∽ Soft-Off by PWR-BTTN

Configures the way to turn off the computer in MS-DOS mode using the power button.

Instant-Off Press the power button and then the system will be turned off instantly. (Default)
 Delay 4 Sec. Press and hold the power button for 4 seconds to turn off the system. If the power button is pressed for less than 4 seconds, the system will enter suspend mode.

\bigcirc Wake on LAN from S5

Allows the system to be awakened from an ACPI sleep state by a Allows the system to be awakened from S5 ACPI sleep state by a wake-up signal from the onboard LAN. (Default: Enabled)

☞ ErP Support

Determines whether to let the system consume least power in S5 (shutdown) state. (Default: Disabled) Note: When this item is set to **Enabled**, the following functions will become unavailable: PME event wake up, power on by mouse, power on by keyboard, and wake on LAN.

2-8 Save & Exit



∽ Save & Exit Setup

Press <Enter> on this item and select **Yes**. This saves the changes to the CMOS and exits the BIOS Setup program. Select **No** or press <Esc> to return to the BIOS Setup Main Menu.

☞ Exit Without Saving

Press <Enter> on this item and select **Yes**. This exits the BIOS Setup without saving the changes made in BIOS Setup to the CMOS. Select **No** or press <Esc> to return to the BIOS Setup Main Menu.

∽ Load Optimized Defaults

Press <Enter> on this item and select **Yes** to load the optimal BIOS default settings. The BIOS defaults settings help the system to operate in optimum state. Always load the Optimized defaults after updating the BIOS or after clearing the CMOS values.

∽ Boot Override

Allows you to select a device to boot immediately. Press <Enter> on the device you select and select **Yes** to confirm. Your system will restart automatically and boot from that device.

∽ Save Profiles

This function allows you to save the current BIOS settings to a profile. You can create up to 4 profiles and save as Setup Profile 1~ Setup Profile 4. Press <Enter> to complete.

∽ Load Profiles

If your system becomes unstable and you have loaded the BIOS default settings, you can use this function to load the BIOS settings from a profile created before, without the hassles of reconfiguring the BIOS settings. First select the profile you wish to load and then press <Enter> to complete.

Chapter 3 Drivers Installation



Before installing the drivers, first install the operating system.

 After installing the operating system, insert the motherboard driver disk into your optical drive. The driver Autorun screen is automatically displayed which looks like that shown in the screen shot below. (If the driver Autorun screen does not appear automatically, go to My Computer, double-click the optical drive and execute the **Run**.exe program.)

3-1 Installing Chipset Drivers



After inserting the driver disk, "Xpress Install" will automatically scan your system and then list all the drivers that are recommended to install. You can click the **Install All** button and "Xpress Install" will install all the recommended drivers. Or click **Install Single Items** to manually select the drivers you wish to install.

eries Utility DVD 1.4 B12.0	713.1	
IGABYTI	E	
Chipset Drivers	Install Chipset Drivers We recommend that you install the drivers listed below for your motherboard. Please click "Install All" to inst drivers automatically.	all all the
Application Software	Xpress Install Install Single Items	
Technical Manuals	Install All	-
Contact	✓ Google Chrome , a faster way to browse the web Version:18.0.1025.142 Size 26.14MB	
System	Google Search built into the address bar Stable and Secure By installing this application, you agree to the Google Chrome Terms of use and Privacy Policy.	
Download Center	Google Toolbar for Internet Explorer Version:7.0.1710.2246 Size:7.19MB	
New Program	Google I colbar makes web browsing more convenient.Search from any website; I ranslate web pages instantly.Share your avoid is sites with finant. By installing this application you agree to the Google Toolbar Terms and Conditions and the Privacy Policy.	
Google Chrome	I Workon Internet Security(NIS) Version2012 Size:124 64MB	
Google ToolBar	Your Power Against Online Threat. Stops Viruses, spyware, and cybercriminal with real-time protection. Enjoys online activities safely, without slowdowns or distruptions. Proactively blocks hackers and dangerous downloads. Identifies unsafe websites in search results.	



• Please ignore the popup dialog box(es) (e.g. the **Found New Hardware Wizard**) displayed when "Xpress Install" is installing the drivers. Failure to do so may affect the driver installation.

- Some device drivers will restart your system automatically during the driver installation. After the system restart, "Xpress Install" will continue to install other drivers.
- After "Xpress Install" installs all of the drivers, a dialog box will appear asking whether to install new GIGABYTE utilities. Click Yes to automatically install the utilities. Or click No if you want to manually select the utilities to install on the Application Software page later.
- For USB 2.0 driver support under the Windows XP operating system, please install the Windows XP Service Pack 1 or later. After installing the SP1 (or later), if a question mark still exists in Universal Serial Bus Controller in Device Manager, please remove the question mark (by right-clicking your mouse and select Uninstall) and restart the system. (The system will then autodetect and install the USB 2.0 driver.)

3-2 Application Software

This page displays all the utilities and applications that GIGABYTE develops and some free software. You can click the **Install** button on the right of an item to install it.

Chipset Drivers	Install Application Programs Click the "Install" button on the right of an application to install it.
Application	Install GIGABYTE Utilities Install Application Software Install New Utilities
Software	EasyTune 6
Technical	Size:42.66MB
Manuals	An easy-to-use Windows-based system enhancement utility allowing quick access to a Install variety of performance features.
Contact	@BIOS
	Size:5.30MB
System	@BIOS provides utility for updating BIOS through internet.
	Smart Recovery 2
Download	Size:23.96MB
Center	Based on the Microsoft Volume Shadow Copy Senices technology, Smart Recovery 2 allows you to quickly back up and restore your system data in the Windows VistaWindows 7 operating system. Smart Recovery 2 supports NTFS file system and can restore system data on PATA and SATA hard drives
Program	DMI Viewer
	Size:3.63MB
Google	install

3-3 Technical Manuals

This page provides the content descriptions for this driver disk.

Techni	cal Manuals		
\neg	Driver Disk Contents		
on let	Incot		
	Infundate	Intel/P) Chinset Device Software	
	VGA	Intel(R) Chipset Device Software	
	IRST	Intel(R) Intel Rapid Storage driver	
	EnableUSBS3XP	A patch program for fixed some USB issue	
	HECI	Intel(R) Management Engine Interface	
	InsHelp	Several install program set	
•	USB20	USB driver for before OS.	
•	XPR2	XpressRecover patch program for some OS.	
Ar	tivirus		
	Norton	Norton Internet Security 2012	
-		ration monor original parts	
Au	dio		
•	MSHDQFE	Microsoft hotfix for HD audio.	
•	realtek	Realtek audio driver.	
bo	ot		
•	isolinux	Important file for XR2.	
0	-iD-		
DU	ODATA	CRATA EC install down	

3-4 Contact

For the detailed contact information of the GIGABYTE Taiwan headquarter or worldwide branch offices, click the URL on this page to link to the GIGABYTE website.



3-5 System

This page provides the basic system information.



3-6 Download Center

To update the BIOS, drivers, or applications, click the **Download Center** button to link to the GIGABYTE website. The latest version of the BIOS, drivers, or applications will be displayed.



3-7 New Program

This page provides a quick link to GIGABYTE's lately developed utilities for users to install. You can click the **Install** button on the right of an item to install it.

Chipset Drivers	Install Application Programs Click the "Install" button on the right of an application	n to install it.	
Application	Install GIGABYTE Utilities Install	Application Software	Install New Utilities
Technical Manuals	3TB+Unlock Size:6.87MB		
Contact	Gigabyte 3TB HDD unlock ut	tility	
System			
Download			
New Program			
Chrome			
Chrome Google ToolBar			

Chapter 4 Unique Features

4-1 BIOS Update Utilities

GIGABYTE motherboards provide two unique BIOS update tools, Q-Flash[™] and @BIOS[™]. GIGABYTE Q-Flash and @BIOS are easy-to-use and allow you to update the BIOS without the need to enter MS-DOS mode. Additionally, this motherboard features the DualBIOS[™] design, which enhances protection for the safety and stability of your computer by adding one more physical BIOS chip.

