

# active™

S T O R A G E

ActiveRAID™ Management Software | Quick Start Guide

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## ActiveRAID Users Guide

Thank you for purchasing the ActiveRAID, RAID storage evolved offering superior performance, capacity and fault tolerance for Apple users.

The ActiveRAID is carefully designed for quick easy installation and years of trouble free service.

This guide is provided to get you started and up and running with the ActiveRAID, but is not meant to replace the assistance of your reseller or Active Storage customer service.

We highly recommend installation by a qualified technician although the ActiveRAID system is complete and ready to use out of the box in Mac OS X based Networks.

All the components required for installation are included but should be checked against the packing list and your order.

This guide assumes the user has workable knowledge of the Mac OS X operating system, and general knowledge of RAID storage.

ActiveRAID systems are ready for use out of the box and will provide excellent performance and reliability in nearly all possible configurations. For assistance in optimizing the ActiveRAID for application, please contact your reseller or Active Storage customer support.

**[www.active-storage.com](http://www.active-storage.com) | 1.877.GR8.RAID**

## Unpacking and Installing the System

The ActiveRAID is complete with all components and hard drives installed. The packaging has been specifically designed to protect the system from damage and facilitate safe removal. Please inspect the packaging for any signs of damage prior to removing the system. If damage is noted, carefully check your ActiveRAID to ensure the packaging damage has not affected the unit. If any damage has occurred, please contact your reseller immediately.

### Follow the steps below to remove the system from the packaging.

- 1). Locate a sturdy table, bench, cart or other flat surface capable of supporting 150lbs. Make sure the surface is large enough to allow the system proper support.
- 2). The system is packaged using an outer and inner box. Carefully cut open the outer box and fold back the flaps. Do the same with the inner box, and remove the accessory box and place it aside. Two people are required to remove the system from the inner box. With one person on each side of the package, remove the upper protective foam and carefully slide your hands under each side of the ActiveRAID and lift out of package and place gently on the surface previously designated.

