ATTO Technology, Inc.

Product Release Notes

3Gb ExpressSAS Host Adapter Release v1.25 - 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 ExpressSAS Host Adapter products, version 1.25, which was released on 06/30/10. This information pertains to the Mac OS X platform for PowerPC and Intel® based systems.

2. Changes

- ***Version 1.25 (Released 06/30/10)***
  - **Note:** It is recommended that firmware dated 06/23/10 be utilized with this driver release.
  - The following apply to changes made from v1.23 to v1.25
  - **New Features, Enhancements and Changes**
    - The discovery process has been improved to recover commands that time out.
    - Initial discovery process modified to halt and allow driver loading to continue when the Device Wait Time is exhausted. Any pending discovery will resume when driver loading completes.
    - CSMI reporting improvement. Unknown port ID for a PHY that is down, or is not the lowest PHY in a wide port, are now reported, in lieu of the PHY ID.
    - Improved controller reset stability concerning resets due to the heartbeat.
    - Added support for the atinfo CLI command to display attached devices, such as a targets serial number.
    - Enhanced OS X rescans concerning devices, for logical unit changes.

- ***Version 1.23 (Released 01/12/2010)***
  - The following apply to changes made from v1.22 to v1.23
  - **Note:** It is recommended that firmware dated 10/22/09 be utilized with this driver release.
  - The following apply to changes made to release V1.23
  - **New Features, Enhancements and Changes**
    - Driver delay compensation added to allow for smooth booting of Macintosh NVRAM options.
    - Provided solution to work around OS X kernel panic when transfer sizes are greater than 32MB.

- ***Version 1.22 (Released 10/29/09)***
  - **Note:** It is recommended that firmware dated 10/22/09 be utilized with this driver release.
  - The following apply to changes made to release V1.22
  - **New Features, Enhancements and Changes**
    - Retries performed by the OS X SAM driver enhanced to prevent excessive I/O completion times, when timeouts occur.
    - Vendor specific SCSI errors enhanced through retries.
    - Enhanced expander discovery commands.
    - Aborts are escalated to target resets for all SATA devices.
    - Improved device wait count setting when handling power cycle devices.
    - Enhanced memory allocation for Snow Leopard.

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- ***Version 1.21 (Released 07/31/09)***
  - **Note:** It is recommended that firmware dated 7/27/09 be utilized with this driver release.
  - The following apply to changes made to release V1.21
  - **New Features, Enhancements and Changes**
    - Documented support for Snow Leopard.
    - Enhanced mapping of 64-bit application memory for the 32 bit Intel driver correctly.
    - Enhanced event logging.
    - Added the Read/Write Time Out Duration properties to specify timeouts for read/write commands. The timeout value is 30 seconds. This timeout applies only to devices for which Mac OS X provides an in-box driver (SCSI device types 0, 5, 7, and 14).
    - When a discovery completes, devices that are (still) present are reported to the OS and I/O resumes immediately.
    - The heartbeat will only be active when I/O is not in progress.

- ***Version 1.20 (Released 04/30/2009)***
  - The following apply to changes made from v1.14 to v1.20
  - **Note:** It is recommended that firmware dated 4/24/09 be utilized with this driver release.
  - **New Features, Enhancements and Changes**
  - **Incident Resolutions/Bug Fixes/Changes**
    - Updated the Uninstall.command script to display "Permission denied" when the sudo password is incorrect or blank. Note that the script will not work when the account has no password. See http://support.apple.com/kb/TA25121
    - SATA NCQ is disabled in NVRAM by default

- ***Version 1.14 (Released 01/30/2009)***
  - The following apply to changes made from v1.13 to v1.14
  - **Note:** It is recommended that firmware dated 1/26/09 be utilized with this driver release.
  - **New Features, Enhancements and Changes**
    - Resolved a Kernel Panic caused by running out of resources under heavy I/O

- ***Version 1.13 (Released 11/18/2008)***
  - **Note:** It is recommended that firmware dated 2008_11_18 be utilized with this driver release.
  - The following apply to changes made from v1.12 to v1.13
  - **New Features, Enhancements and Changes**
    - ExpressSAS H308 Host Adapter model with 8 internal mini-SAS ports for increased connectivity.
    - Resolved an issue regarding the HBA not coming up at full speed under PCI Express 2.0. The problem occurred when using a specific Intel chipset, the MCH 5400
    - For firmware version 2.01 and later, verify the length of writes to correct an issue with ATAPI devices.
    - Improve discovery processing to ensure discovery is retried when the firmware returns a partial topology
    - Added support to disable target ID assignment based on SAS address

- ***Version 1.12 (Released 7/24/2008)***
  - **Note:** It is recommended that firmware dated 2008_07_17 be utilized with this driver release.
  - The following apply to changes made from v1.10 to v1.12
  - **New Features, Enhancements and Changes**
    - Changed the maximum I/O transfer limit default to unlimited to accommodate for changes made in OS X version 10.5.3 that could affect performance
    - Added a system NVRAM switch to disable wide ports
    - Addressed adapter recovery issues preventing the driver from entering into an invalid state if adapter doesn't recover on the first attempt.

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- ***Version 1.10 (Released 5/14/2008)***
  - **Note:** It is recommended that firmware dated 2008_05_09 be utilized with this driver release.
  - The following apply to changes made from v1.00 to v1.10
  - **New Features, Enhancements and Changes**
    - Added support for ExpressSAS H30F**:** With this release, ATTO has released an ExpressSAS H30F Host Adapter model with 16 internal mini-SAS ports for increased connectivity.
    - Support added for ExpressSAS H30F
    - Initialization enhancements incorporated to support transport firmware updates
    - Improved power management functionality
    - Support added for non-zero LUNs
    - Addressed issues related to flashing the adapter while I/O is in progress
    - Enhanced support for applications to perform SMP commands
    - After initial discovery has completed, devices are now presented to the OS in order of ascending SAS address with SMP devices sorted last
    - Improved SATA device affiliation behind expanders when devices are moved between two adapters
    - Untagged commands are now converted to simple queue instead of ordered queue

- ***Version 1.00 (Released 10/19/2007)***
  - Initial release for the ExpressSAS H380 and H308 Host adapters

3. Known Issues/Advisements

- Reference DOS/BIOS and Configuration Tool release notes for additional information
- "Deep" sleep is supported only on Intel Macs. PowerPC Macs will sleep, but not "deep" sleep, so the sleep light will not pulsate. The only side effect is that when PowerPC systems are put to sleep, the fan speed will increase until the system is awakened.

4. Affected Products

Product Name	SKU
ExpressSAS H380 Host Adapter	ESAS-H380-000
ExpressSAS H308 Host Adapter	ESAS-H308-000
ExpressSAS H30F Host Adapter	ESAS-H30F-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, 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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