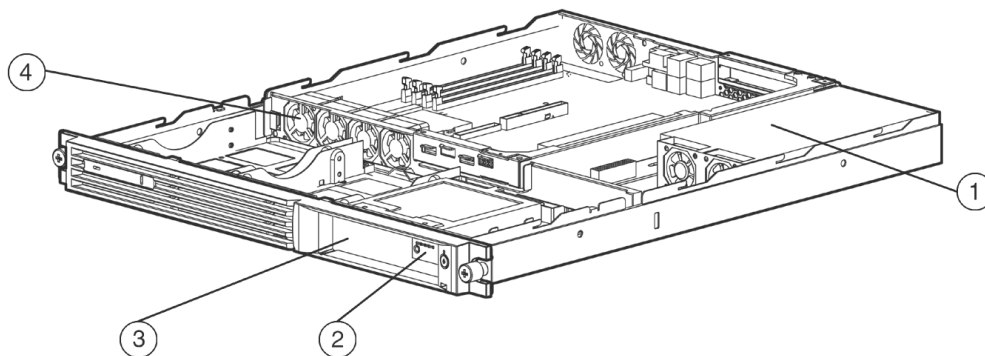


### Overview



1. Power Supply
2. LED Indicators
3. Removable CD-ROM/Diskette Drive Assembly Option Kit (included in some models)
4. Fan Assembly

### What's New

- Intel® Pentium 4 - 3.06-GHz FC-PGA (Flip Chip-Pin Grid Array) processor (single capability) with 512-KB level 2 cache with Hyper-Threading technology

### At a Glance

- Intel Pentium 4 - 3.06GHz, with Hyper-Threading technology, 2.66-GHz or 2.26-GHz or FC-PGA (Flip Chip-Pin Grid Array) processor (single capability) with 512-KB level 2 cache
- The ProLiant DL320 G2 is the cost-effective 1U, 1-way server for flexibly deploying and managing front-end and single-function applications
- 1U Rack form factor (1.75")
- ServerWorks CMIC-SL Chipset with 533-MHz Front Side Bus
- 128-MB PC2100 ECC DDR SDRAM Memory, expandable to 4 GB
- One full-length 64-bit/33-MHz PCI slot available
- Two NC7760 PCI Gigabit Server Adapters (embedded)
- Integrated Dual Channel Ultra ATA/100 Adapter with Integrated ATA RAID (0, 1)
- Optional Slotless Single Channel Wide Ultra3 SCSI Controller Module
- Internal storage capacity of up to 160 GB in ATA Models (2 x 80 GB 1" ATA/100 Non-Hot Plug Drives) or 72GB (2 x 36GB 1" non hot plug SCSI)
- 180-Watt PFC Power Supply
- Front and Rear Unit Identification switches (UID)
- Exceptional serviceability with optional sliding rails, cable management and in-rack toolless service ability access Automatic Server Recovery (ASR), Insight Manager and SmartStart
- 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. Consult the HP Customer Support Center at 1-800-345-1518 for details.

### Standard Features

<b>Processor</b>	Intel Pentium 4 - 3.06-GHz (FC-PGA) Processor (With Hyper-Threading technology) Intel Pentium 4 - 2.66-GHz (FC-PGA) Processor Intel Pentium 4 - 2.26-GHz (FC-PGA) Processor	
<b>Chipset</b>	ServerWorks GC-SL Chipset with 533-MHz Front Side Bus <b>NOTE:</b> For more information regarding ServerWorks, please see the following URL: <a href="http://www.serverworks.com/products/overview.html">http://www.serverworks.com/products/overview.html</a> .	
<b>Memory</b>	Standard	128 MB (PC2100-MHz Registered ECC DDR SDRAM DIMM memory)
	Maximum	4 GB
<b>Network Controller</b>	Two NC7760 PCI Gigabit Server Adapters (embedded)	
<b>Expansion Slots</b>	I/O (1 Total, 1 available) 64-bit/33 MHz PCI 1	PCI Voltage: 3.3 Volt or universal cards
<b>Storage Controllers</b>	Integrated Dual Channel Ultra ATA/100 Adapter with Integrated ATA RAID 0, 1	
<b>Storage</b>	Diskette Drives	1.44 MB (included in some models) <b>NOTE:</b> CD-ROM/Diskette Drive Assembly Option Kit 301048-B21 and DVD-ROM/Diskette Option Kit 268494-B21 are available
	CD-ROM	24x IDE (ATAPI) Low-Profile CD-ROM Drive (included in some models) <b>NOTE:</b> CD-ROM/Diskette Drive Assembly Option Kit 301048-B21 and DVD-ROM/Diskette Option Kit 268494-B21 are available
	Hard Drives	One of the following: (depending on model) None 80-GB ATA drive
	Maximum Internal Storage	One of the following: (depending on model)  160 GB (2 x 80-GB Ultra ATA/100 7,200 rpm non-hot plug 1" drives)
<b>Interfaces</b>	Serial	1
	USB	2 <b>NOTE:</b> Please see the following URL for additional information regarding USB support: <a href="http://www.compaq.com/products/servers/platforms/usb-support.html">http://www.compaq.com/products/servers/platforms/usb-support.html</a> .
	Graphics	1
	Keyboard	1
	Mouse	1
	Network RJ-45	2
<b>Graphics</b>	Integrated ATI RAGE XL Video Controller with 8-MB SDRAM Video Memory	
<b>Form Factor</b>	Rack (1U), (1.75 in/4.45 cm)	

### Standard Features

#### ProLiant Essentials Foundation Pack Software

Insight Manager 7 and HP Systems Insight Manger

Insight Manager 7 and HP's new HP Systems Insight Manager help 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. Insight Manager 7 and HP Systems Insight Manager are both easy to set up work with the Insight Management Agents, integrated Light-Out and Remote Insight Light-Out Edition, and Version Control Agents to deliver robust fault, configuration, and asset management as well as remote administration. With HP Systems Insight Manager customers will also be able to take advantage of role-based security; the ability to manage ProLiant, Integrity, and HP9000 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 Systems Insight Manager visit <http://www.hp.com/go/hpsim>

SmartStart

SmartStart is a tool that simplifies server setup, providing a rapid way to deploy reliable and consistent server configurations. For more information, please visit the SmartStart Web site at <http://www.hp.com/servers/smartstart>. SmartStart version supported (minimum): SmartStart 5.00.

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 <http://www.hp.com/servers/manage>.

ActiveUpdate

Active Update is a web-based application that keeps IT managers directly connected to HP for proactive notification and delivery of the latest software updates.

ROMPaq, support software, and configuration utilities

The latest software, drivers, and firmware fully optimized and tested for your ProLiant server and options.

Survey Utility and diagnostics utilities

The most advanced configuration analysis, reporting and troubleshooting utilities used by HP and at your fingertips.

Optional ProLiant Essentials Value Packs

Optional software offerings that selectively extend the functionality of an Adaptive Infrastructure to address specific business problems and needs:

- Rapid Deployment Pack – an automated solution for multi-server deployment and provisioning, enabling companies to quickly and easily adapt to changing business demands.
- 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.
- 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.

**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**

PCI 2.2 Compliant  
PXE Support  
WOL Support  
Microsoft® Logo certifications  
USB 1.1

**Intelligent Manageability**

Automatic Server Recovery (ASR)  
Remote Insight Lights-Out Edition II (optional)  
Insight Manager 7  
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 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 180-Watt PFC Power Supply, CE Mark Compliant

**System Fans**

6 fans ship standard. 6 total supported internally.

**Ultra Thin Rack Deployment Overview**

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

**Required Cabling**

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

**OS Support**

Microsoft Windows NT® Server  
Microsoft Windows 2000 Server  
Windows Server 2003  
LINUX (Red Hat, SuSE, UnitedLinux)

**NOTE:** Support differences will exist between the ATA 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: <ftp://ftp.compaq.com/pub/products/servers/os-support-matrix-310.pdf>.

**NOTE:** For an up-to-date listing of the latest drivers available for the HP ProLiant DL320, please see: <http://www.compaq.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>.

### 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 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://www5.compaq.com/products/servers/ProLiantdl320/index.html>.

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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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#### Service and Support

HP Services provides a three-year, limited warranty, including Pre-Failure Warranty (coverage of hard drives, memory and processors) fully supported by a worldwide network of resellers and service providers. HP technical assistance is available 7 x 24, toll free in the United States and Canada. Telephone support services may be covered under warranty or available for an additional fee.

**NOTE:** Limited Warranty includes 3 year Parts, 1 year Labor, 1-year on-site support.

A full range of HP Care Pack packaged hardware and software services:

- Installation and start up
- Extended coverage hours and enhanced response times
- System management and performance services
- Availability and recovery services

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

Please see the following URL regarding Warranty Information For Your HP Products:

<http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html>

For additional information regarding Worldwide Limited Warranty and Technical Support, please see the following URL: <ftp://ftp.compaq.com/pub/supportinformation/ejourney/176738.pdf>.

