



RAID installation guide

V1.0

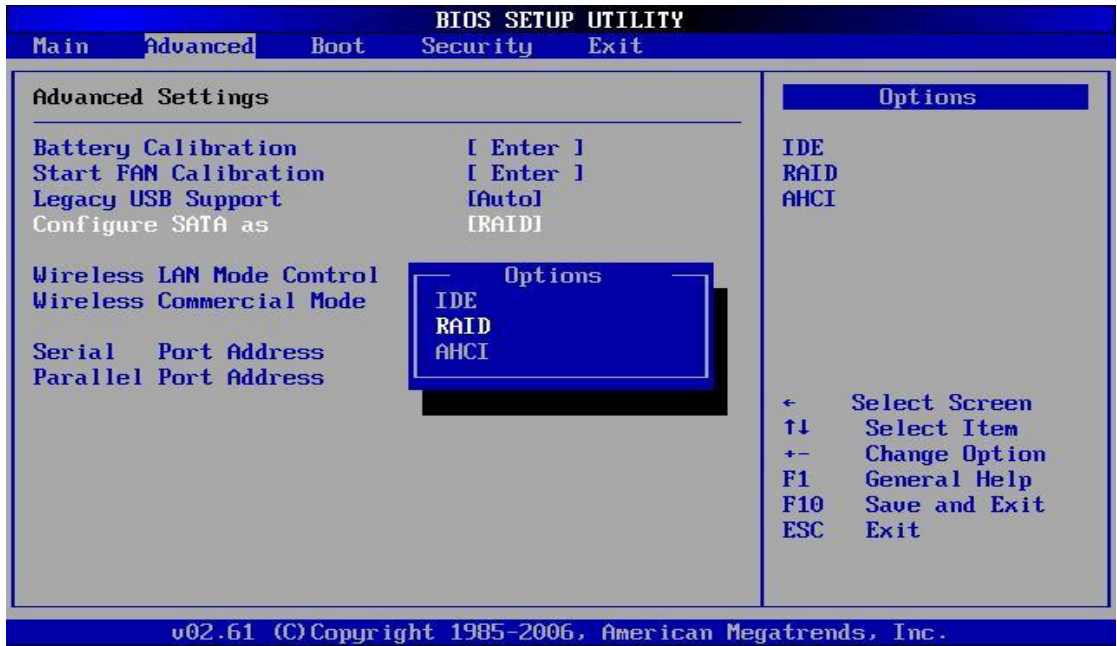
Date : 2009-06-29

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Enabling RAID in BIOS

Perform the following steps to enable the RAID option in the system BIOS:

1. Enter the BIOS Setup program by pressing the **DEL** key after the Power-On-Self-Test (POST) memory test begins.
2. Select the **Advanced** menu, and then the **Configure SATA as** menu.



