Introduction

System Overview

The 7KT266AL motherboard is design for use AMD Duron/ Athlon 200MHZ /266MHz (Double Data Rate) Front Side Bus Frequency CPU, which utilize the Socket-A design and the memory size expandable to 2.0GB.

This motherboard use the newest VIA KT-266 chipset, apply 133MHz/266MHz (Double Data Rate) Front Side Bus frequency and 266MHz memory interface delivers a clear upgrade path to the future generation of 266MHz processors, PC-1600/PC-2100 DDR DRAM and PC100/PC133 SDRAM. The 7KT266AL motherboard offers ULTRA ATA 100 to provide speedier HDD throughout that boosts overall system performance.

This motherboard also has an integrated AC'97 2.1 CODEC on board which is fully compatible with Sound Blaster Pro that gives you the best sound quality and compatibility.

With USB control as well as capability of expanding to 6 USB function ports, the 7KT266AL meet future USB demand. This motherboard integrated Recovery Genius in BIOS protected your hard disk from virus crash hard disk data.

It is ideal for multi-tasking and fully supports MS-DOS, Windows, Windows NT , Windows ME, Windows 2000, Novell, OS/2, Windows95/98, Windows 98SE, Windows XP, UNIX, SCO UNIX etc.

This manual also explains how to install the mainboard for operation, and how to setup your CMOS configuration with the BIOS setup program.

1.Motherboard Description

1.1 Features

1.1.1 Hardware

CPU

-Support AMD Athlon 700MHz~Athlon XP 1600+ processor.
-Support AMD Duron 600MHz~1.1GHz processor.
-Support 200MHz/266MHz (Double Data Rate) Front Side Bus frequency processors.
-Reserves support for future AMD Athlon/Duron processors.

SDRAM Memory

-184-pin DDR module socket *2. Support PC1600/PC2100 DDR DRAM.
-168-pin SDRAM module socket *2. Support PC100/PC133 SDRAM.
-Expandable to 2.0GB.

Chipset

-VIA VT8366 North Brige.
-VIA VT8233 South Brige.

Bus Slots

-Supports 2X/4X AGP Bus.
-Provide one AMR slot and one AGP slot.
-Five 32-bit PCI bus.

Universal Serial Bus

-Supports two back Universal Serial Bus(USB)Ports and four front Universal serial Bus(USB)Ports.

BIOS

-The mainboard BIOS provides "Plug & Play" BIOS whichdetects the peripheral devices and expansion cards of the board automatically.
-The mainboard provides a Desktop Management Interface (DMI) function which records your mainboard specifications.
-BIOS support CD-ROM, SCSI, LAN BOOT, Temperature sensor, LAN, Modem, Alarm Bus CLK setup with BIOS.

I/O Built-in On Board

-Supports one multi-mode Parallel Port.
(1)Standard & Bidirection Parallel Port
(2)Enhanced Parallel Port (EPP)
(3)Extended Capabilities Port
-Supports two serial ports, 16550 UART.
-Supports one Infrared transmission (IR).
-Supports PS/2 mouse and PS/2 Keyboard.
-Supports 360KB, 720KB, 1.2MB, 1.44MB, and 2.88MB floppy disk drivers.

Flash Memory

-Support 2MB flash memory.
-Support ESCD Function.

IDE Built-in On Board

-Supports four IDE devices.
-Supports PIO Mode 4, Master Mode, high performance hard disk drives.
-Support Ultra DMA 33/66/100 Bus Master Mode.
-Supports IDE interface with CD-ROM.
-Supports high capacity hard disk drives.
-Support LBA mode.

PCI-Based AC 97 Digital Audio Processor

-AC 97 2.1 interface.
-16 channels of high-quality sample rate conversion.
-16x8 channel digital mixer.
-Stereo 10 band graphic equalizer.
-Sound Blaster and Sound Blaster Pro emulation..

WOL & WOM (Wake On LAN & Wake On Modem)

Supports system power up from LAN & Modem ring up .

