# Advanced/ATX Jumpers and Connectors

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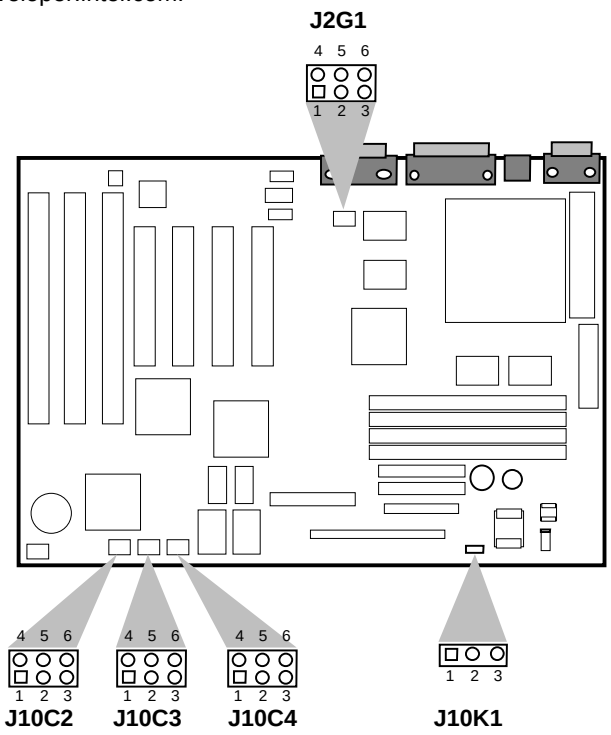



Figure B-1. Jumper locations

## *EXTERNAL CPU CLOCK SPEED - 50/60/66 MHZ (J2G1)*

This jumper block sets the CPU's external operating frequency to memory at 50, 60, or 66 Mhz. Default setting depends on the specific product code and type of Pentium processor installed.

| *External Bus Freq.* | *PCI Bus Freq.* | *Jumpers* |
|---|---|---|
| 50 MHz | 25 MHz | 1-2, 5-6 |
| 60 MHz | 30 MHz | 1-2, 4-5 |
| 66 MHz | 33 MHz | 2-3, 5-6 |
| Reserved | na | 2-3, 4-5 |

Table B-1 External Bus Frequency

## *INTERNAL CPU CLOCK SPEED (J10C2)*

These jumpers sets the internal CPU clock speed to either 1.5x, 2x, or 2.5x that of the external CPU clock speed. These jumpers should be configured dependent on the speed of the processor.

| *CPU Clock Multiplier* | *J10C2* |
|---|---|
| 1.5x | 2-3,4-5 |
| 2.0x | 1-2,4-5 |
| 2.5x | 1-2,5-6 |
| 3.0x | 2-3,5-6 |

Table B-2 CPU Clock Multiplier

## *ISA BUS CLOCK (J10C4)*

This jumper changes the clock frequency of the ISA bus. The effect of this jumper on the ISA clock depends upon the setting of the CPU clock speed jumpers. The default setting for this jumper is 2-3. In general, this jumper should only be set to 1-2 if higher ISA performance is required, and the ISA expansion cards can handle the faster

bus clock. (A clock frequency of greater than 8.33 MHz violates the ISA specification, although many ISA cards are designed to support higher clock frequencies.)

| *Bus Frequency* | *Jumper J10C4* | *ISA Bus Speed* |
|---|---|---|
| 50 MHz | 1-2 or 2-3 | 8.33 MHz |
| 60 MHz | 1-2 | 10 MHz |
| | 2-3 | 7.5 MHz |
| 66 MHz | 1-2 | 11 MHz |
| | 2-3 | 8.25 MHz |

Table B-3 ISA Bus Clock Speed

The following table summarizes the possible combinations of the clock and bus speed related jumpers.

