

***USER'S MANUAL***  
***Of***  
***VIA CN700 Chipset***  
***&***  
***VIA VT8237R Plus Chipset***  
***M/B For VIA C7™ processor family***

***NO. G03-7F2WE-F***

***Rev:1.0***

***Release date: April 2006***

**Trademark:**

\* Specifications and Information contained in this documentation are furnished for information use only, and are subject to change at any time without notice, and should not be construed as a commitment by manufacturer.

## Environmental Protection Announcement

Do not dispose this electronic device into the trash while discarding. To minimize pollution and ensure environment protection of mother earth, please recycle.



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## Manual Revision Information

Reversion	Revision History	Date
1.0	First Edition	April 2006

## Item Checklist

- Motherboard
- Cable for IDE/Floppy
- CD for motherboard utilities
- Cable for USB Port 2/3 (Option)
- User's Manual
- Cable for COM2 Serial Port (Option)
- Cable for S-Video/RCA Composite TV-Out (Optional)

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# Chapter 1

## Introduction of VIA CN700 Chipset Motherboards

### 1-1 Feature of motherboard

The VIA CN700 Chipset motherboard series are designed for the new generation VIA C7™ processor family with the VIA CN700 Chipset that delivers a high performance and professional desktop platform solution. The VIA CN700 is fully optimized to provide an outstanding HD digital media experience. Featuring the all new high bandwidth V4 bus as well as support for DDR2 memory modules which is expandable to 1.0GB.

The VIA CN700 Chipset motherboard series utilize the newest VIA CN700 chipset which supports 400MHz/ 533MHz System Bus in data transfer rate. The VIA CN700 Chipset motherboard series feature a robust shared memory architecture and provide 133MHz/166MHz/200MHz Memory clock frequency for DDR2 533/400 system RAM Modules. The motherboard series are embedded with VIA VT8237R Plus South Bridge offers **ULTRA ATA 133** and **Serial ATA with RAID 0, 1, JBOD** functions to provide speedier HDD throughout that boosts overall system performance. The VIA CN700 Chipset motherboard series implement the VIA VT6103L LAN PHY chip Support Fast Ethernet LAN function provide 10/100 Mb/s data transfer rate.

The motherboard series also have an integrated 6-channel AC'97 CODEC on board which is fully compatible with Sound Blaster Pro® that gives you the best sound quality and compatibility.

The VIA CN700 Chipset motherboard series are integrated the VIA Graphics UniChrome™ Pro IGP graphics core, the chipset features the Chromotion CE Video Display engine with hardware MPEG-2 playback. Together with an advanced 2D/3D graphics core, the VIA CN700 offers exceptional playback and streaming of various digital video formats while maintaining ultra low power consumption and exerting minimal load on the processor. The VIA CN700 also provides extensive display support with outputs to CRT, LCD and standard definition TV as well as support for HDTV up to 1080p resolution.

With USB controller as well as capability of expanding to 8x USB2.0 function ports delivering 480Mb/s bandwidth and rich connectivity, the motherboards meet future USB demand also have built-in hardware monitor function to monitor and protect your computer.

The motherboards provide reliable performance & meets mainstream specification of MCE related concepts. It is really a cost effective choice for your computer.

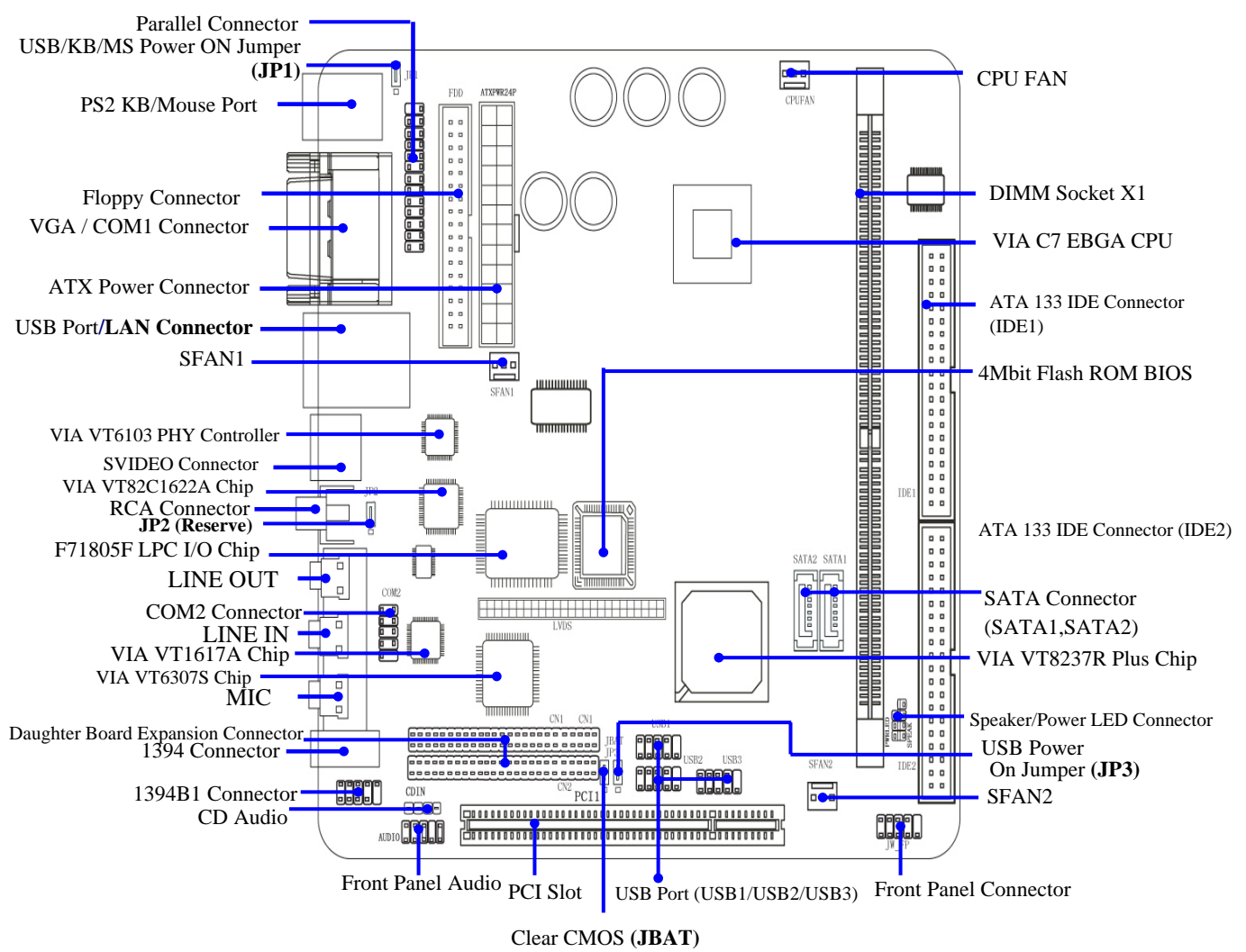
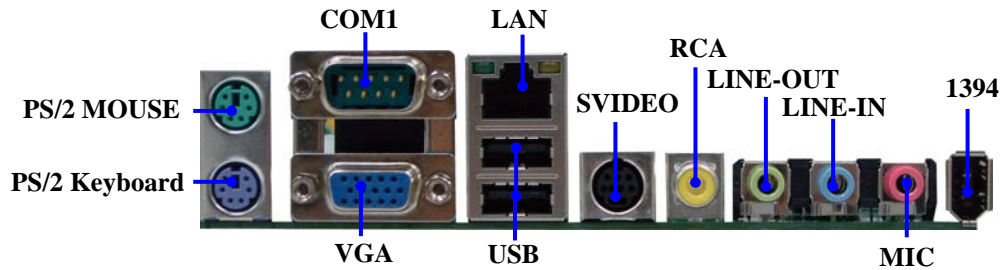
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## 1-2 Specification

<b>Spec</b>	<b>Description</b>
<b>Design</b>	* Mini ITX form factor 4 layers PCB size: 17.0x17.0cm
<b>Chipset</b>	* VIA CN700 Chipset * VIA VT8237R Plus Chipset
<b>CPU</b>	* Embedded VIA CN700 EPGA processor
<b>Memory Socket</b>	* 240-pin DDR2 DIMM socket x1 * Support DDR2 533/400 system RAM Modules DDR memory * Expandable to 1GB
<b>Expansion Slot</b>	* 32-bit PCI slot x 1cs
<b>Integrate VGA</b>	* Integrate 2D/3D graphic Engines * 8/16/32/64MB frame buffer using system memory * Internal AGP 8x performance * Support 24-bit 250MHz RAMDAC
<b>TV-Out</b>	* VIA VT1622A TV Encoder * Provided S-Video/Composite output for NTSC/PAL system
<b>Integrate IDE and Serial ATA RAID</b>	* Two PCI IDE controllers support PCI Bus Mastering, ATA PIO/DMA and the ULTRA DMA 33/66/100/133 functions that deliver the data transfer rate up to 133 MB/s; Two Serial ATA ports provide 150 MB/sec data transfer rate for two Serial ATA Devices and offer RAID 0, 1, JBOD functions
<b>Integrate LAN</b>	* Integrated VIA VT6103 LAN-PHY Controller * Support 10/100 BASE-T Transfer rate
<b>Audio</b>	* AC'97 Digital Audio controller integrated * 6-channel AC'97 Audio CODEC onboard * Audio driver and utility included
<b>BIOS</b>	* Award 4Mb Flash ROM
<b>Multi I/O</b>	* PS/2 keyboard and PS/2 mouse connectors * Floppy disk drive connector x1 * VGA x1, Serial port x1 * USB 2.0 connector x2 * USB 2.0 headers x3 (connecting cable option) * Audio connector (Line-in, Line-out, MIC)

# 1-3 Layout Diagram & Jumper Setting



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## *Jumpers*

<b>Jumper</b>	<b>Name</b>	<b>Description</b>	<b>Page</b>
JP1	Keyboard Power ON Function Setting	3-pin Block	p.5
JP3	USB Power On Function Setting	3-pin Block	p.5
JBAT	CMOS RAM Clear Function Setting	3-pin Block	p.6
JP2	TV OUT/SPDIF Function Setting	3-pin Block	p.6

## *Connectors*

<b>Connector</b>	<b>Name</b>	<b>Description</b>	<b>Page</b>
ATXPWR	ATX Power Connector	20-pin Block	p.11
KB/MS1	PS/2 Mouse & PS/2 Keyboard Connector	6-pin Female	p.12
UL1	USB/ LAN Port Connector	4-pin Connector	p.12
COM1	Serial Port Connector	25-pin Female	p.12
VGA	VGA Port Connector	15-pin Female	p.12
SVIDEO	S-Video TV-Out Connector	4-pin MINI-DIN	p.12
RCA	Composite TV-Out / or SPDIF Connector	RCA Jack	p.12
Line-In/Out, MIC	Line-Out/Line-In/MIC Audio Connector	Phone Jack	p.12
1394	1394 Port1 Connector	9-pin Connector	p.13
FDD	Floppy Driver Connector	34-pin Block	p.13
IDE1/IDE2	Primary/Secondary Connector	40-pin Block	p.13

## *Headers*

<b>Header</b>	<b>Name</b>	<b>Description</b>	<b>Page</b>
COM2	COM2 Serial Port Headers	10-pin Block	p.14
PARALLEL	Parallel Port Headers	25-pin Block	p.14
AUDIO	Line-Out/MIC output Header	4-pin Block	p.15
USB1/USB2/ USB3	USB2.0 Port Headers	10-pin Block	p.15
1394B1	1394 Port2 Headers	9-pin Block	p.16
HD_LED	Hard drive LED connector	3-pin Block	p.16
RESET	Reset switch lead	2-pin Block	p.16
SPEAK	Speaker connector	4-pin Block	p.16
PWR_LED	Power LED Headers	2-pin Block	p.16
PWR_BTN	Power Button Headers	2-pin Block	p.16
CPUFAN, SFAN1/2	FAN Speed Headers	3-pin Block	p.16
LVDS	LVDS Headers	50-pin Block	p.17
CDIN	CD Audio-In Headers	4-pin Block	p.17
<i>CN1/CN2</i>	<i>Daughter Board Expansion Headers</i>	50-pin Block	p.17

