



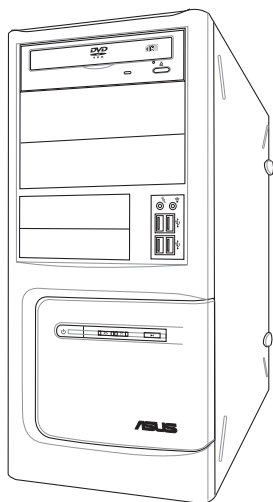
ASUS[®]

A500/AS-D920

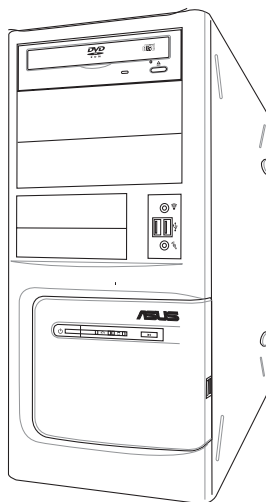
BA5190

ASUS PC

User Manual



A500/AS-D920



BA5190





E5806

Revised Edition V2

April 2010

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Support Fax	+49-2102-9599-11
Online support	support.asus.com

*EUR 0.14/minute from a German fixed landline; EUR 0.42/minute from a mobile phone.





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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.

REACH

Complying with the REACH (Registration, Evaluation, Authorisation, and Restriction of Chemicals) regulatory framework, we published the chemical substances in our products at ASUS REACH website at <http://green.asus.com/english/REACH.htm>.





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 A500/AS-D920, BA5190 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 A500/AS-D920, BA5190 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:

Chapter 1: System introduction

This chapter gives a general description of ASUS A500/AS-D920, BA5190 Desktop PC. The chapter lists the system features, including introduction on the front and rear panels.

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 A500/AS-D920, BA5190 system package for the following items.

Standard items	
1.	ASUS A500/AS-D920, BA5190 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
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

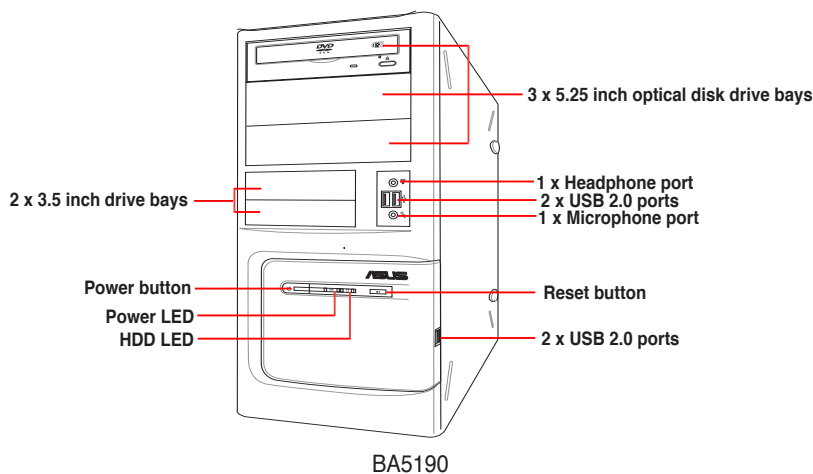
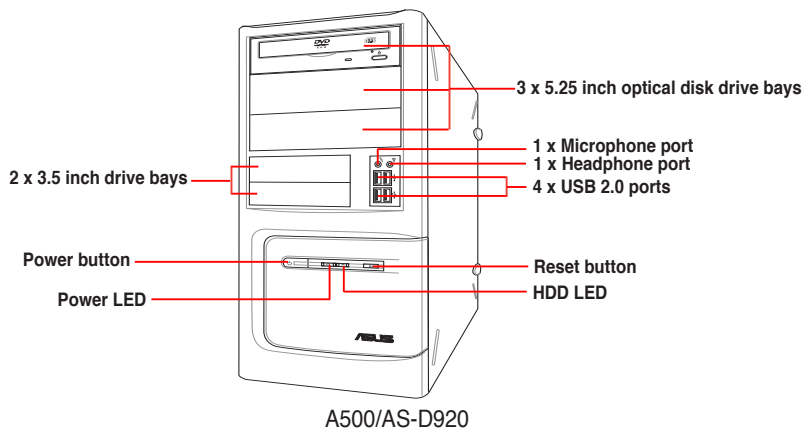
This chapter gives a general description of the desktop PC. The chapter lists the system features including introduction on the front and rear panels.

System introduction





1.1 Front panel



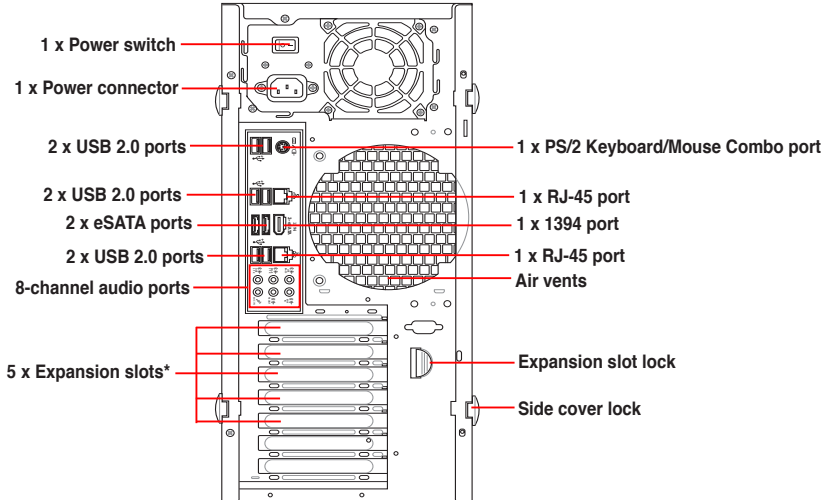
- The storage card reader and optical disk drive are optional items which are not included in the system package. They are purchased separately.
- The 5.25 inch optical disk drive bay is for a 5.25 inch DVD-ROM / CD-RW / DVD-RW device.
- The 3.5 inch drive bay is for a 3.5 inch hard disk drive / USB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



Only five expansion slots are available on this desktop PC.

Voltage selector

The system's power supply unit has a 115V / 230V voltage selector. 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!





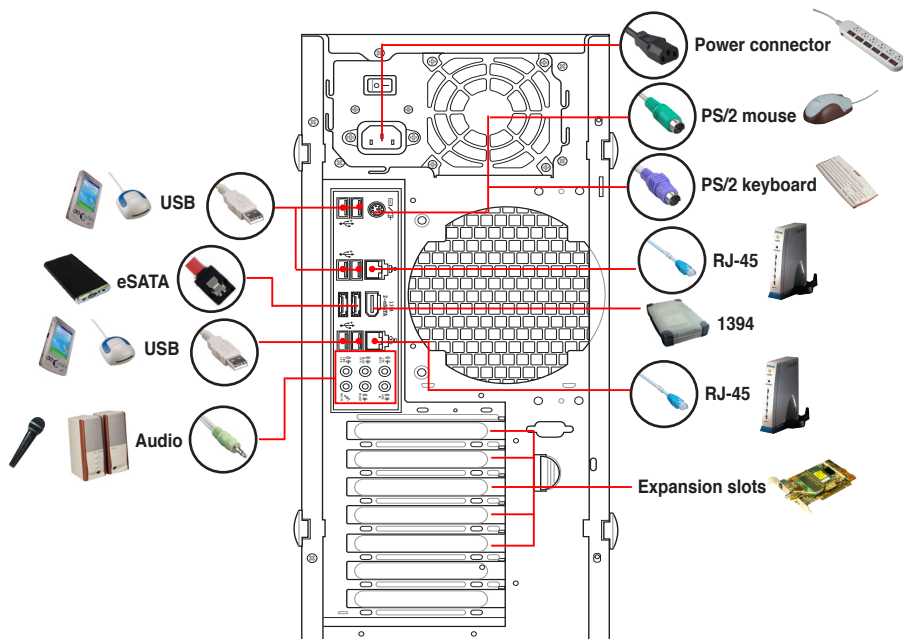
1.3 Connecting to the keyboard and the mouse

Your ASUS A500/AS-D920 and BA5190 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 A500/AS-D920 and BA5190 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

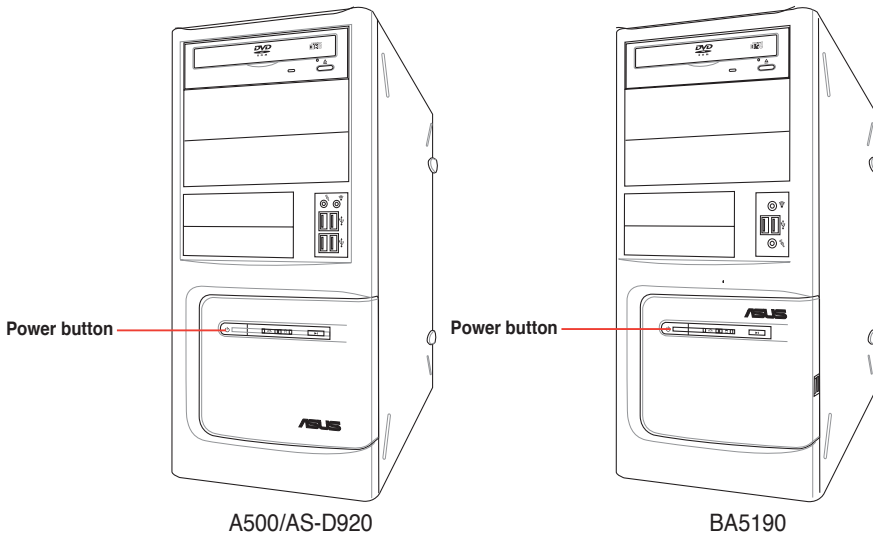
This motherboard supports Windows® XP / Vista operating systems (OS). Always install the latest OS version and the corresponding updates to maximize the features of your hardware. When you start the system for the first time, the system automatically detects the built-in audio and graphics chips and 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

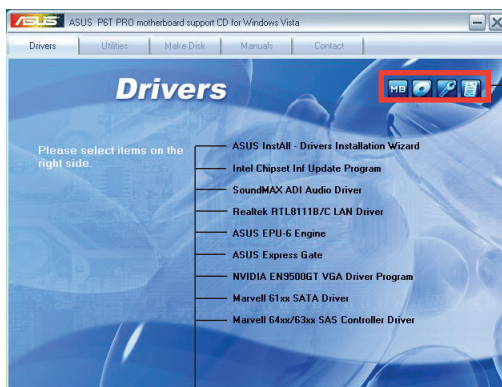
The Support DVD that comes with the system package contains the drivers, software applications, and utilities that you can install to get all system features.



