

2 Installation

This chapter provides information on how to install and configure P5TX-B Mainboard.

Check List

The standard packing of P5TX-B should include:

- P5TX-B mainboard
- 1 IDE cable
- 1 Floppy cable
- P5TX-B User's Manual

Optional packing of P5TX-B includes:

Device driver package

IrDA cable / bracket

USB cable / bracket

1 Audio Cable / Bracket

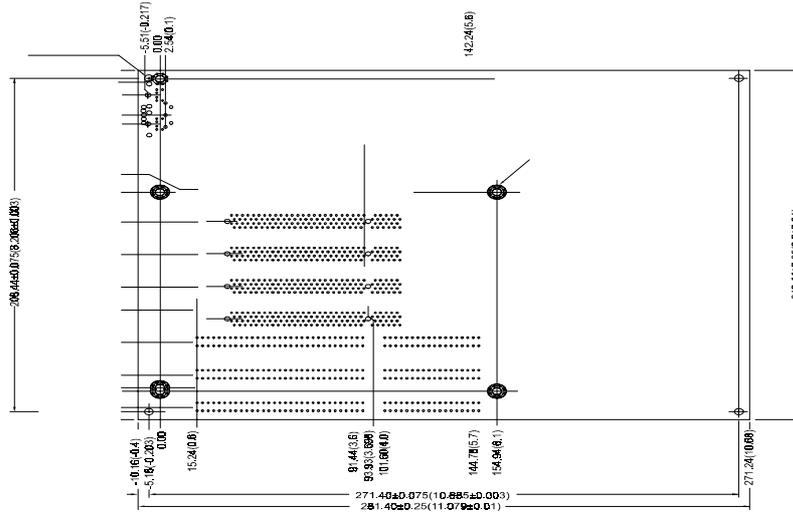
Special offer package of P5TX-B includes:

IrDA Motherboard Adapter

Installation

Dimensions

P5TX-B is designed to fit 3/4 Baby AT form factor chassis. Check the dimensions and mounting holes for special purpose of chassis only.



Install Main Memory

P5TX-B provides tremendous flexibility DRAM configurations. It accepts a maximum of 256MB memory size with Fast Page Mode or Extended Data Output (EDO) memory or Synchronous DRAM. The on-board DRAM is installed with 72-pin SIMM (32-bit) (Single-In-line-Memory Module) and 168-pin 3.3V unbuffered DIMM. (Dual- In-line-Memory Module)

The DIMM Socket is in compliance with JEDEC specifications for 3.3V unbuffered EDO / SDRAM Module. A DIMM Socket is provided to support up to 256MB EDO / Synchronous DRAM Module. (SDRAM)

Users can install the different memory size and type on any bank, according to the memory configuration table. **Please pay more attentions:** the same bank of SIMM should be installed with the same memory size and type.

The following table lists a number of possible DRAM combinations.

Memory Configuration Table:

SIMM		DIMM		Total Memory Size
SIMM1/SIMM2	SIMM3/SIMM4	DIMM1	DIMM2	
2MB(S)/2MB(S)	----	----	----	4MB
2MB(S)/2MB(S)	2MB(S)/2MB(S)	----	----	8MB
4MB/4MB	----	----	----	8MB
4MB/4MB	2MB(S)/2MB(S)	----	----	12MB
4MB/4MB	4MB/4MB	----	----	16MB
8MB/8MB	----	----	----	16MB
8MB/8MB	2MB(S)/2MB(S)	----	----	20MB
8MB/8MB	4MB/4MB	----	----	24MB
8MB/8MB	8MB/8MB	----	----	32MB
16MB/16MB	----	----	----	32MB
16MB/16MB	2MB(S)/2MB(S)	----	----	36MB
16MB/16MB	4MB/4MB	----	----	40MB
16MB/16MB	8MB/8MB	----	----	48MB
16MB/16MB	16MB/16MB	----	----	64MB
32MB/32MB	----	----	----	64MB
32MB/32MB	2MB(S)/2MB(S)	----	----	68MB
32MB/32MB	4MB/4MB	----	----	72MB
32MB/32MB	8MB/8MB	----	----	80MB
32MB/32MB	16MB/16MB	----	----	96MB
32MB/32MB	32MB/32MB	----	----	128MB
64MB/64MB	----	----	----	128MB
64MB/64MB	2MB(S)/2MB(S)	----	----	132MB
64MB/64MB	4MB/4MB	----	----	136MB
64MB/64MB	8MB/8MB	----	----	144MB

Continued.....

