

ICE CUBE VG61

High Performance
Socket478B Motherboard

User's Guide

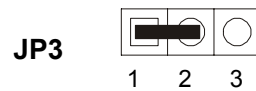


CAUTION

- * Only 1.5V AGP Card is supported. If 3.3V AGP Card added, the motherboard will be damaged.
- * The AGP & TV card is option that there are support S & V of TV and DVI connectors.
- * You should have P4 power and connect its ATX 4-pin power connector with J2.

WARNING

hetem work normally, please ensure JP3 of the mainboard is set as below. Refer to Fig. 2.1 in this manual for the location JP3.



If JP3 is shorted to 2-3, no CMOS data can be retained.

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The information presented in this publication has been carefully checked for reliability; however, no responsibility is assumed for inaccuracies, whereas, specification is subjected to change without notice.

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Preface

ICE CUBE VG61 high-performance Intel Pentium 4 motherboard. The system core logic is based on Intel 82845GE Chipsets. It is integrated with NEC uPD72873GC 1394a controller and Realtek RTL8100B Ethernet controller.

Features

CPU:

- Support Intel Socket 478 Pentium 4 processor
- Support Intel Socket 478 Celeron processor
- 400/533MHz Intel NetBurst micro-architecture bus

Chipset:

- Intel 82845GE + ICH4 chipsets
- Winbond W83627HF LPC controller
- Realtek RTL8100B Ethernet controller
- AgereFW323-05 1394a controller

Main Memory:

- Two 184-pin DIMM sockets, support DDR200/266/333 SDRAM up to 2GB

VGA:

- Integrated Graphics controller in 845GE GMCH
- Support 3D/2D enhancements
- Support AGP8X bandwidth. , Max. Bandwidth 2.1GB/sec
- Support extend AGP4X slot.
- Chrontel CH7010 DVI Transmitter + TV Encoder ADD card
- TV-out supporting up to 1024x768 graphics resolutions

Audio:

- AC-Link with AC'97 2.2 compliant
- Software audio with Realtek ALC650E 6-channel AC'97 codec, S/PDIF output supported

USB 2.0:

- Integrated USB 2.0 controller in ICH4
- Compliant with USB 2.0 specification
- Support Hi-speed, Full-speed and Low-speed data transfer rate. Max. Bandwidth 480Mbits/s

Ethernet:

- Realtek RTL8100B 10/100Base-T Ethernet controller
- Full-Duplex supported
- WFM 2.0 compliant

1394:

- Agere FW323-05 1394a Host controller
- Compliant with IEEE 1394 OHCI Specification rev. 1.1
- Data transfer rate can be 100/200/400Mbps

I/O Interface:

- Winbond W83627HF LPC controller
- Two enhanced PCI IDE channels which support up to 4 IDE devices with ATA-100 transfers up to 100MB/sec
- Build in FDC supports 1.2M/1.44M/2.88M FDD

Back Panel I/O Output:

- SPDIF-OUT optical connector
- 2 Type A USB connectors, 1 RJ-45 LAN port
- 1 S connector, 1 Composite connector
- DVI connector on ADD card
- 2 1394 vertical connectors
- 2 fast serial ports, 1 D-type 15-pin VGA connector
- Line-in, MIC-in, Speaker-out

System BIOS:

- Award BIOS with 2MB/4MB EEPROM
- ACPI/PnP supported

Expansion Slots:

