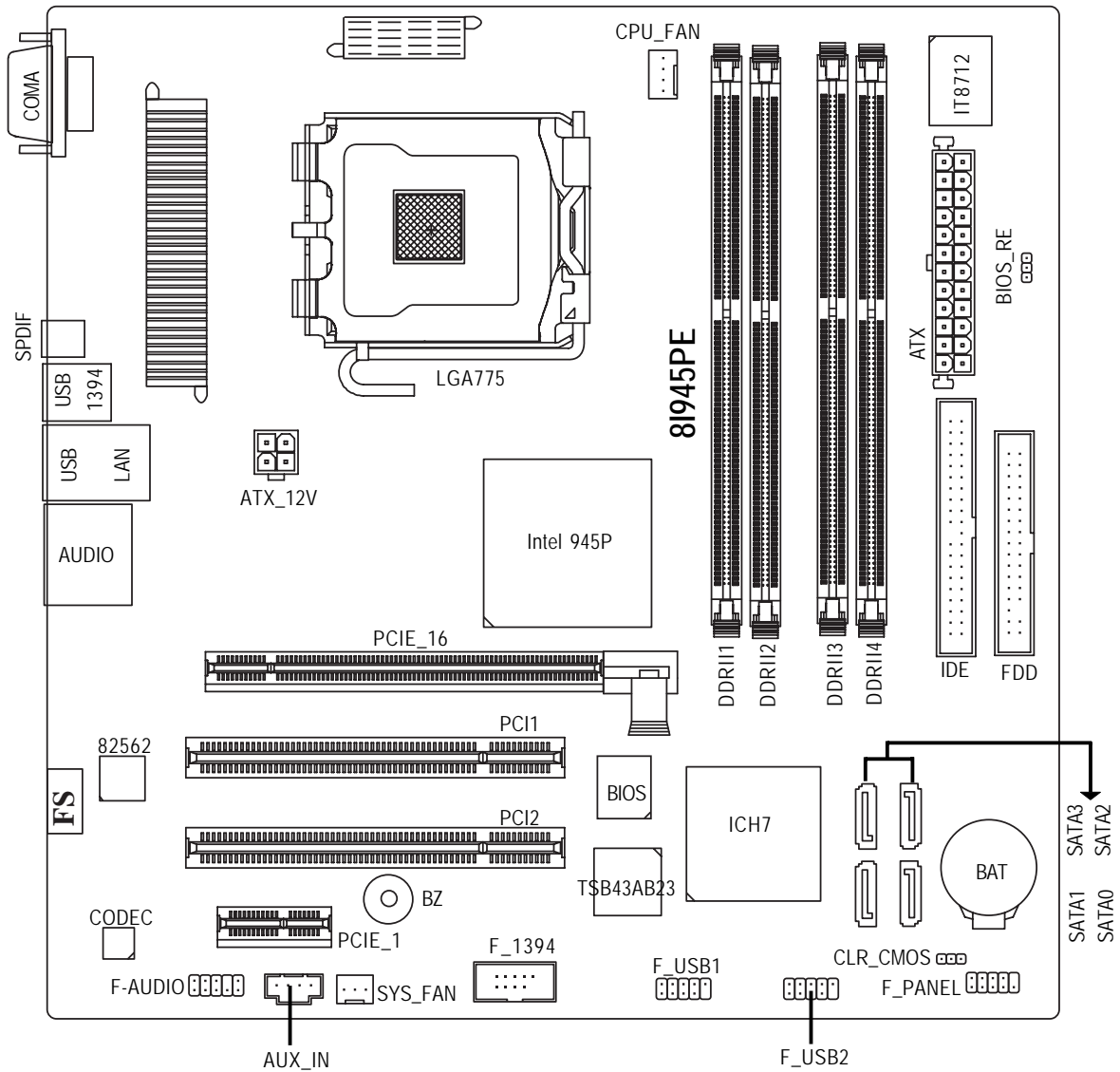# 8I945PE-FS

Intel® Pentium® 4 LGA775 Processor Motherboard
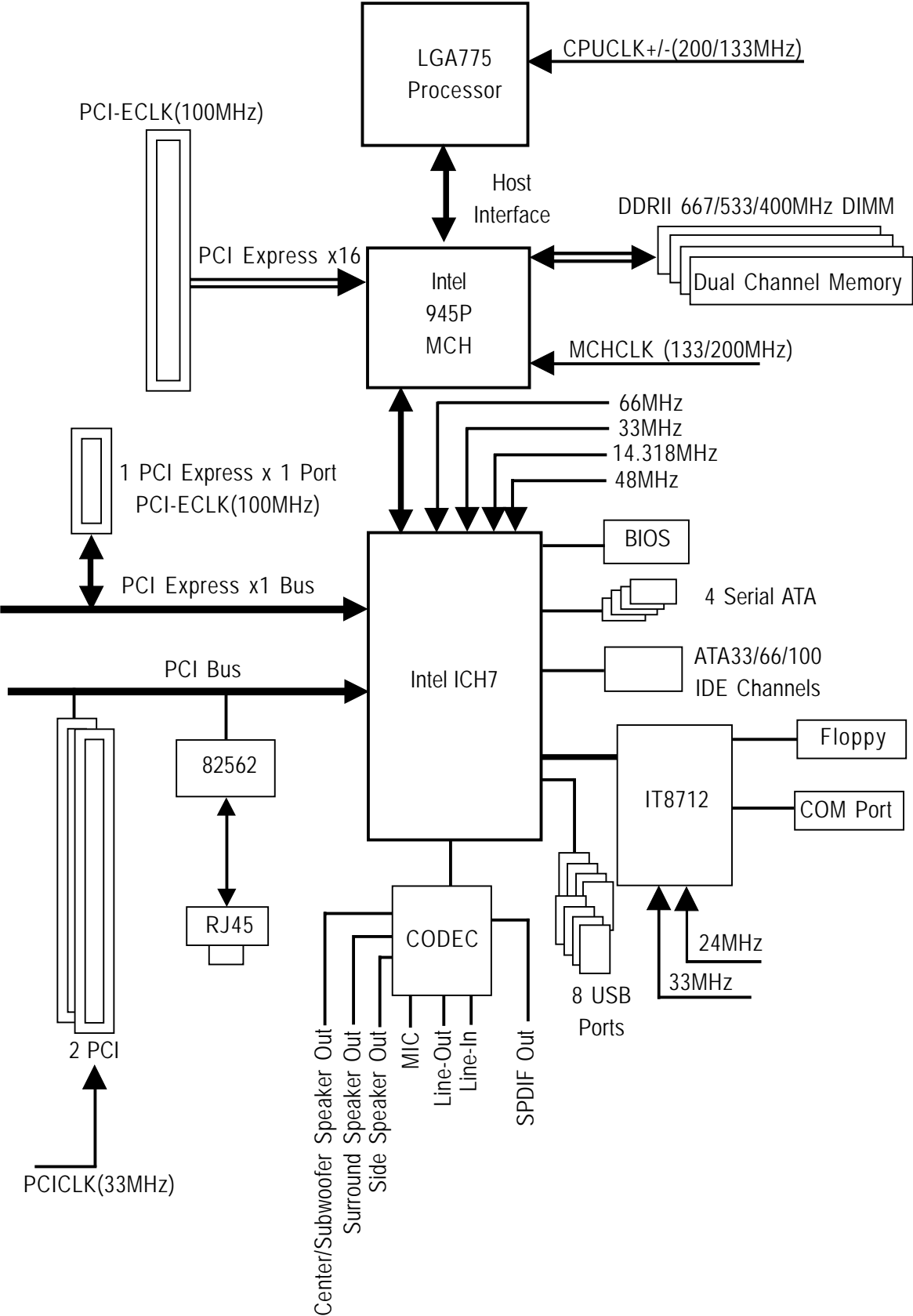
User's Manual

Rev. 1001

8I945PE-FS Motherboard Layout

Block Diagram

LGA775 Processor

CPUCLK+/-(200/133MHz)

PCI-ECLK(100MHz)

Host Interface

DDRII 667/533/400MHz DIMM

Dual Channel Memory

PCI Express x16

Intel 945P MCH

MCHCLK (133/200MHz)

66MHz
33MHz
14.318MHz
48MHz

1 PCI Express x 1 Port
PCI-ECLK(100MHz)

BIOS

PCI Express x1 Bus

4 Serial ATA

PCI Bus

Intel ICH7

ATA33/66/100 IDE Channels

Floppy

82562

IT8712

COM Port

RJ45

CODEC

8 USB Ports

24MHz

33MHz

2 PCI

Center/Subwoofer Speaker Out
Surround Speaker Out
Side Speaker Out
MIC
Line-Out
Line-In
SPDIF Out

PCICLK(33MHz)

Chapter 1 Hardware Installation

1-1 Feature Summary

CPU	◆ Supports Intel® Pentium® D / Pentium® 4 LGA775 CPU
	◆ Supports 1066/800/533MHz FSB
	◆ L2 cache varies with CPU
Chipset	◆ Northbridge: Intel® 945P Express chipset
	◆ Southbridge: Intel® ICH7
	◆ Supported on the Win 2000/XP/MCE operating systems
Memory	◆ 4 DDRII DIMM memory slots (supports up to 4GB memory) (Note 1)
	◆ Supports dual channel DDR II 667(Note 2)/533/400 DIMM
	◆ Supports 1.8V DDR II DIMM
Slots	◆ 1 PCI Express x 16 slot
	◆ 1 PCI Express x 1 slot
	◆ 2 PCI slots
IDE Connections	◆ 1 IDE connection (UDMA 33/ATA 66/ATA 100), allows connection of 2 IDE devices
FDD Connections	◆ 1 FDD connection, allows connection of 2 FDD devices
Onboard SATA 3Gb/s	◆ 4 SATA 3Gb/s connections
	◆ Supported on the Win 2000/XP/MCE operating systems
Peripherals	◆ 1 parallel port supporting Normal/EPP/ECP mode
	◆ 1 COMA port
	◆ 8 USB 2.0/1.1 ports
	◆ 1 front audio connector
Onboard LAN	◆ Onboard 82562 chip (10/100 Mbit)
	◆ 1 RJ 45 port
Onboard Audio	◆ ALC880 CODEC
	◆ Supports Jack Sensing function
	◆ Supports 2 / 4 / 6 / 8 channel audio
	◆ Supports Line In ; Line Out (Front Speaker Out) ; MIC ; Surround Speaker Out (Rear Speaker Out) ; Center/Subwoofer Speaker Out ; Side Speaker Out connection
	◆ Supports SPDIF Out connection
	◆ AUX_In

(Note 1) Due to standard PC architecture, a certain amount of memory is reserved for system usage and therefore the actual memory size is less than the stated amount.

