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 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[1]
- Seagate Secure models meet the NIST 800-88 media sanitization specification and also support the Trusted Computer Group (TCG) Opal standard[1]

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.

SEAGATE

Desktop HDD

Specifications	6TB	5TB	4TB	3TB	2TB
Standard Model Numbers[1]	ST6000DM001	ST5000DM002	ST4000DM000	ST3000DM001	ST2000DM001
Seagate Secure™ Model Numbers	—	—	—	ST3000DM002	ST2000DM002
Model Name	Desktop HDD	Desktop HDD	Desktop HDD	formerly Barracuda	formerly Barracuda
Interface	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s
Performance					
Cache	128MB	128MB	64MB	64MB	64MB
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
Average Data Rate, Read/Write	180	180	146	156	156
Max Sustainable Transfer Rate	220MB/s	220MB/s	180MB/s	210MB/s	210MB/s
Configuration/Organisation					
Heads/Discs	6/12	6/12	8/4	6/3	4/2
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	—	—	—	—	—
Load/Unload Cycles	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	2400	2400	2400	2400	2400
Warranty, Limited (years)[2]	2	2	2	2	2
Power Management					
Startup Power (12V, A)	2.0	2.0	2.0	2.5	2.5
Average Operating Power	9.0W	9.0W	5.60W	8.0W	8.0W
Idling Average	7.2W	7.2W	4.0W	5.40W	5.40W
Standby Mode	0.6W	0.6W	0.5W	0.75W	0.75W
Sleep Mode	0.6W	0.6W	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
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
Physical					
Height	26.11mm	26.11mm	26.11mm	26.11mm	26.11mm
Height	1.028in	1.028in	1.028in	1.028in	1.028in
Width	101.6mm	101.6mm	101.6mm	101.6mm	101.6mm
Width	4.0in	4.0in	4.0in	4.0in	4.0in
Depth	146.99mm	146.99mm	146.99mm	146.99mm	146.99mm
Depth	5.787in	5.787in	5.787in	5.787in	5.787in
Typical Weight	780g	780g	610g	626g	626g
Typical Weight	1.72lb	1.72lb	1.35lb	1.38lb	1.38lb
Carton Unit Quantity	20	20	20	20	20
Cartons per Pallet	40	40	40	40	40
Cartons per Layer	8	8	8	8	8
Special Features					
Seagate AcuTrac™ Technology	Yes	Yes	Yes	Yes	Yes

Specifications	1TB	500GB	320GB	250GB
Standard Model Numbers[1]	ST1000DM003	ST500DM002	ST320DM000	ST250DM000
Seagate Secure™ Model Numbers	ST1000DM004	—	—	—
Model Name	formerly Barracuda	formerly Barracuda	formerly Barracuda	formerly Barracuda
Interface	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s
Performance				
Cache	64MB	16MB	16MB	16MB
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
Average Data Rate, Read/Write	156	125	125	125
Max Sustainable Transfer Rate	210MB/s	144MB/s	144MB/s	144MB/s
Configuration/Organisation				
Heads/Discs	2/1	2/1	2/1	1/1
Bytes per Sector	512E	512E or 512	512E or 512	512E or 512
Voltage				
Voltage Tolerance, Inc. Noise (5V)	±5%	±5%	±5%	±5%
Voltage Tolerance, Inc. Noise (12V)	±10%	±10%	±10%	±10%
Reliability/Data Integrity				
Contact Start/Stop Cycles	50,000	50,000	50,000	50,000
Load/Unload Cycles	300,000	—	—	—
Non-recoverable Read Errors per Bits Read, Max	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14
Workload Rate Limit (TB/year)	55	55	55	55
Power-on Hours	2400	2400	2400	2400
Warranty, Limited (years)[2]	2	2	2	2
Power Management				
Startup Power (12V, A)	2.0	2.0	2.0	2.0
Average Operating Power	5.3W	5.3W	6.2W	6.19W
Idling Average	4.60W	4.60W	4.60W	4.60W
Standby Mode	0.94W	0.94W	0.79W	0.79W
Sleep Mode	0.94W	0.94W	0.79W	0.79W
Environmental/Temperature				
Operating (ambient, min)	0°C	0°C	0°C	0°C
Operating (drive case, max)	60°C	60°C	60°C	60°C
Non-operating (ambient, min)	–40°C	–40°C	–40°C	–40°C
Non-operating (ambient, max)	70°C	70°C	70°C	70°C
Halogen-free	Yes	Yes	Yes	Yes
RoHS compliance	Yes	Yes	Yes	Yes
Physical				
Height	19.99mm	19.99mm	19.99mm	19.99mm
Height	0.787in	0.787in	0.787in	0.787in
Width	101.6mm	101.6mm	101.6mm	101.6mm
Width	4.0in	4.0in	4.0in	4.0in
Depth	146.99mm	146.99mm	146.99mm	146.99mm
Depth	5.787in	5.787in	5.787in	5.787in
Typical Weight	400g	415g	415g	415g
Typical Weight	0.88lb	0.92lb	0.92lb	0.915lb
Carton Unit Quantity	25	25	25	25
Cartons per Pallet	40	40	40	40
Cartons per Layer	8	8	8	8
Special Features				
Seagate AcuTrac™ Technology	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 Extended warranty products available. Consult your distributor for details.

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

© 2015 Seagate Technology LLC. All rights reserved. Printed in USA. Seagate, Seagate Technology and the Spiral logo are registered trademarks of Seagate Technology

LLC in the United States and/or other countries. AcuTrac, Barracuda, DiscWizard, Seagate Secure and SmartAlign are either trademarks or registered trademarks of Seagate Technology LLC or one of its affiliated companies in the United States and/or other countries. All other trademarks or registered trademarks are the property of their respective owners. When referring to drive capacity, one gigabyte, or GB, equals one billion bytes; and one terabyte, or TB, equals one trillion bytes. Your computer's operating system may use a different standard of measurement and report a lower capacity. In addition, some of the listed capacity is used for formatting and other functions, and thus will not be available for data storage. Actual data rates may vary depending on operating environment and other factors. The export or re-export of Seagate hardware or software is regulated by the U.S. Department of Commerce, Bureau of Industry and Security (for more information, visit www.bis.doc.gov), and may be controlled for export, import and use in other countries. Seagate reserves the right to change, without notice, product offerings or specifications. DS1770.6-1507UK July 2015