1.1.2 Software

BIOS

-AWARD legal BIOS.
-Supports APM 1.2.
-Supports USB Function.
-Supports ACPI

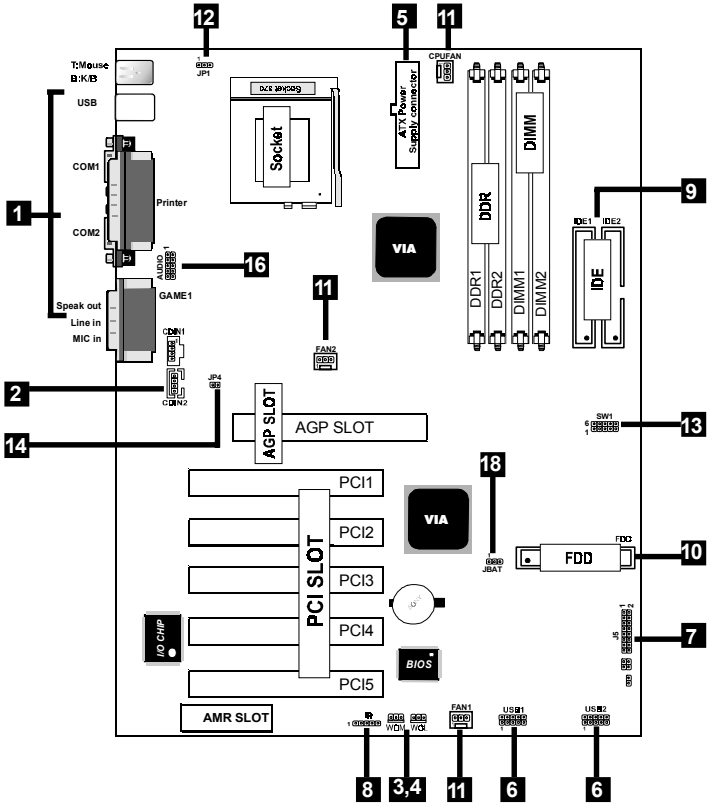
Operation System

-Supporting the highest performance for MS-DOS,Windows, Windows NT, Windows 2000, Windows ME, Novell, OS/2, Windows 95/98, Windows 98 SE, Windows XP, UNIX, SCO UNIX etc.

1.1.3 Attachments

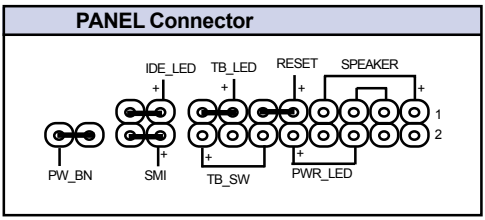
-HDD UDMA66/100 Cable.
-FDD Cable.
-Flash Memory Written for BIOS Update.
-USB2 Cable **(Optional)**.
-Fully Setup CD Driver built in Utility(Ghost, Anitivirus, Adobe Acrobat).
-This Manual.

1.2 Motherboard Connectors



1.Back Panel I/O Connectors
2.CD Audio-In Connector
3.Wake-On-LAN Connector
4.Wake-On-Modem Connector
5.ATX Power Connector(ATX)
6.Front USB2/USB3 Connector
7.Front Panel Connector
8.IR Connector
9.IDE Connectors
10.Floppy Connector
11.Fan Connectors(CPU Fan/Fan1/2)
12.Keyboard Power on Function(JP1)
13.CPU Ratio Selector(SW1)
14.CPU Clock Freq. Setting(JP4)
15.CMOS Function Selection(JBAT)
16.Line-in/out, MIC Header(AUDIO)

1.2.1 Front Panel Connector (J5)



ATX Power Switch (PW_BN)

The system power is controlled by a momentary switch connected to this lead. Pushing the button once will switch the system ON. The system power LED lights when the system's power is on .

Power LED Lead (PWR_LED)

The system power LED lights when the system power is on.

Speaker Connector (SPEAKER)

An offboard speaker can be installed onto the motherboard as a manufacturing option. An offboard speaker can be connected to the motherboard at the front pannel connector. The speaker (onboard or offboard) provides error beep code information during the Power Self-Test when the computer cannot use the video interface. The speaker is not connected to the audio subsystem and does not receive output from the audio subsystem.