**NOTE:** Certain restrictions and exclusions apply. Consult the HP Customer Support Center at 1-800-345-1518 for details.

### Models

<b>DL320R02 3.06-512 KB, 128 MB, ATA without CD/Floppy</b> <i>336549-xx1</i>	<b>Processor(s)</b>  <b>Cache Memory</b> <b>Memory</b>  <b>Network Controller</b> <b>Storage Controller</b> <b>Hard Drives</b> <b>Cache Accelerator</b> <b>Optical Drive</b> <b>Diskette Drive</b> <b>Form Factor</b>	Intel Pentium 4 - 3.06-GHz (FC-PGA) Processor standard (With Hyper-Threading technology) 512-KB level 2 cache 128-MB (Standard) to 4-GB (Maximum) PC2100 Registered ECC DDR SDRAM DIMM Memory Two - NC7760 PCI Gigabit Server Adapters (embedded) Integrated Dual Channel Ultra ATA/100 Adapter with Integrated ATA RAID 0, 1 None ship standard 160-GB maximum (with optional hard drives) Optional Optional Rack (1U), (1.75 in/4.45 cm)
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<b>DL320R02 P3.06-512 KB, 128 MB, ATA 80 GB with CD/Floppy</b> <i>336549-xx2</i>	<b>Processor(s)</b>  <b>Cache Memory</b> <b>Memory</b>  <b>Network Controller</b> <b>Storage Controller</b> <b>Hard Drives</b> <b>Cache Accelerator</b> <b>Optical Drive</b> <b>Diskette Drive</b> <b>Form Factor</b>	Intel Pentium 4 - 3.06-GHz (FC-PGA) Processor standard (With Hyper-Threading technology) 512-KB level 2 cache 128-MB (Standard) to 4-GB (Maximum) PC2100 Registered ECC DDR SDRAM DIMM Memory Two - NC7760 PCI Gigabit Server Adapters (embedded) Integrated Dual Channel Ultra ATA/100 Adapter with Integrated ATA RAID 0, 1 One 80-GB Ultra ATA/100 7,200 rpm non-hot plug 1" drive 160-GB maximum (with optional hard drives) 24x IDE (ATAPI) CD-ROM Drive (Low-Profile) 1.44 MB Floppy Rack (1U), (1.75 in/4.45 cm)
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<b>DL320R02 P2.66-512 KB, 128 MB, ATA without CD/Floppy</b> <i>322544-xx1</i>	<b>Processor(s)</b>  <b>Cache Memory</b> <b>Memory</b>  <b>Network Controller</b> <b>Storage Controller</b> <b>Hard Drives</b> <b>Cache Accelerator</b> <b>Optical Drive</b> <b>Diskette Drive</b> <b>Form Factor</b>	Intel Pentium 4 - 2.66-GHz (FC-PGA) Processor standard 512-KB level 2 cache 128-MB (Standard) to 4-GB (Maximum) PC2100 Registered ECC DDR SDRAM DIMM Memory Two - NC7760 PCI Gigabit Server Adapters (embedded) Integrated Dual Channel Ultra ATA/100 Adapter with Integrated ATA RAID 0, 1 None ship standard 160-GB maximum (with optional hard drives) Optional Optional Rack (1U), (1.75 in/4.45 cm)
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### Models

<b>DL320R02 P2.66-512 KB, 128 MB, ATA 80 GB with CD/Floppy</b> <i>322544-xx2</i>	<b>Processor(s)</b> <b>Cache Memory</b> <b>Memory</b>  <b>Network Controller</b> <b>Storage Controller</b> <b>Hard Drives</b> <b>Internal Storage</b> <b>Optical Drive</b> <b>Diskette Drive</b> <b>Form Factor</b>	Intel Pentium 4 - 2.66-GHz (FC-PGA) Processor standard 512-KB level 2 cache 128-MB (Standard) to 4-GB (Maximum) PC2100 Registered ECC DDR SDRAM DIMM Memory Two - NC7760 PCI Gigabit Server Adapters (embedded) Integrated Dual Channel Ultra ATA/100 Adapter with Integrated ATA RAID 0, 1 One 80-GB Ultra ATA/100 7,200 rpm non-hot plug 1" drive 160-GB maximum (with optional hard drives) 24x IDE (ATAPI) CD-ROM Drive (Low-Profile) 1.44 MB Floppy Rack (1U), (1.75 in/4.45 cm)
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<b>DL320R02 P2.26-512 KB, 128 MB, ATA without CD/Floppy</b> <i>289349-xx1</i>	<b>Processor(s)</b> <b>Cache Memory</b> <b>Memory</b>  <b>Network Controller</b> <b>Storage Controller</b> <b>Hard Drives</b> <b>Internal Storage</b> <b>Optical Drive</b> <b>Diskette Drive</b> <b>Form Factor</b>	Intel Pentium 4 - 2.26-GHz (FC-PGA) Processor standard 512-KB level 2 cache 128-MB (Standard) to 4-GB (Maximum) PC2100 Registered ECC DDR SDRAM DIMM Memory Two - NC7760 PCI Gigabit Server Adapters (embedded) Integrated Dual Channel Ultra ATA/100 Adapter with Integrated ATA RAID 0, 1 None ship standard 160-GB maximum (with optional hard drives) Optional Optional Rack (1U), (1.75 in/4.45 cm)
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<b>DL320R02 P2.26-512 KB, 128 MB, ATA 80 GB with CD/Floppy</b> <i>289349-xx2</i>	<b>Processor(s)</b> <b>Cache Memory</b> <b>Memory</b>  <b>Network Controller</b> <b>Storage Controller</b> <b>Hard Drives</b> <b>Internal Storage</b> <b>Optical Drive</b> <b>Diskette Drive</b> <b>Form Factor</b>	Intel Pentium 4 - 2.26-GHz (FC-PGA) Processor standard 512-KB level 2 cache 128-MB (Standard) to 4-GB (Maximum) PC2100 Registered ECC DDR SDRAM DIMM Memory Two - NC7760 PCI Gigabit Server Adapters (embedded) Integrated Dual Channel Ultra ATA/100 Adapter with Integrated ATA RAID 0, 1 One 80-GB Ultra ATA/100 7,200 rpm non-hot plug 1" drive 160-GB maximum (with optional hard drives) 24x IDE (ATAPI) CD-ROM Drive (Low-Profile) 1.44 MB Floppy Rack (1U), (1.75 in/4.45 cm)
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<b>Country Code Key</b>	XX=00	NA
	XX=29	Japan
	XX=37	APD
	XX=42	EURO
	XX=AA	PRC

### Options

<b>ProLiant DL320 Unique Options</b>	DL320 G2 Slotless SCSI module with cable	283533-B21
	CD-RW/DVD-ROM/Floppy Combo Option kit	343791-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. <b>NOTE:</b> Rapid Deployment pack is now available in Linux only environments.	267196-B21
	Rapid Deployment Pack, 1 User, V1.x (Japan) <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.	267196-291
	Rapid Deployment Pack, 10 Users, V1.x <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.	269817-B21
	Rapid Deployment Pack, 10 Users, V1.x (Japan) <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.	269817-291
	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) <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> .	303284-B21
<b>Memory (DIMMs)</b>	1024-MB PC2100 Registered ECC DDR SDRAM DIMM Memory Kit	287497-B21
	512-MB PC2100 Registered ECC DDR SDRAM DIMM Memory Kit	287496-B21
	256-MB PC2100 Registered ECC DDR SDRAM DIMM Memory Kit	287495-B21
	128-MB PC2100 Registered ECC DDR SDRAM DIMM Memory Kit	287494-B21
<b>Internal Storage</b>	CD-ROM/Diskette Drive Assembly Option Kit	301048-B21
	CD-RW/DVD-ROM/Floppy Combo Option kit	343791-B21
	DVD-ROM/Diskette Drive Assembly Option Kit	268494-B21
	ProLiant DL320 Wide Ultra3 SCSI Cable Option Kit <b>NOTE:</b> The SCSI Cable Option Kit (212690-B21) is required if you are adding PCI SCSI or Array card.	212690-B21
	DL320 G2 Slotless SCSI module with cable	283533-B21