What is DualBIOS[™]?

Motherboards that support DualBIOS have two BIOS onboard, a main BIOS and a backup BIOS. Normally, the system works on the main BIOS. However, if the main BIOS is corrupted or damaged, the backup BIOS will take over on the next system boot and copy the BIOS file to the main BIOS to ensure normal system operation. For the sake of system safety, users cannot update the backup BIOS manually.

What is Q-Flash[™]?

With Q-Flash you can update the system BIOS without having to enter operating systems like MS-DOS or Window first. Embedded in the BIOS, the Q-Flash tool frees you from the hassles of going through complicated BIOS flashing process.

What is @BIOS[™]?

@BIOS allows you to update the system BIOS while in the Windows environment. @BIOS will download the latest BIOS file from the nearest @BIOS server site and update the BIOS.

4-1-1 Updating the BIOS with the Q-Flash Utility

A. Before You Begin

- 1. From GIGABYTE's website, download the latest compressed BIOS update file that matches your motherboard model.
- 2. Extract the file and save the new BIOS file (e.g. X79UP4.F1) to your USB flash drive or hard drive. Note: The USB flash drive or hard drive must use FAT32/16/12 file system.
- Restart the system. During the POST, press the <End> key to enter Q-Flash. Note: You can access Q-Flash by either pressing the <End> key during the POST or pressing the <F8> key in BIOS Setup. However, if the BIOS update file is saved to a hard drive in RAID/AHCI mode or a hard drive attached to an independent SATA controller, use the <End> key during the POST to access Q-Flash.



Because BIOS flashing is potentially risky, please do it with caution. Inadequate BIOS flashing may result in system malfunction.

B. Updating the BIOS

In the main menu of Q-Flash, use the keyboard or mouse to select an item to execute. When updating the BIOS, choose the location where the BIOS file is saved. The following procedure assumes that you save the BIOS file to a USB flash drive.

Step 1:

1. Insert the USB flash drive containing the BIOS file into the computer. In the main menu of Q-Flash, select Update BIOS From Drive.

• The Save BIOS to Drive option allows you to save the current BIOS file.

- Q-Flash only supports USB flash drive or hard drives using FAT32/16/12 file system.
- If the BIOS update file is saved to a hard drive in RAID/AHCI mode or a hard drive attached to an independent SATA controller, use the <End> key during the POST to access Q-Flash.

2. Select USB Flash Drive.

Q-Flash Utility v1.02			
Model Name : X79-UP4			
BIOS Version : F2a			
BIOS Date : 07/16/2012			
Flash Type/Size : MXIC 25L6465E/6406E 8MB			
Update BIOS From Drive			
Select Device			
USB Flash Drive			

3. Select the BIOS update file.

Make sure the BIOS update file matches your motherboard model.

Step 2:

The process of the system reading the BIOS file from the USB flash drive is displayed on the screen. When the message "Are you sure to update BIOS?" appears, select **Yes** to begin the BIOS update. The monitor will display the update process.

- Do not turn off or restart the system when the system is reading/updating the BIOS.
- Do not remove the USB flash drive or hard drive when the system is updating the BIOS.

Step 3:

When the update process is complete, select **Reboot** to reboot the system.



Step 4:

During the POST, press <Delete> to enter BIOS Setup. Select Load Optimized Defaults on the Save & Exit screen and press <Enter> to load BIOS defaults. System will re-detect all peripheral devices after a BIOS update, so we recommend that you reload BIOS defaults.



Select Yes to load BIOS defaults

Step 5:

Select **Save & Exit Setup** and press <Enter>. And then select **Yes** to save settings to CMOS and exit BIOS Setup. The procedure is complete after the system restarts.

4-1-2 Updating the BIOS with the @BIOS Utility

A. Before You Begin

- 1. In Windows, close all applications and TSR (Terminate and Stay Resident) programs. This helps prevent unexpected failures when performing a BIOS update.
- 2. During the BIOS update process, ensure the Internet connection is stable and do NOT interrupt the Internet connection (for example, avoid a power loss or switching off the Internet). Failure to do so may result in a corrupted BIOS or a system that is unable to start.
- 3. Do not use the G.O.M. (GIGABYTE Online Management) function when using @BIOS.
- 4. GIGABYTE product warranty does not cover any BIOS damage or system failure resulting from an inadequate BIOS flashing.

B. Using @BIOS

COIOS	CURRENT MOTHERBOAT	
Flash Memory Type :	MXIC 25L6465E76406E	Update BIOS from GIGABYTE Server
Flash Memory Size :	64M bits	Update BIOS from File
BIOS Sign on Message :	X79-UP4 D13	Care Connect BLOC to Sile
BIOS Vendor :	AMI UEFI BIOS	Save current bios to rise
		About @BIOS
	************************************	GIGARYTE

1. Update BIOS from GIGABYTE Server 12 Update the BIOS Using the Internet Update Function:

Click **Update BIOS from GIGABYTE Server**, select the @BIOS server site closest to your location and then download the BIOS file that matches your motherboard model. Follow the on-screen instructions to complete.

If the BIOS update file for your motherboard is not present on the @BIOS server site, please manually download the BIOS update file from GIGABYTE's website and follow the instructions in "Update the BIOS without Using the Internet Update Function" below.

2. Update BIOS from File Dig Update the BIOS without Using the Internet Update Function:

Click **Update BIOS from File**, then select the location where you save the BIOS update file obtained from the Internet or through other source. Follow the on-screen instructions to complete.

3. Save the Current BIOS File:

Click Save Current BIOS to File to save the current BIOS file.

4. Solution CMOS default after BIOS update Load BIOS Defaults after BIOS Update:

Select the **Load CMOS default after BIOS update** check box and then the system will automatically load BIOS defaults after BIOS update and after the system restarts.

C. After Updating the BIOS

Restart your system after updating the BIOS.



Make sure that the BIOS file to be flashed matches your motherboard model. Updating the BIOS with an incorrect BIOS file could cause your system not to boot.

Unique Features

4-2 EasyTune 6

GIGABYTE's EasyTune 6 is a simple and easy-to-use interface that allows users to fine-tune their system settings or do overclock/overvoltage in Windows environment. The user-friendly EasyTune 6 interface also includes tabbed pages for CPU and memory information, letting users read their system-related information without the need to install additional software.

The EasyTune 6 Interface



Tabs Information

Tab	Function
CPU CPU	The CPU tab provides information on the installed CPU and motherboard.
Memory	The Memory tab provides information on the installed memory module(s). You can select memory module on a specific slot to see its information.
Tuner	 The Tuner tab allows you to change memory settings and voltages. Quick Boost mode provides you with 3 levels of CPU frequency/base clock to choose to achieve desired system performance. After making changes in Quick Boost mode or clicking Default to restore to default values, be sure to restart your system for these changes to take effect. Easy mode provides information on CPU/memory. Advanced mode allows you to individually change system clock settings and voltages settings using the sliders. Save allows you to save the current settings to a new profile (.txt file). Load allows you to load previous settings from a profile. After making changes in Easy mode/Advanced mode, be sure to click Set for these changes to take effect or click Default to restore to default values.
Graphics	The Graphics tab allows you to change the core clock and memory clock for your AMD or NVIDIA graphics card.
Smart	The Smart tab allows you to specify a Smart Fan mode. Smart Fan Advanced mode allows the fan speed to be changed linearly based on the temperature thresholds you set.
HW Monitor	The HW Monitor tab allows you to monitor hardware temperature, voltage and fan speed and set temperature/fan speed alarm. You can choose the alert sound from the buzzer or use your own sound file (.wav file).

