HP NetServer E60
Quick Service
Reference Guide

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Audience Assumptions

The guide is for HP authorized service personnel who install, administer, and troubleshoot HP NetServers. The Hewlett-Packard Company assumes you are qualified in the servicing of computer equipment and trained in recognizing hazards in products with hazardous energy levels.

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LAN RJ45

Key Lock

**External SCSI Port Knock-out**

Video SVGA
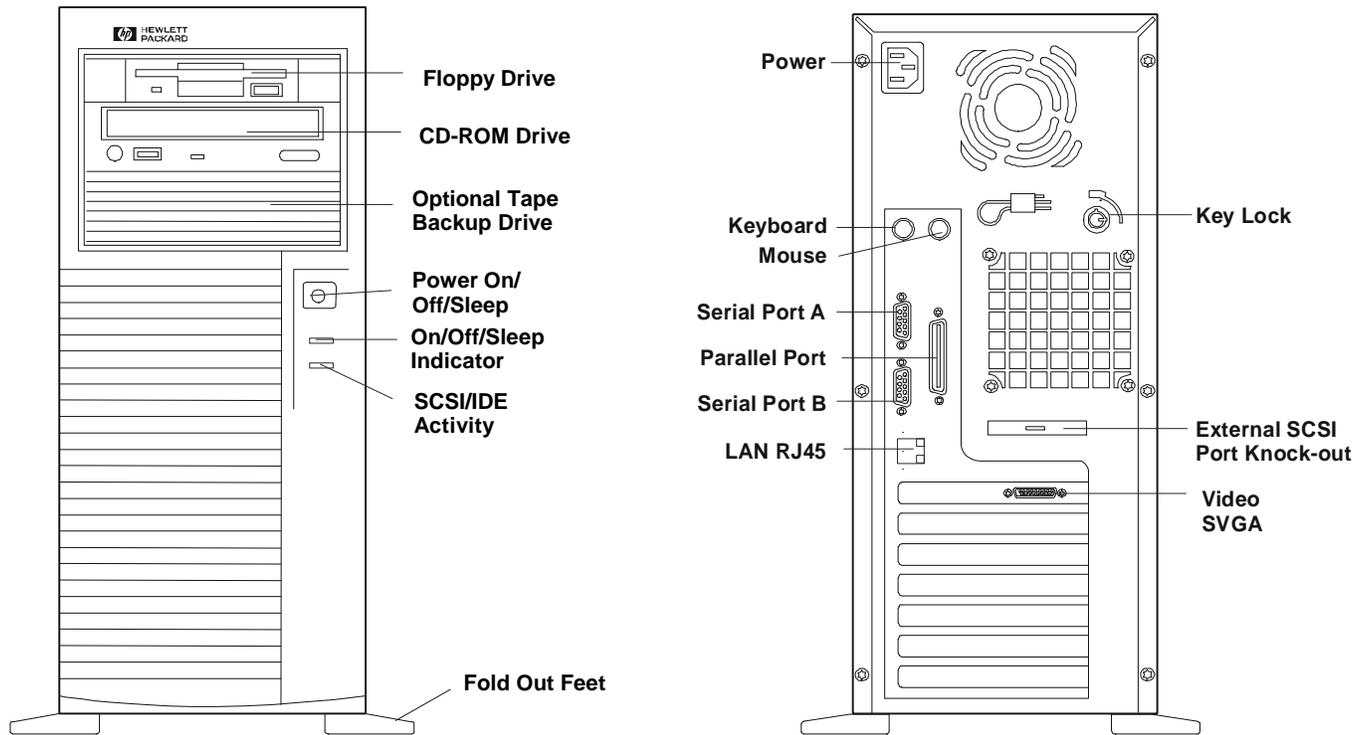
Removing and Replacing the Cover

To remove and replace the cover, you will need a Torx 15 driver or 1/4-inch flat blade screwdriver.

