Data Sheet

Momentus®

The world's most feature-rich 2.5-inch drive for laptops and external enclosures

Up to 750GB (7200 RPM) • Up to 640GB (5400 RPM) • 8MB and 16MB cache • SATA 3Gb/s with NCQ • G-Force Protection™ and Self-Encrypting Drives • FIPS 140-2 certification*

Key Advantages

- Innovative options and features—the power to transform from ordinary to extraordinary
- 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* 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, boxes
- Industrial applications requiring a small form factor

* Certification is imminent; drives are currently shipping.

Compatible with
Windows®7

Think
Green™

Seagate
Secure®

Momentus®

The world's most feature-rich 2.5-inch drive for laptops and external enclosures

Seagate®

Feature Options	Momentus 5400 Drives					Momentus 7200 Drives				
	640GB[1]	500GB[1]	320GB[1]	250GB[1]	160GB[1]	750GB[1]	500GB[1]	320GB[1]	250GB[1]	160GB[1]
Standard Models	ST9640320AS	ST9500325AS	ST9320325AS	ST9250315AS	ST9160314AS	ST9750420AS	ST9500420AS	ST9320423AS	ST9250410AS	ST9160412AS
Free-Fall Sensor Models		ST9500325ASG[2]					ST9500420ASG[2]		ST9250410ASG[2]	
FDE Models		ST9500327AS		ST9250317AS			ST9500421AS		ST9250411AS	
FDE FIPS 140-2 Models							ST9500422AS[3]		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
Cache (MB)	8	8	8	8	8	16	16	16	16	16
Configuration										
Bytes per Sector	512	512	512	512	512	4096[4]	512	512	512	512
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
Load/Unload Cycles	>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
Annualized Failure Rate (AFR)	0.48%	0.48%	0.48%	0.48%	0.48%	0.50%	0.50%	0.50%	0.50%	0.50%
Power Management										
Power (W) Seek, Typical / Idle, Typical	1.3 / 0.68	1.54 / 0.81	1.54 / 0.81	1.54 / 0.81	1.54 / 0.81	1.5 / 0.7	1.554 / 0.67	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
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
Acoustics (bels—sound power) Idle, Typical / Seek, Typical	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	0.370/9.5	0.370/9.5	0.370/9.5	0.370/9.5	0.370/9.5
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
Depth (in/mm)	3.957/100.5	3.957/100.5	3.957/100.5	3.957/100.5	3.957/100.5	3.951/100.35	3.951/100.35	3.951/100.35	3.951/100.35	3.951/100.35
Weight (lb/g)	0.218/98.8	0.218/98.8	0.218/98.8	0.218/98.8	0.218/98.8	0.254/115	0.238/110	0.238/110	0.227/105	0.227/105

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 Certification is imminent; drives are currently shipping.
4 Advanced Sector Format (4K) drive with SmartAlign™ technology resolves misalignment conditions.

www.seagate.com
1-800-SEAGATE (1-800-732-4283)