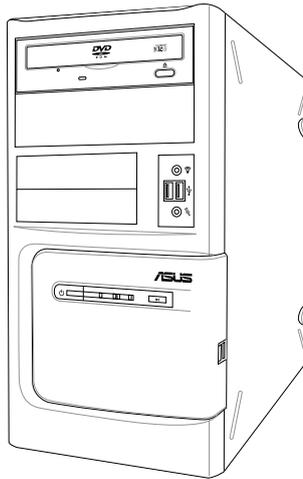


ASUS[®]

BM2220

ASUS PC

User Manual



E4474

First Edition V1

February 2009

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Notices

Federal Communications Commission Statement

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

- This device may not cause harmful interference, and
- This device must accept any interference received including interference that may cause undesired operation.

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 in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

This class B digital apparatus complies with Canadian ICES-003.

Safety information

Electrical safety

- To prevent electric shock hazard, disconnect the power cable from the electric outlet before relocating the system.
- When adding or removing any devices to or from the system, contact a qualified service technician or your retailer. Ensure that all the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all the power cables from the existing system before you add or remove a device to or from the system.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.

Operation safety

- Before installing devices into the system, carefully read all the documentation that comes with the package.
- Before using the product, ensure that all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets, and circuitry.
- Avoid dust, humidity, and extreme temperatures. Do not place this product in a location where it may get wet. Place this product on a flat and stable surface.
- When using this product, do not block any air inlet/outlet on the chassis.
- We recommend that you use this product in environments with an ambient temperature below 40°C.
- If you encounter technical problems with this product, contact a qualified service technician or your retailer.

Lithium-Ion Battery Warning

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.

VORSICHT: Explosionsgefahr bei unsachgemäßen Austausch der Batterie. Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

LASER PRODUCT WARNING

CLASS 1 LASER PRODUCT

General precautions

Before using the ASUS BM2220 Desktop PC, carefully read the general precautions below. Improper operation could lead to personal injury or damage to the product.

- Before using this product, ensure that all components are correctly installed and all cables are correctly connected. If you detect any damage, contact your dealer immediately.
- Avoid dust and extreme temperatures. Do not place this product in a location where it may receive direct sunlight.
- Do not place this product in a location where it may get wet.
- Do not block the air vents on the chassis. Always provide proper ventilation for this product.
- Before turning on the system, check if all the peripherals are correctly connected.
- To avoid short circuits, keep scraps, screws, and threads away from connectors, slots, sockets, and circuitry.
- Do not insert any object or spill liquid into the air vents on the chassis.
- If this product has been used for a long time, avoid direct contact with the heatsinks and the surfaces of IC as they may become very warm and hot. Check if the system receives proper ventilation.
- Before you add or remove a peripheral device to or from the system, ensure that you unplugged the system from the power source.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.
- Do not service this product yourself.
- Though the system casing is elaborately designed to protect users from scratches, be careful with those sharp tips and edges. Put on a pair of gloves before you remove or replace the system cover.
- Unplug this product from the power source when it is left unused for a long period of time.
- We recommend that you use this product in environments with an ambient temperature below 40°C.
- Use this product only with the correct voltage as instructed by the manufacturer.
- To prevent fire or electric shock, do not overload power outlets and extension cords.
- Warning: Ensure that you replace the battery with a correct type; otherwise, it may cause an explosion hazard.

About this guide

Audience

This guide provides general information about ASUS BM2220 Desktop PC and instructions on how to use the Support DVD that comes with the system package.

How this guide is organized

This guide contains the following parts:

1. Chapter 1: System introduction

This chapter gives a general description of ASUS BM2220 Desktop PC. The chapter lists the system features, including introduction on the front and rear panels.

2. Chapter 2: Getting started

This chapter helps you power up the system and install drivers and utilities from the Support DVD.

Conventions used in this guide

To ensure that you perform certain tasks properly, take note of the following symbols used throughout this guide.



WARNING: Information to prevent injury to yourself when trying to complete a task.



