

GA-8SGXP-FS  
P4 Titan Series Motherboard

# USER'S MANUAL

Pentium® 4 Processor Motherboard  
Rev. 2001  
12ME-8SGXPFS-2001

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\* This item will not be shown if you are using a CPU with the locked ratio.



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 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 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	<ul style="list-style-type: none"> <li>• 30.5cm x 24.4cm ATX size form factor, 4 layers PCB</li> </ul>
CPU	<ul style="list-style-type: none"> <li>• Socket 478 for Intel® Micro FC-PGA2 Pentium® 4 processor</li> <li>• Support Intel® Pentium® 4 (Northwood, Prescott) processor</li> <li>• Support Intel® Pentium® 4 Processor with HT Technology <sup>(Note)</sup></li> <li>• Intel® Pentium® 4 800/533/400MHz FSB</li> <li>• 2nd cache depends on CPU</li> </ul>
Chipset	<ul style="list-style-type: none"> <li>• SiS 648FX HOST/AGP/Controller</li> <li>• SiS 964 MuTIOL Media I/O</li> </ul>
Memory	<ul style="list-style-type: none"> <li>• 2 x 184-pin DDR DIMM sockets</li> <li>• Supports DDR400/DDR333/DDR266/DDR200 DIMM</li> <li>• Supports up to 2GB DRAM (Max)</li> <li>• Supports only 2.5V DDR DIMM</li> </ul>
I/O Control	<ul style="list-style-type: none"> <li>• IT8705AF</li> </ul>
Slots	<ul style="list-style-type: none"> <li>• 1 AGP slot supports 8X/4X mode</li> <li>• 5 PCI slots support 33MHz &amp; PCI 2.2 compliant</li> </ul>
On-Board IDE	<ul style="list-style-type: none"> <li>• 2 IDE bus master (UDMA33/ATA66/ATA100/ATA133) IDE ports for up to 4 ATAPI devices</li> <li>• Supports PIO mode3, 4 (UDMA 33/ATA66/ATA100/ATA133) IDE &amp; ATAPI CD-ROM</li> </ul>
Serial ATA	<ul style="list-style-type: none"> <li>• Built-in SiS 964 chipset</li> <li>• 2 Serial ATA connectors in 150 MB/s operation mode</li> </ul>
On-Board Peripherals	<ul style="list-style-type: none"> <li>• 1 Floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88M bytes</li> <li>• 1 Parallel port supports Normal/EPP/ECP mode</li> <li>• 1 Serial port (COMA)</li> <li>• 8 USB 2.0/1.1 ports (4 x Rear, 4 x Front by cable)</li> <li>• 2 IEEE1394 (1 rear, 1 front by cable, rear IEEE 1394 optional)</li> <li>• 1 Front Audio connector</li> </ul>
Hardware Monitor	<ul style="list-style-type: none"> <li>• CPU/System/Power fan revolution detect</li> <li>• CPU temperature detect</li> <li>• System voltage detect</li> <li>• CPU smart fan control</li> <li>• CPU thermal shutdown</li> </ul>

to be continued...

On-Board LAN	<ul style="list-style-type: none"> <li>• Built-in SiS 964 chipset Data transfer rate 10/100 supported</li> <li>• 1 RJ45 port</li> </ul>
On-Board Sound	<ul style="list-style-type: none"> <li>• Realtek ALC655 codec</li> <li>• Supports Jack-Sensing function</li> <li>• Line Out / 2 front speaker</li> <li>• Line In / 2 rear speaker (by s/w switch)</li> <li>• Mic In / center &amp; subwoofer (by s/w switch)</li> <li>• SPDIF Out</li> <li>• AUX In</li> </ul>
On-Board 1394	<ul style="list-style-type: none"> <li>• Built-in VT6307 chip</li> </ul>
PS/2 Connector	<ul style="list-style-type: none"> <li>• PS/2 Keyboard interface and PS/2 Mouse interface</li> </ul>
BIOS	<ul style="list-style-type: none"> <li>• Licensed AWARD BIOS</li> <li>• Supports Q-Flash</li> </ul>
Additional Features	<ul style="list-style-type: none"> <li>• PS/2 Keyboard power on by password</li> <li>• PS/2 Mouse power on</li> <li>• External Modem wake up</li> <li>• STR(Suspend-To-RAM)</li> <li>• Wake on LAN (WOL)</li> <li>• AC Recovery</li> <li>• Poly fuse for keyboard over-current protection</li> <li>• USB KB/Mouse wake up from S3</li> <li>— Supports clear password function</li> </ul>



#### HT functionality requirement content :

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

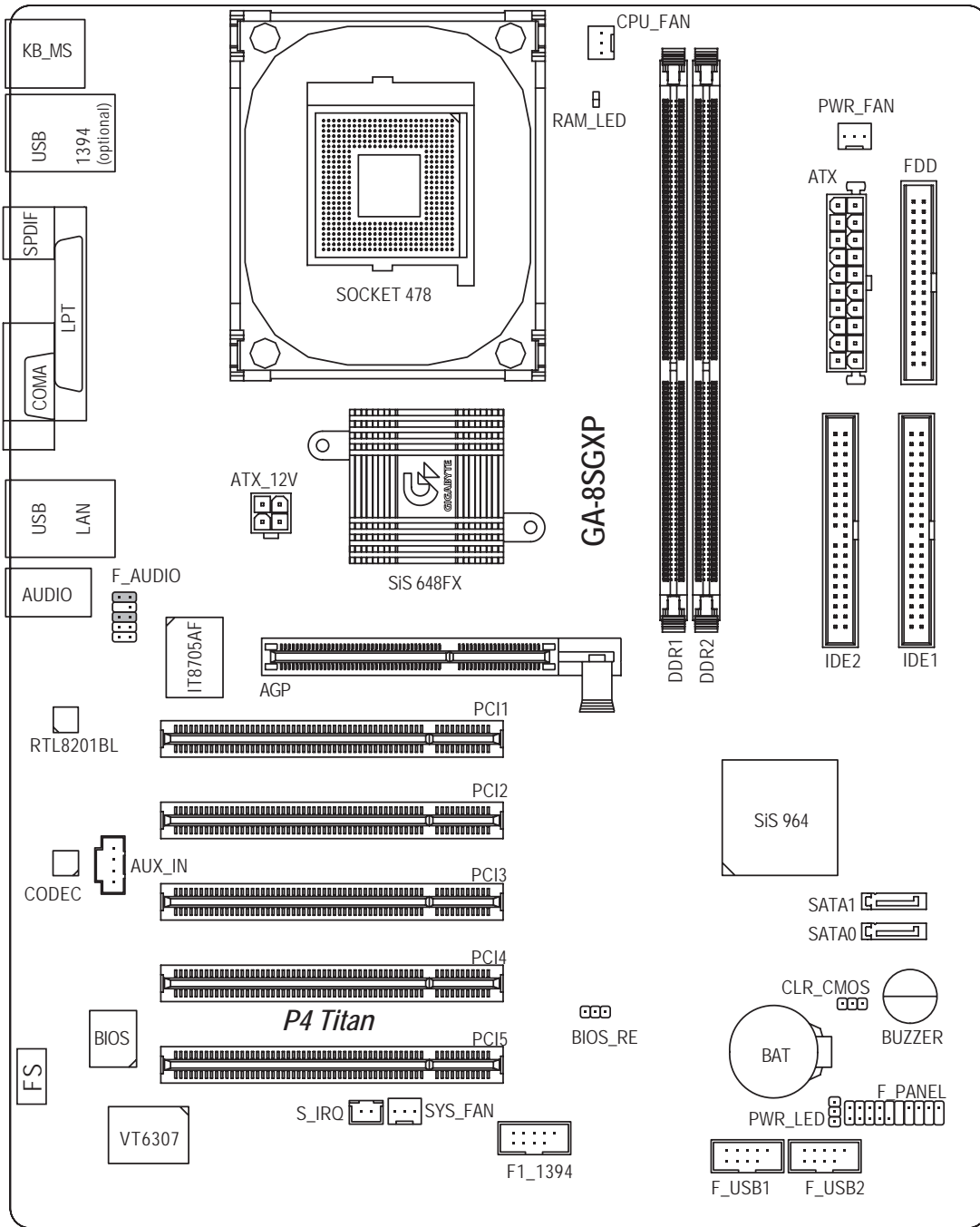
- CPU: An Intel® Pentium 4 Processor with HT Technology
- Chipset: A SiS® Chipset that supports HT Technology
- BIOS: A BIOS that supports HT Technology and has it enabled
- OS: An operation system that has optimizations for HT Technology