Hard Drive LED Connector (IDE_LED)

This connector supplies power to the cabinet IDE activity LED. Read and write activity by devices connected to the Primary or Secondary IDE connectors will cause the LED to light up.

Turbo LED switch (TB_LED)

Since the motherboard turbo function is always on. The turbo LED will remain constantly on while the system power is on. You may wish to connect the Power LED from the system case to this lead.

Reset Switch Lead (RESET)

The connector can be connected to a momentary SPST type switch that is normally open. When the switch is closed, the motherboard resets and runs the POST.

SMI Suspend Switch Lead (SMI)

This allows the user to manually place the system into a suspend mode of Green mode. System activity will be instantly decreased to save electricity and expand the life of certain components when the system is not in use. This 2-pin connector (see the figure) connects to the case-mounted suspend switch. If you do not have a switch for the connector, you may use the "Turbo Switch" instead since it does not have a function. SMI is activated when it detects a short. It may require one or two pushes depending on the position of the switch. Wake-up can be controlled by settings in the BIOS but the keyboard will always allow wake-up (the SMI Suspend Switch Lead cannot wake-up the system). If you want to use this connector, the "Suspend Switch" in the Power Management Setup of the BIOS SOFTWARE section should be on the default setting of Enable.

1.2.2 Floppy Disk Connector (FDD)

This connector supports the provided floppy drive ribbon cable. After connecting the single end to the board, connect the two plugs on the other end to the floppy drives.

1.2.3 Hard Disk Connectors (IDE1/IDE2)

These connectors support the provided IDE hard disk ribbon cable. After connecting the single end to the board, connect the two plugs at the other end to your hard disk.

If you install two hard disks, you must configure the second drive to Slave mode by setting its jumper settings. BIOS now supports SCSI device or IDE CD-ROM boot up (see "HDD Sequence SCSI/IDE First" & "Boot Sequence" in the BIOS Features Setup of the BIOS SOFTWARE) (Pin 20 is removed to prevent inserting in the wrong orientation when using ribbon cables with pin 20 plugged) .

1.2.4 ATX 20-pin Power Connector (ATX)

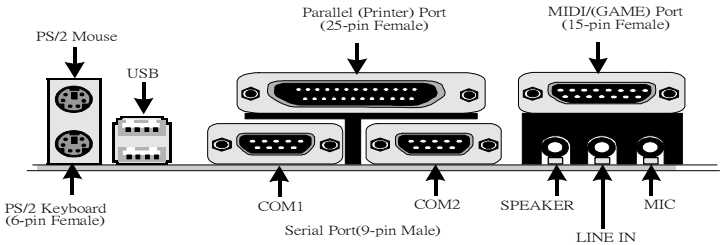
-This connector supports the power button on-board. Using the ATX power supply, functions such as Modem Ring Wake-Up and Soft Power Off are supported on this motherboard . This power connector supports instant power-on functionality, which means that the system will boot up instantly when the power connector is inserted on the board.

Pin	ATX Signal	Pin	ATX Signal
1	3.3V	11	3.3V
2	3.3V	12	-12V
3	GND	13	GND
4	5V	14	PS-ON
5	GND	15	GND
6	5V	16	GND
7	GND	17	GND
8	PW-OK	18	NC
9	5V_SB	19	5V
10	12V	20	5V

1.2.5 Infrared Connector (IR)

After the IrDA interface is configured, files can be transferred from or to portable devices such as laptops, PDAs, and printers using application software.

