

SMART's Storage Solutions

XceedIOPS iSATA Slim

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SMART Modular Technologies' XceedIOPS iSATA Slim is an industrial-grade 3.0 Gb/s serial-ATA (SATA-II), embedded, single-level cell (SLC) solid-state storage device. This device specifically targets the needs of OEM customers in the networking, data communications and industrial computing markets requiring reliable internal storage with an extremely small footprint. SMART's XceedIOPS iSATA Slim is also a natural fit for mobile and embedded computing including medical and automotive. The small form factor, reduced weight, low power consumption, and fast data throughput are major advantages of the XceedIOPS iSATA Slim over traditional rotating hard disk drives (HDDs) and other embedded solid state products.

Designed with an industry-standard SATA interface and connector, XceedIOPS iSATA Slim easily integrates into a host system without the need of special BIOS modifications or additional device drivers. The iSATA Slim provides support for lower density applications not readily available from HDD manufacturers. Available in various capacities ranging from 4GB to 64GB*, SMART's XceedIOPS iSATA Slim products offer leading edge read performance of up to 120 MB/s (maximum) and write performance up to 115 MB/s (maximum).

SMART Xceed products address the need for enhanced reliability by incorporating on-board error detection and correction as well as static wear leveling algorithms to provide reliable operation over the product life cycle.

*64Gb requires a deviation to the height requirements of the MO-297 specification.

Product Family At-A-Glance

| | Capacity (GB) | Performance Sequential |
|-------------------|------------------|---|
| iSATA Slim | | |
| 4-Channel | 4, 8, 16, 32, 64 | 120 MB/s Read (maximum) 115 MB/s Write (maximum) |

Features

- Whole Drive Static Wear Leveling
- Advanced Error Detection/Correction Circuitry for superior data reliability
- Self-Monitoring Analysis and Reporting Technology (S.M.A.R.T.) support
- Supports 48bit LBA Addressing with larger Max Transfer size
- Improved shock and vibration resistance over rotating media
- Indicator LED to indicate drive accesses
- External LED Activity Signaling (through the SATA connector) (Pin 11)
- Provides Health Status Monitor
- Zero seek time
- Noiseless operation



Specifications

| XceedIOPS iSATA Slim | | | |
|--|--|----------------|----|
| Performance | | | |
| Read (maximum) | 120 MB/s | | |
| Write (maximum) | 115 MB/s | | |
| Host Interface Rate (maximum) | 3 Gb/s | | |
| Reliability | | | |
| Data Reliability | < 1in 10 ¹⁴ bits read | | |
| Data Retention | 10 years @ 25°C | | |
| Endurance | > 260 years @ 200 GB/day write cycles (16 GB drive) Unlimited reads | | |
| Error Correction / Error Detection (BCH) | Up to 8 random bits for every 512-byte sector | | |
| Power | | | |
| | Typical | Maximum | |
| Vcc | 3.3/5 ± 5% | 5.25 ± 5% | V |
| Read | 155 | 400 | mA |
| Write | 205 | 500 | mA |
| Idle | 90 | - | mA |
| Environmental | | | |
| Shock – Non-Operating | 1500 g half-sine, 0.5 msec, 1 shock along each axis, X,Y,Z in each direction | | |
| Shock – Operating | 50 g half sine, 11 msec, 3 shocks along each axis, X,Y,Z in each direction | | |
| Vibration – Operating | 16.4 g rms 10-2000Hz, 3 axes | | |
| Operating Temperature - Commercial | 0°C to 70°C | | |
| Storage Temperature | -55°C to 95°C | | |
| Humidity | 5% to 95%, non-condensing, relative humidity | | |
| Altitude | 24,384m [80,000 ft] | | |
| Physical | | | |
| | Standard | | |
| Length | 54 mm | | |
| Width | 39 mm | | |
| Height | 4 mm (non-stacked) or 5.3 mm (stacked) | | |

Ordering Information

| Part Number | Form Factor | Capacity | Unformatted Capacity |
|-----------------|--------------|----------|----------------------|
| SG9SLM6E4G9L02 | Standard | 4GB | 4,014,080 KBytes |
| SG9SLM6E8GAL02 | Standard | 8GB | 8,028,160 KBytes |
| SG9SLM6E16GBL02 | Standard | 16GB | 16,056,320 KBytes |
| SG9SLM6E32GCL02 | Standard | 32GB | 32,112,640 KBytes |
| SG9SLM6E64GDL02 | Non-Standard | 64GB | 64,225,280 KBytes |



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