

About ATTO

For over 30 years, ATTO Technology, Inc. has been a global leader across the IT and media & entertainment markets, specializing in network and storage 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 bus adapters, network adapters, protocol bridges, Thunderbolt™ adapters, and software. ATTO solutions provide high level 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.

All trademarks, trade names, service marks and logos referenced herein belong to their respective companies.

Remote Ethernet Connectivity for SAS Tape

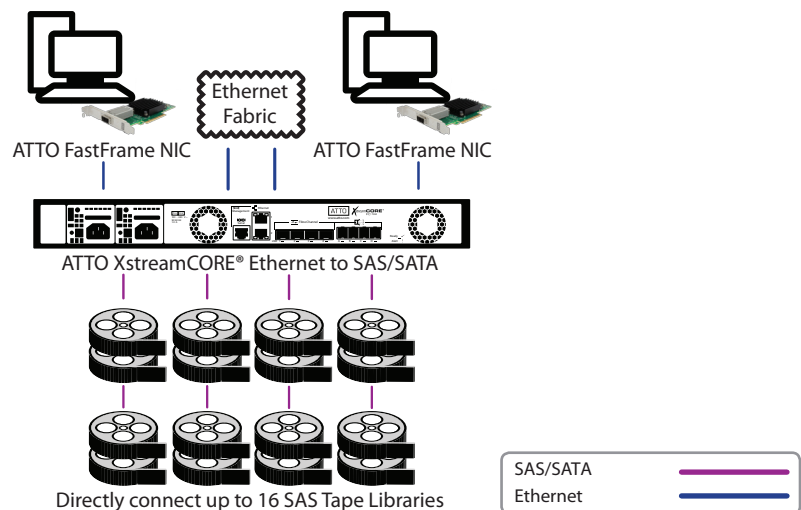
Quickly and easily add Ethernet connectivity for SAS tape

ATTO XstreamCORE®

The digital tape market is experiencing new growth due in part to its cost effective way of handling the growing amount of data being generated and stored in cloud to provide better margins over spinning disk technology. ATTO XstreamCORE® advanced protocol bridge enables the addition of direct attached SAS tape to shared Ethernet networks, giving vendors a flexible and easy way to scale and remotely share these devices.

XstreamCORE® adds remote Ethernet connectivity to multiple SAS devices, including LTO tape drives and libraries, with the possibility of connecting additional drives through SAS expanders. ATTO works with OEM customers to integrate their tape library support into XstreamCORE® including software, API and testing.

XstreamCORE® enables a lower cost of ownership versus native Ethernet tape devices. Fewer switch ports are required when using XstreamCORE® and power, cooling, cabling, and weight requirements can be better managed as the ATTO controller allows separation of racks of client servers, storage, and archive devices.



Solution Benefits

- XstreamCORE® is a protocol bridge that allows Ethernet to connect to SAS storage.
- Installs quickly and easily in 3 simple steps.
- Directly connect SAS tape drives and libraries with the ability to connect more when using a SAS expander.

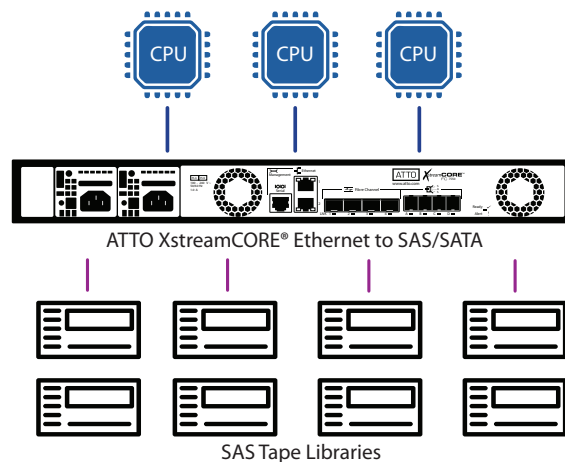


- Enables a lower cost of ownership versus native Ethernet tape devices by using lower cost SAS devices.
- ATTO SpeedWrite™ a tape performance feature significantly boosts write performance by effectively managing commands between attached clients and tape devices.
- XstreamCORE® is a solid state controller that uses an FPGA developed by ATTO to move data very efficiently.
- Advanced diagnostics and management features.
- XstreamCORE works with attached SAS block storage devices.
- XstreamCORE relies on client-side software to handle backup and recovery functions.
- XstreamCORE presents connected drives to compute as iSCSI which can be zoned individually to a single physical host or multiple hosts.
- ATTO developed I/O Acceleration and Offload technologies that make XstreamCORE one of the fastest storage connectivity products on the market with over 1.2M 4K IOPS or 6.4GB/s throughput per controller.

ATTO XstreamCORE enables remote connectivity to direct attached SAS devices with robust mapping that allows all hosts to be assigned to individual drives, all drives or none of the drives.

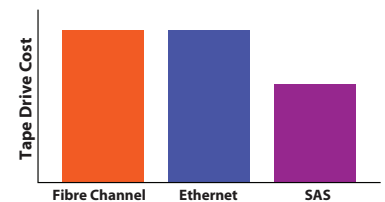
ATTO XstreamCORE features ATTO SpeedWrite™ technology, which is a time proven technology that accelerates data throughput while writing to drives to maintain effective tape drive performance.

ATTO XstreamCORE connects to hosts or fabrics using 40GbE RDMA over Ethernet to provide lossless transmission of data. ATTO XstreamCORE allows all physical hosts to connect to all storage with the ability to assign hosts to specific storage. XstreamCORE® bridges connect SAS, SSDs, HDDs, Optical and Tape drives with up to a total of 1.2 million 4K IOPS and 6.4GB/s throughput per controller with as little as <2 microseconds of added latency.



ATTO XstreamCORE® Protocol Bridge

- ATTO XstreamCORE® protocol bridge provides a versatile connection point that allows storage and compute to scale independently of each other and disaggregates SAS storage so that it can be shared and managed more effectively.
- ATTO XstreamCORE base functionality is a protocol bridge that allows Ethernet to connect to SAS storage to allow multiple hosts to access and share storage at direct attached speeds with very little latency.
- Both rack and blade servers can benefit from added raw storage connected by Ethernet via individual SAS JBOD enclosures with each drive individually mapped and assigned to physical servers.
- ATTO XstreamCORE relies on client-side software (software defined storage solutions) to handle features such as snapshot, data redundancy and deduplication.
- ATTO XstreamCORE presents SAS connected drives or RAID Groups out to compute as iSCSI which can be mapped individually to a single physical host or multiple hosts.



Single FC and Ethernet drives can be as much as \$600 more per drive than SAS tape drives

