

---

# RAID Software

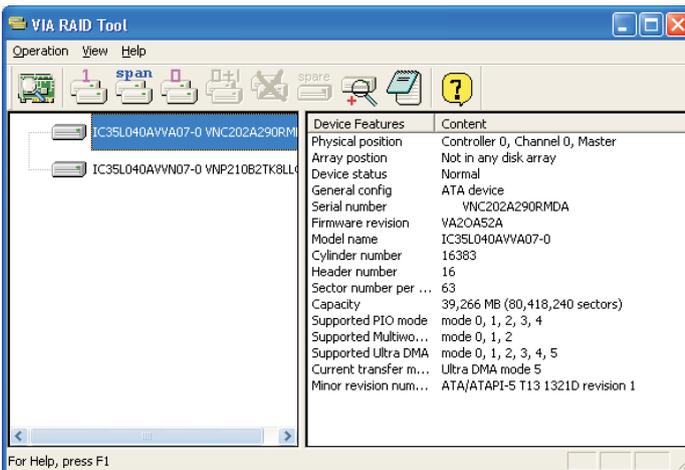
## 1. Getting Start

The “RAID Software” is a Windows-based software utility with graphical user interface and provides user an easy-operation tool to configure and manage disk drives or disk arrays connected to VT8237 SATA controller.

After GUI software is installed, it will automatically start every time when your Windows OS is started. An icon  will appear in the system tray of the tool bar to indicate that GUI software is currently running.



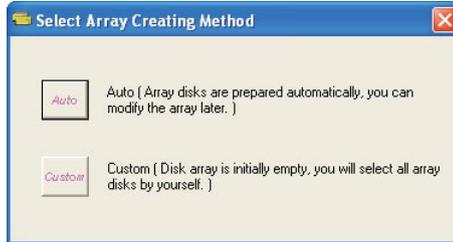
Just double click on the small icon to call out the main interface of the software.



---

## 2. Create Disk Array

1. You may click on one of the three buttons to create different types of disk array–  RAID 1,  Span, and  RAID 0. Then a “Select Array Creating Method” will be prompted.



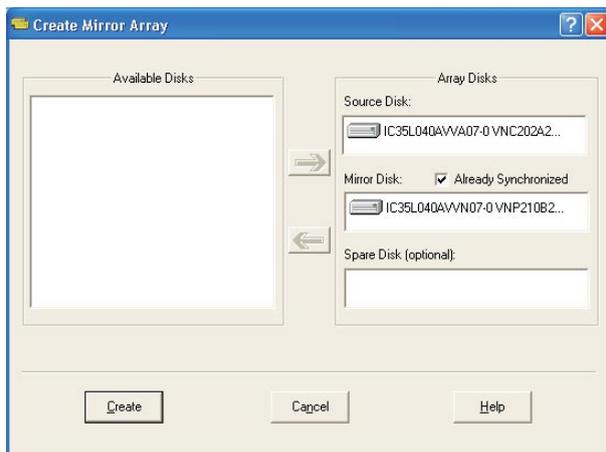
**Auto:**

The software will configure the available hard disk drives to be a disk array. User can modify the hard disk drives later. It is strongly recommended to use this method.

**Custom:**

Disk array is arranged by user.

- 
2. Click **“Auto”** button. The **“Creating Array”** window will pop up. If you select **“Custom”**, the **“Available Disks”** window will list the available disk drives for array-creating. Select a disk drive and click right arrow button to add the specific disk drive to array. After adding a disk drive, user can also remove the selected disk drive from array. Click the disk drive in **“Array Disks”** windows, then click left arrow button to remove the selected disk drive.

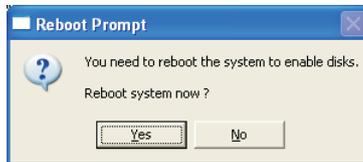


Press **“Create”** button to create or **“Cancel”** button to cancel it.

After you pressed the **“Create”** button, a warning message will pop up. Click **“Yes”** to finish the creation of disk array, or **“No”** to cancel.

