

GA-8ICMT
Pentium Prescott 800 Motherboard

USER'S MANUAL

Pentium® Prescott Processor Motherboard

Rev. 1001

12ME-8ICMT-1001

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Item Checklist

- The GA-8ICMT motherboard
- IDE (ATA100) cable x 1 / Floppy cable x 1
- CD for motherboard driver & utility
- GA-8ICMT user's manual
- Serial ATA cable x 4
- I/O Shield Kit



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

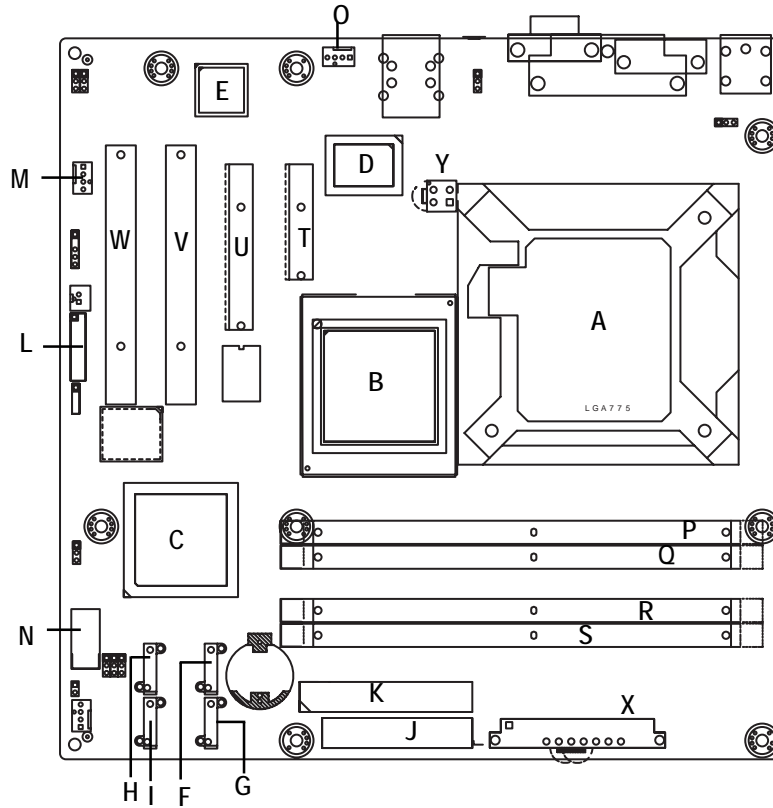
Features Summary

Form Factor	<ul style="list-style-type: none"> 9.6" x 9.6" MATX size form factor, 6 layers PCB.
CPU	<ul style="list-style-type: none"> Supports Intel® Pentium Prescott and Celeron processor Intel® Prescott LGA 775 supports 533/800MHz FSB L2 cache on-die per processor from 1M
Chipset	<ul style="list-style-type: none"> Intel® MCH E7221 Chipset Intel® ICH6R
Memory	<ul style="list-style-type: none"> 4 x DDRII socket up to 4 GB Supports Dual Channel Un-buffered DDRII 400/533 Support 256MB, 512MB, and 1GB memory Single-bit Errors Correction, Multiple-bit Errors Detection
I/O Control	<ul style="list-style-type: none"> ITE IT8712F-A Super I/O
Expansion Slots	<ul style="list-style-type: none"> Supports 2 PCI slots 32-Bit/33MHz (5V) Supports 1 PCI-Express x1 slot Supports 1 PCI-Express x8 slot
On-Board RAID	<ul style="list-style-type: none"> ICH6R Supports SATA RAID 0,1
On-Board Peripherals	<ul style="list-style-type: none"> 1 PATA IDE connector 1 Floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88M bytes. 2 PS/2 connectors 1 Parallel port supports Normal/EPP/ECP mode 1 Serial port (COM) 4 x USB 2.0 1 VGA connector 1 x LAN RJ45 4 x SATA connectors
Hardware Monitor	<ul style="list-style-type: none"> CPU/Power/System Fan Revolution Detect CPU shutdown when overheat System Voltage Detect
On-Board Graphic	<ul style="list-style-type: none"> Build in Intel MCH E7221 Chipset
On-Board LAN	<ul style="list-style-type: none"> Intel 82541PI Gigabit Ethernet Supports ASF 2.0 to protect remote transactions
BIOS	<ul style="list-style-type: none"> Phoenix BIOS on 4Mb flash RAM

GA-8ICMT Motherboard

- | | |
|---------------------|---|
| Additional Features | <ul style="list-style-type: none"><li data-bbox="604 392 1143 430">• PS/2 Mouse power on under Windows Operating System<li data-bbox="604 430 1143 468">• External Modem wake up<li data-bbox="604 468 1143 506">• Supports S1, S4, S5 under Windows Operating System<li data-bbox="604 506 1143 543">• Wake on LAN (WOL)<li data-bbox="604 543 1143 581">• AC Recovery<li data-bbox="604 581 1143 611">• Supports Console Redirection |
|---------------------|---|
-

GA-8ICMT Motherboard Layout

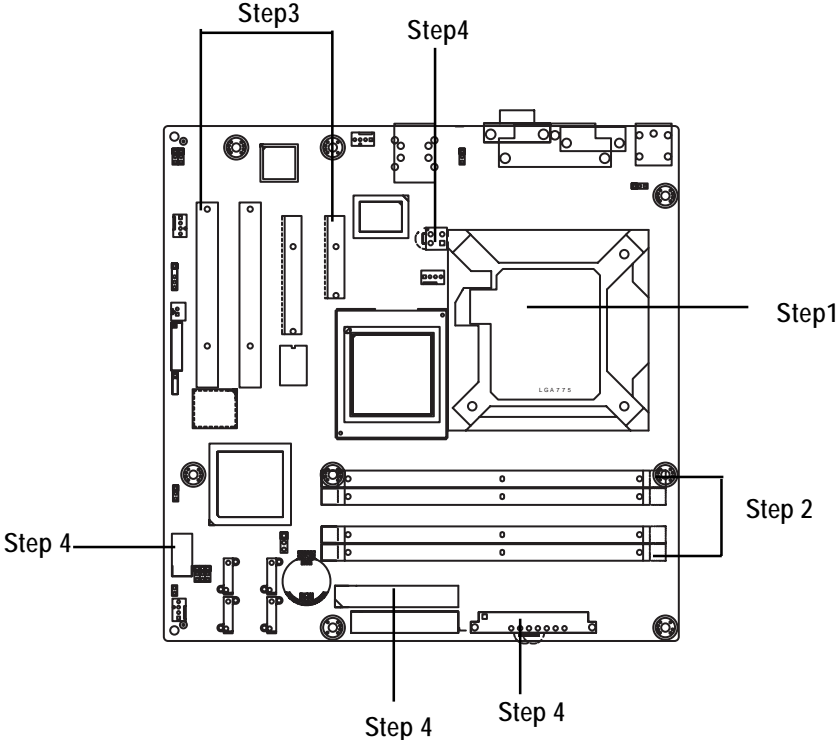


A.	CPU	N.	F_USB1
B.	Intel E7221	O.	REAR_FAN
C.	Intel ICH6R	P.	DDRII 1
D.	ITE IT8712F	Q.	DDRII 2
E.	Intel 82541PI	R.	DDRII 3
F.	SATA1	S.	DDRII 4
G.	SATA2	T.	PCI-E x1 (PCI-E x4 Slot)
H.	SATA3	U.	PCI-E x8
I.	SATA4	V.	PCI 1
J.	FDD	W.	PCI 2
K.	IDE	X.	ATX
L.	F_Panel	Y.	ATX12V
M.	System Fan		

Chapter 2 Hardware Installation Process

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

- Step 1- Install the Central Processing Unit (CPU)
- Step 2- Install memory modules
- Step 3- Install expansion cards
- Step 4- Connect ribbon cables, cabinet wires, and power supply
- Step 5- Setup BIOS software



Step 1: Installing Processor and CPU Heat Sink

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



1. The processor will overheat without the heatsink and/or fan, resulting in permanent irreparable damage.
2. Never force the processor into the socket.
3. Apply thermal grease on the processor before placing cooling fan.
4. Please make sure the CPU type is supported by the motherboard.
5. If you do not match the CPU socket Pin 1 and CPU cut edge well, it will cause improper installation. Please change the insert orientation.

Step1-1: Installing CPU

- Step 1 Gently lift the metal lever located on the CPU socket to the upper-right position.
- Step 2 Remove the plastic covering on the CPU socket.
- Step 3 Align the indented corner of the CPU with the triangle and gently insert the CPU into position. (Grasping the CPU firmly between your thumb and forefinger, carefully place it into the socket in a straight and downwards motion. Avoid twisting or bending motions that might cause damage to the CPU during installation.)
- Step 4 Once the CPU is properly inserted, please replace the plastic covering and push the metal lever back into its original position.
- Step 5 Close the lever, reverse step 1 & 2.



