

A3803-PMC-55

5V Tolerant, Serial Attach SCSI (SAS) Host Bus Adapter (HBA)



Point-to-point connections for greater performance and reliability; and the choice of drive connect.

The Astek A3803-PMC-55 brings SAS functionality to SPARC Compact PCI (cPCI) and VME blades, allowing legacy SPARC and 5V-only (non PCI-X) blades to use modern SAS and SATA disk media. To simplify system builder's inventory control, the A3803-PMC-55 can operate in both 5V only environments (at PCI-66/64), and full rate 133Mhz/64-bit in PCI-X environments. The serial interface allows point-to-point connection offering higher performance, increased aggregate bandwidth, high availability with dual ported SAS drives, and enhanced reliability compared to parallel SCSI. The A3803-PMC-55 supports 3 Gbps SAS, 1.5 Gbps SAS, 3 Gbps SATA and 1.5Gbps SATA hard disk drives.

External SAS expanders allow the A3803-PMC card to support up to 120 target disks.

OS Independent Hardware RAID (0,1)

Integrated RAID (IR) provides the reliability and performance benefits of disk mirroring (RAID 1) and striping (RAID 0). Integrated Mirroring™ (IM) provides data protection for the system boot volume by simultaneously writing redundant data across two to six disks. Integrated striping yields enhanced performance by aggregating the bandwidth of up to six disk drives. IR is OS-Independent and does not require the use of special device drivers.

Available ESS Testing and Conformal Coating

The most demanding applications require support for extended thermal operation and sustained operation in harsh environments. The A3803-PMC-55 is available on request with Environmental Stress Screening tests to ensure operation over extended temperatures (-20C to 70C), and has been delivered with conformal coating and special handling for liquid cooling (Spray-Cool™).

A3803-PMC-55 Ordering Information

A3803-PMC-55	Two-x4 SFF-8470 Front Panel RoHS Compliant Supports Target (SCSI enclosure) functionality
A3803-PMC-55R	Two-x4 SFF-8470 Front Panel RoHS Compliant Integrated RAID0/1/10

KEY APPLICATIONS

- SPARC and PCI 2.1 processor blades (cPCI/VME)
- Data-recording systems
- Embedded database servers
- Embedded high-performance computing
- High-reliability systems
 - NEBS/Telecom
 - MIL-STD 810F
 - Medical scanners

PRODUCT FEATURES

- 8 SAS Lanes
 - 2 SFF-8470 front panel
 - 3Gbps per port
 - x4 Wide port supported
 - Supports SATA 1.5/3.0 Gbps devices
 - Supports disks, tape, RBOD, JBOD, expanders, and optical DVD devices
- 5V Tolerant PCI PMC-X connector
 - Supports PCI 2.1
 - 32-bit/33Mhz
 - 64-bit/66Mhz
 - Supports PCI-X
 - 64-bit/133MHz in PMC-X slots
- LSI Logic's Fusion-MPT™ featuring over 140,000 I/O's per second
- Supports all major OSs
 - Windows 2000 through Windows 7
 - Linux 2.4.x, Linux 2.6.x
 - VxWorks 5.5.x/6.x
- 1 year limited warranty

Technical Specifications

Host Bus Type	64-bit/133MHz PCI-X, backward compatible to PCI 2.1 (5V tolerant)	
Compliance	PCI 2.2, PCI-X 1.0a, PCI-X 2.0 mode 1, IEEE 1386.1, VITA-39	
Data Transfer	132MB/s (PCI 32-bit bus @33MHz) 264MB/s (PCI 64-bit bus@33MHz) 528MB/s (PCI 64-bit bus @66MHz) 800MB/s (PCI-X 64-bit bus @100MHz) 1056MB/s (PCI-X 64-bit bus @133MHz)	
Modes	Bus master DMA	
PCI Voltage	+3.3V +/- 5% (5V tolerant, universal PMC voltage keying)	
PCI Power	7.5 Watts excluding transceivers	
SAS Bus	Eight 3Gbps SAS/SATA ports	
SAS Bandwidths	Single lane – 300 MBps Wide Port (2 lanes) – 600 MBps Wide Port (4 lanes) – 1200 MBps	Single SAS Lane – 600 MBps Wide Port (2 lanes) – 1200 MBps Wide Port (4 lanes) – 2400 MBps
Connectors	External	Internal
A3803-PMC-55	Two- x4 SFF-8470	none
Form Factor	5.87" x 2.91", 150 mm x 75 mm PMC Mezzanine Card	
Protocols	SCSI	
Device Support	Thousands of SAS WWIDs, more than 120 target disks with SAS fan-out expanders	
Agency Approval	CE, Canada, FCC class A, UL Registered	
Environments	Operating	Storage
Temperature	0° to 55° C	-40° to +85° C
Relative Humidity	5 to 90% non-condensing	5 to 90% non-condensing

Software Support

OS Support	Versions
Windows	2000, XP, Server 2003, Vista, Windows 7 32-bit and 64-bit for all versions
Linux	Full support requires 2.6.12+
Sun Sparc Solaris	2.8, 2.9, 2.10
VxWorks	5.5,6.x

WARRANTY

Astek host adapters are assembled and tested in world-class facilities to assure superior product reliability and performance. Astek's host adapters carry a three-year limited warranty.

For more information please visit the Astek web site at:

www.astekcorp.com

Astek Corporation

5055 Corporate Plaza Dr.
Colorado Springs, CO 80919
USA

Tel: +1 866-427-8351

Tel: +1 719-260-1625

Fax: +1 719-260-1668

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