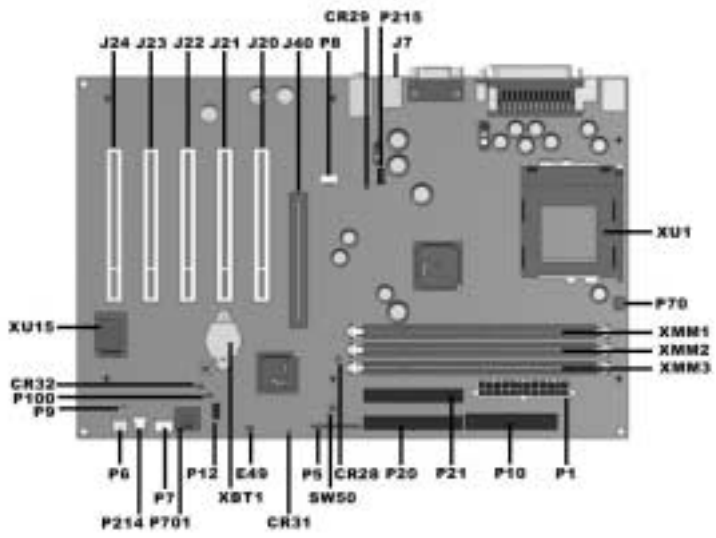

Connectors and Jumpers

CR28	3.3V Aux LED	P12	SOS Connector
CR29	3.3V Main LED (NI)	P214	Hood Intrusion Sensor
CR31	Power Button LED (ON when pushed)	P215	Hood Lock Solenoid Connector
CR32	5V Aux (ON)/PS_ON_LED (OFF)	P10	Diskette Drive Connector
E49	Clear Password Header (Installed = Enabled, Removed = Cleared)	P20	Primary IDE Connector
SW50	Clear CMOS	P21	Secondary IDE Connector
P1	Power Supply Connector	P70	CPU Fan
P5(pins 1-9)	Power Button, Pwr LED and HD LED Connector	P100	ITP Connector
P5(pins 10-11)	SCSI LED Connector	J20-24	PCI Slots
P6	Speaker Connector	J40	AGP/AIMM Connector
P7	CD-ROM Audio	XBT1	External Battery
P701	CD-ROM Audio	XMM1-3	DIMM Memory Slots
P8	Chassis Fan Connector	XU1	Primary 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

ICH Fixed I/O Registers (Continued)

Port	Register Name
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
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 does, 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.

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. This 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.