2 Installation

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

Check List

The standard packing of P5TX-A should include:

- ☑ P5TX-A mainboard
- ☑ 1 IDE cable
- ☑ 1 Floppy cable
- ☑ P5TX-A User's Manual

Optional packing of P5TX-A includes:

Device driver package

IrDA cable / bracket

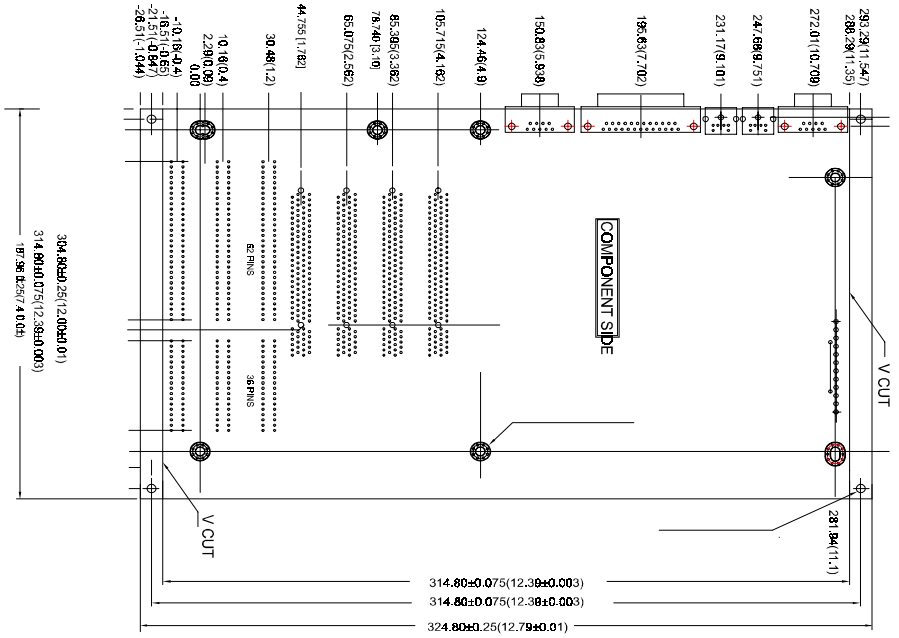
USB cable / bracket

Special offer package of P5TX-A includes:

IrDA Motherboard Adapter

Dimensions

P5TX-A is designed to fit Mini ATX form factor chassis. Check the dimensions and mounting holes for special purpose of chassis only.



Install Main Memory

P5TX-A 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 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 FPM /EDO / Synchronous DRAM Module. (SDRAM)

Users can install the different memory size and type on any bank, according to the memory configuration table.

The following table lists possible DRAM combinations.

DIMM1	DIMM2	DIMM3	Memory Size
8MB	-----	-----	8MB
8MB	8MB	-----	16MB
8MB	8MB	8MB	24MB
16MB	-----	-----	16MB
16MB	16MB	-----	32MB
16MB	16MB	16MB	48MB
32MB	-----	-----	32MB
32MB	32MB	-----	64MB
32MB	32MB	32MB	96MB
64MB	-----	-----	64MB
64MB	64MB	-----	128MB
64MB	64MB	64MB	192MB☆1
128MB	-----	-----	128MB
128MB	128MB	-----	256MB☆2

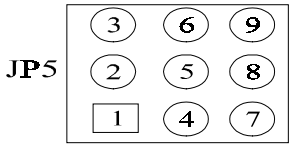
Table 2 -1. P5TX-A Memory Configuration

☆1: *The combination in this row will not support 64Mbit SDRAM.*

☆2: *The 439TX PCIset can support memory up to 256MB, even though it is possible to populate the memory more than 256MB.*

P5TX-A supports 3.3V EDO/SDRAM DIMM. In order to support 5V EDO DIMM, P5TX-A reserves the 5V voltage selection for this situation. **Do not mix** 3.3V and 5V DIMM install together.