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SIMM		DIMM		Total Memory Size
SIMM1/SIMM2	SIMM3/SIMM4	DIMM1	DIMM2	
64MB/64MB	16MB/16MB	----	----	160MB
64MB/64MB	32MB/32MB	----	----	192MB
64MB/64MB	64MB/64MB	----	----	256MB
----	----	8MB	----	8MB
----	----	8MB	8MB	16MB
----	----	16MB	----	16MB
----	----	16MB	8MB	24MB
----	----	16MB	16MB	32MB
----	----	32MB	----	32MB
----	----	32MB	8MB	40MB
----	----	32MB	16MB	48MB
----	----	32MB	32MB	64MB
----	----	64MB	----	64MB
----	----	64MB	8MB	72MB
----	----	64MB	16MB	80MB
----	----	64MB	32MB	96MB
----	----	64MB	64MB	128MB
----	----	128MB	----	128MB
----	----	128MB	8MB	136MB
----	----	128MB	16MB	144MB
----	----	128MB	32MB	160MB
----	----	128MB	64MB	192MB
----	----	128MB	128MB	256MB

Table 2 -1. P5TX-B Memory Configuration

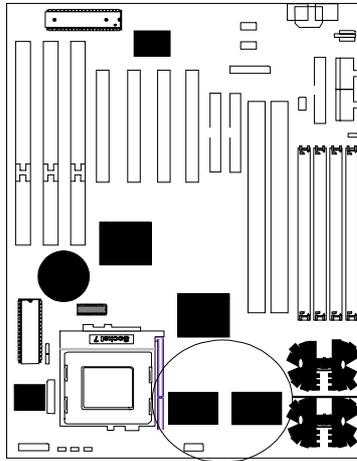
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1. It is not recommended to mix DIMMs which are 3V devices with 5V SIMMs. Mixing 5V and 3V memory is not recommended for reliability reason. Not all 3V memory are 5V tolerant.
2. The DIMM Sockets only support 3V DIMM Module. There is 3V key on the socket.
3. SIMM Socket pairs (i.e. SIMM1 / SIMM2) need to be populated with the same densities and type. The different SIMM Socket pair (i.e. SIMM1/SIMM2; SIMM3/ SIMM4) can be populated different densities and type. If the different memory is used for different SIMM Socket pair, each pair will be optimized for that type of memory.
4. DRAM parity is not supported on the chipset, so please **do not** use parity modules for loading reasons.
5. 2MB(s): means 2Mbyte Single-side SIMM Module.

Cache Memory

P5TX-B is equipped with L2 cache size 256KB or 512KB. L2 Pipelined Burst Cache / optional DRAM Cache. The memory size can be manufactured option.

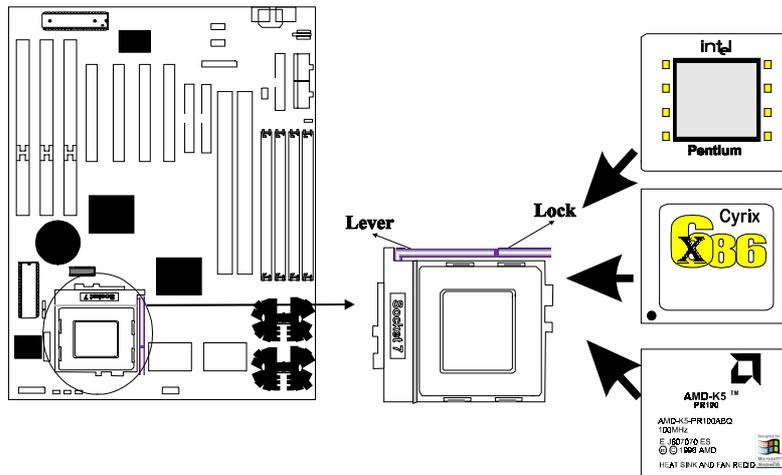


Size	Data RAM (U18, U19)
256KB	32K x 32 (3.3V) (Pipelined Burst / DRAM Cache)
512KB	64K x 32 (3.3V) (Pipelined Burst / DRAM Cache)