1.3 Back Panel Connectors



1.3.1 PS/2 Mouse /Keyboard CONN.

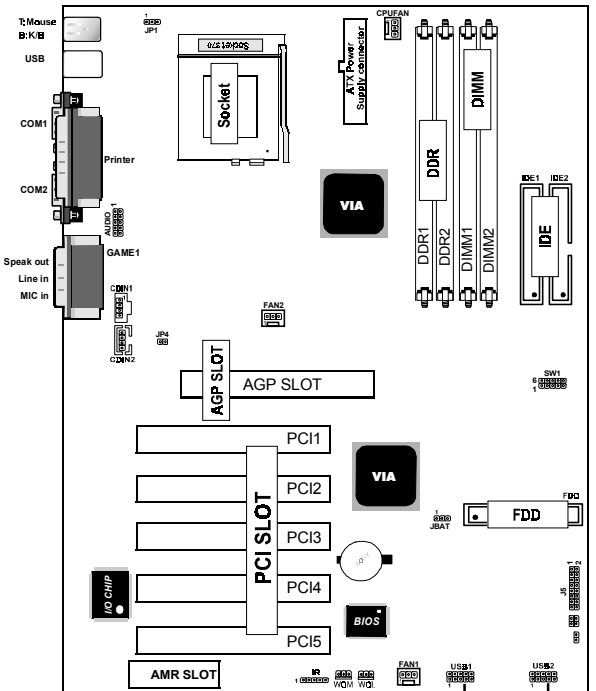
The motherboard provides a standard PS/2 mouse / Keyboard mini DIN connector for attaching a PS/2 mouse. You can plug a PS/2 mouse / Keyboard directly into this connector.

1.3.2 USB Connector: USB

The motherboard provides a OHCI(Open Host Controller Interface)Universal Serial Bus Roots for attaching USB devices such as a keyboard, mouse and other USB devices. You can plug the USB devices directly into this connector.

Pin	Signal
1	+5V_SB
2	USBP0-(USBP1-)
3	USBP0+(USBP1+)
4	GND

Front Two USB Connectors: USB1 & USB2



USB1

VCC	1	2	VCC
P2-	3	4	P3-
P2+	5	6	P3+
GND	7	8	GND
GND	9		

USB2

VCC	1	2	VCC
P4-	3	4	P5-
P4+	5	6	P5+
GND	7	8	GND
GND	9		

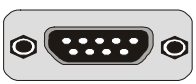
1.4 Serial and Parallel Interface Ports

This system comes equipped with two serial ports and one parallel port. Both types of interface ports will be explained in this chapter.

The Serial Interfaces: COM1/COM2

The serial interface port is sometimes refered to as an RS-232 port or an asynchronous communication port. Mice, printers, modems and other peripheral devices can be connected to a serial port. The serial port can also be used to connect your computer system. If you wish to transfer the contents of your hard disk to another system it can be accomplished by using each machine's serial port.

COM1/COM2

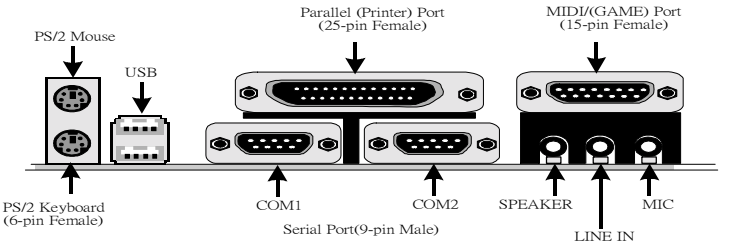


The serial port on this system has one 9-pin connector. Some older computer systems and peripherals used to be equipped with only a 25-pin connector. If you need to connect your 9-pin serial port to an older 25-pin serial port, you can purchase a 9-to-25 pin adapter.

Signal	DB9 Pin	DB25 Pin
DCD	1	8
RX	2	3
TX	3	2
DTR	4	20
GND	5	7
DSR	6	6
RTS	7	4
CTS	8	5
RI	9	22

