



DATA SHEET

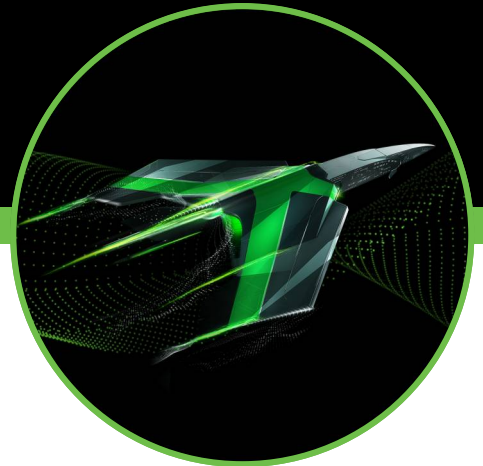
Maximise scale. Optimise TCO. Sustain the future.

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: Up to 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.

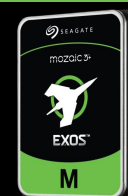
Sustainability: Built with more renewable energy and recycled materials than any previous Seagate product, Exos M 30 TB enables businesses to align with their own sustainability initiatives while reducing environmental impact.

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	Exos M
CMR Capacity	30 TB	28 TB
Standard Model - Seagate Instant Secure Erase (ISE) - 512e ¹	ST30000NM004K	ST28000NM003K
FEATURES		
Recording Technology	CMR	CMR
Helium Sealed-Drive Design	Yes	Yes
Super Parity	Yes	Yes
Low Halogen	Yes	Yes
PowerChoice™ Idle Power Technology	Yes	Yes
PowerBalance™ Power/Performance Technology	Yes	Yes
Hot-Plug Support ²	Yes	Yes
Cache, Multi-segmented (MB)	512	512
Organic Solderability Preservative	Yes	Yes
RSA 3072 Firmware Verification (SD&D)	Yes	Yes
RELIABILITY and DATA INTEGRITY		
Mean Time Between Failures (MTBF, hours)	2500000 hr	2500000 hr
Reliability Rating @ Full 24x7 Operation (AFR)	0.35%	0.35%
Non-recoverable Read Errors per Bits Read	1 sector per 10E15	1 sector per 10E15
Power-On Hours per Year (24x7)	8,760	8,760
512e Sector Size (Bytes per Sector)	512e	512e
Limited Warranty (years)	5	5
PERFORMANCE		
Spindle Speed (RPM)	7200 RPM	7200 RPM
Interface Access Speed (Gb/s)	6.0, 3.0	6.0, 3.0
Max. Sustained Transfer Rate OD (MB/s, MiB/s)	275 MB/s/262 MiB/s	270 MB/s/257 MiB/s
Random Read/Write 4K QD16 WCD (IOPS)	170 / 350	170 / 350
Average Latency (ms)	4.16 ms	4.16 ms
Interface Ports	Single	Single
Rotation Vibration @ 20-1500 Hz (rad/sec)	12.5	12.5
POWER CONSUMPTION		
Idle A (W) Average	6.9 W	6.9 W
Max Operating, Random Read 4K/16Q (W)	9.5W	9.5W
Power Supply Requirements	+12 V and +5 V	+12 V and +5 V
ENVIRONMENTAL		
Temperature, Operating (°C) - drive reported	10°C - 60°C	10°C - 60°C
Vibration, Non-operating: 2 to 500 Hz (Grms)	2.27	2.27
Shock, Operating 2 ms (Read/Write) (Gs)	30 Gs	30 Gs
Shock, Non-operating 2 ms (GS)	200	200
PHYSICAL		
Height (mm/in) ³	26.1 mm/1.028 in	26.1 mm/1.028 in
Width (mm/in, max) ³	101.85 mm/4.010 in	101.85 mm/4.010 in
Depth (mm/in, max) ³	147.0 mm/5.787 in	147.0 mm/5.787 in
Weight (gm/lb)	695 g/1.532 lb	695 g/1.532 lb
Carton Unit Quantity	20	20
Cartons per Pallet / Cartons per Layer	40/8	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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