

KLI-6130



MOTHERBOARD MANUAL

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01

Handling Precautions

Warning :

1. Static electricity may cause damage to the integrated circuits on the motherboard.
Before handling any motherboard outside of its protective packaging, ensure that there is no static electric charge in your body.
2. There is a danger of explosion if the battery is incorrectly replaced.
Replace only with the same or an equivalent type recommended by the manufacturer.
3. Discard used batteries according to the manufacturer's instructions.

Observe the following basic precautions when handling the motherboard or other computer components:

- Wear a static wrist strap which fits around your wrist and is connected to a natural earth ground.
- Touch a grounded or anti-static surface or a metal fixture such as a water pipe.
- Avoid contacting the components on add-on cards, boards and modules with the "gold finger" connectors plugged into the expansion slot. It is best to handle system components by their mounting bracket.

The above methods prevent static build-up and cause it to be discharged properly.

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Overview

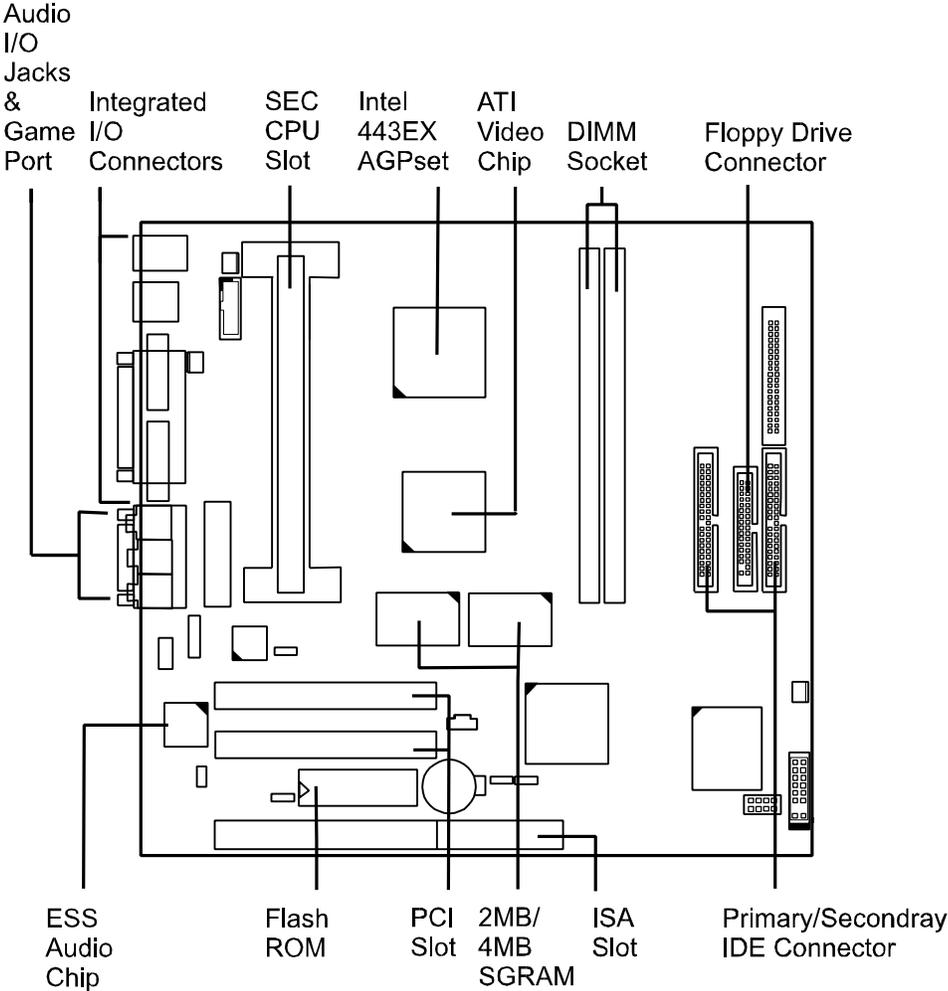
Based on the advanced [Intel 443EX AGPset](#), the KLI-6130 combines blistering [Pentium II](#) processor performance with support for the new [Accelerated Graphics Port \(AGP\)](#) interface which provides a dedicated path for memory-intensive graphics applications – delivering faster system performance and arcade-quality 3D graphics. Also, it has a host bus frequency of 66MHz to run a range of [Intel Pentium II, Deschutes, and Celeron processors](#). Compliant with the [Microsoft PC97](#) standard at both the hardware and BIOS levels, the KLI-6130 comes with support for [ISMP](#) which continuously checks the thermal (available on the Deschutes CPU) and voltage status of your system and changes, when necessary and reports any discrepancies to the network administrator. The board has a [versatile MicroATX-size platform](#) for leading-edge PC '97 compliant systems. For the most up-to-date information and the latest FAQs and BIOS updates, visit FIC Online at www.fic.com.tw.

Package Checklist

Please check that your package contains all the items listed below. If you discover any item is damaged or missing, please contact your vendor.

- [The KLI-6130 motherboard](#)
- [This user's manual](#)
- [One IDE ribbon cable](#)
- [One floppy disk drive ribbon cable](#)
- [One ribbon cable with bracket for COM2](#)
- [Retention mechanism and heatsink support brace](#)
- [Software utilities](#)

The KLI-6130 Motherboard



Main Features

- **Easy Installation**
BIOS with support for Plug and Play, auto detection of IDE hard drives, LS-120 drives, MS Windows 95, Windows 98, Windows NT, and OS/2.
- **Flexible Processor Support**
Onboard 242-pin Slot1 supports: Intel Pentium II 233/266/300MHz, Celeron 266MHz, and at Deschutes 333MHz.
- **Leading Edge Chipset**
Intel 82443EX AGPset includes a CPU interface controller, integrated SDRAM controller, synchronous ISA bus controller, integrated power management unit, concurrent PCI (PCI v.2.0 and 2.1), and USB.
- **Versatile Main Memory Support**
Accepts up to 256MB DRAM in two banks using DIMMs of 8, 16, 32, 64, 128MB with support for SDRAM or EDO memory.
- **Onboard Video Chip**
Onboard ATI Rage Pro video chip with AMC connector support AGP video features for superior 3D video and graphics performance with transfer speeds exceed 500MB/second under 2x transfer mode.
- **IrDA Connector**
An onboard IR connector for wireless infrared connection is available.
- **Super Multi Input/Output (I/O) Support**
Integrated NS 87309 Plug and Play multi-I/O chipset features two high-speed UART 16550 compatible serial ports, one IR connector, one EPP/ECP capable parallel port, and one floppy connector.
- **Remote Wake-Up Support**
Onboard RWU connector allows remote management in a simpler and convenient control to LAN-based networks.
- **LDCM Software Support (manufacturing optional)**
Intel LANdesk Client Manager is a Desktop Management Interface (DMI)-compliant application for local and network management of desktop client systems. The application reduces the number of help desk calls by supplying the user with self diagnostics such as a PC health meter and local alert for potential problems.

■ **Optimized Intel Pentium II Level Processor Performance**

The motherboard utilizes the advanced features of the Intel 443EX AGPset to optimize the unrivaled performance of the Intel Pentium II, Deschutes, and Celeron processors, allowing you to enjoy multimedia software.

■ **CPU Thermal Monitoring Alert (available on the Deschutes CPU)**

A special heat sensor monitors the CPU temperature to make sure that the system is operating at a safe heat level. If the temperature is too high, the sensor automatically generates an SMI to slow down the CPU clock.

■ **Optional System Over-Voltage Report**

System voltage levels are monitored. The system will warn you if the system voltage levels become abnormal. The monitored range for system voltage is -12V, -5V, +12V, +5V, +3.3V, CPU core voltage $\pm 10\%$.

■ **Compact Onboard Audio Subsystem**

Integrated ESS Solo1 PCI Audio**Drive** single-chip PCI audio processor that contains a PCI audio controller, DOS games compatible engine, and owns the feature of high-quality **ESFM** music synthesizer. The subsystem utilizes speaker, line-in, and MIC mini-jack external jacks, one joystick port with MIDI interface.

■ **High-Resolution Onboard VGA Subsystem**

ATI's Rage Pro is an integrated 2D, 3D, and video accelerator for bring great 3D performance of up to 1600x1200 in 256 color solutions by onboard SGRAMs. The board also comes with a 16-bit, bi-directional video port, ATI Multimedia Channel (AMC) for allowing direct connection to popular video upgrades, such as video capture/video conferencing, hardware MPEG-2/DVD player, TV Tuner WITH Intercase support, and Interface to ATI's ImpactTV chip.

■ **Onboard Accelerated Graphics Port (AGP)**

The 32-bit AGP bus provides a dedicated 66Mhz/133Mhz path from the graphics card to the system memory offering a much greater bandwidth than the 32-bit PCI bus does which currently operates at a speed of 33MHz. AGP enabled 3D graphics cards can directly access main memory across this fast path instead of using local memory. This is especially important for memory-intensive 3D graphics applications so as to produce a more detailed 3D texture, greater clarity and higher levels of resolution without compromising system performance. This motherboard is fully compliant with the AGP 1.0 specification.

Installation Procedures

The motherboard has several user-adjustable jumpers on the board that allow you to configure your system to suit your requirements. To set up your computer, you should follow these installation steps: 1). set system jumpers; 2). install RAM modules; 3). install the CPU; 4). install expansion cards; 5). connect devices; 6). set up BIOS feature. 7). set up supporting software tools.

CAUTION: If you use an electric drill to install this motherboard on your chassis, please wear a static wrist strap. The recommended electric drill torque is from 5.0 to 8.0 kg/cm to avoid damaging the chips' pins.

1). Set System Jumpers

Jumpers

Jumpers are used to select the operation modes for your system. To **set** a jumper, a black cap containing metal contacts is placed over the jumper pins according to the required configuration. A jumper is said to be **shorted** when the black cap has been placed on one or two of its pins. The types of jumpers used in this manual are shown below:



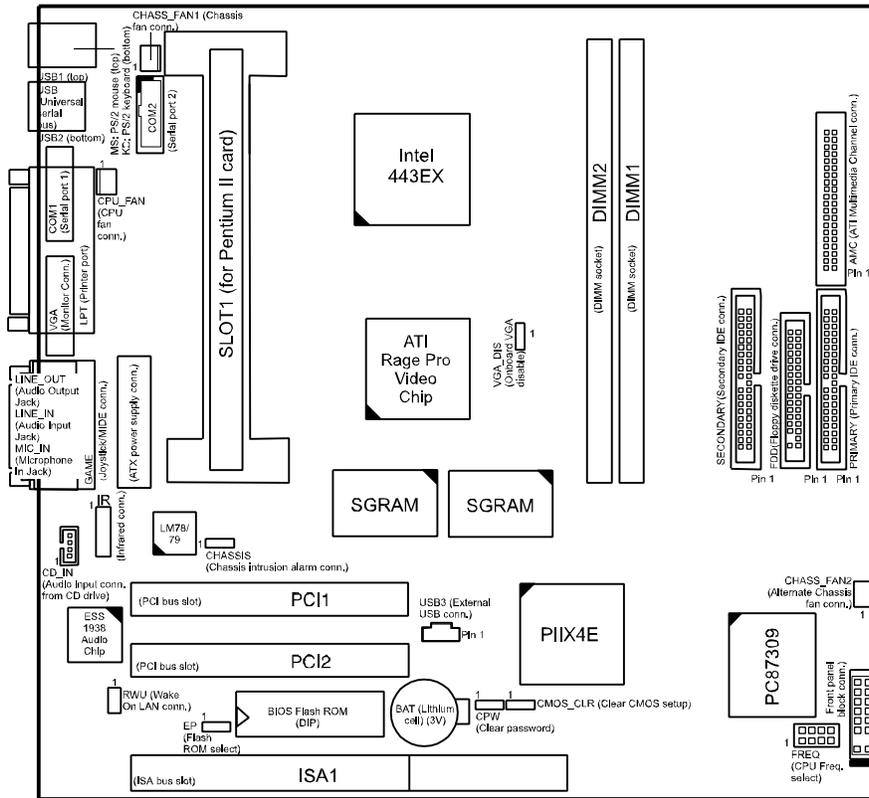
Jumper cap is shown as above



Jumpers in a Block

NOTE: Users are not encouraged to change the jumper settings not listed in this manual. Changing the jumper settings improperly may adversely affect system performance.

