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HARDWARE CONFIGURATION

Key Features:

Chipset

- VIA® Apollo MVP4 Chipset.

Processor

- ZIP socket 7.
- Fully support Intel® Pentium® processors with MMX technology using socket 7.
- Support Pentium® processors operating from 100MHz to 233MHz.
- Support Cyrix®/IBM® 6x86/6x86L/6x86MX/M-II processors.
- Support AMD® K5/K6/K6-2/K6-III processors.
- Support IDT® WinChip C6 processors.

Cache

- Direct-mapped L2 write-back cache.
- Supports 512KB on board synchronous pipelined burst SRAM.

Memory Organiztion

- Supports 3.3V Extended Data Output(EDO) DRAM at 50 and 60ns speeds.
- Memory size up to 256MB.
- Supports single-density DIMMs of 1MB, 2MB, 4MB, 8MB and 16MB depth (x64 or 72).
- Supports double-density DIMMs of 2MB, 4MB, 8MB, 16MB and 32MB depth (x64 or 72).

On-Board I/O

- Two PCI fast IDE ports supporting up to four ATA Device(Including IDE HDDs, CD-ROMs, ZIP and LS-120 drives).
- Supports bus master IDE, PIO mode 4(up to 16MB/sec), Ultra DMA33 (up to 33MB/sec) and Ultra DMA66(up to 66MB/sec) transfer.
- One ECP/EPP parallel port.
- Two 16550-compatible UART serial ports.
- One floppy port supporting two FDDs of 360KB, 720KB, 1.2M, 1.44M or 2.88M formatted capacity.
- Four USB ports.
- One PS/2 type keyboard port.
- PS/2 mouse port.
- Infrared (IrDA) support (via a header).
- VGA port.

AC97 Digital Audio Controller

- Dual full-duplex Direct Sound Channels between system memory and AC97 Link.
- Standard AC97 Codec interface for multimedia systems.
- Complete software driver support for Windows® 95/98.
- Direct game port and one MIDI port interface.

System BIOS

- 2MB flash BIOS supporting PnP, APM, ACPI and windows® 9X.
- Auto detects and supports LBA hard disks with formatted capacities over 8.4GB.
- Easily upgradable by end-user.

Plug-and-Play

- Supports plug-and-play specification 1.0a.
- Plug-and-play for Windows® 9X.
- Fully steerable PCI interrupts.

Power Management

- Supports SMM, APM and ACPI.
- Break switch for instant suspend/resume on system operation.
- Energy star "Green PC" compliant.
- Support Wake on Lan.

