



When you installing AGP card, please make sure the following notice is fully understood and practiced. If your AGP card has "AGP 4X/8X (1.5V) notch"(show below), please make sure your AGP card is AGP 4X/8X (1.5V).



Caution: AGP 2X card is not supported by Intel® 845(GE/PE) / 845(E/G) / 850(E) / E7205 / 865(G/PE/PL/P) / 875P / 848P. You might experience system unable to boot up normally. Please insert an AGP 4X/8X card.



Example 1: Diamond Vipper V770 golden finger is compatible with 2X/4X mode AGP slot. It can be switched between AGP 2X(3.3V) or 4X(1.5V) mode by adjusting the jumper. The factory default for this card is 2X(3.3V). The GA-8I865P(-G) (or any AGP 4X/8X only) motherboards might not function properly, if you install this card without switching the jumper to 4X(1.5V) mode in it.

Example 2: Some ATi Rage 128 Pro graphics cards made by "Power Color", the graphics card manufacturer & some SiS 305 cards, their golden finger is compatible with 2X(3.3V)/4X(1.5V) mode AGP slot, but they support 2X (3.3V) only. The GA-8I865P(-G) (or any AGP 4X/8X only) motherboards might not function properly, if you install this card in it.

Note: Although Gigabyte's AG32S(G) graphics card is based on ATi Rage 128 Pro chip, the design of AG32S(G) is compliance with AGP 4X(1.5V) specification. Therefore, AG32S(G) will work fine with Intel® 845(GE/PE) / 845(E/G) / 850(E) / E7205 / 865(G/PE/PL/P) / 875P / 848P based motherboards.



- The author assumes no responsibility for any errors or omissions that may appear in this document nor does the author make a commitment to update the information contained herein.
- Third-party brands and names are the property of their respective owners.
- Please do not remove any labels on motherboard, this may void the warranty of this motherboard.
- Due to rapid change in technology, some of the specifications might be out of date before publication of this booklet.



WARNING: *Never run the processor without the heatsink properly and firmly attached. PERMANENT DAMAGE WILL RESULT!*

Mise en garde : *Ne faites jamais tourner le processeur sans que le dissipateur de chaleur soit fixé correctement et fermement. UN DOMMAGE PERMANENT EN RÉSULTERA !*

Achtung: *Der Prozessor darf nur in Betrieb genommen werden, wenn der Wärmeleiter ordnungsgemäß und fest angebracht ist. DIES HAT EINEN PERMANENTEN SCHADEN ZUR FOLGE!*

Advertencia: *Nunca haga funcionar el procesador sin el dissipador de calor instalado correcta y firmemente. ¡SE PRODUCIRÁ UN DAÑO PERMANENTE!*

Aviso: *Nunca execute o processador sem o dissipador de calor estar adequado e firmemente conectado. O RESULTADO SERÁ UM DANO PERMANENTE!*

警告: 將散熱板牢固地安裝到處理器上之前，不要運行處理器，過熱將永遠損壞處理器！

警告: 將散熱器牢固地安裝到處理器上之前，不要運行處理器，過熱將永遠損壞處理器！

경고: 히트싱크를 제대로 또 단단히 부착시키지 않은 채 프로세서를 구동시키지 마십시오. 영구적 고장이 발생할수 있습니다!

警告: 永久的な損傷を防ぐため、ヒートシンクを正しくしっかりと取り付けるまでは、プロセッサを動作させないようにしてください。

Declaration of Conformity

We, Manufacturer/Importer
(full address)

G.B.T. Technology Trading GmbH
Ausschläger Weg 41, 1F 20537 Hamburg, Gemany

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

Mother Board

GA-81865P-G/GA-81865P

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

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

CE marking



(EC conformity marking)

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

- | | | | |
|--|---|--|---|
| <input type="checkbox"/> EN 60065 | Safety requirements for mains operated electronic and related apparatus for household and similar general use | <input type="checkbox"/> EN 60950 | Safety for information technology equipment including electrical business equipment |
| <input type="checkbox"/> EN 60335 | Safety of household and similar electrical appliances | <input type="checkbox"/> EN 50091-1 | General and Safety requirements for uninterruptible power systems (UPS) |

Manufacturer/Importer

Signature : Timmy Huang

(Stamp)

Date : Jun. 04, 2004

Name : Timmy Huang

DECLARATION OF CONFORMITY

Per FCC Part 2 Section 2.1077(a)



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-8I865P-G/GA-8I865P

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 interference received, including that may cause undesired operation.

Representative Person's Name: ERIC LU

Signature: Eric Lu

Date: Jun. 04, 2004

GA-8I865P(-G)
P4 Titan Series Motherboard

USER'S MANUAL

Pentium®4 Processor Motherboard

Rev. 1001

12ME-8I865PG-1001

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Warning



CAUTION

Computer motherboards and expansion cards contain very delicate Integrated Circuit (IC) chips. To protect them against damage from static electricity, you should follow some precautions whenever you work on your computer.

1. Unplug your computer when working on the inside.
2. Use a grounded wrist strap before handling computer components. If you do not have one, touch both of your hands to a safely grounded object or to a metal object, such as the power supply case.
3. Hold components by the edges and try not to touch the IC chips, leads or connectors, or other components.
4. Place components on a grounded antistatic pad or on the bag that came with the components whenever the components are separated from the system.
5. Ensure that the ATX power supply is switched off before you plug in or remove the ATX power connector on the motherboard.

Installing the motherboard to the chassis...

If the motherboard has mounting holes, but they don't line up with the holes on the base and there are no slots to attach the spacers, do not become alarmed you can still attach the spacers to the mounting holes. Just cut the bottom portion of the spacers (the spacer may be a little hard to cut off, so be careful of your hands). In this way you can still attach the motherboard to the base without worrying about short circuits. Sometimes you may need to use the plastic springs to isolate the screw from the motherboard PCB surface, because the circuit wire may be near by the hole. Be careful, don't let the screw contact any printed circuit wire or parts on the PCB that are near the fixing hole, otherwise it may damage the board or cause board malfunctioning.

Chapter 1 Introduction

Features Summary

CPU	<ul style="list-style-type: none"> • Socket 478 for Intel® Pentium® 4 (Northwood, Prescott) with HT Technology • Intel® Pentium® 4 400/533/800^(Note 1) MHz FSB • 2nd cache depends on CPU
Chipset	<ul style="list-style-type: none"> • North Bridge: Intel® 865P • South Bridge: Intel® ICH5
Memory	<ul style="list-style-type: none"> • 4 184-pin DDR DIMM sockets • Supports Dual channel DDR400^(Note 2)/DDR333/DDR266 DIMM • Supports 128MB/256MB/512MB/1 GB unbuffered DRAM • Supports up to 4 GB DRAM (Max)^(Note 3)
Slots	<ul style="list-style-type: none"> • 1 AGP slot supports 8X/4X(1.5V) mode • 5 PCI slots
On-Board IDE	<ul style="list-style-type: none"> • 2 IDE bus master (UDMA33/ATA66/ATA100) IDE ports for up to 4 ATAPI devices • Can connect up to 4 IDE devices
On-Board Floppy	<ul style="list-style-type: none"> • 1 Floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88M bytes
On-Board Peripherals	<ul style="list-style-type: none"> • 1 Parallel port supports Normal/EPP/ECP mode • 2 Serial ports (COMA & COMB) • 8 USB 2.0/1.1 ports (4 x Rear, 4 x Front by cable) • 1 IrDA connector for IR/CIR • 1 Front Audio connector • 1 PS/2 keyboard • 1 PS/2 mouse

to be continued.....



Due to chipset (Intel 865P) architecture limitation, a FSB 533 Pentium 4 processor will support DDR333 and DDR266 memory module. A FSB 400 Pentium 4 processor will only support DDR 266 memory module.

(Note 1) An FSB800 CPU can be supported through overclocking in BIOS.

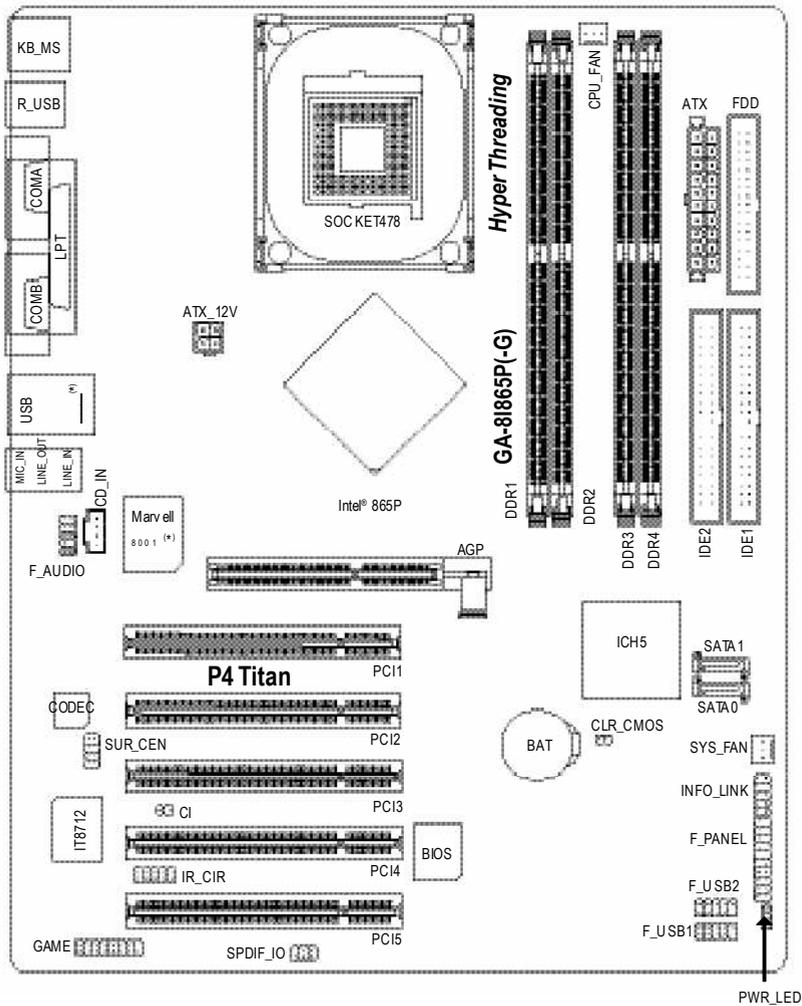
(Note 2) When FSB800 is selected as CPU frequency, memory will automatically adjust to DDR400.

(Note 3) 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.

On-Board LAN (*)	<ul style="list-style-type: none"> • Build in Marvell 8001 Chipset (10/100/1000 Mbit) • 1 RJ45 port
On-Board Sound	<ul style="list-style-type: none"> • ALC850 CODEC (UAJ) • Supports Jack Sensing function • Supports 2 / 4 / 6 / 8 channel audio • Supports Line In / Line Out / MIC connection • Surround Back Speaker (use of Surround-Kit to select) • SPDIF In / Out • CD In / Game connector
Serial ATA	<ul style="list-style-type: none"> • 2 Serial ATA connectors (SATA0/SATA1) • Controlled by ICH5
Hardware Monitor	<ul style="list-style-type: none"> • CPU/System Fan Revolution detect • CPU/System Fan Fail Warning • CPU Overheat Warning • System Voltage Detect
I/O Control	<ul style="list-style-type: none"> • IT8712
PS/2 Connector	<ul style="list-style-type: none"> • PS/2 Keyboard interface and PS/2 Mouse interface
BIOS	<ul style="list-style-type: none"> • Licensed AWARD BIOS • Supports Q-Flash
Additional Features	<ul style="list-style-type: none"> • Supports EasyTune • Supports @BIOS
Overclocking	<ul style="list-style-type: none"> • Over Voltage (DDR/AGP/CPU) by BIOS • Over Clock (DDR/AGP/CPU/PCI) by BIOS
Form Factor	<ul style="list-style-type: none"> • ATX size form factor; 30.5cm x 23.0cm

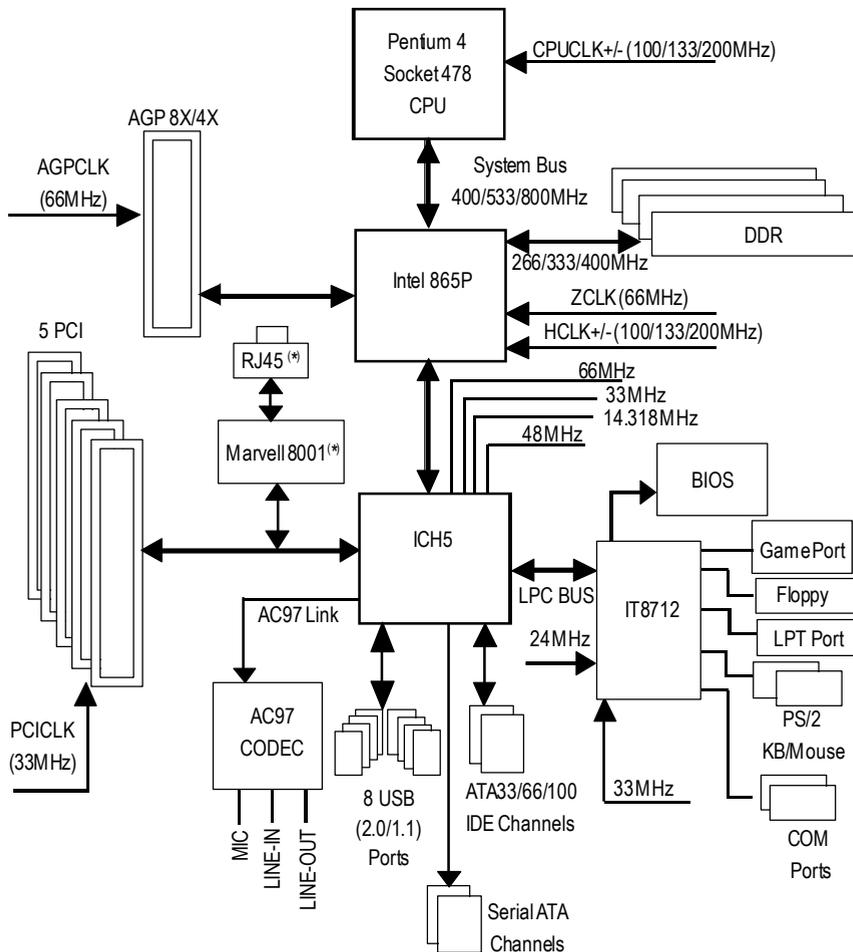
(*) Only for GA-8I865P-G.

GA-8I865P(-G) Motherboard Layout



(*) Only for GA-8I865P-G.