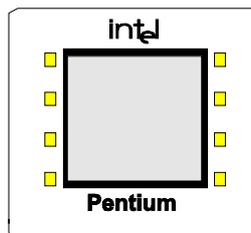
Installation

Install CPU

P5TX-B provides one ZIF socket 7 for installation of Intel Pentium[®] processor, Intel Pentium[®] processor with MMX[™] technology, **Cyrix 6x86 / 6x86L** or **AMD K5 processor. (refer to Appendix B and C)** To install Pentium processor, check the direction of CPU and ZIF socket, lift the lever up to the top, put the CPU into the socket, and lay down the lever of socket and then lock the lever of socket.



CPU Frequency and Bus frequency of Intel Pentium[®] processor or Intel Pentium[®] processor with MMX[™] technology:



Installation

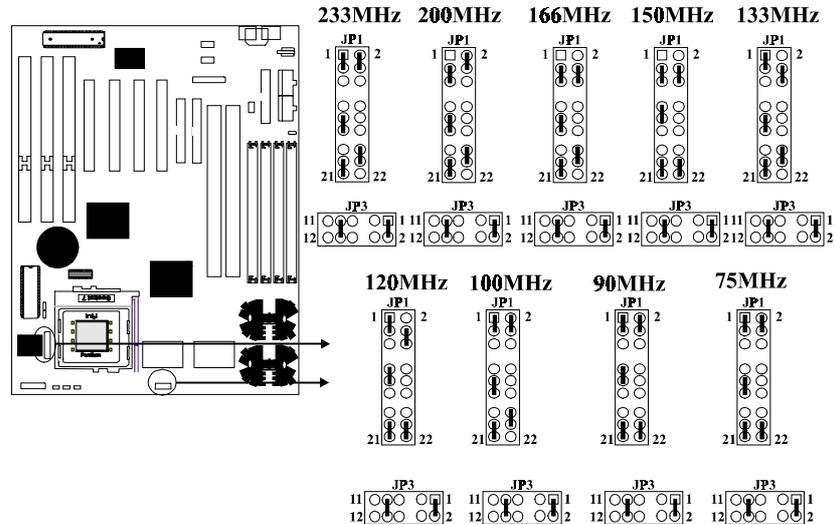
To install the CPU at its correct frequency, Please refer the following table to set up CPU frequency.

Core CPU Freq.	JP1 (Jumpser Short)	JP3 Voltage
233 MHz	1 - 3, 2 - 4, 11 - 13, 19 - 21, 18 - 20	1 - 2, 9 - 10
200 MHz	3 - 5, 2 - 4, 11 - 13, 19 - 21, 18 - 20	1 - 2, 9 - 10
166 MHz	3 - 5, 4 - 6, 11 - 13, 19 - 21, 18 - 20	1 - 2, 9 - 10
150 MHz	3 - 5, 4 - 6, 9 - 11, 19 - 21, 20 - 22	1 - 2, 9 - 10
133 MHz	1 - 3, 4 - 6, 11 - 13, 19 - 21, 18 - 20	1 - 2, 9 - 10
120 MHz	1 - 3, 4 - 6, 9 - 11, 19 - 21, 20 - 22	1 - 2, 9 - 10
100 MHz	1 - 3, 2 - 4, 11 - 13, 19 - 21, 18 - 20	1 - 2, 9 - 10
90 MHz	1 - 3, 2 - 4, 9 - 11, 19 - 21, 20 - 22	1 - 2, 9 - 10
75 MHz	1 - 3, 2 - 4, 11 - 13, 19 - 21, 20 - 22	1 - 2, 9 - 10

Table 2-2. CPU Frequency and Bus Frequency



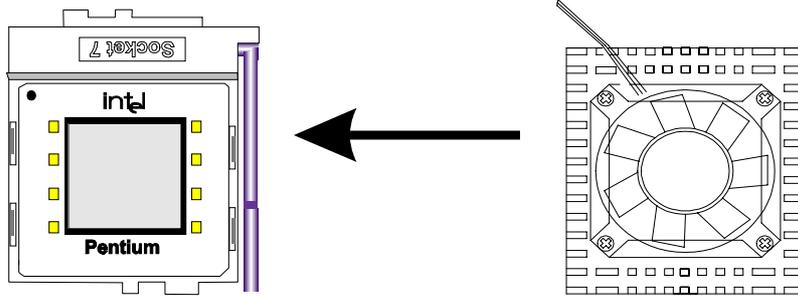
Intel Pentium® processor with MMX™ technology only has 166MHz , 200 MHz and 233MHz.



