

# FUSION™ R800RAID

8-Drive SATA Rackmount Storage System With PCI Express® RAID Controller



Part No.

FUS-R8MR-4TB (Fusion R800R-4TB)

FUS-R8MR-6TB (Fusion R800R-6TB)

FUS-R8MR-8TB (Fusion R800R-8TB)

## Key Features

- ▶ Complete storage system includes rackmount enclosure, RAID controller card, drive modules, cables, and software
- ▶ 4TB, 6TB, or 8TB configurations; Enterprise/RAID Edition drives<sup>(1)</sup>
- ▶ Up to 577 MB/sec read, 625 MB/sec write data transfers (configured as RAID 0)
- ▶ Up to 514 MB/sec read, 557 MB/sec write data transfers (configured as RAID 5)
- ▶ Universal 100–240V, 50/60Hz power supply
- ▶ Drive Activity, Drive Presence, and Power LED indicators
- ▶ RoHS compliant

## OS Compatibility

- ▶ Mac OS X Version 10.4.8 and higher
- ▶ Windows® Vista, Server 2003, and XP
- ▶ Linux (RedHat ES 3, 4; Suse RedHat ES 3, 4; Suse Linux 9, 9.1, 9.2, 9.3, 10, 10.1 and the following architectures: i386; x86\_64 (AMD64, Intel EM64T))

## Hardware Compatibility

- ▶ Mac, Windows or Linux computer with available x8 (or x4) PCI Express (PCIe) slot

## HD Optimized Performance

Whether you're editing a project on your own or running a facility with multiple edit stations, if you're working in HD, you need fast and reliable storage. Sonnet's Fusion R800RAID storage systems meet your needs with breakthrough performance and data safety, provided in affordable, direct

attached disk arrays for the rack. The Fusion R800RAID 2U rackmount system is designed for work environments where performance and fault tolerance are critical. Fusion R800RAID storage systems are fast enough to easily handle uncompressed HD while protecting the data at the same time, yet flexible enough to be configured for any workflow.

Under real world use (drives 85% filled and fragmented), with its drives formatted as a RAID 0 group, a Fusion R800RAID system is capable of single-stream 2K (2048 x 1556) LOG RGB capture and playback. With its drives configured as a protected RAID 5 group (eight 1TB drives striped with parity distributed across all group members), a Fusion R800RAID system can achieve 577MB/sec (AJA Kona 1080HD test), fast enough to handle a single stream of uncompressed 10-bit 1080i 4:4:4 HD, or multiple streams of Pro Res 422, uncompressed 8-bit 1080 HD, DV, HDV, and DVCPRO video.

With drives formatted as a RAID 4, RAID 5, or DVRAID group, Fusion R800RAID systems offer fail-safe protection in the event of a drive failure. You can set up your system to provide visual and audible alerts, including e-mail notification. A drive can be swapped out and the RAID group rebuilt in 2, 3, or 4 hours (4, 6, or 8TB configurations<sup>(1)</sup>, respectively), or you can continue to work at reduced bandwidth while the RAID group rebuilds in the background.

## Built-In Flexibility

Do you need pure, unadulterated speed, ultimate redundancy, or something in between? It's your choice—Fusion R800RAID systems support RAID 0, 1, 4 (DV RAID), 5, 10, 50, and JBOD groups. Fusion R800RAID systems even support hot spares—a designated hot spare drive automatically replaces the failed one without you having to lift a finger. All this flexibility is accomplished without switches—a simple to use configuration utility enables you to optimize your setup for specific workflow requirements.

## Brains and Brawn

The heart of a Fusion R800RAID storage system is the Sonnet PCI Express® RAID controller. This powerhouse is based on the latest-generation Intel® IOP348 RAID processor, which can handle the throughput from all the drives with plenty of overhead. The Sonnet RAID controller is configured with 256MB of ECC-protected RAM, especially important to maintain data stream writes as the disk array nears capacity.

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## Driving Force

Fusion R800RAID storage systems employ Enterprise/RAID Edition hard drives. These drives are subjected to hours of additional, stringent testing to check for soft errors, vibration, and other reliability predictors—just the sturdiest drives pass these tests and are prepared with special RAID-optimized firmware. Enterprise/RAID drives offer higher MTBF (mean time between failure) specs, carry longer warranties than “desktop” drives, and are the building blocks of a super-reliable Fusion storage system.

