

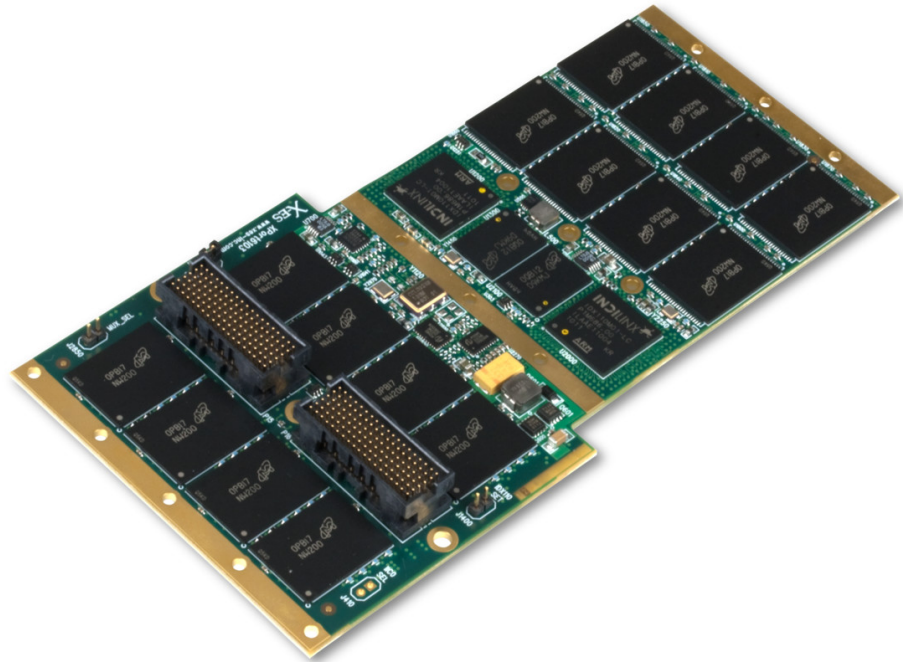
# XPort6103

**End of Life**

XMC Solid-State Drive (SSD) Storage Solution

Please see XPort6105

- ▶ XMC x1 PCIe interface
- ▶ XMC SATA interface (optional)
- ▶ Up to 128 GB capacity
- ▶ 256-bit AES encryption (optional)
- ▶ Declassification via hardware or software control
- ▶ ATA Secure Erase support
- ▶ 120 MB/s write performance (no encryption)
- ▶ 200 MB/s read performance (no encryption)
- ▶ Based on reliable SLC NAND flash technology
- ▶ 100,000 program/erase cycles
- ▶ Designed for rugged environments



## XPort6103

The XPort6103 XMC module has been designed to meet the storage requirements of the most demanding applications. By utilizing solid-state NAND flash technology, the XPort6103 provides a high-performance, high-density, reliable memory solution. The XPort6103 is capable of operating within the demanding environments of MIL-STD-810F, as well as severe shock and vibration conditions.

The XPort6103 has the option to provide 256-bit AES encryption. The encryption chip is NIST- and CSE-certified. The key can be loaded from an onboard EEPROM or from an off-board secured device using the SATA API. The XPort6103 supports enhanced erases, meeting both DOD NISPOM 5220.22 and NSA/CSS 9-12 specifications. Declassification can be achieved via hardware or software control.

The use of SLC NAND flash components allows the XPort6103 to support at least 100,000 program/erase cycles. The card supports global wear leveling and bad block management, further prolonging the life and reliability of the memory. The XPort6103 provides best-in-class performance with up to 200 MB/s sustained sequential read and 120 MB/s sustained sequential write rates. The XPort6103 supports up to 128 GB of storage.

# X-ES

Extreme Engineering Solutions

*...Always Fast*

## Extreme Engineering Solutions

9901 Silicon Prairie Parkway • Verona, WI 53593  
 Phone: 608.833.1155 • Fax: 608.827.6171  
 sales@xes-inc.com • <https://www.xes-inc.com>

**P15 XMC Interface**

- x1 PCI Express port

**P16 XMC Interface**

- External SATA interface (optional)

**Security**

- 256-bit AES Encryption
- CBC block cipher mode
- Declassification via hardware or software control (optional)
- ATA Secure Erase support

**Key Management**

- SATA API
- EEPROM

**Storage Characteristics**

- Serial ATA (SATA) 3 Gb/s
- SLC technology
- Up to 128 GB total
- 120 MB/s write (no encryption)
- 200 MB/s read (no encryption)
- Write protection

**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**

- 5 W (64 GB, no encryption)

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 (300 LFM)	-40 to +70°C (600 LFM)	-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 g <sup>2</sup> /Hz (maximum), 5 to 2000 Hz	0.04 g <sup>2</sup> /Hz (maximum), 5 to 2000 Hz	0.1 g <sup>2</sup> /Hz (maximum), 5 to 2000 Hz
Shock	20 g, 11 ms sawtooth	30 g, 11 ms sawtooth	40 g, 11 ms sawtooth
Humidity	0% to 95% non-condensing	0% to 95% non-condensing	0% to 95% non-condensing

