

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 8TB
- Increase your capacity and drive down costs with up to 1.33TB-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 retirement¹
- Seagate Secure models meet the NIST 800-88 media sanitization specification and also support the Trusted Computer Group (TCG) Opal standard¹



Best-Fit Applications

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

¹ 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 ¹ | ST8000DM002 | ST6000DM001 | ST5000DM002 | ST4000DM000 | ST3000DM001 |
| Seagate Secure™ Model Numbers | — | — | — | — | ST3000DM002 |
| Interface | SATA 6Gb/s |
| Cache | 256MB | 128MB | 128MB | 64MB | 64MB |
| Model Name | Desktop HDD | Desktop HDD | Desktop HDD | Desktop HDD | formerly Barracuda |
| Performance | | | | | |
| 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 |
| Configuration/Organization | | | | | |
| Heads/Disks | 6/12 | 6/12 | 6/12 | 8/4 | 6/3 |
| Bytes per Sector | 512E | 512E | 512E | 512E | 512E |
| Voltage | | | | | |
| Voltage Tolerance, Inc. Noise (5V) | ±5% | ±5% | ±5% | ±5% | ±5% |
| Voltage Tolerance, Inc. Noise (12V) | ±10% | ±10% | ±10% | ±10% | ±10% |
| Reliability/Data Integrity | | | | | |
| Contact Start/Stop Cycles ² | — | — | — | — | — |
| Load/Unload Cycles ³ | 300,000 | 300,000 | 300,000 | 300,000 | 300,000 |
| Nonrecoverable Read Errors per Bits Read, Max | 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) ⁴ | 2 | 2 | 2 | 2 | 2 |
| Power Management | | | | | |
| Startup Power (12V, A) | 2 | 2 | 2 | 2 | 2.5 |
| Average Operating Power | 9W | 9W | 9W | 5.6W | 8W |
| Idle Average (W) | 7.2W | 7.2W | 7.2W | 4W | 5.4W |
| Standby/Sleep Mode | 0.6W/0.6W | 0.6W/0.6W | 0.6W/0.6W | 0.5W/0.5W | 0.75W/0.75W |
| Environmental/Temperature | | | | | |
| 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 |
| Nonoperating (ambient, min) | -40°C | -40°C | -40°C | -40°C | -40°C |
| Nonoperating (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 |
| Physical | | | | | |
| Height (mm/in) | 26.11mm/1.028in | 26.11mm/1.028in | 26.11mm/1.028in | 26.11mm/1.028in | 26.11mm/1.028in |
| Width (mm/in, max) | 101.6mm/4in | 101.6mm/4in | 101.6mm/4in | 101.6mm/4in | 101.6mm/4in |
| Depth (mm/in, max) | 146.99mm/5.787in | 146.99mm/5.787in | 146.99mm/5.787in | 146.99mm/5.787in | 146.99mm/5.787in |
| Weight (g/lb) | 780g/1.72lb | 780g/1.72lb | 780g/1.72lb | 610g/1.35lb | 626g/1.38lb |
| Carton Unit Quantity | 20 | 20 | 20 | 20 | 20 |
| Cartons per Pallet / Cartons per Layer | 40 / 8 | 40 / 8 | 40 / 8 | 40 / 8 | 40 / 8 |
| Special Features | | | | | |
| Seagate AcuTrac™ Technology | Yes | Yes | Yes | Yes | Yes |

¹ 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.

² At 25°C and 50% relative humidity.

³ Load/Unload tested to 600,000 cycles.

⁴ Extended warranty products available. Consult your distributor for details.



Desktop HDD



| Specifications | 2TB | 1TB | 500GB | 320GB | 250GB |
|---|--------------------|--------------------|--------------------|--------------------|--------------------|
| Standard Model Numbers ¹ | ST2000DM001 | ST1000DM003 | ST500DM002 | ST320DM000 | ST250DM000 |
| Seagate Secure™ Model Numbers | ST2000DM002 | ST1000DM004 | — | — | — |
| Interface | SATA 6Gb/s |
| Cache | 64MB | 64/32MB | 16MB | 16MB | 16MB |
| Model Name | formerly Barracuda |
| Performance | | | | | |
| 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 |
| Configuration/Organization | | | | | |
| Heads/Disks | 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 |
| Voltage | | | | | |
| Voltage Tolerance, Inc. Noise (5V) | ±5 % | ±5 % | ±5% | ±5% | ±5% |
| Voltage Tolerance, Inc. Noise (12V) | ±10 % | ±10 % | ±10% | ±10% | ±10% |
| Reliability/Data Integrity | | | | | |
| Contact Start/Stop Cycles ² | — | 50,000 | 50,000 | 50,000 | 50,000 |
| Load/Unload Cycles ³ | 300,000 | 300,000 | — | — | — |
| Nonrecoverable Read Errors per Bits Read, Max | 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) ⁴ | 2 | 2 | 2 | 2 | 2 |
| Power Management | | | | | |
| Startup Power (12V, A) | 2.5 | 2 | 2 | 2 | 2 |
| Average Operating Power | 8W | 5.3W | 6.19W | 6.2W | 6.19W |
| Idle Average (W) | 5.4W | 4.6W | 4.6W | 4.6W | 4.6W |
| Standby/Sleep Mode | 0.75W/0.75W | 0.94W/0.94W | 0.79W/0.79W | 0.79W/0.79W | 0.79W/0.79W |
| Environmental/Temperature | | | | | |
| 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 |
| Nonoperating (ambient, min) | -40°C | -40°C | -40°C | -40°C | -40°C |
| Nonoperating (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 |
| Physical | | | | | |
| Height (mm/in) | 26.11mm/1.028in | 19.99mm/0.787in | 19.99mm/0.787in | 19.99mm/0.787in | 19.99mm/0.787in |
| Width (mm/in, max) | 101.6mm/4in | 101.6mm/4in | 101.6mm/4in | 101.6mm/4in | 101.6mm/4in |
| Depth (mm/in, max) | 146.99mm/5.787in | 146.99mm/5.787in | 146.99mm/5.787in | 146.99mm/5.787in | 146.99mm/5.787in |
| Weight (g/lb) | 626g/1.38lb | 400g/0.88lb | 415g/0.915lb | 415g/0.915lb | 415g/0.915lb |
| Carton Unit Quantity | 20 | 25 | 25 | 25 | 25 |
| Cartons per Pallet / Cartons per Layer | 40 / 8 | 40 / 8 | 40 / 8 | 40 / 8 | 40 / 8 |
| Special Features | | | | | |
| Seagate AcuTrac™ Technology | Yes | No | No | No | No |

¹ 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.

² At 25°C and 50% relative humidity.

³ Load/Unload tested to 600,000 cycles.

⁴ Extended warranty products available. Consult your distributor for details.

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