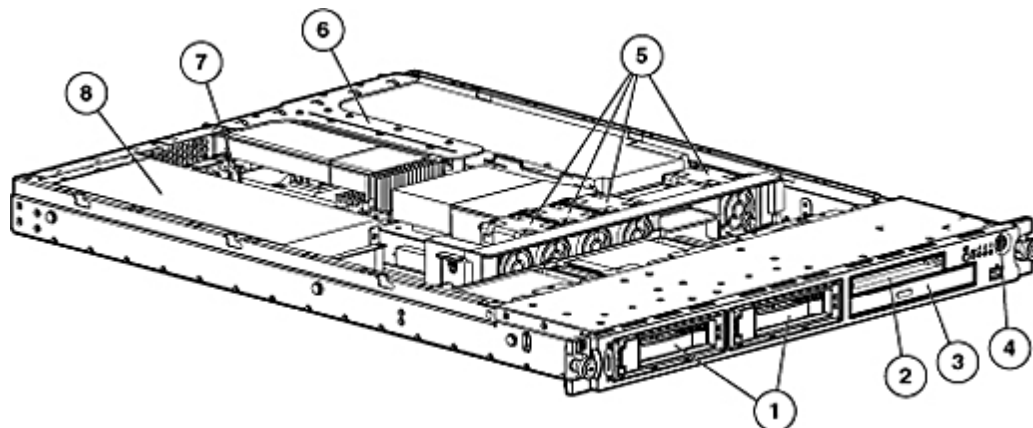


### Overview

### HP ProLiant DL320 Generation 3 (G3)



1. Support for up to two SATA or SCSI non-hot plug hard drives
2. Optional 1.44MB Diskette Drive Assembly Option Kit
3. Optional CD-ROM/DVD-ROM Drive Assembly Option Kit
4. Front LED Indicators
5. Fan Assembly, 4 NHP Dual Rotor Fans with N+1 Redundancy
6. Two PCI-X slots standard with an optional PCI Express slot
7. 4 - PC3200 DDR1 Memory Slots
8. Power Supply

### What's New

- Intel Pentium 4 3.4 GHz/800MHz FSB 2MB Level 2 Cache Models
- ProLiant DL320 Firewall/VPN/Cache Server running Microsoft® ISA Server 2004 Model

### At a Glance

- Three processor options to choose from:
    - Intel Celeron D 2.93 GHz/533MHz FSB 256KB Level 2 Cache
    - Intel Pentium 4 3.4 GHz/800MHz FSB 1MB Level 2 Cache
    - Intel Pentium 4 3.6 GHz/800MHz FSB 1MB Level 2 Cache (Factory Integrated Only)
    - Intel Pentium 4 3.4 GHz/800MHz FSB 2MB Level 2 Cache
  - 1GB of Advanced ECC PC3200 DDR 400MHz SDRAM Memory standard in all P4 models; 512 MB in Celeron models; all expandable to 4 GB
  - Intel E7221 Chipset with 800MHz Front Side Bus (533MHz for Celeron Processors)
  - 1U (1.70") Form Factor
  - New spring-loaded Universal sliding rails for in rack servicing ship standard
  - Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
  - Two available PCI-X slots, including one full-length 64-bit/133MHz slot and one half-length, low-profile 64-bit/100MHz slot
  - Optional PCI-Express full-length slot
  - Integrated iLO Remote Management
  - Automatic Server Recovery (ASR), ROM Based Setup Utility (RBSU), HP System Insight Manager, Status LEDs including system health and UID and SmartStart
  - Internal Storage capacity of 500 GB (2 x 250 GB SATA hard drives) or 145.6 GB (2 x 72.8 GB SCSI NHP hard drives)
  - HP embedded 2 Port SATA Controller with RAID 0/1 support
  - 350 Watt PFC Power Supply
  - Optional CD/DVD/Floppy drive
  - Four USB ports (1 front, 1 internal and 2 in rear)
- NOTE:** Internal USB port can also be used as internal USB port for leave-in USB key support

## Overview

- Protected by HP Services, including a three-year parts, one-year labor, one-year, on-site service, Next Business Day-limited, global warranty and extended, Pre-Failure Warranty which covers processors, memory, and hard drives - Certain restrictions and exclusions apply.

### Standard Features

<b>Processor</b>	Intel Celeron D 2.93 GHz
<a href="#">One of the following depending on Model</a>	Intel Pentium 4 3.4 GHz
	Intel Pentium 4 3.6 GHz (Factory Integrated Only)

<b>Processor Cache</b>	256KB Level 2 Cache (Celeron models)
<a href="#">One of the following depending on Model</a>	1MB Level 2 Cache (Pentium 4 models)
	2MB Level 2 Cache (Pentium 4 models)

<b>Chipset</b>	Intel E7221 chipset with 800MHz Front Side Bus (Pentium 4 Models)
<a href="#">One of the following depending on Model</a>	Intel E7221 chipset with 533MHz Front Side Bus (Celeron Models)

<b>Memory Protection</b>	Advanced ECC
--------------------------	--------------

<b>Memory</b>	Type	PC3200 DDR SDRAM running at 400MHz
	Standard (Pentium 4 models)	1 GB (1x 1024 MB)
	Standard (Celeron models)	512 MB (1 x 512 MB)
	Maximum	4 GB

<b>Network Controller</b>	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
---------------------------	--

Expansion Slots	Slot Number	Bus Speed	Height	Hot Plug	PCI Voltage
PCI-X Non Hot-Plug	1	64-bit/133 MHz PCI-X	Full	no	3.3 Volt
Riser	2	64-bit/100 MHz PCI-X	Half	no	3.3 Volt
PCI-Express Non Hot-Plug Riser (Optional)	1	PCI Express (x8 connector)	Full	no	
	2	64-bit/100 MHz PCI-X	Half	no	3.3 Volt

<b>Storage Controllers</b>	HP embedded 2 Port SATA Controller with RAID 0/1 support. SCSI controllers available via PCI card.
----------------------------	--

### Standard Features

Storage	Diskette Drive	Optional 1.44 MB Diskette Drive option kit is available <b>NOTE:</b> Purchase of floppy drive is required to implement embedded SATA RAID 0/1 with SmartStart 7.2.		
	Optical Drive	Optional CD-ROM, DVD-ROM option kits available <b>NOTE:</b> Purchase of CD-ROM is required for installation of SmartStart.		
	Hard Drives	One of the following: (depending on model): None 80 GB SATA HDD		
Maximum Internal Storage Type	Non-Hot Plug SCSI	145.6 GB	2 x 72.8 GB Ultra320	
	Non-Hot Plug SATA	500 GB	2 x 250 GB Serial ATA	
Interfaces	Serial	1		
	USB	4		
			<b>NOTE:</b> Please see the following URL for additional information regarding USB support: <a href="http://www.hp.com/product/servers/platforms/usb-support.html">http://www.hp.com/product/servers/platforms/usb-support.html</a>	
	Graphics	1		
	Keyboard	1		
	Mouse	1		
	Network RJ-45	2		
	iLO remote management port	1		
Graphics	Integrated ATI RAGE XL Video Controller with 8-MB SDRAM Video Memory			
Form Factor	Rack (1U), (1.70 in/4.45 cm)			
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 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> .		