Installation

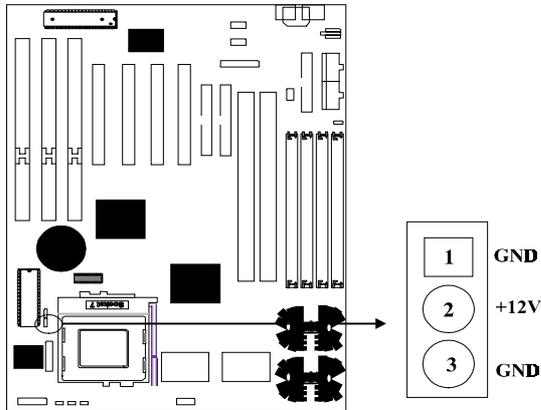
CPU Fan : (J20)

The Pentium[®] Processor needs one fan / heatsink installed on to help heat dissipation. **Do not** install Pentium[®] Processor without the fan/ heatsink.



Install Fan Power On-board: (J20)

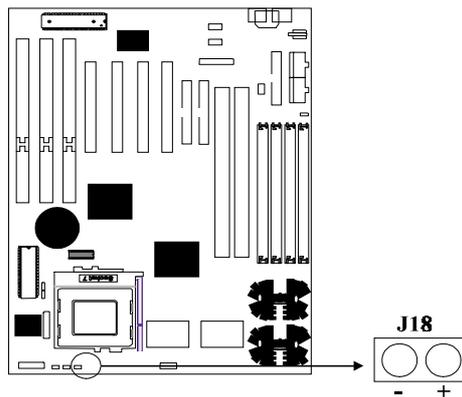
P5TX-B provides the ability to turn the CPU cooling fan off while the system is in low-power suspend mode. If the fan has 2-pin power-cord, please connect the CPU cooling fan power to J20 and enable "CPU Fan Power Green" function in BIOS "Power Management Setup" in order to make it work.



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Green LED: (J18)

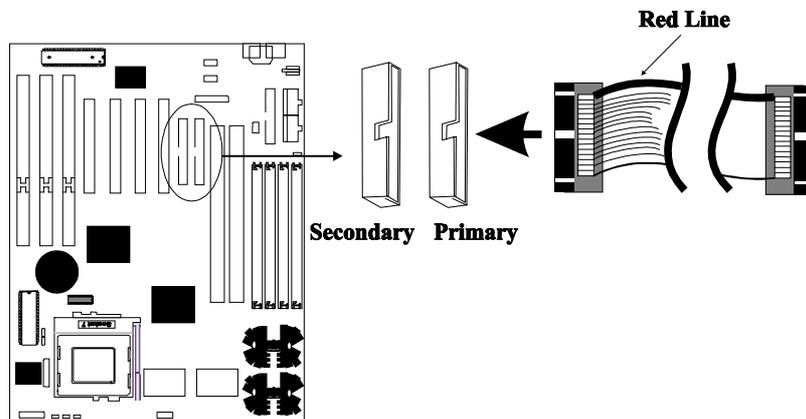
Install Green Function Indicator (Green LED) connect the front panel power LED or green LED to J18. The LED blinking indicates the system in low-power suspend mode.



