

# InfoSafe eSATA/USB 2.0 Dual 3.5" SATA Drive Enclosure with RAID

**SAT3520U2ER**  
**SAT3520UERG**  
Instruction Manual



**INFO SAFE**

**StarTech.com**  
*Making hard-to-find easy!*

## **FCC Compliance Statement**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- 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.

## **Use of Trademarks, Registered Trademarks, and other Protected Names and Symbols**

This manual may make reference to trademarks, registered trademarks, and other protected names and/or symbols of third-party companies not related in any way to StarTech.com. Where they occur these references are for illustrative purposes only and do not represent an endorsement of a product or service by StarTech.com, or an endorsement of the product(s) to which this manual applies by the third-party company in question. Regardless of any direct acknowledgement elsewhere in the body of this document, StarTech.com hereby acknowledges that all trademarks, registered trademarks, service marks, and other protected names and/or symbols contained in this manual and related documents are the property of their respective holders.

# Table of Contents

<b>Introduction .....</b>	<b>1</b>
Features .....	1
Package Contents .....	1
<b>Hardware Guide.....</b>	<b>2</b>
Front View.....	2
Rear View .....	2
<b>Installation.....</b>	<b>3</b>
Installing Drives in the Enclosure .....	3
Connecting SAT3520U2ER to the Host Computer.....	5
Partitioning Installed Drives.....	5
<b>Software Operation Guide.....</b>	<b>8</b>
Software Installation Guide.....	8
Using the SteelVine Manager.....	9
Changing the RAID Mode Using the GUI.....	9
RAID Mode Overview .....	11
<b>Specifications.....</b>	<b>14</b>
<b>Technical Support.....</b>	<b>15</b>
<b>Warranty Information .....</b>	<b>15</b>

# Introduction

Thank you for purchasing a StarTech.com InfoSafe eSATA/USB 2.0 Dual 3.5" SATA Hard Drive Enclosure with RAID. This versatile storage solution allows easy installation of two 3.5" SATA I/II hard drives of up to 2TB capacity (each), for a total capacity of up to 4TB (non-RAID), and maximizes performance capabilities with support for a broad range of RAID applications including RAID 0, RAID 1, and Concatenated (BIG mode).

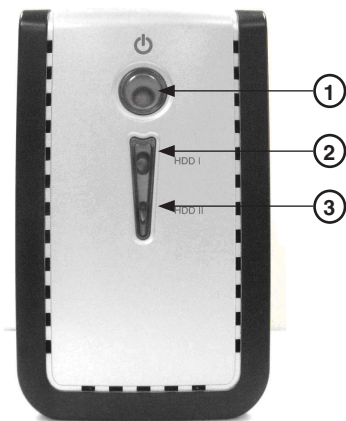
## Features

- Rear panel power and fan on/off switches
- Easy configuration using dip switches or GUI
- Hard drive power and activity LEDs
- Supports data transfer speeds of up to 3Gbps (eSATA) and 480Mbps (USB 2.0)
- RAID can be used with either eSATA or USB 2.0 connection
- Supports RAID 0(Striping or Fast), RAID 1(Mirroring or Safe), BIG(Spanning or Concatenation), SAFE33/55 and JBOD modes
- Built-in 50mm cooling fan

## Package Contents

- 1 x Aluminum Enclosure
- 1 x eSATA Cable
- 1 x Instruction Manual
- 1 x Software and Driver Installation CD
- 1 x Plastic Stand
- 1 x Power Adapter with Power Cord
- 1 x Screw Kit
- 1 x USB Cable

# Hardware Guide



## Front View

- 1. Power LED
- 2. HDD-1 LED
- 3. HDD-2 LED



## Rear View

- 1. Fan
- 2. eSATA Connector
- 3. Power Switch
- 4. Power Adapter Socket
- 5. Fan Switch
- 6. USB Connector

# Installation

If you are connecting the SAT3520U2ER to a host computer using an eSATA port, please note that in order to utilize some of the RAID functionality offered by the enclosure, the eSATA port to which the drive enclosure is connected **must provide** port multiplier support. If the eSATA port does not offer a port multiplier, only one of the two installed drives will be accessible.

Please see the table on the following page for further details.

## Installing Drives in the Enclosure

1. Remove the screws holding the rear panel in place, then slide the rear panel out from the enclosure.



2. Place the first 3.5" SATA hard drive into the tray, then slide it forward until the drive interface is firmly connected to the SATA connector on the SAT3520U2ER/ SAT3520UERGB. Repeat this step with the second 3.5" SATA hard drive, using the remaining tray.



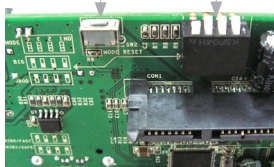
3. Secure the drives to the Enclosure tray, using the provided screws.



