GA-8IKXW / GA-8IKXR

P4 533/800 Motherboard

USER'S MANUAL

Pentium® 4 Processor Motherboard

Rev. 1001

25A08-08IKX-C00

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- ☑ GA-8IKXW/GA-8IKXR user's manual
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- ☑ SPDIF cable x 1
- ☑ COM2 cable x 1
- ☑ Serial ATA power cable x 2
- ☑ I/O Shield

GA-8IKX Series Model List

- ✓ GA-8IKXW (Workstation Model)
- ✓ GA-8IKXR (Server Model: Enhanced onboard VGA function)

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.

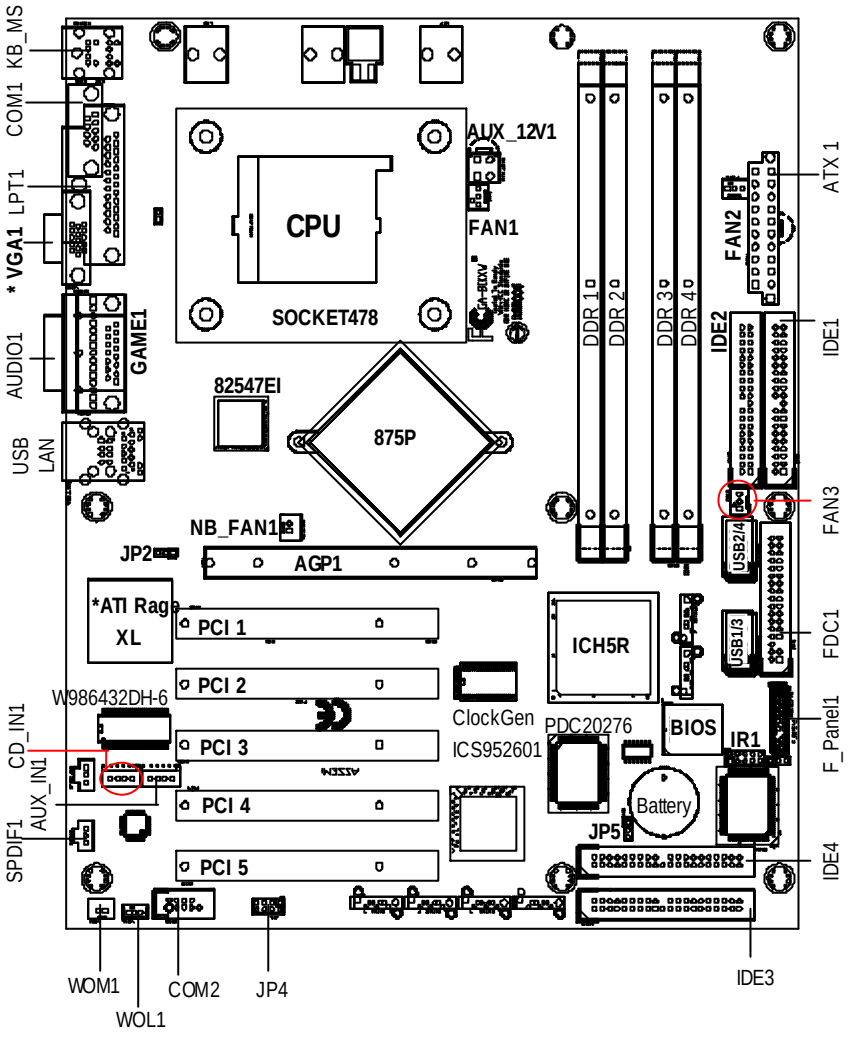
Chapter 1 Introduction

Features Summary

Form Factor	• 30.6cm x 24.4cm ATX size form factor, 4 layers PCB.
Motherboard	• GA-8IKXW/GA-8IKXR Motherboard:
CPU	• Socket 478 for Intel® Micro FC-PGA2 Pentium® 4 processor • Intel Pentium®4 800/533/400MHz FSB • Support Intel ® Pentium ® 4 (Prescott, 0.09μm& Northwood 0.13μm) processor • 2nd cache depend on CPU
Chipset	• Chipset 875P HOST/AGP/Controller • ICH5R I/O Controller Hub
Memory	• 4 184-pin DDR DIMM sockets • Supports Dual Channels DDR 400 DIMM slots • Supports up to 4GB DRAM (Max) • Supports only 2.5V DDR DIMM • Supports 64bit ECC type DRAM integrity mode
I/O Control	• IT8712 F-A
Slots	• 1 AGP slot 8X/4X (1.5V only) device support • 5 PCI slot support 33MHz & PCI 2.2 compliant
On-Board IDE	• 2 IDE controllers on the Intel ICH5R PCI chipset provides IDE HDD/CD-ROM (IDE1, IDE2) with PIO, Bus Master (Ultra DMA33/ATA66/ATA100) operation modes. • IDE3 and IDE4 Compatible with RAID,Ultra ATA133/100.
On-Board Peripherals	• 1 Floppy port supports 2 FDD with 360K, 720K,1.2M, 1.44M and 2.88M bytes. • 1 Parallel port supports Normal/EPP/ECP mode • 2 Serial port (COM) • 6 x USB 2.0/1.1 (2 x Rear,4 x Front by cable) • 1 IrDA connector for IR/CIR • 1 VGA Connector **(For GA-8IKXR Only)**
Hardware Monitor	• CPU/Power/System Fan Revolution Detect • CPU shutdown when overheat • System Voltage Detect

On-Board Sound	• Realtek ALC650 CODEC
On-Board RAID	• Onbard Promise PDC20276 • Supports data striping (RAID 0) or mirroring (RAID 1) • Supports concurrent dual ATA133 IDE controller operation • Support ATAPI mode for CD ROM, DVD ROM ..etc. • Supports IDE bus master operation • Support ATA133/RAID mode switch by BIOS • Mirroring supports automatic background rebuilds • Features LBA and Extended Interrupt 13 drive translation in controller onboard BIOS
On-Board LAN	• Intel 82547EI
On-Board USB 2.0	• Built in ICH5R Chipset
PS/2 Connector	• PS/2 Keyboard interface and PS/2 Mouse interace
BIOS	• Licensed AWARD BIOS, 4M Bit x FWH
Additional Features	• PS/2 Keyboard power on by password • PS/2 Mouse power on • External Modem wake up • STR(Suspend-To-RAM) • Wake on LAN (WOL) • AC Recovery • Poly fuse for keyboard over-current protection

GA-8IKXW /GA-8IKXR Motherboard Layout



*** For GA-8IKXR Only**

Chapter 2 Hardware Installation Process

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

Step 1- Install the Central Processing Unit (CPU)

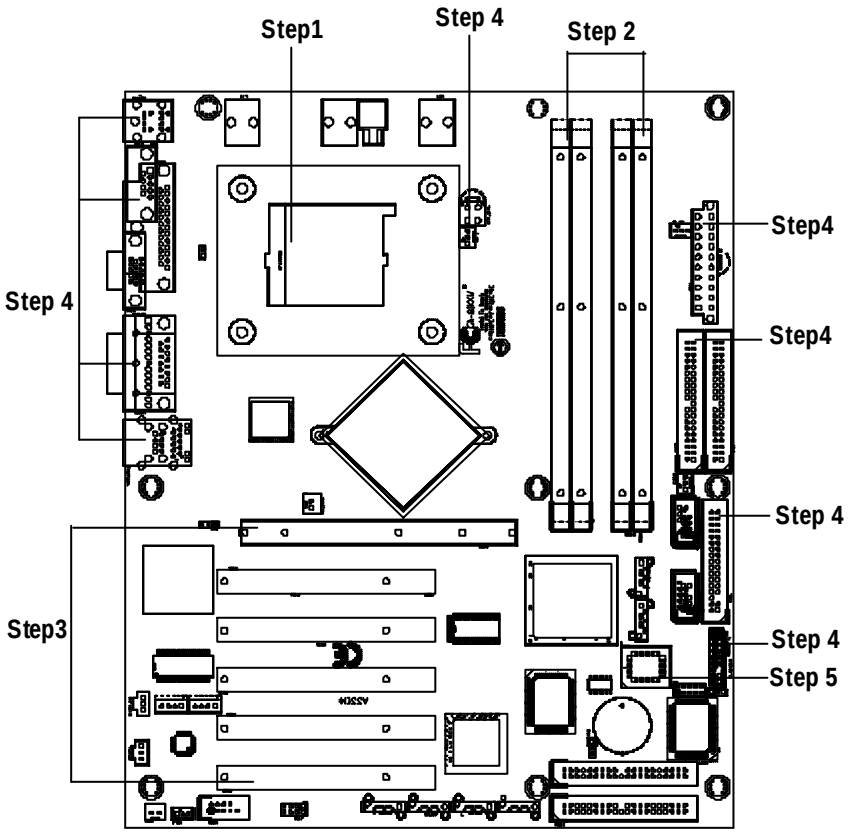
Step 2- Install memory modules

Step 3- Install expansion cards

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

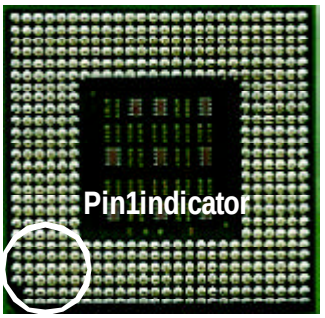
Step 5- Setup BIOS software

Step 6- Install supporting software tools

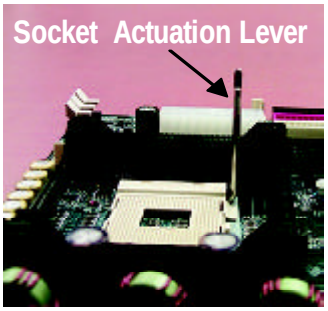


Step 1: Install the Central Processing Unit (CPU)

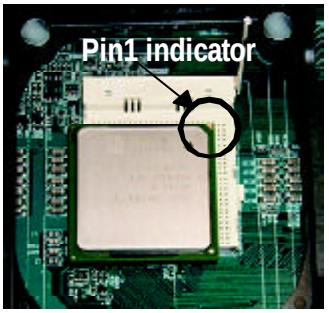
CPU Top View



CPU Bottom View



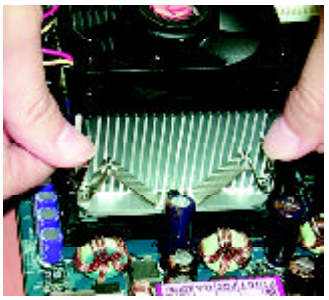
1. Pull up the CPU socket lever and up to 90-degree angle.
3. Press down the CPU socket lever and finish CPU installation.



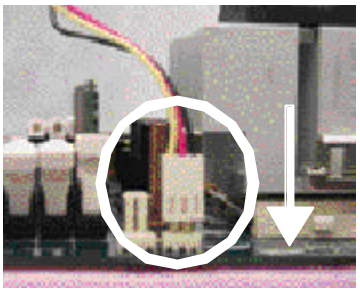
2. Locate Pin 1 in the socket and look for a (golden) cut edge on the CPU upper corner. Then insert the CPU into the socket.

- **Please make sure the CPU type is supported by the motherboard.**
- **If you do not match the CPU socket Pin 1 and CPU cut edge well, it will cause improper installation. Please change the insert orientation.**

Step 1-2:CPU Heat Sink Installation



1. Hook one end of the cooler bracket to the CPU socket first. Hook the other end of the cooler bracket to the CPU socket.

