

GA-9IVDT  
Dual Xeon™ (Nocona/Iwindale)  
Processor Motherboard

# USER'S MANUAL

Dual Xeon™(Nocona/Iwindale)Processor Motherboard

Rev. 1102

12ME-9IVDT-1102

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## Item Checklist

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> The GA-9IVDT motherboard            | <input checked="" type="checkbox"/> Serial ATA cable x 4                 |
| <input checked="" type="checkbox"/> Printer Port (LPT) cable x 1        | <input checked="" type="checkbox"/> PATA ( 1 cables) & FDD cable set x 1 |
| <input checked="" type="checkbox"/> IDE to SATA HDD Power cable x 2     | <input checked="" type="checkbox"/> GA-9IVDT quick installation guide    |
| <input checked="" type="checkbox"/> CD for motherboard driver & utility | <input checked="" type="checkbox"/> GA-9IVDT user's manual               |
| <input checked="" type="checkbox"/> I/O Shield x1                       | <input checked="" type="checkbox"/> Retention Module x 2                 |



### 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	<ul style="list-style-type: none"> <li>12cm x 10.5cm CEB size form factor, 8 layers PCB.</li> </ul>
Motherboard	<ul style="list-style-type: none"> <li>GA-9IVDT Motherboard:</li> </ul>
CPU	<ul style="list-style-type: none"> <li>Dual socket 604 for Intel® Xeon(Nocona/Irwindale) processor supports 3.6 GB and upper</li> <li>Intel® Xeon (Nocona/Irwindale) CPUs supports 800 MHz FSB</li> <li>L2 cache depend on CPU</li> </ul>
Chipset	<ul style="list-style-type: none"> <li>Intel® E7320 Chipset</li> <li>Intel® 6300ESB</li> </ul>
Memory	<ul style="list-style-type: none"> <li>6 x 240-pin DDRII DIMM sockets</li> <li>Supports 6 ECC Registered DIMM DDRII 400</li> <li>Supports up to 12 GB DRAM</li> <li>Supports only 1.8V DDRII DIMM</li> </ul>
I/O Control	<ul style="list-style-type: none"> <li>ITE® ITE IT8712 with HW Monitor</li> </ul>
Slots	<ul style="list-style-type: none"> <li>2 PCI-X slot support 64/66MHz (3.3V / The Green slot supports ZCR)</li> <li>1 PCI slot supports 32/33MHz (5V)</li> <li>1 PCI-E slot by x4</li> </ul>
On-Board IDE	<ul style="list-style-type: none"> <li>1 IDE bus master (ATA100) IDE ports for up to 2 ATAPI devices</li> </ul>
On-Board Peripherals	<ul style="list-style-type: none"> <li>1 Floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88M bytes.</li> <li>1 Parallel port supports Normal/EPP/ECP mode</li> <li>1 Serial port (COM)</li> <li>4 x USB 2.0 (2 X at rear, 2 x by cable)</li> <li>1 x VGA port</li> <li>2 x RJ45 LAN port</li> </ul>
Hardware Monitor	<ul style="list-style-type: none"> <li>CPU/Power/System Fan Revolution Detect</li> <li>CPU shutdown when overtemperature</li> <li>System Voltage Detect</li> </ul>

## GA-9IVDTMotherboard

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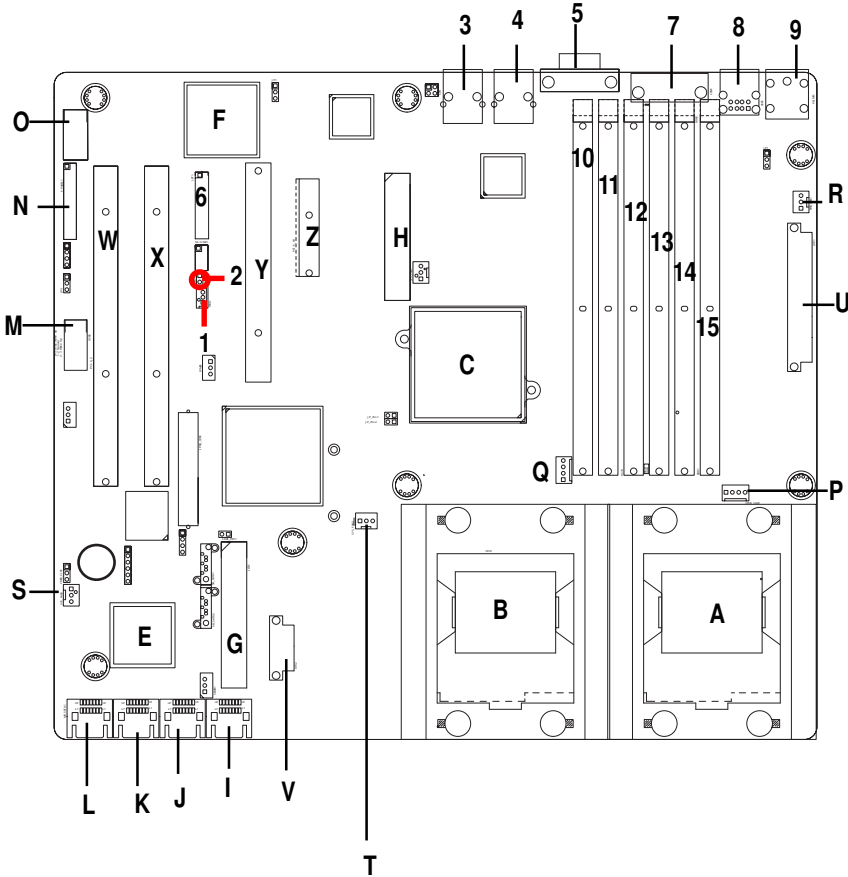
SATA Controller	<ul style="list-style-type: none"><li>• Adaptec® AIC-8130 chipset supports SATAII 4 ports</li><li>• Supports RAID 0 , 1, 5, 10 with ZCR card (2020s)</li><li>• Supports HOST RAID (RAID 0,1)</li><li>• Mirroring supports automatic background rebuilds</li><li>• Features LBA and Extended Interrupt 13 drive translation in controller onboard BIOS</li></ul>
On-Board SATA RAID	<ul style="list-style-type: none"><li>• Adaptec® AIC-8130 chipset supports SATAII interface</li><li>• Built in Intel® 6300ESB chipset</li><li>• RAID 0,1,5,10 are supported when ZCR card is populated. (Optional)</li></ul>
On-Board LAN	<ul style="list-style-type: none"><li>• Broadcom® BCM 5705 and 5721 LAN Chipset</li></ul>
On-Board USB 2.0	<ul style="list-style-type: none"><li>• Built in 6300ESB Chipset</li></ul>
PS/2 Connector	<ul style="list-style-type: none"><li>• PS/2 Keyboard interface and PS/2 Mouse interace</li></ul>
BIOS	<ul style="list-style-type: none"><li>• Lincensed Pheonix on 8MB Flash RAM</li><li>• Supports multi boot function</li><li>• User setting for hardware monitoring</li><li>• Supports PXE</li></ul>
Additional Features	<ul style="list-style-type: none"><li>• Wake on LAN (WOL)</li><li>• AC Recovery</li><li>• Poly fuse for keyboard over-current protection</li></ul>



### **NOTE!**

**Please ensure that you have update SP1 when running Windows Server 2003. Failure to do so will cause the low LAN transfer rate.**

# GA-9IVDT Motherboard Layout



<b>A.</b>	CPU1 (Install First)	<b>1.</b>	WOL1 (Wake on Lan)
<b>B.</b>	CPU2	<b>2.</b>	WOR1 (Wake on Ring)
<b>C.</b>	Intel E7320	<b>3.</b>	G_LAN2 (LAN1 Port)
<b>D.</b>	Intel 6300ESB	<b>4.</b>	G_LAN1 (LAN2 Port)
<b>E.</b>	Adaptec AIC-8130	<b>5.</b>	VGA1 (VGA Port)
<b>F.</b>	ATI Rage_XL	<b>6.</b>	LPT Connector
<b>G.</b>	IDE1	<b>7.</b>	COM1 (COM Port)
<b>H.</b>	FDD1 (Floppy Connector)	<b>8.</b>	USB1 (USB2.0 port)
<b>I.</b>	MV_SATA4 (** Note)	<b>9.</b>	KB_MS (Keyboard & Mouse)
<b>J.</b>	MV_SATA3 (** Note)	<b>10.</b>	DDR6
<b>K.</b>	MV_SATA2 (SATA Connector)	<b>11.</b>	DDR5
<b>L.</b>	MV_SATA1 (SATA Connector)	<b>12.</b>	DDR4
<b>M.</b>	USB2 (USB2.0 connector)	<b>13.</b>	DDR3
<b>N.</b>	F_Panel1(Front Panel)	<b>14.</b>	DDR2
<b>O.</b>	COM2	<b>15.</b>	DDR1
<b>P.</b>	CPU_FAN1		
<b>Q.</b>	CPU_FAN2		
<b>R.</b>	PWR_FAN1 (Power Fan)		
<b>S.</b>	SYS_FAN2 (System Fan)		
<b>T.</b>	SYS_FAN3 (System Fan)		
<b>U.</b>	ATX1Power connector)		
<b>V.</b>	ATX2 (Power connector)		
<b>W.</b>	PCI-X_2 (ZCR Slot)		
<b>X.</b>	PCI-X_1		
<b>Y.</b>	PCI1		
<b>Z.</b>	PCI_E_x4 (PCI-E x4 Slot)		

