Table of Contents

HARDWARE CONFIGURATION

The Intel® 430TX Pentium® PCI motherboard is based on the Intel® 430TX BGA Chipset. The chipset is a highly integrated solution for a cost-effective and compact motherboard. Features on-board include super-I/O, PCI bus master IDE(support ultra DMA 33MB/Sec), PCI Ver 2.1 compliance, USB, support of Pentium CPUs running at 75, 90, 100, 120, 133, 150, 166, 180, 200MHz, Cyrix 6x86 CPUs and AMD K5,K6 processors. DIMM and SIMM sockets are provided onboard, allowing flexible installation of main memory. The onboard pipelined burst cache further boosts the system performance.

Key Features

Processor
- ZIF Socket 7.
- Full support for the Intel® Pentium processor with MMX technology using socket 7.
- Supports 50MHz, 55MHz, 60MHz and 66MHz bus speed including all Pentium® processors operating from 75MHz to 200MHz.
- Supports Cyrix 6x86 and Cyrix 6x86MX™ processors.
- Supports AMD K5,K6 processors.

Cache
- The external cache policy is direct-mapped, write-back.
- 256KB or 512KB synchronous pipelined burst cache is supported.

System Memory
- 8M to 256MB
- A total of four 72-pin SIMM sockets and two 168-pin DIMM sockets.
- Both 5V Fast Page Mode and Extended Data Output (EDO) DRAM types are supported by SIMM sockets.
- 3.3V SDRAM or 5V Fast Page/EDO DRAM can be supported by DIMM sockets.

Memory Organization
Four 72-pin SIMM Sockets
- System memory is divided into two banks. Each bank has two 72-pin SIMM slots.
- Supports Fast Page Mode (FPM), Extended Data Out (EDO) at , 60 and 70ns speeds.
- Supports Symmetrical and Asymmetrical DRAM addressing.
- Memory size from 8M byte up to 256M byte.
- Supports single-density SIMMs of 512KBx32, 1MBx32, 2MBx32and 4MBx32 depth and 16MBx32 depth.
- Supports double-density SIMMs of 1MBx32, 2MBx32, 4MBx32 and 8MBx32 depth.
- Banks of different DRAM types and depths can be mixed.

Two 168-pin DIMM Sockets

- Supports Synchronous DRAM (SDRAM) at 66MHz.
- Supports Symmetrical and Asymmetrical DRAM addressing.
- Memory size from 8M byte up to 256M byte.
- Supports single-density DIMMs of 1MBx64, 2MBx64, 4MBx64 and 8MBx64 depth.
- Supports double-density DIMMs of 2MBx64, 4MBx64,8MBx64 and16MBx64 depth.
- Supports 3.3V SDRAM or 5V Fast Page/EDO DRAM.

On-Board I/O

- Two enhanced IDE channel supporting up to four ATA or ATA2 or Ultra DMA IDE devices.
- Bus Master IDE function enhances multitasking performance.
- One ECP/EPP parallel port (via a header).
- Two 16550-compatible UART serial ports (via a header).
- One floppy port supporting two FDDs of 360KB, 720KB, 1.2MB, 1.44MB or 2.88MB.
- Two USB ports (via a header).
- Factory option to have one standard AT keyboard port or one PS/2 keyboard port(not both).
- PS/2 mouse port (via a header).
- Infrared (IrDA) support (via a header).

System BIOS

- 1MB or 2MB flash BIOS supporting PnP, APM, ATAPI and Windows® 95.
- Auto detects and supports LBA hard disks with formatted capacities up to 8.4GB.
- Easily upgradable by end-user.

Plug-and-Play

- Supports plug-and-play specification 1.1.
- Plug-and-play for DOS, Windows® 3.X as well as Windows® 95.
- Fully steerable PCI interrupts.

Expansion Slots

- 4 PCI bus master slots (rev. 2.1 compliant, with 1 PCI slot sharing with 1 ISA slot).
- 3 ISA slots (1 ISA slot sharing with 1 PCI slot).

