

GA-8IAX
Pentium Prescott 800 Motherboard

USER'S MANUAL

Pentium® Prescott Processor Motherboard

Rev. 1001

12ME-8IAX-1001

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Item Checklist

- | | |
|--|---|
| ☒ The GA-8IAX motherboard | ☒ Serial ATA cable x 4 |
| ☒ IDE (ATA133) cable x 1 / Floppy cable x 1 | ☒ I/O Shield |
| ☒ CD for motherboard driver & utility | ☒ GA-8IAX user's manual |



WARNING!

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

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

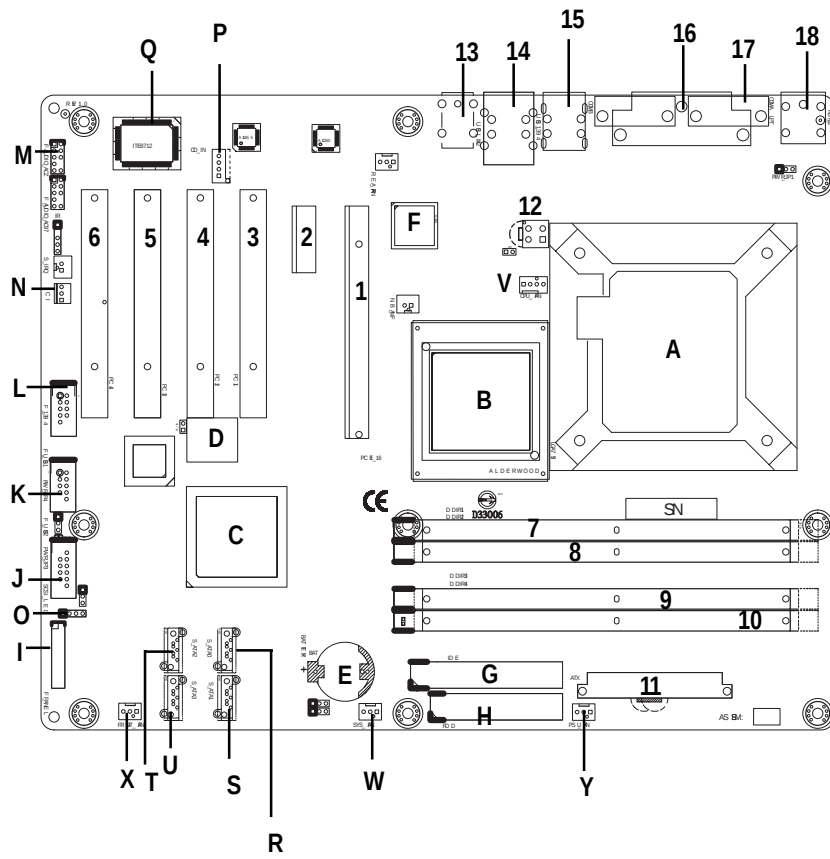
Form Factor	30.6cm x 24.4cm ATX size form factor, 6 layers PCB.
CPU	- Supports Intel® Pentium Prescott LGA 775 processor - Intel® Prescott LGA 775 supports 800MHz FSB - L2 cache on-die per processor from 1M
Chipset	- Intel® Alderwood 925X Chipset - Intel® ICH6R
Memory	4 x 240-pin DDRII DIMM sockets - Supports 4 ECC Un-buffered DIMM DDRII 400 - Support 128MB, 256MB, 512MB, and 1GB memory - Single-bit Errors Correction, Multiple-bit Errors Detection
I/O Control	ITE IT8712F Super I/O
Expansion Slots	- Supports 4 PCI slots 32-Bit/33MHz (5V) - Supports 1 PCI-E x16 slot - Supports 1 PCI-E x 1 slot
On-Board RAID	- ICH6R - Supports SATA RAID 0,1
On-Board Peripherals	1 Floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88M bytes. 1 Parallel port supports Normal/EPP/ECP mode 1 Serial port (COM) 4 x USB 2.0 (2 by cable) 2 x IEEE 1394 (1 by cable) 1 x LAN RJ45 4 x SATA Connectors
Hardware Monitor	- CPU/Power/System Fan Revolution Detect - CPU shutdown when overheat - System Voltage Detect
On-Board LAN	Broadcom 5751 Gigabit Ethernet (PCI-E)
On-Board USB 2.0	Built in ICH6R Chipset
PS/2 Connector	PS/2 Keyboard interface and PS/2 Mouse interace
BIOS	Award BIOS on 4Mb flash RAM

GA-8IAX Motherboard

Additional Features

- PS/2 Mouse power on under Windows Operating System
 - External Modem wake up
 - Supports S1, S3, S4, S5 under Windows Operating System
 - Wake on LAN (WOL)
 - AC Recovery
 - Supports Console Redirection
-

GA-8IAX Motherboard Layout

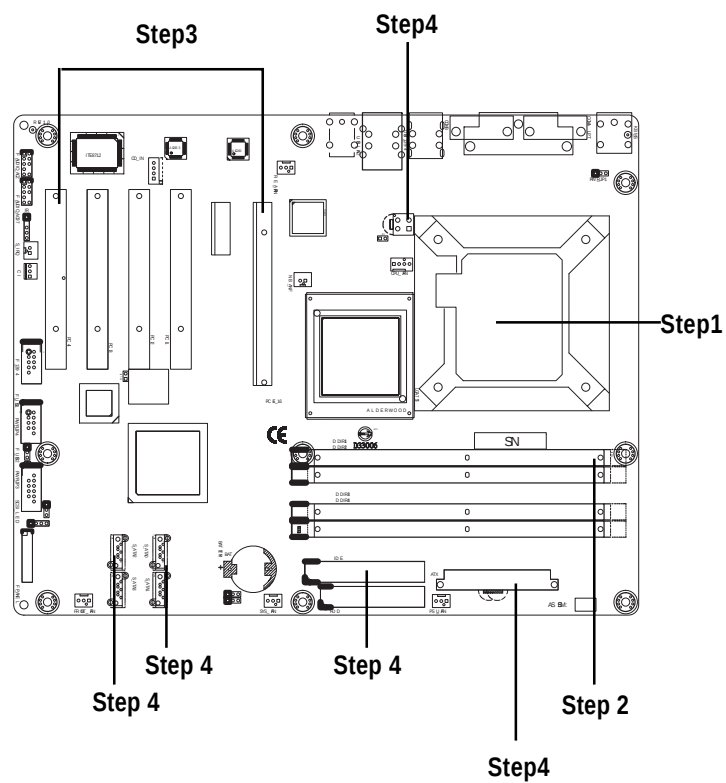


A.	CPU	1.	PCIE_16 (x16)
B.	Intel Alderwood 925X	2.	PCIE_1 (x 4)
C.	Intel ICH6R	3.	PCI_1
D.	BIOS	4.	PCI_2
E.	BAT (Li-Battery)	5.	PCI_3
F.	Broadcom 5751	6.	PCI_4
G.	IDE	7.	DDRII1
H.	FDD	8.	DDRII2
I.	F_Panel (Front Panel)	9.	DDRII3
J.	F_USB2 (Front USB)	10.	DDRII4
K.	F_USB1 (Front USB)	11.	ATX
L.	F_1394 (IEEE 1394)	12.	ATX_12V
M.	F_Audio_ACZ	13.	Audio
N.	CI	14.	USB_LAN2
O.	SCSI LED	15.	USB_1394
P.	CD_IN	16.	LPT
Q.	ITE IT8712F	17.	COMA
R.	SATA_0	18.	KB_MS (Keyboard and Mouse)
S.	SATA_1		
T.	SATA_2		
U.	SATA_3		
V.	CPU_FAN (CPU Fan Connector)		
W.	SYS_FAN (System Fan Connector)		
X.	Front_FAN		
Y.	PSU_FAN (Power Supply Fan)		

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
- Step 5- Setup BIOS software



Step 1: Installing Processor and CPU Heat Sink

Before installing the processor and cooling fan, adhere to the following cautions:



1. The processor will overheat without the heatsink and/or fan, resulting in permanent irreparable damage.
2. Never force the processor into the socket.
3. Apply thermal grease on the processor before placing cooling fan.
4. Please make sure the CPU type is supported by the motherboard.
5. 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.

Step1-1: Installing CPU

- Step 1 Gently lift the metal lever located on the CPU socket to the upper-right position.
- Step 2 Remove the plastic covering on the CPU socket.
- Step 3 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.)
- Step 4 Once the CPU is properly inserted, please replace the plastic covering and push the metal lever back into its original position.
- Step 5 Close the lever, reverse step 1 & 2.



Step1-2: Installing Heat Sink



Fig.1

Please apply heatsink paste on the surface of the installed CPU.

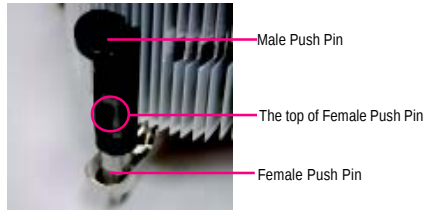


Fig. 2

(to remove the heatsink, turning the push pin along the direction of arrow; and reverse the previous step to install the heat sink.)

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 on top the CPU and make sure the push pins align to the pin hole on the motherboard. Push down the push pins diagonally.

