



3Gb/s SAS/SATA RAID Adapters

ExpressSAS R30F
ExpressSAS R380
ExpressSAS R348

ATTO's ExpressSAS 3Gb/s SAS/SATA RAID Adapters add high-performance parity RAID data protection to direct-attached SAS and SATA JBOD storage.

Long-Standing RAID Experience

Leveraging over 18 years of RAID technology development, ATTO's family of ExpressSAS 3Gb/s SAS/SATA RAID adapters feature the time-proven ATTO RAID Stack, DVRAID™ and DriveAssure™, proprietary technologies developed to provide the most robust RAID-based connectivity solution in the industry.

Flexible Connectivity Solutions

With several port configuration options including 16 internal, 8 external and a user-selectable 4 internal/4 external or 8 internal, ExpressSAS 3Gb/s SAS/SATA RAID adapters are ideal for a wide variety of IT and digital media environments requiring high-performance and parity RAID protected data. ExpressSAS RAID adapters offer driver support for Windows®, Linux and Mac® OS X, providing a single connectivity solution for customers with heterogeneous operating system environments.

Performance Engineered

The ExpressSAS 3Gb/s SAS/SATA RAID adapter family allows users to instantly protect their critical data without compromising performance. ATTO designs ExpressSAS RAID adapters to maintain full performance in degraded mode and to minimize downtime 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.

Advanced Management Tools

ATTO's easy-to-use Configuration Tool features an intuitive GUI that simplifies RAID group configuration, management and monitoring. ATTO's ExpressSAS RAID adapters offer the most advanced performance tuning capabilities and troubleshooting utilities, providing users with sophisticated diagnostics and the flexibility to control settings for specific applications.

Technical Features

- Port configurations include 16 internal, 8 external and user-selectable 4 internal / 4 external or 8 internal
- 600 MB/s per port/phy throughput in full-duplex mode
- Features an x8 PCIe host interface
- Low-profile form factor
- SAS, SATA and SATA II connectivity
- Supports up to 128 SAS/SATA devices
- Exclusive Advanced Data Streaming (ADS™) Technology and DriveAssure™
- Data Recovery mode increases the probability of retrieving lost data from a failed drive
- Disk and Tape support in one PCIe slot
- Driver support for Windows®, Linux, and Mac® OS X
- RAID 0, 1, 4, 5, 6, 10, 40, 50, 60, JBOD and DVRAID®
- 3-year standard product warranty

Technical Specifications

Applications

ExpressSAS RAID adapters add high-performance RAID data protection to direct-attached SAS and SATA JBOD storage. They are an ideal connectivity solution for high-performance media and entertainment and general IT environments. ExpressSAS 3Gb/s SAS/SATA RAID adapters deliver affordable host-level RAID for high-bandwidth workflows such as digital content creation, streaming video, transactional databases, and email and Web servers.

Advanced Data Streaming (ADS™)

Latency-management technology that controls the acceleration of data transfers to move large amounts of data faster and more efficiently.

DriveAssure™ Technology

Drive assessment and latency management technology that minimizes the likelihood of RAID groups becoming degraded or taken offline due to slow drives, ensuring uninterrupted access to data.

RAID Features and Functionality

- SAS, SATA and SATA II support
- RAID Levels 0, 1, 4, 5, 6, 10, 40, 50, 60, JBOD, DVRAID™
- ATTO RAID stack
- Command coalescing
- Support for staggered drive spin-up
- RAID level migration
- Hot swap with auto rebuild
- Online performance metrics and event logs
- Native command queuing
- 256/512MB ECC protected cache memory
- SES, SNMP and S.M.A.R.T. Support
- DVRAID™ for high-bandwidth video environments
- Pass-through support for tape and tape devices
- Configurable stripe size
- Online capacity expansion
- Global and dedicated hot spares
- Automatic and tunable online rebuilds
- N-way mirroring

User Benefits

- High performance host-based RAID for direct-attached storage
- Three port configurations for flexible connectivity
- Full performance in degraded or rebuild mode
- More options for retrieving data from a failed drive with Data Recovery mode
- Affordable and scalable storage expansion alternative to RAID arrays
- 50% faster rebuilds
- Maintain high priority workflows with tunable rebuilds
- RAID group partitioning for better management

Management Tools

- User-friendly GUI for quick and easy RAID setup
- Command Line Interface for advance functionality
- ATTO Config Tool: BIOS-based RAID management and configuration utility

Bus Specifications

- x8 PCI Express host interface

External Connectivity

- x4 Mini SAS connectors
- Low profile form factor; full-height bracket included
- External LEDs for on-line & speed status for each port

Operating System Support

- Windows® Server 2003, 2008,
- Windows XP, Vista, 7
- SUSE Linux
- Red Hat Linux
- Mac® OS X (10.4.x - 10.6.x)

Agency Approvals

- FCC Part 15, Subpart B, Class B
- CE Mark: CISPR 22:2002
- EN55022: 2006, Class B

Compliance

- RoHS

Dimensions

R30F

- Length 8.640", Height 2.900"

R380/R348

- Length 6.600", Height 2.731"

Operating Temperature

Hardware Environment

- Temperature: 0-40°C (32°-104° F) - R380/R348
- Temperature: 0-60°C (32°-104° F) - R30F
- Humidity: 5 - 95% non-condensing

Storage Environment

- Temperature: -40°-70°C (-40°-157°F)
- Humidity: 5 - 95% non-condensing

Operating Voltage

R30F

- 17W (typical)

R380/R348

- 13W (typical)

Airflow

- 150 lf/m (min) recommended

Warranty

- 3 Year



ATTO ExpressSAS R30F	
Ports	16 Internal
Bus Characteristics	x8 PCIe
Form Factor	Low Profile
Connectors	4 Mini SAS (x4) SFF 8087 Internal
Part Number	ESAS-R30F-000



ATTO ExpressSAS R380	
Ports	8 External
Bus Characteristics	x8 PCIe
Form Factor	Low Profile
Connectors	2 Mini SAS (x4) SFF 8088 External
Part Number	ESAS-R380-000



ATTO ExpressSAS R348	
Ports	User Selectable 4 Ext/4 Int or 8 Int
Bus Characteristics	x8 PCIe
Form Factor	Low Profile
Connectors	1 Mini SAS (x4) SFF 8088 External, 2 Mini SAS (x4) SFF 8087 Internal
Part Number	ESAS-R348-000



ATTO Technology, Inc.