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 - Drivers Installation Wizard

Installs drivers for this desktop PC using the installation wizard.

Intel Chipset Inf Update Program

Installs the Intel® chipset Inf update program.

SoundMAX ADI Audio Driver

Installs the SoundMAX ADI audio driver.

Realtek RTL8111B/C LAN Driver

Installs the Realtek® RTL8111B/C LAN driver.

ASUS EPU-6 Engine

Installs ASUS EPU-6 Engine.

ASUS Express Gate

Installs ASUS Express Gate.

NVIDIA EN9500GT VGA Driver Program

Installs the NVIDIA® EN9500GT VGA driver.

Marvell 61xx SATA Driver

Installs the Marvell 61xx SATA driver.

Marvell 64xx/63xx SAS Controller Driver

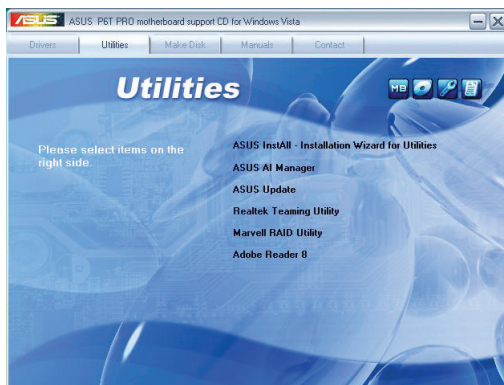
Installs the Marvell 64xx/63xx SAS controller driver.





2.3.3 Utilities menu

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



ASUS InstAll - Installation Wizard for Utilities

Installs utilities for this desktop PC using the installation wizard.

ASUS AI Manager

Installs ASUS AI Manager where you can launch AI Disk, AI Security, and AI Probe easily.

ASUS Update

Allows you to download the latest version of the BIOS from the ASUS website.



Before using the ASUS Update, ensure that you have an Internet connection to connect to the ASUS website.

Realtek Teaming Utility

Installs the Realtek® Teaming Utility.

Marvell RAID Utility

Installs the Marvell RAID utility.

Adobe Reader 8

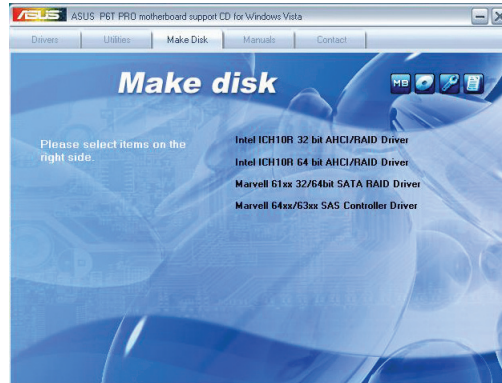
Installs the Adobe Acrobat Reader that allows you to open, view, and print documents in Portable Document Format (PDF).





2.3.4 Make disk menu

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



Intel ICH10R 32 bit AHCI/RAID Driver

Allows you to create an Intel® ICH10R Serial ATA (SATA) AHCI/RAID driver disk for 32bit XP/Vista operating systems.

Intel ICH10R 64 bit AHCI/RAID Driver

Allows you to create an Intel® ICH10R Serial ATA (SATA) AHCI/RAID driver disk for 64bit XP/Vista operating systems.

Marvell 61xx 32/64bit SATA RAID Driver

Allows you to create a Marvell 61xx Serial ATA (SATA) RAID driver disk for 32/64bit XP/Vista operating systems.

Marvell 64xx/63xx SAS Controller Driver

Allows you to create a Marvell 64xx/63xx SAS controller driver disk for 32/64bit XP/Vista operating systems.



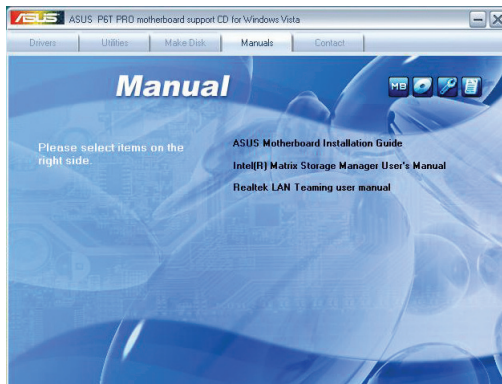


2.3.5 Manual menu

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

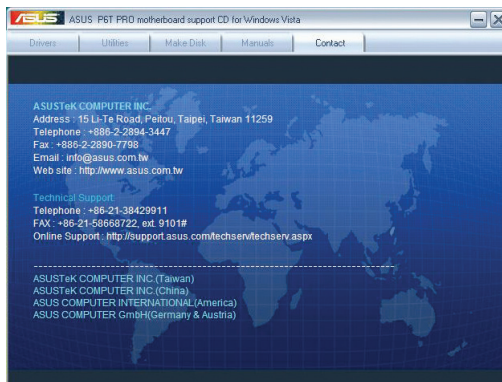


The user manual files are in Portable Document Format (PDF). Install the Adobe® Reader from the Utilities menu before opening a user manual file.



2.3.6 ASUS contact information

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



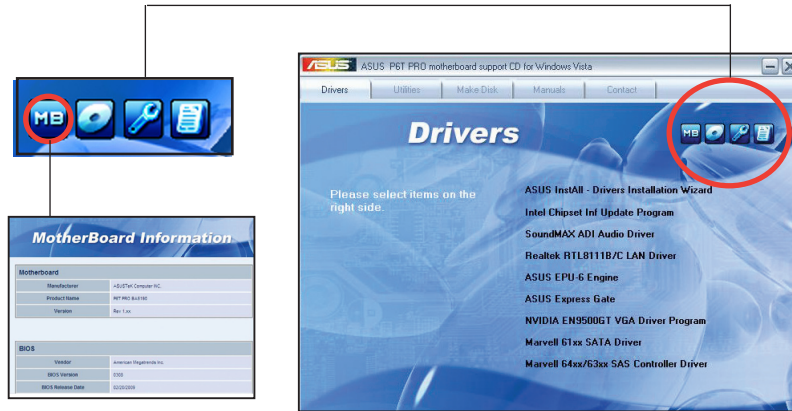


2.3.7 Other information

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.

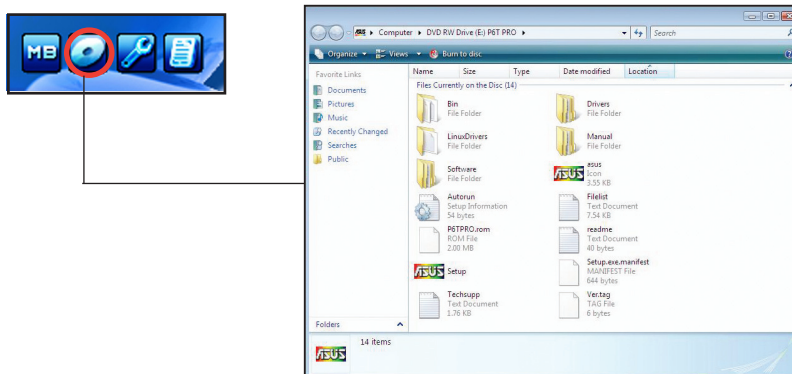
Motherboard Info

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.



ASUS TECHNICAL SUPPORT REQUEST FORM

DATE: _____

ORIGINATOR DESCRIPTION _____

COMPANY NAME: _____ CONTACT NAME: _____

PHONE (AREA): _____ FAX # (AREA): _____

EMAIL ADDRESS: _____

HARDWARE DESCRIPTION

MOTHERBOARD	REVISION #:	BIOS:#40L40-
CPU BRAND	SPEED (MHz):	SIZE (MB):
DRAM BRAND	SPEED (MHz):	SIZE (MB):
CACHE BRAND	SPEED (MHz):	SIZE (MB):
HARD DISK	MODEL NAME:	SIZE (MB):
CDROM BRAND	MODEL NAME:	SIZE (MB):
BACKUP BRAND	MODEL NAME:	SIZE (MB):
OTHER STORAGE:	MODEL NAME:	SIZE (MB):

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-E SLOT 4:
PCI SLOT 1:	PCI SLOT 2:	PCI SLOT 3:	PCI SLOT 4:
PCI SLOT 5:			

SOFTWARE DESCRIPTION _____

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 P6T PRO motherboard

File Name	Description
--Drivers	
-Chipset	-Intel Chipset Software Installation utility V9.1.0.1007 for windows x
-Audio	
-32bit	-Soundmax Audio Driver V5.10.1.6520 For 32bit windows XP (WHQL)
-64bit	-Soundmax Audio Driver V5.10.2.6520 For 64bit windows XP (WHQL)
-Vista	-Soundmax Audio Driver V6.10.1.6520 For 32bit windows Vista/2008 (WHQL)
	-Soundmax Audio Driver V6.10.2.6520 For 64bit windows Vista/2008 (WHQL)
-RAID	
-I310M	
-Install	-Intel Matrix Storage Manager V8.5.0.1032 for windows XP/Vista/2008 &
-Driver	-ICH8M AHCI/RAID Driver For windows XP/Vista/2008 & 64bit XP/Vista/20
-MakeDisk	-Make ICH8M AHCI/RAID Driver Disk For windows XP/Vista/2008 & 64bit X
-Marvell	
-61xx	
-Driver	-Marvell 88SE61xx SATA Controller Driver V1.2.0.57 For windows XP/Vist
-MakeDisk	-Make Marvell 88SE61xx SATA Controller Driver Disk V1.2.0.57 for windo
-61xx	
-Driver	-Marvell 88SE6320 SAS Controller driver for windows XP/Vista/2008 & 64
-MakeDisk	-Make Marvell 88SE6320 SAS Controller driver disk driver V1.1.0.22 for
-Install	-Marvell 88SE6320 SAS Controller driver V3.1.0.22 For windows XP/Vista
	-Marvell 88SE6320 SAS Controller driver V1.2.0.57 For windows XP/Vist
-MRU	-Marvell 88SE6320 SAS Utility V4.1.0.12 For windows XP/Vista/2008 & 64
-LAN	
-NDIS2	-Realtek NDIS2 Driver
-Teaming	-Realtek Teaming Utility V1.00.0000 (package 1.0.0.6) for windows 32/6
-Vista	-Realtek RTL811C LAN Driver V6.210.1003.2008 for windows Vista/2008 &
-RIS	-Realtek RIS Driver V6.210.1003.2008 For windows Vista/2008 & 64bit v1





2.4 ASUS AI Manager

ASUS AI Manager allows you to launch AI Disk, AI Security, and AI Probe easily.