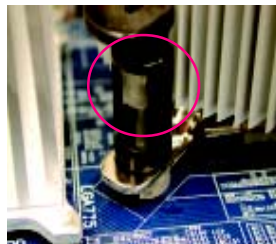


Fig. 4

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



Fig. 5

Please check the back side of the motherboard. Make sure the push pin is seated firmly as the picture shown. Installation completed.



Fig. 6

Attach the power connector of the heatsink to the CPU fan header located on the motherboard.

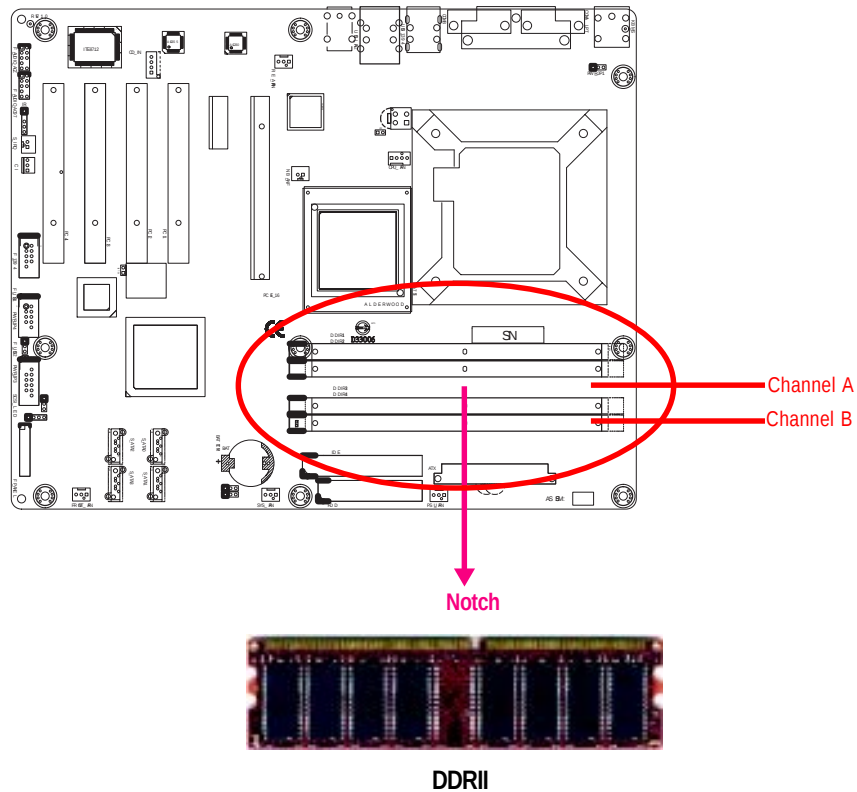
Step 2: Install memory modules



CAUTION Before installing the processor and heatsink, adhere to the following warning:
When DIMM LED is ON, do not install/remove DIMM from socket.

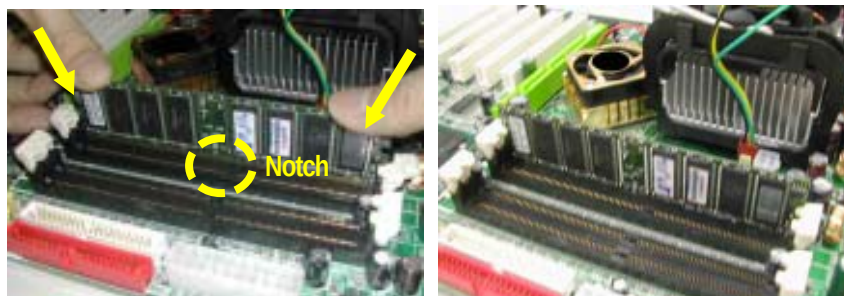
Please note that the DIMM module can only fit in one direction due to the one notches. Wrong orientation will cause improper installation. Please change the insert orientation.

GA-8IAX has 4 dual inline memory module (DIMM) sockets. It supports the Dual Channel Technology. The BIOS will automatically detects memory type and size. To install the memory module, just push it vertically into the DIMM socket. The DIMM module can only fit in one direction due to the notch. Memory size can vary between sockets.



Installation Step:

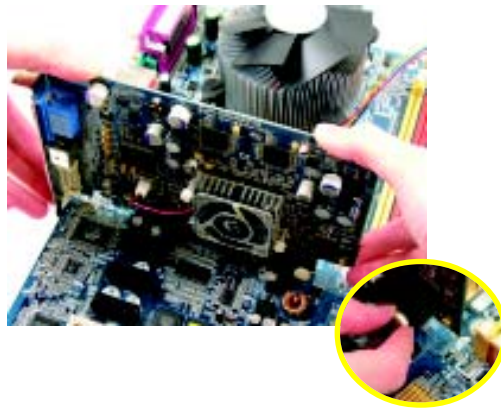
1. The DIMM slot has a notch, so the DIMM memory module can only fit in one direction.
2. Insert the DIMM memory module vertically into the DIMM slot. Then push it down.
3. Close the plastic clip at both edges of the DIMM slots to lock the DIMM module.
4. **When installing the DIMM into the DIMM module, we recommend to populate one DIMM in Channel A module and one in Channel B module for best performance.**
Please note that each logical DIMM must be made of two identical DIMMs having the same device size on each and the same DIMM size.
5. Reverse the installation steps when you wish to remove the DIMM module.

**DDR DIMM Supported Configuration**

Technology	Configuration	# of Row Address Bits	# of Column Address Bits	# of Bank Address Bits	Page Size	Rank Size
256Mbit	16M x 16	13	9	2	4K	128MB
256Mbit	32M x 8	13	10	2	8K	256MB
512Mbit	32M x 8	13	10	2	8K	256MB
512Mbit	64M x 8	13	11	2	16K	512MB
512Mbit	64M x 8	14	10	2	8K	512MB
1Gbit	64M x 16	14	10	2	8K	512MB
1Gbit	128M x 8	14	11	2	16K	1GB
1Gbit	64M x 16	13	10	3	8K	512MB
1Gbit	128M x 8	14	10	3	8K	1GB

Step 3: Install expansion cards

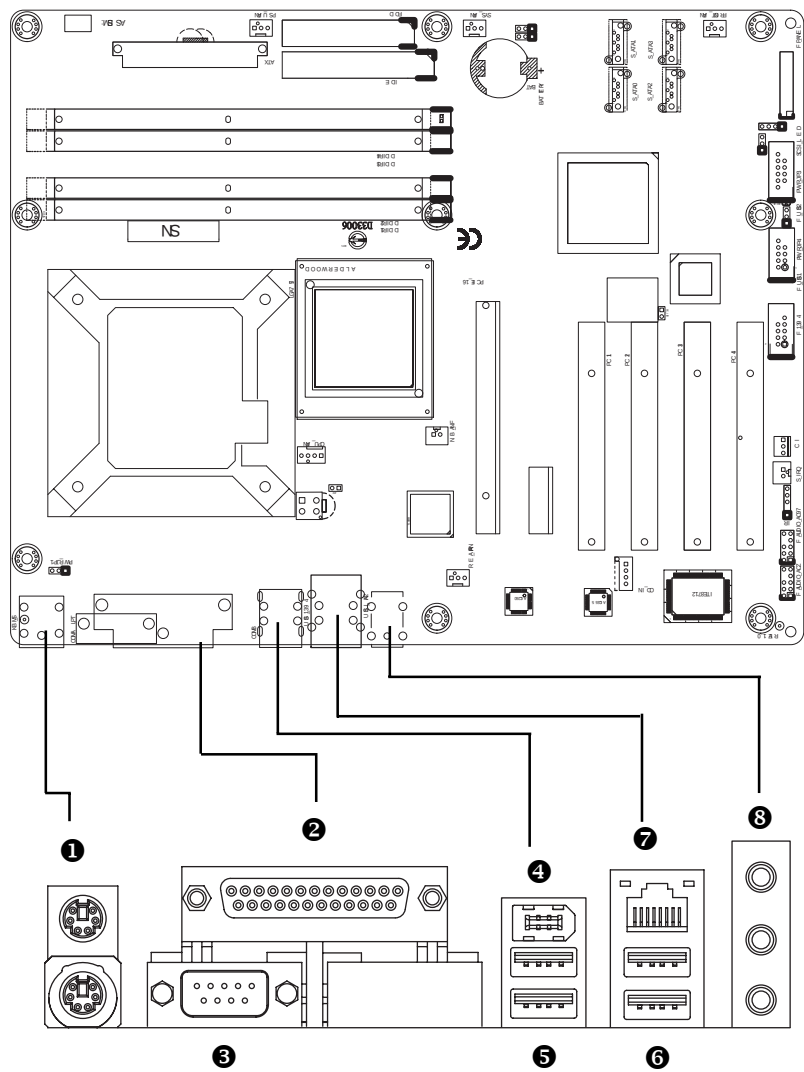
1. Read the related expansion card's instruction document before install the expansion card into the computer.
2. Remove your server's chassis cover, necessary screws and slot bracket from the computer.
3. Press the expansion card firmly into expansion slot in motherboard.
4. Be sure the metal contacts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



Please carefully pull out the small white-drawable bar at the end of the PCI Express x 4 slot when you try to install/Uninstall the VGA card. Please align the VGA card to the onboard PCI Express x 4 slot and fully seated. Make sure your VGA 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



❶ PS/2 Keyboard and PS/2 Mouse Connector

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

❷/❸ Parallel Port / Serial Port

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

❹ IEEE 1394 Port

Connects the IEEE1394 devices to this connector.

