GS-R113-RH Series
GS-R113V-RH
GS-R113L-RH (OEM Model)
1U Rack Mount Server
System Installation Guide

AMD® AM2 Processor Motherboard

Rev. 1.1

Table of Content

Safety, Care and Regulatory Information

❥ **Important safety information**

Read and follow all instructions marked on the product and in the documentation before you operate your system. Retain all safety and operating instructions for future use.

* The product should be operated only from the type of power source indicated on the rating label.

* If your computer has a voltage selector switch, make sure that the switch is in the proper position for your area. The voltage selector switch is set at the factory to the correct voltage.

* The plug-socket combination must be accessible at all times because it serves as the main disconnecting device.

* All product shipped with a three-wire electrical grounding-type plug only fits into a grounding-type power outlet. This is a safety feature. The equipment grounding should be in accordance with local and national electrical codes. The equipment operates safely when it is used in accordance with its marked electrical ratings and product usage instructions

* Do not use this product near water or a heat source.

* Set up the product on a stable work surface or so as to ensure stability of the system.

* Openings in the case are provided for ventilation. Do not block or cover these openings. Make sure you provide adequate space around the system for ventilation when you set up your work area. Never insert objects of any kind into the ventilation openings.

* To avoid electrical shock, always unplug all power cables and modem cables from the wall outlets before removing covers.

* Allow the product to cool before removing covers or touching internal components.

❥ **Precaution for Product with Laser Devices**

Observe the following precautions for laser devices:

* Do not open the CD-ROM drive, make adjustments, or perform procedures on a laser device other than those specified in the product's documentation.

* Only authorized service technicians should repair laser devices.

❥ **Precaution for Product with Modems, Telecommunications, ot Local Area Network Options**

Observe the following guidelines when working with options:

* Do not connect or use a modem or telephone during a lightning storm. There may be a risk of electrical shock from lightning.

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* To reduce the risk of fire, use only No. 26 AWG or larger telecommunications line cord.

* Do not plug a modem or telephone cable into the network interface controller (NIC) receptacle.

* Disconnect the modem cable before opening a product enclosure, touching or installing internal components, or touching an uninsulated modem cable or jack.

* Do not use a telephone line to report a gas leak while you are in the vicinity of the leak.

♦ Federal Communications Commission (FCC) Statement

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Neither the provider nor the manufacturer are responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

♦ FCC part 68 (applicable to products fitted with USA modems)

The modem complies with Part 68 of the FCC Rules. On this equipment is a label that contains, among other information, the FCC registration number and Ringer Equivalence Number (REN) for this equipment. You must, upon request, provide this information to your telephone company.

If your telephone equipment causes harm to the telephone network, the Telephone Company may discontinue your service temporarily. If possible, they will notify in advance. But, if advance notice is not practical, you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect proper operation of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

The FCC prohibits this equipment to be connected to party lines or coin-telephone service.

The FCC also requires the transmitter of a FAX transmission be properly identified (per FCC Rules Part 68, Sec. 68.381 (c) (3)).

/ for Canadian users only /

❥ Canadian Department of Communications Compliance Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of Industry Canada.

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de Classe B prescrites dans le reglement sur le brouillage radioelectrique edicte par Industrie Canada.

❥ DOC notice (for products fitted with an Industry Canada-compliant modem)

The Canadian Department of Communications label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user satisfaction.

Before installing this equipment, users ensure that it is permissible to be connected to the facilities of the local Telecommunications Company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions might not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if resent are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

NOTICE: The Load Number (LN) assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop which is used by the device, to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the sum of the Load Numbers of all the devices does not exceed 100.
/ for European users only /

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.

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.

Introduction

Welcome to Gigabyte GS-R113L/V-RH Rack mount Server System Installation Guide. The guide provides instructions for configuration hardware for the GS-R113L/V-RH your system.

This installation guide will assist you in installing all the essential components for the sever system. For your protection, please read and undertand all of the safety and operating instructions regarding your Gigabyte Server and retain for future reference. The procedures in this guidebook assume that your are a system or network administrator experienced in installing similar hardware.

Contents Packages

When opening the package, please ensure the system components are not damaged during the shipping. Using the following checklist to verify the contents. If any component is missing or damaged in the system, please contact your vendor immediately.

- ☑ Chassis
- ☑ Power Supply (Installed)
- ☑ CPU Heat Sink x 1
- ☑ Silm type CD-ROM drive (Installed)
- ☑ GS-R113-RH Series System Installation Guide
- ☑ Driver CD for motherboard driver & utility

- ☑ GA-3PXSL1-RH Motherboard (Installed)
- ☑ FAN Duct x 1
- ☑ Standard Floppy Drive (Installed)
- ☑ Cables (RJ45)
- ☑ Case Handle Kit x 2

GS-R113-RH Series Model List

- ✓ GS-R113V-RH (Supports 2 hot-swap SATA HDDs)
- ✓ GS-R113L-RH (Supports 2 internal SATA HDDs; OEM Model)

Chapter 1 Features Summary

Motherboard	●	GA-3PXSL1-RH
Processor Supported	●	Supports AMD® Opteron™ 100 series (Socket AM2) processor
	●	AMD® Single/Dual Core in AM2 socket
	●	L2 cache on-die per processor from 1M
Chipset	●	NVIDIA® GeForce 6100 Chipset
	●	NVIDIA® nForce 430 Chipset
System Memory:		
Memory Capacity	●	4 x DDRII socket up to 8 GB
Memory Type	●	Un-buffered DDRII-533/667
DIMM Size	●	Support 512MB, 1GB, 2GB memory
Expansion Slot	●	1 x Low Profile PCI-E (Half-High/Half-Length)
	●	1 x Full-Size PCI add-on card (Full-High/Half-Length)
SATA RAID controller	●	Build in NVIDIA® nForce 430 chipset
	●	Supports Software RAID 0,1
Cooling Fans:	●	5 X System Fan
	●	2 X Power Fan
Integrated LANs:		
Controller	●	Marvell 88E8056 GbE controller/Marvell 88E1116 GbE PHY
	●	Supports WOL, PXE
Integrated Graphics:		
Controller	●	Integrated in NVIDIA® GeForce 6100 Chipset
Graphics Memory	●	256MB (Shared)
Mass Storage System	●	2 x Internal SATA HDDs (GS-R113L-RH)
	●	2 x hot-swap SATA HDDs (GS-R113V-RH)
	●	1 x Standard Type FDD
	●	1 Slim Type CD-ROM
Super I/O		
Controller	●	ITE IT8712F-A

Built-in I/O	• 2 x Serial port (1 by cable)
	• 3 x USB 2.0 connectors (2x rear USB, 1x Front USB)
	• 1 x VGA connector
	• 2 x RJ45 LAN ports
	• P/S 2 Keyboard and Mouse Connectors
	• 1 x RJ45 on front for console redirection
System BIOS:	
BIOS Type	• Phoenix® AWARD BIOS, Multi-boot BBS 1.0 Compliant4Mb Flash Memory
Special Features	• BIOS HW Monitoring reporting (The values monitored by HW Monitoring chipset)
	• Console Redirection via COM ports
	• Wake On LAN
	• ACPI 1.0 Compliant/ ACPI defined S1, S3, S4, and S5
Environment	
Ambient Temperature	• Operating Temperature: 5ºC to 35ºC
	• Non-operating Temperature: 0ºC to 50ºC
Relative Humidity	• 10-80% operating Humidity at 30º C
Safety Regulations	• FCC, CE, BSMI, CB, Win2000
System Dimention:	• 427.5mm x 521mm x 42.6 mm
Electrical Power Supply	• Single Power Supply 250W

Chapter 2 System Hardware Installation

⚠️ **CAUTION**

Please observe the safety information in chapter "Important Safety Information"
Do not expose the server to extreme environmental conditions. Protect it from dust, humidity, and heat.

Step 2-1: Chassis Removal and Installation

Step 1   Loosen the thumbscrew from the back of the server.

Step 2   Push down the indentation located at two sides of the chassis, and slide toward to remove the top cover.

Step 3   Reverse Step 1, and 2 to replace the chassis cover.
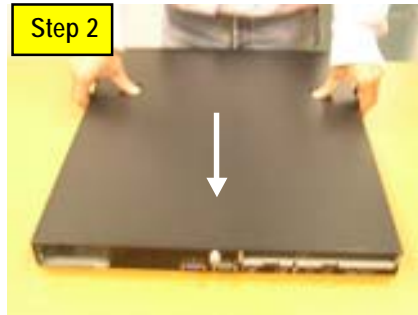
Note: Before installing CPU, you must remove the FAN duct. For FAN duct removal, please see Sub-section 2-7 "**FAN Duct Removal and Installtion**" for detail instruction.

Step 2-2: CPU Installation

Please make sure the CPU type and speed that are supported by the motherboard.

Step 1. Check the CPU pins are not bent. Raise the locking lever next to the socket prior to installing the CPU.

Step 2. The pin 1 location is designated on the CPU by a copper triangle that corresponds to a triangle marking on the socket as shown in Fig. 2.