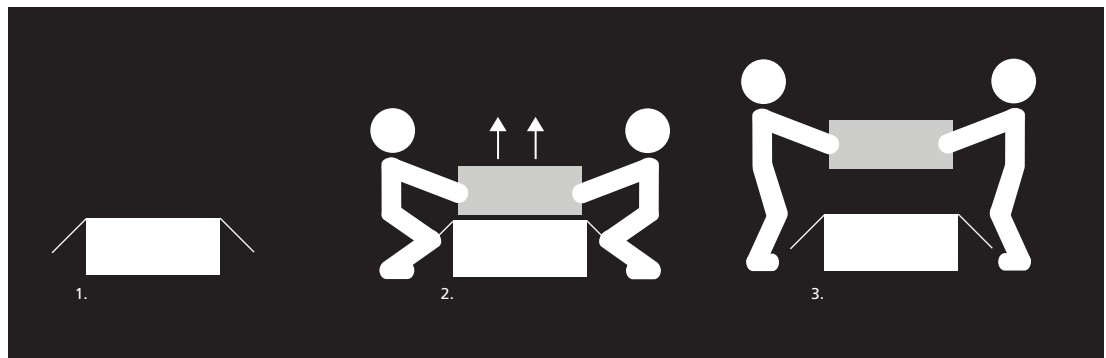


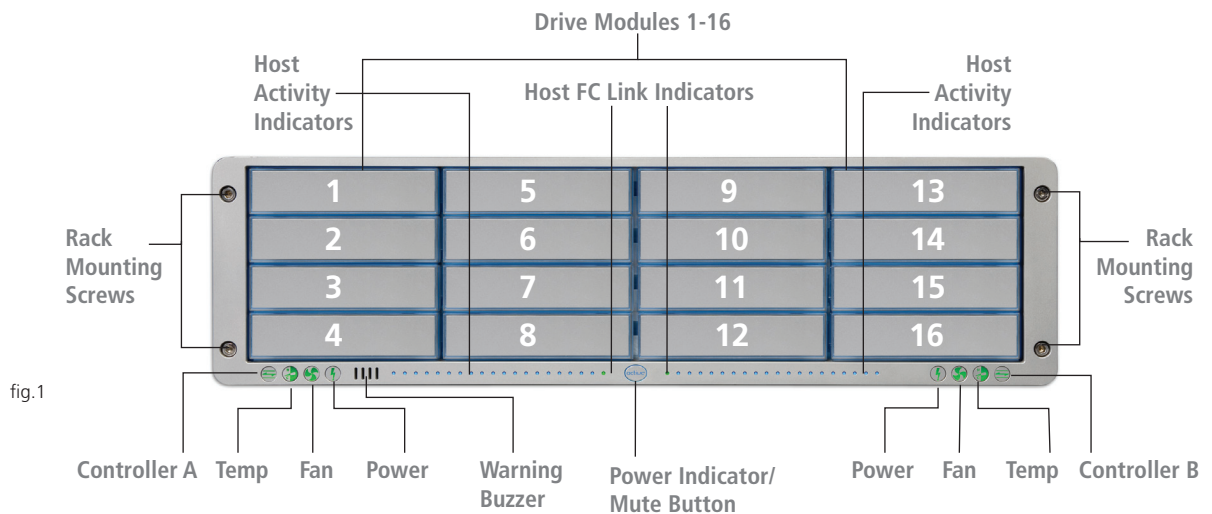
fig.3

- 3). Remove protective film from system - this must be removed before powering the system on to prevent damage from the system.
- 4). Check to make certain all components are properly seated
- 5). The system is now ready for installation into a 4 post equipment rack using the instructions found on the mounting rails. It is recommended that two people are used to install the system into the rack – one in front of the rack and one in the rear of the rack to guide the installation. The system uses front to rear cooling, please keep that in mind when mounting in the equipment rack. The ActiveRAID was designed to deliver maximum performance and trouble free use, but in order to achieve this; the rack it will be installed into must exhibit good rack stability. It is suggested that the ActiveRAID be installed in the lower half of the rack and away from tape loaders which may produce excessive vibration.
- 6). After system is slid into the rack, secure it with the included mounting screws and install the power cords.  
Note: Power requirements for the ActiveRAID can be found at [www.active-storage.com/support](http://www.active-storage.com/support).

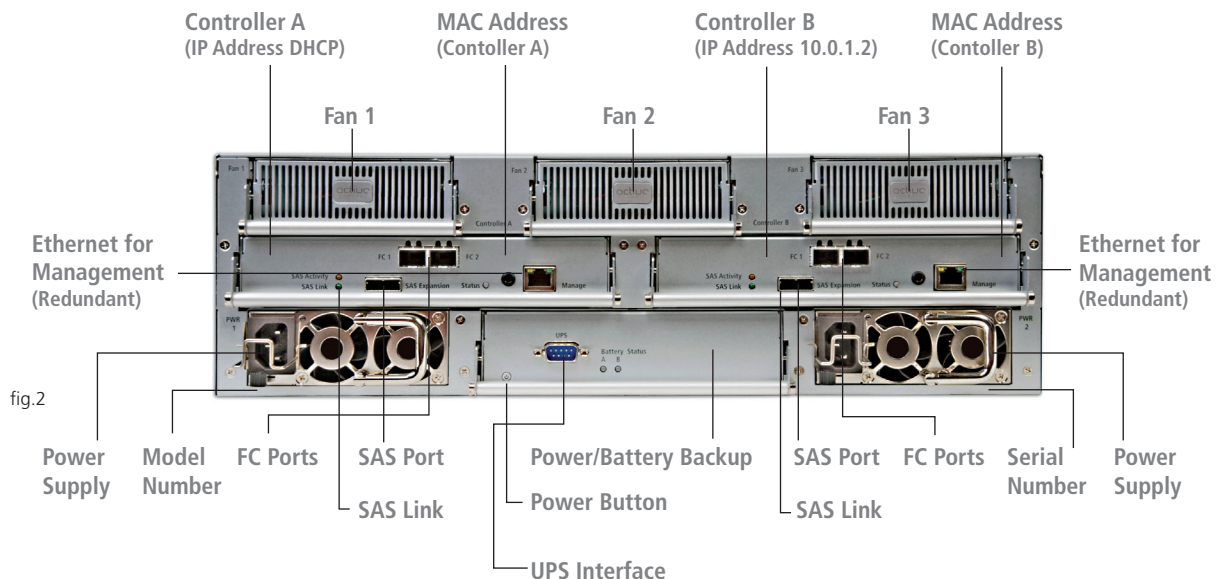
## Getting to know your ActiveRAID

The ActiveRAID is complete with all components and hard drives installed. The packaging has been specifically designed to protect the system from damage and facilitate safe removal. Please inspect the packaging for any signs of damage prior to removing the system. If damage is noted, carefully check your ActiveRAID to ensure the packaging damage has not affected the unit. If any damage has occurred, please contact your reseller immediately.

### Front Panel



### Rear Panel



## Connecting your ActiveRAID

The ActiveRAID utilizes a redundant RAID controller design that provides four 4Gb/s Fibre Channel connections to a Fibre Channel host or network. The system offers the flexibility to connect one to four connections depending on the user environment and intended usage. It is recommended that a minimum of two Fibre Channel connections be made, one to each RAID controller. The charts below describe some possible configurations.