Parallel Interface Port

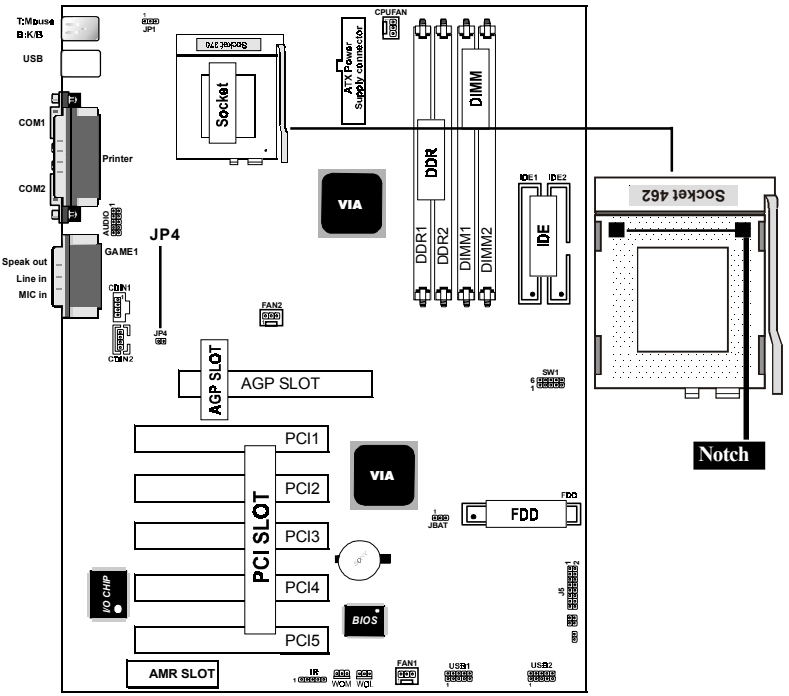
Unlike serial ports, parallel interface ports have been standardized and should not present any difficulty interfacing peripherals to your system. Sometimes called a Centronics port, the parallel port is almost exclusively used with printers. The parallel port on your system has a 25-pin, DB 25 connector(see the picture below).



1.5 CPU Installation

1.5.1 CPU Installation Procedure: Socket 462

1. Pull the lever sideways away from the socket then raise the lever to a 90-degree angle.
2. Locate Pin 1 in the socket and look for the white dot or cut edge in the CPU. Match Pin 1 with the white dot/cut edge then insert the CPU.
3. Press the lever down to complete the installation.
4. **Make sure the spec of the heatsink is good enough, or the processor and motherboard will damage.**



1.5.2 CPU Clock Frequency Setting: JP4

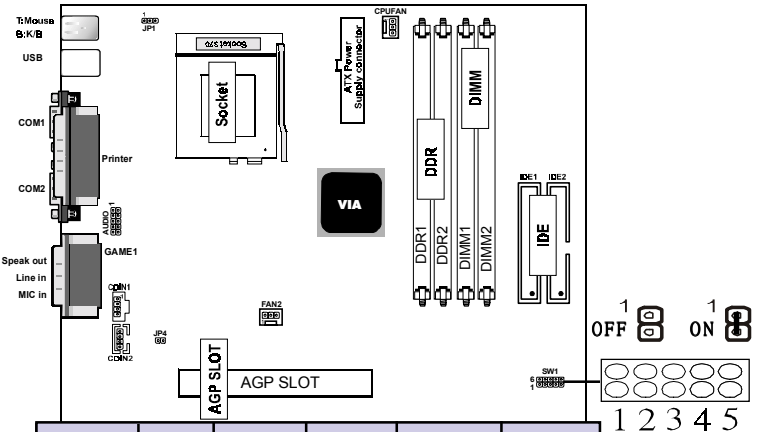
Overclocking is operating a CPU/Processor beyond its specified frequency. JP4 jumper is used for the CPU Front Side Bus Frequencies from 100MHz to 133MHz.

Pin	Assignment
On	100/200 MHz (Default)
Off	133/266 MHz

NOTE:

CPU Front Side Bus Frequency also can setting step by step in BIOS SETUP.