CAUTION: Information to prevent damage to the components when trying to complete a task.



IMPORTANT: Instructions that you **MUST** follow to complete a task.



NOTE: Tips and additional information to aid in completing a task.

Where to find more information

Refer to the following sources for additional information and for product and software updates.

1. **ASUS Websites**

The ASUS websites worldwide provide updated information on ASUS hardware and software products. Refer to the ASUS contact information.

2. **Optional Documentation**

Your product package may include optional documentation, such as warranty flyers, that may have been added by your dealer. These documents are not part of the standard package.

System package contents

Check your BM2220 system package for the following items.

Standard items	
1.	ASUS BM2220 Desktop PC with
	• ASUS Desktop x1
	• Mouse x1
	• Keyboard x1
2.	Cables
	• Power cord x1
3.	Accessories
	• Mouse pad x1
4.	DVD
	• Support DVD x1
5.	Documentation
	• User Manual x1
	• Warranty card x1



If any of the above items is damaged or missing, contact your retailer immediately.

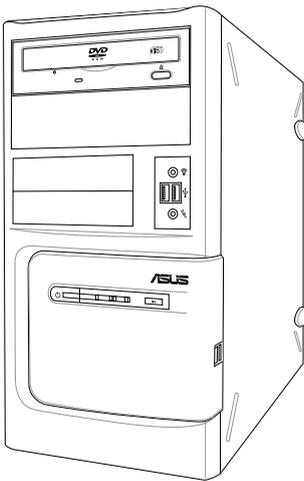
Optional items	
1.	Optical disk drive (ODD)
2.	Storage card reader / Floppy disk drive
3.	LAN cable
4.	Power strip



- Optional items are not included in the system package. They are purchased separately.
- Specifications depend on the desktop PC you purchased. Check with your supplier for the exact specifications.

Chapter 1

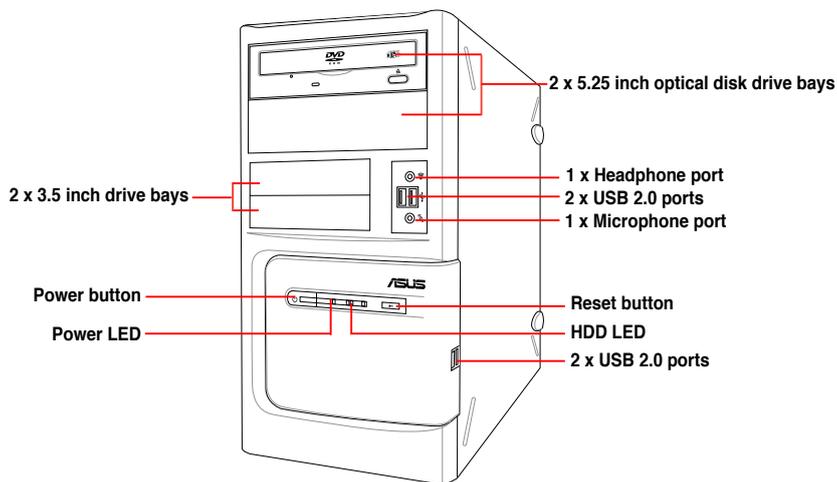
This chapter gives a general description of the desktop PC. The chapter lists the system features including introduction on the front and rear panels.



System introduction

1.1 Front panel

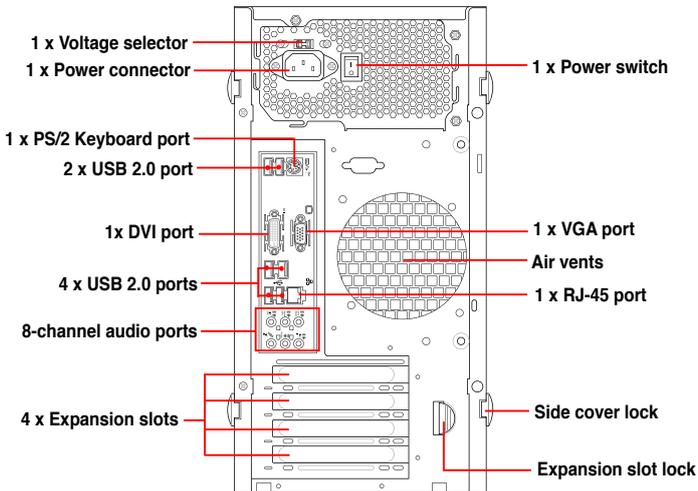
The ASUS BM2220 Desktop PC includes an ASUS motherboard, a power supply unit, a front panel, and a rear panel. All of these components are integrated in a system casing elaborately designed by ASUS.



