

# MS-7255

## MS-7255 (v1.X/v2.X) Mainboard



## Copyright Notice

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## Trademarks

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## Revision History

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Revision	Revision History	Date
V1.0	First release	July 2006
V1.1	Include P4M900M Cover	September 2006

## Technical Support

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If a problem arises with your system and no solution can be obtained from the user's manual, please contact your place of purchase or local distributor. Alternatively, please try the following help resources for further guidance.

- 🔍 Visit the MSI website for FAQ, technical guide, BIOS updates, driver updates, and other information: [http://www.msi.com.tw/program/service/faq/faq/esc\\_faq\\_list.php](http://www.msi.com.tw/program/service/faq/faq/esc_faq_list.php)
- 🔍 Contact our technical staff at: <http://support.msi.com.tw/>

## Safety Instructions

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1. Always read the safety instructions carefully.
2. Keep this User's Manual for future reference.
3. Keep this equipment away from humidity.
4. Lay this equipment on a reliable flat surface before setting it up.
5. The openings on the enclosure are for air convection hence protects the equipment from overheating. DO NOT COVER THE OPENINGS.
6. Make sure the voltage of the power source and adjust properly 110/220V before connecting the equipment to the power inlet.
7. Place the power cord such a way that people can not step on it. Do not place anything over the power cord.
8. Always Unplug the Power Cord before inserting any add-on card or module.
9. All cautions and warnings on the equipment should be noted.
10. Never pour any liquid into the opening that could damage or cause electrical shock.
11. If any of the following situations arises, get the equipment checked by a service personnel:
  - † The power cord or plug is damaged.
  - † Liquid has penetrated into the equipment.
  - † The equipment has been exposed to moisture.
  - † The equipment has not work well or you can not get it work according to User's Manual.
  - † The equipment has dropped and damaged.
  - † The equipment has obvious sign of breakage.
12. DONOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT UNCONDITIONED, STORAGE TEMPERATURE ABOVE 60°C (140°F), IT MAY DAMAGE THE EQUIPMENT.



**CAUTION:** Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.



警告使用者：  
這是甲類的資訊產品，在居住的環境中使用時，可能會造成無線電干擾，在這種情況下，使用者會被要求採取某些適當的對策。



廢電池請回收

For better environmental protection, waste batteries should be collected separately for recycling or special disposal.

## FCC-B Radio Frequency Interference Statement

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This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part



15 of the 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 the instructions, may cause harmful interference to radio 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 measures listed below.

- † Reorient or relocate the receiving antenna.
- † Increase the separation between the equipment and receiver.
- † Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- † Consult the dealer or an experienced radio/television technician for help.

### Notice 1

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

### Notice 2

Shielded interface cables and A.C. power cord, if any, must be used in order to comply with the emission limits.

VOIR LANOTICE D'INSTALLATION AVANT DE RACCORDER AU RESEAU.



*This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:*

- (1) this device may not cause harmful interference, and*
- (2) this device must accept any interference received, including interference that may cause undesired operation.*

## WEEE (Waste Electrical and Electronic Equipment) Statement

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### ENGLISH

To protect the global environment and as an environmentalist, MSI must remind you that...

Under the European Union ("EU") Directive on Waste Electrical and Electronic Equipment, Directive 2002/96/EC, which takes effect on August 13, 2005, products of "electrical and electronic equipment" cannot be discarded as municipal waste anymore and manufacturers of covered electronic equipment will be obligated to take back such products at the end of their useful life. MSI will comply with the product take back requirements at the end of life of MSI-branded products that are sold into the EU. You can return these products to local collection points.

### DEUTSCH

Hinweis von MSI zur Erhaltung und Schutz unserer Umwelt

Gemäß der Richtlinie 2002/96/EG über Elektro- und Elektronik-Altgeräte dürfen Elektro- und Elektronik-Altgeräte nicht mehr als kommunale Abfälle entsorgt werden. MSI hat europaweit verschiedene Sammel- und Recyclingunternehmen beauftragt, die in die Europäische Union in Verkehr gebrachten Produkte, am Ende seines Lebenszyklus zurückzunehmen. Bitte entsorgen Sie dieses Produkt zum gegebenen Zeitpunkt ausschließlich an einer lokalen Altgerätesammelstelle in Ihrer Nähe.

### FRANÇAIS

En tant qu'écologiste et afin de protéger l'environnement, MSI tient à rappeler ceci...

Au sujet de la directive européenne (EU) relative aux déchets des équipements électriques et électroniques, directive 2002/96/EC, prenant effet le 13 août 2005, que les produits électriques et électroniques ne peuvent être déposés dans les décharges ou tout simplement mis à la poubelle. Les fabricants de ces équipements seront obligés de récupérer certains produits en fin de vie. MSI prendra en compte cette exigence relative au retour des produits en fin de vie au sein de la communauté européenne. Par conséquent vous pouvez retourner localement ces matériels dans les points de collecte.

### РУССКИЙ

Компания MSI предпринимает активные действия по защите окружающей среды, поэтому напоминаем вам, что...

В соответствии с директивой Европейского Союза (ЕС) по предотвращению загрязнения окружающей среды использованным электрическим и электронным оборудованием (директива WEEE 2002/96/ЕС), вступающей в силу 13 августа 2005 года, изделия, относящиеся к электрическому и электронному оборудованию, не могут рассматриваться как бытовой мусор, поэтому производители вышеперечисленного электронного оборудования обязаны принимать его для переработки по окончании срока службы. MSI обязуется соблюдать требования по приему продукции, проданной под маркой MSI на территории ЕС, в переработку по окончании срока службы. Вы можете вернуть эти изделия в специализированные пункты приема.

## **ESPAÑOL**

MSI como empresa comprometida con la protección del medio ambiente, recomienda:

Bajo la directiva 2002/96/EC de la Unión Europea en materia de desechos y/o equipos electrónicos, con fecha de rigor desde el 13 de agosto de 2005, los productos clasificados como "eléctricos y equipos electrónicos" no pueden ser depositados en los contenedores habituales de su municipio, los fabricantes de equipos electrónicos, están obligados a hacerse cargo de dichos productos al término de su período de vida. MSI estará comprometido con los términos de recogida de sus productos vendidos en la Unión Europea al final de su período de vida. Usted debe depositar estos productos en el punto limpio establecido por el ayuntamiento de su localidad o entregar a una empresa autorizada para la recogida de estos residuos.

## **NEDERLANDS**

Om het milieu te beschermen, wil MSI u eraan herinneren dat....

De richtlijn van de Europese Unie (EU) met betrekking tot Vervuiling van Elektrische en Electronische producten (2002/96/EC), die op 13 Augustus 2005 in zal gaan kunnen niet meer beschouwd worden als vervuiling.

Fabrikanten van dit soort producten worden verplicht om producten retour te nemen aan het eind van hun levenscyclus. MSI zal overeenkomstig de richtlijn handelen voor de producten die de merknaam MSI dragen en verkocht zijn in de EU. Deze goederen kunnen geretourneerd worden op lokale inzamelingspunten.

## **SRPSKI**

Da bi zaštitili prirodnu sredinu, i kao preduzeće koje vodi računa o okolini i prirodnoj sredini, MSI mora da vas podesti da...

Po Direktivi Evropske unije ("EU") o odbačenju elektonskoj i električnoj opremi, Direktiva 2002/96/EC, koja stupa na snagu od 13. Avgusta 2005, proizvodi koji spadaju pod "elektonsku i električnu opremu" ne mogu više biti odbačeni kao običan otpad i proizvođači ove opreme biće prinuđeni da uzmu natrag ove proizvode na kraju njihovog uobičajenog veka trajanja. MSI će poštovati zahtev o preuzimanju ovakvih proizvoda kojima je istekao vek trajanja, koji imaju MSI oznaku i koji su prodati u EU. Ove proizvode možete vratiti na lokalnim mestima za prikupljanje.

## **POLSKI**

Aby chronić nasze środowisko naturalne oraz jako firma dbająca o ekologię, MSI przypomina, że...

Zgodnie z Dyrektywą Unii Europejskiej ("UE") dotyczącą odpadów produktów elektrycznych i elektronicznych (Dyrektywa 2002/96/EC), która wchodzi w życie 13 sierpnia 2005, tzw. "produkty oraz wyposażenie elektryczne i elektroniczne" nie mogą być traktowane jako śmieć komunalne, tak więc producenci tych produktów będą zobowiązani do odbierania ich w momencie gdy produkt jest wycofywany z użycia. MSI wypełni wymagania UE, przyjmując produkty (sprzedawane na terenie Unii Europejskiej) wycofywane z użycia. Produkty MSI będzie można zwracać w wyznaczonych punktach zbiorczych.

## TÜRKÇE

Çevreci özelliğiyle bilinen MSI dünyada çevreyi korumak için hatırlatır:

Avrupa Birliği (AB) Kararnamesi Elektrik ve Elektronik Malzeme Atığı, 2002/96/EC Kararnamesi altında 13 Ağustos 2005 tarihinden itibaren geçerli olmak üzere, elektrikli ve elektronik malzemeler diğer atıklar gibi çöpe atılmayacak ve bu elektronik cihazların üreticileri, cihazların kullanım süreleri bittikten sonra ürünleri geri toplamakla yükümlü olacaktır. Avrupa Birliği'ne satılan MSI markalı ürünlerin kullanım süreleri bittiğinde MSI ürünlerin geri alınması isteği ile işbirliği içerisinde olacaktır. Ürünlerinizi yerel toplama noktalarına bırakabilirsiniz.

## ČESKY

Záleží nám na ochraně životního prostředí - společnost MSI upozorňuje...

Podle směrnice Evropské unie ("EU") o likvidaci elektrických a elektronických výrobků 2002/96/EC platné od 13. srpna 2005 je zakázáno likvidovat "elektrické a elektronické výrobky" v běžném komunálním odpadu a výrobci elektronických výrobků, na které se tato směrnice vztahuje, budou povinni odebírat takové výrobky zpět po skončení jejich životnosti. Společnost MSI splní požadavky na odebrání výrobků značky MSI, prodávaných v zemích EU, po skončení jejich životnosti. Tyto výrobky můžete odevzdat v místních sběrnách.

## MAGYAR

Annak érdekében, hogy környezetünket megvédjük, illetve környezetvédként fellépve az MSI emlékezteti Önt, hogy ...

Az Európai Unió („EU”) 2005. augusztus 13-án hatályba lépő, az elektromos és elektronikus berendezések hulladékairól szóló 2002/96/EK irányelve szerint az elektromos és elektronikus berendezések többé nem kezelhetők lakossági hulladékként, és az ilyen elektronikus berendezések gyártói kötelessé válnak az ilyen termékek visszavételére azok hasznos élettartama végén. Az MSI betartja a termékvisszavételrel kapcsolatos követelményeket az MSI márkánév alatt az EU-n belül értékesített termékek esetében, azok élettartamának végén. Az ilyen termékeket a legközelebbi gyűjtőhelyre viheti.

## ITALIANO

Per proteggere l'ambiente, MSI, da sempre amica della natura, ti ricorda che....

In base alla Direttiva dell'Unione Europea (EU) sullo Smaltimento dei Materiali Elettrici ed Elettronici, Direttiva 2002/96/EC in vigore dal 13 Agosto 2005, prodotti appartenenti alla categoria dei Materiali Elettrici ed Elettronici non possono più essere eliminati come rifiuti municipali: i produttori di detti materiali saranno obbligati a ritirare ogni prodotto alla fine del suo ciclo di vita. MSI si adeguerà a tale Direttiva ritirando tutti i prodotti marchiati MSI che sono stati venduti all'interno dell'Unione Europea alla fine del loro ciclo di vita. È possibile portare i prodotti nel più vicino punto di raccolta.

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# Chapter 1

## Getting Started

Thank you for choosing the MS-7255 Series (MS-7255 v1.X/v2.X) Micro ATX mainboard. The MS-7255 Series mainboards are based on **VIA® P4M890/P4M900 & VIA® 8237A** chipsets for optimal system efficiency. Designed to fit the advanced **Intel® Pentium 4** processor, the mainboards deliver a high performance and professional desktop platform solution.

## Mainboard Specifications

### Processor Support\*

- Supports Intel® Pentium 4 Extreme Edition, Pentium 4, Pentium D (805/820), Pentium D (920/925/930), Celeron D and Intel® Core™ 2 Duo processors in the LGA775 package.
- Supports 3/4 pin CPU Fan Pin-Header with Fan Speed Control.
- Supports EIST Technology
- Supports Hyper-Threading (HT) Technology
- Supports Intel Dual Core Technology

We recommend use processor with 95w power consumption (805/820/920/925/930)

### Supported FSB

- 533/800/1066 MHz

### Chipset

- North Bridge: VIA® P4M890/P4M900
- South Bridge: VIA® 8237A

### Memory Support\*\*

- DDRII 400/533 SDRAM (2GB Max)
- 2 DDRII DIMMs (240pin / 1.8V)

### LAN

- Supports LAN 10/100 Fast Ethernet by VIA® VT6103L
- Supports LAN 10/100/1000 Fast Ethernet by VIA® VT6122(optional)

### IEEE 1394 (Optional)

- Chip integrated by VIA VT 6307 or VT6308

### Audio

- Chip integrated by VIA® VT1708
- Flexible 8-channel audio with jack sensing
- Compliant with Azalia 1.x HD audio.

### IDE

- 2 ports (4 IDE channels).
- Supports Ultra DMA 33/66/100/133 mode
- Supports PIO, Bus Master operation mode

### SATA

- 2 SATA ports
- Supports 2 SATA devices.
- Supports storage and data transfers at up to 150 MB/s

### Floppy

- 1 floppy port
- Supports 1 FDD with 360K, 720K, 1.2M, 1.44M and 2.88Mbytes

## Connectors

### ● Back Panel

- 1 PS/2 mouse port
- 1 PS/2 keyboard port
- 1 serial port (COM1)
- 1 parallel port supporting SPP/EPP/ECP mode
- 1 D-Sub VGA port
- 1 IEEE 1394 port (Optional)
- 4 USB 2.0 ports
- 1 LAN jack
- 6 flexible audio jacks.