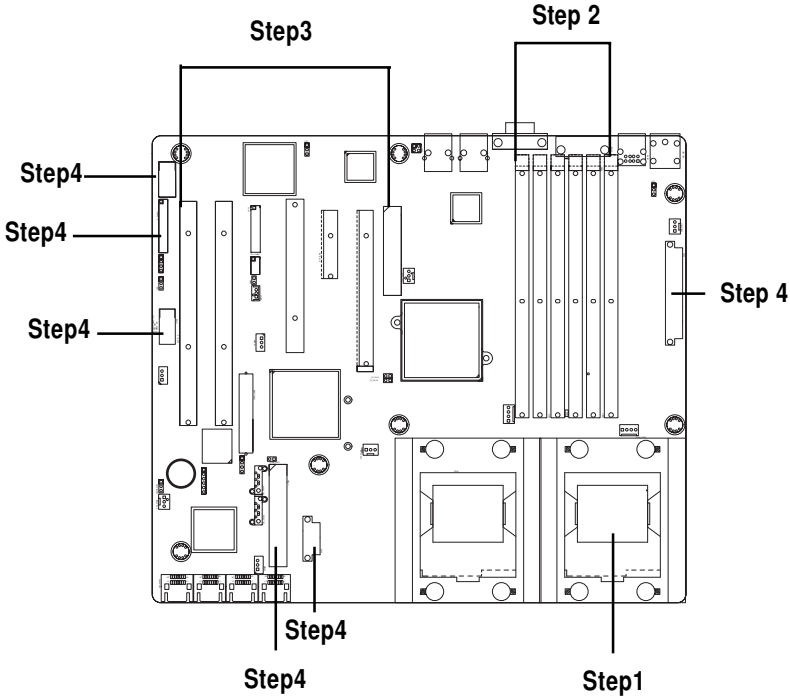
**\*\* Note:** This device is reserved for Adaptec AIC-8140 chipset. (Supports 8 SATAports)



## 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

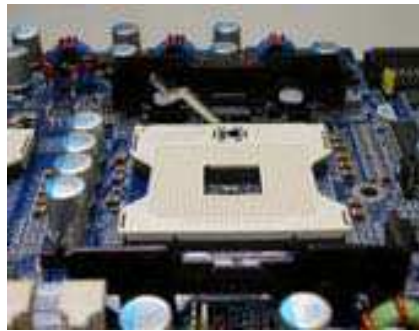


## Step 1: Install the Central Processing Unit (CPU)

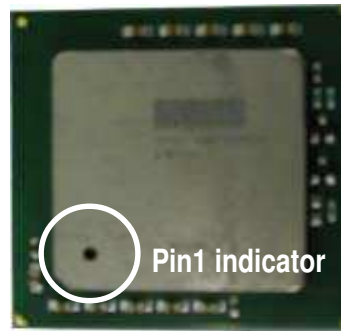
Before installing the processor , adhere to the following warning:



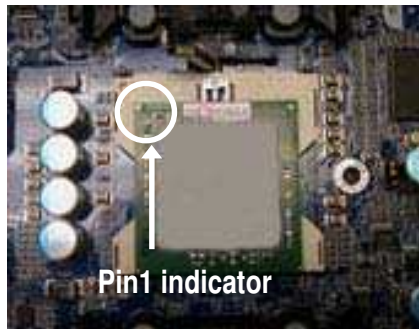
**If you do not match the CPU socket Pin 1 and CPU cut edge well, it will cause improper installation. Please change the insert orientation. Please make sure the CPU type is supported by the motherboard.**



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



2. CPU Top View



3. 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.



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

## Step 1-2:CPU Heat Sink Installation

Before installing the CPU Heat Sink , adhere to the following warning:

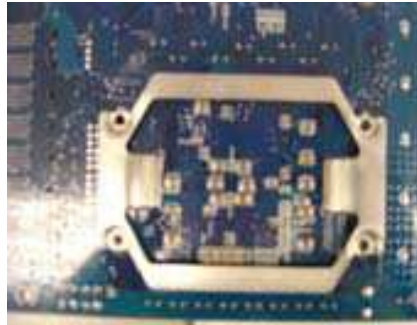


- 1.Please use Intel approved cooling fan.
- 2.We recommend you to apply the thermal tape to provide better heat conduction between your CPU and heatsink.  
(The CPU cooling fan might stick to the CPU due to the hardening of the thermal paste. During this condition if you try to remove the cooling fan, you might pull the processor out of the CPU socket along with the cooling fan, and might damage the processor. To avoid this from happening, we suggest you to either use thermal tape instead of thermal paste, or remove the cooling fan with extreme caution.)
- 3.Make sure the CPU fan power cable is plugged in to the CPU fan connector, this completes the installation.

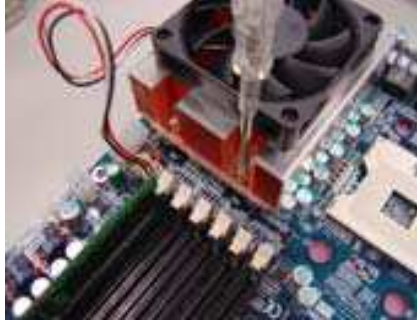
Please refer to CPU heat sink user's manual for more detail installation procedure.



1. Heat sink installation kit.



2. Turn the mother bord to the backside. Lock the retention module on the mother board  
Make sure the position of the 4 holes on the retention module match exactly the position on the motherboard.



3. Fasten the heatsink supporting-base onto the CPU socket on the mainboard.

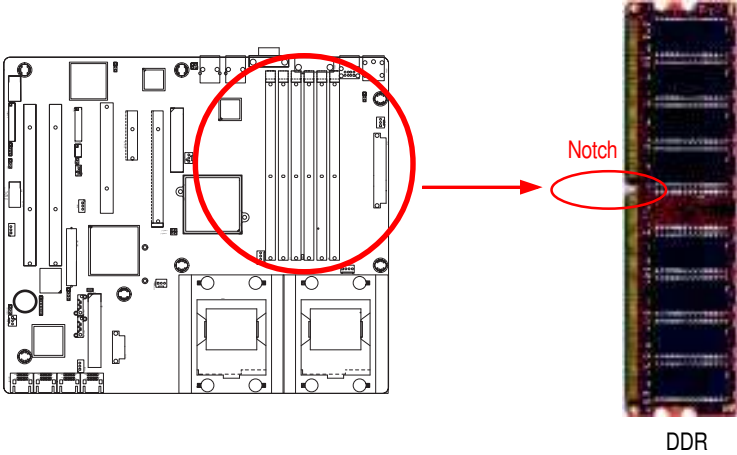


4. Make sure the CPU fan is plugged to the CPU fan connector, than install complete.

## Step 2: Install memory modules



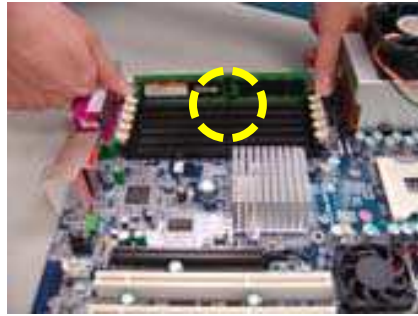
**CAUTION** Before installing the processor and heatsink, adhere to the following warning:  
When DIMM LED is ON, do not install/remove DIMM from socket.  
Please note that the DIMM module can only fit in one direction due to the one notches. Wrong orientation will cause improper installation. Please change the insert orientation.  
The motherboard has 6 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.



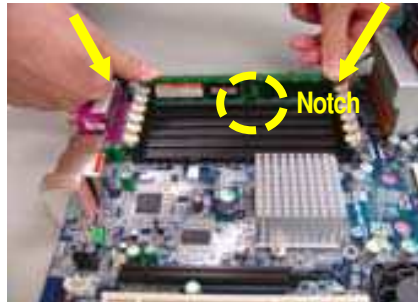
## GA-9IVDTMotherboard

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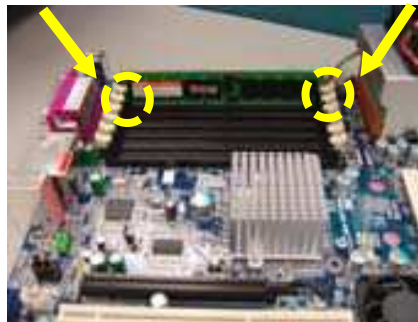
1. The DIMM slot has a notch, so the DIMM memory module can only fit in one direction.



2. Insert the DIMM memory module vertically into the DIMM slot. Then push it down.  
**Please note that DIMM must be populated in order starting at the nearest slot from the ATX power.**



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



**Table 1. Supported DIMM Module Type**

Technology	Organization	SDRAM Chips/DIMM
256MB	8MB x 8 x 4 bks	8
	16MB x 4 x 4bks	16
512MB	16MB x 8 x 4bks	8
	32MB x 4 x 4bks	16
1GB	32MB x 8 x 4bks	8
	64MB x 4 x 4bks	16

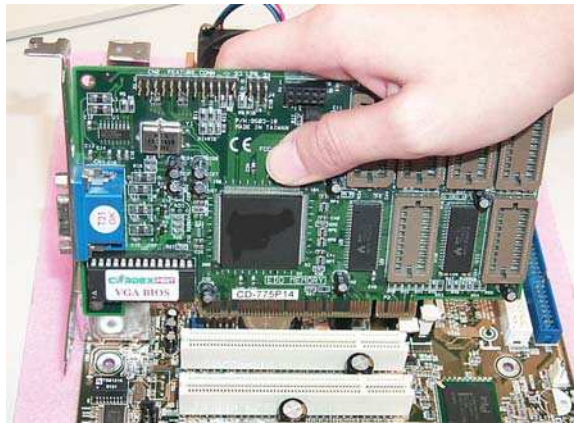
**Table 2. DIMM Placement DDR2-400**

DIMM Configuration	DIMM1	DIMM2	DIMM3
1 Single Rank	Empty	Empty	Single Rank
1 Dual Rank	Empty	Empty	Dual Rank
2 Single Rank	Empty	Single Rank	Single Rank
1 Dual Rank, 1 Single Rank	Empty	Single Rank	Dual Rank
2 Dual Rank	Empty	Dual Rank	Dual Rank
3 Single Rank	Single Rank	Single Rank	Single Rank
1 Dual Rank, 2 Single Rank	Single Rank	Single Rank	Dual Rank

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### Step 3: Install expansion cards