### Standard Features

SmartStart	SmartStart is a tool that simplifies server setup, providing a rapid way to deploy reliable and consistent server configurations. For more information, please visit the SmartStart Web site at <a href="http://www.hp.com/servers/smartstart">http://www.hp.com/servers/smartstart</a> . SmartStart version supported (minimum): SmartStart 7.2.
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 HP Systems Insight Manager 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> .
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><li>• Intelligent Networking Pack - detects and analyzes network bottlenecks or broken network linkages and steers traffic to the optimum route based on network conditions.</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

#### Industry Standard Compliance

ACPI 2.0  
PCI 2.2 Compliant  
PXE Support  
WOL Support  
Microsoft® Logo certifications  
USB 2.0

#### Intelligent Manageability

Automatic Server Recovery (ASR)  
iLO Advanced Pack (optional)  
HP Systems Insight Manager  
Integrated Management Log  
Drive Parameter Tracking (with Smart Array Controllers)  
Dynamic Sector Repairing (with Smart Array Controllers)  
Pre-Failure Warranty (covers processors, hard drives, SATA HDDs and memory)

#### Security

Power-on password  
Keyboard password  
Diskette drive control  
Diskette boot control  
Removable CD-ROM/Diskette Drive Assembly  
Administrator's password

#### Server Power Cords

North America	One Lowline and one Highline (IEC-IEC) power cord ships standard
Japan	One IEC (Highline) and one Lowline power cord ships standard
ROW	One Highline (IEC) power cord ships standard

#### Power Supply

Auto-sensing 350-Watt PFC Power Supply, CE Mark Compliant

#### System Fans

4 dual rotor fans ship standard. 4 dual rotor fans total supported internally. N+1 Redundancy.

#### Ultra Thin Rack Deployment Overview

For the Ultra Thin Rack Deployment Overview, including best practices for the HP ProLiant DL320 G3, please see the following URL: <http://www.hp.com/products/servers/ProLiantdl320/>.

#### Required Cabling

For required cabling information, refer to the Web site at:  
<http://www.hp.com/products/servers/ProLiantdl320/>.

### Standard Features

#### OS Support

Microsoft Windows 2000 Server  
Windows Server 2003 (web and standard editions; standard edition for 64-bit extensions)  
Linux (Red Hat, SuSE, UnitedLinux)

**NOTE:** Support differences will exist between the SATA and SCSI configurations.

**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 drivers available for the HP ProLiant DL320, please see: <http://h18023.www1.hp.com/support/files/server/us/index.html>.

**NOTE:** For a more complete and up-to-date information on Linux support, please visit HP Linux Web site at <http://h18000.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 5,350 sq cm (830 square inches) 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 7 cm (2.75 inches)

**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://h18004.www1.hp.com/products/servers/proliantdl320/index.html>.

#### 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 MSA1000, VA7xxx, EVA3000 & EVA5000, XP, rackable tape libraries and configurable network switches.

For more information on how to order please contact your sales representative or go to <http://www.hp.com/go/factory-express>.

### 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, 1 year labor, 1-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 coverage for the HP branded hardware options qualified for the server, purchased at the same time or afterward, internal to the enclosure, as well as 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, 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.

**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

<b>DL320R03 C2.93-256KB, 512MB</b> 372708-xx1	<b>Processor(s)</b>	Intel Celeron D 2.93 GHz Processor Standard
	<b>Cache Memory</b>	256 KB Level 2 cache
	<b>Chipset</b>	Intel E7221 chipset with 533MHz Front Side Bus
	<b>Memory</b>	512MB (Standard) to 4GB (Maximum) of Advanced ECC PC3200 DDR SDRAM DIMM Memory
	<b>Network Controller</b>	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	<b>Storage Controller</b>	Intel® 82801FR Integrated Serial ATA Host Controller
	<b>Hard Drives</b>	None ship standard
	<b>Internal Storage</b>	500 GB for SATA models, 145.6 GB for SCSI models
	<b>Optical Drive</b>	Optional
	<b>Diskette Drive</b>	Optional
	<b>Form Factor</b>	Rack (1U), (1.70 in/4.45 cm)
<b>DL320R03 P3.4-1MB, 1GB</b> 372709-xx1	<b>Processor(s)</b>	Intel Pentium 4 3.4 GHz Processor Standard
	<b>Cache Memory</b>	1MB Level 2 Cache
	<b>Chipset</b>	Intel E7221 chipset with 800MHz Front Side Bus
	<b>Memory</b>	1GB (standard) to 4GB (Maximum) of Advanced ECC PC3200 DDR SDRAM DIMM Memory
	<b>Network Controller</b>	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	<b>Storage Controller</b>	Intel® 82801FR Integrated Serial ATA Host Controller
	<b>Hard Drives</b>	None ship standard
	<b>Internal Storage</b>	500 GB for SATA models, 145.6 GB for SCSI models
	<b>Optical Drive</b>	Optional
	<b>Diskette Drive</b>	Optional
	<b>Form Factor</b>	Rack (1U), (1.70 in/4.45 cm)
<b>DL320R03 P3.4-1MB, 1GB, 80GB SATA</b> 370669-xx1	<b>Processor(s)</b>	Intel Pentium 4 3.4 GHz Processor Standard
	<b>Cache Memory</b>	1MB Level 2 Cache
	<b>Chipset</b>	Intel E7221 chipset with 800MHz Front Side Bus
	<b>Memory</b>	1GB (standard) to 4GB (Maximum) of Advanced ECC PC3200 DDR SDRAM DIMM Memory
	<b>Network Controller</b>	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	<b>Storage Controller</b>	Intel® 82801FR Integrated Serial ATA Host Controller
	<b>Hard Drives</b>	80GB SATA HDD (HP available via HP Backplane option)
	<b>Internal Storage</b>	500 GB for SATA models, 145.6 GB for SCSI models
	<b>Optical Drive</b>	Optional
	<b>Diskette Drive</b>	Optional
	<b>Form Factor</b>	Rack (1U), (1.70 in/4.45 cm)

### Models

<b>DL320R03 P3.4-2MB, 1GB 372710-xx1</b>	<b>Processor(s)</b>	Intel Pentium 4 3.4 GHz Processor Standard
	<b>Cache Memory</b>	2MB Level 2 Cache
	<b>Chipset</b>	Intel E7221 chipset with 800MHz Front Side Bus
	<b>Memory</b>	1GB (standard) to 4GB (Maximum) of Advanced ECC PC3200 DDR SDRAM DIMM Memory
	<b>Network Controller</b>	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	<b>Storage Controller</b>	Intel® 82801FR Integrated Serial ATA Host Controller
	<b>Hard Drives</b>	None ship standard
	<b>Internal Storage</b>	500 GB for SATA models, 145.6 GB for SCSI models
	<b>Optical Drive</b>	Optional
	<b>Diskette Drive</b>	Optional
	<b>Form Factor</b>	Rack (1U), (1.70 in/4.45 cm)