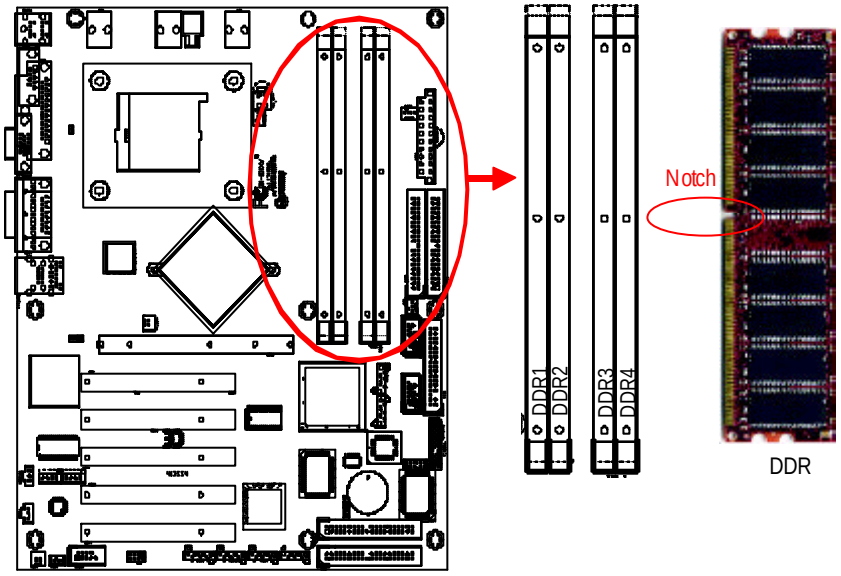


2. Make sure the CPU fan is plugged to the CPU fan connector. Install complete.

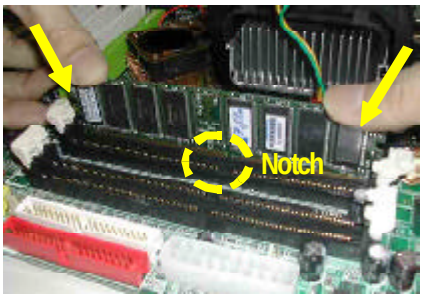
- **Please use Intel® approved cooling fan.**
- **We recommend you to apply the thermal paste to provide better heat conduction between the CPU and heatsink.**
- **Make sure the CPU fan power cable is plugged in to the CPU fan connector, to completes the installation.**
- **Please refer to CPU heat sink user's manual for more detail installation procedure.**

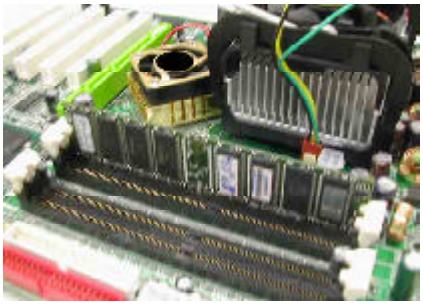
Step 2: Install memory modules

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



Total Memory Sizes With Unbuffered DDR DIMM		
Devices used on DIMM	1 DIMM x 64	2 DIMMs x 64
64 Mbit (2Mx8x4 banks)	128 MBytes	256 MBytes
64 Mbit (1Mx16x4 banks)	32 MBytes	64 MBytes
128 Mbit(4Mx8x4 banks)	256 MBytes	512 MBytes
128 Mbit(2Mx16x4 banks)	64 MBytes	128 MBytes
256 Mbit(8Mx8x4 banks)	512 MBytes	1 GBytes
256 Mbit(4Mx16x4 banks)	128 MBytes	256 MBytes
512 Mbit(16Mx8x4 banks)	1 GBytes	2 GBytes
512 Mbit(8Mx16x4 banks)	256 MBytes	512 MBytes





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 memory in the DIMM module, please insert them **pair by pair**. You must follow the slot number order to insert the DIMM into DIMM module. The installation number sequence are **DDR1/DDR3 -- DDR2/DDR4**. Please note that the pair of memorys are **same size**. If you only insert one pair, you must insert it in **DDR1/DDR3** slot.
5. DIMMs must be populated in pairs, and the DIMMs in a pair must be identical.
6. Reverse the installation steps when you wish to remove the DIMM module.

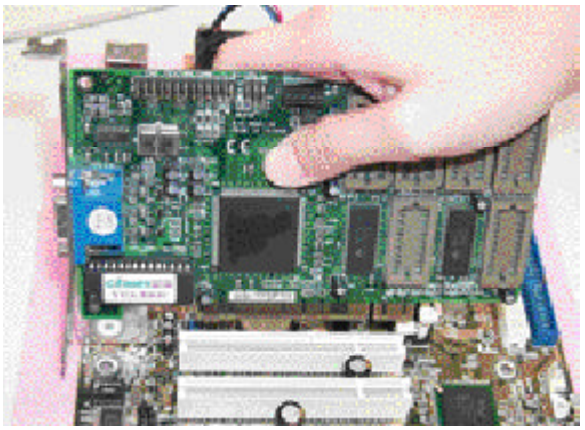
DDR Introduction

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

DDR memory is a sensible evolutionary solution for the PC industry that builds on the existing SDRAM infrastructure, yet makes awesome advances in solving the system performance bottleneck by doubling the memory bandwidth. DDR SDRAM will offer a superior solution and migration path from existing SDRAM designs due to its availability, pricing and overall market support. PC2100 DDR memory (DDR266) doubles the data rate through reading and writing at both the rising and falling edge of the clock, achieving data bandwidth 2X greater than PC133 when running with the same DRAM clock frequency. With peak bandwidth of 2.1GB per second, DDR memory enables system OEMs to build high performance and low latency DRAM subsystems that are suitable for servers, workstations, high-end PC's and value desktop SMA systems. With a core voltage of only 2.5 Volts compared to conventional SDRAM's 3.3 volts, DDR memory is a compelling solution for small form factor desktops and notebook applications.

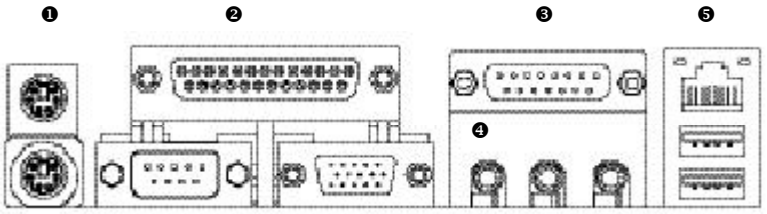
Step 3: Install expansion cards

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.

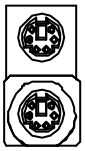


Step 4: Connect ribbon cables, cabinet wires, and power supply

Step 4-1 : I/O Back Panel Introduction



❶ PS/2 Keyboard and PS/2 Mouse Connector



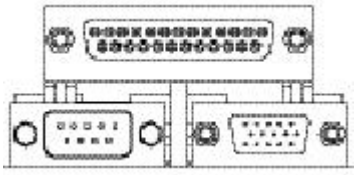
PS/2 Mouse Connector
(6 pin Female)

PS/2 Keyboard Connector
(6 pin Female)

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

❷ Parallel Port, VGA Ports and Serial Port (COMA)

Parallel Port
(25 pin Female)



COM
Serial Ports (9 pin Male)

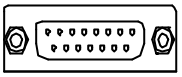
*** VGA Port**
(15 pin Female)

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

*** For GA-8IKXR Only**

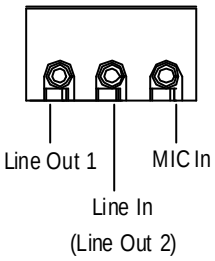
❸ Game/MIDI Ports

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



Joystick/ MIDI (15 pin Female)

❹ Audio Connectors



➢ 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:

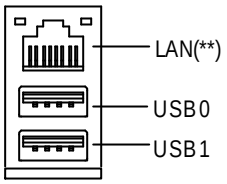
Connect "Front Speaker" to "Line Out"
Connect "Rear Speaker" to "Line In"
Connect "Center and Subwooferr" to "MIC Out ".

Method2:

You can refer to page 23, and contact your nearest dealer for optional SUR_CEN cable.

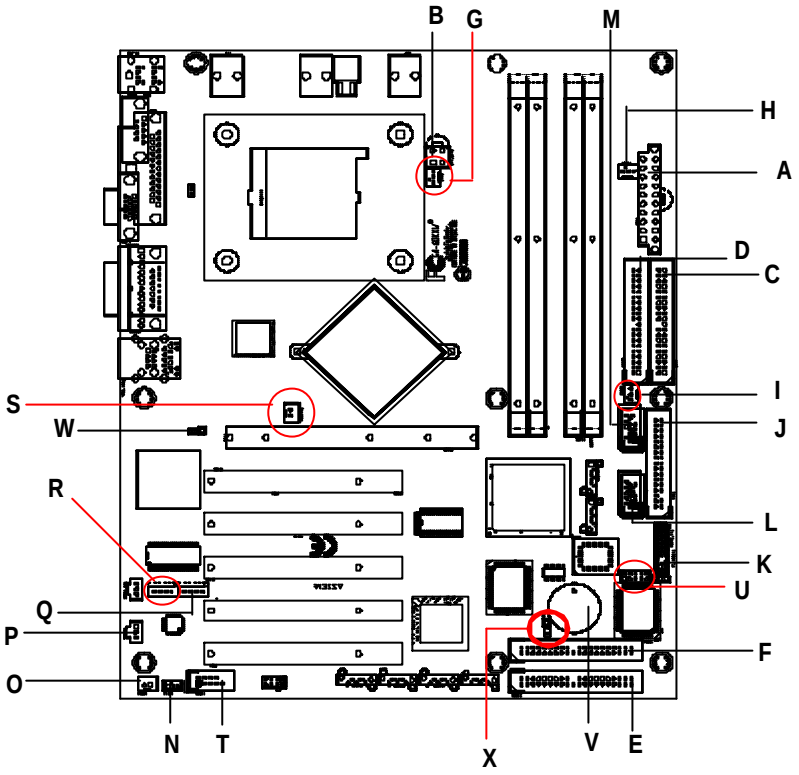
If you want the detail information for "6 / 4 Channel Audio & SPDIF " setup, please download 8IEX Series manual (Complete Version) from Gigabyte web. http://www.gigabyte.com.tw.

❺ USB/ LAN Connector



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

Step 4-2 :Connectors & Jumper Setting Introduction

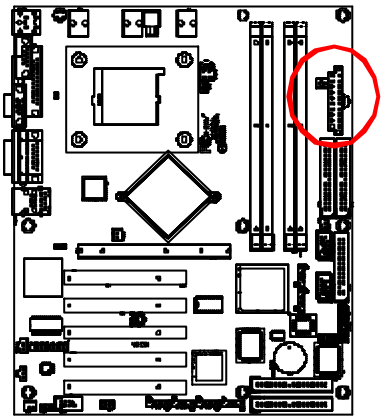


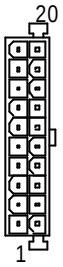
A) ATX1	M) USB4/USB2
B) ATX_12V1	N) WOL1
C) IDE1	O) WOR1
D) IDE2	P) SPDIF1
E) IDE3	Q) AUX_IN1
F) IDE4	R) CD_IN1
G) FAN1(CPU FAN)	S) NB_FAN1
H) FAN2(Power FAN)	T) COM2
I) FAN3(System FAN)	U) IR1
J) FDC1	V) BT
K) F_PANEL1	W) * JP2
L) USB3/USB1	X) JP5

* For GA-8IKXR Only

A) ATX (ATX Power Connector)

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

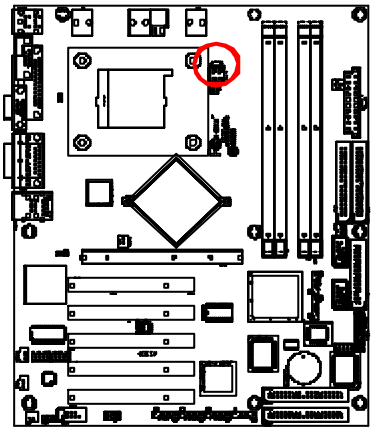


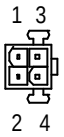


Pin No.	Definition
1	3.3V
2	3.3V
3	GND
4	VCC
5	GND
6	VCC
7	GND
8	Power Good
9	5V SB (stand by +5V)
10	+12V
11	3.3V
12	-12V
13	GND
14	PS_ON (softOn/Off)
15	GND
16	GND
17	GND
18	-5V
19	VCC
20	VCC

B) AUX_12V1(+12V Power Connector)

This connector (ATX _12V) suppliesthe CPU operation voltage (Vcore). If this " ATX_ 12V connector" is not connected, system cannot boot.

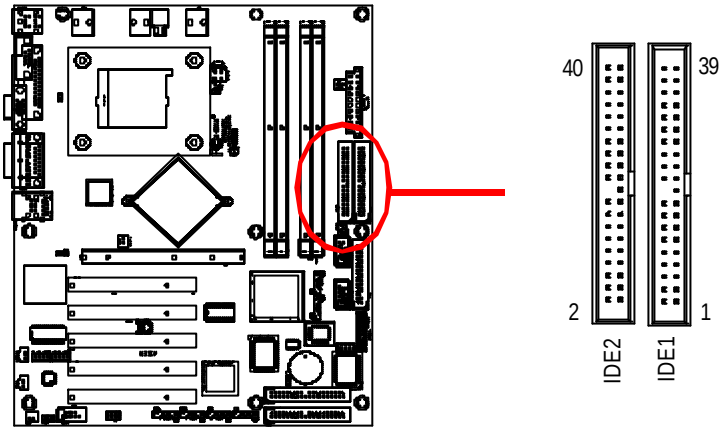




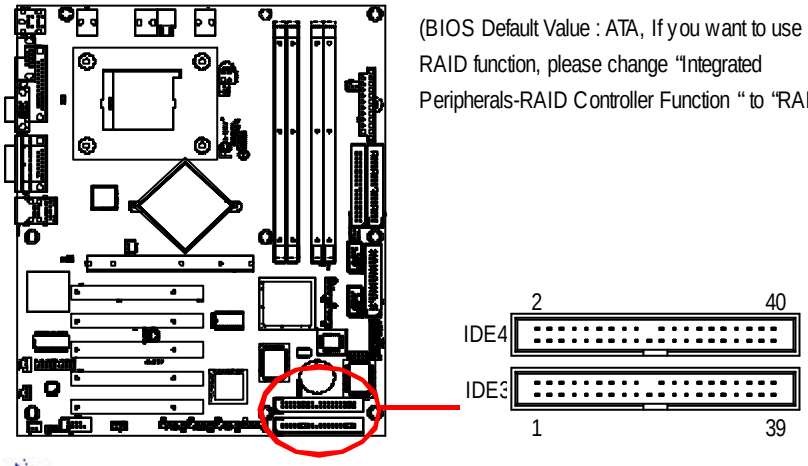
Pin No.	Definition
1	GND
2	GND
3	+12V
4	+12V

C ,D) IDE1 / IDE2 Connector(Primary/Secondary]

Please connect first harddisk to IDE1 and connect CDROM to IDE2. The red stripe of the ribbon cable must be the same side with the Pin1.



