



DATA SHEET

Trusted. Efficient. Versatile.
Exos 7E10



The Seagate® Exos™ 7E10 enterprise hard drive confidently stores up to 10 TB of data without sacrificing performance. The secure, high-capacity, high-performance drives are optimised for demanding enterprise bulk data applications.



Best-Fit Applications

- Hyperscale applications/cloud data centres
- Massive scale-out data centres
- OLTP and HPC 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
- Centralised surveillance

Enterprise Drive for Bulk Data Applications

Exos 7E10 hard drives support up to 10 TB per drive,¹ offering bulk data storage for data centre infrastructures requiring a highly reliable enterprise hard drive. Exos 7E10 provides cost-effective, reliable access to unstructured data. The Exos 7E10 drive helps to catalyse the datasphere, enabling data centre architects and IT professionals to deliver trusted performance, rock-solid reliability, ironclad security, and low TCO for demanding 24×7 operations.

Robust Bulk Data Storage for a 24×7 World

Exos 7E10 drives are backed by a 2 million hour MTBF rating and support workloads of 550 TB per year — 10× that of desktop hard drives. With state-of-the-art cache, on-the-fly error-correction algorithms, and rotational vibration design, the Exos 7E10 helps ensure consistent performance in replicated and RAID multi-drive systems.

High Performance for Mainstream Data Centre Applications

Meet your storage workload requirements in the most efficient and cost-effective data centre footprint on the market today. The Exos 7E10 delivers easy integration into bulk storage systems with 12 Gb/s SAS and SATA 6 Gb/s interface options. With user-definable innovative technology advancements like PowerChoice™ and Seagate RAID Rebuild®, you can tailor your nearline storage requirements for even greater improvements in lowering your TCO.

Enhanced Reliability, Data Protection, and Security

Advanced security features help protect data where it lives — on the drive. Exos 7E10 prevents unauthorised drive access and safeguards stored data with security features that include Secure Downloads & Diagnostics, TCG-compliant Self-Encrypting Drive, and government-grade FIPS/Common Criteria tamper-resistant hard drive.² Seagate Secure™ drives simplify drive repurposing and disposal, help protect data-at-rest, and comply with corporate and federal data security mandates.

¹ Seagate recommends validating your configuration with your HBA/RAID controller manufacturer to ensure full capacity capabilities.

² Self-Encrypting Drives (SED) are not available in all models or countries. May require TCG-compliant host or controller support.





| Specifications | 512e/4KN (FastFormat™) SATA | | | | |
|---|-----------------------------|--------------------|--------------------|--------------------|--------------------|
| Capacity | 10 TB | 8 TB | 6 TB | 4 TB | 2 TB |
| Standard | ST10000NM017B | ST8000NM017B | ST6000NM019B | ST4000NM024B | ST2000NM017B |
| PowerBalance™ Model ** | ST10000NM025B | ST8000NM025B | ST6000NM027B | — | — |
| Seagate Secure™ SED Model ¹ ** | ST10000NM019B | ST8000NM019B | ST6000NM021B | ST4000NM026B | ST2000NM019B |
| Seagate Secure SED-FIPS 140-3 Model ¹ ** | ST10000NM021B | ST8000NM021B | ST6000NM023B | ST4000NM028B | — |
| **not all models will be generally offered as standard configurations | — | — | — | — | — |
| Features | | | | | |
| Protection Information (T10 DIF) | — | — | — | — | — |
| SuperParity | Yes | Yes | Yes | Yes | Yes |
| Low Halogen | Yes | Yes | Yes | Yes | Yes |
| PowerChoice™ Technology | Yes | Yes | Yes | Yes | Yes |
| PowerBalance Technology | Yes | Yes | Yes | Yes | Yes |
| Cache, Multi-segmented (MB) | 256 | 256 | 256 | 256 | 256 |
| Advanced Write Caching (8M internal NOR flash) | Yes | Yes | Yes | Yes | Yes |
| Reliability/Data Integrity | | | | | |
| Vibration, Non-operating: 10 Hz to 500 Hz (Grms) | 5 | 5 | 5 | 5 | 5 |
| Mean Time Between Failures (MTBF, hours) | 2,000,000 | 2,000,000 | 2,000,000 | 2,000,000 | 2,000,000 |
| Reliability Rating @ Full 24x7 Operation (AFR) | 0.44% | 0.44% | 0.44% | 0.44% | 0.44% |
| Non-recoverable Read Errors per Bits Read | 1 sector per 10E15 | 1 sector per 10E15 | 1 sector per 10E15 | 1 sector per 10E15 | 1 sector per 10E15 |
| Power-On Hours per Year | 8,760 | 8,760 | 8,760 | 8,760 | 8,760 |
| Bytes per Sector | 512 | 512 | 512 | 512 | 512 |
| Warranty, Limited (years) | 5 | 5 | 5 | 5 | 5 |
| Performance | | | | | |
| Spindle Speed (RPM) | 7,200 | 7,200 | 7,200 | 7,200 | 7,200 |
| 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 | 6.0, 3.0, 1.5 |
| Max. Sustained Transfer Rate OD | 263MB/s | 255MB/s | 250MB/s | 250MB/s | 226MB/s |
| Average Latency (ms) | 4.16 | 4.16 | 4.16 | 4.16 | 4.16 |
| Interface Ports | Single | Single | Single | Single | Single |
| Rotational Vibration @ 1,500 Hz (rad/s²) | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 |
| Power Consumption | | | | | |
| Idle Power, Average (W) | 7.8 | 7.06 | 7.06 | 5.16 | 5.16 |
| Typical Operating, Random Read (W) | 11.8 | 11.03 | 11.03 | 9.4 | 9.4 |
| Power Supply Requirements | +12 V and +5 V | +12 V and +5 V | +12 V and +5 V | +12 V and +5 V | +12 V and +5 V |
| Environmental | | | | | |
| Temperature, Operating (°C) Drive Reported | 5 ~ 60 | 5 ~ 60 | 5 ~ 60 | 5 ~ 60 | 5 ~ 60 |
| Shock, Operating 2 ms Read/Write (Gs) | 70/40 Gs | 70/40 Gs | 70/40 Gs | 70/40 Gs | 70/40 Gs |
| Shock, Non-operating, (1 ms/2 ms) (Gs) | 150/300 | 150/300 | 150/300 | 150/300 | 150/300 |
| Physical | | | | | |
| Height (in/mm, max) ² | 1.028 in/26.11 mm | 1.028 in/26.11 mm | 1.028 in/26.11 mm | 1.028 in/26.11 mm | 1.028 in/26.11 mm |
| Width (in/mm, max) ² | 4.01 in/101.85 mm | 4.01 in/101.85 mm | 4.01 in/101.85 mm | 4.01 in/101.85 mm | 4.01 in/101.85 mm |
| Depth (in/mm, max) ² | 5.787 in/147 mm | 5.787 in/147 mm | 5.787 in/147 mm | 5.787 in/147 mm | 5.787 in/147 mm |
| Weight (lb/g) | 720 g/1.59 lb | 716 g/1.58 lb | 716 g/1.58 lb | 620 g/1.37 lb | 620 g/1.37 lb |
| Carton Unit Quantity | 20 | 20 | 20 | 20 | 20 |
| Cartons per Pallet / Cartons per Layer | 40/8 | 40/8 | 40/8 | 40/8 | 40/8 |

¹ Self-Encrypting Drives (SED), Instant Secure Erase (ISE) drives, and FIPS 140-3 Validated drives are not available in all models or countries. May require TCG-compliant host or controller support.

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.