- 1 PCI slot, 1 AGP4X slot

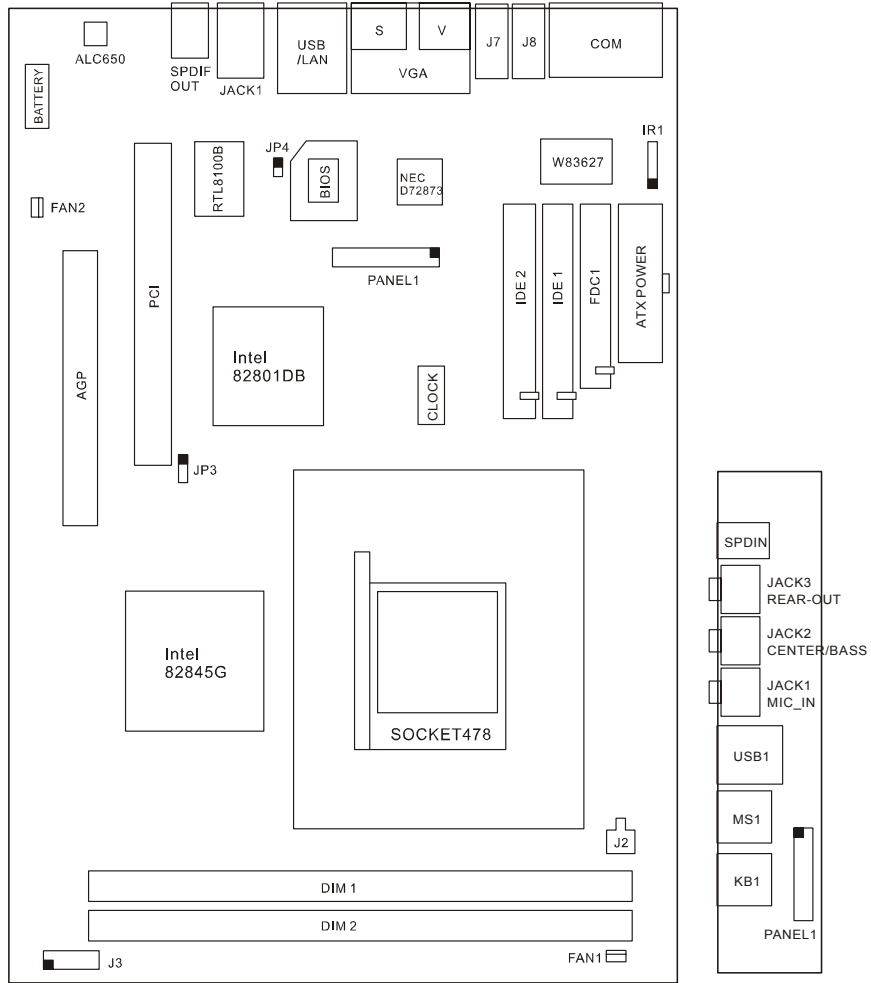
Form Factor:

- Self-defined @ 262 mm (L) × 180 mm (W), 6 Layers

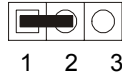
Front Panel I/O Output Board:

- Double desk USB connectors
- PS/2 mouse and keyboard connectors
- SPDIF-IN optical connector
- Center/Bass, Rear-Out, MIC-in
- Board size @ 27 mm (L) x 135 mm (W)

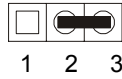
Layout



Motherboard

2.1 JUMPER PRESENTATION

Pins 1 and 2 are shorted with a jumper cap.



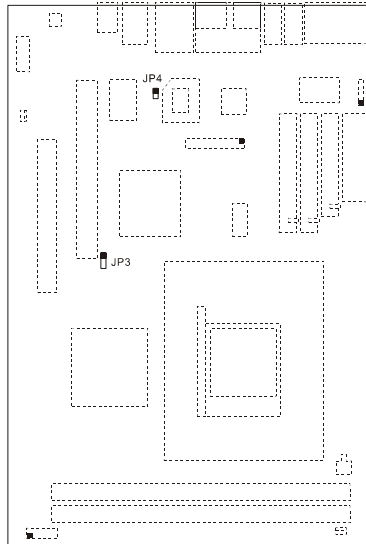
Pins 2 and 3 are shorted with a jumper cap.



The jumper is shorted when the jumper cap is placed over the two pins of the jumper.

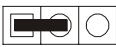
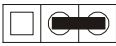


The jumper is opened when the jumper cap is removed from jumper.



2.2 GRAPHICAL DESCRIPTION OF JUMPER SETTINGS

2.3 JP3 – CLEAR CMOS DATA

JP3 is used to clear the CMOS Data in the RTC (build in ICH4 chip).

