

## 2 Installation

This chapter provides information on how to install and configure P6FX1-B Mainboard.

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### Check List

The standard packing of P6FX1-B should include:

- ☒ P6FX1-B mainboard
- ☒ 1 IDE cable
- ☒ 1 Floppy cable
- ☒ 1 9-pin Serial port cable / bracket
- ☒ 1 9-pin Serial port & 25-pin parallel port cable / bracket
- ☒ P6FX1-B User's Manual

Optional packing of P6FX1-B includes:

PS/2 cable mouse / bracket

IDE driver diskette

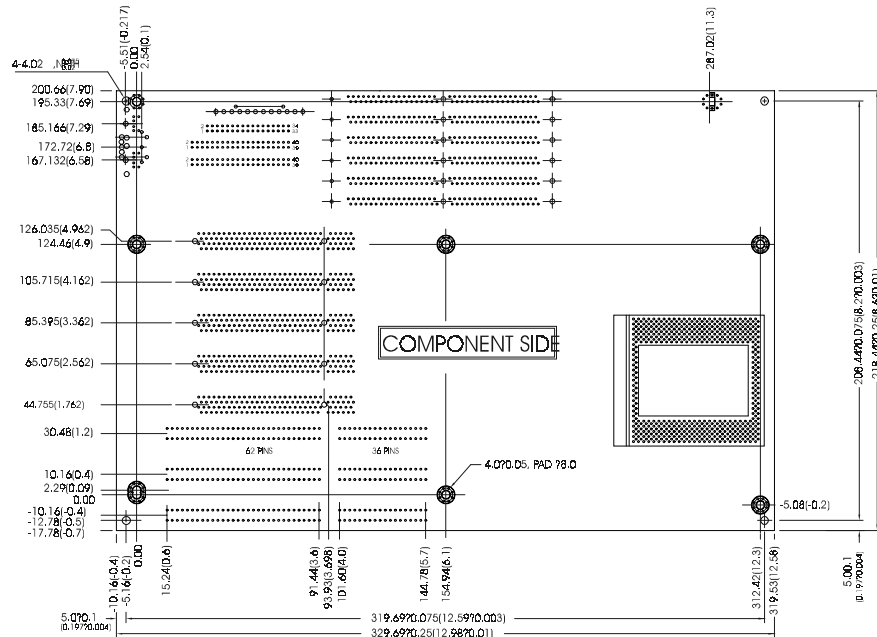
IrDA cable / bracket

USB cable / bracket

## Installation

### Dimensions

P6FX1-B is designed to fit standard Baby AT form factor chassis. Check the dimensions and mounting holes for special purpose of chassis only.



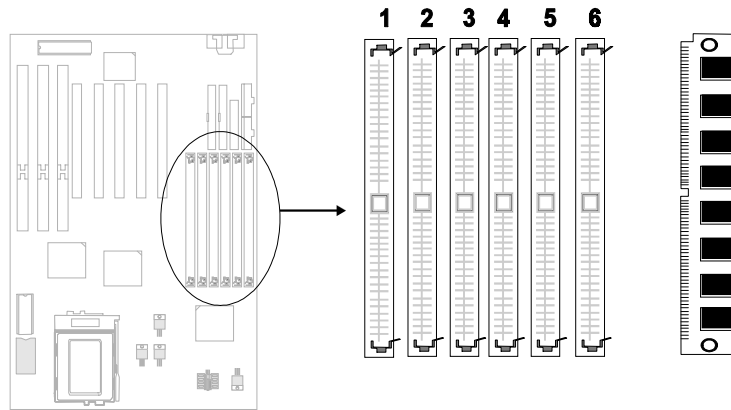
### Install Main Memory

P6FX1-B provides tremendous flexibility DRAM configurations. It accepts a maximum of 384MB memory size with fast page mode or Extended Data Output (EDO) memory. The on-board DRAM is installed with 72-pin SIMM (Single-In-line-Memory Module).

P6FX1-B can support non-parity SIMMs (32-bit) or parity SIMMs (36-bit). When using parity SIMMs, enabling BIOS ECC function can give the system memory the ECC function (one bit error correction, double bit error detection).