Install Cables

IDE Connector: (J6, J7)

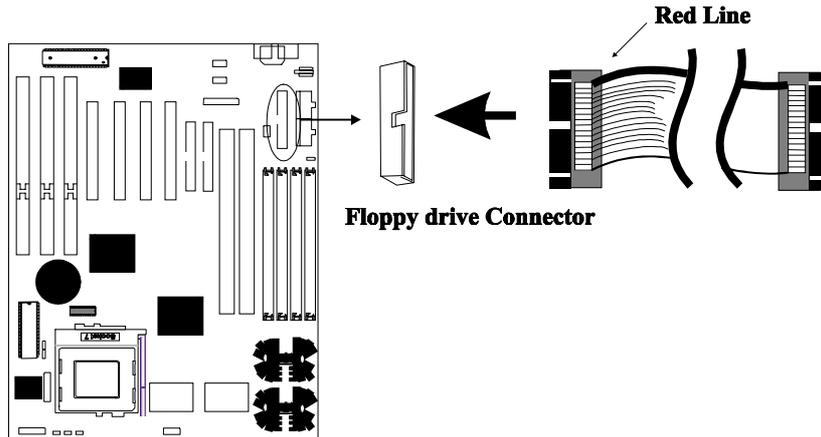
P5TX-B provides 2 PCI IDE connectors which supports 2 ATAPI IDE devices (for example, Hard Drive and CD-ROM) on each connector. Use 40-pin IDE cable to connect IDE devices and IDE connector.



Installation

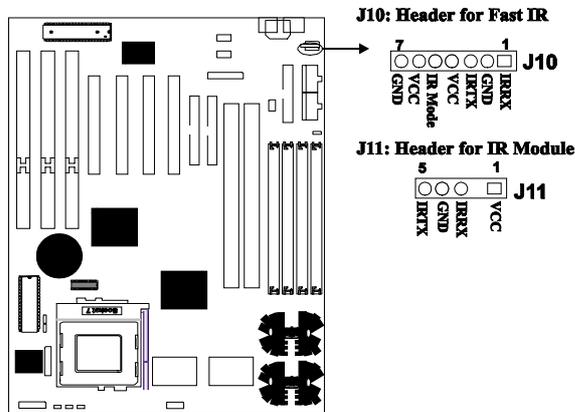
Floppy Disk Connector: (J13)

P5TX-B provides one floppy drive connector with one 34-pin floppy cable. It can support 2 floppy drivers with type : 360KB/ 720KB/ 1.2 MB / 1.44MB / 2.88MB or 3 mode.



IrDA : (J10: Header for Fast IR / J11: Header for IR Module)

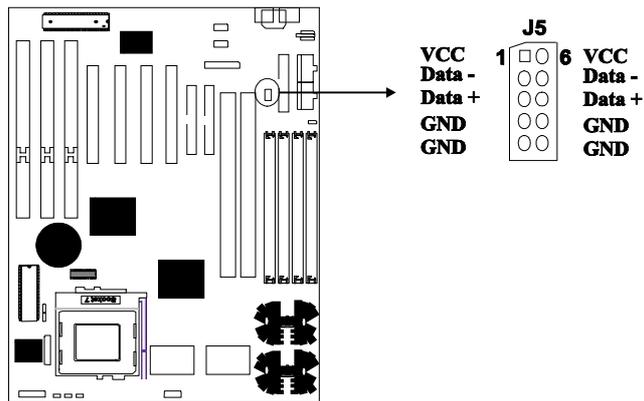
P5TX-B is an IrDA-capable / Fast IR (optional) mainboard. It gives users IR wireless data exchange directly from mobile computers, printers and PDAs,.....etc. Optional IrDA / FIR cable/ bracket provides connector with IrDA module.



Installation

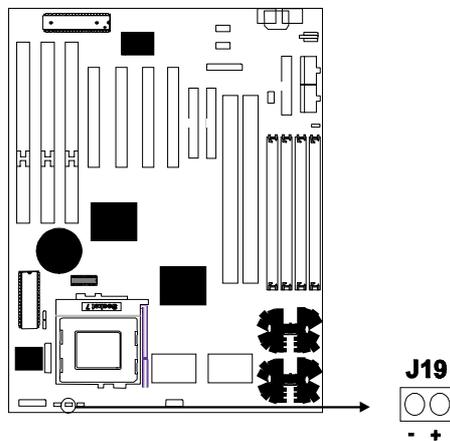
USB Header: (J5)

Universal Serial Bus (USB) is a new industry standard interface for ease use of PC peripheral expansion. Optional USB cable / bracket provides two USB connectors with USB devices.



