



DATA SHEET

Trusted. Efficient. Versatile.
Exos 7E8



The Seagate® Exos® 7E8 enterprise hard drive confidently stores up to 8TB of data without sacrificing performance. The secure, high-capacity, high-performance drives are optimized for demanding enterprise bulk data applications.



Best-Fit Applications

- Hyperscale applications/cloud data centers
- Massive scale-out data centers
- 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
- Centralized surveillance

Enterprise Drive for Bulk Data Applications

Exos 7E8 hard drives support up to 8TB per drive,¹ offering bulk data storage for data center infrastructures requiring a highly reliable enterprise hard drive. Exos 7E8 provides cost-effective, reliable access to unstructured data. Built on field-proven 10th-generation conventional magnetic recording (CMR) technology, the Exos 7E8 drive helps to catalyze the datasphere, enabling data center architects and IT professionals to deliver trusted performance, rock-solid reliability, ironclad security, and low TCO for demanding 24x7 operations.

Robust Bulk Data Storage for a 24x7 World

Exos 7E8 drives are backed by a 2 million hour MTBF rating and support workloads of 550TB per year—10x that of desktop hard drives. With state-of-the-art cache, on-the-fly error-correction algorithms, and rotational vibration design, the Exos 7E8 helps ensure consistent performance in replicated and RAID multi-drive systems.

High Performance for Mainstream Data Center Applications

Meet your storage workload requirements in the most efficient and cost-effective data center footprint on the market today. The Exos 7E8 delivers easy integration into bulk storage systems with 12Gb/s SAS and SATA 6Gb/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 7E8 prevents unauthorized 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 | | | | |
|---|--------------------|--------------------|--------------------|--------------------|--------------------|
| | 6TB | 4TB | 3TB | 2TB | 1TB |
| Capacity | 6TB | 4TB | 3TB | 2TB | 1TB |
| Base Model | ST6000NM002A | ST4000NM000A | ST3000NM000A | ST2000NM000A | ST1000NM000A |
| PowerBalance™ Model | — | — | — | — | — |
| Seagate Secure™ Model ¹ | — | ST4000NM006A | — | — | ST1000NM002A |
| Seagate Secure SED-FIPS Model ^{1,2} | — | ST4000NM013A | ST3000NM004A | — | — |
| Features | | | | | |
| Protection Information (T10 DIF) | — | — | — | — | — |
| Humidity Sensor | 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, Multisegmented (MB) | 256 | 256 | 256 | 256 | 256 |
| Advanced Write Caching (Internal NOR flash) | Yes | Yes | Yes | Yes | Yes |
| Reliability/Data Integrity | | | | | |
| Vibration, Nonoperating: 10Hz to 500Hz (Grms) | 5 | 5 | 5 | 5 | 5 |
| MTBF | 2,000,000hr | 2,000,000hr | 2,000,000hr | 2,000,000hr | 2,000,000hr |
| Reliability Rating @ Full 24x7 Operation (AFR) | 0.44% | 0.44% | 0.44% | 0.44% | 0.44% |
| Nonrecoverable Read Errors per Bits Read, Max | 1 sector per 10E15 | 1 sector per 10E15 | 1 sector per 10E15 | 1 sector per 10E15 | 1 sector per 10E15 |
| Power-On Hours | 8760 | 8760 | 8760 | 8760 | 8760 |
| Bytes per Sector | 512 | 512 | 512 | 512 | 512 |
| Warranty, Limited (years) | 5 | 5 | 5 | 5 | 5 |
| Performance | | | | | |
| Spindle Speed (RPM) | 7200 | 7200 | 7200 | 7200 | 7200 |
| 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 Sustainable Transfer Rate | 215MB/s | 215MB/s | 215MB/s | 215MB/s | 215MB/s |
| Average Latency (ms) | 4.16 | 4.16 | 4.16 | 4.16 | 4.16 |
| Interface Ports | Single | Single | Single | Single | Single |
| Rotational Vibration @ 1500Hz (rad/s ²) | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 |
| Power Consumption | | | | | |
| Idle Average (W) | 7.10W | 5.38W | 5.38W | 4.48W | 4.48W |
| Average Operating Power | 12.91W | 10.77W | 10.77W | 9.91W | 9.91W |
| 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 | | | | | |
| Temperature, Operating (°C) | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C |
| Shock, Operating Read/Write (Gs) | 70/40Gs | 70/40Gs | 70/40Gs | 70/40Gs | 70/40Gs |
| Shock, Nonoperating, 1ms/2ms (Gs) | 150/300 | 150/300 | 150/300 | 150/300 | 150/300 |
| Physical | | | | | |
| Height (in/mm, max) ³ | 1.028in/26.1mm | 1.028in/26.1mm | 1.028in/26.1mm | 1.028in/26.1mm | 1.028in/26.1mm |
| Width (in/mm, max) ³ | 4.010in/101.85mm | 4.010in/101.85mm | 4.010in/101.85mm | 4.010in/101.85mm | 4.010in/101.85mm |
| Depth (in/mm, max) ³ | 5.787in/147.0mm | 5.787in/147.0mm | 5.787in/147.0mm | 5.787in/147.0mm | 5.787in/147.0mm |
| Weight (g/lb) | 716g/1.58lb | 649g/1.43lb | 649g/1.43lb | 620g/1.37lb | 620g/1.37lb |
| 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) and FIPS 140-2 Validated drives are not available in all models or countries. May require TCG-compliant host or controller support.