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### DRAM Memory Installation:



The following table lists a number of possible DRAM combinations.

Bank 0		Bank 1		Bank 2		Total Memory Size
SIMM1	SIMM2	SIMM3	SIMM4	SIMM5	SIMM6	
64MB	64MB	64MB	64MB	64MB	64MB	Bank0+Bank1+Bank 2
32MB	32MB	32MB	32MB	32MB	32MB	The combination of memory size if from minimum 8 MB to maximum 384MB.
16MB	16MB	16MB	16MB	16MB	16MB	
8MB	8MB	8MB	8MB	8MB	8MB	
4MB	4MB	4MB	4MB	4MB	4MB	
none☆	none☆	none ☆	none☆	none☆	none☆	

Table 2 -1. P6Fx1-B Memory Configuration

☆: It means the DRAM module is not installed.



The minimum memory size is 8MB. At lease on bank of SIMMs should be installed.

## ***Installation***

### ***How to do the Combination ?***

Users can install the SIMM module on any bank according to the listing table last page. The possible combinations will make the total memory size from minimum 8 MB to maximum 384 MB.

There are a lot of kinds memory combination to choose. Please refer to the following table for the detailed combination.

Bank 0		Bank 1		Bank 2		Total Memory Size
SIMM1	SIMM2	SIMM3	SIMM4	SIMM5	SIMM6	
4MB	4MB	None	None	None	None	8MB
8MB	8MB	4MB	4MB	None	None	24MB
16MB	16MB	None	None	4MB	4MB	40MB
64MB	64MB	64MB	64MB	64MB	64MB	384MB

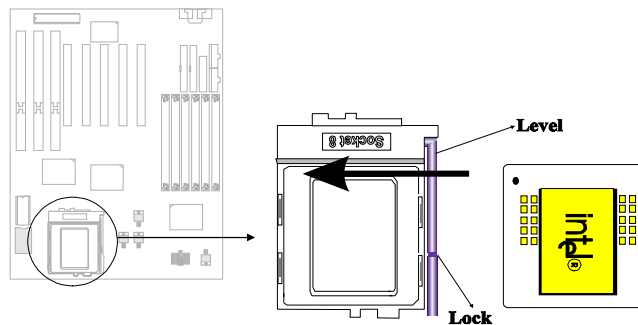


*64MB SIMMs are not available for testing now.*

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## Install CPU

P6FX1-B provides one ZIF socket 8 for installation of Pentium Pro processor. To install Pentium Pro processor, check the direction of CPU and ZIF socket, lift the level up to the top, put the CPU onto the socket, and lay down the level of socket and then lock the level of socket.



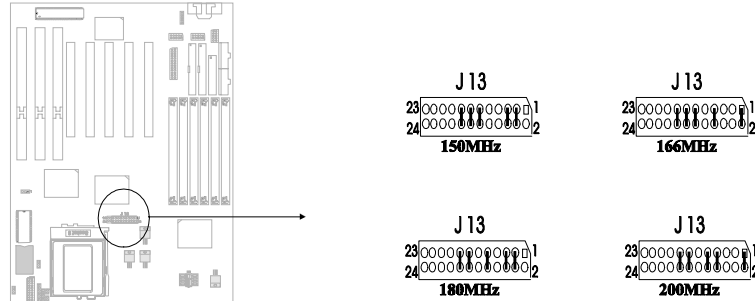
### CPU Frequency and Bus frequency:

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

Core CPU Freq.	Host Clock	Clock Multiplier	J13 (Jumper Short)
150 MHz	60	2.5	short 3-4, short 5-6, short 11-12 short 13-14, short 15-16
166 MHz	66	2.5	short 1-2, short 7-8, short 11-12 short 13-14, short 15-16
180 MHz	60	3	short 3-4, short 5-6, short 9-10 short 13-14, short 15-16
200 MHz	66	3	short 1-2, short 7-8, short 9-10 short 13-14, short 15-16

