GA-8IRX

P4 Titan DDR Motherboard

USER'S MANUAL

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

Do not use AGP 2X card (3.3V) in this motherboard. It will burn and damage the motherboard due to Intel® 845 chipset can't support AGP 2X(3.3V).

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). If you install this card in GA-8IRX (or any AGP 4X only) motherboards without switching the jumper to 4X mode (1.5V), it will burn the motherboard.

Example 2: ATi Rage 128 Pro (Power Color) & SiS 305 golden finger is compatible with 2X/4X mode AGP slot, but it supports 2X(3.3V) only. If you install this card in GA-8IRX (or any AGP 4X only) motherboards, it will burn the motherboard.

Note : Although Gigabyte's AG32S graphics card is based on ATi Rage 128 Pro chip, the design of AG32S is compliance with AGP 4X (1.5V) specification. Therefore, AG32S will work fine with Intel 845 / 850 based motherboards.

Before you install PCI cards, please remove the Dual BIOS label from PCI slots if there is one.

Declaration of Conformity

We,Manufacturer/Importer

(full address)

G.B.T. Technology Träding GMbH

AusschlagerWeg 41,1F, 20537 Hamburg, Germany

declare that the product

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

Mother Board

GA-8IRX

is in conformity with

(reference to the specification under which conformity is declared)

in accordance with 89/336 EEC-EMC Directive

✍ **EN 55011**	Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM high frequency equipment	✍ **EN 61000-3-2*** ☞ **EN 60555-2**	Disturbances in supply systems cause by household appliances and similar electrical equipment "Harmonics"
✍ **EN 55013**	Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment	✍ **EN 61000-3-3*** ☞ **EN 60555-3**	Disturbances in supply systems cause by household appliances and similar electrical equipment "Voltage fluctuations"
✍ **EN 55014**	Limits and methods of measurement of radio disturbance characteristics of household electrical appliances, portable tools and similar electrical apparatus	☞ **EN 50081-1** ☞ **EN 50082-1**	Generic emission standard Part 1: Residual commercial and light industry Generic immunity standard Part 1: Residual commercial and light industry
✍ **EN 55015**	Limits and methods of measurement of radio disturbance characteristics of fluorescent lamps and luminaries	✍ **EN 55081-2**	Generic emission standard Part 2: Industrial environment
✍ **EN 55020**	Immunity from radio interference of broadcast receivers and associated equipment	✍ **EN 55082-2**	Generic emission standard Part 2: Industrial environment
☞ **EN 55022**	Limits and methods of measurement of radio disturbance characteristics of information technology equipment	✍ **ENV 55104**	Immunity requirements for household appliances tools and similar apparatus
✍ **DIN VDE 0855** ✍ **part 10** ✍ **part 12**	Cabled distribution systems; Equipment for receiving and/or **distribution** from sound and television signals	✍ **EN50091-2**	EMC requirements for uninterruptible power systems(UPS)
☞ **CEmarking**			(EC conformity marking)

The manufactuer also declares the conformity of above mentioned product

with the actual required safety standards in accordance with LVD 73/23EEC

✍ **EN 60065**	Safety requirements for mains operated electronic and related apparatus for household and similar general use	✍ **EN 60950**	
✍ **EN 60335**	Safety of household and similar electrical appliances	✍ **EN 50091-1**	

Manufacturer/Importer

Signature: _Timmy Huang_

Name: TimmyHuang

(Stamp)

Date: Oct. 11, 2001

DECLARATION OF CONFORMITY

Per FCC Part 2 Section 2.1077(a)

FC

Responsible Party Name: **G.B.T. INC.**

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-8IRX

Conforms to the following specifications:

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

Supplementary Information:

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

Representative Person's Name: ERIC_LU

Signature: Eric_Lu

Date: Oct. 11,2001

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
BBS	BIOS Boot Specification
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
I/O	Input / Output
IOAPIC	Input Output Advanced Programmable Input Controller
ISA	Industry Standard Architecture

to be continued…...

Acronyms	Meaning
LAN	Local Area Network
LBA	Logical Block Addressing
LED	Light Emitting Diode
MHz	Megahertz
MIDI	Musical Interface Digital Interface
MTH	Memory Translator Hub
MPT	Memory Protocol Translator
NIC	Network Interface Card
OS	Operating System
OEM	Original Equipment Manufacturer
PAC	PCI 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
SMP	Symmetric Multi-Processing
SMI	System Management Interrupt
USB	Universal Serial Bus
VID	Voltage ID

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:

_____

_____

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Before you install PCI cards, please remove the Dual BIOS label from PCI slots if there is one.

- 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 RESULTERA !

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

Advertencia: Nunca haga funcionar el procesador sin el disipador 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!

