XPort6197

Small Form Factor (SFF) Removable NVM Express® Dual Solid-State Drive (SSD) with 2 TB Capacity

❯ Small Form Factor (SFF) module utilizing high-reliability, rugged Solid-State Drives (SSDs)

❯ Two x4 PCI Express Gen3 interfaces

❯ 2 TB capacity (1 TB per PCI Express interface)

❯ Hardware AES-256 encryption

❯ Ideal for Anti-Tamper (AT) and Information Assurance (IA) requirements

❯ Key erasure in less than one second

❯ 1.8 GB/s write performance

❯ 2 GB/s read performance

❯ Can be configured in SLC or TLC mode to optimize endurance or capacity

❯ Designed for extremely rugged environments
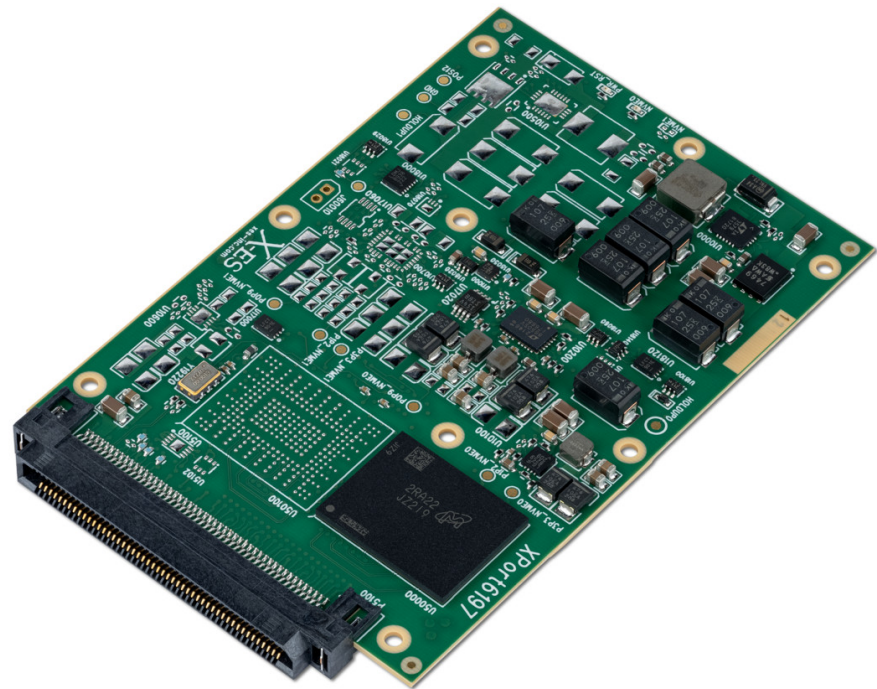
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The XPort6197 is a secure Self-Encrypting Drive (SED) / dual Solid-State Drive (SSD) Small Form Factor (SFF) module hosting two independent 1 TB SSDs, for a total available storage of 2 TB. Each SSD has its own x4 PCI Express Gen3 interface routed to the P5100 rugged SFF connector. The XPort6197's security features include AES-256 encryption, where the encryption key can be purged in less than one second. In addition, the XPort6197 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 XPort6197 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 XPort6197 provides best-in-class performance, with 1.8 GB/s sustained sequential write and 2 GB/s sustained sequential read rates on each of its two independent NVMe® interfaces.

The XPort6197 is intended for applications requiring secure data storage and is ideal for programs with demanding Anti-Tamper (AT) or Information Assurance (IA) requirements. The XPort6197 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

Extreme Engineering Solutions

"Fast, Flexible, Customer-Focused Embedded Solutions"

P5100 I/O SFF Connector

- One NVMe® interface on pins 3-24
- One NVMe® interface on pins 27-48

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 Gen3)
- Configurable SLC or TLC technology
- 2 TB capacity (1 TB per PCI Express interface)
- 1.8 GB/s write per NVMe® interface
- 2 GB/s read per NVMe® interface
- End-to-end data protection

Physical Characteristics

- Small Form Factor (SFF) conduction-cooled module
- Dimensions: 116 mm (L) x 80 mm (W) x 9.5 mm (H)

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.

Ruggedization Level	Level 5
Cooling Method	Conduction-Cooled
Operating Temperature	-40 to +85°C (board rail surface)
Storage Temperature	-55 to +105°C (maximum)
Vibration	0.1 g²/Hz (maximum), 5 to 2000 Hz
Shock	40 g, 11 ms sawtooth
Humidity	Up to 95% non-condensing

XPort6197 Pictured with XPand6200 Series System