| *Processor* | *ISA Bus Speed* | *Jumpers* | | | | |
|---|---|---|---|---|---|---|
| | | *J2G1* | | *J10C2* | | *J10C4* |
| 75 MHz | 8.33 MHz | 1-2 | 5-6 | 2-3 | 4-5 | 1-2 or 2-3 |
| 90 MHz | 10 MHz | 1-2 | 4-5 | 2-3 | 4-5 | 1-2 |
| | 7.5 MHz | 1-2 | 4-5 | 2-3 | 4-5 | 2-3 |
| 100 MHz | 11 MHz | 2-3 | 5-6 | 2-3 | 4-5 | 1-2 |
| | 8.25 MHz | 2-3 | 5-6 | 2-3 | 4-5 | 2-3 |
| 120 MHz | 10 MHz | 1-2 | 4-5 | 1-2 | 4-5 | 1-2 |
| | 7.5 MHz | 1-2 | 4-5 | 1-2 | 4-5 | 2-3 |
| 133 MHz | 11 MHz | 2-3 | 5-6 | 1-2 | 4-5 | 1-2 |
| | 8.25 MHz | 2-3 | 5-6 | 1-2 | 4-5 | 2-3 |
| 150 MHz | 10 MHz | 1-2 | 4-5 | 1-2 | 5-6 | 1-2 |
| | 7.5 MHz | 1-2 | 4-5 | 1-2 | 5-6 | 2-3 |
| 166 MHz | 11 MHz | 2-3 | 5-6 | 1-2 | 5-6 | 1-2 |
| | 8.25 MHz | 2-3 | 5-6 | 1-2 | 5-6 | 2-3 |
| 200 MHz | 11 MHz | 2-3 | 5-6 | 2-3 | 5-6 | 1-2 |
| | 8.25 MHz | 2-3 | 5-6 | 2-3 | 5-6 | 2-3 |

Table B-4 Clock Summary

## *DISABLE / ENABLE SETUP (J10C4)*

Allows access to CMOS Setup Utility to be disabled by jumpering pins 4-5 in J10C4. Default is for access to setup to be enabled, which requires jumpers on 5-6 in J10C4.

## *CLEAR CMOS (J10C3)*

Allows CMOS settings to be reset to default values by jumpering pins 1-2 in J10C3. This will also clear out all plug and play configuration information stored in the ESCD area. The system should then be turned off and the jumper returned to pins 2-3 to restore normal operation.

## *PASSWORD CLEAR (J10C3)*

Allows system password to be cleared by jumpering pins 4-5 in J10C3 and turning the system on. The system should then be turned off and the jumper should be returned to 5-6 in J10C3 to restore normal operation. This procedure should only be done if the user password has been forgotten.

## *VR / VRE (J10K1)*

This jumper block changes the output of the on-board voltage regulator. Pins 2-3 should be jumpered for processors that require standard voltage regulation, pins 1-2 should be jumpered for processors that require the VRE specification. This jumper should not be changed by the user unless changing to a new processor type. Some upgrade processors may require a different setting, check the processor's documentation for the correct setting.

# Connectors

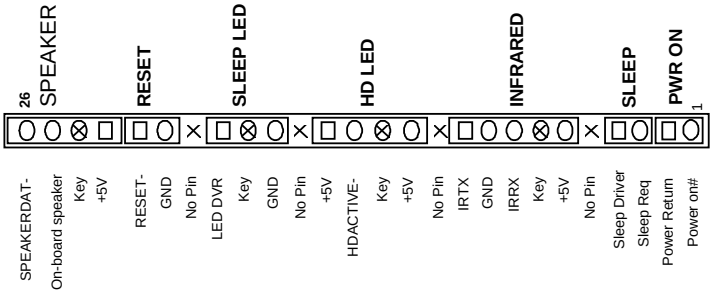
## *POWER SUPPLY CONNECTOR*

### *PRIMARY POWER (J5M1)*

| *Function* | *Name* | *Pin* |
|---|---|---|
| + 3.3 V for PCI slots | 3.3 V | 11 |
| - 12 volts | -12 V | 12 |
| Ground | GND | 13 |
| Power Supply remote ON/OFF control | PS-ON* | 14 |
| Ground | GND | 15 |
| Ground | GND | 16 |
| Ground | GND | 17 |
| -5 volts | -5 V | 18 |
| + 5 volts Vcc | +5 V | 19 |
| + 5 volts Vcc | +5 V | 20 |

