



hp netserver  
lh 3000/3000r



technical  
specifications

## powerful departmental servers you can rely on today and grow with tomorrow

**the hp netserver lh 3000 is packed with high-end features, yet it's priced as a departmental server**

The HP Netserver LH 3000/3000r builds on the success of the popular HP Netserver LH3 and brings even higher performance and reliability to meet your demanding departmental server requirements. Incorporating all the latest performance, storage, and high-availability technologies, this workhorse is loaded with features you'd expect only in high-end servers.

- Extraordinary performance—dual Intel® Pentium® III processors with 133MHz front-side bus, PC 133MHz ECC SDRAM, and performance-boosting integrated RAID controller.
- Best-in-class reliability and uptime—with fully hot-swappable/hot-pluggable components, including disk drives, power supplies, fans, and hot-plug PCI slots.
- Offered as the basic platform of choice for HP Netserver Assured Availability Solutions. Also includes widely adopted, fault-tolerant RAID 5 technology—using an embedded, dual-channel NetRAID controller with optional battery backup, hardware-based parity (XOR) logic, and 32MB cache—expandable to 128MB.
- Excellent investment protection—the HP Netserver LH 3000's design makes it easily upgradable to HP's six-way capable Xeon server, the LH 6000. Shared components and compatible design deliver a cost-effective upgrade to LH 6000's unprecedented processing scalability and other high-performance features.
- Intelligent management—a comprehensive toolset to monitor your server hardware and software from anywhere, anytime.
- Simple installation—choose either the pedestal or 8U form factor rack version with easy customization via factory configuration, integration, and delivery through the *HP Select Express* program.

## features

### performance

<b>processor</b>	Up to two Intel Pentium III 866MHz, 933MHz, or 1GHz with 133MHz front-side bus
<b>cache</b>	256KB on-die write-back cache
<b>ECC memory</b>	<ul style="list-style-type: none"><li>• 128MB high-performance PC133 ECC SDRAM standard</li><li>• 4GB maximum capacity (3.3GB maximum usable memory)</li></ul>
<b>I/O expansion slots</b>	Eight total full-length PCI slots (six 64-bit slots and two 32-bit slots; four hot-plug slots)
<b>controller</b>	<ul style="list-style-type: none"><li>• Integrated, dual-channel Ultra2 SCSI controller</li><li>• Integrated, dual-channel NetRAID controller with 32MB cache (expandable to 128MB) and optional battery backup (utilizing the dual-channel SCSI controller described above)</li><li>• Additional single-channel Ultra/Wide SCSI controller</li></ul>
<b>mass storage system</b>	<ul style="list-style-type: none"><li>• Four front-accessible (half-height) shelves:<ul style="list-style-type: none"><li>– One 3.5-inch floppy disk drive</li><li>– One CD-ROM drive</li><li>– Two open common tray (non-hot-swap) shelves, suitable for drives or tape backup (DLT, DDS, autoloader)</li></ul></li><li>• 12 front-accessible hot-swap shelves:<ul style="list-style-type: none"><li>– Six low-profile standard (also supports three half-height or mixed low-profile and half-height)</li><li>– Six additional low-profile (or three half-height) with optional cage for full duplex capability</li><li>– Hot-swap drive backplane supports Ultra3 SCSI</li></ul></li></ul>
<b>maximum internal storage</b>	440.4GB maximum hot-swap (6×73.4GB half-height drives), plus two 36.4GB common tray drives for maximum internal storage of 513.2GB
<b>video</b>	<ul style="list-style-type: none"><li>• Embedded ATI Rage IIc video controller</li><li>• 1024x768, 64K color at 75Hz</li><li>• 2MB SGRAM</li></ul>
<b>CD-ROM drive</b>	32X max-speed EIDE CD-ROM drive
<b>flexible disk drive</b>	3.5" 1.44MB flexible disk drive
<b>built-in I/O ports</b>	<ul style="list-style-type: none"><li>• One 25-pin parallel port</li><li>• One 9-pin serial/RS-232 port</li><li>• One NIC port</li><li>• Mini-DIN keyboard and mouse ports</li><li>• One 9-pin server management port or second serial/RS-232 port</li></ul>
<b>keyboard and mouse</b>	Localized keyboard and two-button mouse on pedestal models

