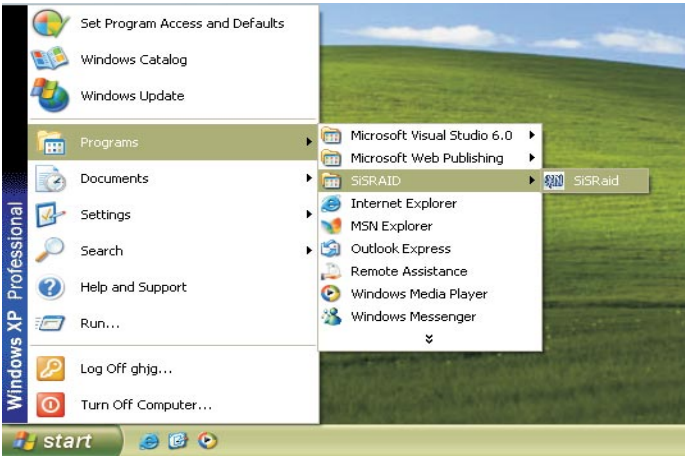
Guide to SiS RAID Utility for Windows XP / 2000

1. General

1. After installing the SiS RAID utility, go to “Start” menu and choose “Programs.” From the “Programs” menu, choose “SiS RAID Utility” and click on “SiSRaid”

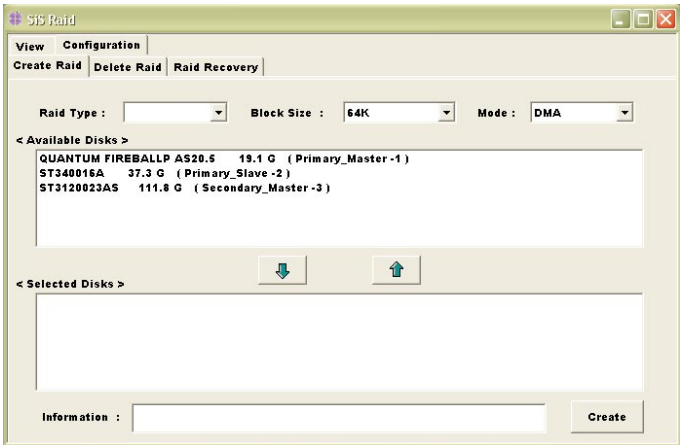


NOTE

If your working OS is installed in the SATA hard disk(s) and you want to re-configure the RAID type, we suggest you to re-configure it in “SiS RAID BIOS Setting Utility” rather than this “SiS RAID Utility for Windows.

2. The SiS RAID Utility window opens as below. The main interface has two tabs: **View** and **Configuration**. You can switch to different tabs by clicking on it. On “View” tab, we can see some device information on different controllers. You can click the drop-down box “Adapter” to select the controller you want to use. The default value is the information of the first device on **“SiS RAID controller 1”**.

3. Click the tab **Configuration**, you can find three tabs: **Create Raid**, **Delete Raid,** and **Raid Recovery**. In the same way, you can switch to different tabs by clicking on it.

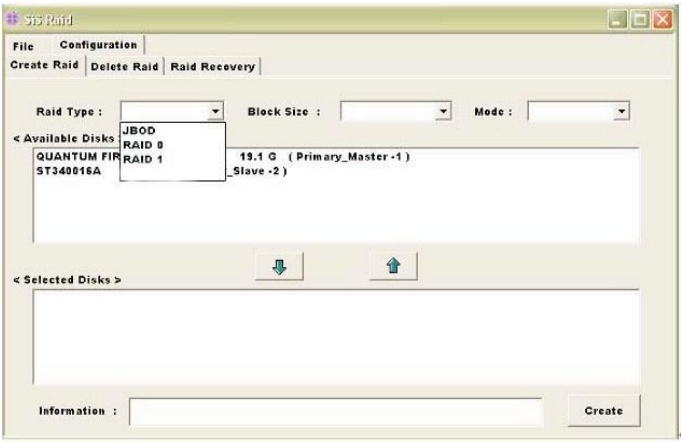


2. Viewing the “Create Raid”

Click the tab **Create Raid**, you can find three drop-down box and three panes. Those meaning will be showing below.

