DATA SHEET

Trusted. Efficient. Versatile.

Exos 7E2000



The Seagate® Exos™ 7E2000 enterprise hard drives can store large amounts of data without using a ton of system space — up to 2,000 GB in a compact 2.5-inch form factor. Exos 7E2000 provides the density, low power consumption and data integrity needed in traditional data centres and the cloud.



Best-fit Applications

- Storage-hungry business applications
- Storage area networks (SAN) and network attached storage (NAS)
- Maximum-capacity entry-level servers and blade servers
- Rich media content storage
- Enterprise backup and restore — D2D, virtual tape
- Cloud computing

Trusted Bulk Data Storage in a Small Data Centre Footprint

Exos 7E2000 drives optimise your data centre footprint in a proven 2.5-inch form factor for infrastructures requiring highly reliable access to bulk data. Conventional magnetic recording (CMR) technology helps Exos 7E2000 catalyse the datasphere, enabling data centre architects and IT professionals to deliver trusted performance, rock-solid reliability and ironclad security for demanding 24×7 operations. A 2M-hr. MTBF rating with supported workloads of 550 TB/year, dense data storage and low power consumption help you meet your storage SLAs while lowering TCO.

Significant Hard Drive Power Savings

Exos 7E2000 drives ensure data confidence with a reliable, low-power platform for efficient bulk storage operations, even in harsh data centre environments. Exos 7E2000 helps reduce per-gigabyte cooling and energy costs by packing high capacities into an SFF, low-power consumption drive. Included PowerChoice™ technology empowers IT organisations to tailor systems for optimal performance and power consumption, resulting in power savings of up to 35% over traditional 3.5-inch drives, and potentially operating as low as 1.1 watts when idle.

Enhanced Enterprise Reliability, Data Protection and Security

Exos 7E2000 security features help protect data where it lives — on the drive. Exos 7E2000 drives help prevent unauthorised access and safeguard stored data with security levels that include Secure Downloads & Diagnostics, TCG-compliant Self-Encrypting Drive and government-grade FIPS tamper-resistant hard drive.[1] Seagate Secure™ drives simplify drive repurposing and disposal, help protect data-at-rest, and comply with corporate and federal data security mandates.

1 Self-Encrypting Drives (SED) and FIPS 140-2 Validated drives are not available in all models or countries. May require TCG-compliant host or controller support. Instant Secure Erase (ISE) functionality meets the ISO/IEC 27040 and NIST 800-88 guidelines for complete and authoritative drive sanitization.