Motherboard Layout



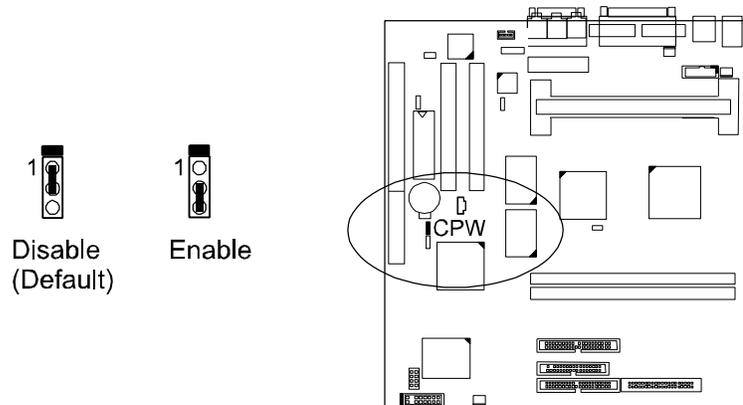
Installation Procedures

ONBOARD MARK	MEANING	PAGE
CPW	Clear Password	8
CMOS_CLR	Clear CMOS Data	8
EP	Flash ROM Type Select	9
VGA_Dis	Disable onboard VGA Feature	9
FREQ	CPU to Bus Frequency Ratio Select	18
DIMM1, DIMM2	DIMM Memory Module Support	10
SLOT1	Central Processing Unit (CPU) Cartridge Support	12
AGP	Accelerated Graphic Port Slot	19
PCI1, PCI2	PCI Bus Expansion Slot (32-bit)	19
ISA1	ISA Bus Expansion Slot (16-bit)	19
FLOPPY	Floppy Diskette Drive Connector	20
PRIMARY, SECONDARY	IDE Device Connector	20
ATX_PWR	ATX Power Connector	21
CPU_FAN	CPU Fan Connector	21
RWU	Remote Wake-Up Connector	22
AMC	ATI Multimedia Channel Connector	22
V_PNL*	Connectors for LEDs and Switches on Front Panel	23
CHASS_FAN1, CHASS_FAN2	System Case Fan Connector	24
COM1, COM2	Serial Port	25
KB	PS/2 Keyboard Connector	25
MS	PS/2 Mouse Connector	25
LPT	Printer Connector	26
USB1, USB2, USB3	Universal Serial Bus Connector	26
LINE-IN	Audio Line-In Jack	27
LINE-OUT	Audio Line-Out Jack	27
MIC-IN	Audio Microphone Jack	27
GAME	Joystick/MIDI Connector	27
IR	Infrared Port Module Connector	28
CD_IN	CD-ROM Drive Audio-out Connector	28

** includes PWR_LED, SPK, RPW_SW, IDE_LED, and RST connectors. (See Page 23 for more information.)*

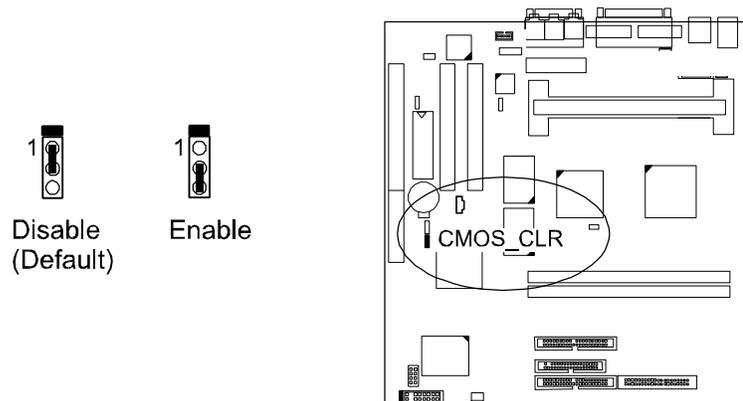
Enabling Clear Password Function: CPW

This jumper allows you to enable or to disable the password configuration. You may need to enable this jumper by shorting it with a jumper cap if you forget your password. To clear the password setting: (1). Turn off your computer, (2). Turn on your computer, (3). Hold down the Delete key during boot and enter BIOS Setup to re-enter user preferences, (4). Turn off your computer, (5). Turn on your computer for the new settings to take effect.



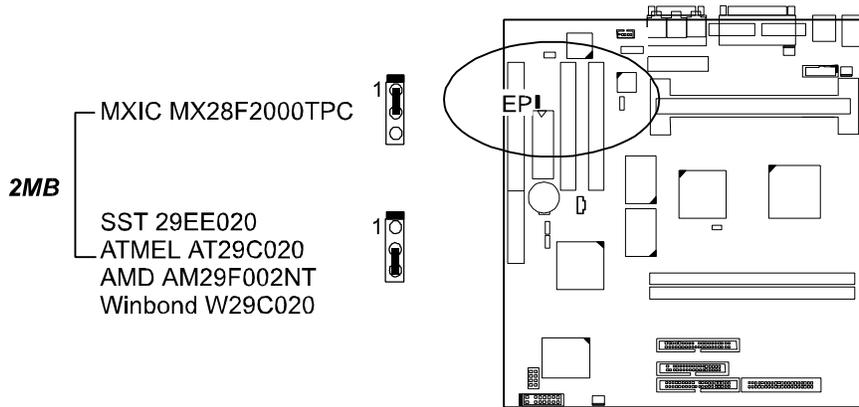
Enabling CMOS Clear Function: CMOS_CLR

The CMOS RAM is powered by the onboard button cell battery. To clear the RTC data: (1). Turn off your computer, (2). Move this jumper to Enable, (3). Move the jumper back to Disable, (4). Turn on your computer, (5). Hold down the Delete key during boot and enter BIOS Setup to re-enter user preferences.



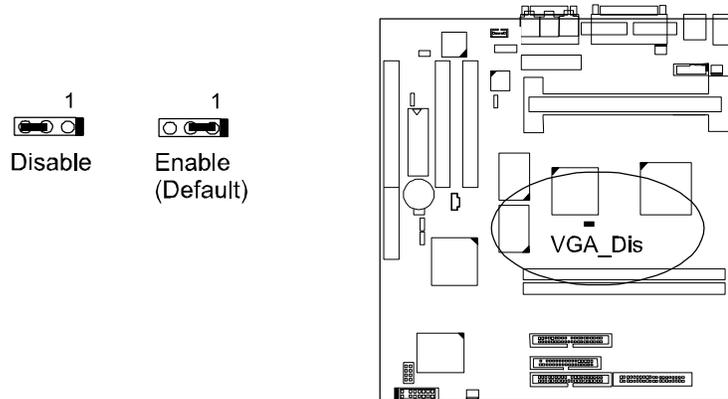
Flash ROM Type Selection: EP

This jumper allows you to configure the flash ROM chip. This jumper setting was installed with the manufacturer's default. If you want to know the flash ROM type installed on this board, partially remove the sticker on top of the chip.



Disabling Onboard VGA Feature: VGA_Dis

This 3-pin jumper have to be disabled if user wants to use other PCI VGA add-in card than the onboard AGP VGA feature.



2). Install RAM Modules

RAM Module Configuration

The board provides two onboard DIMM sockets allowing 3.3V (unbuffered) EDO/SDRAM DIMM modules with data access time of 12ns, 10ns or faster. ECC memory and parity check is also supported. Either 8, 16, 32, 64, or 128MB DIMM can be installed on these two sockets. The maximum total memory supported is up to 256MB. **Do not use memory modules with more than 24 chips per module. Ask your retailer for the specifications before purchasing.**

<i>Socket</i>	<i>Accepted Memory Module</i>		<i>Total Memory</i>
1	8/16/32/64/128MB 168-pin 3.3V SDRAM	x1	
2	8/16/32/64/128MB 168-pin 3.3V SDRAM	x1	

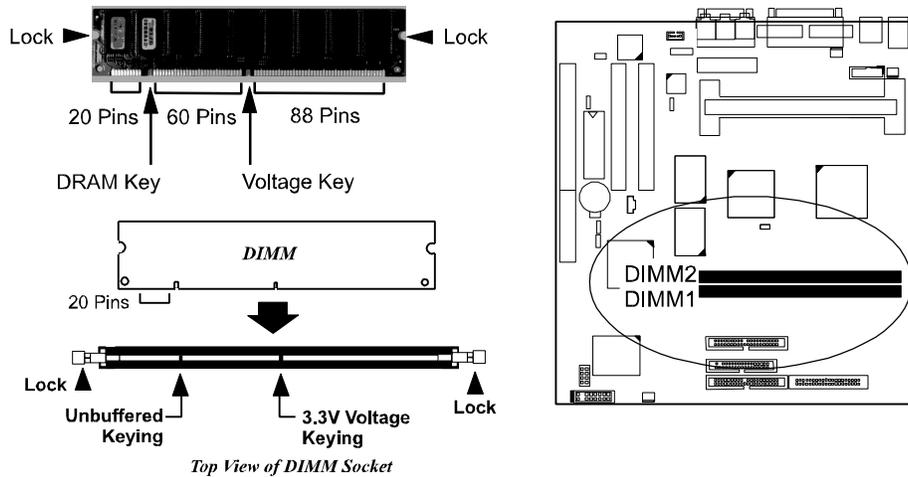
Total System Memory allowed up to 256MB =

Install and Remove DIMMs

SDRAM DIMM modules have different pin contact on each side and therefore have a higher pin density. Complete the following procedures when installing DIMMs:

Complete the following procedures to install DIMMs:

1. Locate the DIMM slots on the motherboard.



2. Install the DIMM straight down into the DIMM slot with both hands.
2. The locks of the slot will close up to hold the DIMM in place when the DIMM touches the slot's bottom.



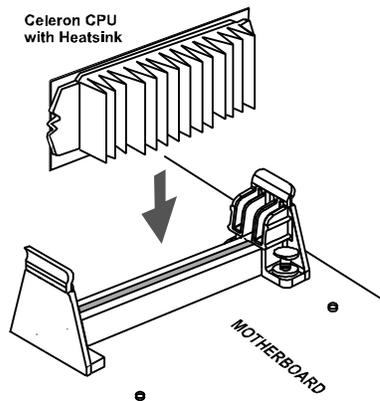
Press the clips with both hands to remove the DIMM.

3). Install the CPU Module

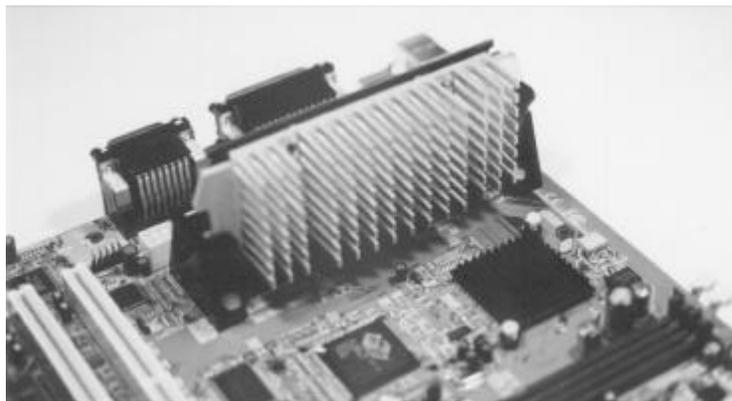
WARNING: If the heatsink is not mounted tightly against the CPU cartridge, the CPU will overheat. Please read the Appendix of this book before you install CPU cartridge.

Celeron CPU Module Installation

The motherboard comes with an onboard Retention Module for the Celeron CPU. To install it is quite simple, simply by insert the Celeron CPU module firmly onto it as the figure below shows.



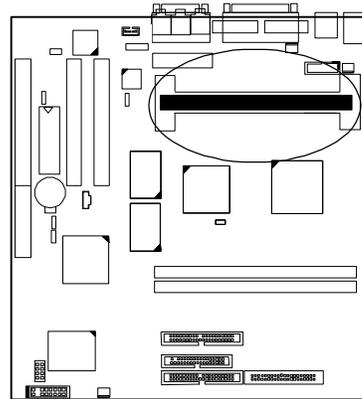
The photo below demonstrates a Celeron CPU module on the motherboard.



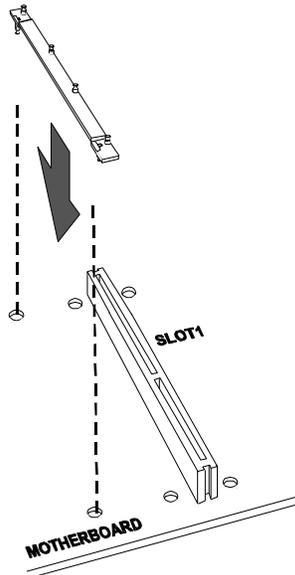
Pentium II CPU Module Installation

To install a Pentium II CPU module, you need to remove the Retention Module for Celeron CPU module; then follow the steps in this section to install your Pentium II CPU module.

