# XPort6193

**End of Life**

Small Form Factor (SFF) 512 GB Removable SATA Solid-State Drive (SSD) with 256-bit Encryption

Please see XPort6196

- Small Form Factor (SFF) utilizing a high-reliability 2.5 in. rugged Solid-State Drive (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)
- Can be built to meet NIST FIPS 140-2 certification
- Designed for rugged environments
- Provides up to 512 GB 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

## 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 as well as key erasure, 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.

X-ES
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*"Fast, Flexible, Customer-Focused Embedded Solutions"*

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## Physical Characteristics

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

## Storage Characteristics

- SATA 3 Gb/s
- SLC technology
- Up to 512 GB 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
- Quick Erase

## Key Management

- SATA API
- Key purge

## 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 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 |

# XPort6193 Pictured with XPand6200