❺/❻ USB port

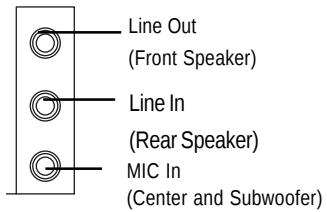
Before you connect your device(s) into USB connector(s), please make sure your device(s) such as USB keyboard, mouse, scanner, zip, speaker...etc. have a standard USB interface. Also make sure your OS supports USB controller. If your OS does not support USB controller, please contact OS vendor for possible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

❼ LAN Port

The provided Internet connection is Gigabit Ethernet, providing data transfer speeds of 10/100/1000Mbps.

LAN LED Description

Name	Color	Condition	Description
LAN Link/Activity	Green	ON	LAN Link / no Access
	Green	BLINK	LAN Access
	-	OFF	Idle
10/100 LAN Speed	Green	ON	100Mbps connection
	-	OFF	10Mbps connection
GbE LAN Speed	Yellow	ON	1Gbps connection
	Yellow	BLINK	Port identification with 1Gbps connection
	Green	ON	100Mbps connection
	Green	BLINK	Port identification with 10 or 100Mbps connection
	-	OFF	10Mbps connection

8 Audio Connector

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

Please note:

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

If you want to enable 6-channel function, you have 2 choose for hardware connection.

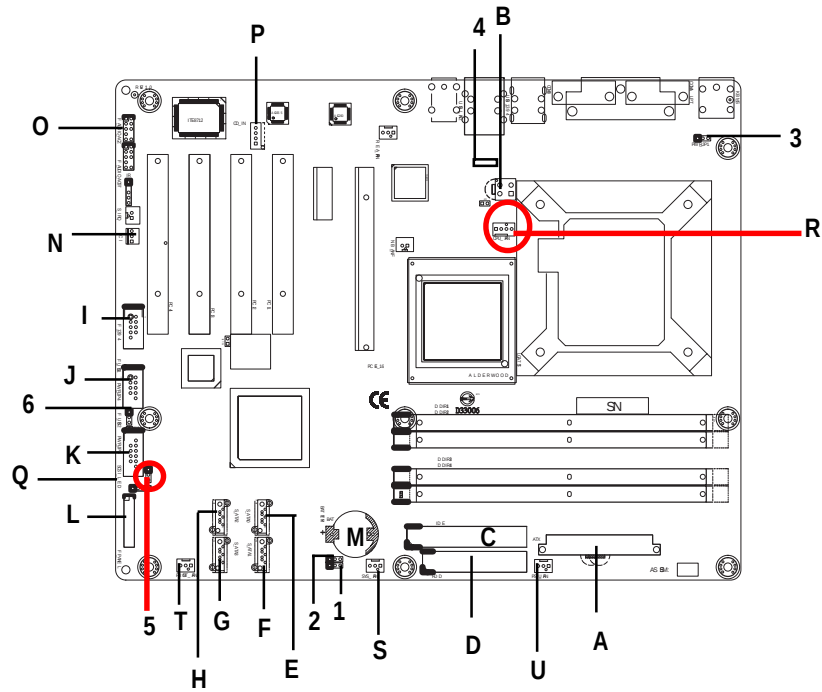
Method1:

Connect "Front Speaker" to "Line Out"

Connect "Rear Speaker" to "Line In"

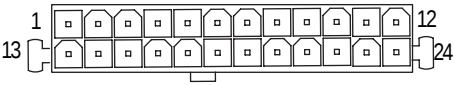
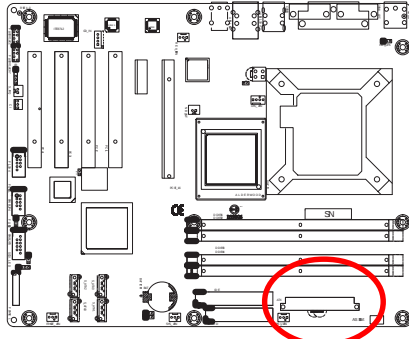
Connect "Center and Subwooferr" to "MIC In ".

Step 4-2 :Connectors & Jumper Setting Introduction



A) ATX1	O) F_AUDIO_ACZ
B) ATX 12V	P) CD_IN
C) IDE	Q) SCSI_LED
D) FDD	R) CPU_FAN
E) SATA_0	S) SYS_FAN
F) SATA_1	T) FRONT_FAN
G) SATA_2	U) PSU_FAN
H) SATA_3	
I) F_1394	1) JP1
J) F_USB2	2) JP3
K) F_USB1	3) PWR_JP1
L) F_Panel	4) PWR_JP2
M) BAT	5) PWR_JP3
N) CI	6) PWR_JP4

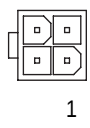
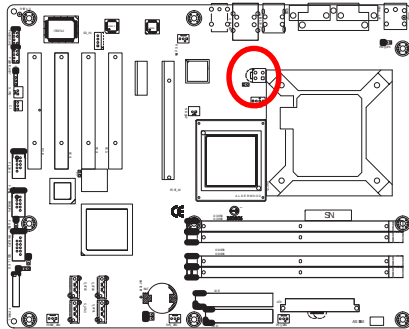
A) ATX (ATX Power Connector)



PIN No.	Definition
1	+3.3V
2	+3.3V
3	GND
4	+5V
5	GND
6	+5V
7	GND
8	POK
9	5VSB
10	+12V
11	+12V
12	+3.3V
13	+3.3V
14	-12V
15	GND
16	PSON
17	GND
18	GND
19	GND
20	-5V
21	+5V
22	+5V
23	+5V
24	GND

➤ 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.

B) ATX_12V(+12V Power Connector)

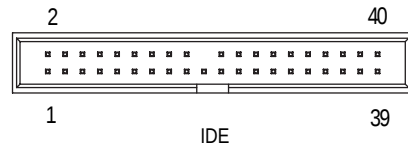
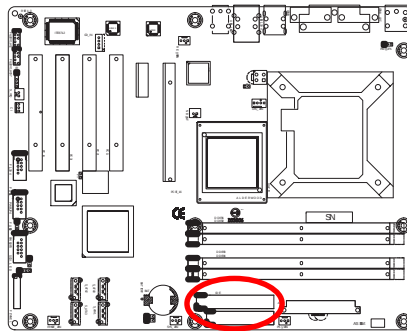


Pin No.	Definition
1	GND
2	GND
3	P12V-CPU0
4	P12V-CPU0

➤ This connector (ATX +12V) is used only for CPU1 Core Voltage.

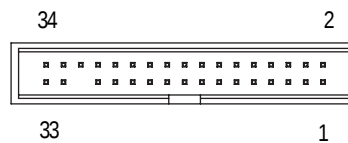
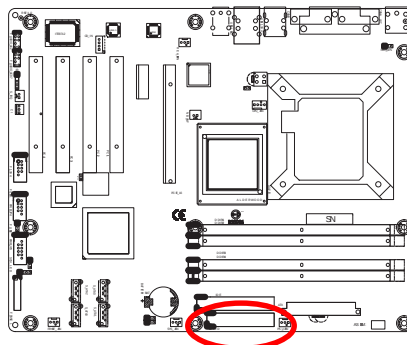
C) IDE Connector

Please connect first harddisk to IDE1. The red stripe of the ribbon cable must be the same side with the Pin1.



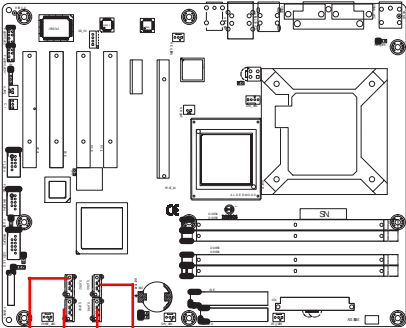
D) FDD (Floppy Connector)

Please connect the floppy drive ribbon cables to FDD. It supports 360K,720K,1.2M,1.44M and 2.88Mbytes floppy disk types. The red stripe of the ribbon cable must be the same side with the Pin1.



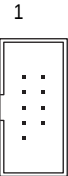
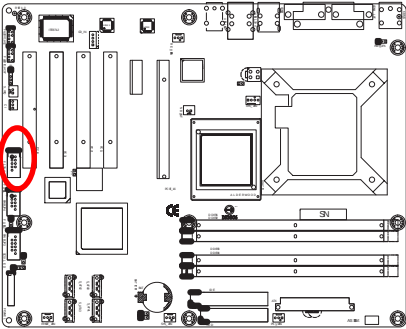
E / F / G / H) SATA_0/ 1/ 2/ 3 (Serial ATA Connectors)

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

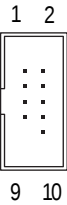
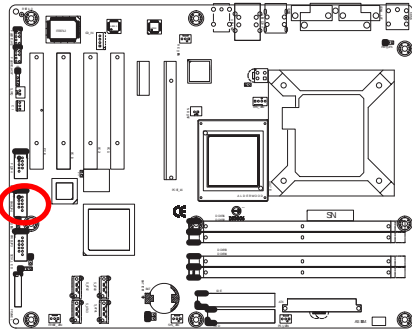
I) F_1394(Front IEEE 1394 Connector)



Pin No.	Definition
1	VCC
2	VCC
3	FTP A1+
4	FTP A1-
5	GND
6	GND
7	FTP B1+
8	FTP B1-
9	GND
10	Pin Removed

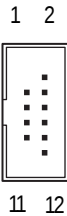
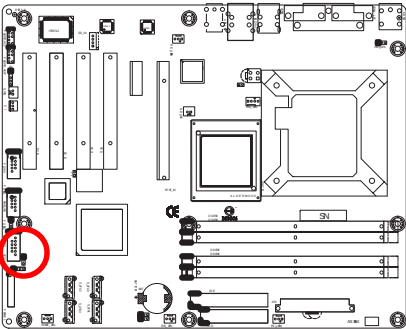
J) F_USB1 (Front USB1 Connector)

Be careful with the polarity of the front panel USB connector. Check the pin assignment while you connect the front panel USB cable. Please contact your nearest dealer for optional front panel USB cable.