## features (continued)

### availability

<b>hot-swap power supplies</b>	<ul style="list-style-type: none"><li>• Two hot-swap power supplies standard</li><li>• Optional redundant hot-swap power supply and redundant hot-swap fan tray</li></ul>
<b>high availability/ clustering support</b>	Offered as basic platform for HP Netserver Assured Availability Solutions. For further information on cluster support go to: <a href="http://www.netserver.hp.com/netserver/products/highlights_ha.asp">http://www.netserver.hp.com/netserver/products/highlights_ha.asp</a>
<b>self-restart capability</b>	Automatic Server Restart (ASR) that reboots the server in the event of a NOS hang
<b>self-correcting memory</b>	Manageable Error Checking and Correcting (ECC) system and cache memory with memory scrubbing feature
<b>hot-swap disk drives</b>	<ul style="list-style-type: none"><li>• Supports 9.1GB and 18.2GB 7,200rpm Ultra3 SCSI disk drives</li><li>• Supports 9.1GB, 18.2GB, 36.4GB, and 73GB 10,000rpm Ultra3 SCSI disk drives</li><li>• Supports 18.2GB 15,000rpm Ultra3 SCSI drives</li></ul>
<b>disk array controller</b>	<ul style="list-style-type: none"><li>• Integrated, dual-channel Ultra2 HP NetRAID controller</li><li>• 32MB SDRAM write-back cache—expandable to 64MB or 128MB</li><li>• Optional battery backup</li><li>• Supports RAID 0, 1, 3, 5, 10, 30, 50</li></ul>
<b>advanced cooling system</b>	<ul style="list-style-type: none"><li>• Seven hot-swap fans standard</li><li>• Two additional hot-swap fans with optional secondary fan tray</li><li>• Active fan-speed control and failure sensing</li><li>• Superior air flow design for low internal temperature rise</li></ul>
<b>network interface</b>	Integrated 10/100TX network interface card
<b>automatic tape backup</b>	Optional automated DAT backup with up to 40GB to back up daily. With six cartridges there is a cartridge for every day, Monday through Friday. With a slot dedicated to a cleaning cartridge, backup is reduced to a once-weekly task of changing the magazine, so maintenance is easier.

### intelligent management

<b>installation and configuration</b>	<ul style="list-style-type: none"><li>• HP Netserver Navigator with automated, menu-driven system setup and configuration</li><li>• Guided network operating system installation</li><li>• Automatic installation of monitoring tools</li></ul>
<b>management software</b>	<ul style="list-style-type: none"><li>• HP Toptools for Servers, a comprehensive server management solution with an intuitive browser-based user interface; facilitates troubleshooting, administration, and detailed inventory information</li><li>• Industry-leading HP OpenView Managex Event Manager for NOS management</li><li>• Easy integration with other leading network and system management products</li></ul>
<b>remote administration</b>	<ul style="list-style-type: none"><li>• HP Integrated Remote Assistant provides emergency remote access over a modem with a single unified event log for faster troubleshooting</li><li>• Optional HP Toptools Remote Control card for even more powerful remote management, including remote LAN access, advanced security, online diagnostics, and group actions</li><li>• File transfer capabilities for secure and easy remote updates</li></ul>

## features (continued)

### expandability

- |                        |                                                                                                                                                                                                                                                                                                     |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>design features</b> | <ul style="list-style-type: none"><li>• Tool-free access and interchangeable side covers</li><li>• All major assemblies easy to remove for upgrades or repair</li><li>• Simple conversion from pedestal to rack configuration</li><li>• Physically compatible with standard 19-inch racks</li></ul> |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### flexibility

