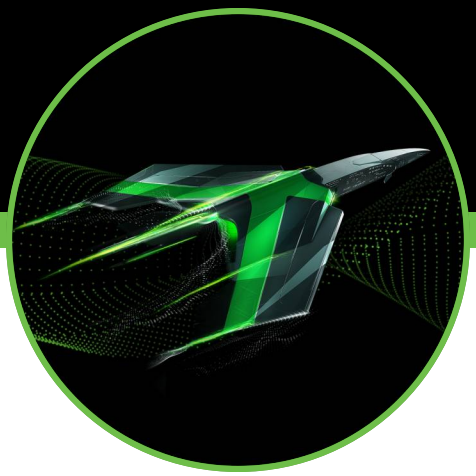
DATA SHEET

Scalable. Responsive. Innovative.

Exos



Seagate manufactures hard drives that specifically address the demand for hyperscale cloud scalability. The Exos® enterprise hard drives are the highest-capacity hard drives in the fleet.

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

Maximum Storage Capacity for Highest Rack Space Efficiency

Market-leading HDD offering the highest capacity available for more petabytes per rack

Highly reliable performance making it the logical choice for cloud data center and massive scale-out data center applications

Hyperscale SATA model tuned for large data transfers and low latency

PowerBalance™ feature optimizes Watts/TB

Maximize total cost of ownership savings through lower power and weight with helium sealed-drive design

Proven helium side-sealing weld technology for added handling robustness and leak protection

Digital environmental sensors to monitor internal drive conditions for optimal operation and performance

Data protection and security—Seagate Secure™ features for safe, affordable, fast, and easy drive retirement

Proven enterprise-class reliability backed by 6-month limited warranty and 2.5M-hr MTBF rating

Specifications	SATA 6Gb/s			
Product Name	Exos	Exos	Exos	Exos
CMR Capacity	22TB	24TB	26TB	28TB
Standard Model (512E)[1]	ST22000NM000C	ST24000NM000C	ST26000NM000C	ST28000NM000C
Features				
CMR	Yes	Yes	Yes	Yes
Helium Sealed-Drive Design	Yes	Yes	Yes	Yes
Super Parity	Yes	Yes	Yes	Yes
Low Halogen	Yes	Yes	Yes	Yes
PowerChoice™ Idle Power Technology	Yes	Yes	Yes	Yes
PowerBalance™ Power/Performance Technology	Yes	Yes	Yes	Yes
Hot-Plug Support[2]	Yes	Yes	Yes	Yes
Cache, Multisegmented (MB)	512	512	512	512
Organic Solderability Preservative	Yes	Yes	Yes	Yes
RSA 3072 Firmware Verification (SD&D)	Yes	Yes	Yes	Yes
Reliability and Data Integrity				
Mean Time Between Failures (MTBF, hours)	2500000hr	2500000hr	2500000hr	2500000hr
Reliability Rating @ Full 24×7 Operation (AFR)	0.35%	0.35%	0.35%	0.35%
Nonrecoverable Read Errors per Bits Read	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15
Power-On Hours per Year (24×7)	8760	8760	8760	8760
512e Sector Size (Bytes per Sector)	512e	512e	512e	512e
Limited Warranty (months)	6	6	6	6
Performance				
Spindle Speed (RPM)	7200	7200	7200	7200
Interface Access Speed (Gb/s)	6.0, 3.0	6.0, 3.0	6.0, 3.0	6.0, 3.0
Max. Sustained Transfer Rate OD (MB/s,MiB/s)	270MB/s / 258MiB/s	270MB/s / 258MiB/s	270MB/s / 258MiB/s	270MB/s / 258MiB/s
Random Read/Write 4K QD16 WCD (IOPS)	170 / 320	170 / 320	170 / 320	170 / 320
Average Latency (ms)	4.16	4.16	4.16	4.16
Interface Ports	Single	Single	Single	Single
Rotation Vibration @ 20-1500 Hz (rad/sec²)	12.5	12.5	12.5	12.5
Power Consumption				
Idle A (W) Average	6.7W	6.7W	6.7W	6.7W
Max Operating, Random Read 4K/16Q (W)	9.5W	9.5W	9.5W	9.5W
Power Supply Requirements	+12V and +5V	+12V and +5V	+12V and +5V	+12V and +5V
Environmental				
Temperature, Operating (°C) - drive reported	10C - 60C	10C - 60C	10C - 60C	10C - 60C
Vibration, Nonoperating: 2 to 500Hz (Grms)	2.27	2.27	2.27	2.27
Shock, Operating 2ms (Read/Write) (Gs)	30Gs	30Gs	30Gs	30Gs
Shock, Nonoperating 2ms (Gs)	200	200	200	200
Physical				
Height (mm/in, max)[3]	26.1mm/1.028in	26.1mm/1.028in	26.1mm/1.028in	26.1mm/1.028in
Width (mm/in, max)[3]	101.85mm/4.010in	101.85mm/4.010in	101.85mm/4.010in	101.85mm/4.010in
Depth (mm/in, max)[3]	147.0mm/5.787in	147.0mm/5.787in	147.0mm/5.787in	147.0mm/5.787in
Weight (gm/lb)	695g/1.532lb	695g/1.532lb	695g/1.532lb	695g/1.532lb
Carton Unit Quantity	20	20	20	20
Cartons per Pallet/Cartons per Layer	40 / 8	40 / 8	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 fomat

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 For connector-related dimensions, see SFF-8323.