# **TECH BRIEF**



### Benefits of ATTO XstreamCORE® intelligent Bridge connected SAN based storage

- Increases ROI of storage solutions by quickly and cost effectively converting direct attached SAS RAID, JBOD or JBOF storage to high performance SAN technology enabling load balancing and a faster backbone
- Improves application and network performance by enabling all servers to connect to and share all storage at up to 6.4GB/s throughput or 1.1M 4K IOPS per controller with very low latency (less than four microseconds)
- Maximizes storage utilization and power while reducing the total cost of ownership by aggregating direct attached storage devices on one shared storage network
- Scale storage without disruption by allowing IT administrators to add storage capacity as needed, without server reboots
- Increase uptime as storage is independent of servers and not required to be taken offline during maintenance or server failure
- Enhances storage visibility and network performance by allowing IT administrators to grant storage access to specific servers and clients and assign unique boot drives to physical servers
- Decreases amount of time it takes to transfer data between hosts

## **Build an Open, High Performing SAN Quickly and Cost Effectively**

### Add Fibre Channel to SAS Connected JBOD, JBOF and RAID Enclosures

ATTO XstreamCORE® intelligent Bridge is an open, modular controller that adds enterprise Fibre Channel features, hardware data mover functionality and host LUN mapping to direct-attached serial-attached storage (SAS) storage devices.

Direct-attached storage devices in a virtualized environment frequently need to transfer data between each other as an aspect of virtual machine load balancing or migration. This can be a time-intensive process which is performed over an Ethernet network. ATTO XstreamCORE *i*ntelligent Bridges allows direct-attached SAS storage to be placed in a Fibre Channel storage area network (SAN) and makes the limitations seen with direct attached storage a thing of the past.

ATTO XstreamCORE *i*ntelligent Bridge serves as a platform for IT administrators to enable direct-attach SAS RAID, JBOD or JBOF storage to be part of a Fibre Channel SAN fabric. Creating a Fibre Channel SAN enables all attached servers to have direct access to all storage at a high rate of speed with very low latency—up to 12GB/s throughput or 2.2M 4K IOPS per controller pair, eliminating bottlenecks while adding redundancy. Adding SAN technology with the ATTO XstreamCORE *i*ntelligent Bridge also removes the requirement for data migration when upgrading existing storage, meaning minimal downtime with no risk of data loss or corruption.



#### **About ATTO**

For over 30 years, ATTO Technology, 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.

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### **Enhanced Storage Availability and Visibility**

Adding ATTO XstreamCORE® bridges, Celerity™ Fibre Channel host bus adapters (HBAs) and FibreConnect™ Fibre Channel switches in front of new or existing SAS storage arrays gives IT managers the ability to centrally localize storage and improve overall performance by adding a simple SAN solution that is easy to install, easy to manage and easy to support. With a direct attached SAS environment, each server can only access the block level storage directly connected to it. Under a SAN network that incorporates the ATTO XstreamCORE *i*ntelligent Bridge, the data attached to a failed server can be accessed from any other server on the network without missing a beat.

## Keep Storage Separate with ATTO XstreamCORE

The open, modular configuration of the ATTO XstreamCORE® intelligent Bridge gives IT administrators the freedom to scale the size of each individual resource: software, compute, memory, network and storage, while providing industry leading performance. With data path acceleration, the ATTO XstreamCORE intelligent Bridge accelerates all reads and writes in hardware while providing the lowest latency and quickest response time for I/O hungry applications.

With a focus on speeding up the data center and with the price of solid-state drives (SSD) falling while capacity is rising, having high performance, low latency technology that can harness SSD capabilities is vitally important. If you require SSDs to perform well, there are few technologies that can maximize SSD performance and reduce latency as well as Fibre Channel. The ATTO XstreamCORE intelligent Bridge lets IT administrators assign a single shelf of SSD drives to the network and leverage that investment and performance among every attached client and server, or you can architect a complete solution using only SSD drives.

With the XstreamCORE intelligent Bridge, it's possible to architect a storage infrastructure with SSD or hard-disk drive (HDD) devices with automatic SAS to Fibre Channel LUN mapping, and host group mapping, which allows IT administrators to assign access to specific LUNs to attached clients. The XstreamCORE is also VMware Ready® certified with VAAI Hardware Data Mover support to allow organizations to build storage solutions that offload CPU, memory and network resources from data transfers while the controller transfers data in the background.