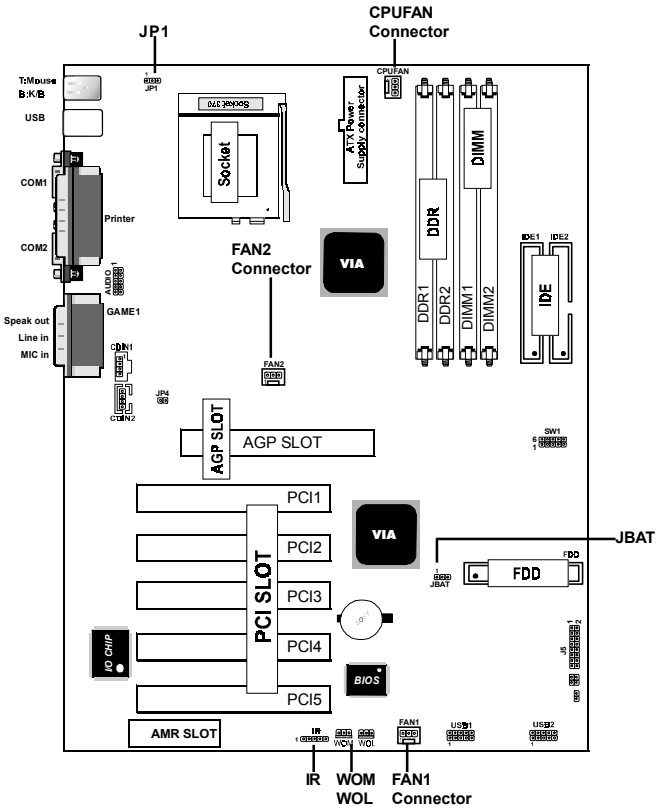
1.5.3 CPU Ratio Select: SW1



Ratio	1-6	2-7	3-8	4-9	5-10
x5	ON	ON	ON	OFF	ON
x5.5	ON	OFF	ON	OFF	ON
x6	ON	ON	OFF	OFF	ON
x6.5	ON	OFF	OFF	OFF	ON
x7	ON	ON	ON	ON	OFF
x7.5	ON	OFF	ON	ON	OFF
x8	ON	ON	OFF	ON	OFF
x8.5	ON	OFF	OFF	ON	OFF
x9	ON	ON	ON	OFF	OFF
x9.5	ON	OFF	ON	OFF	OFF
x10	ON	ON	OFF	OFF	OFF
x10.5	ON	OFF	OFF	OFF	OFF
x11	ON	ON	ON	ON	ON
x11.5	ON	OFF	ON	ON	ON
x12	ON	ON	OFF	ON	ON
x12.5	ON	OFF	OFF	ON	ON

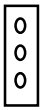
1.6 Jumper Setting

A jumper has two or more pins that can be covered by a plastic jumper cap, allowing you to select different system options.

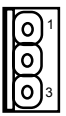


1.6.1 CPU/System Fan Connectors: CPU Fan/Fan1/2

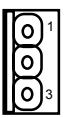
These connectors support cooling fans of 350mA (4.2 Watts) or less, depending on the fan manufacturer, the wire and plug may be different. The red wire should be positive, while the black should be ground.

Pin	Assignment
 1	1 Signal
2	2 +12VDC
3	3 Ground

1.6.2 Wake-On Modem Header: WOM

Pin	Assignment
 1	1 5V_SB
2	2 Ground
3	3 Signal

1.6.3 Wake-On LAN Header: WOL

Pin	Assignment
 1	1 5V_SB
2	2 Ground
3	3 Signal

NOTE:

(This feature requires that Wake up LAN or Ring in Wake up is enabled .)

1.6.4 Keyboard Power On Function: JP1

Pin	Assignment
1-2	Disabled (Default)
2-3	Enabled

1.6.5 CMOS Function Selection: JBAT

Pin	Assignment
1-2	Normal (Default)
2-3	Clear CMOS

NOTE:

(Please follow the procedure below to clear CMOS data.)

(1)Remove the AC power line.
(2)JBAT(2-3)Closed.
(3)Wait five seconds.
(4)JBAT(1-2) Closed.
(5)AC Power on.
(6)Reset your desired password or clear CMOS data.

