



Quick Start Guide

About this Quick Start Guide

This Quick Start guide provides abbreviated instructions to install and configure the SurfRAID TRITON12S3 storage system. For more details refer to the SurfRAID TRITON12S3 User Guide that can be downloaded at <http://www.partnersdata.com/cgi-bin/support>

1 Shipping Container & Safety

- Carefully inspect the shipping container and contents for damage.
- Do not install disk drives until after the RAID system is installed into data center rack.
- Enclosures can weigh in excess of 80 lbs and therefore should not be lifted alone.
- Do not lift the system by the handles on the Power Supplies as they are not designed to lift the weight of the system.
- To avoid injury and damage to the system, please remove power source connections before removing Power Supplies from the system.
- All Plug In Modules are required to ensure proper operation and cooling of your SurfRAID TRITON12S3 storage system. Please only remove modules from your system when a replacement module can be added immediately. Always unplug the system before moving.

Rack System Precautions

The following safety requirements must be considered when mounting your SurfRAID TRITON12S3 storage system in a rack cabinet.

- The Rack Design should incorporate stabilizing features suitable to prevent the rack from tipping or being pushed over during installation or in normal use.
- When filling a rack please fill from the bottom of the rack up and empty from the top down.
- Do not slide more than one enclosure out of the rack at one time to avoid the danger of the rack tipping over.

ESD Protection

WARNING: Ensure that you use a suitable antistatic wrist or ankle strap and observe all conventional ESD precautions when handling modules and components. Avoid contact with backplane components and module connectors, etc. ESD damage is not covered by warranty.

2 Preparation of Site and Host Server

Before you begin make sure the site where you intend to set up and use your SurfRAID TRITON12S3 storage system has the following:

- Standard AC power from an independent source or a Rack Distribution Unit. **The use of a UPS is strongly recommended.**

WARNING: Without a UPS you must disable both the Controller and Disk Write Back Cache in order to avoid the possibility of data corruption.

- Host computer with a compatible SAS Host Bus Adapter to connect the SurfRAID TRITON12S3 storage system.

3 Mounting the System into a Rack

Each SurfRAID TRITON storage system comes with a model specific Rack Mount kit. Detailed instructions for installing the rack mount kit(s) for your system can be found inside the rack mount kit itself or can be downloaded from our support site at www.partnersdata.com/cgi-bin/support

WARNING: Larger SurfRAID models require the use of two rack mount kits in order to have adequate support. Damage due to improper installation is not covered under warranty.

4 Cabling the System

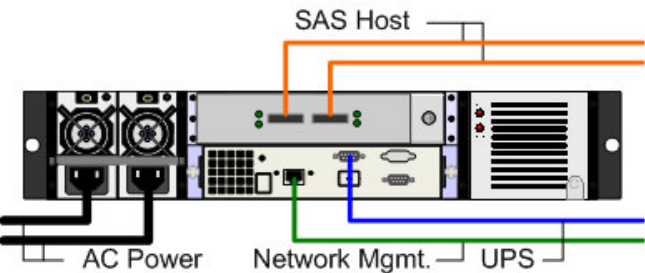


Figure 1—Cable Layout

Installation of the Power Cables

DANGER: The Power cable installation procedure must be followed carefully to ensure that there is no danger of power cables being cut, trapped, pinched, stretched, or excessively bent.

Plug the provided power cables into the power distribution units of the SurfRAID TRITON12S3 Storage System being sure to secure them with the system's Power Cable Retaining Clips. **Power supplies should be connected to separate UPS on separate circuits to avoid the possibility of power loss.**

A Installation of the Management Cable

Management of your SurfRAID TRITON12S3 can be done through the front panel LCD, DB9 serial connection or RJ45 Network Interface. By default DHCP is set for the network interface. After the RAID system finishes powering on, the management IP will display on front panel LCD, see figure 1 for attaching network cable. If you need to set a static IP address, please refer to the user guide for using the serial connection to set

your static management network IP address. The serial connection settings = Baud rate 115200, 8bits, no parity, 1 stop bit, flow control = none.