1. Raid Type:

Click the drop-down box “Raid Type”. This box enables the user to select array type. There are three array types that the user can select: JBOD, RAID 0, and RAID 1. User can select any one array type to create a RAID set.

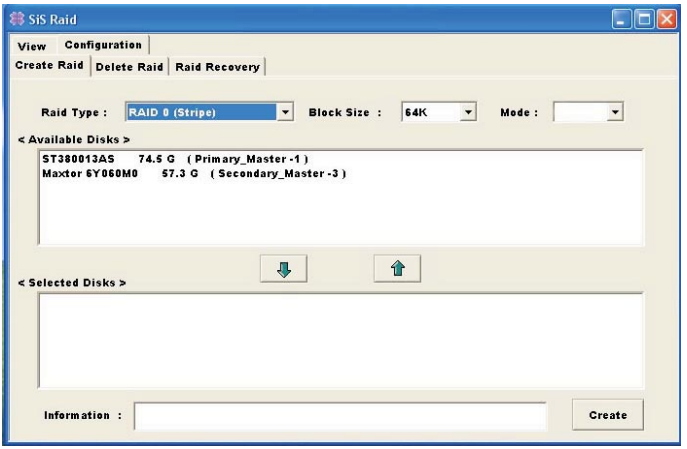


NOTE

If your SATA hard disks are already configured in any RAID type,your SATA hard disks could not appear in the <Available Disks> pane.

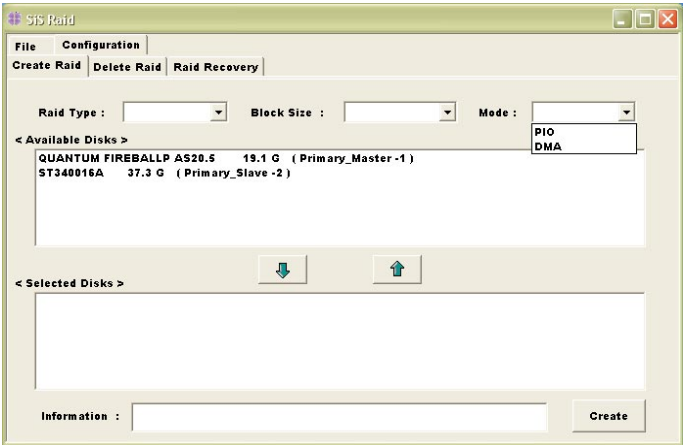
2. **Block Size:**

If user selected RAID 0 array types in the “RAID Type” box, the “Block Size” drop-down box will be enabled and user must select a block size. Clicking the drop-down box “Block Size”, there are seven block size that the user can select: 8k, 16k, 32k, 64k, 128k, 256k and 512k. User can select any one block size to create a RAID 0 set. The default selection is 64k.



3. Mode Type:

Click the drop-down box “Mode Type”. This box enables the user to select mode type. There are two mode types that the user can select: PIO and DMA. User can select any one mode type to create a RAID set. The default selection is DMA.

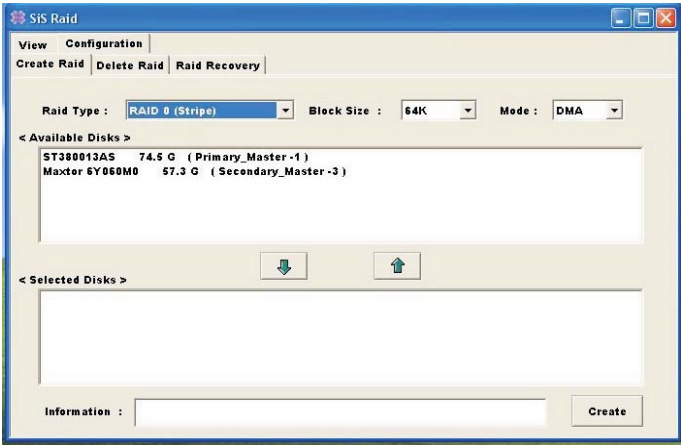


NOTE

For the “Mode” option, you may select between “DMA” and “PIO” modes, but it is recommended to select “DMA” mode.