- The storage card reader, optical disk drive, and floppy disk drive are optional items which are not included in the system package. They are purchased separately.
- The 5.25 inch optical disk drive bay is for a 5.25 inch DVD-ROM / CD-RW / DVD-RW device.
- The 3.5 inch drive bay is for a 3.5 inch hard disk drive / floppy disk drive / USB storage card reader.
- The storage card reader is for Secure Digital™ / MultimediaCard / Memory Stick® / CompactFlash® / Microdrive™ / SmartMedia® storage cards.

1.2 Rear panel

The system rear panel includes the power connector and several I/O ports that allow you to conveniently connect devices.

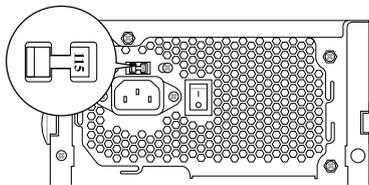


Voltage selector

The system's power supply unit has a 115V / 230V voltage selector located below the power connector. Use this switch to select the appropriate system input voltage according to the voltage supply in your area.

If the voltage supply in your area is 100-127V, set the switch to 115V.

If the voltage supply in your area is 200-240V, set the switch to 230V.



Setting the switch to 115V in a 230V environment or 230V in a 115V environment will seriously damage the system!

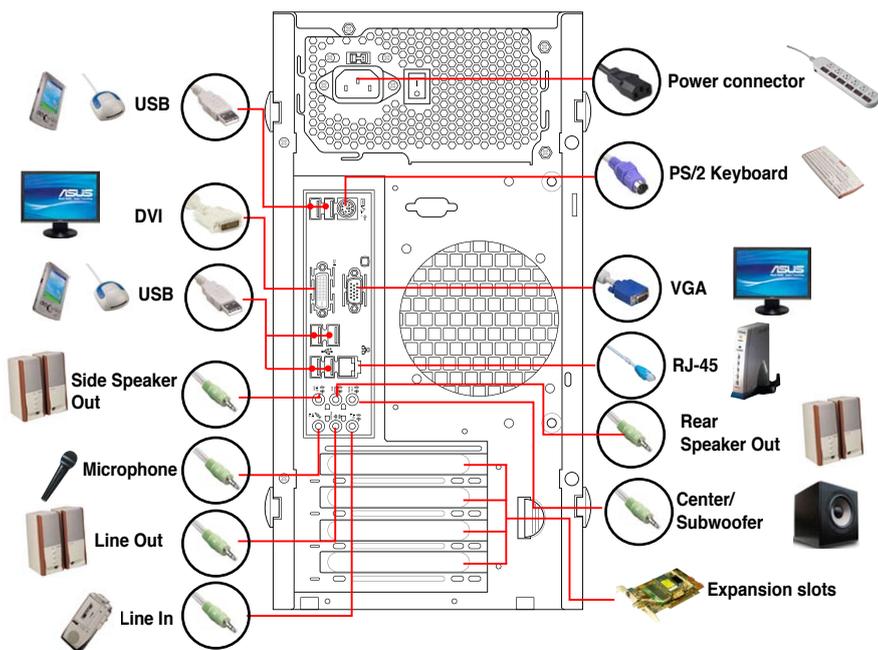
1.3 Connecting to the keyboard and the mouse

Your ASUS BM2220 Desktop PC package includes a PS/2 keyboard or a USB keyboard and a USB mouse. Connect the PS/2 keyboard to the PS/2 keyboard port at the rear panel or the USB keyboard to a USB port either at the rear panel or front panel. Connect the USB mouse to a USB port either at the rear panel or front panel.