Step 3. Insert the CPU with the correct orientation. The CPU only fits in one orientation. When CPU is placed into socket properly, push the locking lever back into locked position.
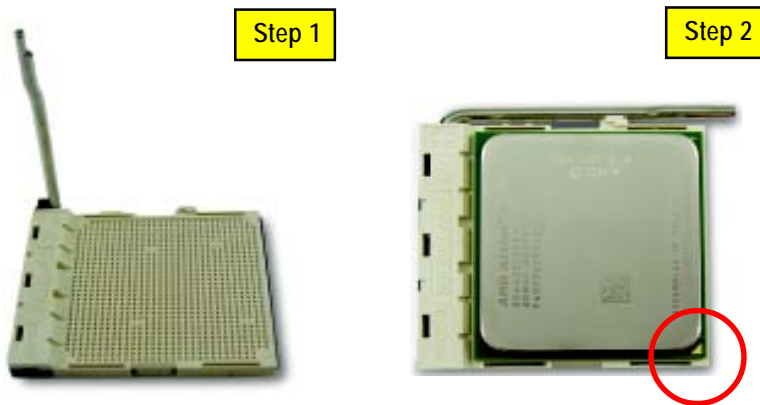
Step 1

Step 2

Step 2-3: Heat Sink Installation

Step 1   Place the Heat Sink on the CPU. Before putting the heat sink on the CPU, please well
          remember to apply the thermal conductivity compound on the CPU.

Step 2   Seat the heat sink in the retention modules with the four screws. Installation completed.

Step 2-4: Memory Installation

Step 1. Unlock a DIMM socket by pressing the retaining clips outwards.

Step 2. Aling a DIMM on the socket such that the notch on the DIMM exactly match the notches in
the   socket.

Step 3. Firmly insert the DIMMinto the socket until the retaining clips snap back in place.

**Step 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.**

Step 5. Reverse the installation steps when you wish to remove the DIMM module.
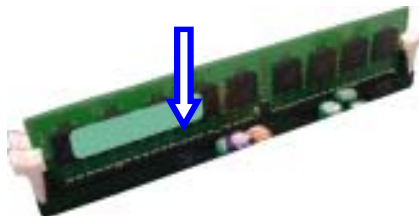
Step 2-5: PCI Expansion Card Installation

GS-R113-RH Series provides expansion riser slots for one PCI 32/33MHz slot and one PCI-E x8 slot. To install the peripheral, please go through the following steps.

Note!! Before installing the PCI expansion card, please check the card size limitation. Size limitation for PCI-X full-height/full-length is 228.5 mm x 91.5 mm; size limitation for Low-Profile Card : 167.5 mm x 56 mm .

Step 1   Loosen the riser bracket screws.

Step 2   Lift the riser bracket slightly, then pull it out from the server chassis.

Step 3   Unlock the screw on the riser bracket to remove the PCI bracket. Align the expansion card with the guiding groove. Slide the expansion card into the slot until the card firmly seats.

Step 4   Align the riser bracket to the system module (see the arrow direction mark 1), and push it to locked position.

Step 5   Reverse Step 1 & 2 to lock the riser bracket firmly. Installation completed.
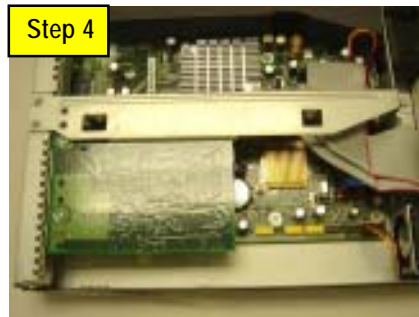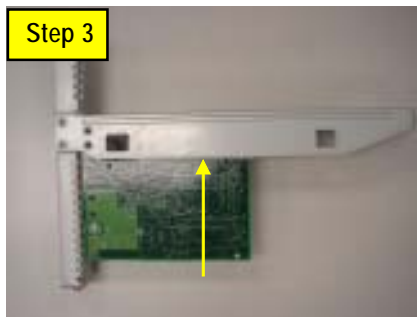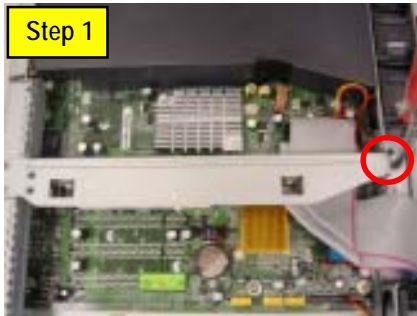
Step 2-6: Hard Disk Drive Installation

GS-R113V-RH

Step 1   Press the release button and pull the blank out of the drive bay.

Step 2   Slide hard disk into blank and secure it with screws

Step 3   To replace the hard drive blank, slide the blank into the bay until it locks into place. Connect cable and power.

Step 4   Reverse step 1, 2, and 3 to complete the HDD installtion.
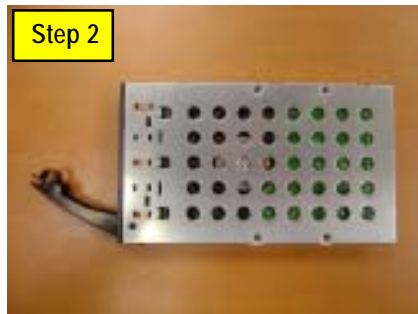
GS-R113L-RH (OEM Model)

Step 1   Lossen the screws securing the hard drive plate.

Step 2   Slide toward to remove the hard drive plate from system.

Step 3   Place hard disk on the plate and lock hard drive with 4 screws.

Step 4   Replace the hard drive plate, slide the blank into the bay until it locks into place.Connect HDD power cable.

Step 5   Reverse step 1, 2, 3 and 4 to complete the HDD installtion.
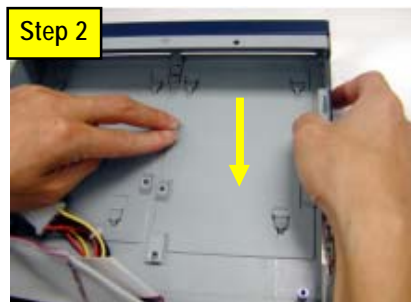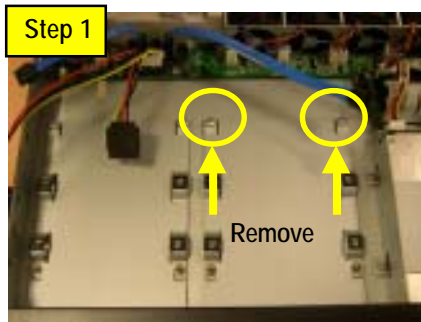
Step 2-7: FAN Duct Removal and Installation

Step 1   Lift up to remove the fan duct.

Step 2   To Install the FAN Duct, just simply place the fan duct on the top of heat sink.

Chapter 3 Appearance of GS-R113-RH

3-1: Front View of GS-R113V-RH
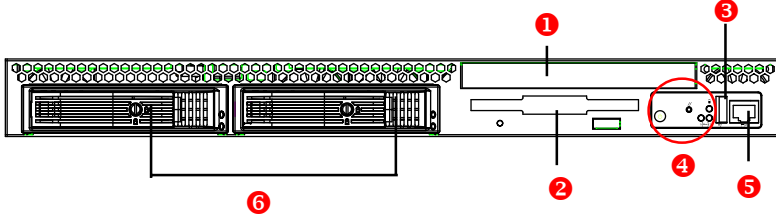
x	Slim Type CD-ROM
y	Standard Floopy
z	USB Connector
{	LEDs
|	RJ45 (For Console Redirection)
}	Easy swap SATA HDDs

3-2: Front View of GS-R113L-RH (OEM Model)
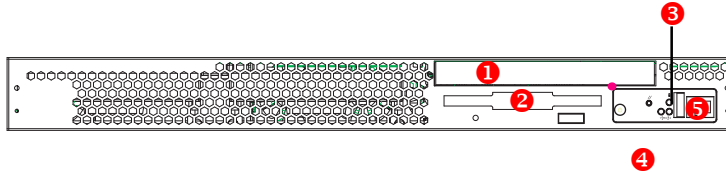
x	Slim Type CD-ROM
y	Standard Floopy
z	USB Connector
{	LEDs
|	RJ45 (For Console Redirection)

3-3: Rear View of GS-R113L-RH/GS-R113V-RH
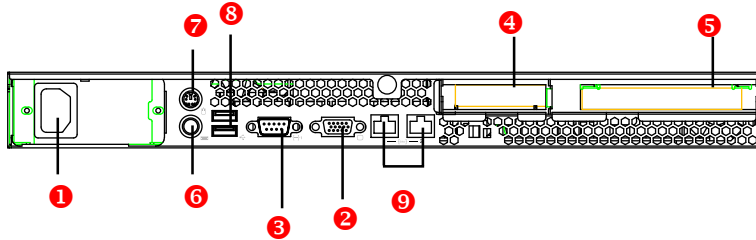
x	Power
y	VGA Port
z	COM Port
{	Low Profile Riser Slot
|	Full-size/Full-length Riser Slot
}	Keyboard Connector
~	Mouse Connector
¡	USB Connectors
¢	LAN 1 & 2 Ports

3-4: Switch and LED Indicators Introduction

Reset BTN HDD

Power/Sleep→

LAN1/2 Activities
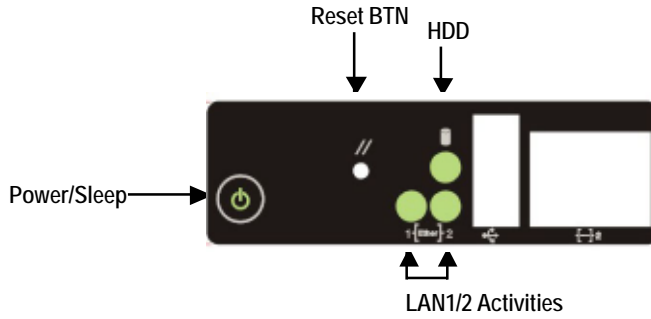
Name	Color	Condition	Description
Power	Green	On	Power On
	Green	Blink	Sleep (S1)
	--	Off	Power Off (S4/S5)
HDD	Green	Blink	Hard Disk Drive Access
	--	Off	No Access and No HDD Fault
LAN1	Green	On	LAN Link / No access
Activity	Green	Blink	LAN access
	--	Off	Idle
LAN2	Green	On	LAN Link / No access
Activity	Green	Blink	LAN access
	--	Off	Idle

