GA-8I865GVMK-775

Intel® Pentium® 4 LGA775 Processor Motherboard

User's Manual

Rev. 1002
12ME-I865GVMKT-1002

Declaration of Conformity
We, Manufacturer/Importer
(full address)

G.B.T. Technology Trading GMbH
Ausschlager Weg 41, 1F 20537 Hamburg, Germany

declare that the product
(description of the apparatus, system, installation to which it refers)

Motherboard
GA-8I865GVMK-775

is in conformity with
(reference to the specification under which conformity is declared)
in accordance with 89/336 EEC-EMC Directive

☐ **EN 55011**	Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM) high frequency equipment	☒ **EN 61000-3-2** ☒ **EN 61000-3-3**	Disturbances in supply systems caused by household appliances and similar electrical equipment "Voltage fluctuations"
☐ **EN 55013**	Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment	☒ **EN 55024**	Information Technology equipment-Immunity characteristics-Limits and methods of measurement
☐ **EN 55014-1**	Limits and methods of measurement of radio disturbance characteristics of household electrical appliances, portable tools and similar electrical apparatus	☐ **EN 50082-1** ☐ **EN 50082-2**	Generic immunity standard Part 1: Residual, commercial and light industry Generic immunity standard Part 2: Industrial environment
☐ **EN 55015**	Limits and methods of measurement of radio disturbance characteristics of fluorescent lamps and luminaries	☐ **EN 55014-2**	Immunity requirements for household appliances tools and similar apparatus
☐ **EN 55020**	Immunity from radio interference of broadcast receivers and associated equipment	☐ **EN 50091- 2**	EMC requirements for uninterruptible power systems (UPS)
☒ **EN 55022**	Limits and methods of measurement of radio disturbance characteristics of information technology equipment		
☐ **DIN VDE 0855** ☐ **part 10** ☐ **part 12**	Cabled distribution systems. Equipment for receiving and/or distribution from sound and television signals		
☒ **CE marking**			(EC conformity marking)

CE

The manufacturer also declares the conformity of above mentioned product with the actual required safety standards in accordance with LVD 73/23 EEC

☐ **EN 60065**	Safety requirements for mains operated electronic and related apparatus for household and similar general use	☐ **EN 60950**	Safety for information technology equipment including electrical business equipment
☐ **EN 60335**	Safety of household and similar electrical appliances	☐ **EN 50091-1**	General and Safety requirements for uninterruptible power systems (UPS)

Manufacturer/Importer

Signature : *Timmy Huang*

Date : June 15, 2005   Name : Timmy Huang

(Stamp)

DECLARATION OF CONFORMITY
Per FCC Part 2 Section 2.1077(a)

FC

Responsible Party Name:G.B.T. INC. (U.S.A.)

Address: 17358 Railroad Street
City of Industry, CA 91748

Phone/Fax No:(818) 854-9338/ (818) 854-9339

hereby declares that the product

Product Name: Motherboard

Model Number: GA-8I865GVMK-775

Conforms to the following specifications:

FCC Part 15, Subpart B, Section 15.107(a) and Section 15.109
(a).Class B Digital Device

Supplementary Information:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful and (2) this device must accept any inference received, including that may cause undesired operation.

Representative Person's Name: ERIC LU

Signature: *Eric Lu*

Date: June 15, 2005

Copyright

Notice

Product Manual Classification

In order to assist in the use of this product, Gigabyte has categorized the user manual in the following:

- ■ For detailed product information and specifications, please carefully read the "Product User Manual".

- ■ For detailed information related to Gigabyte's unique features, please go to "Technology Guide" section on Gigabyte's website to read or download the information you need.
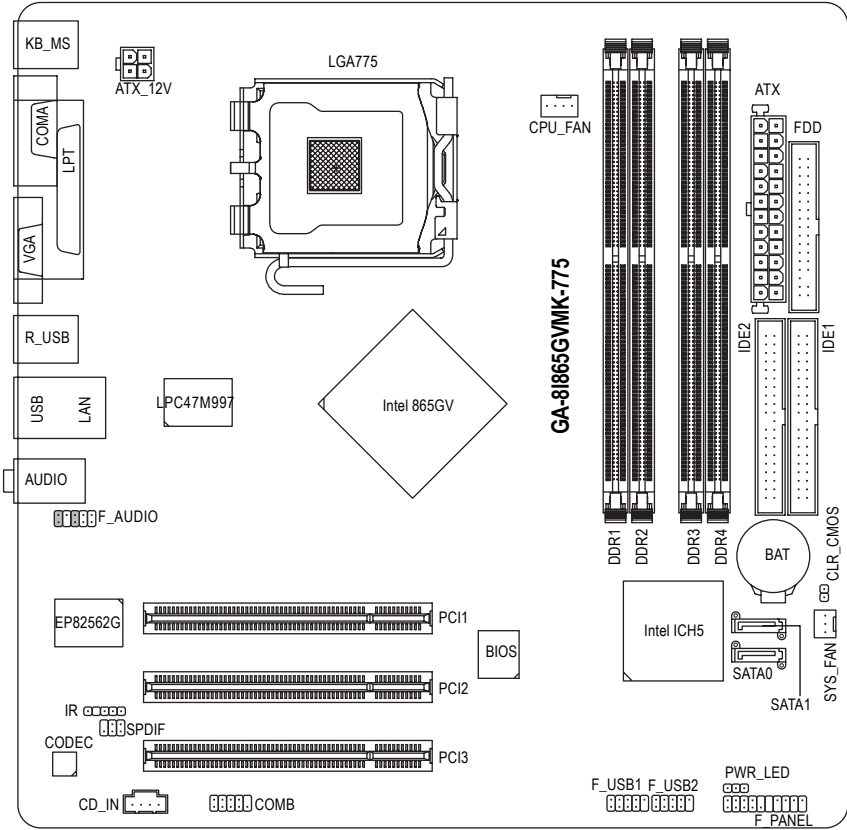
For more product details, please click onto Gigabyte's website at www.gigabyte.com.tw
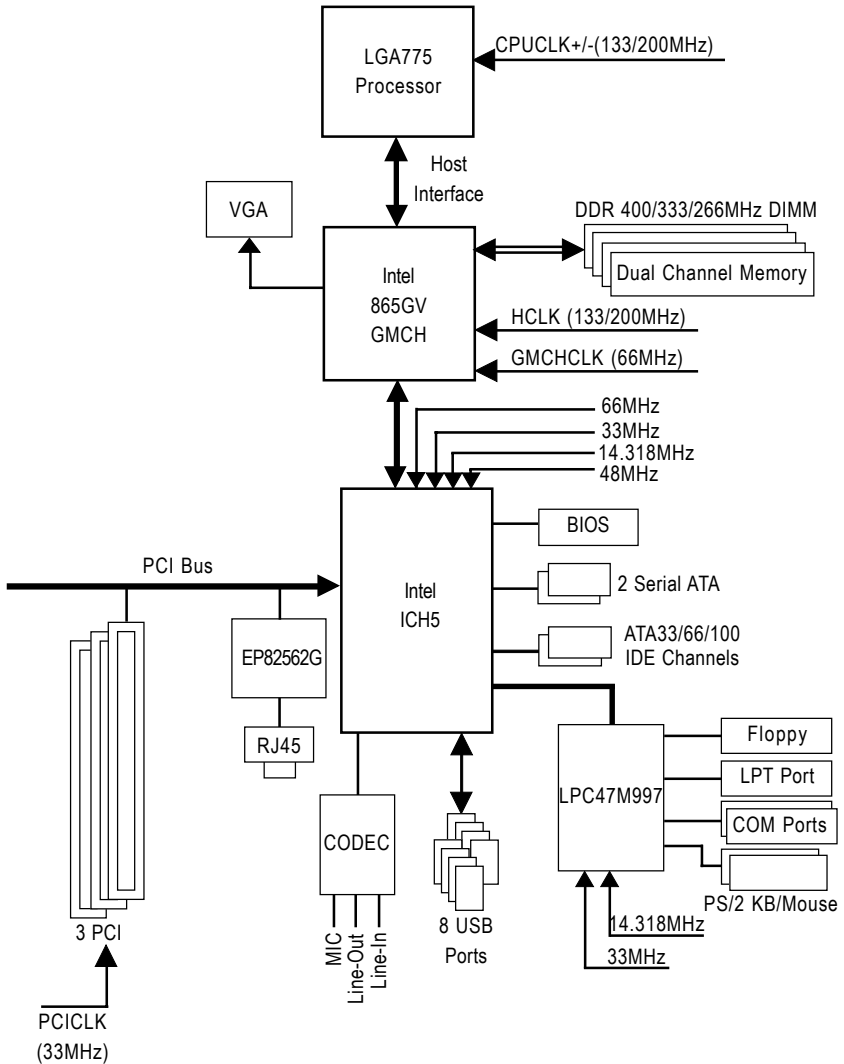
Table of Contents

GA-8I865GVMK-775 Motherboard Layout

Block Diagram

Chapter 1 Hardware Installation

1-1 Considerations Prior to Installation

Preparing Your Computer

The motherboard contains numerous delicate electronic circuits and components which can become damaged as a result of electrostatic discharge (ESD). Thus, prior to installation, please follow the instructions below:

1. Please turn off the computer and unplug its power cord.
2. When handling the motherboard, avoid touching any metal leads or connectors.
3. It is best to wear an electrostatic discharge (ESD) cuff when handling electronic components (CPU, RAM).
4. Prior to installing the electronic components, please have these items on top of an antistatic pad or within a electrostatic shielding container.
5. Please verify that the power supply is switched off before unplugging the power supply connector from the motherboard.

Installation Notices

1. Prior to installation, please do not remove the stickers on the motherboard. These stickers are required for warranty validation.
2. Prior to the installation of the motherboard or any hardware, please first carefully read the information in the provided manual.
3. Before using the product, please verify that all cables and power connectors are connected.
4. To prevent damage to the motherboard, please do not allow screws to come in contact with the motherboard circuit or its components.
5. Please make sure there are no leftover screws or metal components placed on the motherboard or within the computer casing.
6. Please do not place the computer system on an uneven surface.
7. Turning on the computer power during the installation process can lead to damage to system components as well as physical harm to the user.
8. If you are uncertain about any installation steps or have a problem related to the use of the product, please consult a certified computer technician.

Instances of Non-Warranty

1. Damage due to natural disaster, accident or human cause.
2. Damage as a result of violating the conditions recommended in the user manual.
3. Damage due to improper installation.
4. Damage due to use of uncertified components.
5. Damage due to use exceeding the permitted parameters.
6. Product determined to be an unofficial Gigabyte product.

1-2 Feature Summary

CPU	◆ Supports the latest Intel® Pentium® 4 LGA775 CPU
	◆ Supports 800/533MHz FSB
	◆ L2 cache varies with CPU
Chipset	◆ Northbridge: Intel® 865GV Chipset
	◆ Southbridge: Intel® ICH5
Memory	◆ 4 DDR DIMM memory slots (supports up to 4GB memory) (Note)
	◆ Supports dual channel DDR 400/333/266 unbuffered DIMM
	◆ Supports 2.5V DDR DIMM
Slots	◆ 3 PCI slots
IDE Connections	◆ 2 IDE connection (UDMA 33/ATA 66/ATA 100), allows connection of 4 IDE devices
FDD Connections	◆ 1 FDD connection, allows connection of 2 FDD devices
Onboard SATA	◆ 2 Serial ATA ports from ICH5 controller (SATA0, SATA1)
Peripherals	◆ 1 parallel port supporting Normal/EPP/ECP mode
	◆ 1 VGA port, 1 COMA port, onboard COMB connection
	◆ 8 USB 2.0/1.1 ports (rear x 4, front x 4 via cable)
	◆ 1 front audio connector
	◆ 1 IR connector
	◆ 1 PS/2 keyboard port
	◆ 1 PS/2 mouse port
Onboard VGA	◆ Built-in Intel® 865GV Chipset
Onboard LAN	◆ Onboard EP82562G chip (10/100 Mbit)
	◆ 1 RJ45 port
Onboard Audio	◆ ADI AD1888 CODEC
	◆ Supports 2 / 4 / 5.1 channel audio
	◆ Supports Line In (Rear Speaker Out) ; Line Out (Front Speaker Out) ; MIC (Center/Subwoofer Speaker Out)
	◆ SPDIF Out connection
	◆ CD In connection
I/O Control	◆ SMSC LPC47M997
Hardware Monitor	◆ System voltage detection
	◆ CPU / System temperature detection
	◆ CPU / System fan speed detection
BIOS	◆ Use of licensed AWARD BIOS
	◆ Supports Q-Flash
Additional Features	◆ Supports @BIOS
Form Factor	◆ Micro ATX form factor; 24.4cm x 24.4cm

(Note)   Due to standard PC architecture, a certain amount of memory is reserved for system usage and therefore the actual memory size is less than the stated amount.
For example, 4 GB of memory size will instead be shown as 3.xxGB memory during system startup.

1-3   Installation of the CPU and Heatsink

CAUTION

Before installing the CPU, please comply with the following conditions:
1.   Please make sure that the motherboard supports the CPU.
2.   Please take note of the one indented corner of the CPU. If you install the CPU in the wrong direction, the CPU will not insert properly. If this occurs, please change the insert direction of the CPU.
3.   Please add an even layer of heat sink paste between the CPU and heatsink.
4.   Please make sure the heatsink is installed on the CPU prior to system use, otherwise overheating and permanent damage of the CPU may occur.
5.   Please set the CPU host frequency in accordance with the processor specifications. It is not recommended that the system bus frequency be set beyond hardware specifications since it does not meet the required standards for the peripherals. If you wish to set the frequency beyond the proper specifications, please do so according to your hardware specifications including the CPU, graphics card, memory, hard drive, etc.

NOTE

HT functionality requirement content :
Enabling the functionality of Hyper-Threading Technology for your computer system requires all of the following platform components:
- CPU: An Intel® Pentium 4 Processor with HT Technology
- Chipset: An Intel® Chipset that supports HT Technology
- BIOS: A BIOS that supports HT Technology and has it enabled
- OS: An operation system that has optimizations for HT Technology

1-3-1   Installation of the CPU
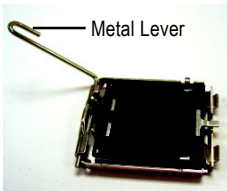
Metal Lever

Fig. 1
Gently lift the metal lever located on the CPU socket to the upright position.
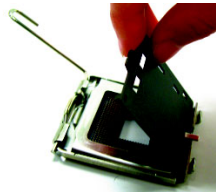
Fig. 2
Remove the plastic covering on the CPU socket.
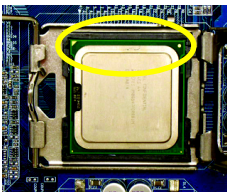
Fig. 3
Notice the small gold colored triangle located on the edge of the CPU socket. Align the indented corner of the

CPU with the triangle and gently insert the CPU into position. (Grasping the CPU firmly between your thumb and forefinger, carefully place it into the socket in a straight and downwards motion. Avoid twisting or bending motions that might cause damage to the CPU during installation.)

Fig. 4
Once the CPU is properly inserted, please replace the plastic covering and push the metal lever back into its original position.