Power Management

- APM specification 1.2 compliant.
- Support auto display off and hard disk standby.
- Activity monitoring for non-APM power management.
- Support external SMI push-button.
- Comply to the Energy star "Green PC" program.
- Advanced system Config and Power Interface(ACPI).

Motherboard Layout (Model Code No. - 35833501)

The following diagrams show the relative positions of the jumpers, connectors, major components and banks on the motherboard.
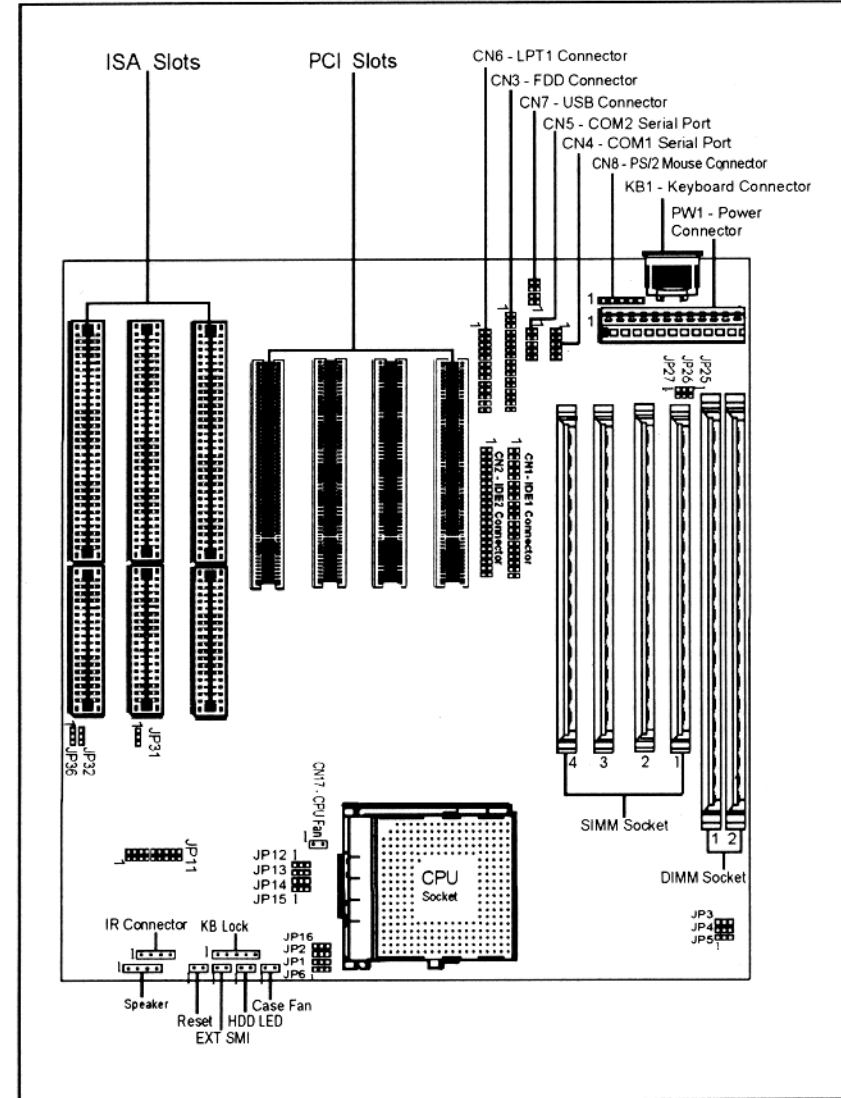
Jumper Settings

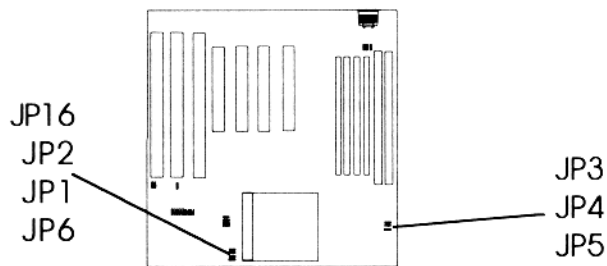This chapter explains how to configure the motherboard's hardware. Before using your computer, make sure all jumpers and DRAM modules are set correctly. Refer to this chapter whenever in doubt.

