

Enterprise Performance 10K HDD

VERSION 9

Channel Data Sheet

The Perfect Match of High Capacity and High Performance

- High-capacity and small 2.5-inch footprint enables data centres to keep pace with data growth and optimise data centre space.
- Delivers up to 2.4TB of high-performance data access for write-intensive applications
- Future-proof your storage infrastructure with a single advanced format interface model.
- Seagate® Enhanced Caching feature accelerates read and write I/O operations, preventing applications from slowing down under peak usage conditions.
- Latest 12 Gb/s SAS interface for improved scalability.
- Seagate Secure® features for preventing unauthorized access to data and for compliance with data security standards.
- Protection Information (PI) protects against data corruption.¹
- Seagate Secure SED and FIPS 140-2 government-grade models provide security for data-at-rest, and Instant Secure Erase (ISE) helps cut IT drive retirement costs.²
- Seagate PowerChoice™ technology for T10-compliant power management enables IT organisations to tailor systems for enhanced power consumption.
- Seagate RAID Rebuild® technology option makes RAID recovery faster and safer.



Best-fit Applications

- Mission-critical servers and external storage arrays
- Database and online transaction process (OLTP) applications
- Power- and space-constrained data centres
- Green IT and drive-retirement cost reduction initiatives
- Compliance and data security initiatives
- Migration from 3.5 inch drive systems to next-generation technology
- Cost-effective alternative to higher-priced performance solutions

¹ Protection Information (PI) feature requires PI-compliant host or controller support.

² Not all drives may be available in all countries. Seagate Secure drives meet ISO/IEC 27040 and NIST 800-88 standards and may require use of TCG-compliant host or controller support.

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| Specifications | FastFormat™ 512 Emulation/4K Native | | | |
|--|-------------------------------------|--------------------|--------------------|--------------------|
| Capacity | 2.4TB | 1.8TB | 1.2TB | 600GB |
| Standard Model | ST2400MM0129 | ST1800MM0129 | ST1200MM0129 | ST600MM0099 |
| Seagate Secure® SED Model ¹ | — | — | ST1200MM0139 | ST600MM0109 |
| Seagate Secure FIPS 140-2/Common Criteria Model ² | ST2400MM0149 | ST1800MM0149 | — | — |
| PERFORMANCE | | | | |
| Spindle Speed (RPM) | 10,000 RPM | 10,000 RPM | 10,000 RPM | 10,000 RPM |
| Average Latency (ms) | 2.9 | 2.9 | 2.9 | 2.9 |
| Sustained Transfer Rate (Outer to Inner Diameter, MB/s) | 270 to 117 | 270 to 117 | 270 to 117 | 270 to 117 |
| Cache, Multi-segmented (MB) | 256 | 256 | 256 | 256 |
| ENHANCED CACHING FEATURES | | | | |
| I/O Acceleration and Response Time Optimisation | Enabled | Enabled | Enabled | Enabled |
| NAND Flash Type | eMLC | eMLC | eMLC | eMLC |
| NAND Flash Size | 16GB | 16 GB, 16GB | 16 GB | 16 GB |
| Intelligent NAND Endurance Management | Yes | Yes | Yes | Yes |
| ENTERPRISE FEATURES | | | | |
| Secure Download & Diagnostics (SD&D) and Instant Secure Erase Option | Yes | Yes | Yes | Yes |
| FastFormat (512e/4Kn AF Switching) | Yes | Yes | Yes | Yes |
| 12 Gb/s SAS | Yes | Yes | Yes | Yes |
| CONFIGURATION/RELIABILITY | | | | |
| Discs/Heads | 4/8 | 3/6 | 2/4 | 1/2 |
| External Transfer Rate (MB/s) | 1,200 | 1,200 | 1,200 | 1,200 |
| Non-recoverable Read Errors per Bits Read, Max | 1 per 10E16 | 1 per 10E16 | 1 per 10E16 | 1 per 10E16 |
| Annualised Failure Rate (AFR) | 0.44% | 0.44% | 0.44% | 0.44% |
| Limited Warranty (years) | 5 | 5 | 5 | 5 |
| POWER MANAGEMENT | | | | |
| Typical Op (A) +5V/+12V | 0.47/0.50 | 0.46/0.42 | 0.46/0.42 | 0.46/0.42 |
| Typical Operating (W) | 8.5 | 7.5 | 7.15 | 7 |
| Average Idling Power (W) | 4.8 | 4.4 | 3.91 | 3.8 |
| Performance Efficiency Index (Idle W/GB) | 0.0020 | 0.0024 | 0.0033 | 0.0063 |
| Environmental | | | | |
| Ambient Temperature, Operating (C°) | 5°C – 55°C | 5°C – 55°C | 5°C – 55°C | 5°C – 55°C |
| Ambient Temperature, Non-operating (C°) | -40°C – 70°C | -40°C – 70°C | -40°C – 70°C | -40°C – 70°C |
| Shock, Max. Operating: 11 ms (Gs) | 40 | 40 | 40 | 40 |
| Shock, Max. Non-operating: 2 ms (Gs) | 400 | 400 | 400 | 400 |
| Vibration, Operating: <500Hz (Gs) | 0.5 | 0.5 | 0.5 | 0.5 |
| Vibration, Non-operating: <500Hz (Gs) | 3 | 3 | 3 | 3 |
| PHYSICAL | | | | |
| Height (in/mm, max) ³ | 0.591 in/15 mm | 0.591 in/15 mm | 0.591 in/15 mm | 0.591 in/15 mm |
| Width (in/mm, max) ³ | 2.76 in/70.1 mm | 2.76 in/70.1 mm | 2.76 in/70.1 mm | 2.76 in/70.1 mm |
| Depth (in/mm, max) ³ | 3.955 in/100.45 mm | 3.955 in/100.45 mm | 3.955 in/100.45 mm | 3.955 in/100.45 mm |
| Weight (lb/g) | 0.507 lb/230 g | 0.507 lb/230 g | 0.507 lb/230 g | 0.496 lb/225 g |
| Carton Unit Quantity | 40 | 40 | 40 | 40 |
| Cartons per Pallet / Cartons per Layer | 60/10 | 60/10 | 60/10 | 60/10 |