<b>DL320R03 P3.4-2MB, 1GB, 80GB SATA 370670-xx1</b>	<b>Processor(s)</b>	Intel Pentium 4 3.4 GHz Processor Standard
	<b>Cache Memory</b>	2MB Level 2 Cache
	<b>Chipset</b>	Intel E7221 chipset with 800MHz Front Side Bus
	<b>Memory</b>	1GB (standard) to 4GB (Maximum) of Advanced ECC PC3200 DDR SDRAM DIMM Memory
	<b>Network Controller</b>	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	<b>Storage Controller</b>	Intel® 82801FR Integrated Serial ATA Host Controller
	<b>Hard Drives</b>	80GB SATA HDD (HP available via HP Backplane option)
	<b>Internal Storage</b>	500 GB for SATA models, 145.6 GB for SCSI models
	<b>Optical Drive</b>	Optional
	<b>Diskette Drive</b>	Optional
	<b>Form Factor</b>	Rack (1U), (1.70 in/4.45 cm)

<b>DL320R03 P3.4-1MB, 1GB, 80GB SATA VPN 385841-xx1</b>	<b>Processor(s)</b>	Intel Pentium 4 3.4 GHz Processor Standard
	<b>Cache Memory</b>	1MB Level 2 Cache
	<b>Chipset</b>	Intel E7221 chipset with 800MHz Front Side Bus
	<b>Memory</b>	1GB (standard) to 4GB (Maximum) of Advanced ECC PC3200 DDR SDRAM DIMM Memory
	<b>Network Controller</b>	Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter
	<b>Storage Controller</b>	Intel® 82801FR Integrated Serial ATA Host Controller
	<b>Hard Drives</b>	80GB SATA HDD (HP available via HP Backplane option)
	<b>Internal Storage</b>	500 GB for SATA models, 145.6 GB for SCSI models
	<b>Optical Drive</b>	CD-ROM Drive
	<b>Diskette Drive</b>	Optional
	<b>Form Factor</b>	Rack (1U), (1.70 in/4.45 cm)

### Models

**NOTE:** The HP ProLiant DL320 Firewall/VPN/Cache Server running Microsoft® Internet Security & Acceleration Server 2004 is a prepackaged, preconfigured hardware/software advanced firewall, VPN, and Web caching solution that can be quickly and easily deployed in multiple network environments to protect key business applications especially Microsoft Exchange against new and emerging security threats.

For additional information, please see: <http://www.hp.com/servers/DL320FW-VPN-Cache>

---

Country Code Key	XX=00	NA
	XX=29	Japan
	XX=37	APD
	XX=42	EURO
	XX=AA	PRC

### Configuration Information - Factory Integrated Models (North America only)

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

<b>Models</b>	<p>HP ProLiant DL320G3 SATA Rack CTO Chassis (North America) <span style="float: right;">374295-405</span></p> <p><b>Factory Integrated Model ships with:</b></p> <p>Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter</p> <p>1 full length/height and 1 half length-low profile 64bit PCI-X slot</p> <p>Integrated Lights-Out (iLO) embedded</p> <p>DL320 G3 Non Hot Plug SATA Option Kit</p> <p>Rack (1U) form factor, (1.70 in/4.45 cm)</p>
	<p>HP ProLiant DL320G3 SCSI Rack CTO Chassis (North America) <span style="float: right;">383338-405</span></p> <p><b>Factory Integrated Model ships with:</b></p> <p>Embedded NC7782 Dual Port PCI-X 10/100/1000T Gigabit network adapter</p> <p>1 full length/height and 1 half length-low profile 64bit PCI-X slot</p> <p>Non Hot Plug U320 SCSI Option Kit</p> <p>Integrated Lights-Out (iLO) embedded</p> <p>DL320 G3 Non Hot Plug U320 SCSI Option Kit</p> <p>Rack (1U) form factor, (1.70 in/4.45 cm)</p>

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

<b>Processors</b>	<p>X2.93/CELERON/512MB DL320G3 FIO Base <span style="float: right;">374866-L21</span></p> <p>X3.4/PIV/1G DL320G3 FIO Base <span style="float: right;">374867-L21</span></p> <p>X3.6/PIV/1G DL320G3 FIO Base <span style="float: right;">374868-L21</span></p>
<b>Base Memory</b>	<p>512MB of Advanced ECC PC3200 DDR SDRAM DIMM Memory Kit (1 x 512MB) <span style="float: right;">354560-B21</span></p> <p>1024MB of Advanced ECC PC3200 DDR SDRAM DIMM Memory Kit (1 X 1024MB) <span style="float: right;">354563-B21</span></p>
<b>Optical Drive</b>	<p>DL320G3 DVD-ROM Drive <span style="float: right;">374303-B21</span></p> <p>DL320G3 CD Drive (Required for installation of SmartStart and OS) <span style="float: right;">372703-B21</span></p> <p>DL320G3 FLOPPY DRIVE (Required for installation of SW SATA RAID) <span style="float: right;">372702-B21</span></p>

### Configuration Information - Factory Integrated Models (North America only)

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

Controllers	64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2	374654-B21
	Smart Array 6404/256 Controller	273914-B21
	Smart Array 6402/128 Controller	273915-B21
	Smart Array 641 Controller	291966-B21
	Smart Array 642 Controller	291967-B21
Hard Drives	<b>Ultra320 Non-Hot Plug</b>	
	72.8 GB 10,000 rpm, U320 Non-Hot Plug Hard Drive, 1"	332751-B21
	36.4 GB 15,000 rpm, U320 Non-Hot Plug Hard Drive, 1"	357012-B21
	<b>Serial ATA</b>	
	80-GB SATA 1.5Gb 7,200 RPM Hard Drive (1")	349237-B21
	160-GB SATA 1.5Gb 7,200 RPM Hard Drive (1")	349238-B21
	250-GB SATA 1.5Gb 7,200 RPM Hard Drive (1")	349239-B21

**NOTE:** Please note that Serial ATA hot-plug capability and drive LEDs are not supported by the DL320 G3 embedded SATA storage controller.