1.4 Connecting to other peripheral devices

The ASUS BM2220 Desktop PC is equipped with a number of ports at the rear and front panels where you can connect peripheral devices to the system.

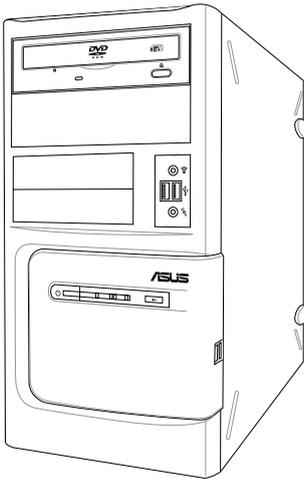
Refer to the illustration below for details.



Before you connect a peripheral device to the system, refer to the documentation that comes with the device or contact your supplier directly for information on how to install it.

Chapter 2

This chapter helps you to power up the system and install drivers and utilities from the Support DVD.



Getting started

2.1 Installing an operating system

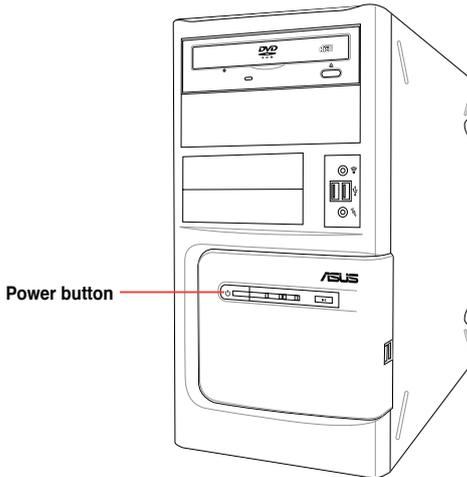
This motherboard supports Windows® XP / Vista operating systems (OS). Always install the latest OS version and the corresponding updates to maximize the features of your hardware. When you start the system for the first time, the system automatically detects the built-in audio and graphics chips and attempts to install the drivers that come with the OS. Select **NO** when a window appears asking if you want to restart the system. Install drivers according to the instructions in the following sections.



- To ensure that the OS works properly, install the drivers included in the Support DVD.
- Motherboard settings and hardware options vary. Use the setup procedures presented in this chapter for reference only. Refer to your OS documentation for detailed information.

2.2 Powering your system

Press the Power button to power up the system.



2.3 Support DVD information

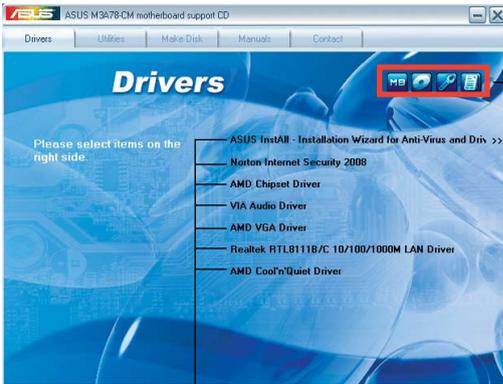
The Support DVD that comes with the system package contains the drivers, software applications, and utilities that you can install to get all system features.



The contents of the Support DVD are subject to change at any time without notice. Visit the ASUS website at www.asus.com for updates.

2.3.1 Running the Support DVD

Place the Support DVD into the optical drive. The DVD automatically displays the Drivers menu if Autorun is enabled on your computer.



