TSC-300X
Mission and Payload Systems 3U-VPX

3U VPX RAID Controller Module

Feature Set

General
- 3U VPX
- PCI Express x1, x2, x4 or x8
- Jumper setting for x8 or x4
- Auto-negotiation for x2 or x1
- XMC Site with Rear I/O
- I²C Bus (SMBus®) Management
- I²C Bus Temperature Monitor
- 1.0” Pitch with VPX-REDI standard
- .80” air cooled and .85” conduction cooled Pitch available

Drive Interfaces:
- RAID 0, 1, 1E
- 8x Drives supported
- Serial Attached SCSI (SAS)
- Serial ATA (SATA)
- 1.5 and 3 Gb/s per Drive Port

RAID Levels:
- RAID-0 Integrated Striping
- RAID-1 Integrated Mirroring (IM)
- RAID-1E Enhanced IM
- Zero Channel RAID

Power:
- 5V @ 5A, 3.3V @ 1A (Max)
- 30 Watts (Max) without PMC/XMC

Specs - Conduction Cooled with SSD:
- Conformal Coat: Optional
- Operating Temperature: -40° to +85°C
- Storage Temperature: -55° to +105°C
- Humidity: 0 to 95% RH Non-Condensing
- Shock: 40g Peak
- Sawtooth @ 11 mSec
- Vibration (Random): 1g2/Hz, 15Hz to 2KHz
- Vibration (Sine): 10g Peak, 15Hz to 2KHz

TSC-300X is a 3U VPX RAID Controller Module utilizing the LSISAS1068E PCIe RAID Controller, capable of supporting up to eight SAS/SATA Mass Storage drives. The TSC-300X features on-board storage via I²C of configuration parameters, BIOS and mirroring data. The module includes an XMC/PMC site accessible via PCIe.

TSC-300X Features:
- 3U VPX Conduction Cooled per VITA 46, VITA 48 & VITA 65 OpenVPX
- PCIe 1.0a - x1, x2, x4 & x8 per VITA 46.4
- Up to 8x SAS/SATA FLASH or Rotating drives supported
- SAS/SATA Transfer rates up to 3 Gb/s per drive
- RAID 0, 1, 1E
- XMC/PMC site with rear I/O per VITA 46.9, VITA 42.3 and IEEE 1386.1
- Supports the LSI 1068E MegaRAID Software Utility
- Drive activity LEDs for each attached drive
- I²C bus for Chassis Management functions
- ZEROIZE and PURGE command via Discrete Interface
- Supports PURGE command via PCIe
- Supportable Operating Systems
  - Microsoft Windows XP
  - Linux Red Hat
  - Linux SuSE Enterprise Editions
  - Microsoft Windows 2000
  - Microsoft Windows Server 2003/2008
  - Solaris 9/10
  - Consult factory for current list of validated Operating Systems
Compliance Specifications:
- The TSC-300X SATA Drive Module is designed to meet CE Emissions specification EN 55022, CE Immunity specification EN 50082-2 and FCC 47 CFR, Part 15, Class A when tested in a shielded enclosure.

Standard Configuration Ordering Information:
- Air Cooled Level 1 0.8" Pitch TSC-300X1-000
- Conduction Cooled Level 5 1.0" Pitch VPX-REDI TSC-300X5-101

Consult factory to order other configurations

TSC-300X Block Diagram