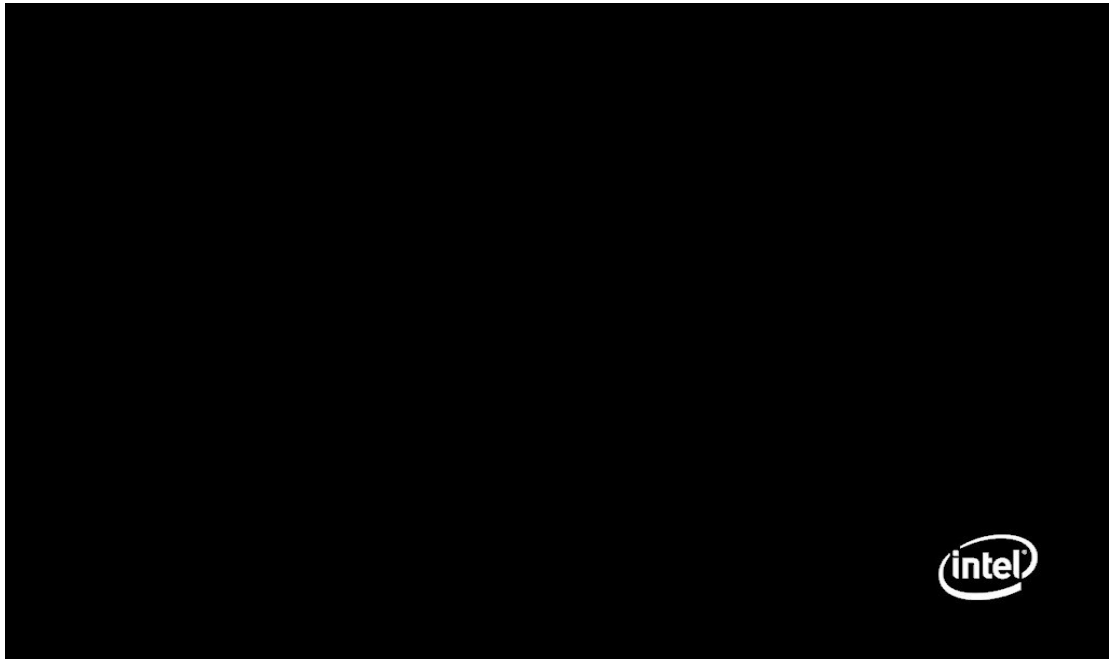
3. Select the **SATA Mode** option from **IDE** to **RAID**.
4. Press the **F10** key to save the BIOS settings and exit the BIOS Setup Program.



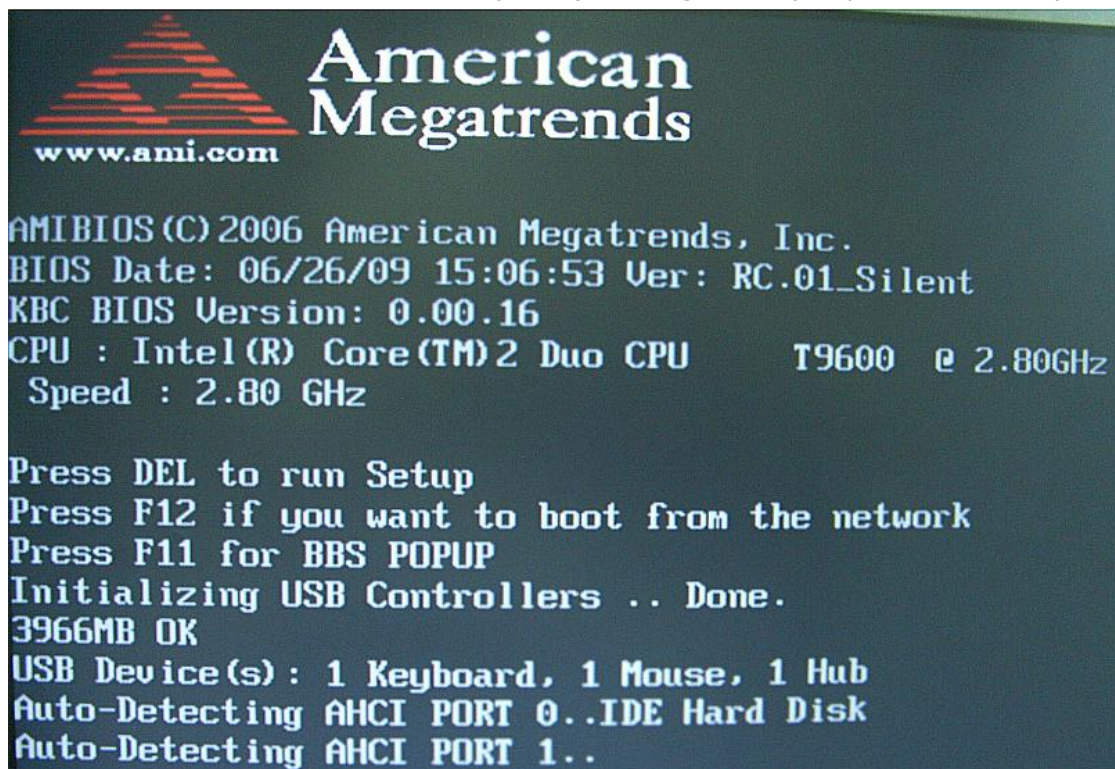
Using INTEL RAID Utility

Perform the following steps to configure the RAID utility in the RAID ROM:

1. Press **Tab** key after the Power-On-Self-Test (POST) memory test begin



2. You will see the Power-On-Self-Test (POST) message after you pressed **Tab** key.



3. The system will boot to RAID ROM, and INTEL RAID Utility will allow you to manage RAID disks.

```
Intel(R) Matrix Storage Manager option ROM v8.8.0.1009 ICH9M-E
Copyright(C) 2003-09 Intel Corporation. All Rights Reserved.

RAID Volumes:
None defined.

Physical Disks:
Port Drive Model      Serial #              Size   Type/Status(Vol ID)
0   FUJITSU MH22250B   K60KT8A2DTGA        232.8GB Non-RAID Disk
1   FUJITSU MH22250B   K60KT81255J3        232.8GB Non-RAID Disk
Press <CTRL-I> to enter Configuration Utility..
```

Now !!! By pressing <CTRL-I> to enter INTEL RAID Configuration Utility

4. You can see RAID configurations and status like the display.

```
Intel(R) Matrix Storage Manager option ROM v8.8.0.1009 ICH9M-E
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[ MAIN MENU ]
1. Create RAID Volume
2. Delete RAID Volume
3. Reset Disks to Non-RAID
4. Recovery Volume Options
5. Exit

[ DISK/VOLUME INFORMATION ]

RAID Volumes:
None defined.

Physical Disks:
Port Drive Model      Serial #              Size   Type/Status(Vol ID)
0   FUJITSU MH22250B   K60KT8A2DTGA        232.8GB Non-RAID Disk
1   FUJITSU MH22250B   K60KT81255J3        232.8GB Non-RAID Disk

[↑↓]-Select      [ESC]-Exit      [ENTER]-Select Menu
```

Configuration RAID Array

Perform the following steps to configure RAID Array by using utility:

Create RAID Volume

1. Select Create RAID Volume [Enter]



2. Enter a volume name for your RAID drive [Enter]
3. Choose a RAID level :
 - RAID 0 : Stripes Data (Performance Mode)
 - RAID 1 : Mirrors Data (Redundancy Mode)
 - Recovery : Copies data between a master and a recovery disk .
4. After you choose RAID0 or RAID1 , you need to set Strip or Mirror Size.
5. If you choose Recovery , you need to set Master and Recovery Disk.
6. Create Volume [Enter]

