

Build Your Own High Performance Shared Storage

Powered by ATTO FibreBridge™ Storage Controllers

Shared Storage, Shared Fast

While performance is a key driver in eliminating storage bottlenecks, latency dictates how fast storage can respond to an application request. Spinning hard disk drives typically have a high amount of latency due to how they store and retrieve data. SSD Flash storage, on the other hand, is extremely efficient in responding to application requests.

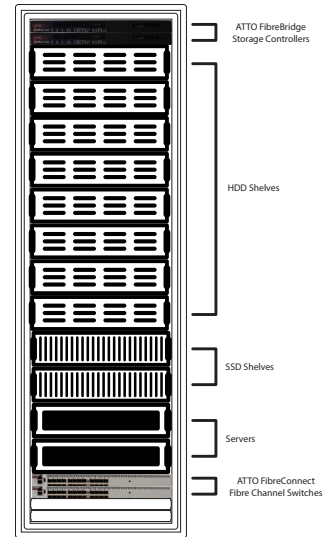
ATTO's FibreBridge 7500 Storage Controller is engineered to minimize latency while providing high throughput and I/O performance. By connecting SAS SSD and HDD storage to a Fibre Channel SAN while adding only <4 microseconds of latency, it allows users to construct high performance, high capacity storage solutions.

- ATTO 7500 Storage Controller
 - 1.47M 4K IOPS
 - 6.4GB/s throughput
 - <4 microseconds latency
- ATTO 6500 Storage Controller
 - 120,000 4K IOPS
 - 2.4GB/s throughput

Enterprises today are under pressure to do more with less IT resources. While storage capacity requirements double every 18 months on average, storage budgets remain relatively flat. At the same time, the rise of virtualization and private cloud deployments in data center infrastructure has created a need for greater agility and higher performance.

Software Defined Storage provides a solution to many of the current challenges posed by the changing IT landscape. In contrast to traditional storage infrastructure, Software Defined Storage migrates features and services out from the physical hardware to a software layer above storage. In addition to eliminating vendor lock-in, this enables cost reductions through the use of commodity servers and storage. It also allows for system capacity and performance to be easily scaled in response to changing business needs.

When building out a Software Defined Data Center, it's important to first define performance goals. Storage bottlenecks can impact even the most advanced server nodes, limiting throughput and transactional performance. Efforts must also be made to balance performance and cost: Hybrid Arrays are cost effective but can present performance limitations, plus budgets may not cover the cost of All-Flash Arrays.



Price and Performance Flexibility

ATTO FibreBridge Storage Controllers enable IT managers to build out Software Defined infrastructures using off-the-shelf JBOD storage and Software Defined Storage software, which provides advanced features such as deduplication, RAID, compression, snapshot, tiering, replication and more. Two available options give users the choice to use either a high performance controller which aggregates and shares SSD Flash storage for applications where throughput and IOPs are a priority, or a budget-friendly controller primarily aimed at building out HDD capacity storage solutions along with SAN tape drive connectivity.





FibreBridge 7500 Dual 16Gb Fibre Channel Host Ports		FibreBridge 6500 Dual 8Gb Fibre Channel Host Ports	
Throughput	6.4 GB/s	Throughput	2.4 GB/s
4K IOPS	1.5M	4K IOPS	120,000
Target Application	Sharing SSD storage and aggregating HDD storage	Target Application	High capacity HDD archive storage with SAN tape connectivity

Cost Breakdown

Product	7500	7500 Dual	6500	6500 Dual
SSD TB	4	4	N/A	N/A
HDD TB	9	9	96	96
IOPS	735K	1.47M	60K	120K
\$/IOP (without Storage)	\$0.017	\$0.017	\$0.114	\$0.114
\$/IOP (with Storage)	\$0.039	\$0.028	\$0.23	\$0.17
\$/GB*	\$2.21	\$3.17	\$0.21	\$0.32




*When configured in a solution with JBOD storage

Storage Controllers





Qualified With	Manufacturer	Model	SKU
	ATTO Technology	6500 Storage Controller	FCBR-6500-D00 FCBR-6500-DPS
	ATTO Technology	7500 Storage Controller	FCBR-7500-DPS

Cables




For best results, ATTO qualified and tested Fibre Channel and SAS cables are recommended

Qualified With	Manufacturer	Model	SKU
	ATTO	SAS QSFP 1M & 3M (6500)	CBL-QSFP-EP1 CBL-QSFP-EP3
	ATTO	SAS MiniSAS-HD 1M (7500)	CBL-4488-E1X
	ATTO	Fibre Channel 3M & 10M	CBL-LCLC-R03 CBL-LCLC-R10




JBODs

Qualified With	Manufacturer	Model	Drive Slots
	AIC	J2024-01	24
	Dell	MD1200	12, 24 or 60
	HP	MSA2040 SAS D2700 SAS	24
	Supermicro	CSE-216BE2C-R920LPB	24







Drives

Qualified With	Manufacturer	Model	Type
	HGST	Ultrastar C10, C15, SSD400S, SSD800MM and SSD1600MM	SSD and HDD products
	Micron	M550 and P400	SSD products
	Seagate	Savvio 10K.3	HDD products

Software

Qualified with	Manufacturer	Product	Type
	Microsoft	Storage Server	Storage Spaces
	NexentaStor	MetroHA plugin (6500)	Software Defined Storage
	SUSE	Open SUSE	Operating system

SAN Infrastructure

Qualified with	Manufacturer	Product	Type
	ATTO	Celerity Fibre Channel HBAs	8Gb and 16Gb models
	ATTO	FibreConnect Fibre Channel Switches	8Gb and 16Gb models
	Qlogic	Fibre Channel HBAs	8Gb and 16Gb models
	Emulex	LightPulse® HBAs	8Gb and 16Gb models
	Brocade	Fibre Channel Switches	8Gb and 16Gb models
	Cisco	Fibre Channel Switches	8Gb models

ATTO Storage Controllers are qualified and tested with products from the above listed manufacturers. Other models and manufacturers may be compatible; contact ATTO Technology for more information on interoperability.