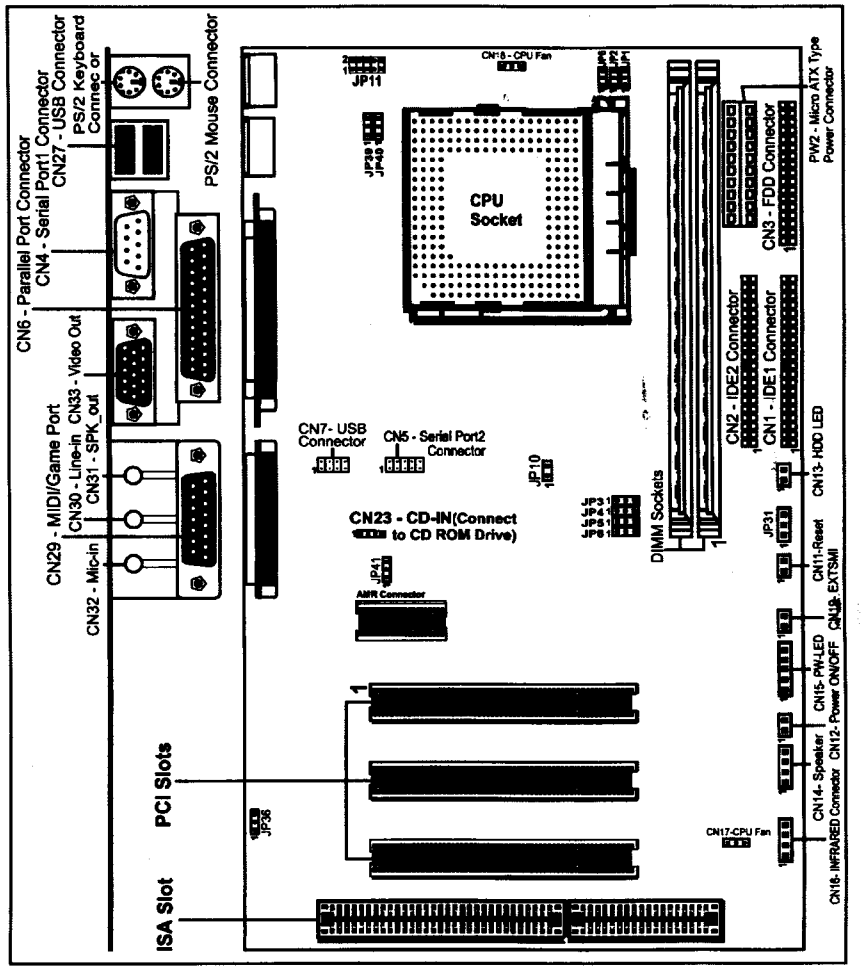
Expansion Slots

- 3 PCI bus master slots (rev. 2.2 compliant).
- 1 ISA slot.
- 1 AMR slot.

CAUTION
Static electricity can harm delicate components of the motherboard. To prevent damage caused by static electricity, discharge the static electricity from your body before you touch any of the computers electronic components.

Motherboard Layout (Model Code No. - 35889700XX)

The following diagram shows the relative positions of the jumpers, connectors, major components and memory banks on the motherboard.



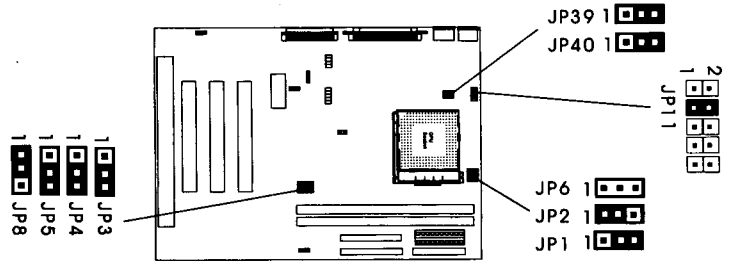
NOTE

1) Be sure to check the cable orientation in order to match the colored strip to the pin 1 end of the connector.

Jumper Settings

This section 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.

CPU Type and Voltage Selection Jumper - JP1, JP2, JP3, JP4, JP5, JP6, JP8, JP11, JP39, JP40



Intel® MMX CPU

CPU Type & Speed	CPU, PCI Bus Clock & CPU Type									CPU Voltage		
	CPU MHz	PCI MHz	JP3	JP4	JP5	JP8	JP1	JP2	JP6	JP11	JP39	JP40
Intel Pentium-166MMX	66MHz	33MHz										
Intel Pentium-200MMX	66MHz	33MHz										
Intel Pentium-233MMX	66MHz	33MHz										

Intel® CPU (Intel® Pentium® CPU without MMX Technology)

CPU Type & Speed	CPU, PCI Bus Clock & CPU Type									CPU Voltage		
	CPU MHz	PCI MHz	JP3	JP4	JP5	JP8	JP1	JP2	JP6	JP11	JP39	JP40
Intel Pentium-100	66MHz	33MHz										
Intel Pentium-120	60MHz	30MHz										
Intel Pentium-133	66MHz	33MHz										
Intel Pentium-150	60MHz	30MHz										
Intel Pentium-166	66MHz	33MHz										
Intel Pentium-180	60MHz	30MHz										
Intel Pentium-200	66MHz	33MHz										

■ Close □ Open

AMD® CPU

CPU Type & Speed	CPU, PCI Bus Clock & CPU Type									CPU Voltage		
	CPU MHz	PCI MHz	JP3	JP4	JP5	JP8	JP1	JP2	JP6	JP11	JP39	JP40
AMD-K5-PR133	66MHz	33MHz										
AMD-K5-PR166	66MHz	33MHz										
AMD-K6-166	66MHz	33MHz										
AMD-K6-200	66MHz	33MHz										
AMD-K6-233(3.2V)	66MHz	33MHz										
AMD-K6-233(2.2V)	66MHz	33MHz										
AMD-K6-266	66MHz	33MHz										
AMD-K6-300	66MHz	33MHz										
AMD-K6-2/300*	100MHz*	33MHz*										
AMD-K6-2/333	95MHz	31.75MHz										
AMD-K6-2/350	100MHz	33MHz										
AMD-K6-2/380	95MHz	31.75MHz										
AMD-K6-2/450	100MHz	33MHz										
AMD-K6-2/475	95MHz	31.75MHz										
AMD-K6-2/500	100MHz	33MHz										
AMD-K6-2/533	97MHz	32.3MHz										
AMD-K6-2/550	100MHz	33MHz										
AMD-K6-III/400	100MHz	33MHz										
AMD-K6-III/450	100MHz	33MHz										