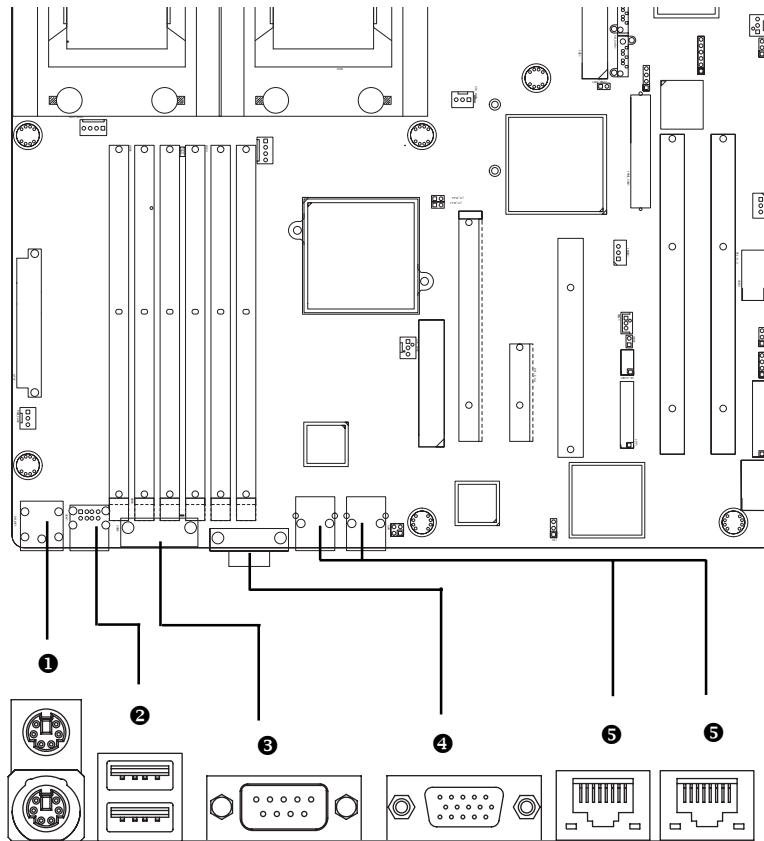
1. Read the related expansion card's instruction document before install the expansion card into the computer.
2. Remove your server's chassis cover, necessary screws and slot bracket from the computer.
3. Press the expansion card firmly into expansion slot in motherboard.
4. Be sure the metal contacts 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**

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 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.

**❸/❹ Serial Port / VGA Port**

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

**❺ LAN1/2 Port**

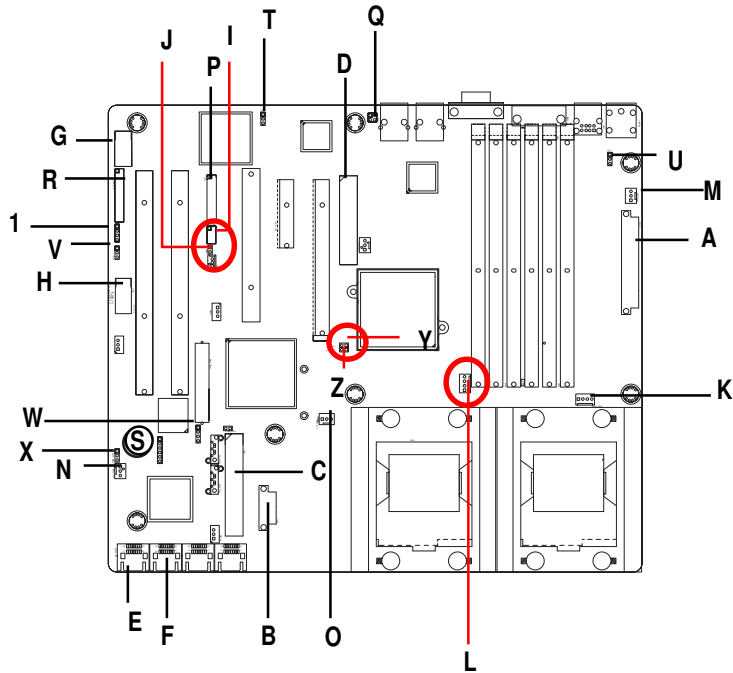
The provided Internet connection is Gigabit Ethernet, providing data transfer speeds of 10/100/1000Mbps.

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LAN Port	Status	Description
LAN	Yellow LED On	GIGALAN connected
	Green LED On	GIGALAN at Speed 10/100MB
	Green LED Blinking	Data Transfer

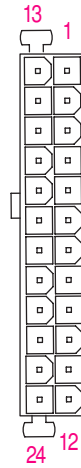
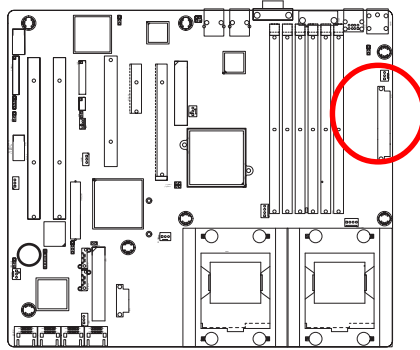
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**Step 4-2 :Connectors and Jumper Setting Introduction**



A) ATX1	O) SYS_FAN3
B) ATX2	P) LPT1
C) IDE1	Q) ID_SW1
D) FDD1	R) F_Panel
E) MV_SATA1	S) BAT1 (Battery)
F) MV_SATA2	T) JP1
G) COM2	U) JP2
H) USB2	V) JP3
I) WOR1	W) JP4
J) WOL1	X) CMOS_CLR1
K) CPU_FAN1	Y) JP_PLL1
L) CPU_FAN2	Z) JP_PLL2
M) PWR_FAN1	1) JP_SPK1
N) SYS_FAN2	

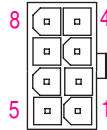
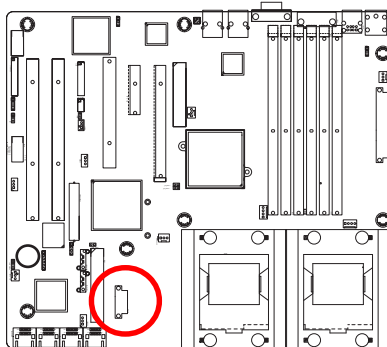
**A) ATX 1 (ATX Power Connector)**



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.

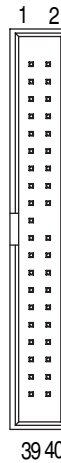
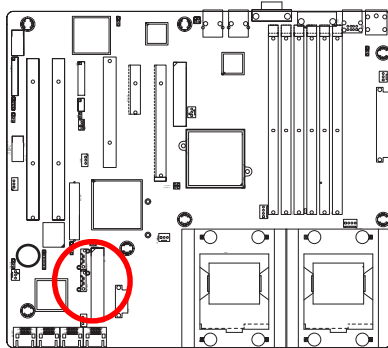
**B) ATX2 (ATX Power Connector)**



Pin No.	Definition
1	GND
2	GND
3	GND
4	GND
5	P12V_CPU0
6	P12V_CPU0
7	P12V_CPU1
8	P12V_CPU1

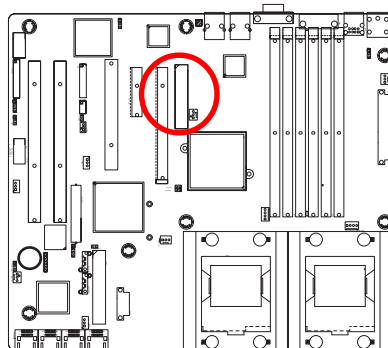
**C) IDE1 Connector**

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



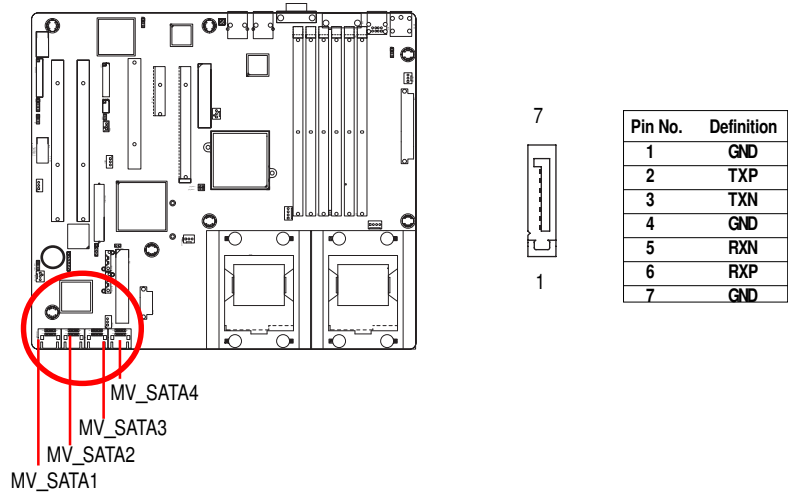
**D) FDD1 (Floppy Connector)**

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.

