



Avid Unity ISIS media networks

Engineered for uninterrupted, mission-critical media access, the Avid Unity ISIS™ (Infinitely Scalable Intelligent Storage) media network is built upon revolutionary storage hardware and an innovative 64-bit file system to deliver an unprecedented combination of real-time performance, 24/7 availability, and massive scalability.



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do more™

Avid Unity ISIS media networks

As the newest member of the Avid Unity™ family, the Avid Unity ISIS media network delivers a highly scalable, self-balancing distributed architecture that combines the Avid Unity ISIS 64-bit file system with the intelligent Avid ISIS™ Engine. Together, they offer support for up to 150 real-time 50 Mbps clients with simultaneous access to as much as 192 terabytes of storage today, and expandability planned for the future. Running on standard Gigabit Ethernet technology, Avid Unity ISIS systems provide facility-wide uninterrupted access to media; powerful yet simple management tools; and an open architecture that supports both Avid® and non-Avid clients in a range of mission-critical environments.

Four-dimensional scalability

Today's media professionals want the ability to scale their storage networks—up and down—to respond to every opportunity and to grow or adapt intelligently. Avid Unity ISIS media networks offer groundbreaking flexibility, with designed-in four-way scalability:

Capacity

The Avid Unity ISIS media network can currently support from 8 TB to 192 TB, with the possibility of scaling much higher in the future. Add capacity as you need it. The Avid Unity ISIS file system seamlessly integrates additional Avid ISIS Engines, automatically load-balancing all of the storage without interrupting operations.

Clients

Media networks for broadcast and education environments serve large numbers of end users. Avid Unity ISIS media networks can accommodate up to 150 real-time clients and up to 1,000 user accounts, with even higher numbers planned for the future.

Performance

Handle a wide range of resolutions with ease. Scale bandwidth to deliver real-time SD and mastering-quality Avid DNxHD™ media today (all formats up to 145 Mbps), with higher bandwidth support planned for future releases.

Reliability

All Avid Unity ISIS components are designed with multiple levels of redundancy for operation in a 24/7 environment. Redundant storage and connectivity ensures full system availability; adding storage elements increases system bandwidth and resiliency, as well as capacity.



Avid ISIS Storage Blades

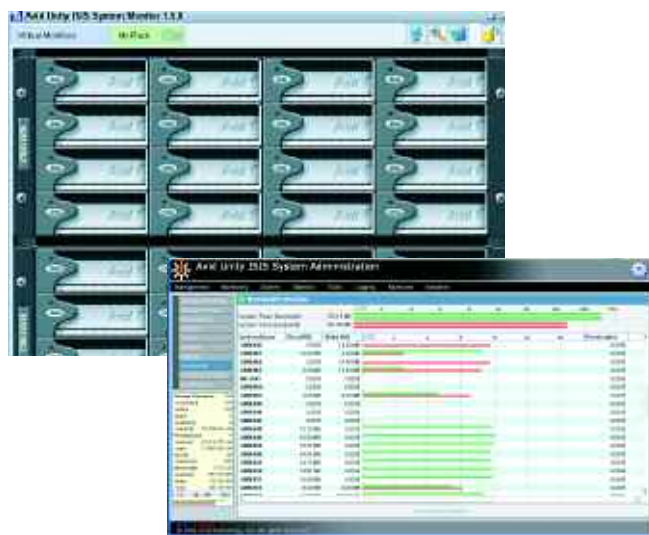
Avid Unity ISIS: innovative engineering for high-availability operation

High-pressure, deadline-driven broadcast, post, or film productions demand the high availability and reliability provided by the Avid ISIS Engine and Avid ISIS file system.

The Avid ISIS Engine is a unique blade-based storage subsystem that features intelligent dual-drive storage blades, integrated Ethernet switching, and redundant power and cooling. Each Avid ISIS Storage Blade is a mini-server including disks, a processor, memory, and networking. The drive blades communicate with one another, constantly load-balancing and redistributing data in the case of drive failure. All processing takes place in parallel to ensure real-time flow and maintain data resiliency. And administration is straightforward with built-in system-wide health monitoring and remote notification of any critical system events. Avid ISIS Engines and blades can be easily added, removed,

or hot-swapped while the system is live. The system recognizes the addition or replacement and self-balances—while work continues without delay.

Unlike common storage area networks (SANs), the advanced Avid ISIS architecture distributes data and metadata so that each intelligent component can make instant decisions that collectively optimize the performance, capacity, and health of the entire system. The distributed file system management results in extremely efficient access of storage by clients, increasing performance and ensuring real-time access. More processing power is provided as the amount of storage or number of clients increases, delivering unparalleled scaling potential.