How Connections	Controller A Port 1	Controller B Port 1	Max Throughput	Failover Path
	Port 1	Port 1	400MB/s Degraded - Failed Controller 0 MB/s	None
	Port 1	Port 1	Dual Port Dual Controller 800MB/s Degraded - Failed Controller 400MB/s	Yes
	Port 1, Port 2	Port 1, Port 2	Quad Port Dual Controller 1600MB/s Degraded - Failed Controller 800MB/s	Yes Multipath

The ActiveRAID support 2Gb and 4Gb Fibre Channel connections using either industry standard optical or Apple copper Fibre Channel cables or any combination of either. The latest recommended SFP and optical cables, and FC switches can be found at [www.active-storage.com/support](http://www.active-storage.com/support)

Monitoring and managing the ActiveRAID is done using an Ethernet connection. The system provides dual Ethernet ports which provide redundant connections to the Ethernet network. The system will function with one, two or no Ethernet connection.

It is suggested at least one Ethernet connection be made in order to allow remote monitoring of the system.

## Connecting your ActiveRAID (continued)

The ActiveRAID supports most popular UPS (Uninterruptible Power Supplies) systems. If you are not sure if your UPS is supported, a list of supported systems can be found at [www.active-storage.com/support](http://www.active-storage.com/support)

The UPS can be plugged directly into the UPS on the ActiveRAID. The system will automatically recognize it.

## Using the ActiveRAID

Once you have connected your ActiveRAID to the Fibre Channel network or host computer, you can switch the system on by depressing the power button.

The system will begin extensive internal diagnostics. During the approximately 90 second start up routine, the system cycle through and blink certain indicator lights, sound the buzzer, and cycle the cooling modules as it tests each component. Once the diagnostic cycle is complete, the system status indicators will illuminate indicating the status of the various components of the system, and the Active storage front bezel ICON will glow blue.

The system is now ready for use. If this is the first time you are using the ActiveRAID, you should begin by visiting the ActiveRAID Admin utility and ActiveRAID viewer.

## Shutting Down your ActiveRAID

The ActiveRAID like any RAID system is designed to be used 24/7/365 and rarely requires shutdown, but in the case of a shutdown, the system is designed to provide the greatest protection of data possible. Following these simple steps will ensure a proper and safe shutdown.

- 1). Unmount all ActiveRAID volumes from the host computer or network before beginning a shutdown
- 2). There are two possible configurations for the ActiveRAID. Backup batteries installed and no back up batteries present. You can determine which system you are using the ActiveRAID viewer software.

### **Backup Batteries Installed:**

After un-mounting the ActiveRAID from the network or host computer -

- a. **Using the ActiveRAID power button** - Depress and hold the power button for 5 seconds. Doing this will place the ActiveRAID into the shutdown sequence. Fibre Channel activity will be ceased (all requested from the host will be rejected if the system is unintentionally still mounted), any data remaining in controller or drive cache will be flushed to the hard drives, hard drives will be put into the idle state, batteries will be shut off, and the system will power down. This takes approximately 10-30 seconds.

### **No Battery Backup Present:**

There are two ways to shut the system down; After un-mounting the ActiveRAID from the network or host computer -

- b. **Using the ActiveRAID power button** – Wait one minute after un-mounting the volumes, this will allow the system to flush any remaining drive cache data, Depress the power button, the system will shutdown immediately.

**\*WARNING: Improper Shut Down May Cause Data Loss**

# Using The Active Storage Management Suite

Please refer to the help guides included with the management software

## Operation of the status indicators - Front

Status Indicator	Color and Action	Description
Active Logo	Blue Blinking	System OK Buzzer muted
FC Link	Off Green	No FC Link FC Link Established
Controller Icon	Green Amber Red	Controller OK Warning Failure
Power Indicator	Green Amber Red	Power Supply OK Warning – Predictive failure Failure or Power Cord Removed
Temp Indicator	Green Amber Red	Temperature OK Warning -Temp at Maximum usable Over temp condition
Fan Indicator	Green Amber Red	Fans OK Warning – RPM out of range – failure imminent Fan Fail
Drive Module	No Light Blue Red	OK Activity Drive Fail
Host Activity (40 LEDs)	Off Blue	No Fibre Channel Host Activity Indicates level of activity



## Operation of the status indicators - Rear

Status Indicator	Color and Action	Description
Fan Active Logo	Blue Red	System OK Failure
Controller	Green Amber Red	Controller OK Warning Failure
Power Supply	Green Green Blinking Yellow Red Red Blinking	Power Supply OK – System on Power Supply OK – System off Warning – Predictive failure Failure Power Cord Removed
Battery Module	Green Amber Red	Charged Charging Failed

## System Problems

If you should ever experience a problem with your ActiveRAID system, you can quickly assess the problem using the Active Viewer software on a remote computer. In addition, if you are near the system, you can use the system status indicators on the enclosure in order to determine the component at fault.

Since the ActiveRAID has been designed for quick and easy field service, the faulty component can easily be replaced by the user, reseller, or authorized ActiveRAID service person.

If you are unsure about replacement or require a service part, you can contact your reseller, or call Active Storage support directly at 1-877-MAC DISK. Alternately you can contact support at [support@active-storage.com](mailto:support@active-storage.com) or visit [www.active-storage.com/support](http://www.active-storage.com/support) for the diagnostic information.