Available functions in EasyTune 6 may differ by motherboard model. Grayed-out area(s) indicates that the item is not configurable or the function is not supported.



Incorrectly doing overclock/overvoltage may result in damage to the hardware components such as CPU, chipset, and memory and reduce the useful life of these components. Before you do the overclock/overvoltage, make sure that you fully know each function of EasyTune 6, or system instability or other unexpected results may occur.

4-3 Q-Share

Q-Share is an easy and convenient data sharing tool. After configuring your LAN connection settings and Q-Share, you are able to share your data with computers on the same network, making full use of Internet resources.

GIGABYTE	
	Q-Share
	Ver.1.2

Directions for using Q-Share

After installing Q-Share from the motherboard driver disk, go to Start>All Programs>GIGABYTE>Q-Share.exe to launch the Q-Share tool. Find the **Q-Share** icon **i** in the notification area and right-click on this icon to configure the data sharing settings.

		Connect
Enable Incoming Folder	Disable Incoming Folder	Incoming folder 🕨
Qpen Incoming Folder : C:\Q-ShareFolder Change Incoming Folder : C:\Q-ShareFolder	Ωpen Incoming Folder : C:\Q-ShareFolder	Update Q-Share About Q-Share Exit

Figure 1. Data Sharing Disabled

Figure 2. Data Sharing Enabled

Options Descriptions

Option	Description
Connect	Displays the computers with data sharing enabled
Enable Incoming Folder	Enables data sharing
Disable Incoming Folder	Disables data sharing
Open Incoming Folder :	Accesses the shared data folder
C:\Q-ShareFolder	
Change Incoming Folder :	Changes the data folder to be shared (Note)
C:\Q-ShareFolder	
Update Q-Share	Updates Q-Share online
About Q-Share	Displays the current Q-Share version
Exit	Exits Q-Share

(Note) This option is available only when data sharing is NOT enabled.

Chapter 5 Appendix

5-1 Configuring SATA Hard Drive(s)

RAID Levels

	RAID 0	RAID 1	RAID 5	RAID 10
Minimum				
Number of Hard	≥2	2	≥3	≥4
Drives				
Array Capacity	Number of hard	Size of the smallest	(Number of hard	(Number of hard
	drives * Size of the	drive	drives -1) * Size of	drives/2) * Size of the
	smallest drive		the smallest drive	smallest drive
Fault Tolerance	No	Yes	Yes	Yes

To configure SATA hard drive(s), follow the steps below:

- A. Install SATA hard drive(s) in your computer.
- B. Configure SATA controller mode in BIOS Setup.
- C. Configure a RAID array in RAID BIOS. (Note 1)
- D. Install the SATA RAID/AHCI driver and operating system. (Note 2)

Before you begin

Please prepare:

- At least two SATA hard drives (to ensure optimal performance, it is recommended that you use two hard drives with identical model and capacity). If you do not want to create RAID, you may prepare only one hard drive.
- Windows 7/Vista/XP (Note 3) setup disk.
- Motherboard driver disk.
- A USB floppy disk drive (needed during Windows XP installation) (Note 3)
- An empty formatted floppy disk (needed during Windows XP installation) (Note 3)

5-1-1 Configuring Intel X79 SATA Controllers

A. Installing SATA hard drive(s) in your computer

Attach one end of the SATA signal cable to the rear of the SATA hard drive and the other end to available SATA port on the motherboard. If there is more than one SATA controller on your motherboard, refer to "Chapter 1," "Hardware Installation," to identify the SATA controller for the SATA port. (For example, on this motherboard, the SATA3 0/1 (Note 4) and SATA2 2/3/4/5 ports are supported by the X79 Chipset.) Then connect the power connector from your power supply to the hard drive.

- (Note 1) Skip this step if you do not want to create RAID array on the SATA controller.
- (Note 2) Required when the SATA controller is set to AHCI or RAID mode.
- (Note 3) The X79 SATA RAID/AHCI driver does not support Windows XP.
- (Note 4) When a RAID set is built across the SATA 6Gb/s and SATA 3Gb/s channels, the system performance of the RAID set may vary depending on the devices being connected.

B. Configuring SATA controller mode in BIOS Setup

Make sure to configure the SATA controller mode correctly in system BIOS Setup.

Step 1:

Turn on your computer and press <Delete> to enter BIOS Setup during the POST (Power-On Self-Test). To create RAID, set **Intel SATA Controller Mode** under the **Peripherals** menu to **RAID Mode** (Figure 1). If you do not want to create RAID, set this item to **IDE Mode** or **AHCI Mode**.

	GIGABYTE -	UEFI DualBIOS	
	STOR STOR	R	
M.I.T. System	BIOS Features	Peripherals	Power Management Save & Exit
			English Q-Flash
			(1) IDE Mode. (2) AHCI Mode. (3) RAID
LAN PXE Boot Option ROM		Disabled	Mode.
LAN Controller		Enabled	
		Enabled	
		For the Area	
Intel SATA Controller Mode		RAID Mode	
Legacy dob support		Enabled	
VHCI Hand-off		Enabled	
EHCI Hand-off		Disabled	
Port 60/64 Emulation		Disabled	++: Select Screen 11/Click: Select Item
USB Storage Devices:			
USB 2.0 USB Flash Drive 0.00		Auto	+/-/PU/PD: Change Opt.
▶ Trusted Computing			F1 : General Help
Super IO Configuration			
 Marvell ATA Controller Configuration 			F7 : Optimized Defaults
			F8 : Q-Flash
			F9 : System Information
			F10 : Save & EXIT
			ESC/Right Click: Exit
			Loom Argin Orlow Exit
C	opyright (C) 2011 A	merican Megatrends, I	Inc.

Figure 1

Step 2: Save changes and exit BIOS Setup.



The BIOS Setup menus described in this section may differ from the exact settings for your motherboard. The actual BIOS Setup menu options you will see shall depend on the motherboard you have and the BIOS version.

C. Configuring a RAID array in RAID BIOS

Enter the RAID BIOS setup utility to configure a RAID array. Skip this step and proceed with the installation of Windows operating system for a non-RAID configuration.

Step 1:

After the POST memory test begins and before the operating system boot begins, look for a message which says "Press <Ctrl-I> to enter Configuration Utility" (Figure 2). Press <Ctrl> + <I> to enter the RAID Configuration Utility.

Intel(R	Intel(R) Rapid Storage Technology enterprise - SATA Option ROM - 3.0.0.1184							
Copyr	Copyright(C) 2003-11 Intel Corporation. All Rights Reserved.							
RAID	RAID Volumes :							
None o	None defined.							
Physic ID 0	al Devices : Device Model ST3120026AS	Serial # 3JT354CP	Size 111.7GB	Type/Status(Vol ID) Non-RAID Disk				
1 Press	ST3120026AS <ctrl -="" i=""> to ente</ctrl>	3JT329JX er Configuration Utility	111.7GB	Non-RAID Disk				

Figure 2

Step 2:

After you press <Ctrl> + <l>, the MAIN MENU screen will appear (Figure 3).

Create RAID Volume

If you want to create a RAID array, select Create RAID Volume in MAIN MENU and press < Enter>.