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

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

### Options

ProLiant DL320 G3 Unique Options	PCI-X/PCI-EXPRESS RISER	374281-B21
	Floppy Drive Option Kit	372702-B21
	DVD ROM Drive Option	374303-B21
	CD ROM Drive Option	372703-B21
	DL320 G3 Non Hot Plug U320 SCSI Option Kit	374282-B21
	<b>NOTE:</b> This option is required for use with any supported non Hot Plug U320 SCSI HDD options. A PCI controller is also required; please see Storage Controllers below for U320 controller options.	
	DL320 G3 Non Hot Plug SATA HDD Option Kit	372704-B21
<b>NOTE:</b> This option is required on the non-hard drive models for any supported SATA HDD options.		
<hr/>		
ProLiant Essentials Value Pack Software	Rapid Deployment Pack, 1 User, V1.x	267196-B21
	<b>NOTE:</b> This license allows 1 server to be managed and deployed via the Deployment Server.	
	<b>NOTE:</b> Rapid Deployment pack is now available in Linux only environments.	
	Rapid Deployment Pack, 1 User, V1.x (Japan)	267196-291
	<b>NOTE:</b> This license allows 1 server to be managed and deployed via the Deployment Server.	
	<b>NOTE:</b> Rapid Deployment pack is now available in Linux only environments.	
	Rapid Deployment Pack, 10 Users, V1.x	269817-B21
	<b>NOTE:</b> This license allows 10 servers to be managed and deployed via the Deployment Server.	
	<b>NOTE:</b> Rapid Deployment pack is now available in Linux only environments.	
	Rapid Deployment Pack, 10 Users, V1.x (Japan)	269817-291
	<b>NOTE:</b> This license allows 10 servers to be managed and deployed via the Deployment Server.	
	<b>NOTE:</b> Rapid Deployment pack is now available in Linux only environments.	
	Flexible Quantity License Kit	302127-B21
	License-Only - for use with a Master License Agreement	302128-B21
	ProLiant Essentials Workload Management Pack (Featuring Compaq Resource Partitioning Manager version 2.0)	303284-B21
	Performance Management Pack, single server	306696-B21
	<b>NOTE:</b> This license allows 1 server to be managed by Performance Management Pack.	
Performance Management Pack, flexible license kit	306697-B21	
<b>NOTE:</b> A single pack is shipped with a single license key for the total number of licenses ordered		
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	372951-B21	
ProLiant Essentials Resource Management, Single kit	371645-B21	
ProLiant Essentials Resource Management, 10-license kit	372029-B21	
ProLiant Essentials Resource Management, Flex kit	371646-B21	
ProLiant Essentials Resource Management, AKA kit	371647-B21	

### Options

ProLiant Essentials Vulnerability and Patch Management Pack, 1-Server 10-Desktop Bundle License	389941-B21
ProLiant Essentials Vulnerability and Patch Management Pack, 10-Desktop License	389938-B21
ProLiant Essentials Vulnerability and Patch Management Pack, Flexible-Quantity Desktop License	389939-B21
ProLiant Essentials Vulnerability and Patch Management Pack, Tracking license for Desktops	389940-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 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>.

---

<b>Software Options</b>	HP ProLiant DL320 Firewall/VPN/Cache Server (pre-installed software only)	382009-B21
-------------------------	---	------------

---

<b>Memory (DIMMs)</b>	1024MB of Advanced ECC PC3200 DDR SDRAM DIMM Memory Kit (1 X 1024MB)	354563-B21
	512MB of Advanced ECC PC3200 DDR SDRAM DIMM Memory Kit (1 x 512MB)	354560-B21

---

<b>Internal Storage</b>	CD-ROM Drive Assembly Option Kit	372703-B21
	Floppy Drive Assembly Option kit	372702-B21
	DVD-ROM Drive Assembly Option Kit	374303-B21
	DL320 G3 Non Hot Plug U320 SCSI Option Kit	374282-B21
	DL320 G3 Non Hot Plug SATA Option Kit	372704-B21

**NOTE:** When adding either SATA or U320 SCSI drives to a non-hard drive DL320 G3 model, the appropriate option kit above is required for operation.

---

<b>Hard Drives</b>	<b>Wide Ultra320 - Universal Non-Hot Plug</b>	
	72.8 GB 10,000 rpm, U320 Non-Hot Plug Hard Drive, 1"	332751-B21
	36.4 GB 15,000 rpm, U320 Non-Hot Plug Hard Drive, 1"	357012-B21
	<b>NOTE:</b> 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.	
	<b>Serial ATA</b>	
	250-GB SATA 1.5Gb 7,200 RPM Hard Drive (1")	349239-B21
160-GB SATA 1.5Gb 7,200 RPM Hard Drive (1")	349238-B21	
80-GB SATA 1.5Gb 7,200 RPM Hard Drive (1")	349237-B21	

### Options

**NOTE:** Please note that Serial ATA hot-plug capability and drive LEDs are not supported by the DL320 G3 embedded SATA storage controller.

**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\\_div/11531\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/11531_div/11531_div.HTML)  
(Worldwide)

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

**SATA Hard Drive QS:**

[http://h18000.www1.hp.com/products/quickspecs/11940\\_div/11940\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/11940_div/11940_div.HTML)  
(Worldwide)

[http://h18000.www1.hp.com/products/quickspecs/11940\\_na/11940\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/11940_na/11940_na.HTML)  
(North America)

Storage Controllers	64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2	374654-B21
	Smart Array 6404/256 Controller	273914-B21
	Smart Array 6402/128 Controller	273915-B21
	Smart Array 641 Controller	291966-B21
	Smart Array 642 Controller	291967-B21
	256MB DDR, Battery-Backed Cache Upgrade Kit for SA-6400	273913-B21
	<b>NOTE:</b> This 256-MB Battery-Backed Cache Module supports the Smart Array 6400 series controllers, HP StorageWorks Modular Smart Array 1000 and the HP StorageWorks Modular Smart Array 500.	
	128MB BBWC for SA641/642	351580-B21
	<b>NOTE:</b> This 128 MB BBWC supports the Smart Array 641 Controller and Smart Array 642 Controller.	
	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter	268351-B21
	<b>NOTE:</b> Supports Wide Ultra3, Ultra320 SCSI drives only. If cabling to internal drives, you must first remove the integrated controller module. ATA models require the Wide Ultra3 SCSI cable option kit 212690-B21.	
	<b>NOTE:</b> This adapter will run at 33-MHz speeds due to the 33-MHz PCI Bus.	
64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS	284688-B21	
<b>NOTE:</b> Supports Wide Ultra3, Ultra320 SCSI drives only. If cabling to internal drives, you must first remove the integrated controller module. ATA models require the Wide Ultra3 SCSI cable option kit 212690-B21.		
<b>NOTE:</b> This adapter will run at 33-MHz speeds due to the 33-MHz PCI Bus.		
<b>NOTE:</b> 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:		
<a href="http://h18000.www1.hp.com/products/quickspecs/11943_div/11943_div.HTML">http://h18000.www1.hp.com/products/quickspecs/11943_div/11943_div.HTML</a> (HP Single Channel Ultra320 SCSI HBA)		
<a href="http://h18000.www1.hp.com/products/quickspecs/12067_div/12067_div.HTML">http://h18000.www1.hp.com/products/quickspecs/12067_div/12067_div.HTML</a> (Smart Array 641)		
<a href="http://h18000.www1.hp.com/products/quickspecs/12069_div/12069_div.HTML">http://h18000.www1.hp.com/products/quickspecs/12069_div/12069_div.HTML</a> (Smart Array 642)		
<a href="http://h18000.www1.hp.com/products/quickspecs/10429_div/10429_div.HTML">http://h18000.www1.hp.com/products/quickspecs/10429_div/10429_div.HTML</a> (SCSI Adapter)		
<a href="http://h18000.www1.hp.com/products/quickspecs/11555_div/11555_div.HTML">http://h18000.www1.hp.com/products/quickspecs/11555_div/11555_div.HTML</a>		



### Options

(U320 Adapter)

