Compaq EVO Workstation W4000

Illustrated Parts Map
Small Form Factor

COMPAQ

© 2001 Compaq Computer Corporation.

Compaq, the Compaq logo, and EVO are trademarks of Compaq Information Technologies Group, L.P.

Intel, Celeron, and Pentium are trademarks of Intel Corporation.

All other product names mentioned herein may be trademarks of their respective companies.

Compaq shall not be liable for technical or editorial errors or omissions contained herein. The information in this document is provided “as is” without warranty of any kind and is subject to change without notice. The warranties for Compaq products are set forth in the express limited warranty statements accompanying such products. Nothing herein should be construed as constituting an additional warranty.

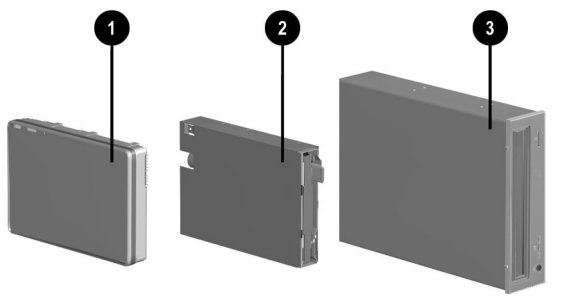
November 2001

Document Number
260713-001

Spare Part Number
262013-001

System Unit

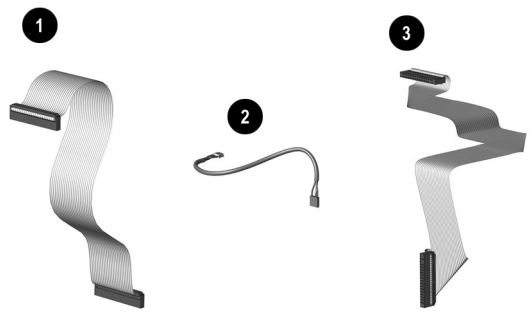
1	Computer cover	not spared
2	Front bezel	262011-001
3	Expansion card cage	not spared
4	Power supply	244166-001
5	Chassis assembly with drive cage	not spared
6	Front trim (below front bezel)	257404-001



Mass Storage Devices

1	18-GB U3 SCSI 10K hard drive	160063-001
*	18-GB U3 SCSI 15K hard drive	194585-001
*	36-GB U3 SCSI 10K hard drive	192197-001
*	72-GB U3 SCSI 10K hard drive	250187-001
*	36-GB U3 SCSI 15K hard drive	250186-001
*	20-GB UATA 100/7200 Quiet hard drive	180476-001
*	40-GB UATA 100/7200 Quiet hard drive	202904-001
*	60-GB UATA 100/7200 hard drive	232022-001
2	Diskette drive, buttonless	237180-001
3	48X CD-ROM drive	232320-001
*	16/10/40X CD-RW drive	246691-001
*	16X DVD-ROM drive	232319-001
*	Zip drive, 250	232317-001

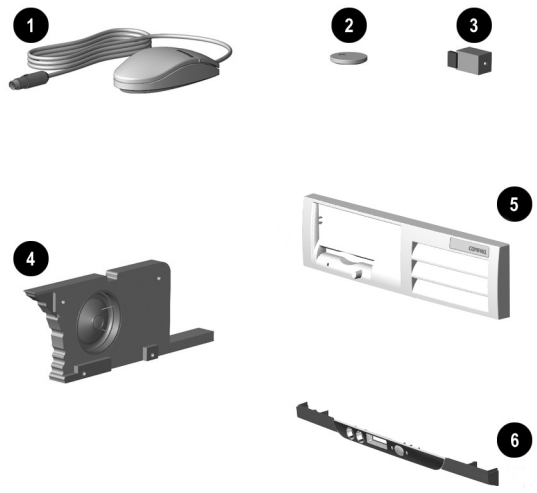
**Not shown*



Cables

1	Diskette drive data cable, 8.5” (168999-003)	258208-001
2	CD-ROM audio cable, 18”	192263-001
3	Hard drive/CD-ROM data cable, 17.75” single device (180950-035)	258209-001
*	LED SCSI controller cable	247485-001
*	CD-ROM data cable, 12.25” (180950-34)	258207-001
*	SCSI Drive data cable	258210-001
*	Matrox G200 graphics cable assy. with bracket	171976-001