Intel(R) Rapid Storage Technology enterprise - SATA Option ROM - 3.0.0.1184 Copyright(C) 2003-11 Intel Corporation. All Rights Reserved.								
	[MAIN MENU]							
	1. Create RAID Volume3. Reset Disks to Non-RAID2. Delete RAID Volume4. Exit							
RAID None of	RAID Volumes : None defined							
Physic	cal Deivces :							
ID 0 1	Device Model ST3120026AS ST3120026AS	Serial # 3JT354CP 3JT329JX	Size 111.7GB 111.7GB	Type/Status(Vol ID) Non-RAID Disk Non-RAID Disk				
	[↑↓]-Select [ESC]-Exit [ENTER]-Select Menu							
		Figure 3						

Step 3:

After entering the **CREATE VOLUME MENU** screen, enter a volume name with 1~16 letters (letters cannot be special characters) under the **Name** item and press <Enter>. Then, select a RAID level (Figure 4). RAID levels supported include RAID 0, RAID 1, RAID 10, and RAID 5 (the selections available depend on the number of the hard drives being installed). Press <Enter> to proceed.

Intel(R) Rapid Storage Technology enterprise - SATA Option ROM - 3.0.0.1184 Copyright(C) 2003-11 Intel Corporation. All Rights Reserved.						
	[CREATE Nam RAID Lev Disl Strip Siz Capacit	VOLUME MENU] ne : Volume0 el : RAID0(Stripe) cs : Select Disks ze : 128KB ty : 111.7 GB				
		Create Volume				
Г.		[HELP]				
	RAID0: Stripes data (performance).					
[↑↓]-Change	[TAB]-Next	[ESC]-Previous Menu	[ENTER]-Select			
	F	igure 4				

Step 4:

Under **Disks** item, select the hard drives to be included in the RAID array. If only two hard drives are installed, they will be automatically assigned to the array. Set the stripe block size (Figure 5) if necessary. The stripe block size can be set from 4 KB to 128 KB. Once you have selected the stripe block size, press <Enter>.

Intel(I	R) Rapid Storage Technolog Copyright(C) 2003-11 In	y enterprise - SATA Option ROM tel Corporation. All Rights Reserv	- 3.0.0.1184 /ed.		
	[CREATE Nat RAID Le Dis Strip S Capac	VOLUME MENU] me : Volume0 vel : RAID0(Stripe) sks : Select Disks ize : 128KB ity : 111.7 GB			
		Create Volume			
		[HELP]			
[HELP] The following are typical values: RAID0 - 128KB RAID10 - 64KB RAID5 - 64KB					
[↑↓]-Change	[TAB]-Next	[ESC]-Previous Menu	[ENTER]-Select		
		Figure 5			

Step 5:

Enter the array capacity and press <Enter>. Finally press <Enter> on the **Create Volume** item to begin creating the RAID array. When prompted to confirm whether to create this volume, press <Y> to confirm or <N> to cancel (Figure 6).

	Intel(R) Rapid Storage Technology enterprise - SATA Option ROM - 3.0.0.1184 Copyright(C) 2003-11 Intel Corporation. All Rights Reserved.						
		[CREATE VOL Name : RAID Level : Disks : Strip Size : Capacity :	UME MENU] Volume0 RAID0(Stripe) Select Disks 128 KB 111.7 GB				
	WAR	NING : ALL DATA ON SEI	LECTED DISKS WILL BE LOST. create this volume? (Y/N) :				
		Press ENTER to creat	te the specified volume.				
[↑	↓]-Change	[TAB]-Next	[ESC]-Previous Menu	[ENTER]-Select			
		- :	0				



When completed, you can see detailed information about the RAID array in the **DISK/VOLUME INFORMATION** section, including the RAID level, stripe block size, array name, and array capacity, etc. (Figure 7)



Figure 7

To exit the RAID BIOS utility, press <Esc> or select 4. Exit in MAIN MENU.

Now, you can proceed to install the SATA RAID/AHCI driver and operating system.

Delete RAID Volume

To delete a RAID array, select **Delete RAID Volume** in **MAIN MENU** and press <Enter>. In the **DELETE VOLUME MENU** section, use the up or down arrow key to select the array to be deleted and press <Delete>. When prompted to confirm your selection (Figure 8), press <Y> to confirm or <N> to abort.



5-1-2 Configuring Marvell 88SE9172 SATA Controllers

A. Installing SATA hard drive(s) in your computer

Attach one end of the SATA signal cable to the rear of the SATA hard drive and the other end to available SATA port on the motherboard. The Marvell 88SE9172 SATA controllers control the onboard GSATA3 6/7/8/9 connectors and the eSATA ports on the back panel. Then connect the power connector from your power supply to the hard drive.

B. Configuring SATA controller and RAID mode in BIOS Setup

Make sure to configure the SATA controller mode correctly in system BIOS Setup.

Step 1:

Turn on your computer and press <Delete> to enter BIOS Setup during the POST. To create RAID, go to **Peripherals** and set **GSATA Controller** on the **Marvell ATA Controller Configuration** submenu to **RAID Mode** (Figure 2). If you do not want to create RAID, set this item to **IDE Mode** or **AHCI Mode**.





The BIOS Setup menus described in this section may differ from the exact settings for your motherboard. The actual BIOS Setup menu options you will see shall depend on the motherboard you have and the BIOS version.



Figure 2



The first GSATA Controller item controls the "GSATA3 6" and "GSATA3 7" connectors. The second
 GSATA Controller item controls the "GSATA3 8" and "GSATA3 9" connectors. The third GSATA
 Controller item controls the eSATA ports on the back panel.

Step 2:

Save changes and exit BIOS Setup.

C. Configuring a RAID array in RAID BIOS

Enter the RAID BIOS setup utility to configure a RAID array. Skip this step and proceed to the installation of Windows operating system for a non-RAID configuration.

After the POST memory test begins and before the operating system boot begins, look for a message which says "Press <Ctrl>+<M> to enter BIOS Setup or <Space> to continue" (Figure 3). Press <Ctrl> + <M> to enter the RAID setup utility.



Appendix

	Marvell BIOS Set	up (c) 2009 Marvell Technology Group Ltd.
[Adapter]	[Devices]	- [RAID]
Adapter 0		
	Vendor ID Device ID:	1B4B:91A2
	BIOS Version:	1.0.1.0025
	PCI Slot:	
	Raid Mode:	VA RAID0 RAID1
ENTER/SPACE: Selec	t, ESC: Back/Exit	

On the main screen of the RAID setup utility (Figure 4), use the left or right arrow key to move through tabs.

Figure 4

Create a RAID Array:

Step 1: On the main screen, press <Enter> on the **RAID** tab. Then the **RAID Config** menu appears (Figure 5). Press <Enter> on the **Create VD** item.



Figure 5

Step 2: The next screen displays the two hard drives you installed. Press <Enter> or <Space> on the two hard drives respectively to add them into the RAID array. Selected hard drives are marked with an asterisk (Figure 6). Then press <Enter> on **NEXT**.