JP3	Clear CMOS data
	Normal
	Clear CMOS

2.4 JP4 – BIOS PROTECTION

JP4	BIOS protection
	Enabled
	Disabled

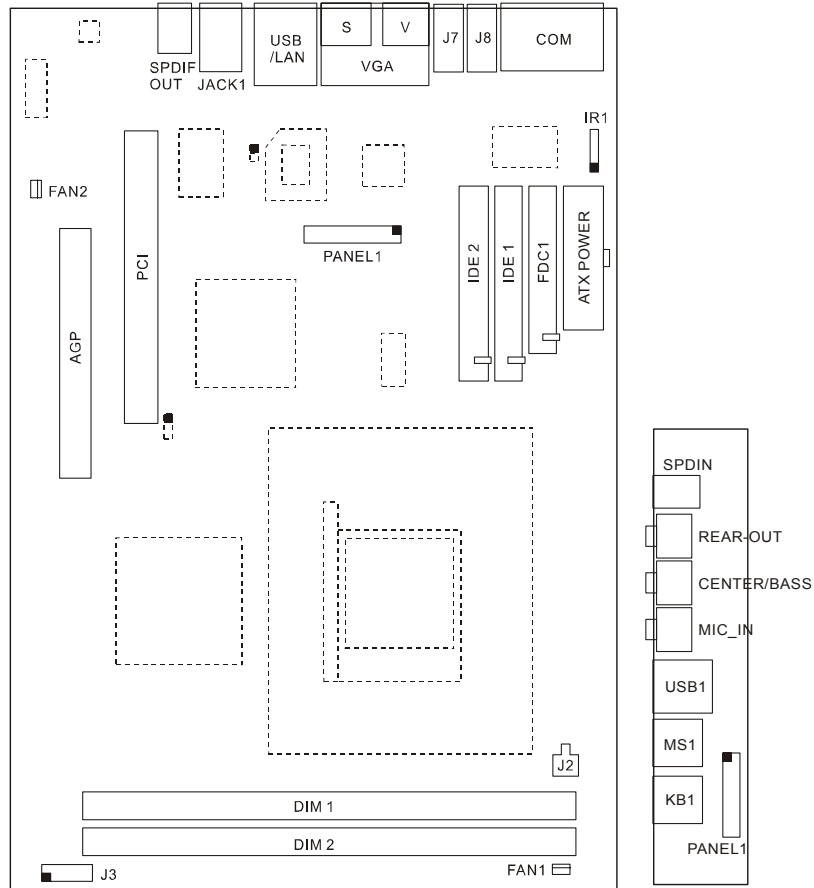
CHAPTER 3

CONNECTOR CONFIGURATION

Once the mainboard has been fastened into system case, the next step is to connect the internal cables. The internal cables are wire leads with plastic female connectors that attach to the connectors. The mainboard connectors have the various numbers of pins and are the contact points between the mainboard and other parts of the computer.

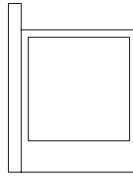
Refer to Fig. 2.1 for the location of the connectors.

Connector Location



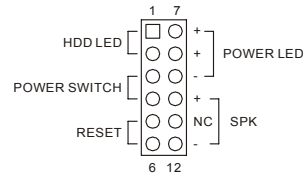
3.1 U1 – SOCKET478

U1 is the Socket478 CPU socket which can support Intel Pentium 4 processor.

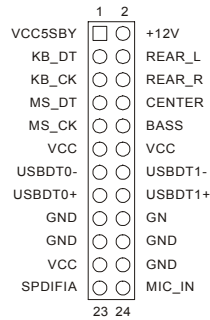


3.2 SYSTEM PANEL CONNECTOR

J3 is a front panel multi-function jumper. The pin definition is as following figure.



3.3 PANEL1 – MULTI-FUNCTION CONNECTOR



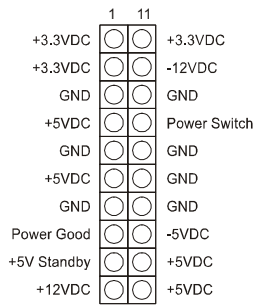
3.4 FAN CONNECTOR

FAN1 and FAN2 is the fan connector of system and CPU.

3.5 IR1 – IrDA CONNECTOR

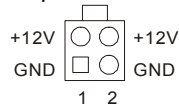


3.6 ATX POWER SUPPLY CONNECTOR

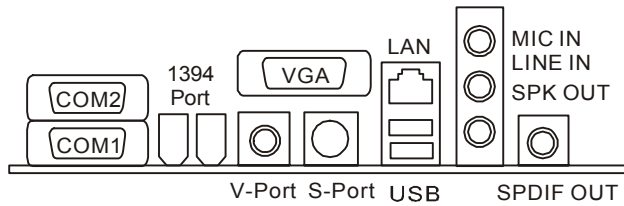


3.7 ATX 12V Connector

J2 must be connected with the ATX 4-pin connector of P4 Power.