Key Lock

Screws

Screws

Removing the Cover

Front of Chassis

Bottom of Chassis
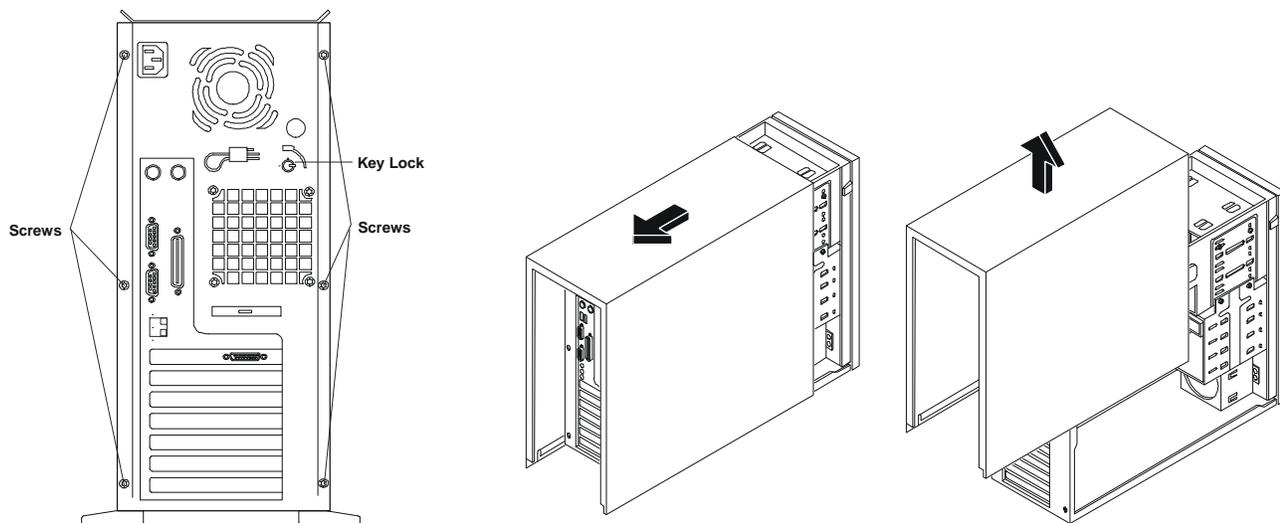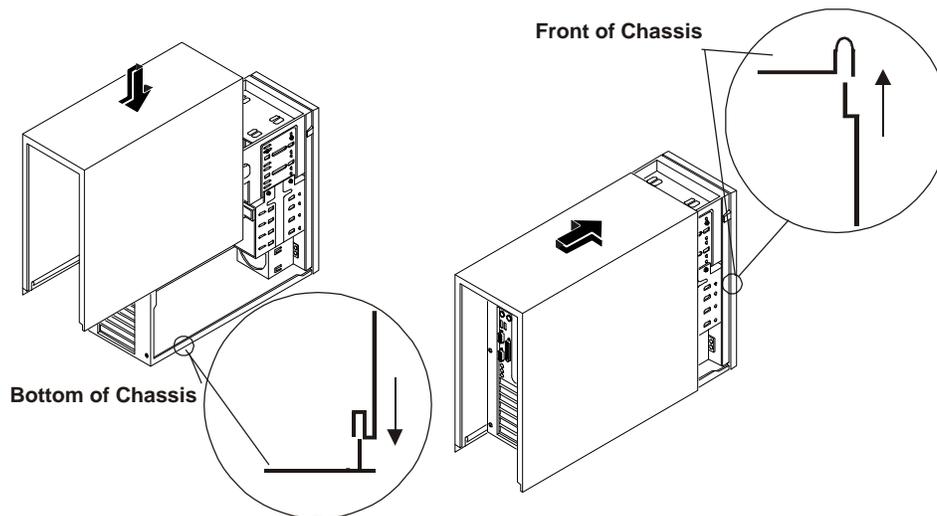
Installing the cover

Memory

The NetServer E 60's main memory is implemented with 3.3V, 100 MHz, unbuffered SDRAM DIMMs (Dual In-Line Memory Modules). The NetServer E 60 ships with at least 64 MB of main memory and supports up to 1 GB. Memory is available in the following DIMM capacities: 64, 128, and 256 MB.

There are four DIMM sockets on the system board. DIMMs may be installed in any combination in any socket. However, HP recommends starting at socket 0 and filling the sockets in order: 1, 2, and 3.

Use only HP DIMMs.

