

4-1-4 Configuring SATA Hard Drive(s)

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

- (1) Install SATA hard drive(s) in your system.
- (2) Configure SATA controller mode and boot sequence in BIOS Setup.
- (3) Configure RAID set in RAID BIOS.^(Note)
- (4) Make a floppy disk containing the SATA controller driver.
- (5) Install the SATA controller driver during OS installation.

Before you begin

Please prepare:

- (a) 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.
- (b) An empty formatted floppy disk.
- (c) Windows XP/2000 setup disk.
- (d) Driver CD for your motherboard.

A. Intel® ICH8R Southbridge

(1) 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(s) on the motherboard. If there are more than one SATA controller on your motherboard, you may refer to the motherboard user's manual to identify the SATA controller for the connector. Then connect the power connector from your power supply to the hard drive.

(Note) Skip this step if you do not want to create RAID array on the SATA controller

(2) Configuring SATA controller mode and boot sequence in BIOS Setup

You have to make sure whether the SATA controller is configured correctly in system BIOS Setup and set BIOS boot sequence for the SATA hard drive(s).

Step 1:

Turn on your computer and press Del to enter BIOS Setup during POST (Power-On Self Test). If you want to create RAID, set **SATA RAID/AHCI Mode** under the **Integrated Peripherals** menu to **RAID (Disabled by default)**.

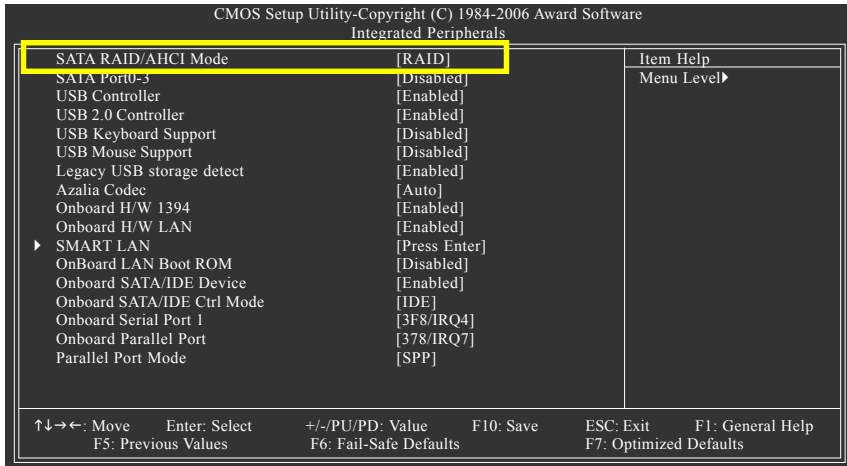


Figure 1



The BIOS Setup menus described in this section may not show 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.

Step 2:

Set **First Boot Device** under the **Advanced BIOS Features** menu to **CDROM** to boot from CD-ROM after system restarts (Figure 2).

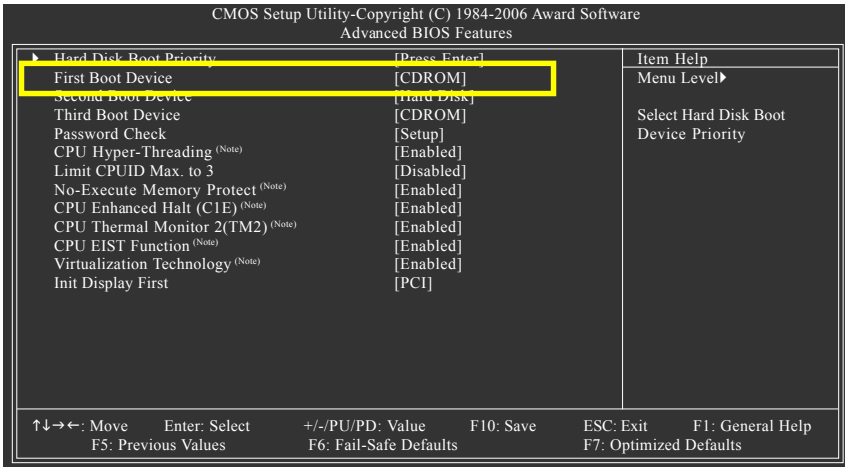


Figure 2

Step 3:

Save and exit BIOS Setup.

(3) Configuring RAID set in RAID BIOS

Enter the RAID BIOS setup utility to configure a RAID array. Skip this step and proceed to Section 4 if you do not want to create RAID.

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 3). Press CTRL+ I to enter the RAID BIOS setup utility.

