



ATTO Technology, Inc.

Product Release Notes

Celerity 16Gb Gen 5 and 16Gb/32Gb Gen 6 Fibre Channel Multipath Director™ Release v2.15MP – 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 16Gb Gen 5 and 16Gb/32Gb Gen 6 Fibre Channel adapter product v2.15MP that was released on December 18th, 2017. This information pertains to the Microsoft Windows 10, 8.1, 8 and 7 as well as Windows Server 2016, 2012 R2, 2012, 2008 R2 and 2008 operating systems. **Note:** It is recommended that the latest firmware available on ATTO website be used with this driver release.

2. Changes

- **Version 2.15MP (Released 12/18/2017)**
 - **New Features & Enhancements**
 - Add HP MSA 2050 storage array support.
 - Full Inquiry data is now reported for multipathed devices.
- **Version 2.10MP (Released 05/03/2017)**
 - **New Features & Enhancements**
 - x64 CLI tools are now included in the x64 package
 - Added support for the Seagate 5825 storage array
- **Version 2.05MP (Released 11/01/2016)**
 - **New Features/Enhancements**
 - Added support for Dot Hill 6424 and 6844 storage
 - Fixed an issue that occurred when rapidly hot plugging devices under heavy I/O load with no saved configuration
- **Version 2.03MP (Released 09/01/2016)**
 - **New Features/Enhancements**
 - Devices will report immediately when MultiPath Director is disabled and re-enabled.
 - Fixed logging to contain Windows line endings.
- **Version 2.00MP (Released 06/30/2016)**
 - **New Features/Enhancements**
 - Added support for Celerity 16Gb/32Gb Gen 6 Fibre Channel Host Bus Adapters.
 - Added support for LU-based multipathing.
 - Added support for configuring an alias.
 - Fixed an issue with installing on a clean install of Windows Server 2008.
 - 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 1.75MP (Released 01/21/2016)**
 - **New Features/Enhancements**
 - Resolved a connection issue with previous versions of EMC storage
 - Added limits to the amount of disk space the event log can consume.
 - Resolved an upgrade issue with MultiPath Director

- **Version 1.70MP (Released 08/06/2015)**
 - **New Features/Enhancements**
 - Added support for Windows 10
 - Added support for Dot Hill arrays.
 - Fixed an installation failure issue.
 - Resolved a timing issue that could result in removal of storage LUNs.

- **Version 1.65MP (Released 03/16/2015)**
 - **New Features/Enhancements**
 - ALUA devices are now allowed to change the path mode from disabled to the 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.
 - Fixed a system crash when a device does not support Report LUNs.
 - Addressed a potential system crash when removing devices.

- **Version 1.61MP (Released 01/15/2015)**
 - **New Features/Enhancements**
 - Addressed a failback and failover issue with explicit ALUA
 - Fixed SCSI pass through support so commands are issued to the correct path.
 - Added support for Dot Hill 68xx, 39xx and 37xx storage arrays.
 - Added support for Quantum StorNext QXS, QD, QM and QS storage arrays.

- **Version 1.60MP (Released 10/30/2014)**
 - **New Features/Enhancements**
 - Enhanced Config Tool diagnostics with automatic driver log events.
 - Corrected an installation path issue with CLI Tools.

- **Version 1.55MP (Released 7/08/2014)**
 - **New Features/Enhancements**
 - Microsoft Certified Drivers for Windows 8, 8.1 (x86, x64) & 2012, 2012 R2 (x64)
 - Added support for the Dot Hill 48xx storage array.
 - Added support for the Quantum StorNext QX storage array.
 - Addressed an issue that caused LUNs with saved configurations to disappear.
 - Made changes to the reported bus type to enable thin provisioning support.
 - Fixed an issue where I/O to a LUN could be stalled

- **Version 1.50MP (Released 3/24/2014)**
 - **New Features/Enhancements**
 - Expanded diagnostic output tools.
 - Feature added to allow user driven rescanning of all paths to devices.
 - Added support for logical block provisioning management.
 - 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.

- **Version 1.45MP (Released 2/06/2014)**
 - **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 in path discovery that may result in a BSOD.
 - 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.
 - Updated the version in the driver INF.

