Seagate ®

Momentus®

The World's Most Feature-Rich 2.5-Inch Drive

Key Advantages

- The power to transform from ordinary to extraordinary with innovative options and features.

- 7200 RPM delivers a constant high-performance boost.

- 5400 RPM enables affordable, low-power and high-capacity drives for external enclosures.

- Self-Encrypting Drives mitigate data breaches, comply with data protection regulations and preserve brand recognition.

- Self-Encrypting Drives with FIPS 140-2 certification[1] are government-approved for the U.S. and Canadian governments.

- G-Force Protection™ technology can help keep your data recoverable after a fall, even if your laptop doesn't survive.

- Seagate SmartAlign™ technology provides a transition to 4K sectors without the need for software utilities.

Best-Fit Applications

- Mainstream and high-performance laptops

- External storage solutions

- Industrial applications requiring a small form factor

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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Specifications	Momentus 5400 Drives						Momentus 7200 Drives				
	750GB[1]	640GB[1]	500GB[1]	320GB[1]	250GB[1]	160GB[1]	750GB[1]	500GB[1]	320GB[1]	250GB[1]	160GB[1]
Feature Options											
Standard Models	ST9750423AS[3]	ST9640320AS	ST9500325AS	ST9320325AS ST320LT022[3,4]	ST9250315AS ST250LT020[3,4]	ST9160314AS ST160LT015[3,4]	ST9750420AS[3]	ST9500423AS[3]	ST9320423AS ST320LT023[3,4]	ST9250410AS ST250LT021[3,4]	ST9160412AS ST160LT016[3,4]
Free-Fall Sensor Models			ST9500325ASG[2]					ST9500420ASG[2]		ST9250410ASG[2]	
SED Models			ST9500327AS		ST9250317AS			ST9500421AS		ST9250411AS	
FIPS 140-2 Models								ST9500422AS		ST9250412AS[3]	
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	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ
Cache (MB)	16	8	8	8 16	8 16	8 16	16	16	16	16	16
Configuration											
Bytes per Sector	4096[3] —	512 —	512 —	512 4096[3,4]	512 4096[3,4]	512 4096[3,4]	4096[3] —	512 4096[3]	512 4096[3,4]	512 4096[3,4]	512 4096[3,4]
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	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	>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	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%	0.48%	0.48%	0.48%	0.48%	0.50%
Power Management											
Power (W) Seek, Typical Idle, Typical	1.4 0.5	1.3 0.68	1.54 0.81	1.54 0.81	1.54 0.81	1.54 0.81	1.5 0.7	1.5 0.7	1.554 0.67	1.554 0.67	1.554 0.67
Environmental											
Temperature (°C) Operating Nonoperating	0 to 60 −40 to 70	0 to 60 −40 to 70	0 to 60 −40 to 70	0 to 60 −40 to 70	0 to 60 −40 to 70	0 to 60 −40 to 70	0 to 60 −40 to 70	0 to 60 −40 to 70	0 to 60 −40 to 70	0 to 60 −40 to 70	0 to 60 −40 to 70
Shock (Gs) Operating: 2ms Nonoperating: 1ms	350 1000	350 1000	350 1000	350 1000	350 1000	350 1000	350 1000	350 1000	350 1000	350 1000	350 1000
Acoustics (bels—sound power) Idle, Typical Seek, Typical	2.3 2.6	2.3 2.6	2.4 2.6	2.4 2.6	2.4 2.6	2.4 2.6	2.3 2.5	2.3 2.5	2.3 2.5	2.3 2.5	2.3 2.5
Physical											
Height (in/mm)	0.374/9.5	0.374/9.5	0.374/9.5	0.374/9.5	0.374/9.5	0.374/9.5	0.374/9.5	0.374/9.5	0.374/9.5	0.374/9.5	0.374/9.5
Width (in/mm)	2.75/69.85	2.75/69.85	2.75/69.85	2.75/69.85	2.75/69.85	2.75/69.85	2.75/69.85	2.75/69.85	2.75/69.85	2.75/69.85	2.75/69.85
Depth (in/mm)	3.951/100.35	3.951/100.35	3.951/100.35	3.951/100.35	3.951/100.35	3.951/100.35	3.951/100.35	3.951/100.35	3.951/100.35	3.951/100.35	3.951/100.35
Weight (lb/g)	0.254/115	0.218/98.8	0.218/98.8	0.218/98.8	0.206/93.5	0.206/93.5	0.254/115	0.238/110	0.238/110	0.227/105	0.227/105
Carton Unit Quantity	50	50	50	50	50	50	50	50	50	50	50
Cartons per Pallet	60	60	60	60	60	60	60	60	60	60	60
Cartons per Layer	10	10	10	10	10	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 Drive with G-Force Protection™ feature
3 Advanced Format (4K) drive with SmartAlign™ technology resolves misalignment conditions.
4 7mm z-height expanded to 9.5mm enables compatibility with standard laptop chassis.

FIPS 140-2 Inside

Compatible with Windows®7

Think Green™

Seagate Secure®

ADVANCED AF FORMAT

www.seagate.com