MSI
MICRO-STAR INTERNATIONAL

Axis 700
Axis 700 Lite

MS-6427 (V1.X) Barebone

FCC-B Radio Frequency Interference Statement

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 instruction manual, 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.

CE N1996

= Reorient or relocate the receiving antenna.
= Increase the separation between the equipment and receiver.
= Connec 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 LA NOTICE D'INSTALLATION AVANT DE RACCORDER AU RESEAU.

FC **Micro-Star International**
Axis 700

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 interfer ence that may cause undesired operation.

Trademark

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Intel® and Pentium® are registered trademarks of Intel Corporation.
PS/2 and OS®/2 are registered trademarks of International Business Machines Corporation.
Windows® 95/98/2000/NT/XP are registered trademarks of Microsoft Corporation.
Netware® is a registered trademark of Novell, Inc.
Award® is a registered trademark of Phoenix Technologies Ltd.
AMI® is a registered trademark of American Megatrends Inc.

U.S. Patent Numbers

4,631,603; 4,819,098; 4,907,093; 5,315,448; and 6,516,132.

This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

Revision History

Revision	Revision History	Date
v1.0	First release	August 2006

Copyright Notice

Safety Instructions

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. Check power supply rating: 100-240V~, 3-1.5A, 60-50Hz.
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 service personnel:
    - The power cord or plug is damaged.
    - Liquid has penetrated into the equipment.
    - The equipment has been exposed to moisture.
    - The equipment does 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. DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT UNCONDITIONED, STORAGE TEMPERATURE ABOVE 40^0 C (102^0F), 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.

廢電池請回收

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

Warning:

1. For every changes in powercord¨¦s usage, please use an approved power cord with condition greater or equal to H05VV-F,3G , 0.75mm^2.
2. Internal part is hazardous moving parts, please keep fingers and other body parts away.
3. For pluggable equipment, the socket-outlet shall be installed near the equipment and shall be easily accessible.
4. Do not disable the protective earth pin from the plug, the equipment must be connected to an earthed mains socket-outlet.

1. The optical storage devices are classified as a Class 1 Laser products. Use of controls or adjustments or performance of procedures other than those specified
2. Do not touch the lens inside the drive

WEEE Statement

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 équipement 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/EC), 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 termino 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 periodo 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 Electrische en Electronische producten (2002/96/EC), die op 13 Augustus 2005 in zal gaan kunnen niet meer beschouwd worden als vervuilling.

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 odbačenoj ekektronskoj i električnoj opremi, Direktiva 2002/96/EC, koja stupa na snagu od 13. Avgusta 2005, proizvodi koji spadaju pod "elektronsku 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 śmieci 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 atılamayacak ve bu elektonik 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 odebírání 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 környezetvédőként 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 kezelhetőek lakossági hulladékként, és az ilyen elektronikus berendezések gyártói kötelessé válnak az ilyen termékek visszavételére azok hasznos élettartama végén. Az MSI betartja a termékvisszavétellel kapcsolatos követelményeket az MSI márkanév 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.

CONTENTS

Chapter 1
Getting Started

Congratulations for purchasing Axis 700 (MS-6427) barebone. Axis 700 barebone is your best Slim PC choice. With the fantastic appearance and ultra-small form factor, it can easily be set anywhere. The feature packed platform also gives you an exciting PC experience.

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Mainboard Specifications

Processor Support

- VIA® C7 1GHz / 21x21mm nano BGA2 package
- TDP max 1.2GHz @12W
- Supports VRM mobile (down to 0.7V)
- Thermal design margin up to 100°c Tcase
- 3D instructions SSE / SSE2 / SSE3
- Security Features RGN / AES / SHA-1

Supported FSB

- 400 / 533 MHz

Chipset

- North Bridge: VIA® CN700 chipset
- South Bridge: VIA® VT8237R+ chipset

Memory Support

- Supports DDRII 400 / 533 SDRAM (2GB Max)
- 1 DDRII DIMM (240pin / 1.8V)

LAN

- Supports PCI LAN 10/100 Fast Ethernet by VIA® VT6103L

Audio

- Chip integrated by VIA® VT1618
- Flexible 5.1-channel audio with jack sensing
- Compliant with AC97 2.3 spec

IDE

- One IDE port by VT8237R+
- Supports Ultra DMA 66/100/133 mode
- Supports PIO, Bus Master operation mode

SATA

- Supports two SATA ports by VT8237R+
- Supports storage and data transfers at up to 150MB/s

RAID

- SATA1-2 supports RAID 0/ 1 or JBOD mode by VT8237R+

Connectors

- Back Panel
  - 1 PS/2 mouse port
  - 1 PS/2 keyboard port
  - 2 serial ports (COMA and COMB)
  - 2 USB 2.0 ports
  - 1 LAN jack
  - 3 flexible audio jacks
  - 1 S-Video port (for standard only)
  - 1 DVI port (for standard only)
  - 1 VGA oort

- On-Board Pinheaders
  - 3 USB 2.0 pinheaders
  - 1 audio pinheader

Slots

- 1 PCI slot
- Supports 3.3V/ 5V PCI bus Interface

Form Factor

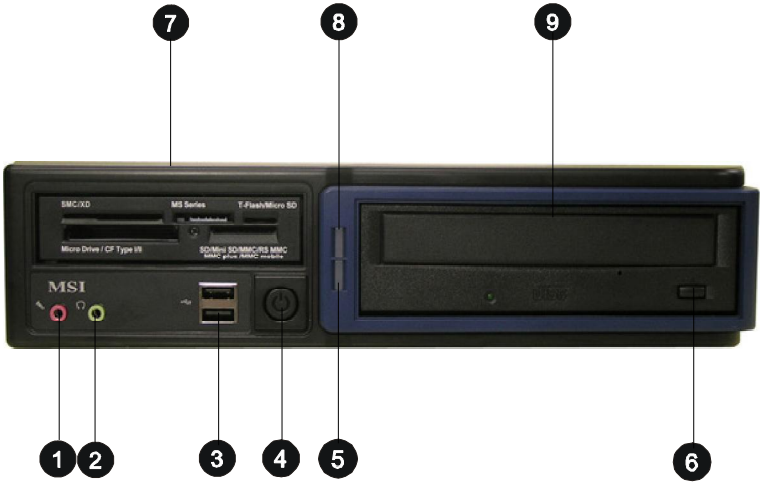
- Mini-ITX (17 cm X 17 cm)

Mounting

- 4 mounting holes

System Configuration

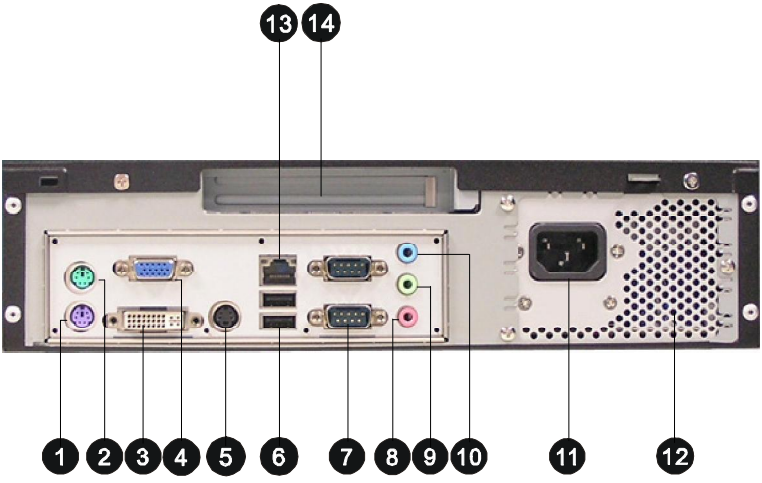
Front View



1. Mic-In (pink)
2. Headphone-Out (green)
3. USB 2.0 ports x 2
4. Power Button
5. HDD LED
6. Optical Drive Eject/ Close Button
7. Card Reader Drive (optional)
8. Power LED
9. Optical Drive (optional)

Rear View

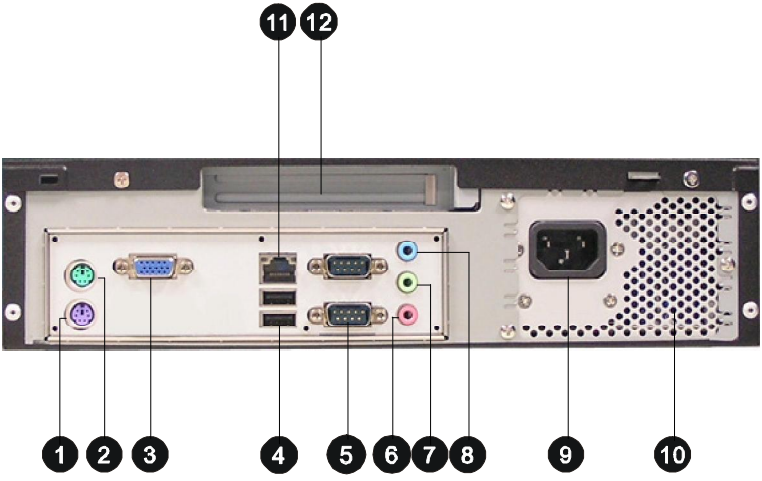
(Standard Version)