### Options

<b>Hard Drives</b>	<p><b>Wide Ultra320 – Universal Non-Hot Plug</b></p> <p>36-GB U320 10,000 rpm Non-Hot Plug Hard Drive (1") 271832-B21</p> <p><b>NOTE:</b> Please see the Hard Drive QuickSpecs for Technical Specifications such as capacity, height, width, interface, transfer rate, seek time, physical configuration, and operating temperature:</p> <p><b>U320 Hard Drive QS:</b>  <a href="http://h18000.www1.hp.com/products/quickspecs/11531_div/11531_div.HTML">http://h18000.www1.hp.com/products/quickspecs/11531_div/11531_div.HTML</a> (Worldwide)  <a href="http://h18000.www1.hp.com/products/quickspecs/11531_na/11531_na.HTML">http://h18000.www1.hp.com/products/quickspecs/11531_na/11531_na.HTML</a> (North America)</p> <p><b>SCSI Hard Drive QS:</b>  <a href="http://h18000.www1.hp.com/products/quickspecs/10260_div/10260_div.HTML">http://h18000.www1.hp.com/products/quickspecs/10260_div/10260_div.HTML</a> (Worldwide)  <a href="http://h18000.www1.hp.com/products/quickspecs/10260_na/10260_na.HTML">http://h18000.www1.hp.com/products/quickspecs/10260_na/10260_na.HTML</a> (North America)</p> <p><b>ATA100 Hard Drive QS:</b>  <a href="http://h18000.www1.hp.com/products/quickspecs/11361_div/11361_div.HTML">http://h18000.www1.hp.com/products/quickspecs/11361_div/11361_div.HTML</a> (Worldwide)  <a href="http://h18000.www1.hp.com/products/quickspecs/11361_na/11361_na.HTML">http://h18000.www1.hp.com/products/quickspecs/11361_na/11361_na.HTML</a> (North America)</p> <p><b>ATA/100 – Non-Hot Plug</b></p> <p>80-GB ATA/100 7,200 rpm Drive (1") 278424-B21</p> <p>40-GB ATA/100 7,200 rpm Drive (1") 230534-B21</p>
<b>Storage Controllers</b>	<p>Smart Array 532 Controller 225338-B21</p> <p><b>NOTE:</b> Supports Wide Ultra2/3 SCSI drives only. If cabling to internal drives, you must first disable the integrated controller module, and use the Wide Ultra3 SCSI cable option kit 212690-B21.</p> <p>Smart Array 532 Controller (Japan) 225338-291</p> <p><b>NOTE:</b> Supports Wide Ultra2/3 SCSI drives only. If cabling to internal drives, you must first disable the integrated controller module, and use the Wide Ultra3 SCSI cable option kit 212690-B21.</p> <p>Smart Array 5302/128 Controller 283552-B21</p> <p><b>NOTE:</b> Supports Wide Ultra2/3 SCSI drives only. If cabling to internal drives, you must first disable the integrated controller module, and use the Wide Ultra3 SCSI cable option kit 212690-B21.</p> <p>Smart Array 5302/128 Controller (Japan) 283552-291</p> <p><b>NOTE:</b> Supports Wide Ultra2/3 SCSI drives only. If cabling to internal drives, you must first disable the integrated controller module, and use the Wide Ultra3 SCSI cable option kit 212690-B21.</p> <p>Smart Array 5304/256 Controller 283551-B21</p> <p><b>NOTE:</b> Supports Wide Ultra2/3 SCSI drives only. If cabling to internal drives, you must first disable the integrated controller module, and use the Wide Ultra3 SCSI cable option kit 212690-B21.</p> <p>Smart Array 5304/256 Controller (Japan) 283551-291</p> <p><b>NOTE:</b> Supports Wide Ultra2/3 SCSI drives only. If cabling to internal drives, you must first disable the integrated controller module, and use the Wide Ultra3 SCSI cable option kit 212690-B21.</p> <p>Smart Array 641 Controller 291966-B21</p> <p>Smart Array 642 Controller 291967-B21</p> <p>Ultra3 Channel Expansion Module for Smart Array 5300 Controller 153507-B21</p> <p>128-MB Cache Module for Smart Array 5302 Controller 153506-B21</p> <p>256-MB Battery-Back Cache Module 254786-B21</p> <p><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</p> <p>64 MB Battery Backed Write Cache Enabler 291969-B21</p> <p><b>NOTE:</b> This 64 MB BBWC supports the Smart Array 641 Controller and Smart Array 642 Controller.</p> <p>64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter 268351-B21</p>

### Options

**NOTE:** 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.

**NOTE:** 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

**NOTE:** 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.

**NOTE:** This adapter will run at 33-MHz speeds due to the 33-MHz PCI Bus.

**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/10851\\_div/10851\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/10851_div/10851_div.HTML) (Smart Array 532)

[http://h18000.www1.hp.com/products/quickspecs/10640\\_div/10640\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/10640_div/10640_div.HTML) (Smart Array 5300 Series)

[http://h18000.www1.hp.com/products/quickspecs/11328\\_div/11328\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/11328_div/11328_div.HTML) (Smart Array 5312)

[http://h18000.www1.hp.com/products/quickspecs/11563\\_div/11563\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/11563_div/11563_div.HTML) (Smart Array 641)

[http://h18000.www1.hp.com/products/quickspecs/11563\\_div/11563\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/11563_div/11563_div.HTML) (Smart Array 642)

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

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

#### Communications

NC3123 Fast Ethernet NIC PCI 10/100 WOL

174830-B21

NC6170 Dual Port PCI-X 1000SX Gigabit Server Adapter

313879-B21

NC6770 PCI-X Gigabit Server Adapter, 1000-SX

244949-B21

NC7770 PCI-X Gigabit Server Adapter

244948-B21

NC7170 Dual Port PCI-X 1000T Gigabit Server Adapter

313881-B21

**NOTE:** Any NC31XX, NC61XX, NC71XX or NC77XX NIC can be used for redundancy with the embedded NC7760 Network Controller.

#### Management Options

Remote Insight Lights-Out Edition II (NA, LA)

227251-001

Remote Insight Lights-Out Edition II (EMEA)

227251-021

Remote Insight Lights-Out Edition II (ROW)

227251-371

#### Security

HP/Atalla AXL600L SSL Accelerator Card for ProLiant Servers

524545-B21

Compaq AXL300 Accelerator PCI Card (HW SSL Encryption) for ProLiant Servers

227933-B21

### Options

#### Monitors

##### **Essential Series**

Compaq S9500 CRT Monitor (19-inch, Carbon/Silver)	261615-XXX
Compaq S7500 CRT Monitor (17-inch, Carbon/Silver)	261606-XXX
Compaq S5500 CRT Monitor (15-inch Carbon/Silver)	261602-XXX
Compaq TFT1501 Flat Panel Monitor (15-inch, Carbon/Silver, North America)	301042-003
Compaq TFT1501 Flat Panel Monitor (15-inch, Carbon/Silver, Outside North America)	P4825D-XXX
Compaq TFT1701 Flat Panel Monitor (17-inch, Carbon/Silver, North America)	292847-003
Compaq TFT1701 Flat Panel Monitor (17-inch, Carbon/Silver, Outside North America)	P9019A-XXX

##### **Advantage Series**

Compaq V7550 CRT Color Monitor (17-inch, Carbon/Silver)	261611-XXX
Compaq TFT1720 Flat Panel Monitor (17-inch, Carbon/Silver, North America)	295926-003
Compaq TFT1720 Flat Panel Monitor (17-inch, Carbon/Silver, outside North America)	D5064D-XXX
Compaq FT1720M Flat Panel Monitor (17-inch, Carbon/Silver, includes speaker, USB port, headphone, North America)	301958-003
Compaq TFT1720M Flat Panel Monitor (17-inch, Carbon/Silver, includes speaker, USB port, headphone, outside North America)	D5064P-XXX
Compaq TFT1520 Flat Panel Monitor (15-inch, Carbon/Silver, North America)	295925-003
Compaq TFT1520 Flat Panel Monitor (15-inch, Carbon/Silver, outside North America)	D5063D-XXX
Compaq TFT1520M Flat Panel Monitor (15-inch, Carbon/Silver includes speaker, USB port, headphone, North America)	301957-003
Compaq TFT1520M Flat Panel Monitor (15-inch, Carbon/Silver includes speaker, USB port, headphone, outside North America)	D5063P-XXX

##### **Performance Series**

HP P930 CRT Monitor (19-inch, Flat-screen, Carbon/Silver, North America)	302268-003
HP P930 CRT Monitor (19-inch, Flat-screen, Carbon/Silver, Outside North America)	P909W-XXX
HP P1130 CRT Monitor (21-inch, Flat-screen, Carbon/Silver, North America)	302270-003
HP P1130 CRT Monitor (21-inch, Flat-screen, Carbon/Silver, Outside North America)	P4819-XXX
HP L1825 Flat Panel Monitor (18-inch, Carbon/Silver, North America)	303486-003
HP L1825 Flat Panel Monitor (18-inch, Carbon/Silver, Outside North America)	P9021W-XXX
HP L2025 Flat Panel Monitor (20-inch, Carbon/Silver, North America)	303102-003
HP L2025 Flat Panel Monitor (20-inch, Carbon/Silver, Outside North America)	P4831W-XXX
Compaq TFT1825 Flat Panel Monitor (18-inch, Carbon/Silver, North America)	296751-003
Compaq TFT1825 Flat Panel Monitor (18-inch, Carbon/Silver, Outside North America)	P9021A-XXX
Compaq TFT2025 Flat Panel Monitor (20-inch, Carbon/Silver, North America)	285550-003
Compaq TFT2025 Flat Panel Monitor (20-inch, Carbon/Silver, Outside North America)	P4831D-XXX
TFT5110R Flat Panel Monitor (Carbon) (1U rack mountable)	281683-B21

