



hp netserver
lc 2000



technical
specifications

rock-solid workgroup server your growing business can depend on

a solid value for corporate workgroups, branch offices, and quickly growing small businesses that want enterprise-level system reliability features at an entry-level price. Designed with simplicity for easy installation, the hp netserver lc 2000 meets the demands of your quickly growing business.

The HP Netserver LC 2000 delivers value to corporate workgroups, branch offices, and quickly-growing small businesses with:

- **High tech and high touch**—designed to be simple to install, configure, and upgrade, all HP Netserver LC 2000 components are easily accessible and designed for tool-less service—accented by color-coded “touch points”
- **High availability at a low price**—we created the LC 2000 to deliver the most essential uptime-protecting technologies at a very accessible price. With more hot-swappable and redundant components than have ever been offered in a workgroup server, the LC 2000 creates a super-reliable foundation for the growing network
- **Intelligent management**—the HP Netserver LC 2000 is complemented by a hardware and NOS management suite that combines unmatched flexibility with simplicity for precise control. HP management tools ensure that your LC 2000 can be managed from anywhere
- **Value, value, value**—with the unbeatable value delivered by the HP Netserver LC 2000, workgroup and remote office IT managers get all the features they need and pay for none that they don't
- **Best-in-class uptime protection**—with up to six hot-swappable disk drive bays, standard redundant, hot-swappable fans, optional hot-swappable redundant power supplies, support for redundant NICS, and duplexing
- **Freedom to expand**—with capacity for 4GB SDRAM, 291.2GB of storage and six open PCI slots, the HP Netserver LC 2000 offers room for growth that is unprecedented in a workgroup server

features

performance

processor	Up to two Intel® Pentium® III 733MHz, 800MHz, 866MHz, 933MHz, or 1GHz processors, with 133MHz front-side bus
level 2 cache	256K on-die write-back cache
ECC memory	Four DIMM sockets for 64MB, 128MB, 256MB, 512MB, or 1GB SDRAM PC-133 DIMM ¹
I/O expansion slots	Six full-length PCI slots (four 32-bit and two 64-bit slots)
SCSI controller	Embedded dual channel Ultra-2
mass storage system	<ul style="list-style-type: none">• 10 shelves total• One 3.5 inch flexible disk drive• One CD-ROM• Two open common tray removable media bays<ul style="list-style-type: none">– Suitable for tape backup device or common tray disk drives• Six open hot-swappable mass storage bays (supporting six low-profile or three half-height drives)<ul style="list-style-type: none">– Hot-swap drive backplane supports Ultra3 SCSI– Duplexing option available to split hot-swap drive backplane (3x2)
maximum internal storage	219GB maximum hot-swap (3 × 73GB half-height drives) plus two 36GB common-tray drives for maximum internal storage of 291.2GB
expansion slots	<ul style="list-style-type: none">• Two 64-bit and four 32-bit PCI slots• Peer 32-bit/64-bit PCI buses, both at 33Mhz
video	<ul style="list-style-type: none">• Embedded ATI Rage IIc video controller• 1024x768, 64K color at 75Hz• 2MB SGRAM
CD-ROM drive	32X maximum-speed IDE
flexible disk drive	3.5" 1.44MB flexible disk drive
built-in I/O ports	<ul style="list-style-type: none">• One serial port• One 25-pin parallel port• One SCSI knockout port for external connections• One server management port (serial)• Video port—SVGA• Mini-DIN keyboard and mouse ports
keyboard and mouse	Localized keyboard and two-button mouse on pedestal models

¹ Maximum useable memory will be less depending on configuration

features (continued)

availability

hot-swap power supplies	Standard redundant hot-swap fans, optional hot-swap redundant power supply
self-correcting memory	Automatic Error Checking and Correcting (ECC) system and cache memory
hot-swap disk drives	<ul style="list-style-type: none">• Supports 9.1GB, 18.2GB 7200rpm Ultra3 SCSI disk drives• Supports 9.1GB, 18.2GB, 36.4GB, or 73GB 10,000rpm Ultra3 SCSI disk drives• Supports 18.2GB, 15,000rpm Ultra3 SCSI disk drive
power supply	<ul style="list-style-type: none">• Hot swappable 1+1 redundant power supply option• Two power cords per system, with redundancy option
disk array controller	Optional NetRAID-3Si Disk Array Controller or NetRAID-1Si Disk Array Controller and three 9.1GB 7200rpm disk drives
network interface	<ul style="list-style-type: none">• Integrated 10/100TX NIC• Supports redundant NICs
fans	Redundant, hot-swappable fans protect system components with uninterrupted cooling
duplexing support	Hot-swap drive cage supports optional duplexing kit to split the six-drive backplane into two segments that address three drives each
one-button disaster recovery	Simple and reliable data restoration with the world's first hardware-based One-Button Disaster Recovery solution, standard with use of HP Surestore products

