FCC Information and Copyright

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. There is no guarantee that interference will not occur in a particular installation.

The vendor makes no representations or warranties with respect to the contents here of and specially disclaims any implied warranties of merchantability or fitness for any purpose. Further the vendor reserves the right to revise this publication and to make changes to the contents here of without obligation to notify any party beforehand.

Duplication of this publication, in part or in whole, is not allowed without first obtaining the vendor's approval in writing.

The content of this user's manual is subject to be changed without notice and we will not be responsible for any mistakes found in this user's manual. All the brand and product names are trademarks of their respective companies.

|--|

LAYOUT OF M6VLQ GRAND 1
COMPONENT INDEX2
ENGLISH
DIMM Modules: DIMM1/ DIMM2
ES PAÑOL 12 Características del M6VLQ Pro. 12 Contenido del Paquete 13 Cómo instalar un Puente. 14 Instalación de la CPU. 14 Módulos DIMM: DIMM1/ DIMM2. 15 Puentes, Cabezales, Conectores y Ranuras 16
WATCHDOG TECHNOLOGY
WA RPS PEEDER.22Introduction.22System Requirement.22Installation23Usage.24
S TUDIO FUN! TM (OPTIONAL)
TROUBLE SHOOTING



Layout of M6VLQ Grand

NOTE: ●represents the first pin.

Component Index



English

M6VLQ Pro Features

A. Hardware

CPU

- Provides Socket 370
- Supports Celeron™ processor PPGA (FC-PGA & FC-PGA2) and the Pentium® III Micro-Processor (FC-PGA & FC-PGA2) and VIA C3 Ezra and Ezra-T Samuel 2 for high-end workstations and servers.
- Front Side Bus at 66/100/133 MHz.

Chipset

North Bridge: VIA CLE266 CE. South Bridge: VIA VT8235.

Main Memory Supports up to 2 DDR devices. Supports 200/266 MHz (without ECC) DDR devices. Maximum memory size of 2GB.

Lan Chip (optional) Chip: VIA VT6103.

Supports 10 Mb/s and 100 Mb/s auto-negotiation Half / Full duplex capability.

Slots Three 32-bit PCI bus masterslots. One CNR slot.

On Board IDE Supports four IDE disk drives.

Supports FIO Mode 4, Bride Mode and Ultra DMA 33/66/100/133 Bus Master Mode.

Super I/O Chip: ITE IT8705.

Provides the most commonly used legacy Super I/O functionality.

- Environment Control initiatives
 - H/W Monitor
 - Fan Speed Controller
 - ITE's "Smart Guardian" function

On Board AC'97 Sound Codec

Chip: VIA VT1612A.

- AC'97 2.2 S/PDIF extension compliant codec.
- 18-bit stereo full duplex.

On Board Peripherals *a.Rearside* 1 serial port

- 1 VGA port
- 1 parallel port. (SPP/EPP/ECP mode)
- 1 audio pott in horizontal position.
- 1 LAN jack.
- PS/2 mouse and PS/2 keyboard.
- 2USB2.0 ports.

- *b.FrontSide* 1 floppy port supports 2 FDDs with 360K, 720K, 1.2M, 1.44M and 2.88Mbytes.
- 4USB2.0 ports.
- 1 S/PDIF Out Connector.

Dimensions

Micro ATX Form Factor: 19 X 24.4cm (W X L)

B. BIOS & Software

BIOS

- Award legal Bios.
- Supports APM1.2.
- Supports ACPI.
- Supports USB Function.

Software

- Supports Watchdog[™], 9th Touch[™], FLASHER[™], StudioFun![™] (optional), Warpspeeder[™].
- Gfers the highest performance for Windows 98 SE, Windows 2000, Windows Me, Windows XP, SCOUNIX etc.

Package contents

- HDD Cable X1
- FDD Cable X1
- User's Manual X1 USB Cable X1 (optional)
- Rear I/O Panelf or ATX Case X1 (optional)
- Fully Setup Driver CD X1
- S/PDIF Cable X1 (optional)
- StudioFun! Application CD X1 (optional)

How to setup Jumper

The illustration shows how jumpers are setup. When the Jumper cap is placed on pins, the jumper is "*close*". If no jumper cap is placed on the pins, the jumper is "*open*". The illustration shows a 3-pin jumper whose pin 1and 2 are "*close*" when jumper cap is placed on these 2 pins.



Jumper dose





Pin1-2 dose

CPU Installation

- **Step1:** Pull the lever sideways away from the socket and then raise the lever up to a 90-degree angle.
- Step2: Look for the white dot/cut edge. The white dot/cut edge should point towards the lever piv ot. The CPU will fit only in the correct orientation.
- Step3: Hold the CPU down firmly, and then close the lever.
- **Step4:** Put the CPU fan on the CPU and buckle it. Connect the CPU fan power cable to the JCFAN1. This completes the installation.



Step1



Step2



Step3



Step4

CPU Fan Header: JCFAN1

ГОП	Pin No.	Assignment
	1	Ground
1 JCFAN1	2	+12V
	3	FAN rpm Rate Sense

System Fan Header: JSFAN1

	Pin No.	Assignment
3 0 0 1	1	Ground
JSFAN1	2	+12V
	3	FAN rpm Rate Sense

DIMM Modules: DIMM1/ DIMM2

DR AM Access Time: 2.5/ Unbuffered DDR 200/266 MHz Type required. DR AM Type: 64MB/ 128VB/ 256MB/ 512MB/ 1GB DI MM Module (184 pin)

Total Memory Size with Unbuffered DIMMs

DIMM Socket Location	DDR Module	Total Memory Size (MB)
DIMMB1	64MB/128MB/256MB/512MB/1GB *1	Max is
DIMMB2	64MB/128MB/256MB/512MB/1GB *1	2GB

Only for reference

Installing DDR Module

- 1. Unlock a DIMM slot by pressing the retaining clips outward. Align a DIMM on the slot such that the notch on the DIMM matches the break on the slot.
- 2. Insert the DIMM firmly and vertically into the sldt until the retaining chip snap back in place and the Dimm is properly seated.



Jumpers, Headers, Connectors & Slots

Floppy Disk Connector: FDD1

The motherboard provides a standard floppy disk connector that supports 360K, 720K, 1.2M, 1.44M and 2.88M floppy disk types. This connector supports the provided floppy drive ribbon cables.

Hard Disk Connectors: IDE1/ IDE2

The motherboard has a 32-bit Enhanced PCI IDE Controller that provides PIO Mode 0~4, Bus Master, and Ultra DMA 33/ 66/ 100/ 133 functionality. It has two HDD connectors IDE1 (primary) and IDE2 (secondary).

The IDE connectors can connect a master and a slave drive, so you can connect up to four hard disk drives. The first hard drive should always be connected to IDE1.

Peripheral Component Interconnect Slots: PCI 1-3

This motherboard is equipped with 3 standard PCI slots. PCI stands for Peripheral Component Interconnect, and it is a bus standard for expansion cards. This PCI slot is designated as 32 bits.

Communication Network Riser Slot: CNR1

The CNR specification is an open Industry Standard Architecture, and it defines a hardware scalable riser card interface, which supports modem only.

Power Connectors: JATXPWR1

	PIN	Assianment	PIN	Assianment
10 65 20	1	+3.3V	11	+3.3V
	2	+3.3V	12	-12V
	3	Ground	13	Ground
	4	+5V	14	PS_ON
	5	Ground	15	Ground
	6	+5V	16	Ground
1 11	7	Ground	17	Ground
	8	PW_OK	18	-5V
JATXPWR1	9	Standby Voltage	19	+5V
		+5V		
	10	+12V	20	+5V

JPANELI 2^{2} 1 $(+)$									
Pin	Assignmer	nt	Fu	nction	Pin	A	ssignn	nent	Function
1	+5V				2	S	leep Co	ontrol	Sleep
3	NA		Sp	beaker	4		Ground		Button
5	NA		Со	nnector	6		NA		NA
7	Speaker				8	Po	ower LED (+)		POWER
9	HDD LED (+	+)	Har	d Drive	10	Po	ower LE	D (+)	LED
11	HDD LED (·	-)		LED	12	P	ower LE	D (-)	
13	Ground		Reset 14 Po		ower B	utton	Power-on		
15	Reset Contr	ol	В	Sutton	n 16 Ground		nd	Button	
17	NA				18		KEY		
19	NA		IrDA		20		KEY		IrDA
21	+5V		Connector		22		Ground		Connector
23	IRTX				24		IRR)	<	
Fro	nt USB Hea	ader	:: J	USB1/2		l			
	Pin Assignment Pin Assignment						ssignment		
2 [7	$\frac{10}{10000}$	1		+5V(f	used)		2		+5V(fused)
	0000	3	6	USI	BP4-		4		USBP5-
1)	5	5	USE	3P4+		6		USBP5+
J	USB1/2	7	,	Ground			8		Ground
	G	9	9 KEY 10 NA				NA		
Pov	ver Source	Sele	ectio	on for K	Leybo	ar	d/ Mot	ise: J	KBVI
	JKBV1	A	Assi	gnment	ent Description				on
+5V for key board and mous				and mouse					

Front Panel Connector: JPANEL1

I

Pin 1-2 close



Note: In order to support this function "Power-on the system via keyboard and mouse", "JKBV1" jumper cap should be placed on pin 2-3.