2.4.1 Installing AI Manager

To install AI Manager on your computer:

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



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. Click the **Utilities** tab, then click **ASUS AI Manager**.
3. Follow the onscreen instructions to complete the installation.

2.4.2 Launching AI Manager

You can launch AI Manager right after installation or anytime from the Windows® desktop.

To launch AI Manager from the Windows® desktop, click **Start > All Programs > ASUS > AI Manager > AI Manager v1.xx.xx**. The AI Manager Quick Bar appears.



After launching the application, the AI Manager icon appears in the Windows® taskbar. Right-click this icon for more options.



2.4.3 AI Manager Quick Bar

Click the Main, My favorites, Support, and Information icon from the Quick Bar to show the corresponding menu.





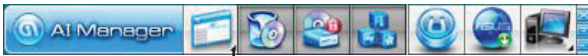
Click  to switch between a full-screen AI Manager window and the Quick bar.

Click  to keep AI Manager in the taskbar.

Click  to close AI Manager.

2.4.4 Main

Launch AI Disk, AI Security, and AI Probe from the Main menu. Click the small triangle to open or close the Main menu.



Click to open/close the Main menu

AI Disk

AI Disk allows you to easily clear the temporary IE files, IE URLs, IE cookies, IE history list, Recycle Bin, and recently opened files list. Select the item that you want to clear, then click **Apply**.





AI Security

AI Security allows you to set passwords to lock your removable storage devices such as a USB flash disk and a CD/DVD disk, which ensures more security for your data.

To lock a device:

1. If you are using AI Security for the first time, key in a password consisting of up to 20 alphanumeric characters.
2. Confirm your password.
3. Key in your password hint (optional).
4. Click **OK**.



5. Select the device you want to lock, then click **Apply**.



6. Key in your password, then click **OK**. The device you selected cannot be accessed without the password.

To unlock a device:

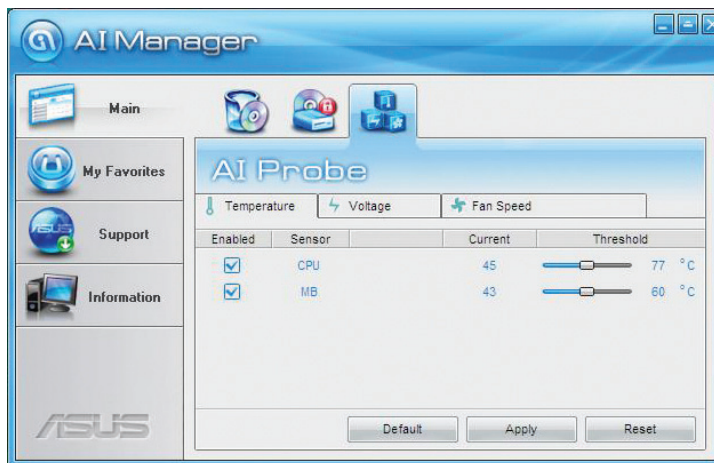
1. Deselect the device you locked, then click **Apply**.
2. Key in your password, then click **OK**.

To change your password, click **Change Password** and follow the onscreen instructions.



AI Probe

AI Probe automatically detects the motherboard and CPU temperatures, CPU fan speed, and CPU voltage. It also allows you to adjust these values manually.





2.4.5 My favorites

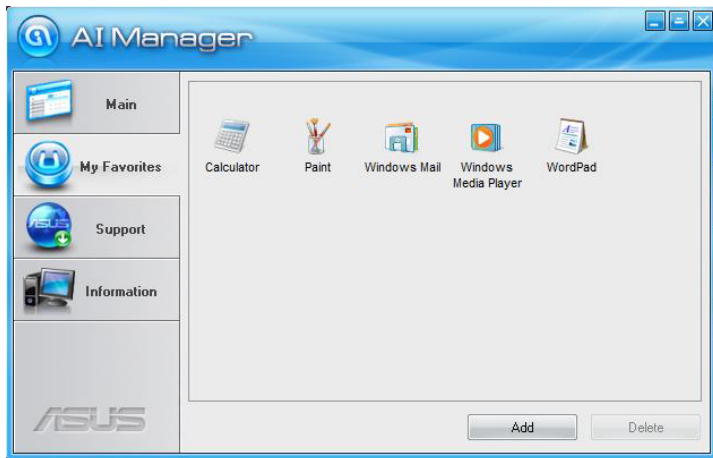
Add your favorite applications to the **My Favorites** menu.

To add an application:

1. Click **Add** and then from the succeeding screen select the application you want to add to the **My Favorites** menu.
2. Click **Open**. The application you selected is added and its icon appears.

Right-click an icon in the **My Favorites** menu to open, delete, or rename the corresponding application.

Double-click an icon to open the corresponding application.





2.4.6 Support

The **Support** menu displays links to the ASUS international website, online technical support website, online download support website, and contact information website.



2.4.7 Information

The **Information** menu displays the general information of your system, motherboard, CPU, BIOS, memory, and other devices installed.







7. When the logo images appear on the right window pane, select an image to enlarge by clicking on it.



8. Adjust the boot image to your desired size by selecting a value on the Ratio box. Click **Next**.



9. When the screen returns to the ASUS Update utility, flash the BIOS to load the new boot logo.
10. After flashing the BIOS, restart the computer to display the new boot logo during POST.





2.6 ASUS EPU-6 Engine

ASUS EPU-6 Engine is an energy-efficient tool that satisfies different computing needs. This utility provides four modes that you can select to enhance system performance or save power. Selecting Auto mode will have the system shift modes automatically according to current system status. You can also customize each mode by configuring settings like CPU frequency, vCore Voltage, and Fan Control.

Installing 6 Engine

To install 6 Engine on your computer:

1. Place the Support DVD into the optical drive. The Drivers menu appears if Autorun is enabled on your computer.
2. Click the **Drivers** tab and then click **ASUS EPU-6 Engine**.
3. Follow the onscreen instructions to complete the installation.

Launching 6 Engine

Launch 6 Engine by double-clicking the 6 Engine icon in the Windows® system tray.

The first time you launch 6 Engine, the following message appears, asking you to run Calibration first. Running calibration allows the system to detect CPU properties to optimize power management.

Click **Run Calibration** and wait for a few seconds. Then, the 6 Engine main menu appears.





6 Engine main menu

CPU
Current CPU Power: 2.50
Total CPU Energy Saving: 15.71141 x 10⁻³ kWh
Exit

Displays CPU Power and Total CPU Energy Saving

Displays the following message if no VGA power saving engine is detected.

VGA:
No VGA detected, please install supported VGA card (VGA GUI, http://www.asus.com/monitoring_engine/) or install and enable ASUS SmartDoctor

Lights up when power saving engine is activated

Displays the amount of CO2 reduced

*Shifts between the display of Total and Current CO2 reduced

EPU-6 Engine the complete system power saving solution

CPU VGA Chipset Memory H.D.D. Fan

Reduced CO2 Emission
0.000 mg Since 2007/04/17 03:39 Current

Mode Setting High Performance Current Status

Auto Turbo High Performance Medium Power Saving Max. Power Saving

Setting Calibrate

Tranquility Performance Convenience Reliability Energy Saving

Exit

Displays current mode

Auto Mode
Turbo Mode
High Performance Mode
Medium Power Saving Mode
Max. Power Saving Mode

Runs calibration

Displays the system properties of each mode

Exits the utility

Advanced settings for each mode (refer to the next page for further information)




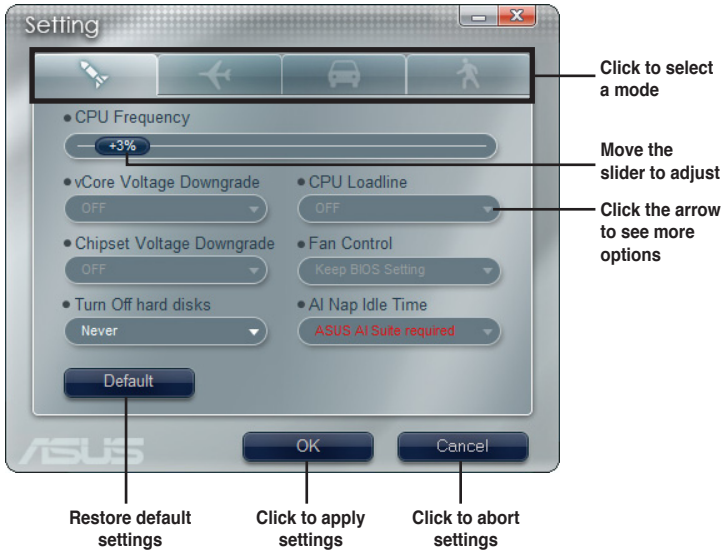
- Click **Current** to show the CO2 that has been reduced since you click the **Renew** button Since 2007.04.12.
- Click **Total** to show the total CO2 that has been reduced since you launched 6 Engine.





Advanced settings menu

Click **Setting**  from the 6 Engine main menu to display configuration options in each mode. Some options in certain modes are dimmed, meaning that they are not available.



Configuration options in Advanced settings menu

The following lists the configuration options and their definitions in Advanced settings menu.

- **CPU Frequency:** Raises or lowers CPU frequency to a certain percentage.
- **vCore Voltage Downgrade:** Lowers CPU vCore voltage.
 - **High:** Downgrades voltage to the highest level for CPU power saving.
 - **Small:** Downgrades voltage to the minimum level.
- **Chipset Voltage Downgrade:** Turns on/off chipset voltage.
- **Turn Off hard disks:** Turns off hard disk drives when they are not accessed after a certain time.
- **CPU Loadline:** Sets up the CPU loadline to manage CPU power saving.
 - **Light:** Saves CPU power to the minimum level.
 - **Heavy:** Saves CPU power to the highest level.





- **Fan Control:** Adjusts fan speeds to reduce noise and save system power.
 - **Quiet:** Lowers CPU fan speed and shuts off two chassis fans.
 - **Slow:** Lowers CPU fan and two chassis fan speeds.
- **AI Nap Idle Time:** Enters AI Nap mode after a certain time during system idle process.