Adapter] [Devices] [RAID] RAID Config Select free disks to create Port Disk Name Size Max Sneed Status * S0 SATA: WDC WD800JD-22LSA0 76.3GB SATA 3Gb/s FREE * S1 SATA: WDC WD800JD-22LSA0 76.3GB SATA 3Gb/s FREE NEXT		Marvell BIOS Se	etup (c) 2009 Ma	arvell Technolog	y Group Ltd.		
Select free disks to create Port Disk Name * S0 SATA: WDC WD800JD-22LSA0 76.3GB SATA 3Gb/s * S1 SATA: WDC WD800JD-22LSA0 76.3GB SATA 3Gb/s FREE * S1 SATA: WDC WD800JD-22LSA0 76.3GB SATA 3Gb/s FREE NEXT			[RAID]				
Select free disks to create Port Disk Name Size Max Speed Status * S0 SATA: WDC WD800JD-22LSA0 76.3GB SATA 3Gb/s FREE * S1 SATA: WDC WD800JD-22LSA0 76.3GB SATA 3Gb/s FREE NEXT				RA	ID Config ——		
Port Disk Name Size Mox Speed Status * S0 SATA: WDC WD800JD-22LSA0 76.3GB SATA 3Gb/s FREE * S1 SATA: WDC WD800JD-22LSA0 76.3GB SATA 3Gb/s FREE NEXT NEXT SATA 3Gb/s FREE SATA 3Gb/s SATA 3Gb/s SATA 3Gb/s	Select free disks	to create					
* SO SATA: WDC WD800JD-22LSA0 76.3GB SATA 3Gb/s FREE * SI SATA: WDC WD800JD-22LSA0 76.3GB SATA 3Gb/s FREE NEXT	Port D	isk Name		Size	Max Speed	Status	
* SI SATA: WDC WD800JD-22LSA0 76.3GB SATA 3Gb/s FREE NEXT	* S0 S	ATA: WDC WD800JD	-22LSA0	76.3GB	SATA 3Gb/s	FREE	
NEXT	* S1 S	ATA: WDC WD800JD	-22LSA0	76.3GB	SATA 3Gb/s	FREE	
	NEXT						

Figure 6

Step 3: On the **Create VD** menu (Figure 7), use the up or down arrow key to move the selection bar to select an item and press <Enter> to display options. Set the required items in sequence and press the down arrow key to proceed to the next item.

Sequence:

- 1. RAID Level: Select a RAID level. Options include RAID 0 (Stripe) and RAID 1 (Mirror).
- 2. Stripe Size: Select the stripe block size. Options include 32 KB, 64 KB, and 128 KB.
- 3. Quick Init: Select whether to quickly erase old data on the hard drives when creating the array.
- 4. Cache Mode: Select write-back or write-through cache.
- 5. VD Name: Enter an array name with 1~10 letters (letters cannot be special characters).

[Adapter] ———	— [Devices] —	[RAID]	5) 010up 2tu.	
Select free disk Create VD * RAID L Max Siz Stripe Si Quick In Cache M VD Nan Disks ID NEXT	s to create evel : RAID0 e (MB): 152478 ze : 64KB it : NO lode : WriteBack ie : b : 01			

Figure 7

6. **NEXT:** After completing the settings above, move to **NEXT** and press <Enter> to begin creating the array. When prompted to confirm, press <Y> to confirm or <N> to cancel (Figure 8).

	Marvell BIOS Setur	p (c) 2009 Marve	ell Technology	y Group Ltd.	
		[RAID]			
			RAI		
Select free disks to e * Create VD * RAID Level Max Size (MI Stripe Size Quick Imit Cache Mode VD Name Disk ID NEXT	reate : RAID0 3): 152478 : 64KB : NO : WriteBack : GBT : 01				
Create the VD?[Y]					



When completed, the RAID tab will display the new array. (Figure 9)

	Marvell BIOS Setup (c) 2009 Marvell Technology Group Ltd.						
	[Adapter]	[]	Devices] —	— [RAID]		
	Wirtual Diale						
	ID		Size			Strine	CacheMode
	0	GBT	152.4GB	RAID0	ONLINE	64KB	WriteBack
	[Physical Dis						
	Port	Disk Name				Max Speed	Status
	S0	SATA: WDC	C WD800JD-22	LSA0	76.3GB	SATA 3Gb/s	ASSIGNED
	S1	SATA: WDC	C WD800JD-22	LSA0	76.3GB	SATA 3Gb/s	ASSIGNED
T	NTED ODA OF						
E	NTER/SPACE:	Select, ESC: I	Back/Exit				

Figure 9

To exit the RAID BIOS utility, press <Esc> on the main screen and press <Y> to confirm. Now, you can proceed to install the operating system.

Delete the RAID Array:

To deleted the existing array, press <Enter> on the **RAID** tab and select **Delete VD**. When the **Delete VD** menu appears, press <Enter> on the array to select it and then press <Enter> on **NEXT**. When prompted, press <Y> to confirm (Figure 10). When the message "Do you want to delete the VD's MBR?" appears, press <Y> to clear the MBR or press other keys to ignore.

		Ma	rvell BIOS Setuj	o (c) 2009 Mar	vell Technology	Group Ltd.		
[Adap			ices] ——	[RAID]				
D	elete VD	-						
	ID * 0	Name	Size	Level	Status	Stripe	CacheMode	
	r ()	GB1	152.4GB	KAID0	ONLINE	64KB	WriteBack	
	NEXT							
Delete the	VD?[Y]							

Figure 10

Use the Marvell Storage Utility in the Operating System:

With the Marvell Storage utility, you can set up an array or view the current array status in the operating system. To install the utility, insert the motherboard driver disk, then go to **Application Software\Install Application Software** and select **Marvell Storage Utility** to install. Note: After the installation, you must login the utility with the same account name and password that you use to login the operating system. If you did not set the account password before, click **Login** to enter the Marvell Storage Utility directly. Please note that if you set the hard drive(s) to IDE or AHCI mode, it is normal that you will not see the hard drive(s) in the Marvell Storage Utility.

5-1-3 Installing the SATA RAID/AHCI Driver and Operating System

With the correct BIOS settings, you are ready to install the operating system.

A. Installing Windows 7/Vista

(The following instructions use Windows 7 as the example operating system.)

Step 1:

Boot from the Windows 7/Vista setup disk and perform standard OS installation steps. When you arrive at the "Where do you want to install Windows?" screen, select Load Driver.

Step 2:

Insert the motherboard driver disk and then browse to the location of the driver. The locations of the drivers are as follows:

For the Intel X79:

RAID/AHCI driver for Windows 32-Bit:\BootDrv\RSTe\32Bit RAID/AHCI driver for Windows 64-Bit:\BootDrv\RSTe\64Bit

For the Marvell 88SE9172:

RAID driver for Windows 32-bit: \BootDrv\Marvell\RAID\i386 RAID driver for Windows 64-bit: \BootDrv\Marvell\RAID\amd64 AHCI driver for Windows 32-bit: \BootDrv\Marvell\AHCI\Floppy32 AHCI driver for Windows 64-bit: \BootDrv\Marvell\AHCI\Floppy64

Step 3:

For Intel X79, select Intel(R) C600 Series Chipset SATA RAID Controller (Figure 1). For Marvell 88SE9172, select Marvell 91xx SATA 6G RAID Controller (Figure 2). Click Next to load the driver and continue the OS installation.

🕞 🥂 Install Windows	🕞 🥂 Install Windows
Select the driver to be installed.	Select the driver to be installed.
Inter(R) C600 Series Chipset SATA RAID Controller (G:\BootDrv\IRST\32Bit\laStorA.inf)	Marvell 91xx SATA 6G RAID Controller <d:\bootdrv\marvell\raid\\386\mv91xxr.inf)< td=""></d:\bootdrv\marvell\raid\\386\mv91xxr.inf)<>
₩ ∐ide drivers that are not compatible with hardware on this computer.	₩ Hide drivers that are not compatible with hardware on this computer.
Brgwse Rescan Next	Brgwse Bescan Next
Figure 1	Eigure 2

B. Installing Windows XP (For the Marvell 88SE9172) (Note)

Before installing Windows XP, connect a USB floppy disk drive to your computer first because you need to install the SATA RAID/AHCI driver from a floppy disk that contains the driver during the OS installation. Without the driver, the hard drive(s) may not be recognized during the Windows setup process. First, copy the driver from the motherboard driver disk to a floppy disk. Refer to the methods below.

Method A:

- For RAID mode, copy all files in the **\BootDrv\Marvell\RAID\Floppy32** folder to your floppy disk. To install Windows 64-Bit, copy the files in the **Floppy64** folder.
- For AHCI mode, depending on whether you want to install the 32- or 64-bit version, copy the files in the AHCI\Floppy32 or AHCI\Floppy64 folder.

