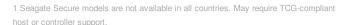SEAGATE

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[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.

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	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
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/Organisation					
Heads/Discs	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
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)[4]	2	2	2	2	2
Power Management					
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
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 (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
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	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
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/Organisation					
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
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	—	—	—
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)[4]	2	2	2	2	2
Power Management					
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
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 (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
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.