1-3-2   Installation of the Heatsink

Fig.1
Please apply an even layer of heatsink paste on the surface of the installed CPU.

Male Push Pin

The top of Female Push Pin
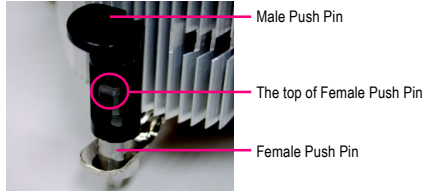
Female Push Pin

Fig. 2
(Turning the push pin along the direction of arrow is to remove the heatsink, on the contrary, is to install.) Please note the direction of arrow sign on the male push pin doesn't face inwards before installation. (This instruction is only for Intel boxed fan)
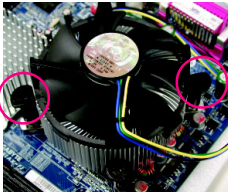
Fig. 3
Place the heatsink atop the CPU and make sure the push pins aim to the pin hole on the motherboard. Pressing down the push pins diagonally.
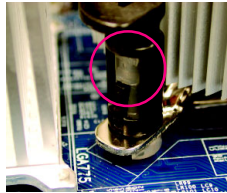
Fig. 4
Please make sure the Male and Female push pin are joined closely. (for detailed installation instructions, please refer to the heatsink installation section of the user manual)
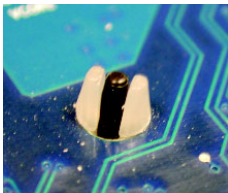
Fig. 5
Please check the back of motherboard after installing. If the push pin is inserted as the picture, the installation is complete.
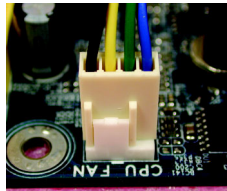
Fig. 6
Finally, please attach the power connector of the heatsink to the CPU fan header located on the motherboard.

NOTE
The heatsink may adhere to the CPU as a result of hardening of the heatsink paste. To prevent such an occurrence, it is suggested that either thermal tape rather than heat sink paste be used for heat dissipation or using extreme care when removing the heatsink.

1-4　Installation of Memory

Before installing the memory modules, please comply with the following conditions:

CAUTION

1. Please make sure that the memory used is supported by the motherboard. It is recommended that memory of similar capacity, specifications and brand be used.
2. Before installing or removing memory modules, please make sure that the computer power is switched off to prevent hardware damage.
3. Memory modules have a foolproof insertion design. A memory module can be installed in only one direction. If you are unable to insert the module, please switch the direction.

The motherboard supports DDR memory modules, whereby BIOS will automatically detect memory capacity and specifications. Memory modules are designed so that they can be inserted only in one direction. The memory capacity used can differ with each slot.

Notch

DDR
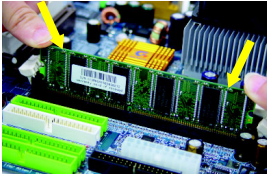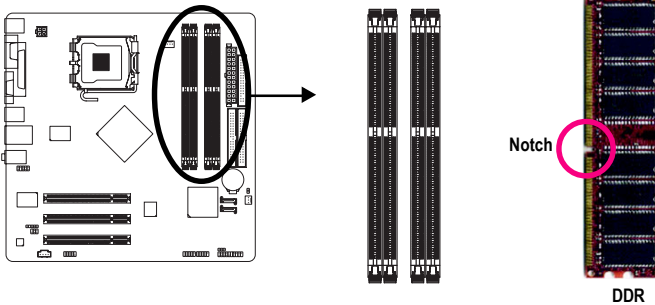
Fig.1
The DIMM socket has a notch, so the DIMM memory module can only fit in one direction. Insert the DIMM memory module vertically into the DIMM socket. Then push it down.

Fig.2
Close the plastic clip at both edges of the DIMM sockets to lock the DIMM module.
Reverse the installation steps when you wish to remove the DIMM module.

Dual Channel DDR

GA-8I865GVMK-775 supports the Dual Channel Technology. After operating the Dual Channel Technology, the bandwidth of Memory Bus will double.

GA-8I865GVMK-775 includes 4 DIMM sockets, and each Channel has two DIMM sockets as following:
▸▸ Channel A : DDR 1, DDR 2
▸▸ Channel B : DDR 3, DDR 4

If you want to operate the Dual Channel Technology, please note the following explanations due to the limitation of Intel chipset specifications.
1. Dual channel memory cannot be used if one or three DDR memory modules are installed.
2. If two DDR memory modules are installed (same storage capacity), one must be added to the Channel A slot and the other in the Channel B slot in order to use dual channel memory. Dual channel memory cannot function if both DDR memory modules are installed on the same channel.
3. If four DDR memory modules are installed, please use memory of the same storage capacity in order to use dual channel memory and for BIOS to detect all the DDR memory modules.

We'll strongly recommend our user to slot two DDR memory modules into the DIMMs with the same color in order for Dual Channel Technology to work.

The following table is for Dual Channel Technology combination: (DS: Double Side, SS: Single Side)

	DDR 1	DDR 2	DDR 3	DDR 4
2 memory modules	DS/SS	X	DS/SS	X
	X	DS/SS	X	DS/SS
4 memory modules	DS/SS	DS/SS	DS/SS	DS/SS

1-5   Installation of Expansion Cards

You can install your expansion card by following the steps outlined below:

1. Read the related expansion card's instruction document before install the expansion card into the computer.
2. Remove your computer's chassis cover, screws and slot bracket from the computer.
3. Press the expansion card firmly into expansion slot in motherboard.
4. Be sure the metal contacts on the card are indeed seated in the slot.
5. Replace the screw to secure the slot bracket of the expansion card.
6. Replace your computer's chassis cover.
7. Power on the computer, if necessary, setup BIOS utility of expansion card from BIOS.
8. Install related driver from the operating system.

Installing a PCI expansion card:
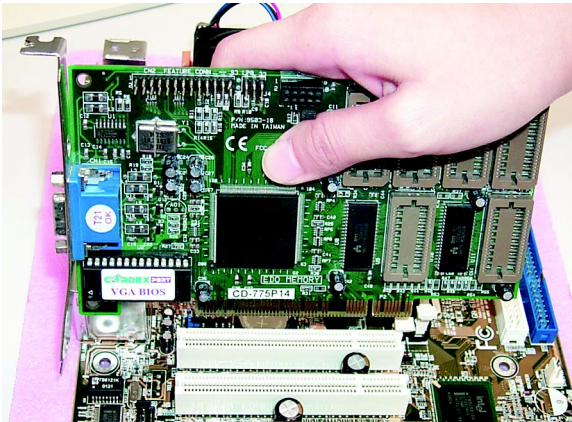
1-6   I/O Back Panel Introduction
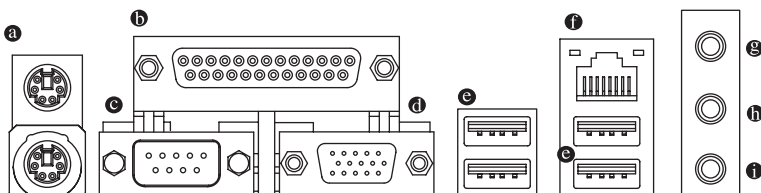
ⓐ **PS/2 Keyboard and PS/2 Mouse Connector**

To install a PS/2 port keyboard and mouse, plug the mouse to the upper port (green) and the keyboard to the lower port (purple).

ⓑ **Parallel Port**

The parallel port allows connection of a printer, scanner and other peripheral devices.

ⓒ **COMA (Serial Port)**

Connects to serial-based mouse or data processing devices.

ⓓ **VGA Port**

Monitor can be connected to VGA port.

ⓔ **USB port**

Before you connect your device(s) into USB connector(s), please make sure your device(s) such as USB keyboard, mouse, scanner, zip, speaker...etc. have a standard USB interface. Also make sure your OS supports USB controller. If your OS does not support USB controller, please contact OS vendor for possible patch or driver upgrade. For more information please contact your OS or device(s) vendors.

ⓕ **LAN Port**

The provided Internet connection provides data transfer speeds of 10/100Mbps.

ⓖ **Line In**

Devices like CD-ROM, walkman etc. can be connected to Line In jack.

ⓗ **Line Out**

Connect the stereo speakers or earphone to this connector.

ⓘ **MIC In**

Microphone can be connected to MIC In jack.

You can use audio software to configure 2-/4-/5.1-channel audio functioning.

1-7 Connectors Introduction
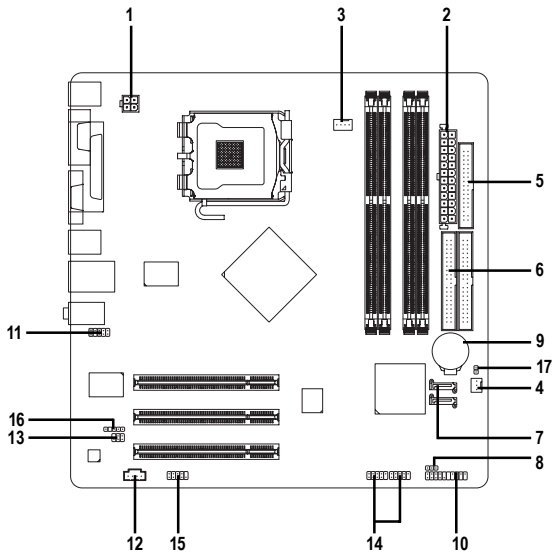
1) ATX_12V	**10) F_PANEL**
2) ATX (Power Connector)	**11) F_AUDIO**
3) CPU_FAN	**12) CD_IN**
4) SYS_FAN	**13) SPDIF**
5) FDD	**14) F_USB1 / F_USB2**
6) IDE1 / IDE2	**15) COMB**
7) SATA0 / SATA1	**16) IR**
8) PWR_LED	**17) CLR_CMOS**
9) BAT	

1/2) ATX_12V/ATX (Power Connector)

With the use of the power connector, the power supply can supply enough stable power to all the components on the motherboard. Before connecting the power connector, please make sure that all components and devices are properly installed. Align the power connector with its proper location on the motherboard and connect tightly.

The ATX_12V power connector mainly supplies power to the CPU. If the ATX_12V power connector is not connected, the system will not start.

Caution!

Please use a power supply that is able to handle the system voltage requirements. It is recommended that a power supply that can withstand high power consumption be used (300W or greater). If a power supply is used that does not provide the required power, the result can lead to an unstable system or a system that is unable to start.

If you use a 24-pin ATX power supply, please remove the small cover on the power connector on the motherboard before plugging in the power cord ; otherwise, please do not remove it.
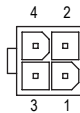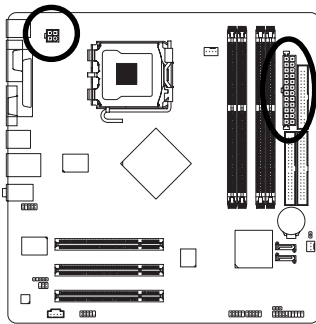
Pin No.	Definition
1	GND
2	GND
3	+12V
4	+12V
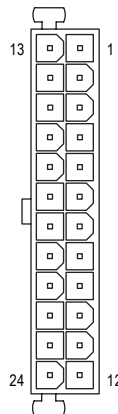
Pin No.	Definition
1	3.3V
2	3.3V
3	GND
4	+5V
5	GND
6	+5V
7	GND
8	Power Good
9	5V SB(stand by +5V)
10	+12V
11	+12V
12	3.3V (Only for 24pins ATX)
13	3.3V
14	-12V
15	GND
16	PS_ON(soft On/Off)
17	GND
18	GND
19	GND
20	-5V
21	+5V
22	+5V
23	+5V
24	GND

3/4) CPU_FAN / SYS_FAN (Cooler Fan Power Connector)

The cooler fan power connector supplies a +12V power voltage via a 3-pin/4-pin(only for CPU_FAN) power connector and possesses a foolproof connection design.

Most coolers are designed with color-coded power connector wires. A red power connector wire indicates a positive connection and requires a +12V power voltage. The black connector wire is the ground wire (GND).

Please remember to connect the power to the cooler to prevent system overheating and failure.
Caution!
Please remember to connect the power to the CPU fan to prevent CPU overheating and failure.
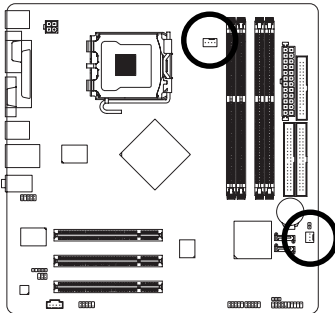
Pin No.	Definition
1	GND
2	+12V
3	Sense
4	Speed Control (Only for CPU_FAN)

5) FDD (FDD Connector)

The FDD connector is used to connect the FDD cable while the other end of the cable connects to the FDD drive. The types of FDD drives supported are: 360KB, 720KB, 1.2MB, 1.44MB and 2.88MB. Please connect the red power connector wire to the pin1 position.
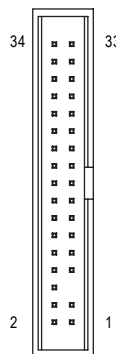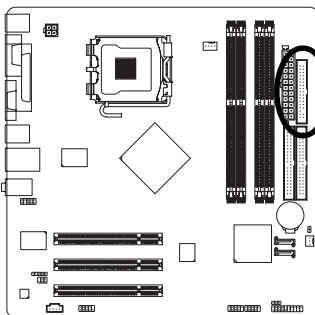
6) IDE1 / IDE2 (IDE Connector)

An IDE device connects to the computer via an IDE connector. One IDE connector can connect to one IDE cable, and the single IDE cable can then connect to two IDE devices (hard drive or optical drive). If you wish to connect two IDE devices, please set the jumper on one IDE device as Master and the other as Slave (for information on settings, please refer to the instructions located on the IDE device).
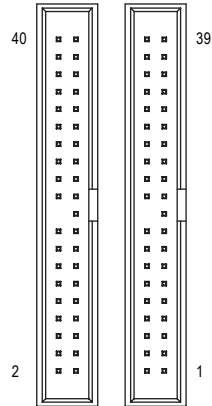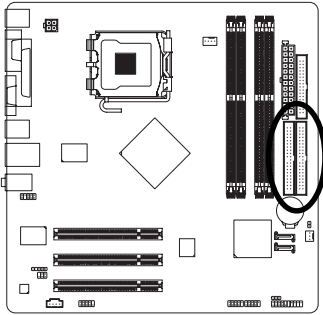
7) SATA0 / SATA1 (Serial ATA Connector)

Serial ATA can provide up to 150MB/s transfer rate. Please refer to the BIOS setting for the Serial ATA and install the proper driver in order to work properly.
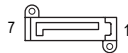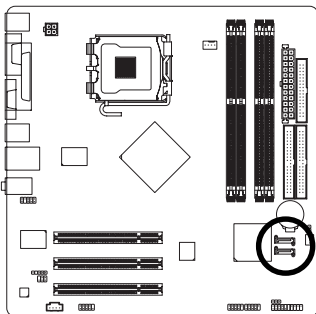
Pin No.	Definition
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND

8) PWR_LED

PWR_LED is connect with the system power indicator to indicate whether the system is on/off. It will blink when the system enters suspend mode.
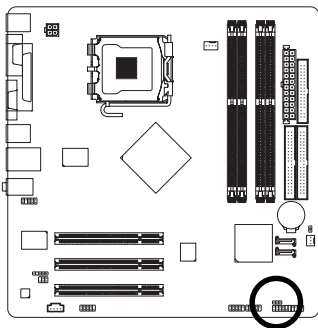
1 ⊡⊡⊡

Pin No.	Definition
1	MPD+
2	MPD-
3	MPD-

9) BAT(Battery)
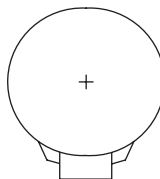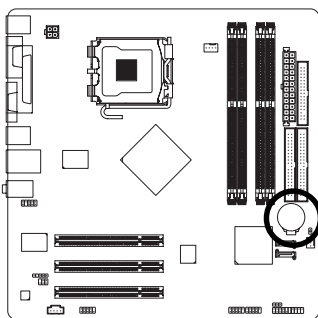
❖ Danger of explosion if battery is incorrectly replaced.