Step1-2: Installing Heat Sink



Fig.1
Please apply heatsink paste on the surface of the installed CPU.

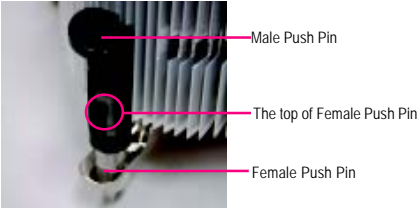


Fig. 2
(to remove the heatsink, turning the push pin along the direction of arrow; and reverse the previous step to install the heat sink.)
Please note the direction of arrow sign on the male push pin doesn't face inwards before installation. (This instruction is only for Intel boxed fan)

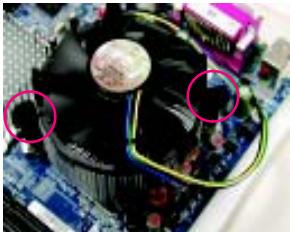


Fig. 3
Place the heatsink on top the CPU and make sure the push pins align to the pin hole on the motherboard. Push down the push pins diagonally.



Fig. 4
Please make sure the Male and Female push pin are brought together. (for detailed installation instructions, please refer to the heatsink installation section of the user manual)



Fig. 5
Please check the back side of teh motherboard. Make sure the push pin is seated firmly as the picture shown. Installation completed.



Fig. 6
Attach the power connector of the heatsink to the CPU fan header located on the motherboard.

Step 2: Install memory modules



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

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

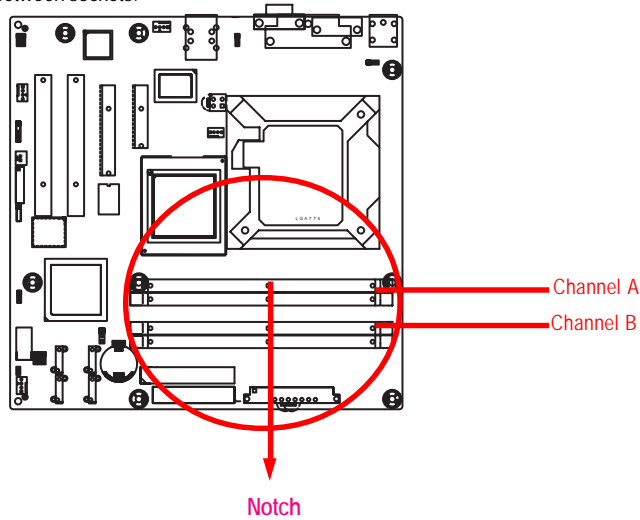


Table 1. Supported DIMM Module Type

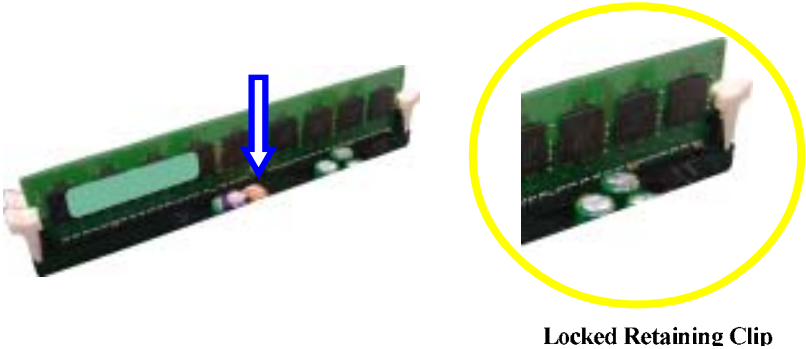
Technology	Organization	SDRAM Chips/DIMM
256MB	8MB x 8 x 4 bks	8
	16MB x 4 x 4bks	16
512MB	16MB x 8 x 4bks	8
	32MB x 4 x 4bks	16
1GB	32MB x 8 x 4bks	8
	64MB x 4 x 4bks	16

Table 2. DIMM Placement DDR2-400

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

Installation Step:

1. Unlock a DIMM socket by pressing the retaining clips outwards.
2. Aling a DIMM on the socket such that the notch on the DIMM exactly match the notches in the socket.
3. Firmly insert the DIMM into the socket until the retaining clips snap back in place.
4. When installing the DIMM into the DIMM socket, we recommend to populate one DIMM in Channel A module and one in Channel B module for best performance.
Please note that each logical DIMM must be made of two identical DIMMs having the same device size on each and the same DIMM size.
5. Reverse the installation steps when you wish to remove the DIMM module.



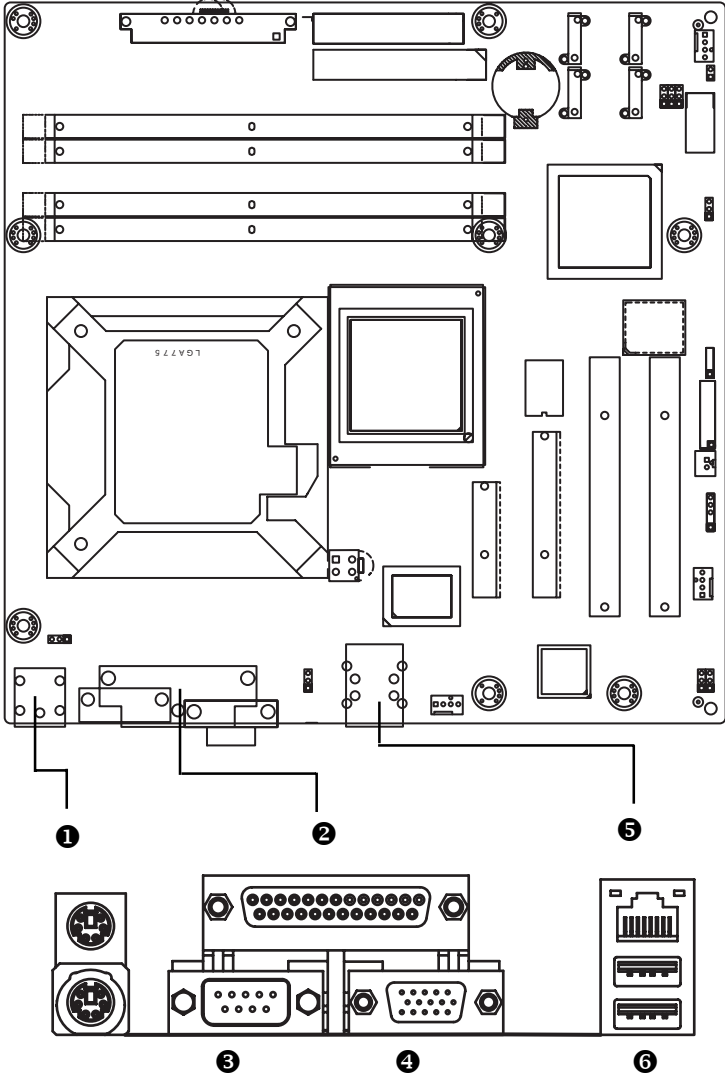
Step 3: Install expansion cards

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 ❸/❹ Parallel Port / Serial Port / VGA Port

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

❺ LAN Port

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

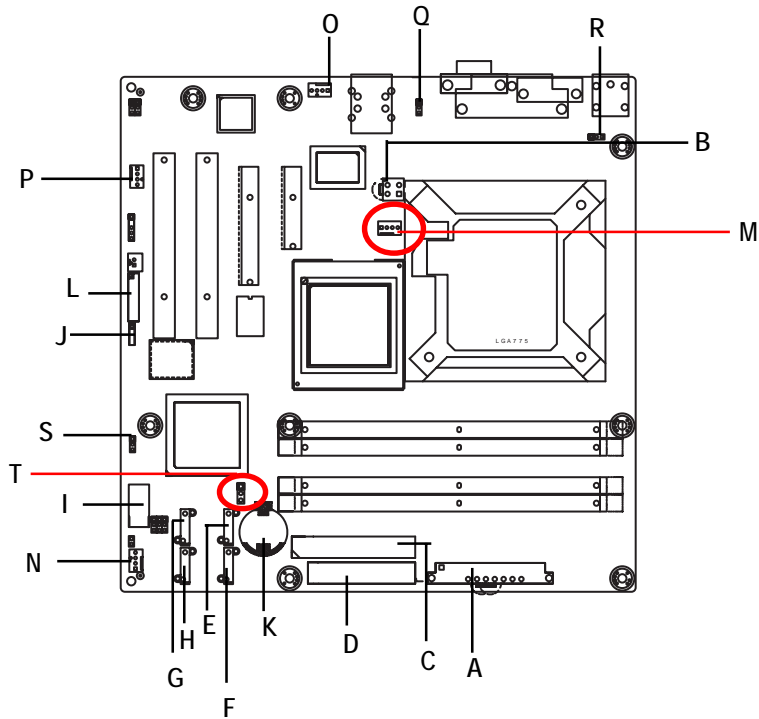
❻ USB Port

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

LAN LED Description

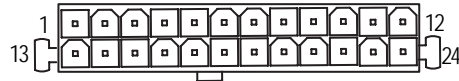
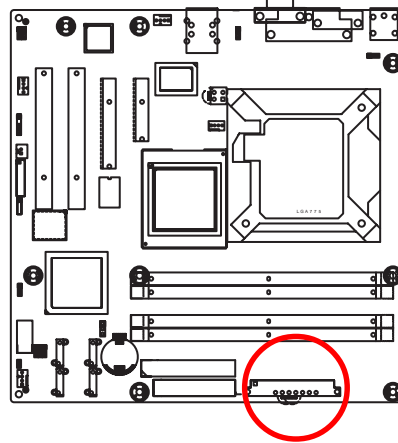
Name	Color	Condition	Description
LAN Link/Activity	Green	ON	LAN Link / no Access
	Green	BLINK	LAN Access
	-	OFF	Idle
10/100 LAN Speed	Green	ON	100Mbps connection
	-	OFF	10Mbps connection
GbE LAN Speed	Yellow	ON	1Gbps connection
	Yellow	BLINK	Port identification with 1Gbps connection
	Green	ON	100Mbps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

