



ATTO Technology, Inc.

Product Release Notes

Celerity 8Gb Fibre Channel Release v2.06– Microsoft® Windows®

1. General Release Information

These product release notes define the new features, changes, known issues and release details that apply to the Celerity 8Gb Fibre Channel adapter product v2.06 that was released on April 16th, 2018. This information pertains to the Microsoft Windows 10, 8.1, 8 and 7 as well as Windows Server 2016, 2012 R2, 2012 and 2008 R2 operating systems. **Note:** It is recommended that the latest firmware available on ATTO website be used with this driver release.

2. Changes

- **Version 2.06 (Released 4/16/2018)**
 - **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
 - Improvements to driver installation via setup.exe on 32-bit Windows
- **Version 2.05.1 (Released 1/19/2018)**
 - **New Features & Enhancements**
 - Restored previously available settings for target mode driver (OEM only)
- **Version 2.05 (Released 12/18/2017)**
 - **New Features & Enhancements**
 - Added atdevinfo, atfcinfo, and atlocate CLI tools to the release package.
- **Version 2.00 (Released 05/03/2017)**
 - **New Features & Enhancements**
 - x64 CLI tools are now included in the x64 package
 - Support for FC LUN masking has been removed
- **Version 1.90 (05/09/2016)**
 - **New Features and Enhancements**
 - Corrected an issue with Reinstate Recovery Qualifier not being properly rejected when sent by a target to the adapter.
- **Version 1.85 (Released 8/06/2015)**
 - **New Features & Enhancements**
 - Added support for Windows 10
 - Fixed a potential driver hang issue
 - Implemented T10-PI management improvements
- **Version 1.80 (Released 3/16/2015)**
 - **New Features & Enhancements**
 - Corrected an issue with RSCN discovery.
 - Addressed an issue so 32-bit applications can open in 64-bit Windows.

- **Version 1.75 (Released 10/30/2014)**
 - **New Features & Enhancements**
 - Fixed a fabric discovery issue
- **Version 1.70 (Released 7/08/2014)**
 - **New Features & Enhancements**
 - Enhanced the device display in atinfo
 - Added support for atreset
 - Addressed an issues where Windows drivers cannot interpret older Windows driver eventlogs
- **Version 1.65 (Released 3/27/2014)**
 - **New Features & Enhancements**
 - Corrected issue with Execution Throttle that could prevent I/O from being started
 - Fixed a negotiation issue in Point-to-Point
 - Added support for Windows 8.1 (x86, x64) and Server 2012 R2 (x64)
- **Version 1.61 (Released 2/06/2014)**
 - **New Features & Enhancements**
 - Improved LinkDown timeout resolution.
 - Added support for the TMGen utility.
- **Version 1.60 (Released 4/23/2013)**
 - **New Features & Enhancements**
 - Added support for Hyper-V 2012
 - Updated Flash Management API to resolve an issue that occurred during flashing.
 - Microsoft Certified Drivers for Windows 8 (x86, x64) & 2012 (x64)
- **Version 1.50 (Released 3/7/2013)**
 - **New Features & Enhancements**
 - Added support for Execution Throttle.
 - Task Management handling has been improved.
 - Improved PCI error interrupt processing.
 - Fixed a NumSest discovery failure.
 - Added ability to set NumSest to values that are not powers of 2
- **Version 1.40 (Released 11/29/2012)**
 - **New Features & Enhancements**
 - Added virtualization (NPIV) features including support for Hyper-V 2.0.
- **Version 1.36 (Released 5/4/2012)**
 - **New Features & Enhancements**
 - Addressed an incompatibility with certain Promise devices running in Point-to-Point.
 - A potential problem where booting off the card on certain systems was corrected.
- **Version 1.35 (Released 7/29/2011)**
 - **New Features & Enhancements**
 - We now register the Node Name of the first channel on an adapter as the serial number when registering HBA attributes with the Management Server.
 - Performance improvements were made for use with Power Center.
 - PLOGI and PRLI are retried, in the event of timing out, due to the commands getting lost on the other side of the switch.
- **Version 1.34 (Released 3/31/2011)**
 - **New Features & Enhancements**
 - Feature Improvement related to command out operation
 - Improved resolution of Port Down Timeout (OEM feature)
 - Various improvements related to Target Mode operation
 - Added support for troubleshooting script.