Block Diagram

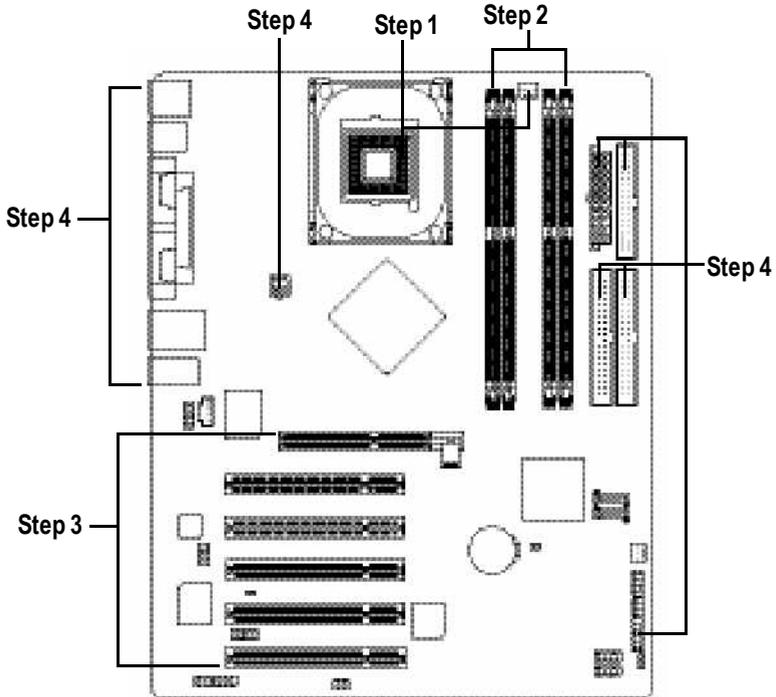


(*) Only for GA-8I865P-G.

Chapter 2 Hardware Installation Process

To set up your computer, you must complete the following steps:

- Step 1- Install the Central Processing Unit (CPU)
- Step 2- Install memory modules
- Step 3- Install expansion cards
- Step 4- Install I/O Peripherals Cables



Congratulations you have accomplished the hardware installation!

Turn on the power supply or connect the power cable to the power outlet. Continue with the BIOS/ software installation.

Step 1: Install the Central Processing Unit (CPU)



Before installing the processor, adhere to the following warning:

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.

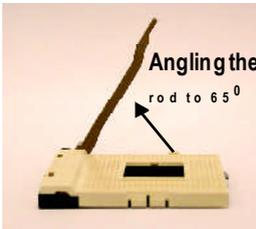


HT functionality requirement content :

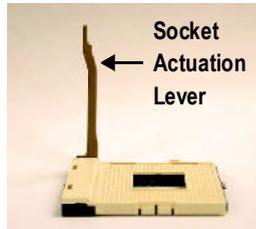
Enabling the functionality of Hyper-Threading Technology for your computer system requires all of the following platform components:

- 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

Step 1-1: CPU Installation



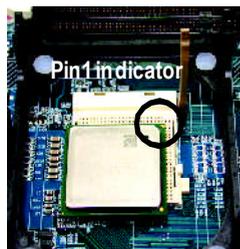
1. Angling the rod to 65-degree maybe feel a kind of tight, and then continue pull the rod to 90-degree when "click" noise is heard.



2. Pull the rod to the 90-degree directly.



3. CPU Top View



4. Locate Pin 1 in the socket and look for a (golden) cut edge on the CPU upper corner. Then insert the CPU into the socket.

Step 1-2 : CPU Cooling Fan Installation



Before installing the CPU cooling fan, adhere to the following warning:

1. Please use Intel approved cooling fan.
2. We recommend you to apply the thermal tape to provide better heat conduction between your CPU and cooling fan.

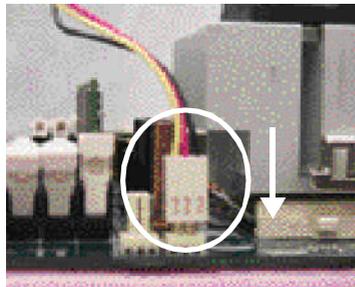
(The CPU cooling fan might stick to the CPU due to the hardening of the thermal paste. During this condition if you try to remove the cooling fan, you might pull the processor out of the CPU socket along with the cooling fan, and might damage the processor. To avoid this from happening, we suggest you to either use thermal tape instead of thermal paste, or remove the cooling fan with extreme caution.)

3. Make sure the CPU fan power cable is plugged in to the CPU fan connector, this completes the installation.

Please refer to CPU cooling fan user's manual for more detail installation procedure.



1. Fasten the cooling fan supporting-base onto the CPU socket on the mainboard.



2. Make sure the CPU fan is plugged to the CPU fan connector, than install complete.

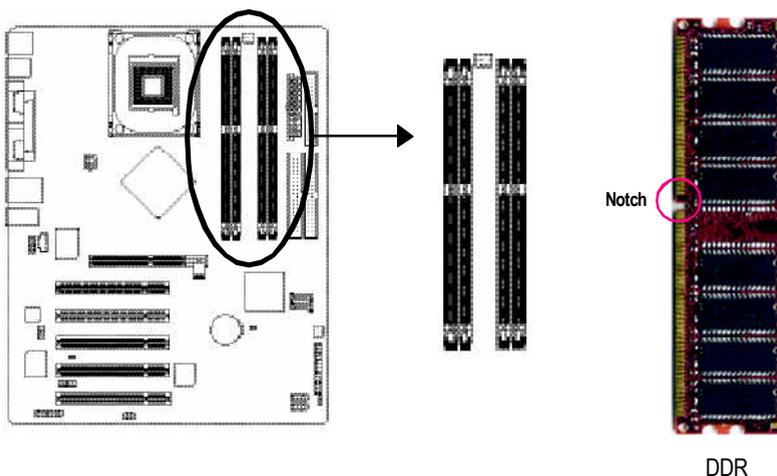
Step 2: Install memory modules



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

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.



DDR

GA-8I865P(-G) supports the Dual Channel Technology. After operating the Dual Channel Technology, the bandwidth of Memory Bus will add double up to 6.4GB/s.

GA-8I865P(-G) includes 4 DIMM sockets, and each Channel has two DIMM sockets as following:

- ▶▶ Channel A : DIMM 1, DIMM 2
- ▶▶ Channel B : DIMM 3, DIMM 4

If you want to operate the Dual Channel Technology, please note the following explanations due to the limitation of Intel® chipset specifications.

1. Only one DDR memory module is installed: The Dual Channel Technology can't operate when only one DDR memory module is installed.

2. Two DDR memory modules are installed (the same memory size and type): The Dual Channel Technology will operate when two memory modules are inserted individually into Channel A and B. If you install two memory modules in the same channel, the Dual Channel Technology will not operate.
3. Three DDR memory modules are installed: Please note that The Dual Channel Technology will not operate when three DDR memory modules are installed; part of them will not be detected.
4. Four DDR memory modules are installed: If you install four memory modules at the same time, the Dual Channel Technology will operate only when those modules have the same memory size and type.

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 tables include all memory-installed combination types:

(Please note that those types not in the tables will not boot up.)

● Figure 1: Dual Channel Technology (DS: Double Side, SS: Single Side)

	DIMM 1	DIMM 2	DIMM 3	DIMM 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

● Figure 2: Don't operate Dual Channel Technology (DS: Double Side, SS: Single Side)

	DIMM 1	DIMM 2	DIMM 3	DIMM 4
1 memory module	DS/SS	X	X	X
	X	DS/SS	X	X
	X	X	DS/SS	X
	X	X	X	DS/SS
2 memory modules	DS/SS	DS/SS	X	X
	X	X	DS/SS	DS/SS
3 memory modules	DS/SS	DS/SS	DS/SS	X
	DS/SS	DS/SS	X	DS/SS
	DS/SS	X	DS/SS	DS/SS
	X	DS/SS	DS/SS	DS/SS

1. The DIMM slot has a notch, so the DIMM memory module can only fit in one direction.



2. Insert the DIMM memory module vertically into the DIMM slot. Then push it down.



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



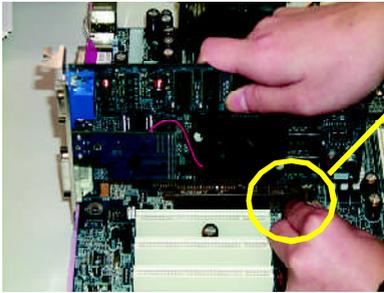
DDR Introduction

Established on the existing SDRAM infrastructure, DDR (Double Data Rate) memory is a high performance and cost-effective solution that allows easy adoption for memory vendors, OEMs, and system integrators.

DDR memory is a great evolutionary solution for the PC industry that builds on the existing SDRAM architecture, yet make the awesome advances in solving the system performance bottleneck by doubling the memory bandwidth. Nowadays, with the highest bandwidth of 3.2GB/s of DDR400 memory and complete line of DDR400/333/266/200 memory solutions, DDR memory is the best choice for building high performance and low latency DRAM subsystem that are suitable for servers, workstations, and full range of desktop PCs.

Step 3: Install expansion cards

1. Read the related expansion card's instruction document before install the expansion card into the computer.
2. Remove your computer's chassis cover, necessary 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.



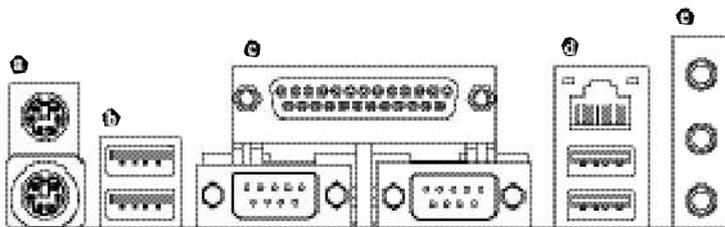
AGP Card



Please carefully pull out the small white- drawable bar at the end of the AGP slot when you try to install/ Uninstall the AGP card. Please align the AGP card to the onboard AGP slot and press firmly down on the slot .Make sure your AGP card is locked by the small white- drawable bar.

Step 4: Install I/O Peripherals Cables

Step 4-1: I/O Back Panel Introduction



PS/2 Keyboard and PS/2 Mouse Connector

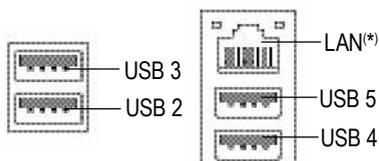


PS/2 Mouse Connector
(6 pin Female)

PS/2 Keyboard Connector
(6 pin Female)

- This connector supports standard PS/2 keyboard and PS/2 mouse.

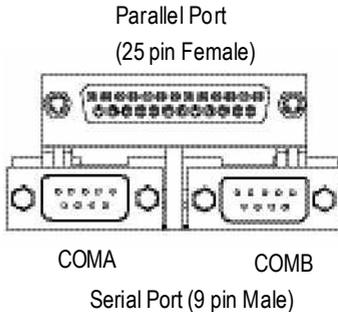
USB / LAN(*) Connector



- 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 connector is fast Ethernet with 10/100/1000 Mbps speed.

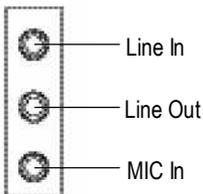
(*) Only for GA-8I865P-G.

⊕ Parallel Port and Serial Ports (COMA/COMB)



- This connector supports 2 standard COM ports and 1 Parallel port. Device like printer can be connected to Parallel port; mouse and modem etc can be connected to Serial ports.

⊕ Audio Connectors



- After install onboard audio driver, you may connect speaker to Line Out jack, microphone to MIC In jack. Devices like CD-ROM, walkman etc. can be connected to Line-In jack.

Please note:

You are able to use 2-/4-/6-/8-channel audio feature by S/W selection.

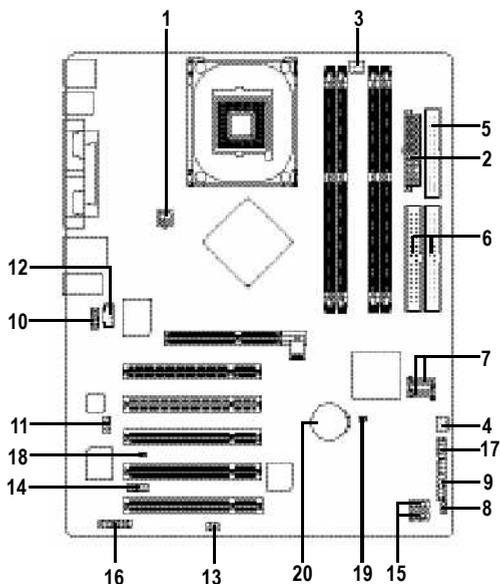
If you want to enable 8-channel function you can refer to page 25, and contact your nearest dealer for optional SUR_CEN cable.



NOTE

If you want the detail information for 2-/ 4-/ 6-/ 8-channel audio setup installation, please refer to page 64.

Step 4-2: Connectors & Jumper Setting Introduction



1) ATX_12V	11) SUR_CEN
2) ATX	12) CD_IN
3) CPU_FAN	13) SPDIF_IO
4) SYS_FAN	14) IR_CIR
5) FDD	15) F_USB1/F_USB2
6) IDE1/IDE2	16) GAME
7) SATA0/SATA1	17) INFO_LINK
8) PWR_LED	18) CI
9) F_PANEL	19) CLR_CMOS
10) F_AUDIO	20) BAT

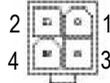
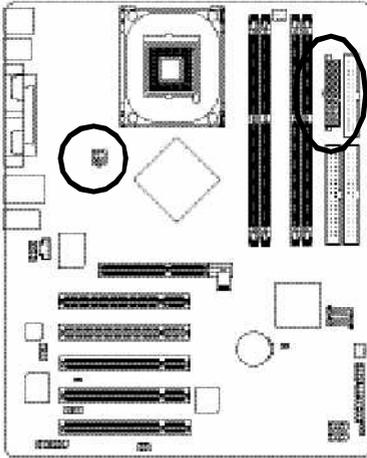
1/2) ATX_12V/ATX(Power Connector)

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.

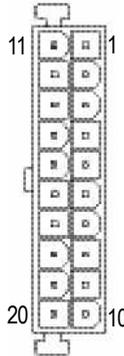
The ATX_12V power connector mainly supplies power to the CPU. If the ATX_12V power connector is not connected, the system will not start.

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.



