TECH BRIEF

ATTO

XstreamCORE®
Intelligent Bridges

- Hardware-accelerated protocol bridge
- Over 1.2 million 4K IOPS per controller
- Less than 2 microseconds added latency (ET8200)
- Up to 6.4 GB/s sustained throughput
- 32Gb Fibre Channel and 40Gb Ethernet to 12Gb SAS
- Parallel command and data path processing
- All reads/writes offloaded to dedicated hardware
- Supports SSD, HDD, or hybrid configurations
- Scale up to 240 SAS/SATA devices
- Universal power input: 85–264 VAC, 0.5A (typical), 47–63 Hz

Management and Monitoring

- Web-based GUI, CLI, and REST API
- Drive Map Director™ for secure device mapping
- Extended Copy (LID1) for fast offloaded transfers
- Real-time analytics and performance counters
- Secure protocols: TLS, SSH, SNMPv3
- PCIe analyzer and diagnostics
- IPv6/IPv4 dual stack support
- Transparent passthrough for self-encrypting drives

Reduced CapEx and OpEx

- Use low-cost COTS SAS JBOD and JBOF storage
- Build high-density, low-latency storage fabrics
- Integrates with SDS platforms
- Reduce maintenance and vendor lock-in
- Pay-as-you-grow scalability
- Long lifecycle, modular architecture
- Plug-and-play deployment

ATTO XstreamCORE® Intelligent Bridge
Build Your Own Private Cloud Storage

A private cloud is a networked storage solution deployed for internal users in a single organization, with access protected by the organization's firewall to keep data secure. It can reside in an enterprise data center or at a colocation facility managed by a service provider. The benefit of a private cloud is that it provides flexibility and simplicity by allowing users to set up and manage their own environment.

ATTO XstreamCORE® intelligent bridges serve as a platform for IT system integrators to build out private-cloud storage. XstreamCORE® bridges integrate off-the-shelf SAS JBOD or JBOF storage into Ethernet or Fibre Channel storage area networks (SANs), infrastructures that centralize storage for shared server access, support server virtualization, and deliver guaranteed data integrity, low latency, and scalability. ATTO XstreamCORE adds robust management and monitoring features, along with a standardized set of services and integrations when used with leading software-defined storage (SDS) platforms from companies such as Nexenta Systems, DataCore, Maxta, and other SDS innovators supporting modern cloud and virtualization environments.

Lower TCO

ATTO XstreamCORE enables a lower total cost of ownership compared to proprietary flash and hybrid storage appliances that are costly to scale and can create vendor lock-in. With XstreamCORE, system integrators can build high-performance, high-capacity storage solutions that aggregate up to 240 SAS/SATA solid-state drives (SSDs), hard disk drives (HDDs), or hybrid SSD/HDD devices—expandable to 960 drives in validated enterprise configurations. Costs for an all-flash SSD system—including JBOD enclosures and SSDs—can be as low as $0.05 per GB, and $0.01 per GB for an all-HDD implementation*. XstreamCORE also lowers TCO by enabling servers to share SSDs as read and/or write cache, and provides the option to boost existing storage performance by adding an SSD flash tier—avoiding the need for expensive all-flash arrays.

About ATTO

For over 35 years ATTO Technology, Inc. has been a global leader specializing in network and storage connectivity and infrastructure solutions for the most data-intensive computing environments. ATTO works closely with its partners to create the world's best end-to-end data delivery, management and storage solutions.

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High Performance, Low Latency

XstreamCORE delivers industry-leading performance, with the XstreamCORE 7600 achieving up to 1.2 million 4K IOPS and less than 4 microseconds of added latency per controller in a dual-controller Fibre Channel configuration. The ET 8200, optimized for Ethernet deployments, offers comparable throughput with latency as low as 2 microseconds through full TCP/IP offload. These performance levels are made possible by ATTO's advanced xCORE™ hardware acceleration architecture, which dedicates memory modules and data paths exclusively to performance-critical commands. Because all reads and writes are accelerated in hardware, commands do not compete for shared system resources—enabling more data transfers at faster rates.