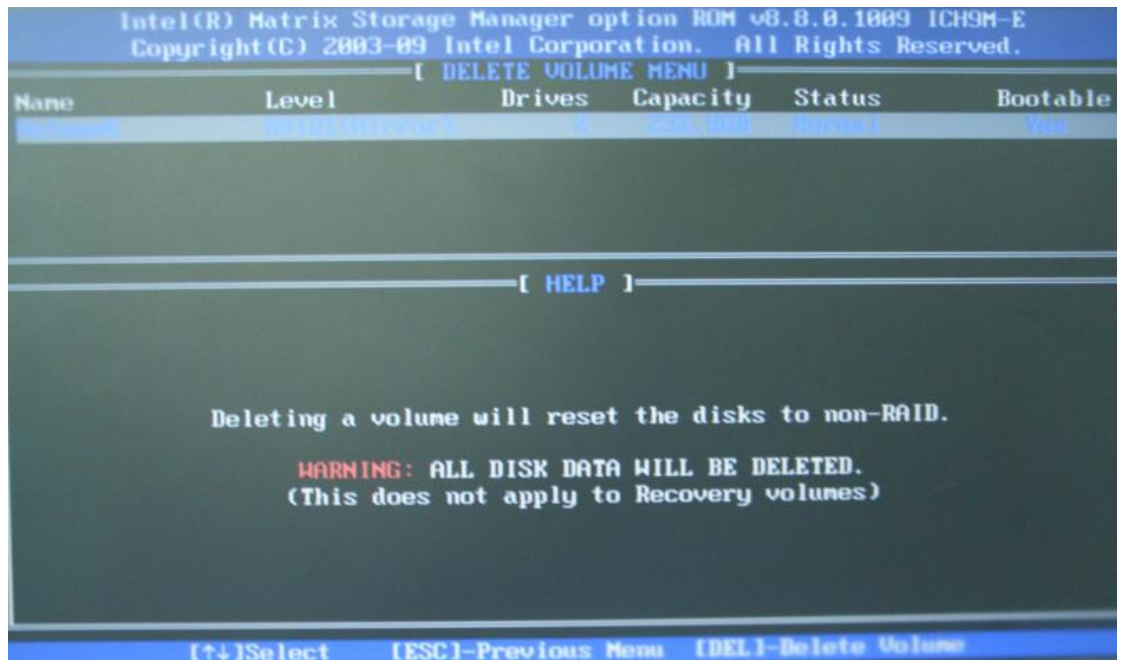


WARNING : ALL DATA ON SELECTED DISKS WILL BE LOST.