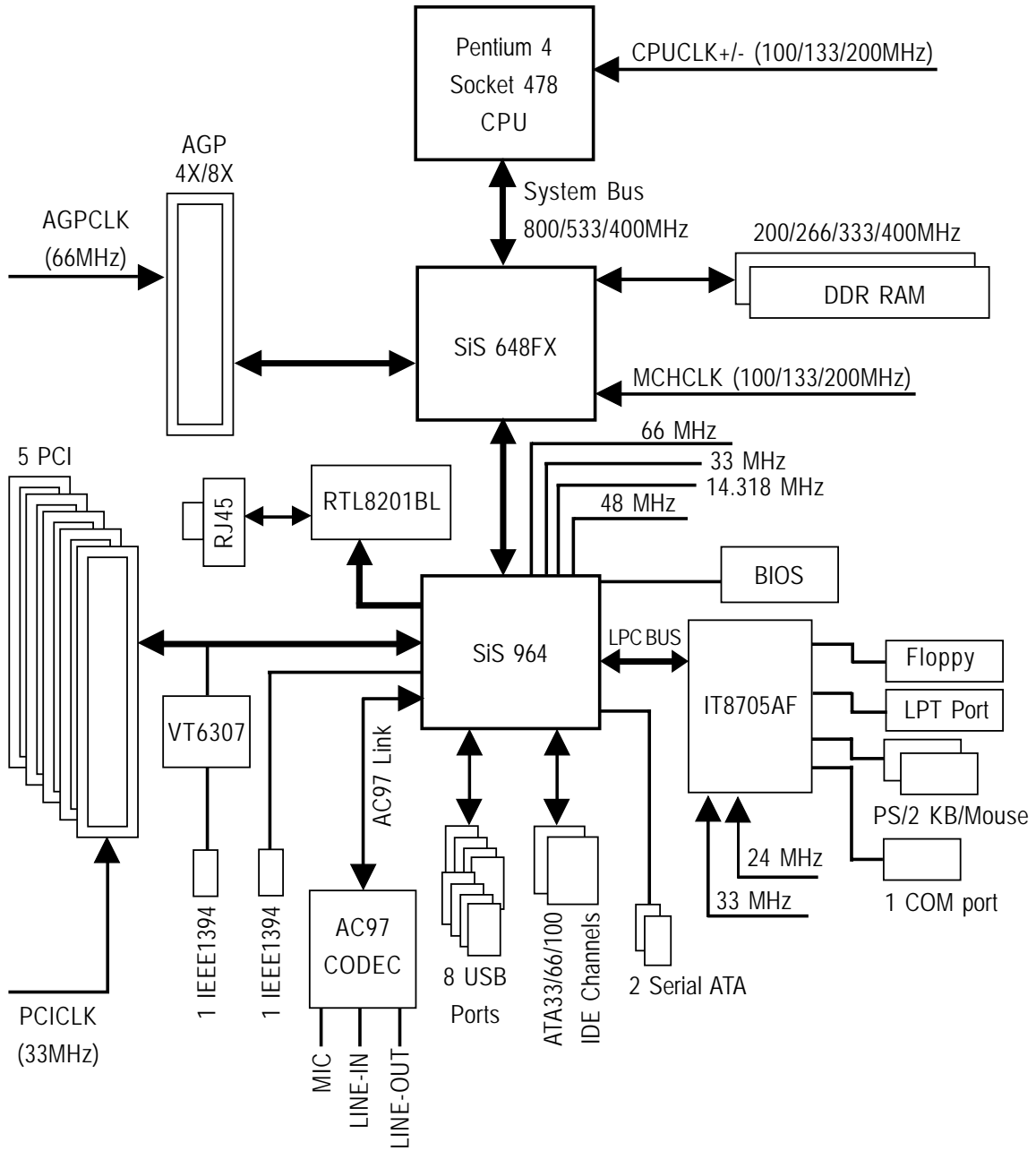
Please set the CPU host frequency in accordance with your processor's specifications.

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, Memory, Cards...etc.

# GA-8SGXP-FS Motherboard Layout



# Block Diagram





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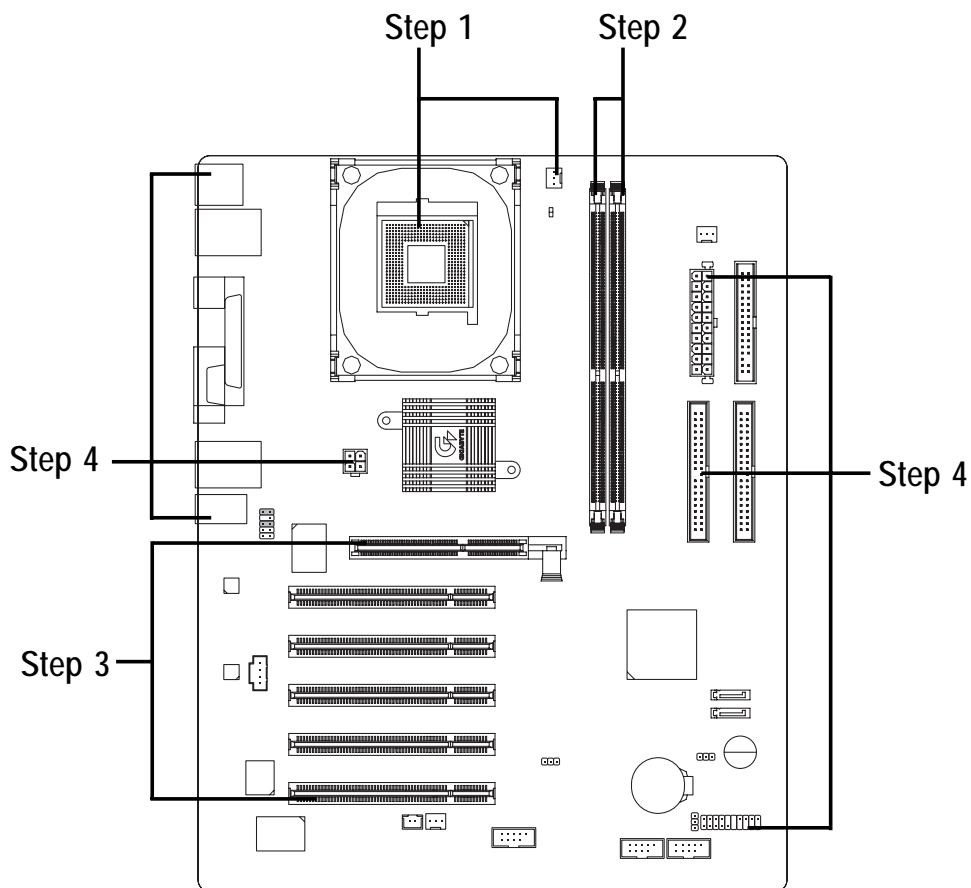
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## Chapter 2 Hardware Installation Process

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- Connect ribbon cables, cabinet wires, and power supply



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.

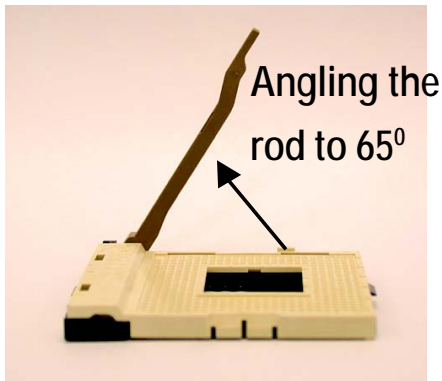
## Step 1: Install the Central Processing Unit (CPU)



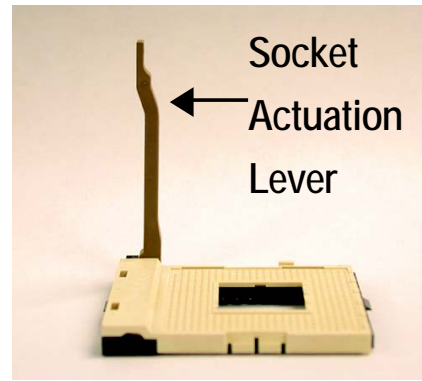
Before installing the processor, adhere to the following warning:

1. Please make sure the CPU type is supported by the motherboard.
2. 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 1-1: CPU Installation



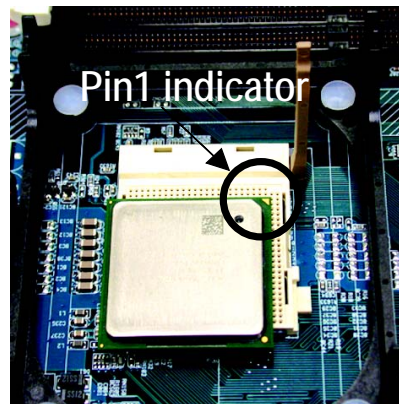
1. Angling the rod to 65-degree maybe feel a kind of tight , and then continue pull the rod to 90-degree when a noise "cough" made.



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



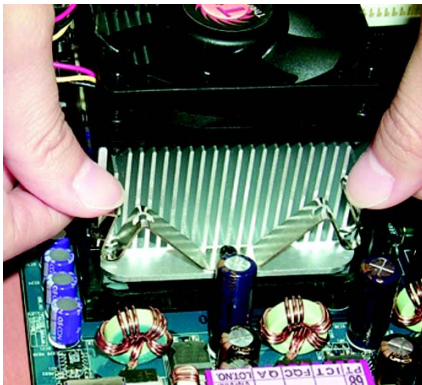
Before installing the CPU cooling fan, adhere to the following warning:

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.

