



ATTO Technology, Inc.

## Product Release Notes

# Celerity 16Gb Gen 5 and 16Gb/32Gb Gen 6 Fibre Channel Multipath Director™ Release V2.05MP – Mac OS®

## 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 Celerity 16Gb Gen 5 Fibre Channel adapter product and 16Gb/32Gb Gen 6 Fibre Channel adapter product v2.05MP that was released on September 20, 2016. This information pertains to the OS X® 10.9 and later as well as macOS Sierra.

## 2. Changes

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- **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 for Celerity Gen 6 16Gb/32Gb FC adapters.
    - Added support for LU-based multipathing.
    - Added support for configuring an alias.
    - Addressed a potential for failover to fail when large numbers of LUNs are present.
    - Addressed issues that could cause excessive completion times for failover or discovery.
- **Version 1.45MP (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
- **Version 1.40MP (Released 8/06/2015)**
  - **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 10.11
    - Improved system resource utilization when using event logging services
    - Implemented T10-PI management improvements
    - Fixed a max transfer size processing issue
    - Addressed a SCSI abort issue
    - Added support for Dot Hill arrays

- **Version 1.35 (Released 3/136/2015)**
  - **Note:** It is recommended that firmware dated 03/16/2015 be utilized with this driver release.
  - **New Features/Enhancements**
    - ALUA devices are now allowed to change the path mode from disabled to the default
    - For Thunderbolt topologies, addressed an issue to properly manage multipathing configurations across Thunderbolt cable pulls.
    - Addressed an event logging issue.
    - Active/non-optimized paths are activated in the same manner as standby path by default.
    - Corrected identifier determination for some storage. As a result, previously saved configuration will no longer be in effect for some arrays. The configuration must be resaved after upgrading.
    - Addressed a timing issue when mounting volumes.
    - Fixed an issue of seeing LUNs in a direct attached environment.
  
- **Version 1.31 (Released 1/27/2015)**
  - **Note:** It is recommended that firmware dated 08/14/2014 be utilized with this driver release.
  - **New Features/Enhancements**
    - Fixed a resource leak issue.
    - Addressed an I/O response underrun
  
- **Version 1.30 (Released 10/30/2014)**
  - **Note:** It is recommended that the latest firmware dated 08/14/2014 be utilized with this driver release.
  - **New Features/Enhancements**
    - Added support for Mac OS X 10.10
    - Addressed a firmware issue causing an error when querying a switch
    - Corrected an issue where HBAs failed to properly recover from a controller reset.
  
- **Version 1.25MP (Released 9/25/2014)**
  - **Note:** It is recommended that the latest flash bundle available on ATTO website be utilized with this driver release.
  - **New Features/Enhancements**
    - Enhanced diagnostic capabilities with improved event logging
    - Improved CLI management capabilities
    - Added support for atreset
    - Added support for device display in atinfo
    - Addressed a potential kernel panic when drivers run out of IO resources
    - Addressed a potential kernel panic when a FC ThunderLink is present
    - Addressed an issue where IO to a LUN could be stalled
    - Set default so that active/non-optimized paths are activated for IO in the same manner as standby paths
    - Corrected an issue where a cable pull could result in I/O failure
  
- **Version 1.20MP (Released 3/24/2014)**
  - **Note:** It is recommended that firmware dated 11/08/2012 be utilized with this driver release.
  - **New Features/Enhancements**
    - Expanded diagnostic output tools.
    - Feature added to allow user driven rescanning of all paths to devices.
    - Feature added allowing a path to be a member of two path sets at one time for devices that change identifiers in VPD. Supported with Config Tool 4.14 and later.
    - Corrected a kernel panic that may occur when unloading a driver.
    - Resolved issues with execution throttle.
  
- **Version 1.15MP (Released 2/06/2014)**
  - **Note:** It is recommended that firmware dated 11/08/2012 be utilized with this driver release.
  - **New Features/Enhancements**
    - Corrected an issue with path discovery for paths that are deactivated immediately after being found.
    - Addressed an issue with deactivating paths that are disabled due to I/O errors.
    - Fixed an issue where discovery or failover of a path could be delayed by a transitioning asymmetric access state for a port group that did not apply to the path.

- Resolved an issue where simultaneously reporting device changes on multiple HBA channels could result in the multipathed devices from being activated
  - Addressed an issue where path selection could prematurely fail an I/O when the last remaining path failed simultaneously
  - Corrected an issue where path rediscovery would not activate the path after the link down timeout previously expired
  - Paths that have a scan pending are considered retrying so I/O is suspended when no paths are active.
  - Feature added to allow path activations and deactivations during the link down timeout period to coordinate with other device events to prevent invalid path states.
  - Added PCIe pause support for Thunderbolt hot plugging in OS X 10.9.
- **Version 1.03MP (Released 6/27/2013)**
  - **Note:** It is recommended that firmware dated 11/08/2012 be utilized with this driver release.
  - **New Features/Enhancements**
    - Corrected an issue where I/O could be stopped to a device after a link goes down.
- **Version 1.02MP (Released 4/10/2013)**
  - **Note:** It is recommended that firmware dated 11/08/2012 be utilized with this driver release.
  - **New Features/Enhancements**
    - Added '—m' option with the same functionality as the standard driver.
    - Corrected out of resource processing when the mapped controller and destination controller for an I/O are different.
- **Version 1.01MP (Released 1/15/2013)**
  - **Note:** It is recommended that firmware dated 11/08/2012 be utilized with this driver release.
  - **New Features/Enhancements**
    - Changed the default Execution Throttle to 255 (disabled).
    - Implemented interrupt coalescing.
    - Fixed event Log messages so lost frames report with the correct error code.
    - Corrected an issue that could result in devices not being found after waking from sleep.
    - Corrected target identifier determination for certain arrays.
    - Disabled multipathing for certain arrays that do not report proper device identification.
- **Version 1.00MP (Released 11/08/2012)**
  - **Note:** It is recommended that firmware dated 11/08/2012 be utilized with this driver release.
  - **New Features/Enhancements**
    - Initial release of Mac OS multipathing drivers for the Celerity 16Gb FC adapters.

### 3. Known Issues/Advisements

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- Multiple direct connections to a Xyratex drive array do not work.
- Celerity quad-channel (FC-164E) is not supported on Mac OS.

#### 4. Affected Products

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Product Name	SKU
Celerity FC 164E	CTFC-164E-000
Celerity FC 162E	CTFC-162E-000
Celerity FC 161E	CTFC-161E-000
Celerity FC 81EN	CTFC-81EN-000
Celerity FC 82EN	CTFC-82EN-000
Celerity FC 84EN	CTFC-84EN-000
Celerity FC-164P	CTFC-164P-000
Celerity FC-162P	CTFC-162P-000
Celerity FC-161P	CTFC-161P-000
Celerity FC-322E	CTFC-322E-000
Celerity FC-321E	CTFC-321E-000
ThunderLink FC 2082	TLFC-2082-D00
ThunderLink FC 2162	TLFC-2162-D00

#### 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:

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