## *Expansion Sockets*

<b>Socket/Slot</b>	<b>Name</b>	<b>Description</b>	<b>Page</b>
DDR2	DDR2 SDRAM Module Socket	240-pin DDR2 SDRAM Module Expansion Socket	p.9
PCI1	PCI Slot	32-bit PCI Local Bus Expansion slots	p.9



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# Chapter 2

## Hardware installation

### 2-1 Hardware installation Steps

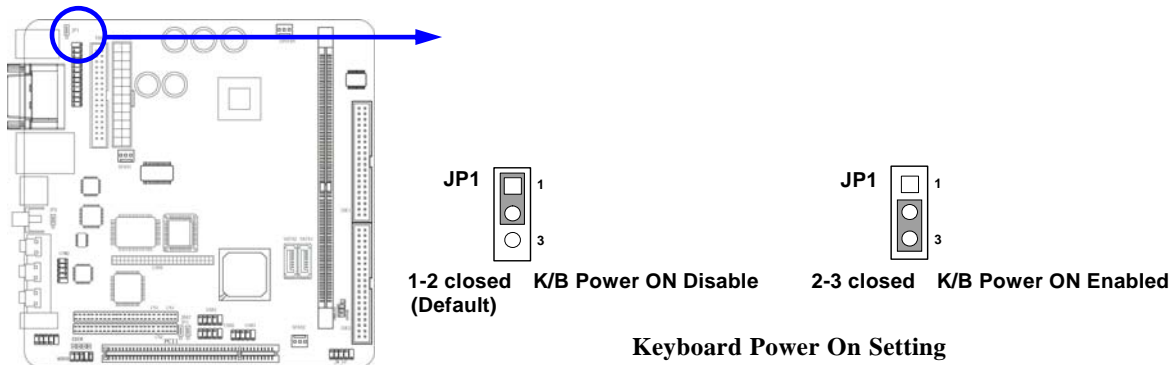
Before using your computer, you had better complete the following steps:

1. Check motherboard jumper setting
2. Install CPU and Fan
3. Install System Memory (DIMM)
4. Install Expansion cards
5. Connect IDE and Floppy cables, Front Panel /Back Panel cable
6. Connect ATX Power cable
7. Power-On and Load Standard Default
8. Reboot
9. Install Operating System
10. Install Driver and Utility

### 2-2 Checking Motherboard's Jumper Setting

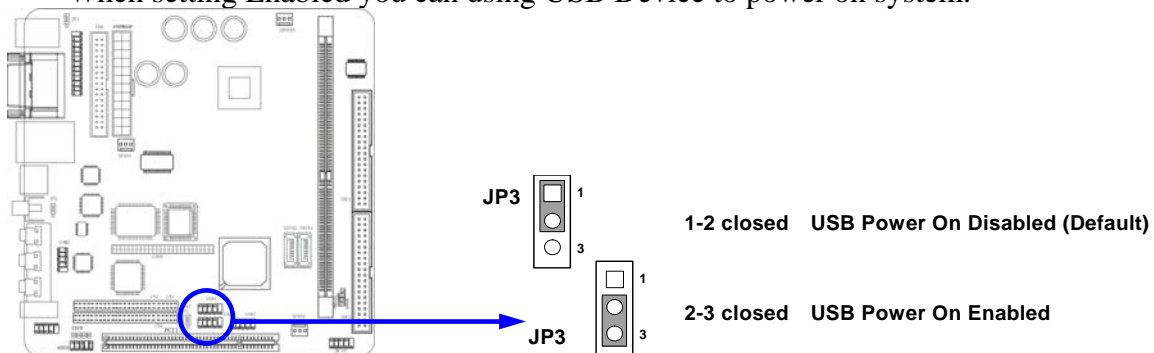
#### (1) Keyboard Power On function Enabled/Disabled (3-pin): JP1

When setting Enabled you can using keyboard by key in password to power on system.



#### (2) USB Power On function Enabled/Disabled (3-pin): JP3

When setting Enabled you can using USB Device to power on system.



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### (3) CMOS RAM Clear (3-pin): JBAT

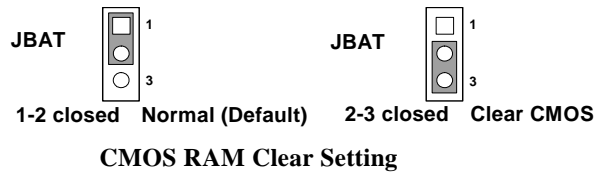
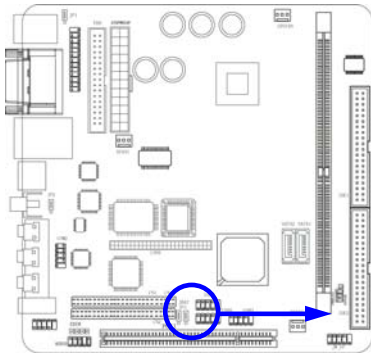
A battery must be used to retain the motherboard configuration in CMOS RAM short 1-2 pins of JPAT to store the CMOS data.

To clear the CMOS, follow the procedure below:

1. Turn off the system and unplug the AC power
2. Remove ATX power cable from ATX power connector
3. Locate JP6 and short pins 2-3 for a few seconds
4. Return JP6 to its normal setting by shorting pins 1-2
5. Connect ATX power cable back to ATX power connector

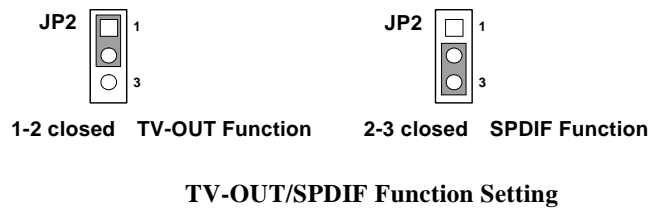
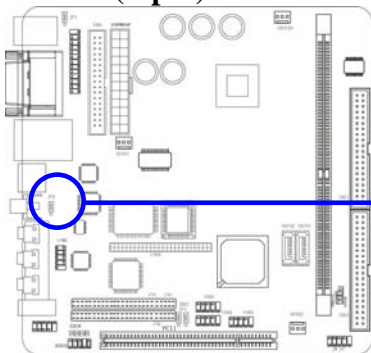
**Note: When should clear CMOS**

1. *Troubleshooting*
2. *Forget password*
3. *After over clocking system boot fail*



### (4) TV-OUT/SPDIF Function

Reserve(3-pin): JP2



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## 2-3 Glossary

**Chipset (core logic)** - two or more integrated circuits which control the interfaces between the system processor, RAM, I/O devices, and adapter cards.

**Processor socket** - the socket used to mount the system processor on the motherboard.

**Slot (AGP, PCI, ISA, RAM)** - the slots used to mount adapter cards and system RAM.

**AGP - Accelerated Graphics Port** - a high speed interface for video cards; runs at 1X (66MHz), 2X (133MHz), or 4X (266MHz).

**PCI - Peripheral Component Interconnect** - a high speed interface for video cards, sound cards, network interface cards, and modems; runs at 33MHz.

**Serial Port** - a low speed interface typically used for mouse and external modems.

**Parallel Port** - a low speed interface typically used for printers.

**PS/2** - a low speed interface used for mouse and keyboards.

**USB - Universal Serial Bus** - a medium speed interface typically used for mouse, keyboards, scanners, and some digital cameras.

**Sound (interface)** - the interface between the sound card or integrated sound connectors and speakers, MIC, game controllers, and MIDI sound devices.

**BIOS (Basic Input/Output System)** - the program logic used to boot up a computer and establish the relationship between the various components.

**Driver** - software, which defines the characteristics of a device for use by another device or other software.

**Processor** - the "Central Processing Unit" (CPU); the principal integrated circuit used for doing the "computing" in "personal computer"

**Front Side Bus Frequency** - The working frequency of the motherboard, which is generated by the clock generator for CPU, DRAM and PCI BUS.

**CPU L2 Cache** - The flash memory inside the CPU, normally Pentium III CPU has 256K or above, while Celeron CPU will have 128K.

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## 2-3-1 Setting CPU Bus Clock & Memory Clock Jumper

### Setting the front side bus frequency and SDRAM frequency

The motherboard uses jumper less function for the front side bus frequency and SDRAM frequency users don't need setting any jumper when plug the CPU in motherboard

*For experience user looking for over clocking possibility, please refer to sec 2-3-2.*

## 2-3-2 Over clock Running

**WARNING!** This section is for experienced motherboard installer only. Over clocking can result in system instability or even shortening life of the processor.

Users can choose over clock running by BIOS CMOS SETUP UTILITY. When you entered CMOS SETUP UTILITY, choose "Miscellaneous Control" you will see the screen as below then.

Phoenix - AwardBIOS CMOS Setup Utility  
Miscellaneous Control

VIA C3 Clock Ratio	Default	Item Help
Auto Detect PCI/DIMM Clock	Enabled	
Spread Spectrum	Disabled	
** Current Host/PCI Clock is		Menu Level >
Host/PCI Clock at Next Boot is	100	
** Current DRAM Clock is	133MHz	
DRAM Clock at Next Boot is	133MHz	
+2.5V Select	2.65V	

↑↓→← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help  
F5:Previous Values F6:Optimized Defaults F7:Standard Defaults

**WARNING!** The Design of this motherboard follows chipset and CPU vender's design guideline. Any attempts to push beyond product specification are not recommended and you are taking your own risk to damage your system or important data. Before over clocking, you must make sure your components are able to tolerate such abnormal setting, especially CPU, memory, hard disks, and VGA cards.

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## 2-4 Install Memory

The motherboards provide **one** 240-pin DUAL INLINE MEMORY MODULES (DIMM) sites for memory expansion available from minimum memory size of 64MB to maximum memory size of 1.0GB DDR2 SDRAM.

### Valid Memory Configurations

Bank	184-Pin DIMM	PCS	Total Memory
Bank 0, 1 (DDR1)	DDR2 533/DDR2 400 DDR2 SDRAM Module	X1	64MB~1.0GB
Total	System Memory (Max. 1.0GB)	1	64MB~1.0GB

Generally, installing DDR SDRAM modules to your motherboard is very easy, you can refer to figure 2-4 to see what a 240-Pin DDR2 400/DDR2 533 DDR2 SDRAM module looks like.

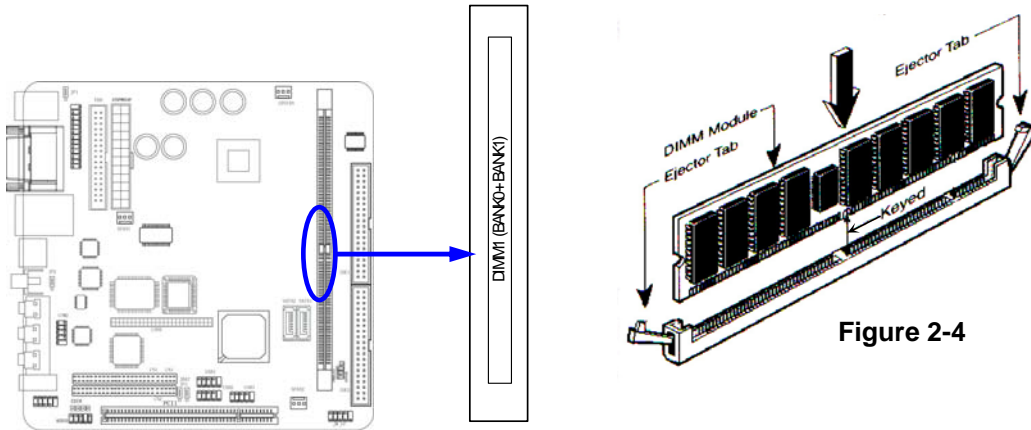


Figure 2-4

**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 indentation on both sides.

**WARNING!** For the DDR SDRAM CLOCK is set at 133MHz, use only DDR266-compliant DDR 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 SDR Modules are not DDR266-compliant, set the DDR SDRAM clock to 100MHz to ensure system stability.