H.D.D. LED: (J19)

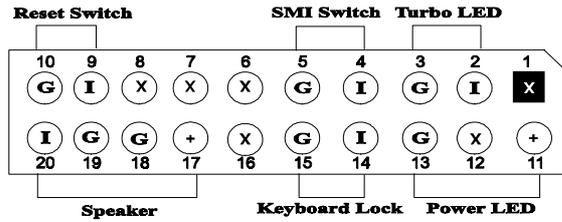
P5TX-B provides one set of IDE HDD LED headers to connect the front panel HDD LED. When the IDE devices are accessed, the LED will indicate the activity.



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20-pin Front Panel Switch Connector: (J16)

In order to help quick install front panel switch, these headers are integrated in 20-pin header set.



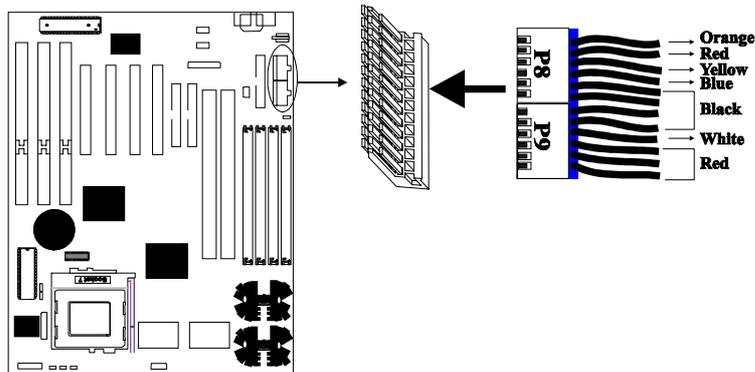
X : No function **G : Ground**
I : Input **+ : Vcc**

Connector	Feature / Connect to
SMI Switch	Suspend / Resume
Reset Switch	Reset System
Keyboard Lock	Front Panel Keylock (Optional)
Speaker	Front Panel Speaker
Power LED	Front Panel Power LED
Turbo LED	Front Panel Turbo LED

Table 2 -3. Front Panel Switch Connector

Power Supply Connector: (J14)

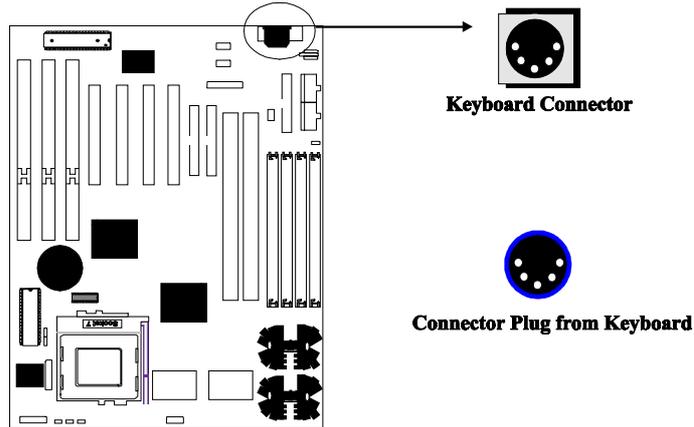
P5TX-B provides one set of J14 power supply connectors. Follow the direction to install the power cable on connectors.



Installation

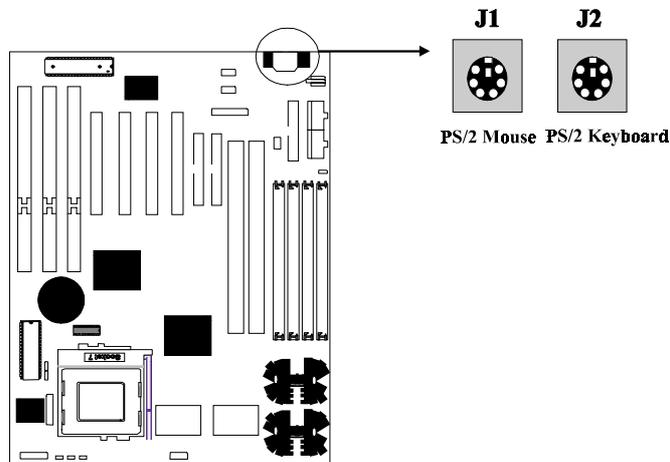
AT Keyboard Connector: (J3)

P5TX-B provides one AT keyboard connector. Follow the direction of keyboard cable to install on keyboard connector. If users want to install PS/2 mouse, P5TX-B provides one set of headers with PS/2 cable mouse / bracket to install on the back panel of your chassis.



PS/2 Mouse & Keyboard Connector: (J1, J2)

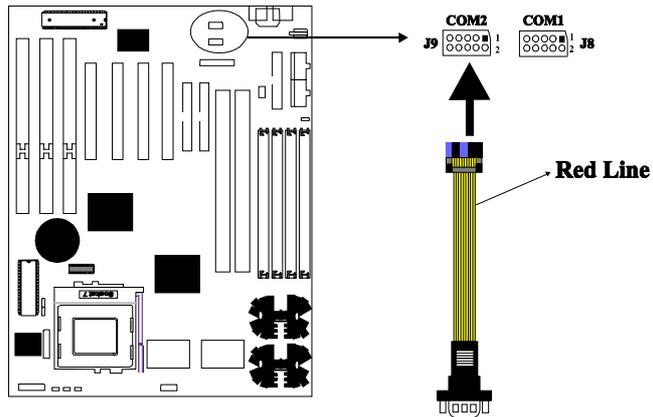
P5TX-B provides (manufacture option) PS/2 mouse and keyboard set.



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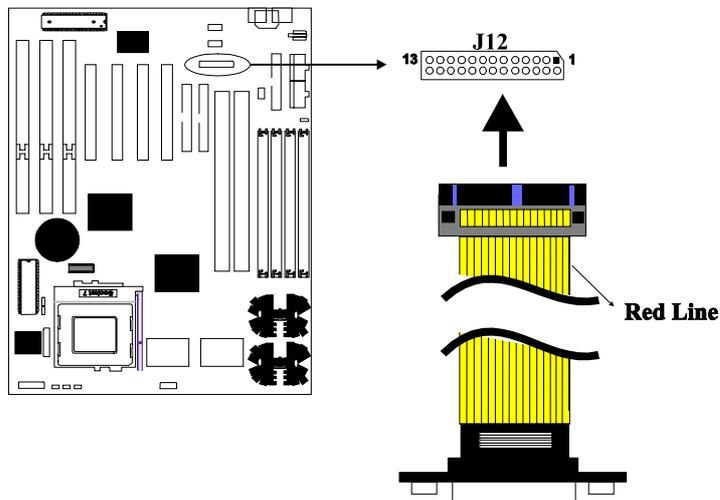
Serial Port COM1 and COM2 : (J8, J9)

P5TX-B provides two high speed 16550 UART compatible serial ports.



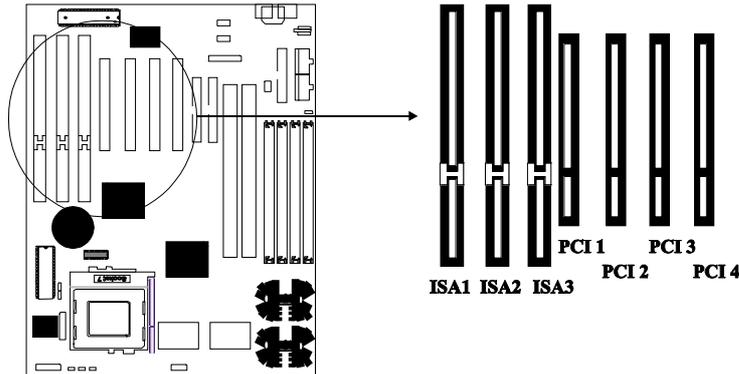
Parallel Port Printer Connector : (J12)

P5TX-B provides one set of high speed parallel port headers and cable. The parallel port can support bidirection / EPP / ECP mode.



