



**SL-65MIV/65MIV2/65MIV-X/65MIV2-X V1.1**

**USER MANUAL**

# USER NOTICE

<b>Product Model</b>	<b>: SL-65MIV/65MIV2/ 65MIV-X/65MIV2-X</b>
<b>Manual Revision</b>	<b>: V1.1</b>
<b>Release Date</b>	<b>: January 2001</b>

**T**his Users Guide & Technical Reference is for assisting system manufacturers and end-users in setting up and installing the motherboard.

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# CHAPTER 1

## INTRODUCTION

### 1-1 ITEMLIST CHECKUP

- Motherboard
- Support CD
- User's Manual
- Bundle Bonus Pack CD
- Bundle Bonus Pack Manual
- Temperature Sensor Cable
- ATA66/100 IDE Cable
- RS232 Cable
- FDD Cable

### 1-2 CPU

- Supports Intel® FC-PGA370 Pentium® III up to 1GHz, and FC-PGA370.
- Supports Celeron™ & PPGA370 Celeron processors up to 800MHz.
- Supports VIA Cyrix III processors up to 733MHz.
- Supports 66 to 200 MHz system bus speed.
- Supports processor voltage Auto-Detect circuit.

### 1-3 CHIPSET

- North Bridge - VIA 8605 APOLLO PRO133A PM133.
- South Bridge - VIA VT82C686A or VT82C686B.

### 1-4 BIOS

- Award BIOS V6.0.
- Support Plug & Play V1.0.
- Flash Memory for easy upgrade.
- Supports BIOS writing protection.
- Year 2000 compliant.

### 1-5 EXTENSION SLOTS

- Three PCI bus Mater slots.
- One AGP 4x mode slot.
- Three DIMM slots.

## **1-6 ADVANCED HIGH-PERFORMANCE DRAM CONTROLLER**

- Supports PC133 and PC100 SDRAM and Virtual Channel Memory (VCM) SDRAM up to 3 DIMMs.
- 64-bit data width and 3.3V DRAM interface.
- Supports up to 1.5 GB memory space.
- Different DRAM types may be used in mixed combinations.
- PCI-2.2 compliant, 32 bit 3.3V PCI interface with 5V tolerant inputs .

## **1-7 MULTI-I/O FUNCTION**

- Two Ultra DMA 33 / 66 Master Mode PCI EIDE ports (for 65MIV only).
- Two Ultra DMA-33 / 66 / 100 Master Mode PCI EIDE ports (for 65MIV2 only).
- Two UART's for Complete Serial Ports.
- One dedicated IR connector:  
Third serial port dedicated to IR function either through the two complete serial ports or the third dedicated port Infrared-IrDA (HPSIR) and ASK (Amplitude Shift Keyed) IR.
- Multi-mode parallel connector:  
Standard mode, ECP and EPP support.
- Floppy Disk connector:  
Two FDDs with drive swap support.
- Universal Serial Bus connector:  
--- USB v1.1 and Intel Universal HCI v1.1 compatible.  
--- Provides 2 build-in USB ports (another 2 internal USB ports for extensible purpose require an optional USB connect cable).
- PS/2 Keyboard connector.
- PS/2 Mouse connector.

## **1-8 INTEGRATED SAVAGE4 2D/3D/VIDEO ACCELERATOR**

- Optimized Share Memory Architecture (SMA).
- 2 to 32MB frame buffer using system memory.
- Single cycle 128-bit 3D architecture.
- Full AGP 4x, including sideband addressing and execute mode.
- Floating point triangle setup engine.
- 8M triangles/second setup engine.
- 140M pixels/second trilinear fill rate.
- 2D/3D resolutions up to 1920x1440.

## **1-9 SOUND CONTROLLER**

- SoundBlaster Pro Hardware and Direct Sound Ready AC'97 Digital Audio Controller with Codec Onboard.

## **1-10 FULL FEATURED ACCELERATED GRAPHICS PORT (AGP) CONTROLLER**

- Synchronous and pseudo-synchronous with the host CPU bus with optimal skew control PCI AGP CPU Mode 33/66/100 MHz DDR 3x synchronous.
- Support 66MHz 1x/2x/4x modes for AD and SBA signaling.
- AGP v2.0 compliant.

## **1-11 POWER MANAGEMENT**

- ACPI 1.0 compliant (Advanced Configuration and Power Interface).
- APM V1.2 compliant (Legacy power management).
- Supports ACPI suspend STR mode POS mode (Power On Suspend).
- Supports Wake On LAN (WOL) & Wake On Modem.
- Supports real time clock (RTC) with date alarm, month alarm, and century field.

## **1-12 FROM FACTOR**

- ATX form factor, 4 layers PCB.
- Motherboard size 22.0cm X24.5cm.

## **1-13 HARDWARE MONITORING**

- Programmable control, status, monitor and alarm for flexible desktop management (software include).
- Five-positive voltage monitoring.
- Two-temperature monitoring.
- Two Fan-speed monitoring.

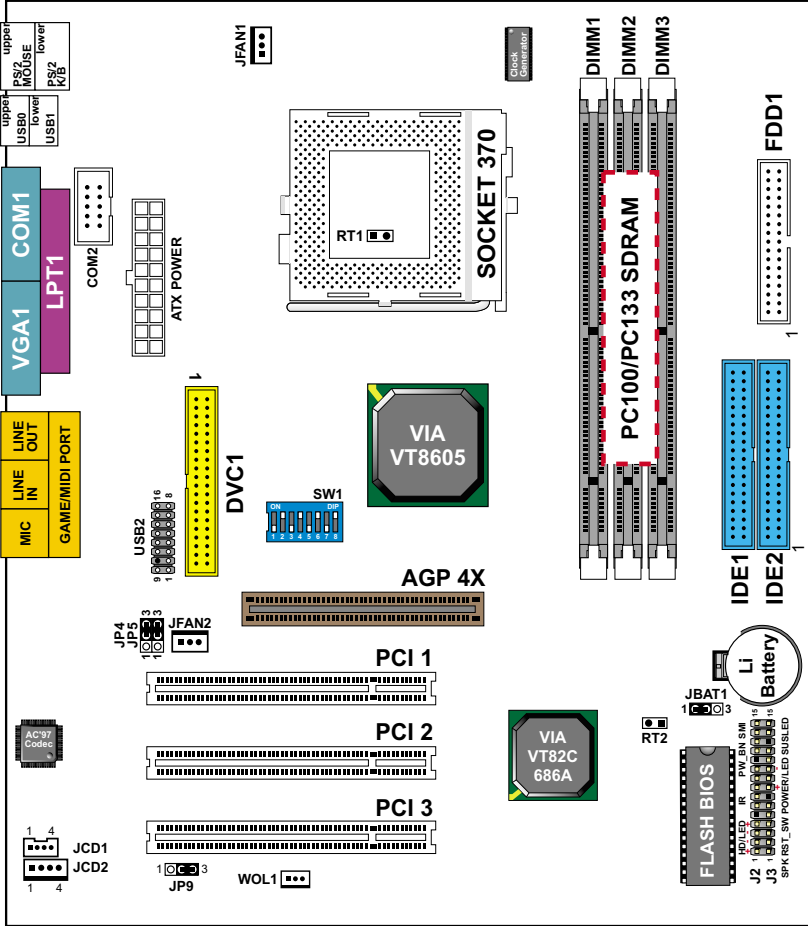
## **1-14 OTHERS**

- Clock generator supports 1MHz linear clock setting.



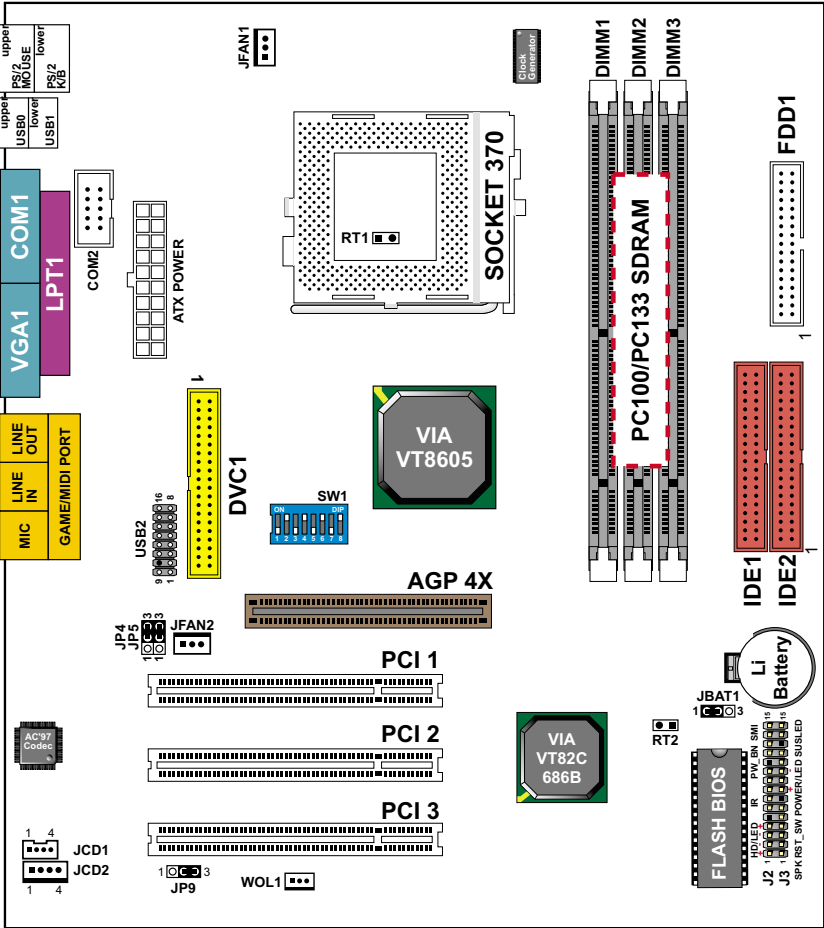
# 1-15.1 MOTHERBOARD LAYOUT --- 65MIV

- Default Setting: Intel Celeron 300A/66 MHz



## 1-15.2 MOTHERBOARD LAYOUT --- 65MIV2

- Default Setting: Intel Celeron 300A/66 MHz



## 1-16 FLAT PANEL DESKTOP MONITOR SUPPORT

- The VT8605 / 86C370 has the capability of displaying graphics on TFT flat panel desktop monitors using a 12-bit digital interface to an external encoder. The VT8605 / 86C370 also supports autoexpansion and centering of all VGA text and graphics modes to ensure that the entire flat panel display will be utilized. All resolutions are supported up to 1280 x 1024 by flat panel desktop monitor. The resolution is Digital Visual Interface 1.0 specification compliant.

