Compaq Deskpro EX and EXS

Illustrated Parts Map

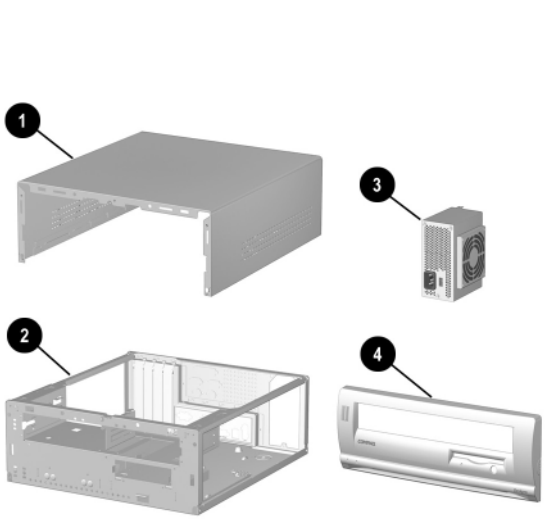
Compaq Deskpro EX and EXS
Series of Personal Computers
Desktop Models

COMPAQ

September 2001

Part Number 201857-002

Spare Part Number 215878-001



System Unit

1	Access panel	Not spared
2	Chassis/basepan	Not spared
3	Power supply, Non-PFC	201829-001
*	Power supply, PFC (**EMEA**)	224063-001
4	Front bezel assembly	213434-001

**Not shown*

Miscellaneous Screw Kit

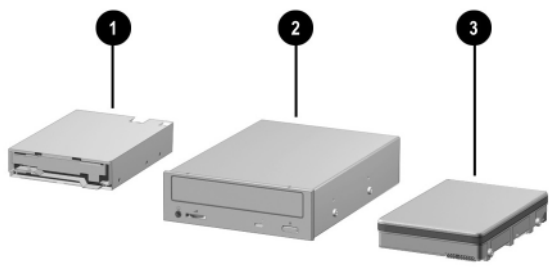
	Miscellaneous Screw Kit, includes:	**179180-001**
	6-32 x 1/4 hi-top, thread-forming screw with serrations (4 ea.) (192308-001)	
	6-19 x 5/16 panhead, plastite screw (5 ea.) (101346-068)	
	6-19 x .5/16 hi-top, taptite screw with captive washer (4 ea.) (114399-069)	
	6-32 x 3/16 hi-top, thread-forming screw with serrations (5 ea.) (192308-003)	
	M3 x 5mm, hi-top, taptite screw with serrations (3 ea.) (247348-001)	
	6-32 x 3/16 buttonhead tamper-resistant, taptite screw with serrations (4 ea.) (296769-002)	
	6-32 x 5/16 hi-top, taptite screw (5 ea.) (109834-568)	
	6-19 x 1/2 Panhead, plastite screw (4 ea.) (101346-071)	
	Thumbscrew, molded cap (179333-002)	
	6-32 x 3/16 buttonhead tamper-resistant, taptite screw with serrations (4 ea.) (296769-002)	

Keyboards (not illustrated)

Easy Access keyboard	123130-xxx
Spacesaver keyboard	269513-xxx
Dutch	-331
Finnish	-351
French	-051
International	-B31
Norwegian	-091
Spanish	-071
Swedish	-101
United Kingdom	-031
United States	-001

Documentation and Software (not illustrated)

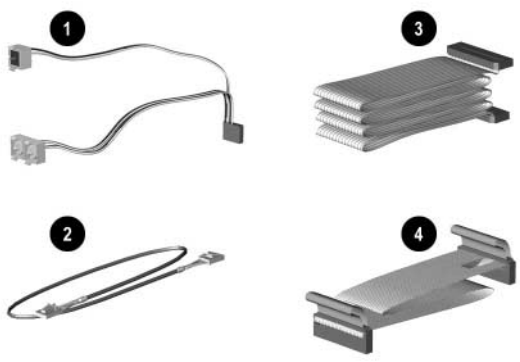
Illustrated Parts Map	215878-001
Maintenance & Service Guide	215877-001
Quick Troubleshooting Guide	153837-001