intelligent management

installation and configuration	<ul style="list-style-type: none">• HP Netserver Navigator with automated, menu-driven system setup and configuration• Guided network operating system installation• Automatic installation of monitoring tools
management software	<ul style="list-style-type: none">• HP Toptools for Servers—a comprehensive server management solution with intuitive, browser-based user interface, facilitates troubleshooting, administration, and detailed inventory information• Optional award-winning HP OpenView Manage-x Event Manager for complete NOS management• Easy integration with other leading network and system management products
remote administration	<ul style="list-style-type: none">• HP Integrated Remote Assistant provides emergency remote access over a modem with unified event log for faster troubleshooting (requires external modem)• Optional HP Toptools Remote Control card for even more powerful remote management, remote LAN access, advanced security, on line diagnostics, and group actions

expandability

design features	<ul style="list-style-type: none">• Rack model at 5U rack height• Rack models (and the rack conversion kit) ship with a single universal bezel that fits both HP and Rittal racks• Includes a quick-release cable management arm• Easy access to all system components from one panel• Designed for serviceability with clearly labeled cabling and color coded handles
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features (continued)

flexibility

supported operating systems

Microsoft® Windows NT® 4.0, Windows® 2000; Microsoft BackOffice Small Business Server, 0
Novell NetWare 4.2, 5.0; Red Hat Linux; SCO OpenServer and UnixWare

security and safety

system security

- Startup password
 - Flexible disk drive, CD ROM, and hard disk drive boot disable
 - Power and reset switch lock
 - Enable or disable serial port, parallel port, flexible disk drive, and write operations to the flexible disk drive
 - Hot-swap hard disk drive cage lock
 - Lockable chassis
-

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
-

hardware maintenance

- Optional HP Supportpack for 3-year, 4-hour response during standard business hours
 - Optional HP Supportpack for 3-year, 4-hour response, 24 hours a day, 7 days a week
 - Optional HP Supportpack for 3-year Call-to-Repair Commitment Service within 6 hours, 24 hours a day, 7 days a week
-

software maintenance

- HP Personalized Systems Support (PSS) for proactive software support in mission-sensitive environments
 - HP Critical Systems Support (CSS) for high availability support in mission-critical environments
-

reseller support services

Comprehensive reseller support framework to ensure successful support of HP NetServers includes:

- Proactive notification e-mail service
 - Service and support Web site
 - Server management and hardware troubleshooting courses (STAR)
 - Troubleshooting toolkit
 - 24x7 telephone support for authorized resellers
 - HP Business Builders blueprints for new business opportunities
-

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: 0.12
- Energy Efficiency Ratio is the quotient used to measure consumed power according to the Energy Saving Law measurement method divided by the capacity specified in the Energy Saving Law

accessories

	product accessory	product no.
memory	• 64MB 133MHz ECC SDRAM DIMM	D8264A
	• 128MB 133MHz ECC SDRAM DIMM	D8265A
	• 256MB 133MHz ECC SDRAM DIMM	D8266A
	• 512MB 133MHz ECC SDRAM DIMM	D8267A
	• 1GB 133MHz ECC SDRAM DIMM	D8268A
storage devices	• 9.1GB Ultra3 SCSI disk drive (7,200rpm—common tray)	P1213A
	• 9.1GB Ultra3 SCSI disk drive (10,000rpm—common tray)	P1214A
	• 18.2GB Ultra3 SCSI disk drive (7,200rpm—common tray)	P1215A
	• 18.2GB Ultra3 SCSI disk drive (10,000rpm—common tray)	P1167A
	• 36.4GB Ultra3 SCSI disk drive (10,000rpm—common tray)	P1169A
	• 73GB half-height hot-swap Ultra3 SCSI disk drive (10,000rpm)	D9420A
	• 9.1GB low-profile hot-swap Ultra3 SCSI disk drive (7,200rpm)	P1217A
	• 9.1GB low-profile hot-swap Ultra3 SCSI disk drive (10,000rpm)	P1168A
	• 18.2GB low-profile hot-swap Ultra3 SCSI disk drive (7,200rpm)	P1216A
	• 18.2GB low-profile hot-swap Ultra3 SCSI disk drive (10,000rpm)	P1166A
	• 36.4GB low-profile hot-swap Ultra3 SCSI disk drive (10,000rpm) ¹	D9419A
	• Optional Duplexing Kit	D8280A
disk trays	• 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
disk array controllers	• NetRAID-1Si one-channel disk array controller	D2140A
	• NetRAID-4M four-channel Ultra3 disk array controller	D9351A
	• HP NetRAID-1M controller (Ultra3 SCSI, 1 channel)	P3410A
	• HP NetRAID-2M controller (Ultra3 SCSI, 2 channels, 64MB cache)	P3411A
	• HP NetRAID-2M controller (Ultra3 SCSI, 2 channels, 128MB cache)	P3475A
external storage solutions	• HP Netserver Storage System/6	D3604B
	• HP Netserver Rack Storage/12 (Ultra3)	D5989C
	• HP Netserver Rack Storage/12 SCSI Card (Ultra3)	D6025C
	• HP Netserver Rack Storage/12FC	D5991A
	• HP Netserver Rack Storage/12FC HBA Card	D6977A
	• HP Netserver Rack Storage/12FC HBA Card (for clustering)	D8602A

¹ When configuring more than four 36.4GB low-profile hot-swap Ultra3 SCSI disk drives (D9419A), an additional power supply (D8513A) is required.

accessories (continued)

	product accessory	product no.
internal backup drives	• HP Surestore DAT8i tape drive	C1528K/V
	• HP Surestore DAT24i tape drive	C1555D/V
	• HP Surestore DAT40i tape drive	C5686A/V
	• HP Surestore DLT 40i tape drive	C5647A/V
	• HP Surestore DLT 80i tape drive	C5725A/V
	• HP Surestore Ultrium 230	C7400A/V
	• HP Surestore DLT1	C7484A/V
external backup drives	• HP Surestore DAT8e tape drive	C1529K
	• 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 DLT1	C7483A
rack-optimized backup drives	• HP Surestore DAT8k DDS-2 tape drive ¹	C6533A
	• HP Surestore DAT24k DDS-3 tape drive ¹	C6525A
	• HP Surestore DAT40k DDS-4 tape drive ¹	C6541A
	• HP Surestore DLT 40k DLT drive ¹	C6515A
	• HP Surestore DLT 80k DLT drive ¹	C6529A
	• HP Surestore 2Uk rack kit	C6542A
	• HP Surestore 3Uk rack kit	C6543A
	• HP Surestore Ultrium 230	C7470A
	• HP Surestore Tape Array 5500	C1534AE
automated backup	• HP Surestore DAT24x6i Autoloader	C5677B/BV
	• HP Surestore DAT24x6e Autoloader	C1559C
	• HP Surestore DAT 40x6i Autoloader	C5716A/AV
	• HP Surestore DLT Autoloader 418	C6280F
	• HP Surestore DAT 40x6e Autoloader	C5717A
	• HP Surestore Tape Library 2/20 ²	C7202RA/NB
	• HP Surestore DLT Autoloader 818	C6282RA/NB
	• HP Surestore Tape Library 4/40	C7214NB
	• HP Surestore Autoloader 1/9 standalone, Remote Management Card	C7146RA/NB
• HP Surestore Autoloader 1/9 rackmount, Remote Management Card	C7746RA/NB	
processor upgrades	• Intel Pentium III 600MHz, 133MHz front-side bus	D8510A
	• Intel Pentium III 667MHz, 133MHz front-side bus	D8511A
	• Intel Pentium III 733MHz, 133MHz front-side bus	D9184A
	• Intel Pentium III 800MHz, 133MHz front-side bus	D9185A
	• Intel Pentium III 866MHz, 133MHz front-side bus	P1188A
	• Intel Pentium III 933MHz, 133MHz front-side bus	P1807A
	• Intel Pentium III 1GHz, 133MHz front-side bus	P2488A

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

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

accessories (continued)

hp supportpacks	product no.
monitors	HP offers a variety of monitors (15", 17", and 21"). Please refer to HP Order Assistant at http://www.netserver.hp.com/netserver/tools/ for complete configuration and order information.
Network interface cards	HP Netserver 10/100TX PCI LAN adapter D5013B
Redundant power supply	Redundant hot-swap power supply D8513A
conversion kit	Pedestal-to-rack conversion kit D8512A
remote management	<ul style="list-style-type: none"> • HP Integrated Remote Assistant Included • HP Tootools Remote Control Card D6028A • AC/DC Adapter for Tootools Remote Control Card D6138A
APC uninterruptible power supply (UPS)	(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
hp racks	<ul style="list-style-type: none"> • HP Rack System/E41 J1500A • HP Rack System/E33 J1501A • HP Rack System/E25 J1502A • HP Rack System/U33 J1466A • HP Rack System/U25 J1464A • HP Monitor/Keyboard switchboxes: <ul style="list-style-type: none"> – 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 • HP 15" Flat Panel Monitor/Keyboard J1470A • Vertical Extension Kit (for Rack System/E) J1471A • Rackmount Kits: <ul style="list-style-type: none"> – Keyboard rackmount kit J1518A – Monitor rackmount kit J1519A – Sliding shelf rackmount kit J1526A – Stationary shelf rackmount kit J1520A

For a complete list of racks and rack accessories, download the HP Netserver Rack Assistant tool from http://netserver.hp.com/netserver/tools/rack_asst.asp

