VIA

User's Manual

VIA EPIA-M
Mini-ITX Mainboard

Version 1.0
November 4th, 2002

P/N 99-51-011311

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Trademarks

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CE

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 when the equipment is operated in a commercial environment. 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. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

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.

VIA EPIA-M Mini-ITX Mainboard

FC

Tested to comply with FCC Standard

For Home or Office Use

Copyright Notice

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Safety Instructions

NOTE

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 in such a way that people cannot 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. Liquid can cause damage or 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
    - If the equipment has obvious sign of breakage
12. DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT UNCONDITIONED, STORAGE TEMPERATURE ABOVE 60^0 C (140^0F), IT MAY DAMAGE THE EQUIPMENT.

CAUTION: Explosion or serious damage may occur if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.

Box Contents

This VIA EPIA-M Mini-ITX Mainboard package should contain the following items:

- 1 x VIA EPIA-M Mini-ITX Mainboard
- 1 x User's manual
- 1 x ATA-33/66/100 Hard drive ribbon cable
- 1 x Floppy ribbon cable
- 1 x Combo Module (2 port USB 2.0 and 2 port IEEE1394)
- 1 x Driver Utilities CD

Contents

1

Specifications

The ultra-compact and highly intergrated VIA EPIA-M Mini-ITX Mainboard is the smallest form factor mainboard specification available today, developed by VIA Technologies, Inc as part of the company's open industry-wide total connectivity initiative. The mainboard enables the creation of an exciting new generation of small, ergonomic, innovative and affordable embedded systems. Through high level of integration, mini-ITX only occupy 66% of the size of FlexATX mainboard form factor. The mainboard comes with an embedded VIA Processor, boasting ultra low power consumption and cool, quiet operation.

This chapter includes the following sections:

Specifications

CPU

- VIA C3 / EDEN EBGA Processor (on board)
- Enhanced Ball Grid Array Package (EBGA)
- Internal L1 128KB and L2 64KB cache memory

Chipset

- VIA CLE266 North Bridge
- VT8235 South Bridge

Graphics

- Integrated CastleRock graphics with MPEG-2 decoder

Audio

- VT1616 six channel AC'97 Codec
- 3 Audio jacks: Line-in, Line-out and Mic-in; switched to 6-channel output during 6-channel operations with Smart 5.1 (See Appendix 5-1)

Main Memory

- 1 DDR266 DIMM socket
- Up to 1GB memory size

PCI Bus IDE

- 1 PCI slot
- 2 X UltraDMA 66 / 100 / 133 Connector

LAN

- VIA VT6103 10 / 100 Base-T Ethernet PHY

USB

- USB v2.0 / v1.1

Firewire

- IEEE 1394; VIA VT6307S 2-port Firewire

TV-Out

- VIA VT1622/M (Macrovision) TV-Out Controller
- Supports 640 x 480, 800 x 600, and 1024 x 768 NTSC/PAL TV

Onboard I/O Connectors

- Two 1394 connectors for two 1394 ports
- Front-panel audio connectors (Mic and Line Out)
- CD Audio-in connector
- 1 FIR connector; 1 PS2 connector
- Wake-on-LAN
- CPU / Sys Fan / FAN3
- System intrusion connector
- 1 I^2C connector
- 1 Connector for LVDS module (Optional)
- Serial port connector for second com port

Back Panel I/O Ports

- 1 PS2 mouse port; 1 PS2 keyboard port
- 1 Parallel; 1 RJ-45 LAN port; 1 Serial port
- 2 USB 2.0 ports; 1 VGA port
- 1 RCA port (SPDIF or TV out); 1 S-Video port
- 3 Audio jacks: line-out, line-in and mic-in; can be switched to 6 channel output with Smart 5.1 (See Appendix 5-1)

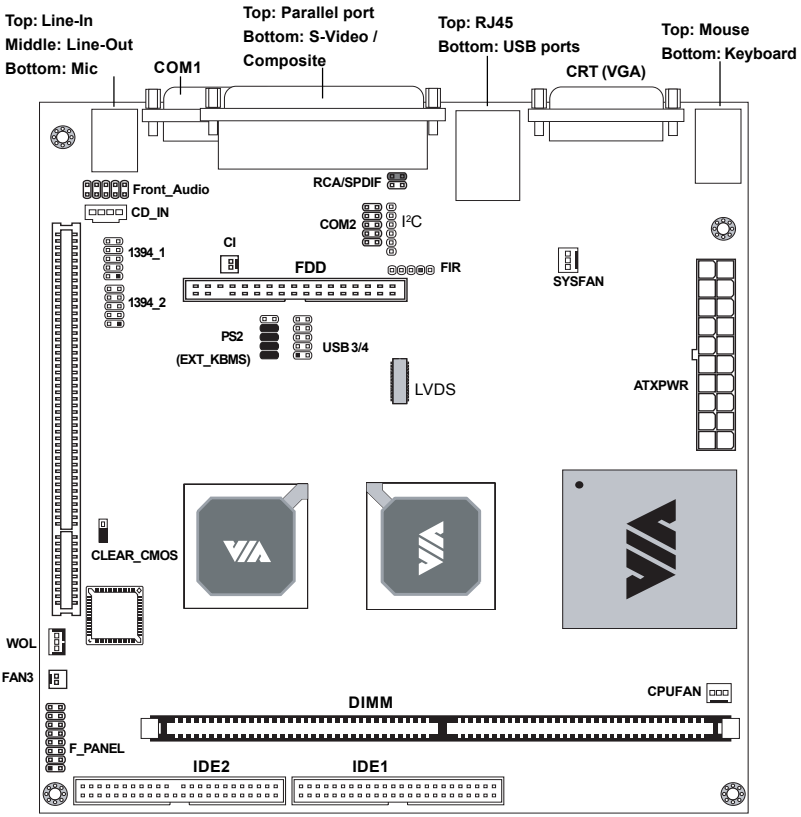
BIOS

- Award BIOS with 2 / 4Mbit flash memory

Form Factor

- 17 cm X 17 cm Mini-ITX (4 layers)

Layout



VIA EPIA-M Mini-ITX Mainboard

Connectors Guide

Component	Function	Reference
SYSFAN/CPUFAN/FAN3	Fan power connectors	See p. 2-2
DIMM	DIMM slot	See p. 2-4
ATX Power Connector	Connecting ATX power supply	See p. 2-6
PS/2 Mouse	Mouse connector	See p. 2-7
PS/2 Keyboard	Keyboard connector	See p. 2-7
LPT Connector	Parallel port connector	See p. 2-8
USB 1, USB 2	Connecting to USB devices	See p. 2-8
RJ-45 NIC Port	Connecting to a LAN	See p. 2-8
COM Port	Serial port connector	See p. 2-9
Line Out	Connecting Headphones/Speakers	See p. 2-9
Line In	Connecting an audio device	See p. 2-9
Mic In	Connecting a Micorphone	See p. 2-9
S-Video	Connect to S-Video	See p. 2-9
RCA or S/PDIF	Connect to RCA video or S/PDIF	See p. 2-9
VGA Out	Connect to CRT monitor	See p. 2-9
IDE 1, IDE 2	Connecting IDE devices	See p. 2-10
F_Panel	Front panel connectors	See p. 2-11
FIR	FIR module connector	See p. 2-12
PS2	PS2 header	See p. 2-12
USB_3/4	USB pin-header connector	See p. 2-13
WOL	Wake-On LAN connector	See p. 2-13
FireWire	IEEE1394	See p. 2-14
COM2	The second serial port	See p. 2-14
CI	Chassis Intrusion connector	See p. 2-15
FDD	Floppy Drive Connector	See p. 2-15
CD_IN	CD_In Connector	See p. 2-16
I²C	I²C Connector	See p. 2-16
F_Audio	Front Audio Connector	See p. 2-17
LVDS	LVDS module connector	See p. 2-17
Clear_CMOS	Clear CMOS jumper	See p. 2-18
RCA Video or S/PDIF	Connecting RCA Video or SPDIF	See p. 2-18
PCI Slot	Connecting to expansion cards	See p. 2-19

2

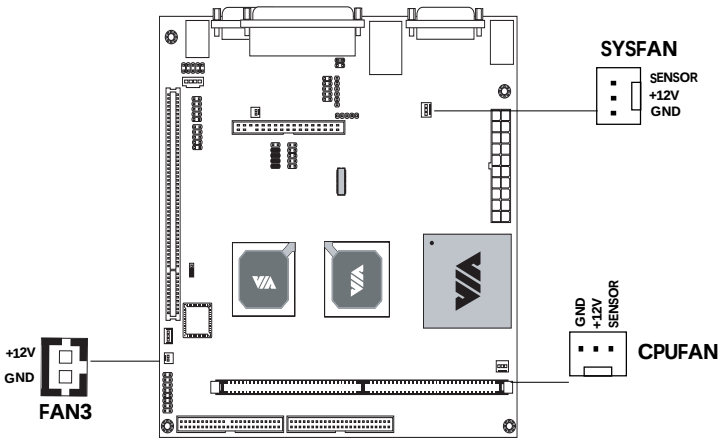
Installation

This chapter provides you with the information about hardware setup procedures. While installating, be careful in holding the components and follow the installation procedures. Some components can be damaged if installed incorrectly. If possible, use a grounded wrist strap before handling computer components. The components can be damaged by static electricity.

This chapter contains the following topics:

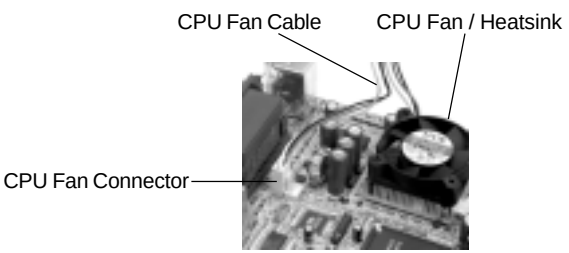
CPU

The VIA EPIA-M Mini-ITX Mainboard includes an embedded VIA Eden Processor or VIA C3™ E-Series Processor. The CPUFAN (CPU fan) and SYSFAN (system fan) run on +12V and maintain system cooling. When connecting the wire to the connectors, always be aware 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. Both CPU and System fan connectors have sensors to detect fan speed, but the power fan does not have sensor. FAN3 is an additional FAN connector.



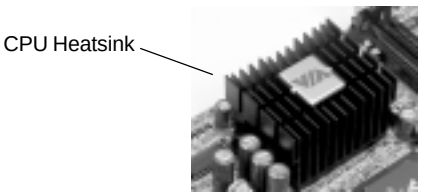
The VIA C3™ E-Series Processor

With low power consumption and advanced thermal dissipation properties, the embedded VIA C3™ E-Series requires only a small fan to guarantee performance and reliability. Ensure that the CPU Fan Connector is correctly installed, as displayed below.



The VIA Eden Processor

Providing ultra-low power consumption and advanced thermal dissipation properties, the VIA Eden Processor features a fanless design. The VIA Eden Processor requires only a heatsink, as shown below.



STOP

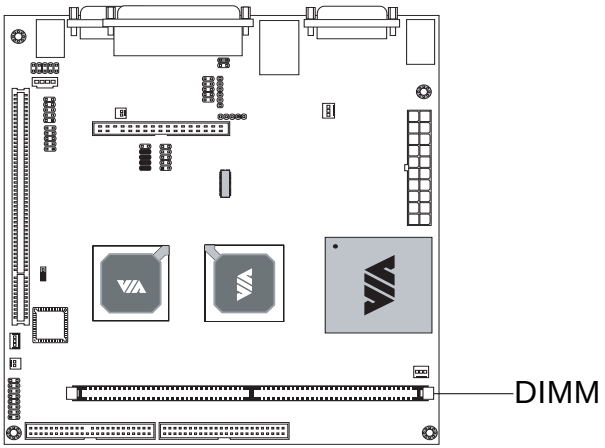
WARNING!

Overclocking

This motherboard is not designed to support overclocking. Any attempt to operate beyond product specifications is not recommended. **We do not guarantee the damages or risks caused by operation beyond product specifications.**

Memory Installation

The VIA EPIA-M Mini-ITX Mainboard provides one 184-pin DIMM slot for DDR266 SDRAM memory modules.



DDR SDRAM Module Installation Procedures

1.) Push the white retaining latches at either end of the DIMM slot outwards.

2.) Align the DDR SDRAM module with the corresponding notches on the DIMM slot. The modules will only fit if placed in the correct position.

3.) With both hands, press the DDR SDRAM module down into the DIMM slot so that the white retaining latches rotate up and secure the module in place (see picture below).

Available DDR SDRAM Configurations

Refer to the table below for available DDR SDRAM configurations on the mainboard.

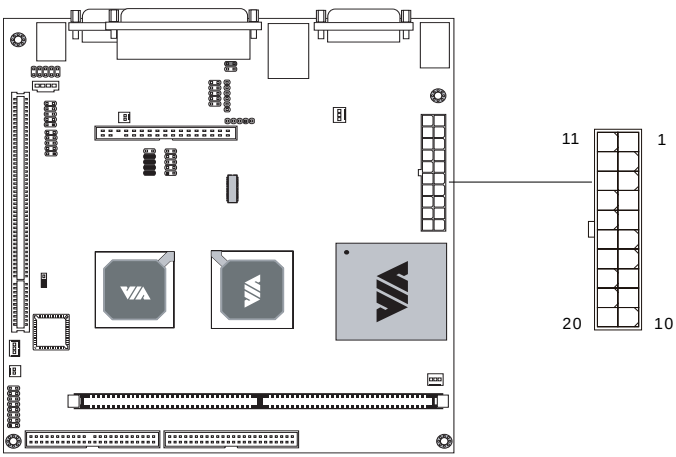
Socket	Memory Module	Total Memory
DIMM	64MB, 128MB, 256MB, 512MB, 1GB	64MB~1GB
Maximum System Memory Supported		1GB

Power Supply

The VIA EPIA-M Mini-ITX Mainboard requires an ATX power supply to be connected. Before inserting the power supply connector, always make sure that all components are installed correctly to ensure that no damage will be caused.

ATX 20-Pin Power Connector

To connect the ATX power supply, make sure the plugs of the power supply are inserted in the proper orientation and the pins are correctly aligned. Then, push down the power supply plug firmly into the connector.

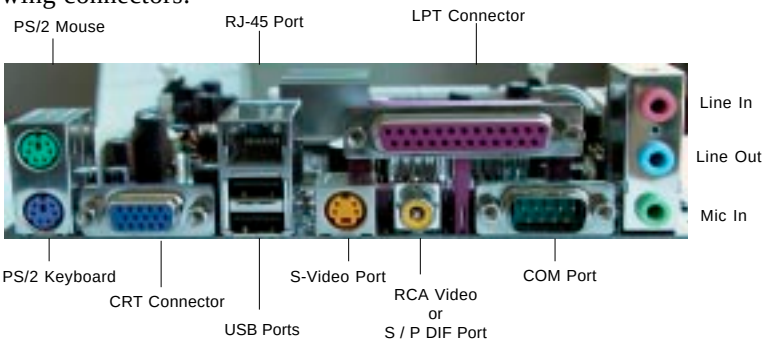


ATXPWR Pin Definition

PIN	SIGNAL	PIN	SIGNAL
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

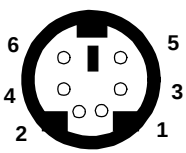
Back Panel

The back panel of the VIA EPIA-M Mini-ITX Mainboard contains the following connectors:



Mouse Connector: JMS1

The mainboard provides a standard PS/2 mouse connector for attaching a PS/2 mouse. You can plug a PS/2 mouse directly into this connector. The connector location and pin assignments are as follows:



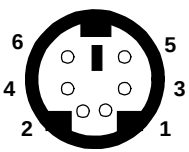
PS/2 Mouse (6-pin Female)

Pin Definition

PIN	SIGNAL	DESCRIPTION
1	Mouse DATA	Mouse DATA
2	NC	No connection
3	GND	Ground
4	VCC	+5V
5.	Mouse Clock	Mouse clock
6.	NC	No connection

Keyboard Connector: JKB1

The mainboard provides a standard PS/2 keyboard connector for attaching a PS/2 keyboard. You can plug a PS/2 keyboard directly into this connector.



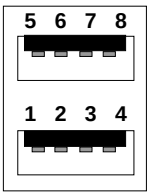
PS/2 Keyboard (6-pin Female)

Pin Definition

PIN	SIGNAL	DESCRIPTION
1	Keyboard DATA	Keyboard DATA
2	NC	No connection
3	GND	Ground
4	VCC	+5V
5.	Keyboard Clock	Keyboard Clock
6.	NC	No connection

USB Port Connectors

The mainboard provides 2 USB 2.0/1.1 ports (plus 1 pin-headers for up to 2 additional USB 2.0 connections). USB-compatible devices can be plugged directly into these ports.



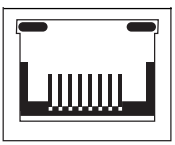
USB Ports

Pin Definition

PIN	SIGNAL	DESCRIPTION
1	VCC	+5V
2	-Data 0	Negative Data Channel 0
3	+Data 0	Positive Data Channel 0
4	GND	Ground
5.	VCC	+5V
6.	-Data 1	Negative Data Channel 1
7.	+Data 1	Positive Data Channel 1
8.	GND	Ground

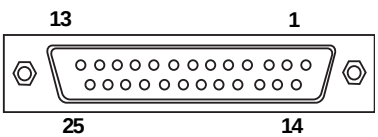
RJ-45 NIC Port

The mainboard provides one standard RJ-45 port for connection to the Local Area Network (LAN). You can connect a network cable to the LAN port.



Parallel Port Connector: LPT1

The mainboard provides a 25-pin female connector for LPT (parallel port). A parallel port is a standard printer port that supports Enhanced Parallel Port (EPP) and Extended Capabilities Parallel Port (ECP) modes.

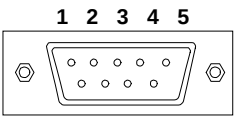


Pin Definition

PIN	SIGNAL	DESCRIPTION
1	STROBE	Strobe
2	DATA0	Data0
3	DATA1	Data1
4	DATA2	Data2
5	DATA3	Data3
6	DATA4	Data4
7	DATA5	Data5
8	DATA6	Data6
9	DATA7	Data7
10	ACK#	Acknowledge
11	BUSY	Busy
12	PE	Paper End
13	SELECT	Select
14	AUTO FEED#	Automatic Feed
15	ERR#	Error
16	INIT#	Initialize Printer
17	SLIN#	Select In
18	GND	Ground
19	GND	Ground
20	GND	Ground
21	GND	Ground
22	GND	Ground
23	GND	Ground
24	GND	Ground
25	GND	Ground

Serial Port Connectors: COM 1

The mainboard offers one 9-pin male Serial Port connector (COM 1) . You can attach a serial mouse or other serial devices directly to this port.



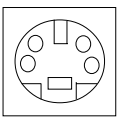
9-Pin Male DIN Connectors

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

S-Video Port

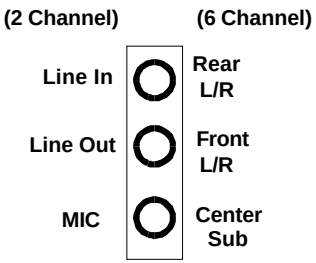
This port allows S-Video output in NTSC and PAL modes.



Audio Port Connectors

Line-Out is a connector for speakers or headphones. The **Line-In** connector can be used for an external CD player, tape player, or other audio devices. The **Mic-In** connector is for connecting microphones. Please note when 6-channel applications are used, all three connectors become output connectors. **Line-Out** becomes Front L/R; **Line-In** becomes Rear L/R; **Mic-In** becomes Center/Sub. **Note**: Win98SE supports only 4-CH output. See appendix 5-1 for Smart5.1.

1/8" Stereo Audio Connectors

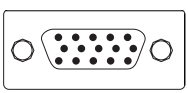


RCA Video or S/PDIF Port

This dual function port may be used either as a RCA Video port or as a S/PDIF port.

VGA Out

A DB-15 pin female connector that connects to a VGA monitor.

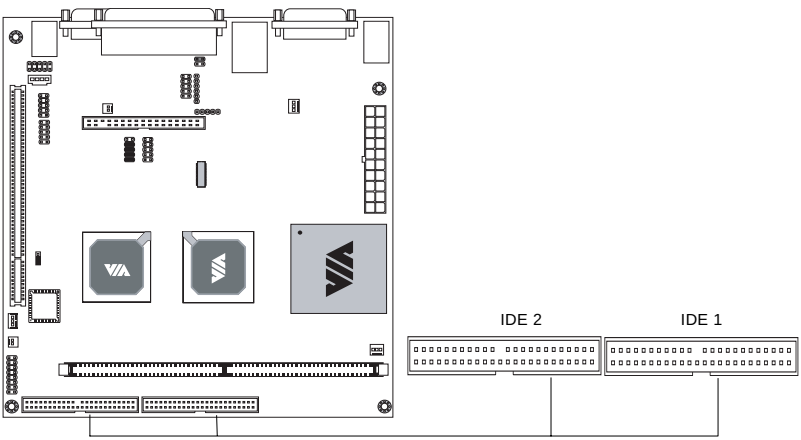


Connectors

The VIA EPIA-M Mini-ITX Mainboard provides the following connectors:

Hard Disk Connectors: IDE1 & IDE2

The mainboard has a 32-bit Enhanced PCI IDE and Ultra DMA 33/66/100/133 controller that provides PIO mode 0~4, Bus Master, and Ultra DMA 33/66/100/133 functions. You can connect up to four hard disk drive, CD-ROM, LS-120 and other devices. These connectors utilize the provided IDE hard disk cable.



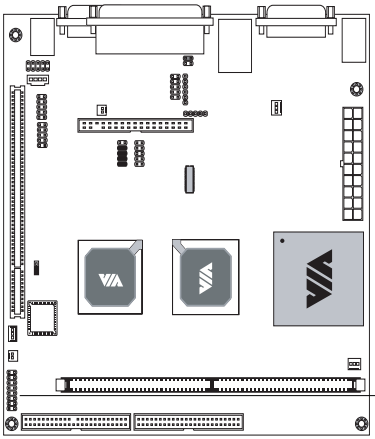
IDE1 (Primary IDE Connector)
The first hard drive should always be connected to IDE1. IDE1 can connect a Master and a Slave drive. You must configure the second hard drive to Slave mode by setting the jumper accordingly.

IDE2 (Secondary IDE Connector)
IDE2 can also connect a Master and a Slave drive.

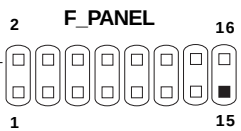
TIP: If you install two hard disks on cable, you must configure the second drive to Slave mode by setting its jumper. Refer to the hard disk documentation supplied by hard disk vendors for jumper setting instructions.

Case Connectors: F_PANEL

The connector block F_PANEL allow you to connect to the Power Switch, Reset Switch, Power LED, HDD LED and SLED on the case.



PIN	SIGNAL	PIN	SIGNAL
1	PW_LED+	2	HD_LED+
3	PW_LED+	4	HD_LED-
5	PW_LED-	6	PW_BN+
7	SPEAKER+	8	PW_BN-
9	NC	10	RST_SW+
11	NC	12	RST_SW-
13	SPEAKER-	14	SLP_LED+
15	NC	16	SLP_LED-



Power Button (PW_BN)

Connect to a 2-pin switch button. Pressing this button will turn the system power on or off.

Reset Switch (RST_SW)

The Reset Switch is used to reboot the system rather than turning the power ON/OFF. Avoid rebooting while the HDD is working. You can connect the Reset Switch from the system case to this pin.

Power LED (PW_LED)

The LED is lit when the system is power on. If the system is in S1 (POS - Power On Suspend) or S3 (STR- Suspend To RAM) state, the LED will blink.

HDD LED (HD_LED)

HDD LED shows the activity of a hard disk drive. Avoid turning the power off while HDD LED is lit. Connect the HDD LED from the system case to this pin.

Sleep LED (SLP_LED)

The SLED is lit when the system is in the S1 (POS - Power On Suspend) state.

Speaker (SPEAKER)

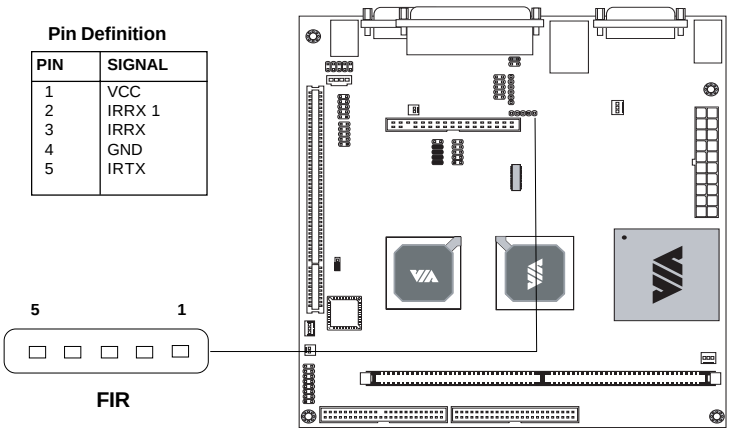
The speaker from the system case is connected to this pin.

Fast IrDA Infrared Module Connector: FIR

This connector allows you to connect an IrDA Infrared module. You must configure the setting through the BIOS setup to activate the IR function.

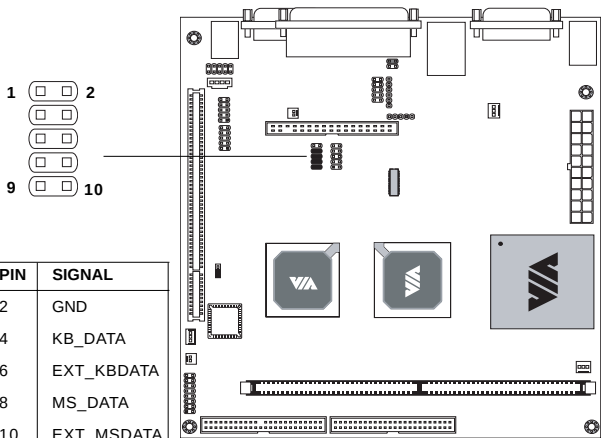
Pin Definition

PIN	SIGNAL
1	VCC
2	IRRX 1
3	IRRX
4	GND
5	IRTX



PS2 Header: EXT_KBMS

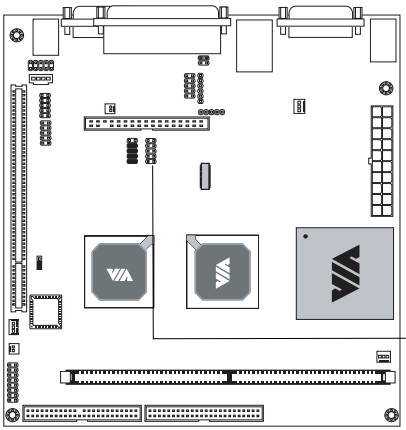
When the header is not in use, please short pin 3&5, pin 4&6, pin 7&9, and pin 8&10.



PIN	SIGNAL	PIN	SIGNAL
1	+5V	2	GND
3	KB_CLK	4	KB_DATA
5	EXT_KBCLK	6	EXT_KBDATA
7	MS_CLK	8	MS_DATA
9	EXT_MSCLK	10	EXT_MSDATA

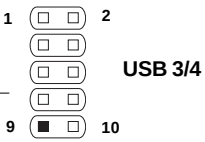
USB pin-header: USB3/4

The mainboard provides 1 front USB pin-header connector, allowing up to 2 additional USB ports**.** Please plug the USB 2-port module onto this pin-header.



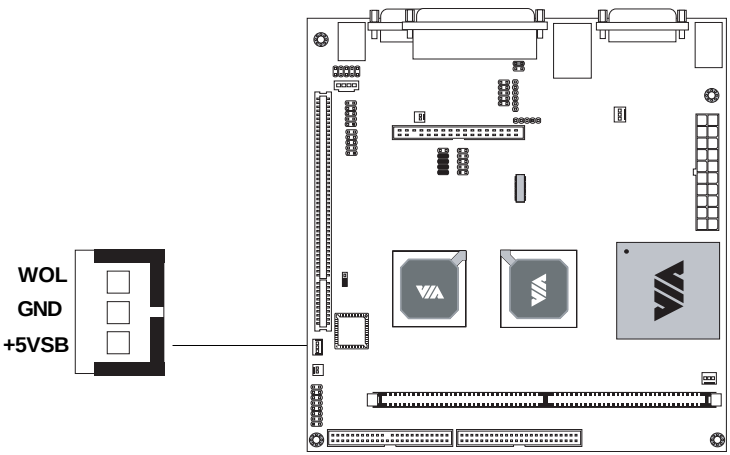
USB 3/4 Pin Definition

PIN	SIGNAL	PIN	SIGNAL
1	VCC	2	VCC
3	USB2-	4	USB3-
5	USB2+	6	USB3+
7	GND	8	GND
9	NC	10	GND



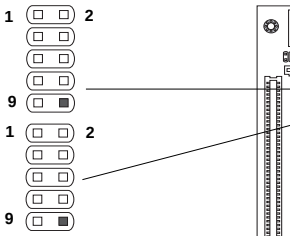
Wake-On LAN Connector: WOL

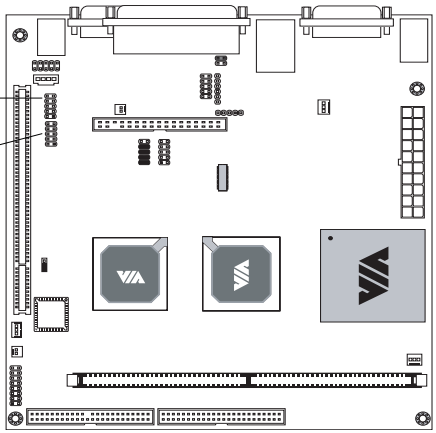
This connector allows you to connect a network card with the Wake-On LAN function. The connector will power up the system when a signal is received through the network card.



FireWire: IEEE1394

FireWire is a serial I/O interface that provides you fast data transfer rates. There are 2 FireWire ports available.



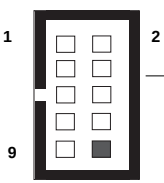


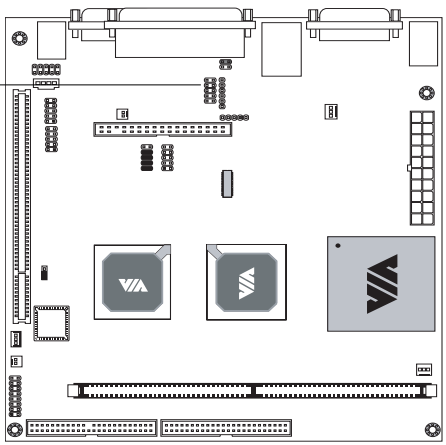
1394_X Definition

PIN	SIGNAL	PIN	SIGNAL
1	TPA0+	2	TPA0-
3	GND	4	GNF
5	TPB0+	6	TPB0-
7	1394_VDD	8	1394_VDD
9	GND		

COM2: The Second Serial Port

COM2 is a pin header for second serial port.

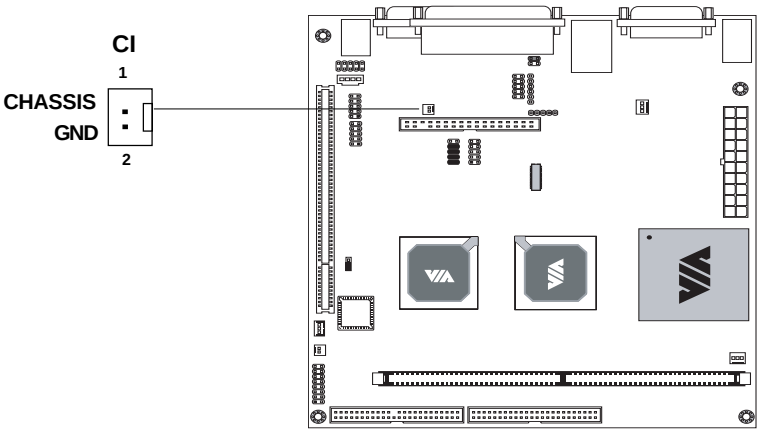




PIN	SIGNAL	PIN	SIGNAL
1	RIN12	2	RIN32
3	DOUT22	4	DOUT32
5	GND	6	RIN22
7	DOUT12	8	RIN42
9	-XR12		

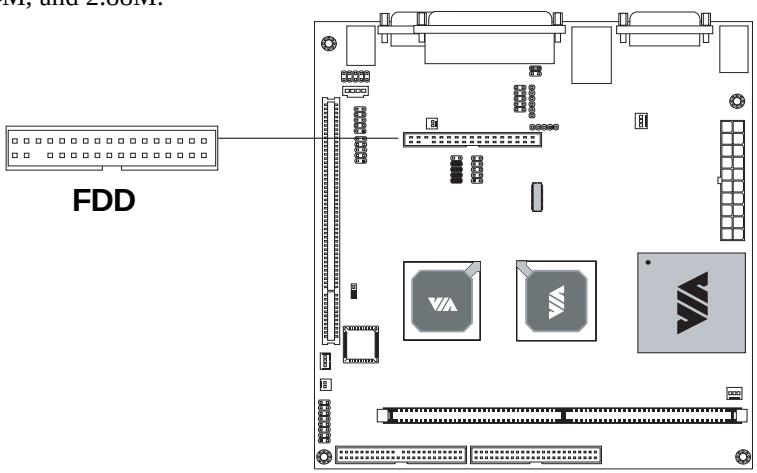
Chassis Intrusion Connector: CI

This connector is for a chassis designed with intrusion detection feature. It requires a chassis intrusion sensor or on a chassis. If any chassis component is moved, the sensor triggers and sends a high-level signal to this connector to record a chassis intrusion event.



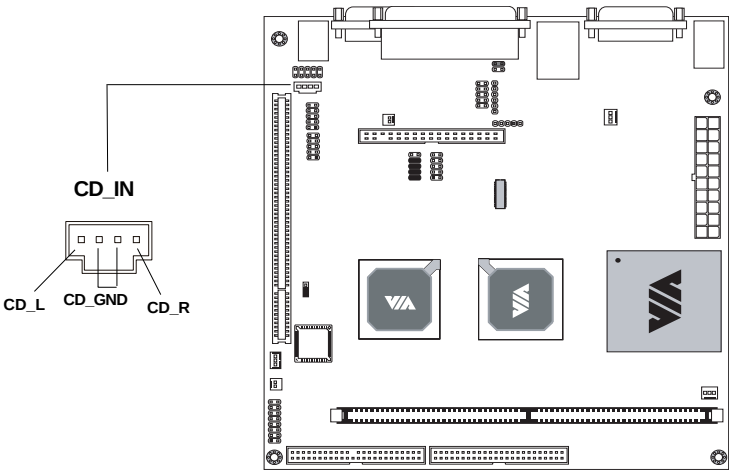
Floppy Disk Drive Connector: FDD

The standard floppy disk drive connector supports 360K, 720K, 1.2M, 1. 44M, and 2.88M.



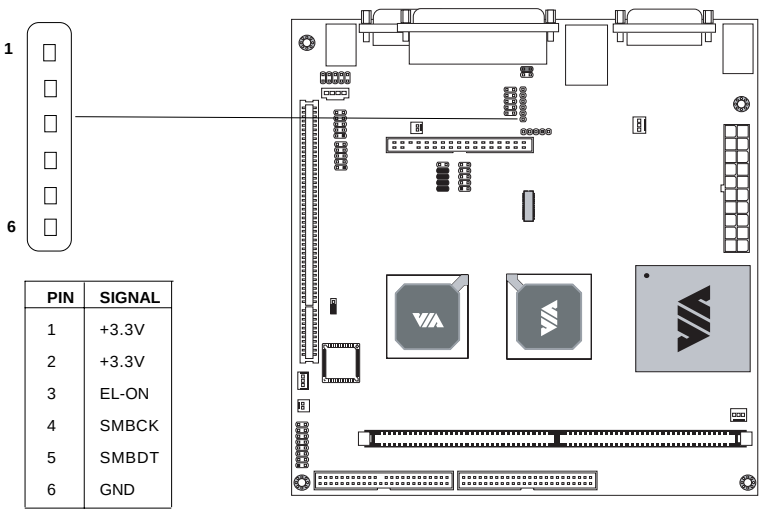
CD-In Connector: CD_IN

This connector is for the CD-ROM audio connector.



I²C Connector: I²C

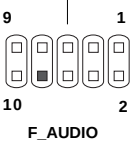
This is for connecting a I²C device.

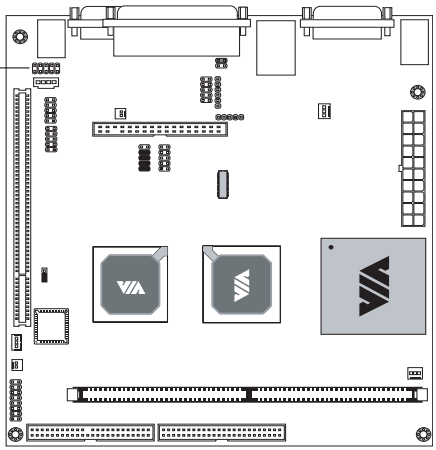


PIN	SIGNAL
1	+3.3V
2	+3.3V
3	EL-ON
4	SMBCK
5	SMBDT
6	GND

Front Audio Connector: F_Audio

This connector allows you to connect audio jacks on front panel for convenient connection and control of audio devices. **Note:** 1. When the front audio board is not in use, use the mini jumper to connect pin 5&6 and pin 9&10 (default). 2. When the front audio board is in use, remove the mini jumper.



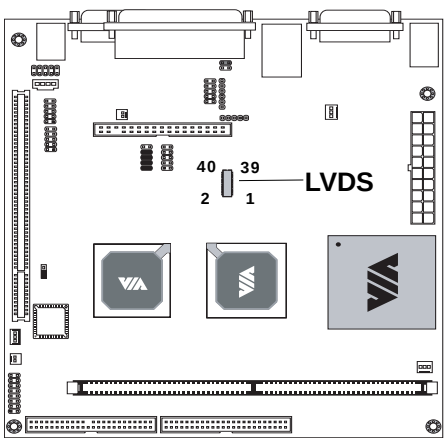


PIN	SIGNAL	PIN	SIGNAL
1	FRN_MIC	2	AGND
3	AUD_MIC_BIAS	4	+5V
5	LINE_OUT_R	6	NEXT_R
7	NC	8	Key Pin
9	LINE_OUT_L	10	NEXT_L

LVDS Module Connector: LVDS (Optional)

This connector allows you to connect to a LVDS module.

PIN	SIGNAL	PIN	SIGNAL
1	GFPDE	2	GFPD3
3	GFPD0	4	GFPD4
5	GFPD1	6	GFPD5
7	GFPD2	8	GFPCLK
9	GFPHS	10	GFPD6
11	GFPVS	12	GFPD7
13	GFPD11	14	GFPD8
15	GFPD12	16	GFPD9
17	ENPVDD	18	GFPD10
19	ENPVEE	20	GFPD13
21	FPBKLP	22	GFPD14
23	PWRGD_SB	24	GFPD15
25	SPCLK2	26	GFPD16
27	SPD2	28	GFPD17
29	GND	30	GFPD18
31	GND	32	GFPD19
33	3.3V	34	GFPD20
35	GND	36	GFPD21
37	5V	38	GFPD22
39	5V	40	GFPD23

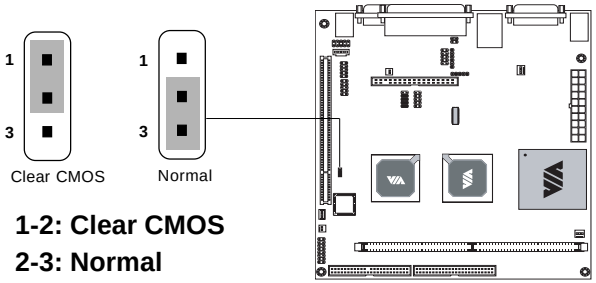


Jumpers

The mainboard provides jumpers for setting the mainboard's functions. This section will explain how to change settings for your mainboard's functions through the use of the jumpers.

Clear CMOS Jumper: CLEAR_CMOS

The onboard CMOS RAM stores system configuration data and has an onboard battery power supply. The long-life battery has a lifetime of at least 5 years. If you want to clear the system configuration data from the CMOS RAM, use the CLEAR_CMOS (Clear CMOS jumper). Follow the instructions below to clear the data:



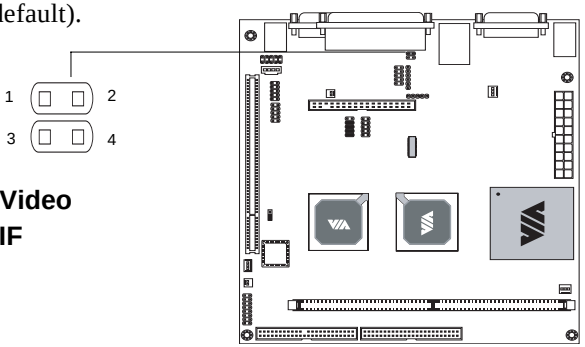
1-2: Clear CMOS
2-3: Normal

WARNING!

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

RCA Video or S/PDIF Select

Users can select either RCA Video or S/PDIF as the enabled function on the dual-purpose port. For TV-out composite function, please short 1-2. For RCA Video, short 3-4 (default).

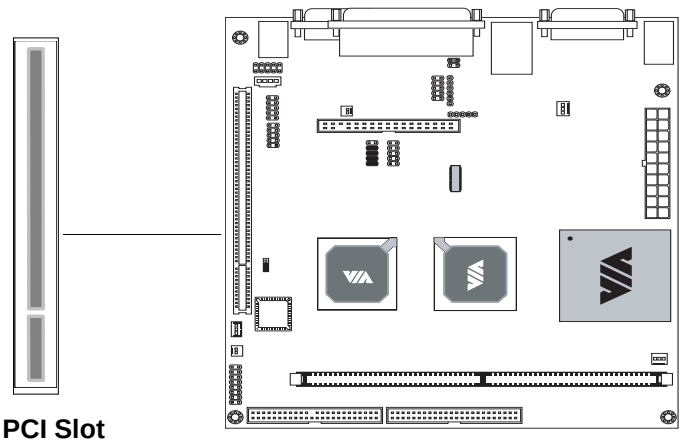


1-2: RCA Video
3-4: S/PDIF

Slots

PCI Slot

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



PCI Slot

PCI Interrupt Request Routing

The IRQ, abbreviation of interrupt request line and pronounced I-R-Q, are hardware lines over which devices can send interrupt signals to the microprocessor. The "PCI & LAN" IRQ pins are typically connected to the PCI bus INT A# ~ INT D# pins as follows:

	Order 1	Order 2	Order 3	Order 4
PCI Slot 1	INT B#	INT C#	INT D#	INT A#
IEEE1394	INT B#			

3

BIOS Setup

This chapter gives you detailed explaination of BIOS setup functions. It consists of the following topics:

Entering Setup

Power on the computer and press DEL straight away to enter the BIOS setup menu. If you missed the BIOS setup entry point, you may restart the system and try again.

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, only for Status Page Setup Menu and Option Page Setup Menu
<F5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<F6>	Load the default CMOS value from Fail-Safe default table, only for Option Page Setup Menu
<F7>	Load Optimized defaults
<F10>	Save all the CMOS changes and exit

Getting Help

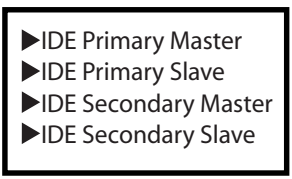
After entering the BIOS setup menu, the Main Menu appears.

Main Menu

The main menu displays all BIOS setup categories. Use the control keys (↓↑) to select any item/sub-menu. Description of the selected/highlighted category is displayed at the bottom of the screen.

Sub-Menu

If you find a right pointer symbol (as shown in the right view) on the left of field, this means a sub-menu is available. The sub-menu contains additional options. You can use control keys (↓↑) to highlight the field and press <Enter> to enter the sub-menu. To return from the sub-menu press <Esc >.

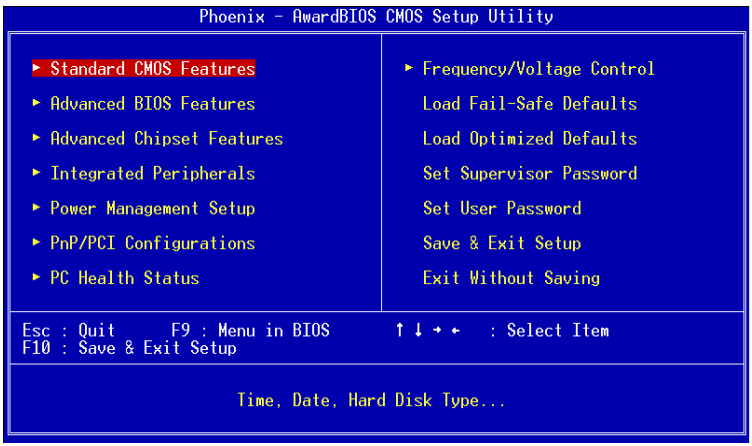


General Help <F1>

The BIOS setup program provides a General Help screen. You can call up this screen from any menu/sub-menu by pressing <F1>. The help screen displays the keys for use and navigate the BIOS setup. Press <Esc> to exit the help screen.

The Main Menu

The Main Menu contains twelve setup functions and two exit choices. Use arrow keys to select the items and press <Enter> to accept or enter the sub-menu.



Standard CMOS Features
Use this menu to set basic system configurations.

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

Advanced Chipset Features
Use this menu to set chipset specific features and optimize system performance.

Integrated Peripherals
Use this menu to set onboard peripherals features.

Power Management Setup
Use this menu to set onboard power management functions.

PnP/PCI Configurations
Use this menu to set the PnP and PCI configurations.

PC Health Status
This menu shows the PC health status.

Frequency/Voltage Control
Use this menu to set the system frequency and voltage control.

Load Fail-Safe Defaults
Use this menu to load the BIOS default settings for minimal and stable system operations.

Load Optimized Defaults
Use this menu to load BIOS default settings for optimal and high performance system operations.

Set Supervisor Password
Use this menu to set supervisor password.

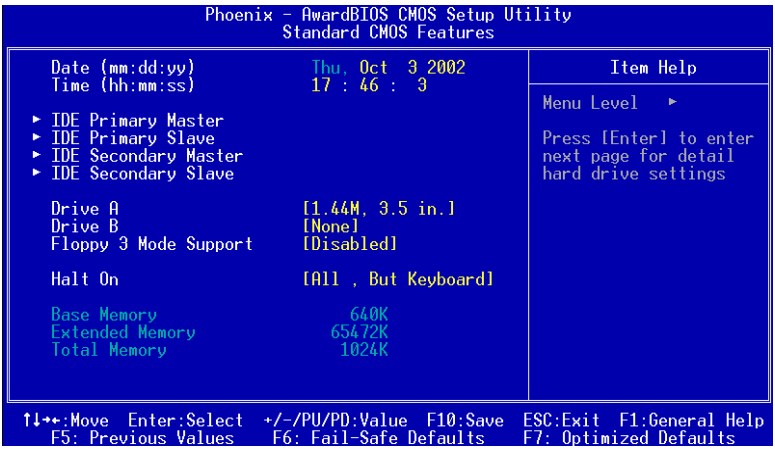
Set User Password
Use this menu to set user password.

Save & Exit Setup
Save BIOS setting changes and exit setup.

Exit Without Saving
Abandon all BIOS setting changes and exit setup.

Standard CMOS Features

Use the arrow keys to highlight the item and use the <PgUp> or <PgDn> keys to select the value you desire for each item.



Date

The date format is <Day><Month><Date><Year>.

Day - day of the week, for example Friday. Read-only.
Month - the month from Jan to Dec.
Date - the date from 1 to 31.
Year - the year, range from 1999 to 2098.

Time

The time format is <Hour><Minute><Second>.

Drive A/B

Set the type of floppy drive installed. Available options are *None*, *360K, 5.25 in.*, *1.2M, 5.25 in.*, *720K*, 3.5 in., *1.44M, 3.5 in., 2.88M, 3.5 in.*

Floppy 3 Mode Support

If enabled Drive A/B is define to 3 Mode. Floppy 3 Mode supports older Japanese Floppy. Settings: *Disabled, Drive A, Drive B,* and *Both.*

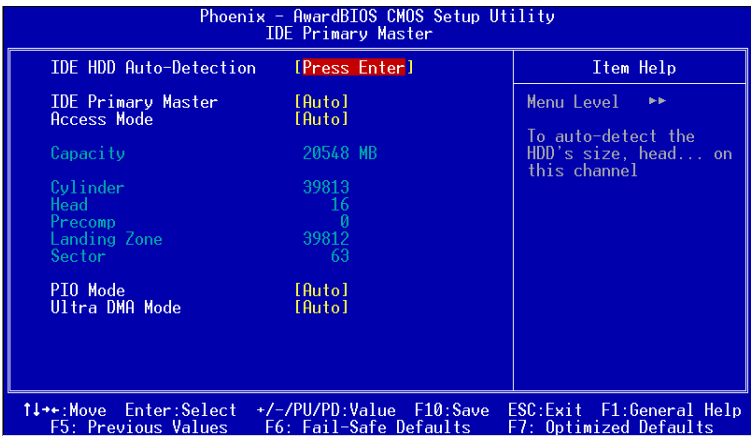
Halt On

Determine the system behaviour if an error is detected during bootup. Settings:
All Errors System halts when any error is detected.

No Errors	System does not halt for any error.
All, But Keyboard	System halts for all errors (except keyboard error).
All, But Diskette	System halts for all errors (except diskette error).
All, But Disk/Key	System halts for all errors (except disk/keyboard error)

IDE Primary Master/Slave and Secondary Master/Slave

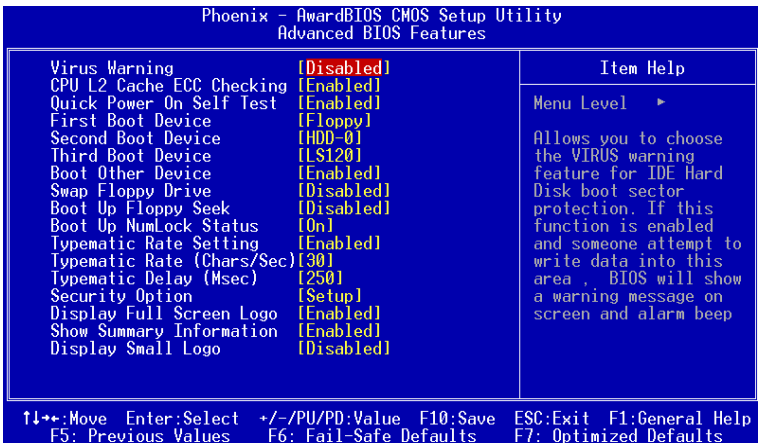
Press <Enter> to enter the sub-menu and the following screen appears:



The specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category. Select Auto whenever possible. If you select Manual, make sure the information provided is from your hard disk vendor or system manufacturer.

IDE Primary Slave	The settings are None, Auto, Manual.
Access Mode	The settings are CHS, LBA, Large, Auto.
Capacity	The formatted size of the storage device.
Cylinder	Number of cylinders.
Head	Number of heads.
Precomp	Write precompensation.
Landing Zone	Cylinder location of the landing zone.
Sector	Number of sectors.
PIO Mode	The settings are Mode 0/1/2/3/4, Auto.
Ultra DMA Mode	The settings are Disabled and Auto.

Advanced BIOS Features



Virus Warning
Set the Virus Warning feature for IDE Hard Disk boot sector protection. If the function is enabled, any attempt to write data into this area will cause a beep and a warning message will be displayed. Settings: *Disabled* and *Enabled*.

CPU L2 Cache ECC Checking
Set the ECC (Error-Correcting Code) feature for Level 2 cache. Facilitates error detection/correction when data passes through Level 2 cache. Settings: *Enabled* and *Disabled*.

Quick Power On Self Test
Shorten Power On Self Test (POST) cycle and enable shorter bootup time. Allow BIOS to skip some check items during POST. Settings: *Enabled* and *Disabled*.

First/Second/Third Boot Device
Set the boot device sequence as BIOS attempts to load the disk operating system. The settings are:

Floppy	The system will boot from floppy drive.
LS120	The system will boot from LS-120 drive.
HDD-0	The system will boot from first HDD.

SCSI	The system will boot from SCSI.
CD-ROM	The system will boot from CD-ROM.
HDD-1	The system will boot from second HDD.
HDD-2	The system will boot from third HDD.
HDD-3	The system will boot from fourth HDD.
ZIP100	The system will boot from ATAPI ZIP drive.
USB-FDD	The system will boot from USB floppy drive.
USB-ZIP	The system will boot from USB ZIP drive.
USB-CDROM	The system will boot from USB CDROM.
USB-HDD	The system will boot from USB HDD.
LAN	The system will boot from network drive.
Disabled	Disable this sequence.

Boot Other Device
Enable the system to boot from other devices if the system fails to boot from the First/Second/Third boot device. Settings: *Enabled* and *Disabled*.

Swap Floppy Drive
If the system has two floppy drives, choose enable to assign physical drive B to logical drive A and vice-versa. Settings: *Enabled* and *Disabled.*

Boot Up Floppy Seek
Set floppy seek during POST, BIOS will determine whether the floppy is 40 or 80 tracks. Settings: *Enabled* and *Disabled*.

Boot Up NumLock Status
Set the NumLock status when the system is powered on. “On” will turn key pad into number keys, and “Off” will turn key pad into arrow keys. Settings: *On* and *Off*.

Typematic Rate Setting
Set the typematic rate and delay. Settings: *Enabled* and *Disabled*.

Typematic Rate (Chars/Sec)
When Typematic Rate Setting is enabled. This item allows you to set the rate (characters/second) at which the keys are accelerated. Settings: *6*, *8*, *10*, *12*, *15*, *20*, *24* and *30*.

Typematic Delay (Msec)
When Typematic Rate Setting is enabled. This item allows you to select the delay between when the key was first pressed and when the acceleration begins. Settings: *250*, *500*, *750* and *1000*.

Security Option
Specifies the type of BIOS password protection that is implemented. Settings are described below:

Option	Description
Setup	The password prompt appears only when end users try to run Setup.
System	A password prompt appears every time when the computer is powered on or when end users try to run Setup.

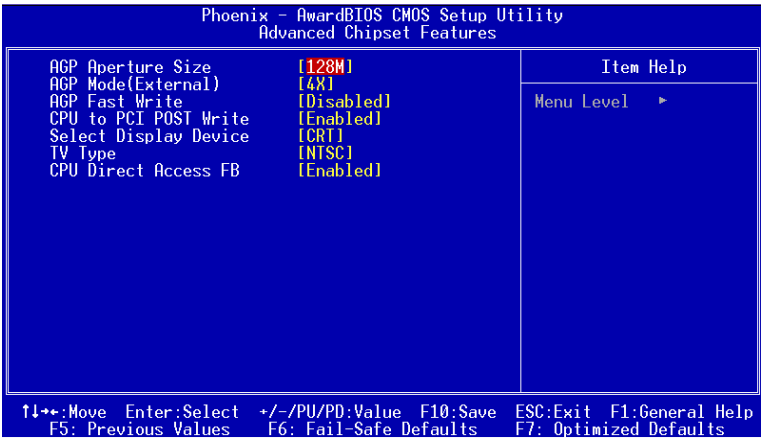
Display Full Screen logo
Show full screen logo during BIOS bootup process. Settings: *Enabled* and *Disabled.*

Show Summary Information
Show summary information during BIOS bootup process. Settings: *Enabled* and *Disabled.*

Display Small Logo
Show small energy star logo during BIOS bootup process. Settings: *Enabled* and *Disabled*.

Advanced Chipset Features

The Advanced Chipset Features menu is used for optimizing the chipset functions.



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

AGP Aperture Size

This setting controls how much memory space can be allocated to AGP for display purposes. The aperture is a portion of the PCI memory address range dedicated to graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation. Settings: *4MB, 8MB, 16MB, 32MB, 64MB, 128MB, and 256MB*.

AGP Mode (External)

This mainboard supports AGP 4x interface. When the AGP 4x video card is used, it can transfer video data at 1066MB/s. AGP 4x is backward-compatible, leave the default 4x mode on if unsure. When set to 1x mode, the maximum transfer rate it to 266MB/s, and 2x mode transfer data at 533MB/s. Settings: *4X, 2X,* and *1X.*

AGP Fast Write

Enabling this feature can improve system performance. Enable the function only when your AGP card supports “Fast Write”. Settings: *Enabled* and *Disabled*.

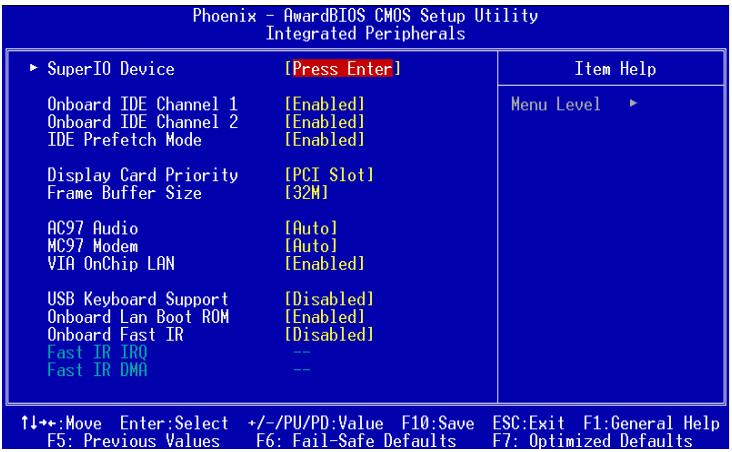
CPU to PCI POST Write
When *Enabled*, CPU can write up to four words of data to the PCI write buffer before CPU must wait for PCI bus cycle to finish. If *Disabled*, CPU must wait after each write cycle until PCI bus signals that it is ready to receive more data. Settings: *Enabled* and *Disabled.*

Select Display Device
Set the device you want to use for displaying. Settings: *CRT* and *TV*.

TV Type
Set the TV type you would like to use. Settings: *NTSC* and *PAL*.

CPU Direct Access FB
Eable CPU direct access frame buffer. Settings: *Enabled* and *Disabled.*

Integrated Peripherals



Onboard IDE Channel 1/2

The integrated peripheral controller contains an IDE interface with support for two IDE channels. Choose *Enabled* to activate each channel separately. Settings: *Disabled, Enabled.*

IDE Prefetch Mode

This allows your hard disk controller to use the fast block mode to transfer data to and from the hard disk drive. Block mode is also called block transfer, multiple commands or multiple sector read/write. *Enabled* enables IDE controller to use block mode; *Disabled* allows the controller to use standard mode.

Display Card Priority

This setting specifies which VGA card is your primary graphics adapter. Settings: *PCI Slot* and *AGP*.

Frame Buffer Size

Set the Frame Buffer size. Settings: *16M, 32M,* and *64M*.

AC97 Audio
Auto allows the mainboard to detect whether an audio device is used. If the device is detected, the onboard VIA AC'97 (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. Setting options: *Auto* and *Disabled*.

MC97 Modem
Auto allows the mainboard to detect whether a modem is used. If a modem is used, the onboard VIA MC'97 (Modem Codec'97) controller will be enabled; if not, it is disabled. Disable the controller if you want to use other controller cards to connect to a modem. Settings: *Auto* and *Disabled*.

VIA-3043 OnChip LAN
Decide whether to invoke the boot ROM of VIA-3043 onchip LAN. Settings: *Enabled* and *Disabled*.

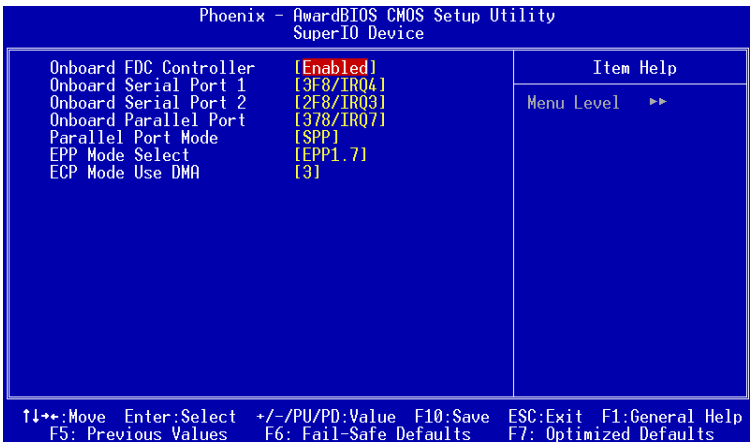
USB Keyboard Support
Enable USB Keyboard Support for DOS and Windows 95. Settings: *Enabled* and *Disabled*.

Onboard LAN Boot ROM
Enable the function of onboard LAN boot ROM. Settings: *Enabled* and *Disabled*.

Onboard Fast IR
Enable onboard fast IR functions. Settings: *Enabled* and *Disabled.*

SuperIO Device

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



Onboard FDC Controller

Enable the onboard floppy controller. Select “Enabled” when you have installed a floppy disk drive. Settings: *Enabled* and *Disabled*.

Onboard Serial Port 1/2

Set the base I/O port address and IRQ for the onboard serial port A/serial port B. Selecting *Auto* allows BIOS to automatically determine the correct base I/O port address. Settings: *Disabled*, *3F8/IRQ4*, *2F8/IRQ3*, *3E8/IRQ4*, *2E8/IRQ3* and *Auto*.

Onboard Parallel Port

This specifies the I/O port address and IRQ of the onboard parallel port. Settings: *378/IRQ7*, *278/IRQ5*, *3BC/IRQ7* and *Disabled*.

Parallel Port Mode

Set the parallel port mode. To operate the onboard parallel port as Standard Parallel Port, choose “SPP.” To operate the onboard parallel port in the EPP mode, choose “EPP.” By choosing “ECP”, the onboard parallel port will operate in ECP mode. Choosing “ECP + EPP” will allow the onboard parallel port to support both the ECP and EPP modes simultaneously. Settings are:

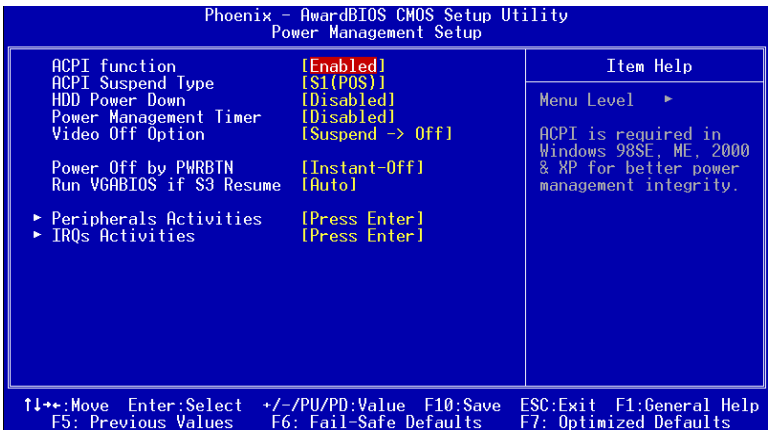
SPP : Standard Parallel Port
EPP : Enhanced Parallel Port
ECP : Extended Capability Port
ECP + EPP: Extended Capability Port + Enhanced Parallel Port

EPP Mode Select
Select the Enhance Parallel Port mode. Settings: *EPP1.9* and *EPP1.7*.

ECP Mode Use DMA
ECP utilises a DMA channel. This field is only available if Parallel Port Mode is set to "ECP". Select DMA channel for ECP use. Settings: *1* and *3*.

Power Management Setup

The Power Management Setup menu configures the system to most effectively save energy while operating in a manner consistent with your own style of computer use.



ACPI Function

Activate the ACPI (Advanced Configuration and Power Management Interface) Function. If your operating system is ACPI-aware (i.e. Windows 98/98SE/ME/2000/XP) select Enabled. Settings: *Enabled* and *Disabled*.

ACPI Suspend Type

Set the power saving mode for ACPI function. Settings are:
S1/POS - S1/Power On Suspend (POS) is a low power state. In this state, no system context (CPU or chipset) is lost and hardware maintains all system context.
S3/STR - S3/Suspend To RAM (STR) is a power-down state. In this state, power is supplied only to essential components such as main memory and wakeup-capable devices. The system context is saved to main memory, and context is restored from the memory when a “wakeup” event occurs.
S1 & S3 - Depends on OS to select S1 or S3.

HDD Power Down

Set the time to power down HDD after hard disk inactivity. Settings: *Disable* and *1~15* Min.

Power Management Timer
Set the idle time before system enters power saving mode. ACPI OS such as Windows XP will override this option. Settings: *Disable* and *1/2/4/6/8/10/20/30/40* min and *1* hr.

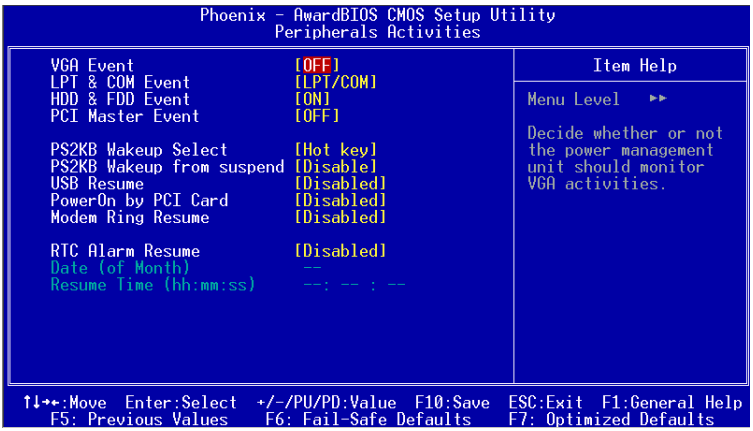
Video Off Option
Select whether or not to turn off the screen when system enters power saving mode, ACPI OS such as Windows XP will override this option. Settings are:
Always On - The screen is always on even when system enters power saving mode.
Suspend -> Off - The screen is turned off when system enters power saving mode.

Power Off by PWRBTN
This field configures the power button function. Settings are:
Delay 4 Sec - The system is turned off if power button is pressed for more than four seconds.
Instant-Off - The power button functions as a normal power-on/-off button.

Run VGABIOS if S3 Resume
Select whether to run VGA BIOS if resumed from S3 state. This is only necessary for older VGA drivers, select Auto if in doubt. Settings: *Auto, Yes* and *No.*

Peripheral Activities

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



VGAEvent

Decide whether or not the power management unit should monitor VGA activities. Settings: *Off* and *ON.*

LPT & COM Event

Decide whether or not the power management unit should monitor parallel port (LPT) and serial port (COM) activities. Settings: *None, LPT, COM* and *LPT/COM.*

HDD & FDD Event

Decide whether or not the power management unit should monitor hard disks and floppy drives activties. Settings: *Off* and *On.*

PCI Master Event

Decide whether or not the power management unit should monitor PCI master activties. Settings: *Off* and *On.*

PS2KB Wakeup Select

When Select Password, Please press ENTER key to change Password, Max 8 characters. Settings: *Password* and *Hot key.*

PS2KB Wakeup from suspend
Select which "Hot-Key" is used to wake-up the system from power saving mode. Settings: *Disabled, Ctrl+F1, Ctrl+F2, Ctrl+F3, Ctrl+F4, Ctrl+F5, Ctrl+F6, Ctrl+F7, Ctrl+F8, Ctrl+F9, Ctrl+F10, Ctrl+F11, Ctrl+F12, Power, Wake* and *Any Key*.

USB Resume
Decide whether or not the USB devices can wake the system from suspend state. Settings: *Disabled* and *Enabled.*

PowerOn by PCI Card
Decide whether or not a PCI card can power up the system or resume it from suspend state. Such PCI cards include LAN, onboard USB ports, etc. Settings: *Disabled* and *Enabled.*

Modem Ring Resume
Decide whether or not Ring-In signals from Modem can wake up the system from suspend state. Settings: *Disabled* and *Enabled.*

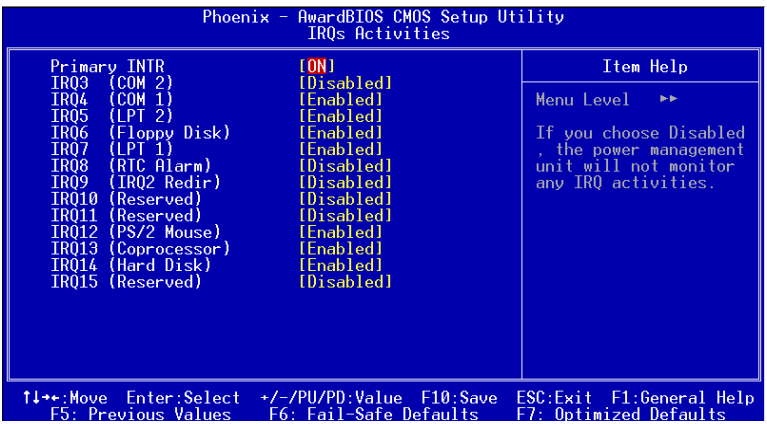
RTC Alarm Resume
The field is used to enable or disable the feature of booting up the system on a scheduled time/date. Settings: *Disabled* and *Enabled.*

Date (of Month)
The field specifies the date for *RTC Alarm Resume*. Settings: 0~31.

Resume Time (hh:mm:ss)
The field specifies the time for *RTC Alarm Resume. F*ormat is <hour> <minute><second>.

IRQs Activities

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



Primary INTR

Selecting *ON* will cause the system to wake up from power saving modes if activity is detected from any enabled IRQ channels. Settings: *OFF* and *ON.*

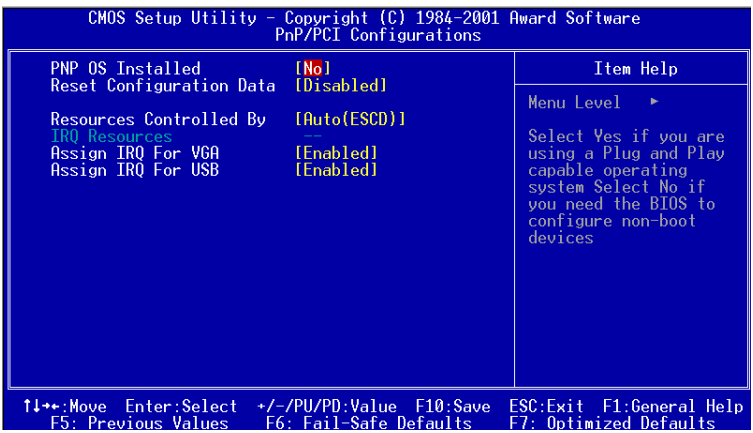
IRQ3~IRQ15

Enables or disables the monitoring of the specified IRQ line. If set to *Enabled*, the activity of the specified IRQ line will prevent the system from entering power saving modes or awaken it from power saving modes. Settings: *Disabled* and *Enabled.*

Note: *IRQ (Interrupt Request) lines are system resources allocated to I/O devices. When an I/O device needs to gain attention of the operating system, it signals this by causing an IRQ to occur. After receiving the signal, when the operating system is ready, the system will interrupt itself and perform the service required by the IO device.*

PNP/PCI Configurations

This section describes the BIOS configuration of the PCI bus system. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.



PNP OS Installed

When set to *Yes*, BIOS will only initialize the PnP cards used for booting (VGA, IDE, SCSI). Other cards will be initialized by the PnP operating system like Windows® 95 or 98/98SE. When set to *No*, BIOS will initialize all the PnP cards. Set to *Yes* the operating system is Plug & Play capable. The settings: *No* and *Yes*.

Reset Configuration Data

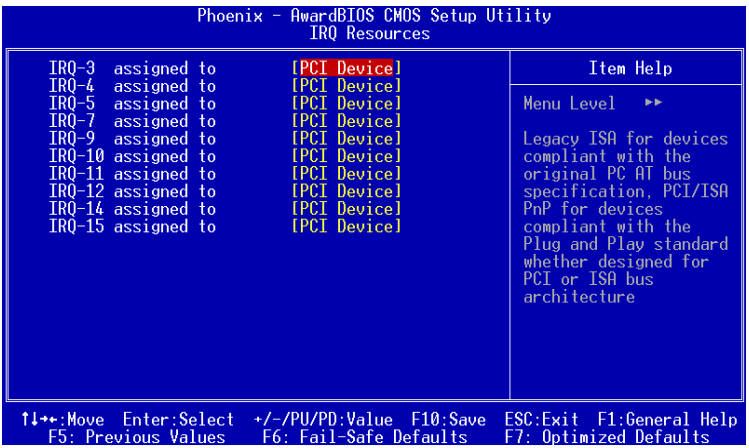
Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system can not boot. The settings: *Enabled* and *Disabled*.

Resource Controlled By

The BIOS can automatically configure all the boot and Plug and Play compatible devices. Choose "Auto(ESCD)" if unsure, the BIOS will automatically assign IRQ, DMA and memory base address fields. The settings: *Auto (ESCD)* and *Manual*.

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:

PCI Device For Plug & Play compatible devices designed for PCI bus architecture.

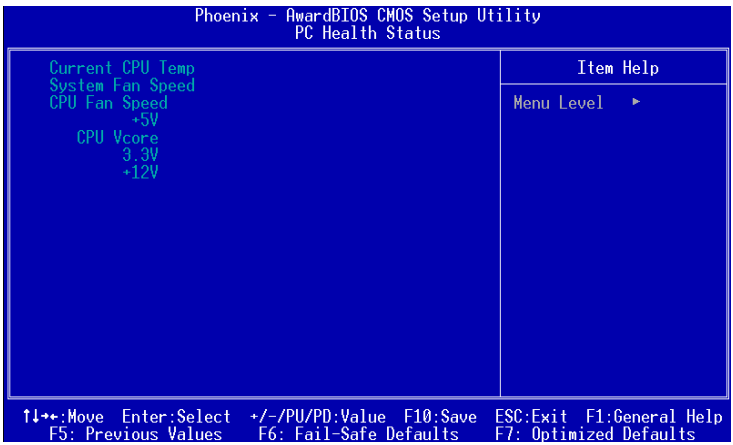
Reserved The IRQ will be reserved for further request.

Assign IRQ For VGA/USB

Assign IRQ for VGA and USB devices. Settings: *Disabled* and *Enabled*.

PC Health Status

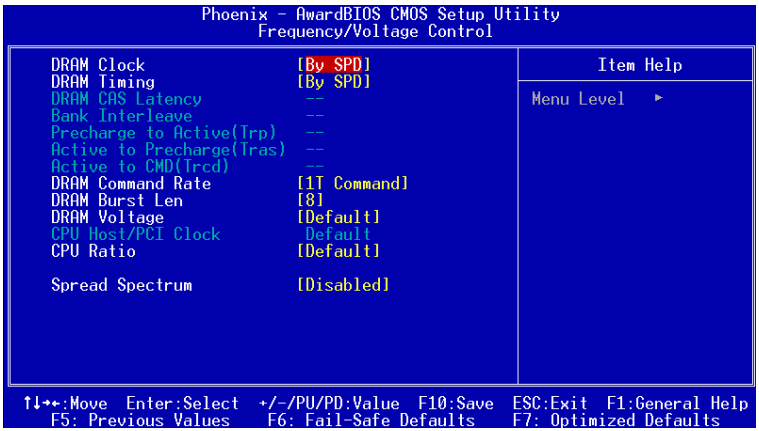
This section shows the status of your CPU, fan, warning for overall system status.



Current CPU Temp, CPU Fan Speed, System Fan Speed, +12V, +5V, +3.3V, CPU Vcore.

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

Frequency/Voltage Control



DRAM Clock

The chipset supports synchronous and asynchronous mode between host clock and DRAM clock frequency. Settings: *By SPD, 100MHz* and *133MHz.*

DRAM Timing

This setting determines whether DRAM timing is configured by reading the contents of the SPD (Serial Presence Detect) EPROM on the DRAM module. Selecting Yes makes SDRAM Cycle Length and Bank Interleave automatically determined by BIOS according to the configurations on the SPD. Settings: *Manual* and *By SPD.*

SDRAM CAS Latency

Set the time between SDRAM read command and when the data actually becomes available. Settings: *2* and *2.5.*

Bank Interleave

Set the interleave mode of the SDRAM interface. Interleaving allows banks of SDRAM to alternate their refresh and access cycles. One bank will undergo its refresh cycle while another is being accessed. This improves performance of the SDRAM by masking the refresh time of each bank. Settings: *Disabled, 2 Bank* and *4 Bank.*

Precharge to Active (Trp)

Set the time from DRAM precharge to active state. Settings: *2T* and *3T.*

Active to Precharge (Tras)
Set the time from active back to precharge state. Settings: *5T* and *6T.*

Active to CMD (Trcd)
Set the time from active state to command state. Settings: *2T* and *3T.*

DRAM Command Rate
This setting controls the DRAM command rate. Selecting 1T allows DRAM signal controller to run at 1T (T=clock cycles) rate. Selecting 2T makes DRAM signal controller run at 2T rate. 1T is faster than 2T. Settings: *2T Command* and *1T Command*.

DRAM Burst Len
This setting allows you to set the size for DRAM Burst-Length. The bigger the size, the faster the system addresses memory. Settings: *4* and *8.*

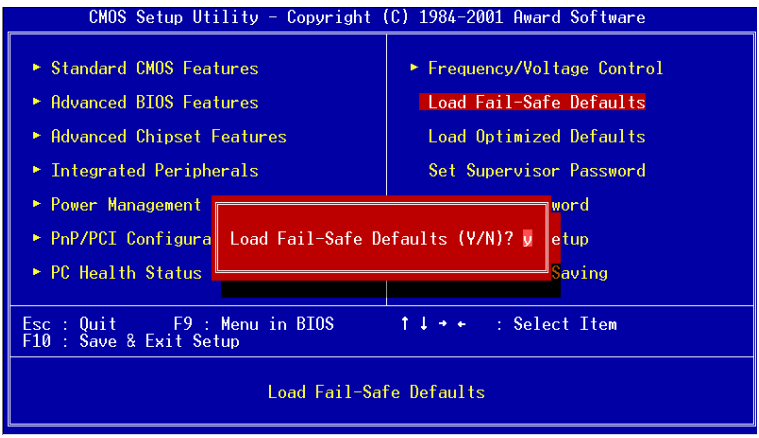
DRAM Voltage
This setting allows you to set the appropriate DRAM voltage. Setting options: *2.5V, 2.6V, 2.7V* and *2.8V*

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 problems, leave the setting at *Disabled* for optimal system stability and performance. But if you are plagued by EMI, setting to *Enabled* for EMI reduction. Remember to disable Spread Spectrum if you are overclocking because even a 0.25% jitter can introduce a temporary boost in clockspeed of 25MHz (with a 1GHz CPU) which may just cause your overclocked processor to lock up. Settings: *Disabled, -0. 5%, +/-0.5%, +/-0.25%,*and *+/-0.38%.*

Load Fail-Safe Defaults

This option on the main menu allows users to restore all the BIOS settings to the default Fail Safe values. These values are set by the mainboard manufacturer to provide the most stable system.

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

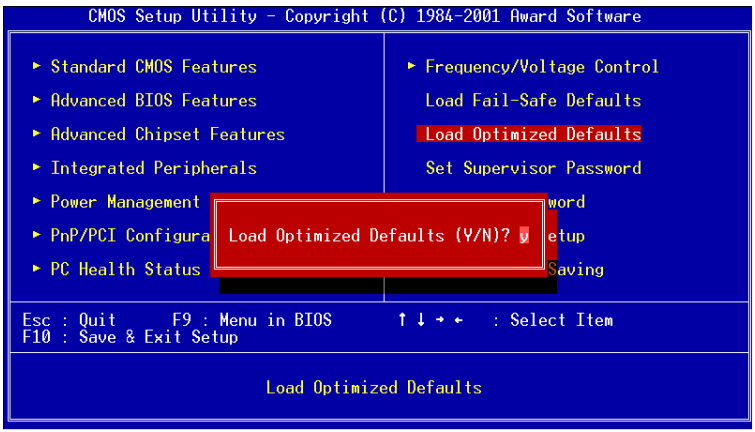


Pressing 'Y' loads the default BIOS values that provide a minimal and stable system configuration.

Load Optimized Defaults

This option on the main menu allows users to restore all the BIOS settings to the default Optimized values. The Optimized Defaults are the default values also set by the mainboard manufacturer for both optimized and stable performance of the mainboard.

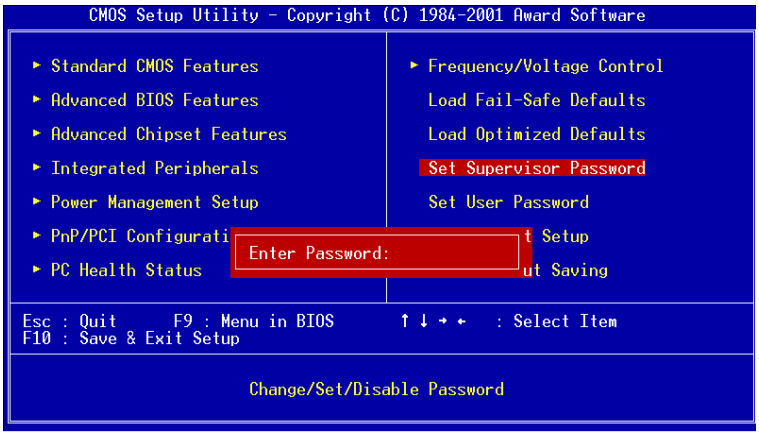
When you select Load Optimized Defaults, a message as below appears:



Pressing 'Y' loads the default values that are factory settings for optimal and stable system performance.

Set Supervisor/User Password

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



Type the password, up to eight characters in length, and press <Enter>. The password typed now will clear any previously set password from CMOS memory. You will be prompted to confirm the password. Re-type 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 that 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.

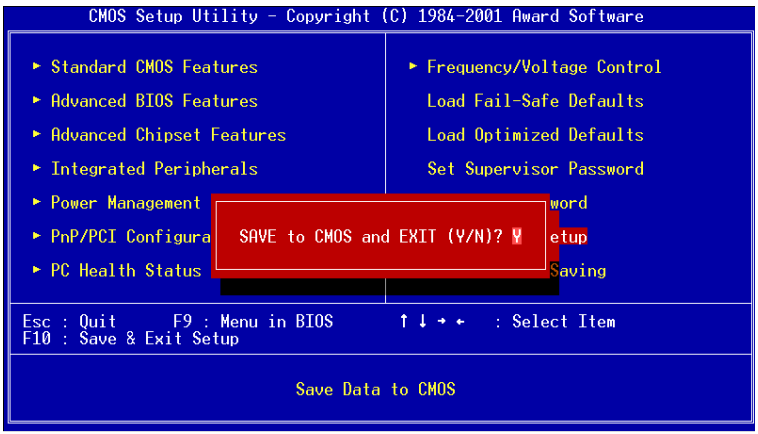
Additionally, when a password is enabled, you can also have BIOS to request a password each time the system is booted. This would prevent unauthorized use of your computer. The setting to determine when the password prompt is required is the Security Option of the Advanced BIOS Features menu. If the Security Option is set to *System*, the password is required both at boot and at entry to Setup. If set to *Setup*, password prompt only occurs when trying to enter Setup.

About Supervisor Password & User Password:

Supervisor password :	*Can enter and change the settings of the setup menus.*
User password:	*Can only enter but do not have the right to change the settings of the setup menus.*

Save & Exit Setup

When you want to quit the Setup menu, you can select this option to save the changes and quit. A message as below will appear on the screen:

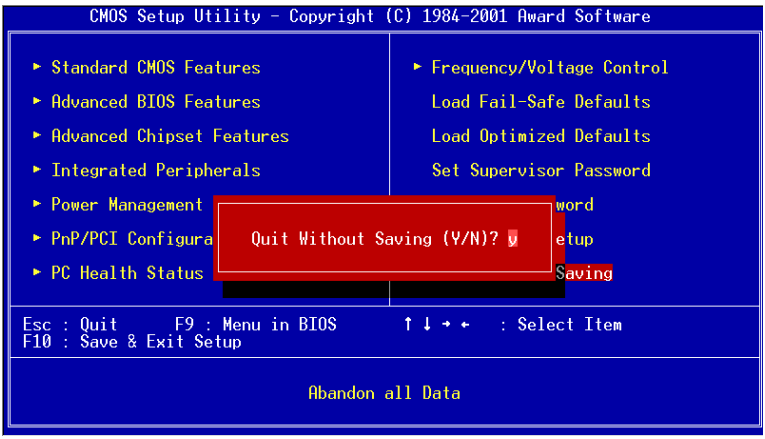


Typing “Y” will allow you to quit the Setup Utility and save the user setup changes to RTC CMOS.

Typing “N” will return to the Setup Utility.

Exit Without Saving

When you want to quit the Setup menu, you can select this option to abandon the changes. A message as below will appear on the screen:



Typing “Y” will allow you to quit the Setup Utility without saving any changes to RTC CMOS.

Typing “N” will return to the Setup Utility.

4

Software Setup

This chapter gives you brief descriptions of each mainboard drivers and applications. It consists of the following topic:

Note: You must install VIA chipset drivers first before installing other drivers such as audio or VGA drivers. The applications will only function correctly if the necessary drivers are already installed.

Driver Utilities CD Content

Getting Started

The VIA EPIA-M mainboard includes a Driver Utilities CD which contains driver utilities and software to enhance the performance of the mainboard. Please check that you have this CD in your gift box. If the CD is missing in your gift box, please contact your local dealer for the CD.

Note: The driver utilities and software are updated from time to time. Please visit VIA's website (http://www.viamainboard.com/) for the latest updated driver utilities and software.

Running the Driver Utilities CD

To start using the CD, just simply insert the CD into your local CD-ROM or DVD-ROM drive. The CD should run automatically when you close your CD-ROM or DVD-ROM drive. The driver utilities and software menu screen should then appear on your desktop. If the CD does not run automatically, you can run the CD manually by typing "D:\Setup.exe" at Start\Run.

(Please note that D: might not be your CD-ROM/DVD-ROM drive's letter. Make sure you type the correct letter of CD-ROM/DVD-ROM drive on your system).

CD Content

Upon running the CD, the following driver utilities and software menu screen appears as follow:

The driver utilities and software in this CD are:

- **VIA 4in1 Drivers**: Contains VIA ATAPI Vendor Support Driver (enables the performance enhancing bus mastering functions on ATA-capable Hard Disk Drives and ensures IDE device compatibility), AGP VxD Driver (provides service routines to your VGA driver and interface directly to hardware, providing fast graphical access), IRQ Routing Miniport Driver (sets the system's PCI IRQ routing sequence) and VIA INF Driver (enables the VIA Power Management function).

- **VIA Graphics Driver**: Enhance the onboard VIA graphic chip.

- **VIA Audio Driver**: Enhance the onboard VIA audio chip.

- **VIA LAN Driver**: Enhance the onboard VIA LAN chip.

- **VIA USB 2.0 Driver**: Enhance VIA USB 2.0 ports.

- **VIA FIR Driver**: Support for FIR.

- **FliteDeck**: Contains three sub-utilities (optional)

5

Appendix

This chapter gives you a brief description of how Smart 5.1 is enabled. It consists of the following topic:

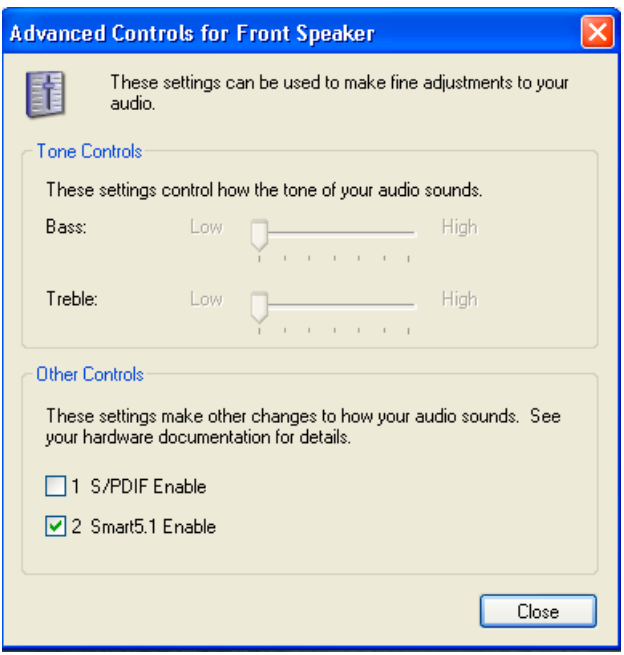
Smart 5.1 - Intelligent 6 Channel Audio

Enabling Smart 5.1 Intelligent 6 Channel Audio

Smart5.1 allows the user to output 6 channel audio directly from the audio jacks on the mainboard, using the traditional line-in and microphone jacks as output jacks. For it to work properly, both the OS and the software application used need to support 6 channel audio.

First, open the Speaker Contol Panel and Click on Advanced. An "advanced" button will appear below the Volume govenor. Hit the Button to open the Advanced Controls for Front Speaker. Here you must check the Box Smart 5.1 enable like shown in Fig. 1. Smart 5.1 Capabalities are enabled.

Enabling Smart 5.1 in speaker control panel



Step one in setting up Smart5.1 is to open the audio speaker control panel and select Smart5.1 Enable.

Selecting 5.1 speaker setup in Windows control panel

The second step is to set the Speakers properties to 5.1 Sourround Sound Speakers in Advanced Audio Properties Panel. Now you just have to connect your Speakers to the 3 Jack Connector like shown below. Now your Smart 5. 1 capabilities are enabled.