

# Desktop HDD

Data Sheet

## The Power of One

- Seagate brings over 30 years of trusted performance and reliability to the Seagate® Desktop HDDs—now available in capacities up to 8 TB
- Increase your capacity and drive down costs with up to 1.33TB-per-disk hard drive technology
- SATA 6Gb/s interface optimises burst performance.
- Seagate AcuTrac™ servo technology delivers dependable performance
- Free DiscWizard™ software enables high capacities on legacy PC BIOS systems
- Seagate Secure™ models provide hardware-based data security and deliver an Instant Secure Erase feature for safe, fast and easy drive retirement<sup>1</sup>
- Seagate Secure models meet the NIST 800-88 media sanitization specification and also support the Trusted Computer Group (TCG) Opal standard<sup>1</sup>



## Best-Fit Applications

- Desktop or all-in-one PCs
- Home servers
- Entry-level direct-attached storage devices (DAS)

<sup>1</sup> Seagate Secure models are not available in all countries. May require TCG-compliant host or controller support.



# Desktop HDD



| Specifications                                 | 8TB                | 6TB                | 5TB                | 4TB                | 3TB                |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|
| Standard Model Numbers <sup>1</sup>            | ST8000DM002        | ST6000DM001        | ST5000DM002        | ST4000DM000        | ST3000DM001        |
| Seagate Secure™ Model Numbers                  | —                  | —                  | —                  | —                  | ST3000DM002        |
| Interface                                      | SATA 6Gb/s         | SATA 6Gb/s         | SATA 6Gb/s         | SATA 6Gb/s         | SATA 6Gb/s         |
| Cache  | 256 MB             | 128 MB             | 128 MB             | 64 MB              | 64 MB              |
| Model Name                                     | Desktop HDD        | Desktop HDD        | Desktop HDD        | Desktop HDD        | formerly Barracuda |
| <b>Performance</b>                             |                    |                    |                    |                    |                    |
| SATA Transfer Rates Supported (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                  | 220MB/s            | 220MB/s            | 220MB/s            | 180MB/s            | 210MB/s            |
| <b>Configuration/Organisation</b>              |                    |                    |                    |                    |                    |
| Heads/Discs                                    | 6/12               | 6/12               | 6/12               | 8/4                | 6/3                |
| Bytes per Sector                               | 512E               | 512E               | 512E               | 512E               | 512E               |
| <b>Voltage</b>                                 |                    |                    |                    |                    |                    |
| Voltage Tolerance, Inc. Noise (5V)             | ±5%                | ±5%                | ±5%                | ±5%                | ±5%                |
| Voltage Tolerance, Inc. Noise (12V)            | ±10%               | ±10%               | ±10%               | ±10%               | ±10%               |
| <b>Reliability/Data Integrity</b>              |                    |                    |                    |                    |                    |
| Contact Start/Stop Cycles <sup>2</sup>         | —                  | —                  | —                  | —                  | —                  |
| Load/Unload Cycles <sup>3</sup>                | 300,000            | 300,000            | 300,000            | 300,000            | 300,000            |
| Non-recoverable Read Errors per Bits Read, Max | 1 per 10E14        | 1 per 10E14        | 1 per 10E14        | 1 per 10E14        | 1 per 10E14        |
| Workload Rate Limit (TB/year)                  | 55                 | 55                 | 55                 | 55                 | 55                 |
| Power-on Hours                                 | 2,400              | 2,400              | 2,400              | 2,400              | 2,400              |
| Warranty, Limited (years) <sup>4</sup>         | 2                  | 2                  | 2                  | 2                  | 2                  |
| <b>Power Management</b>                        |                    |                    |                    |                    |                    |
| Startup Power (12V, A)                         | 2                  | 2                  | 2                  | 2                  | 2.5                |
| Average Operating Power                        | 9 W                | 9 W                | 9 W                | 5.6 W              | 8 W                |
| Idling Average (W)                             | 7.2 W              | 7.2 W              | 7.2 W              | 4 W                | 5.4 W              |
| Standby/Sleep Mode (,)                         | 0.6 W/0.6 W        | 0.6 W/0.6 W        | 0.6 W/0.6 W        | 0.5 W/0.5 W        | 0.75 W/0.75 W      |
| <b>Environmental/Temperature</b>               |                    |                    |                    |                    |                    |
| Operating (ambient, min)                       | 0°C                | 0°C                | 0°C                | 0°C                | 0°C                |
| Operating (drive case, max)                    | 60°C               | 60°C               | 60°C               | 60°C               | 60°C               |
| Non-operating (ambient, min)                   | -40°C              | -40°C              | -40°C              | -40°C              | -40°C              |
| Non-operating (ambient, max)                   | 70°C               | 70°C               | 70°C               | 70°C               | 70°C               |
| Halogen-free                                   | Yes                | Yes                | Yes                | Yes                | Yes                |
| RoHS compliance                                | Yes                | Yes                | Yes                | Yes                | Yes                |
| <b>Physical</b>                                |                    |                    |                    |                    |                    |
| Height (mm/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/1.028 in  |
| Width (mm/in, max)                             | 101.6 mm/4 in      | 101.6 mm/4 in      | 101.6 mm/4 in      | 101.6 mm/4 in      | 101.6 mm/4 in      |
| Depth (mm/in, max)                             | 146.99 mm/5.787 in | 146.99 mm/5.787 in | 146.99 mm/5.787 in | 146.99 mm/5.787 in | 146.99 mm/5.787 in |
| Weight (lb/g)                                  | 780 g/1.72 lb      | 780 g/1.72 lb      | 780 g/1.72 lb      | 610 g/1.35 lb      | 626 g/1.38 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             |
| <b>Special Features</b>                        |                    |                    |                    |                    |                    |
| Seagate AcuTrac™ Technology                    | Yes                | Yes                | Yes                | Yes                | Yes                |

