

# Desktop HDD

## Data Sheet

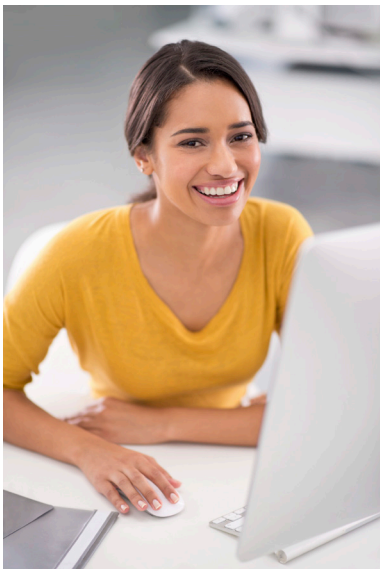
### The Power of One

- Seagate brings over 30 years of trusted performance and reliability to the new Seagate® Desktop HDDs—now available in capacities up to 6TB.
- Increase your capacity and drive down costs with up to 1TB-per-disk hard drive technology.
- SATA 6Gb/s interface optimizes 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                                | 6TB <sup>1</sup> | 5TB <sup>1</sup> | 4TB <sup>1</sup> | 3TB <sup>1</sup>    | 2TB <sup>1</sup>   | 1TB <sup>1</sup>   | 500GB <sup>1</sup>      | 320GB <sup>1</sup>      | 250GB <sup>1</sup>      |
|---|------------------|------------------|------------------|---------------------|--------------------|--------------------|-------------------------|-------------------------|-------------------------|
| Standard Model Numbers                        | ST6000DM001      | ST5000DM002      | ST4000DM000      | ST3000DM001         | ST2000DM001        | ST1000DM003        | ST500DM002 <sup>2</sup> | ST320DM000 <sup>2</sup> | ST250DM000 <sup>2</sup> |
| Seagate Secure™ Model Numbers                 | —                | —                | —                | ST3000DM002         | ST2000DM002        | ST1000DM004        | —                       | —                       | —                       |
| Model Name                                    | Desktop HDD      | Desktop HDD      | Desktop HDD      | formerly Barracuda® | formerly Barracuda | formerly Barracuda | formerly Barracuda      | formerly Barracuda      | formerly Barracuda      |
| Interface Options (with NCQ)                  | SATA 6Gb/s       | SATA 6Gb/s       | SATA 6Gb/s       | SATA 6Gb/s          | SATA 6Gb/s         | SATA 6Gb/s         | SATA 6Gb/s              | SATA 6Gb/s              | SATA 6Gb/s              |
| <b>Performance</b>                            |                  |                  |                  |                     |                    |                    |                         |                         |                         |
| Cache, Multisegmented (MB)                    | 128              | 128              | 64               | 64                  | 64                 | 64                 | 16                      | 16                      | 16                      |
| 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        | 6.0/3.0/1.5        | 6.0/3.0/1.5             | 6.0/3.0/1.5             | 6.0/3.0/1.5             |
| Average Data Rate, Read/Write                 | 180              | 180              | 146              | 156                 | 156                | 156                | 125                     | 125                     | 125                     |
| Max Sustained Data Rate, OD Read (MB/s)       | 220              | 220              | 180              | 210                 | 210                | 210                | 144                     | 144                     | 144                     |
| <b>Configuration/Organization</b>             |                  |                  |                  |                     |                    |                    |                         |                         |                         |
| Heads/Disks                                   | 6/12             | 6/12             | 8/4              | 6/3                 | 4/2                | 2/1                | 2/1                     | 2/1                     | 1/1                     |
| Bytes per Sector                              | 512E             | 512E             | 512E             | 512E                | 512E               | 512E               | 512E or 512             | 512E or 512             | 512E or 512             |
| <b>Voltage</b>                                |                  |                  |                  |                     |                    |                    |                         |                         |                         |
| Voltage Tolerance, Inc. Noise (5V)            | ±5%              | ±5%              | ±5%              | ±5%                 | ±5%                | ±5%                | ±5%                     | ±5%                     | ±5%                     |
| Voltage Tolerance, Inc. Noise (12V)           | ±10%             | ±10%             | ±10%             | ±10%                | ±10%               | ±10%               | ±10%                    | ±10%                    | ±10%                    |
| <b>Reliability/Data Integrity</b>             |                  |                  |                  |                     |                    |                    |                         |                         |                         |
| Contact Start/Stop Cycles                     | —                | —                | —                | —                   | —                  | 50,000             | 50,000                  | 50,000                  | 50,000                  |
| Load/Unload Cycles                            | 300,000          | 300,000          | 300,000          | 300,000             | 300,000            | 300,000            | —                       | —                       | —                       |
| Nonrecoverable Read Errors per Bits Read, Max | 1 per 10E14      | 1 per 10E14      | 1 per 10E14      | 1 per 10E14         | 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                 | 55                 | 55                      | 55                      | 55                      |
| Power-On Hours                                | 2400             | 2400             | 2400             | 2400                | 2400               | 2400               | 2400                    | 2400                    | 2400                    |
| Limited Warranty (years) <sup>3</sup>         | 2                | 2                | 2                | 2                   | 2                  | 2                  | 2                       | 2                       | 2                       |