Power Source Selection for USB: JUSBV1/ JUSBV2

JUSBV1/JUSBV2	Assignment	Description
1 • 3 Pin 1-2 close	+5V	JUSBV1: 5V for USB connectors located at the JUSBLAN1 connector port
		located at the JUSB1/2 connector ports
1 • • • 3 Pin 2-3 close	+5V Standby Volt <i>a</i> ge	JUSBV1: JUSBLAN1 port powered with standby voltage of 5V JUSBV2: JUSB1/2 ports powered with standby voltage of 5V

Note: In order to support this function "Power-on the system via USB devices", "JUSBV1/ JUSBV2" jumper cap should be placed on pin 2-3 respectively.

Clear CMOS Jumper: JCMOS1

JCMOS1	Assignment
3 1 Pin 1-2 Close	Normal Operation (default)
3 1 Pin 2-3 Close	Clear CMOS Data



The following procedures are for resetting the BIOS password. It is important to follow these instructions closely.

% Clear CMOS Procedures:

- 1. Remove AC power line.
- 2. Set the jumper to "Pin 2-3 Close".
- 3. Wait for five seconds.
- 4. Set the jumper to "Pin 1-2 Close".
- 5. Power on the AC.
- 6. Reset your desired password or clear the CMOS data.

Case Open Connector: JCI1

	Pin	Assignment
	1	Case Open Signal
JCI1	2	Ground

CD-ROM Audio-In Header: JCDIN1/JCDIN2

		Pin	Assignment		
		1	Left Channel Input		
		2	Ground		
		3	Ground		
JC	DIN1/2	4	Right Channel Input		
Front Panel Audio Header: JAUDIO1					

2000 0 10 100000 9 JAUDIO1						
Pin	Assignment	Pin	Assignment			
1	Mic In	2	Ground			
3	Mic Power	4	Audio Power			
5	Right Line Out/Speaker Out Right	6	Right Line Out/Speaker Out Right			
7	Reserv ed	8	Key			
9	Left Line Out/Speaker Out Left	10	Left Line Out/Speaker Out Left			

Digital Audio Connector: JS PDIF1

	Pin	Assignment
3 🗘 🔿 🛑 1	1	+5V
JSPDIF1	2	SPDIF_OUT
	3	Ground

Wake On LAN Header: JWO L1

	Pin	Assignment
	1	+5V Standby
JWOL1	2	Ground
	3	Wake up

Back Panel Connectors



Español

Características del M6VLQ Pro

A. Hardware

CPU

- Proporciona Socket 370.
- Soporta procesador Celeron™ PPGA (FC-PGA & FC-PGA2) y Pentium® III Micro-Procesador (FC-PGA & FC-PGA2) y VIAC3 Ezra and Ezra – T Samuel 2
- para estaciones de trabajo y servidores de alta capacidad. Front Side Bus a 66/100/133 MHz.

Chipset

North Bridge: VIA CLE266 CE. South Bridge: VIA VT8235.

Memoria Principal Soporta hasta 2 dispositivos DDR.

Soporta dispositivos DDR 200/266 MHz (sin ECC).

Tamaño máxima de memoria 2GB.

Lan Chip (opcional) Chip: VIA VT6103.

Soporta 10 Mb/s y 100 Mb/s auto-negociación Half / Full duplex.

Ranuras Tres ranuras 32-bit PCI bus master. Una ranura CNR.

IDE Onboard

Soporta cuatro IDE disk drives. Soporta Modo PIO 4, Modo Bride y Ultra DMA 33/66/100/133 Modo Bus Master.

Super I/O Chip: ITE IT8705.

Proporciona el más alto funcionamiento de uso común para Super I/O.

- Environment Control initiatives
 - Monitor H/W
 - Controlador de Velocidad del Ventilador
 - Función ITE "Smart Guardian"

AC'97 Sound Codec Onboard

Chip: VIA VT1612A.

- AC'97 2.2 S/PDIF extensión del codec.
- 18-bit estéreo full duplex.

Periféricos Onboard *a.Parte Trasera* 1 puerto en serie.

- 1 puerto VGA.
- 1 puerto paralelo. (modos SPP/EPP/ECP)
- 1 puerto de audio enposición horizontal.
- 1 LAN jack.
- Ratón PS/2y teclado PS/2.
- 2 puertos USB2.0.

- *b.Parte Delantera* 1 puerto para disquetera soportando 2 FDDs de 360K, 720K, 1.2M, 1.44My 2.88Mbytes.
- 4 puertos USB2.0.
- 1 Conector S/PDIF Out.

Dimensiones Forma de Factor Micro ATX: 19 X 24.4cm (W X L)

B. BIOS & Software

BIOS

- Award legal Bios.
- APM1.2.
- ACPI.
- Función USB.

Software

- Soporta Watchdog[™], 9th Touch[™], FLASHER™, StudioFunl[™] (opcional), WarpspeederTM.
- Crece el más alto funcionamiento para Windows 98 SE, Windows 2000, Windows Me, Windows XP, SCO UNIX etc.

Contenido del Paquete

- Cable HDD X1
- Cable FDD X1
- Manual del Usuario X1
- Cable USBX1 (opcional)
- Panel trasero I/O para carcasa ATX X1 (opcional)
- Configuración completa del CD X1
- Cable S/PDIF X1 (opcional)
- Aplicación del CD SudioFurl X1 (opcional)

Cómo instalar un Puente

La ilustración muestra cómo instalar un puente. Cuando el Jumper Cap está ubicado en los contactos, el puente está en "close". Si no hay Jumper Cap ubicado en los contactos, el puente está en "open". La siguiente ilustración muestra un contacto 3 en el que los contactos 1 y 2 están "close" cuando el Jumper Cap está ubicado en los dos contactos.







Puente open

Puente close

Contacto 1-2 close

Instalación de la CPU

- Paso 1: Empuje la palanca hacia afuera del socket y levante la palanca hasta un ángulo de 90 grados.
- Paso 2: Fijese por el punto blanco o márgen cortado. El punto blanco o márgen cortado debería apuntar hacia el pivote de la palanca. La CPU solamente se fijará en una sola correcta orientación.
- Paso 3: Tome el CPU firmemente hacia abajo, y cierre la palanca para completar la instalación.
- Paso 4: Ponga el ventilador de la CPU en el CPU y asegúrelo. Conecte el cable de corriente del ventilador de la CPU al JCFAN1. Ésto completa la instalación.



paso1



paso 2

E

paso 3



paso4

14

Cabezal del Sistema de Ventilación del CPU: JCFAN1

O	Conrtacto No.	Asignación
	1	Tierra
1	2	+12V
JCFAN1	3	FAN rpm Rate Sense

Cabezal del Sistema de Ventilación: JS FAN1

	Contacto No.	A si gnaci ón
3 000 1	1	Tierra
JSFAN1	2	+12V
	3	FAN rpm Rate Sense

Módulos DIMM: DIMM1/ DIMM2

DR AM Tiempode Acceso: 2.5V UnbufferedDDR 200/266 MHz Tipo requerido. DR AM Tipo: 64MB/ 128MB/ 256MB/ 512MB/ 1GB Módulo DIMM (184 cortactos)

Total del Tamaño de Memoria Unbuffered DIMMs

Localización del Socket DIMM	Módulo DDR	Total del Tamaño de Memoria (MB)
DIMMB1	64MB/128MB/256MB/512MB/1GB	
	*1	Máximo
DIMMB2	64MB/128MB/256MB/512MB/1GB	2GB
	*1	

Solamente para referencia

Instalación del Módulo DDR

1. Abra una ranura de DIMM presionando el clip de retención hacia afuera. Aliñe el DIMM en la ranura tales que la muesca en el DIMM encaje en la cumbrera de la ranura.



2. Inserte el DIMM verticalmente y firmemente en la ranura hasta que el clip de retención vuelva a su posición original y el DIMM esté correctamente colocado.



Puentes, Cabezales, Conectores y Ranuras

Conector de Disquetera: FDD1

La placa madre proporciona un conector estándar para disquete que soporta disquetera de 360K, 720K, 1.2M, 1.44M y 2.88M. Este conector utiliza cables proporcionados por el disquete.

Conector del Disco Duro: IDE1/ IDE2

La placa madre tiene un controlador de 32-bit PCI IDE que proporciona Modo PIO 0~5, Bus Master, y funcionalidad Ultra DMA 33/ 66/ 100. Tiene dos conectores HDD: IDE1 (primario) y IDE2 (secundario).

