



Electronic Emission Notices

Federal Communications Commission (FCC) Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with instructions contained in this manual, may cause harmful interference to radio and television communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- REORIENT OR RELOCATE THE RECEIVING ANTENNA
- INCREASE THE SEPARATION BETWEEN THE EQUIPMENT AND THE RECEIVER
- CONNECT THE EQUIPMENT INTO AN OUTLET ON A CIRCUIT DIFFERENT FROM THAT OF THE RECEIVER
- CONSULT THE DEALER OR AN EXPERIENCED AUDIO/TELEVISION TECHNICIAN

NOTE: Connecting this device to peripheral devices that do not comply with Class B requirements, or using an unshielded peripheral data cable, could also result in harmful interference to radio or television reception.

The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

To ensure that the use of this product does not contribute to interference, it is necessary to use shielded I/O cables.

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Box Included Checklist

- ☒ Sapphire PI-AM2RS780G Motherboard
- ☒ Cable for ATA 133 IDE
- ☒ Sapphire Driver CD for Motherboard
- ☒ Cable for Serial ATA II
- ☒ Rear External I/O Shield
- ☒ Sapphire PE-AM2RS690MH Motherboard User's Manual

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.



Features of motherboard

The AMD 780G Series motherboards are based on the latest AMD780G Chipset and SB700 chipset which supports the new generation innovative 64-bit AMD Socket AM2+ dual core multi-tasking Socket AM2+ Athlon64 X2 processors and dual core AMD Phenom™ processors. With an integrated low-latency high-bandwidth DDR2 memory controller and the highly-scalable HT 3.0, AMD 780G Platform Processor Chipset motherboard series deliver the outstanding system performance and professional desktop platform solution with the advantages of new generation 64-bit AMD Socket AM2 Athlon64 X2 processors, AMD Phenom™ processors and the fully compatibility of the next generation operation system.

The AMD 780G Series motherboards support new generation Socket AM2+ processors with an integrated DDR2 memory controller which provides with 200MHz/333MHz/400MHz memory clock frequency for Dual channel DDR2 533 / DDR2 667 / DDR2 800 DDR2 Module up to 8.0GB. The whole motherboard series are embedded with SB700 chipset that provides ULTRA ATA 133 connectors and Serial ATA2 with RAID 0, 1 and RAID 10 functions which support up to two IDE devices and six Serial ATA2 devices to accelerate hard disk drives and guarantee the data security without failure in advanced computing performance.

The AMD 780G Chipset incorporates HD 3200 Graphics with a core frequency of 500MHz featured with DirectX10.0 compliant 2D/3D graphics processor, Maximum DAC frequency of 400 MHz Resolution up to 2560x1600 (Under condition), refresh rate up to 85MHz delivering incredible graphics and blistering performance. AMD™ 780G chipset provides incredible flexibility and unlimited upgrade potential as it supports all Radeon® PCI – E graphics cards on a system configured for either single GPU or next generation multimedia operation. Designed with ATI's unique architecture to optimize speed and stability, this solution is perfect for overclocking – without the need of additional cooling systems.

The 780G series motherboards provide 10/100/1000 LAN functions with Marvel M88E8056 PCI-E 10/100/1000 LAN. And the embedded Azalia 8-channel HD Audio CODEC is fully compatible with Sound Blaster Pro® standards that offer you with the home cinema quality and satisfying software compatibility.

The motherboards offer one PCI-Express 2.0 x16 graphics slot of 8Gbyte/sec data transfer rate at each relative direction which gets 2 times of bandwidth more than PCI-Express and it's up to a peak concurrent bandwidth of 8Gbyte/sec at full speed to guarantee the ultimate GPU computing performance. Two 32-bit PCI slots guarantee the rich connectivity for the I/O of peripherals; the motherboards are designed of tackling the profuse multimedia requirements nowadays. Users can enjoy the high-performance of Hybrid CrossFire function by utilizing the ATI VGA Card and the IGP in North bridge by program in driver.

Embedded USB controller as well as capability of expanding to 10 of USB2.0 functional ports delivering 480Mb/s bandwidth and rich connectivity, these motherboards meet the future USB demands which are also equipped with hardware monitor function on system to monitor and protect your system and maintain your non-stop business computing.

Some special features---**CPU Thermal Throttling/ CPU Vcore 7-shift / CPU Smart Fan/Debug Port** this motherboard are designed for power user to use the over-clocking function in more flexible ways. But please be caution that the over-clocking maybe cause the fails in system reliabilities. This motherboard provides the guaranteed performance and meets the demands of the next generation computing. But if you insist to gain more system performance with variety possibilities of the components you choose, please be careful and make sure to read the detailed descriptions of these value added product features, please get them in the coming section.

Special Features of Motherboard

CPU Smart Fan---(The Noise Management System (Only support 4-pin CPU cooler))

It's never been a good idea to gain the performance of your system by sacrificing its acoustics. CPU Smart Fan Noise Management System is the answer to control the noise level needed for now-a-day's high performance computing system. The system will automatically increase the fan speed when CPU operating loading is high, after the CPU is in normal operating condition, the system will low down the fan speed for the silent operating environment. The system can provide the much longer life cycle for both CPU and the system fans for game use and business requirements.

CPU Vcore 7-Shift--- (Shift to Higher Performance)

The CPU voltage can be adjusted up by 13 steps for the precisely over-clocking of extra demanding computing performance.

CPU Thermal Throttling Technology---(The CPU Overheat Protection Technology)

To prevent the increasing heat from damage of CPU or accidental shutdown while at high workload, the CPU Thermal Throttling Technology will force CPU to enter partially idle mode from 87.5% to 12.5% according to preset CPU operating temperature in BIOS (from 40°C to 90°C). When the system senses the CPU operating temperature reaching the preset value, the CPU operating bandwidth will be decreased to the preset idle percentage to cool down the processor. When at throttling mode the beeper sound can be optionally selected to indicate it is in working.

Specification

Spec	Description
Design	* Micro u-ATX form factor 4 layers PCB * size: 24.5 cm*22.0cm
Chipset	* AMD780G Chipset and AMD SB700 Chipset
CPU Socket AM2+	* Support 64bit AMD AM2+ 940-Pin Phenom processors * Support HT 3.0
Memory Socket	* 240-pin DDR2 Module socket x 4 * Support 4 pcs DDR2 533 / DDR2 667 / DDR2 800 Modules - Expandable to 8.0
Expansion Slot	* PCI-Express2.0 x16 slot 1pcs delivers up to 16 GB/s of concurrent bandwidth. * 32-bit PCI slot x 2 pcs
Integrate IDE and Serial ATA2 RAID	* One 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. * Four Serial ATA2 ports provide 300 MB/sec data transfer rate with RAID 0, 1, 10 functions.
Integrated VGA	* Integrated with HD3200 graphics * a core frequency of 500MHz * DirectX10 compliant 2D graphics processor * supported ATI innovated AVIVO Technology and Multiple Display configurations
LAN (Option)	* Integrated Marvel M88E8056 PCI-E 10/100 /1000 LAN chip * Supports Fast Ethernet LAN function provide 10/100/1000 Mb /s data transfer rate
Optional Audio	* 8-channelALC883 HD Audio Codec integrated * Support 8-channel 3D surround & Positioning Audio * Audio driver and utility included
BIOS	* Award 8MB SPI Flash ROM
Multi I/O	* PS/2 keyboard and PS/2 mouse connectors * Floppy disk drive connector x1 * 1* Parallel port of 25-pin Block / 1 * Serial port of 9-pin Block * 1 * VGA port / 1 * TV-OUT header * 1 * HDMI port (optional) /1 * DVI port * USB2.0 port x 4 and headers x 6 * Audio connector (Line-in, Line-out, MIC/ 8CH Audio)