- **Version 1.35MP (Released 6/27/2013)**
 - **New Features/Enhancements**
 - Increased the timeout error threshold for some storage devices during discovery.
- **Version 1.34MP (Released 12/18/2012)**
 - **New Features/Enhancements**
 - Corrected target identifier determination for some storage.
 - Disabled multipathing for some arrays that do not report proper device identification.
 - Corrected Test Unit Ready polling to function when only one LUN is present for a device.
- **Version 1.33MP (Released 11/07/2012)**
 - **New Features/Enhancements**
 - The included CLI tools have been updated to scan for all LUNs.
- **Version 1.32MP (Released 10/26/2012)**
 - **New Features/Enhancements**
 - Corrected an issue that could cause paths to not be rediscovered during the link down timeout if a bus scan failed when it went down.
- **Version 1.31MP (Released 10/01/2012)**
 - **New Features/Enhancements**
 - Fixed an issue that could cause a blue screen during path scanning and activation.
- **Version 1.30MP (Released 09/17/2012)**
 - **New Features/Enhancements**
 - Added atmpcfg to the installation.
 - When a device returns sense data of 06/29/00 (Power On/Reset), all paths to the device are rescanned for changes.
 - If the vendor ID, product ID, or SCSI device type in the Inquiry data for a device changes, the device is destroyed and recreated so the OS is updated.
 - Resolved issues with multipathed devices being added and removed properly when Multipath Director is enabled and disabled in Device Manager.
 - Inquiry data for multipathed devices is modified to clear the TPGS field.
 - Capturing time for statistics is more accurate and efficient.
 - Corrected a timing window in which a saved configuration may fail to load if loaded after multipathed devices are reported to the OS.
 - Setting a saved configuration for a path or a device that is no longer configurable is silently ignored.
 - Added support for Celerity 16Gb adapters.
 - Added support for performing explicit failover and failback for active non-optimized paths to some arrays.
 - Added support for disabling failback via atmpcfg.
 - Corrected an issue so failover/failback would happen immediately after a link event.
 - Polling using Test Unit Ready commands has been enhanced to better detect asymmetric access state changes automatically.
 - Corrected issues in path management processing to properly handle paths that have failback scheduled.
 - Improved command error processing during path scanning and activation.
 - Corrected issues in path activation that could cause I/O to be suspended even though a path is available for I/O.
- **Version 1.21MP (Released 02/17/2011)**
 - **New Features/Enhancements**
 - Corrected an issue that could exhaust system memory when a disk LUN is removed and replaced with LUNZ.
- **Version 1.20MP (Released 01/19/2011)**
 - **New Features/Enhancements**

- The device IDs for devices created by MultiPath Director have been changed to correspond to those created by Windows. Therefore, device drivers will still load when MultiPath Director is installed.
 - Resolved an issue that occurred if debug logging was enabled and an unsupported IOCTL was received by MultiPath Director.
 - Target based identifiers in Inquiry VPD page 0x83 are given priority over LUN based identifiers in determining how to multipath devices.
 - Devices that report an unknown device type in Inquiry data are ignored.
 - Internal commands are retried during asymmetric access state transitions.
- **Version 1.10MP (Released 10/15/2010)**
 - **New Features/Enhancements**
 - Added driver readme to the self-extracting executable package.
 - Installed new CLI tools with the driver - atmpinfo and atmpcfg - to display information and configure settings respectively for devices controlled by MultiPath Director.
 - Feature added so the driver detects LUN inventory changes by polling one logical unit on each device present every three seconds.
 - Corrected an issue with I/Os waiting to be retried.
 - Improved the discovery of multiple paths.
 - Added debugging and event logging support controlled by a new registry setting EventLogMask. A new CLI tool, atbdlog.exe, is installed with the driver to retrieve the log. No events are logged to the Windows system event log.
 - Added support for the 'access' LUN of some storage arrays.
 - Enhanced power management processing.
 - **Version 1.00MP (Released 10/28/2010)**
 - **New Features/Enhancements**
 - Initial release of Windows drivers for the Celerity 8Gb FC adapters
 - **Supported OS**
 - Windows XP (x86, x64)
 - Windows Vista (x86, x64)
 - Windows Server 2003 (x86, x64)
 - Windows Server 2008 (x86, x64)

3. Known Issues/Advisements

- None

4. Affected Products

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 321E	CTFC-322E-000
Celerity FC 322E	CTFC-322E-000
ThunderLink FC 2082 Device	TLFC-2082-D00
ThunderLink FC 2162 Device	TLFC-2162-D00

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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