Los conectores IDE puede conectar a un disco mastery uno esclavo, así puede conectar hasta cuatro discos duros. El primer disco duro debe estar siempre conectado al IDE1.

Ranuras de Interconexión del Componente Periférico: PCII-3

Ésta placa madre está equipada con 3 ranuras estándar PCI. PCI es la sigla para Interconexión del Componente Periférico, y es un bus estándar para tarjetas de expansión. Ésta ranura PCI está diseñado con 32 bits.

Ranura de Banda de Suspensión de Comunicación y Red: CNR1 La especificación CNR es una abierta Industria de Arquitectura Estándar, que define una tarjeta de interface escalable del hardware en el que soporta solamente modem.

	Contactos	Asignación	Contactos	Asignación
10 20	1	+3.3V	11	+3.3V
	2	+3.3V	12	-12V
	3	Tierra	13	Tierra
	4	+5V	14	PS_ON
	5	Tierra	15	Tierra
	6	+5V	16	Tierra
1 11	7	Tierra	17	Tierra
	8	PW_OK	18	-5V
JATXPWR1	9	Voltaje Standby	19	+5V
		+5V		
	10	+12V	20	+5V

Conectores de Corriente: JATXPWR1

J PA NI	JPANEL1 $2 1 \xrightarrow{\text{PWR}_\text{LED}}_{1} 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0$				
Contacto	Asignación	Función	Contacto	Asignación	Función
1	+5V	Conector	2	Control de Suspension	Botón de Suspension
3	NA	del Altavoz	4	Tierra	
5	NA		6	NA	NA
7	Altavoz		8	Corriente LED (+)	Corriente
9	HDD LED (+)	LED	10	Corriente LED (+)	LED
11	HDD LED (-)	del Disco Duro	12	Corriente LED (-)	
13	Tierra	Botón de Reinicio	14	Botón de Encendido	Botón de Encendido
15	Control de Reinicio		16	Tierra	
17	NA		18	KEY	
19	NA		20	KEY	
21	+5V	ConectorIrDA	22	Tierra	Conector IrDA
23	IRTX		24	IRRX	

=

Conector del Panel Frontal: JPANEL1

Cabezal Frontal USB: JUSB1/2

	Contactos	Asignación	Contactos	Asignación
2 $\left[\Delta \Delta \Delta \Delta \Omega \right]^{10}$	1	+5V (fused)	2	+5V (fused)
	3	USBP4-	4	USBP5-
1 9	5	USBP4+	6	USBP5+
JUSB1/2	7	Tierra	8	Tierra
	9	KEY	10	NA

Fuente de Corriente Selección para Teclado/Ratón: JKBV1

	• 1	Asignacion	Descripcion
Contacto	1 3	+5V	+5V para teclado y ratón
Contacto	1 3 2-3 close	Voltaje Standby +5V	Ratón PS/2 y Teclado PS/2 son encendidos con unvoltaje standby de +5V

Nota: Para soportar la función "Encendiendo el sistema por medio del teclado y ratón", el jumper cap del "JKBV1" debe ser ubicado en el contacto 2-3.

Fuente de Corriente Selección para USB: JUSBV1/ JUSBV2

JUSBV1/JJSBV2	Asignación	Descripción
1 DO 3 Contacto 1-2 close	+5V	JUSBV1: 5V para conectores USB ubicados en el puerto JUSBLAN1
		JUSBV2: 5V para conectores USB ubicado el el puerto JUSB1/2
1 • 0 3	Voltaje Standby +5V	JUSBV1: puerto JUSBLAN1 encendidos con voltaje standby de 5V
		JUSBV2: puertos JUSB1/2 encendidos con voltaje standby de 5V

Nota: Para soportar la función "Encendiendo el sistema por medio del dispositivo USB", el jumper cap del "JUSBV1/JUSBV2" debe ser ubicado en el contacto 2-3 respectivamente.

Puente de Borrar CMOS: JCMOS1

JCMOS1	Asignación
	Operación Normal (default)
Contacto 1-2 Close	
	Borra datos del CMOS
Contacto 2-3 Close	



* Procedimientos para Borrar CMOS:

- Quite el cable de corriente del AC.
 Fijar el puerte en el "contacto 2-3 close".
- 3. Espere 5 segundos.
- 4. Fijar el Puerte en el 'contacto 1-2 close'.
- 5. Encienda AC.
- 6. Reconfigure la contræeña deseada o borre datos CMOS.

Conector de la Carcasa Abierta: JCI1

G	Contactos	Asignación
1	1	Señal de la Carcasa Abierta
JCI1	2	Tierra
	1 4 10	OD DOM LODDIA/ LODDI

Cabezal de Entrada de Audio CD-ROM: JCDIN1/ JCDIN2

4 Q	Contactos	Asignación
81	1	Entrada del Canal Izquierdo
1	2	Tierra
	3	Tierra
JCDIN1/2	4	Entrada del Canal Derecho
	4	

Cabezal de Audio del Panel Frontal: JAUDIO1

2000 0 10 10000 9 JAUDIO1				
Contactos	Asignación	Contactos	Asignación	
1	Entrada del Mic	2	Tierra	
3	Corriente del Mic	4	Corriente de Audio	
5	Salida de Línea Derecho/ Salida del Altavoz Derecho	6	Salida de Línea Derecho/Salida del Altav oz Derecho	
7	Reservado	8	Key	
9	Salida de Línea Izquierdo/ Salida del Altavoz Izquierdo	10	Salida de Línea Izquierdo/Salida del Altav oz Izquierdo	

Conector Digital de Audio: JSPDIF1

	Contactos	Asignación
3 🖸 🔘 🛑 1	1	+5V
JSPDIF1	2	SPDIF_OUT
	3	Tierra

Conectores del Panel Trasero

Raton PS/2	JUSBLAN1 LAN (Opcional)	JPRN Puerto	NT1 Paralelo	JGA Puerto	ME1 de Juego
		6011			
PS/2	USB	COMT	VGAI	Altavoz	el Mic
KBMS 1		J COM1	JVGA1	Ent L	rada de Línea

Watchdog Technology

It is important to know that when overclocking, the system can be at a vulnerable state. Therefore, the BIOSTAR Watchdog Technology was designed to protect y our PC under dangerous over-clock situations. Any over-clocking that reaches the threshold settings, the Watchdog Technology will disable y our system from rebooting in the BIOS setting. Under this circumstance, please power off your PC. After that, press <Insert> and power on y our system simultaneously to restart your system. This userfriendly design can save y ouf rom squandering your time on opening the case just to clear the CMOS. In the end, tharks to the Watchdog Technology, everything is back at a safe and sound!

WarpSpeeder



Introduction

[WarpSpeeder[™]], a new powerful control utility, features three userfriendly functions including Overclock Manager, Overvoltage Manager, and Hardware Monitor.

With the Overclock Manager, users can easily adjust the frequency they prefer orthey can get the best CPU performance with just one click. The Overvoltage Manager, on the other hand, helps to power up CPU core voltage and Memory voltage. The cool Hardware Monitor smartly indicates the temperatures, voltage and CPU fan speed as well as the chipset information. Also, in the About panel, you can get detail descriptions about BIOS model and chipsets. In addition, the frequency status of CPU, memory, AGP and PCI along with the CPU speed are synchronically shown on our main panel.

Moreover, to protect users' computer systems if the setting is not appropriate when testing and results in system fail or hang, [WarpSpeederTM] technology assures the system stability by automatically rebooting the computer and then restart to a speed that is either the original system speed or a suitable one.

System Requirement

OS Support: Windows 98 SE, Windows Me, Windows 2000, Windows XP

DirectX: DirectX 8.1 or above. (The Windows XP operating system includes DirectX 8.1. If you use Windows XP, you do not need to install DirectX 8.1.)

Installation

1. Execute the setup execution file, and then the following dialog will pop up. Please click "Next" button and follow the default procedure to install.



2. When you see the following dialog in setup procedure, it means setup is completed. If the "Launch the WarpSpeeder Tray Utility" checkbox is checked, the Tray Icon utility and [WarpSpeeder™] utility will be automatically and immediately launched after you click "Finish" button.



Usage

The following figures are just only for reference, the screen printed in this user manual will change according to your motherboard on hand.

[WarpSpeeder[™]] includes 1 tray icon and 5 panels:

1. Tray Icon:

Whenever the Tray Icon utility is launched, it will display a little tray icon on the right side of Windows Taskbar.



This utility is responsible for conveniently invoking [WarpSpeeder[™]] Utility. You can use the mouse by clicking the left button in order to invoke [WarpSpeeder[™]] directly from the little tray icon or you can right-click the little tray icon to pop up apopup menu as following figure. The "Laurch Utility" item in the popup menu has the same function as mouse left-click on tray icon and "Exit" item will close Tray Icon utility if selected.



2. Main Panel

If you click the tray icon, [$\mathsf{WarpSpeeder}^{\mathsf{TM}}$] utility will be invoked. Please refer

do the following figure; the utility's first windowy ou will see is Main Panel.