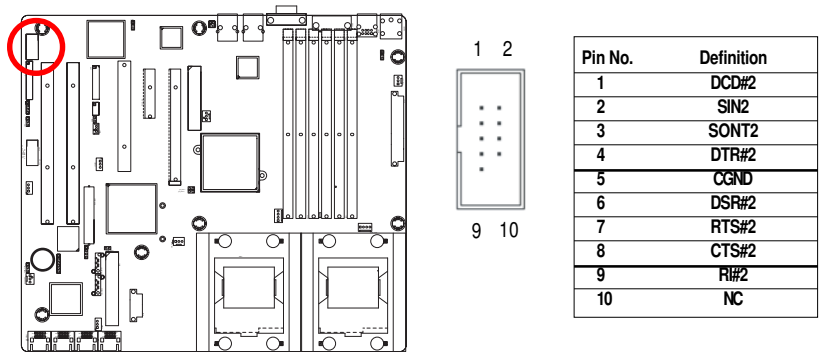


**E / F ) MV\_SATA1/SATA2/SATA3/SATA4 (Serial ATA Connectors)**

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

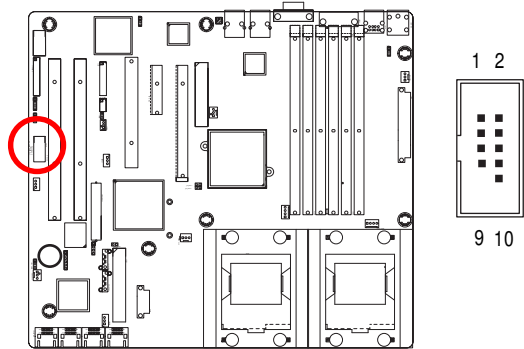


**G) COM2**



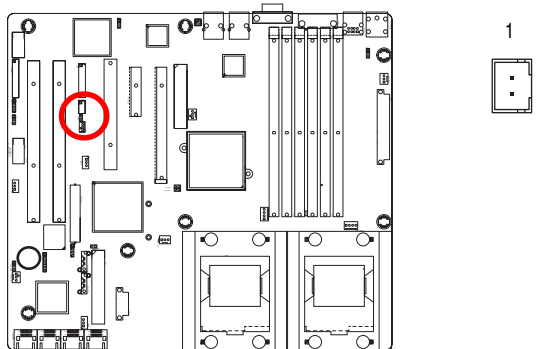
### H ) USB2 (Front USB Connector )

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

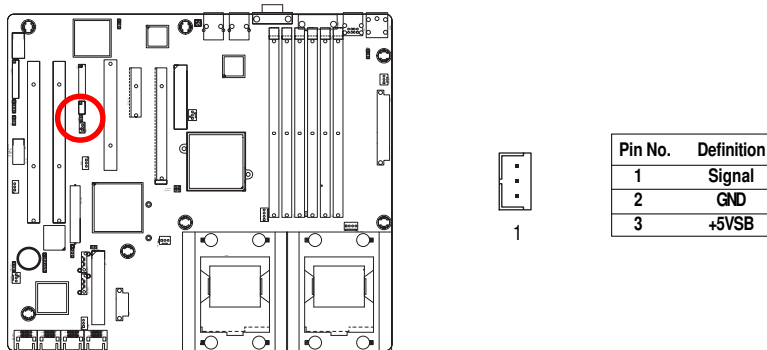
### I ) WOR1 (Wake on Ring)



Pin No.	Definition
1	Signal
2	GND

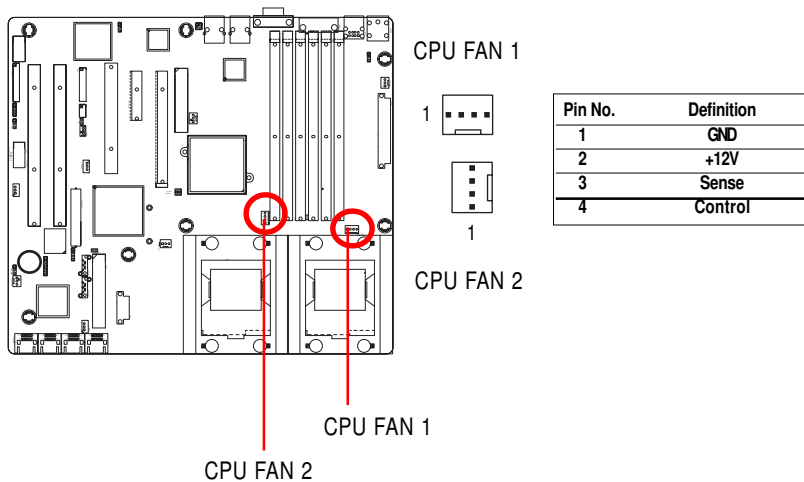
### J) WOL1 (Wake on LAN)

This connector allows the remote servers to manage the system that installed this mainboard via your network adapter which also supports WOL.



### K / L) CPU\_FAN1 / 2 (CPU Fan Connector)

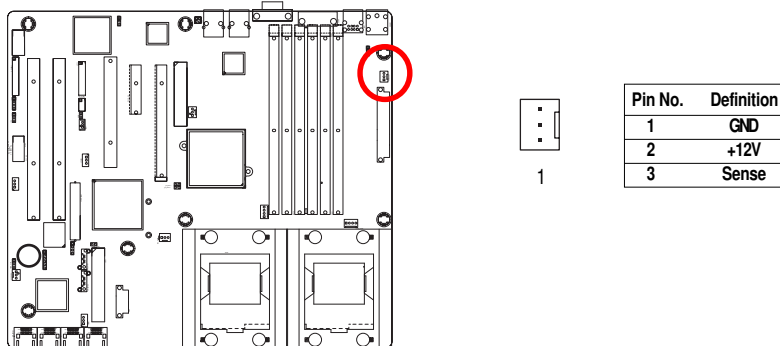
Please note, a proper installation of the CPU cooler is essential to prevent the CPU from running under abnormal condition or damaged by overheating. The CPU fan connector supports Max. current up to 1A.





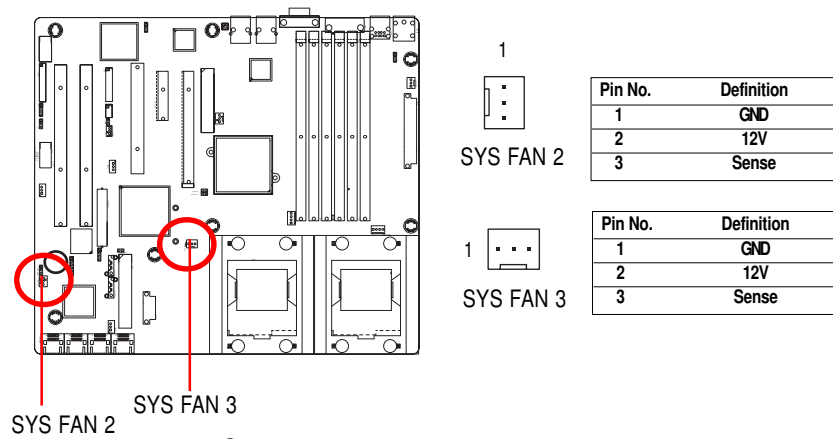
**M) PWR\_FAN1 (Power Fan Connector)**

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



**N / O ) SYS\_FAN 2 / 3 (System Fan Connector)**

This connector allows you to link with the cooling fan on the system case to lower the system temperature. These connectors are for system use only.

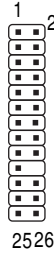
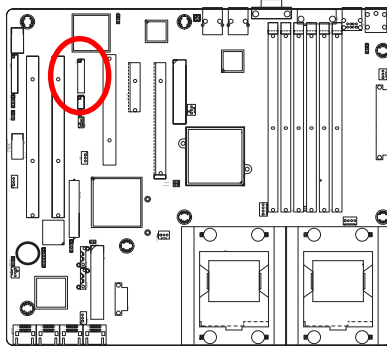


SYS FAN 2      SYS FAN 3

G  
H

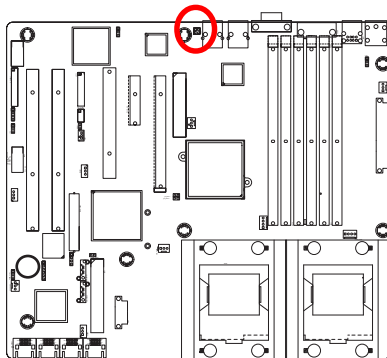
**P ) LPT1**

Please connect the printer device via this connector.



Pin No.	Definition
1	LPD_STB-
2	LPD_AFD-
3	LPD_0
4	LPD_ERR-
5	LPD_1
6	LPD_INIT-
7	LPD_2
8	LPD_SLIN-
9	LPD_3
10	GND
11	LPD_4
12	GND
13	LPD_5
14	GND
15	LPD_6
16	GND
17	LPD_7
18	GND
19	LPD_ACK-
20	Pin removed
21	LPD_BUSY
22	Pin Removed
23	LPD_PE
24	GND
25	LPD_SLCT
26	GND

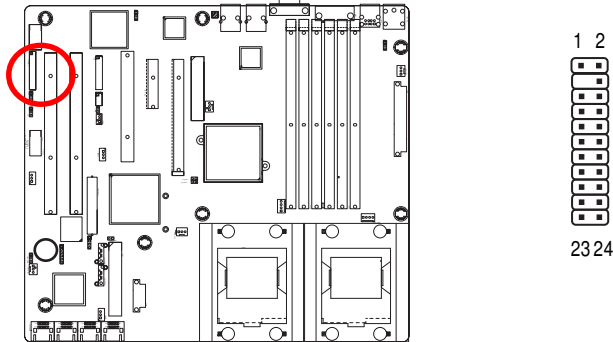
**Q ) ID\_SW1 (ID Switch)**



Pin No.	Definition
1	P5V_DUAL(+)
2	ID_LED(-)
3	IPMI_IDSW
4	GND

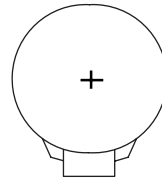
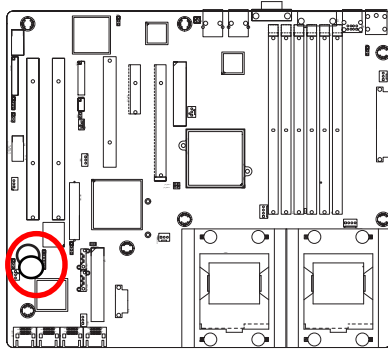
**R ) F\_Panel1 ( 2 x 12 pins connector)**