| <b>Power Management</b>                       |                  |                  |                  |                     |                    |                    |                         |                         |                         |
| Startup Power (A)                             | 2.0              | 2.0              | 2.0              | 2.5                 | 2.5                | 2.0                | 2.0                     | 2.0                     | 2.0                     |
| Operating Mode, Typical (W)                   | 9.0              | 9.0              | 5.6              | 8.0                 | 8.0                | 5.3                | 5.3                     | 6.19                    | 6.19                    |
| Idle Average (W) <sup>4</sup>                 | 7.2              | 7.2              | 4.0              | 5.4                 | 5.4                | 4.6                | 4.6                     | 4.60                    | 4.60                    |
| Standby Mode (W)                              | 0.6              | 0.6              | 0.50             | 0.75                | 0.75               | 0.94               | 0.94                    | 0.79                    | 0.79                    |
| Sleep Mode (W)                                | 0.6              | 0.6              | 0.50             | 0.75                | 0.75               | 0.94               | 0.94                    | 0.79                    | 0.79                    |
| <b>Environmental</b>                          |                  |                  |                  |                     |                    |                    |                         |                         |                         |
| <b>Temperature</b>                            |                  |                  |                  |                     |                    |                    |                         |                         |                         |
| Operating (ambient min °C)                    | 0                | 0                | 0                | 0                   | 0                  | 0                  | 0                       | 0                       | 0                       |
| Operating (drive case max °C)                 | 60               | 60               | 60               | 60                  | 60                 | 60                 | 60                      | 60                      | 60                      |
| Nonoperating (ambient °C)                     | -40 to 70        | -40 to 70        | -40 to 70        | -40 to 70           | -40 to 70          | -40 to 70          | -40 to 70               | -40 to 70               | -40 to 70               |
| Halogen Free                                  | Yes              | Yes              | Yes              | Yes                 | Yes                | Yes                | Yes                     | Yes                     | Yes                     |
| RoHS Compliance                               | Yes              | Yes              | Yes              | Yes                 | Yes                | Yes                | Yes                     | Yes                     | Yes                     |
| <b>Physical</b>                               |                  |                  |                  |                     |                    |                    |                         |                         |                         |
| Height (mm/in)                                | 26.11/1.028      | 26.11/1.028      | 26.11/1.028      | 26.11/1.028         | 26.11/1.028        | 20.2/0.784         | 20.2/0.784              | 20.2/0.784              | 20.2/0.784              |
| Width (mm/in)                                 | 101.6/4.0        | 101.6/4.0        | 101.6/4.0        | 101.6/4.0           | 101.6/4.0          | 101.6/4.0          | 101.6/4.0               | 101.6/4.0               | 101.6/4.0               |
| Depth (mm/in)                                 | 146.99/5.787     | 146.99/5.787     | 146.99/5.787     | 146.99/5.787        | 146.99/5.787       | 146.99/5.787       | 146.99/5.787            | 146.99/5.787            | 146.99/5.787            |
| Weight (g/lb)                                 | 780/1.720        | 780/1.720        | 610/1.345        | 626/1.38            | 626/1.38           | 400/0.88           | 415/0.92                | 415/0.92                | 415/0.92                |
| Carton Unit Quantity                          | 20               | 20               | 20               | 20                  | 20                 | 25                 | 25                      | 25                      | 25                      |
| Cartons per Pallet                            | 40               | 40               | 40               | 40                  | 40                 | 40                 | 40                      | 40                      | 40                      |
| Cartons per Layer                             | 8                | 8                | 8                | 8                   | 8                  | 8                  | 8                       | 8                       | 8                       |
| <b>Special Features</b>                       |                  |                  |                  |                     |                    |                    |                         |                         |                         |
| Seagate AcuTrac™ Technology                   | Yes              | Yes              | Yes              | Yes                 | Yes                | No                 | No                      | No                      | No                      |

1 One gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes when referring to drive capacity.

2 Seagate ships this drive in both 4K- and 512-byte sectors. SmartAlign technology is included on 4K sector drives. Both drives are functionally and physically equivalent.

3 Extended warranty products available. Consult your distributor for details.

4 Idle information may be based on Idle 1 or Idle 2 specifications. Consult the product manual for more information.



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