**NOTE:** Monitors larger than 17" may be too heavy for use in rack systems.

### Options

#### Tape Drives

##### **External DAT Tape Drives**

HP StorageWorks 20/40-GB DAT DDS-4 Tape Drive, External (Carbon) (NA)	157770-002
HP StorageWorks 20/40-GB DAT DDS-4 Tape Drive, External (Int'l) (Carbon)	157770-B32
HP StorageWorks 20/40-GB DAT DDS-4 Tape Drive, External (Japan) (Carbon)	157770-292

**NOTE:** Please see the [20/40-GB DAT Tape Drive QuickSpecs](#) for additional options such as host bus adapters, controllers, cassettes, and for an up-to-date listing of the latest O/S Support details, please see the following:

[http://h18000.www1.hp.com/products/quickspecs/10426\\_div/10426\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/10426_div/10426_div.HTML) (Worldwide)  
[http://h18000.www1.hp.com/products/quickspecs/10426\\_na/10426\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/10426_na/10426_na.HTML) (North America)

##### **Internal and External DAT 72 Tape Backup Drive**

HP StorageWorks DAT 72 Tape Drive, External (Carbon) (NA)	Q1527A
HP StorageWorks DAT 72 Tape Drive Tape Drive, External (Carbon) (Int'l)	Q1528A

**NOTE:** Please see the [DAT 72 Tape Drive QuickSpecs](#) for additional options such as adapters, controllers, and cassettes, and for an up-to-date listing of the latest O/S Support details, please see the following:

[http://h18000.www1.hp.com/products/quickspecs/11597\\_div/11597\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/11597_div/11597_div.HTML) (Worldwide)  
[http://h18000.www1.hp.com/products/quickspecs/11597\\_na/11597\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/11597_na/11597_na.HTML) (North America)

##### **External LTO Ultrium Tape Drives**

HP StorageWorks Ultrium 215 Tape Drive for ProLiant, external (Carbon) NA	Q1544A
HP StorageWorks Ultrium 215 Tape Drive for ProLiant, external (Carbon) Int'l	Q1545A

**NOTE:** Please see the [HP StorageWorks Ultrium 230 Tape Drive QuickSpecs](#) for additional options such as controllers, and other related items, and for an up-to-date listing of the latest O/S Support details, please see the following:

[http://h18006.www1.hp.com/products/quickspecs/11678\\_div/11678\\_div.html](http://h18006.www1.hp.com/products/quickspecs/11678_div/11678_div.html) (Worldwide)  
[http://h18006.www1.hp.com/products/quickspecs/11678\\_na/11678\\_na.html](http://h18006.www1.hp.com/products/quickspecs/11678_na/11678_na.html) (North America)

HP StorageWorks Ultrium 230 Tape Drive for ProLiant, External (Carbon) (NA)	Q1516A
HP StorageWorks Ultrium 230 Tape Drive for ProLiant, External (Carbon) (Int'l)	Q1517A

**NOTE:** Please see the [HP StorageWorks Ultrium 230 Tape Drive QuickSpecs](#) for additional options such as controllers, and other related items, and for an up-to-date listing of the latest O/S Support details, please see the following:

[http://h18006.www1.hp.com/products/quickspecs/11415\\_div/11415\\_div.html](http://h18006.www1.hp.com/products/quickspecs/11415_div/11415_div.html) (Worldwide)  
[http://h18006.www1.hp.com/products/quickspecs/11415\\_na/11415\\_na.html](http://h18006.www1.hp.com/products/quickspecs/11415_na/11415_na.html) (North America)

HP StorageWorks Ultrium 460 tape drive for ProLiant, external (Carbon) (NA)	Q1519A
HP StorageWorks Ultrium 460 tape drive for ProLiant, external (Carbon) (Int'l)	Q1520A

**NOTE:** Please see the [HP StorageWorks Ultrium 460 Tape Drive QuickSpecs](#) for additional options such as controllers, and other related items, and for an up-to-date listing of the latest O/S Support details, please see the following:

[http://h18006.www1.hp.com/products/quickspecs/11530\\_div/11530\\_div.html](http://h18006.www1.hp.com/products/quickspecs/11530_div/11530_div.html) (Worldwide)  
[http://h18006.www1.hp.com/products/quickspecs/11530\\_na/11530\\_na.html](http://h18006.www1.hp.com/products/quickspecs/11530_na/11530_na.html) (North America)

##### **External AIT Tape Drives**

HP StorageWorks External AIT 35-GB, LVD Tape Drive (Carbon)	216885-001
HP StorageWorks External AIT 35-GB, LVD Tape Drive (Carbon) (Int'l)	216885-B31
HP StorageWorks External AIT 35-GB, LVD Tape Drive (Carbon) (Japan)	216885-291

**NOTE:** Please see the [AIT 35 GB, LVD Tape Drive QuickSpecs](#) for additional options such as adapters, controllers, and cassettes, and for an up-to-date listing of the latest O/S Support details, please see the following:

[http://h18000.www1.hp.com/products/quickspecs/10712\\_div/10712\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/10712_div/10712_div.HTML) (Worldwide)  
[http://h18000.www1.hp.com/products/quickspecs/10712\\_na/10712\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/10712_na/10712_na.HTML) (North America)

HP StorageWorks AIT 50-GB Tape Drive, External (Carbon) (NA)	157767-002
HP StorageWorks AIT 50-GB Tape Drive, External (Int'l) (Carbon)	157767-B32
HP StorageWorks AIT 50-GB Tape Drive, External (Japan) (Carbon)	157767-292
HP StorageWorks Rackmount AIT 50-GB, 3U (Single Drive)	274333-B21

**NOTE:** Please see the [AIT 50-GB Tape Drive QuickSpecs](#) for additional options such as adapters, controllers, and cassettes, and for an up-to-date listing of the latest O/S Support

### Options

details, please see the following:

[http://h18000.www1.hp.com/products/quickspecs/10425\\_div/10425\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/10425_div/10425_div.HTML) (Worldwide)

[http://h18000.www1.hp.com/products/quickspecs/10425\\_na/10425\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/10425_na/10425_na.HTML) (North America)

HP StorageWorks External AIT 100-GB Tape Drive (carbon) 249160-001

HP StorageWorks External AIT 100-GB Tape Drive (carbon) (Int'l) 249160-B31

**NOTE:** Please see the AIT 100-GB Tape Drive QuickSpecs for additional options such as adapters, controllers, and cassettes, and for an up-to-date listing of the latest O/S Support details, please see the following:

[http://h18000.www1.hp.com/products/quickspecs/11062\\_div/11062\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/11062_div/11062_div.HTML) (Worldwide)

[http://h18000.www1.hp.com/products/quickspecs/11062\\_na/11062\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/11062_na/11062_na.HTML) (North America)

#### **External DLT Tape Drives**

HP StorageWorks 40/80-GB DLT Tape Drive, External (Carbon) INTL 146197-B23

HP StorageWorks 40/80-GB DLT Tape Drive, External (Carbon) (Japan) 146197-293

HP StorageWorks Rackmount DLT 40/80, 3U (Single Drive) 274332-B21

HP StorageWorks Rackmount DLT 40/80, Dual-Drive, 3U (Two Drives) 274335-B21

HP StorageWorks Rackmount DLT 40/80, Tape Array III, 5U (Four Drives) 274337-B21

**NOTE:** Please see the 40/80-GB DLT Drive QuickSpecs for additional options such as host bus adapters, controllers, cassettes, and for an up-to-date listing of the latest O/S Support details, please see the following:

[http://h18000.www1.hp.com/products/quickspecs/10658\\_div/10658\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/10658_div/10658_div.HTML) (Worldwide)

[http://h18000.www1.hp.com/products/quickspecs/10658\\_na/10658\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/10658_na/10658_na.HTML) (North America)

#### **External DLT VS Tape Drives**

HP StorageWorks DLT VS 40/80 Tape Drive, External (Carbon) NA 280129-B22

HP StorageWorks DLT VS 40/80 Tape Drive, External (Carbon) INTL 280129-B31

HP StorageWorks DLT VS 40/80 Tape Drive, External (Carbon) Japan 280129-291

**NOTE:** Please see the DLT VS 40/80 Tape Drive QuickSpecs for additional options such as host bus adapters, controllers, cassettes, and for an up-to-date listing of the latest O/S Support details, please see the following:

[http://h18000.www1.hp.com/products/quickspecs/11403\\_div/11403\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/11403_div/11403_div.HTML) (Worldwide)

[http://h18000.www1.hp.com/products/quickspecs/11403\\_na/11403\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/11403_na/11403_na.HTML) (North America)

#### **External SDLT Tape Drives**

HP StorageWorks SDLT 160/320, External NA (carbon) 257319-001

HP StorageWorks SDLT 160/320, External INTL (carbon) 257319-B31

HP StorageWorks SDLT 160/320, External Japan (carbon) 257319-291

**NOTE:** Please see the SDLT 160/320-GB Tape Drive QuickSpecs for additional options such as adapters, controllers, and media, and for an up-to-date listing of the latest O/S Support details, please see the following:

[http://h18000.www1.hp.com/products/quickspecs/11406\\_div/11406\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/11406_div/11406_div.HTML) (Worldwide)

[http://h18000.www1.hp.com/products/quickspecs/11406\\_na/11406\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/11406_na/11406_na.HTML) (North America)

HP StorageWorks SDLT 110/220, External NA (carbon) 192103-002

HP StorageWorks SDLT 110/220, External INTL (carbon) 192103-B32

HP StorageWorks SDLT 110/220, External Japan (carbon) 192103-292

HP StorageWorks Rackmount SDLT 110/220, 3U (Single Drive) 274331-B21

HP StorageWorks Rackmount SDLT 110/220, Dual-Drive, 3U (Two Drives) 274334-B21

HP StorageWorks Rackmount SDLT 110/220, Tape Array III, 5U (Four Drives) 274336-B21

**NOTE:** Please see the SDLT 110/220-GB Tape Drive QuickSpecs for additional options such as adapters, controllers, and media, and for an up-to-date listing of the latest O/S Support details, please see the following:

[http://h18000.www1.hp.com/products/quickspecs/10772\\_div/10772\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/10772_div/10772_div.HTML) (Worldwide)

[http://h18000.www1.hp.com/products/quickspecs/10772\\_na/10772\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/10772_na/10772_na.HTML) (North America)

#### **1/8 Autoloader**

HP StorageWorks 1/8 Autoloader, Rackmount kit C9268R

### Options

#### **External AIT Autoloader**

HP StorageWorks AIT 35 GB Autoloader, Rackmount (Carbon) (NA)	280349-001
HP StorageWorks AIT 35 GB Autoloader, Rackmount (Carbon) (Int'l)	280349-B31

**NOTE:** Please see the AIT 35-GB Autoloader QuickSpecs for additional options such as adapters, controllers, and cassettes, and for an up-to-date listing of the latest O/S Support details, please see the following:

[http://h18000.www1.hp.com/products/quickspecs/11404\\_div/11404\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/11404_div/11404_div.HTML) (Worldwide)  
[http://h18000.www1.hp.com/products/quickspecs/11404\\_na/11404\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/11404_na/11404_na.HTML) (North America)

#### **Rackmount Tape Drive Kits**

3U Rackmount Kit	274338-B21
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**NOTE:** The 3U Rackmount Kit (PN 274338-B21) can support up to (2) full-height or (4) half-height tape drives and is compatible with multiple Single-Ended and LVD SCSI Tape Drives including the 12/24-GB DAT, 20/40-GB DAT, 20/40-GB DAT DDS-4 8 Cassette Autoloader, DAT72 GB AIT 35-GB LVD, AIT 50 GB, DLT VS 40/80, 40/80-GB DLT, SDLT 110/220-GB, SDLT 160/320-GB, Ultrium 215, Ultrium 230 and Ultrium 460 Tape Drives.

5U Rackmount Kit	274339-B21
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**NOTE:** The 5U Rackmount Kit (PN 274339-B21) can support up to (4) full-height tape drives and is compatible with all Ultrium/DLT/SDLT tape drives including the 40/80-GB DLT, SDLT 110/220-GB, SDLT 160/320-GB, Ultrium 230, and Ultrium 460 Tape Drives.

**NOTE:** Please see the Rackmount Tape Drive Kits QuickSpecs for additional information regarding these kits, please see the following:

[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)

#### **Rackmount Tape Drive Cable Kits**

LVD Cable Kit, VHDCI/HD68	168048-B21
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**NOTE:** For use with the 3U RM Storage Enclosure and DLT Tape Array III only.

LVD Cable Kit, HD68/HD68	242381-B21
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**NOTE:** For use with the 3U RM Storage Enclosure and DLT Tape Array III only.

### Tape Automation

#### **SSL2020 – AIT50 based library with up to 2 drives and 20 slots**

SSL2020 AIT Mini-Library 1 drive, 20 slot Table Top	175195-B21
SSL2020 AIT Mini-Library 2 drive, 20 slot Table Top	175195-B22
SSL2020 AIT Mini-Library 1 drive, 20 slot Rackmount	175196-B21
SSL2020 AIT Mini-Library 2 drive, 20 slot Rackmount	175196-B22
SSL2020 AIT Library Pass Thru with Transport	175312-B21

#### **Add-on drives and accessories**

SSL2020 AIT Library Pass Thru Extender	175312-B22
AIT 50GB Drive Add-On LVD Drive for SSL2020 AIT Library	175197-B21
19 Slot Magazine for SSL2020 AIT Library	175198-B21
AIT 50-GB Data Cassette (5 pack)	152841-001
AIT Cleaning Cassette	402374-B21

**NOTE:** Please see the SSL2020 Automated AIT Tape Library Solution QuickSpecs for additional information including Upgrade Kits, Accessories, and SCSI Cable Kits and additional options needed for a complete solution at:

[http://h18000.www1.hp.com/products/quickspecs/10580\\_na/10580\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/10580_na/10580_na.HTML) (North America)  
[http://h18000.www1.hp.com/products/quickspecs/10580\\_div/10580\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/10580_div/10580_div.HTML) (Worldwide)

### Options

<b>External Storage – Rack</b>	StorageWorks Enclosure Model 4314R (rack-mountable)	190209-001
	StorageWorks Enclosure Model 4314R (rack-mountable) (Int'l)	190209-B31
	StorageWorks Enclosure Model 4314R (rack-mountable) (Japan)	190209-291
	StorageWorks Enclosure Model 4354R (rack-mountable)	190211-001
	StorageWorks Enclosure Model 4354R (rack-mountable) (Int'l)	190211-B31
	StorageWorks Enclosure Model 4354R (rack-mountable) (Japan)	190211-291
	<b>NOTE:</b> The StorageWorks Enclosure 4300 Family support the Wide Ultra2/Ultra3 1" Hot Plug Hard Drives.	
	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

<b>HP StorageWorks Modular Smart Array 1000</b>	HP StorageWorks Modular Smart Array 1000	201723-B22
	Modular Smart Array 1000 Controller	218231-B22
	Modular Smart Array Fibre Channel I/O Module	218960-B21
	Modular Smart Array 1000 Fabric Switch	218232-B21
	Modular Smart Array 1000 Fibre Channel Adapter (FCA) 2101	245299-B21
	Modular Smart Array hub 2/3	286763-B21

**NOTE:** Please see the Modular Smart Array 1000 QuickSpecs for additional options and configuration information at

[http://h18000.www1.hp.com/products/quickspecs/11033\\_na/11033\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/11033_na/11033_na.HTML) (North America)

[http://h18000.www1.hp.com/products/quickspecs/11033\\_div/11033\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/11033_div/11033_div.HTML) (Worldwide)

<b>StorageWorks Modular Array 8000</b>	MA8000 60 Hz	175992-B21
	MA8000 50 Hz	175992-B22

**NOTE:** Options include controller, solution kits, ACS. MA8000 includes controller shelf, drive shelves and cabinet. Packaging upgrade to RA8000.

**NOTE:** Please see the StorageWorks MA8000 QuickSpecs for FC Hubs, FC switches, platform software, host adapters, disks and options for complete solutions at:

[http://h18000.www1.hp.com/products/quickspecs/10545\\_na/10545\\_na.HTML](http://h18000.www1.hp.com/products/quickspecs/10545_na/10545_na.HTML) (North America)

[http://h18000.www1.hp.com/products/quickspecs/10545\\_div/10545\\_div.HTML](http://h18000.www1.hp.com/products/quickspecs/10545_div/10545_div.HTML) (Worldwide)

**UPS and PDU Power Cord Matrix** *Please see the UPS and PDU Power Cord Matrix that lists cable descriptions, requirements, and specifications for UPS and PDU units.*  
<ftp://ftp.compaq.com/pub/products/servers/ProLiantstorage/power-protection/powercordmatrix.pdf>

### Options

<b>Uninterruptible Power Systems – Rack UPSs</b>	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
	Rack-Mountable UPS R6000 (6000VA, 6000 Watt) High Voltage (NA)	347207-001
	<b>NOTE: The UPS R6000 has a hardwired input.</b>	
	Rack-Mountable UPS R6000 (6000VA, 6000 Watt) High Voltage (Int'l)	347207-B31
	<b>NOTE: The UPS R6000 has a hardwired input.</b>	
	Rack-Mountable UPS R6000 (6000VA, 6000 Watt) High Voltage (Japan)	347207-291
	<b>NOTE: The UPS R6000 has a hardwired input.</b>	
	HP UPS R12000 XR, N+x (12KVA, 12KW) High Voltage (WW)	207552-B22
	<b>NOTE: The UPS R12000 XR has a hardwired input and output</b>	
	<b>NOTE: UPS R6000 has a hardwired input; and the UPS R12000 XR has a hardwired input and output connection.</b>	