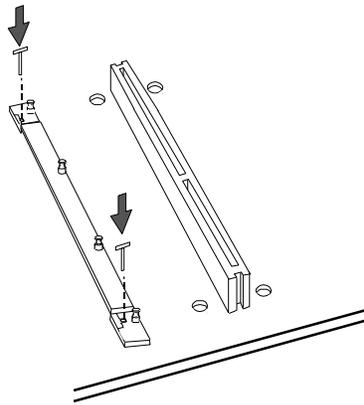
1. Locate Slot1 on the motherboard.



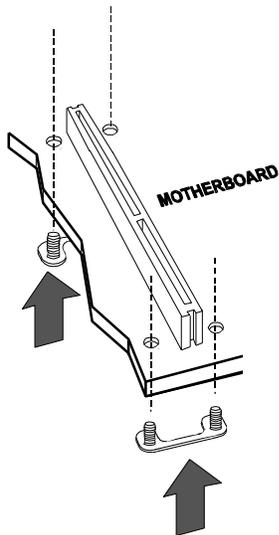
2. Place the Heatsink Support Base on the motherboard as shown.



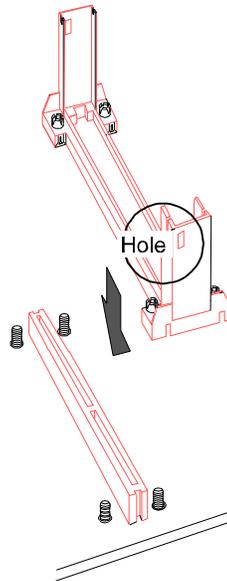
3. Affix it by inserting one “T”-shaped plastic plug into the hole on each end.



4. Install two Retention Mechanism Attachment mounts on the board.

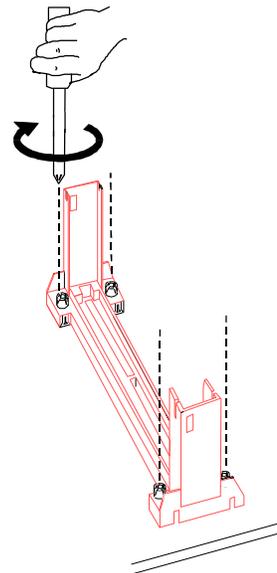


5. Place the Retention Mechanism Assembly on the board, on top of the Retention Mechanism Attachment mounts.

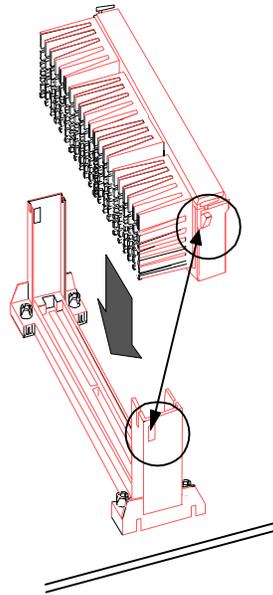


6. Affix the Retention Mechanism Assembly with four screws.

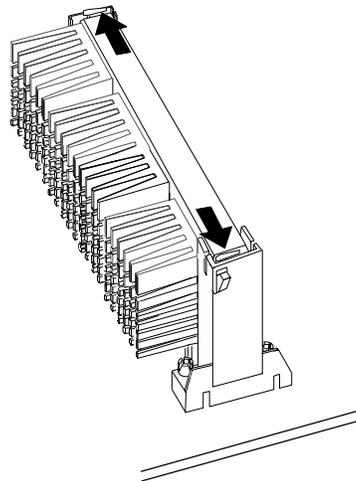
WARNING: Excessive torque may damage the board. Tighten captive nuts to no more than 6 ± 1 inch/pound.



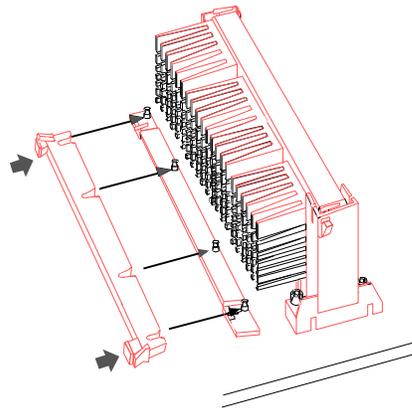
- Slide the CPU module into the Retention Mechanism Assembly.



- Pull the buttons outwards until click to the right positions.



10. Hook the Heatsink Top Support to the Heatsink Support Base to affix the CPU module.



CPU to Bus Frequency Ratio: *FREQ*

This 2x4 jumper is used to set the ratio of the internal frequency of the CPU to the bus clock.

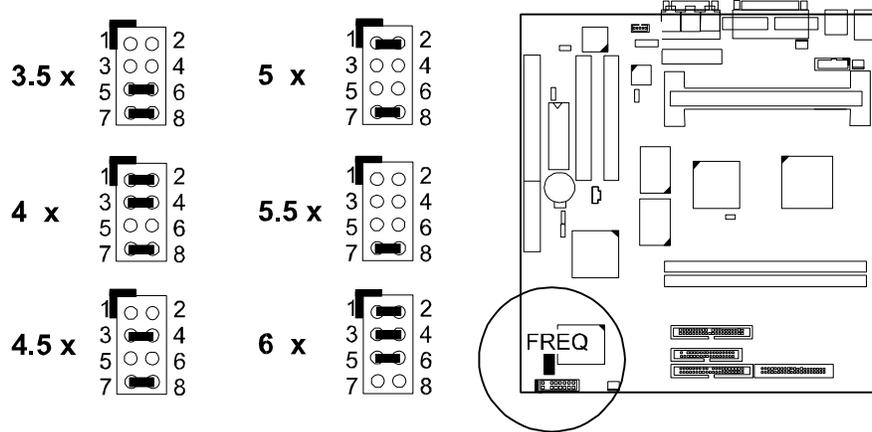
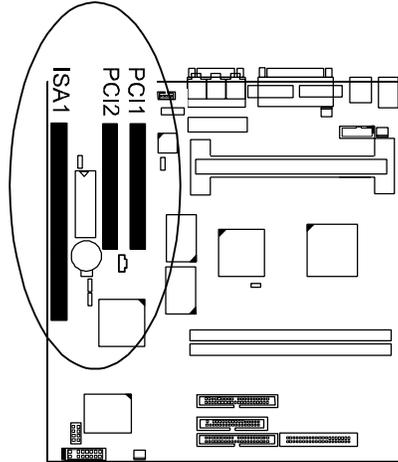


Table of CPU Frequencies

CPU FREQUENCY	BUS FREQUENCY	RATIO
333 MHz	66 MHz	5 x
300 MHz	66 MHz	4.5 x
266 MHz	66 MHz	4 x
233 MHz	66 MHz	3.5 x

4). Install Expansion Cards

Expansion cards are printed circuit boards that, when connected to the motherboard, increase the capabilities of your system. For example, expansion cards can provide video and sound capabilities. Your motherboard features **one 16-bit ISA bus** and **two 32-bit PCI bus** expansion slots.



CAUTION: Always turn the system power off before installing or removing any device and always observe static electricity precautions.

To install an expansion card, do the following:

1. Remove the computer chassis cover and select an empty expansion slot.
2. Remove the corresponding slot cover from the computer chassis. Unscrew the mounting screw that secures the slot cover and pull the slot cover out from the computer chassis. Keep the slot cover mounting screw nearby.
3. Holding the edge of the peripheral card, carefully align the edge connector with the expansion slot.
4. Push the card firmly into the slot. Push down on one end of the expansion card, then the other. Use this “rocking” motion until the add-on card is firmly seated inside the expansion slot.
5. Secure the board with the mounting screw removed in Step 2. Make sure that the card has been placed evenly and completely into the expansion slot.
6. Replace the computer system’s cover.
7. Setup the BIOS if necessary.
8. Install the necessary software drivers for the expansion card.

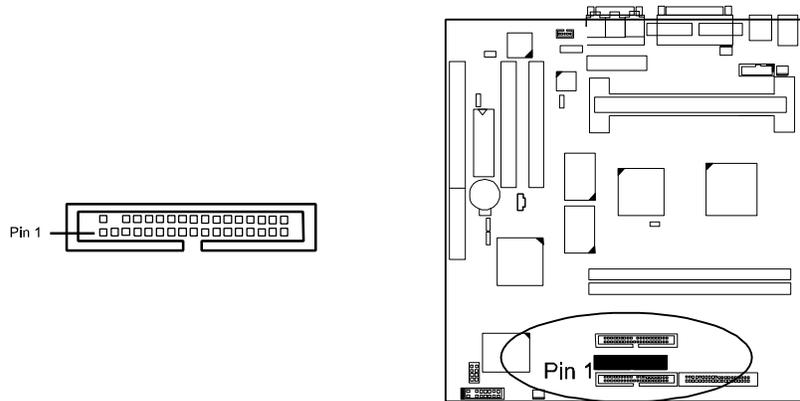
5). Connect Devices

Connect to Internal Devices

Floppy Diskette Drive Connector: FLOPPY

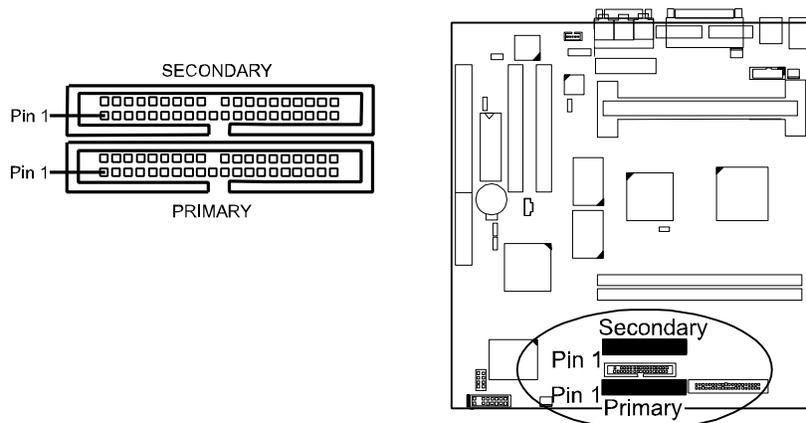
This connector provides the connection with your floppy disk drive.

The red stripe of the ribbon cable must be the same side with the Pin 1.



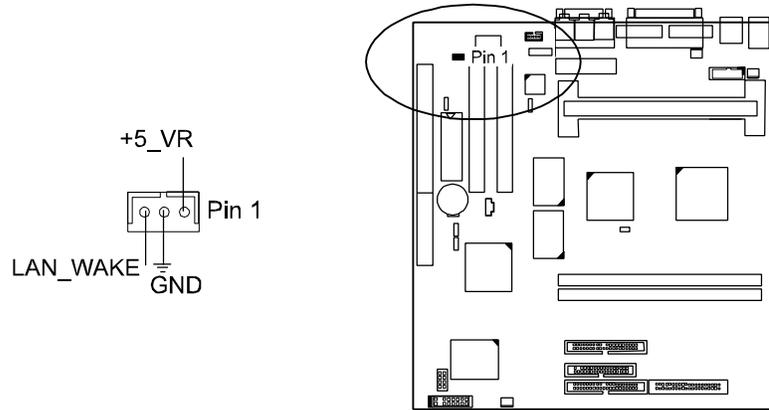
IDE HDD Device Connectors: PRIMARY, SECONDARY

These two connectors are used for your IDE hard disk drives, CD drives, LS-120 drives, or IDE ZIP drives. The red stripe of the ribbon cable must be the same side with the Pin 1.



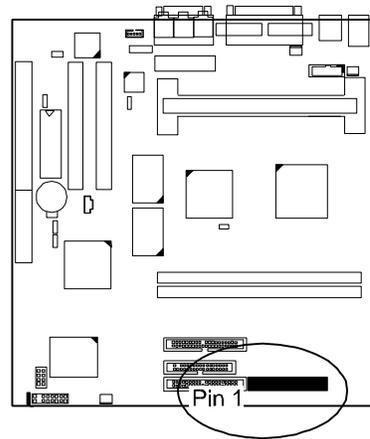
Wake-On-LAN Connector: RWU

This 3-pin connector allows the remote LAN server to wake up the system with a LAN card installed. Refer to the LAN card installation guide for details.