- |                                    |                                                                                                                |
|------------------------------------|----------------------------------------------------------------------------------------------------------------|
| <b>supported operating systems</b> | Microsoft® Windows NT® 4.0, Windows® 2000; Novell NetWare 4.2, 5.0; Red Hat Linux; SCO OpenServer and UnixWare |
|------------------------------------|----------------------------------------------------------------------------------------------------------------|

### security and safety

- |                        |                                                                                                                                                                                                                                                                                                                    |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>system security</b> | <ul style="list-style-type: none"><li>• Startup password</li><li>• Network server mode</li><li>• Power reset switch cover and keyboard lock button</li><li>• Enable or disable serial port, floppy disk drives, and write operations to floppy disk drives</li><li>• Provision for padlock or cable lock</li></ul> |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### service and support

- |                 |                                                                                                                                                                                                                                                                                                                                      |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>warranty</b> | <ul style="list-style-type: none"><li>• 3-year, next-business day, onsite limited warranty from HP or authorized resellers (standard business hours) worldwide</li><li>• Pre-failure warranty/notification</li><li>• Free telephone support for basic setup, installation, and troubleshooting for the life of the product</li></ul> |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>hp instant support</b> | <p>Fast, Web-based support that automates and speeds resolution of most computing problems. Available at no charge, HP Instant Support is:</p> <ul style="list-style-type: none"><li>• Automated—Web-based problem identification, diagnosis, and resolution</li><li>• Personalized—Ability to select your preferred support experience</li><li>• Relevant—Seamless transmission of hardware information and case history to HP support specialists at any time</li><li>• Reliable—It's there when you need it, 24 hours a day</li></ul> <p>For more information, visit the HP Instant Support Web site at:<br/><a href="http://www.hp.com/go/instant-support">http://www.hp.com/go/instant-support</a></p> |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- |                             |                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>hardware maintenance</b> | <ul style="list-style-type: none"><li>• Optional HP Supportpack for 3-year, 4-hour response during standard business hours</li><li>• Optional HP Supportpack for 3-year, 4-hour response, 24 hours a day, 7 days a week support</li><li>• Optional HP Supportpack for 3-year Call-to-Repair Commitment Service within 6 hours, 24 hours a day, 7 days a week</li></ul> |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- |                             |                                                                                                                                                                                                                                                         |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>software maintenance</b> | <ul style="list-style-type: none"><li>• HP Personalized Systems Support for proactive software support in mission-sensitive environments</li><li>• HP Critical Systems Support for high availability support in mission-critical environments</li></ul> |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>reseller support services</b> | <p>Comprehensive reseller support framework to ensure successful support of HP Netservers, including:</p> <ul style="list-style-type: none"><li>• Proactive notification e-mail service<sup>1</sup></li><li>• Service and support Web site<sup>1</sup></li><li>• HP STAR Certification classes for IT professionals</li><li>• Troubleshooting Toolkit<sup>1</sup></li><li>• 24x7 telephone support for authorized resellers</li><li>• HP Businessbuilders—blueprints for new business opportunities</li></ul> |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

<sup>1</sup> See <http://netserver.hp.com/netserver/support> for details.

## features (continued)

### regulatory compliance

#### electromagnetic emissions

- USA: FCC Title 47, Part 15 Class A (Self Declaration)
- EU Countries: EN 55022 Class A
- Korea: M of C Class A
- Japan: VCCI Class A
- Australia/New Zealand: CISPR 22 Class A
- Taiwan: BSMI CNS 13438 Class A
- EN 61000-3-2: Harmonic Current
- EN 61000-3-3: Voltage Fluctuation and Flicker

#### electromagnetic immunity

- Generic Immunity (EN50082-1, EU Countries), including:
- ESD (IEC-801-2): 4KV Contact, 8KV Air
  - Radiated Immunity (IEC-801-3): 3V/m, 80% AM Mod, 27MHz–1000MHz
  - Fast Transient/Burst (IEC-801-4): 1.0KV Power, 0.5KV I/O lines