² FIPS 140-2 Level 2 Certification in process.

³ 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 | | | | |
|---|--------------------|--------------------|--------------------|--------------------|--------------------|
| | 6TB | 4TB | 3TB | 2TB | 1TB |
| Capacity | 6TB | 4TB | 3TB | 2TB | 1TB |
| Base Model | ST6000NM003A | ST4000NM003A | ST3000NM001A | ST2000NM003A | ST1000NM001A |
| PowerBalance™ Model | — | — | — | — | — |
| Seagate Secure™ Model ¹ | — | ST4000NM007A | ST3000NM003A | ST2000NM007A | — |
| Seagate Secure SED-FIPS Model ^{1,2} | — | ST4000NM015A | ST3000NM005A | — | — |
| Features | | | | | |
| Protection Information (T10 DIF) | Yes | Yes | Yes | Yes | Yes |
| Humidity Sensor | 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, Multisegmented (MB) | 256 | 256 | 256 | 256 | 256 |
| Advanced Write Caching (Internal NOR flash) | Yes | Yes | Yes | Yes | Yes |
| Reliability/Data Integrity | | | | | |
| Vibration, Nonoperating: 10Hz to 500Hz (Grms) | 5 | 5 | 5 | 5 | 5 |
| MTBF | 2,000,000hr | 2,000,000hr | 2,000,000hr | 2,000,000hr | 2,000,000hr |
| Reliability Rating @ Full 24x7 Operation (AFR) | 0.44% | 0.44% | 0.44% | 0.44% | 0.44% |
| Nonrecoverable Read Errors per Bits Read, Max | 1 sector per 10E15 | 1 sector per 10E15 | 1 sector per 10E15 | 1 sector per 10E15 | 1 sector per 10E15 |
| Power-On Hours | 8760 | 8760 | 8760 | 8760 | 8760 |
| Bytes per Sector | 512 | 512 | 512 | 512 | 512 |
| Warranty, Limited (years) | 5 | 5 | 5 | 5 | 5 |
| Performance | | | | | |
| Spindle Speed (RPM) | 7200 | 7200 | 7200 | 7200 | 7200 |
| 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 Sustainable Transfer Rate | 215MB/s | 215MB/s | 215MB/s | 215MB/s | 215MB/s |
| Average Latency (ms) | 4.16 | 4.16 | 4.16 | 4.16 | 4.16 |
| Interface Ports | Dual | Dual | Dual | Dual | Dual |
| Rotational Vibration @ 1500Hz (rad/s ²) | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 |
| Power Consumption | | | | | |
| Idle Average (W) | 7.97W | 5.94W | 5.94W | 4.86W | 4.86W |
| Average Operating Power | 13.18W | 11.33W | 11.33W | 10.09W | 10.09W |
| 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 | | | | | |
| Temperature, Operating (°C) | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C |
| Shock, Operating Read/Write (Gs) | 70/40Gs | 70/40Gs | 70/40Gs | 70/40Gs | 70/40Gs |
| Shock, Nonoperating, 1ms/2ms (Gs) | 150/300 | 150/300 | 150/300 | 150/300 | 150/300 |
| Physical | | | | | |
| Height (in/mm, max) ³ | 1.028in/26.1mm | 1.028in/26.1mm | 1.028in/26.1mm | 1.028in/26.1mm | 1.028in/26.1mm |
| Width (in/mm, max) ³ | 4.010in/101.85mm | 4.010in/101.85mm | 4.010in/101.85mm | 4.010in/101.85mm | 4.010in/101.85mm |
| Depth (in/mm, max) ³ | 5.787in/147.0mm | 5.787in/147.0mm | 5.787in/147.0mm | 5.787in/147.0mm | 5.787in/147.0mm |
| Weight (g/lb) | 716g/1.58lb | 649g/1.43lb | 649g/1.43lb | 620g/1.37lb | 620g/1.37lb |
| 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) and FIPS 140-2 Validated drives are not available in all models or countries. May require TCG-compliant host or controller support.