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## 2-5 Expansion Cards

**WARNING!** Turn off your power when adding or removing expansion cards or other system components. Failure to do so may cause severe damage to both your motherboard and expansion cards.

### 2-5-1 Procedure For Expansion Card Installation

1. Read the documentation for your expansion card and make any necessary hardware or software setting for your expansion card such as jumpers.
2. Remove your computer's cover and the bracket plate on the slot you intend to use.
3. Align the card's connectors and press firmly.
4. Secure the card on the slot with the screen you remove above.
5. Replace the computer system's cover.
6. Set up the BIOS if necessary.
7. Install the necessary software driver for your expansion card.

### 2-5-2 Assigning IRQs For Expansion Card

Some expansion cards need an IRQ to operate. Generally, an IRQ must exclusively assign to one use. In a standard design, there are 16 IRQs available but most of them are already in use.

#### Standard Interrupt Assignments

IRQ	Priority	Standard function
0	N/A	System Timer
1	N/A	Keyboard Controller
2	N/A	Programmable Interrupt
3 *	8	Communications Port (COM2)
4 *	9	Communications Port (COM1)
5 *	6	Sound Card (sometimes LPT2)
6 *	11	Floppy Disk Controller
7 *	7	Printer Port (LPT1)
8	N/A	System CMOS/Real Time Clock
9 *	10	ACPI Mode when enabled
10 *	3	IRQ Holder for PCI Steering
11 *	2	IRQ Holder for PCI Steering
12 *	4	PS/2 Compatible Mouse Port
13	N/A	Numeric Data Processor
14 *	5	Primary IDE Channel
15 *	1	Secondary IDE Channel

\* These IRQs are usually available for ISA or PCI devices.

## 2-5-3 Interrupt Request Table For This Motherboard

Interrupt request are shared as shown the table below:

	INT A	INT B	INT C	INT D	INT E	INT F	INT G	INT H
Slot 1		√						
Slot2			√					
Slot3				√				
Slot4					√			
Onboard VGA	√							
Onboard USB	√							
Onboard USB 1		√						
Onboard USB 2			√					
LAN			√					
AC97/MC97			√					

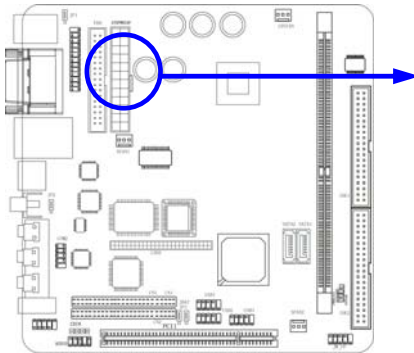
**IMPORTANT!** If using PCI cards on shared slots, make sure that the drivers support “Shared IRQ” or that the cards don’t need IRQ assignments. Conflicts will arise between the two PCI groups that will make the system unstable or cards inoperable.

## 2-6 Connectors, Headers

### 2-6-1 Connectors

#### (1) Power Connector (20-pin block) : ATXPWR

ATX Power Supply connector. This is a new defined 20-pins connector that usually comes with ATX case. The ATX Power Supply allows to use soft power on momentary switch that connect from the front panel switch to 2-pins Power On jumper pole on the motherboard. When the power switch on the back of the ATX power supply turned on, the full power will not come into the system board until the front panel switch is momentarily pressed. Press this switch again will turn off the power to the system board.



PIN	ROW1	ROW2
1	3.3V	3.3V
2	3.3V	-12V
3	GND	GND
4	5V	Soft Power On
5	GND	GND
6	5V	GND
7	GND	GND
8	Power OK	-5V
9	+5V (for Soft Logic)	+5V
10	+12V	+5V

**\*\*\*Optional DC-DC 12V Power Supply Board\*\*\*\*\***

To use this Power Board for save the space of low profile case



### **12V Mini-ITX Power supply**

- i. 60Watt DC-DC power supply
- ii. ATX standard compliant
- iii. 12V operation
- iv. 100% silent, small footprint

#### **(2) PS/2 Mouse & PS/2 Keyboard Connector: KB/MS1**

If you are using a PS/2 mouse, you must purchase an optional PS/2 mouse set which connects to the 5-pins block and mounts to an open slot on your computer's case.

#### **(3) USB Port connector: UL1**

The connectors are 4-pins connector that connect USB devices to the system board, And standard RJ45 connector for Network supports 10/100 BASE-T transfer rate.

#### **(5) Serial Port Connector (9-pin female): COM1**

Serial Port connector is a 9-pin D-Subminiature connector. The On-board Serial Port can be disabled through the BIOS SETUP. Please refer to Chapter 3 "INTEGRATED PERIPHERALS SETUP" section for more detail information.

#### **(6) VGA Connector (15-pin female): VGA**

VGA Connector is a 15-pin D-Subminiature Receptacle connector. This connector is for connection Monitor and System to display.

#### **(7) TV-Out Connector: S-Video/ RCA**

The S-Video/RCA Connector is for S-Video/Composite TV-Out function  
*RCA is setting for Composite TV-Out connector when JP3 setting 1-2 closed*  
*RCA is setting for SPDIF-Out connector when JP3 setting 2-3 closed*

#### **(8) Audio Connector: (Line-Out/ Line-IN/ MIC)**

This Connector are 3 phone Jack for LINE-OUT/ LINE-IN/ MIC.

**Line-out :** Audio output to speaker

**Line-In :** Audio input to Audio controller

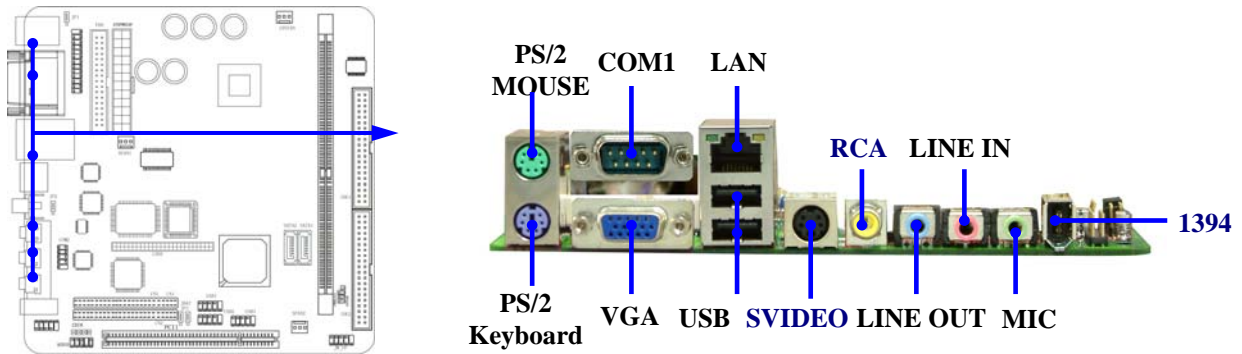
**MIC :** Microphone Connector



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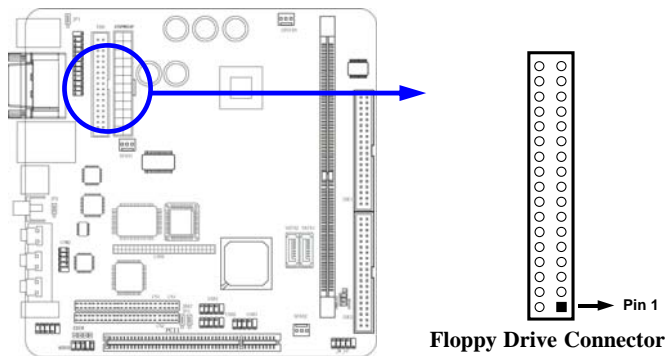
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**(9) 1394 Port 1 Connector: 1394**



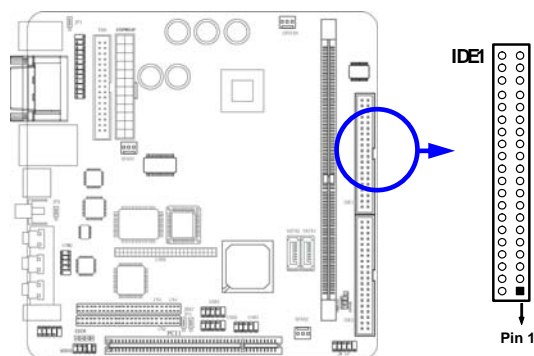
**(10) Floppy drive Connector (34-pin block): FDD**

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



**(11) Primary IDE Connector (40-pin block): IDE1**

This connector supports the provided IDE hard disk ribbon cable. After connecting the single plug end to motherboard, connect the two plugs at other end to your hard disk(s). If you install two hard disks, you must configure the second drive to Slave mode by setting its jumpers accordingly. Please refer to the documentation of your hard disk for the jumper settings.

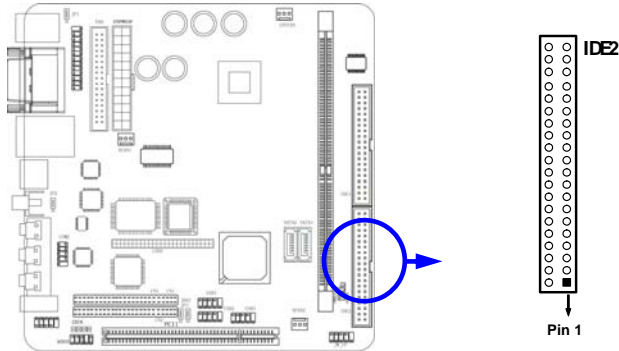


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**(12) Secondary IDE Connector (40-pin block): IDE2**

This connector connects to the next set of Master and Slave hard disks. Follow the same procedure described for the primary IDE connector. You may also configure two hard disks to be both Masters using one ribbon cable on the primary IDE connector and another ribbon cable on the secondary IDE connector.

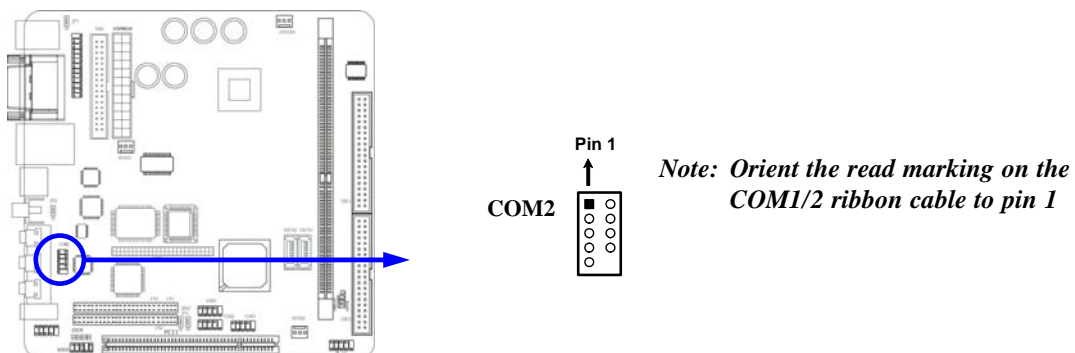


- Two hard disks can be connected to each connector. The first HDD is referred to as the “Master” and the second HDD is referred to as the “Slave”.
- For performance issues, we strongly suggest you don’t install a CD-ROM or DVD-ROM drive on the same IDE channel as a hard disk. Otherwise, the system performance on this channel may drop.