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(full address)

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Manufacturer/Importer

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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:

_____

_____

Table of Content

Item Checklist

- ? The GA-8IRX motherboard
- ? IDE cable x 1/ Floppy cable x 1
- ? CD for motherboard driver & utility (IUCD)
- ? GA-8IRX user's manual
- ? Quick PC Installation Guide
- ? USB Cable x 1

WARNING!

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 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 ower 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 write 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

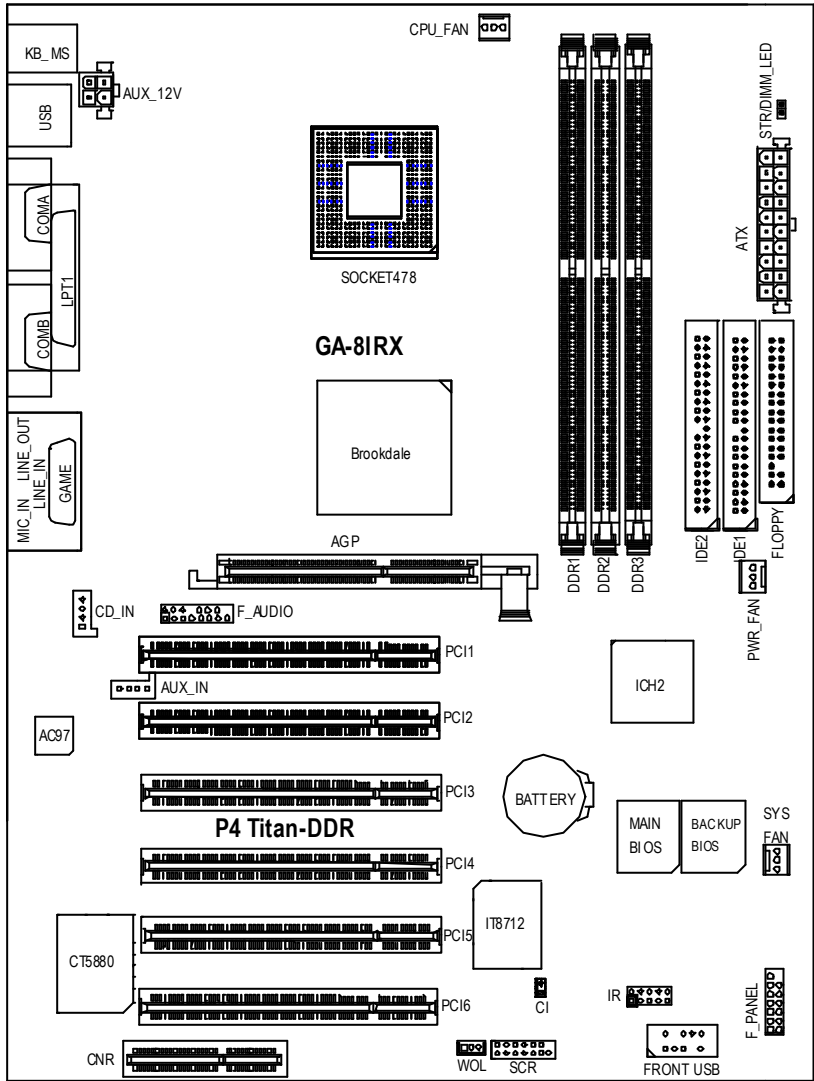| Form Factor	☞ 30.5cm x 22.8cm ATX size form factor, 4 layers PCB.
CPU	☞ Socket 478 for Intel® Micro FC-PGA2 Pentium® 4 processor
	☞✍ Support Intel ® Pentium ® 4 (Northwood, 0.13um) processor
	☞ Intel Pentium®4 400MHz FSB
	☞ 2nd cache depend on CPU
Chipset	☞ Chipset 82845 HOST/AGP/Controller
	☞ 82801BA(ICH2) I/O Controller Hub
Memory	☞ 3 184-pin DDR DIMM sockets
	☞ Supports PC1600 DDR or PC2100 DDR DIMM
	☞ Supports up to 2GB DRAM (Max)
	☞ Supports only 2.5V DDR DIMM
	☞ Supports 64bit ECC type DRAM integrity mode
I/O Control	☞ IT8712
Slots	☞ 1 CNR(Communication and Networking Riser) Slot
	☞ 1 AGP slot 4X (1.5V) device support
	☞ 6 PCI slot supports 33MHz & PCI 2.2 compliant
On-Board IDE	☞ An IDE controller on the Intel 82801BA PCI chipset provides IDE HDD/CD-ROM with PIO, Bus Master (Ultra DMA33/ATA66/ATA100) operation modes.
	☞ Can connect up to four IDE devices
On-Board Peripherals	☞ 1 Floppy port supports 2 FDD with 360K, 720K,1.2M, 1.44M and 2.88M bytes.
	☞ 1 Parallel port supports Normal/EPP/ECP mode
	☞ 2 Serial ports (COMA&COMB)
	☞ 4 USB ports (Rear USB x 2, Front USB x 2)
	☞ 1 SCR connector
	☞ 1 IrDA connector for IR
Hardware Monitor	☞ CPU/Power/System Fan Revolution detect
	☞ CPU/Power/System Fan Control
	☞ CPU Overheat Warning
	☞ System Voltage Detect