For example, 4 GB of memory size will instead be shown as 3.xxGB memory during system startup.

(Note 2) To use a DDRII 667 memory module on the motherboard, you must install an 800/1066MHz FSB processor .

I/O Control	◆	IT8712
Hardware Monitor	◆	System voltage detection
	◆	CPU temperature detection
	◆	CPU / System fan speed detection
	◆	CPU warning temperature
	◆	CPU / System fan failure warning
	◆	CPU smart fan control
BIOS	◆	Use of licensed AWARD BIOS
Form Factor	◆	Micro ATX form factor; 24.4 cm x 24.4cm

Hardware Installation

1-2 Installation of the CPU and Heatsink

⚠️ CAUTION

Before installing the CPU, please comply with the following conditions:

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

NOTE

HT functionality requirement content :

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

1-2-1 Installation of the CPU
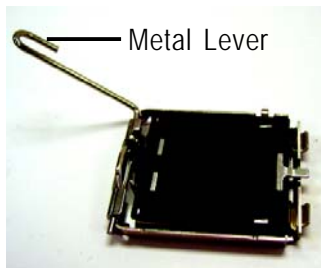
Metal Lever

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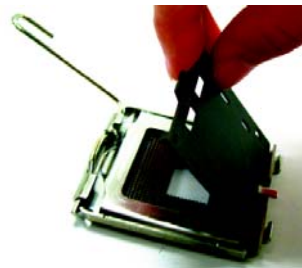
Fig. 2
Remove the plastic covering on the CPU socket.
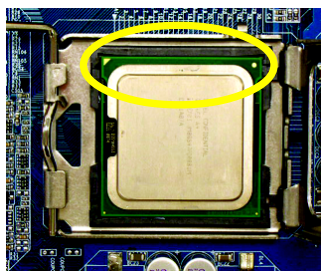
Fig. 3
Notice the small gold colored triangle located on the edge of the CPU socket. Align the

indented corner of the CPU with the triangle and gently insert the CPU into position. (Grasping the CPU firmly between your thumb and forefinger, carefully place it into the socket in a straight and downwards motion. Avoid twisting or bending motions that might cause damage to the CPU during installation.)
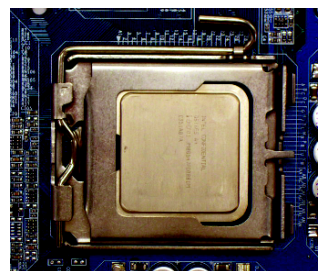
Fig. 4
Once the CPU is properly inserted, please replace the load plate and push the metal lever back into its original position.

8I945PE-FS Motherboard - 6 -

1-2-2   Installation of the Heatsink

Fig.1

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

Male Push Pin

The top of Female Push Pin
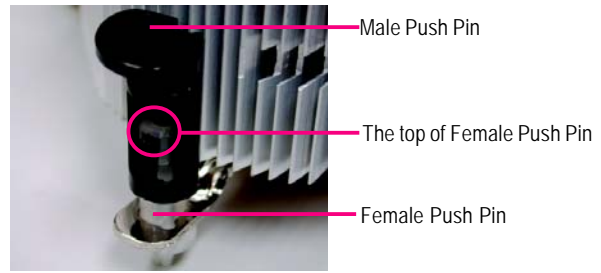
Female Push Pin

Fig. 2

(Turning the push pin along the direction of arrow is to remove the heatsink, on the contrary, is to install.)

Please note the direction of arrow sign on the male push pin doesn't face inwards before installation. (This instruction is only for Intel boxed fan)
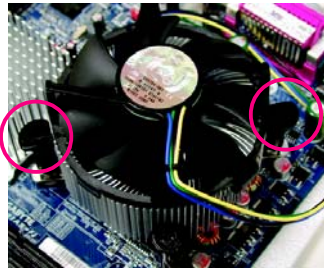
Fig. 3

Place the heatsink atop the CPU and make sure the push pins aim to the pin hole on the motherboard.Pressing down the push pins diagonally.
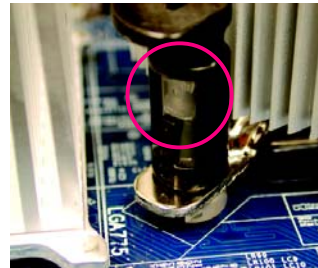
Fig. 4

Please make sure the Male and Female push pin are joined closely. (for detailed installation instructions, please refer to the heatsink installation section of the user manual)
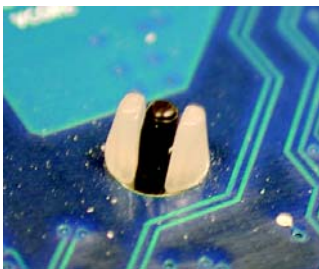
Fig. 5

Please check the back of motherboard after installing. If the push pin is inserted as the picture, the installation is complete.
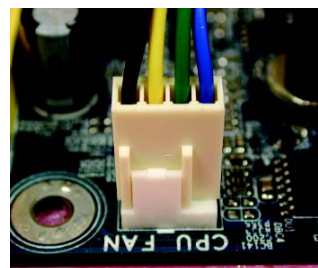
Fig. 6

Finally, please attach the power connector of the heatsink to the CPU fan header located on the motherboard.

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

1-3   Installation of Memory

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

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

Notch

DDR II
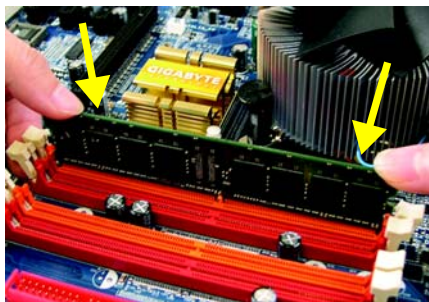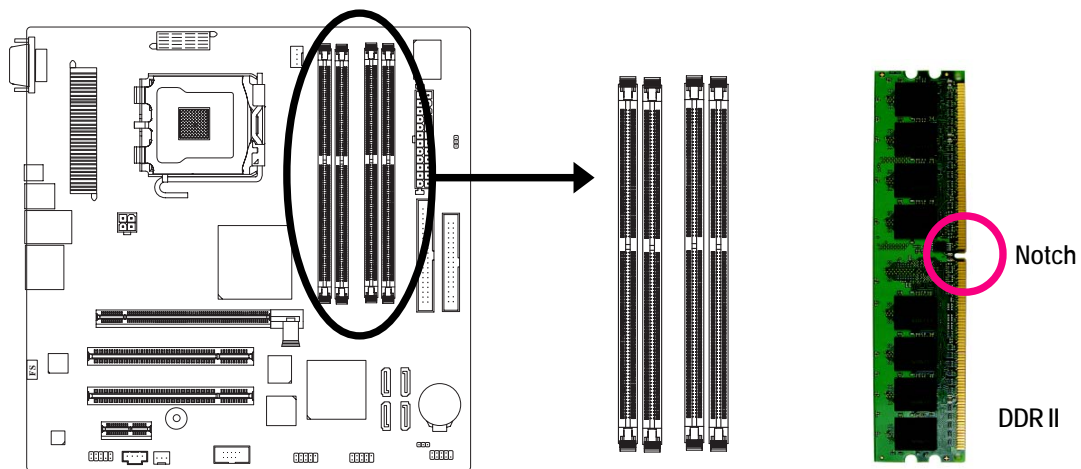
Fig.1
The DIMM socket has a notch, so the DIMM memory module can only fit in one direction. Insert the DIMM memory module vertically into the DIMM socket. Then push it down.
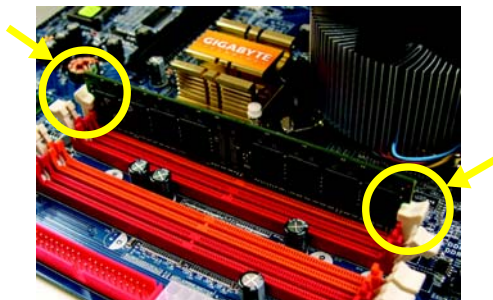
Fig.2
Close the plastic clip at both edges of the DIMM sockets to lock the DIMM module.
Reverse the installation steps when you wish to remove the DIMM module.

Dual Channel Memory Configuration

GA-8I945PE-FS supports the Dual Channel Technology. After operating the Dual Channel Technology, the bandwidth of Memory Bus will add double. GA-8I945PE-FS includes 4 DIMM sockets, and each Channel has two DIMM sockets as following:

➤ Channel A : DDR II 1, DDR II 2

➤ Channel B : DDR II 3, DDR II 4

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

1. Dual Channel mode will not be enabled if only one DDR II memory module is installed.

2. To enable Dual Channel mode with two or four memory modules (it is recommended to use memory modules of identical brand, size, chips, and speed), you must install them into DIMM sockets of the same color.