Pin No.	Definition
1	GND
2	GND
3	+12V
4	+12V



Pin No.	Definition
1	3.3V
2	3.3V
3	GND
4	VCC
5	GND
6	VCC
7	GND
8	PowerGood
9	5V SB(stand by +5V)
10	+12V
11	3.3V
12	-12V
13	GND
14	PS_ON(softOn/Off)
15	GND
16	GND
17	GND
18	-5V
19	VCC
20	VCC

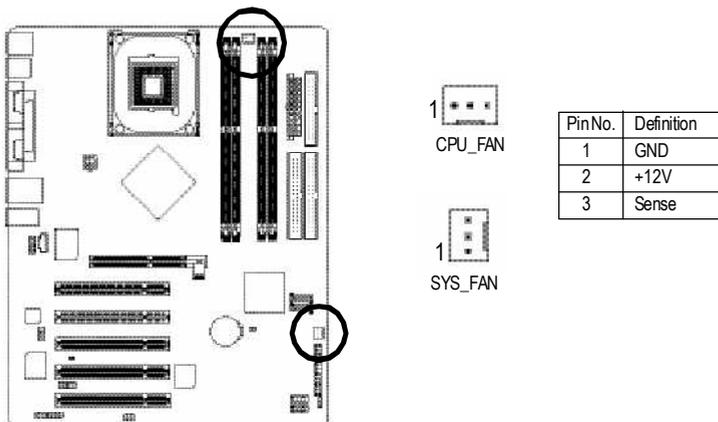
3/4) CPU_FAN / SYS_FAN (Cooler Fan Power Connector)

The cooler fan power connector supplies a +12V power voltage via a 3-pin power connector and possesses a fail-proof 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!

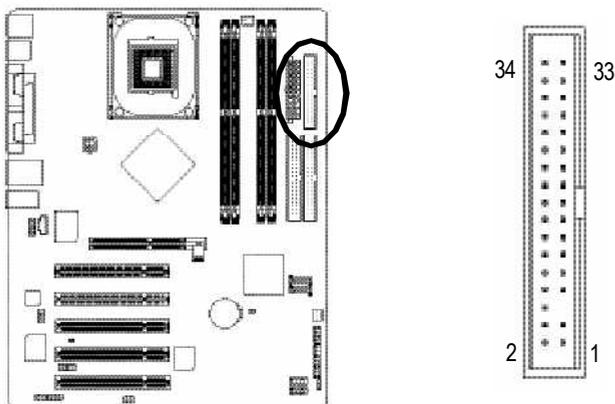
Please remember to connect the power to the CPU fan to prevent CPU overheating and failure.



5) FDD(Floppy Connector)

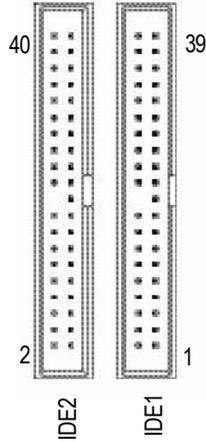
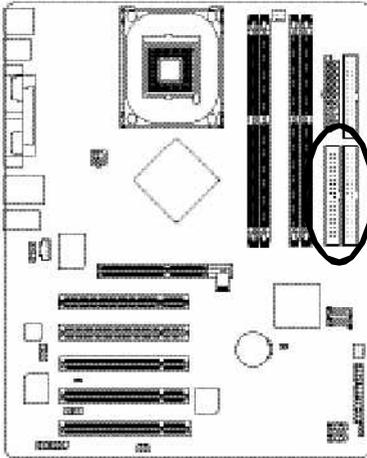
The FDD connector is used to connect the FDD cable while the other end of the cable connects to the FDD drive. The types of FDD drives supported are: 360KB, 720KB, 1.2MB, 1.44MB and 2.88MB.

Please connect the red power connector wire to the pin1 position.



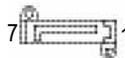
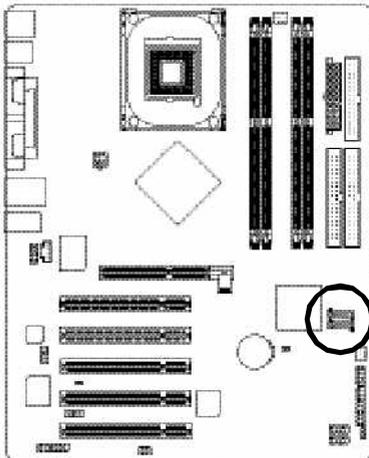
6) IDE1/ IDE2(IDE1/IDE2 Connector)

Each IDE connector can connect with one IDE cable to connect the IDE hard drive with the computer. It is recommended that the first hard drive be connected to the IDE1 connector while the disk drive be connected to the IDE2 connector.



7) SATA0/SATA1 (Serial ATA Connector)

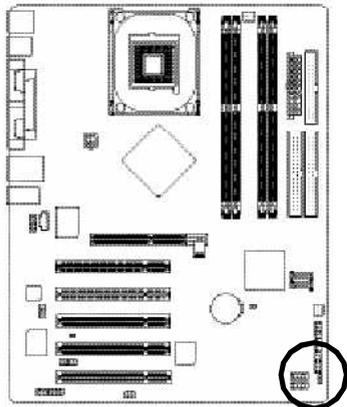
You can connect the Serial ATA device to this connector.



Pin No.	Definition
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND

8) PWR_LED

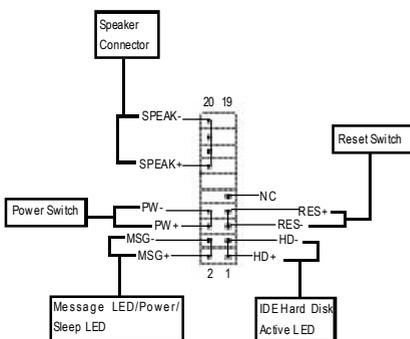
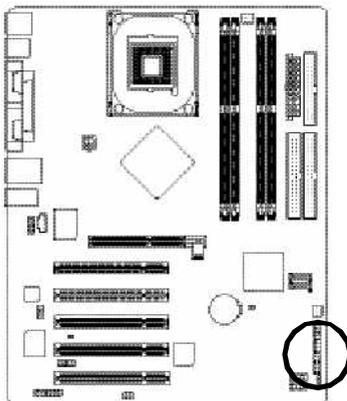
PWR_LED is connect with the system power indicator to indicate whether the system is on/off. It will blink when the system enters suspend mode. If you use dual color LED, power LED will turn to another color.



PinNo.	Definition
1	MPD+
2	MPD-
3	MPD-

9) F_PANEL (2x10 pins connector)

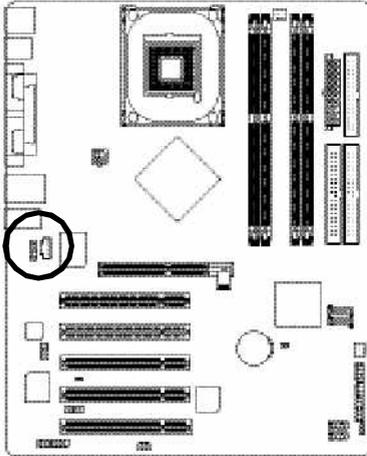
Please connect the power LED, PC peaker, resetswitch and power switch etc of your chassis front panel to the F_PANEL connector according to the pin assignment below.



HD (IDE Hard Disk Active LED) (Blue)	Pin 1: LED anode(+) Pin2: LED cathode(-)
SPEAK(Speaker Connector) (Amber)	Pin 1: VCC(+) Pin 2- Pin 3: NC Pin 4: Data(-)
RES (Reset Switch) (Green)	Open: Normal Operation Close: Reset Hardware System
PW(Power Switch) (Red)	Open: Normal Operation Close: Power On/Off
MSG(Message LED/Power/ Sleep LED)(Yellow)	Pin 1: LED anode(+) Pin2: LED cathode(-)
NC(Purple)	NC

10) F_AUDIO (F_AUDIO Connector)

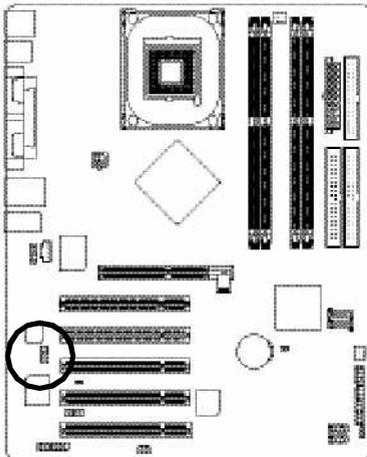
If you want to use FrontAudio connector, you must remove 5-6, 9-10 Jumper. In order to utilize the front audio header, your chassis must have front audio connector. Also please make sure the pin assignment on the cable is the same as the pin assignment on the MB header. To find out if the chassis you 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.



PinNo.	Definition
1	MIC
2	GND
3	MIC_BIAS
4	POWER
5	FrontAudio(R)
6	RearAudio(R)
7	Reserved
8	No Pin
9	FrontAudio(L)
10	RearAudio(L)

11) SUR_CEN

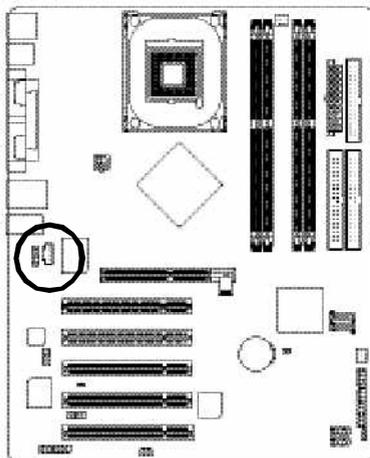
Please contact your nearest dealer for optional SUR_CEN cable.



PinNo.	Definition
1	SUROUTL
2	SUROUTR
3	GND
4	No Pin
5	CENTER_OUT
6	BASS_OUT
7	AUX_L
8	AUX_R

12) CD_IN (CD IN)

Connect CD-ROM or DVD-ROM audio out to the connector.

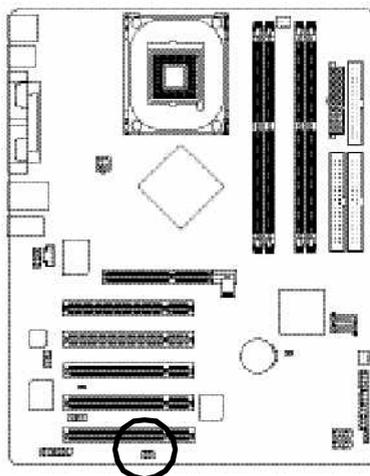


PinNo.	Definition
1	CD_L
2	GND
3	GND
4	CD_R

13) SPDIF_IO (SPDIF In/Out)

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. Use SPDIF IN feature only when your device has digital output function.

Be careful with the polarity of the SPDIF_IO 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.

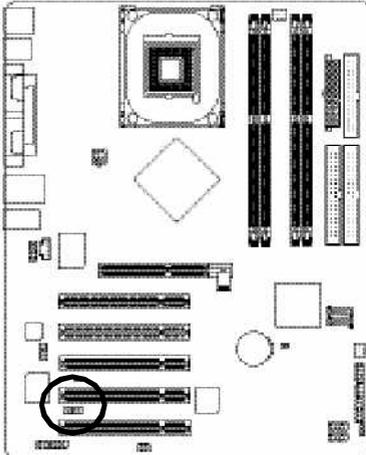


PinNo.	Definition
1	VCC
2	No Pin
3	SPDIF
4	SPDIF
5	GND
6	GND

14) IR_CIR

Make sure the pin 1 on the IR device is aligning with pin one the connector. To enable the IR/CIR function on the board, you are required to purchase an option IR/CIR module. For detail information please contact your authorized Giga-Byte distributor. To use IR function only, please connect IR module to Pin1 to Pin5.

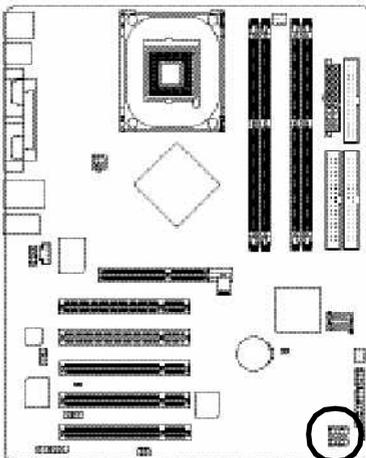
Be careful with the polarity of the IR/CIR connector. Check the pin assignment carefully while you connect the IR/CIR cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional IR/CIR cable, please contact your local dealer.



PinNo.	Definition
1	VCC
2	NC
3	IRRX
4	GND
5	IRTX
6	NC
7	CIRRX
8	VCC
9	CIRTX
10	NC

15) F_USB1 / F_USB2(Front USB Connector)

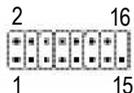
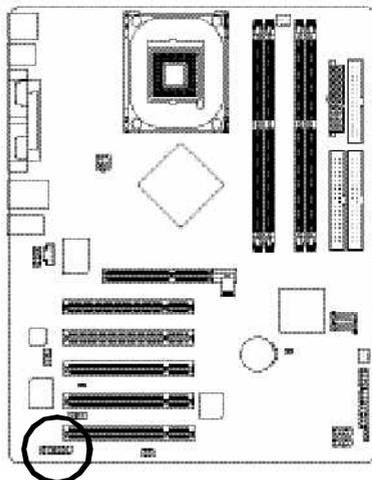
Be careful with the polarity of the front USB connector. Check the pin assignment carefully while you connect the front USB cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional front USB cable, please contact your local dealer.



PinNo.	Definition
1	Power
2	Power
3	USB0 DX-/USB6 DX-
4	USB1 Dy-/USB7 Dy-
5	USB0 DX+/USB6 DX+
6	USB1 Dy+/USB7 Dy+
7	GND
8	GND
9	NoPin
10	NC

16) GAME (GAME Connector)

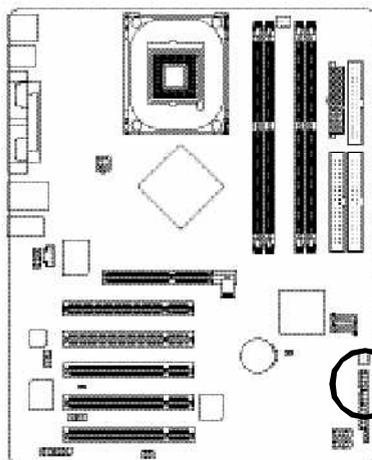
This connector supports joystick, MIDI keyboard and other relate audio devices.



