

# 4 Drive eSATA Multi RAID Hard Drive Enclosure

SAT3540ER



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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.

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# Introduction

Thank you for purchasing a StarTech.com InfoSafe 4 Drive eSATA Multi RAID Hard Drive Enclosure. This innovative storage solution supports the configuration and management of multiple storage devices connected to a single host, as well as a robust feature set - including easy to use RAID configuration, automated disk rebuilding, and virtualization capabilities.

## Features

- 80mm internal fan for enhanced hard drive cooling
- Each hard drive bay is hot swappable
- Easy to read LEDs indicate system/drive status and activity
- Single rear eSATA interface with Port Multiplier support to host to manage access to each hard drive
- Supports data transfer rates up to 3 Gbps
- Supports up to four 3.5" SATA I/II HDD Supports

## Package Contents

- 1 x Drive Enclosure
- 1 x Driver CD
- 1 x Drive Management Software Disk
- 1 x eSATA Cable
- 1 x Instruction Manual
- 1 x PCI Express Controller Card
- 1 x Power Adapter

## SAT3540ER RAID Storage Policies

Before you use the SAT3540ER Manager to configure the Storage Appliance, take a minute to study the following terms. The terms represent SAT3540ER configuration options or storage policies for mapping the physical to the virtual drives. You'll choose from these policies during the configuration process. Your choice is important and impacts how you can best use the SAT3540ER Storage Appliance.

<b>JBOD</b>	<p>A storage policy that grants the host PC direct access to a physical disk drive. With JBOD (Just a Bunch Of Disks), the number of available drives is equal to the number of physical drives. JBOD is also called the bypass mode because the host bypasses the SteelVine virtualization engine to access the disk directly.</p>
<b>Safe</b>	<p>A storage policy configuration in which all data is stored in duplicate on separate disks to protect against data loss due to disk failure (also called Mirroring). At least two drives mirror each other at all times, equivalent to RAID 1. Every write operation goes to both disks. Safe mode provides the highest level of data protection, but halves the amount of storage space since all data must be stored twice.</p> <p>To implement the Safe storage policy, the Basic Configuration Wizard creates a volume which consists of two hard disk drives that mirror each other. A remaining hard disk drive can be specified as a Hot Spare in the Advanced Menu.</p>
<b>Big</b>	<p>A storage policy configuration in which multiple physical drives are strung together (concatenated, also called Spanning) and treated as one large volume. Big provides the maximum amount of storage space but no additional performance or data redundancy. This configuration allows you to increase logical volume size beyond the capacity of individual drives.</p> <p>The Basic Configuration Wizard implements the Big storage policy by concatenating all the hard disk drives into a single volume.</p>

<p><b>Fast</b></p>	<p>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.</p> <p>Fast offers the best performance in terms of speed, but no data redundancy. Striping increases storage operation speed by using several disk drives in parallel. Each portion of data is divided into segments that are written to different disks simultaneously. Striping provides improved performance but does not enhance reliability because there is no way to retrieve or reconstruct data stored on a failed drive.</p> <p>To implement the Fast storage policy, the Basic Configuration Wizard creates a single volume of up to four hard disk drives in a striped format.</p>
<p><b>Safe + Big</b></p>	<p>A storage policy configuration in which one-half of the available storage space is concatenated. The other half mirrors the first half to provide full data redundancy.</p> <p>The Safe + Big storage policy configuration mirrors the concatenated disks to create a volume consisting of four disk drives.</p>
<p><b>Safe + Fast</b></p>	<p>A volume configuration in which an array of stripes is created. Each stripe consists of two mirrored drives. Safe + Fast provides the I/O load balancing features of striping and the added reliability of mirrored data, equivalent to RAID 1+0.</p> <p>In the Safe + Fast storage policy, data is written to mirrored disks in a striped format to create a volume consisting of four disk drives.</p>

# SAT3540ER Installation

## Hardware Overview

### Power

Receptor for the provided Power Adapter (12VDC, Maximum 8.23 Amps, 100-240V AC, 50-60Hz)

### Ports

DC IN - Power DC jack.

eSATA port - Connect your eSATA port to the computer being used.

### Buttons

Fan SW - Fan ON/OFF switch.