Install Add-on Card

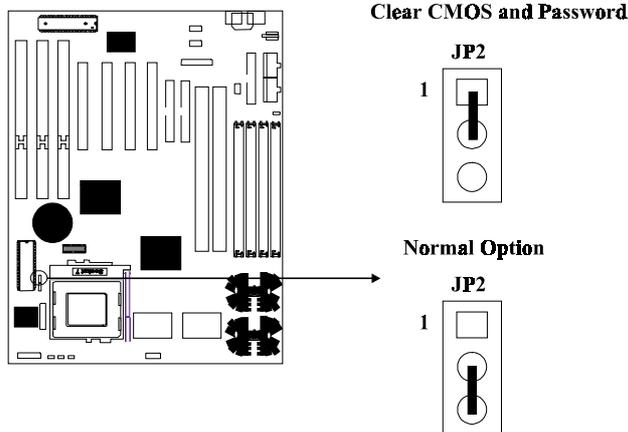
P5TX-B provides three ISA slots and four PCI slots. ISA 3 and PCI 1 slots are shared and can not be installed at the same time.



Other Jumpers

Clear CMOS (JP2)

BIOS setting values is stored in CMOS RAM. To clear CMOS Data of your computer, please open the computer chassis; short 1-2 of JP2 with short jumper; power on your system carefully until the screen is shown; power off your system; the CMOS data will be cleared. For normal optional, please short the 2-3 of JP2 and close your computer chassis.



Installation

Summary

Jumper Setting:

Jumper Block	Function	Configuration (Jumper short)
JP1	75MHz	9 -11, 17 - 19, 20 - 22
	66MHz	11-13, 19 - 21, 18 - 20
	60MHz	9 - 11, 19 - 21, 20 - 22
	55MHz	11-13, 17 - 19, 20 - 22
	50MHz	11-13, 19 - 21, 20 - 22
	x3.5	1 - 3, 2 - 4
	x3.0	2 - 4, 3 - 5
	x2.5	3 - 5, 4 - 6
	x2.0	1 - 3, 4 - 6
	x1.5	1 - 3, 2 - 4
JP2	Clear CMOS	1 - 2
	Normal	2 - 3
JP3	3.52 V	1 - 2, 9 - 10
	3.3 V	3 - 4, 9 - 10
	2.9V / 3.3V	1 - 2, 7 - 8
	2.8V / 3.3V	1 - 2, 9 - 10
	2.5V / 3.3V	1 - 2, 11- 12

Table 2 -4. Jumper Settings

Installation

Connector Table:

Connector	Function	Description
J1	PS/2 Mouse Connector (Optional)	Connect to PS/2 Mouse
J2	PS/2 Keyboard Connector (Optional)	Connect to PS/2 Keyboard
J3	AT Keyboard Connector	Connect to AT Keyboard
J4	5-pin PS/2 Mouse Header	Connect to PS/2 Mouse Cable / Bracket
J5	USB 5x2 Header	Connect to 2 channel of USB cable
J6	Primary Hard Disk Connector	Connect to the 1st IDE channel for 1 or 2 IDE drives
J7	Secondary Hard Disk Connector	Connect to the 2nd IDE channel for 1 or 2 IDE drives
J8	Serial Port One (COM1/ COM3)	Connect to Serial Port one cable / bracket
J9	Serial Port Two (COM2 / COM4)	Connect to Serial Port two cable / bracket
J10	7-pin Fast IR Header (Optional)	Connect to Fast Infrared cable/bracket
J11	5-pin IR Header	Connect to Infrared cable / bracket
J12	Parallel Port Connector	Connect to Parallel Port one cable / bracket
J13	Floppy Disk Connector	Connect to one or two floppy drive
J14	12-pin AT Power Connector	Connect to AT Power Supply P8 and P9
J15	3-pin Green Power Header (Optional)	Connect to Green Power On/OFF control cable.
J16	Front Panel Switch Connector	Connect to several purpose of front panel function of indicator, Reset, SMI Switch.....
J17	2-pin Green Power Switch Header (Optional)	Connect to Green Power On/OFF push button of front panel
J18	2-pin Green LED Header	Connect to Green LED indicates the low-power suspend mode
J19	2-pin Hard Disk LED Header	Connect to chassis front panel HDD indicator
J20	3-pin CPU Fan Header	Connect to 2 or 3-pin power cord of CPU fan

Table 2 -5. Connectors

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