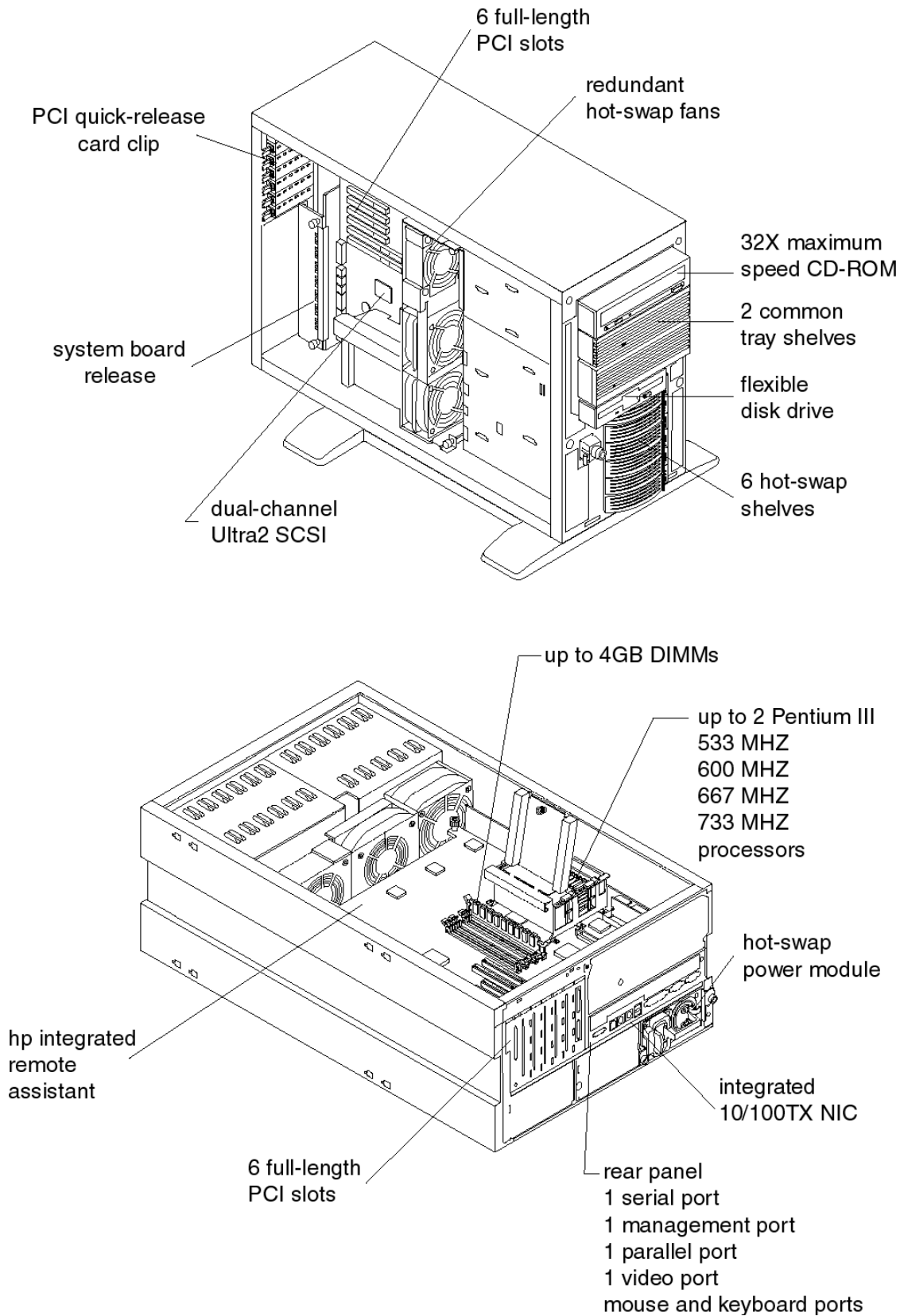
specifications

Support can be delivered either by your local service-authorized reseller or by Hewlett-Packard. For more information, visit our Web site at <http://www.hp.com/go/netserver>

5-Year 24x7 6-Hour Onsite Hardware Call-to-Repair	H2824E/VV
5-Year 24x7 4-Hour Onsite Response	H2823E/VV
5-Year 4-Hour Onsite Response (regular business hours) ¹	H2822E/VV
5-Year Next Business Day Onsite Response	H2838E/VV
3-Year 24x7 6-Hour Onsite Hardware Call-to-Repair	H1820A/E/VV
3-Year 24x7 4-Hour Onsite Response	H5514A/E/VV
3-Year 4-Hour Onsite Response (regular business hours) ¹	H5519A/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 for NT, 1 year (cluster server)	H1933E
• Priority Recovery for NT, 1 year	H1934E
• Priority Management for NT, 1 year	H1941E
• Operations Checkup for NT, 1 engagement	H1950E
• Critical Systems Support for NT and SAP R/3	H3035E
• Critical Systems Support for 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

¹ Provides HP's best response time service during regular business hours, Monday through Friday, except HP Holidays

hp netserver lc 2000/2000r



specifications

operating temperature	5°C–35°C
operating humidity	20%–80% RH
acoustic emissions	Sound Level: (LpA) <51 dB(A) bystander position
power supply	Nominal, 100–127/200–240V AC, 50/60Hz; range, 90–140/180–264V AC, 47/63Hz
power availability	349W
power consumption	4.5A @ 120V, 2.3A @ 240V
system dimensions	<ul style="list-style-type: none"> • Height: 460mm (18.05") with feet; 441mm (17.3") without feet • Width: 216mm (8.5") • Depth: 692mm (27.2") with rack bezel, 648mm (25.5") without bezel
system weight	58 lbs.

choose your hp netserver lc 2000 or lc 2000r

product No.	description	configuration
D9164A	Pentium III 800MHz, 133MHz front-side bus	Pedestal
D9165A	Pentium III 800MHz, 133MHz front-side bus	Rack
P1798A	Pentium III 866MHz, 133MHz front-side bus	Pedestal
P1800A	Pentium III 866MHz, 133MHz front-side bus	Rack
P1802A	Pentium III 933MHz, 133MHz front-side bus	Pedestal
P1804A	Pentium III 933MHz, 133MHz front-side bus	Rack
P3493A	Pentium III 933MHz, 133MHz front-side bus and NetRAID-1M Ultra3 controller and three 18.2GB, 7200rpm Ultra3 hot-swap disk drives	Pedestal

All models include:

128MB 133MHz ECC SDRAM with memory scrubbing; embedded, dual-channel, Ultra2 SCSI controller; embedded 10/100TX NIC; redundant, hot-swappable fans; CD-ROM drive; flexible disk drive; HP Integrated Remote Assistant; HP Tootools

Support:

Support can be delivered by your local service authorized reseller or by Hewlett-Packard

support

Support can be delivered by your local reseller or by the Hewlett-Packard Customer Support Organization.

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 NetServers. 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_lc2000.asp

HP Select Express Program:

HP NetServers 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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