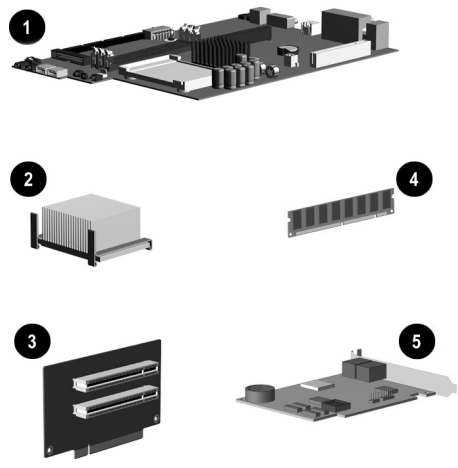
**Not shown*



Miscellaneous Parts

1	Mouse, 3 button carbon	232616-001
*	Mouse 2 button, carbon	237241-001
2	Battery	150399-001
3	Solenoid, 2-coil	201485-001
4	Speaker	249968-001
5	Front bezel	262011-001
6	Front trim (below front bezel)	257404-001
*	Foot, rubber (4 ea) (166932-001)	266051-001
*	Chassis fan	257405-001
*	Return kit	212545-001

**Not shown*



Standard and Optional Boards

1	System board	252299-001
*	U3 SCSI Controller	158364-001
Intel Pentium 4 Microprocessor with alcohol pad		
*	1.5 GHz	252918-001
*	2.0 GHz	252920-001
2	Heatsink with thermal grease and alcohol pad	254286-001
3	Riser board	252298-001
4	Memory Module, 128 MB, 133 MHz	257305-001
*	Memory Module, 256 MB, 133 MHz	257306-001
*	Memory Module, 512 MB, 133 MHz	257307-001
5	Modem, 56K, PCI, V92	239411-001
*	nVIDIA NV11 GL Graphics controller, 32 MB	250206-001
*	Matrox G200 MMS PCI Graphics controller	171975-001
*	NIC, 3Com	253951-001

**Not shown*

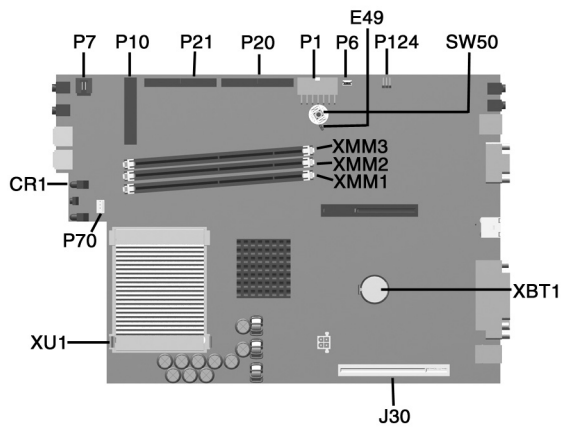
Keyboards (not illustrated)

Internet		**164996-xxx**	
Arabic	-171	International	-002
Belgian	-181	Latin American Spanish	-161
Brazilian Portuguese	-201	Norwegian	-191
BHCSY*	-B41	Polish	-002
Czech	-221	Portuguese	-131
Danish	-081	Russian	-251
Dutch/Netherlands	-002	Slovakian	-231
Finnish	-351	Spanish	-071
French	-051	Swedish	-101
French-Canadian	-121	Swiss	-111
German	-041	Taiwanese	-AB1
Greek	-151	Thai	-281
Hungarian	-211	Turkish	-141
Italian	-061	United Kingdom	-031
Japanese	-191	U.S.	-001
Korean (Hanguel)	-AD1		

*Bosnia-Herzegovina, Croatia, Slovenia, and Yugoslavia

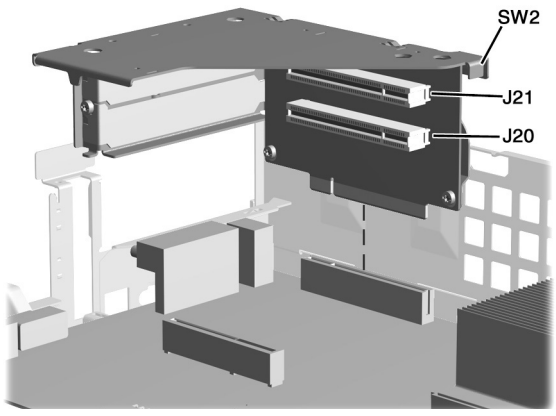
Documentation and Packaging (not illustrated)

