



## HP NetServer LH II Series



If your organization's computing needs range from file sharing and high-speed communications to database applications, there's no better solution than HP NetServer LH II servers.

### **Best-in-class departmental servers**

#### **Uni- and dual Pentium® II 266MHz and 300MHz**

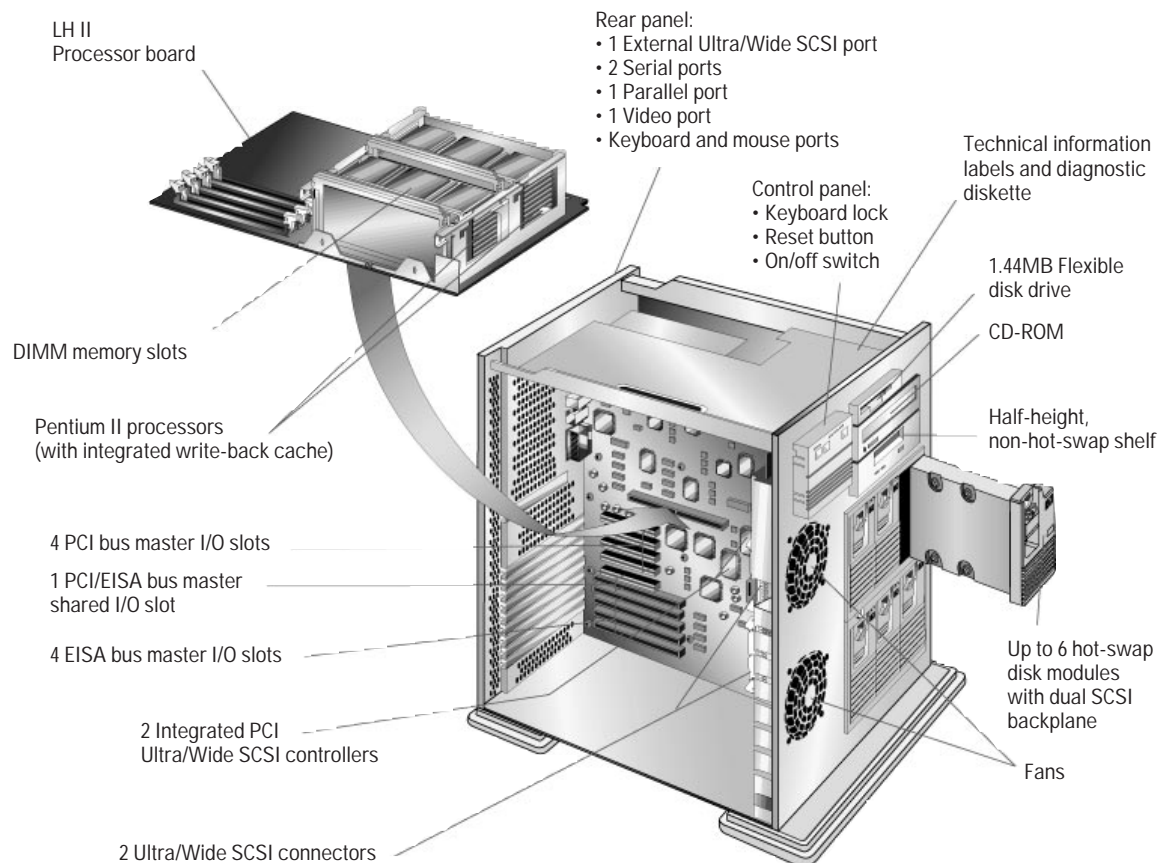
These best-in-class servers feature an advanced system architecture and memory subsystem that delivers powerful performance and maximum I/O bandwidth. Innovative availability features, such as intelligent hot-swap, built-in duplexing, and an optional Smart Redundant Power Supply, protect your data and minimize downtime.

Advanced tools are included to simplify network and server management.

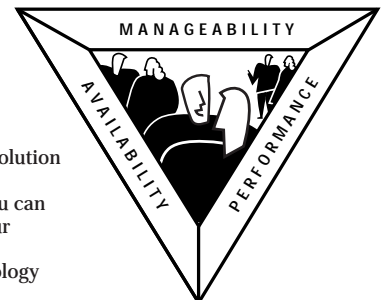
HP protects your valuable investment with timely and comprehensive support, as well as with servers designed for growth, including affordable upgrades to dual Pentium II performance and upgrades from the HP NetServer LH Pro.

data sheet

# HP NetServer LH II Series



HP's MAP strategy ensures that your enterprise networking solution delivers the highest levels of Manageability, Availability, and Performance, all backed with industry-leading support. So you can count on optimum, easy-to-achieve results over the life of your server. Maximum system uptime and data protection in your business-critical environment. And the most advanced technology available today—with plenty of headroom for future growth.



