

# USB 3.0/eSATA to 4 Bay 3.5in SATA HDD RAID Enclosure

SAT3540U3ER



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- · Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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## Introduction

The SAT3540U3ER 4 Drive Bay USB 3.0/eSATA to 3.5" SATA RAID Enclosure is a high-performance external RAID storage solution, supporting up to 4 high capacity 3.5" SATA hard drives over a USB 3.0 or eSATA connection.

The 4-bay RAID enclosure can be connected to the host/source computer through USB or eSATA and automatically builds your SATA RAID array based on your selection (Spanning, RAID 0, RAID 1, RAID 1+0, RAID 3, and RAID 5 supported), delivering a simple, yet flexible external storage solution. Designed for convenience, the enclosure features front panel LED indicators that provide RAID information and simple hard drive status and activity monitoring. The enclosure also features a built-in, 3-speed 80mm fan with automatic or manual controls that allow you to customize the speed of the fan as necessary, ensuring suitable operating temperatures for optimized drive performance.

### **Packaging Contents**

- 1 x 4 Bay SATA Enclosure
- 1 x eSATA cable
- 1 x USB 3.0 cable
- 4 x Hard Drive Handles
- 1 x Screw driver and screw kit
- 1 x Universal Power Adapter with 3 Power Cords (NA/UK/EU)
- 1 x Instruction Manual

### **System Requirements**

- 3.5" SATA hard drive(s)
- USB enabled computer system with available USB port or SATA enabled computer system with available eSATA port
- · Available AC electrical outlet
- Microsoft® Windows® XP/ Server 2003/ Vista/ Server 2008 R2/ 7 (32/64-bit) / 8 (32/64-bit) or Apple® Mac OS® X, or Linux®



#### **Front View**



#### **Rear View**



## Installation

**WARNING!** Hard drives and storage enclosures require careful handling, especially when being transported. If you are not careful with your hard disk, lost data may result. Always handle your hard drive and storage device with caution. Be sure that you are properly grounded by wearing an anti-static strap when handling computer components or discharge yourself of any static electricity build-up by touching a large grounded metal surface (such as the computer case) for several seconds.

#### Hardware Installation

1. Attach the included Hard Drive Handles to each of the hard drives with the supplied screws and screw driver.



\*installation photos for reference only

2. Press the front door in to release the latch and open the door. The door is also removable for easier access





Inside will be a metal drive cage in front of the drive bays. Along the top of the drive cage are two small tabs. Press them down to release the cage and remove it.



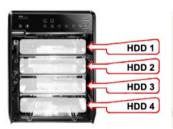


4. Remove the cardboard inserts (if first time setup) and then insert the hard drives into the slots. Hard drives can be removed from the enclosure by pressing down on the handles, then pulling them out.





Once all of the hard drives are installed, reinstall the metal cage and front door.
Make sure the bottom of the cage stays inside of the track before closing the cover.





6. Connect the power adapter DIN connector into the side of the enclosure and power up the enclosure.

#### **Driver Installation**

No driver installation is required for the supported operating systems, as this enclosure is natively supported, so the drivers are already installed.

# How to Use

While the enclosure is powered on, press and hold the 'Mode' button for three (3) seconds until one of the RAID LED's start to flash. Pressing the 'Mode' button will now switch between available RAID modes. Once set, press and hold the 'Confirmation' button on the back of the enclosure until the enclosure powers off. Connect the enclosure to a computer system, then power the enclosure back on and it will now be set for the desired RAID mode.

NOTE: Changing RAID modes will destroy any existing data on the hard drives

LED	Status	Description
<b>→</b> O SPN	ON	<b>SPAN:</b> Spanning concatenates multiple hard drives into a single large disk. Provides no performance or redundancy
U SPN	OFF	benefits.
+ O STR	ON	RAID 0 (Stripe): Striping combines multiple disk into a single large disk array. The data is split evenly across each disk simultaneously. Read/write performance is increased as a
	OFF	result, but failure of any one disk will make the entire array unusable.
$\bigcirc$	ON	RAID 1 (Mirror): Mirroring writes the same data across multiple disk, creating a mirror copy. This provides
	OFF	redundancy in case one drive fails.
3	ON	RAID 3: Uses striping to write data to multiple disks like RAID 0, but reserves one disk for parity. The single parity disk is a bottle-neck for writing since every write requires updating
	OFF	the parity data. Failure of any one disk will still allow access to the data, until the disk is replaced.
(5)	ON	<b>RAID 5:</b> Uses striping to write data to multiple disks simultaneously and distribute parity across multiple disks.
	OFF	Failure of any one disk will still allow access to the data, until the disk is replaced.
<del>(</del> 10)	ON	RAID 10 (1+0): Creates a stripped set, then mirrors each
	OFF	stripped disk. Combines the performance of RAID 0 with the redundancy of RAID 1.



#### **Drive Status Indicators**

LED	Status	Description	
H	ON	An error has been detected on one or more	
	OFF	hard drive.	
REBUILD	ON	PAID array is surrently rebuilding	
	OFF	RAID array is currently rebuilding.	

#### eSATA/ USB Connectivity

The LED indicators will show which host interface is currently active on the enclosure. To switch interfaces, shut the enclosure off and disconnect old cable and then connect the new cable and turn the enclosure back on. Only one interface can be active at a time, so it is recommended that only one cable be connected at a time to ensure the proper interface is chosen.

LED	Status	Description
SATA	ON OFF	eSATA connection active
<b>(</b>	ON OFF	USB connection active

### **Fan Speed Control**

The cooling Smart Fan is automatically controlled by an integrated thermal sensor, but can also be set manually. The fan is capable of running at 3 different speeds depending on the temperature range of the enclosure (less than 45°C, between  $45^{\circ}\text{C} \sim 54^{\circ}\text{C}$ , and greater than  $55^{\circ}\text{C}$ ), or set manually to run constantly at a single speed.

LED	Status	Description	
A.)	ON		
AUTO	OFF	Smart Fan Auto Mode	
AD.	ON	Smart Fan Manual Mode	
	OFF		
A?)	ON	Low Speed - 1200 RPM (Manual Mode only)	
	OFF		
A2)	ON	. Medium Speed - 1800 RPM (Manual Mode only)	
(E)	OFF		
<u> </u>	ON	High Speed - 2500 RPM (Manual Mode only)	
	OFF		

Pressing the Fan button will toggle between Auto and Manual modes and then toggle between the different manual fan speeds.

# Specifications

Number of Drive Bays	4
Host Interface	USB 3.0/ eSATA
Chipset ID	JMicron JMB394 + JMB355 + JMS539
	1 x USB 3.0 type B female
External Connectors	1 x eSATA female
	1 x DIN power connector
	1 x Power
	5 x Fan Speed/Mode
	2 x Host Connection
LEDs	4 x HDD Power/Activity
	6 x RAID Mode
	1 x Rebuild
	1 x Hard Drive Error
Fans	1 x 80mm
Compatible Hard Drives	3.5" SATA Hard Drives
M D-4- T	USB 3.0: 5 Gbps
Maximum Data Transfer Rate	eSATA: 3 Gbps
RAID Modes	Span, 0, 1, 3, 5, 10 (1+0)
Power Adapter	12V DC, 5000mA, 4-pin DIN plug
Enclosure Material	Aluminum and Plastic
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)
Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)
Humidity	5% ~ 95% RH
Dimensions	215.0mm x 126.0mm x 170.0mm
Weight	1800g
Compatible Operating Systems	Windows XP/ Server 2003/ Vista/ Server 2008 R2/ 7 (32/64-bit) / 8 (32/64- bit) Mac OS X, Linux



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