### ● On-Board Pinheaders

- 1 front Audio pinheader
- 1 CD-in pinheader
- 1 SPDIF-out pinheader
- 1 IEEE 1394 pinheader (Optional)
- 2 USB 2.0 pinheaders
- 1 serial port pinheader (JCOM2)

## Slots

- 1 PCI Express x16 slot
- 1 PCI Express x1 slot
- 2 PCI slots.
- Support 3.3V/ 5V PCI bus Interface

## Form Factor

- Micro-ATX (24.4cm X 21.0cm)

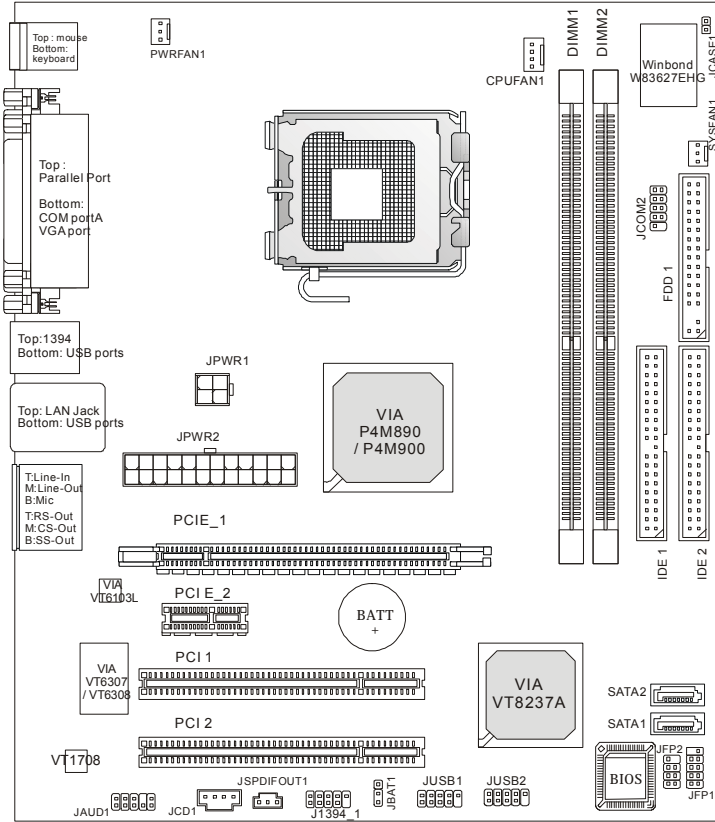
## Mounting

- 6 mounting holes

\* For the latest information about CPU, please visit [http://www.msi.com.tw/program/products/mainboard/mbd/pro\\_mbd\\_cpu\\_support.php](http://www.msi.com.tw/program/products/mainboard/mbd/pro_mbd_cpu_support.php)

\*\* For the updated supporting memory modules, please visit [http://www.msi.com.tw/program/products/mainboard/mbd/pro\\_mbd\\_trp\\_list.php](http://www.msi.com.tw/program/products/mainboard/mbd/pro_mbd_trp_list.php)

# Mainboard Layout

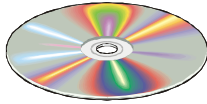


MS-7255 v1.X/v2.X M-ATX Mainboard

## Packing Checklist



MSI motherboard



MSI Driver/Utility CD



SATA Cable (Optional)



Power Cable



Standard Cable for  
IDE Devices



Back IO Shield



User's Guide

\* The pictures are for reference only. Your packing contents may vary depending on the model you purchased.

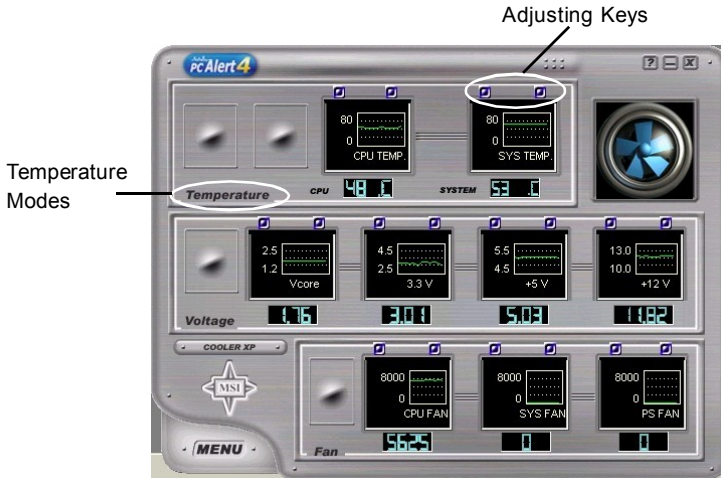
## PC Alert™ 4

The PC Alert™ 4 is a utility you can find in the CD-ROM disk. The utility is just like your PC doctor that can detect the following PC hardware status during real time operation:

- monitor CPU & system temperatures
- monitor fan speeds
- monitor system voltages



If one of the items above is abnormal, the program main screen will be immediately shown on the screen, with the abnormal item highlighted in red. This will continue to be shown until the condition returns to the normal status.



Users can use the Adjusting Keys to change the minimum and maximum threshold of each item for the system to send out a warning message. Click *Temperature* to select the temperature modes of either Fahrenheit (°F) or Celsius (°C). The PC Alert™ 4 CPU in the Status Area will show the current CPU temperature.



### Important

1. Items shown on PC Alert 4 vary depending on your system status.
2. Whenever the minimum or maximum threshold of each item has been changed, please close the PC Alert 4 program for the new settings to take effect.

## Chapter 2

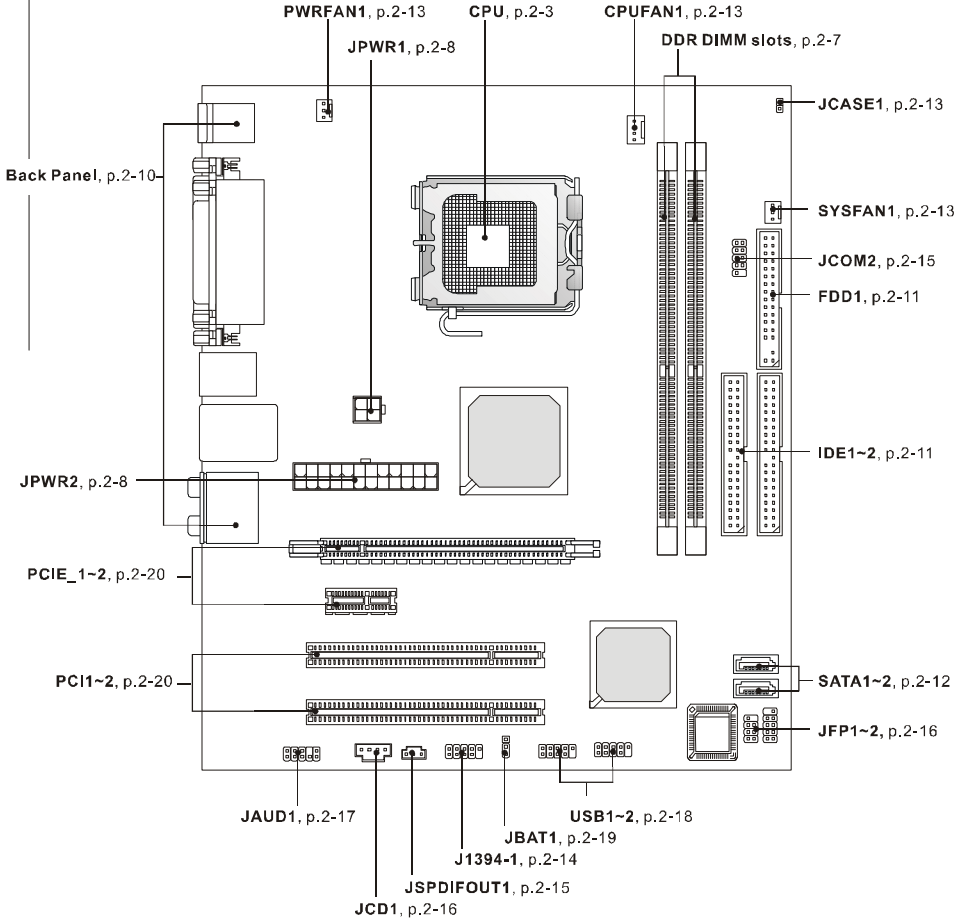
# Hardware Setup

This chapter provides you with the information about hardware setup procedures. While doing the installation, be careful in holding the components and follow the installation procedures. For some components, if you install in the wrong orientation, the components will not work properly.

Use a grounded wrist strap before handling computer components. Static electricity may damage the components.



# Quick Components Guide



## CPU (Central Processing Unit)

This mainboard supports Intel® Pentium 4 processor in LGA 775 package. When you are installing the CPU, **make sure to install the cooler to prevent overheating.** If you do not have the CPU cooler, contact your dealer to purchase and install them before turning on the computer.

For the latest information about CPU, please visit [http://www.msi.com.tw/program/products/mainboard/mbd/pro\\_mbd\\_cpu\\_support.php](http://www.msi.com.tw/program/products/mainboard/mbd/pro_mbd_cpu_support.php).

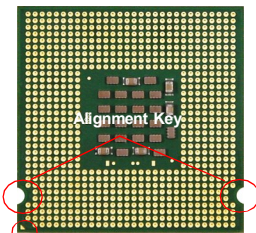


### Important

1. Overheating will seriously damage the CPU and system. Always make sure the cooling fan can work properly to protect the CPU from overheating.
2. Make sure that you apply an even layer of heat sink paste (or thermal tape) between the CPU and the heatsink to enhance heat dissipation.
3. While replacing the CPU, always turn off the ATX power supply or unplug the power supply's power cord from the grounded outlet first to ensure the safety of CPU.

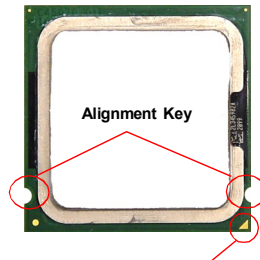
### Introduction to LGA 775 CPU

The pin-pad side of LGA 775 CPU.



Yellow triangle is the Pin 1 indicator

The surface of LGA 775 CPU. Remember to apply some silicone heat transfer compound on it for better heat dispersion.



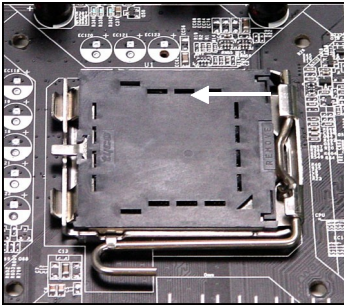
Yellow triangle is the Pin 1 indicator

## CPU & Cooler Installation

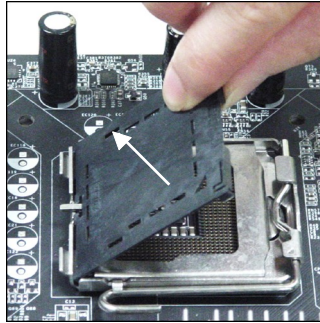
When you are installing the CPU, **make sure the CPU has a cooler attached on the top to prevent overheating.** If you do not have the cooler, contact your dealer to purchase and install them before turning on the computer. Meanwhile, do not forget to apply some silicon heat transfer compound on CPU before installing the heat sink/cooler fan for better heat dispersion.

Follow the steps below to install the CPU & cooler correctly. Wrong installation will cause the damage of your CPU & mainboard.

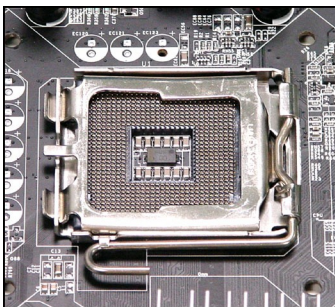
1. The CPU has a plastic cap on it to protect the contact from damage. Before you install the CPU, always cover it to protect the socket pin.



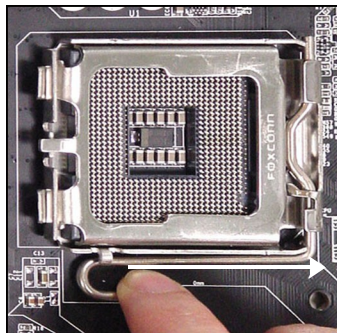
2. Remove the cap from lever hinge side (as the arrow shows).



3. The pins of socket reveal.



4. Open the load lever.

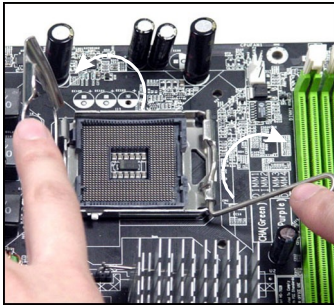




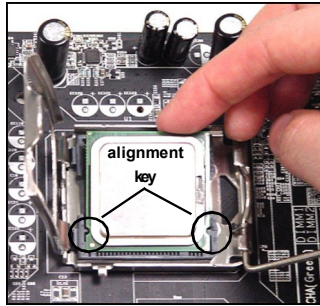
Important

1. Confirm if your CPU cooler is firmly installed before turning on your system.
2. Do not touch the CPU socket pins to avoid damaging.
3. The availability of the CPU land side cover depends on your CPU packing.

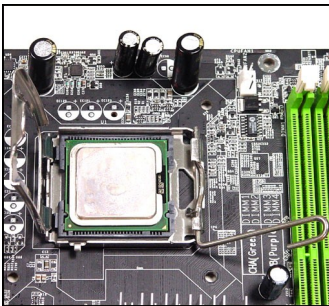
5. Lift the load lever up and open the load plate.



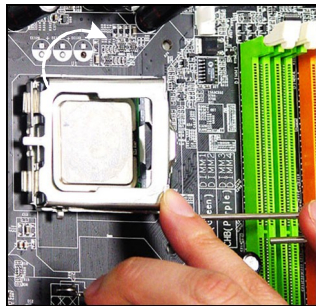
6. After confirming the CPU direction for correct mating, put down the CPU in the socket housing frame. Be sure to grasp on the edge of the CPU base. Note that the alignment keys are matched.



7. Visually inspect if the CPU is seated well into the socket. If not, take out the CPU with pure vertical motion and reinstall.

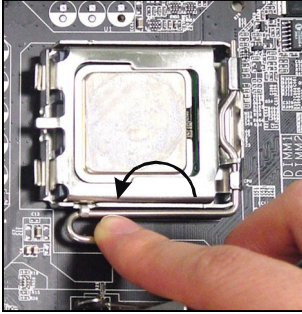


8. Cover the load plate onto the package.

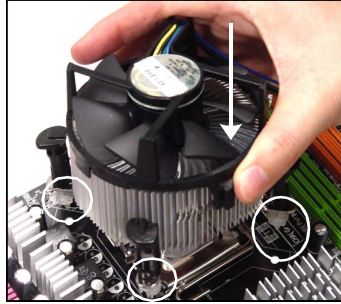


## MS-7255 Mainboard

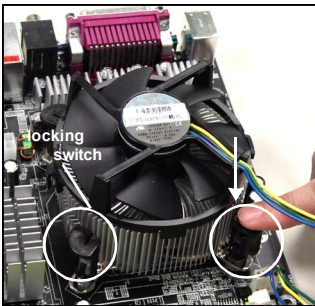
9. Press down the load lever lightly onto the load plate, and then secure the lever with the hook under retention tab.



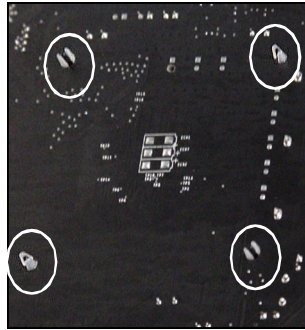
10. Align the holes on the mainboard with the heatsink. Push down the cooler until its four clips get wedged into the holes of the mainboard.



11. Press the four hooks down to fasten the cooler. Then rotate the locking switch (refer to the correct direction marked on it) to lock the hooks.



12. Turn over the mainboard to confirm that the clip-ends are correctly inserted.



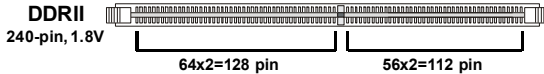
### Important

1. Check the information in **H/W Monitor** in BIOS (Chapter 3) for the CPU temperature.
2. Whenever CPU is not installed, always protect your CPU socket pin with the plastic cap covered (shown in Figure 1) to avoid damaging.
3. Please note that the mating/unmating durability of the CPU is 20 cycles. Therefore we suggest you do not plug/unplug the CPU too often.

## Memory

The mainboard provides two 240-pin non-ECC **DDRII** DIMM slots.

For more information on compatible components, please visit [http://www.msi.com.tw/program/products/mainboard/mbd/pro\\_mbd\\_trp\\_list.php](http://www.msi.com.tw/program/products/mainboard/mbd/pro_mbd_trp_list.php).



### Installing DDRII Modules

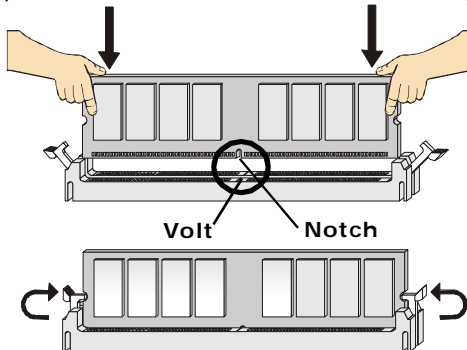
1. The memory module has only one notch on the center and will only fit in the right orientation.
2. Insert the memory module vertically into the DIMM slot. Then push it in until the golden finger on the memory module is deeply inserted in the DIMM slot.