# Features

Performance	
Processor	Intel® Pentium II 266MHz and 300MHz, upgradable to dual SMP
Cache	512KB write-back per processor (integrated on processor)
ECC Memory	512MB; 60 ns DIMM
DIMM Memory	32MB, 64MB, 128MB, 256MB
Controller	Two PCI Ultra/Wide SCSI controllers integrated on system board
Smart Redundant Power Supply	Optional RPS with status monitoring and reporting
Video	<ul style="list-style-type: none"> <li>Integrated 1024x768, 16-color, noninterlaced</li> <li>512KB standard video memory</li> <li>Super VGA drivers available with operating system or from HP electronic support service</li> </ul>
CD-ROM	12x Max CD-ROM
Flexible Disk Drive	1.44MB flexible disk drive
Mass Storage System	Nine front-accessible shelves: one 3.5-inch 1.44MB flexible disk drive (included); one for CD-ROM (included); one standard half-height (non-hot-swap); six hot-swap (must use hot-swap drives)
Keyboard and Mouse	Localized keyboard and two-button mouse
Availability	
Clustering Support	Supports HP High-Availability solution which is built around the server industry standard Microsoft® Cluster Server (MSCS)
Disk Array Controller	<ul style="list-style-type: none"> <li>HP NetRAID PCI Disk Array Controller with three Ultra/Wide SCSI channels</li> <li>HP NetRAID-1 PCI Disk Array Controller with one Ultra/Wide SCSI channel</li> <li>Hot-swap and hot-spare capabilities</li> <li>Supports RAID 0, 1, 3, 5, 10, 30, 50</li> <li>Provides online capacity expansion and RAID level migration</li> <li>Battery backup for cache memory</li> </ul>
Power Supply	Optional RPS with status monitoring and reporting
Cooling	Dual fans provide extra cooling for internal components; superior airflow design
Manageability	
Up and running quickly	<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> <li>IntranetWare™ from Novell® distributed with every system (requires customer purchase for activation)</li> </ul>
Management and administration	<ul style="list-style-type: none"> <li>HP TopTools for servers facilitates remote administration and problem resolution</li> <li>Extensive built-in management capabilities based on SNMP standards</li> <li>Bundled or optional HP Remote Assistant provides remote access, regardless of system state, for faster troubleshooting</li> <li>File transfer capabilities for secure and easy remote updates</li> <li>Industry-leading HP OpenView™ for complete network management</li> <li>Easy integration with other leading network and system management products</li> </ul>
Expandability	
I/O Expansion	<ul style="list-style-type: none"> <li>4 PCI</li> <li>4 EISA</li> <li>1 shared PCI/EISA</li> </ul>
Built-In I/O Ports	<ul style="list-style-type: none"> <li>Ultra/Wide external SCSI port</li> <li>One 25-pin parallel port</li> <li>Two 9-pin RS-232 serial ports</li> <li>Video port</li> <li>Mini-DIN keyboard and mouse ports</li> </ul>