Pin No.	Definition
1	VCC
2	GRX1_R
3	GND
4	GPSA2
5	VCC
6	GPX2_R
7	GPY2_R
8	MSI_R
9	GPSA1
10	GND
11	GPY1_R
12	VCC
13	GPSB1
14	MSO_R
15	GPSB2
16	No Pin

17) INFO_LINK

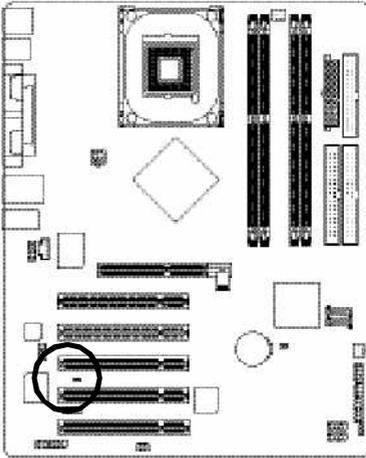
This connector allows you to connect some external devices to provide you extra function.



Pin No.	Definition
1	SMBCLK
2	VCC
3	SMBDATA
4	GPIO
5	GND
6	GND
7	NoPin
8	NC
9	+12V
10	+12V

18) CI (Chassis Intrusion, Case Open)

This 2 pin connector allows your system to enable or disable the "case open" item in BIOS if the system case begin remove.

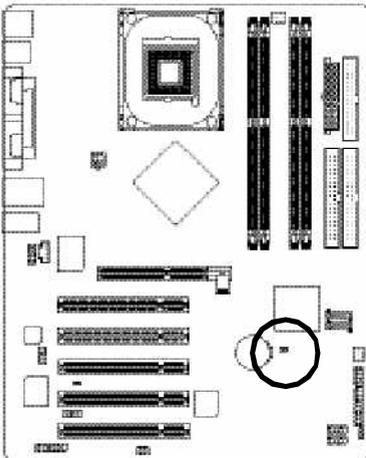


1 

PinNo.	Definition
1	Signal
2	GND

19) CLR_CMOS (Clear CMOS)

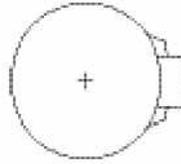
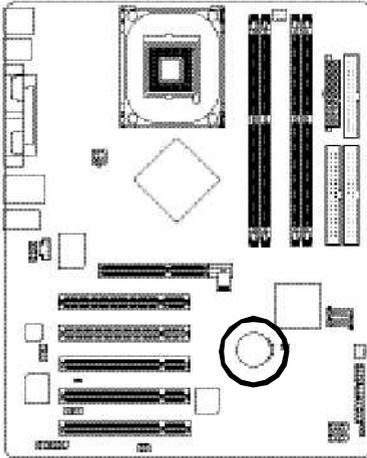
You may clear the CMOS data to its default values by this jumper. To clear CMOS, temporarily short 1-2 pin. Default doesn't include the "Shunter" to prevent from improper use this jumper.



1  Open: Normal

1  Short: Clear CMOS

20) BAT (Battery)



CAUTION

- ❖ 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. Remove the battery, wait for 30 second.
3. Re-install the battery.
4. Plug the power cord and turn ON the computer.

Chapter 3 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 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 previous item
<↓>	Move to next item
<←>	Move to the item in the left hand
<→>	Move to the item in the right hand
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
<+/PgUp>	Increase the numeric value or make changes
<-/PgDn>	Decrease the numeric value or make changes
<F1>	General help, only for Status Page Setup Menu and Option Page Setup Menu
<F2>	Item Help
<F3>	Reserved
<F4>	Reserved
<F5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<F6>	Load the file-safe default CMOS value from BIOS default table
<F7>	Load the Optimized Defaults
<F8>	Q-Flash function
<F9>	System Information
<F10>	Save all the CMOS changes, only for Main Menu

GETTING HELP

Main Menu

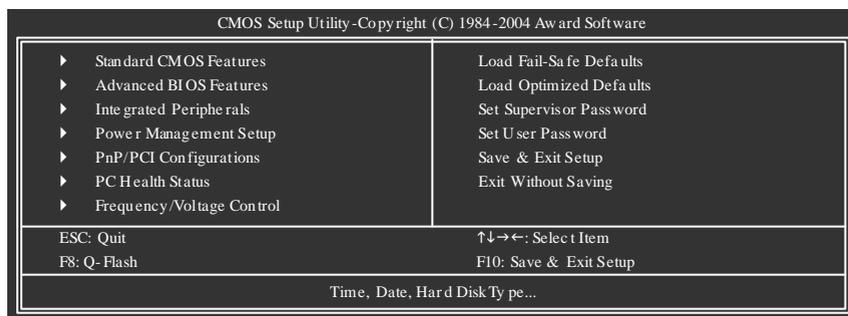
The on-line description of the highlighted setup function is displayed at the bottom of the screen.

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 Main Menu (For example: BIOS Ver. : E3)

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



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

- **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 Configurations**

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's 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.

Standard CMOS Features

CMOS Setup Utility - Copyright (C) 1984-2004 Award Software		Item Help
Standard CMOS Features		
Date (mm:dd:yy)	Fri, May 15 2004	
Time (hh:mm:ss)	22:31:24	
▶ IDE Channel 0 Master	[None]	Change the day, month, year
▶ IDE Channel 0 Slave	[None]	
▶ IDE Channel 1 Master	[None]	<Week>
▶ IDE Channel 1 Slave	[None]	Sun. to Sat.
Drive A	[1.44M, 3.5"]	<Month>
Drive B	[None]	Jan. to Dec.
Floppy 3 Mode Support	[Disabled]	
Holt On	[All, But Keyboard]	<Day>
Base Memory	640K	1 to 31 (or maximum allowed in the month)
Extended Memory	127M	
Total Memory	128M	<Year>
		1999 to 2098
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help F5: Previous Values F6: Fail-Save Default 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 is <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 Master(Slave) / IDE Channel 1 Master(Slave) IDE Device Setup. You can use one of three methods:
 - Auto Allows BIOS to automatically detect IDE devices during POST(default)
 - 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.

❶ 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.

❷ 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 boot will be stopped.
- ▶ All, But Keyboard The system boot will not stop for all errors except a keyboard error. (Default value)
- ▶ All, But Diskette The system boot will not stop for all errors except a disk error.
- ▶ All, But Disk/Key The system boot will not stop for all errors except keyboard and disk errors.

❸ 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.

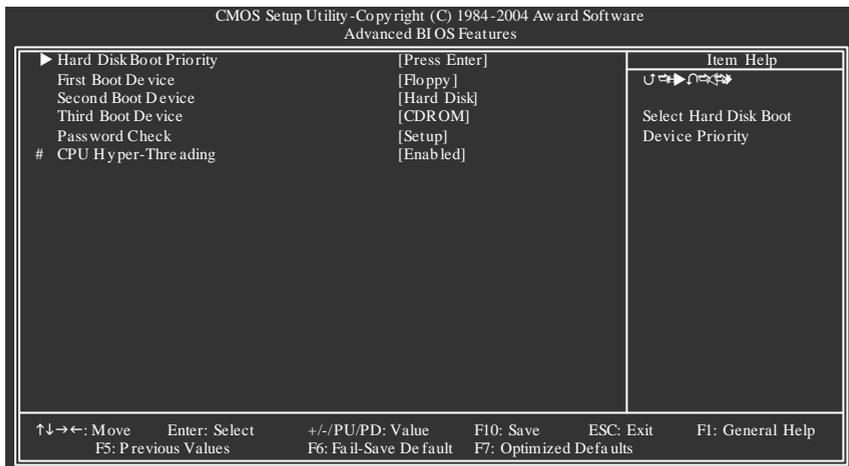
The value of the base memory is typically 512 K for systems with 512K memory installed on the motherboard, or 640 K for systems with 640 K or more memory installed on the motherboard.

Extended Memory

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

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

Advanced BIOS Features



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

▶ Hard Disk Boot Priority

- ▶ Press Enter Select Hard Disk Boot Device priority.

▶ First / Second / Third Boot Device

- This feature allows you to select the boot device priority.
 - ▶ 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.

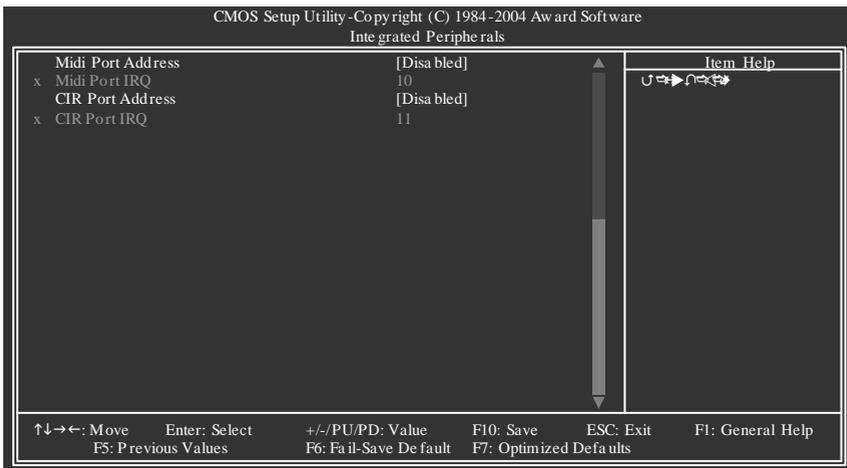
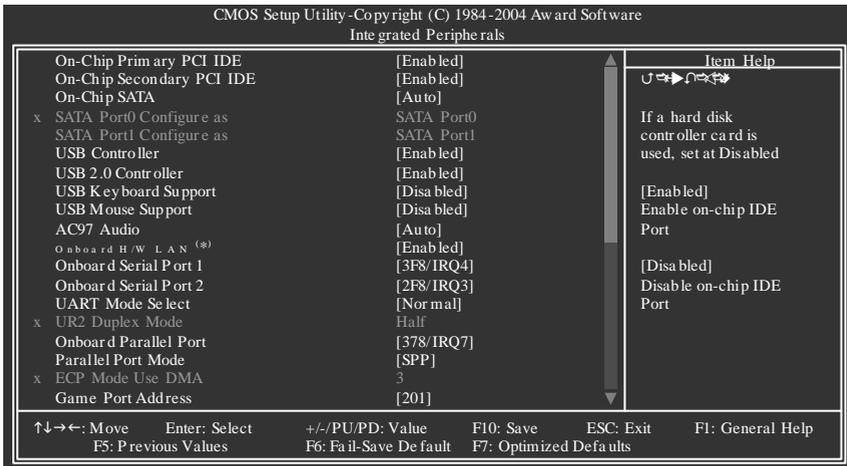
▶ Password Check

- ▶ 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.

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.

Integrated Peripherals



(*) Only for GA-8I865P-G.

On-Chip Primary PCI IDE

- ▶ Enabled Enable onboard 1st channel IDE port. (Default v alue)
- ▶ Disabled Disable onboard 1st channel IDE port.

On-Chip Secondary PCI IDE

- ▶ Enabled Enable onboard 2nd channel IDE port. (Default v alue)
- ▶ Disabled Disable onboard 2nd channel IDE port.

On-chip SATA

- ▶ Disabled Disable SATA controller.
- ▶ Auto When there is no device to be plugged in IDE 1 or IDE2, SATA c ontroller will remap to IDE controller. (Default v alue)
- ▶ Manual Set SATA Mode manually.

SATA Port0 Configure as

- ▶ IDE Pri. Master Remap SATA Port 0 to IDE Pri. Master.
- ▶ IDE Pri. Slave Remap SATA Port 0 to IDE Pri. Slave.
- ▶ IDE Sec. Master Remap SATA Port 0 to IDE Sec. Master.
- ▶ IDE Sec. Slave Remap SATA Port 0 to IDE Sec. Slave.
- ▶ SATA Port0 SATA controller set to SATA port0. As this mode, it s upport by WinXP or later OS only . (Default v alue)
- ▶ SATA Port1 SATA controller set to SATA port1. As this mode, it s upport by WinXP or later OS only .

SATA Port1 Configure as

- ▶ The values depend on SATA Port0.

USB Controller

- ▶ Enabled Enable USB Controller. (Default v alue)
- ▶ Disabled Disable USB Controller.

USB 2.0 Controller

Disable this function if you are not using onboard USB 2.0 feature.

- ▶ Enabled Enable USB 2.0 Controller. (Default v alue)
- ▶ Disabled Disable USB 2.0 Controller.

USB Keyboard Support

- ▶ Enabled Enable USB Key board Support.
- ▶ Disabled Disable USB Key board Support. (Default v alue)

USB Mouse Support

- ▶ Enabled Enable USB Mouse Support.
- ▶ Disabled Disable USB Mouse Support. (Default value)

AC97 Audio

- ▶ Auto Auto detect AC'97 audio function. (Default value)
- ▶ Disabled Disable AC'97 audio function.

Onboard H/W LAN (*)

- ▶ Enabled Enable Onboard H/W LAN function. (Default value)
- ▶ Disabled Disable this function.

Onboard Serial Port 1

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

Onboard Serial Port 2

- ▶ Auto BIOS will automatically setup the port 2 address.
- ▶ 3F8/IRQ4 Enable onboard Serial port 2 and address is 3F8.
- ▶ 2F8/IRQ3 Enable onboard Serial port 2 and address is 2F8. (Default value)
- ▶ 3E8/IRQ4 Enable onboard Serial port 2 and address is 3E8.
- ▶ 2E8/IRQ3 Enable onboard Serial port 2 and address is 2E8.
- ▶ 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.

- ▶ ASKIR Set onboard I/O chip UART to ASKIR Mode.
- ▶ IrDA Set onboard I/O chip UART to IrDA Mode.
- ▶ Normal Set onboard I/O chip UART to Normal Mode. (Default Value)

UR2 Duplex 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.

(*) Only for GA-8I865P-G.

Onboard Parallel port

This feature allows you to select from a given set of parameters if the parallel port uses the onboard I/O controller.

- ▶ 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

This feature allows you to connect with an advanced printer via the port mode it supports.

- ▶ SPP Using Parallel port as Standard Parallel Port. (Default value)
- ▶ EPP Using Parallel port as Enhanced Parallel Port.
- ▶ ECP Using Parallel port as Extended Capabilities Port.
- ▶ ECP+EPP Using Parallel port as ECP & EPP mode.

ECP Mode Use DMA

This feature allows you to select Direct Memory Access (DMA) channel if the ECP mode is selected.

This function will be available when "Parallel Port Mode" is set at ECP or ECP+EPP.

- ▶ 3 Set ECP Mode Use DMA to 3. (Default value)
- ▶ 1 Set ECP Mode Use DMA to 1.

Game Port Address

- ▶ 201 Set Game Port Address to 201. (Default value)
- ▶ 209 Set Game Port Address to 209.
- ▶ Disabled Disable this function.