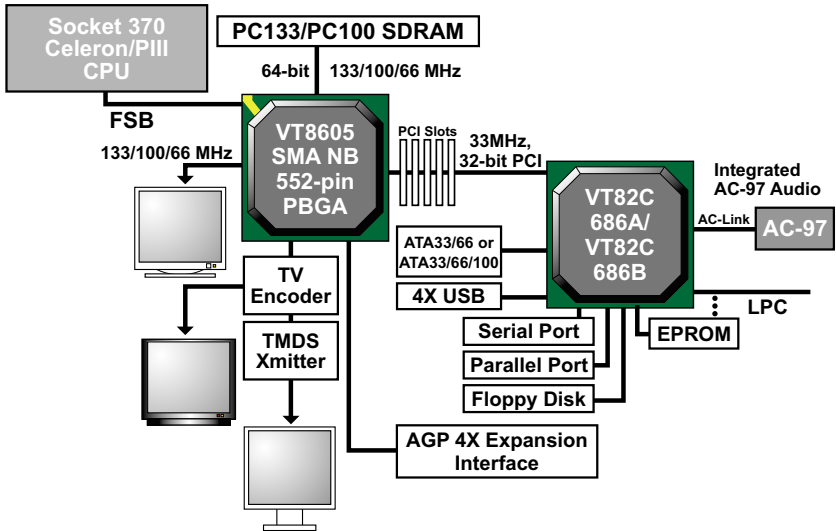
## 1-17 HIGH SCREEN RESOLUTION CRT SUPPORT

Resolution Supported	System Memory Frame Buffer		
	Size (8MB Default)		
640x480x8 /16/ 32	4MB	8MB	16/32MB
800x600x8 /16/ 32	✓	✓	✓
1024x768x8 /16/ 32	✓	✓	✓
1280x1024x8	✓	✓	✓
1280x1024x16	✓	✓	✓
1280x1024x32		✓	✓
1600x1200x8	✓	✓	✓
1600x1200x16	✓	✓	✓
1600x1200x32		✓	✓
1920x1440x8	✓	✓	✓
1920x1440x16		✓	✓

### High Screen Resolution CRT Support

### 1-18 CHIPSET DIAGRAM

- The VT8605 is a high performance, cost-effective and energy efficient SMA chip set for the implementation of AGP / PCI / LPC desktop personal computer system with 66MHz, 100MHz, and 133MHz CPU host bus (“Front Side Bus”) frequencies and based on 64-bit Socket-370 (Intel Pentium III, Celeron) super-scalar processors. VT8605 is the VIA part number.



**VT8605 System Block Diagram with VT82C686A or VT82C686B  
PCI-TO-ISA South Bridge**

## 1-19 MOTHERBOARD SPECIFICATION TABLE OF 65MIV/ 65MIV2

Model	65MIV	65MIV2
North bridge	VIA VT8605	
South bridge	VIA VT82C686A	VIA VT82C686B
Memory	Supports PC133 and PC100 SDRAM and Virtual Channel Memory (VCM) up to 1.5GB 3 DIMM Slots	
AGP Interface	AGP 4X Mode	
On-chip Graphics	S3 SAVAGE 4 AGP 4X	
Audio	Build-in AC97 codec	
IDE	2 x Ultra ATA33/66 IDE ports	2 x Ultra ATA33/66/100 IDE ports
I/O	4 x USB ports, 1 x FDD port, 2 x COM ports, 1 x LPT port, 1 x IrDA, 1 PS/2 Mouse, 1 PS/2 K/B	
PCI slot	3 x PCI Master Slots	
VD-Tech	Optional	
Hardware Monitoring	Yes	
BIOS writing Protection	Yes	
Remark		

**ATTENTION !!!**

---

1. Please refer to your processor installation or other documentation attached with your CPU for detailed installing instruction.
2. Installing a heat sink and cooling fan is necessary for proper heat dissipation from your CPU. Uncorrected installation may result in overheating and damage of your CPU.
3. Before changing the setting of CPU Vcore from BIOS program, user SHOULD make sure of correct specification both of CPU CLOCK and RATIO. Uncorrected setting may cause damage to your CPU.



***MEMO***

## CHAPTER 2

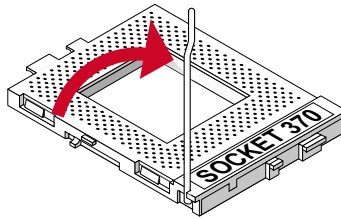
# HARDWARE SETUP

### 2-1 CPU INSTALLATION

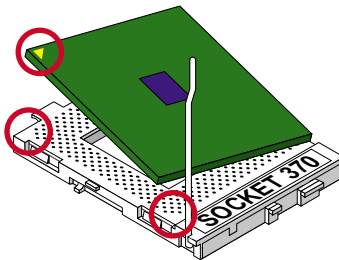
#### **WARNING !!!**

Never run your processor without the heat sink properly and firmly attached. PERMANENT DAMAGE WILL RESULT!

1. Pull the lever sideways away from the socket, and then raise the lever up to a 90-degree angle.

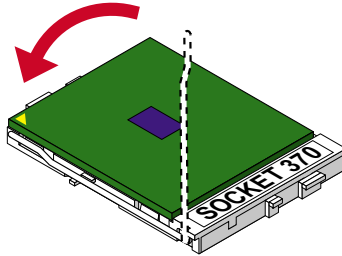


2. Take note of the red circle as below picture. When insert the CPU into socket, you can find out there is a definite pin orientation for CPU and socket.





3. Make sure that the CPU positions in the socket tightly, and then put the lever down to complete the CPU installation.



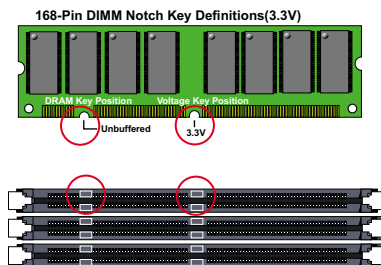
## 2-2 MEMORY INSTALLATION

### WARNING !!!

- Make sure that you unplug your power supply when adding or removing memory modules or other system components, failure to do so may cause severe damage to both your motherboard and expansion cards.
- Be careful when inserting or removing DIMM, forcing a DIMM in or out of a socket can be damaged the memory module or the socket. Some of DIMMs contain EDO or FTP DRAM that accept only 5V power. These DIMM types are incompatible with the motherboard, the M/B only supports 3.3V true SDRAM DIMMs.

### Installing DIMM:

- Make sure you have the correct memory module type for your motherboard.
- Insert the module(s) as shown, DIMMs have 168-pins and two notches that will match with the onboard DIMM socket, memory modules are installed by inserting them straight into the slot until they “click” into place. They only fit in one direction so do not force them into place.

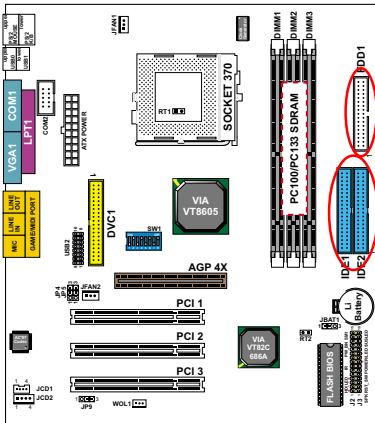


### Removing:

- Press the holding clips on both sides of socket out ward to release the DIMM, Gently pull the DIMM out of the socket.

### 2-3 HDD/FDD INSTALLATION

- To install HDD (Hard Disk Drive), you may connect the cable's blue connector to the motherboard's primary (IDE1) or secondary IDE connector, and then connect the gray connector to your slave device and the black connector to your master device. If you install two hard disks , you must configure the second drive to Slave mode by setting its jumper accordingly. Please refer to your hard disk documentation for the jumper settings.
- To install FDD (Floppy Disk Drive), you may connect the single end to the board , and connect two plugs on the other end to the floppy drives.



**Floppy Disk Drive Connector:**  
Orient the red markings on the floppy ribbon cable to Pin1.

**Hard Disk Drive Connector:**  
Orient the red markings on the IDE ribbon cable to Pin1.

### 2-4.1 CPU BUS RATIO SELECT

- Normally, the Bus Ratio (Frequency Multiple) of your processor is locked by processor's Vendor, setting of the CPU Bus Ratio will have no effect.
- Bus Ratio exceed 8.0X, user can not change all values from DIP switch the Bus ratio will be detected by BIOS automatically.
- The Bus Ratio Setting is available on unlocked processors only.

SW1 DIP1 ~ DIP4 SETTING					
3.0x	ON	ON	ON	ON	ON
	ON	ON	OFF	ON	ON
4.0x	ON	ON	ON	ON	ON
	ON	ON	ON	OFF	ON
5.0x	ON	ON	ON	ON	ON
	ON	ON	OFF	ON	ON
6.0x	ON	ON	ON	ON	ON
	ON	ON	OFF	ON	ON
7.0x	ON	ON	ON	ON	ON
	ON	ON	OFF	ON	ON
8.0x	ON	ON	ON	ON	ON
	ON	ON	OFF	ON	ON

### 2-4.2 BUS CLOCK SELECT

- Over clocking is not recommended, your system may work unstable.

SW1 DIP5 ~ DIP8 SETTING								
ON	ON	ON	ON	ON	ON	ON	ON	Auto Select 66/100/133 MHz (default)
ON	ON	ON	ON	ON	ON	OFF	ON	
ON	ON	ON	ON	ON	ON	OFF	OFF	
ON	ON	ON	ON	ON	ON	OFF	OFF	
ON	ON	ON	ON	ON	ON	OFF	OFF	66MHz
ON	ON	ON	ON	ON	ON	OFF	OFF	100MHz
ON	ON	ON	ON	ON	ON	OFF	OFF	133MHz



## 2-5 JUMPER DEFINITIONS

- The figure below shows the location of the motherboard’s jumper blocks.

### CAUTION

- *Do not move the jumper with the power on. Always turn off the power and unplug the power cord from the computer before changing the jumper. Otherwise, the motherboard could be damaged.*

### 2-5.1 ONBOARD FAN (JFAN1/JFAN2)

JFAN1/JFAN2: ONBOARD FAN (12V)	
CPU FAN	JFAN1 
SYSTEM FAN	JFAN2 

Those connectors support processor/system/chassis cooling fan with +12V. Those support three pin head connector. When connecting the wire to FAN connectors, user should give attention that the red wire is the positive and should be connected to the +12V, the black wire is Ground and should be connected to GND. If your motherboard has Hardware Monitor chipset on-board, you must use a specially designed fan with speed sensor to take advantage of this function.



For fans with fan speed sensor, every rotation of the fan will send out 2 pulses. System Hardware Monitor will count and report the fan rotation speed.





NOTE 1: Always consult vendor for proper CPU cooling fan.

NOTE 2: CPU FAN supports the FAN control. You can install PC Alert utility. This will automatically control the CPU FAN speed according to the actual CPU temperature.

### 2-5.2 USB PORT SELECT (JP4/JP5)



JP4/JP5: USB PORT SELECT (2)	
Redirect USB port 2 to USB 2 connector (default)	
Redirect USB port 2 to AGP	

### 2-5.3 POWER LOST RESUME (JP9)

JP9: POWER LOST RESUME	
Normal (default)	JP9 1  3
Enabled	JP9 1  3


**NOTE:** This jumper allows user to use the switch of ATX power supply to control ON/OFF switch directly instead of using the power switch on the motherboard.

### 2-5.4 CLEAR CMOS DATA (JBAT1)

JBAT1: CLEAR CMOS DATA	
Clear CMOS Data	JBAT1 1  3
Retain Data (default)	JBAT1 1  3

**NOTE:** We recommend user to unplug the power cord from ATX power supply to take precautions. Clear CMOS memory by shorting this jumper pin 2 & pin3 momentarily, and then remove the cap back to pin 1 & pin2 to retain original CMOS setting.

