# **SOLUTION BRIEF**



### 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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### Host Read Cache for VMware Datacenters

### Add External SAS/SATA SSD Flash with Multipathing and Fibre Channel Support

### Take Advantage of VMware vSphere® Flash Read Cache™ (vFRC) with XstreamCORE®

Adding remote flash to ESXi<sup>™</sup> hosts and allocating it as read cache is supported in VMware<sup>®</sup> as of ESXi 5.5. VMware vFRC is a feature that allows hosts to use solid state drives as a caching layer for virtual machines virtual disks to improve performance by moving frequently read information closer to the CPU. Now SAS shelves of SSDs can be added to the datacenter where hosts can be allocated and assigned the flash they need to improve each VMs read performance. VMware has published vFRC performance numbers that show database performance can be increased between 47% - 145% through proper sizing and application of vFRC. vFRC requires VMware vSphere<sup>®</sup> Enterprise Plus<sup>™</sup> edition.

## ATTO XstreamCORE<sup>®</sup> adds Flash SSDs up to 64 hosts per appliance pair

ATTO XstreamCORE<sup>®</sup> interfaces with commodity shelves of up to 240 total SAS/SATA SSDs per appliance. XstreamCORE supports the ability to map Fibre Channel initiators directly to SAS LUNs up to a maximum of 64 ESXi hosts. This benefits hosts that may be space constrained from adding SSD drives, such as blade servers or servers without free drive slots. ATTO recommends that appliances be installed in pairs for redundancy both in Fibre Channel pathways as well as to connect to multiple SAS controllers of a JBOF shelf. Multiple XstreamCORE appliance pairs can be added to a fabric to support far more than 64 hosts in a single data center.

ATTO XstreamCORE intelligent Bridges					
Product	4K IOPS	Throughput	Host Ports	x4 SAS Ports	SKU
XstreamCORE FC 7600	1.1M	6,400 MB/s	(2) - 32Gb Fibre Channel	4 (16 PHYs)	XCFC-7600-002
XstreamCORE FC 7550	1.1M	6,400 MB/s	(4) - 16Gb Fibre Channel	4 (16 PHYs)	XCFC-7550-004

XstreamCORE listed in the VMware Compatibility Guide



The Power Behind the Storage

### ATTO XstreamCORE eliminates the need for enterprise storage

- XstreamCORE FC 7550/7600 presents SAS/SATA SSDs on Fibre Channel fabrics to all ESXi hosts for use as local SSD flash for hosts and read cache for VMs or even raw SSD capacity storage space.
- Allows the use of commodity JBOFs to scale up to 240 total SSD devices per • appliance pair instead of more expensive All Flash or Enterprise storage.
- No hardware or software licensing required to utilize all XstreamCORE features. .
- XstreamCORE features ATTO xCORE<sup>™</sup> processor which accelerates all I/O in • hardware ensuring a deterministic, consistent protocol conversion latency of less than 4 microseconds.
- XstreamCORE advanced features including host group mapping, which isolates • specific Fibre Channel initiators to specific SSD LUNs ensuring hosts can only see the SSDs they are allocated. This mapping can be quickly and easily changed as host needs and additional SSDs are added to the environment.

### Adding SSDs as read cache via Fibre Channel

XstreamCORE connects up to 10 shelves of flash SSDs to a Fibre Channel fabric and then to up to 64 VMware ESXi hosts. This storage is then set up as remote flash for hosts or as SSD LUNs to scale up existing storage.



6Gb and 12Gb SSD JBOF Shelves



The Power Behind the Storage 02/27/20

#### ATTO XstreamCORE® FC 7550

16Gb Fibre Channel to SAS



### ATTO XstreamCORE® FC 7600

• 32Gb Fibre Channel to SAS

