



2.5 HDD DATA SHEET

Amazing Versatility.
Unmatched Dependability.



Seagate brings over 20 years of trusted performance and reliability to the Seagate® BarraCuda® 2.5-inch HDDs — now available in capacities up to 5 TB.



Best-Fit Applications

- Laptops
- Mobile storage
- External storage systems
- All-in-one PCs
- Ultra-slim desktop PCs

Key Advantages

Broadest 2.5-inch hard drive portfolio with up to 5 TB capacity and both 7 mm and 15 mm form factors suitable for a variety of compute applications.

Thinnest and lightest 2.5-inch hard drive with up to 2 TB storage in a 7 mm z-height, providing seamless upgrades of thin and light laptops and smaller form factor systems.

Fast data rates of up to 140 MB/s enables superior PC end-user experience and snappier file transfers.

2.5-inch, 15 mm z-height hard drives provide 3 TB to 5 TB in capacity, offering **the highest-capacity 2.5-inch hard drives** available for external or all-in-one storage.

15 mm z-height enables slimmer all-in-one desktop PC drives while helping reduce system heat generation and vibration.

Low startup current configurations for 3 TB to 5 TB drives enable **use in legacy low-current systems** like USB-2 external boxes, while simultaneously lowering power consumption.

5 TB drives can store more than **1.25 million songs and 600 hours of HD video.**¹

¹ Quantitative usage examples for 5 TB capacity drive



| Specifications | 5 TB | 4 TB | 3 TB | 2 TB | 1 TB |
|--|----------------------|---------------------|---------------------|---------------------|---------------------|
| Capacity | 5TB | 4TB | 3TB | 2TB | 1TB |
| Model Numbers | ST5000LM000 | ST4000LM024 | ST3000LM024 | ST2000LM015 | ST1000LM049 |
| Bytes per Sector (logical/physical) | 512/4,096 | 512/4,096 | 512/4,096 | 512/4,096 | 512/4,096 |
| Performance | | | | | |
| Interface | SATA 6Gb/s | SATA 6Gb/s | SATA 6Gb/s | SATA 6Gb/s | SATA 6Gb/s |
| Data Transfer Rate (MB/s) | Up to 140 | Up to 140 | Up to 140 | Up to 140 | Up to 160 |
| Cache (MB) | 128 | 128 | 128 | 128 | 128 |
| Spindle Speed (RPM) | 5,400 | 5,400 | 5,400 | 5,400 | 7,200 |
| Recording Technology | SMR | SMR | SMR | SMR | SMR |
| Reliability/Data Integrity | | | | | |
| Load/Unload Cycles | 600,000 | 600,000 | 600,000 | 600,000 | 600,000 |
| Head-Rest Method | QuietStep™ Ramp Load | QuietStep Ramp Load | QuietStep Ramp Load | QuietStep Ramp Load | QuietStep Ramp Load |
| Non-recoverable Read Errors per Bits Read, Max | 1 per 10E14 | 1 per 10E14 | 1 per 10E14 | 1 per 10E14 | 1 per 10E14 |
| Limited Warranty (years) ¹ | 2 | 2 | 2 | 2 | 5 |
| Power Management | | | | | |
| Startup Current (+5 V, A) | 1.2 | 1.2 | 1.2 | 1.0 | 1.0 |
| Read/Write Power, Average (W) | 1.9/2.1 | 1.9/2.1 | 1.9/2.1 | 1.7/1.8 | 1.9/1.7 |
| Idle Power, Average (W) | 1.1 | 1.1 | 1.1 | 0.5 | 0.7 |
| Environmental | | | | | |
| Temperature, Operating (°C) | 0°C – 60°C | 0°C – 60°C | 0°C – 60°C | 0°C – 60°C | 0°C – 60°C |
| Temperature, Non-operating (°C) | -40°C – 70°C | -40°C – 70°C | -40°C – 70°C | -40°C – 70°C | -40°C – 70°C |
| Shock, Operating: 2 ms (Gs) | 300 | 300 | 300 | 400 | 400 |
| Shock, Non-operating: 1 ms (Gs) | 650 | 650 | 650 | 1,000 | 1,000 |
| Acoustics, Idle, Typical (bels—sound power) | 2.6 | 2.6 | 2.6 | 2.2 | 2.2 |
| Acoustics, Seek, Typical (bels—sound power) | 2.7 | 2.7 | 2.7 | 2.4 | 2.4 |
| Physical | | | | | |
| Height (mm/in) | 15/0.59 | 15/0.59 | 15/0.59 | 7/0.276 | 7/0.276 |
| Width (mm/in) | 69.85 mm/2.75 in | 69.85 mm/2.75 in | 69.85 mm/2.75 in | 69.85 mm/2.75 in | 69.85 mm/2.75 in |
| Depth (mm/in) | 100.35 mm/3.951 in | 100.35 mm/3.951 in | 100.35 mm/3.951 in | 100.35 mm/3.951 in | 100.35 mm/3.951 in |
| Weight (g/lb, max) | 190 g/0.42 lb | 190 g/0.42 lb | 190 g/0.42 lb | 90 g/0.198 lb | 85 g/0.187 lb |
| Carton Unit Quantity | 40 | 40 | 40 | 50 | 50 |
| Cartons Per Pallet/Layer | 60/10 | 60/10 | 60/10 | 60/10 | 60/10 |
| Special Features | | | | | |
| Multi-Tier Caching Technology™ | Yes | Yes | Yes | Yes | Yes |
| Halogen-free | Yes | Yes | Yes | Yes | Yes |
| RoHS compliance | Yes | Yes | Yes | Yes | Yes |