4. **<Available Disks>:**

This pane will list out all the disks that can be used to create a RAID set currently. It will show some disk information (ex. Location, serial numbers, the ability of boot and the status of recovering).



5. **<Selected Disks>:**

This pane will list out all the disks that have been selected to create a RAID set. User can highlight the specific disk that we wants in the <Available Disks> pane and click the downward arrow icon or double click the marked disk to select that disk into the <Selected Disks> pane. In the same way, user can click the upward arrow icon or double click the marked disk in the <Selected Disks> to get back the disk that we might select wrong to the <Available Disks> pane.

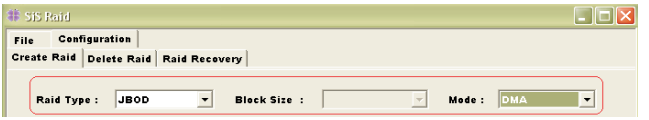
6. **<Information>:**

This pane will show the information about creating a RAID set after clicking the **Create** button. The information may be “Please select the <Raid Type> first!”, “Please select the <Mode Type> first!”, “Please select the <Block Size> first!”, “Please select the disk you want first!”, “Mirror supports TWO DISKS only.”, “Raid Created successful! Reboot please!!” or “Raid Creation failed!”.

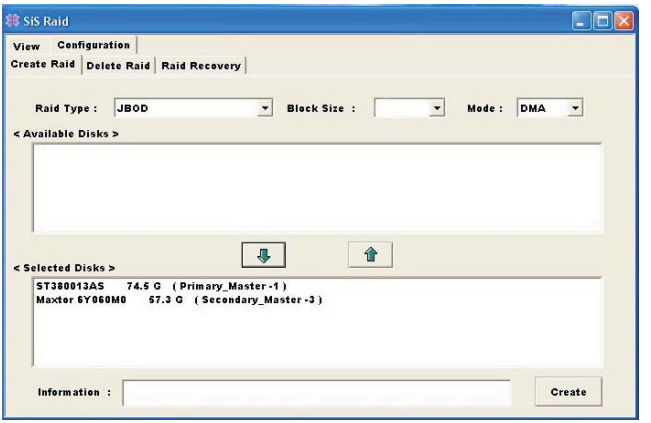
3. Create Raid

A. To create a JBOD array, follow these steps:

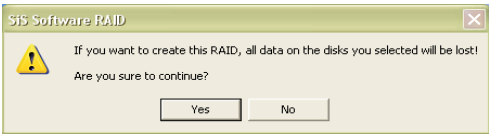
1. **Configuration**→"Create Raid"→"Raid Type"→JBOD.
2. From the drop-down box "Mode Type", select the mode type you want or use the default value **"DMA"**.



3. From the <Available Disks> pane, select the disk and click downward arrow icon or double click it to add the disk on the <Selected Disks> pane.

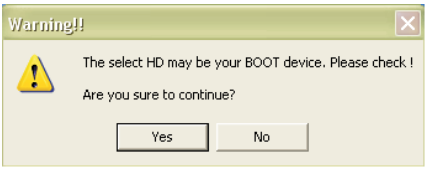


4. When the JBOD array's configuration is finished, click the **Create** button. Then a warning message will pop up. Pay attention to the warning message, and then click **Yes** button to finish the creation of JBOD array, or click **No** button to cancel.