NOTE!! To make LAN 2 LED work properly, please follow the instrctions illustrated below:

Step 1. Right click **My Computer** and select **Manage**.
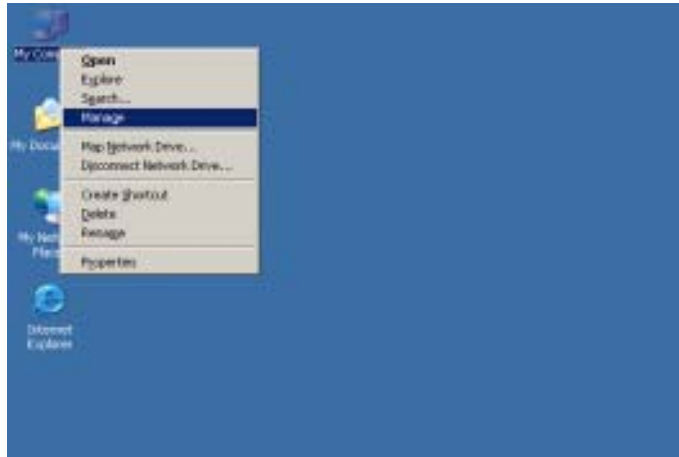
Step 2. Select **Device Manager** from the left window and select Manage.

Step 3. In the right window, right click **Marvell Yukon 88E8056 PCI-E Gigabit Ethernet Controller** and select **Properties.**

Step 4. Select **Wake From Shutdown** in the Property selection list and select **On**, click OK. Configuration is completed.
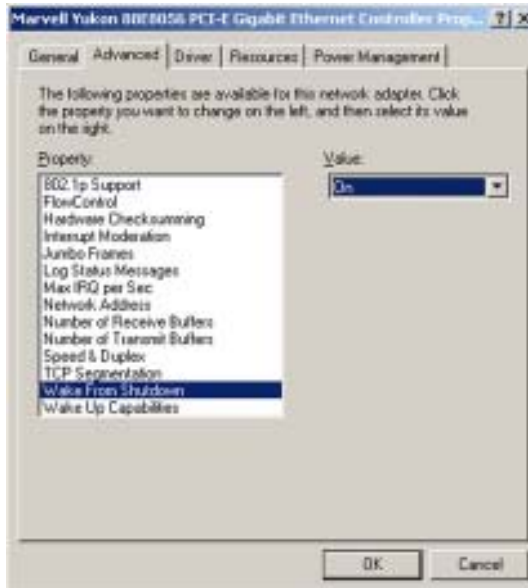
3-5: LAN LED Description

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

NOTE!! To make LAN 2 LED work properly, please see page 21 and 22 for detail instruction.

3-6 : Connector Icon Description

Suggest Icon	Description
▭ Keyboard icon	Keyboard
▢	VGA
Mouse icon	Mouse
1 ─── ┤Ether├ ─── 2	LAN
┤⋯⋯├ 1	Serial Port
USB icon	USB

Chapter 4 Motherboard Layout & Jumper Setting

4-1: GA-3PXSL1-RH Motherboard Components
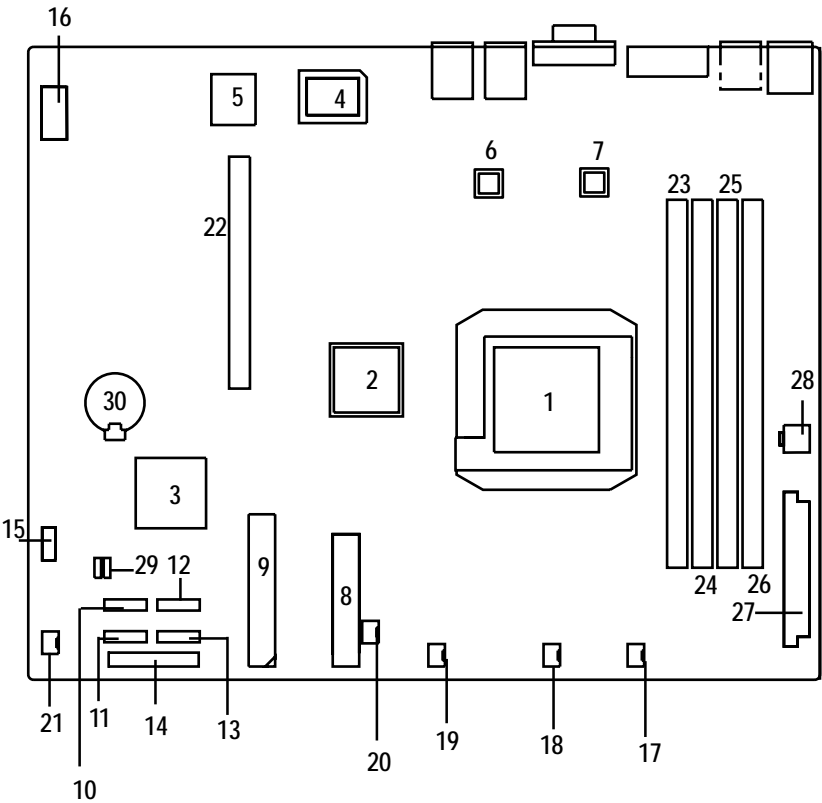
1	AMD Opteron/Socket AM2	**16**	COM2
2	NVIDIA GeForce 6100	**17**	System Fan1
3	NVIDIA nForce 430	**18**	System Fan2
4	ITE 8712F-A	**19**	System Fan3
5	BIOS Flash	**20**	System Fan4
6	Marvel 8056 GbE	**21**	System Fan5
7	Marvel 88E1116 GbE PHY	**22**	Slot for Riser Card
8	Floppy Connector	**23**	DDRA1
9	IDE1 Connector	**24**	DDRB1
10	SATA1	**25**	DDRA2
11	SATA2	**26**	DDRB2
12	SATA3	**27**	Auxiliary Power (ATX1)
13	SATA4	**28**	Auxiliary Power (ATX+12V)
14	Front Panel2	**29**	Jumper block
15	Front USB3	**30**	Battery

4-2: Jumper Setting

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.**
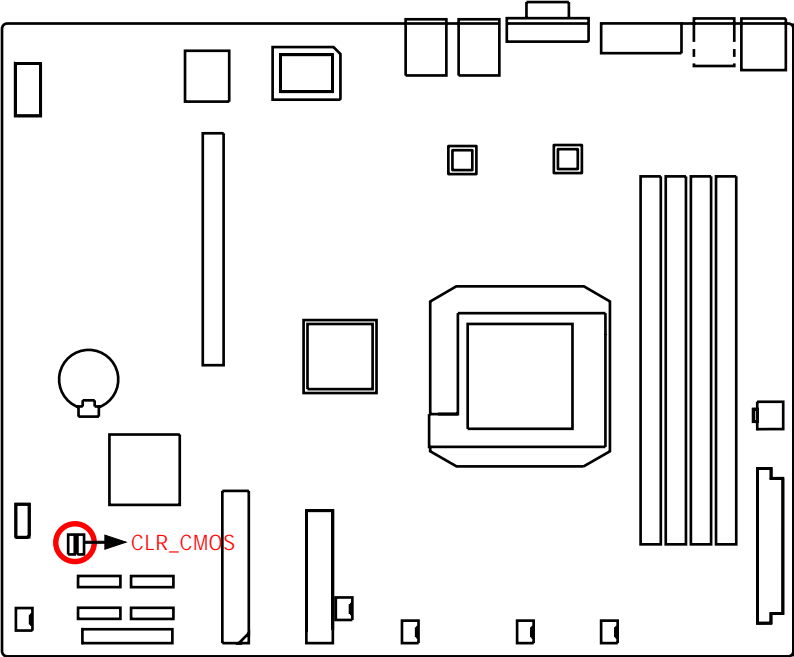
1   1-2 close: Clear CMOS

1   2-3 close: Normal (Default value)

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Chapter 5 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.

ENTERINGSETUP

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

CONTROLKEYS

<↑>	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 AWARD special enhanced features.

      (ex: onboard device enable/disable, power management)

●   **Security**

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

●   **Boot**

      This setup page include all the items of first boot function features.