¹ Extended warranty products available. Consult your distributor for details.



| Specifications | 1TB | 500 GB | 500 GB |
|--|---------------------|---------------------|---------------------|
| Capacity | 1TB | 500GB | 500GB |
| Model Numbers | ST1000LM048 | ST500LM034 | ST500LM030 |
| Bytes per Sector (logical/physical) | 512/4,096 | 512/4,096 | 512/1/4096 |
| Performance | | | |
| Interface | SATA 6Gb/s | SATA 6Gb/s | SATA 6Gb/s |
| Data Transfer Rate (MB/s) | Up to 140 | Up to 160 | Up to 140 |
| Cache (MB) | 128 | 128 | 128 |
| Spindle Speed (RPM) | 5,400 | 7,200 | 5,400 |
| Recording Technology | SMR | SMR | SMR |
| Reliability/Data Integrity | | | |
| Load/Unload Cycles | 600,000 | 600,000 | 600,000 |
| Head-Rest Method | QuietStep Ramp Load | QuietStep Ramp Load | QuietStep Ramp Load |
| Non-recoverable Read Errors per Bits Read, Max | 1 per 10E14 | 1 per 10E14 | 1 per 10E14 |
| Limited Warranty (years) ¹ | 2 | 5 | 2 |
| Power Management | | | |
| Startup Current (+5 V, A) | 1.0 | 1.0 | 1.0 |
| Read/Write Power, Average (W) | 1.6/1.7 | 1.9/1.7 | 1.6/1.7 |
| Idle Power, Average (W) | 0.45 | 0.7 | 0.45 |
| Environmental | | | |
| Temperature, Operating (°C) | 0°C – 60°C | 0°C – 60°C | 0°C – 60°C |
| Temperature, Non-operating (°C) | -40°C – 70°C | -40°C – 70°C | -40°C – 70°C |
| Shock, Operating: 2 ms (Gs) | 400 | 400 | 400 |
| Shock, Non-operating: 1 ms (Gs) | 1,000 | 1,000 | 1,000 |
| Acoustics, Idle, Typical (bels—sound power) | 2 | 2.2 | 2 |
| Acoustics, Seek, Typical (bels—sound power) | 2.2 | 2.4 | 2.2 |
| Physical | | | |
| Height (mm/in) | 7/0.276 | 7/0.276 | 7/0.276 |
| Width (mm/in) | 69.85 mm/2.75 in | 69.85 mm/2.75 in | 69.85 mm/2.75 in |
| Depth (mm/in) | 100.35 mm/3.951 in | 100.35 mm/3.951 in | 100.35 mm/3.951 in |
| Weight (g/lb, max) | 90 g/0.198 lb | 85 g/0.187 lb | 90 g/0.198 lb |
| Carton Unit Quantity | 50 | 50 | 50 |
| Cartons Per Pallet/Layer | 60/10 | 60/10 | 60/10 |
| Special Features | | | |
| Multi-Tier Caching Technology™ | Yes | Yes | Yes |
| Halogen-free | Yes | Yes | Yes |
| RoHS compliance | Yes | Yes | Yes |

¹ Extended warranty products available. Consult your distributor for details.

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