# Features

Flexibility	
Supported Operating Systems	Banyan® VINES®, IBM® OS/2® Warp Server, Microsoft® MS-DOS®, Microsoft Windows® NT™ Server, Novell® NetWare®, Novell NetWare SFT™ III, Novell IntranetWare™, SCO® OpenServer™, and SCO UnixWare®
Supported SMP Operating Systems	IBM OS/2 Warp Server SMP, Microsoft Windows NT Server, Novell NetWare SMP, SCO OpenServer MPX™, and SCO UnixWare
Rackmounting	Optional rackmount solutions to save valuable space in multiserver environment
Security and Safety	
Security	<ul style="list-style-type: none"> <li>Startup password</li> <li>Network server mode</li> <li>Keyboard lock button with optional screen blanking</li> <li>Server case lock</li> <li>EISA configuration protection password</li> <li>Enable or disable serial port, flexible disk drives, and write operations to flexible disk drives</li> </ul>
Service and Support	
Warranty	Three-year, next-business-day, on-site limited warranty from HP or authorized resellers (standard business hours) worldwide
Support Options	<ul style="list-style-type: none"> <li>Optional 4-hour response during standard business hours, or 24 hours a day, 7 days a week available as HP SupportPack from resellers</li> <li>Free telephone support for basic setup, installation, and troubleshooting in U.S., Canada, and Europe during warranty</li> <li>Network phone-in support (advanced NOS and network support) available in U.S., Canada, Europe, and Australia as optional HP SupportPack from resellers</li> </ul>
Specifications	
Operating Temperature	41° to 95° F (5° to 35° C)
Operating Humidity	20% to 80% noncondensing
Acoustic Emissions	Sound level (LpA): <58 dB(A)
Power Supply	Nominal range 100–127/200–240 VAC, 50–60Hz; 90–140/180–264 VAC, 47–63Hz
Power Availability	410W continuous
Power Consumption	645/614W maximum with 110/220V supply
A/C Load	2200 BTU/hr (560 KCAL/hr) maximum
System Dimensions	19.3"H x 13.7"W x 18.1"D (49cm x 34.8cm x 46cm)
System Weight	50–70lb (22.7–31.8kg), depending on configuration
Regulatory Compliance	
Electromagnetic Compliance	<ul style="list-style-type: none"> <li>CISPR 22 Class B (International)</li> <li>EN 55022 Class B (EU Countries)</li> <li>EN 50082-1, Generic Immunity (EU Countries), includes: IEC 801-2, ESD; IEC 801-3, RI; IEC 801-4, FT</li> <li>FCC Class B Verified (USA—Self-Declaration)</li> <li>M of C Class A (Korea)</li> <li>VCCI Class B (Japan)</li> <li>EN61000-3-2 Harmonic Current</li> <li>EN61000-3-3 Flicker/Voltage Fluctuation</li> <li>BCIQ Class B (Taiwan)</li> <li>C-TICK Class B (Australia)</li> </ul>
Safety Compliance	<ul style="list-style-type: none"> <li>CSA Certified (Canada, File LR106647)</li> <li>EN 60950 Compliance (International)</li> <li>TÜV Certified (Germany)</li> <li>UL Listed (USA, File E139742)</li> <li>NOM-1-NYCE Certified (Mexico)</li> </ul>

# Accessories

	Product Accessory <sup>1</sup>	Product No.
Memory	<ul style="list-style-type: none"> <li>HP 32MB 60ns EDO DIMM</li> <li>HP 64MB 60ns EDO DIMM</li> <li>HP 128MB 60ns EDO DIMM</li> <li>HP 256MB 60ns EDO DIMM</li> </ul>	D4295A D4296A D4297A D4926A
Storage Devices	<ul style="list-style-type: none"> <li>2.1GB, 5400rpm Fast SCSI-2 disk drive<sup>2</sup></li> <li>4.2GB, 7200rpm Fast SCSI-2 disk drive<sup>2</sup></li> <li>2.1GB, 7200rpm hot-swap Ultra/Wide SCSI disk module</li> <li>4.2GB, 7200rpm hot-swap Ultra/Wide SCSI disk module</li> <li>4.2GB, 10,000rpm hot-swap Ultra/Wide SCSI disk module</li> <li>9.1GB, 7200rpm hot-swap Ultra/Wide SCSI disk module</li> <li>18.2GB, 7200rpm hot-swap</li> <li>HP SureStore DAT8i Internal DDS3 Drive (8GB)</li> <li>HP SureStore DAT8e External DDS3 Drive (8GB)</li> <li>HP SureStore DAT24i Internal DDS3 Drive (24GB)<sup>3</sup></li> <li>HP SureStore DAT24e External DDS3 Drive (24GB)</li> <li>HP SureStore DAT24x6e External DDS3 Autoloader (144GB)</li> <li>HP SureStore DLT30e External DLT Drive (30GB)</li> <li>HP SureStore DLT40e External DLT Drive (40GB)</li> <li>HP SureStore DLT70e External DLT Drive (70GB)</li> <li>3.5-inch hard disk drive mounting trays (3-pack, non-hot-swap)<sup>2</sup></li> <li>Tape/DAT/CD-ROM mounting trays (3-pack, no front panel)<sup>2</sup></li> <li>HP NetServer hot-swap tray (for selected non-HP drives only, refer to HP electronic services for supported drives)</li> <li>Cable kit</li> </ul>	D2077A D4956A D3582C D3583C D4903A D4289A D5039A C1528H C1529H C1555B C1556B C1559A C1549A C1579A C5658A D2198B D2199A D3349B D4845A
External Storage Solution	<ul style="list-style-type: none"> <li>HP NetServer Storage Rack System/6</li> <li>HP NetServer Rack Storage/8</li> </ul>	D3604B D4902A
Disk Array Controller	<ul style="list-style-type: none"> <li>HP NetRAID PCI Disk Array Controller with three Ultra/Wide SCSI channels<sup>3</sup></li> <li>HP NetRAID-1 PCI Disk Array Controller with one Ultra/Wide SCSI channel</li> </ul>	D4943A D4992A
Redundant Power Supply	Smart RPS with status monitoring and reporting	D4921A
Uninterruptible Power Supplies	UPS devices are available from APC. For additional information, contact your local APC reseller, or see APC's web page at <a href="http://www.apcc.com">http://www.apcc.com</a>	
Network Connectivity	<ul style="list-style-type: none"> <li>HP DeskDirect 10/100VG PCI LAN adapter</li> <li>HP NetServer 10/100TX PCI LAN adapter</li> </ul>	J2585B D5013A
Monitor	<ul style="list-style-type: none"> <li>HP 14" Super VGA Display</li> <li>HP 15" Low Emission Display</li> <li>HP 15" Ergo Ultra VGA Display</li> <li>HP 17" Ultra VGA Display</li> </ul>	D2821A D2825A D2830A D2835A
HP NetServer Racks <sup>4</sup> and Accessories <sup>5</sup>	<ul style="list-style-type: none"> <li>2-meter rack with side panels and rear door</li> <li>2-meter rack only</li> <li>8-port HP Console switchbox</li> <li>4-port HP Console switchbox</li> <li>HP NetServer Storage System/6 Rack kit</li> <li>HP NetServer LH Plus/LH Pro Rackmount kit<sup>4</sup></li> </ul>	J1487B J1488A J1497A J1493A J1492A J1491A
HP Remote Assistant	EISA server management card for remote diagnostic and environmental monitoring of server <ul style="list-style-type: none"> <li>HP Remote Assistant (with modem) for U.S./Canada/Latin America</li> <li>HP Remote Assistant (with modem) for Europe/Asia Pacific</li> <li>HP Remote Assistant (without modem) for outside of U.S./Canada/Latin America</li> </ul>	D2968C D2969C D2967C
Upgrades	<ul style="list-style-type: none"> <li>HP Pentium II/266MHz CPU Chip</li> <li>HP Pentium II/300MHz CPU Chip</li> <li>HP NetServer LH II processor board upgrade kit</li> </ul>	D4995A D4996A D5952A

