



ATTO Technology, Inc.

# Product Release Notes

## 16Gb/32/64G Fibre Channel Release v1.07 – illumos

### 1. General Release Information

These product release notes define the new features, changes, known issues and release details that apply to the 16Gb/32Gb/64Gb Fibre Channel adapters, version 1.07, that was released on 02/06/2023. This information pertains to illumos NestOS, OpenIndiana, NexentaStor 5/4.

### 2. Changes

- **Version 1.07 (Released 02/06/2023)**
  - **It is recommended that firmware dated 230123 be used with this driver release.**
  - **New Features**
    - Add support for the Celerity FC-641E and FC-642E
    - Add target mode execution throttle
    - Add private arbitrated loop support for G6 adapters
    - Add Sequence Level Error Recovery support for initiator mode
    - Add support for displaying the serial number
  - **Incident Resolutions/Bug Fixes/Changes**
    - Fix crash when cleaning up an aborted command
    - Free exchange resources after all sequences are freed
    - In target mode, do not respond to commands explicitly aborted by an initiator
    - Apply task management to target mode I/O waiting for resources
    - In target mode, respond to ABTS after aborting the affected command.
    - Fix queue depth management when NVRAM execution throttle is enabled
    - Handle FCP response IUs smaller than FC requirements
    - Report Sequence Level Error Recovery state for display in atdevinfo
    - Change request/XCB/SCB resource logging to verbose only
    - Install atcfg instead of atlocate
    - Reject PLOGI in certain fabric topology situations
    - Fix FC port ID in logout event
    - Fix attempting PRLI after an explicit LOGO from the target
    - Fix waiting for devices during driver load
    - Fix sending task management commands to targets
    - Fix target mode ABTS cleanup under resource constraints and link event.
    - Fix target mode command ordering under heavy I/O load and resource constraints
    - Fix potential crash when a target mode command is aborted while waiting to be started
    - Fix in-flight I/O processing when changing the execution throttle in NVRAM.
    - Fairly handle out-of-resource conditions when starting initiator mode I/O
    - Don't respond to ABTS directed at an F\_Port controller with LOGO
    - Fix FLOGI response service parameters
    - Fix potential I/O failure when retrying commands in failover scenarios
    - Fix hung discovery if login retry conditions persist.
    - Fix potential crash when pulling the cable during I/O
    - Fix logging priority order for errors and warnings
    - Fix potential controller reset when lots of targets are attached.
    - Fix processing RSCNs with more than one entry
    - Don't count down link down timeouts when recovering from sleep
    - Fix target mode response to a command that encounters a data transfer error.
    - Address multiple issues with target state change handling
    - Fix potential corruption of an aborted initiator mode command.
    - Fix potential corruption of task management commands

- Fix a corner case data integrity error
  - Retry commands that fail due to a link error
  - Fix potential IOCTL errors during a controller reset.
  - Fix resuming I/O that is deferred by the execution throttle
  - Retry commands received in target mode when out of resources instead of returning queue full SCSI status to the initiator.
  - Return queue full (not busy) when out of resources in target mode
  - Fix management of exchange IDs after a controller reset
  - Fix G6/G7 LED blink pattern during link activity
  - Prevent task management from canceling the link down timeout
  - Fix controller recovery after creating a firmware core dump
  - Fix specification compliance for handling of incoming SCSI PRLI requests.
  - Fix ELS Link Cable Beacon response
  - Fix corner case where a response to a PRLI could be dropped.
  - Fix discovery command timeouts when ELS commands are retried
  - Fix potential driver hang when servicing a PRLI request
  - Fix processing of a received PLOGI prior to FC topology discovery.
- **Version 1.06 (Released 02/11/2021)**
  - **New Features, Enhancements and Changes**
    - Fix a driver hang when processing an incoming login for a device already known.
    - Change the log level of removal events to Notice
    - Lower CQ consumption interval
    - Fix issue with COMSTAR targets not being discovered
    - Return correct status when out of resources for target mode data transfers
    - Improve I/O latency
    - Add atfccfg to driver package
    - Add illumos driver support for the new target-mode API
    - Add core dump generation support for attrace
    - Fix resource allocation when user parameters exceed controller capabilities
    - Add support for the Celerity FC-321P, 322P, and 324P
- **Version 1.05 (Released 03/18/2020)**
  - **New Features, Enhancements and Changes**
    - Improvements to stability when aborting an FC exchange, allocating/freeing target bounce memory, handling incoming Extended Link Services Commands and when discovery encounters an error
- **Version 1.04 (Released 11/07/2019)**
  - **New Features, Enhancements and Changes**
    - Allow for servicing multiple I/O interrupts in parallel
- **Version 1.03 (Released 06/25/2019)**
  - **New Features, Enhancements and Changes**
    - Improved logging of out-of-resource errors
    - Store the original driver configuration file when previous settings are being preserved by the driver installer
    - Updates to enhance driver memory allocation to allocate in smaller chunks
    - Improved extended port cycle testing
- **Version 1.02 (Released 11/05/2018)**
  - **Note:** It is recommended that firmware dated 11/05/2018 be used with this driver release.
  - **New Features, Enhancements and Changes**
    - Increased the number of I/O resources to improve performance.
    - Fixed support for atfcvnr to change the node WWN
    - Add several performance optimizations for potential performance improvements based on workload.
    - Improved target mode performance
    - Added support for the built-in fcinfo / fcadm illumos tools
    - Added CLI tool installation location to the README

- **Version 1.01 (Released 8/22/2018)**
  - **New Features**
    - Initial release of illumos drivers for the Celerity adapters

### 3. Known Issues/Advisements

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- None

### 4. Affected Products

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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
Celerity FC-641E	CTFC-641E-000
Celerity FC-642E	CTFC-642E-000

### 5. Contacting ATTO Support

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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
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