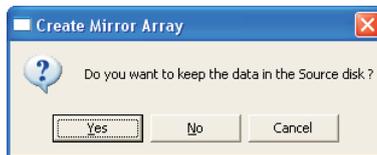


- 
3. A message box will pop up to prompt user that the disk array has been created successfully and ask user whether to restart the computer. Click **“Yes”** to restart the computer or click **“No”** to skip restarting. New disk array setting will take effect only after restarting.



### Create RAID 1

You can reserve the data on the source drive after clicking **“Create”** button when you create a RAID 1 array.



There is a limitation if user wants to keep the data on the source drive - the capacity of the mirror drive must be greater or equal to the source drive, otherwise the RAID 1 can't be created.

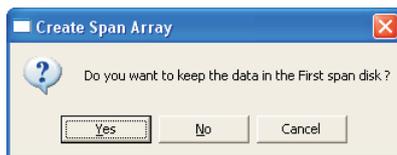


If user wants to keep data in the source drive, RAID tool will ask user to synchronize the mirror drive after the system's rebooting.

---

## Create JBOD

The data in the first disk drive of JBOD array can be reserved when a JBOD array is created.

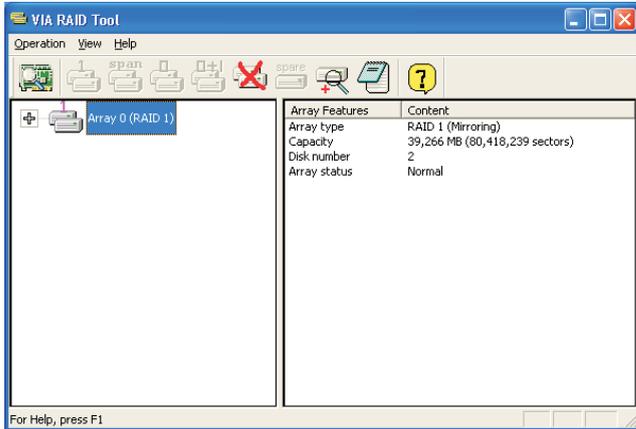


The data on the first disk drive will be reserved and the other disk drives in JBOD will be expanded behind the first disk drive and become free space.

---

### 3. Delete Disk Array

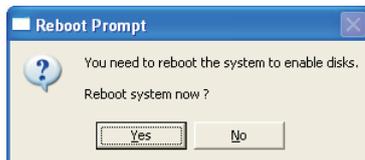
1. Select the disk array that you want to delete from the left window. Click “**Remove Array**” button , then a warning message will pop up.



2. Click “**Yes**” to delete the specific disk array or click “**No**” to cancel.



- 
3. A message box will pop up to prompt user that the disk array has been deleted successfully and ask user whether to restart the computer. Click “**Yes**” to restart the computer or click “**No**” to skip the restarting. New setting will take effect only after restarting.



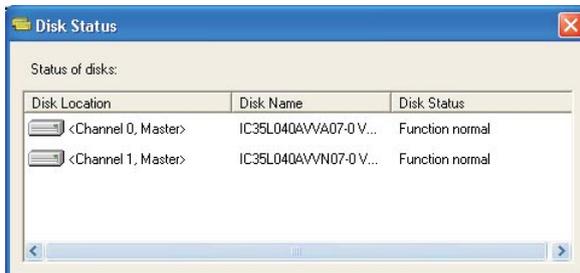
**Warning:**

Deleting a disk array will destroy all the data on the disk array except RAID 1. When a RAID is deleted, the data on these two hard disk drives will be reserved.

#### 4. **Check All Disks**

You can check if all the disk drives work normally by clicking  button. After you complete the checking, a dialog window will pop up to show each disk’s current status as following picture.

Your hard disk drive must be compatible with ATA/ATAPI-5 specifications and support SMART commands; otherwise the checking will fail.