## 2-6-2 Headers

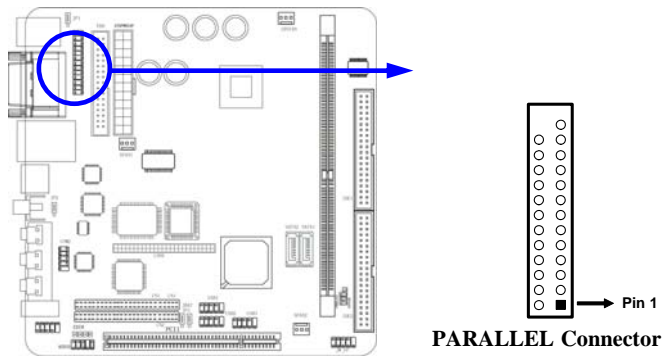
**(1) COM2 Serial Port Headers (9-pin) : COM2**

This board has two serial port COM1 (Connector)/COM2(Headers), it come with cable providing serial port COM1/COM2. The On-board serial port can be disabled through BIOS SETUP. Please refer to Chapter 3 “INTEGRATED PERIPHERALS SETUP“ section for more detail information.



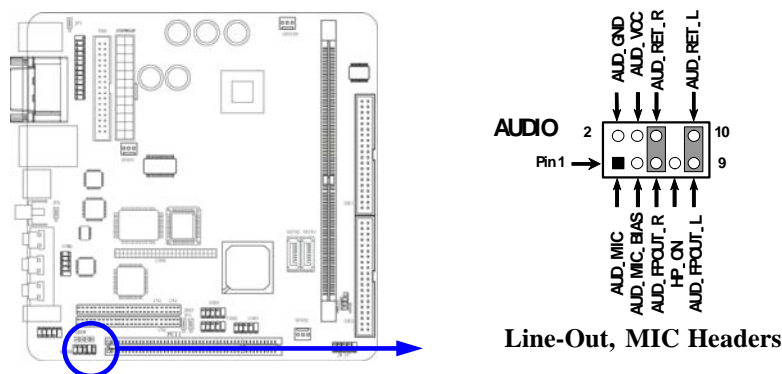
**(2) Parallel Port Headers (25-pin Block): Parallel**

The On-board Parallel Port can be disabled through the BIOS SETUP. Please refer to Chapter 3 “INTEGRATED PERIPHERALS SETUP” section for more detail information.



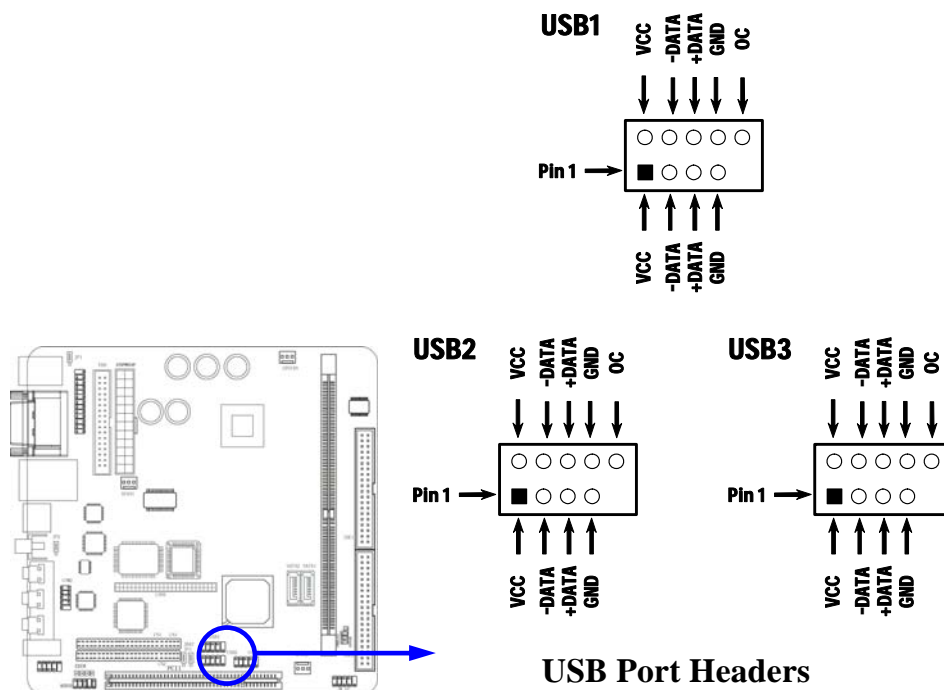
**(3) Line-Out, MIC Header (9-pin): AUDIO**

This header connect to Front Panel Line-out, MIC connector with cable.

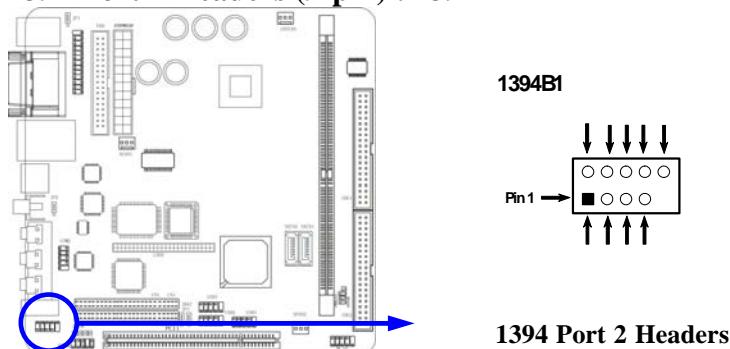


**(4) USB Port Headers (9-pin) : USB1/USB2/ USB3**

These headers are used for connecting the additional USB port plug. By attaching an option USB cable, your can be provided with two additional USB plugs affixed to the back panel.



(5) **1394 Port 2 Headers (9-pin) : 1394B1**



(6) **IDE Activity LED: HD\_LED**

This connector connects to the hard disk activity indicator light on the case.

(7) **Reset switch lead: RESET**

This 2-pin connector connects to the case-mounted reset switch for rebooting your computer without having to turn off your power switch. This is a preferred method of rebooting in order to prolong the life of the system's power supply. See the figure below.

(8) **Speaker connector: SPEAK**

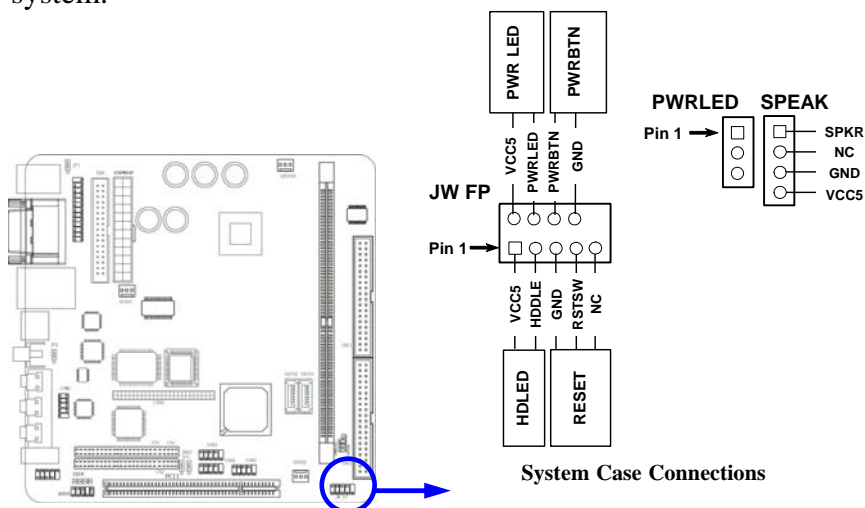
This 4-pin connector connects to the case-mounted speaker. See the figure below.

(9) **Power LED: PWR LED**

The Power LED is light on while the system power is on. Connect the Power LED from the system case to this pin.

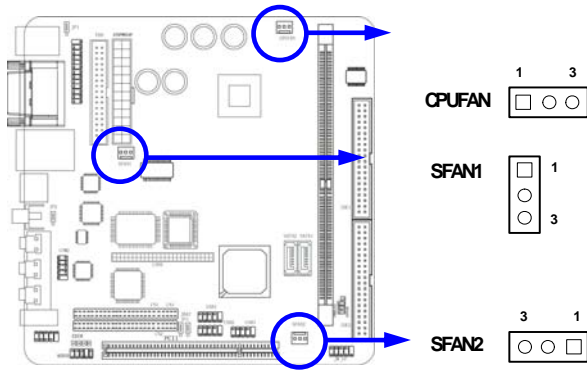
(10) **Power switch: PWR BTN**

This 2-pin connector connects to the case-mounted power switch to power ON/OFF the system.



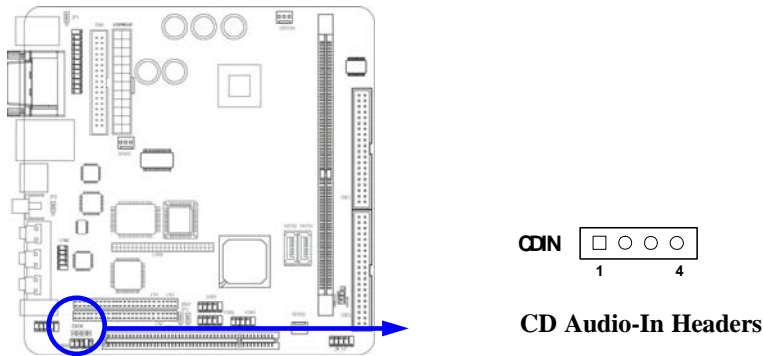
(11) **FAN Speed Headers (3-pin) : CPUFAN, SFAN1/SFAN2**

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. Connect the fan's plug to the board taking into consideration the polarity of connector.



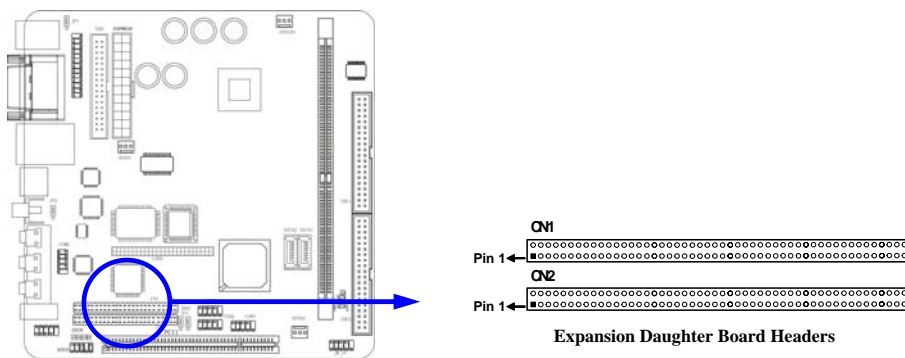
**(12) CD Audio-In Headers (4-pin) : CDIN**

CDIN is the connectors for CD-Audio Input signal. Please connect it to CD-ROM CD-Audio output connector.

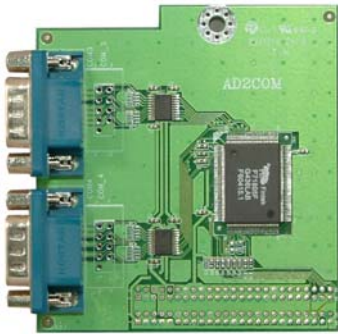


**(13) Expansion Daughter Board Headers :CN1/CN2**

These two Headers can add the COM Port card/ LAN card/ PCMCIA card.