Specifications	4K Native		5xx Emulation	
Capacity	2TB	1TB	2TB	1TB
Standard Model Numbers	ST2000NX0263	ST1000NX0323	ST2000NX0273	ST1000NX0333
Seagate Secure™ Model[1]	ST2000NX0323	ST1000NX0363	ST2000NX0343	ST1000NX0373
Seagate Secure SED-FIPS Model[1]	ST2000NX0333	—	ST2000NX0353	—
Features				
Interface	12 Gb/s SAS	12 Gb/s SAS	12 Gb/s SAS	12 Gb/s SAS
PowerChoice™ Technology	Yes	Yes	Yes	Yes
Protection Information	Yes	Yes	Yes	Yes
Low Halogen	Yes	Yes	Yes	Yes
Seagate RAID Rebuild®	Yes	Yes	Yes	Yes
Reliability/Data Integrity				
MTBF	2,000,000 hr	2,000,000 hr	2,000,000 hr	2,000,000 hr
Reliability Rating @ Full 24×7 Operation (AFR)	0.44%	0.44%	0.44%	0.44%
Non-recoverable Read Errors per Bits Read, Max	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15
Power-On Hours per Year (24×7)	8,760	8,760	8,760	8,760
Sector Size (Bytes per Logical Sector)	4K	4K	5xx	5xx
Limited Warranty (years)	5	5	5	5
Performance				
Spindle Speed (RPM)	7,200 RPM	7,200 RPM	7,200 RPM	7,200 RPM
Cache, Multi-segmented (MB)	128	128	128	128
Interface Access Speed (Gb/s)	12.0, 6.0, 3.0	12.0, 6.0, 3.0	12.0, 6.0, 3.0	12.0, 6.0, 3.0
Max. Sustained Transfer Rate OD (MB/s)	136MB/s	136MB/s	136MB/s	136MB/s
Average Latency (ms)	4.16	4.16	4.16	4.16
Interface Ports	Dual	Dual	Dual	Dual
Rotational Vibration @ 1800 Hz (rad/s^2)	16	16	16	16
POWER CONSUMPTION				
Average Idling Power (W)	3.53	3.29	3.53	3.29
Typical Operating, Random Read (W)	6.02	5.9	6.02	5.9
PowerChoice(TM) Technology (Standby) (W)	1.52	1.52	1.52	1.52
Power Supply Requirements	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V
Environmental				
Temperature, Operating (°C)	5°C – 55°C	5°C – 55°C	5°C – 55°C	5°C – 55°C
Vibration, Operating, 5Hz to 500Hz (Grms)	0.5	0.5	0.5	0.5
Vibration, Non-operating, 5Hz to 500Hz (Grms)	3	3	3	3
Shock, Operating, 2 ms (Gs)	25	25	25	25
Shock, Non-operating, 2 ms (Gs)	400	400	400	400
Acoustics, typical - idling (bels)	2.8	2.8	2.8	2.8
Acoustics, typical - seek (bels)	3.2	3.2	3.2	3.2
Physical				
Height (in/mm)[2]	0.591 in/15 mm	0.591 in/15 mm	0.591 in/15 mm	0.591 in/15 mm
Width (in/mm)[2]	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)[2]	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)	198 g/0.437 lb	190 g/0.419 lb	198 g/0.437 lb	190 g/0.419 lb
Carton Unit Quantity	40	40	40	40
Cartons per Pallet / Cartons per Layer	60/10	60/10	60/10	60/10

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2 These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at www.sffcommittee.org. For connector-related dimensions, see SFF-8223.



Specifications	5xx Native		4K Native	
Capacity	2TB	1TB	2TB	1TB
Standard Model Numbers	ST2000NX0433	ST1000NX0453	ST2000NX0243	ST1000NX0303
Seagate Secure™ Model[1]	—	—	ST2000NX0283	ST1000NX0343
Seagate Secure SED-FIPS Model[1]	—	—	—	—
Features				
Interface	12 Gb/s SAS	12 Gb/s SAS	SATA 6Gb/s	SATA 6Gb/s
PowerChoice™ Technology	Yes	Yes	Yes	Yes
Protection Information	Yes	Yes	No	No
Low Halogen	Yes	Yes	Yes	Yes
Seagate RAID Rebuild®	Yes	Yes	Yes	Yes
Reliability/Data Integrity				
MTBF	2,000,000 hr	2,000,000 hr	2,000,000 hr	2,000,000 hr
Reliability Rating @ Full 24×7 Operation (AFR)	0.44%	0.44%	0.44%	0.44%
Non-recoverable Read Errors per Bits Read, Max	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15
Power-On Hours per Year (24×7)	8,760	8,760	8,760	8,760
Sector Size (Bytes per Logical Sector)	5xx	5xx	4K	4K
Limited Warranty (years)	5	5	5	5
Performance				
Spindle Speed (RPM)	7,200 RPM	7,200 RPM	7,200 RPM	7,200 RPM
Cache, Multi-segmented (MB)	128	128	128	128
Interface Access Speed (Gb/s)	12.0, 6.0, 3.0	12.0, 6.0, 3.0	6.0, 3.0, 1.5	6.0, 3.0, 1.5
Max. Sustained Transfer Rate OD (MB/s)	136MB/s	136MB/s	136MB/s	136MB/s
Average Latency (ms)	4.16	4.16	4.16	4.16
Interface Ports	Dual	Dual	Single	Single
Rotational Vibration @ 1800 Hz (rad/s^2)	16	16	16	16
POWER CONSUMPTION				
Average Idling Power (W)	3.53	3.29	3.87	3.51
Typical Operating, Random Read (W)	6.02	5.9	5.22	4.74
PowerChoice(TM) Technology (Standby) (W)	1.52	1.52	1.14	1.14
Power Supply Requirements	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V
Environmental				
Temperature, Operating (°C)	5°C – 55°C	5°C – 55°C	5°C – 55°C	5°C – 55°C
Vibration, Operating, 5Hz to 500Hz (Grms)	0.5	0.5	0.5	0.5
Vibration, Non-operating, 5Hz to 500Hz (Grms)	3	3	3	3
Shock, Operating, 2 ms (Gs)	25	25	25	25
Shock, Non-operating, 2 ms (Gs)	400	400	400	400
Acoustics, typical - idling (bels)	2.8	2.8	2.8	2.8
Acoustics, typical - seek (bels)	3.2	3.2	3.2	3.2
Physical				
Height (in/mm)[2]	0.591 in/15 mm	0.591 in/15 mm	0.591 in/15 mm	0.591 in/15 mm
Width (in/mm)[2]	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)[2]	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)	198 g/0.437 lb	190 g/0.419 lb	198 g/0.437 lb	190 g/0.419 lb
Carton Unit Quantity	40	40	40	40
Cartons per Pallet / Cartons per Layer	60/10	60/10	60/10	60/10