E , F) IDE3 /IDE4 (RAID/ATA133,Green Connectorr)



(BIOS Default Value : ATA, If you want to use RAID function, please change "Integrated Peripherals-RAID Controller Function " to "RAID")

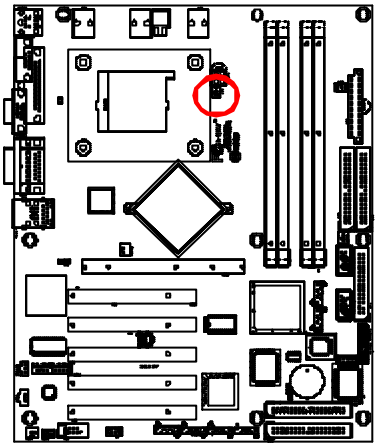
Important Notice:

If you wish to use IDE3 and IDE4, please use it in unity with BIOS (either RAID or ATA133). Then, install the correct driver to have proper operation. For details, please refer to the RAID manual.

If you want the detail information for "RAID" setup , please download 8IEX Series manual (Complete Version) from Gigabyte web. http://www.gigabyte.com.tw.

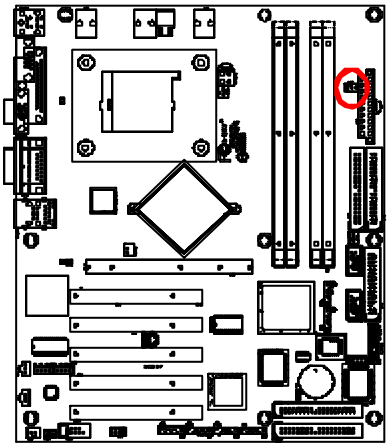
G) FAN1 (CPU Fan Connector)

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



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

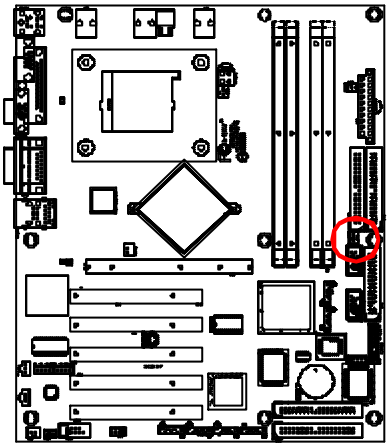
H) PWR_FAN (Power Fan Connector)



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

I) FAN3 (System Fan Connector)

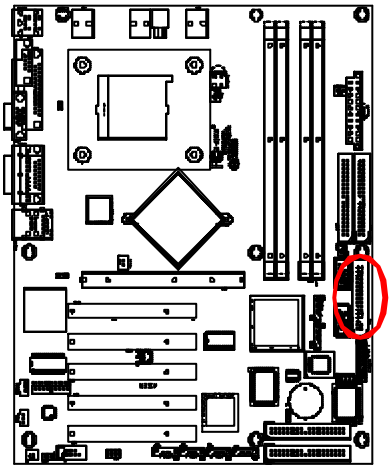
This connector allows you to link with the cooling fan on the system case to lower the system temperature.

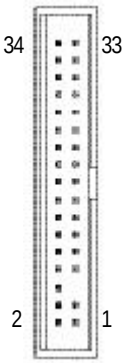


Pin No.	Definition
1	GND
2	+12V
3	Sense

J) FDC1 (Floppy Connector)

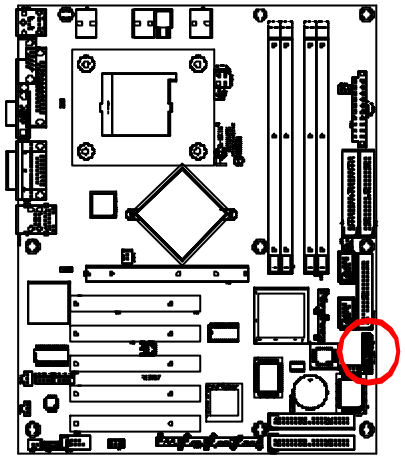
Please connect the floppy drive ribbon cables to FDD. It supports 360K,720K,1.2M,1.44M and 2.88Mbytes floppy disk types. The red stripe of the ribbon cable must be the same side with the Pin1.





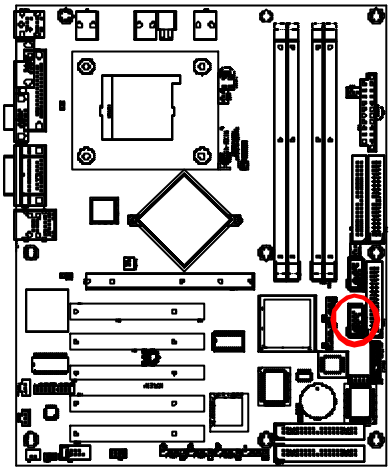
X) F_PANEL1 (2x9 pins connector)

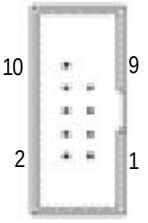
Please connect the power LED, PC speaker, reset switch and power switch of your chassis front panel to the F_PANEL connector according to the pin assignment above.



L)USB3 /USB1 (Front USB 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.

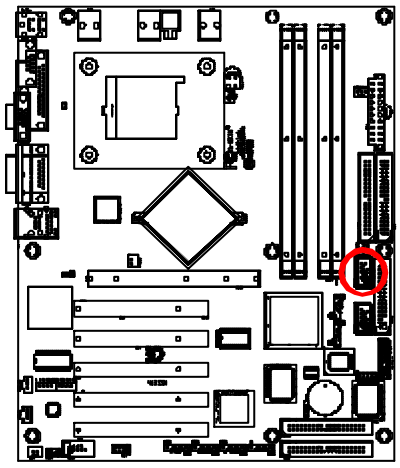


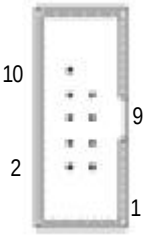


Pin No.	Definition
1	Power
2	Power
3	USB DX-
4	USB Dy-
5	USB DX+
6	USB Dy+
7	GND
8	GND
9	No Pin
10	USB Over Current

M) USB2/USB4(Front USB 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.





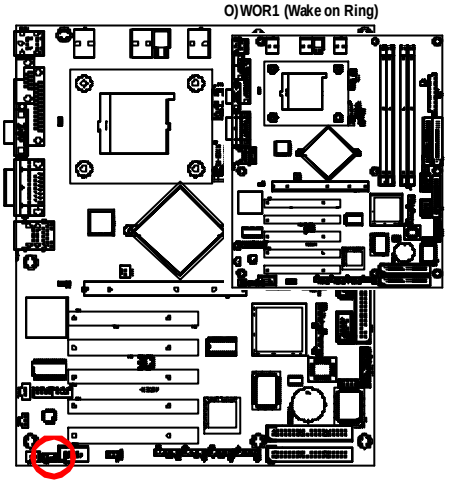
Pin No.	Definition
1	Power
2	Power
3	USB DX-
4	USB Dy-
5	USB DX+
6	USB Dy+
7	GND
8	GND
9	No Pin
10	USB Over Current

This connector allows the removeservers to manage the system thatinstalled this mainboard via your network adapter which also supports WOL.

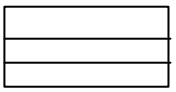
Pin No.	Definition
1	+5V SB
2	GND
3	Signal

N) WOL1 (Wake on LAN)

O) WOR1 (Wake on Ring)

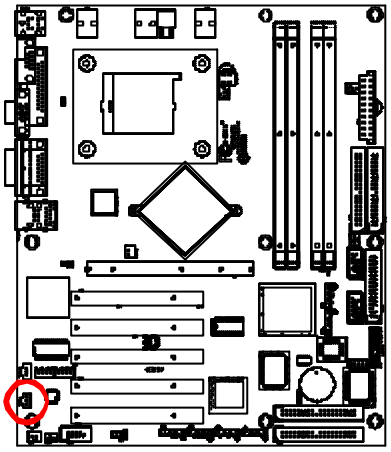


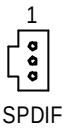
Pin No.	Definition
1	Signal
2	GND



P)SPDIF

The SPDIF output is capable of providing digital audio to external speakers or compressed AC3 data to an external Dolby Digital Decoder. Use this feature only when your stereo system has digital input function.

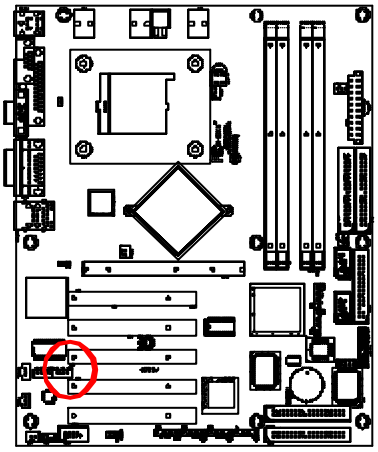


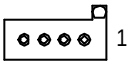


Pin No.	Definition
1	VCC
2	SPDIF OUT
3	GND

Q) AUX_IN1 (AUX In Connector)

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

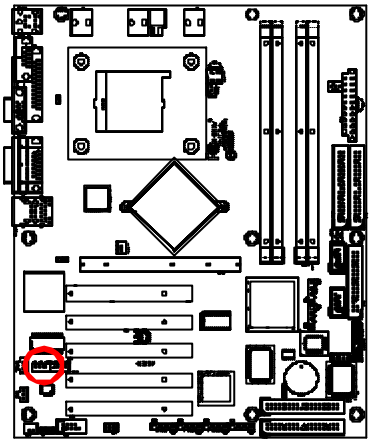


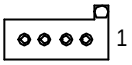


Pin No.	Definition
1	AUX-L
2	GND
3	GND
4	AUX-R

R) CD_IN1 (CD Audio Line In Connector)

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

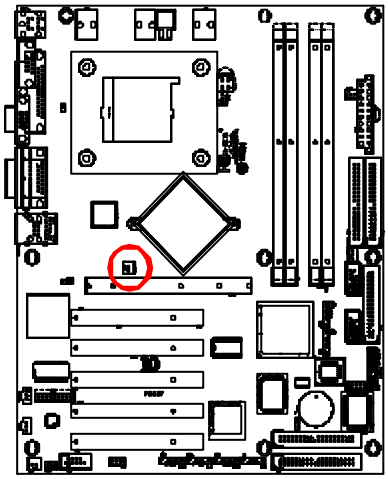




Pin No.	Definition
1	CD-L
2	GND
3	GND
4	CD_R

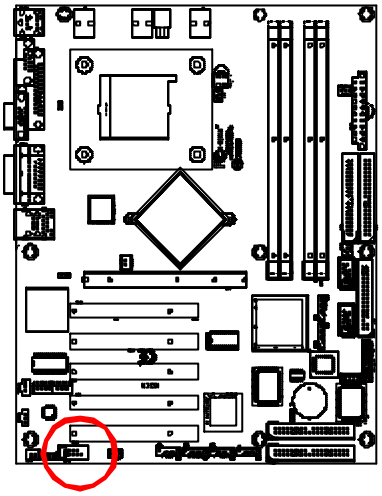
S) NB_FAN1

If you installed wrong direction, the Chip Fan will not work. Sometimes will damage the Chip Fan. (Usually black cable is GND)



