

Data Sheet

Momentum[®] Thin

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

Key Advantages

- 7mm z-height form factor enables thin chassis design for all segments of laptop computing.
- Seagate SmartAlign™ technology provides a transition to 4K sectors without the need for software utilities.
- Self-Encrypting Drives mitigate data breaches, comply with data protection regulations and preserve brand recognition.
- Self-Encrypting Drives with FIPS 140-2 certification¹ are approved for the U.S. and Canadian governments.

Best-Fit Applications

- Entry-level to high-performance laptops—Enjoy a stylish, thin and lightweight design without exceeding your budget.
- Netbooks—Get a thinner netbook without compromising on storage or affordability.
- Ultraportables—Take advantage of a stylish, thin and lightweight design without compromising on features.
- Slim consumer electronics devices—Add some style to your digital life.

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



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- Seagate clearly demonstrates how to help differentiate, increase profitability and meet market demand for slim computing.
- The 2.5-inch form factor enables compromise-free, cost-effective and reliable storage for slim, entry-level laptops, high-end netbooks, ultraportables and CE devices.
 - Seagate® Momentum® Thin drives come in 320, 250 and 160GB capacities, to provide the right capacity points for full-functioning computing devices. For performance enthusiasts, check out the 7200-RPM Momentum Thin drive.
 - Users now have 16MB of cache on both the mainstream 5400-RPM and the high-performance 7200-RPM options.
 - Seagate Self-Encrypting Drives (SED) deliver government-grade encryption without performance degradation – protecting your data where it lives.
 - The Momentum Thin SED is the first Trusted Computing Group Opal specification drive to achieve FIPS 140-2, Level-2 certification by the U.S. and Canadian governments.

Specifications	Momentum 5400 Drives			Momentum 7200 Drives		
	320GB ¹	250GB ¹	160GB ¹	320GB ¹	250GB ¹	160GB ¹
Feature Options						
Standard Models	ST320LT020	ST250LT003	ST160LT003	ST320LT007	ST250LT007	ST160LT007
Self-Encrypting Drive Models				ST320LT014	ST250LT014	
Self-Encrypting Drive FIPS 140-2 Validated				ST320LT009	ST250LT009	
Interface	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ
Cache (MB)	16	16	16	16	16	16
Configuration						
Bytes per Sector	4096 ²	4096 ²	4096 ²	4096 ²	4096 ²	4096 ²
Reliability/Data Integrity						
Head-Rest Method	Quiet Step™ Ramp Load	Quiet Step Ramp Load	Quiet Step Ramp Load	Quiet Step Ramp Load	Quiet Step Ramp Load	Quiet Step Ramp Load
Load/Unload Cycles	>600,000	>600,000	>600,000	>600,000	>600,000	>600,000
Nonrecoverable Read Errors per Bits Read	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14
Annualized Failure Rate (AFR)	0.48%	0.48%	0.48%	0.48%	0.48%	0.48%
Power Management						
Power (W)						
Seek, Typical	1.4	1.4	1.4	1.6	1.6	1.6
Idle, Typical	0.48	0.48	0.48	0.66	0.66	0.66
Environmental						
Temperature (°C)						
Operating	0 to 60	0 to 60	0 to 60	0 to 60	0 to 60	0 to 60
Nonoperating	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70
Shock (Gs)						
Operating: 2ms	350	350	350	350	350	350
Nonoperating: 1ms	1000	1000	1000	1000	1000	1000
Acoustics (bels—sound power)						
Idle, Typical	2.0	2.0	2.0	2.3	2.3	2.3
Seek, Typical	2.2	2.2	2.2	2.5	2.5	2.5
Physical						
Height (in/mm)	0.276/7.0	0.276/7.0	0.276/7.0	0.276/7.0	0.276/7.0	0.276/7.0
Width (in/mm)	2.76/70.1	2.76/70.1	2.76/70.1	2.76/70.1	2.76/70.1	2.76/70.1
Depth (in/mm)	3.959/100.55	3.959/100.55	3.959/100.55	3.959/100.55	3.959/100.55	3.959/100.55
Weight (lb/g)	0.203/92.0	0.203/92.0	0.203/92.0	0.203/92.0	0.203/92.0	0.203/92.0
Carton Unit Quantity	50	50	50	50	50	50
Cartons per Pallet	60	60	60	60	60	60
Cartons per Layer	10	10	10	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 Advanced Format 4K sector drive with SmartAlign™ technology resolves misalignment conditions.

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