

## ABOUT ATTO TECHNOLOGY, INC.

For 30 years, ATTO Technology, Inc. has been a global leader across the IT and media & entertainment markets, specializing in storage and network connectivity and infrastructure solutions for the most data-intensive computing environments. ATTO works with partners to deliver end-to-end solutions to better store, manage and deliver data. Working as an extension of customer's design teams, ATTO manufactures host and RAID adapters, network adapters, storage controllers, Thunderbolt™ adapters, and software. ATTO solutions provide a high level of connectivity to all storage interfaces, including Fibre Channel, SAS/SATA, iSCSI, Ethernet, NVMe, NVME over Fabrics and Thunderbolt. ATTO is the Power Behind the Storage.

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# ATTO ExpressSAS® Adapters Enable 8K Streaming

VIDEO CLARITY BRINGS ATTO INTO 8K STREAMING

## Video Clarity Success Story

### SITUATION

As companies prepare to bring 8K media options to consumers, they must first tackle the challenge of the massive file sizes required to shoot, edit, store and display 8K productions. Editors looking to experiment or fully produce in 8K have limited options and are forced to wait for the market to catch up—costing them precious time in an industry that will rapidly be demanding a large amount of 8K content. Video Clarity, a software and hardware company in the broadcast media industry, is one such provider looking to take on the data challenges the market is anticipating. Video Clarity is in the business of making playout servers and analyzers, which enable customers to stream and analyze raw 8K footage.

In the media & entertainment industry, any loss of data can be fatal for a project – the loss of even a few frames could mean expensive reshoots or cancellations. Video Clarity analyzers, which are used by broadcasters to take an uncompressed stream of video and measure quality parameters, rely on top-of-the-line RAID protection to ensure that every frame of video makes it to its destination. Video Clarity came to ATTO Technology Inc. because 8K file sizes were presenting problems even their 4K analyzers couldn't handle. In the previous 4K version, they were using three RAID cards set to RAID 0 for higher performance. By contrast, the current system did not have enough throughput for an 8K stream and they didn't have enough room for an additional RAID card. The critical 4K data solution that made Video Clarity unique, that they hoped would lead others into 8K, was at stake because of the protection demands of such large amounts of data.

### SOLUTION

The ATTO solution came in the form of the ExpressSAS® RAID host bus adapter (HBA). When Video Clarity approached ATTO with this problem, ATTO engineers recognized that the problem was RAID capability for maximum data access—something competitors just couldn't supply. ATTO suggested using the 12Gb ExpressSAS HBAs to leverage 12Gb speeds and next generation PCI that would give them the bandwidth they needed to protect and stream 8K file sizes. For Video Clarity, this was the perfect solution. In the words of Tim Anderson, the operations manager at Video Clarity, "We contacted ATTO letting them know our I/O requirement. I was able to collaborate with one of the ATTO engineers and together we determined the H120F card would be best suited."

### RELATED PRODUCTS

ExpressSAS 12Gb/s HBAs combine 12Gbps SAS speeds and x8 PCI Express 3.0 with powerful hardware and software elements to manage latency in real-time environments. Additionally, the H1208 and H120F HBAs, the cards used by Video Clarity, include Power Center Pro, an integrated software RAID solution that brings the performance and protection of RAID to attached storage devices. In addition, ATTO exclusive Advanced Data Streaming (ADS™) Technology maximizes CPU processes to deliver smooth and reliable data transfers and the highest consistent performance. ATTO sets the standard for board design and signal integrity to minimize those costly transmission errors and data corruption. These differentiating capabilities is what made ATTO Video Clarity's choice for high-performance SAS/SATA storage connectivity.

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### RESULTS

The result is the ClearView Extreme 8K Analyzer—a format independent video quality analyzer with 8K at 60Hz 10 bit play or record function. Additionally, an interactive 8K side-by-side playback of two sequences up to 30Hz was developed. The data speed requirement for this type of application is well over five gigabytes per second of continuous reads or writes to a high-speed disk array, making it a perfect example of ATTO's commitment to large data challenges. ATTO RAID cards also complemented the performance goals set by Video Clarity. There was no sacrifice for processing bandwidth to a software-defined RAID solution, instead allowing ATTO to handle the load. Video Clarity is quick to mark the magnitude of the accomplishment, saying, "With the help of ATTO we were one of the first to market with an uncompressed 8K player and analyzer." Not only are Video Clarity's customers able to employ the benefits of an 8K analyzer, they can do so with the peace of mind that access to their data will be up to 70% faster and won't be interrupted completely by an outage, allowing them 100% up time and 100% access to their data.

### FUTURE IMPACT

From this experience Video Clarity has recognized the benefit of ATTO's highly personalized approach to data solutions. In the words of Tom Johnson, the ATTO account manager who assisted in the solution, "not only did ATTO's 12Gb SAS HBA work for the 8K player but Video Clarity has selected ATTO HBAs across the board for their players to take advantage of the next-gen PCI express slots they have added to their line." The impacts of ATTO's solution with the ClearView Extreme 8K Analyzer will go wherever 8K goes. Japan has committed itself to broadcasting the 2020 Olympics in 8K and experts say that 8K solutions will be integral as virtual reality continues to evolve. The ability to stream and edit video—enabled only by ATTO—will be critical as these technologies evolve.