3.8 REAR PANEL CONNECTORS



3.9 FRONT PANEL CONNECTORS



CHAPTER 4

AWARD BIOS UTILITY

4.1 ENTERING SETUP

Power on the computer, when the following message briefly appears at the bottom of the screen during the POST (Power On Self Test), press key or simultaneously press the <Ctrl> + <Alt> + <Esc> keys, to enter the AWARD BIOS CMOS Setup Utility. **Press to enter SETUP**

Once you have entered, the Main Menu appears on the screen. The main menu allows you to select from eleven setup functions and two exit choices. Use the arrow keys to select the item and press the <Enter> key to accept or enter the sub-menu.

Phoenix – AwardBIOS CMOS Setup Utility	
<ul style="list-style-type: none">▶ Standard CMOS Features▶ Advanced BIOS Features▶ Advanced Chipset Features▶ Integrated Peripherals▶ Power Management Setup▶ PnP/PCI Configurations▶ PC Health Status	<ul style="list-style-type: none">▶ Frequency/Voltage Control<ul style="list-style-type: none">Load Fail – Safe DefaultsLoad Optimized DefaultsSet Supervisor PasswordSet User PasswordSave & Exit SetupExit Without Saving
Esc: Quit F9: Menu in BIOS ↑↓→←: Select Item F10: Save & Exit Setup	
Load Optimized Defaults	

Load Fail – Safe Defaults

The safest default settings. You can use this function to detect the errors.

Load Optimized Defaults

The Optimized Defaults are common and efficient. It is recommended to load the optimized defaults at first, and then modify the needed configuration settings.

4.2 STANDARD CMOS FEATURES SETUP

The basic CMOS settings included in “Standard CMOS Features” are Date, Time, Hard Disk Drive Types, Floppy Disk Drive Types, and VGA etc. Use the arrow keys to highlight the item, and then use the <PgUp> or <PgDn> keys to select the value desired in each item.

Phoenix – AwardBIOS CMOS Setup Utility Standard CMOS Features		
Date (mm:dd:yy)	Tue. Jan 01 2002	Item Help
Time (hh:mm:ss)	11:23:33	
▶ IDE Primary Master		Menu Level ▶ Change the day, month, year and century
▶ IDE Primary Slave		
▶ IDE Secondary Master		
▶ IDE Secondary Slave		
Drive A	[1.44M, 3.5 in.]	
Drive B	[None]	
Video	[EGA/VGA]	
Hal On	[All, But Keyboard]	
Base Memory	640K	
Extended Memory	63488K	
Total Memory	64512K	
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5: Previous Values F6: Fail - Save Defaults F7: Optimized Defaults		

Date/Time

Set the system date and time.

IDE Primary/Secondary Master/Slave

The BIOS will automatically detect the IDE drives type.

Drive A/B

Set the type of floppy drives installed.

Options: 720K/1.44/2.88M, 3.5 in.; None; 360K/1.2M, 5.25 in.

Video [EGA/VGA]

Select the type of video display card installed in your system.

EGA/ VGA: For EGA, VGA, SEGA, SVGA, or PGA monitors adapters.

CGA 40: Color Graphic Adapter, powering up in 40-column mode.

CGA 80: Color Graphic Adapter, powering up in 80-column mode.

MONO: Monochrome adapter, including high-resolution monochrome adapters.

Halt On [All, But Keyboard]

This category determines whether the system will stop if an error is detected during powering up.

All errors: Stop and prompt whenever the BIOS detect a non-fatal error.

No errors: The system boot will not stop for any error that may be detected.

All, But Keyboard: Stop and prompt for all other errors but a keyboard error.

All, But Diskette: Stop and prompt for all other errors but a diskette error.

All, But Disk/Key: Stop and prompt for all other errors but a keyboard or disk error.

Memory

This is a Display-Only Category, determined by POST of the BIOS.

Base Memory: The amount of base (or conventional) memory installed in the system.

Extended Memory: How much extended memory is presented during the POST.

Total Memory: The sum of the above memory.

4.3 ADVANCED BIOS FEATURES

The following indicates the options for each item and describes their meaning.

