IEZ / ITZV4 Micro-ATX Intel[®] 810E Micro-ATX Intel[®] 810 Socket 370 Motherboard

User's Guide

Model	:	IEZ / ITZV4
Manual Version	:	English, version 1.0
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This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generatesm uses and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning! The use of shielded cables for the connection of the monitor to the graphics card is required to assure compliance with FCC regulations Changes or modifications to this authority to operate this equipment.

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General Description

Thanks for purchasing **IEZ / ITZV4 Socket 370** mainboard. **IEZ** is based on Intel[®] 810E chipset (North Bridge FW82810E & South Bridge FW82801AA). The 810E chipset provides stability and value with Intel graphics performance and smart integration. **ITZV4** chipset is Intel[®] 810(North Bridge FW82810 & South Bridge FW82801AA). It is a highly integrated chipset designed for the basic graphics / multimedia PC platform. **IEZ / ITZV4** provide you perfect function to be the same with your system operation and end user. This user's manual contains all the information and features that show you how to use the **IEZ / ITZV4** motherboard. Please take a moment to familiarize yourself with the design and organization of this manual.

Manual Features

This manual is divided into the following four sections:

Section 1: Product Information

A brief overview of what comes in the mainboard package, the mainboard layout an the specification it appears.

Section 2: Hardware Installation

Tell you the usage of the mainboard jumpers and the connectors.

Section 3: CMOS Setup Utility

A summary of the mainboard CMOS (BIOS) Setting.

Section 4: BIOS / Software Utility

Introduction of some useful mainboard BIOS / Software utility.

Package Check List

This **IEZ / ITZV4** mainboard package contains the following items. Please inspect the package contents and confirm that every thing is there. If anything is missing or damaged, call your vendor for instructions before operating.

The Package includes:

- One IEZ / ITZV4 mainboard
- One Floppy Interface Cable
- One IDE Interface Cable
- One Motherboard Resource CD

SECTION 1 Product Information

1-1 Mainboard Specifications

Form Factor	Micro ATX form factor		
Board Size	24.4cm x 19.0cm		
CPU	Supports Socket 370 CPUCeleron(PPGA) & Coppermine(FC-PGA) Supports FSB 66.8/73/100/103/118/124/133/137/140/150MHz Supports CPU type/clock by jumperless BIOS set up		
System Memory	DIMM 168-pin x 2, SDRAM maximum 512MB		
Chipset	Intel 810 / 810E Chipsets including: -Intel 82810(ITZV4) / Intel 82810E(IEZ)GMCH -Intel 82801AA ICH -Intel 82802AB FWH		
Expansion Slots	3 x PCI slots 1 x ISA slot 1 x AMR connector for MC'97		
Serial Port	Two serial ports UATR 16550 compatible		
Parallel Port	One parallel port supports: -SPP-standard parallel port -EPP-enhanced parallel port -ECP-extemded capabilities port		
Floppy Interface	Support drivers inches/format with: -3.5 inches-720KB/1.44MB/2.88MB -5.25 inches-360KB/1.2MB		
Ide Interface	Dual Ide Interface support 4 x IDE HDD or CDROM Support PIO Mode 4, ULTRA DMA/33 & ULTRA DMA/66		
USB Port Two USB ports supported Support USB Legacy Keyboard function			
PS/2 Mouse	PS/2 mouse supported by connector onboard		
PS/2 Keyboard	PS/2 Keyboard supported by connector onboard		
Sound Function	ON-ICH Audio Codec AC'97		
Fuse	Support Recoverable fuse for USB,KB & MOUSE		
RTC and Battery	Built in ICH Lithium(CR-2032) battery		
Power Connector	ATX		
Wake up Function	LAN wake up RTC Alarm wake up		
Hardware Monitor	3 Fan speed Monitor 4 Positive Voltage Inputs, 2 intrinsic voltage monitoring Over temperature indicate output Automatic Power on voltage detection beep		
BIOS	Award BIOS Supports APM, DMI and ACPI Supports STR(Suspend To RAM) Supports virus warning Supports Flash / Upgrade BIOS functions		
LED Indicator	System Power LED HDD activity LED System Suspend LED		

1-2 Motherboard Layout



Jumpers

- **CPU Clock Frequency** 1. JP2 2.
 - JP1
- 3. CON13
- **Clear CMOS**
- COM2 IrDA
- CON16 4. 5. CON11, CON12
 - CD_IN

Expansion Sockets

1.	DIMM 1	Support 168-pin DIMM Memory
2.	DIMM2	Support 168-pin DIMM Memory

Expansion Slots

1.	CPU	Socket 370 CPU
2.	PCI slot1 to slot3	32-bit PCI Bus Expansion slot
3.	ISA slot	ISA Bust Expansion slot
3.	AMR	AMR Expansion Slot for MC97 Devices

Connectors

Panel

4.