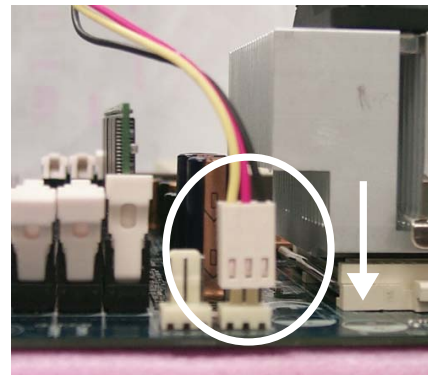
(The CPU cooling fan might stick to the CPU due to the hardening of the thermal paste. During this condition if you try to remove the cooling fan, you might pull the processor out of the CPU socket along with the cooling fan, and might damage the processor. To avoid this from happening, we suggest you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



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

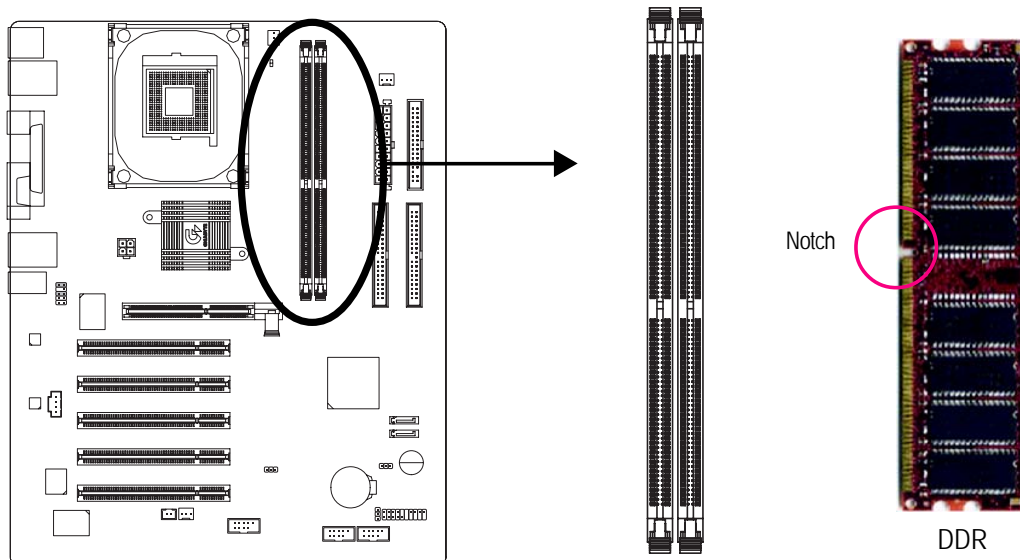
## Step 2: Install Memory Modules



Before installing the memory modules, adhere to the following warning:

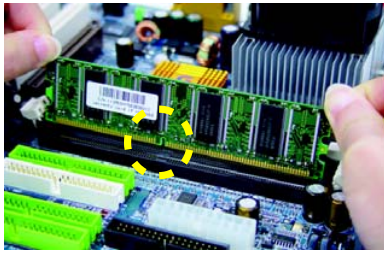
1. When RAM LED is ON, do not install / remove DIMM from socket.
2. Please note that the DIMM module can only fit in one direction due to the one notch. Wrong orientation will cause improper installation. Please change the insert orientation.

The motherboard has 2 dual inline memory module (DIMM) sockets. The BIOS will automatically detects memory type and size. To install the memory module, just push it vertically into the DIMM socket. The DIMM memory module can only fit in one direction due to the notch. Memory size can vary between sockets.



Support Unbuffered DDR DIMM Sizes type:

64 Mbit (2Mx8x4 banks)	64 Mbit (1Mx16x4 banks)	128 Mbit (4Mx8x4 banks)
128 Mbit (2Mx16x4 banks)	256 Mbit (8Mx8x4 banks)	256 Mbit (4Mx16x4 banks)
512 Mbit (16Mx8x4 banks)	512 Mbit (8Mx16x4 banks)	



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



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



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

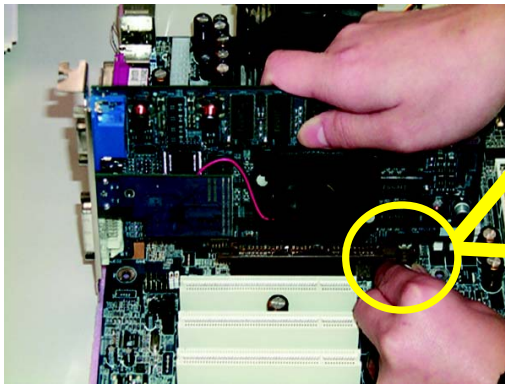
## DDR Introduction

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, 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.



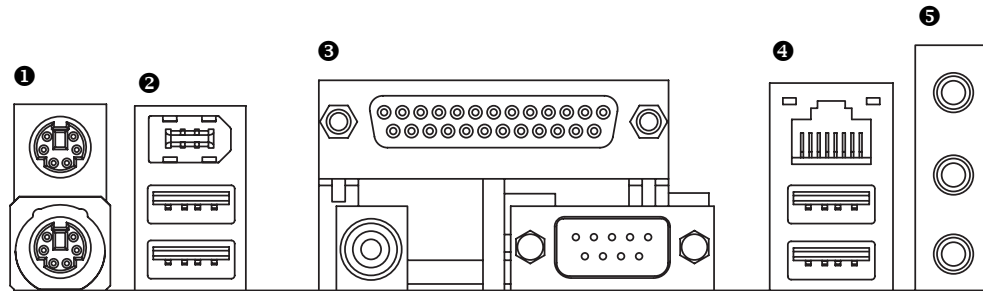
AGP Card

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.

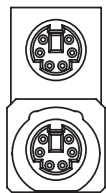


# Step 4: Connect Ribbon Cables, Cabinet Wires and Power Supply

## Step 4-1: I/O Back Panel Introduction



### 1 PS/2 Keyboard and PS/2 Mouse Connector

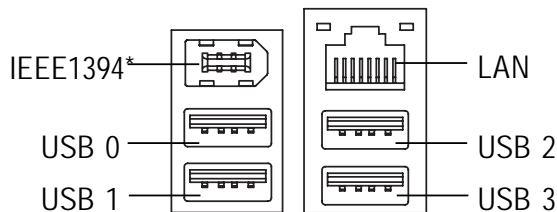


PS/2 Mouse Connector  
(6 pin Female)

PS/2 Keyboard Connector  
(6 pin Female)

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

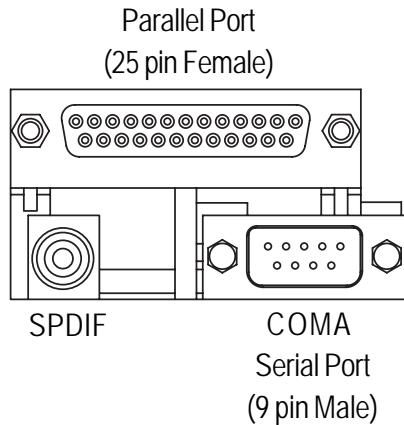
### 2/4 IEEE1394/ USB/ LAN Connector



\* optional (only available up PCB revision 2.1)

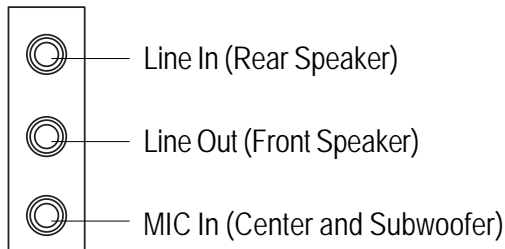
➤ LAN is fast Ethernet with 10/100Mbps speed.  
 ➤ Before you connect your device(s) into USB connector(s), please make sure your device(s) such as USB keyboard, mouse, scanner, zip, speaker...etc. Have a standard USB interface. Also make sure your OS supports USB controller. If your OS does not support USB controller, please contact OS vendor for possible patch or driver upgrade. For more information please contact your OS or device(s) vendors.

### ③ Parallel Port, Serial Port (COMA) and SPDIF



- This connector supports 1 standard COM port , 1 Parallel port and 1 SPDIF port. Devices like printer can be connected to Parallel port; mouse and modem etc. can be connected to serial port. SPDIF output is capable of providing digital audio to external speakers of compressed AC3 data to an external Dolby Digital Decoder.

### ⑤ 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:**

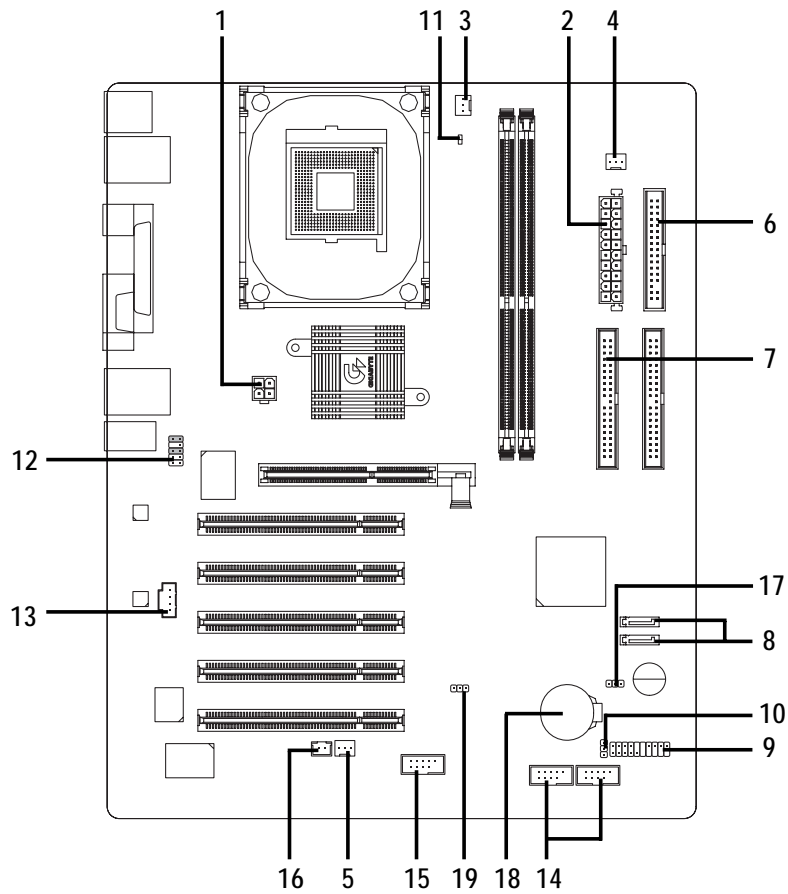
You are able to use 2-/4-/6-channel audio feature by S/W selection.

Connect "Front Speaker" to "Line Out"

Connect "Rear Speaker" to "Line In"

Connect "Center and Subwoofer" to "MIC In".