On-Board Sound	☞ Creative CT5880 Sound Chipset + Sigmatel 9708T CODEC
	☞ Line In/Line Out/Mic In/CD In/AUX_IN/Game Port
PS/2 Connector	☞ PS/2 Keyboard interface and PS/2 Mouse interface
BIOS	☞ Licensed AWARD BIOS, 4M bit x 2 FWH
	☞ Supports Dual BIOS
Additional Features	☞ PS/2 Keyboard power on by password
	☞ PS/2 Mouse power on
	☞ External Modem wake up
	☞ STR(Suspend-To-RAM)
	☞ Wake on LAN
	☞ AC Recovery
	☞ USB KB/Mouse wake up from S3
	☞ Supports @BIOS
	☞ Supports EasyTuneIII
	☞ Supports Multi Language
Special Features	☞ Over Voltage (DDR / AGP)
	☞ Over Clock (CPU / DDR)

⚠ Please set the CPU host frequency in accordance with your processor's specifications. We don't recommend you to set the system bus frequency over the CPU's specification because these specific bus frequencies are not the standard specifications for CPU, chipset and most of the peripherals. Whether your system can run under these specific bus frequencies properly will depend on your hardware configurations, including CPU, Chipsets,SDRAM,Cards….etc.

GA-8IRX Motherboard Layout

Labels in the figure:
CPU_FAN, KB_MS, AUX_12V, USB, COMA, LPT1, COMB, MIC_IN, LINE_OUT, LINE_IN, GAME, SOCKET478, **GA-8IRX**, Brookdale, AGP, CD_IN, F_AUDIO, PCI1, AUX_IN, PCI2, AC97, PCI3, BATTERY, **P4 Titan-DDR**, PCI4, CT5880, PCI5, IT8712, PCI6, CI, IR, CNR, WOL, SCR, FRONT USB, F_PANEL, MAIN BIOS, BACKUP BIOS, SYS FAN, ICH2, PWR_FAN, DDR1, DDR2, DDR3, IDE2, IDE1, FLOPPY, ATX, STR/DIMM_LED

Chapter 2 Hardware Installation Process

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

        Step 1- Install the Central Processing Unit (CPU)

        Step 2- Install memory modules

        Step 3- Install expansion cards

        Step 4- Connect ribbon cables, cabinet wires, and power supply

        Step 5- Setup BIOS software

        Step 6- Install supporting software tools
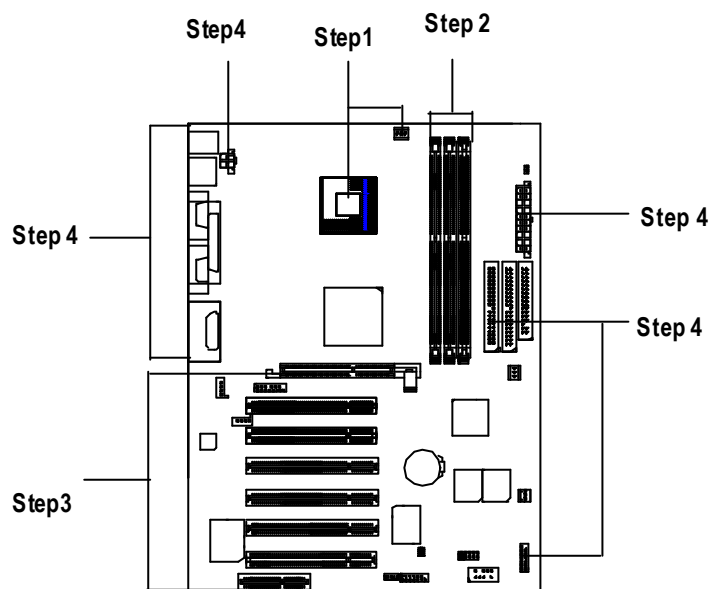
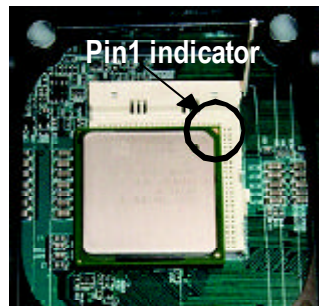# Step 1: Install the Central Processing Unit (CPU)
Step 1-1 CPU Installation

CPU Top View
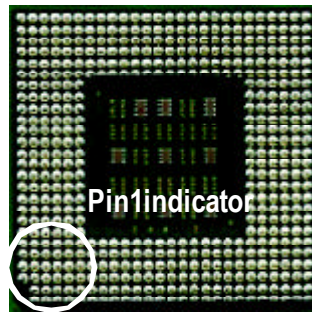
CPU Bottom View
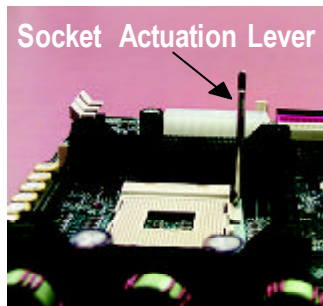
1. Pull up the CPU socket lever and up to 90-degree angle.

3. Press down the CPU socket lever and finish CPU installation.

2. 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.

? **Please make sure the CPU type is supported by the motherboard.**

? **If you do not match the CPU socket Pin 1 and CPU cut edge well, it will cause improper installation. Please change the insert orientation.**

Step 1-2 : CPU Heat Sink Installation
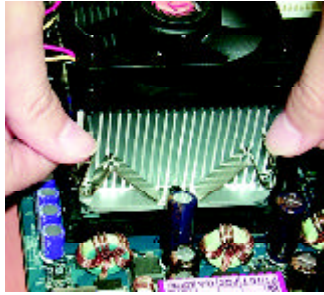
1. Hook one end of the cooler bracket to the CPU socket first.
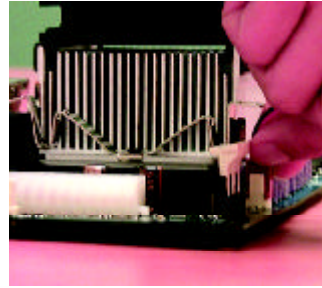
2. Hook the other end of the cooler bracket to the CPU socket.

? **Please use Intel approved cooling fan.**

? **We recommend you to apply the thermal tape to provide better heat conduction between your CPU and heatsink.**
(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 alone 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.)

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

? **Please refer to CPU heat sink user's manual for more detail installation procedure.**

Step 2: Install memory modules

The motherboard has 3 dual inline memory module (DIMM) sockets, but it can only support a maximum of 4 banks of DDR memory. DDR slot 1 uses 2 banks, DDR slot 2&3 share the remaining 2 banks. Please refer to the following tables for possible memory configurations supported. The BIOS will automatically detects memory type and size. To install the memory module, just push it vertically into the DIMM Slot. The DIMM module can only fit in one direction due to the notch. Memory size can vary between sockets.

Total Memory Sizes With Unbuffered DDR DIMM

Devices used on DIMM	1 DIMM x 64 / x 72	2 DIMMs x 64 / x 72	3 DIMMs x 64 / x 72
64 Mbit (2Mx 8 x 4 banks)	128MBytes	256MBytes	256MBytes
64 Mbit (1Mx 16 x 4 banks)	32 MBytes	64 MBytes	96 MBytes
128 Mbit(4Mx 8 x 4 banks)	256MBytes	512MBytes	512MBytes
128 Mbit(2Mx 16 x 4 banks)	64 MBytes	128MBytes	196MBytes
256 Mbit(8Mx 8 x 4 banks)	512MBytes	1 GBytes	1 GBytes
256 Mbit(4Mx 16 x 4 banks)	128MBytes	256MBytes	384MBytes
512 Mbit(16Mx 8 x 4 banks)	1 GBytes	2 GBytes	2 GBytes
512 Mbit(8Mx 16 x 4 banks)	256MBytes	512MBytes	768MBytes

Notes: Double-sided x 16 DDR memory devices are not support by Intel 845 chipset.

DDR1	DDR2	DDR3
S	S	S
D	S	S
D	D	X
D	X	D
S	D	X
S	X	D

DDR

D:Double Sided DIMM   S:Single Sided DIMM
X:Not Use

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.

? **When STR/DIMM LED is ON, do not install/remove DIMM from socket.**

? **Please note that the DIMM module can only fit in one direction due to the two notches. Wrong orientation will cause improper installation. Please change the insert orientation.**

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, 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.
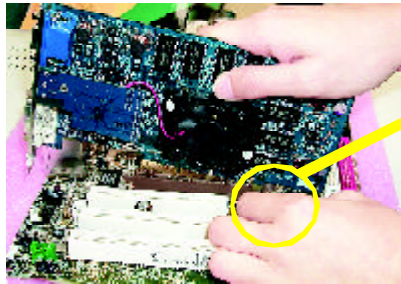
AGP Card

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.
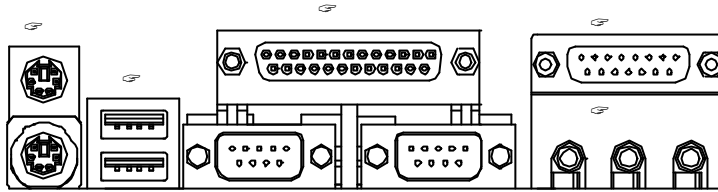
Issues To Beware Of When Installing CNR

Please use standard CNR card like the one in order to avoid mechanical problem.
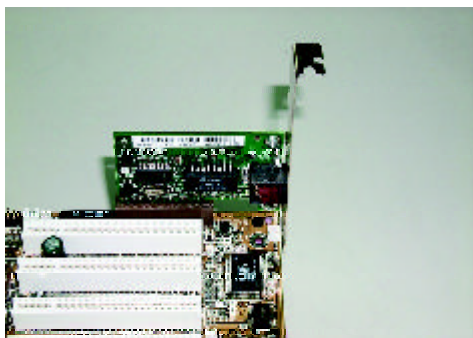
Standard CNR Card

Step 4: Connect ribbon cables, cabinet wires, and power supply

Step 4-1 : I/O Back Panel Introduction
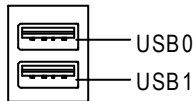

☞ **PS/2 Keyboard and PS/2 Mouse Connector**

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.
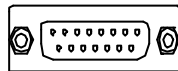
☞ **USB Connector**

USB0
USB1

✍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 (Win 95 with USB supplement, Win98, Windows 2000, Windows ME, WinNT with SP 6) 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.

☞ **Parallel Port and Serial Ports (COMA/COMB)**

Parallel Port
(25 pin Female)
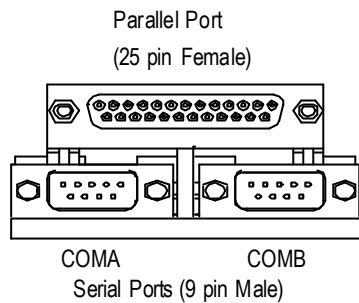
✍This connector supports 2 standard COM ports and 1 Parallel port. Device like printer can be connected to Parallel port ; mouse and modem etc can be connected to Serial ports.
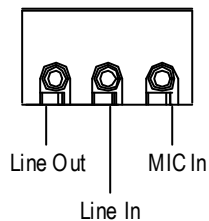
COMA   COMB
Serial Ports (9 pin Male)

☞ **Game /MIDI Ports**

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

Joystick / MIDI (15 pin Female)

☞ **Audio Connectors**

Line Out   MIC In

Line In

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

Please note: Line Out 1: Line Out or SPDIF (The SPDIF output is capable of providing digital audio to external speakers or compressed AC3 data to an external Dolby digital decoder). To enable SPDIF, simply insert SPDIF connector into Line Out1. Line Out1 will become SPDIF Out automatically.

To enable Four Speaker (for Creative 5880 audio only), and Line In will become Line Out2 to support second pair of stereo speakers.

If you want to realize the "Four Speaker & SPDIF " setup information in detail, please download this manual from Gigabyte web http://www.gigabyte.com.tw.

Step 4-2 : Connectors Introduction
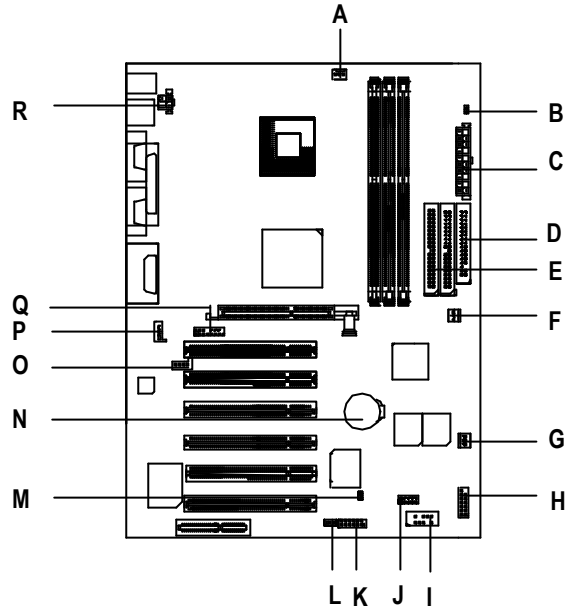
A) CPU_FAN	J) IR/CIR
B) STR/DIMM_LED	K) SCR
C) ATX	L) WOL
D) FLOPPY	M) CI
E) IDE1/IDE2	N) BAT
F) PWR_FAN	O) AUX_IN
G) SYS_FAN	P) CD_IN
H) F_PANEL	Q) F_AUDIO
I) FRONT_USB	R) AUX_12V

R) AUX_12V(+12V Power Connector)

⍓ This connector (ATX +12V) is used only for CPU Core Voltage.

```
      1 3
GND  ┌────┐ +12V
GND  └────┘ +12V
      2 4
```
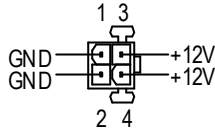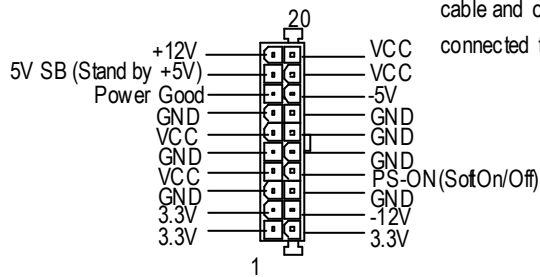
A) CPU_FAN (CPU Fan Connector)

⍓ Please note, a proper installation of the CPU cooler is essential to prevent the CPU from running under abnormal condition or damaged by overheating.The CPU fan connector supports Max. current up to 600mA .

```
    ┌─┐ Sense
  1 │ │ +12V/Control
    └─┘ GND
CPU_FAN
```
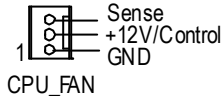
F) PWR_FAN (Power Fan Connector)

```
  1 ┌─┐ GND
    │ │ +12V/Control
    └─┘ Sense
```

G) SYS_FAN (System Fan Connector)

```
    ┌─┐ Sense
    │ │ +12V/Control
  1 └─┘ GND
```
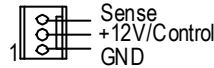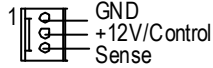
C) ATX (ATX Power Connector)

⍓ AC power cord should only be connected to your power supply unit after ATX power cable and other related devices are firmly connected to the mainboard.

```
                    20
+12V ─────────────┌──┐ VCC
5V SB (Stand by +5V) ─│  │ VCC
Power Good ──────────│  │ -5V
GND ─────────────────│  │ GND
VCC ─────────────────│  │ GND
GND ─────────────────│  │ GND
VCC ─────────────────│  │ PS-ON(Soft On/Off)
GND ─────────────────│  │ GND
3.3V ────────────────│  │ -12V
3.3V ────────────────└──┘ 3.3V
                    1
```

E) IDE1 / IDE2 Connector(Primary/Secondary]
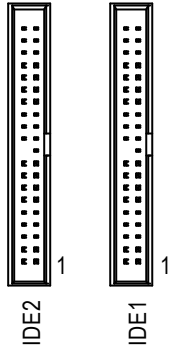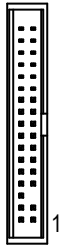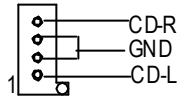
☞ Important Notice:
  Please connect first harddisk to IDE1
  and connect CDROM to IDE2.

IDE2   IDE1
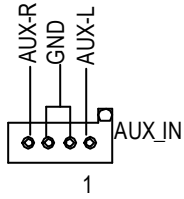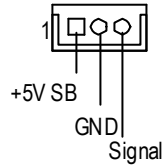
D) FLOPPY (Floppy Connector)

P) CD_IN (CD Audio Line In Connector)

CD-R
GND
CD-L
1

O) AUX_IN (AUX In Connector)

AUX-R
GND
AUX-L

AUX_IN
1

L) WOL(Wake on LAN)

1

+5V SB
GND
Signal

I) FRONT_USB (Front USB Connector)

GND
NC
USB D3+
USB D3-
Power

1

Power
USB D2-
USB D2+
NC
GND

✍ Be careful with the polarity of the front panel USB connector. Check the pin assignment while you connect the front panel USB cable. Please contact your nearest dealer for optional front panel USB cable.
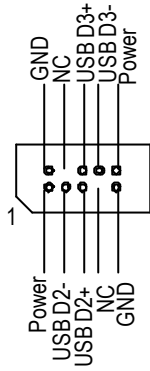
Q) F_AUDIO (F_AUDIO Connector)
There are two types of front audio connector, please refer to the tables below before you install.

Incase speaker (L)
GND
GND
GND
Rear Audio (R)
Rear Audio (L)

1

Incase speaker (R)
GND
MIC
+12V
Front Audio (R)
Front Audio (L)
GND

Type1

✍ If you want to use type 1-Front Audio connector, you must remove 11-12, 13-14 Jumper. If you want to use type 2-Front Audio connector, you must remove 3-4, 5-6 Jumper.
In order to utilize the front audio header, your chassis must have front audio connector. Also please make sure the pin assigment on the cable is the same as the pin assigment on the MB header. To find out if the chassis you are buying support front audio connector, please contact your dealer

GND
Rear Audio (R)
Rear Audio (L)

1

MIC
Front Audio (R)
Front Audio (L)
GND
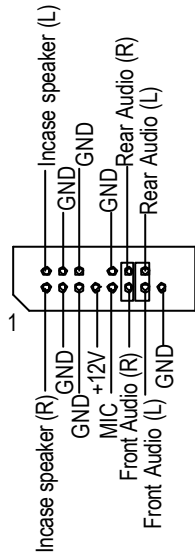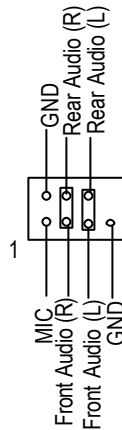
Type2

B) STR/DIMM_LED

STR/DIMM LED

? Do not remove memory modules while DIMM LED is on. It might cause short or other unexpected damages due to the 2.5V stand by voltage. Remove memory modules only when STR function is disabled by jumper and AC Power cord is disconnected.

K) SCR (Smart Card Reader Header)

NC NC DATA NC DATA DATA NC

1

VCC VCC DATA Clock NC GND NC
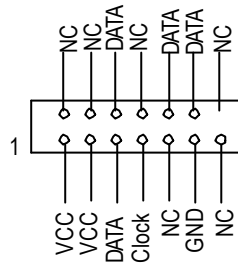
? This MB supports smart card reader. To enable smart card reader function an optional smart card reader box is required. Please contact your autherized distributor.

J) IR/CIR (IR/CIR)

NC CIRRX VCC GND NC

1

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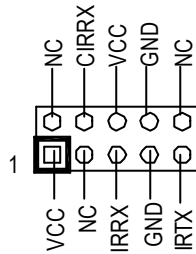
? Make sure the pin 1 on the IR device is aling with pin one the connector. To enable the IR/CIR function on the board, you are required to purchase an option IR/CIR module. For detail information please contact your autherized Giga-Byte distributor.
To use IR function only, please connect IR module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

M) CI (CASE OPEN)

GND
1 Signal
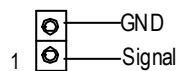
? This 2 pin connector allows your system to enable or disable the system alarm if the system case begin remove.

H) F_PANEL (2x7 pins jumper)
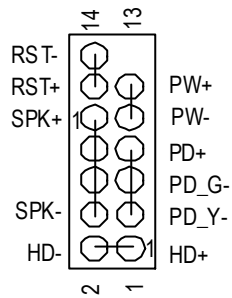
HD (IDE Hard Disk Active LED)	Pin 1: LED anode(+)
	Pin 2: LED cathode(-)
SPK (Speaker Connector)	Pin 1: VCC(+)
	Pin 2- Pin 3: NC
	Pin 4: Data(-)
RST (Reset Switch)	Open: Normal Operation
	Close: Reset Hardware System
PD+/PD_G-/PD_Y-(Power LED)	Pin 1: LED anode(+)
	Pin 2: LED cathode(-)
	Pin 3: LED cathode(-)
PW (Soft Power Connector)	Open: Normal Operation
	Close: Power On/Off

? Please connect the power LED, PC speaker, reset switch and power switch etc of your chassis front panel to the F_PANEL connector according to the pin assignment above.

N) BAT (Battery)
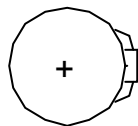
CAUTION

? 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.

Chapter 3 BIOS Setup

BIOS Setup is an overview of the BIOS Setup Program. The program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM so that it retains the Setup information when the power is turned off.

ENTERING SETUP

After power on the computer, pressing **<Del>** immediately during POST (Power On Self Test) it will allow you to enter standard BIOS CMOS SETUP.

If you require more advanced BIOS settings, please go to "Advanced BIOS" setting menu. To enter Advanced BIOS setting menu, press "Ctrl+F1" key on the BIOS screen.

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

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.

Dual BIOS / Q-Flash Utility

After power on the computer, pressing <Del> immediately during POST (Power On Self Test) it will allow you to enter Award BIOS CMOS SETUP, then press <F8> to enter DualBIOS/Q-Flash utility. *If you want to detail information for "DualBIOS/Q-Flash Utility ", please download this manual from Gigabyte web*

http://www.gigabyte.com.tw.

Select Language

You can press <F3> to select multi language. There are 7 languages available, including English, Japanese, French, Spanish, Germany, Simplified Chinese, Traditional Chinese.

CMOS Setup Utility-Copyright (C) 1984-2002 Award Software

Standard CMOS Features	Select Language
Advanced BIOS Features	Load Fail-Safe Defaults
Integrated Peripherals	Load Optimized Defaults
Power Management Setup	Set Supervisor Password
PnP/PCI Configurations	Set User Password
PC Health Status	Save & Exit Setup
Frequency/Voltage Control	Exit Without Saving
Top Performance	

Select Language

English	[■]
Français	[ ]
Deutsch	[ ]
Español	[ ]
简体中文	[ ]
繁體中文	[ ]
日本語	[ ]

? **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.

? **Advanced Chipset Features**

This setup page includes all the items of chipset special features.

We would not suggest you change the chipset default setting unless you really need it.

? **Integrated Peripherals**

This setup page includes all onboard peripherals.

We would not suggest you change the default setting unless you really need it. For power End-User use only.

? **Power Management Setup**

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

We would not suggest you change the default setting unless you really need it. For power End-User use only.

? **PnP/PCI Configurations**

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

We would not suggest you change the default setting unless you really need it. For power End-User use only.

? **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.

For power End-User use only.

? **Select Language**

This setup page is select multi language.
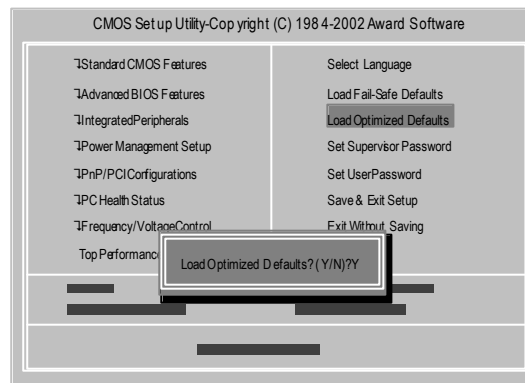
? **Load Fail-Safe Defaults**

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.

Load Optimized Default

```
         CMOS Setup Utility-Copyright (C) 1984-2002 Award Software

   Standard CMOS Features              Select Language
   Advanced BIOS Features              Load Fail-Safe Defaults
   Integrated Peripherals              Load Optimized Defaults
   Power Management Setup              Set Supervisor Password
   PnP/PCI Configurations              Set User Password
   PC Health Status                    Save & Exit Setup
   Frequency/Voltage Control           Exit Without Saving

     Top Performanc┌─────────────────────────────────┐
                    │ Load Optimized Defaults? (Y/N)?Y │
                    └─────────────────────────────────┘
```
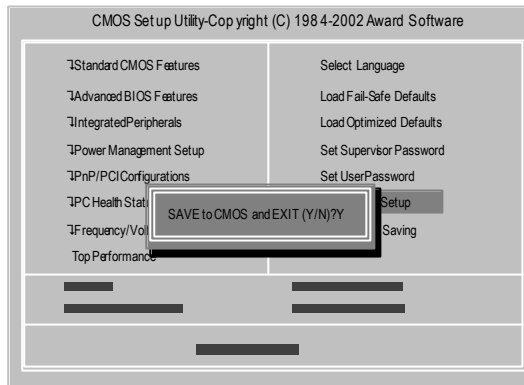
? **Load Optimized Defaults**

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

To Load Optimized, move cursor, by pressing the arrow keys on the keyboard ,to highlight the optimized default and press enter key then press "Y" if you decide to load this option.

Save & Exit Setup

```
              CMOS Set up Utility-Cop yright (C) 198 4-2002 Award Software

     ꒃStandard CMOS Features              Select Language
     ꒃAdvanced BIOS Features              Load Fail-Safe Defaults
     ꒃIntegrated Peripherals              Load Optimized Defaults
     ꒃPower Management Setup              Set Supervisor Password
     ꒃPnP/PCI Configurations              Set User Password
     ꒃPC Health Stati ┌─────────────────────────┐ Setup
     ꒃFrequency/Vol   │ SAVE to CMOS and EXIT (Y/N)?Y │ Saving
      Top Performance └─────────────────────────┘
```

✍ To save exit the BIOS setting screen press F10, and press "Y" if
   you want to save setting. By typing "N" or "ESC" will take you
   back to setup screen.

If you want to realize the BIOS setup information in detail, please down-
load this manual from Gigabyte web http://www.gigabyte.com.tw.

Chapter 4 Driver Intallation

Picture below are shown in Windows ME (IUCD driver version 1.9)

Insert the driver CD-title that came with your motherboard into your CD-ROM driver, 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.

A. Installing Intel 845 Chipset Driver
Please install this driver as the first priority.
this item installs the chipset driver utility that
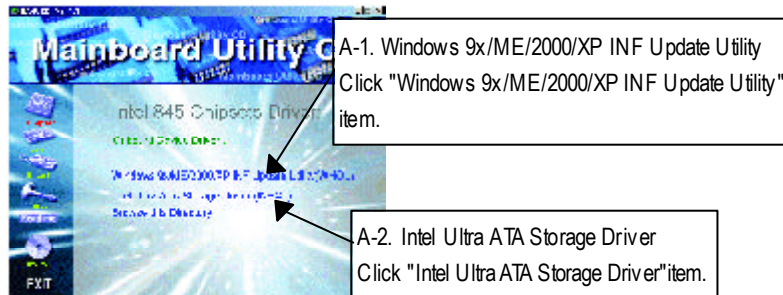enableds Plug-n-Plag INF support for Intel
chipset component.

B. Installing Sound Driver
Click this item to install sound driver.

A: Intel 845 Chipset Driver Installation

Follow the setup that showing on the scween to install the Utility.

A-1. Windows 9x/ME/2000/XP INF Update Utility
Click "Windows 9x/ME/2000/XP INF Update Utility" item.

A-2. Intel Ultra ATA Storage Driver
Click "Intel Ultra ATA Storage Driver"item.

B: Sound Driver Installation

Press "Audio" icon.

1.Click "Creative CT5880 Sound Driver" item.