Step 4-2 :Connectors & Jumper Setting Introduction



A) ATX	M) CPU_FAN
B) ATX_12V	N) FRONT_FAN
C) IDE	O) REAR_FAN
D) FDD	P) SYS_FAN
E) S_ATA1	Q) PWR_JP1
F) S_ATA2	R) PWR_JP2
G) S_ATA3	S) PWR_JP3
H) S_ATA4	T) JP3 (CMOS Clear Jumper)
I) F_USB1	
J) HDD_LED	
K) BAT (Battery)	
L) F_Panel1	

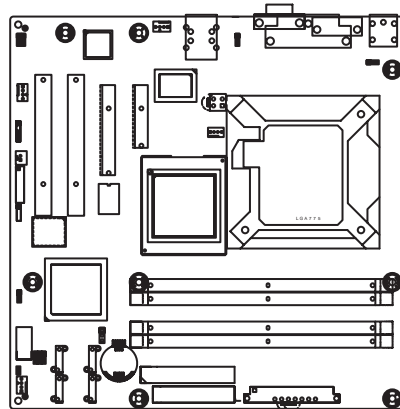
A) ATX (ATX Power Connector)



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

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

B) ATX_12V(+12V Power Connector)



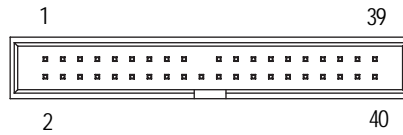
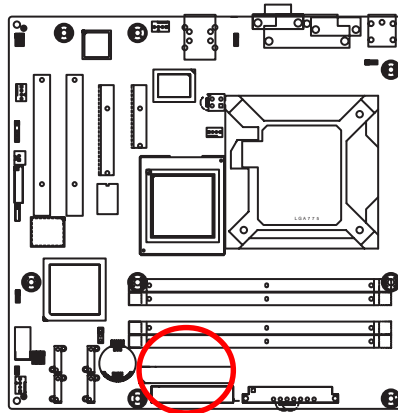
- This connector (ATX +12V) is used only for CPU1 Core Voltage.



Pin No.	Definition
1	GND
2	GND
3	12V
4	12V
5	P12V_CPU1
6	P12V_CPU1
7	P12V_CPU0
8	P12V_CPU0

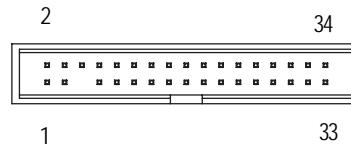
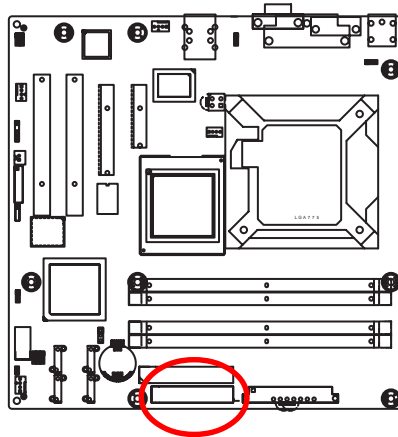
C) IDE Connector

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



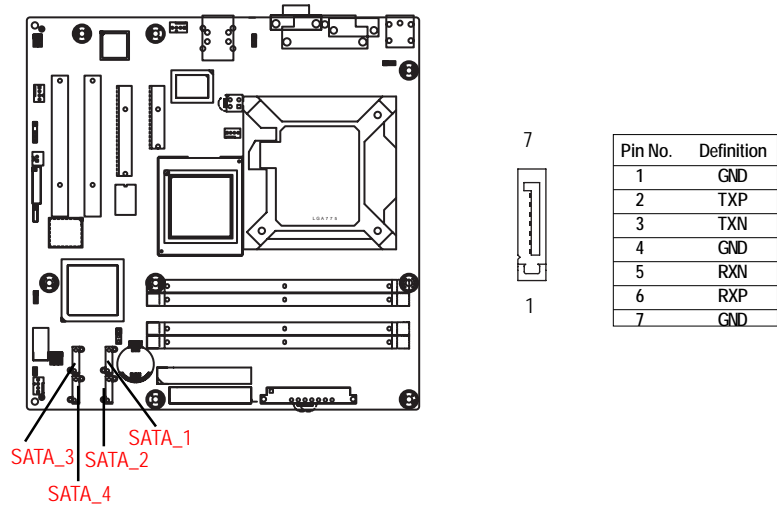
D) FDD (Floppy Connector)

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



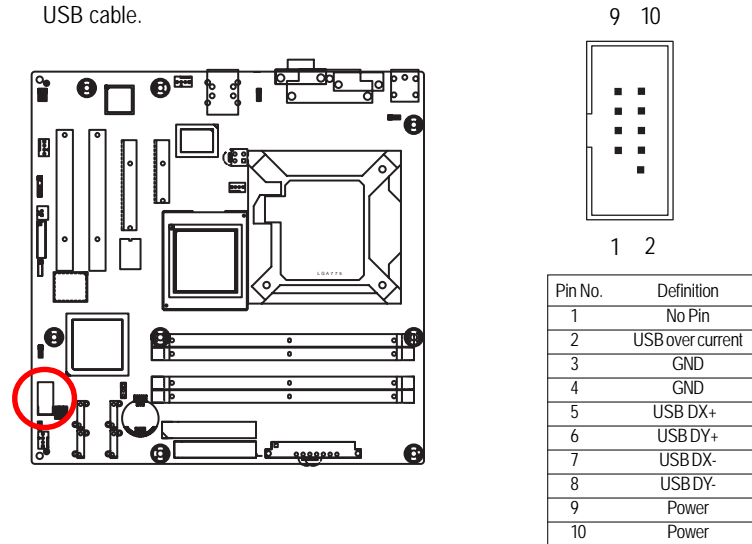
E / F / G / H) S_ATA1/ 2/ 3/ 4 (Serial ATA Connectors)

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

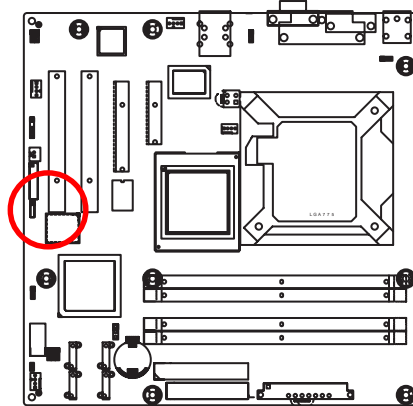


I) F_USB1 (Front USB Connector)

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.

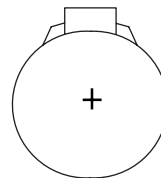
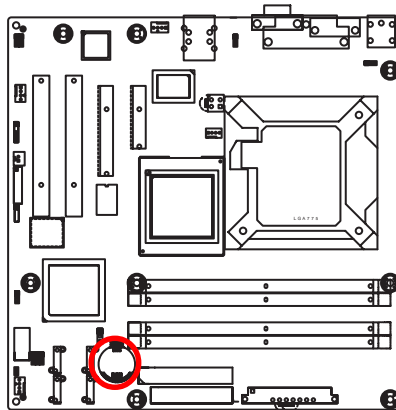


J) HDD_LED



Pin No.	Definition
1	NC
2	HD_LED
3	HD_LED
4	NC

K) BAT1 (Battery)



CAUTION

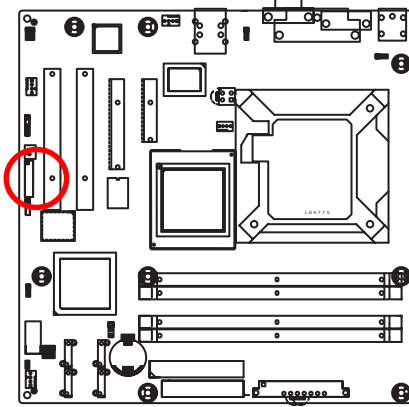
- ❖ Danger of explosion if battery is incorrectly replaced.
- ❖ Replace only with the same or equivalent type recommended by the manufacturer.
- ❖ Dispose of used batteries according to the manufacturer's instructions.