Main Panel contains features as follows:

a. Display the CPU Speed, CPU external clock, Memory clock, AGP clock, and PCI clock information.

b. Contains About, Voltage, Overclock, and Hardware Monitor Buttons for invoking respective panels.

c. With a user-friendly Status Animation, it can represent 3 overclock percentage stages:

Duck walking => overclock percentage from 100% ~ 110 %

Duck running => overclock percentage from 110% ~ 120%

Duck burning => overclock percentage from 120% ~ above



3. Voltage Panel

Click the Voltage button in Main Panel, the button will be highlighted and the Voltage Panel will slide out to up as the following figure.

In this panel, you can decide to increase CPU core voltage and Memory voltage or not. The default setting is "No". If you want to get the best performance of overclocking, we recommend you click the option "Yes".



4. Overclock Panel

Click the Overclock button in Main Panel, the button will be highlighted and the Overclock Panel will slide out to left as the following figure.



Overclock Panel contains these features:

a. "--3MHz button", "-1MHz button", "+1MHz button", and "+3MHz button": provide user the ability to do real-time overclock adjustment.

Warning: Manually overclock is potentially dangerous, especially when the overclocking percentage is over 110 %. We strongly recommend you verify every speed you overclock by click the Verify button. Or, you can just click Auto overclock button and let [WarpSpeederTM] automatically gets the best result for you.

b. "Recovery Dialog button": Pop up the following dialog. Let user select a restoring way if system need to do a fail-safe reboot.

Recovery Options	X
Please select a recovery option that will decide what kind of restoring you want to do after system fail-safe reboot.	
Options Group	
C Restore to Hardware Default CPU Clock Value	
Restore to the Previous Verified CPU Clock Value	

- c. "Auto-overclock button": User can click this button and [WarpSpeeder[™]] will set the best and stable performance and frequency automatically. [WarpSpeeder[™]] utility will execute a series of testing until system fail. Then system will dofail-safe reboot by using Watchdog function. After reboot, the [WarpSpeeder[™]] utility will restore to the hardware default setting or load the verified best and stable frequency according to the Recovery Dialog's setting.
- d. "Verify button": User can click this button and [WarpSpeeder™] will proceed a testing for current frequency. If the testing is ok, then the current frequency will be saved into system registry. If the testing fail, system will do a fail-safe rebooting. After rebot, the [WarpSpeeder™] utility will restore to the hardware default setting or bad the verified best and stable frequency according to the Recovery Dialog's setting.

Note: Because the testing programs, invoked in Auto-overclock and Verify, include DirectDraw, Direct3D and DirectShow tests, the DirectX 8.1 or newer runtime library is required. And please make sure your display card's color depth is High color (16 bit) or True color(24/32 bit) that is required for Direct3D rendering.

5. Hardware Monitor Panel

Click the Hardware Monitor button in Main Panel, the button will be highlighted and the Hardware Monitor panel will slide out to left as the following figure.

In this panel, you can get the real-time status information of your system. The information will be refreshed every 1 second.

6. About Panel

Click the About button in Main Panel, the button will be highlighted and the About Panel will slide out to up as the following figure.

In this panel, you can get model name and detail information in hints of all the chipset that are related to overclocking. You can also get the mainboard's BIOS model and the Version number of [WarpSpeeder™] utility.

Note: Because the overclock, overvoltage, and hardware monitor features are controlled by several separate chipset, [WarpSpeederTM] divide these features to separate panels. If one chipset is not on board, the correlative button in Main panel will be disabled, but will not interfere other panels' functions. This property can make [WarpSpeederTM] utility more robust.

StudioFun![™] (Optional)

Introduction

StudioFun!TM is a media-player based on optimized GNU/Linux distribution to bring a "Room Theater" experience into life It plays DVD, VCD, MP3, Audio CD and other multimedia. Furthermore, Users can take snapshots of video and customize the saved images as screensavers or photo slideshows. Of course, the images can be stored in USB mass storage devices like flash disks and USB floppy disks.

Hardware Requirements

The supported hardware list of StudioFun! updates regularly. <u>Soplease check the</u> "hwreq.txt" located in the root of StudioFun! CD to get the latest supporting information

Installation and Usage

Please refer to the manual, located in the "**Manual**" folder under the root of StudioFun! CD, to get the most updated and detailed information of StudioFun. The manual comes in 3 different formats – Wordformat, PDF file format, or HTML format. Uses can choose the favorite one.

Trouble Shooting

PROBABLE	SOLUTION
No power to the system at all Power light don't illuminate, fan inside power supply does not tum on. Indicator light on keyboard does not turn on	* Make sure power cable issecurely plugged in * Replace cable * Contact technical support
PROBABLE	SOLUTION
System inoperative. Keyboard lights are on, power indicator Ights are lit, hard drive is spinning.	 Using even pressure on both ends of the DIMM, press down firmly until the module snaps into place.
PROBABLE System does not boot from hard disk drive, can be booted from CD-ROM drive.	SOLUTION * Check cable lunning from disk to diskcontrollel board. Make sure both ends are securely plugged in; check the drive type in the standard CMOS setup. * Backing up the hard drive is extremely important. All hard disks are capable o
PROBABLE System only boots from CD-ROM. Hard disk can be read and applications can be used but booting from hard disk is impossible.	SOLUTION * Back up data and applications files. Reforma the hard drive. Re-install applications and data using backup disks.
FROBABLE Screen message says "Invalid Configuration" or "CMOS Failure."	* Review system's equipment . Make sure correct information is in setup.
PROBABLE	SOLUTION
Cannot boot system after installing second hard drive.	* Set master/slave jumperscorrectly. * Run SETUP program and select correct drive types. Call drive manufacturers for compatibility with other drives

Solución de Problemas

CAUSA PROBABLE	SOLUCIÓN
No hay corriente en el sistema. La luz de corriente no ilumina, ventilador dentro de la fuente de alimentación apagada. Indicador de luz del teclado apagado.	 * Asegúrese que el cable de transmisión este seguramente enchufado. * Reemplace el cable. * Contacte ayuda técnica.
CAUSA PROBABLE	SOLUCIÓN
Sistema inoperativo. Luz del teclado encendido, luz de indicador de corriente iluminado, disco rígido está girando.	* Presione los dos extremos del DIMM, presione para abajo firmemente hasta que el módulo encaje en ellugar.
CAUSA PROBABLE	SOLUCIÓN
Sistema no arranca desde el disco rígido, puede ser arrancado desde el CD-ROM drive.	 * Controle el cable de ejecución desde el disco hasta el disco del controlador. Asegúrese de que ambos lados estén enchufados cor seguridad; controle el tipo de disco en la configuraciónestándar CMOS. * Copiando el disco rígido es extremadamente importante. Todos los discos rígidos sor capaces de dañarse en cualquier momento.
CAUSA PROBABLE	SOLUCIÓN
Sistema solamente arranca desde el CD-ROM. Discorígido puede leer y aplicaciones pueden ser usados pero el arranque desde el disco rígido esimposible	* Copie datos y documentos de aplicación Vuelva a formatear el disco rígido. Vuelva a instalar las aplicaciones y datos usando e disco de conjado.
CAUSA PROBABLE	SOLUCIÓN
Mensaje de pantalla "Invalid Configuration" o "CMOS Failure"	* Revise el equipo del sistema. Asegúrese de que la información configurada sea correcta
	SOLUCION
No puede arrancar después de instalar el segundo disco rígido	* Fije correctamente el puente master/es clavo.
	 * Ejecute el programa SETUP y seleccione e tipo de disco correcto. Llame a una manufacturación del disco para compatibilidad con otros discos.

=

08/13/2003

-

BIOS Setup	1
1 Main Menu	3
2 Standard CMOS Features	6
3 Advanced BIOS Features	9
4 Advanced Chipset Features	12
5 Integrated Peripherals	16
6 Power Management Setup	20
7 PnP/PCI Configurations	25
8 PC Health Status	
9 Frequency Control	

i

BIOS Setup

Introduction

This manual discussed Award[™] Setup program built into the ROM BIOS. The Setup program allows users to modify the basic system configuration. This special information is then stored in battery-backed RAM so that it retains the Setup information when the power is turned off.

The Award BIOSTM installed in your computer system's ROM (Read Only Memory) is a custom version of an industry standard BIOS. This means that it supports AMD[®] processor input/output system. The BIOS provides critical low-level support for standard devices such as disk drives and serial and parallel ports.

Adding important has customized the Award BIOSTM, but nonstandard, features such as virus and password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system.

The rest of this manual is intended to guide you through the process of configuring your system using Setup.

Plug and Play Support

These AWARD BIOS supports the Plug and Play Version 1.0A specification. ESCD (Extended System Configuration Data) write is supported.

EPA Green PC Support

This AWARD BIOS supports Version 1.03 of the EPA Green PC specification.

APM Support

These AWARD BIOS supports Version 1.1&1.2 of the Advanced Power Management (APM) specification. Power management features are implemented via the System Management Interrupt (SMI). Sleep and Suspend power management modes are supported. Power to the hard disk drives and video monitors can be managed by this AWARD BIOS.

PCI Bus Support

This AWARD BIOS also supports Version 2.1 of the Intel PCI (Peripheral Component Interconnect) local bus specification.

DRAM Support

DDR SDRAM (Double Data Rate Synchronous DRAM) are supported.

Supported CPUs

This AWARD BIOS supports the Intel[®] CPU.

Using Setup

In general, you use the arrow keys to highlight items, press $\langle Enter \rangle$ to select, use the $\langle PgUp \rangle$ and $\langle PgDn \rangle$ keys to change entries, press $\langle F1 \rangle$ for help and press $\langle Esc \rangle$ to quit. The following table provides more detail about how to navigate in the Setup program by using the keyboard.

Keystroke	Function
Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item on the left (menu bar)
Right arrow	Move to the item on the right (menubar)
Move Enter	Move to the item you desired
PgUp key	Increase the numeric value or make changes
PgDnkey	Decrease the numeric value or make changes
+Key	Increase the numeric value or make changes
-Key	Decrease the numeric value or make changes
Esc key	Main Menu – Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu – Exit Current page and return to Main Menu
F1 key	General help on Setup navigation keys
F5 key	Load previous values from CMOS
F7 key	Load the optimized defaults
F10 key	Save all the CMOS changes and exit

1 Main Menu

Once you enter Award BIOSTM CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions. Use the arrow keys to select among the items and press <Enter> to accept and enter the sub-menu.

!! WARNING !!

The information about BIOS defaults on manual (Figure 1,2,3,4,5,6,7,8,9) is just for reference, please refer to the BIOS installed on board, for update information.

■ Figure 1. Main Menu

Phoenix - AwardBIOS CMOS Setup Utility			
► Standard CMUS Features	► Frequency/Voltage Control		
► Advanced BIOS Featu r es	Load Optimized Defaults		
► Advanced Chipset Features	Set Supervisor Password		
 Integrated Peripherals 	Set User Password		
► Power Management Setup	Save & Exit Setup		
► PnP/PCI Configurations	Exit Without Saving		
► PC Health Status	Upgrade BIOS		
Esc : Quit F10 : Save & Exit Setup	↑↓→← : Select Item		
Time Date Hard	l Disk Tune		

Standard CMOS Features

This submenu contains industry standard configurable options.

Advanced BIOS Features

This submenu allows you to configure enhanced features of the BIOS. Advanced Chipset Features

This submenu allows you to configure special chipset features.

Integrated Peripherals

This submenu allows you to configure certain IDE hard drive options and Programmed

Input/ Output features.

Power Management Setup

This submenu allows you to configure the power management features.

PnP/PCI Configurations

This submenu allows you to configure certain "Plug and Play" and PCI options.

PC Health Status

This submenu allows you to monitor the hardware of your system.

Frequency/Voltage Control

This submenu allows you to change CPU Vcore Voltage and CPU/PCI clock. (However, this function is strongly recommended not to use. Not properly change the voltage and clock may cause CPU or M/B damage!)

Load Optimized Defaults

This selection allows you to reload the BIOS when the system is having problems particularly with the boot sequence. These configurations are factory settings optimized for this system. A confirmation message will be displayed before defaults are set.

Set Supervisor Password

Setting the supervisor password will prohibit everyone except the supervisor from making changes using the CMOS Setup Utility. You will be prompted with to enter a password.

Set User Password

If the Supervisor Password is not set, then the User Password will function in the same way as the Supervisor Password. If the Supervisor Password is set and the User Password is set, the "User" will only be able to view configurations but will not be able to change them.

Save & Exit Setup

Save all configuration changes to CMOS(memory) and exit setup. Confirmation message will be displayed before proceeding.

Exit Without Saving

Abandon all changes made during the current session and exit setup. confirmation message will be displayed before proceeding.

Upgrade BIOS

This submenu allows you to upgrade bios.

2 Standard CMOS Features

The items in Standard CMOS Setup Menu are divided into 10 categories. Each category includes no, one or more than one setup items. Use the arrow keys to highlight the item and then use the PgUp or PgDn keys to select the value you want in each item.

■ Figure 2. Standard CMOS Setup

Phoenix — AwardBIOS CMOS Setup Utility 國際 Standard CMOS Features				
Date (mm:dd:yy) Timo (bb:mm:ss)	Thu, Jul 3 2003	Item Help		
 ► IDE Primary Master ► IDE Primary Slave ► IDE Secondary Master ► IDE Secondary Slave 	10 . 55 . 47	Menu Level ► Change the day, month, year and century		
Drive A Drive B	[1.44M, 3.5 in.] [None]			
Video Halt On	[EGA/VGA] [All , But Keyboard]			
Base Memory Extended Memory Total Memory	640K 65472K 1024K			
↑↓++:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F7: Optimized Defaults				

Main Menu Selections

This table shows the selections that you can make on the Main Menu.

ltem	Options	Description
Date	mm : dd : yy	Set the system date. Note that the 'Day' automatically changes when you set the date.
Time	hh : mm : ss	Set the system internal clock.
IDE Primary Master	Options are in its sub menu.	Press <enter> to enter the sub menu of detailed options</enter>
IDE Primary Slave	Options are in its sub menu.	Press <enter> to enter the sub menu of detailed options.</enter>
IDE Secondary Master	Options are in its sub menu.	Press <enter> to enter the sub menu of detailed options.</enter>
IDE Secondary Slave	Options are in its sub menu.	Press <enter> to enter the sub menu of detailed options.</enter>
Drive A	360K, 5.25 in	Select the type of floppy
	1.2M, 5.25 in	disk drive installed in your
Drive B	720K, 3.5 in	System.
	1.44M, 3.5 in	
	2.88M, 3.5 in	
	None	
Video	EGA/VGA	Select the default video
	CGA 40	device.
	CGA 80	
	MONO	

ltem	Options	Description
Halt On	All Errors	Select the situation in which
	No Errors	you want the BIOS to stop
	All, but Keyboard	the POST process and
	All, but Diskette	notify you.
	All, but Disk/ Key	
Base Memory	N/A	Displays the amount of
		conventional memory
		detected during boot up.
Extended Memory	N/A	Displays the amount of
		extended memory detected
		during boot up.
Total Memory	N/A	Displays the total memory
		available in the system.

3 Advanced BIOS Features

■ Figure 3. Advanced BIOS Setup

Phoenix – AwardBIOS CMOS Setup Utility Advanced BIOS Features			
Boot Seq & Floppy Setup [Press Enter]	Item Help		
 Lache & Shadow Setup [Press Enter] Virus Warning [Disabled] Processor Number Feature [Enabled] Quick Power On Self Test [Enabled] Boot Up NumLock Status [On] Gate A20 Option [Fast] Typematic Rate Setting [Disabled] X Typematic Rate (Chars/Sec) 6 X Typematic Delay (Msec) 250 Security Option [Setup] OS Select For DRRM > 64MB [Non-0S2] Summary Screen Show [Disabled] 	Menu Level ►		
↑↓→+:Move Enter:Select +/-/PU/PD:Value F10:Save E F5:Previous Values F7: Optimi	SC:Exit F1:General Help ized Defaults		

Boot Seq & Floppy Setup

First/ Second/ Third/ Boot Other Device

These BIOS attempt to load the operating system from the device in the sequence selected in these items.

The Choices: Floppy, LS120, HDD-0, SCSI, CDROM, HDD-1, HDD-2, HDD-3, ZIP100, USB-FDD, USB-ZIP, USB-CDROM, USB-HDD, LAN, HPT370, Disabled, Enabled.

Swap Floppy Drive

For systems with two floppy drives, this option allows you to swap logical drive assignments.

The Choices: Disabled (default), Enabled.

Boot Up Floppy Seek

Enabling this option will test the floppy drives to determine if they have 40 or 80 tracks. Disabling this option reduces the time it takes to boot-up. **The Choices:** Disabled, **Enabled** (default).

Cache & Shadow Setup

CPU Internal Cache

Depending on the CPU/chipset in use, you may be able to increase memory access time with this option.

The Choices: Enabled (default) Disabled

Enable cache. Disable cache.

External Cache

Disabled

This option you to enable or disable "Level 2" secondary cache on the CPU, which may improve performance. **The Choices: Enabled** (default) Enable cache.

Enable cache. Disable cache.

CPU L2 Cache ECC Checking

This item allows you to enable/disable CPU L2 Cache ECC Checking. **The Choices: Enabled** (default), Disabled.

Video BIOS Shadow

Determines whether video BIOS will be copied to RAM for faster execution. **The Choices: Enabled** (default) Optional ROM is enabled. Disabled Optional ROM is disabled.