Refer to the following table for the configuration options in each mode.

Configuration options	Turbo Mode	High Performance Mode	Medium Power Saving Mode	Maximum Power Saving Mode
CPU Frequency	Overclocking +1% to +5%	N/A	Downclocking -1% to -10%	Downclocking -1% to -10%
vCore Voltage Downgrade	N/A	N/A	Small/High	Small/High
Chipset Voltage Downgrade	N/A	N/A	On/Off	On/Off
Turn Off hard disks	Never/After 3 mins–After 5 hours	Never/After 3 mins–After 5 hours	Never/After 3 mins–After 5 hours	Never/After 3 mins–After 5 hours
CPU Loadline	N/A	N/A	Light/Heavy	Light/Heavy
Fan Control	N/A	N/A	Keep Bios Setting/Slow	Keep Bios Setting/Quiet
AI Nap Idle Time	Never/After 3 mins–After 5 hours	Never/After 3 mins–After 5 hours	Never/After 3 mins–After 5 hours	Never/After 3 mins–After 5 hours



The values in the table above are subject to change at any time without notice. Visit the ASUS website at www.asus.com for updates.





2.7 ASUS Express Gate

ASUS Express Gate is an instant-on environment that gives you quick access to the Internet. Eight seconds after powering on your computer, you can instantly surf the Internet, use Skype or other Express Gate applications without entering the Windows® OS.



- The actual boot time depends on the system configuration.
- Download the latest Express Gate version from the ASUS website at www.asus.com.

Installing ASUS Express Gate



- Ensure to install ASUS Express Gate from the motherboard Support DVD before use.
- ASUS Express Gate supports installation on SATA HDDs, USB HDDs, and flash drives with at least 1.2GB free disk space. When installing ASUS Express Gate on USB HDDs and flash drives, connect the drives to the motherboard USB port before turning on the computer.
- ASUS Express Gate supports SATA devices in IDE mode only.
- ASUS Express Gate supports SATA devices connected to motherboard chipset-controlled onboard SATA ports only. All onboard extended SATA ports and external SATA ports are NOT supported. See section 1.2.1 Motherboard layout for the exact location of the onboard SATA ports.
- Ensure that your monitor supports the screen resolution of 1024 x 768 before using ASUS Express Gate; otherwise, it will not launch after you power on your computer and your computer boots to the OS directly.
- We recommend that you install 1GB system memory or larger for a better performance of ASUS Express Gate.

To install Express Gate on your computer:

1. Place the Support DVD into the optical drive. The **Drivers** menu appears if **Autorun** is enabled on your computer.
2. Click the **Utilities** tab, then click **ASUS Express Gate**.
3. Select your preferred language, then click **OK**.
4. The InstallShield Wizard for Express Gate appears. Click **Next** to continue.





5. Select the target drive where you want to install Express Gate. If you have multiple partitions installed on your computer, it is recommended to install Express Gate in Drive C. Click **Next** to continue.
6. Follow the onscreen instructions to complete the installation.

The Splash Screen

The Express Gate's splash screen appears eight seconds after you power on your computer.



The actual boot time depends on the system configuration.



Click an application icon to enter the Express Gate environment and launch the selected application

Turn off the computer

Continue booting to the existing OS when the timer above the Exit icon counts down to zero (0); click to immediately enter the existing OS



- To enter the motherboard BIOS Setup program, click **Exit** on the splash screen and then hold down **** during POST.
- Click **?** in the Express Gate environment for the detailed software instructions.

Splash screen hot-keys

Key	Function
<PAUSE/BREAK>	Power off
ESC	Continue to boot OS





Express Gate Environment hot-keys:

Key	Function
<Alt> + <Tab>	Switch between softwares
<Ctrl> + <Alt> + 	Bring up Power-Off dialog box
<Ctrl> + <Alt> + <Print Screen>	Save screen snapshot as picture to file



When you are using ASUS Express Gate for the first time, launch an application from the splash screen, a first-time wizard will appear and guide you through basic Express Gate configurations including language, date, and time.

Using the LaunchBar

The LaunchBar allows you to launch applications and configure the Express Gate settings. The LaunchBar can be configured to auto-hide and dock at the bottom or top of the screen.



Launches the **Web Browser** for quick access to the Internet. You can view PDF files from the web pages or your USB storage device.



ASUS Express Gate supports file uploading from SATA HDDs, ODDs, and USB drives. It supports file downloading to USB drives only.



Launches the **Online Games**.



Launches the **Photo Manager**.



Launches the **Chat** instant messaging tool.



Launches the **Skype** application which allows you to chat with or call other people on Skype.



The indicator under an application icon indicates that the application is running. If an application stops responding, right-click its icon then select **Close** to force it to close.





The smaller icons on the right side of the LaunchBar are:



Displays your Express Gate version.



Launches the help file.



Launches the **Configuration Panel** which allows you to specify network settings and other settings.



Configures the network.



Adjusts the volume.



This icon appears only when a removable storage device / USB drive is connected. Left-click this icon to launch the **File Manager** window. Right-click it to eject the removable storage device / USB drive.




Exits ASUS Express Gate. Click **Yes** to enter the operating system you installed on the hard disk drive.

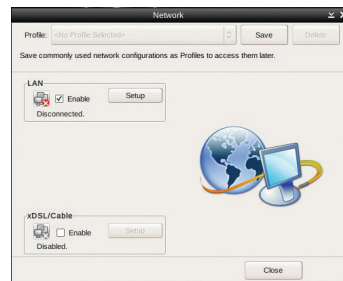


Powers off the computer.

Accessing the Internet

To configure the network settings:

1. Click **Configuration Panel**  on the LaunchBar.
2. Click **Network**.
3. Make the proper network configurations. Each network interface is enabled immediately after you tick the **Enable** checkbox.



The number of the LAN ports vary with the motherboard.





- **LAN settings**

If you connect your computer to a home router that is connected to your DSL/cable modem, enable all the LAN ports. Express Gate automatically uses the connected port.



If you plug the network cable into a different port while Express Gate is running (e.g. move the cable from LAN1 to LAN2, restart Express Gate to activate the new setting).

If your computer does not automatically get network settings from a DHCP server, click **Setup** to configure the static IP settings manually. If your computer automatically gets network settings from a DHCP server, skip this step.

- **WiFi settings (if supported)**

If you want to connect to a wireless network, click **Setup** to configure the WiFi options. In the **WiFi** tab of the **Advanced Network Settings** box, key in the network name of the wireless access point in the **SSID** field. If Security is enabled on the wireless access point, select the corresponding security algorithm from the dropdown list such as WEP or WAP in the **Encryption Type** field, and key in the password. Click **OK** to enable WiFi and establish the wireless connection.

- **xDSL / Cable dial-up (PPPoE) settings:**

If you use a network cable connected directly to your DSL/cable modem, click **Setup** to configure the xDSL/cable dial-up settings. Choose whether the DSL/cable modem is connected to your computer's LAN port. Key in the username and password for your account. Click **OK** to enable xDSL/cable dial-up and establish the PPPoE connection. When PPPoE is enabled, the port it uses will automatically be unchecked.





Using the Online Games

Express Gate introduces a **Splashtop Gaming** portal site which provides interesting games in different categories.



Enable the Internet connection to use the Online Games feature.

Using the Photo Manager

Photo Manager allows you to view pictures saved on your hard drive or external storage devices. You can view pictures in thumbnail view, in an enlarged view individually, in a filename/data list view, or play them in a slideshow. JPEG, GIF, BMP, and PNG formats are supported. Refer to the online Help for details.



ASUS Express Gate supports SATA devices connected to **motherboard chipset-controlled onboard SATA ports** only. All onboard extended SATA ports and external SATA ports are NOT supported.

Restoring to factory settings

To restore Express Gate to the factory settings:

1. Click **Configuration Panel** on the LaunchBar.
2. Click **Environment Settings**.
3. Click **Restore** from the **General** tab. A confirmation dialog box appears. Click **Yes** to immediately restart Express Gate to finish clearing system settings. All bookmarks, network settings, and other changes you made will be cleared.



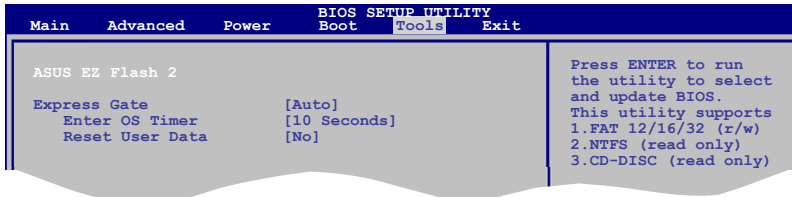
The first-time wizard will run again when you enter the Express Gate environment after clearing its settings.





Configuring Express Gate in BIOS Setup

To enter the motherboard BIOS Setup program, click **Exit** on the splash screen and then hold down **** during POST. Go to the **Tools** menu to configure Express Gate. Refer to **4.7.2 Express Gate** for details.



Repairing Express Gate

In case Express Gate does not start normally, reinstall the software or use the repair utility to repair Express Gate.

To repair Express Gate:

Click **Start > All Programs > Express Gate > Express Gate Installer > Repair this software**, then follow the onscreen instructions to complete the repair.





2.8 Realtek Teaming Utility

This motherboard features two Realtek® 8111C PCIe Gigabit LAN controllers and supports Teaming function, which allows two single connections to be grouped as one single connection, providing benefits such as bandwidth increase, load balancing, and fault tolerance.



The speed of transmission is subject to the actual network environment or status even with Teaming enabled.

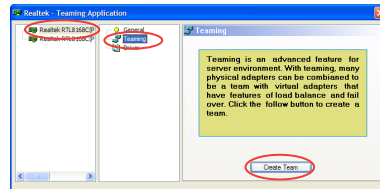
To install Realtek Teaming Utility:

1. Place the support DVD into the optical drive. Click **Realtek Teaming Utility** from the Utilities tab.
2. Follow the onscreen instructions to complete the installation.