1.7 Installation Memory

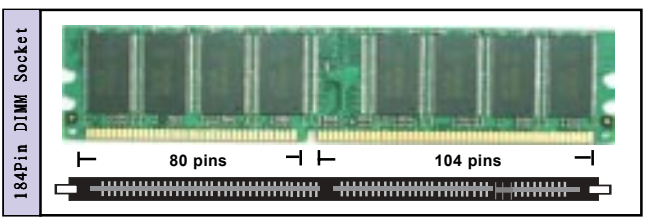
1.7.1 SDRAM & DDR Module

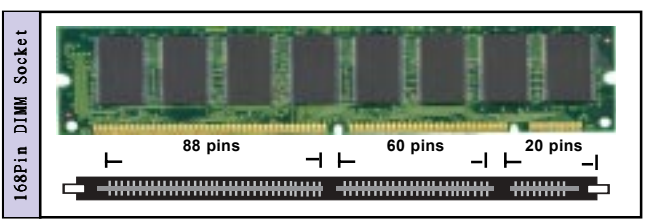
This motherboard provides two 184-pin DUAL INLINE MEMORY MODULES (DIMM) and two 168-pin SDRAM Module Socket sites for memory expansion available from minimum memory size of 64MB to maximum memory size of 2.0GB DDR SDRAM.
Users only can install either 168-pin SDRAM Module or 184-pin DDR DRAM Module at one time.

NOTE:

When you install DIMM module fully into the DIMM socket the eject tab should be locked into the DIMM module very firmly and fit into its indention on both sides.

Bank	Memory module
SDRAM 1	64MB, 128MB, 256MB, 512MB
(Bank 0-1)	168 pin, 3.3V DDR SDRAM
SDRAM 2	64MB, 128MB, 256MB, 512MB
(Bank 2-3)	168 pin , 3.3V DDR SDRAM
DDR 1	64MB, 128MB, 256MB, 512MB
(Bank 0-1)	184 pin, 2.5V DDR SDRAM
DDR 2	64MB, 128MB, 256MB, 512MB
(Bank 2-3)	184 pin, 2.5V DDR SDRAM
	Total System Memory (Max 2GB)

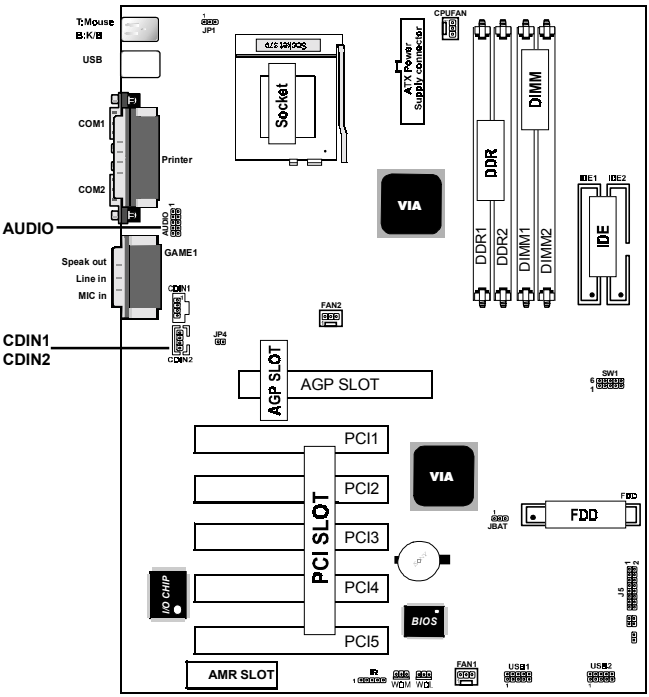




Warning:

For the SDRAM CLOCK is set at 133MHz, use only PC2100-compliant DDR Modules or PC133 compliant SDRAM Modules. When this motherboard operate at 133Mhz, most system will not even boot if non-compliant modules are used because of the strict timing issues, if your DRAM Modules are not PC133/PC2100-compliant, set the SDRAM clock to 100MHz to ensure system stability.

1.8 Audio Subsystem



1.8.1 CD Audio-in Connectors: CDIN1/CDIN2

CDIN1 and CDIN2 are the connectors for CD-Audio Input signal. Please connect it to CD-ROM CD-Audio output connector.

1.8.2 Line-in/out, MIC Headers: AUDIO

This Connector are 3 phone Jack for LINE-OUT, LINE-IN, MIC and a 15-pin D-Subminiature Receptacle Connector for joystick/MIDI Device.

Line-out : Audio output to speaker
Line-in : Audio input to sound chip
MIC : Microphone Connector
Game/MIDI : For joystick or MIDI Device