- ✓ AMD780G Platform Processor Chipset based motherboard
- ✓ Cable for IDE
- ✓ CD for motherboard utilities
- ✓ Cable for Serial ATA IDE Port
- ✓ AMD780G Platform Processor Chipset motherboard User's Manual
- ✓ Dongle Connector (Optional) just for PA78GT3-HG

Hardware Installation

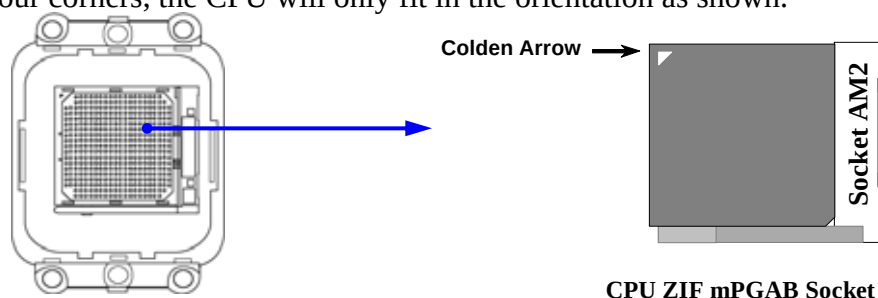
Install Socket AM2 Supported AMD Processor

This motherboard provides a 940-pin surface mount, Zero Insertion Force (ZIF) socket, referred to as the mPGA940 socket supports AMD Athlon64 processor in the 940 Pin package utilizes Flip-Chip Pin Grid Array package technology.

The CPU that comes with the motherboard should have a cooling FAN attached to prevent overheating. If this is not the case, then purchase a correct cooling FAN before you turn on your system.

WARNING! Be sure that there is sufficient air circulation across the processor's heatsink and CPU cooling FAN is working correctly, otherwise it may cause the processor and motherboard overheat and damage, you may install an auxiliary cooling FAN, if necessary.

To install a CPU, first turn off your system and remove its cover. Locate the ZIF socket and open it by first pulling the level sideways away from the socket then upward to a 90-degree angle. Insert the CPU with the correct orientation as shown below. The notched corner should point toward the end of the level. Because the CPU has a corner pin for two of the four corners, the CPU will only fit in the orientation as shown.



When you put the CPU into the ZIF socket, No force require to insert of the CPU, then press the level to Locate position slightly without any extra force.

Install Memory

The motherboards provide four / two 240-pin DDRII DUAL INLINE MEMORY MODULES (DIMM) sites for DDRII memory expansion available from minimum memory size of 128MB to maximum memory size of 8.0GB / 4.0GB DDRII SDRAM.

Valid Memory Configurations of 4-DIMM Design Motherboard

Bank	240-Pin DIMM	PCS	Total Memory
Bank 0, 1 (DIMM1)	DDRII400/DDRII533/DDRII667/DDRII800	X1	128MB~2.0GB
Bank 2, 3 (DIMM2)	DDRII400/DDRII533/DDRII667/DDRII800	X1	128MB~2.0GB
Bank 4, 5 (DIMM3)	DDRII400/DDRII533/DDRII667/DDRII800	X1	128MB~2.0GB
Bank 6,7 (DIMM4)	DDRII400/DDRII533/DDRII667/DDRII800	X1	128MB~2.0GB
Total	System Memory (Max. 8.0GB)	4	128MB~8.0GB

Recommend DIMM Module Combination

1. **One DIMM Module** ---Plug in DIMM1
2. **Two DIMM Modules**---Plug in DIMM1 and DIMM2 or DIMM3 and DIMM4 for Dual channel function of 4-DIMM Design motherboard and Plug in DIMM1 and DIMM2 for Dual channel function of 2-DIMM Design motherboard.
3. **Four DIMM Modules**---Plug in DIMM1/DIMM2/DIMM3/DIMM4.

For Dual channel Limited!

1. Dual channel function only supports when 2 DIMM Modules plug in either both DIMM1 & DIMM2 or DIMM3 & DIMM4, or four DIMM Modules plug in DIMM1~DIMM4 of 4-DIMM motherboard and 2 DIMM Modules plug in DIMM1 & DIMM2 of 2-DIMM Motherboard.
2. DIMM1 & DIMM2, or DIMM3 & DIMM4 of 4-DIMM motherboard, and DIMM1 & DIMM2 of 2-DIMM motherboard must be the same type, the same size, and the same frequency for dual channel function.

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 / 533 / 667 / 800 SDRAM module looks like.

