

Avatar "Sounds Off" Using ATTO's Technology

Performance and Reliability Makes ATTO the Clear Choice for Advanced Audio Rentals



Success In Brief

- Advanced Audio Rentals is called upon to provide audio production for "Avatar"
- Advanced Audio Rentals chooses ATTO's storage connectivity products based on their superior performance and reliability
- Advanced Audio built their scoring systems using ATTO's ExpressSAS 3Gb/6Gb SAS/SATA RAID and Host Bus Adapters
- ATTO's cards provided unparalleled support for Pro Tools 8 for Mac
- ATTO RAID adapter's mirroring capability afforded an extra layer of redundancy
- Exclusive Advanced Data Streaming (ADS™) Technology ensured multiple concurrent tracks
- Thanks to ATTO's products, Advanced Audio was able to reduce support by 50%, saving both time and money

ATTO's SAS/SATA RAID and Host Bus Adapters enable the Successful Audio Production for James Cameron's "Avatar"

Challenge

Advanced Audio Rentals was presented an opportunity of a lifetime. They were asked to provide the audio production equipment to 20th Century Fox's Newman Scoring Stage where they produced the soundtrack for the mega-blockbuster 3D sci-fi thriller from James Cameron, "Avatar".



AAA_Neytiri_Jake_ST_wk0 L to R Jake Sully (Sam Worthington) and Neytiri (Zoe Saldana) Photo credit: Twentieth Century Fox
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The production required both a high-bandwidth and reliable storage connectivity solution in order to produce 96 tracks of 24-bit audio at 96kHz. Many audio projects are attempted using Firewire drives in an effort to save cost. Paul Levy from Advanced Audio Rentals maintains the position that too often, the hard drives and connectivity protocols are treated as an afterthought, even though they are at the heart of the system. Firewire was simply not going to cut it for this production. Advanced Audio had used many of ATTO's storage connectivity products in the past including Celerity Fibre Channel, ExpressPCI SCSI and ExpressSAS SAS/SATA adapters. They tried competitors' HBAs but found that those cards would simply not work reliably with Digidesign ProTools®. ATTO was the clear choice for this initiative.

Solution

Advanced Audio conducted an evaluation of ATTO's wide array of SAS/SATA RAID and Host Bus Adapters for their systems and noticed a significant improvement when using the cards in combination with Pro Tools 8 for Mac. After numerous performance and stability tests, they decided that they would build their scoring systems using ATTO's ExpressSAS 3Gb and 6Gb RAID and Host Bus Adapters with Advanced Data Streaming (ADS™) latency management technology, a standard on all ATTO HBAs. Managing latencies in audio workflows is key to maintaining smooth and efficient data transfers for the highest consistent performance.

The main orchestra recording system used an ATTO ExpressSAS R380 SAS/SATA RAID adapter connected to 8 – 1 TB Hitachi SATA drives configured as four RAID 1 groups. Advanced Audio also utilized an ATTO ExpressSAS H380 SAS/SATA HBA connected to an additional 4 Hitachi SATA drives used primarily as a backup for the main RAID array. The two ATTO ExpressSAS HBA's operated in tandem to allow primary drive activity to take place on



"ATTO's ExpressSAS proves to be an incredible time saver for Pro Tools HD sessions. It just works!"

- Paul Levy, CEO
Advanced Audio Rentals

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the main RAID groups while copying to and from the additional 4-bay system. This created backup in real time, on-the-fly, so the sessions could enjoy an uninterrupted workflow. Two other systems were also created using ATTO's H380 SAS/SATA HBA—a second, 96 channel ProTools|HD system was used for a synthesizer playback, and the third for mixing stems (*method of mixing audio based on creating groups of audio tracks and processing them separately prior to combining them in the master*) which required 24–32 tracks at a time.

Paul Levy maintains the following guidelines as his keys to a successful audio system design:

- The storage system must have RAID redundancy
- The system must provide simultaneous background transfers
- All Pro Tools systems must be able to transfer data between each other
- Firewire connections and daisy-chaining must be eliminated
- All hard drives must be removable, hot-swappable, and able to be shuttled to other systems
- Client must be able to easily move session data to/from their own personal systems

Careful attention to details were considered to assure the team at Avatar had a rock-solid system for both the score and the mix.

Benefits

- ✓ ATTO RAID and Host Bus Adapters provided a rock solid and durable system configuration. Advanced Audio was able to reduce technical support by 50% and create an environment with no downtime, saving both time and money.
- ✓ ATTO's ADS™ Technology ensured the recording of multiple tracks of audio could maintain a smooth, consistent data flow. Advanced Audio cut their offline data transfer time in half by doing background copying while simultaneously recording or playing back audio sessions.
- ✓ ATTO RAID Adapters offered a layer of redundancy without manual intervention. Resources could be spent on editing the tracks instead of worrying about the storage.

Conclusion

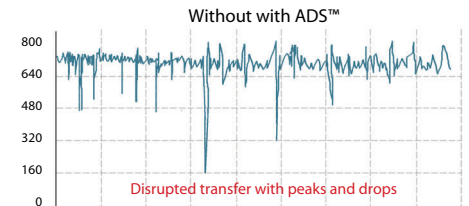
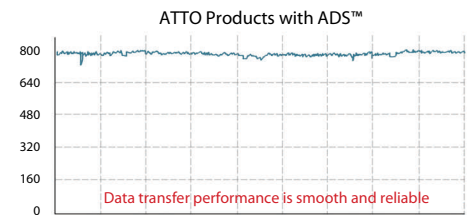
ATTO Technology was the only storage connectivity solution provider to support the use of Mac based Pro Tools. Incorporating ATTO RAID and Host Bus Adapters into the workflow, allowed for the necessary performance and reliability needed to edit multiple tracks simultaneously, a challenge for any large audio production.

Companies Involved

ATTO Technology, Inc. is a global leader of storage connectivity and infrastructure solutions for data-intensive computing environments. ATTO provides a wide range of end-to-end solutions to help customers better store, manage and deliver their data. With a focus toward markets that require high performance, ATTO manufactures host adapters, RAID adapters, bridges, RAID storage controllers, switches, and management software. ATTO solutions are based on providing a high level of connectivity to all storage interfaces including SCSI, SATA, iSCSI, SAS and Fibre Channel.

Advanced Audio Advanced Audio is one of the country's most trusted pro audio rental and support companies. Advanced Audio, headquartered in Burbank, CA specializes in the rental and support of the latest in audio technology, as well as a wide range of support and consultation services. Advanced Audio has a 20-year history of satisfied clients, including all of the major film, television and music recording facilities, in Los Angeles and abroad.

Advanced Data Streaming (ADS™)



Best in industry data transfers



Products used

- ATTO ExpressSAS 36Gb and 6Gb HBAs
 - ESAS-H380-000
 - ESAS-H680-000
- ATTO ExpressSAS 3Gb RAID Adapters
 - ESAS-R380-000
- Digidesign Pro Tools® 8
- Hitachi Hard Drives

