Meeting the High-Performance Demands of Media Creation Environments

Challenge
Infrastructure requirements for post-production environments have changed radically over the past decade. The fragmented, bandwidth-limited storage solutions of the past no longer adequately serve the needs of today’s media professionals. High bandwidth is required to meet the speed and accessibility demands of high-performance applications. In addition, data management strategies need to be maximized to support collaborative workflows that provide access to 8K, 4K, 3D, and other high-resolution content across multiple workstations.

Solution
To meet the workflow challenges of current media creation environments, a production infrastructure must combine high performance and high availability with reliability. With Supermicro Workstation and ATTO Celerity™ Fibre Channel HBAs featuring MultiPath Director™, creative professionals are able to meet the low-latency, high bandwidth storage and network connectivity needs for media workflows.

Supermicro's SuperServer® 7048GR-TR is a “SuperWorkstation” optimized for high performance computing. Generating massive parallel processing power and unrivaled networking flexibility with PCI-E 3.0 expansion slots, Supermicro GPU/Xeon Phi™ Superserver systems deliver maximum processing acceleration for the most compute-intensive workloads. The 7048GR-TR supports the latest Intel Xeon E5-2600 v3 family processors and accommodates up to 4 GPU cards to power graphics-intensive applications such as 3D animation/visualization and special effects rendering. High-efficiency redundant power supplies, “Whisper-Quiet” fans and optimized air flow chassis design make it suitable for desktop production environments.

SOLUTION BENEFITS
- Provides multiple users with shared access to large amounts of stored data
- Fulfills the high-availability demands of digital media applications
- Provides a completely redundant, high performance solution
- Up to 100% faster system performance than competitive solutions
- Up to 9 streams of uncompressed HD video

CERTIFICATION
- Linux and Windows operating platforms

KEY FEATURES
Supermicro SuperServer® 7048GR-TR
- Supports up to 4 GPU/Xeon Phi™ cards with the very latest x86 dual Intel® Xeon™ processor E5-2600 v3 product family up to 36 cores per node and 160W TDP
- Supports redundant Titanium Level power supplies, integrated IPMI 2.0 with KVM over dedicated LAN
- Offered with Supermicro Global Services and Support featuring Next Business Day or 4-Hour Same Day hardware maintenance service to increase system uptime and productivity

ATTO Advanced Data Streaming (ADS™)
- Low latency and smooth, reliable data transfers with reduced potential for dropped frames
- Manages data acceleration to maximize the number of transactions processed by the host’s CPU

ATTO MultiPath Director™
- Enables multipathing protection for servers, workbooks and workstations, providing a completely redundant, high availability solution for digital media applications
- Redundant data paths with failover protection, guarantee uninterrupted access to your data
- Load-balancing eliminates bottlenecks by using multiple paths to optimize data transfers consistently across all OS platforms

ATTO Celerity 16Gb Fibre Channel HBAs feature MultiPath Director, a proprietary driver that enables redundant data paths for failover protection and load-balancing, and Advanced Data Streaming™ (ADS), a latency management technology found throughout the ATTO product range that ensures smooth data transfers with a reduced potential for dropped frames. The combination of Supermicro workstations and ATTO Fibre Channel HBAs enable professionals to pass multiple uncompressed HD and 4K video streams.
Solution Benchmark

ATTO conducted performance testing in a Windows workstation environment to provide creative professionals with insight into the benefits of the Supermicro and ATTO solution.

The Supermicro-ATTO solution outperformed similar competitor solutions running in a Windows 7/Adobe Premiere environment. With the 7048GR-TR, the system was capable of delivering up to 9 streams of uncompressed HD video. This measured performance advantage demonstrates that the Supermicro-ATTO solution supports more streams per workstation, reducing rendering bottlenecks and increasing cost savings since editors are enabled to be more productive.

Additionally, the testing demonstrates the latency and performance advantage the solution brings to a real-time creative environment. The SuperMicro SuperServer® 7048GR-TR workstation, combined with ATTO's Celerity FC HBA and the load balancing benefits of MultiPath Director™, is able to provide up to 100% faster throughput than other workstation/HBA configurations, while ADS latency management technology reduces the potential for dropped frames.

Where To Buy

Supermicro website:

ATTO website:
https://www.attotech.com/products/adapters/fibre-channel-hba/16gb/ctfc-162E-000