* = *Default setting (AMD-K6-2/300 CPU)*

■ Close □ Open

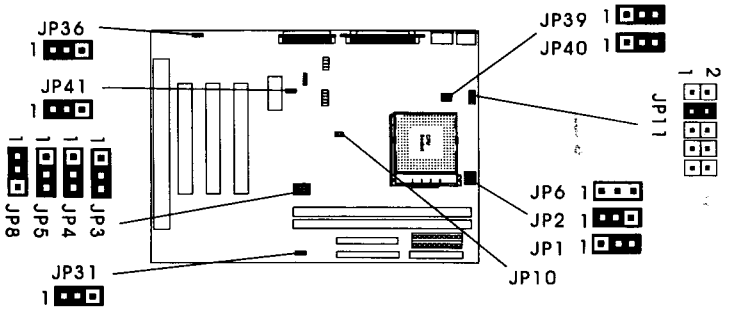
Cyrix®/IBM® CPU

CPU Type & Speed	CPU, PCI Bus Clock & CPU Type									CPU Voltage		
	CPU MHz	PCI MHz	JP3	JP4	JP5	JP8	JP1	JP2	JP6	JP11	JP39	JP40
Cyrix/IBM 6x86-PR200+	75MHz	25MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	2-3	1-2	1-2
	75MHz	37.5MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	2-3	1-2	1-2
Cyrix/IBM 6x86L-PR150+	60MHz	30MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	1-2	1-2	1-2
Cyrix/IBM 6x86L-PR166+	66MHz	33MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	1-2	1-2	1-2
Cyrix/IBM 6x86L-PR200+	75MHz	37.5MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	1-2	1-2	1-2
	75MHz	25MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	1-2	1-2	1-2
Cyrix/IBM 6x86MX-PR166	60MHz	30MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	2-3	1-2	1-2
	66MHz	33MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	2-3	1-2	1-2
Cyrix/IBM 6x86MX-PR200	66MHz	33MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	2-3	1-2	1-2
	75MHz	25MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	2-3	1-2	1-2
	75MHz	37.5MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	2-3	1-2	1-2
Cyrix/IBM 6x86MX-PR233	66MHz	33MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	2-3	1-2	1-2
	75MHz	25MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	2-3	1-2	1-2
	75MHz	37.5MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	2-3	1-2	1-2
Cyrix MII 6x86MX-PR266	83MHz	27.77MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	2-3	1-2	1-2
Cyrix MII 6x86MX-PR300	66MHz	33MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	2-3	1-2	1-2
Cyrix MII 6x86MX-PR333	83MHz	27.77MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	2-3	1-2	1-2
Cyrix MII 6x86MX-PR333	75MHz	25MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	2-3	1-2	1-2
	75MHz	37.5MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	2-3	1-2	1-2

■ Close ▯ Open

IDT® WinChip C6 CPU

CPU Type & Speed	CPU, PCI Bus Clock & CPU Type									CPU Voltage		
	CPU MHz	PCI MHz	JP3	JP4	JP5	JP8	JP1	JP2	JP6	JP11	JP39	JP40
IDT WinChip C6-200	66MHz	33MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	2-3	1-2	1-2
IDT WinChip C6-225	75MHz	25MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	2-3	1-2	1-2
	75MHz	37.5MHz	1-2	1-2	1-2	1-2	1-2	1-2	Open	2-3	1-2	1-2



JP10 - System Memory Tuning Jumper

In order to cope with different type of DIMM memory in the market, a system MEMORY TUNING jumper is provided.

In case of any power up problem due to the DIMM MEMORY, you can close the jumper and try again.

If no problem is found, the jumper should be kept **DEFAULT (OPEN)**.

JP31 - CMOS Clear

JP31	CMOS
1-2*	Normal operation*
2-3	Clear

JP36 - BIOS Program Voltage / BIOS Select

JP36	Selection
1-2	INTEL/MX (2MB)
2-3	ATMEL/SST/Winbond (2MB)

JP36 is pre-installed in the factory. It should NOT be altered by the users.

* = *Default setting*

■ Close ▯ Open

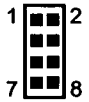
JP41 - Selection for on Board AC97 or AMR AC97 Sound

JP41	Selection
1 ■■□ 1-2*	on Board AC97 Sound*
1 □■■ 2-3	AMR AC97 Sound

Warning:
Before handling the motherboard from its original package, please ensure that there is no static electricity on your body. Otherwise it may cause damage to the integrated circuits on the motherboard.