Phoenix – AwardBIOS CMOS Setup Utility Advanced BIOS Features		
Virus Warning	[Disabled]	Item Help
CPU L1 & L2 Cache	[Enabled]	Menu Level ► Allows you to choose the VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep
Quick Power On Self Test	[Enabled]	
First Boot Device	[Floppy]	
Second Boot Device	[HDD – 0]	
Third Boot Device	[LS120]	
Boot Other Device	[Enabled]	
Swap Floppy Drive	[Disabled]	
Boot Up Floppy Seek	[Enabled]	
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]	
Report No FDD For WIN 95	[No]	
Small Logo(EPA) Show	[Disabled]	
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5: Previous Values F6: Fail - Save Defaults F7: Optimized Defaults		

Virus warning

When enabled, guards against boot virus threats early in the On Guard boot cycle, before they have a chance to load into your system, ensuring your computer boots to a clean operating system.

CPU L1 & L2 Cache

Turn on or off the CPU's L1 and L2 built-in cache.

Quick Power On Self Test

Enabled allows skip some tests during POST. Disabled is Normal POST.

First/Second/Third Boot Device

Select Your Boot Device Priority. It could be Floppy, LS120, HDD-0, SCSI, CDROM, HDD-1~3, ZIP100, USB-FDD/ZIP/CDROM/HDD and LAN, or Disabled.

Boot Other Device

Enables other boot device.

Swap Floppy Drive

If the system has two floppy drives, choose enabled to assign physical drive B to logical drive A and vice-versa.

Boot Up Floppy Seek

Tests the tracks of floppy drive to determine whether they have 40 or 80 tracks.

Boot Up NumLock Status

Set the power on state for NumLock. On, Off.

Gate A20 Option

Fast: Lets chipset control GateA20, or Normal - a pin in the keyboard controller controls GateA20. Default is Fast.

Typematic Rate Setting

When enabled, you can configure the following two items: typematic rate and typematic delay.

Typematic Rate (chars/sec)

Set the rate that the keys are repeats per sec. 6-30

Typematic Delay (Msec)

Set the delay time before keystrokes begin to repeat. 250-1000

Security Option

Determine whether the password is required every time the system boots or only when you enter setup. Setup, System

OS Select For DRAM>64MB

Selects OS2 only if you are running OS/2 operating system with more than 64MB of

RAM.

Report NO FDD for WIN 95

Choose Yes to report NO Floppy Disk Drive for WIN 95 to release IRQ6.

Small Logo(EPA) Show : Enabled or disabled the EPA logo.

Disabled is Normal POST.

4.4 ADVANCED CHIPSET FEATURES SETUP

The following indicates the options for each item and describes their meaning.

Phoenix – AwardBIOS CMOS Setup Utility Advanced Chipset Features		
DRAM Timing Selectable	[By SPD]	Item Help
CAS Latency Time	2.5	
Active to Precharge Delay	7	
DRAM RAS# to CAS# Delay	3	Menu Level ►
DRAM RAS# Precharge	3	
Turbo Mode	[Disabled]	
Memory Frequency For	[Auto]	
System BIOS Cacheable	[Enabled]	
Video BIOS Cacheable	[Enabled]	
Memory Hole At 15M-16M	[Disabled]	
Delay Transaction	[Enabled]	
Delay Prior to Thermal	[16 Min]	
AGP Aperture Size (MB)	[64]	
** On-Chip VGA Setting **		
On-Chip VGA	[Enabled]	
On-Chip Frame Buffer Size	[8MB]	
Boot Display	[Auto]	
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5: Previous Values F6: Fail – Save Defaults F7: Optimized Defaults		

DRAM Timing Selectable

By SPD is the default setting. Manual

CAS Latency Time

Contains the information for SDRAM initialization procedure. 1.5/2/2/5/3

Active to Precharge Delay

5/6/7

DRAM RAS# to CAS# Delay

Set the latency between the DDR SDRAM active command and the read/write

command. 2/3

DRAM RAS# Precharge

Set the idle clocks after issuing a precharge command to the DDR SDRAM. 2/3

Turbo Mode

Enabled or disabled Turbo mode.

Memory Frequency For

This item's options will auto change to 'Auto/DDR200/DDR266' if CPU FSB is 400MHz, and to 'Auto/DDR266/DDR333' if CPU FSB is 533MHz.

System BIOS Cacheable

Besides conventional memory, the system BIOS area is also cacheable. Enabled, Disabled.

