

Datasheet

ATTO Technology Benchmark Report for Apple Final Cut Pro and NetApp Media Content Management Solution

KEY FEATURES

Supports Consolidation of Media Workflows for Greater Efficiency

- Supports more high bi-rate media streams for collaborative edit environments
- Low latency, high performance for streaming workloads; both ingest and playback

Optimized for Increased Productivity

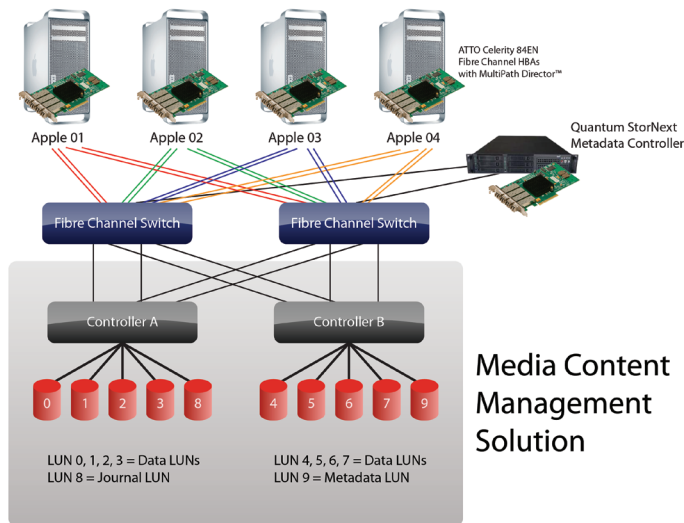
- High-density packaging provides maximum read/write performance, enabling more concurrent video streams per rack unit
- Mirrored caching, coupled with 8Gb/s Fibre Channel front end and 6Gb/s SAS back end capable of handling mixed large block and small block random access to support multi-stream high resolution production, proxy workflows and metadata

High-Performance Storage for Post Production Workflow

In recent years, the media industry has seen explosive growth of high-bandwidth content increasing the need for efficient, scalable, and affordable enterprise storage. Media facilities are seeking high performance storage to meet the challenges of their post production workflow particularly the ability to consolidate storage pools to reduce file-transfer bottlenecks.

NetApp®, Quantum and ATTO have jointly tested the Media Content Management solution and the ATTO 8Gb Celerity Host Bus Adapter with MultiPath Director™. The architecture is targeted for all phases of the production and distribution workflows including ingest, manage, produce, process, deliver and archive. The solution features balanced and flexible performance characteristics allowing it to reliably support both random access and sequential access intensive workloads.

In recent ATTO Celerity testing, the NetAPP Media Content Management solution outperformed all previously tested storage subsystems. New benchmarks were set across several media industry test regimens, including the number of uncompressed HD video streams simultaneously supported for Final Cut Pro® editors. With four Macintosh® clients running Final Cut Pro, the NetApp Media Content Management solution played back 22 uncompressed HD (1920 x 1080, 10-bit YUV) video streams without dropping frames. Testing showed no dropped frames even across many hours. This solution can obtain 3.48 gigabytes of sustained video read performance out of a single 4 RU chassis which is unprecedented in the media and entertainment industry. This solution allows media facilities to stay with the edit client connectivity they most rely on, upgrade their infrastructure to the Media Content Management solution and architect more collaborative media workflows.



- 4 Macs running Final Cut Pro
- 22 Video Streams
- 3.48 GBPS aggregate sustained video read
- Uncompressed HD
 - 1920 x 1080 x 29.97
 - 10 bit YUV
 - 158 Megabytes per second
- E5460 4U, with 60 2Terabyte Drives
 - 7200 RPM Nearline SAS
 - ATTO Celerity 84EN with MultiPath Director™
- Driver Version 1.41MP
- RAID 5
- 6+1 RAID Group
- One volume per Group

Media Content Management Solution

Figure 1) NetApp/ATTO/StorNext Configuration (graphic supplied by ATTO)

AJA DISK BENCHMARK (WITH STORNEXT FILE SYSTEM)

Video Format	Reads Total	Writes Total
DVCPProHD 1080i60	2584 MBPS	1088.9 MBPS
(High Definition) 1920 x 1080 10-bit YUV	5954.4 MBPS	3556.3 MBPS
(High Definition) 1920 x 1080 10-bit RGB	5799.9 MBPS	3574.5 MBPS
(2K film) 2048 x 1556 10-bit RGB	5776.5 MBPS	3898.3 MBPS

*The AJA disk benchmark is a common benchmark in the video industry which provides performance data that has been obtained using an actual file system. These numbers have been run from 4 separate Mac Pros simultaneously, and the results combined to illustrate overall throughput to the storage. The results are presented for both reads and writes using a variety of video formats.

VIDEO PERFORMANCE USING APPLE FINAL CUT PRO

Total High Definition Video Streams @158 Megabytes per second (1920 x 1080 10bit RGB)	22 streams total
Streams Played Back in Real-time for Workstation Apple 01	6 streams
Streams Played Back in Real-time for Workstation Apple 02	5 streams
Streams Played Back in Real-time for Workstation Apple 03	5 streams
Streams Played Back in Real-time for Workstation Apple 04	6 streams
Total MBPS from all Workstations	3480 MBPS

*This test demonstrates actual video performance that would be seen by an editor in number of streams of HD video on the timeline. This is a real world test of the storage, HBA, and file system. Aggregate bandwidth reported from MAC OS X is also reported.

About NetApp

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