Welcome to mRAID16: High Performance massively scalable 4K/8K video storage for the media and entertainment industry

Active Storage's mRAID16 is specifically designed to meet the evolving challenges of modern broadcast and post-production storage infrastructures. It is a high performance and massively scalable 4K/8K video storage system for the most demanding media workflows. The mRAID16 has performance, scalability and configuration flexibility to meet nearly every broadcast and post-production facility's needs from ingest to archive.

mRAID16 is a continuation of the Active Storage award winning mRAID storage system. It is designed for the smoothest workflow, highest ease of use, and ultimate user collaboration and creativity. Combining superior performance and massive capacity in one system, mRAID16 is the product to address all customers' media storage needs in house.

Storage Architecture for 4K/8K Workflow
With a deep understanding of media workflow, mRAID16 is architected to support 4K/8K uncompressed video streams. It comes with dual-controller in standard configuration providing over 6GB/s data throughput. The system can easily scale-out to multiple controllers with over 20GB/s bandwidth. mRAID16 is an ideal primary storage for 4K/8K media workflow.

Innovative System Software
mRAID16 comes with a hyper-converged architecture. Its virtualized RAID kernel design separates physical hard drives from logical volumes. It divides disk space into small data blocks, and uses the blocks to create RAID groups for fine-grained resource management. This technology realizes automatic load balancing, higher storage performance, better storage space utilization, and faster disk reconstruction.

Massive Media Storage
Besides its outstanding performance for media workflows, mRAID16 is excellent for near-line and archive storage. It comes with a 2U 12-bay controller enclosure and 4U 24-bay expansion enclosures that supports up to 6PB in a dual-controller mRAID16 system.

ActiveManager
ActiveManager is a browser based, Apple friendly, modern graphical user interface for mRAID16. It provides system monitoring, configuration and performance statistics in single software application. ActiveManager is a powerful, intuitive, and easy to use tool to manage the mRAID16.

Business benefits

- Ideal in SAN environment for Mac, Windows and Linux workstations
- High performance storage for content creation
- Enterprise performance and reliability without enterprise complexity
- High availability architecture against any component failure
- Linear scale-out performance and capacity

Key features

- Massively scalable shared storage for performance and capacity
- 4K/8K workflow optimized prime storage
- Near-line and archive storage up to 7.5PB in capacity
- True all-active controller design
- 16Gb/s FC interface delivers over 6GB/s data throughput
- Fastest disk rebuild time down to minutes from days
- Supports all SSD and multi-tier SSD/ HDD configurations

Post Production Workflow

Ingest → Shared File System (Xsan) → mRAID Primary Shared Storage → Post Production (Final Cut Pro) → Broadcast/Delivery

Additional features

- Hyper-converged architecture with enterprise performance and reliability
- Block virtualized RAID kernel design provides an unmatched level of fine-tuning and fastest disk rebuild time
- Redundant path, multiple FC ports and large cache guarantee maximum performance
- Controllers automatically load balance to provide highest throughput
- Fully redundant components with seamless fail-over and fail-back
- Dynamic online capacity expansion and drive roaming
- Battery-backed cache to hard disks guarantees no data loss
- Low noise and high energy-efficient power and cooling system
- Automated ID assignment and one stroke power on/off for all enclosures
- 100% Apple Xsan and Active Storage vSAN compatible
- Browser based Apple friendly management suite
- Scale-out architecture for both SAN and NAS

Technical specifications

- Dual Intel Xeon 6-core prcoessors
- System capacity: 48TB expandable to 7.5PB
- Front-end interface (standard): 8x 16Gb/s FC or 8x 10Gb/s Ethernet
- Front-end interface (optional): 16x 16Gb/s FC or 16x 10Gb/s Ethernet
- Front-end interface: Mix FC or Ethernet ports
- Back-end interface: 4x 12Gb/s SAS ports
- Expansion uplink/downlink: 8x 12Gb/s SAS ports
- System cache: 48GB standard
- RAID level support: 0, 1, 3, 5, 6, 10 and 50
- Disk support: SSD, SAS and NL-SAS
- Power: 100V to 240V AC
- Controller enclosure: 2U, 3.4"x17.6"x29.5", 122 lbs.
- Expansion enclosure: 4U, 6.9"x17.6"x19.3", 124 lbs.
- Operating temperature: 5°C to 40°C
- Operating humidity: 10% to 90%

Dual-Controller System

Front view

Rear view

Expansion

Front view

Rear view

Configurations

	48TB / 96TB / 120TB Systems	96TB / 192TB / 240TB Expansions
Overall Capacity*	48TB expandable to 7.5PB	96TB
Connectivity	8 x 16Gb/s FC	2 x 12Gb/s SAS
Hard Drive Module	Hot swappable 4TB /8TB /10TB NL-SAS	Hot swappable 4TB /8TB /10TB NL-SAS
Controller	Dual 6-core Xeon, 48GB Cache	Dual I/O
Power and Cooling	Redundant hot swappable	Redundant hot swappable
Battery Back Up	Full backup to disks	

Active Storage is the innovative leader for broadcast, post-production, online and archive solutions. Many of the most recognizable media and creative brands in the world choose Active Storage because we understand their needs and deliver solutions they can rely on. Fast, reliable, and easy to deploy, Active Storage delivers a best-of-breed user experience, award-winning industrial design and customer service. Ease of use and robust performance make Active Storage the first choice for complex storage deployments.

mRAID16 is designed to withstand the grueling 24/7, 365 days a year deployments and severe duty cycles of media production and archive. Active Storage knows what it takes to meet deadlines and offers 24/7 technical support in case of emergency. mRAID16 comes with a 3-year comprehensive product warranty except batteries, which are warranted for one year.

*Usable capacity will vary depending on drive configuration and RAID level.