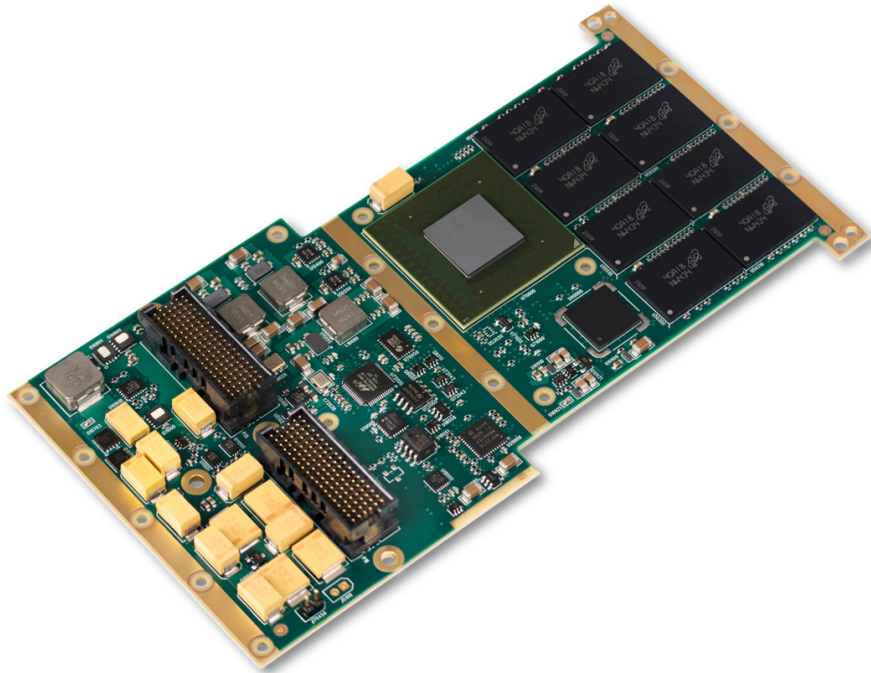# XPort6105

End of Life

XMC Secure Solid-State Drive (SSD) with Self-Encrypting Drive (SED) Technology

Please see XPort6107

- XMC x2 PCIe interface per VITA 42.3
- XMC SATA interface (configurable)
- Up to 512 GB capacity
- Hardware AES-256 encryption with XTS BCM
- Ideal for Anti-Tamper (AT) and Information Assurance (IA) requirements
- Multiple key management options
- Key erasure in less than 30 ms
- Support for numerous military sanitization protocols
- Fast clear in less than 8 seconds
- 185 MB/s write performance
- 175 MB/s read performance
- Uses reliable SLC NAND flash technology
- Designed for extremely rugged environments

XPort6105

The XPort6105 is a secure self-encrypting drive (SED) / Solid-State Drive (SSD) XMC module that provides up to 512 GB of storage. The XPort6105's security features include AES-256 XTS encryption, where the encryption key can be purged in less than 30 ms, leaving no remnants of the key behind. In addition, the XPort6105 supports several military sanitization protocols, including a fast clear. All of the sanitization protocols can be invoked via software or hardware discretes.

By utilizing solid-state SLC NAND flash technology, the XPort6105 provides a high-performance, high-density, reliable memory solution. The card supports 9 petabytes of write endurance in a 512 GB configuration. The XPort6105 provides best-in-class performance with up to 175 MB/s sustained sequential read and 185 MB/s sustained sequential write rates.

The XPort6105 is intended for applications requiring secure data storage and is ideal for programs with demanding Anti-Tamper (AT) or Information Assurance (IA) requirements. The XPort6105 is capable of operating in the most rugged operating environments and was designed to meet or exceed the requirements of MIL-STD-810.

X-ES

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P15 XMC Interface

- x2 PCI Express port per VITA 42.3

P16 XMC Interface

- SATA interface (configurable via jumper)

Security

- 256-bit AES Encryption
- XTS block cipher mode
- Support for multiple sanitization protocols
- Declassification via hardware or software control
- Key erasure in less than 30 ms
- No firmware stored in SLC NAND flash
- Ideal for Anti-Tamper (AT) and Information Assurance (IA) requirements
- Write protection

Supported Sanitization Protocols

- NSA 9-12
- Navy NAVSO P-5239-26
- NISPOM DoD 5220.22-M
- Air Force AFSSI-5020
- Army AR380-19
- IRIG 106-09

Storage Characteristics

- Serial ATA (SATA) 3 Gb/s
- SLC technology
- 256 GB or 512 GB capacities
- 185 MB/s write
- 175 MB/s read

Physical Characteristics

- XMC conduction- or air-cooled form factor
- Dimensions: 143.75 mm x 74 mm

Environmental Requirements

Contact factory for appropriate board configuration based on environmental requirements.

- Supported ruggedization levels (see chart below): 1, 3, 5
- Conformal coating available as an ordering option

Power Requirements

- Power will vary based on configuration and usage. Please consult factory.

Ruggedization Level	Level 1	Level 3	Level 5
Cooling Method	Standard Air-Cooled	Rugged Air-Cooled	Conduction-Cooled
Operating Temperature	0 to +55°C ambient †	-40 to +70°C ambient †	-40 to +85°C (board rail surface)
Storage Temperature	-40 to +85°C ambient	-55 to +105°C ambient	-55 to +105°C (maximum)
Vibration	0.002 g²/Hz (maximum), 5 to 2000 Hz	0.04 g²/Hz (maximum), 5 to 2000 Hz	0.1 g²/Hz (maximum), 5 to 2000 Hz
Shock	20 g, 11 ms sawtooth	30 g, 11 ms sawtooth	40 g, 11 ms sawtooth
Humidity	Up to 95% non-condensing	Up to 95% non-condensing	Up to 95% non-condensing

† Contact factory for airflow rate details.

XPort6105

*MUX configurable via jumper
Shunt Placement:
Shunt Placed   => SATA link from P16
Shunt Removed => PCIe SATA Controller Used

16x NAND Flash — SATA NAND Controller and Encryption — SATA — MUX — SATA / SATA — PCIe-to-SATA Controller — x2 PCIe — P15

P16