⇨ 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	PWR_LED+	Dual Color LED (+/-) / Single Color LED (-)
2	5VSB	P5VStand By Power (Reserverd)
3	Key	Pin Removed
4	ID_LED+	ID LED Signal anode (+)
5	PWR-	Dual Color LED (-/+ ) / Single Color LED (+)
6	ID_LED-	ID LED Signal cathode(-)
7	HD+	Hard Disk LED Signal anode (+)
8	F_SYSRDY	System Fan Fail LED Signal anode (+)
9	HD-	Hard Disk LED Signal cathode(-)
10	SYS_STATUS-	System Status LED Signal cathode(-)
11	PWB+	Soft Power connector anode (+)
12	LAN1_ACT	LAN1 access LED Signal
13	PWB+ GND	Soft Power connector Ground
14	L1_LINK-	LAN1 linked LED Signal cathode(-)
15	RST_BTN-	Reset button cathode(-)
16	SENSOR_SDA	SMBus Data
17	RST_BTN_GND	Reset Button GND
18	SENSOR_SCL	SMBus Clock
19	SV_SW-	Service ID LED Switch
20	CASE_OPEN#	Case Open Signal
21	SV_SW- (GND)	Service ID LED Switch GND
22	LAN2_ACT	LAN2 access LED Signal
23	NMI_SW-	NMI Switch cathode(-)
24	L2_LINK-	LAN2 linked LED Signal cathode(-)

### S ) BAT1 (Battery)



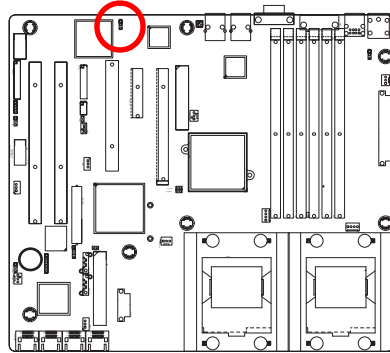
#### CAUTION



- ❖ 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...

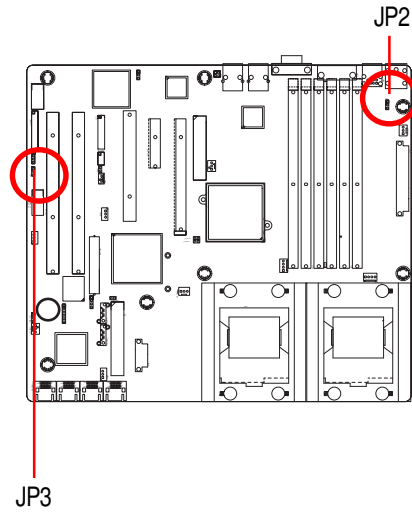
1. Turn OFF the computer and unplug the power cord.
2. Remove the battery, wait for 30 second.
3. Re-install the battery.
4. Plug the power cord and turn ON the computer.



**T) JP1 (Onboard VGA Enable/Disable Function)**



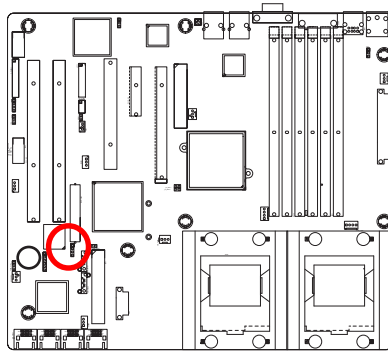
- 1  1-2 close: Enable VGA function (Default)
- 1  2-3 close: Disable VGA function




**U / V) JP2/JP3 (USB Wake Up Function)**



- 1  1-2 close: Normal (Default)
- 1  2-3 close: Enable USB wake-up function

**W) JP4 (BIOS Write Protect Setting Jumper)**

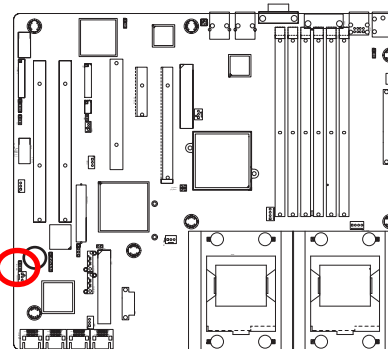




-  1-2 close: Top Block Lock (Default)
-  3-4 close: 2-8 Block Lock
-  Open: All blocks write enabled

**X) CLR\_CMOS (Clear CMOS Function)**

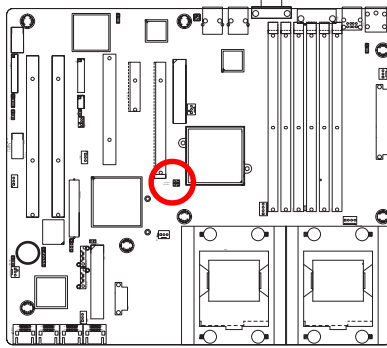
You may clear the CMOS data to its default values by this jumper.

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



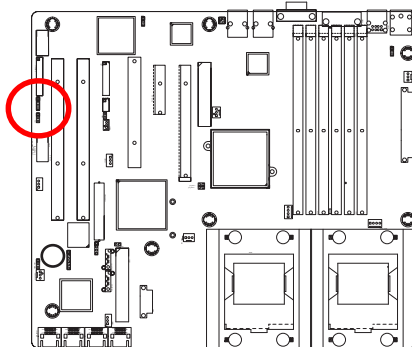
-  1 1-2 close: Clear CMOS
-  1 2-3 close: Normal (Default)

**Y / Z ) JP\_PLL1/2 (FSB Select Jumper Setting)**



CPU FSB / DDR	JP_PLL1	JP_PLL2
133 (533) / DDRII-400	CLOSE	OPEN
200 (800) / DDRII-400	CLOSE	CLOSE

**1 ) JP\_SPK1 (External Speaker Jumper)**



1



Pin No.	Definition
1	SPK+
2	NC
3	NC
4	SPK-

## 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 <F2> 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
<F6>	Reserved
<F7>	Reserved
<F8>	Reserved
<F9>	Load the Optimized Defaults
<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>.

- **Main**  
This setup page includes all the items in standard compatible BIOS.
- **Advanced**  
This setup page includes all the items of AMI special enhanced features.  
(ex: Auto detect fan and temperature status, automatically configure hard disk parameters.)
- **Security**  
Change, set, or disable password. It allows you to limit access the system and setup.
- **Server**  
Server additional features enabled/disabled setup menus.
- **Boot**  
This setup page include all the items of first boot function features.
- **Exit**  
There are five options in this selection: Exit Saving Changes, Exit Discarding Changes, Load Optimal Defaults, Load Failsafe Defaults, and Discard Changes.

## 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.

PhoenixBIOS Setup Utility					
Main	Advanced	Security	Server	Boot	Exit
System Time:		[00:13:12]			Item Specific Help
System Date:		[01/01/2005]			
Legacy Diskette A		[1.44MB/1.25MB 3 <sup>1/2</sup> ]			
▶ IDE Channel 1 Master		[None]			
▶ IDE Channel 1 Slave		[None]			
▶ IDE Channel 2 Master		[None]			
▶ IDE Channel 3 Slave		[None]			
▶ System Information					
F1: Help	↑↓: Select Item	+ -: Change Values	F5: Setup Defaults		
Esc: Exit	←→: Select Menu	Enter: Select ▶ Sub-Menu	F10: Save&Exit		

Figure 1: Main

### System Time

The time is calculated based on the 24-hour military time clock. Set the System Time (HH:MM:SS)

### System Date

Set the System Date. Note that the "Day" automatically changed after you set the date.  
(Weekend: DD: MM: YY) (YY: 1099~2099)

---

### ☞ Legacy Diskette A

This category identifies the type of floppy disk drive A that has been installed in the computer.

- ▶▶ Disabled            Disable this device.
- ▶▶ 360KB, 5<sup>1</sup>/<sub>4</sub> in.      3<sup>1</sup>/<sub>2</sub> inch AT-type high-density drive; 360K byte capacity
- ▶▶ 1.2MB, 3<sup>1</sup>/<sub>2</sub> in.      3<sup>1</sup>/<sub>2</sub> inch AT-type high-density drive; 1.2M byte capacity
- ▶▶ 720K, 3<sup>1</sup>/<sub>2</sub> in.        3<sup>1</sup>/<sub>2</sub> inch double-sided drive; 720K byte capacity
- ▶▶ 1.44M, 3<sup>1</sup>/<sub>2</sub> in.      3<sup>1</sup>/<sub>2</sub> inch double-sided drive; 1.44M byte capacity.
- ▶▶ 2.88M, 3<sup>1</sup>/<sub>2</sub> in.      3<sup>1</sup>/<sub>2</sub> inch double-sided drive; 2.88M byte capacity.

☞ **Note:** The 1.25MB,3<sup>1</sup>/<sub>2</sub> reference a 1024 byte/sector Japanese media format. The 1.25MB,3<sup>1</sup>/<sub>2</sub> diskette requires 3-Mode floppy-disk drive.

### ☞ IDE Channel 0 Master, Slave / Channel 1 Master, Slave, Serial ATA

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

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

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

#### ▶▶ TYPE

1-39: Predefined types.

Users: Set parameters by User.

Auto: Set parameters automatically. (Default Values)

CD-ROM: Use for ATAPI CD-ROM drives or double click [Auto] to set all HDD parameters automatically.

ATAPI Removable: Removable disk drive is installed here.

» **Multi-Sector Transfer**

This field displays the information of Multi-Sector Transfer Mode.

Disabled: The data transfer from and to the device occurs one sector at a time.

Auto: The data transfer from and to the device occurs multiple sectors at a time if the device supports it.

» **LBA Mode**            This field shows if the device type in the specific IDE channel support LBA Mode.

» **32-Bit I/O**            Enable this function to maximize the IDE data transfer rate.

» **Transfer Mode**        This field shows the information of Transfer Mode.

» **Ultra DMA Mode**    This field displays the DMA mode of the device in the specific IDE channel.

☞ **System Information**

This category includes the information of Processor Type, Speed, Extended memory, BIOS Version, BIOS Date, System Product Name, System serial number, System version, System UUID, Main Board ID, and Main Board Serial number.

## Advanced

### About This Section: Advanced

With this section, allowing user to configure your system for basic operation. User can change the processor options, chipset configuration, PCI configuration and chipset control.