Pin No.	Definition
1	VCC
2	GND

T) COM2

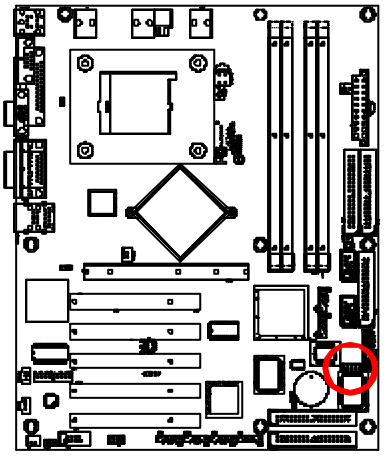


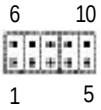
1

Pin No.	Definition
1	NDCDB
2	NSINB
3	NSOUTB
4	NDTRB
5	GND
6	NDSRB-
7	NRTSB-
8	NCTSB-
9	NRIB-
10	NC

U) IR1

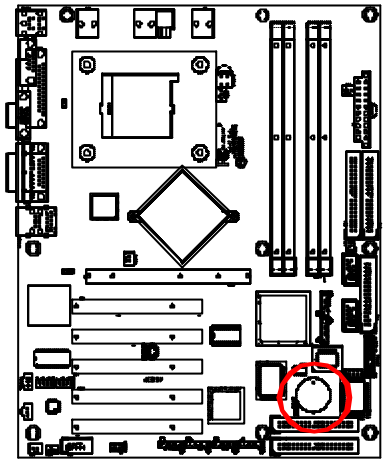
Make sure the pin 1 on the IR device is aling with pin one the connector. To enable the IR function on the board, you are required to purchase an option IR module. For detail information please contact your autherized Giga-Byte distributor.
To use IR function only, please connect IR module to Pin1 to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

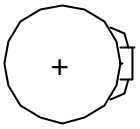




Pin No.	Definition
1	VCC
2	NC
3	IRRX
4	GND
5	IRTX
6	NC
7	CIRRX
8	VCC
9	CIRTX
10	NC

V) BT (Battery)



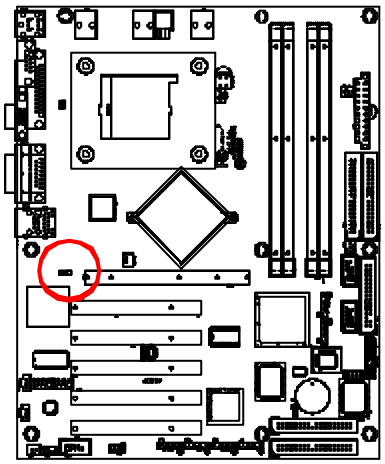


CAUTION

- ❖ 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.

W) JP2 ((Onboard VGA Functon-- For GA-8IKXR Only)

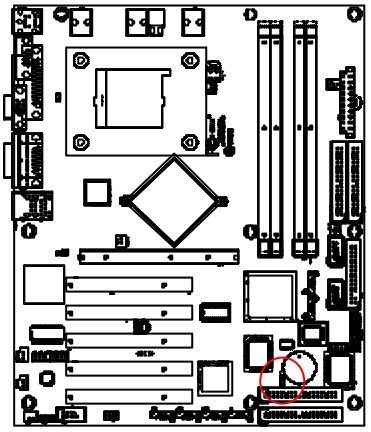


1  1-2 close: VGA Enabled (Default)

1  2-3 close: VGA Disabled

X) JP5 ((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.

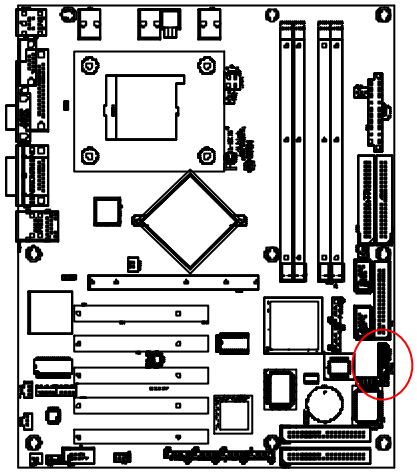


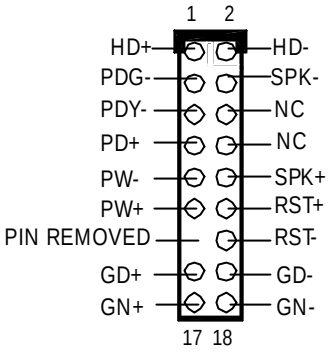
1  1-2 close: Clear CMOS

1  2-3 close: Normal

K) F_PANEL (2x9 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.





HD (IDE Hard Disk Active LED)	Pin1: LED anode(+) Pin2: LED cathode(-)
GN (Green Switch)	Open: Normal Close: Entering green mode
GD (Green LED)	Pin1: LED anode(+) Pin2: LED cathode(-)
SPK(Speaker Connector)	Pin1: VCC(+) Pin2-Pin3: NC Pin4: Data(-)
PD+PDG-PDY-(Power LED)	Pin1: LED anode(-) Pin2: LED cathode(-) Pin3: LED cathode(-)
PW (Soft Power Connector)	Open: Normal opeartion Close: Power On/Off
RS (Reset Switch)	Open: Normal operation Close: Reset Hardware System

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

Power ON the computer and press <DEL> immediately will allow you to enter Setup.

CONTROL KEYS

<↑>	Move to previous item
<↓>	Move to next item
<←>	Move to the item in the left hand
<→>	Move to the item in the right hand
<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>	Reserved
<F3>	Reserved
<F4>	Reserved
<F5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<F6>	Reserved
<F7>	Load the Optimized Defaults
<F8>	Reserved
<F9>	Reserved
<F10>	Save all the CMOS changes, only for Main Menu

GETTING HELP

Main Menu

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

Status Page Setup Menu / Option Page Setup Menu

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

- **Main**

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

- **Advanced**

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

  (ex: Auto detect fan and temperature status, automatically configure hard disk parameters.)

- **PC Health Status**

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

- **Security**

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

- **Defaults**

  Load Optimized Defaults option and loads preset system parameter values to set the system in its highest performance configurations.

- **Exit**

  Save CMOS value settings to CMOS and exit setup or abandon all CMOS value changes and exit setup.

Main

Once you enter Phoenix BIOS Setup Utility, the Main Menu (Figure 1) will appear on the screen. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

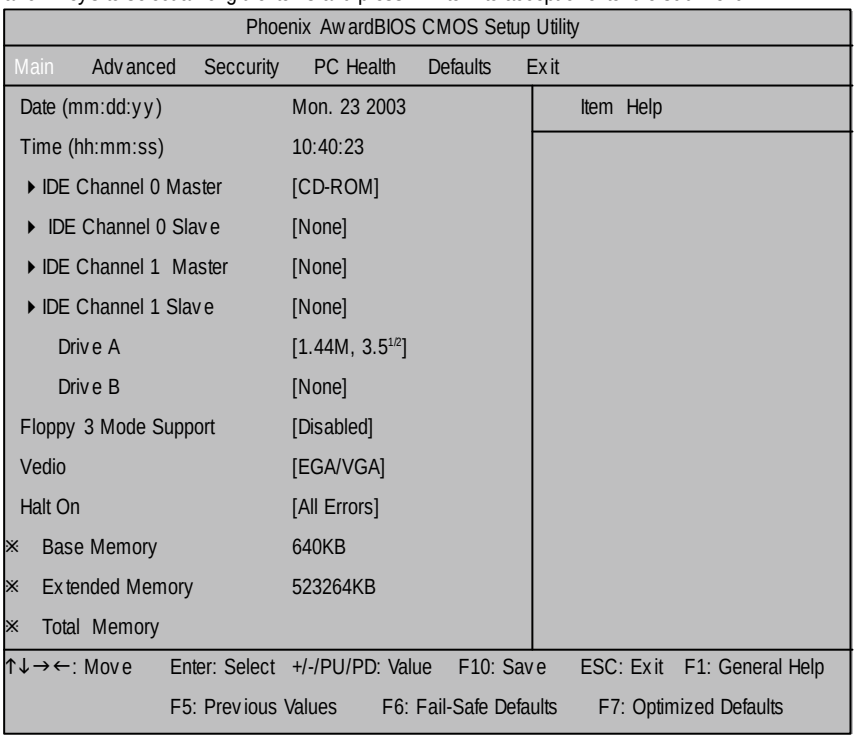


Figure 1: Main

☞ Date

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

- ▸▸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

Note: ※ indicates Display ONLY

☞ Time

The times format is setin <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 HDD Auto Detection

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 thespecifications of your drive must match with the drive table. The hard diskwill 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 andpress <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
⏩ PRECOMP	Write precomp
⏩ Landind Zone	Landing zone
⏩ Sectors	Number of sectors

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

☞ Drive A / Drive B

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

⏩ None	No floppy drive installed
⏩ 360K, $5^{1/4}$ 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.

☞ Floppy 3 Mode Support

⏩ Both	Select both Drive A and Drive B for the Floppy 3 Mode Support.
⏩ Drive A	Select Drive A for the Floppy 3 Mode Support.
⏩ Drive B	Select Drive B for the Floppy 3 Mode Support.
⏩ Disabled	Disable this function. (Defaults)

☞ Vedio

⏩ EGA/VGA	Set Vedio display as EGA/VGA mode.
⏩ CGA40	Set Vedio display as CGA 40 mode.
⏩ CGA80	Set Vedio display as CGA 80 mode.
⏩ MONO	Set Vedio display as MONO mode.

☞ 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. (Defaults)
⏩All, But Keyboar	The system boot will not stop for a keyboard error; it will stop for all other errors.
⏩All, But Diskette	The system boot will not stop for a disk error; it will stop for all other errors.
⏩All, But Disk/Key	The system boot will not stop for a keyboard or disk error; it will stop for all other errors.

☞Memory

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

Base Memory

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

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

Extended Memory

The BIOS determines the amount of extended memory is present during the POST. This is the amount of memory located above 1 MB in the CPU's memory address map.

Advanced

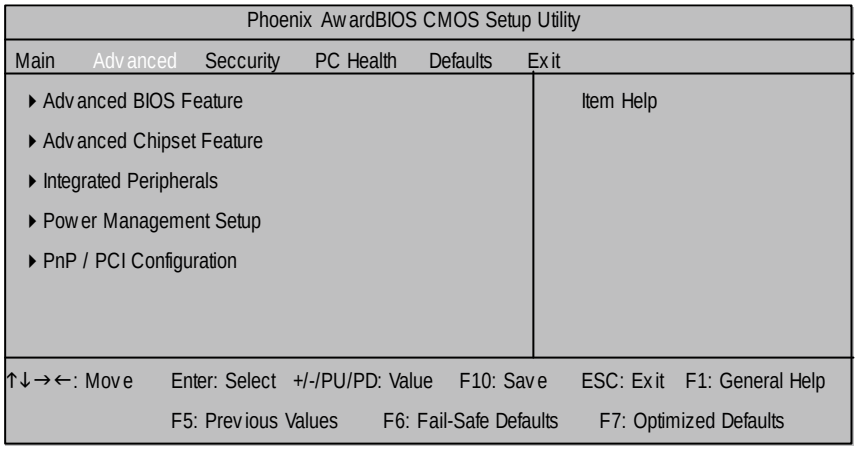


Figure 2: Advanced

Advanced BIOS Feature

Phoenix AwardBIOS CMOS Setup Utility		
Advanced		
Advanced BIOS Features		Item Help
CPU Clock Ratio	[21x]	
Hyper Threading Technology	[Enabled]	
First Bootable Add-in Card	[Onboard IDE RAID]	
Hard Disk Boot Priority		
First Boot Device	[Floppy]	
Second Boot Device	[Hard Disk]	
Third Boot Device	[CD-ROM]	
Boot Other Device	[Enabled]	
F1: Help ↑↓: Select Item	+ -: Change Values	F5: Setup Defaults
Esc: Exit ←→: Select Menu	Enter: Select ▸ Sub-Menu	F10: Save&Exit

Figure 2-1: Advanced BIOS Features

☞ CPU Clock Ratio

Set CPU clock ratio.

☞ Hyper Threading Technology

- Enabled — For Windows XP and Linux 2.4x operating system, optimized for Hyper Threading Technology. (Defaults)
- Disabled — Disable this function.

☝**Note**: This item will appear when your CPU supports Hyper Therading Technology.

☞ First Bootable Add-in Card

This category provides options for user to select the first bootable add-in card.

⏩PCI Slot 1	Select PCI Slot 1 as the first bootable add-in card.
⏩PCI Slot 2	Select PCI Slot 2 as the first bootable add-in card.
⏩PCI Slot 3	Select PCI Slot 3 as the first bootable add-in card.
⏩PCI Slot 4	Select PCI Slot 4 as the first bootable add-in card.
⏩PCI Slot 5	Select PCI Slot 5 as the first bootable add-in card.
⏩Onchip SATA RAID	Select Onchip SATA RAID as the first bootable add-in card. (Default)
⏩Onboard ATA/RAID	Select Onboard ATA/RAID as the first bootable add-in card.