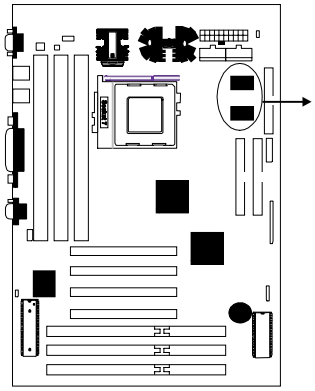
	DRAM Voltage	Setting
JP5	3.3V	short 1-2, 4-5, 7-8 (default)
	5V	short 2-3, 5-6, 8-9



Cache Memory

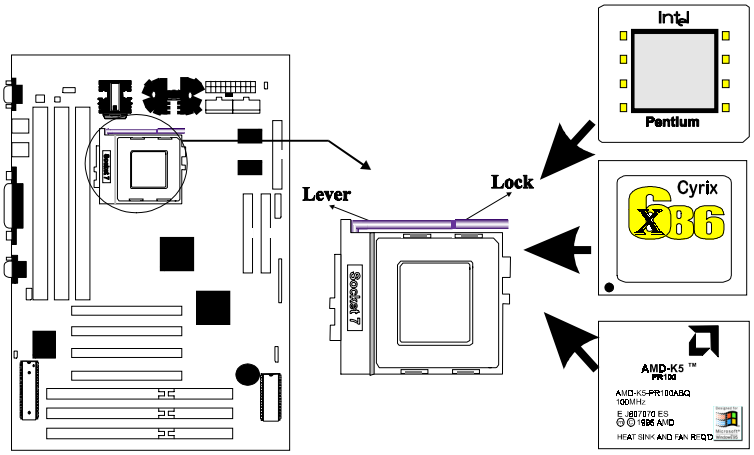
P5TX-A is soldered with L2 cache size 512KB or 256KB L2 Pipelined Burst Cache. (optional DRAM Cache). No COAST type cache module slot supported.

Size	Data RAM (U5, U6)
256KB	32K x 32 (3.3V) (Pipelined Burst / DRAM Cache)
512KB (default)	64K x 32 (3.3V) (Pipelined Burst / DRAM Cache)



Install CPU

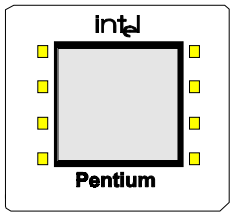
P5TX-A provides one ZIF socket 7 for installation of Intel Pentium ® processor, Intel Pentium ® processor with MMX™ technology, Cyrix / IBM 6x86 or AMD K5 processor. Lift the lever up to the top, put the CPU onto the socket, and lay down the lever of socket and then lock the lever of socket.


Intel
Pentium
Lever
Lock
Cyrix
6x86
Socket 7
AMD-K5 ™
PR100
AMD-K5-PR100ABQ
100MHz
HEAT SINK AND FAN REQ'D

CPU Frequency and Bus frequency :

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

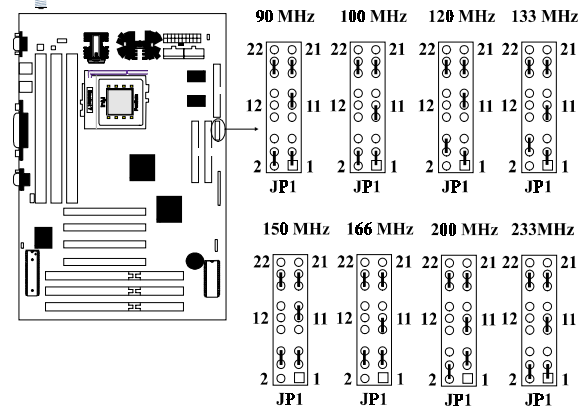
Intel Pentium ® processor or Intel Pentium ® processor with MMX™ technology:



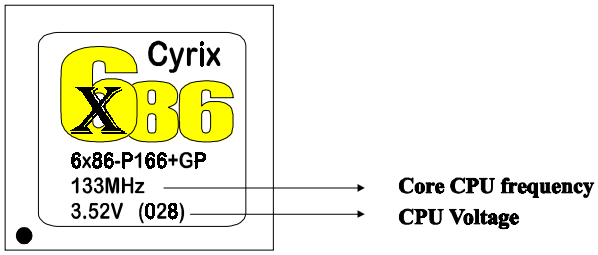
Core CPU Freq.	Host Clock	JP1 (Jumpser Short)	Clock Multiplier	JP1 (Jumpser Short)
90 MHz	60	11-13, 17-19, 18-20	1.5	1-3, 2-4
100 MHz	66	9-11, 17-19, 18-20	1.5	1-3, 2-4
120 MHz	60	11-13, 17-19, 18-20	2	1-3, 4-6
133 MHz	66	9-11, 17-19, 18-20	2	1-3, 4-6
150 MHz	60	11-13, 17-19, 18-20	2.5	3-5, 4-6
166 MHz	66	9-11, 17-19, 18-20	2.5	3-5, 4-6
200 MHz	66	9-11, 17-19, 18-20	3	2-4, 3-5
233 MHz	66	9-11, 17-19, 18-20	3.5	1-3, 2-4

Table 2 -2. CPU Frequency and Bus Frequency

Intel Pentium ® processor with MMX™ technology only has 166MHz , 200 and 233 MHz. 233MHz is not available when the manual is edited.