#### Important

*You can barely see the golden finger if the module is properly inserted in the DIMM slot.*

3. The plastic clip at each side of the DIMM slot will automatically close.



#### Important

- *DDRII modules are not interchangeable with DDR and the DDRII standard is not backwards compatible. You should always install DDRII memory modules in the DDRII DIMM slots and DDR memory modules in the DDR DIMM slots.*
- *In dual-channel mode, make sure that you install memory modules of **the same type and density** in different channel DDR DIMM slots.*
- *To enable successful system boot-up, always insert the memory modules into the **DIMM1** first.*

## Power Supply

### ATX 24-Pin Power Connector: JPWR2

This connector allows you to connect an ATX 24-pin power supply. To connect the ATX 24-pin power supply, make sure the plug of the power supply is inserted in the proper orientation and the pins are aligned. Then push down the power supply firmly into the connector.

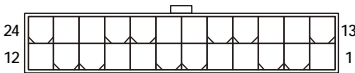
You may use the 20-pin ATX power supply as you like. If you'd like to use the 20-pin ATX power supply, please plug your power supply along with pin 1 & pin 13 (refer to the image at the right hand). There is also a foolproof design on pin 11, 12, 23 & 24 to avoid wrong installation.



JPWR2 Pin Definition

PIN	SIGNAL	PIN	SIGNAL
1	+3.3V	13	+3.3V
2	+3.3V	14	-12V
3	GND	15	GND
4	+5V	16	PS-ON#
5	GND	17	GND
6	+5V	18	GND
7	GND	19	GND
8	PWROK	20	Res
9	5VSB	21	+5V
10	+12V	22	+5V
11	+12V	23	+5V
12	NC	24	GND

JPWR2



### ATX 12V Power Connector: JPWR1

This 12V power connector is used to provide power to the CPU.

JPWR1



JPWR1 Pin Definition

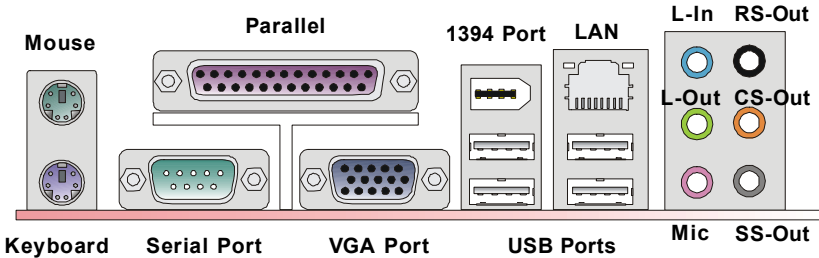
PIN	SIGNAL
1	GND
2	GND
3	12V
4	12V



### Important

1. Make sure that all the connectors are connected to proper ATX power supplies to ensure stable operation of the mainboard.
2. Power supply of 350 watts (and above) is highly recommended for system stability.
3. ATX 12V power connection should be greater than 18A.

## Back Panel



### ► Mouse/Keyboard Connector

The standard PS/2® mouse/keyboard DIN connector is for a PS/2® mouse/keyboard.

### ► Parallel Port Connector

A parallel port is a standard printer port that supports Enhanced Parallel Port (EPP) and Extended Capabilities Parallel Port (ECP) mode.

### ► Serial Port Connector

The serial port is a 16550A high speed communications port that sends/ receives 16 bytes FIFOs. You can attach a serial mouse or other serial devices directly to the connector.

### ► VGA Connector

The DB15-pin female connector is provided for VGA monitors.

### ► IEEE 1394 Port

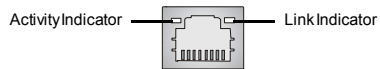
The 1394 port on the back panel provides connection to 1394 devices.

### ► USB Connectors

The OHCI (Open Host Controller Interface) Universal Serial Bus root is for attaching USB devices such as keyboard, mouse, or other USB-compatible devices.

### ► LAN (RJ-45) Jack

The standard RJ-45 jack is for connection to single Local Area Network (LAN). You can connect a network cable to it.



LED	Color	LED State	Condition
Left	Orange	Off	LAN link is not established.
		On (steady state)	LAN link is established.
		On (brighter & pulsing)	The computer is communicating with another computer on the LAN.
Right	Green	Off	10 Mbit/sec data rate is selected.
	Green	On	100 Mbit/sec data rate is selected.
	Orange	On	1000 Mbit/sec data rate is selected.



► **Audio Port Connectors**

These audio connectors are used for audio devices. You can differentiate the color of the audio jacks for different audio sound effects.

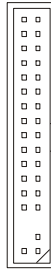
- **Blue audio jack** - Line In / Side-Surround Out in 7.1 channel mode, is used for external CD player, tapeplayer or other audio devices.
- **Green audio jack** - Line Out, is a connector for speakers or headphones.
- **Pink audio jack** - Mic In, is a connector for microphones.
- **Black audio jack** - Rear-Surround Out in 5.1/ 7.1 channel mode.
- **Orange audio jack** - Center/ Subwoofer Out in 5.1/ 7.1 channel mode.
- **Gray audio jack** - If there is a gray audio jack on the back panel in your mainboard, the **Gray audio jack** is for Rear-Surround Out and the **Black audio jack** will be used as the Side-Surround Out.

## Connectors

### Floppy Disk Drive Connector: FDD1

This standard FDD connector supports 360K, 720K, 1.2M, 1.44M and 2.88M floppy disk types.

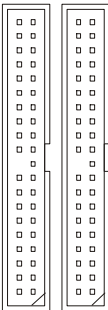
FDD1



### ATA133 Hard Disk Connectors: IDE1 & IDE2

The mainboard has a 32-bit Enhanced PCI IDE and Ultra DMA 66/100/133 controller that provides PIO mode 0~4, Bus Master, and Ultra DMA 66/100/133 function. You can connect hard disk drives, CD-ROM and other IDE devices.

The Ultra ATA133 interface boosts data transfer rates between the computer and the hard drive up to 133 megabytes (MB) per second. The new interface is one-third faster than earlier record-breaking Ultra ATA/100 technology and is backwards compatible with the existing Ultra ATA interface.



IDE1 IDE2

#### IDE1 (Primary IDE Connector)

IDE1 can connect a Master and a Slave drive. You must configure the second hard drive to Slave mode by setting the jumper accordingly.

#### IDE2 (Secondary IDE Connector)

IDE2 can also connect a Master and a Slave drive.

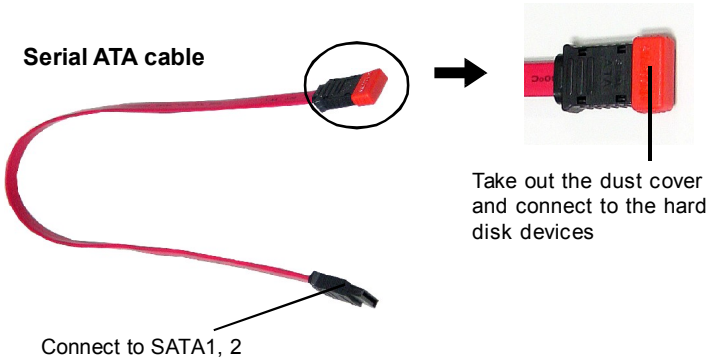
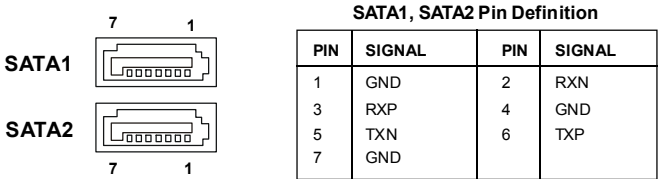


### Important

*If you install two hard disks on cable, you must configure the second drive to Slave mode by setting its jumper. Refer to the hard disk documentation supplied by hard disk vendors for jumper setting instructions.*

### Serial ATA Connectors: SATA1, SATA2

SATA1, SATA2 are high-speed Serial ATA interface ports. Each supports 1<sup>st</sup> generation serial ATA data rates of 150MB/s and is fully compliant with Serial ATA 1.0 specifications. Each Serial ATA connector can connect to 1 hard disk device.

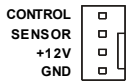


#### Important

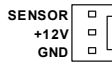
Please do not fold the Serial ATA cable into 90-degree angle. Otherwise, data loss may occur during transmission.

## Fan Power Connectors: CPUFAN1, PWRFAN1, SYSFAN1

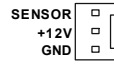
The fan power connectors support system cooling fan with +12V. When connecting the wire to the connectors, always take note that the red wire is the positive and should be connected to the +12V, the black wire is Ground and should be connected to GND. If the mainboard has a System Hardware Monitor chipset on-board, you must use a specially designed fan with speed sensor to take advantage of the CPU fan control.



**CPUFAN1**



**PWRFAN1**



**SYSFAN1**



### Important

*Please refer to the recommended CPU fans at Intel® official website or consult the vendors for proper CPU cooling fan.*

## Chassis Intrusion Switch Connector: JCASE1

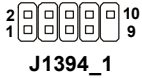
This connector connects to a 2-pin chassis switch. If the chassis is opened, the switch will be short. The system will record this status and show a warning message on the screen. To clear the warning, you must enter the BIOS utility and clear the record.



**JCASE1**

### IEEE 1394 Connectors (optional): J1394\_1

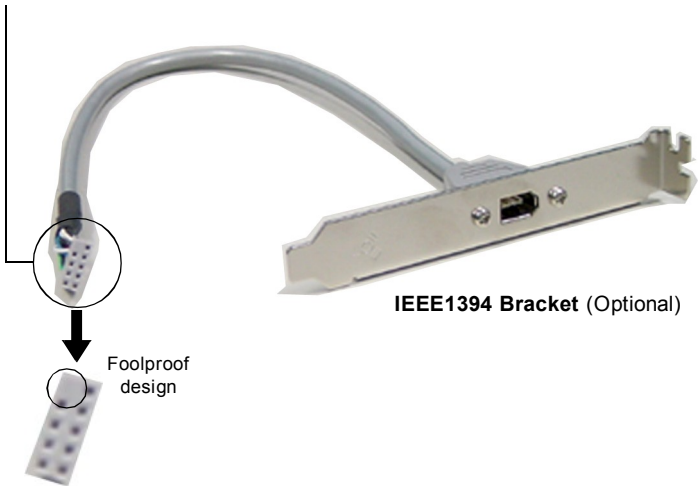
The mainboard provides IEEE1394 pinheaders that allow you to connect IEEE 1394 ports via an external IEEE1394 bracket (optional).



Pin Definition

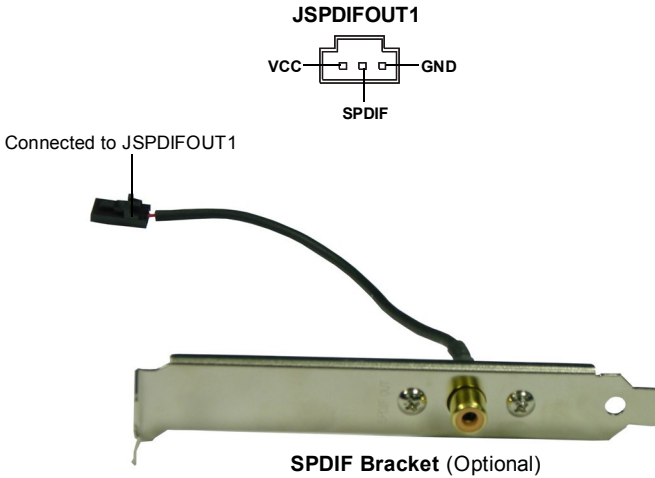
PIN	SIGNAL	PIN	SIGNAL
1	TPA+	2	TPA-
3	Ground	4	Ground
5	TPB+	6	TPB-
7	Cable power	8	Cable power
9	Key (no pin)	10	Ground

Connected to J1394\_1



### SPDIF-Out Connector: JSPDIFOUT1

This connector is used to connect SPDIF (Sony & Philips Digital Interconnect Format) interface for digital audio transmission.



### Serial Port Connector: JCOM 2

The mainboard provides one 9-pin header as serial port JCOM 2. The port is a 16550A high speed communication port that sends/receives 16 bytes FIFOs. You can attach a serial mouse or other serial devices directly to it.

**JCOM2**

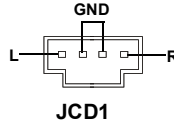
1 2

9

Pin Definition		
PIN	SIGNAL	DESCRIPTION
1	DCD	Data Carry Detect
2	SIN	Serial In or Receive Data
3	SOUT	Serial Out or Transmit Data
4	DTR	Data Terminal Ready
5	GND	Ground
6	DSR	Data Set Ready
7	RTS	Request To Send
8	CTS	Clear To Send
9	RI	Ring Indicate

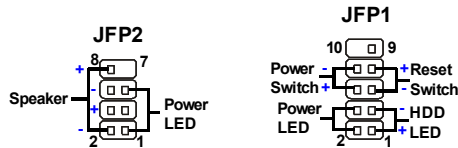
### Aux Line-In Connector: JCD1

The connector is for DVD add-on card with Line-in connector.



### Front Panel Connectors: JFP1/JFP2

The mainboard provides two front panel connectors for electrical connection to the front panel switches and LEDs. The JFP1 is compliant with Intel® Front Panel I/O Connectivity Design Guide.



JFP1 Pin Definition

PIN	SIGNAL	DESCRIPTION
1	HD_LED +	Hard disk LED pull-up
2	FPWR/SLP	MSG LED pull-up
3	HD_LED -	Hard disk active LED
4	FPWR/SLP	MSG LED pull-up
5	RST_SW -	Reset Switch low reference pull-down to GND
6	PWR_SW+	Power Switch high reference pull-up
7	RST_SW +	Reset Switch high reference pull-up
8	PWR_SW -	Power Switch low reference pull-down to GND
9	RSVD_DNU	Reserved. Do not use.

JFP2 Pin Definition

PIN	SIGNAL	DESCRIPTION
1	GND	Ground
2	SPK-	Speaker-
3	SLED	SuspendLED
4	BUZ+	Buzzer+
5	PLED	PowerLED
6	BUZ-	Buzzer-
7	NC	Noconnection
8	SPK+	Speaker+

## Front Panel Audio Connector: JAUD1

The JAUD1 front panel audio connector allows you to connect the front panel audio and is compliant with Intel® Front Panel I/O Connectivity Design Guide.



**JAUD1 Pin Definition**

PIN	SIGNAL	DESCRIPTION
1	AUD_MIC	Front panel microphone input signal
2	AUD_GND	Ground used by analog audio circuits
3	AUD_MIC_BIAS	Microphone power
4	AUD_VCC	Filtered +5V used by analog audio circuits
5	AUD_FPOUT_R	Right channel audio signal to front panel
6	AUD_RET_R	Right channel audio signal return from front panel
7	HP_ON	Reserved for future use to control headphone amplifier
8	KEY	No pin
9	AUD_FPOUT_L	Left channel audio signal to front panel
10	AUD_RET_L	Left channel audio signal return from front panel



### Important

*If you don't want to connect to the front audio header, pins 5 & 6, 9 & 10 have to be jumpered in order to have signal output directed to the rear audio ports. Otherwise, the Line-Out connector on the back panel will not function.*





## Front USB Connectors: JUSB1, JUSB2

The mainboard provides two USB 2.0 pinheaders (optional USB 2.0 bracket available) that are compliant with Intel® I/O Connectivity Design Guide. USB 2.0 technology increases data transfer rate up to a maximum throughput of 480Mbps, which is 40 times faster than USB 1.1, and is ideal for connecting high-speed USB interface peripherals such as **USB HDD, digital cameras, MP3 players, printers, modems and the like.**



**Pin Definition**

PIN	SIGNAL	PIN	SIGNAL
1	VCC	2	VCC
3	USB0-	4	USB1-
5	USB0+	6	USB1+
7	GND	8	GND
9	Key (no pin)	10	USBOC



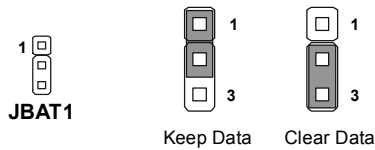
### Important

*Note that the pins of VCC and GND must be connected correctly to avoid possible damage.*

## Jumpers

### Clear CMOS Jumper: JBAT1

There is a CMOS RAM onboard that has a power supply from external battery to keep the data of system configuration. With the CMOS RAM, the system can automatically boot OS every time it is turned on. If you want to clear the system configuration, set the JBAT1 (Clear CMOS Jumper ) to clear data.