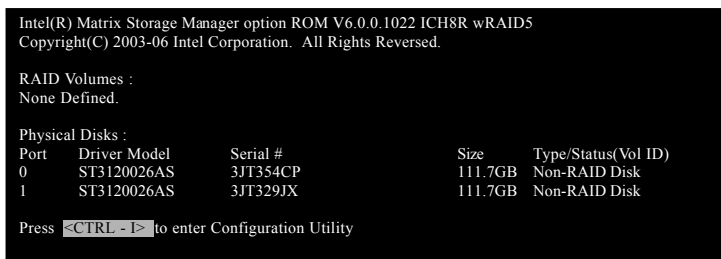


Figure 3

Step 2:

After you press CTRL+ I, the **Create RAID Volume** screen will appear (Figure 4).

Create RAID Volume

If you want to create RAID array, select **Create RAID Volume** in Main Menu and press ENTER.

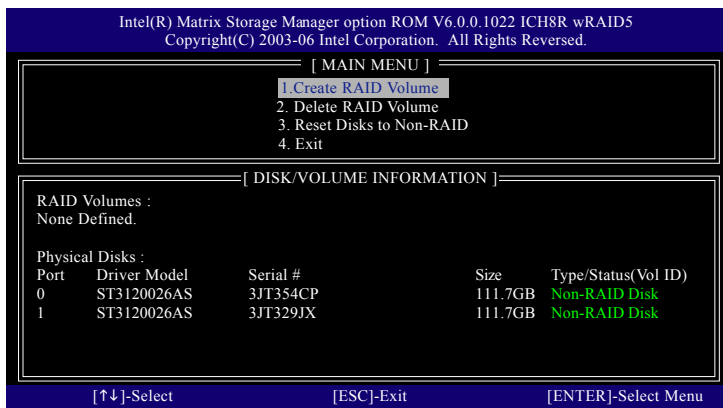


Figure 4

Step 3:

After entering the Create Volume Menu screen, name the disk array with 1–16 letters (letters cannot be special characters) under the Name item. When finished, press ENTER to select a RAID level (Figure 5). There are four RAID levels: RAID0, RAID1, RAID10 and RAID5. Select a RAID level and press ENTER.

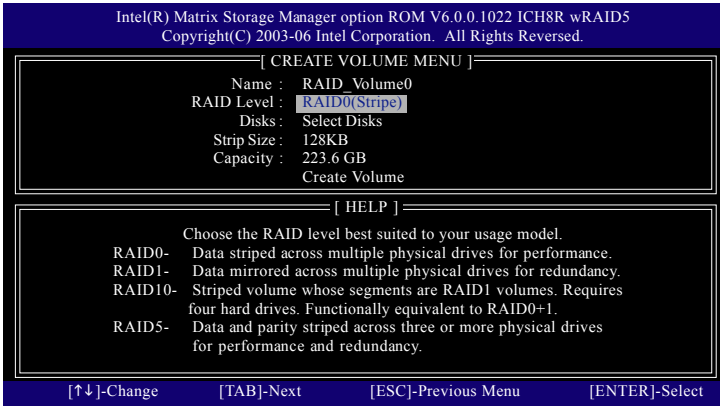


Figure 5

Step 4:

Set the stripe block size (Figure 6). The KB is the standard unit of stripe block size. The stripe block size can be set from 4KB to 128KB. After the setting, press ENTER to set array capacity.

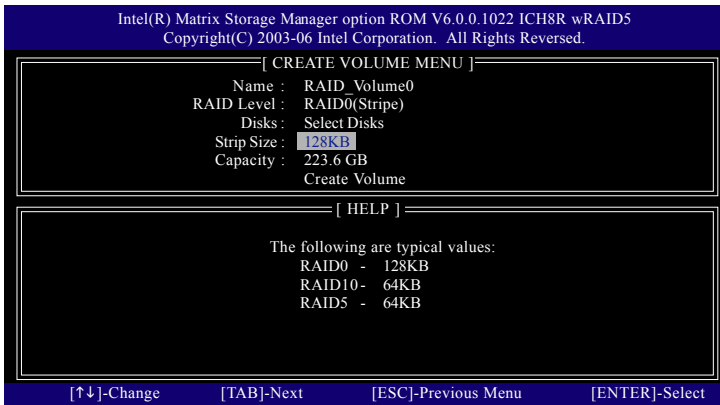


Figure 6

Step 5:

After setting all the items above, select Create Volume and press ENTER (Figure 7) to begin the creation of the RAID array.