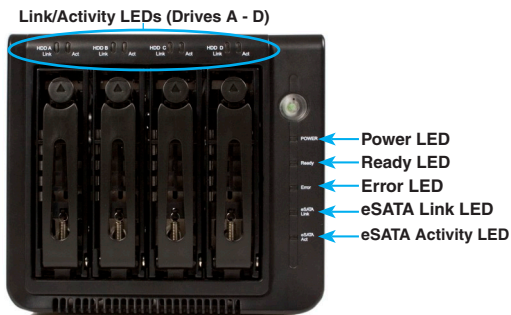
SYS. Rst - System reset button.

### LEDs

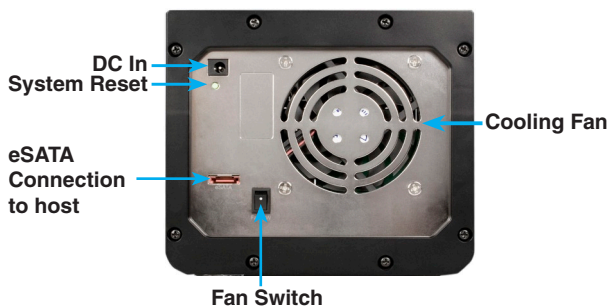
<b>Power LEDs</b>	Green	Power ON.
<b>Ready LEDs</b>	Green	System ready.
<b>Error LEDs</b>	Red	System error.
<b>eSATA Link LEDs</b>	Green	Valid connection from eSATA port to computer.
<b>eSATA Act LEDs</b>	Yellow	The device is active.
<b>HDD A / B / C / D Link</b>	Green	HDD A / HDD B / HDD C / HDD D ready.
<b>HDD A / B / C / D Act</b>	Yellow	Data transmitting on HDD A / HDD B / HDD C / HDD D.



## Front View



## Rear View



## Hardware Installation

In order to run the SAT3540ER Manager, you must first install the Silicon Image PCIE card and its associated driver. The card provides a software and hardware link between the PC that functions as the host computer and the SAT3540ER Storage Appliance.

### Install the PCIE Card and Driver

Prior to physically installing the PCI Express card in the host computer, please install the necessary Driver software. To do so:

1. Insert the Driver CD in the CD/DVD-ROM drive. Browse to the folder titled X:\Driver\Auto-install for Windows XP & Vista (where X designates the location of the CD/DVD-ROM drive).
2. Double-click on the file titled **SiI3531-W-D\_15171**. Follow the Installation Wizard to complete the installation.
3. Turn off the PC. Remove the host computer case cover, and install the PCI Express card in an available PCI Express slot. Replace the host computer case cover and power the computer back on.

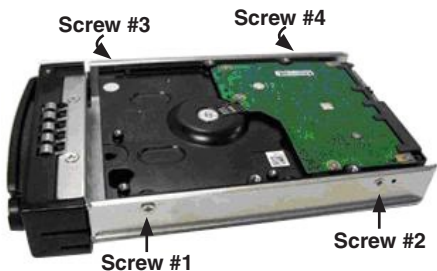
### Connect the SAT3540ER to the Host Computer

The SAT3540ER Storage Appliance houses four configurable hard drives. After installing the PCI Express card and drivers, connect the host computer to the SAT3540ER Storage Appliance using an eSATA cable (included). To install drives within SAT3540ER:

1. Locate and press the release button and pull out the drive tray.



2. Remove the screws holding in the plastic brace from the tray, then secure the hard drive into the trays with the previously removed screws. Repeat for each hard drive tray.



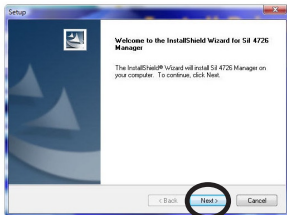
3. Push the tray into the enclosure until you feel some resistance when the drive SATA connector will be making contact with that of the SAT3540ER.
4. Once you are certain that the drive has been inserted as far as it can go and is snugly connected to the SATA connection, manually close the front door of the bay.
5. Repeat steps 1-4 for each additional drive you wish to install.

## Installing the SAT3540ER Manager Configuration Utility

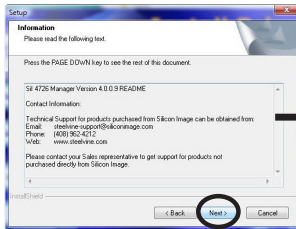
### Microsoft® Windows

1. Insert the CD labeled 4 Bay RAID Hard Drive Enclosure into your CD-ROM drive.
2. When the launch screen appears, click on **Install**, then select the operating system as appropriate to begin installation.
3. When the InstallShield® Wizard start screen appears. Click **Next** to continue.

