

## High-performance SAS expander that fits your enclosure

The A33606-AIC is family of 36-port 6Gb/s SAS/SATA expander add-in cards. This complete subsystem incorporates everything system vendors need to add next-generation storage support for JBOD and RBOD systems that need to support SAS and SATA target disks. The A33606-AIC supplies 36 lanes of 6Gb/s SAS connectivity. Each lane can connect to a disk, a host bus adapter (HBA) or cascade to another expander device. When configured for cascaded connections, the A33606-AIC allows a single SAS HBA card to drive hundreds of target disks. To maximize performance, lanes can be aggregated into a 'wide' port connecting an HBA to the A33606-AIC or an A33606-AIC to another A33606-AIC.

The A33606-AIC includes enclosure management features that allow system vendors to monitor temperatures and provide external LEDs mounted elsewhere in a chassis.

## Support for SATA devices

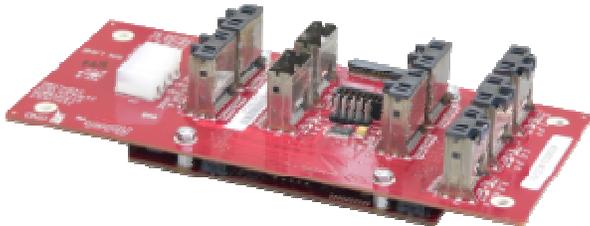
The A33606-AIC supports direct connection of low-cost Serial ATA (SATA) target disks. The expander chipset transparently bridges SATA to SAS and allows system designers to use either high-reliability enterprise class SAS disks, or select lower cost SATA devices to maximize storage density.

## KEY APPLICATIONS

- Storage enclosures
- HBA port multiplier
- SAN fabric switch

## PRODUCT FEATURES

- 6Gbps per port, 36 ports
- Supports multi-lane aggregation for wide-port configurations up to 24Gbps
- Can be cascaded to allow a single initiator to control hundreds of target disks
- Supports connection to multiple initiators allowing Storage-Area-Networking and system redundancy
- Supports SCSI Enclosure Services (SES-2).
  - On-board and external thermal monitoring
  - GPIO Header for additional LED output
- Connects to both SAS and SATA hard disk drives
- T-10 and Phy-based zoning
- 1 year limited warranty



## A33606-AIC Ordering Information

A33606-AIC-01	x36 lanes of 6Gb/s SAS, vertical SAS connectors
A33606-AIC-02	x36 lanes of 6Gb/s SAS, right-angle SAS connectors



## Technical Specifications

<b>Host Bus Type</b>	n/a	
<b>Compliance</b>	ANSI T10 SAS specification 2.1-r4	
<b>Data Transfer</b>	Up to 54Gb/s	
<b>Modes</b>	Standalone fabric switch	
<b>Supply Voltage</b>	+4.5V to 13.2V +/- 5%	
<b>Supply Power</b>	18 Watts	
<b>SAS Bus</b>	Thirty-six 6Gb/s SAS/SATA ports	
<b>SAS Bandwidths</b>	1.5Gb/s (SAS/SATA-I) Single lane - 150 MB/s Wide Port (4 lanes) - 600 MB/s Wide Port (8 lanes) - 1200 MB/s  3.0Gb/s (SAS/SATA-II) Single lane - 300 MB/s Wide Port (4 lanes) - 1200 MB/s Wide Port (8 lanes) - 2400 MB/s  6.0Gb/s (SAS-2/SATA-III) Single lane - 600 MB/s Wide Port (4 lanes) - 2400 MB/s Wide Port (8 lanes) - 4800 MB/s	
<b>Connectors</b> A33603-AIC-01	<b>External</b>	<b>Internal</b> 36 lanes routed through nine SFF-8087 Mini SAS 4i connectors.
<b>Form Factor</b>	6.762" x 3.112" card	
<b>Protocols</b>	SAS-2, SES-2, SAS, SATAI, SATA II	
<b>Device Support</b>	Effectively unlimited (limited by HBA controller)	
<b>Agency Approval</b>	RoHS Compliant (lead-free)	
<b>Environments</b>	<b>Operating</b>	<b>Storage</b>
<b>Temperature</b>	0° to 55° C	-40° to +85° C
<b>Relative Humidity</b>	5 to 90% non-condensing	5 to 90% non-condensing

### WARRANTY

Astek products are assembled and tested in world-class facilities to assure superior product reliability and performance. Astek's expander board products carry a one-year limited warranty.

### About Astek Corporation

Astek manufactures storage products for embedded markets including medical, telecommunications and military applications. In addition to Host Bus Adapters, Astek also supplies Serial Attached SCSI solutions including edge and fan-out expanders.

For more information please visit the Astek web site at:

[www.astekcorp.com](http://www.astekcorp.com)

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