PhoenixBIOS Setup Utility			
Main	Advanced	Security	Server Boot Exit
<ul style="list-style-type: none"> <li>▶ PCI Configuration</li> <li>▶ Advanced Chipset Control</li> <li>▶ Advanced Processor Option</li> <li>▶ Peripheral Configuration</li> <li>▶ Hardware Monitor</li> </ul>		Item Specific Help	
Reset Configuration Data		[No]	
ClkGen Spread Spectrum		[Disabled]	
System After AC Back		[Pre-State]	
Extended Memory Testing		[Enabled]	
Network Server		[Enabled]	
Clear Case Open Logs:		[Enter]	
F1: Help	↑↓: Select Item	+ -: Change Values	F5: Setup Defaults
Esc: Exit	←→: Select Menu	Enter: Select ▶ Sub-Menu	F10: Save&Exit

Figure 2: Advanced

## PCI Configuration

PhoenixBIOS Setup Utility			
PCI Configuration		Item Specific Help	
<ul style="list-style-type: none"> <li>▶ Embedded Video Controller</li> <li>▶ Embedded SATA RAID Controller</li> <li>▶ Embedded NIC (Gbit #1)</li> <li>▶ Embedded NIC (Gbit #2)</li> </ul>			
F1: Help	↑↓: Select Item	+ -: Change Values	F5: Setup Defaults
Esc: Exit	← →: Select Menu	Enter: Select ▶ Sub-Menu	F10: Save&Exit

Figure 2-1: PCI Configuration

### ☞ Embedded Video Controller

#### ▶ Onboard VGA Control

- ▶ Enabled            Enable onboard VGA device. (Default value)
- ▶ Disabled           Disable this function.

### ☞ Embedded SATA RAID Controller

#### ▶ Option ROM Scan

- ▶ Enabled            Enableing this item to initialize device expansion ROM.
- ▶ Disabled           Disable this function. (Default value)

☞ **Embedded NIC (Gbit #1 / 2)**

▶ **Onboard LAN 1 / 2 Control**

- ▶▶ Enabled                    Enable onboard LAN 1 / 2 device. (Default value)
- ▶▶ Disabled                    Disable this function.

▶ **Option ROM Scan**

- ▶▶ Enabled                    Enableing this item to initialize device expansion ROM.
- ▶▶ Disabled                    Disable this function. (Default value)

## Advanced Chipset Control

PhoenixBIOS Setup Utility		Item Specific Help
Advanced Chipset Control		
USB Controller	[Enabled]	
Legacy USB Support	[Disabled]	
Force Compliance Mode	[Enabled]	
PCI-E port A Device 2	[Enabled]	
PCI-E port A1 Device 3	[Enabled]	
Data Parity Error Recovery	[Enabled]	
Wake On LAN	[Enabled]	
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 Control

### ☞ USB Controller

This item allows users to enable or disable the USB device by setting item to the desired value.

- ▶ Enabled      Enable USB controller. (Default value)
- ▶ Options      Disbale this function.

### ☞ Legacy USB Support

This option allows user to function support for legacy USB.

- ▶ Enabled      Enables support for legacy USB.
- ▶ Disabled      Disables support for legacy USB. (Default Value)



---

**Force Compliance Mode**

This option allows user to function PCI-E Compliance mode by setting item to desired value.

- ▶▶ Enabled                      Enables PCI-E Force Compliance mode. (Default Value)
- ▶▶ Disabled                     Disables this function.

**PCI-E port A Device 2**

Force PCI Express v1.0 Compability Mode, this PCI-E port A by setting to desired value.

- ▶▶ Auto                            Set this function to Auto.
- ▶▶ Force PCI Express 1.0      Force PCI Express v1.0 Compability Mode.
- ▶▶ Enabled                       Enables PCI-E port A Device2 (Default Value)
- ▶▶ Disabled                      Disables this function.

**PCI-E port A1 Device 3**

Force PCI Express v1.0 Compability Mode, this PCI-E port A1 by setting to desired value.

- ▶▶ Auto                            Set this function to Auto.
- ▶▶ Force PCI Express 1.0      Force PCI Express v1.0 Compability Mode.
- ▶▶ Enabled                       Enables PCI-E port A1 Device 3. (Default Value)
- ▶▶ Disabled                      Disables this function.

**Data Parity Error Recovery**

- ▶▶ Enabled                       Enable data parity error recovery function. (Default vaules)
- ▶▶ Disabled                      Disable this function.

**Wake On LAN**

This option allow user to determine the action of the system when a LAN wake up occurs.

- ▶▶ Enabled                       Enable Wake On LAN. (Default value)
- ▶▶ Disabled                      Disable this function.

**Note:** This item must enabled if you're running under Windows operating system.

## Advanced Processor Option

PhoenixBIOS Setup Utility		Item Specific Help
Advanced Processor Option		
Hyper Threading Technology	[Enabled]	
Thermal Management 2	[Disabled]	
Adjacent Cache Line Prefetch	[Enabled]	
Set Max Ext CPUID = 3	[Disabled]	
F1: Help      ↑↓: Select Item      + -: Change Values      F5: Setup Defaults Esc: Exit      ←→: Select Menu      Enter: Select ▶ Sub-Menu      F10: Save&Exit		

Figure 2-3: Advanced Processor Option

### ☞ Hyper Threading Technology

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

### ☞ Thermal Management 2

- ▶▶ Enabled      Enable Thermal Management 2 function.
- ▶▶ Disabled      Disable this function. (Default value)

☞ **Adjacent Cache Line Prefetch**

- ▶▶ Enabled      Processor will fetch both cache lines when it requires data that is not currently inits cache. (Default value)
- ▶▶ Disabled      Processor will only fetch the cache line that contains the data currently required by the processor.

☞ **Set Max Ext CPUID = 3**

Set MAX CPUID extended function value to 3.

- ▶▶ Enabled      Enable Set Max Ext CPUID = 3 function.
- ▶▶ Disabled      Disable this function. (Default value)

## Peripheral Configuration

PhoenixBIOS Setup Utility		Item Specific Help
Peripheral Configuration		
Serial Port A	[Enabled]	
Base I/O address/IRQ	[3F8/IRQ4]	
Serial Port B	[Enabled]	
Base I/O address/IRQ	[2F8/IRQ3]	
Parallel Port	[Enabled]	
Mode	[Bi-directional]	
Base I/O address	[378]	
Floppy disk controller	[Enabled]	
Floppy check	[Disabled]	
Parallel ATA	[Both]	
Serial ATA	[Enabled]	
Native Mode Operation	[Auto]	
F1: Help      ↑ ↓ : Select Item      + - : Change Values      F5: Setup Defaults		
Esc: Exit      ← → : Select Menu      Enter: Select ▶ Sub-Menu      F10: Save&Exit		

Figure 2-4: Peripheral Configuration

### Serial Port A

This allows users to configure serial port A by using this option.

- ▶▶ Disabled      Disable the configuration.
- ▶▶ Enabled      Enable the configuration (Default value)

#### ▶ Base I/O Address/IRQ

- ▶▶ 3F8/IRQ4      Set IO address to 3F8. (Default value)
- ▶▶ 2F8/IRQ3      Set IO address to 2F8.
- ▶▶ 3E8/IRQ4      Set IO address to 3E8.
- ▶▶ 2E8/IRQ3      Set IO address to 2E8.

---

### Serial Port B

This allows users to configure serial port B by using this option.

- ▶ Disabled      Disable the configuration.
- ▶ Enabled      Enable the configuration (Default value)

#### ▶ Base I/O Address/IRQ

- ▶ 3F8/IRQ4      Set IO address to 3F8.
- ▶ 2F8/IRQ3      Set IO address to 2F8. (Default value)
- ▶ 3E8/IRQ4      Set IO address to 3E8.
- ▶ 2E8/IRQ3      Set IO address to 2E8.

### Parallel Port

This allows users to configure parallel port by using this option.

- ▶ Enabled      Enable the configuration. (Default value)
- ▶ Disabled      Disable the configuration.

#### ▶ Mode

This option allows user to set Parallel Port transfer mode.

- ▶ EPP              Using Parallel port as Enhanced Parallel Port. (Default)
- ▶ Bi-directional      Use this setting to support bi-directional transfers on the parallel port.
- ▶ ECP              Using Parallel port as Extended Capabilities Port.

#### ▶ Base I/O Address

- ▶ 378              Set IO address to 378
- ▶ 278              Set IO address to 278.

### ☞ Floppy disk controller

- » Enabled Enable the floppy disk controller. (Default value)
- » Disabled Disable the device.

### ☞ Floppy Check

- » Enabled Enable the device to verify floppy typer when system boot.
- » Disabled Disable the this function. (Default value)

### ☞ Parallel ATA

- » Disabled Disable the device.
- » Both Select both Channel 0 and Channel 1 as Parallel ATA.  
(Default value)
- » Channel 0 Select both Channel 0 as Parallel ATA.
- » Channel1 Select both Channel 1 as Parallel ATA.

### ☞ Serial ATA

- » Enabled Enable Serial ATA device. (Default value)
- » Disabled Disable the Serial ATA.

### ☞ Native Mode Operation

This option allows user to set the native mode for ATA function.

Note that certain OS is not supported under Native Mode.

- » Auto Auto detected. (Default value)
- » Serial ATA Set Native mode to Serial ATA.
- » Parallel ATA Set Native mode to Parallel ATA.

---

**Reset Configuration Data**

- » Yes Clear the Extended System Configuration Data (ESCD) area.
- » No Disable this function. (default value)

**Clk Gen Spread Spectrum**

- » Enabled Enable ClkGen Spread Spectrum.
- » Disabled Disabled this function. (Default value)

**System After AC Back**

Set the mode of operation if an AC/Power loss occurs.

- » Power On Power on system without pressing power button.
- » Stay Off Keep the power off until the power button is pressed.
- » Pre- State Set system to the last state when AC power is removed. Do not power on system when AC power is back. (Default value)

**Extended Memory Testing**

Determine which type of tests will be performed extended memory. (above 1M)

- » Enabled Enable Extended Memory Testing. (Default value)
- » Disabled Disable this function.