7. Please make sure you have back up your disk drive data already , and you can press [Y] to create volume .

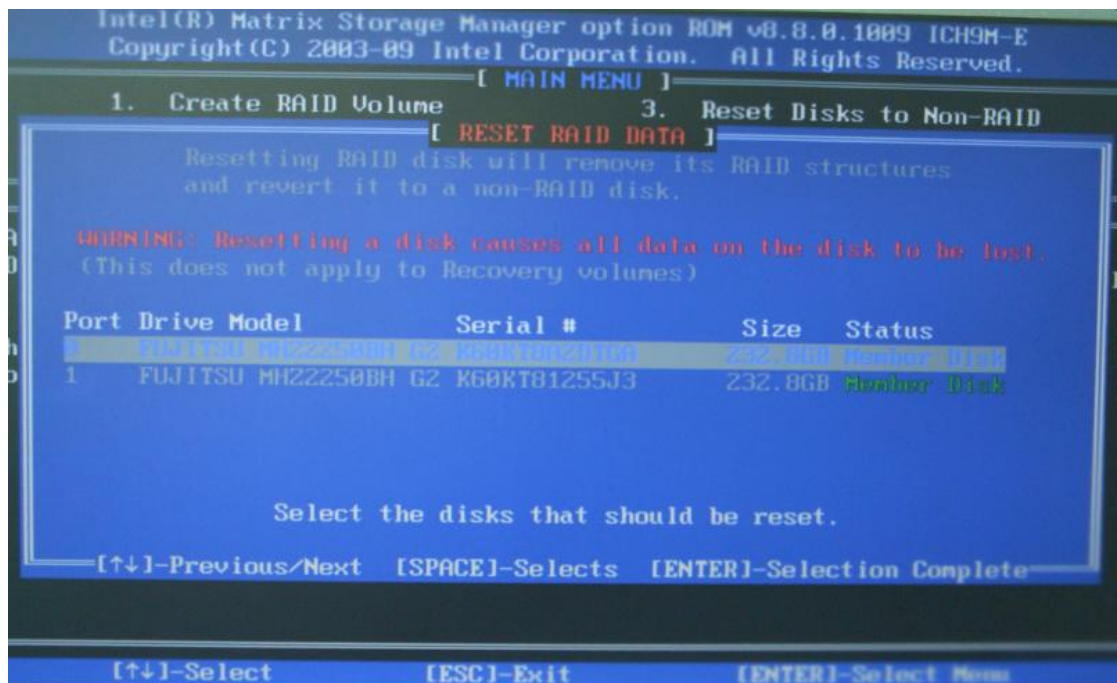
Delete RAID Volume

1. Select Delete RAID Volume [Enter]
2. Select the drive which you want to delete and press [DEL] .



Reset Disks to Non-RAID

1. Select Reset Disks to Non-RAID [Enter]
2. Select the disk that should be reset. [Space]
3. Press [Enter] and [Y] to reset the drive to Non-RAID.

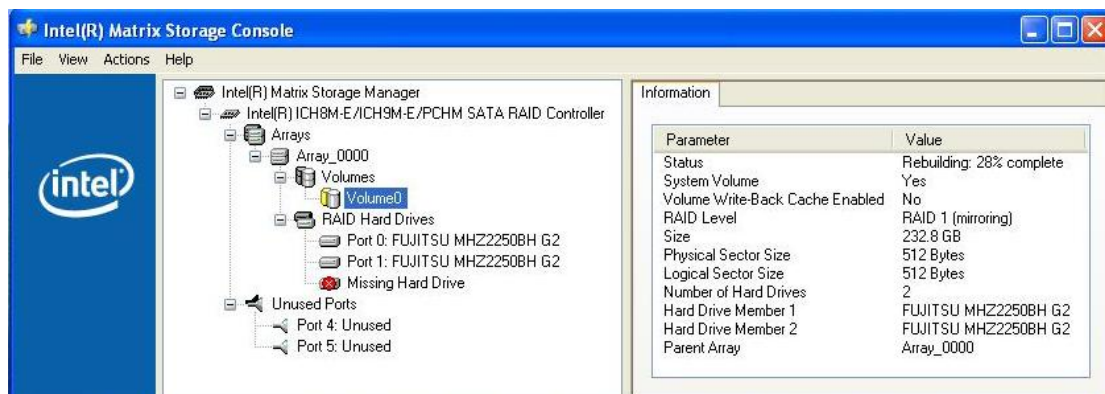


If one of your RAID1 Disk isn't stable or broken, you can reset the disk to Non-RAID, and the Disk will change status to "Rebuild" mode.

Exit the RAID Utility and boot into Windows. Operating System is being restored the RAID1 Disk.

