



## 3Gb/s SAS/SATA Host Bus Adapters

ExpressSAS H30F  
ExpressSAS H380  
ExpressSAS H308

ATTO's ExpressSAS 3Gb/s SAS/SATA Host Bus Adapters provide high-performance connectivity for a wide range of Direct Attached Storage infrastructures.

### Industry Proven Technology

ExpressSAS 3Gb/s host bus adapters leverage the performance and reliability enhancements of Serial Attached SCSI (SAS) technology to deliver high performance connectivity to SAS/SATA storage. ExpressSAS HBAs are engineered for the most stringent digital media workgroup and IT server environments, and are compatible with a wide array of 3rd party products, such as HDDs and SSDs, storage arrays and many other SAS and SATA infrastructure products.

### Flexible Connectivity Solutions

ExpressSAS 3Gb/s SAS/SATA HBA's provide flexible connectivity to SAS/SATA storage. With 16 internal, 8 external or 8 internal port configurations, users benefit from cost-effective and efficient scalability. With support for SAS, SATA and SATA II connectivity, ExpressSAS 3Gb/s host bus adapters are ideal for a variety of storage environments.

### Performance Engineered

ExpressSAS 3Gb/s host bus adapters combine 3Gb/s SAS speeds and x8 PCI Express with powerful hardware and software elements to manage latency in real-time environments. Exclusive Advanced Data Streaming (ADS™) Technology maximizes CPU processes to deliver smooth and reliable data transfers and the highest consistent performance. ATTO pays close attention to detail in board design and signal integrity to minimize transmission errors and data corruption. These differentiating capabilities make ATTO the premier choice for high-performance direct-attached SAS/SATA storage connectivity.

### Advanced Management Tools

ATTO's easy-to-use Configuration Tool features an intuitive GUI that simplifies the installation, management and monitoring of the host bus adapter. With advanced troubleshooting and performance tuning capabilities, ExpressSAS HBAs provide users with sophisticated diagnostics and the flexibility to control settings for specific applications.

### Technical Features

- Port configurations include 16 internal, 8 external and 8 internal
- 600 MB/s per port/phy throughput in full-duplex mode
- Features a high-performance x8 PCIe host interface
- Low-profile form factor
- SAS, SATA and SATA II connectivity
- Supports up to 256 SAS/SATA devices
- Driver support for Windows®, Linux, Mac® OS X, VMware® and more
- Exclusive Advanced Data Streaming (ADS™) Technology
- Proven interoperability with support for SNIA HBA API
- ATTO Configuration Tool for customized performance settings
- Low power consumption
- 3-year standard product warranty

## Technical Specifications

### Applications

ExpressSAS 3Gb/s SAS/SATA host adapters deliver high performance connectivity to direct attached SAS or SATA storage. The impressive performance of the ExpressSAS family of 3Gb/s HBAs is perfect for a wide array of data-intensive IT and digital media applications such as tape backup, data warehousing, high-definition video, post-production, and digital film production.

### Advanced Data Streaming (ADS™)

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

### Key Features

- SAS, SATA and SATA II support
- Auto Negotiation between 3Gb/s and 1.5Gb/s devices
- Supports SSP, SMP, STP protocols
- PC BIOS bootability
- SGPIO support
- SES, SNMP and S.M.A.R.T. support
- Flash ROM for easy field updates
- Advanced management functions

### User Benefits

- High performance (MB/s and IOPS)
- Superior system performance with SAS/SATA technology
- Low power consumption
- Support for virtualized server environments

### Management Tools

- Command Line Interface for advanced functionality
- ATTO Config Tool (w/GUI) BIOS-based management and configuration utility

### Bus Specifications

- x8 PCI Express host interface
- Supports PCI Express Base Spec 1.0a

### External Connectivity

- Low profile bracket
- x4 MiniSAS Connectors
- External LEDs for on-line and speed status for each port

### Operating System Support

- Windows Server 2003, 2008, XP, Vista, 7
- Red Hat & SUSE Linux
- Mac OS X (10.4.x - 10.6.x)
- VMware® ESX Server 3.5

### Agency Approvals

- FCC Part 15, Class B
- CISPR 22:2002
- EN55022: 2002, Class B

### Compliance

- RoHS

### Dimensions

- H30F
- Length 6.600", Height 2.900"
- H380, H308
- Length 5.600", Height 2.731"

### Operating Temperature

Hardware Environment

- Temperature: 0-60°C (32°-140°F) at 300 lf/m airflow
- Temperature: 0-40°C (32°-104°F) at 150 lf/m airflow
- Humidity: 5 - 95% non-condensing

Storage Environment

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

### Operating Voltage

H30F

- 12V @ 1.45A max.
- 3.3V @ .50A max
- 19W (typical)

H380

- 12V @ .59A max.
- 3.3V @ .87A max.
- 10W (typical)

H308

- 12V @ 1.05A max.
- 3.3V @ .45A max
- 10W (typical)

### Airflow

- 150 lf/m (min) recommended

### Warranty

- 3 Year



ATTO ExpressSAS H30F

Ports	16 Internal
Bus Characteristics	x8 PCIe
Form Factor	Low Profile
Connectors	4 Mini SAS (x4) SFF 8087 Internal
Part Number	ESAS-H30F-000



ATTO ExpressSAS H380

Ports	8 External
Bus Characteristics	x8 PCIe
Form Factor	Low Profile
Connectors	2 Mini SAS (x4) SFF 8088 External
Part Number	ESAS-H380-000



ATTO ExpressSAS H308

Ports	8 Internal
Bus Characteristics	x8 PCIe
Form Factor	Low Profile
Connectors	2 Mini SAS (x4) SFF 8087 Internal
Part Number	ESAS-H308-000



ATTO Technology, Inc.