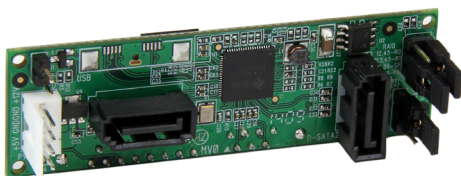# StarTech.com

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Internal Drive Mounted Dual SATA Hard Drive RAID Adapter

S322SAT3R

*actual product may vary from photos

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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.

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Front View

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Rear View

2-pin LED connector
for HDD Activity LED

RAID setting
jumper pins

4-pin power
connector

SATA host interface
connector

Drive #2 SATA
(DATA) connector

RAID unlock/
lock jumper
pins

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Introduction

Packaging Contents

- 1x Internal Drive Mounted Dual SATA Hard Drive RAID Adapter (S322SAT3R)
- 2x SATA Cable (50cm)
- 1x 4-pin to SATA Power Adapter
- 1x Installation Manual

System Requirements

- 2 x 2.5/3.5" SATA Hard Drives or Solid State Drives (HDD/SSD)
- 1 x Computer System with:
    - 1x Available SATA Interface Connection
    - 2 x Available SATA Power Source
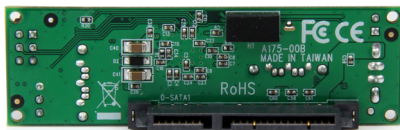
Installation

Hardware Installation

WARNING! Hard drives, internal computer system components, and RAID adapters require careful handling. If you are not careful with your hard drive, lost data may result. Always handle your computer equipment 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.

Note: Before you begin installation open your computer system and remove any SATA or Data or power cables connected to the drives you intent to build in your RAID array.

WARNING! Setting or changing your RAID modes may erase all data or metadata on your existing HDD/SSDs. It is recommended you backup any existing data before attaching your hard drives to the **S322SAT3R** RAID Adapter.

1. Set the **RAID unlock/lock jumper pins** to the unlock position, and set your desired RAID configuration. (See: **Configure RAID**).

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2. Connect the **Drive #1 SATA (DATA + Power) connector** on the **S322SAT3R** to the SATA (DATA+Power) connector on the first **HDD/SSD** mounted in your **Computer System**.

3. Using one of the included **SATA Cables**, connect the SATA (Data) connector on the second **HDD/SSD** to the **Drive #2 SATA (DATA) connector** on the **S322SAT3R**.
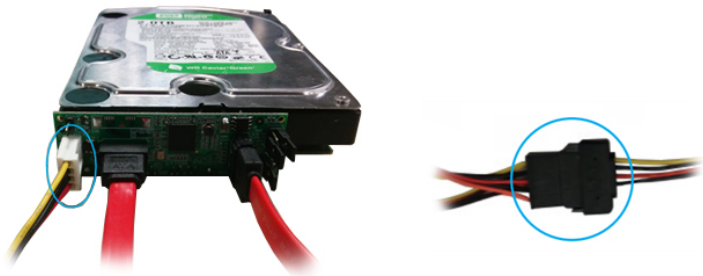

4. Connect an available **SATA Power Source** in your **Computer System** to the SATA (Power) connector on the second **HDD/SSD**.

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5. Using the remaining included **SATA Cable**, connect the **SATA Host Interface connector** on the **S322SAT3R** to an available **SATA Interface** on your **Computer System**.

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6. Using the included **4-pin to SATA Power Adapter**, connect the **4-pin power connector** on the **S322SAT3R** to an available **SATA Power Source** in your **Computer System**.

7. The **S322SAT3R** is now been installed, close your computer case and start your computer to build the RAID array.

8. **(Optional)** If you would prefer to lock your RAID array so it cannot be altered by the RAID mode setting jumper pins, power down and open your **computer system**, and set the **RAID Lock/Unlock Jumper Pins** to the lock position. (See Configure RAID). The computer system can then be closed and powered back on.

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Configure RAID

WARNING! Setting or changing your RAID modes may erase all data or metadata on your existing HDD/SSDs.

RAID Lock/Unlock Jumper Pins

The **RAID lock/unlock jumper pins**, located above the drive mounting brackets enable you to lock your RAID configuration so it cannot be changed. Or unlock your configuration so it can be changed.
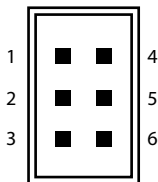
GND ■

SET ■

NC ■

Use the included jumper and the table below, to short the pins and set the mode for your desired configuration.