JP1, JP2, JP3, JP4,JP5 - CPU Type Selection

You can locate three headers JP3. JP4 and JP5 of the same color for Clock Generator .

CPU Type & Speed	Bus Clock	JP1	JP2	JP3	JP4	JP5
Intel Pentium-90	60MHz	1-2	1-2	1-2	2-3	2-3
Intel Pentium-100	66MHz	1-2	1-2	2-3	1-2	2-3
Intel Pentium-120	60MHz	1-2	2-3	1-2	2-3	2-3
Intel Pentium-133	66MHz	1-2	2-3	2-3	1-2	2-3
Intel Pentium-150	60MHz	2-3	2-3	1-2	2-3	2-3
Intel Pentium-166	66MHz	2-3	2-3	2-3	1-2	2-3
Intel Pentium-180	60MHz	2-3	1-2	1-2	2-3	2-3
Intel Pentium-200	66MHz	2-3	1-2	2-3	1-2	2-3
Intel Pentium-233	66MHz	1-2	1-2	2-3	1-2	2-3
Cyrix 6x86-P150+	60MHz	1-2	2-3	1-2	2-3	2-3
Cyrix 6x86-P166+	66MHz	1-2	2-3	2-3	1-2	2-3
Cyrix 6x86MX-PR166	60MHz	2-3	2-3	1-2	2-3	2-3
Cyrix 6x86MX-PR200	66MHz	2-3	2-3	2-3	1-2	2-3
AMD-K5-PR90	60MHz	1-2	1-2	1-2	2-3	2-3
AMD-K5-PR100	66MHz	1-2	1-2	2-3	1-2	2-3
AMD-K5-PR120	60MHz	1-2	1-2	1-2	2-3	2-3
AMD-K5-PR133	66MHz	1-2	1-2	2-3	1-2	2-3
AMD-K5-PR166	66MHz	2-3	2-3	2-3	1-2	2-3
AMD-K5-PR200	66MHz	2-3	1-2	2-3	1-2	2-3
AMD-K6-PR2-166	66MHz	2-3	2-3	2-3	1-2	2-3
AMD-K6-PR2-200	66MHz	2-3	1-2	2-3	1-2	2-3
AMD-K6-PR2-233	66MHz	1-2	1-2	2-3	1-2	2-3

JP6 is reserved for future AMD K6 processors. Simply leave JP6 OPEN for all existing Intel, Cyrix, AMD K5 and AMD K6 processors . This motherboard is compatible with Cyrix 6x86 CPU but must be Revision 2.7 and newer. Please contact your CPU supplier for details on identification of Cyrix 6x86 CPU revisions.
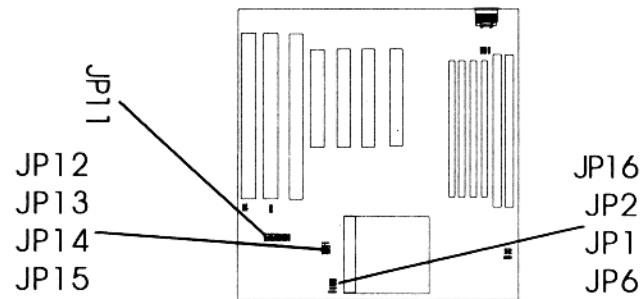
JP11, JP12, JP13, JP14, JP15, JP16 - Power Selection for the CPU Bus Section, Bus Voltage & CPU Core-Voltage Select