Pin No.	Definition
1	USB3_OC#2_FB(USB power)
2	USB3_OC#2_FB(USB power)
3	USB_ICH_P4N_IND
4	USB_ICH_P5N_IND
5	USB_ICH_P4P_IND
6	USB_ICH_P5P_IND
7	GND
8	GND
9	PIN Removed
10	NC

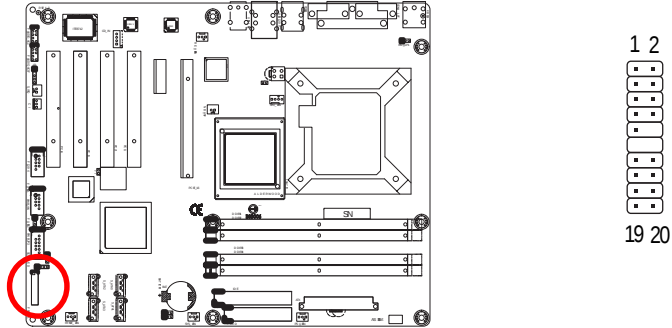
K) F_USB2 (Front USB2 Connector)



Pin No.	Definition
1	Pin Removed
2	NC
3	USB4_OC#3_FB(USB power)
4	USB4_OC#3_FB(USB power)
5	USB_ICH_P6N_IND
6	USB_ICH_P7N_IND
7	USB_ICH_P6P_IND
8	USB_ICH_P7P_IND
9	GND
10	GND
11	Pin Removed
12	NC

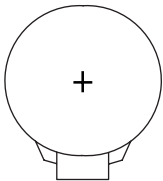
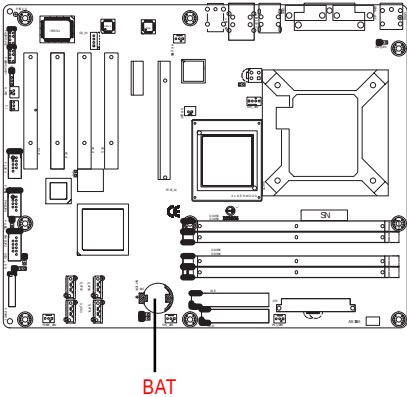
L) F_Panel (2X10 Pins connector)

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



Pin No	Signal Name	Description
1	HD+	Hard Disk LED anode (+)
2	MSG+	MESSAGE signal anode (+)
3	HD-	Hard Disk LED cathode(-)
4	MSG-	MESSAGE signal cathode(-)
5	RES-	Front Panel Reset Switch cathode(-)
6	PW+	Soft power connector anode (+)
7	RES+	Front Panel Reset Switch anode (+)
8	PW-	Soft power connector cathode(-)
9	N C	No connect
10	Pin Removed	N C
11	Pin Removed	N C
12	Pin Removed	N C
13	GD+	Green LED anode (+)
14	SPK+	Speaker connector anode (+)
15	GD-	Green LED cathode(-)
16	SPK+	Speaker connector cathode(-)
17	GN+	Green Switch anode (+)
18	SPK-	Speaker connector anode (+)
19	GN-	Green Switch cathode(-)
20	SPK-	Speaker connector cathode(-)

M) BAT (Battery)



CAUTION

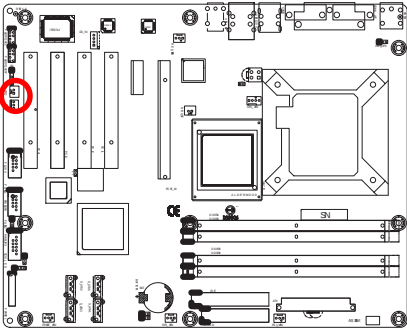
- ❖ Danger of explosion if battery is incorrectly replaced.
- ❖ Replace only with the same or equivalent type recommended by the manufacturer.
- ❖ Dispose of used batteries according to the manufacturer's instructions.

If you want to erase CMOS...

1. Turn OFF the computer and unplug the power cord.
2. Remove the battery, wait for 30 second.
3. Re-install the battery.
4. Plug the power cord and turn ON the computer.

N) CI (CASE OPEN)

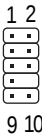
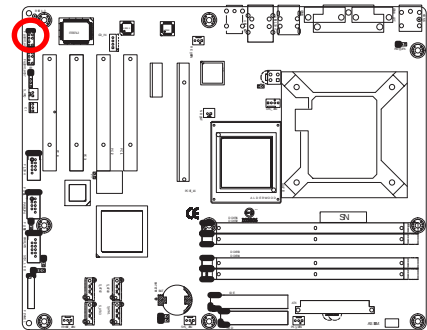
This 3 pin connector allows your system to enable or disable the “case open” item in BIOS if the system case begin remove.



Pin No.	Definition
1	GND
2	INTRUDER#
3	NC

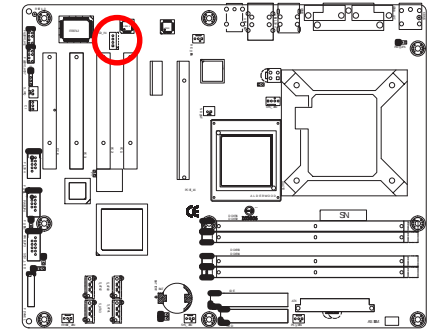
O) F_Audio_ACZ (Front Audio connector)

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.



Pin No.	Definition
1	MIC2_L
2	GND
3	MIC2_R
4	ACZ_DET
5	HP_OUTL_R
6	FAUDIO_JD
7	GND
8	No Pin
9	HP_OUTL_L
10	HP_DET

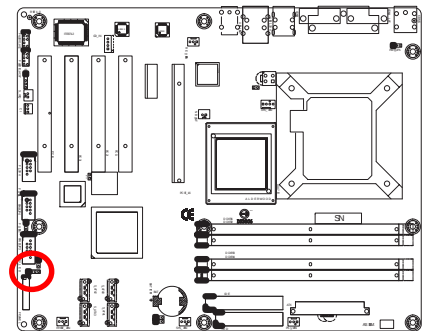
P) CD_IN1 (CD IN,Black)



Pin No.	Definition
1	CD-L
2	GND
3	GND
4	CD_R

Q) SCSI_LED (SCSI Indicative LED Connector)

You can connect the SCSI indicative LED of your SCSI add-on card to this connector, which can indicate whether the SCSI device is active or not.

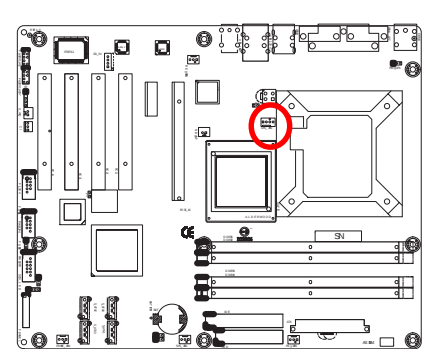


1 

Pin No.	Definition
1	GND
2	SCSI_CONN_LED#
3	SCSI_CONN_LED#
4	GND

R) 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 1A .