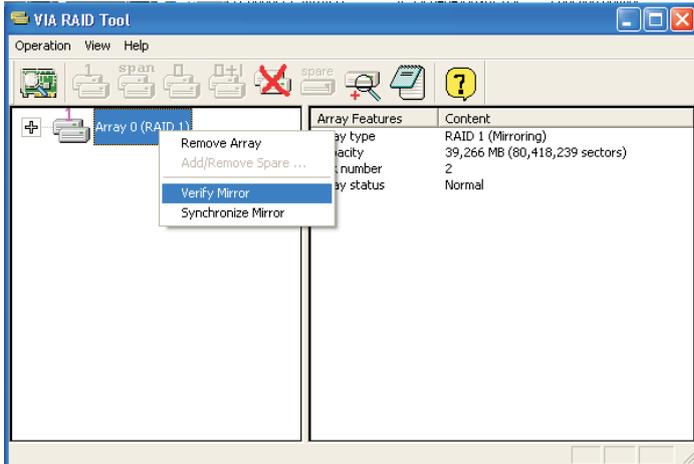


---

## 5. Verify Mirror Disk

Data on the mirror disk must be the same as its corresponding source disk to provide fault tolerance for RAID 1.

1. Select a RAID 1. Right-click the selected RAID, and then a shortcut menu will appear. Click “Verify Mirror” to verify whether the source and the mirror disks are identical.



- 
2. After executing “verify mirror” command, a dialog will show the verifying process. You can pause or cancel this process at any time. The process may take a long time if the capacity of RAID is large.



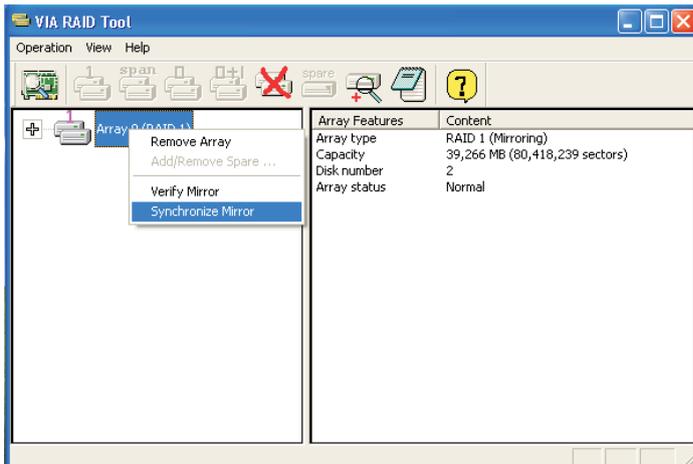
3. When the mirror disk is not identical with the corresponding source disk, the mirror disk will be marked with a “need-sync” icon: . A “need-sync” mirror disk should be synchronized as soon as possible.

---

## 6. Synchronize Mirror Disk

For RAID 1, it must be synchronized when data on the mirror disk is not identical with its corresponding source disk. Sometimes the data on the mirror disk may be newer than the source disk. For example, the source disk is absent and the mirror disk runs in the tolerance mode. So the exact meaning of “Synchronize Mirror” is to keep the data on a pair of the source and the mirror disks identical. RAID software always marks the mirror disk with a “need-sync” icon  even though the mirror disk may have the correct data.

1. Select RAID 1. Right-click the selected RAID, then a shortcut menu will appear. Click “Synchronize Mirror” to synchronize the source and the mirror disks.



- 
2. When synchronization starts, a dialog will show the process. You can pause or cancel this process at any time.



3. A message will pop up when synchronization is finished.



## 7. **Disk Error Detection**

RAID will pop up an error message when the failure or absence of a disk drive is detected.



---

## 8. Duplicate Critical RAID 1 Array

If, during the system-booting, the software detects the inconsistency between the source and the mirror disks of RAID 1, the disk array will be marked as critical status, and the software will automatically prompt user to duplicate the RAID 1 to make the mirror disk consist with the corresponding source disk again.



You may click **"Yes"** to synchronize now or click **"No"** to synchronize later.



When the synchronization starts, a dialog will show the process. You can pause or cancel this process at any time. If you cancel the synchronization process, the RAID is on "need-sync" condition. You should synchronize again to guarantee the data are identical between the source and the mirror disk drives.

A message will pop up when synchronization is finished.