The XstreamCORE platform's combination of high throughput and ultra-low latency also delivers clear cost advantages. When used to build storage solutions with off-the-shelf components, the cost per IOP can be as low as $0.0075 for all-SSD implementations and approximately $0.0045 for hybrid SSD/HDD setups*.

Benefits

· Enables system integrators to build highperformance, high-capacity storage solutions aggregating up to 240 SAS/SATA SSD, HDD, or hybrid SSD/HDD devices—supporting ~7.2PB raw capacity (using 30TB drives)

· Ideal platform for database acceleration, analytics, AI/ML workloads, and other demanding, latency-sensitive applications

· Brings benefits of Fibre Channel and Ethernet SAN technologies, including guaranteed data delivery, sub-4 microsecond latency, and support for server and site clustering to SAS JBOD or JBOF storage

· Modular design enables easy data migration and seamless software/hardware component upgrades

· High availability configurations provide enhanced reliability and continuous uptime for storage shared across multiple servers
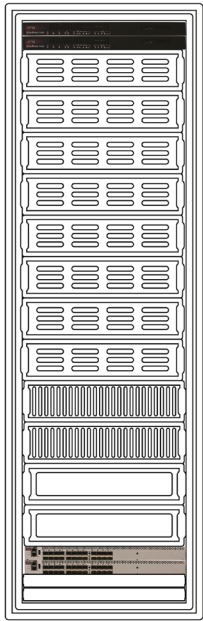

Figure 1

Figure 2

Servers

ATTO XstreamCORE
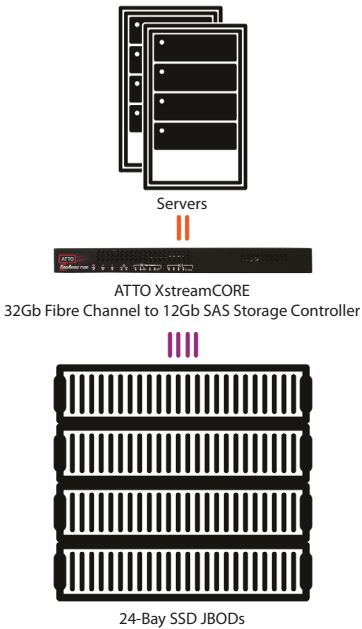32Gb Fibre Channel to 12Gb SAS Storage Controller

24-Bay SSD JBODs

Figure 1 - Dual XstreamCORE bridges with 10 shelves of SSD/ HDD storage connected to a server via 32Gb Fibre Channel

Figure 2 - All SSD configuration with a single XstreamCORE bridge achieving up to 1.2M 4K IOPS

*Note: Costs are based on typical enterprise configurations using off-the-shelf SAS/SATA SSDs and JBOD enclosures. Actual costs may vary depending on hardware selection and system design.

	XstreamCORE w/ SSD	XstreamCORE w/ HDD	Hybrid Storage	All Flash Array	PCIe Flash
Performance	Up to 1.2M 4K IOPS	Up to 1.1M 4K IOPS	10,000s 4K IOPS	1M–3M 4K IOPS	500,000+ 4K IOPS
Throughput	Up to 6.4 GB/s	Up to 6.4 GB/s	Up to 6.4 GB/s	Up to 6.4 GB/s	Up to 6.4 GB/s
Usage	Shared Storage	DAS, Shared	DAS, Shared	DAS, Shared	Single Server storage
Latency	Controller <4 microseconds; overall depends on SSDs	Controller <4 microseconds; overall depends on HDDs	5–10 milliseconds	<1 millisecond	100s of microseconds

ATTO XstreamCORE 7600 connectivity

ATTO XstreamCORE ET 8200 connectivity