❖ Replace only with the same or equivalent type recommended by the manufacturer.

❖ Dispose of used batteries according to the manufacturer's instructions.

If you want to erase CMOS...

1. Turn OFF the computer and unplug the power cord.

2. Take out the battery gently and put it aside for about 10 minutes. (Or you can use a metal object to connect the positive and negative pins in the battery holder to makethem short for one minute.)

3. Re-install the battery.

4. Plug the power cord and turn ON the computer.

10) F_PANEL (Front Panel Jumper)

Please connect the power LED, PC speaker, reset switch and power switch etc. of your chassis frontpanel to the F_PANEL connector according to the pin assignment below.
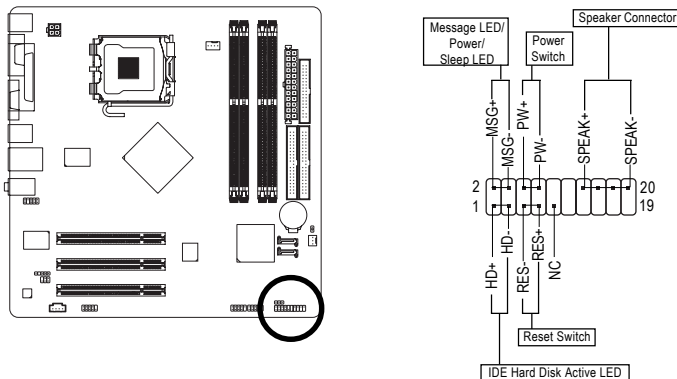
HD (IDE Hard Disk Active LED)	Pin 1: LED anode(+)
	Pin 2: LED cathode(-)
SPEAK (Speaker Connector)	Pin 1: Power
	Pin 2- Pin 3: NC
	Pin 4: Data(-)
RES (Reset Switch)	Open: Normal
	Close: Reset Hardware System
PW (Power Switch)	Open: Normal
	Close: Power On/Off
MSG(Message LED/Power/Sleep LED)	Pin 1: LED anode(+)
	Pin 2: LED cathode(-)
NC	NC

11) F_AUDIO (Front Audio Panel Connector)

If you want to use Front Audio connector, you must remove 5-6, 9-10 Jumper.
In order to utilize the front audio header, your chassis must have front audio connector. Also please make sure the pin assigment on the cable is the same as the pin assigment on the MB header. To find out if the chassis you are buying support front audio connector, please contact your dealer. Please note, you can have the alternative of using front audio connector or of using rear audio connector to play sound.
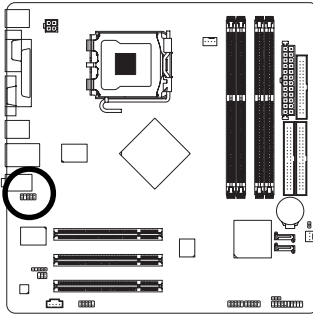
Pin No.	Definition
1	MIC
2	GND
3	MIC_BIAS
4	POWER
5	FrontAudio(R)
6	Rear Audio (R)/ Return R
7	NC
8	No Pin
9	FrontAudio (L)
10	Rear Audio (L)/ Return L

12) CD_IN (CD In Connector)

Connect CD-ROM or DVD-ROM audio out to the connector.
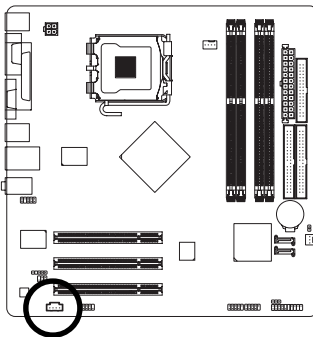
Pin No.	Definition
1	CD-L
2	GND
3	GND
4	CD-R

Hardware Installation

13) SPDIF (SPDIF Out Connector)

The SPDIF output is capable of providing digital audio to external speakers or compressed AC3 data to an external Dolby Digital Decoder. Use this feature only when your stereo system has digital input function. Be careful with the polarity of the SPDIF connector. Check the pin assignment carefully while you connect the SPDIF cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional SPDIF cable, please contact your local dealer.
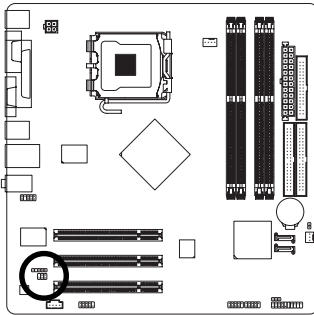
Pin No.	Definition
1	Power
2	No Pin
3	SPDIF
4	NC
5	GND
6	GND

14) F_ USB1 / F_USB2 (Front USB Connector)

Be careful with the polarity of the front USB connector. Check the pin assignment carefully while you connect the front USB cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional front USB cable, please contact your local dealer.
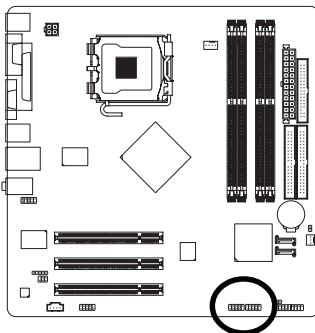
Pin No.	Definition
1	Power
2	Power
3	USB DX-
4	USB Dy-
5	USB DX+
6	USB Dy+
7	GND
8	GND
9	No Pin
10	NC

15) COMB (COM B Connector)

Be careful with the polarity of the COMB connector. Check the pin assignment carefully while you connect the COMB cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional COMB cable, please contact your local dealer.

$2 \begin{array}{|c|c|c|c|c|} \hline \bullet & \bullet & \bullet & \bullet & \bullet \\ \hline \bullet & \bullet & \bullet & \bullet & \bullet \\ \hline \end{array} \begin{array}{c} 10 \\ 9 \end{array}$
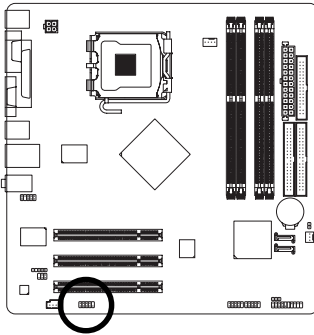
Pin No.	Definition
1	NDCDB-
2	NSINB
3	NSOUTB
4	NDTRB-
5	GND
6	NDSRB-
7	NRTSB-
8	NCTSB-
9	NRIB-
10	No Pin

16) IR

Be careful with the polarity of the IR connector while you connect the IR. Please contact your nearest dealer for optional IR device.

$1 \begin{array}{|c|c|c|c|c|} \hline \bullet & \bullet & \bullet & \bullet & \bullet \\ \hline \end{array}$
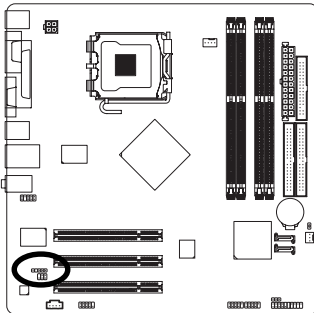
Pin No.	Definition
1	Power
2	No Pin
3	IR RX
4	GND
5	IR TX

17) CLR_CMOS (Clear CMOS)

You may clear the CMOS data to its default values by this jumper. To clear CMOS, temporarily short 1-2 pin. Default doesn't include the "Shunter" to prevent from improper use this jumper.
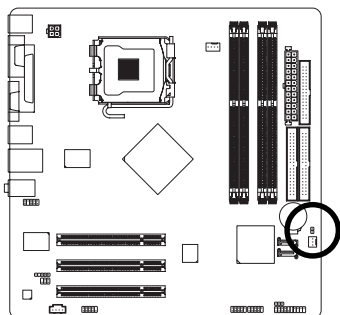
Open: Normal

Short: Clear CMOS

Chapter 2 BIOS Setup

BIOS (Basic Input and Output System) includes a CMOS SETUP utility which allows user to configure required settings or to activate certain system features.

The CMOS SETUP saves the configuration in the CMOS SRAM of the motherboard.

When the power is turned off, the battery on the motherboard supplies the necessary power to the CMOS SRAM.

When the power is turned on, pushing the <Del> button during the BIOS POST (Power-On Self Test) will take you to the CMOS SETUP screen. You can enter the BIOS setup screen by pressing "Ctrl + F1".

When setting up BIOS for the first time, it is recommended that you save the current BIOS to a disk in the event that BIOS needs to be reset to its original settings. If you wish to upgrade to a new BIOS, either Gigabyte's Q-Flash or @BIOS utility can be used.

Q-Flash allows the user to quickly and easily update or backup BIOS without entering the operating system. @BIOS is a Windows-based utility that does not require users to boot to DOS before upgrading BIOS but directly download and update BIOS from the Internet.

CONTROL KEYS

< ↑ >< ↓ >< ← >< → >	Move to select item
<Enter>	Select Item
<Esc>	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
<Page Up>	Increase the numeric value or make changes
<Page Down>	Decrease the numeric value or make changes
<F1>	General help, only for Status Page Setup Menu and Option Page Setup Menu
<F2>	Item Help
<F5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<F6>	Load the fail-safe default CMOS value from BIOS default table
<F7>	Load the Optimized Defaults
<F8>	Q-Flash utility
<F9>	System Information
<F10>	Save all the CMOS changes, only for Main Menu

Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Status Page Setup Menu / Option Page Setup Menu

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc>.

The BIOS Setup menus described in this chapter are for reference only and may differ from the exact settings for your motherboard.

The Main Menu (For example: BIOS Ver. : E1)

Once you enter Award BIOS CMOS Setup Utility, the Main Menu (as figure below) will appear on the screen. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

CMOS Setup Utility-Copyright (C) 1984-2005 Award Software	
▶ Standard CMOS Features	Load Fail-Safe Defaults
▶ Advanced BIOS 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
▶ Frequency/Voltage Control	
ESC: Quit	↑↓→←: Select Item
F8: Q-Flash	F10: Save & Exit Setup
Time, Date, Hard Disk Type...	

If you can't find the setting you want, please press "Ctrl+F1" to search the advanced option hidden.

■ **Standard CMOS Features**

This setup page includes all the items in standard compatible BIOS.

■ **Advanced BIOS Features**

This setup page includes all the items of Award special enhanced features.

■ **Integrated Peripherals**

This setup page includes all onboard peripherals.

■ **Power Management Setup**

This setup page includes all the items of Green function features.

■ **PnP/PCI Configuration**

This setup page includes all the configurations of PCI & PnP ISA resources.

■ **PC Health Status**

This setup page is the System auto detect Temperature, voltage, fan, speed.

■ **Frequency/Voltage Control**

This setup page is control CPU clock and frequency ratio.

■ **Load Fail-Safe Defaults**

Fail-Safe Defaults indicates the value of the system parameters which the system would be in safe configuration.

■ **Load Optimized Defaults**

Optimized Defaults indicates the value of the system parameters which the system would be in best performance configuration.

■ **Set Supervisor Password**

Change, set, or disable password. It allows you to limit access to the system and Setup, or just to Setup.

■ **Set User Password**

Change, set, or disable password. It allows you to limit access to the system.

■ **Save & Exit Setup**

Save CMOS value settings to CMOS and exit setup.

■ **Exit Without Saving**

Abandon all CMOS value changes and exit setup.

2-1 Standard CMOS Features

```
CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
                    Standard CMOS Features
  Date (mm:dd:yy)                Thu, Aug  5  2004      Item Help
  Time (hh:mm:ss)                22:31:24               Menu Level▶

▶ IDE Channel 0 Master          [None]                 Change the day, month,
▶ IDE Channel 0 Slave           [None]                 year
▶ IDE Channel 1 Master          [None]
▶ IDE Channel 1 Slave           [None]                 <Week>
                                                       Sun. to Sat.
  Drive A                       [1.44M, 3.5"]
  Drive B                       [None]                 <Month>
  Floppy 3 Mode Support         [Disabled]             Jan. to Dec.

  Halt On                       [All, But Keyboard]    <Day>
                                                       1 to 31 (or maximum
  Base Memory                   640K                   allowed in the month)
  Extended Memory               239M
  Total Memory                  240M                   <Year>
                                                       1999 to 2098

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

⌐ **Date**

The date format is <week>, <month>, <day>, <year>.

▶▶ Week   The week, from Sun to Sat, determined by the BIOS and is display only
▶▶ Month   The month, Jan. Through Dec.
▶▶ Day   The day, from 1 to 31 (or the maximum allowed in the month)
▶▶ Year   The year, from 1999 through 2098

⌐ **Time**

The times format in <hour> <minute> <second>. The time is calculated base on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00.

⌐ **IDE Channel 0 Master, Slave / IDE Channel 1 Master, Slave**

▶▶ IDE HDD Auto-Detection Press "Enter" to select this option for automatic device detection.

▶▶ IDE Channel 0/1 Master/Slave IDE Device Setup. You can use one of three methods:

   Auto   Allows BIOS to automatically detect IDE devices during POST. (Default value)
   None   Select this if no IDE devices are used and the system will skip the automatic
            detection step and allow for faster system start up.
   Manual   User can manually input the correct settings.

▶▶ Access Mode   Use this to set the access mode for the hard drive. The four options are:
                 CHS/LBA/Large/Auto(default:Auto)

Hard drive information should be labeled on the outside drive casing. Enter the appropriate option based on this information.

▶▶ Cylinder   Number of cylinders
▶▶ Head   Number of heads
▶▶ Precomp   Write precomp
▶▶ Landing Zone Landing zone
▶▶ Sector   Number of sectors

If a hard disk has not been installed, select NONE and press <Enter>.

☞ **Drive A / Drive B**

The category identifies the types of floppy disk drive A or drive B that has been installed in the computer.

- ▶ None   No floppy drive installed
- ▶ 360K, 5.25"   5.25 inch PC-type standard drive; 360K byte capacity.
- ▶ 1.2M, 5.25"   5.25 inch AT-type high-density drive; 1.2M byte capacity
                   (3.5 inch when 3 Mode is Enabled).
- ▶ 720K, 3.5"   3.5 inch double-sided drive; 720K byte capacity
- ▶ 1.44M, 3.5"   3.5 inch double-sided drive; 1.44M byte capacity.
- ▶ 2.88M, 3.5"   3.5 inch double-sided drive; 2.88M byte capacity.

☞ **Floppy 3 Mode Support (for Japan Area)**

- ▶ Disabled   Normal Floppy Drive. (Default value)
- ▶ Drive A   Drive A is 3 mode Floppy Drive.
- ▶ Drive B   Drive B is 3 mode Floppy Drive.
- ▶ Both   Drive A & B are 3 mode Floppy Drives.

☞ **Halt on**

The category determines whether the computer will stop if an error is detected during power up.

- ▶ No Errors   The system boot will not stop for any error that may be detected and you
                       will be prompted.
- ▶ All Errors   Whenever the BIOS detects a non-fatal error the system will be stopped.
- ▶ All, But Keyboard The system boot will not stop for a keyboard error; it will stop for all other
                       errors. (Default value)
- ▶ All, But Diskette The system boot will not stop for a disk error; it will stop for all other errors.
- ▶ All, But Disk/Key The system boot will not stop for a keyboard or disk error; it will stop for all
                       other errors.

☞ **Memory**

The category is display-only which is determined by POST (Power On Self Test) of the BIOS.

▶ **Base Memory**

The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system.

The value of the base memory is typically 512K for systems with 512K memory installed on the motherboard, or 640K for systems with 640K or more memory installed on the motherboard.

▶ **Extended Memory**

The BIOS determines how much extended memory is present during the POST.

This is the amount of memory located above 1 MB in the CPU's memory address map.

▶ **Total Memory**

This item displays the memory size that used.

2-2   Advanced BIOS Features

```
              CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
                            Advanced BIOS Features
  ▶  Hard Disk Boot Priority              [Press Enter]          Item Help
     First Boot Device                    [Floppy]               Menu Level▶
     Second Boot Device                   [Hard Disk]
     Third Boot Device                    [CDROM]                Select Hard Disk Boot
     Password Check                       [Setup]                Device Priority
  #  CPU Hyper-Threading                  [Enabled]
     Limit CPUID Max. to 3                [Disabled]
     No-Execute Memory Protect (Note)     [Enabled]
     CPU Enhanced Halt (C1E) (Note)       [Enabled]
     CPU Thermal Monitor 2(TM2) (Note)    [Enabled]
     CPU EIST Function (Note)             [Enabled]
     On-Chip Frame Buffer Size            [16MB]




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

NOTE " # " System will detect automatically and show up when you install the Intel® Pentium® 4 processor with HT Technology.