●   **PC Health Status**

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

●   **Exit**

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

Main

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

Phoenix-Award WorkstationBIOS CMOS Setup Utility					
Main	Advanced	Security	Boot	PC Health	Exit
Date (mm:dd:yy)		Thr. Jan. 29 2006		Item Help	
Time (hh:mm:ss)		23:1:52			
▶ System Information		[Press Enter]			
Drive A		[1.44M, 3.5$^{1/2}$]			
Floppy 3 Mode Support		[Disabled]			
Halt On		[All, But Keyboard]			
x Base Memory		KB			
x Extended Memory		KB			
x Total Memory		KB			
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help					
F5: Previous Values F7: Optimized Defaults					

Figure 1: Main

☞ **Date**

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

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

☞ **Time**

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

Note that "x" indicates Display ONLY

```
┌──────────────────────────────────────────────────────────────────────────┐
│          Phoenix-Award WorkstationBIOS CMOS Setup Utility                  │
├──────────────────────────────────────────────────────────────────────────┤
│ Main     Advanced        Security     Boot    PC Health      Exit          │
├──────────────────────────────────────────────┬───────────────────────────┤
│ System Information                            │   Item  Help              │
├──────────────────────────────────────────────┴───────────────────────────┤
│ ***************   System Information  ***************                      │
│                                                                            │
│ Product Name:          GS-R113L_V                                          │
│ BIOS Version:          F1                                                  │
│ Build Date:            xx-xx-xx                                            │
│ Manufactory:                                                              │
│ Chipset Type:                                                             │
│ LAN1 MAC Address:                                                         │
│ LAN2 MAC Address:                                                         │
│ CPU Core Frequency                                                       │
│ CPU Frequency Ratio                                                      │
│ CPU L1 Cache                                                             │
│ CPU L2 Cache                                                             │
│ ▶ IDE Channel 0 Master       [None]                                       │
│ ▶  IDE Channel 0 Slave       [None]                                       │
│ ▶ IDE Channel 1  Master      [CD-540E]                                    │
│ ▶ IDE Channel 1 Slave        [None]                                       │
│ ▶ IDE Channel 2  Master      [None]                                       │
│ ▶ IDE Channel 3  Master      [None]                                       │
│ ▶ IDE Channel 4  Master      [None]                                       │
│ ▶ IDE Channel 5  Master      [None]                                       │
│                                                                            │
├────────────────────────────────────────────────────────────────────────── │
│ ↑↓→← : Move    Enter: Select +/-/PU/PD: Value  F10: Save   ESC: Exit  F1: General Help │
│            F5: Previous Values   F7: Optimized Defaults                     │
└──────────────────────────────────────────────────────────────────────────┘
```

Figure 1-1: Main

☞ **System Information**

This category includes the information of motherboard, BIOS version, Build Date, Manufactory, relative chipset type, and processors information.

☞ **IDE HDD AutoDetection**

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

☞ **IDE Channel 0~5 Master / Channel 0~1 Slave**

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

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

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

▶ **Access Mode**

This option allows user to set hard drive parameters.

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

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

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

☞ **Drive A**

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

▸▸ None   No floppy drive installed

▸▸ 360K, $5^{1/4}$ in.   5.25 inch PC-type standard drive; 360K byte capacity.

▸▸ 1.2M, $5^{1/4}$ in.   5.25 inch AT-type high-density drive; 1.2M byte capacity

                       (3.5 inch when 3 Mode is Enabled).

▸▸ 720K, $3^{1/2}$ in.   3.5 inch double-sided drive; 720K byte capacity

▸▸ 1.44M, $3^{1/2}$ in.   3.5 inch double-sided drive; 1.44M byte capacity.

▸▸ 2.88M, $3^{1/2}$ in.   3.5 inch double-sided drive; 2.88M byte capacity.

☞ **Floppy 3 Mode Support**

This is required to support older Japanese floppy drives. Floppy 3 Mode Support will allow reading and writing of 1.2MB (as opposed 1.44MB) on a 3.5-inch diskette.

▸▸ Disabled   Normal Floppy Drive. (Default setting)

▸▸ Drive A   Drive A is 3 mode Floppy Drive.

▸▸ Drive B   Drive B is 3 mode Floppy Drive.

▸▸ Both   Drive A & B are 3 mode Floppy Drives.

☞ **Halt On**

This function allows system to halt when an error is detected during Power-On-Self-Test.

▸▸ NO Errors   The system boot will not stop for any error that may be detected and you will be prompted.

▸▸ All Errors   Whenever the BIOS detects a non-fatal error the system boot will be stopped.

▸▸ All, But Keyboard   The system boot will not stop for all errors except a keyboard error. (Default setting)

▸▸ All, But Diskette   The system boot will not stop for all errors except a disk error.

▸▸ All, But Disk/Key   The system boot will not stop for all errors except keyboard and disk errors.

☞ **Base Memory**

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

☞ **Extended Memory**

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

☞ **Total Memory**

The POST of the BIOS will determine the amount of total memory installed in the system.

Advanced

Phoenix-Award WorkstationBIOS CMOS Setup Utility		
Main Advanced Security Boot PC Health Exit		
▶ Advanced BIOS Feature	Item Help	
▶ Advanced Chipset		
▶ Integrated Peripherals		
▶ Power Management Setup		
▶ PnP/PCI Configuration		
↑↓→← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help		
F5: Previous Values F7: Optimized Defaults		

Figure 2: Advanced

Advanced BIOS Feature

Phoenix-Award WorkstationBIOS CMOS Setup Utility		
Advanced		
Advanced BIOS Feature		Item Help
Quick Power On Self Test	[Enabled]	
Boot Up Floppy Seek	[Disabled]	
Boot Up Num-Lock Status	[On]	
x APIC Mode	Enabled	
Full Screen LOGO Show	[Disabled]	
Summary Screen Show	[Enabled]	
DMI Event Log	[Enabled]	
Clear All Event Log	[No]	
View DMI Event Log	[Enter]	
Mark DMI events Log as Read	[Enter]	
x Event Log Capacity	Space Available	
x Event Log Vaildity	Vaild	
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help		
F5: Previous Values F7: Optimized Defaults		

Figure 2-1: Advanced BIOS Features

☞**Quick Power On Self Test**

This category speeds up Power On Self Test (POST) after you power on the computer. If it is set to Enable, BIOS will shorten or skip some check items during POST.

▶Enabled   Enables quick POST.(Default setting)

▶Disabled   Normal POST.

☞Boot Up Floppy Seek

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

▸▸Enabled   BIOS searches for floppy disk drive to determine it is 40 or 80 tracks. Note that BIOS can not tell from 720K, 1.2M or 1.44M drive type as they are all 80 tracks. (Default value)

▸▸Disabled   BIOS will not search for the type of floppy disk drive by track number. Note that there will not be any warning message if the drive installed is 360K.

☞Boot Up Num-Lock Status

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

▸▸ Auto   System auto assign. (Default setting)

▸▸ Enabled   Enable NumLock.

▸▸ Disabled   Disable this function.

☞Full Screen Logo Show

▸▸ Enabled   Show Full Logo when system boot.

▸▸ Disabled   Disable this function. (Default setting)

☞Summary Screen Show

▸▸ Enabled   Show Summary screen when system boot. (Default setting)

▸▸ Disabled   Disable this function.

☞DMI Event Log

▸▸ Enabled   Store POST error message to the DMI Event Log. (Default setting)

▸▸ Disabled   Disable this function.

☞Clear all DMI Event Log

▸▸ Yes   System will clear DMI event logs at next POST stage, and set this item to [No] automatically.

▸▸ No   Do not clear DMI event logs at next POST stage. (Default setting)

View DMI Event Log

      Press [Enter] to view all DMI event logs.

Mark DMI Events Log as Read

      This option allows user to clear all DMI Event Logs immediately. Press [Enter] will pop up a confirmation window. Hit [Y] and [Enter] to clear all DMI event logs immediately.

Event Log Capacity

      This item displays the information of Event Log Capacity.

Events Log Vaildity

      This item displays the information of Event Log Vaildity.

Advanced Chipset

Phoenix-Award WorkstationBIOS CMOS Setup Utility	
Advanced	
Advanced Chipset	Item Help
OnChip VGA [Enabled]	
Frame Buffer Size [64M]	
PMU [Auto]	
▶ DRAM Configuration [Press Enter]	
DRAM ECC enable [Disabled]	
x DRAM MCE enable [Disabled]	
System BIOS Cacheable [Disabled]	
↑↓→← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help	
F5: Previous Values F7: Optimized Defaults	

Figure 2-2: Advanced Chipset

☞ **OnChip VGA**

    ▶Enabled   Enable Onboard VGA chipset. (Default setting)

    ▶Disabled   Disable this device.

☞ **Frame Buffer Size**

    This item allows user to select the frame buffer size.

    ▶Options   16M, 32M, 64M, 128MB, 256MB.

☞ **PMU**

    ▶Auto   Auto detect (Default value)

    ▶Disabled   Disable this device.

☞ **DRAM ECC enable**

    ▶Enabled   Enable memory ECC function

    ▶Disabled   Disabled this function. (Default setting)

☞ DRAM MCE enable

    ▶ Enabled   Enable memory MCE function

    ▶ Disabled   Disabled this function. (Default setting)

☞ System BIOS Cacheable

    ▶ Enabled   Enable System BIOS Cacheable function.

    ▶ Disabled   Disabled this function. (Default setting)

Integrated Peripherals

Phoenix-Award WorkstationBIOS CMOS Setup Utility	
Advanced	
Integrated Peripherals	Item Help
▶ IDE Function Setup	
▶ RAID Config	
OnChip USB [V1.1+V2.0]	
USB Memory Type [SHADOW]	
USB Keyboard Support [Disabled]	
USB Mouse Support [Disabled]	
MAC Lan [Auto]	
MAC Media Interface [Pin Strap]	
2nd Lan Controller [Auto]	
IDE HDD Block Mode [Enabled]	
Onboard FDC Controller [Enabled]	
Onboard Serial Port 1 [3F8,IRQ4]	
Onboard Serial Port 2 [2F8,IRQ3]	
UART Mode Select [Normal]	
x UR2 Duplex Mode Half	
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help	
F5: Previous Values F7: Optimized Defaults	

Figure 2-3: Integrated Peripherals

☞IDE Function Setup

☞OnChip IDE Channel 0

    ▸Enabled   Enable onboard Onchip IDE Channel 0. (Default setting)

    ▸Disabled   Disable this function.

☞Primary Master PIO

    ▸Auto   Auto detect the IDE secondary master PIO. (Default setting)

    ▸Mode 0   Select Mode 0 as IDE secondary master PIO.

    ▸Mode 1   Select Mode 1 as IDE secondary master PIO.