### 2-5.5 WAKE ON LAN (WOL) FUNCTION (WLO1)

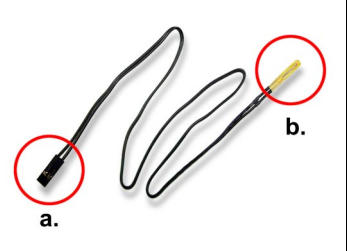
WOL1 : WAKE ON LAN (WOL) FUNCTION	
Connect the Wake On LAN signal from LAN card to WOL1	WOL1 

**NOTE:** For support WOL function, the ATX power supply must provide at least 5V / 720mA standby current.

## 2-5.6 CD-ROM AUDIO CONNECTOR (JCD1/JCD2)

<b>JCD1/JCD2: CD-ROM AUDIO CONNECTOR</b>		
PIN NO.	JCD1	JCD2
<b>PIN 1</b>	<b>GND</b>	<b>Left Channel</b>
<b>PIN 2</b>	<b>Left Channel</b>	<b>GND</b>
<b>PIN 3</b>	<b>GND</b>	<b>GND</b>
<b>PIN 4</b>	<b>Right Channel</b>	<b>Right Channel</b>

## 2-5.7 THERMAL SENSOR CONNECTOR (RT2)

<b>RT2: THERMAL SENSOR CONNECTOR</b>	
	<p>a: Connect to RT2. b: Connect this thermal sensor to particular device which generates lots of heat such as Hard Driver, VGA chip, etc.,. When connected, user could observe the temperature change from the BIOS program.</p>

**USB2: 2nd USB Connector Set**

**MIC port: Microphone Jack**

**Line In port: Audio In Jack**

**Line Out / Speaker Out port: Audio Out Jack**

**RT2: CPU Thermal sensor**

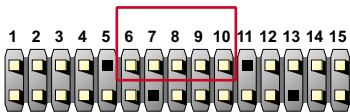
## 2-6 CONNECTORS

- In this section we list all external connectors that user will use them.

### 2-6.1 J2



HDD LED CONNECTOR	
PIN 1	+5V
PIN 2	HDD LED SIGNAL
PIN 3	HDD LED SIGNAL
PIN 4	+5V
DESCRIPTION	This connector supplies power to the cabinet's IDE activity LED. Read and write activity by devices connected to the Primary or Secondary IDE connector will cause the LED to light up.



INFRARED CONNECTOR	
PIN 6	INFRARED TRANSMIT SIGNAL
PIN 7	GND
PIN 8	INFRARED RECEIVE SIGNAL
PIN 9	NONE
PIN 10	+5V
DESCRIPTION	This connector supports an optional wireless transmitting and receiving infrared module. This module mounts to a small opening on system cases that support this feature. User must also configure the setting through BIOS program "Peripheral Setup" to select whether UART2 is directed for use with COM2 or IrDA. Use the five pins and connect a ribbon cable from the module to the motherboard's IR connector according to the pin definitions.



<b>ATX POWER SWITCH</b>	
<b>PIN 12</b>	<b>ATX POWER SWITCH</b>
<b>PIN 13</b>	<b>GND</b>
<b>DESCRIPTION</b>	<p>The system power is controlled by a momentary switch connected to this lead.                      Pressing the button once will switch the system between ON and SOFT OFF.                      Pushing the switch while in the ON mode for more 4 seconds will turn the system off.                      The system power LED shows the status of the system's power.</p>



<b>SMI CONNECTOR</b>	
<b>PIN 14</b>	<b>SMI(System Management Interrupt) SIGNAL</b>
<b>PIN 15</b>	<b>GND</b>
<b>DESCRIPTION</b>	<p>This allows user to manually place the system into a suspend mode or "Green" mode, where system activity is decreased to save electricity and prolong the life of certain components when the system is not in use. This 2-in connector connects to the case-mounted suspend switch. If you do not have a switch for the connector, you may use the "Turbo Switch".                      SMI is activated when it detects a short to open moment and therefore leaving it shorted will not cause any problems. This may require one or two presses depending on the position of the switch.                      Wake-Up can be controlled by settings in the BIOS but the keyboard will always allow wake-up(the SMI lead cannot wake up the system).</p>



## 2-6.2 J3



<b>SPEAKER CONNECTOR</b>	
<b>PIN 1</b>	<b>SPEAKER SIGNAL</b>
<b>PIN 2</b>	<b>NONE</b>
<b>PIN 3</b>	<b>GND</b>
<b>PIN 4</b>	<b>+5V</b>
<b>DESCRIPTION</b>	This <b>SPEAKER</b> connector connects to the case-mounted speaker. Two sources ( <b>LINE OUT</b> and <b>SPEAKER</b> ) allow you to hear system beeps and warnings. Only <b>SPEAKER</b> allows you to hear system beeps before the integrated audio has been properly initialized.



<b>RESET SWITCH CONNECTOR</b>	
<b>PIN 5</b>	<b>RESET SIGNAL</b>
<b>PIN 6</b>	<b>GND</b>
<b>DESCRIPTION</b>	<b>RESET SWITCH</b> connector connects to the case-mounted reset switch for rebooting your system without having to turn off your power switch. This is a preferred method of reboot to prolong the life of the system's power supply.

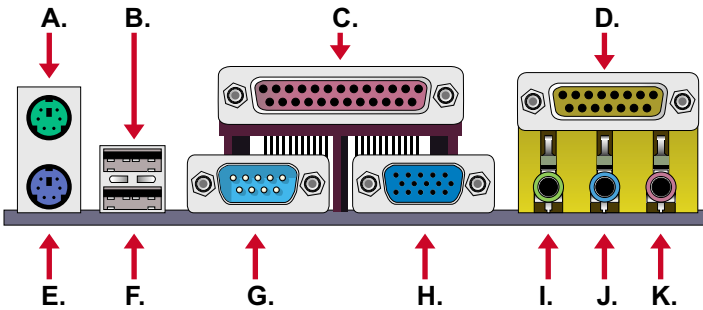


<b>POWER LED CONNECTOR</b>	
<b>PIN 8</b>	<b>+5V</b>
<b>PIN 9</b>	<b>NONE</b>
<b>PIN 10</b>	<b>GND</b>
<b>DESCRIPTION</b>	This <b>Power LED</b> connector connects the system power LED, which lights when the system is powered on and blinks when it is in sleep mode.



SUSPEND LED	
PIN 14	SUSPEND LED SIGNAL
PIN 15	GND
DESCRIPTION	Connect to Suspend indicator light.

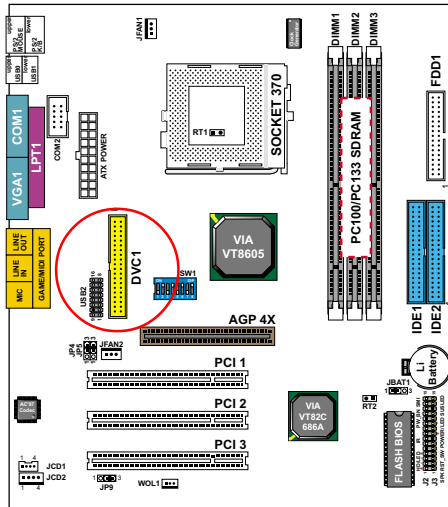
### 2-6.3 CHASSIS PANEL CONNECTOR



- A : PS/2 MOUSE PORT
- B : USB 0 PORT
- C : LPT1 PORT
- D : GAME/MIDI PORT
- E : PS/2 KEYBOARD PORT
- F : USB 1 PORT
- G : COM1 PORT
- H : VGA PORT
- I : LINE / SPEAKER OUT
- J : LINE IN
- K : MICROPHONE

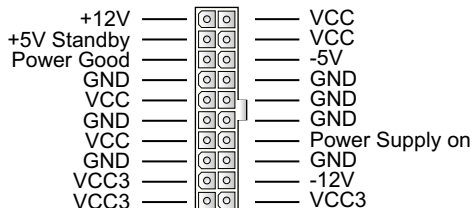
## 2-6.4 FLAT-PANEL DISPLAY CONNECTOR (DVC1)

- This motherboard provides a special socket “ **DVC1** ”. Which has the capability of displaying graphics on TFT flat panel desktop monitors using a 12-bit digital interface to an external encoder. The motherboard also supports auto expansion and centering of all VGA text and graphics modes to ensure that the entire flat panel display will be utilized. All resolutions are supports up to 1280x1024. The solution is Digital Visual Interface 1.0 specification compliant.



## 2-6.5 ATX POWER SUPPLY CONNECTOR

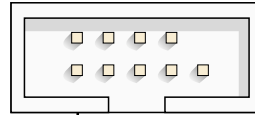
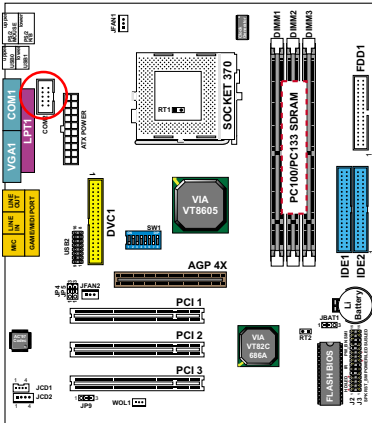
- This connector connects to an ATX power supply. The plug from the power supply only inserts in an orientation because of the different hole sizes. Find the proper orientation and push down firmly making sure that all pins are aligned.
- Reminding that your power supply should support at least 10mA on the 5V standby voltage. It may cause an difficulty to power on the system if the power supply cant support the load.
- For Wake On LAN function, the power supply should support at least 720mA current.**





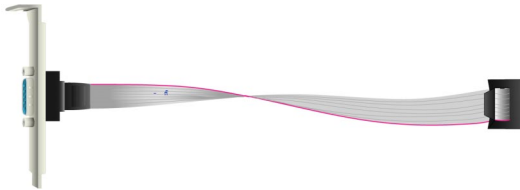
## 2-6.7 SERIAL PORT CONNECTOR

- One serial port is ready for a mouse or other serial devices. A second serial port is available using a serial port bracket connected from the motherboard to an expansion slot opening.



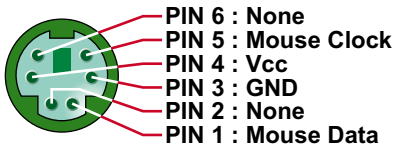
PIN1

Serial Port Connectors:  
Orient the red markings on the floppy ribbon cable to PIN1.

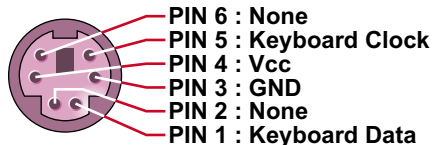


RS232 cable

## 2-6.8 PS/2 MOUSE AND PS/2 KEYBOARD



PS/2 MOUSE



PS/2 KEYBOARD

## 2-6.9 IRQ DESCRIPTION



IRQ	Function Description	Priority
IRQ 0	System Timer	1
IRQ 1	Keyboard Controller	2
IRQ 2	Programmable Interrupt	N/A
IRQ 3	Serial Port (COM 2)	11
IRQ 4	Serial Port (COM 1)	12
IRQ 5		13
IRQ 6	Floppy Disk Controller	14
IRQ 7	Parallel Port (LPT1)	15
IRQ 8	Real Time Clock (RTC)	3
IRQ 9		4
IRQ 10		5
IRQ 11		6
IRQ 12	PS/2 Mouse Port	7
IRQ 13	Coprocessor	8
IRQ 14	Primary IDE Channel	9
IRQ 15	Secondary IDE Channel	10

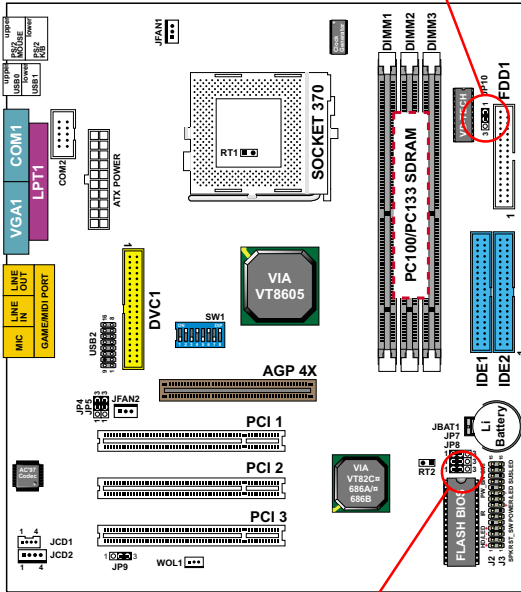
- Both ISA and PCI expansion cards may require IRQs. System IRQs are available to cards installed in the ISA expansion bus first, then any remaining IRQs are available to PCI cards. Currently, there are two types of ISA cards.
- The original ISA expansion card design, now referred to as “Legacy” ISA card, requires that you configured the card’s jumpers manually and then install it in any available slot on the ISA bus. To see a map of your used and free IRQs in Windows 98, the *Control Panel* in *My Computer*, contains a *System* icon, which gives you a *Device Manager* tab. Double-Clicking on a specific hardware device gives you a *Resources* tab which shows the Interrupt number and address. Double-Clicking *Computers* to see all the interrupts and addresses for your system. Make sure that no two devices use the same IRQ or your computer will experience problems when those two devices are in use at the same time.