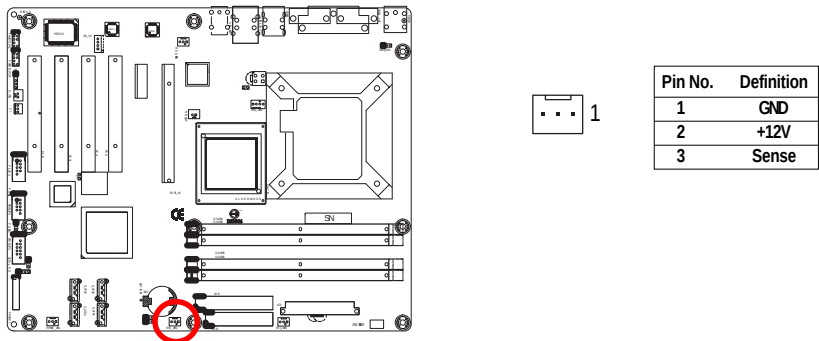


1 

Pin No.	Definition
1	GND
2	12V
3	Sense
4	Control

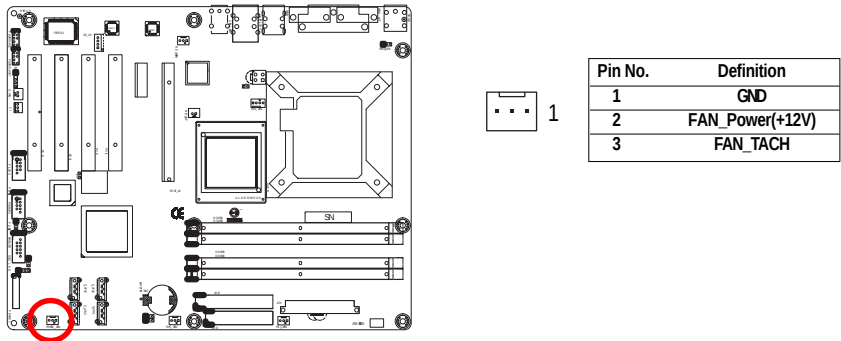
S) SYS_FAN (System Fan Connector)

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



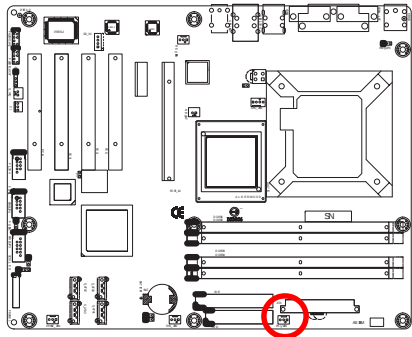
T) FRONT FAN (Front Fan Connector)

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



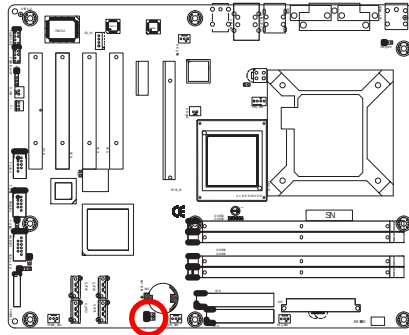
U) PSU_FAN (Power Fan Connector)

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

1) JP1 (Password Skip Function)

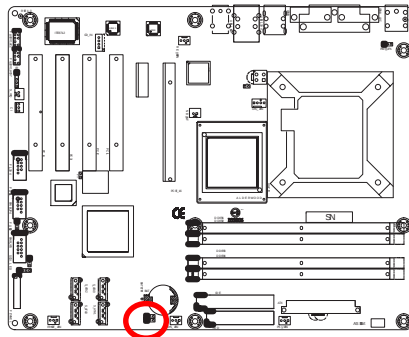


- 1  1-2 close: Normal (Default)
- 1  2-3 close: Skip Supervisor Password in BIOS setup menu

2) JP3 (Clear CMOS Function)

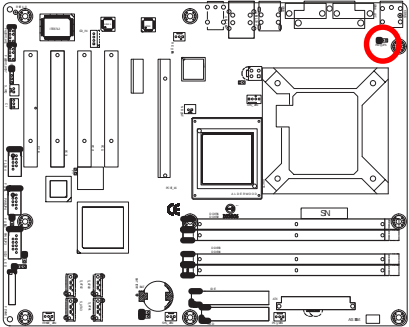
You may clear the CMOS data to its default values by this jumper.

Default value doesn't include the "Shunter" to prevent from improper use this jumper. To clear CMOS, temporarily short 1-2 pin.



- 1  1-2 close: Normal (Default vaule)
- 1  2-3 close: Clear CMOS

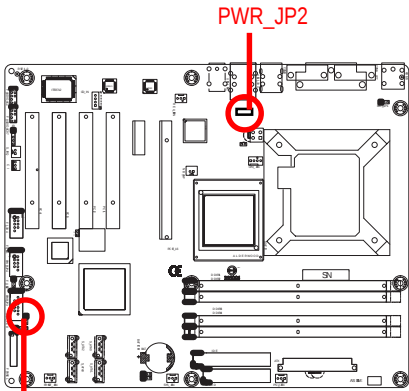
3) PWR_JP1 (KB_MS connector PS2 Keyboard/Mouse power source selection)



1  1-2 close: Default vaule

Pin No.	Definition
1	VCC
2	KBVCC
3	5VDUAL

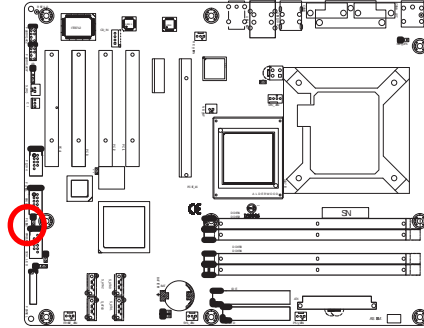
4 / 5) PWR_JP2 / PWR_JP3 (USB power source selection)



1  1-2 close: Default vaule

Pin No.	Definition
1	USBVCC
2	FUSEVCC
3	VCC

PWR_JP3

6) PWR_JP4 (F_USB2 connector USB power source selection)

1-2 close: Default vaule

Pin No.	Definition
1	5VDUAL
2	F_USB2
3	VCC

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 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.

CONTROIKES

<↑>	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>	Dual BIOS/Q-Flash function
<F9>	System Information
<F10>	Save all the CMOS changes, only for Main Menu

GETTINGHELP

Main Menu

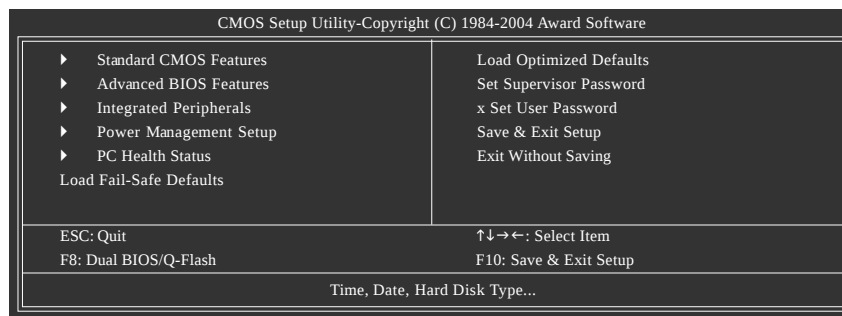
The on-line description of the highlighted setup function is displayed at the bottom of the screen.

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. : F1)

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



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

- **Standard CMOS Features**
This setup page includes all the items in standard compatible BIOS.
- **Advanced BIOS Features**
This setup page includes all the items of Award special enhanced features.
- **Integrated Peripherals**
This setup page includes all onboard peripherals.

- **Power Management Setup**
This setup page includes all the items of Green function features.
- **PC Health Status**
This setup page is the System auto detect Temperature, voltage, fan, speed.
- **Load Fail-Safe Defaults**
Fail-Safe Defaults indicates the value of the system parameters which the system would be in safe configuration.
- **Load Optimized Defaults**
Optimized Defaults indicates the value of the system parameters which the system would be in best performance configuration.
- **Set Supervisor password**
Change, set, or disable password. It allows you to limit access to the system and Setup, or just to Setup.
- **Set User password**
Change, set, or disable password. It allows you to limit access to the system.
- **Save & Exit Setup**
Save CMOS value settings to CMOS and exit setup.
- **Exit Without Saving**
Abandon all CMOS value changes and exit setup.

Standard CMOS Features

CMOS Setup Utility-Copyright (C) 1984-2004 Award Software Standard CMOS Features		
Date (mm:dd:yy)	Tue, Jan 27 2004	Item Help
Time (hh:mm:ss)	22:31:24	Menu Level▶
▶ IDE Channel 0 Master	[None]	Change the day, month, year
▶ IDE Channel 0 Slave	[None]	<Week>
▶ IDE Channel 2 Master	[None]	Sun. to Sat.
▶ IDE Channel 2 Slave	[None]	<Month>
▶ IDE Channel 3 Master	[None]	Jan. to Dec.
▶ IDE Channel 3 Slave	[None]	<Day>
Drive A	[1.44M, 3.5"]	1 to 31 (or maximum allowed in the month)
Holt On	[All, But Keyboard]	<Year>
▶ System Inforamtion	[Press Enter]	1999 to 2098
Model Name	GA-8IAX	
BIOS Version	F1	
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help F5: Previous Values F6: Fail-Save Default F7: Optimized Defaults		

☞ Date

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

- ▶▶ Date The date, Monday to Sunday.
- ▶▶ Month The month, Jan. Through Dec.
- ▶▶ Day The day, from 1 to 31 (or the maximum allowed in the month)
- ▶▶ Year The year, from 1999 through 2098

☞ Time

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

☞ IDE HDDAutoDetection

Press [Enter] to auto-detect the HDD's size, head, etc on this channel.

☞ IDE Channel 0 Master, Slave / Channel 1 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 that 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 form your hard disk vendor or the system manufacturer.

▶ Access Mode

This option allows user to set hard drive parameters.

Option: CHS, LBA, Large, Auto (Default Value)

» Capacity	Displays the capacity of HDD
» Cylinder	Number of cylinders
» Heads	Number of heads
» Precmp	Write precomp
» Landind Zone	Landing zone
» Sectors	Number of sectors

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

☞ DriveA

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

- » None No floppy drive installed
- » 360K, 5^{1/4} in. 5.25 inch PC-type standard drive; 360K byte capacity.
- » 1.2M, 5^{1/4} in. 5.25 inch AT-type high-density drive; 1.2M byte capacity
(3.5 inch when 3 Mode is Enabled).
- » 720K, 3^{1/2} in. 3.5 inch double-sided drive; 720K byte capacity
- » 1.44M, 3^{1/2} in. 3.5 inch double-sided drive; 1.44M byte capacity.
- » 2.88M, 3^{1/2} in. 3.5 inch double-sided drive; 2.88M byte capacity.