Video BIOS Cacheable

Besides conventional memory, video RAM area is also cacheable. Enabled, Disabled.

Memory Hole At 15M-16M

Enabled Memory hole at 15-16M is reserved for expanded ISA card.

Delayed Transaction

Enabled/ Disabled: Default setting is recommended.

Delay Prior to Thermal

Default setting is recommended. 4/8/16/32 Min.

AGP Aperture Size (MB)

Sets the effective size of the Graphics Aperture to be used in the particular GART Configuration. 4MB~ 256MB:

On-Chip VGA: Enabled/Disabled

On-Chip Frame Buffer Size: 8MB/1MB

Boot Display: Auto, CRT, TV, EPP

4.5 INTEGRATED PERIPHERALS

The following indicates the options for each item and describes their meaning.

Phoenix – AwardBIOS CMOS Setup Utility Integrated Peripherals		
On-Chip Primary PCI IDE	[Enabled]	Item Help
IDE Primary Master PIO	[Auto]	
IDE Primary Slave PIO	[Auto]	Menu Level ►
IDE Primary Master UDMA0	[Auto]	
IDE Primary Slave UDMA	[Auto]	
On-Chip Secondary PCI IDE	[Enabled]	
IDE Secondary Master PIO	[Auto]	
IDE Secondary Slave PIO	[Auto]	
IDE Secondary Master UDMA	[Auto]	
IDE Secondary Slave UDMA	[Auto]	
USB Controller	[Enabled]	
USB2.0 Controller	[Enabled]	
USB Keyboard Support	[Disabled]	
USB Mouse Support	[Disabled]	
AC97 Audio	[Auto]	
Init Display First	[Onboard/AGP]	
IDE HDD Block Mode	[Enabled]	
Onboard Lan Boot ROM	[Enabled]	
POWER ON Function	[BUTTON ONLY]	
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5: Previous Values F6: Fail - Save Defaults F7: Optimized Defaults		

On-Chip Primary Secondary PCI IDE

Enables or disables On-Chip Primary/Secondary PCI IDE.

IDE Primary/Secondary Master/Slave PIO

Defines the IDE primary/secondary master/slave mode. Mode 0 – 4/ Auto:

IDE Primary/Secondary Master/Slave UDMA

Auto/ Disabled: Ultra DMA mode will be enabled if an Ultra DMA device is detected.

USB/2.0 Controller

Enables or disables onchip USB/USB2.0 controller.

USB Keyboard/Mouse Support

Enabled will support USB Keyboard/Mouse under DOS status.

AC97 Audio

Auto/ Disabled: Enables or disables the AC97 Audio onboard.

Init Display First

PCI Slot: Initializes the PCI VGA first.

Onboard/AGP: Initializes the onboard AGP VGA first.

IDE HDD Block Mode

Allows IDE HDD to read/write several sectors at each time. IDE HDD only reads/writes one sector at each time.

Onboard Lan Boot ROM: Enabled, Disabled

POWER ON Function

BUTTON ONLY / Keyboard 98 / Password / Hot Key / Mouse Left / Mouse Right / Any Key

KB Power ON Password

Press Enter to set the keyboard password to power up the system.

Hot Key Power ON

Options: Ctrl+F1~F12

Onboard FDC Controller

Enables or disables onboard FDC.

Onboard Serial Port 1/2

3F8/IRQ4,2F8/IRQ3,3E8/IRQ4,2E8/IRQ3, Defines the onboard serial port address and required interrupt number.

Auto: Onboard serial port address and IRQ are automatically assigned.

Disabled: Onboard serial port is disabled.

UART Mode Select

Set the UART Mode: Normal, IrDA, ASKIR

RxD, TxD Active

Hi, Lo/ Lo, Hi/ Lo, Lo/ Hi, Hi

IR Transmission Delay

Enabled/ Disabled

UR2 Duplex Mode

Half/ Full

Use IR Pins

IR-Rx2Tx2/ RxD2, TxD2

Onboard Parallel Port

378/IRQ7, 278/IRQ5, 3BC/IRQ7, Defines onboard parallel port address and IRQ channel. Disabled Onboard parallel port is disabled.

Parallel Port Mode

P Defines the parallel port mode: SPP, EPP, ECP, ECP+EP, Normal

EPP Mode Select

EPP1.7, EPP1.9

ECP Mode Use DMA

3, 1

Pwron After PWR-Fail

Off, on, former sts

Midi port address/IRQ:

Select midi port address/IRQ or disabled it.

