User Manual

5-Bay Portable RAID Tower

EXTERNAL 5-BAY SATA RAID

USB3.0+eSATA ENCLOSURE

1. Product Specifications：

	Support single HDD up to 16TB+, with a total of 5 RAID 0 set up of 80TB+ capacity
	Only work with provided external 12V8A power supply. Will have the following signal alerts once power is detected out of range: a Yellow light signals low voltage, it may be seen by pulling off the bottom HDD B Red light signals high voltage, it may be seen by pulling off the bottom HDD
	Support RAID0/1/3/5,JBOD, and Normal Clone
	Smart fan control. Support sleep mode
	Transfer rate up to 5.0Gbps via USB3.0 and up to 3.0Gbps via eSATA
	Support Windows、MAC、Linux OS
	■ Auto-Sleep mode during data transfer via USB or eSATA. Besides POWER light, all LED lights will turn off. Once transfer is complete, it will be back to wake-up mode with all lights on. ■ Auto-Sleep mode once connected computer enters sleep model or shut down. ■ Auto-Sleep mode after 30 minutes without operation from USB connected computer. Will resume once READ/WRITE on any HDD.

2. Package Contents:

			
Enclosure X1	Type-C Cable X1	eSATA Cable X1	12V8A Power Adapter X1
			
Power Cable X1	CD Disk X1	Screwdriver X1	Screws X20

3. HDD Installation Instruction

(Please do not connect the power supply while installing the hard drive.)

3.1：3.5-inch hard drive installation

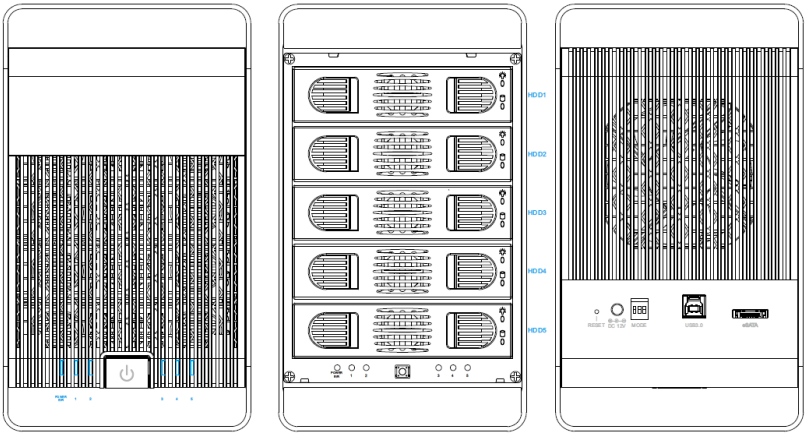
	1. Touch the protruding position on the top of the panel with your fingers. Pull out the magnetic panel and place it properly.
	2. Pull out the tray by pushing down on switches in the middle with your thumb and index finger.
	3. The 3.5-inch hard disk in the extraction box is installed without screws. Please remove the fixing tabs on both sides of the extraction box. Put the hard disk in the extraction box correctly, and make sure that the screw holes at the bottom of the hard disk are placed in the positioning posts of the extraction box.
	**4.** Firmly push the side clamps back into place making sure the HDD screw holes are lined up with the screw holes in the tray.

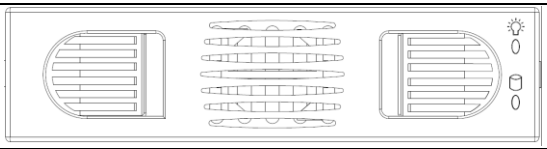
	5. Repeat the process with all the HDD trays. Check to see if all the trays are inserted and locked into place before positioning the magnetic front panel into place.

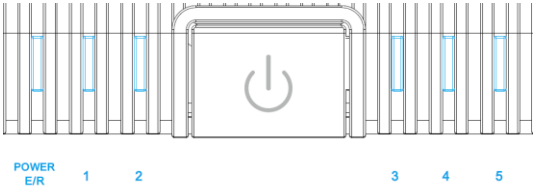
3.2：2.5-inch hard drive installation

	1. Remove the clasp on the right side of the extraction disk, and place the 2.5-inch hard disk in the position shown on the left.
	2. Turn the hard disk and the extraction disk over to the back. Take the screws from the accessory bag to fix the 2.5-inch hard disk. There are four screw holes. Once done, insert the tray back into enclosure.