- **Version 1.32 (Released 12/7/2010)**
 - **New Features & Enhancements**
 - Feature Improvement related to chip reset operation.
 - Interoperability improvement related to Target mode operation.
 - CLI tools are now included in the driver package.
 - Instructions to activate T10-DIF support are now included in ReadMe.
 - Microsoft certified 8Gb Celerity drivers for Windows 2003 (x86/x64) and 2008 (x86/x64 and R2 x64)

- **Version 1.30 (Released 7/30/2010)**
 - **New Features & Enhancements**
 - Support added for T10-DIF
 - The registry T10Dif default setting is 0 (disabled). To enable, change setting to one (1).
 - When enabled, the driver will detect if a disk drive is formatted for T10-DIF. Upon detection of T10-DIF, the driver will automatically generate the DIF field on the writes, and check it on the reads.
 - This feature does not provide a mechanism to format the drive.
 - Feature improvements related to Target Mode operation

- **Version 1.20 (Released 11/19/2009)**
 - **New Features & Enhancements**
 - Implemented Message Signaled Interrupts (MSI) for x64 drivers (x86 performs better without it).
 - Changed the INF file to tell the OS that we don't need I/O space mappings. This helps later OSes to do a better job of allocating resources to secondary PCI busses.
 - Insure that a non-zero E_D_TOV value is used in Point-to-Point direct connect mode. Some initiator was sending a PLOGI with this set to 0, causing second and subsequent connections to fail.
 - A system hang problem on the Del T610 was corrected.
 - An error log event was added to report when the Initiator invokes a Task Management function.
 - Several code optimizations were made
 - Added support for CLI tools.
 - In Target Mode, if we receive a SCSI command and there are no available XCBs or Exchanges, we will now attempt to respond with a SCSI Busy response. Previously commands were dropped, causing the initiator to time them out and retry them.
 - A problem where a target would no longer respond to commands after a link down/up was resolved.
 - Descriptor Format Sense Data will now be interpreted correctly when reporting events to the OS.

- **Version 1.10 (Released 5/20/2009)**
 - **New Features & Enhancements**
 - Resolved and issues where the LUN Masking Util did not apply saved configuration after reboot
 - Windows fails to properly negotiate sleep states with StorPort Driver in Windows Vista 32 bit
 - Resolved Auto Topology issues
 - A problem was fixed where a recovery command for a timeout could get out on the wire before the ABTS for the command that timed out
 - If Initiator Mode is disabled, the Initiator bit in the RFF_ID Name Server registration request is now cleared
 - A double completion problem in Target Mode was fixed
 - Registry entry TargetModeLinkDelay was added so that in Target Mode applications, the link won't come up until the upper level SCSTMD driver connects
 - The version 1 Target Mode interface now defaults FctmdFeatures to FCTMD_FEATURE_IMMEDIATE_LOGIN

- In Target Mode, the bytes were swapped for ResidualLength for cases of Data Overruns
 - Auto topology now gives P2P a little more preference
 - A workaround was incorporated to accommodate a switch that was improperly assigning a conflicting Area and Domain to certain Port IDs
 - A problem where RSCNs would not get processed after a certain number of them were received was corrected
 - The default Interrupt Coalescing is now NONE
 - ADISC Replies were using the wrong R_CTL bits
 - When rejecting the login from the Fabric Controller, we now return a Reject Reason of Command Not Supported. This causes the Fabric Controller to stop attempting to log in indefinitely
 - Work-around was implemented for the QLogic 5600 switch that stops responding to logins to the Management Server after 500 logins. This problem occurred during automated cable pull testing. The symptom was that after a cable pull, discovery was not started and targets didn't show up
 - HBA API calls that send low-level Fibre Channel requests (such as CT_PASSTHRU) were truncating the returned Response Length to the length of the Request. That has been fixed
- **Version 1.0 (Released 8/26/2008)**
 - **New Features & Enhancements**
 - Initial release of Windows drivers for the Celerity 8Gb FC adapters

3. Known Issues/Advisements

- Windows registry is not cleaned up after attempting to create a virtual port on a down physical port using Hyper-V. This is a Microsoft issue that appears when using SCVMM 2008.
- Fibre Channel performance can be reduced significantly if the Celerity 8Gb HBA is placed in a Supermicro main board that uses the Intel 5520 (Tylersburg) chipset. The workaround is to disable Active State Power Management (ASPM) within the Windows Operating System or the main board bios. Contact ATTO Tech Support for more information.
- When updating the adapter firmware using a flash bundle, the adapter I/O transfer size should be set to 512KB or higher. Instructions on changing the adapter I/O transfer size can be found within the ATTO Utility Manual.

4. Affected Products

Product Name	SKU
Celerity FC 81EN	CTFC-81EN-000
Celerity FC 82EN	CTFC-82EN-000
Celerity FC 84EN	CTFC-84EN-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. Please visit <https://www.attotech.com/support/> for hours of operation.

ATTO Technical Support can be contacted via phone or email:

- Phone: 716.691.1999 ext. 242
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