Method B:

Steps:

- 1: Use an alternative system and insert the motherboard driver disk.
- 2: From your optical drive folder, double click the **Menu.exe** file in the **BootDrv** folder. A Command Prompt window will open similar to that in Figure 3.
- 3: Insert the blank formatted disk (if you're using a USB floppy disk drive, make sure it is designated as drive A). Select the controller driver by pressing the corresponding letter from the menu and press <Enter>. For example, from the menu in Figure 3, select 7) Marvell RAID driver. (For AHCI drive(s), select Marvell AHCI driver.)

Your system will then automatically copy the driver files to the floppy disk. Press any key to exit when finished.



Figure 3

(Note) The X79 SATA RAID/AHCI driver does not support Windows XP.

Refer to the following for installing the driver during the Windows setup process.

Step 1:

Restart your system to boot from the Windows XP setup disk and press <F6> as soon as you see the message "Press F6 if you need to install a 3rd party SCSI or RAID driver." A screen will then appear asking you to specify an additional SCSI adapter. Press <S>.

Step 2:

Insert the floppy disk containing the SATA RAID/AHCI driver and press <Enter>. Select either the 32-bit or 64-bit items depending on whether you want to install the 32-bit or 64-bit version of Windows XP (Figure 4). Both of the **Marvell shared library** and **Marvell 91xx SATA Controller** need to be installed. Below we assume that you are installing the 32-bit version. First select **Marvell shared library for 32bit (install first)** and press <Enter>. On the next screen, press <S> to return to the screen in Figure 4. Then select **Marvell 91xx SATA Controller 32bit Driver** and press <Enter>. When both of the two drivers appear on the confirmation screen, press <Enter> to continue the driver installation.

Windows Setup	
You hav using a	e chosen to configure a SCSI Adapter for use with Windows, device support disk provided by an adapter manufacturer.
Select the	ne SCSI Adapter you want from the following list, or press ESC n to the previous screen.
	Marvell shared library for 32bit (install first) Marvell 91xx SATA Controller 32bit Driver Marvell shared library for 64bit (install first) Marvell 91xx SATA Controller 64bit Driver
ENTER=Select	F3=Exit

Figure 4

Step 3:

On the next screen, press <Enter> to continue the driver installation. After the driver installation, you can proceed with the Windows XP installation.

C. Rebuilding an Array

Rebuilding is the process of restoring data to a hard drive from other drives in the array. Rebuilding applies only to fault-tolerant arrays such as RAID 1, RAID 5, and RAID 10 arrays. The procedures below assume a new drive is added to replace a failed drive to rebuild a RAID 1 array. (Note: The new drive must have equal or greater capacity than the old one.)

For the Intel X79:

Turn off your computer and replace the failed hard drive with a new one. Restart your computer.

• Enabling Automatic Rebuild

Step 1:

When the message "Press <Ctrl-I> to enter Configuration Utility" appears, press <Ctrl> + <I> to enter the RAID Configuration Utility. The following screen appears after you enter the RAID Configuration Utility.



Step 2:

Select the new hard drive to add into the array to be rebuilt and press <Enter>. The following screen appears, indicating that an automatic rebuild will be performed after you enter the operating system. You can access **Intel Rapid Storage Technology enterprise** from **All Programs** in the **Start** menu. You will see that the status of the array displays as **Rebuilding**. If you do not enable automatic rebuild on this stage, you have to manually rebuild the array in the operating system (see the next page for more details).



Performing the Rebuild in the Operating System

While in the operating system, make sure the Chipset driver and Intel Rapid Storage Technology Enterprise RAID Port Drivers have been installed from the motherboard driver disk. Then launch Intel Rapid Storage Technology enterprise from All Programs in the Start menu.



Step 1:

On the right panel of the screen, click **Rebuild to** another disk under **Volume Properties**.



The **Status** item on the right of the screen and the **Information** section on the bottom display the rebuild progress.



Step 2:

Select a new drive to rebuild the RAID and click **Rebuild**.





After the RAID volume rebuilding, the **Status** will display as **Normal**.

For the Marvell 88SE9172:

Turn off your computer and replace the failed hard drive with a new one. Restart your computer. To enable an automatic rebuild in the operating system, you have to set the new hard drive as a Spare drive in the RAID setup utility first.

• Enabling Automatic Rebuild

Step 1:

When the message "Press <Ctrl>+<M> to enter BIOS Setup or <Space> to continue" appears, press <Ctrl> + <M> to enter the RAID setup utility. On the main screen, press <Enter> on the **RAID** tab and then press <Enter> on **Spare Management**.

	Marvell BIOS	Setup (c) 2009 Marvell Technology Group Ltd.	
[Adapter] ——	Marvell BIOS	RAID Config Create VD	
		Spare Management	
ENITED /SDA CE: Soloo	t ESC: Dools/Exit		

Step 2:

The new hard drive will be displayed on the screen. Press <Enter> or <Space> on the new hard drive to select it and then press <Enter> on **NEXT**. When prompted, press <Y> to confirm. The new hard drive is now set as a Spare drive.

			Marvell BIOS	Setup (c) 2009 Marv	ell Technology G	roup Ltd.		
				[RAID]				
						RAID Config		
		Spare Mana	agement ——					-
		Port	Disk Name		Size	Max Speed	Status	
		* S0	SATA: WDC WD	800JD-22LSA0		SATA 3Gb/s	FREE	
		NEXT						
								-
EN	TED /ODA	CE: Calast	EQC: Datala/East					
Er	VIEK/SPA	CE. Select,	ESC. Dack/EXIt					

Step 3:

Make sure you have installed the Marvell RAID driver and Marvell Storage Utility from the motherboard driver disk. While in the operating system, launch the Marvell Storage Utility from Start\All Programs\Marvell Storage Utility\Marvell Tray, right-click on the <u>co</u> icon in the notification area, and select **Open MSU**. Then login the Marvell Storage Utility.

Under Virtual Disk 0, the Property tab displays the rebuild progress on the right of the Background Activity **Progress** item, indicating that the RAID volume is being rebuilt. When completed, the status will display as **Done**.

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	Incapter s		films		1		
1		AND DESCRIPTION OF	FAID Level		RAID 1		
	- 6	Trestal Disks p	STATUS		Depreded		
	- 6	Physical Disk: pl	Size		74.5 00		
	Puscel D	taka	Member Count		2		
	-	vaicel Diek: port					
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• Manually Rebuilding RAID 1 in the Operating System

You can manually rebuild a RAID 1 array without setting the new hard drive as a Spare drive in the RAID setup utility first. While in the operating system, open the Marvell Storage Utility and login.

Step 1:

Under Virtual Disk 0, click the Operation tab and select Rebuild.



Step 2:

The screen will display the new hard drive. Click on the hard drive to select it and click the **Submit** button to begin the rebuild.

+ Admit	Lasout			
M	larvell S	torage (Property V (Sec.)	
derier in	all Storage H	anagement C	CONSISTENCY OF A REAL PROPERTY OF	This operation will rebuild with selected Physical Disk on the Virtual Disk (Surre)
8	Adapter 2 Vesial Date In California Instal Date Instal Date	is Million State Photos Oraci p Pila Haar Diahi pan C		
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5-2 Configuring Audio Input and Output

5-2-1 Configuring 2/4/5.1/7.1-Channel Audio

The motherboard provides six audio jacks on the back panel which support 2/4/5.1/7.1-channel (Note) audio. The picture to the right shows the default audio jack assignments.

The integrated HD (High Definition) audio provides jack retasking capability that allows the user to change the function for each jack through the audio driver.

Center/Subwoofer Cut Speaker Out Front Speaker Out

For example, in a 4-channel audio configuration, if

a Rear speaker is plugged into the default Center/Subwoofer speaker out jack, you can retask the Center/ Subwoofer speaker out jack to be Rear speaker out.



