

P6F212

MOTHER BOARD

USER'S MANUAL

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Using This Manual

This manual is designed to help you build a reliable Personal Computer based on the P6F209 platform.

Chapter 1 - Quick Reference

This chapter is for advanced users who want to quickly assemble a system. The mainboard layout along with jumper and switch settings, and memory configuration are provided.

Chapter 2 - Introduction

This chapter includes an introduction, a checklist of the items that ship with this mainboard, and a summary of the principal features and components.

Chapter 3 - Hardware Installation

This chapter explains how to prepare your mainboard for use and how to make the various connections to other computer components and peripheral items.

Chapter 4 - BIOS Configuration

This chapter explains how to use the system setup utility that is stored in the mainboard's firmware.

Chapter 5 - Driver and Utility

This chapter briefly describes the drivers and utility programs that are packaged with the mainboard.

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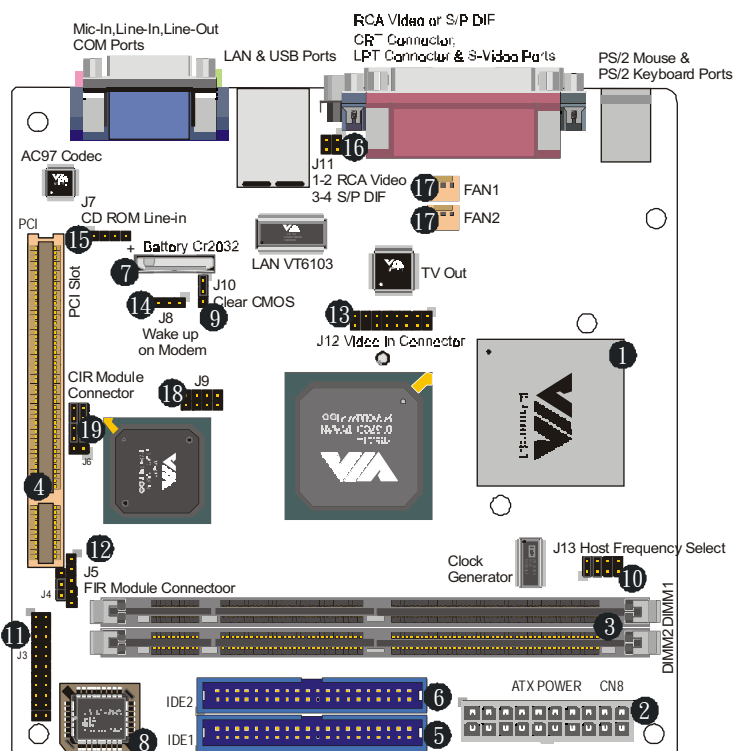
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1. P6F212 Quick Reference

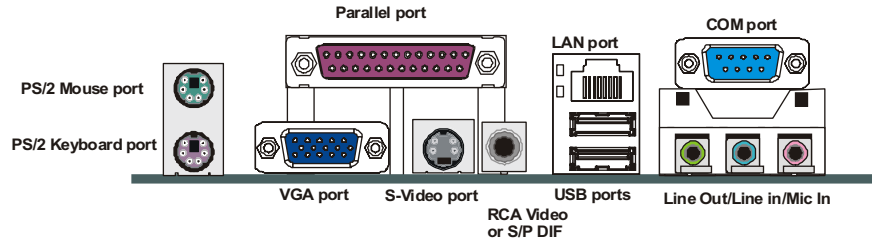
This section is for users to get started using the mainboard straight away.

1.1. Mainboard Layout



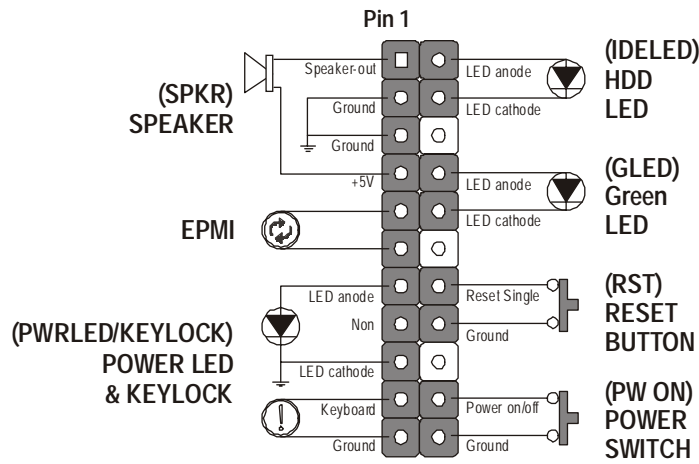
- | | |
|----------------------------------|--|
| 1. VIA C3 EPGA CPU | 11. Front Panel connector |
| 2. ATX power connector (CN8) | 12. FIR Module connector (J5) |
| 3. DIMM module sockets (DIMM1~2) | 13. Video in connector (J12) |
| 4. PCI expansion connector | 14. Wake up on Modem (J8) |
| 5. IDE connector (IDE1) | 15. CD ROM Line-in (J7) |
| 6. IDE connector (IDE2) | 16. S/P DIF Output/RCA Video Output Select (J11) |
| 7. RTC battery | 17. FAN Connector (FAN1/FAN2) |
| 8. Flash BIOS | 18. USB Port 2 & 3 Connector (J9) |
| 9. Clear CMOS (J10) | 19. CIR Module Connector (J6) |
| 10. Host Frequency (J13) | |

1.2. I/O Ports



1.3. Front Panel Connector

The following illustration shows the front panel connector pin assignments:



1.4 Jumpers

| | | |
|------------|------------------|-------------------|
| J10 | 1-2 | Normal Mode |
| | 2-3 | Clear CMOS |
| J11 | 1-2 | RCA Video Output |
| | 3-4 | S/P DIF Output |
| J4 | 1-2 | Disabled DOC BIOS |
| | 2-3 | Enabled DOC BIOS |
| J13 | 5-6 , 7-8 | 66MHz |
| | 3-4 , 7-8 | 100MHz |
| | 1-2 , 3-4 | 133MHz |

1.5. PCI and AGP Frequency Setting

The PCI and AGP frequency settings are automatically set by the system.

1.6. Memory Installation

Note: The VT8601 chipset family used in this mainboard supports up to two double-sided or three single-sided DIMMs when the DRAM interface is operating at 133 MHz. Installing DIMM modules that exceed these specifications requires that the BIOS down-shifts the SDRAM clocks to 100 MHz through a two-wire interface of the system clock generator.

168-Pin DIMM SDRAM Memory Configuration

| | |
|-----------------------|---------------------------------|
| Bank 0 (DIMM1) | 8, 16, 32, 64, 128, 256, 512 MB |
| Bank 1 (DIMM2) | 8, 16, 32, 64, 128, 256, 512 MB |
| Total | 8 MB to 1024 MB |

1.7. Connectors

| | |
|-------------|---|
| FAN1 | CPU/Chipset FAN Connector: This 3-pin header is used for connecting a CPU chipset fan. |
| FAN2 | System Fan Connector: This 3-pin header is for connecting the case fan that keeps the system cool. |
| J7 | CD ROM Line-in Connector: This 4-pin headers is used for connecting the CD ROM audio input to the sound card. |
| J8 | Wake up on Modem Connector: This 3-pin header is used for remote wake up of the computer through a network card. |
| J5 | FIR Module Connector: This 5-pin header is used for connecting a FIR port for use of FIR device. |
| J12 | Video in Connector: This 16-pin header is used for connecting an Video port for use of video devices. |
| J6 | CIR Module Connector: This 10-pin header is used for connecting a CIR device. |
| J9 | USB Port 2&3 Connector: This 8-pin header is used for connecting a USB port for use of USB device. |
| CN2 | COM Port Connector: This 10-pin header is used to connect a serial port extension bracket for adding a serial port to your system. |
| CN3 | USB Connector and RJ45 Connector: This 10-pin header are used to connecting front panel USB port 3 and 4. |
| CN4 | RCA Video or S/P DIF Jack: |
| CN5 | S-Video Jack: |

2. Introduction

2.1. Overview

The high quality P6F212 is a high performance, enhanced function motherboard.

The motherboard delivers comprehensive multimedia capabilities and bus mastering EIDE (Enhanced IDE) controller, and concurrent PCI bus. The motherboard accommodates SDRAM (Synchronous DRAM) memory and supports ATA33/66/100.

The motherboard achieves the highest reliability by supporting ECC (Error Checking and Correction) memory protection, enabling the motherboard to achieve superior data integrity and fault-tolerance with respect to memory errors while running applications.

- ▶ High Performance 64-bit 2D GUI
- ▶ Highly Integrated RAMDAC™ & Clock Synthesizer
- ▶ Full Feature High Performance 3D Engine
- ▶ Video Processor
- ▶ Video Capture and DVD
- ▶ Versatile Frame Buffer Interface
- ▶ Hi-Res and Hi-Ref Display Support
- ▶ CRT Power Management (VESA DPMS)
- ▶ Flat Panel Interface