**Network Server**

- » Enabled System will be secured at boot to prevent tampering during network operation. (Default value)
- » Disabled Disable this function.

**Clear Case Open Log**

Please [Enter] to clear case open logs.

## Security

PhoenixBIOS Setup Utility					
Main	Advanced	Security	Server	Boot	Exit
Supervisor Password Is:		Clear		Item Specific Help	
User Password Is:		Clear			
Set Supervisor Password		[Enter]			
Set User Password		[Enter]			
Password On boot		[Disabled]			
F1: Help		↑↓: Select Item	+ -: Change Values	F5: Setup Defaults	
Esc: Exit		←→: Select Menu	Enter: Select ▶ Sub-Menu	F10: Save&Exit	

Figure 3: Security

### 🔔 About This Section: Security

In this section, user can set either supervisor or user passwords, or both for different level of password securities. In addition, user also can set the virus protection for boot sector.

### 🔑 Set Supervisor Password

You can install and change this options for the setup menus. Type the password up to 6 characters in length and press <Enter>. The password typed now will clear any previously entered password from the CMOS memory. 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 specified password or press <Enter> key to disable this option.



**☞ Set User Password**

You can only enter but do not have the right to change the options of the setup menus. 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 6 characters in length and press <Enter>. The password typed now will clear any previously entered password from the CMOS memory. 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 specified password.

**☞ Password on boot**

Password entering will be required when system on boot.

- ▶▶ Enabled      Requiries entering password when system on boot.
- ▶▶ Disabled     Disable this function. (Default value)

## Server

PhoenixBIOS Setup Utility					
Main	Advanced	Security	Server	Boot	Exit
▶ Console Redirection				Item Specific Help	
Halt On		[Mid]			
Memory RAS Feature Control		[Standard]			
Clear Mem. ECC Error Info.		[Disabled]			
Fatal Err on port A		[Enabled]			
F1: Help		↑↓: Select Item		+ -: Change Values	
Esc: Exit		←→: Select Menu		Enter: Select ▶ Sub-Menu	
				F5: Setup Defaults	
				F10: Save&Exit	

Figure 4: Server

## Console Redirection

PhoenixBIOS Setup Utility			
Console Redirection		Item Specific Help	
Com Port Address		[Disabled]	
Baud Rate		[19.2K]	
Console Type		[PC ANSI]	
Flow Control		[CTS/RTS]	
Continue C.R after POST		[Off]	
F1: Help		↑↓: Select Item	
Esc: Exit		←→: Select Menu	
		+ -: Change Values	
		Enter: Select ▶ Sub-Menu	
		F5: Setup Defaults	
		F10: Save&Exit	

Figure 4-1: Console Redirection

---

### ☞ Com Port Address

If this option is set to enabled, it will use a port on the motherboard.

- ▶▶ On-board COMA      Use COMA as the COM port address.
- ▶▶ On-board COMB      Use COMB as the COM port address.
- ▶▶ Disabled              Disable this function. (Default value)

### ☞ Baud Rate

This option allows user to set the specified baud rate.

- ▶▶ Options                300, 1200, 2400, 9600, 19.2K, 38.4K, 57.6K, 115.2K.

### ☞ Console Type

This option allows user to select the specified console type. This is defined by IEEE. PC-ANSI is the standard PC-type terminal. Note that for VT100+, you must select English as your language. And VT-UTF8 uses unicode.

- ▶▶ Options                vt100, vt100+, vt100 8bit, PC ANSI 7bit, PC-ANSI, VT-UTF8.

### ☞ Flow Control

Enables Flow Control when EMP is sharing the same serial port as console redirection, the flow control must be set to CTS/RTS or CTS/RTS+CD depending on whether a modem is used.

- ▶▶ None                    Not supported.
- ▶▶ XON/OFF                Software control.
- ▶▶ CTS/RTS                Hardware control. (Default values)

### ☞ Continue C.R. after POST

This option allows user to enable console redirection after O.S has loaded.

- ▶▶ On                        Enable console redirection after O.S has loaded.
- ▶▶ Off                        Disable this function. (Default value)

### ☞ **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.
- ▶▶ Mid                            The system boot will not stop for a keyboard or disk error; it will stop for all other errors. (Default value)

### ☞ **Memory RAS Feature Control**

Select specified features for DIMMs. Sparing or Memory Mirroring.

- ▶▶ Standard                    Select Standard as Memory RAS Feature. (Default value)
- ▶▶ Sparing                      This feature allows user to uses a spare online bank to provide DIMM fail-over capabilities when a pre-defined threshold of single-bit correctable errors is reached.

### ☞ **Clear Mem. ECC Error Info**

- ▶▶ Enabled                      Enable Clear memory ECC error information function.
- ▶▶ Disabled                    Disable this function. (Default value)

### ☞ **Fatal Error on port A**

- ▶▶ Enabled                      Enable Fatal Error on port A. (Default value)
- ▶▶ Disabled                    Disable this function.



**Please note that the following item will be shown when IPMI card is populated**

#### **Clear all Event Log**

Press [Enter], system will clear all event log.

#### **Log POST System Event**

- ▶▶ Enabled                      Log system event when system boot. (Default value)
- ▶▶ Disabled                     Disable this function.

#### **BMC action for IERR**

- ▶▶ No action                     Do not take any action. (Default value)
- ▶▶ Hard Reset                  System reboot automatically, but AC power is supplied.
- ▶▶ Power Cycle                 System powering down for 5 seconds than rebooting.

#### **Triger of CPU reduction**

This function provide user to select the CPU reduction situation. This function is supported when dual CPUs operating.

- ▶▶ IERR & Thermal              CPU reduction when IERR occuring and system overheating. (Default value)
- ▶▶ Thermal Trip                 CPU reduction when system overheat.
- ▶▶ IERR                            CPU reduction when IERR occurs.
- ▶▶ Disabled                      Disable this function.

#### **IPMI LED Clear:**

Press[Enter] to clear IPMI LED.

## Boot

PhoenixBIOS Setup Utility					
Main	Advanced	Security	Server	Boot	Exit
+ Removable Devices				Item Specific Help	
CD-ROM Drive					
+ Hard Drive					
F1: Help		↑↓: Select Item		+ -: Change Values	F5: Setup Defaults
Esc: Exit		←→: Select Menu		Enter: Select ▶ Sub-Menu	F10: Save&Exit

Figure 5: Boot

### 🔧 About This Section: Boot

The “Boot” menu allows user to select among four possible types of boot devices listed using the up and down arrow keys. By applying <+> and <Space> key, you can promote devices and by using the <-> key, you can demote devices. Promotion or demotion of devices alerts the priority that the system uses to search for boot device on system power on.

### 🔧 Boot Device Priority

#### ▶ Removable Device / Hard Drive / CD-ROM Drive/

These three fields determines which type of device the system attempt to boot from after **PhoenixBIOS 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.

## Exit

PhoenixBIOS Setup Utility			
Main	Advanced	Security	Server Boot Exit
Exit Saving Changes		Item Specific Help	
Exit Discarding Changes			
Load Setup Defaults			
Discard Changes			
Save Changes			
F1: Help	↑↓: Select Item	+ -: Change Values	F5: Setup Defaults
Esc: Exit	← →: Select Menu	Enter: Select ▶ Sub-Menu	F10: Save&Exit

Figure 6: Exit

### 🔧 About This Section: Exit

Once you have changed all of the set values in the BIOS setup, you should save your changes and exit BIOS setup program. Select “**Exit**” from the menu bar, to display the following sub-menu.

- **Exit Saving Changes**
- **Exit Discarding Changes**
- **Load Setup Default**
- **Discard Change**
- **Save Changes**

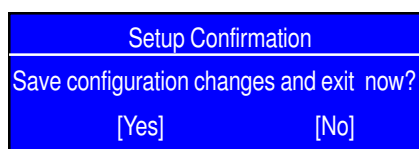
### ☞ Exit Saving Changes

This option allows user to exit system setup with saving the changes.

Press <Enter> on this item to ask for the following confirmation message:

Pressing 'Y' to store all the present setting values tha user made in this time into CMOS.

Therefore, whenyou boot up your computer next time, the BIOS will re-configure your system according data in CMOS.

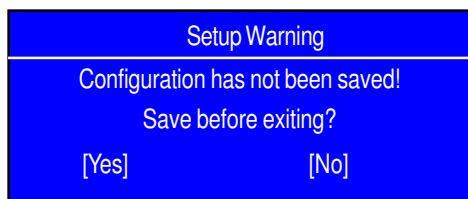


### ☞ Exit Discarding Changes

This option allows user to exit system setup without changing any previous settings values in CMOS. The previous selection remain in effect.

This will exit the Setup Utility and restart your compuetr when selecting this option.

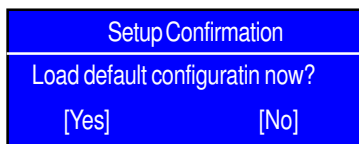
Press <Enter> on this item to ask for confirmation message.



### ☞ Load Setup Defaults

This option allows user to load default values for all setup items.

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

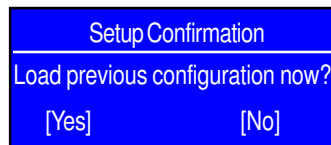




**Discard Changes**

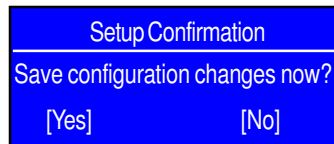
This option allows user to load previous values from CMOS for all setup item.

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

**Save Changes**

This option allows user to save setup data to CMOS.

