

## ABOUT ATTO TECHNOLOGY, INC.

For 30 years, ATTO Technology, Inc., has been a global leader across the IT and media & entertainment markets, specializing in storage and network 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. Working as an extension of customer's design teams, ATTO manufactures host and RAID adapters, network adapters, storage controllers, Thunderbolt enabled adapters and software. ATTO solutions provide a high level of connectivity to all storage interfaces, including Fibre Channel, SAS, SATA, iSCSI, 40/10GbE, NVMe and Thunderbolt. ATTO is the Power Behind the Storage. [www.atto.com](http://www.atto.com)

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## ATTO MultiPath Director™

HIGH-AVAILABILITY WORKSTATION CONNECTIVITY FOR FIBRE CHANNEL STORAGE

### WHAT IS THE ATTO MULTIPATH DIRECTOR™ (MPD)

Most storage systems today utilize redundant RAID controllers with multiple Fibre Channel inputs to assure optimal performance and continuous up-time. Operating systems must support Asymmetric Logical Unit Access (ALUA) in order to recognize and manage multiple paths to the same storage device. ALUA support is limited in the macOS® operating system. To overcome these shortfalls, ATTO developed MultiPath Director™; a proprietary operating system driver, available for use with the ATTO ThunderLink Fibre Channel adapters that enables Apple, as well as Windows hosts, to connect directly to higher-end redundant storage systems.

While each storage manufacturer implements slightly different variations of ALUA, the ATTO MultiPath Director driver is designed to support each variation and automatically discovers, configures and manages connectivity to the storage controllers for optimal performance. Competitor products are limited to using the native multipathing software built into macOS.

MultiPath Director, when paired with storage systems, provides a completely redundant, high-performance storage solution for workstation and server applications. MultiPath Director ensures deadlines are met through high availability access to data for multiple users, enabling the swift and efficient completion of projects. With automatic path failover and fallback, MultiPath Director allows multiple workstations or servers to continually access the same 'pool' of storage.

Real time and simultaneous access to data enables workgroups or single users to create efficient workflows that save time and money, while dramatically increasing a project's time to completion.

Furthermore, ATTO MultiPath Director comes with an easy-to-use Configuration Tool that provides a simple platform to configure, monitor, manage and troubleshoot the multiple connections between a host and its storage. The ATTO Configuration Tool also allows users to view and manage the status of all paths to each target or LUN, as well as track statistics for data transferred across each path.

When it comes to meeting the storage needs for digital creative assets, performance is key. Having a reliable, field-proven, well-supported and easy-to-use solution is critical. Every storage array has unique characteristics. End users need the ability to optimize a solution for their unique work flow to provide the most efficient data-transfer and storage management methodologies.

ATTO MultiPath Director provides that flexibility and management capability to tune for distinct work flows. Combined with configuration documentation, troubleshooting guidelines, and knowledgeable technical support, end users are ensured a pleasurable out of the box experience.

When it comes to determining what storage options will best suit a user's needs, the choice is an easy one – choose the solution that is qualified and endorsed by industry leaders and used by many professionals in creative communities, ATTO MultiPath Director.

**ATTO MPD COMPARED TO NATIVE macOS MULTIPATHING**

<b>Feature</b>	<b>Benefit</b>	<b>ATTO Product with ATTO MultiPath Director</b>	<b>Native macOS MultiPath SW</b>
LUN-Based Failover	Best resolution for error recovery	Yes	Yes
Drivers Customized and Optimized to Specific Storage Vendor Controller	Each storage vendor implements ALUA slightly different. ATTO has tested and customized MultiPath Director to assure interoperability and optimal performance with many storage vendors.	Yes	No
16Gb & 8Gb Fibre Channel Support	Higher performance for data-intense applications and workflows.	Yes	Yes
32Gb Fibre Channel Support	Higher performance for data-intense applications and workflows.	Yes	No
Ability to Steer Reads and Writes	Optimized for performance	Yes	No
Tunable IO Sizes	Can be customized for many different workflows	Yes	No
Tunable Failover Failback time-outs	Optimized for streaming environments	Yes	No
Uniform Behavior Across Multiple Operating Systems	Synchronized failback/failover behavior in heterogeneous SAN including macOS, Windows, Linux & Meta Data Controllers	Yes	No
Full GUI Support	Provides Full Control of the adapter and its configuration	Yes	No
Remote Management Support	Allows user to administer their SAN from any computer	Yes	No
Save Configuration	Allows user to identify bad paths or path changes once the SAN has been configured	Yes	No
IO Stats Monitoring	Used to optimize system and for troubleshooting	Yes	No
IO Performance Monitoring	Ability to monitor IO performance	Yes	No
Locate Functionality	Helps diagnose technical issues by blinking path LEDs	Yes	No
Advanced Dynamic Parameter Reporting	Allows the user to see the state of a link, connection mode/rate, WWN, etc...	Yes	Partial
Advanced Error Handling	Supports advanced vendor unique error handling	Yes	No
Support for Some Non-ALUA Based Targets	Supports multiple failover methodologies	Yes	No
Best-in-class Support with Customized Go-to-market Program	Dedicated technical support, training, co-marketing, collaterals etc. ATTO and each qualified Storage Partner have support agreements in place to assure the end users have a place to go for assistance. Apple will not openly support all storage vendors.	Yes	No