¹ Not all drives may be available in all countries. Seagate Secure drives meet ISO/IEC 27040 and NIST 800-88 standards and may require use of TCG-compliant host or controller support.

² FIPS 140-2 in review. See FIPS 140-2 Level 2 Certificate at <http://csrc.nist.gov/groups/STM/cmvp/validation.html>

³ These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at www.sffcommittee.org.



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| Specifications | 512 Native | |
|--|--------------------|--------------------|
| Capacity | 1.2TB | 600GB |
| Standard Model | ST1200MM0009 | ST600MM0009 |
| Seagate Secure® SED Model ¹ | ST1200MM0039 | ST600MM0039 |
| Seagate Secure FIPS 140-2/Common Criteria Model ^{1,2} | — | — |
| PERFORMANCE | | |
| Spindle Speed (RPM) | 10,000 RPM | 10,000 RPM |
| Average Latency (ms) | 2.9 | 2.9 |
| Sustained Transfer Rate (Outer to Inner Diameter, MB/s) | 250 to 108 | 250 to 125 |
| Cache, Multi-segmented (MB) | 128 | 128 |
| ENHANCED CACHING FEATURES | | |
| I/O Acceleration and Response Time Optimisation | — | — |
| NAND Flash Type | — | — |
| NAND Flash Size | — | — |
| Intelligent NAND Endurance Management | — | — |
| ENTERPRISE FEATURES | | |
| Secure Download & Diagnostics (SD&D) and Instant Secure Erase Option | Yes | Yes |
| FastFormat (512e/4Kn AF Switching) | — | — |
| 12 Gb/s SAS | Yes | Yes |
| CONFIGURATION/RELIABILITY | | |
| Discs/Heads | 2/4 | 1/2 |
| External Transfer Rate (MB/s) | 1,200 | 1,200 |
| Non-recoverable Read Errors per Bits Read, Max | 1 per 10E16 | 1 per 10E16 |
| Annualised Failure Rate (AFR) | 0.44% | 0.44% |
| Limited Warranty (years) | 5 | 5 |
| POWER MANAGEMENT | | |
| Typical Op (A) +5V/+12V | 0.45/0.38 | 0.45/0.35 |
| Typical Operating (W) | 7.25 | 6.68 |
| Average Idling Power (W) | 4.26 | 3.44 |
| Performance Efficiency Index (Idle W/GB) | 0.0036 | 0.0057 |
| Environmental | | |
| Ambient Temperature, Operating (C°) | 5°C – 55°C | 5°C – 55°C |
| Ambient Temperature, Non-operating (C°) | -40°C – 70°C | -40°C – 70°C |
| Shock, Max. Operating: 11 ms (Gs) | 40 | 40 |
| Shock, Max. Non-operating: 2 ms (Gs) | 400 | 400 |
| Vibration, Operating: <500Hz (Gs) | 0.5 | 0.5 |
| Vibration, Non-operating: <500Hz (Gs) | 3 | 3 |
| PHYSICAL | | |
| Height (in/mm, max) ³ | 0.591 in/15 mm | 0.591 in/15 mm |
| Width (in/mm, max) ³ | 2.76 in/70.1 mm | 2.76 in/70.1 mm |
| Depth (in/mm, max) ³ | 3.955 in/100.45 mm | 3.955 in/100.45 mm |
| Weight (lb/g) | 0.426 lb/193 g | 0.49 lb/222 g |
| Carton Unit Quantity | 40 | 40 |
| Cartons per Pallet / Cartons per Layer | 60/10 | 60/10 |

¹ Not all drives may be available in all countries. Seagate Secure drives meet ISO/IEC 27040 and NIST 800-88 standards and may require use of TCG-compliant host or controller support.

² FIPS 140-2 in review. See FIPS 140-2 Level 2 Certificate at <http://csrc.nist.gov/groups/STM/cmvp/validation.html>

³ These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at www.sffcommittee.org.

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