² FIPS 140-2 Level 2 Certification in process.

³ 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 SATA | | | |
|---|--------------------|--------------------|--------------------|--------------------|
| | 8TB | 6TB | 4TB | 2TB |
| Capacity | 8TB | 6TB | 4TB | 2TB |
| Base Model | ST8000NM000A | ST6000NM021A | ST4000NM002A | ST2000NM001A |
| PowerBalance™ Model | ST8000NM016A | — | — | — |
| Seagate Secure™ Model ¹ | ST8000NM004A | — | ST4000NM010A | — |
| Seagate Secure SED-FIPS Model ^{1,2} | ST8000NM008A | ST6000NM025A | ST4000NM012A | — |
| Features | | | | |
| Protection Information (T10 DIF) | — | — | — | — |
| Humidity Sensor | Yes | Yes | Yes | Yes |
| SuperParity | Yes | Yes | Yes | Yes |
| Low Halogen | Yes | Yes | Yes | Yes |
| PowerChoice™ Technology | Yes | Yes | Yes | Yes |
| PowerBalance™ Technology | Yes | Yes | Yes | Yes |
| Cache, Multisegmented (MB) | 256 | 256 | 256 | 256 |
| Advanced Write Caching (Internal NOR flash) | Yes | Yes | Yes | Yes |
| Reliability/Data Integrity | | | | |
| Vibration, Nonoperating: 10Hz to 500Hz (Grms) | 5 | 5 | 5 | 5 |
| MTBF | 2,000,000hr | 2,000,000hr | 2,000,000hr | 2,000,000hr |
| Reliability Rating @ Full 24x7 Operation (AFR) | 0.44% | 0.44% | 0.44% | 0.44% |
| Nonrecoverable 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 | 8760 | 8760 | 8760 | 8760 |
| Bytes per Sector | 512 | 512 | 512 | 512 |
| Warranty, Limited (years) | 5 | 5 | 5 | 5 |
| Performance | | | | |
| Spindle Speed (RPM) | 7200 | 7200 | 7200 | 7200 |
| 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 Sustainable Transfer Rate | 249MB/s | 226MB/s | 226MB/s | 226MB/s |
| Average Latency (ms) | 4.16 | 4.16 | 4.16 | 4.16 |
| Interface Ports | Single | Single | Single | Single |
| Rotational Vibration @ 1500Hz (rad/s ²) | 12.5 | 12.5 | 12.5 | 12.5 |
| Power Consumption | | | | |
| Idle Average (W) | 7.64W | 6.20W | 5.40W | 4.42W |
| Average Operating Power | 12.81W | 11.67W | 10.89W | 9.83W |
| 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 | | | | |
| Temperature, Operating (°C) | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C |
| Shock, Operating Read/Write (Gs) | 70/40Gs | 70/40Gs | 70/40Gs | 70/40Gs |
| Shock, Nonoperating, 1ms/2ms (Gs) | 150/300 | 150/300 | 150/300 | 150/300 |
| Physical | | | | |
| Height (in/mm, max) ³ | 1.028in/26.1mm | 1.028in/26.1mm | 1.028in/26.1mm | 1.028in/26.1mm |
| Width (in/mm, max) ³ | 4.010in/101.85mm | 4.010in/101.85mm | 4.010in/101.85mm | 4.010in/101.85mm |
| Depth (in/mm, max) ³ | 5.787in/147.0mm | 5.787in/147.0mm | 5.787in/147.0mm | 5.787in/147.0mm |
| Weight (g/lb) | 716g/1.58lb | 693g/1.53lb | 649g/1.43lb | 620g/1.37lb |
| Carton Unit Quantity | 20 | 20 | 20 | 20 |
| Cartons per Pallet/Cartons per Layer | 40 / 8 | 40 / 8 | 40 / 8 | 40 / 8 |

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.

² FIPS 140-2 Level 2 Certification in process.

³ 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 SAS | | | |
|---|--------------------|--------------------|--------------------|--------------------|
| | 8TB | 6TB | 4TB | 2TB |
| Capacity | 8TB | 6TB | 4TB | 2TB |
| Base Model | ST8000NM001A | ST6000NM029A | ST4000NM005A | ST2000NM004A |
| PowerBalance™ Model | — | — | — | — |
| Seagate Secure™ Model ¹ | ST8000NM006A | — | ST4000NM011A | — |
| Seagate Secure SED-FIPS Model ^{1,2} | ST8000NM010A | ST6000NM033A | ST4000NM014A | — |
| Features | | | | |
| Protection Information (T10 DIF) | Yes | Yes | Yes | Yes |
| Humidity Sensor | Yes | Yes | Yes | Yes |
| SuperParity | Yes | Yes | Yes | Yes |
| Low Halogen | Yes | Yes | Yes | Yes |
| PowerChoice™ Technology | Yes | Yes | Yes | Yes |
| PowerBalance™ Technology | Yes | Yes | Yes | Yes |
| Cache, Multisegmented (MB) | 256 | 256 | 256 | 256 |
| Advanced Write Caching (Internal NOR flash) | Yes | Yes | Yes | Yes |
| Reliability/Data Integrity | | | | |
| Vibration, Nonoperating: 10Hz to 500Hz (Grms) | 5 | 5 | 5 | 5 |
| MTBF | 2,000,000hr | 2,000,000hr | 2,000,000hr | 2,000,000hr |
| Reliability Rating @ Full 24x7 Operation (AFR) | 0.44% | 0.44% | 0.44% | 0.44% |
| Nonrecoverable 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 | 8760 | 8760 | 8760 | 8760 |
| Bytes per Sector | 512, 520, 528 | 512, 520, 528 | 512, 520, 528 | 512, 520, 528 |
| Warranty, Limited (years) | 5 | 5 | 5 | 5 |
| Performance | | | | |
| Spindle Speed (RPM) | 7200 | 7200 | 7200 | 7200 |
| 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 Sustainable Transfer Rate | 249MB/s | 226MB/s | 226MB/s | 226MB/s |
| Average Latency (ms) | 4.16 | 4.16 | 4.16 | 4.16 |
| Interface Ports | Dual | Dual | Dual | Dual |
| Rotational Vibration @ 1500Hz (rad/s ²) | 12.5 | 12.5 | 12.5 | 12.5 |
| Power Consumption | | | | |
| Idle Average (W) | 7.97W | 6.84W | 5.79W | 5.06W |
| Average Operating Power | 13.18W | 12.30W | 11.12W | 10.14W |
| 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 | | | | |
| Temperature, Operating (°C) | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C |
| Shock, Operating Read/Write (Gs) | 70/40Gs | 70/40Gs | 70/40Gs | 70/40Gs |
| Shock, Nonoperating, 1ms/2ms (Gs) | 150/300 | 150/300 | 150/300 | 150/300 |
| Physical | | | | |
| Height (in/mm, max) ³ | 1.028in/26.1mm | 1.028in/26.1mm | 1.028in/26.1mm | 1.028in/26.1mm |
| Width (in/mm, max) ³ | 4.010in/101.85mm | 4.010in/101.85mm | 4.010in/101.85mm | 4.010in/101.85mm |
| Depth (in/mm, max) ³ | 5.787in/147.0mm | 5.787in/147.0mm | 5.787in/147.0mm | 5.787in/147.0mm |
| Weight (g/lb) | 716g/1.58lb | 693g/1.53lb | 649g/1.43lb | 620g/1.37lb |
| Carton Unit Quantity | 20 | 20 | 20 | 20 |
| Cartons per Pallet/Cartons per Layer | 40 / 8 | 40 / 8 | 40 / 8 | 40 / 8 |

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.