Table 2 -2. CPU Frequency and Bus Frequency

## Installation



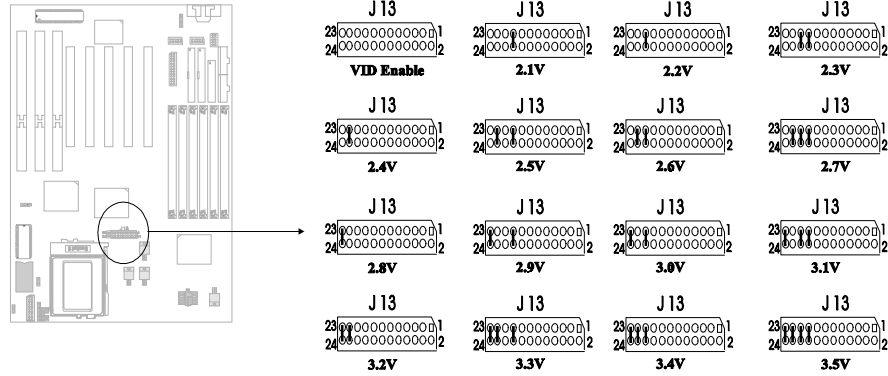
### Set the Jumpers for CPU Voltage:

The Pentium Pro Processor has VID to detect the CPU core voltage automatically.  
Leave VID 0 ~ VID 3 open unless you have VID disabled Pentium Pro Processor.

J13	VID 0 17-18	VID 1 19-20	VID 2 21-22	VID 3 23-24
VID Enable	open	open	open	open
2.1	short	open	open	open
2.2	open	short	open	open
2.3	short	short	open	open
2.4	open	open	short	open
2.5	short	open	short	open
2.6	open	short	short	open
2.7	short	short	short	open
2.8	open	open	open	short
2.9	short	open	open	short
3.0	open	short	open	short
3.1	short	short	open	short
3.2	open	open	short	short
3.3	short	open	short	short
3.4	open	short	short	short
3.5	short	short	short	short

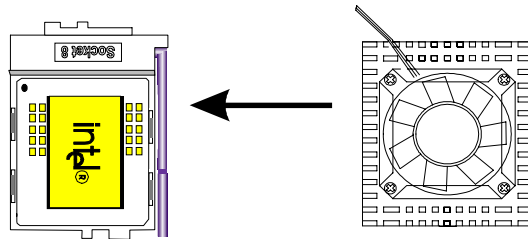
Table 2 -3. the Jumpers for CPU Voltage

## Installation



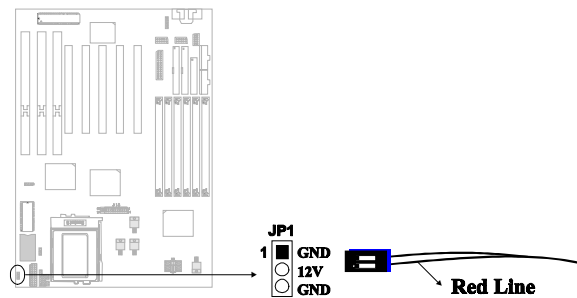
### CPU Fan :

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



### Install Fan Power On-board:

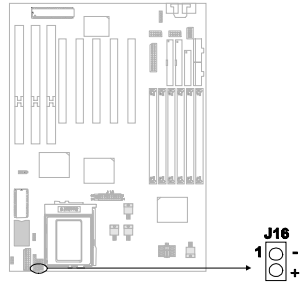
P6FX1-B provides the ability to turn the CPU cooling fan off while the system is in low-power suspend mode. If the fan has 2-pin power-cord, please connect the CPU cooling fan power to JP1 and enable "CPU Fan Power Green " function in BIOS "Power Management Setup" in order to make it work.



## ***Installation***

### **Green LED: (J16)**

Install Green Function Indicator (Green LED) connect the front panel power LED or green LED to J16. The LED blinking indicates the system in low-power suspend mode.