- To install a microphone, connect your microphone to the Mic in jack and manually configure the jack for microphone functionality.
- Audio signals will be present on both of the front and back panel audio connections simultaneously. If you want to mute the back panel audio (only supported when using an HD front panel audio module), refer to instructions on the next page.

High Definition Audio (HD Audio)

HD Audio includes multiple high quality digital-to-analog converters (DACs) and features multistreaming capabilities that allow multiple audio streams (in and out) to be simultaneously processed. For example, users can listen to MP3 music, have an Internet chat, make a telephone call over the Internet, and etc. all at the same time.

A. Configuring Speakers

(The following instructions use Windows 7 as the example operating system.)

Step 1:

After installing the audio driver, the **HD Audio Manager** icon **I** will appear in the notification area. Double-click the icon to access the **HD Audio Manager**.





(Note) 2/4/5.1/7.1-Channel Audio Configurations:

Refer to the following for multi-channel speaker configurations.

- 2-channel audio: Headphone or Line out.
- 4-channel audio: Front speaker out and Rear speaker out.
- 5.1-channel audio: Front speaker out, Rear speaker out, and Center/Subwoofer speaker out.
- 7.1-channel audio: Front speaker out, Rear speaker out, Center/Subwoofer speaker out, and Side speaker out.

Step 2:

Connect an audio device to an audio jack. The **The current connected device is** dialog box appears. Select the device according to the type of device you connect. Then click **OK**.



Step 3:

On the **Speakers** screen, click the **Speaker Configuration** tab. In the **Speaker Configuration** list, select **Stereo**, **Quadraphonic**, **5.1 Speaker**, or **7.1 Speaker** according to the type of speaker configuration you wish to set up. Then the speaker setup is completed.



B. Configuring Sound Effect

You may configure an audio environment on the Sound Effects tab.

C. Activating an AC'97 Front Panel Audio Module

If your chassis provides an AC'97 front panel audio module, to activate the AC'97 functionality, click the tool icon on the **Speaker Configuration** tab. On the **Connector Settings** dialog box, select the **Disable front panel jack detection** check box. Click **OK** to complete.





D. Muting the Back Panel Audio (For HD Audio Only)

Click **Device advanced settings** on the top right corner on the **Speaker Configuration** tab to open the **Device advanced settings** dialog box. Select the **Mute the rear output device, when a front headphone plugged in** check box. Click **OK** to complete.

pack Devic	e
O Mu e the re	ar output device, when a front headphone plugged in.
O Make front	and rear output devices playback two different audio streams
simultaneou	isly.
Recording Dev	ice
🧿 Tie up same	type of input jacks, i.e. line-in or microphone, as an input device.
~ ~ ~	
U separate a	rinput jacks as independent input devices.



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Appendix

5-2-2 Configuring S/PDIF Out

The S/PDIF Out jacks can transmit audio signals to an external decoder for decoding to get the best audio quality.

1. Connecting a S/PDIF Out Cable:

Connect a S/PDIF coaxial cable or a S/PDIF optical cable (either one) to the corresponding S/PDIF out connector as shown below and an external decoder for transmitting the S/PDIF digital audio signals.



2. Configuring S/PDIF Out:

On the **Digital Output(Optical)** screen (Note), click the **Default Format** tab and then select the sample rate and bit depth. Click **OK** to complete.

Digital Output(Optical)	Digital Output			Device advances settings
Main Volume			Set Default	ANALOG Back Panel
Sound Effects Default Format				
				0 0
Default	Format			Front Panel
16 Bits,	48000 Hz (DVD Quality)	•	8	
				۲
				DICITAL

(Note) Enter the **Digital Output(Optical)** screen to configure further settings if you use the S/PDIF Out connector(s) on the back panel for digital audio output or enter the **Digital Output** screen if you use the internal S/PDIF Out connector (SPDIF_O) for digital audio output.

Appendix

5-2-3 Configuring Microphone Recording

Step 1:

After installing the audio driver, the **HD Audio Manager** icon will appear in the notification area. Double-click the icon to access the **HD Audio Manager**.





Step 2:

Connect your microphone to the Mic in jack (pink) on the back panel or the Mic in jack (pink) on the front panel. Then configure the jack for microphone functionality. Note: The microphone functions on the front panel and back panel cannot be used at the same time.

Main Volume		Set Default	ANALOG
e current connected device is :		Device	Back Panel
Which device did you plug in?	-		
Une In			
Production Production			
Rear Speaker Out			Front Panel
Side Speaker Out	•	8	
			DIGITAL
Enable auto popup dialog, when device has been plugged in	when driving in shared		
OK			

Step 3:

Go to the **Microphone** screen. Do not mute the recording volume, or you'll not be able to record the sound. To hear the sound being recorded during the recording process, do not mute the playback volume. It is recommended that you set the volumes at a middle level.



Step 4:

To raise the recording and playback volume for the microphone, click the **Microphone Boost** icon 💌 on the right of the **Recording Volume** slider and set the Microphone Boost level.





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Step 5:

After completing the settings above, click **Start**, point to **All Programs**, point to **Accessories**, and then click **Sound Recorder** to begin the sound recording.



* Enabling Stereo Mix

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If the HD Audio Manager does not display the recording device you wish to use, refer to the steps below. The following steps explain how to enable Stereo Mix (which may be needed when you want to record sound from your computer).

Step 1:

Locate the **1** icon in the notification area and right-click on this icon. Select **Recording Devices**.



Step 2:

On the **Recording** tab, right-click on an empty space and select **Show Disabled Devices**.



Step 3:

When the **Stereo Mix** item appears, right-click on this item and select **Enable**. Then set it as the default device.



Step 4:

Now you can access the **HD Audio Manager** to configure **Stereo Mix** and use **Sound Recorder** to record the sound.



5-2-4 Using the Sound Recorder



A. Recording Sound

- 1. Make sure you have connected the sound input device (e.g. microphone) to the computer.
- 2. To record the audio, click the **Start Recording** button Start Recording.
- 3. To stop recording audio, click the **Stop Recording** button stop recording.

Be sure to save the recorded audio file upon completion.

B. Playing the Recorded Sound

You can play your recording in a digital media player program that supports your audio file format.

5-3 Troubleshooting

5-3-1 Frequently Asked Questions

To read more FAQs for your motherboard, please go to the **Support & Downloads\FAQ** page on GIGABYTE's website.

- Q: Why is the light of my keyboard/optical mouse still on after the computer shuts down?
- A: Some motherboards provide a small amount of standby power after the computer shuts down and that's why the light is still on.
- Q: How do I clear the CMOS values?
- A: For motherboards that have a Clear CMOS button, press this button to clear the CMOS values (before doing this, please turn off the computer and unplug the power cord). For motherboards that have a Clear CMOS jumper, refer to the instructions in Chapter 1 to short the jumper to clear the CMOS values. If your board doesn't have this jumper/button, refer to the instructions on the motherboard battery in Chapter 1. You can temporarily remove the battery from the battery holder to stop supplying power to the CMOS, which will clear the CMOS values after about one minute.
- Q: Why do I still get a weak sound even though I have turned my speaker to the maximum volume?
- A: Make sure your speaker is equipped with an internal amplifier. If not, try a speaker with power/amplifier.
- Q: Why cannot I install the onboard HD audio driver successfully? (For Windows XP only)
- A: Step 1: First, make sure Service Pack 1 or Service Pack 2 has been installed (check in My Computer > Properties > General > System). If not, please update it from Microsoft's website. Then make sure the Microsoft UAA Bus Driver for High Definition Audio has been installed successfully (check in My Computer > Properties > Hardware > Device Manager > System Devices).
 - Step 2: Check if Audio Device on High Definition Audio Bus or Unknown device is present in Device Manager or Sound, video, and game controllers. If yes, please disable this device. (If not, skip this step.)
 - Step 3: Then go back to My Computer > Properties > Hardware > Device Manager > System devices and right-click on Microsoft UAA Bus Driver for High Definition Audio and select Disable and Uninstall.
 - Step 4: In Device Manager, right-click on the computer name and select Scan for hardware changes. When the Add New Hardware Wizard appears, click Cancel. Then install the onboard HD audio driver from the motherboard driver disk or download the audio driver from GIGABYTE's website to install.
 - For more details, go to the Support & Downloads\FAQ page on our website and search for "onboard HD audio driver."