<sup>1</sup> Seagate ships the 500GB, 320GB and 250GB models in both 4K- and 512-byte sectors. SmartAlign technology is included on 4K sector drives. Both drives are functionally and physically equivalent.

<sup>2</sup> At 25°C and 50% relative humidity.

<sup>3</sup> Load/Unload tested to 600,000 cycles.

<sup>4</sup> Extended warranty products available. Consult your distributor for details.



# Desktop HDD



| Specifications                                 | 2TB                | 1TB                | 500GB              | 320GB              | 250GB              |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|
| Standard Model Numbers <sup>1</sup>            | ST2000DM001        | ST1000DM003        | ST500DM002         | ST320DM000         | ST250DM000         |
| Seagate Secure™ Model Numbers                  | ST2000DM002        | ST1000DM004        | —                  | —                  | —                  |
| Interface                                      | SATA 6Gb/s         | SATA 6Gb/s         | SATA 6Gb/s         | SATA 6Gb/s         | SATA 6Gb/s         |
| Cache  | 64 MB              | 64/32 MB           | 16 MB              | 16 MB              | 16 MB              |
| Model Name                                     | formerly Barracuda | formerly Barracuda | formerly Barracuda | formerly Barracuda | formerly Barracuda |
| <b>Performance</b>                             |                    |                    |                    |                    |                    |
| SATA Transfer Rates Supported (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                  | 210MB/s            | 210MB/s            | 144MB/s            | 144MB/s            | 144MB/s            |
| <b>Configuration/Organisation</b>              |                    |                    |                    |                    |                    |
| Heads/Discs                                    | 6/3 or 4/2         | 2/1                | 2/1                | 2/1                | 1/1                |
| Bytes per Sector                               | 512E               | 512E               | 512E or 512        | 512E or 512        | 512E or 512        |
| <b>Voltage</b>                                 |                    |                    |                    |                    |                    |
| Voltage Tolerance, Inc. Noise (5V)             | ±5 %               | ±5%                | ±5%                | ±5%                | ±5%                |
| Voltage Tolerance, Inc. Noise (12V)            | ±10 %              | ±10%               | ±10%               | ±10%               | ±10%               |
| <b>Reliability/Data Integrity</b>              |                    |                    |                    |                    |                    |
| Contact Start/Stop Cycles <sup>2</sup>         | —                  | 50,000             | 50,000             | 50,000             | 50,000             |
| Load/Unload Cycles <sup>3</sup>                | 300,000            | 300,000            | —                  | —                  | —                  |
| Non-recoverable Read Errors per Bits Read, Max | 1 per 10E14        | 1 per 10E14        | 1 per 10E14        | 1 per 10E14        | 1 per 10E14        |
| Workload Rate Limit (TB/year)                  | 55                 | 55                 | 55                 | 55                 | 55                 |
| Power-on Hours                                 | 2,400              | 2,400              | 2,400              | 2,400              | 2,400              |
| Warranty, Limited (years) <sup>4</sup>         | 2                  | 2                  | 2                  | 2                  | 2                  |