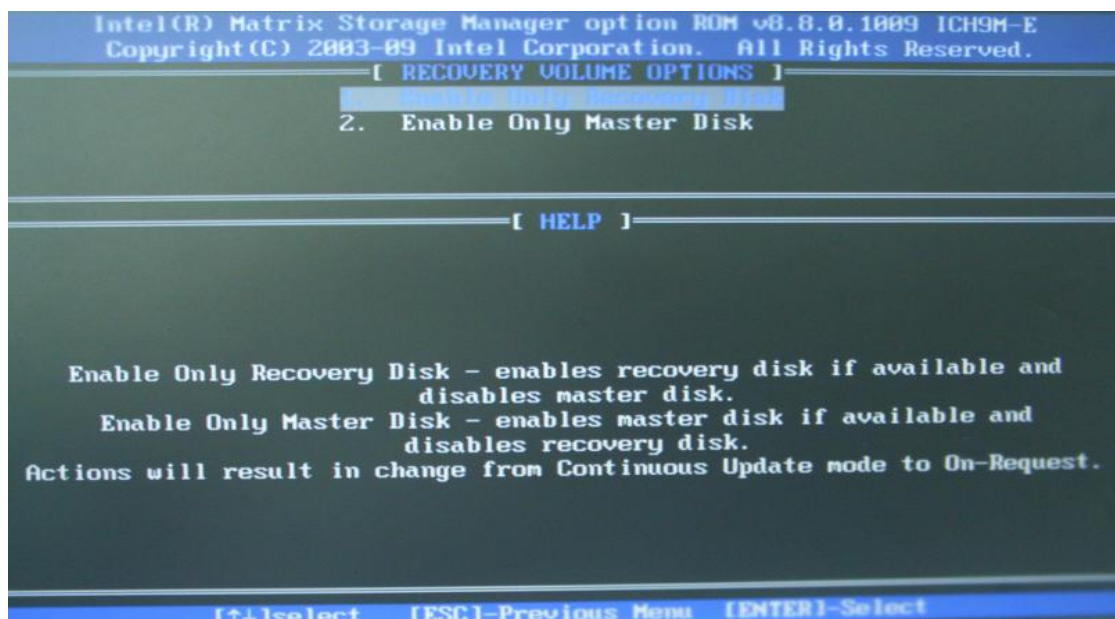


You can see the rebuilding rate of progress in INTEL Matrix Storage Console



Recovery Volume Option

1. Select Recovery Volume Option [Enter]
2. Enable Only Recovery Disk – enables recovery disk if available and disables master disk. [Enter]
3. Enable Only Master Disk – enables master disk if available and disables recovery disk. [Enter]



Intel® Matrix Storage Manager

How do I install an operating system onto an RAID mode (F6 install method)?

In order to install an operating system onto an RAID mode, the RAID Function must be enabled in the system BIOS, and the F6 installation method must be used to load the Intel® Matrix Storage Manager driver during operating system setup.

Note: The F6 installation method is not required for Microsoft Windows Vista* and Win7*.

Create F6 Installation Floppy Disk

<1> Visit INTEL Download Center Web site to download it.

http://downloadcenter.intel.com/Product_Filter.aspx?ProductID=2101&lang=eng

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---- Select ----
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Windows Server® 2003 Standard x64 Edition
Windows Server® 2003 Standard Edition
Windows Server® 2003 Enterprise x64 Edition
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<2> Find the last Utilities, Tools and Examples .Click Download .

Utilities, Tools and Examples			
Title	Ver.#	Date	Download
2. 32-bit Floppy Configuration Utility for Intel® Matrix Storage Manager (197KB) Creates floppy disk for 32-bit OS with Intel® Matrix Storage Manager 8.2.0.1001 files - used to preinstall RAID driver (F6 during Windows* setup).	8.2.0.1001	6/2/2008	
Read Me (txt)			
OS:Windows Server* 2003, Windows Server* 2003 Standard Edition, Windows Server* 2008, Windows Vista*, Windows Vista* 32, Windows* XP Home Edition , Windows* XP Media Center Edition, Windows* XP Professional			

<3> Unzip the Utilities, and copy the files onto floppy disk.

F6 Installation Method

Perform the following steps to install the Intel Matrix Storage Manager driver during operating system setup:

1. Press the **F6** key when prompted in the status line with the *Press F6 if you need to install AHCI mode*. This message appears at the beginning of Windows* XP setup (during text-mode phase).