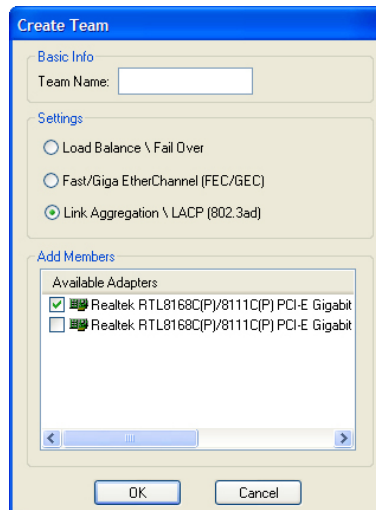
Configuring Realtek Teaming Utility in Windows® XP

To create a teaming set in Windows® XP:

1. Launch the Realtek Teaming Utility by clicking **Start > All Programs > Realtek > Teaming Utility > Teaming Utility**.
2. Select a LAN adapter from the left column, select **Teaming** in the middle column, and then click **Create Team**.



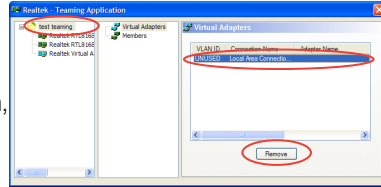
3. Enter a name for the teaming in the **Team Name** box. Select a teaming mode that best suits your network environment, and then choose the adapters to join the teaming set. Click **OK** to finish the teaming setting.





To remove a teaming set in Windows® XP:

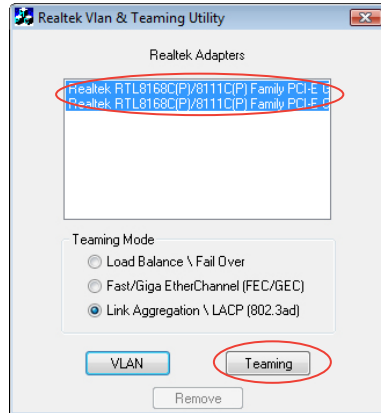
1. Launch the Realtek Teaming Utility.
2. Select the teaming set that you want to remove in the left column, select the virtual adapter in the right column, and then click **Remove**.



Configuring Realtek Teaming Utility in Windows® Vista

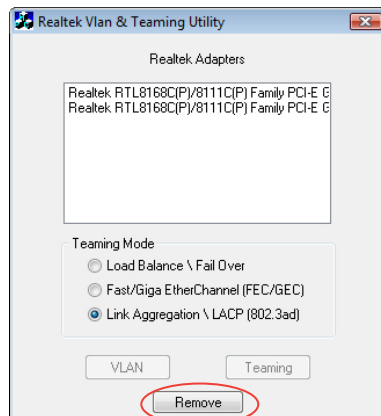
To create a teaming set in Windows® Vista:

1. Launch the Realtek VLAN & Teaming Utility by clicking **Start > All Programs > Realtek Teaming and VLAN Utility > Realtek Teaming and VLAN Utility**.
2. Choose the adapters to join the teaming set, and then select a teaming mode that best suits your network environment. Click **Teaming** to create the teaming set. Click **OK** to close the message windows and finish creating the teaming set.



To remove a teaming set in Windows® Vista:

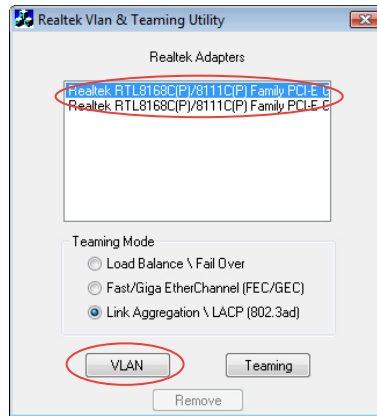
1. Launch the Realtek VLAN & Teaming Utility.
2. Click **Remove** to remove the existing teaming set.





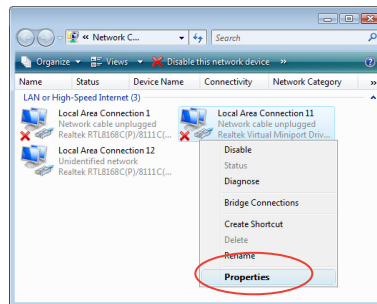
To create a virtual LAN adapter in Windows® Vista:

1. Launch the Realtek VLAN & Teaming Utility.
2. Choose one adapter to create the virtual LAN adapter, and then click **VLAN**. Click **OK** to close the message window and finish creating the virtual LAN adapter.

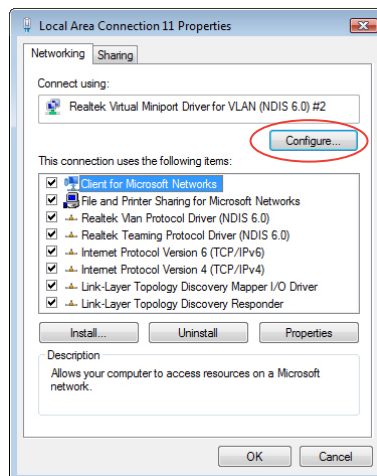


3. Click **Start > Control Panel > Network and Sharing Center**, and then click **Manage network connections** from the left **Tasks** list.

Right-click the virtual LAN adapter icon and select **Properties**.

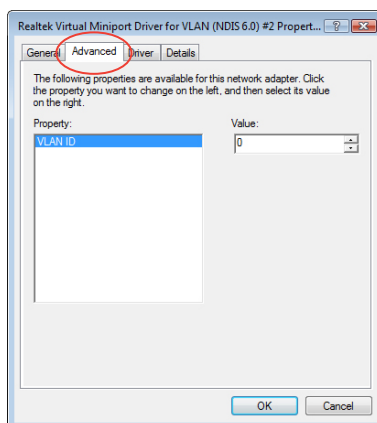


4. Conduct necessary settings for the virtual LAN adapter, and then click **Configure**.



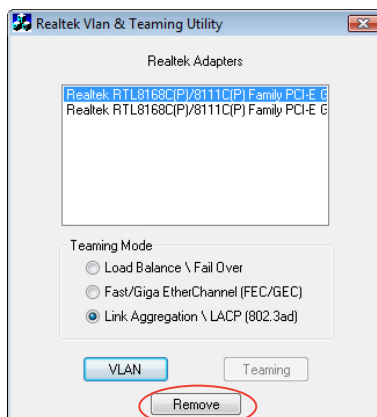


5. Click the **Advanced** tab in the **Realtek Virtual Miniport Driver for VLAN (NDIS 6.0) Properties** window and conduct necessary VLAN settings. Close all windows when finished.



To remove a virtual LAN adapter in Windows® Vista:

1. Launch the Realtek VLAN & Teaming Utility.
2. Click **Remove** to remove the existing virtual LAN adapter.





2.9 RAID configurations

The motherboard comes with the Intel® ICH10R Southbridge controller that supports RAID 0, RAID 1, RAID 10, and RAID 5 for six independent Serial ATA channels.

2.9.1 RAID definitions

RAID 0 (Data striping) optimizes two identical hard disk drives to read and write data in parallel, interleaved stacks. Two hard disks perform the same work as a single drive but at a sustained data transfer rate, double that of a single disk alone, thus improving data access and storage. Use of two new identical hard disk drives is required for this setup.

RAID 1 (Data mirroring) copies and maintains an identical image of data from one drive to a second drive. If one drive fails, the disk array management software directs all applications to the surviving drive as it contains a complete copy of the data in the other drive. This RAID configuration provides data protection and increases fault tolerance to the entire system. Use two new drives or use an existing drive and a new drive for this setup. The new drive must be of the same size or larger than the existing drive.

RAID 5 stripes both data and parity information across three or more hard disk drives. Among the advantages of RAID 5 configuration include better HDD performance, fault tolerance, and higher storage capacity. The RAID 5 configuration is best suited for transaction processing, relational database applications, enterprise resource planning, and other business systems. Use a minimum of three identical hard disk drives for this setup.

RAID 10 is data striping and data mirroring combined without parity (redundancy data) having to be calculated and written. With the RAID 10* configuration you get all the benefits of both RAID 0 and RAID 1 configurations. Use four new hard disk drives or use an existing drive and three new drives for this setup.

Intel® Matrix Storage. The Intel® Matrix Storage technology supported by the ICH10R chip allows you to create a RAID 0, RAID 1, RAID 5, and RAID 10* function to improve both system performance and data safety. You can also combine two RAID sets to get higher performance, capacity, or fault tolerance provided by the difference RAID function. For example, RAID 0 and RAID 1 set can be created by using only two identical hard disk drives.



If you want to boot the system from a hard disk drive included in a created RAID set, copy the RAID driver from the support DVD to a floppy disk before you install an operating system to the selected hard disk drive. Refer to section 2.10 **Creating a RAID driver disk** for details.





2.9.2 Installing Serial ATA hard disks

The motherboard supports Serial ATA hard disk drives. For optimal performance, install identical drives of the same model and capacity when creating a disk array.

To install the SATA hard disks for a RAID configuration:

1. Install the SATA hard disks into the drive bays.
2. Connect the SATA signal cables.
3. Connect a SATA power cable to the power connector on each drive.

2.9.3 Intel® RAID configurations

This motherboard supports RAID 0, RAID 1, RAID 5, RAID 10 and Intel® Matrix Storage configurations for Serial ATA hard disks drives through the Intel® ICH10R Southbridge chip.

Setting the RAID item in BIOS

You must set the RAID item in the BIOS Setup before you can create a RAID set(s). To do this:

1. Enter the BIOS Setup during POST.
2. Go to **Main > Storage Configuration > Configure SATA as**, then press **<Enter>**.
3. Select **[RAID]**, then press **<Enter>**.
5. Save your changes, then exit the BIOS Setup.



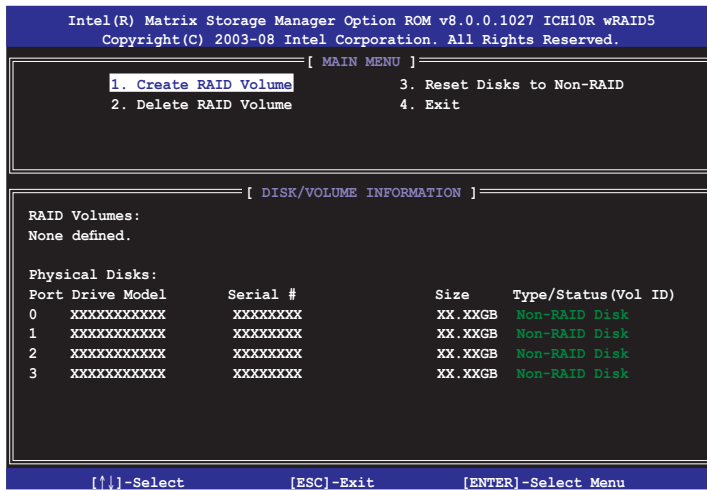


Intel® Matrix Storage Manager option ROM utility

The Intel® Matrix Storage Manager Option ROM utility allows you to create RAID 0, RAID 1, RAID 10 (RAID 0+1), and RAID 5 set(s) from Serial ATA hard disk drives that are connected to the Serial ATA connectors supported by the Southbridge.