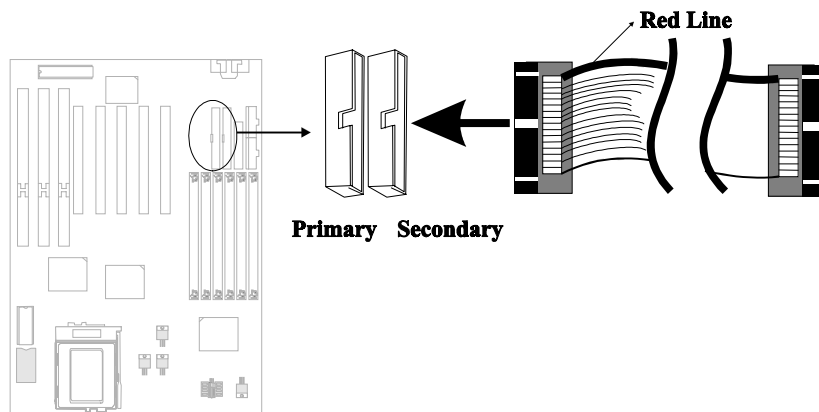


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## Install Cables

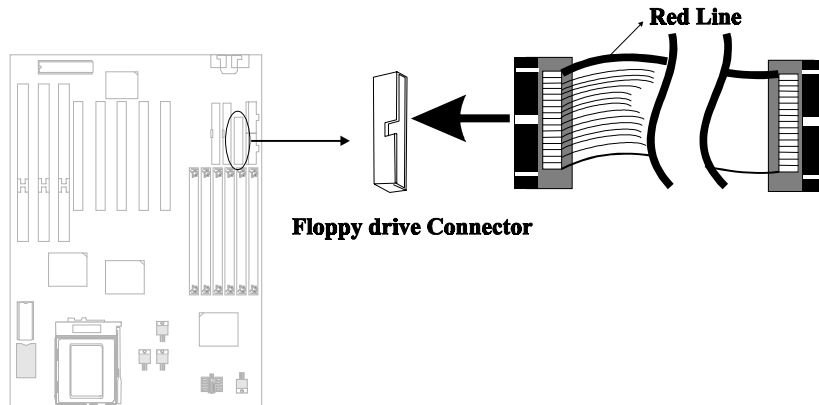
### IDE Connector:

P6FX1-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.



### Floppy Cable:

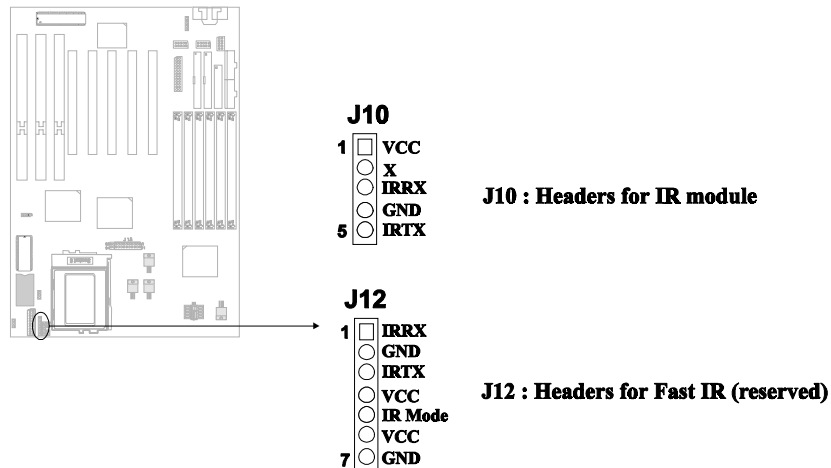
P6FX1-B provides one floppy drive connector with one 34-pin floppy cable. It can support 2 floppy drives with type : 360KB/ 720KB/ 1.2 MB / 1.44MB or 3 mode.