ATI Multimedia Channel Connector: AMC

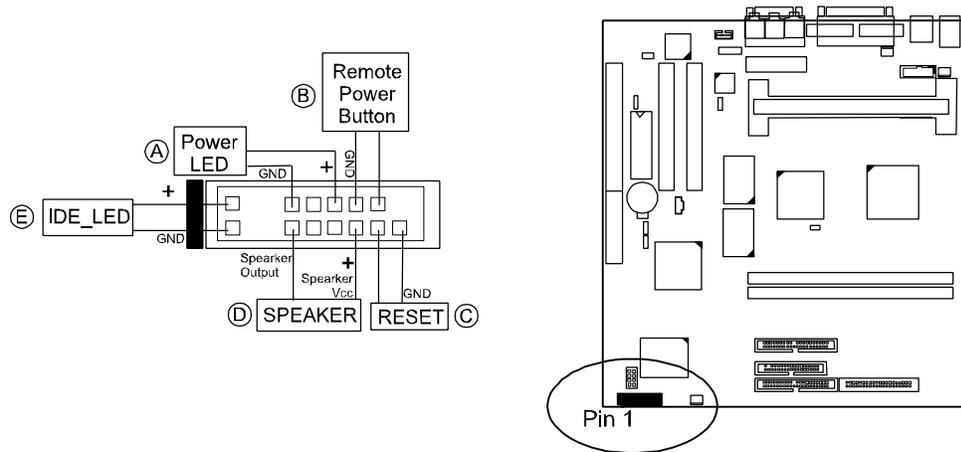
This 16-bit, bi-directional video port allows direct connection to popular video upgrades such as Video capture/video conferencing, hardware DVD or MPEG-2 decoder, or TV Tuner with intercast support. It includes I²C interface to control AMC peripherals. If an ATI add-in card allowing the AMC Interface such as ImpactTV2 is installed, this connector provides user with the linkage between the board and the card. Please read also the card manual for more detail information.



Connect to System Case

Front Panel Block Connector: *V_PNL*

This block connector includes: PWR_LED, SPK, RPW_SW, IDE_LED, and RST connectors.



PWR_LED (A) – 3-pin male

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

RPW_SW (B) – 2-pin male

This connector is connected with the remote power (soft power) switch.

Pushing this switch will turn off and on the system power instead of the power switch on the power supply.

RST (C) – 2-pin male

This connector connects to the case-mounted reset switch for rebooting the system without having to turn off power switch. This is a preferred method of rebooting in order to prolong the life of the system's power supply. It allows soft power off if the operating systems support it such as MS Windows 95.

SPK (D) – 4-pin male

This connector connects with the case-mounted speaker.

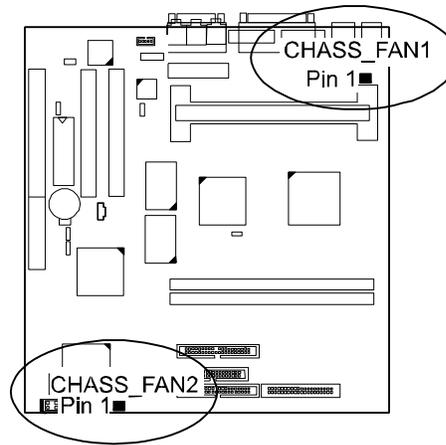
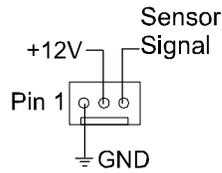
IDE_LED (E) – 2-pin male

This connector is connected IDE device indicator. This LED will blink when the hard disk drives are activated.

Chassis Fan Connectors: CHASS_FAN1, CHASS_FAN2

WARNING: Without sufficient air circulation, the CPU cartridge may overheat and cause damage to both the CPU cartridge and the motherboard. Damage may occur to the motherboard and/or the CPU fan if these pins are incorrectly used. These are not jumpers, do not place jumper caps over these pins.

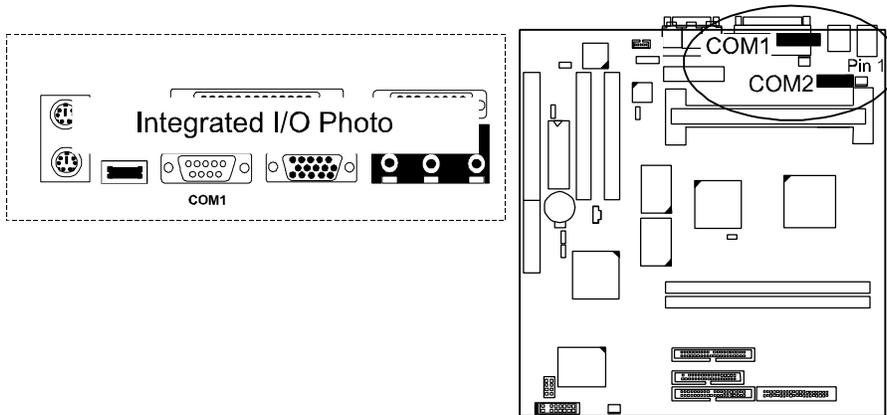
There are two 3-pin connectors available on the board for user to select one to link to the cooling fan on the system chassis to lower the system temperature. Depending on the fan manufacturer, the wiring and plug may be different. Connect the fan's plug to the motherboard taking into consideration the polarity of the connector.



Connect to External Devices

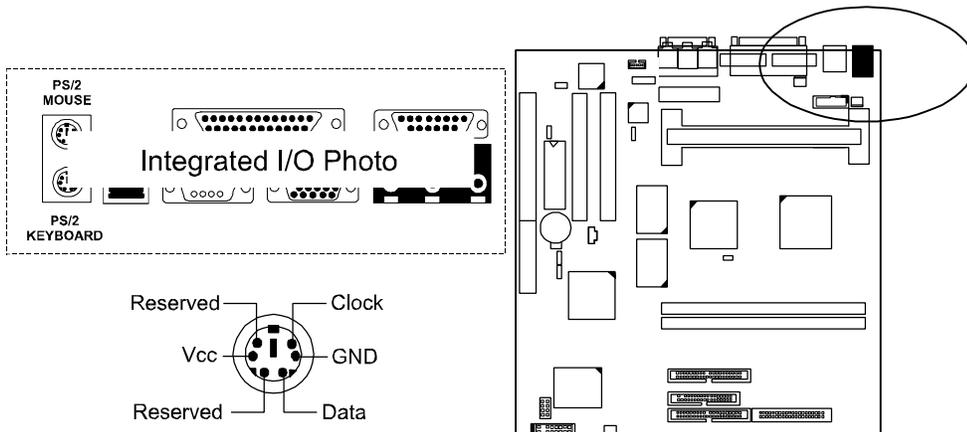
Serial Port Connectors: COM1, COM2

COM1 (9-pin D-sub male connector) and COM2 (9-pin male connector) allow you to connect with your devices that use serial ports, such as a serial mouse or a modem.



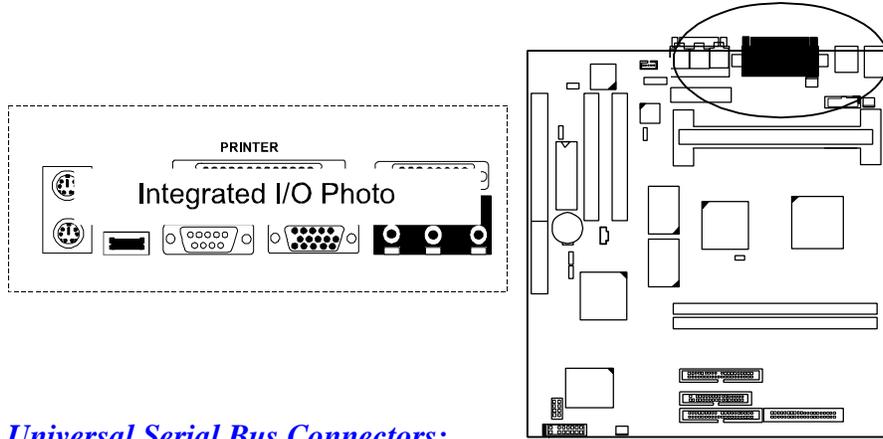
PS/2 Keyboard Connector, PS/2 Mouse Connector: KB/ MS

These two 6-pin female connectors are used for your PS/2 keyboard and PS/2 mouse.



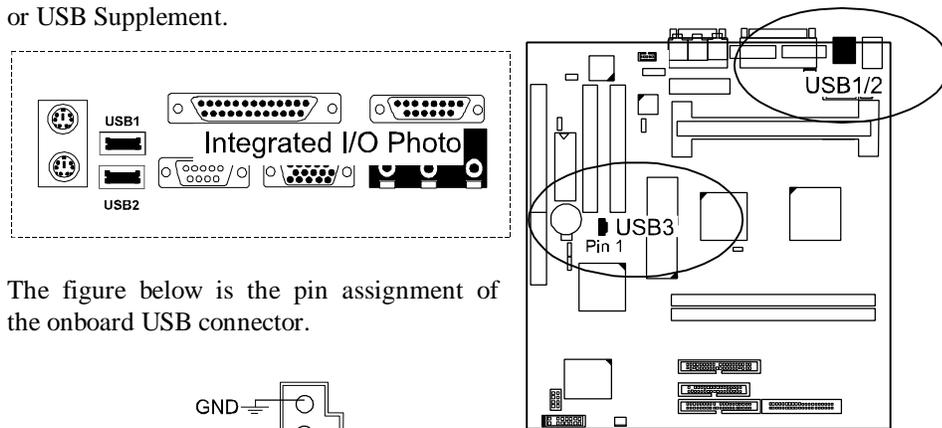
Printer Connector: LPT

This 25-pin D-sub female connector is attached to your printer.

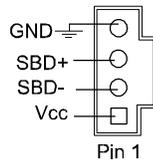


Universal Serial Bus Connectors: USB1, USB2, USB3

These two connectors that integrated on the edge of the board are used for linking with USB peripheral devices. Also, this board provides an connector USB for linking with the USB socket on the front panel of some system cases. If this connector is onboard and is used, the USB0 connector is disabled. Your operating system must support USB features, such as MS Windows 95 OSR2.1 or USB Supplement.

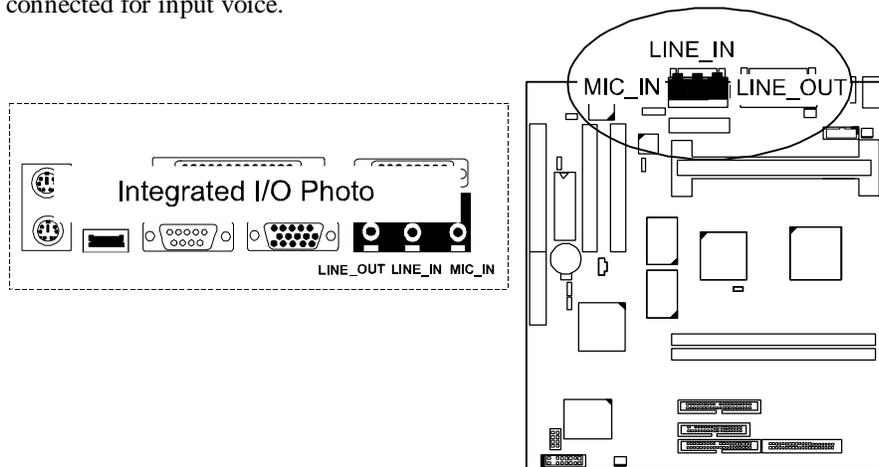


The figure below is the pin assignment of the onboard USB connector.



Audio I/O Jacks: LINE_OUT, LINE_IN, MIC_IN

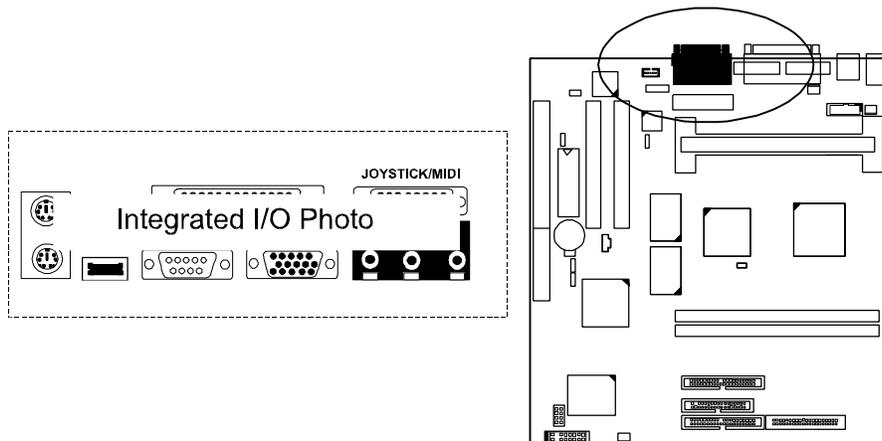
LINE_OUT can be connected to headphones or preferably powered speakers. LINE_IN allows tape players or other audio sources to be recorded by your computer or played through the LINE_OUT. MIC_IN allows microphones to be connected for input voice.



