



Competitive Benchmark - 6Gb RAID



Industry-leading Performance with ATTO ExpressSAS R680
6Gb SAS/SATA RAID Adapter vs. LSI 9750-8e 6Gb SAS/SATA RAID Adapter

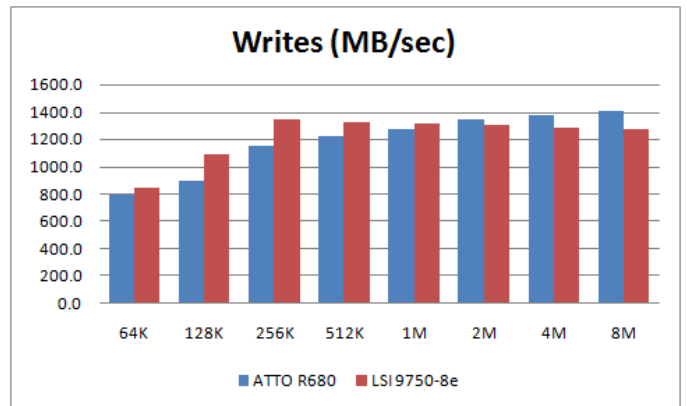
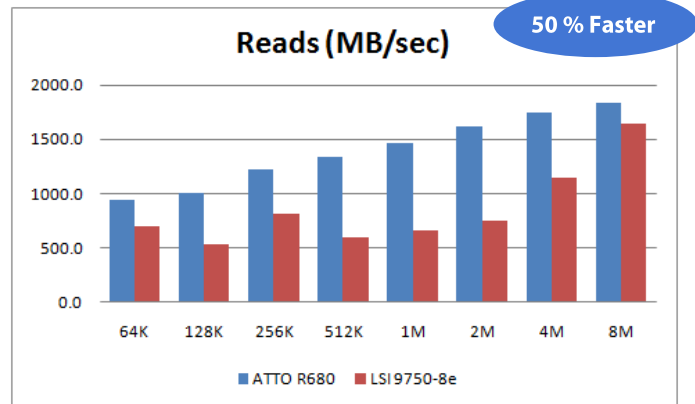
Overview

Intel's Iometer server I/O performance storage measurement tool was used to capture the data presented in this testing. 6Gb/sec SAS/SATA RAID adapters were tested in the PCIe 2.0 slot of the host running MS Windows 7 x64 with 6GB DDR3 RAM. The storage targets were connected to an external JBOD array through an Astek 6Gb expander with 8 PHYs and 16 raw, unformatted Western Digital 6Gb/sec 1TB SATA drives attached. Adapter performance was measured at multiple block transfer sizes to replicate high transactional and streaming storage applications for Reads and Writes, respectively.

Results

Comparative performance benchmark data (MB/sec):

	Read		Write	
	ATTO R680	LSI 9750-8e	ATTO R680	LSI 9750-8e
64K	938.0	707.0	793.9	843.0
128K	1006.7	539.9	899.6	1093.7
256K	1224.3	819.4	1147.2	1343.6
512K	1334.0	593.4	1224.7	1325.2
1M	1460.3	666.6	1276.6	1314.0
2M	1616.8	745.6	1343.1	1299.8
4M	1746.4	1148.3	1378.0	1286.6
8M	1831.0	1649.0	1406.7	1270.9



Configuration

ATTO ExpressSAS R680 6Gb RAID Adapter

- 6Gb/s SAS/SATA RAID with 8 external ports
- x8 PCIe 2.0

LSI 9750-8e SAS/SATA 6Gb RAID Adapter

- 6Gb/s SAS/SATA RAID with 8 external ports
- x8 PCIe 2.0

Host Configuration

- Intel E5506 Xeon 2.12 GHz, 6GB DDR3 RAM
- PCIe 2.0 x8
- Windows 7 x64

Storage Configuration

- 16 Western Digital 1TB SATA 6Gb/s HDD
- RAID 5 Configuration
- ATTO and LSI adapter interleave set to 256K

Benchmark Application

- Intel Iometer server I/O performance storage measurement tool
- 100% sequential at 64KB to 8MB Reads and Writes at a queue depth of 2

Summary and Conclusions

The ExpressSAS R680 provides up to 50% faster read performance compared to a LSI's 6Gb SAS/SATA RAID adapter. Additionally, the ATTO R680 delivers excellent write performance, especially at larger block transfer sizes. It allows users to achieve the highest I/O and data throughput for the complete spectrum of applications, including advanced video, backup and transactional database.

The ATTO ExpressSAS 6Gb/s SAS/SATA RAID adapter family allows users to instantly protect their critical data while enhancing performance. ATTO designs ExpressSAS RAID adapters to maintain full performance in degraded mode with 50% faster rebuilds, limiting exposure to a second drive failure. Exclusive latency management features like Advanced Data Streaming (ADS™) Technology and DriveAssure™ minimize data transfer interruptions to ensure the highest level of consistent performance. These differentiating capabilities make ATTO the premier choice for high-performance host-based RAID connectivity.