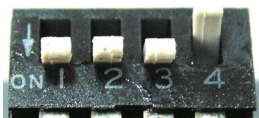
4. Select the operating mode for your hard drive using the DIP Switches shown below. Once you have set the DIP switches according to the desired RAID mode, press the Reset Button to save changes.

**Reset Button**

**DIP Switches**



**DIP Switches**  
(GUI mode is shown)



RAID Mode	DIP Switch No.			
	1	2	3	4
<b>GUI* (Requires Software Installation)**</b>	ON	ON	ON	ON
<b>JBOD*</b>	ON	OFF	OFF	ON
<b>BIG</b>	ON	OFF	OFF	OFF
<b>RAID 0 (Fast)</b>	ON	OFF	ON	OFF
<b>RAID 1 (Safe)</b>	ON	OFF	ON	ON
<b>RAID/SAFE33*</b>	ON	ON	OFF	OFF
<b>RAID/SAFE55*</b>	ON	ON	OFF	ON

\*denotes Port Multiplier requirement over eSATA

\*\* Please see pg. 11 for more details on GUI Mode

5. Replace the Enclosure tray (with drives attached) into the Enclosure.



6. Secure the Enclosure tray within the Enclosure, using the screws removed in step 1.

## Connecting SAT3520U2ER to the Host Computer

Once the hard drives have been installed within the Enclosure and the necessary dipswitch settings have been made:

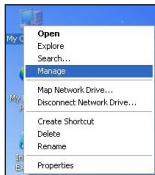
1. Connect the power adapter (included) to the power adapter socket on the rear panel of SAT3520U2ER. Connect the remaining end of the power adapter to an available power outlet.
2. Connect SAT3520U2ER to the host computer using either an eSATA or USB cable (both included).

**NOTE:** if using eSATA, the host controller on the computer system needs to support Port Multiplier technology.

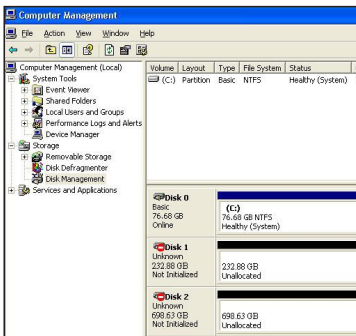
## Partitioning Installed Drives

Once the necessary connection (either eSATA or USB) has been made to the host computer, from the host computer operating system:

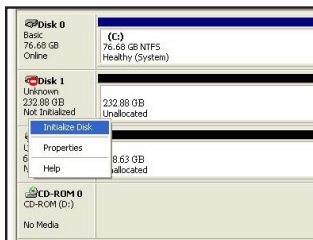
1. Right-click on the **My Computer** icon and select **Manage**.



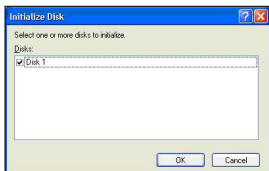
- In the left pane of the Computer Management window, select **Device Manager**. The installed hard drives will appear as “unallocated”, in the bottom half of the right pane.



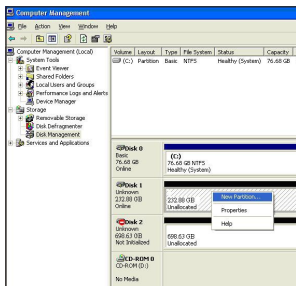
- Right-click the Disk you wish to use and select **Initialize Disk**.



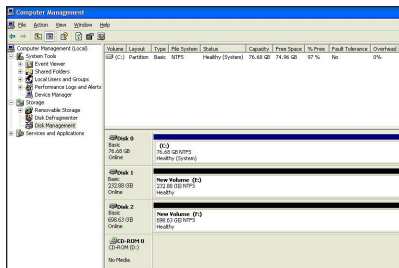
- Click **OK** to initialize the disk.



5. The disk should now be shown as “Online.” Right-click on the unallocated block and select **New Partition**.



6. The **New Partition Wizard** will appear. Follow the on-screen instructions to complete the creation of the new partition. When the partition has been created, the hard drive should appear as “New Volume.”