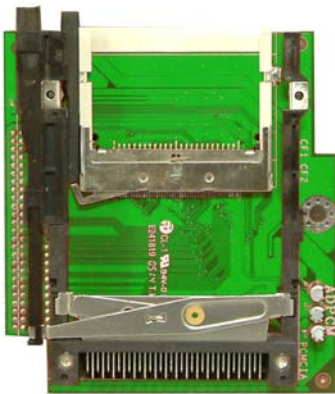
**(14) Optional Expansion cards**  
***Expansion Daughter-boards (optional)***



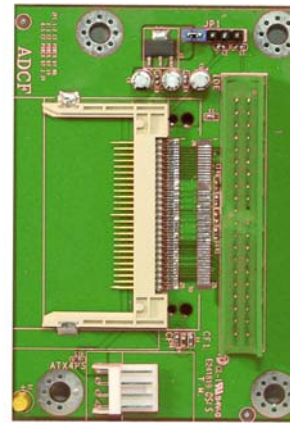
**AD2COM**  
 For 2xCOM Ports Added



**ADRTLAN-P/ADRTLAN-G**  
 For 2<sup>nd</sup> 10/100 or 10/100/1000 Ethernet LAN



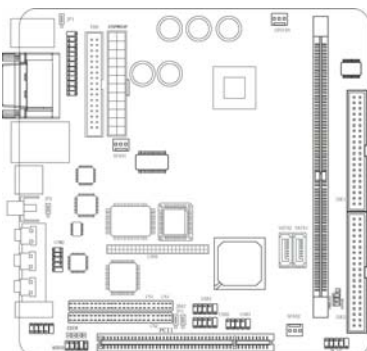
**ADPCM**  
 Card Bus Type I + II Supported Expansion Interface With CF Compatible Card Reader



**ADCF**  
 IDE Interface Supported CF Compatible Disk On Module

**(15) LVDS Headers (4-pin) : LVDS**

This 50 pin female header allows you connect to the LCD monitor devices



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## 2-7 Starting Up Your Computer

1. After all connections are made, close your computer case cover.
2. Be sure all the switch are off, and check that the power supply input voltage is set to proper position, usually in-put voltage is 220V~240V or 110V~120V depending on your country's voltage used.
3. Connect the power supply cord into the power supply located on the back of your system case according to your system user's manual.
4. Turn on your peripheral as following order:
  - a. Your monitor.
  - b. Other external peripheral (Printer, Scanner, External Modem etc...)
  - c. Your system power. For ATX power supplies, you need to turn on the power supply and press the ATX power switch on the front side of the case.
5. The power LED on the front panel of the system case will light. The LED on the monitor may light up or switch between orange and green after the system is on. If it complies with green standards or if it is has a power standby feature. The system will then run power-on test. While the test are running, the BIOS will alarm beeps or additional message will appear on the screen.

If you do not see any thing within 30 seconds from the time you turn on the power. The system may have failed on power-on test. Recheck your jumper settings and connections or call your retailer for assistance.

Beep	Meaning
One short beep when displaying logo	No error during POST
Long beeps in an endless loop	No DRAM install or detected
One long beep followed by three short beeps	Video card not found or video card memory bad
High frequency beeps when system is working	CPU overheated System running at a lower frequency

6. During power-on, press <Delete> key to enter BIOS setup. Follow the instructions in BIOS SETUP.
7. **Power off your computer:** You must first exit or shut down your operating system before switch off the power switch. For ATX power supply, you can press ATX power switching after exiting or shutting down your operating system. If you use Windows 9X, click "**Start**" button, click "**Shut down**" and then click "**Shut down the computer?**" The power supply should turn off after windows shut down.



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## Chapter 3

### Introducing BIOS

The BIOS is a program located on a Flash Memory on the motherboard. This program is a bridge between motherboard and operating system. When you start the computer, the BIOS program gain control. The BIOS first operates an auto-diagnostic test called POST (power on self test) for all the necessary hardware, it detects the entire hardware device and configures the parameters of the hardware synchronization. Only when these tasks are completed done it gives up control of the computer to operating system (OS). Since the BIOS is the only channel for hardware and software to communicate, it is the key factor for system stability, and in ensuring that your system performance as its best.

In the BIOS Setup main menu of Figure 3-1, you can see several options. We will explain these options step by step in the following pages of this chapter, but let us first see a short description of the function keys you may use here:

- Press <Esc> to quit the BIOS Setup.
- Press ↑↓←→ (up, down, left, right) to choose, in the main menu, the option you want to confirm or to modify.
- Press <F10> when you have completed the setup of BIOS parameters to save these parameters and to exit the BIOS Setup menu.
- Press Page Up/Page Down or +/- keys when you want to modify the BIOS parameters for the active option.

### 3-1 Entering Setup

Power on the computer and by pressing <Del> immediately allows you to enter Setup.

If the message disappears before your 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 <Ctrl>, <Alt> and <Delete> keys. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to

**Press <F1> to continue, <Ctrl-Alt-Esc> or <Del> to enter Setup**



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## 3-2 Getting Help

### Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

### Status Page Setup Menu/Option Page Setup Menu

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>.

## 3-3 The Main Menu

Once you enter Award® BIOS CMOS Setup Utility, the Main Menu (Figure 3-1) will appear on the screen. The Main Menu allows you to select from fourteen setup functions and two exit choices. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

Phoenix - AwardBIOS CMOS Setup Utility

Standard CMOS Features	Miscellaneous Control
Advanced BIOS Features	Load optimized Defaults
Advanced Chipset Features	Load Standard Defaults
Integrated Peripherals	Set Supervisor Password
Power Management Setup	Set User Password
PnP/PCI Configurations	Save & Exit Setup
PC Health Status	Exit Without Saving
Esc : Quit	↑↓→← : Select Item
F10 : Save & Exit Setup	
Time, Date, Hard Disk Type...	

Figure 3-1

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### **Standard CMOS Features**

Use this Menu for basic system configurations.

### **Advanced BIOS Features**

Use this menu to set the Advanced Features available on your system.

### **Advanced Chipset Features**

Use this menu to change the values in the chipset registers and optimize your system's performance.

### **Integrated Peripherals**

Use this menu to specify your settings for integrated peripherals.

### **Power Management Setup**

Use this menu to specify your settings for power management.

### **PnP/PCI configurations**

This entry appears if your system supports PnP/PCI.

### **PC Health Status**

This entry shows your PC health status.

### **Miscellaneous Control**

Use this menu to specify your settings for Miscellaneous Control.

### **Load Optimized Defaults**

Use this menu to load the BIOS default values that are factory settings for optimal performances system operations.

### **Load Standard Defaults**

Use this menu to load the BIOS default values for the minimal/stable performance system operation.

### **Set Supervisor/User Password**

Use this menu to set User and Supervisor Passwords.

### **Save & Exit Setup**

Save CMOS value changes to CMOS and exit setup.

### **Exit Without Saving**

Abandon all CMOS value changes and exit setup.

## 3-4 Standard CMOS Features

The items in Standard CMOS Setup Menu are divided into several categories. Each category includes no, one or more than one setup items. 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.

Phoenix - AwardBIOS CMOS Setup Utility

### Standard CMOS Features

Date (mm:dd:yy)	Thu, Nov, 27 2003	Item Help	
Time (hh:mm:ss)	16 : 18 : 49		
IDE Primary Master		Menu Level >  Change the day, month, Year and century	
IDE Primary Slave			
IDE Secondary Master			
IDE Secondary Slave			
Drive A	1.4M, 3.25 in.		
Drive B	None		
Video	EGA/VGA		
Halt On	All Errors		
Base Memory	640K		
Extended Memory	64512K		
Total Memory	65536K		
↑↓→← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults			

### Date

The date format is <day><month><date><year>.

**Day** Day of the week, from Sun to Sat, determined by BIOS. Read-only.

**Month** The month from Jan. through Dec.

**Date** The date from 1 to 31 can be keyed by numeric function keys.

**Year** The year depends on the year of the BIOS.

### Time

The time format is <hour><minute><second>.

### Primary Master/Primary Slave

### Secondary Master/Secondary Slave

Press PgUp/<+> or PgDn/<-> to select Manual, None, Auto type. Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category. If your hard disk drive type is not matched or listed, you can use Manual to define your own drive type manually.

If you select Manual, related information is asked to be entered to the following items. Enter the information directly from the keyboard. This information should be provided in the documentation from your hard disk vendor or the system manufacturer.

If the controller of HDD interface is SCSI, the selection shall be "None".

If the controller of HDD interface is CD-ROM, the selection shall be "None"

**Access Mode** The settings are Auto Normal, Large, and LBA.

**Cylinder** number of cylinders

**Head** number of heads

**Precomp** write precomp

**Landing Zone** landing zone

**Sector** number of sectors

## 3-5 Advanced BIOS Features

Phoenix - AwardBIOS CMOS Setup Utility

### Advanced BIOS Features

Virus Warning	Disabled	Item Help
CPU L2 Cache ECC Checking	Disabled	
CPU L1 Cache	Enabled	Menu Level >
CPU L2 Cache	Enabled	
Quick Power On Self Test	Enabled	
First Boot Device	Floppy	
Second Boot Device	HDD-0	
Third Boot Device	CDROM	
Boot Other Device	Enabled	
Swap Floppy Drive	Disabled	
Boot Up Floppy Seek	Enabled	
Boot Up NumLock Status	On	
Gate A20 Option	Normal	
Typematic Rate Setting	Disabled	
Typematic Rate (Chars/Sec)	6	
Typematic Delay (Msec)	250	
Security Option	Setup	
OS Select For DRAM > 64MB	Non-OS2	
HDD S.M.A.R.T. Capability	Disabled	
Report No FDD For Windows	Yes	
Video BIOS Shadow	Enabled	
↑↓→← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults		

### Virus Warning

Allows you to choose the VIRUS Warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep.

**Disabled** (default) No warning message to appear when anything attempts to access the boot sector or hard disk partition table.

**Enabled** Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector of hard disk partition table.

### CPU L2 Cache ECC Checking

Choose Enabled or Disabled. This option enables the Level 2 cache memory ECC (error check correction).

### CPU L1 Cache

The default value is Enabled.

**Enabled** (default) Enable cache

**Disabled** Disable cache

*Note: The L1 cache is built in the processor.*

### CPU L2 Cache

Choose Enabled or Disabled. This option enables the Level 2 cache memory.

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### Quick Power On Self-Test

This category speeds up Power On Self Test (POST) after you power on the computer. If this is set to Enabled. BIOS will shorten or skip some check items during POST.

- Enabled** (default) Enable quick POST
- Disabled** Normal POST

### First/Second/Third/Fourth Boot Device

The BIOS attempts to load the operating system from the devices in the sequence selected in these items. The settings are Floppy, LS/ZIP, HDD-0/HDD-1/HDD-3, SCSI, CDROM, LAN and Disabled.

### Swap Floppy Drive

Switches the floppy disk drives between being designated as A and B. Default is Disabled.

### Boot Up Floppy Seek

During POST, BIOS will determine if the floppy disk drive installed is 40 or 80 tracks. 360K type is 40 tracks while 760K, 1.2M and 1.44M are all 80 tracks.

### Boot Up NumLock Status

The default value is On.

- On** (default) Keypad is numeric keys.
- Off** Keypad is arrow keys.

### Gate A20 Option

- Normal** The A20 signal is controlled by keyboard controller or chipset hardware.
- Fast** (default) The A20 signal is controlled by port 92 or chipset specific method.

### Typematic Rate Setting

Keystrokes repeat at a rate determined by the keyboard controller. When enabled, the typematic rate and typematic delay can be selected. The settings are: Enabled/Disabled.

### Typematic Rate (Chars/Sec)

Sets the number of times a second to repeat a keystroke when you hold the key down. The settings are: 6, 8, 10, 12, 15, 20, 24, and 30.

### Typematic Delay (Msec)

Sets the delay time after the key is held down before it begins to repeat the keystroke. The settings are 250, 500, 750, and 1000.

### Security Option

This category allows you to limit access to the system and Setup, or just to Setup.