The following is a Dual Channel Memory configuration table: (DS: Double Side, SS: Single Side)

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

1-4   Installation of Expansion Cards

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

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

Installing a PCI Express x 16 expansion card:

⚠ CAUTION
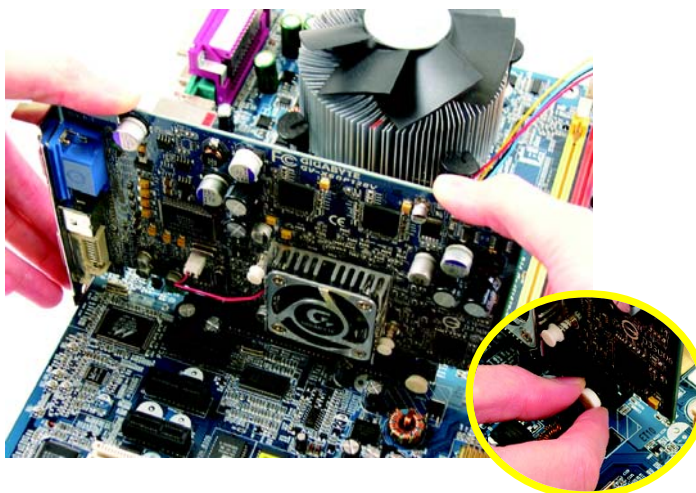
Please carefully pull out the small white-drawable bar at the end of the PCI Express x 16 slot when you try to install/Uninstall the VGA card. Please align the VGA card to the onboard PCI Express x 16 slot and press firmly down on the slot .Make sure your VGA card is locked by the small white-drawable bar.

1-5   I/O Back Panel Introduction
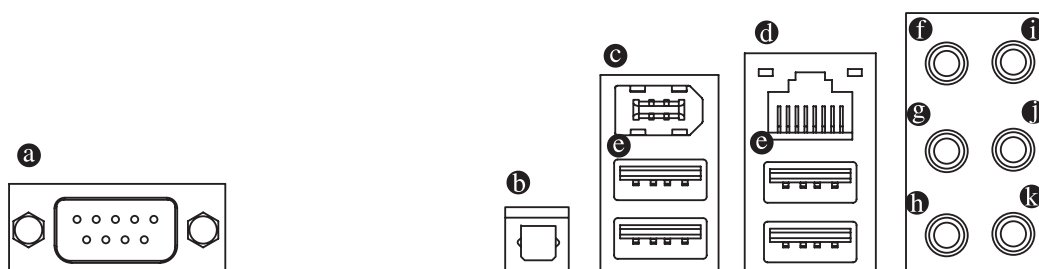
ⓐ COM A (Serial Port)

Connects to serial-based mouse or data processing devices.

ⓑ SPDIF Out

The SPDIF optical output port is capable of providing digital audio to external speakers or com
pressed AC3 data to an external Dolby Digital Decoder via an optical cable.

ⓒ 1394 Connector

Serial interface standard set by Institute of Electrical and Electronics Engineers, which has features
like high speed, highbandwidth 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.

ⓓ LAN Port

The provided Internet connection is fast Ethernet, providing data transfer speeds of 10/100Mbps.

ⓔ USB port

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

ⓕ Rear Speaker Out

Connect the rear surround speakers to this connector.

ⓖ Center/Subwoofer Speaker Out

Connect the Center/Subwoofer speakers to this connector.

ⓗ Side Speaker Out

Connect the side surround speakers to this connector.

ⓘ Line In

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

ⓙ Line Out (Front Speaker Out)

Connect the stereo speakers, earphone or front surround speakers to this connector.

ⓚ MIC In

Microphone can be connected to MIC In jack.

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1-6   Connectors Introduction
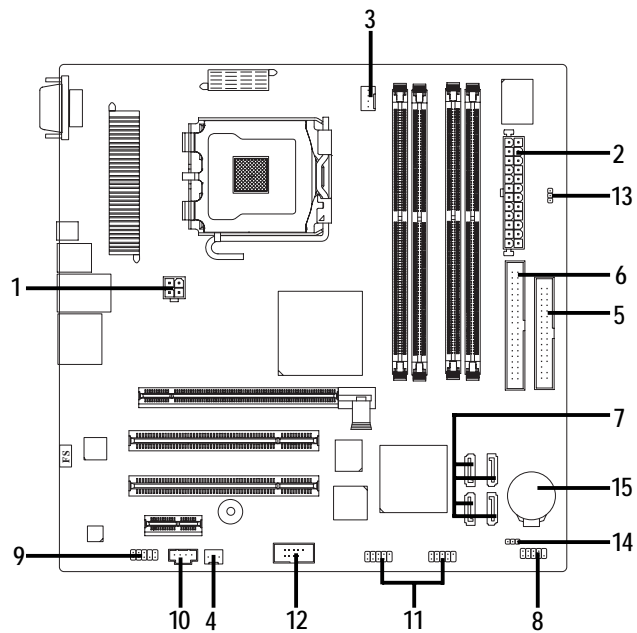
1)	ATX_12V	9)	F_AUDIO
2)	ATX (Power Connector)	10)	AUX_IN
3)	CPU_FAN	11)	F_USB1 / F_USB2
4)	SYS_FAN	12)	F_1394
5)	FDD	13)	BIOS_RE
6)	IDE	14)	CLR_CMOS
7)	SATA0 / SATA1 / SATA2 / SATA3	15)	BAT
8)	F_PANEL		

1/2) ATX_12V/ATX (Power Connector)

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

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

Caution!

Please use a power supply that is able to handle the system voltage requirements. It is recommended that a power supply that can withstand high power consumption be used (300W or greater). If a power supply is used that does not provide the required power, the result can lead to an unstable system or a system that is unable to start.
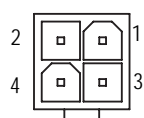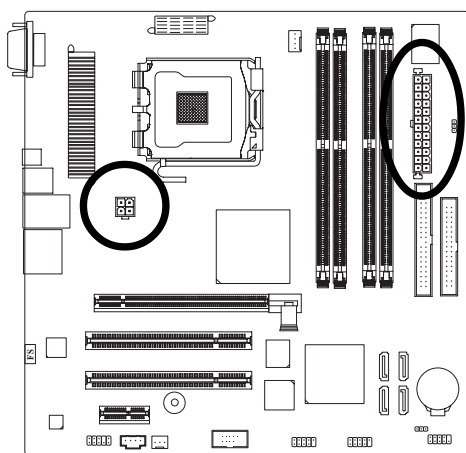
Pin No.	Definition
1	GND
2	GND
3	+12V
4	+12V
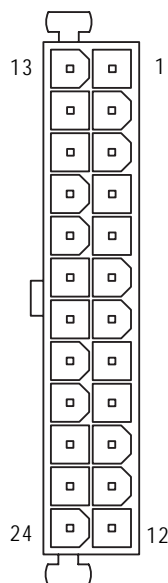
Pin No.	Definition
1	3.3V
2	3.3V
3	GND
4	+5V
5	GND
6	+5V
7	GND
8	Power Good
9	5V SB(stand by +5V)
10	+12V
11	+12V(Only for 24pins ATX)
12	3.3V(Only for 24pins ATX)
13	3.3V
14	-12V
15	GND
16	PS_ON(soft On/Off)
17	GND
18	GND
19	GND
20	-5V
21	+5V
22	+5V
23	+5V(Only for 24pins ATX)
24	GND(Only for 24pins ATX)

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

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

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

Please remember to connect the power to the cooler to prevent system overheating and failure.

Caution!

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

CPU_FAN

SYS_FAN

Pin No.	Definition
1	GND
2	+12V
3	Sense
4	Speed Control (Only for CPU_FAN)
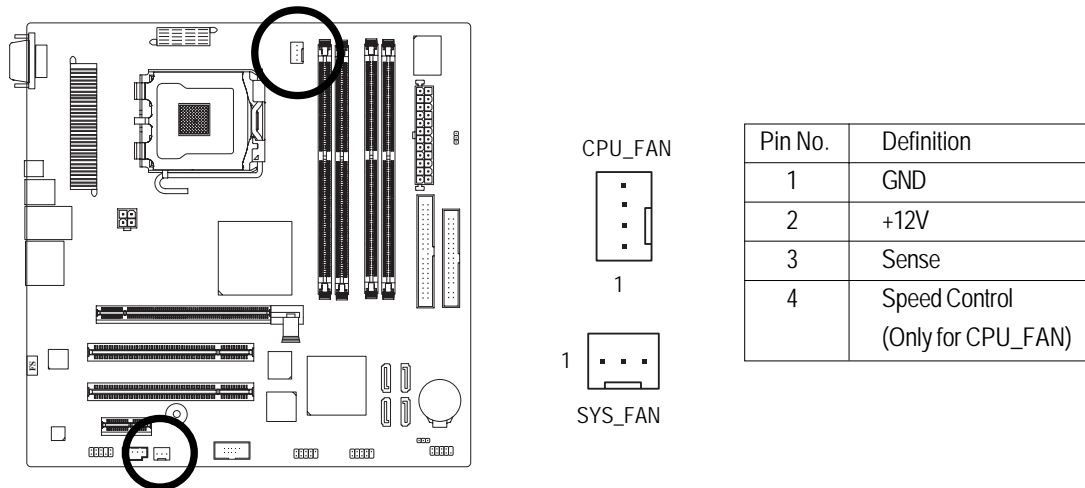
5) FDD (Floppy Connector)