    ▸Mode 2   Select Mode 2 as IDE secondary master PIO.

    ▸Mode 3   Select Mode 3 as IDE secondary master PIO.

    ▸Mode 4   Select Mode 4 as IDE secondary master PIO.

☞Primary Slave PIO

    ▸Auto   Auto detect the IDE secondary slave PIO. (Default setting)

    ▸Mode 0   Select Mode 0 as IDE secondary slave PIO.

    ▸Mode 1   Select Mode 1 as IDE secondary slave PIO.

    ▸Mode 2   Select Mode 2 as IDE secondary slave PIO.

    ▸Mode 3   Select Mode 3 as IDE secondary slave PIO.

    ▸Mode 4   Select Mode 4 as IDE secondary slave PIO.

☞Primary Master UDMA

    ▸Auto   Auto detect the IDE Primary Master Ultra DMA in the specified IDE

                       channel. (Default setting)

    ▸Disabled   Disable this function.

☞Primary Slave UDMA

    ▸Auto   Auto detect the IDE Primary Slave Ultra DMA in the specified IDE channel.

                       (Default setting)

    ▸Disabled   Disable this function.

OnChip IDE Channel 1

    ▸Enabled   Enable onboard Onchip IDE Channel 0. (Default setting)

    ▸Disabled   Disable this function.

Secondary Master PIO

    ▸Auto   Auto detect the IDE secondary master PIO. (Default setting)

    ▸Mode 0   Select Mode 0 as IDE secondary master PIO.

    ▸Mode 1   Select Mode 1 as IDE secondary master PIO.

    ▸Mode 2   Select Mode 2 as IDE secondary master PIO.

    ▸Mode 3   Select Mode 3 as IDE secondary master PIO.

    ▸Mode 4   Select Mode 4 as IDE secondary master PIO.

Secondary Slave PIO

    ▸Auto   Auto detect the IDE secondary slave PIO. (Default setting)

    ▸Mode 0   Select Mode 0 as IDE secondary slave PIO.

    ▸Mode 1   Select Mode 1 as IDE secondary slave PIO.

    ▸Mode 2   Select Mode 2 as IDE secondary slave PIO.

    ▸Mode 3   Select Mode 3 as IDE secondary slave PIO.

    ▸Mode 4   Select Mode 4 as IDE secondary slave PIO.

Secondary Master UDMA

    ▸Auto   Auto detect the IDE Primary Master Ultra DMA in the specified IDE

                      channel. (Default setting)

    ▸Disabled   Disable this function.

Secondary Slave UDMA

    ▸Auto   Auto detect the IDE Primary Slave Ultra DMA in the specified IDE channel.

                      (Default setting)

    ▸Disabled   Disable this function.

☞IDE DMA transfer access

▸ Enabled   Enable IDE DMA transfer access. (Default setting)

▸ Disabled   Disable this function.

☞Serial-ATA Controller

▸ All Enabled   Enable all serial device controllers. (Default setting)

▸ Disabled   Disable this device.

▸ SATA-1   Only enable SATA-1 device.

☞IDE Prefetch Mode

▸ Enabled   Enable IDE Prefetch Mode. (Default setting)

▸ Disabled   Disable this function.

⟲RAID Enable

    ▸▸Enabled   Enable RAID function.

    ▸▸Disabled   Disable this function. (Default setting)

⟲SATA1 Primary RAID

    ▸▸Enabled   Enable SATA1 Primary RAID function.

    ▸▸Disabled   Disable this function. (Default setting)

⟲SATA1 Secondary RAID

    ▸▸Enabled   Enable SATA1 Secondary RAID function.

    ▸▸Disabled   Disable this function. (Default setting)

⟲SATA2 Primary RAID

    ▸▸Enabled   Enable SATA1 Primary RAID function.

    ▸▸Disabled   Disable this function. (Default setting)

⟲SATA2 Secondary RAID

    ▸▸Enabled   Enable SATA1 Secondary RAID function.

    ▸▸Disabled   Disable this function. (Default setting)

☞OnChip USB

> ▶Options   V1.1+V2.0, V1.1, Disabled.
>
> Default value is V1.1+V2.0

☞USB Memory Type

> ▶Options   SHADOW, Base Memory (640K).

☞USB Keyboard Support

> ▶Enabled   Enable USB Keyboard Support.
>
> ▶Disabled   Disable USB Keyboard Support. (Default setting)

☞USB Mouse Support

> ▶Enabled   Enable USB Mouse Support.
>
> ▶Disabled   Disable USB Mouse Support. (Default setting)

☞MAC LAN

> ▶Auto   Auto detect onboard H/W LAN. (Default setting)
>
> ▶Disabled   Disable this function.

☞MAC Media Interface

This BIOS feature determines which MAC interface is used to connect the Gigabit MAC to the external PHY devices.

> ▶Pin Strap   When set to Pin Strap, the Gigabit MAC will automatically
>
> determine the right interface by querying the interface pins.
>
> (Default setting)
>
> ▶MII   When set to MII, the Gigabit MAC is set to use the MII which will be
>
> connected to Fast Ethernet PHY devices. This only allows transfers of
>
> up to 100Mbps.
>
> ▶RGMII   When set to RGMII, the Gigabit MAC is set to use the RGMII which
>
> will be connected to reduced pin-count Gigabit PHY devices. This
>
> allows transfers of up to 1000Mbps.

☞2nd LAN Controller

▸Auto   Auto detect onboard second H/W LAN. (Default setting)

▸Disabled   Disable this function.

☞IDE HDD Block Mode

The IDE HDD Block Mode feature speeds up hard disk access by transferring data from multiple sectors at once instead of using the old single sector transfer mode. When you enable it, the BIOS will automatically detect if your hard disk supports block transfers and configure the proper block transfer settings for it. Up to 64KB of data can be transferred per interrupt with IDE HDD Block Mode enabled.

▸Enabled   Enable IDE HDD Block Mode. (Default setting)

▸Disabled   Disable this function.

☞Onboard FDC Controller

▸Enabled   Select "enabled" to active Onboard Floppy Controller. (Default setting)

▸Disabled   Disable this function.

☞Onboard Serial Port 1

▸Auto   BIOS will automatically setup the port 1 address.

▸3F8/IRQ4   Enable onboard Serial port 1 and set IO address to 3F8. (Default setting)

▸2F8/IRQ3   Enable onboard Serial port 1 and set IO address to 2F8.

▸3E8/IRQ4   Enable onboard Serial port 1 and set IO address to 3E8.

▸2E8/IRQ3   Enable onboard Serial port 1 and set IO address to 2E8.

▸Disabled   Disable onboard Serial port 1.

☞Onboard Serial Port 2

▸Auto   BIOS will automatically setup the port 2 address.

▸3F8/IRQ4   Enable onboard Serial port 2 and set IO address to 3F8.

▸2F8/IRQ3   Enable onboard Serial port 2 and set IO address to 2F8. (Default setting)

▸3E8/IRQ4   Enable onboard Serial port 2 and set IO address to 3E8.

▸2E8/IRQ3   Enable onboard Serial port 2 and set IO address to 2E8.

▸Disabled   Disable onboard Serial port 2.

⌐UART Mode Select

••Normal   Using as standard serial port. (Default setting)

••IrDA Using as IR and set to IrDA mode.

••ASKIR   Using as IR and set to ASKIR mode.

••SCR Using as Smart Card Interface.

⌐UR2 Duplex Mode

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

••Full   IR function Duplex Full.

••Half   IR function Duplex Half.

⌐Onboard Parallel Port

••378/IRQ7   Enable onboard LPT port and set address to 378/IRQ7.

                        (Default setting)

••278/IRQ5   Enable onboard LPT port and set address to 278/IRQ5.

••3BC/IRQ7   Enable onboard LPT port and set address to 3BC/IRQ7.

••Disabled   Disable onboard LPT port.

Power Management Setup

Phoenix-Award WorkstationBIOS CMOS Setup Utility	
Advanced	
Power Management	Item Help
ACPI Function	[Enabled]	
ACPI Suspend Type	[S1,S3]	
Power Management	[User Define]	
Video off Method	[DPMS Support]	
HDD Power Down	[Disabled]	
HDD Down In Suspend	[Disabled]	
Soft-off by PBNT	[Instant-off]	
AC Back	[Off]	
WOL (PME#) From Soft -Off	[Disabled]	
WOR (RI#) From Soft -Off	[Disabled]	
Power-On by Alarm	[Disabled]	
x Day of Moth Alarm	0	
x Time (hh:mm:ss) Alarm	0:0:0	
↑↓→← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help	
F5: Previous Values F7: Optimized Defaults	

Figure 2-4: Power Management

☞ **ACPI Function**

    ▸Enabled   Enable ACPI function. (Default setting)

    ▸Disabled   Disable this function.

☞ **ACPI Suspend Type**

    ▸S1(POS)   Set ACPI suspend type to S1.

    ▸S3(STR)   Set ACPI suspend type to S3.

    ▸S1, S3   Set ACPI suspend type to S1&S3. (Default setting)

☞ **Soft-off by PBTTN**

    ▸Instant-off   Press power button then Power off instantly. (Default setting)

    ▸Delay 4 Sec.   Press power button 4 sec to Power off. Enter suspend if button is pressed less than 4 sec.

☞ **WOL (PME#) From Soft-Off**

    ▸Disabled   Disable Wake Up On LAN and PME wakeup function. (Default setting)

    ▸Enabled   Enable Wake Up On Ring function.

☞ **WOR (RI#) From Soft-off**

    ▸Disabled   Disable Wake Up On Ring function. (Default setting)

    ▸Enabled   Enable Wake Up On Ring function.