² FIPS 140-2 Level 2 Certification in process.

³ 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 | | | |
|---|--------------------|--------------------|--------------------|--------------------|
| | 8TB | 6TB | 4TB | 2TB |
| Capacity | 8TB | 6TB | 4TB | 2TB |
| Base Model | ST8000NM002A | ST6000NM022A | ST4000NM001A | ST2000NM002A |
| PowerBalance™ Model | — | — | — | — |
| Seagate Secure™ Model ¹ | — | — | — | — |
| Seagate Secure SED-FIPS Model ^{1,2} | ST8000NM009A | ST6000NM026A | — | — |
| Features | | | | |
| Protection Information (T10 DIF) | — | — | — | — |
| Humidity Sensor | Yes | Yes | Yes | Yes |
| SuperParity | Yes | Yes | Yes | Yes |
| Low Halogen | Yes | Yes | Yes | Yes |
| PowerChoice™ Technology | Yes | Yes | Yes | Yes |
| PowerBalance™ Technology | Yes | Yes | Yes | Yes |
| Cache, Multisegmented (MB) | 256 | 256 | 256 | 256 |
| Advanced Write Caching (Internal NOR flash) | Yes | Yes | Yes | Yes |
| Reliability/Data Integrity | | | | |
| Vibration, Nonoperating: 10Hz to 500Hz (Grms) | 5 | 5 | 5 | 5 |
| MTBF | 2,000,000hr | 2,000,000hr | 2,000,000hr | 2,000,000hr |
| Reliability Rating @ Full 24x7 Operation (AFR) | 0.44% | 0.44% | 0.44% | 0.44% |
| Nonrecoverable 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 | 8760 | 8760 | 8760 | 8760 |
| Bytes per Sector | 4096 | 4096 | 4096 | 4096 |
| Warranty, Limited (years) | 5 | 5 | 5 | 5 |
| Performance | | | | |
| Spindle Speed (RPM) | 7200 | 7200 | 7200 | 7200 |
| 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 Sustainable Transfer Rate | 249MB/s | 226MB/s | 226MB/s | 226MB/s |
| Average Latency (ms) | 4.16 | 4.16 | 4.16 | 4.16 |
| Interface Ports | Single | Single | Single | Single |
| Rotational Vibration @ 1500Hz (rad/s ²) | 12.5 | 12.5 | 12.5 | 12.5 |
| Power Consumption | | | | |
| Idle Average (W) | 7.64W | 6.20W | 5.40W | 4.42W |
| Average Operating Power | 12.81W | 11.67W | 10.89W | 9.83W |
| 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 | | | | |
| Temperature, Operating (°C) | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C |
| Shock, Operating Read/Write (Gs) | 70/40Gs | 70/40Gs | 70/40Gs | 70/40Gs |
| Shock, Nonoperating, 1ms/2ms (Gs) | 150/300 | 150/300 | 150/300 | 150/300 |
| Physical | | | | |
| Height (in/mm, max) ³ | 1.028in/26.1mm | 1.028in/26.1mm | 1.028in/26.1mm | 1.028in/26.1mm |
| Width (in/mm, max) ³ | 4.010in/101.85mm | 4.010in/101.85mm | 4.010in/101.85mm | 4.010in/101.85mm |
| Depth (in/mm, max) ³ | 5.787in/147.0mm | 5.787in/147.0mm | 5.787in/147.0mm | 5.787in/147.0mm |
| Weight (g/lb) | 716g/1.58lb | 693g/1.53lb | 649g/1.43lb | 620g/1.37lb |
| Carton Unit Quantity | 20 | 20 | 20 | 20 |
| Cartons per Pallet/Cartons per Layer | 40 / 8 | 40 / 8 | 40 / 8 | 40 / 8 |

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.

² FIPS 140-2 Level 2 Certification in process.

