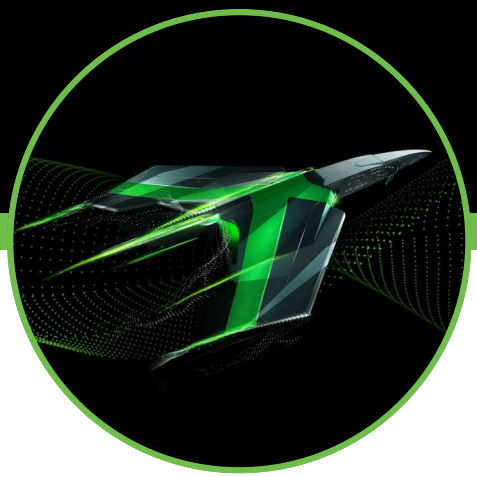
DATA SHEET

# Maximise scale. Optimise TCO. Sustain the future.



Seagate's Exos M hard drive, boasting breakthrough 3 TB per platter density, delivers extraordinary storage capacity and power efficiency for AI and data-intensive applications in cutting-edge cloud and enterprise environments.

## Best-Fit Applications

- Scalable hyperscale applications/cloud data centres
- Massive scale-out data centres
- Big-data applications
- High-capacity density RAID storage
- Mainstream enterprise external storage arrays
- Distributed file systems, including Hadoop and Ceph
- Enterprise backup and restore — D2D, virtual tape

**Breakthrough Areal Density:** The Exos M hard drive is the first to feature 3 TB per platter, enabling massive storage capacity in the same footprint for maximised AI-driven data centre efficiency.

**Unmatched Capacity:** 30 TB+ of storage in an industry-standard 3.5 inch form factor delivers capacity at scale while optimising space utilisation in data centres.

**Time-Tested Excellence Meets Next-Gen Innovation:** Blends 90% of trusted, proven components from previous generations with cutting-edge Mozaic 3+ technology.

**Superior Power Efficiency:** Offers 3× the power efficiency per terabyte compared to typical drives, reducing operational costs and energy consumption and supporting your sustainability goals.

**Enterprise-Class Reliability:** Designed for the stringent demands of hyperscale cloud service providers, providing durable, always-on performance essential for critical enterprise applications.

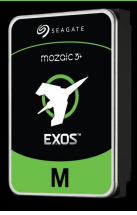
**Sustainability:** Built with more renewable energy and recycled materials than any previous Seagate product, Exos M 30 TB enables businesses to align with their own sustainability initiatives while reducing environmental impact.

**Compatibility and Interoperability:** Maintains the same form factor, interface, and cooling as previous generations, simplifying integration into existing infrastructure and reducing upgrade complexities.

**Efficient Cooling:** Engineered for optimal heat dissipation, ensuring reliable performance without increasing cooling requirements in your data centre.

**Scalable for AI and Big Data:** Ideal for AI, big data analytics, and high-capacity storage, Exos M 30 TB supports evolving business demands and data-hungry applications, ensuring future-ready infrastructure.

**Seagate Secure:** Built-in reliable data protection enhances security, safeguarding your data against threats in enterprise environments.




| Specifications | SATA 6Gb/s |
|---|---|
| Product Name | Exos M |
| CMR Capacity | 30 TB |
| Standard Model - Seagate Instant Secure Erase (ISE) - 512e[1] | ST30000NM004K |
| FEATURES | |
| CMR | Yes |
| Helium Sealed-Drive Design | Yes |
| Super Parity | Yes |
| Low Halogen | Yes |
| PowerChoice™ Idle Power Technology | Yes |
| PowerBalance™ Power/Performance Technology | Yes |
| Hot-Plug Support[2] | Yes |
| Cache, Multi-segmented (MB) | 512 |
| Organic Solderability Preservative | Yes |
| RSA 3072 Firmware Verification (SD&D) | Yes |
| RELIABILITY and DATA INTEGRITY | |
| Mean Time Between Failures (MTBF, hours) | 2500000 hr |
| Reliability Rating @ Full 24×7 Operation (AFR) | 0.35% |
| Non-recoverable Read Errors per Bits Read | 1 sector per 10E15 |
| Power-On Hours per Year (24×7) | 8,760 |
| 512e Sector Size (Bytes per Sector) | 512e |
| Limited Warranty (years) | 5 |
| PERFORMANCE | |
| Spindle Speed (RPM) | 7200 RPM |
| Interface Access Speed (Gb/s) | 6.0, 3.0 |
| Max. Sustained Transfer Rate OD (MB/s, MiB/s) | 275 MB/s/262 MiB/s |
| Random Read/Write 4K QD16 WCD (IOPS) | 170 / 350 |
| Average Latency (ms) | 4.16 ms |
| Interface Ports | Single |
| Rotation Vibration @ 20-1500 Hz (rad/sec) | 12.5 |
| POWER CONSUMPTION | |
| Idle A (W) Average | 6.9 W |
| Max Operating, Random Read 4K/16Q (W) | 9.5W |
| Power Supply Requirements | +12 V and +5 V |
| ENVIRONMENTAL | |
| Temperature, Operating (°C) - drive reported | 10°C - 60°C |
| Vibration, Non-operating: 2 to 500 Hz (Grms) | 2.27 |
| Shock, Operating 2 ms (Read/Write) (Gs) | 30 Gs |
| Shock, Non-operating 2 ms (GS) | 200 |
| PHYSICAL | |
| Height (mm/in)[3] | 26.1 mm/1.028 in |
| Width (mm/in, max)[3] | 101.85 mm/4.010 in |
| Depth (mm/in, max)[3] | 147.0 mm/5.787 in |
| Weight (gm/lb) | 695 g/1.532 lb |
| Carton Unit Quantity | 20 |
| Cartons per Pallet / Cartons per Layer | 40/8 |

1 FastFormat models ship in 512e format state. When switching from 512e to 4Kn by executing the FastFormat routine, all data on the drive will be deleted. Note that data must be aligned to 4K sectors to see improved performance in 4Kn format

2 Supports Hotplug operation per Serial ATA Revision 3.3 specification

3 These base deck dimensions conform to the Small Form Factor Standard (SFF-8301) found at https://www.snia.org/sff. For connector-related dimensions, see SFF-8323.

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