## Versatile Performance

These systems are ideal for use in mixed environments—various operating systems, editing applications and output demands requiring the flexibility and interoperability that Fusion R800RAID storage systems provide. Fusion R800RAID systems support Mac OS® X, Windows® XP, Windows Vista, and Linux. They are compatible with capture cards from AJA, Blackmagic Design, Matrox, and Bluefish444, and work with all mainstream video editing applications including Apple® Final Cut Pro®, and Adobe® Premiere® Pro CS3.

## Accessories

- ▶ Fusion 500GB RAID Drive Module – Spare drive module for Fusion family storage systems. (Part No. FUS-RM-0500GB)
- ▶ Fusion 750GB RAID Drive Module – Spare drive module for Fusion family storage systems. (Part No. FUS-RM-0750GB)
- ▶ Fusion 1 TB RAID Drive Module – Spare drive module for Fusion family storage systems. (Part No. FUS-RM-1000GB)

TECHNICAL SPECIFICATIONS	
Warranty	2-year limited warranty
External Connectors	Enclosure – Two mini-SAS Card – Two Infiniband multilane
Drives Supported	1.5 & 3 Gb per second Serial ATA; up to 7,200 RPM
Data Transfer Speed	Up to 577 MB/s, depending on interface used and configuration
Supported Video Formats	2K (2048 x 1556) LOG RGB, 10-bit 1080 4:4:4 HD, uncompressed 8-bit 1080i HD, Pro Res 422, DV, HDV, DVCPRO, and uncompressed SD
Power Supply	2x 180W (non redundant), 100-240V, 50/60Hz Universal
Operating Temperature	+32° F to +104° F (+0° C to +40° C)
Dimensions	17.0 x 16.5 x 3.5 in (43.8 x 41.9 x 8.8 cm)
Weight	36 lbs (16.3kg)
Package Contents	Rackmount disk enclosure, Sonnet RAID controller, (2) Multilane cables, eight 3.5" drive modules, power cord, software CD, User's Guides

## FUSION R800RAID BENCHMARK

### CONFIGURATION

Fusion R800RAID connected to Sonnet RAID controller installed in Quad 2.66 GHz Mac Pro w/3GB of RAM and an AJA Kona3 capture card. Drives were configured as RAID 5

Video Streams/Configuration	RAID 5
DV (1 stream=3.6 MB/s)	16
DV50 (1 stream=7.2 MB/s)	12
DVCPRO HD 720p 59.94 (1 stream=14.4 MB/s)	9
DVCPRO HD 1080i 29.97 (1 stream=16 MB/s)	9
HDV 720p (1 stream=2.4 MB/s)	14
HDV 1080i 29.97 (1 stream=3.1 MB/s)	8
Uncompressed 8-bit NTSC (1 stream=21.0 MB/s)	8
Uncompressed 10-bit NTSC (1 stream=28.0 MB/s)	6
Uncompressed 8-bit 720 HD (1 stream=55.2 MB/s)	2
Uncompressed 10-bit 720 HD (1 stream=73.6 MB/s)	1
Uncompressed 8-bit 1080i HD (1 stream=124.3 MB/s)	2
Uncompressed 10-bit 1080 HD (1 stream=165.7 MB/s)	1
2K (2048 X 1556)LOG RGB (1 stream=309.0 MB/s)	1*

\*RAID 0

To see a side-by-side performance comparison chart of all the Fusion family members, visit at (<http://www.sonnettech.com/product/fusionfamily>).

Rather than waste your time with meaningless disk tests performed on empty drives, we've conducted in-depth, real world testing to provide you with realistic results. Testing was conducted after weeks of use, during which time projects were captured, parts deleted, more parts captured, rendered, and so on, leaving the drives 85% full and fragmented. The stream counts we present here reflect the reduced performance that results from regular day in, day out use. Remember, virtually any storage system works well the day you get it, but the true test is whether it will fail when you push the envelope and deadlines—Fusion storage systems won't let you down.

Technical Notes:

<sup>(1)</sup> Although most hard drive manufacturers define 1 gigabyte as 1,000,000,000 byte, the computer operating systems usually calculate a gigabyte by dividing the bytes (whether it is disk capacity, file size, or system RAM) by 1,073,741,824 (2<sup>30</sup>). This distinction may be a cause of confusion, as a hard disk with a manufacturer rating of 500GB may have its capacity reported by the operating system as 454.7GB.



For Windows



RoHS COMPLIANT