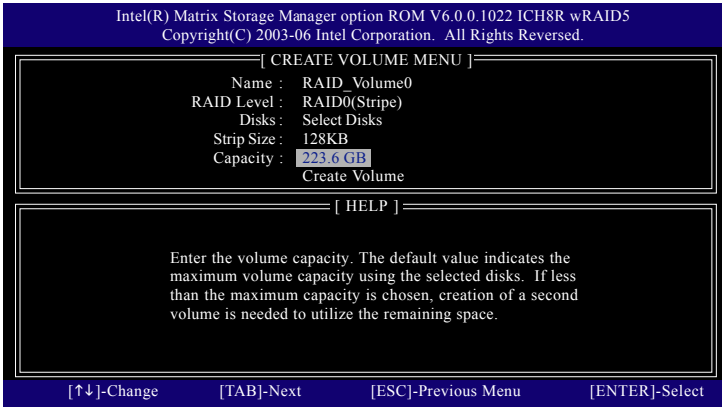


Figure 7

Step 6:

When prompted to confirm whether to create this volume, press Y to create or N to cancel.

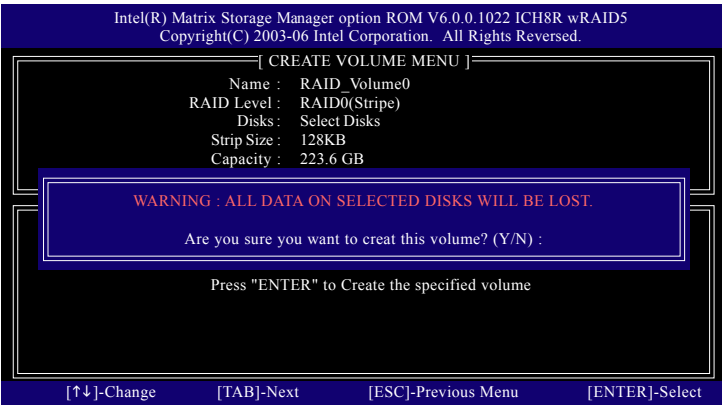


Figure 8

After the creation is completed, you can see detailed information about the RAID Array in the DISK/ VOLUME INFORMATION section, including RAID mode, disk block size, disk name, and disk capacity, etc.

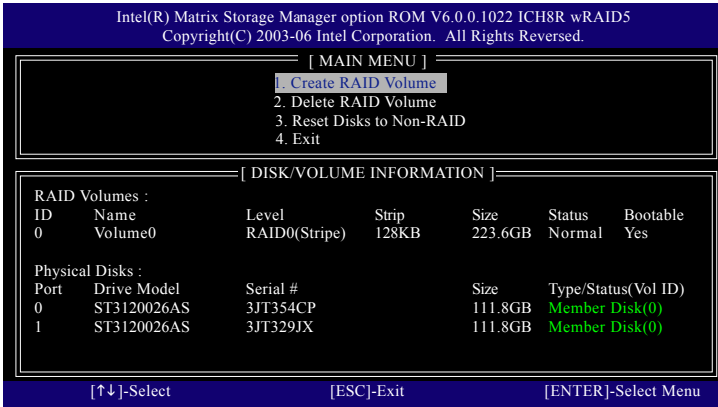


Figure 9

Delete RAID Volume

If you want to delete a RAID volume, select the Delete RAID Volume option in Main Menu. Press ENTER and follow on-screen instructions.

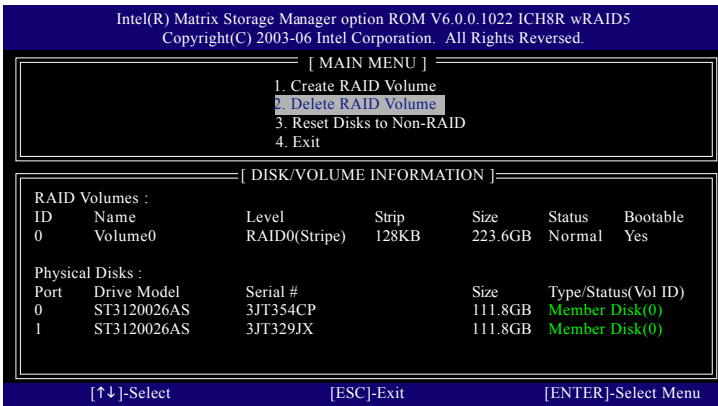


Figure 10

To exit the ICH8R RAID BIOS utility, press ESC in Main Menu.