Service Reference Guide	259968-001
Quick Troubleshooting Guide	153837-001
Illustrated Parts Map	262013-001



System Board Connectors and Jumpers (position of some untitled components may vary in location)

CR1	3.3V Aux LED	P21	Secondary IDE connector
E49	Password jumper (Installed = Enabled, Removed = Cleared)	P70	CPU fan connector
J30	Riser board socket	P124	Hood lock header
P1	Power supply connector	SW50	Clear CMOS button
P6	Speaker connector	XBT1	Battery
P7	CD-ROM audio	XMM1-3	Memory sockets
P10	Diskette drive connector	XU1	Processor socket
P20	Primary IDE connector		



Riser Board Connectors and Jumpers

J20	PCI slot	SW2	Security hood switch
J21	PCI slot		

System Hardware Interrupts

IRQ	System Function	IRQ	System Function
0	Timer Interrupt	8	Real-Time Clock
1	Keyboard	9	Unused
2	Interrupt Controller Cascade	10	Unused, available for PCI
3	Serial Port (COM B)	11	Unused, available for PCI
4	Serial Port (COM A)	12	Mouse
5	Unused, available for PCI	13	Coprocessor
6	Diskette Drive	14	Primary ATA (IDE) Controller
7	Parallel Port (LPT 1)	15	Secondary ATA (IDE) Controller

System Hardware DMA

DMA	System Function	DMA	System Function
0	Unused	4	DMA Controller Cascading
1	Unused	5	Unused
2	Diskette Drive	6	Unused
3	ECP Parallel Port LPT1 (Default; Alternate = DMA 0)	7	Unused

ICH Fixed I/O Registers

Port	Register Name
00h, 02h, 04h, 06h	Channel 0, 1, 2, 3 DMA base and current address register
C0h, C4h, C8h, CCh	Channel 4, 5, 6, 7 DMA base and current address register
01h, 03h, 05h, 07h	Channel 0, 1, 2, 3 DMA base and current count register
C2h, C6h, Cah, CEh	Channel 4, 5, 6, 7 DMA base and current count register
10h-1Fh	Aliased at 00h-0Fh
20h	Master PIC ICW1 Init. Cmd Word 1 register, Master PIC OCW2 Init. Cmd Word 2 register, and Master PIC OCW3 Init. Cmd Word 3 register
21h	Master PIC OCW1 Init. Cmd Word 1 register, Master PIC ICW2 Init. Cmd Word 2 register, and Master PIC ICW3 Init. Cmd Word 3 register
24h,-25h, 28-29h, 2Ch-2Dh, 30h-31h, 34h-35h, 38h-39h, 3Ch-3Dh	Aliased at 20h-21h
40h	Counter 0 interval time status byte format and Counter 0 counter access port register
41h	Counter 1 interval time status byte format and Counter 1 counter access port register
42h	Counter 2 interval time status byte format and Counter 2 counter access port register
43h	Timer control word register, Timer control word register read back, and Counter latch command
50h-53h	Aliased at 40h-43h
61h	NMI status and control register
70h	NMI enable register and Real-time clock (Standard RAM) index register

ICH Fixed I/O Registers (Continued)

