3.5" TWO-BAY RAID EXTERNAL ENCLOSURE

Item No.:RENE-35SS

Features:

-Supports JBOD,BIG,RAID0,RAID1,RAID33,RAID50 mode

-Enhanced data protection and high -performances storage

-Automatic disk rebuild (Under SAFE Mode)

-USB or eSATA interface for data transfer

-Supports Plug-play and Hot-plug and virtualization capabilities

-Support model select for hardware and one backup function

-Power Supply: Self-Power

Specifications:

Inner Interface:SATA

Outer Interface:USB2.0 & eSATA

Date Trasfer rate: e-SATA to SATA I: 1.5G SATA II:3Gb/s ; USB2.0:480Mb/s

Suitability:2 x 3.5" SATA HDD

Supports Plug-play and Hot-plug

Power Supply: AC 100~240V, 50~60Hz ; DC 5V/12V, 4A

Material:Aluminum

Cooling Fan:One 40x40x10mm Cooling Fan

OS Compatibility:Windows 98se/Me/2000/XP/Vista; MAC OS 8.6 or above

Dimension:202 x 126 x 66 mm (L x W xH)

What is RAID?

RAID (Redundant Array of Independent Disks) is a set of technology standards for teaming disk drives to improve fault tolerance and performance

Why RAID?

Increased data protection. If in an unfortunate event where a drive fails,the same data is preserved on the mirrored drive.

Intelligent array controllers can apply different types of RAID for different hard disk drives.

Increased overall network system data capacity.

Increased I/O read/write efficiency.

RAID Mode:

There have 3 mode switch in the rear back of the product, it can form 8 kinds of different ways through these 3 switches, it can realize 7 kinds of different functions as below:
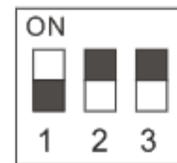
BIG MODE
[OFF/OFF/OFF]

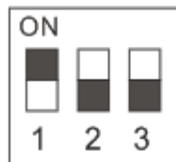JBOD MODE
[OFF/OFF/ON]

FAST MODE
[OFF/ON/OFF]

SAFE MODE
[OFF/OFF/OFF]

SAFE33 MODE
[ON/OFF/OFF]

SAFE50 MODE
[ON/OFF/ON]

ON ON ON MODE
[ON/ON/ON]

Big Mode: The BIG storage policy concatenates a series of physical hard drives as a single large volume; resulting in a seamless expansion of virtual volumes beyond the physical limitations of singularly connected hard drives. SteelVine BIG storage policy delivers maximum storage space without a single large capacity and costly hard drive.

Hard drive A and B are concatenated into a single virtual volume in the Figure below with a storage capacity that is equal to the sum of each of the physical hard drives A and B.

JBOD Mode: The JBOD (Just a Bunch of Disks) storage policy enables each hard drive to be seen separately as one drive. When using a SATA host controller, JBOD should only be used if the SATA host controller provides Port Multiplier (PM) support. If a host is not PM-aware, only a single drive is presented (drive 0). No such

limitation if using a USB host connection. FAST The FAST storage policy distributes access across all hard disks, also called striping (equivalent to RAID 0). FAST presents the best data speed but no data redundancy. FAST storage policy accelerates hard disk operating speed by using many disks in parallel. Hard drive data segments are written to different disks simultaneously which increases performance while sacrificing data redundancy. To implement the FAST storage policy, the SteelVine Storage Processor creates a single virtual volume that is striped across both hard drives, with a storage capacity that is equal to the sum of both hard disk drives.

SAFE Mode: The SAFE storage policy stores all data in duplicate on separate drives to protect against data loss due to drive failure. One drive mirrors the other at all times, equivalent to RAID 1. Every write operation goes to both drives. SAFE provides the highest level of data protection for critical data that you cannot afford to lose if a hard drive fails, but halves the amount of storage capacity because all data must be stored twice. The resulting storage capacity of the virtual SAFE volume will be equivalent to the size of one hard drive (if both drives are the same) or the smaller of the two drives (if they are different). If one drive fails, the SAFE volume is still usable, but it is in a vulnerable state because its mirrored hard drive is inaccessible. When the offline drive comes back online, the appliance begins a rebuild process immediately to restore data redundancy. A message box appears in the GUI to notify you that a rebuild is in progress. Although the volume remains available during the rebuild process, the volume is susceptible to data loss through damage to the remaining drive until redundancy is restored at the end of the rebuild and verification process. Host access takes precedence over the rebuild process. If you continue to use the SAFE volume during the rebuild, the rebuild process will take a longer time to complete, and the host data transfer performance will also be affected.

It is also possible to create a SAFE volume using one hard disk drive connected to Port 0 of the SteelVine Storage Reference Design, although no mirroring will occur until a second hard disk drive is connected to Port 1. With only one hard disk drive connected, the SAFE volume will be available, although no data protection will be provided until a second hard disk drive is connected.

SAFE33 Mode: The SAFE33 storage policy creates two virtual volumes; one SAFE volume and one BIG volume, and should be used when you need the high reliability for some of your data (with the added overhead of mirroring) but you don't need high reliability for the remainder of your data. SAFE33 reduces the cost of additional hard drives in operations where non-critical data could be lost without severe consequences. SAFE33 uses a SAFE volume that is mirrored across two hard drives to protect your critical data in the event a hard drive failure. If one drive fails the SAFE volume is retrievable although the BIG volume is not. When you replace the failed drive, the SAFE volume is automatically rebuilt on to the replacement drive.

The size of the SAFE volume of a SAFE33 policy will be one-third of the size of one hard drive (if they are equal) or one-third of the size of the smaller (if they are not equal.) The size of the BIG volume will be the combination of all remaining capacities.

When using a SATA host connection, you must have a PM (Port Multiplier) aware host adapter. If your SATA host adaptor is not PM aware, then ONLY the SAFE volume will be detected and the BIG volume will not be accessible. No such limitation exists when using a USB host connection.

SAFE50 Mode: The SAFE50 storage policy creates two virtual volumes; one SAFE volume and one BIG volume, and should be used when you need the high reliability for some of your data (with the added overhead of

mirroring) but you don't need high reliability for the remainder of your data. SAFE50 reduces the cost of additional hard drives in operations where non-critical data could be lost without severe consequences. SAFE50 uses a SAFE volume that is mirrored across two hard drives to protect your critical data in the event a hard drive failure. If one drive fails the SAFE volume is retrievable although the BIG volume is not. When you replace the failed drive, the SAFE volume is automatically rebuilt on to the replacement drive.

The size of the SAFE volume of a SAFE50 policy will be one-half of the size of one hard drive (if they are equal) or one-half of the size of the smaller (if they are not equal). The size of the BIG volume will be the combination of all remaining capacities.

When using a SATA host connection, you must have a PM (Port Multiplier) aware host adapter when using SAFE50 on the top level node of a cascaded configuration so that ALL volumes can be detected by the host. If your SATA host adaptor is not PM aware, then ONLY the SAFE volume will be detected and the BIG volume will not be accessible. No such limitation exists when using a USB host connection.