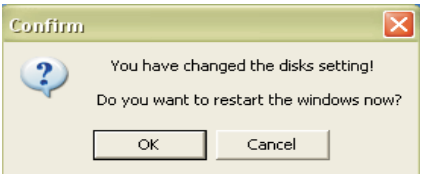


NOTE

If the disk you selected has the ability of booting, another warning message will pop up before "SiS Software RAID" message. You may click **Yes** button to continue or click **No** button to cancel.



5. Next, another message box will pop up to tell user that disk setting has been changed and ask whether to restart the computer or not. Click **Yes** button to restart the computer or click **Cancel** button to skip restarting.

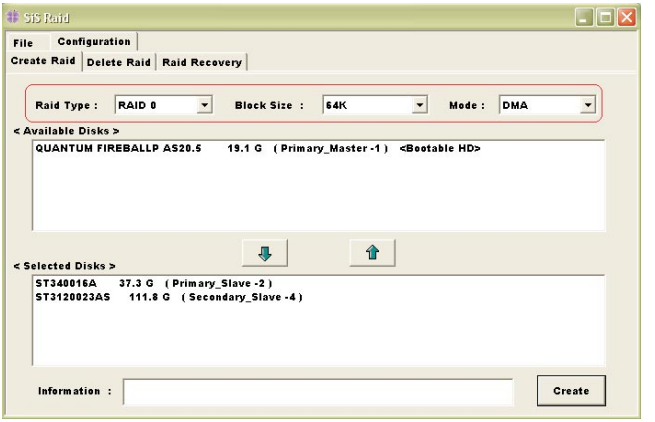


NOTE

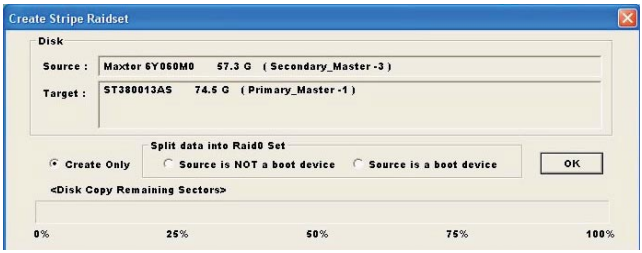
New Setting will be activated only after you restart the computer.

B. To create a RAID 0 (Stripe) array, follow these steps:

1. **Configuration**→ "Create Raid"→"Raid Type"→RAID 0.
2. From the drop-down box "Block Size", select the block size you want.
3. From the drop-down box "Mode Type", select the mode type you want.
4. From the <Available Disks> pane, select the disk and click downward arrow icon or double click it to add the disk on the <Selected Disks> pane.



5. When the RAID0 array's configuration is finished, click the **Create** button. Then a "Create Stripe RaidSet" dialog will pop up.



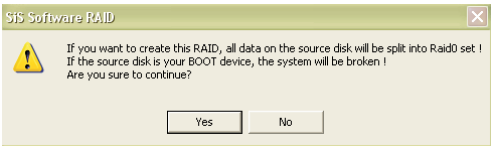
<Option Description>

Source:	The first selected disk.
Target:	The second selected disk.
Create Only:	Select this option will destroy all data on all the selected disks and create a clean stripe array without any data on it.
Source is not a boot device:	Select this option will split data from source disk into all the selected disks. In this option, the source cannot be bootable.
Source is a boot device:	Select this option will split data from source disk into all the selected disks. In this option, the source can be bootable.
OK:	Start the operation.

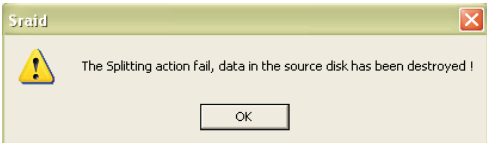
<Disk Copy Remaining Sector>:
Show the remaining splitting data.

6. Next, you may click **Cancel** button to leave, or click **OK** button to continue after the operation being selected. Different warning messages will pop up according to the option you select. The warning messages are similar to JBOD array creation but the operation is "Split data into Raid0".

