



ExpressSAS 12Gb Host Adapter v1.12 – FreeBSD®

1. General Release Information

These product release notes define the new features, changes, known issues and release details that apply to the ExpressSAS 12Gb SAS/SATA host adapter driver **v1.12** that was released on **November 12, 2018**. This information pertains to the FreeBSD 9 and 10 operating systems.

2. Changes

- **Version 1.12 (Released 11/12/2018)**
 - **Note:** It is recommended that firmware dated 11/02/2018 be used with this driver release.
 - **New Features, Enhancements and Changes**
 - Added an adaptive wait NVRAM setting that extends the device wait time and count until SAS discovery is complete
 - Added the ability to present the virtual SES device when no devices are attached

- **Version 1.11 (Released 08/22/2018)**
 - **Note:** It is recommended that firmware dated 08/17/2018 be used with this driver release.
 - **New Features, Enhancements and Changes**
 - Added support for a new flash bundle format that supports smaller download chunks compatible with the maximum transfer size for the driver
 - Increased I/O resources to improve performance with certain I/O workloads
 - Improved target mode performance
 - Fixed an issue with Virtual SES devices not being presented

- **Version 1.10 (Released 12/12/2017)**
 - **Note:** It is recommended that firmware dated 12/01/2017 be used with this driver release.
 - **New Features, Enhancements and Changes**
 - Added SMR drive support
 - Added support for displaying SATA device temperature in *atdevinfo*
 - Added support for *atsasinfo* to replace *atsasphy*
 - Added *atdevinfo* and *atsasinfo* CLI tools
 - Fixed PHY state display in *atsasphy* when disabling a PHY with no active link
 - Fixed infinite discovery when a bad SATA drive causes expander BCCs
 - Fixed load balancing of SAS drives in dual path topologies when SATA drives present
 - Fixed a discovery issue that could cause devices to be blocked from the system
 - The tracing driver now enables event logging by default

- **Version 1.05 (Released 06/07/2017)**
 - **Note:** It is recommended that firmware dated 05/30/2017 be used with this driver release.
 - **New Features, Enhancements and Changes**
 - Resolved an issue where the driver incorrectly responded to a Check condition for ATA Pass-Through commands
 - Implemented a fix for Write Buffer mode 7 translation for SATA drives
 - The driver will now detect and explicitly disable host managed SMR SATA drives
 - Added an NVRAM setting to enable SEMB SATA devices as disks
 - Resolved a memory corruption issue with T10-DIF and SAS enclosures
 - Added support for Write Buffer modes D, E, and F for SATA drives

- Modified driver so that adapter SES device is not created until a device is attached
 - Fixed the potential for drives newly formatted for T10-PI to be marked as unavailable in *atpcpro*.
 - Fixed an issue where devices with a corrupt format may be blocked from the system when Power Center Pro is enabled
 - Modified driver to allow communication to SATA drives when the minimum link rate of the expander topology does not match the drive rate
 - Changed the I/O timeout policy during expander discovery of a single device to have minimal impact on the overall discovery process
 - Fixed Write Same processing to some non-512 sector size SATA drives
 - Disabled the Extended Power Conditions feature set for SATA drives
 - Fixed a potential hang when a port goes down during discovery
 - Fixed a potential task management and timeout error recovery conflict
 - Fixed a potential crash when the user connects an invalid expander topology
 - Fixed issues with inaccessible devices (due to invalid topologies) being presented to the OS.
- **Version 1.00 (Released 1/27/2016)**
 - **Note:** It is recommended that firmware dated 1/5/2016 be used with this driver release.
 - **New Features, Enhancements and Changes**
 - This is the initial release of the ExpressSAS 12G HBA driver for FreeBSD.

3. Known Issues/Advisements

- None

4. Affected Products

Product Name
ExpressSAS H1280
ExpressSAS H1208
ExpressSAS H120F
ExpressSAS H12F0
ExpressSAS H1244
ExpressSAS H1248
ExpressSAS H1288

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
- E-Mail: techsupport@attotech.com