Laptop SSHD
Laptop Thin SSHD
Ultra Mobile SSHD

Data Sheet

SSD-like Speed. Large HDD Capacity. An Affordable Price.

- Boots and performs like an SSD[1]

- Capacities up to 1TB

- All-in-one design for simplicity and ease of installation

- Installs and works just like a traditional hard drive in any laptop, PC, Mac or game console, and with any OS and application

- SATA 6Gb/s with NCQ for interface speed

- Self-Encrypting Drive (SED) versions available to maximize data protection and minimize the risk of confidential information breaches

- Backed by a 3-year limited warranty[2]

Best-Fit Applications

- Thin, thinner and thinnest z-heights

- 9.5mm for all-in-one PCs and older laptops

- 7mm for thin and light laptops and high-performance gaming systems

- 5mm for tablets and ultrabooks

1 Performance may vary depending on user's hardware configuration and operating system.
  Testing performed on a Seagate® Laptop SSHD 1TB, Seagate Laptop Thin SSHD 500GB and Seagate Ultra Mobile SSHD 500GB.
2 Extended warranty products available. Consult your distributor for details.

Laptop SSHD
Laptop Thin SSHD
Ultra Mobile SSHD

Seagate ®

Specifications	9.5mm	7mm	5mm
Model Name	Laptop SSHD	Laptop Thin SSHD	Ultra Mobile SSHD
Capacity	1TB[1]	500GB[1]	500GB[1]
Standard Model	ST1000LM014	ST500LM000	ST500LX012
Standard Zero Gravity Sensor (ZGS) Model	—	—	ST500LX014
Self-Encrypting Drive (SED) Model[2]	ST1000LM015	ST500LM001	ST500LX016
SED-FIPS 140-2 Model[3]	ST1000LM028	ST500LM020	ST500LX013
Interface[4]	SATA 6Gb/s NCQ	SATA 6Gb/s NCQ	SATA 6Gb/s NCQ
Performance			
NAND Type/Size	MLC/8GB	MLC/8GB	MLC/8GB
Interface Access Speed (Gb/s)	6.0/3.0/1.5	6.0/3.0/1.5	6.0/3.0/1.5
Average Data Throughput (MB/s)	100	100	100
PC Mark Vantage Average HDD Score	16,000	16,000	16,000
Average Windows 8 Boot Time (sec)	<19	<19	<19
Seek Average, Read (ms)	<12	<12	<12
Seek Average, Write (ms)	<14	<14	<13
Configuration/Organization			
Heads/Disks	4/2	2/1	2/1
Bytes per Sector	4096	4096	4096
Power Supply Requirements	+5V	+5V	+5V
Reliability/Data Integrity			
Head-Rest Method	QuickStep™ Ramp Load	QuickStep Ramp Load	QuickStep Ramp Load
Load/Unload Cycles	600,000	600,000	600,000
Nonrecoverable Read Errors per Bits Read, Max	1 per 10E15	1 per 10E15	1 per 10E15
Predicted Annualized Failure Rate (AFR)	0.48%	0.48%	0.48%
Limited Warranty (years)[5]	3	3	3
Power Management			
Power (W)			
Seek, Typical	2.7	2.5	2.5
Idle, Typical	0.9	0.9	0.6
Environmental			
Temperature (°C)			
Operating	0 to 60	0 to 60	0 to 60
Nonoperating	−40 to 70	−40 to 70	−40 to 70
Shock (Gs)			
Operating: 2ms	350	350	400
Nonoperating: 1ms	1000	1000	1000
Acoustics (bels—sound power)			
Idle, Typical	2.2	2.0	2.0
Seek, Typical	2.7	2.2	2.2
Physical			
Height (mm/in, max)			
Standard and SED Models	9.5/0.374	7.0/0.276	5.0/0.268
FIPS Model	9.5/0.374	7.0/0.276	5.2/0.276
Width (mm/in, max)	69.85/2.75	69.85/2.75	69.85/2.75
Depth (mm/in, max)	100.35/3.95	100.35/3.95	100.35/3.95
Weight (g/lb)	115/0.254	95/0.209	93/0.205
Carton Unit Quantity	50	50	50
Cartons per Pallet	60	60	60
Cartons per Layer	10	10	10

1 One gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes when referring to drive capacity.

2 Self-Encrypting Drives (SED) and FIPS 140-2 Validated drives are not available in all models or countries. May require TCG-compliant host or controller support.

3 Some SED FIPS 140-2 models in review. See FIPS 140-2 Level 2 Certificate at: http://csrc.nist.gov/groups/STM/cmvp/documents/140-1/1401val2011.htm#1635

4 Supports hotplug operation per Serial ATA Revision 2.6 specification.

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

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