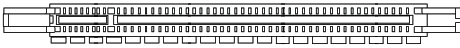
### Important

*You can clear CMOS by shorting 2-3 pin while the system is off. Then return to 1-2 pin position. Avoid clearing the CMOS while the system is on; it will damage the mainboard.*

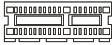
## Slots

### PCI (Peripheral Component Interconnect) Express Slots

PCI Express architecture provides a high performance I/O infrastructure for Desktop Platforms with transfer rates starting at 2.5 Giga transfers per second over a PCI Express x1 lane for Gigabit Ethernet, TV Tuners, 1394 controllers, and general purpose I/O. Also, desktop platforms with PCI Express Architecture will be designed to deliver highest performance in video, graphics, multimedia and other sophisticated applications. Moreover, PCI Express architecture provides a high performance graphics infrastructure for Desktop Platforms doubling the capability of existing AGP 8x designs with transfer rates of 4.0 GB/s over a PCI Express x16 lane for graphics controllers, while PCI Express x1 supports transfer rate of 250 MB/s.



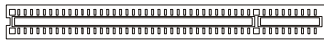
PCI Express x16 Slot



PCI Express x1 Slot

### PCI (Peripheral Component Interconnect) Slots

The PCI slots support LAN cards, SCSI cards, USB cards, and other add-on cards that comply with PCI specifications. At 32 bits and 33 MHz, it yields a throughput rate of 133 MBps.



32-bit PCI Slot



### Important

*When adding or removing expansion cards, make sure that you unplug the power supply first. Meanwhile, read the documentation for the expansion card to configure any necessary hardware or software settings for the expansion card, such as jumpers, switches or BIOS configuration.*

## PCI Interrupt Request Routing

The IRQ, acronym of interrupt request line and pronounced I-R-Q, are hardware lines over which devices can send interrupt signals to the microprocessor. The PCI IRQ pins are typically connected to the PCI bus pins as follows:

	Order 1	Order 2	Order 3	Order 4
PCI Slot 1	INT B#	INT C#	INT D#	INT A#
PCI Slot 2	INT C#	INT D#	INT A#	INT B#

## Chapter 3

# BIOS Setup

This chapter provides information on the BIOS Setup program and allows you to configure the system for optimum use.

You may need to run the Setup program when:

- ≈ An error message appears on the screen during the system booting up, and requests you to run SETUP.
- ≈ You want to change the default settings for customized features.

## Entering Setup

Power on the computer and the system will start POST (Power On Self Test) process. When the message below appears on the screen, press <DEL> key to enter Setup.

### **Press DEL to enter SETUP**

If the message disappears before you respond and you still wish to enter Setup, restart the system by turning it OFF and On or pressing the RESET button. You may also restart the system by simultaneously pressing <Ctrl>, <Alt>, and <Delete> keys.



### Important

1. *The items under each BIOS category described in this chapter are under continuous update for better system performance. Therefore, the description may be slightly different from the latest BIOS and should be held for reference only.*
2. *Upon boot-up, the 1st line appearing after the memory count is the BIOS version. It is usually in the format:*

*W7255VMS V1.0 031505 where:*

*1st digit refers to BIOS maker as A = AMI, W = AWARD, and P = PHOENIX.*

*2nd - 5th digit refers to the model number.*

*6th digit refers to the chipset as I = Intel, N = nVidia, and V = VIA.*

*7th - 8th digit refers to the customer as MS = all standard customers.*

*V1.0 refers to the BIOS version.*

*031505 refers to the date this BIOS was released.*

## Control Keys

<↑>	Move to the previous item
<↓>	Move to the next item
<←>	Move to the item in the left hand
<→>	Move to the item in the right hand
<Enter>	Select the item
<Esc>	Jumps to the Exit menu or returns to the main menu from a submenu
<+/PU>	Increase the numeric value or make changes
<-/PD>	Decrease the numeric value or make changes
<F6>	Load Optimized Defaults
<F7>	Load Fail-Safe Defaults
<F10>	Save all the CMOS changes and exit

## Getting Help

After entering the Setup menu, the first menu you will see is the Main Menu.

### Main Menu

The main menu lists the setup functions you can make changes to. You can use the arrow keys ( ↑↓ ) to select the item. The on-line description of the highlighted setup function is displayed at the bottom of the screen.

### Sub-Menu

If you find a right pointer symbol (as shown in the right view) appears to the left of certain fields that means a sub-menu can be launched from this field. A sub-menu contains additional options for a field parameter. You can use arrow keys ( ↑↓ ) to highlight the field and press <Enter> to call up the sub-menu. Then you can use the control keys to enter values and move from field to field within a sub-menu. If you want to return to the main menu, just press the <Esc >.

```

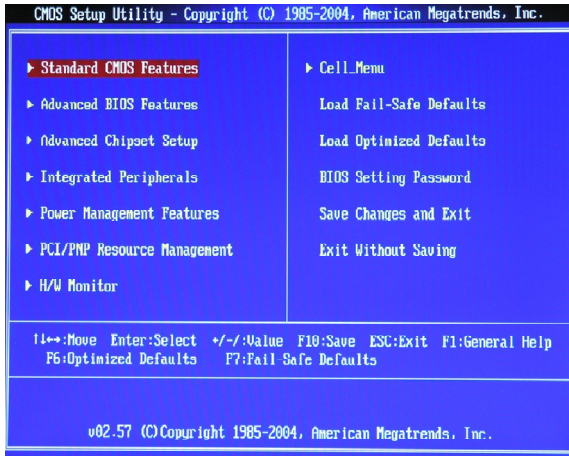
> IDE Channel 0 Master [ None]
> IDE Channel 0 Slave [ None]
> IDE Channel 1 Master [ None]
> IDE Channel 1 Slave [ None]

```

## General Help <F1>

The BIOS setup program provides a General Help screen. You can call up this screen from any menu by simply pressing <F1>. The Help screen lists the appropriate keys to use and the possible selections for the highlighted item. Press <Esc> to exit the Help screen.

## The Main Menu



### ► Standard CMOS Features

Use this menu for basic system configurations, such as time, date etc.

### ► Advanced BIOS Features

Use this menu to setup the items of AWARD® special enhanced features.

### ► Advanced Chipset Setup

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 Features

Use this menu to specify your settings for power management.

### ► PCI/PNP Resource Management

This entry appears if your system supports PnP/PCI.

### ► H/W Monitor

This entry shows your PC health status.

### ► Cell Menu

Use this menu to specify your settings for CPU/AGP frequency/voltage control and overlocking.



▶ **Load Fail-Safe Defaults**

Use this menu to load the default values set by the mainboard manufacturer.

▶ **Load Optimized Defaults**

Use this menu to load the default values set by the mainboard manufacturer specifically for optimal performance of the mainboard.

▶ **BIOS Setting Password**

Use this menu to set the password for BIOS.

▶ **Save & Exit Setup**

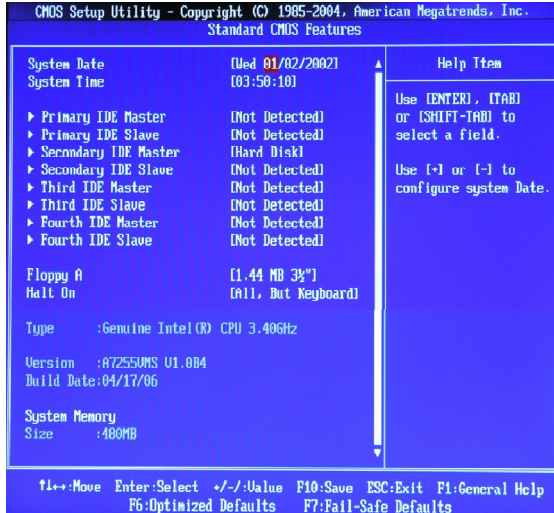
Save changes to CMOS and exit setup.

▶ **Exit Without Saving**

Abandon all changes and exit setup.

## Standard CMOS Features

The items in Standard CMOS Features Menu includes some basic setup items. Use the arrow keys to highlight the item and then use the <+> or <-> keys to select the value you want in each item.



### ► Date (MM:DD:YY)

This allows you to set the system to the date that you want (usually the current date). The format is <day> <month> <date> <year>.

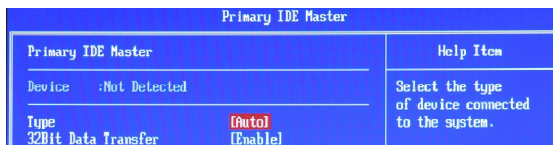
- day** Day of the week, from Sun to Sat, determined by BIOS. Read only.
- month** The month from Jan. through Dec.
- date** The date from 1 to 31 can be keyed by numeric function keys.
- year** The year can be adjusted by users.

### ► Time (hh:mm:ss)

This allows you to set the system time that you want (usually the current time). The time format is <hour> <minute> <second>.

### ► IDE Primary/Secondary/Third/Fourth Master/Slave

Press <+> or <-> to select the hard disk drive type. The specification of hard disk drive will show up on the right hand according to your selection. Press <Enter> for the sub-menu of each item:



► **Type**

This item allows you to select how to define the HDD parameters.

► **32Bit Data Transfer**

Enable 32bit to maximize the IDE hard disk data transfer rate.

► **Floppy A**

This item allows you to set the type of the floppy drives installed.

► **Halt On**

The setting determines whether the system will stop if an error is detected at boot.

Available options are:

[No Errors]

The system doesn't stop for any detected error.

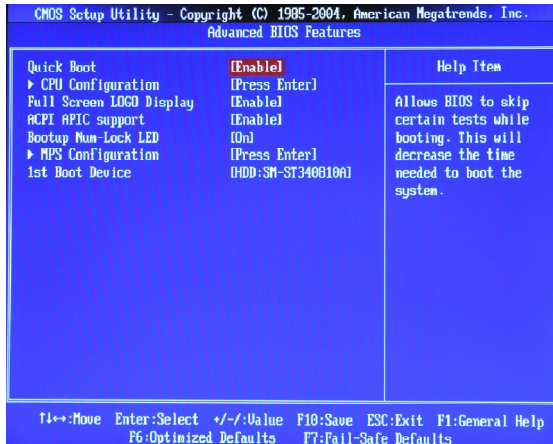
[All, But Keyboard]

The system doesn't stop for a keyboard error.

**\*\*System Information\*\***

CPU Type and memory status of your system (read only).

## Advanced BIOS Features

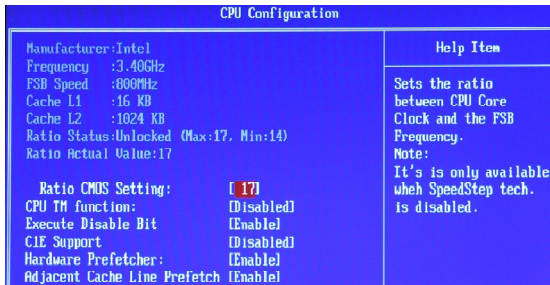


### ► Quick Boot

Setting the item to [Enabled] allows the system to boot within 5 seconds since it will skip some check items.

### CPU Configuration

Press <Enter> to enter the sub-menu.



### \*\*CPU Information\*\*

Manufacturer/Frequency/FSB Speed/Cache L1/Cache L2/Ratio Value  
 These items show the CPU related information of your system (read only).

### ► Ratio CMOS Setting

This setting controls the multiplier that is used to determine the internal clock speed of the processor relative to the external or motherboard clock speed. It is available only when the processor supports this function.

### ► CPU TM function

The item allows you to specify the CPU speed (at percentage) to which it will slow down when the CPU reaches the predetermined overheat temperature.

**▶ Execute Disable Bit**

Execute-Disable Bit capability is a robust hardware feature, detectable using the CPUID instruction, that protects against malicious software executing code on IA-32 systems.

**▶ C1E Support**

This item allows you to enable/disable the C1E power management feature which can also drop clock speed and voltage on the processor.

**▶ Hardware Prefetcher**

This item allows you to enable/disable the hardware prefetcher, or in other words – hardware prefetch mechanism.

**▶ Adjacent Cache Line Prefetch**

This item allows you to enable/disable the adjacent cache line prefetch mode. When disabled, only one 64 byte line from the 128 byte sector is prefetched (which contains the requested data). When enabled – both lines are prefetched no matter whether they have or have not the requested data.

**▶ Full Screen LOGO Display**

This item enables you to show the company logo on the bootup screen. Settings are:

- |            |  |
|------------|--|
| [Enabled]  | Shows a still image (logo) on the full screen at boot. |
| [Disabled] | Shows the POST messages at boot.                       |

**▶ ACPI APIC support**

This field is used to enable or disable the APIC (Advanced Programmable Interrupt Controller). Due to compliance with PC2001 design guide, the system is able to run in APIC mode. Enabling APIC mode will expand available IRQ resources for the system.

**▶ Boot Up Num-Lock LED**

This setting is to set the Num Lock status when the system is powered on. Setting to [On] will turn on the Num Lock key when the system is powered on. Setting to [Off] will allow users to use the arrow keys on the numeric keypad.

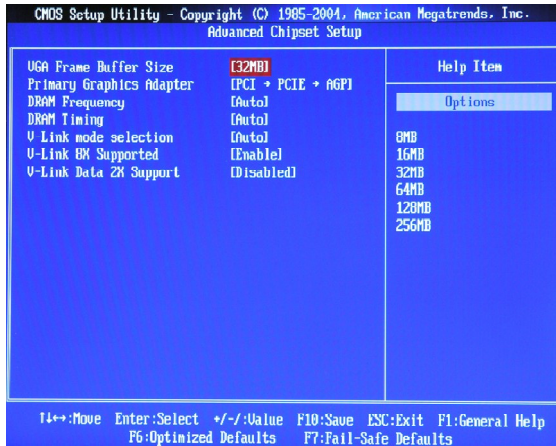
**▶ MPS Configuration**

This field allows you to select which MPS (Multi-Processor Specification) version to be used for the operating system. You need to select the MPS version supported by your operating system. To find out which version to use, consult the vendor of your operating system.

**▶ 1st Boot Device**

The original IBM PCs loaded the DOS operating system from drive A (floppy disk), so IBM PC-compatible systems are designed to search for an operating system first on drive A, and then on drive C (hard disk). However, modern computers usually load the operating system from the hard drive, and may even load it from a CD-ROM drive.

## Advanced Chipset Setup



### Important

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

#### ► VGA Frame Buffer Size

The field specifies the size of system memory allocated for video memory.

#### ► Primary Graphics Adapter

This setting specifies which graphic card is your primary graphics adapter.

#### ► DRAM Frequency

Use this field to configure the clock frequency of the installed DRAM.

#### ► DRAM Timing

The value in this field depends on performance parameters of the installed memory chips (DRAM). Do not change the value from the factory setting unless you install new memory that has a different performance rating than the original DRAMs.

#### ► V-Link mode selection

This item lets you choose the speed mode between the North Bridge & South Bridge.

#### ► V-Link 8X Supported

This item enables or disables the 8X VLink Data Rate.

#### ► V-Link Data 2X Support

This item enables or disables the VLink Data 2X.

## Integrated Peripherals

CMOS Setup Utility - Copyright (C) 1985-2004, American Megatrends, Inc.		
Integrated Peripherals		
		Help Item
USB Function	[Enable]	
USB 2.0 Ports Enable	[Enable]	
Legacy USB Support	[Enable]	Enables 1.1 USB host controllers.
USB Keyboard Legacy Support	[Enable]	
USB Mouse Legacy Support	[Enable]	
USB Storage Device Support	[Enable]	
▶ IDE Configuration	[Press Enter]	
▶ SATA Devices Configuration	[Press Enter]	
* LAN Controller	[Enable]	
Onboard LAN Option ROM	[Disabled]	
Audio Controller	[Auto]	
Onboard 1394	[Enable]	
▶ I/O Devices Configuration	[Press Enter]	

↑↓←→:Move Enter:Select +/-:Value F10:Save ESC:Exit F1:General Help  
F6:Optimized Defaults F7:Fail-Safe Defaults

### ► USB Functions

This setting is used to enable/disable the onboard USB host controller.

### ► USB 2.0 Ports Enable

Set to [Enabled] if you need to use any USB 2.0 device in the operating system that does not support or have any USB 2.0 driver installed, such as DOS and SCO Unix.

### ► Legacy USB Support

Set to [Enabled] if you need to use any USB 1.1/2.0 device in the operating system that does not support or have any USB 1.1/2.0 driver installed, such as DOS and SCO Unix. Set to [Disabled] only if you want to use any USB device other than the USB mouse.

### ► USB Keyboard Legacy Support

Select Enabled if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard.

### ► USB Mouse Legacy Support

Select [Enabled] if you need to use a USB-interfaced mouse in the operating system.

### ► USB Storage Device Support

Select [Enabled] if you need to use a USB-interfaced keyboard or storage device in the operating system.

### IDE Configuration

Press <Enter> to enter the sub-menu:

#### ► PCI IDE BusMaster

This item allows you to enable/ disable the PCI IDE busmaster.

► **OnBoard PCI IDE Controller**

The integrated peripheral controller contains an IDE interface with support for two IDE channels. Change setting to activate each channel separately or both.

**SATA Devices Configuration**

Press <Enter> to enter the sub-menu:

► **Serial ATA IDE Controller**

This feature allows users to enable or disable the RAID function for each SATA hard disk drive.

► **Serial ATA BIOS Execute**

This allows you to enable or disable onchip Serial ATA controller.

► **LAN Controller**

This setting allows you to enable/disable the onboard LAN controller.

► **Onboard LAN Option ROM**

The item enables or disables the initialization of the onboard LAN Boot ROMs during bootup. Selecting [Disabled] will speed up the boot process.

► **Audio Controller**

This item allows you to enable/ disable the audio controller. Disable the function if you want to use other controller cards to connect an audio device.

► **OnBoard 1394**

This setting is used to enable/disable the onboard IEEE 1394 controller.

**I/O Devices Configuration**

Press <Enter> to enter the sub-menu:

► **Floppy Disk Controller**

This is used to enable or disable the onboard Floppy controller.

► **Serial Port1/2 Address**

These items specify the base I/O port addresses of the onboard Serial Port 1/2 . Selecting [Auto] allows BIOS to automatically determine the correct base I/O port address.

► **Parallel Port Address**

There is a built-in parallel port on the on-board Super I/O chipset that provides Standard, ECP, and EPP features.

► **Parallel Port Mode**

[SPP]	Standard Parallel Port
[EPP]	Enhanced Parallel Port
[ECP]	Extended Capability Port
[ECP+EPP]	Extended Capability Port + Enhanced Parallel Port

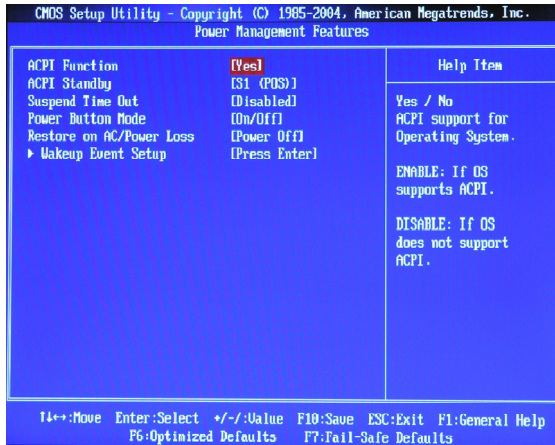


To operate the onboard parallel port as Standard Parallel Port only, choose [SPP]. To operate the onboard parallel port in the EPP mode simultaneously, choose [EPP]. By choosing [ECP], the onboard parallel port will operate in ECP mode only. Choosing [ECP + EPP] will allow the onboard parallel port to support both the ECP and EPP modes simultaneously.

► **Parallel Port IRQ**

This item allows you to set parallel port IRQ.

## Power Management Features



### Important

*S3-related functions described in this section are available only when your BIOS supports S3 sleep mode.*

#### ► ACPI Function

This item is to activate the ACPI (Advanced Configuration and Power Management Interface) Function. If your operating system is ACPI-aware, such as Windows 98SE/2000/ME/XP, select [Enabled]. Settings: [Enabled] and [Disabled].

#### ► ACPI Standby

This item specifies the power saving modes for ACPI function. If your operating system supports ACPI, such as Windows 98SE, Windows ME and Windows 2000, you can choose to enter the Standby mode in S1 (POS) or S3 (STR) fashion through the setting of this field. Options are:

[S1(POS)] The S1 sleep mode is a low power state. In this state, no system context is lost (CPU or chipset) and hardware maintains all system context.

[S3(STR)] The S3 sleep mode is a lower power state where the information of system configuration and open applications/files is saved to main memory that remains powered while most other hardware components turn off to save energy. The information stored in memory will be used to restore the system when a “wake up” event occurs.

#### ► Suspend Time Out

If system activity is not detected for the length of time specified in this field, all devices except CPU will be shut off.

► **Power Button Mode**

This feature allows users to configure the Power Button function. Settings are:

- [Power Off] The power button functions as a normal power-on/-off button.
- [Suspend] When you press the power button, the computer enters the suspend/sleep mode, but if the button is pressed for more than four seconds, the computer is turned off.

► **Restore on AC/Power Loss**

This setting specifies whether your system will reboot after a power failure or interrupt occurs. Available settings are:

- [Power Off] Leaves the computer in the power off state.
- [Power On] Leaves the computer in the power on state.
- [Last State] Restores the system to the previous status before power failure or interrupt occurred.

**Wakeup Event Setup**

Press <Enter> to enter sub-menu.

► **Resume On KBC**

The item specifies how the system will be awakened from power saving mode when input signal of the keyboard is detected.

► **Wake-Up Key**

This setting only works **Resume On KBC** is set to [Enabled]. This setting specifies how the system will be awakened from power saving mode when input signal of the keyboard is detected.

► **Resume On PS/2 Mouse**

The setting determines whether the system will be awakened from what power saving modes when input signal of the PS/2 mouse is detected.

► **Resume On Lan**

The item specifies how the system will be awakened from power saving mode when input signal of the Lan is detected.

► **Resume On RTC Alarm**

This is used to enable or disable the feature of booting up the system on a scheduled time/date from the S3, S4, and S5 state.

► **USB Device Wakeup function**

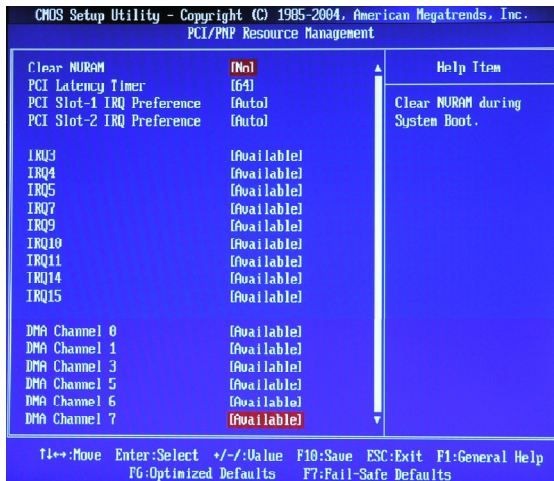
This setting allows USB device wake up the system from S3 state.

► **PCI Express Wakeup**

The item specifies how the system will be awakened from power saving mode when input signal of the PCI Express is detected

## PNP/PCI Resource Management

This section describes configuring the PCI bus system and PnP (Plug & Play) feature. PCI, or **P**eripheral **C**omponent **I**nterconnect, is a system which allows I/O devices to operate at speeds nearing the speed the CPU itself uses when communicating with its 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.



### ► Clear NVRAM

The NVRAM (Non-volatile Random Access Memory) is where the BIOS stores resource information for both PNP and non-PNP devices in a bit string format. When the item is set to [Yes], the system will reset NVRAM right after the system is booted up and then set the setting of the item back to [No] automatically.

### ► PCI Latency Timer

This item controls how long each PCI device can hold the bus before another takes over. When set to higher values, every PCI device can conduct transactions for a longer time and thus improve the effective PCI bandwidth. For better PCI performance, you should set the item to higher values.

### ► PCI Slot1~2 IRQ Preference

These items specify the IRQ line for each PCI slot.

**► IRQ Resources Setup**

The items are adjustable only when *Resources Controlled By* is set to *Manual*.

Press <Enter> and you will enter the sub-menu of the items. IRQ Resources list IRQ 3/4/5/7/9/10/11/12/14/15 for users to set each IRQ a type depending on the type of device using the IRQ. Settings are:

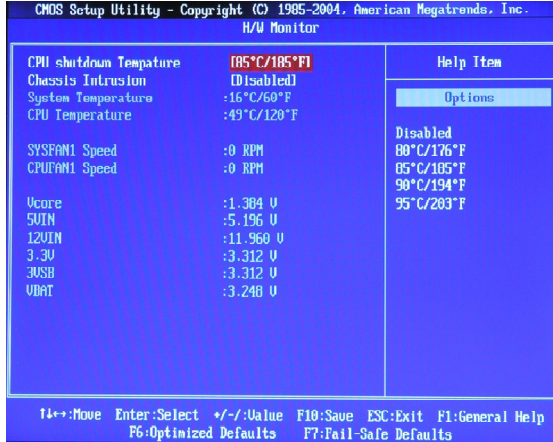
- |                  |   |
|------------------|---|
| <i>Available</i> | For Plug & Play compatible devices designed for PCI bus architecture. |
| <i>Reserved</i>  | The IRQ will be reserved for further request.                         |

**► DMA Resources Setup**

Press <Enter> and you will enter the sub-menu of the items. DMA Resources 0/1/3/5/6/7 for setting determine if BIOS should remove a DMA from the available DMAs passed to devices that are configurable by the system BIOS. The available DMA pool is determined by reading the NVRAM. If more DMAs must be removed from the pool, the end user can reserve the DMA.

## H/W Monitor

This section shows the status of your CPU, fan, overall system status, etc. Monitor function is available only if there is hardware monitoring mechanism onboard.



### ► CPU Shutdown Temperature

If the CPU temperature reaches the upper limit preset in this setting, the system will be shut down automatically. This helps you to prevent the CPU overheating problem. This item is available only when your OS supports this function, such as Windows ME/XP.

### ► Chassis Intrusion

The field enables or disables the feature of recording the chassis intrusion status and issuing a warning message if the chassis is once opened. To clear the warning message, set the field to [Reset]. The setting of the field will automatically return to [Enabled] later.

### ► System/CPU Temperature, CPU/SYSFAN Speed, Vcore, 5VIN, 12VIN, 3.3V, 3VBS, VBAT

These items display the current status of all of the monitored hardware devices/ components such as CPU voltages, temperatures and all fans' speeds.

## Cell Menu

The items here includes some important settings of CPU and PCI functions.

CMOS Setup Utility - Copyright (C) 1985-2004, American Megatrends, Inc.		Help Item
Cell_Menu		
Adjust DDR Voltage (U)	[1.85]	
Adjust NB Voltage (U)	[1.55]	
Spread Spectrum	[Enable]	Min:1.80V Max:2.40V
Adjust CPU FSB Frequency	[200]	Color Message :
Adjust PCI Express Frequency	[100]	Gray : Default Voltage
Adjust PCI Frequency	[33.3]	White : Safe settings.
Auto Disable PCI Clock	[Disabled]	Yellow: High performance settings.
		Red : Not recommended settings. System may be unstable.

F4←:Move Enter:Select +/-:Value F10:Save ESC:Exit F1:General Help  
F6:Optimized Defaults F7:Fail-Safe Defaults



### Important

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

#### ► Adjust DDR Voltage (V)

Adjusting the DDR voltage can increase the DDR speed. Any changes made to this setting may cause a stability issue, so **changing the DDR voltage for long-term purpose is NOT recommended.**

#### ► Adjust NB Voltage (V)

NorthBridge voltage is adjustable in the field, allowing you to increase the performance of your NorthBridge when overclocking, but stability may be affected.



### Important

*The settings shown in different color in CPU Voltage, DDR Voltage and NB Voltage help to verify if your setting is proper for your system.*

**Gray: Default setting.**

**White: Safe setting.**

**Yellow: High performance setting.**

**Red: Not recommended setting and the system may be unstable.**

*Changing CPU Voltage, DDR Voltage and NB Voltage may result in the instability of the system; therefore, it is **NOT** recommended to change the default setting for long-term usage.*

► **Spread Spectrum**

When the motherboard's clock generator pulses, the extreme values (spikes) of the pulses creates EMI (Electromagnetic Interference). The **Spread Spectrum** function reduces the EMI generated by modulating the pulses so that the spikes of the pulses are reduced to flatter curves. If you do not have any EMI problem, leave the setting at [Disabled] for optimal system stability and performance. But if you are plagued by EMI, select the desired range for EMI reduction. Remember to disable **Spread Spectrum** function if you are overclocking, because even a slight jitter can introduce a temporary boost in clock speed which may just cause your overclocked processor to lock up.

► **Adjust CPU FSB Frequency**

This item allows you to select the CPU Front Side Bus clock frequency (in MHz) and overclock the processor by adjusting the FSB clock to a higher frequency.

► **Adjust PCI Express Frequency**

This item allows you to select the PCI Express frequency (in MHz).

► **Adjust PCI Frequency**

This item allows you to select the PCI frequency (in MHz). In default this value will change automatically in accordance with the setting of **Adjust CPU FSB Frequency**. However, you may adjust the desired fixed PCI frequency you like by using the <+> & <-> key.

► **Auto Disable PCI Clock**

This item is used to auto disable the PCI slots. When set to [Enabled], the system will remove (turn off) clocks from empty PCI slots to minimize the electromagnetic interference (EMI).



## Load Optimized Defaults

The two options on the main menu allow users to restore all of the BIOS settings to the default Fail-Safe or Optimized values. The Optimized Defaults are the default values set by the mainboard manufacturer specifically for optimal performance of the mainboard. The Fail-Safe Defaults are the default values set by the BIOS vendor for stable system performance.

When you select Load Fail-Safe Defaults, a message as below appears:

A red rectangular message box with a double border. The text inside is white and reads "Load Fail-Safe Defaults (Y/N)? N".

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

Pressing Y loads the BIOS default values for the most stable, minimal system performance.

When you select Load Optimized Defaults, a message as below appears:

A red rectangular message box with a double border. The text inside is white and reads "Load Optimized Defaults (Y/N)? N".

Load Optimized Defaults (Y/N)? N

Pressing Y loads the default factory settings for optimal system performance.