³ 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 | | | |
|---|--------------------|--------------------|--------------------|--------------------|
| | 8TB | 6TB | 4TB | 2TB |
| Capacity | 8TB | 6TB | 4TB | 2TB |
| Base Model | ST8000NM003A | ST6000NM030A | ST4000NM004A | ST2000NM005A |
| PowerBalance™ Model | — | — | — | — |
| Seagate Secure™ Model ¹ | — | — | — | — |
| Seagate Secure SED-FIPS Model ^{1,2} | ST8000NM011A | ST6000NM034A | — | — |
| Features | | | | |
| Protection Information (T10 DIF) | Yes | Yes | Yes | Yes |
| Humidity Sensor | Yes | Yes | Yes | Yes |
| SuperParity | Yes | Yes | Yes | Yes |
| Low Halogen | Yes | Yes | Yes | Yes |
| PowerChoice™ Technology | Yes | Yes | Yes | Yes |
| PowerBalance™ Technology | Yes | Yes | Yes | Yes |
| Cache, Multisegmented (MB) | 256 | 256 | 256 | 256 |
| Advanced Write Caching (Internal NOR flash) | Yes | Yes | Yes | Yes |
| Reliability/Data Integrity | | | | |
| Vibration, Nonoperating: 10Hz to 500Hz (Grms) | 5 | 5 | 5 | 5 |
| MTBF | 2,000,000hr | 2,000,000hr | 2,000,000hr | 2,000,000hr |
| Reliability Rating @ Full 24x7 Operation (AFR) | 0.44% | 0.44% | 0.44% | 0.44% |
| Nonrecoverable 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 | 8760 | 8760 | 8760 | 8760 |
| Bytes per Sector | 4096, 4160, 4224 | 4096, 4160, 4224 | 4096, 4160, 4224 | 4096, 4160, 4224 |
| Warranty, Limited (years) | 5 | 5 | 5 | 5 |
| Performance | | | | |
| Spindle Speed (RPM) | 7200 | 7200 | 7200 | 7200 |
| 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 Sustainable Transfer Rate | 249MB/s | 226MB/s | 226MB/s | 226MB/s |
| Average Latency (ms) | 4.16 | 4.16 | 4.16 | 4.16 |
| Interface Ports | Dual | Dual | Dual | Dual |
| Rotational Vibration @ 1500Hz (rad/s ²) | 12.5 | 12.5 | 12.5 | 12.5 |
| Power Consumption | | | | |
| Idle Average (W) | 7.97W | 6.84W | 5.79W | 5.06W |
| Average Operating Power | 13.18W | 12.30W | 11.12W | 10.14W |
| 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 | | | | |
| Temperature, Operating (°C) | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C |
| Shock, Operating Read/Write (Gs) | 70/40Gs | 70/40Gs | 70/40Gs | 70/40Gs |
| Shock, Nonoperating, 1ms/2ms (Gs) | 150/300 | 150/300 | 150/300 | 150/300 |
| Physical | | | | |
| Height (in/mm, max) ³ | 1.028in/26.1mm | 1.028in/26.1mm | 1.028in/26.1mm | 1.028in/26.1mm |
| Width (in/mm, max) ³ | 4.010in/101.85mm | 4.010in/101.85mm | 4.010in/101.85mm | 4.010in/101.85mm |
| Depth (in/mm, max) ³ | 5.787in/147.0mm | 5.787in/147.0mm | 5.787in/147.0mm | 5.787in/147.0mm |
| Weight (g/lb) | 716g/1.58lb | 693g/1.53lb | 649g/1.43lb | 620g/1.37lb |
| Carton Unit Quantity | 20 | 20 | 20 | 20 |
| Cartons per Pallet/Cartons per Layer | 40 / 8 | 40 / 8 | 40 / 8 | 40 / 8 |

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.

² FIPS 140-2 Level 2 Certification in process.

³ 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.

| | |
|---------------------------------|---|
| AMERICAS | Seagate Technology LLC 10200 South De Anza Boulevard, Cupertino, California 95014, United States, 408-658-1000 |
| ASIA/PACIFIC | Seagate Singapore International Headquarters Pte. Ltd. 7000 Ang Mo Kio Avenue 5, Singapore 569877, 65-6485-3888 |
| EUROPE, MIDDLE EAST, AND AFRICA | Seagate Technology SAS 16-18, rue du Dôme, 92100 Boulogne-Billancourt, France, 33 1-4186 10 00 |

© 2019 Seagate Technology LLC. All rights reserved. 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, PowerBalance, PowerChoice, Seagate RAID Rebuild, Seagate Secure, and the Seagate Secure logo 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. DS1957.2-1904US April 2019