7. If the operation is “Split data into Raid0”, a warning message will pop up. See below:

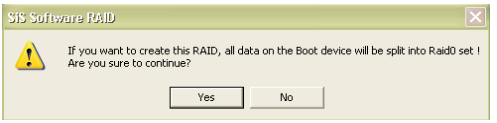


Next, you may click **Yes** button to start the operation or click **No** button to cancel.

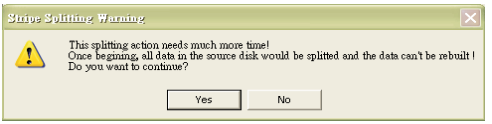


When this operation is beginning, you still can click the destroy button on the “Create Stripe RaidSet” dialog to stop this operation. **But this action will cause the data of the source disk broken**. And the following message will be popup to remind you.

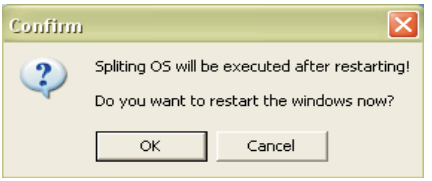
8. If the operation is **“Source is a boot device”** of **<Split data into Raid0 Set>**, the following warning message will popup, seeing below:



Next, you can click “Yes” button to start the operation or click “No” button to cancel. When you click “Yes” button to start this operation, the following warning message will popup.



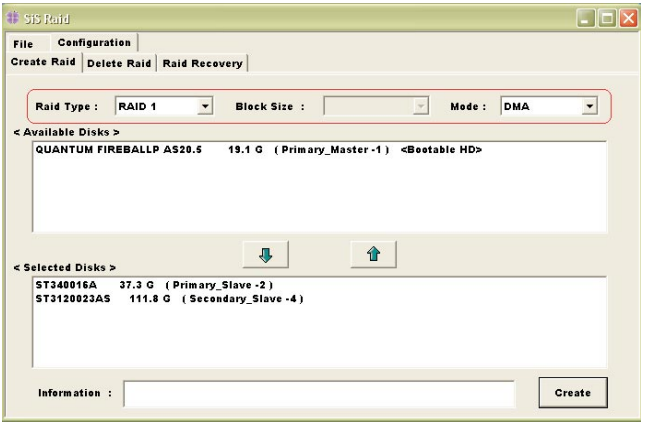
Next, you can click “Yes” button to start the operation or click “No” button to cancel. When you click “Yes” button to start this operation, the following warning message will popup.



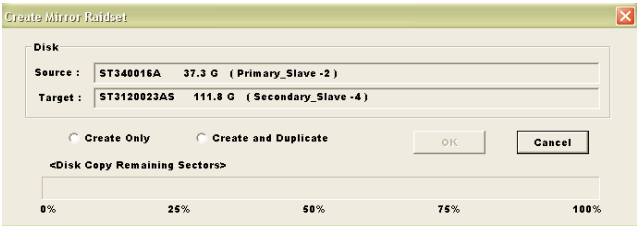
Next, you can click “Ok” button to restart the windows and start the operation **“Source is a boot device”** of **<Split data into Raid0 Set>**. Or click “Cancel” button to suspend this operation. But, this operation is still done after restarting the windows next time.

C. To create a RAID 1 (Mirror) array, follow these steps:

1. **Configuration**→ "Create Raid"→"Raid Type"→RAID 1.
2. From the drop-down box "Mode Type", select the mode type you want.
3. From the <Available Disks> pane, select the disk and click downward arrow icon or double click it to add the disk on the <Selected Disks> pane.



4. When the RAID1 array's configuration is finished, click the **Create** button. Then a "Create Mirror RaidSet" dialog will pop up.