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

34   33

2   1

---
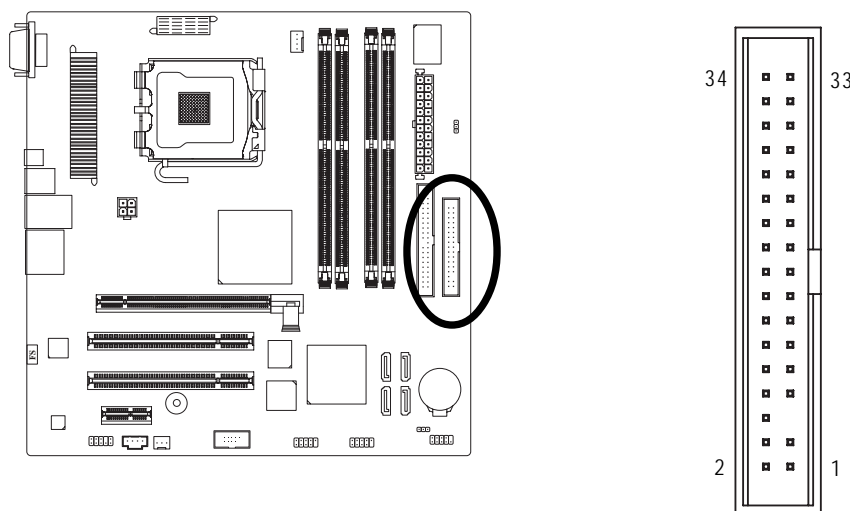
6) IDE (IDE Connector)

An IDE device connects to the computer via an IDE connector. One IDE connector can connect to one IDE cable, and the single IDE cable can then connect to two IDE devices (hard drive or optical drive). If you wish to connect two IDE devices, please set the jumper on one IDE device as Master and the other as Slave (for information on settings, please refer to the instructions located on the IDE device).
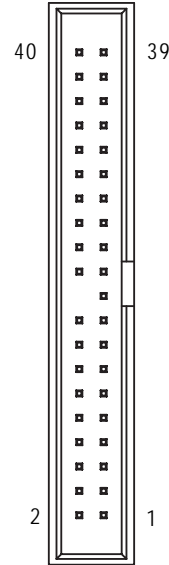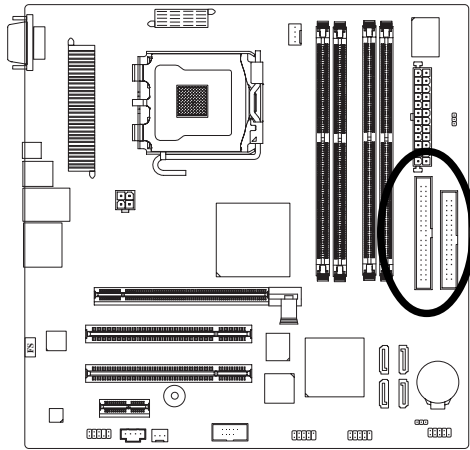
7) SATA0/SATA1/SATA2/SATA3 (SATA 3Gb/s Connector)

SATA 3Gb/s can provide up to 300MB/s transfer rate. Please refer to the BIOS setting for the Serial ATA and install the proper driver in order to work properly.
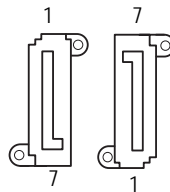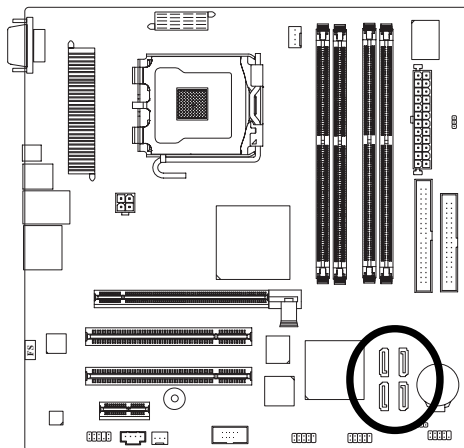
Pin No.	Definition
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND

8I945PE-FS Motherboard   - 14 -

8) F_PANEL (Front Panel Jumper)

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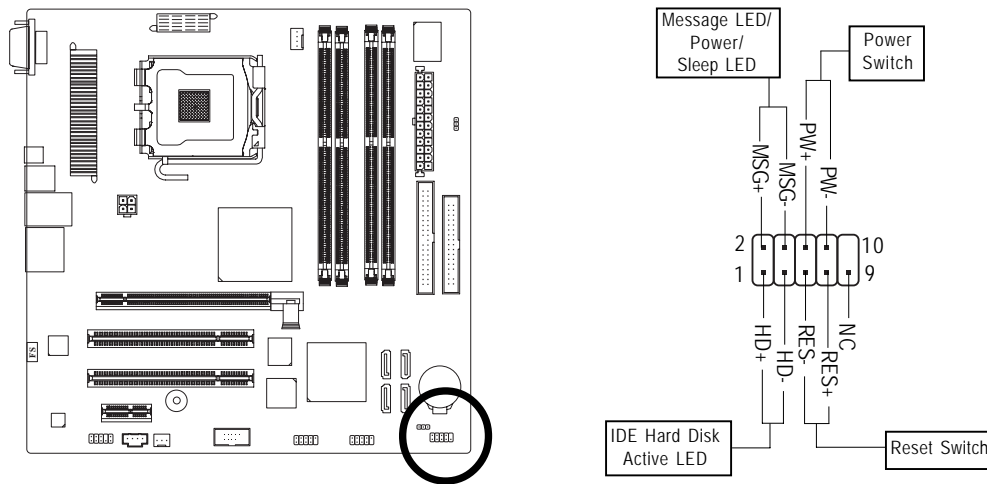
HD (IDE Hard Disk Active LED)	Pin 1: LED anode(+)
	Pin 2: LED cathode(-)
RES (Reset Switch)	Open: Normal Operation
	Close: Reset Hardware System
PW (Power Switch)	Open: Normal Operation
	Close: Power On/Off
MSG (Message LED/Power/Sleep LED)	Pin 1: LED anode(+)
	Pin 2: LED cathode(-)
NC	NC

9) F_AUDIO (Front Audio Panel Connector)

This connector is supported to connect HD(High Definition) Audio. Check the pin assignment carefully while you connect the audio panel cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional audio panel cable, please contact your local dealer.
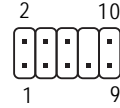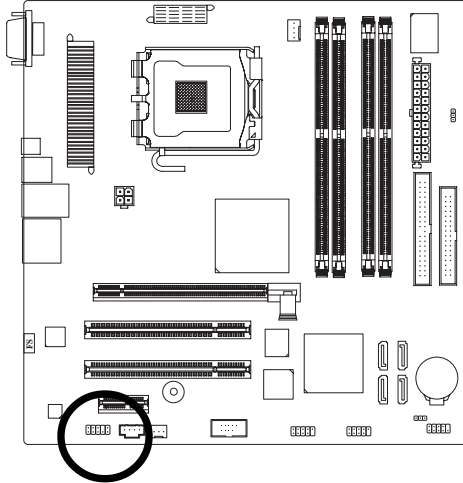
HD Audio:

Pin No.	Definition
1	MIC2_L
2	GND
3	MIC2_R
4	-ACZ_DET
5	Line2_R
6	FSENSE1
7	FAUOIO_JD
8	No Pin
9	LINE2_L
10	FSENSE2

AC'97 Audio:

Pin No.	Definition
1	MIC
2	GND
3	MIC Power
4	N/A
5	Line Out (R)
6	N/A
7	N/A
8	No Pin
9	N/A
10	Line Out (L)

10) AUX_IN (AUX In Connector)

Connect other device (such as PCI TV Tuner audio out) to the connector.
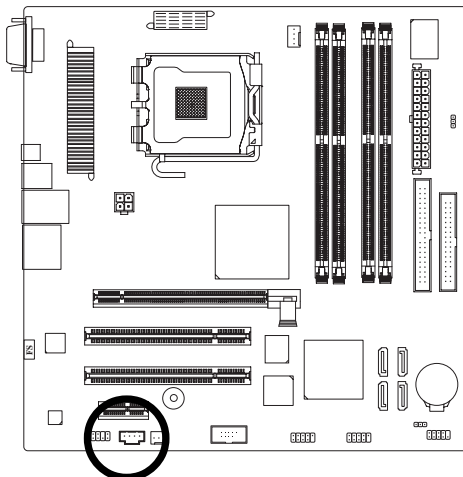
Pin No.	Definition
1	AUX-L
2	GND
3	GND
4	AUX -R

8I945PE-FS Motherboard   - 16 -

11) 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.

2   10

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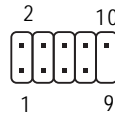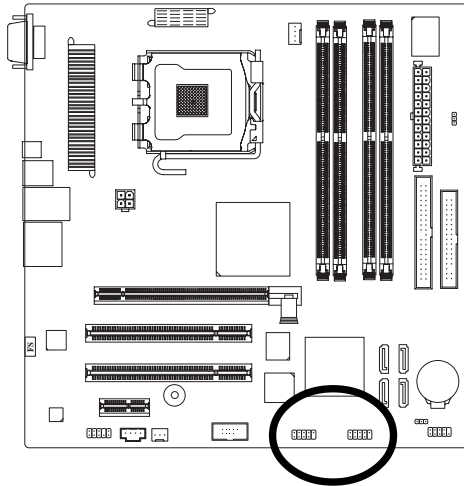
Pin No.	Definition
1	Power
2	Power
3	USB DX-
4	USB Dy-
5	USB DX+
6	USB Dy+
7	GND
8	GND
9	No Pin
10	NC

12) F_1394 (IEEE 1394 Connector)

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.