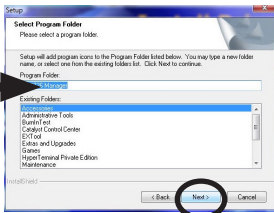
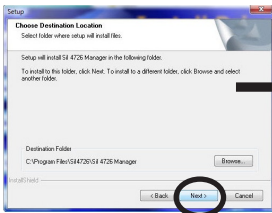
4. Read the license agreement and click **Accept** to accept its terms.
5. Review the **Read Me** file and click **Next** to continue.



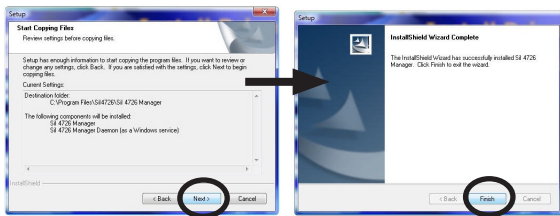
6. Select the location on your computer to install the program and then click **Next**.



7. Select the Program Folder into which the shortcuts should be placed and then click **Next**.



8. Click **Next** to begin the installation process. The InstallShield® Wizard copies and sets up all the files required for the SAT3540ER Manager. Click Finish to conclude the installation.



9. The SAT3540ER Manager is installed in the **Programs** section of the Start Menu under SteelVine, as shown below. The installation creates a shortcut to the SAT3540ER Manager application, which displays information captured by a daemon (service) that monitors the SAT3540ER Storage Appliance. The daemon is started automatically as a service during the installation.

The daemon program will launch automatically as a service, every time Windows is started.

# Getting Started

## Start the SAT3540ER Manager

The SAT3540ER Manager starts with the Status window visible. The Configuration Wizard can be accessed from the Status window with a password.

### Microsoft® Windows

The SAT3540ER Manager is installed in the **Programs** section of the **Start Menu** under SteelVine.

Click on the **Sil4726 Manager** icon (Start > Programs > SteelVine) to launch the SAT3540ER Manager configuration utility. The Status window will appear:

The screenshot shows the 'Sil 4726 Manager' application window. The title bar includes 'File Edit Help' and standard window controls. Below the title bar is a toolbar with icons for Home, Print, Refresh, and a numeric keypad. The main content area displays system status and drive information in a table format.

S/N: #578023

	Temp	Fan Speed	Drive #0	Drive #1	Drive #2	Drive #3	Drive #4
Box Status	0 C / 32 F	System + PS	Normal	Normal	Unplugged	Unplugged	Unplugged
Drive S/N			5QJ01XEE	5QJ028BV			
Exp. S/N			5QJ01XEE	5QJ028BV			

	Policy	Total	Drive #0	Drive #1	Drive #2	Drive #3	Drive #4
Capacity			931.5 GB	931.5 GB	0 GB	0 GB	0 GB
Volume #0	JBOD	931.513 GB	931.513 GB				

Buttons: Refresh, Quit

- Use the Status window to monitor SAT3540ER status.
- Access SAT3540ER Manager dialogs, such as the Configuration Wizard, by selecting menu options (or clicking toolbar buttons) and entering a password when prompted. The default password is **admin**.

## SAT3540ER Status Window

The screenshot shows the SAT3540ER Manager Status window. It features a menu bar (File, Edit, Help) and a toolbar with icons for power, refresh, and help. The window title is "4726 Manager". Below the toolbar, the serial number "S/N #578023" is displayed. The main content area is divided into two sections: "System Status" and "Drive Status".

**System Status** section:

Temp	Fan Speed	Drive #0	Drive #1	Drive #2	Drive #3	Drive #4
0 C / 32 F	System + PS	Normal	Normal	Unplugged	Unplugged	Unplugged
Drive S/N		5QJ01XEE	5QJ02BBV			
Exp. S/N		5QJ01XEE	5QJ02BBV			

**Drive Status** section:

Policy	Total	Drive #0	Drive #1	Drive #2	Drive #3	Drive #4
Capacity		931.5 GB	931.5 GB	0 GB	0 GB	0 GB
Volume #0	J80D	931.513 GB				

At the bottom right of the window are "Refresh" and "Quit" buttons. Arrows in the image point from the labels "System Status", "Drive Status", and "Capacity Information" to their respective sections in the screenshot.