NOTE: The motherboard does not support Pre-AMP function. An external amplifier is necessary to LINE_OUT.

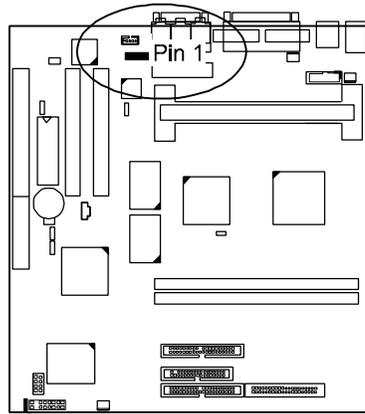
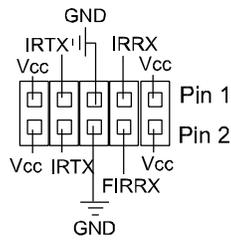
Joystick/MIDI Connector: GAME

This 15-pin female connector allows you to connect game joysticks or game pads for playing games. Connect MIDI devices for playing or editing audio.



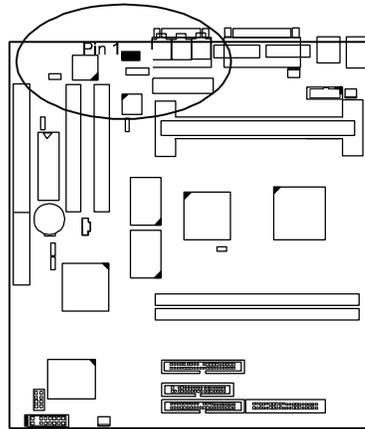
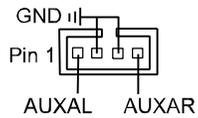
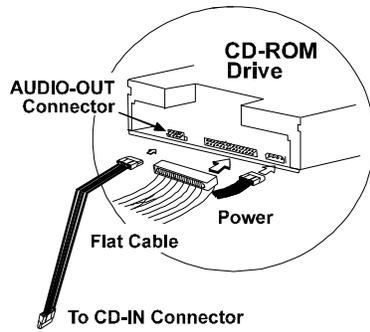
Infrared Connector: IR

The 2x5 pinhead is used for connecting to the infrared (SIR) port and allows transmission of data with another system which also supports the IR feature.



CD-ROM Drive Audio-out Connector: CD_IN

This 4-pin block connector is linked to the AUDIO-OUT port of your CD-ROM drive by a cable which comes with it. Read the CD-ROM drive manual for detailed installation instructions.



BIOS Setup

The motherboard comes with an Award BIOS chip that contains the ROM Setup information of your system. This chip serves as an interface between the processor and the rest of the motherboard's components. This chapter explains the information contained in the Setup program and tells you how to modify the settings according to your system configuration.

CMOS Setup Utility

ROM PCI/ISA BIOS (2A69JF09) CMOS SETUP UTILITY AWARD SOFTWARE, INC.	
STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD BIOS DEFAULTS	EXIT WITHOUT SAVING
LOAD SETUP DEFAULTS	
Esc : Quit	↑ ↓ → ← : Select Item
F10 : Save & Exit Setup	(Shift)F2 : Change Color
Time, Date, Hard Disk Type...	

A Setup program, built into the system BIOS, is stored in the CMOS RAM. This Setup utility program allows changes to the motherboard configuration settings. It is executed when the user changes system configuration; user changes system backup battery; or the system detects a configuration error and asks the user to run the Setup program. Use the arrow keys to select and press Enter to run the selected program.

Standard CMOS Setup

ROM PCI/ISA BIOS (2A69JF09)								
STANDARD CMOS SETUP								
AWARD SOFTWARE, INC.								
Date (mm:dd:yy) : Mon, Mar 30 1998								
Time (hh:mm:ss) : 15 : 37 : 55								
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master	: Auto	0	0	0	0	0	0	Auto
Primary Slave	: Auto	0	0	0	0	0	0	Auto
Secondary Master	: Auto	0	0	0	0	0	0	Auto
Secondary Slave	: Auto	0	0	0	0	0	0	Auto
Drive A : 1.44M, 3.5 in.					Base Memory: 640K			
Drive B : None					Extended Meory: 31744K			
Floppy 3 Mode Support: Disabled					Other Memory: 384K			
Video : EGA/VGA					Total Memory: 32768K			
Halt On : All Errors								
Esc : Quit			↑ ↓ → ← : Select Item			PU/PD/+/- : Modify		
F1 : Help			(Shift)F2 : Change Color					

The Standard CMOS Setup screen is displayed above. Each item may have one or more option settings. The system BIOS automatically detects memory size, thus no changes are necessary. Use the arrow keys to highlight the item and then use the PgUp or PgDn keys to select the value you want in each item.

Hard Disk Configurations

TYPE: Select from 1 to 45 to fill remaining fields with predefined values of disk drives. Select User to fill the remaining fields. Select Auto to detect the HDD type automatically.

SIZE: The hard disk size. The unit is Mega Bytes.

CYLS: The cylinder number of the hard disk.

HEAD: The read/write head number of hard disk.

PRECOMP: The cylinder number at which the disk drive changes the write timing.

LANDZ: The cylinder number that the disk drive heads (read/write) are seated when the disk drive is parked.

SECTOR: The sector number of each track defined on the hard disk.

MODE: Select Auto to detect the mode type automatically. If your hard disk supports the LBA mode, select LBA or Large. However, if your hard disk cylinder is more than 1024 and does not support the LBA function, set at Large. Select Normal if your hard disk supporting cylinders is below 1024.

Floppy 3 Mode Support

This feature allows you to install a 3.5" (1.2MB) NEC 9801 floppy drive. The options are: Both , Disabled (Default), Drive A, Drive B.

Software Turbo Speed

The BIOS supports Software Turbo Speed feature. Instead of pressing the Turbo Speed Button on the front panel, simply press the **Alt, Ctrl, and +** keys at the same time to enable the Turbo Speed feature; and press the **Alt, Ctrl, and -** keys at the same time to disable the feature.

BIOS Features Setup

ROM PCI/ISA BIOS (2A69JF09)	
BIOS FEATURES SETUP	
AWARD SOFTWARE, INC.	
Virus Warning	: Disabled
Detect Boot Virus By Trend	: Enabled
CPU Internal Cache	: Enabled
External Cache	: Enabled
Quick Power On Self Test	: Enabled
Boot From LAN First	: Enabled
Boot Sequence (LS120/ZIP100)	: A, C, SCSI
Swap Floppy Drive	: Disabled
Boot Up Floppy Seek	: Enabled
Boot Up NumLock Status	: On
Typematic Rate Setting	: Disabled
Typematic Rate (Chars/Sec)	: 6
Typematic Delay (Msec)	: 250
Security Option	: Setup
PS/2 mouse function control	: Enabled
OS Select For DRAM > 64MB	: Non-OS2
Video BIOS Shadow	: Enabled
C8000 - CBFFF Shadow	: Disabled
CC000 - CFFFF Shadow	: Disabled
D0000 - D3FFF Shadow	: Disabled
D4000 - D7FFF Shadow	: Disabled
D8000 - DBFFF Shadow	: Disabled
DC000 - DFFFF Shadow	: Disabled
Esc : Quit	↑↓←→ : Select Item
F1 : Help	PU/PD/+/- : Modify
F5 : Old Values	(Shift)F2 : Color
F6 : Load BIOS Defaults	
F7 : Load Setup Defaults	

Virus Warning

When enabled, assigns the BIOS to monitor the master boot sector and the DOS boot sector of the first hard disk drive. The options are: Enabled, Disabled (Default).

Detect Boot Virus By Trend

This feature starts the virus scan tool to detect if boot virus in boot sector of the first hard disk drive when booting up. The options are: Enabled (Default), Disabled.

CPU Internal Cache

When enabled, improves the system performance. Disable this item when testing or trouble-shooting.

The options are: Enabled (Default), Disabled.

External Cache

When enabled, supports an optional cache SRAM. This feature allows you to disable the cache function when the system performance is unstable to run some software.

The options are: Enabled (Default), Disabled.

Quick Power On Self Test

When enabled, allows the BIOS to bypass the extensive memory test.

The options are: Enabled (Default), Disabled.

Boot From LAN First

This feature makes the system bootable by the remote server via LAN.

The options are: Enabled (Default), Disabled.

Boot Sequence (LS120/ZIP100)

Allows the system BIOS to first try to boot the operating system from the selected disk drive.

The options are: A, C, SCSI (Default); C, A, SCSI; C, CDROM, A; CDROM, C, A; D, A, SCSI; E, A, SCSI; F, A, SCSI; SCSI, A, C; SCSI, C, A; C Only; LS/ZIP, C.

Swap Floppy Drive

Allows you to switch the order in which the operating system accesses the floppy drives during boot up. The options are: Enabled, Disabled (Default).

Boot Up Floppy Seek

When enabled, assigns the BIOS to perform floppy diskette drive tests by issuing the time-consuming seek commands.

The options are: Enabled (Default), Disabled.

Boot Up Numlock Status

When set to On, allows the BIOS to automatically enable the Num Lock Function when the system boots up. The options are: On (Default), Off.

Typematic Rate Setting

The term typematic means that when a keyboard key is held down, the character is repeatedly entered until the key is released. When this item is enabled, you may change the typematic repeat rate.

The options are: Disabled (Default), Enabled.

Typematic Rate (Chars/Sec)

Sets the rate of a character repeat when the key is held down.

The options are: 6 (Default), 8, 10, 12, 15, 20, 24, 30.

Typematic Delay (Msec)

Sets the delay time before a character is repeated.

The options are: 250 (Default), 500, 750, 1000 millisecond.

Security Option

Allows you to set the security level of the system.

The options are: Setup (Default), System.

PS/2 Mouse Function Control

When enabled, allows you to release IRQ12 for using the PS/2 mouse.

The options are: Enabled (Default), Disabled.

OS Select For DRAM > 64MB

If your operating system (OS) is OS2, select the option OS2. Otherwise, stay with the default setting Non-OS2.

The options are: Non-OS2 (Default), OS2.

Video BIOS Shadow

Allows the BIOS to copy the video ROM code of the add-on video card to the system memory for faster access.

The options are: Enabled (Default), Disabled.

C8000-CBFFF to DC000-DFFFF Shadow

Allows the BIOS to copy the BIOS ROM code of the add-on card to system memory for faster access. It may improve the performance of the add-on card.

Some add-on cards will not function properly if its BIOS ROM code is shadowed. To use these options correctly, you need to know the memory address range used by the BIOS ROM of each add-on card.

The options are: Enabled, Disabled (Default).

Chipset Features Setup

ROM PCI/ISA BIOS (2A69JF09) CHIPSET FEATURES SETUP AWARD SOFTWARE, INC.			
Auto Configuration	: Enabled	CPU Clock Frequency	: 66 MHz
DRAM Speed Selection	: 60ns	Spread Spectrum	: Disabled
MA Wait State	: Fast	CPU Warning Temperature	: Disabled
EDO RAS# To CAS# Delay	: 3	Current CPU Temperature	: 7 °C/ 44 °F
EDO RAS# Precharge Time	: 3	Current System Temp.	: 34 °C/ 93 °F
EDO DRAM Read Burst	: x333	Current Chassis Fan Speed	: 0 RPM
EDO DRAM Write Burst	: x222	Current CPU Fan Speed	: 0 RPM
CPU-To-PCI IDE Posting	: Enabled	VCORE : 2.01 V	+3.3 (V) : 3.34 V
System BIOS Cacheable	: Enabled	+5.0 (V) : 5.16 V	+12 (V) : 13.12 V
Video RAM Cacheable	: Enabled	-12 (V) : -12.16 V	-5.0 (V) : -5.11 V
8 Bit I/O Recovery Time	: 1	Esc: Quit	+/- : Select Item
16 Bit I/O Recovery Time	: 2	F1 : Help	PU/PD +/- : Modify
Memory Hole At 15M-16M	: Disabled	F5 : Old Values (Shift)	F2 : Color
Delayed Transaction	: Disabled	F6 : Load BIOS Defaults	
AGP Aperture Size (MB)	: 64	F7 : Load Setup Defaults	
SDRAM CAS latency Time	: 3		

Auto Configuration

When set at Enabled, it allows you to configure the features that from the third one, Fast RAS To CAS Delay, to the eighth one, Refresh RAS# Assertion. The options are: Enabled (Default), Disabled.