### Options

<b>UPS Options</b>	SNMP Serial Port Card	192189-B21
	<b>NOTE:</b> Supports tower and rack UPS XR models. This card does not support the 500, 700, and 6000VA UPSs (non-XR models).	
	Six Port Card	192185-B21
	<b>NOTE:</b> Supports tower and rack UPS XR models. This card does not support the 500, 700, and 6000VA UPSs (non-XR models).	
	High to Low Voltage Transformer (250VA)	388643-B21
	<b>NOTE:</b> Supports R6000 UPS series only. 2.5 amps @ 125 Volts max output across two NEMA 5-15.	
	Extended Runtime Module, R1500 XR	218971-B21
	<b>NOTE:</b> 2U each, two ERM maximum.	
	Extended Runtime Module, R3000 XR	192188-B21
	<b>NOTE:</b> 2U each, one ERM maximum.	
	Extended Runtime Module, R6000	347224-B21
	<b>NOTE:</b> 3U each, two ERM maximum.	
	Extended Runtime Module, R12000 XR, 4U	217800-B21
	R1200 XR Backplate Receptacle Kit, (2) L6-30R (NA)	325361-001
	<b>NOTE:</b> The R12000 XR Backplate Kit has a hardwired input.	
	R1200 XR Backplate Receptacle Kit, (2) IEC-309R (WW)	325361-B21
	<b>NOTE:</b> The R12000 XR Backplate Kit has a hardwired input.	
SNMP-EN Adapter	347225-B21	
<b>NOTE:</b> 4U each, two ERM maximum.		
SNMP-EN Adapter	347225-B21	
<b>NOTE:</b> Supports R6000 UPS series only.		
Multi-Server UPS Card	123508-B21	
<b>NOTE:</b> Supports R6000 UPS series only.		
Scalable UPS Card	123509-B21	
<b>NOTE:</b> Supports R6000 UPS series only.		
<hr/>		
<b>Modular PDU Options</b>	Third Party Modular PDU Mounting Kit	310777-B21
	<b>NOTE:</b> This kit allows you to mount the Modular PDUs in (1U configuration only) in racks other than the 9000/10000 Series racks (any racks using the standard 19" rail, including the 7000 Series racks). For more details please refer the Modular PDU QuickSpecs.	
	4.5' IEC C 13 to IEC C14 PDU Jumper Cable (1 per pack)	142257-006
4.5' IEC C 13 to IEC C14 PDU Jumper Cable (15 per pack)	142257-007	
<hr/>		
<b>USB Options</b>	USB Easy Access Keyboard (Carbonite/Silver)	DC168B#
	USB Optical Scroll Mouse (Carbonite)	DD441B
	USB 1.44-MB External Diskette Drive (Carbonite)	DC141B

### Options

#### USB Easy Access Keyboard (Carbonite) Country Key Code

Dash #	Description	Dash #	Description
A2M	ICELAND	ABT	HE
AB0	TAWA	ABU	UK
AB1	KOR	ABV	ARA
AB2	PRC	ABX	FIN
AB6	FRA	ABY	DEN
AB7	GRK	ABZ	ITL
AB8	TURK	AC0	BEL
AB9	PORT	AC4	BRZ
ABA	US	ACB	RUSS
ABB	EURO	AKB	CZE
ABC	FCAN	AKC	HUNG
ABD	GR	AKD	POL
ABE	SP	AKL	THAI
ABF	FR	AKN	BHCSY
ABH	NL	AKR	SLOV
ABJ	Japan	ARK	ICELAND
ABM	LA	B15	KAZ
ABN	NOR	UUZ	SWISS
ABS	SW		

#### Rack Builder

Please see the Rack Builder for configuration assistance at <http://www.compaq.com/rackbuilder/>.

#### ProLiant DL320

#### Deployment Options

Third Party Cabinet Rack Option	174574-B21
Sliding Rails and Cable Management Solution Option	174575-B21
Telco Rack Option	174576-B21

### Options

<b>HP Rack 10000 Series</b> (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://www5.compaq.com/products/quickspecs/10995\\_div/10995\\_div.HTML](http://www5.compaq.com/products/quickspecs/10995_div/10995_div.HTML) (Worldwide)

[http://www5.compaq.com/products/quickspecs/10995\\_na/10995\\_na.HTML](http://www5.compaq.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>

<b>Rack Options for HP Rack 10000 Series</b>	Rack Blanking Panels – Graphite (Multi)	253214-B26
	<b>NOTE:</b> Contains one each of 1U, 2U, 4U and 8U.	
	Rack Blanking Panels – Graphite (1U)	253214-B21
	<b>NOTE:</b> The Rack Blanking Panels (PN 253214-B21) contains 10 each of (1U).	
	Rack Blanking Panels – Graphite (2U)	253214-B22
	<b>NOTE:</b> The Rack Blanking Panels (PN 253214-B21) contains 10 each of (2U).	
	Rack Blanking Panels – Graphite (3U)	253214-B23
	<b>NOTE:</b> The Rack Blanking Panels (PN 253214-B21) contains 10 each of (3U).	
	Rack Blanking Panels – Graphite (4U)	253214-B24
	<b>NOTE:</b> The Rack Blanking Panels (PN 253214-B21) contains 10 each of (4U).	
	Rack Blanking Panels – Graphite (5U)	253214-B25
	<b>NOTE:</b> The Rack Blanking Panels (PN 253214-B21) contains 10 each of (5U).	
	800mm Wide Stabilizer Kit (Graphite)	255488-B21
	<b>NOTE:</b> Supported by the Rack 10842 cabinet only.	
	600mm Stabilizer Kit – Graphite	246107-B21
	Baying Kit for Rack 10000 series (Carbon)	248929-B21
	42U Side Panel – Graphite Metallic	246099-B21
110V Fan Kit (Graphite)	257413-B21	
<b>NOTE:</b> Roof Mount Includes power cord with IEC320-C13 to Nema 5-15P.		
220V Fan Kit (Graphite)	257414-B21	
<b>NOTE:</b> Roof Mount Includes power cord with IEC320-C13 to Nema 6-15P.		
36U Side Panel – Graphite Metallic	246102-B21	
47U Side Panel – Graphite Metallic	255486-B21	

### Options

9000/10000 Series Offset Baying Kit (42U)	248931-B21
<p><b>NOTE:</b> This kit can be used to connect 9000 and 10000 series racks of the same U height together. Kit contents include hardware for connecting racks and a panel to cover the 100mm gap at the rear of the two racks.</p> <p><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>.</p>	
Ballast Option Kit	120672-B21
9000/10000 Series Offset Baying Kit (42U)	248931-B21
<p><b>NOTE:</b> This kit can be used to connect 9000 and 10000 series racks of the same U height together. Kit contents include hardware for connecting racks and a panel to cover the 100mm gap at the rear of the two racks.</p> <p><b>NOTE:</b> For additional information regarding Rack Cabinets, 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></p>	
Rack Rail Adapter Kit (25" depth)	120675-B21
100 kg Sliding Shelf	234672-B21
Monitor/Utility Shelf - Graphite	253449-B21
Depth Adjustable Fixed Rail	332558-B21
Cable Management D-Rings Kit	168233-B21
Console Management Controller (CMC) Option Kit	203039-B21
Console Management Controller (CMC) Sensors Option Kit	203039-B22
Console Management Controller (CMC) Locking Option Kit	203039-B23
Console Management Controller (CMC) Smoke Sensors Option Kit	203039-B24
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
Server Console Switch 1 x 4 port (100-230 VAC) (Int'l)	400336-B31
Server Console Switch 1 x 4 port (100-230 VAC) (Japan)	400336-291
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
Switch Box Connector Kit (115V)	144007-001
Switch Box Connector Kit (230V)	144007-002
Switch Box Connector Kit (high voltage) (Int'l)	144007-B33
TFT5600 Rack Keyboard Monitor	221546-xx1
<p><b>Country Code Key</b> (for TFT5600 RKM Rack Keyboard Monitor (PN 221546-xx1))</p>	

### Options

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

Local Access Cable Kit 232985-B21

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

**NOTE:** The 1U Rack Keyboard & Drawer (PN 257054-xx1) is to be used with the Keyboards for Racks with Trackball (PN 158649-xxx).

**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

Input Device Adjustable Rails 287139-B21

**NOTE:** Input Device Adjustable Rails (287139-B21) are for use with the TFT5110R, TFT5600RKM and integrated keyboard/drawer which is used in mounting into third party racks.

Input Device Telco Rail 287138-B21

**NOTE:** Input Device Adjustable Rails (287138-B21) are for use ONLY with the TFT5110R, TFT5600RKM and integrated keyboard/drawer which is used in mounting into third party racks.