The SAT3540ER Manager Status window provides a systems summary. The Status window displays a tab for each SAT3540ER attached to the PC. Each connected SAT3540ER is identified by its serial number (S/N #) on the tab. Each tab consists of two tables. The upper table displays the following system and drive status:

The upper table captures the status of each disk drive within columns Drive 0, Drive 1, Drive 2, and Drive 3:

- The **Box Status** row shows the state of each disk drive: Normal, Re building, Unplugged, Needs Rebuild, or New drive.
- The **Drive S/N** row shows the unique identifier assigned by the disk manufacturer to distinguish the hard disk drives within the Storage Appliance.

- The **Exp. S/N** row shows the serial number of the hard disk drive within the bay during volume configuration. The daemon compares the expected and actual Drive serial numbers to recognize a status change and displays the comparison results in the Status window.

The lower table of the Status window notes capacity information for the individual hard disk drives and implemented volumes:

- The **Policy** column shows the storage policy used for that volume
- The **Total** column indicates the combined capacity of the volume
- The **Drive 0, 1, 2, and 3** columns offer drive capacity information
- The **Capacity** row shows the full amount of storage space (in GB) available on each hard disk drive.
- The **Volume** rows show the total capacity of each volume and the individual disk capacities assigned to each volume.

**The File menu of the Status window contains the following items:**





File Menu Item	Description
Change Password	Launches a dialog to establish a new password.
Scan Devices	Refreshes the tabs presented by the Status window.
Change Connections	Launches a dialog to make remote connections.

**The Edit menu of the Status window contains the following items:**

Edit Menu Item	Description
Configure Box	Opens the SAT3540ER Configuration Wizard.
Specify Policy	Launches the Rebuild Policy configuration dialog.
Event Log	Opens the Event Log viewer.
Specify Firmware	Opens the Firmware Manager.

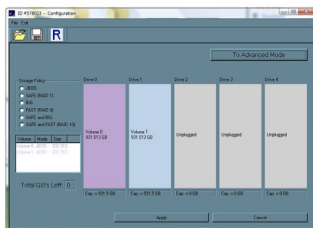


The toolbar of the Status window consists of these buttons:

Button	Tooltip	Description
	Configure Box	Opens the SAT3540ER Configuration Wizard.
	Specify Policy Information	Launches the Rebuild Policy configuration dialog.
	Show Event Log	Opens the Event Log viewer.
	Specify Firmware	Opens the Firmware Manager.

## Basic Configuration

### Basic Configuration Wizard






The SAT3540ER Basic Configuration Wizard is accessible from the Status window and allows volume management. The Basic Configuration Wizard defines volumes based on a selected storage policy and does not allow volume counts or capacities to be modified.

To protect against unintended changes, the SAT3540ER Manager prompts for a password the first time the Wizard is accessed.

The Basic Configuration Wizard consists of these major components:

- The Storage Policy frame on the left consists of six radio buttons representing available storage policies.
- The volumes table, below the Storage Policy frame, consists of Volume, Mode, and Size columns to summarize the created volumes.
- The Total GB's Left box in the lower-left window shows the remaining capacity in GB for all the disk drives.
- The remainder of the Configuration Wizard displays disk space. Space allocated to the same volume appears in matching color. The Configuration Wizard displays a hatch pattern to indicate a proposed configuration, while a solid block indicates an existing volume.

**The toolbar of the Configuration Wizard window consists of these buttons:**

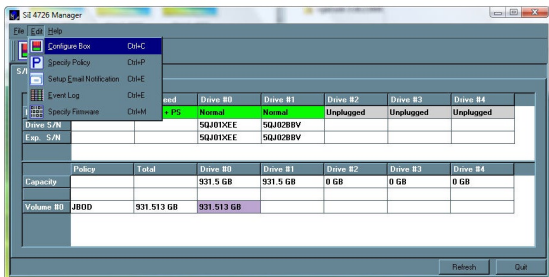
Button	Tooltip	Description
	Read a configuration from a file	Reads the saved volume configuration
	Write configuration from system to a file	Saves a configuration to a file
	Restore configuration to last commit	Cancels proposed changes

Three buttons at the bottom of the Configuration Wizard control the affected change(s).