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.

L) F_Panel1 (2X9 Pins Front Panel connector)

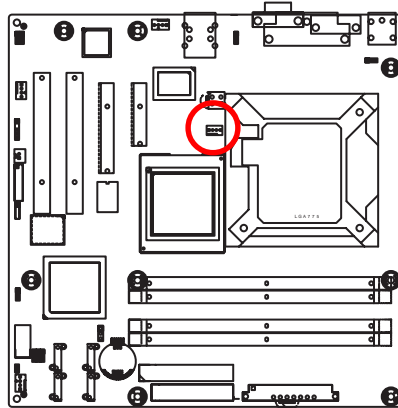
Please connect the power LED, PC speaker, reset switch and power switch of your chassis front panel to the F_PANEL connector according to the pin assignment above.



Pin No	Signal Name	Description
1	HD+	Hard Disk LED anode (+)
2	PDG	5VSB
3	HD-	Hard Disk LEDcathode(-)
4	PDY	Power LED Signal
5	GND	Ground
6	PW+	Soft power connector anode (+)
7	RST	Reset button
8	GND	Ground
9	VCC	+5V Standby power connector
10	SLP	N C
11	IRRX	No function
12	GND	Ground
13	GND	Ground
14	N C	No connect
15	IRTX	No function
16	VCC	N C
17	GND	Ground
18	CI	Case open signal

M) CPU_FAN (CPU Fan Connector)

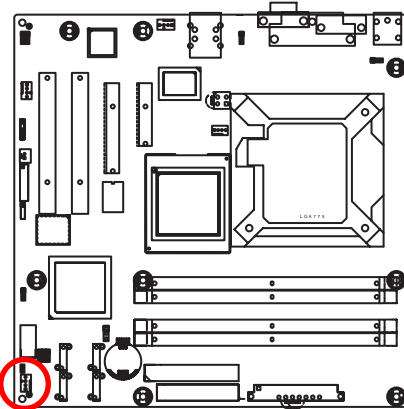
Please note, a proper installation of the CPU cooler is essential to prevent the CPU from running under abnormal condition or damaged by overheating. The CPU fan connector supports Max. current up to 1A .



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

N) FRONT_FAN (Front System Fan Connector)

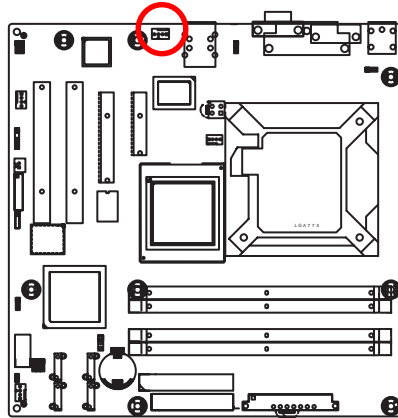
This connector allows you to link with the cooling fan on the system case to lower the system temperature.



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

O) REAR_FAN (Rear System Fan Connector)

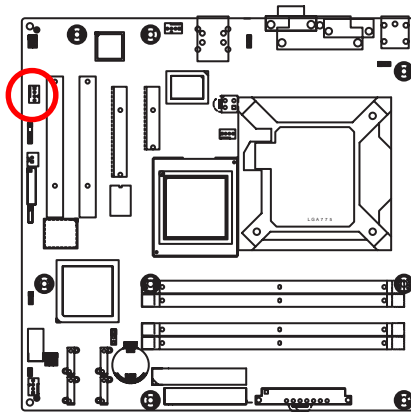
This connector allows you to link with the cooling fan on the system case to lower the system temperature.



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

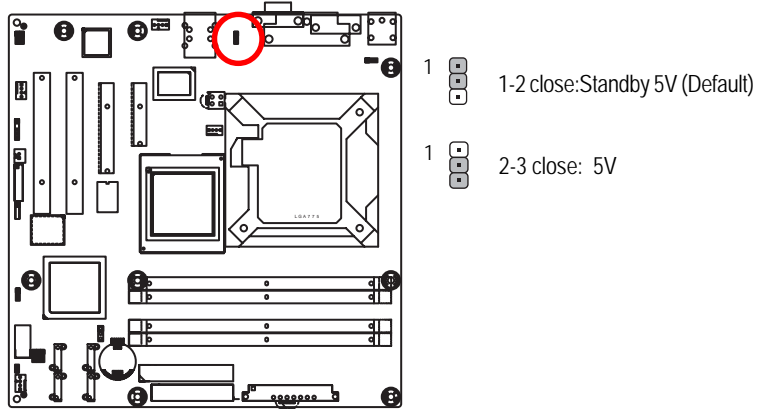
P) SYS_FAN (System Fan Connectors)

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

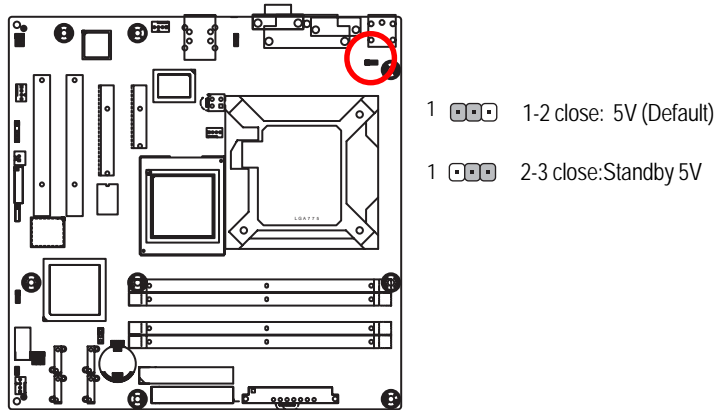


Pin No.	Definition
1	GND
2	12V
3	Sense
4	Control

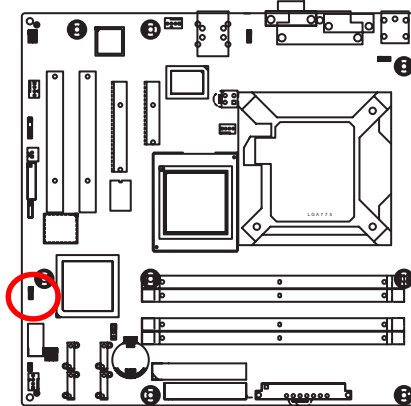
Q) PWR_JP1 (Rear USB power source jumper)





R) PWR_JP2 (Keyboard and Mouse power source jumper)



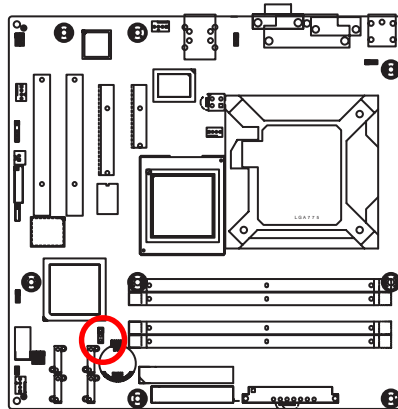
S) PWR_JP3 (Front USB power source jumper)





- 1  1-2 close: Standby 5V (Default)
- 1  2-3 close: 5V

T) JP3 (Clear CMOS Function)

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



- 1  1-2 close: Normal
- 1  2-3 close: Clear CMOS

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]			<Tab>, <Shift-Tab>, or
Lagecy Disktte A		[1.44MB 3 ^{1/2}]			<Enter> selects field.
Lagecy Disktte B		[Disabled]			
Hard Disk Pre-Delay		[Disabled]			
▶ Primary IDE Master		[CD-ROM]			
▶ Primary IDE Slave		[None]			
▶ IDE Secondary/Master		[None]			
▶ IDE Secondary/Slave		[None]			
▶ Advanced Processor Options					
Language		[English (U.S)]			
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/B

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

- ▶ Disabled Disable this device.
- ▶ 360KB, 5¹/₄ in. 3¹/₂ inch AT-type high-density drive; 360K byte capacity
- ▶ 1.2MB, 3¹/₂ in. 3¹/₂ inch AT-type high-density drive; 1.2M byte capacity
- ▶ 720K, 3¹/₂ in. 3¹/₂ inch double-sided drive; 720K byte capacity
- ▶ 1.44M, 3¹/₂ in. 3¹/₂ inch double-sided drive; 1.44M byte capacity.
- ▶ 2.88M, 3¹/₂ in. 3¹/₂ inch double-sided drive; 2.88M byte capacity.

☞ **Note:** The 1.25MB,3¹/₂ reference a 1024 byte/sector Japanese media format. The 1.25MB,3¹/₂ diskette requires 3-Mode floppy-disk drive.

☞ Hard Disk Pre-Delay

This item provides function for user to add a delay before the first access of a hard disk by BIOS. Some hard disks hang if accessed before they have initialized themselves. The delay ensures the hard disk initialized after powering up, prior to being accessed.

- ▶ Options Disabled, 3 Seconds, 6 Seconds, 9 Seconds, 12 Seconds, 21 Seconds, 30Seconds. Default vaule is **Disabled**.