| *Pin* | *Name* | *Function* |
|---|---|---|
| 1 | 3.3 V | + 3.3 V for PCI slots |
| 2 | 3.3 V | + 3.3 V for PCI slots |
| 3 | GND | Ground |
| 4 | +5 V | + 5 volts Vcc |
| 5 | GND | Ground |
| 6 | +5 V | + 5 volts Vcc |
| 7 | GND | Ground |
| 8 | PWR | Power Good |
| 9 | +5 | + 5 volts Stand By for RTC |
| 10 | +12 V | + 12 volts |

## *FRONT PANEL CONNECTORS – (J10H1, J10A1)*




### *SPEAKER CONNECTOR*

| *Pin* | *Signal Name* |
|---|---|
| 26 | SPKR_DAT |
| 25 | Piezo SPKR DAT |
| 24 | Key |
| 23 | +5V |

### *INFRA-RED*

| *Pin* | *Signal Name* |
|---|---|
| 10 | IR_TX |
| 9 | Ground |
| 8 | IR_RX |
| 7 | Key |
| 6 | +5V |

### *RESET CONNECTOR*

| *Pin* | *Signal Name* |
|---|---|
| 22 | RESET |
| 21 | Ground |

### *SLEEP/RESUME*

| *Pin* | *Signal Name* |
|---|---|
| 4 | Sleep Pull Up |
| 3 | Sleep Req |

### *POWER/SLEEP LED*

| | *Signal Name* |
|---|---|
| 19 | LED_PWR |
| 18 | Key |
| 17 | Ground |

### *REMOTE ON/OFF*

| *Pin* | *Signal Name* |
|---|---|
| 2 | Power Return |
| 1 | Power on |

### *HARD DRIVE LED (DISK)*

| *Pin* | *Signal Name* |
|---|---|
| 15 | +5V |
| 14 | HD ACTIVE |
| 13 | Key |
| 12 | +5V |

### *CARD SLOT FAN POWER (J10A1)*

| *Fast Pin* | *Slow Pin* | *Signal Name* |
|---|---|---|
| 1 | 4 | Ground |
| 2 | 5 | +12 V |
| 3 | 6 | Ground |

## *BACK PANEL CONNECTORS*

### *SERIAL PORTS*

| *Pin* | *Signal Name* |
|---|---|
| 1 | DCD |
| 2 | Serial In - (SIN) |
| 3 | Serial Out - (SOUT) |
| 4 | DTR- |
| 5 | GND |
| 6 | DSR- |
| 7 | RTS- |
| 8 | CTS- |
| 9 | RI |

### *PS/2 KEYBOARD & MOUSE PORTS*

| *Pin* | *Signal Name* |
|---|---|
| 1 | Data |
| 2 | No Connect |
| 3 | Ground |
| 4 | Vcc |
| 5 | Clock |
| 6 | No Connect |

### *VIDEO MONITOR PORT*

| Pin | Signal Name |
|---|---|
| 1 | Red |
| 2 | Green |
| 3 | Blue |
| 4 | No Connect |
| 5 | Ground |
| 6 | Ground |
| 7 | Ground |
| 8 | Ground |
| 9 | No Connect |
| 10 | Ground |
| 11 | No Connect |
| 12 | DDC DAT |
| 13 | Horizontal Sync. |
| 14 | Vertical Sync. |
| 15 | DDC Clock |