To enter the Intel® Matrix Storage Manager option ROM utility:

1. Install all the Serial ATA hard disk drives.
2. Turn on the system.
3. During POST, press <Ctrl+I> to display the utility main menu.



The navigation keys at the bottom of the screen allow you to move through the menus and select the menu options.



The RAID BIOS setup screens shown in this section are for reference only and may not exactly match the items on your screen.





Creating a RAID 0 set (striped)

To create a RAID 0 set:

1. From the utility main menu, select **1. Create RAID Volume** and press <Enter>. The following screen appears.

Intel(R) Matrix Storage Manager option ROM v8.0.0.1027 ICH10R wRAID5
Copyright(C) 2003-08 Intel Corporation. All Rights Reserved.

[CREATE VOLUME MENU]

Name: Volume0
RAID Level: RAID0(Stripe)
Disks: Select Disks
Strip Size: 128KB
Capacity: XXX GB

Create Volume

[HELP]

Enter a unique volume name that has no special characters and is
16 characters or less.

[↑,↓]-Change [TAB]-Next [ESC]-Previous Menu [Enter]-Select

2. Enter a name for the RAID 0 set and press <Enter>.
3. When the RAID Level item is highlighted, press the up/down arrow key to select **RAID 0(Stripe)**, and then press <Enter>.
4. When the Disks item is highlighted, press <Enter> to select the hard disk drives to configure as RAID. The following screen appears.

[SELECT DISKS]

Port	Drive Model	Serial #	Size	Status
0	XXXXXXXXXXXX	XXXXXXXXXX	XX.XGB	Non-RAID Disk
1	XXXXXXXXXXXX	XXXXXXXXXX	XX.XGB	Non-RAID Disk
2	XXXXXXXXXXXX	XXXXXXXXXX	XX.XGB	Non-RAID Disk
3	XXXXXXXXXXXX	XXXXXXXXXX	XX.XGB	Non-RAID Disk

Select 2 to 6 disks to use in creating the volume.

[↑,↓]-Previous/Next [SPACE]-SelectsDisk [ENTER]-Done

5. Use the up/down arrow key to highlight a drive, and then press <Space> to select. A small triangle marks the selected drive. Press <Enter> after completing your selection.





6. Use the up/down arrow key to select the stripe size for the RAID 0 array, and then press <Enter>. The available stripe size values range from 4 KB to 128 KB. The default stripe size is 128 KB.



We recommend a lower stripe size for server systems, and a higher stripe size for multimedia computer systems used mainly for audio and video editing.

7. Enter the RAID volume capacity that you want and press <Enter>. The default value indicates the maximum capacity allowed.
8. Press <Enter> when the Create Volume item is highlighted. The following warning message appears.

WARNING: ALL DATA ON SELECTED DISKS WILL BE LOST.

Are you sure you want to create this volume? (Y/N) :

9. Press <Y> to create the RAID volume and return to the main menu, or <N> to go back to the Create Volume menu.

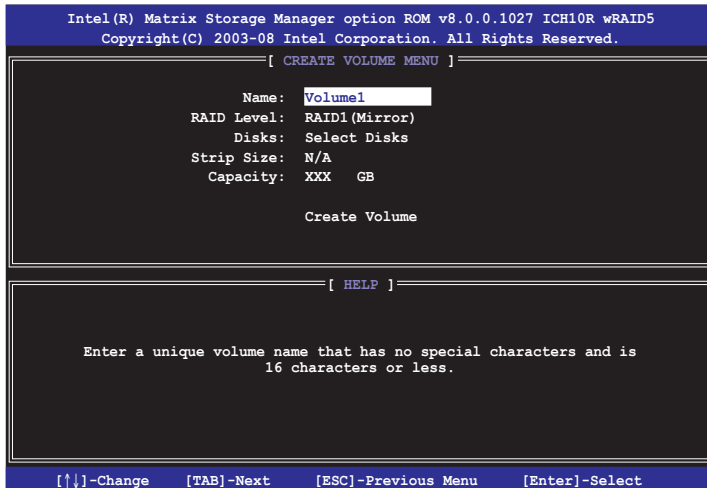




Creating a RAID 1 set (mirrored)

To create a RAID 1 set:

1. From the utility main menu, select **1. Create RAID Volume** and press <Enter>. The following screen appears.



2. Enter a name for the RAID 1 set and press <Enter>.
3. When the RAID Level item is highlighted, press the up/down arrow key to select **RAID 1(Mirror)**, then press <Enter>.
4. When the Capacity item is highlighted, enter the RAID volume capacity that you want, and then press <Enter>. The default value indicates the maximum capacity allowed.
5. Press <Enter> when the Create Volume item is highlighted. The following warning message appears.



6. Press <Y> to create the RAID volume and return to main menu or <N> to go back to Create Volume menu.





Creating a RAID 10 set (RAID 0+1)

To create a RAID 10 set:

1. From the utility main menu, select **1. Create RAID Volume** and press <Enter>. The following screen appears.

Intel(R) Matrix Storage Manager option ROM v8.0.0.1027 ICH10R wRAID5
Copyright(C) 2003-08 Intel Corporation. All Rights Reserved.

[CREATE VOLUME MENU]

Name: Volume10
RAID Level: RAID10 (RAID0+1)
Disks: Select Disks
Strip Size: 64KB
Capacity: XXX GB

Create Volume

[HELP]

Enter a unique volume name that has no special characters and is
16 characters or less.

[↑↓]-Change [TAB]-Next [ESC]-Previous Menu [Enter]-Select

2. Enter a name for the RAID 10 set and press <Enter>.
3. When the RAID Level item is highlighted, press the up/down arrow key to select **RAID 10 (RAID 0+1)**, and then press <Enter>.
4. When the Stripe Size item is highlighted, press the up/down arrow key to select the stripe size for the RAID 10 array, and then press <Enter>. The available stripe size values range from 4 KB to 64 KB. The default stripe size is 64 KB.



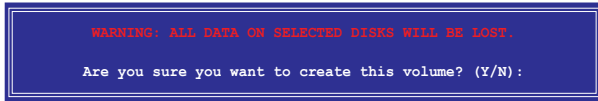
We recommend a lower stripe size for server systems, and a higher stripe size for multimedia computer systems used mainly for audio and video editing.

5. Enter the RAID volume capacity that you want and press <Enter>. The default value indicates the maximum capacity allowed.





- Press <Enter> when the Create Volume item is highlighted. The following warning message appears.

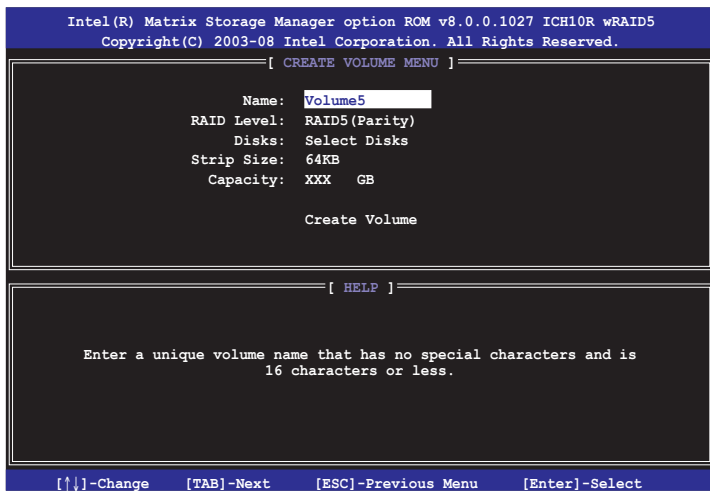


- Press <Y> to create the RAID volume and return to the main menu or <N> to go back to the Create Volume menu.

Creating a RAID 5 set (parity)

To create a RAID 5 set:

- From the utility main menu, select **1. Create RAID Volume** and press <Enter>. The following screen appears.



- Enter a name for the RAID 5 set and press <Enter>.
- When the RAID Level item is highlighted, press the up/down arrow key to select **RAID 5(Parity)**, and then press <Enter>.





- The Disks item is highlighted, press <Enter> to select the hard disk drives to configure as RAID. The following screen appears.

[SELECT DISKS]				
Port	Drive Model	Serial #	Size	Status
0	XXXXXXXXXX	XXXXXXXX	XX.XGB	Non-RAID Disk
1	XXXXXXXXXX	XXXXXXXX	XX.XGB	Non-RAID Disk
2	XXXXXXXXXX	XXXXXXXX	XX.XGB	Non-RAID Disk
3	XXXXXXXXXX	XXXXXXXX	XX.XGB	Non-RAID Disk
Select 3 to 6 disks to use in creating the volume.				
=[↑↓]-Previous/Next [SPACE]-SelectsDisk [ENTER]-Done				

- Use the up/down arrow key to highlight the drive you want to set, and then press <Space> to select. A small triangle marks the selected drive. Press <Enter> after completing your selection.
- When the Stripe Size item is highlighted, press the up/down arrow key to select the stripe size for the RAID 5 array, and then press <Enter>. The available stripe size values range from 16 KB to 128 KB. The default stripe size is 64 KB.



We recommend a lower stripe size for server systems, and a higher stripe size for multimedia computer systems used mainly for audio and video editing.

- Enter the RAID volume capacity that you want and then press <Enter>. The default value indicates the maximum allowed capacity.
- Press <Enter> when the Create Volume item is highlighted. The following warning message appears.

WARNING: ALL DATA ON SELECTED DISKS WILL BE LOST.

Are you sure you want to create this volume? (Y/N):

- Press <Y> to create the RAID volume and return to the main menu or <N> to go back to the Create Volume menu.





