

Technical Bulletin



Connecting to LTO SAS Tape Drives

Products this applies to:

- **ThunderLink® SH 2068 – Thunderbolt™ 2 to 6Gb SAS/SATA**
- **ThunderStream® SC 4808 – Thunderbolt™ 2 to 6Gb SAS/SATA RAID**

Technical Notes:

In our latest product testing, ATTO has noted utilizing Transport Layer Retries with the latest LTO tape drives behave differently in certain respects than previous generations. When reading from tape, ATTO no longer supports Transport Layer Retries (TLR) with the products noted above. If an error occurs while reading from tape, TLR will normally catch it and automatically retry. Without TLR, products will rely upon the backup application to catch the error and initiate the retry. When using LTO tape drives with the ATTO products noted in this bulletin, ATTO recommends validating that the backup application you are using supports error retry handling. Most sophisticated backup applications have this capability. In instances where they do not (which may include LTFS applications), a read error will occur and the data restore will fail. The user can simply try again.

Additionally, the latest LTO SAS tape drives exhibit different operation characteristics than previous versions and as a result, more read errors are generated than with previous generations of tape. Through extensive testing, ATTO has found that by slowing the SAS link down from 6Gb/s to 3Gb/s, the frequency of read errors with LTO drives is reduced tremendously. To make it easier for our customers, the products listed above will automatically reduce the SAS PHY speed down to 3Gb/s when an LTO drive is attached. This functionality was introduced in January of 2017 for the (currently shipping Thunderbolt 2) Thunderbolt products.

We recommend users update (via the ATTO website) to following firmware versions or later:

- **ThunderLink SH 2068 & ThunderStream SC 4808 – FW Version 170828 (Released September 5th 2018)**

TLR continues to be supported with ExpressSAS H6XX or H12XX adapters.

The products listed above fully support attached LTO tape devices. ATTO has maintained a compatibility and interoperability lab for many years and is confident in our ability to continue and support current and legacy tape devices.

Please contact ATTO Technical Support (716-691-1999 Ext. 242) for more information.