

ATTO

The Power Behind the Storage

Edition No.1

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ATTO Technology, Inc.



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WHAT'S NEW AT ATTO?

ATTO Releases First ThunderLink[®] Device for Thunderbolt[™] 3

First device available to connect with new Thunderbolt 3 platforms

ATTO Technology, Inc., is proud to be the first company to release devices capable of connecting with new Thunderbolt[™] 3 platforms, giving users in creative and collaborative working environments the ability to share data even faster, whether in the field or in the editing bay. The new [ThunderLink[®]](#) devices offer single- and dual-port connectivity while supporting the full power of up to [40Gb Ethernet](#) and [32Gb Fibre Channel](#) networks. Users enjoy double the throughput of Thunderbolt 2 devices and can connect to high-performance PCIe and DisplayPort with a single devices.

ATTO continues to support Thunderbolt 2 platforms and devices. For more information, visit the [Thunderbolt Devices](#) on our website.



ATTO's Thunderbolt[™] portfolio has more than 4X the interoperability than the competition.



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PRODUCT LAUNCHES

ATTO introduces XstreamCORE™ storage controllers

Supports up to 240 flash devices while adding less than four microseconds of latency

Are your customers looking for a way to speed up data transfers? ATTO Technology, Inc., has the solution: the new [XstreamCORE™](#) storage controller, which uses industry-leading technology to power migrations of data across servers in minutes instead of hours.

Thanks to two new technologies, XstreamCORE provides very high, reliable throughput and IOPS while also enabling users to benefit from common, open source storage services and network mapping functions.

XstreamCORE storage controllers can support 240 total flash or capacity devices, which users can manage from a single pane of glass, while achieving 6.4 GB/s throughput with accelerated reads and writes. This makes XstreamCORE a smart choice when converting a direct-attached SAS storage technologies to Fibre Channel networks for faster access to data and a better return on investment.



Build a stronger data infrastructure with XstreamCORE. Learn more at <https://www.atto.com/landing/XstreamCORE>.

Product:	Transfer Rate:	4k IOPS:	Input Connectors:	Output Connectors:
XstreamCORE FC 7550	6000MB/s	1,200,000	4 16Gb FC	4 (x4) 12Gb SAS
XstreamCORE FC 7500	3200MB/s	735,000	2 16Gb FC	4 (x4) 12Gb SAS

<https://www.atto.com/products/storage-controllers/xstreamcore>



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NEW CERTIFICATIONS

ATTO Technology certifies Celerity™ Gen 6 products with Quantum® and NetApp®

ATTO Technology, Inc. is happy to announce certified compatibility for [Celerity™ Gen 6](#) products and the [MultiPath Director™](#) driver. ATTO is now certified with Quantum's QXS series and with NetApp's E-Series storage area network (SAN) solutions. Interoperability solutions with ATTO and Quantum or NetApp can be used for high-end servers, where ATTO's exclusive multipathing technology ensures big data environments operate smoothly. This latest line of certifications signal strong continuing partnerships with Quantum and NetApp, as well as ATTO's commitment to enhancing solutions for all users.

See more [here](#).

ATTO Products	Partner	Partner Product
Celerity 32Gb/s Gen 6 HBA	Quantum	QXS Series
Celerity 32Gb/s Gen 6 HBA	NetApp	E-Series SAN Solution
Multipath Director	Quantum	QXS Series
Multipath Director	NetApp	E-Series SAN Solution

PRESS RELEASES

ATTO Technology adds to Thunderbolt™ 3 portfolio with connectivity to 10Gb Ethernet networks

Now shipping; ATTO maintains longstanding commitment to support Thunderbolt connectivity for creative content professionals.

<https://www.atto.com/corporate/news/293/ATTO-Technology-adds-to-Thunderbolt-3-portfolio-with-connectivity-to-10Gb-Ethernet-networks>

ATTO Technology Announces Support for Thunderbolt™ 3 for Mac® Platforms

New development further expands opportunities to connect to Apple platforms with ATTO devices.

<https://www.atto.com/corporate/news/292/ATTO-Technology-Announces-Support-for-Thunderbolt-3-for-Mac-Platforms>

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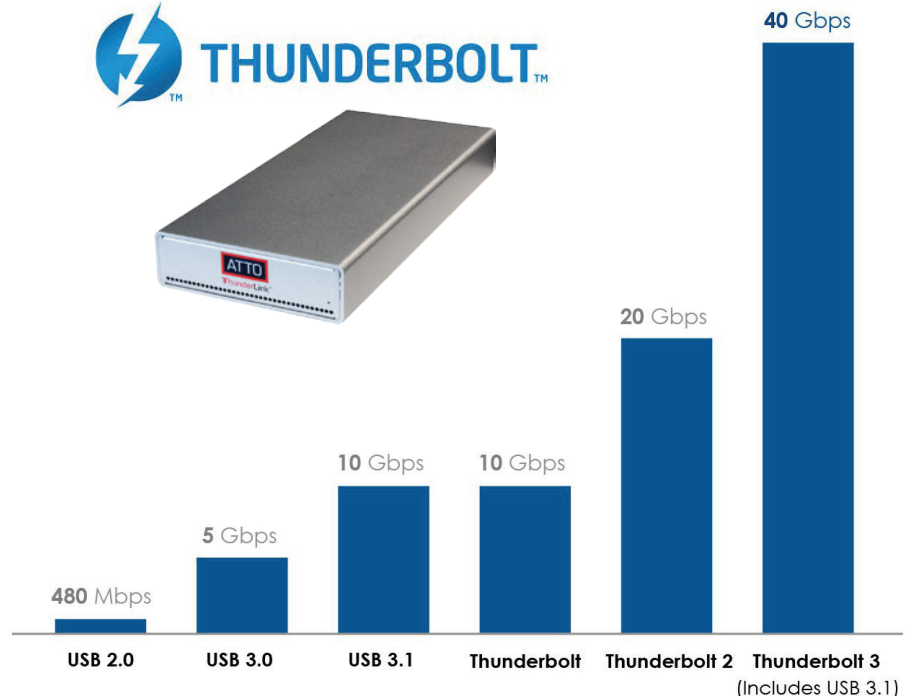
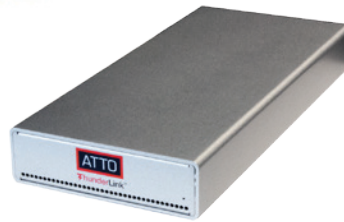
DID YOU KNOW