☞ **Power -On by Alarm**

You can set "Power -On by Alarm" item to enabled and key in Data/time to power on system.

    ▸Disabled   Disable this function. (Default setting)

    ▸Enabled   Enable alarm function to POWER ON system.

If Power on by Alarm Lead To Power On is Enabled.

Date (of Month) Alarm :   Everyday, 0~31 (0 indicates repeat daily)

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

PnP/PCI Configuration

Phoenix-Award WorkstationBIOS CMOS Setup Utility	
Advanced	
PnP/PCI Configuration	Item Help
Init Display First [PCIEx]	
Reset Configuration Data [Disabled]	
Resource Controller By [Auto (ESCD)]	
x IRQ Resource	
PCI VGA Palette Snoop [Disabled]	
***** PCI Express relative items *****	
Maximum Payloads Size [4096]	
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help	
F5: Previous Values F7: Optimized Defaults	

Figure 2-5: PnP/PCI Configuration

☞ **Init Display First**

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

▶ PCIEx   Set Init Display First to PCI Express Slot. (Default setting)

▶ PCI Slot   Set Init Display First to PCI Slot.

☞ **Reset Configuration Data**

▶ Yes   Clear the Extended System Configuration Data (ESCD) area.

▶ No   Disable this function. (Default setting)

☞Resource Controller By

This BIOS items provides function for configuring all of the boot and Plug & Play compatible devices. Normally, user should set this items Auto, then the BIOS can automatically assign the IRQs and DMA channels. All the IRQ and DMA assignment fields should disappear as a result.

But if you are having problems assigning the resources automatically via the BIOS, you can select Manual to reveal the IRQ and DMA assignment fields. Then you can assign each IRQ or DMA channel to either Legacy ISA or PCI/ISA PnP devices.

▶▶Options   Auto (ESCD), Manual. Default setting is Auto (ESCD).

☞PCI VGA Palette Snoop

This option is only useful if you use an MPEG card or an add-on card that makes use of the graphics card's Feature Connector. It corrects incorrect color reproduction by "snooping" into the graphics card's framebuffer memory and modifying (synchronizing) the information delivered from the graphics card's Feature Connector to the MPEG or add-on card. It will also solve the problem of display inversion to a black screen after using the MPEG card.

▶▶Enabled   Enable PCI VGA Palette Snoop.

▶▶Disabled   Disable this function. (Default setting)

☞Maximum Payloads Size

This option provides function for user to set the maximum TLP payloads size for the PCI Express devices. The unit is "byte".

▶▶Options   128, 256, 512, 1024, 2048, 4096.

Security

Phoenix-Award WorkstationBIOS CMOS Setup Utility					
Main	Advanced	Security	Boot	PC Health	Exit
Set Supervisor Password				Item Help	
Set User Password					
Supervisor Password Status		Not Installed			
User Password Status		Not Installed			
Security Option		[Setup]			
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help					
F5: Previous Values F7: Optimized Defaults					

Figure 3: Security

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

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

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

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

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

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

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

☞ **Security Option**

Select whether the password is required every time when the system boots or only when user enter the setup.

Boot

Phoenix-Award WorkstationBIOS CMOS Setup Utility		
Main Advanced Security Boot PC Health Exit		
▶ Removable Device Priority	Item Help	
▶ Hard Disk Boot Priority		
▶ CD-ROM Boot Priority		
▶ Network Boot Priority		
First Boot Device [CD-ROM]		
Second Boot Device [Removable]		
Third Boot Device [Hard Disk]		
Boot Other Device [Enabled]		
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help		
F5: Previous Values F7: Optimized Defaults		

Figure 4: 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.

☞ Removable Device / Hard Drive / CD-ROM Drive/Network Boot Priority

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

☞ First/ Second / Third Boot Device

These three fields determines which first/second/third devices the system attempt to boot from after **BIOS Post** completed. Press Enter on each item to determine boot device.

PC Health

Phoenix-Award WorkstationBIOS CMOS Setup Utility	
Main Advanced Security Boot PC Health Exit	
+12V	Item Help
DDR 1.8V	
3VDUAL	
Voltage Battery	
System Temperature1	
System Temperature2	
CPU Temperature	
SYS Fan 1 Temperature	
SYS Fan 2 Temperature	
SYS Fan 3 Temperature	
SYS Fan 4 Temperature	
Fan Control Mode [Depend Pn CPU Temp]	
↑↓→← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help F5: Previous Values F7: Optimized Defaults	

Figure 5: PC Health

☞ **Voltage: +12V/ DDER 1.8V/ 3VDUAL/ Voltage Battery**

    ▸▸Detect system's voltage status automatically.

☞ **CPU /System 1/ System 2 Temperature**

    ▸▸Display the current CPU temperature, System1 & 2 ambient temperature.

☞ **CPU SYS 1/2/3/4 FAN Speed (RPM)**

    ▸▸Display the current CPUs and System 1/23/4 FAN speed.

☞ **Fan Control Mode**

    ▸▸Depend om CPU Temp   Control bt CPU temperature. (Default setting)

    ▸▸Control By CPU&SYS1   Control by CPU and System 1 temperature.

Exit

Phoenix-Award WorkstationBIOS CMOS Setup Utility					
Main	Advanced	Security	Boot	PC Health	Exit
Load Optimized Defaults				Item Help	
Save & Exit Setup					
Exit Without Saving					
↑↓→←: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help					
F5: Previous Values F7: Optimized Defaults					

Figure 7: Exit

☞ **Load Optimized Defaults**

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

Load Optimal Defaults? ((Y/N) **Y**
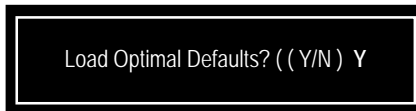
☞ **Save & Exit Setup**

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

Type "N" will return to Setup Utility.

☞ **Exit Without Saving**

Type "Y" will abandon all data and quit without saving.

Type "N" will return to Setup Utility.

Chapter 6   Application Driver Installation

A.   NVDIA Chipset 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, **Click** on "nVDIA Chipset 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.

1. Autorun

2. InstallShield Wizard Welcome Window

2. Click "Next" to start the installation

3. Select Features

3. Select the feature setup that you want to install. And click "Next".
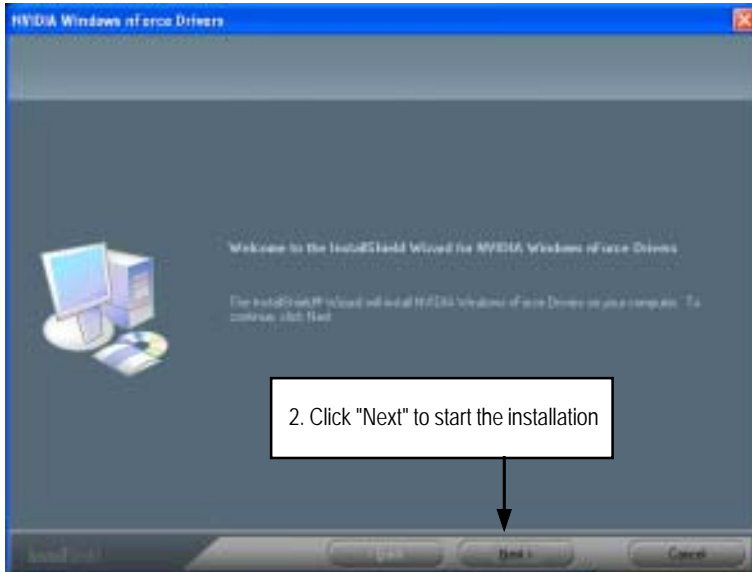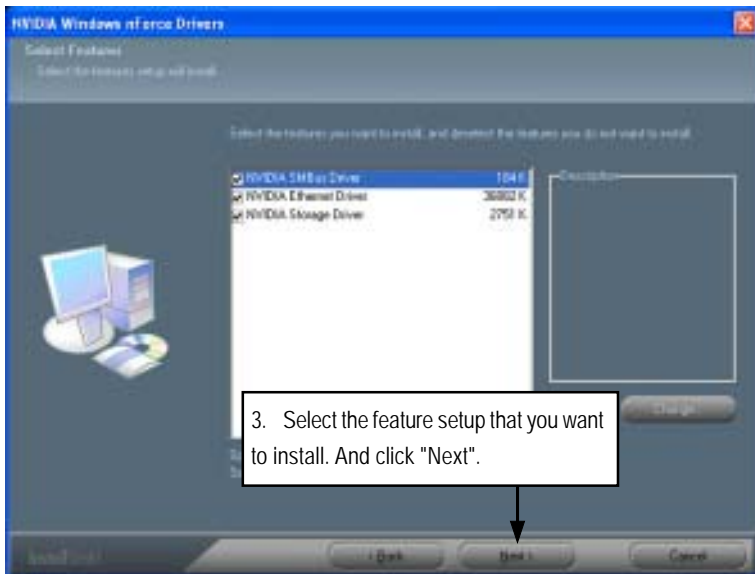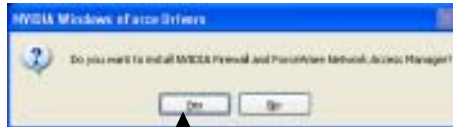
4. **NVDIA IDE SW Driver Information**
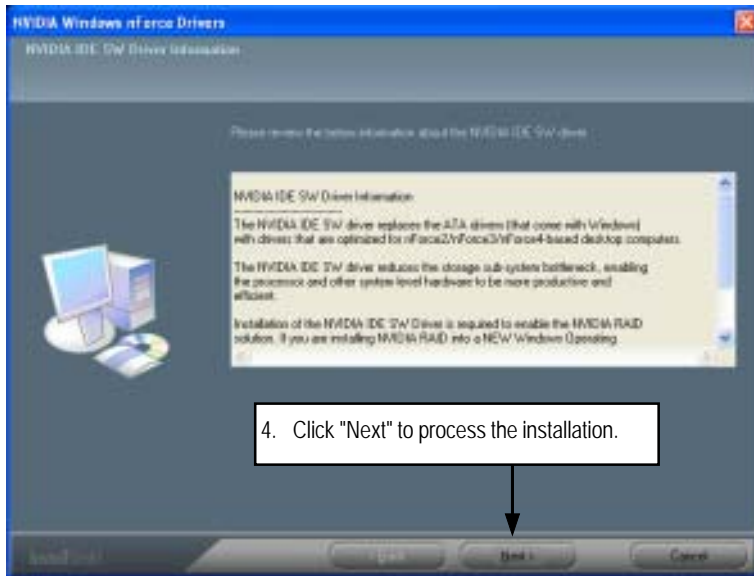
4. Click "Next" to process the installation.
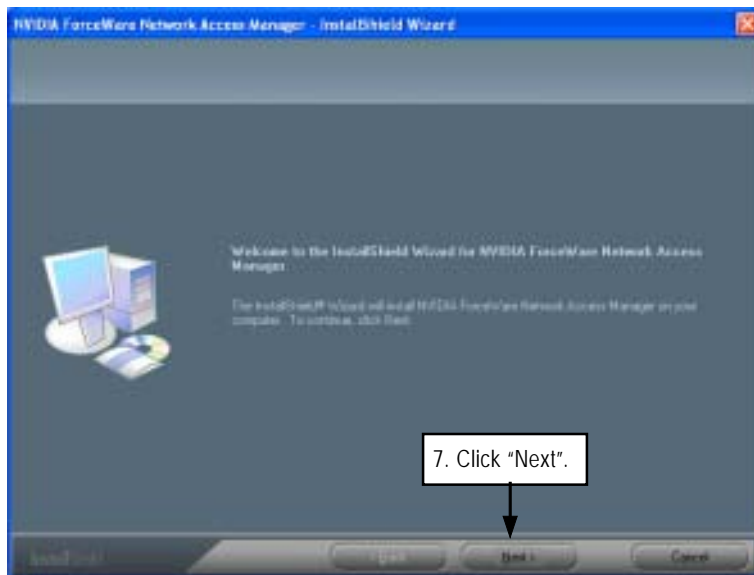
5. **IDE SW Driver Installation Confirmation Dialog**
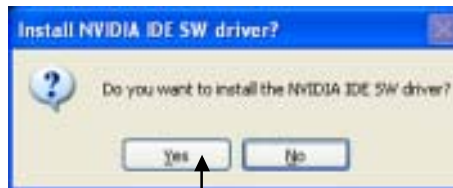
5. Click "Yes".