## BIOS Setting Password

When you select this function, a message as below will appear on the screen:



**Enter Password:**

Type the password, up to 6 characters in length, and press <Enter>. The password typed now will replace any previously set password from CMOS memory. You will be prompted to confirm the password. Retype the password and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

To clear a set password, just press <Enter> when you are prompted to enter the password. A message will show up confirming the password will be disabled. Once the password is disabled, the system will boot and you can enter Setup without entering any password.

When a password has been set, 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.

## Appendix A

# VIA VT8237 SATA RAID Introduction

The Southbridge VT8237 provides a hybrid solution that combines two independent SATA ports for support of up to two Serial ATA (Serial ATA RAID) drives.

Serial ATA (SATA) is the latest generation of the ATA interface. SATA hard drives deliver blistering transfer speeds of up to 150MB/sec. Serial ATA uses long, thin cables, making it easier to connect your drive and improving the airflow inside your PC.

The key features of VT8237 SATA RAID are:

1. Dual independent ATA channels and maximum connection of two SATA hard disk drives allowed.
2. Supports RAID 0 or RAID 1.
3. 4 KB to 64 KB striping block size support.
4. Bootable disk or disk array support.
5. Windows-based RAID configure and management software tool. (Compatible with BIOS)
6. Supports hot-swap failed disk drive in RAID 1 array.
7. Microsoft Windows 98, Me, 2000, XP operating systems support.
8. Event log for easy troubleshooting.

## Introduction

This section gives a brief introduction on the RAID-related background knowledge and a brief introduction on VIA SATA RAID Host Controller. For users wishing to install their VIA SATA RAID driver and RAID software, proceed to **Driver and RAID Software Installation** section.

### RAID Basics

RAID (Redundant Array of Independent Disks) is a method of combining two or more hard disk drives into one logical unit. The advantage of an Array is to provide better performance or data fault tolerance. Fault tolerance is achieved through data redundant operation, where if one drives fails, a mirrored copy of the data can be found on another drive. This can prevent data loss if the operating system fails or hangs. The individual disk drives in an array are called "members". The configuration information of each member is recorded in the "reserved sector" that identifies the drive as a member. All disk members in a formed disk array are recognized as a single physical drive to the operating system.

Hard disk drives can be combined together through a few different methods. The different methods are referred to as different RAID levels. Different RAID levels represent different performance levels, security levels and implementation costs. The RAID levels which the VIA VT8237 SATA RAID Host Controller supports are RAID 0 and RAID 1. The table below briefly introduced these RAID levels.

RAID Level	No. of Drives	Capacity	Benefits
RAID 0 (Striping)	2	Smallest size * 2	Highest performance without data protection
RAID 1 (Mirroring)	2	Smallest size	Data protection

#### RAID 0 (Striping)

RAID 0 reads and writes sectors of data interleaved between multiple drives. If any disk member fails, it affects the entire array. The disk array data capacity is equal to the number of drive members times the capacity of the smallest member. The striping block size can be set from 4KB to 64KB. RAID 0 does not support fault tolerance.

#### RAID 1 (Mirroring)

RAID 1 writes duplicate data onto a pair of drives and reads both sets of data in parallel. If one of the mirrored drives suffers a mechanical failure or does not respond, the remaining drive will continue to function. Due to redundancy, the drive capacity of the array is the capacity of the smallest drive. Under a RAID 1 setup, an extra drive called the .spare drive. can be attached. Such a drive will be activated to replace a failed drive that is part of a mirrored array. Due to the fault tolerance, if any RAID 1 drive fails, data access will not be affected as long as there are other working drives in the array.

## BIOS Configuration



### Important

*The BIOS Configuration pictures shown below is for your reference only, and may vary from actual ones.*

When the system powers on during the POST (Power-On Self Test) process, press <Tab> key to enter the BIOS configuration.

```
VIA Technologies, Inc. VIA VT6420 RAID BIOS Setting Utility V1.10
Copyright (C) VIA Technologies, Inc. All Right reserved.

Press <Tab> key into User Window!
Scan Devices, Please wait...
Channel 0 Master: Maxtor 34098H4
Channel 1 Master: Maxtor 34098H4
```

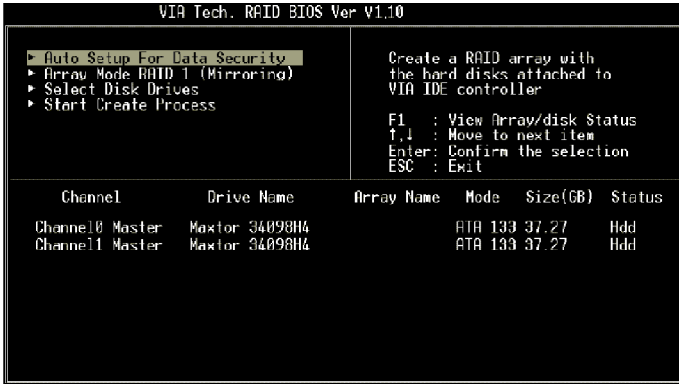
The Serial ATA RAID volume may be configured using the VIA Tech. RAID BIOS. Always use the arrow keys to navigate the main menu, use up and down arrow key to select the each item and press <Enter> to call out the list of creation steps. The main interface of BIOS configuration utility is as below:

```
VIA Tech. RAID BIOS Ver V1.10
```

<ul style="list-style-type: none"> <li>▶ Create Array</li> <li>▶ Delete Array</li> <li>▶ Create/Delete Spare</li> <li>▶ Select Boot Array</li> <li>▶ Serial Number View</li> </ul>		<p>Create a RAID array with the hard disks attached to VIA IDE controller</p> <p>F1 : View Array/disk Status          ↑↓ : Move to next item          Enter: Confirm the selection          ESC : Exit</p>			
Channel	Drive Name	Array Name	Mode	Size(GB)	Status
Channel0 Master	Maxtor 34098H4	ATA	133	37.27	Hdd
Channel1 Master	Maxtor 34098H4	ATA	133	37.27	Hdd

## Create Disk Array

Use the up and down arrow keys to select the **Create Array** command and press <Enter>.



### Important

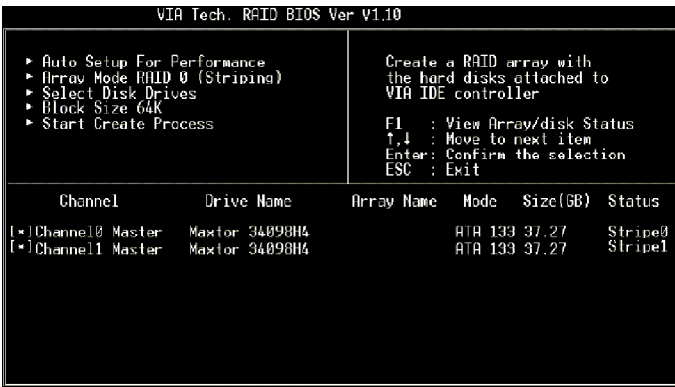
*The "Channel", "Drive Name", "Mode" and "Size (GB)" in the following example might be different from your system.*

Select **Array Mode** and press <Enter>, a list of array modes will appear. Highlight the target array mode that you want to create, and press <Enter> to confirm the selection. If RAID 1 is selected, an option list will popup and enable the users to select **Create and duplicate** which allows BIOS copy the data from the source to the mirroring drive.



## VIA VT8237 SATA RAID Introduction

After array mode is selected, there are two methods to create a disk array. One method is “**Auto Setup**” and the other one is “**Select Disk Drives**”. **Auto Setup** allows BIOS to select the disk drives and create arrays automatically, but it does not duplicate the mirroring drives even if the user selected **Create and duplicate** for RAID 1. It is recommended all disk drives are new ones when wanting to create an array. **Select Disk Drives** lets the user select the array drives by their requirements. When using **Select Disk Drives**, the channel column will be activated. Highlight the target drives that you want to use and press <Enter> to select them. After all drives have been selected, press <Esc> to go back to the creation steps menu.



If user selects a RAID 0 array in step 2, the block size of the array can also be selected. Use the arrow key to highlight **Block Size** and press <Enter>, then select a block size from the popup menu. The block size can be 4KB to 64KB.





## Important

Even though 64KB is the recommended setting for most users, you should choose the block size value which is best suited to your specific RAID usage model.

**4KB:** For specialized usage models requiring 4KB blocks

**8KB:** For specialized usage models requiring 8KB blocks

**16KB:** Best for sequential transfers

**32KB:** Good for sequential transfers

**64KB:** Optimal setting

Use the arrow key to highlight **Start Create Process** and press <Enter>. A warning message will appear, Press **Y** to finish the creation, or press **N** to cancel the creation. Important note: All existing content in the hard drive will be destroyed after array creation.

## Delete Disk Array

A RAID can be deleted after it has been created. To delete a RAID, use the following steps:

1. Select **Delete Array** in the main menu and press <Enter>. The channel column will be activated.
2. Select the member of an array that is to be deleted and press <Enter>. A warning message will show up, press **Y** to delete or press **N** to cancel.

```
VIA Tech. RAID BIOS Ver V1.10

▶ Create Array
▶ Delete Array
▶ Create/Delete Spare
▶ Select Boot Array
▶ Serial Number View

The selected array will be destroyed.
Are you sure? Continue? Press Y/N

Delete a RAID array contain
the hard disks attached to
VIA IDE controller

F1 : View Array/disk Status
↑↓ : Move to next item
Enter: Confirm the selection
ESC : Exit
```

Channel	Drive Name	Array Name	Mode	Size(GB)	Status
[*] Channel0 Master	Maxtor 3409BH4	ARRAY 0	ATA 133	37.27	Stripe0
[*] Channel1 Master	Maxtor 3409BH4	ARRAY 0	ATA 133	37.27	Stripe1

Deleting a disk array will destroy all the data on the disk array except RAID 1 arrays. When a RAID is deleted, the data on these two hard disk drives will be reserved and become two normal disk drives.



## Create and Delete Spare Hard Drive

If a RAID 1 array is created and there are drives that do not belong to other arrays, the one that has a capacity which is equal to or greater than the array capacity can be selected as a spare drive for the RAID 1 array. Select **Create/Delete Spare** and press <Enter>, the channel column will then be activated. Select the drive that you want to use as a spare drive and press <Enter>, the selected drive will be marked as **Spare**. The spare drive cannot be accessed in an OS.

To delete a spare drive, highlight **Create/Delete Spare** and press <Enter>. The spare drive will be highlighted, press <Enter> to delete the spare drive.



## View Serial Number of Hard Drive

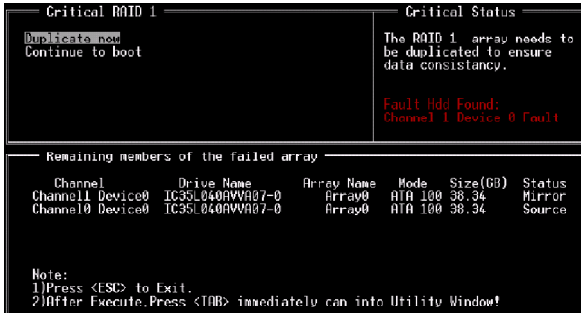
Highlight **Serial Number View** and press <Enter>. Use arrow key to select a drive, the selected drive's serial number can be viewed in the last column. The serial number is assigned by the disk drive manufacturer.

Press the **F1** key to show the array status on the lower screen. If there are no disk arrays then nothing will be displayed on the screen.



## Duplicate Critical RAID 1 Array

When booting up the system, BIOS will detect if the RAID 1 array has any inconsistencies between user data and backup data. If BIOS detects any inconsistencies, the status of the disk array will be marked as critical, and BIOS will prompt the user to duplicate the RAID 1 in order to ensure the backup data consistency with the user data.



If user selects **Continue to boot**, it will enable duplicating the array after booting into OS.

## Rebuild Broken RAID 1 Array

When booting up the system, BIOS will detect if any member disk drives of RAID has failed or is absent. If BIOS detects any disk drive failures or missing disk drives, the status of the array will be marked as broken.

If BIOS detects a broken RAID 1 array but there is a spare hard drive available for rebuilding the broken array, the spare hard drive will automatically become the mirroring drive. BIOS will show a main interface just like a duplicated RAID 1. Selecting **Continue to boot** enables the user to duplicate the array after booting into operating system.

If BIOS detects a broken RAID 1 array but there is no spare hard drive available for rebuilding the array, BIOS will provide several operations to solve such problem.



1. **Power off and Check the Failed Drive:**

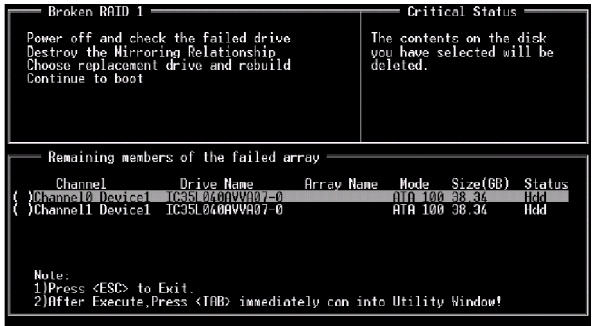
This item turns off the computer and replaces the failed hard drive with a good one. If your computer does not support APM, you must turn off your computer manually. After replacing the hard drive, boot into BIOS and select **Choose replacement drive and rebuild** to rebuild the broken array.

2. **Destroy the Mirroring Relationship:**

This item cancels the data mirroring relationship of the broken array. For broken RAID 1 arrays, the data on the surviving disk will remain after the destroy operation. However, **Destroy the Mirroring Relationship** is not recommend because the data on the remaining disk will be lost when the hard drive is used to create another RAID 1 array.

3. **Choose Replacement Drive and Rebuild:**

This item enables users to select an already-connected hard drive to rebuild the broken array. After choosing a hard drive, the channel column will be activated.



Highlight the target hard drive and press <Enter>, a warning message will appear. Press **Y** to use that hard drive to rebuild, or press **N** to cancel. Please note selecting option **Y** will destroy all the data on the selected hard drive.

4. **Continue to boot:**

This item enables BIOS to skip the problem and continue booting into OS.

## Installing Operating System & Drivers

### Install Driver in Windows OS

#### † New Windows OS (2000/XP/NT4) Installation

The following details the installation of the drivers while installing Windows XP.

1. Start the installation:
  - If your driver disk is damaged or lost, make a new driver disk by copying all the necessary files from the provided MSI CD: [ **IDE\VIA\Floppy** ]
  - Boot from the CD-ROM. Press **F6** when the message "Press F6 if you need to install third party SCSI or RAID driver" appears.
2. When the Windows Setup window is generated, press **S** to specify an Additional Device(s).
3. Insert the driver diskette **VIA VT6420/VT8237 Disk Driver** into drive A: and press <Enter>.
4. Depending on your operating system, choose **VIA RAID Controller(Windows XP)**, **VIA RAID Controller(Windows 2000)** or **VIA RAID Controller (Windows NT4)** from the list that appears on the Setup screen, press the <Enter> key.
5. Press <Enter> to continue with installation or if you need to specify any additional devices to be installed, do so at this time. Once all devices are specified, press <Enter> to continue with installation.
6. From the Setup screen, press the <Enter> key. Setup will now load all device files and then continue the Windows XP installation. During the GUI portion of the install you might be prompted to click **Yes** to install the RAID driver. Click **Yes** as many times as needed in order to finish the installation. This will not be an issue with a signed driver.

#### † Existing Windows XP Driver Installation

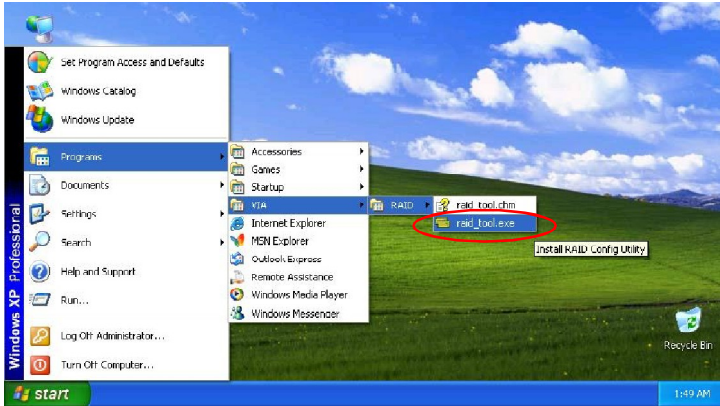
1. Insert the MSI CD into the CD-ROM drive.
2. The CD will auto-run and the setup screen will appear.
3. Under the Driver tab, click on **VIA SATA RAID Drivers**.
4. The drivers and VIA RAID Tool will be automatically installed.


#### † Confirming Windows XP Driver Installation

1. From Windows XP, open the **Control Panel** from **My Computer** followed by the System icon.
2. Choose the **Hardware** tab, then click the **Device Manager** tab.
3. Click the "+" in front of the **SCSI and RAID Controllers** hardware type. The driver **VIA SATA RAID Controller** should appear.

## Using VIA RAID Tool



Once the installation is complete, go to **Start** ---> **Programs** ---> **VIA** ---> **RAID** ---> **raid\_tool.exe** to enable **VIA RAID Tool**.



After the software is finished installation, it will automatically start whenever Windows is initiated. You may double-click on the  shown in the system tray of the tool bar to launch the **VIA RAID Tool** utility.





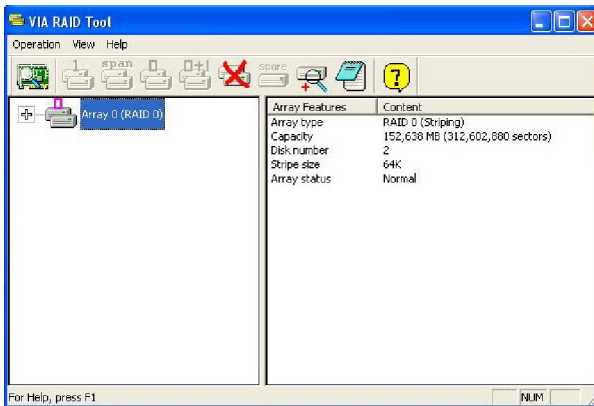
The main interface is divided into two windows and the toolbar above contain the main functions. Click on these toolbar buttons to execute their specific functions. The left windowpane displays the controller and disk drives and the right windowpane displays the details of the controller or disk drives. The available features are as following:

-  View by Controller
-  View by Devices
-  View Event log
-  Help Topics

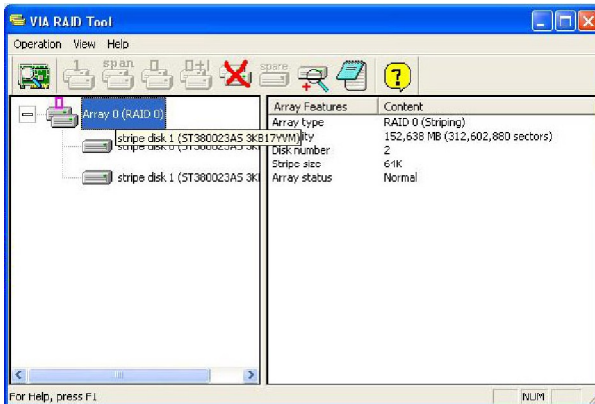
## MS-7255 Mainboard

It means that VT8237 SATA RAID only has the feature of monitoring the status of RAID 0 or RAID 1.

Click on  or  button to determine the viewing type of left window pane. There are two viewing types: By controllers and by device. Click on the object in the left window pane to display the status of the object in the right windowpane. The following screen shows the status of Array 0---RAID 0.

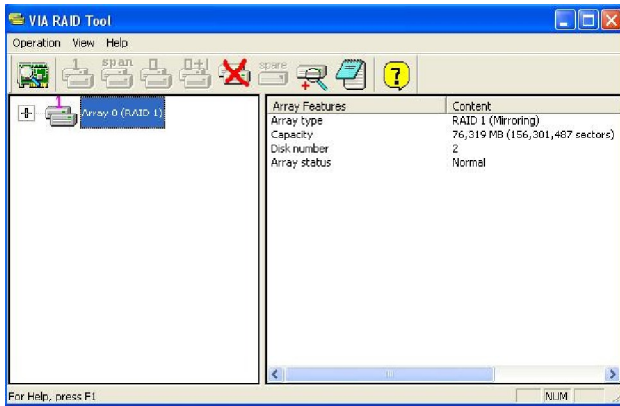


Click on the plus (+) symbol next to Array 0---RAID 0 to see the details of each disk.

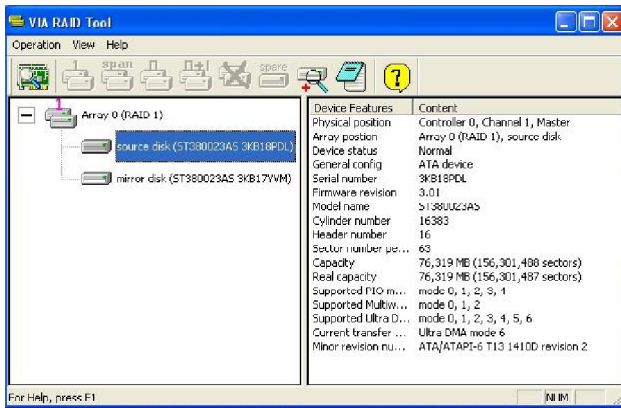


## VIA VT8237 SATA RAID Introduction

You may also use the same  or  button to view the status of Array 0---RAID 1.



Click on the plus (+) symbol next to Array 0---RAID 1 to see the details of each disk.



## *Appendix B*

### *VIA VT1708 Audio*

The VIA VT1708 HD Audio Codec delivers high fidelity audio playback featuring four premium quality stereo DACs enabling 8 channel support, and 2 stereo ADCs, all of which support the latest 24-bit, 192KHz audio standards.



## Installing the VIA VT1708 Audio Driver

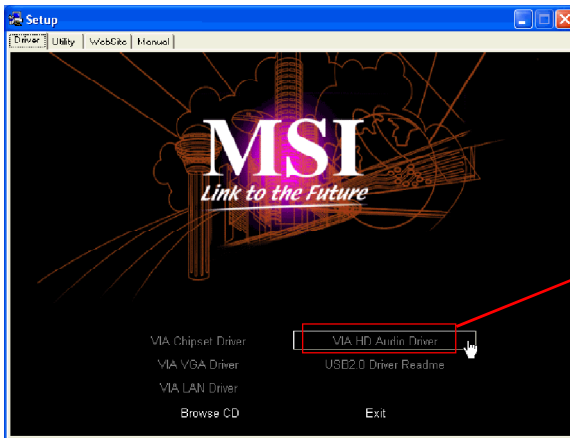
You need to install the driver for VIA VT1708 codec to function properly before you can get access to 2-, 4-, 6-, 8- channel or 7.1+2 channel audio operations. Follow the procedures described below to install the drivers for different operating systems.

### Installation for Windows 2000/XP


For Windows® 2000, you must install Windows® 2000 Service Pack4 or later before installing the driver. For Windows® XP, you must install Windows® XP Service Pack1 or later before installing the driver.

The following illustrations are based on Windows® XP environment and could look slightly different if you install the drivers in different operating systems.

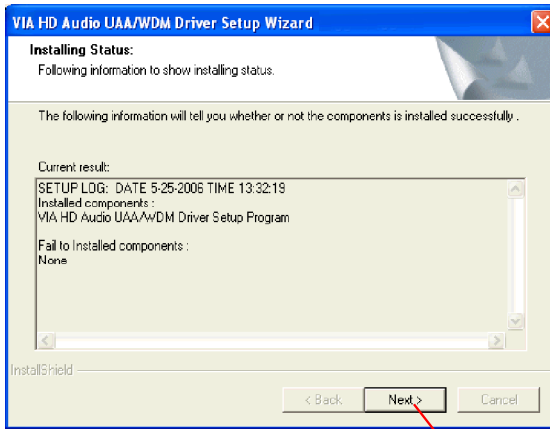
1. Insert the application CD into the CD-ROM drive. The setup screen will automatically appear.
2. Click **VIA HD Audio Driver**.



### Important

The **HD Audio Adeck**  software utility is under continuous update to enhance audio applications. Hence, the program screens shown here in this section may be slightly different from the latest software utility and shall be held for reference only.

3. Click **Next** to install the Realtek High Definition Audio Driver.



Click here

4. Click **Finish** to restart the system.



Select this option

Click here

## Software Configuration

### HD Audio Deck: Adeck

Audio Deck (Adeck) is a Windows based program that co-works with the VIA HD Audio driver and the VIA HD Audio chip. With this convenient audio control interface, you can make the best use of the VIA Audio chip and create powerful customized sound environments.

The main features of Adeck include:

- Supports various sound enhancement settings with detailed user customization
- Supports active jack detection
- Supports jack function configuration
- Supports configurations for independent headphone and re-redirect headphone.
- Supports set sampling rate of S/PDIF output device
- Supports Hot Keys
- Supports Multi-language
- Supports speech testing
- Supports multi-device selection for playback and recording



### Important

*Adeck only supports the VIA HD audio chip series with VIA HD audio driver installed.*

After installing the audio driver, you are able to use the 2-, 4-, 6- or 8- channel audio feature now. Click the audio icon  from the system tray at the lower-right corner of the screen to activate the **HD Audio Deck**.



Double click

## Display Mode

The VIA Adeck has two basic display modes: “Simple Mode” and “Full Mode”.

### Simple Mode

Once Adeck has been launched, the panel will be displayed in the center of windows desktop. The Adeck system is initialized using the simple mode. In this mode, the user only has limited control and audio information. The basic controls include: master volume and mute. The basic audio information includes: peak meter, number of channels, S/PDIF out status or sound effect status, etc.



If you want to control the sound effects in detail, you can click on the buttons located on the lower portion of the panel. These buttons are labeled: Speaker, Mixer, Effect, Jack, S/PDIF and Info. When any of the buttons are activated, the Adeck system will go into full mode for detailed control.

To exit Adeck, simply click the Power button on the Adeck panel.

### Full Mode

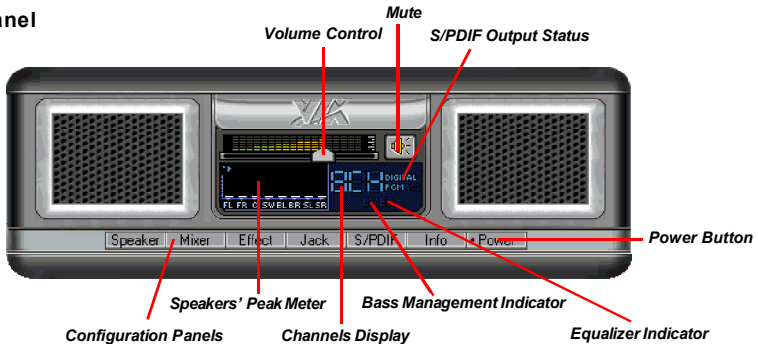
In the full mode, the bottom portion of Adeck expands. Depending upon the button that was selected, different panels will be displayed in the expanded portion.



## PANEL DETAIL

Adeck consists of two parts: a top and bottom panel. In the simple mode, only the top panel will be fully shown. In the full mode, both the top and bottom panel will be fully visible.

### Top Panel



**Volume control:** This is the global volume control. The global volume is controlled using a slider. Moving the slider to the left decreases the volume. Moving the slider to the right increases the volume.

**Mute button:** This is the global mute control. When the mute button is activated, all speakers connected to the system will be silenced.

**Channels Display:** On the right of the peak meter, there is a display that shows the number of audio channels that is being used in the system. The number of channels can be changed in the speaker configuration panel.

**Peak Meter:** The volume peak meter is located to the left of the channel display. The number of peak meters changes according to the number of channels used in the system.

**S/PDIF Output Status:** The S/PDIF output status is located to the right of the Channel Display. If "Digital PCM" is shown, that means the audio system will allow a PCM music stream output from the S/PDIF output jack.

**Bass Management Indicator:** The Bass Management Indicator is located below the Channel Display. If it is enabled, "BM" will be visible. Notice that the "Bass Management" and "Equalizer" functions can not be enabled at the same time.

**Equalizer Indicator:** The Equalizer Indicator is located to the right of the Bass Management Indicator. If it is enabled, "EQ" will be visible. As mentioned earlier, the Equalizer and Bass Management functions can not be enabled at the same time.

**Configuration Panels:** On the bottom of the top panel, there is a row of buttons. When any of the buttons are activated (except the "Power" button), the bottom panel expands to show the selected panel.

**Power Button:** When the Power button is activated, Adeck will hide itself in the system tray.

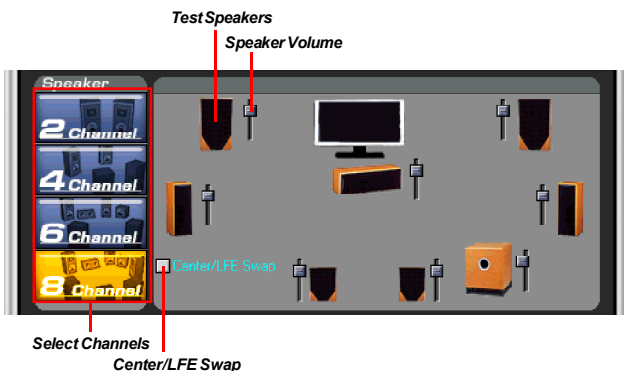
## Configuration Panels

### Speaker Configuration Panel

Speaker Configuration Panel is divided into two parts. On the left side, you can select the number of audio channels. There are up to 8 channels available. Once a channel configuration is selected the right side of the panel will change accordingly.

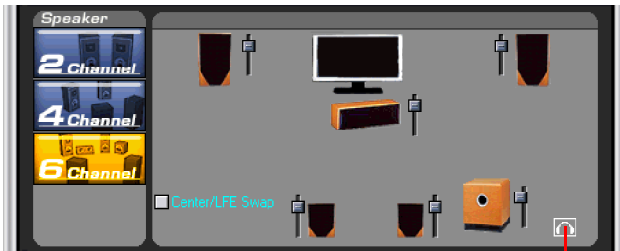
On the right side of Speaker Configuration Panel, you can set the volume level for each speaker separately. Speaker positions can also be changed. To test a speaker, double-click on the speaker to hear the test audio clip.

Below side of the speaker configuration on the right side, there is a check box for center/LFE Swapping. This function is used to swap the center speaker and LFE speaker audio streams.



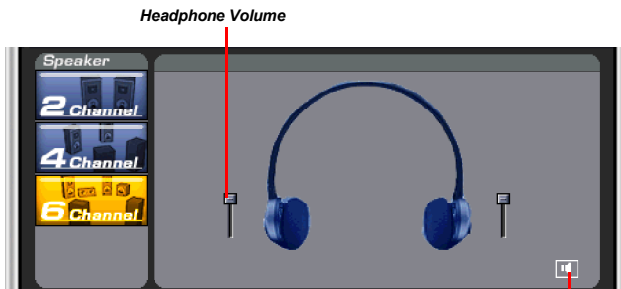
## MS-7255 Mainboard

If the "Independent Headphone" feature has been enabled, the maximum number of channels will be six. To control the headphone volume, click on the headphone icon at the bottom-right corner.



*Click here to view Independent Headphone Control*

To switch back to the speaker volume controls, click on the speaker icon at the bottom-right corner.



