

1. Features

- Form Factor: 2.5-inch
- Capacity : 1TB, 2TB, 4TB, 8TB, 16TB
- 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 military secure erase protocol
 - 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)
- Power consumption
 - Active: Up to 6.09W (8TB, Avg.)
 - Idle: Up to 2.73W (8TB, Avg.)
- Endurance: Up to 4,000 TBW⁴
- 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
 - Adaptive Thermal Protection
- Shock (operating and non-operating)
 - 1,000 G/0.5ms
- Vibration⁶
 - Operating : 16.3 G_{RMS} (10-2,000 Hz)
- Altitude
 - Operating: -1,000 to 100,000 ft.
 - Non-Operating: -1,000 to 100,000 ft.
- Mechanical
 - SATA connector: 5V ±10%
 - 2.5-inch drive: 100.45 x 69.85 x 7.0 (or 15.0) mm
 - Weight: 200 grams (MAX)
- Reliability
 - Uncorrectable bit error rate (UBER): <1 sector per 10¹⁵ bits read
 - MTBF: 1.5 million hours³
 - End-to-End data protection
- Product Ecological Compliance
 - RoHS
- 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 full sustained 4KB random write workload (1TB, 2TB) and full sustained 128K random write workload (4TB, 8TB, 16TB)
 5. Operating temperature is the drive case temperature as measured by the SMART temperature attribute.
 6. Based on MIL-STD-810F PART 514.5 : 2003