2   10

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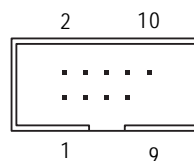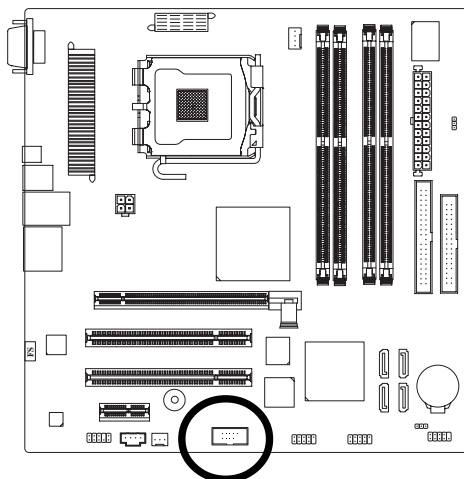
Pin No.	Definition
1	TPA2+
2	TPA2-
3	GND
4	GND
5	TPB2+
6	TPB2-
7	Power
8	Power
9	No Pin
10	GND

13) BIOS_RE (BIOS Recovery)

If the BIOS file on the motherboard is damaged, set this jumper to Recovery mode. Insert the floppy disk containing the complete BIOS file and then restart the system. System will write the BIOS file to the BIOS ROM automatically at startup.
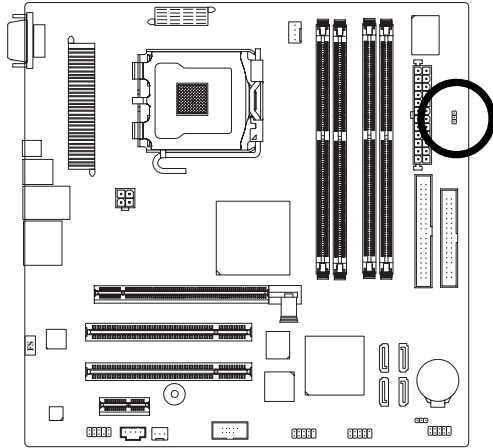
1-2: Normal

2-3: BIOS Recovery

14) CLR_CMOS (Clear CMOS)

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

1-2: Clear CMOS

2-3 : Normal

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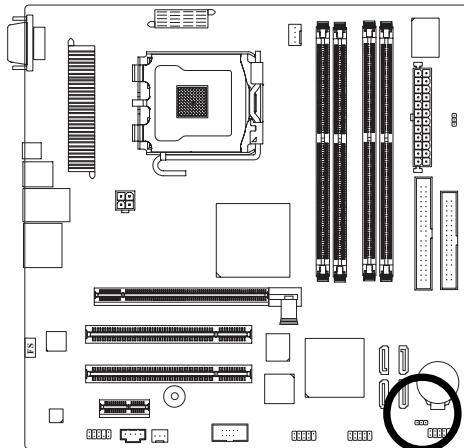
15) BAT(Battery)
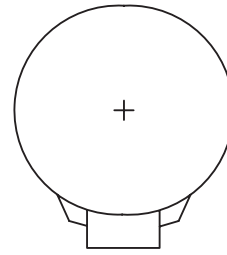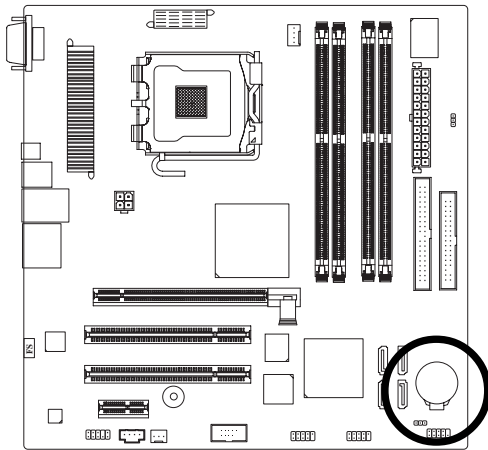
❖ Danger of explosion if battery is incorrectly replaced.

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

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

If you want to erase CMOS...

1. Turn OFF the computer and unplug the power cord.
2. Take out the battery gently and put it aside for about 10 minutes (Or you can use a metal object to connect the positive and negative pins in the battery holder to make them short for one minute).
3. Re-install the battery.
4. Plug the power cord and turn ON the computer.

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Chapter 2   BIOS Setup

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

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

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

CONTROL KEYS

<↑><↓><←><→>	Move to select item
<Enter>	Select Item
<Esc>	Main Menu - Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu - Exit current page and return to Main Menu
<Page Up>	Increase the numeric value or make changes
<Page Down>	Decrease the numeric value or make changes
<F1>	General help, only for Status Page Setup Menu and Option Page Setup Menu
<F2>	Item Help
<F5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<F7>	Default Setting
<F9>	System Information
<F10>	Save all the CMOS changes, only for Main Menu

Main Menu

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

Status Page Setup Menu / Option Page Setup Menu

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

The Main Menu (BIOS Ver. 10d)

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

CMOS Setup Utility-Copyright (C) 1984-2005 Award Software	
▶ Standard CMOS Features	Load Fail-Safe Defaults
▶ Advanced BIOS Features	Load Optimized Defaults
▶ Integrated Peripherals	Set Supervisor Password
▶ Power Management Setup	Set User Password
▶ PnP/PCI Configurations	Save & Exit Setup
▶ PC Health Status	Exit Without Saving
▶ Frequency/Voltage Control	
ESC: Quit	↑↓→←: Select Item
F10: Save & Exit Setup	
Time, Date, Hard Disk Type...	

■ **Standard CMOS Features**

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

■ **Advanced BIOS Features**

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

■ **Integrated Peripherals**

This setup page includes all onboard peripherals.

■ **Power Management Setup**

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

■ **PnP/PCI Configuration**

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

■ **PC Health Status**

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

■ **Frequency / Voltage Control**

This setup page is control CPU clock and frequency ratio.

■ **Load Fail-Safe Defaults**

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

■ **Load Optimized Defaults**

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

■ **Set Supervisor Password**

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

■ **Set User Password**

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

■ **Save & Exit Setup**

Save CMOS value settings to CMOS and exit setup.

■ **Exit Without Saving**

Abandon all CMOS value changes and exit setup.

2-1   Standard CMOS Features

```
                CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
                              Standard CMOS Features
┌──────────────────────────────────────────────────────────────────────────────────┐
│   Date (mm:dd:yy)                   Fri, Sep 2 2005          Item Help             │
│   Time (hh:mm:ss)                   20:1:24                  Menu Level▶           │
│                                                                                    │
│ ▶ IDE Channel 0 Master             [None]                   Change the day, month,│
│ ▶ IDE Channel 0 Slave              [None]                   year                  │
│ ▶ IDE Channel 2 Master             [None]                                         │
│ ▶ IDE Channel 2 Slave              [None]                   <Week>                │
│ ▶ IDE Channel 3 Master             [None]                   Sun. to Sat.          │
│ ▶ IDE Channel 3 Slave              [None]                                         │
│                                                             <Month>               │
│   Drive A                          [None]                   Jan. to Dec.          │
│                                                                                    │
│   Halt On                          [All, But Keyboard]      <Day>                 │
│                                                             1 to 31 (or maximum   │
│   Base Memory                      640K                     allowed in the month) │
│   Extended Memory                  511M                                           │
│   Total Memory                     512M                     <Year>                │
│                                                             1999 to 2098          │
│                                                                                    │
├──────────────────────────────────────────────────────────────────────────────────┤
│ ↑↓→←: Move    Enter: Select    +/-/PU/PD: Value    F10: Save   ESC: Exit   F1: General Help│
│         F5: Previous Values        F6: Fail-Safe Defaults      F7: Optimized Defaults│
└──────────────────────────────────────────────────────────────────────────────────┘
```

☞ **Date**

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

▸ Week   The week, from Sun to Sat, determined by the BIOS and is display only

▸ Month   The month, Jan. Through Dec.

▸ Day   The day, from 1 to 31 (or the maximum allowed in the month)

▸ Year   The year, from 1999 through 2098

☞ **Time**

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

☞ **IDE Channel 0 Master, Slave**

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

▸ IDE Device Setup. You can use one of three methods:

Auto   Allows BIOS to automatically detect IDE devices during POST(default)

None   Select this if no IDE devices are used and the system will skip the automatic detection step and allow for faster system start up.

Manual   User can manually input the correct settings

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

☞ **IDE Channel 2/3 Master, Slave**

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

▸ Extended IDE Drive SATA devices setup. You can use one of two methods:

Auto   Allows BIOS to automatically detect SATA IDE devices during POST. (Default value)

None   Select this if no SATA IDE devices are used and the system will skip the automatic detection step and allow for faster system start up.

▸ Access Mode   Use this to set the access mode for the hard drive. The two options are: Large/Auto(default:Auto)

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> ▸ Capacity   Capacity of currently installed hard disk.

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

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

☞ **Drive A**

The category identifies the types of floppy disk drive A 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.

☞ **Halt on**

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

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

☞ **Memory**

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

> ▸ **Base Memory**

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

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

> ▸ **Extended Memory**

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

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

> ▸ **Total Memory**

This item displays the memory size that used.