Virus Warning

This option allows you to choose the Virus Warning feature that is used to protect the IDE Hard Disk boot sector. If this function is enabled and an attempt is made to write to the boot sector, BIOS will display a warning message on the screen and sound an alarm beep. **Disabled** (default) Enabled Virus protection is disabled. Virus protection is activated.

Processor Number feature

This item allows you enable or disable processor number feature. **The Choices: Enabled** (default), Disabled.

Quick Power On Self Test

Enabling this option will cause an abridged version of the Power On Self-Test (POST) to execute after you power up the computer. Enabled (default) Enable quick POST

Enublea (actually Enuble	
Disabled Normal	POST.

Boot Up NumLock Status

Selects the NumLock. State after power on.

On (default) Off Numpad is number keys. Numpad is arrow keys.

Gate A20 Option

 Select if chipset or keyboard controller should control Gate A20.

 Normal
 A pin in the keyboard controller controls Gate A20.

 Fast (default)
 Lets chipset control Gate A20.

Typematic Rate Setting

When a key is held down, the keystroke will repeat at a rate determined by the keyboard controller. When enabled, the typematic rate and typematic delay can be configured. **The Choices: Disabled** (default), Enabled.

Typematic Rate (Chars/Sec)

Sets the rate at which a keystroke is repeated when you hold the key down. **The Choices: 6** (default), 8,10,12,15,20,24,30.

Typematic Delay (Msec)

Sets the delay time after the key is held down before it begins to repeat the keystroke. **The Choices: 250** (default), 500,750,1000.

Security Option

This option will enable only individuals with passwords to bring the system online and/or to use the CMOS Setup Utility. System A password is required for the system to boot and is

System	A password is required for the system to boot and is
	also required to access the Setup Utility.
Setup (default)	A password is required to access the Setup Utility
	only.
TEL: 11 1 1 10	

This will only apply if passwords are set from the Setup main menu.

OS Select For DRAM > 64MB

A choice other than Non-OS2 is only used for OS2 systems with memory exceeding 64MB. The Choices: Non-OS2 (default), OS2.

Summary Screen Show

This item allows you to enable/ disable display the Summary Screen Show. The Choices: Disabled (default), Enabled.

4 Advanced Chipset Features

This submenu allows you to configure the specific features of the chipset installed on your system. This chipset manage bus speeds and access to system memory resources, such as DRAM. It also coordinates communications with the PCI bus. The default settings that came with your system have been optimized and therefore should not be changed unless you are suspicious that the settings have been changed incorrectly.

■ Figure 4. Advanced Chipset Setup

Phoenix - AwardBIOS CMOS Setup Utility Advanced Chipset Features			
DRAM Clock/Drive Control [Press Enter] DCD & D2D Pridge Control [Press Enter]	Item Help		
 Hor & P2r Bridge Control [Press Enter] CPU & PCI Bus Control [Press Enter] Memory Hole [Disabled] System BIOS Cacheable [Disabled] Video RAM Cacheable [Disabled] VGA Share Memory Size [32M] Memory Parity/ECC Check [Disabled] 	Menu Level ►		
↑↓→+:Move Enter:Select +/-/PU/PD:Value F10:Save	ESC:Exit F1:General Help		

DRAM Clock/ Drive Control

To control the Clock. If you highlight the literal "Press Enter" next to the "DRAM Clock" label and then press the enter key, it will take you to a submenu with the following options:

DRAM Clock

This item determines DRAM clock following 100MHz, 133MHz or By SPD. **The Choices:** 100MHz, 133MHz, **By SPD** (default).

DRAM Timing

This item determines DRAM clock/ timing follow SPD or not. **The Choices: By SPD** (default), Manual.

DRAM CAS Latency

When DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing.

The Choices: 2.5 (default), 2.

Bank Interleave

This item allows you to enable or disable the bank interleave feature. The Choices: Disabled (default).

Precharge to Active (Trp)

This items allows you to specify the delay from precharge command to activate command.

The Choices: 2T, 3T (default).

Active to Precharge (Tras)

This items allows you to specify the minimum bank active time. The Choices: 7T, 6T (default).

Active to CMD (Trcd)

Use this item to specify the delay from the activation of a bank to the time that a read or write command is accepted. The Choices: 2T, 3T (default).

DRAM Command Rate

This item controls clock cycle that must occur between the last valid write operation and the next command. The Choices: 1T Command, 2T Command (default).

AGP & P2P Bridge Control

If you highlight the literal "Press Enter" next to the "AGP & P2P Bridge Control" label and then press the enter key, it will take you a submenu with the following options:

AGP Aperture Size

Select the size of the Accelerated Graphics Port (AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation.

The Choices: 64M (default), 256M, 128M, 32M, 16M, 8M, 4M.

AGP Mode

This item allows you to select the AGP Mode. The Choices: 4X (default), 2X, 1X.

AGP Driving Control By choosing "Auto" the system BIOS will the AGP output Buffer Drive strength P Ctrl by AGP Card. By choosing "Manual", it allows user to set AGP output Buffer Drive strength P Ctrl by manual.

The Choices: Auto (default), Manual.

AGP Driving Value

While AGP driving control item set to "Manual", it allows user to set AGP driving.

The Choices: DA (default).

AGP Master 1 WS Write

The Choices: Enabled, Disabled (default).

AGP Master 1 WS Read

When Enabled, read to the AGP (Accelerated Graphics Port) are executed with one wait states.

The Choices: Disabled (default), Enabled.

CPU & PCI Bus Control

If you highlight the literal "Press Enter" next to the "CPU & PCI Bus Control" label and then press the enter key, it will take you a submenu with the following options:

CPU to PCI Write Buffer

When enabled, up to four Dwords 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 Choices: Enabled (default), Disabled.

PCI Master 0 WS Write

When Enabled, writes to the PCI bus are executed with zero-wait states. **The Choices: Enabled** (default), Disabled.

PCI Delay Transaction

The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select Enabled to support compliance with PCI specification. **The Choices:** Disabled, **Enabled** (default).

Memory Hole At 15M-16M

You can reserve this area of system memory for ISA adapter ROM. When this area is reserved it cannot be cached. The user information of peripherals that need to use this area of system memory usually2 discussed their memory requirements.

The Choices: Disabled (default), Enabled.

System BIOS Cacheable

Selecting the "Enabled" option allows caching of the system BIOS ROM at F0000h-FFFFFh which can improve system performance. However, any programs writing to this area of memory will cause conflicts and result in system errors.

The Choices: Enabled, Disabled (default).

Video RAM Cacheable

Enabling this option allows caching of the video RAM, resulting a better system performance. However, if any program writes to this memory area, a system error may result.

The Choices: Disabled (default), Enabled.

VGA Share Memory Size

This item allows you to select the VGA share memory size. The Choices: 32M (default), 16M, 8M, Disabled.

Memory Parity/ ECC Check

This item allows you to enable or disable memory parity/ ECC checking. **The Choices: Disabled** (default), Enabled.

5 Integrated Peripherals

■ Figure 5. Integrated Peripherals

Phoenix - AwardBIOS CMOS Setup Utility Integrated Peripherals			
USB 2.0 Support	[Enabled]	Item Help	
 VIA ONCHIP IDE Devi VIA ONCHIP PCI Devi SuperIO Device Init Display First OnChip USB Controll USB Keyboard Suppor IDE HDD Block Mode 	ce [Press Enter] ce [Press Enter] [PcI Slot] er [All Enabled] t [Disabled] [Enabled]	Menu Level ►	
↑↓++:Move Enter:Selec F5:Previous	t +/-/PU/PD:Value F10:Save Values F7: Optim	ESC:Exit F1:General Help ized Defaults	

USB 2.0 Support

This item allows you to enable or disable USB 2.0 supports. **The Choices: Enabled** (default), Disabled.

VIA Onchip IDE Device

The chipset contains a PCI IDE interface with support for two IDE channels.

Select "Enabled" to activate the first and / or second IDE interface. If you install a primary and / or secondary add-in IDE interface, select "Disabled" to desactivate an interface. If you highlight the literal "Press Enter" next to the "Onchip IDE Control" label and then press the enter key, it will take you a submenu with the following options:

OnChip IDE Channel 0/1

The motherboard chipset contains a PCI IDE interface with support for two IDE channels. Select "Enabled" to activate the first and/or second IDE interface. Select "Disabled" to deactivate an interface if you are going to install a primary and/or secondary add-in IDE interface. **The Choices: Enabled** (default), Disabled.

IDE Prefetch Mode

The "onboard" IDE drive interfaces supports IDE prefetching for faster drive access. If the interface does not support prefetching. If you install a primary

and/or secondary add-in IDE interface, set this option to "Disabled". The Choices: Enabled (default), Disabled.

Primary / Secondary Master / Slave PIO

The IDE PIO (Programmed Input / Output) fields let you set a PIO mode (0-4) for each of the IDE devices that the onboard IDE interface supports. Modes 0 through 4 provides successively increased performance. In Auto mode, the system automatically determines the best mode for each device. **The Choices: Auto** (default), Mode0, Mode1, Mode2, Mode3, Mode4.

