



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 | 512n SATA | | |
|---|--------------------|--------------------|--------------------|
| | 6 TB | 4 TB | 2 TB |
| Capacity | 6 TB | 4 TB | 2 TB |
| Standard | ST6000NM000B | ST4000NM000B | ST2000NM000B |
| PowerBalance™ Model ** | — | — | — |
| Seagate Secure™ SED Model ¹ ** | — | ST4000NM006B | ST2000NM006B |
| Seagate Secure SED-FIPS 140-3 Model ¹ ** | — | ST4000NM012B | — |
| **not all models will be generally offered as standard configurations | — | — | — |
| Features | | | |
| Protection Information (T10 DIF) | — | — | — |
| SuperParity | Yes | Yes | Yes |
| Low Halogen | Yes | Yes | Yes |
| PowerChoice™ Technology | Yes | Yes | Yes |
| PowerBalance Technology | Yes | Yes | Yes |
| Cache, Multi-segmented (MB) | 256 | 256 | 256 |
| Advanced Write Caching (8M internal NOR flash) | Yes | Yes | Yes |
| Reliability/Data Integrity | | | |
| Vibration, Non-operating: 10 Hz to 500 Hz (Grms) | 5 | 5 | 5 |
| Mean Time Between Failures (MTBF, hours) | 2,000,000 | 2,000,000 | 2,000,000 |
| Reliability Rating @ Full 24x7 Operation (AFR) | 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 |
| Power-On Hours per Year | 8,760 | 8,760 | 8,760 |
| Bytes per Sector | 512 | 512 | 512 |
| Warranty, Limited (years) | 5 | 5 | 5 |
| Performance | | | |
| Spindle Speed (RPM) | 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 |
| Max. Sustained Transfer Rate OD | 215MB/s | 215MB/s | 215MB/s |
| Average Latency (ms) | 4.16 | 4.16 | 4.16 |
| Interface Ports | Single | Single | Single |
| Rotational Vibration @ 1,500 Hz (rad/s ²) | 12.5 | 12.5 | 12.5 |
| Power Consumption | | | |
| Idle Power, Average (W) | 7.06 | 6.04 | 5.16 |
| Typical Operating, Random Read (W) | 11.03 | 10.32 | 9.4 |
| Power Supply Requirements | +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 |
| Shock, Operating 2 ms Read/Write (Gs) | 70/40 Gs | 70/40 Gs | 70/40 Gs |
| Shock, Non-operating, (1 ms/2 ms) (Gs) | 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 |
| Width (in/mm, max) ² | 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 |
| Weight (lb/g) | 716 g/1.58 lb | 650 g/1.43 lb | 620 g/1.37 lb |
| Carton Unit Quantity | 20 | 20 | 20 |
| Cartons per Pallet / Cartons per Layer | 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.



| Specifications | 512n SAS | | |
|---|--------------------|--------------------------------|--------------------------------|
| Capacity | 6 TB | 4 TB | 2 TB |
| Standard | ST6000NM001B | ST4000NM001B | ST2000NM001B |
| PowerBalance™ Model ** | — | — | — |
| Seagate Secure™ SED Model ¹ ** | — | ST4000NM007B | ST2000NM007B |
| Seagate Secure SED-FIPS 140-3 Model ¹ ** | — | ST4000NM013B | — |
| **not all models will be generally offered as standard configurations | — | — | — |
| Features | | | |
| Protection Information (T10 DIF) | Yes | Yes | Yes |
| SuperParity | Yes | Yes | Yes |
| Low Halogen | Yes | Yes | Yes |
| PowerChoice™ Technology | Yes | Yes | Yes |
| PowerBalance Technology | Yes | Yes | Yes |
| Cache, Multi-segmented (MB) | 256 | 256 | 256 |
| Advanced Write Caching (8M internal NOR flash) | Yes | Yes | Yes |
| Reliability/Data Integrity | | | |
| Vibration, Non-operating: 10 Hz to 500 Hz (Grms) | 2.27 | 2.27 | 2.27 |
| Mean Time Between Failures (MTBF, hours) | 2,000,000 | 2,000,000 | 2,000,000 |
| Reliability Rating @ Full 24x7 Operation (AFR) | 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 |
| Power-On Hours per Year | 8,760 | 8,760 | 8,760 |
| Bytes per Sector | 512 | 512 | 512 |
| Warranty, Limited (years) | 5 | 5 | 5 |
| Performance | | | |
| Spindle Speed (RPM) | 7,200 | 7,200 | 7,200 |
| 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, 12.0, 6.0, 3.0 |
| Max. Sustained Transfer Rate OD | 236MB/s | 236MB/s | 236MB/s |
| Average Latency (ms) | 4.16 | 4.16 | 4.16 |
| Interface Ports | Dual | Dual | Dual |
| Rotational Vibration @ 1,500 Hz (rad/s ²) | 12.5 | 12.5 | 12.5 |
| Power Consumption | | | |
| Idle Power, Average (W) | 7.24 | 6.59 | 5.9 |
| Typical Operating, Random Read (W) | 11.34 | 10.8 | 10.3 |
| Power Supply Requirements | +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 |
| Shock, Operating 2 ms Read/Write (Gs) | 70/40 Gs | 70/40 Gs | 70/40 Gs |
| Shock, Non-operating, (1 ms/2 ms) (Gs) | 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 |
| Width (in/mm, max) ² | 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 |
| Weight (lb/g) | 716 g/1.58 lb | 620 g/1.37 lb | 620 g/1.37 lb |
| Carton Unit Quantity | 20 | 20 | 20 |
| Cartons per Pallet / Cartons per Layer | 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.



