



ATTO Technology, Inc.

Product Release Notes

Celerity 16Gb Gen 5 and 16Gb/32Gb Gen 6 Fibre Channel Release v2.28 macOS®

1. General Release Information

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 driver version v2.28 which was released on January 15th, 2019. This information pertains to macOS® 10.11 and later.

2. Changes

Version 2.28 (Released 1/15/2019)

- **Note:** It is recommended that the latest flash bundle available on ATTO website be utilized with this driver release.
- **New Features/Enhancements**
 - Added macOS support for Gen 6 Fibre Channel quad port cards for Mac Pro 6,1 and later

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• **Version 2.27 (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

• **Version 2.26 (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
 - Increased number of IO resources to improve performance
 - Fix support for atfcvnr to change the node WWN

• **Version 2.25 (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

• **Version 2.20 (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 2.16 (Released 05/03/2017)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be used with this driver release.
 - **New Features/Enhancements**
 - Added support for *atinfo* to display the SFP transceiver serial number

- **Version 2.10 (Released 12/20/2016)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be used with this driver release.
 - **New Features/Enhancements**
 - Removed the 164E from the installer welcome screen.
 - Added link cable beacon feature.
 - Improved the speed of reporting devices to the OS.
 - Changed the default maximum transfer size to 512KB to improve third party storage controller performance.

- **Version 2.05 (Released 09/20/2016)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be used 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.

- **Version 2.00 (Released 6/30/2016)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be used with this driver release.
 - **New Features/Enhancements**
 - Added support for Celerity Gen 6 16Gb/32Gb FC adapters

- **Version 1.45 (Released 1/21/2016)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be used with this driver release.
 - **New Features/Enhancements**
 - Maintenance release of Mac OS drivers

- **Version 1.40 (Released 8/06/2015)**
 - **Note:** It is recommended that the latest flash bundle available on ATTO website be used with this driver release.
 - **New Features/Enhancements**
 - Added support for 10.11
 - Improved system resource utilization when using event logging services
 - Addressed OSX handling issue that could lead to I/O errors
 - Implemented T10-PI management improvements
 - Fixed a max transfer size processing issue

- **Version 1.35 (Released 3/16/2015)**
 - **Note:** It is recommended that firmware dated 03/16/2015 be used with this driver release.
 - **New Features/Enhancements**
 - Addressed an event logging issue.
 - 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 used 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 firmware dated 08/14/2014 be used 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 1.25 (Released 08/28/2014)**
 - **Note:** It is recommended that firmware dated 08/14/2014 be used 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
- **Version 1.20 (Released 03/27/2014)**
 - **Note:** It is recommended that firmware dated 12/02/2013 be used with this driver release.
 - **New Features/Enhancements**
 - Corrected issue with Execution Throttle that could prevent I/O from being started.
- **Version 1.15 (Released 02/06/2014)**
 - **Note:** It is recommended that firmware dated 12/02/2013 be used with this driver release.
 - **New Features/Enhancements**
 - Added PCIe pause support for Thunderbolt hot plugging in OS X 10.9.
- **Version 1.10 (Released 10/15/2013)**
 - **Note:** It is recommended that firmware dated 4/10/2013 be used with this driver release.
 - **New Features/Enhancements**
 - Mac OS X Mavericks (10.9) Support.
 - Increased the maximum supported targets from 256 to 512.
 - Corrected an issue with read commands that falsely complete with a GOOD SCSI status.
- **Version 1.02 (Released 4/17/2013)**
 - **Note:** It is recommended that firmware dated 4/10/2013 be used with this driver release.
 - **New Features/Enhancements**
 - Implemented improvements for SAN Boot
 - Updated "--m" options for OS X 10.7 & later
- **Version 1.01 (Released 1/15/2013)**
 - **Note:** It is recommended that firmware dated 11/08/2012 be used 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
- **Version 1.00 (Released 11/08/2012)**
 - **Note:** It is recommended that firmware dated 11/08/2012 be used with this driver release.
 - **New Features/Enhancements**
 - Initial release of Mac drivers for the Celerity 16Gb FC adapters

3. Known Advisements

- *Multiple direct connections to a Xyratex drive array are not supported. Contact ATTO Tech Support for more information.*
- *Celerity quad-channel (FC-164E and FC-324E) are not supported on Mac OS.*

- 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
Celerity FC-161E	CTFC-161E-000
Celerity FC-162E	CTFC-162E-000
Celerity FC-164E	CTFC-164E-000
Celerity FC-161P	CTFC-161P-000
Celerity FC-162P	CTFC-162P-000
Celerity FC-164P	CTFC-164P-000
Celerity FC-321E	CTFC-321E-000
Celerity FC-322E	CTFC-322E-000
Celerity FC-324E	CTFC-324E-000

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