4. Product Description



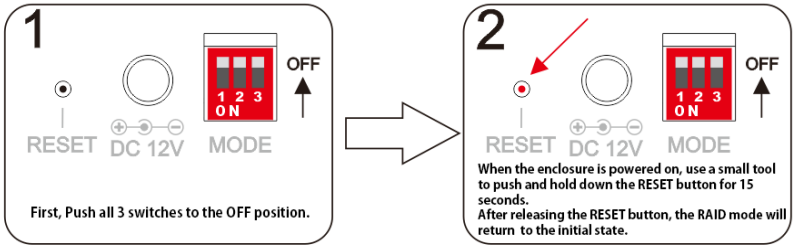
Mobile Tray Face Panel	
Function and description	HDD Power LED : The Blue LED will stay on when powered on and will turn off during sleep mode. HDD Activity LED : The Yellow LED will blink during HDD activity (Read and write).

<table>
<tr><td>Lower panel</td><td colspan="2"> 
</td></tr>
<tr><td rowspan="2">FUNCTION AND DESCRIPTION</td><td>NORMAL MODES</td><td>RAID1/3/5/10/Clone Modes</td></tr>
<tr><td>POWER LED: THE BLUE LED WILL STAY ON WHEN THE UNIT IS POWERED ON.
1-5 LED: CORRESPONDS TO THE HDD LIGHT FROM TOP TO BOTTOM, UNDER NORMAL CIRCUMSTANCES, WHEN HDD 1 TO 5 HAVE READ/ WRITE ACTIVITY THE CORRESPONDING 1-5 LED WILL FLASH BLUE</td><td>When the HDD 1-5 LED lights up in red and the E/R lights up in red, it means that the corresponding red light has an error in the hard disk. Please replace the defective hard drive with a new hard disk with a capacity not less than the old hard drive when the enclosure is powered down. If the activity light of the new hard disk flashes blue and red alternately and the E/R light flashes red, it means that the replacement hard disk is in the process of data recovery (Rebuild mode), and other hard disks will also flash blue lights at the same time. Please do not shut down and wait patiently. The recovery speed is about 180M/ s.
E/R LED: Error/ Rebuild LED. When there is a failure to establish a RAID mode combination, and RAID automatically restores data after replacing the hard disk; this LED will flash red, indicating that the disk array data is being restored. When the RAID mode is wrong, this LED will be solid red.</td></tr>
</table>

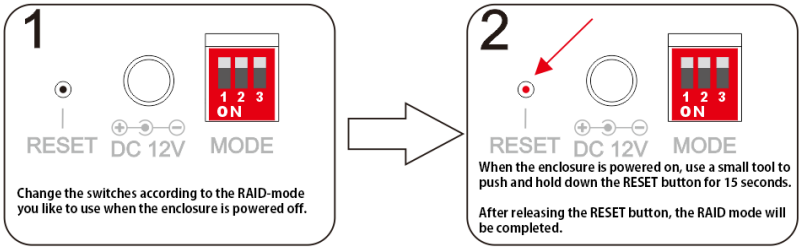
Locations	Functions
	Power Switch: Power on: Push once to power on the unit. Shut down: Push and hold for 4 seconds to shut down.
	12V power input interface (5.5*2.5): (new power supply voltage input protection) Connect the 12V 8A power adapter in the accessory box.
	RESET switch: When you need to change the RAID mode, you need to press this switch for a few second, and then create a new RAID configuration mode. Please refer to the setting method below for details.
	RAID mode switch: RAID mode setting switch. See [RAID Mode Comparison Table] for detailed settings.
	USB3.0 interface: Use USB3.0 transmission cable to connect to computer host, notebook, server, and other devices.
	e-SATA interface: Use e-SATA transmission cable to connect to computer host, notebook, server, and other devices.
	Smart fan: When the hard disk is active, the fan will stay on. When the hard disk goes into sleep mode, the fan will power down.

5.Hardware RAID setup

1. First set the initial state



2. Set RAID mode



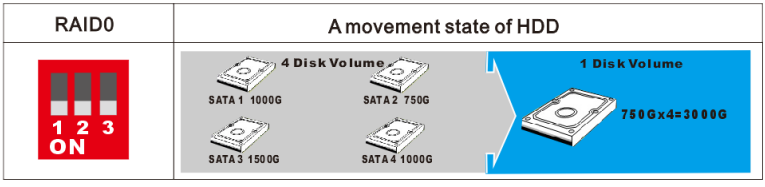
Attention:

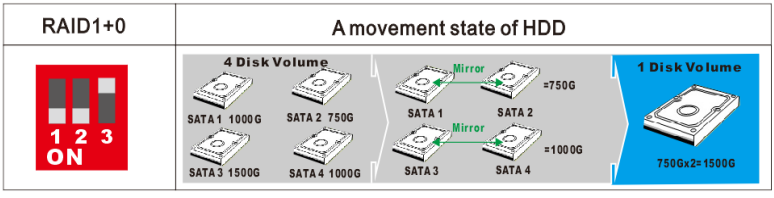
Before changing the RAID mode, please back up the data on the hard drive. Once the RAID mode is changed, all data on the hard drive will be erased.

