

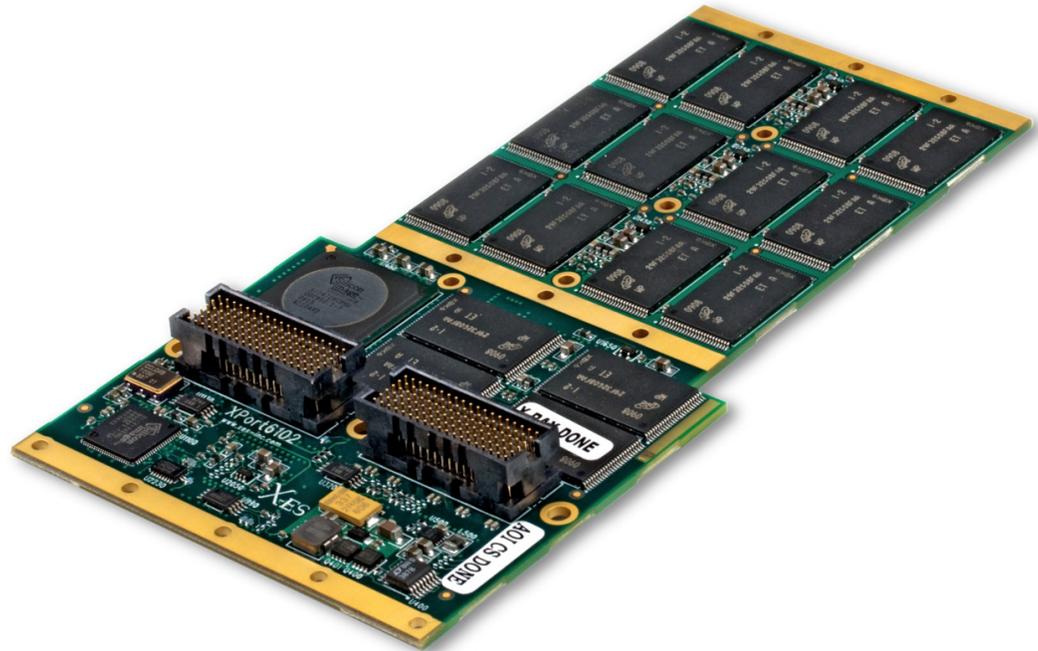
XPort6102

End of Life

XMC Solid-State Drive (SSD) Storage Solution

Please see XPort6105

- ▶ XMC x1 PCIe interface
- ▶ XMC SATA interface (optional)
- ▶ Up to 80 GB capacity
- ▶ Five internal SATA controllers for maximum bandwidth
- ▶ RAID 0 configuration
- ▶ 256-bit AES encryption (optional)
- ▶ 120 MB/s read performance (RAID 0)
- ▶ 60 MB/s write performance (RAID 0)
- ▶ Based on reliable SLC NAND flash technology
- ▶ 100,000 program/erase cycles
- ▶ Designed for rugged environments
- ▶ -40°C to +85°C operating temperature range



XPort6102

The XPort6102 has been designed from the ground up to meet today's ruggedized XMC storage requirements. By utilizing solid-state NAND flash technology, the XPort6102 provides a high-performance, high-density, reliable memory solution. The XPort6102 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.

The XPort6102 has the option to provide 256-bit AES encryption. The encryption chip used is NIST- and CSE-certified. The encryption hardware is designed to encrypt/decrypt the entire card without any performance degradation. It supports key management with SATA API or an optional I²C interface.

The use of SLC NAND flash components allows the XPort6102 to support at least 100,000 program erase cycles. The card also supports global wear leveling prolonging the life of the memory. The XPort6102 uses five discrete NAND flash controllers and a hardware RAID controller, maximizing performance. The XPort6102 provides best-in-class performance, supporting up to 120 MB/s of sustained read and 60 MB/s sustained write in a RAID 0 configuration.

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P15 XMC Interface

- x1 PCI Express port

P16 XMC Interface

- External SATA interface (optional)

Encryption (Optional)

- 256-bit AES
- CBC block cipher mode

Key Management

- SATA API
- I²C interface (optional)

Storage Characteristics

- SLC technology
- Up to 80 GB total
- Five internal SATA drives
- Internal RAID controller
- Support for secondary storage only

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

Software Requirements

- Linux (kernel 2.6.27 or newer with AHCI support)
- WindRiver VxWorks drivers available

Power Requirements

- 8 W (maximum power consumption)
- 5 W (typical power consumption)

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 ² /Hz (maximum), 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