IDE Primary / Secondary Master / Slave UDMA

Ultra DMA/100 functionality can be implemented if it is supported by the IDE hard drives in your system. As well, your operating environment requires a DMA driver (Windows 95 OSR2 or a third party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/100, select Auto to enable BIOS support.

The Choices: Auto (default), Disabled.

VIA OnChip PCI Device

VIA-3058 AC97 Audio

This item allows you to decide to enable/ disable to support AC97 Audio. **The Choices: Auto** (default), Disabled.

VIA-3068 MC97 Modem

This item allows you to decide to enable/ disable to support AC97 Modem. The Choices: Auto (default), Disabled.

VIA-3043 OnChip LAN

This item allows you to enable or disable the onboard LAN chip. **The Choices: Enabled** (Default), Disabled.

Onboard LAN Boot ROM

This item allows you to enable or disable the onboard LAN Boot ROM. **The Choices: Disabled** (Default), Enabled.

Super IO Device

Press Enter to configure the Super I/O Device.

Onboard FDC Controller

Select Enabled if your system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If install and FDC or the system has no floppy drive, select Disabled in this field. **The Choices: Enabled** (default), Disabled.

Onboard Serial Port 1

Select an address and corresponding interrupt for the first and second serial ports.

The Choices: **3F8/IRQ4** (default), Disabled, Auto, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3.

UART Mode Select

This item allows you to determine which Infrared (IR) function of onboard I/O chip.

The Choices: Normal(default), ASKIR, IrDA, SCR .

UR2 Duplex Mode

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. **The Choices: Half** (default), Full.

Onboard Parallel Port

This item allows you to determine access onboard parallel port controller with which $\ensuremath{\mathrm{I/O}}$ Address.

The Choices: 378/IRQ7 (default), 278/IRQ5, 3BC/IRQ7, Disabled.

Parallel Port Mode

The default value is SPP.	
SPP (default)	Using Parallel port as Standard Printer Port.
EPP	Using Parallel port as Enhanced Parallel Port.
ECP	Using Parallel port as Extended Capabilities Port
ECP+EPP	Using Parallel port as ECP & EPP mode.

ECP Mode Use DMA

Select a DMA Channel for the port. **The Choices: 3** (default), 1.

Game Port Address

Game Port I/O Address. **The Choices: 201** (default), 209, Disabled.

Midi Port Address

Midi Port Base I/O Address. **The Choices: 330** (default), 300, Disabled.

Midi Port IRQ

This determines the IRQ in which the Midi Port can use. **The Choices: 10** (default), 5.

Init Display First

This item allows you to decide to active whether PCI Slot or on-chip VGA first. The Choices: Onboard/AGP, PCI Solt (default).

OnChip USB Controller

This item allows you to set the onchip USB. **The Choices: All Enabled** (default), All Disabled, 1&2 USB Port, 2&3 USB Port, 1&3 USB Port, 1 USB Port, 2 USB Port, 3 USB Port.

USB Keyboard Support

The default value is Disabled. Enabled **Disabled** (default)

Enable USB Keyboard Support. Disable USB Keyboard Support.

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 mode (most new drives do), select Enabled for automatic detection of the optimal number of block read / write per sector where the drive can support.

The Choices: Enabled (default), Disabled.

6 Power Management Setup

The Power Management Setup Menu allows you to configure your system to utilize energy conservation and power up/power down features.

■ Figure 6. Power Management Setup

Phoenix - AwardBIOS CMOS Setup Utility Power Management Setup			
ACPI function	[Enabled]	Item Help	
HCPI Suspend Type Power Management Option HDD Power Down Suspend Mode Video Off Option Video Off Method MODEM Use IRQ Soft-Off by PWRBTN Run VGABIOS if S3 Resume State After Power Failure ► IRQ/Event Activity Detect	IST(PUS)] [User Define] [Disable] [Disable] [Suspend -> Off] [V/H SYNC+Blank] [3] [Instant-Off] [Auto] [Auto] [Press Enter]	Menu Level ►	
-/++:Move Enter:Select +/- F5:Previous Value	/PU/PD:Value F10:Save H s F7: Ontim	ESC:Exit F1:General Help	

ACPI function

This item displays the status of the Advanced Configuration and Power Management (ACPI).

The Choices: Enabled (default), Disabled.

ACPI Suspend Type

The item allows you to select the suspend type under the ACPI operating system.
The Choices: S1 (POS) (default)
S3 (STR)
S1 & S3
POS+STR

Power Management

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

1.HDD Power Down.

2.Suspend Mode.

There are four options of Power Management, three of which have fixed mode settings

Min. Power Saving

Minimum power management. Suspend Mode = 1 hr. HDD Power Down = 15 min

Max. Power Saving

Maximum power management only available for sl CPU's. Suspend Mode = 1 min. HDD Power Down = 1 min.

User Defined (default)

Allows you to set each mode individually. When not disabled, each of the ranges are from 1 min. to 1 hr. except for HDD Power Down which ranges from 1 min. to 15 min. and disable.

Video Off Method

This option determines the manner in which the monitor is goes blank. $V\!/H\,S\,YNC{+}Blank$

This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.

Blank Screen

This option only writes blanks to the video buffer.

DPMS Support (default)

Initial display power management signaling.

HDD Power Down

When enabled, the hard disk drive will power down and after a set time of system inactivity. All other devices remain active.

The Choices: Disabled (default), 1 Min, 2 Min, 3 Min, 4 Min, 5 Min, 6 Min, 7 Min,8 Min, 9 Min, 10 Min, 11 Min, 12 Min, 13 Min, 14 Min, 15 Min.

Suspend Mode

When enabled and after the set time of system inactivity, all devices except the CPU will be shut off.

The Choices: Disabled (default), 1Min, 2Min, 4Min, 8Min, 12Min, 20Min, 30Min, 40Min, 1Hour.

Video Off Option

This field determines when to activate the video off feature for monitor power management.

The Choices: Suspend→Off (default), Always on, All Modes→Off.

Video Off Method

This option determines the manner in which the monitor is goes blank.

V/H SYNC+Blank (default)

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

Initial display power management signaling.

Modem Use IRQ

This determines the IRQ, which can be applied in MODEM use. **The Choices: 3** (default), 4/5/7/9/10/11/NA.

Soft-Off by PWR-BTTN

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state when the system has "hung." **The Choices:** Delay 4 Sec, **Instant-Off** (default).

Run VGABIOS if S3 Resume

Choosing Enabled will make BIOS run VGA BIOS to initialize the VGA card when system wakes up from S3 state . The system time is shortened if you disable the function , but system will need AGP driver to initialize the card . So , if the AGP driver of the VGA card does not support the initialization feature , the display may work abnormally or not function after S3 .

The Choices:Auto (default), Yes, No.

State After Power Failure

This field determines the action the system will automatically take when power is restored to a system that had lost power previously without any subsequent manual intervention. There are 3 sources that provide current to the CMOS area that retains these Power-On instructions; the motherboard battery (3V), the Power Supply (5VSB), and the Power Supply (3.3V). While AC is not supplying power, the motherboard uses the motherboard battery (3V). If AC power is supplied and the Power Supply is not turned on, 5VSB from the Power Supply is used. When the Power Supply is eventually turned on 3.3V from the Power Supply will be used.

The Choices: Auto, On, Off (default).

IRQ/ Event Activity Detect

If you highlight the literal "Press Enter then press the enter key it will take yo	er" next to the "IRQ/ Event Activity Detect" label and
VGA	When set to on, any event occurring at a VGA port will awaken a system which has been powered down. The Choices: Off (default), On.
LPT & COM	When set to On , any event occurring at a LPT/COM Port will awaken a system which has been powered down. The Choices: LPT/COM (default), COM, LPT, NONE.
HDD & FDD	When set to On (default), any event occurring at a hard or floppy drive will awaken a system which has been powered down. The Choices: On (default), Off.
PCI MASTER	When set to On, any event occurring at PCI will awaken a system which has been powered down. The Choices: Off (default), On.
PowerOn by PCI Card	This item allows you to enable or disable Power on by PCI Card. The Choices: Disabled (default), Enabled.
Modem Ring Resume	This item allows you to enable or disable modem ring resume. The Choices: Disabled (default), Enabled.
Wake Up On LAN/Ring	To use this function, you need a LAN add-on card which support power on function. It should also support the wake-up on LAN jump. The Choices: Disabled (default), Enabled.
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. The Choices: Disabled (default), Enabled.
Date (of Month)	You can choose which month the system will boot
Resume Time (hh: mm: ss)	You can choose the hour, minute and second the

system will boot up.

Primary INTR When set to ON (default), any event occurring at Primary INTR will awaken a system, which has been powered down.

IRQs Activity Monitoring When set to ON (default), any event occurring at Primary INTR will awaken a system which has been powered down.

