

# Laptop Thin HDD

## Data Sheet

### The World's First 7 mm, 2.5 Inch Form Factor Drive

- 7 mm z-height form factor enables thin chassis design for all segments of laptop computing.
- Self-Encrypting Drives that mitigate data breaches, comply with data protection regulations and preserve brand recognition.<sup>1</sup>
- Self-Encrypting Drives with FIPS 140-2 certification are approved by the US and Canadian governments.<sup>1,2</sup>

### Best-Fit Applications

- Entry-level laptops — enjoy a stylish, thin and lightweight design without exceeding your budget.
- Netbooks — have a thinner netbook without compromising on storage or affordability.
- Ultraportables — take advantage of a stylish, thin and lightweight design without compromising on features.

<sup>1</sup> Refer to specifications table for further information and feature options.

<sup>2</sup> See FIPS 140-2 Level 2 Certificate at <http://csrc.nist.gov/groups/STM/cmvp/documents/140-1/1401vend.htm>



# Laptop Thin HDD



Specifications	5400-RPM Drives			7200-RPM Drives	
	500GB <sup>1</sup>	320GB <sup>1</sup>	250GB <sup>1</sup>	500GB <sup>1</sup>	320GB <sup>1</sup>
<b>Feature Options</b>					
Model Name	formerly Momentus <sup>®</sup> Thin	formerly Momentus Thin	formerly Momentus Thin	Laptop Thin HDD	Laptop Thin HDD
Standard Models	ST500LT012	ST320LT012	ST250LT012	ST500LM021	ST320LM010
Self-Encrypting Drive Models	ST500LT025	—	—	—	—
Self-Encrypting Drive FIPS 140-2 Validated	ST500LT015	—	—	—	—
Interface	SATA 3Gb/s	SATA 3Gb/s	SATA 3Gb/s	SATA 6Gb/s	SATA 6Gb/s
Cache (MB)	16	16	16	32	32
<b>Configuration/Organisation</b>					
Bytes per Sector (logical/physical)	512/4,096	512/4,096	512/4,096	512/4,096	512/4,096
Load/Unload Cycles	>600,000	>600,000	>600,000	>600,000	>600,000
<b>Performance</b>					
Seek Average (ms)	12	12	12	11	11
I/O Data Transfer Rate, Max (MB/s)	600	600	600	600	600
Sustained Data Transfer Rate OD, Max (MB/s)	118.5	118.5	118.5	135	135
<b>Reliability/Data Integrity</b>					
Head-Rest Method	QuietStep <sup>™</sup> Ramp Load	QuietStep Ramp Load	QuietStep Ramp Load	QuietStep Ramp Load	QuietStep Ramp Load
Non-recoverable Read Errors per Bits Read, Max	1 per 10 <sup>14</sup>	1 per 10 <sup>14</sup>	1 per 10 <sup>14</sup>	1 per 10 <sup>14</sup>	1 per 10 <sup>14</sup>
Annualised Failure Rate (AFR)	0.48%	0.48%	0.48%	0.48%	0.48%
<b>Power Management</b>					
Startup Power, Typical (A)	1.0	1.0	1.0	1.0	1.0
Seek, Typical (W)	1.2	1.2	1.2	1.8	1.8
Idling, Typical (W)	0.45	0.45	0.45	0.65	0.65
<b>Environmental</b>					
Temperature (°C)					
Operating	0 to 60	0 to 60	0 to 60	0 to 60	0 to 60
Non-operating	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70
Shock (Gs)					
Operating: 2ms	400	400	400	400	400
Non-operating: 1ms	1,000	1,000	1,000	1,000	1,000
Acoustics (bels — sound power)					
Idling, Typical	2.0	2.0	2.0	2.3	2.3
Seek, Typical	2.2	2.2	2.2	2.4	2.4
<b>Physical</b>					
Height (mm/in)	7.0/0.276	7.0/0.276	7.0/0.276	7.0/0.276	7.0/0.276
Width (mm/in)	70.1/2.76	70.1/2.76	70.1/2.76	70.1/2.76	70.1/2.76
Depth (mm/in)	100.55/3.959	100.55/3.959	100.55/3.959	100.55/3.959	100.55/3.959
Weight (g/lb)	95.0/0.209	95.0/0.209	95.0/0.209	95.0/0.209	95.0/0.209
Carton Unit Quantity	50	50	50	50	50
Cartons per Pallet	60	60	60	60	60
Cartons per Layer	10	10	10	10	10

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



FIPS 140-2 Inside



Think Green



Seagate Secure



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