2.2. Mainboard Specifications and Features

2.2.1. Hardware

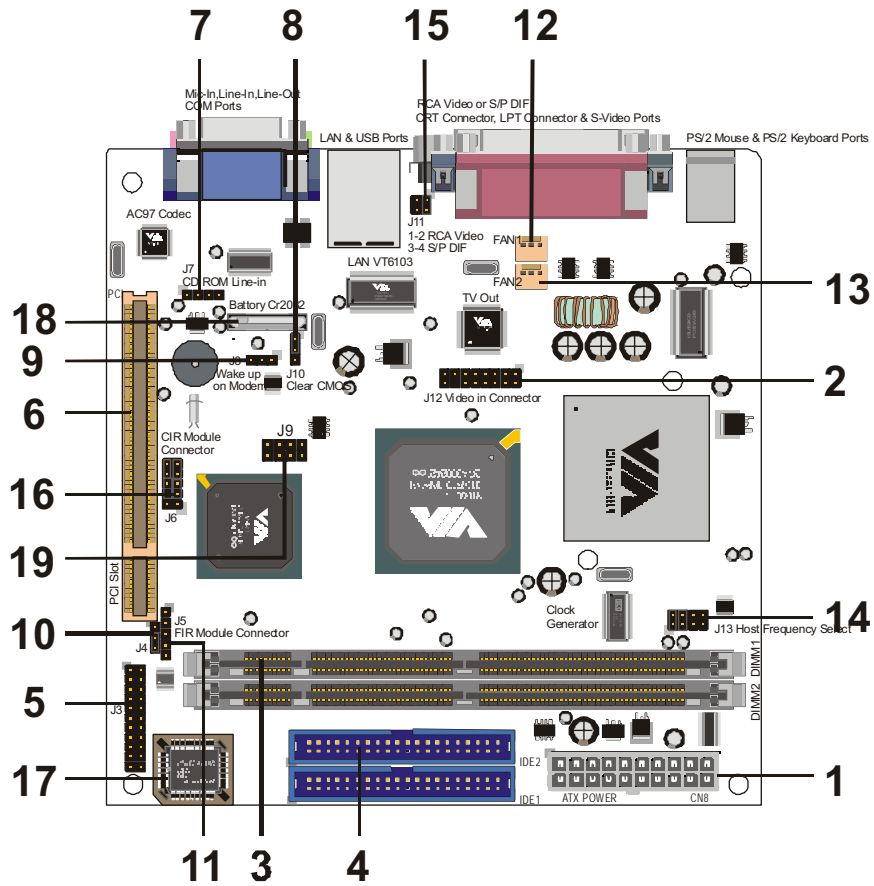
| | |
|---------------------------------------|--|
| CPU | VIA C3 Processor EBGA CPU Internal L1 128KB and L2 64KB cache memory. |
| Coprocessor Speed | CPU has built-in floating point unit System bus clock 66/100/133 MHz PCI bus clock 33 MHz |
| Chipset | VIA VT8231 South Bridge VIA VT8601A super-I/O integrated peripheral controller |
| DRAM | Two 168-pin DIMM sockets, up to 1GB Supports 8 MB to 512MB SDRAM memory types |
| EIDE Controller | Supports four IDE devices in two channels Supports PIO mode 0 through mode 4 drives Supports Bus Mastering DMA mode 2 drives Supports two Bus Mastering Ultra DMA-ATA 33/66/100 drives |
| Enhanced I/O | Supports Iomega ZIP or LS-120 removable drives One floppy disk controller One Standard/EPP/ECP parallel port connector Two 16550 compatible serial port connectors Two USB (Universal Serial Bus) ports on board, two front USB ports by cable |
| I/O Option | One line-out, mic-in, LAN, vga on board, One connector for front panel USB ports One COM port by cable |
| Mouse Keyboard Expansion Slots | PS/2 mouse connector and PS/2 keyboard connector on board One 32-bit PCI slot One Digital Video output header |

| | |
|--------------------------|---|
| Power Management | Compliant with EPA, APM 1.2 and ACPI Auto Power on ATX soft-off power control Power – on by keyboard and PS/2 mouse Power – on by external modem ring Power – on by alarm Fan off in sleep mode |
| System Management | CPU temperature warning and system temperature detection CPU and system voltage detection CPU and secondary fan RPM detection Switching regulator |
| Voltage Regulator | CPU voltage auto-detection |
| Form Factor | FATX form factor 17 cm x 17 cm (6.7 x 6.7-inch) |

2.2.2. Software

| | |
|---------------------------|---|
| BIOS | AWARD AGP/PCI BIOS 2M-bit Flash BIOS with ESCD (Extended System Configuration Data) block Supports APM, Plug and Play, Multi-Boot, DMI and EIDE devices Supports ACPI Supports high-capacity LS-120 and ZIP removable media drive |
| Driver and Utility | VIA 4 in 1 driver VIA ProSavage Display driver AC97 codec audio driver LAN driver Flash utility for BIOS upgrade System Environment Monitoring Utility |
| Operating System | Operates with MS_DOS, Windows 3.x/9x/ME/XP/2000/NT, OS/2, Novell NetWare/UnixWare 1.1, and SCO Unix 4.2 |

2.3. Mainboard Layout



Note: Because of optional items and design changes, your mainboard may not be identical to the one shown in the illustration.

Key to Mainboard Components

| No. | Name | Function |
|-----|----------------|--|
| 1 | CN8 | ATX Power connector |
| 2 | J12 | Video in connector |
| 3 | DIMM1~2 | Memory module slots |
| 4 | IDE1~2 | IDE connector |
| 5 | J3 | Front Panel connector |
| 6 | PCI1 | 32-bit PCI Slot |
| 7 | J7 | CD-ROM Line-in header |
| 8 | J10 | Clear CMOS |
| 9 | J8 | Wake up on Modem connector |
| 10 | J4 | DOC BIOS header |
| 11 | J5 | FIR Module connector |
| 12 | FAN1 | CPU fan connector |
| 13 | FAN2 | Secondary case fan connector |
| 14 | J13 | Host Frequency header |
| 15 | J11 | S/P DIF Output/RCA Video Output select |
| 16 | J6 | CIR Module connector |
| 17 | U4 | Flash BIOS |
| 18 | BAT1 | RTC battery |
| 19 | J9 | USB Port 2 & 3 connector |

2.4. Microprocessor

The mainboard is designed to operate with the following processors:

| Processor Type | FSB |
|----------------|------------|
| VIA Cyrix C3 | 100/133MHz |

2.5. Chipset

The P6F212 supports the VIA Apollo PLE133 chipset. The VIA Apollo PLE133 chipset is designed for desktops and workstations that provide internal graphics, and provides ATA-100 and SDRAM support.

The VT8231 I/O controller hub makes a direct connection between the graphics system, the IDE controller, and the PCI bus. It uses accelerated hub architecture to effectively double the bandwidth between these components enabling more lifelike audio and video. The VT8231 I/O controller hub includes an integrated audio codec controller that lets the processor more effectively decode sound generated by the integrated audio system.

This concludes Chapter 2. Chapter 3 covers hardware installation.

3. Hardware Installation

This chapter explains how to use your mainboard to build a powerful computer system. At a minimum, you will need the following components in order to build a fully functioning system.

- ▶ Computer case with ATX power supply
- ▶ PGA370 Processor
- ▶ One SDRAM memory module
- ▶ One floppy disk drive
- ▶ One UDMA-66/100 IDE hard disk drive
- ▶ One CD-ROM drive
- ▶ One display monitor
- ▶ One mouse
- ▶ One PS/2 keyboard
- ▶ One set of loudspeakers

Of course, you can use the system I/O ports and expansion slots to add many more features and components to your system than the items listed above.

3.1. Unpacking

The P6F212 mainboard package contains the following items:

- ▶ One mainboard
- ▶ One IDE 66/100 40-pin ribbon cable
- ▶ One floppy 34-pin ribbon cable
- ▶ Driver and utility CD
- ▶ User's manual reference

After removing the mainboard from its anti-static bag, place it on a grounded or antistatic surface (component side up). Inspect the mainboard and contact your vendor immediately if it is damaged.

3.2. Installation

The P6F212 is designed to fit into a standard FATX form factor chassis. The pattern of the mounting holes and the position of the back panel connectors meet the FATX system board specification. The chassis comes with various mounting fasteners, which are made of metal or plastic. It is highly recommended to use as many metal fasteners as possible to mount the mainboard in the chassis for better grounding.

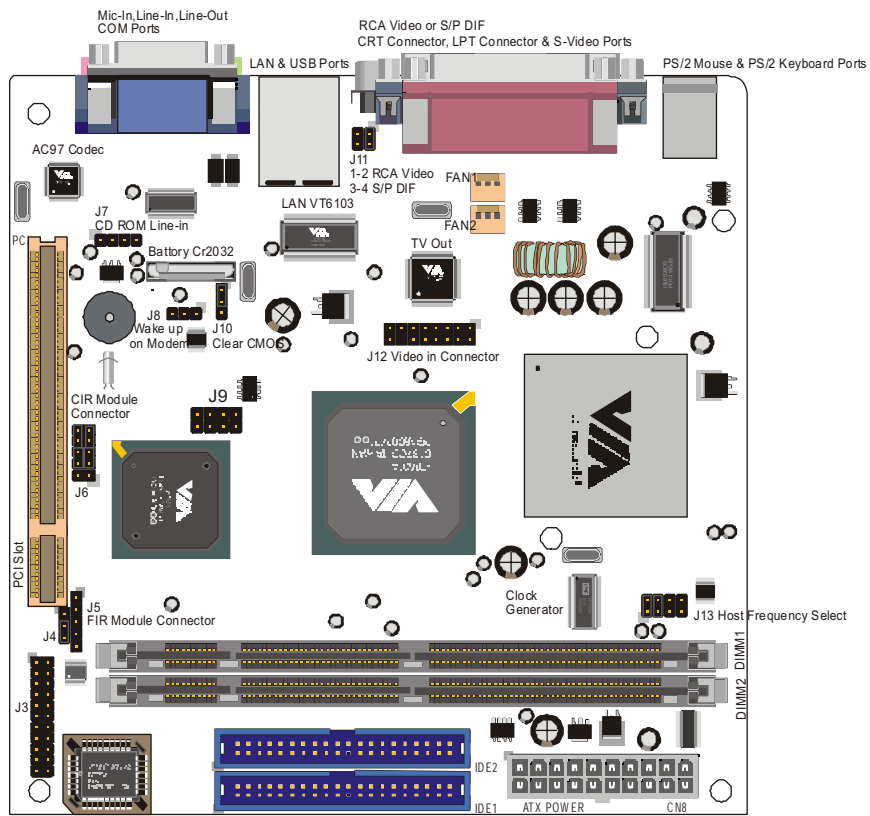
To install the mainboard you need to install the CPU and DIMM memory modules, attach the connectors, and set the correct CPU speed in the CMOS setup.

3.3. Safety Measures

Computer components and electronic circuit boards can be damaged by discharges of static electricity. Working on computers that are still connected to a power supply can be extremely dangerous. Follow the simple guidelines below to avoid damaging your computer:

- ▶ Always disconnect the mainboard from the ATX power supply, and disconnect the computer from the power outlet whenever you are working inside the computer case.
- ▶ If possible, wear a grounded wrist strap when you are installing the mainboard or working inside the computer case. Alternatively, discharge any static electricity by touching the bare metal chassis of the computer case, or the bare metal body of any other grounded appliance.
- ▶ Hold electronic circuit boards by the edges only. Do not touch the components on the board unless it is necessary to do so. Do not flex or stress the circuit board.
- ▶ Leave each component inside the static-proof packaging that it ships with until you are ready to use the component for the installation.