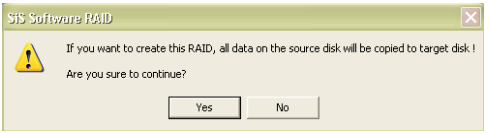
<Option Description>

Source:	The first selected disk.
Target:	The second selected disk.
Create Only:	Select this option will destroy all data on all the selected disks and create a clean mirror array without any data on it.
Create and Duplicate:	Duplicate operation will reserve data on the source disk and copy them onto the target disk.
OK:	Start the operation.
Cancel:	Cancel the operation.

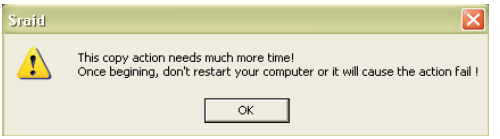
<Disk Copy Remaining Sector>:
Show the remaining splitting data.

5. Next, you may click **Cancel** button to leave, or click **OK** button to continue after the operation being selected. The warning messages will pop up according to the operation you selected, and the message is similar to JBOD array creation.

6. If the operation is **“Create and Duplicate”**, the following warning message will popup, seeing below:



Next, you can click “Yes” button to start the operation or click “No” button to cancel. When you click “Yes” button to start this operation, the following warning message will popup.



Click “OK” button to start this duplicating action. Don’t restart your computer or it will cause the action fail.

7. When the operation is finished, the restart warning message will popup as well as JBOD array creation.

4. Explaining the RaidType Information

General case: **RAID0 (A = B C | D E)**

<Meaning>

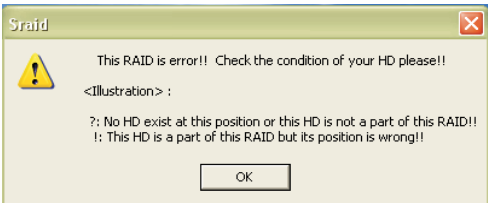
RAID0: Raid Type

A: total number of disks in this Raid

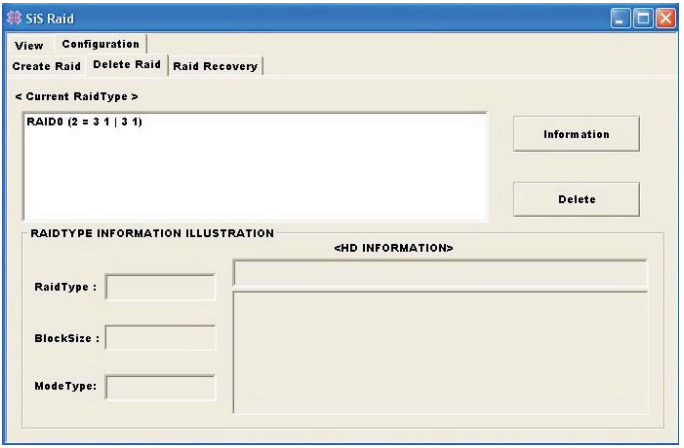
B,C: the serial number of each disk in this Raid

D,E: a) Raid is correct, B=D C=E

b) Raid is error, D or E will show “?” or “!”.
In that case, the meaning of “?” and “!” will show below.



<Example>

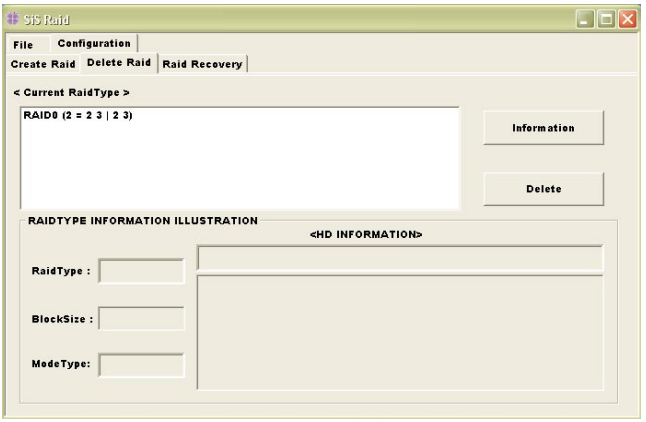


<HD information>

5. Delete Raid

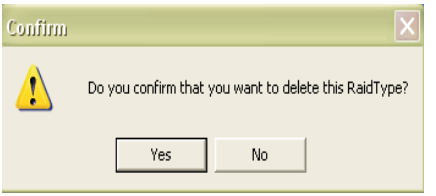
Click the tab “Delete Raid”, you can find some panes and two buttons. The RaidType meaning will show below.

