



ATTO Technology, Inc.

Product Release Notes

Celerity 16Gb Gen 5 and 16Gb/32Gb Gen 6 Fibre Channel Release v1.60 – Linux®

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 v1.60 that was released on May 3, 2017. This information pertains to the following operating systems: Red Hat Enterprise Linux 6, 7; CentOS 6, 7; SUSE Linux Enterprise Server 11sp4, 12; OpenSUSE Linux 13.2, 42.1; Ubuntu 16.04 LTS.

2. Changes

- **Version 1.60 (Released 05/03/2017)**
 - **Note:** It is recommended that latest firmware available on ATTO website be used with this driver release.
 - **New Features/Enhancements**
 - Added support for *atinfo* to display the SFP transceiver serial number
 - Added support for Ubuntu 16.04 LTS
 - Updated builds for kernel 4.9, and later
- **Version 1.55 (Released 12/20/2016)**
 - **Note:** It is recommended that latest firmware available on ATTO website be used with this driver release.
 - **New Features/Enhancements**
 - Modified driver to automatically unload the *attocfg* driver when switching between the MP and standard drivers
 - Reworked *ioctl* code to directly access user memory instead of double-buffering
 - Resolved issue with 32-bit driver builds for 4.x kernels
- **Version 1.51 (Released 09/01/2016)**
 - **Note:** It is recommended that latest firmware available on ATTO website be utilized with this driver release.
 - **New Features/Enhancements**
 - General improvements
- **Version 1.50 (Released 06/30/2016)**
 - **Note:** It is recommended that latest firmware available on ATTO website be utilized with this driver release.
 - **New Features/Enhancements**
 - Added support for Celerity 16Gb/32Gb Gen 6 Fibre Channel Host Bus Adapters
 - Fixed a potential hang by offlining targets before removing them.
- **Version 1.45 (Released 01/21/2016)**
 - **Note:** It is recommended that latest firmware available on ATTO website be utilized with this driver release.
 - **New Features/Enhancements**
 - Updates to CLI tools and readme

- **Version 1.40 (Released 8/06/2015)**
 - **Note:** It is recommended that latest firmware available on ATTO website be utilized with this driver release.
 - **New Features/Enhancements**
 - Implemented T10-PI management improvements
 - Integrated miscellaneous bug-fixes
- **Version 1.35 (Released 3/19/2015)**
 - **Note:** It is recommended that latest firmware available on ATTO website be utilized with this driver release.
 - **New Features/Enhancements**
 - Added support for Fedora 21
 - Added support for SUSE Linux Enterprise Server 12
 - Addressed a timing issue when mounting volumes.
 - Fixed an issue of seeing LUNs in a direct attached environment.
- **Version 1.32 (Released 1/27/2015)**
 - **Note:** It is recommended that latest firmware available on ATTO website be utilized with this driver release.
 - **New Features/Enhancements**
 - Addressed an exchange leak in HwContPlogiReq
- **Version 1.30 (Released 10/30/2014)**
 - **Note:** It is recommended that latest firmware available on ATTO website be utilized with this driver release.
 - **New Features/Enhancements**
 - Added support for RHEL 7
 - Addressed a model description error
 - Addressed an issue where HBAs failed to properly recover from a controller reset.
- **Version 1.20 (Released 8/28/2014)**
 - **Note:** It is recommended that firmware dated 08/14/2014 be utilized with this driver release.
 - **New Features/Enhancements**
 - Improved IO performance for transactional Linux SAN environments
 - Increased default queue parameters from 128 to 512
 - Enhanced diagnostic capabilities with improved event logging
 - Added new display information for atmpinfo
 - Added support for atreset
 - Added support for device display in atinfo
- **Version 1.15 (Released 3/27/2014)**
 - **Note:** It is recommended that firmware dated 12/02/2013 be utilized with this driver release.
 - **New Features/Enhancements**
 - Increased the maximum targets supported from 256 to 512
 - Added port speed to administrator reports.
 - Addressed performance issues for certain configurations
- **Version 1.05 (Released 6/27/2013)**
 - **Note:** It is recommended that firmware dated 4/10/2013 be utilized with this driver release.
 - **New Features/Enhancements**
 - Added support for SCST – contact for SCST kit

- **Version 1.03 (Released 4/17/2013)**
 - **Note:** It is recommended that firmware dated 4/10/2013 be utilized with this driver release.
 - **New Features/Enhancements**
 - Added support for Fedora 17 & 18
 - Added support for openSUSE 12.3
 - Sleep Mode Improvements
 - Fixed compile issue with kernel 3.7 and 3.8

- **Version 1.02 (Released 1/15/2013)**
 - **Note:** It is recommended that firmware dated 11/08/2012 be utilized with this driver release.
 - **New Features/Enhancements**
 - Added support for the quad port Celerity 16Gb Fibre Channel Host Adapter (164E)
 - Changed the default Execution Throttle to 255 (disabled)
 - Implemented interrupt coalescing
 - Data transfer errors no longer cause the command to be aborted without allowing the upper layer to send a response in Target Mode
 - Fixed event Log messages so lost frames report with the correct error code

- **Version 1.01 (Released 11/08/2012)**
 - **Note:** It is recommended that firmware dated 11/08/2012 be utilized with this driver release.
 - **New Features/Enhancements**
 - SAN Boot is now supported
 - T10 DIF now can be enabled in Linux
 - Fibre Channel Link Down Timeout is now operational
 - The Port Database is now sorted so devices show up in the same order across reboots
 - Enhanced the PCIe speed capability back up to Gen 3 if it had been lowered by placing the card in another platform
 - Fixed an issue where the HBA API Get Port Stats would hang
 - Fixed a kernel panic when loading driver.
 - Driver compiles with newer (3.4+) kernels.

- **Version 1.00 (Released 9/28/2012)**
 - **Note:** It is recommended that firmware dated 9/24/2012 be utilized with this driver release.
 - **New Features/Enhancements**
 - Initial release of Linux drivers for the Celerity 16Gb FC adapters

3. Known Issues/Advisements

- When connecting directly to a disk drive while the topology is set to P2P Preferred (or AL preferred) the device may not be found. If occurs adjust topology setting.
- Arbitrated Loop is not support by the 16Gb Fibre Channel - the industry specification has not been finalized.
- If the card is placed in certain slots of an Intel Grosse Point machine, the system will not boot
- Multiple direct connections to a Xyratex drive array do not work.
- The system will not boot if the card is placed in an MSI 277A-GD80 motherboard and the System BIOS PCI ROM Priority is set for EFI Compatible ROM. The System BIOS is trying to run both the EFI and Legacy BIOS at the same time. To work around this issue, set the System BIOS PCI ROM Priority setting to Legacy ROM.

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

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