Midi Port Address

- ▶ 300 Set Midi Port Address to 300.
- ▶ 330 Set Midi Port Address to 330.
- ▶ Disabled Disable this function. (Default value)

Midi Port IRQ

- ▶ 5 Set Midi Port IRQ to 5.
- ▶ 10 Set Midi Port IRQ to 10. (Default value)

CIR Port Address

- ▶ 310 Set CIR Port Address to 310.
- ▶ 320 Set CIR Port Address to 320.
- ▶ Disabled Disable this function. (Default value)

CIR Port IRQ

- ▶ 5 Set CIR Port IRQ to 5.
- ▶ 11 Set CIR Port IRQ to 11. (Default value)

Power Management Setup

CMOS Setup Utility - Copyright (C) 1984-2004 Award Software
Power Management Setup

		Item Help
ACPI Suspend Type	[S1(POS)]	
Power LED in S1 state	[Blinking]	
Off by Power button	[Instant-off]	
PME Event Wake Up	[Enabled]	
ModemRingOn/WakeOnLan	[Enabled]	
Resume by Alarm	[Disabled]	
x Date (of Month) Alarm	Everyday	[S1] Set suspend type to Power On Suspend under ACPI OS
x Time (hh:mm:ss) Alarm	0:0:0	
Power On By Mouse	[Disabled]	
Power On By Keyboard	[Disabled]	
x KB Power ON Password	Enter	[S3] Set suspend type to Suspend to RAM under ACPI OS
AC BackFunction	[Soft-Off]	

↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
 F5: Previous Values F6: Fail-Save Default 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), power 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 sec.

PME Event Wake Up

- ▶ Disabled Disable this function.
- ▶ Enabled Enable PME Event Wake up. (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. (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 RTC Alarm Lead To Power On is Enabled.
Date (of Month) Alarm : Everyday, 1~31
Time (hh: mm: ss) Alarm : (0~23) : (0~59) : (0~59)

Power On By Mouse

- ▶ Disabled Disabled this function. (Default value)
- ▶ Mouse Click Double click on PS/2 mouse left button to power on the system.

Power On By Keyboard

This feature allows you to set the method for powering-on the system.

The option "Password" allows you to set up to 5 alphanumeric characters to power-on the system.

The option "Keyboard 98" allows you to use the standard keyboard 98 to power on the system.

- ▶ Password Enter from 1 to 5 characters to set the Keyboard Power On Password.
- ▶ Disabled Disabled this function. (Default value)
- ▶ Keyboard 98 If your keyboard have "POWER Key" button, you can press the key to power on the system.

KB Power ON Password

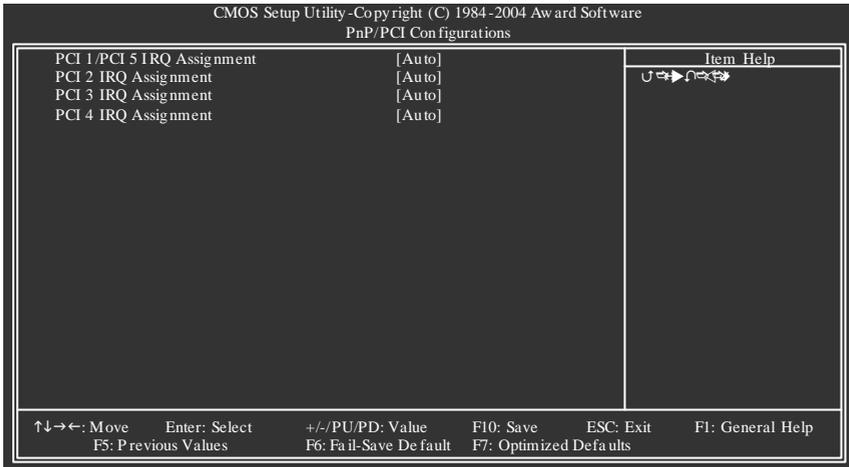
When "Power On by Keyboard" set at Password, you can set the password here.

- ▶ Enter Input password (from 1 to 5 characters) and press Enter to set the Keyboard Power On password.

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.

PnP/PCI Configurations



❏ PCI 1/PCI 5 IRQ Assignment

- ▶ Auto Auto assign IRQ to PCI 1/PCI 5. (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 5.

❏ 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.

❏ PCI 4 IRQ Assignment

- ▶ Auto Auto assign IRQ to PCI 4. (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 4.

PC Health Status

CMOS Setup Utility - Copyright (C) 1984-2004 Award Software		PC Health Status	
Reset Case Open Status	[Disabled]	Item	Help
Case Opened	Yes	U	→
Vcore	OK		
DDR25V	OK		
+3.3V	OK	[Disabled]	
+5V	OK	Don't monitor	
+12V	OK	current fan speed	
Current CPU Temperature	33°C	[Enabled]	
Current CPU FAN Speed	4687 RPM	Clear case open status	
Current SYSTEM FAN Speed	0 RPM	and set to be Disabled	
CPU Warning Temperature	[Disabled]	at next boot	
CPU FAN Fail Warning	[Disabled]		
SYSTEM FAN Fail Warning	[Disabled]		
↑↓ → ←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help F5: Previous Values F6: Fail-Save Default F7: Optimized Defaults			

Reset Case Open Status

- ▶ Disabled Don't reset case open status. (Default value)
- ▶ Enabled Clear case open status at next boot.

Case Opened

If the case is closed, "Case Opened" will show "No".

If the case have been opened, "Case Opened" will show "Yes".

If you want to reset "Case Opened" value, set "Reset Case Open Status" to "Enabled" and save CMOS, your computer will restart.

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

- ▶ Detect system's voltage status automatically.

Current CPU Temperature

- ▶ Detect CPU Temp. automatically.

Current CPU/SYSTEM FAN Speed (RPM)

- ▶ Detect CPU/SYSTEM Fan speed status automatically.

CPU Warning Temperature

- ▶ 60°C / 140°F Monitor CPU Temp. at 60°C / 140°F.
- ▶ 70°C / 158°F Monitor CPU Temp. at 70°C / 158°F.
- ▶ 80°C / 176°F Monitor CPU Temp. at 80°C / 176°F.
- ▶ 90°C / 194°F Monitor CPU Temp. at 90°C / 194°F.
- ▶ Disabled Disable this function. (Default value)

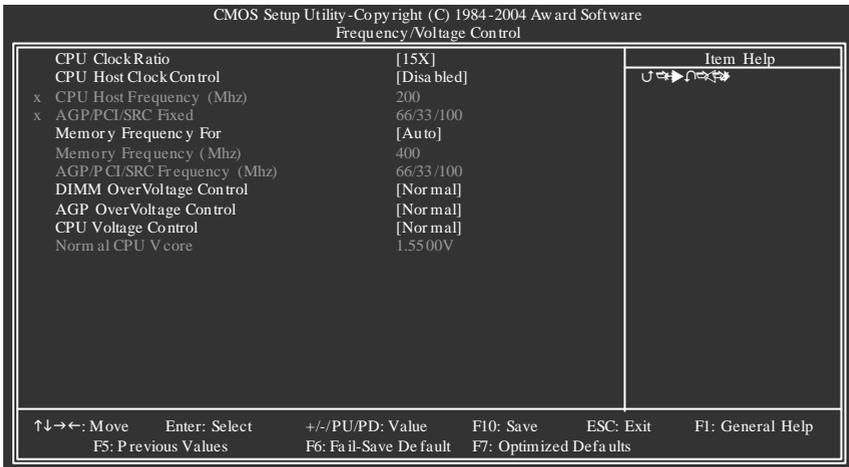
☛ CPU FAN Fail Warning

- ▶ Disabled Fan Warning Function Disable. (Default value)
- ▶ Enabled Fan Warning Function Enable.

☛ SYSTEM FAN Fail Warning

- ▶ Disabled Fan Warning Function Disable. (Default value)
- ▶ Enabled Fan Warning Function Enable.

Frequency/Voltage Control



☛ CPU Clock Ratio

This setup option will automatically assign by CPU detection.

For Willamette CPU: 8X~23X default: 14X

For C-Stepping P4: 8X,10X~24X default: 15X

For Northwood CPU: 12X~24X default: 16X

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

☛ CPU Host Clock Control

Please note that if your system is overclocked and cannot restart, please wait 20secs. for automatic system restart or clear the CMOS setup data and perform a safe restart.

- ▶ Disabled Disable CPU Host Clock Control. (Default value)
- ▶ Enabled Enable CPU Host Clock Control.

☛ CPU Host Frequency (Mhz)

This item will be available when "CPU Host Clock Control" is set to Enabled.

- ☛ 100MHz ~ 355MHz Set CPU Host Clock from 100MHz to 355MHz.

If you use FSB400 Pentium 4 processor, please set "CPU Clock" to 100MHz. If you use FSB533 Pentium 4 processor, please set "CPU Clock" to 133MHz. If you use FSB800 Pentium 4 processor, please set "CPU Clock" to 200MHz.

Incorrect using it may cause your system broken. For power End-User use only!

☛ AGP/PCI/SRC Fixed

This item will be available when "CPU Host Clock Control" is set to Enabled.

Serial ATA device is very sensitive to SRC clock. SRC over clock may make Serial ATA device function can't work properly.

- ☛ Adjust AGP/PCI/SRC clock asynchronous with CPU.

☛ Memory Frequency For

for FSB(Front Side Bus) frequency=400MHz,

- ☛ 2.66 Memory Frequency = Host clock X 2.66.
- ☛ Auto Set Memory frequency by DRAM SPD data. (Default value)

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

- ☛ 2.0 Memory Frequency = Host clock X 2.0.
- ☛ 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,

- ☛ 2.0 Memory Frequency = Host clock X 2.0.
- ☛ 1.6 Memory Frequency = Host clock X 1.6.
- ☛ 1.33 Memory Frequency = Host clock X 1.33.
- ☛ Auto Set Memory frequency by DRAM SPD data. (Default value)

☛ Memory Frequency (Mhz)

- ☛ The values depend on CPU Host Frequency (Mhz).

☛ AGP/PCI/SRC Frequency (Mhz)

- ☛ The values depend on AGP/PCI/SRC Fixed.

❏ DIMM OverVoltage Control

- ▶▶ Normal Set DIMM OverVoltage Control to Normal. (Default value)
- ▶▶ +0.1V Set DIMM OverVoltage Control to +0.1V.
- ▶▶ +0.2V Set DIMM OverVoltage Control to +0.2V.
- ▶▶ +0.3V Set DIMM OverVoltage Control to +0.3V.

Increase DRAM voltage may get stable for Over_Clock. But it may damage to DRAM module when enable this feature.

❏ AGP OverVoltage Control

- ▶▶ Normal Set AGP OverVoltage Control to Normal. (Default value)
- ▶▶ +0.1V Set AGP OverVoltage Control to +0.1V.
- ▶▶ +0.2V Set AGP OverVoltage Control to +0.2V.
- ▶▶ +0.3V Set AGP OverVoltage Control to +0.3V.

Increase AGP voltage may get stable for Over_Clock. But it may damage to AGP Card when enable this feature.

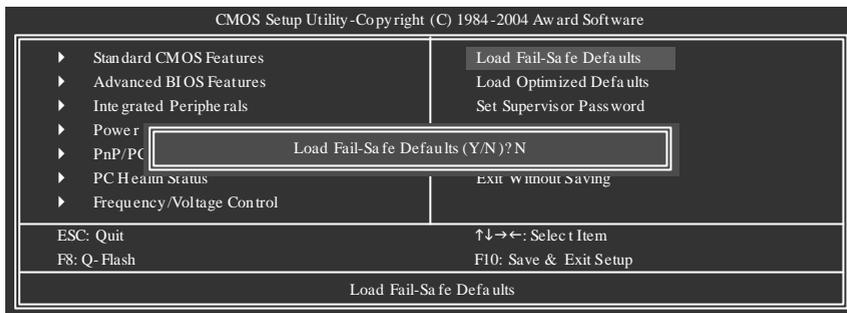
❏ CPU Voltage Control

- ▶▶ Supports adjustable CPU Vcore from 0.8375V to 1.7600V. (Default value: Normal)

❏ Normal CPU Vcore

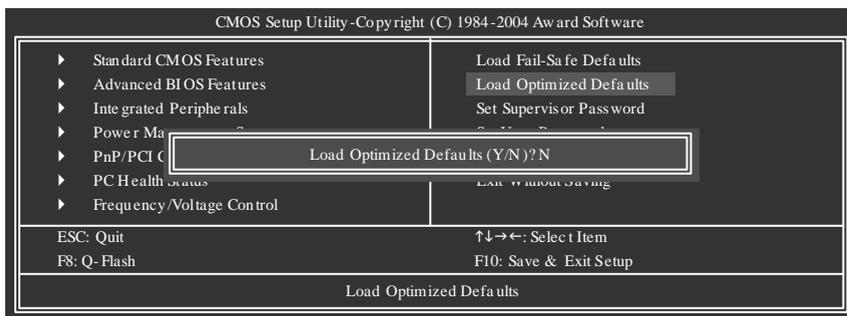
- ▶▶ Display your CPU Vcore Voltage.

Load Fail-Safe Defaults



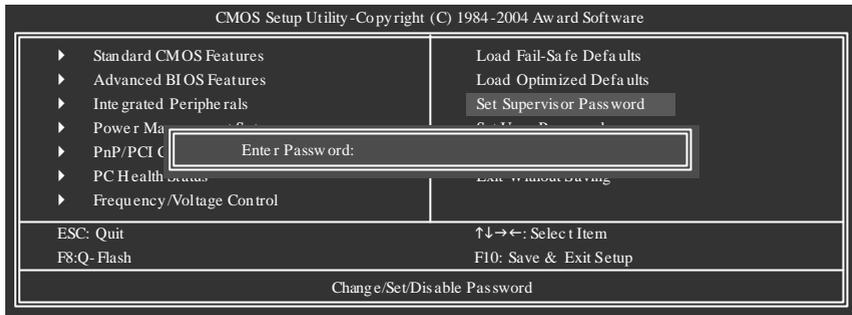
Fail-Safe defaults contain the most appropriate values of the system parameters that allow minimum system performance.

Load Optimized Defaults



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

Set Supervisor/User 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.

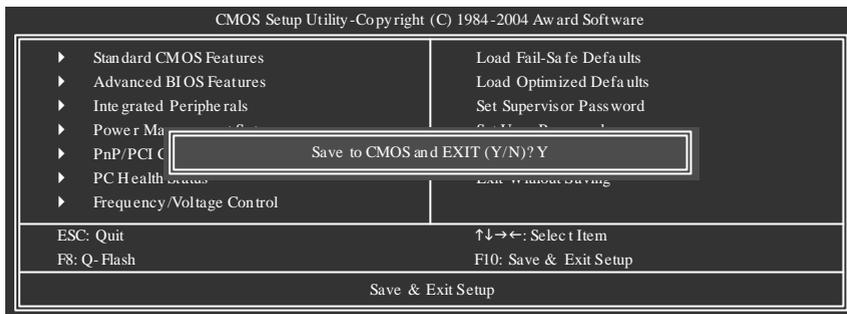
The BIOS Setup program allows you to specify two separate passwords:

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.

