



ATTO Technology, Inc.

## Product Release Notes

# Celerity 16Gb Gen 5 and 16Gb/32Gb Gen 6 Fibre Channel Multipath Director™ Release v2.16MP – 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 v2.16MP that was released on April 16<sup>th</sup>, 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 2.16MP (Released 04/16/2018)**
  - 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 2.15MP (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
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. 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
- E-Mail: [techsupport@attotech.com](mailto:techsupport@attotech.com)