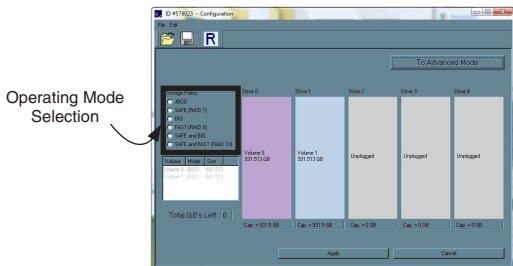
Button Label	Description
Apply	Causes the Wizard to download the changes to the SAT3540ER.
OK	Submits configuration changes to the SAT3540ER and closes the Configuration Wizard.
Cancel	Aborts the changes and closes the Configuration Wizard.

## Volume Configuration

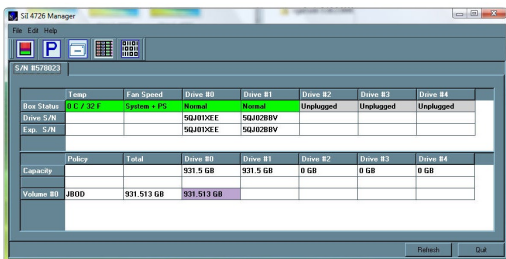
- To open the Configuration Wizard, select **Configure Box** from the **Edit** menu or click the **Configure Box**  button in the toolbar.



- Choose the operating mode you wish to use, and select the corresponding radio button (please see **pages 2-4** for further description of each mode). Note that the volumes table below the **Storage Policy** frame lists the volume label, implemented storage policy, and size.

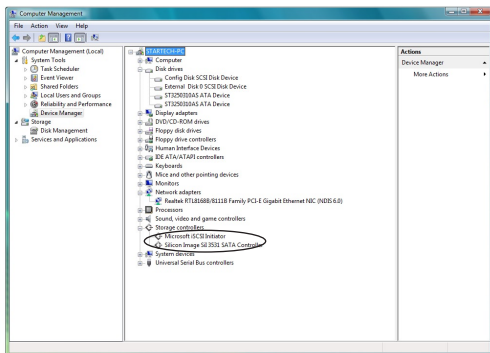


- A confirmation request box will appear, warning that a configuration change may result in total data loss. Click **Continue** to complete the configuration.
- Select **Save to Config File** from the **File** menu or click the Write configuration for system to a file button in the toolbar to save the configuration.
- Click the **OK** button to build the configuration and close the Configuration Wizard window. This configures the drives using the storage policy selected in step #2. Within a minute, the **Status** window will reflect the implemented storage policy.



- Partition the configured volume(s) to complete the implementation. For more information on how to partition drives, please consult the documentation that accompanied your hard drive or operating system at the time of purchase.
- Following drive configuration, you may wish to browse to the operating system Computer Management section, to ensure the changes have taken effect.

Right-click on **My Computer** or **Computer** (Windows Vista™) and select **Manage**. In the left pane of the Computer Management window, click on **Device Manager**; under Storage Controllers, you'll see **Microsoft iSCSI Initiator** and **Silicon Image Sil 3531 SATA Controller**



Similarly, if you click on **Disk Management** in the left pane, you will notice an “unknown” disk, designated as “not initialized”. Please note that this drive space is not available as it is kept in reserve for configuration.



# Administering the SAT3540ER

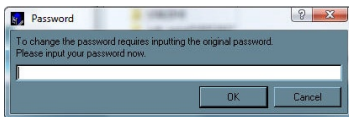
## Change Password

The SAT3540ER Manager limits configuration access with a password prompt. The password information is stored locally on the server running the daemon. The default password is **admin**.

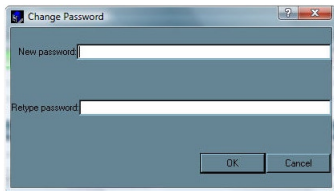
1. From the **File** menu, select **Change Password**.



2. Enter the current password (or use admin if you have not changed the default password).



3. Enter the new password within the provided fields. The entered password must be a combination of 5 or more characters.



4. Click OK to implement the new password.

## Manage Configuration Files

The Basic Configuration Wizard provides menus and icons to manage

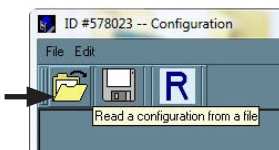
configuration files.