| <b>Power Management</b>                        |                    |                    |                    |                    |                    |
| Startup Power (12V, A)                         | 2.5                | 2                  | 2                  | 2                  | 2                  |
| Average Operating Power                        | 8 W                | 5.3 W              | 6.19 W             | 6.2 W              | 6.19 W             |
| Idling Average (W)                             | 5.4 W              | 4.6 W              | 4.6 W              | 4.6 W              | 4.6 W              |
| Standby/Sleep Mode (,)                         | 0.75 W/0.75 W      | 0.94 W/0.94 W      | 0.79 W/0.79 W      | 0.79 W/0.79 W      | 0.79 W/0.79 W      |
| <b>Environmental/Temperature</b>               |                    |                    |                    |                    |                    |
| Operating (ambient, min)                       | 0°C                | 0°C                | 0°C                | 0°C                | 0°C                |
| Operating (drive case, max)                    | 60°C               | 60°C               | 60°C               | 60°C               | 60°C               |
| Non-operating (ambient, min)                   | -40°C              | -40°C              | -40°C              | -40°C              | -40°C              |
| Non-operating (ambient, max)                   | 70°C               | 70°C               | 70°C               | 70°C               | 70°C               |
| Halogen-free                                   | Yes                | Yes                | Yes                | Yes                | Yes                |
| RoHS compliance                                | Yes                | Yes                | Yes                | Yes                | Yes                |
| <b>Physical</b>                                |                    |                    |                    |                    |                    |
| Height (mm/in)                                 | 26.11 mm/1.028 in  | 19.99 mm/0.787 in  | 19.99 mm/0.787 in  | 19.99 mm/0.787 in  | 19.99 mm/0.787 in  |
| Width (mm/in, max)                             | 101.6 mm/4 in      | 101.6 mm/4 in      | 101.6 mm/4 in      | 101.6 mm/4 in      | 101.6 mm/4 in      |
| Depth (mm/in, max)                             | 146.99 mm/5.787 in | 146.99 mm/5.787 in | 146.99 mm/5.787 in | 146.99 mm/5.787 in | 146.99 mm/5.787 in |
| Weight (lb/g)                                  | 626 g/1.38 lb      | 400 g/0.88 lb      | 415 g/0.915 lb     | 415 g/0.915 lb     | 415 g/0.915 lb     |
| Carton Unit Quantity                           | 20                 | 25                 | 25                 | 25                 | 25                 |
| Cartons per Pallet / Cartons per Layer         | 40 / 8             | 40 / 8             | 40 / 8             | 40 / 8             | 40 / 8             |
| <b>Special Features</b>                        |                    |                    |                    |                    |                    |
| Seagate AcuTrac™ Technology                    | Yes                | No                 | No                 | No                 | No                 |

<sup>1</sup> Seagate ships the 500GB, 320GB and 250GB models in both 4K- and 512-byte sectors. SmartAlign technology is included on 4K sector drives. Both drives are functionally and physically equivalent.

<sup>2</sup> At 25°C and 50% relative humidity.

<sup>3</sup> Load/Unload tested to 600,000 cycles.

<sup>4</sup> Extended warranty products available. Consult your distributor for details.

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