7. Repeat steps 1-6 to partition the second hard drive.

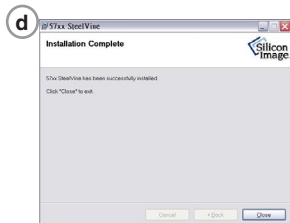
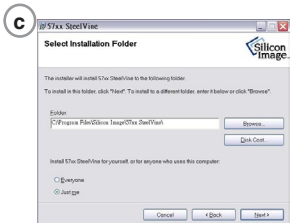
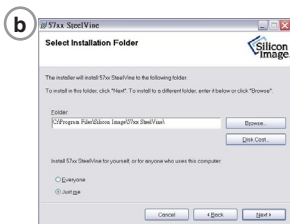
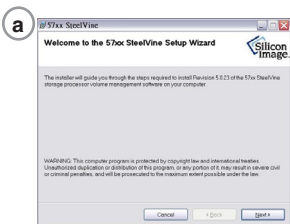
# Software Operation Guide

## Software Installation Guide

1. Insert the included Driver CD into the CD/DVD-ROM drive on the computer to which the Enclosure will be connected (host computer).
2. Click on the **Install GUI** icon.



3. Follow the instructions provided by the SteelVine Setup Wizard to complete the GUI installation.



## Using the SteelVine Manager

To start the program, click **Start > Program Files > Silicon Image 57xx SteelVine > SteelVine Manager**.

Once started, the SteelVine Manager Application can be found in the Notification Tray, (typically located at the bottom right hand corner of the screen near the clock). Double-click on the notification tray to open the SteelVine Manager GUI status window. The SteelVine Manager icon remains active in the notification tray, even if you close the SteelVine Manager window. It can be closed by right-clicking the icon and clicking **Exit**.

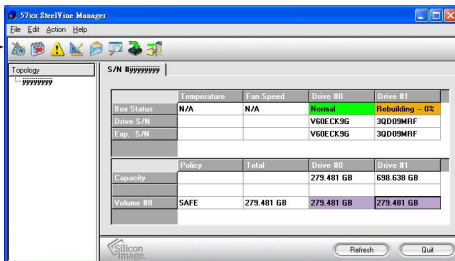
**SteelVine Manager  
Application**



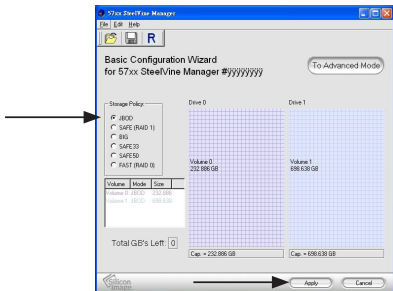
## Changing the RAID Mode Using the GUI

In order to change the RAID mode of the SAT3520U2ER/SAT3520U-ERGB using the GUI, the DIP switches must be set to GUI mode. For detailed instructions on setting the unit to GUI mode using the DIP switches, refer to step 4 of the installation process (page 4).

1. Open the SteelVine Manager Application.
2. Click on the **Configure Box Icon**.



3. Select the storage policy you wish to use, then click **Apply** to finalize the switching process.



For further instructions pertaining to the operation of the SteelVine Manager, refer to the SteelVine User Guide included on your device's software CD.

# RAID Mode Overview

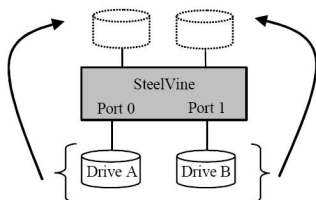
## 1. GUI Mode

This mode offers configuration through the GUI (Graphic Utility Interface), thus requiring that you install the included software. Using this mode, you can allow different RAID combinations through the software interface. This mode is recommended for professional and advanced users.

GUI Mode retains the disk configuration of the last mode for which the enclosure was set (i.e. if the disks were configured as JBOD before being set for GUI, they will still show as two separate disks. However, if set for RAID0, it will still display as one large disk).

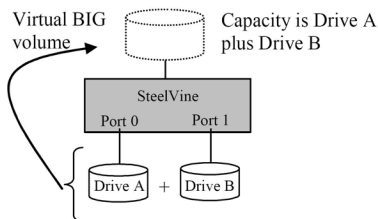
## 2. JBOD (Single) Mode (default)

The installed drives will be configured as JBOD (Single)(Just a Bunch Of Disks). The number of available drives is equal to the number of physical drives.



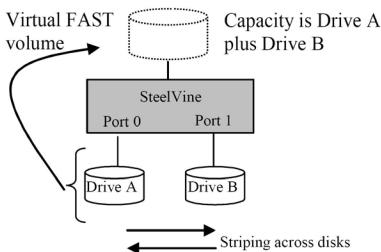
## 3. BIG (Span) Mode

Installed drives are configured to offer maximum storage space (concatenated), but no additional performance or data redundancy.



