M1E2SSD

SETAC PCI Express SSD Module

Product Description

Silicom Solid State Drive SETAC ExpressModule Server card is PCI-Express X8 Solid State Drive card that can fit into a 3.5" HD form factor. The Silicom Solid State Drive SETAC ExpressModule adapter is the front I/O module in Silicom Server to Appliance Converter (SETAC) architecture.

The Silicom Solid State Drive SETAC ExpressModule Server cards are based on LSI SAS2008 SAS/SATA I/O controller with eight 6GBPs SAS/SATA ports. The advanced Integrated RAID options include support for the Integrated Mirroring (RAID 1), Integrated Mirroring Enhanced (RAID 1E), Integrated Striping (RAID 0), and Integrated Striping/Integrated Mirroring (RAID 10) solutions.

Silicom's Solid State Drive SETAC ExpressModule Server cards are the ideal solution for implementing storage with RAID0/1/1E/10 capabilities and high speed read/write within high performance servers.

Key Features

RAID Features The LSISAS2008 controller offers the following Integrated RAID features:

- Integrated Mirroring (RAID 1)
- Integrated Mirroring Enhanced (RAID 1E)
- Integrated Striping (RAID 0)
- Integrated Striping/Integrated Mirroring (RAID 10)

PCI Express Features The LSISAS2008 controller supports the following PCI Express 2.0 features:

- PCI Power Management 1.2
- Active State Power Management, including the L1 and L0s states, is supported by placing links in a power-saving mode when there is no link activity
- 32-deep command queue
- Software compatibility with PCI and PCI-X software, which leverages existing PCI
- PCI Express Traffic Class 0 and one virtual channel, with native support for 16 virtual functions (single-root)
- Message Signaled Interrupts (both MSI and MSI-X), as well as INTx interrupt signaling for legacy PCI support

SAS Features: The LSISAS2008 controller supports the following SAS 2.0 features:

- 6Gb/s, 3Gb/s, and 1.5Gb/s SAS data transfers

- Serial, point-to-point, enterprise-level storage interface

- Wide data transfers using from two to eight phys

- Narrow ports consisting of a single phy

- Data transfers using SCSI information units

- Compatibility with SATA target devices

- T10 Data Protection information model

- 2 MB of on-chip EDRAM for context RAM

- Greater than 2-TB addressing by means of 16-byte SCSI Read/Write/Verify CDB for SAS and SATA

SATA/STP: Features The LSISAS2008 controller supports the following SATA/STP features:

- 6Gb/s, 3Gb/s, and 1.5Gb/s SATA data transfers

- 6Gb/s, 3Gb/s, and 1.5Gb/s STP data transfers

- Addressing of multiple SATA targets through an expander

- Ability for multiple initiators to address a single target (in a failover configuration) through an expander

Common Key features:

- PCI Express ExpressModule Electromechanical Specification Revision 1.0

- Support PCI Express Base Specification 2.0 (2.5 GHz)

Technical Specifications

Solid State Drive SETAC ExpressModule Server card Technical Specifications:	
Solid State Drive SETAC ExpressModule Server card supports:	Eight PCI Express phys, with support for x8, x4, x2, and x1 link widths
Operating Systems Support	
Operating system support:	Windows Linux VMware
General Technical Specifications	
Interface Standard:	PCI Express ExpressModule Electromechanical Spec. Revision 1.0 Silicom SETAC PCI-Express Base Specification Revision 2.0 (5 GT/s)

Board Size:	168.2mm x 98mm (6.62"X3.858")
PCI Express Card Type:	X8 Lane
PCI Express Voltage:	+12V +- 8%
PCI Connector:	Gold Finger: X8
Controller:	LSI LSISAS2008
Holder:	Not included
Weight:	0.190Kg (With 8 modules)
Power Consumption (with data):	19.8W
Power Consumption:	12.2W
Operating Temperature:	-5°C – 40°C (23°F – 105°F)
Storage:	-40°C–65°C (-40°F–149°F)
EMC Certifications:	FCC Part 15, Subpart B Class A Conducted Emissions Radiated Emissions CE EN 55022: 1998 Class A Amendments A1: 2000; A2: 2003 Conducted Emissions Radiated Emissions CE EN 55024: 1998 Amendements A1: 2000; A2: 2003 Immunity for ITE Amendment A1: 2001 CE EN 61000-3-2 2000, Class A Harmonic Curent Emissions CE EN 61000 3-3 1995, Amendement A1: 2001 Voltage Fluctuations and Flicker CE IEC 6100-4-2: 1995 ESD Air Discharge 8kV. Contact Discharge 4kV. CE IEC 6100-4-3:1995 Radiated Immunity (80-1000Mhz), 3V/m 80% A.M. by 1kHz CE IEC 6100-4-4:1995 EFT/B: Immunity to electrical fast transients 1kV Power Leads, 0.5Kv Signals Leads CE IEC 6100-4-5:1995 Immunity to conductive surges COM Mode; 2kV,

	Dif. Mode 1kV
	CE IEC 6100-4-6:1996
	Conducted immunity (0.15-80 MHz) 3VRMS 80% A.M.
	By 1kHz
	CE IEC 6100-4-11:1994
	Voltage Dips and Short Interruptions
	V reduce >95%, 30% >95% Duration 0.5per, 25per, 250per
MTBF(Without mSATA Modules):	186 Years
MTBF(With mSATA Modules):	24 Years
LEDs	
LEDs location:	Active Led(Green), Error Led(Yellow)
Connectors:	LED is located on the PCB, visible via holes in the metal bracket holder on the right side

Order Information

P/N	Description	Notes
M1E2SSD-R	Solid State Drive SETAC ExpressModule Server card	x8 Gen2, ExpressModule, Based on LSI LSISAS2008
M1E2SSD-1T-C-R	Solid State Drive SETAC ExpressModule Server card with 1 TB Flash Storage	x8 Gen2, ExpressModule, Based on LSI LSISAS2008

-C: with canister

Advanced features may require driver software support

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