Communications	HP NC150T PCI 4-port Gigabit 1000T Combo Switch Adapter	367132-B21	
	HP NC310F PCI-X Single Port 1000SX Gigabit Server Adapter	368169-B21	
	HP NC320T PCI Express Single Port 1000T Gigabit Server Adapter	367047-B21	
	HP NC1020 PCI Single Port 1000T Gigabit Server Adapter	353377-B21	
	HP NC6170 PCI-X Dual Port 1000SX Gigabit Server Adapter	313879-B21	
	HP NC7170 PCI-X Dual Port 1000T Gigabit Server Adapter	313881-B21	
	HP NC7170 PCI-X Dual Port Low Profile 1000T Gigabit Server Adapter	383738-B21	
	HP NC7771 PCI-X Single Port 1000T Gigabit Server Adapter	290563-B21	
	<b>NOTE:</b> Any NC61XX, NC71XX or NC77XX network adapter can be used for redundancy with the embedded NC7782 network adapter.		
	HP NC570C PCI-X Dual-port 4x Fabric Adapter	376158-B21	
	HP NC571C PCI Express Dual-port 4x Fabric Adapter	376160-B21	
	HP 24-Port 4x Fabric Copper Switch	376227-B21	
	HP 4x Fabric 1m Copper Cable	376232-B21	
	HP 4x Fabric 3m Copper Cable	376232-B22	
HP 4x Fabric 5m Copper Cable	376232-B23		

Management Options	ProLiant Essentials Integrated Lights-Out Advanced Pack	263825-B21
--------------------	---	------------

Security	HP/Atalla AXL600L SSL Accelerator Card for ProLiant Servers	524545-B21
	AXL300 Accelerator PCI Card for ProLiant Servers	227933-B21

### Tape Drives

**NOTE:** For complete listing of tape drive offerings, please see:

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

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

**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.

#### DAT Drives

HP StorageWorks DAT 24 Tape Drive, External (Flint)	C1556D
HP StorageWorks DAT 40 Tape Drive, External (Carbon)	C5687C
HP StorageWorks DAT 72 Tape Drive, External (Carbon)	Q1523A
HP StorageWorks 1U Rack-Mount Kit with one DAT 72 drive	A7443A

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

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

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

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>

#### Ultrium Tape Drives

### Options

HP StorageWorks Ultrium 215 Tape Drive, External (Carbon)	Q1545A
HP StorageWorks 1U Rack-Mount Kit with one Ultrium 215 drive	A7444A
HP StorageWorks Ultrium 448 Tape Drive, External (Carbonite)	DW017A
HP StorageWorks 1U Rack-Mount Kit with one Ultrium 448 drive	DW028A

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

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

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

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

[http://h18006.www1.hp.com/products/quickspecs/12128\\_na/12128\\_na.html](http://h18006.www1.hp.com/products/quickspecs/12128_na/12128_na.html)  
(North America)

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>

#### Rack-Mount Tape Drive Enclosures

HP StorageWorks 1U Rack-Mount Kit	A7445A
-----------------------------------	--------

**NOTE:** The 1U Rack-mount Kit can support up to 2 half-height tape drives and compatible with multiple tape drives.

HP StorageWorks 3U Rack-Mount Kit	274338-B21
-----------------------------------	------------

**NOTE:** The 3U Rack-Mount Kit can support up to 2 full-height or 4 half-height tape drives and compatible with multiple tape drives.

HP StorageWorks 5U Rack-Mount Kit	274339-B21
-----------------------------------	------------

**NOTE:** The 5U Rack-Mount Kit can support up to 4 full-height tape drives.

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

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

[http://h18000.www1.hp.com/products/quickspecs/10854\\_na/10854\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/10854_na/10854_na.HTML)  
(North America)

HP StorageWorks Tape Array 5300	C7508A
---------------------------------	--------

**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\\_div/11878\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/11878_div/11878_div.HTML)  
(Worldwide)

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

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

LVD Cable Kit, VHDCI/HD68	168048-B21
---------------------------	------------

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

LVD Cable Kit, HD68/HD68	242381-B21
--------------------------	------------

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

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
--------------------------------------	--------

### Options

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
<b>NOTE:</b> For use with Tape Array 5300 only	

### Tape Autoloaders

#### DAT Autoloaders

HP StorageWorks DAT 72x6 Tape Autoloader, External (Flint) Q1567A

**NOTE:** Please see the DAT 72x6 Tape Autoloader QuickSpecs for additional options such as host bus adapters, controllers and media:

[http://h18006.www1.hp.com/products/quickspecs/11905\\_div/11905\\_div.html](http://h18006.www1.hp.com/products/quickspecs/11905_div/11905_div.html)  
(Worldwide)

[http://h18006.www1.hp.com/products/quickspecs/11905\\_na/11905\\_na.html](http://h18006.www1.hp.com/products/quickspecs/11905_na/11905_na.html)  
(North America)

#### 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

<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

MSL6060, 2 drive, 60 slot, Ultrium 460, RM 331196-B21

MSL6060, 2 drive, 60 slot, Ultrium 460, RM with embedded FC router 331196-B22

### Options

**NOTE:** Please reference the [MSL6000 Tape Library QuickSpecs at http://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 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

**NOTE:** Please reference the [MSL5026S2 Tape Library QuickSpecs at http://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 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

**NOTE:** Please reference the [MSL5052S2 Tape Library QuickSpecs at http://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 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

**NOTE:** Please reference the [MSL5030 Tape Library QuickSpecs at http://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 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

**NOTE:** Please reference the [MSL5060 Tape Library QuickSpecs at http://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 ESL E-Series Tape Libraries

ESL Extended 712e Tape Library, 0 drive, 712 LTO slots	AA934B
ESL Extended 630e Tape Library, 0 drive, 630 SDLT slots	AA935B
ESL Extended 322e Tape Library, 0 drive, 322 LTO slots	AA939B
ESL Extended 286e Tape Library, 0 drive, 286 SDLT slots	AA940B
ESL E-Series Ultrium 460 drive kit	AA937A
ESL E-Series Ultrium 460-FC drive kit	AA941A
ESL E-Series SDLT 320 drive kit	AA936A
ESL E-Series e2400-FC 2G Interface Controller	AA928A

### Options

**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>

Magento-Optical Jukeboxes	HP StorageWorks 9.1 GB Entry-level Optical Storage	
	9100mx standalone drive	C1114M
	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.