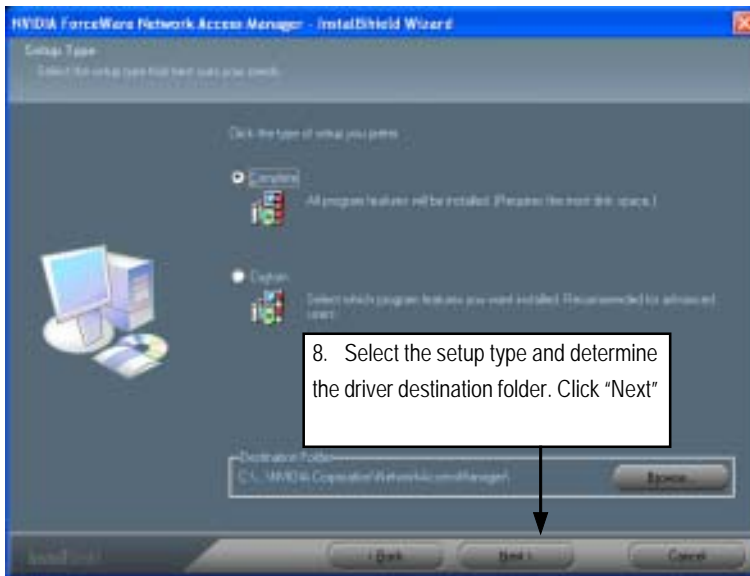**6. Firewall and ForceWare Network Access Manager Installation Confirmation Dialog**

6. Click "Yes".
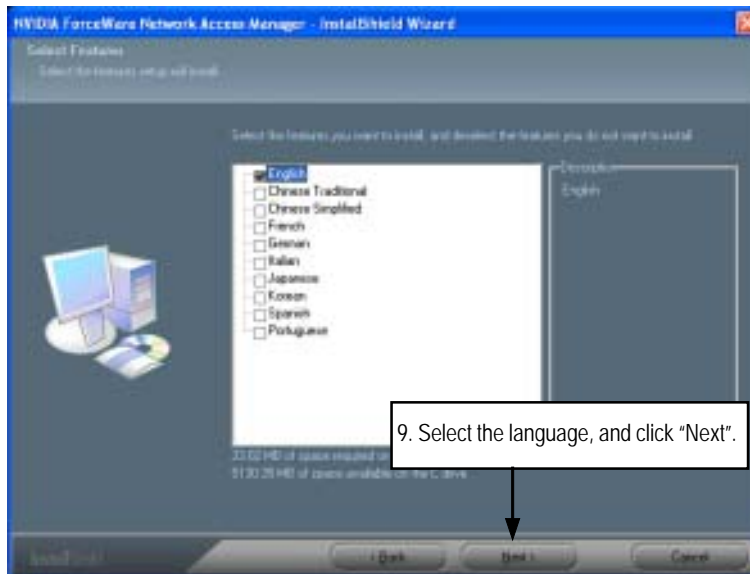
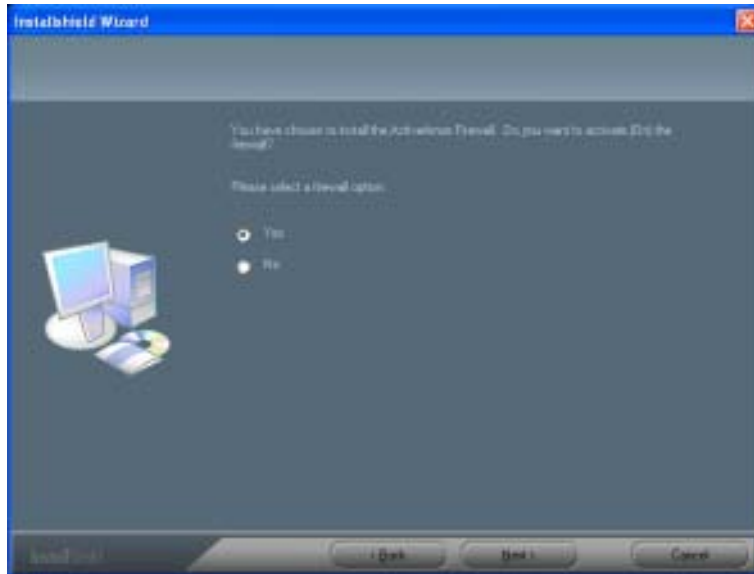**7. Network Access Manager Installation**

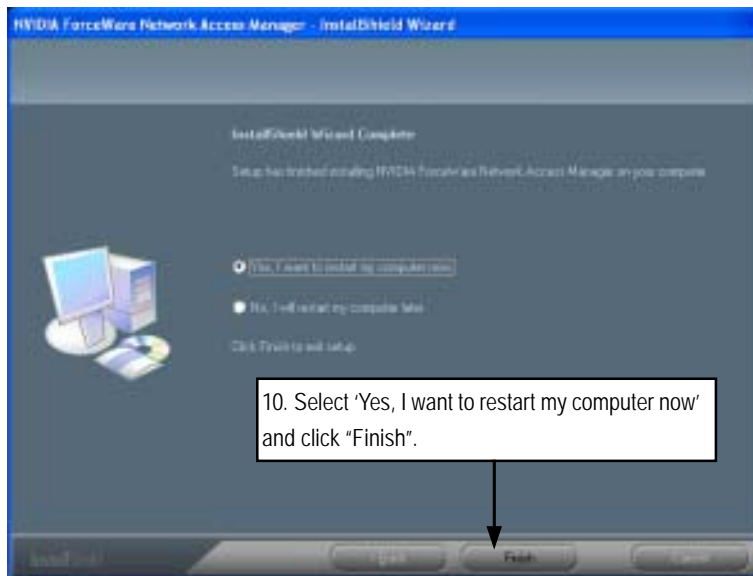7. Click "Next".

