THEMIS

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**

Conduction Cooled TRIAD-300X module with 1.0" VPX-REDI covers shown

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

OpenVPX™

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

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.
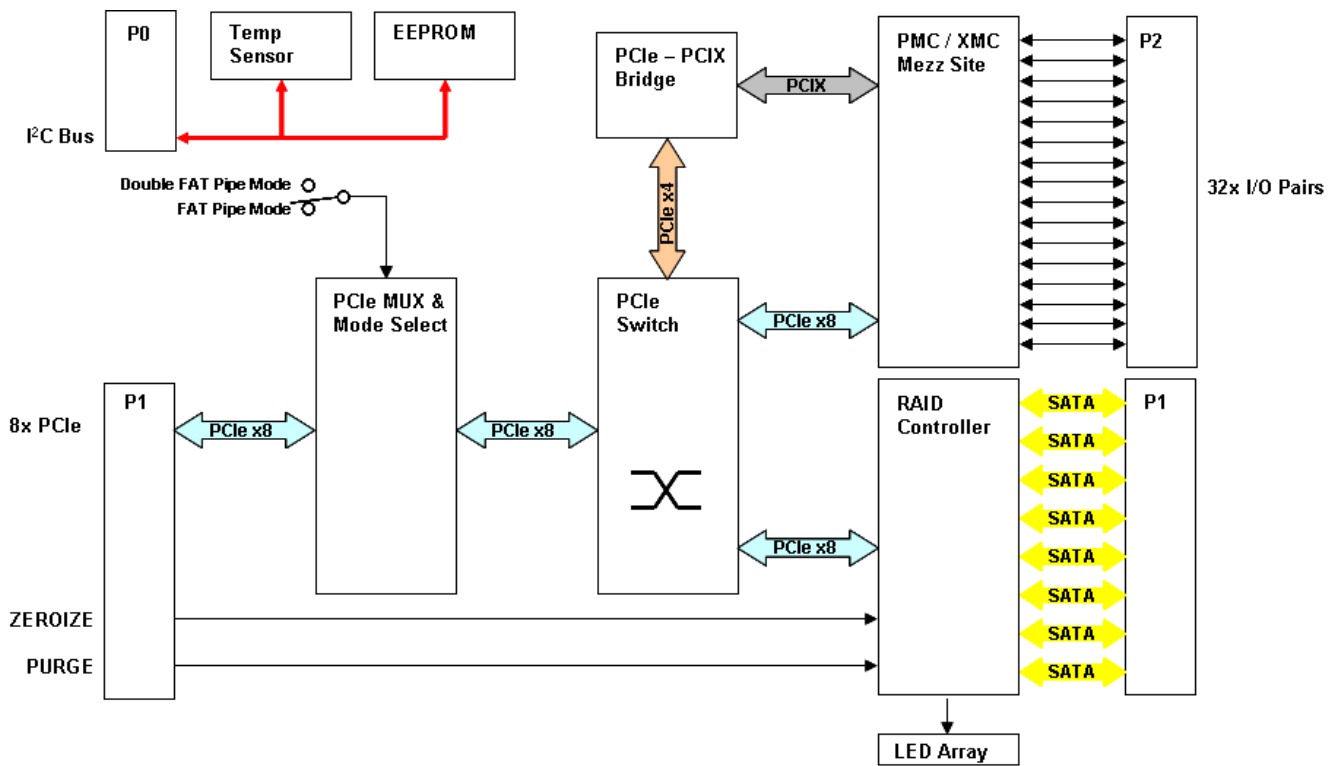
Standard Configuration Ordering Information:

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