☞ IDE Primary Master, Slave / Secondary Master, Slave, Parallel 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.

☞ **Advanced Processor Option**

This category includes **Processor Reset** function and the information of **CPU Speed**, **Processor ID**, **Processor L2 Cache**. Select 'Yes' on **Processor Reset** item, BIOS will clear historical processor status and reset all processors on next boot.

☞ **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.

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"> ▶ Memory Configuration ▶ PCI Configuration ▶ I/O Device Configuration ▶ Advanced Chipset Control 					Item Specific Help
Boot-time Diagnostic Screen		[Disabled]			
Reset Configuration Data		[No]			
NumLock		[Auto]			
Memory/Processor Error		[Boot]			
Multiprocessor Specification		[1.4]			
F1: Help	↑↓: Select Item	+ -: Change Values		F5: Setup Defaults	
Esc: Exit	← →: Select Menu	Enter: Select ▶ Sub-Menu		F10: Save&Exit	

Figure 2: Advanced

Memory Configuration

PhoenixBIOS Setup Utility		
Advanced		
Memory Configuration		Item Specific Help
System Memory	KB	
Extended Memory	KB	
DIMM Group #1 Status	Not Installed	
DIMM Group #2 Status	Not Installed	
DIMM Group #3 Status	Not Installed	
DIMM Group #4 Status	Not Installed	
DIMM Group #5 Status	Not Installed	
Memory Reset	[No]	
Extended RAM Setup	[Disabled]	
F1: Help ↑↓: Select Item + -: Change Values F5: Setup Defaults Esc: Exit ←→: Select Menu Enter: Select ▶ Sub-Menu F10: Save&Exit		

Figure 2-1: Memory Configuration

System Memory/Extended Memory/DIMM Group 1,2,3,4,5 Status

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

Memory Reset

- ▶▶ Yes Select 'Yes', system will clear the memory error status.
- ▶▶ No Disable this function. (Default value)

Extend RAM Step

- ▶▶ Enabled Enable test extended memory process.
- ▶▶ Disabled Disable this function. (Default value)

PCI Configuration

PhoenixBIOS Setup Utility	
Advanced	
PCI Configuration	Item Specific Help
<ul style="list-style-type: none"> ▶ Embedded Video Controller ▶ Embedded NIC (Gbit #1) 	
PCI Slot 1 Option ROM [Enabled]	
PCI Slot 2 Option ROM [Enabled]	
PCI Slot 3 Option ROM [Enabled]	
PCI Slot 4 Option ROM [Enabled]	
F1: Help ↑↓: Select Item + -: Change Values F5: Setup Defaults Esc: Exit ←→: Select Menu Enter: Select ▶ Sub-Menu F10: Save&Exit	

Figure 2-2: PCI Configuration

☞ Embedded Video Controller

▶ Onboard VGA Control

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

▶ Pre-Allocated Memory Size

Select the amount of pre-allocated graphics memory for use by the Internal Graphics Device.

- ▶▶ Options 1MB, 8MB. Default value is 8MB.

☞ **EmbeddedNIC#1**

▶ **Onboard LAN Control**

- ▶▶ Enabled Enable onboard LAN1 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)

☞ **PCI Slot 1/2/3/4 Option ROM**

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

I/O Device Configuration

PhoenixBIOS Setup Utility	
Advanced	
I/O Configuration	Item Specific Help
Serial port A:	[Disabled]
Base I/O address	[3F8]
Interrupt	[IRQ4]
Parallel port:	[Disabled]
Mode	[Bi-directional]
Base I/O address	[378]
PS/2 Mouse	[Enabled]
USB Controller	[Enabled]
USB 2.0 Controller	[Enabled]
Legacy USB Support	[Enabled]
Serial ATA:	[Enabled]
Native Mode operation	[Auto]
SATA Controller Mode Option	[Compatible]

F1: Help	↑↓: Select Item	+ -: Change Values	F5: Setup Defaults
Esc: Exit	←→: Select Menu	Enter: Select ▶ Sub-Menu	F10: Save&Exit

Figure 2-3: I/O Device 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

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

▶ Interrupt

- ▶▶ IRQ4 Set interrupt as IRQ4. (Default value)
- ▶▶ IRQ3 Set interrupt as IRQ3.

Parallel Port

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

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

▶ Mode

This option allows user to set Parallel Port transfer mode.

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

▶ Base I/O Address

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

PS/2 Mouse

Set this option 'Enabled' to allow BIOS support for a PS/2 - type mouse.

- ▶▶ Enabled 'Enabled' forces the PS/2 mouse port to be enabled regardless if a mouse is present. (Default value)
- ▶▶ Disabled 'Disabled' prevents any installed PS/2 mouse from functioning, but frees up IRQ12.

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.

USB 2.0 Controller

This item allows users to enable or disable the USB 2.0 device by setting item to the desired value.

- ▶▶ Enabled Enable USB 2.0 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 (Default Value)
- ▶▶ Disabled Disables support for legacy USB

Serial ATA

- ▶▶ Enabled Enables on-board serial ATA function. (Default Value)
- ▶▶ Disabled Disables on-board serial ATA function.

▶ Native Mode Operation

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

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

▶ SATA Controller Mode Option

- ▶▶ Compatible Mode SATA and PATA drives are auto-detected and placed in Legacy mode. (Default value)
- ▶▶ Enhanced (non-AHCI) Mode SATA and PATA drives are auto-detected and placed in Native mode.

Note: Pre-Win2000 operating system do not work in Enhanced mode.

▶ SATA AHCI Enable

- ▶▶ Enabled Set this item to enable SATA AHCI function for WinXP-SP1+IAA driver supports AHCI mode.
- ▶▶ Disabled Disabled this function.

▶ SATA RAID Enable

- ▶▶ Enabled Enabled SATA RAID function.
- ▶▶ Disabled Disable this function.

Advanced Chipset Control

PhoenixBIOS Setup Utility	
Advanced	
Advanced Chipset Control	Item Specific Help
Enabled Multimedia Timer [No]	
ICH6 Root Port #1 Sub-Menu	
PCI Device	
Wake On LAN/PME [Enabled]	
Wake Up Ring [Disabled]	
Wake On RTC Alarm [Disabled]	
F1: Help ↑↓: Select Item + -: Change Values F5: Setup Defaults Esc: Exit ←→: Select Menu Enter: Select ▶ Sub-Menu F10: Save&Exit	

Figure 2-4: Advanced Chipset Control

☞ Enabled Multimedia Time

- ▶ Yes Enable Multimedia Timer Support.
- ▶ No Disable this function. (Default value)

☞ ICH6 Root Port #1 Sub-Menu

Function for this category are for debugging the PCI Express Root Port #1.

- ▶ Disabled Port is always disabled.
- ▶ Enabled Port is always enabled.
- ▶ Auto Only enabled if card found. (Default value)

☞ **PCIDevice**

▶ **PCI IRQ Line 1/2/3/4**

When ACPI device cannot use IRQs already in use by ISA or EISA devices. Use 'Auto Select' only if no ISA or EISA legacy cards are installed.

- ▶▶ Auto Select Auto selecting PCI IRQ lines. (Default value)
- ▶▶ 3,4,5,7,9,10,11,12,14,15 Selecting specify PCI IRQ lines.
- ▶▶ Disabled Disable this function.

☞ **Wake On LAN / PME**

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

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

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

☞ **Wake On Ring**

This option allow user to determine the action of the system power is off and the modem is ringing.

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

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

☞ **Wake On RTC Alarm**

You can set "RTC Alarm Resume" item to enabled and key in Data/time to power on system.

- ▶▶ Enabled Enable alarm function to POWER ON system. (Default value)
- ▶▶ Disabled Disable this function.

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

☞ Boot -time Diagnostic

When this item is enabled, system will shows Diagnostic status when system boot.

- ▶▶ Enabled Enable Boot-time Diagnostic.
- ▶▶ Disabled Disable this function. (Default value)

☞ Memory Processor Error

When Boot is selected, the system will attempt to boot after a memory or processor error occurred.

- ▶▶ Boot System attempts to boot if a memory or processor error cooured.
(Default value)
- ▶▶ Halt System will stop if an error is detected during power up.

☞ Multiprocessor Specification

This option allows user to configure the multiprocessor(MP) specification revision level. Some operating system will require 1.1 for compatibility reasons.

- ▶▶ 1.4 Support MPS Version 1.4 . (Default value)
- ▶▶ 1.1 Support M PS Version 1.1.

☞ Reset Configuration Data

- ▶▶ Yes Reset all configuration data.
- ▶▶ No Do not make any changes. (Default value)

☞ NumLock

This option allows user to select power-on state for NumLock.

- ▶▶ On Enable NumLock.
- ▶▶ Off Disable this function.