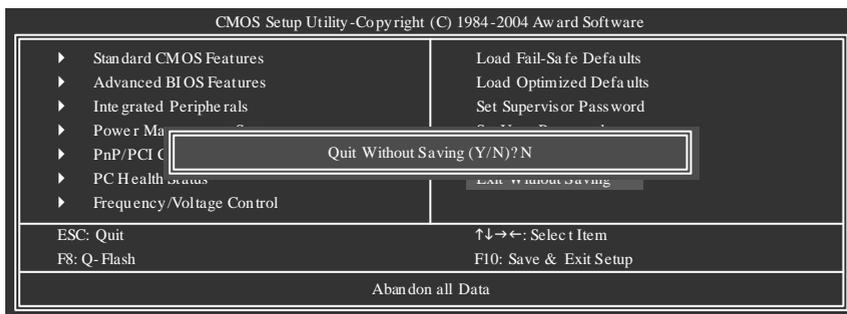
Save & Exit Setup



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

Type "N" will return to Setup Utility.

Exit Without Saving



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

Type "N" will return to Setup Utility.

Chapter 4 Technical Reference

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.



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**.

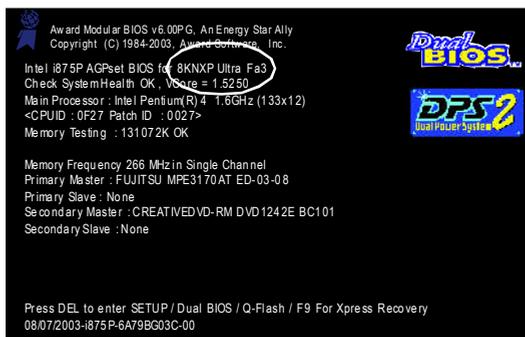
Part One:

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.

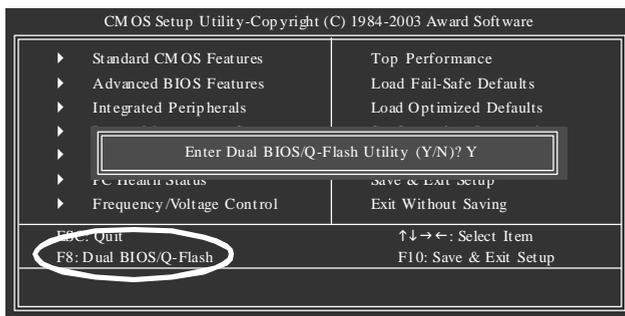
In the following sections, we take GA-8KNXP Ultra as the example to guide you how to flash BIOS from an older version to the latest version. For example, from Fa3 to Fba.

The BIOS file is Fa3 before updating



Entering the Q-Flash™ utility:

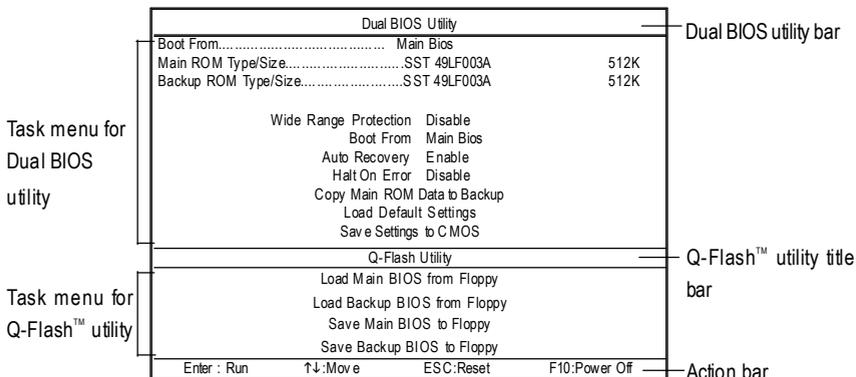
Step1: To use Q-Flash utility, you must press **Del** in the boot screen to enter BIOS menu.



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.



Task menu for Dual BIOS utility:

Contains the names of eight tasks and two items 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:

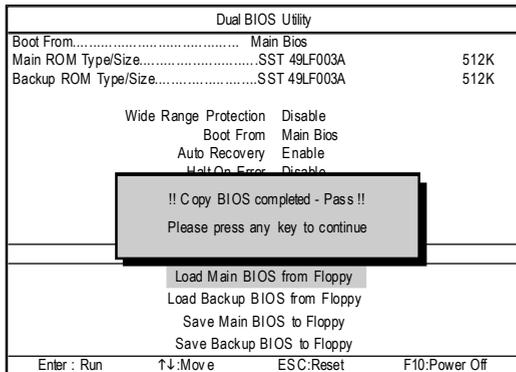
1. Press arrow buttons on your keyboard to move the light bar to "Load Main BIOS from Floppy" item in the Q-Flash menu and press **Enter** button.

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



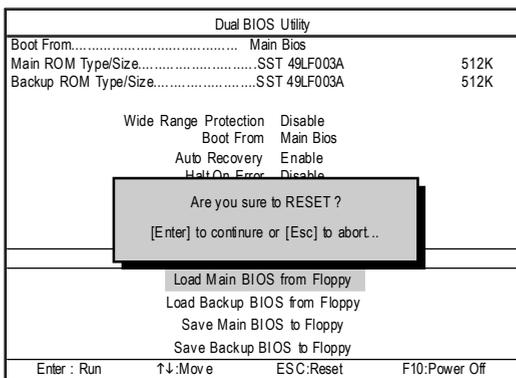
If you want to save the current BIOS for backup purpose, you can begin Step 1 with "Save Main BIOS to Floppy" item.

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



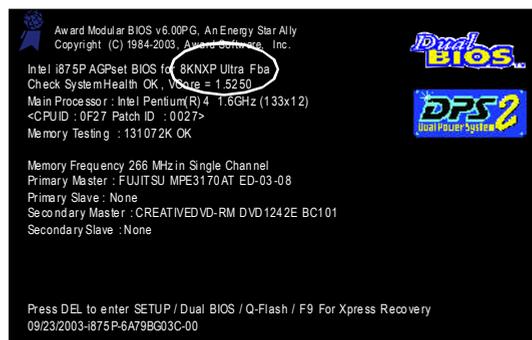
 You can repeat Step 1 to 4 to flash the backup BIOS, too.

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

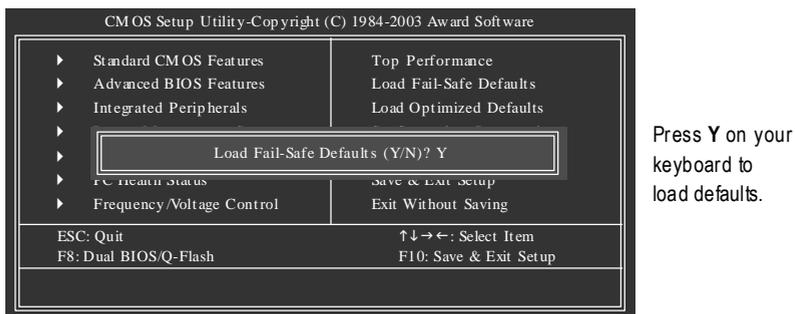
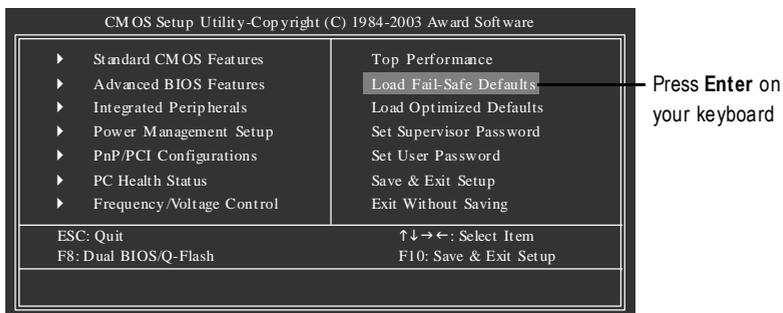


After system reboots, you may find the BIOS version on your boot screen becomes the one you flashed.

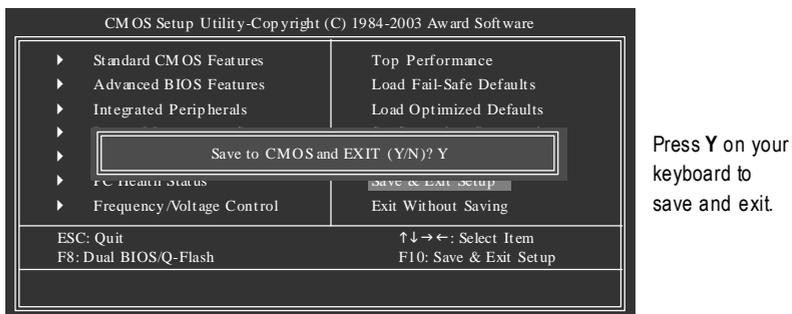
The BIOS file becomes Fab after updating



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 reboots all devices after BIOS has been upgraded. Therefore, we highly recommend reloading the BIOS defaults after BIOS has been upgraded.



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.



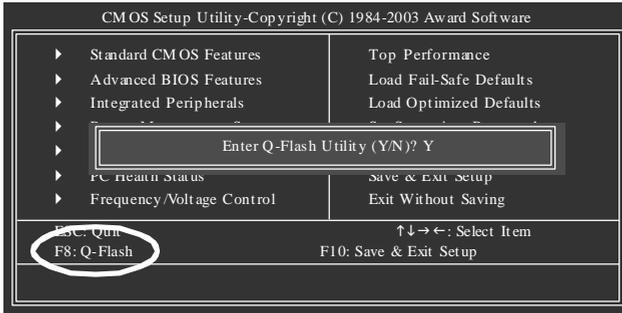
Part Two:

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.

Entering the Q-Flash™ utility:

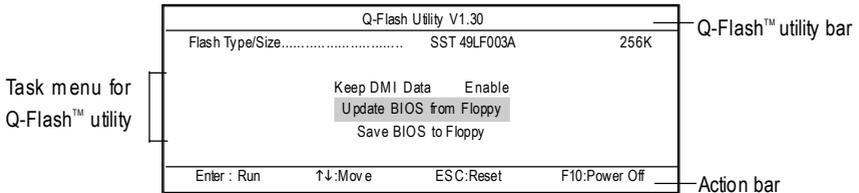
Step1: To use the Q-Flash utility, you must press **Del** in the boot screen to enter BIOS menu.



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

Exploring the Q-Flash™ utility screen

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



Task menu for Q-Flash utility:

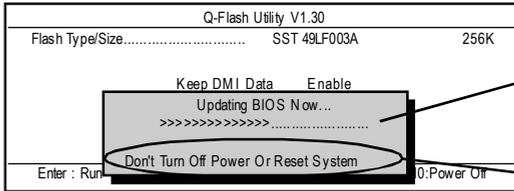
Contains the names of three tasks. Blocking a task and pressing **Enter** key on your keyboard to enable execution of the task.

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.

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.

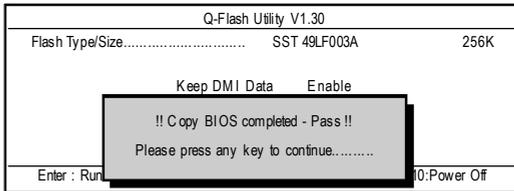


The process of updating BIOS

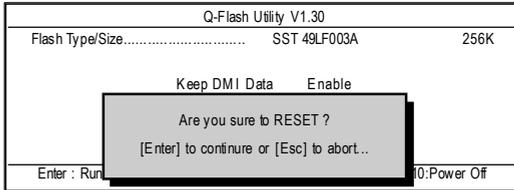


Do not turn off power or reset your system at this stage!!

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

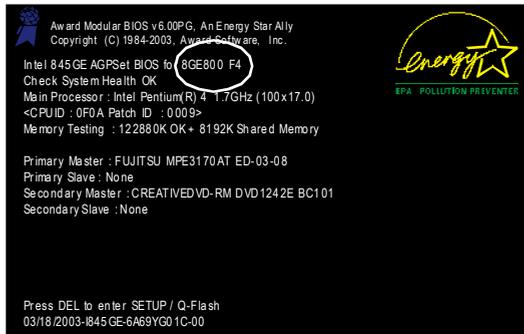


5. Press **Esc** and then **Y** button to exit the Q-Flash utility. The computer will restart automatically after you exit Q-Flash.



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



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**.

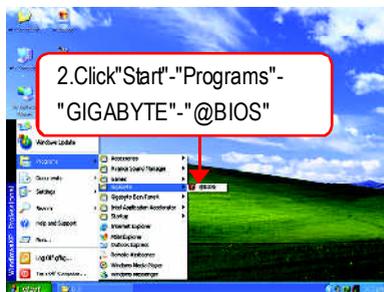
Congratulation!! You have updated BIOS successfully!!

Method 2: @ BIOS Utility

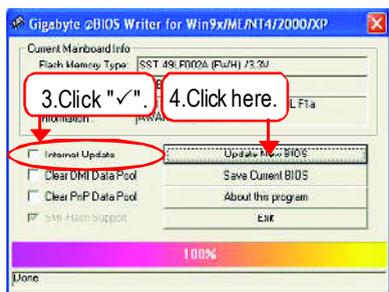
If you don't have DOS boot disk, we recommend that you used Gigabyte @BIOS™ program to flash BIOS.



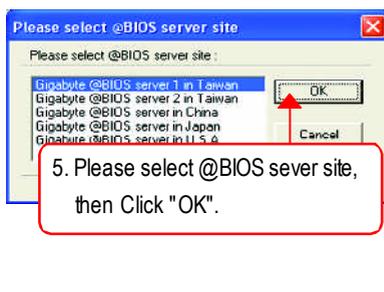
(1)



(2)



(3)



(4)

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: 81865P-G.F1).
- e. Complete update process following the instruction.

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.

Note:

- a. 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.
- b. 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.
- c. 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.
- d. Please note that any interruption during updating will cause system unbooted.



2- / 4- / 6- / 8- Channel Audio Function Introduction

The installation of windows 98SE/2K/ME/XP is very simple. Please follow next step to install the function!

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 :

Following installation of the audio driver, you find a Sound Effect  icon on the lower right hand taskbar. Click the icon to select the function.



STEP 3:

Click "Speaker Configuration" then click on the left selection bar and select "2CH Speaker" to complete 2 channel audio configuration.



4 Channel Analog Audio Output Mode

STEP 1 :

Connect the front channels to "Line Out",
the rear channels to "Line In".



Line Out Line In

STEP 2 :

Following installation of the audio driver, you find a Sound Effect icon on the lower right hand taskbar. Click the icon to select the function.



STEP 3 :

Click "Speaker Configuration" and select the "UAJ Function". Then click on the left selection bar and select "4CH Speaker" to complete 4 channel audio configuration.

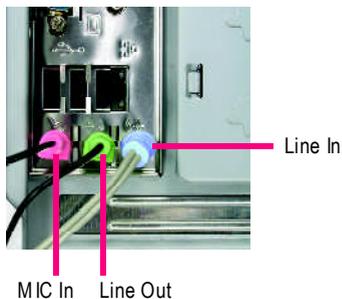


Basic 6 Channel Analog Audio Output Mode

Use the back audio panel to connect the audio output without any additional module.

STEP 1 :

Connect the front channels to "Line Out", the rear channels to "Line In", and the Center/Subwoofer channels to "MIC In".



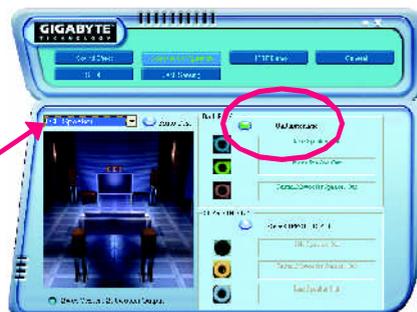
STEP 2 :

Following installation of the audio driver, you find a icon a Sound Effect  icon on the lower right hand taskbar. Click the icon to select the function.



STEP 3 :

Click "Speaker Configuration" and select the "UAJ Function". Then click on the left selection bar and select "6CH Speaker" to complete 6 channel audio configuration.



8 Channel Audio Setup (using Audio Combo Kit, Optional Device):

(Audio Combo Kit offers SPDIF output, an optical and coaxial cable and a Surround-Kit. The Surround-Kit offers R/L surround, center/subwoofer output and rear surround)



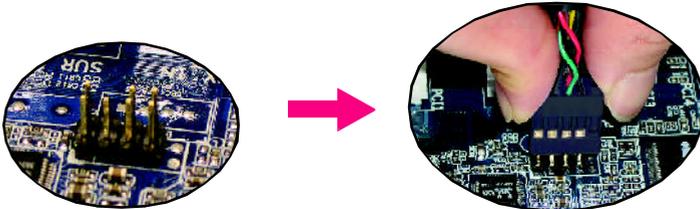
STEP 1 :

Secure the Audio Combo Kit at the panel on the back of the case.



STEP 2 :

Connect the Surround-Kit to the SUR_CEN connector located on the motherboard.

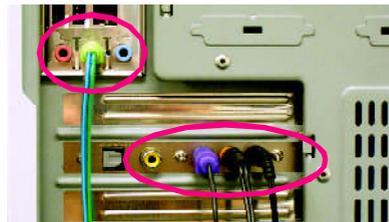


STEP 3 :

There are two methods of 8 channel audio configuration:

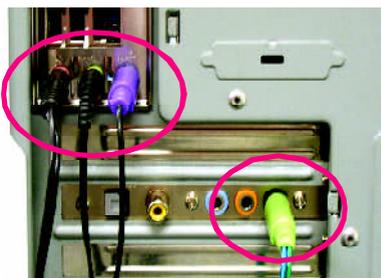
Method 1:

Connect the front channels to the "LINE OUT" port located on the audio panel and the rear channels to the Surround-Kit "REAR R/L" port. Connect the center/subwoofer channels to the Surround-Kit "SUB CENTER" and the R/L channels to the Surround-Kit "SUR BACK" port.



Method 2:

Connect the front channels to the "LINE OUT" port located on the audio panel and the rear channels to the "LINE IN" port. Connect the center/subwoofer channels to the "MIC IN" port located on the audio panel and the R/L channels to the Surround-Kit "SUR BACK" port. (This method requires UAJ function)



STEP 4 :

Following installation of the audio driver, you find a icon a Sound Effect  icon on the lower right hand taskbar. Click the icon to select the function.



STEP 5 :

Click "Speaker Configuration" and select both the "UAJ Function" and "Only Surround-Kit". Then click on the left selection bar and select "8CH Speaker" to complete 8 channel audio configuration.



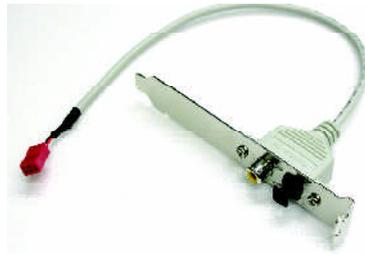
Sound Effect Configuration:

At the sound effect menu, users can adjust sound option settings as desired.



SPDIF Output Device (Optional Device)

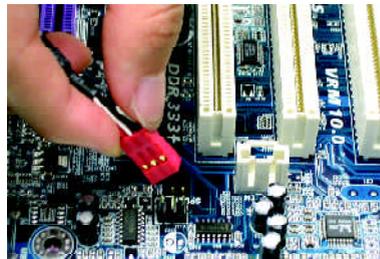
A "SPDIF output" device is available on the motherboard. Cable with rear bracket is provided and could link to the "SPDIF output" connector (As picture.) For the further linkage to decoder, rear bracket provides coaxial cable and Fiber connecting port.



1. Connect the SPDIF output device to the rear bracket of PC, and fix it with screw.



2. Connect SPDIF device to the motherboard.



3. Connect SPDIF to the SPDIF decoder.



Jack-Sensing and UAJ Introduction

Jack-Sensing provides audio connectors error-detection function.

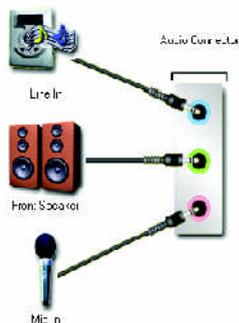


Install Microsoft DirectX8.1 or later version before to enable Jack-Sensing support for Windows 98/98SE/2000/ME.

Jack-Sensing includes 2 parts: AUTO and MANUAL. Following is an example for 2 channels (Windows XP):

Introduction of audio connectors

You may connect CDROM, Walkman or others audio input devices to Line In jack, speakers, ear-phone or others output devices to Line Out jack, and microphone to MIC In jack.



Auto-detecting:

Please connect the devices to the right jacks as above. A window will appear as right picture if you setup the devices properly.

Please note that 3D audio function will only appear when 3D audio inputs.

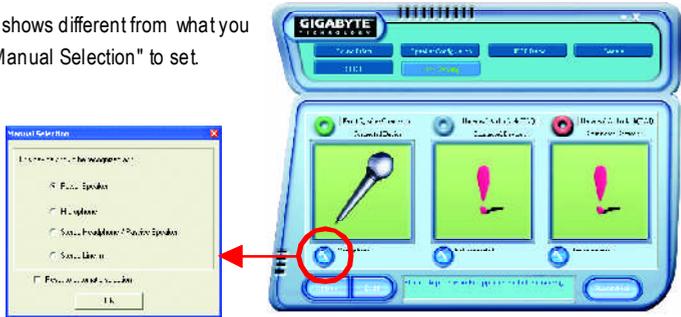


If you set wrong with the connectors, the warning message will come out as right picture.



Manual setting:

If the device picture shows different from what you set, please press "Manual Selection" to set.



UAJ Introduction

UAJ (Universal Audio Jack) has a very smart feature: It will switch signal automatically when user plugs his audio device to the wrong jack (Line-in/ Line-out). That means users do not need to worry the audio device should be plug in Line-in or Line-out jack, the device will work perfectly after UAJ is activated.

Enable UAJ function:

You can click "UAJ Automatic" button to enable UAJ function.



Xpress Recovery Introduction

What is Xpress Recovery ?

Xpress Recovery is a utility used to back up and restore an OS partition. If the hard drive is not working properly, the user can restore the drive to its original state.



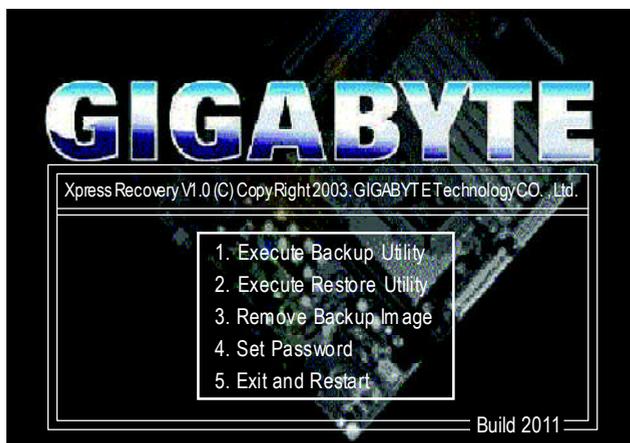
1. Supports FAT16, FAT32, and NTFS formats
2. Must be connected to the IDE1 Master
3. Allows installation of only one OS
4. Must be used with an IDE hard disk supporting HPA
5. The first partition must be set as the boot partition. When the boot partition is backed up, please do not alter its size.
6. Xpress Recovery is recommended when using Ghost to return boot manager to NTFS format.

How to use the Xpress Recovery

1. Boot from CD-ROM (BMP Mode)

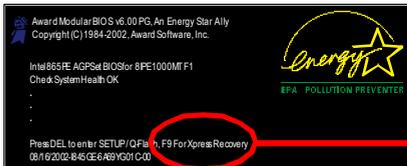
Enter the BIOS menu, select "Advanced BIOS Feature" and set to boot from CD-ROM. Insert the provided driver CD into your CD drive, then save and exit the BIOS menu. Once the computer has restarted, the phrase "Boot from CD:" will appear at the bottom left-hand corner of the screen. When "Boot from CD:" appears, press any key to enter Xpress Recovery.

Once you have completed this step, subsequent access to Xpress Recovery can also function by pressing the F9 key during computer power on.

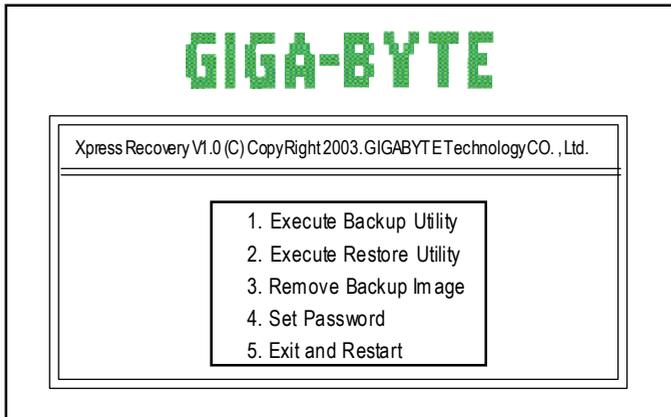


2. Press F9 during powering on the computer. (Text Mode)

Press F9 during powering on the computer .



F9 For Xpress Recovery



1. If you have already entered Xpress Recovery by booting from the CD-ROM, you can enter Xpress Recovery in the future by pressing the F9 key.
2. System storage capacity as well as drive reading/writing speed will affect backup speed.
3. It is recommended that Xpress Recovery be immediately installed after OS and all required driver and software installations are complete.

1. Execute Backup Utility:

Press B to Backup your System or Esc to Exit

The backup utility will automatically scan your system and back up data as a backup image in your hard drive.



Not all systems support access to Xpress Recovery by pressing the F9 key during computer power on. If this is the case, please use the boot from CD-ROM method to enter Xpress Recovery.

2. Execute Restore Utility:

This program will recover your system to factory default.

Press R to restore your system back to factory default or press Esc to exit

Restores backup image to original state.

3. Remove Backup Image:

Remove backup image. Are you sure? (Y/N)

Remove the backup image.

4. Set Password:

Please input a 4-16 character long password (a-z or 0-9) or press Esc to exit

You can set a password to enter Xpress Recovery to protect your hard disk data. Once this is done, password input will be required to enter Xpress Recovery during the next as well as subsequent system restarts. If you wish to remove the need for password entry, please select "Set Password" and under "New Password/Confirm Password", make sure there is no entry and then press "Enter" to remove password requirement.

5. Exit and Restart:

Exit and restart your computer.

Chapter 5 Appendix

Install Drivers



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 setup.exe.

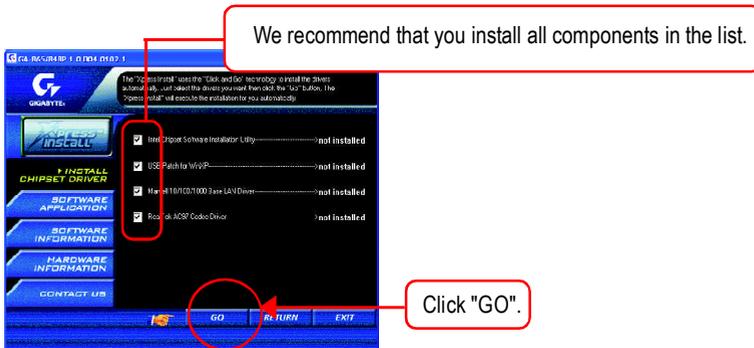
INSTALL CHIPSET DRIVER

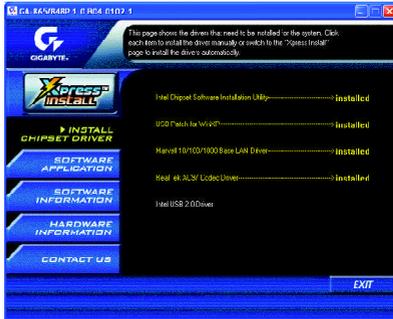
This page shows the drivers that need to be installed for the system. Click each item to install the driver manually or switch to the  to install the drivers automatically.



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

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 by itself.





Driver install finished!! you have to reboot system!!

Item Description

- Intel Chipset Software Installation Utility
Tell the operating system how the chipset components will be configured.
- USB Patch for WinXP
This patch driver can help you to resolve the USB device wake up S3 hang up issue in XP.
- Marvell 10/100/1000 Base LAN Driver (*)
For Marvell 10/100/1000 LAN chip use.
- RealTek AC97 Codec Driver
For Intel(R) ICH/ICH2/ICH4/ICH5 AC97 audio.
- Intel USB 2.0 Driver
It is recommended that you use the Microsoft Windows update for the most updated driver.



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).

(*) Only for GA-8I865P-G.

SOFTWARE APPLICATION

This page reveals the value-added software developed by Gigabyte and its worldwide partners.



- Gigabyte Windows Utilities Manager(GWUM)
This utility can integrate the Gigabyte's applications in the system tray.
- Gigabyte Management Tool(GMT)
A useful tool which can manage the computer via the network.
- EasyTune4
Powerful utility that integrates the overclocking and hardware monitoring functions.
- DMI Viewer
Windows based utility which is used to browse the DMI/SMBIOS information of the system.
- Face-Wizard
New utility for adding BIOS logo.
- @BIOS
Gigabyte windows flash BIOS utility.
- Acrobat e-Book
Useful utility from Adobe.
- Acrobat Reader
Popular utility from Adobe for reading .PDF file format documents.
- Norton Internet Security(NIS)
Integrated utility which includes anti-virus, ad control, etc
- DirectX 9
Install Microsoft DirectX 9 to enable 3D hardware acceleration that support for operating system to achieve better 3D performance.
- Marvell VCT Utility (*)
Utility for Marvell chips. [VCT(Virtual Cable Tester) Technology for Gigabit Networks]

(*) Only for GA-8I865P-G.

FAQ

Below is a collection of general asked questions. To check general asked questions based on a specific motherboard model, please log on to <http://tw.giga-byte.com/faq/faq.htm>

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: Why cannot I use all functions in EasyTune™ 4?

Answer: The availability of the listed functions in EasyTune™ 4 depends on the MB chipset. If the chipset doesn't support certain functions in EasyTune™ 4, these functions will be locked automatically and you will not be able to use them.

Question 4: Why do I fail to install RAID and ATA drivers under Win 2000 and XP on boards that support RAID function after I connect the boot HDD to IDE3 or IDE4 ?

Answer: First of all, you need to save some files in the CD-ROM to a floppy disk before installing drivers. You also need to go through some rather different steps in the installation process. Therefore, we suggest that you refer to the installation steps in the RAID manual at our website.

(Please download it at http://tw.giga-byte.com/support/user_pdf/raid_manual.pdf)

Question 5: 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 make them 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.
7. Save changes and reboot the system.

Question 6: Why does system seem unstable after updating BIOS?

Answer: Please remember to load Fail-Safe Defaults (Or Load BIOS Defaults) after flashing BIOS. However, if the system instability still remains, please clear CMOS to solve the problem.

Question 7: 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 8: How do I disable onboard VGA card in order to add an external VGA card?

Answer: Gigabyte motherboards will auto-detect the external VGA card after it is plugged in, so you don't need to change any setting manually to disable the onboard VGA.

Question 9: Why cannot I use the IDE 2?

Answer: Please refer to the user manual and check whether you have connected any cable that is not provided with the motherboard package to the USB Over Current pin in the Front USB Panel. If the cable is your own cable, please remove it from this pin and do not connect any of your own cables to it.

Question 10: 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

Question 11:For the M/B which have RAID function, how to set in the BIOS in order to bootup from IDE3, 4 by either RAID or ATA mode?

Answer:Please set in the BIOS as follow:

1. Advanced BIOS features-->(SATA)/RAID/SCSI boot order: "SATA"
2. Advanced BIOS features--> First boot device: "SCSI"
3. Integrated Peripherals--> Onboard H/W ATA/RAID: "enable"

Then it depends on the RAID mode that you need to set "RAID" to RAID mode or "ATA" to normal ATA mode in the item named RAID controller function.

Question 12:How to set in the BIOS to bootup from the IDE/ SCSI/ RAID card ?

Answer:Please set in the BIOS as follow:

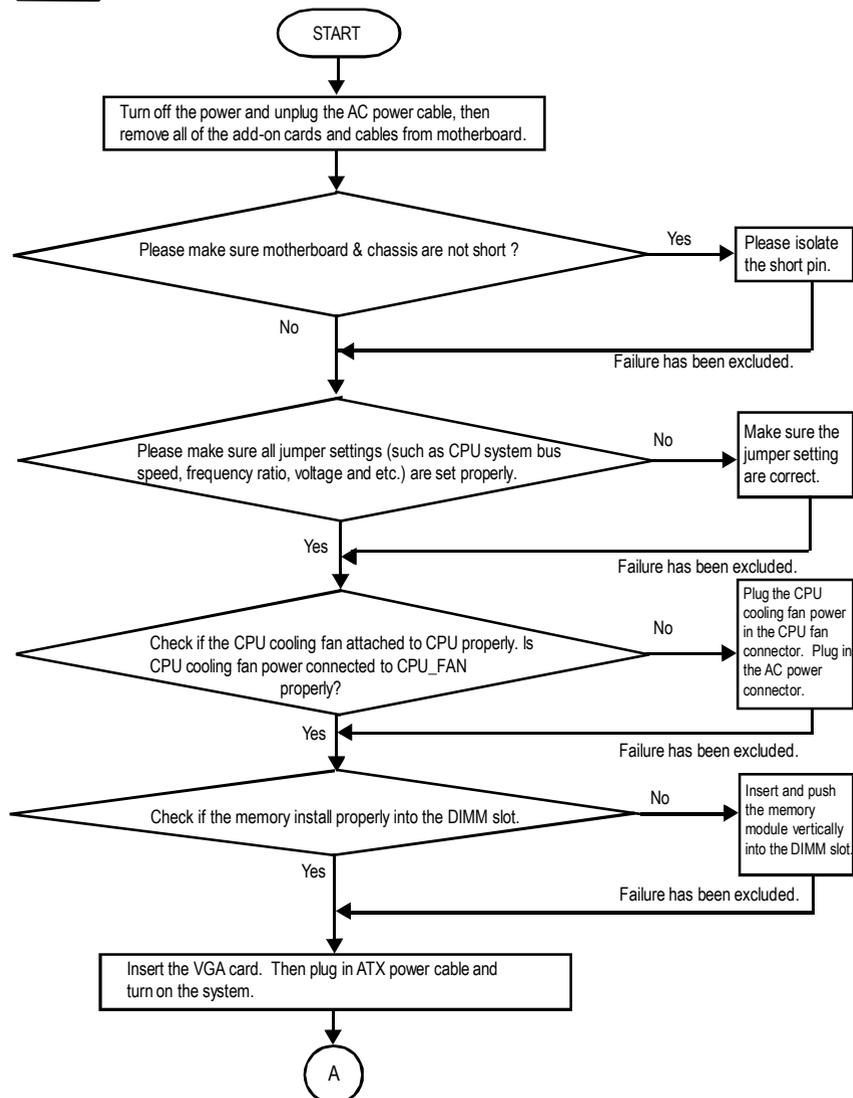
1. Advanced BIOS features-->(SATA)/RAID/SCSI boot order: "SCSI"
2. Advanced BIOS features--> First boot device: "SCSI"

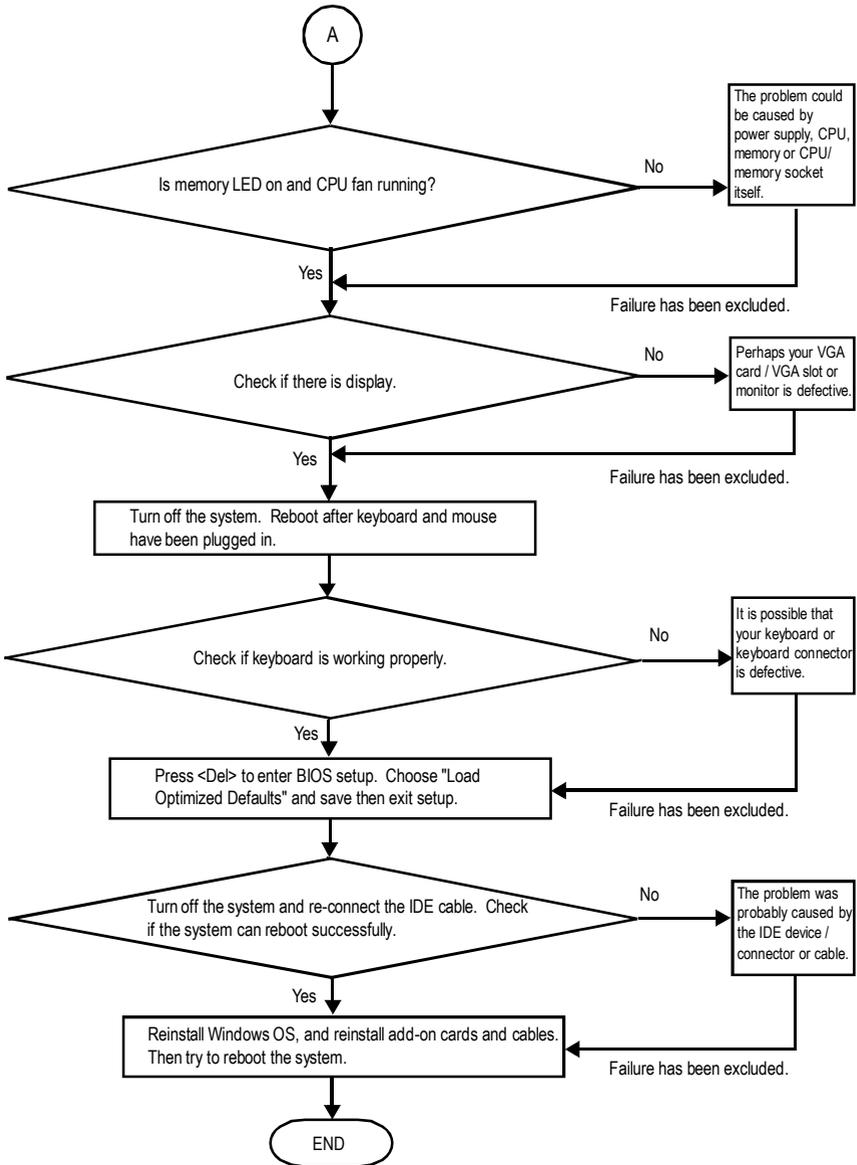
Then it depends on the mode(RAID or ATA) that you need to set in RAID/ SCSI BIOS.

Troubleshooting



If you encounter any trouble during boot up, please follow the troubleshooting procedures .





If the above procedure unable to solve your problem, please contact with your local retailer or national distributor for help. Or, you could submit your question to the service mail via Gigabyte website technical support zone (<http://www.gigabyte.com.tw>). The appropriate response will be provided ASAP.

Technical Support/RMA Sheet

Customer/Country:	Company:	Phone No.:
Contact Person:	E-mail Add. :	

Model name/Lot Number:	PCB revision:
BIOS version:	O.S./A.S.:

Hardware Configuration	Mfs.	Model name	Size:	Driver/Utility:
CPU				
Memory				
Brand				
Video Card				
Audio Card				
HDD				
CD-ROM / DVD-ROM				
Modem				
Network				
AMR / CNR				
Keyboard				
Mouse				
Power supply				
Other Device				

Problem Description:

Acronyms

Acronyms	Meaning
ACPI	Advanced Configuration and Power Interface
APM	Advanced Power Management
AGP	Accelerated Graphics Port
AMR	Audio Modem Riser
ACR	Advanced Communications Riser
BIOS	Basic Input / Output System
CPU	Central Processing Unit
CMOS	Complementary Metal Oxide Semiconductor
CRIMM	Continuity RIMM
CNR	Communication and Networking Riser
DMA	Direct Memory Access
DMI	Desktop Management Interface
DIMM	Dual Inline Memory Module
DRM	Dual Retention Mechanism
DRAM	Dynamic Random Access Memory
DDR	Double Data Rate
ECP	Extended Capabilities Port
ESCD	Extended System Configuration Data
ECC	Error Checking and Correcting
EMC	Electromagnetic Compatibility
EPP	Enhanced Parallel Port
ESD	Electrostatic Discharge
FDD	Floppy Disk Device
FSB	Front Side Bus
HDD	Hard Disk Device
IDE	Integrated Dual Channel Enhanced
IRQ	Interrupt Request

to be continued.....

Acronyms	Meaning
IOAPIC	Input Output Advanced Programmable Input Controller
ISA	Industry Standard Architecture
LAN	Local Area Network
I/O	Input / Output
LBA	Logical Block Addressing
LED	Light Emitting Diode
MHz	Megahertz
MIDI	Musical Instrument Digital Interface
MTH	Memory Translator Hub
MPT	Memory Protocol Translator
NIC	Network Interface Card
OS	Operating System
OEM	Original Equipment Manufacturer
PAC	PC I.A.G.P. Controller
POST	Power-On Self Test
PCI	Peripheral Component Interconnect
RIMM	Rambus in-line Memory Module
SCI	Special Circumstance Instructions
SECC	Single Edge Contact Cartridge
SRAM	Static Random Access Memory

CONTACT US

Contact us via the information in this page all over the world.

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<http://tw.giga-byte.com/TechSupport/ServiceCenter.htm>
 Non-Tech. Support (Sales/Marketing issues):
<http://ggts.gigabyte.com.tw/nontech.asp>
 Website: <http://www.gigabyte.com.tw>

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 Fax: 1 (626) 854-9339
 Tech. Support:
<http://www.giga-byte.com/TechSupport/ServiceCenter.htm>
 Non-Tech. Support (Sales/Marketing issues):
<http://ggts.gigabyte.com.tw/nontech.asp>
 Website: <http://www.giga-byte.com>

• Germany

G.B.T. Technology Trading GmbH
 Tel: 49-40-2533040
 49-01803-428468 (Tech.)
 Fax: 49-40-25492343 (Sales)
 49-01803-428329 (Tech.)
 Tech. Support:
<http://de.giga-byte.com/TechSupport/ServiceCenter.htm>
 Non-Tech. Support (Sales/Marketing issues):
<http://ggts.gigabyte.com.tw/nontech.asp>
 Website: <http://www.gigabyte.de>

• Japan

Nippon Giga-Byte Corporation
 Website: <http://www.gigabyte.co.jp>

• U.K

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 Tel: 44-1908-362700
 Fax: 44-1908-362709
 Tech. Support:
<http://uk.giga-byte.com/TechSupport/ServiceCenter.htm>
 Non-Tech. Support (Sales/Marketing issues):
<http://ggts.gigabyte.com.tw/nontech.asp>
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 BE Tech.Support : 0900-84034 (☎ 0.4/M)
 Fax: +31 40 290 2089
 Tech. Support:
<http://nz.giga-byte.com/TechSupport/ServiceCenter.htm>
 Non-Tech. Support (Sales/Marketing issues):
<http://ggts.gigabyte.com.tw/nontech.asp>
 Website: <http://www.giga-byte.nl>

• China

NINGBO G.B.T. Tech. Trading CO., Ltd.
 Tech. Support:
<http://cn.giga-byte.com/TechSupport/ServiceCenter.htm>
 Non-Tech. Support (Sales/Marketing issues):
<http://ggts.gigabyte.com.tw/nontech.asp>
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