☞ HardDisk 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.

- **First/ Second/ Third Boot Device**

  Select the first/second/t\hird 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.
⏩ZIP100	Select your boot device priority by ZIP100.
⏩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.
⏩LAN	Select your boot device priority by LAN.
⏩Disabled	Select your boot device priority by Disabled.

Advanced Chipset Feature

Phoenix AwardBIOS CMOS Setup Utility			
Advanced			
Advanced Chipset Features			Item Help
DRAM Timing Selectable	[BY SPD]		
x CAS Latency	2.5		
x Active to Precharge Delay	6		
x DRAM RAS# to CAS# Delay	3		
x DRAM RAS# Precharge	3		
Memory Frequency For	[Auto]		
AGP Aperture Size(MB)	[128]		
※ DRAM Data Integrity Modes	ECC		
F1: Help	↑↓: Select Item	+ -: Change Values	F5: Setup Defaults
Esc: Exit	←→: Select Menu	Enter: Select ▸ Sub-Menu	F10: Save&Exit

Figure 2-2: Advanced Chipset Features

☞ DRAM Timing Selectable

- ⏩ By SPD — Configure DRAM Timing by DRAM SPD data. (Default)
- ⏩ Manual — Manually configure DRAM Timing.

Note: When you set this item to Manual, the following items can be adjusted.

☞ CAS Latency

- ⏩ 2 — Set CAS Latency to 2 Micro second.
- ⏩ 2.5 — Set CAS Latency to 2.5 Micro second. (Default)
- ⏩ 3 — Set CAS Latency to 3 Micro second.

☞ Active to Precharge Delay

- ⏩8 Set Active to Precharge Delay to 8 Micro second.
- ⏩7 Set Active to Precharge Delay to 7 Micro second.
- ⏩6 Set Active to Precharge Delay to 6 Micro second. (Default)
- ⏩5 Set Active to Precharge Delay to 5 Micro second.

☞ DRAM RAS# to CAS# Delay

- ⏩4 Set DRAM RAS to CAS Delay to 4 Micro second.
- ⏩3 Set DRAM RAS to CAS Delay to 3 Micro second. (Default)
- ⏩2 Set DRAM RAS to CAS Delay to 2 Micro second.

☞ DRAM RAS# to Precharge

- ⏩4 Set DRAM RAS to Precharge to 4 Micro second.
- ⏩3 Set DRAM RAS to Precharge to 3 Micro second. (Default)
- ⏩2 Set DRAM RAS to Precharge to 2 Micro second.

☞ Memeory Frequency For

- ⏩DDR266 Select the memory frequency for DDR266
- ⏩Auto System auto-detect memory frequency. (Default)

☞ AGP Aperture Size(MB)

- ⏩4 Select the Aperture Size at 4MB
- ⏩8 Select the Aperture Size at 8MB
- ⏩16 Select the Aperture Size at 16MB
- ⏩32 Select the Aperture Size at 32MB
- ⏩64 Select the Aperture Size at 64MB
- ⏩128 Select the Aperture Size at 128MB
- ⏩256 Select the Aperture Size at 256MB

☞ DRAM Data Integrity Modes

This field only displays the information of DRAM Data Integrity Modes Only.

Integrated Peripherals

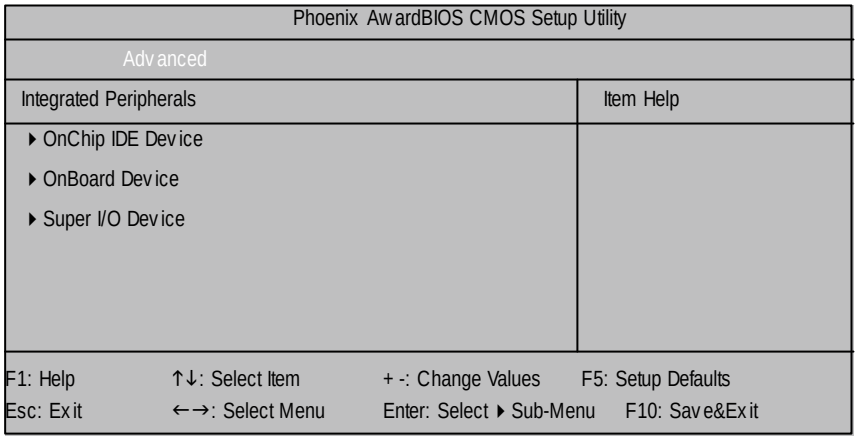


Figure 2-3: Integrated Peripherals

OnChip IDE Device

Phoenix AwardBIOS CMOS Setup Utility		
Advanced		
OnChip IDE Device		Item Help
HDD HDD Block Mode	[Enabled]	
OnChip Primary PCI IDE	[Enabled]	
IDE Primary Master PIO	[Auto]	
IDE Primary Slave PIO	[Auto]	
IDE Primary Master UDMA	[Auto]	
IDE Primary Slave UDMA	[Auto]	
OnChip Secondary PCI IDE	[Enabled]	
IDE Secondary Master PIO	[Auto]	
IDE Secondary Slave PIO	[Auto]	
IDE Secondary Master UDMA	[Auto]	
IDE Secondary Slave UDMA	[Auto]	
*** On-Chip Serial ATA ***		
x SATA Mode		
On-Chip Serial ATA	[Disabled]	
x Serial ATA Port 0 Mode	Primary Master	
Serial ATA Port 1 Mode	Primary Slave	
F1: Help ↑↓: Select Item	+ -: Change Values	F5: Setup Defaults
Esc: Exit ←→: Select Menu	Enter: Select ▸ Sub-Menu	F10: Save&Exit

Figure 2-3-1: OnChip IDE Device

- **IDE HDD Block Mode**

If your IDE hard drive supports block mode, select [Enabled] for automatic detection of the optimal number if block read/writes per sector the drive can supprit.

- ▸▸Enabled Hard Drive supports Block Mode.
- ▸▸Disabled Disable this function.

- **OnChip Primary PCI IDE**
  - Enabled — Enable the function of On-chip primary PCI IDE. (Defualt)
  - Disabled — Disable this function.

- **IDE Primary Master PIO**
  - Auto — Auto detect the IDE primary master PIO. (Default)
  - Mode 0 — Select Mode 0 as IDE primary master PIO.
  - Mode 1 — Select Mode 1 as IDE primary master PIO.
  - Mode 2 — Select Mode 2 as IDE primary master PIO.
  - Mode 3 — Select Mode 3 as IDE primary master PIO.
  - Mode 4 — Select Mode 4 as IDE primary master PIO.

- **IDE Primary Slave PIO**
  - Auto — Auto detect the IDE primary slave PIO. (Default)
  - Mode 0 — Select Mode 0 as IDE primary slave PIO.
  - Mode 1 — Select Mode 1 as IDE primary slave PIO.
  - Mode 2 — Select Mode 2 as IDE primary slave PIO.
  - Mode 3 — Select Mode 3 as IDE primary slave PIO.
  - Mode 4 — Select Mode 4 as IDE primary slave PIO.

- **IDE Primary UDMA**
  - Auto — Auto detect the IDE Primary Ultra DMA in the specified IDE channel. (Default)
  - Disabled — Disable this function.

- **IDE Primary Slave UDMA**
  - Auto — Auto detect the IDE Primary Slave Ultra DMA in the specified IDE channel. (Default)
  - Disabled — Disable this function.

- **OnChip Secondary PCI IDE**
  - Enabled — Enabled the function of Oc-chip secondary PCI IDE. (Default)
  - Disabled — Disable this function.

- **IDE Secondary Master PIO**
  - Auto — Auto detect the IDE secondary master PIO. (Default)
  - Mode 0 — Select Mode 0 as IDE secondary master PIO.
  - Mode 1 — Select Mode 1 as IDE secondary master PIO.
  - Mode 2 — Select Mode 2 as IDE secondary master PIO.
  - Mode 3 — Select Mode 3 as IDE secondary master PIO.
  - Mode 4 — Select Mode 4 as IDE secondary master PIO.

- **IDE Secondary Slave PIO**
  - Auto — Auto detect the IDE secondary slave PIO. (Default)
  - Mode 0 — Select Mode 0 as IDE secondary slave PIO.
  - Mode 1 — Select Mode 1 as IDE secondary slave PIO.
  - Mode 2 — Select Mode 2 as IDE secondary slave PIO.
  - Mode 3 — Select Mode 3 as IDE secondary slave PIO.
  - Mode 4 — Select Mode 4 as IDE secondary slave PIO.

- **IDE Secondary Master UDMA**
  - Auto — Auto detect the IDE Primary Master Ultra DMA in the specified IDE channel. (Default)
  - Disabled — Disable this function.

- **IDE Secondary Slave UDMA**
  - Auto — Auto detect the IDE Primary Slave Ultra DMA in the specified IDE channel. (Default)
  - Disabled — Disable this function.

☞ On-Chip Serial ATA Setting

- **SATA Mode**

  This category can be adjust only when your system is enhanced the SATA controller.

  - ⏩IDE SATA as IDE mode. (Defaults)
  - ⏩RAID SATA as IDE mode.

- **On-Chip Serial ATA**

  - ⏩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.
  - ⏩SATA Only SATA is operating in legacy mode.
  - ⏩Disabled Disable this function. (Defaults)

- **Serial ATA Port 0 Mode**

  - ⏩Primary Master Set Serial ATA Port 0 as Primary Master. (Default)
  - ⏩Primary Slave Set Serial ATA Port 0 as Primary Slave.
  - ⏩Secondary Master Set Serial ATA Port 0 as Secondary Master.
  - ⏩Secondary Slave Set Serial ATA Port 0 as Secondary Slave.
  - ⏩SATA0 Master Set Serial ATA Port 0 as SATA0 Master.
  - ⏩SATA1 Master Set Serial ATA Port 0 as SATA1 Master.

- **Serial ATA Port 1 Mode**

  - ⏩Primary Slave Set Serial ATA Port 1 as Primary Slave. (Default)
  - ⏩Primary Slave Set Serial ATA Port 1 as Primary Slave.
  - ⏩Secondary Master Set Serial ATA Port 1 as Secondary Master.
  - ⏩Secondary Slave Set Serial ATA Port 1 as Secondary Slave.
  - ⏩SATA0 Master Set Serial ATA Port 1 as SATA0 Master.
  - ⏩SATA1 Master Set Serial ATA Port 1 as SATA1 Master.

Onboard Device

Phoenix AwardBIOS CMOS Setup Utility		
Advanced		
Onboard Device		Item Help
USB Controller	[Enabled]	
USB 2.0 Controller	[Enabled]	
USB Keyboard Support	[Disabled]	
USB Mouse Support	[Disabled]	
AC97 Audio	[Auto]	
* Onboard VGA Device	[Enabled]	
Onboard ATA/RAID Device	[Enabled]	
RAID Controller Function	[RAID]	
CSA LAN (Giga-LAN)	[Enabled]	
Onboard LAN Boot ROM	[Disabled]	
F1: Help ↑↓: Select Item	+ -: Change Values	F5: Setup Defaults
Esc: Exit ←→: Select Menu	Enter: Select ▸ Sub-Menu	F10: Save&Exit

Figure 2-3-2: Onboard Device

▸ USB Controller

⏩ Enabled Enable USB Controller function. (Default)

⏩ 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.

*** For GA-8IKXR Only**

USB Keyboard Support

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

USB Mouse Support

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

AC97 Audio

- Auto — Auto-detect AC97 Audio (Default)
- Disabled — Disable AC97 Audio.

Onboard VGA Devices (For GA-8IKXR Only)

- Enabled — Enable Onboard VGA Device. (Default)
- Disabled — Disable Onboard VGA Device.

Onboard ATA/RAID Devices

- Enabled — Enable Onboard ATA/RAID Device. (Default)
- Disabled — Disable Onboard ATA/RAID Device.

RAID Controller Function

- RAID — Set Onboard ATA/RAID Device as RAID mode.
- ATA — Set Onboard ATA/RAID Device as ATA mode.