☞ Halt on

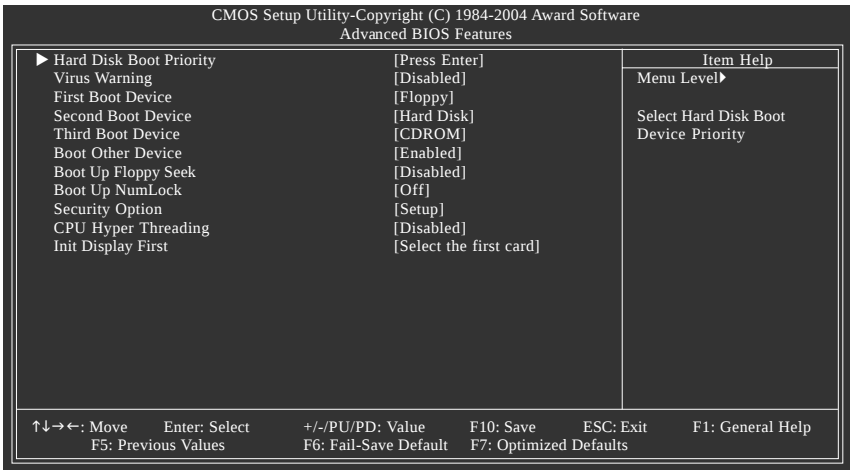
The category determines whether the computer will stop if an error is detected during power up.

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

☞ System Information

Press [Enter] to view the Motherboard and System information.

Advanced BIOS Features



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

☞ Hard Disk Boot Priority

These three fields determines which type of device the system attempt to boot from after **BIOS Post** completed. Specifies the boot sequence from the available devices. If the first device is not a bootable device, the system will seek for next available device.

☞ Virus Warning

This category allows user to choose the virus warning feature for IDE hard disk boot sector protection. If this feature is [Enabled] and someone attempt t o write data into this area, BIOS will shows a warning messages on screen and alarm beep.

- ▶ Enabled Enable Virus warning function.
- ▶ Disabled Disable this function. (Default value)

☞ First/ Second/ Third Boot Device

Select the first/second/third boot device

- » Floppy Select your boot device priority by Floppy.
- » Hard Disk Select your boot device priority by Hard Disk.
- » CDROM Select your boot device priority by CDROM.
- » USB-FDD Select your boot device priority by USB-FDD.
- » USB-CDROM Select your boot device priority by USB-CDROM.
- » LAN Select your boot device priority by LAN.
- » Disabled Select your boot device priority by Disabled.

☞ Boot Other Device

Select the specified boot device priority.

- » Enabled Enable the specified boot device.
- » Disabled Disable the specified boot device.

☞ 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 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)

☞ Boot Up Num-Lock

- » ON Set this option "On" to turn the NumLock On at a system boot.
- » OFF Disables this function. (Default value)

🔒 Security Option

- » Setup Password required when entering setup menu. (Default value)
- » System Password required when system boot.

🔒 CPU Hyper Threading

- » Enabled Enables Hyper-Threading Technology Feature when using Windows XP and Linux 2.4x operating systems that are optimized for Hyper-Threading technology.
- » Disabled Disables Hyper-Threading Technology when using other operating systems. (Default value)

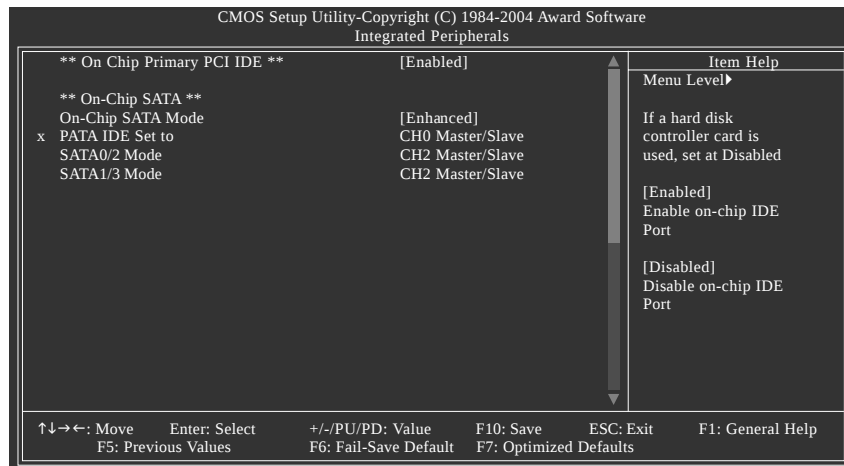
🔒 Init Display First

This feature allows you to select the first initiation of the monitor display from which card, when you install an AGP VGA card and a PCI VGA card on board.

- » Select the first card Select the first card initiation of the monitor displays from different type of VGA card. (Default value)
- » PEG Set Init Display First to PCI Express Slot.
- » PCI Set Init Display First to PCI Slot.

Integrated Peripherals

On-Chip IDE Device



☞ OnChip Primary PCI IDE

If hard disk controller card is used, set this function to disabled.

- » Enabled Enable the function of On-chip primary PCI IDE. (Default value)
- » Disabled Disable this function.

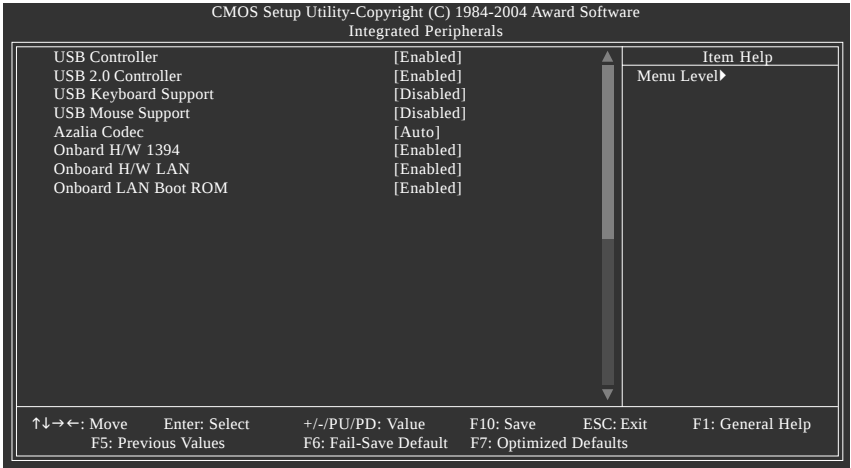
☞ OnChip SATA Mode

- » Auto Auto arrange by BIOS.
- » Combined Mode PATA and SATA are combined. Max. of 2 IDE drives in each channel.
- » Enhanced Mode Enable both SATA and PATA. Max. of 6 IDE drives are supported. (Default value)
- » Non-Combined SATA is operating in legacy mode.
- » Disabled Disable this function.

☞ PATA IDE Set to

- » Ch0 Master/Slave Set PATA IDE to Channel 0 Master/Slave. (Default value)
- » Ch1 Master/Slave Set PATA IDE to Channel 1 Master/Slave.

On-Board Device



USB Controller

- » Enabled Enable USB Controller function. (Default value)
- » Disabled Disable USB Controller function.

USB 2.0 Controller

This item provide the function for user to enable/disable EHCI controller only. This BIOS itself may / may not have high speed USB support built-in, the support will be automatically turn on when high speed device were attached.

- » Enabled Enable USB 2.0 Controller function. (Default)
- » Disabled Disable USB 2.0 Controller function.

USB Keyboard Support

- » Enabled Enable USB Keyboard Support.
- » Disabled Disable USB Keyboard Support. (Default value)

☞ USB Mouse Support

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

☞ Azalia Codec

- » Auto Auto-detect Azalia Audio (Default value)
- » Disabled Disable this function.

☞ Onboard H/W 1394

- » Enabled Enable onboard H/W 1394. (Default value)
- » Disabled Disable this function.

☞ Onboard H/W LAN

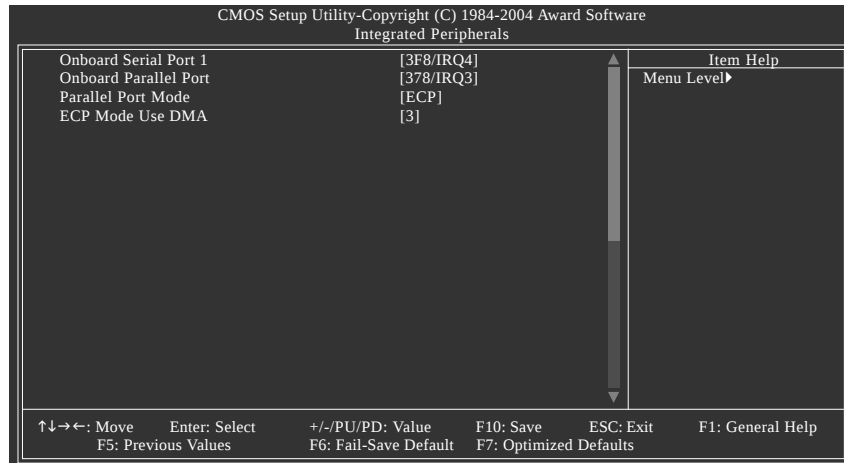
- » Enabled Enable onboard H/W LAN. (Default value)
- » Disabled Disable this function.