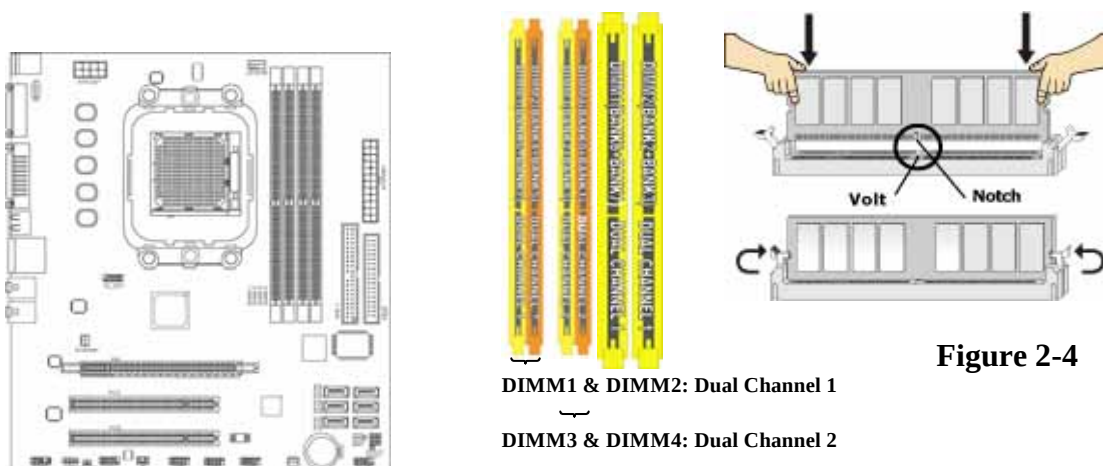


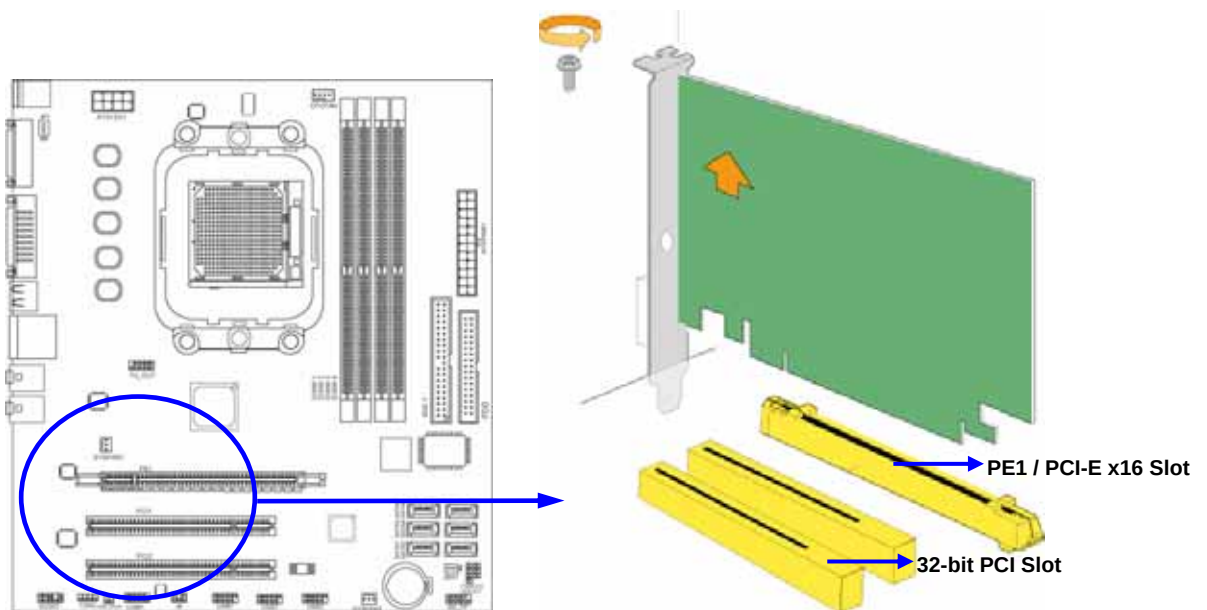
Figure 2-4

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

Expansion Cards

The motherboards offer one PCI-Express x16 graphics slot of 4Gbyte/sec data transfer rate at each relative direction which gets 3.5 times of bandwidth more than AGP 8X and it's up to a peak concurrent bandwidth of 8Gbyte/sec at full speed to guarantee the ultimate GPU computing performance. Two 32-bit PCI slots guarantee the rich connectivity for the I/O of peripherals; the motherboards are designed of tackling the profuse multimedia requirements nowadays. Users can enjoy the high-performance of Hybrid Graphics function by utilizing the ATI VGA Card and the IGP in North bridge by program in driver.

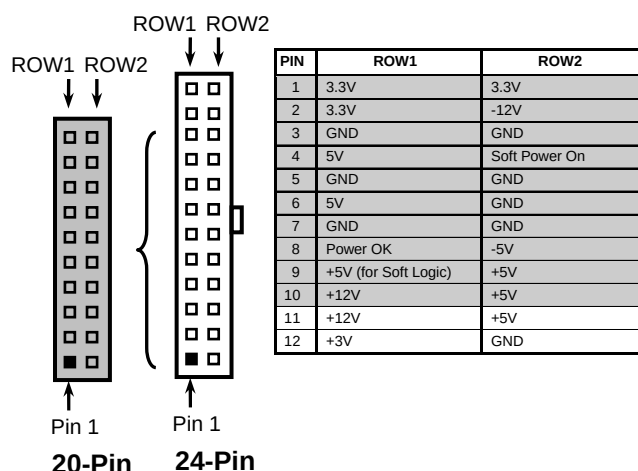


Connectors, Headers & Jumpers Setting

Connectors

(1) Power Connector (24-pinblock) : ATXPWR1

ATX Power Supply connector: This is a new defined 24-pins connector that usually comes with ATX case. The ATX Power Supply allows using 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.



** We recommend that you use an ATX 12V

Specification 2.0-compliant power supply unit (PSU) with a minimum of 350W power rating. This type has 24-pin and 4-pin power plugs.

** If you intend to use a PSU with 20-pin and 4-pin power plugs, make sure that the 20-pin power plug can provide at least 15A on +12V and the power supply unit has a minimum power rating of 350W. The system may become unstable or may not boot up if the power is inadequate.

(2) ATX 12V Power Connector (8-pin block) : ATX12V1

This is a new defined 8-pins connector that usually comes with ATX Power Supply. The ATX Power Supply which fully supports AM2 processor must including this connector for support extra 12V voltage to maintain system power consumption. Without this connector might cause system unstable because the power supply can not provide sufficient current for system.



(3) PS/2 Mouse & PS/2 Keyboard Connector: KB1

The connectors are for PS/2 keyboard and PS/2 Mouse

(4) USB Port connector: CN5

The connectors are 4-pin connectors that connect USB devices to the system board.

(5) LAN Port connector: UL1

This connector is standard RJ45 connector for Network The USBLAN1 support 10M/100Mb/1000Mb s data transfer rate

(6) Audio Line-In, Lin-Out, MIC, Surrback, Surround, CEN/LEF Connector: SURROUND1 / CN1

This Connector are 6 phone Jack for LINE-OUT, LINE-IN, MIC, Surrback, Surround, CEN/LEF

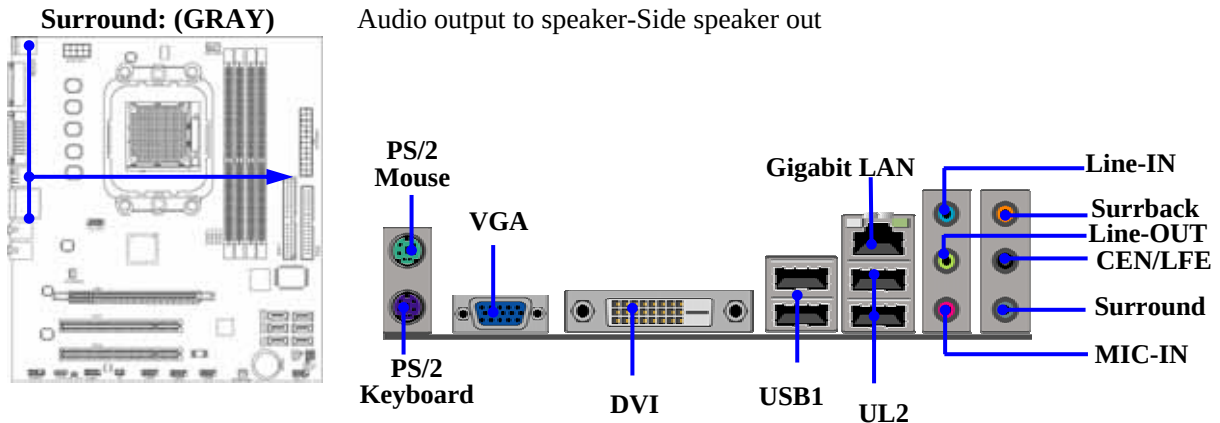
Line-in : (BLUE) Audio input to sound chip

Line-out : (GREEN) Audio output to speaker

MIC : (PINK) Microphone Connector

Surrback : (ORANGE) Audio output to speaker-Rear speaker out

CEN/LEF : (BLACKNESS) Audio output to speaker-Center/Subwoofer speaker out

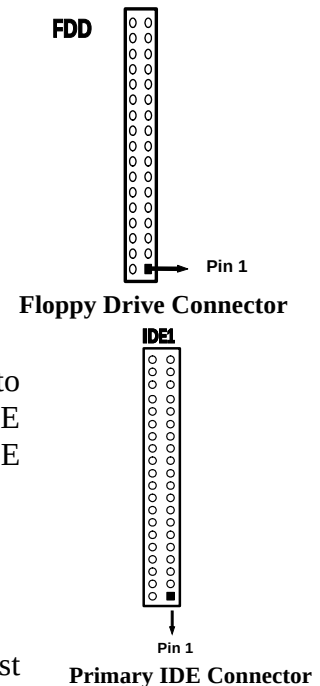


(7) Floppy drive Connector (34-pin block): FDD1

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.

(8) Primary IDE Connector (40-pin block): IDE1

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.

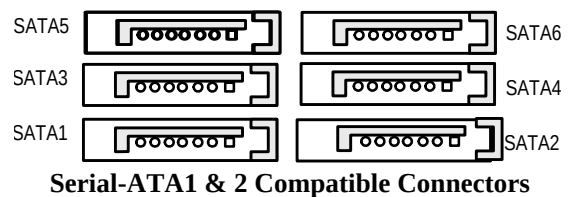


- Two hard disks can be connected to each connector. The first HDD is referred to as the “Master” and the second HDD is referred to as the “Slave”.
- For performance issues, we strongly suggest you don’t install a CD-ROM or DVD-ROM drive on the same IDE channel as a hard disk. Otherwise, the system performance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

(9) Serial-ATA Port connector:

SATA1 / SATA2 / SATA3/ SATA4/ SATA5/ SATA6

These connectors support the provided Serial ATA and Serial ATA2 IDE hard disk cable to connecting the motherboard and serial ATA hard disk.



(10) D-Sub 15-pin Connector: VGA

VGA is the 15-pin D-Subminiature female connector; it is for the display devices, such as the CRT monitor, LCD monitor and so on.