DRAM Speed Selection

Allows you to select the speed of data access to EDO DRAM. The options are: 60 ns (Default), 50 ns.

MA Wait State

Allows you to select the memory address wait state. The settings are Slow or Fast. The default setting is Slow.

EDO RAS# to CAS# Delay

When Auto Configure DRAM Timing set at Disabled, allows you to define the delay time that from the DRAM RAS# active to CAS# active. The settings are 2 Clocks or 3 Clocks. The default setting is 3 Clocks, depends on the CPU frequency and DRAM type.

EDO RAS# Precharge Timing

Allows you to select the DRAM RAS# Precharge Time (unit: clock). The options are: 4, 3 (Default).

EDO DRAM Read Burst

When Auto Configure DRAM Timing set at Disabled, allows you to define the DRAM read burst timing.

The settings are x333 or x222. The default setting is x333, depends on the CPU frequency and DRAM type.

EDO DRAM Write Burst

When Auto Configure DRAM Timing set at Disabled, allows you to define the DRAM write burst timing.

The settings are x333 or x222. The default setting is x222, depends on the CPU frequency and DRAM type.

CPU-To-PCI IDE Posting

Select Enabled to post write cycles from the CPU to the PCI IDE interface. IDE accesses are posted in the CPU to PCI buffers, for cycle optimization.

The options are: Disabled, Enabled (Default).

System BIOS Cacheable

Selecting Enabled allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

The options are: Disabled, Enabled (Default).

Video RAM Cacheable

Selecting Enabled allows caching of the video BIOS ROM at C0000h to C7FFFh, resulting in better video performance. However, if any program writes to this memory area, a memory access error may result.

The options are: Enabled (Default), Disabled.

8 Bit I/O Recovery Time

Allows you to set the 8-bit ISA I/O recovery time.

The options are: 1 (Default), 2, 3, 4, 5, 6, 7, NA, 8. Unit: Bus clock.

16 Bit I/O Recovery Time

Allows you to set the 16-bit ISA I/O recovery time.

The options are: 1, 2 (Default), 3, NA, 4. Unit: Bus clock.

Memory Hole At 15M-16M

When enabled, the memory hole at the 15MB address will be relocated to the 15~16MB address range of the ISA cycle when the processor accesses the 15~16MB address area.

When disabled, the memory hole at the 15MB address will be treated as a DRAM cycle when the processor accesses the 15~16MB address area.

The options are: Enabled, Disabled (Default).

Delayed Transaction

Enable this feature to abort the current PCI master cycle and to accept the new PCI master request, it reaccepts the original PCI master and returns the PCI data phase to the original PCI master. It will enhance the system performance. The options are: Enabled, Disabled (Default).

AGP Aperture Size (MB)

It allows you to select the main memory frame size fo AGP use.

The options are 4, 8, 16, 32, 64 (Default), 128, 256MB.

SDRAM CAS latency Time

If any DIMM is installed, this feature allows you to select the CAS Latency.

The options are: 2 (Clocks), 3 (Clocks) (Default).

CPU Clock Frquency

This feature allows you to set the CPU clock frequency.

The options are: 50 MHz, 68 MHz, 60 MHz, 66 MHz (Default).

Spread Spectrum

This feature is used to set the spread Spectrum to be center spread type or down spread type.

The options are: Enabled, Disabled (Default).

System Hardware Monitor -

(CPU Warning Temperature, Current CPU Temperature, Current System Temp., CPU Fan Speed, Current Chassis Fan Speed, VCORE)

This feature allows end users and technicians to monitor the data provided by the LDCM fuction of this motherboard.

Power Management Setup

ROM PCI/ISA BIOS (2A69JF09)	
POWER MANAGEMENT SETUP	
AWARD SOFTWARE, INC.	
Power Management	: Disable
PM Control by APM	: Yes
Video Off Method	: DPMS
Video Off After	: Suspend
MODEM Use IRQ	: 3
Doze Mode	: Disable
Standby Mode	: Disable
Suspend Mode	: Disable
HDD Power Down	: Disable
Throttle Duty Cycle	: 62.5%
VGA Active Monitor	: Disabled
Soft-Off by PWR-BTTN	: Delay 4 Sec.
CPUFAN Off In Suspend	: Enabled
IRQ 8 Break Suspend	: Disabled
Resume by Ring	: Enabled
Resume by LAN	: Enabled
Resume by Alarm	: Disabled
** Reload Global Timer Events **	
IRQ[3-7, 9-15], NMI	: Enabled
Primary IDE 0	: Disabled
Primary IDE 1	: Disabled
Secondary IDE 0	: Disabled
Secondary IDE 1	: Disabled
Floppy Disk	: Disabled
Serial Port	: Enabled
Parallel Port	: Disabled
Esc: Quit ↑↓←→: Select Item	
F1 : Help PU/PD+/- : Modify	
F5 : Old Values (Shift)F2 : Color	
F6 : Load BIOS Defaults	
F7 : Load Setup Defaults	

Power Management

This item allows you to adjust the power management features. Select Disable for disabling global power management features. Select User Defined for configuring your own power management features. MIN Saving initiates all predefined timers in their minimum values. MAX Saving, on the other hand, initiates maximum values.

The options are: Disabled (Default), User Defined, MIN Saving, MAX Saving.

PM Control by APM

The option No allows the BIOS to ignore the APM (Advanced Power Management) specification. Selecting Yes will allow the BIOS wait for APM's prompt before it enters Doze mode, Standby mode, or Suspend mode. If the APM is installed, it will prompt the BIOS to set the system into power saving mode when all tasks are done.

The options are: No, Yes (Default).

Video Off Method

The option V/H SYNC+Blank allows the BIOS to blank off screen display by turning off the V-Sync and H-Sync signals sent from add-on VGA card. DPMS Supported allows the BIOS to blank off screen display by your add-on VGA card which supports DPMS (Display Power Management Signaling function). Blank Screen allows the BIOS to blank off screen display by turning off the red-green-blue signals.

The options are: V/H SYNC+Blank, DPMS (Default), Blank Screen.

Video Off After

This feature allows you to select under which mode to power off your monitor. The options are: Standby, Doze, NA, Suspend (Default).

MODEM Use IRQ

This feature allows you to select the IRQ# of the system that is the same IRQ# as the modem use.

The options are: NA, 3 (Default), 4, 5, 7, 9, 10, 11.

Doze Mode

When disabled, the system will not enter Doze mode. The specified time option defines the idle time the system takes before it enters Doze mode.

The options are: Disabled (Default), 1, 2, 4, 8, 12, 20, 30, 40 Min, 1 Hr.

Standby Mode

When disabled, the system will not enter the Standby mode. The specified time option defines the idle time before enters Standby mode.

The options are: Disabled (Default), 1, 2, 4, 8, 12, 20, 30, 40 Min, 1 Hr.

Suspend Mode

When disabled, the system will not enter Suspend mode. The specified time option defines the idle time the system takes before it enters Suspend mode.

The options are: Disabled (Default), 1, 2, 4, 8, 12, 20, 30, 40 Min, 1 Hr.

HDD Power Down

Selecting Disable will turn off the hard disk drive (HDD) motor. Selecting 1 Min..15 Min allows you define the HDD idle time before the HDD enters the Power Saving Mode. The option When Suspend lets the BIOS turn the HDD motor off when system is in Suspend mode.

The options 1 Min..15 Min and When Suspend will not work concurrently. When HDD is in the Power Saving Mode, any access to the HDD will wake the HDD up.

The options are: Disable (Default), 1 Min..15 Min, When Suspend.

Throttle Duty Cycle

This option specifies the speed at which the system clock runs in power saving modes. The settings are expressed as a ratio between the normal clock speed and the power down clock speed.

The settings are 12.5 %, 25 %, 37.5 %, 50 %, 62.5 % (Default), 75%.

VGA Active Monitor

Enable this feature to check if your VGA monitor can enter power-saving modes. The options are: Disabled (Default), Enabled.

Soft-Off by PWR-BTTN

This feature is designed for the case when you use an ATX power supply. The selection Delay 4 Sec. will allow the system shut down after 4 seconds after the power button is pressed. The selection Instant-Off will allow the system shut down immediately once the power button is pressed.

The settings are Delay 4 Sec. (Default) or Instant-Off.

CPUFAN Off In Suspend

Enabling this feature will allow the CPU fan stop running when the system enters Suspend mode.

The options are Disabled or Enabled (Default).

IRQ 8 Break Suspend

Enable this feature will keep the system not in the Suspend mode when IRQ8 is active. The settings are Disabled (Default) or Enabled.

Resume by Ring

An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system from a soft off state.

The options are Disabled or Enabled (Default).

Resume by LAN

When set at Enabled, an input signal comes from the other client/server on the LAN awakes the system from a soft off state if connected over LAN.

The options are Disabled or Enabled (Default).

Resume by Alarm

When set at Enabled, it allows you to set the time when the system to be turned on from the system power-off status.

The options are Disabled (Default) or Enabled.

Date (of Month) Alarm

If Resume by Alarm is set at Enabled , this feature allows you to set the day of the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled.

The options are: 0 (Default), 1..31.

Time (hh:mm:ss) Alarm

If Resume by Alarm is set at Enabled , this feature allows you to set the time of the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled.

The options are: 7: 0: 0 (Default). hh (*hour*) - 0, 1, 2,..., 23; mm (*minute*) - 0, 1, 2,...,59; ss (*second*) - 0, 1, 2,...,59.

IRQ[3-7,9-15], NMI

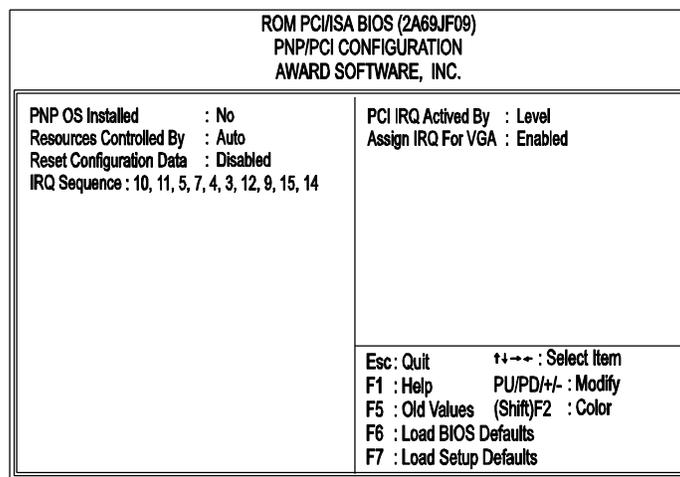
Enable this feature will keep the system not in the Suspend mode when IRQ3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15 is active.

The settings are Disabled or Enabled. The default setting is Enabled.

Primary IDE 0, Primary IDE 1, Secondary IDE 0, Secondary IDE 1, Floppy Disk, Serial Port, Parallel Port

Enable this feature will keep the system not in the Suspend mode when the selected device is active. The settings are Disabled or Enabled. The default setting is Disabled, except Serial Port.

PNP/PCI Configuration



PNP OS Installed

If your operating system is a Plug-and-Play one, such as Windows NT, Windows 95, select Yes. The options are: No (Default), Yes.

Resources Controlled By

If set at Auto, the BIOS arranges all system resources. If there exists conflict, select Manual. The options are: Auto (default), Manual. The manual options of **IRQ- / DMA- assigned to** are: Legacy ISA, PCI/ISA PnP.

Reset Configuration Data

When enabled, allows the system to clear the last BIOS configuration data and reset with the default data. The options are: Enabled, Disabled (default).

IRQ Sequence

This feature allows you to select the PCI IRQ sequence. The options are: 15, 11, 10, 12, 14, 5, 7, 3, 4, 9; 10, 11, 5, 7, 4, 3, 12, 9, 15, 14 (Default).

PCI IRQ Activated By

We suggest that you set this to its default configuration unless you are a qualified technician. The options are: Level (Default), Edge.

Assign IRQ For VGA

If your PCI VGA card does not need an IRQ, select Disabled to release an IRQ for system use. The options are: Enabled (Default), Disabled.

Load BIOS Defaults

BIOS defaults contain the most appropriate values of the system parameters that allow minimum system performance. The OEM manufacturer may change the defaults through MODBIN before the binary image burns into the ROM.

Load Setup Defaults

Selecting **this field** loads the factory defaults for BIOS and Chipset Features which the system automatically detects.

