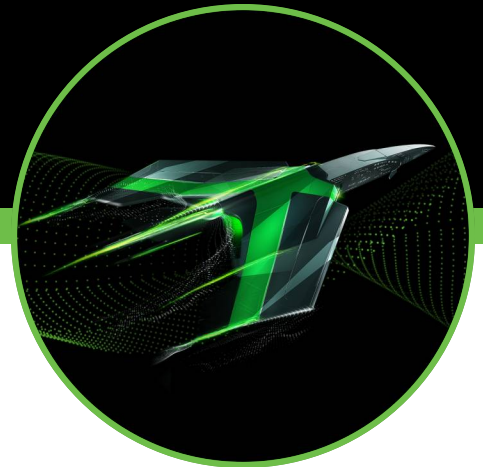


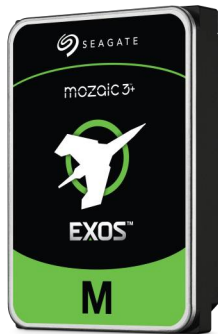


DATA SHEET

Maximize scale. Optimize TCO. Sustain the future.



Seagate's Exos M hard drive, boasting breakthrough 3TB 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 centers
- Massive scale-out data centers
- 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 3TB per platter, enabling massive storage capacity in the same footprint for maximized AI-driven data center efficiency.

Unmatched Capacity: 30TB+ of storage in an industry-standard 3.5-inch form factor delivers capacity at scale while optimizing space utilization in data centers.

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 30TB 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 center.

Scalable for AI and Big Data: Ideal for AI, big data analytics, and high-capacity storage, Exos M 30TB 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	30TB
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, Multisegmented (MB)	512
Organic Solderability Preservative	Yes
RSA 3072 Firmware Verification (SD&D)	Yes
RELIABILITY and DATA INTEGRITY	
Mean Time Between Failures (MTBF, hours)	2500000hr
Reliability Rating @ Full 24x7 Operation (AFR)	0.35%
Nonrecoverable Read Errors per Bits Read	1 sector per 10E15
Power-On Hours per Year (24x7)	8760
512e Sector Size (Bytes per Sector)	512e
Limited Warranty (years)	5
PERFORMANCE	
Spindle Speed (RPM)	7200RPM
Interface Access Speed (Gb/s)	6.0, 3.0
Max. Sustained Transfer Rate OD (MB/s, MiB/s)	275MB/s / 262MiB/s
Random Read/Write 4K QD16 WCD (IOPS)	170 / 350
Average Latency (ms)	4.16ms
Interface Ports	Single
Rotation Vibration @ 20-1500 Hz (rad/sec)	12.5
POWER CONSUMPTION	
Idle A (W) Average	6.9W
Max Operating, Random Read 4K/16Q (W)	9.5W
Power Supply Requirements	+12V and +5V
ENVIRONMENTAL	
Temperature, Operating (°C) - drive reported	10°C - 60°C
Vibration, Nonoperating: 2 to 500Hz (Grms)	2.27
Shock, Operating 2ms (Read/Write) (Gs)	30Gs
Shock, Nonoperating 2ms (Gs)	200
PHYSICAL	
Height (mm/in) ³	26.1mm/1.028in
Width (mm/in, max) ³	101.85mm/4.010in
Depth (mm/in, max) ³	147.0mm/5.787in
Weight (gm/lb)	695g/1.532lb
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.

© 2024 Seagate, Seagate Technology, and the Spiral logo are registered trademarks of Seagate Technology LLC in the United States and/or other countries. Exos, the Exos logo, FastFormat, PowerBalance, PowerChoice, and Seagate Secure are either trademarks or registered trademarks of Seagate Technology LLC or one of its affiliated companies in the United States and/or other countries. All other trademarks or registered trademarks are the property of their respective owners. When referring to drive capacity, one gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes. Your computer's operating system may use a different standard of measurement and report a lower capacity. In addition, some of the listed capacity is used for formatting and other functions, and thus will not be available for data storage. Actual data rates may vary depending on operating environment and other factors, such as chosen interface and disk capacity. The export or re-export of Seagate hardware or software is regulated by the U.S. Department of Commerce, Bureau of Industry and Security (for more information, visit www.bis.doc.gov), and may be controlled for export, import, and use in other countries. Seagate reserves the right to change, without notice, product offerings or specifications. DS2045.3-2409US