Boot Device Priority

1. IDE CD-ROM Drive
2. Flexible Disk Drive
3. Embedded SCSI A
4. Embedded SCSI B
5. PCI 2
6. PCI 1
7. PCI 6
8. PCI 3
9. PCI 4
10. PCI 5

Exploded Views
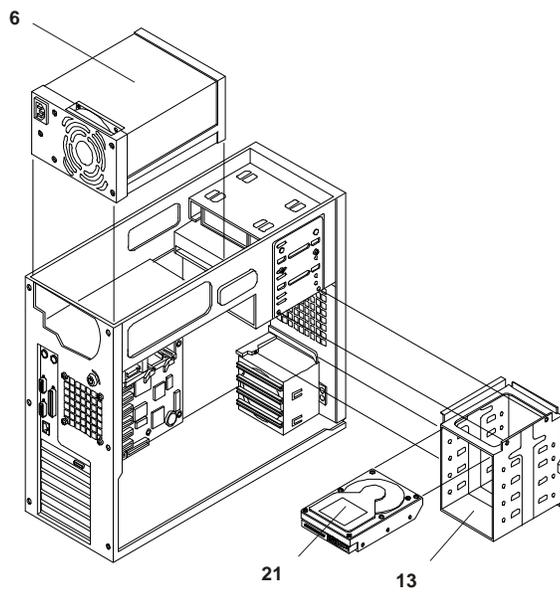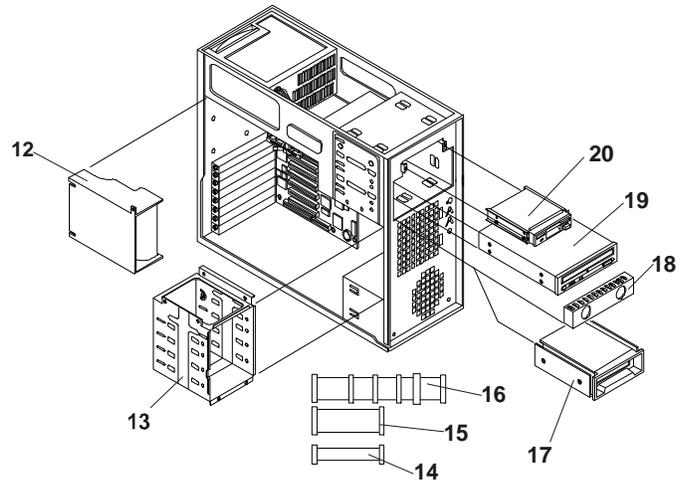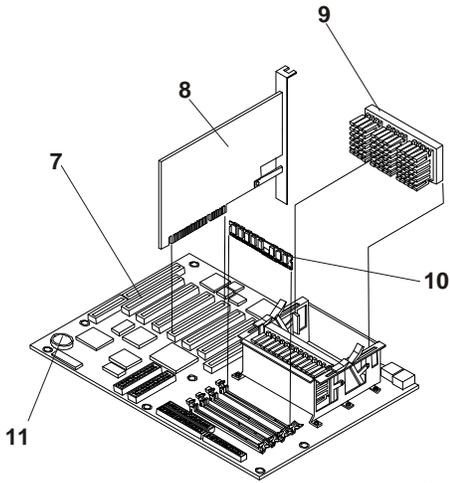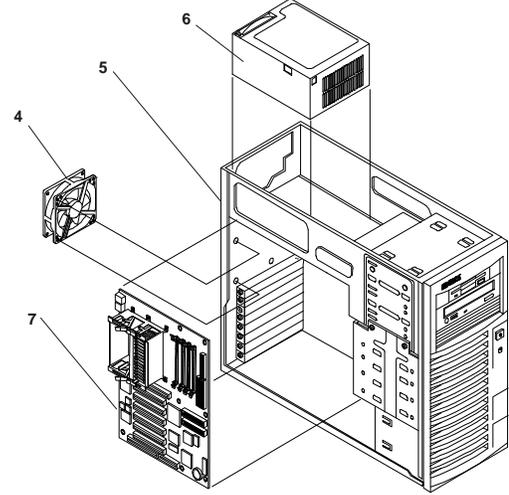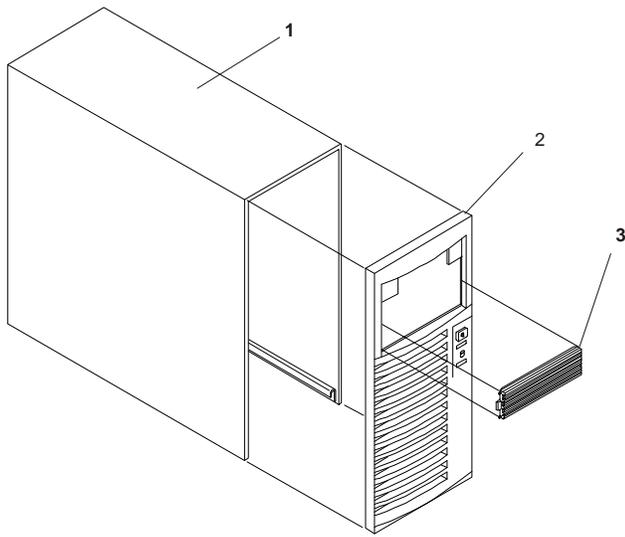
Replaceable Parts List