(11) **DVI:** Digital Visual Interface

This interface standard designed to maximize the visual quality of digital display devices such as flat panel LCD computer displays and digital projectors.

(12) **HDMI:** High-Definition Multimedia Interface (**Optional**)

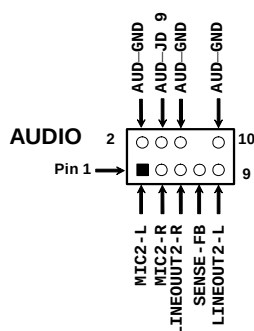
This point-to-point interface is for audio and video signals designed as a single-cable solution for home theater and consumer electronics equipment. Inset the “Dongle Connector” on the DVI Connector, transferring the DVI Connector to HDMI Connector.



Headers

(1) **Line-Out/MIC Header for Front Panel (9-pin): AUDIO1**

These headers connect to Front Panel Line-out, MIC connector with cable. Without install the cable, this header default setting is 5-6 short, 9-10 short. When you install the cable you have take off these jumpers.

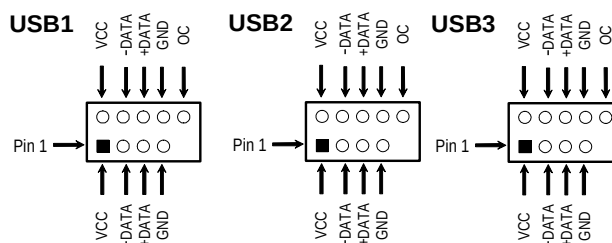


Line-Out, MIC Headers
ALC883

(2) **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.



USB Port Headers

(3) Speaker connector: SPEAK1

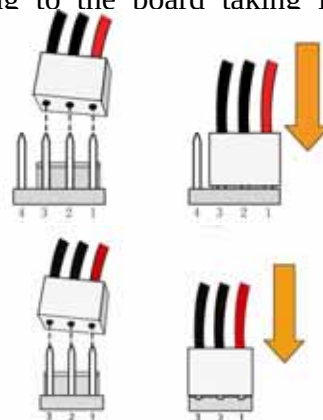
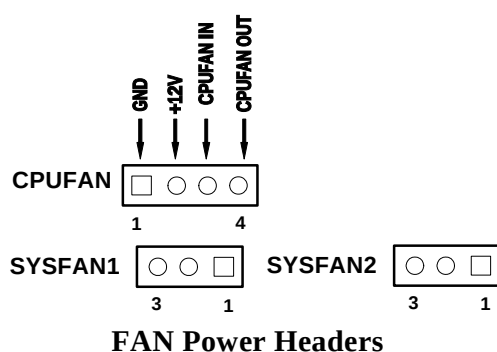
This 4-pin connector connects to the case-mounted speaker. See the figure below.

(4) Power LED: PWR LED1

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

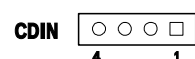
(5) FAN Power Headers: SYSFAN1, SYSFAN2 (3-pin), CPUFAN (4-pin)

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.



(6) CD Audio-In Headers (4-pin) : CDIN

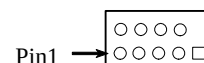
CDIN are the connectors for CD-Audio Input signal. Please connect it to CD-ROM CD-Audio output connector.



CD Audio-In Headers

(7) Serial COM Port Header: COM1

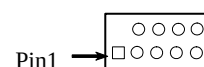
COM1 is the 9-pin block pin-header. The On-board serial port can be disabled through BIOS SETUP.



Serial COM Port 9-pin Block

(8) TV-OUT Header

TV-OUT is the 9-pin block pin-header. TV-out is commonly used to label the connector of equipment offering an analog video signal that is acceptable for a television AV input.



TV-OUT Conn. 9-pin Block

Starting Up Your Computer

1. After all connection 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.

Useful Setup

BIOS Setup

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.

Entering Setup

Power on the computer and by pressing 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 to enter Setup

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>.

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 Advanced BIOS Features Advanced Chipset Features Integrated Peripherals Power Management Setup Miscellaneous control PC Health Status	Power User Overclock settings CPU Thermal Throttling Setup Password Settings Load Fail-Safe Defaults Load Optimized Defaults Save & Exit Setup Exit Without Saving
Esc : Quit F9 : Menu in BIOS ↑↓→← : Select Item F10 : Save & Exit Setup	

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.

PC Health Status

This entry shows your PC health status.

CPU Thermal Throttling Setting

The selection is set for activating the active CPU Thermal Protection by flexible CPU loading adjustment in the arrange of temperature you define.

Load Fail-Safe Defaults

This menu uses a minimal performance setting, but the system would run in a stable way.

Load Optimized Defaults

Use this menu to load the BIOS default values these are setting for optimal performances system operations for performance use.

Password Setting

This entry for setting Supervisor password and User password

Save & Exit Setup

Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

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

Standard CMOS Features		Item Help
Date (mm.dd.yy)	00* 00 * 00	
Time (hh:mm:ss)	16 : 48 : 35	Menu Level > Change the day, month, year and century
> IDE Channel 0 Master	None	
> IDE Channel 0 Slave	None	
SATA Channel 1	None	
SATA Channel 2	None	
SATA Channel 3	None	
SATA Channel 4	None	
SATA Channel 5	None	
SATA Channel 6	None	
Drive A	1.44M, 3.5 in.	
Halt On	All Errors	
Base Memory	640K	
Extended Memory	1047552K	
Total Memory	1048476K	
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe Defaults F7:Optimized 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>.

IDE Channel 0 Master / Channel 0 Slave

SATA Channel 1, 2, 3, 4, 5, 6

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 the type of hard disk drives 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

Advanced BIOS Features

Phoenix – AwardBIOS CMOS Setup Utility

Advanced BIOS Features

CPU Feature	Press Enter	Item Help
Hard Disk Boot Priority	Press Enter	
Virus Warning	Disabled	Menu Level >
CPU Internal Cache	Enabled	
External Cache	Enabled	
Quick Power On Self Test	Enabled	
First Boot Device	Hard Disk	
Second Boot Device	CD-ROM	
Third Boot Device	Floppy	
Boot other Device	Enabled	
Boot Up Floppy Seek	Disable	
Boot Up NumLock Status	On	
Typematic Rate Setting	Disabled	
* Typematic Rate (Chars/Sec)	6	
* Typematic Delay (Msec)	250	
Security Option	Setup	
APIC Mode	Enabled	
MPS Version Control For OS	1.4	
OS Select For DRAM > 64MB	Non-OS2	
HDD S.M.A.R.T. Capability	Disabled	
Small Logo (EPA) Show	Enabled	
↑↓↔← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe Defaults F7:Optimized Defaults		

Hard Disk Boot Priority

The selection is for you to choose the hard disk drives priorities to boot from.

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 Internal Cache

The default value is Enabled.

Enabled (default) Enable cache

Disabled Disable cache

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

External Cache

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

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, LAD and 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.

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.

ACPI Mode

This option allow you to enable the ACPI Mode (Advanced Configuration and Power Interface). You can choose from Enabled and Disabled.

HDD S.M.A.R.T Capability

This option allow you to enable the HDD S.M.A.R.T Capability (Self-Monitoring, Analysis and Reporting Technology) . You can choose from Enabled and Disabled.

MPS Version Control For OS 1.4

This option is only valid for multiprocessor motherboards as it specifies the version of the Multiprocessor Specification (MPS) that the motherboard will use.

OS Select For DRAM > 64MB

Allows OS2® 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®.

Small Logo (EPA) Show

The selection is for you to choose the EPA small logo to show or not.

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

DRAM Configuration	[press enter]	Item Help
HT Link Control	[press enter]	
PCIE Configuration	[press enter]	Menu Level >
IGX Configuration	[press enter]	
HDMI Audio	Disabled	
NB Power Management	Auto	
Memory Hole	Disabled	
System BIOS Cacheable	Disabled	
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe Defaults F7:Optimized Defaults		

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.

