ATTO, SGO and Dot Hill Power Real-Time 8K Video Processing

THE CHALLENGE

With 6K and now 8K production being adopted by the film/television industry, the technical requirements to support those formats push the limits of what current hardware is capable of. With 4 times the resolution of 4K Ultra High-definition video, 8K creates a particularly tough challenge for editing workflows. When you add in the need for operators to interact with footage and to view results in real time at all levels of the processing chain, including VFX, compositing, color correction and grading, managing latency and maximizing throughput becomes more crucial than ever.

THE SOLUTION

ATTO Technology's collaboration with partners SGO and Dot Hill has resulted in a solution that demonstrates how uncompressed Ultra High-definition 8K video can be processed in real time. The system consists of an HP Z840 workstation with an NVIDIA Quadro M6000 graphics card, ATTO Celerity™ 16Gb Quad Port Fibre Channel host bus adapter and Dot Hill AssuredSAN® Ultra48 storage array. The HP workstation runs SGO's Mistika post-production software. With ATTO's card connected to all four ports of the Ultra48 storage array, the system maintains an aggregated sustained bandwidth of 6,400 Mb/s—enough throughput to transfer 8K footage in Mistika's uncompressed Mistika.js format. In addition, the NVIDIA M6000 graphics board enables basic real-time effects such as color grading at 8K resolution, along with video downconversion for output to a 4K monitor.

HP Z840 Workstation with ATTO Celerity 164E
16Gb FC HBA and 4K Monitor

Dot Hill Ultra48

SOLUTION COMPONENTS

ATTO TECHNOLOGY CELERITY™ FC-164E 16GB HOST BUS ADAPTER

Celerity Fibre Channel host bus adapters deliver industry leading bandwidth and low latency. Available in single-, dual- and quad-channel configurations, Celerity 16Gb Fibre Channel HBAs support up to 6,400 MB/s data transfer rates, making them an ideal solution for advanced media applications including 8K editing. ATTO's exclusive MultiPath Director™ technology enables failover and load balancing for multiple Fibre Channel data paths for direct connection of Linux® , Mac OS® X and Windows® servers and workstations to Enterprise-class storage.

DOT HILL ASSUREDSAN ULTRA48 STORAGE ARRAY

The Ultra48 chassis houses up to 48 2.5-inch drives and manages up to 6,400 MB/s sequential reads, 5,300 MB/s sequential writes. It's built for performance for FUHD, Ultra HD and 3D workflows and simultaneously streams to multiple hosts without disruption.

HP Z840 WORKSTATION

HP's highest performing workstation, the Z840 is built for high-end computing and visualization and delivers outstanding performance in an expandable chassis. It achieves the performance you need with the ability to support two next generation Intel® Xeon® processors for up to 36 total processor cores in one system.

NVIDIA QUADRO M6000 GRAPHICS CARD

NVIDIA's most powerful pro graphics card with advanced Maxwell™ GPU architecture to conquer challenging graphics workloads and power interactive, photorealistic visualization. Includes 12 GB of GPU memory and advanced capabilities for up to four 4K displays.

SGO MISTIKA

Mistika is the only creative system capable of true interactive operation up to 8K Ultra High-definition and beyond. Real-time processing allows an interactive experience at all levels of operation at any resolution, in full quality and in real time.

ATTO