Security

PhoenixBIOS Setup Utility					
Main	Advanced	Security	Server	Boot	Exit
User Password Is:		Clear			Item Specific Help
Supervisor Password Is:		Clear			
Set User Password		[Enter]			
Set Supervisor Password		[Enter]			
Password on boot		[Disabled]			
Fixed disk boot sector		[Disabled]			
Diskette access		[Supervisor]			
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 Requires entering password when system on boot.
- ▶▶ Disabled Disable this function. (Default value)

☞ Fixed disk boot sector

- ▶▶ Write Protect Write protects boot sector on harddisk to protect against virus.
- ▶▶ Normal Set the fixed disk boot sector at Normal state. (Default value)

☞ Diskette access

Control access to diskette drives.

- ▶▶ User Requires user's password to access floppy drives.
- ▶▶ Supervisor Requires supervisor's password to access floppy drives. (Default value)

Server

PhoenixBIOS Setup Utility					
Main	Advanced	Security	Server	Boot	Exit
<ul style="list-style-type: none"> ▶ System Management ▶ Console Redirection 				Item Specific Help	
Assert NMI on SERR		[Enabled]			
Post Error Pause		[Enabled]			
AC-LINK		[Last State]			
F1: Help ↑↓: Select Item + -: Change Values F5: Setup Defaults Esc: Exit ←→: Select Menu Enter: Select ▶ Sub-Menu F10: Save&Exit					

Figure 4: Server

System Management

PhoenixBIOS Setup Utility	
Server	
System Management	Item Specific Help
BIOS Version: XXXXXX	
Board Part Number: XXXXXX	
Board Serial Number: XXXXXX	
System Part Number: XXXXXX	
System Serial Number: XXXXXX	
Chassis Part Number: XXXXXX	
Chassis Serial Number: XXXXXX	
F1: Help ↑↓: Select Item + -: Change Values F5: Setup Defaults Esc: Exit ←→: Select Menu Enter: Select ▶ Sub-Menu F10: Save&Exit	

Figure 4-1: System Management

Server Management

This category allows user to view the server management features. Including information of **BIOS Version, Board Part/Serial Number, System Part/Serial Number, and Chassis Part/Serial Number**. All items in this menu cannot be modified in user's mode. If any items require changes, please consult your system supervisor.

Console Redirection

PhoenixBIOS Setup Utility	
Server	
Console Redirection	Item Specific Help
BIOS Redirection Port:	[Disabled]
ACPI Redirection Port	[Disabled]
Baud Rate	[19.2K]
Terminal Type	[PS ANSI]
Flow Control	[CTR/RTS]
F1: Help ↑↓: Select Item + -: Change Values F5: Setup Defaults Esc: Exit ←→: Select Menu Enter: Select ▶ Sub-Menu F10: Save&Exit	

Figure 4-2: Console Redirection

☞ BIOS Redirection Port

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

- ▶▶ Serial Port A Use Serial Port A as he COM port address.
- ▶▶ Disabled Disable this function. (Default value)

☞ ACPI Redirection Port

Select the serial port to use for ACPI Headless Console Redirection. If the item is set to 'Disabled', system will completely disable ACPI Headless Console Redirection.

- ▶▶ Serial Port A Use Serial Port A as he 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.

☞ Terminal Type

This option allows user to select the specified terminal type. This is defined by IEEE.

- ▶▶ Options VT100, VT100 8bit, PC-ANSI 7bit, VT100+, VT-UTF8

☞ Flow Control

This option provide user to enable the flow control function.

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

☞ Assert NMI on SERR

If this option is set to enabled, PCI bus system error (SERR) is enabled and is routed to NMI.

- ▶▶ Enabled Enable Assert NMI on SERR. (Default value)
- ▶▶ Disabled Disable this function.

☞ Post Error Pause

If this item is set to enabled, the system will wait for user intervention on critical POST errors. If this item is disabled, the system will boot with no intervention if possible.

- ▶▶ Enabled Enable Post Error Pause. (Default value)
- ▶▶ Disabled Disable this function.

☞ AC-LINK

This option provides user to set the mode of operation if an AC / power loss occurs.

- ▶▶ Power On System power state when AC cord is re-plugged.
- ▶▶ Stay Off Do not power on system when AC power is back.
- ▶▶ Last State Set system to the last state when AC power is removed. Do not power on system when AC power is back. (Default value)

Boot

PhoenixBIOS Setup Utility			
Main	Advanced	Security	Server Boot Exit
CD-ROM Drive		Item Specific Help	
+Removable Devices			
+Hard Drive			
IBA GE Slot 0A58 V1226			
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

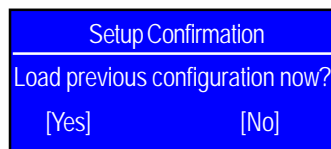
☞Exit Saving Changes

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.

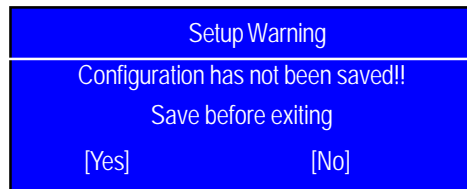


☞Exit Discarding Changes

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.

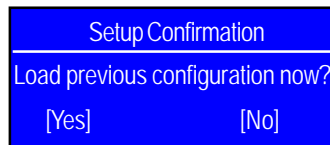
Press <Enter> on this item to ask for confirmation message.



☞Load Setup Default

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

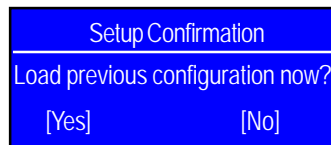
When you press <Enter> on this item, you will get a confirmation dialog box with a message as below:



☞ Discard Changes

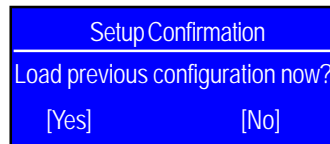
This option allows user to load previous values from CMOS for all setup item.

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 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:

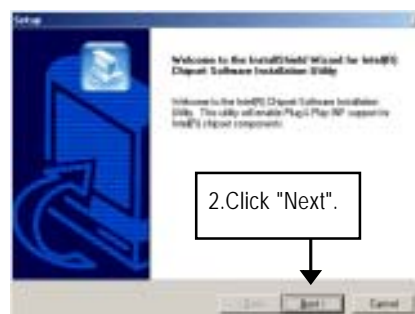
1. The CD auto run program starts, **Double click** on "Intel Chipset Software Installation Utilities" to start the installation.
2. Then, a series of installation wizards appear. Follow up the wizards to install the drivers.
3. Setup completed, click "Finish" to restart your computer.

Auto Run windows



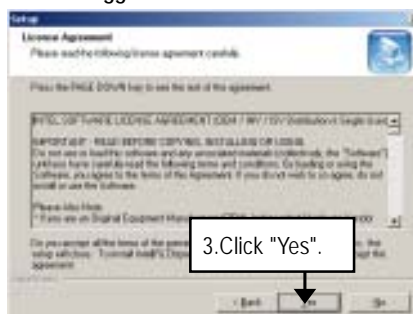
(1)

Setup Wizard



(2)

License Agreement



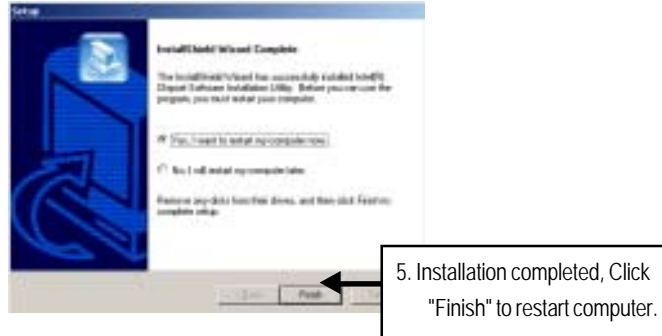
(3)

Readme Information



(4)

Installation Completed



(5)

B. Intel VGA 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:

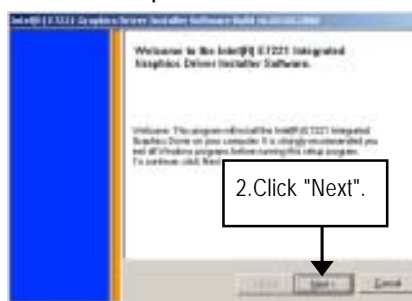
1. The CD auto run program starts, **Double click** on "Intel VGA Driver" to start the installation.
2. Then, a series of installation wizards appear. Follow up the wizards to install the drivers.
3. Setup completed, click "Finish" to restart your computer.