DRAM Configuration

Phoenix – AwardBIOS CMOS Setup Utility

DRAM Configuration

(CASL)CAS# latency	Auto	Item Help
DRAM Command Rate	2T	
DCTs Mode	Unganged	Menu Level >>
CKE base Power down Mode	Enabled	
CKE based powerdom	per channel	
Memclock tri-stating	Disabled	
Memory Hole Remapping	Eabled	
Auto Optimize Bottom IO	Enabled	
*Bottom of {31:24}IO	C0	
DDRII Timing Item	Disabled	
* Tw Tr Command delay	3 bus clock	
* Trfc 0 for DIMM 0	75ns	
* Trfc 1 for DIMM 1	75ns	
* Trfc 2 for DIMM 2	75ns	
* Trfc 3 for DIMM 3	75ns	
↑↓↔← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe Defaults F7:Optimized Defaults		

CAS # Latency

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing. The settings are: Auto,3, 4 and 5.

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.

Row 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 date. *Fast* gives faster performance; and *Slow* gives more stable performance. This field applies only when synchronous DRAM is installed in the system.

HT Link Control

Phoenix - AwardBIOS CMOS Setup Utility

HT link Control

HT link Width	Auto	Item Help	
HT link Frequency	Auto		
CLMC Support	Disabled	Menu Level >	
X CDLC	Disabled		
X CDLD	Disabled		
X CDLW	Disabled		
X CDLF	Disabled		
X CDIR	Disabled		
X CDLR	Disabled		
X CDLRInt	00		
X CDLRlen	23		
IH Flow Control Mode	Disabled		
HT link Trislate	Disabled		
Unit ID Clumping	Auto		
2x LCLK Mode	Disabled		
↑↓↔← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe Defaults F7:Optimized Defaults			

PCIE Configuration

Phoenix - AwardBIOS CMOS Setup Utility

PCIE Configuration

Primary Dual Slot Config	Auto	Item Help
GPP Slots Power Limit,w	25	
>GFX Port 1	press Enter	Menu Level >
>GPP1	Press Enter	
>NB-SB Port Features	Press Enter	
↑↓↔ Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe Defaults F7:Optimized Defaults		

Integrated Peripherals

Phoenix – AwardBIOS CMOS Setup Utility

Integrated Peripherals

CIMx-SB700 Revision	2.5.0	Item Help
> SuperIO Function Setup	Press Enter	Menu Level >
> Onboard Devices	Press Enter	
> Onchip IDE Device	Press Enter	
> Onchip SATA Device	Press Enter	
↑↓←→ Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe Defaults F7:Optimized Defaults		

Super IO Device

Please refer to section 3-7-1

OnChip IDE Device

Please refer to section 3-7-2

OnChip SATA Device

Please refer to section 3-7-3

Super IO Function Setup

Phoenix – AwardBIOS CMOS Setup Utility

Super IO Function Setup

Onboard FDC Controller	Enabled	
Onboard Serial Port1	3F8/IRQ4	
UART Mode Select	IrDA	
Onboard Parallel Port	378/IRQ7	
IrDA Duplex Mode	Half	Menu Level >>
PWR0M After PWR-Fail	[OFF]	
↑↓↔← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe Defaults F7:Optimized Defaults		

Onboard FDC 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

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

UART Mode Select

This item allows you to determine which InfraRed(IR) function of the onboard I/O chip, this functions uses.

IrDA Duplex Mode

This field is available when UART Mode is set to either ASKIR or IrDA. This item enables you to determine the infrared function of the onboard infrared chip. The options are Full and Half (default). Full-duplex means that you can transmit and send information simultaneously. Half-duplex is the transmission of data in both directions, but only one direction at a time.

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.

Poweron After Power Failure

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

Onchip IDE Function

Phoenix - AwardBIOS CMOS Setup Utility

OnChip IDE Function

IDE HDD Block Mode	Enabled	Item Help
IDE DMA transfer	Enabled	
Primary Master PIO	Auto	Menu Level >>
Primary Slave PIO	Auto	
Primary Master UDMA	Auto	
Primary Slave UDMA	Auto	
↑↓↔← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe Defaults F7:Optimized Defaults		

Primary Master/Slave PIO

The two IDE PIO (Programmed Input/Output) fields let you set a PIO mode (0-2) for each of the two IDE devices that the onboard IDE interface supports. Modes 0 through 2 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.

Primary 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.

Onchip SATA Controller

This item allows you to control Serial ATA controller.

Onboard Devices

Phoenix - AwardBIOS CMOS Setup Utility

OnChip PCI Device

Onboard PCIE LAN	Enabled	Item Help
Onboard Lan Rom	Disabled	
HD Audio	Enable	Menu Level >>
Onchip USB Controller	Enabled	
USB EHCI Controller	Enabled	
USB Keyboard Support	Enabled	
↑↓↔← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe Defaults F7:Optimized Defaults		

Onboard LAN device (Enabled)

This option allows you to control the onboard LAN device.

HD Audio

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

Onchip USB Controller System

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

USB Device Support

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

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
ACPI Suspend Type	S1(POS)	
C2 Disabled /Enabled	Disabled	Menu Level >
Power Management Option	User Define	
HDD Power Down	Disabled	
Video Off Option	[suspend -> off]	
Video off Method	V/H SyNC + BLANK	
Modem Use IRQ	3	
Soft-OFF by PWRBTN	Instant off	
Power On by PCI Card	Disabled	
Power Fail Status	HardWare Strap	
Modem Ring Resume	Disabled	
APCI XSDT Table	Enabled	
HPET Support	Enabled	
Power On By Keyboard	Disabled	
Power On By Mouse	Disabled	
RTC Alarm Resume	Disabled	
*Date(of Month)	0	
*Resume Time (hh:mm:ss)	0:0:0	
↑↓↔← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe Defaults F7:Optimized Defaults		

ACPI Function

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

HDD Power Down (Disabled)

The IDE hard drive will spin down if it is not accessed within a specified length of time.Options are from 1 Min to 15 Min and Disable.

Video Off Method

This determines the manner in which the monitor is blanked.

DPMS (default) Initial display power management signaling.

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

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

.MODEM Use IRQ

If you want an incoming call on a modem to automatically resume the system from a power-saving mode, use this item to specify the interrupt request line (IRQ) that is used by the modem. You might have to connect the fax/modem to the motherboard Wake On Modem connector for this feature to work.

Soft-Off by PWRBTN

Under ACPI (Advanced Configuration and Power management Interface) you can create a software power down. In a software power down, the system can be resumed by Wake up Alarms. This item lets you install a software power down that is controlled by the power Button on your system. If the item is set to Instant-Off, then the power button causes a software power down. If the item is set to Delay 4 Sec, then you have to hold the power button down for four seconds to cause a software power down.

RTC Alarm Resume

When set to Enabled, additional fields become available and you can set the date (day of the month), hour, minute and second to turn on your system. When set to 0 (zero) for the day of the month, the alarm will power on your system every day at the specified time .

Date (of month)

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

Time (hh:mm:ss)

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.

Miscellaneous

Phoenix - AwardBIOS CMOS Setup Utility

Miscellaneous Control

Init Display First	PCI Ex	Item Help
Reset Configuration Data	Disabled	
Resource Controlled by	Auto [ESCD]	Menu Level >
* IRQ Resource	Press Enter	
PCI/VGA Palette Snoop	Disabled	
Assign IRQ for VGA	Enabled	
Assign IRQ for USB	Enabled	
PCI Latency Timer (CLK)	[64]	
* PCI Express Relative Items		
Maximum Payload Size	4096	
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe Defaults F7:Optimized Defaults		

Reset Configuration Data

If you enable this item and restart the system, any Plug and Play configuration data stored in the BIOS Setup is cleared from memory.