☞ **Hard Disk Boot Priority**

Select boot sequence for onboard(or add-on cards) SCSI, RAID, etc.

Use < ↑ > or < ↓ > to select a device, then press<+> to move it up, or <-> to move it down the list. Press <ESC> to exit this menu.

☞ **First / Second / Third Boot Device**
- ▶▶ Floppy   Select your boot device priority by Floppy.
- ▶▶ LS120   Select your boot device priority by LS120.
- ▶▶ Hard Disk   Select your boot device priority by Hard Disk.
- ▶▶ CDROM   Select your boot device priority by CDROM.
- ▶▶ ZIP   Select your boot device priority by ZIP.
- ▶▶ USB-FDD   Select your boot device priority by USB-FDD.
- ▶▶ USB-ZIP   Select your boot device priority by USB-ZIP.
- ▶▶ USB-CDROM   Select your boot device priority by USB-CDROM.
- ▶▶ USB-HDD   Select your boot device priority by USB-HDD.
- ▶▶ LAN   Select your boot device priority by LAN.
- ▶▶ Disabled   Select your boot device priority by Disabled.

☞ **Password Check**
- ▶▶ Setup   The system will boot but will not access to Setup page if the correct password is not entered at the prompt. (Default value)
- ▶▶ System   The system will not boot and will not access to Setup page if the correct password is not entered at the prompt.

(Note)   This item will show up when you install a processor that supports this function.

 CPU Hyper-Threading
  ▶ Enabled   Enables CPU Hyper-Threading Feature. Please note that this feature is only
                    working for operating system with multi processors mode supported. (Default
                    value)
  ▶ Disabled   Disables CPU Hyper-Threading.

 Limit CPUID Max. to 3
  ▶ Enabled   Limit CPUID Maximum value to 3 when use older OS like NT4.
  ▶ Disabled   Disables CPUID Limit for Windows XP.(Default value)

 No-Execute Memory Protect (Note)
  ▶ Enabled   Enable No-Execute Memory Protect function.(Default value)
  ▶ Disabled   Disable No-Execute Memory Protect function.

 CPU Enhanced Halt (C1E) (Note)
  ▶ Enabled   Enable CPU Enhanced Halt (C1E) function.(Default value)
  ▶ Disabled   Disable CPU Enhanced Halt (C1E) function.

 CPU Thermal Monitor 2 (TM2) (Note)
  ▶ Enabled   Enable CPU Thermal Monitor 2 (TM2) function.(Default value)
  ▶ Disabled   Disable CPU Thermal Monitor 2 (TM2) function.

 CPU EIST Function (Note)
  ▶ Enabled   Enable CPU EIST function.(Default value)
  ▶ Disabled   Disable CPU EIST function.

 On-Chip Frame Buffer Size
  ▶ 1MB   Set on-chip frame buffer size to 1MB.
  ▶ 4MB   Set on-chip frame buffer size to 4MB.
  ▶ 8MB   Set on-chip frame buffer size to 8MB.
  ▶ 16MB   Set on-chip frame buffer size to 16MB. (Default value)
  ▶ 32MB   Set on-chip frame buffer size to 32MB.

(Note)   This item will show up when you install a processor that supports this function.

2-3 Integrated Peripherals

```
                 CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
                                  Integrated Peripherals
      On-Chip Primary PCI IDE              [Enabled]              Item Help
      On-Chip Secondary PCI IDE            [Enabled]              Menu Level▶
      On-Chip SATA                         [Auto]
   x  SATA Port0 configure as              SATA Port0
      SATA Port1 configure as              SATA Port1
      USB Controller                       [Enabled]
      USB 2.0 Controller                   [Enabled]
      USB Keyboard Support                 [Disabled]
      USB Mouse Support                    [Disabled]
      AC97 Audio                           [Auto]
      Onboard H/W LAN                      [Enabled]
      Onboard LAN Boot ROM                 [Disabled]
      POWER ON Function                    [Disabled]
      Onboard Serial Port 1                [3F8/IRQ4]
      Onboard Serial Port 2                [2F8/IRQ3]
      UART Mode Select                     [Normal]
   x  UR2 Duplex Mode                      Half
      Onboard Parallel Port                [378/IRQ7]
      Parallel Port Mode                   [PRINTER]
   x  ECP Mode Use DMA                     3

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

☞ **On-Chip Primary PCI IDE**
  ▶▶ Enabled   Enable onboard 1st channel IDE port. (Default value)
  ▶▶ Disabled   Disable onboard 1st channel IDE port.

☞ **On-Chip Secondary PCI IDE**
  ▶▶ Enabled   Enable onboard 2nd channel IDE port. (Default value)
  ▶▶ Disabled   Disable onboard 2nd channel IDE port.

☞ **On-Chip SATA**
  ▶▶ Disabled   Disable onboard Seria ATA function.
  ▶▶ Auto   When there is no device to be plugged in IDE1 or IDE2, SATA controller will
                       remap to IDE controller. (Default value)
  ▶▶ Manual   Set SATA mode manually from "SATA Port0 configure as" item.

☞ **SATA Port0 configure as**
  ▶▶ IDE Pri. Master   Set SATA controller to compatible mode. This mode will remap SATA Port 0 to
                       IDE Primary Master.
  ▶▶ IDE Pri. Slave   Set SATA controller to compatible mode. This mode will remap SATA Port 0 to
                       IDE Primary Slave.
  ▶▶ IDE Sec. Master   Set SATA controller to compatible mode. This mode will remap SATA Port 0 to
                       IDE Secondary Master.
  ▶▶ IDE Sec. Slave   Set SATA controller to compatible mode. This mode will remap SATA Port 0 to
                       IDE Secondary Slave.
  ▶▶ SATA Port0   Set SATA controller to native mode(Serial ATA mode - SATA Port 0). This mode
                       is only supported by Windows XP or later. (Default value)
  ▶▶ SATA Port1   Set SATA controller to native mode(Serial ATA mode - SATA Port 1). This mode
                       is only supported by Windows XP or later.

☞ **SATA Port1 configure as**
  ▶▶ The setting depends on "SATA Port0 configure as" item setting. (Default: SATA Port1)

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☞ **USB Controller**
- ▷ Enabled   Enable USB controller. (Default value)
- ▷ Disabled   Disable USB controller.

☞ **USB 2.0 Controller**

You can disable this function if you are not using onboard USB 2.0 feature.
- ▷ Enabled   Enable USB 2.0 controller. (Default value)
- ▷ Disabled   Disable USB 2.0 controller.

☞ **USB Keyboard Support**
- ▷ Enabled   Enable USB keyboard support.
- ▷ Disabled   Disable USB keyboard support. (Default value)

☞ **USB Mouse Support**
- ▷ Enabled   Enable USB mouse support.
- ▷ Disabled   Disable USB mouse support. (Default value)

☞ **AC97 Audio**
- ▷ Auto   Auto detect AC97 audio function. (Default value)
- ▷ Disabled   Disable AC97 audio function.

☞ **Onboard H/W LAN**
- ▷ Enabled   Enable onboard H/W LAN function. (Default value)
- ▷ Disabled   Disable this function.

☞ **Onboard LAN Boot ROM**

This function decide whether to invoke the boot ROM of the onboard LAN chip.
- ▷ Enabled   Enable this function.
- ▷ Disabled   Disable this function. (Default value)

☞ **POWER ON Function**
- ▷ Disabled   Disable this function. (Default value)
- ▷ Any KEY   Press any key to power on the system.
- ▷ Mouse   Double click on mouse left button to power on the system.
- ▷ Mouse/Any KEY Press any key or double click on mouse left button to power on the system.

☞ **Onboard Serial Port 1**
- ▷ Auto   BIOS will automatically setup the port 1 address.
- ▷ 3F8/IRQ4   Enable onboard Serial port 1 and address is 3F8/IRQ4. (Default value)
- ▷ 2F8/IRQ3   Enable onboard Serial port 1 and address is 2F8/IRQ3.
- ▷ 3E8/IRQ4   Enable onboard Serial port 1 and address is 3E8/IRQ4.
- ▷ 2E8/IRQ3   Enable onboard Serial port 1 and address is 2E8/IRQ3.
- ▷ Disabled   Disable onboard Serial port 1.

☞ **Onboard Serial Port 2**
- ▷ Auto   BIOS will automatically setup the port 1 address.
- ▷ 3F8/IRQ4   Enable onboard Serial port 2 and address is 3F8/IRQ4.
- ▷ 2F8/IRQ3   Enable onboard Serial port 2 and address is 2F8/IRQ3. (Default value)
- ▷ 3E8/IRQ4   Enable onboard Serial port 2 and address is 3E8/IRQ4.
- ▷ 2E8/IRQ3   Enable onboard Serial port 2 and address is 2E8/IRQ3.
- ▷ Disabled   Disable onboard Serial port 2.

☞ **UART Mode Select**

This item allows you to determine which Infra Red(IR) function of Onboard I/O chip.

▸ Normal   Set onboard I/O chip UART to normal mode. (Default value)

▸ IrDA   Set onboard I/O chip UART to IrDA mode.

▸ ASKIR   Set onboard I/O chip UART to ASKIR mode.

☞ **UR2 Duplex Mode**

This feature allows you to seclect IR mode.

This function will available when "UART Mode Select" doesn't set at Normal.

▸ Half   IR Function Duplex Half. (Default value)

▸ Full   IR Function Duplex Full.

☞ **Onboard Parallel port**

▸ Disabled   Disable onboard LPT port.

▸ 378/IRQ7   Enable onboard LPT port and address is 378/IRQ7. (Default value)

▸ 278/IRQ5   Enable onboard LPT port and address is 278/IRQ5.

▸ 3BC/IRQ7   Enable onboard LPT port and address is 3BC/IRQ7.

☞ **Parallel Port Mode**

▸ SPP   Using Parallel port as Standard Parallel Port.

▸ EPP1.9+SPP Using Parallel port as Enhanced Parallel Port 1.9 and SPP mode.

▸ ECP   Using Parallel port as Extended Capabilities Port.

▸ EPP1.9+ECP Using Parallel port as Enhanced Parallel Port 1.9 and ECP mode.

▸ PRINTER   Using Parallel port as printer port. (Default value)

▸ EPP1.7+SPP Using Parallel port as Enhanced Parallel Port 1.7 and SPP mode.

▸ EPP1.7+ECP Using Parallel port as Enhanced Parallel Port 1.7 and ECP mode.

☞ **ECP Mode Use DMA**

▸ 3   Set ECP Mode Use DMA to 3. (Default value)

▸ 1   Set ECP Mode Use DMA to 1.

2-4 Power Management Setup

```
CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
                    Power Management Setup
  ACPI Suspend Type                    [S1(POS)]          Item Help
  Power LED in S1 state                [Blinking]         Menu Level▶
  Off by Power button                  [Instant-off]
  AC BACK Function                     [Soft-Off]
  PME Event Wake Up                    [Enabled]
  ModemRingOn/WakeOnLan                [Enabled]
  Resume by Alarm                      [Disabled]
x Date (of Month) Alarm                Everday
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-Safe Defaults          F7: Optimized Defaults
```

✆ **ACPI Suspend Type**
  ▶▶ S1(POS)   Set ACPI suspend type to S1/POS(Power On Suspend). (Default value)
  ▶▶ S3(STR)   Set ACPI suspend type to S3/STR(Suspend To RAM).

✆ **Power LED in S1 state**
  ▶▶ Blinking   In standby mode(S1), poer LED will blink. (Default value)
  ▶▶ Dual/OFF   In standby mode(S1):
                  a. If use single color LED, power LED will turn off.
                  b. If use dual color LED, power LED will turn to another color.

✆ **Off by Power button**
  ▶▶ Instant-off Press power button then Power off instantly. (Default value)
  ▶▶ Delay 4 Sec. Press power button 4 sec. to Power off. Enter suspend if button is pressed less than
                  4 seconds.

✆ **AC BACK Function**
  ▶▶ Soft-Off   When AC-power back to the system, the system will be in "Off" state.
                  (Default value)
  ▶▶ Full-On   When AC-power back to the system, the system always in "On" state.
  ▶▶ Memory   When AC-power back to the system, the system will return to the Last state
                  before AC-power off.

✆ **PME Event Wake Up**
  This feature requires an ATX power supply that provides at least 1A on the 5VSB lead.
  ▶▶ Disabled   Disable this function.
  ▶▶ Enabled   Enable PME as wake up event. (Default value)

✆ **ModemRingOn/WakeOnLan**
  An incoming call via modem can awake the system from any suspend state or an input signal comes
  from the other client server on the LAN can awake the system from any suspend state.
  ▶▶ Disabled   Disable Modem Ring On / Wake On LAN function.
  ▶▶ Enabled   Enable Modem Ring On / Wake On LAN function. (Default value)

  ☞ **Resume by Alarm**

You can set "Resume by Alarm" item to enabled and key in Date/Time to power on system.
- ▶ Disabled   Disable this function. (Default value)
- ▶ Enabled   Enable alarm function to POWER ON system.

If Resume by Alarm is Enabled.
- ▶ Date (of Month) Alarm :   Everyday, 1~31
- ▶ Time (hh: mm: ss) Alarm :   (0~23) : (0~59) : (0~59)

2-5 PnP/PCI Configurations