Auto Run windows



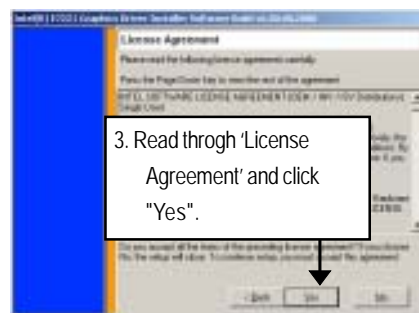
(1)

Intel E7221 Graphic Installer Software



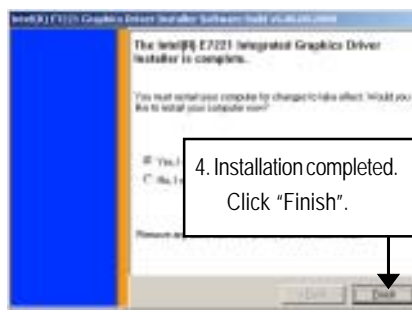
(2)

License Agreement



(3)

Installation Completed



(4)

C. Intel LAN 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:

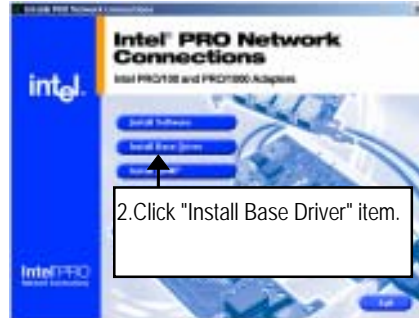
1. The CD auto run program starts, **Double click** on "Intel LAN Driver" to start the installation.
2. Select "Install Base Driver".
3. System starts to install the LAN Driver automatically.

Auto Run windows



(1)

Intel LAN Drivers



(2)

Installing automatically



(3)

D. Intel Pro Software 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:

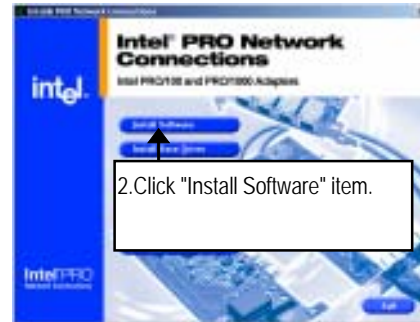
1. The CD auto run program starts, **Double click** on "Intel LAN Driver" to enter Intel Pro Network Connections Installation program.
2. Select "Install Software".
3. Then, a series of installation wizards appear. Follow up the wizards to install the drivers.
4. Setup completed, click "Finish" to restart your computer.

Auto Run windows



(1)

Install Software

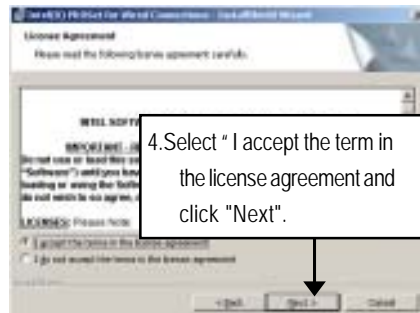


(2)

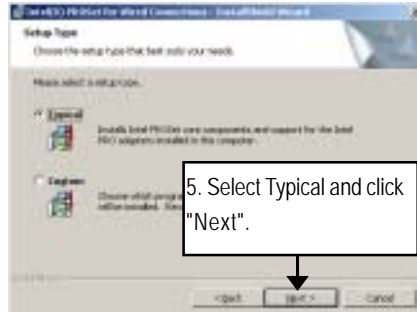
InstallShield Wizard



License Agreement

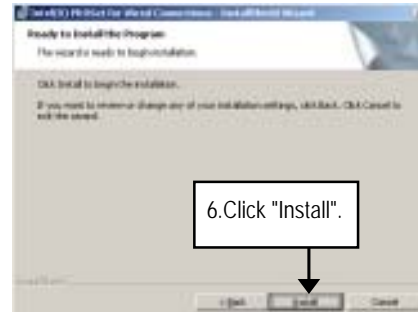


Setup Type



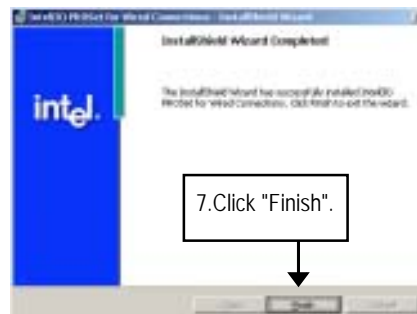
(5)

Ready to Install the Program



(6)

Installation Complete



(7)

E. Adaptec SATA RAID Driver Installation

Installation Procedures:

1. The CD auto run program starts, Double click on "Adaptec SATA RAID Driver" to start the installation.
2. Double click "Driver" folder.
3. Refer to your operating system, select the desired folder to install the RAID driver.
4. Copy the folder to a floppy diskette. When installing, insert the diskette into floppy drive.

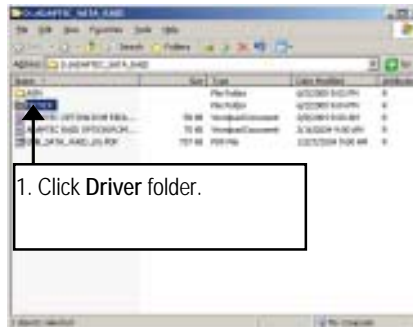
Note: User must enable "SATA RAID" function in the CMOS "I/O Device Configuration" setup menu before installing Adaptec RAID driver.

Auto Run windows



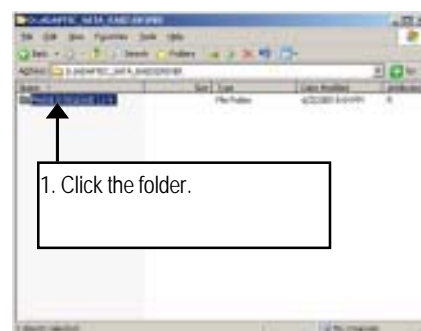
(1)

SATA RAID Driver

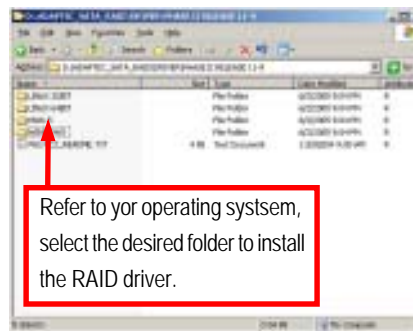


(2)

Operating System Selection

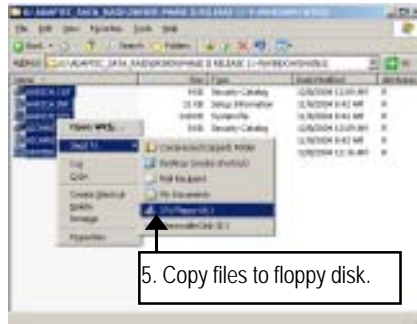


(3)



(4)

Copy Files



(5)

F. DirectX 9.0 Driver Installation

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

Installation Procedures:

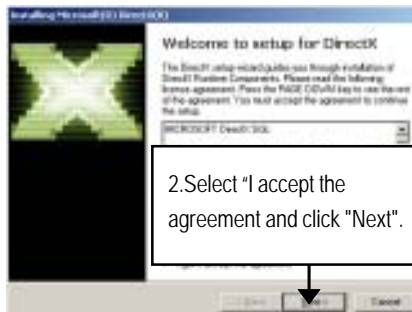
1. The CD auto run program starts, **Double** click on "Directx9.0" to start the installation.
2. Then, a series of installation wizards appear. Follow up the wizards to install the drivers.
3. Setup completed, click "Finish" to restart your computer.

Auto Run windows



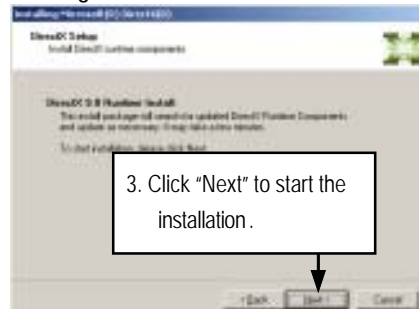
(1)

License Agreement



(2)

Starting Installation



(3)

Installation Wizard completed



(4)

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

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

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



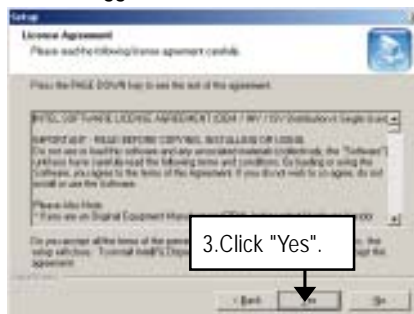
(1)

Setup Wizard



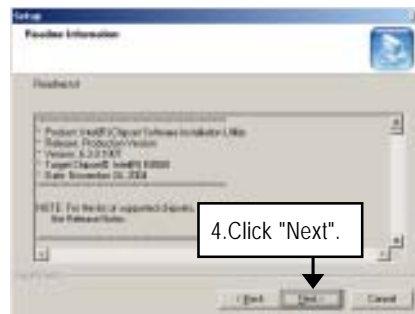
(2)

License Agreement



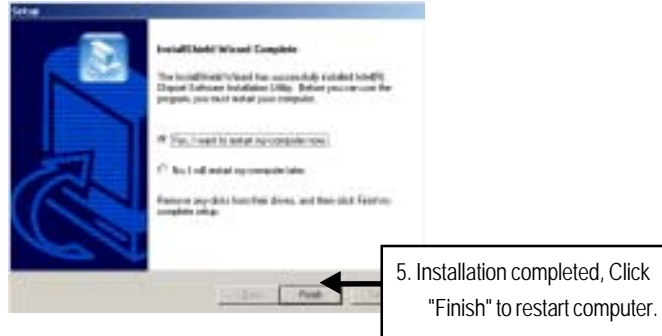
(3)

Readme Information



(4)

Installation Completed



(5)

B. Intel VGA 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:

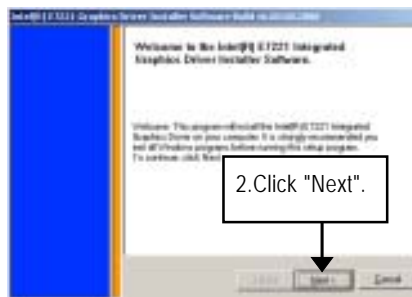
1. The CD auto run program starts, **Double click** on "Intel VGA Driver" to start the installation.
2. Then, a series of installation wizards appear. Follow up the wizards to install the drivers.
3. Setup completed, click "Finish" to restart your computer.

