

# XPort6176

3U VPX NVM Express® Solid-State Drive (SSD) with Self-Encrypting Drive (SED) Technology

- ▶ Two VPX x4 PCIe interfaces per VITA 46.4
- ▶ 1 to 2 TB capacity
- ▶ Hardware AES-256 encryption
- ▶ Ideal for Anti-Tamper (AT) and Information Assurance (IA) requirements
- ▶ Key erasure in less than one second
- ▶ Up to 1.8 GB/s write performance
- ▶ Up to 2 GB/s read performance
- ▶ Can be configured in SLC or TLC mode to optimize endurance or capacity
- ▶ Designed for extremely rugged environments



## XPort6176

The XPort6176 is a secure self-encrypting drive (SED) / Solid-State Drive (SSD) 3U VPX module that provides 1 to 2 TB of storage. Its security features include AES-256 encryption, where the encryption key can be purged in less than one second. In addition, the XPort6176 supports sanitization protocols per the NVMe® specification, including block erase and overwrite. All of the sanitization protocols can be invoked via in-band software commands.

By utilizing solid-state NVM Express® technology, the XPort6176 provides a high-performance, high-density, reliable memory solution. Each 1 TB NVMe® device on the card yields 480 TB of write endurance in 100% TLC mode and 8,000 TB of write endurance in 100% SLC mode. The XPort6176 provides best-in-class performance, with up to 1.8 GB/s sustained sequential write and up to 2 GB/s sustained sequential read rates on each of its two independent NVMe® interfaces.

The XPort6176 is intended for applications requiring secure data storage and is ideal for programs with demanding Anti-Tamper (AT) or Information Assurance (IA) requirements. The XPort6176 is capable of operating in the most rugged operating environments by utilizing directly soldered storage, rather than implementing a carrier-based approach for commercial storage form factors such as M.2.

# X-ES

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### Extreme Engineering Solutions

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**VPX (VITA 46.4) P1 I/O**

- One NVMe® interface on P1Ln0-3:PCIe3.0x4
- One NVMe® interface on P1Ln4-7:PCIe3.0x4

**Security**

- 256-bit AES Encryption
- Support for multiple sanitization protocols
- Declassification via software control
- Key erasure in less than one second
- Ideal for Anti-Tamper (AT) and Information Assurance (IA) requirements

**Supported Sanitization Protocols**

- Block erase
- Overwrite
- Crypto erase

**Storage Characteristics**

- NVMe® 1.3c Compliant (PCIe Gen 3.0)
- Configurable SLC or TLC technology
- 1 to 2 TB capacity
- Up to 1.8 GB/s write per NVMe® interface
- Up to 2 GB/s read per NVMe® interface
- End-to-end data protection

**Physical Characteristics**

- 3U VPX-REDI conduction-cooled form factor
- Dimensions: 100 mm x 160 mm
- 0.8 in. pitch

**Environmental Requirements**

Contact factory for appropriate board configuration based on environmental requirements.

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

**Power Requirements**

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

<b>Ruggedization Level</b>	<b>Level 5</b>
<b>Cooling Method</b>	Conduction-Cooled
<b>Operating Temperature</b>	-40 to +85°C (board rail surface)
<b>Storage Temperature</b>	-55 to +105°C (maximum)
<b>Vibration</b>	0.1 g <sup>2</sup> /Hz (maximum), 5 to 2000 Hz
<b>Shock</b>	40 g, 11 ms sawtooth
<b>Humidity</b>	Up to 95% non-condensing