Init Display First

Use this item to specify whether your graphics adapter is installed in one of the PCI E slots or is integrated on the motherboard. If a PCI E graphics card is installed, the onboard VGA will be disabled.

PCI/VGA Palette Snoop

This item is designed to overcome problems that can be caused by some non-standard VGA cards. This board includes a built-in VGA system that does not require palette snooping so you must leave this item disabled.

Assign IRQ For USB

Names the interrupt request (IRQ) line assigned to the USB on your system. Activity of the selected IRQ always awakens the system.

IRQ Resources

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

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

Show H/W Health in Post	Enabled	Item Help
Shutdown Temperature	Disabled	
SMART FAN Configuration	Press Enter	Menu Level >
Vcc3.3	3.37v	
Vcore	1.27V	
NBVCC	1.08V	
+5V	5.24V	
+12V	12.55V	
5VSB	5316V	
VDIMM	1.96V	
CPU Temperature	41°C	
System Temperature	34°C	
CPUFAN	3625RPM	
SYSFAN1	0 RPM	
SYSFAN2	0 RPM	
↑↓↔← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe Defaults F7:Optimized Defaults		

Show PC Health in Post

During Enabled, it displays information list below. The choice is either Enabled or Disabled

Shutdown Temperature

This item can let users setting the Shutdown temperature, when CPU temperature over this setting the system will auto shutdown to protect CPU.

PS CPU Smart FAN Configurations

CPU Full-Speed Temp

This item allows you setting the FAN works in full speed when the temperature over the value which out set. If the temperature below the value but over the Idle Temperature, the FAN will works over 60% of full speed, and the higher temperature will gain higher FAN speed, after over the temperature which this item setting, the FAN works in full speed.

CPU Idle Temp

This item allows you setting the FAN works in 60% of full speed, when the temperature lower than the temperature which you setting.

CPU Temperature/ System Temperature / NBTemperature /SYSFAN1, FAN2 Speed/Vcore/ Vdd/3.3V/+5V/+12V/-12V/VBAT(V)/5VSB(V)

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

Power User Overclock Settings

Phenix - AwardBIOS CMOS Setup Utility

Power User Overclock Settings

CPU/HT Reference Clk(MHz) 200 PCIE Reference clock 100 SB Reference clock 100 CPU Ratio at Next Boot Auto AMD K8 Cool&Quiet control Auto CPU Voltage at Next Boot Default CPU Vcore 7-shift Normal VDIMM Select 1.95v NB Voltage Setting Default Memory Clock Mode Auto *Memory Clock at Next Boot DDR 800	Item Help CPU/HT Reference Clk Min=190 Max=600 Key in a DEC number :[] ↑↓:Move ENTER:Accept ESC:Abort Menu Level >
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe Defaults F7:Optimized Defaults	

CPU Ratio at Next Boot

Phoenix - AwardBIOS CMOS Setup Utility

Power User Overclock Settings

CPU/HT Reference Clk(MHz) 200 PCIE Reference clock 100 SB Reference clock 100 CPU Ratio at Next Boot Auto AMD K8 Cool&Quiet control Auto CPU Voltage at Next Boot Default CPU Vcore 7-shift Normal VDIMM Select 1.95v NB Voltage Setting Default Memory Clock Mode Auto *Memory Clock at Next Boot DDR 800	AMD CPU Ratio Control Auto . . . [☒] X4. [] X4.5. . . . [] X5. [] X5.5. . . . [] X6. [] X6.5. . . . [] ↑↓:Move ENTER:Accept ESC:Abort
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe Defaults F7:Optimized Defaults	

SB Reference clock

Phoenix - AwardBIOS CMOS Setup Utility

Power User Overclock Settings

CPU/HT Reference Clk(MHz) 200 PCIE Reference clock 100 SB Reference clock 100 CPU Ratio at Next Boot Auto AMD K8 Cool&Quiet control Auto CPU Voltage at Next Boot Default CPU Vcore 7-shift Normal VDIMM Select 1.95v NB Voltage Setting Default Memory Clock Mode Auto *Memory Clock at Next Boot DDR 800	SB Reference Clock Min = 90 Max =150 Key in a DEC Number : ↑↓:Move ENTER:Accept ESC:Abort
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe Defaults F7:Optimized Defaults	

CPU Voltage at Next Boot

CPU/HT Reference Clk(MHz) 200 PCIE Reference clock 100 SB Reference clock 100 CPU Ratio at Next Boot Auto AMD K8 Cool&Quiet control Auto CPU Voltage at Next Boot Default CPU Vcore 7-shift Normal VDIMM Select 1.95v NB Voltage Setting Default Memory Clock Mode Auto *Memory Clock at Next Boot DDR 800	CPU Voltage at Next Boot Default [] 1.550v [] 1.525v [] 1.500v [] ↑↓:Move ENTER:Accept ESC:Abort
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe Defaults F7:Optimized Defaults	

CPU Vcore 7-shift

This item allows you select the CPU Vcore Voltage xx% more than the standard value, by this function for the precise over-clocking for extra demanding of performance

Phoenix - AwardBIOS CMOS Setup Utility

Power User Overclock Settings

CPU/HT Reference Clk(MHz)	200	CPU Vcore 7-Shift Normal. . . [] +5% [] +10% [] +15% [] +20% [] +25% [] +30% [] +35% [] ↑↓:Move ENTER:Accept ESC:Abort
PCIE Reference clock	100	
SB Reference clock	100	
CPU Ratio at Next Boot	Auto	
AMD K8 Cool&Quiet control	Auto	
CPU Voltage at Next Boot	Default	
CPU Vcore 7-shift	Normal	
VDIMM Select	1.95v	
NB Voltage Setting	Default	
Memory Clock Mode	Auto	
*Memory Clock at Next Boot	DDR 800	
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe Defaults F7:Optimized Defaults		

VDIMM Select

Phoenix - AwardBIOS CMOS Setup Utility

Power User Overclock Settings

CPU/HT Reference Clk(MHz)	200	VDIMM Select 1.70v [] 1.75v [] 1.80v [] 1.85v [] 2.55v []
PCIE Reference clock	100	
SB Reference clock	100	
CPU Ratio at Next Boot	Auto	
AMD K8 Cool&Quiet control	Auto	
CPU Voltage at Next Boot	Default	
CPU Vcore 7-shift	Normal	
VDIMM Select	1.95v	
NB Voltage Setting	Default	
Memory Clock Mode	Auto	
*Memory Clock at Next Boot	DDR 800	
↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe Defaults F7:Optimized Defaults		

NB Voltage Setting

This item allows you to select value of Voltage for North Bridge Chipset

Phoenix - AwardBIOS CMOS Setup Utility Power User Overclock Settings

CPU/HT Reference Clk(MHz)	200	NB Voltage Setting Default [] 1.15 v. [] 1.20 v. [] ↑↓:Move ENTER:Accept ESC:Abort
PCIE Reference clock	100	
SB Reference clock	100	
CPU Ratio at Next Boot	Auto	
AMD K8 Cool&Quiet control	Auto	
CPU Voltage at Next Boot	Default	
CPU Vcore 7-shift	Normal	
VDIMM Select	1.95v	
NB Voltage Setting	Default	
Memory Clock Mode	Auto	
*Memory Clock at Next Boot	DDR 800	

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

CPU Thermal -throttling

Phoenix - AwardBIOS CMOS Setup Utility CPU Thermal-Throttling

CPU Thermal - Throttling	Disabled	Item Help Menu Thermal Throttling Temp Min=40 Max=90 Key in a DEC number ↑↓:Move ENTER:Accept ESC:Abort Level >>
* Thermal-Throttling Temp	70°C	
* CPU Thermal-Throttling Duty	50.0%	

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

Load Fail-Safe Defaults

Load Fail-Safe Defaults

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

Load Fail-Safe Defaults (Y/N)? N

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

Load Optimized Defaults

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.

Password Settings

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.

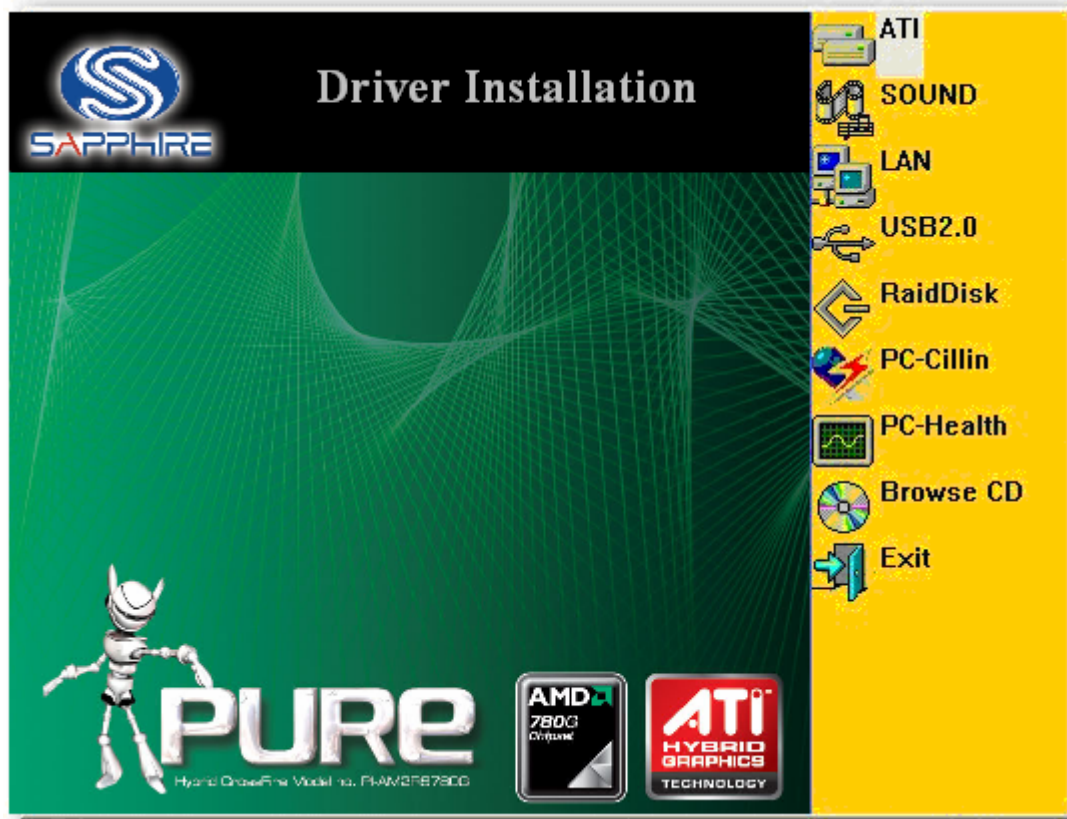
You determine when the password is required within the BIOS Features Setup Menu and its Security option. If the Security option is set to “System”, the password will be required both at boot and at entry to Setup. If set to “Setup”, prompting only occurs when trying to enter Setup.

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.

Driver Installation supports WINDOWS 9X/NT/2K/XP

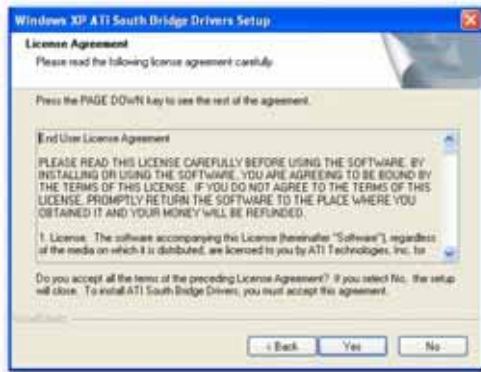
Insert CD into your CD-ROM drive and the MAGIC INSTALL Menu should appear as below. If the menu does not appear, double-click MY COMPUTER / double-click CD-ROM drive or click START / click RUN / type X:\SETUP.EXE (assuming X is your CD-ROM drive).



Install ATI Intergrated Driver Pack



1. Click ATI in the DRIVER INSTALL MENU
2. Click Next when ATI software driver pack appears.



3. Click “Yes” to accept the license agreement and start installation..
4. Click Finish to restart your computer

Install ALC883 HD Audio Driver



1. Click SOUND when DRIVER INSTALL MENU appears
2. Click Next when Realtek High Definition Audio driver windows appear



3. Click FINISH and restart your computer



4. Manual Sound Effect Setting



5. Drivers and mixer.



6. Audio input and output settings .



7. Microphone effect.



8. 3D Audio

NOTE: Please upgrade your Windows XP to Service Pack 1 / Windows 2000 to Service Pack 4 or later before you the HD Audio CODEC driver.

Install Maxwell LAN Controller Driver



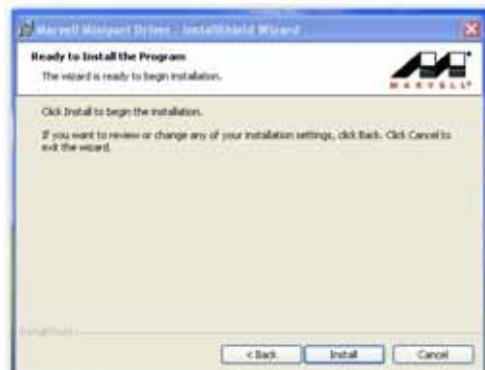
1. Click LAN when DRIVER INSTALL Menu appear



2. Click Install to install REALTEK LAN and Fast Ethernet NIC Driver



3. To click "yes" to accept the license agreement



4. Click install



5. Installing process



6. After driver installation completed, click finish

Install ATI USB2.0 DRIVER



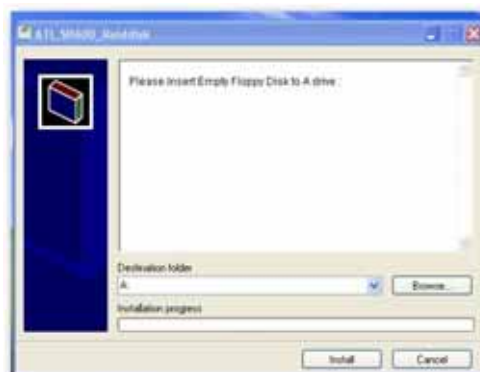
Windows 2000 OS

Please install Windows 2000 service pack 4 or later .

Windows XP OS

Please install Windows XP service pack 1 or later .

Install RAID SATA Driver and Utility



1 Click RAIDDisk when DRIVER INSTALL MENU appears

2. Install RAID Disk.

Install PC-CILLIN 2007 Anti-virus program



1. Click PC-CILLIN when DRIVER INSTALL MENU appears



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



3. This is license agreement, select "I accept the terms in the licence agreement" and Click NEXT



4. The scanning process



5. Click Next after you select the features you want to install and the folder to install it



6. Click Install after you select to install the optional online services.



7. copying new files



8. click “automatically restart your computer now ”and Finish to activate this function.

Install MyGuard Hardware monitor Utility



1. Click PC-health when DRIVER INSTALL MENU appears



2. Click Next on My Guard Install Shield Wizard Window



3. Click Install to begin the installation.



4. Click Finish to complete the installation.

AMD Platform RAID Function Installation

Step 1.

Please get into the location: BIOS setup \ Integrated Peripherals \ Onchip SATA Device \

Onchip SATA Type ,choose RAID to enable the RAID function and choose the RAID hard drive channel.

Phoenix - AwardBIOS CMOS Setup Utility

RAID Configuration

RAID Enable	Enabled	Item Help
IDE Primary Master RAID	Disabled	
IDE Primary Slave RAID	Disabled	Menu Level >>
IDE Secondary Master RAID	Disabled	
IDE Secondary Slave RAID	Disabled	
SATA Channel 1	RAID Enabled	
SATA Channel 2	RAID Enabled	
SATA Channel 3	RAID Enabled	
SATA Channel 4	RAID Enabled	
↑↓↔← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults		

Step 2.

