



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 24x7 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.<sup>1</sup> Seagate Secure™ drives simplify drive repurposing and disposal, help protect data-at-rest, and comply with corporate and federal data security mandates.

<sup>1</sup> 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 <sup>1</sup>                   | ST2000NX0323       | ST1000NX0363       | ST2000NX0343       | ST1000NX0373                 |
| Seagate Secure SED-FIPS Model <sup>1</sup>           | ST2000NX0333       | —                  | ST2000NX0353       | —                            |
| <b>Features</b>                                      |                    |                    |                    |                              |
| 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                          |
| <b>Reliability/Data Integrity</b>                    |                    |                    |                    |                              |
| MTBF   | 2,000,000 hr       | 2,000,000 hr       | 2,000,000 hr       | 2,000,000 hr                 |
| Reliability Rating @ Full 24x7 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 (24x7)                       | 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                            |
| <b>Performance</b>                                   |                    |                    |                    |                              |
| 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 <sup>2</sup> ) | 16                 | 16                 | 16                 | 16                           |
| <b>POWER CONSUMPTION</b>                             |                    |                    |                    |                              |
| 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, +12V and +5V |
| <b>Environmental</b>                                 |                    |                    |                    |                              |
| 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                          |
| <b>Physical</b>                                      |                    |                    |                    |                              |
| Height (in/mm) <sup>2</sup>                          | 0.591 in/15 mm     | 0.591 in/15 mm     | 0.591 in/15 mm     | 0.591 in/15 mm               |
| Width (in/mm) <sup>2</sup>                           | 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) <sup>2</sup>                           | 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                        |

<sup>1</sup> 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.

<sup>2</sup> These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at [www.sffcommittee.org](http://www.sffcommittee.org). For connector-related dimensions, see SFF-8223.



| Specifications                                       | 5xx Native         |                    | 4K Native          |                    |
|--|--------------------|--------------------|--------------------|--------------------|
|  | 2TB                | 1TB                | 2TB                | 1TB                |
| Capacity   | 2TB                | 1TB                | 2TB                | 1TB                |
| Standard Model Numbers                               | ST2000NX0433       | ST1000NX0453       | ST2000NX0243       | ST1000NX0303       |
| Seagate Secure™ Model <sup>1</sup>                   | —                  | —                  | ST2000NX0283       | ST1000NX0343       |
| Seagate Secure SED-FIPS Model <sup>1</sup>           | —                  | —                  | —                  | —                  |
| <b>Features</b>                                      |                    |                    |                    |                    |
| 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                |
| <b>Reliability/Data Integrity</b>                    |                    |                    |                    |                    |
| MTBF   | 2,000,000 hr       | 2,000,000 hr       | 2,000,000 hr       | 2,000,000 hr       |
| Reliability Rating @ Full 24x7 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 (24x7)                       | 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                  |
| <b>Performance</b>                                   |                    |                    |                    |                    |
| 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 <sup>2</sup> ) | 16                 | 16                 | 16                 | 16                 |
| <b>POWER CONSUMPTION</b>                             |                    |                    |                    |                    |
| 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     |
| <b>Environmental</b>                                 |                    |                    |                    |                    |
| 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                |
| <b>Physical</b>                                      |                    |                    |                    |                    |
| Height (in/mm) <sup>2</sup>                          | 0.591 in/15 mm     | 0.591 in/15 mm     | 0.591 in/15 mm     | 0.591 in/15 mm     |
| Width (in/mm) <sup>2</sup>                           | 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) <sup>2</sup>                           | 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              |

<sup>1</sup> 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.

<sup>2</sup> These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at [www.sffcommittee.org](http://www.sffcommittee.org). For connector-related dimensions, see SFF-8223.



| Specifications                                       | 512 Emulation                |                    | 512 Native         |                    |
|--|------------------------------|--------------------|--------------------|--------------------|
|  | 2TB                          | 1TB                | 2TB                | 1TB                |
| Capacity   | 2TB                          | 1TB                | 2TB                | 1TB                |
| Standard Model Numbers                               | ST2000NX0253                 | ST1000NX0313       | ST2000NX0403       | ST1000NX0423       |
| Seagate Secure™ Model <sup>1</sup>                   | ST2000NX0303                 | ST1000NX0353       | —                  | —                  |
| Seagate Secure SED-FIPS Model <sup>1</sup>           | —                            | —                  | —                  | —                  |
| <b>Features</b>                                      |                              |                    |                    |                    |
| 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                |
| <b>Reliability/Data Integrity</b>                    |                              |                    |                    |                    |
| MTBF   | 2,000,000 hr                 | 2,000,000 hr       | 2,000,000 hr       | 2,000,000 hr       |
| Reliability Rating @ Full 24x7 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 (24x7)                       | 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                  |
| <b>Performance</b>                                   |                              |                    |                    |                    |
| 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 <sup>2</sup> ) | 16                           | 16                 | 16                 | 16                 |
| <b>POWER CONSUMPTION</b>                             |                              |                    |                    |                    |
| 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                            | +12V and +5V, +12 V and +5 V | +12 V and +5 V     | +12 V and +5 V     | +12 V and +5 V     |
| <b>Environmental</b>                                 |                              |                    |                    |                    |
| 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                |
| <b>Physical</b>                                      |                              |                    |                    |                    |
| Height (in/mm) <sup>2</sup>                          | 0.591 in/15 mm               | 0.591 in/15 mm     | 0.591 in/15 mm     | 0.591 in/15 mm     |
| Width (in/mm) <sup>2</sup>                           | 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) <sup>2</sup>                           | 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              |

<sup>1</sup> 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.

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