Integrated Peripherals

ROM PCI/ISA BIOS (2A69JF09) INTEGRATED PERIPHERALS AWARD SOFTWARE, INC.			
IDE HDD Block Mode	: Enabled	KBC Input Clock	: 8 MHz
On-Chip Primary PCI IDE	: Enabled	Onboard FDC Controller	: Enabled
On-Chip Secondary PCI IDE	: Enabled	Onboard Serial Port 1	: 3F8/IRQ4
IDE Primary Master PIO	: Auto	Onboard Serial Port 2	: 2F8/IRQ3
IDE Primary Slave PIO	: Auto	UR2 Mode	: Stanadard
IDE Secondary Master PIO	: Auto	Onboard Parallel Port	: 378/IRQ7
IDE Secondary Slave PIO	: Auto	Parallel Port Mode	: SPP
IDE Primary Master UDMA	: Auto		
IDE Primary Slave UDMA	: Auto		
IDE Secondary Master UDMA	: Auto		
IDE Secondary Slave UDMA	: Auto		
HDD S.M.A.R.T. Capability	: Disabled	Esc: Quit	↑↓←→: Select Item
USB Controller	: Disabled	F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values (Shift)	F2 : Color
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

IDE HDD Block Mode

When enabled, the system executes read/write requests to hard disk in block mode. The options are: Enabled (Default), Disabled.

On-Chip Primary PCI IDE

When enabled, allows you to use the onboard primary PCI IDE. The options are: Enabled (Default), Disabled.

On-Chip Secondary PCI IDE

When enabled, allows you to use the onboard secondary PCI IDE. The options are: Enabled (Default), Disabled.

IDE Primary Master PIO

Allows an automatic or a manual configuration of the PCI primary IDE hard disk (master) mode.

The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

IDE Primary Slave PIO

Allows an automatic or a manual configuration of the PCI primary IDE hard disk (slave) mode.

The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

IDE Secondary Master PIO

Allows an automatic or a manual configuration of the PCI secondary IDE hard disk (master) mode.

The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

IDE Secondary Slave PIO

Allows an automatic or a manual configuration of the PCI secondary IDE hard disk (slave) mode.

The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

IDE Primary Master UDMA

Allows you to select the first PCI IDE channel of the first master hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disabled.

IDE Primary Slave UDMA

Allows you to select the first PCI IDE channel of the first slave hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disabled.

IDE Secondary Master UDMA

Allows you to select the second PCI IDE channel of the secondary master hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disabled.

IDE Secondary Slave UDMA

Allows you to select the second PCI IDE channel of the secondary slave hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disabled.

HDD S.M.A.R.T. Capability

“S.M.A.R.T” is the abbreviation of “Self-Mointoring, Analysis and Reprotng Technology”. To enable it will assist you in preventing some (but not all) system down time due to hard disk drive failure.

The options are: Enabled, Disabled (Default).

USB Controller

If you do not use the onboard USB feature, it allows you to disable it.

The options are: Enabled, Disabled (Default).

BIOS Support USB Keyboard

If Enabled is selected in the above feature, this feature will appear.

If your USB devices cannot be detected automatically by the system BIOS or some driver diskettes came with your USB devices, please set at DOS for allowing you to install the driver. The options are: Setup (Default), DOS.

KBC input clock

This feature allows you to select different KBC input clocks which your keyboard actually supported. Please read your keyboard manual also for more information. The options are: 8 (Default), 12, 16 MHz.

Onboard FDC Controller

When enabled, the floppy diskette drive (FDD) controller is activated.

The options are: Enabled (Default), Disabled.

Onboard Serial Port 1

If the serial port 1 uses the onboard I/O controller, you can modify your serial port parameters. If an I/O card needs to be installed, COM3 and COM4 may be needed.

The options are: 3F8/IRQ4 (Default), 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, Disabled.

Onboard Serial Port 2

If the serial port 2 uses the onboard I/O controller, you can modify your serial port parameters. If an I/O card needs to be installed, COM3 and COM4 may be needed.

The options are: 2F8/IRQ3 (Default), 3E8/IRQ4, 2E8/IRQ3, Disabled, 3F8/IRQ4.

UR2 Mode

Select an operating mode for the second serial port. Set at Standard, if you use COM2 as the serial port as the serial port, instead as an IR port.

The options are: Standard (Default), Sharp IR, IrDA SIR.

Onboard Parallel Port

Allows you to select from a given set of parameters if the parallel port uses the onboard I/O controller.

The options are: 378/IRQ7 (Default), 278/IRQ5, Disabled, 3BC/IRQ7.

Parallel Port Mode

Allows you to connect with an advanced printer.

The options are: SPP (Default), EPP1.7, EPP1.9, EPP, ECP, ECP+EPP.

ECP Mode Use DMA

If you select ECP or ECP+EPP in Parallel Port Mode, this feature allows you to select Direct Memory Access (DMA) channel.

The options are: 3 (Default), 1.

Supervisor/User Password

To enable the Supervisor/User passwords, select the item from the Standard CMOS Setup. You will be prompted to create your own password. Type your password up to eight characters and press Enter. You will be asked to confirm the password. Type the password again and press Enter. You may also press Esc to abort the selection and not enter a password. To disable password, press Enter when you are prompted to enter password. A message appears, confirming the password is disabled.

Under the BIOS Feature Setup, if System is selected under the Security Option field and the Supervisor Password is enabled, you will be prompted for the Supervisor Password every time you try to enter the CMOS Setup Utility. If System is selected and the User Password is enabled, you will be requested to enter the User Password every time you reboot the system. If Setup is selected under the Security Option field and the User Password is enabled, you will be prompted only when you reboot the system.

Clear Password

If you forget your password, turn off the system power first and remove the system unit cover. Locate Jumper CPW and cap it. Remove Jumper CPW and reset the system. At this point, you will not be asked for the password to enter Setup.

IDE HDD Auto Detection

The IDE Hard Disk Drive Auto Detection feature automatically configures your new hard disk. Use it for a quick configuration of new hard drives. This feature allows you to set the parameters of up to four IDE HDDs. The option with **(Y)** are recommended by the system BIOS. You may also keys in your own parameters instead of setting by the system BIOS. After all settings, press Esc key to return the main menu. For confirmation, enter the Standard CMOS Setup feature.

Save and Exit Setup

After you have made changes under Setup, press Esc to return to the main menu. Move cursor to Save and Exit Setup or press F10 and then press Y to change the CMOS Setup. If you did not change anything, press Esc again or move cursor to Exit Without Saving and press Y to retain the Setup settings. The following message will appear at the center of the screen to allow you to save data to CMOS and exit the setup utility:

SAVE to CMOS and EXIT (Y/N)?

Exit without Saving

If you select this feature, the following message will appear at the center of the screen to allow you to exit the setup utility without saving CMOS modifications:

Quit Without Saving (Y/N)?

Software Utilities

The board comes with helpful supporting software to promote your system performance. This chapter introduces them with the installation procedures.

Starting Installation

To run each feature, simply click on the wanted software item in the main menu.

LANDesk Client Manager (manufacturing option)

The LDCM software must be installed to use the hardware manager. It is used for remote management over network and is of no use to non-networked systems.

LDCM 3.21 Specification Overview

Intel LANDesk Client Manager v3.21 provides real-time PC health monitoring, alerting and self-diagnostics that will make your PCs more reliable and easier to support. It offers far more configurability than its predecessor, Intel LANDesk Client Manager v3.0., supports DMI v2.0 specifications, and enables you to:

Review system inventory

Client Manager enables you to view hundreds of inventoried items. Some of these items are software related, while many others are hardware related.

View DMI-compliant component information

Client Manager enables you to view component information that is compliant with the Desktop Management interface (DMI). This means you manage third-party DMI-compliant components not included with Client Manager.

Back up and restore system configuration files

Client Manager enables you to back up and restore system configuration files. Whenever you plan on changing the system configuration, You can

make a backup set. If the system no longer works correctly, after you change the system configuration, you can simply restore the system configuration with the backup set.

NOTE: By default the Windows 95 and Windows NT registry files aren't part of the snapshot file list. This means the restoration of a snapshot may not be effective.

Troubleshoot

Since Client Manager enables you to View the system inventory, you can easily troubleshoot system problem.

Receive notifications for system events

Client Manager enables you to receive notification of certain system events. For example, if the system is running low on virtual memory, you are notified of the potential problem.

Transfer files to and from client workstations

As an administrator, you have the ability to transfer files to and from client workstations. This is helpful, for example, when you need to update a client workstation driver.

Remotely reboot client workstations

Administrators also have the ability to remotely reboot a workstation. This is helpful when you want system configuration changes to take effect.

Waking up a computer

You can use Client Manager to "wake up" a remote computer that is powered off or "sleeping" in a reduced-power state.

Two Options of LDCM Setup

LDCM Local Setup: Install software to monitor the *local* system. **(Recommended)** Settings can be auto-detected or changed. The installation of it is straight forward. First select *LDCM Local Setup in the main menu*, then all the way down to the end of the installation. Reboot the system.

LDCM Administrator Setup: Installs software to monitor PC systems on the network within the same bridge address with Local software installed. The installation of it is straight forward. First select *LDCM Administrator Setup in the main menu*, then all the way down to the end of the installation. Reboot the

system. The administrator should install both Local and Administrator Software. (First install *Local Setup*, then install *Administrator Setup*.)

Desktop Management Interface (DMI)

DMI (Desktop Management Interface) is a standard for organizing system configuration information. Using DMI, computer configuration can be made much simpler, quicker, and easier. Computer system configuration information can be read and modified from remote locations, permitting remote configuration and boot up.

Starting DMI

1. Format a bootable MS-DOS 6.22 system diskette, copy the DMICFG.EXE from the CD-ROM to the diskette.
2. Reboot the system by using this bootable system diskette to enter real mode.
3. After the DOS prompt, type *DMICFG* and press *Enter* key. The display below will appear on the monitor screen.

Editing DMI provides record data about your computer system. The feature allows you to select editable DMI items by pressing arrow keys. The button *Press [ENTER] for detail* will pop up a sub menu. Use “+,-“ keys to change configurations. Press *Esc* key to abort the configuration and exit. Press *Enter* key to save and exit. The screen field under *Show Only Component* means that the items are automatically detected by BIOS. The screen menu leading by *Edit Component* indicates the items under it are allowed to be changed by users.

Adding DMI allows users to add new information such as Manufacturer Name, Product Name.

Loading DMI loads the DMI information if users need the old DMI information.

Saving DMI saves the DMI information if users need to keep the DMI information that just changed.

If you exit DMI installation but cannot boot up (this case rarely occur), please ask local dealer to help you. (It might need another BIOS flash ROM chip.)

Bus Master IDE Driver

The motherboard package provides Intel Bus Master IDE driver in the software utilities for Windows 95 and Windows NT to improve the system performance. Please read the relating README files first before install it. This motherboard supports Ultra DMA/33; therefore installs default 16-bit drivers when the operating system detects the board and the Bus Master IDE driver not installed, information in the circle like the display below indicates the system will treat it as a standard dual PCI IDE controller. It cannot take advantage of the Ultra DMA. (The attached peripheral devices must support UDMA.)

Installation

The installation is straight forward by clicking on *IDE Bus Master* item of the main menu. There is no option to be selected while the installation procedure goes. After the installation, the system should be rebooted.

Patch for Chipset

The motherboard package provides INF update file in the software utilities. Before you run the SETUP file, please read the relating README file first. This software is necessary for the operating system to recognize the chipset implemented on this motherboard; otherwise, the question marks in the circle will appear in your Window 95 environment.

Installation

The installation is straight forward by clicking on *Patch for Chipset* item of the main menu. There is no option to be selected while the installation procedure goes. After the installation, the system should be rebooted.

NOTE: AGP VxD Support Utility is not necessary when an Intel chipset onboard. User may ignore it.
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BIOS Flash Software

The board package provides BIOS flash software tool in the software utilities. This software feature is provided for upgrading BIOS use. To start the program, click on *Browse CD* in the main menu, select *Flash*, then choose the BIOS vendor that provided the BIOS this board came with. Please print the relating README file and read it first. For more information about, please visit FIC Web Site: www.fic.com.tw.

Downloading BIOS File

Format a bootable system diskette by inserting an empty floppy disk into floppy disk drive and by typing **format a: /s**, visit the FIC Web Site: www.fic.com.tw. Please visit *BIOS Update* page in FIC's Technical Support section, then select the BIOS file you need. Download it to your bootable diskette.