I/O Address (Hex)	Register Name
71h	Real-time clock (Standard RAM) target register
72h	Extended RAM index register
73h	Extended RAM target register
74h-75h	Alaised at 70h-71h
76h-77h	Aliased at 72h-73h or 70h-71h
81h, 82h, 83h	Channel 2, 3, 1 DMA memory low page register
84h-86h, 88h	Reserved page registers
89h, 8Ah, 8Bh	Channel 6, 7, 5 DMA memory low page register
8Ch-8Eh	Reserved page registers
8Fh	Refresh low page register
91h-9Fh (except 92h)	Aliased at 81h-8Fh
92h	Fast A20 and INIT register
CF9h	Reset control register
A0h	Slave PIC ICW1 Init. cmd word 1 register, Slave PIC OCW2 Init. cmd word 2 register, and Slave PIC 0CW3 Init. cmd word 3 register
A1	Slave PIC ICW2 Init. cmd word 2 register, Slave PIC ICW3 Init. cmd word 3 register, Slave PIC ICW4 Init. cmd word 4 register, and Slave PIC OCW1 Init. cmd word 1 register
A4h-A5h, A8h-A8h, ACh-ADh, B0h-B1h, B4h-B5h, B8h-B9h, BCh-Bdh	Aliased at A0h-A1h
B2h	Advanced power management control port register
B3h	Advanced power management status port register
C0h, C4h, C8h, CCh	Channel 4, 5, 6, 7 DMA base and current address register
C1h	Aliased at C0h
C5h	Aliased atC4h
C9h	Aliased at C8h
CDh	Aliased at CCh
C2h, C6h, CAh, CEh	Channel 4, 5, 6, 7 DMA base and current count register
C3h	Aliased at C2h
C7h	Aliased at C6h
CBh	Aliased at CAh
CFh	Aliased at Ceh
D0h	Channel 4-7 DMA command register and status register
D1h	Aliased at D0h
D4h	Channel 4-7 DMA write single mask register
D5h	Aliased at D4h
D6h	Channel 4-7 DMA channel mode register
D7h	Aliased at D6h
D8h	Channel 4-7 DMA clear byte pointer register
D9h	Aliased at D8h
DAh	Channel 4-7 DMA master clear register
DBh	Aliased at DAh
DCh	Channel 4-7 DMA clear mask register
DEh	Aliased at DCh
DEh	Channel 4-7 DMA write all mask register
DFh	Aliased at DEh
F0h	Coprocessor error register
170h-177h	PIO mode command block offset for secondary drive
1F0h-1F7h	PIO mode command block offset for primary drive
376h	PIO mode control block offset for secondary drive
3F6h	PIO mode control block offset for primary drive
4D0h	Master PIC edge/level triggered register
3F6h	PIO mode control block offset for primary drive
4D1h	Slave PIC edge/level triggered register
400-47F	Super I/O
F800-F87F	Reserved (power management)
FA00-FA3F	Reserved (GPIO management)
FC00-FC0F	Reserved (SMBUS controller)

NOTE: When the POS_DEC_EN bit is set, additional I/O ports get positively decoded by the ICH.

System Memory Map

Size	Memory Address	System Function
512 KB	FFFFFFFFh to FFF80000h	System ROM
3839 MB	FFFBFFFFh to 10000000h	PCI memory expansion
511 MB	0FFFFFFFh to 00100000h	Host or PCI memory expansion
128 KB	000FFFFFh to 000E0000h	System ROM
96 KB	000DFFFFh to 000C8000h	PCI option ROMs
32 KB	000C7FFFh to 000C0000h	Video ROM
128 KB	000BFFFFh to 000A0000h	Video RAM
640 KB	0009FFFFh to 00000000h	Base memory

Clearing CMOS*

The computer's configuration (CMOS) may occasionally be corrupted. If it is, it is necessary to clear the CMOS memory using switch SW50.
To clear and reset the configuration, perform the following procedure:

1. Prepare the computer for disassembly.

CAUTION: The power cord must be disconnected from the power source before pushing the Clear CMOS Button (NOTE: All LEDs on the board should be OFF). Failure to do so may damage the system board

2. Remove the access panel.
3. Press the CMOS button located on the system board and keep it depressed for 5 seconds.
4. Replace the access panel.
5. Turn the computer on and run F10 Computer Setup (delete-utility) to reconfigure the system.

*When the CMOS button is pushed or the jumper is removed, both the power-on password and the setup password become invalid because both are stored in the configuration memory. You will need to reset the passwords.

Disabling or Clearing the Power-On and Setup Passwords*

1. Turn off the computer and any external devices, and disconnect the power cord from the power outlet.
2. Remove the access panel.
3. Locate the header and jumper labeled E49.
4. Remove the jumper from pins 1 and 2. Place the jumper over pin 2 only, in order to avoid losing it.
5. Replace the access panel.
6. Plug in the computer and turn on power. Allow the operating system to start.
   NOTE: Placing the jumper on pin 2 clears the current passwords and disables the password features.
7. To re-enable the password features, repeat steps 1-3, then replace the jumper on pins 1 and 2.
8. Repeat steps 5-6, then establish new passwords.

   Refer to the Computer Setup (F10 Setup) instructions to establish new passwords.

*When the CMOS button is pushed or the jumper is removed, both the power-on password and the setup password become invalid because both are stored in the configuration memory. You will need to reset the passwords.