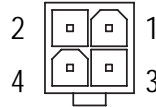
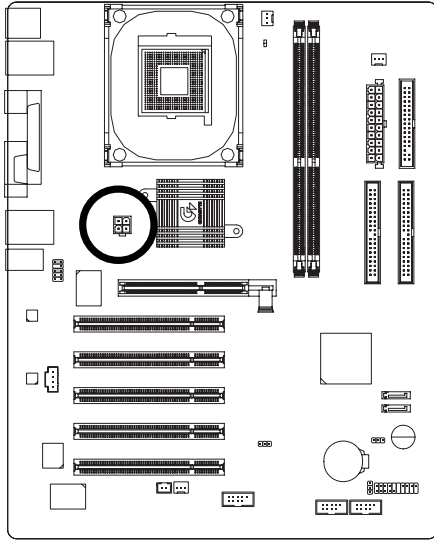
## Step 4-2: Connectors and Jumpers Introduction



1) ATX_12V	11) RAM_LED
2) ATX	12) F_AUDIO
3) CPU_FAN	13) AUX_IN
4) PWR_FAN	14) F_USB1 / F_USB2
5) SYS_FAN	15) F1_1394
6) FDD	16) S_IRQ
7) IDE1 / IDE2	17) CLR_CMOS
8) SATA0 / SATA1	18) BATTERY
9) F_PANEL	19) BIOS_RE
10) PWR_LED	

### 1) ATX\_12V (+12V Power Connector)

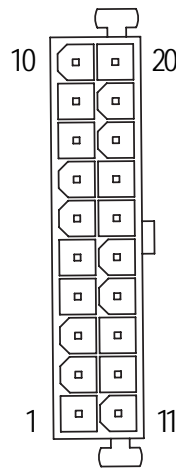
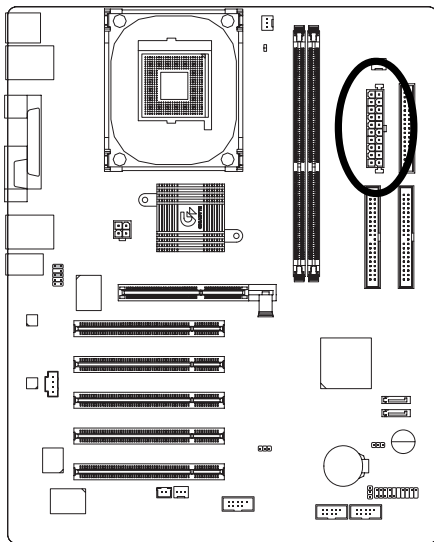
This connector (ATX\_12V) supplies the CPU operation voltage (Vcore).  
 If this "ATX\_12V connector" is not connected, system cannot boot.



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

### 2) ATX (ATX Power)

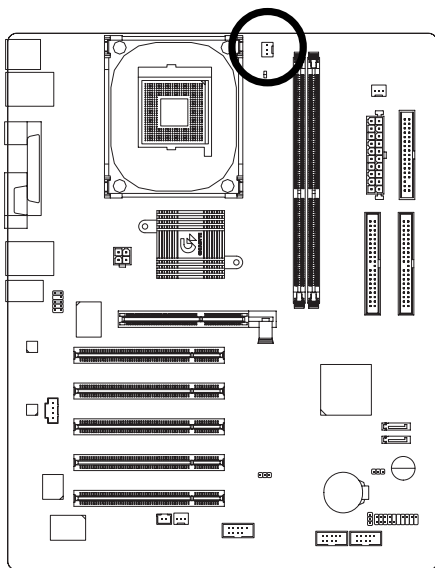
AC power cord should only be connected to your power supply unit after ATX power cable and other related devices are firmly connected to the mainboard.



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

### 3) CPU\_FAN (CPU Fan Connector)

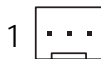
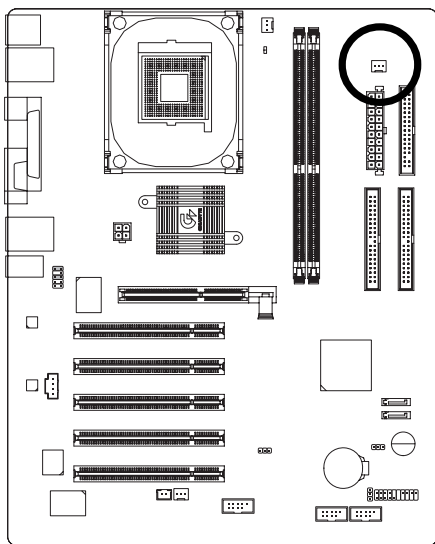
Please note, a proper installation of the CPU cooler is essential to prevent the CPU from running under abnormal condition or damaged by overheating. The CPU fan connector supports Max. current up to 600 mA.



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

### 4) PWR\_FAN (Power Fan Connector)

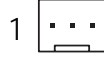
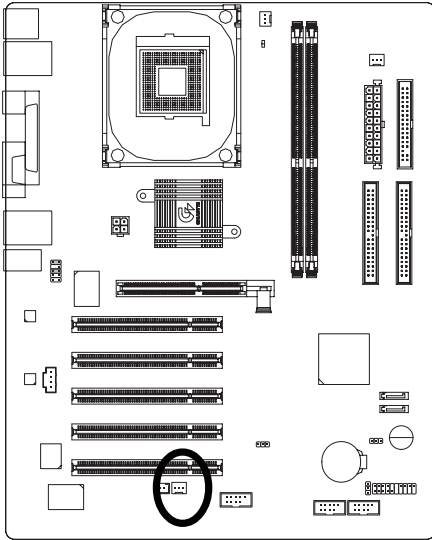
This connector allows you to link with the cooling fan on the system case to lower the system temperature.



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

## 5) SYS\_FAN (System Fan Connector)

This connector allows you to link with the cooling fan on the system case to lower the system temperature.

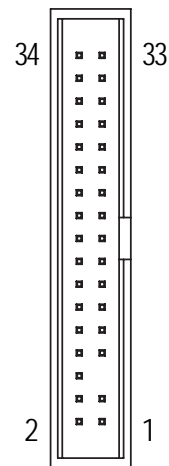
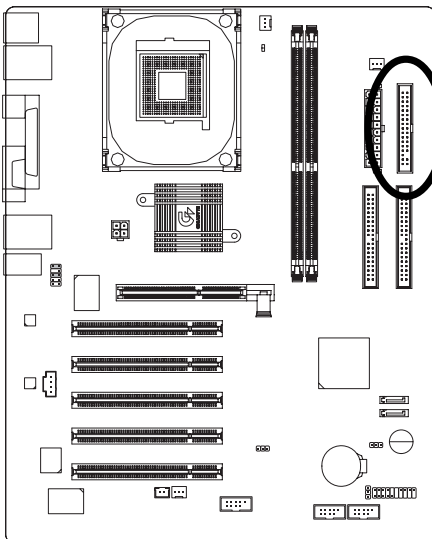


Pin No.	Definition
1	GND
2	+12V
3	Sense

## 6) FDD (Floppy Connector)

Please connect the floppy drive ribbon cables to FDD. It supports 360K, 1.2M, 720K, 1.44M and 2.88M bytes floppy disk types.

The red stripe of the ribbon cable must be the same side with the Pin1.

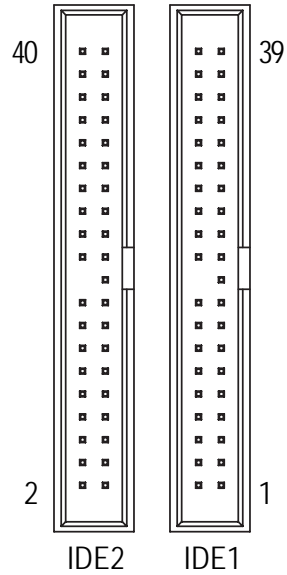
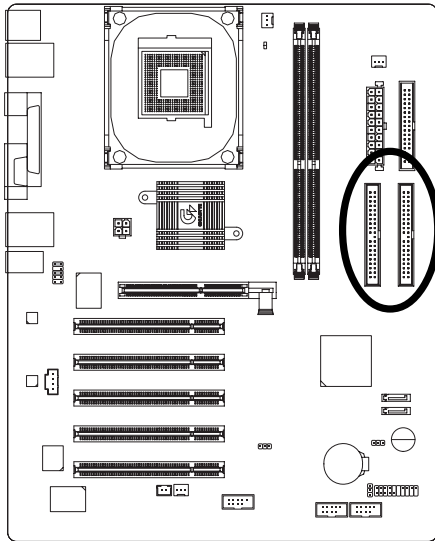


### 7) IDE1 / IDE2 (IDE1 / IDE2 Connector)

Important Notice:

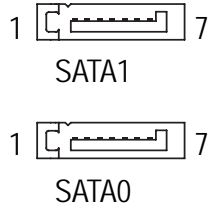
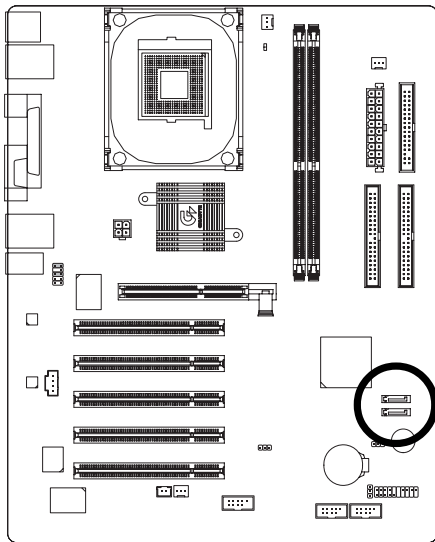
Please connect first hard disk to IDE1 and connect CD-ROM to IDE2.

The red stripe of the ribbon cable must be the same side with the Pin1.