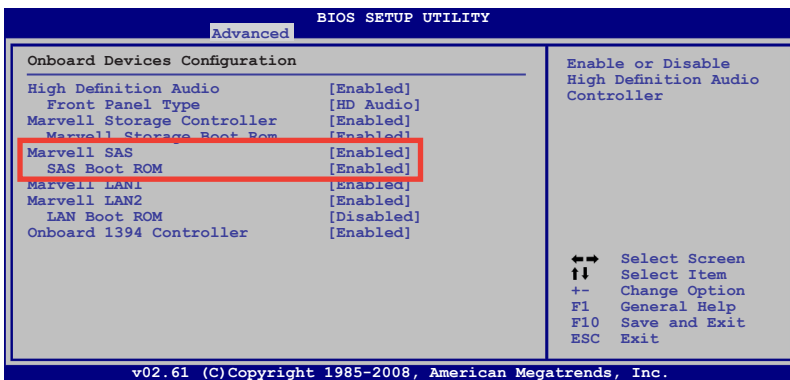
2.9.4 Marvell® SAS RAID configurations

The Marvell® 88SE6320 SAS controller allows you to configure RAID 0 and 1 set on the SAS hard disk drives.

Setting the RAID item in BIOS

You must set the RAID item in the BIOS Setup before you can create a RAID set. To do this:

1. Install two internal SAS hard disk drives to the SAS connectors labeled **SAS1/2**.
2. Boot up your computer, and press during POST to enter the BIOS setup.
3. In the **Advanced** menu, go to **Onboard Devices Configuration**, and enable both **Marvell SAS** and **SAS Boot ROM**.
4. Press <F10> to save the changes and exit.



The RAID BIOS setup screens shown in this section are for reference only, and may not exactly match the items on your screen.

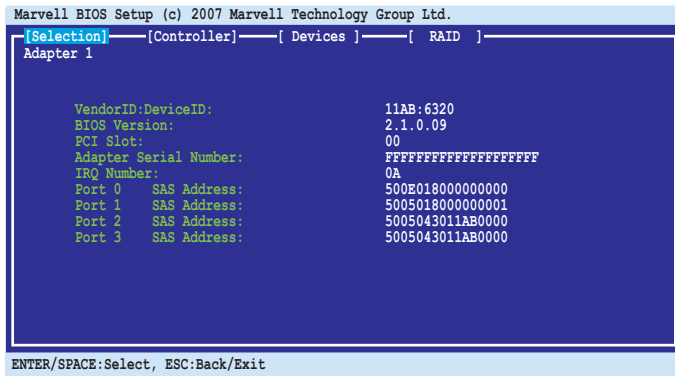




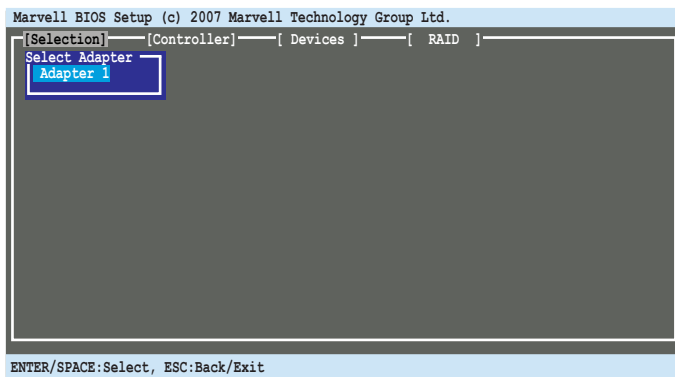
Marvell® RAID BIOS Configuration utility

To enter the Marvell® RAID BIOS setup utility

1. Boot up your computer.
2. During POST, press <Ctrl> + <M> to enter the utility main menu.



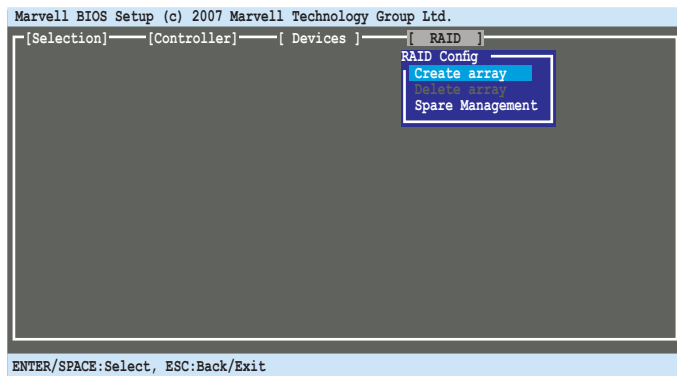
3. Press <Enter> and select a desired adapter for RAID configuration.



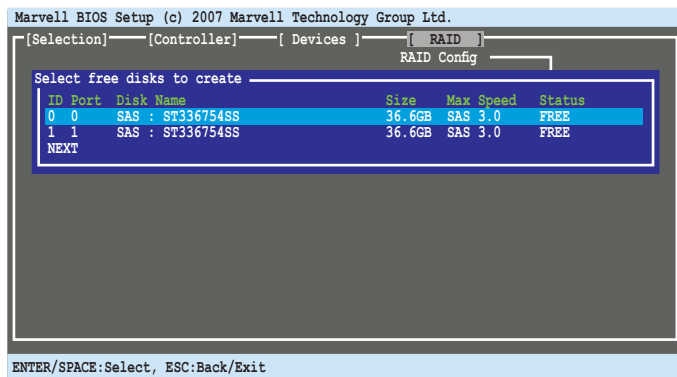
Creating a RAID 0 or RAID 1 set

To create a RAID set:

1. From the utility menu bar, select **RAID > Create array**.



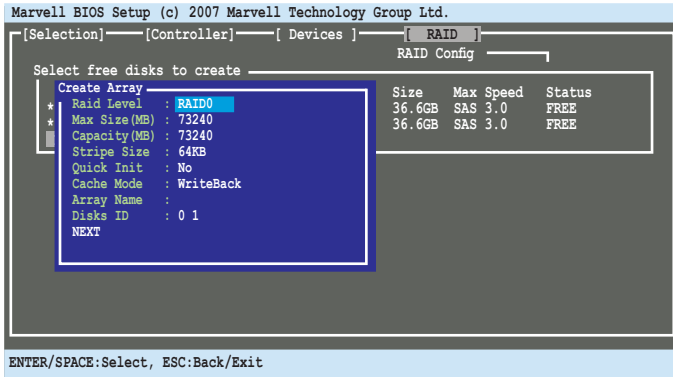
2. Press <Enter>. The screen shows the disks you can add to make up the RAID set. Use the arrow key to select a disk and press <Enter> or <Space> to include this disk in the array.



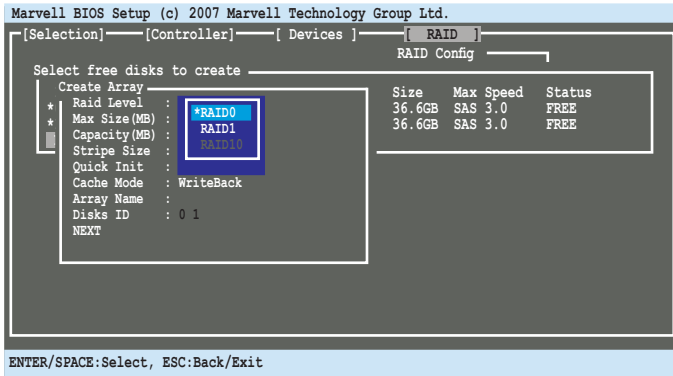
3. After you have selected the desired disks, select **NEXT** to create array.



4. The Create Array screen appears.



5. Use the arrow key to select the **RAID Level** item and press <Enter> to display the available RAID set. Select a RAID set and press <Enter>. After you have selected the desired RAID set, select Next to create array.

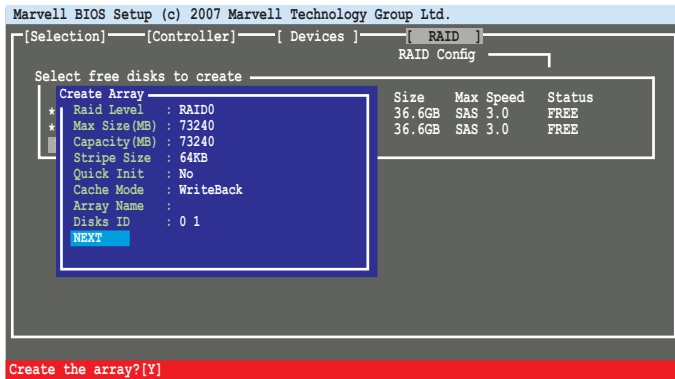


- The available RAID sets vary with the number of disks you select. The RAID sets that you are not allowed to create are grayed out.
- Except for the RAID Level item, we recommend you keep the default values for the other items in Create Array screen.

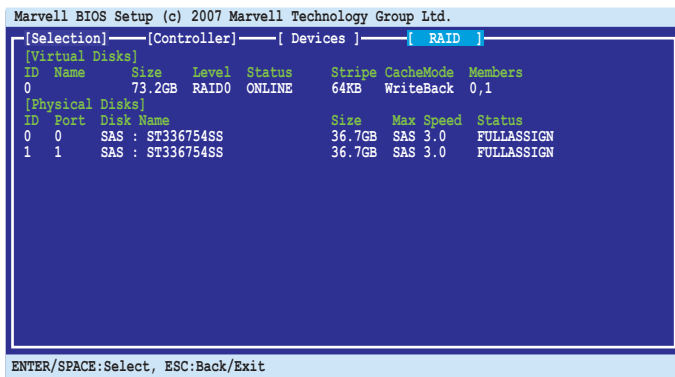




6. A confirmation screen appears. Press <Y> to confirm the array creation.



7. The newly created array appears in the RAID menu.

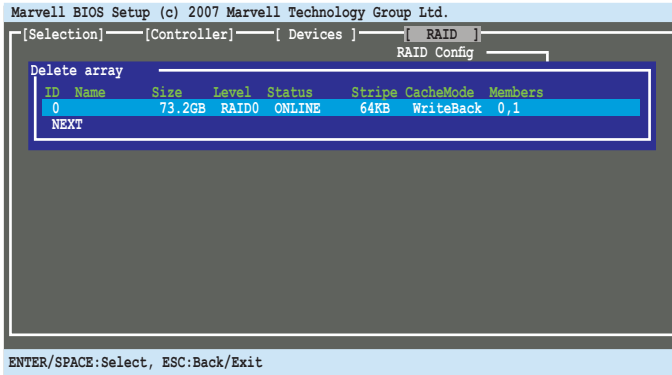




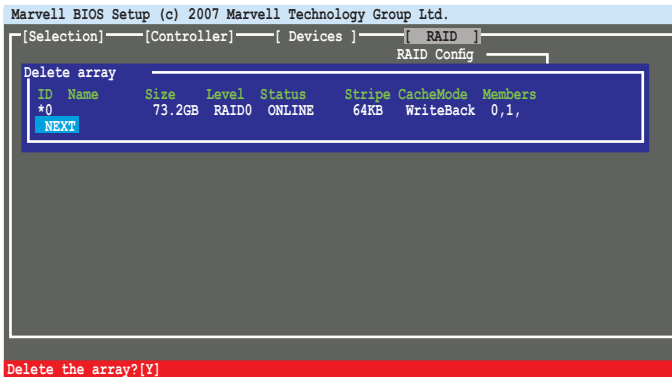
Deleting an array

To delete a RAID set

1. From the utility menu bar, select **RAID > Delete array**, and then press <Enter>. The **Delete array** screen appears.