2-2 Advanced BIOS Features

```
               CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
                              Advanced BIOS Features
 ▶  Hard Disk Boot Priority               [Press Enter]        Item Help
    BIOS Flash Protection                 [Auto]               Menu Level▶
    First Boot Device                     [CDROM]
    Second Boot Device                    [Floppy]
    Third Boot Device                     [Hard Disk]
    Boot Up Floppy Seek                   [Disabled]
    Boot Up NumLock                       [On]
    Password Check                        [Setup]
 #  CPU Hyper-Threading                   [Enabled]
    Limit CPUID Max. to 3                 [Disabled]
    No-Execute Memory Protect (Note)      [Enabled]
    CPU Enhanced Halt (C1E) (Note)        [Enabled]
    CPU EIST Function (Note)              [Enabled]
    Full Screen LOGO Show                 [Enabled]
    Intel OnScreen Branding               [Enabled]




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

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

☞ **Hard Disk Boot Priority**

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

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

☞ **BIOS Flash Protection**

This field lets you determine the states that flash BIOS

▸ Auto	BIOS enables flash write access automatically when updating BIOS data/DMI/ESCD. (Default Value)
▸ Enabled	During POST, DMI/ESCD would not be updated. But flash tools can update BIOS always.

☞ **First / Second / Third Boot Device**

▸ Floppy	Select your boot device priority by Floppy.
▸ LS120	Select your boot device priority by LS120.
▸ Hard Disk	Select your boot device priority by Hard Disk.
▸ CDROM	Select your boot device priority by CDROM.
▸ ZIP	Select your boot device priority by ZIP.
▸ USB-FDD	Select your boot device priority by USB-FDD.
▸ USB-ZIP	Select your boot device priority by USB-ZIP.
▸ USB-CDROM	Select your boot device priority by USB-CDROM.
▸ USB-HDD	Select your boot device priority by USB-HDD.
▸ LAN	Select your boot device priority by LAN.
▸ Disabled	Disable this function.

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

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☞ **Boot Up Floppy Seek**

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

➨ 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)

➨ Enabled   BIOS searches for floppy disk drive to determine if 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 80 tracks.

☞ **Boot Up Num-Lock**

➨ On   Keypad is number keys. (Default value)

➨ Off   Keypad is arrow keys.

☞ **Password Check**

➨ Setup   The system will boot but will not access to Setup page if the correct password is not entered at the prompt. (Default value)

➨ System   The system will not boot and will not access to Setup page if the correct password is not entered at the prompt.

If you want to cancel the setting of password, please just press ENTER to make [SETUP] empty.

☞ **CPU Hyper-Threading**

This option appears only when the processor you install supports Intel® Hyper-Threading Technology.

➨ Enabled   Enable CPU Hyper-Threading feature. Please note that this feature only works for operating system with multiprocessors mode supported. (Default value)

➨ Disabled   Disable CPU Hyper-Threading.

☞ **Limit CPUID Max. to 3**

➨ Enabled   Limit CPUID Maximum value to 3 when use older OS like NT4.

➨ Disabled   Disables CPUID Limit for windows XP. (Default value)

☞ **No-Execute Memory Protect** (Note)

➨ Enabled   Enables No-Execute Memory Protect function. (Default value)

➨ Disabled   Disables No-Execute Memory Protect function.

☞ **CPU Enhanced Halt (C1E)** (Note)

➨ Enabled   Enables CPU Enhanced Halt (C1E) function. (Default value)

➨ Disabled   Disables CPU Enhanced Halt (C1E) function.

☞ **CPU EIST Function** (Note)

➨ Enabled   Enable CPU EIST function. (Default value)

➨ Disabled   Disable CPU EIST function.

☞ **Full Screen LOGO Show**

➨ Enabled   Display Full Screen LOGO during POST. (Default value)

➨ Disabled   Don't dispaly Full Screen LOGO during POST.

☞ **Intel OnScreen Branding**

➨ Enabled   Enable this function. (Default value)

➨ Disabled   Disable this function.

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

2-3 Integrated Peripherals

```
                CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
                                  Integrated Peripherals
┌──────────────────────────────────────────────────────────────────────────────────┐
│    On-Chip Primary PCI IDE          [Enabled]                   │ Item Help         │
│    On-Chip SATA Mode                [Auto]                      │ Menu Level▶       │
│  x PATA IDE Set to                  Ch.0 Master/Slave           │                   │
│    SATA Port 0/2 Set to             Ch.2 Master/Slave           │                   │
│    SATA Port 1/3 Set to             Ch.3 Master/Slave           │                   │
│    USB Controller                   [Enabled]                   │                   │
│    USB 2.0 Controller               [Enabled]                   │                   │
│    USB Keyboard Support             [Enabled]                   │                   │
│    USB Mouse Support                [Enabled]                   │                   │
│    Azalia Codec                     [Auto]                      │                   │
│    Onboard H/W 1394                 [Enabled]                   │                   │
│    Onboard H/W LAN                  [Enabled]                   │                   │
│    Onboard LAN Boot ROM             [Disabled]                  │                   │
│    Power On By Mouse                [Disabled]                  │                   │
│    Power On By Keyboard             [Disabled]                  │                   │
│  x KB Power ON Password             Enter                       │                   │
│    Onboard FDC Controller           [Enabled]                   │                   │
│    Onboard Serial Port 1            [3F8/IRQ4]                  │                   │
│    AC Back Function                 [Memory]                    │                   │
├──────────────────────────────────────────────────────────────────────────────────┤
│ ↑↓→←: Move     Enter: Select    +/-/PU/PD: Value    F10: Save   ESC: Exit  F1: General Help │
│         F5: Previous Values         F6: Fail-Save Default      F7: Optimized Defaults  │
└──────────────────────────────────────────────────────────────────────────────────┘
```

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

☞ **On-Chip SATA Mode**
- ▸ Disabled   Disable this function.
- ▸ Auto   BIOS will auto detect.   (Default value)
- ▸ Combined   Set On-Chip SATA mode to Combined, you can use up to 4 HDDs on the motherboard; 2 for SATA and the other for PATA.
- ▸ Enhanced   Set On-Chip SATA mode to Enhanced, the motherboard allows up to 6 HDDs to use; 4 SATA HDDs plus PATA HDDs.
- ▸ Non-Combined   Set On-Chip SATA mode to Non-Combined, SATA will be simulated to PATA mode. Support a maximum of 4 SATA devices. PATA devices will be ignored.

☞ **PATA IDE Set to**
- ▸ Ch.1 Master/Slave   Set PATA IDE to Ch. 1 Master/Slave.
- ▸ Ch.0 Master/Slave   Set PATA IDE to Ch. 0 Master/Slave. (Default value)

☞ **SATA Port 0/2 Set to**
- ▸ This value will auto make by the setting "On-Chip SATA Mode" and "PATA IDE Set to".
  If PATA IDE were set to Ch. 1 Master/Slave, this function will auto set to Ch. 0 Master/Slave.

☞ **SATA Port 1/3 Set to**
- ▸ This value will auto make by the setting "On-Chip SATA Mode" and "PATA IDE Set to".
  If PATA IDE were set to Ch. 0 Master/Slave, this function will auto set to Ch. 1 Master/Slave.

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

☞ **USB 2.0 Controller**
Disable this function if you are not using onboard USB 2.0 feature.
- ▶ Enabled   Enable USB 2.0 Controller. (Default value)
- ▶ Disabled   Disable USB 2.0 Controller.

☞ **USB Keyboard Support**
- ▶ Enabled   Enable USB Keyboard Support. (Default value)
- ▶ Disabled   Disable USB Keyboard Support.

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

☞ **Azalia Codec**
- ▶ Auto   Auto detect Azalia audio function. (Default value)
- ▶ Disabled   Disable Azalia audio function.

☞ **Onboard H/W 1394**
- ▶ Enabled   Enable onboard IEEE 1394 function. (Default value)
- ▶ Disabled   Disable this function.

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

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

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

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

☞ **KB Power ON Password**
When "Power On by Keyboard" set at Password, you can set the password here.
- ▶ Enter   Input password (from 1 to 5 characters) and press Enter to set the Keyboard Power On password.

☞ **Onboard FDC Controller**
- ▸▸ Enabled   Enable onboard FDC controller. (Default value)
- ▸▸ Disabled   Disable onboard FDC controller.

☞ **Onboard Serial Port 1**
- ▸▸ 3F8/IRQ4   Enable onboard Serial port 1 and address is 3F8/IRQ4. (Default value)
- ▸▸ 2F8/IRQ3   Enable onboard Serial port 1 and address is 2F8.
- ▸▸ 3E8/IRQ4   Enable onboard Serial port 1 and address is 3E8.
- ▸▸ 2E8/IRQ3   Enable onboard Serial port 1 and address is 2E8.
- ▸▸ Disabled   Disable onboard Serial port 1.

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

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2-4 Power Management Setup

```
                  CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
                                  Power Management Setup
   ACPI Suspend Type                        [S3(STR)]              Item Help
   USB Device Wake-Up From S3               [Enabled]             Menu Level▶
   Soft-Off by PWR-BTTN                     [Instant-Off]
   PME Event Wake Up                        [Enabled]
   Power On by Ring                         [Enabled]
   Resume by Alarm                          [Disabled]
 x Date (of Month) Alarm                    0
 x Time (hh:mm:ss) Alarm                    0 : 0 : 0




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

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

☞ **USB Device Wake-Up From S3**
  ▶▶ Disabled   Disable USB Device Wake-Up from S3.
  ▶▶ Enabled   Enable USB Device Wake-Up from S3. (Default value)

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

☞ **PME Event Wake Up**
  ▶▶ Disabled   Disable this function.
  ▶▶ Enabled   Enable PME Event Wake up. (Default value)

☞ **Power On by Ring**
  ▶▶ Disabled   Disable Power on by Ring function.
  ▶▶ Enabled   Enable Power on by Ring function. (Default value)

☞ **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 Resume by alarm is Enabled.
  ▶▶ Date (of Month) Alarm :   0~31
  ▶▶ Time (hh: mm: ss) Alarm : (0~23) : (0~59) : (0~59)