## 2-7 VOICE DIANOSTIC FUNCTION --- ONLY FOR 65MIV-X/ 65MIV2-X

- The Voice Diagnostic Function provides user an indispensable assistance on troubleshooting while assembling your computer components. If there is any conflict or other latent problem triggers a boot-up failure, this new VD-TECH technology will voice you realistically where the conflict/problem is, then user can remove the malfunction quickly.
- This function mainly provides 4 languages and their contents as following table:

<b>English Voice Content</b>
<ol style="list-style-type: none"> <li>1. No memory module</li> <li>2. Please check memory module</li> <li>3. Please clear CMOS setting</li> <li>4. Please check the Video adapter</li> <li>5. Please check hard disk cable or setting</li> </ol>
<b>國語語音内容</b>
<ol style="list-style-type: none"> <li>1. 未安裝記憶體</li> <li>2. 請檢查記憶體</li> <li>3. 請清除 CMOS 設定</li> <li>4. 請檢查顯示卡</li> <li>5. 請檢查硬碟接線及設定</li> </ol>
<b>El Contenido Español de la Voz</b>
<ol style="list-style-type: none"> <li>1. No hay modulo de memoria</li> <li>2. Por favor, chequea el modulo de memoria</li> <li>3. Por favor, borra CMOS setting</li> <li>4. Por favor, chequea la tarjeta de video</li> <li>5. Por favor, chequea el cable o la instalacion del disco duro</li> </ol>
<b>日本語音内容</b>
<ol style="list-style-type: none"> <li>1. メモリーないじゃん (メモリーがありません)</li> <li>2. メモリーだめだめ (メモリーをチェックして下さい)</li> <li>3. CMOS だめっす? (CMOSの内容をクリアして下さい)</li> <li>4. VGA どう? (ビデオカードをチェックして下さい)</li> <li>5. ハードディスクつながってる? (HDDケーブル又は設定をチェックして下さい)</li> </ol>

JP10: VD-TECH CONTROLLER CHIP	
Enabled (default)	JP10  1 3
Disabled	JP10  1 3



JP7/JP8: VOICE DIAGNOSTIC LANGUAGE SELECT	
Chinese Language	JP7  1 3 JP8  3
English Language (default)	JP7  1 3 JP8  3
Japanese Language	JP7  1 3 JP8  3
Spanish Language	JP7  1 3 JP8  3

**NOTE: JP7 and JP8 are supported by 65MIV-X/65MIV2-X only.**





**MEMO**

# CHAPTER 3

## SOFTWARE SETUP

### 3-1 ABOUT THE SUPPORT CD

- In support CD, it contains most informations for user's requirement, such as Acrobat Reader, BIOS, User's Manual, Driver, Hardware Monitor (if motherboard supports this function), Patch, and Utility etc. User can browse the CD and get further details in regard of our motherboard. Of course, welcome to vendor's website for the newest release.

### 3-2 VIA CHIPSET DRIVER INSTALLATION (4-IN-1 DRIVER)

Step 1:

- Please put the Support CD attached to motherboard into the CD-ROM drive.
- When appears a welcome window as left screen, then user should choose "**Install Driver**".

Step 2:

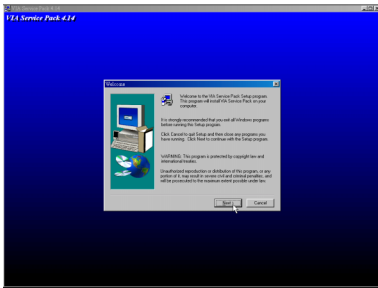
- Click on the "**VIA Chipsets Driver**".

Step 3:

- Click on the "**4-in-1 driver**".

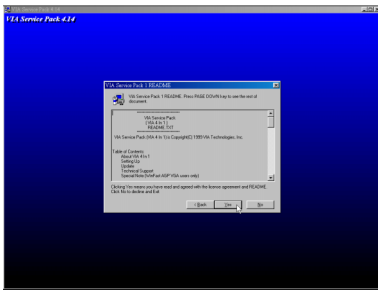
Step 4:

- Click on the "**Install VIA 4-in-1 driver**" to continue.



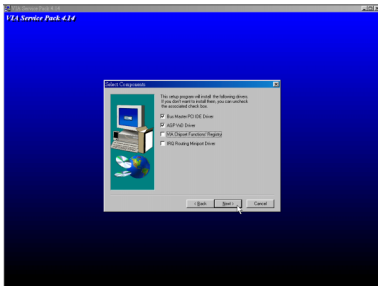
Step 5:

- Press Next button to continue.



Step 6:

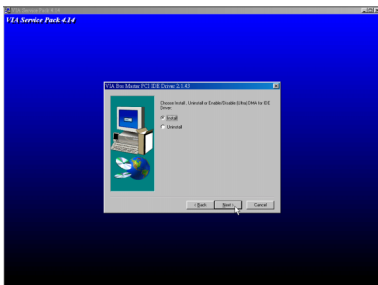
- Click “Yes” to continue.



Step 7:

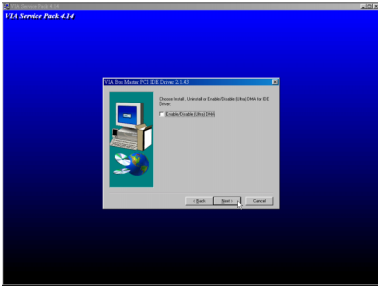
- Press select the checkbox as below:
  - **Bus Master PCI IDE Driver**
  - **AGP VxD Driver**
  - **VIA Chipset Function's Registry**
  - **IRQ Routing Miniport Driver**

Note: In Windows 98SE environment, user does not need to add “VIA Chipset Function's Registry” and “IRQ Routing Miniport Driver” items.



Step 8:

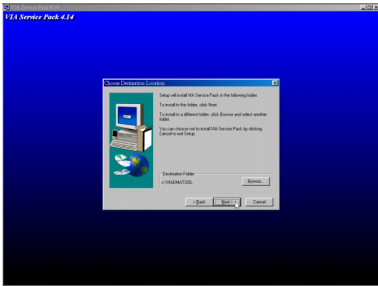
- Click “Install” and Press Next button to continue.



Step 9:

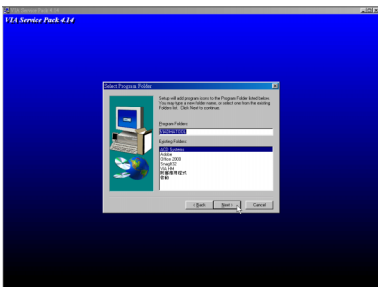
- We recommend user to leave “**Enable / Disable [Ultra] DMA**” checkbox empty.

Note: Whether select this item or not, user needs to enable the Hard Disk DMA function in Control Panel manually. (For further details, please refer to next page)



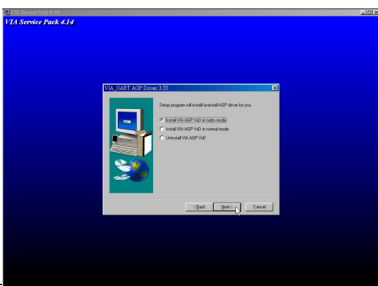
Step 10:

- The default setup destination is C:\VIADMATOOL, press Next button to continue.



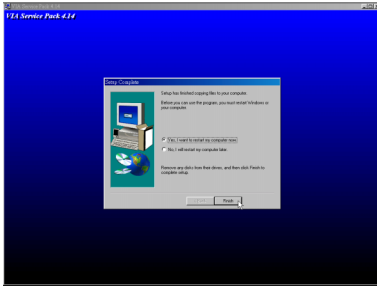
Step 11:

- Press Next button to continue.



Step 12:

- Select “**Install VIA AGP VxD**” in turbo mode and press Next button to continue.



Step 13:

- After all the setup process is finished, please restart your computer by clicking on Finish.

## About Hard Disk DMA Function

Last but not least, user must enable the Hard Disk DMA function. The process is below:

1. [Start] [Setting] [Control Panel] [System] [Device Manager].
2. In Device Manager, select [Disk Drivers] [GENERIC IDE TYPEXX].
3. Select [Properties] for GENERIC IDE TYPEXX.
4. In Properties, select [Settings].
5. In Option item, select the DMA checkbox.
6. Restart your computer.

### **3-3 ONBOARD S3® SAVAGE4™ VGA DRIVER INSTALLATION**

- We provide a simple process for user to install the S3® Savage4 VGA driver. Whichever Microsoft Windows operating system user adopts, they have similar installation below.

#### **3-3.1 INSTALL PM133 VGA DRIVER FOR WINDOWS 95/98/SE**

1. Please put the Support CD attached to motherboard into the CD-ROM drive. When appears a welcome window as left screen, then user should choose *"Install Driver"*.
2. Click on the *"VIA chipsets Driver"*.
3. Click on the *"VIA PM133 VGA Driver"* to continue.
4. Click on the *"Install VGA Driver for Win95/98/SE"*.
5. Full the instruction on screen to complete the installation, after which please restart your PC.

#### **3-3.2 INSTALL PM133 VGA DRIVER FOR NT4.0**

1. Please put the Support CD attached to motherboard into the CD-ROM drive. When appears a welcome window as left screen, then user should choose *"Install Driver"*.
2. Click on the *"VIA chipsets Driver"*.
3. Click on the *"VIA PM133 VGA Driver"* to continue.
4. Click on the *"Install VGA Driver for NT4.0"*.
5. Full the instruction on screen to complete the installation, after which please restart your PC.

### **3-3.3 INSTALL PM133 VGA DRIVER FOR WINDOWS ME**

1. Please put the Support CD attached to motherboard into the CD-ROM drive. When appears a welcome window as left screen, then user should choose *"Install Driver"*.
2. Click on the *"VIA chipsets Driver"*.
3. Click on the *"VIA PM133 VGA Driver"* to continue.
4. Click on the *"Install VGA Driver for Windows ME"*.
5. Follow the instruction on screen to complete the installation, after which please restart your PC.

### **3-3.4 INSTALL S3® SAVAGE4™ VGA DRIVER WINDOWS 2000**

1. Please put the Support CD attached to motherboard into the CD-ROM drive. When appears a welcome window as left screen, then user should choose *"Install Driver"*.
2. Click on the *"VIA chipsets Driver"*.
3. Click on the *"VIA PM133 VGA Driver"* to continue.
4. Click on the *"Install VGA Driver for Win2000"*.
5. Follow the instruction on screen to complete the installation, after which please restart your PC.