4.6 POWER MANAGEMENT SETUP

The following indicates the options for each item and describes their meaning.

Phoenix – AwardBIOS CMOS Setup Utility Power Management Setup		
ACPI Function	[Enabled]	Item Help
ACPI Suspend Type	[S1<POS>]	
x Run VGABIOS if S3 Resume	Auto	
Power Management Option	[User Define]	Menu Level ►
Video Off Method	[DPMS]	
Video Off In Suspend	[Yes]	
Suspend Type	[Stop Grant]	
MODEM Use IRQ	[3]	
Suspend Mode	[Disabled]	
HDD Power Down	[Disabled]	
Soft – Off by PWRBTN	[Instant – Off]	
CPU THRM-Throttling	[50.0%]	
Wake-Up by PCI card	[Enabled]	
Power On by Ring	[Enabled]	
x USB KB Wake-Up From S3	Disabled	
Resume by Alarm	[Disabled]	
x Date<of Month> Alarm	0	
x Time<hh:mm:ss> Alarm	0 : 0 :0	
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5: Previous Values F6: Fail - Save Defaults F7: Optimized Defaults		

ACPI function Enabled, Disabled.

ACPI Suspend Type: Set the ACPI suspend type. S1(POS)

Power Management

User Define: Users can configure their own Power Management Timer.

Min Saving - defined timer values are used. All timers are in their MAX values.

Max Saving - defined timer values are used. All timers are in their MIN values.

Video Off Method

V/H SYNC+Blank: In addition to Blank Screen, BIOS will also turn off the V-SYNC & H-SYNC signals from VGA card to monitor.

DPMS Support: This function is enabled only for VGA cards supporting DPMS.

Blank Screen: The system BIOS will only blank off the screen when disabling video.

Note: When the green monitor does not detect the V/H-SYNC signals, the electron gun will be turned off.

Video Off in Suspend: Yes, No

MODEM Use IRQ 3, 4, 5, 7, 9, 10, 11 NA. Special wake-up event for Modem.

Suspend Mode

Disabled: The system never enters Suspend mode by timer.

1 Min ~ 1Hr: Defines the continuous idle time before the system enters Suspend mode.

If any items defined in "PM Events" are on and activated, the system will be woken up.

HDD Power Down Disabled: HDD's motor will not be off by timer.

1 - 15 Min: Defines the continuous HDD idle time before the HDD enters power saving mode (motor off).

Soft-Off by PWRBTN Instant-Off The system will immediately power off once the power button is pressed. Delay 4 sec The system will power off when power button is pressed for 4 seconds.

CPU THRM-Throtting

12.5%, ~ 87.5% Selects the duty cycle of the STPCLK# signal, and slowing down the CPU speed when the system enters green mode.

Wake-Up by PCI card

Enabled Allows the system to be waken up by PCI card.

Power On by Ring

Enabled Allows the system to be powered on when a indicator signal comes up to UART1 or UART2 from external modem (to LAN Wake-up Header from LAN adapter or to modem Ring on Header from internal modem card).

Resume by Alarm

Enabled RTC alarm can be used to generate a wake-up event to power up the system.

Disabled RTC has no alarm function.

Date/Time (of Month/hh:mm:ss) Alarm

Set the alarm date and time.

Reload Global Timer Events

Enabled reload global timer when following event occur.

Primary/Secondary IDE 0/1
FDD, COM, LPT Port
PCI PIRQ [A-D] #

4.7 PNP/PCI CONFIGURATION SETUP

The following indicates the options for each item and describes their meaning.

Phoenix – AwardBIOS CMOS Setup Utility PnP/PCI Configuration		
Reset Configuration Data	[Disabled]	Item Help
Reset Controlled By * IRQ Resource	[Auto (ESCD)] Press Enter	Menu Level ►
PCI/VGA Palette Snoop	[Disabled]	
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5: Previous Values F6: Fail - Save Defaults F7: Optimized Defaults		

Reset Configuration Data

Default setting is Disabled. Select Enabled to reset ESCD when you exit Setup, if you have installed a new add-on and the system reconfiguration has caused serious conflicts preventing the OS from booting.

Resources Controlled By

BIOS can automatically configure all boot and PnP compatible devices. If you choose Auto, you cannot select IRQ DMA and memory base address fields, because BIOS automatically assigns them.

