E EFS SSD

High-bandwidth storage for 4K/UHD, VFX, DI and Finishing workflows

For over a decade EditShare has delivered high-performance, shared storage systems that enable media professionals to deliver outstanding content. Along with companion asset management and archiving systems, EditShare solutions have increased productivity across broadcast and media enterprises around the globe.

Based on the proven high-performance EditShare File System (EFS), EFS SSD is specifically engineered for bandwidth hungry formats such as uncompressed DPX, DNxHR 444 and ProRes 4444, the mainstay of 4K and Ultra HD post-production, Digital Intermediate (DI), VFX and Finishing projects. It combines Solid State Drives (SSD) with a new architecture to create a flexible platform that scales from a budget-friendly 8TB all the way to 5PB+.

And, like all members of the EFS family, EFS SSD implements a single global namespace that eliminates the need to map users to different RAID arrays, leverages proprietary Native Client connections and EditShare SwiftRead technology to improve performance and availability in Windows, OSX and Linux environments. In addition, it supports configurations providing fault tolerant systems that protect media assets and file metadata from potential hardware failures.

Pinnacle of Performance

The challenge of delivering the 155 MB/s data rate needed to push an HD stream through a post facility once seemed daunting. But the need for 300-400 MB/s to view, edit and render multiple 4K/UHD streams or 1.8 -2.4 GB/s for DPX content in DI workflows might appear insurmountable. Happily, these are the applications for which the EFS SSD shared storage system is designed.

It exploits the SSD's improved Write and Read throughput, and RAID Controller bottlenecks are eliminated by pairing just 8 SSD drives with a

controller and using RAID 5 protection. Finally, the bandwidth needed to move media streams to/from Windows, OSX and Linux client workstations is generated via our Native Client which replaces SMB and AFP protocols with a higher performing, higher availability, multi-threaded alternative.

The result is EFS SSD performance that is truly spectacular. A partially populated 8 SSD storage node delivers approximately 3000 MB/s, sufficient to move at least two 10-bit DPX files and support film scanning, restoration, color correction and other DI workflows. Bandwidth grows to approximately 4800 and 5500 MB/s, with a 16-drive and a fully populated 24-drive storage node, respectively.

The EFS SSD isn't limited to single node installations. When bandwidth or storage capacity exceeds that available with a single node, we offer EFS SSD multi-node clustered storage configurations. These employ the same file system, client software and hardware building blocks, but permit bandwidth and capacity to be scaled to customer requirements.

Flexible 4K Migration

EditShare understands that a migration to a "4K/UHD" infrastructure may need to satisfy a variety of capacity, cost, and integration constraints. Some customers may choose a small, dedicated high-bandwidth capability for deployment alongside their existing production infrastructure in order to avoid a wholesale upgrade. The single node EFS SSD configuration is an economical path to "4K ready" shared storage capable of supporting a few workstations on a dedicated 10G or 40G network.

For facilities that want to deploy 4K/UHD capabilities in an existing production environment, EFS SSD can be seamlessly integrated with existing EditShare server groups. And for new 'greenfield' 4K/UHD installations, an EFS SSD can fulfill central core storage requirements since it

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can be configured in clusters as large as 5PB that support large numbers of client systems.

Accelerated Collaboration

Built for hard-core multi-stream high-bandwidth media workflows, EFS SSD combines large stream counts and real time collaboration. Our EditShare Connect software permits editors using leading professional creative and finishing tools, including Avid Media Composer®, Adobe® Premiere Pro®, Apple FCP X®, Black Magic Resolve®, Autodesk Flame® and others, to safely share bins and sequences.

EFS SSD administrators will find that with an easy-to-manage single global namespace, its simple to manage user accounts and privileges, establish shared media and project spaces, manage quotas, Health reports and perform general system maintenance. With no per-seat client licenses, you have the freedom to increase attached clients without additional costs.

Like all EditShare shared storage solutions, the new EFS SSD system seamlessly integrates with the EditShare Flow production MAM, allowing users to log, track, search and retrieve 4K/UHD assets across online, nearline and offline EditShare storage platforms. Plus with AirFlow, the web browser component of Flow, remote users can access assets for review and approval or remote editing.

EFS SSD Product Specifications

EFS SSD Storage Server

EFS Metadata Server

Hardware Description

EFS SSD Storage Server[1]

> X10 motherboard, Intel 6-core E5-1650V3 CPU, 3.5 GHz clock, Intel chipset
> 32 GB DDR4 - 2133 MHz ECC High Speed RAM[2]
> Mirrored 240GB SSD OS drives
> 1/2/4 TB SSD Media Drives, RAID 5 protection
> 12 Gb/s Hardware RAID controller[3]
> 1+1 Power Supplies
> 1+1+1 mid-plane Fans

XEFS Metadata Server

> X10 motherboard, Intel 6-core E5-1650V3 CPU, 3.5 GHz clock, Intel chipset
> 64GB DDR4 – 2133 MHz DDR4 ECC High Speed RAM
> Mirrored 240GB SSD OS drives
> 1+1 Power Supplies
> 1+1 Fans

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Electrical Characteristics

Input Voltage	100 – 240 VAC
Input Frequency	50/60 Hz
Power Consumption	300W

Input Voltage	100 – 240 VAC
Input Frequency	50/60 Hz
Power Consumption	100/120 W

Thermal Characteristics

Emissions	1023 BTU/hr.

Emissions	342 BTU/hr.

Environmental Characteristics

Operating Temperature	0°C (32°F) - 50°C (122°F)
Operating Humidity	5% - 95% non-condensing
Storage Temperature	-20°C (-4°F) - 60°C (140°F)
Storage Humidity	5% - 95% non-condensing

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Operating Humidity	5% - 95% non-condensing
Storage Temperature	-20°C (-4°F) - 60°C (140°F)
Storage Humidity	5% - 95% non-condensing

Mechanical Characteristics

Width/Height/Depth	483 x 89 x 648 mm 19.0 x 3.5 x 25.5 in
Shipping Weight	26.2 kg/58 lb.
Racked (no SSD)	19.7 kg / 43.5 lb.
Racked (SSD installed)	22.1 kg/49.0 lb.

Width/Height/Depth	483 x 89 x 582 mm 19.0 x 3.5 x 22.9 in
Shipping Weight	20.8 kg / 46 lb.
Racked Weight	14.0 kg / 31 lb.

[1]Describes storage node only configuration
[2]Single node configuration has 64GB
[3]One RAID controller per 8 drives

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