### 8) SATA0 / SATA1 (Serial ATA Connector)

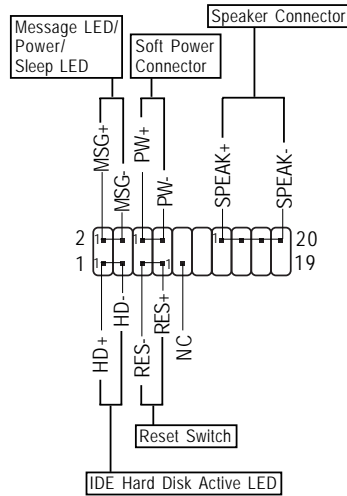
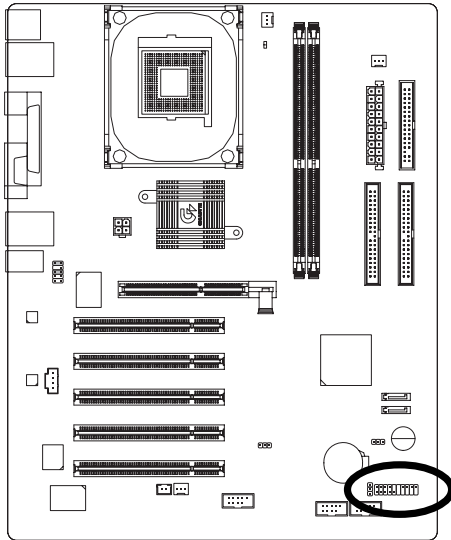
You can connect the Serial ATA device to this connector, it provides you high speed transfer rates (150MB/sec).



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

### 9) F\_PANEL (2 x 10 pins Connector)

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 below.

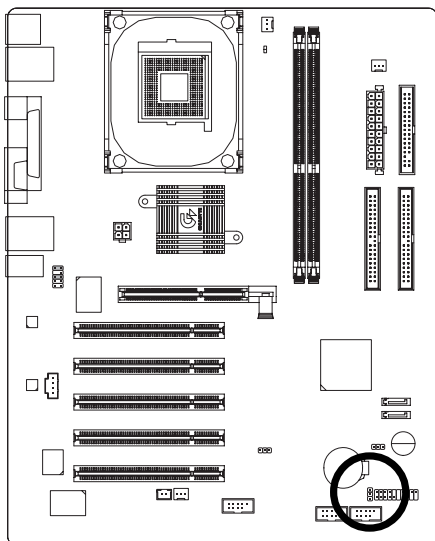


HD (IDE Hard Disk Active LED) (Blue)	Pin 1: LED anode(+) Pin 2: LED cathode(-)
SPK (Speaker Connector) (Amber)	Pin 1: VCC(+) Pin 2- Pin 3: NC Pin 4: Data(-)
RES (Reset Switch) (Green)	Open: Normal Operation Close: Reset Hardware System
PW (Soft Power Connector) (Red)	Open: Normal Operation Close: Power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



### 10) 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.

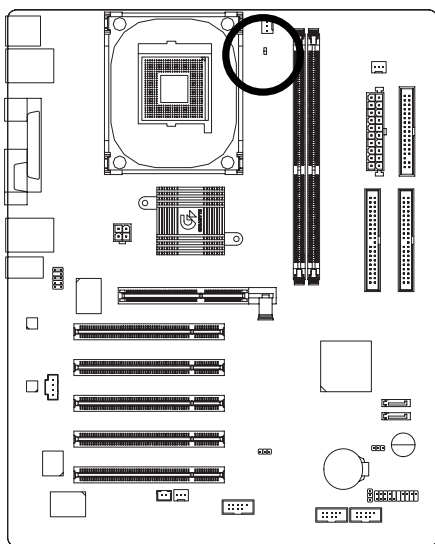


1

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

### 11) RAM\_LED

Do not remove memory modules while RAM\_LED is on. It might cause short or other unexpected damages due to the stand by voltage. Remove memory modules only when AC power cord is disconnected.



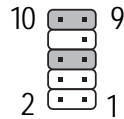
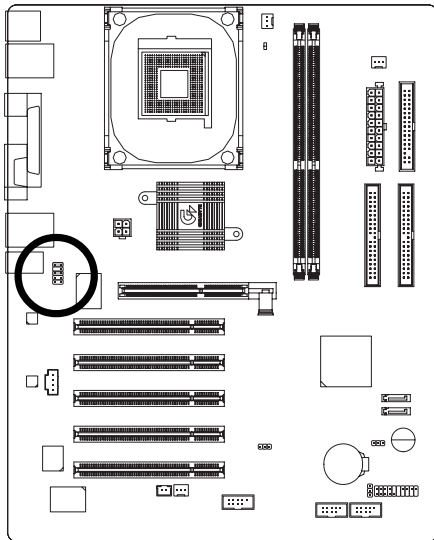
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## 12) F\_AUDIO (Front Audio Connector)

If you want to use Front Audio connector, you must remove 5-6, 9-10 Jumper.

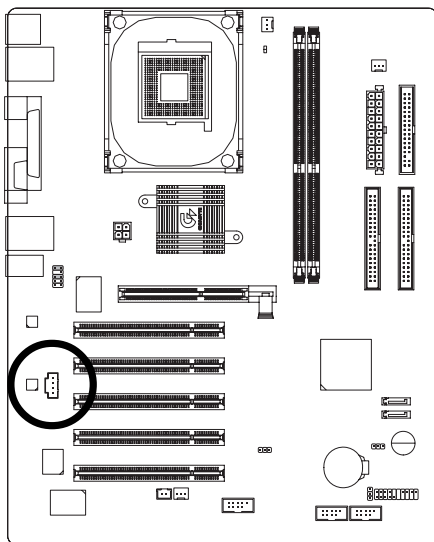
In order to utilize the front audio header, your chassis must have front audio connector. Also please make sure the pin assignment on the cable is the same as the pin assignment on the MB header. To find out if the chassis you are buying support front audio connector, please contact your dealer. Please note, you can have the alternative of using front audio connector or of using rear audio connector to play sound.



Pin No.	Definition
1	MIC
2	GND
3	REF
4	Power
5	Front Audio (R)
6	Rear Audio (R)
7	Reserved
8	No Pin
9	Front Audio (L)
10	Rear Audio (L)

## 13) AUX\_IN (AUX In Connector)

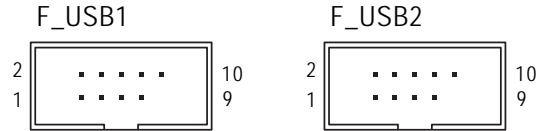
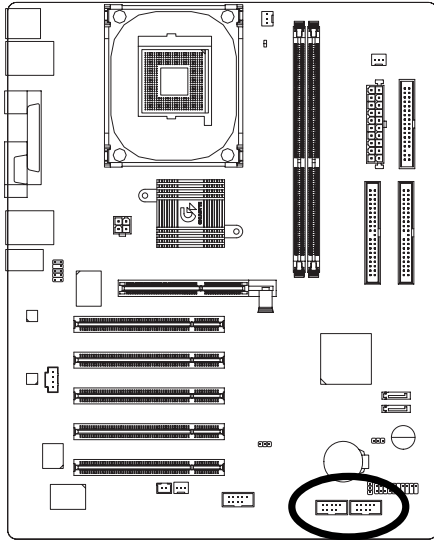
Connect other device (such as PCI TV Tuner audio out) to the connector.



Pin No.	Definition
1	AUX-L
2	GND
3	GND
4	AUX-R

### 14) F\_USB1 / F\_USB2 (Front USB Connector)

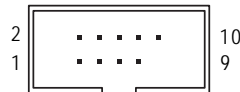
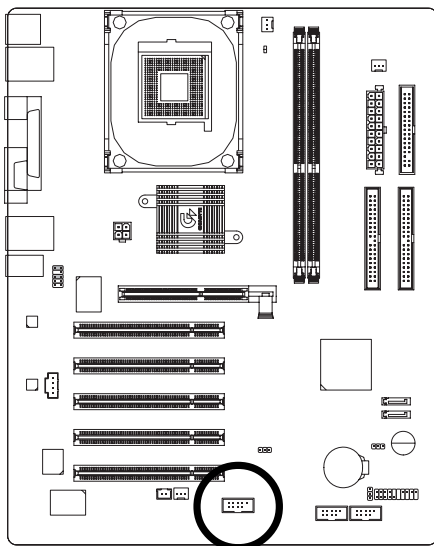
Be careful with the polarity of the front USB connector. Check the pin assignment carefully while you connect the front USB cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional front USB cable, please contact your local dealer.



Pin No.	Definition
1	Power
2	Power
3	USB Dx-
4	USB Dy-
5	USB Dx+
6	USB Dy+
7	GND
8	GND
9	No Pin
10	NC

### 15) F1\_1394 (IEEE1394 Connector)

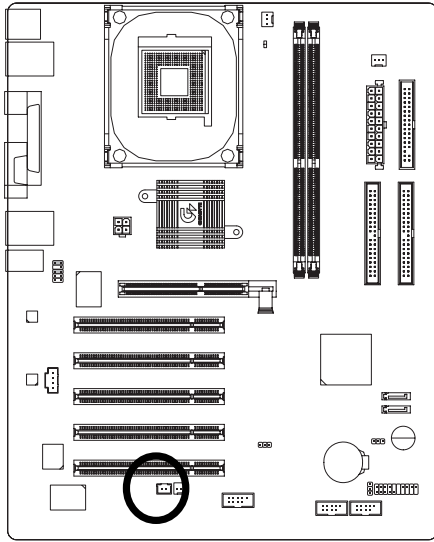
**Please Note:** Serial interface standard set by Institute of Electrical and Electronics Engineers, which has features like high speed, high bandwidth and hot plug. Be careful with the polarity of the IEEE1394 connector. Check the pin assignment carefully while you connect the IEEE1394 cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional IEEE1394 cable, please contact your local dealer.