### *PARALLEL PORT*

| *Signal Name* | *Pin* | *Pin* | *Signal Name* |
|---|---|---|---|
| STROBE- | 1 | 14 | AUTO FEED- |
| Data Bit 0 | 2 | 15 | ERROR- |
| Data Bit 1 | 3 | 16 | INIT- |
| Data Bit 2 | 4 | 17 | SLCT IN- |
| Data Bit 3 | 5 | 18 | Ground |
| Data Bit 4 | 6 | 19 | Ground |
| Data Bit 5 | 7 | 20 | Ground |
| Data Bit 6 | 8 | 21 | Ground |
| Data Bit 7 | 9 | 22 | Ground |
| ACK- | 10 | 23 | Ground |
| BUSY | 11 | 24 | Ground |
| PE (Paper End) | 12 | 25 | Ground |
| SLCT | 13 | | |

### *MIDI/GAME PORT*

| *Pin* | *Signal Name* |
|---|---|
| 1 | Vcc |
| 2 | JSBUT0 |
| 3 | JSX1R |
| 4 | GND |
| 5 | GND |
| 6 | JSY1R |
| 7 | JSBUT1 |
| 8 | Vcc |
| 9 | Vcc |
| 10 | JSBUT2 |
| 11 | JSX2R |
| 12 | MIDI-OUT-R |
| 13 | JSY2R |
| 14 | JSBUT3 |
| 15 | MIDI-IN-R |

## *INTERNAL I/O HEADERS*

### *IDE CONNECTORS (J8H1, J8H2)*

| *Signal Name* | *Pin* | *Pin* | *Signal Name* |
|---|---|---|---|
| Reset IDE | 1 | 2 | Ground |
| Host Data 7 | 3 | 4 | Host Data 8 |
| Host Data 6 | 5 | 6 | Host Data 9 |
| Host Data 5 | 7 | 8 | Host Data 10 |
| Host Data 4 | 9 | 10 | Host Data 11 |
| Host Data 3 | 11 | 12 | Host Data 12 |
| Host Data 2 | 13 | 14 | Host Data 13 |
| Host Data 1 | 15 | 16 | Host Data 14 |
| Host Data 0 | 17 | 18 | Host Data 15 |
| Ground | 19 | 20 | Key |
| DDRQ0 (DDRQ1) | 21 | 22 | Ground |
| I/O Write- | 23 | 24 | Ground |
| I/O Read- | 25 | 26 | Ground |
| IOCHRDY | 27 | 28 | Vcc pull-up |
| DDACK0 (DDACK1)- | 29 | 30 | Ground |
| IRQ14 (IRQ15) | 31 | 32 | No Connect |
| Addr 1 | 33 | 34 | No Connect |
| Addr 0 | 35 | 36 | Addr 2 |
| CS 1P (1S)- | 37 | 38 | CS 3P (3S)- |
| Activity- | 39 | 40 | Ground |

Note: Signals in parenthesis are for the sec. IDE connector.

### *FLOPPY CONNECTOR (J9G1)*

| *Signal Name* | *Pin* | *Pin* | *Signal Name* |
|---|---|---|---|
| Ground | 1 | 2 | DENSEL |
| Ground | 3 | 4 | Reserved |
| Key | 5 | 6 | FDEDIN |
| Ground | 7 | 8 | Index- |
| Ground | 9 | 10 | Motor Enable A- |
| Ground | 11 | 12 | Drive Select B- |
| Ground | 13 | 14 | Drive Select A- |
| Ground | 15 | 16 | Motor Enable B- |
| MSEN1 | 17 | 18 | DIR- |
| Ground | 19 | 20 | STEP- |
| Ground | 21 | 22 | Write Data- |
| Ground | 23 | 24 | Write Gate- |
| Ground | 25 | 26 | Track 00- |
| MSEN0 | 27 | 28 | Write Protect- |
| Ground | 29 | 30 | Read Data- |
| Ground | 31 | 32 | Side 1 Select- |
| Ground | 33 | 34 | Disk Change- |