☞ Onboard LAN Boot ROM

Decide whether to invoke the boot ROM of the onboard chip.

- » Enabled Invoke the boot ROM of the onboard chip.
- » Disabled Disable this function. (Default value)

Super I/O Device



Onboard Serial Port 1

- » 3F8/IRQ4 Enable onboard Serial port 1 and set IO address to 3F8.
- » 2F8/IRQ3 Enable onboard Serial port 1 and set IO address to 2F8.
- » 3E8/IRQ4 Enable onboard Serial port 1 and set IO address to 3E8. (Default value)
- » 2E8/IRQ3 Enable onboard Serial port 1 and set IO address to 2E8.
- » Disabled Disable onboard Serial port 1.

Onboard Parallel Port

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

Parallel Port Mode

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

ECP Mode Use DMA

This option is only available if the setting for the Parallel Port Mode option is ECP. This option sets the DMA channel used by parallel port.

The options: 1, 3 (Default value)

Power Management Setup

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Power Management Setup

		Item Help
ACPI Suspend Type	[S1(POS)]	Menu Level▶
Soft -off by BTIN	[Instant-off]	
PME Event Wake Up	[Enabled]	
Resume by Alarm	[Disabled]	
x Date (of Month) Alarm	Everyday	[S1] Set suspend type to Power On Suspend under ACPI OS
x Time (hh:mm:ss) Alarm	0 : 0 : 0	
AC Back Function	[Soft-off]	[S3] Set suspend type to Suspend to RAM under ACPI OS

↑↓→←: Move

Enter: Select

+/-/PU/PD: Value

F10: Save

ESC: Exit

F1: General Help

F5: Previous Values

F6: Fail-Save Default

F7: Optimized Defaults

⌵ ACPI Suspend Type

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

⌵ Soft-off by BTIN

- ▶▶ Instant off Soft switch ON/OFF for Power Button. (Default Value)
- ▶▶ Delay-4Sec Soft switch ON 4 Sec for Power off.

⌵ PME Event Wake Up

- ▶▶ Enabled Enable PME Event wake up function.
- ▶▶ Disabled Disable PME event wake up 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)
- » Enabled Enable alarm function to POWER ON system.

If RTC Alarm Lead To Power On is Enabled.

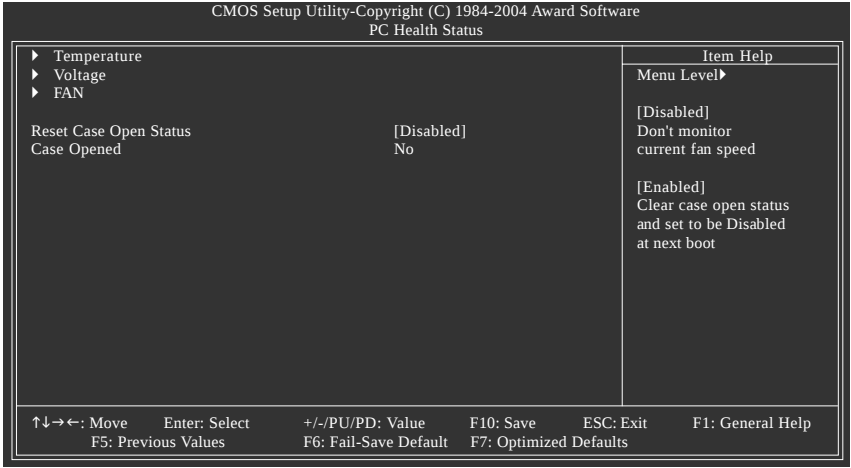
Date (of Month) Alarm : Everyday, 1~31

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

AC Back Function

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

PC Health Status



☞ Temperature

▶▶ Display the current CPU temperature, system front and rear ambient temperature.

☞ Voltage: VCORE / +3.3V/ +5V / +12V/ VBAT/ VID

▶▶ Detect system's voltage status automatically.

☞ FAN(RPM)

▶▶ Display the current CPU, System , and Front FAN speed.

☞ S.M.A.R.T.FAN Control

▶▶ Enabled Enable SMART Fan Controol function.

▶▶ Disabled Disable this function.

Reset Case Open Status**Case Open**

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

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

If you want to reset "Case Opened" value, set "Reset Case Open Status" to

"Enabled" and save CMOS, your computer will restart.

The option: Enabled, Disabled (Default value)

Case Open Warning

Set this option to Enabled to active warning beep sound when the system chassis is opened.

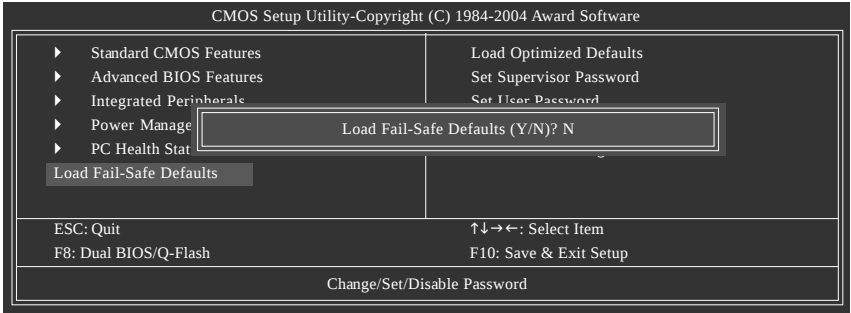
►► Enabled

Enable case open warning.

►► Disabled

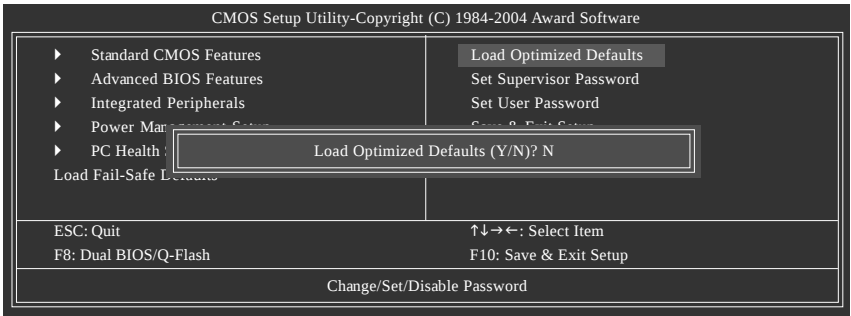
Disable this function. (Default value)

Load Fail-Safe Defaults



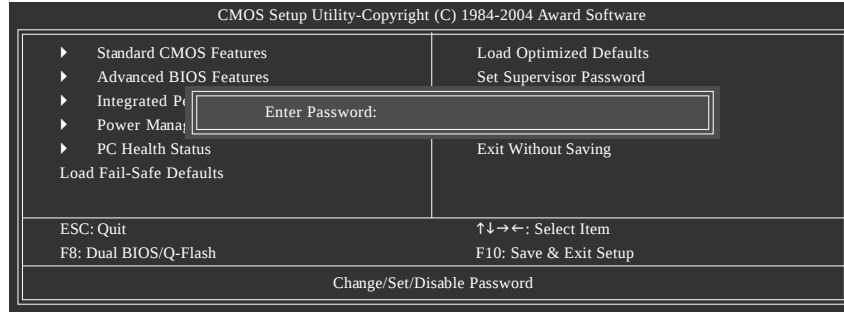
Fail-Safe defaults contain the most appropriate values of the system parameters that allow minimum system performance.

Load Optimized Defaults



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

Set Supervisor/User Password



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

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

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

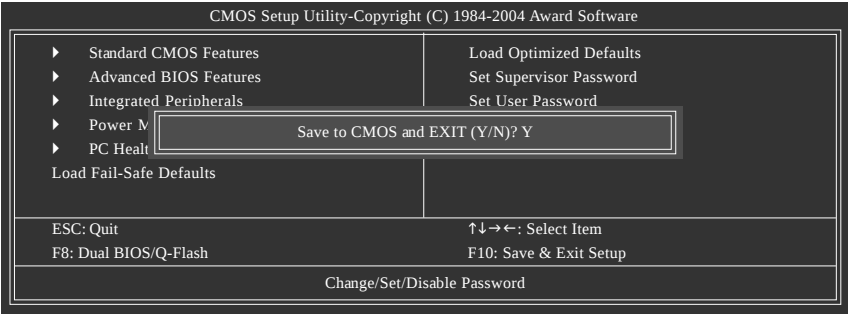
The BIOS Setup program allows you to specify two separate passwords:

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

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

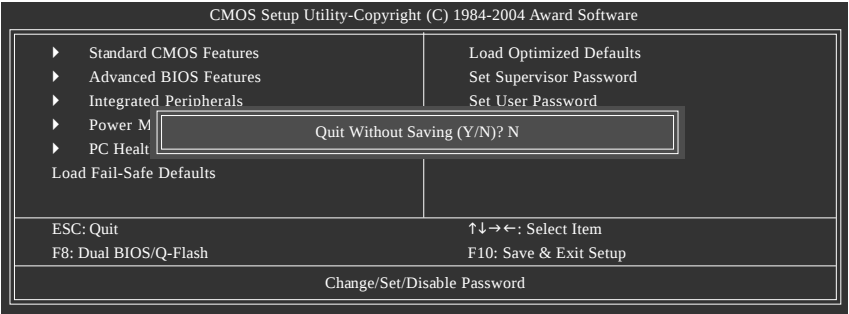
If you select "Setup" at "Password Check" in Advance BIOS Features Menu, you will be prompted only when you try to enter Setup.