### 3-4 AC'97 AUDIO CODEC INSTALLATION

Step 1:

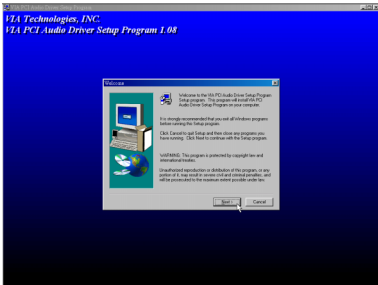
- Please put the Support CD attached to motherboard into the CD-ROM drive.
- When appears a welcome window as left screen, then user should choose “**Install Driver**”.

Step 2:

- Click on the “**VIA Chipsets Driver**”.

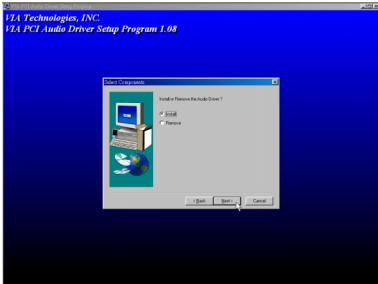
Step 3:

- Click on the “**AC'97 driver**”.



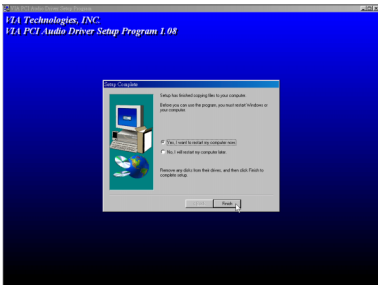
Step 4:

- Press Next button to continue.



Step 5:

- When asking you install or remove the audio driver, please select “**Install**” and press Next button to continue.



Step 6:

- It's recommended for user to restart the computer after the audio driver is finished. Please select “**Yes, I want to restart my computer now**”.





**MEMO**

# CHAPTER 4

## BIOS SETUP

### 4-1 INTRODUCE THE BIOS

- BIOS stands for Basic Input Output System. It is sometimes called ROM BIOS because it is stored in a Read-Only Memory(ROM) chip on the motherboard. BIOS is the first program to run when you turn on your computer.
- BIOS performs the following functions:
  1. Initializing and testing hardware in your computer(a process called “POST”, for Power On Self Test).
  2. Loading and running your operating system.
  3. Helping your operating system and application programs to manage your PC hardware by means of a set of routines called BIOS Run-Time Service.

### 4-2 WHAT IS BIOS SETUP

- Setup is an interactive BIOS program that you need to run when:
  1. Changing the hardware on your system. (for example: installing a new Hard Disk etc.,)
  2. Modifying the behavior of your computer. (for example: changing the system time or date, or turning special features on or off etc.,)
  3. Enhancing your computer’s behavior. (for example: speeding up performance by turning on shadowing or caching)

### 4-3 HOW TO RUN BIOS SETUP

- One way of running SETUP is to press a special function key or key combination during POST, before the operating system is loaded during POST, the BIOS usually displays a prompt such as:

Press DEL to enter SETUP

#### 4-4 WHAT IS CMOS

- CMOS is a special kind of memory maintained by a battery after you turn your computer off. The BIOS uses CMOS to store the settings you selected in SETUP. The CMOS also maintains the internal clock. Every time you turn on your computer, the BIOS Looks in CMOS for the settings you selected and configures your computer accordingly. If the battery charge runs too low, the CMOS content will be lost and POST will issue a “CMOS invalid” or “CMOS checksum invalid” message. If this happens, you may have to replace the battery. After the battery is replaced, the proper settings will need to be stored in SETUP.

#### 4-5 WHAT IS POST

- POST is an acronym for Power On Self Test. It's a traditional name for the routines that the BIOS uses to test and initializes the devices on your system when the PC is powered on. Its meanings has grown to include anything the BIOS does before the operating system is started. Each of POST routines is assigned a POST code, an unique number which is sent to I/O port 080h before the routine is executed.

#### 4-6 BIOS UPGRADE

- Motherboards incorporate the system BIOS in a Flash memory component. Flash BIOS allows user upgrades without the need to replace an EPROM component.
- The upgrade utility fits on a floppy diskette and provides the capability to save, verify, and update the system BIOS. The upgrade utility can be run from a hard disk drive or a network drive, but no memory managers can be installed during upgrades.

##### 4-6.1 BEFORE UPGRADE BIOS

- It is recommended that you save a copy of the original motherboard BIOS along with a Flash EPROM Programming utility(AWDFLASH.EXE) to a bootable floppy disk in case you need to reinstall the BIOS later.

## 4-6.2 UPGRADE PROCESS

Note: Normally, to upgrade BIOS that is unnecessary if the system is working fine without any problem, user should upgrade the BIOS unless you experienced incompatible problem or need BIOS upgrade to create new features. However, please read all information in this section before upgrading.

“AWDFLASH.EXE” is a Flash EPROM Programming utility that updates the BIOS by uploading a new BIOS file to the programmable flash ROM on the motherboard, This program only works in ***pure DOS environment, the utility can not be worked in win95/98, ME, NT or WINDOWS 2000 environment.***

### Upgrading the system BIOS

Set 1. Please visit the board maker’s website, download the newest BIOS file and newest award flash utility “AWDFLASH.EXE” for the motherboard. The BIOS file you downloaded will be a \*.bin format.

Step 2. Create a bootable diskette. Then copy the BIOS file and award flash utility “AWDFLASH.EXE” into the diskette.

Step 3. Insert the diskette into drive A, reboot your system and boot from the diskette.

Step 4. When booting is finished type **awdf flash \*.bin /sn/py/cc** and then press <Enter> to run BIOS upgrade program. (\*.bin depends on your motherboard model and version code).

Step 5. After upgraded, please press <F1> or <F10> to exit or reset your system, **Warning !** If there appears **Write Fail** while Award “FLASH MEMORY WRITER” verifying Flash memory, just repeat the process, please DO NOT reset or turn off the system. If the award memory flash utility was not able to update the BIOS successfully, your system may not be able to boot up,

Step 6. You will see a message “CMOS checksum error-Default loaded” during booting the system. Please press <Del> to run CMOS setup utility, then reload “LOAD SETUP DEFAULTS” or “**Load Optimized Defaults**” and save this change.

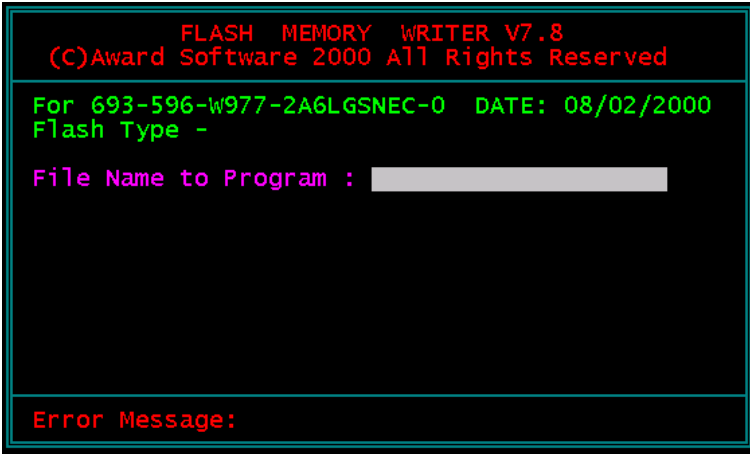


Figure 1 : Award Flash Memory Writer Start Screen

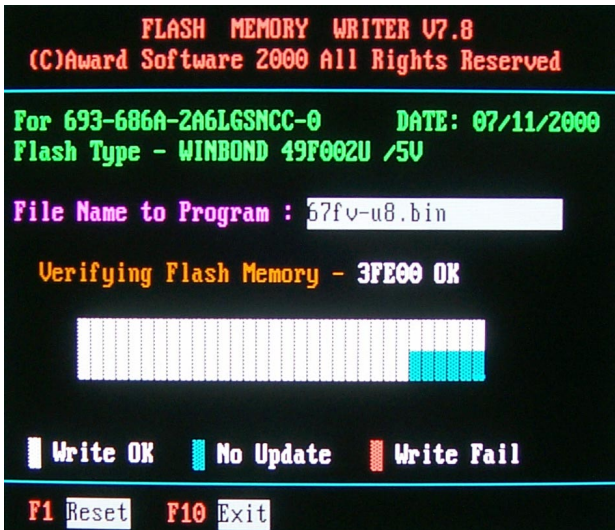


Figure 2 : Award Flash Memory Writer Start Screen

The parameters of AWDFLASH.EXE

/sn: No original BIOS backup

/py: Program flash memory

/cc: Clear CMOS data after programming

/r : Reset system after programming

**NOTE:** User can type AWDFLASH /? to get further details about parameters. Wrong usage of parameter will damage the BIOS information, so that we strongly recommend user to leave parameters away unless you realize their function.

## 4-7 CMOS SETUP UTILITY

- This VIA PM-133 motherboard comes with the AWARD BIOS from AWARD Software Inc. Enter the Award BIOS program Main Menu by:

1. Turn on or reboot your system. After a series of diagnostic checks, the following message will appear:

**PRESS <DEL> TO ENTER SETUP**

2. Press the <DEL> key and the main program screen will appear as follows.

**CMOS Setup Utility - Copyright (C) 1984 - 2000 Award Software**

<ul style="list-style-type: none"> <li>▶ Standard CMOS Features</li> <li>▶ Advanced BIOS Features</li> <li>▶ Advanced Chipset Features</li> <li>▶ Integrated Peripherals</li> <li>▶ Power Management Setup</li> <li>▶ PnP/PCI Configurations</li> <li>▶ PC Health Status</li> </ul>	<ul style="list-style-type: none"> <li>▶ Frequency Control</li> <li>Load Optimized Defaults</li> <li>Set Supervisor Password</li> <li>Set User Password</li> <li>SAVE &amp; EXIT SETUP</li> <li>EXIT WITHOUT SAVING</li> </ul>
<p>Esc : Quit F10 : Save &amp; Exit Setup</p>	<p>↑↓→← : Select Item (Shift) F2 : Change Color</p>
<p>Time, Date, Hard Disk Type...</p>	

3. Using the arrows on your keyboard, select an option, and press <Enter>. Modify the system parameters to reflect the options installed in your system.
4. You may return to the Main Menu anytime by pressing <ESC>.
5. In the Main Menu, "SAVE AND EXIT SETUP" saves your changes and reboots the system, and "EXIT WITHOUT SAVING" ignores your changes and exits the program.

## 4-8 STANDARD CMOS SETUP

- Standard CMOS Setup allows you to record some basic system hardware configuration and set the system clock and error handling. You only need to modify the configuration values of this option when you change your system hardware configuration or the configuration stored in the CMOS memory gets lost or damaged.

Run the STANDARD CMOS SETUP as following:

1. Choose “STANDARD CMOS SETUP” from the Main Menu and a screen with a list of option will appear:

### CMOS Setup Utility - Copyright (C) 1984-2000 Award Software Standard CMOS Features

<b>Date (mm:dd:yy)</b>	<b>Mon, January 1 2001</b>	<b>Item Help</b>
<b>Time (hh:mm:ss)</b>	<b>9 : 52 : 15</b>	<b>Menu Level ▶</b>
▶ <b>IDE Primary Master</b>	<b>Press Enter 13022 MB</b>	
▶ <b>IDE Primary Slave</b>	<b>Press Enter None</b>	
▶ <b>IDE Secondary Master</b>	<b>Press Enter None</b>	
▶ <b>IDE Secondary Slave</b>	<b>Press Enter None</b>	
<b>Drive A</b>	<b>1.44M, 3.5 in.</b>	
<b>Drive B</b>	<b>None</b>	
<b>Video</b>	<b>EGA/VGA</b>	
<b>Halt On</b>	<b>All Errors</b>	
<b>Base Memory</b>	<b>640K</b>	
<b>Extended Memory</b>	<b>31744K</b>	
<b>Total Memory</b>	<b>32768K</b>	

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

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys.