## Installation

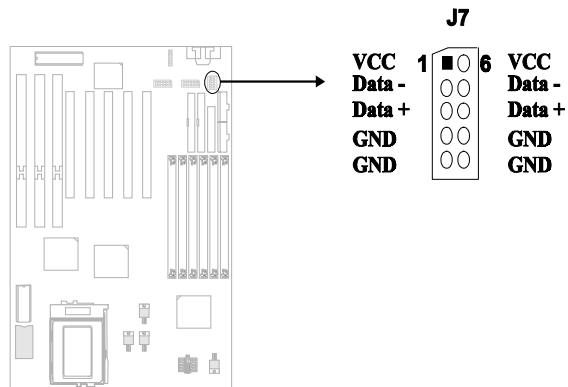
### IrDA :

P6FX1-B is an IrDA-capable mainboard. It gives users IR wireless data exchange directly from mobile computers, printers and PDAs,.....etc. Optional IrDA cable/ bracket provides connector with IrDA module.



### USB Header:

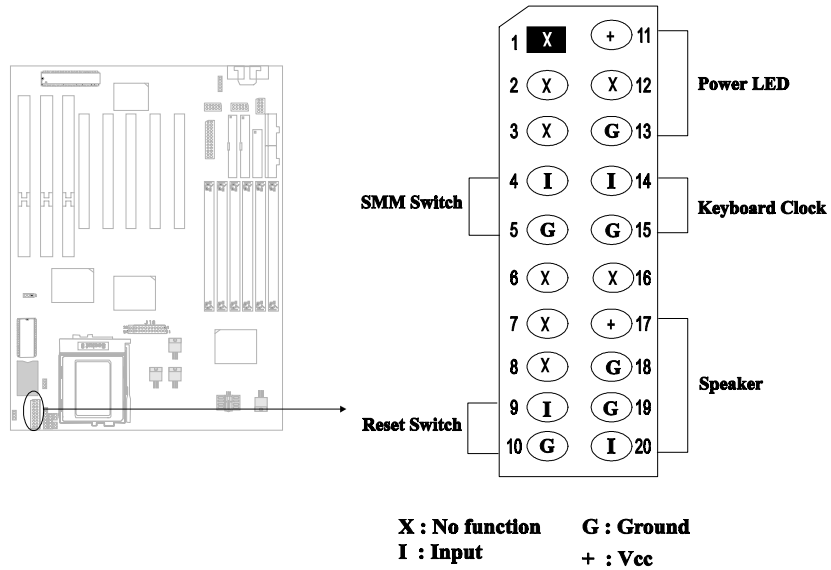
Universal Serial Bus (USB) is a new industry standard interface for ease use of PC peripheral expansion. Optional USB cable / bracket provides two USB connectors with USB devices.



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### 20-pin Front Panel Switch Connector:

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



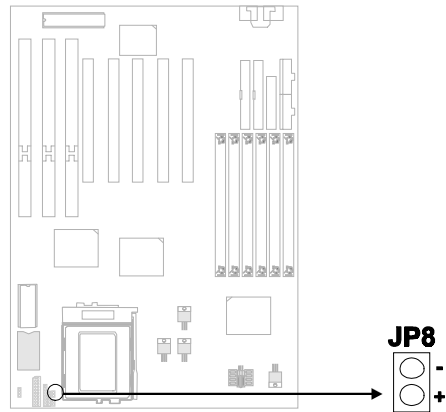
Connector	Featrue / Conect to
SMM Switch	Suspend / Resume
Reset Switch	Reset System
Keyboard Lock	Front Panel Keylock (Optional)
Speaker	Front Panel Speaker
Power LED	Front Panel Power LED

Table 2 -4. Front Panel Switch Connector

## ***Installation***

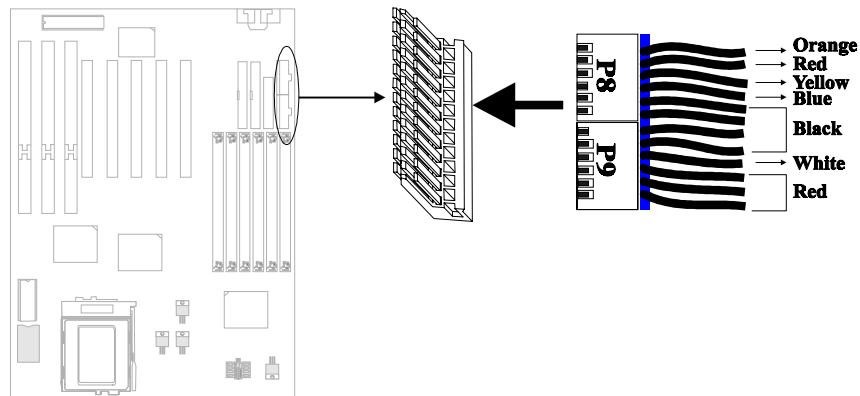
### **H.D.D. LED:**

P6FX1-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.