Click an icon to display Support DVD/motherboard information

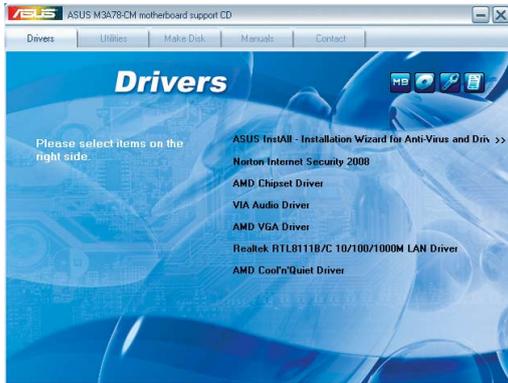
Click an item to install



If Autorun is NOT enabled on your computer, browse the contents of the Support DVD to locate the file **ASSETUP.EXE** from the **BIN** folder. Double-click **ASSETUP.EXE** to run the DVD.

2.3.2 Drivers menu

The Drivers menu shows the available device drivers if the system detects installed devices. Install the necessary drivers to activate the devices.



ASUS InstAll - Installation Wizard for Drivers

Installs drivers for this desktop PC using the installation wizard.

Norton Internet Security 2008

Installs the Norton Internet Security 2008 software to protect your PC from the latest online threats.

AMD Chipset Driver

Installs the AMD chipset driver.

VIA Audio Driver

Installs the VIA® audio driver.

AMD VGA Driver

Installs the AMD VGA driver.

Realtek RTL8111B/C 10/100/1000M LAN Driver

Install the Realtek® RTL8111B/C 10/100/1000M LAN driver.

AMD Cool'n'Quiet Driver

Installs the AMD Cool'n'Quiet driver.

2.3.3 Utilities menu

The Utilities menu shows the applications that the system supports. Tap an item from the screen to install.



Click to display the next screen.



Click to display the previous screen.

ASUS InstAll - Installation Wizard for Utilities

Installs utilities for this desktop PC using the installation wizard.

ASUS PC Probe II

This smart utility monitors the fan speed, CPU temperature, and system voltages, and alerts you of any detected problems. This utility helps you keep your computer in healthy operating condition.

ASUS Cool'n'Quiet Utility

Installs the ASUS Cool'n'Quiet utility.

ASUS Update

Allows you to update the motherboard BIOS in a Windows environment. This utility requires an Internet connection either through a network or an Internet Service Provider(ISP).

AMD RAID/AHCI RaidXpert

Install the AMD RAID/AHCI Xpert utility.

Realtek Diagnostics Utility

Installs the Realtek Diagnostics Utility.

Microsoft DirectX 9.0c

Installs the Microsoft® DirectX 9.0c driver. The Microsoft® DirectX 9.0c IS A multimedia technology that enhances computer graphics and sound. DirectX® improves the multimedia features of your computer so you can enjoy watching TV and movies, capturing videos, or playing games in your computer. Visit the Microsoft website (www.microsoft.com) for updates.

Corel MediaOne Starter

Installs the Corel MediaOne Starter to easily manage, edit, share, and protect your multimedia data.

Adobe Reader 8

Installs the Adobe Acrobat Reader that allows you to open, view, and print documents in Portable Document Format (PDF).

WinZip 11

Installs the Winzip 11 software for file-compression and protection.

Ulead Burn.Now

Installs the Ulead Burn.Now software.

Ulead PhotoImpact 12 SE

Installs the Ulead PhotoImpact 12 SE software.

ASUS Express Gate Installer

Installs the ASUS Express Gate.

2.3.4 Make Disk menu

The Make Disk menu allows you to make a RAID driver disk.



Make AMD RAID/AHCI Vista32 Driver

Allows you to create an AMD® Serial ATA (SATA) RAID/AHCI driver disk for 32bit Vista operating system.

Make AMD RAID/AHCI Vista64 Driver

Allows you to create an AMD® Serial ATA (SATA) RAID/AHCI driver disk for 64bit Vista operating system.