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Specifications	512 Emulation		512 Native	
Capacity	2TB	1TB	2TB	1TB
Standard Model Numbers	ST2000NX0253	ST1000NX0313	ST2000NX0403	ST1000NX0423
Seagate Secure™ Model[1]	ST2000NX0303	ST1000NX0353	—	—
Seagate Secure SED-FIPS Model[1]	—	—	—	—
Features				
Interface	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s
PowerChoice™ Technology	Yes	Yes	Yes	Yes
Protection Information	No	No	No	No
Low Halogen	Yes	Yes	Yes	Yes
Seagate RAID Rebuild®	Yes	Yes	Yes	Yes
Reliability/Data Integrity				
MTBF	2,000,000 hr	2,000,000 hr	2,000,000 hr	2,000,000 hr
Reliability Rating @ Full 24×7 Operation (AFR)	0.44%	0.44%	0.44%	0.44%
Non-recoverable Read Errors per Bits Read, Max	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15	1 sector per 10E15
Power-On Hours per Year (24×7)	8,760	8,760	8,760	8,760
Sector Size (Bytes per Logical Sector)	512	512	512	512
Limited Warranty (years)	5	5	5	5
Performance				
Spindle Speed (RPM)	7,200 RPM	7,200 RPM	7,200 RPM	7,200 RPM
Cache, Multi-segmented (MB)	128	128	128	128
Interface Access Speed (Gb/s)	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5	6.0, 3.0, 1.5
Max. Sustained Transfer Rate OD (MB/s)	136MB/s	136MB/s	136MB/s	136MB/s
Average Latency (ms)	4.16	4.16	4.16	4.16
Interface Ports	Single	Single	Single	Single
Rotational Vibration @ 1800 Hz (rad/s^2)	16	16	16	16
POWER CONSUMPTION				
Average Idling Power (W)	3.87	3.51	3.87	3.51
Typical Operating, Random Read (W)	5.22	4.74	5.22	4.74
PowerChoice(TM) Technology (Standby) (W)	1.14	1.14	1.14	1.14
Power Supply Requirements	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V	+12 V and +5 V
Environmental				
Temperature, Operating (°C)	5°C – 55°C	5°C – 55°C	5°C – 55°C	5°C – 55°C
Vibration, Operating, 5Hz to 500Hz (Grms)	0.5	0.5	0.5	0.5
Vibration, Non-operating, 5Hz to 500Hz (Grms)	3	3	3	3
Shock, Operating, 2 ms (Gs)	25	25	25	25
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Carton Unit Quantity	40	40	40	40
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