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 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	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	—	—	—	—	—
Load/Unload Cycles[2]	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
Workload Rate Limit (TB/year)	55	55	55	55	55
Power-On Hours	2400	2400	2400	2400	2400
Warranty, Limited (years)[3]	2	2	2	2	2
Power Management					
Startup Power (12V, A)	2.0	2.0	2.0	2.0	2.5
Average Operating Power	9.0W	9.0W	9.0W	5.60W	8.0W
Idle Average (W)	7.2W	7.2W	7.2W	4.0W	5.40W
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/4.0in	101.6mm/4.0in	101.6mm/4.0in	101.6mm/4.0in	101.6mm/4.0in
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 Load/Unload tested to 600,000 cycles
3 Extended warranty products available. Consult your distributor for details.

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	64MB	64MB	16MB	16MB	16MB
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/Organization					
Heads/Disks	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	—	50,000	50,000	50,000	50,000
Load/Unload Cycles[2]	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
Workload Rate Limit (TB/year)	55	55	55	55	55
Power-On Hours	2400	2400	2400	2400	2400
Warranty, Limited (years)[3]	2	2	2	2	2
Power Management					
Startup Power (12V, A)	2.5	2.0	2.0	2.0	2.0
Average Operating Power	8.0W	5.3W	5.3W	6.2W	6.19W
Idle Average (W)	5.40W	4.60W	4.60W	4.60W	4.60W
Standby/Sleep Mode	0.75W/0.75W	0.94W/0.94W	0.94W/0.94W	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/4.0in	101.6mm/4.0in	101.6mm/4.0in	101.6mm/4.0in	101.6mm/4.0in
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/0.92lb	415g/0.92lb	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.
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3 Extended warranty products available. Consult your distributor for details.

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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