

# Momentum Thin

## Data Sheet

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

- 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.<sup>1</sup>
- Self-Encrypting Drives 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 for the U.S. and Canadian governments.<sup>1,2</sup>

### 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.

<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>



| Specifications                                | Momentum 5400 Drives     |  |  | Momentum 7200 Drives    |                         |
|---|--------------------------|--|--|-------------------------|-------------------------|
|   | 500GB <sup>1</sup>       | 320GB <sup>1</sup>                                 | 250GB <sup>1</sup>                                 | 320GB <sup>1</sup>      | 250GB <sup>1</sup>      |
| <b>Feature Options</b>                        |                          |  |  |                         |                         |
| Standard Models                               | ST500LT012 <sup>2</sup>  | ST320LT020 <sup>2</sup><br>ST320LT012 <sup>3</sup> | ST250LT003 <sup>2</sup><br>ST250LT012 <sup>3</sup> | ST320LT007 <sup>2</sup> | ST250LT007 <sup>2</sup> |
| Self-Encrypting Drive Models                  | ST500LT025 <sup>3</sup>  |  |  | ST320LT014 <sup>2</sup> |                         |
| Self-Encrypting Drive<br>FIPS 140-2 Validated | ST500LT015 <sup>3</sup>  |  |  | ST320LT009 <sup>2</sup> |                         |
| Interface                                     | 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                      |
| <b>Configuration</b>                          |                          |  |  |                         |                         |
| Bytes per Sector                              | 4096                     | 4096   | 4096   | 4096                    | 4096                    |
| <b>Reliability/Data Integrity</b>             |                          |  |  |                         |                         |
| Head-Rest Method                              | Quiet Step™<br>Ramp Load | Quiet Step<br>Ramp Load                            | Quiet Step<br>Ramp Load                            | Quiet Step<br>Ramp Load | Quiet Step<br>Ramp Load |
| Load/Unload Cycles                            | >600,000                 | >600,000   | >600,000   | >600,000                | >600,000                |
| Nonrecoverable Read<br>Errors per Bits Read   | 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%                   |
| <b>Power Management</b>                       |                          |  |  |                         |                         |
| Power (W)                                     |                          |  |  |                         |                         |
| Seek, Typical                                 | 1.2                      | 1.4  | 1.4  | 1.6                     | 1.6                     |
| Idle, Typical                                 | 0.45                     | 0.48   | 0.48   | 0.66                    | 0.66                    |
| <b>Environmental</b>                          |                          |  |  |                         |                         |
| Temperature (°C)                              |                          |  |  |                         |                         |
| Operating                                     | 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               |
| Shock (Gs)                                    |                          |  |  |                         |                         |
| Operating: 2ms                                | 400                      | 350  | 350  | 350                     | 350                     |
| Nonoperating: 1ms                             | 1000                     | 1000   | 1000   | 1000                    | 1000                    |
| Acoustics (bels—sound power)                  |                          |  |  |                         |                         |
| Idle, Typical                                 | 2.0                      | 2.0  | 2.0  | 2.3                     | 2.3                     |
| Seek, Typical                                 | 2.2                      | 2.2  | 2.2  | 2.5                     | 2.5                     |
| <b>Physical</b>                               |                          |  |  |                         |                         |
| Height (in/mm)                                | 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               |
| Depth (in/mm)                                 | 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              |
| 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.

<sup>2</sup> Advanced Format 4K sector drive with SmartAlign™ technology resolves misalignment conditions.

<sup>3</sup> SmartAlign technology is not available on this model.



[www.seagate.com](http://www.seagate.com)

AMERICAS  
ASIA/PACIFIC  
EUROPE, MIDDLE EAST AND AFRICA

Seagate Technology LLC 10200 South De Anza Boulevard, Cupertino, California 95014, United States, 408-658-1000  
Seagate Singapore International Headquarters Pte. Ltd. 7000 Ang Mo Kio Avenue 5, Singapore 569877, 65-6485-3888  
Seagate Technology SAS 16-18, rue du Dôme, 92100 Boulogne-Billancourt, France, 33 1-4186 10 00