- The **Read Config File** command from the **File** menu in the **Basic Configuration Wizard** imports a configuration file so that you can restore a previously saved configuration (storage policy).
- The **Save to Config File** command from the **File** menu in the **Basic Configuration Wizard** exports an SAT3540ER configuration to a file.

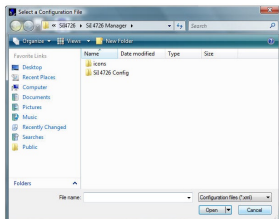
## Import Configuration File

Note: You must have previously saved a configuration file so that one is available to import it.

1. Select **Configure Box** from the **Edit** menu or click the **Configure Box** button in the Status window's toolbar to open the Basic Configuration Wizard.
2. Select **Read Config File** from the **File** menu in the Basic Configuration Wizard, or click on the **Read a configuration from a file** icon.



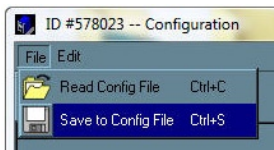
3. Navigate to the required file and click **Open** to import it. The Basic Configuration Wizard provides notice of a successful import and graphically displays the imported volumes.



4. Click **OK** to implement the imported configuration.

## Save a Configuration File

1. Select **Configure Box** from the **Edit** menu, or click the **Configure Box** button in the Status window's toolbar to open the Basic Configuration Wizard.
2. Select **Save to Config File** from the **File** menu, or click on the Save to a Configuration File button (denoted with a floppy disk icon)



3. Navigate to the appropriate directory, specify a file name in the **File Name** text box and click the **Save** button.



## Manage Client Connection to the Daemon

The SAT3540ER Manager consists of two modules:

- Daemon
- User interface

The daemon module monitors SAT3540ER status and performs Safe volume rebuilds automatically. By default, the user interface attaches to a daemon running on the same PC to display the information gathered by the daemon. The user interface may also be configured to display information tracked by a daemon module running on a remote PC that is in the same room or at a different site. Having the user interface remote to the daemon allows remote monitoring for system fan and hard disk drive failures. Identification of a failed part may then allow the service provider to replace failed components before further complications.

The daemon module listens for connections on TCP port 51115. Do not change this port number.

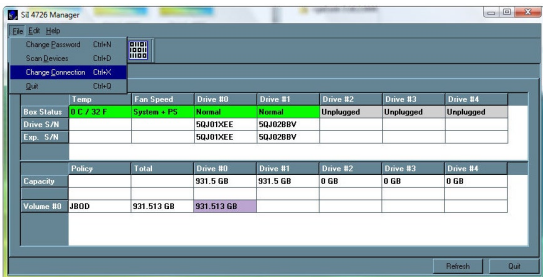
### Prerequisites:

Ensure you have the following before you establish the remote connection:

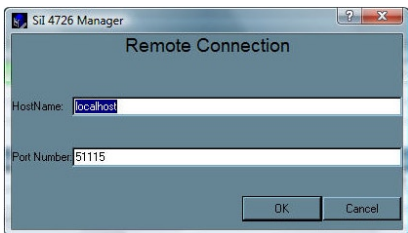
- The daemon is running on the PC, local to the SAT3540ER.
- The Configuration Manager user interface module is installed running remotely.
- A TCP/IP connection can be established between the daemon listening on port 51115 and the user interface.

## Set up a Remote Connection

1. In the **Status** window, select **Change Connection** from the **File** menu.



2. Enter the hostname or IP address of the PC hosting the daemon. Click **OK**.



3. The user interface will establish the requested connection and display the information gathered by the remote daemon in the Status window.

## Configure Safe Volume Rebuild Storage Policy

This SAT3540ER feature is provided to manage rebuilds of Safe volumes.

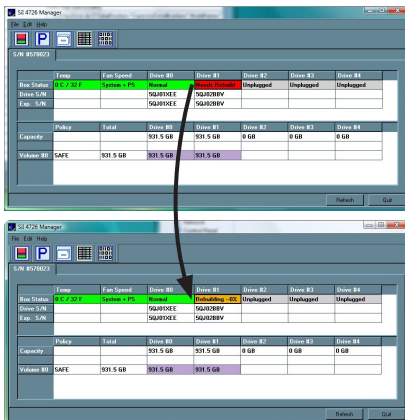
### When is a rebuild necessary?