| Specifications | 512e/4KN (FastFormat™) SATA | | | | |
|---|-----------------------------|--------------------|--------------------|--------------------|--------------------|
| | 10 TB | 8 TB | 6 TB | 4 TB | 2 TB |
| Capacity | 10 TB | 8 TB | 6 TB | 4 TB | 2 TB |
| Standard | ST1000NM017B | ST8000NM017B | ST6000NM019B | ST4000NM024B | ST2000NM017B |
| PowerBalance™ Model ** | ST1000NM025B | ST8000NM025B | ST6000NM027B | — | — |
| Seagate Secure™ SED Model ¹ ** | ST1000NM019B | ST8000NM019B | ST6000NM021B | ST4000NM026B | ST2000NM019B |
| Seagate Secure SED-FIPS 140-3 Model ¹ ** | ST1000NM021B | 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/s ²) | 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.



| Specifications | 512e/4KN (FastFormat) SAS | | | | |
|---|--------------------------------|--------------------------------|--------------------------------|--------------------|--------------------|
| | 10 TB | 8 TB | 6 TB | 4 TB | 2 TB |
| Capacity | 10 TB | 8 TB | 6 TB | 4 TB | 2 TB |
| Standard | ST1000NM018B | ST8000NM018B | ST6000NM020B | ST4000NM025B | ST2000NM018B |
| PowerBalance™ Model ** | — | — | — | — | — |
| Seagate Secure™ SED Model ¹ ** | ST1000NM020B | ST8000NM020B | ST6000NM022B | ST4000NM027B | ST2000NM020B |
| Seagate Secure SED-FIPS 140-3 Model ¹ ** | ST1000NM022B | ST8000NM022B | ST6000NM024B | ST4000NM029B | — |
| **not all models will be generally offered as standard configurations | — | — | — | — | — |
| Features | | | | | |
| Protection Information (T10 DIF) | Yes | Yes | Yes | Yes | Yes |
| 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, 520, 528 | 512, 520, 528 | 512, 520, 528 | 512, 520, 528 | 512, 520, 528 |
| 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) | 12.0, 6.0, 3.0, 12.0, 6.0, 3.0 | 12.0, 6.0, 3.0, 12.0, 6.0, 3.0 | 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 | 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 | Dual | Dual | Dual | Dual | Dual |
| Rotational Vibration @ 1,500 Hz (rad/s ²) | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 |
| Power Consumption | | | | | |
| Idle Power, Average (W) | 8.14 | 7.24 | 6.59 | 5.9 | 5.9 |
| Typical Operating, Random Read (W) | 12.26 | 11.34 | 10.8 | 10.3 | 10.3 |
| 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 | 650 g/1.43 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.



| Specifications | 4Kn SATA | | | | |
|---|--------------------|--------------------|--------------------|--------------------|--------------------|
| Capacity | 10 TB | 8 TB | 6 TB | 4 TB | 2 TB |
| Standard | ST1000NM002B | ST8000NM002B | ST6000NM004B | ST4000NM004B | ST2000NM004B |
| PowerBalance™ Model ** | — | — | — | — | — |
| Seagate Secure™ SED Model ¹ ** | ST1000NM006B | ST8000NM006B | ST6000NM008B | ST4000NM010B | ST2000NM010B |
| Seagate Secure SED-FIPS 140-3 Model ¹ ** | — | — | — | — | — |
| **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 | 4,096 | 4,096 | 4,096 | 4,096 | 4,096 |
| 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/s ²) | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 |
| Power Consumption | | | | | |
| Idle Power, Average (W) | 7.8 | 7.06 | 6.04 | 5.16 | 5.16 |
| Typical Operating, Random Read (W) | 11.8 | 11.03 | 10.32 | 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 | 650 g/1.43 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.



| Specifications | 4Kn SAS | | | | |
|---|--------------------------------|--------------------------------|---------------------|--------------------------------|---------------------|
| | 10 TB | 8 TB | 6 TB | 4 TB | 2 TB |
| Capacity | 10 TB | 8 TB | 6 TB | 4 TB | 2 TB |
| Standard | ST1000NM003B | ST8000NM003B | ST6000NM005B | ST4000NM005B | ST2000NM005B |
| PowerBalance™ Model ** | — | — | — | — | — |
| Seagate Secure™ SED Model ¹ ** | ST1000NM007B | ST8000NM007B | ST6000NM009B | ST4000NM011B | ST2000NM011B |
| Seagate Secure SED-FIPS 140-3 Model ¹ ** | ST1000NM011B | ST8000NM011B | ST6000NM013B | ST4000NM017B | — |
| **not all models will be generally offered as standard configurations | — | — | — | — | — |
| Features | | | | | |
| Protection Information (T10 DIF) | Yes | Yes | Yes | Yes | Yes |
| 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 | 4,096, 4,160, 4,224 | 4,096, 4,160, 4,224 | 4,096, 4,160, 4,224 | 4,096, 4,160, 4,224 | 4,096, 4,160, 4,224 |
| 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) | 12.0, 6.0, 3.0, 12.0, 6.0, 3.0 | 12.0, 6.0, 3.0, 12.0, 6.0, 3.0 | 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 | 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 | Dual | Dual | Dual | Dual | Dual |
| Rotational Vibration @ 1,500 Hz (rad/s ²) | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 |
| Power Consumption | | | | | |
| Idle Power, Average (W) | 8.14 | 7.24 | 6.59 | 5.9 | 5.9 |
| Typical Operating, Random Read (W) | 12.26 | 11.34 | 10.8 | 10.3 | 10.3 |
| 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 | 650 g/1.43 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.

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