



ATTO Technology, Inc.

Product Release Notes

ThunderLink® FC 2082/2162 and 3322/3162 Multipath Director™ Release V2.31MP – macOS®

1. General Release Information

These product release notes define the new features, changes, known issues and release details that apply to the ThunderLink Fibre Channel 2082/2162 and 3322/3162 adapter's version 2.31MP, which was released on June 25, 2019. This information pertains to macOS® 10.11 and later.

2. Changes

- **Version 2.31MP (Released 06/25/2019)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be utilized with this driver release.
 - Compatibility with Dark mode
 - Naming convention of installer package updated
- **Version 2.30MP (Released 05/28/2019)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be utilized with this driver release.
 - Changed installer package name to osx_drv_tlfc5_XYZ
 - Improvements to WWNs reported to macOS for multipathed devices
 - Driver is notarized to be compatible with macOS 10.14.5 and later security feature
- **Version 2.28MP (Released 03/28/2019)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be utilized with this driver release.
 - Improve logging of out-of-resource errors.
 - Updated logging of task management events
 - Display the adapter port number in System Profiler
 - Additional support for the Promise E830f array
- **Version 2.27MP (Released 11/05/2018)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be utilized with this driver release.
 - **New Features/Enhancements**
 - Improved stability when the driver loads
 - Change the multipathing method for the Active XSG1 and Quantum QXS storage array prevent saved configurations from being loaded incorrectly
 - Improvements made when hot plugging devices with I/O in flight
- **Version 2.26MP (Released 04/16/2018)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be utilized with this driver release.

- **New Features/Enhancements**
 - Added support for a new flash bundle format that supports smaller download portions compatible with the maximum transfer size for the driver
 - Additional support for Promise VTrak E630f and the DotHill DH3000
 - Improvements to displaying which offline devices are being presented to the OS (and displayed in ConfigTool).
 - Note: As a result of this change, previously saved configurations may need to be deleted and resaved to display correctly after reboot
- **Version 2.25MP (Released 12/18/2017)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be utilized with this driver release.
 - **New Features/Enhancements**
 - Added atdevinfo, atfcinfo, and atlocate CLI tools to the release package
 - Added HP MSA 2050 support
- **Version 2.20MP (Released 09/25/2017)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be utilized with this driver release.
 - **New Features/Enhancements**
 - Fixed a potential error when doing extended link bounce testing
 - Increased stability during tape I/O
 - Improvements to scheduling and processing device management
 - Changed the method for reporting device changes to macOS
- **Version 2.16MP (Released 05/03/2017)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be utilized with this driver release.
 - **New Features/Enhancements**
 - Added support for the Seagate 5825 storage array
 - Added support for atinfo to display the SFP serial number
- **Version 2.10MP (Released 12/20/2016)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be utilized with this driver release.
 - **New Features/Enhancements**
 - Added support for Dot Hill 6424 and 6844 storage
 - Added link cable beacon feature
 - Improved the speed of reporting devices to the OS
 - Adjusted the default maximum transfer size to 512KB to improve third party storage controller performance
- **Version 2.05MP (Released 09/20/2016)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be utilized with this driver release.
 - **New Features/Enhancements**
 - Added support for macOS Sierra
 - Added '-t <number>' option to system NVRAM parameters to change the number of targets.
 - Enabled LU-based MP for Quantum QXS storage.
 - Resolved potential driver hang if I/O errors occur during OS device scanning.
- **Version 2.00MP (Released 06/30/2016)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be utilized with this driver release.

- **New Features/Enhancements**
 - Added support LU-based multipathing and for configuring an alias for a logical unit or a path's adapter or target port
 - Enhanced saved configurations so more device information is reported when the device is disconnected
 - Additional support by adding path set identifier determination for LSI and NETAPP INF-01-00 storage arrays
 - Improved functionality during multiple, consecutive path failures and when large numbers of LUNs are present
 - Added rotational logging to the event log.
 - Developed enhancements for completion times for failover or discovery
- **Version 1.20MP (Released 01/21/2016)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be utilized with this driver release.
 - **New Features/Enhancements**
 - Resolved a connection issue with previous versions of EMC storage
 - Resolved a possible crash when pulling the TB cable.

Version 1.15MP (Released 08/06/2015)

- **Note:** It is recommended that the latest flash bundle available on ATTO website be utilized with this driver release.
- **New Features/Enhancements**
 - Adjusted the format of the flash revision to MM/DD/YYYY to conform to other drivers format
 - Added support for the Dot Hill 4854 array.
 - Fixed processing of the max transfer size values set by the Config Tool
 - The dynamic execution throttle minimum value has been increased to account for task set full simulations.
 - The event logging service has been improved to use less system resources
 - Added support for the T10-PI setting in atfcvnr.
- **Version 1.10MP (Released 03/25/2015)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be utilized with this driver release.
 - **New Features/Enhancements**
 - Applications are allowed to change the path mode from disabled to the default for ALUA devices
 - The feature to disable native OS X multipathing now supports ATTO 16Gb controllers in target mode
 - Failback to active/non-optimized paths is performed in the same manner as standby paths by default
 - Added LSI/NetApp INF-01-00 storage array support to use the correct identifiers for path set configuration. As a result, previously saved configurations will no longer be in effect for these arrays. The configuration must be resaved after upgrading to this version
- **Version 1.07MP (Released 01/27/2015)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be utilized with this driver release.
 - **New Features/Enhancements**
 - Improved I/O response underrun processing
 - Corrected a resource leak error

- **Version 1.05MP (Released 10/30/2014)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be utilized with this driver release.
 - **New Features/Enhancements**
 - Support for Mac OS 10.10
 - Added support for Quantum StorNext QX series storage.
 - Active/non-optimized paths are activated for I/O in the same manner as standby paths by default.

- **Version 1.00MP**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be utilized with this driver release.
 - **New Features/Enhancements**
 - Initial release of Mac drivers for the ThunderLink FC 2082/2162.
 - **Supported OS**
 - Mac OS X 10.6.8
 - Mac OS X 10.7
 - Mac OS X 10.8
 - Mac OS X 10.9

3. Known Advisements

- *When interfacing the ATTO ThunderLink 2082 to a 16Gb Fibre Channel switch that uses SFP+ transceivers from Avago (including Avago SPFs re-branded by a switch manufacturer), a link-up delay of up to 60 seconds may be observed if the switch port is set to auto-speed detect. To rectify the delay, set the speed of the interfacing switch port to 8Gb, Avago Part #: 57-000088-01*
- *macOS High Sierra has introduced User-Approved Kernel Extension Loading. For additional information on this update, please visit: <http://developer.apple.com/library/content/technotes/tn2459>*

4. Affected Products

Product Name	SKU
ThunderLink FC 2082	TLFC-2082-D00/DE0
ThunderLink FC 2162	TLFC-2162-D00/DE0
ThunderLink FC 3322	TLFC-3322-D00/DE0
ThunderLink FC 3162	TLFC-3162-D00/DE0

5. Contacting ATTO Support

ATTO Technology, Inc. is renowned for its technical support services. ATTO's goal is to provide you the quickest response possible for your technical support needs, and is available Monday-Friday, 8:00 AM to 8:00 PM EST (except holidays and plant closings).

ATTO Technical Support can be contacted via phone or email:

- Phone: 716.691.1999 ext. 242
- E-Mail: techsupport@attotech.com