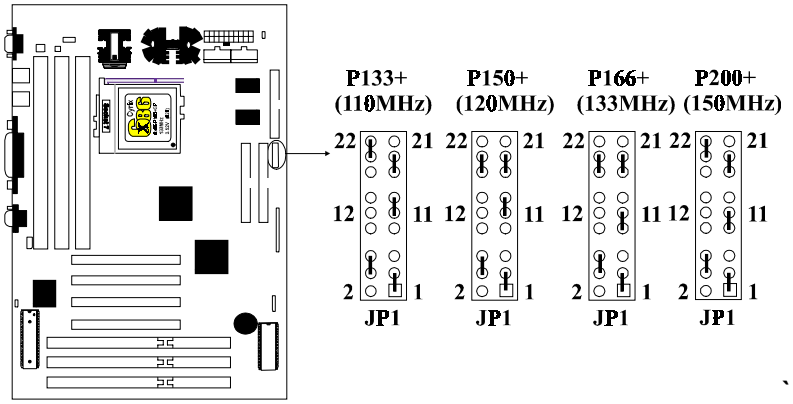


Cyrix or IBM 6x86 CPU:

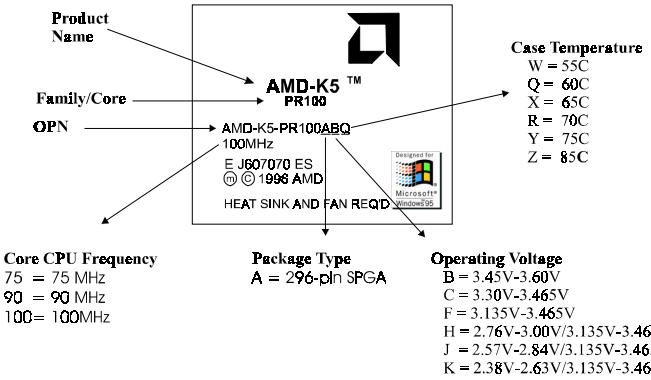


6x86	CPU Core Freq (MHz)	Host Clock (MHz)	JP1 (Jumpser Short)	Clock Multiplier	JP1 (Jumpser Short)
PR133+	110	55	11-13, 17-19, 20-22	2	1-3, 4-6
PR150+	120	60	11-13, 17-19, 18-20	2	1-3, 4-6
PR166+	133	66	9-11, 17-19, 18-20	2	1-3, 4-6
PR200+	150	75	9-11, 17-19, 20-22	2	1-3, 4-6

Table 2 -3. Cyrix or IBM 6x86 CPU Frequency and Bus Frequency

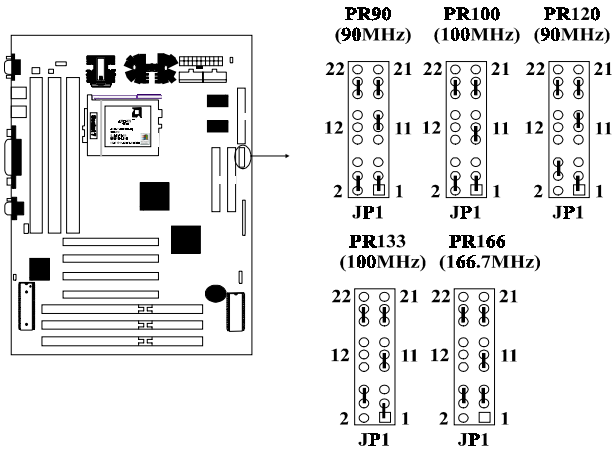


AMD K5 CPU:



AMD K5	CPU Core Freq. (MHz)	Host Clock (MHz)	JP1 (Jumper Short)	Clock Multiplier ☆	JP1 (Jumper Short)
PR90	90	60	11-13, 17-19, 18-20	1.5	1-3, 2-4
PR100	100	66	9-11, 17-19, 18-20	1.5	1-3, 2-4
PR120	90	60	11-13, 17-19, 18-20	2	1-3, 4-6
PR133	100	66	9-11, 17-19, 18-20	2	1-3, 4-6
PR166	116.7	66	9-11, 17-19, 18-20	2.5	3-5, 4-6

Table 2 -4. AMD K5 CPU Frequency and Bus Frequency

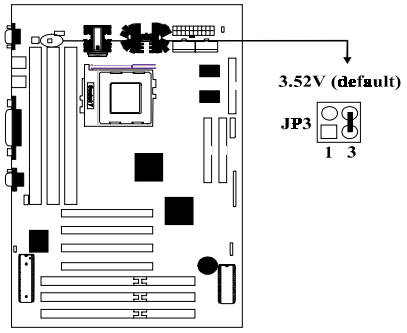


☆: *AMD K5 processor use P-rating to represent the performance of processor. The clock multiplier by Host clock equals P-rating mumber.*

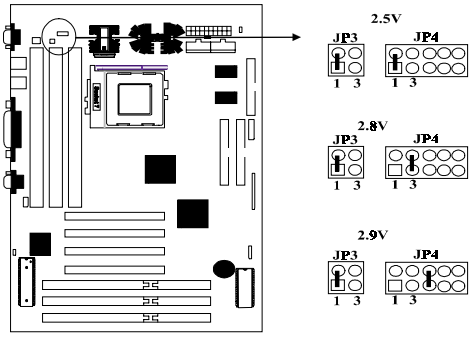
Set the Jumpers for CPU Voltage:

The CPU voltage depends on different CPU level need to install the jumper setting for correct voltage as follows. Check your CPU marking to get the correct voltage value.

CPU Type	CPU Voltage	JP3
Pentium® OverDrive® processor or AMD K5 (Single Voltage)	3.52V (default)	3-4

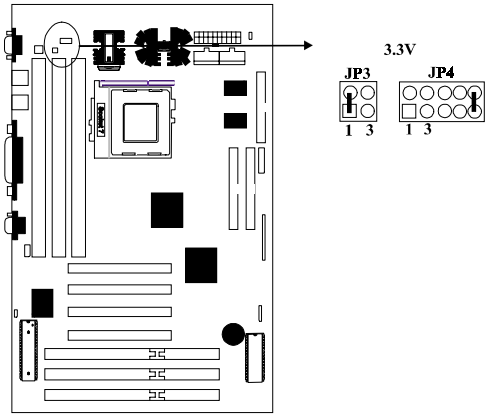


CPU Type	CPU Core Voltage	JP4	CPU I/O Voltage	JP3
Intel Pentium® processor with MMx™	2.5V	1-2	3.3V	1-2
technology (Dual Voltage)	2.8V (default)	3-4		
Cyrix/IBM 6x86L	2.9V	5-6		



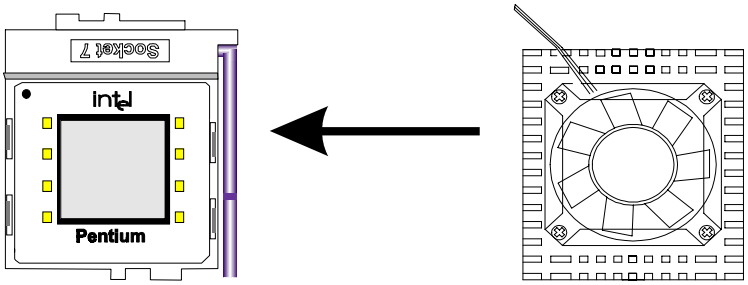
CPU Type	CPU Core Voltage	JP4	CPU I/O Voltage	JP3
Cyrix or IBM 6x86 CPU	3.3V	9-10	3.3V	1-2

Table 2 -5. the Jumpers for CPU Voltage



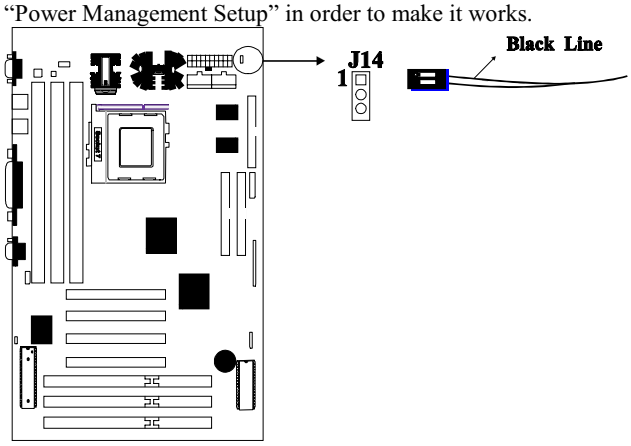
CPU Fan :

The CPU (Intel, Cyrix, AMD…) needs one fan / heatsink installed on to help heat dissipation. **Do not** install CPU without the fan/ heatsink.



Install Fan Power On-board: (J14)

P5TX-A 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 J14 and enable "CPU Fan Power Green " function in BIOS "Power Management Setup" in order to make it works.



Install Cables

IDE Connector: (J8, J9)

P5TX-A 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.