- System** The system will not boot and access to Setup will be denied if the correct password is not entered at the prompt.
- Setup** (default) The system will boot, but access to Setup will be denied if the correct password is not entered prompt.

### OS Select For DRAM > 64MB

Allows OS2<sup>®</sup> to be used with >64MB or DRAM. Settings are Non-OS/2 (default) and OS2. Set to OS/2 if using more than 64MB and running OS/2<sup>®</sup>.

### Report No FDD For Windows

Whether report no FDD for Win 95 or not. The settings are: Yes, No.

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## 3-6 Advanced Chipset Features

The Advanced Chipset Features Setup option is used to change the values of the chipset registers. These registers control most of the system options in the computer.

Phoenix - AwardBIOS CMOS Setup Utility

### Advanced Chipset Features

		Item Help
DRAM Timing Setting	Press Enter	
AGP Timing Setting	Press Enter	
PCI Timing Setting	Press Enter	
Select Display Device	CRT	Menu Level >
TV_Type	NTSC	
TV_Connector	CVBS	
TV_Layout	Default	
System BIOS Cacheable	Disabled	
Video RAM Cacheable	Enabled	
Memory Size Hole	Disabled	

↑↓→← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help  
F5:Previous Values F6:Optimized Defaults F7:Standard Defaults

*Note: Change these settings only if you are familiar with the chipset.*

### DRAM Timing Setting

Please refer to section 3-6-1

### AGP Timing Setting

Please refer to section 3-6-2

### PCI Timing Setting

Please refer to section 3-6-3

### 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 settings are: Enabled and Disabled.

### Video BIOS Cacheable

Select Enabled allows caching of the video BIOS, resulting in better system performance. However, if any program writes to this memory area, a system error may result. The settings are: Enabled and Disabled.

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## 3-6-1 DRAM Timing Setting

Phoenix - AwardBIOS CMOS Setup Utility

### DRAM Timing Setting

DRAM Timing	By SPD	Item Help
x DRAM CAS Latency	2.5	
Bank Interleave	4 Banks	
RAS Precharge Time	3T	Menu Level >>
RAS Active Time	6T	
RAS to CAS Delay	3T	
DRAM Command Rate	2T	

↑↓→← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help  
F5:Previous Values F6:Optimized Defaults F7:Standard Defaults

#### DRAM CAS Latency

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing. The settings are: 2T, 2.5T and 3T.

#### RAS Precharge Time

If an insufficient number of cycles is allowed for the RAS to accumulate its charge before DRAM refresh, the refresh may be incomplete and the DRAM may fail to retain data. Fast gives faster performance; and Slow gives more stable performance. This field applies only when synchronous DRAM is installed in the system. The settings are: 2T and 3T.

#### RAS-to-CAS Delay

This field let's you insert a timing delay between the CAS and RAS strobe signals, used when DRAM is written to, read from, or refreshed. *Fast* gives faster performance; and *Slow* gives more stable performance. This field applies only when synchronous DRAM is installed in the system. The settings are: 2T and 3T.

## 3-6-2 AGP Timing Settings

Phoenix - AwardBIOS CMOS Setup Utility

### AGP Timing Settings

AGP Aperture Size	64MB	Item Help
AGP Mode	4X	Menu Level >>
AGP Fast Write	Disabled	
AGP Master 1 WS Write	Disabled	
AGP Master 1 WS Read	Disabled	
CPU to AGP Post Write	Enabled	
AGP Delay Transaction	Enabled	
VGA Share Memory Size	32MB	
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults		

## 3-6-3 PCI Timing Settings

Phoenix - AwardBIOS CMOS Setup Utility

### PCI Timing Settings

PCI Master 1 WS Write	Disabled	Item Help
PCI Master 1 WS Read	Disabled	Menu Level >>
CPU to PCI Post Write	Enabled	
PCI Delay Transaction	Enabled	
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults		

### PCI Delay Transaction

The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select Enabled to support compliance with PCI specification version 2.1. The settings are: Enabled and Disabled.

## 3-7 Integrated Peripherals

Phoenix - AwardBIOS CMOS Setup Utility

### Integrated Peripherals

OnChip IDE Function	Press Enter	Item Help
OnChip Device Function	Press Enter	Menu Level >
OnChip SIO Function	Press Enter	
Init Display First	PCI Slot	
↑↓→← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults		



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### OnChip IDE Function

Please refer to section 3-7-1

### OnChip Device Function

Please refer to section 3-7-2

### OnChip SIO Function

Please refer to section 3-7-3

### Init Display First

This item allows you to decide to activate whether PCI Slot or on-chip VGA first. The settings are: PCI Slot, AGP Slot, On-Chip VGA.

## 3-7-1 OnChip IDE Function

Phoenix - AwardBIOS CMOS Setup Utility

OnChip IDE Function

OnChip IDE Channel 0	Enabled	Item Help	
OnChip IDE Channel 1	Enabled		
Primary Master PIO	Auto	Menu Level >>	
Primary Slave PIO	Auto		
Secondary Master PIO	Auto		
Secondary Slave PIO	Auto		
Primary Master UDMA	Auto		
Primary Slave UDMA	Auto		
Secondary Master UDMA	Auto		
Secondary Slave UDMA	Auto		
IDE DMA Transfer Access	Enabled		
IDE Prefetch Mode	Enabled		
IDE HDD Block Mode	Enabled		
Delay For HDD (Secs)	0		
↑↓→← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults			

### OnChip IDE Channel 0/Channel 1

The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select *Enabled* to activate each channel separately. The settings are: Enabled and Disabled.

### Primary/Secondary Master/Slave PIO

The four IDE PIO (Programmed Input/Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device. The settings are: Auto, Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

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### Primary/Secondary Master/Slave UDMA

Ultra DMA/33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/33 and Ultra DMA/66, select Auto to enable BIOS support. The settings are: Auto, Disabled.

### IDE HDD Block Mode

Block mode is also called block transfer, multiple commands, or multiple sector read/write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read/writes per sector the drive can support. The settings are: Enabled, Disabled.

## 3-7-2 OnChip Device Function

Phoenix - AwardBIOS CMOS Setup Utility  
OnChip Device Function

VIA LAN Function	Enabled	Item Help	
VIA LAN BootROM	Disabled		
VIA LAN BootROM Boot Option	Hook INT19	Menu Level >>	
VIA LAN BootROM PXERPL Option	PXE		
Current VIA MAC Address is	003018-xxxxxx		
VIA MAC Address Input	Press Enter		
AC97 Sound Device	Auto		
Game Port Address	200		
Midi Port Address	Disabled		
Midi Port IRQ	10		
USB Host Controller	Enabled		
USB 2.0 Support	Enabled		
USB Device Legacy Support	Always Off		
USB Keyboard Legacy Support	Disabled		
USB Mouse Legacy Support	Disabled		
↑↓→← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults			

### AC97 Sound Device

This item allows you to decide to enable/disable the chipset family to support AC97 Audio. The settings are: Enabled, Disabled, Auto.

### USB Host Controller

Select *Enabled* if your system contains a Universal Serial Bus (USB) controller and you have a USB peripherals. The settings are: Enabled, Disabled.

### USB Keyboard/Mouse Legacy Support

Select *Enabled* if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard. The settings are: Enabled, Disabled.

## 3-7-3 Onboard Super IO Function

Phoenix - AwardBIOS CMOS Setup Utility

### Onboard Super IO Function

Onboard FDD Controller	Enabled	Item Help	
Onboard Serial Port 1	3F8/IRQ4		
Onboard Serial Port 2	2F8/IRQ3	Menu Level >>	
Onboard Fast IR	Disabled		
Fast IR IRQ	11		
Fast IR DMA	6		
Onboard Parallel Port	378/IRQ7		
Parallel Port Mode	SPP		
EPP Mode Select	EPP1.7		
ECP Mode Use DMA	3		
↑↓→← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults			

#### Onboard FDD Controller

Select Enabled if your system has a floppy disk controller (FDD) installed on the system board and you wish to use it. If you install add-on FDC or the system has no floppy drive, select Disabled in this field. The settings are: Enabled and Disabled.

#### Onboard Serial Port 1/Port 2

Select an address and corresponding interrupt for the first and the second serial ports. The settings are: 3F8/IRQ4, 2E8/IRQ3, 3E8/IRQ4, 2F8/IRQ3, Disabled, Auto.

#### Onboard Fast IR

This item allows you to Enabled Fast InfraRed (IR) function of the onboard I/O chip, when enabled this function user must install driver the driver is in CD Pack\VIA\VIAFIR.

#### Onboard Parallel Port

There is a built-in parallel port on the on-board Super I/O chipset that Provides Standard, ECP, and EPP features. It has the following option:

##### Disabled

- (3BCH/IRQ7)/ Line Printer port 0
- (278H/IRQ5)/ Line Printer port 2
- (378H/IRQ7) Line Printer port 1

#### Parallel Port Mode

- SPP : Standard Parallel Port
- EPP : Enhanced Parallel Port
- ECP : Extended Capability Port

##### SPP/EPP/ECP/ECP+EPP

To operate the onboard parallel port as Standard Parallel Port only, choose "SPP." To operate the onboard parallel port in the EPP modes simultaneously, choose "EPP." By choosing "ECP", the onboard parallel port will operate in ECP mode only. Choosing "ECP+EPP" will allow the onboard parallel port to support both the ECP and EPP modes simultaneously. The ECP mode has to use the DMA channel, so choose the onboard parallel port with the ECP feature. After selecting it, the following message will appear: "ECP Mode Use DMA" at this time, the user can choose between DMA channels 3 to 1. The onboard parallel port is EPP Spec. compliant, so after the user chooses the onboard parallel port with the EPP function, the following message will be displayed on the screen: "EPP Mode Select." At this time either EPP 1.7 spec. or EPP 1.9 spec. can be chosen.

## 3-8 Power Management Setup

The Power Management Setup allows you to configure your system to most effectively save energy saving while operating in a manner consistent with your own style of computer use.

Phoenix - AwardBIOS CMOS Setup Utility

Power Management Setup

ACPI Function	Enabled	Item Help
Video Off Option	Always Off	
Video Off Method	V/H SYNC+Blank	Menu Level >
MODEM Use IRQ	3	
Power Button Function	Instant Off	
State after Power Failure	Always Off	
> Wake Up Events	Press Enter	
↑↓→← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults		

### ACPI Function

This item allows you to Enabled/Disabled the Advanced Configuration and Power Management (ACPI). The settings are Enabled and Disabled.

### Video Off Method

This determines the manner in which the monitor is blanked.

**V/H SYNC+Blank** (Default) This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.

**Blank Screen** This option only writes blanks to the video buffer.

**DPMS** Initial display power management signaling.

### Modem Use IRQ

This determines the IRQ in which the MODEM can use.

The settings are: 3, 4, 5, 7, 9, 10, 11, NA.

### Power Button Function

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state. The settings are: Delay 4 Sec, Instant-Off.

### State After Power Failure

This determines the manner when the power recovery after power failure. The setting are: Always Off, Always On.

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## 3-8-1 Wake Up Events

Phoenix - AwardBIOS CMOS Setup Utility

### Wake Up Events

VGA	Off	Item Help
LPT&COM	LPT/COM	
HDD&FDD	ON	
PCI Master	OFF	Menu Level >>
Wake-Up on Ring/LAN	Disabled	
Wake-Up on PCI PME	Disabled	
PS2KB Wakeup Selection	Hot Key	
PS2KB Wakeup from S1-S5	Disabled	
Wake-Up on RTC Alarm	Disabled	
Date of Month Alarm	0	
Time (hh:mm:ss)	0:0:0	
> IRQS Activities	Press Enter	

↑↓→← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help  
F5:Previous Values F6:Optimized Defaults F7:Standard Defaults

### Wake Up by PCI PME

This will enable the system to wake up to PCI LAN Card.  
The settings are: Enabled and Disabled.