1. **Connfiguration** → “Delete Raid”, the following windows will appear:

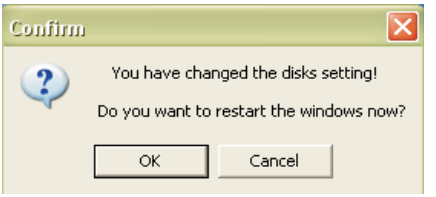


2. Highlight the disk array in the <Current RaidType> pane, and then click the **Information** button, or double click the array. You can get the information about the disk array.

3. If you want to delete a disk array you selected, you can highlight the disk array and then click the **Delete** button. Then a warning message will pop up. Pay attention to the warning message. You may click **Yes** to delete the selected disk array, or click **No** to cancel.



4. Next, another message will pop up to tell user the setting of these disks have been changed and ask whether to restart the computer.

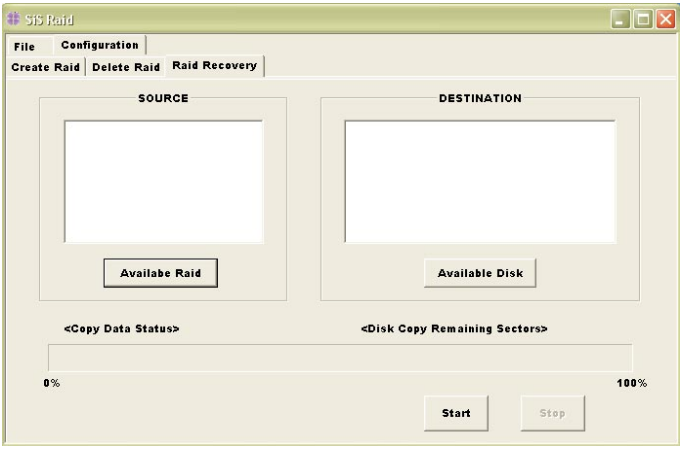


6. Raid Recovery

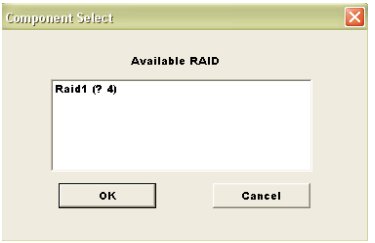
NOTE

The recovering operation is workable only when error RAID1 set exist.

1. Click the tab **Raid Recovery**, you can find two panes and some buttons. Those meaning will be showing below.



2. First, you can click the button **Available Raid** to find whether any error RAID set existing. See below:



Next, highlight the error RAID set you want to recovery. And you can click the **OK** button to continue or click **Cancel** to cancel this operation.

3. After you select **Available Raid**, click the **Available Disk** button to find whether any empty hard disk existing. See below:

Next, highlight the empty hard disk you want to select. And you can click the **OK** button to continue or click **Cancel** to give up this selection.

4. When the **Available Raid** and **Available Disk** is finished, you may click the **Start** button to start this operation. And the **Start** button will become **Pause**. Then you can click the **Pause** button to pause the thread operation. And the **Pause** button will become **Start**. Or you may click the **Stop** button to cancel this operation. This operation can be broken off if you want to close this RAID utility or shut down your computer, and it can continue when you open this RAID utility again or restart you computer next time.