Keyboard/Monitor/Mouse extension cables 169989-001

**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

<b>HP Factory Express</b>	<b>Factory Installation, Racking, and Customization Services</b>	
	Factory Express Server Configuration Level 1	293355-888
	<b>NOTE:</b> 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
	<b>NOTE:</b> 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
	<b>NOTE:</b> 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).	
	<b>NOTE:</b> 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
	<b>NOTE:</b> 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).	
	<b>NOTE:</b> 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
	<b>NOTE:</b> 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).	
	<b>NOTE:</b> Available on ProLiant rack models only.	
	<b>NOTE:</b> Factory Express Engineered Solution Level 6 is a custom solutions available through Factory Express. Please contact your local reseller or Account Manager.	

<b>Service and Support Offerings (HP Care Pack Services)</b>	<b>Hardware Services On-site Service</b>	
	Next Business Day On-site Service, 5-Day x 9-Hour Coverage, 3 Years (Canadian Part Number)	FP-ELXEC-36
	Next Business Day On-site Service, 5-Day x 9-Hour Coverage, 3 Years (U.S. Part Number)	102407-002
	Next Business Day On-site Service, 5-Day x 9-Hour Coverage, 3 Years (AP/EMEA Part Numbers)	U4479A U4479E
	4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years (Canadian Part Number)	FP-EL3EC-36
	4-Hour On-site Service, 5-Day x 13-Hour, 3 Years (U.S. Part Number)	331045-002
	4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years (AP/EMEA Part Numbers)	U4480A U4480E
	4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years (Canadian Part Number)	FP-EL7EC-36
	4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years (U.S. Part Number)	162675-002
	4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years (AP/EMEA Part Numbers)	U4481A U4481E
	6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years (Canadian Part Number)	FP-ELCEC-36
	6-Hour Call to Repair, On-site Service 7-Day x 24-Hour Coverage, 3 Years (U.S. Part Number)	331046-002

### Options

6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years (AP/EMEA Part Numbers)	U4482A U4482E
<b>Installation &amp; Start-up Services</b>	
Hardware Installation (Canadian Part Number)	FP-ELINS-EC
Hardware Installation (U.S. Part Number)	401791-002
Hardware Installation (AP/EMEA Part Numbers)	U4490A U4490E
Installation & Start-Up of a ProLiant server and Microsoft O/S per the Customer Description and/or Data Sheet. To be delivered on a scheduled basis 8am-5pm, M-F, excl. HP holidays. (U.S. Part Number)	240013-002
Installation & Start-Up of a ProLiant server and Microsoft O/S per the Customer Description and/or Data Sheet. To be delivered on a scheduled basis 8am-5pm, M-F, excl. HP holidays. (Canadian Part Number)	FM-MSTEC-01
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. (AP/EMEA Part Numbers)	U4491A U4491E
Installation & Start-Up of a ProLiant server and 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. (U.S. Part Number)	331051-002
Installation & Start-Up of a ProLiant server and 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. (Canadian Part Number)	FM-LSTEC-01
<b>Support Plus</b>	
Onsite HW support, 8am-9pm, M-F, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays. (U.S. Part Number)	239928-002
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. (Canadian Part Number)	FM-M01E1-36
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. (AP/EMEA Part Numbers)	U4492A U4492E
Onsite HW support, 8am-9pm, M-F, 4hr response and Linux O/S SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays. (U.S. Part Number)	331049-002
Onsite HW support, 8am-9pm, M-F, 4hr response and Linux O/S SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays. (Canadian Part Number)	FM-L01E1-36
Onsite HW support, 8am-9pm, M-F, 4hr response and Linux O/S SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays. (AP/EMEA Part Numbers)	U4494A U4494E
<b>Support Plus 24</b>	
Onsite HW support 24x7, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays. (U.S. Part Number)	239930-002
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. (Canadian Part Number)	FM-M02E1-36
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. (AP/EMEA Part Numbers)	U4493A U4493E
Onsite HW support 24x7, 4hr response and Linux O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays. (U.S. Part Number)	331050-002
Onsite HW support 24x7, 4hr response and Linux O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays. (Canadian Part Number)	FM-L02E1-36
Onsite HW support 24x7, 4hr response and Linux O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays. (AP/EMEA Part Numbers)	U4495A U4495E
<b>HP Care Pack Priority Services for ProLiant Servers - Priority Silver</b>	
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, proactive patch notification, 1 System Healthcheck	FM-M04E1-36

### Options

per year (2-5-2 Part Number for Canada)	
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-M24E1-36
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-N04E1-36
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-N24E1-36
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, proactive patch notification, 1 System Healthcheck per year (6-3 Part Number for U.S.)	239932-002
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.)	239934-002
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.)	239972-002
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.)	239974-002

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



### Memory

#### HP ProLiant DL320 G2 All Models

##### Standard Memory

128-MB PC2100 Registered ECC DDR SDRAM DIMM Memory installed (1 x 128-MB SDRAM DIMM)

##### Standard Memory Plus Optional Memory

Up to 3200-MB memory is available with the optional installation of PC2100 Registered ECC DDR SDRAM DIMM Memory kits.

##### Standard Memory Replaced with Optional Memory

Up to 4096-MB of memory is available with the removal of the standard 128-MB of memory and the optional installation of PC2100 Registered ECC DDR SDRAM DIMM Memory kits.

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

Memory		Slot			
		1	2	3	4
Standard	128 MB	Empty	Empty	Empty	128 MB
Optional	3,200 MB	1024 MB	1024 MB	1024 MB	128 MB
Maximum	4,096 MB	1024 MB	1024 MB	1024 MB	1024 MB

Following are memory options available from HP:

- 1024-MB PC2100 Registered ECC DDR SDRAM DIMM Memory Option Kit 287497-B21
- 512-MB PC2100 Registered ECC DDR SDRAM DIMM Memory Option Kit 287496-B21
- 256-MB PC2100 Registered ECC DDR SDRAM DIMM Memory Option Kit 287495-B21
- 128-MB PC2100 Registered ECC DDR SDRAM DIMM Memory Option Kit 287494-B21

### Storage



0 - 1  
A Two 3.5" x 1" ATA non-hot plug drive bays  
A Removable CD-ROM/Diskette Drive Assembly

### 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	A	Integrated IDE (ATAPI)
Low-profile IDE DVD-ROM Drive	Up to 1	A	Integrated IDE

#### Hard Drives

##### Wide Ultra3 SCSI Non-Hot Plug Drives

	Quantity Supported	Position Supported	Controller
<b>1-inch</b>	Up to 2	0-1	
36.4-GB 10,000 rpm			Integrated Single Channel Wide Ultra2 Controller Module (SCSI Models)
18.2-GB 10,000 rpm			Smart Array 532 Controller Smart Array 5304/128 Controller Smart Array 5304/256 Controller 64-bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS

##### ATA/100 Non-Hot Plug Drives

	Quantity Supported	Position Supported	Controller
<b>1-inch</b>	Up to 2	0-1	Integrated Ultra ATA/100 Controller Module (ATA Models)
80-GB 7,200 rpm			
40-GB 7,200 rpm			

### Storage

#### External Storage

	Quantity Supported	Position Supported	Host Controller or Adapter
Modular Smart Array 30 Family	Up to 13	External	Smart Array 5302/128 Controller 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 500 System	1	External	Smart Array 532 Controller (used as Host Bus Adapter) 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) <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)			

#### Maximum Storage Capacity – (StorageWorks Enclosure 4300 with ATA models)

Internal	80 GB (2 x 40 GB 1" ATA/100)
External	509.6 GB (1 x (14 x 36.4-GB 1" Wide Ultra3 Drives))
Total	589.6 GB

### Storage

	Quantity Supported	Position Supported	Controller
<b>Tape Drives</b>			
(External only supported)			
<b>NOTE:</b> 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: <a href="http://h18000.www1.hp.com/products/quickspecs/North_America/10233.html">http://h18000.www1.hp.com/products/quickspecs/North_America/10233.html</a> (North America) <a href="http://h18000.www1.hp.com/products/quickspecs/Division/10233.html">http://h18000.www1.hp.com/products/quickspecs/Division/10233.html</a> . (Worldwide)			
<b>NOTE:</b> For an up-to-date listing of the latest O/S Support details for each of the Tape Storage Systems listed below, please see the following: <a href="http://h18000.www1.hp.com/products/quickspecs/North_America/10809.html">http://h18000.www1.hp.com/products/quickspecs/North_America/10809.html</a> (North America) <a href="http://h18000.www1.hp.com/products/quickspecs/Division/10809.html">http://h18000.www1.hp.com/products/quickspecs/Division/10809.html</a> . (Worldwide)			
20/40-GB DAT DDS-4 Tape Drive	Up to 3	External	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
AIT 35-GB LVD Tape Drive	Up to 3	External	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
AIT 100-GB Tape Drive	(for AIT 35 GB)		
AIT 50-GB Tape Drive	Up to 2 (for AIT 100 GB, AIT 50 GB)		
HP StorageWorks AIT 35 GB Autoloader	Up to 1 (for a single HBA) Up to 2 (for a dual HBA)	External	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
LTO Ultrium 230, External LTO Ultrium 460, External	Up to 2	External	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
SDLT 110/220-GB, External SDLT 160/320-GB, External	Up to 2	External	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
External DLT VS 40/80-GB External 40/80-GB DLT Enhanced	Up to 3	External	Dual Channel Wide-Ultra SCSI-3 Adapter Wide-Ultra SCSI-3 Adapter
SSL2020 AIT Library	Up to 5	External	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter SAN Access Module for Smart Array 5302 Controller