The following is a list of IRQ, Inter ReQuest, which can be exempted much as the COM ports and LPT ports above can. When an I/P 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 services.

As above, the choices are On and Off. Off is the default.

When set On, activity will neither prevent the system from going into a power management mode nor awaken it.

Primary INTR IRQ3 (COM2) IRQ4 (COM1) IRO5 (LPT2) IRQ6 (Floppy Disk) IRQ7 (LPT1) IRQ8 (RTC Alarm) (IRQ2 Redir) IRQ9 **IRQ10** (Reserved) IRQ11 (Reserved) IRQ12 (PS2/Mouse) IRQ13 (Coprocessor) IRQ14 (Hard Disk) IRQ15 (Reserved)

7 PnP/PCI Configurations

This section describes configuring the PCI bus system. PCI, or Personal Computer Interconnect, is a system which allows I/O devices to operate at speeds nearing the speed of the CPU itself uses when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

■ Figure 7. PnP/PCI Configurations

Phoenix - AwardBIOS CMOS Setup Utility PnP/PCI Configurations			
PNP OS Installed Reset Configuration Data	[No] [Disabled]	Item Help	
Resources Controlled By x IRQ Resources	[Auto(ESCD)] Press Enter	Menu Level ►	
PCI/VGA Palette Snoop Assign IRQ For VGA Assign IRQ For USB	[Disabled] [Enabled] [Enabled]		
tlac.Moue Enter:Select +/-		 FSC·Evit El·General Heln	
E5 Drouiouc Value	c = 10.000	mized Defaulte	

PNP OS Installed

When set to "Yes", BIOS will only initialize the PnP cards used for booting (VGA, IDE, SCSI). The rest of the cards will be initialized by the PnP operating systems, like WindowsTM95. When set to "No", BIOS will initialized all the PnP cards. Therefore for non-PnP operating system (DOS, NetwareTM), this option must set to "No".

The Choices: No (default), Yes.

Reset Configuration Data

The system BIOS supports the PnP feature which requires the system to record which resources are assigned and protects resources from conflict. Every peripheral device has a node, which is called ESCD. This node records which resources are assigned to it. The system needs to record and update ESCD to the memory locations. These locations (4K) are reserved in the system BIOS. If the Disabled (default) option is chosen, the system's ESCD will update only when the new configuration varies from the last one. If the Enabled

option is chosen, the system is forced to update ESCDs and then is automatically set to the "Disabled" mode.

The above settings will be shown on the screen only if "Manual" is chosen for the resources controlled by function.

Legacy is the term, which signifies that a resource is assigned to the ISA Bus and provides non-PnP ISA add-on cards. PCI / ISA PnP signifies that a resource is assigned to the PCI Bus or provides for ISA PnP add-on cards and peripherals.

The Choices: Disabled (default), Enabled.

Resources Controlled By

By Choosing "Auto(ESCD)" (default), the system BIOS will detect the system resources and automatically assign the relative IRQ and DMA channel for each peripheral.By Choosing "Manual", the user will need to assign IRQ & DMA for add-on cards. Be sure that there are no IRQ/DMA and I/O port conflicts.

IRQ Resources

This submenu will allow you to assign each system interrupt a type, depending on the type of device using the interrupt. When you press the "Press Enter" tag, you will be directed to a submenu that will allow you to configure the system interrupts. This is only configurable when "Resources Controlled By" is set to "Manual".

IRQ-3	assigned to	PCI Device
IRQ-4	assigned to	PCI Device
IRQ-5	assigned to	PCI Device
IRQ-7	assigned to	PCI Device
IRQ-9	assigned to	PCI Device
IRQ-10	assigned to	PCI Device
IRQ-11	assigned to	PCI Device
IRQ-12	assigned to	PCI Device
IRQ-14	assigned to	PCI Device
IRQ-15	assigned to	PCI Device

PCI / VGA Palette Snoop

Choose Disabled or Enabled. Some graphic controllers which are not VGA compatible take the output from a VGA controller and map it to their display as a way to provide boot information and VGA compatibility.

However, the color information coming from the VGA controller is drawn from the palette table inside the VGA controller to generate the proper colors, and the graphic controller needs to know what is in the palette of the VGA controller. To do this, the non-VGA graphic controller watches for the Write access to the VGA palette and registers the snoop data. In PCI based systems, where the VGA controller is on the PCI bus and a non-VGA graphic controller is on an ISA bus, the Write Access to the palette will not show up on the

ISA bus if the PCI VGA controller responds to the Write.

In this case, the PCI VGA controller should not respond to the Write, it should only snoop the data and permit the access to be forwarded to the ISA bus. The non-VGA ISA graphic controller can then snoop the data on the ISA bus. Unless you have the above situation, you should disable this option.

Disabled (default) Enabled Disables the function. Enables the function.

Assign IRQ For USB

Lets the user choose which IRQ to assign for USB. The Choices: Enabled (default), Disabled.

Assign IRQ For VGA

Lets the user choose which IRQ to assign for the VGA. **The Choices: Enabled** (default), Disabled.

8 PC Health Status

■ Figure 8. PC Health Status

Phoenix - AwardBIOS CMOS Setup Utility PC Health Status			
Shutdown Temperature	[Disabled]	Item	Help
CPU Vcore + 3.3 V + 5.0 V +12.0 V -12.0 V - 5.0 V SV(SB) Voltage Battery Current CPU FAN Speed Current CPU FAN Speed Current SYS FAN Speed Show H/W Monitor in POST Chassis Open Warnning	[Enabled] [Disabled]	Menu Level	•
↑↓→+:Move Enter:Select +/- E5:Previous Value	/PU/PD:Value F1	0:Save ESC:Exit F1: 7: Optimized Defaults	General Help

Shutdown Temperature

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

The Choices: 60°C / 140°F, 65°C / 149°F, 70°C / 158°F, Disabled (default).

<u>CPU Vcore/+3.3V/+5V/+12V/-12V/-5V/5V (SB)/ Battery Voltage</u>

Detect the system's voltage status automatically.

Current CPU Temp

Show you the current CPU temperature.

Current CPU FAN Speed

This field displays the current CPU FAN speed.

Current SYS FAN Speed

This field displays the current SYS FAN speed.

Show H/W Monitor in POST

If you computer contain a monitoring system, it will show PC health status during POST stage. The item offers several delay time to select you want. **The Choices: Enabled** (default), Disabled.

Chassis Open Warning

This item allows you to enable or disable Chassis Open Warning beep. The Choices: Disabled (Default), Enabled.

9 Frequency Control

■ Figure 9. Frequency Control

Phoenix - AwardBIOS CMOS Setup Utility Frequency/Voltage Control			
VIA C3 Clock Ratio	[Default]	Ite	m Help
DDR Voltage DDR Voltage Auto Detect PCI/DIMM Clk Spread Spectrum CPU Clock Intel CPU Ratio	[2.6 V] [Enabled] [Enabled] [100MHz] [Default]	Menu Level	•
-/- F5:Previous Value	/PU/PD:Value F1 s F	0:Save ESC:Exit F1 7: Optimized Default	:General Help s

VIA C3 Clock Ratio

This item allows you to select the C3 clock ratio.

The Choices: Default (default), x3, x3.5, x4, x4.5, x5, x5.5, x6, x6.5, x7, x8, x9, x10, x9.5, x12, x8.5, x10.5, x11, x12, x12.5, x13, x14, x14.5, x15, x15.5, x16.

CPU Voltage

This item allows you to select CPU Voltage Regulator. **The Choices: Default** (default), +5.1%, +3.4%, +1.7%.

DDR Voltage

This item allows you to select DDR Voltage Regulator. The Choices: 2.6V (default), 2.7V, 2.8V.

Auto Detect PCI/ DIMM Clk

This item allows you to enable or disable auto Detect PCI/ DIMM Clock. **The Choices: Enabled** (default), Disabled.

CPU Clock

This item allows you to select CPU Clock, and CPU over clocking.

~	If unfortunately, the system's frequency that you are selected is
	not functioning, there are two methods of booting-up the system.
	Method 1: Clear the COMS data by setting the JCOMS1 ((2-3) closed))
	as "ON" status. All the CMOS data will be loaded as
	defaults setting.
	Method 2: Press the <insert> key and Power button simultaneously,</insert>
	after that keep-on pressing the <insert> key until the</insert>
	power-on screen showed. This action will boot-up the
	system according to FSB of the processor.
	% It's strongly recommended to set CPU Vcore and clock in
	default setting. If the CPU Vcore and clock are not in default
	setting, it may cause CPU or M/B damage.

Intel CPU Ratio

This item allows you to select the CPU Ratio.

The Choices: Default (default), x3. x3.5, x4, x4.5, x5, x5.5, x6, x6.5, x7, x7.5, x8, x8.5, x9, x9.5, x10, x10.5, x11, x11.5, x12, x13, x14, x15, x16.