



ATTO Technology, Inc.

## Product Release Notes

# ThunderLink® FC 2082/2162 and 3322/3162 Multipath Director™ Release V2.28MP – macOS®

## 1. General Release Information

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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 2.28MP, which was released on March 28, 2019. This information pertains to macOS® 10.11 and later.

## 2. Changes

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- **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

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- *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

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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

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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](mailto:techsupport@attotech.com)