#### safety

- EN 60950/IEC 950 Compliance (International)
- UL and cUL Listed (File E139742)
- Highly Specialized Equipment (Mexico)
- TÜV Certified (Germany)
- CE Marking (Europe)

#### Japan energy saving law

- Category: J
- Energy Efficiency Ratio: 0.13
- Energy Efficiency Ratio is the quotient of consumed power measured according to the Energy Saving Law measurement method divided by the capacity specified in the Energy Saving Law

## accessories

	product accessory	product no.
<b>memory</b>	• 128MB 133MHz ECC SDRAM DIMM	D8265A
	• 256MB 133MHz ECC SDRAM DIMM	D8266A
	• 512MB 133MHz ECC SDRAM DIMM	D8267A
	• 1GB 133MHz ECC SDRAM DIMM	D8268A
<b>storage devices</b>	• 9.1GB Ultra3 SCSI disk drive (7,200rpm—common tray)	P1213A <sup>1</sup>
	• 9.1GB Ultra3 SCSI disk drive (10,000rpm—common tray)	P1214A <sup>1</sup>
	• 18.2GB Ultra3 SCSI disk drive (7,200rpm—common tray)	P1215A <sup>1</sup>
	• 18.2GB Ultra3 SCSI disk drive (10,000rpm—common tray)	P1167A <sup>1</sup>
	• 36.4GB Ultra3 SCSI disk drive (10,000rpm—common tray)	P1169A <sup>1</sup>
	• 9.1GB low-profile, hot-swap Ultra3 SCSI disk drive (7,200rpm)	P1217A <sup>1</sup>
	• 9.1GB low-profile, hot-swap Ultra3 SCSI disk drive (10,000rpm)	P1168A <sup>1</sup>
	• 18.2GB low-profile, hot-swap Ultra3 SCSI disk drive (7,200rpm)	P1216A <sup>1</sup>
	• 18.2GB low-profile, hot-swap Ultra3 SCSI disk drive (10,000rpm)	P1166A <sup>1</sup>
	• 18.2GB low-profile, hot-swap Ultra3 SCSI disk drive (15,000rpm)	D9421A <sup>1</sup>
	• 36.4GB low-profile, hot-swap Ultra3 SCSI disk drive (10,000rpm)	D9419A <sup>1</sup>
	• 73.4GB half-height, hot-swap, Ultra3 SCSI disk drive (10,000rpm)	D9420A <sup>1</sup>
	• Second drive cage for up to 6 additional hot-swap drives	D9158A
	• Optional Duplexing Kit	D8280A
<b>disk trays</b>	• 3.5" hard disk drive mounting trays (3 pack, non-hot-swap)	D2198B
	• Tape/DAT/CD-ROM mounting trays (3 pack, no front panel)	D2199A
	• HP Netserver low-profile hot-swap disk tray	D6128A
	• HP Netserver half-height hot-swap disk tray	D6127A
<b>RAID controllers</b>	• Integrated dual-channel HP NetRAID controller with 32MB expandable cache	Included
	• Upgrade integrated HP NetRAID controller cache memory size to 64MB	D7155A
	• Upgrade integrated HP NetRAID controller cache memory size to 128MB	D7156A
	• Integrated disk array controller optional battery backup	D8550A
	• HP NetRAID-1Si controller (Ultra2 SCSI, 1 channel)	D2140A
	• HP NetRAID-3Si controller (Ultra2 SCSI, 3 channels)	D5955A
	• HP NetRAID-1M controller (Ultra3 SCSI, 1 channel)	P3410A
	• HP NetRAID-2M controller (Ultra3 SCSI, 2 channels, 64MB)	P3411A
	• HP NetRAID-2M controller (Ultra3 SCSI, 2 channels, 128MB)	P3475A
	• HP NetRAID-4M controller (Ultra3 SCSI, 4 channels, 64MB cache)	D9161A
	• HP NetRAID-4M controller (Ultra3 SCSI, 4 channels, 128MB cache)	D9351A
	• Cable Kit for use with HP NetRAID-1Si and internal storage bays	D4282B
• Cable Kit for use with HP NetRAID-1Si	D6020A	

<sup>1</sup> Ultra3 performance can only be achieved by using an Ultra3 SCSI controller or an Ultra3 RAID controller with the Ultra3 drives.

## accessories (continued)

	product accessory	product no.
<b>external storage solutions</b>	• HP Netserver Rack Storage/12 (Ultra3) HP racks	D5989C
	• HP Netserver Rack Storage/12 SCSI Card (Ultra3) HP racks	D6025C
	• HP Netserver Rack Storage/12FC	D5991A
	• HP FC Array disk array controller	D5990A
	• HP Netserver Rack Storage/12FC HBA Card (for clustering) or standalone	D8602B
	• HP 8-port Fibre Channel Loop Switch	P4459A
<b>internal backup drives</b>	• HP Surestore DAT24i tape drive	C1555D/V
	• HP Surestore DAT40i tape drive	C5686A/V
	• HP Surestore DLT40i tape drive	C5647A/V
	• HP Surestore DLT80i tape drive	C5725A/V
	• HP Surestore Ultrium 230	C7400A/V
	• HP Surestore DLT1	C7484A/V
<b>external backup drives</b>	• HP Surestore DAT8e tape drive	C1529K
	• HP Surestore DAT24e tape drive	C1556D
	• HP Surestore DAT40e tape drive	C5687A
	• HP Surestore DLT40e tape drive	C1579A
	• HP Surestore DLT80e tape drive	C5726A
	• HP Surestore Ultrium 230	C7401A
	• HP Surestore DLT1	C7483A
<b>rack-optimized backup drives</b>	• HP Surestore 2Uk rack kit	C6542A
	• HP Surestore 3Uk rack kit	C6543A
	• HP Surestore DAT24k DDS-3 tape drive	C6525A <sup>1</sup>
	• HP Surestore DAT40k DLT drive	C6541A <sup>1</sup>
	• HP Surestore DLT 40k DLT drive	C6515A
	• HP Surestore DLT80k DLT drive	C6529A <sup>1</sup>
	• HP Surestore Ultrium 230	C7470A
	• HP Surestore Tape Array 5500	C1534AE
<b>automated backup</b>	• HP Surestore DAT24x6i Autoloader	C5677B/BV
	• HP Surestore DAT24x6e Autoloader <sup>2</sup>	C1559C
	• HP Surestore DAT 40x6i Autoloader	C5716A/AV
	• HP Surestore DAT 40x6e Autoloader	C5717A
	• HP Surestore DLT Autoloader 418 <sup>2</sup>	C6280F
	• HP Surestore DLT Autoloader 818 <sup>2</sup>	C6282RA/NB
	• HP Surestore Tape Library 2/20 <sup>2</sup>	C7202RA/NB
	• HP Surestore Tape Library 4/40 <sup>2</sup>	C7214RA/NB
	• HP Surestore Autoloader 1/9 standalone, Remote Management Card	C7146RA/NB
	• HP Surestore Autoloader 1/9 rackmount, Remote Management Card <sup>2</sup>	C7746RA/NB
<b>processor upgrades</b>	• Intel Pentium III 866MHz, 133MHz front-side bus, 256KB cache	P1188A
	• Intel Pentium III 933MHz, 133MHz front-side bus, 256KB cache	P1807A
	• Intel Pentium III 1GHz, 133MHz front-side bus, 256KB cache	P2488A
<b>monitors</b>	HP offers a wide variety of monitors (15, 17, and 21). Please refer to HP Order Assistant at <a href="http://www.netserver.hp.com/netserver/tools/">http://www.netserver.hp.com/netserver/tools/</a> for complete configuration and order information.	
<b>network interface card</b>	• HP Netserver 10/100TX PCI LAN adapter (standard and also as accessory)	D5013B
	• HP 10/100 IPSec 3DES Security LAN adapter	P3492A
	• HP gigabit ethernet LAN adapter	P3482A

<sup>1</sup> 2Uk (C6542A) or 3Uk rack kit required (C6543A<sup>2</sup>).

<sup>2</sup> See <http://www.products.storage.hp.com/eprise/main/storage/DisplayPages/automatedbackup.htm> for additional product and configuration options.

## accessories (continued)

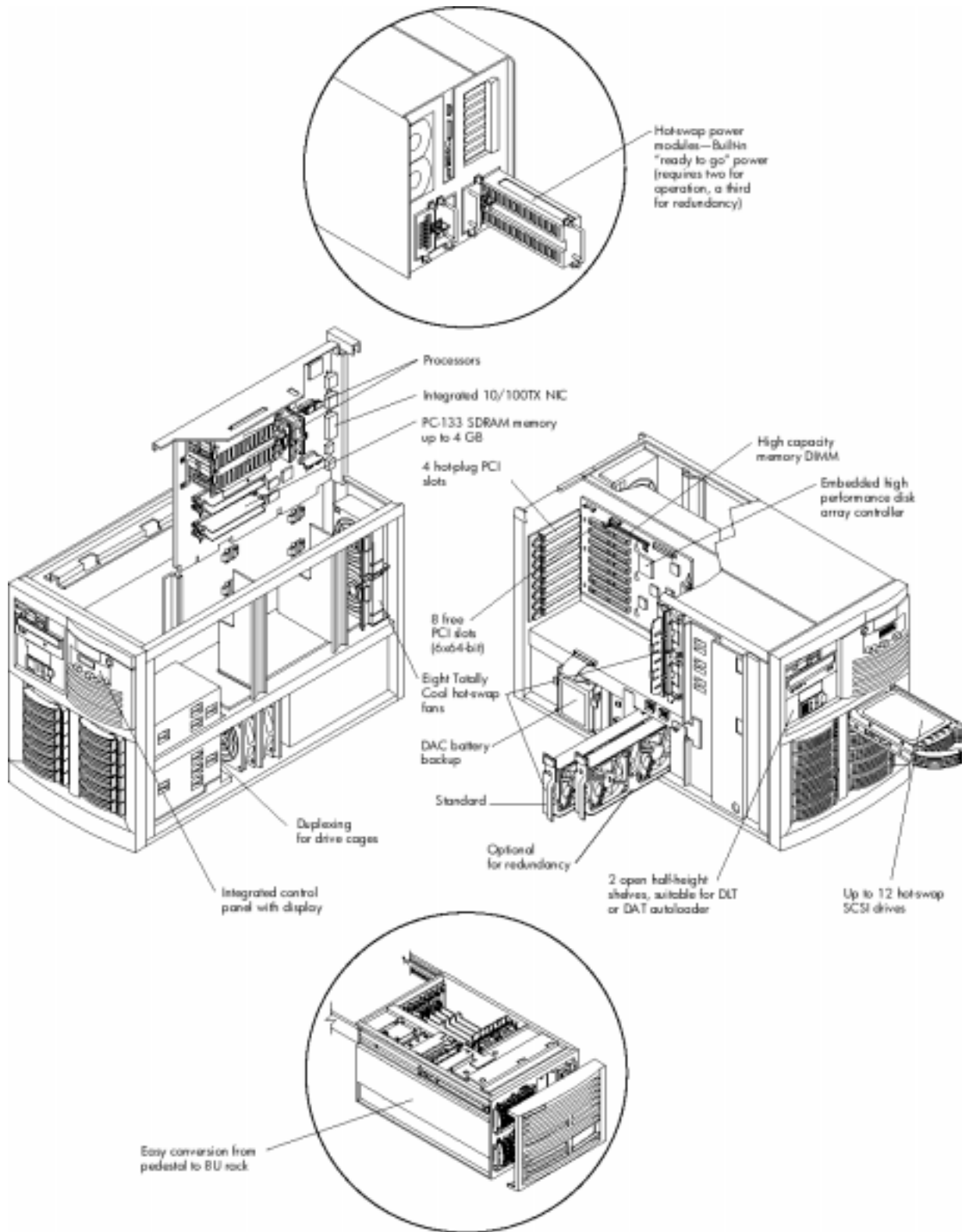
	product accessory	product no.
<b>redundant power and cooling</b>	Redundant hot-swap power supply and redundant hot-swap fan tray	D8551A
<b>conversion kit</b>	Pedestal-to-rack conversion kit	D9142A
<b>upgrade kits</b>	LH 3000 to LH 6000 upgrade kit includes two Intel Pentium III Xeon processors, system board, 256MB PC-133 SDRAM, one additional power supply module, plus HP Netserver Navigator CD-ROM and documentation <ul style="list-style-type: none"><li>• Intel Pentium III Xeon 700MHz processor with 1MB cache</li><li>• Intel Pentium III Xeon 700MHz processor with 2MB cache</li></ul>	D9314A D9315A
<b>remote management</b>	<ul style="list-style-type: none"><li>• HP Integrated Remote Assistant</li><li>• HP Tootools Remote Control card including battery</li><li>• Optional AC adapter for HP Tootools Remote Control card</li></ul>	Included D6028A D6138A
<b>APC uninterruptible power supply (UPS)</b>	(APC) American Power Conversion UPS devices used to protect servers and storage against downtime and data loss due to power anomalies and are fully compatible with the HP environment. Available through Hewlett-Packard. Refer to <a href="http://www.hp.com/racksolutions/p_ups.html">http://www.hp.com/racksolutions/p_ups.html</a>	
<b>hp racks</b>	For a complete list of racks and rack accessories, download the HP Netserver Rack Assistant tool from <a href="http://netserver.hp.com/netserver/tools/rack_asst.asp">http://netserver.hp.com/netserver/tools/rack_asst.asp</a>	