### **Power Supply Connector:**

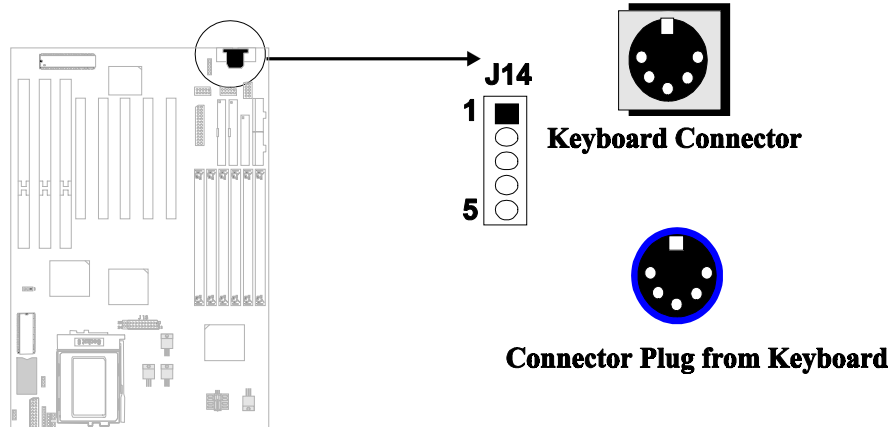
P6FX1-B provides one set of PS/2 power supply connectors. Follow the direction to install the power cable on connectors.



## *Installation*

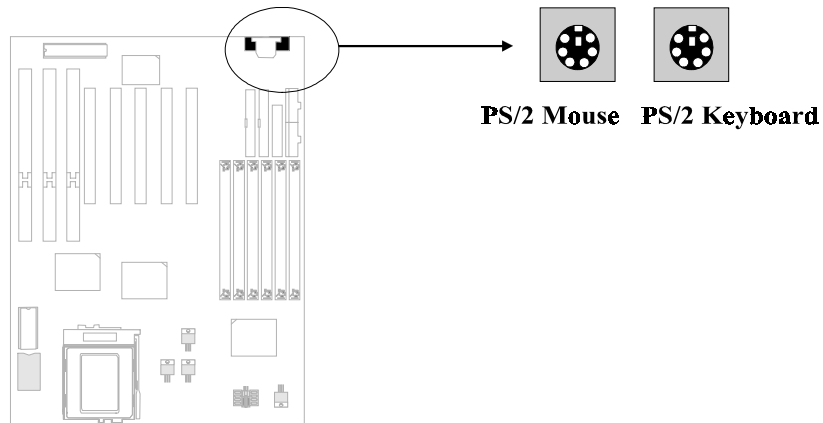
### **AT Keyboard Connector:**

P6FX1-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, P6FX1-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:**

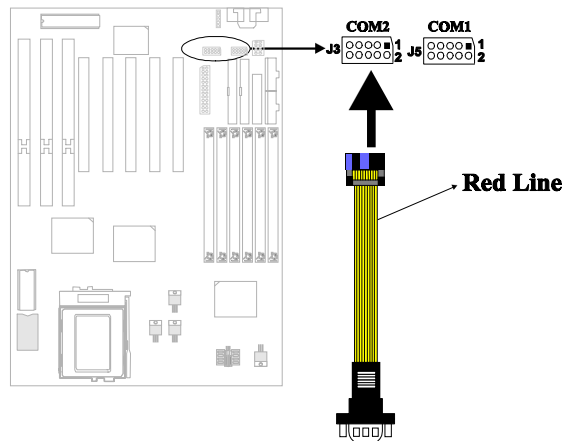
P6FX1-B provides (manufactured option) PS/2 mouse and keyboard set.