CSA LAN (Giag-LAN)

- Enabled — Enable the Giga-LAN (Default)
- 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)

Super I/O Device

Phoenix AwardBIOS CMOS Setup Utility		
Advanced		
Super I/O		Item Help
Power on Function	[BUTTON ONLY]	
x KB Power ON Password	Enter	
x Hot Key Power ON	Ctrl-F1	
Onboard FDC Controller	[Enabled]	
Onboard Serial Port 1	[3F8/IRQ4]	
Onboard Serial Port 2	[2F8/IRQ3]	
UART Mode Select	[Normal]	
x UR2 Duplex Mode	Half	
Onboard Parallel Port	[378/IRQ7]	
Parallel Port Mode	[SPP]	
x ECP Mode Use DMA	3	
PWRON After PWR-Fail	[Off]	
Game Port Address	[201]	
Midi Port Address	[330]	
Midi Port IRQ	[10]	
CIR Port Address	[Disabled]	
CIR Port IRQ	[Disabled]	
F1: Help ↑↓: Select Item	+ -: Change Values	F5: Setup Defaults
Esc: Exit ←→: Select Menu	Enter: Select ▸ Sub-Menu	F10: Save&Exit

Figure 2-3-3: Super I/O Device

- **Power ON Function**

  - Password — Enter from 1 to 5 characters to set the Keyboard Power On Password.
  - Hot Key — Press specified Hot Keys (Described in the following category) to power on system.
  - Mouse Move — Move mouse to power system

- Mouse Click — Mouse double click to power system.
- Any Key — Press any key to power on system.
- BUTTON ONLY — Press the power button to power on system. (Default)
- Keyboard 98 — if your keyboard has "keyboard 98" button, you can press the key to power on your system.

KB Power ON Password

This entry can be adjust when user select [Password] at Power On Function.

Press [Enter] to set password.

Hot Key Power ON

This entry can be adjust when user select [Hot Key] at Power On Function.

The hot keys options are: [Ctrl-F1], [Ctrl-F2], [Ctrl-F3], [Ctrl-F4], [Ctrl-F5], [Ctrl-F6], [Ctrl-F7], [Ctrl-F8], [Ctrl-F9], [Ctrl-F10], [Ctrl-F11] and [Ctrl-F112].

This Default setting is [Ctrl-F1].

Onboard Serial Port 1

- Auto — BIOS will automatically setup the port 1 address.
- 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)
- 2E8/IRQ3 — Enable onboard Serial port 1 and set IO address to 2E8.
- Disabled — Disable onboard Serial port 1.

Onboard Serial Port 2

- Auto — BIOS will automatically setup the port 2 address.
- 3F8/IRQ4 — Enable onboard Serial port 2 and set IO address to 3F8.
- 2F8/IRQ3 — Enable onboard Serial port 2 and set IO address to 2F8. (Default)
- 3E8/IRQ4 — Enable onboard Serial port 2 and set IO address to 3E8.
- 2E8/IRQ3 — Enable onboard Serial port 2 and set IO address to 2E8.
- Disabled — Disable onboard Serial port 2.

UART Mode Select

- Normal — Using as standard serial port. (Defaults)
- IrDA — Using as IR and set to IrDA mode.
- ASKIR — Using as IR and set to ASKIR mode.
- SCR — Using as Smart Card Interface.

UR2 Duplex Mode

This entry can be adjust when user select [IrDA] in UART Mode Selection.

- Full — IR function Duplex Full.
- Half — IR function Duplex Half.

Onboard Parallel Port

- 378/IRQ7 — Enable onboard LPT port and set address to 378/IRQ7. (Default)
- 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. (Default)
- EPP — Using Parallel port as Enhanced Parallel Port.
- ECP — Using Parallel port as Extended Capabilities Port.
- ECP+EPP — Using Parallel port as ECP & EPP mode.
- Normal — Using Parallel port as Normal.

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: 0,1,2,3 (Default)

PWRON After PWR-Fail

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

Game Port Address

- Disabled — Disable this function.
- 201 — Enabled Game Port and set address to 201. (Default)
- 209 — Enabled Game Port and address to 209.

Midi Port Address

- 330 — Enabled Midi Port and set address to 330. (Default)
- 300 — Enabled Midi Port and set address to 300.
- Disabled — Disable this function.

Midi Port IRQ

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

CIR Port Address

- 310 — Enabled CIRPort and set address to 310. (Default)
- 320 — Enabled CIR Port and set address to 320.
- Disabled — Disable this function.

CIR Port IRQ

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

Power Management Setup

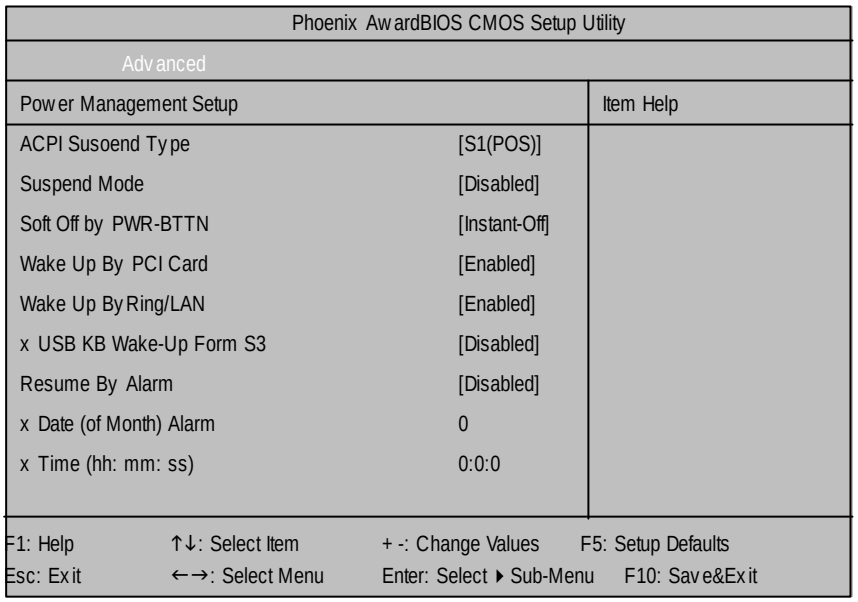


Figure 2-4: Power Management Setup

☞ ACPI Suspend Type

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

☞ USB KB Wake-Up Form S3

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 USB keyboard wake-up form S3.

☞ Soft-off by PWR-BTTN

- ⏩ Instant-off Press power button then Power off instantly. (Default)
- ⏩ Delay 4 Sec. Press power button 4 sec to Power off. Enter suspend if button is pressed less than 4 sec.

☞ Wake Up by PCI Card

- ⏩ Disabled Disable Wake Up by PCI Card. (Default)
- ⏩ Enabled Enable Wake Up by PCI Card.

☞ Wake Up On Ring/LAN

- ⏩ Disabled Disable Wake Up On Ring/LAN function. (Default Value)
- ⏩ Enabled Enable Wake Up On Ring/LAN function.

☞ 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)

PnP/PCI Configuration

Phoenix AwardBIOS CMOS Setup Utility		
Advanced		
PnP/PCI Configuration		Item Help
INT Pin 1 Assignment	[Auto]	
INT Pin 2 Assignment	[Auto]	
INT Pin 3 Assignment	[Auto]	
INT Pin 4 Assignment	[Auto]	
INT Pin 5 Assignment	[Auto]	
INT Pin 6 Assignment	[Auto]	
INT Pin 7 Assignment	[Auto]	
INT Pin 8 Assignment	[Auto]	
F1: Help ↑↓: Select Item + -: Change Values F5: Setup Defaults		
Esc: Exit ←→: Select Menu Enter: Select ▸ Sub-Menu F10: Save&Exit		

Figure 2-6: PnP/PCI Configuration

☞ INT Pin 1 Assignment

▸▸Auto	Auto assign IRQ INT Pin1. (Default)
▸▸3,4,5,7,9.,10,11,12,14,15	Set IRQ 3,4,5,7,9,10,11,12,14,15 to Pin1.

☞ INT Pin 2 Assignment

▸▸Auto	Auto assign IRQ INT Pin2. (Default)
▸▸3,4,5,7,9.,10,11,12,14,15	Set IRQ 3,4,5,7,9,10,11,12,14,15 to Pin1.

☞ INT Pin 3 Assignment

▸▸Auto	Auto assign IRQ INT Pin3. (Default)
▸▸3,4,5,7,9.,10,11,12,14,15	Set IRQ 3,4,5,7,9,10,11,12,14,15 to Pin3.

☞ INT Pin 4 Assignment

⏩Auto	Auto assign IRQ INT Pin4. (Default)
⏩3,4,5,7,9.,10,11,12,14,15	Set IRQ 3,4,5,7,9,10,11,12,14,15 to Pin4.

☞ INT Pin 5 Assignment

⏩Auto	Auto assign IRQ INT Pin5. (Default)
⏩3,4,5,7,9.,10,11,12,14,15	Set IRQ 3,4,5,7,9,10,11,12,14,15 to Pin5.

☞ INT Pin 6 Assignment

⏩Auto	Auto assign IRQ INT Pin6. (Default)
⏩3,4,5,7,9.,10,11,12,14,15	Set IRQ 3,4,5,7,9,10,11,12,14,15 to Pin6.

☞ INT Pin 7 Assignment

⏩Auto	Auto assign IRQ INT Pin7. (Default)
⏩3,4,5,7,9.,10,11,12,14,15	Set IRQ 3,4,5,7,9,10,11,12,14,15 to Pin7.

☞ INT Pin 8 Assignment

⏩Auto	Auto IRQ assign INT Pin8. (Default)
⏩3,4,5,7,9.,10,11,12,14,15	Set IRQ 3,4,5,7,9,10,11,12,14,15 to Pin8.

Security

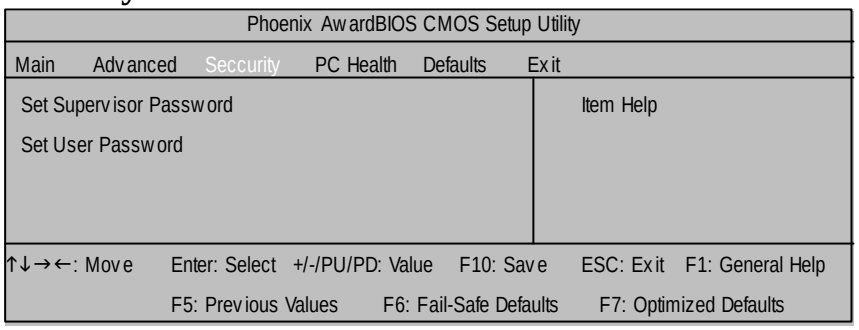


Figure 3: Security

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 entered 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.

PC Health

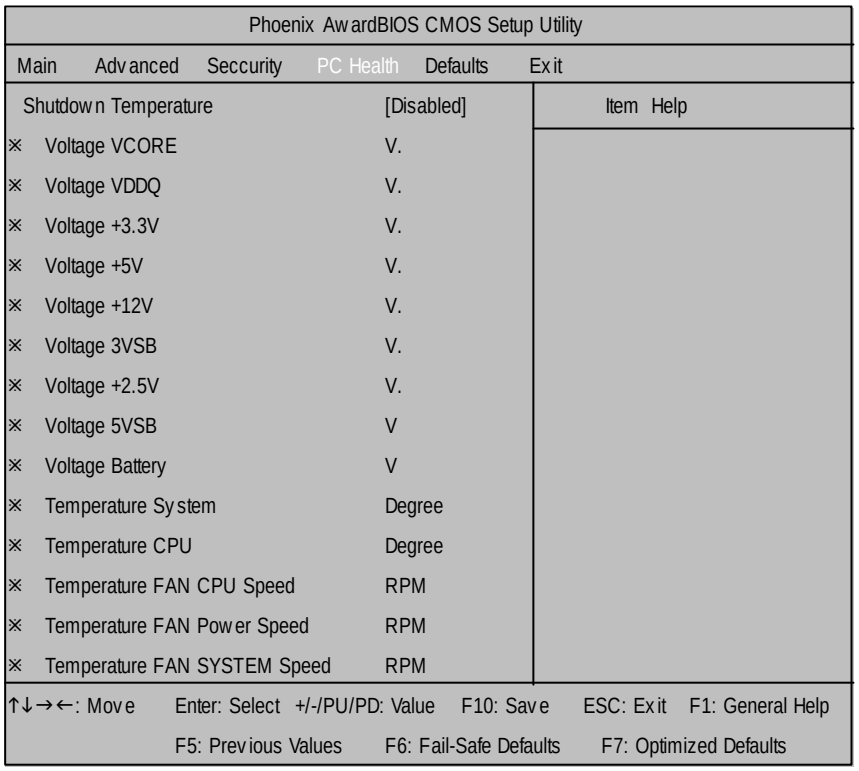


Figure 4: PC Health

☞ **Shutdown Temperture**

⏩Disabled	Disable CPU shtdown temperture function. (Default)
⏩60ºC /140ºCF	Set the CPU shtdown temperture at 60ºC /140ºCF.
⏩65ºC /149ºCF	Set the CPU shtdown temperture at 65ºC /149ºCF.
⏩70ºC /158ºCF	Set the CPU shtdown temperture at 70ºC /158ºCF.