Did you know that over 300 hours of video are uploaded to YouTube every minute? Don't be daunted—Thunderbolt™ 3 can transfer this data in less than 20 seconds. Now your customers can spend less time uploading and more time creating their masterpieces.

4K Workflow speeds

Thunderbolt™	Supports 4K output through dual Thunderbolt connectors, each on a dedicated bus
Thunderbolt 2	Supports 4K output via one Thunderbolt connector
Thunderbolt 3	Supports <i>uncompromised</i> 4K workflows



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UPCOMING TRADESHOWS

Tradeshow Dates and Booth Numbers

Show	Dates	Location	Description
AVID Connect	April 22-23	Wynn Las Vegas, NV	AVID Connect is a gathering of media professionals, brought together by AVID technology to celebrate and promote content creation successes and upcoming technology.
NAB Show	April 24-27	Convention Center Las Vegas, NV	NAB is where global visionaries convene, where corporate alliances are formed, where development teams work vigorously to fill consumer demand for more digital content and where immersive experiences comes to life.
SuperMeet Las Vegas	April 25	Pavilion Ballroom, Rio Hotel Las Vegas, NV	SuperMeet is the convening of some of the most important names in post-production and collaborative editing workflows. The Las Vegas SuperMeet provides the post-production and broadcast community an opportunity to not only learn about latest technology trends, but to network and share industry news and opportunities.
GPU Tech Conference	May 8-11	San Jose, CA	The NVIDIA GPU Tech Conference is a gathering of minds to discuss the most vital work in the computing industry today, including deep learning and AI, big data analytics, virtual reality, self-driving cars and much more.



Going to NAB 2017? Visit ATTO at booth #SL9611

No matter what your workflow, ATTO provides the storage connectivity for 4K, 8K and beyond. We're embracing NAB 2017's mantra by showcasing our solutions in the 4K, 8K, HDR and VR work environments.

Both in the ATTO booth as well as in our on-site event center, ATTO will showcase live demos in:

- Fibre Channel SAN using Gen 6 Celerity, Thunderbolt 3 to 32Gb Fibre Channel and Thunderbolt 2 to 16Gb Celerity
- Thunderbolt 3 for AVID Nexis
- Build your own storage area network using XstreamCORE 7550

With a constant eye on future-proofing, ATTO will bring to NAB the technologies used today for collaborative workflows and those needed to move to 8K and beyond.

We look forward to having you stop by our booth #SL9611 and see what's new for you.



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SUCCESS STORY

ATTO SAS RAID Cards enable 8K Streaming

Video Clarity brings ATTO into 8K analyzing solutions

Situation

As companies prepare to bring 8K media options to consumers, they must first tackle the challenge of 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. This costs 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."

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Related Products

ExpressSAS 12Gb/s HBAs combine 12Gbs 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, 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.

Results

The result is the ClearView Xtreme Analyzer 8K—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 completely interrupted 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 Xtreme 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.

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SWITCHES

As QLogic departs, ATTO still delivers.

ATTO Technology, Inc., can fill the void QLogic is leaving in the market with our best-in-class 16Gb and 8Gb [FibreConnect™ Fibre Channel switches](#), featuring:

- Scalability up to 24 ports
- Backward compatibility
- Proven interoperability with third party products

If you're interested in expanding your solutions to include FibreConnect, please contact your sales representative or give us a call at +1.716.691.1999.

	FibreConnect1612	QLogic 5800	ATTO Advantage
Total bandwidth	384 Gb/s	200 GB/s (with stacking ports)	~2x more bandwidth
Total line-rate ports	24 @ 16 Gb/s 24 @ 8 Gb/s	0 @ 16 GB/s 20 @ 8 GB/s	Brocade drives the highest line-rate performance
Maximum port speed	16 Gb/s	8 Gb/s	Leads the industry
Power	0.14 watt/Gb/s	0.42-45 watt/Gb/s	3X the efficiency
Frame-based ISL Trunking	123 Gb/s framebased trunk	Features not available	Only provider of framebased trunking in the industry
ClearLink Diagnostic ports	Included	Not available	Simple cable and optics diagnostics
Forward error correction (FEC)	Included	Not available	Increased transmission reliability
ASIC-enabled buffer credit loss detection and automatic recovery at virtual channel level	Included	Not available	Enhanced reliability and automated recovery from errors

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ABOUT ATTO

For nearly 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-enabled devices, switches and software. ATTO solutions provide a high level of connectivity to all storage interfaces, including Fibre Channel, SAS, SATA, iSCSI, 40/10GbE and Thunderbolt. ATTO is the Power Behind the Storage.

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