B Installation of the UPS Cable

If you plan to use a UPS it is recommended to attach the UPS serial cable provided with your RAID system between the UPS device and the RAID system serial UPS connection, see figure 1 and User's Guide.

C Installation of the Host SAS Cables

There are two SAS Host connections on the rear of the RAID chassis, see figure 1 (Right connector = Host Channel A (Ch0), Left connector = Host Channel B(Ch1)).

WARNING: Do not connect the data cables to the Host until you have completed the configuration process and have powered down your Host Server as it may cause Host errors.

5 Disk Drive Installation

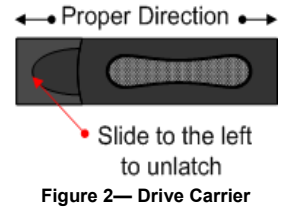
Drive Location Rules

The SurfRAID TRITON12S3 Storage System supports up to twelve (12) SATA disk drives per enclosure. Refer to Figure 3 for slot locations.

Important: If your SurfRAID TRITON Storage System was Pre-Configured the disk drives will be labeled with a slot number and unit number. The disks must go in the correct unit and in their correct slots. See Figure 3. and Pre-Configuration paperwork that shipped with your RAID system.

Installing the disk drives

- Lower the display panel of the SurfRAID TRITON12S3 Storage System to allow installation of disk carriers.
 - Release the drive carrier handle by sliding the latch downward to the unlocked position (as shown in Figure 2) and pivoting the handle to the upright position.
 - Insert the drive carrier into the enclosure.
 - Slide the carrier gently, all the way into the enclosure.
 - Seat the drive carrier—the camming foot of the carrier will engage into a slot in the enclosure drive bay.
 - When the carrier is fully seated, close the handle. A click should be heard as the latch engages and holds the handle closed.
- Important:** If the handle of the drive carrier resists being closed **STOP**. The drive carrier is not properly seated. Remove the drive carrier from the enclosure and repeat steps 1 to 6.
- Continue to populate the enclosure with the desired amount of disk drives.
 - Fill all open drive slots with provided drive filler sleds to ensure proper cooling of the system.



6 Enclosure Module Locations and Drive

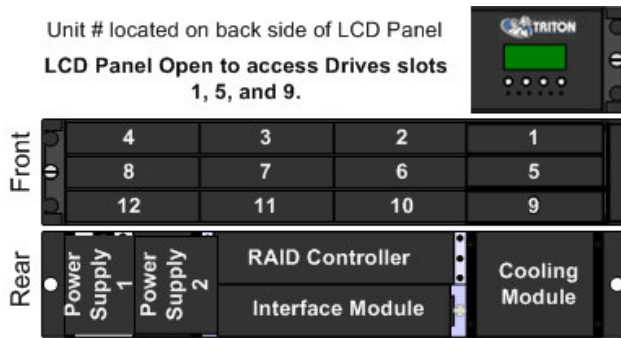


Figure 3—Module Locations and Drive Bays

7 Power On

Before powering on the SurfRAID TRITON12S3 system, please ensure that all modules are firmly seated in their correct bays (See Figure 3)

Important: It is recommended that after a system has been shipped or moved to a different location all modules should be removed and resealed in their correct bays before the system is powered on.

1. On the power module located at the rear of the unit, press the one main power on switch to provide power to the subsystem.
2. All the LEDs on the display panel should be illuminated when the enclosure power is activated. The system will perform its power on self diagnostics. When complete the front panel LCD will display the model number of the RAID system and the assigned IP address. If any alarms sound please contact Partners Data System Support Team.

8 Embedded Configuration Utility

Accessing the embedded RAID Management Utility

The embedded RAID Management of your SurfRAID TRITON12S3 can be accessed through the Front Display Panel, the Serial Connection, Telnet or through the Web Browser based RAID Manager.

Important: The system can be accessed using only one connection method at a time.

A Front Display Panel

Configuration of your SurfRAID TRITON12S3 can be accomplished via the Front Display Panel with the exception of applying a Firmware updates.