Easily manage and monitor Avid Unity ISIS from any system with a Web browser and a secure connection to the System Director.

Feature	Function	Benefit
Up to 192 TB storage (96 TB mirrored)	Scale from 8 TB to 192 TB.	Capacity to respond to new business opportunities quickly and cost-effectively.
Support for up to 150 dual-stream 50 Mbps clients	Designed for the most demanding enterprise environments.	Flexibility to grow as your needs change.
Unmatched bandwidth scalability	The Avid ISIS architecture increases bandwidth performance as storage is added.	Users can size their system to fit workflow needs without system-imposed bandwidth limitations.
No single point of failure	All active system components are redundant and can be hot swapped, including Storage Blades, Switch Blades, power modules, and System Directors.	All critical data is protected at multiple levels.
Data redistribution	Data is redistributed to alternate storage elements in the event of a storage hardware failure.	The self-healing Avid ISIS system can provide continuous access to data for uninterrupted productivity.
Ultra-fast drive rebuild	Replaced drives are rebuilt up to 20 times faster than conventional RAID techniques.	Vulnerability to data loss during drive rebuild is dramatically reduced.
Gigabit Ethernet infrastructure	Avid Unity ISIS employs standard Ethernet technology, eliminating the need for mixed Fibre Channel and Ethernet networks.	Industry-standard Ethernet technology simplifies administration, integrates easily into existing environments, and reduces total cost of ownership.
Intelligent load balancing	Automatic load balancing distributes data evenly among storage servers, so each server can perform within its optimal range.	Optimum real-time performance ensures that media can be accessed in the shortest possible time.
Health monitoring and administration tools	Browser-based, graphical representation of the whole system lets users pinpoint areas of concern and respond quickly to a system alert.	Users can isolate and replace system components quickly and maintain optimum redundancy levels.
Open architecture	Open to Avid and non-Avid clients.	Integrates into the facility with ease; lets you use whatever tools you want.

System specifications

Avid Unity ISIS file system

- 64-bit distributed file system
- Enables real-time access to the Storage Blades
- Distributes file system management among clients, Storage Blades, and System Director

Avid ISIS Engine

- Rigid rackmount-ready chassis (4U rack height) contains 16 Avid ISIS Storage Blades, 2 Integrated Switch Blades, and 3 Power/Cooling Blades
- Laminar airflow for efficient cooling of all components
- No internal cabling; passive mid-plane distributes signals and power directly to all internal components
- Dimensions:
 - Width: 19 in (482 mm)
 - Depth: 28.75 in (730 mm)
 - Max Weight: 127 lb (57.6 kg)
 - Power Consumption: 1150 watts (max.)

Avid ISIS Storage Blade

- Intelligent dual-drive storage elements; 500 GB or 1 TB per blade
- Design minimizes drive vibration
- Integrated Linux-based server with dual redundant 1 Gb Ethernet ports
- Each blade is a hot swappable field replaceable unit

Integrated Ethernet switching

- Dual, independent Layer 2 networks connect clients and storage blades
- Built-in DHCP server for seamless attachment of clients to storage network
- Avid ISIS Integrated Switch Blade (2 per Avid ISIS Engine)
 - Eight 1 Gb Ethernet client ports
 - One 10 Gb Ethernet port for external switch connectivity
 - One 12 Gb Avid ISIS Engine expansion port
 - One chassis management port
 - Hot swappable, field replaceable unit
- Avid ISIS Expansion Switch Blade (two required for 3+ Avid ISIS Engine configurations)
 - Creates star-topology for interconnecting three or more Avid ISIS Engines
 - Seven 12 Gb Avid ISIS Engine expansion ports
 - Hot swappable field replaceable unit

Avid ISIS Power/Cooling Blade

- 600 watt power supply
- Redundant, 2+1 configuration
- Hot swappable field replaceable unit

Avid ISIS System Director

- Rackmount-ready (2U rack height)
- Dual, mirrored internal drives
- Removable, lockable front cover
- Redundant power supplies
- Dual 1 Gb Ethernet connections to blade servers
- Dual private System Director network connections (for communications between System Directors)
- Dimensions:
 - Width: 16.93 in (430 mm)
 - Depth: 26.46 in (672 mm)
 - Max Weight: 60 lb (27.2 kg)

Avid Unity ISIS monitoring, management, and administration tools

- Set up, view, and edit: users, workspaces, disk sets
- View error warnings and informational message logs
- Monitor the health and physical location of major components
- Remote notification of system events



Browser-based health monitoring and administration tools

To learn more, visit www.avid.com/unityisis or contact your local Avid office.

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