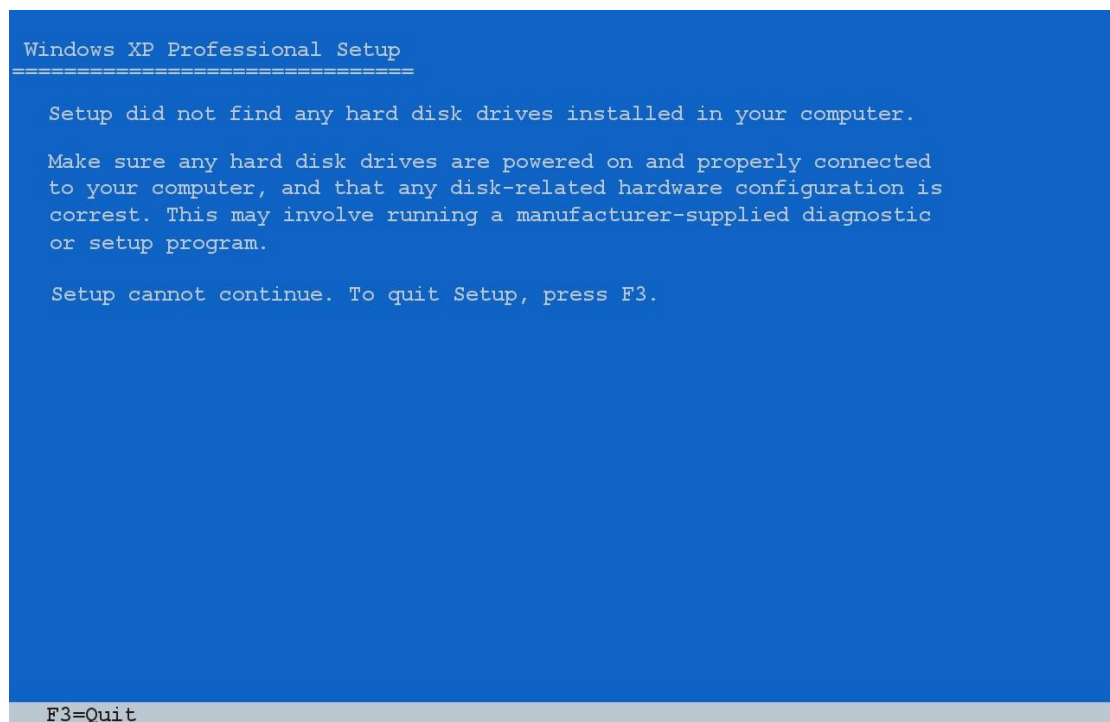


Note: Nothing will happen immediately after pressing F6. Setup will temporarily continue loading drivers. You will then be prompted with a screen asking you to load support for mass storage device(s).

2. Press the **S** key to **Specify Additional Device**.
3. You will be prompted to *Please insert the disk labeled Manufacturer-supplied hardware support disk into Drive A:* When prompted, insert the floppy disk containing the following files: IAAHCI.INF, IAAHCI.CAT, IASTOR.INF, IASTOR.CAT, IASTOR.SYS, and TXTSETUP.OEM and press the **Enter** key.
4. After pressing Enter, you should be presented with a list of available floppy disk. Select your controller from the list. The up and down arrow keys can be used to scroll through the list as all controllers may not be visible. The list may include: (Select the ICH-X AHCI Controller for your platform)

- Intel® ESB2 SATA AHCI Controller
 - Intel® ICH7R/DH SATA AHCI Controller
 - Intel® ICH7M/MDH SATA AHCI Controller
 - Intel® ICH8R/DH/DO SATA AHCI Controller
 - Intel® ICH8M-E/M SATA AHCI Controller
 - Intel® ICH9R/DO/DH SATA AHCI Controller
 - Intel® ICH9M-E/M SATA AHCI Controller
 - **Intel® ICH8M-E/ICH9M-E SATA RAID Controller**
5. The next screen should confirm your selected controller. Press the **Enter** key again to continue.
6. At this point, you have successfully in the Intel Matrix Storage Manager driver and Windows setup should continue. Leave the floppy disk in the floppy drive until the system reboots. Windows setup will need to copy the files from the floppy again to the Windows installation folders. Once Windows setup has copied these files again, you should then remove the floppy diskette so that Windows setup can reboot as needed.

Note: If you wish to use the Intel Matrix Storage Manager graphical user interface in Windows, you will need to install the Intel Matrix Storage Manager by running the Setup.exe process after these steps have been completed and the operating system has been successfully installed.



Note: If you enabling RAID in BIOS, but you didn't press **F6 key** while Windows XP installing

You will see the error like this , and you need to press **F3 key** to quit setup .

- End -

You also can visit INTEL Support Web site to get more information as below link:

<http://support.intel.com/support/chipsets/imsm/>