CoreVoltage JP11	BUS Section JP12, JP13, JP14, JP15	BUSVoltage JP16	CPU Examples
1-2 (1.8V) (Reserved)	1-2	2-3 (3.3V)	IBM®,Cyrix® 6x86MX
3-4 (2.1V) (Reserved)	1-2	2-3 (3.3V)	AMD® K6 (266Mhz or above)
5-6 (2.5V)	1-2	2-3 (3.3V)	AMD K5 ("K" marking)
7-8 (2.7V)	1-2	2-3 (3.3V)	AMD K5 ("J" marking)
9-10 (2.8V)	1-2	1-2* (3.5V)	Intel® Pentium Processors with MMX Technology
9-10 (2.8V)	1-2	2-3 (3.3V)	Cyrix 6x86I (Core 2.8V I/O 3.3V)
9-10 (2.8V)	1-2	2-3 (3.3V)	Cyrix 6x86MX (Core 2.8V I/O 3.3V)
11-12 (2.9V)	1-2	2-3 (3.3V)	AMD K5 ("H" marking)
11-12 (2.9V)	1-2	1-2* (3.5V)	AMD K6 PR2-166
11-12 (2.9V)	1-2	1-2* (3.5V)	AMD K6 PR2-200
13-14 (3.2V)	1-2	1-2* (3.5V)	AMD K6 PR2-233
15-16 (3.3V)	2-3*	1-2* (3.5V)	AMD K5 ("B","C"or"F" marking)
17-18* (3.5V)	2-3*	1-2* (3.5V)	Intel P54C
17-18* (3.5V)	2-3*	1-2* (3.5V)	Cyrix 6x86

Remark: Example of AMD marking : "AMD-K5-PR100ABQ"
In the above tables, the AMD marking refers to the 2nd character - (B in the example) after P-rating (PR100 in the example).
Note: Cyrix 6x86 is a single-voltage CPU while Cyrix 6x86L is a dual-voltage version.
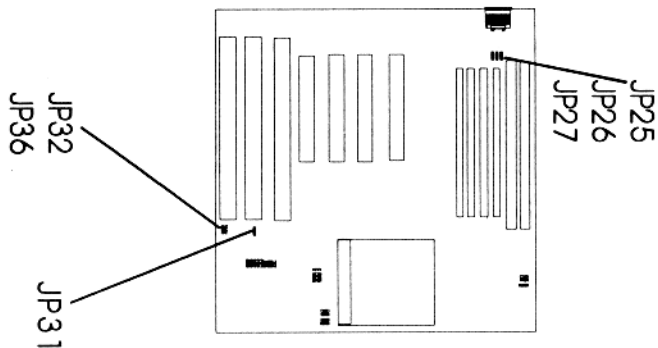
JP31 - CMOS Clear

JP31	CMOS
1-2	Normal operation
2-3	Clear

JP32, JP36 - Reserved Jumpers

Reserved jumpers are pre-installed in factory. They should NOT be altered by the users.

DIMM Voltage Select

JP25 , JP26 , JP27	DIMM Voltage
Open	3.3V (DIMM 1, DIMM 2)
Closed	5V (DIMM 1, DIMM 2)

Memory Configuration

Table 1 and 2 show the possible memory combinations. The motherboard will support both Fast Page DRAM or EDO DRAM SIMMs and SDRAM DIMMs

Notice:
Don't mix the Fast Page DRAM and EDO DRAM within the same memory bank. If Fast Page DRAM and EDO DRAM SIMMs are installed in separate banks,each bank will be optimized for maximum performance.