Mass Storage Devices

1	Diskette drive, 3.5-inch without bezel	210795-001
2	48X Max tray load IDE CD-ROM drive	187263-001
*	32X Max CD-ROM, RW	101916-001
*	32X Max CD-RW drive	217824-001
*	10X DVD-ROM drive	215422-001
*	16X DVD-ROM drive	236922-001
*	2X DVD-ROM drive	176745-001
3	10-GB UATA Quiet hard drive (5400)	203139-001
*	10-GB UATA hard drive (66/7200)	135364-001
*	10-GB UATA Quiet hard drive (100/5400)	180472-001
*	15-GB UATA hard drive (66/5400)	202903-001
*	15-GB UATA hard drive (66/7200)	192060-001
*	15-GB UATA Quiet hard drive (7200)	180474-001
*	20.0-GB UATA Quiet hard drive (100/7200)	180476-001
*	20.0-GB UATA hard drive (5400)	218318-001
*	20.0-GB UATA hard drive (100/7200)	180475-001
*	30-GB hard drive (100/7200)	180477-001
*	30-GB hard drive (100/5400)	236920-001
*	40-GB hard drive (100/5400)	236921-001
*	40-GB UATA Quiet hard drive (100/7200)	202904-001
*	60-GB UATA hard drive (100/7200)	232022-001
*	LS-120 drive	103421-001

**Not shown*



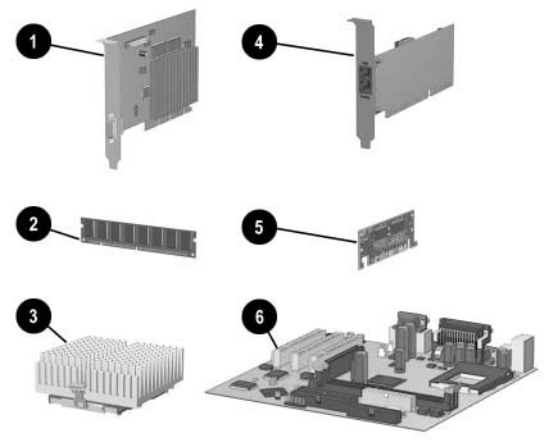
Cables

1	LED/power cable	222039-001
2	CD audio cable	149806-001
3	Hard drive/CD-ROM cable, 18”, dual connector	215392-001
4	Diskette drive cable, 15.5”	161735-001

Miscellaneous Parts

1	Battery	153099-001
*	Mouse, scroll	334689-002
2	Mouse, 2-button	166861-001
3	Fan, chassis	230434-001
*	ON/OFF switch holder	224849-001
*	Hood button with spring	237300-001
*	Heatsink 866, 933 MHz, and 1 GHz	228026-001
*	Heatsink 1.13 GHz and greater	239119-001
*	Return Kit with buns (U.S.)	207742-001

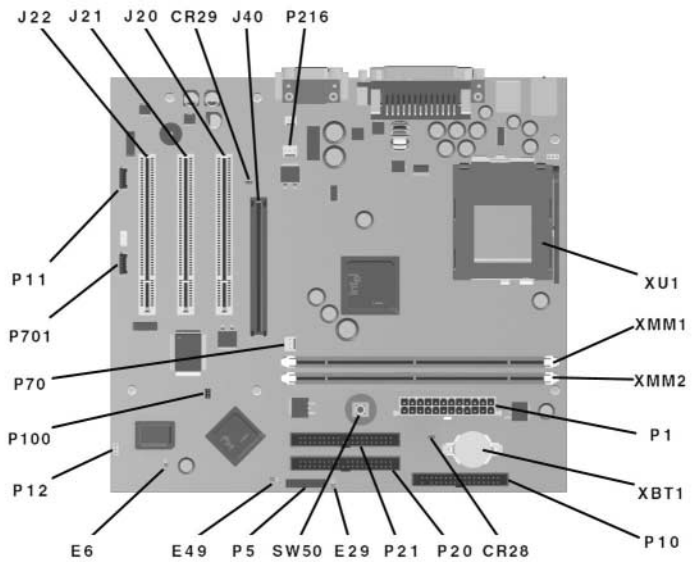
**Not shown*



Standard and Optional Boards

Graphics Controllers		
1	NVIDIA M64, 16 MB SDRAM AGP board	182757-001
*	NVIDIA M64, 32 MB RAM, AGP	203280-001
*	NVIDIA NV-15, 32 MB	180284-001
*	Vanta LT 8 MB SDRAM	201827-001
*	Vanta 16 MB RAM, AGP	239920-001
5*	AIMM (GPA) 4 MB, 133 MHz graphics	192012-001
Memory Module 133MHz		
2	SDIMM, 64 MB	170080-001
*	SDIMM, 128 MB	170081-001
*	SDIMM, 256MB	192014-001
Intel Celeron Processor		
3	566/66 MHz with heatsink and clip	203967-001
3	600/66 MHz with heatsink and clip	192011-001
3	633/66 MHz with heatsink and clip	225922-001
3	667/66 MHz with heatsink and clip	237697-001
3	700/66 MHz with heatsink and clip	230433-001
*	733/66 MHz with heatsink and clip	239698-001
*	800/100 MHz with heatsink and clip	231853-001
*	850/100 MHz with heatsink and clip	239115-001
Intel Pentium III Processor		
*	667/133 MHz with heatsink and clip	239326-001
*	733/133 MHz with heatsink and clip	229738-001
*	800/133 MHz with heatsink and clip	239325-001
*	866/133 MHz with fansink and clip	192006-001
*	933/133 MHz with fansink and clip	203969-01
*	1GHz/133MHz with heatsink and clip	222727-001
*	1.13 GHz/133MHz with heatsink and clip	239112-001
*	1.20 GHz/133MHz with heatsink and clip	239113-001
Other boards		
4	NIC, 10/100 PCI	116188-001
*	Audio board, PCI, ES1373	113897-003
6	System Board (replaced by 240762-001)	203966-001
6	System Board Tualatin ready (replaces 203966-001)	240762-001