A rebuild is initiated to restore data redundancy for a Safe volume that has entered a vulnerable state. In a vulnerable state, one of the two mirrored disks goes offline or becomes inaccessible. Although the Safe volume remains available during the rebuild process, the volume is susceptible to data loss through damage of the remaining disk, until data redundancy is restored through a rebuild.

The rebuild feature also applies to other policies such as Safe + Big and Safe + Fast.

### What happens during a rebuild?

The rebuild process restores data redundancy by first utilizing space allocated for a Hot Spare. In case Hot Spare space does not exist or has already been rebuilt, the SteelVine processor rebuilds to empty space on a hard disk drive other than the one containing vulnerable data. Following a rebuild, it is not necessary to designate space to a Hot Spare for a subsequent rebuild to occur.



Once the daemon rebuilds to a designated Hot Spare, a designated Hot Spare will not exist and the SteelVine processor will rebuild to empty space.

With **Automatic Rebuild** and **Immediate Rebuild** options selected, the daemon module of the SAT3540ER Manager automatically initiates an immediate rebuild. Alternatively, the daemon may be configured to delay rebuild until the first write to the Safe volume by selecting the **Rebuild Only If Needed** option. The latter setup allows temporary removal of a hard disk drive without requiring a rebuild. To minimize the possibility of data loss, the rebuild process should be set up to launch immediately.

With **Manual Rebuild** selected, the user decides when to initiate rebuild following a rebuild prompt. Unless the SAT3540ER Manager is actively monitored, the Automatic rebuild should be set up to minimize the possibility of data loss.

In case you select **No** in response to a rebuild prompt, select **Scan Devices** from the **File** menu of the Status window to trigger a new prompt.

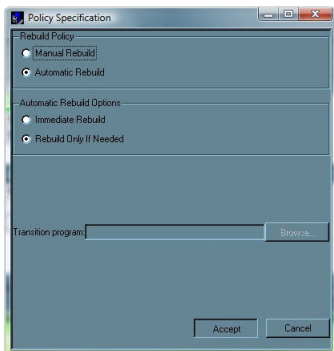
If a power failure interrupts a rebuild, the daemon will restart the rebuild process.

## Configure a Rebuild

1. Select **Specify Policy** from the **Edit** menu of the Status window, or click on the Specify Policy button on the toolbar.



2. Select one of the following policy options:
  - The **Manual Rebuild** radio button requires a user to manually initiate a rebuild of the volume.
  - The **Automatic Rebuild** option forces the daemon to initiate the rebuild process automatically and minimize the possibility of data loss.
3. If you select the **Automatic Rebuild** option you have the following additional choices:
  - **Immediate Rebuild** causes the daemon to rebuild immediately following detection of an offline hard disk drive.
  - **Rebuild Only If Needed** delays the rebuild for a Safe volume with an offline hard disk drive until the write occurs to the Safe volume.

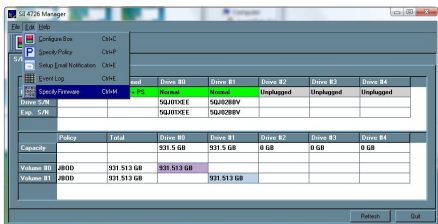


- Click the **Accept** button to commit the selected options. The daemon uses the specified rebuild policy to maintain redundancy. The Status window displays a rebuild in progress.

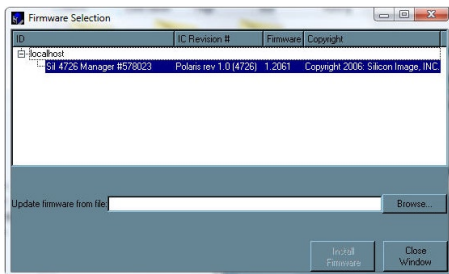
## Firmware Installation (Upgrade)

New releases of firmware are sometimes made available on our web site (<http://www.startech.com/downloads/>). To perform a firmware upgrade:

- Select **Specify Firmware** from the **Edit** menu of the Status window.



- The **Firmware Selection** dialog shows all of the SAT3540ER devices attached to the PC, the current firmware for each Storage Appliance, and the circuit board revision of each SAT3540ER.