Table 1 (SIMM Configurations)

SIMM1 (Bank 0)	SIMM2 (Bank 0)	SIMM3 (Bank 1)	SIMM4 (Bank 1)	Total
Empty	Empty	4MB	4MB	8MB
Empty	Empty	8MB	8MB	16MB
Empty	Empty	16MB	16MB	32MB
Empty	Empty	32MB	32MB	64MB
Empty	Empty	64MB	64MB	128MB
4MB	4MB	Empty	Empty	8MB
4MB	4MB	4MB	4MB	16MB
4MB	4MB	8MB	8MB	24MB
4MB	4MB	16MB	16MB	40MB
4MB	4MB	32MB	32MB	72MB
4MB	4MB	64MB	64MB	136MB
8MB	8MB	Empty	Empty	16MB
8MB	8MB	4MB	4MB	24MB
8MB	8MB	8MB	8MB	32MB
8MB	8MB	16MB	16MB	48MB
8MB	8MB	32MB	32MB	80MB
8MB	8MB	64MB	64MB	144MB
16MB	16MB	Empty	Empty	32MB
16MB	16MB	4MB	4MB	40MB
16MB	16MB	8MB	8MB	48MB
16MB	16MB	16MB	16MB	64MB
16MB	16MB	32MB	32MB	96MB
16MB	16MB	64MB	64MB	160MB
32MB	32MB	Empty	Empty	64MB
32MB	32MB	4MB	4MB	72MB
32MB	32MB	8MB	8MB	80MB
32MB	32MB	16MB	16MB	96MB
32MB	32MB	32MB	32MB	128MB
32MB	32MB	64MB	64MB	192MB
64MB	64MB	Empty	Empty	128MB
64MB	64MB	4MB	4MB	136MB
64MB	64MB	8MB	8MB	144MB
64MB	64MB	16MB	16MB	160MB
64MB	64MB	32MB	32MB	192MB
64MB	64MB	64MB	64MB	256MB

Table 2 (DIMM Configurations)

DIMM1	DIMM2	Total
None	8MB	8MB
None	16MB	16MB
None	32MB	32MB
None	64MB	64MB
None	128MB	128MB
8MB	None	8MB
8MB	8MB	16MB
8MB	16MB	24MB
8MB	32MB	40MB
8MB	64MB	72MB
8MB	128MB	136MB
16MB	None	16MB
16MB	8MB	24MB
16MB	16MB	32MB
16MB	32MB	48MB
16MB	64MB	80MB
16MB	128MB	144MB
32MB	None	32MB
32MB	8MB	40MB
32MB	16MB	48MB
32MB	32MB	64MB
32MB	64MB	96MB
32MB	128MB	160MB
64MB	None	64MB
64MB	8MB	72MB
64MB	16MB	80MB
64MB	32MB	96MB
64MB	64MB	128MB
64MB	128MB	192MB
128MB	None	128MB
128MB	8MB	136MB
128MB	16MB	144MB
128MB	32MB	160MB
128MB	64MB	192MB
128MB	128MB	256MB

BIOS SETUP

This chapter discusses Award's Setup Program built into the ROM BIOS. The Setup Program allows users to modify the basic system configuration. This special information is then stored in battery-backed RAM, which retains the setup information when the power is turned off.

Starting Setup

The Award BIOS is immediately activated when you turn on the computer. The BIOS reads the system information contained in the CMOS and begins the process of checking out the system and configuring it. When it finishes, the BIOS will seek an operating system on one of the disks and then launch and turn control over to the operating system .

While the BIOS is in control, the Setup Program can be activated :

1. By pressing <Del> immediately after switching the system on, or
2. By pressing the <Del> key when the following message appears briefly at the bottom of the screen during the POST (Power On Self Test)

Press DEL to enter SETUP

If the message disappears before you can respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" button on the system case. You may also restart by simultaneously pressing the <Ctrl>, <Alt>, and <Delete> keys . If you do not press the keys at the correct time and the system does not reset, an error message will be displayed and you will again be asked to ...

PRESS F1 TO CONTINUE, DEL TO ENTER SETUP

Getting Help

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc> or the F1 key again.

In Case of Problems

If, after making and saving system changes with the Setup Program, you discover that your computer does not reset, use the Award BIOS defaults to override the CMOS settings.

Main Menu

Once you enter the Award BIOS CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from various setup functions and two exit choices. Use the arrow keys to select among the items and press <Enter> to accept and enter the sub-menu.