	512-KB level 2 cache per processor
	<b>Memory</b>	1024 MB (Standard) 16,384 MB (Maximum) PC1600 Advanced ECC SDRAM; 2:1 interleaved memory <b>NOTE:</b> Maximum memory achieved using 2048 MB DIMMs.
	<b>Network Controller</b>	Embedded NC3163 Fast Ethernet NIC PCI 10/100 with WOL (Wake On LAN)
	<b>Storage Controller</b>	Integrated Dual Channel Wide Ultra3 SCSI Adapter
	<b>Hard Drive</b>	None ship standard
	<b>Internal Storage</b>	12 1" hot plug hard drive bays standard
	<b>Power Supplies</b>	Redundant 600W Hot Plug Power Supplies (1 + 1 redundancy)
	<b>System Fan</b>	Redundant Hot Plug System Fans
	<b>Drive Cages</b>	Two 6 x 1" Drive Cages standard
	<b>Optical Drive</b>	40x or higher IDE CD-ROM Drive
	<b>Diskette Drive</b>	1.44 MB Diskette Drive
	<b>Form Factor</b>	Tower

### Models

ML530R02 X3.0-512KB,  
1024MB, 1P  
271244-001

<b>Processor</b>	One Intel Xeon 3.0 GHz Processor standard (up to 2 supported)
<b>Processor System Bus</b>	400 MHz system bus
<b>Processor Memory</b>	512-KB level 2 cache per processor
<b>Memory</b>	1024 MB (Standard) 16,384 MB (Maximum) PC1600 Advanced ECC SDRAM; 2:1 interleaved memory <b>NOTE:</b> Maximum memory achieved using 2048 MB DIMMs.
<b>Network Controller</b>	Embedded NC3163 Fast Ethernet NIC PCI 10/100 with WOL (Wake On LAN)
<b>Storage Controller</b>	Integrated Dual Channel Wide Ultra3 SCSI Adapter
<b>Hard Drive</b>	None ship standard
<b>Internal Storage</b>	12 1" hot plug hard drive bays standard
<b>Power Supplies</b>	One 600W Hot Plug Power Supply
<b>System Fan</b>	Hot Plug System Fans
<b>Drive Cages</b>	Two 6 x 1" Drive Cages standard
<b>Optical Drive</b>	40x or higher IDE CD-ROM Drive
<b>Diskette Drive</b>	1.44 MB Diskette Drive
<b>Form Factor</b>	Rack (7U)

ML530R02 X3.0-512KB,  
1024MB, 2P  
271246-001

<b>Processor</b>	Two Intel Xeon 3.0 GHz Processor standard
<b>Processor System Bus</b>	400 MHz system bus
<b>Processor Memory</b>	512-KB level 2 cache per processor
<b>Memory</b>	1024 MB (Standard) 16,384 MB (Maximum) PC1600 Advanced ECC SDRAM; 2:1 interleaved memory <b>NOTE:</b> Maximum memory achieved using 2048 MB DIMMs.
<b>Network Controller</b>	Embedded NC3163 Fast Ethernet NIC PCI 10/100 with WOL (Wake On LAN)
<b>Storage Controller</b>	Integrated Dual Channel Wide Ultra3 SCSI Adapter
<b>Hard Drive</b>	None ship standard
<b>Internal Storage</b>	12 1" hot plug hard drive bays standard
<b>Power Supplies</b>	Redundant 600W Hot Plug Power Supplies (1 + 1 redundancy)
<b>System Fan</b>	Redundant Hot Plug System Fans
<b>Drive Cages</b>	Two 6 x 1" Drive Cages standard
<b>Optical Drive</b>	40x or higher IDE CD-ROM Drive
<b>Diskette Drive</b>	1.44 MB Diskette Drive
<b>Form Factor</b>	Rack (7U)

### Models

<b>ML530R02 X2.80-512KB, 1024MB, 1P</b> 306488-001	<b>Processor</b>	One Intel Xeon 2.80 GHz Processor standard (up to 2 supported)
	<b>Processor System Bus</b>	400 MHz system bus
	<b>Processor Memory</b>	512-KB level 2 cache per processor
	<b>Memory</b>	1024 MB (Standard) 16,384 MB (Maximum) PC1600 Advanced ECC SDRAM; 2:1 interleaved memory <b>NOTE:</b> Maximum memory achieved using 2048 MB DIMMs.
	<b>Network Controller</b>	Embedded NC3163 Fast Ethernet NIC PCI 10/100 with WOL (Wake On LAN)
	<b>Storage Controller</b>	Integrated Dual Channel Wide Ultra3 SCSI Adapter
	<b>Hard Drive</b>	None ship standard
	<b>Internal Storage</b>	12 1" hot plug hard drive bays standard
	<b>Power Supplies</b>	One 600W Hot Plug Power Supply
	<b>System Fan</b>	Hot Plug System Fans
	<b>Drive Cages</b>	Two 6 x 1" Drive Cages standard
	<b>Optical Drive</b>	40x or higher IDE CD-ROM Drive
	<b>Diskette Drive</b>	1.44 MB Diskette Drive
	<b>Form Factor</b>	Rack (7U)

<b>ML530R02 X2.80-512KB, 1024MB, 2P</b> 306490-001	<b>Processor</b>	Two Intel Xeon 2.80 GHz Processor standard
	<b>Processor System Bus</b>	400 MHz system bus
	<b>Processor Memory</b>	512-KB level 2 cache per processor
	<b>Memory</b>	1024 MB (Standard) 16,384 MB (Maximum) PC1600 Advanced ECC SDRAM; 2:1 interleaved memory <b>NOTE:</b> Maximum memory achieved using 2048 MB DIMMs.
	<b>Network Controller</b>	Embedded NC3163 Fast Ethernet NIC PCI 10/100 with WOL (Wake On LAN)
	<b>Storage Controller</b>	Integrated Dual Channel Wide Ultra3 SCSI Adapter
	<b>Hard Drive</b>	None ship standard
	<b>Internal Storage</b>	12 1" hot plug hard drive bays standard
	<b>Power Supplies</b>	Redundant 600W Hot Plug Power Supplies (1 + 1 redundancy)
	<b>System Fan</b>	Redundant Hot Plug System Fans
	<b>Drive Cages</b>	Two 6 x 1" Drive Cages standard
	<b>Optical Drive</b>	40x or higher IDE CD-ROM Drive
	<b>Diskette Drive</b>	1.44 MB Diskette Drive
	<b>Form Factor</b>	Rack (7U)

### Models

<b>ML530R02 X2.40-512KB, 1024MB, 1P</b> 180286-001	<b>Processor</b>	One Intel Xeon 2.40 GHz Processor standard (up to 2 supported)
	<b>Processor System Bus</b>	400 MHz system bus
	<b>Processor Memory</b>	512-KB level 2 cache per processor
	<b>Memory</b>	1024 MB (Standard) 16,384 MB (Maximum) PC1600 Advanced ECC SDRAM; 2:1 interleaved memory <b>NOTE:</b> Maximum memory achieved using 2048 MB DIMMs.
	<b>Network Controller</b>	Embedded NC3163 Fast Ethernet NIC PCI 10/100 with WOL (Wake On LAN)
	<b>Storage Controller</b>	Integrated Dual Channel Wide Ultra3 SCSI Adapter
	<b>Hard Drive</b>	None ship standard
	<b>Internal Storage</b>	12 1" hot plug hard drive bays standard
	<b>Power Supplies</b>	One 600W Hot Plug Power Supply
	<b>System Fan</b>	Hot Plug System Fans
	<b>Drive Cages</b>	Two 6 x 1" Drive Cages standard
	<b>Optical Drive</b>	40x or higher IDE CD-ROM Drive
	<b>Diskette Drive</b>	1.44 MB Diskette Drive
	<b>Form Factor</b>	Rack (7U)

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<b>ML530R02 X2.40-512KB, 1024MB 2P</b> 226609-001	<b>Processor</b>	Two Intel Xeon 2.40 GHz Processors standard
	<b>Processor System Bus</b>	400 MHz system bus
	<b>Processor Memory</b>	512-KB level 2 cache per processor
	<b>Memory</b>	1024 MB (Standard) 16,384 MB (Maximum) PC1600 Advanced ECC SDRAM; 2:1 interleaved memory <b>NOTE:</b> Maximum memory achieved using 2048 MB DIMMs.
	<b>Network Controller</b>	Embedded NC3163 Fast Ethernet NIC PCI 10/100 with WOL (Wake On LAN)
	<b>Storage Controller</b>	Integrated Dual Channel Wide Ultra3 SCSI Adapter
	<b>Hard Drive</b>	None ship standard
	<b>Internal Storage</b>	12 1" hot plug hard drive bays standard
	<b>Power Supplies</b>	Redundant 600W Hot Plug Power Supplies (1 + 1 redundancy)
	<b>System Fan</b>	Redundant Hot Plug System Fans
	<b>Drive Cages</b>	Two 6 x 1" Drive Cages standard
	<b>Optical Drive</b>	40x or higher IDE CD-ROM Drive
	<b>Diskette Drive</b>	1.44 MB Diskette Drive
	<b>Form Factor</b>	Rack (7U)

### Options

<b>ProLiant ML530 G2 Unique Options</b>	Intel Xeon 3.0 GHz/512 KB Processor Option Kit	316898-B21	
	Intel Xeon 2.80 GHz/512 KB Processor Option Kit	306504-B21	
	Intel Xeon 2.40 GHz/512 KB Processor Option Kit	191224-B21	
<b>ProLiant Essentials Value Pack Software</b>	Rapid Deployment Pack, 1 User, V1.x <b>NOTE:</b> This license allows 1 server to be managed and deployed via the Deployment Server.	267196-B21	
	Rapid Deployment Pack, 10 Users, V1.x <b>NOTE:</b> This license allows 10 servers to be managed and deployed via the Deployment Server.	269817-B21	
	ProLiant Essentials Workload Management Pack 2.0 (Featuring Compaq Resource Partitioning Manager version 2.0)	303284-B21	
	Performance Management Pack, single server <b>NOTE:</b> This license allows 1 server to be managed by Performance Management Pack.	306696-B21	
	ProLiant Essentials Performance Management Pack, 10 Pack Server License	374055-B21	
	Performance Management Pack, flexible license kit <b>NOTE:</b> A single pack is shipped with a single license key for the total number of licenses ordered	306697-B21	
	ProLiant Essentials Intelligent Networking Pack, 1 License	372906-B21	
	ProLiant Essentials Intelligent Networking Pack Flex License	372950-B21	
	ProLiant Essentials Intelligent Networking Pack Track License <b>NOTE:</b> Flexible and volume quantity license kits are available for ProLiant Essentials Value Packs. Refer to <a href="http://www.hp.com/servers/proliantessentials">http://www.hp.com/servers/proliantessentials</a> or the various ProLiant Essentials Value Pack product QuickSpecs for more information. <b>NOTE:</b> For more information regarding ProLiant Essentials Software, please see the following URL: <a href="http://www.hp.com/servers/proliantessentials">http://www.hp.com/servers/proliantessentials</a> .	372951-B21	
	<b>Software</b>	HP digital asset protection	302316-001
	<b>Processor</b>	Intel Xeon 3.0 GHz/512 KB Processor Option Kit	316898-B21
		Intel Xeon 2.80 GHz/512 KB Processor Option Kit	306504-B21
Intel Xeon 2.40 GHz/512 KB Processor Option Kit		191224-B21	
<b>Memory</b> (DIMMs; 2:1 interleaved)	512MB PC1600 Registered ECC SDRAM Memory Kit (2 x 256 MB)	187418-B21	
	1024MB PC1600 Registered ECC SDRAM Memory Kit (2 x 512 MB)	187419-B21	
	2048MB PC1600 Registered ECC SDRAM Memory Kit (2 x 1024 MB)	187420-B21	
	4096MB PC1600 Registered ECC SDRAM Memory Kit (2 x 2048 MB)	187421-B21	
<b>Optical Drives</b>	16X DVD-ROM Drive Option Kit (Carbon) <b>NOTE:</b> This drive is supported in the CD-ROM bay and in the removable media bay.	217053-B21	
	CD-RW/DVD ROM Combo Drive Option Kit <b>NOTE:</b> This drive is supported in the CDROM bay and in the removable media bay.	331346-B21	
<b>Internal Storage</b>	ML5xx Two Bay Hot Plug SCSI Drive Cage <b>NOTE:</b> The drive cage option kit (PN 244058-B21) has one 1" drive bay and one 1.6" drive bay.	244058-B21	

### Options

#### Hard Drives

##### **Ultra320 SCSI – Universal Hot Plug**

300-GB 10,000 rpm U320 Universal Hard Drive (1")	350964-B22
146.8-GB 10,000 rpm U320 Universal Hard Drive (1")	286716-B22
72.8-GB 10,000 rpm U320 Universal Hard Drive (1")	286714-B22
36.4-GB 10,000 rpm U320 Universal Hard Drive (1")	286713-B22
72.8-GB 15,000 rpm U320 Universal Hard Drive (1")	286778-B22
36.4-GB 15,000 rpm U320 Universal Hard Drive (1")	286776-B22
18.2-GB 15,000 rpm U320 Universal Hard Drive (1")	286775-B22

**NOTE:** All U320 Universal Hard Drives are backward compatible to U2 or U3 speeds. U320 drives require an optional U320 Smart Array Controller or U320 SCSI HBA to support U320 transfer rates.

**NOTE:** Please see the Hard Drive QuickSpecs for Technical Specifications such as capacity, height, width, interface, transfer rate, seek time, physical configuration, and operating temperature: U320 Hard Drive QS:

[http://h18000.www1.hp.com/products/quickspecs/11531\\_na/11531\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/11531_na/11531_na.HTML)

#### Storage Controllers

Smart Array 6402/128 Controller	273915-B21
256MB DDR, Battery-Backed Cache Upgrade Kit for SA-6400	273913-B21
<b>NOTE:</b> This 256-MB Battery-Backed Cache upgrade kit supports the Smart Array 6400 series controller only.	
Smart Array 5304/256 Controller	283551-B21
Smart Array 6402/128 Controller	273915-B21
Smart Array 6404/256 Controller	273914-B21
Smart Array 641 Controller	291966-B21
Smart Array 642 Controller	291967-B21
128-MB Cache Module for Smart Array 5302 Controller	153506-B21
256-MB Battery-Back Cache Module	254786-B21
<b>NOTE:</b> This 256-MB Battery-Backed Cache Module supports the Smart Array 5300 series controllers, HP StorageWorks Modular Smart Array 1000 and the HP StorageWorks Modular Smart Array 500.	
64 MB Battery Backed Write Cache Enabler	291969-B21
<b>NOTE:</b> This 64 MB BBWC supports the Smart Array 641 Controller and Smart Array 642 Controller.	
128MB Battery-Backed Cache Enabler	351580-B21
<b>NOTE:</b> This 128MB BBWC supports the Smart Array 641 Controller and Smart Array 642 Controller.	
64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter	268351-B21
Ultra320 Expansion Module for SA-6402	273911-B21
64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS	284688-B21

**NOTE:** Please see the following Controller or SCSI Adapter QuickSpecs for Technical Specifications such as PCI Bus, PCI Peak Data Transfer Rate, SCSI Protocols supported, SCSI Peak Data Transfer Rate, Channels, SCSI Ports, Drives supported, Cache, RAID support, and additional information:

[http://h18000.www1.hp.com/products/quickspecs/11587\\_na/11587\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/11587_na/11587_na.HTML)  
(Smart Array 6400 Series)

[http://h18000.www1.hp.com/products/quickspecs/12067\\_na/12067\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/12067_na/12067_na.HTML)  
(Smart Array 641)

[http://h18000.www1.hp.com/products/quickspecs/12069\\_na/12069\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/12069_na/12069_na.HTML)  
(Smart Array 642)

[http://h18000.www1.hp.com/products/quickspecs/10429\\_na/10429\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/10429_na/10429_na.HTML)  
(SCSI Adapter)

[http://h18000.www1.hp.com/products/quickspecs/11555\\_na/11555\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/11555_na/11555_na.HTML)  
(U320 Adapter)

### Options

<b>Communications</b>	NC6170 Dual Port PCI-X 1000SX Gigabit Server Adapter	313879-B21
	HP NC6770 PCI-X Gigabit Server Adapter, 1000-SX	244949-B21
	NC7170 Dual Port PCI-X 1000T Gigabit Server Adapter	313881-B21
	NC7771 PCI-X Gigabit Server Adapter	290563-B21
<b>NOTE:</b> Any NC61XX, NC71XX or NC77XX NIC can be used for redundancy with the embedded NC7781 Network Controller.		
<b>Redundant Options</b>	Hot-plug Redundant Fan Kit	128284-B21
	<b>NOTE:</b> Included in 2P models.	
	Hot Plug Redundant Power Supply	236845-001
	<b>NOTE:</b> Included in 2P models.	
<b>Management Options</b>	Remote Insight Lights-Out Edition II	227251-001
<b>Security</b>	HP/Atalla AXL600L SSL Accelerator Card for ProLiant Servers	524545-B21
	Compaq AXL300 Accelerator PCI Card for ProLiant Servers	227933-B21

### Tape Drives

**NOTE:** In order to install certain tape drives internally, you may need to remove the rails that come standard on the drives and then re-insert the screws in the mounting holes. Mounting screws are shipped standard with server.

**NOTE:** External tape devices, including both tape drives and tape arrays/enclosures, can be directly connected to the VHDCI SCSI port located on the back of the server. Use of a SCSI adapter to connect these devices is optional, not required.

#### **Internal, External, and Rack-Mount Ultrium Tape Drives**

HP StorageWorks Ultrium 215 Tape Drive, External (Carbon)	Q1545A
HP StorageWorks Ultrium 215 rack-mount (Carbon) - Single drive installed in a 3U rack-mount kit	350544-B21
HP StorageWorks Ultrium 215 Array Module (Carbon) - Offline hot-swap drive for Tape Array 5300	C7492B
HP StorageWorks Ultrium 230 Tape Drive, Internal (Carbon)	Q1515A
HP StorageWorks Ultrium 230 Tape Drive, External (Carbon)	Q1517A
HP StorageWorks Ultrium 230, Rack-mount (Carbon) - Single drive installed in a 3U rack-mount kit	350545-B21
HP StorageWorks Ultrium 230 Array Module (Carbon) - Offline hot-swap drive for Tape Array 5300	C7470B
HP StorageWorks Ultrium 460 Tape Drive, Internal (Carbon)	Q1518A
HP StorageWorks Ultrium 460 Tape Drive, External (Carbon)	Q1520A
HP StorageWorks Ultrium 460, Rack-mount (Carbon) - Single drive installed in a 3U rack-mount kit	350546-B21
HP StorageWorks Ultrium 460 Array Module (Carbon) - Offline hot-swap drive for Tape Array 5300	Q1512B
Fan Option - Internal Cooling Fan Kit	344257-B21

**NOTE:** Needs to be ordered when purchasing an internal Ultrium 230 drive that will be installed inside of an ML 530 G1/G2 or ML 570 G1/G2. Kit includes fan and instructions to install fan inside of server in drive bay.

**NOTE:** Please see the HP StorageWorks Ultrium 215, 230, and 460 Tape Drive QuickSpecs for additional options such as controllers, media, and other related items:

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

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>

#### **Internal, External, Hot-Plug, and Rack-Mount DAT Drives**

HP StorageWorks DAT 72 Tape Drive, External (Carbon)	Q1523A
HP StorageWorks DAT 72 Tape Drive, Internal (Carbon)	Q1522A
HP StorageWorks DAT 72 Tape Drive, Internal Hot-Plug (Carbon)	Q1529A

### Options

HP StorageWorks DAT 72 Array Module (Carbon) - Offline hot-swap drive for Tape Array 5300	Q1524B
HP StorageWorks DAT 40 Tape Drive, External (Carbon)	C5687C
HP StorageWorks DAT 40 Tape Drive, Internal (Carbon)	C5686B
HP StorageWorks DAT 40 Tape Drive, Internal Hot-Plug (Carbon)	Q1546A
HP StorageWorks DAT 40 Array Module (Carbon) - Offline hot-swap drive for Tape Array 5300	C7497B
HP StorageWorks DAT 24 Tape Drive, External (Flint)	C1556D
HP StorageWorks DAT 24 Tape Drive, Internal (Flint)	C1555D
HP StorageWorks DAT 24 Array Module (Carbon) - Offline hot-swap drive for Tape Array 5300	C7498A

**NOTE:** Please see the DAT Tape Drive QuickSpecs for controllers, media, and other options:

[http://h18000.www1.hp.com/products/quickspecs/11883\\_na/11883\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/11883_na/11883_na.HTML)

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

#### **Internal and External DLT VS Tape Drives**

HP StorageWorks DLT VS80 Tape Drive, Internal (Carbon)	337699-B21
HP StorageWorks DLT VS80 Tape Drive, External (Carbon)	337699-B22

**NOTE:** Please see the DLT VS80 Tape Drive QuickSpecs for additional options such as host bus adapters, controllers, media, and other options:

[http://h18006.www1.hp.com/products/quickspecs/11403\\_na/11403\\_na.HTML](http://h18006.www1.hp.com/products/quickspecs/11403_na/11403_na.HTML)

For an up-to-date listing of the latest O/S and software support details for the DLT VS80, please visit: <http://www.hp.com/go/connect>

#### **Internal, External and Rack-mount SDLT Tape Drives**

HP StorageWorks SDLT 320 Tape Drive, Internal (Carbon)	257319-B21
HP StorageWorks SDLT 320 Tape Drive, External (Carbon)	257319-001
Fan Option - Internal Cooling Fan Kit	344257-B21

**NOTE:** Needs to be ordered when purchasing an internal SDLT 320 drive that will be installed inside of an ML530 G1/G2 or ML570 G1/G2. Kit includes fan and instructions to install fan inside of server in drive bay.

**NOTE:** Please see the SDLT 320 Tape Drive QuickSpecs for additional options such as adapters, controllers, and media.

[http://h18006.www1.hp.com/products/quickspecs/11840\\_na/11840\\_na.HTML](http://h18006.www1.hp.com/products/quickspecs/11840_na/11840_na.HTML)

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

#### **Rack-Mount Tape Drive Enclosures**

HP StorageWorks 3U Rack-Mount Kit	274338-B21
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**NOTE:** The 3U Rack-Mount Kit can support up to 2 full-height or 4 half-height tape drives and compatible with multiple Single-Ended and LVD SCSI tape drives including DAT, DLT VS80, SDLT 320, Ultrium 215, Ultrium 230, and Ultrium 460 Tape Drives.

HP StorageWorks 5U Rack-Mount Kit	274339-B21
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**NOTE:** The 5U Rack-Mount Kit can support up to 4 full-height tape drives and is compatible with SDLT 320, Ultrium 230, and Ultrium 460 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\\_na/10854\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/10854_na/10854_na.HTML)

HP StorageWorks Tape Array 5300	C7508A
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**NOTE:** The Tape Array 5300 is a 3U enclosure that supports up to 2 full-height or 4 half-height hot-swap array modules, including DAT and Ultrium tape drives. Cables and terminators are not included and must be ordered separately.

**NOTE:** Please see the Tape Array 5300 QuickSpecs for additional information regarding this product.

[http://h18000.www1.hp.com/products/quickspecs/11878\\_na/11878\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/11878_na/11878_na.HTML)

#### **Accessories for 3U & 5U Rack-mount Tape Drive Kits**

LVD Cable Kit, VHDCI/HD68	168048-B21
<b>NOTE:</b> For use with the 3U Rack-mount Kit and 5U Rack-mount Kit only.	
LVD Cable Kit, HD68/HD68	242381-B21

### Options

**NOTE:** For use with the 3U Rack-mount Kit and 5U Rack-mount Kit only.

#### Accessories for 3U & 5U Rack-mount Tape Drive Kits

*PSU/Fan Upgrade Kit - Redundant hot-swap power supply unit and fan for Tape Array 5300.*

68-pin HD multi-mode terminator	C2364A
1.0m 68-pin VHDCI to 68-pin HD cable	C2361B
2.5m 68-pin VHDCI to 68-pin HD cable	C2362B
5.0m 68-pin VHDCI to 68-pin HD cable	C2365A
10.0m 68-pin VHDCI to 68-pin HD cable	C2363B
0.5m 68-pin HDI to 68-pin HD cable LVD/SE	C2978B
1.5m 68-pin HDI to 68-pin HD cable LVD/SE	C2979B
0.9m 68-pin HDI to 68-pin HD cable LVD/SE	C2911C
2.5m 68-pin HDI to 68-pin HD cable LVD/SE	C2924C

**NOTE:** For use with Tape Array 5300 only

#### Tape Autoloaders

##### **DAT Autoloader**

HP StorageWorks DAT 72x6 Internal Autoloader	Q1566A
HP StorageWorks DAT 72x6 External Autoloader	Q1567A

**NOTE:** Please see the DAT Tape Autoloader QuickSpecs for additional options such as host bus adapters, controllers and media:

[http://h18000.www1.hp.com/products/quickspecs/11985\\_na/11985\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/11985_na/11985_na.HTML)

HP StorageWorks DAT 40x6 Tape Autoloader, Internal (Flint)	C5716A
HP StorageWorks DAT 40x6 Tape Autoloader, External (Flint)	C5717C

**NOTE:** Please see the DAT Tape Autoloader QuickSpecs for additional options such as host bus adapters, controllers and media:

[http://h18000.www1.hp.com/products/quickspecs/11985\\_na/11985\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/11985_na/11985_na.HTML)

##### **HP StorageWorks 1/8 Tape Autoloader**

1/8 Ultrium 460 Tape Autoloader, Tabletop	AA927A
1/8 SDLT 320 Tape Autoloader, Tabletop	AA926A
1/8 Ultrium 230 Tape Autoloader, Tabletop	C9572CB
1/8 DLT VS80 Tape Autoloader, Tabletop	C9264CB
1/8 Tape Autoloader Rackmount Kit	C9268R

**NOTE:** Required to install the 1/8 tape autoloader in a standard 19-inch rack

**NOTE:** Please reference the 1/8 Tape Autoloader QuickSpecs at [www.hp.com/go/automation](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>

##### **HP StorageWorks SSL1016 Tape Autoloader**

SSL1016 Ultrium 460 Tape Autoloader	330821-B21
SSL1016 SDLT 320 Tape Autoloader	330816-B21

**NOTE:** Please reference the SSL1016 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 MSL6000 Tape Library**

MSL6030, 1 drive, 30 slots, Ultrium 460, RM	330731-B22
MSL6030, 2 drive, 30 slots, Ultrium 460, RM	330731-B23
MSL6030, 1 drive, 30 slots, Ultrium 460, RM with embedded FC router	330731-B24
MSL6030, 2 drive, 30 slots, Ultrium 460, RM with embedded FC router	330731-B25

### Options

MSL6030, 1 drive, 30 slots, Ultrium 460, TT	330788-B21
MSL6030, 2 drive, 30 slots, Ultrium 460, TT	330788-B22
MSL6060, 2 drive, 60 slot, Ultrium 460, RM	331196-B21
MSL6060, 2 drive, 60 slot, Ultrium 460, RM with embedded FC router	331196-B22
MSL6060, 2 drive, 60 slot, Ultrium 460, TT	331195-B21

**NOTE:** Please reference the 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>

#### **HP StorageWorks MSL5026S2 Tape Library**

MSL5026S2, 1 drive, 26 slots, SDLT 320, RM	293472-B22
MSL5026S2, 2 drive, 26 slots, SDLT 320, RM	293472-B23
MSL5026S2, 1 drive, 26 slots, SDLT 320, RM with embedded FC router	293472-B24
MSL5026S2, 2 drive, 26 slots, SDLT 320, RM with embedded FC router	293472-B25
MSL5026S2, 1 drive, 26 slots, SDLT 320, TT	293473-B21
MSL5026S2, 2 drive, 26 slots, SDLT 320, TT	293473-B22

**NOTE:** Please reference the MSL5026S2 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>

#### **HP StorageWorks MSL5052S2 Tape Library**

MSL5052S2, 2 drive, 52 slots, SDLT 320, RM	293474-B21
MSL5052S2, 2 drive, 52 slots, SDLT 320, RM with embedded FC router	293474-B24
MSL5052S2, 2 drive, 52 slots, SDLT 320, TT	293476-B21

**NOTE:** Please reference the MSL5052S2 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>

#### **HP StorageWorks MSL5030 Tape Library**

MSL5030, 1 drive, 30 slots, Ultrium 230, RM	301897-B22
MSL5030, 2 drive, 30 slots, Ultrium 230, RM	301897-B23
MSL5030, 1 drive, 30 slots, Ultrium 230, RM with embedded FC router	301897-B24
MSL5030, 2 drive, 30 slots, Ultrium 230, RM with embedded FC router	301897-B25
MSL5030, 1 drive, 30 slots, Ultrium 230, TT	301898-B21
MSL5030, 2 drive, 30 slots, Ultrium 230, TT	301898-B22

**NOTE:** Please reference the MSL5030 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>

#### **HP StorageWorks MSL5060 Tape Library**

MSL5060, 2 drive, 60 slots, Ultrium 230, RM	301899-B22
MSL5060, 2 drive, 60 slots, Ultrium 230, RM with embedded FC router	301899-B23
MSL5060, 2 drive, 60 slots, Ultrium 230, TT	301900-B21

**NOTE:** Please reference the MSL5060 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

<b>HP StorageWorks ESL E-Series Tape Libraries</b>	AA934A
ESL Extended 712e Tape Library, 0 drive, 712 LTO slots	AA935A
ESL Extended 630e Tape Library, 0 drive, 630 SDLT slots	AA937A
ESL E Ultrium 460 drive kit	AA936A
ESL E SDLT 320 drive kit	

**NOTE:** Please reference the ESL E-Series Tape Libraries 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>

<b>HP StorageWorks ESL9000 Series Tape Libraries</b>	
ESL9595 Extended Tape Library, 0 drive, 400 slots (card cage, Interface Mgr card, Command View license)	343378-B21
ESL9322 Extended Tape Library, 0 drive, 222 slots (card cage, Interface Mgr card, Command View license)	343377-B21
ESL9000 Ultrium 460 drive kit	330834-B21
ESL9000 Ultrium 230 drive kit	301930-B21
ESL9000 SDLT 320 drive kit	293414-B21

**NOTE:** Please reference the ESL9000 Series Tape Libraries 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>

### Magneto-Optical Jukeboxes

<b>HP StorageWorks 9.1 GB Entry-level Optical Storage</b>	
220mx, 1 drive, 24 slot jukebox	C1118M
220mx, 2 drive, 24 slot jukebox	C1119M

**NOTE:** Please reference the Magneto-Optical Jukebox data sheets at <http://www.hp.com/go/optical> for additional information needed to create a complete solution

<b>HP StorageWorks 9.1 GB Mid-range Optical Jukeboxes</b>	
300mx, 2 drive, 32 slot jukebox	C1150M
600mx, 4 drive, 64 slot jukebox	C1160M
700mx, 2 drive, 76 slot jukebox	C1170M

**NOTE:** Please reference the Magneto-Optical Jukebox data sheets at <http://www.hp.com/go/optical> for additional information needed to create a complete solution

<b>HP StorageWorks 9.1 GB High-end Optical Jukeboxes</b>	
1200mx, 4 drive, up to 128 slots	C1104M
1200mx, 6 drive, up to 128 slots	C1105M
2200mx, 4 drive, up to 238 slots	C1111M
2200mx, 6 drive, up to 238 slots	C1107M
2200mx, 10 drive, up to 238 slots	C1110M

**NOTE:** Please reference the Magneto-Optical Jukebox data sheets at <http://www.hp.com/go/optical> for additional information needed to create a complete solution

### Options

External Storage – Tower & Rack	HP StorageWorks Modular Smart Array 20	335921-B21
	<b>NOTE:</b> Rack-mountable 12 (SATA) drive enclosure with U320 Host connectivity, redundant power supplies.	
	HP StorageWorks Modular Smart Array 20 Starter Kit	366172-B21
	<b>NOTE:</b> Rack-mountable 12 (SATA) drive enclosure with U320 Host connectivity, redundant power supplies. Includes Smart Array 6402/128 Controller.	
	<b>NOTE:</b> The Modular Smart Array Enclosure 20 Family supports the SATA 1.5Gb/s 1" Hot Plug Hard Drives.	
	HP StorageWorks Modular Smart Array 30 SB	302969-B21
	<b>NOTE:</b> Rack-mountable 14 drive enclosure with single bus , redundant power supplies	
HP StorageWorks Modular Smart Array 30 DB	HP StorageWorks Modular Smart Array 30 DB	302970-B21
	<b>NOTE:</b> Rack-mountable 14 drive enclosure with single bus , redundant power supplies	
	<b>NOTE:</b> The Modular Smart Array Enclosure 30 Family support the Wide Ultra3, Ultra320 1" Hot Plug Hard Drives.	
	Redundant Power Supply 499W	338296-B21
	StorageWorks Single Bus U320 I/O Module	287484-B21
	StorageWorks Dual Bus U320 I/O Module	287483-B21
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HP StorageWorks Modular Smart Array 1500	Modular Smart Array 1500 Controller Shelf	AA986A
	<b>NOTE:</b> Please see the StorageWorks Modular SAN Array 1500 QuickSpecs for additional options and configuration information at: <a href="http://www.hp.com/go/MSA1500cs">http://www.hp.com/go/MSA1500cs</a>	
<hr/>		
HP StorageWorks Modular Smart Array 1000	HP StorageWorks Modular Smart Array 1000	201723-B22
	<b>NOTE:</b> Please see the Modular Smart Array 1000 QuickSpecs for additional options and configuration information at <a href="http://h18000.www1.hp.com/products/quickspecs/11033_na/11033_na.HTML">http://h18000.www1.hp.com/products/quickspecs/11033_na/11033_na.HTML</a>	
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StorageWorks Options	StorageWorks SAN Switch 2/8-EL	322120-B21
	StorageWorks SAN Switch 2/16	322118-B21
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UPS Power Cord Matrix	<b>Please see the UPS Power Cord Matrix for cable descriptions, requirements, and specifications for UPS units:</b> <a href="ftp://ftp.compaq.com/pub/products/servers/proliantstorage/power-protection/powercordmatrix.pdf">ftp://ftp.compaq.com/pub/products/servers/proliantstorage/power-protection/powercordmatrix.pdf</a> .	
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Uninterruptible Power Systems – Tower Supply	HP UPS T1000 XR (1000 VA, 700 Watts), Low Voltage	204155-001
	HP UPS T1500 XR (1440 VA, 1050 Watts)	204155-002
	HP UPS T2200 XR (1920 VA, 1600 Watts) Low Voltage	204451-001
	HP UPS T2200 XR (2200 VA, 1600 Watts) High Voltage	204451-002
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Uninterruptible Power Systems – Rack	HP UPS R1500 XR (100 to 127)	204404-001
	HP UPS R3000 XR (120V)	192186-001
	HP UPS R3000 XR (208V)	192186-002
	Rack-Mountable UPS R6000 (208V)	347207-001
	UPS R12000 XR N+ x (200-240V) (hardwired)	207552-B22
	<b>NOTE:</b> UPS R6000 has a hardwired input; and the UPS R12000 XR has a hardwired input and output connection.	

### Options

<b>Modular PDUs 1U/0U</b> (Up to 32 outlets)	HP Modular Power Distribution Units (mPDU), Low Volt Model, 24A (100-127 VAC)	252663-D71
	<b>NOTE:</b> The above mPDU may also be used to connect to the low volt model of the UPS R3000 XR.	
	HP Modular Power Distribution Units (mPDU), High Volt Model, 24A (200-240 VAC)	252663-D72
	<b>NOTE:</b> L6-30 input.	
	HP Modular Power Distribution Units (mPDU), High Volt Model, 40A (200-240 VAC)	252663-B21
	<b>NOTE:</b> The 40A model has a hardwired input.	
	HP Modular Power Distribution Units (mPDU), High Volt Model, 16A (200-240 VAC)	252663-B24
	<b>NOTE:</b> This PDU has a detachable input power cord and allows for adaptability to country specific power requirements. This model may also be used with the high volt UPSs R3000 XR and R6000. Cable P/N 340653-001 required if connecting to UPS R3000 XR (192186-002 -High Volt model only).	
	<b>NOTE:</b> 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: <a href="http://h18000.www1.hp.com/products/quickspecs/11041_na/11041_na.HTML">http://h18000.www1.hp.com/products/quickspecs/11041_na/11041_na.HTML</a>	
<b>USB Options</b>	USB Easy Access Keyboard (Carbonite/Silver)	DC168B#ABA
	USB 2-Button Optical Scroll Mouse (Carbonite/Silver)	DC172B
	USB 1.44-MB External Diskette Drive (Carbonite)	DC141B
<b>Custom Builder</b>	Please see the Enterprise Configurator for configuration assistance at: <a href="http://www.hp.com/products/configurator">http://www.hp.com/products/configurator</a>	
<b>Rack Conversion Kit</b>	ProLiant ML5xx G2 Tower to Rack Conversion Kit	253699-B21
	ProLiant ML5xx G2 Rack to Tower Conversion Kit	271258-B21
<b>HP Rack 10000 Series</b> (Graphite Metallic)	HP Rack S10614 (14U) Rack Cabinet - Shock Pallet	292302-B22
	HP Rack 10842 (42U, 800mm wide) – Pallet	257415-B21
	HP Rack 10842 (42U, 800mm wide) – Shock Pallet	257415-B22
	HP Rack 10647 (47U) – Pallet	245160-B21
	HP Rack 10647 (47U) – Crated	245160-B23
	HP Rack 10642 (42U) – Pallet	245161-B21
	HP Rack 10642 (42U) – Shock Pallet	245161-B22
	HP Rack 10642 (42U) – Crated	245161-B23
	HP Rack 10636 (36U) – Pallet	245162-B21
	HP Rack 10636 (36U) – Shock Pallet	245162-B22
	HP Rack 10636 (36U) – Crated	245162-B23
	HP Rack 10622 (22U) – Pallet	245163-B21
	HP Rack 10622 (22U) – Shock Pallet	245163-B22
	HP Rack 10622 (22U) – Crated	245163-B23
		<b>NOTE:</b> -B21 (pallet) used to ship empty racks shipped on a truck -B22 (shock pallet) used to ship racks with equipment installed (by custom systems, VARs and Channels) -B23 (crated) used for air shipments of empty racks
	<b>NOTE:</b> Please see the Rack 10000 QuickSpecs for Technical Specifications such as height, width, depth, weight, and color: <a href="http://h18000.www1.hp.com/products/quickspecs/10995_na/10995_na.HTML">http://h18000.www1.hp.com/products/quickspecs/10995_na/10995_na.HTML</a>	
	<b>NOTE:</b> For additional information regarding Rack Cabinets, please see the following URL: <a href="http://h18000.www1.hp.com/products/servers/proliantstorage/racks/index.html">http://h18000.www1.hp.com/products/servers/proliantstorage/racks/index.html</a>	

### Options

<b>Rack Options for HP Rack 10000 Series</b>	HP Rack Light Kit (Neon)	361589-B21	
	HP Rack Plinth Kit (Carbon)	251960-B21	
	42U Side Panel – Graphite Metallic	246099-B21	
	36U Side Panel – Graphite Metallic	246102-B21	
	47U Side Panel – Graphite Metallic	255486-B21	
	<b>NOTE:</b> For additional information regarding Rack Options, please see the following URL: <a href="http://h18000.www1.hp.com/products/servers/proliantstorage/rack-options/index.html">http://h18000.www1.hp.com/products/servers/proliantstorage/rack-options/index.html</a> .		
	KVM USB Interface Adapter	336047-B21	
	Server Console Switch 1 x 4 port (100-230 VAC)	400336-001	
	Server Console Switch, 0 x 1 x 8 port	336044-B21	
	Server Console Switch, 0 x 2 x 16 port	336045-B21	
	IP Console Switch Box, 1 x 1 x 16	262585-B21	
	IP Console Switch Box, 3 x 1 x 16	262586-B21	
	IP Console Interface Adapter, 8 pack	262587-B21	
	IP Console Interface Adapter, 1 pack	262588-B21	
	IP Console Expansion Module	262589-B21	
	CPU to Server Console Cable, 12'	110936-B21	
	CPU to Server Console Cable, 3'	110936-B24	
	CPU to Server Console Cable, 7'	110936-B25	
	IP CAT5 Cable 3', 4 pack	263474-B21	
	IP CAT5 Cable 6', 8 pack	263474-B22	
IP CAT5 Cable 12', 8 pack	263474-B23		
IP CAT5 Cable 20', 4 pack	263474-B24		
IP CAT5 Cable 40', 1 pack	263474-B25		
TFT5600 Rack Keyboard Monitor	221546-001		
1U Rack Keyboard & Drawer (Carbon)	257054-001		
<b>NOTE:</b> For additional information regarding Rack Options, please see the following URL: <a href="http://h18000.www1.hp.com/products/servers/proliantstorage/rack-options/index.html">http://h18000.www1.hp.com/products/servers/proliantstorage/rack-options/index.html</a> .			
<b>Rack Options for Third Party Cabinet Racks</b>	Rack Adapter Kit	332815-B21	
	<b>NOTE:</b> This kit allows HP rack servers to fit in racks that are 24" wide.		
	Third Party Rack Kit	274739-B21	
<b>NOTE:</b> The Third party rack kit is required for round hole racks or for square hole racks that do not conform to the adjustment range of the standard rail that ships with the server.			

### Options

#### HP Factory Express

#### Factory Installation, Racking, and Customization Services

Factory Express Server Configuration Level 1 293355-888

**NOTE:** Free Installation of HP Options - Installation of HP Options memory, NICs, hard drives, controllers, processors, I/O cards, pre-install standard OEM OS image, and tape drives. Installation fees will apply to all non-HP certified hardware and asset tags.

Factory Express Server Configuration Level 2 266326-888

**NOTE:** Includes Level 1 Customer Intent of a ProLiant server and options configuration, OS installation, custom image download, IP addressing, network setting, and custom packaging. Customer unique requirements (quick restore creation, cd duplication, test reports, real-time reporting of server MAC address, password, and RILOE). Customer access, validation and control through VPN (price/server).

Factory Express Rack Integration Level 3 with 1 – 3 servers or storage enclosures 325736-888

Factory Express Rack Integration Level 3 with 4 – 9 servers or storage enclosures 232539-888

Factory Express Rack Integration Level 3 with 10 or more servers or storage enclosures 325735-888

**NOTE:** Includes Level 1 Customer Intent for standard mounted servers and storage units plus standard cable mgmt, RAID configuration, servers & storage, power distribution, networking gear and accessories (price/rack).

**NOTE:** Available on ProLiant rack models only.

Factory Express Rack Integration Level 4 with 1 – 3 servers or storage enclosures 325734-888

Factory Express Rack Integration Level 4 with 4 – 9 servers or storage enclosures 232540-888

Factory Express Rack Integration Level 4 with 10 or more servers or storage enclosures 325733-888

**NOTE:** Includes Level 2 Customer Intent plus customer defined cable management and naming convention, customer furnished image download, IP addressing, cluster configurations (SQL, External storage RAID). Quick restore creation, cd duplication, test reports, real-time reporting of server MAC address, password, RILOE). Customer access and validation through VPN (price/rack).

**NOTE:** Available on ProLiant rack models only.

Factory Express Rack Integration Level 5 with 1 – 3 servers or storage enclosures 325732-888

Factory Express Rack Integration Level 5 with 4 – 9 servers or storage enclosures 232541-888

Factory Express Rack Integration Level 5 with 10 or more servers or storage enclosures 325731-888

**NOTE:** Includes Level 4 Customer Intent plus Custom SW layering and extended test, Customer access, validation and control through VPN, Clustered racks with networking gear and / or external storage array, Start-up installation services custom quote. (price/rack).

**NOTE:** Available on ProLiant rack models only.

**NOTE:** Factory Express Engineered Solution Level 6 is a custom solutions available through Factory Express. Please contact your local reseller or Account Manager.

#### Service and Support Offerings (HP Care Pack Services)

#### Hardware Services 4-Hour On-site Service

4-Hour On-site Service, 9-Hour x 5-Day Coverage, 3 Years (2-5-2 Part Number for Canada) FP-MI4HR-36

4-Hour On-site Service, 9-Hour x 5-Day Coverage, 3 Years (6-3 Part Number for US) 401783-002

4-Hour On-site Service, 24 Hour x 7 Day Coverage, 3 Years (6-3 Part Number for US) 401782-002

4-Hour On-site Service, 24 Hour x 7 Day Coverage, 3 Years (2-5-2 for Canada) FP-MI724-36

### Options

#### **Installation & Start-up Services**

<i>Hardware Installation (2-5-2 Part Number for Canada)</i>	FP-MIINS-IN
Hardware Installation (6-3 Part Number for US)	401793-002
Pre-installation planning; unpack equipment, install most current Compaq HW options internal to server at same time of server installation; assemble & test; basic user information provided; Install & configure basic functionality of Win NT Operating System plus up to 1 day start-up activity, configure print & network access services, and orientation (2-5-2 Part Number for Canada.)	FM-MSTEC-03
Pre-installation planning; unpack equipment, install most current Compaq HW options internal to server at same time of server installation; assemble & test; basic user information provided; Install & configure basic functionality of Win NT Operating System plus up to 1 day start-up activity, configure print & network access services, and orientation (6-3 Part Number for U.S.)	240015-002
Pre-installation planning; unpack equipment, install most current Compaq HW options internal to server at same time of server installation; assemble & test; basic user information provided; Install & configure basic functionality of Novell NetWare Operating System plus up to 1 day start-up activity, configure print & network access services, and orientation (2-5-2 Part Number for Canada)	FM-NSTEC-03
Pre-installation planning; unpack equipment, install most current Compaq HW options internal to server at same time of server installation; assemble & test; basic user information provided; Install & configure basic functionality of Novell NetWare Operating System plus up to 1 day start-up activity, configure print & network access services, and orientation (6-3 Part Number for U.S.)	240010-002

#### **HP Care Pack Priority Services for ProLiant Servers – Priority Level**

9 x 5 HW, 4-hr response, Next Available HW engineer; 9 x 5 Bronze Software Support 2-hr response for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System, Next Available Specialist (2-5-2 Part Number for Canada)	FM-M01E3-36
9 x 5 HW, 4-hr response, Next Available HW engineer; 9 x 5 Bronze Software Support 2-hr response for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System, Next Available Specialist (6-3 Part Number for U.S.)	239936-002
9 x 5 HW, 4-hr response, Next Available HW engineer; 9 x 5 Bronze Software Support 2-hr response for Novell NetWare Operating System, Next Available Specialist (2-5-2 Part Number for Canada)	FM-N01E3-36
9 x 5 HW, 4-hr response, Next Available HW engineer; 9 x 5 Bronze Software Support 2-hr response for Novell NetWare Operating System, Next Available Specialist (6-3 Part Number for U.S.)	239976-002

#### **HP Care Pack Priority Services for ProLiant Servers – Priority 24 Level**

24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Bronze Software Support, 2-hr response for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System, Next Available Specialist (6-3 Part Number for U.S.)	239938-002
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Bronze Software Support, 2-hr response for Novell NetWare Operating System, Next Available Specialist (6-3 Part Number for U.S.)	239978-002

#### **HP Care Pack Priority Services for ProLiant Servers - Priority Silver**

24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Silver Software Support, 1-hr response, Monday – Friday, 8AM – 5PM local time, 2-hr response after hours for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System, Technical Account Manager, Technical Newsletter, SW activity review (2-5-2 Part Number for Canada)	FM-M04E3-36
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Silver Software Support, 1-hr response, Monday – Friday, 8AM – 5PM local time, 2-hr response after hours for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System, Technical Account Manager, Technical Newsletter, SW activity review (6-3 Part Number for U.S.)	239940-002
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Silver Subsequent System Support for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System (6-3 Part Number for U.S.)	239942-002
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Silver Subsequent System Support for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System (2-5-2 Part Number for Canada)	FM-M24E3-36
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Silver Software Support, 1-hr response, Monday – Friday, 8AM – 5PM local time, 2-hr response after hours for Novell NetWare Operating System, Technical Account Manager, Technical Newsletter, SW activity review (2-5-2 Part Number for Canada)	FM-N04E3-36

### Options

24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Silver Software Support, 1-hr response, Monday – Friday, 8AM – 5PM local time, 2-hr response after hours for Novell NetWare Operating System, Technical Account Manager, Technical Newsletter, SW activity review (6-3 Part Number for U.S.)	239980-002
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Silver Subsequent System Support for Novell NetWare Operating System (2-5-2 Part Number for Canada.)	FM-N24E3-36
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Silver Subsequent System Support for Novell NetWare Operating System (6-3 Part Number for U.S.)	239982-002
<b>HP Care Pack Priority Services for ProLiant Servers – Priority Gold</b>	
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Gold Software Support, 30 minute response (critical), 1-hr response (non-critical), for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System, Technical Account Manager, Technical Newsletter, SW activity review, proactive revision management, Upgrade impact planning, 2 System Healthcheck per year (2-5-2 Part Number for Canada)	FM-M08E3-36
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Gold Software Support, 30 minute response (critical), 1-hr response (non-critical), for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System, Technical Account Manager, Technical Newsletter, SW activity review, proactive revision management, Upgrade impact planning, 2 System Healthcheck per year (6-3 Part Number for U.S.)	239944-002
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Gold Subsequent System Support for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System (2-5-2 Part Number for Canada)	FM-M28E3-36
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Gold Subsequent System Support for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System (6-3 Part Number for U.S.)	239946-002
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Gold Software Support, 30 minute response (critical), 1-hr response (non-critical), for Novell NetWare Operating System, Technical Account Manager, Technical Newsletter, SW activity review, Upgrade impact planning (2-5-2 Part Number for Canada)	FM-N08E3-36
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Gold Software Support, 30 minute response (critical), 1-hr response (non-critical), for Novell NetWare Operating System, Technical Account Manager, Technical Newsletter, SW activity review, Upgrade impact planning (6-3 Part Number for U.S.)	239984-002
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Gold Subsequent System Support for Novell NetWare Operating System (2-5-2 Part Number for Canada)	FM-N28E3-36
24 x 7 HW, 4-hr response, Named HW engineer; 24 x 7 Gold Subsequent System Support for Novell NetWare Operating System (6-3 Part Number for U.S.)	239986-002
24 x 7 HW, 2-hr response, Named HW engineer; 24 x 7 Gold Software Support, 30 minute response (critical), 1-hr response (non-critical), for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System, Technical Account Manager, Technical Newsletter, SW activity review, proactive revision management, Upgrade impact planning, 2 System Healthcheck per year (2-5-2 Part Number for Canada)	FM-M09E3-36
24 x 7 HW, 2-hr response, Named HW engineer; 24 x 7 Gold Software Support, 30 minute response (critical), 1-hr response (non-critical), for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System, Technical Account Manager, Technical Newsletter, SW activity review, proactive revision management, Upgrade impact planning, 2 System Healthcheck per year (6-3 Part Number for U.S.)	239948-002
24 x 7 HW, 2-hr response, Named HW engineer; 24 x 7 Gold Subsequent System Support for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System (2-5-2 Part Number for Canada)	FM-M29E3-36
24 x 7 HW, 2-hr response, Named HW engineer; 24 x 7 Gold Subsequent System Support for Windows NT, Windows 2000, Professional, Server or Advanced Server Operating System (6-3 Part Number for U.S.)	239950-002
24 x 7 HW, 2-hr response, Named HW engineer; 24 x 7 Gold Software Support, 30 minute response (critical), 1-hr response (non-critical), for Novell NetWare Operating System, Technical Account Manager, Technical Newsletter, SW activity review, Upgrade impact planning (2-5-2 Part Number for Canada.)	FM-N09E3-36

### Options

24 x 7 HW, 2-hr response, Named HW engineer; 24 x 7 Gold Software Support, 30 minute response (critical), 1-hr response (non-critical), for Novell NetWare Operating System, Technical Account Manager, Technical Newsletter, SW activity review, Upgrade impact planning (6-3 Part Number for U.S.)	239988-002
24 x 7 HW, 2-hr response, Named HW engineer; 24 x 7 Gold Subsequent System Support for Novell NetWare Operating System (2-5-2 Part Number for Canada)	FM-N29E3-36
24 x 7 HW, 2-hr response, Named HW engineer; 24 x 7 Gold Subsequent System Support for Novell NetWare Operating System (6-3 Part Number for U.S.)	239990-002

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

### Memory

#### HP ProLiant ML530 Generation 2 (G2)

##### Advanced ECC Memory Standard

1024 MB (2 x 512-MB) PC1600- ECC SDRAM installed

##### Advanced ECC Memory Standard Plus Optional Memory

Up to 13,312-MB memory is available with the optional installation of PC1600- ECC SDRAM memory kits

##### Advanced ECC Memory Standard Replaced with Optional Memory

Up to 16,384-MB of memory is available with the removal of the standard 1024-MB of memory and the optional installation of PC1600-MHz ECC SDRAM memory kits.

**NOTE:** This chart does not represent all possible memory configurations.

		Bank A		Bank B		Bank C		Bank D	
		Slot 1	Slot 2	Slot 3	Slot 4	Slot 5	Slot 6	Slot 7	Slot 8
Standard	1024 MB	512 MB	512 MB	Empty	Empty	Empty	Empty	Empty	Empty
Optional	13,312 MB	512 MB	512 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB
Maximum	16,384 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB

#### Optional Compaq Advanced Memory Protection Configurations

##### NOTE:

-Online Spare Memory: Bank D is the Online Spare Bank.

-Mirrored Memory: Bank C mirrors Bank A, Bank D mirrors Bank B.

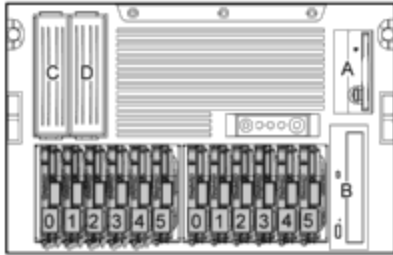
**NOTE:** This chart does not represent all possible memory configurations.

		Bank A		Bank B		Bank C		Bank D	
		Slot 1	Slot 2	Slot 3	Slot 4	Slot 5	Slot 6	Slot 7	Slot 8
Online	2560 MB	512 MB	512 MB	256 MB	256 MB	Empty	Empty	512 MB	512 MB
Mirrored	3072 MB	512 MB	512 MB	256 MB	256 MB	512 MB	512 MB	256 MB	256 MB

Following are memory options available from HP:

- 512-MB PC1600-MHz Registered ECC SDRAM Memory Option Kit (2 x 256 MB) 187418-B21
- 1024-MB PC1600-MHz Registered ECC SDRAM Memory Option Kit (2 x 512 MB) 187419-B21
- 2048-MB PC1600-MHz Registered ECC SDRAM Memory Option Kit (2 x 1024 MB) 187420-B21
- 4096-MB PC1600-MHz Registered ECC SDRAM Memory Option Kit (2 x 2048 MB) 187421-B21

### Storage



- 2X 0 - 5 Two 6 x1 inch Wide Ultra3 SCSI Hard Drive Cages
- A 1.44-MB Diskette Drive
- B 40x IDE CD-ROM
- C, D Two available half height bays for tape backup, DVD, SCSI storage, or optional ML5xx Internal Two Bay Hot Plug Wide SCSI Drive Cage (with fan)



- 2X 0 - 5 Two 6 x1 inch Wide Ultra3 SCSI Hard Drive Cages
- A 1.44-MB Diskette Drive
- B 40x IDE CD-ROM
- C, D Two available half height bays for tape backup, DVD, SCSI storage, or optional ML5xx Internal Two Bay Hot Plug Wide SCSI Drive Cage (with fan)

### Drive Support

	Quantity Supported	Position Supported	Controller
<b>Removable Media</b>			
1.44-MB Diskette Drive	Up to 1	A	Integrated
IDE CD-ROM Drive	Up to 1	B	Integrated IDE
DVD-ROM Drive Option Kit	Up to 1	B, C, D	Integrated IDE
ML5xx Internal Two Bay Hot Plug Wide SCSI Drive Cage (with fan)	Up to 1	C, D	Integrated SCSI

### Storage

#### Hard Drives

##### Ultra320 Hot Pluggable Drives

	Quantity Supported	Position Supported	Controller
<b>1-inch Drives</b>	Up to 12	2X 0-5	Integrated Dual Channel Wide Ultra3 SCSI Adapter
300-GB 10,000 rpm	Up to 14 (With optional Drive Cage and ML5xx Internal Two Bay Hot Plug Wide SCSI Drive Cage)	2X 0-5, C, D	Smart Array 5304/256 Controller
146.8-GB 10,000 rpm			Smart Array 6402/128 Controller
72.8-GB 10,000 rpm			Smart Array 6404/256 Controller
36.4-GB 10,000 rpm			Smart Array 641 Controller
72.8-GB 15,000 rpm			Smart Array 642 Controller
36.4-GB 15,000 rpm			64-bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
18.2-GB 15,000 rpm			64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter

**NOTE:** All U320 Universal Hard Drives are backward compatible to U2 or U3 speeds. U320 drives require an optional U320 Smart Array Controller or U320 SCSI HBA to support U320 transfer rates

#### External Storage

	Quantity Supported	Position Supported	Host Controller or Adapter
Modular Smart Array 30 Family	Up to 28	External	Smart Array 5304/256 Controller Smart Array 6402/128 Controller Smart Array 6404/256 Controller Smart Array 642 Controller 64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
Modular Smart Array 1000	Please see the Modular Smart Array 1000 QuickSpecs below to determine configuration requirements	External	Please see the Modular Smart Array 1000 QuickSpecs (URL below) for the latest list of supported HBAs
Modular Smart Array 1500 cs	Please see the Modular Smart Array 1500 QuickSpecs below to determine configuration requirements	External	Please see the Modular Smart Array 1500 cs QuickSpecs (URL below) for the latest list of supported HBAs
Modular Smart Array 1000: <a href="http://h18000.www1.hp.com/products/quickspecs/11033_na/11033_na.HTML">http://h18000.www1.hp.com/products/quickspecs/11033_na/11033_na.HTML</a>			
Modular Smart Array 1500: <a href="http://www.hp.com/go/MSA1500cs">http://www.hp.com/go/MSA1500cs</a>			

#### Maximum Storage Capacity – (Ultra3 Drive Cage, ML5xx Two Bay Hot Plug SCSI Drive Cage, 4 channel controller in all 7 slots & MSA30 enclosures)

Internal	4.20 TB (14 x 300 GB Ultra320 1" Drives)
External	117.60 TB (28 StorageWorks Enclosures each with 14 x 300 GB Ultra320 1" Drives)
Total	121.80 TB

#### Tape Drives, Tape Autoloaders & Tape Libraries

**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://www5.compaq.com/products/quickspecs/North\\_America/10233.html](http://www5.compaq.com/products/quickspecs/North_America/10233.html)

**NOTE:** For an up-to-date listing of the latest O/S Support details for each of the Tape Autoloaders & Tape Libraries listed below, please see the following: [http://www5.compaq.com/products/quickspecs/North\\_America/10809.html](http://www5.compaq.com/products/quickspecs/North_America/10809.html)

	Quantity Supported	Position Supported	Controller
HP StorageWorks DAT 40 Tape	Up to 3 per drive	0-4 per drive cage	Smart Array 5304/256 Controller

### Storage

Drive, Internal Hot-Plug HP StorageWorks DAT 72 Tape Drive, Internal Hot-Plug	cage. <b>NOTE: drives are 1.5 height devices</b>		Smart Array 6402/128 Controller Smart Array 6404/256 Controller Smart Array 642 Controller Smart Array 641 Controller 64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
Ultrium 230, Internal Ultrium 460, Internal	1	C + D	Integrated Dual Channel Wide Ultra3 Adapter 64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks DAT 72 Tape Drive, Internal HP StorageWorks DAT 40 Tape Drive, Internal HP StorageWorks DAT 24 Tape Drive, Internal	2	C, D	Integrated Dual Channel Wide Ultra3 Adapter 64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks DLT VS80 Tape Drive, Internal HP StorageWorks SDLT 320 Tape Drive, Internal	1	C + D	Integrated Dual Channel Wide Ultra3 Adapter 64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
Ultrium 215, External Ultrium 230, External Ultrium 460, External	Up to 2	External	Integrated Dual Channel Wide Ultra3 Adapter 64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks DAT 72 Tape Drive, External HP StorageWorks DAT 40 Tape Drive, External HP StorageWorks DAT 24 Tape Drive, External	Up to 2	External	Integrated Dual Channel Wide Ultra3 Adapter 64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks DLT VS80 Tape Drive, External	Up to 2	External	Integrated Dual Channel Wide Ultra3 Adapter 64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks SDLT 320 Tape Drive, External	Up to 2	External	Integrated Dual Channel Wide Ultra3 Adapter 64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks DAT 40x6 Tape Autoloader, Internal	1	C+D	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks DAT 72x6 Tape Autoloader, External HP StorageWorks DAT 40x6 Tape Autoloader, External 1/8 Ultrium 460 Tape Autoloader 1/8 SDLT 320 Tape Autoloader 1/8 Ultrium 230 Tape Autoloader 1/8 DLT VS80 Tape Autoloader SSL1016 Ultrium 460 Tape Autoloader	1 autoloader per SCSI channel	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS

### Storage

SSL1016 SDLT320 Tape  
Autoloader  
SSL1016 DLT1 Tape  
Autoloader

MSL6060 (Ultrium 460 -based)  
Library  
MSL6030 (Ultrium 460 -based)  
Library  
MSL5052S (320 SDLT-based)  
Library  
MSL5030 (Ultrium 230 -based)  
Library  
MSL5060 (Ultrium 230 -based)  
Library

Please reference the  
MSL Tape Library  
QuickSpecs to  
determine  
configuration  
requirements

External

64-Bit/133Mhz Dual Channel Ultra320 SCSI Adapter  
64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS

ESL Extended 712e  
ESL Extended 630e  
ESL9322 ETLA  
ESL9595 ETLA

Please reference the  
ESL E-Series and  
ESL9000 Series Tape  
Libraries  
QuickSpecs to  
determine  
configuration  
requirements

External

64-Bit/133Mhz Dual Channel Ultra320 SCSI Adapter  
64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS

ESL9000 Serries: [http://h18000.www1.hp.com/products/quickspecs/11875\\_na/11875\\_na.html](http://h18000.www1.hp.com/products/quickspecs/11875_na/11875_na.html)

### Power Specifications

Part Number	230822-001
Spare Kit	231782-001
Operational Input Voltage Range (V rms)	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	600	600	600	600	600	600
Nominal Input Current (A rms)	9.4	8.1	4.4	4.1	3.9	3.6
Max Rated Input Wattage Rating (Watts)	923	909	914	882	870	857
Max. Rated VA (Volt-Amp)	942	928	914	900	887	875
Efficiency (%)	65	66	67	68	69	70
Power Factor	0.98					
Leakage Current (mA)	0.31	0.36	0.65	0.69	0.72	0.75
Maximum Inrush Current (A peak)	15	17	30	32	34	35
Maximum Inrush Current duration (mS)	20					

### System Specifications

	Processor	Memory	HDD	PCI	PS	
<b>ML530 G2 Fully Configured</b>	2	16	12	7	2	
Fully Loaded System Input Wattage (W)	902	888	875	862	850	838
Fully Loaded System Input Current (A rms)	9.2	7.9	4.3	4.0	3.8	3.6
Fully Loaded System Thermal (BTU-Hr)	3076	3029	2984	2940	2898	2856
Fully Loaded System VA (Volt-Amp)	920	906	893	880	867	855
Power cord requirements	Nema 5-15P to IEC320-C13			Option no./Spare no.: See Power Cord chart		
	IEC320-C13 to IEC320-C14			Option no. /Spare no.: 142259-001/142258-B21		

#### NOTES:

ActiveAnswers Power Calculation

Power calculator is LIVE on ActiveAnswers website. This is an external link.

Follow this link: <http://h30099.www3.hp.com/configurator/powercalcs.asp>.

To drill down to calculators:

- Click on: "ProLiant Servers"
- Click on the Server of interest. Example: ML530 G2
- Click on: "Power Calculator" link (You may need to scroll down to see it.)

Power Cord	163719-002
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### Technical Specifications

<b>System Unit – Tower</b>	<b>Dimensions</b> (HxWxD) (with feet/bezel)	20.0 x 12.8 x 27.8 in (50.8 x 32.5 x 70.6 cm)		
	<b>Weight</b>	100 lb (45.36 kg)		
	No hard drives installed, one power supply			
	<b>Input Requirements</b> (per power supply)	Range Input Voltage	100 to 127 VAC/200 to 240 VAC	
		Rated Input Frequency	47 to 63 Hz	
		Input Power	690W @ 110 VAC	
		Rated Input Current	7.6A	
	<b>BTU Rating</b>	2400 BTU/hr		
	<b>SCSI Connectors</b>	Two internal HD68 connectors (supporting Wide Ultra3)		
		One external VHDCI connector (supporting Wide Ultra3)		
		One SCSI knockout		
	<b>Power Supply Output Power</b> (per power supply)	Rated Steady-State Power	600W	
Maximum Peak Power				
<b>Acoustic Noise</b>	Idle (Fixed Disk Drives Spinning)			
		L WAd (BELS)	7.0	
	Operating (Random Seeks to Fixed Disks)			
		L WAd (BELS)	7.1	

<b>System Unit Rack</b>	<b>Dimensions</b> (HxWxD)	12.8 x 17.5 x 25.6 in (32.5 x 44.4 x 65.0 cm)		
	<b>Weight</b> (approximate)	100 lb (45.36 kg)		
	No hard drives installed, one power supply			
	<b>Input Requirements</b> (per power supply)	Range Input Voltage	100 to 127 VAC/200 to 240 VAC	
		Rated Input Frequency	47 to 63 Hz	
		Input Power	690W @ 110 VAC	
		Rated Input Current	7.6A	
	<b>BTU Rating</b>	2400 BTU/hr		
	<b>SCSI Connectors</b>	Two internal HD68 connectors (supporting Wide Ultra3)		
		One external VHDCI connector (supporting Wide Ultra3)		
		One SCSI knockout		
	<b>Power Supply Output Power</b> (per power supply)	Rated Steady-State Power	600W	
Maximum Peak Power				
<b>Acoustic Noise</b>	Idle (Fixed Disk Drives Spinning)			
		L WAd (BELS)	6.7	
	Operating (Random Seeks to Fixed Disks)			
		L WAd (BELS)	6.8	

### Technical Specifications

<b>40X Max IDE CD-ROM Drive</b>	<b>Disk</b>	Applicable Disk	CD-ROM, CD-XA, CD-DA (Mode 1, Mode 2, Form 1 and 2) Photo CD (Single and Multi-session) Mixed Mode (Audio and Data combined) CD-R
		Capacity	540 MB (Mode 1, 12 cm) 650 MB (Mode 2, 12 cm)
	<b>Block Size</b>	Mode 1 Mode 2 CD-DA CD-XA	2,048 bytes 2,340 bytes, 2,336 bytes 2,352 bytes 2,328 bytes
	<b>Interface</b>	IDE (ATAPI)	
	<b>Access Times (typical)</b>	Random Full-Stroke	100 ms 150 ms
	<b>Audio Output Level</b>	Line-Out	0.7 VRMS at 47 kOhms
	<b>Data Transfer Rate</b>	Sustained Burst	150 KB/s (1X audio) 16.67 Mbytes/sec
	<b>Cache Buffer</b>	128 KB	
	<b>Start-up Time (typical)</b>	< 7 seconds	
	<b>Stop Time</b>	< 4 seconds	
	<b>Laser Parameters</b>	Type Wave Length	Semiconductor Laser GaAlAs 780 ± 25 nm
	<b>Operating Conditions</b>	Temperature Humidity	41° to 113° F (5° to 45° C) 10% to 80%
	<b>Dimensions</b>	(HxWxD, maximum) Weight	1.7 x 5.85 x 8.11 in (4.29 x 14.86 x 20.60 cm) 2.09 lb (0.95 kg)

<b>Integrated Dual Channel Wide Ultra3 SCSI Adapter</b>	<b>Drives Supported</b>	Up to 15 SCSI devices per channel
	<b>Data Transfer Method</b>	64-bit PCI bus-master
	<b>SCSI Channel Transfer Rate</b>	160 MB/s per channel
	<b>Maximum Transfer Rate per PCI Bus (peak)</b>	267 MB/s
	<b>SCSI Termination</b>	Active Termination
	<b>SCSI Connectors</b>	1 external, 2 internal (68-pin)

<b>Compaq NC3163 Fast Ethernet NIC Embedded 10/100 WOL (Wake On LAN)</b>	<b>Network Interface</b>	10Base-T/100Base-TX	
	<b>Compatibility</b>	IEEE 802.3/802.3u compliant	
	<b>Data Transfer Method</b>	32-bit bus-master PCI	
	<b>Network Transfer Rate</b>	10Base-T (Half-Duplex)	10 Mb/s
		10Base-T (Full-Duplex)	20 Mb/s
		100Base-TX (Half-Duplex)	100 Mb/s
		100Base-TX (Full-Duplex)	200 Mb/s
	<b>Connector</b>	10Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)
<b>Cable Support</b>	100Base-TX	Category 5 UTP; up to 328 ft (100 m)	

### *Technical Specifications*

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