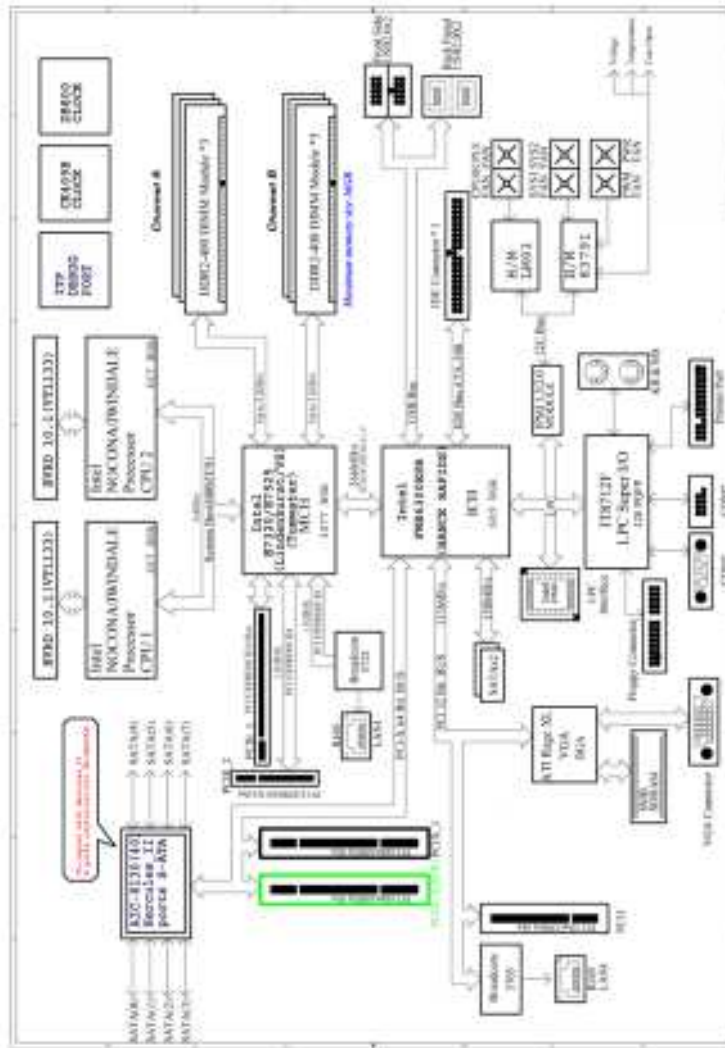
When you press <Enter> on this item, you will get a confirmation dialog box with a message as below:



Press [Yes] to save setup data to CMOS.

## Chapter 4 Technical Reference

### Block Diagram



## 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 Utility" to start the chipset 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



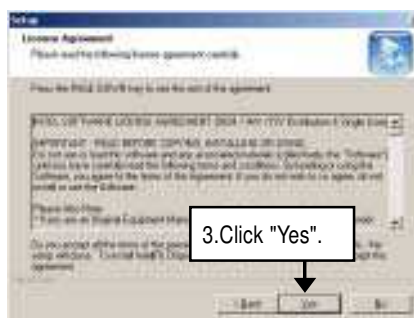
(1)

#### Setup Wizard



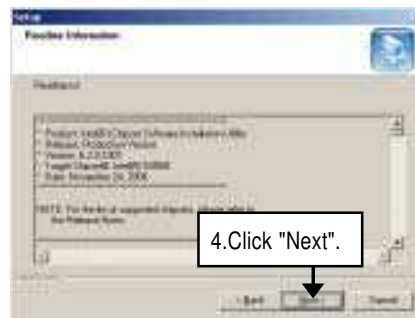
(2)

#### License Agreement



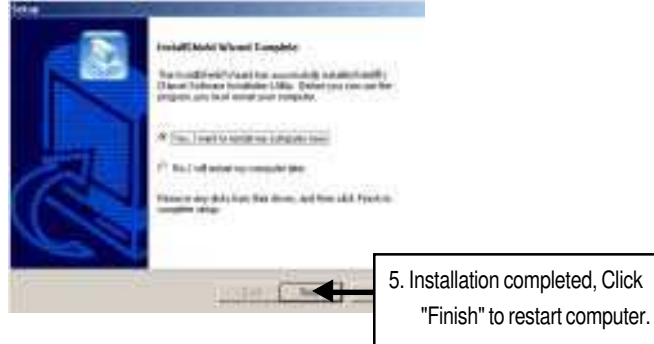
(3)

#### Readme Information



(4)

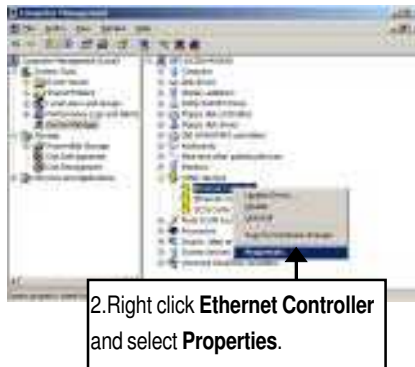
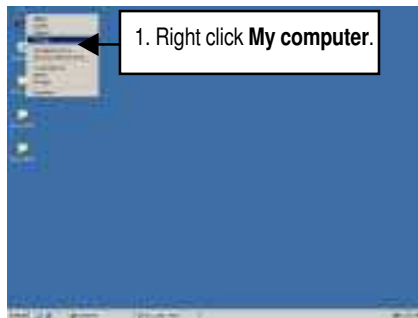
### Installation Completed



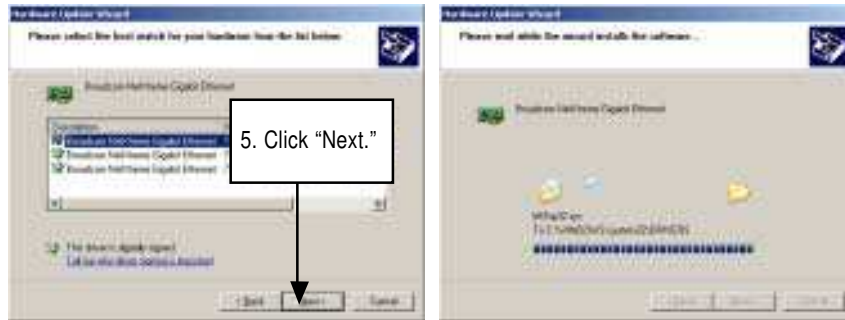
## B. Broadcom BCM5705/5721 Driver Installation

### Installation Procedures:

1. Insert the driver CD-title that came with your motherboard into your CD-ROM driver.
2. Right click **My Computer** and select **Manage**.
3. Click on **Device Manager**.
4. On the right side of windows, right click on **Ethernet Controller** and select **Properties**.
5. Select **Driver** Tab, and click on **Update Driver** tab.
6. Select **Install the software automatically**, then click **Next**.
7. Hardware Update Wizard widow pops up. Click **Next**.
8. Installation completed, click **Finish**.



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## C. Adaptec 8130 Host Raid Driver Installation

### Installation Procedures:

1. The CD auto run program starts, **Double click** on "Adaptec 8130 Host Raid".
2. Click on **WINDOWS** folder.
3. Copy all files to the floppy disk.
4. Reboot the system.
5. Insert the floppy disk and press **F6** when system boot.

### Auto Run windows



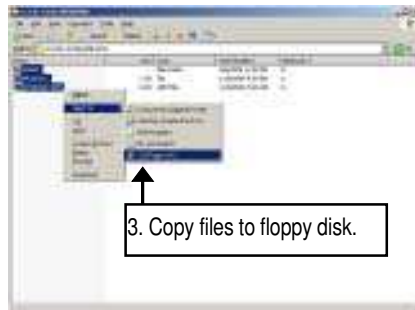
(1)

### Host RAID Driver Installation



(2)

### Copy Files



(3)

## D. DirectX 9.0C 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 "Directx9.0C" 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 Installation



(3)

### Installation Wizard completed



(4)



## E. Adaptec Storage Manager Utility 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:

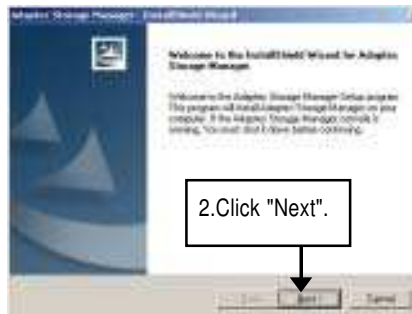
1. The CD auto run program starts, **Double click** on "Adaptec Storage Manager" to start the installation.
2. Then, a series of installation wizards appear. Follow up the wizards to install the drivers.
3. Setup completed, click "Finish" to restart your computer.

#### Auto Run windows



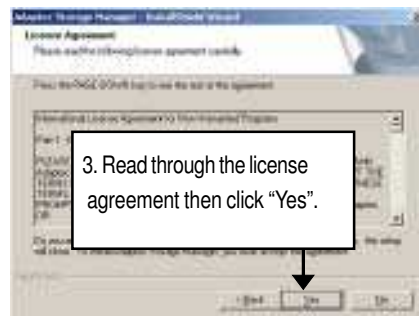
(1)

#### Install Shield Wizard



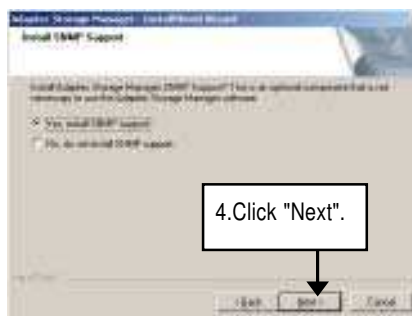
(2)

#### License Agreement



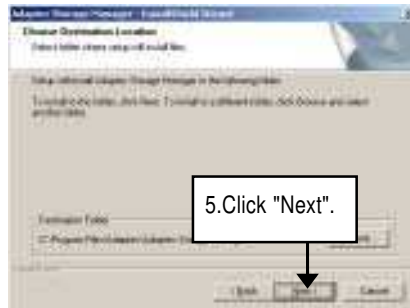
(3)

#### Install SNMP Install



(4)

### Choose Destination Location



(5)

### Install SNMP Install



(6)

### Installation Completed



(7)

## 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

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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:

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