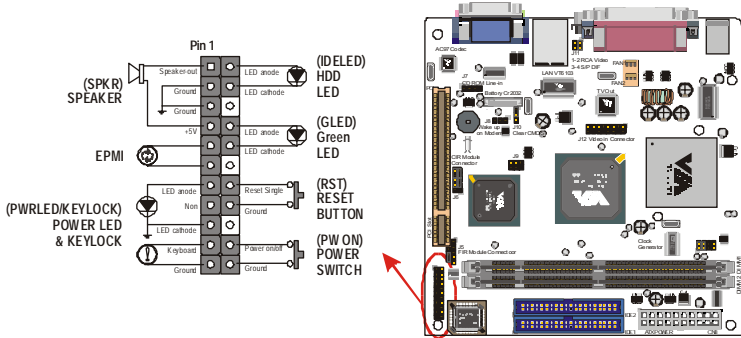
3.4. Connector/Jumper Location



3.5. Attaching Connectors

3.5.1. Front Panel Connectors (J3)

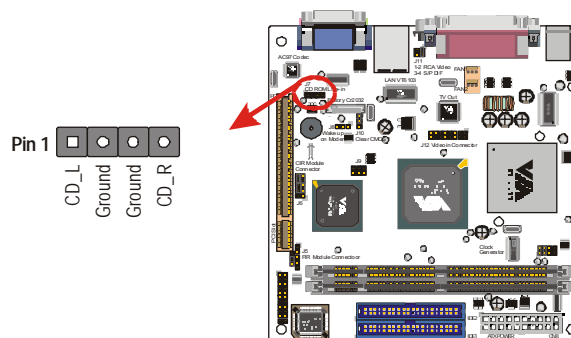
There are seven connectors on the mainboard for speaker, switches, and indicator lights on the system’s front panel.



| | |
|---------------------------|---|
| PW ON | This 2-pin connector connects to the case-mounted Power button. |
| RST | This 2-pin connector connects to the case-mounted reset switch and is used to reboot the system. |
| GLED | This 2-pin connector connects to the case-mounted Green LED to indicate a standby status. The LED remains lit even when the system is off to indicate that AC power is available. When the system enters standby mode, the LED starts blinking. |
| HLED | This 2-pin connector connects to the case-mounted HDD LED to indicate hard disk activity. |
| PLED & keylock | This 5-pin connector connects to the case-mounted keylock switch and the power LED. The keylock switch is used to lock the keyboard for security purposes. |
| EPMI | This 2-pin connector connects to the case-mounted EPMI. The EPMI switch is used to into power saving and resume. |
| SPKR | This 4-pin connector connects to the case-mounted speaker. |

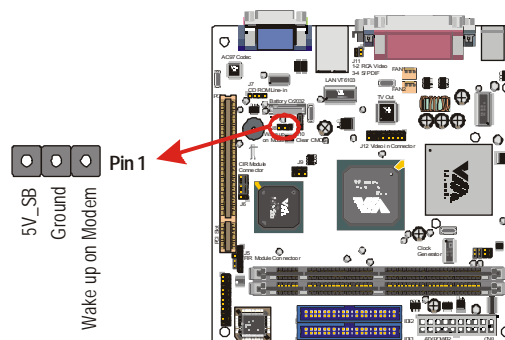
3.5.2. Audio CD-In Connector (J7)

This connector enable you to connect a CD-ROM to the mainboard and receive stereo audio input.



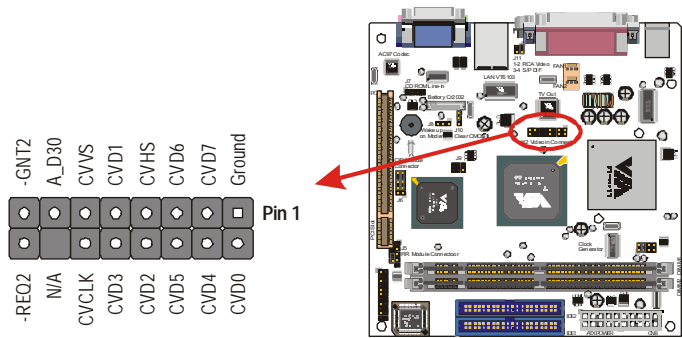
3.5.3. LAN/Modem Wake up Connectors (J8)

These 3-pin headers are used for remote wake up of the computer through a network or modem signal.



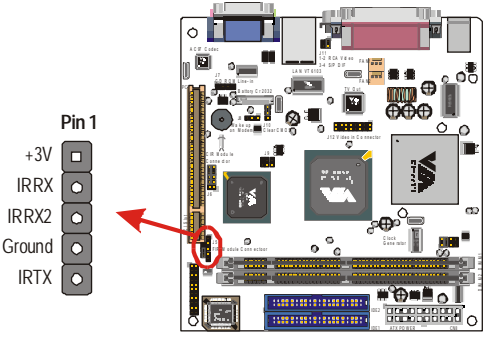
3.5.4. Video Connector (J12)

VT1621 TV Out Controller, Simultaneous S-Video and Ccomposite output, support 640x480, 800x600 NTSC/PAL TV.



3.5.5. FIR Module Connectors (JP5)

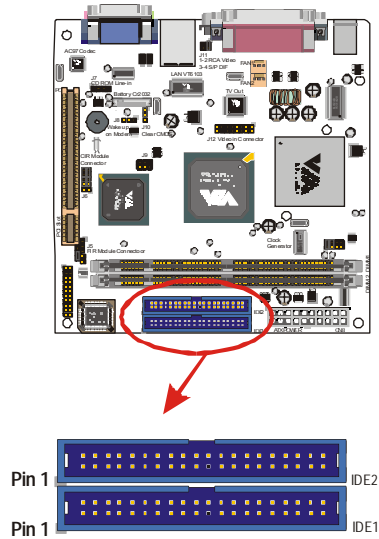
This 5-pin connector connects to an optional wireless transmitting and receiving infrared module via a cable and a bracket. Configure BIOS to enable the IrDA port if you attach an infrared module to this connector.



3.5.6. IDE Connectors

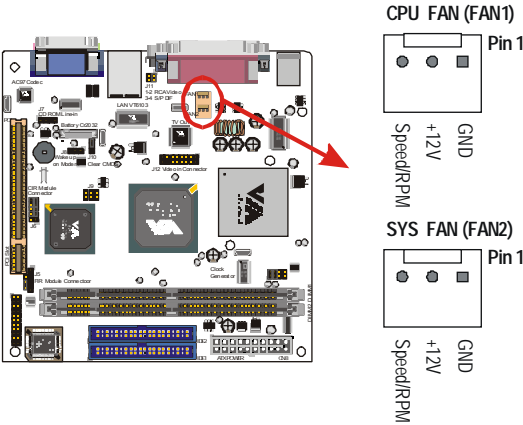
An IDE drive ribbon cable has two connectors to support two IDE drives. If a ribbon cable connects to two IDE drives at the same time, one of them has to be configured as Master and the other has to be configured as Slave by setting the drive select jumpers on the drive.

Consult the documentation that came with your IDE drive for details on jumper locations and settings. You must orient the cable connector so that the pin 1 (color) edge of the cable corresponds to pin 1 of the I/O port connector.



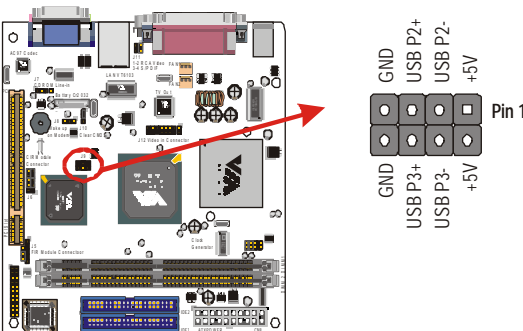
3.5.7. CPU/System Fan Power Supplies (FAN1/ FAN2)

There are two fan connectors on the mainboard for the cooling fans. The connectors support fans of 12V DC/500mAMP (six watt) or less. When the system goes into sleep state, fans should be shut down to eliminate audible noise and reduce power consumption. You can monitor the fan speed by way of the VT8231 chip (providing the fan comes with a tachometer output).



3.5.8. USB Port 2 & 3 Connector (J9)

The mainboard has an onboard USB connector that enables you to connect front panel USB ports.

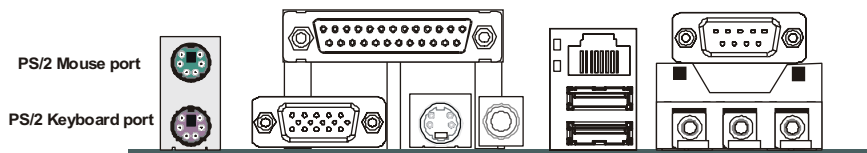


3.5.9. Back Panel Connectors

The back panel provides external access to PS/2 style keyboard and mouse connectors, one serial port, one VGA port, one parallel port, dual USB ports, one LAN port, one 1394 port, and audio Line-out, Mic-in port which are integrated on the mainboard. The figures below show the location of the back panel I/O connectors.

PS/2 Mouse and PS/2 Keyboard Ports

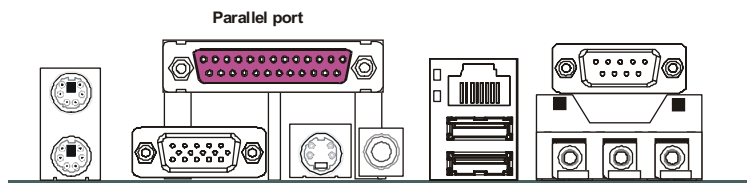
Connect a PS/2 mouse to the green 6-pin mini DIN connector. The system will automatically assign IRQ 12 to the PS/2 mouse if one is connected.



Connect a PS/2 keyboard to the purple 6-pin mini DIN connector. If you want to connect a standard AT size (large DIN) connector, you must use an adapter.

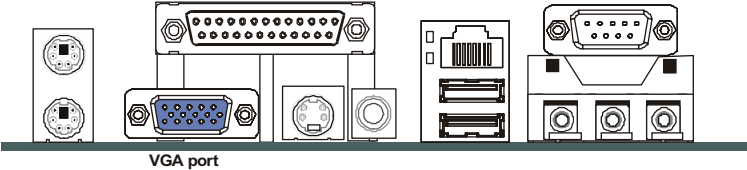
Parallel Port

Connect a printer or other parallel device to the burgundy-colored 25-pin parallel port. You can set the parallel port IRQ and parallel port mode in BIOS. Refer to Integrated Peripherals in Chapter 4 for details.



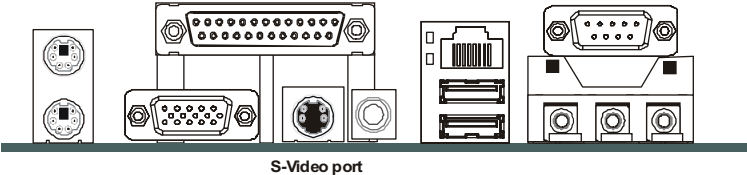
VGA Port

Connect an external monitor to the blue 15-pin VGA port.



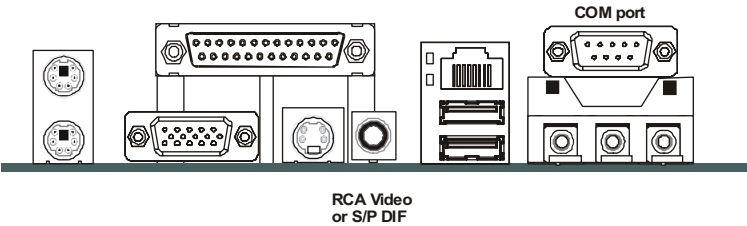
S-Video Port

You can connect S-Video devices to S-Video port on the back panel.



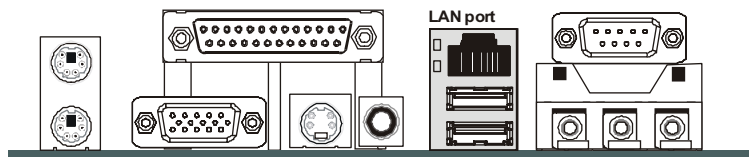
RCA Video OR S/P DIF Port

You can connect RCA Video devices to RCA Video port (TV-Out) or S/P DIF Audio on the back- panel.



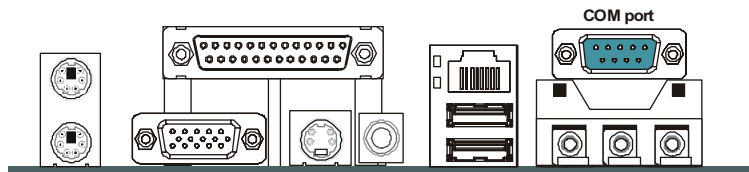
LAN Port

Connect a device to the LAN port on the back panel.



Serial Port

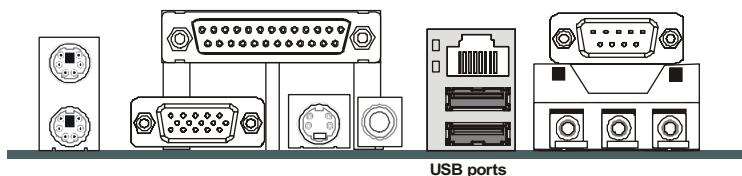
Connect a serial device such as a mouse or modem to the turquoise 9-pin serial port. You can set the serial port IRQs in BIOS. Refer to Integrated Peripherals in Chapter 4 for details.



Note: Serial printers must be connected to the serial port.

Universal Serial Bus Ports

You can connect two USB devices or USB hubs to the USB ports. The USB ports provide a hardware interface for low-speed peripherals such as the keyboard, mouse, joystick, scanner, printer and telephony devices, and also support MPEG-1 and MPEG-2 digital video. The USB ports have a maximum bandwidth of 12 Mbits/sec (equivalent to 1.5 Mbytes/sec), and up to 127 devices can be attached. Fast devices can use the full bandwidth, while lower-speed ones can transfer data using a 1.5 Mbits/sec sub-channel.

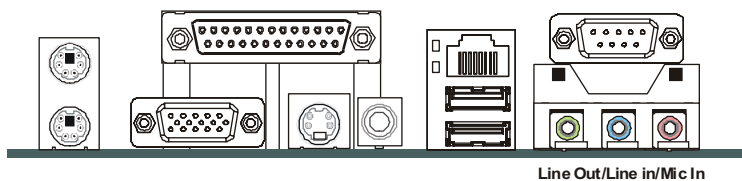


Audio Line-Out Port Connectors

You can connect various audio devices to this audio jacks. Connect headphones or powered speakers to the lime-colored lineout connector.

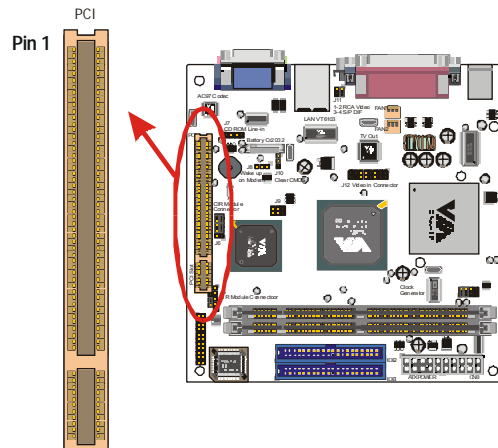
Audio Mic-In Port Connectors

You can connect dynamic mono or stereo microphone to the mic-in connector.



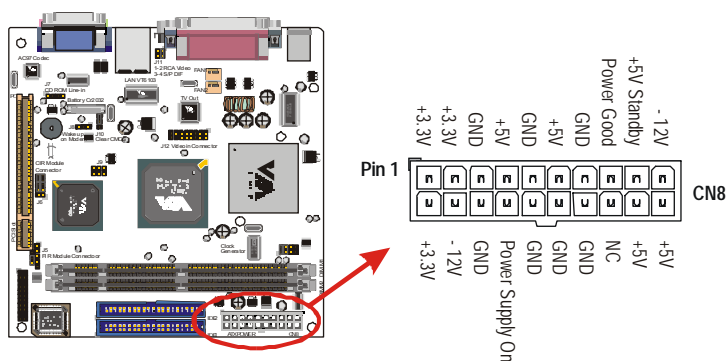
3.5.10. PCI Connector (PCI1)

PCI connector is one of equipment interfaces that connects peripheral equipment and motherboard. Its transfer speed is faster than traditional ISA. PCI is the mainstream transfer interface for extra adopter.



3.5.11. Power Supply Connector (CN8)

The ATX power supply has a single lead connector with a clip on one side of the plastic housing. There is only one way to plug the lead into the ATX power connector. Press the lead connector down until the clip snaps into place and secures the lead onto the connector.



Warning: Incorrect installation of the power supply could result in serious damage to the mainboard and connected peripherals. Make sure the power supply is unplugged from the AC outlet before connecting the leads from the power supply.

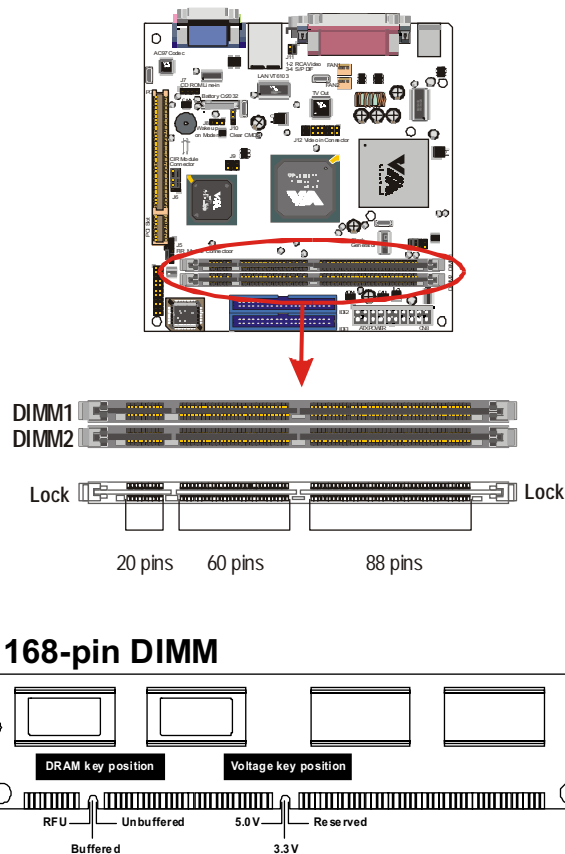
3.6. Installing System Memory

Maximum system memory supported by the mainboard is 1 GB.

The mainboard has two DIMM Sockets. Memory can be installed using 168-pin SDRAM DIMM memory modules. There are no jumper settings required for the memory size or type, which is automatically detected by the BIOS.

Due to the high-speed design of the mainboard, the memory modules must meet the following requirements:

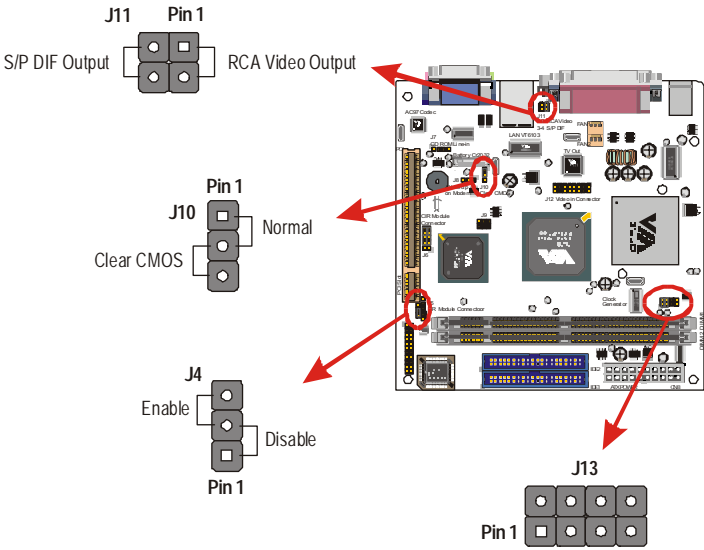
Install the 168-pin SDRAM modules in any combination as follows:



| | |
|----------------------------|---------------------------|
| Bank 0 (DIMM1) | 8/16/32/64/128/256/512 MB |
| Bank 1 (DIMM2) | 8/16/32/64/128/256/512 MB |
| Total System Memory | 8 MB ~ 1024 MB |

3.7. Setting Jumpers

Refer to the following illustration and instructions to set the jumpers on your mainboard.



S/P DIF Output Select Jumper (J11)

1-2 for RCA Video Output.
3-4 for S/P DIF Output.

Clear CMOS Jumper (J10)

You may need to clear the CMOS if your system cannot boot up because you forgot your password, the CPU clock setup is incorrect, or the CMOS settings need to be reset to default values after the system BIOS has been updated.

Refer to the following solutions to reset your CMOS setting:

Solution A

1. Power off the system and disconnect the power cable.
2. Place a shunt to short pin 1 and pin 2 of J10 for five seconds.
3. Place the shunt back to pin 2 and pin 3 of J10.
4. Power on the system.

Solution B

If the CPU clock setup is incorrect, you may not be able to boot up. In this case, follow these instructions:

-
1. Turn the system off, then on again. The CPU will automatically boot up using standard parameters.
 2. As the system boots, enter BIOS and set up the CPU clock.
-

Note: *If you are unable to enter BIOS setup, turn the system on and off a few times.*

DOC BIOS Select Jumper (J4)

1-2 Disable.
2-3 Enable.

Host Frequency Select Jumper (J13)

Frequency selection for the clock generator jumper setting.

3.8. Auto Power On

After losing AC power, the system will not turn on automatically when the power comes back unless you set the options in BIOS.

This concludes Chapter 3. Chapter 4 covers the BIOS setup program.

4. BIOS Configuration

After the hardware configuration of the mainboard is finished, and the system hardware has been assembled, the system may be powered up. At this point, CMOS setup should be run to ensure that system information is correct.

The mainboard employs the latest Award BIOS CMOS chip with support for Windows Plug and Play. This CMOS chip contains the ROM Setup instructions for configuring the mainboard's BIOS. The BIOS (Basic Input and Output System) Setup program is a menu driven utility that enables you to make changes to the system configuration and tailor your system to suit your individual work needs. It is a ROM-based configuration utility that displays the system's configuration status and provides you with a tool to set system parameters. These parameters are stored in non-volatile battery-backed-up CMOS RAM that saves this information even when the power is turned off. When the system is turned back on, the system is configured with the values found in CMOS.

Using easy-to-use pull down menus, you can configure such items as:

- ▶ Hard drives, diskette drives, and peripherals
- ▶ Video display type and display options
- ▶ Password protection from unauthorized use
- ▶ Power management features

The settings made in the Setup program intimately affect how the computer performs. It is important, therefore, first to try to understand all the Setup's options, and second, to make settings appropriate for the way you use the computer. This chapter provides clear explanations for all Setup options.

This program should be executed under the following conditions:

- ▶ When changing the system configuration
- ▶ When a configuration error is detected by the system and you are prompted to make changes to the Setup program
- ▶ When resetting the system clock
- ▶ When setting the CPU clock speed so that it automatically runs either fast or slow
- ▶ When redefining the communication ports to prevent any conflicts
- ▶ When making changes to the Power Management configuration
- ▶ When changing the password or making other changes to the security setup

Normally, CMOS setup is needed when the system hardware is not consistent with the information contained in the CMOS RAM, whenever the CMOS RAM has lost power, or the system features need to be changed.

4.1. Entering Setup

When the system is powered on, the BIOS will enter the Power-On Self Test (POST) routines. These routines perform various diagnostic checks; if an error is encountered, the error will be reported in one of two different ways:

1. If the error occurs before the display device is initialized, a series of beeps will be transmitted.
2. If the error occurs after the display device is initialized, the screen will display the error message.

After the POST routines are completed, the following message appears:

“Press DEL to enter SETUP”

To access the AWARD BIOS SETUP program, press the key to display the “**CMOS SETUP UTILITY**” screen:

These screens provide access to the utility’s various functions.

Listed below are explanations of the keys displayed at the bottom of the screen:



| Key | Function |
|------------|--|
| Esc | Escape key: Exits the current menu |
| ↑↓→← | Cursor keys: Scroll through the items on a menu |
| +/-/PU/PD | Plus, minus, Page Up and Page Down keys: Modify the selected field’s values |
| F10 | F10 key: Saves the current configuration and exits setup |
| F1 | F1 key: Displays a screen that explains all key functions |
| F5 | F5 key: Loads previously saved values to CMOS |
| F6 | F6 key: Loads a minimum configuration for troubleshooting. |
| F7 | F7 key: Loads optimum set of values for peak performance |

4.2. Standard CMOS Features

Standard CMOS Features is the same for all three chipsets. Selecting “**Standard CMOS Features**” on the main program screen displays the following menu:



The Standard CMOS Setup utility is similar for all three chipsets and is used to configure the following features:

Date: Month, Day, Year

Time: Hour, Minute, and Second. Use 24 Hour clock format (for PM numbers, add 12 to the hour, you would enter 4:30 p.m. As 16:30).

IDE Devices: Your computer has two IDE channels (Primary and Secondary) and each channel can be installed with one or two devices (Master and Slave). Use these items to configure each device on the IDE channel. Press **Enter** to display the IDE sub-menu:

- ▶ **IDD HDD Auto-Detection:** Press <Enter> while this item is high lighted if you want the Setup Utility to automatically detect and configure a hard disk drive on the IDE channel.

If your system has an IDE hard drive, you can use this utility to detect its parameters and enter them into the Standard CMOS Setup automatically.

If the auto-detected parameters displayed do not match the ones that should be used for your hard drive, do not accept them. Press the <N> key to reject the values and enter the correct ones manually in the Standard CMOS Setup screen.

Note: If you are setting up a new hard disk drive that supports LBA mode, more than one line will appear in the parameter box. Choose the line that lists LBA for an LBA drive.

Do not choose “Large” or “Normal” if the hard disk drive is already fully formatted when you installed it. Select the mode that was used to format it.

► **IDE Primary/Secondary Master/Slave:** If you leave this item at “Auto,” the system will automatically detect and configure any IDE devices it finds. If it fails to find a hard disk, change the value to “Manual” and then manually configure the drive by entering the characteristics of the drive in the items below (Capacity, Cylinder, Head, Precomp, etc.). Refer to your drive’s documentation or look on the drive if you need to obtain this information. If no device is installed, change the value to “None.”

► **Access Mode:** This item defines some special ways that can be used to access IDE hard disks such as LBA (Large Block Addressing). Leave this value at “Auto” and the system will automatically decide the fastest way to access the hard disk drive.

Press <Esc> to close the IDE device sub-menu and return to the Standard CMOS Features page.

Floppy Drive A and Floppy Drive B: Options for these fields are:

- △ 360K, 5.25 in.
- △ 1.2M, 5.25in.
- △ 720K, 3.5in.
- △ 1.44M, 3.5in.
- △ 2.88M, 3.5in.
- △ None (Not Installed) (Drive A/B default)

The “Not Installed” option could be used as an option for diskless workstations.

Video: Set this field to the type of graphics card installed in your system. If you are using a VGA or higher resolution card, choose the “EGA/VGA” option. The options are:

- △ EGA/VGA (default)
- △ MONO
- △ CGA 40
- △ CGA 80

Halt On: This setting determines which type of errors will cause the system to halt during bootup. The options are:

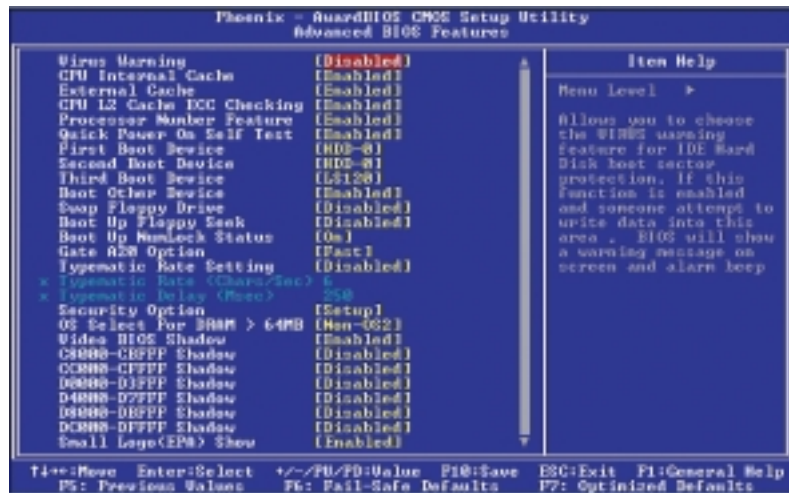
- △ All Errors (default)
- △ No Errors
- △ All, But Keyboard
- △ All, But Diskette
- △ All, But Disk/Key

Base/Extended/Total Memory: These items are automatically detected by the system at start up time. These are display only fields. You cannot make changes to these fields.

After you have made your selections in the Standard CMOS Setup screen, press <ESC> to go back to the main screen.

4.3. Advanced BIOS Features

Selecting “Advanced BIOS Features” on the main program screen displays this menu, which allows you to define advanced information about your system. You can make modifications to most of these items without introducing fatal errors to your system. Note that the page has a scroll-bar to scroll down to more items.



The following explains the options for each feature:

Virus Warning: When enabled, any attempt to write to the boot sector or partition table will halt the system and cause a warning message to appear. If this happens, you can use an anti-virus utility on a virus free, bootable floppy diskette to reboot and clean your system. The default setting is “Disabled.”

CPU Internal Cache: This Setting enables the CPU internal cache. The default setting is “Enabled.”

External Cache: This setting enables the Level 2 cache. The default setting is “Enabled.”

CPU L2 Cache ECC Checking: This item enables or disables ECC (Error Correction Code) error checking on the CPU cache memory. The default setting is “Enabled.”

Processor Number Feature: Some new processors are installed with a unique processor number. This number may be used for verification in Internet transactions and e-commerce. If you prefer not to use or distribute the unique processor number, set this item to Disabled to suppress the processor number. The default setting is “Enabled”.

Quick Power On Self Test: This will skip some diagnostic checks during the Power On Self Test (POST) to speed up the booting process. The default setting is “Enabled”.

First/Second/Third Boot Other Device: Use these four items to select the priority and order of the devices that your system searches for an operating system at start-up time. The default settings are “Floppy,” “HDD-0,” “LS120,” and “Enabled” respectively.

Swap Floppy Drive: If you have two floppy diskette drives in your system, this item allows you to swap the assigned drive letters so that drive A becomes drive B, and drive B becomes drive A. The default setting is “Disabled”.

Boot Up Floppy Seek: If this item is enabled, it checks the geometry of the floppy disk drives at start-up time. You don’t need to enable this item unless you have an old diskette drive with 360K capacity. The default setting is “Disabled”.

Boot Up Numlock Status: If set to “Off,” the cursor controls will function on the numeric keypad. The default setting is “On”.

Gate A20 Option: This option accesses memory above 1 MB using the fast gate A20 line when set to “Fast” (default). The other option is “Normal”.

Typematic Rate Setting: If set to “Enabled,” enables you to set the Typematic Rate and Typematic Delay. The default setting is “Disabled.”

- ▶ **Typematic Rate (Chars/Sec):** This setting controls the speed at which the system registers repeated keystrokes. The choices range from 6 to 30 Chars/Sec. The default setting is “6” Chars/Sec.

► **Typematic Delay (Msec):** This setting controls the time between the display of the first and second characters. There are four delay choices: 250ms, 500ms, 750ms and 1000ms. The default setting is "250" ms.

Security Option: This setting controls the password feature. The options are "Setup" and "System." Selecting "Setup" will protect the configuration settings from being tampered with. Select "System" if you want to use the password feature every time the system boots up. The default setting is "Setup." You can create your password by using the "SUPERVISOR/USER PASSWORD" utility in the main program screen.

OS Select For DRAM > 64MB: Set to "OS2" if the system memory size is greater than 64 MB and the operating system is OS/2. The default setting is "Non-OS2."

Video BIOS Shadow: Determines whether video BIOS will be copied to RAM. However, it is optional depending on chipset design. Video Shadow will increase the video speed. The default setting is "Enabled."

XX000-XXFFF Shadow: These categories determine whether option ROMs will be Chipset Feature Setup Auto Configuration copied to RAM. An example of such option ROM would be support of on-board SCSI. The default setting is "Disabled."

Small Logo (EPA) Show: This setting enables or disables the EPA logo. The default setting is "Enabled."

After you have made your selections in the BIOS Features Setup screen, press <ESC> to go back to the main screen.

4.4. Advanced Chipset Features

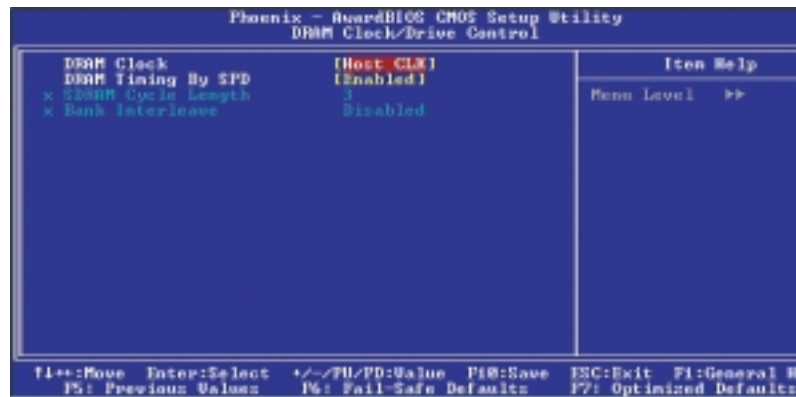
Selecting “Advanced Chipset Features” on the main program screen displays this menu:



This option displays a table of items that define critical timing parameters of the mainboard. You should leave the items on this page at their default values unless you are very familiar with the technical specification of your system hardware. If you change the values incorrectly, you may introduce fatal errors or recurring instability into your system.

4.4.1. DRAM Clock/Drive Control

Scroll to this item and press <Enter> to view the following screen:



DRAM Clock: This item allows you to control the DRAM speed. The default setting is “Host CKL.”

DRAM Timing: Set this By SPD to Enabled the system to automatically set the SDRAM timing by SPD (Serial Presence Detect). SPD is an EEPROM chip on the DIMM module that stores information about the memory chips it contains, including size, speed, voltage row and column addressed, and manufacturer. If you disable this item, you can use the following two items to manually set the timing parameters for the system memory. The default setting is “Enabled”.

4.4.2. AGP & P2P Bridge Control

Scroll to this item and press <Enter> to view the following screen:



AGP Aperture Size: This item defines the size of the aperture if you use an AGP graphics adapter. The AGP aperture refers to a section of the PCI memory address range used for graphics memory. We recommend that you leave this item at the default value.

AGP Master 1 WS Write: This implements a single delay when writing to the AGP Bus. By default, two-wait states are used by the system, providing greater stability. The default setting is “Disabled”.

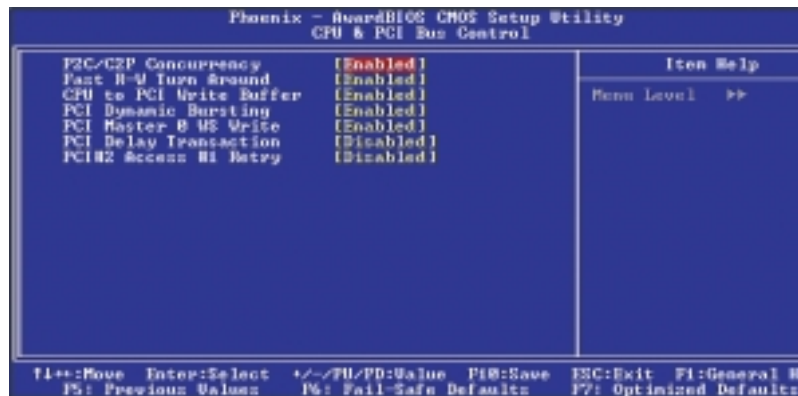
AGP Master 1 WS Read: This implements a single delay when writing to the AGP Bus. By default, two-wait states are used by the system, allowing greater stability. The default setting is “Disabled”.

Init Display First: This item sets whether the PCI Slot or AGP is activated first. The default setting is “PCI Slot”.

Frame Buffer Size: This item allows you to control the VGA frame buffer size. The default setting is “8M”.

4.4.3. CPU&PCI Bus Control

Scroll to this item and press <Enter> to view the following screen:



P2C/C2P Concurrency: This item allows you to enable/disable the PCI to CPU and CPU to PCI concurrently. The default setting is “Enabled”.

Fast R-W Turn Around : The default setting is “Enabled”.

CPU to PCI Write Buffer: When enabled, up to four words of data can be written to the PCI bus without interrupting the CPU. When disabled, a write buffer is not used and the CPU read cycle will not be completed until the PCI bus signals that it is ready to receive the data. The default setting is “Enabled”.

PCI Dynamic Bursting: When enabled, every write transaction goes to the write buffer. “Burstable” transactions then burst on the PCI bus and “nonburstable” transactions do not. The default setting is “Enabled”.

PCI Master 0 WS Write: When enabled, writes to the PCI bus are executed with zero wait states. The default setting is “Enabled”.

PCI Delay Transaction: The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Enable to support compliance with PCI specification version 2.1. The default setting is “Disabled”

PCI#2 Access #1 Retry: When enabled, the AGP Bus (PCI#1) access to PCI Bus (PCI#2) is executed with the error retry feature. The default setting is “Disabled”.

Memory Hole: In order to improve performance, some space in memory can be reserved for ISA cards. The default setting is “Disabled.”

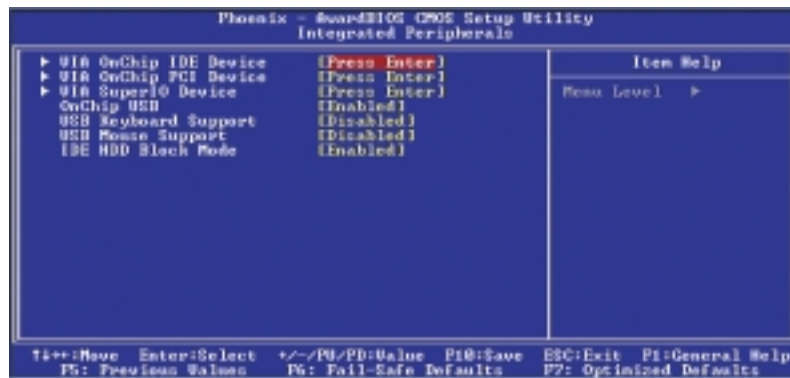
System BIOS Cacheable: When set to “Enabled”, the System BIOS will be cached for faster execution. The default setting is “Enabled.”

Video RAM Cacheable: Selecting Enabled allows caching of the video RAM , resulting in better system performance. However, if any program is written to this memory area, a system error may result. The default setting is “Enabled.”

After you have made your selections in the Advanced Chipset Features, press the <ESC> key to go back to the main program screen.

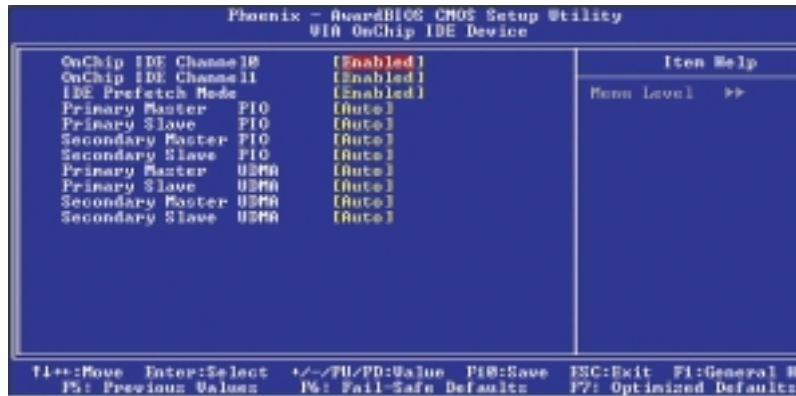
4.5. Integrated Peripherals

Selecting “Integrated Peripherals” on the main program screen displays this menu:



4.5.1. VIA OnChip IDE Device

Scroll to this item and press <Enter> to view the following screen:



OnChip IDE Channel 10/11: Use these items to enable or disable the PCI IDE channels that are integrated on the mainboard. The default setting is “Enabled”.

IDE Prefetch Mode : The onboard IDE drive interface supports IDE prefetching, for faster drive access. If you install a primary and secondary add-on IDE interface, set this field to Disabled if the interface does not support prefetching. The default setting is “Enabled”.

Primary/Secondary Master/Slave PIO: Each IDE channel supports a master device and a slave device. These four items let you assign which kind of PIO (Programmed Input/Output) is used by IDE devices. Choose select a PIO mode from 0-4. The default setting is “Auto”.

Primary/Secondary Master/Slave UDMA: Each IDE channel supports a master device and a slave device. This mainboard supports Ultra DMA technology, which provides faster access to IDE device. The default setting is “Auto”.

4.5.2. VIA OnChip PCI Device

Scroll to this item and press <Enter> to view the following screen:



VIA-3058 AC97 Audio: Auto and disabled the onboard audio chip. Disable this item if you are going to install a PCI audio add-on card. The default setting is “Auto”.

VIA-3068 MC97 Modem: Auto and disabled the onboard modem. Disable this item if you are going to install an external modem. The default setting is “Disabled”.

VIA-3043 OnChip LAN: Auto and disabled the onboard LAN. Disable this item if you are going to install an Onchip LAN. The default setting is “Enabled”.

Onboard Legacy Audio: Enables the onboard legacy audio function. If this item is enabled the following items become available. The default setting is “Enabled”.

Sound Blaster: Enables or disabled a Sound Blaster card if installed. The default setting is “Disabled”.

SB I/O Base Address: This item lets you set the I/O base address for the Sound Blaster card. There are four options:

▷ 220H

▷ 240H

▷ 260H

▷ 280H

The default setting is “220H”.

SB IRQ Select: This item lets you set the Interrupt Request (IRQ) for the Sound Blaster card. There are four options:

▷ IRQ5

▷ IRQ7

▷ IRQ9

▷ IRQ10

The default setting is “IRQ5”.

SB DMA Select: This item lets you set the DMA for the Sound Blaster card. There are four options:

▷ DMA0

▷ DMA1

▷ DMA2

▷ DMA3

The default setting is “DMA1”.

MPU-401: Use this item to enable or disable the MPU-401 function for the game port. The default setting is “Disabled”.

MPU-401 I/O Address: Use this item to set the I/O address for the game port. There are four options:

▷ 300-303H

▷ 310-313H

▷ 320-323H

▷ 330-333H

The default setting is “330-333H”.

Game Port (200-207H): Use this item to set the I/O address for the game port. The default setting is “Enabled”.

4.5.3. VIA SuperIO Device

Scroll to this item and press <Enter> to view the following screen:



Onboard FDD Controller: This option enables the onboard floppy disk drive controller. The default setting is “Disabled”.

Onboard Serial Port 1/2: These option are used to assign the I/O addresses for the two onboard serial ports. They can be assigned as follows:

- △ 3F8/IRQ4
- △ 2F8/IRQ3
- △ 3E8/IRQ4
- △ 2E8/IRQ3
- △ Auto
- △ Disabled (disables the onboard serial port)

The default setting is “Auto”.

Onboard Parallel Port: This option is used to assign the I/O addresses for the onboard parallel ports. The options are:

- △ 378/IRQ7
- △ 278/IRQ5
- △ 3BC/IRQ7
- △ Disabled (disables the onboard parallel port)

The default setting is “378/IRQ7”.

Onboard Parallel Mode: There are four options - “Normal”, “EPP” (Enhanced Parallel Port), “ECP” (Extended Capabilities Port), and “ECP+EPP”. Change the mode from “Normal” to the enhanced mode only if your peripheral device can support it. The default setting is “Normal”.

OnChip USB: Enables the OnChip USB . Leave this at the default “Enabled” if you want to connect USB devices to your computer.

USB Keyboard Support: Enables USB keyboard support for legacy operating systems. The default setting is “Disabled”.

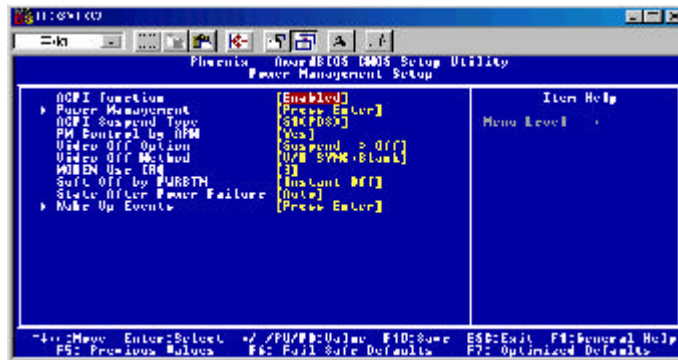
USB Mouse Support: Enables USB Mouse support for legacy operating systems. The default setting is “Disabled”.

IDE HDD Block Mode: Enable this field if your IDE hard drive supports block mode. Block mode enables BIOS to automatically detect the optimal number of block read and writes per sector that the drive can support. The default setting is “Enabled”.

After you have made your selections in the Advanced Chipset Features, press the <ESC> key to go back to the main program screen.

4.6. Power Management Setup

Power Management Setup controls the mainboard's "Green" features. Selecting "Power Management Setup" on the main program screen displays this menu:

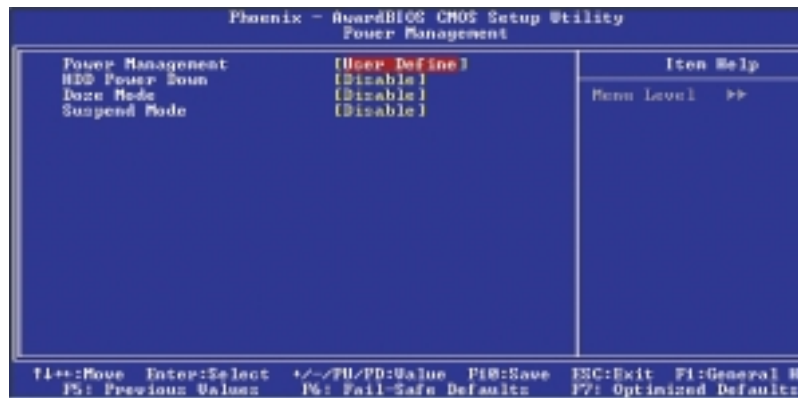


ACPI Function: When set to "Enabled," turns on the ACPI Function. The default setting is "Enabled."

Note: ACPI (Advanced Configuration and Power Interface) is a power management specification that makes hardware status information available to the operating system. ACPI enables a PC to turn its peripheral on and off for improved power management. It also allows the PC to be turned on and off by external devices, so that mouse or keyboard activity wakes up the computer.

4.6.1. Power Management

Scroll to this item and press <Enter> to view the following screen:



Power Management: This setting controls the System Doze Mode, Standby Mode, and Suspend Mode Timer features. There are four options:

- △ User Define: allows you to customize all power saving timer features
- △ Max Saving: recommended setting for general use
- △ Min Saving: sets power saving at minimum values

HDD Power Down: The IDE hard drive will spin down if it is not accessed within a specified length of time. Options are from "1 Min" to "15 Min" and "Disable". The default setting is "Disabled".

Doze Mode: The system speed will change from turbo to slow if no Power Management events occur for a specified length of time. Full power function will return when a Power Management event is detected. The default setting is "Disable".

Suspend Mode: The CPU clock will be stopped and the video signal will be suspended if no Power Management events occur for a specified length of time. Full power function will return when a Power Management event is detected. Options are from “1 Min” to “1 Hour” and “Disabled”. The default setting is “Disabled”.

ACPI Suspend Type: Use this item to define how your system suspends. If set to S1(POS) (default), the suspend mode is equivalent to a software power down. If set to S3(STR), the suspend mode is a suspend to RAM will be suspended if no Power Management events occur for a specified length of time. Full power function will return when a Power Management event is detected. Options are from “Disabled, 1 Min, 2 Min, 4 Min, 6 Min, 8 Min, 10 Min, 20 Min, 30 Min, 40 Min, or 1 Hour. the system shuts down with the exception of a refresh current to the system memory.

PM Control by APM: When this item enabled, an Advanced Power Management device will be activated to enhance the Max. Power Saving mode and stop the CPU internal clock. If Advance Power Management (APM) is installed on your system, selecting Yes gives better power saving. If the Max. Power Saving is not enabled, this will be preset to No. The default setting is “Yes.”

Video Off Option: This option define if the video is powered down when the system is put into suspend mode.

Video Off Method: This setting controls the video off method in power saving mode. The “DPMS” option allows the BIOS to control the video card if it has the DPMS (Display Power Management System) feature. Other options are “V/H SYNC+Blank” (default) and “Blank Screen.” The “V/H SYNC+Blank” which disables V/H SYNC signals and blanks the screen. The “Blank Screen” option is used when you do not have a “Green” monitor.

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

- △ 3 (default)
- △ 4
- △ 5
- △ 7
- △ 9
- △ 10
- △ 11
- △ NA

Soft-Off by PWRBTN: When set to “Instant-Off” (default), pressing the power button will turn off the system power. When set to “Delay 4 Sec.” you have to press the power button and hold it for more than 4 seconds to turn off the system power. Otherwise, the system just goes into suspend mode. The options are “Instant-Off” and “Delay 4 Sec.”

State After Power Failure : This item to set the ATX power supply status when power resume after unexpected power fail. When off is selected, power supply will maintain on soft-off status, when power is resume. When on is selected, power supply will turn on, and when Auto is selected, power supply will maintain on the status before unexpected power fail.

4.6.2. Wake Up Events

Scroll to this item and press <Enter> to view the following screen:



VGA: When this item enabled, you can set VGA to awaken the system. The default is “Off.”

LPT & COM: When LPT & COM stays On, any activity from one of the listed system peripheral devices or IRQs wakes up the system. The default is “LPT/COM.”

HDD & FDD: When HDD & FDD stays On, any activity from one of the listed system peripheral devices wakes up the system. The default is “ON.”

PCI Master: When PCI Master stays On, any activity from one of the listed system peripheral devices wakes up the system.

Power-On by PCI Card: This item enables/disables the power on function of PCI Card. The default is “Disabled.”

Wake Up On LAN/Ring: This item determines the system will resume by activity of LAN/Ring. If enabled this feature enabled, system will power on itself from power-off mode when the activity of LAN/Ring. The default is “Disabled.”

RTC Alarm Resume: When this item enabled, your can set the date

and time at which the RTC (real-time clock) alarm awakens the system from Suspend mode. The default is "Disabled."

Data (of Month): This item selects the alarm date.

Key in a DEC number:Min=0, Max=31.

Resume Time (hh:mm:ss): This item selects the alarm Time.

[hh] : Key in a DEC number:Min=0, Max=23.

[mm/ss]: Key in a DEC number:Min=0, Max=59.

Primary INTR: Press Enter to on/off the wake up ability of a specified IRQ. In the following is a list of IRQ's, Interrupt ReQuests, which can be exempted much as the COM ports and LPT ports above can. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service. When On mode exist, activity will neither prevent the system from going into a power management mode nor awaken it.

- * IRQ3 (COM 2)
- * IRQ4 (COM 1)
- * IRQ5 (LPT 2)
- * IRQ6 (Floppy Disk)
- * IRQ7 (LPT 1)
- * IRQ8 (RTC Alarm)
- * IRQ9 (IRQ2 Redir)
- * IRQ10 (Reserved)
- * IRQ11 (Reserved)
- * IRQ12 (PS / 2 Mouse)
- * IRQ13 (Coprocessor)
- * IRQ14 (Hard Disk)
- * IRQ15 (Reserved).

Press **ESC** to return to the main menu.

4.7. PnP/PCI Configurations

Both the ISA and PCI buses on the Mainboard use system IRQs (Interrupt ReQuests) and DMAs (Direct Memory Access). You must set up the IRQ and DMA assignments correctly through the PnP/PCI Configuration Setup utility; otherwise, the mainboard will not work properly.

Selecting “PnP/PCI Configurations” on the main program screen displays this menu:



PNP OS Installed: This item allows you to determine PnP OS is installed or not. The default is “No.”

Reset Configuration Data: The system BIOS supports the Plug and Play feature so the resources assigned to each peripheral have to be recorded to prevent them from conflicting. The location to store the assigned resources is called ESCD (Extended System Configuration Data) which is located in the system flash EEPROM. If this option is set to “Disabled,” the ESCD will update automatically when the new configuration varies from the last one. If set to “Enable,” the ESCD will be cleared and updated and then this option will automatically be set to “Disabled.”

Resources Controlled By: The setting “Manual” which allows you to control IRQs and DMAs individually. The other option is “Auto” (default) which will detect the system resources and automatically assign the relative IRQs and DMAs for each peripheral.

IRQ/DMA Resources: When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

IRQ3/4/5/7/9/10/11/12/14/15 assigned to: This item allows you to determine the IRQ assigned to the ISA bus and is not available to any PCI slot. Legacy ISA for devices is compliant with the original PC AT bus specification; PCI/ISA PnP (default) for devices is compliant with the Plug-and-Play standard whether designed for PCI or ISA bus architecture.

DMA 0/1/3/5/6/7 assigned to: When resources are controlled manually, assign each system DMA channel as one of the following types, depending on the type of device using the interrupt: Legacy ISA Devices compliant with the original PC AT bus specification, requiring a specific interrupt (such as IRQ4 for serial port 1). PCI/ISA PnP (default) Devices compliant with the Plug-and-Play standard, whether designed for PCI or ISA bus architecture.

PCI/VGA Palette Snoop: This item is designed to overcome some problems that can be caused by some non-standard VGA cards. This board includes a built in VGA system that does not require palette snooping so you must leave this item disabled. The default setting is "Disabled."

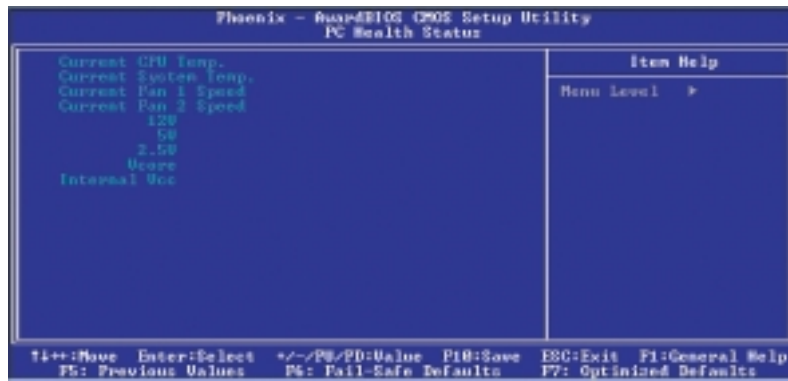
Assign IRQ For VGA: This item allows the user to set VGA IRQ Routing table Enabled or Disabled. The default setting is "Enabled."

Assign IRQ For USB: This item allows the user the option to assign an IRQ to on-board USB controller. Since the on-board controller is always enabled, if no IRQ is assigned to it, there will be a question mark report on the system device under Windows95/98. The default setting is "Enabled."

After you have made your selections in the PnP/PCI Configurations, press the <ESC> key to go back to the main program screen.

4.8. PC Health Status

On mainboards that support hardware monitoring, this item lets you monitor the parameters for critical voltages, critical temperatures, and fan speeds. Selecting “**PC Health Status**” on the main program screen displays this menu:



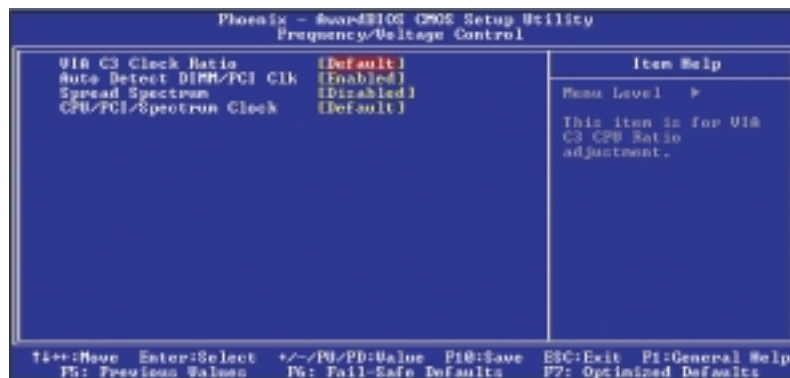
System Component Characteristics: These fields provide you with information about the systems current operating status. You cannot make changes to these fields. The following information is displayed:

- △ 12V Power supply's
- △ 5V Power supply's
- △ 2.5V(onboard 2.5V)
- △ Internal Vcc (onboard 5V)

After you have made your selections in the PC Health Status Setup, press the <ESC> key to go back to the main program screen.

4.9. Frequency/Voltage Control

This item enables you to set the clock speed and system bus for your system. The clock speed and system bus are determined by the kind of processor you have installed in your system.



VIA C3 Clock Ratio: This item allows the user to adjust CPU Ratio. The values for this field range from 8 to 50.

Auto Detect DIMM/PCI Clk: When set to “Enabled” (default), the system will automatically turn off the PCI and DIMM clock when not in use to reduce electromagnetic interference.

Spread Spectrum: If you enable spread spectrum, it can significantly reduce the EMI (Electronic-Magnetic Interference) generated by the system. The default setting is “Disabled.”

CPU/PCI Spectrum Clock: This item appears if you have set the CPU Internal Core Speed to Manual. Use the CPU/PCI Clock to set the system bus frequency for the installed processor. The values for this field range from 66/33 MHz/+/-0.5% to 143/36 MHz/+/-0.45%.

After you have made your selections in the Frequency/Voltage Control Setup, press the <ESC> key to go back to the main program screen.

4.10. Load Optimized Defaults Option

This option opens a dialog box that lets you install optimized defaults for all appropriate items in the whole Setup Utility.

Press the <Y> key and then <Enter> to install the defaults.

Press the <N> key and then <Enter> to not install the defaults.

The optimized defaults place demands on the system that may be greater than the performance level of the components, such as the CPU and the memory. You can cause fatal errors or instability if you install the optimized defaults when your hardware does not support them. If you only want to install setup defaults for a specific option, select and display that option, and then press the <F7> key.

4.11. Set Supervisor/User Password

The “Set Supervisor/User Password” utilities set the passwords.

The mainboard is shipped with the password disabled. If you want to change the password, you must first enter the current password, then at the prompt enter your new password. The password is case sensitive. You can use up to eight alphanumeric characters.

Press <Enter> after entering the password. At the next prompt, confirm the new password by retyping it and pressing <Enter> again.

To disable the password, press <Enter> instead of entering a new password when the “Enter Password” dialog box appears. A message appears confirming that the password has been disabled.

If you have set supervisor and user passwords, only the supervisor password allows you to enter the BIOS Setup Program.

Note: If you forget your password, the only way to solve this problem is to discharge the CMOS memory by turning power off and placing a shunt on jumper J10 to short pin 1 and pin 2 for five seconds, then putting the shunt back to pin 2 and pin 3 of J10.

4.12. Save & Exit Setup

Selecting this option and pressing <**Enter**> will save the new setting information in the CMOS memory and continue with the booting process.

4.13. Exit Without Saving

Selecting this option and pressing <**Enter**> will exit the Setup Utility without recording any new values or changing old ones.

This concludes Chapter 4. Chapter 5 describes the drivers and utility programs that are packaged with the mainboard.

5. Driver and Utility

5.1. Flash Utility

The BIOS of the P6F212 mainboard can be upgraded by using a Flash utility. A new version of the BIOS can be downloaded from the factory's BBS and Web site. The system BIOS is stored in a 1 M-bit Flash EEPROM that can be erased and reprogrammed by the Flash utility.

There are two files in the D:\DRIVER\FLASH directory:

- △ FLASH.EXE Flash utility for AWARD BIOS upgrade
- △ README.TXT Text file of instructions

The Flash utility will not work with any memory manager software running in the system. In order to make sure no memory manager software is running, boot your system from a bootable floppy diskette which does not contain CONFIG.SYS and AUTOEXEC.BAT files. If you are using MS-DOS 6.x, you can press the <F5> function key when the "Starting MS-DOS." message appears on the screen to by pass the CONFIG.SYS and AUTOEXEC.BAT.

5.2. CD Driver Overview

To start your mainboard CD disc, insert into your CD-ROM drive and the CD AutoRun screen should appear. If the AutoRun screen does not appear, double click or run D:\Autorun.exe (assuming that your CD-ROM drive is drive D:)

The P6F212 CD include

1. Install Mainboard Software (VIA)
2. Install display device driver (Trident)
3. Install Audio Device Software (AC97)
4. Install LAN Driver (KLE/PLE)



5.2.1. VIA 4 In 1 driver

This folder has 4 in 1 drivers for Windows Millennium/2000/98/95/NT.

The Installation Steps:

1. Insert the manufacturer's CD-ROM into your CD-ROM drive.
2. Click **Driver** Install.
3. Select the folder **Driver\Via\4in1** driver for WIN2000/9X/ME or NT to start the installation:
4. Follow the instructions on the screen to complete the installation.
After setup is completed, you need to restart the computer.

5.2.2 . VIA Trident display driver

This folder has the software and drivers for the graphics system built into the VIA Apollo PLE133.

The Installation Steps:

1. Insert the manufacturer's CD-ROM into your PC's CD-ROM drive.
2. Click **Driver** Install.
3. Select the folder **Driver\Via\Video\KLE-PLE** driver for WIN2000/9X/NT40/ME or LINUX to start the installation:
4. Follow the instructions on the screen to complete the installation.
After setup is completed, you need to restart the computer.

5.2.3. AC97 Audio Driver

Software and drivers are provided for the VT8231 codec sound system that is integrated on this mainboard. The VT8231 codec allows the system to generate optimal sound effects. Drivers are provided for Windows NT/2000/98SE/95/NT.

The manual Installation Steps:

1. Insert the manufacturer's CD-ROM into your PC's CD-ROM drive.
2. Click **Driver** Install.
3. Select the folder **Driver\Via\Audio\8231** driver for WIN98SE, WIN2000/WIN95/WINNT to start the installation:
4. Follow the instructions on the screen to complete the installation.
After setup is completed, you need to restart the computer.

5.2.4. LAN Driver

Software and drivers are provided for the VT6103 controller that is integrated on this mainboard. The VT6103 controller allows the system to generate transmit effects. Drivers are provided for Windows NT/2000/98/95/ME/SE.

The Installation Steps:

1. Insert the manufacturer's CD-ROM into your PC's CD-ROM drive.
2. Click **Driver** Install.
3. Select the folder **Driver\VIA\LAN** driver for WIN98, WIN2000/WIN95/WINNT/WINME/WIN98SE to start the installation:
4. Follow the instructions on the screen to complete the installation.
After setup is completed, you need to restart the computer.

5.3. Online Services

Flexus Computer Technology, under the Freetech brand name, has consistently won recognition for excellence in the design and manufacturing of high quality mainboards!

Our products are globally recognized among the leading cost-performance mainboards in the industry today and we are a certified ISO-9002 manufacturer!

Our customers are our partners! Flexus practices partnership service “not customer service”! Our attention to partnership service is aggressive and proactive, by using our global partnership service system. We create value for our partners in the high-end market and we are always ready to see to our partners’ requirements, because at Flexus, we believe our partners’ success is our success!

If you need technical support, information on products, or updated versions of the BIOS, drivers and utilities access the Internet and point your browser to:

www.freetech.com