☞ **Voltage: VCORE / VDDQ / +2.5V / +3.3V / +5V / +12V / 3VSB / 5VSB / Battery**

⏩Detect system's voltage status automatically.

☞ **TemperatureCPU / TemperatureSystem**

⏩Display the burrent CPU and System temperature.

☞ **FAN CPU / FAN Power / FAN System Speed (RPM)**

⏩Display the burrent CPU, System and PowerFAN speed.

Defaults

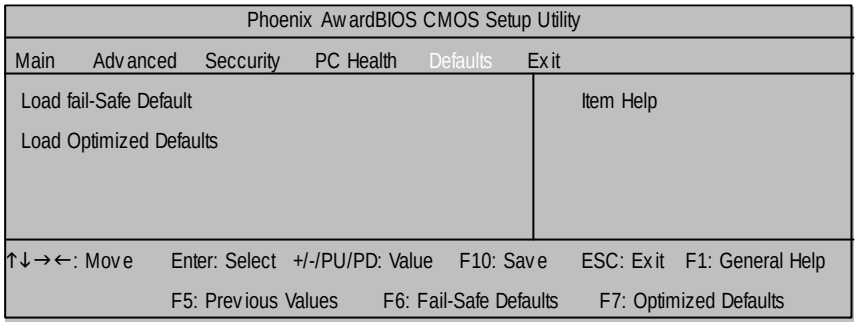


Figure 5: Defaults

☞Load Fail-Safe Defaults

When you press <Enter> on this item, you will get a confirmation dialog box with a message as below:

Press 'Y' to load the BIOS default values for the most stable, minimum-performance system operation.

☞Load Optimized Defaults

When you press <Enter> on this item, you will get a confirmation dialog box with a message as below:

Exit

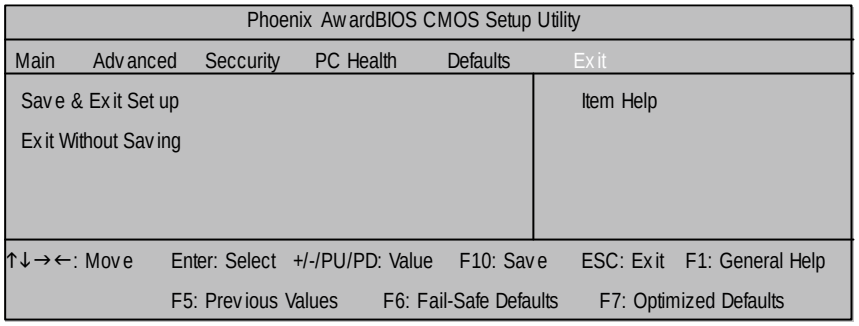


Figure 6: Exit

☞Save & Exit Setup

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

Type "N" will return to Setup Utility.

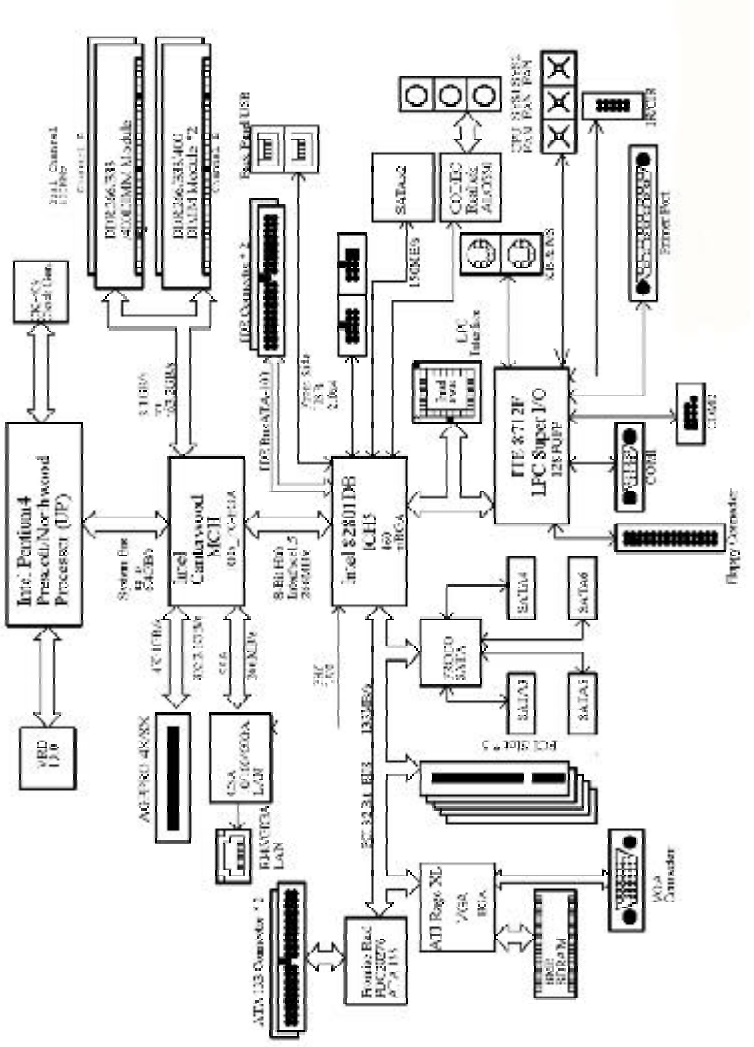
☞Exit Without Saving

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

Type "N" will return to Setup Utility.

Chapter 4 Technical Reference

Block Diagram



Chapter 5 Driver Installation

A. Intel Chipset Software Installation Utilities

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.

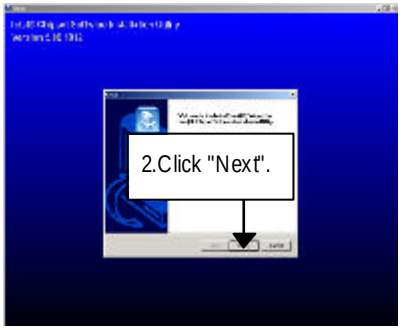
Installation Procedures:

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

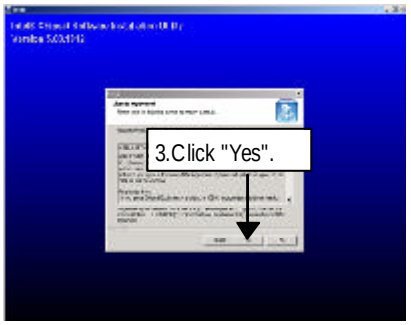
(1)

Setup Wizard



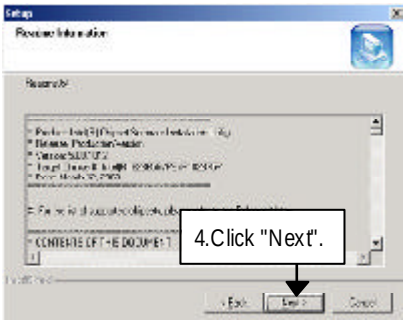
(2)

License Aggremment



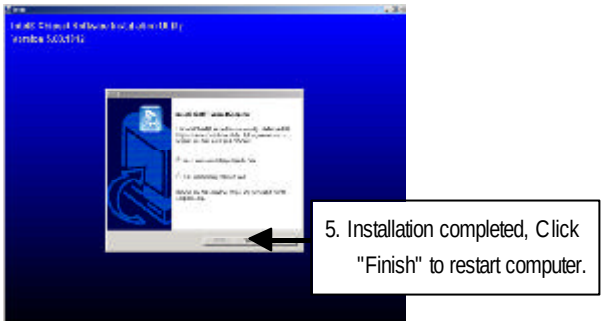
(3)

Readme Information



(4)

Installation Completed



(5)

B. Intel PRO 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 "Intel Network Driver" to start the installation.
2. You can select either **Wired LAN Adapters** or **Wired LAN Adapters** to install the required drivers. Follow up a series of installation wizards to install the drivers.

Auto Run windows

(1)

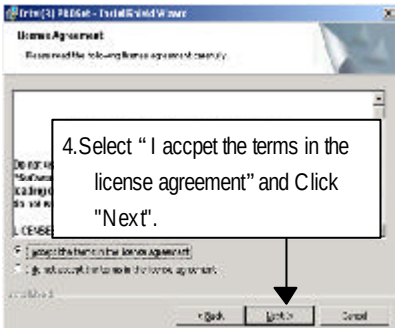
Intel PRO Network Drivers

(2)

Wired LAN Adapter Driver Installation

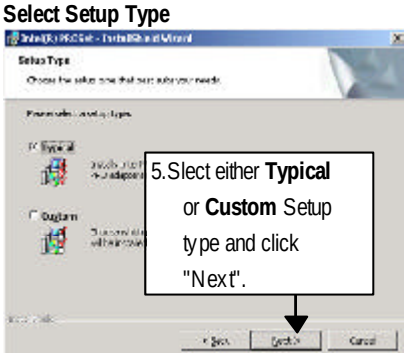
(3)

License Agreement



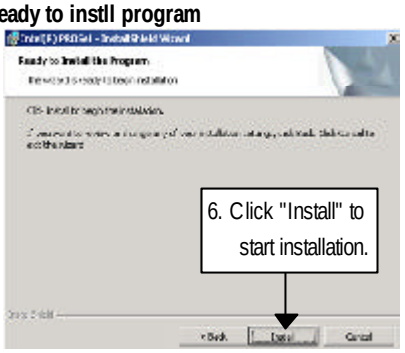
(4)

Select Setup Type



(5)

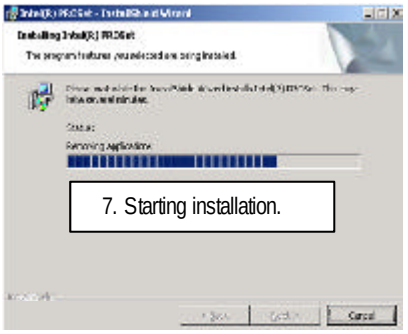
Ready to instll program



(6)

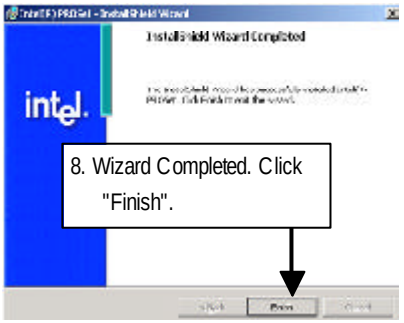
Step 5. Note that user can select either **Typical** or **Custom** Setup Types. **Typical** setup type allows users to install basic connectivity and the adapter management utility. **Custom** setup type embraces installing features and subfeatures user selects, including modern utilities, manage ment components and drivers. Recommended for advanced users.

Starting Installaiton



(7)

Installation Completed



(8)

Intel PRO Network Drivers

(9)

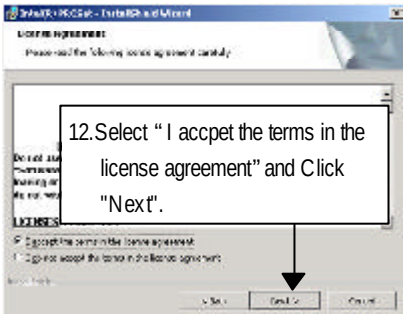
Wireless LAN Adapter Driver Installation

(10)

Wireless LAN Adapter Driver Installation

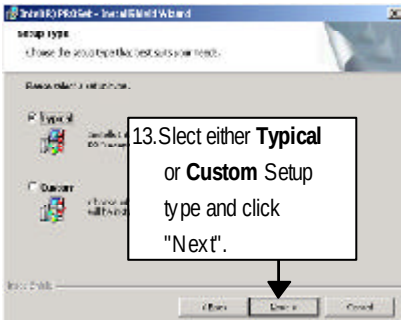
(11)

License Agreement



(12)

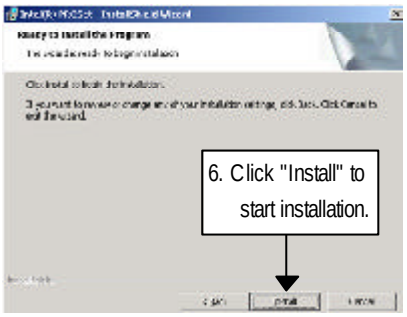
Select Setup Type



(13)

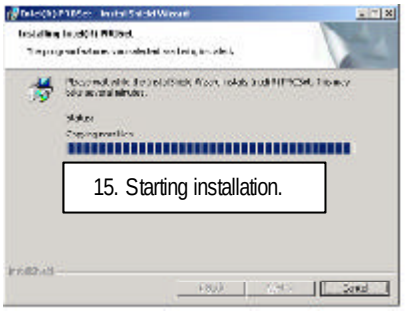
Step 13. Note that user can select either **Typical** or **Custom** Setup Types. **Typical** setup type allows users to install basic connectivity and the adapter management utility. **Custom** setup type embraces installing features and subfeatures user selects, including modern utilities, management components and drivers. Recommended for advanced users.