### *VESA FEATURE CONNECTOR (J8G1)*

| *Signal Name* | *Pin* | *Pin* | *Signal Name* |
|---|---|---|---|
| Ground | 1 | 2 | Data 0 |
| Ground | 3 | 4 | Data 1 |
| Ground | 5 | 6 | Data 2 |
| Data enable | 7 | 8 | Data 3 |
| Sync enable | 9 | 10 | Data 4 |
| PCLK enable | 11 | 12 | Data 5 |
| No Connect | 13 | 14 | Data 6 |
| Ground | 15 | 16 | Data 7 |
| Ground | 17 | 18 | PCLK |
| Ground | 19 | 20 | BLANK |
| Ground | 21 | 22 | HSYNC |
| No Connect | 23 | 24 | VSYNC |
| No Connect | 25 | 26 | Ground |
| key | 27 | 28 | key |
| Ground | 29 | 30 | IIC CLK |
| No Connect | 31 | 32 | IIC DAT |
| EN1 | 33 | 34 | EN0 |

### *CD-ROM AUDIO INTERFACE (J1F1)*

| *Pin* | *Signal Name* |
|---|---|
| 1 | Ground |
| 2 | CD-Left |
| 3 | Ground |
| 4 | CD-Right |

### *WAVETABLE UPGRADE INTERFACE (J1F2)*

| *Pin* | *Signal Name* |
|---|---|
| 1 | Wave Right |
| 2 | Ground |
| 3 | Wave Left |
| 4 | Ground |
| 5 | No Connect |
| 6 | Ground |
| 7 | No Connect |
| 8 | MIDI_OUT |

### *VOICE MODEM AUDIO INTERFACE (J1F3)*

| *Pin* | *Signal Name* |
|---|---|
| 1 | Ground |
| 2 | Tel In |
| 3 | Ground |
| 4 | Tel Out |

## *EXPANSION CARD CONNECTORS*

### *ISA CONNECTORS*

| *Signal Name* | *Pin* | *Pin* | *Signal Name* |
|---|---|---|---|
| GND | B1 | A1 | IOCHK- |
| RSTDRV | B2 | A2 | SD7 |
| Vcc | B3 | A3 | SD6 |
| IRQ9 | B4 | A4 | SD5 |
| -5V | B5 | A5 | SD4 |
| DRQ2 | B6 | A6 | SD3 |
| -12V | B7 | A7 | SD2 |
| 0WS- | B8 | A8 | SD1 |
| +12V | B9 | A9 | SD0 |
| GND | B10 | A10 | IOCHRDY |
| SMEMW- | B11 | A11 | AEN |
| SMEMR- | B12 | A12 | SA19 |
| IOW- | B13 | A13 | SA18 |
| IOR- | B14 | A14 | SA17 |
| DACK3- | B15 | A15 | SA16 |
| DRQ3 | B16 | A16 | SA15 |
| DACK1- | B17 | A17 | SA14 |
| DRQ1 | B18 | A18 | SA13 |
| REFRESH- | B19 | A19 | SA12 |
| SYSCLK | B20 | A20 | SA11 |
| IRQ7 | B21 | A21 | SA10 |
| IRQ6 | B22 | A22 | SA9 |
| IRQ5 | B23 | A23 | SA8 |
| IRQ4 | B24 | A24 | SA7 |
| IRQ3 | B25 | A25 | SA6 |

| *Signal Name* | *Pin* | *Pin* | *Signal Name* |
|---|---|---|---|
| DACK2- | B26 | A26 | SA5 |
| TC | B27 | A27 | SA4 |
| BALE | B28 | A28 | SA3 |
| Vcc | B29 | A29 | SA2 |
| OSC | B30 | A30 | SA1 |
| GND | B31 | A31 | SA0 |
| | KEY | KEY | |
| MEMCS16- | D1 | C1 | SBHE- |
| IOCS16- | D2 | C2 | LA23 |
| IRQ10 | D3 | C3 | LA22 |
| IRQ11 | D4 | C4 | LA21 |
| IRQ12 | D5 | C5 | LA20 |
| IRQ15 | D6 | C6 | LA19 |
| IRQ14 | D7 | C7 | LA18 |
| DACK0- | D8 | C8 | LA17 |
| DRQ0 | D9 | C9 | MEMR- |
| DACK5- | D10 | C10 | MEMW- |
| DRQ5 | D11 | C11 | SD8 |
| DACK6- | D12 | C12 | SD9 |
| DRQ6 | D13 | C13 | SD10 |
| DACK7- | D14 | C14 | SD11 |
| DRQ7 | D15 | C15 | SD12 |
| Vcc | D16 | C16 | SD13 |
| Master- | D17 | C17 | SD14 |
| GND | D18 | C18 | SD15 |

## *PCI CONNECTORS*

| *Signal Name* | *Pin* | *Pin* | *Signal Name* |
|---|---|---|---|
| TRST- (Vcc) | A1 | B1 | -12V |
| +12V | A2 | B2 | TCK |
| TMS (Vcc) | A3 | B3 | GND |
| TDI (Vcc) | A4 | B4 | TDO (No Connect) |
| Vcc | A5 | B5 | Vcc |
| PCIINTA- | A6 | B6 | Vcc |
| PCIINTC- | A7 | B7 | PCIINTB- |
| Vcc | A8 | B8 | PCIINTD- |
| Reserved | A9 | B9 | PRSNT1- (No Connect) |
| Vcc | A10 | B10 | Reserved |
| Reserved | A11 | B11 | PRSNT2- (No Connect) |
| GND | A12 | B12 | GND |
| GND | A13 | B13 | GND |
| Reserved | A14 | B14 | Reserved |
| SPCIRST- | A15 | B15 | GND |
| Vcc | A16 | B16 | PCLKE |
| AGNT- | A17 | B17 | GND |
| GND | A18 | B18 | REQA- |
| Reserved | A19 | B19 | Vcc |
| AD30 | A20 | B20 | AD31 |
| 3.3V | A21 | B21 | AD29 |
| AD28 | A22 | B22 | GND |
| AD26 | A23 | B23 | AD27 |
| GND | A24 | B24 | AD25 |
| AD24 | A25 | B25 | 3.3V |
| IDSEL | A26 | B26 | CBE3- |
| 3.3V | A27 | B27 | AD23 |
| AD22 | A28 | B28 | GND |
| AD20 | A29 | B29 | AD21 |
| GND | A30 | B30 | AD19 |
| AD18 | A31 | B31 | 3.3V |

| *Signal Name* | *Pin* | *Pin* | *Signal Name* |
|---|---|---|---|
| AD16 | A32 | B32 | AD17 |
| 3.3V | A33 | B33 | CBE2- |
| FRAME- | A34 | B34 | GND |
| GND | A35 | B35 | IRDY- |
| TRDY- | A32 | B32 | 3.3V |
| GND | A37 | B37 | DEVSEL- |
| STOP- | A38 | B38 | GND |
| 3.3V | A39 | B39 | PLOCK- |
| SDONE | A40 | B40 | PERR- |
| SBO- | A41 | B41 | 3.3V |
| GND | A42 | B42 | SERR- |
| PAR | A43 | B43 | 3.3V |
| AD15 | A44 | B44 | CBE1- |
| 3.3V | A45 | B45 | AD14 |
| AD13 | A46 | B46 | GND |
| AD11 | A47 | B47 | AD12 |
| GND | A48 | B48 | AD10 |
| AD9 | A49 | B49 | GND |
| KEY | A50 | B50 | KEY |
| KEY | A51 | B51 | KEY |
| CBEO- | A52 | B52 | AD8 |
| 3.3V | A53 | B53 | AD7 |
| AD6 | A54 | B54 | 3.3V |
| AD4 | A55 | B55 | AD5 |
| GND | A56 | B56 | AD3 |
| AD2 | A57 | B57 | GND |
| AD0 | A58 | B58 | AD1 |
| Vcc | A59 | B59 | Vcc |
| SREQ64- | A60 | B60 | SACK64- |
| Vcc | A61 | B61 | Vcc |
| Vcc | A62 | B62 | Vcc |