- 1. IDE 1 Primary IDE Connector
- 2. IDE2 Secondary IDE Connector
- 3. Floppy Floppy Drive Connector
 - PowerOn ATX Power on
 - Reset Reset Swithch Connector
 - HDD Led HDD Led Connector
 - Power Led ATX Power Led Connector
 - Speaker Chassis Speaker Connector
 - KEYLOCK Keyboard Lock Switch Connector
- Sys Fan
 System Fan Connector
 CPU Fan
 CPU Fan Connector
- 7. ATX Power ATX Power Connector
- 8. COM2 COM2 Connector
- 9. CD Audio CD-IN Connector
- 10. Joystick Game / Audio Connector
- 11. Printer Ptinter (Parallel) Port Connector
- 12. USB Universal Serial Bus Port1 and Port2
- 13. PS/2 Mouse PS/2 Mouse & Keyboard Connectors

SECTON 2 HARDWARE INSTALLATION

This section gives you a step-by step procedure on how to install your system. Follow each section accordingly.

2-1 Jumper Settings

Please refer the following figures for the locations of the jumpers on the mainboard.

2-1.1 CMOS Clear Setting



To clear CMOS, please follow the steps below:

- 1. Power off the system and unplug the chassis AC power cord.
- 2. Short JP1 at pin 2-3 for few seconds.
- 3. Set JP1 back to its Normal position at pin 1-2.
- 4. Plug the AC power cord to the chassis.
- 5. Power on the system and load the BIOS setup default.

2-1.2 CPU Type Setting

Static Precautions

Static electricity can be a serious damage to the electronic components on this mainboard. To avoid damage caused by electrostatic discharge, observe the following precautions:

- Don't removes the motherboard from its anti-static packaging until you are ready to

install it into a computer case.

- Before you handle the motherboard in any way, touch a grounded, antistatic surface,

such as an unpainted portion of the system chassis, for a few seconds to discharge

any built-up static electricity.

- Handle add-in cards and modules by the edges or mounting bracket.

CPU Setting

After installing the CPU, you must set the clock selection jumpers to match the frequency of the CPU. Find the jumpers labeled **JP2** set the jumpers (from 1 to 8 jumpers, we call them as FS0, FS1, FS2 and FS3) according to the figure below and table for CPU frequency. **JP2's** jumpers from 9 to 12 (we call them as FS4 and FS5) are used for over-clock, we also recommend them to users.

CPU Frequency





Remarks:

This motherboard belongs to jumperless and its Clock Ratio has been Set in the BIOS. If the user need to change any ratio, please reset in the BIOS.

Clock Frequency:

FS3	FS2	FS1	FS0	CPU (MHz)	PCICLK (MHz)
Short	Short	Short	Short	66.80	33.40
Short	Short	Short	Open	68.00	34.00
Short	Short	Open	Short	100.30	33.43
Short	Short	Open	Open	103.00	34.33
Short	Open	Short	Short	133.73	33.43
Short	Open	Short	Open	145.00	36.25
Short	Open	Open	Short	133.73	33.43
Short	Open	Open	Open	137.33	34.33
Open	Short	Short	Short	140.00	35.00
Open	Short	Short	Open	140.00	46.67
Open	Short	Open	Short	118.00	39.33
Open	Short	Open	Open	124.00	41.33
Open	Open	Short	Short	133.70	44.57
Open	Open	Short	Open	137.00	45.67
Open	Open	Open	Short	150.00	37.50
Open	Open	Open	Open	72.50	36.25

☞ OVER-CLOCK Select :



JP2	FS4	FS5	FREQUENCY
JP2-I	SHORT	OPEN	66/100
JP2-II	OPEN	SHORT	100/133

2-2 Connectors

2-2.1 Panel Connector



- PWRLED ATX Power LED Connector (3 pins)
- SPEAKER Chassis Speaker Connector (4 pins)
- KEY LOCK Key Lock Connector (2 pins)
- HDDLED HDD LED Connector (2 pins)
- RESET Reset Switch Connector (2 pins)
- PWR ON ATX Power Switch Connector (2 pins)

2-2.2 Power Connector

Connect the 20-pin ATX power supply cable to this power connector. Make sure the right plug-in direction and the power supply is off before connecting or disconnecting the power cable.

Remark: We suggest that users use 5 V STB and power source current should be over 0.7A, otherwise it will affect system boot up.



ATX Power Connector



2-2.3 Fan Connector

Connect the CPU and System fan cables to the fan connectors shown below. The fan connectors are marked as: **SYS FAN & CPU FAN** on the motherboad.



2-2.4 PS/2 Mouse and Keyboard Connectors

Connect the PS/2 mouse and keyboard to the onboard 6-pin Mini-Din connector shown as below.





2-2.5 USB Device Connector

Connect your USB device(s) to the onboard USB connector shown as below.



Top: USB1 Bottom: USB2



2-2.6 Serial Device (COM1/COM2), VGA and Printer Connectors

Connector your serial device(s) to the onboard serial connectors marked as **COM1** and **COM2**. Connect the 15-pins VGA Monitor Output marked as **VGA** to your system monitor or other VGA compatible devices. Connect your local printer to the onboard 25-pin printer connector marked shown as below.



2-2.7 Floppy Drive Connector

Connect the floppy drive cable to the onboard 34-pin floppy drive connector marked as **FDD.**





2-2.8 IrDA Connector

Connect your IR devices to the onboard IrDA connectors shown as below.





2-2.9 IDE Hard Disk Connector

Connect your IDE devices to the onboard 40-pin IDE connectors marked as **IDE1** and **IDE2**.



It is suggested that you connect the IDE devices to your IDE cables as the figure shown above. Each IDE channel, either Primary or Secondary, supports two IDE devices which must be set differently to master mode and slave mode.

2-3 Game / Audio Connector and CD IN Connectors

Connect the game device onboard marked as **JOYSTICK**. CD connectors onboard marked as **CD IN** are for CD-ROM connector and.



II. HARDWARE INSTALLATION

2-4 System Memory Installation

There are 2 pieces 168-pin DIMM (Dual Inline Memory Module) sockets on the mainboard which support SDRAM and EDO DRAM memory.



There are 2x168-pin DIMM slots (DIMM1, DIMM2) that allow you to install the system memory max up to 512MB SDRAM.



- To ensure reliability, it is recommended to use PC 100 SDRAM or PC 133 SDRAM for your high clock SDRAM performance requirement.
- If you are using low clock SDRAMs, you should set the SDRAM clock option of the BIOS's Chipset Feature Setup to HCLK-33 to ensure stability.
- DIMM Sizes supported: **8MB, 16MB, 32MB, 64MB, 128MB, 256MB.**
- Total Memory Size = DIMM1 + DIMM2, maximum up to 512MB.

SECTION 3

CMOS SETUP UTILITY

The rest of this manual is intended to guide you through the process of configuring your system using Setup. While the BIOS is in control, the Setup program can be activated by pressing the key during the POST (Power On Self-Test). If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" button on the system case. You may also restart by simultaneously pressing <Ctrl>, <Alt>, and <Delete> keys.

3-1 BIOS Setup Main Menu

Once you enter the BIOS setup utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions . the arrow keys to select among the items and press <Enter> to accept and enter the submenu.

Standard CMOS Features	Frequency/Voltage Control	
≻Advanced BIOS Features	Load Fail -Safe Defaults	
≻Advanced Chipset Features	Load Optimized Defaults	
➢Integrated Peripherals	Set Supervisor Password	
Power Management Setup	Set User Password	
➢ PnP/PCI Configurations	Save & Exit Setup	
➢ PC Health Status	Exit Without Saving	
Esc : Quit	$\uparrow \downarrow \leftarrow \rightarrow$: Select Item	
F10 : Save & Exit Setup		
Abandon all Datas		

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

The main menu includes the following main setup categories, which defines basic information about your system. Below are the keyboard function keys you can use under the menu.

Menu function keys:

↓ ←

F1

F10

- To Move around the screen. An item is highlighted if it is selected.
- : General Help on setup.

: Save CMOS Changes & Exit.



- : To select or enter a submenu.
- : Main Menu: quit without saving changes.

3-2 Standard CMOS Setup

The items in Standard CMOS Setup Menu are divided into 10 categories. Each category includes none, one or more than one setup items. Use the arrow keys to highlight the item and then use the $\uparrow \downarrow \leftarrow \rightarrow$ / <PgUp> / <PgDn> keys to select the value you want in each item.

Standard CMOS Features

Date (mm : dd : yy): Time (hh : mm: ss):	Mon, Feb 8 1999 16:19:20	Item Help
 IDE Primary Master IDE Primary Slave IDE Secondary Master IDE Secondary Slave 	Press Enter None Press Enter None Press Enter None Press Enter None	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 30720K 31744K	
^↓ ← → Move Enter: Sel F5:Previous Val	ect +/-/PU/PD:Value F10:Save E ues F6:Fail-safe.defaults F7	SC: Exit F1:General Help :Optimized Defaults

Date & Time

To set the date and time, highlight the date area.Press $1 \neq - \neq /$ PgUp>/<PgDn> to set the current date. The date format is month: Jan. ~ Dec; date: 1 ~ 31; year: 1994 ~ 2079; hour: 00 ~ 23; and second: 00 ~ 59.

- IDE Primary Master
- IDE Primary Slave
- IDE Secondary Master
- IDE Secondary Slave

Press <Enter> to enter the submenu of detailed options, the following table shows the IDE primary master submenu.

CMOS Setup Utility – Copyright © 1984-1999 Award Software IDE Primary Master

IDE HDD Auto-Detection	Press Enter	Item Help
IDE Primary Master Access Mode	Auto Auto	Menu Level >>
Capacity	0 MB	To auto-detect the HDD's size, head on this channel
Cylinder Head Precomp Landing Zone Sector		
1 ↑↓←→Move Enter: Select F5:Previous Values	+/-/PU/PD: Value F10:Save E F6:Fail-safe defaults F7:Opti	SC: Exit F1:General Help mized Defaults

IDE HDD Auto-detection
 IDE HDD Auto-detection:

Press enter to auto - detect the HDD on the channel. If detection is successful, it fills the remaining feilds on the menu.

Selecting 'manual' lets you set the remaining fields on

■ IDE Primary Master

IDE Primary Master:

- None the screen. Selects the type of fixed disk. "User Type"
- Auto will let you select the number of cylinders, heads, etc.
- Manual Note: PRECOMP=65535 means NONE!

Default: Auto

Access Mode

Access Mode:

- Choose the access mode for this hard disk.
- Normal
- LBA
- Large
- Auto

Default: Auto

Capacity Capacity:

- Auto display your drive size

Disk drive capacity (approximated). Note that this size is usually slightly greater thanthe size of the formatted disk given by a disk checking program.

The following options are selectable onlyif the 'IDE Primary Master' item is set to 'Manual' and Access Mode is set to "Normal":			
Cylinder	Min = 0 Max = 65535	Set the number of cylinders for this hard disk.	
Head	Min = 0 Max = 255	Set the number of read/write heads	
Precomp	Min = 0 Max = 65535	Warning: Setting a value of 65535 means no hard disk	
Landing zone	Min = 0 Max = 65535		
Sector	Min = 0 Max = 255	Number of sectors per track	

Drive A / Drive B

Drive A / B:	Select the floppy drive type installed in your system. The
- None	available options for Drive A and Drive B are: 360KB 5.25",
- 360KB 5.25"	1.2MB 5.25", 720KB 3.5" 1.44MB 3.5", 2.88MB 3.5" and
- 1.2MB 5.25"	NONE.
- 720KB 3.5"	

- 1.44MB 3.5"	Default: Drive A	1.44MB 3.5
- 2.88MB 3.5"	Drive B	None

■ Video

Video:

Select the video display card type installed in your system. The available types are: EGA/VGA, CGA 40, CGA80 and

- CGA40 Mono.
- CGA80

- EGA / VGA

- Mono

Default: EGA/VGA

Halt On

Halt On:

- All Errors

This item defines the operation of the system POST (Power On Self-Test). You can use this item to select which kind of

- No Errors errors will cause the system to halt during POST.
- All, But keyboard
- All, But Diskette
- All, But Disk / Key

Default: All, But Keyboard

3-3 Advanced BIOS Features

This section allows you to configure your system for basic operation.

CMOS Setup Utility – Copyright © 1984 – 2000 Award Software Advanced BIOS Features

Virus Warning CPU Internal Cache External Cache	Enabled Enabled Enabled	Item Help
CPU L2 Cache ECC Checking	Enabled	Menu Level >
Quick Power On Self Test First Boot device	Disabled	Allows you to choose the VIRUS
Second Boot device	HDD-0	warning feature for IDE Hard Disk
Third Boot device	LS/ZIP	boot sector protection. If this
Boot other device	Enabled	function is enabled and someone
Swap Floppy Drive	Disabled	attempt to write data into this area,
Boot Up Floppy Seek	Enabled	BIOS will show a warning message
Boot Up NumLock Status	Off	on screen and alarm beep
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	
↑↓←→Move Enter: Select +/-/P	U/PD: Value F10:S	Save ESC: Exit F1:General Help
F5:Previous Values	F6:Fail-safe defaults	s F7:Optimized Defaults

Virus Warning Virus Warning:

- Enabled
 - Disabled
 - Disabled

If this function enabled and someone attempt to write data into this area, BIOS will automatically show a warming message on screen and alarm beep. Default: Disabled

CPU internal / external cache CPU internal / external cache:

- Enabled
- Disabled

These two items controls Enable / Disable the CPU internal / external cache.

Default: Enabled

CPU L2 Cache ECC Checking CPU L2 Cache ECC Checking:

- Enabled
- Disabled

This item allows you to enable / disable CPU L2 Cache ECC Checking.

Default: Enabled

Quick Power On Self Test Quick Power On Self Test:

- Enabled
- Disabled

This item speeds up Power On Self Test (POST) after you power up the computer. If it is set to Enable, BIOS will shorten or skip some check items during POST. **Default: Disabled**

First / Second / Third / Boot Other Device First / Second / Third / Boot Other Device:

- Floppy
- LS/ZIP
- HDD-0/1/2/3
- SCSI
- CDROM
- LAN
- Disabled
- Enabled

Swap Floppy Drive Swap Floppy Drive:

- Enabled
- Disabled

The BIOS attempts to load the operating system from the devices in the sequence selected in these items.

Default:

First→floppy, Second→HDD-O, Third→LS/ZIP, Other→Enabled

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

Boot Up Floppy Seek Boot Up Floppy Seek:

- Enabled

- Disabled

Seeks disk drives during boot up.

Default: Enabled

Boot Up NumLock Status Boot Up NumLock Status:

- Off
- On

Selects power on state for NumLock.

Default: off

■ Gate A20 Option Gate A20 Option:

Normal-a pin in the keyboard controller controls Gate A20. Fast-lets chipset control Gate A20

Default: Fast

Typematic Rate Setting Typematic Rate Setting:

Normal

Fast

- Enabled
- Disabled

Keystrokes repeat at a rate determined by the keyboard controller, when enabled, the typematic rate and typematic delay can be selected.

Default: Disabled

Typematic Rate (Chars/Sec) Typematic Rate (Chars/Sec): Sets the number of times a second to repeat a key stroke when you hold the key down. 10 12 Default: 6 20 24

- 30

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Typematic Delay (Msec) Typematic Delay (Msec):

- 250
- 500
- 750
- 1000

Select the delay time after the key is held down held down before it begins to repeat the key strokes.

Default: 250

Security option Security option:

- Setup
- System

Select whether the password is required every time when you enter setup. Setup -The system will boot up. System - The system will not boot and access to setup will be denied if the correct password the correct password is not entered at the prompt.

Default: Setup

OS Select for DRAM > 64MB OS Select for DRAM > 64MB:

- Non-OS/2
- OS/2

Select OS2 only if you are running OS/2 operating system with greater than 64MB of RAM on the system.

Default: Non-OS/2

Report No FDD for WIN 95 Report No FDD for WIN 95:

- Yes
- No

Whether report no FDD for WIN 95 or not.

Default: No

3-4 Advanced Chipset Features

This item allows you to configure the system based on the specific features of the chipset. This chipset manages bus speed and access to system memory recources, and external cache. It must be stated that these items should never need to be altered. The default settings have been chosen because they provide you the best operating conditions for your system. The only time you might consider making any changes if you discovered that the datas were being lost while control your system.

> CMOS Setup Utility – Copyright © 1984 – 2000 Award Software Advanced Chipset Features

SDRAM CAS Latency Time	2	
SDRAM Cycle Time Tras/Trc	6/8	Item Help
SDRAM RAS-to-CAS Delay	3	
SDRAM RAS Precharge Time	3	
System BIOS Cacheable	Disabled	Menu Level 🛛 🕨
Video BIOS Cacheable	Disabled	
Memory Hole At 15M-16M	Disabled	
CPU Latency Timer	Disabled	
Delayed Transaction	Enabled	
On-Chip Video Window Size	64MB	
Use VGA BIOS in VBU Block	Enabled	
Local Memory Frequency	100 Mhz	
* Onboard Display Cache Setting	1*	
CAS# Latency	3	
Paging Mode Control	Open	
RAS-to-CAS Override	by CAS# LT	
RAS# Timing	Fast	
RAS# Precharge Timing	Fast	
g		
↑↓←→Move Enter: Select	+/-/PU/PD: Value F10:S	ave ESC: Exit F1:General Help
F5:Previous Values	F6:Fail-safe Defaults	F7:Optimized Defaults

SDRAM CAS Latency Time SDRAM CAS Latency Time: - 3

2

When synchronous DRAM is installed, the number of clock cycles of CASIatency depends on the DRAM timing

Default: 3

SDRAM Cycle Time Tras/Trc SDRAM Cycle Time Tras/Trc:

- 6/8
- 5/7
- SDRAM RAS-to-CAS Delay SDRAM RAS-to-CAS Delay:
 - 3
 - 2

Select the number of SCLKs for an access

Default: 6/8

When synchronous DRAM is installed in the system, this field lets you insert a timing delay between the as CAS and RAS strobe signals, used DRAM is written to, read from,or refreshed.

Default: 3

SDRAM RAS Precharge Time SDRAM RAS Precharge Time:

- 3
- 2

If an insufficient number of cycles is allowed for the RAS to accumulate its charge before DRAM refresh, the refresh may be incomplete and the DRAM may fail to retain data.

Default: 3

System BIOS Cacheable System BIOS Cacheable:

- Enabled
- Disabled

Selecting Enabled allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance.

Default: Disabled

Video BIOS Cacheable Video BIOS Cacheable:

- Enabled
- Disabled

Select Enabled allows caching of the video BIOS, resulting in better system performance.

Default: Disabled

Memory Hole At 15M - 16M Memory Hole At 15M - 16M:

- Enabled
- Disabled

When this area is reserved, it cannot be cached. The user information of peripherals that need to use this area of system memory usually discusses their memory requirements.

Default: Disabled

CPU Latency Timer CPU Latency Timer

- Enabled
- Disabled

This option allows you to Enabled/Disabled CPU latency Timer.

Default: Disabled

Delayed Transaction Delayed Transaction:

- Enabled
- Disabled

Select Enabled to support compliance with PCI specification version 2.1

Default: Enabled

On-chip Video Window Size On-chip Video Window Size:

- Enabled
- 32MB
- 64MB

■ Use VGA BIOS in VBU Block

- Enabled
- Disabled

Local Memory Frequency Local Memory Frequency

- 100MHz
- 133MHz

-

Select the on-chip video window size for VGA drive use.

Default: 64MB

Let you determine whether use VGA BIOS in VBU Block or not.

Default: Enabled

Normally, the local memory frequency equals CPU frequency. But this item letyou choose local memory frequency, which means you can let local memory and CPU work in different frequency.

Default: 100MHz

Select the local memory clock periods.

Default: 3

Paging Mode Control Paging Mode Control:

Open Close

RAS-to-CAS Override

RAS-to-CAS Override:

Override

By CAS # LT

Select the paging mode control.

Default: Open

Select the display cache clock periods control.

Default: By CAS # LT

This item controls RAS#active to Protegra, and refresh to RAS# active delay (in local memory clocks).

Default: Fast

This item controls RAS# precharge (in local memory clocks).

- RAS # Precharge Timing RAS # Precharge Timing:
 - Fast

RAS # Timing

RAS # Timing:

Fast

Slow

- Slow

Default: Fast

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CAS # Latency CAS # Latency: - 3 - 2

3-5 Integrated Peripherals

CMOS Setup Utility - Copyright © 1984 - 2000 Award Software Integrated Peripherals

OnChip Primary PCI IDE	Enabled	ltem Help	
OnChip Secondary PCI IDE	Enabled		
IDE Primary Master PIO	Auto	MenuLevel >	
IDE Primary Slave PIO	Auto		
IDE Secondary Master PIO	Auto		
IDE Secondary Slave PIO	Auto		
IDE Primary Master UDMA	Auto		
IDE Primary Slave UDMA	Auto		
IDE Secondary Master UDMA	Auto		
IDE Secondary Slave UDMA	Auto		
USBController	Enabled		
USB Keyboard Support	Disabled		
Init Display First	PCI Slot		
AC97 Audio	Auto		
AC97 Modern	Auto		
IDE HDD Block Mode	Enabled		
KBC input dock	8MHz		
Power On Function	Hat Key		
* KB Power ON Password	Enter		
* Hot Kev Power On	Qrl-F1		
Onboard FDC Controller	Enabled		
Onboard Serial Port 1	3F8/IRQ4		
Onboard Serial Port 2	2F8/IRQ3		
UART Mode Select	Normal		
* LR2 Dudex mode	Haf		
Onboard Parallel Port	378/IRQ7		
Parallel Port Mode	SPP		
* FOP Model ke DMA	3		
Game Port Address	201		
Mid Port Address	330		
Mid Port IRQ	10		
∴ → Move Enter Select +/-/PU//PD \/alue E10.Save ESC: Evit E1:Ceneral Help			
E5Previous Values E6	Fail-safe defaults	F7Optimized Defaults	

On-Chip Primary / Secondary PCI IDE On-Chip Primary / Secondary PCI IDE:

- Enabled
- Disabled

The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select Enabled to activate each channel separately.

Default: Enabled

IDE Primary / Secondary Master / Slave PIO IDE Primary / Secondary Master / Slave PIO:

- Auto
- Mode 0
- Mode 1
- Mode 2
- Mode 3
- Mode 4

The four IDE PIO fields let you set a PIO mode for each of the four IDE devices that IDE interface support onboard. Mode 0 through 4 provide successively increased performance. In Auto mode, the system automatically

determines the best mode for each device.

Default: Auto

IDE Primary / Secondary Master / Slave UDMA
 IDE Primary / Secondary Master / Slave UDMA:

- Auto
- Disabled

If your hard drive and system software both support Ultra DMA 33, select Auto to enable BIOS support.

Default: Auto

USB Controller

USB Controller:

- Enabled
- Disabled

USB Keyboard Support

USB Keyboard Support:

Enabled

Disabled

Select Enabled if your system contains a Universal Seria Bus (USB) controller and you have a USB peripheral.

Default: Enabled

Select Enabled if your system contains a universal Serial Bus (USB) controller and you have a USB keyboard.

Default: Disabled

Init Display First Init Display First:

-

- PCI Slot
- Onboard

AC 97 Audio / Modem AC 97 Audio / Modem:

- Auto
- Disabled

IDE HDD Block Mode IDE HDD Block Mode:

- Enabled
- Disabled

KBC input clock KBC input clock:

- 8MHz
- 12MHz

POWER ON Function POWER ON Function:

- Password
- Hot KEY
- Mouse Left / Right
- Any KEY
- Botton Only
- Keyboard 98

This item allows you to decide to active whether PCI slot or on-chip VGA first.

Default: PCI Slot

This item allows you to decide to enable/ disable the 810 chipset family to support AC 97 audio / modem.

Default: Auto

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

Default: Enabled

Set the KBC input clock.

Default: 8MHz

Set the power on function mode for power on.

Default: Any KEY

KB Power ON Password KB Power ON Password:

If Power On Function is set Password, this option let you set KB Power OnPassword. Press <Enter> and enter your password.

Hot Key Power ON Hot Key Power ON:

- Ctrl-F1
- ~ Ctrl-F12

This option let you choose Power ON Key from <Ctrl-F1> to <Ctrl-F12>.

Default: Ctrl-F1

Onboard FDC Controller Onboard FDC Controller:

- Enabled
- Disabled

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

Default: Enabled

Onboard Serial Port 1/2 Onboard Serial Port 1/2:

- Auto
- Disabled
- 3F8/IRQ4
- 2F8/IRQ3
- 3E8/IRQ4
- 2E8/IRQ3

UART Mode Select UART Mode Select:

- Normal
- IrDA
- ASKIR
- Onboard Parallel Port
 Onboard Parallel Port:
 - 378/IRQ7
 - 278/IRQ5
 - 3BC/IRQ7
 - Disabled

Select a logical COM port name and matching address for the first and second serial ports. Select an address and corresponding interrut for the first and second serial ports.

Default: Por1 3F8/IRQ4 Port2 2F8/IRQ3

Let you choose UART Mode.

Default: Normal

Select a logical LPT port address and corresponding interrupt for the physical parallel port.

Default: 378/IRQ7

Parallel Port Mode Parallel Port Mode: Select an operating mode for the on board SPP parallel (printer) port. -EPP -ECP **Default: SPP** _ ECP+EPP -**Game Port Address** Game Port Address: Select an address for game port. Disabled -201 -Default: 201 209 _ **Midi Port Address** Midi Port Address: Select an address for Midi Port. Disabled -330 300 -290 Default: 330 -**Midi Port IRQ Midi Port IRQ:** Select a corresponding interrupt for Midi Port. -5 10 Default: 10 -

3-6 Power Management Setup

The Power Management Setup allows you to configure your system effectively save energy while operating in a manner consistent with your own style of computer use.

ACPI function	Enabled	ltem	Help
ACPI Suspend Type	S3 (STR)		
Power Management	User Define	Menu Level	>
Video Off Method	DPMS		
Video Off In Suspend	Yes		
Suspend Type	PwrOn Suspend		
MODEM Use IRQ	3		
Suspend Mode	Disabled		
HDD Power Down	Disabled		
Soft-Off by PWR-BTTN	Instant-Off		
Power On by Ring	Enabled		
Resume by Alarm	Disabled		
* Date (of Month) Alarm	0		
* Time (hh:mm:ss:) Alarm	0 0 0		
# Delayed Old all average and the			
Reload Global Timer Events "	Dischlad		
Primary IDE 0	Disabled		
Primary IDE 1	Disabled		
Secondary IDE 0	Disabled		
Secondary IDE 1	Disabled		
FDD, COM, LPT Port	Disabled		
PCI PIRQ [A-D]#	Disabled		
1 ↑↓←→Move Enter: Select +/-/PU/PD: Va	lue F10:Save ESC: E	xit F1:General I	lelp
E5:Previous Values E6:Fail-safe	defaults F7:Optir	mized Defaults	



ACPI Function ACPI Function:

ACPI Function:This opotion allows you to enable/disable the Advance-EnabledConfiguration and power Interface which offers-Disabledimproved power management

Default: Enabled

- ACPI Suspend Type ACPI Suspend Type:
 - S1 (POS)
 - S3 (STR)

Select type for ACPI Suspend.

Default: S1 (POS)

Power Management Power Management:

- User Define
- Min Saving
- Max Saving

This category allows you to select the type(or degree) of power directly related to the following modes: HDD Power Down; Doze Mode; Suspend Mode. User Define allows you to set each mode individually. When not disabled, each of the ranges are from 1min. to 1 hr. except for HDD Power Down which ranges from 1 min. to 15 min. and disable.

Default: User Define

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Video Off Method Video Off Method:

- V/H SYNC+Blank
- DPMS
- Blank Screen

Determines the manner in which the monitor is blanded System turns off vertical and horizontal synchroniza tion ports and writes blanks to the video buffer. Select this option if your monitor supports.System only writes blanks to the video buffer.

Default: DPMS

Video Off In Suspend Video Off In Suspend:

-

Yes

No

Setup whether video off in suspend or not.

Default: Yes

- **Suspend Type Suspend Type:** This item lets you select a method of global system Stop Grant -
 - PwrOn Suspend

suspend.

Default: PwrOn Suspend

Modem Use IRQ Modem Use IRQ:

- NA -
- 3,4,5,7,9,10,11

Name the interrupt request (IRQ) line assigned to the modem (if any) on your system. Select IRQ always awakens the system.

Suspend Mode Suspend Mode

- 1/2/4/8/12/20/30/40Min
- 1 Hour
- Disabled

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

Default: Disabled

HDD Power Down HDD Power Down

- 1/2/3/4/5/6/7/8/9 /10/11/12/13/14/15 Min
- Disabled

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

Soft-Off by PWR-BTTN Soft-Off by PWR-BTTN When Enabled, turning the system off with the on/off button places the system in a very low-power-usage Instant-Off Delay 4 Sec. state, with only enough circuitry receiving power to detect power button activity or Resume by Ring activity. **Default: Instant-Off Power On by Ring Power On by Ring** Setup whether Power on by ring or not. Enabled **Default: Enabled** Disabled **Resume by Alarm Resume by Alarm** Set whether resume by alarm or not. Enabled **Default: Disabled** Disabled

Primary/Secondary IDE 0 / IDE 1 Primary/Secondary IDE 0 / IDE 1:

- Enabled This option allows you determine whether enable
 - Disabled Primary/Secondary IDE 0/IDE 1 or not.

Default: Disabled

■ FDD,COM,LPT Port FDD,COM,LPT Port

Enabled

Disabled

This option allows you set whether enable FDD, COM, LPT Port or not.

Default: Disabled

PCI PIRQ[A-D]# PCI PIRQ[A-D]#

- Enabled
- Disabled

This option lets you set PCI PIRQ [A-D]#.

3-7 PnP/PCI Configurations

This section describes configuring the PCI bus system. PCI- Personal Computer Interconnect, is a system which allows I/O devices to operate at speeds nearing the speed of CPU itself using when communicates 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.

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PnP/PCI Configurations

	4		
PNP OS Installed	No		
		Item Help	
Reset Configuration Data	Disabled	Menu Level 🗲	
5			
Resources Controlled By	Auto(ESCD)		
* IRQ Resources	Press Enter		
* DMA Resources			
* Memory Resources			
PCI/VGA Palette Snoop	Disabled		
$\wedge \psi \rightarrow \leftarrow$: Move Enter: Sel	lect +/-/PU/PD:Value F	10:Save ESC:Exit F1:General H	elp
			· r
F5:Previo	ous Values F6:Fail-Safe D	Defaults F7:Optimized Defaults	

Reset Configuration Data
 Reset Configuration Data

- Enabled
- Disabled

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

Default: Disabled

Resources controlled By Resources controlled By

- Auto(ESCD)
- Manual

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

Default: Auto(ESCD)

PCI/VGA Palette Snoop PCI/VGA Palette Snoop

Leave this field at Disabled.

- Enabled
- Disabled

3-8 PC Health Status

This option show you some statistics including current system temp, current CPU1

temp, current CPUFAN1, FAN2 speed etc. which indicate your PC health status.

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Voltage 0	1.45v	
Voltage 1	0.97v	Item Help
Voltage 2	2.76v	Menu Level 🗲
Voltage 3	6.85v	
Voltage 4	11.26	
Voltage 5	(-) 16.96v	
Voltage 6	(-) 8.77v	
Voltage 7	8.00v	
Voltage Battery	3.45v	
Temperature 1	28c	
Temperature 2	54c	
Fan 1 speed	ORPM	
Fan 2 speed	ORPM	
↑↓→←: Move	Enter:Select +/-/PU/PD:Value F10:S F5:Previous Values F6:Fail-Safe Defai	ave ESC:Exit F1:General Help ults F7:Optimized Defaults

3-9 Frequency/Voltage Control

CMOS Setup Utility - Copyright © 1984-2000Award Software Frequency / Voltage Control



Auto Detect DIMM/PCI Clk Auto Detect DIMM/PCI Clk:

- Enabled
- Disabled

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

Default: Enabled

Spread Spectrum Spread Spectrum:

- Enabled
- Disabled

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

Default: Disabled

Host CPU/DIMM/PCI Clock Host CPU/DIMM/PCI Clock:

Setup Host CPU/DIMM/PCI Clock

- Default
- 66/100/33MHz
- 68/102/34MHz
- 75/112/37MHz

Default: Default

CPU Clock Ratio CPU Clock Ratio x3 x3.5 x4 x4.5 x5 x5.5 x6 x6

- x7
- x7.5
 - x8

3-10 Load Fail-Safe Defaults

This option allows you load Fail-Safe Defaults settings. To load setup default, press <Y> key to confirm the operation when you see the below display.



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3-11 Load Optimized Defaults

This option allows you load Optimized Defaults settings to optimize your system. To load optimized default, press <Y> key to confirm the operation when you see the below display.



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3-12 Set Supervisor/User Password

Password prevents unauthorized use of your computer. If you set a password, the system prompts for the correct password before boot or access to setup. The main difference between Supervisor Password and User Password is the privilege. Because Supervisor Password allows you to modify all CMOS setup but User password only some of them. Their steps all as follows:

- 1. Highlight the item Set Supervisor Password / Set User Password on the main menu and press ENTER.
- 2. The password dialog box will appear.
- 3. If you are installing a new password, carefully type in the password. Press ENTER after you have typed in the password. If you are deleting a password that is already installed just press ENTER when the password dialog box appears.
- 4. The system will ask you to confirm the new password by asking you to type it in a second time. Carefully type the password again and press ENTER, or just press ENTER if you are deleting a password that is already installed.
- 5. If you typed the password correctly, the password will be installed.

[NOTE]

if you forget your password, or you want to cancel your password, you can do the steps as the following:

(1) Password forgotten:

- i. Turn off the system.
- ii. Short JP1 at Pin 2-3 for a few seconds to clear CMOS.
- iii. Set the JP1 back to Pin 1-2.
- iv. Power on the system.

(2) Clear Password:

Clear your password by key in the password you installed before, then go to password setting to press ENTER twice.

3-13 Save & Exit Setup

Highlight this item and press ENTER to save the changes that you have made in the setup utility and exit the setup program. When the Save and Exit dialog box appears, press <Y> to save and exit, or press <N> to return to the setup main menu.

3-14 Exit Without Saving

Use this option to exit setup utility without saving the CMOS value changes.

IV SOFTWAR UTILITY

SECTION 4 SOFTWARE UTILITY

The support software for this motherboard is supplied in a CD. All the support programs are stored in separate folders, so you can find the program you need easily enough. We recomend you to choose the program which you need most, it will assist your computer system to high performance. The support software contains the following programs:

- * Intel VGA Driver Program
- * Intel chipset Driver Program
- Audio Codec Driver Program \div

4-1 **Intel VGA Driver Program**

Driver files location:

Intel VGA Driver Program: \Video\810VGA

Intel chipset Driver Program 4-2

Driver files location:

Intel chipset Driver Program: \lde\810\intelinf

\lde\810\infinst

Please run "SETUP.EXE" file in the directory "intelinf", then run "SETUP.EXE" file in the directory "infinst".

4-3 **Audio Codec Driver Program**

Driver files location:

Audio Codec Driver Program:\Audio\810 Audio