Now, you can proceed to the installation of the SATA driver and operating system.

(4) Making a SATA Driver Disk

To install operating system onto a serial ATA hard disk successfully, you need to install the SATA controller driver during OS installation. Without the driver, the hard disk may not be recognized during the Windows setup process. First of all, copy the driver for the SATA controller from the motherboard driver CD-ROM to a floppy disk. See the instructions below about how to copy the driver in MS-DOS mode^(Note 1). Prepare a startup disk that has CD-ROM support and a blank formatted floppy disk.

Step 1: Insert the prepared startup disk and motherboard driver CD-ROM in your system. Boot from the startup disk. Once at the A:\> prompt, change to the CD-ROM drive (example: D:\>). At the D:\> prompt, type the following two commands. Press ENTER after each command (Figure 11):

```
cd bootdrv
menu
```

Step 2: When the controller menu (Figure 12) appears, remove the startup disk and insert the blank formatted disk. Select the controller driver by pressing the corresponding letter from the menu. For example, from the menu in Figure 12, press 7 to select **Intel Matrix Storage Manager 32 bit** for Windows operating system^(Note 2). Your system will then automatically zip and transfer this driver file to the floppy disk. Press 0 to exit when finished.

```
11/17/2005 06:128 PM      288,896 NT.exe
06/02/2006 05:134 PM      <DIR>   Network
06/02/2006 05:135 PM      <DIR>   Setup
09/09/2004 06:116 PM      288,896 Run.exe
06/02/2006 11:556 AM      9,709  Setup.htm
09/02/2003 10:411 AM      2,189  Setup.Ld.htm
10/21/2005 09:491 PM      1,332  Show.htm
06/02/2006 11:151 AM      2,189  Style.css
06/17/2004 11:572 AM      1,332  Style.css
06/02/2006 06:117 PM      9,394  TBI1.htm
06/02/2006 06:118 PM      9,400  TBI2.htm
06/15/2006 10:433 PM      <DIR>   Utility
06/25/2006 10:435 AM      2,007  Wact1
06/02/2006 10:222 AM      2,048  Wact2
06/15/2006 06:325 PM      <DIR>   boot
06/25/2006 10:400 AM      <DIR>   boot.catalog
06/25/2006 06:325 PM      410   CmdLine
06/25/2006 02:181 PM      57,344  wpa.dll
11/29/2005 05:196 PM      1,588,346  wpa.sys
06/02/2006 05:196 PM      <DIR>   File(s)
1,588,346 bytes free
D:\>
D:\>cd bootdrv
D:\bootdrv>
```

Figure 11

```
06/25/2006 10:00 AM      <DIR>   release
06/15/2004 11:48 AM      318   kwp.htm
11/29/2005 02:181 PM      57,344  wpa.dll
25 File(s)  1,588,346 bytes free
10 Dir(s)  0 bytes free
D:\>cd bootdrv
D:\bootdrv>menu
2>Intel RAID Driver
3>Intel RAID Driver
4>Intel RAID Driver
5>Intel RAID Driver
6>Intel RAID Driver
7>Intel Matrix Storage Manager 32 bit
8>Intel Matrix Storage Manager 64 bit
9>Intel Matrix Storage Manager 64 bit
0>Exit
D:\bootdrv>
```

Figure 12

(Note 1) For users without a startup disk:

Use an alternative system and insert the GIGABYTE motherboard driver CD-ROM. From the CD-ROM drive folder, double click the **MENU.exe** file in the **BootDrv** folder (Figure 13). A command prompt window will open similar to that in Figure 12.

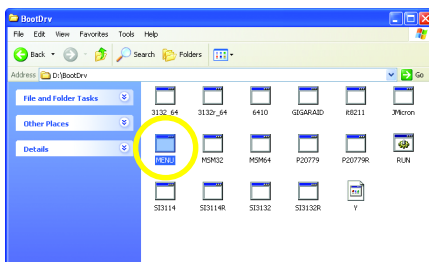


Figure 13

(Note 2) For 64-bit Windows Operating System, please select **Intel(R) Matrix Storage Manager 64 bit**.

(5) Installing SATA controller driver during OS installation

Now that you have prepared the SATA driver disk and configured BIOS settings, you are ready to install Windows 2000/XP onto your SATA hard drive with the SATA driver. The following is an example of Windows XP installation.

Step 1: Restart your system to boot from the Windows 2000/XP Setup disk and press F6 as soon as you see the "Press F6 if you need to install a 3rd party SCSI or RAID driver" message (Figure 14). After pressing F6, there will be a few moments of some files being loaded before you see the next screen.