RAID mode comparison table:

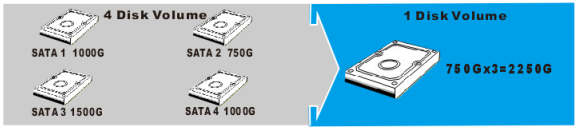
ITEM	S/W1	S/W2	S/W3	MODE
1	ON	ON	ON	**RAID0**
2	ON	ON	OFF	**RAID1/RAID10**
3	ON	OFF	OFF	**RAID3**
4	OFF	ON	OFF	**RAID5**
5	OFF	ON	ON	**CLONE**
6	ON	OFF	ON	**LARGE**
7	OFF	OFF	OFF	**NORMAL**

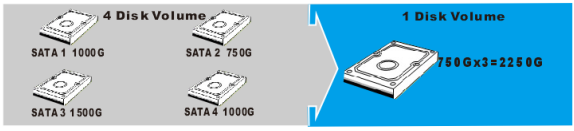
Schematic diagrams of RAID setting by switches

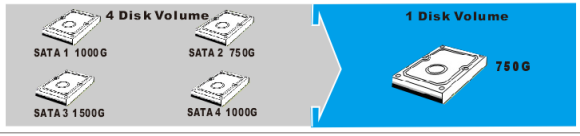


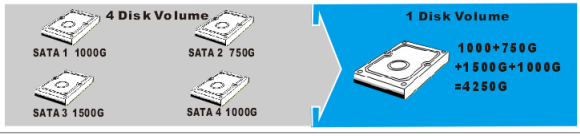


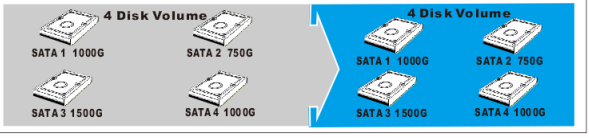
Note: RAID1+0 can only use 4 hard drives.

RAID3	A movement state of HDD
	

RAID5	A movement state of HDD
	

Clone	A movement state of HDD
	

Large	A movement state of HDD
	

Normal	A movement state of HDD
	

6.Software RAID setup

- Insert the Software CD into your ROM drive.
- In Windows explorer, locate the CD drive and open the windows folder.

- Double click on the setup file to begin the installation。

- After the program startup screen appears (see the figure below), click ‘Install’, and the program will begin to install.

- The following screen will appear after installation. Click "Start Application Now" and select "Finish" to run the program.

To Start the Application:

After the program is installed, there is a small icon in the task bar at the lower right corner of Windows, which can be clicked to open; or when the product is connected to the computer, the management program will automatically pop out. As shown in the figure below, five hard disks are displayed in the software (displaying the inserted hard disks).

When the RAID Manager software is open, if the enclosure is plugged in, the program will prompt the message as shown in the figure below.

When the RAID Manager software is open, if the enclosure is disconnected or removed, the program will prompt the message as shown in the figure below.

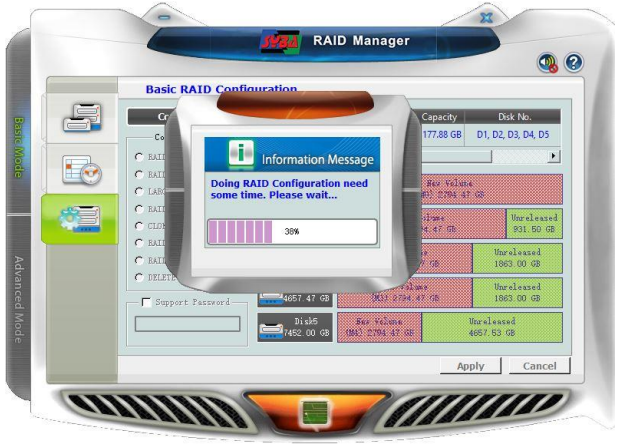
Setting RAID Mode:

You can configure the RAID mode easily through the management software. Click under "Basic Mode" When the icon enters the "Basic RAID Group Settings", the following screen will appear  . The left side is to configure RAID.

The program will automatically display the RAID mode that you can set according to the number of hard disks installed. For example, when two hard disks are installed, RAID3, RAID5, RAID10 will be greyed out.

To set up RAID mode, select the mode you need, press the "Apply" program at the bottom right. A warning box will pop up. See the picture below. Please keep in mind, when you change the RAID mode, be sure to back up your data as all the information on the hard drive will be erased when the RAID mode is switched.

To continue, confirm ‘Yes’. The management program will automatically configure the RAID mode you set.

