



ATTO Technology, Inc.

Product Release Notes

ExpressSAS Host Adapter 6 Gb Flash Bundle Version 090320

1. General Release Information

These product release notes define the new features, changes, known issues and release details that apply to the ExpressSAS 6Gb Host Adapter flash bundle package, version 090320, which was released on 03/24/2009. This information pertains to the flash bundles and BIOS utility associated with the ExpressSAS 6Gb Host Adapter products.

2. Changes

- **Version 090320 / BIOS V1.11 (Released 03/24/09)**
 - Added the Device Name field to the SAS Identify Address Frame (an optional field added in SAS 2.0).
 - Resolved an issue during initial device discovery that could result in a driver crash if the device rejects a discovery command.
 - SATA devices behind expanders are no longer reset during discovery
 - Improved SATA NCQ processing so performance is maintained as the queue depth increases
 - Improved port down cleanup to ensure all I/O is completed before destroying devices when multiple ports are instantiated
 - The SMP PHY control command to clear affiliations for SATA devices behind and expander now uses Clear Affiliation function and escalates to the Hard Reset function is necessary
 - SATA NCQ is disabled in NVRAM by default
 - Bus resets will no longer result in resource failures
 - Data under-runs are reported when a SCSI error occurs on the same command
 - Improved Head-of-line blocking detection to expedite SATA error recovery
- **Version 090128 / BIOS V1.01 (Released 02/18/09)**
 - Resolved issues that may cause the driver to crash or hang if a device rejects a discovery command on initial load.
 - Resolved any unexpected target ID changes after a cable pull and reinsertion, when a SATA device is connected behind an expander.
- **Version 081205 / BIOS V1.00 (Released 12/11/08)**
 - Initial release for the ExpressSAS H680 and H608 host adapter products

3. Known Issues/Advisements

1. Testing has shown an incompatibility issue that the Infotrend EONStor ES A08S-C2132 array
2. The HP ML150 BIOS hangs when an H6xx adapter is installed
3. The HP xw6400 and xw8400 BIOS will halt and display "922- Fatal Error on PCI-E Slot <#>. Press F1 to Boot" on a cold boot with an H6xx adapter installed. The system will boot and function normally after pressing F1. This is believed to be a false error message. It does not occur on warm boots
4. I/O may timeout in the BIOS driver in the Intel SR1560SFHS motherboard. It has been determined that the system BIOS does not assign the correct interrupt line to the adapter
5. When the BIOS driver is enabled on the H6F0 or H60F in an HP xw4600, a POST error message "110- Out of Memory for Options ROMs" is displayed.
6. Staggered spin-up for SATA is not currently supported
7. The ENABLE NOTIFY SPINUP primitive is not generated for SAS staggered spin-up functionality. However, most drives will spin-up after power-up when a Start Unit command or the first media access occurs giving the illusion that staggered spin-up is working. Some drives may not spin-up without the primitive after receiving a Stop Unit Command
8. A link may not recover after a bus reset is issued due to a resource allocation issue. This only effects Windows XP since the first level of error recovery is a bus reset
9. ATAPI devices are not currently supported (e.g. SATA CD and DVD drives)
10. SAS multiplexing is not currently supported
11. SATA port multipliers and port selectors are not supported
12. SGPIO is not currently supported
13. SATA commands may not complete after a link reset is issued

4. Affected Products

Product Name	SKU
ExpressSAS H680 Host Adapter	ESAS-H680-000
ExpressSAS H608 Host Adapter	ESAS-H608-000
ExpressSAS H6F0 Host Adapter	ESAS-H6F0-000
ExpressSAS H60F Host Adapter	ESAS-H60F-000
ExpressSAS H644 Host Adapter	ESAS-H644-000

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
- E-Mail: techsupport@attotech.com