- Select the SAT3540ER unit that requires an upgrade.
- In the **Upgrade firmware from file** text box, enter the file name of the

new firmware you wish to use or click the **Browse** button to locate the new firmware file.

5. Click **Install Firmware** to begin the upgrade.

**Please note:** Do not power off the SAT3540ER Storage Appliance during the download. The firmware download should take less than a minute to complete. We recommend that the SAT3540ER is not accessed when performing a download.

## Monitoring the SAT3540ER

Use the Status window to monitor the SAT3540ER Storage Appliance.

### Monitor Drive Status

The color of the drives in the Status window indicates the state of the drive.

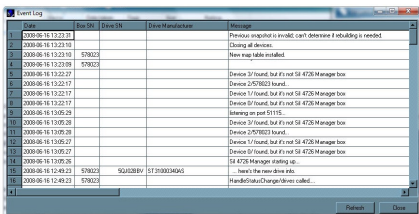
Color	State	Definition	Resolution
Green	Normal	The drive is active	
Red	Needs Rebuild	The drive is in a failed state. That is, a write has occurred to a Safe volume while the disk drive was offline.	Replace the failed disk drive.
Gray or Red	Unplugged	The drive is offline or unplugged. The background will appear red after a write to the volume.	Verify the disk is securely in the bay. Otherwise, replace as necessary.
Light Blue	New Drive	New drive.	

Color	State	Definition	Resolution
Yellow	Rebuilding	The drive is being rebuilt	
Purple	Wrong Slot	There's a mismatch between the Serial # and Expected Serial # because a hard disk drive has been installed into the wrong bay.	Install the correct disk drive into the bay.

## Review Event Logs

Event logs are helpful for troubleshooting and locating system errors.

1. Select **Event Log** from the **Edit** menu in the Status window.
2. The **Event Log** screen displays a list of events in a tabular format. The **Date** column displays the date and time of the event, the **Box SN** and **Drive SN** columns indicates the respective serial numbers for the event, the **Drive Manufacturer** column displays vendor information, and a **Message** column provides an event description.



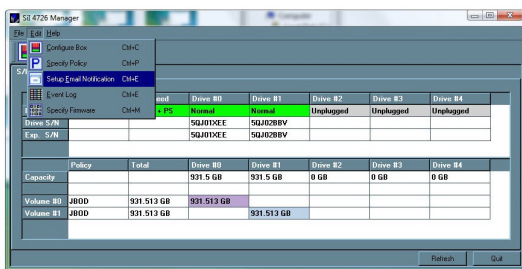
3. Click **Refresh** to update the log or click **Close** to close the log.



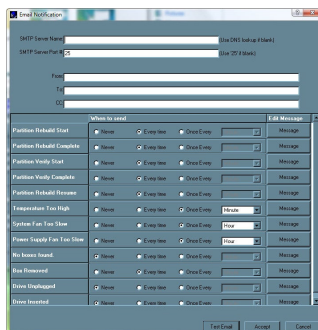
## Configuring Email Notification

Email notifications offer a convenient way to stay informed as to the status of the SAT3540ER via e-mail. To configure e-mail notification:

1. Select **Setup Email Notification** from the **Edit** menu in the Status window.



2. The **Email Notification** allows you to configure the SMTP Server Name and Port, as well as the intended recipient.





# Specifications

<b>Enclosure Type</b>	Aluminum
<b>Bus Interface</b>	SATA revision 2.0
<b>Chipset ID</b>	Enclosure: Sil4726 Host Card: Sil3531
<b>External Connectors</b>	1 x eSATA 1 x DC Power
<b>Fan</b>	1x 80mm Ball Bearing Fan
<b>Compatible Hard Drives</b>	Up to 4 x 1 Terabyte SATA hard drives
<b>Maximum Data Transfer Rate</b>	eSATA: 3Gbps
<b>Supported RAID Modes</b>	JBOD RAID 0 (Striping) (FAST) RAID 1 (Mirroring) (SAFE) RAID 0+1(SAFE + FAST) Spanning (Concatentation) (BIG) Spanning + Concatenation
<b>Power Supply</b>	12V 8.33A (100-240V, 100w)
<b>Dimensions (LxWxH)</b>	230.0mm x 170.0mm x 146.0mm
<b>Weight</b>	3400g
<b>Compatible Operating System</b>	Windows 2000/XP/Vista™

## 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.

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