



## 3Gb ExpressSAS Host Adapter Release v1.31 - Linux

### 1. General Release Information

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These product release notes define the new features, changes, known issues and release details that apply to the ExpressSAS Host adapter products v1.31 that was released on 11/30/10. This information pertains to the Linux OS.

### 2. Changes

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- **Version 1.31 (Released 11/30/10)**
  - **Note:** It is recommended that firmware dated 11/19/10 be utilized with this driver release.
  - The following apply to changes made from v1.25 to v1.31
  - **New Features, Enhancements and Changes**
    - Improved SCSI Pass Through IOCTLs.
    - Enhanced interoperability with 2.6.30 kernel.
    - Added support for HDPARM.
    - Enhanced interoperability with 2.6.14-2.6.17 kernels.
    - Chip reset improvements.
    - Enhanced SAS transport support.
    - Improved interoperability with openSUSE11 and SAS transport.
  
- **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 v1.20 to v1.25
  - **New Features, Enhancements and Changes**
    - Controller reset enhancement regarding task management failures.
    - 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 Linux SAS Transport layer.
    - Improved SCSI pass through requests initiated by the CLI tools where the command timeout was not honored.
    - Improved compatibility for loading the driver for an H30F in a system with SAS transport enabled.
  
- **Version 1.20 (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 from v1.19 to v1.20

- **New Features, Enhancements and Changes**
  - CSMI support added.
  - Descriptive strings for sense keys to SCSI error event logging added.
  - Improved task management commands for enhanced recovery processing.
  - Aborts are escalated to target resets for SATA devices.
  - Enhanced expander discovery commands.
  - Improved device wait count setting when handling power cycle devices.
  - SMP API direct attached target discovery report enhanced.
  - Implemented simplified power management feature.
  - Removed “num\_ioreq” module parameter
  - Added “io\_time\_out” module parameter (default value of 30 seconds)
  
- **Version 1.19 (Released 07/31/09)**
  - **Note:** It is recommended that firmware dated 07/27/09 be utilized with this driver release.
  - The following apply to changes made from v1.15 to v1.19
  - **New Features, Enhancements and Changes**
    - Enhanced Event Logging
    - Added direct attached device discovery to the SMP API.
    - Reduced default number of commands per LUN from 32 to 7.
    - Resolved driver compilation issue for kernel 2.6.25
    - Fixed a resource leak when aborting commands that could eventually lead to failing commands.
    - Fixed return codes from the abort handler that could cause incorrect errors when aborting commands.
    - 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 1.15 (Released 11/18/2008)**
  - **Note:** It is recommended that firmware dated 11/18/08 be utilized with this driver release.
  - The following apply to changes made from v1.13 to v1.15
  - **New Features, Enhancements and Changes**
    - Resolved driver compilation issue for kernel 2.6.25
    - Resolved driver compilation issue for kernel 2.6.22 and older
    - 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
    - Fixed a bug in Linux Rescan Host Routine that could lead to invalid outstanding references to the driver. This would prevent the driver from being unloaded
    - Fixes to reset and abort handling.
  
- **Version 1.13 (Released 9/26/2008)**
  - **Note:** It is recommended that firmware dated 07/17/08 be utilized with this driver release.
  - The following apply to changes made from v1.11 to v1.13
  - **New Features, Enhancements and Changes**
    - Fixed compilation issue in RH4U3
    - Updated compilation of driver for SUSE Xen Kernel
    - Certified with Novell SUSE® LINUX Enterprise Server 10 for AMD64® & Intel® EM64T® Service Pack 1 for SUSE® SLES 10
  
- **Version 1.11 (Released 7/24/2008)**
  - **Note:** It is recommended that firmware dated 07/17/08 be utilized with this driver release.
  - The following apply to changes made from v1.10 to v1.11
  - **New Features, Enhancements and Changes**
    - Improvements made to power management to support hibernation
    - Improved support for kernel 2.6.25

- **Version 1.10 (Released 5/14/2008)**
  - **Note:** It is recommended that firmware dated 05/09/08 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 Linux kernel 2.6.25
    - 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
    - Addressed an issue with installation in SUSE 9
  
- **Version 1.00 (Released 10/19/2007)**
  - Initial release for the ExpressSAS H380 and H308 Host adapters

### 3. Known Issues/Advisements

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- Reference DOS/BIOS and Configuration Tool release notes for additional information

### 1. Affected Products

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

### 2. 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:

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