Pin No.	Definition
1	TPA2+
2	TPA2-
3	GND
4	GND
5	TPB2+
6	TPB2-
7	Power
8	Power
9	No Pin
10	GND

### 16) S\_IRQ

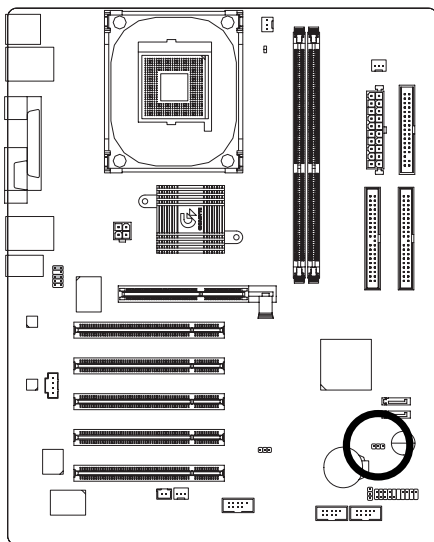
This connector is for special design, for example: PCMCIA add on card.



Pin No.	Definition
1	GND
2	Signal

### 17) CLR\_CMOS (Clear CMOS)

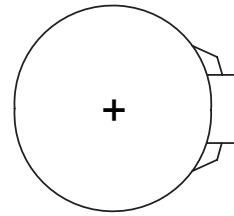
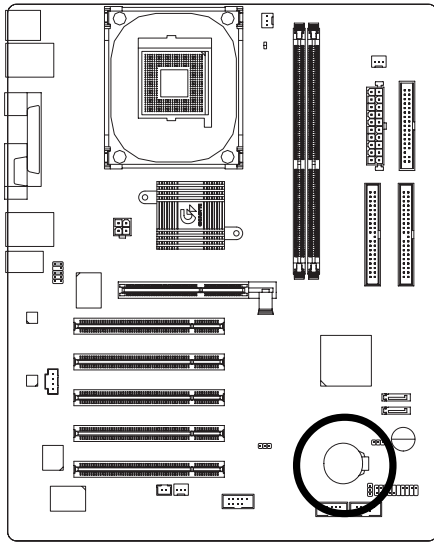
You may clear the CMOS data to its default values by this jumper. To clear CMOS, temporarily shor 1-2 pin. Default doesn't include the "Shunter" to prevent from improper use this jumper.



1 Open: Normal

1 1-2 Close: Clear CMOS

## 18) BATTERY



### CAUTION

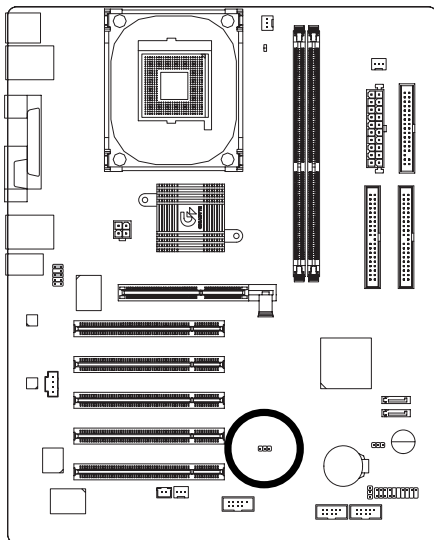
- ❖ Danger of explosion if battery is incorrectly replaced.
- ❖ Replace only with the same or equivalent type recommended by the manufacturer.
- ❖ Dispose of used batteries according to the manufacturer's instructions.

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.

## 19) BIOS\_RE (BIOS Recovery)

You can recover the BIOS data to default value by this jumper.



1  1-2 short: Normal (Default)

1  2-3 short: BIOS Recovery

Enables recovery of the old system BIOS after an attempt to update has failed.

The system BIOS execute from floppy drive A: and the insert "Flash BIOS Diskette" restores the system BIOS on the mainboard.

Please download the Flashprogram and the BIOS file for this board from the Fujitsu Siemens website.

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## 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

Powering ON the computer and pressing <Del> immediately will allow you to enter 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.

### 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
<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. : E8)

Once you enter Award BIOS CMOS Setup Utility, the Main Menu (Figure 1) 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.

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

▶ Standard CMOS Features	Load Fail-Safe Defaults
▶ Advanced BIOS Features	Load Optimized Defaults
▶ Integrated Peripherals	Set Supervisor Password
▶ Power Management Setup	Set User Password
▶ PnP/PCI Configurations	Save & Exit Setup
▶ PC Health Status	Exit Without Saving
▶ Frequency/Voltage Control*	
ESC:Quit	↑↓→←:Select Item
F8: Q-Flash	F10:Save & Exit Setup
Time, Date, Hard Disk Type...	

Figure 1: Main Menu

- **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.

\* This item will not be shown if you are using a CPU with the locked ratio.



- **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 to 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.

\* This item will not be shown if you are using a CPU with the locked ratio.

# Standard CMOS Features

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## Standard CMOS Features

Date (mm:dd:yy)	Thu, Jan 8 2004	Item Help
Time (hh:mm:ss)	10:32:23	Menu Level ►
▶IDE Primary Master	[None]	Change the day, month, year
▶IDE Primary Slave	[None]	
▶IDE Secondary Master	[None]	<Week>
▶IDE Secondary Slave	[None]	Sun. to Sat.
Drive A	[1.44M, 3.5"]	<Month>
Drive B	[None]	Jan. to Dec.
Floppy 3 Mode Support	[Disabled]	
Halt On	[No Errors]	<Day>
		1 to 31 (or maximum allowed in the month)
Base Memory	640K	
Extended Memory	127M	<Year>
Total Memory	128M	1999 to 2098
↑↓→←: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults		

Figure 2: Standard CMOS Features

### ☞ Date

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

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

### ☞ Time

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

## ☞ IDE Primary Master, Slave / IDE Secondary Master, Slave

The category identifies the types of hard disk from drive C to F that has been installed in the computer. There are two types: auto type, and manual type. Manual type is user-definable; Auto type which will automatically detect HDD type.

Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category.

If you select User Type, related information will be asked to enter to the following items. Enter the information directly from the keyboard and press <Enter>. Such information should be provided in the documentation from your hard disk vendor or the system manufacturer.

- ▶▶ Capacity            The hard disk size. The unit is MegaBytes.
- ▶▶ Access Mode        The options are: Auto / Large / LBA / Normal.
- ▶▶ Cylinder            The cylinder number of hard disk.
- ▶▶ Head                The read /write head number of hard disk.
- ▶▶ Precomp            The cylinder number at which the disk driver changes the write current.
- ▶▶ Landing Zone        The cylinder number that the disk driver heads(read/write) are seated when the disk drive is parked.
- ▶▶ Sectors             The sector number of each track define on the hard disk.

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

## ☞ Acoustic Management

As well as hard disk and optical date drives such as CD-ROM, CD-RW and DVD are also responsible for generating noise in the PC. Therefore the BIOS support the acoustic management feature to reduce the noise. In the Standard CMOS Features please select the IDE drive, which should be support the Acoustic management and press Enter. When the IDE device can support the acoustic management then you can see this option in the BIOS setup. The following options are available:

- ▶▶ Hard Drive    Disabled: full hard disk performance with maximum noise generation  
                  Silent: lower hard disk performance with minimum noise generation  
                  Default is disabled
- ▶▶ Optical Drive Disabled: the device can rotate at maximum speed with maximum noise generation  
                  Medium: the device can rotate at no higher than medium speed with medium noise generation  
                  Silent: the device can rotate at minimum speed only with minimum noise generation  
                  Default is medium

For optimal performance for hard drive and optical drive please disabled the acoustic management.

## ☞ Drive A / Drive B

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

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

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

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

## ☞ Halt on

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

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

## ☞ Memory

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

### - - Base Memory

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

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

## -- Extended Memory

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

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

## Advanced BIOS Features

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### Advanced BIOS Features

▶ Hard Disk Boot Priority	[Press Enter]	Item Help
First Boot Device	[CDROM]	Menu Level ▶
Second Boot Device	[Floppy]	Select Hard Disk Boot
Third Boot Device	[Hard Disk]	Device Priority
Boot Up Floppy Seek	[Disabled]	
Password Check	[Setup]	
CPU Hyper-Threading*	[Enabled]	
Full Screen LOGO Show	[Enabled]	
Intel OnScreen Branding	[Enabled]	
Init Display First	[AGP]	
↑↓→←: Move    Enter:Select    +/-/PU/PD: Value    F10: Save    ESC:Exit    F1: General Help F5: Previous Values    F6: Fail-Safe Defaults    F7: Optimized Defaults		

Figure 3: Advanced BIOS Features

### ☞ Hard Disk Boot Priority

Select boot device priority for onboard hard disk (or add-on cards).

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

Press <ESC> to exit this menu.

1. Bootable Add-in Cards      Selet your boot device priority.

### ☞ First / Second / Third Boot Device

- ▶▶ Floppy      Select your boot device priority by Floppy.
- ▶▶ LS120      Select your boot device priority by LS120.
- ▶▶ Hard Disk      Select your boot device priority by Hard Disk.
- ▶▶ CDROM      Select your boot device priority by CDROM.
- ▶▶ ZIP      Select your boot device priority by ZIP.
- ▶▶ USB-FDD      Select your boot device priority by USB-FDD.
- ▶▶ USB-ZIP      Select your boot device priority by USB-ZIP.

\* This item will not be shown if you are using a CPU that doesn't support the "Hyper Threading Technology".

- ▶▶ 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.