The default password to access the configuration utility via the front panel is 00000000. Use the up and down arrows and check buttons to enter password and navigate menus. After entering the last password character, keep pressing the check button until screen changes and logs into management.

For detailed Instructions on using the Front Panel management interface refer to the SurfRAID TRITON12S3 User Guide.

B Serial Connection

The Serial Connection allows you the same configuration options for your SurfRAID TRITON12S3 as the Front Display Panel plus firmware upgrades.

The break sequence is the "X" key and the default password to access the configuration utility via the serial connection is 00000000.

For detailed Instruction on using the Serial Connection refer to the SurfRAID TRITON12S3 User Guide.

C Web Browser based & Telnet RAID Manager

The web based Raid Manager web interface is the preferred method used to manage all of the RAID functions, including firmware updates. Telnet is also supported, except for the firmware upgrades.

Network configuration

In order to access your SurfRAID TRITON12S3 storage system via the web based RAID Manager you will need to configure the network settings.

By default the system will look for a DHCP Server to obtain an IP address. If one is not found, it will search to determine if an IP address had been previously assigned. If an address was not previously assigned, then the system defaults to an IP address of **192.168.001.100**.

Note: See your Network Administrator before using the default IP Address as it may not be compatible with your site's network.

IP assigned by DHCP Server

If your system is hooked up to a network that contains a DHCP Server it will automatically be assigned an IP address when it is powered on, or when network cable is plugged in, the assigned IP address will display on the front panel LCD display.

While DHCP IP Address assignment is convenient it is not recommended as a long term solution. As a best practice, we recommend assigning a Static IP Address. Please refer to your User Guide for instructions.

Launching the web based RAID Manager (recommend IE or Firefox)

To launch the RAID Manager utility from a web browser type in the IP address of your SurfRAID12S3 storage system. For Example:

http://192.168.001.100

To make changes in the RAID Management GUI you will need to be logged in as administrator. The default administrator user name and password are:

User Name: admin

Password: 00000000

Once logged in the main "RAID Hierarchy" webpage will appear showing your RAID system's Pre-Configured or Un-Configured state. Please continue with the next step to determine if your new RAID system has been Pre-Configured and ready to attach to your Host Server.

For more information regarding the embedded web browser based management GUI please refer to the SurfRAID TRITON12S3 User Guide.

9 Configuration

All SurfRAID TRITON12S3's have been tested and Pre-Configured prior to being delivered unless specifically requested. If you are unsure as to how your system was configured, please see the RAID Configuration document enclosed with your system.

Default Configuration;

We do our best to configure our systems to the specifications of the end user, however, in the event that the end user did not respond to the requests for configuration requirements the system is configured to our standard configuration. Standard configuration is RAID 6 with one large volume.

Custom Configuration;

If you requested a specific configuration for your system please take a moment to verify that your configuration is correct before using the system. To change your configuration please refer to the SurfRAID TRITON 12S3 User Guide.

For assistance in deciding how you want to configure your system please contact Partners Data Systems Support Department.

Caution: RAID 6 is strongly recommended when configuring Volume Sets on your SurfRAID TRITON12S3. The use of SATA disk drives in a non RAID 6 configuration has been shown to increase the possibility of data loss in the event of a drive failure.

10 Connecting to Host

Once your system has been configured and you have powered down your Host Server you can connect the RAID systems SAS Host cables to the Host system's SAS connections.

Note: Some Host Server manufacturers have their SAS interfaces designed specifically for their storage devices. It is recommended to use 3rd party SAS Host bus adapters.

After powering the Host Server on, login and go to the operating system disk management or terminal window to verify the Host Server can see the RAID volumes from the RAID system. If not reboot Host Server and ensure SAS HBA can see the RAID system volumes. If not please contact our support team for assistance. If new RAID volumes are seen by the Host Server disk management, next apply OS partition label (Apply GPT label if RAID volume is greater than 2TB). Your new RAID volume(s) is now ready for non files system applications or if needed ready for the OS file system(s) to be created.

Note: All operating systems have their rules and limitations in how big a RAID volume can be seen and how large of a file system the OS can create and use. Please refer to your Host Server and operating system User Guide

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