2-5 PnP/PCI Configurations

```
         CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
                        PnP/PCI Configurations
 Resources Controlled By            [Auto]                     Item Help
 x   IRQ Resources                  Press Enter         Menu Level



 ↑↓→←: Move    Enter: Select    +/-/PU/PD: Value   F10: Save    ESC: Exit    F1: General Help
         F5: Previous Values      F6: Fail-Save Default         F7: Optimized Defaults
```
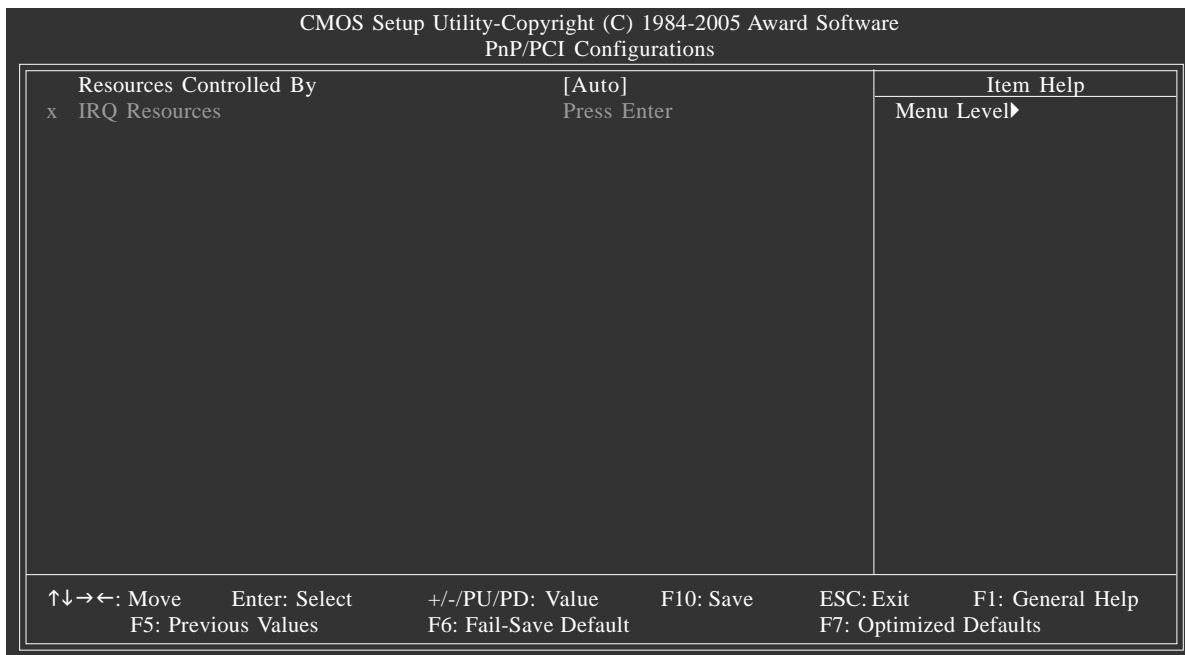
☞ **Resources Controlled By**
- ▶ Manual   User can set the PnP resource (I/O Address, IRQ & DMA channels) used by legacy ISA DEVICE.
- ▶ Auto   BIOS automatically use these PnP rescuers. (Default value)

☞ **IRQ assigned (3,4,5,7,9,10,11,12,14,15)**
- ▶ PCI Device   This IRQ assigns for PCI device. (Default value)
- ▶ Reserved   Reserved this IRQ for other device.

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2-6 PC Health Status

```
        CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
                            PC Health Status
┌──────────────────────────────────────────────────────┬─────────────────────┐
│  Vcore                              1.312V             │      Item Help      │
│  VCC18                              1.792V             │  Menu Level▶        │
│  +3.3V                              3.232V             │                     │
│  +12V                               11.287V            │                     │
│  Current CPU Temperature            49ºC               │                     │
│  Current CPU FAN Speed              3515 RPM           │                     │
│  Current SYSTEM FAN Speed           0    RPM           │                     │
│  CPU Warning Temperature            [Disabled]         │                     │
│  CPU FAN Fail Warning               [Disabled]         │                     │
│  SYSTEM FAN Fail Warning            [Disabled]         │                     │
│  CPU Smart FAN Control              [Enabled]          │                     │
│                                                        │                     │
│                                                        │                     │
│                                                        │                     │
│                                                        │                     │
│                                                        │                     │
│                                                        │                     │
├──────────────────────────────────────────────────────┴─────────────────────┤
│ ↑↓→←: Move     Enter: Select    +/-/PU/PD: Value   F10: Save   ESC: Exit   F1: General Help │
│        F5: Previous Values         F6: Fail-Save Default      F7: Optimized Defaults │
└──────────────────────────────────────────────────────────────────────────────┘
```

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

  ▸ Detect system's voltage status automatically.

☞ **Current CPU Temperature**

  ▸ Detect CPU temperature automatically.

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

  ▸ Detect CPU/SYSTEM Fan speed status automatically.

☞ **CPU Warning Temperature**

  ▸ 60ºC / 140ºF   Monitor CPU temperature at 60ºC / 140ºF.
  ▸ 70ºC / 158ºF   Monitor CPU temperature at 70ºC / 158ºF.
  ▸ 80ºC / 176ºF   Monitor CPU temperature at 80ºC / 176ºF.
  ▸ 90ºC / 194ºF   Monitor CPU temperature at 90ºC / 194ºF.
  ▸ Disabled   Disable this function. (Default value)

☞ **CPU/SYSTEM FAN Fail Warning**

  ▸ Disabled   Fan warning function disable. (Default value)
  ▸ Enabled   Fan warning function enable.

☞ **CPU Smart FAN Control**

  ▸ Disabled   Disable this function.
  ▸ Enabled   When this function is enabled, CPU fan will run at different speed depending on CPU temperature.

2-7   Frequency Control

```
              CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
                              Frequency Control
┌─────────────────────────────────────────────────────────┬──────────────────┐
│  System Memory Multiplier            [Auto]               │      Item Help   │
│  Memory Frequency (Mhz)              533                  │  Menu Level▶     │
│                                                           │                  │
│                                                           │                  │
│                                                           │                  │
│                                                           │                  │
│                                                           │                  │
│                                                           │                  │
│                                                           │                  │
│                                                           │                  │
│                                                           │                  │
│                                                           │                  │
│                                                           │                  │
│                                                           │                  │
│                                                           │                  │
├───────────────────────────────────────────────────────────────────────────┤
│ ↑↓→←: Move     Enter: Select     +/-/PU/PD: Value    F10: Save    ESC: Exit   F1: General Help │
│        F5: Previous Values       F6: Fail-Save Default       F7: Optimized Defaults │
└───────────────────────────────────────────────────────────────────────────┘
```
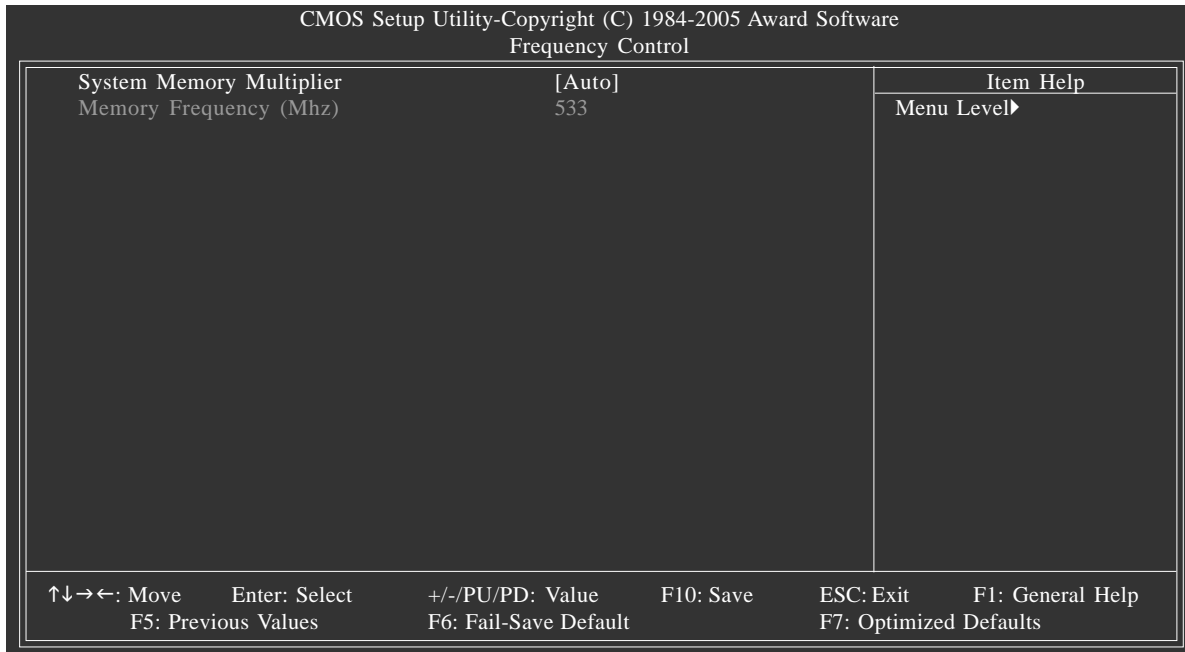
⚠ **CAUTION** Incorrect using these features may cause your system broken. For power end-user use only.

☞ **System Memory Multiplier**

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

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

- ▶▶ 3   Memory Frequency = Host clock X 3.
- ▶▶ 4   Memory Frequency = Host clock X 4.
- ▶ Auto   Set Memory frequency by DRAM SPD data. (Default value)

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

- ▶ 2.0   Memory Frequency = Host clock X 2.0.
- ▶ 2.66   Memory Frequency = Host clock X 2.66.
- ▶ 3.33   Memory Frequency = Host clock X 3.33.
- ▶ Auto   Set Memory frequency by DRAM SPD data. (Default value)

for FSB(Front Side Bus) frequency=1066MHz,

- ▶ 1.5   Memory Frequency = Host clock X 1.5.
- ▶ 2.0   Memory Frequency = Host clock X 2.0.
- ▶ 2.5   Memory Frequency = Host clock X 2.5.
- ▶ Auto   Set Memory frequency by DRAM SPD data. (Default value)

☞ **Memory Frequency (Mhz)**

The values depend on "System Memory Multiplier" item.