## ***Installation***

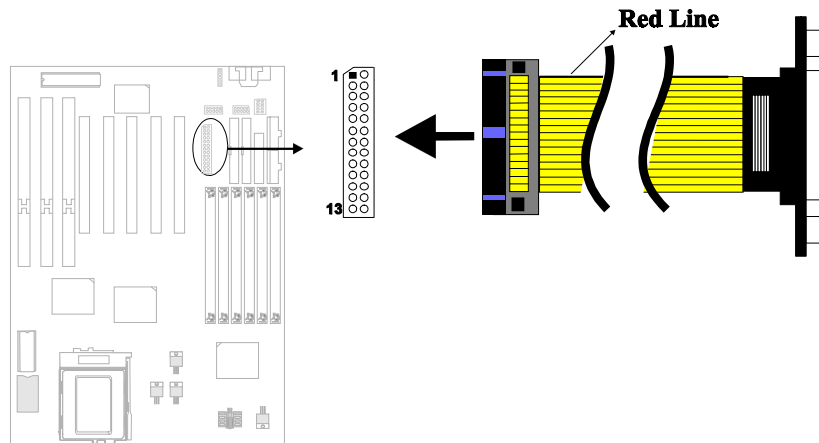
### **Serial Port COM1 and COM2 :**

P6FX1-B provides two sets of high speed serial port heads and cables. Each serial port is 16550 UART compatible.



### **Parallel Port Printer Connector :**

P6FX1-B provides one set of high speed parallel port headers and cable. The parallel port can support bidirection / EPP / ECP mode.

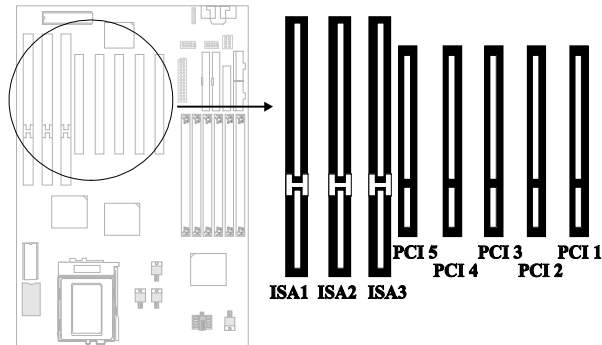


*The serial port and parallel port cable are mounted on two bracket, and also can be seperated.*

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## Install Add-on Card

P6FX1-B provides three ISA slots and five PCI slots. ISA 3 and PCI 5 slots are shared and can not be installed at the same time. PCI 4 and PCI 5 slots share the same IRQ.



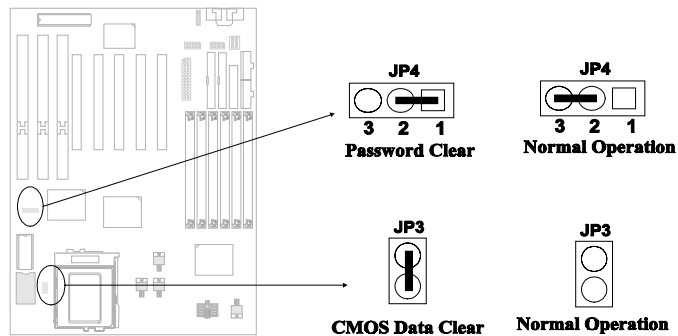
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## Other Jumpers

### Clear CMOS ( JP3) and Clear Password (JP4)

BIOS setting values and password are stored in CMOS RAM. To clear CMOS Data of your computer, please open the computer chassis; short JP3 with short jumper ; power on your system carefully; power off your system; then CMOS data will be cleared. For normal operation, please remove the short jumper from JP3 and close your computer chassis.

To clear Password of your system, please short 1-2 of JP4 at system power on stage; short 2-3 in normal stage.



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### Summary

#### Jumper Setting:

Jumper Block	Function	Configuration (Jumper short)
J13 1-2, 3-4, 5-6, 7-8, 9-10, 11-12, 13-14, 15-16	Pentium® Pro Processor Speed	<u>200MHz</u> <u>180MHz</u> <u>166MHz</u> <u>150MHz</u> ☆ 1-2      3-4      1-2      3-4 7-8      5-6      7-8      5-6 9-10      9-10      11-12      11-12 13-14      13-14      13-14      13-14 15-16      15-16      15-16      15-16
J13 17-18, 19-20, 21-22 23-24	Pentium® Pro Processor Voltage	☆ Open for CPU with VID enabled ( Auto-detection for CPU Voltage)
JP3	Clear CMOS	short : Clear CMOS open : Normal Operaion ☆
JP4	Clear Password	1-2 : Clear Password 2-3 : Normal Operation☆

Table 2 -5. Jumper Settings

☆: Default configuration

#### Host Clock Setting:

The table below presents the detailed Jumper Settings for different CPU Clock.  
Users can refer to this table for the reference if you cannot find out the proper CPU  
type on “ **Table 2-5. Jumper Settings**” .

<b>Host Clock</b>	60 MHz	J13 short 3-4, short 5-6
	66 MHz	J13 shot 1-2, short 7-8
<b>CPU Core Clock</b>	Host Clock * 2	J13 shot 9-10, short 11-12, short 13-14, short 15-16
	Host Clock * 2.5	J13 short 11-12, short 13-14, short 15-16
	Host Clock * 3	J13 shot 9-10, short 13-14, short 15-16
	Host Clock * 3.5	J13 short 13-14, short 15-16
	Host Clock * 4	J13 shot 9-10, short 11-12, short 15-16



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Table 2 -6. Host Clock Settings

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### **Pentium® Pro CPU Speed Table:**

The table below shows the configuration for different speeds of the Pentium® Pro Processor.

<b>Pentium Pro</b>	<b>Cache Size</b>	<b>Host Freq. (MHz)</b>	<b>PCI Freq. (MHz)</b>	<b>ISA Freq. (MHz)</b>
150MHz	L1 16KB, L2 256KB	60	30	7.5
166MHz	L1 16KB, L2 512KB	66	33	8.33
180MHz	L1 16KB, L2 256KB	60	30	7.5
200MHz	L1 16KB, L2 256/512KB	66	33	8.33

Table 2 -7. CPU Speed

### **Connector Table:**

<b>Connector</b>	<b>Function</b>	<b>Description</b>
PS1	PS/1 12-pin Power Connector	Connect to power supply P8 and P9
JP1	CPU Fan Connector	Connect to 2 or 3-pin power cord
JP8	Hard Disk LED Connector	Connect to chassis front panel HDD indicator
J1	PS/2 Keyboard Connector (Optional)	Connect to PS/2 Keyboard
J2	PS/2 Mouse Connector (Optional)	Connect to PS/2 Mouse
J3	Serial Port Two (COM2)	Connect to serial port 2 bracket
J5	Serial Port One (COM1)	Connect to serial port 1 bracket
J7	USB Port 1 & Port 2 Connector	Connect to 2 channel of USB cable
J8	Floppy Disk Connector	Connect to one or two floppy drive
J9	Secondary Hard Disk Connector	Connect to the 2nd IDE channel for 1 or 2 IDE drives
J10	Infrared (IR) Connector	Connect to Infra-red cable/bracket

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Continued.....

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Connector	Function	Description
J11	Primary Hard Disk Connector	Connect to the 1st IDE channel for 1 or 2 IDE drives
J12	Fast Infrared (IR) Connector	Connect to FIR cable / bracket (reserved)
J14	5-pin Header with PS/2 Mouse	Connect to PS/2 cable mouse / bracket
J15	AT Keyboard Connector	Connect to AT Keyboard
J16	Green LED	Connect the LED to J16. The LED blinking indicates the low-power suspend mode.
J17	Front Panel Switch Connector	Connect to several purpose of front panel function of indicator

Table 2 -8. Connectors

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