After the System boot up in the second page , you can find the AMD RAID IDE ROM BIOS windows appear. It will ask you to “Press “Ctrl-F” to enter RAID setup utility

Pro Magic Plus Function Introduction

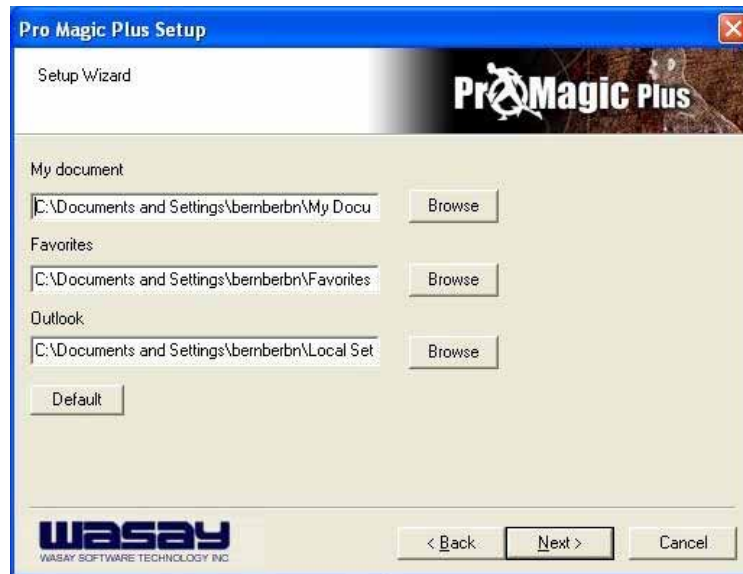
What's Pro Magic Plus?

Tired with reinstall OS each time when it doesn't work? Does your computer often crash down or unable to work after installed new software? Have you had great loses and troubles because of computer problems? Still using time-consuming backup software that occupies lots of HD space?

Pro Magic Plus- an instant system recovery software tailored to solve these problems for you. It combines various application tools (e.g. anti-virus, backup software, uninstall software, multi-boot software) to satisfy your needs of all sorts of system protections.

What functions does Pro Magic Plus have?

1. **Instant System Restoration** – Regardless of mis-operation or system crash, install Pro Magic Plus beforehand would allow you to instantly restore your system back by simply reboot your computer.
2. **Easy-to-use** – Auto installation from CD ROM; Supports Mouse
3. **System Uninstall** – Pro Magic provides a protection mode, which allows user to freely test any software. If user does not want to keep the software, just reboot the computer to restore back to the previous state, and Pro Magic will remove it completely from you computer.
4. **Password Security** – Pro Magic provides double password protection, including user password for entering each OS and manager password for managing 'Pro Magic', which can effectively prevent others from using your computer without permission or data from being stolen. (disable item for OEM version)
5. **Complete Protection** – Pro Magic not only protects the system disk, but also can protect your data disk, and does not require to reboot when backup or restore data disk.
6. **Multipoint Save/Restore** – You can backup your system whenever you need and restore them back to anytime you wish, 1 hour, 1 day or 1 month ago. Restore points are unlimited. (disable item for OEM version)
7. **Data Disk Protection** – Pro Magic Plus now comes with data disk protection, provides complete protection for your computer! (disable item for OEM version)
8. **You can choose to change the default path of 'My Document', 'My Favorite' and 'Outlook Express'**, so that when you are restoring the system, data in these folders will not be restored as well. (This is optional, you can leave it as it is).



graph 4

 **NOTE:** Functions of each version will differ from each other, and will be based on the function descriptions of each version.

System Requirements

- ◇ First OS must be Windows 98 SE/ME/2000/XP
- ◇ Support Only Windows OS (No Linux)
- ◇ Windows server OS and Windows NT not supported
- ◇ Minimum of Intel 486 or above, 16MB of memory or above
- ◇ Minimum of 500MB free/usable space or above
- ◇ Support for SCSI & SATA Hard disk

Pro Magic Plus only supports SCSI hard disk with Windows 2000 or OS above

Notice Before Installation

1. Before install Pro Magic Plus, turn off all anti-virus software. (Include BIOS anti-virus function)
2. Pro Magic Plus does not support multiple PRI partitions. If you have multiple PRI partitions, please repartition your HD before installation.
3. If your HDD is not fully partitioned (with un-partitioned/unused space at end of HDD), please repartition the HDD before install Pro Magic Plus.

USEFUL HELP

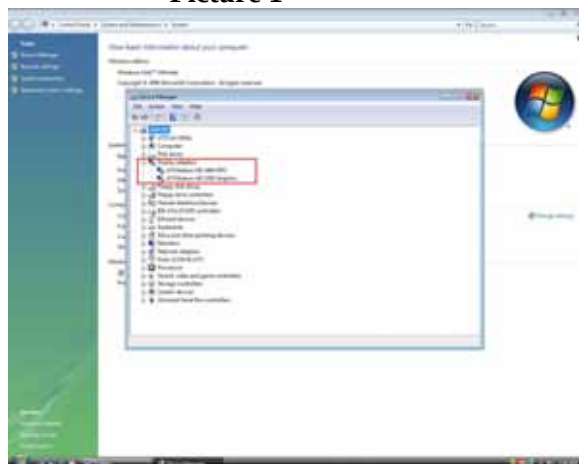
HOW TO UPDATE BIOS

- 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.** Download and make a copy of the latest BIOS for AMD690X PPC motherboard series from the web site to your boot disc.
- STEP 4.** Insert your boot disc into A:,
start the computer, type "Awdflash A:\ AMD690X.BIN /SN/PY/CC/R"
AMD690X xxx.BIN is the file name of latest BIOS it can be AMD690Xa.BIN or AMD690Xb.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 to update and flash the BIOS, then the system will restart automatically.

HOW TO ENABLE HYBRID CROSSFIRE

- STEP 1.** Install one ATI Radeon HD2400PRO or HD3450 PCI-E graphic card on MB.
- STEP 2.** BIOS setup → Miscellaneous → Init Display First → select "IGX"Install Copy utility
- STEP 3.** In Windows Device Manager → Display Adaptors must has two devices; one is ATI HD 3200 graphics, the other is ATI HD 2400PRO or HD3450 (see picture 1)
- STEP4.** install ATI Catalyst 8.3 or later version driver. After driver install finished, restart computer.
- STEP5.** Open ATI Catalyst Control Center → select Advanced Mode → enable "CrossFire" (see picture 2)

Picture 1



Picture 2



Trouble Shooting

Problem	Solution
No power to the system to the all power light don't illuminate, fan inside power supply doesn't turn on.	1. Make sure power cable is security plugged in. 2. Replace cable. 3. Contact technical support.
System inoperative. Keyboard lights are on , power indicator lights are lit, and hard drive is spinning.	Using ever pressure on both ends of the DIMM , press down firmly until the module snaps into places.
System doesn't boot from hard disk drive, can be booted from optical drive.	1. Check cable running from disk to disk controller board. .Make sure both ends are securely plugged in, check the drive type in the standard CMOS setup. 2. Backing up the hard drive is extremely important .All hard disks are capable of breaking down at any time.
System only boots from optical drive .Hard disk can be read and applications can be used but booting from hard disk is impossible.	1. Back up date and applications files. 2. Reformat the hard drive. Reinstall applications and date using backup disks.
Screen message says "Invalid Configuration" or "CMOS Failure"	Review system 's equipment .Make sure correct information on is in setup.
Can not boot system after installing second hard drive.	1. Set master /slave jumpers correctly. 2. Run SETUP program and select correct drive types. Call the drive manufacture for compatibility with other drives.