**Not shown*



System Board Connectors and Jumpers

CR28	3.3V Aux LED	P12	SOS connector
CR29	3.3 V Main LED (NI)	P20	Primary IDE connector
E6	Firmware hub top block lock (Installed = bootblock unprotected. Removed = boot-block protected.)	P21	Secondary IDE connector
E29	SCSI LED cable connetor	P70	CPU fan connector
E49	Password jumper (Installed = Enabled, Removed = Cleared)	P100	ITP connector
J20-22	PCI slots	P216	chassis fan connector
J40	AGP/AIMM connector	P701	CD-ROM audio
P1	Power supply connector	SW50	Clear CMOS button
P5	Power button, front panel LED connector	XBT1	Battery
P10	Diskette drive connector	XMM1-2	Memory sockets
P11	Aux audio connector	XU1	Processor socket

System Hardware Interrupts

IRQ	System Function	IRQ	System Function
0	Timer Interrupt	8	Real-Time Clock
1	Keyboard	9	Available for PCI
2	Interrupt Controller Cascade	10	Available for PCI
3	Serial Port (COM B)	11	Available for PCI
4	Serial Port (COM A)	12	Mouse
5	Available for PCI	13	Coprocessor
6	Diskette Drive	14	Primary IDE Controller
7	Parallel Port (LPT 1)	15	Secondary 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 & Current Address Regsiter
C0h, C4h, C8h, CCh	Channel 4, 5, 6, 7 DMA Base & Current Address Register
01h, 03h, 05h, 07h	Channel 0, 1, 2, 3 DMA Base & Current Count Register
C2h, C6h, Cah, CEh	Channel 4, 5, 6, 7 DMA Base & Current Count Register
10h-1Fh	Aliased at 00h-0Fh
20h	Master PIC ICW1 Init. Cmd Word 1 Register Master PIC OCW2 Op Ctrl Word 2 Register Master PIC OCW3 Op Ctrl Word 3 Register
21h	Master PIC ICW2 Init. Cmd Word 1 Register Master PIC ICW3 Init. Cmd Word 1 Register Master PIC ICW4 Init. Cmd Word 1 Register Master PIC OCW1 Op Ctrl 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 Counter 0 Counter Access Port Register
41h	Counter 1 Interval Time Status Byte Format Counter 1 Counter Access Port Register
42h	Counter 2 Interval Time Status Byte Format Counter 2 Counter Access Port Register
43h	Timer Control Word Register Timer Control Word Register Read Back Counter Latch Command
50h-53h	Aliased at 40h-43h
61h	NMI Status and Control Register
70h	NMI Enable Register Real-Time Clock (Standard RAM) Index Register
71h	Real-Time Clock (Standard RAM) Target Register
72h	Extended RAM Index Register
73h	Extended RAM Target Register
74h-75h	Aliased at 70h-71h
76h-77h	Aliased at 72h-73h or 70h-71h
80h, 84h-86h, 88h	Reserved Page Registers
81h, 82h, 83h	Channel 2, 3, 1 DMA Memory Low Page Register
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
A0h	Slave PIC ICW1 Init. Cmd Word 1 Register Slave PIC OCW2 Op Ctrl Word 2 Register Slave PIC OCW3 Op Ctrl Word 3 Register

ICH Fixed I/O Registers (Continued)

Port	Register Name
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 Slave PIC OCW1 Op Ctrl 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 at C4h
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 Channel 4-7 DMA 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
4D0h	Master PIC Edge/Level Triggered Register
4D1h	Slave PIC Edge/Level Triggered Register
400-47F	Super I/O
CF9h	Reset Control Register
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 FFF80000	System ROM
2030 MB	FEDFFFFFh to 80000000h	PCI Memory Expansion
2047 MB	7FFFFFFFh to 00100000h	HOST or PCI Memory Expansion
128KB	000FFFFFh to 000E0000h	System ROM
128 KB	000DFFFFh to 000C0000h	PCI Option ROMs
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 jumper 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 (Section 4.6).
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.
6. 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 to all equipment. Allow the operating system to start. (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