**Date (mm:dd:yy)** The BIOS determines the day of the week from the other date information. This field is for information only.

Press the left or right arrow key to move to the desired field (date, month, year). Press the PgUp or PgDn key to increment the setting, or type the desired value into the field.

**Time (hh:mm:ss)** The time format is based on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00. Press the left or right arrow key to move to desired field. Press the PgUp or PgDn key to increment the setting, or type the desired value into the field.

**Primary / Secondary Master / Slave** This field records the specifications for all non-SCSI hard disk drives installed in your system. Refer to the respective documentation on how to install the drives.

**CMOS Setup Utility - Copyright (C) 1984-2000 Award Software  
IDE Primary Master**

IDE HDD Auto-Detection	Press Enter	Item Help
IDE Primary Master	Auto	Menu Level ▶▶
Access Mode	Auto	
Capacity	13022 MB	
Cylinder	25232	
Head	16	
Precomp	0	
Landing Zone	25231	
Sector	63	

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

**Drive A / Drive B** Set this field to the type(s) of floppy disk drive(s) installed in your system. The choices are:  
360KB, 5.25in.,  
1.2MB, 5.25in.,  
720KB, 3.5in.,  
1.44MB, 3.5in., Drive A (default)  
2.88MB, 3.5in.,  
None., Drive B (default)

**Video** Set this field to the type of video display card installed in the system. The choices are:  
Mono,  
EGA / VGA (default) ,  
CGA 40,  
CGA 80

**Halt On** Set this warning feature for the type of errors that will cause the system to halt. The choices are:  
All Errors,  
No Errors,  
All, But Keyboard,  
All, But Diskette,  
All, But Disk / Key.

3. Press <ESC> to return to the Main Menu when you finish setting up all items.

## 4-9 ADVANCED BIOS FEATURES

- ADVANCED BIOS FEATURS allows you to improve your system performance or set up sysem features according to your preference.

Run the ADVANCED BIOS FEATURES as following:

1. Choose “ADVANCED BIOS FEATURES” from the Main Menu and a screen with a list of option will appear:
2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys. An explanation of the <F> keys follows:

<F1>: “Help” gives options available for each item.

<F5>: Get the previous values. These values are the values with which the user started in the current session.

<F6>: Load all options with Fail-Safe default values.

<F7>: Load all options with Optimized default values.

**CMOS Setup Utility - Copyright (C) 1984-2000 Award Software  
Advanced BIOS Features**

		Item Help
Virus Warning	Disabled	Menu Level ▶
CPU Internal Cache	Enabled	
External Cache	Enabled	
CPU L2 Cache ECC Checking	Enabled	
Process or Number Feature	Disabled	
Quick Power On Self Test	Enabled	
First Boot Device	Floppy	
Second Boot Device	HDD-0	
Third Boot Device	CDROM	
Boot Other Device	Enabled	
Swap Floppy Drive	Disabled	
Boot Up Floppy Seek	Disabled	
Boot Up NumLock Status	On	
Gate A20 Option	Fast	
Typematic Rate Setting	Disabled	
× Typematic Rate (Chars/Sec)	6	
× Typematic Delay (Msec)	250	
Security Option	Setup	
OS Select For DRAM > 64MB	Non-OS2	
Video BIOS Shadow	Enabled	
C8000-CBFFF Shadow	Disabled	
CC000-CFFFF Shadow	Disabled	
D0000-D3FFF Shadow	Disabled	
D4000-D7FFF Shadow	Disabled	
D8000-DBFFF Shadow	Disabled	
DC000-DFFFF Shadow	Disabled	

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

**Virus Warning** When enabled, you receive a warning message if a program (specifically, a virus) attempts to write to the boot sector or the partition table of the hard disk drive. You should then run an antivirus program. Keep in mind that this feature protects only the boot sector, not the entire hard drive.

**NOTE:** *Many disk diagnostic programs that access the boot sector table can trigger the virus warning message. If you plan to run such a program, we recommend that you disable the virus warning.*

**CPU Internal Cache/ External Cache** Cache memory is additional memory that is much faster than conventional DRAM (system memory). CPUs from 486-type on up contain internal cache memory, and most, but not all, modern PCs have additional (external) cache memory. When the CPU requests data, the system transfers the requested data from the main DRAM into cache memory, for even faster access by the CPU. The External Cache field may not appear if your system does not have external cache memory.

**CPU L2 Cache ECC Checking** When you select *Enabled*, memory checking is enabled when the external cache contains ECC SRAMs. The choice: Enabled, Disabled.

**Processor Number Feature** Choose Disabled or Enabled. When enabled, the processor serial number will display during the boot up screen.

**Quick Power On Self Test** Select *Enabled* to reduce the amount of time required to run the power-on self -test (POST). A quick POST skips certain steps. We recommend that you normally disable quick POST. Better to find a problem during POST than lost data during your work.

- First/Second/Third/Other Boot Device** The BIOS attempts to load the operating system from the devices in the sequence selected in these items. The choice: Floppy, LS/ZIP, HDD, SCSI, CDROM, Disabled.
- Swap Floppy Drive** This field is effective only in systems with two floppy drives. Selecting Enabled assigns physical drive B logical drive A, and physical drive A to logical drive B.
- Boot Up Floppy Seek** When enabled, the BIOS tests (seeks) floppy drives to determine whether they have 40 or 80 tracks. Only 360-KB floppy drives have 40 tracks; drives with 270KB, 1.2MB, and 1.44MB capacity all have 80 tracks. Because very few modern PCs have 40-track floppy drives, we recommend that you set this field to a disabled to save time.
- Boot Up NumLock Status** Toggle between On or Off to control the state of the NumLock key when the system boots. When toggled On, the numeric keypad generates numbers instead of controlling cursor operations.
- Gate A20 Option** Gate A20 refers to the way the system addresses memory above 1 MB (extended memory). When set to *Fast*, the system chipset controls Gate A20. When set to *Normal*, a pin in the keyboard controller controls Gate A20. Setting Gate A20 to Fast improves system speed, particularly with OS/2 and Windows.
- Typematic Rate Setting** When *Disabled*, the following two items (Typematic Rate and Typematic Delay) are irrelevant. Keystroke repeat at a rate determined by the keyboard controller in your system. When *Enabled*, you can select a typematic rate and typematic delay.

**Typematic Rate (Chars / Sec)** When the typematic rate setting is enabled, you can select a typematic rate (the rate at which character repeats when you hold down a key) of 6, 8, 10, 12, 15, 20, 24, or 30 characters per second.

**Typematic Delay (Msec)** Choose 250 (default), 500, 750 and 1000. This option sets the time interval for displaying the first and the second characters.

**Security Option** If you have set a password, select whether the password is required every time the System boots, or only when you enter setup.

**OS Select For DRAM > 64MB** Select OS2 only if you are running OS/2 operating system with greater than 64MB of RAM on your system.

**Video BIOS Shadow** Enabled copies Video BIOS to shadow RAM for improving performance.  
The choice: Enabled (default), Disabled.

**C8000-CBFFF to DC000-DFFFF Shadow** These options are used to shadow other expansion card ROMs.

3. Press <ESC> to return to the Main Menu when you finish setting up all items.

## 4-10 ADVANCED CHIPSET FEATURES

- ADVANCED CHIPSET FEATURES allows you to change the values of chipset registers. These registers control the system options.

Run the ADVANCED CHIPSET FEATURES as following:

1. Choose "ADVANCED CHIPSET FEATURES" from the Main Menu and a screen with a list of option will appear:
2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys. An explanation of the <F> keys follows:

<F1>: "Help" gives options available for each item.

<F5>: Get the previous values. These values are the values with which the user started in the current session.

<F6>: Load all options with Fail-Safe default values.

<F7>: Load all options with Optimized default values.



**CMOS Setup Utility - Copyright (C) 1984-2000 Award Software  
Advanced Chipset Features**

		Item Help
Bank 0/1 DRAM Timing	SDRAM 8/10ns	Menu Level ▶
Bank 2/3 DRAM Timing	SDRAM 8/10ns	
Bank 4/5 DRAM Timing	SDRAM 8/10ns	
SDRAM Cycle Length	3	
DRAM Clock	Host CLK	
DRAM Drive Strength	Auto	
× DRAM Drive Value	2F	
Memory Hole	Disabled	
P2C/C2P Concurrency	Enabled	
Fast R-W Turn Around	Disabled	
System BIOS Cacheable	Disabled	
Video RAM Cacheable	Disabled	
Frame Buffer Size	8M	
AGP Aperture Size	64M	
AGP-4X Mode	Disabled	
AGP Driving Control	Auto	
× AGP Driving Value	DA	
AGP Fast Write	Disabled	
OnChip USB	Enabled	
OnChip USB 2	Enabled	
USB Keyboard Support	Disabled	
USB Mouse Support	Disabled	
OnChip Sound	Auto	
OnChip Modem	Auto	
CPU to PCI Write Buffer	Enabled	
PCI Dynamic Bursting	Disabled	
PCI Master 0 WS Write	Enabled	
PCI Delay Transaction	Enabled	
PCI#2 Access #1 Retry	Disabled	
AGP Master 1 WS Write	Disabled	
AGP Master 1 WS Read	Disabled	
CPU Vcore Select	Default	

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

**Bank 0/1 2/3 4/5 DRAM Timing** This item allows you to select the value in this field, depending on whether the board has paged DRAMs or EDO (Extended Data Output) DRAMs.

The choice: SDRM 8 / 10ns

Normal

Medium

Fast

Turbo

**SDRAM Cycle Length Time** You can select CAS latency time in HCLKs of 2/2 or 3/3. The system board designer should have set the values in this field, depending on the DRAM installed. Do not change the values in this field unless you change specifications of the installed DRAM or the installed CPU.

**DRAM Clock** This item allows you to control the DRAM speed.  
The choice: Host Clock, HCLK+33M, HCLK-33M.

**DRAM Drive Strength** Leave this item with Auto mode.  
The choice: Auto, Manual.

**DRAM Drive Value** When "DRAM Drive Strength" is set to "Auto", this item will be unable to be selected. We don't recommend user to adjust this item.

**Memory Hole** In order to improve performance, certain space in memory is reserved for ISA cards. This memory must be mapped into the memory space below 16MB.  
The choice: 15M-16M, Disabled.

**P2C/C2P Concurrency** This item allows you to enable/disable the PCI to CPU, CPU to PCI concurrency.  
The choice: Enabled, Disabled.

**Fast R-W Turn Around** This item controls the DRAM timing. It allows you to enable / disable the fast read / write turn around.  
The choice: Enabled, Disabled.

**System BIOS Cacheable** Choose Enabled or Disabled (default). When enabled, the access to the system BIOS ROM addressed at F0000H - FFFFFH is cached.

**Video RAM Cacheable** Choose Enabled or Disabled (default). When enabled, the access to the VGA RAM addressed is cached.

**Frame Buffer Size** 4M/8M(default)/16M/32M/NA.This option allows you select memory size shared to onboard VGA.

**AGP Aperture Size** Choose 4, 8, 16, 32, 64 (default), 128 or 256 MB. Memory mapped and graphics data structures can reside in a Graphics Aperture. This area is like a linear buffer. BIOS will automatically report the starting address of this buffer to the O.S.