Auto Run windows



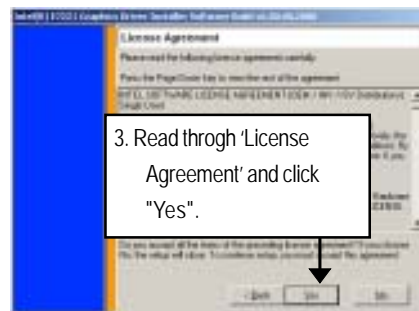
(1)

Intel E7221 Graphic Installer Software



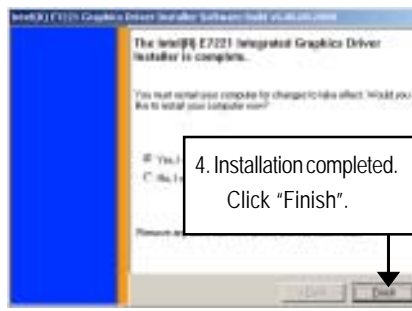
(2)

License Agreement



(3)

Installation Completed



(4)

C. Intel LAN 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:

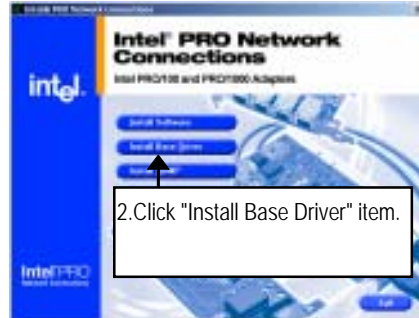
1. The CD auto run program starts, **Double click** on "Intel LAN Driver" to start the installation.
2. Select "Install Base Driver".
3. System starts to install the LAN Driver automatically.

Auto Run windows



(1)

Intel LAN Drivers



(2)

Installing automatically



(3)

D. Intel Pro Software 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:

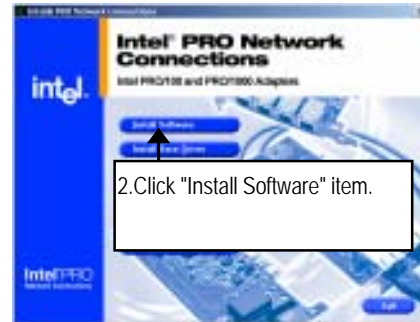
1. The CD auto run program starts, **Double click** on "Intel LAN Driver" to enter Intel Pro Network Connections Installation program.
2. Select "Install Software".
3. Then, a series of installation wizards appear. Follow up the wizards to install the drivers.
4. Setup completed, click "Finish" to restart your computer.

Auto Run windows



(1)

Install Software

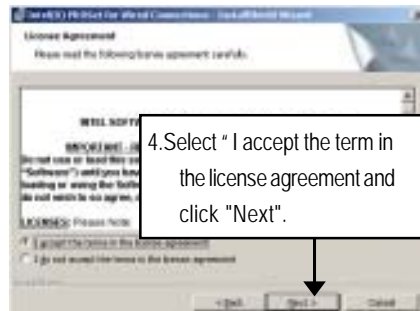


(2)

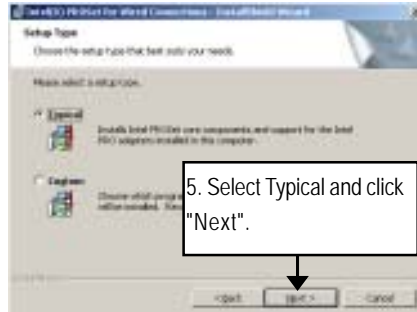
InstallShield Wizard



License Agreement

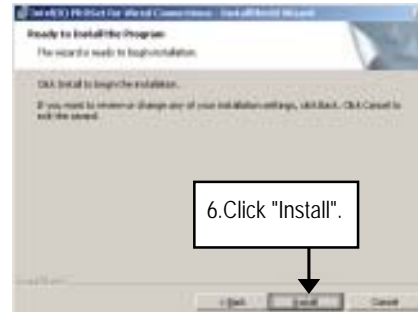


Setup Type



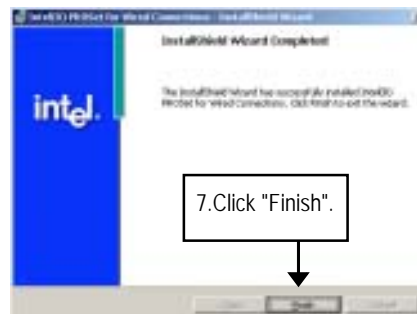
(5)

Ready to Install the Program



(6)

Installation Complete



(7)

E. Adaptec SATA RAID Driver Installation

Installation Procedures:

1. The CD auto run program starts, Double click on "Adaptec SATA RAID Driver" to start the installation.
2. Double click "Driver" folder.
3. Refer to your operating system, select the desired folder to install the RAID driver.
4. Copy the folder to a floppy diskette. When installing, insert the diskette into floppy drive.

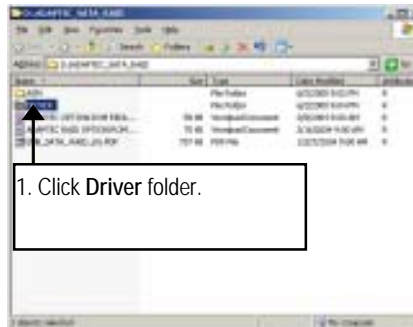
Note: User must enable "SATA RAID" function in the CMOS "I/O Device Configuration" setup menu before installing Adaptec RAID driver.

Auto Run windows



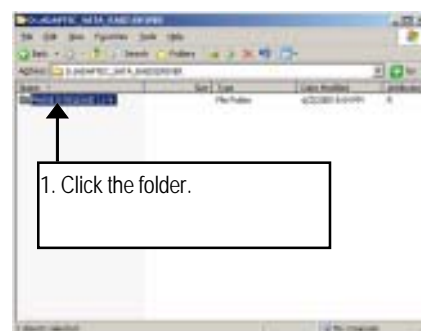
(1)

SATA RAID Driver

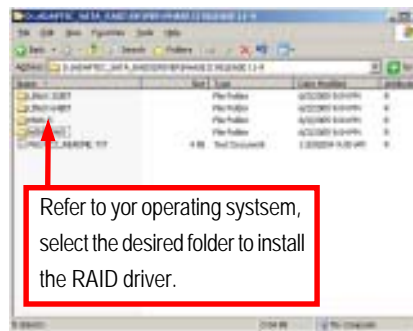


(2)

Operating System Selection



(3)



(4)

F. DirectX 9.0 Driver Installation

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

Installation Procedures:

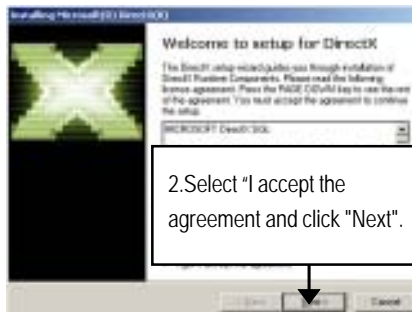
1. The CD auto run program starts, **Double** click on "Directx9.0" to start the installation.
2. Then, a series of installation wizards appear. Follow up the wizards to install the drivers.
3. Setup completed, click "Finish" to restart your computer.

Auto Run windows



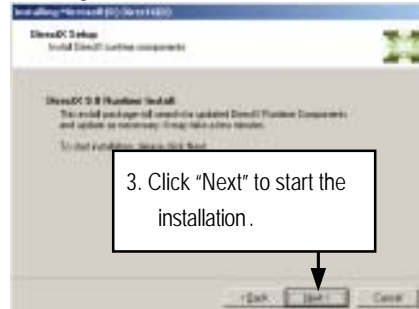
(1)

License Agreement



(2)

Starting Installaiton



(3)

Installaiton Wizard completed



(4)

Chapter 6 Appendix

Acronyms

Acronyms	Meaning
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AGP	Accelerated Graphics Port
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