	HP StorageWorks Ultra Density Optical Storage	
	30ux standalone drive	AA961A
	700ux, 1 drive, 24 slot jukebox	AA962A
	700ux, 2 drive, 24 slot jukebox	AA963A
	1100ux, 2 drive, 38 slot jukebox	AA964A

**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.

External Storage – Rack	Redundant Power Supply 499W	338296-B21
	StorageWorks Enclosure 4200 Redundant Power Supply Option	338296-B21
	StorageWorks Enclosure 4200 Ultra3 Single Bus I/O Module Option	190212-B21
	StorageWorks Enclosure 4200 Ultra3 Dual Bus I/O Module Option	190213-B21
	StorageWorks Enclosure 4200 Tower to Rack Conversion Kit	150213-B21

HP StorageWorks Modular Smart Array 1000	HP StorageWorks Modular Smart Array 1000	201723-B22
	Modular Smart Array 1000 Fabric Switch	218232-B21
	<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> (North America)	
	<a href="http://h18000.www1.hp.com/products/quickspecs/11033_div/11033_div.HTML">http://h18000.www1.hp.com/products/quickspecs/11033_div/11033_div.HTML</a> (Worldwide)	

UPS and PDU Power Cord Matrix	<i>Please see the UPS and PDU Power Cord Matrix that lists cable descriptions, requirements, and specifications for UPS and PDU units.</i>
	<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>

### Options

<b>Uninterruptible Power Systems – Rack UPSs</b>	HP UPS R5500 XR, (5000VA, 4500 Watt), High Voltage (NA/Jpn)	326529-D71	
	HP UPS R5500 XR, (6000VA, 5400 Watt), High Voltage (Int'l)	326529-B31	
	HP UPS R1500 XR (1440VA, 1340 Watt), Low Voltage (NA)	204404-001	
	HP UPS R1500 XR (1500VA, 1340 Watt), High Voltage (Int'l)	204404-B31	
	HP UPS R1500 XR (1500VA, 1340 Watt), Low Voltage (Japan)	204404-291	
	HP UPS R3000 XR (2880VA, 2700 Watt), Low Voltage (NA)	192186-001	
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (NA)	192186-002	
	HP UPS R3000 XR (2400VA, 2250 Watt), Low Voltage (Japan)	192186-291	
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (Japan)	192186-292	
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (Int'l - detachable cord)	192186-B31	
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (16A IEC309 Plug)	192186-B32	
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (16A CEE 7/7 SCHUKO Plug)	192186-B33	
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (16A BS-546 Plug)	192186-AR1	
	HP UPS R5500 XR, (5000VA, 4500 Watt), High Voltage (NA/Jpn)	326529-D71	
	HP UPS R5500 XR, (6000VA, 5400 Watt), High Voltage (Int'l)	326529-B31	
	HP UPS R12000 XR, N+ x (12KVA, 12KW) High Voltage (WW)	207552-B22	
	<b>NOTE:</b> The UPS R12000 XR has a hardwired input and output connection.		

<b>USB Options</b>	USB Optical Scroll Mouse (Carbonite)	DD441B
	USB 1.44-MB External Diskette Drive (Carbonite)	DC141B
	256MB HP Drive Key II (USB 2.0)	PH657A

**Custom Builder** Please see the Enterprise Configurator for configuration assistance at:  
<http://www.hp.com/products/configurator>.

<b>ProLiant DL320 Deployment Options</b>	Rack Adapter Kit	332815-B21
	<b>NOTE:</b> This kit allows HP rack servers to fit in racks that are 24" wide. Telco Rack Support - Support for all 2-post Telco racks requires the use of the standard rack kit and an additional option kit from Rack Solutions <a href="http://www.racksolutions.com/hp">http://www.racksolutions.com/hp</a>	

<b>HP Rack 5000 Series (Graphite Carbon)</b>	HP 5642 Rack-Unassembled	358254-B21
	Stabilizer Kit for 5642 Rack (Graphite Carbon)	374493-B21
	<b>NOTE:</b> The stabilizing kit is used to prevent rack from tipping over.	
	Baying Kit for 5642 Rack (Graphite Carbon)	374499-B21
	<b>NOTE:</b> The baying kit is used to join two or more HP 5642 racks.	

### Options

HP Rack 10000 Series (Graphite Metallic)	HP S10614 (14U) Rack Cabinet – Shock Pallet	292302-B22
	HP 10842 (42U, 800mm wide) Rack Cabinet – Pallet	257415-B21
	HP 10842 (42U, 800mm wide) Rack Cabinet – Shock Pallet	257415-B22
	HP 10647 (47U) Rack Cabinet – Pallet	245160-B21
	HP 10647 (47U) Rack Cabinet – Shock Pallet	245160-B23
	HP 10642 (42U) Rack Cabinet – Pallet	245161-B21
	HP 10642 (42U) Rack Cabinet – Shock Pallet	245161-B22
	HP 10642 (42U) Rack Cabinet – Crated	245161-B23
	HP 10636 (36U) Rack Cabinet – Pallet	245162-B21
	HP 10636 (36U) Rack Cabinet – Shock Pallet	245162-B22
	HP 10636 (36U) Rack Cabinet – Crated	245162-B23
	HP 10622 (22U) Rack Cabinet – Pallet	245163-B21
	HP 10622 (22U) Rack Cabinet – Shock Pallet	245163-B22
	HP 10622 (22U) Rack Cabinet – Crated	245163-B23

**NOTE:** -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

**NOTE:** It is mandatory to use a shock pallet in order to ship racks with equipment installed.

**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](http://h18000.www1.hp.com/products/quickspecs/10995_div/10995_div.HTML)  
(Worldwide)

[http://h18000.www1.hp.com/products/quickspecs/10995\\_na/10995\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/10995_na/10995_na.HTML)  
(North America)

**NOTE:** For additional information regarding Rack Cabinets, please see the following URL: <http://h18000.www1.hp.com/products/servers/proliantstorage/rack-options/index.html>.

---

### Rack Options for HP Rack 10000 Series

**NOTE:** For additional information regarding Rack Options, please see the following URL: <http://h18000.www1.hp.com/products/servers/proliantstorage/rack-options/index.html>

### Options

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
TFT5600 Rack Keyboard Monitor	221546-xx1

**Country Code Key** (for TFT5600 Rack Keyboard Monitor (PN 221546-xx1))

XX = 001	US	XX = 091	Norway
XX = 031	UK	XX = 101	Sweden/Finland
XX = 041	Germany	XX = 111	Switzerland
XX = 051	France	XX = 131	Portugal
XX = 061	Italy	XX = 181	Belgium
XX = 071	Spain	XX = 291	Japan
XX = 081	Denmark	XX = B31	International

1U Rack Keyboard & Drawer (Carbon)	257054-xx1
------------------------------------	------------

**Country Code Key** (for 1U Rack Keyboard & Drawer (PN 257054-xx1))

XX = 001	US	XX = 091	Norway
XX = 031	UK	XX = 101	Sweden/Finland
XX = 041	Germany	XX = 111	Switzerland
XX = 051	France	XX = 131	Portugal
XX = 061	Italy	XX = 181	Belgium
XX = 071	Spain	XX = 291	Japan
XX = 081	Denmark	XX = B31	International

**NOTE:** For additional information regarding Rack Options, please see the following URL: <http://h18000.www1.hp.com/products/servers/proliantstorage/rack-options/index.html>.

<b>HP KVM Switch Options</b>	Server Console Switch (KVM), 0 x 1 x 8 port	336044-B21
	Server Console Switch (KVM), 0 x 2 x 16 port	336045-B21
	IP Console Switch Box (KVM/IP), 1 x 1 x 16	262585-B21
	IP Console Switch Box (KVM/IP), 3 x 1 x 16	262586-B21
	HP 1x4 USB/PS2 KVM Switch, RM (ALL)	371302-B21
	HP 1x4 USB/PS2 KVM Switch, TT, (EURO)	371301-A21
	HP 1x4 USB/PS2 KVM Switch, TT (UK)	371301-031
	HP 1x4 USB/PS2 KVM Switch, TT, (AUST/NZ)	371301-011
	HP 1x4 USB/PS2 KVM Switch, TT, (NA/JPN)	371301-D71
	PS/2 Interface Adapter, 8 pack	262587-B21
	PS/2 Interface Adapter, 1 pack	262588-B21
	CAT5 KVM Expansion Module	262589-B21
	Serial Interface adapter - 1 Pack with power supply	373035-B21
	CAT5e Cable 3', 4 pack	263474-B21
	CAT5e Cable 6', 8 pack	263474-B22
	CAT5e Cable 12', 8 pack	263474-B23



### Options

CAT5e Cable 20', 4 pack	263474-B24
CAT5e Cable 40', 1 pack	263474-B25

**NOTE:** For additional information regarding HP KVM Switches and options, please see the following URL:

<http://h18004.www1.hp.com/products/servers/proliantstorage/rack-options/list.html#console>

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

##### **Hardware Services On-site Service**

Next Business Day On-site Service, 5-Day x 9-Hour Coverage, 3 Years	U4479A
Next Business Day On-site Service, 5-Day x 9-Hour Coverage, 3 Years, Electronic	U4479E
4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years	U4480A
4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic	U4480E
4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years	U4481A
4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	U4481E
6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years	U4482A
6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	U4482E

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

Hardware Installation	U4490A
Hardware Installation, Electronic	U4490E
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.	U4491A
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	U4491E

##### **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.	U4492E
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	U4492E

##### **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.	U4493A
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	U4493E
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.	U6309A
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.	U6309E
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.	U8331A
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.	U8331E

## Options

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

## Memory

### HP ProLiant DL320 G3 All Models

#### Standard Memory

512-MB PC3200 ECC DDR SDRAM installed (1 x 512-MB SDRAM DIMM) on Celeron model; 1GB (1 x 1024 MB SDRAM DIMMs) on all P4 models.

#### Standard Memory Plus Optional Memory

Up to 4096-MB memory is available with the optional installation of PC3200 ECC DDR SDRAM Memory kits.

**NOTE:** The chart below represents the P4 models with 1GB standard memory, and does not represent all possible configurations. Memory can be populated in any order with any of the supported DIMMs listed. For optimal performance, the total amount of memory in slots 1A and 2A should equal to the total amount of memory in slots 3B and 4B.

Memory		Slot			
		1A	2A	3B	4B
Standard	1024 MB	1024MB	Empty	Empty	Empty
Optional	2048 MB	512 MB	512 MB	512 MB	512 MB
Maximum	4,096 MB	1024 MB	1024 MB	1024 MB	1024 MB

Following are memory options available from HP:

- 1024MB of Advanced ECC PC3200 DDR SDRAM DIMM Memory Kit (1 x 1024 MB) 354563-B21
- 512MB of Advanced ECC PC3200 DDR SDRAM DIMM Memory Kit (1 x 512 MB) 354560-B21

## Storage



- 1- 2 Two 3.5" x 1" SATA or SCSI non-hot plug drive bays
- A Removable 1.44 MB Diskette Drive Assembly Kit
- B Optional CD-ROM/DVD Drive Assembly Kit

## Drive Support

	Quantity Supported	Position Supported	Controller
<b>Removable Media</b>			
1.44-MB Diskette Drive	Up to 1	A	Integrated
Low-profile IDE (ATAPI) CD-ROM Drive	Up to 1	B	Integrated IDE (ATAPI)
Low-profile IDE DVD-ROM Drive	Up to 1	B	Integrated IDE

## Hard Drives

### Ultra320 SCSI Non-Hot Plug Drives

	Quantity Supported	Position Supported	Controller
<b>1-inch</b>			
72.8-GB 10,000 rpm 36.4-GB 15,000 rpm	Up to 2	1-2	64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2 Smart Array 5304/128 Controller Smart Array 5304/256 Controller 64-bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS

## Serial ATA Drives

	Quantity Supported	Position Supported	Controller
<b>1-inch</b>			
250-GB 7,200 rpm 160-GB 7,200 rpm 80-GB 7,200 rpm	Up to 2	1-2	HP embedded 2 Port SATA Controller with RAID 0/1 support

## Storage

### External Storage

	Quantity Supported	Position Supported	Host Controller or Adapter
Modular Smart Array 30 Family	Up to 14	External	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 500 G2	1	External	Please see the Modular Smart Array 500 QuickSpecs for the latest list of supported HBAs: <a href="http://www.hp.com/go/msa500">http://www.hp.com/go/msa500</a>
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 1000: <a href="http://h18000.www1.hp.com/products/quickspecs/11033_div/11033_div.HTML">http://h18000.www1.hp.com/products/quickspecs/11033_div/11033_div.HTML</a> (Worldwide)			

### Maximum Storage Capacity - (Enclosure with SCSI models)

Internal	145.6 GB (2 x 72.8 GB 1" SCSI)
External	4.20 TB (1 x (14 x 300 GB 1" Ultra320 Drives))
Total	4.35 TB

**NOTE:** In order to implement integrated SATA RAID with Smart Start 7.2, purchase of floppy drive is required.

### Maximum Storage Capacity - (SATA Enclosure with SATA models)

Internal	500 GB (2 x 250 GB 1" SATA)
External	3.00 TB (1 x (12 x 250 GB 1" SATA Drives))
Total	3.50 TB

**NOTE:** In order to implement integrated SATA RAID with Smart Start 7.2, purchase of floppy drive is required.

**NOTE:** The External capacity section relates to the HP StorageWorks Modular Smart Array 20.

### 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://h18000.www1.hp.com/products/quickspecs/North\\_America/10233.html](http://h18000.www1.hp.com/products/quickspecs/North_America/10233.html) (North America)  
<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 & Tape Libraries listed below, please see the following:

[http://h18000.www1.hp.com/products/quickspecs/North\\_America/10809.html](http://h18000.www1.hp.com/products/quickspecs/North_America/10809.html) (North America)  
<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>

### Storage

	Quantity Supported	Position Supported	Controller
<b>HP StorageWorks Tape Drives, External</b> Ultrium 215 Ultrium 230 Ultrium 448 Ultrium 460 SDLT 320 Tape Drive	Up to 2	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS 64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2
<b>HP StorageWorks Tape Drives, External</b> Ultrium 960	1	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS 64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2
<b>HP StorageWorks Tape Drives, External</b> DAT 72 Tape Drive DAT 40 Tape Drive DAT 24 Tape Drive DLT VS80 Tape Drive	Up to 3	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
<b>HP StorageWorks Tape Drives, External</b> SDLT 320 Tape Drive	Up to 2	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
<b>HP StorageWorks Autoloaders, External</b> DAT 72x6 Tape Autoloader 1/8 Tape Autoloader SSL1016 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
<b>HP StorageWorks Rack-mount Tape Drive Enclosures</b> 1U Rack-Mount Kit 3U Rack-Mount Kit 5U Rack-Mount Kit	1 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

#### HP StorageWorks Tape Libraries, External

MSL6060 (Ultrium 460 - based)  
MSL6030 (Ultrium 460 - based)  
MSL5026S2 (SDLT 320-based)  
MSL5052S2 (SDLT 320-based)  
MSL5030 (Ultrium 230 - based)  
MSL5060 (Ultrium 230 - based)