Ready to instll program



(14)

Starting Installaiton



Installation Completed

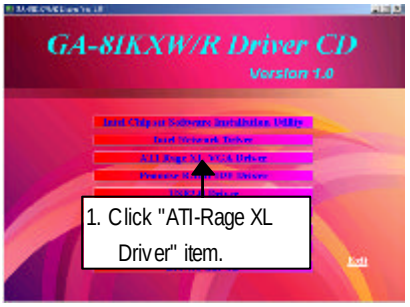
C. ATI-Rage XL VGA Driver Installation (For GA-8IKXR Only)

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 "ATI-Rage XL VGA 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

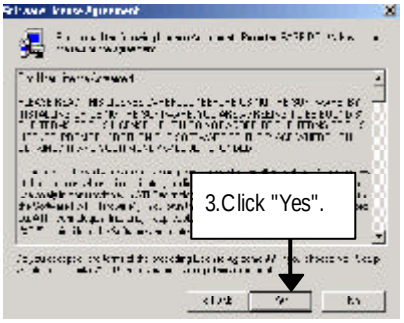


(1)

ATI Windows 2000 Driver Setup

(2)

Software License Agreement



(3)

Setup Completed

(4)

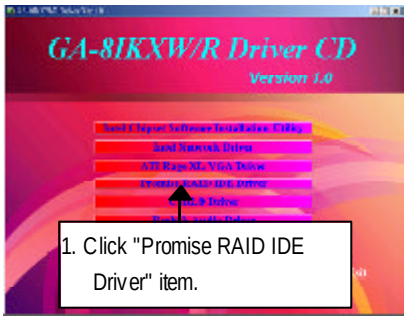
D. Promise RAID IDE Driver Installation

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:

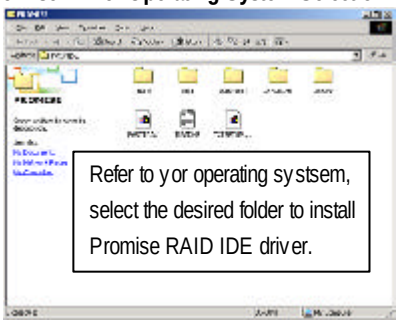
1. The CD auto run program starts, **Double click** on "Promise RAID IDE Driver" to start the installation.
2. Then, a series of installation wizards appear. Follow up the wizards to install the drivers.
3. Setup completed, click "Finish" to restart your computer.

Auto Run windows



(1)

Promise Driver Operating System Selection



(2)

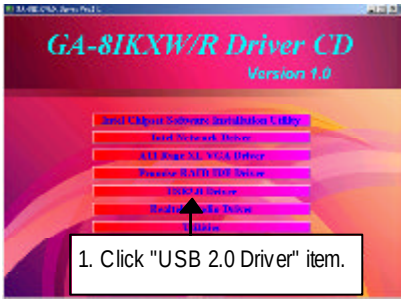
E. USB 2.0 Driver

Insert the driver CD-title that came with your motherboard into your CD-ROM driver, the driver CD-title will auto start and show 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 "USB2.0 Driverr" to start the installation.
2. Setup completed, click "OK" to restart your computer.

Auto Run windows



Installation completed

F. RealTek Audio 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.

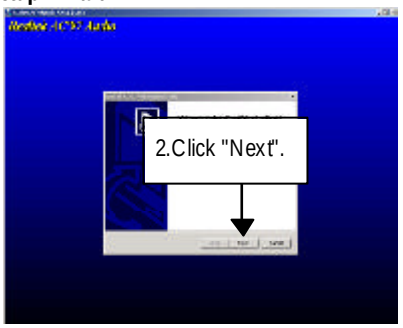
nstallation Procedures:

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)

Setup Wizard

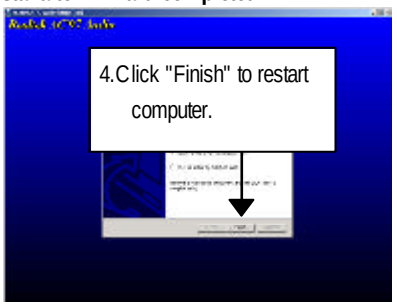


(2)

Starting Installaiton

(3)

Installaiton Wizard completed



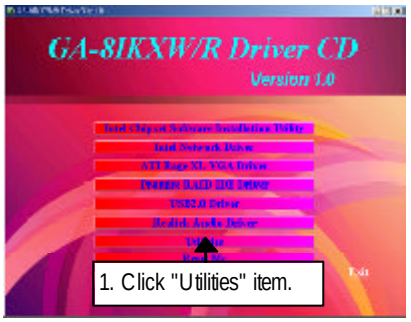
(4)

G. Utilities 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.

The **Utilities** item contains the utility of **DirectX 9.0**, **Adabe Acrobate Reader**, **Norton Internet Security 2003, @BIOS** and **Gigabyte Management Tool.**

Auto Run windows



(1)

Utilities List

(2)

Chapter 6 Serial ATA RAID Creation Procedures

This section provides user to enhance the ICH5R serial ATA RAID function. To configure the RAID Utility, please enter to BIOS setup and select the Onchip Serial ATA to **Enhanced Mode**, than set SATA Mode to **RAID**. Save and exit.

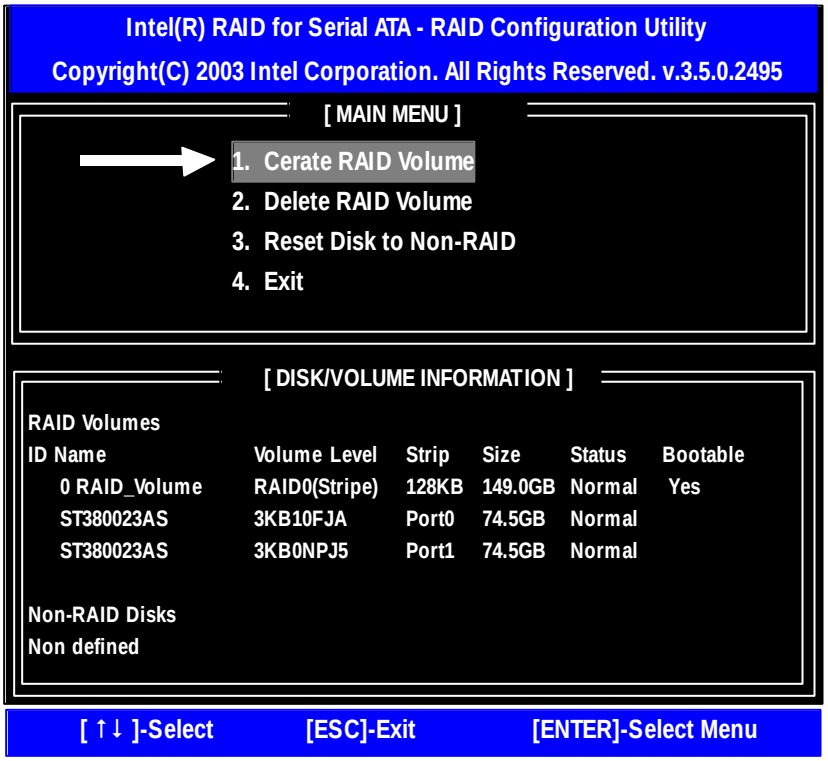
ENTERING RAID CONFIGURATION UTILITY

Power ON the computer and press <Ctrl +I> immediately will allow you to enter RAID Configuration Utility.

CREATE RAID VOLUME

Step1. Select Create RAID Volume.

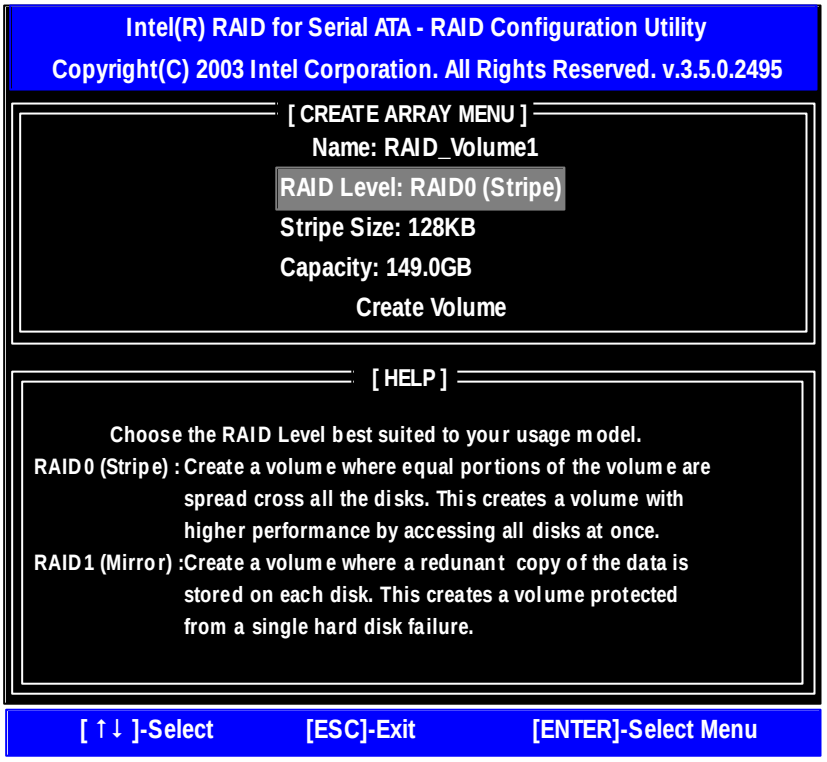
Step2. Press [Enter] to create the specified volume.



CREATE ARRAY MENU

Step 1. Select RAID Level best suited to your usage mode.

Step 2. After selecting the RAID Level, identify the desired Strip Size.



RAID0 (Stripe) : Create a volume where equal portions of the volume are spread cross all the disks. This creates a volume with higher performance by accessing all disks at once.

RAID1 (Mirror) : Create a volume where a redunant copy of the data is stored on each disk. This creates a volume protected from a single hard disk failure.

EXIT

Step 1. Verify the Disk/Volume Information.

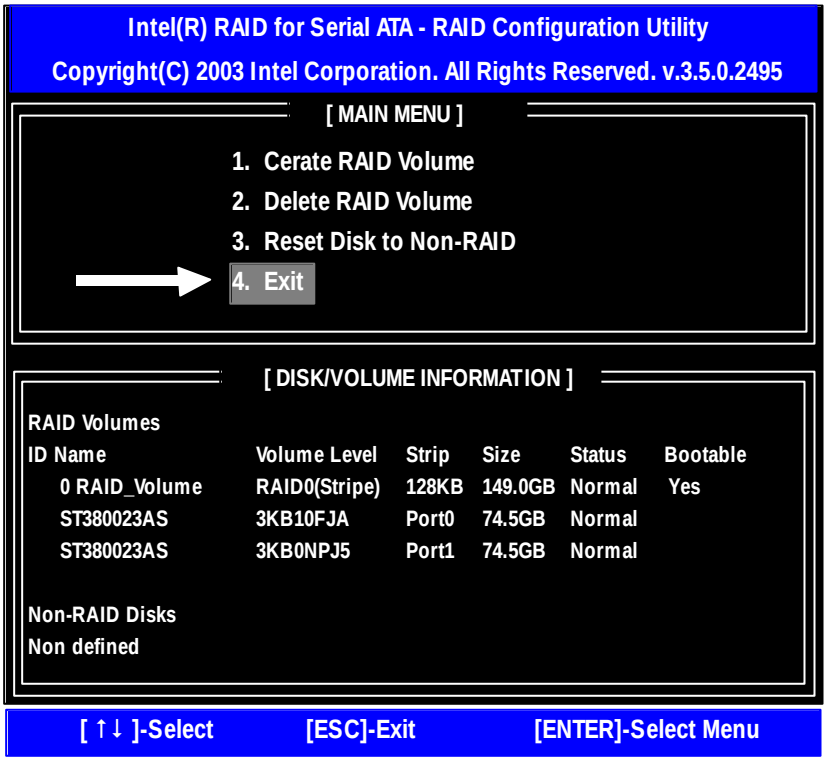
Step 2. RAID Volume is created, go back to the main menu.

Step 3. Select Exit and press [Enter].

Step 4. A confirmation dialog box will appear.

Step 5. Press Y and [Enter] to exit the configuration.

Step 6. RAID configuration is completed.



Chapter 7 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

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

Technical Support/RMA Sheet

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

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

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

Problem Description: