



hp netserver
lxr8500 datasheet



technical
specifications

delivering unbeatable scalability to the data center

A perfect fit for data centers operating OLTP, ERP, database, and Web-based e-business environments, the HP Netserver LXR 8500 increases reliability, simplifies management, and reduces costs by consolidating smaller servers and multiple applications.

The HP Netserver LXR 8500 delivers next generation processing power, reliability, and scalability to fast-growth data centers with a solution that rivals UNIX® systems:

- Eight-way capable out of the box—just add processors
- Balanced, high-performance design that scales up to eight Intel® Pentium® III Xeon processors, up to 32GB SDRAM memory, and four 64-bit PCI controllers
- Best-in-class reliability with fully hot-swappable and hot-pluggable components and pre-failure alerting on critical components. Fault-resilient booting and “totally safe” memory scrubbing utility. Full one-button disaster recovery protection with optional HP Surestore tape drive
- Intelligent management tools for hardware, NOS, and applications, including HP Tootools and HP OpenView Managex Event Manager
- Integration with leading management platforms, including HP OpenView Network Node Manager (NNM) for Microsoft® Windows NT®, CA Unicenter TNG, and Tivoli Management Software. Secure and easy remote management with preinstalled HP Tootools Remote Control Card for complete control anytime, anywhere
- Complete portfolio of multi-node clustering certifications for SCSI and Fibre Channel from Microsoft, Novell, EMC, Giganet, Vinca, and NSI
- Simple installation with 7U rack-optimized form factor, and easy customization via factory configuration, integration, and delivery through *HP Select Express Program*
- World-class service and support offerings to design, implement, and maintain data center solutions for maximum availability

features

performance

processor	Up to 8 Intel Pentium III Xeon 700MHz processors
level 2 cache	1MB or 2MB
ECC memory	256MB, 100MHz ECC SDRAM DIMM (standard)
I/O expansion slots	Ten hot-plug, full-length PCI slots; four 64-bit, 66MHz slots; and six 64-bit, 33MHz slots (one 33MHz PCI slot used by pre-installed HP Tootools Remote Control Card)
controller	Integrated, dual-channel Ultra2 SCSI
external storage, including fibre channel	Optional HP Netserver Rack Storage/12 with support for eight 73GB half-height, twelve 36GB low-profile, twelve 73GB low-profile, twelve 18.2GB, or twelve 9.1GB drives; or HP Netserver Rack Storage/12FC with optional redundant Fibre Channel controllers
video	1024 × 768, 256-color resolution at 60–75Hz video, 2MB standard video memory
CD-ROM drive	24X max-speed IDE
flexible disk drive	3.5" 1.44MB
built-in I/O ports	Keyboard, video, mouse, 2 serial ports, 1 parallel port, and 2 LVDS SCSI (1 internal, 1 external)

availability

hot-swap power supplies	2+1 redundant hot-swap power supplies with pre-failure alerting
self-restart capability	Automatic Server Restart (ASR) that reboots the server in the event of a NOS hang
internal monitoring	90 monitoring and reporting sensors
CPU	Fault resilient boot deallocates a failed processor upon boot-up and continues operation
self-correcting memory	<ul style="list-style-type: none">• Error Checking and Correcting (ECC) system memory and cache memory• "Totally safe" software memory scrubbing utility• System (BIOS) deallocates "failed" memory (bank/board) at boot-up• System (BIOS) reconfigures misconfigured DIMMs (across memory boards)• Memory pre-failure alerting
hot-swap disk drives	Up to 2 hot-swap, Ultra2 or Ultra3 SCSI low-profile drives with pre-failure alerting
PCI hot-plug support	Allows for online repair of PCI adapter card in all PCI slots
disk array controller	<ul style="list-style-type: none">• HP NetRAID-1M Controller with 32MB cache (Ultra3 SCSI, 1-channel PCI card)• HP NetRAID-2M Controller with 64MB cache (Ultra3 SCSI, 2-channel PCI card)• HP NetRAID-2M Controller with 128MB cache (Ultra3 SCSI, 2-channel PCI card)• HP NetRAID-4M Controller with 64MB cache (Ultra3 SCSI, 4-channel PCI card)• HP NetRAID-4M Controller with 128MB cache (Ultra3 SCSI, 4-channel PCI card)
advanced cooling system	6 hot-swappable redundant fans, individually removable
intelligent platform management interface (IPMI)	<ul style="list-style-type: none">• An open specification for system component monitoring• Foundation for self-healing
network interface	Optional 10/100TX network interface card with support for optional redundant cards, failover, load balancing, and fast Etherchannel

features (continued)

availability (continued)

tape backup

- “One button” disaster recovery with optional HP Surestore DAT. A single backup tape includes system image and data files. The user can boot from tape upon disaster, then restore the data files from the tape.
- Optional scalable and highly available tape backup:
 - Internal DDS-3 DAT24i tape drive with world’s first hardware-based one-button disaster recovery feature.
 - HP Surestore Taperack enclosure, with up to 4 removable DLT 40r or DLT 80r drives, delivering 40GB to 320GB capacity. Dual, redundant, load-sharing power supplies and fans ensure uninterrupted backup operation. Super fast backup—up to 100GB/hr for 320GB in under 4 hrs.
 - HP Surestore DLT Autoloaders and libraries for maximized performance and capacity.
- HP Surestore Fibre Channel SCSI bridge provides for maximum availability of critical backup data. It supports long-distance backup or mirroring of data—up to 500 meters for a single connection.

intelligent management

installation and configuration

HP Netserver Navigator with automated menu-driven setup, and guided Microsoft Windows NT and Novell NetWare and IntranetWare installation

remote administration

- Preinstalled HP Tiptools Remote Control card for secure remote management
- Remote plug and play capability—remote software installation and hardware configuration
- Group actions—take action on a group of servers simultaneously

management software

- HP Tiptools for Servers, a comprehensive server management solution with intuitive browser-based user interface; facilitates troubleshooting, administration, and asset information collection
- HP OpenView Managex Event Manager for complete NOS and application management
- Easy interaction with other leading network and system management products
- Pre-failure alerts on key system components

expandability

design features

Up to 8 Intel Pentium III Xeon processors with your choice of L2 cache

flexibility

supported operating systems

- Microsoft Windows NT 4.0, NT 4.0E
- Microsoft Windows® 2000
- Novell NetWare 5.0
- SCO UNIXWare 7.1
- SCO OpenServer 5.05
- Linux 6.0

features (continued)

security and safety

system security

- Startup password
- HP Tootools Remote Control Card encrypted password
- Keyboard lock button with optional screen blank
- Enable or disable serial port, flexible disk drives, and write operations to flexible disk drives

service and support

warranty

- 3-year, next-business day, onsite limited warranty from HP or authorized resellers (standard business hours) worldwide
- Pre-failure warranty/notification
- Free telephone support for basic setup, installation, and troubleshooting for the life of the product

hp instant support

Fast, Web-based support that automates and speeds resolution of most computing problems. Available at no charge, HP Instant Support is:

- Automated—Web-based problem identification, diagnosis, and resolution
- Personalized—Ability to select your preferred support experience
- Relevant—Seamless transmission of hardware information and case history to HP support specialists at any time
- Reliable—It's there when you need it, 24 hours a day

For more information, visit the HP Instant Support Web site at:

<http://www.hp.com/go/instant-support>

hardware support

- 3-year, Hardware Call-to-Repair Commitment within 6 hours (24 hours/day, 7 days/week) H1822A
- 3-year, onsite within 4-hour response (24 hours/day, 7 days/week) H5515A
- 3-year, onsite within 4-hour response (standard business hours) H5516A
- Onsite installation and network configuration H5751A

software support

HP Critical System Support for Windows NT (includes HP High Availability Observatory)

- Priority Recovery for Windows NT, 1 Year H1934BA
- Priority Recovery Add-on for BackOffice, 1 Year H1936BA
- Proactive Prevention for Windows NT, 1 Year H1941BA
- Managed Change for Windows NT, 1 Year H1943BA
- Performance Optimization for Windows NT, 1 Server H1946BA
- Remote Support Business Builder H1947BA
- ASE Services for Windows NT, 1 Day H1948BA
- Operations Checkup for Windows NT, 1 Engagement H1950BA
- CSS for Windows NT Bundle, 1 Year (includes Hardware Call-to-Repair and Priority Recovery for one server, Proactive Prevention, Managed Change, Performance Optimization, Expert Technical Advice, and Operations Checkup) H1931BA
- CSS for Windows NT Reactive Bundle (includes Hardware Call-to-Repair and Priority Recovery for one server) H1932BA

HP Personalized System Support¹

- Standard Recovery, 1 Year H2217AA
- Standard Recovery, Applications Add-on, 1 Year H2216AA
- Proactive Management, 1 Year H2219AA
- Proactive Support, 1 Year H2218AA

¹ Available in North America only

features (continued)

service and support (continued)

reseller support services

Comprehensive reseller support framework ensures successful support of HP Netserver; includes:

- Proactive Notification e-mail service
- Service and support Web site (www.hp.com/go/netserver)
- Server Management and Hardware Troubleshooting courses (STAR)
- Troubleshooting toolkit
- 24x7 telephone support for authorized resellers
- Business Builders Reseller Support
- Information Assistant Navigator CD Reference Library (optional)

hp netserver racks express¹

- Easy and quick server deployment: Complete HP Netserver solutions are delivered to your reseller, or your site, within four weeks of receipt of order, with components such as HP Netserver, racks, PDUs, cables, RAID storage, and switchboxes installed and configured
- Dramatic time savings: Because a system from HP Racks Express is delivered configured to your site, power-on is reduced from days to hours
- Easy customization: Your reseller and HP Sales Representative will work together with you to design HP Netserver solutions that meet your unique needs
- Convenience: HP Netserver Racks Express services deliver preassembled rack systems in four weeks or less at a single economical price per rack

regulatory compliance

electromagnetic immunity

Generic Immunity (EN 50082-1, EU Countries), including:

- ESD (IEC-801-2): 4KV Contact, 8KV Air
- Radiated Immunity (IEC-801-3): 3V/m, 80% AM Mod, 27-1000MHz
- EFT (IEC-801-4): 1.0KV Power, 0.5KV I/O lines
- IEC 1000-3-2: Harmonic Current
- IEC 1000-3-3: Voltage Fluctuation and Flicker

electromagnetic interference

- USA/Canada: FCC Class A
- EU Countries: EN 55022 Class A
- Korea: M of C Class A
- Japan: VCCI Class A
- Australia: CISPR 22 Class A
- New Zealand: CISPR 22 Class A
- Taiwan: BSMI Class A

safety

- EN 60950/IEC 950 Compliance (International)
- UL, cUL Listed (USA, Canada file E139742)
- TÜV Certified (Germany)
- CE Marking (Europe)

¹ Not available in all regions

accessories

	product accessory	product no.
memory	• 256MB DIMM	D9325A
	• 512MB DIMM	D7138A
	• 1GB DIMM	P1222A
	• Optional second memory carrier board	D7071A
processor	• Intel Pentium III Xeon 700MHz 1MB L2 cache	P1734A
	• Intel Pentium III Xeon 700MHz 2MB L2 cache	P1761A
internal storage devices	• 9.1GB low-profile, hot-swap Ultra3 SCSI disk drive (10,000rpm) ¹	P1168A
	• 18.2GB low-profile, hot-swap Ultra3 SCSI disk drive (10,000rpm) ¹	P1166A
	• 36.4GB low-profile, hot-swap Ultra3 SCSI disk drive (10,000rpm) ¹	D9419A
	• 18.2GB low-profile, hot-swap Ultra3 SCSI disk drive (15,000rpm) ¹	D9421A
	• 73.4GB low-profile, hot swap Ultra3 SCSI disk drive (10,000rpm) ¹	P3577A
RAID controllers	• HP NetRAID-1M Controller with 32MB cache (Ultra3 SCSI, 1-channel PCI card)	P3410A
	• HP NetRAID-2M Controller with 64MB cache (Ultra3 SCSI, 2-channel PCI card)	P3411A
	• HP NetRAID-2M Controller with 128MB cache (Ultra3 SCSI, 2-channel PCI card)	P3475A
	• HP NetRAID-4M controller with 64MB cache (Ultra3 SCSI, 4 channels)	D9161A
	• HP NetRAID-4M controller with 128MB cache (Ultra3 SCSI, 4 channels)	D9351A
host bus adapter	• HP Ultra3 SCSI PCI adapter	P3413A
	• HP FC HBA (host bus adapter) card (cluster or standalone)	D8602B
external storage SCSI enclosure	• HP Netserver Rack Storage/12 (Ultra3)	D5989C
	• HP Netserver Rack Storage/12 SCSI Card (Ultra3)	D6025C
	• HP Netserver Rack Storage/12 Cables:	
	– 2.5-meter SCSI cable, high density to high density	D3636C
	– 2.5-meter SCSI cable, high density to very high density offset	D6020A
	– 5-meter SCSI cable, high density to very high density offset	D6982A
	– 10-meter SCSI cable, high density to very high density offset	D6983A
– HP Netserver Y Power Cable kit ²	D4991A	

¹ Ultra3 SCSI performance can only be achieved by using an Ultra3 SCSI controller or an Ultra3 SCSI RAID Controller with the Ultra3 drives.

² One kit is required for each of the 10th to 15th HP Netserver Rack Storage/12 or HP Netserver Rack Storage/12FC units to be installed in a single rack.

accessories (continued)

	product accessory	product no.
external storage fibre channel enclosures	• HP Netserver Rack Storage/12FC	D5991A
	• HP FCArray disk array controller (includes three 3-meter cables and three copper GBICs)	D5990A
	• HP 8-port Fibre Channel Loop Switch (includes one 3-meter Fibre Channel cable and two copper GBICs)	P4459A
	HP Netserver Rack Storage/12FC Cables:	
	• 1-meter SCSI cable, high density to very high density offset ¹	D7131A
	• 3-meter Fibre Channel HSS DC to HSS DC copper cable with 2 copper GBICs ²	D6978A
	• 5-meter Fibre Channel HSS DC to HSS DC copper cable with 2 copper GBICs	D6979A
	• 10-meter Fibre Channel HSS DC to HSS DC copper cable with 2 copper GBICs	D7080A
	• 50-meter Fibre Channel multimode short-wave optical with 2 optical-fibre GBICs	D6980A
	• 100-meter Fibre Channel multimode short-wave optical with 2 optical-fibre GBICs	D6981A
	• HP Surestore Fibre Channel SCSI Bridge 2100ER for DLT libraries	C6340F
storage devices for external enclosures	• 9.1GB low-profile, hot-swap Ultra3 SCSI disk drive (10,000rpm)	P1168A ³
	• 18.2GB low-profile, hot-swap Ultra3 SCSI disk drive (10,000rpm)	P1166A ³
	• 36.4GB low-profile, hot-swap Ultra3 SCSI disk drive (10,000rpm)	D9419A
	• 73.4GB half height, hot-swap Ultra3 SCSI disk drive (10,000rpm)	D9420A
	• 73.4GB low-profile, hot swap Ultra3 SCSI disk drive (10,000rpm)	P3577A
	• 18.2GB low-profile, hot-swap Ultra3 SCSI disk drive (15,000rpm)	D9421A
internal backup	• HP Surestore DAT24i tape drive	C1555DV
	• HP Surestore DAT40i tape drive	C5686AV
automated backup	• HP Surestore DAT24x6e Autoloader	C1559C
	• HP Surestore DAT40x6e Autoloader	C5717A
	• HP Surestore DLT Autoloader 418 ⁴	C6280F
	• HP Surestore DLT Autoloader 818 ⁴	C6282RA/NB
	• HP Surestore Tape Library 2/20 LVDS ⁴	C7202NB
	• HP Surestore Tape Library 4/40 LVDS ⁴	C7214NB
	• HP Surestore Tape Library 6/60 LVDS ⁴	C7230NB
	• HP Surestore Autoloader 1/9 standalone, Remote Management Card	C7146RA/NB
	• HP Surestore Autoloader 1/9 rackmount, Remote Management Card ⁴	C7746RA/NB

¹ Required for dual SCSI channel RS/8 configuration when connecting to RS/12FC.

² Gigabit interface converter (GBIC) is attached to each end of the cable and is installed into the FC Hub and the FC HBA.

³ Ultra3 SCSI performance can only be achieved by using an Ultra3 SCSI controller or an Ultra3 SCSI RAID Controller with the Ultra3 drives.

⁴ Autoloaders—<http://www.products.storage.hp.com/eprise/main/storage/DisplayPages/automatedbackup.htm>

accessories (continued)

hp supportpacks	product no.
external backup	<ul style="list-style-type: none"> • HP Surestore DAT24e tape drive C1556D • HP Surestore DAT40e tape drive C5687A • HP Surestore DLT 40e tape drive C1579A • HP Surestore DLT 80e tape drive C5726A • HP Surestore Ultrium 230 C7401A • HP Surestore DLT 1e C7483A
rack-optimized backup	<ul style="list-style-type: none"> • HP Surestore 2Uk rack kit C6542A • HP Surestore 3Uk rack kit C6543A • HP Surestore DAT24k DDS-3 tape drive¹ C6525A • HP Surestore DAT40k DDS-4 tape drive¹ C6541A • HP Surestore DLT 40k DLT drive¹ C6515A • HP Surestore DLT 80k DLT drive¹ C6529A • HP Surestore Ultrium 230 C7470A • HP Surestore Tape Array 5500 C1534AE
hp storage	<p>For a complete list of storage products, please see the <i>HP Storage Index</i>, located at http://products.storage.hp.com/eprise/main/storage/DisplayPages/StorageIndex.htm.</p>
network interface card	<ul style="list-style-type: none"> • HP 10/100TX PCI LAN adapter D5013B • HP 10/100 IPSec 3DES Security LAN adapter P3492A • HP Gigabit Ethernet LAN adapter P3482A
APC uninterruptible power supply (UPS)	<p>(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 http://www.hp.com/racksolutions/p_ups.html</p>
monitors	<ul style="list-style-type: none"> • HP 15" Rackmount Flat Panel Monitor/Keyboard J1470A • HP 15" Low Emissions Display D2825A • HP 19" Display D2843A • HP 21" Display D2846A
hp racks²	<ul style="list-style-type: none"> • HP Rack System/E41 (41 EIA units of usable space) J1500A • Front door for /E41 J1509A • Tie kit for /E41 J1512B • Side panel kit for /E41 J1506A • HP Rack System/E33 (33 EIA units of usable space) J1501A • Front door for /E33 or /U33 J1510A • Tie kit for /E33 or /U33 J1513B • Side panel kit for /E33 J1507A • HP Rack System/E25 (25 EIA units of usable space) J1502A • Front door for /E25 or /U25 J1511A • Side panel kit for /E25 J1508A

¹ 2Uk rack kit (C6542A) or 3Uk³ rack kit (C6543A) required

² EIA unit = 1.75 inches

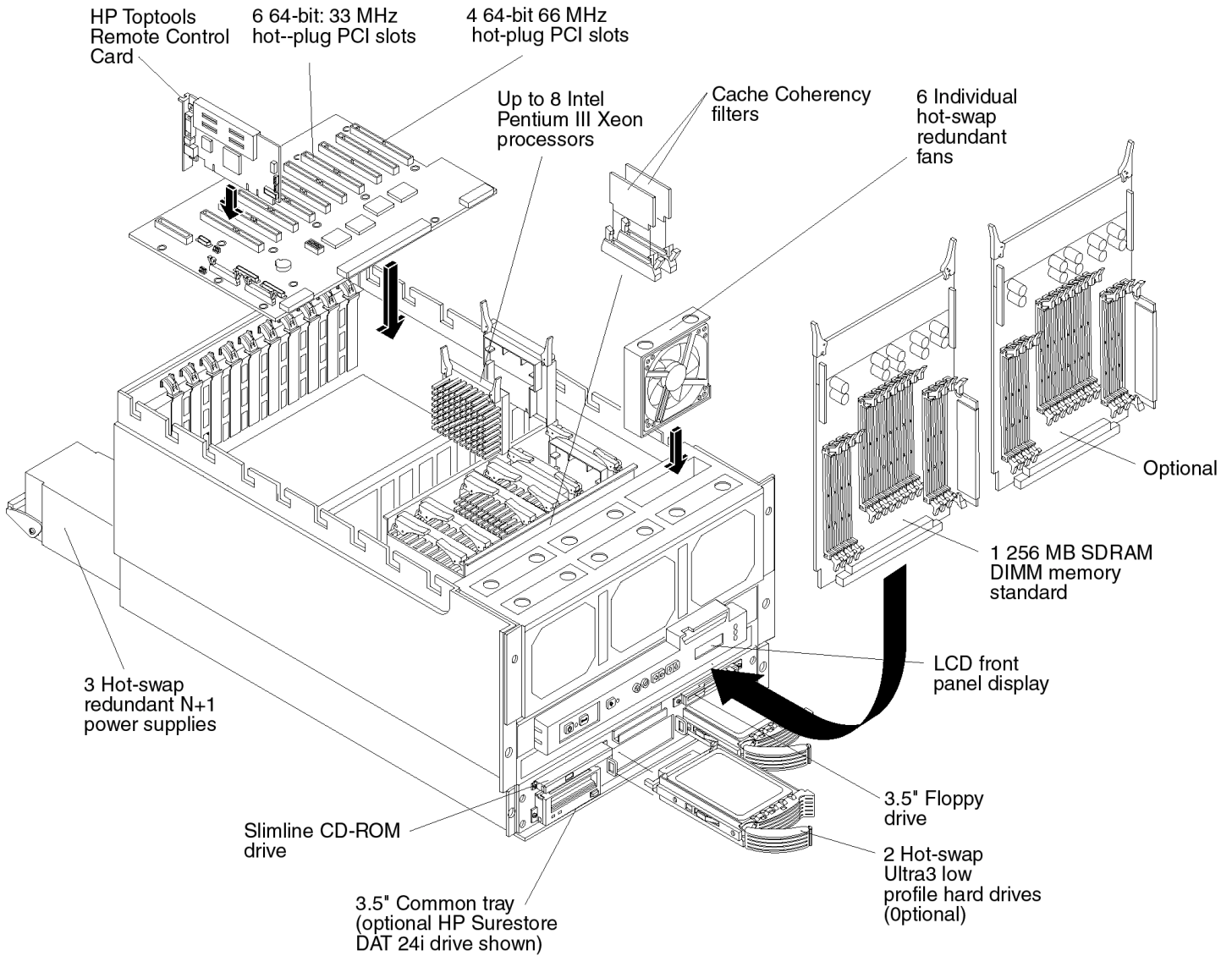
accessories (continued)

	product accessory	product no.
hp racks¹ (continued)	• HP Rack System/U33 (33 EIA units of usable space)	J1466A
	• HP Rack System/U25 (25 EIA units of usable space)	J1464A
	• Monitor/Keyboard Switchboxes:	
	– 4-port switchbox (cable not included)	J1473A
	– 8-port switchbox(cable not included)	J1474A
	– 2-User Expansion Kit	J1475A
	– Cable, 8 foot	J1476A
	– Cable, 15 foot	J1477A
	• Vertical Extension Kit for /E41, /E33, /E25	J1471A
	• Rackmount Kits:	
	– Keyboard rackmount kit	J1518A
	– Monitor rackmount kit	J1519A
	– Sliding Shelf Rackmount Kit	J1526A
	– Plain shelf rackmount kit	J1520A
	• Filler panels (qty 6)	J1514A
• Delivery Services:		
– Inside delivery service	J1543A	
– Coordinated shipment service	J1544A	
– HP Netserver Rack Installation Self-Paced Training kit	D7001A	
hp netserver racks	For a complete list of racks and additional rack accessories and kits, please see the <i>HP Netserver Rack Configuration Guide</i> , located at http://netserver.hp.com/netserver/products/racks_accs/racks_accs.asp . Use HP Netserver Rack Assistant to configure your complete rackmounted solution. Download from http://netserver.hp.com/netserver/tools/rack_asst.asp .	
service kit	Hot swap service kit with power supply and fan	D7073A
keyboard and mouse	• HP Mini-DIN mouse	C3751B
	• HP Netserver keyboard	D8597A/D4950B ²

¹EIA unit = 1.75 inches

²Japanese only keyboard

hp netserver lxr 8500



specifications

operating temperature	41° to 95°F (5° to 35°C)
operating humidity	20% to 80% noncondensing
acoustic emissions	Sound pressure (LpA): <55 dB(A), bystander position
power supply	Three N+1 750W, 200/240V, hot-swap, redundant
power availability from power system dc source	1500 watts dc continuous
maximum power draw from ac source	1100 watts
system dimensions	Rack: 17.5" W × 12.25" H × 28" D (445m W × 311m H × 711m D)
system weight	135 lb (61.24 kg)

choose your hp netserver lxr 8500

product no.	processor	All "A" models include: 256MB, 100MHz ECC SDRAM DIMM, CD-ROM, 3.5" FDD, 3 hot-swap power supplies, 6 redundant hot-swap fans, 2 CPU boards, two 4X SRAM Processor Coherency Filters, 7 CPU terminator cards, 1 memory card, HP Tootools for Servers, HP Tootools Remote Control Card, and HP OpenView Managex/SE. "AV" models do not include memory.
P1230A	Pentium III Xeon 700MHz/1MB cache	
P1231AV	Pentium III Xeon 700MHz/1MB cache	
P1765A	Pentium III Xeon 700MHz/2MB cache	
P1766AV	Pentium III Xeon 700MHz/2MB cache	
P3453A	Pentium III Xeon 900MHz/2MB cache	
P3454AV	Pentium III Xeon 900MHz/2MB cache	

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

For additional information on HP products and services, visit us at 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_lxr8500.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>

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