**AGP-4X Mode** This item allows user enable/disable the AGP 4X (133MHz clock)mode.  
The choice. Enabled, Disabled(default)

**AGP Driving Control** This item allows you to adjust the AGP driving force. Choose Manual to key in a AGP Driving Value in the next selection. This field is recommended to set in Auto for avoiding any error in your system.  
The choice: Manual, Auto.

**AGP Driving Value** This item allows you to adjust the AGP driving force.  
The choice: Min=0000 ~ Max=00FF.

**AGP Fast Write** This item will enable the AGP model into fast write mode.

**OnChip USB / USB2** This should be enabled if your system has a USB installed on the system board and you want to use it. Even when so equipped, if you add a higher performance controller, you will need to disable this feature. The choice: Enabled, Disabled.

**USB Keyboard Support** Select Enabled if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard. The choice:Enabled,Disabled.

**USB Mouse Support** Select Enabled if your system contains a Universal Serial Bus (USB) controller and you have a USB mouse. The choice:Enabled,Disabled.

**OnChip Sound** Enabled: Turn on AC'97 codec chip controller. Disabled: Turn off AC'97 codec chip controller or user can plug external add-on sound card.

**OnChip Modem** Enabled: Turn on MC99 feature. Disabled (default): Turn off AC'97 codec chip controller or user can connect external add-on modem.

**CPU to PCI Write Buffer** When this field is Enabled, writes from the CPU to the PCI bus are buffered, to compensate for the speed differences between the CPU and the PCI bus. When Disabled, the writes are not buffered and the CPU must wait until the write is complete before starting another write cycle. The choice: Enabled, Disabled.

**PCI Dynamic Bursting** When Enabled, every write transaction goes to the write buffer. Bursting transactions then burst on the PCI bus and non-bursting transactions don't. The choice: Enabled, Disabled.

**PCI Master 0 WS Write** When Enabled, writes to the PCI bus are executed with zero wait states.  
The choice: Enabled, Disabled.

**PCI Delay Transaction** The choice: Enabled, Disabled.

**PCI # 2 Access # 1  
Retry** The choice: Enabled, Disabled(default).

**AGP Master 1 WS  
Write** The choice: Enabled, Disabled(default).

**AGP Master 1 WS  
Read** The choice: Enabled, Disabled(default).

**CPU Vcore Select** This item allows you select the CPU's Vcore voltage.  
The choice: Default, +0.05V, +0.1V, +0.2V, +0.3V,  
+0.4V, -0.05V, -0.1V.

3. Press <ESC> to return to the Main Menu when you finish setting up all items.

## 4-11 INTEGRATED PERIPHERALS

- INTEGRATED PERIPHERALS option allows you to get some informations inside your system when it is working.

Run the INTEGRATED PERIPHERALS as following:

1. Choose "INTEGRATED PERIPHERALS" from the Main Menu and a screen with a list of option will appear:
2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys. An explanation of the <F> keys follows:

<F1>: "Help" gives options available for each item.

<F5>: Get the previous values. These values are the values with which the user started in the current session.

<F6>: Load all options with Fail-Safe default values.

<F7>: Load all options with Optimized default values.

**CMOS Setup Utility - Copyright (C) 1984-2000 Award Software  
Integrated Peripherals**

		Item Help
On-Chip IDE Channel 0	Enabled	Menu Level ▶
On-Chip IDE Channel 1	Enabled	
IDE Prefetch Mode	Enabled	
Primary Master PIO	Auto	
Primary Slave PIO	Auto	
Secondary Master PIO	Auto	
Secondary Slave PIO	Auto	
Primary Master UDMA	Auto	
Primary Slave UDMA	Auto	
Secondary Master UDMA	Auto	
Secondary Slave UDMA	Auto	
Init Display First	PCI Slot	
IDE HDD Block Mode	Enabled	
Onboard FDD Controller	Enabled	
Onboard Serial Port 1	Auto	
Onboard Serial Port 2	Auto	
UART 2 Mode	Standard	
× IR Function Duplex	Half	
× TX, RX inverting enable	No, Yes	
Onboard Parallel Port	378/IRQ7	
Onboard Parallel Mode	Normal	
ECP Mode Use DMA	3	
Parallel Port EPP Type	EPP1.9	
Onboard Legacy Audio	Enabled	
Sound Blaster	Disabled	
SB I/O Base Address	220H	
SB IRQ Select	IRQ 5	
SB DMA Select	DMA 1	
MPU-401	Disabled	
MPU-401 I/O Address	330-333H	
Game Port (200-207H)	Enabled	

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

**On-Chip IDE channel 0/1** The chipset contains a PCI IDE interface with support from two IDE channels. Select Enabled to activate the first and/or the second IDE interface. Select Disabled to deactivate an interface if you install a primary and/or second add-on IDE interface.  
The choice: Enabled (default), Disabled.

**IDE Prefetch Mode** The onboard IDE drive interfaces supports IDE prefetching for faster drive accesses. If you install a primary and/or secondary add-in IDE interfaces, set this field to Disabled if the interface does not support prefetching.  
The choice: Enabled, Disabled.

**Primary Master / Slave PIO Secondary Master / Slave PIO** Choose Auto (default) or Mode 0~4. The BIOS will detect the HDD mode type automatically when you choose Auto. You need to set to a lower mode than Auto when your hard disk becomes unstable.  
The choice: Auto, Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

**Primary Master / Slave UDMA Secondary Master / Slave UDMA** Ultra DMA/66 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA drive and your system software both support Ultra DMA/66, select Auto to enable BIOS support.  
The choice: Auto, Disabled.

**Init Display First** Initialize the AGP video display before initializing any other display device on the system. Thus the AGP display becomes the primary display.

**IDE HDD Block Mode** Block mode is also called block transfer, multiple commands, or multiple sector read/write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read/write per sector the drive can support.



- Onboard FDC Controller** Select Enabled if your system has a floppy drive controller (FDC) installed on the system board and you want to use it. If you install add-in FDC or the system has no floppy drive, select Disabled in this field.  
The choice: Enabled, Disabled.
- Onboard Serial Port 1 / Port2** Select a logical COM port name and matching address for the first and second serial ports. Select an address and corresponding interrupt for the first and second serial ports.
- UART 2 Mode** The second serial port on your system may offer a variety of infrared port modes. Click here for a description of various modes. (Click your browser's Back button, or your right mouse button, to return to this page.)
- IR Function Duplex** Select the value required by the IR device connected to the IR port. Full-duplex mode permits simultaneous two-direction transmission. Half-duplex mode permits transmission in one direction only at a time. If no infrared port is present in the system, select Disabled.
- TX, RX inverting enable** This item allows you to enable the TX, RX inverting which depends on different H/W requirement. This field is not recommended to change its default setting for avoiding any error in your system.  
The choice: "No, No", "No, Yes"(default), "Yes, No", "Yes, Yes".
- Onboard Parallel Port** Select a logical LPT port address and corresponding interrupt for the physical parallel port.
- Onboard Parallel Port Mode** Select an operating mode for the onboard parallel (printer) port. Select Normal, Compatible, or SPP unless you are certain your hardware and software both support one of the other available modes.  
The choice: Normal , EPP, ECP, ECP/EPP.

## 65MIV/65MIV2/65MIV-X/65MIV2-X

**ECP Mode Use DMA** Select a DMA channel for the port.

**Parallel Port EPP Type** Select EPP port type 1.7 or 1.9, as required by your parallel peripheral.

**Onboard Legacy Audio** This field controls the onboard audio.

- Sound Blaster
- SB I/O Base Address
- SB IRQ Select
- SB DMA Select
- MPU-401
- MPU-401 I/O Address
- Game Port (200-207H)

3. Press <ESC> to return to the Main Menu when you finish setting up all items.

## 4-12 POWER MANAGEMENT SETUP

- POWER MANAGEMENT SETUP allows you to set the system's power saving functions.

Run the POWER MANAGEMENT SETUP as following:

1. Choose "POWER MANAGEMENT SETUP" from the Main Menu and a screen with a list of option will appear:

### CMOS Setup Utility - Copyright (C) 1984-2000 Award Software Power Management Setup

ACPI Function	Enabled	Item Help
▶ Power Management	Press Enter	Menu Level ▶
ACPI Suspend Type	S1 (POS)	
PM Control by APM	Yes	
Video Off Option	V/H SYNC+Blank	
Video Off Method	Standby	
MODEM Use IRQ	3	
Soft-Off by PWRBTN	Instand-Off	
▶ State After Power Failure	Auto	
Wake Up Events	Press Enter	

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

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys. An explanation of the <F> keys follows:

<F1>: "Help" gives options available for each item.

<F5>: Get the previous values. These values are the values with which the user started in the current session.

<F6>: Load all options with Fail-Safe default values.

<F7>: Load all options with Optimized default values.

**ACPI Function** Select Enabled only if your computer's operating system supports the Advanced Configuration and Power Interface (ACPI) specification. Currently, Windows NT 5.0 support ACPI.

**CMOS Setup Utility - Copyright (C) 1984-2000 Award Software  
Power Management**

<b>Power Management</b>	<b>User Define</b>	<b>Item Help</b>
<b>HDD Power Down</b>	<b>Disable</b>	<b>Menu Level ▶</b>
<b>Doze Mode</b>	<b>Disable</b>	
<b>Suspend Mode</b>	<b>Disable</b>	

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

**Power Management** This category allows you to select the type (or degree) of power saving and is directly related to the following modes:

Max Saving	Maximum power savings. Only Available for SL CPUs. Inactivity period is 1 minute in each mode.
User Define	Set each mode individually. Select time-out periods in the section for each mode, below.
Min Saving	Minimum power savings. Inactivity period is 1 hour in each mode (except the hard drive).

**HDD Power Down** After the selected period of drive inactivity, the hard disk drive powers down while all other devices remain active.

**Doze Mode** After the selected period of system inactivity, the CPU clock runs at slower speed while all other devices still operate at full speed.

**Suspend Mode** After the selected period of system inactivity, all devices except the CPU shut off.

**ACPI Suspend Type** This item will allow you to select the ACPI suspend type. You can select S3(STR) for suspending to DRAM or S1(POS) for power on suspend under Windows 98 ACPI mode.  
The choice: S1(POS), S3(STR).

**PM Control by APM** When enabled, an Advanced Power Management device will be activated to enhance the Max. Power Saving mode and stop the CPU internal clock, If Advanced Power Management (APM) is installed on your system, selecting Yes gives better power savings. If the Max. Saving is not enabled, this will be present to No.

**Video Off Option** When enabled, this feature allows the VGA adapter to operate in a power saving mode.

Always On	Monitor will remain on during power saving modes.
Suspend --> Off	Monitor blanked when the systems enters the Suspend mode.
All Modes --> Off	Monitor blanked when the system enters either Suspend or Standby modes.

**Video Off Method** This determines the manner in which the monitor is blanked.

V/H SYNC + Blank	This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.
Blank Screen	This option only writes blanks to the video buffer.
DPMS Supports	Select this option if your monitor supports the Display Power Management Signaling (DPMS) standard of the Video Electronics Standards to select video power management values.

**MODEM Use IRQ** Name the interrupt request (IRQ) line assigned to the modem (if any) on your system. Activity of the selected IRQ always awakens the system.

**Soft-Off by PWR-BTTN** When Enabled, turning the system off with the on/off button places the system in a very low-power-usage state, with only enough circuitry receiving power to detect power button activity or Resume by Ring activity.

