DriveAssure™ Technology
ATTO RAID products provide guaranteed latency response

What is Latency?
Latency is defined as the time between a request and a response. In a storage system utilizing an ATTO Technology Inc. RAID product, it is the time from when a workstation or server application issues a request for data from storage to the time that the ATTO RAID product returns a response from the drives.

Latency Impact
In a storage system, latency is impacted by all aspects of the network topology, from host adapters to the drives themselves. When ATTO RAID products are used, they not only minimize latency through pre-fetching, caching and early response technologies, ATTO also has proprietary algorithms to minimize the impact of drive latency.

ATTO RAID Guarantees Latency
Throughput alone is not an accurate indicator of system performance for video applications. Latency introduced via a slow drive or intermittently slow drive in a storage array if left unmanaged will lead to reduced system performance. Figure 1 is an example of how reads and writes with larger than usual delays dramatically reduce the total available stream count even though there is ample throughput.

ATTO ExpressSAS® RAID products with DriveAssure™ technology, for parity and redundant RAID levels compensate when one drive in a RAID group does not respond within a specified period of time. The data from a slow drive can be generated using the parity or redundancy information from the rest of the RAID group, with only a nominal change in throughput.

Figure 2: Latency Response with DriveAssure
ATTO RAID products have the ability to cap latency at a user specified level resulting in up to an 80% improvement in latency response when compared with the competition.

Figure 2 shows how ATTO RAID technology efficiently manages reads and writes, forgiving intermittent drive problems while keeping data moving smoothly.

ATTO DriveAssure with guaranteed latency enables the fastest low latency data transfers while preventing premature drive failures and slow downs, efficiently utilizing all available drive bandwidth. Enlist a good data management plan which includes ATTO RAID products.