```
           CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
                          PnP/PCI Configurations
┌──────────────────────────────────────────────────────────────────────────┐
│  PCI 1 IRQ Assignment              [Auto]                    Item Help     │
│  PCI 2 IRQ Assignment              [Auto]              Menu Level▶         │
│  PCI 3 IRQ Assignment              [Auto]                                  │
│                                                       Device(s) using this │
│                                                       INT:                 │
│                                                                            │
│                                                                            │
│                                                                            │
│                                                                            │
│                                                                            │
│                                                                            │
│                                                                            │
│                                                                            │
│                                                                            │
│                                                                            │
├──────────────────────────────────────────────────────────────────────────┤
│ ↑↓→←: Move   Enter: Select   +/-/PU/PD: Value   F10: Save   ESC: Exit  F1: General Help │
│        F5: Previous Values    F6: Fail-Safe Defaults      F7: Optimized Defaults │
└──────────────────────────────────────────────────────────────────────────┘
```
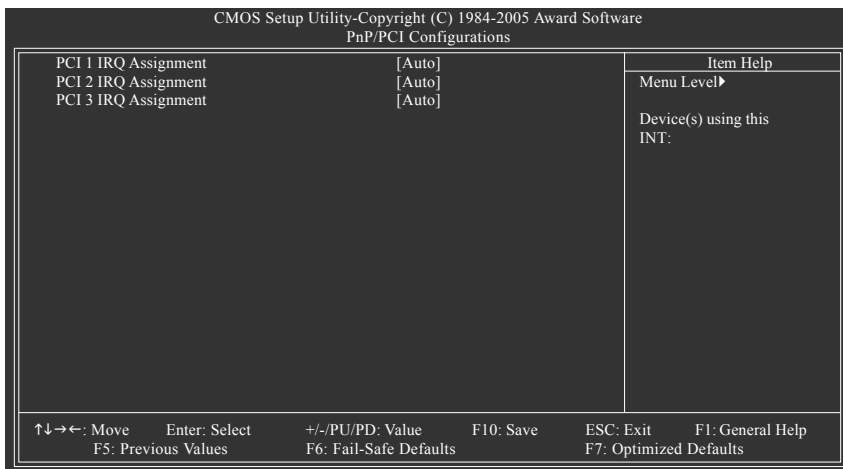
  ☞ **PCI 1 IRQ Assignment**
- ▶ Auto   Auto assign IRQ to PCI 1. (Default value)
- ▶ 3,4,5,7,9,10,11,12,14,15   Set IRQ 3,4,5,7,9,10,11,12,14,15 to PCI 1.

  ☞ **PCI 2 IRQ Assignment**
- ▶ Auto   Auto assign IRQ to PCI 2. (Default value)
- ▶ 3,4,5,7,9,10,11,12,14,15   Set IRQ 3,4,5,7,9,10,11,12,14,15 to PCI 2.

  ☞ **PCI 3 IRQ Assignment**
- ▶ Auto   Auto assign IRQ to PCI 3. (Default value)
- ▶ 3,4,5,7,9,10,11,12,14,15   Set IRQ 3,4,5,7,9,10,11,12,14,15 to PCI 3.

2-6 PC Health Status

```
          CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
                          PC Health Status
  Current CPU Temperature            50ºC                          Item Help
  Current System Temperature         32ºC              Menu Level▶
  Vcore                              1.35V
  +3.3V                              3.28V
  +5V                                5.17V
  +12V                               11.84V
  DDR25V                             2.39V
  Current CPU FAN Speed              3308 RPM
  Current SYSTEM FAN Speed           0    RPM
  CPU Smart FAN Control              [Enabled]
  CPU Smart FAN Mode                 [Auto]




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

☞ **Current CPU/System Temperature**

▶ Detect CPU/System temperature automatically.

☞ **Current Voltage(V) Vcore / +3.3V / +5V / +12V / DDR25V**

▶ Detect system's voltage status automatically.

☞ **Current CPU/SYSTEM FAN Speed (RPM)**

▶ Detect CPU/SYSTEM Fan speed status automatically.

☞ **CPU Smart FAN Control**

▶ Disabled Disable this function.

▶ Enabled When this function is enabled, CPU fan will run at different speed depending on CPU temperature. Users can adjust the fan speed with Easy Tune based on their requirements. (Default value)

☞ **CPU Smart FAN Mode**

This option is available only when CPU Smart FAN Control is enabled.

▶ Auto BIOS autodetects the type of CPU fan you installed and sets the optimal CPU Smart FAN control mode for it. (Default value)

▶ Voltage Set to Voltage when you use a CPU fan with a 3-pin fan power cable.

▶ PWM Set to PWM when you use a CPU fan with a 4-pin fan power cable.

NOTE In fact, the **Voltage** option can be used for CPU fans with 3-pin or 4-pin power cables. However, some 4-pin CPU fan power cables are not designed following Intel 4-wire fans PWM control specifications. With such CPU fans, selecting PWM will not effectively reduce the fan speed.

2-7 Frequency/Voltage Control

```
                  CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
                                 Frequency/Voltage Control
┌─────────────────────────────────────────────────────────────────────────────────────┐
│ CPU Clock Ratio                     [15X]                              Item Help       │
│ Memory Frequency For                [Auto]                      Menu Level▶            │
│ Memory Frequency (Mhz)              266                                                │
│                                                                Set CPU Ratio if CPU    │
│                                                                Ratio is unclocked      │
│                                                                                        │
│                                                                                        │
│                                                                                        │
│                                                                                        │
│                                                                                        │
│                                                                                        │
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│                                                                                        │
│                                                                                        │
│                                                                                        │
│ ↑↓→←: Move    Enter: Select    +/-/PU/PD: Value    F10: Save    ESC: Exit    F1: General Help │
│      F5: Previous Values       F6: Fail-Safe Defaults          F7: Optimized Defaults  │
└─────────────────────────────────────────────────────────────────────────────────────┘
```
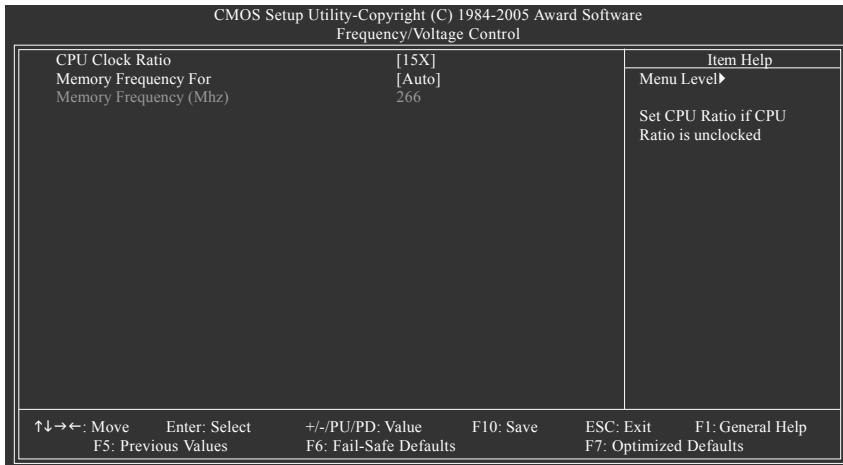
⚠ **CAUTION**   Incorrect using these features may cause your system broken. For power end-user use only.

☞ **CPU Clock Ratio**

This setup option will automatically assign by CPU detection.

The option will display "Locked" and read only if the CPU ratio is not changeable.

☞ **Memory Frequency For**

Wrong frequency may make system can't boot, clear CMOS to overcome wrong frequency issue.

for FSB(Front Side Bus) frequency=533MHz,

▸▸ 2.0   Memory Frequency = Host clock x 2.

▸▸ 2.5   Memory Frequency = Host clock x 2.5.

▸▸ Auto   Set Memory frequency by DRAM SPD data. (Default value)

for FSB(Front Side Bus) frequency=800MHz,

▸▸ 1.33   Memory Frequency = Host clock x 1.33.

▸▸ 1.66   Memory Frequency = Host clock x 1.66.

▸▸ 2.0   Memory Frequency = Host clock x 2.

▸▸ Auto   Set Memory frequency by DRAM SPD data. (Default value)

☞ **Memory Frequency (Mhz)**

The values depend on "Memory Frequency For" item.

2-8   Load Fail-Safe Defaults

```
CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
```

▶ Standard CMOS Features	Load Fail-Safe Defaults
▶ Advanced BIOS Features	Load Optimized Defaults
▶ Integrated Peripherals	Set Supervisor Password
▶ Power Ma~~nagement S~~	
▶ PnP/PCI C	Load Fail-Safe Defaults (Y/N)? N
▶ PC Health ~~Status~~	~~Exit Without Saving~~
▶ MB Intelligent Tweaker(M.I.T.)	
ESC: Quit	↑↓→←: Select Item
F8: Q-Flash	F10: Save & Exit Setup
	Load Fail-Safe Defaults

Fail-Safe defaults contain the most appropriate values of the system parameters that allow minimum system performance.

2-9   Load Optimized Defaults

```
CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
```

▶ Standard CMOS Features	Load Fail-Safe Defaults
▶ Advanced BIOS Features	Load Optimized Defaults
▶ Integrated Peripherals	Set Supervisor Password
▶ Power Ma~~nagement S~~	~~Set User Password~~
▶ PnP/PCI C	Load Optimized Defaults (Y/N)? N
▶ PC Health ~~Status~~	~~Exit Without Saving~~
▶ MB Intelligent Tweaker(M.I.T.)	
ESC: Quit	↑↓→←: Select Item
F8: Q-Flash	F10: Save & Exit Setup
	Load Optimized Defaults

Selecting this field loads the factory defaults for BIOS and Chipset Features which the system automatically detects.

2-10 Set Supervisor/User Password

```
CMOS Setup Utility-Copyright (C) 1984-2005 Award Software

   ▶   Standard CMOS Features              Load Fail-Safe Defaults
   ▶   Advanced BIOS Features              Load Optimized Defaults
   ▶   Integrated Peripherals              Set Supervisor Password
   ▶   Power Management Setup              Set User Password
   ▶   PnP/PCI C                           
   ▶   PC Health          Enter Password:
   ▶   MB Intelligent Tweaker(M.I.T.)

   ESC: Quit                              ↑↓→←: Select Item
   F8: Q-Flash                            F10: Save & Exit Setup
                     Change/Set/Disable Password
```

When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

Type the password, up to eight characters, and press <Enter>. You will be asked to confirm the password.
Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

To disable password, just press <Enter> when you are prompted to enter password. A message
"PASSWORD DISABLED" will appear to confirm the password being disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

The BIOS Setup program allows you to specify two separate passwords:
SUPERVISOR PASSWORD and a USER PASSWORD. When disabled, anyone may access all BIOS Setup program function. When enabled, the Supervisor password is required for entering the BIOS Setup program and having full configuration fields, the User password is required to access only basic items.

If you select "System" at "Password Check" in Advance BIOS Features Menu, you will be prompted for the password every time the system is rebooted or any time you try to enter Setup Menu.

If you select "Setup" at "Password Check" in Advance BIOS Features Menu, you will be prompted only when you try to enter Setup.

2-11 Save & Exit Setup

CMOS Setup Utility-Copyright (C) 1984-2005 Award Software	
▶ Standard CMOS Features	Load Fail-Safe Defaults
▶ Advanced BIOS Features	Load Optimized Defaults
▶ Integrated Peripherals	Set Supervisor Password
▶ Power Management Setup	Set User Password
▶ PnP/PCI Configurations	
▶ PC Health	Save to CMOS and EXIT (Y/N)? Y
▶ MB Intelligent Tweaker(M.I.T.)	
ESC: Quit	↑↓→←: Select Item
F8: Q-Flash	F10: Save & Exit Setup
Save Data to CMOS	

Type "Y" will quit the Setup Utility and save the user setup value to RTC CMOS.
Type "N" will return to Setup Utility.

2-12 Exit Without Saving

CMOS Setup Utility-Copyright (C) 1984-2005 Award Software	
▶ Standard CMOS Features	Load Fail-Safe Defaults
▶ Advanced BIOS Features	Load Optimized Defaults
▶ Integrated Peripherals	Set Supervisor Password
▶ Power Management Setup	Set User Password
▶ PnP/PCI C	Quit Without Saving (Y/N)? N
▶ PC Health Status	Exit Without Saving
▶ MB Intelligent Tweaker(M.I.T.)	
ESC: Quit	↑↓→←: Select Item
F8: Q-Flash	F10: Save & Exit Setup
Abandon all Data	

Type "Y" will quit the Setup Utility without saving to RTC CMOS.
Type "N" will return to Setup Utility.

English

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Chapter 3 Drivers Installation

NOTE

Pictures below are shown in Windows XP.

Insert the driver CD-title that came with your motherboard into your CD-ROM drive, the driver CD-title will auto start and show the installation guide. If not, please double click the CD-ROM device icon in "My computer", and execute the Run.exe.

3-1 Install Chipset Drivers

After insert the driver CD, "Xpress Install" will scan automatically the system and then list all the drivers that recommended to install. The "Xpress Install" uses the"Click and Go" technology to install the drivers automatically. Just select the drivers you want then click the "GO" button. The will execute the installation for you automatically.

NOTE
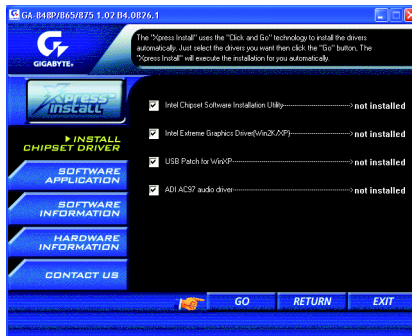
Some device drivers will restart your system automatically. After restarting your system the "Xpress Install" will continue to install other drivers.

System will reboot automatically after install the drivers, afterward you can install others application.

CAUTION

For USB2.0 driver support under Windows XP operating system, please use Windows Service Pack. After install Windows Service Pack, it will show a question mark "?" in "Universal Serial Bus controller" under "Device Manager". Please remove the question mark and restart the system (System will auto-detect the right USB2.0 driver).

3-2 Software Application

This page displays all the tools that Gigabyte developed and some free software, you can choose anyone you want and press "install" to install them.

3-3 Software Information

This page lists the contents of software and drivers in this CD-title.
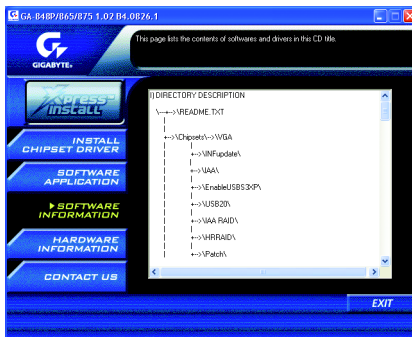
3-4 Hardware Information

This page lists all device you have for this motherboard.
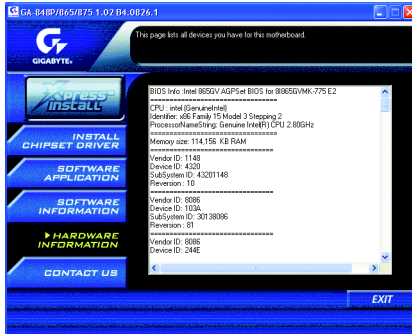
3-5 Contact Us

Please see the last page for details.

