

# DriveAssure™ Technology

ATTO

## Drive Assessment and Latency Management for Enhanced Performance

### Customer Challenges

When reading or writing data to storage or RAID devices, if one or more drives are not performing as expected due to slow spots or bad sectors, drive performance will be compromised. Common errors within drives can cause performance degradation or premature failure of the drives that can result in loss of critical assets.

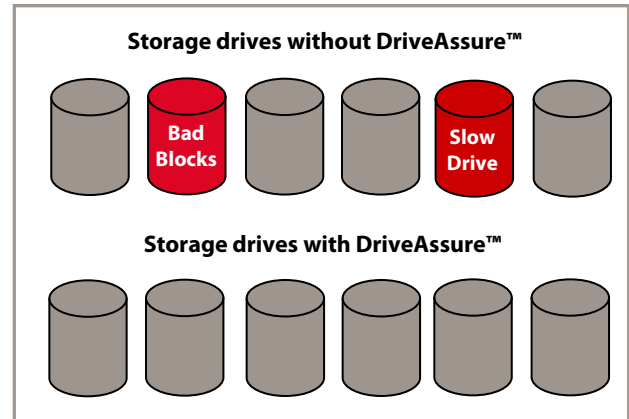
- **IT managers** and financial institutions need assurance that data is securely backed up and RAID groups are online without unnecessarily running in degraded mode.
- **Broadcast providers** are highly concerned with data loss which can negatively impact play-to-air environments. Video-on-demand providers need constant (24/7) access to their media.
- **Video Editing** customers can't afford to have projects interrupted because of dropped frames, or data loss due to premature drive failures and the time and expense involved in replacing those drives.

### ATTO's Solution

**DriveAssure™ is a specialized drive assessment and latency management feature**, available on ATTO FastStream™ RAID Storage Controllers and ExpressSAS RAID Adapters, that provides bounded latency through proprietary algorithms and user controls. DriveAssure prevents premature drive failures and slow downs to ensure uninterrupted access to data.

**Proactive Measures:** Unlike competitive products that fail a drive after a few unsuccessful retries, DriveAssure initializes (scrubs) and performs periodic drive scans to search for bad sectors and repairs them prior to a catastrophic failure. DriveAssure has built-in intelligence that performs parity verification and regularly monitors drive I/O performance.

**Corrective Measures:** During normal operation proprietary algorithms handle errors on drives due to slow spots or bad sectors. Through active monitoring of drive response times, retries of reads and writes, and alternative methods of data generation, DriveAssure makes certain that data is returned without failing the drive.



### User Benefits

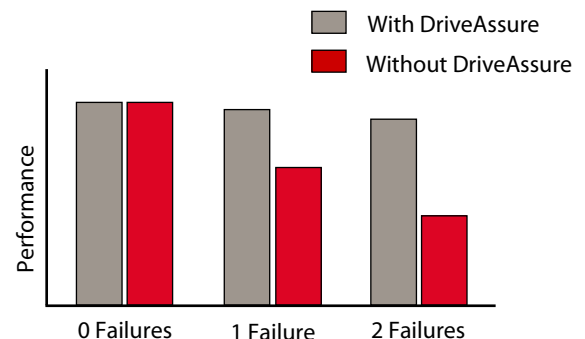
**Enhanced Productivity** - Systems run longer, faster and smoother with uninterrupted data transfer.

**Increased Data Protection** - The potential for lost data or dropped frames is significantly minimized.

**Cost Savings** - Unnecessary drive replacements are eliminated, saving time and money on new drives and the labor involved with initializing and rebuilding RAID groups.

**Faster Reads and Writes** - With a lower occurrence of drive failures, bandwidth is directed to where it is needed most - application performance - not RAID group rebuilds and data backups.

### Drive Failure Rate



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