### Power On by Ring/LAN

During Disabled, the system will ignore any incoming call from the modem/LAN. During Enabled, the system will boot up if there's an incoming call from the modem/LAN.

### Wake-Up on RTC Alarm

This function is for setting date and time for your computer to boot up. During Disabled, you cannot use this function. During Enabled, choose the Date and Time Alarm:

#### Date(of month) Alarm

You can choose which month the system will boot up. Set to 0, to boot every day.

#### Time(hh:mm:ss) Alarm

You can choose what hour, minute and second the system will boot up.

**Note:** If you have change the setting, you must let the system boot up until it goes to the operating system, before this function will work.

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## 3-9 PnP/PCI Configuration Setup

This section describes configuring the PCI bus system. PCI, or Personal Computer Interconnect, is a system which allows I/O devices to operate at speeds nearing the speed the CPU itself uses when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

Phoenix - AwardBIOS CMOS Setup Utility  
PnP/PCI Configurations

PNP OS Installed	No	Item Help
Reset Configuration Data	Disabled	
Resources Controlled By	Manual	
> IRQ Resources	Press Enter	
PCI/VGA Palette Snoop	Disabled	
Assign IRQ for VGA	Enabled	
Assign IRQ for USB	Enabled	
↑↓→← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults		

### Reset Configuration Data

Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system can not boot. The settings are: Enabled and Disabled.

### Resource Controlled By

The Award Plug and Play BIOS has the capacity to automatically configure all of the boot and Plug and Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug and Play operating system such as Windows®95/98. If you set this field to "manual" choose specific resources by going into each of the sub menu that follows this field (a sub menu is preceded by a ">").

The settings are: Auto(ESCD), Manual.

### IRQ Resources

When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

### PCI/VGA Palette Snoop

Leave this field at *Disabled*. The settings are Enabled, Disabled.

## 3-10 PC Health Status

This section shows the Status of you CPU, Fan, Warning for overall system status. This is only available if there is Hardware Monitor onboard.

Phoenix - AwardBIOS CMOS Setup Utility

### PC Health Status

Current CPU Temp	49°C	Item Help
Current System Temp	35°C	
Current Fan 1 Speed	5649 RPM	Menu Level >
Current Fan 2 Speed	4510 RPM	
CPU Vcore	1.377V	
3.3V	3.348V	
+12V	12.077V	
Internal VCC	3.348V	
↑↓→← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults		

### Current FAN1, FAN2 Speed/CPU Vcore/3.3V/+12V/Internal VCC

This will show the CPU/FAN/System voltage chart and FAN Speed.

## 3-11 Miscellaneous Control

This section is for setting CPU Miscellaneous Control.

Phoenix - AwardBIOS CMOS Setup Utility

### Miscellaneous Control

VIA C3 Clock Ratio	Default	Item Help
Auto Detect PCI/DIMM Clock	Enabled	
Spread Spectrum	Disabled	Menu Level >
** Current Host/PCI Clock is		
Host/PCI Clock at Next Boot is	100	
** Current DRAM Clock is 133MHz **		
DRAM Clock at Next Boot is	133MHz	
+2.5V Select	2.65V	
↑↓→← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults		

### CPU Clock Ratio

This item allows you to select the CPU ratio.

### Auto Detect PCI/DIMM Clock

This item allows you to enable/disable auto detect PCI/DIMM Clock.

The settings are: Enabled, Disabled.

### Spread Spectrum

This item allows you to set the Spread Spectrum.

### Host/PCI Clock at Next Boot is

This item allows you to select the CPU/PCI Clock.

By press PageDown/PageUp key you can change the CPU Host/PCI Clock

When jumper setting CPU Host Clock 66MHz you can choose 66/33~99/49MHz

When jumper setting CPU Host Clock 100MHz you can choose 100/33~132/44MHz

When jumper setting CPU Host Clock 133MHz you can choose 133/33~200/50MHz

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## 3-12 Load Standard/Optimized Defaults

### Load Standard Defaults

When you press <Enter> on this item, you get confirmation dialog box with a message similar to:

Load Standard Defaults (Y/N)? N

Pressing <Y> loads the BIOS default values for the most stable, minimal-performance system operations.

### Load Optimized Defaults

When you press <Enter> on this item, you get a confirmation dialog box with a message similar to:

Load Optimized Defaults (Y/N)? N

Pressing <Y> loads the default values that are factory settings for optimal performance system operations.

## 3-13 Set Supervisor/User Password

You can set either supervisor or user password, or both of them. The differences are:

**Supervisor password:** Can enter and change the options of the setup menus.

**User password:** Can only enter but do not have the right to change the options of the setup menus. When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

### ENTER PASSWORD:

Type the password, up to eight characters in length, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. 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 a password, just press <Enter> when you are prompted to enter the password. A message will confirm that the password will be disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

### PASSWORD DISABLED.

When a password has been enabled, you will be prompted to enter it every time you try to enter Setup. This prevents an unauthorized person from changing any part of your system configuration.

Additionally, when a password is enabled, you can also require the BIOS to request a password every time your system is rebooted. This would prevent unauthorized use of your computer.

You determine when the password is required within the BIOS Features Setup Menu and its Security option. If the Security option is set to “System”, the password will be required both at boot and at entry to Setup. If set to “Setup”, prompting only occurs when trying to enter Setup.



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## Chapter 4

### DRIVER & FREE PROGRAM INSTALLATION

Check your package and there is A MAGIC INSTALL CD included. This CD consists of all DRIVERS you need and some free application programs and utility programs. In addition, this CD also include an auto detect software which can tell you which hardware is installed, and which DRIVERS needed so that your system can function properly. We call this auto detect software MAGIC INSTALL.

### MAGIC INSTALL supports WINDOWS 95/98/98SE/NT4.0/2000/XP

Insert CD into your CD-ROM drive and the MAGIC INSTALL Menu should appear as below. If the menu does not appear, double-click MY COMPUTER / double-click CD-ROM drive or click START / click RUN / type X:\SETUP.EXE (assuming X is your CD-ROM drive).



**From MAGIC INSTALL MENU you may make 9 selections:**

1. VIA 4 IN 1      install VIA Service Pack 4 IN 1 driver
2. VGA            install VIA CN700 VGA driver
3. SOUND         install ALC/CMI Audio driver
4. LAN            install VIA VT6103 LAN-PHY Controller driver
5. USB2.0        install USB 2.0 driver
6. DIRECTX9      install Microsoft DirectX 9 driver
7. PC-CILLIN     install PC-CILLIN2006 anti-virus program
8. BROWSE CD    to browse the contents of the CD
9. EXIT            to exit from MAGIC INSTALL menu

Each selection is illustrated as below:

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## 4-1 VIA 4 IN 1 Install VIA Service Pack 4 IN 1 Driver

\* The path of the file is X:\VIA\DRIVER\VIAHYPERION4IN1456V.EXE

**IDE :** VIA ATAPI VENDOR SUPPORT DRIVER IS USED TO FIXED COMPATIBILITY ISSUE FOR IDE DEVICES

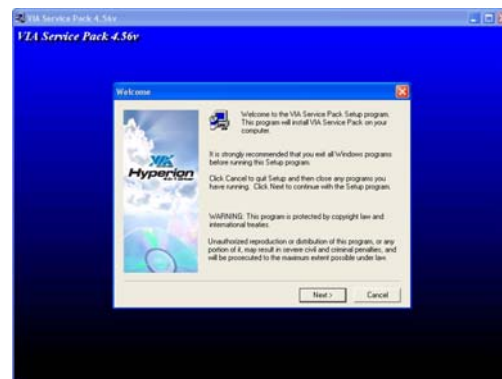
**AGPVXD :** VIA AGPVXD DRIVER IS TO BE INSTALLED, IF YOU ARE USING AN AGP VGA CARD, VIAGART.VXD WILL PROVIDE SERVICE ROUTINES TO YOUR VGA DRIVER AND INTERFACE DIRECTLY TO HARDWARE, PROVIDING FAST GRAPHIC ACCESS

**IRQ ROUTING :** VIA PCI IRQ MINIPOINT DRIVER IS TO BE INSTALLED UNDER WIN98 ONLY, IT WILL FIX PCI IRQ ROUTING SEQUENCE

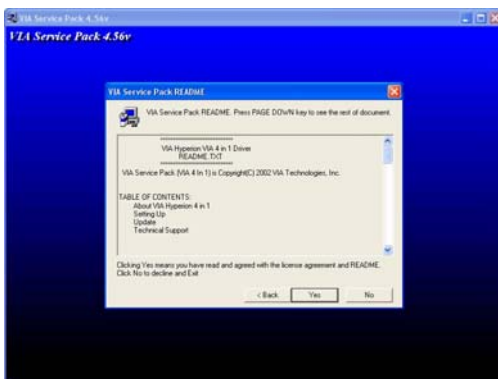
**INF :** VIA REGISTRY DRIVER IS TO BE INSTALLED UNDER WINDOWS THE DRIVER WILL ENABLE VIA POWER MANAGERMENT CONTROLLER



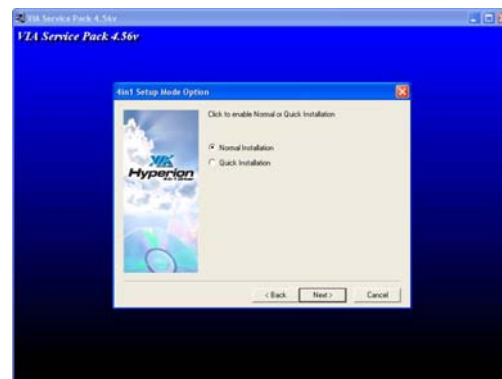
1. Click IDE when MAGIC INSTALL MENU appears



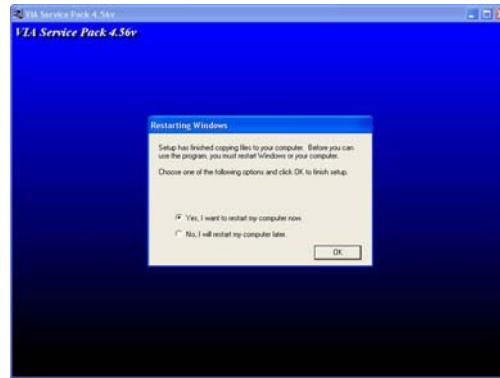
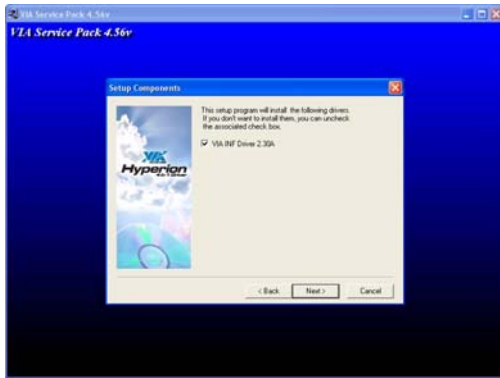
2. Click NEXT when VIA Service Pack Wizard appears



3. This is to announce the Copy Write, click Yes



4. Please select normal installation and Click NEXT



5. Click NEXT to Install ATAPI Vender Support Driver
6. Click OK and Restart your computer

## 4-2 VGA install VIA CN700 VGA Driver

For WINDOWS 9X/ME/NT4.0/2000/XP



1. Click VGA when MAGIC INSTALL MENU appears
2. Click NEXT When ProSavageDDR Driver Install Setup Wizard Appears

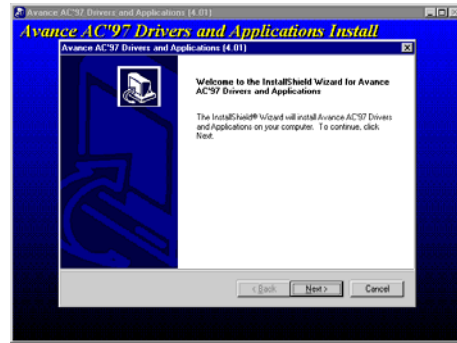


3. Click NEXT to Install Driver File
4. Click Finish to Restart Computer

## 4-3 SOUND install ALC AC97' Codec Audio Driver



1. Click SOUND when MAGIC INSTALL MENU appears



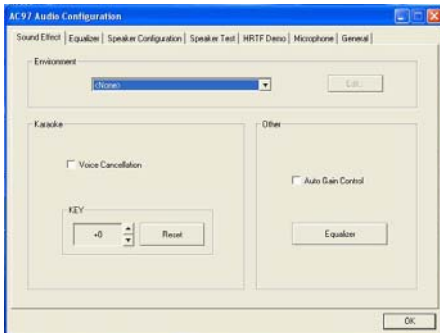
2. Click NEXT when the realtek AC97 Audio Setup windows appear



3. Click Finish and Restart Windows



4. Realtek AVRACK utility



5. Sound Effect select and Karaoke Mode Function



6. Manual Sound Effect Setting



7. This is 2/4/6 channel speakers configuration



8. This is 2/4/6 channel speakers position test setting

**Note: The path of the file**

**For WIN98/NT4.0/WIN2K/XP is X:\CODEC\ALC\SETUP.EXE**

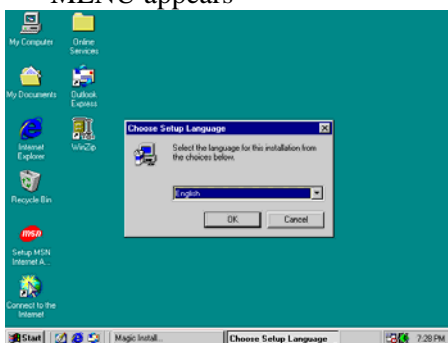
## 4-3-1 Sound Install CMI8738-6CH/C3DX PCI Audio Driver



1. Click SOUND when MAGIC INSTALL MENU appears



2. Click Install Device Driver and Applications



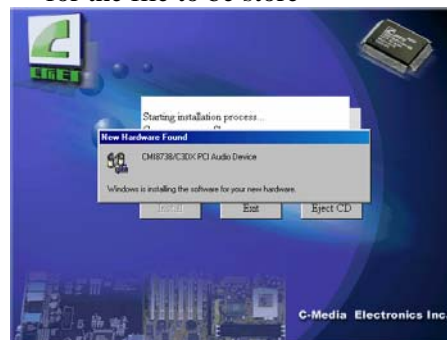
3. Choose English when Setup Language screen appears and Click OK



4. Click Next when copyright Issue appears, click Next or choose BROWSE to change the path for the file to be store



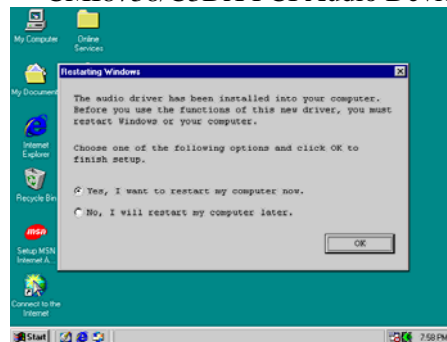
5. Choose another Program Folders for installing or click Next



6. OS will auto detect and set up C-Media CMI8738/C3DX PCI Audio Device



7. Select 2/4/5.1 Channel speaker output and Click EXIT



8. Click YES and restart computer

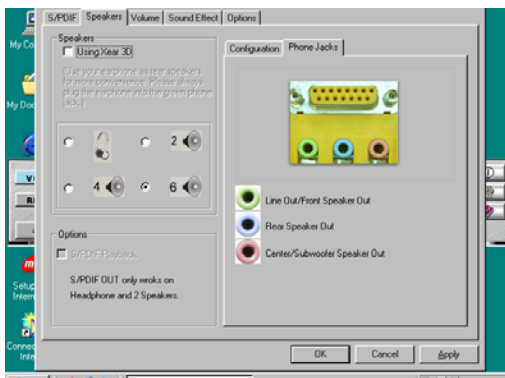




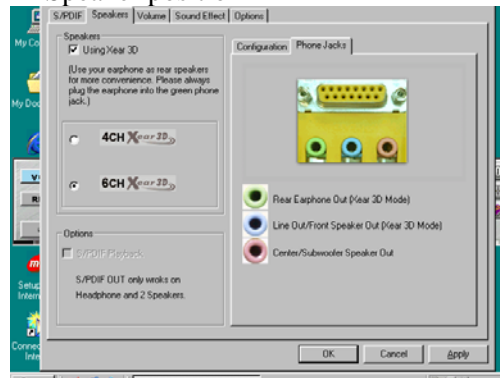
9. This is the C-Media Audio Rack Play table



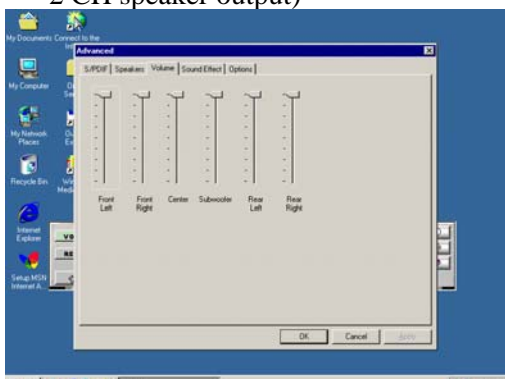
10. Click Start\Program\PCI Audio Application\Multi-Channel Audio Demo to test the 6CH Speaker position



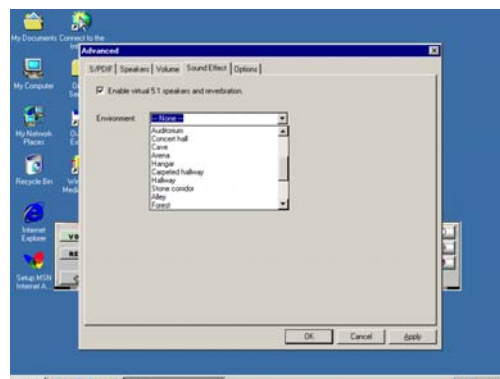
11. Click C-Media Mixer\Advanced\Speakers, this is the C-Media Audio speaker Configuration setting. (S/PDIF supports only 2 CH speaker output)



12. Enable **USING Xear 3D**, you can select 4/6 Speakers Xear Functions



13. Click C-Media Mixer\Advanced\volume, this is for the 6CH speaker volume Setting



14. By clicking C-Media Mixer\Advanced\Sound Effect selection. You can set up the Sound Environment Simulator

**NOTE:** **MAGIC INSTALL** will auto detect and install, or the file path is:  
**X:\CMI8738\SETUP.EXE (for WINDOWS 95/98/98SE/ME/NT4.0/2000/XP)**

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## 4-4 LAN Install VIA LAN Controller Driver

The VIA 10/100Mb PCI Ethernet Adapter Driver path is X:\VIA\LANDRV



1. Click LAN when Magic Install Menu appear
2. Click OK and finish LAN driver installation

## 4-5 USB2.0 Install VIA USB2.0 DEVICE DRIVER



1. Click USB2.0 when MAGIC INSTALL MENU Appear
2. When USB2.0 Setup Program Appear, Click NEXT

**Note:** Please Install Microsoft Service Pack 1 in Windows XP OS Before you Install VIA USB2.0 Device Driver.

Please Install Microsoft Service Pack 4 in Windows 2000 OS Before you Install VIA USB2.0 Device Driver.



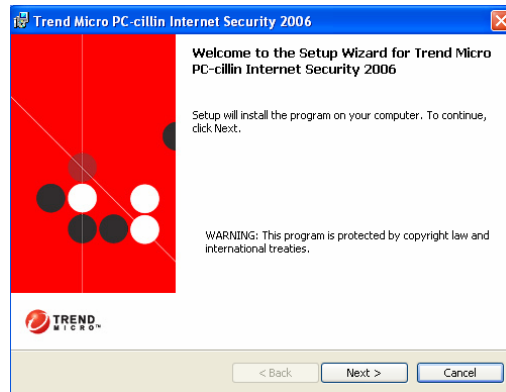
3. Select Install USB Driver and Click NEXT
4. Select FINISH and Restart your Computer

The Path of the file is X:\VIA\VIAUSB20\SETUP.EXE

## 4-6 PC-CILLIN Install PC-CILLIN 2006 Anti-virus program



1. Click PC-CILLIN when MAGIC INSTALL MENU appears



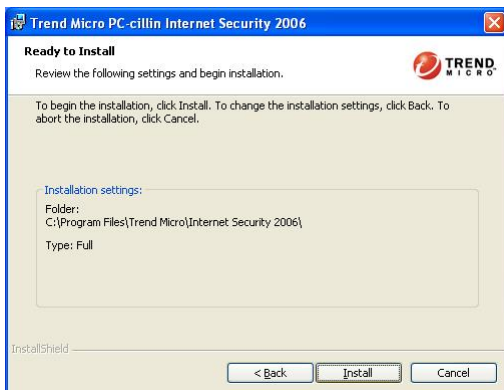
2. Please select "Install program" when the "Trend Micro internet security" installshield wizard windows appears



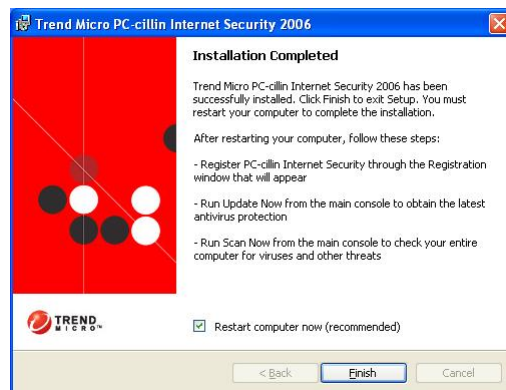
3. This is license agreement, select "I Accept the terms" and Click NEXT



4. Click NEXT or choose Change to change the path for the file to be stored



5. Click INSTALL, Start to install the software



Setup Complete and click FINISH

**Note :** Please install ACROBAT READER for reading PC-CILLIN 2006 User Manual which locates at the path "X:\acrobat\adberdr6\_enu\_full.exe".



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## 4-7 HOW TO DISABLE ON-BOARD SOUND

Enter BIOS SETUP choose INTEGRATE PERIPHERALS choose ON-CHIP DEVICE FUNCTION choose AC97 AUDIO

Disable on-board sound function by press PAGE DOWN KEY to Disable

## 4-8 HOW TO UPDATE BIOS

Before update BIOS users have to “Disable”, “Flash Part Write Protect” item which in “Miscellaneous Control” of BIOS SETUP. Otherwise the system the will not allow you to upgrade BIOS by Award Flash Utility.

**Method 1.** In DOS Mode

**STEP 1.** Prepare a boot disc. (you may make one by click START click RUN type SYS A: click OK)

**STEP 2.** Copy utility program to your boot disc. You may copy from DRIVER CD X:\FLASH\AWDFLASH.EXE or download from our web site.

**STEP 3.** Copy latest BIOS for 7F2WExxx/7F2Wxxx from our web site to your boot disc.

**STEP 4.** Insert your boot disc into A:,  
start the computer, type “Awdflash A:\ 7F2WExxx.BIN /SN /PY /CC /R”  
7F2WExxx.BIN is the file name of latest BIOS it can be 7F2WEA3.BIN or 7F2WE  
B2.BIN

SN means don't save existing BIOS data

PY means renew existing BIOS data

CC means clear existing CMOS data

R means restart computer

**STEP 5.** Push ENTER and the BIOS will be updated, computer will be restarted automatically