5-3-2 Troubleshooting Procedure

If you encounter any troubles during system startup, follow the troubleshooting procedure below to solve the problem.







If the procedure above is unable to solve your problem, contact the place of purchase or local dealer for help. Or go to the **Support & Downloads\Technical Support** page to submit your question. Our customer service staff will reply you as soon as possible.

Regulatory Statements

Regulatory Notices

This document must not be copied without our written permission, and the contents there of must not be imparted to a third party nor be used for any unauthorized purpose. Contravention will be prosecuted. We believe that the information contained herein was accurate in all respects at the time of printing. GIGABYTE cannot, however, assume any responsibility for errors or omissions in this text. Also note that the information in this document is subject to change without notice and should not be construed as a commitment by GIGABYTE.

Our Commitment to Preserving the Environment

In addition to high-efficiency performance, all GIGABYTE motherboards fulfill European Union regulations for RoHS (Restriction of Certain Hazardous Substances in Electrical and Electronic Equipment) and WEEE (Waste Electrical and Electronic Equipment) environmental directives, as well as most major worldwide safety requirements. To prevent releases of harmful substances into the environment and to maximize the use of our natural resources, GIGABYTE provides the following information on how you can responsibly recycle or reuse most of the materials in your "end of life" product.

Restriction of Hazardous Substances (RoHS) Directive Statement

GIGABYTE products have not intended to add and safe from hazardous substances (Cd, Pb, Hg, Cr+6, PBDE and PBB). The parts and components have been carefully selected to meet RoHS requirement. Moreover, we at GIGABYTE are continuing our efforts to develop products that do not use internationally banned toxic chemicals.

Waste Electrical & Electronic Equipment (WEEE) Directive Statement

GIGABYTE will fulfill the national laws as interpreted from the 2002/96/EC WEEE (Waste Electrical and Electronic Equipment) directive. The WEEE Directive specifies the treatment, collection, recycling and disposal of electric and electronic devices and their components. Under the Directive, used equipment must be marked, collected separately, and disposed of properly.

WEEE Symbol Statement



The symbol shown below is on the product or on its packaging, which indicates that this product must not be disposed of with other waste. Instead, the device should be taken to the waste collection centers for activation of the treatment, collection, recycling and disposal procedure. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

For more information about where you can drop off your waste equipment for recycling, please contact your local government office, your household waste disposal service or where you purchased the product for details of environmentally safe recycling.

- When your electrical or electronic equipment is no longer useful to you, "take it back" to your local or regional waste collection administration for recycling.
- If you need further assistance in recycling, reusing in your "end of life" product, you may contact us at the Customer Care number listed in your product's user's manual and we will be glad to help you with your effort.

Finally, we suggest that you practice other environmentally friendly actions by understanding and using the energy-saving features of this product (where applicable), recycling the inner and outer packaging (including shipping containers) this product was delivered in, and by disposing of or recycling used batteries properly. With your help, we can reduce the amount of natural resources needed to produce electrical and electronic equipment, minimize the use of landfills for the disposal of "end of life" products, and generally improve our quality of life by ensuring that potentially hazardous substances are not released into the environment and are disposed of properly.

FCC Notice (U.S.A. Only)

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 the 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 into an outlet on a circuit different from that to which the receiver is connected.
- Consult a dealer or experienced TV/radio technician for help.

Canada, Industry Canada (IC) Notices / Canada, avis d'Industry Canada (IC)

- This Class B digital apparatus complies with Canadian ICES-003 and RSS-210.
- Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
- Cet appareil numérique de classe B est conforme aux normes canadiennes ICES-003 et RSS-210.
- Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférence et (2) cet appareil doit accepter toute interférence, notamment les interférences qui peuvent affecter son fonctionnement.



Appendix



 GIGA-BYTE TECHNOLOGY CO., LTD.
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New Taipei City 231, Taiwan
TEL: +886-2-8912-4000
FAX: +886-2-8912-4005
Tech. and Non-Tech. Support (Sales/Marketing) :
http://esupport.gigabyte.com
WEB address (English): http://www.gigabyte.com
WEB address (Chinese): http://www.gigabyte.tw
• G.B.T. INC U.S.A.
TEL: +1-626-854-9338
FAX: +1-626-854-9326
Tech. Support: http://esupport.gigabyte.com
Warranty Info: http://rma.gigabyte.us
Web address: http://www.gigabyte.us
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Tel: +1-626-854-9338 x 215 (Soporte de habla hispano)
FAX: +1-626-854-9326
Correo: soporte@gigabyte-usa.com
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Web address: http://latam.giga-byte.com
Giga-Byte SINGAPORE PTE. LTD Singapore
WEB address : http://www.gigabyte.sg
Thailand
WEB address : http://th.giga-byte.com
Vietnam
WEB address : http://www.gigabyte.vn

• NINGBO G.B.T. TECH. TRADING CO., LTD. - China WEB address : http://www.gigabyte.cn Shanghai TEL: +86-21-63400912 FAX: +86-21-63400682 Beijing TEL: +86-10-62102838 FAX: +86-10-62102848 Wuhan TEL: +86-27-87685981 FAX: +86-27-87579461 GuangZhou TEL: +86-20-87540700 FAX: +86-20-87544306 Chengdu TEL: +86-28-85483135 FAX: +86-28-85256822 Xian TEL: +86-29-85531943 FAX: +86-29-85510930 Shenyang TEL: +86-24-83992342 FAX: +86-24-83992102 GIGABYTE TECHNOLOGY (INDIA) LIMITED - India WEB address : http://www.gigabyte.in Saudi Arabia WEB address : http://www.gigabyte.com.sa • Gigabyte Technology Pty. Ltd. - Australia

WEB address : http://www.gigabyte.com.au

• G.B.T. TECHNOLOGY TRADING GMBH - Germany	Hungary
WEB address : http://www.gigabyte.de	WEB address : http://www.giga-byte.hu
• G.B.T. TECH. CO., LTD U.K.	• Turkey
WEB address : http://www.giga-byte.co.uk	WEB address : http://www.gigabyte.com.tr
Giga-Byte Technology B.V The Netherlands	Russia
WEB address : http://www.giga-byte.nl	WEB address : http://www.gigabyte.ru
GIGABYTE TECHNOLOGY FRANCE - France	Poland
WEB address : http://www.gigabyte.fr	WEB address : http://www.gigabyte.pl
• Sweden	Ukraine
WEB address : http://www.gigabyte.se	WEB address : http://www.gigabyte.ua
• Italy	Romania
WEB address : http://www.giga-byte.it	WEB address : http://www.gigabyte.com.ro
• Spain	Serbia
WEB address : http://www.giga-byte.es	WEB address : http://www.gigabyte.co.rs
• Greece	Kazakhstan
WEB address : http://www.gigabyte.com.gr	WEB address : http://www.gigabyte.kz
Czech Republic	You may go to the GIGABYTE website, select your language
WEB address : http://www.gigabyte.cz	in the language list on the top right corner of the website.

• GIGABYTE eSupport

To submit a technical or non-technical (Sales/Marketing) question, please link to: http://esupport.gigabyte.com

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