

Enterprise Capacity 3.5 HDD

Data Sheet

Capacity-Optimised Enterprise Hard Drive for Bulk-Data Applications

- 1 TB to 8 TB¹, 3.5-inch enterprise drive with industry-leading conventional magnetic recording (CMR) technology
- Advanced Write Caching feature enables up to 100% performance improvement in random writes over last-generation drive
- 12 Gb/s SAS and SATA 6 Gb/s interfaces in industry-standard formats (512n, 512e and 4Kn) for easy integration into replicated and RAID multi-drive storage servers and systems
- State-of-the-art cache, on-the-fly error-correction algorithms, super parity and end-to-end SAS-based data integrity for accurate data storage
- Industry-leading rotational vibration design helps ensure consistent performance in dense multi-drive systems
- Engineered for 24x7 workloads of 550 TB/yr
- Robust performance with dual processors, ramp load technology, top-cover-attached motor and humidity sensor for optimum performance in all chassis
- On-demand PowerBalance™ feature available for lower power/performance in random read/write environments
- Seagate Secure® Self-Encrypting Drive featuring Instant Secure Erase for cost-saving drive retirement and secure data-at-rest protection²
- Seagate SeaTools™ diagnostic software to provide drive self-tests ensuring no unnecessary downtime and maximising TCO



Best-Fit Applications

- Hyperscale applications/cloud data centres with replicated storage
- Massive scale-out data centres and big data analytics
- High-capacity density RAID storage
- Mainstream enterprise external storage (SAN, NAS, DAS)
- Distributed file systems, including Hadoop and Ceph
- Enterprise backup and restore - D2D, virtual tape

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.

Enterprise Capacity 3.5 HDD



| Specifications | 4Kn SATA | | | |
|---|--------------------|--------------------|--------------------|--------------------|
| Capacity | 8TB | 6TB | 4TB | 2TB |
| Base Model | ST8000NM0045 | ST6000NM0125 | ST4000NM0085 | ST2000NM0105 |
| PowerBalance™ Model | — | — | — | — |
| Seagate Secure® Model ¹ | ST8000NM0115 | ST6000NM0185 | ST4000NM0055 | — |
| Seagate Secure SED-FIPS Model ^{1,2} | ST8000NM0145 | ST6000NM0265 | — | — |
| Special Features | | | | |
| Protection Information (T10 DIF) | — | — | — | — |
| Humidity Sensor | Yes | Yes | Yes | Yes |
| SuperParity | — | — | — | — |
| Halogen-free | Yes | Yes | Yes | Yes |
| PowerChoice™ Technology | Yes | Yes | Yes | Yes |
| PowerBalance™ Technology | Yes | Yes | Yes | Yes |
| Cache | 256 MB | 256 MB | 128 MB | 128 MB |
| Advanced Write Caching (Internal NOR flash) | Yes | Yes | Yes | Yes |
| Reliability/Data Integrity | | | | |
| Vibration, Non-operating: 10Hz to 500Hz (Gms) | 5 | 5 | 5 | 5 |
| 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 | 8,760 | 8,760 | 8,760 | 8,760 |
| Bytes per Sector | 4096 | 4096 | 4096 | 4096 |
| Warranty, Limited (years) | 5 | 5 | 5 | 5 |
| Performance | | | | |
| Spin Speed | 7200 RPM | 7200 RPM | 7200 RPM | 7200 RPM |
| 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 @ 1,500Hz(rad/s ²) | 12.5 | 12.5 | 12.5 | 12.5 |
| Power Consumption | | | | |
| Idling Average (W) | 7.6 W | 6.2 W | 5 W | 4 W |
| Average Operating Power | 11 W | 10 W | 9 W | 8 W |
| Power Supply Requirements | +12V and +5V | +12V and +5V | +12V and +5V | +12V and +5V |
| Environmental/Temperature | | | | |
| Temperature, Operating (°C) | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C |
| Shock, Operating, 2ms | 70/40 Gs | 70/40 Gs | 70/40 Gs | 70/40 Gs |
| Shock, Non-operating, 1ms/2ms (Gs) | 250/150 Gs | 250/150 Gs | 250/150 Gs | 250/150 Gs |
| Physical | | | | |
| Height (mm/in) ³ | 26.1 mm/1.028 in | 26.1 mm/1.028 in | 26.1 mm/1.028 in | 26.1 mm/1.028 in |
| Width (mm/in, max) ³ | 101.85 mm/4.01 in | 101.85 mm/4.01 in | 101.85 mm/4.01 in | 101.85 mm/4.01 in |
| Depth (mm/in, max) ³ | 147 mm/5.787 in | 147 mm/5.787 in | 147 mm/5.787 in | 147 mm/5.787 in |
| Weight (lb/g) | 780 g/1.72 lb | 700 g/1.54 lb | 655 g/1.44 lb | 605 g/1.33 lb |
| 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.

Enterprise Capacity 3.5 HDD



| Specifications | 4Kn SAS | | | |
|---|--------------------|--------------------|--------------------|--------------------|
| | 8TB | 6TB | 4TB | 2TB |
| Capacity | 8TB | 6TB | 4TB | 2TB |
| Base Model | ST8000NM0065 | ST6000NM0105 | ST4000NM0095 | ST2000NM0115 |
| PowerBalance™ Model | — | — | — | — |
| Seagate Secure® Model ¹ | ST8000NM0095 | ST6000NM0205 | ST4000NM0075 | — |
| Seagate Secure SED-FIPS Model ^{1,2} | ST8000NM0125 | ST6000NM0255 | — | — |
| Special Features | | | | |
| Protection Information (T10 DIF) | Yes | Yes | Yes | Yes |
| Humidity Sensor | Yes | Yes | Yes | Yes |
| SuperParity | Yes | Yes | Yes | Yes |
| Halogen-free | Yes | Yes | Yes | Yes |
| PowerChoice™ Technology | Yes | Yes | Yes | Yes |
| PowerBalance™ Technology | Yes | Yes | Yes | Yes |
| Cache | 256 MB | 256 MB | 128 MB | 128 MB |
| Advanced Write Caching (Internal NOR flash) | Yes | Yes | Yes | Yes |
| Reliability/Data Integrity | | | | |
| Vibration, Non-operating: 10Hz to 500Hz (Gms) | 5 | 5 | 5 | 5 |
| 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 | 8,760 | 8,760 | 8,760 | 8,760 |
| Bytes per Sector | 4096, 4160, 4224 | 4096, 4160, 4224 | 4096, 4160, 4224 | 4096, 4160, 4224 |
| Warranty, Limited (years) | 5 | 5 | 5 | 5 |
| Performance | | | | |
| Spin Speed | 7200 RPM | 7200 RPM | 7200 RPM | 7200 RPM |
| 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 @ 1,500Hz(rad/s ²) | 12.5 | 12.5 | 12.5 | 12.5 |
| Power Consumption | | | | |
| Idling Average (W) | 8.5 W | 6.9 W | 6 W | 5 W |
| Average Operating Power | 12 W | 11.1 W | 9 W | 8.5 W |
| Power Supply Requirements | +12V and +5V | +12V and +5V | +12V and +5V | +12V and +5V |
| Environmental/Temperature | | | | |
| Temperature, Operating (°C) | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C |
| Shock, Operating, 2ms | 70/40 Gs | 70/40 Gs | 70/40 Gs | 70/40 Gs |
| Shock, Non-operating, 1ms/2ms (Gs) | 250/150 Gs | 250/150 Gs | 250/150 Gs | 250/150 Gs |
| Physical | | | | |
| Height (mm/in) ³ | 26.1 mm/1.028 in | 26.1 mm/1.028 in | 26.1 mm/1.028 in | 26.1 mm/1.028 in |
| Width (mm/in, max) ³ | 101.85 mm/4.01 in | 101.85 mm/4.01 in | 101.85 mm/4.01 in | 101.85 mm/4.01 in |
| Depth (mm/in, max) ³ | 147 mm/5.878 in | 147 mm/5.878 in | 147 mm/5.878 in | 147 mm/5.878 in |
| Weight (lb/g) | 780 g/1.72 lb | 700 g/1.54 lb | 655 g/1.44 lb | 605 g/1.33 lb |
| 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.

Enterprise Capacity 3.5 HDD



| Specifications | 512e SATA | | | |
|---|--------------------|--------------------|--------------------|--------------------|
| | 8TB | 6TB | 4TB | 2TB |
| Capacity | 8TB | 6TB | 4TB | 2TB |
| Base Model | ST8000NM0055 | ST6000NM0115 | ST4000NM0115 | ST2000NM0125 |
| PowerBalance™ Model | ST8000NM0165 | ST6000NM0215 | — | — |
| Seagate Secure® Model ¹ | ST8000NM0105 | ST6000NM0175 | ST4000NM0245 | — |
| Seagate Secure SED-FIPS Model ^{1,2} | ST8000NM0155 | ST6000NM0275 | ST4000NM0225 | — |
| Special Features | | | | |
| Protection Information (T10 DIF) | — | — | — | — |
| Humidity Sensor | Yes | Yes | Yes | Yes |
| SuperParity | — | — | — | — |
| Halogen-free | Yes | Yes | Yes | Yes |
| PowerChoice™ Technology | Yes | Yes | Yes | Yes |
| PowerBalance™ Technology | Yes | Yes | Yes | Yes |
| Cache | 256 MB | 256 MB | 128 MB | 128 MB |
| Advanced Write Caching (Internal NOR flash) | Yes | Yes | Yes | Yes |
| Reliability/Data Integrity | | | | |
| Vibration, Non-operating: 10Hz to 500Hz (Gms) | 5 | 5 | 5 | 5 |
| 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 | 8,760 | 8,760 | 8,760 | 8,760 |
| Bytes per Sector | 512 | 512 | 512 | 512 |
| Warranty, Limited (years) | 5 | 5 | 5 | 5 |
| Performance | | | | |
| Spin Speed | 7200 RPM | 7200 RPM | 7200 RPM | 7200 RPM |
| 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 @ 1,500Hz(rad/s ²) | 12.5 | 12.5 | 12.5 | 12.5 |
| Power Consumption | | | | |
| Idling Average (W) | 7.6 W | 6.2 W | 5 W | 4 W |
| Average Operating Power | 10 W | 10 W | 9 W | 8 W |
| Power Supply Requirements | +12V and +5V | +12V and +5V | +12V and +5V | +12V and +5V |
| Environmental/Temperature | | | | |
| Temperature, Operating (°C) | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C |
| Shock, Operating, 2ms | 70/40 Gs | 70/40 Gs | 70/40 Gs | 70/40 Gs |
| Shock, Non-operating, 1ms/2ms (Gs) | 250/150 Gs | 250/150 Gs | 250/150 Gs | 250/150 Gs |
| Physical | | | | |
| Height (mm/in) ³ | 26.1 mm/1.028 in | 26.1 mm/1.028 in | 26.1 mm/1.028 in | 26.1 mm/1.028 in |
| Width (mm/in, max) ³ | 101.85 mm/4.01 in | 101.85 mm/4.01 in | 101.85 mm/4.01 in | 101.85 mm/4.01 in |
| Depth (mm/in, max) ³ | 147 mm/5.878 in | 147 mm/5.878 in | 147 mm/5.878 in | 147 mm/5.878 in |
| Weight (lb/g) | 780 g/1.72 lb | 700 g/1.54 lb | 655 g/1.44 lb | 605 g/1.33 lb |
| Carton Unit Quantity | 20 | 20 | 20 | 20 |
| Cartons per Pallet / Cartons per Layer | 40 / 8 | 40 / 8 | 40 / 8 | 40 / 8 |

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Enterprise Capacity 3.5 HDD



| Specifications | 512e SAS | | | |
|---|--------------------|--------------------|--------------------|--------------------|
| | 8TB | 6TB | 4TB | 2TB |
| Capacity | 8TB | 6TB | 4TB | 2TB |
| Base Model | ST8000NM0075 | ST6000NM0095 | ST4000NM0125 | ST2000NM0135 |
| PowerBalance™ Model | ST8000NM0175 | ST6000NM0225 | — | — |
| Seagate Secure® Model ¹ | ST8000NM0085 | ST6000NM0195 | ST4000NM0255 | — |
| Seagate Secure SED-FIPS Model ^{1,2} | ST8000NM0135 | ST6000NM0285 | ST4000NM0235 | — |
| Special Features | | | | |
| Protection Information (T10 DIF) | Yes | Yes | Yes | Yes |
| Humidity Sensor | Yes | Yes | Yes | Yes |
| SuperParity | Yes | Yes | Yes | Yes |
| Halogen-free | Yes | Yes | Yes | Yes |
| PowerChoice™ Technology | Yes | Yes | Yes | Yes |
| PowerBalance™ Technology | Yes | Yes | Yes | Yes |
| Cache | 256 MB | 256 MB | 128 MB | 128 MB |
| Advanced Write Caching (Internal NOR flash) | Yes | Yes | Yes | Yes |
| Reliability/Data Integrity | | | | |
| Vibration, Non-operating: 10Hz to 500Hz (Gms) | 5 | 5 | 5 | 5 |
| 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 | 8,760 | 8,760 | 8,760 | 8,760 |
| Bytes per Sector | 512, 520, 528 | 512, 520, 528 | 512, 520, 528 | 512, 520, 528 |
| Warranty, Limited (years) | 5 | 5 | 5 | 5 |
| Performance | | | | |
| Spin Speed | 7200 RPM | 7200 RPM | 7200 RPM | 7200 RPM |
| 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 | Dual | Dual | Dual | Dual |
| Rotational Vibration @ 1,500Hz(rad/s ²) | 12.5 | 12.5 | 12.5 | 12.5 |
| Power Consumption | | | | |
| Idling Average (W) | 8.5 W | 6.9 W | 6 W | 5 W |
| Average Operating Power | 12 W | 11.1 W | 9 W | 8.5 W |
| Power Supply Requirements | +12V and +5V | +12V and +5V | +12V and +5V | +12V and +5V |
| Environmental/Temperature | | | | |
| Temperature, Operating (°C) | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C |
| Shock, Operating, 2ms | 70/40 Gs | 70/40 Gs | 70/40 Gs | 70/40 Gs |
| Shock, Non-operating, 1ms/2ms (Gs) | 250/150 Gs | 250/150 Gs | 250/150 Gs | 250/150 Gs |
| Physical | | | | |
| Height (mm/in) ³ | 26.1 mm/1.028 in | 26.1 mm/1.028 in | 26.1 mm/1.028 in | 26.1 mm/1.028 in |
| Width (mm/in, max) ³ | 101.85 mm/4.01 in | 101.85 mm/4.01 in | 101.85 mm/4.01 in | 101.85 mm/4.01 in |
| Depth (mm/in, max) ³ | 147 mm/5.878 in | 147 mm/5.878 in | 147 mm/5.878 in | 147 mm/5.878 in |
| Weight (lb/g) | 780 g/1.72 lb | 700 g/1.54 lb | 655 g/1.44 lb | 605 g/1.33 lb |
| 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.

Enterprise Capacity 3.5 HDD



| Specifications | 512n SATA | | | |
|---|--------------------|--------------------|--------------------|--------------------|
| | 4TB | 3TB | 2TB | 1TB |
| Capacity | 4TB | 3TB | 2TB | 1TB |
| Base Model | ST4000NM0035 | ST3000NM0005 | ST2000NM0055 | ST1000NM0055 |
| PowerBalance™ Model | — | — | — | — |
| Seagate Secure® Model ¹ | ST4000NM0045 | ST3000NM0015 | ST2000NM0065 | ST1000NM0065 |
| Seagate Secure SED-FIPS Model ^{1,2} | ST4000NM0105 | ST3000NM0055 | — | — |
| Special Features | | | | |
| Protection Information (T10 DIF) | — | — | — | — |
| Humidity Sensor | Yes | Yes | Yes | Yes |
| SuperParity | Yes | Yes | Yes | Yes |
| Halogen-free | Yes | Yes | Yes | Yes |
| PowerChoice™ Technology | Yes | Yes | Yes | Yes |
| PowerBalance™ Technology | No | No | No | No |
| Cache | 128 MB | 128 MB | 128 MB | 128 MB |
| Advanced Write Caching (Internal NOR flash) | No | No | No | No |
| Reliability/Data Integrity | | | | |
| Vibration, Non-operating: 10Hz to 500Hz (Gms) | 5 | 5 | 5 | 5 |
| 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 | 8,760 | 8,760 | 8,760 | 8,760 |
| Bytes per Sector | 512 | 512 | 512 | 512 |
| Warranty, Limited (years) | 5 | 5 | 5 | 5 |
| Performance | | | | |
| Spin Speed | 7200 RPM | 7200 RPM | 7200 RPM | 7200 RPM |
| 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 | 215MB/s | 215MB/s | 215MB/s | 215MB/s |
| Average Latency (ms) | 4.16 | 4.16 | 4.16 | 4.16 |
| Interface Ports | Single | Single | Single | Single |
| Rotational Vibration @ 1,500Hz(rad/s ²) | 12.5 | 12.5 | 12.5 | 12.5 |
| Power Consumption | | | | |
| Idling Average (W) | 5 W | 5 W | 4 W | 4 W |
| Average Operating Power | 9.5 W | 9.5 W | 8 W | 8 W |
| Power Supply Requirements | +12V and +5V | +12V and +5V | +12V and +5V | +12V and +5V |
| Environmental/Temperature | | | | |
| Temperature, Operating (°C) | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C |
| Shock, Operating, 2ms | 70/40 Gs | 70/40 Gs | 70/40 Gs | 70/40 Gs |
| Shock, Non-operating, 1ms/2ms (Gs) | 250/150 Gs | 250/150 Gs | 250/150 Gs | 250/150 Gs |
| Physical | | | | |
| Height (mm/in) ³ | 26.1 mm/1.028 in | 26.1 mm/1.028 in | 26.1 mm/1.028 in | 26.1 mm/1.028 in |
| Width (mm/in, max) ³ | 101.85 mm/4.01 in | 101.85 mm/4.01 in | 101.85 mm/4.01 in | 101.85 mm/4.01 in |
| Depth (mm/in, max) ³ | 147 mm/5.878 in | 147 mm/5.878 in | 147 mm/5.878 in | 147 mm/5.878 in |
| Weight (lb/g) | 655 g/1.44 lb | 655 g/1.44 lb | 605 g/1.33 lb | 605 g/1.33 lb |
| 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.



Enterprise Capacity 3.5 HDD



| Specifications | 512n SAS | | | |
|---|--------------------|--------------------|--------------------|--------------------|
| | 4TB | 3TB | 2TB | 1TB |
| Capacity | 4TB | 3TB | 2TB | 1TB |
| Base Model | ST4000NM0025 | ST3000NM0025 | ST2000NM0045 | ST1000NM0045 |
| PowerBalance™ Model | — | — | — | — |
| Seagate Secure® Model ¹ | ST4000NM0065 | ST3000NM0035 | ST2000NM0085 | ST1000NM0075 |
| Seagate Secure SED-FIPS Model ^{1,2} | ST4000NM0135 | ST3000NM0045 | — | — |
| Special Features | | | | |
| Protection Information (T10 DIF) | Yes | Yes | Yes | Yes |
| Humidity Sensor | Yes | Yes | Yes | Yes |
| SuperParity | Yes | Yes | Yes | Yes |
| Halogen-free | Yes | Yes | Yes | Yes |
| PowerChoice™ Technology | Yes | Yes | Yes | Yes |
| PowerBalance™ Technology | No | No | No | No |
| Cache | 128 MB | 128 MB | 128 MB | 128 MB |
| Advanced Write Caching (Internal NOR flash) | No | No | No | No |
| Reliability/Data Integrity | | | | |
| Vibration, Non-operating: 10Hz to 500Hz (Gms) | 5 | 5 | 5 | 5 |
| 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 | 8,760 | 8,760 | 8,760 | 8,760 |
| Bytes per Sector | 512 | 512 | 512 | 512 |
| Warranty, Limited (years) | 5 | 5 | 5 | 5 |
| Performance | | | | |
| Spin Speed | 7200 RPM | 7200 RPM | 7200 RPM | 7200 RPM |
| 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 | 215MB/s | 215MB/s | 215MB/s | 215MB/s |
| Average Latency (ms) | 4.16 | 4.16 | 4.16 | 4.16 |
| Interface Ports | Dual | Dual | Dual | Dual |
| Rotational Vibration @ 1,500Hz(rad/s ²) | 12.5 | 12.5 | 12.5 | 12.5 |
| Power Consumption | | | | |
| Idling Average (W) | 6.7 W | 6.7 W | 4.5 W | 4.5 W |
| Average Operating Power | 10.5 W | 10.5 W | 8.5 W | 8.5 W |
| Power Supply Requirements | +12V and +5V | +12V and +5V | +12V and +5V | +12V and +5V |
| Environmental/Temperature | | | | |
| Temperature, Operating (°C) | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C | 5°C – 60°C |
| Shock, Operating, 2ms | 70/40 Gs | 70/40 Gs | 70/40 Gs | 70/40 Gs |
| Shock, Non-operating, 1ms/2ms (Gs) | 250/150 Gs | 250/150 Gs | 250/150 Gs | 250/150 Gs |
| Physical | | | | |
| Height (mm/in) ³ | 26.1 mm/1.028 in | 26.1 mm/1.028 in | 26.1 mm/1.028 in | 26.1 mm/1.028 in |
| Width (mm/in, max) ³ | 101.85 mm/4.01 in | 101.85 mm/4.01 in | 101.85 mm/4.01 in | 101.85 mm/4.01 in |
| Depth (mm/in, max) ³ | 147 mm/5.878 in | 147 mm/5.878 in | 147 mm/5.878 in | 147 mm/5.878 in |
| Weight (lb/g) | 655 g/1.44 lb | 655 g/1.44 lb | 605 g/1.33 lb | 605 g/1.33 lb |
| 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.

SEAGATE.COM

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

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