



TSM-300X

Mission and Payload Systems 3U-VPX

3U VPX SAS, SATA, or PCI Express
Mass Storage Drive Module

Feature Set

General:

- 3U VPX
 - VITA 46.4 PCI Express PCIe
 - VITA 48 VPX-REDI
 - VITA 65 OpenVPX
- Solid State Drive up to 256 GB
- Rotating Drive up to 500 GB
- Data Security
 - Quick PURGE
 - MIL PURGE
 - Custom PURGE
 - AES Encryption (1Q11)

Data Interface to Drive:

- 1x PCIe Interface
- Serial ATA (SATA)
- Serial Attached SCSI (SAS)

Outputs:

- SATA/SAS to 2nd Drive
- SATA Activity Discrete

Inputs

- PURGE Discrete (Destructive)
- I2C Bus (SMBus®) Management
- I2C Bus Temperature Monitor
- 1.0" Pitch with VPX-REDI standard
- .80" air cooled and .85" conduction cooled Pitch available

Power

- < 5 Watts @ 5 VDC (Max, SSD)

Environmental

- Conduction Cooled
- 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



TSM-300X is a 3U VPX storage module which can be fitted with either a rotating or solid state drive. The module can accept data from a variety of sources, including PCI Express, Serial ATA (SATA) or Serial Attached SCSI (SAS) data buses.

The Solid State Drive (SSD) configuration features FLASH memory. This drive is designed for rugged and conduction cooled applications. At the current time, drive capacities are available up to 256 GB per module

The Rotating Hard Disk Drive (HDD) is only intended for Level 1, commercial temperature range usage, and shock and vibration consistent with laboratory or development usage.

With the associated T_RAID-300X module, the SSD supports Non-Destructive MIL PURGE (ZEROIZE) and Quick PURGE commands via the SATA interface in accordance with NSA, USAF, USN and other government agency specifications. The SSD will also support User Definable Custom PURGE functions.

The SSD configuration supports a PURGE discrete to the module, if the SSD manufacturer supports that feature. Using the PURGE discrete, the system can command an instantaneous destructive PURGE of the module. This discrete is intended to be used for emergency PURGE of the SSD. Once the SSD is PURGED in this manner, it is no longer readable or usable.

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Data Security (SSD Only):

- Once PURGE is started, PURGE must complete. SSD will resume PURGE after power is reapplied.
- MIL PURGE (ZEROIZE)
 - Data Erasure over 1 hour for large drive capacities
 - ZEROIZE in accordance with specifications:
 - NAVSO-5239
 - AFSSI-5020
 - AR 380-19
 - DoD 5220.22-M
 - NSA 130-2
- Quick PURGE
 - Emergency data erasure in a few seconds
 - Data cannot be recovered
- Custom Purge
 - Quick PURGE but FLASH Mgmt Tables are preserved
 - Can be reformatted and reused after Custom Purge
- Encryption
 - AES Coming 1Q11. Consult Factory

Compliance Specifications:

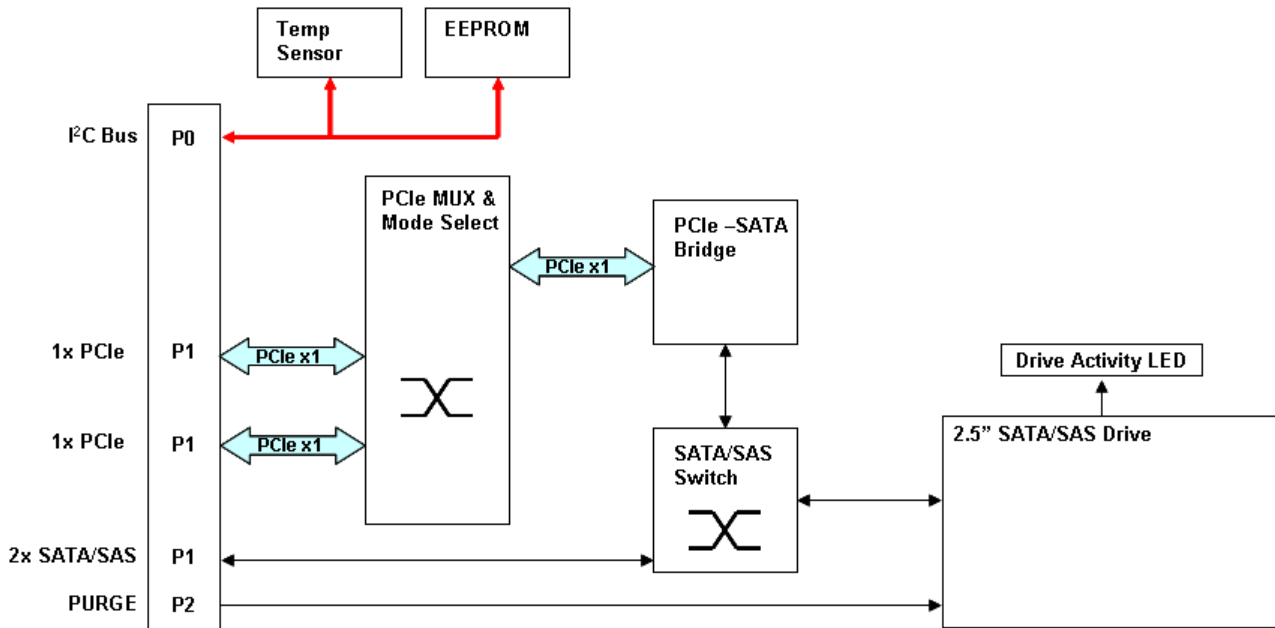
- The TSM-300X SAS/SATA/PCIe Mass Storage Drive Module is designed to meet CE Emissions specification EN 55022, CE Immunity specification EN 50082-2 and FCC 47 CFR, Part 15, Class A when tested in a shielded enclosure.

Standard Configuration Ordering Information:

Air Cooled	Level 1	0.8" Pitch		TSM-300X1-000
Conduction Cooled	Level 5	1.0" Pitch	VPX-REDI	TSM-300X5-501

Consult factory to order other configurations

TSM-300X Block Diagram



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