8. Network Access Manager Setup Type Selection

8. Select the setup type and determine the driver destination folder. Click "Next"

9. Network Access Manager Installation Language Preference

9. Select the language, and click "Next".

10. ActiveAmor FireWall Installation

11. Installation Complete. Restart Computer

10. Select 'Yes, I want to restart my computer now' and click "Finish".

B. nVIDIA 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 the installation guide. If not, please double click the CD-ROM device
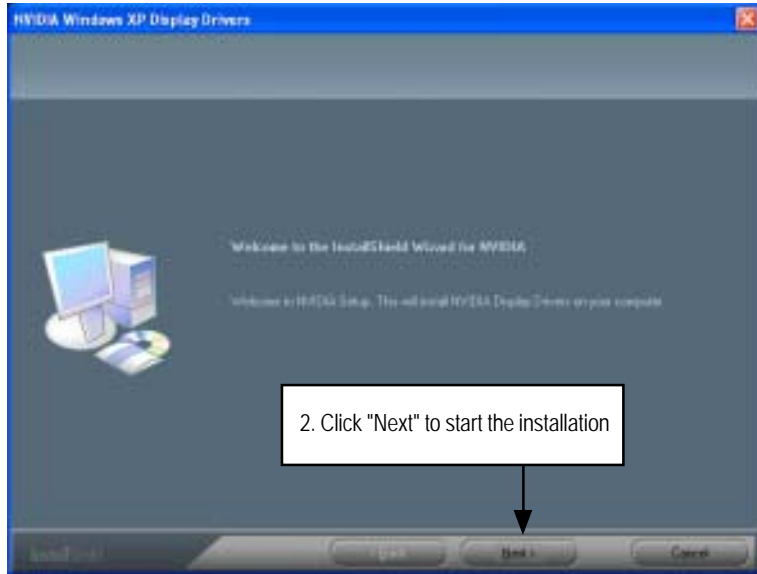icon in "My computer", and execute the setup.exe.

Installation Procedures:

1. The CD auto run program starts, **Click** on "nVIDIA 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.

1. Autorun

2. **InstallShield Wizard Welcom Window**

2. Click "Next" to start the installation

3. **Installaiton Wizard Completed**

3. Select 'Yes, I want to restart my computer now' and click "Finish".

C.   Marvell 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 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, **Click** on "Marvell LAN Driver" to start the installation.

2. Then, a series of installation wizards appear. Follow up the wizards to install the drivers.

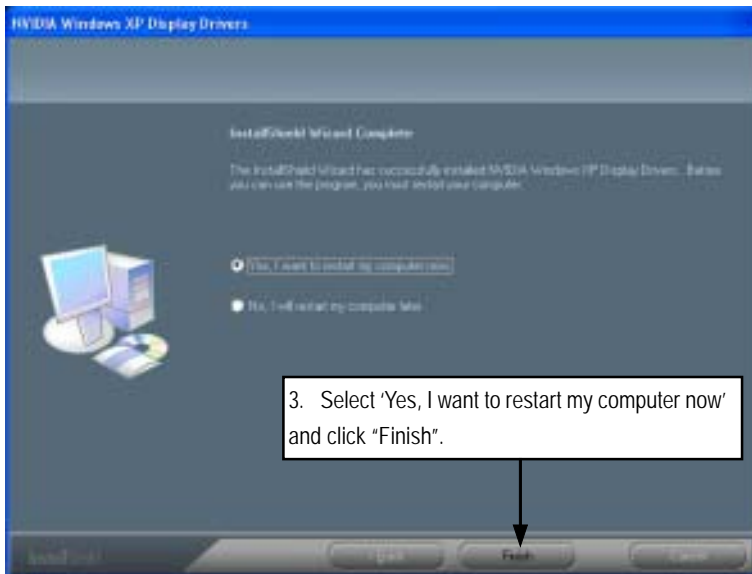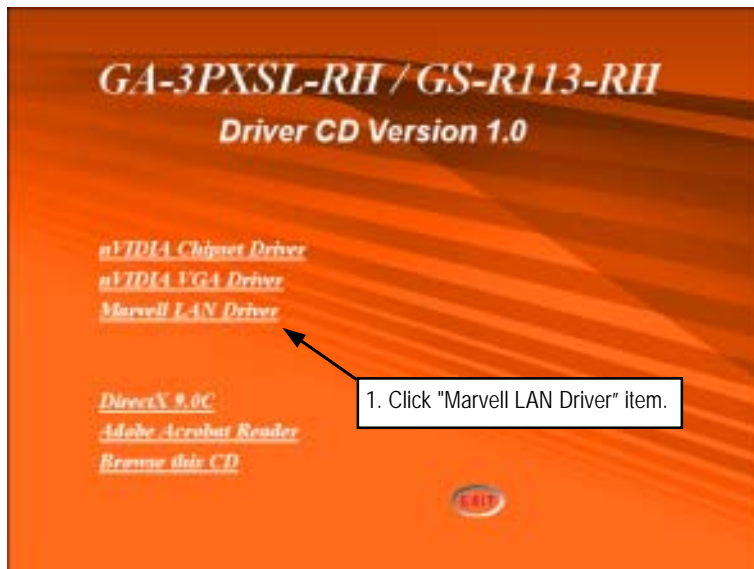3.Setup completed, click "Finish" to restart your computer.

1.   Autorun

2. InstallShield Wizard Welcome Window

3. License Agreement

4. Ready to Install the Program

4. Click "Install" to start the installation

5. Installaiton Wizard Completed

4. Click "Finish". Installation Completed

D.   DirectX 9.0 Driver Installation

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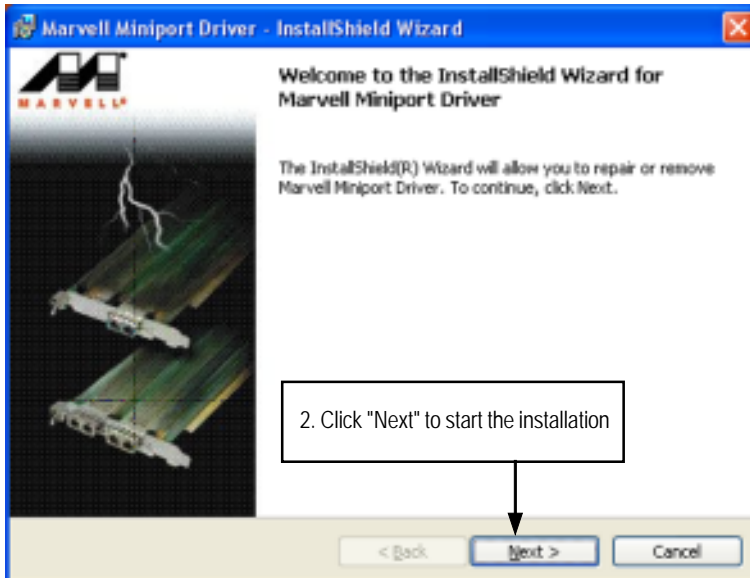icon in "My computer", and execute the setup.exe.

Installation Procedures:

1. The CD auto run program starts, **Double click** on "Directx9.0" to start the installation.

2. Then, a series of installation wizards appear. Follow up the wizards to install the drivers.

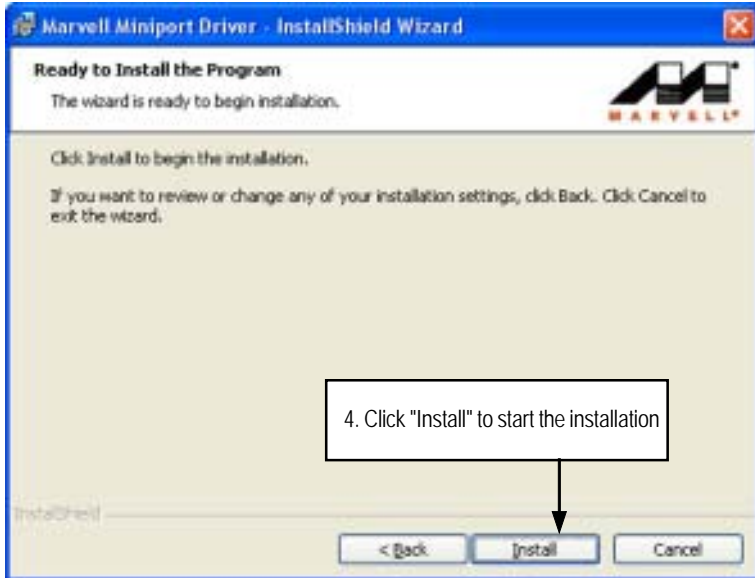3.Setup completed, click "Finish" to restart your computer.

1. Autorun

2. License Agreement

2. Select "I accept the agreement andclick "Next" to process the installation.

3. Start Installaiton

3. Click "Next" to start the installation .

4. Installaiton Wizard completed

Installing Microsoft(R) DirectX(R)

Restart Computer

To apply the changes, DirectX setup needs to restart your machine.

Please save your work and then close all applications before continuing.

4. Click "Finish". Installation complete.

< Back   Finish   Cancel
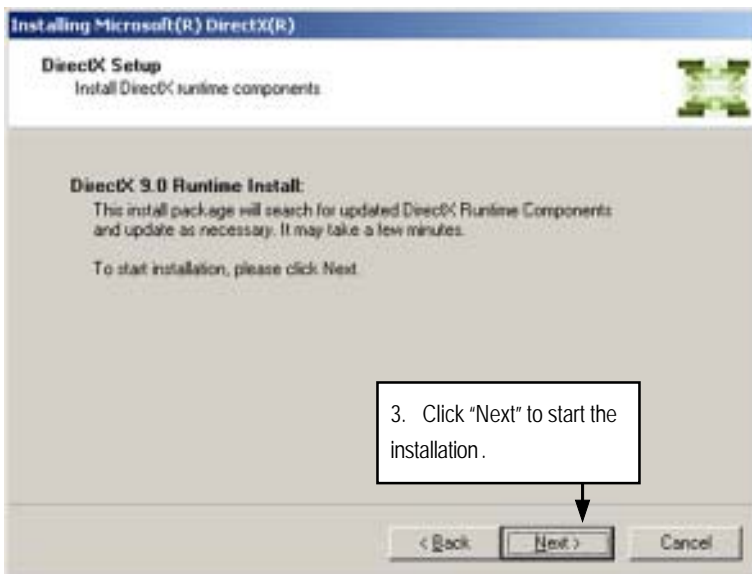
Chapter 7 Appendix

7-1: 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
ZCR	Zero Channel RAID