2-8 Load Fail-Safe Defaults

```
         CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
   ┌──────────────────────────────────────────────────────────────────────────┐
   │  ▶  Standard CMOS Features          │  Load Fail-Safe  Defaults            │
   │  ▶  Advanced BIOS Features          │  Load Optimized Defaults             │
   │  ▶  Integrated  Peripherals         │  Set Supervisor Password             │
   │  ▶  Power Ma                                                               │
   │  ▶  PnP/PCI          Load Fail-Safe Defaults (Y/N)? N                      │
   │  ▶  PC Health Status                    Exit Without Saving                │
   │  ▶  Frequency/Voltage  Control                                            │
   ├──────────────────────────────────────────────────────────────────────────┤
   │  ESC: Quit                              ↑↓→←: Select Item                  │
   │  F10: Save & Exit Setup                                                    │
   ├──────────────────────────────────────────────────────────────────────────┤
   │                    Load Fail-Safe  Defaults                                │
   └──────────────────────────────────────────────────────────────────────────┘
```

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

2-9 Load Optimized Defaults
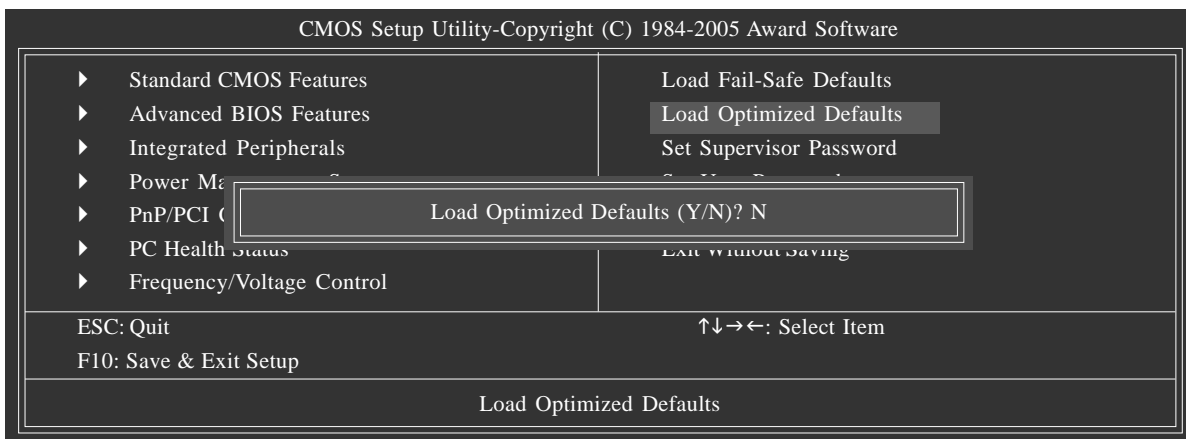
```
         CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
   ┌──────────────────────────────────────────────────────────────────────────┐
   │  ▶  Standard CMOS Features          │  Load Fail-Safe  Defaults            │
   │  ▶  Advanced BIOS Features          │  Load Optimized Defaults             │
   │  ▶  Integrated  Peripherals         │  Set Supervisor Password             │
   │  ▶  Power Ma                                                               │
   │  ▶  PnP/PCI         Load Optimized Defaults (Y/N)? N                       │
   │  ▶  PC Health Status                   Exit Without Saving                 │
   │  ▶  Frequency/Voltage  Control                                            │
   ├──────────────────────────────────────────────────────────────────────────┤
   │  ESC: Quit                              ↑↓→←: Select Item                  │
   │  F10: Save & Exit Setup                                                    │
   ├──────────────────────────────────────────────────────────────────────────┤
   │                    Load Optimized  Defaults                                │
   └──────────────────────────────────────────────────────────────────────────┘
```

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

2-10   Set Supervisor/User Password
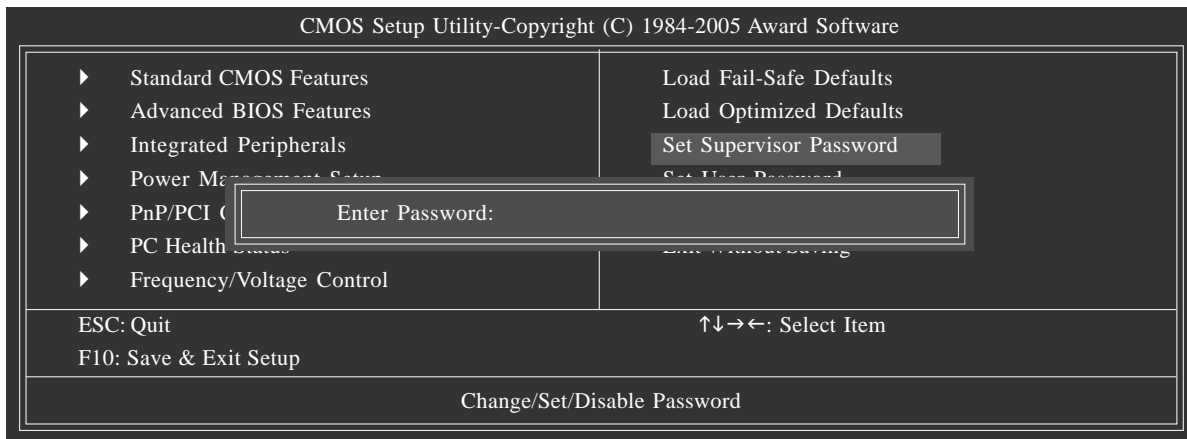
```
                    CMOS Setup Utility-Copyright (C) 1984-2005 Award Software
   ┌─────────────────────────────────────────────────────────────────────────────┐
   │  ▶   Standard CMOS Features              Load Fail-Safe Defaults              │
   │  ▶   Advanced BIOS Features              Load Optimized Defaults              │
   │  ▶   Integrated  Peripherals             Set Supervisor Password             │
   │  ▶   Power Ma┌───────────────────────────────────────────────────┐ssword     │
   │  ▶   PnP/PCI │        Enter  Password:                            │           │
   │  ▶   PC Health└───────────────────────────────────────────────────┘ving      │
   │  ▶   Frequency/Voltage  Control                                               │
   ├─────────────────────────────────────────────────────────────────────────────┤
   │  ESC: Quit                              ↑↓→←: Select Item                     │
   │  F10: Save & Exit Setup                                                       │
   ├─────────────────────────────────────────────────────────────────────────────┤
   │                         Change/Set/Disable Password                           │
   └─────────────────────────────────────────────────────────────────────────────┘
```

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

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

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

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

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

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

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

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

2-11   Save & Exit Setup

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

    ▶  Standard CMOS Features              Load Fail-Safe Defaults
    ▶  Advanced BIOS Features              Load Optimized Defaults
    ▶  Integrated Peripherals              Set Supervisor Password
    ▶  Power Management Setup              Set User Password
    ▶  PnP/PCI C                           Save & Exit Setup
    ▶  PC Health      Save to CMOS and EXIT (Y/N)? Y
    ▶  Frequency/Voltage Control

    ESC: Quit                            ↑↓→←: Select Item
    F10: Save & Exit Setup

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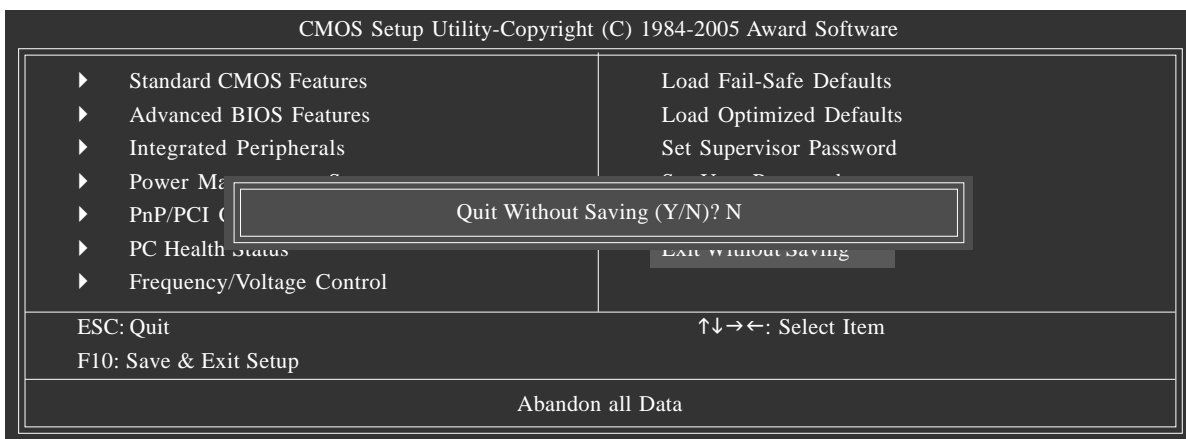
Type "Y" will quit the Setup Utility and save the user setup value to RTC CMOS.
Type "N" will return to Setup Utility.

2-12   Exit Without Saving

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

    ▶  Standard CMOS Features              Load Fail-Safe Defaults
    ▶  Advanced BIOS Features              Load Optimized Defaults
    ▶  Integrated Peripherals              Set Supervisor Password
    ▶  Power Ma                            Set User Password
    ▶  PnP/PCI (       Quit Without Saving (Y/N)? N
    ▶  PC Health Status                    Exit Without Saving
    ▶  Frequency/Voltage Control

    ESC: Quit                            ↑↓→←: Select Item
    F10: Save & Exit Setup

                        Abandon all Data
```

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

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