**State after Power Failure** This field lets you determine the state that your PC returns to after a power failure. If set to off, the PC will not boot after a power failure. If set to On, the PC will restart after a power failure.

**CMOS Setup Utility - Copyright (C) 1984-2000 Award Software**  
**Wake Up Events**

VGA	OFF	Item Help
LPT & COM	LPT/COM	Menu Level ▶
HDD & FDD	ON	
PCI Master	OFF	
Wake Up On LAN/Ring	Disabled	
RTC Alarm Resume	Disabled	
Date (of Month)	0	
Resume Time (hh:mm:ss)	0 0 0	
Primary INTR	ON	
IRQ Activity Monitoring	Press Enter	

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

**VGA** When Enabled, you can set the VGA awakens the system

**LPT & COM** When On of LPT & COM, any activity from one of the listed system peripheral devices or IRQs wakes up the system.

**HDD & FDD** When On of HDD & FDD, any activity from one of the listed system peripheral devices wakes up the system.

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

**Wake Up On LAN/Ring** An input signal from a local area network (LAN) awakens the system from a soft off state.

**RTC Alarm Resume** When Enabled, you can set the date and time at which the RTC (Real Time Clock) alarm awakens the system from suspend mode.

**Date (of Month)** Select a date in the month when you want the alarm to go off.

**Resume Time (hh:mm:ss)** Set the time you want the alarm to go off.

**Primary INTR** When set to on, any event occurring at will awaken a system which has been powered down.  
On(default):The system can not enter the power saving mode when I/O ports or IRQ# is activated.  
Off:The system still can enter the power saving mode when I/O ports or IRQ# is activated.

**IRQ Activity Monitoring** - 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 set On, activity will neither prevent the system from going into a power management mode nor awaken it.

**CMOS Setup Utility - Copyright (C) 1984-2000 Award Software  
IRQ Activity Monitoring**

IRQ 3 (COM2)	Enabled	Item Help
IRQ 4 (COM1)	Enabled	Menu Level ▶
IRQ 5 (LPT2)	Enabled	
IRQ 6 (Floppy Disk)	Enabled	
IRQ 7 (LPT1)	Enabled	
IRQ 8 (RTC Alarm)	Disabled	
IRQ 9 (IRQ2 Redir)	Disabled	
IRQ 10 (Reserved)	Disabled <sup>⌘</sup>	
IRQ 11 (Reserved)	Disabled <sup>⌘</sup>	
IRQ 12 (PS/2 Mouse)	Enabled	
IRQ 13 (Coprocessor)	Enabled <sup>⌘</sup>	
IRQ 14 (Hard Disk)	Enabled	
IRQ 15 (Reserved)	Disabled	

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

3. Press <ESC> to return to the Main Menu when you finish setting up all items.



## 4-13 PNP / PCI CONFIGURATION

- PNP/PCI CONFIGURATION allows you to set the system's power saving functions.

Run the PNP/PCI CONFIGURATION as following:

1. Choose "PNP/PCI CONFIGURATION" from the Main Menu and a screen with a list of option will appear:

### CMOS Setup Utility - Copyright (C) 1984-2000 Award Software PnP/PCI Configurations

<b>PNP OS Installed</b>	<b>No</b>	<b>Item Help</b>
<b>Reset Configuration Data</b>	<b>Disabled</b>	<b>Menu Level ▶</b>
<b>Resources Controlled By</b>	<b>Auto(ESCD)</b>	
× <b>IRQ Resources</b>	<b>Press Enter</b>	
× <b>DMA Resources</b>	<b>Press Enter</b>	
	<b>▣</b>	
<b>PCI/VGA Palette Snoop</b>	<b>Disabled</b>	
<b>Assign IRQ For VGA</b>	<b>Enabled</b>	
<b>Assign IRQ For USB</b>	<b>Enabled</b>	

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

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys. An explanation of the <F> keys follows:

<F1>: "Help" gives options available for each item.

<F5>: Get the previous values. These values are the values with which the user started in the current session.

<F6>: Load all options with Fail-Safe default values.

<F7>: Load all options with Optimized default values.

**PNP OS Installed** Select Yes if the system operating environment is Plug-and-Play aware (e.g., Windows95).

**NOTE:** *BIOS will automatically disable all PnP resources except the boot device card when you select Yes on Non-PnP operating system.*

**Reset Configuration Data** Normally, you leave this 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 cannot boot.

**Resource Controlled By** The Plug and Play AwardBIOS can automatically configure all the boot and Plug and Play-compatible devices. If you select *Auto*, all the interrupt request (IRQ) and DMA assignment fields disappear, as the BIOS automatically assigns them.

**IRQ Resources** Press Enter. Please refer to the below list.

**CMOS Setup Utility - Copyright (C) 1984-2000 Award Software  
IRQ Resources**

IRQ-3 assigned to	PCI/ISA PnP	Item Help
IRQ-4 assigned to	PCI/ISA PnP	Menu Level ▶
IRQ-5 assigned to	PCI/ISA PnP	
IRQ-7 assigned to	PCI/ISA PnP	
IRQ-9 assigned to	PCI/ISA PnP	
IRQ-10 assigned to	PCI/ISA PnP	
IRQ-11 assigned to	PCI/ISA PnP	
IRQ-12 assigned to	PCI/ISA PnP	
IRQ-14 assigned to	PCI/ISA PnP	
IRQ-15 assigned to	PCI/ISA PnP	

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

**DMA Resources** Press Enter. Please refer to the below list.

**CMOS Setup Utility - Copyright (C) 1984-2000 Award Software  
DMA Resources**

DMA-0 assigned to	PCI/ISA PnP	Item Help
DMA-1 assigned to	PCI/ISA PnP	Menu Level ▶
DMA-3 assigned to	PCI/ISA PnP	
DMA-5 assigned to	PCI/ISA PnP	
DMA-6 assigned to	PCI/ISA PnP	
DMA-7 assigned to	PCI/ISA PnP	

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

**PCI/VGA Palette Snoop** This option allows the BIOS to preview VGA status, and to modify the information delivered from the feature Connector of the VGA card to MPEG card. This option can solve the display inversion to black after you have used MPEG card.

**Assign IRQ for VGA** Select *Enabled* if you system has a VGA controller and you have one or more USB devices connected. If you are not using your system's VGA controller, select *Disabled* to free the IRQ resource.

**Assign IRQ for USB** Select *Enabled* if you system has a USB controller and you have one or more USB devices connected. If you are not using your system's USB controller, select *Disabled* to free the IRQ resource.

3. Press <ESC> to return to the Main Menu when you finish setting up all items.

## 4-14 PC HEALTH STATUS

- This section helps you to get more information about your system including CPU temperature, FAN speed and voltage. It is recommended that you contact with your motherboard supplier to get proper value about your setting of the CPU temperature.

### CMOS Setup Utility - Copyright (C) 1984-2000 Award Software PC Health Status

<b>Shutdown Temperature</b>	<b>60°C/140°F</b>	<b>Item Help</b>
<b>Voltage 0</b>	<b>1.87 V</b>	<b>Menu Level ▶</b>
<b>Voltage 1</b>	<b>2.00 V</b>	
<b>Voltage 2</b>	<b>3.37 V</b>	
<b>Voltage 3</b>	<b>5.02 V</b>	
<b>Voltage 4</b>	<b>12.28 V</b>	
<b>Voltage 5</b>	<b>(-)12.52 V</b>	
<b>Voltage 6</b>	<b>(-)5.10 V</b>	
<b>Voltage 7</b>	<b>5.08 V</b>	
<b>Voltage Battery</b>	<b>3.08 V</b>	
<b>Temperature 1</b>	<b>41°C</b>	
<b>Temperature 2</b>	<b>(-)55°C</b>	
<b>Temperature 3</b>	<b>(-)55°C</b>	
<b>Fan 1 Speed</b>	<b>5625 RPM</b>	
<b>Fan 2 Speed</b>	<b>0 RPM</b>	
<b>Fan 3 Speed</b>	<b>0 RPM</b>	

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

**Shutdown Temperature** This item allows you to set up the CPU shutdown Temperature. This item only effective under Windows 98 ACPI mode.

The choice:60°C/140°F , 65°C/149°F , 70°C/158°F , 75°C/167°F

**Voltage** Shows power supply actual voltage value.

**Temperature 1/2/3** This field displays the current CPU temperature, if your computer contains a monitoring system.

**FAN 1/2/3 Speed** These fields display the current speed of up to three CPU fans, if your computer contains a monitoring system.

- Press <ESC> to return to the Main Menu when you finish setting up all items.

## 4-15 FREQUENCY/VOLTAGE CONTROL

### CMOS Setup Utility - Copyright (C) 1984-2000 Award Software Frequency Control

Auto Detect DIMM/PCI CLK	Disabled	Item Help
Spread Spectrum	Disabled	Menu Level ▶
CPU Host Clock	66	

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

**Auto Detect DIMM/PCI CLK** To reduce the occurrence of electromagnetic interference (EMI), the BIOS detects the presence or absence of components in DIMM and PCI slots and turns off system clock generator pulses to empty slots.

**Spread Spectrum Modulated** When the system clock generator pulses, the extreme values of the pulse generate excess EMI. Enabling pulse spectrum spread modulation changes the extreme values from spikes to flat curves, thus reducing EMI. This benefit may in some cases be outweighed by problems with timing-critical device, such as a clock-sensitive SCSI device.

**CPU Host Clock** Select Default or select a timing combination for the CPU bus. When set to Default, the BIOS uses the actual CPU bus clock values.

- Press <ESC> to return to the Main Menu when you finish setting up all items.

## 4-16 LOAD OPTIMIZED DEFAULTS

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

**“ Load Optimized Defaults (Y / N) ? N ”**

Pressing “Y” loads the BIOS default values that are factory settings for optimal performance system operations.

## 4-17 SET SUPERVISOR / USER PASSWORD

- These two options allow you to set your system passwords. Normally, the supervisor has a higher ability to change the CMOS setup option than the user. The way to set up the passwords for both Supervisor and User are as follows:

1. Choose “Change Password” in the Main Menu and press <Enter>. The following message appears:

**“Enter Password : ”**

2. The first time you run this option, enter your password up to 8 characters and press <Enter>. The screen does not display the entered characters.
3. After you enter the password, the following message appears prompting you to confirm the password:

**“Confirm Password : ”**

4. Enter the same password “exactly” as you just typed again to confirm the password and press <Enter>.
5. Move the cursor to Save & Exit Setup to save the password.
6. If you need to delete the password you entered before, choose the Supervisor Password and press <Enter>. It will delete the password that you had before.
7. Move the cursor to Save & Exit Setup to save the option you did, otherwise the old password will still be there the next time you turn your system on.
8. Press <Enter> to exit to the Main Menu.

**NOTE:** *If you forget or lose the password, the only way to access the system is to clear the CMOS RAM. All setup information will be lost and you need to run the BIOS setup program again.*

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

## 4-18 SAVE & EXIT SETUP

- SAVE & EXIT SETUP allows you to save all modifications you have specified into the CMOS memory. Highlight this option on the Main Menu and the following message appears:

`"SAVE to CMOS and EXIT (Y/N) ? Y "`

Press <Enter> key to save the configuration changes.

## 4-19 EXIT WITHOUT SAVING

- EXIT WITHOUT SAVING option allows you to exit the Setup Utility without saving the modifications that you have specified. Highlight this option on the Main Menu and the following message appears:

`"Quit Without Saving (Y/N) ? N "`

You may change the prompt to "Y" and press <Enter> key to leave this option .