2. Select a desired array to delete and select **NEXT**. Press <Y> after the confirmation screen appears.



3. Press <Y> again to confirm and delete the selected array.



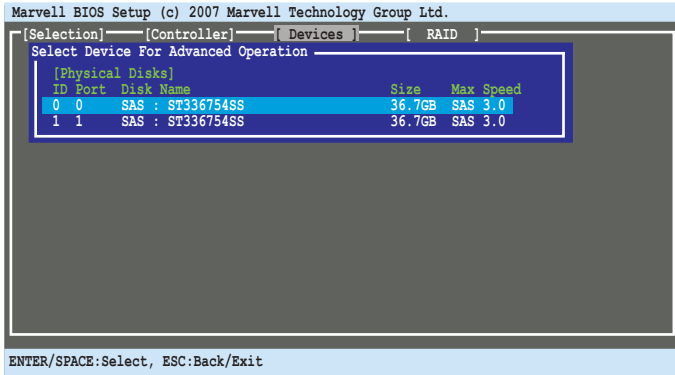
You cannot recover lost data if you delete an array. Make sure you back up important data before deleting an array.





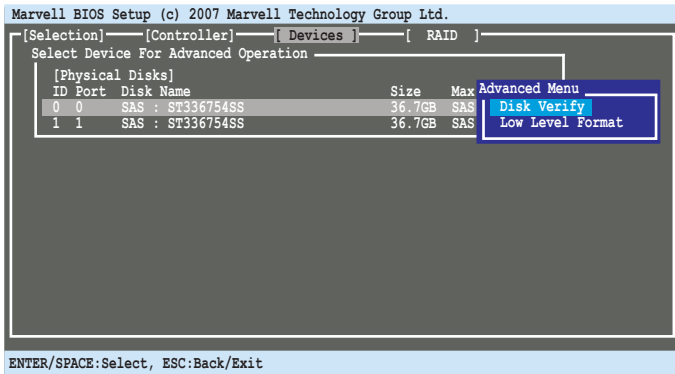
Advanced Operation

From the utility menu bar, select **Devices**, and then press <Enter>. The **Advanced Operation** screen appears. You can run **Disk Verify** and **Low Level Format** in the Advanced Operation screen.



To run Disk Verify

1. In the Advanced Operation screen, use the arrow key to select a disk and press <Enter> or <Space>. The **Advanced Menu** appears. Select **Disk Verify** and press <Enter>.



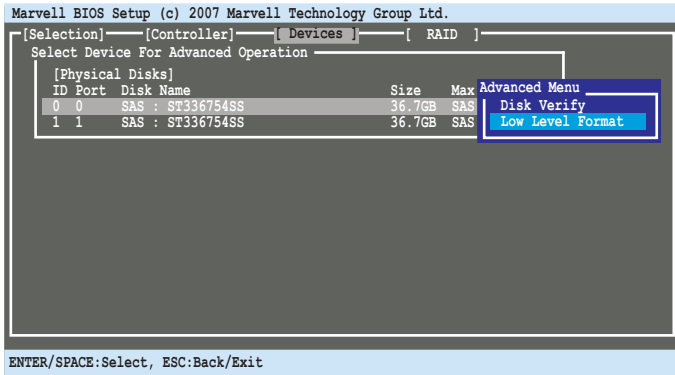
2. Press <Y> after the confirmation screen appears.
3. The utility verifies the selected disk. When completed, press <ESC> to return to the Advanced Operation screen.





To run Low Level Format

1. In the Advanced Operation screen, use the arrow key to select a disk and press <Enter> or <Space>. The **Advanced Menu** appears. Select **Low Level Format** and press <Enter>.



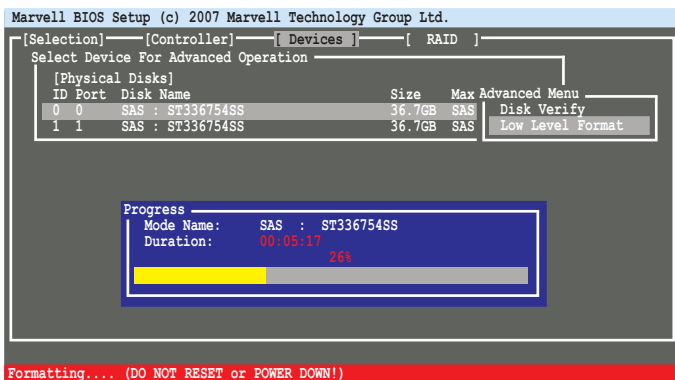
The Low Level Format feature supports SAS HDDs only.

2. Press <Y> after the confirmation screen appears.



You cannot recover lost data if you run low level format on the selected disk. Make sure you back up important data before running low level format.

3. The utility runs low level format on the selected disk. DO NOT reset the computer or shut down the power during the operation.



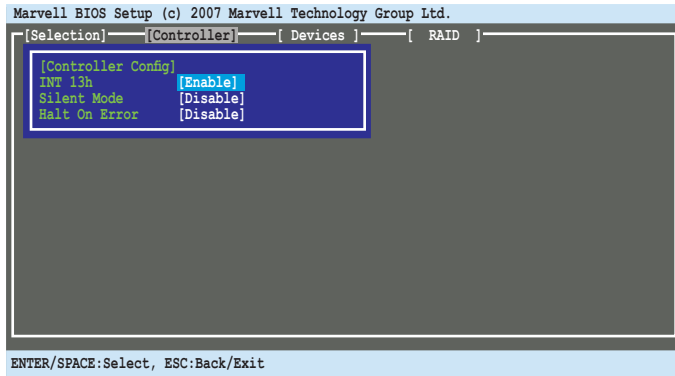
4. When completed, press <ESC> to return to the Advanced Operation screen.





Controller Configuration

From the utility menu bar, select **Controller**, and then press <Enter>. The **Controller Config** screen appears and allows you to change controller settings.



INT 13h [Enable]

Allows you to enable or disable the Interrupt 13h support. Set this item to [Enable] if you want to use the device(s) connected to Marvell® 88SE6320 SAS controller as boot device. Set this item to [Disable] if you want to use the device(s) connected to Marvell® 88SE6320 SAS controller as data device.

Configuration options: [Disable] [Enable]

Silent Mode [Disable]

Allows you to enable or disable the BIOS POST silent mode. When enabled, the information of the drives connected to Marvell® 88SE6320 SAS controller will be hidden during system POST.

Configuration options: [Disable] [Enable]

Halt On Error [Disable]

Allows you to enable or disable the Halt On Error function. When enabled, the BIOS POST will halt when an error (such as virtual drive status changes) occurs and require user's confirmation to continue.

Configuration options: [Disable] [Enable]





2.10 Creating a RAID driver disk

A floppy disk with the RAID driver is required when installing Windows® XP/Vista and later operating system on a hard disk drive that is included in a RAID set. For Windows Vista user, you can create a RAID driver disk with a floppy disk drive or a USB flash disk drive.

2.10.1 Creating a RAID driver disk without entering the OS

To create a RAID driver disk without entering the OS:

1. Boot your computer.
2. Press during POST to enter the BIOS setup utility.
3. Set the optical drive as the primary boot device.
4. Insert the support DVD into the optical drive.
5. Save changes and exit BIOS.
6. Press any key when the system prompts "Press any key to boot from the optical drive."
7. When the menu appears, press <1> to create a RAID driver disk.
8. Insert a formatted floppy disk into the floppy drive then press <Enter>.
9. Follow succeeding screen instructions to complete the process.

2.10.2 Creating a RAID driver disk in Windows®

To create a RAID driver disk in Windows®:

1. Start Windows®.
2. Place the motherboard support DVD into the optical drive.
3. Go to the **Make disk** menu, and then click **Intel ICH10R 32/64 bit RAID Driver Disk** to create an Intel® ICH10R RAID driver disk.
4. Insert a floppy disk into the floppy disk drive or connect a USB flash disk if you are using Windows Vista OS.
5. Follow succeeding screen instructions to complete the process.



Write-protect the floppy disk to avoid computer virus infection.





To install the RAID driver in Windows® XP:

1. During the OS installation, the system prompts you to press the <F6> key to install third-party SCSI or RAID driver.
2. Press <F6> then insert the floppy disk with RAID driver into the floppy disk drive.
3. When prompted to select the SCSI adapter to install, make sure you select **Intel(R) SATA RAID Controller (Desktop ICH10R)**.
4. Follow the succeeding screen instructions to complete the installation.

To install the RAID driver in Windows Vista:

1. Insert the floppy disk/USB device with RAID driver into the floppy disk drive/USB port.
2. During the OS installation, select **Intel(R) SATA RAID Controller (Desktop ICH10R)**.
3. Follow the succeeding screen instructions to complete the installation.





2.11 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).

2.12 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.

2.12.1 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.





2.12.2 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.





2.12.3 Recovering a Windows® 7 OS

1. Turn on your ASUS Desktop PC. When the ASUS logo appears, press **<F8>** to enter the **Please select boot device** menu.



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

2. Insert the recovery DVD into the optical drive and select the optical drive (CDROM:XXX) as the boot device. Press **Enter** and then press any key to continue.
3. Wait until the Hard-Disk Information screen appears. 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." Select a partition and click **NEXT**.

Recover system to entire HD

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

4. Tick **I accept** then click **Next**.
5. Follow the onscreen instructions to complete the recovery process.
6. Click **OK** on the confirmation message to eject the disc from the optical drive and the system restarts.
7. After the system restarts, Windows® 7 begins its system configurations. Follow the onscreen instructions to complete the process, and the system automatically restarts.



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.

Manufacturer:	ASUSTeK Computer Inc.
Address:	No.150, LI-TE RD., PEITOU, TAIPEI 112, TAIWAN
Authorised representative in Europe:	ASUS Computer GmbH
Address:	HARKORT STR. 21-23, 40880 RATINGEN, GERMANY