Chapter 4 Appendix

4-1   Unique Software Utilities

4-1-1   Xpress Recovery2 Introduction

Xpress Recovery2 is designed to provide quick backup and restoration of hard disk data. Supporting Microsoft operating systems including Windows XP/2000/NT/98/Me and DOS, and file systems including FAT16, FAT32, and NTFS, Xpress Recovery2 is able to back up data

on hard disks on PATA and SATA IDE controllers. After Xpress Recovery2 is executed from CD-ROM for the first time, it will stay permanent in your hard disk. If you wish to run Xpress Recovery2 later, you can simply press F9 during system bootup to enter Xpress Recovery2 without the CD-ROM.

System requirements:

1. Intel x86 platforms
2. At least 64M bytes of system memory
3. VESA-supported VGA cards

How to use the Xpress Recovery2

Initial access by booting from CD-ROM and subsequent access by pressing the F9 key:

Steps: After entering BIOS Setup, go to **Advanced BIOS Feature** and set to boot from CD-ROM. Save the settings and exit the BIOS Setup. Insert the provided driver CD into your CD-ROM drive. Upon system restart, the message which says "Boot from CD/DVD:" will appear in the bottom left corner of the screen. Press any key to enter Xpress Recovery2.

After the steps above are completed, subsequent access to Xpress Recovery2 can be made by simply pressing the <F9> key during system power-on.

```
.
.
.
Boot from CD/DVD:                               Boot from CD/DVD:
Press any key to startup XpressRecovery2.....
```

```
    Award Modular BIOS v6.00PG, An Energy Star Ally
    Copyright  (C) 1984-2005, Award Software,  Inc.
Intel 865 BIOS for 8I865GVMK-775 F4
.
.
.
.
<DEL>:BIOS Setup/Q-Flash, <F9>: Xpress Recovery2, <F12> For Boot Menu      <F9> Xpress Recovery2
11/07/2005-I865-6A79HG0GC-00
```

NOTE
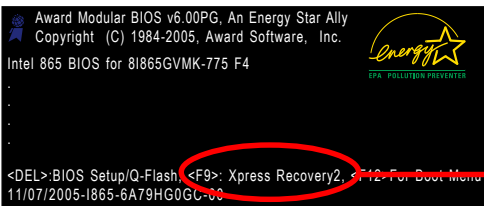
1. If you have already entered Xpress Recovery2 by booting from the CD-ROM, you can enter Xpress Recovery2 by pressing the <F9> key in the future.
2. System storage capacity and the reading/writing speed of the hard disk will affect the data backup speed.
3. It is recommended that Xpress Recovery2 be immediately installed once you complete installations of OS and all required drivers as well as software.

The Main Screen of Xpress Recovery2

1. RESTORE:

Restore the backed-up data to your hard disk. (This button will not appear if there is no backup file.)

2. BACKUP:

Back up data from hard disk.

3. REMOVE:

Remove previously-created backup files to release disk space. (This button will not appear if there is no backup file.)

4. REBOOT:

Exit the main screen and restart the system.

Limitations:

1. Not compatible to Xpress Recovery.
2. For the use of Xpress Recovery2, a primary partition must be reserved.
3. Xpress Recovery2 will store the backup file at the end of the hard disk, so free space available on the hard disk for the backup file must be allocated in advance. (A minimum 4GB is recommended but the actual space is dependent on the size of the data to be backed up)
4. Capable of backing up hard disks installed with Windows operating systems including DOS and Windows XP/2000/NT/9x/Me.
5. USB hard disks are currently not supported.
6. Does not support RAID/AHCI (class code 0104/0106) hard disks.
7. Capable of backing up and restoring only the first physical hard disk.

Hard disks detection sequence is as follows:

    a. PATA IDE primary channel
    b. PATA IDE secondary channel
    c. SATA IDE channel 1
    d. SATA IDE channel 2
    e. SATA IDE channel 3
    f. SATA IDE channel 4

Precautions:

1. When using hard disks with more than 128G under Windows 2000, be sure to execute the EnableBigLba.*exe* program from the driver CD before data backup.
2. It is normal that data backup takes longer time than data restoration.
3. Xpress Recovery2 is compliant with the GPL regulations.
4. On a few motherboards based on Nvidia chipsets, BIOS update is required for Xpress Recovery2 to correctly identify RAID and SATA IDE mode. Please contact your motherboard manufacturer.
5. Xpress Recovery2 supports only PATA hard disks and not SATA hard disks on the following motherboards (As this is a BIOS-related issue, it can be solved by BIOS update)

GA-K8U	GA-K8NXP-9	GA-8N-SLI Royal
GA-K8U-9	GA-K8N Ultra-9	GA-8N-SLI Pro
GA-K8NXP-SLI	GA-K8NF-9 (PCB Ver. 1.0)	GA-8N-SLI
GA-K8N Ultra-SLI	GA-K8NE (PCB Ver. 1.0)	
GA-K8N Pro-SLI	GA-K8NMF-9	

GA-8I865GVMK-775 Motherboard   - 50 -

4-1-2 Flash BIOS Method Introduction

Method 1 : Q-Flash™ Utility

Q-Flash™ is a BIOS flash utility embedded in Flash ROM. With this utility, users only have to stay in the BIOS menu when they want to update BIOS. Q-Flash™ allows users to flash BIOS without any utility in DOS or Windows. Using Q-Flash™ indicating no more fooling around with any complicated instructions and operating system since it is in the BIOS menu.

⚠️ **CAUTION**

Please note that because updating BIOS has potential risk, please do it with caution!! We are sorry that Gigabyte Technology Co., Ltd is not responsible for damages of system because of incorrect manipulation of updating BIOS to avoid any claims from end-users.

Before You Begin:

Before you start updating BIOS with the Q-Flash™ utility, please follow the steps below first.

1. Download the latest BIOS for your motherboard from Gigabyte's website.
2. Extract the BIOS file downloaded and save the BIOS file (the one with model name.Fxx. For example, 8KNXPU.Fba) to a floppy disk.
3. Reboot your PC and press **Del** to enter BIOS menu.

The BIOS upgrading guides below are separated into two parts.
If your motherboard has dual-BIOS, please refer to **Part One**.
If your motherboard has single-BIOS, please refer to **Part Two**.

Part One:

Updating BIOS with Q-Flash™ Utility on Dual BIOS Motherboards.

Some of Gigabyte motherboards are equipped with dual BIOS. In the BIOS menu of the motherboards supporting Q-Flash and Dual BIOS, the Q-Flash utility and Dual BIOS utility are combined in the same screen. This section only deals with how to use Q-Flash utility.

In the following sections, we take GA-8KNXP Ultra as the example to guide you how to flash BIOS from an older version to the latest version. For example, from Fa3 to Fba.

The BIOS file is Fa3 before updating

```
Award Modular BIOS v6.00PG, An Energy Star Ally
Copyright (C) 1984-2003, Award Software, Inc.

Intel i875P AGPset BIOS for 8KNXP Ultra Fa3
Check System Health OK , VCore = 1.5250
Main Processor : Intel Pentium(R) 4  1.6GHz (133x12)
<CPUID : 0F27 Patch ID  : 0027>
Memory Testing  : 131072K OK

Memory Frequency 266 MHz in Single Channel
Primary Master : FUJITSU MPE3170AT ED-03-08
Primary Slave : None
Secondary Master : CREATIVEDVD-RM DVD1242E BC101
Secondary Slave : None




Press DEL to enter SETUP / Dual BIOS / Q-Flash / F9 For
Xpress Recovery
08/07/2003-i875P-6A79BG03C-00
```

Entering the Q-Flash™ utility:

Step1: To use Q-Flash utility, you must press **Del** in the boot screen to enter BIOS menu.

CMOS Setup Utility-Copyright (C) 1984-2004 Award Software	
▶ Standard CMOS Features	Select Language
▶ Advanced BIOS Features	Load Fail-Safe Defaults
▶ Integrated Peripherals	Load Optimized Defaults
▶ Power Management Setup	Set Supervisor Password
▶ PnP/PCI Configurations	Set User Password
▶ PC Health Status	Save & Exit Setup
▶ MB Intelligent Tweaker(M.I.T.)	Exit Without Saving
ESC: Quit	F3: Change Language
F8: Dual BIOS/Q-Flash	F10: Save & Exit Setup
Time, Date, Hard Disk Type...	

Step 2: Press **F8** button on your keyboard and then **Y** button to enter the Dual BIOS/Q-Flash utility.

Exploring the Q-Flash™ / Dual BIOS utility screen

The Q-Flash / Dual BIOS utility screen consists of the following key components.

```
                          Dual BIOS Utility                        ——— Dual BIOS utility bar
        Boot From.......................................      Main Bios
        Main ROM Type/Size...........................SST 49LF003A      512K
        Backup ROM Type/Size.........................SST 49LF003A      512K

                    Wide Range Protection    Disable
                          Boot From    Main Bios
                       Auto Recovery    Enable
                      Halt On Error    Disable
                    Copy Main ROM Data to Backup
                       Load Default Settings
                       Save Settings to CMOS
                          Q-Flash Utility                          ——— Q-Flash™ utility title
                     Load Main BIOS from Floppy                         bar
                     Load Backup BIOS from Floppy
                      Save Main BIOS to Floppy
                      Save Backup BIOS to Floppy
        Enter : Run      ↑↓:Move      ESC:Reset      F10:Power Off  ——— Action bar
```

Task menu for Dual BIOS utility (left label)
Task menu for Q-Flash™ utility (left label)

Task menu for Dual BIOS utility:

Contains the names of eight tasks and two item showing information about the BIOS ROM type. Blocking a task and pressing Enter key on your keyboard to enable execution of the task.

Task menu for Q-Flash utility:

Contains the names of four tasks. Blocking a task and pressing Enter key on your keyboard to enable execution of the task.

Action bar:

Contains the names of four actions needed to operate the Q-Flash/Dual BIOS utility. Pressing the buttons mentioned on your keyboards to perform these actions.

Using the Q-Flash™ utility:

This section tells you how to update BIOS using the Q-Flash utility. As described in the "Before you begin" section above, you must prepare a floppy disk having the BIOS file for your motherboard and insert it to your computer. If you have already put the floppy disk into your system and have entered the Q-Flash utility, please follow the steps below to flash BIOS.

Steps:

1. Press arrow buttons on your keyboard to move the light bar to "Load Main BIOS from Floppy" item in the Q-Flash menu and press Enter button.

   Later, you will see a box pop up showing the BIOS files you previously downloaded to the floppy disk.

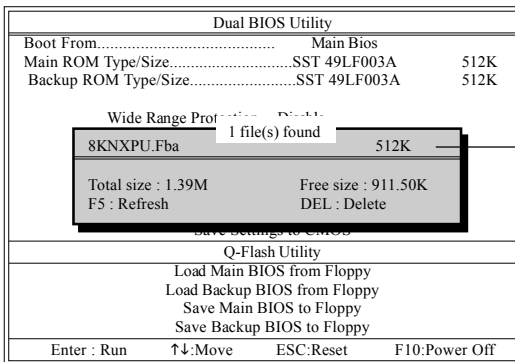   **NOTE** If you want to save the current BIOS for backup purpose, you can begin Step 1 with "Save Main BIOS to Floppy" item.

2. Move to the BIOS file you want to flash and press **Enter**.

   In this example, we only download one BIOS file to the floppy disk so only one BIOS file, 8KNXPU.Fba, is listed.

   CAUTION Please confirm again you have the correct BIOS file for your motherboard.

Dual BIOS Utility		
Boot From..	Main Bios	
Main ROM Type/Size............................	SST 49LF003A	512K
Backup ROM Type/Size........................	SST 49LF003A	512K

   Wide Range Protection   Disable

1 file(s) found	
8KNXPU.Fba	512K
Total size : 1.39M	Free size : 911.50K
F5 : Refresh	DEL : Delete

   — BIOS file in the floppy disk.

   Save Settings to CMOS

Q-Flash Utility
Load Main BIOS from Floppy
Load Backup BIOS from Floppy
Save Main BIOS to Floppy
Save Backup BIOS to Floppy
Enter : Run   ↑↓:Move   ESC:Reset   F10:Power Off

After pressing **Enter**, you'll then see the progress of reading the BIOS file from the floppy disk.
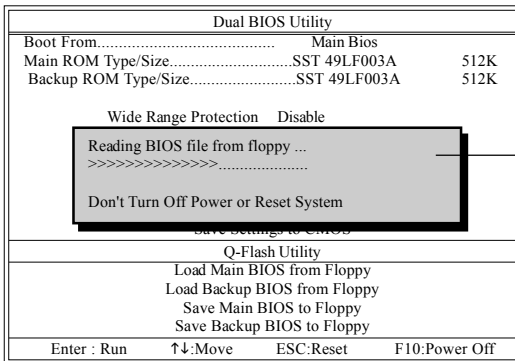
Dual BIOS Utility		
Boot From..	Main Bios	
Main ROM Type/Size............................	SST 49LF003A	512K
Backup ROM Type/Size........................	SST 49LF003A	512K

   Wide Range Protection   Disable

   Reading BIOS file from floppy ...
   >>>>>>>>>>>>>>.....................

   Don't Turn Off Power or Reset System

   CAUTION
   Do not trun off power or reset your system at this stage!!

   Save Settings to CMOS

Q-Flash Utility
Load Main BIOS from Floppy
Load Backup BIOS from Floppy
Save Main BIOS to Floppy
Save Backup BIOS to Floppy
Enter : Run   ↑↓:Move   ESC:Reset   F10:Power Off

After BIOS file is read, you'll see a confirmation dialog box asking you "Are you sure to update BIOS?"

3. Press Y button on your keyboard after you are sure to update BIOS.

Then it will begin to update BIOS. The progress of updating BIOS will be displayed.

⚠ Please do not take out the floppy disk when it begins flashing BIOS.
CAUTION

4. Press any keys to return to the Q-Flash menu when the BIOS updating procedure is completed.

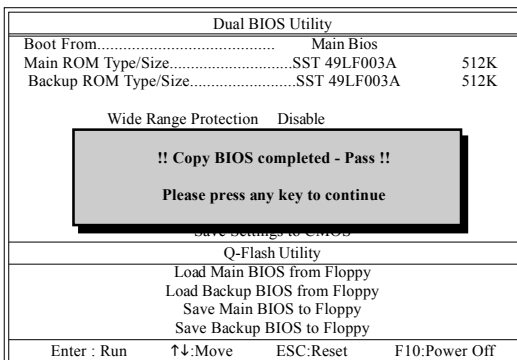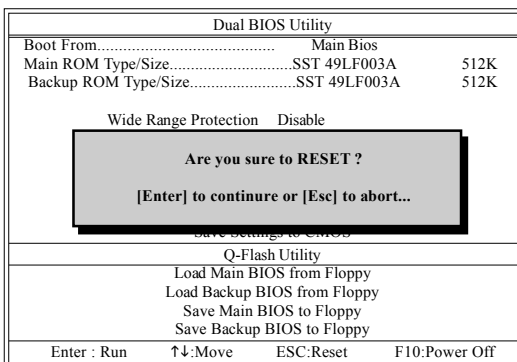| Dual BIOS Utility		
Boot From..	Main Bios	
Main ROM Type/Size.............................	SST 49LF003A	512K
Backup ROM Type/Size........................	SST 49LF003A	512K

Wide Range Protection   Disable

!! Copy BIOS completed - Pass !!

Please press any key to continue

Save Settings to CMOS

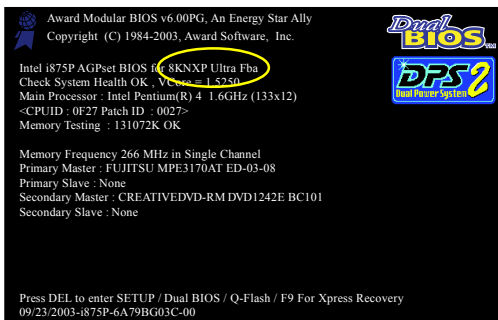| Q-Flash Utility	
Load Main BIOS from Floppy	
Load Backup BIOS from Floppy	
Save Main BIOS to Floppy	
Save Backup BIOS to Floppy	
Enter : Run ↑↓:Move ESC:Reset F10:Power Off	

◯
NOTE

You can repeat Step 1 to 4 to flash the backup BIOS, too.

5. Press Esc and then Y button to exit the Q-Flash utility. The computer will restart automatically after you exit Q-Flash.
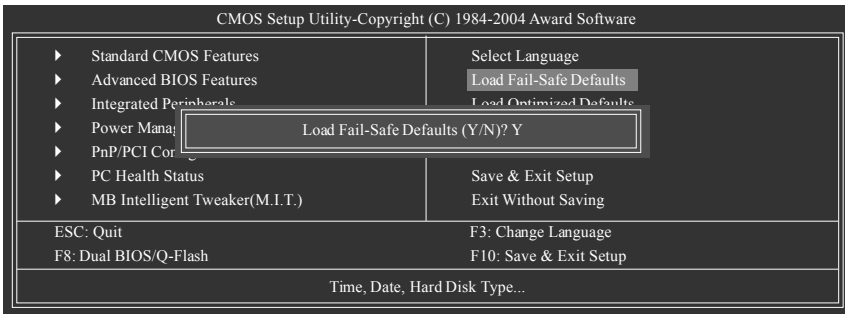
Dual BIOS Utility		
Boot From..	Main Bios	
Main ROM Type/Size.............................	SST 49LF003A	512K
Backup ROM Type/Size........................	SST 49LF003A	512K

Wide Range Protection   Disable

Are you sure to RESET ?

[Enter] to continure or [Esc] to abort...

Save Settings to CMOS

Q-Flash Utility	
Load Main BIOS from Floppy	
Load Backup BIOS from Floppy	
Save Main BIOS to Floppy	
Save Backup BIOS to Floppy	
Enter : Run ↑↓:Move ESC:Reset F10:Power Off	

After system reboots, you may find the BIOS version on your boot screen becomes the one you flashed.

The BIOS file becomes Fab after updating.

Award Modular BIOS v6.00PG, An Energy Star Ally
Copyright (C) 1984-2003, Award Software, Inc.

Intel i875P AGPset BIOS for 8KNXP Ultra Fba
Check System Health OK , VCore = 1.5250
Main Processor : Intel Pentium(R) 4 1.6GHz (133x12)
<CPUID : 0F27 Patch ID : 0027>
Memory Testing : 131072K OK

Memory Frequency 266 MHz in Single Channel
Primary Master : FUJITSU MPE3170AT ED-03-08
Primary Slave : None
Secondary Master : CREATIVEDVD-RM DVD1242E BC101
Secondary Slave : None

Press DEL to enter SETUP / Dual BIOS / Q-Flash / F9 For Xpress Recovery
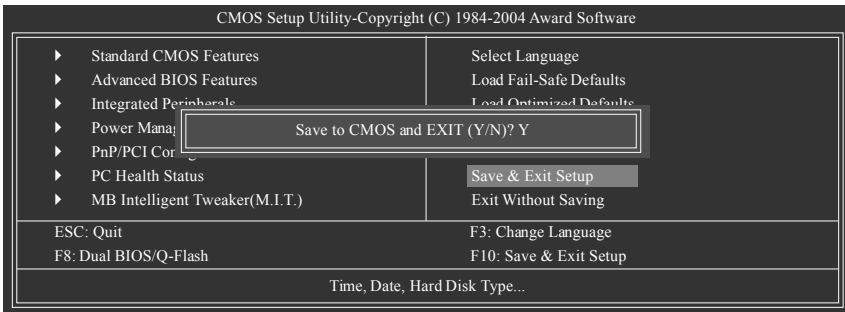09/23/2003-i875P-6A79BG03C-00

6. Press **Del** to enter BIOS menu after system reboots. When you are in BIOS menu, move to
    Load Fail-Safe Defaults item and press **Enter** to load BIOS Fail-Safe Defaults. Normally the system
    redetects all devices after BIOS has been upgraded. Therefore, we highly recommend reloading the
    BIOS defaults after BIOS has been upgraded.

CMOS Setup Utility-Copyright (C) 1984-2004 Award Software	
▶ Standard CMOS Features	Select Language
▶ Advanced BIOS Features	Load Fail-Safe Defaults
▶ Integrated Peripherals	Load Optimized Defaults
▶ Power Manag _Load Fail-Safe Defaults (Y/N)? Y_	
▶ PnP/PCI Cor	
▶ PC Health Status	Save & Exit Setup
▶ MB Intelligent Tweaker(M.I.T.)	Exit Without Saving
ESC: Quit	F3: Change Language
F8: Dual BIOS/Q-Flash	F10: Save & Exit Setup
Time, Date, Hard Disk Type...	

Press **Y** on your keyboard to load defaults.

7. Select **Save & Exit Setup** item to save the settings to CMOS and exit the BIOS menu.
    System will reboot after you exit the BIOS menu. The procedure is completed.
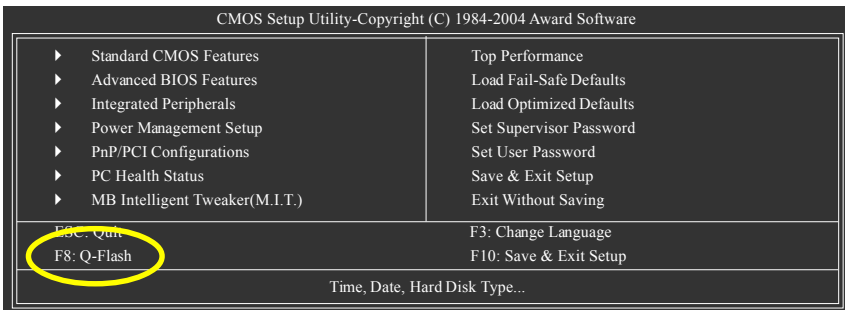
CMOS Setup Utility-Copyright (C) 1984-2004 Award Software	
▶ Standard CMOS Features	Select Language
▶ Advanced BIOS Features	Load Fail-Safe Defaults
▶ Integrated Peripherals	Load Optimized Defaults
▶ Power Manag _Save to CMOS and EXIT (Y/N)? Y_	
▶ PnP/PCI Cor	
▶ PC Health Status	Save & Exit Setup
▶ MB Intelligent Tweaker(M.I.T.)	Exit Without Saving
ESC: Quit	F3: Change Language
F8: Dual BIOS/Q-Flash	F10: Save & Exit Setup
Time, Date, Hard Disk Type...	

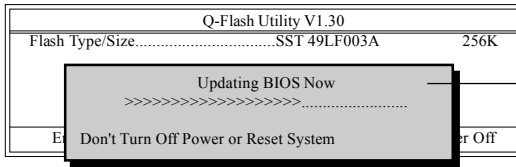Press **Y** on your keyboard to save and exit.

Part Two:

Updating BIOS with Q-Flash™ Utility on Single-BIOS Motherboards.

This part guides users of single-BIOS motherboards how to update BIOS using the Q-Flash™ utility.
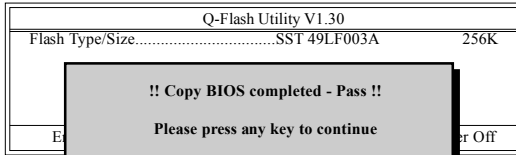
CMOS Setup Utility-Copyright (C) 1984-2004 Award Software	
▶ Standard CMOS Features	Top Performance
▶ Advanced BIOS Features	Load Fail-Safe Defaults
▶ Integrated Peripherals	Load Optimized Defaults
▶ Power Management Setup	Set Supervisor Password
▶ PnP/PCI Configurations	Set User Password
▶ PC Health Status	Save & Exit Setup
▶ MB Intelligent Tweaker(M.I.T.)	Exit Without Saving
ESC: Quit	F3: Change Language
F8: Q-Flash	F10: Save & Exit Setup
Time, Date, Hard Disk Type...	

Exploring the Q-Flash™ utility screen

The Q-FlashBIOS utility screen consists of the following key components.

```
                    Q-Flash Utility V1.30                          ── Q-Flash™ utility bar
     Flash Type/Size.................................SST 49LF003A      256K

                         Keep DMI Data    Enable
                       Update BIOS from Floppy
                        Save BIOS to Floppy
         Enter : Run        ↑↓:Move        ESC:Reset        F10:Power Off   ── Action bar
```

Task menu for Q-Flash™ utility

Task menu for Q-Flash utility:

Contains the names of three tasks. Blocking a task and pressing Enter key on your keyboard to enable execution of the task.

Action bar:

Contains the names of four actions needed to operate the Q-Flash utility. Pressing the buttons mentioned on your keyboards to perform these actions.

Using the Q-Flash™ utility:

This section tells you how to update BIOS using the Q-Flash utility. As described in the "Before you begin" section above, you must prepare a floppy disk having the BIOS file for your motherboard and insert it to your computer. If you have already put the floppy disk into your system and have entered the Q-Flash utility, please follow the steps below to flash BIOS.

Steps:

1. Press arrow buttons on your keyboard to move the light bar to "Update BIOS from Floppy" item in the Q-Flash menu and press Enter button.

   Later, you will see a box pop up showing the BIOS files you previously downloaded to the floppy disk.

   NOTE If you want to save the current BIOS for backup purpose, you can begin Step 1 with "Save BIOS to Floppy" item.

2. Move to the BIOS file you want to flash and press Enter.

   In this example, we only download one BIOS file to the floppy disk so only one BIOS file, 8GE800.F4, is listed.

   CAUTION Please confirm again you have the correct BIOS file for your motherboard.

```
                    Q-Flash Utility V1.30
     Flash Type/Size.................................SST 49LF003A      256K
                           1 file(s) found
        8GE800.F4                          256K              ── BIOS file in the floppy
                                                                 disk.
        Total size : 1.39M          Free size : 1.14M
     En  F5 : Refresh               DEL : Delete      er Off
```

```
                    Q-Flash Utility V1.30
     Flash Type/Size.................................SST 49LF003A      256K
                                                                    CAUTION
        Reading BIOS file from floppy ...                    Do not trun off power or
        >>>>>>>>>>>>>>......................                 reset your system at
     En  Don't Turn Off Power or Reset System      er Off    this stage!!
```

After BIOS file is read, you'll see a confirmation dialog box asking you "Are you sure to update BIOS?"

CAUTION Please do not take out the floppy disk when it begins flashing BIOS.

GA-8I865GVMK-775 Motherboard   - 56 -

3. Press Y button on your keyboard after you are sure to update BIOS.
    Then it will begin to update BIOS. The progress of updating BIOS will be shown at the same time.

Q-Flash Utility V1.30	
Flash Type/Size.................................SST 49LF003A	256K

Updating BIOS Now
>>>>>>>>>>>>>>>>>>>.........................

En Don't Turn Off Power or Reset System er Off

⚠ CAUTION

Do not trun off power or reset your system at this stage!!

4. Press any keys to return to the Q-Flash menu when the BIOS updating procedure is completed.

Q-Flash Utility V1.30	
Flash Type/Size.................................SST 49LF003A	256K

!! Copy BIOS completed - Pass !!

Please press any key to continue

5. Press Esc and then Y button to exit the Q-Flash utility. The computer will restart automatically after you exit Q-Flash.

Q-Flash Utility V1.30	
Flash Type/Size.................................SST 49LF003A	256K

Are you sure to RESET ?

[Enter] to continure or [Esc] to abort...

After system reboots, you may find the BIOS version on your boot screen becomes the one you flashed.

The BIOS file becomes F4 after updating

Award Modular BIOS v6.00PG, An Energy Star Ally
Copyright (C) 1984-2003, Award Software, Inc.

Intel 845GE AGPSet BIOS for 8GE800 F4
Check System Health OK
Main Processor : Intel Pentium(R) 4 1.7GHz (100x17.0)
<CPUID : 0F0A Patch ID : 0009>
Memory Testing : 122880K OK + 8192K Shared Memory

Primary Master : FUJITSU MPE3170AT ED-03-08
Primary Slave : None
Secondary Master : CREATIVEDVD-RM DVD1242E BC101
Secondary Slave : None

Press DEL to enter SETUP / Q-Flash
03/18/2003-I845GE-6A69YG01C-00

energy
EPA POLLUTION PREVENTER

6. Press Del to enter BIOS menu after system reboots and "Load BIOS Fail-Safe Defaults". See how to Load BIOS Fail-Safe Defaults, please kindly refer to Step 6 to 7 in **Part One**.

Congratulation!! You have updated BIOS successfully!!

Method 2 : @BIOS™ Utility

If you do not have a DOS startup disk, we recommend that you use the new @BIOS utility. @BIOS allows users to update their BIOS under Windows. Just select the desired @BIOS server to download the latest version of BIOS.

Fig 1. Installing the @BIOS utility
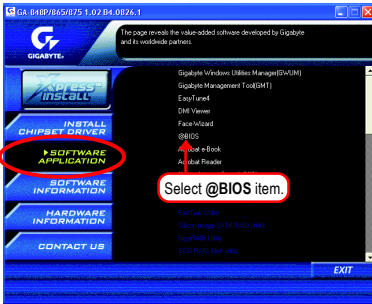
Select **@BIOS** item.

Fig 2. Installation complete and run @BIOS

Click Sart/ Programs/ GIGABYTE/@BIOS

Fig 3. The @BIOS utility
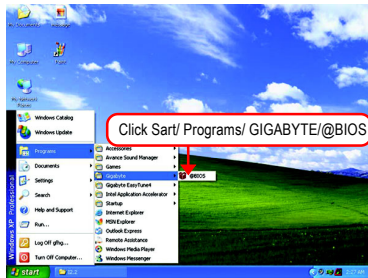
Click "✓"　　Click "Update New BIOS"
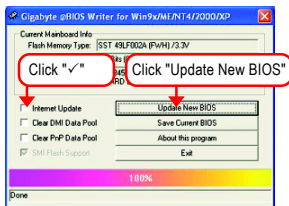
Fig 4. Select the desired @BIOS server
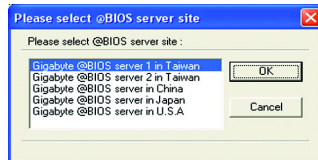
1. Methods and steps:

　I. Update BIOS through Internet

　　　a.　Click "Internet Update" icon

　　　b.　Click "Update New BIOS" icon

　　　c.　Select @BIOS™ sever

　　　d.　Select the exact model name on your motherboard

　　　e.　System will automatically download and update the BIOS.

　II. Update BIOS NOT through Internet:

　　　a.　Do not click "Internet Update" icon

　　　b.　Click "Update New BIOS"

　　　c.　Please select "All Files" in dialog box while opening the old file.

　　　d.　Please search for BIOS unzip file, downloading from internet or any other methods (such as: 8I865GVM-775.E2).

　　　e.　Complete update process following the instruction.

GA-8I865GVMK-775 Motherboard　　　- 58 -

III. Save BIOS

In the very beginning, there is "Save Current BIOS" icon shown in dialog box. It means to save the current BIOS version.

IV. Check out supported motherboard and Flash ROM:

In the very beginning, there is "About this program" icon shown in dialog box. It can help you check out which kind of motherboard and which brand of Flash ROM are supported.

2. Note:

    I.   In method I, if it shows two or more motherboard's model names to be selected, please make sure your motherboard's model name again. Selecting wrong model name will cause the system unbooted.

    II.   In method II, be sure that motherboard's model name in BIOS unzip file are the same as your motherboard's. Otherwise, your system won't boot.

    III. In method I, if the BIOS file you need cannot be found in @BIOS™ server, please go onto Gigabyte's web site for downloading and updating it according to method II.

    IV. Please note that any interruption during updating will cause system unbooted

4-1-3   2- / 4- / 5.1- Channel Audio Function Introduction

You are able to use 2-/4-/5.1-channnels audio feature by audio software selection.
The installation of audio software for Windows 98/ 2000/ ME/ XP is very simple. Please follow the steps to install the function. (Following pictures are in Windows XP)

Stereo Speakers Connection and Settings:
We recommend that you use the speaker with amplifier to acquire the best sound effect if the stereo output is applied.

STEP 1:
Connect the stereo speakers or earphone to "Line Out".
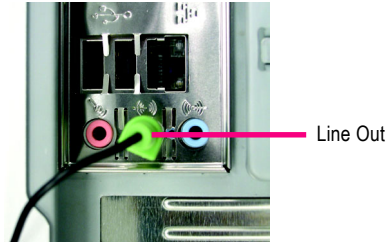
Line Out

STEP 2 :
After you install the audio driver, you will find the "SoundMAX Control Panel" icon [icon] in the status area on the lower right of the screen. Right-click the icon to select "SoundMAX Control Panel" or "Preferences".
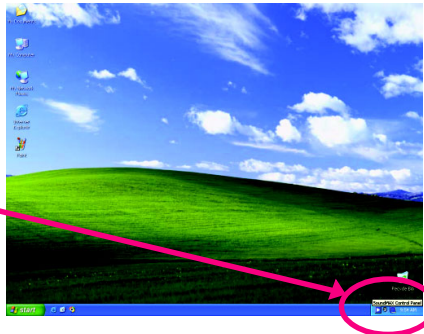
STEP 3:
On the "Preferences" menu, click the "Listening Environment" tab. In the "Speaker Setup" box, click "Stereo Headphones" or "Stereo Speakers" and then click "Apply". You will find a headphone or stereo speakers icon on the SoundMAX menu. This completes the headphone or stereo speakers setup.
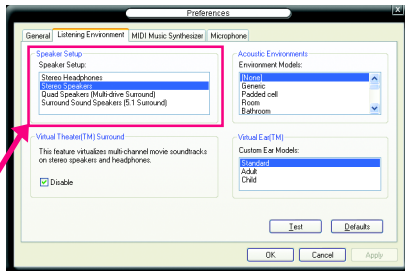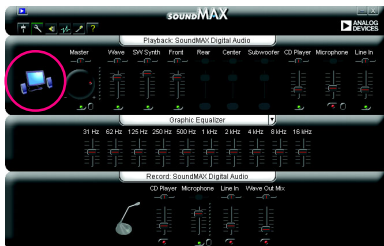
4 Channel Audio Setup

STEP 1 :
Connect the Front Speakers to "Line Out", the Rear Speakers to "Line In".

Line In (Rear Speaker Out)
Line Out (Front Speaker Out)
Mic In

STEP 2 :
After you install the audio driver, you will find the "SoundMAX Control Panel" icon in the status area on the lower right of the screen. Right-click the icon to select "SoundMAX Control Panel" or "Preferences".
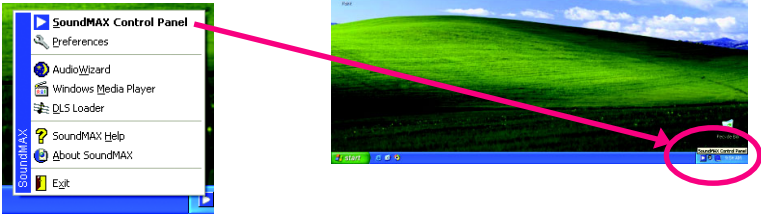

STEP 3:
On the "Preferences" menu, click the "Listening Environment" tab. In the "Speaker Setup" box, click "Multi-drive" and then click "Apply". You will find a multi-driver icon on the SoundMAX menu. This completes the 4-channel audio configuration.
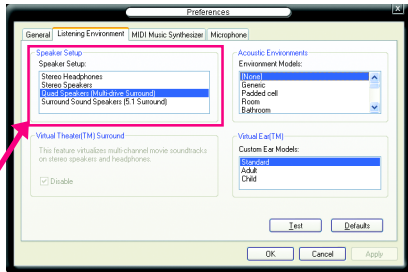
5.1 Channel Audio Setup

STEP 1 :
Connect the Front Speakers to "Line Out", the Sur-round Speakers to "Line In", and the Center/Subwoofer Speakers to "MIC In".

Line In (Surround Speaker Out)
Line Out (Front Speaker Out)
Mic In (Center/Subwoofer Speaker Out)

STEP 2 :
After you install the audio driver, you will find the "SoundMAX Control Panel" icon in the status area on the lower right of the screen. Right-click the icon to select "SoundMAX Control Panel" or "Preferences".
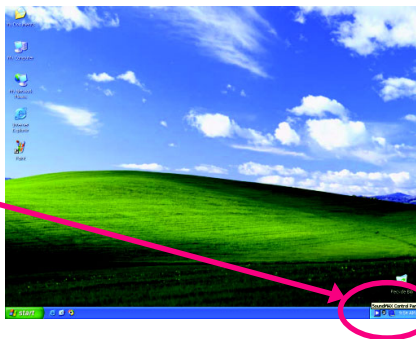
STEP 3:
On the "Preferences" menu, click the "Listening Environment" tab. In the "Speaker Setup" box, click "Surround Sound Speakers (5.1 Surround)" and then click "Apply". You will find a surround sound speakers icon on the SoundMAX menu. This completes the 5.1 channel audio configuration.
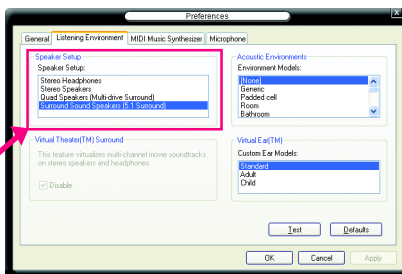
Sound Effect Configuration:
At the "Acoustic Environments" menu, users can adjust sound option settings as desired.
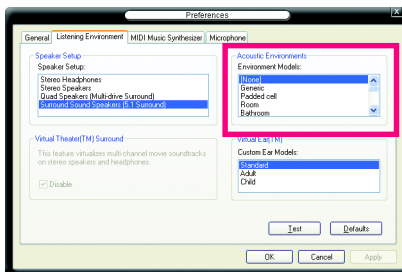
SPDIF Output Device (Optional Device)

A "S/PDIF output" device is available on the motherboard. Cable with rear bracket is provided and could link to the "S/PDIF output" connector (As picture.) For the further linkage to decoder, rear bracket provides coaxial cable and Fiber connecting port.
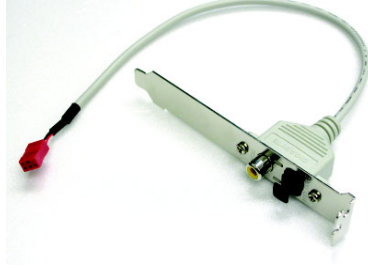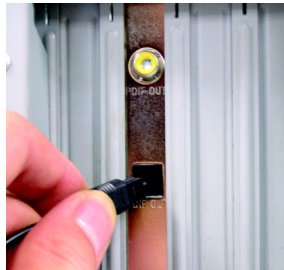
1.
Connect the SPDIF output device to the rear bracket of PC, and fix it with screw.
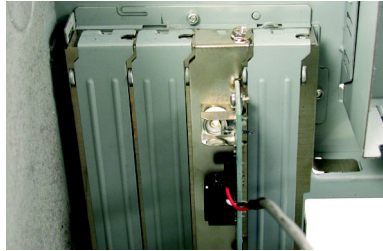
2.
Connect SPDIF wire to the motherboard.
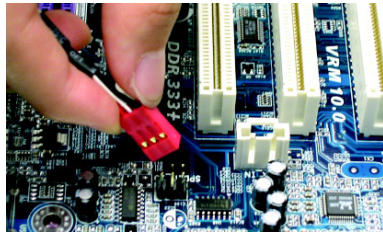
3.
Connect co-axial or optical output to the AC3 decoder.

4-2   Troubleshooting

Below is a collection of general asked questions. To check general asked questions based on a specific motherboard model, please log on to www.gigabyte.com.tw

Question 1: I cannot see some options that were included in previous BIOS after updating BIOS. Why?
Answer: Some advanced options are hidden in new BIOS version. Please press Ctrl and F1 keys after entering BIOS menu and you will be able to see these options.

Questions 2: Why is the light of my keyboard/optical mouse still on after computer shuts down?
Answer: In some boards, a small amount of electricity is kept on standby after computer shuts down and that's why the light is still on.

Question 3: How do I clear CMOS?
Answer: If your board has a Clear CMOS jumper, please refer to the Clear CMOS steps in the manual. If your board doesn't have such jumper, you can take off the on-board battery to leak voltage to clear CMOS. Please refer to the steps below:
   Steps:
   1.   Turn off power.
   2.   Disconnect the power cord from MB.
   3.   Take out the battery gently and put it aside for about 10 minutes (Or you can use a metal object to connect the positive and negative pins in the battery holder to makethem short for one minute).
   4.   Re-insert the battery to the battery holder.
   5.   Connect power cord to MB again and turn on power.
   6.   Press Del to enter BIOS and load Fail-Safe Defaults(or load Optimized Defaults).
   7.   Save changes and reboot the system.

Question 4: Why do I still get a weak sound after turning up the speaker to the maximum volume?
Answer: Please make sure the speaker you are using is equipped with an internal amplifier. If not, please change another speaker with power/amplifier and try again later.

Question 5: Sometimes I hear different continuous beeps from computer after system boots up. What do these beeps usually stand for?
Answer: The beep codes below may help you identify the possible computer problems. However, they are only for reference purposes. The situations might differ from case to case.

→AMI BIOS Beep Codes
*Computer gives 1 short beep when system boots successfully.
*Except for beep code 8, these codes are always fatal.
   1 beep Refresh failure
   2 beeps Parity error
   3 beeps Base 64K memory failure
   4 beeps Timer not operational
   5 beeps Processor error
   6 beeps 8042 - gate A20 failure
   7 beeps Processor exception interrupt error
   8 beeps Display memory read/write failure
   9 beeps ROM checksum error
   10 beeps CMOS shutdown register read/write error
   11 beeps Cache memory bad

→   AWARD BIOS Beep Codes
1 short: System boots successfully
2 short: CMOS setting error
1 long 1 short: DRAM or M/B error
1 long 2 short: Monitor or display card error
1 long 3 short: Keyboard error
1 long 9 short: BIOS ROM error
Continuous long beeps: DRAM error
Continuous short beeps: Power error

Appendix

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Appendix

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Contact Us

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Tech. Support :

http://tw.giga-byte.com/TechSupport/ServiceCenter.htm

Non-Tech. Support(Sales/Marketing) :

http://ggts.gigabyte.com.tw/nontech.asp

WEB address (English): http://www.gigabyte.com.tw

WEB address (Chinese): http://chinese.giga-byte.com

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http://ggts.gigabyte.com.tw/nontech.asp

WEB address : http://uk.giga-byte.com

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http://ggts.gigabyte.com.tw/nontech.asp

WEB address : http://www.giga-byte.nl

- **China**

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WEB address : http://www.gigabyte.com.cn

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FAX: +86-27-87851330

GuangZhou

TEL: +86-20-87586074

FAX: +86-20-85517843

Chengdu

TEL: +86-28-85236930

FAX: +86-28-85256822

Xian

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FAX: +86-24-23960918-809

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http://tw.giga-byte.com/TechSupport/ServiceCenter.htm

Non-Tech. Support(Sales/Marketing) :

http://ggts.gigabyte.com.tw/nontech.asp

WEB address : http://www.giga-byte.com.au

- **France**

GIGABYTE TECHNOLOGY FRANCE S.A.R.L.

Tech. Support :

http://tw.giga-byte.com/TechSupport/ServiceCenter.htm

Non-Tech. Support(Sales/Marketing) :

http://ggts.gigabyte.com.tw/nontech.asp

WEB address : http://www.gigabyte.fr

- **Russia**

Moscow Representative Office Of GIGA-BYTE Technology Co., Ltd.

Tech. Support :

http://tw.giga-byte.com/TechSupport/ServiceCenter.htm

Non-Tech. Support(Sales/Marketing) :

http://ggts.gigabyte.com.tw/nontech.asp

WEB address : http://www.gigabyte.ru

- **Poland**

Office of GIGA-BYTE TECHNOLOGY Co., Ltd. in POLAND

Tech. Support :

http://tw.giga-byte.com/TechSupport/ServiceCenter.htm

Non-Tech. Support(Sales/Marketing) :

http://ggts.gigabyte.com.tw/nontech.asp

WEB address : http://www.gigabyte.pl

- **Serbia & Montenegro**

Representative Office Of GIGA-BYTE Technology Co., Ltd. in SERBIA & MONTENEGRO

Tech. Support :

http://tw.giga-byte.com/TechSupport/ServiceCenter.htm

Non-Tech. Support(Sales/Marketing) :

http://ggts.gigabyte.com.tw/nontech.asp

WEB address: http://www.gigabyte.co.yu

- **Czech Republic**

Representative Office Of GIGA-BYTE Technology Co., Ltd. in CZECH REPUBLIC

Tech. Support :

http://tw.giga-byte.com/TechSupport/ServiceCenter.htm

Non-Tech. Support(Sales/Marketing) :

http://ggts.gigabyte.com.tw/nontech.asp

WEB address: http://www.gigabyte.cz

- **Romania**

Representative Office Of GIGA-BYTE Technology Co., Ltd. in Romania

Tech. Support :

http://tw.giga-byte.com/TechSupport/ServiceCenter.htm

Non-Tech. Support(Sales/Marketing) :

http://ggts.gigabyte.com.tw/nontech.asp

WEB address: http://www.gigabyte.com.ro