Save & Exit Setup



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

Exit Without Saving



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



Chapter 5 Driver Installation

A. Intel Chipset Software Installation Utility

Insert the driver CD-title that came with your motherboard into your CD-ROM driver, the driver CD-title will auto start and show a series of Setup Wizard dialog boxes. If not, please double click the CD-ROM device icon in "My computer", and execute the setup.exe.

Installation Procedures:

1. The CD auto run program starts, **Double click** on "Intel Chipset Software Installation Utilities" to start the installation.
2. Then, a series of installation wizards appear. Follow up the wizards to install the drivers.
3. Setup completed, click "Finish" to restart your computer.

Auto Run windows



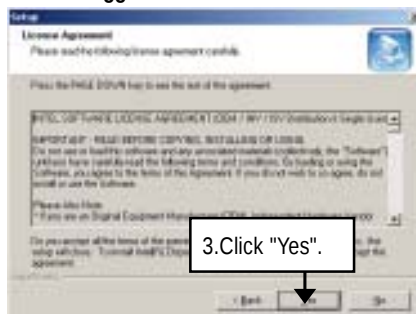
(1)

Setup Wizard



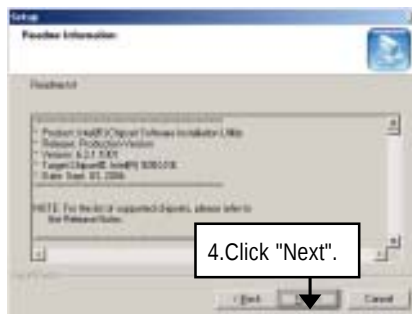
(2)

License Agreement



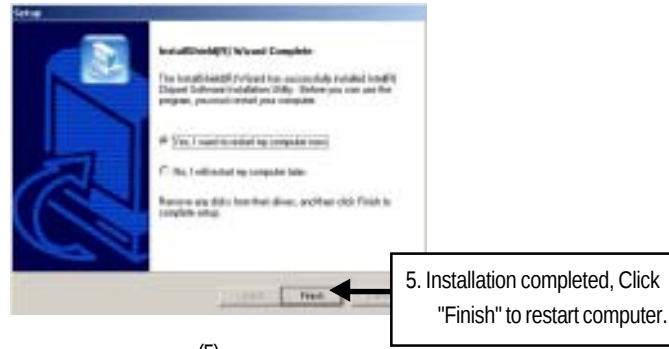
(3)

Readme Information



(4)

Installation Completed



(5)

B. Broadcom Network Driver Installation

Insert the driver CD-title that came with your motherboard into your CD-ROM driver, the driver CD-title will auto start and show a series of Setup Wizard dialog boxes. If not, please double click the CD-ROM device icon in "My computer", and execute the setup.exe.

Installation Procedures:

1. The CD auto run program starts, **Double click** on "Broadcom Network Driver" to start the installation.
2. Refer to your operating system and select the desired folder to install lan driver.

Auto Run windows



(1)

Broadcom Network Drivers



(2)

Select Operating System



(3)

C. Realtek Audio Driver

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

Installation Procedures:

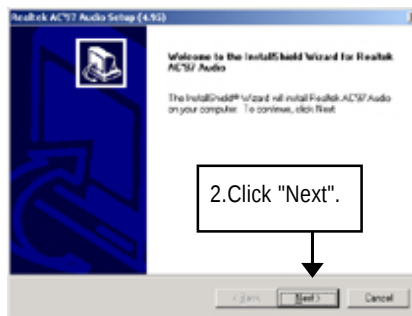
1. The CD auto run program starts, **Double click** on "Realtek Audio Driver" to start the installation.
2. Then, a series of installation wizards appear. Follow up the wizards to install the drivers.
3. Setup completed, click "Finish" to restart your computer.

Auto Run windows



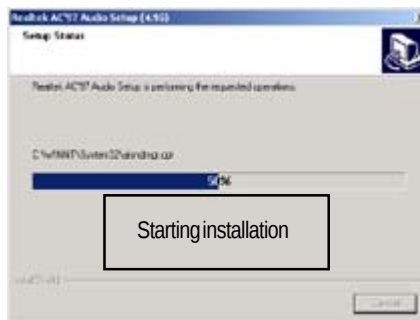
(1)

InstallShield Wizard



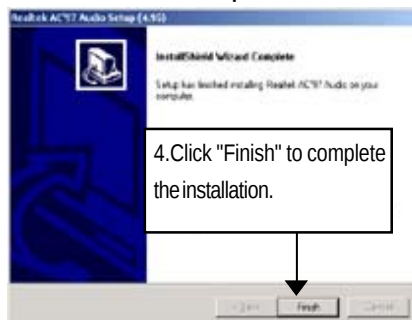
(2)

Starting Installation



(3)

Installation Wizard completed



(4)

D. DirectX 9.0 Driver Installation

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

Installation Procedures:

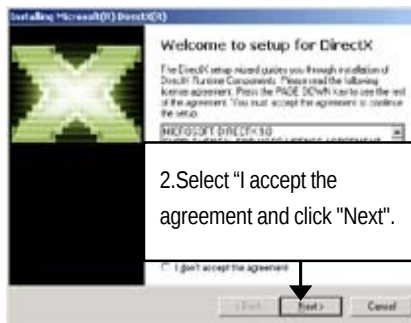
1. The CD auto run program starts, **Double click** on "Directx9.0" to start the installation.
2. Then, a series of installation wizards appear. Follow up the wizards to install the drivers.
3. Setup completed, click "Finish" to restart your computer.

Auto Run windows



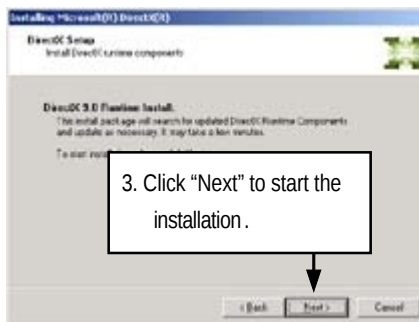
(1)

License Agreement



(2)

Starting Installaiton



(3)

Installaiton Wizard completed



(4)

E. Intel SATA Driver Installation

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

Installation Procedures:

1. The CD auto run program starts, **Double click** on "Intel SATA Driver" to start the installation.
2. Then, a series of installation wizards appear. Follow up the wizards to install the drivers.
3. Setup completed, click "Finish" to restart your computer.

Auto Run windows



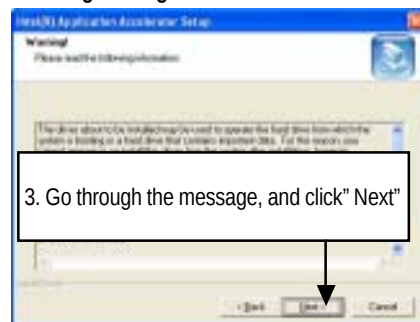
(1)

Setup Wizard



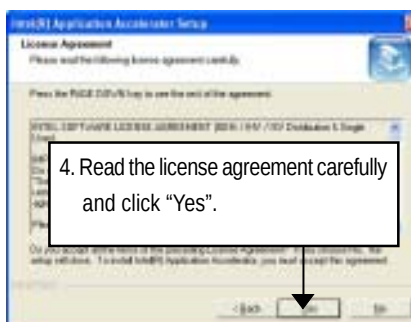
(2)

Warning Message



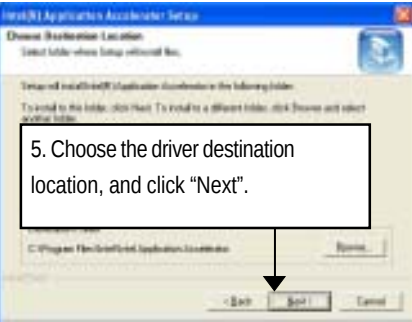
(3)

License Agreement



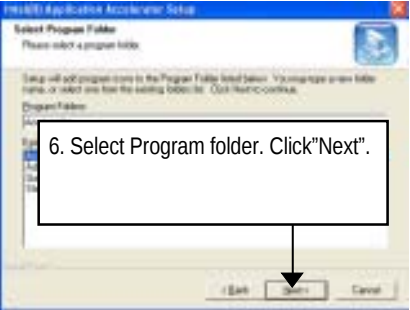
(4)

Destination Choose



(5)

Program Folder Selection



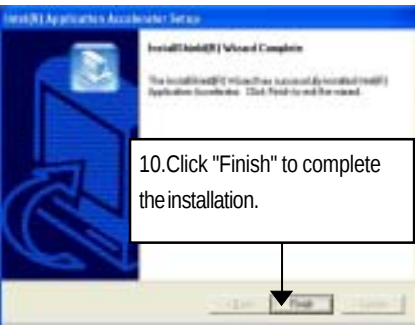
(6)

Setup Status



(7)

Installation Completed



(8)

Chapter 6 Appendix

Acronyms

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

GA-8IAX Motherboard

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