



ATTO Technology, Inc.

Product Release Notes

FastFrame 10GbE NIC & CNA Release v2.22 – Mac OS® X

1. General Release Information

These product release notes define the new features, changes, known issues and release details that apply to the FastFrame Network Interface Card and Converged Network Adapter products v2.22 that was released on 6/30/2014. This information pertains to Mac OS X.

2. Changes

- **Version 2.22 (Released 6/30/14)**
 - The following applies to driver v2.22
 - **New Features**
 - Receive Side Coalescing (RSC) support
 - Installer option for applying system-wide network tuning settings
- **Version 2.21 (Released 10/15/2013)**
 - The following apply to driver v2.21
 - **New Features**
 - Mac OS X Mavericks (10.9) Support.
 - Corrected an issue when uninstalling the driver.
- **Version 2.20 (Released 08/15/2013)**
 - The following apply to driver v2.20
 - **New Features**
 - Optimized dynamic interrupt coalescing functionality.
 - Corrected an issue when disabling an Ethernet interface during periods of high network activity.
 - Corrected an issue when transmitting data residing in non-aligned memory.
 - Resolved a potential issue that could cause the driver to attempt to deactivate transmit rings that are already inactive.
 - Enhanced the chip reset procedure.
 - Improved handling of direct attach copper cables (NS and CS adapters only).
 - Improved logging and handling of DCBX errors (CS adapters only).
 - Improved handling of unexpected logout or login failures (CS adapters only).
 - Enhanced FCoE performance (CS adapters only).
 - Resolved an issue when using DCB with more than 2 traffic classes (CS adapters only).
 - Improved handling of DCBX settings (CS adapters only).
 - Updated '--m' option to work in OS X 10.7 and later (CS adapters only).
- **Version 2.12 (Released 10/11/2012)**
 - The following apply to driver v2.12
 - **New Features**
 - Updated the memory allocation for x64 platforms for compatibility with OS X 10.8.2 and later.
 - Corrected an issue with memory allocation that could cause the driver to not load.
- **Version 2.11 (Released 7/25/2012)**
 - The following apply to driver v2.11
 - **New Features**

- Mac OS X Mountain Lion (10.8) Support.
- Added support to display interrupt information in atinfo.
- Added support for atrest.
- **Supported OS**
 - Mac OS X 10.8

- **Version 2.10 (Released 6/21/2012)**
 - The following apply to driver v2.10
 - **New Features**
 - Resolved a possible crash or hang during Thunderbolt hot plugging.
 - Corrected link speed selection for NT adapters.
 - Network connectivity is maintained when waking from sleep.
 - Enhanced initialization to better deal with fragmented system memory.
 - **Supported OS**
 - Mac OS X 10.6
 - Mac OS X 10.7

- **Version 2.00 (Released 4/23/2012)**
 - The following apply to driver v2.00
 - **New Features**
 - Initial release of Mac OS X drivers for the FastFrame 10GBASE-T Network Interface Card.
 - Added support for the temperature sensor for NT adapters.
 - Several enhancements to report errors and operate correctly in degraded mode.
 - Added support for two new checksum offloads included in OS X Lion, allowing IPv6 checksum calculation to take place in hardware for TCP and UDP. The checksum calculation covers the IPv6 pseudo header, TCP/UDP header and TCP/UDP data on both transmit and receive.
 - Added support for the NT11, and NT12 adapters. Changed link speed selection to account for additional link speeds supported by the Twinville chip.
 - VLAN discovery frames are no longer sent if the feature is disabled.
 - Erroneous data is now properly discarded in the event of a cable pull while reading from a Fibre Channel drive.
 - Features specific to CS adapters are confirmed to be disabled for NS and NT adapters during driver initialization.
 - When the frame size of a link aggregate is changed in System Preferences, connectivity is no longer lost.
 - Receipt of broadcast packets is confirmed to be enabled upon waking from sleep.
 - Fixed the mapping of User Priority to Traffic Class so Priority Flow Control (PFC) works correctly, preventing dropped FCoE packets.
 - Corrected several crashes and hangs that could occur during Thunderbolt hot plugging.
 - **Supported OS**
 - Mac OS X 10.6
 - Mac OS X 10.7

- **Version 1.10 (Released 9/1/2011)**
 - The following apply to driver v1.10
 - **New Features**
 - Initial release of Mac OS X drivers for the FastFrame 10GbE Converged Network Adapters
 - **Supported OS**
 - Mac OS X 10.6
 - Mac OS X 10.7

- **Version 1.00 (Released 7/20/2011)**
 - The following apply to driver v1.00
 - **New Features**
 - Initial release of Mac drivers for the FastFrame 10GbE Network Interface Card
 - **Supported OS**
 - Mac OS X 10.6
 - Mac OS X 10.7

3. Known Issues/Advisements

For NS and NT adapters, the NVRAM option to disable VLAN discovery is displayed when viewing settings with the 'atcnanvr' CLI tool. This setting is specific to CS adapters and is never referenced by NS and NT adapters.

Thunderbolt hot plugging is not supported for CS adapters.

A fixed 10Gb/s speed setting is not available in System Preferences. The available choices are:

NS	1Gb/s, auto
NT	1Gb/s, 100Mb/s, auto

When auto is selected, the speed will be fixed at 10Gb/s (NS adapters require a capable SFP for this to occur). As a result of this limitation, the IOActiveMedium property in the I/O registry will indicate auto speed instead of 10Gb/s when 10Gb/s is negotiated. 10Gb/s is not available because when it is set, an OS X bug prevents the use of jumbo frames (IR 9459).

By default this driver enables Receive Side Coalescing (RSC) to improve CPU utilization. This feature is not compatible with routing/IP forwarding or bridging. If routing/IP forwarding or bridging is being used, RSC must be disabled by setting the "atto-args-fastframe" boot argument to "-r". Future releases will include this information in the ReadMe.htm file.

4. Affected Products

Product Name	SKU
FastFrame NT11	FFRM-NT11-000
FastFrame NT12	FFRM-NT12-000
FastFrame NS11	FFRM-NS11-000
FastFrame NS12	FFRM-NS12-000
FastFrame NS14	FFRM-NS14-000
FastFrame CS11	FFRM-CS11-000
FastFrame CS12	FFRM-CS12-000
FastFrame CS14	FFRM-CS14-000
FastFrame DAC NS11	FFRM-NS11-DA0
FastFrame DAC NS12	FFRM-NS12-DA0

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, and is available Monday-Friday, 8:00 AM to 6:00 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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