

1. Features

- Form Factor: 1.8-inch
- Capacity : 1TB, 2TB
- Compliance
 - SATA Revision 3.0; compatible with SATA 6Gb/s, 3Gb/s and 1.5Gb/s interface rates
 - ATA8-ACS2; includes SCT (Smart Command Transport) and device statistics log support
 - Enhanced SMART ATA feature set
 - Native Command Queuing (NCQ) command set
 - Data set management Trim command
- Security
 - TCG/Opal 2.0 Compliant
 - Hardware-based AES-256 encryption engine
 - ATA security feature command set and password login support
 - Secure erase (data page) command set: fast and secure erase
 - Sanitize device feature set support
- ATA modes supported
 - PIO mode 3, 4
 - Multiword DMA mode 0, 1, 2
 - Ultra DMA mode 0, 1, 2, 3, 4, 5
- Industry-standard, 512-byte sector size support
- Hot-plug/hot-remove capable
- Performance^{1,2}
 - Sequential 128KB Read: Up to 520 MB/s
 - Sequential 128KB Write: Up to 500 MB/s
 - Random 4KB Read: Up to 70,000 IOPS
 - Random 4KB Write: Up to 70,000 IOPS
 - Read/Write Latency: 65µs/40µs (TYP)
- Quality of Service^{6,8}
 - Read/Write: 500µs / 5ms (99.9%)
- Performance Consistency^{7,8}
 - Read/Write: Up to 90% / 90% (99.9%)
- Power consumption
 - Active: Up to 3.44W (2TB, Avg.)
 - Idle: Up to 1.24W (2TB, Avg.)
- Endurance: Up to 270 TBW (1TB) and 540TB (2TB)⁴
- Warranty: 5 years or maximum endurance used
- Secure firmware update with digitally signed firmware image
- Temperature⁵
 - Operating : -40°C to +85°C
 - Non-Operating: -55°C to 95°C
 - Temperature monitoring and logging
 - Thermal throttling
- Shock (operating and non-operating)
 - 1,000 G/0.5ms
- Vibration
 - Operating : 2.17 G_{RMS} (5-700 Hz)
 - Non-Operating: 3.13 G_{RMS} (5-800 Hz)
- Altitude
 - Operating: -1,000 to 10,000 ft.
 - Non-Operating: -1,000 to 40,000 ft.
- Mechanical
 - SATA connector: 5V ±10%
 - 1.8-inch drive: 78.6 x 54.0 x 8.0 mm
 - Weight: 150 grams (MAX)
- Reliability
 - Uncorrectable bit error rate (UBER): <1 sector per 10¹⁵ bits read
 - MTBF: 1.5 million hours³
 - End-to-End data protection
- Notes:
 1. Typical I/O performance numbers as measured fresh-out-of-the-box (FOB) using Iometer with a queue depth of 32 and write cache enabled.
 2. 4KB transfers used for READ/WRITE latency values.
 3. The product achieves a mean time between failure (MTBF) based on population statistics not relevant to individual units.
 4. Based on JESD218 standard with JESD219 workload
 5. Drive case temperature.
 6. Based on Random 4KB QD=1 workload, measured as the time taken for 99.9 percentile of commands to finish the round-trip from host to drive and back to host.
 7. Based on Random 4KB QD=32 workload, measured as the (IOPS in the 99.9th percentile slowest 1-second interval)/(average IOPS during the test).
 8. Measurement taken once the workload has reached steady state but including all background activities required for normal operation and data reliability.