Mode	Description	Jumper Pins
Unlocked	Enables you to change your RAID configuration mode.	GND-SET
Locked	Does not allow you to change your RAID configuration mode.	SET-NC

RAID Mode Setting Jumper Pins

The RAID setting jumper pins, located next to the SATA connector enable you to set your desired RAID configuration between RAID 0, RAID 1, JBOD, and RAID initial Mode.

1 ■ ■ 4

2 ■ ■ 5

3 ■ ■ 6

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Use the included jumpers and the table below, to short the pins and set your desired RAID mode.

RAID Mode	Description	Short Pins
RAID 0	Striping - Improves system performance	1-2, 4-5
RAID 1	Mirror – Creates a redundant drive on the second drive for security	2-3, 4-5
BIG	Spanning – Creates a large single drive volume consisting of both drives.	1-2, 5-6
JBOD	Just a Bunch of Disks – Allows access to both drives individually (Note: A port multiplier compatible SATA controller is required for this mode)	2-3, 5-6

Set RAID Configuration

1. Set the RAID Lock/Unlock Jumper Pins to the unlock position.

2. Using the RAID Mode setting jumper pins to your desired Mode.

3. Your RAID array has now been installed.

4. **(Optional)** If you would prefer to lock your RAID array so it cannot be altered by the RAID mode setting jumper pins, power down your SATA host device, and set the RAID Lock/Unlock Jumper Pins to the lock position.

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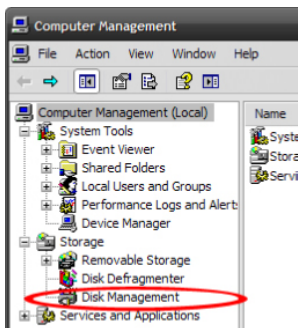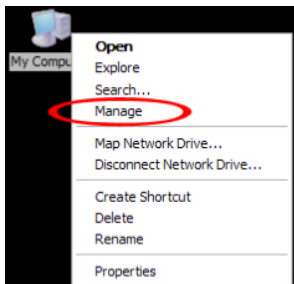# LED Activity and Drive Failure Indicators

The S322SAT3R includes a 2-pin LED connector for HDD Activity LED enabling you to visually monitor drive activity and RAID array health. Please review the table below for a list of each specific indication.

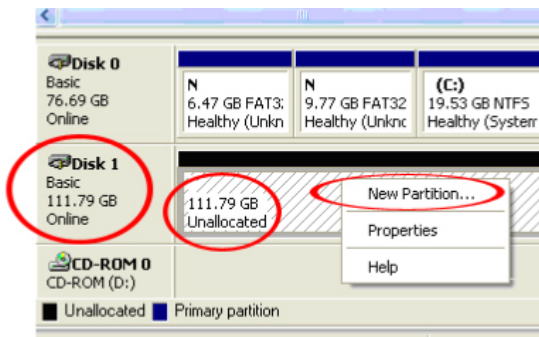| Description	LED Activity
Adapter powered on and RAID status healthy	Off
HDD Activity	Flashing LED (Short Flash with DATA bursts)
Degraded array / failed RAID	Solid Bright LED
RAID rebuilding	Pulsing LED (Long 1 second flash with between 1 second pauses)
RAID rebuild complete	Off

Hard Drive Initialization

If the HDD/SSD RAID Array is new or otherwise blank, it may need to be initialized and formatted before use. Follow the steps below in a Windows interface to initialize the drive.

1. From the main Windows desktop, right-click on "My Computer" ("Computer" in Vista/ 7 / 8), then select Manage. In the new Computer Management window, select Disk Management from the left window panel.

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2. A dialog window should automatically appear, asking you to initialize the drive. Depending on the version of Windows, it will give you the option of either creating an "MBR" or "GPT" disk. GPT (GUID partition) is required for drives volumes larger than 2TB. However, it is not compatible with some older operating systems, while MBR is supported by newer and older operating systems.

3. Once initialized, locate the Disk that says it is "Unallocated" (check the listed hard drive capacity to confirm it's the correct hard drive) and then right-click in the section that says "Unallocated" and select "New Partition".

4. Follow the on screen prompts to initialize the drive in the format of your choice.

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