Make AMD RAID/AHCI XP/ XP 64bit Driver

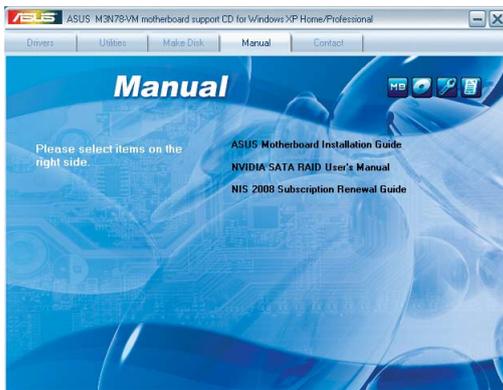
Allows you to create an AMD® Serial ATA (SATA) RAID/AHCI driver disk for 32/64bit XP operation system.

2.3.5 Manual menu

The Manual menu contains a list of supplementary user manuals. Click an item to open the folder of the user manual.



Most user manual files are in Portable Document Format (PDF). Install the Adobe® Acrobat® Reader from the Utilities menu before opening a user manual file.



2.3.6 ASUS contact information

Click the **Contact** tab to display the ASUS contact information.

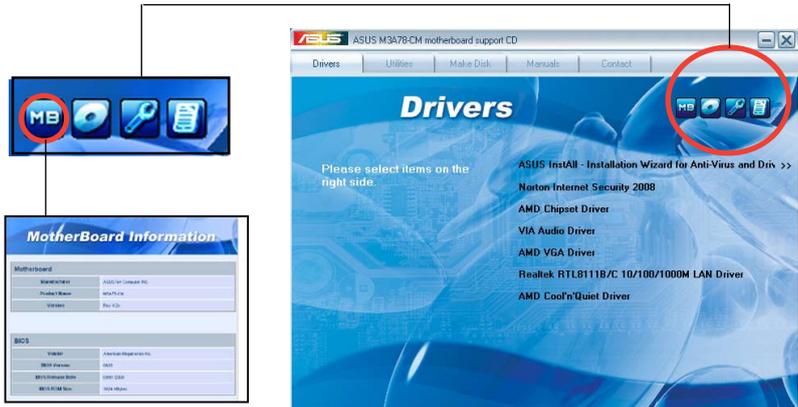


2.3.5 Other information

The icons on the top right corner of the screen give additional information on the motherboard and the contents of the Support DVD. Click an icon to display the specified information.

Motherboard Info

Displays the general specifications of the motherboard.



Browse this DVD

Displays the Support DVD contents in graphical format.



Technical support Form

Displays the ASUS Technical Support Request Form that you have to fill out when requesting technical support.



```
ASUSTEK TECHNICAL SUPPORT REQUEST FORM      DATE:
-----
ORIGINATOR DESCRIPTION
-----
COMPANY NAME :                               CONTACT NAME:
PHONE (AREA) :                               FAX # (AREA):
EMAIL ADDRESS:
-----
HARDWARE DESCRIPTION
-----
MOTHERBOARD :                               REVISION #:                               BIOS:#A0L0A0-
CPU BRAND :                                   SPEED(MHZ):                               SIZE(MB):
DRAM BRAND :                                   SPEED(MHz):                               SIZE(KB):
CACHE BRAND :                                   SPEED(MHz):                               SIZE(MB):
HARD DISK :                                    MODEL NAME:                               SIZE(MB):
COROM BRAND :                                   MODEL NAME:                               SIZE(MB):
BACKLUP BRAND :                               MODEL NAME:                               SIZE(MB):
OTHER STORAGE:
-----
ADD-IN CARD DESCRIPTION (MODEL NAME/VENDOR)
-----
(E)ISA SLOT 1:
(E)ISA SLOT 2:
(E)ISA SLOT 3:
(E)ISA SLOT 4:
PCI-E SLOT 1:
PCI-E SLOT 2:
PCI-E SLOT 3:
PCI SLOT 1:
PCI SLOT 2:
PCI SLOT 3:
PCI SLOT 4:
PCI SLOT 5:
```