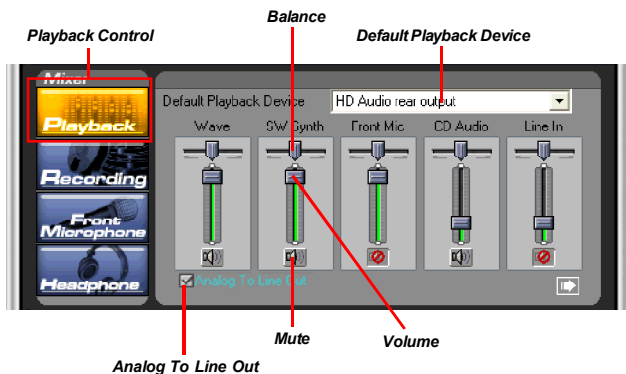
*Click here, it will turn to Speaker Control.*

## Mixer Configuration Panel

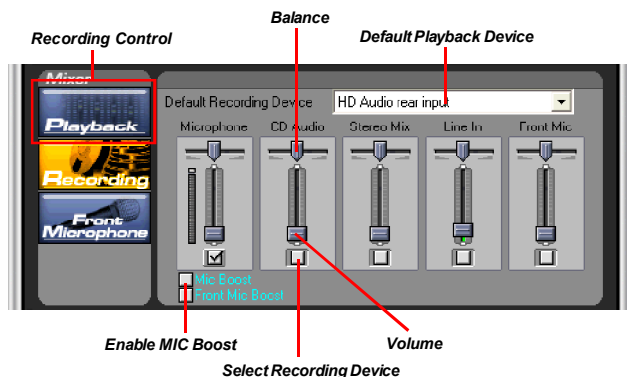
On the Mixer Configuration Panel, there are four mixer devices that can be selected: playback, recording, headphone and microphone.

Below shows the Playback Mixer. Each of the Playback items has a volume, balance and mute control. You can also select the default playback device from a drop-down menu.

When select desired box to enable “Analog To Line Out”, you can hear the analog input source (such as Microphone, Line In) from the speaker. In this condition Jack detection function will be disabled.

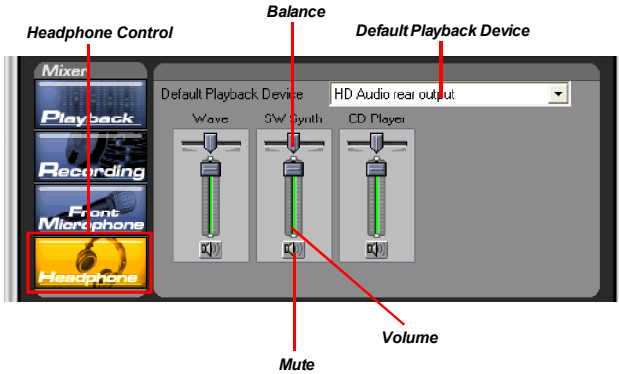


On the Recording Mixer, all possible input devices are shown. Below shows the Recording Mixer. Each of the Recording items has a volume, balance and item select. Please note that there can only be one source at any given time. On the bottom side of this page, there are Mic boost control check box. You could enlarge the recording sound of MIC by checking on this feature. There is also a peak meter to show the volume of the audio input.

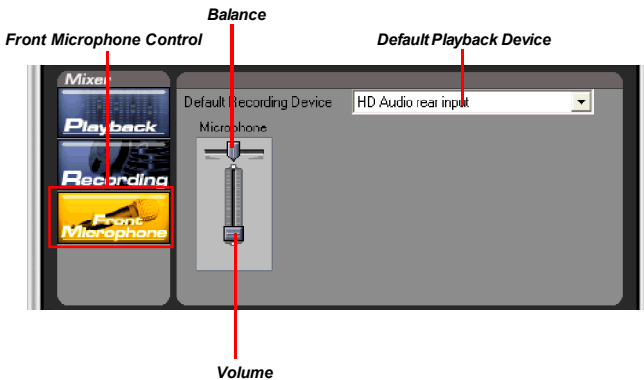




The "Headphone" and "Front Microphone" configuration panels may or may not be shown depending on your computer system. The "Headphone" mixer controls work the same way as the "Playback" mixer controls, but it is only visible when the "Independent Headphone" feature is enabled.



The "Front Microphone" configuration panel is shown in the figure below. This configuration panel only contains one mixer control because the front microphone only has one input jack.

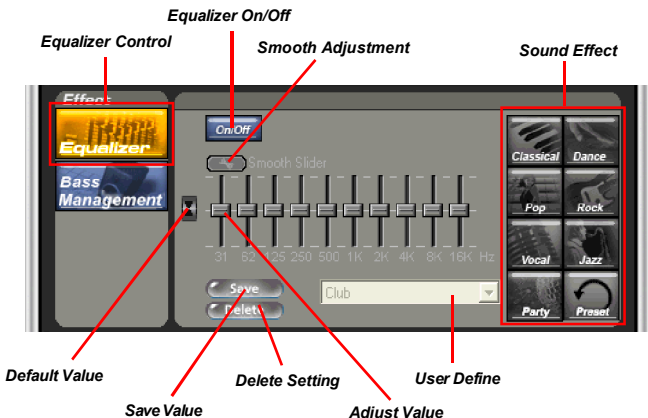


### Effects Configuration Panel

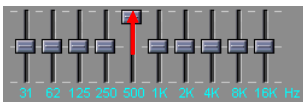
There are two sound enhancement controls in Adeck: "Equalizer" and "Bass Management".

When the Equalizer is selected, you will see the 10 bands from 31 Hz to 16 kHz. The equalizer settings will only take effect after you enables it by pressing the "On/Off" button above the equalizer.

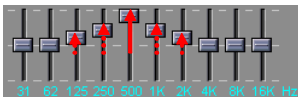
There are seven preset equalizer settings that can be selected: Classical, Dance, Pop, Rock, Vocal, Jazz and Party. Additionally, you can create custom settings and save them for later use. To save the current equalizer setting, click on the "Save" button. To delete a setting, select the setting to be deleted from the drop-down menu and click on the "Delete" button.



The below figure shows an example of an adjustment being made to the 500 Hz band without the "Smooth Slider" enabled.



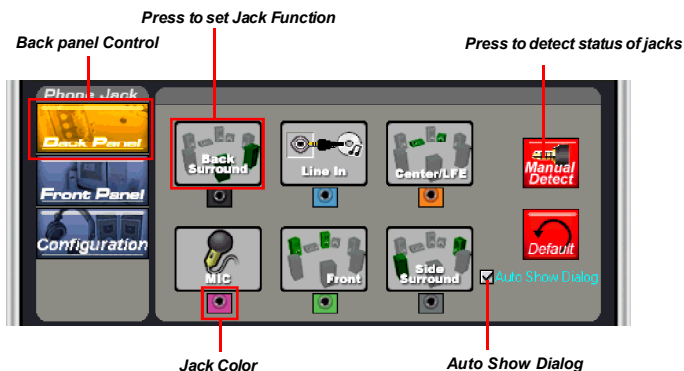
If "Smooth Slider" is enabled, any adjustment to any of the Equalizer bands will cause the surrounding bands to be affected so as to produce a smoother sound.



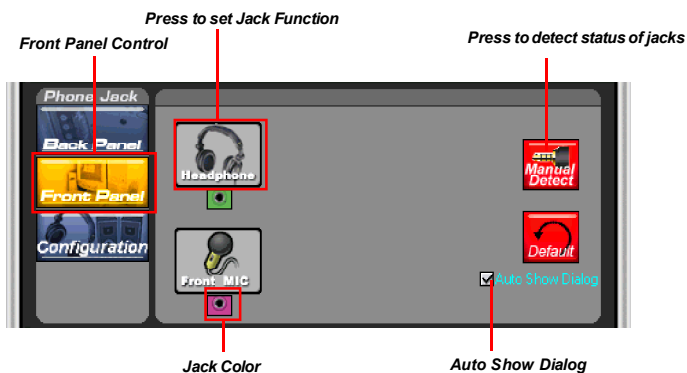


## Jack Configuration Panel

The Jack Configuration Controls enable you to configure all the audio jacks on the computer system. The "Back Panel" lists all the jacks at the rear side of the computer system. The "Front Panel" lists all the jacks at the front side of the computer system. In general, the multi-channel playback and recording jacks will be listed in the "Back Panel" controls. And the "Headphone" and "Front Mic" will be listed on "Front Panel". In the "Back Panel" controls, shown in the below figure, the jacks can be distinguished by the different colors used to identify each jack. You should be able to find matching colors at the rear of the computer system. Each of the jacks can be re-assigned. You can easily revert to the default setting by clicking on the "Default" button.

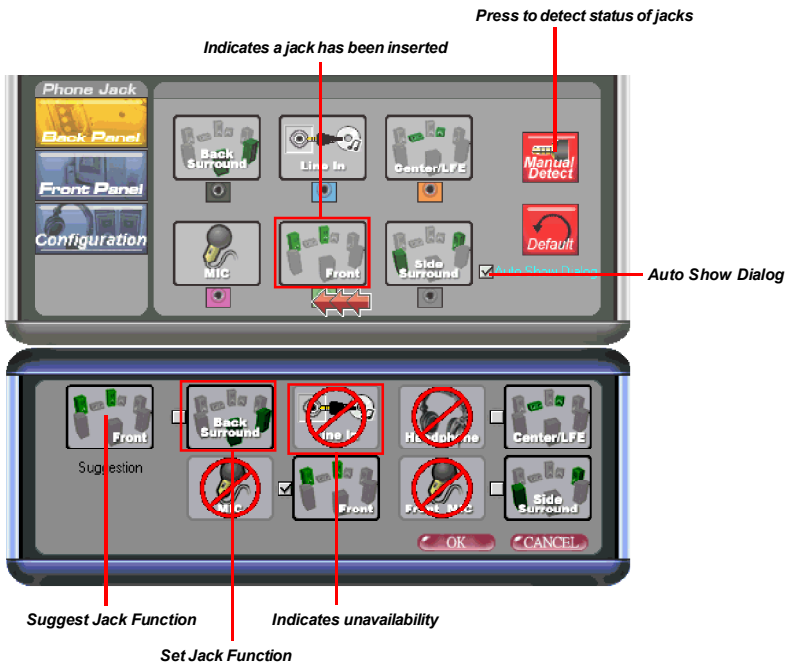


The "Front Panel" controls usually only has two jacks listed: "Headphone" and "Front Mic".



The jack detection function can be enabled by checking the "Auto Show Dialog" checkbox. When a new device is plugged-in, a new panel will be displayed. The below figure shows an example of a jack being plugged into the green jack. When the jack insertion is detected, ADeck will be displayed. You will see a red arrow indicating the jack insertion event. Even the "Auto Show Dialog" is disabled, you still can press the "Manual Detect" to detect status of jacks.

When you clicks on the jack indicated by the arrow, an extension of the panel will be displayed. There you can assign the jack to any available function. Functions that are not available will not have a checkbox next to it.



The Headphone Configuration Panel is shown in the below figure. There are two headphone configurations that can be chosen: "Independent Headphone" or "Redirected Headphone".

### Redirected Headphone Function

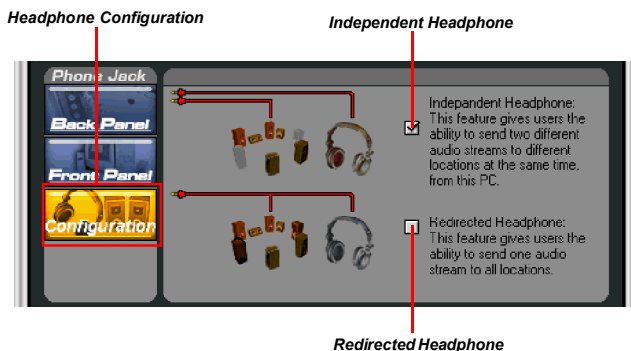
The "Redirected Headphone" features enables you to hear the same audio that is being channeled to the front speakers. In this mode, once the headphone has been inserted the audio will be redirected from the speakers to the headphone.

Please note that the "Independent Headphone" function requires two channels. Therefore, only six channels will be available if "Independent Headphone" is being used.

### Independent Headphone Function (Multi-Stream Function)

The "Independent Headphone" feature enables you to play different audio sources simultaneously and let them output respectively from the indicated rear panel or front panel. This feature is very helpful for different purposes playback at the same time..

1. Click Configuration button to show the menu.
2. Mark "check" to select desired box to enable Independent Headphone Function.



### Important

*Before set up, please make sure the playback devices are well plugged in the jacks on the rear or front panel. The VIA HD Audio front Headphone item will appear after you plugging the speakers into the jacks on the front panel.*

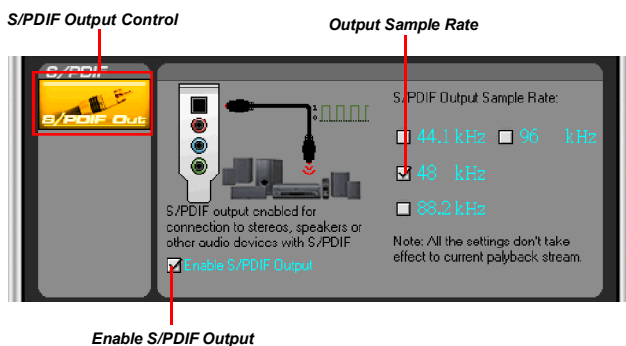
## MS-7255 Mainboard

In the default setting, the first selective audio source will be played from the rear panel. For the second audio source output, you must select the VIA HD Audio front output from the scroll list. Then this second audio can be played back from the Front out by different audio playback AP.



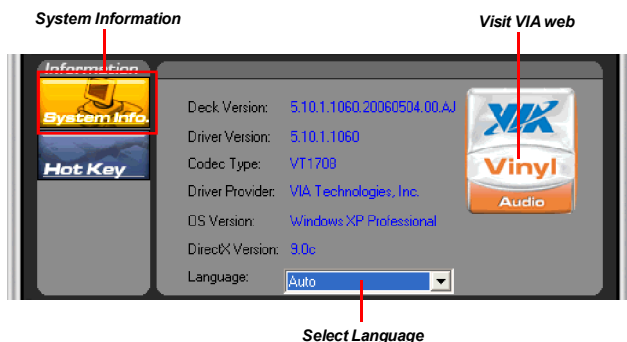
## S/PDIF Configuration Panel

The S/PDIF Configuration Panel allows you to enable S/PDIF support and select the S/PDIF output sampling rate. Please note that some S/PDIF decoders do not support 176.4 and 192 kHz. Before enable these higher sampling rates, please checking the external S/PDIF decoder first.



## System Information Panel

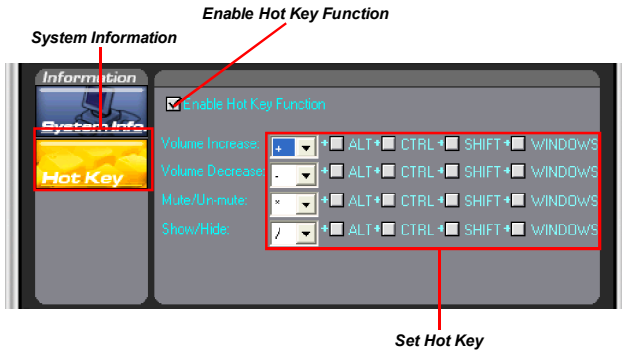
The System Information Panel displays the current system information, allows you to select the language for Adeck and enables you to visit the VIA web site.





## Hot Key Configuration Panel

The "Hot Key" Configuration Panel allows you to set hot keys for controlling the volume and muting. To use the hot keys, "Enable Hot Key Function" must first be checked.



When a hot key is pressed, the screen will show a green volume control bar at the bottom of the screen and a mute/un-mute icon at the top-right corner of the screen. The on-screen display can be hidden by pressing the "Show/Hide" hot key.