If you choose Manual, go to the next item and press Enter to configure the IRQ Resources.

PCI/VGA Palette Snoop

Disabled is default setting. Enabled Non-standard VGA cards such as graphics accelerators or MPEG video cars may not show colors properly. Enabling this item can solve this problem.

4.8 PC HEALTH STATUS

The following indicates the options for each item and describes their meaning.

Phoenix – AwardBIOS CMOS Setup Utility PC Health Status	
CPU Warning Temperature [Disabled]	Item Help
Current System Temp.	Menu Level ►
Current CPU1 Temperature	
Current CPUFAN1 Speed	
Current CPUFAN2 Speed	
IN0 (V)	
IN1 (V)	
IN2 (V)	
+5 V (V)	
+12 V (V)	
-12 V (V)	
-5 V (V)	
VBAT (V)	
5VSB (V)	
Shutdown Temperature [Disabled]	
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5: Previous Values F6: Fail - Save Defaults F7: Optimized Defaults	

CPU Warning Temperature

An alarm will beep when the CPU temperature is over this value. *Disabled* No alarm beep.

Shutdown Temperature

Set the shutdown temperature.

4.9 FREQUENCY/VOLTAGE CONTROL

The following indicates the options for each item and describes their meaning.

Phoenix – AwardBIOS CMOS Setup Utility Frequency/Voltage Control		
Auto Detect PCI/DIMM Clk	[Enabled]	Item Help
Spread Spectrum	[Disabled]	Menu Level ►
CPU Host/PCI Clock	Default	
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5: Previous Values F6: Fail - Save Defaults F7: Optimized Defaults		

Auto Detect PCI Clk

Enabled Close empty DIMM or PCI clock to reduce EMI. Disabled Does not close empty DIMM or PCI clock.

Warning: Be sure your selection is right. CPU over speed will be dangerous!

Spread spectrum

Disabled, Enabled

CPU Host/AGP/PCI Clock

Default

4.10 PASSWORD SETTING

When you select “Set User Password” or “Set Supervisor Password” and press **Enter**, the following message will appear at the center of the screen:

ENTER PASSWORD

Type the password, up to eight characters, and press **Enter**. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press **Enter**. You may also press **Esc** to abort the selection.

To disable password, just press **Enter** when you are prompted to enter password. A message as below will confirm the password being disabled. Once the password is disabled, the system will boot and you can enter BIOS Setup freely.

PASSWORD DISABLED

If you have selected “**System**” in “Security Option” of “BIOS Features Setup” menu, you will be prompted for the password every time the system reboots or any time you try to enter BIOS Setup.

If you have selected “**Setup**” at “Security Option” from “BIOS Features Setup” menu, you will be prompted for the password only when you enter BIOS Setup.

Supervisor Password has higher priority than User Password. You can use Supervisor Password when booting the system or entering BIOS Setup to modify all settings. Also you can use User Password when booting the system or entering BIOS Setup but can not modify any setting if Supervisor Password is enabled.

4.11 EXIT SETUP

Save & Exit Setup

After finish modifying the values, choose this item to save the changes to the CMOS RAM. A confirmation message will appear, type “Y” and press **Enter** to save and exit Setup.

Exit Without Saving

If you do not want to save the changes, choose this item to exit Setup without saving changes. A confirmation message will appear, type “Y” and press **Enter** to save and exit Setup.

The table below summaries the functions and settings of each jumper of the motherboard.

1. JUMPER SETTINGS

Function	Jumper Settings	
Clear CMOS	Normal	JP3: 1-2 Short
	Clear CMOS	JP3: 2-3 Short
BIOS Protection	Enabled	JP4: Short
	Disabled	JP4: Open

2. CONNECTORS

Connector	Description
U1	Socket 478 of Intel Pentium 4 CPU
FAN1	Fan connector of CPU
FAN2	Fan connector of System
IR1	IR connector
J3	2x6-pin front panel switch connector
PANEL1	2x12-pin multi-functions connector
J4	ATX Power Supply connector
J2	ATX 12V connector It must be connected with the ATX 4-pin connector of P4 power, otherwise the system cannot boot up.
DIM1/2	DIMM slot
FDC1	Floppy Disk connector
IDE1/2	IDE slot
PCI1	PCI slot
AGP	AGP slot