

XPort6193

Small Form Factor (SFF) 1 TB Removable SATA Solid-State Drive (SSD) with 256-bit Encryption

- ▶ Small Form Factor (SFF) utilizing a fully tested and qualified, high-reliability, 2.5 in. rugged SSD
- ▶ -40°C to 85°C operating temperature range
- ▶ High-reliability rugged connector
- ▶ Hot Swap capabilities possible in some configurations
- ▶ Easy insertion and extraction mechanism
- ▶ AES 256-bit encryption (optional)
- ▶ Designed for rugged environments
- ▶ Provides up to 1 TB of NAND flash
- ▶ Based on reliable SLC NAND flash technology
- ▶ Global wear-leveling support for added memory endurance
- ▶ ATA Secure Erase support
- ▶ Declassification support
- ▶ Military sanitization support
- ▶ Encryption key purge in less than 30 ms



XPort6193

The XPort6193 is the ideal solution for today's ruggedized secure storage requirements. The XPort6193 utilizes a fully tested and qualified, high-reliability 2.5 in. Solid-State Drive (SSD). The XPort6193 is capable of operating within the demanding environments of MIL-STD-810F, including harsh temperatures from -40°C to 85°C, as well as rigorous shock and vibration conditions.

Optionally, the XPort6193 can provide 256-bit AES hardware encryption with XTS block cipher mode. The encryption hardware is designed to encrypt/decrypt the entire card with minimal performance degradation. It supports key management via the SATA API, and additionally supports key erasure in under 30 ms leaving no remnants of the key behind.

Designed with a high-reliability connector, the XPort6193 will support thousands of insertions and extractions. The use of SLC NAND flash components coupled with global wear-leveling, bad block management, and over-provisioning increase both the reliability and life of the drive.



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Physical Characteristics

- Small Form Factor (SFF) incorporating a standard 2.5 in. SSD module
- 115 mm (L) x 80.4 mm (W) x 9.51 mm (H)
- Development and deployable carrier systems available

Storage Characteristics

- Serial ATA (SATA) 3 Gb/s
- SLC technology
- Up to 1 TB of NAND flash

Endurance

- High-reliability rugged connector
- Global wear-leveling, bad block management, and drive over-provisioning

Security

- 256-bit AES encryption (optional)
- XTS block cipher mode
- ATA Secure Erase support
- Declassification support
- Fast clear (less than 4 seconds)

Key Management

- SATA API
- Key purge (less than 30 ms)

Environmental Requirements

Contact factory for appropriate board configuration based on environmental requirements.

- Supported ruggedization levels (see chart below): 5

Power Requirements

- Typical 2.5 W maximum power dissipation
- Max power dissipation is dependent on drive configuration. Contact X-ES for details.

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 ambient
Vibration	0.002 g ² /Hz, 5 to 2000 Hz	0.04 g ² /Hz (maximum), 5 to 2000 Hz	0.1 g ² /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

XPort6193 Pictured with XPand6200