BENCH**MARK**

ATTO Celerity™ Fibre Channel HBAs

ATTO Celerity™ 32Gb and 16Gb host bus adapters (HBAs) were designed to meet the ever-growing performance needs of a scalable storage area network (SAN). Today's SANs require increased performance to support the data request loads put forth by common enterprise applications such as email, online transaction processing (OLTP), data warehousing and web applications. This load, measured in IOPS, directly affects productivity, efficiency and revenue. Using a high-performance HBA is even more critical when used in virtual environments where multiple virtual machines (VMs) are sharing the same HBA.

Celerity HBAs have an advantage over the Qlogic embedded in the processor's architecture. The ATTO controller has multiple cores, providing full IOPS performance to a single port in "active standby" mode on dual-port HBA. If a port, cable or SFP fails, a port on the ATTO adapter can support up to 2.5X as many IOPS as the competitive HBA. ATTO Celerity HBAs allow sustained maximum performance, enabling users to continue to meet service level agreements.

With data centers moving to all-flash arrays, the need to drive greater performance to more solid-state drives (SSDs) is becoming critical. ATTO Celerity HBAs support up to 2X the number of outstanding commands than the competition. This is very important for high-transaction environments because Celerity can keep more commands in flight at any point in time, resulting in lower latency. Celerity optimizes CPU interrupts using ATTO algorithms, which allow the server applications to process more data in a given period of time. This results in overall higher IOPS performance which means you can connect and sustain performance to more SSDs than the competition.

Celerity HBAs make it possible to have longer distances between your servers and storage. Featuring 5X more buffer credits than the competition, Celerity HBAs support more data in-flight allowing you to extend your connection to storage up to 10 km, without degrading throughput for demanding long-distance applications such as a stretch cluster.

ATTO and QLogic Comparisons

Subject	ATTO	QLogic	ATTO Advantage
IOPS (Single Port)	1.6M	650K	ATTO provides 2.5X better performance
Commands in Flight	128	64	ATTO provides faster throughput
Buffer Credits	80	16	ATTO supports more data in flight

**ATTO Celerity HBA vs. QLogic HBA
1 / 2 port 32GFC Read IOPs - Windows**
IOPS: Sequential Writes

Legend:
- Qlogic QLE2742 2P 32GFC
- Qlogic QLE2742 1P 32GFC
- ATTO CTFC-322E 2p 32GFC
- ATTO CTFC-322E 1p 32GFC

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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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