



In the content creation world there is a movement toward bigger and faster both with connectivity and file size. As High Definition video production increases in an existing editing workflow, limitations of current storage solutions are being exposed as insufficient to support performance needs. Moving to a SAN infrastructure featuring an ATTO FastStream SC 8500 allows customers to complete projects on time and under budget with built-in scalability for future growth.

#### Current Workflow

Many editors utilize internal storage, that is, storage which is included with their server or external Firewire or eSATA drives. These solutions do work and have worked for many years however their shortcomings are becoming more apparent as video editing storage needs expand.

Studio managers are starting to realize that in order to meet the deadlines and needs of today's editing workflow changes need to occur in storage, specifically on how editors collaborate on projects and how to increase performance for uncompressed video and digital film. One solution that will help a studio expand their workflow capacity is the addition of a Storage Area Network (SAN). This solution is often perceived as very expensive and complicated. Studios may feel it is beyond their expertise and budget, however this does not have to be the case.

**Current Solution** - Consists of direct attached storage that is not shared among multiple workstations. Files can be shared over the LAN, but transferring even a small HD file can take hours.



Direct Attached Storage

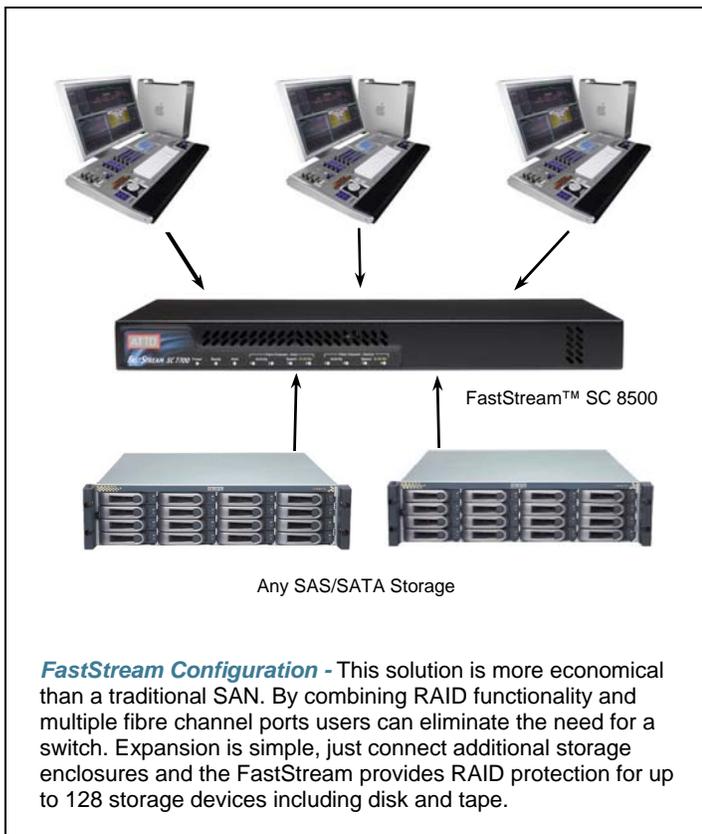
#### FastStream Small Workgroup SAN Solution

The ATTO FastStream SC 8500 was engineered for real-time environments to provide high-performance, low latency shared disk storage access. This allows editors to create high speed RAID protected SANs that enable a collaborative workflow among several editors without the complexity or high cost associated with SAN products.

The solution consists of the FastStream SC 8500, basic disk storage, Fibre Channel host adapters and SAN management software.

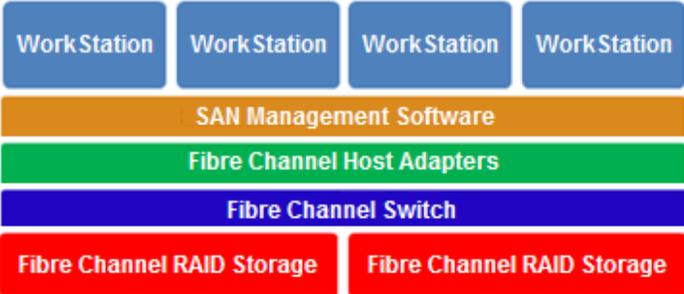
#### Benefits

- High-speed 8Gb performance via four independent Fibre Channel ports provide up to 1400 MB/s
- Latency management allows up to 30 DVCPro HD streams simultaneously with 48 audio streams
- Support for 3Gb SAS and/or SATA drives
- Protect all data with parity RAID protection
- Compatible with all leading editing solutions
- Purchase RAID one time, use low cost, off-the-shelf storage instead of expensive RAID arrays
- No storage server needed
- No Fibre Channel switch needed
- Expand existing RAID groups or create new ones with the addition of storage as your needs grow
- Simple management and diagnostics