Filelist

Displays the contents of the Support DVD and a brief description of each in text format.



```
File list for the included support software for H3A78-CH motherboard
File Name      Description
-----
-Drivers
--AMD
--XP              AMD cool'n'quiet driver V1.3.2 for windows XP/XP 64bit
--Audio           VIA Audio driver v6.0.1.1510 for windows 32bit xp/64bit xp.(WHQL)
                  VIA Audio driver v6.0.1.1510 For windows vista 32bit&64bit.(WHQL)
-Chipset
--Vista
--efn            AMD chipset Driver V1.2.0.2 for windows Vista 32bit
--Btfn64         AMD Chipset Driver V1.2.0.2 For windows Vista 64bit
--XP             AMD Chipset driver v5.10.1000.8 For windows XP/XP 64bit
--VGA
--efn            AMD VGA Driver V8.510.0.0 For windows Vista 32bit
--Btfn64         AMD VGA Driver V8.510.0.0 For windows Vista 64bit
--XP             AMD VGA driver V8.531.0.0 For windows xp 64bit
                  AMD VGA Driver V8.531.0.0 For windows XP
-Raid
--driver         -AMD raid/AHCI driver files for windows XP/Vista and windows 64bit XP
--MakeDisk       -Make AMD raid/AHCI driver disk for windows XP/Vista and windows 64bit
--Infineon       Infineon TPM Professional driver V3.0.202 for windows XP/XP 64bit/v
```

2.4 Loading the initial OS default settings

If you want to load the initial default settings for your system, press <F3> during the Power-On Self-Test (POST).

2.5 Recovery DVD

The ASUS PC Recovery DVD assists you in reinstalling the OS and restoring it to its original working state. Before using the Recovery DVD, copy your data files to a USB flash disk or to a network drive and make note of any customized configuration settings such as network settings.

2.5.1 Recovering a Windows® XP OS:

1. Turn on your system. Insert the Recovery DVD into the optical disk drive.
2. Restart the system and press <F8> when the ASUS logo appears. Select the optical drive as the boot device.
3. Select where to install a new system. Options are:

Recover system to a partition

This option deletes only the partition you selected, allows you to keep other partitions, and creates a new system partition as drive "C".

Recovery system to entire HD

This option deletes all partitions from your hard disk and creates a new system partition as drive "C".

4. A confirmation screen pops up. Click **Next** to confirm.
5. Check **I accept** from the succeeding screen and click **Next**.
6. A list displays the contents you are going to recover. Click **Yes** to confirm. The recovery process starts.
7. Insert the Support DVD when prompted, then click **OK**. The system restarts.
8. After the system reboots, Windows® XP begins its system configurations. Follow the onscreen instructions to complete the process, then the system restarts. Adjust the screen to a suitable display resolution.



The ASUS PC Recovery DVD is for ASUS Desktop PC only. **DO NOT** use it on other systems. Visit the ASUS website at www.asus.com for updates.

2.5.2 Recovering a Windows® Vista OS:

1. Turn on your system and press <F8> when the ASUS logo appears.
2. Insert the Recovery DVD into the optical drive when a **Please select boot device** menu appears. Select the optical drive as the boot device then press **Enter**. The system restarts.



If you want to recover the system from the hidden partition, press <F9> when the ASUS logo appears. Then follow steps 3-6 below.

3. After the system reboots, an **ASUS Preload** window appears. Press **Next** to continue.
4. Select where to install a new system. Options are:

Recover Windows to first partition only:

This option deletes only the first partition, allows you to keep other partitions, and creates a new system partition as drive "C".

Recover Windows to entire HD:

This option deletes all partitions from your hard disk and creates a new system partition as drive "C".

Recover Windows to entire HD with 2 partitions:

This option deletes all partitions from your hard disk and creates two new system partitions. The first partition takes up 60% of the whole hard disk size and the second partition takes up 40%. The new system is installed in the first partition. You can back up your data in the second partition.

5. When a window appears querying **Are you sure you want to recover now**, click **Finish**. The process percentage is displayed on the screen.
6. When a **Recovery finish** message appears, click **OK** and the system restarts. After it restarts, follow the onscreen instructions to complete the system configurations.



The ASUS PC Recovery DVD is for ASUS Desktop PC only. **DO NOT** use it on other systems. Visit the ASUS website at www.asus.com for updates.