<sup>1</sup> Please see the *HP NetServers Configuration Guide* for important technical information when choosing your accessories  
<sup>2</sup> For use in standard half-height shelf only (one shelf available)  
<sup>3</sup> Must order cable kit (D4845A)  
<sup>4</sup> For additional information about HP rackmounting products, see <http://www.hp.com/go/enclosures>  
<sup>5</sup> For additional information, call HP FAX Response System at 1-208-344-4809 (worldwide from fax only) and request document #7433

# HP NetServer LH II Series

## Configuration and Models

	Model	Processor	Cache	ECC Memory	Product No.
HP NetServer LH II	Model 1	Pentium II 266MHz	512KB	64MB	D5017A
HP NetServer LH II	Model 1 w/bundled Remote Assistant <sup>1</sup>	Pentium II 266MHz	512KB	64MB	D5953A
HP NetServer LH II	Model 12A <sup>2</sup>	Pentium II 266MHz	512KB	128MB	D5974A
HP NetServer LH II	Model 1	Pentium II 300MHz	512KB	64MB	D5021A
HP NetServer LH II SMP	Model 1	Pentium II 300MHz, dual	512KB	64MB	D5023A

<sup>1</sup> Requires additional purchase of modem.  
<sup>2</sup> Includes three 4.2GB drives and HP NetRAID-1 DAC.

## HP SupportPack Offering<sup>1</sup>

HP SupportPack is an easy way for you to buy prepackaged service and support from your HP Authorized Reseller. A wide variety of services are available, from enhanced hardware support to telephone assistance for network operating systems and software applications.

HP SupportPack	Order Number
3-year, next-business-day, on-site	Standard Warranty
3-year, on-site service with 4-hour response <sup>2</sup> (Standard Business Hours)	H5518A
3-year, on-site service with 4-hour response <sup>2</sup> (24 hours/day, 7 days/week)	H5513A
On-site installation and network configuration	H5751A
Remote NOS, Application, LAN, WAN, and Management Phone Support	H1847AA

<sup>1</sup> One HP SupportPack per server on the network.

<sup>2</sup> Includes NOS Restoration.

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## For Additional Information

HP WWWeb Server	<a href="http://www.hp.com/go/netserver">http://www.hp.com/go/netserver</a> <a href="http://www.hp.com/go/storage">http://www.hp.com/go/storage</a>
HP NetServer FTP Server	<a href="ftp://ftp.hp.com/pub/servers">ftp://ftp.hp.com/pub/servers</a>
HP NetServer BBS	1-208-344-1691
HP FAX Response System	1-208-344-4809 (worldwide from fax only)

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