7. SiS964/SiS180 Hot-Plug Utility

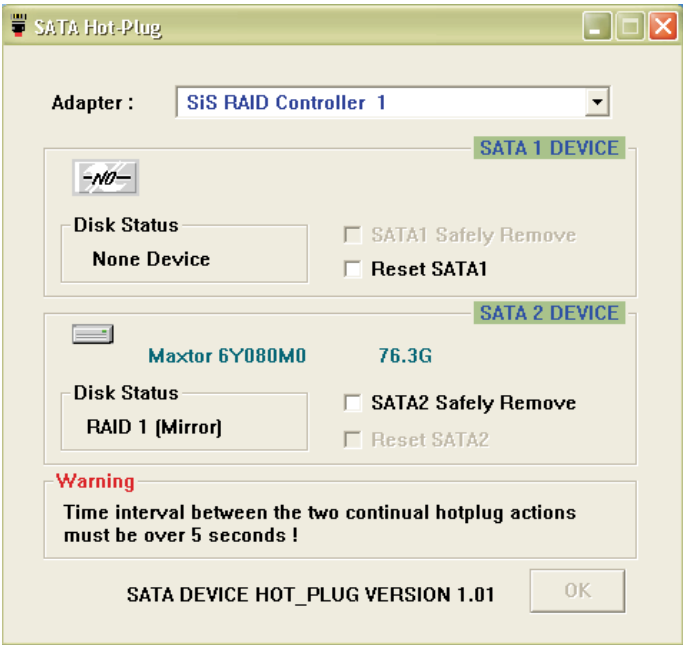
NOTE

1. The Hot-Plug support is ONLY applied to Single SATA drive.
2. SiS Hot-Plug Utility only supports Windows 2000 and XP.
3. Usually, each power wire will provide 2 power connectors for HDDs. It is recommended to connect SATA HDDs to different power wires to prevent intervention.
4. If you only hot-plug the SATA data cable without unplugging the power cable, sometimes it will cause the Hot-Plug function fail.
5. Time interval of the two continual hot-plug actions must be over 5 seconds.

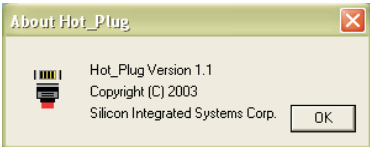
How to use SiS964/SiS180 Hot-Plug Utility

1. After installing the SiS RAID driver, the SiS Hot-Plug Utility will be installed automatically. And this Hot-Plug utility will be resident in the toolbar. You can click the right button of the mouse on the hot-plug icon and some selection will be popup. You can click “Exit” to close this resident utility or let it always be resident in the toolbar.

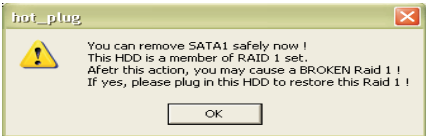
2. Next, you can click the “SATA Status” and the SiS Hot-Plug Utility window opens as below. You can click the drop-down box “Adapter” to select the controller you want to use. The default value is the information on first controller **“SiS RAID controller 1”**.



3. You also can click “About” to get some copyright information and the hot-plug version (ex. Hot_Plug Version 1.1). See below:



4. If you want to remove any one SATA device and hope that the data can be protected. You can click the grid in front of "**SATAx Safely Remove**", and then click the button "OK" to remove it. The following message will be popup to tell you that hard disk can be removed safely now.



5. If you plug in a SATA device, the resident hot-plug utility will popup and show the following message. You can click the "ok" button to close this message box and the device information will show on it.

6. If you plug out a SATA device without selecting the "SATAx Safely Remove", the data in this SATA device may be lost. The following message will be popup to tell you the SATA device has be removed.

7. If you plug in a SATA device but the Hot-Plug utility cannot find any device plugged in, you can plug out this SATA device and plug in it again by some times. If you still can't find any SATA device plugged in, you can click the grid in front of "**Reset SATAx**", and then click the button "OK" to reset it. And try again the action that plugging out and plugging in. Then you should find the SATA device information on the Hot-Plug utility.