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

#### HP StorageWorks ESL E-Series Tape Libraries

ESL 712e  
ESL 630e  
ESL 322e  
ESL 286e

Please reference the ESL E-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

### Technical Specifications

<b>System Unit</b>	<b>Dimensions</b> (HxWxD)	1.70 x 16.78 x 24.0 in (4.32 x 42.62 x 60.96 cm)	
	<b>Weight</b> (no drives installed)	24.0 lb (10.91 kg)	
	<b>Weight</b> (fully configured with two hard drives, four DIMM modules, and a PCI expansion board)	27.0 lb (12.27 kg)	
<b>Input Requirements</b>	Range Line Voltage	90 to 264 VAC	
	Nominal Line Voltage	100 to 120 VAC/220 to 240 VAC	
	Rated Input Current	6 A (100 to 120 VAC) to 3 A (200 to 240 VAC)	
	Rated Input Frequency	47 to 63 Hz	
	Rated Input Power	@ 115V input, Rated input power = 486W (assume output wattage=350W) @ 230V input, Rated input power = 479W (assume output wattage=350W)	
	<b>Power Supply Output</b>	Steady State Power	350 W (rated)
		<b>NOTE:</b> 1. +3.3V and +5V total O/P power 130W Maximum. 2. +3.3V, +5V and +12V total O/P power 324W Maximum.	
<b>Environmental Operating</b>	<b>Operating</b>	Ambient Temperature	50° to 95° F (10° to 35° C)
		Temperature Derating	1.8° F per 1000 ft to 10,000 ft (1° C per 300 m to 3000 m)
		Relative Humidity	10% to 90% (non-condensing)
		Maximum wet bulb temperature	82° F (28° C)
<b>Non-operating Storage</b>		Temperature	-22° to 140° F (-30 to 60° C)
		Relative Humidity	5% to 95% (non-condensing)
		Maximum wet bulb temperature	102° F (38.7° C)
<b>Non-operating Shipping</b>		Temperature	-22° to 140° F (-30 to 60° C)
		Relative Humidity	5% to 95% (non-condensing)
		Maximum wet bulb temperature	102° F (38.7° C)



### Technical Specifications

#### Acoustic Noise

Idle (Fixed Disk Drives Spinning)	
L WAd (BELS)	6.1
Bystander L pAm (dBA)	54
Operating (Random Seeks to Fixed Disks)	
L WAd (BELS)	6.2
Bystander L pAm (dBA)	52

Serial ATA Hard Drives    80 GB 7.2K  
349237-B21

<b>Capacity</b>	80,000 MB
<b>Height</b>	1.028 in/2.611cm
<b>Width</b>	4.0 in (10.16 cm)
<b>Interface</b>	Serial ATA
<b>Transfer Rate</b> Synchronous (Maximum)	1.5 Gb/s
<b>Seek Time</b> (typical reads, including settling)	Single Track            0.9 ms Average                    9.0 ms Full-Stroke                17.0 ms
<b>Physical Configuration</b>	Rotational Speed        7,200 rpm Bytes/Sector              512 Logical Blocks            156,301,488
<b>Operating Temperature</b>	41° to 131° F (5° to 55° C)

#### Power Supply

##### Input voltage specifications Input Specifications

Rated input voltage	100 VAC to 240 VAC
Rated input line	90 VAC to 264VAC
Frequency range	47 to 63 Hz
Rated input power	@ 115V input, Rated input power = 486W (assume output wattage=350W) @ 230V input, Rated input power = 479W (assume output wattage=350W)
Rated input current	6 A, 3 A (110 V, 220 V)
Steady state power	350W (rated)
<b>BTU Rating</b>	1710 BTU/hr
<b>Ambient temperature range</b>	Operating                50° to 118° F (10° to 48° C) Non-operating         -40° to 158° F (-40° to 70° C)
<b>Relative humidity</b> (non-condensing)	Operating                55% to 85% Non-operating         5% to 95%
<b>Dielectric voltage withstand</b>	Input to output        1800 VAC/minute Input to ground        1800 VAC/minute

## Technical Specifications

**Maximum Wet Bulb Temperature** 41.3C

<b>Embedded NC7782 Dual Port NIC</b>	<b>Network Interface</b>	10Base-T/ 100Base-TX/ 1000Base-TX		
	<b>Compatibility</b>	IEEE 802.3 10Base-T IEEE 802.3ab 1000Base-T IEEE 802.3u 100Base-TX		
	<b>Data Transfer Method</b>	64-bit/100MHz PCI-X		
	<b>Network Transfer Rate</b>	10Base-T (Half-Duplex)	10 Mb/s	
		10Base-T (Full-Duplex)	20 Mb/s	
		100Base-TX (Half-Duplex)	100 Mb/s	
		100Base-TX (Full-Duplex)	200 Mb/s	
		1000Base-TX (Half and Full-Duplex)	2000Mb/s	
	<b>Connector</b>	RJ-45		
	<b>Cable Support</b>	10Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)	
10/100/1000Base-TX		Category 5 UTP; up to 328 ft (100 m)		

<b>Integrated Dual Channel Serial ATA Controller</b>	<b>Simultaneous drive transfer channels</b>	2 channels	
	<b>Transfer rate synchronous (maximum theoretical)</b>	150 MB/s per channel; 300MB/s in RAID 0 pair	
	<b>Data transfer method</b>	Intel® 82801FR Integrated Serial ATA Host Controller (non-RAID mode) Intel® 82801FR Integrated Serial ATA Host Controller (RAID Mode)	
	<b>Drive support</b>	Serial ATA	
	<b>Data transfer modes</b>	Legacy Mode	
		Combined Mode	
	<b>Protocol</b>	Serial ATA	
	<b>Feature</b>	NCQ (Native Command Queuing);AHCI (Advanced Host Controller Interface)	

### Technical Specifications

<b>Integrated Serial ATA Controller</b>	<b>Transfer rate synchronous (maximum)</b>	150 MB/s per channel; 300MB/s in RAID 0 pair
	<b>Protocol</b>	Serial ATA
	<b>Drive support</b>	HP Universal Serial ATA
	<b>Data transfer modes</b>	ATA data-transfer modes supported SATA 1.0, SATA II PIO modes 0-4 Multiword DMA modes 0-2 Ultra DMA modes 0-6
<b>RAID levels</b>		0, 1
<b>Feature</b>		Supports Pre-Failure Warranty of SATA Hard Drives Support for Systems Insight Manager Supports multiple logical volumes Setup through ROM based Array Configuration Utility Installation scripting support
<b>OS Support</b>		Microsoft Windows 2000 Server Microsoft Windows Server 2003 Novell NetWare Linux (Red Hat, SuSE, UnitedLinux)

**NOTE:** This controller does not support LED functions  
This controller does not support Hot Plug functions

© Copyright 2005 Hewlett-Packard Development Company, L.P.

The information contained herein is subject to change without notice.

Microsoft and Windows NT are US registered trademarks of Microsoft Corporation. Intel is a US registered trademark of Intel Corporation.

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.