## accessories (continued)

hp supportpacks	product no.
Support can be delivered either by your local service-authorized reseller or by Hewlett-Packard. For more information, visit our Web site at <a href="http://www.hp.com/go/netserver">http://www.hp.com/go/netserver</a>	
5-Year 24x7 6-Hour Onsite Hardware Call-to-Repair	H2827E/VV
5-Year 24x7 4-Hour Onsite Response	H2826E/VV
5-Year 4-Hour Onsite Response (regular business hours) <sup>1</sup>	H2825E/VV
5-Year Next Business Day Onsite Response	H2839E/VV
3-Year 24x7 6-Hour Onsite Hardware Call-to-Repair	H1819A/E/VV
3-Year 24x7 4-Hour Onsite Response	H5513A/E/VV
3-Year 4-Hour Onsite Response (regular business hours) <sup>1</sup>	H5518A/E/VV
HP Netserver Solution Installation and Configuration (L Series)	H5751A
Racking of HP Netserver Solution	H5756A
HP Netserver Cluster Solution Installation/Network Configuration	H5757A
Racking of HP Netserver Cluster Solution	H3368A
HP Personalized System Support for PC Servers:	
• Proactive Management, 1 year	H2219AA/E
• Standard Recovery, 1 year	H2217AA/E
• Standard Recovery Applications Add-on, 1 year	H2216AA/E
• Proactive Support, 1 year	H2218AA/E
HP Critical Systems Support for Windows Servers:	
• NT Solution, 1 year	H1931E
• Reactive Bundle, 1 year (second server)	H1932E
• Priority Recovery NT, 1 year (cluster server)	H1933E
• Priority Recovery NT, 1 year	H1934E
• Priority Management NT, 1 year	H1941E
• Operations Checkup NT, 1 engagement	H1950E
• Critical Systems Support NT and SAP R/3	H3035E
• Critical Systems Support NT and Microsoft Exchange	H1931E & H1947E
Microsoft Cluster Server Migration, 1 cluster	H1945E
Change Management Planning for NT, 1 year	H1943E
Additional Patch Management Reviews	H1944E
Performance Optimization for NT, 1 year	H1946E
Expert Technical Advice for NT, 1 topic	H1947E
Account Support Engineer Services for NT, 1 day	H1948E

<sup>1</sup> Provides HP's best response time service during regular business hours, Monday through Friday, except HP holidays

# hp netserver lh 3000/3000r



## specifications

<b>operating temperature</b>	41 to 95° F (5 to 35° C)
<b>operating humidity</b>	20% to 80% non-condensing
<b>acoustic emissions</b>	Sound level (LpA): <50dB(A), bystander position
<b>power supply</b>	Auto-ranging 90 to 132 VAC, or 180 to 264 VAC at 47–63Hz
<b>power availability</b>	550W continuous
<b>power consumption</b>	825W maximum, 8.3A with 100–120V, 3.9A with 200–240V
<b>system dimensions</b>	<ul style="list-style-type: none"> <li>• Rack: 19"W x 14"H x 29.5"D (482.6mm W x 354.7mm H x 749.2cm D)</li> <li>• Pedestal: 13.8"W x 19.5"H x 28.5"D (350.5mm W x 494.8mm H x 724.2mm D)</li> </ul>
<b>system weight</b>	77–110lbs (35–50kg), depending on configuration

## choose your hp netserver lh 3000 or lh 3000r

product no.	processor	configuration
P1178A	Pentium III 866MHz, 133MHz front-side bus, 256KB on-die cache	Pedestal
P1180A	Pentium III 866MHz, 133MHz front-side bus, 256KB on-die cache	Rack
P1794A	Pentium III 933MHz, 133MHz front-side bus, 256KB on-die cache	Pedestal
P1796A	Pentium III 933MHz, 133MHz front-side bus, 256KB on-die cache	Rack
P2482A	Pentium III 1GHz, 133MHz front-side bus, 256KB on-die cache	Pedestal
P2483A	Pentium III 1GHz, 133MHz front-side bus, 256KB on-die cache	Rack

**All models include:**

128MB PC 133MHz ECC SDRAM with memory scrubbing, integrated dual-channel HP NetRAID controller with I<sub>2</sub>O, integrated 10/100TX NIC, CD-ROM drive, flexible disk drive, hot-swap power supplies and fans, HP Integrated Remote Assistant, HP Tootools for Servers, and HP OpenView Managemex Event Manager.

## support

Support can be delivered by your local reseller or by the Hewlett-Packard Customer Support Organization. Web-based troubleshooting available through HP Instant Support: [www.hp.com/go/instant-support](http://www.hp.com/go/instant-support)

For additional information on HP products and services, visit us at [www.hp.com](http://www.hp.com)

For the location of the nearest sales office, call:

**United States:** +1 800 637 7740

**Canada:** +1 905 206 4725

**Japan:** +81 3 3331 6111

**Latin America:** +1 305 267 4220

**Australia/New Zealand:** +61 3 9272 2895

**Asia Pacific:** +8522 599 7777

**Europe/Africa/Middle East:** +41 22 780 81 11

For more information, contact any of our worldwide sales offices or HP Channel Partners (in the U.S. call 1 800 637 7740).

HP's world-class services and support provide maximum uptime for HP Netervers. Standard warranty includes:

- Next-day onsite service
- Phone support
- Free exchange parts

For a complete list of enhanced Supportpacks, see:

<http://netserver.hp.com/netserver/products/highlights lh3000.asp>

### ***HP Select Express Program:***

HP Netervers are also available through the *HP Select Express* program, which provides direct, coordinated delivery. This program offers custom integration of HP hardware offered at HP's lowest prices. For more information, visit our Web site at:

<http://netserver.hp.com/netserver/buy/select/sep>

Intel and Pentium are U.S. registered trademarks of Intel Corporation. Microsoft, Windows, and Windows NT are U.S. registered trademarks of Microsoft Corporation.

Information in this document is subject to change without notice.

© Copyright Hewlett-Packard Company 2001

3/2001