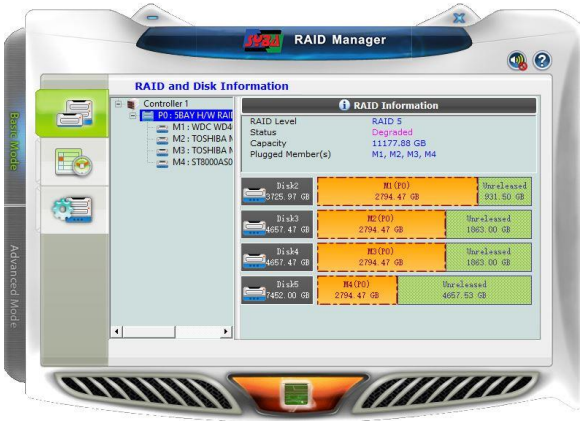


When the RAID manager automatically completes the RAID creation, the following screen will appear. The new mode is created.

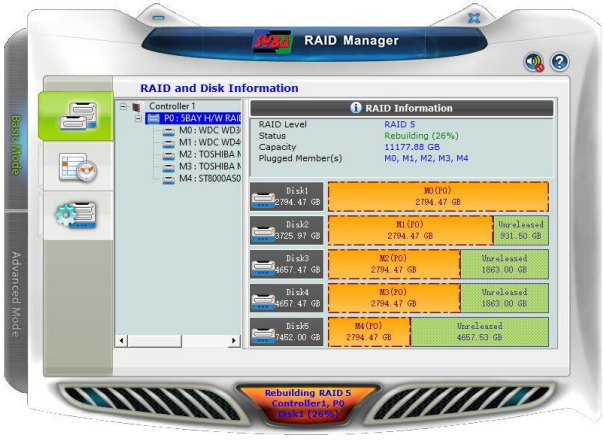
Deleting RAID Mode:

When you do not need the RAID mode and need to restore four independent hard disks, select “Delete All RAID Groups” and press “Apply”. The following warning box will appear. Press “Yes” to continue and all RAID groups will be deleted.

When a hard disk in the RAID is damaged, the RAID degraded will be displayed in the management interface.



You can replace a new hard disk with a capacity no less than the damaged hard disk, and RAID will automatically restore data (only RAID1/3/5/10). You can see the progress of data reconstruction as shown below.



Note: You can only select either Hardware RAID or Software RAID setup. Please do not set both of them at the same time.

Frequently Asked Questions:

Won't power ON:

1. Please check whether the power supply is the 12V8A power supply provided with the enclosure. Check if it is correctly inserted into the power interface and correctly connected to the enclosure. Check if the indicator light of the power supply is on.

2. Pull out the bottom hard disk tray and look at the PCB board inside the enclosure to see if there is a red or yellow light. A light indicates that there may be a problem with the power supply. Please contact customer service for additional assistance.

RAID problem:

1. Cannot set the RAID mode manually:

Please confirm whether the hard disk is brand new or has not been used in other RAID setting. Check if the toggle switch is in the correct position. Is the power on after pressing the RESET button for 15 seconds? Or please shut down and try again. Please use the enclosed CD disk to install RAID Manager, and use management software to group RAID.

2. RAID automatic reconstruction and recovery function:

If one of the hard disks fails, the power light will be red. Please turn off the power and confirm that the capacity of new hard disk is GREATER than the capacity of old hard disk of the RAID group (don't remove other hard disks that have not failed). After replacing the new hard disk, the power light and read/write light will flash at the same time, and the read/write light and E/R signal light of other hard drives will also flash at the same time.

3. RAID automatic rebuild recovery failed:

Check the recovery progress in the RAID management software. If you have been stuck at a certain progress for more than half an hour, please unplug the newly inserted hard disk and connect this hard disk to another computer for formatting. Then insert and try again. If it still

fails, replace the hard disk. Remember, you cannot pull out other undamaged hard drives in the RAID group at will.

RAID rebuilding conditions and precautions:

1. RAID 3/5/10 mode cannot have more than two defective hard disks at the same time. RAID 1 only allows one to be defective. If exceeded, the data cannot be recovered. Other RAID modes do not support rebuilding.

2. Clone Mode, as long as one hard disk is intact, the files of this hard disk can be completely cloned to the newly inserted hard disk.

3. When replacing the hard disk, please turn off the computer first. For example, if the hard disk is pulled out while the computer is in the RAID group, the data may be damaged or the recovered data may be incomplete and unusable.

4. The new hard disk must be greater than or equal to the smallest capacity of the hard disks in the original RAID5. Cannot replace with hard disks that have already have RAID setting.

5. After replacing the hard disk and powering on, you need to wait a few minutes for the system to start the rebuilding process. During this wait period, if any hard disk is unplugged, the RAID information of the original RAID group will be damaged. Once the RAID information is damaged, the rebuilding process cannot be started again and all data will be damaged.

Important Reminder:

Any important data and information must be backed up regularly. Our company is not responsible for data loss.