1. PS/2 Keyboard (purple)
2. PS/2 Mouse (green)
3. DVI Port (for standard only)
4. VGA Port (D-Sub15)
5. S-Video (for standard only)
6. USB 2.0 Ports
7. Serial Ports
8. Mic-In (pink)
9. Line-Out (green)
10. Line-In (blue)
11. Power Jack
12. Ventilation Hole
13. LAN Jacks (RJ45)
14. Expansion Slots

Rear View

(Lite Version)



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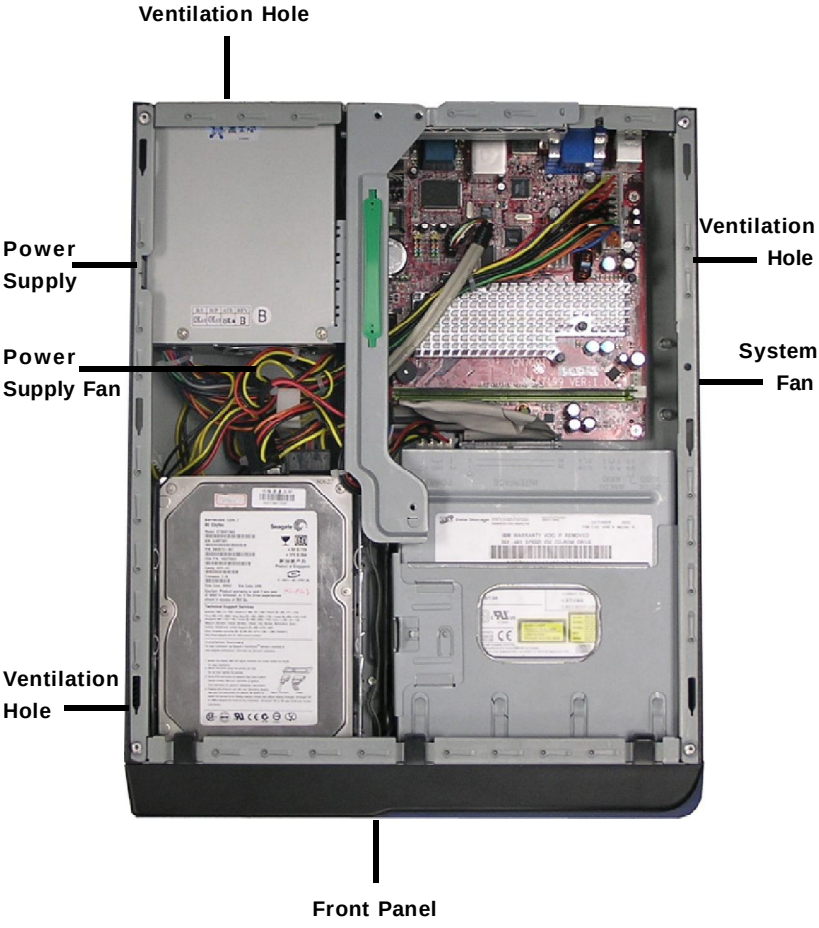
Chassis Design

- Dimension: 363mm (D) x 300mm (W) x 72mm (H)
- Minimized screw structure
- Detachable bay housing
- Multiple ventilation holes

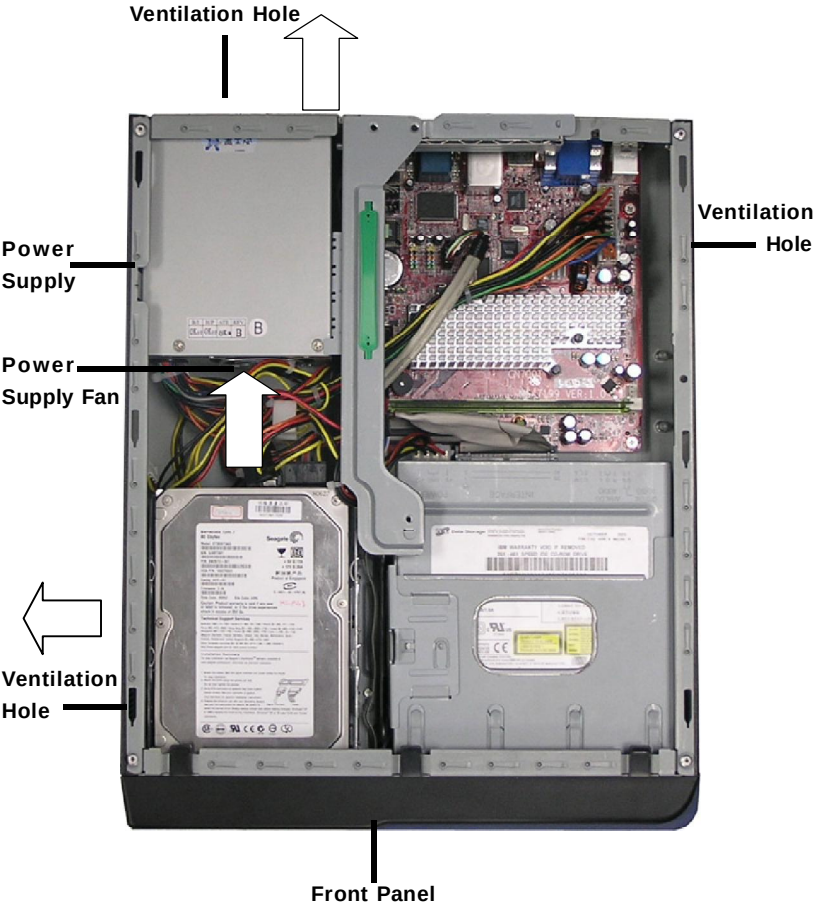
1. System Ventilation Hole
2. Power Supply Ventilation Hole
3. CPU Fan Ventilation Hole
4. System Ventilation Hole

sharp

System Picture



System Air Flow Direction



After the installation is completed, please keep other objects away from the ventilation hole at least 2.5cm and above. Do not block the ventilation hole.

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.

ONLY FOR SERVICE PERSONEL

Always unplug the power cord before inserting any add-on card or module.

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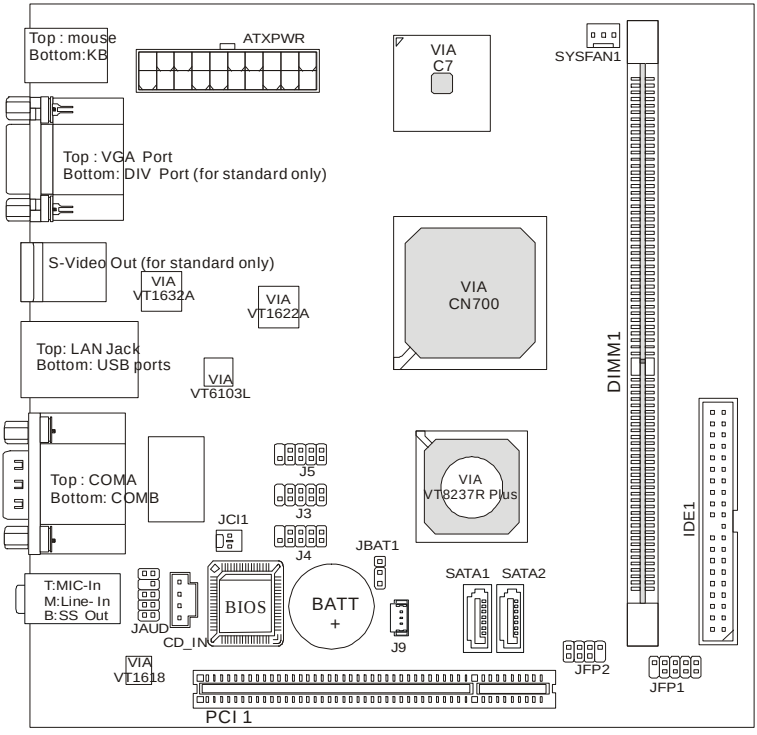
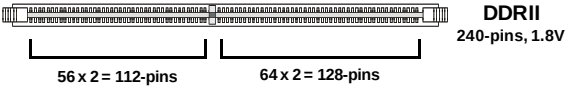
Mainboard Layout



MS-7199 (V1.X) Mini-ITX Mainboard

Memory

The mainboard provides one slot for 240-pins non-ECC DDRII DIMM, which supports the memory size up to 2GB. For more information on compatible components, please visit *http://www.msi.com.tw/program/products/slim_pc/slm/pro_slm_cpu_support.php*

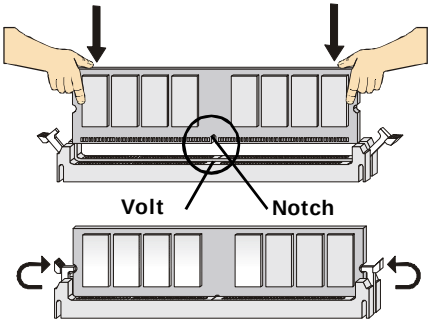


Installing DDRII Modules

1. The DIMM memory module has only one notch on the center and will only fit in the right orientation.
2. Insert the DIMM memory module vertically into the DIMM slot. Then push it in until the golden finger on the memory module is deeply inserted in the socket.
3. The plastic clip at each side of the DIMM slot will automatically close.

Important

You can barely see the golden finger if the module is properly inserted in the socket.

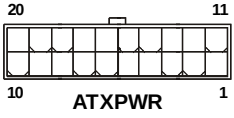


Power Supply

The mainboard supports ATX power supply for the power system. Before inserting the power supply connector, always make sure that all components are installed properly to ensure that no damage will be caused.

ATX 20-Pin Power Connector: ATXPWR

This connector allows you to connect to an power supply. To connect to the 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.



ATXPWR

Pin Definition

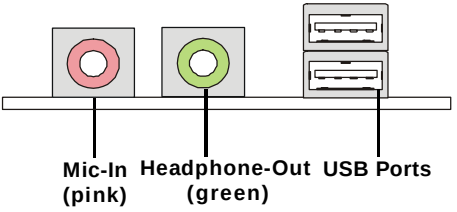
PIN	SIGNAL	PIN	PINSIGNAL
1	3.3V	11	3.3V
2	3.3V	12	-12V
3	GND	13	GND
4	5V	14	PS_ON
5	GND	15	GND
6	5V	16	GND
7	GND	17	GND
8	PW_OK	18	-5V
9	5V_SB	19	5V
10	12V	20	5V

Important

1. Make sure that the connector is connected to proper ATX power supplies to ensure stable operation of the mainboard.
2. Power supply of 130 watts (and above) is highly recommended for system stability.

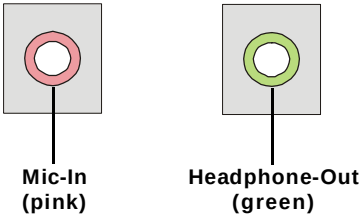
Front Panel

The Front Panel provides the following connectors:



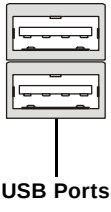
Audio Ports

These audio ports allow you to connect front audio devices.



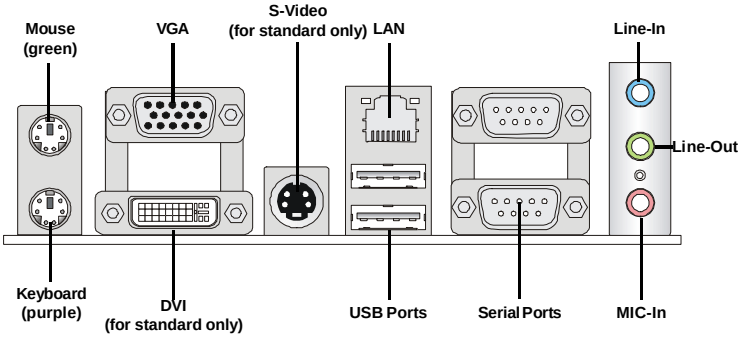
USB Ports

The mainboard provides a UHCI (Universal Host Controller Interface) Universal Serial Bus root for attaching USB devices such as keyboard, mouse or other USB-compatible devices. You can plug the USB devices directly into these connectors.



Rear Panel

The Rear Panel provides the following connectors:



▶ Mouse/Keyboard Connector
The standard PS/2® mouse/keyboard DIN connector is for a PS/2® mouse/keyboard.

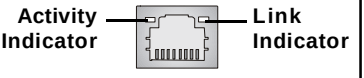
▶ VGA Connector
The DB15-pin female connector is provided for VGA monitors.

▶ DVI Connector (for standard only)
The DVI (Digital Visual Interface) connector allows you to connect an LCD monitor. It provides a high-speed digital interconnection between the computer and its display device. To connect a LCD monitor, simply plug your monitor cable into the DVI connector, and make sure that the other end of the cable is properly connected to your monitor (refer to your monitor manual for more information).

▶ S-Video Connector (for standard only)
The S-Video connector allows users to connect display devices for component video input/output. S-Video (Super-Video, sometimes referred to as Y/C Video, or component video) is a video signal transmission in which the luminance signal and the chrominance signal are transmitted separately to achieve superior picture clarity. The luminance signal (Y) carries brightness information, which defines the black and white portion, and the chrominance signal (C) carries color information, which defines hue and saturation. An S-Video connection brings better video quality than a composite/RCA connection.

▶ 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.



LAN (Optional)

PIN	SIGNAL	DESCRIPTION
1	TDP	Transmit Differential Pair
2	TDN	Transmit Differential Pair
3	RDP	Receive Differential Pair
4	NC	Not Used
5	NC	Not Used
6	RDN	Receive Differential Pair
7	NC	Not Used
8	NC	Not Used

▶ USB Port Connectors

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

▶ Serial Port Connectors

The mainboard offers two 9-pins male DIN connectors as serial ports. The ports are 16550A high speed communication ports that send/receive 16 bytes FIFOs. You can attach a serial mouse or other serial devices directly to the connectors.

▶ 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 in 5.1 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.

Connectors

.

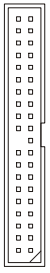
ATA133 IDE Connector: IDE1

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.

▶ IDE (Primary IDE Connector)

The first hard drive should always be connected to IDE1. IDE1 can connect a Master and a Slave drive. You must configure second hard drive to Slave mode by setting the jumper accordingly.



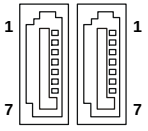
IDE1

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 1st 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.



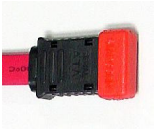
SATA1/SATA2

Pin Definition

PIN	SIGNAL	PIN	SIGNAL
1	GND	2	RXN
3	RXP	4	GND
5	TXN	6	TXP
7	GND		

▶ **Serial ATA cable**

Connect to SATA1/2



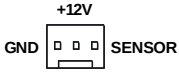
Take off the Dust Cover and connect to the Hard Disk Devices

Important

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

Fan Power Connectors: SYSFAN1

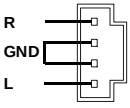
The Fan Power Connectors support system cooling fan with +12V. It supports 3-pins head connector. When connecting the wire to the connectors, always take note that the red wire is the positive and should be connected to the +12V, the black wire is Ground and should be connected to GND. If the mainboard has a System Hardware Monitor chipset on-board, you must use a specially designed fan with speed sensor to take the advantage of the CPU fan control.



SYSFAN1

CD-In Connector: CD_IN

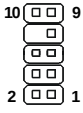
This connector is provided for CD-ROM audio.



CD_IN

Front Panel Audio Connector: JAUD

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



JAUD

Pin Definition

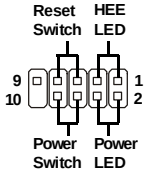
PIN	SIGNAL	DESCRIPTION
1	AUD_MIC	Front panel microphone input signal
2	AUD_GND	Ground used by analog audio circuits
3	AUD_MIC_BIAS	Microphone power
4	AUD_VCC	Filtered +5V used by analog audio circuits
5	AUD_FPOUT_R	Right channel audio signal to front panel
6	AUD_RET_R	Right channel audio signal return from front panel
7	HP_ON	N/C
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 Panel Connector: JFP1/JFP2

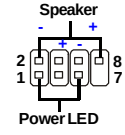
The mainboard provides two front panel connectors for electrical connection to the front panel switches and LEDs. JFP1 is compliant with Intel® Front Panel I/O Connectivity Design Guide.



JFP1

Pin Definition

PIN	SIGNAL	DESCRIPTION
1	HD_LED_P	Hard disk LED pull-up
2	FP PWR/SLP	MSG LED pull-up
3	HD_LED_N	Hard disk active LED
4	FP PWR/SLP	MSG LED pull-up
5	RST_SW_N	Reset Switch low reference pull-down to GND
6	PWR_SW_P	Power Switch high reference pull-up
7	RST_SW_P	Reset Switch high reference pull-up
8	PWR_SW_N	Power Switch low reference pull-down to GND
9	RSVD_DNU	Reserved. Do not use.



JFP2

Pin Definition

PIN	SIGNAL	PIN	SIGNAL
1	GND	2	SPK-
3	SLED	4	BUZ+
5	PLED	6	BUZ-
7	N/C	8	SPK+

Chassis Intrusion Switch Connector: JCI1

This connector is connected 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.

JCI1

Front USB Connectors: J3/J4/J5

The mainboard provides three standard USB 2.0 pinheaders. 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.

J3/J4/J5

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

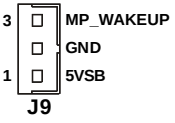
► **USB 2.0 Bracket (Optional)**

Important

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

Wake On LAN Connector: J9

This connector allows you to connect to a LAN card with Wake On LAN function. You can wake up the computer via remote control through a local area network.

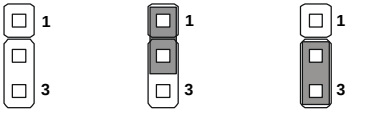


Jumper

The motherboard provides the following jumpers for you to set the computer's function. This section will explain how to change your motherboard's function through the use of jumpers.

Clear CMOS Jumper: JBT1

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



JBAT1 Keep Data Clear Data

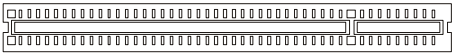
Important

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.

Slot

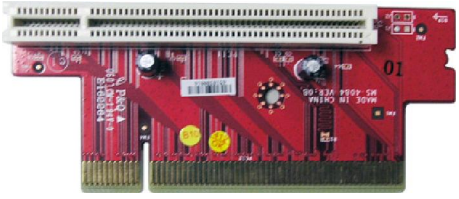
PCI (Peripheral Component Interconnect) Slot

The PCI slot supports 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.



PCI Slot

▶ **Riser Card**



Chapter 3
BIOS Setup

This chapter provides the 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.

MSI
MICRO-STAR INTERNATIONAL

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:

W7265IMS V1.0 060715 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.*
▶ *060715 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
<F1>	General Help
<F5>	Previous Values
<F7>	Optimized Defaults
<F10>	Save & Exit Setup

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.

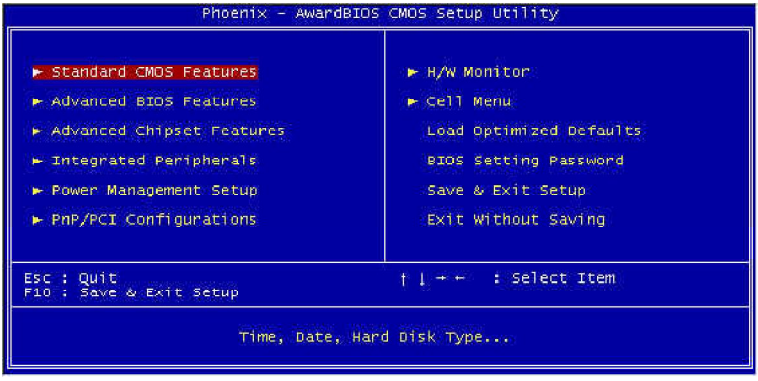
▶ Sub-Menu

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 >.

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 the special enhanced features.

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

► Integrated Peripherals
Use this menu to specify your settings for integrated peripherals.

► Power Management Setup
Use this menu to specify your settings for power management.

► PnP/PCI Configurations
This entry appears if your system supports PnP/PCI.

► 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 overclocking.

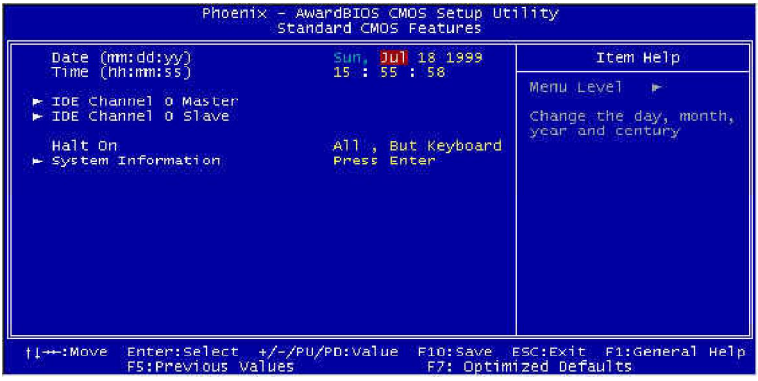
► Load Optimized Defaults
Use this menu to load the default values set by the mainboard manufacturer specifically for optimal performance of the mainboard.

► 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



► 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.

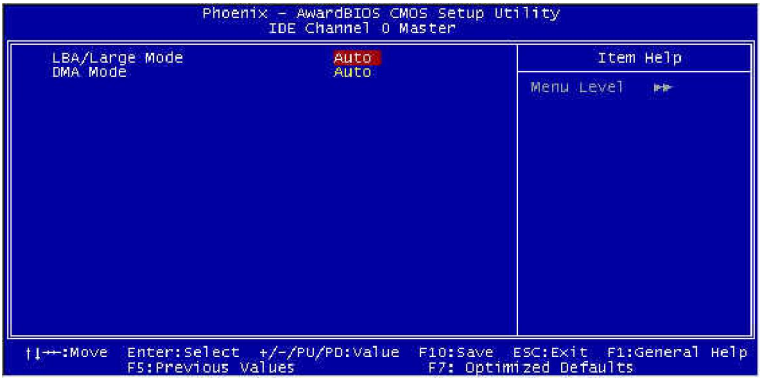
[Date] The date from 1 to 31 can be keyed by numeric function keys.

[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>.

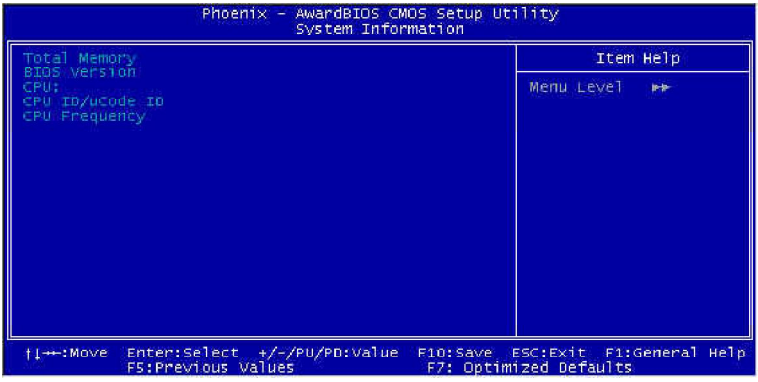
► IDE Channel 0 Master/Slave
Press <+> or <-> to select the hard disk drive type. The specification of hard disk drive will show up on the right hand according to your selection. Press <Enter> for the sub-menu of each item:



► LBA/Large Mode
This item allows you to enable or disable the LBA (Logical Block Address, the logical block size in hard disk) mode.

► DMA Mode
This item allows you to enable or disable the DMA (Direct Memory Access) mode.

► System Information
Press <Enter> and the following sub-menu appears:

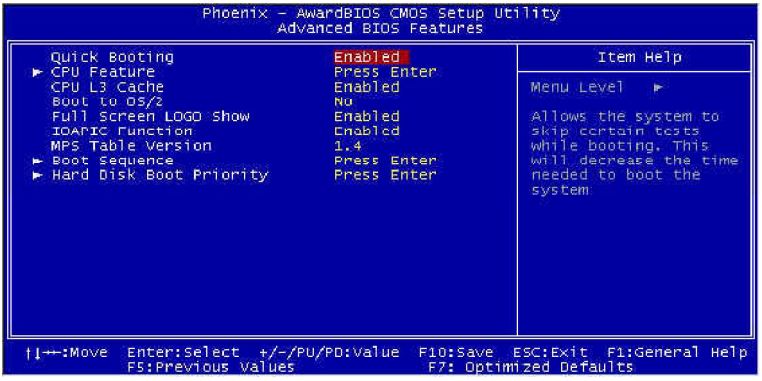


► Total Memory
This item shows the memory size of your system. You cannot change any values in the Total Memory fields (read only).

► BIOS Version
This item shows the BIOS version of your system (read only).

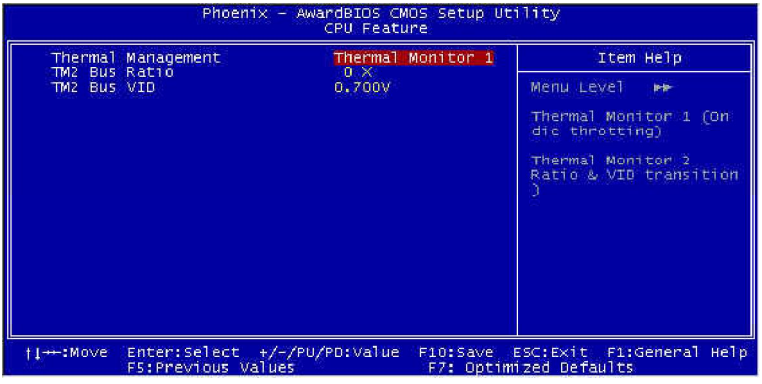
► CPU ID/uCode IO/Frequency
The three items show the CPU related information of your system (read only).

Advanced BIOS Features



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

▶ CPU Feature
Press <Enter> for the sub-menu of each item:



▶ Thermal Management
This setting specifies the thermal technologies implemented in the Pentium M processor.

▶ TM2 Bus Ratio / TM2 Bus VID
These settings specify the multiplier and VID values used by the processor in TM2 (Thermal Monitor 2) mode.

► CPU L3 Cache
Level 3 cache is the extra cache built into motherboards between the microprocessor and the main memory. Located away from the CPU, the L3 cache is slower than the L1 & L2 caches. This setting allows you to turn on or off the L3 cache.

► Boot to OS/2
This allows you to run the OS/2 operating system with DRAM larger than 64MB. When you choose [No], you cannot run the OS/2® operating system with DRAM larger than 64MB. But it is possible if you choose [OS2].

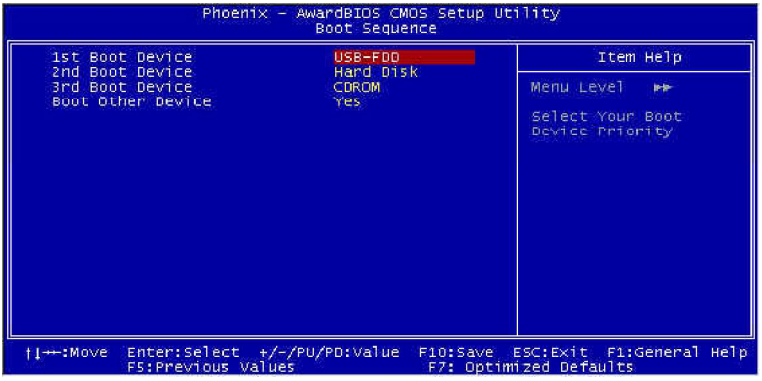
► Full Screen LOGO Show
This item enables you to show the company logo on the bootup screen. Settings are:

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

► IOAPIC Function
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.

► MPS Table Version
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.

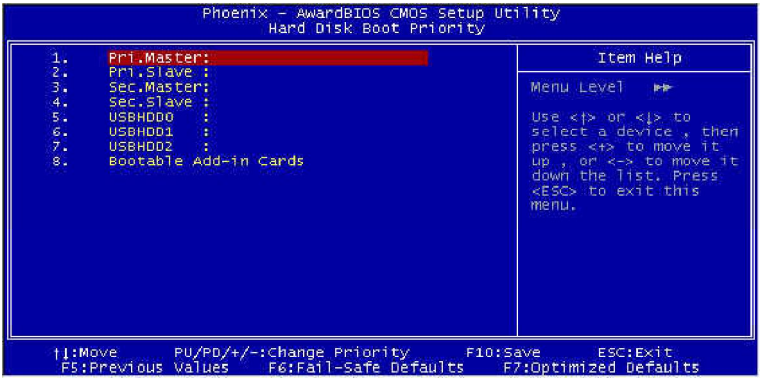
► Boot Sequence
The original IBM PCs loaded the DOS operating system from drive A (floppy disk), so IBM PC-compatible systems are designed to search for an operating system first on drive A, and then on drive C (hard disk). However, modern computers usually load the operating system from the hard drive,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



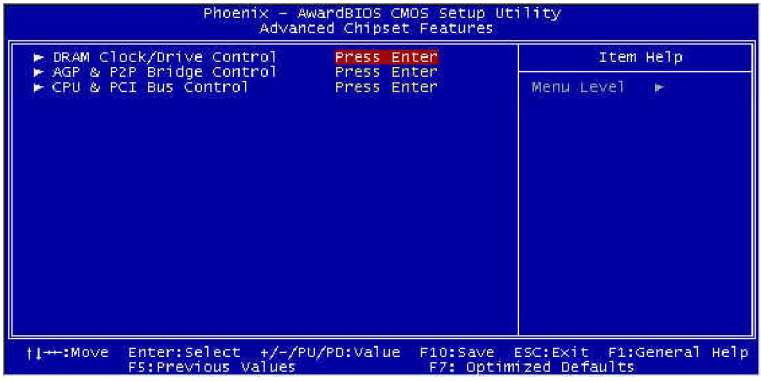
▶ 1st Boot Device/2nd Boot Device/3rd Boot Device
These items allow you to set the sequence of boot devices where BIOS attempts to load the disk operating system.

▶ Boot Other Device
Setting the option to [Enabled] allows the system to try to boot from other device if the system fails to boot from the 1st/2nd/3rd boot device.

▶ Hard Disk Boot Priority
Press [Enter] to enter a sub menu which shows every current hard drive installed. Use [PageUp] or [PageDown] key to select the first boot hard disk.



Advanced Chipset Features



► DRAM Clock/Drive Control
Press <Enter> and the following sub-menu appears:

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

Important

Be careful with the three hooks on the Front Panel. Remember to remove them gently with hands or the damages can be made easily.

▶ 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.

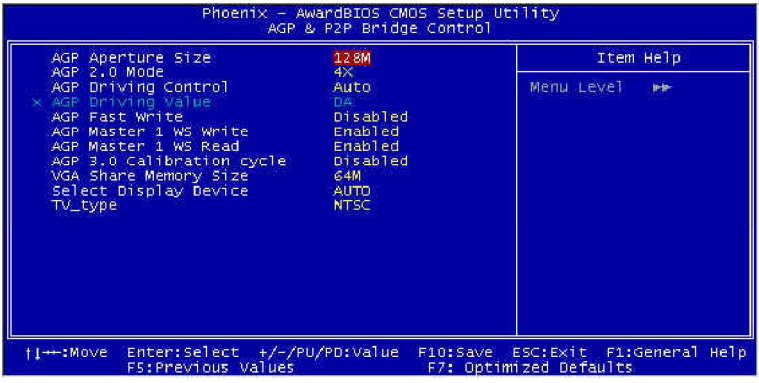
▶ Read to Precharge (Trtp)
Time interval between a read and a precharge command.

▶ Write to Read CMD (Twtr)
Minimum time interval between the end of write data burst and the start of a column-read command. It allows I/O gating to overdrive sense amplifiers before read command starts.

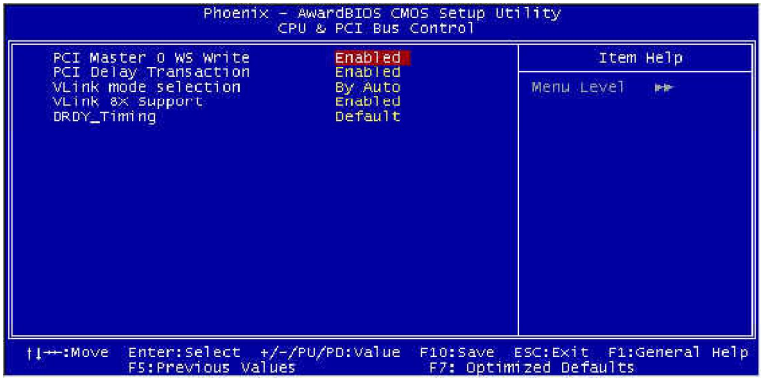
▶ Write Recovery Time (Twr)
Minimum time interval between end of write data burst and the start of a precharge command. Allows sense amplifiers to restore data to cells.

▶ DRAM Command Rate
This setting controls the DRAM command rate. Select [1T Command] allows DRAM singlal controller to run at 1T (T=clock cycles) rate. Select [2T Command] makes DRAM siganl controller run at 2T rate. [1T] is faster than [2T].

▶ AGP & P2P Bridge Control
Press <Enter> and the following sub-menu appears:



▶ CPU & PCI Bus Control
Press <Enter> and the following sub-menu appears:



▶ PCI Master 0 WS Write
When [Enabled], writes to the PCI bus are executed with zero wait states.

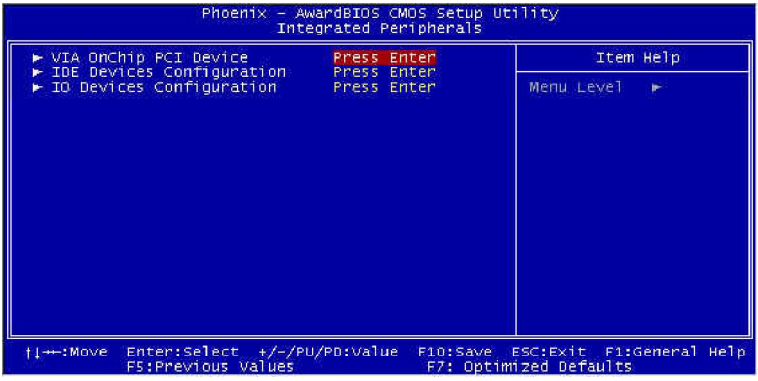
▶ PCI Delay Transaction
The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select [Enabled] to support compliance with PCI specification version 2.1.

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

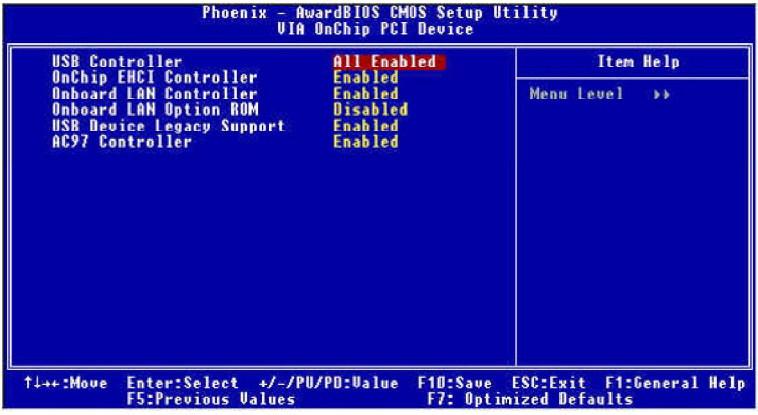
▶ VLink 8X Support
This item enables or disables the 8X VLink Data Rate.

▶ DRDY_Timing
This item allows you to select the DRDY Timing from Slowest, Default and Optimize.

Integrated Peripherals



▶ VIA OnChip PCI Device
Press <Enter> and the following sub-menu appears:



▶ USB Controller
Select [Enabled] if your system contains a Universal Serial Bus (USB) controller and you have USB peripherals.

▶ OnChip EHCI Controller
This setting disables/enables the OnChip EHCI controller. The Enhanced Host Controller Interface (EHCI) specification describes the register-level interface for a Host Controller for the Universal Serial Bus (USB) Revision 2.0.

▶ Onboard LAN Controller
This setting controls 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. Setting options: [Enabled], [Disabled].

▶ USB Device Legacy 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.

▶ AC97 Controller
[Auto] allows the mainboard to detect whether an audio device is used. If an audio device is detected, the onboard AC97 (Audio Codec'97) controller will be enabled; if not, it is disabled. Disable the controller if you want to use other controller cards to connect an audio device.

▶ IDE Devices Configuration

Press <Enter> and the following sub-menu appears:

▶ OnChip SATA

This setting is used to specify the SATA controller. The settings are:

[Disabled]	Disable the SATA controller.
[Enabled]	Enable the SATA controller.

▶ SATA Mode

This setting is used to select the SATA mode. The setting are:

[IDE]	Set SATA HDD as IDE mode
[RAID]	RAID enabled

▶ PCI IDE BusMaster

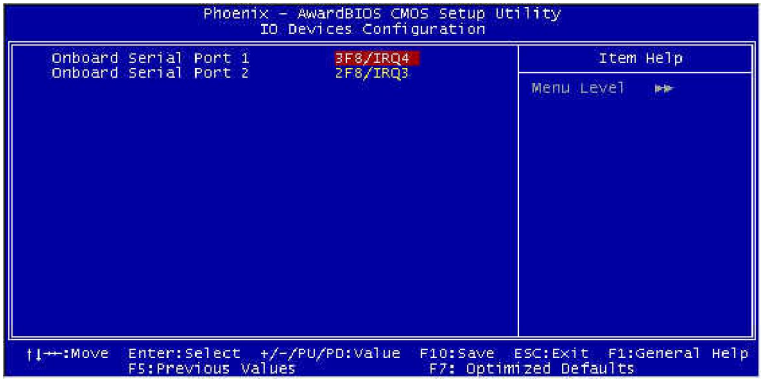
Set this option to [Enabled] to specify that the IDE controller on the PCI local bus has bus mastering capability.

▶ OnChip IDE Channel0

The integrated peripheral controller contains an IDE interface with support for two IDE channels. Choose [Enabled] to activate each channel separately.

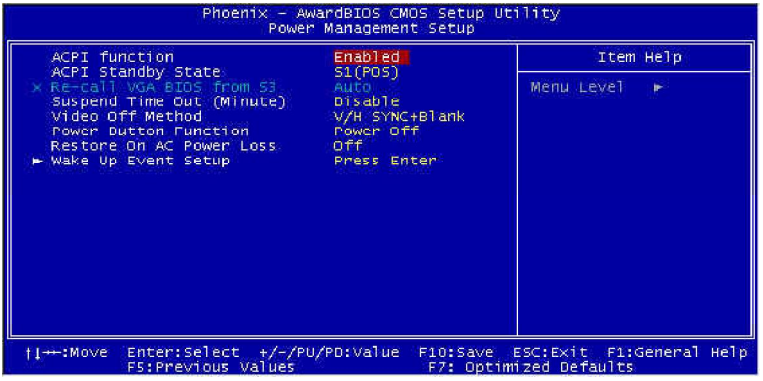
▶ IDE Prefetch Mode
The onboard IDE drive interfaces support IDE prefetching, for faster drive accesses. When you install a primary and/or secondary add-in IDE interface, set this option to Disabled if the interface does not support prefetching

▶ IO Devices Configuration
Press <Enter> and the following sub-menu appears:



▶ Onboard Serial Port 1/2
These items specify the base I/O port address and IRQ for the onboard Serial Port A (COM A)/Serial Port B (COM B). Selecting [Auto] allows BIOS to automatically determine the correct base I/O port address.

Power Management Setup



▶ 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, select [Enabled].

▶ ACPI Standby State

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. Setting options:

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

[S3(STR)] The S3 sleep mode is a lower power state where the infor mation 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 (Minute)

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

► Video Off Method

This determines the manner in which the monitor is blanked.

[V/H SYNC+Blank]	This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.
[Blank Screen]	This option only writes blanks to the video buffer.
[DPMS Support]	Initial display power management signalling.

► Power Button Function

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.

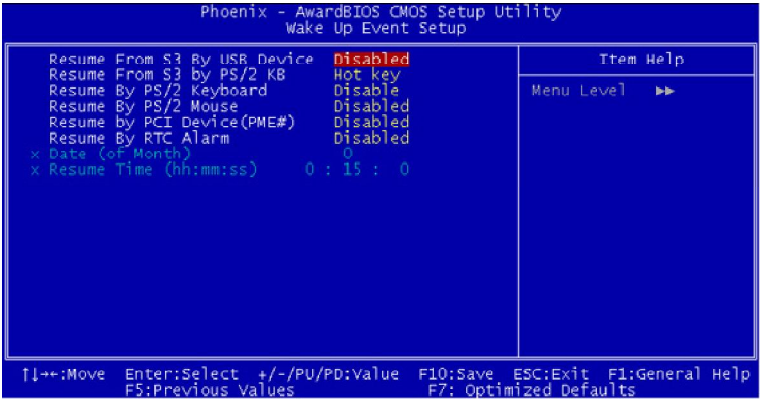
► Restore On AC Power Loss

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

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

▶ Wake Up Event Setup

You can turn On or Off monitoring of commonly used interrupt requests so they do not awaken the system from, or reset activity timers for, Doze and Standby modes. For example, if you have a modem on IRQ3, you can turn On IRQ3 as a wake-up event, so an interrupt from the modem can wake up the system. Or you may wish to turn Off IRQ12 (the PS/2) mouse as a wake-up event, so accidentally brushing the mouse does not awaken the system. The default wake-up event is keyboard activity.



▶ Resume From S3 By USB Device

The item allows the activity of the USB device to wake up the system from S3 (Suspend to RAM) sleep state.

▶ Resume From S3 By PS/2 KB

The item specifies how the system will be awakened from power saving mode when input signal of the PS/2 keyboard is detected. Use the <PageUp> & <PageDown> keys to select the options. When selecting [Password], enter the desired password.

▶ Resume By PS/2 Keyboard

The item specifies how the system will be awakened from power saving mode when input signal of the PS/2 keyboard is detected.

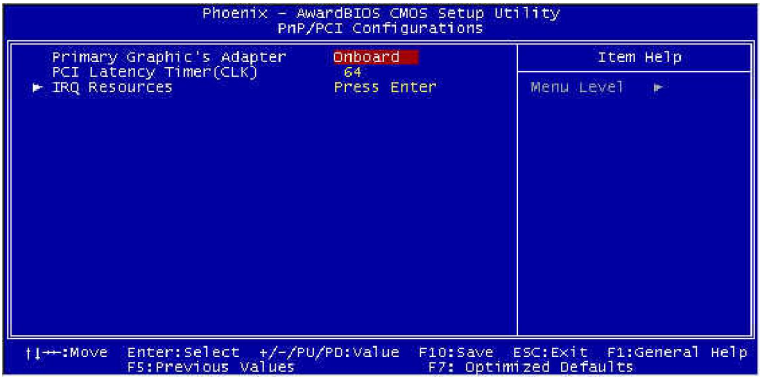
▶ Resume By PS/2 Mouse

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 by PCI Device (PME#)
When setting to [Enabled], this setting allows your system to be awakened from the power saving modes through any event on PME (Power Management Event).

▶ Resume By 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.

PNP/PCI Configurations



▶ Primary Graphic's Adapter

This setting specifies which graphic card is your primary graphics adapter. Setting options are:

[AGP]	The system initializes the installed AGP card first. If an AGP card is not available, it will initialize the PCI VGA card.
[PCI]	The system initializes the installed PCI VGA card first. If a PCI VGA card is not available, it will initialize the AGP card.

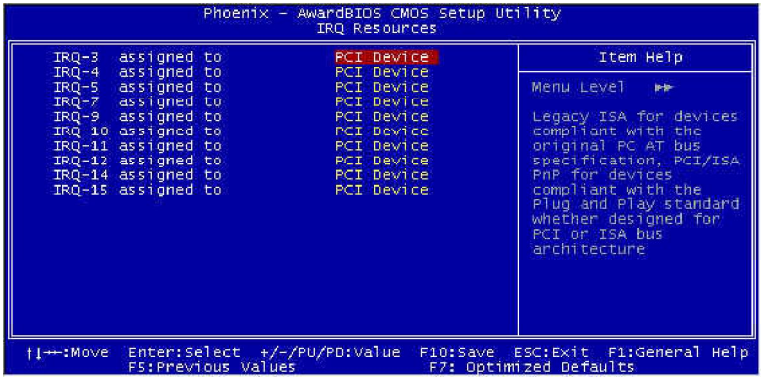
▶ PCI Latency Timer (CLK)

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.

▶ IRQ Resources

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:

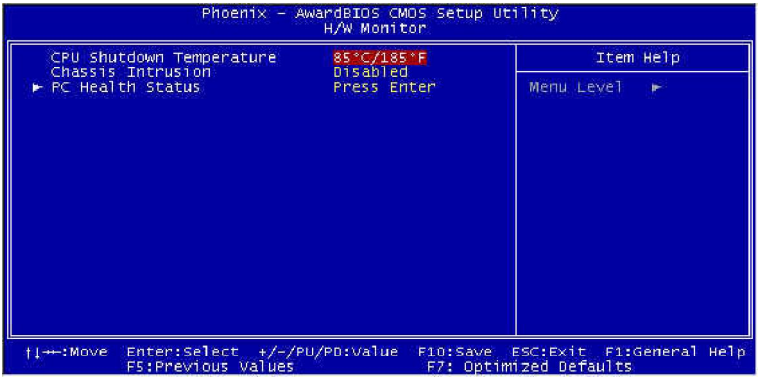
[PCI Device]	For Plug & Play compatible devices designed for PCI bus architecture.
[Reserved]	The IRQ will be reserved for further request.



▶ IRQ [3-15] assigned to

These fields specify whether the system will be awakened from power saving modes when activity or input signal of the specified hardware peripheral or component is detected.

H/W Monitor



▶ CPU Shutdown Temperature

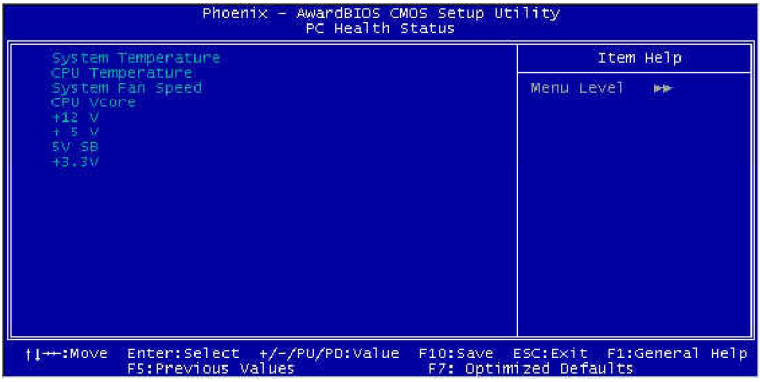
If the CPU temperature reaches the upper limit preset in this setting, the system will be shut down automatically. This helps you to prevent the CPU overheating problem. This item is available only when your OS supports this function, such as Windows ME/XP.

▶ 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.

▶ PC Health Status

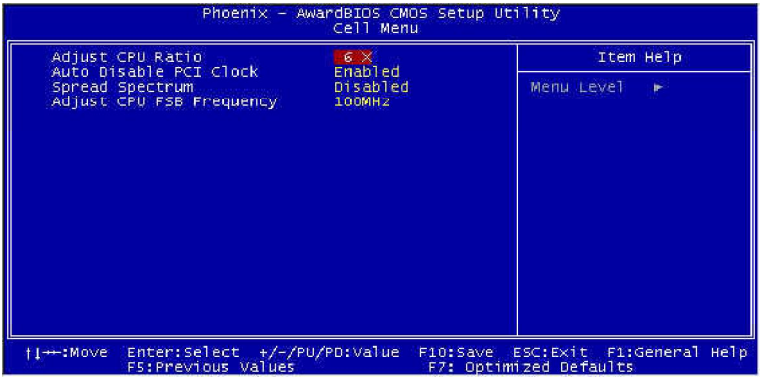
This entry shows your PC health status. Press <Enter> and the following sub-menu appears:



▶ System/CPU Temperature, System Fan Speed, CPU Vcore, +12V, +5V, 5VSB, +3.3V

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



▶ Adjust CPU Ratio
This item allows you to adjust the CPU ratio. Setting to [Startup] enables the CPU running at the fastest speed which is detected by system.

▶ Auto Disable PCI Clock
This item is used to auto detect the PCI slots. When set to [Enabled], the system will remove (turn off) clocks from empty PCI slots to minimize the electromagnetic interference (EMI). Settings: [Enabled], [Disabled].

▶ 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.

Important

1. *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 value of Spread Spectrum for EMI reduction.*
2. *The greater the Spread Spectrum value is, the greater the EMI is reduced, and the system will become less stable. For the most suitable Spread Spectrum value, please consult your*
3. *Remember to disable Spread Spectrum 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.*

Load Optimized Defaults

The Optimized Defaults are the default values set by the mainboard manufacturer specifically for optimal performance of the mainboard.

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

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:

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.

Chapter 4
System Assembly

This chapter provides you with the information about system assembly procedures. While doing the installation, be careful in holding the components and follow the installation procedures.

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

ONLY FOR SERVICE PERSONEL

Always unplug the power cord before inserting any add-on card or module.

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Overview

The built-in mainboard is designed for Axis 700 barebone only. Except the mainboard, the built-in components of the barebone include power supply. In this chapter we'll show you how to install Memory Modules, Riser Card, Card Reader, Hard Disk Drive and Optical Disk Drive.

Installation Tools

Screwdriver

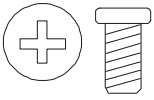
Gloves

Screws

Two types of screws are used in assembling the barebone:

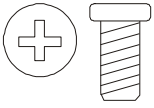
Screw type 1: M3XL4

Screw type 2: 6#32



Screw type 1: M3XL4

This screw is used to lock the Top Cover, Card Reader, Riser Bracket, FDD and ODD.



Screw type 2: 6#32

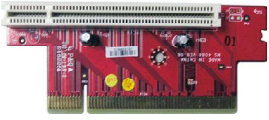
This screw is used to lock the Power Supply and HDD.

Checking the Items

Before assembling your system, please check the items listed below for basic system operation. The Footstand and the CPU cooler are included in the package, other items are optional.

Footstand

Riser Card



IDE or SATA HDD (Optional)

Optical Drive (Optional)

Card Reader (Optional)

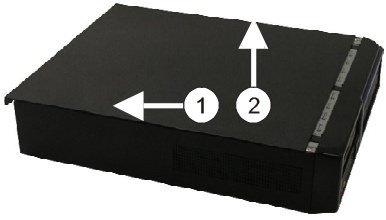
DDRII SDRAM (Optional)

Installation Procedures

1. Removing Top Cover

Unlock the two screws on the Back Panel with screwdriver.

Follow the steps to remove the Top Cover from the system with hands.



Remove the Front Panel from the system with hands to release all the cages.

Important

Be careful with the three hooks on the Front Panel. Remember to remove them gently with hands or the damages can be made easily.

2. Removing Optical Disk Drive (ODD)

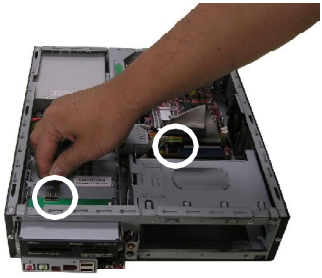
Disconnect the cable and the power cord of the ODD (Optional).

Pull the Lock Bracket to release the ODD.

Remove the ODD from the system.

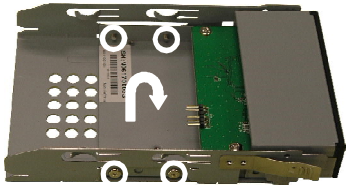
3. Removing Card Reader

Disconnect the cable of Card Reader (Optional)



Remove the Card Reader tray from the sysetem with fingers pressing the bracket.

Unlock the four screws to release the Card Reader.



Important

This multi-function Card Reader tray is designed to be a 3 in 1 device with three different choices for installtion which includes the Card Reader itself, HDD and FDD.

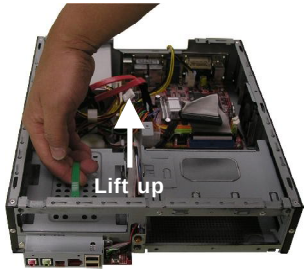
4. Removing Riser Card

Remove the Riser Card (Support Bracket) from the system with hands.

5. Removing Hard Disk Drvie (HDD)

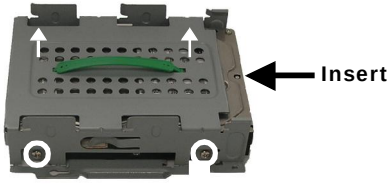
Unlock the screw from the chassis with screwdriver.

Remove the HDD tray from the system with hands.

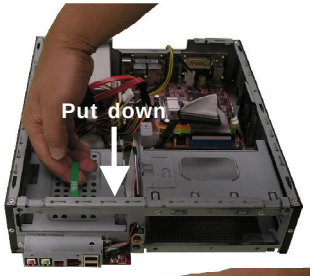


6. Installing Hard Disk Drvie (HDD)

Insert the HDD (Optional) into the HDD tray and lock the four screws.



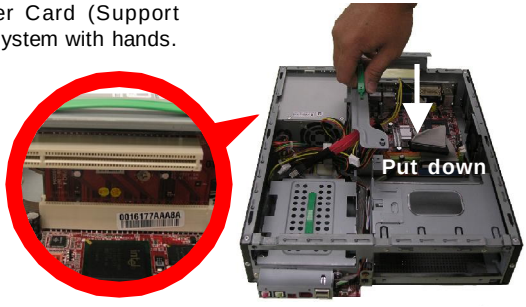
Install the HDD tray to the system with hands.



Lock the screw to the chassis with screwdriver.

7. Installing Riser Card

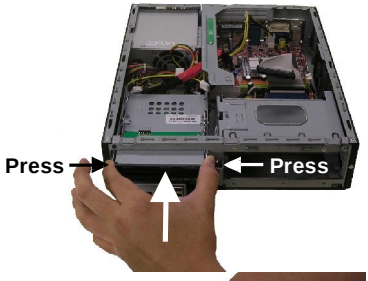
Install the Riser Card (Support Bracket) to the system with hands.



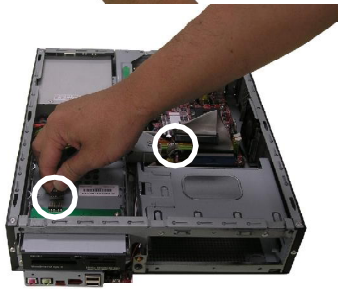
8. Installing Card Reader

Insert the Card Reader tray into the system with fingers pressing the bracket.

**Remember to lock the four screws to fix the Card Reader before inserting.*



Connect the cable of Card Reader (Optional)



9. Installing Optical Disk Drive (ODD)

Insert the ODD into the system.

Important

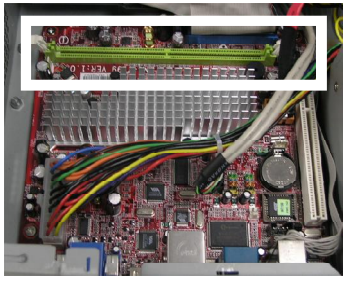
Please note that the length of the ODD should be under 185MM.

Push the Lock Bracket to fix the ODD.

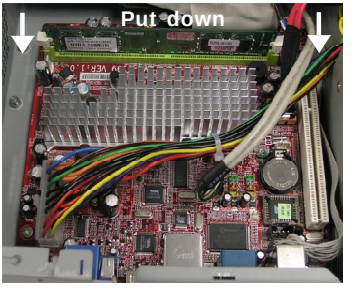
Connect the cable and the power cord of the ODD (Optional).

10. Installing Memory Modules

Find the location of DIMM slot.



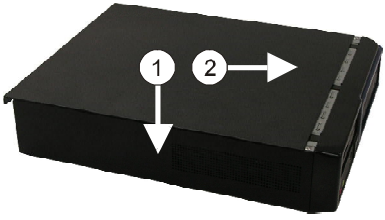
Insert the Memory Modules vertically into the DIMM slot.



13. Restoring Top Cover

Restore the Front Panel to the system with hands.

Follow the steps to restore the Top Cover to the system with hands.

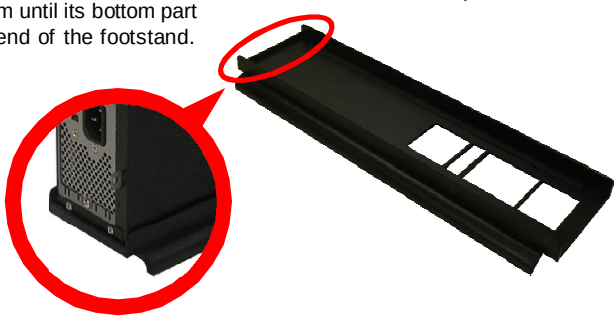


Lock the two screws on the Back Panel with screwdriver.

5. Installing Footstand

Place the footstand on the table. Lift up the system and put it on the footstand.

Move the system until its bottom part fit against the end of the footstand.



Horizontal Type

Tower Type

Appendix A
VIA VT1618 Audio

The mainboard is equipped with VIA® VT1618 chip, which provides support for 6-channel audio output, VIA® VT1618 allows the board to attach 4 or 6 speakers for better surround sound effect. The section will tell you how to install and use 4-/6-channel audio function on the board.

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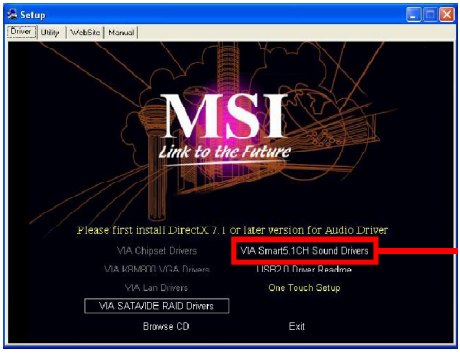
Installing the Audio Driver

You need to install the driver for VIA® VT1618 chip to function properly before you can get access to 4-/6-channel audio operations. Follow the procedures described below to install the drivers for different operating systems.

Installation for Windows 98SE/ME/2000/XP

For Windows® 2000, you must install Windows® 2000 Service Pack2 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 companion CD into the CD-ROM drive. The setup screen will automatically appear.
2. Click **VIA Smart5.1CH Sound Drivers**.



Click here

Special Notice during Installation

Once you are finishing the installation of your system, please right-click on [My Computer] on the desktop, and choose [Properties] -> [Hardware] -> [Device Manager]. If you can see the question mark (?) next to the <Other devices> & <Multimedia Audio Controller>, it means the system detects the audio codec in your system item and the **VIA Smart5.1CH Sound Drivers** will appear on your CD.

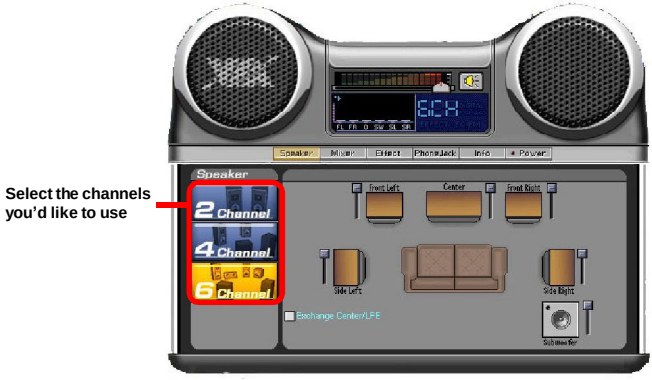
3. Click Next to install the AC'97 Audio software, and click Finish to restart the system.
4. You will find the icon in the system tray and on the desktop. Double-click the icon on the desktop or right-click on the icon in the system tray. Also, you can right-click on the icon in the system tray and choose VIA Audio Deck, and the following screen will appear to show some basic settings about the audio configuration.

Software Configuration

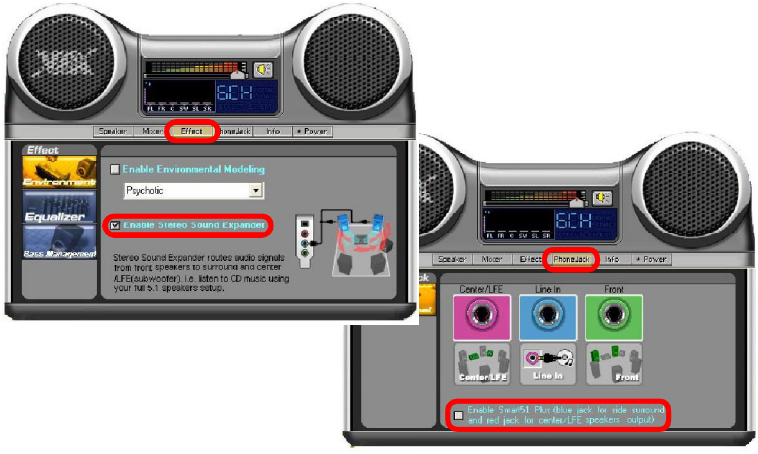
After installing the audio driver, you are able to use the 4-/6-channel audio feature now. Click the audio icon from the window tray at the lower-right corner of the screen to activate the **VIA Audio Deck Configuration**.

Speaker

Here you can select the channels you would like to use here. For the expander and Center/Subwoofer speaker exchange, please check the **Exchange Center/LFT** check boxes.



You have to check the "Enable Stereo Sound Expander" check box in Effect tab and the "Enable Smart51 Plus (blue jack for side surround and red jack for center/LEF speakers output" check box in PhoneJack tab, if you intend to use 4 or 5.1 channel sound effect.



Mixer

In the **Mixer** part, you may adjust the volumes individually.

n Playback

Here you can regulate the volume of each output. Click the allow button to the right for more outputs.

n Recording

Here you can choose the preferred recording input. Choosing **Mic** allows you to record the audio through the connected microphones, **Line-In** allows you to record to record through the connected line-in device, and etc. Choosing **Stereo Mixer** allows you to record the audio through all inputs.

Speaker Test

Here you can click on each speaker to test its function, and increase/ decrease the volume.

Information

Here it provides the information about Vinyl Deck, including the driver version, codec type, and OS version... etc.

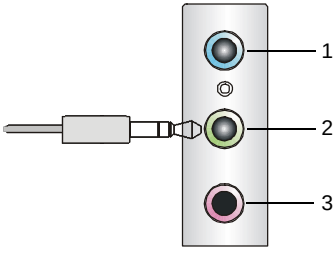
Hardware Setup

Connecting the Speakers

When you have set the Multi-Channel Audio Function mode properly in the software utility, connect your speakers to the correct phone jacks in accordance with the setting in software utility.

n 2-Channel Mode for Stereo-Speaker Output

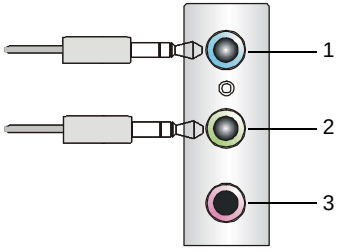
Refer to the following diagram and caption for the function of each phone jack on the back panel when 2-Channel Mode is selected.



Back Panel

1 Line-In
2 Line-Out *(Front channels)*
3 MIC-In

n 4-Channel Mode for 4-Speaker Output



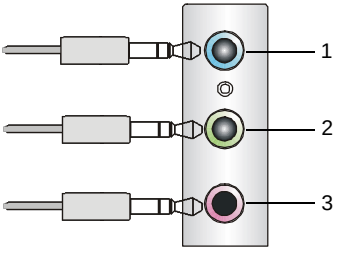
Back Panel

Description:
Connect two speakers to back panel's Line-Out connector and two speakers to the real-channel Line-Out connector.

4-Channel Analog Audio Output

1 Side-Surround
2 Line-Out *(Front channels)*
3 MIC-In

n 6-Channel Mode for 6-Speaker Output



Back Panel

Description:
Connect two speakers to back panel's Line-Out connector, two speakers to the rear-channel Line-Out connector and two speakers to the center/LFE channel Line-Out connector.

6-Channel Analog Audio Output

1 Side-Surround
2 Line-Out *(Front channels)*
3 Center/ LFE