Upgrading BIOS File

Place the bootable diskette containing the BIOS file in the diskette drive (Assume the diskette drive is A.), and reboot the system by A drive. At the A: > prompt, execute the BIOS upgrading procedure by entering the Flash BIOS utility and the BIOS file with its extension. Backup the old BIOS file.

Command: {flash tool file}{space}{downloaded BIOS file} / cc <Enter>

Parameter **CC** stands for **Clear CMOS**. It is most frequently used. The other parameters are listed in AWDFlash.txt file or Type {flash tool file}/?, please read it if need. After press *Enter* key, a FLASH MEMORY WRITER menu will appear. Enter the new BIOS file name with its extension file name into the text box after **File Name to Program**. If you want to save your old BIOS (this is recommend), select **Y** to **Do You Want To Save Bios**, then type the old BIOS name and the extension after **FILE NAME TO SAVE:**. Select **N** to **Do You Want To Save Bios**, if you do not want to save your old BIOS. After the decision on saving the old BIOS or not (saving the old BIOS file is strongly recommended), select **Y** to **Are you sure to program** when the next menu appears; wait until a message shows **Message: Power Off or Reset the system**.

WARNING: Do not turn off or reset the computer during the flash process.

Loading New BIOS Defaults

Once the BIOS has been flashed successfully,

1. remove the diskette and reboot the system.
2. Press *Delete* key to enter **CMOS SETUP UTILITY** menu while system booting-up.
3. Select **LOAD SETUP DEFAULTS** and load the new BIOS default values.

Finally execute **SAVE AND EXIT SETUP** to complete the whole process.

Anti-Virus Tool

The motherboard package provides a virus scan tool, PC-cillin '95/97 Virus Scanner, for the Windows 95 environment. This tool allows you to perform virus scan and cure when it is necessary. Please read the relating README file first before installing the corresponding executable file.

Hardware Requirements

PC-cillin '95 Virus Scanner is fully compliant with Windows 95.

Minimum: 8MB (or above) RAM. The total disk space requirement to install PC-cillin '95 Virus Scanner is approximately 4.0 MB.

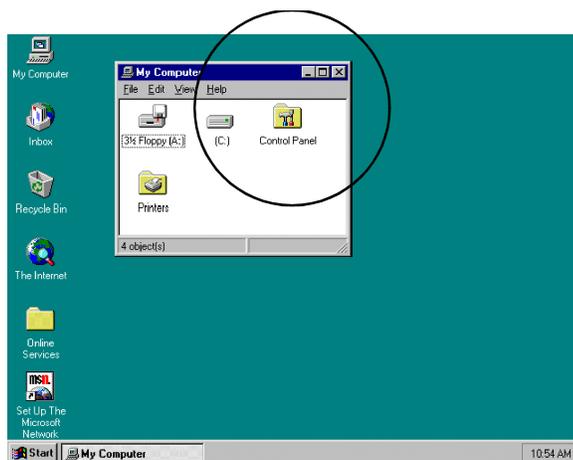
Technical Notes

PC-cillin '95 Virus Scanner will be installed to the program group "PC-cillin '95 Virus Scanner" by default. The PCCWIN95.EXE command will be added to the Startup group, and the AUTOEXEC.BAT will be modified to add PCSCAN commands to fully protect your system from computer viruses at system boot up.

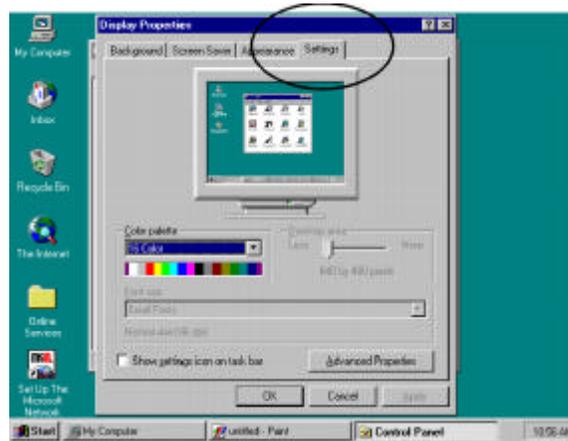
ATI Video Driver

This board equipped the video onboard chip, ATI Rage Pro. A set of software utilities are provided in the supporting disk. The following steps are given when the driver is installed in Windows 95. For the detail information, please read the related README files. **Please install this driver by clicking on the file \ATI_PRO\ATISetup.**

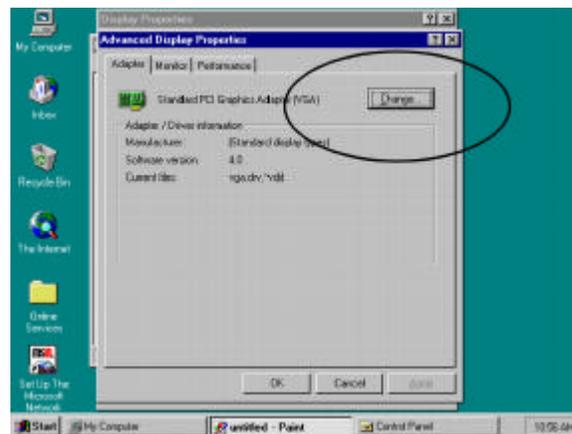
1. Place your CD-ROM in its drive. The following figure will shown. Click on the icon of **Control Panel** (in circle).



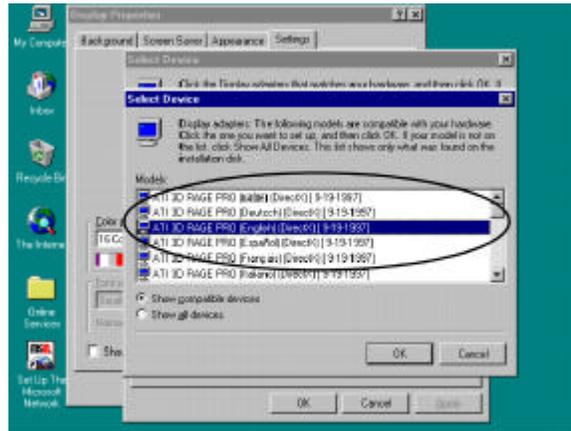
2. Click on the item of **Setup** (in circle).



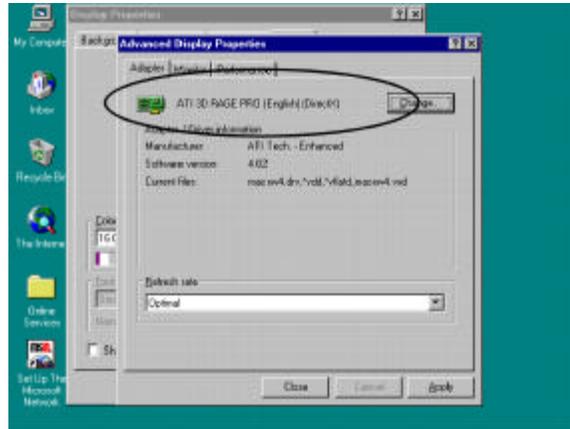
3. Click on the button of **Setup** (in circle).



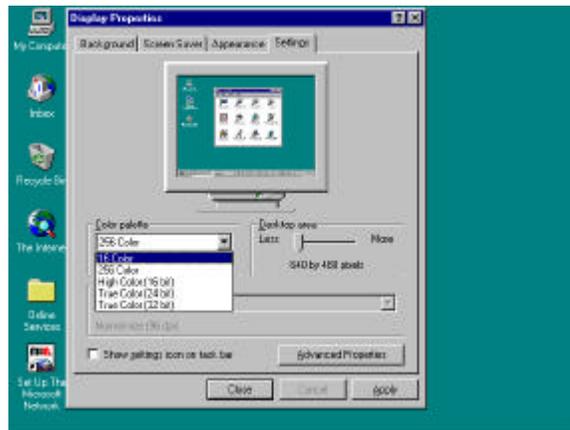
4. When the operating menu appears, select **ATI 3D PRO** (if your operating system is English, for instance, select **ATI 3D RAGE PRO [English][DirectX]**).



After the driver installed, the name of the driver just selected is in now. Click on the button of **Close**.



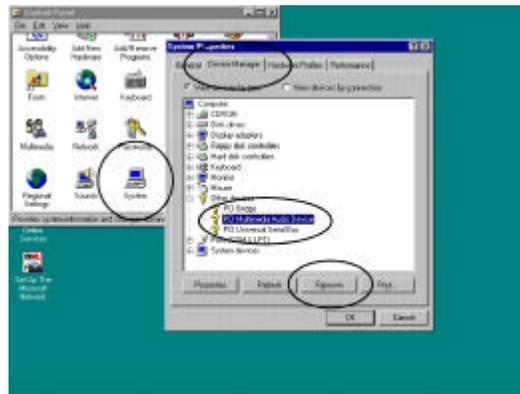
The menu appears. It allows users to select the appropriate supported resolutions. After select the options in this menu. Select Close to restart the system.



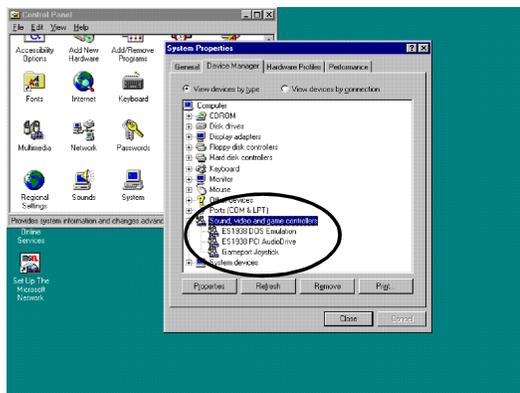
ESS Audio Driver

This board equipped the video onboard ESS Solo-1 chip. A set of software utilities are provided in the supporting disk. The following steps are given when the driver is installed in Windows 95. For the detail information, please read the related README files.

1. Place your utility CD in its drive. On the Windows 95 menu, select **Control Panel**, then **System**, Device Manager's ? **PC Multimedia Audio Device** in turn. Select **Remove**; then **Refresh**.

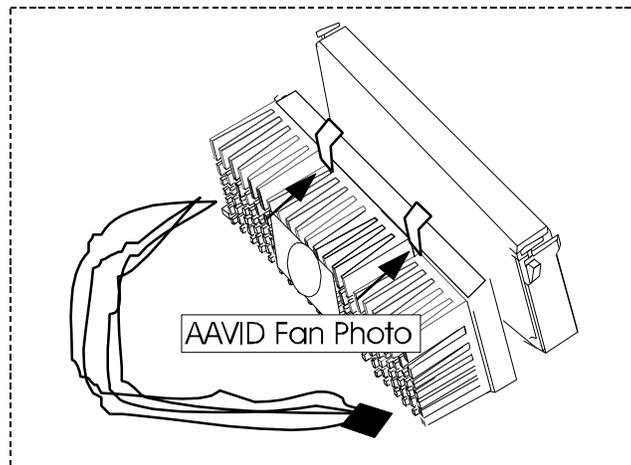


2. Click the item **es1938.com** (the ESS Solo-1 driver); then the system will ask user to place their Windows 95 system CD-ROM again to install the other related system files for the driver. The installation procedures are completed when the menu appears. Notice that the driver's related items are included now.

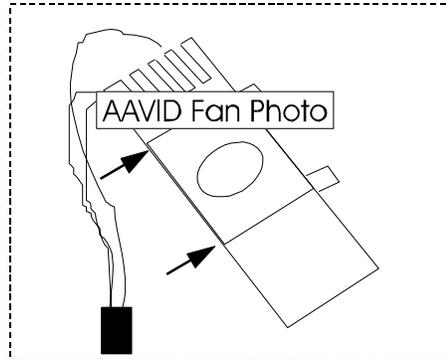


An Example of Fan Installation

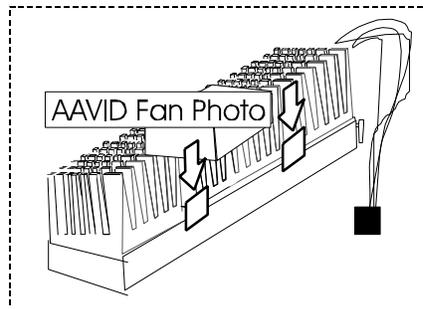
1. The photo below shows a CPU cartridge and an AAVID heatsink with CPU fan. Two hooks (the white arrow heads pointed) are used to fasten the heatsink with the cartridge.



2. As the arrow heads point, two ends of the hooks are inserted on the corresponding holes on the CPU cartridge.



3. Push these two ends of the hooks to insert into the corresponding holes on the cartridge.



4. Push the other ends of the two hooks in the direction of the arrow head to complete these installation.

