



Quick Start Guide

About this Quick Start Guide

This Quick Start guide provides abbreviated instructions to install and configure the SurfRAID TRITON16i+ storage system. For more details refer to the SurfRAID TRITON16i+ 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 TRITON16i+ storage system. 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 TRITON16i+ 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 TRITON 16i+ 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 or IP switch with compatible 1Gbit RJ45 iSCSI to connect the SurfRAID TRITON16i+ 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

Important: Ensure you are using CAT5E or CAT6 RJ45 shielded cabling for the SurfRAID16i+

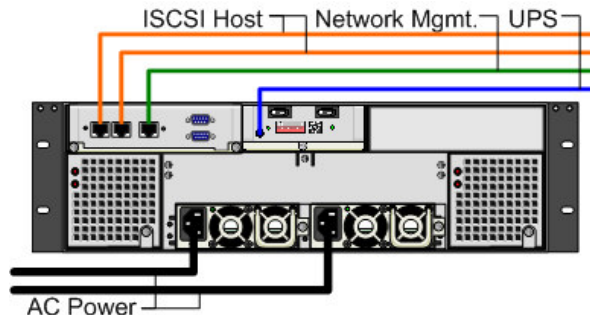


Figure 1—Cable Layout

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 TRITON16i+ 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 TRITON16i+ can be done through the front panel LCD (Limited Functionality), 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 management network cable. If you need to set a static IP address, please refer to the user guide for using the serial connection or LCD panel 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 for setup.

C Installation of the Host iSCSI Cables

There are two iSCSI Host connections on the rear of the RAID chassis, see figure 1 (Left connector=LAN1(Ch0), Right connector=LAN2(Ch1)).

WARNING: Do not connect the data cables to the Host or IP switch until you have completed the configuration process and prepared your Host Server or IP Switch as it may cause Host errors.

5 Disk Drive Installation

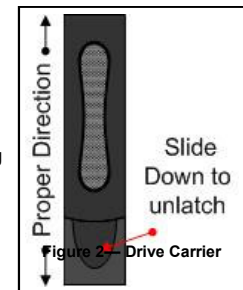
Drive Location Rules

The SurfRAID TRITON16i+ Storage System supports up to sixteen (16) 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

1. Lower the display panel of the SurfRAID TRITON16i+ Storage System to allow installation of disk carriers.
2. 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.
3. Insert the drive carrier into the enclosure.
4. Slide the carrier gently, all the way into the enclosure.
5. Seat the drive carrier—the camming foot of the carrier will engage into a slot in the enclosure drive bay.
6. 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.

6 Enclosure Module Locations and Drive

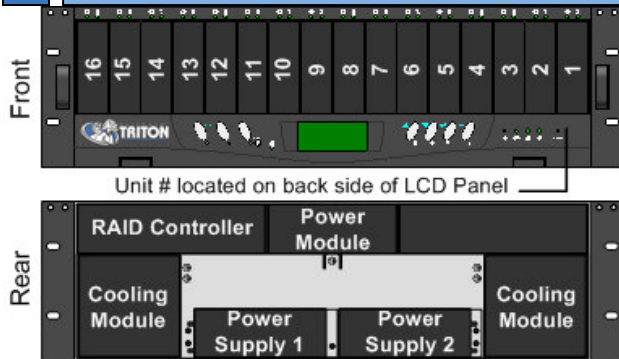


Figure 3—Module Locations and Drive Bays

7 Power On

Before powering on the SurfRAID TRITON16i+ 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 power On/Off button for power supply one (1). Then press the power On/Off button for power supply two (2).
2. All the LEDs on the display panel should be illuminated when the enclosures 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 TRITON16i+ can be accessed through the Front Display Panel, the Serial Connection, Telnet, SSH or through the Web Browser based RAID Manager.

Important: You may only use one connection method at a time.

A Front Display Panel

Configuration of your SurfRAID TRITON16i+ can be accomplished via the Front Display Panel with the exception of applying a Firmware updates.

Important: Please note the SurfRAID 16i+ LCD panel is limited to the following; Reset Defaults, Change IP, Quick Install, Restart/Shutdown, Mute Alarm, System Info and FW/RAM Size and Logout. To perform all other RAID management please use the other management interfaces.

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 TRITON16i+ User Guide.

B Serial Connection

The Serial Connection allows you fully manage and monitor your SurfRAID TRITON16i+ including 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 TRITON16i+ User Guide.

C Web Browser based Telnet and SSH 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 and SSH are also supported, except for the firmware upgrades.

Network configuration

In order to access your SurfRAID TRITON16i+ 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**.

IP assigned by DHCP Server

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

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 SurfRAID16i+ storage system. For Example:

http://192.168.001.100

The Main “Home” Menu will appear Select one of the links on the left hand side or the SR-TRITON16i+ image to be prompted for login

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 “Home” webpage Click Volume Config to show 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 or IP Switch.

For more information regarding the embedded web browser based management GUI please refer to the SurfRAID TRITON16i+ User Guide.

9 Configuration

All SurfRAID TRITON16i+’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 16i+ 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 TRITON16i+. 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 prepared your Host Server or IP Switch you can connect the RAID systems iSCSI Host cable(s) to your Host system’s 1Gbit NIC(s), TOE or iSCSI HBAs or 1Gbit IP switch.

Note: Some Host Server manufacturers have their iSCSI interfaces designed specifically for their storage devices. It is recommended to use On Board NICs , 3rd party TOE or iSCSI Host bus adapters. See User Guide.

Next step will be to map your iSCSI RAID system’s host volumes in the RAID system’s GUI to allow access from the host server. Also if MPIO or Trunking of the host ports is desired, see SR-TRITON16i+ User Guide.

Next you will need to setup the iSCSI initiator in your host server OS to accept a connection from the iSCSI RAID system and to see the iSCSI volumes in the host server’s disk management. If not please contact our support team for assistance. If the new iSCSI RAID volumes are seen by the Host Server’s 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: Most operating systems and iSCSI HBAs have their own iSCSI initiator setup and all have 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 Guides.

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