---

## 9. *Rebuild Broken RAID 1 array*

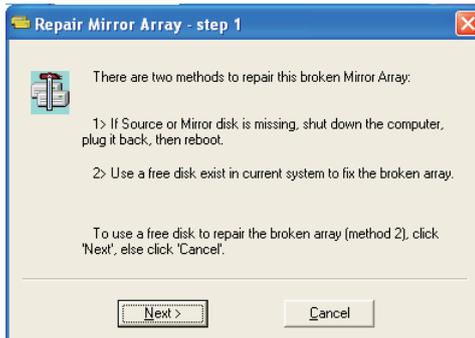
If, during the system-booting, the failure or absence of any member disk of RAID is detected, the array will be marked as broken status.

If broken RAID 1 array is detected by the RAID software, it will indicate a serial steps to repair this problem.

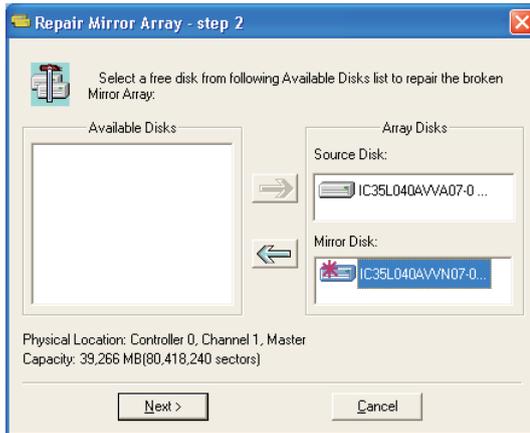
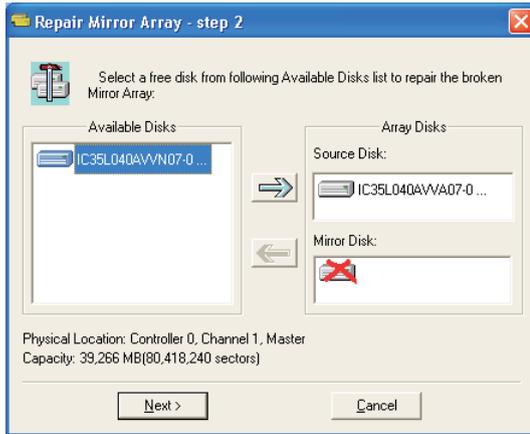
1. A dialog box will pop up to indicate the RAID is broken. Click **Yes**.



2. Then another dialog box will pop up. If the source or the mirror disk drive is unplugged only, click "**Cancel**" to stop rebuilding step. Shut down the system. Plug the absent disk drive, and then reboot the system. If the original disk drive is broken-down, you may plug a new disk drive then reboot the system. Click "Next" to the next step.



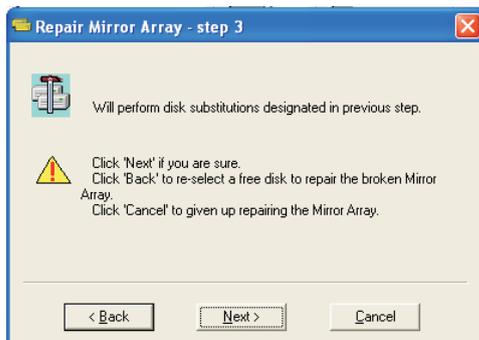
- 
3. Select a disk drive from “Available Disks” and click  button to replace the broken-down one, and then click “Next”.



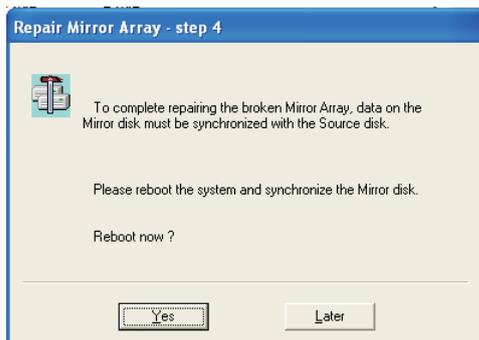
- 
- A warning message will pop up. If you want to rebuild the RAID by using the disk drive that you selected in the previous step, click **"Next"**.

**Warning:**

The data on the selected disk drive will be lost.



- Reboot the system.



- This RAID is marked as a critical RAID. The RAID software will do the "Duplicating Critical RAID 1" process.