* This part is not on an exploded view
** This part number is constantly revised for each new release

Fig	Description	Replacement	Exchange
1	Cover	Not orderable	
2	Bezel	D7140-63003	
3	Drive Bay Cover	Not orderable	
4	Cooling Fan	D7140-63009	
5	Chassis	D7140-63002	
6	Power Supply	D6129-63003	D6129-69003
7	ATX System board	D7140-63000	D7140-69000
8	AGP Video Board	D7140-63008	
9a	Processor Module, PII/400	1821-4611	
9b	Processor Module, PII/450	1821-4203	
9c	Processor Module, PIII/500	D7129-63001	D7129-69001
10a	DIMM, E 60, 64 MB	D7155-63000	D7155-69000
10b	DIMM, E 60, 128 MB	D7156-63000	D7156-69000
10c	DIMM, E 60, 256 MB	D7157-63000	D7157-69000
11	Battery, 3V coin	1420-0356	
12	Air Flow Guide	D7140-63011	
13	Drive Cage	Not orderable	
14	Cable, flexible disk	D7140-63006	
15	Cable, IDE CD-ROM	D7140-63005	
16	Cable, SCSI, Internal	D7140-63001	D7140-69001
17	Tape Drive, SureStore T20 SCSI Travan	C4402 or C4402A	
18	Spacer	Not orderable	
19	32x CD-ROM Drive	D7140-63015	
20	3.5 inch flexible disk drive	D2035-60282	
21	9.1 GB Hard Disk Drive, Ultra 2 Wide	D4911-63001	D4911-69001
*	Cable, Power Supply Harness	D7140-63012	
*	Foot	D7140-63004	
*	E60 Nameplate	D7140-63007	
*	CPU terminator card	D7140-63014	
*	HP Navigator CD-ROM	**	
*	Technical Reference Card	D7140-63010	

Keyboards

Language	HP Part Number	Language	HP Part Number
US #ABA	D4950-63001	Spanish #ABE	D4950-63004
Dutch #ABH	D4950-63006	French #ABF	D4950-63005
Russian #ACB	D4950-63030	Norway #ABN	D4950-63009
Czech #AKB	D4950-63036	Swiss #ABP	D4950-63011
Italian #ABZ	D4950-63017	Poland #AKD	D4950-63038
Turkish #AB8	D4950-63033	Swiss-German #ABP	D4950-63011
Taiwan #AB0	D4950-63023	Arab-English #ABV	D4950-63020
UK/Irish #ABU	D4950-63013	Arab-French #AB6	D4950-63025
Danish #ABY	D4950-63016	Korean #AB1	D4950-63021
German #ABD	D4950-63003	Belgium-Flemish #ABW	D4950-63014
Portugal #AB9	D4950-63027	Hungary #AKC	D4950-63037
Greek #AB7	D4950-63032	Swedish #ABS	D4950-63012

Power Cords

Country	HP Part Number	Country	HP Part Number
Australia	8120-1369	UK	8120-1351
United States	8120-1751	Japan	8120-4753
Denmark	8120-2956	Switzerland	8120-2104
Europe	8120-1689		

System Board Illustration

Power   Terminator   Processor   Memory Slots

0 1 2 3

PS/2 Style Keyboard & Mouse

Snap

Serial A

Parallel

Serial B

Flexible Disk

IDE1

IDE2

LAN (RJ45)

AGP Video

PCI Slot 1

SCSI B

PCI Slot 2

SCSI A

PCI Slot 3 Full-sized

System Switches

PCI Slot 4 Full-sized

Status Connector

PCI Slot 5 Full-sized

PCI Slot 6 shared with ISA Slot Full-sized

Snap

○ System Board screw not visible when processor is installed

● System Board Screw

System Switch Details

On
Off
Off = KBD power on
Unused
On = Clear Password
On = Clear Configuration

400 Mhz
450 Mhz
500 Mhz

The switches and each of their definitions are listed below.