### ☞ **Boot Up Floppy Seek**

During POST, BIOS will determine the floppy disk drive installed is 40 or 80 tracks. 360K type is 40 tracks. 720K, 1.2M and 1.44M are all 80 tracks.

- ▶▶ Enabled            BIOS searches for floppy disk drive to determine it is 40 or 80 tracks. Note that BIOS can not tell from 720K, 1.2M or 1.44M drive type as they are all 80tracks.
- ▶▶ Disabled          BIOS will not search for the type of floppy disk drive by track number. Note that there will not be any warning message if the drive installed is 360K. (Default value)

### ☞ **Password Check**

- ▶▶ Setup             Ask password when enter setup. (Default value)
- ▶▶ System            Ask password when system boot.

### ☞ **CPU Hyper-Threading\***

- ▶▶ Disabled          Disable 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)

### ☞ **Full Screen LOGO Show**

This feature allows you to show the company logo on the bootup screen.

- ▶▶ Disabled          Shows the POST messages at boot.
- ▶▶ Enabled            Shows the still image(LOGO) on the full screen at boot. (Default value)

### ☞ **Intel OnScreen Branding**

This feature allows you to show the Intel brand logo on the bootup screen.

- ▶▶ Disabled          Don't display Intel brand logo.
- ▶▶ Enabled            Display Intel brand logo at boot. (Default value)

### ☞ **Init Display First**

Select the first initiation of the monitor display from AGP or PCI VGA card.

- ▶▶ PCI                Set Init Display First to PCI.
- ▶▶ AGP                Set Init Display First to AGP. (Default value)

\* This item will not be shown if you are using a CPU that doesn't support the "Hyper Threading Technology".

# Integrated Peripherals

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Integrated Peripherals

IDE1 Conductor Cable	[Auto]	Item Help
IDE2 Conductor Cable	[Auto]	Menu Level ►
On-Chip Primary PCI IDE	[Enabled]	[Auto]
On-Chip Secondary PCI IDE	[Enabled]	Auto-detect IDE
AC97 Audio	[Enabled]	cable type
Onboard LAN device	[Enabled]	
USB Controller	[Enabled]	[ATA66/100/133]
USB 2.0 Controller	[Enabled]	Set Conductor cable
USB Legacy Support	[Disabled]	to ATA66/100/133(80-pins)
Onboard 1394 Function	[Enabled]	
SiS Serial ATA Controller	[Enabled]	[ATA33]
<b>SiS Serial ATA Mode</b>	<b>IDE</b>	Set Conductor cable
Onboard Serial Port 1	[3F8/IRQ4]	to ATA33(40-pins)
Onboard Parallel Port	[378/IRQ7]	
Parallel Port Mode	[EPP]	
<b>x ECP Mode Use DMA</b>	<b>3</b>	
↑↓→←: Move    Enter:Select    +/-/PU/PD:Value    F10:Save    ESC:Exit    F1:General Help F5:Previous Values    F6:Fail-Safe Defaults    F7:Optimized Defaults		

Figure 4: Integrated Peripherals

## ☞ IDE1 Conductor Cable

- ▶▶ Auto Will be automatically detected by BIOS. (Default value)
- ▶▶ ATA66/100/133 Set IDE1 Conductor Cable to ATA66/100/133 (Please make sure your IDE device and cable is compatible with ATA66/100/133).
- ▶▶ ATA33 Set IDE1 Conductor Cable to ATA33 (Please make sure your IDE device and cable is compatible with ATA33).

## ☞ IDE2 Conductor Cable

- ▶▶ Auto Will be automatically detected by BIOS. (Default value)
- ▶▶ ATA66/100/133 Set IDE2 Conductor Cable to ATA66/100/133 (Please make sure your IDE device and cable is compatible with ATA66/100/133).
- ▶▶ ATA33 Set IDE2 Conductor Cable to ATA33 (Please make sure your IDE device and cable is compatible with ATA33).

### ☞ On-Chip Primary PCI IDE

If a hard disk controller card is used, set at "Disabled".

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

### ☞ On-Chip Secondary PCI IDE

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

### ☞ AC97 Audio

- ▶▶ Enabled            Auto detect AC97 audio. (Default value)
- ▶▶ Disabled            Disable AC97 audio.

### ☞ Onboard LAN device

- ▶▶ Enabled            Enabled onboard Lan chip function. (Default value)
- ▶▶ Disabled            Disable this function.

### ☞ USB Controller

You can disable this function if you are not using onboard USB feature.

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

### ☞ USB 2.0 Controller

You can disable this function if you are not using onboard USB2.0 feature.

- ▶▶ Enabled            Enable USB2.0 controller. (Default value)
- ▶▶ Disabled            Disable USB2.0 controller.

### ☞ USB Legacy Support

If you are using USB keyboard or mouse, please set at "Enabled".

- ▶▶ Enabled            Enable USB keyboard or mouse support.
- ▶▶ Disabled            Disable USB keyboard or mouse support. (Default value)

### ☞ Onboard 1394 Function

You can disable this function if you are not using onboard IEEE1394 function.

- ▶▶ Enabled            Enabled onboard IEEE1394 function. (Default value)
- ▶▶ Disabled            Disable this function.



### ☞ **SiS Serial ATA Controller**

- ▶▶ Enabled Enabled onboard SATA controller. (Default value)
- ▶▶ Disabled Disable this function.

### ☞ **SiS Serial ATA Mode**

- ▶▶ IDE Set onboard SATA controller function as IDE. (Default value)
- ▶▶ RAID Set RAID function (two SATA drives necessary)  
(for detailed information see SIS 964 SATA-RAID user manual)

### ☞ **Onboard Serial Port 1**

- ▶▶ Disabled Disable onboard Serial port 1.
- ▶▶ 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.
- ▶▶ Auto BIOS will automatically setup the port 1 address.

### ☞ **Onboard Parallel port**

- ▶▶ Disabled Disable onboard LPT port.
- ▶▶ 378/IRQ7 Enable onboard LPT port and address is 378/IRQ7. (Default value)
- ▶▶ 278/IRQ5 Enable onboard LPT port and address is 278/IRQ5.
- ▶▶ 3BC/IRQ7 Enable onboard LPT port and address is 3BC/IRQ7.

### ☞ **Parallel Port Mode**

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

### ☞ **ECP Mode Use DMA**

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

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

# Power Management Setup

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## Power Management Setup

ACPI Suspend Type	[S3(STR)]	Item Help
Soft-Off by PWR_BTTN	[Off]	Menu Level ►
System After AC Back	[Laststate]	[S1]
IRQ [3-7, 9-15], NMI	[Enabled]	Set suspend type to
ModemRingOn	[Disabled]	Power On Suspend under
PME Event Wake Up	[Disabled]	ACPI OS
Power On by Keyboard	[Disabled]	
Power On by Mouse	[Disabled]	[S3]
Resume by Alarm	[Disabled]	Set suspend type to
x Month Alarm	NA	Suspend to RAM under
x Day (of Month)	0	ACPI OS
x Time (hh:mm:ss)	0 : 0 : 0	
↑↓→←: Move    Enter:Select    +/-/PU/PD:Value    F10:Save    ESC:Exit    F1:General Help F5:Previous Values    F6:Fail-Safe Defaults    F7:Optimized Defaults		

Figure 5: Power Management Setup

### ☞ ACPI Suspend Type

- ▶▶ S1(POS)      Set suspend type to Power On Suspend under ACPI OS(Power On Suspend).
- ▶▶ S3(STR)      Set suspend type to Suspend To RAM under ACPI OS (Suspend To RAM).  
(Default value)

### ☞ Soft-off by PWR\_BTTN

- ▶▶ Off            Press power button to power off instantly. (Default value)
- ▶▶ Suspend       Press power button 4 sec. to power off. Enter suspend if button is pressed less than 4 sec.

### ☞ System After AC Back

- ▶▶ Off            When AC-power back to the system, the system will be in "Off" state.
- ▶▶ On             When AC-power back to the system, the system will be in "On" state.
- ▶▶ LastState     When AC-power back to the system, the system will return to the Last state before AC-power off. (Default value)

### ☞ **IRQ [3-7, 9-15], NMI**

When IRQ [3-7, 9-15] or NMI triggered, the suspend timer will be reloaded to prevent system gets into green mode.

- ▶▶ Disabled      Don't monitor IRQ [3-7, 9-15] or NMI.
- ▶▶ Enabled      Monitor IRQ [3-7, 9-15] or NMI. (Default value)

### ☞ **ModemRingOn**

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. (Default value)
- ▶▶ Enabled      Enable Modem Ring on/wake on Lan.

### ☞ **PME Event Wake Up**

- ▶▶ Disabled      Disable this function. (Default value)
- ▶▶ Enabled      Enable PME as wake up event.

### ☞ **Power On by Keyboard**

- ▶▶ Any Key      Set Keyboard power on by any key.
- ▶▶ Password      Input password (from 1 to 8 characters) and press enter to set the keyboard power on password.
- ▶▶ Disabled      Disable this function. (Default value)

### ☞ **Power On by Mouse**

- ▶▶ Disabled      Disable this function. (Default value)
- ▶▶ Enabled      Move or click the mouse to power on system.

### ☞ **Resume by Alarm**

You can set "Resume by Alarm" item to enabled and key in Data/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.

Month Alarm :                      NA, 1~12

Day (of Month) :                    1~31

Time ( hh: mm: ss) :                (0~23) : (0~59) : (0~59)

# PnP/PCI Configurations

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## PnP/PCI Configurations

PCI 4 IRQ Assignment	[Auto]	Item Help
PCI 1/5 IRQ Assignment	[Auto]	Menu Level ►
PCI 2 IRQ Assignment	[Auto]	
PCI 3 IRQ Assignment	[Auto]	
↑↓→←: Move    Enter:Select    +/-/PU/PD:Value    F10:Save    ESC:Exit    F1:General Help F5:Previous Values    F6:Fail-Safe Defaults    F7:Optimized Defaults		

Figure 6: PnP/PCI Configurations

### ☞ 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.

### ☞ PCI 1/5 IRQ Assignment

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

### ☞ 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.

# PC Health Status

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## PC Health Status

Vcore	1.458V	Item Help
VCC18	1.824V	Menu Level ►
+3.3V	3.280V	
+5V	4.220V	
+12V	11.921V	
Current CPU Temperature	33°C	
Current CPU FAN Speed	4687 RPM	
Current Power FAN Speed	0 RPM	
Current SYSTEM FAN Speed	0 RPM	
CPU Shutdown Temperature	[Disabled]	
↑↓→←: Move    Enter:Select    +/-/PU/PD: Value    F10: Save    ESC:Exit    F1: General Help F5: Previous Values    F6: Fail-Safe Defaults    F7: Optimized Defaults		

Figure 7: PC Health Status

### ☞ **Current Voltage (V) Vcore / VCC18 / +3.3V / +5V / +12V**

▶▶ Detect system's voltage status automatically.

### ☞ **Current CPU Temperature**

▶▶ Detect CPU temperature automatically.

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

▶▶ Detect CPU/Power/System fan speed status automatically.

### ☞ **CPU Shutdown Temperatre**

▶▶ Disabled                      Disable thermal shutdown function. (Default value)

▶▶ 60°C / 140°F, 70°C / 158°F, 80°C / 176°F, 90°C / 194°F

When CPU temperature is tantamount or move than the setting, the system will shutdown automatically.

## Frequency/Voltage Control\*

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### Frequency/Voltage Control

CPU Clock Ratio	[15X]	Item Help
		Menu Level ►
<p>↑↓→←: Move    Enter:Select    +/-/PU/PD:Value    F10:Save    ESC:Exit    F1:General Help            F5:Previous Values    F6:Fail-Safe Defaults    F7:Optimized Defaults</p>		

Figure 8: Frequency/Voltage Control

### ☞ CPU Clock Ratio

►►15X-21X    It's depends on CPU Clock Ratio.

\* This function will not be shown if you are using a CPU with the locked ratio.

## Load Fail-Safe Defaults

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▶ Standard CMOS Features	Load Fail-Safe Defaults
▶ Advanced BIOS Features	Load Optimized Defaults
▶ Integrated Peripherals	Set Supervisor Password
▶ Power Management	Load Fail-Safe Defaults (Y/N) ? N
▶ PnP/PCI Configurations	Save & Exit Setup
▶ PC Health Status	Exit Without Saving
▶ Frequency/Voltage Control*	
ESC: Quit	↑↓→←: Select Item
F8: Q-Flash	F10: Save & Exit Setup
Load Fail-Safe Defaults	

Figure 9: Load Fail-Safe Defaults

### Load Fail-Safe Defaults

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

\* This item will not be shown if you are using a CPU with the locked ratio.

## Load Optimized Defaults

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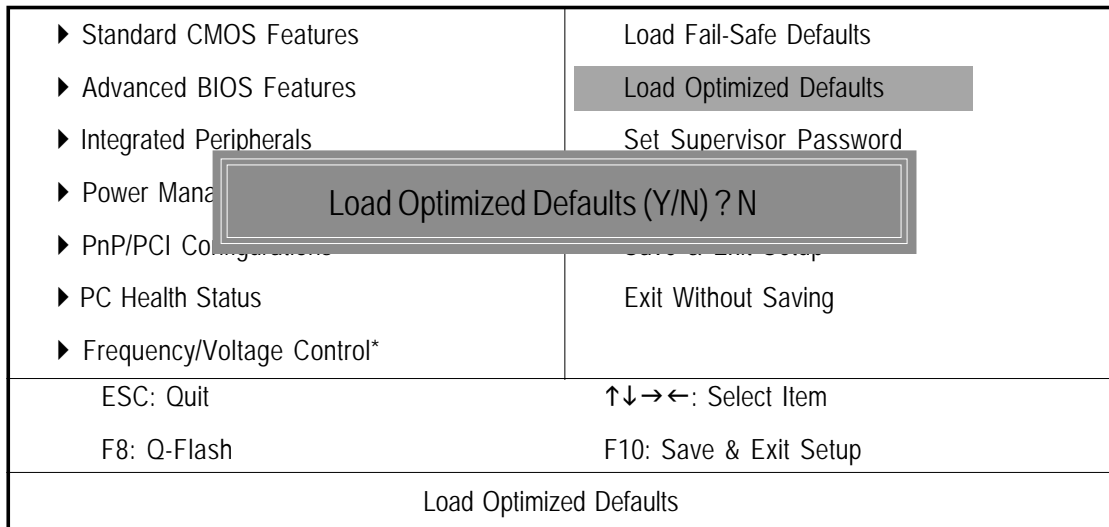


Figure 10: Load Optimized Defaults

### Load Optimized Defaults

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

\* This item will not be shown if you are using a CPU with the locked ratio.



## Set Supervisor/User Password

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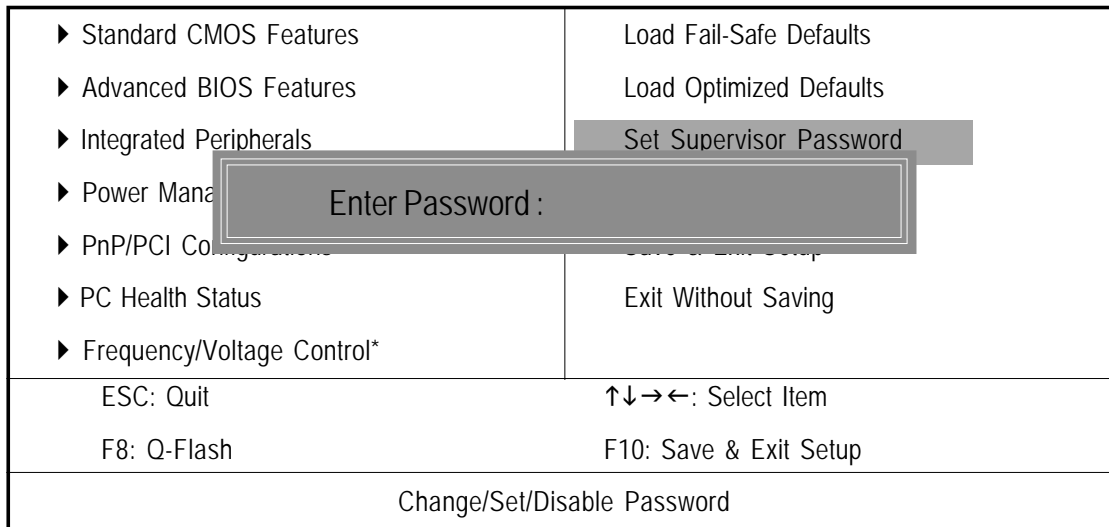


Figure 11: Password Setting

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.

\* This item will not be shown if you are using a CPU with the locked ratio.

## Save & Exit Setup

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▶ Standard CMOS Features	Load Fail-Safe Defaults
▶ Advanced BIOS Features	Load Optimized Defaults
▶ Integrated Peripherals	Set Supervisor Password
▶ Power Management	Save & Exit Setup
▶ PnP/PCI Configurations	Exit Without Saving
▶ PC Health Status	
▶ Frequency/Voltage Control*	
ESC: Quit	↑↓→←: Select Item
F8: Q-Flash	F10: Save & Exit Setup
Save Data to CMOS	

Figure 12: 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.

\* This item will not be shown if you are using a CPU with the locked ratio.

## Exit Without Saving

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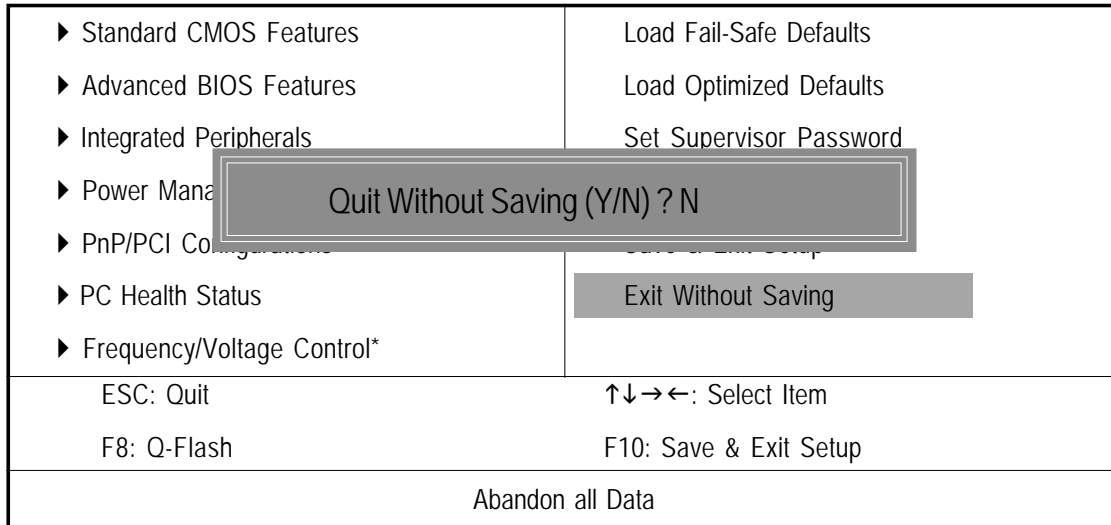


Figure 13: Exit Without Saving

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

Type "N" will return to Setup Utility.

\* This item will not be shown if you are using a CPU with the locked ratio.