### TechSpecs

<b>System Unit</b>	<b>Dimensions (HxWxD)</b>	1.67 x 19.0 x 21.9 in (4.24 x 48.3 x 55.6 cm)
	<b>Weight</b>	24.58 lb (11.15 kg)
	Fully configured with two hard drives, four DIMM modules, and a PCI expansion board	
<b>Input Requirements (per power supply)</b>	Range Line Voltage	100 to 240 VAC
	Nominal Line Voltage	100 to 120 VAC/220 to 240 VAC
	Rated Input Current	3 A (100 to 120 VAC) to 1.5 A (200 to 240 VAC)
	Rated Input Frequency	50 to 60 Hz
<b>BTU Rating</b>	870 BTUs/hr <b>NOTE: The BTU Rating listed is for the Rated Input Power of 255W.</b>	
<b>Power Supply Output Power (per power supply)</b>	Steady State Power	180 W (rated) <b>NOTE: The maximum expected steady state.</b>
	Maximum Peak Power	200 W (2 minutes)
<b>Environmental Operating</b>		
<b>Operating</b>	Ambient Temperature	50° to 95° F (10° to 35° C)
	Temperature Derating	1.8° F per 984.25 ft to 9,842.5 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	-4° to 140° F (-20 to 60° C)
	Relative Humidity	10% to 95%
	Maximum wet bulb temperature	84° F (29° C)
<b>Non-operating Shipping</b>	Temperature	-40° to 140° F (-40 to 60° C)
	Relative Humidity	10% to 90%
	Maximum wet bulb temperature	86° F (30° C)
<b>Acoustic Noise</b>	Idle (Fixed Disk Drives Spinning)	
	<b>L WAd (BELS)</b>	6.1
	<b>L pAm (dBA)</b>	54.1
	Operating (Random Seeks to Fixed Disks)	
	<b>L WAd (BELS)</b>	6.2
	<b>L pAm (dBA)</b>	52

### TechSpecs

<b>1.44-MB Diskette Drive</b>	<b>Size</b>	3.5 in (8.89 cm)	
	<b>LED Indicators</b> (front panel)	Green	
	<b>Read/Write Capacity per Diskette</b> (high/mid/low density)	1.44 MB/1.2 MB/720 KB formatted	
	<b>Drive Supported</b>	One	
	<b>Drive Height</b>	0.50 in/1.27 cm	
	<b>Drive Rotation</b>	300-360/300 rpm	
	<b>Transfer Rate Synchronous</b> (Maximum) (high/mid/low)	500/500/250 K b/s	
	<b>Bytes/Sector</b>	512	
	<b>Sectors/Track</b> (high/low)	18/9	
	<b>Tracks/Side</b> (high/low)	80/80	
	<b>Access Times</b>	Track-to-Track (high/mid/low)	3/3/6 ms
		Average (high/mid/low)	174/94/94 ms
		Settling Time	15 ms
		Latency Average	83/100 ms
<b>Cylinders</b> (high/low)	80/80		
<b>Read/Write Heads</b>	Two		

<b>Non-Hot Plug ATA/100 Hard Drives</b>	<b>80 GB 7.2K 278424-B21</b>	<b>Capacity</b>	80054 MB	
		<b>Height</b>	1.0 in (2.54 cm)	
		<b>Width</b>	4.0 in (10.16 cm)	
		<b>Interface</b>	ATA 100	
		<b>Transfer Rate Synchronous</b> (Maximum)	100 MB/s	
		<b>Seek Time</b> (typical reads, including settling)	Single Track	0.8 ms
			Average	8.5 ms
			Full-Stroke	17.8 ms
			Rotational Speed	7,200 rpm
		<b>Physical Configuration</b>	Bytes/Sector	512
			Logical Blocks	156,355,584
	<b>Operating Temperature</b>	41° to 131° F (5° to 55° C)		

### TechSpecs

<b>Power Supply</b>	<b>Input voltage specifications</b>	Rated input voltage	100 VAC to 240 VAC
	<b>Input Specifications</b>	Rated input line	180 VAC to 264VAC (90 VAC to 132 VAC)
		Frequency range	47 to 63 Hz
		Rated input power	298 W
		Rated input current	3.3 A, 1.7 A (110 V, 220 V)
		Steady state power	180W
		Maximum peak power	200W for 2 minutes
		Ambient temperature range	20 ms from zero crossing at 120 VAC
		Operating	41° to 122° F (5° to 50° C)
		Non-operating	-40° to 185° F (-40° to 85° C)
		Operating	5% to 95%
	<b>Relative humidity</b> (non-condensing)	Non-operating	5% to 95%
		<b>Dielectric voltage withstand</b>	Input to output
	<b>Maximum Wet Bulb Temperature</b>	Input to ground	1500 VAC/minute
80/80		82° F (28° C)	

### TechSpecs

<b>Low-Profile 24X Max IDE (ATAPI) CD-ROM Drive</b>	<b>Disk</b>	Applicable Disk	CD-DA, CD-ROM (Mode 1 and 2) CD-XA, CD-I (Mode 2, Form 1 and 2) CD-I Ready, CD Extra, Video CD, CD-Bridge Photo CD (Single and Multi-session) CD-WO
		Capacity	550 MB (Mode 1, 12 cm) 640 MB (Mode 2, 12 cm)
		Diameter	4.7 in, 3.15 in/12 cm, 8 cm
		Rotational Speed	4200 rpm maximum
		Center Hole	0.6 in/15 mm diameter
		Thickness	1.2 mm
		Track Pitch	1.6 µm
	<b>Block Size</b>	Mode 0	2,368, 2,352 bytes
		Mode 1	2,352, 2,340, 2,336, 2,048 bytes
		Mode 2	2,352, 2,340, 2,336, 2,048 bytes
	<b>Interface</b>	IDE (ATAPI)	
	<b>Access Times (typical)</b>	Random	<150 ms
		Full-Stroke	<350 ms
	<b>Data Transfer Rate</b>	Sustained	150 KB/s (sustained 1X)
		Burst	2100 to 4800 KB/s
	<b>Cache Buffer</b>	128 KB	
	<b>Start-up Time (typical)</b>	< 10 seconds	
	<b>Stop Time</b>	< 5 seconds	
	<b>Operating Conditions</b>	Temperature	41° to 118° F (5° to 45° C)
		Humidity	10% to 80%
	<b>Dimensions</b>	(HxWxD, maximum)	0.5 x 5.12 x 5.16 in (1.27 x 13 x 13.1 cm)
		Weight	<11.98 oz (<340 g)



### TechSpecs

<b>Two NC7760 PCI Gigabit Server Adapters (embedded)</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 80.3u 100Base-TX	
	<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
		1000Base-TX	1000Mb/s
	<b>Connector</b>	RJ-45	
	<b>Cable Support</b>	10Base-T 10/100/1000Base-TX	Categories 3, 4 or 5 UTP; up to 328 ft (100 m) Category 5 UTP; up to 328 ft (100 m)

<b>Video Controller</b>	<b>Controller Chip</b>	ATI RAGE XL	
	<b>Video DRAM</b>	8 MB Video SDRAM	
	<b>Data Transfer Method</b>	32-bit PCI	
	<b>Support Resolution</b>	Supported Color Depths:	
		640 x 480	16.7M, 64K, 256, 16
		800 x 600	16.7M, 64K, 256, 16
		1024 x 768	16.7M, 64K, 256, 16
		1152 x 864	16.7M, 64K, 256, 16
	1280 x 1024	16.7M, 64K, 256, 16	
	1600 x 1200	64K, 256, 16	
	<b>Connector</b>	VGA	

### TechSpecs

<b>Integrated Dual Channel Ultra ATA/100 Controller Module</b>	<b>Temperature Range</b>	Operating	32° to 158° F (0° to 70° C)
		Shipping	-40° to 257° F (-40° to 125° C)
	<b>Relative humidity (non- condensing)</b>	Operating	10% to 90%
		Non-operating	5% to 95%
	<b>Simultaneous drive transfer channels</b>	2 channels	
	<b>Transfer rate synchronous (maximum)</b>	100 B/s	
	<b>Data transfer method</b>	32-bit PCI bus-master	
	<b>Drive support</b>	Ultra ATA, EIDE & Fast ATA-2	
	<b>PCI bus transfer rate (maximum)</b>	133 MB/s	
	<b>Data transfer modes</b>	UDMA Mode[0-5]	
		PIO Mode[0-4]	
	<b>Protocol</b>	ATA100 compatible	
	<b>Feature</b>	CRC (Cyclical Redundancy Check)	
<b>Buffer size</b>	128 Byte		

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