Pin Assignment

1.CN7: USB Connector



1	USB-VCC	2	USB-GND
3	USB DT2-	4	USB DT3+
5	USB DT2+	6	USB DT3-
7	USB-GND	8	USB-VCC

2.CN23: CD-IN

1	GND
2	CD-L
3	GND
4	CD-R

Warning:
Power on after Power-Fail
This new feature is enabled in this system, i.e. once plugging-in the AC-power, the system will start-up automatically. Please install all the components/devices into the system before plugging in the AC-power plug.

** = Default setting*

■ Close □ Open

Hardware Setup

The memory combinations. The motherboard will support Extended Data Output (EDO), Burst Extended Data Output (BEDO) and Synchronous DRAM (SDRAM) DIMMs.

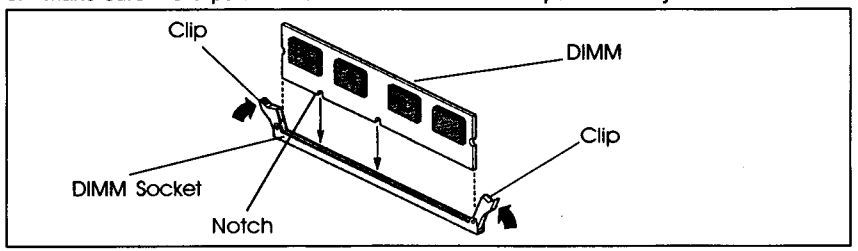
DIMM Configurations

DIMM 1	DIMM 2	Total
Empty	8MB	8MB
Empty	16MB	16MB
Empty	32MB	32MB
Empty	64MB	64MB
Empty	128MB	128MB
8MB	Empty	8MB
8MB	8MB	16MB
8MB	16MB	24MB
8MB	32MB	40MB
8MB	64MB	72MB
8MB	128MB	136MB
16MB	Empty	16MB
16MB	8MB	24MB
16MB	16MB	32MB
16MB	32MB	48MB
16MB	64MB	80MB
16MB	128MB	144MB

DIMM 1	DIMM 2	Total
32MB	Empty	32MB
32MB	8MB	40MB
32MB	16MB	48MB
32MB	32MB	64MB
32MB	64MB	96MB
32MB	128MB	160MB
64MB	Empty	64MB
64MB	8MB	72MB
64MB	16MB	80MB
64MB	32MB	96MB
64MB	64MB	128MB
64MB	128MB	192MB
128MB	Empty	128MB
128MB	8MB	136MB
128MB	16MB	144MB
128MB	32MB	160MB
128MB	64MB	192MB
128MB	128MB	256MB

To Install DIMMs

1. Locate the DIMM sockets.
2. Holding the DIMM by the edges, remove it from its antistatic package.
3. Make sure the clips at either end of the socket are pushed away from the socket.



4. Position the DIMM above the socket. Align the two small notches in the bottom edge of the DIMM with the keys in the socket.
5. Insert the bottom edge of the DIMM into the socket.
6. When the DIMM is seated, push down on the top edge of the DIMM until the retaining clips at the ends of the socket snap into place. Make sure the clips are firmly in place.

CAUTION!

Turn system power off before installing and removing any device, otherwise you'll cause the system damage.

Installing a New Processor

An upgrade processor can dramatically increase general system speed and performance.

Most microprocessor upgrade kits include the following items:

- Microprocessor chip
- Installation instructions and technical data

Your system may have these features built in, or support them as upgrades.

To Install a Processor to ZIF Socket

To install the processor, follow these steps:

1. If the system microprocessor is already on the motherboard socket, you need to remove it from the motherboard socket. The socket is a Zero Insertion Force (ZIF) socket which has a metal arm at one side. Carefully grasp this arm, move it horizontally away from the socket and lift it up. Eventually you will be able to lift the chip straight up out of the socket.

Be careful not to bend any of the pins when removing the microprocessor chip from its socket. The microprocessor chip can be permanently damaged.

2. Unpack the new microprocessor chip.
3. Carefully align the processor with the correct orientation to the socket on the motherboard.
4. Carefully insert the processor into the socket, and move the metal arm downward to replace it in its original position.

Connect the Processor Fan Connector

There is a fan attached the processor to prevent the overheating. Connect the processor fan cable to the fan connector that located on the motherboard near the processor and ensure the fan can operate. Otherwise the CPU can overheat and cause damage to both CPU and motherboard.

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.