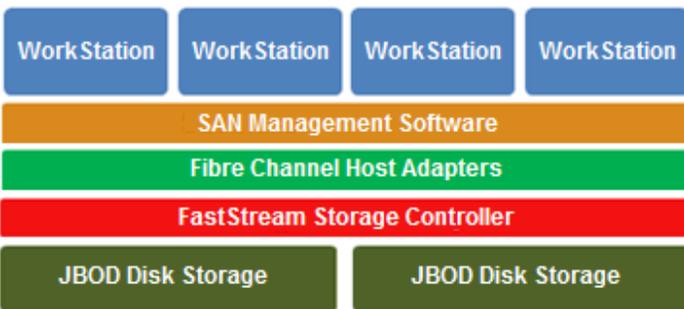
**Cost Comparison** - Several solutions exist today which enable a shared environment, most of these solutions are geared toward Enterprise infrastructures and as such feature a hefty price tag. Since the FastStream has the ability to scale up to meet customer needs; a solution may be created for over half the price of the competition.

**Typical Shared SAN Solution**



Most expense in this solution is contributed by the Fibre Channel Switch and RAID Array's. Whenever storage expansion is needed RAID needs to be repurchased along with the enclosure and disk drives. A typical solution including SAN Management software, Switch and RAID Storage may cost well over \$50,000.

**FastStream Storage Controller Solution**



The FastStream SC Solution replaces the Fibre Channel Switch and allows the use of lower cost JBOD Enclosures which do not have built in RAID - The FastStream provides the SAN connectivity and RAID protection. A typical solution including SAN management software, FastStream and storage costs less than \$25,000.

**FastStream Interoperability**

Tested Compatible with
Apple Final Cut Pro / Final Cut Studio
Apple Shake 2D/3D Compositing
Adobe Premiere / PhotoShop
AJA
Avid Media Composer / Nitris
Blackmagic
Cinema 4D
Digidesign ProTools HD
Logic Pro
Matrox AXIO

**Performance Optimization**

Performance is a key component of an editing solution and the FastStream provides best in class performance to editing applications.

RAID 5	SAS Drives	SATA Drives
Reads	1283 MB/sec	926 MB/sec
Writes	643 MB/sec	578 MB/sec
Reads / Rebuild	1262 MB/sec	912 MB/sec
Writes / Rebuild	693 MB/sec	576 MB/sec
Rebuild – with I/O	38 Minutes	60 Minutes
Rebuild – no I/O	7 Minutes	16 Minutes

24 drives, 1MB Transfer size, 128 KB Interleave – 8 QDepth

**Rebuild Technology**

One of the most important functions of a RAID solution for digital content creation is degraded performance which is performance during a drive rebuild. The above chart shows an example of normal RAID performance and performance during rebuilds. As you can see, streaming applications have full access to disk bandwidth in the event of a drive failure which allows editors to complete projects on time.

**Ease of Use**

ATTO FastStream features installation wizards for audio and video applications to allow you to spend less time managing your storage and more time editing. We developed the FastStream line of products from the ground up to not only make them easy to use, but easy to setup, maintain and manage storage from one central location.

**Storage and OS Agnostic**

FastStream Storage Controllers were engineered to be interoperable with a number of storage products. This allows you to purchase one brand of storage to begin your infrastructure and purchase other brands of storage as your needs mature.

There are no operating system requirements for the FastStream. So there are no worries if your system runs in OS X, Windows, Linux or proprietary operating systems.

Full Interoperability information can be found on the ATTO website at [www.attotech.com](http://www.attotech.com).

Tested with
AIC
Dell
Engenio
Enhance
Fibernetix
Infortrend
JMR
NEC
Promise
Proware
Xyratex