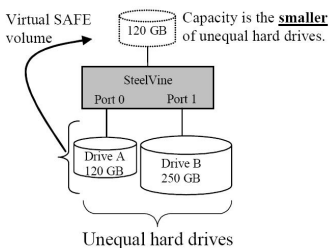
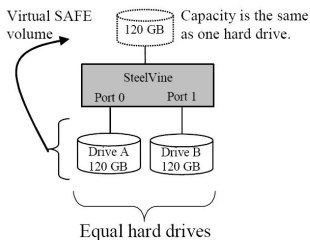
## 4. RAID 0 (FAST) Mode

A storage policy configuration in which I/O processing is balanced evenly to all disks in a method known as striping, equivalent to RAID 0. This mode offers the best performance in terms of speed, but no data redundancy.



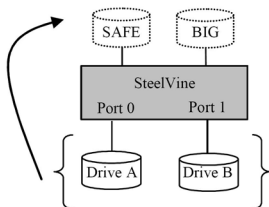
## 5. RAID 1 (SAFE) Mode

A storage policy configuration in which all data written to the hard drive is duplicated (mirrored) onto the second physical disk to protect against data loss due to disk failure. Equivalent to RAID 1, Safe mode provides the highest level of data protection, but reduces the amount of storage space by half since all data must be stored twice.



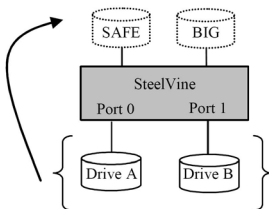
## 6. SAFE33 Mode

The RAID Mode is SAFE33, wherein 30% of each HDD is used to build a SAFE(mirror) RAID and also uses the rest of the capacity to build a second BIG(Span) HDD. In this mode, two physical drives will be recognized, one is SAFE(mirror) and the other is BIG(Span).



## 7. SAFE55 Mode

This configuration takes 55% of both drives to build a SAFE(mirror) RAID; the remaining drive capacity is used to build a BIG(span) RAID. In this mode, the system recognizes two physical drives - one SAFE(mirror) and the other, BIG(span).



# Specifications

<b>Chipset ID</b>	Silcon Image SIL5744
<b>Supported Drive Capacity</b>	Up to 2TB for each bay
<b>Power Adapter</b>	(12V 4.2A) 50W
<b>Maximum Data Transfer Rate</b>	eSATA - 3 Gbps USB 2.0 - 480 Mbps
<b>RAID Modes Supported</b>	JBOD, RAID 0,1, 0+1 and BIG+RAID 1
<b>Fans</b>	1 x 50mm
<b>Drive Type Compatibility</b>	3.5" SATA revision 1.x (1.5Gbps) and revision 2.x (3.0Gbps) internal hard drives
<b>OS Support</b>	Windows ME/2000/XP/2003/Vista, MAC OS 9.0 +, and Linux 2.4.1.0 +
<b>LED Indicators</b>	Power, HD1, HD2
<b>AC input</b>	100-240 VAC
<b>Enclosure Type</b>	Aluminum
<b>Connector Types</b>	1 x eSATA* 1 x USB type B (female)
<b>Product Dimensions (L x W x H)</b>	199 mm x 74 mm x 75 mm (7.83 in ) x (2.91 in ) x (2.95 in )
<b>Regulatory Certifications</b>	CE, RoHS, TUV, UL

\*eSATA host controller requires Port Multiplier support

## Technical Support

StarTech.com's lifetime technical support is an integral part of our commitment to provide industry-leading solutions. If you ever need help with your product, visit [www.startech.com/support](http://www.startech.com/support) and access our comprehensive selection of online tools, documentation, and downloads.

## Warranty Information

This product is backed by a one year warranty.

In addition, StarTech.com warrants its products against defects in materials and workmanship for the periods noted, following the initial date of purchase. During this period, the products may be returned for repair, or replacement with equivalent products at our discretion. The warranty covers parts and labor costs only. StarTech.com does not warrant its products from defects or damages arising from misuse, abuse, alteration, or normal wear and tear.

### Limitation of Liability

In no event shall the liability of StarTech.com Ltd. and StarTech.com USA LLP (or their officers, directors, employees or agents) for any damages (whether direct or indirect, special, punitive, incidental, consequential, or otherwise), loss of profits, loss of business, or any pecuniary loss, arising out of or related to the use of the product exceed the actual price paid for the product. Some states do not allow the exclusion or limitation of incidental or consequential damages. If such laws apply, the limitations or exclusions contained in this statement may not apply to you.



StarTech.com has been making “hard-to-find easy” since 1985, providing high quality solutions to a diverse IT and A/V customer base that spans many channels, including government, education and industrial facilities to name just a few. We offer an unmatched selection of computer parts, cables, A/V products, KVM and Server Management solutions, serving a worldwide market through our locations in the United States, Canada, the United Kingdom and Taiwan.

Visit **[www.startech.com](http://www.startech.com)** today for complete information about all our products and to access exclusive interactive tools such as the Cable Finder, Parts Finder and the KVM Reference Guide.