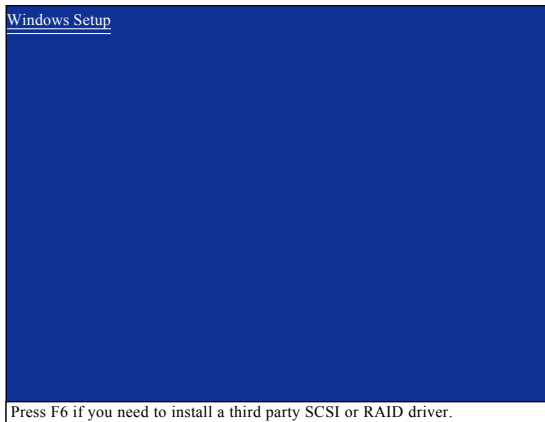


Figure 14

Step 2:

When a screen similar to that below appears, insert the floppy disk containing the SATA driver and press S (Figure 15).

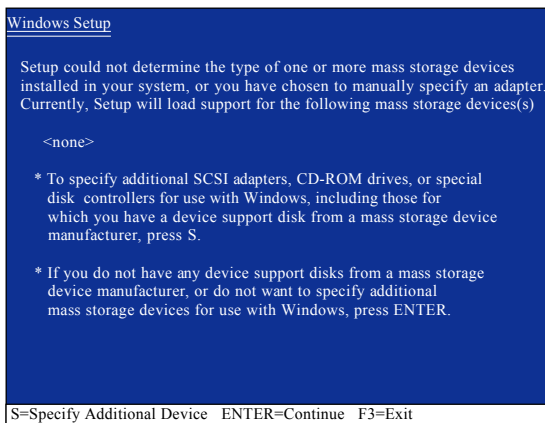


Figure 15

Step 3:

Use the ARROW keys on your keyboard to select **Intel(R) ICH8R/DO/DH SATA RAID Controller (Desktop ICH8R)*** (Figure 16) and press ENTER. Then the system will load the SATA driver from the floppy disk.



Figure 16



If a message appears saying one or some file(s) cannot be found, please check the floppy disk or copy the correct SATA driver again from the motherboard driver CD.

Step 4:

When the screen as shown below appears, press ENTER to continue the SATA driver installation from the floppy disk. The driver installation will be finished in about one minute.

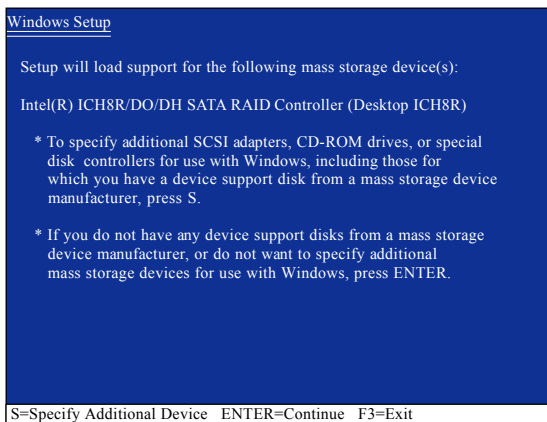


Figure 17

*** If you set the SATA RAID/AHCI Mode item in BIOS Setup to AHCI mode, please select **Intel(R) ICH8R/DO/DH SATA AHCI Controller (Desktop ICH8R)**.

After the SATA controller driver installation is completed, you should see a screen as below. It indicates that you have installed the SATA controller driver successfully. You can proceed with the Windows 2000/XP installation.

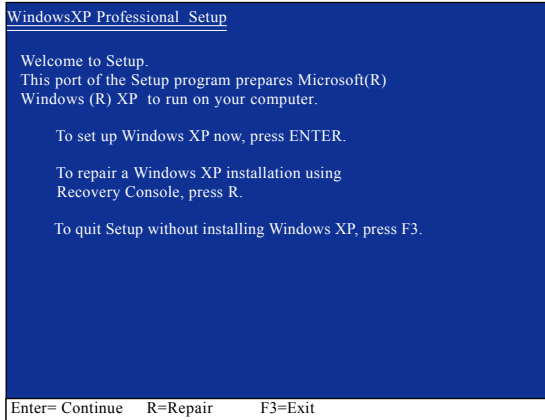


Figure 18

(Note: Each time you add a new hard drive to a RAID array, the RAID driver will have to be installed under Windows once for that hard drive. After that, the driver will not have to be installed.)