Switch position	Factory preset	Definition:
1	OFF	Off - let's you power on your system by pressing any key on the keyboard or the power-on button.
		On – let's you power on the system only by pressing the power-on button.
2		Unused
3	OFF	Clears the password. Set the switch to the ON position and restart the NetServer to clear the password. Return the switch to the OFF position and restart the NetServer to return to normal operation.
4	OFF	Resets the CMOS configuration to the default values. Set the switch to the ON position and restart the NetServer to reset the CMOS. Return the switch to the OFF position and restart the NetServer to return to normal operation.
5 - 8	(See table below)	Select processor speed settings. The switch positions may need to be changed when upgrading the processor (see table below).

Processor Switch Settings

The following table shows the settings for each Intel processor module. To set the switches correctly, observe the markings on the replacement processor module. Each processor module will have a speed marking. Use the table below to look up the appropriate switch settings for each of these CPUs.

CPU Speed	Switch 5	Switch 6	Switch 7	Switch 8
400 MHz	OFF	OFF	ON	OFF
450 MHz	ON	OFF	ON	OFF
500 MHz	OFF	ON	ON	OFF

Specifications

Temperature

Operating	5° to 35° C (41° to 95° F)
Non-operating	-40° to +65° C (-40° to +149° F)

Humidity (non-condensing)

Operating	20% to 80% relative humidity, non-condensing
Non-operating	5% to 95% relative humidity, non-condensing

Altitude

Operating	-30 to 3,000 m (~ 10,000 ft)
Non-operating	-30 to 12,000 m (~ 40,000 ft)

Thermal Output

Maximum Operating	1116 BTU/hr

Hardware

Processors	Intel Pentium II or III (up to 2 processors), supported speeds: 400, 450, and 500MHz. 512KB level 2 cache on processor.
Chipset	Intel 440BX AGPset with 66/100 MHz bus speed support.
Memory	Supports up to four SDRAM DIMMS for a maximum total of 1GB. Supported DIMM types: 64MB, 128MB, or 256MB unbuffered, 72 bits wide, ECC single-bit correcting, multi-bit detecting.
Video	AGP slot (rev. 1.0 compliant) with bundled ATI Rage IIc AGP (Accelerated Graphics Port) video with 4MB SDRAM. Supports up to 1600x1200, 65K colors. AGP IRQ Enable/disable jumper is set to disable by default. Set to enable if DVD or other video application is used.
SCSI	Embedded Adaptec AIC-7895 Ultra/wide SCSI dual channel PCI controller. 40MB/s transfer rate, two 68-pin connectors.
IDE	Embedded Ultra DMA/33 E-IDE dual channel PCI controller.
LAN	Embedded Intel 82559 10/100 PCI Fast Ethernet Controller. Wake up on LAN enable/disable via BIOS setup.
PCI Bus	32-bit, 33MHz speed. PCI rev. 2.1 compliant.
I/O	Two Serial ports. One bi-directional parallel port with ECP/EPP high speed support. PS/2 style mouse and keyboard connectors.
CD-ROM	Bundled HP D4384A CD-ROM drive. IDE interface. 32x speed.

Weight and Dimensions

Weight	Approx. 30 lbs (14 kg.), depending on configuration – excludes keyboard and monitor.
Height	17.09 inches (434 mm)
Width	7.1 inches (180mm)
	11.67 inches (296.5mm) Feet opened
Depth	19.57 inches (497mm)

Power Supply Specifications

Type	Auto-ranging
Input - Max. Range	100 to 127 VAC ~5 A at 50/60 Hz
	200 to 240 VAC ~ 2.85 A at 50/60 Hz
Operating Current	100 VAC: 5.3 A
	120 VAC: 4.6 A
	200/208 VAC: 3.2 A
	220/230 VAC: 2.8 A
In-rush Current	25 A
Operating Power	305 W

Notes: