

Data Sheet

Momentum® 7200.3

Industry-leading 7200-RPM performance meets the industry's lowest power consumption levels.

**320, 250, 160, 80 GB • 7200 RPM •
SATA 3Gb/s with NCQ • G-Force Protection™**

Key Advantages

- Highest available notebook performance increases productivity in all environments.
- Developed with proven Seagate® 7200-RPM laptop technology
- Available in capacities from 80 GB to 320 GB
- SATA 3Gb/s NCQ interface.
- 16-MB cache on every capacity
- G-Force Protection available for added robustness in mobile environments
- Green features:
 - Leverages Seagate laptop power management technology, delivering the lowest-power 7200-RPM laptop hard drive yet
 - Utilizes ramp load features which remove the head from the disk during idle periods, improving idle power consumption and adding to the durability of the drive
- QuietStep™ technology enables ultra-quiet load/unload acoustics
- Perpendicular recording technology

Best-Fit Applications

- Mainstream laptops
- Performance laptops
- Workstations
- Small form factor PCs



Momentum® 7200.3

Industry-leading 7200-RPM performance meets the industry's lowest power consumption levels.



G-Force Protection

When a laptop is dropped, the most catastrophic damage to the hard drive occurs when the head scrapes across the surface of the disk, causing potential data loss. G-Force Protection, an optional drop sensor, protects the Momentum 7200.3 drive against shock by sensing when the system is in a free-fall state, moving the heads off the platter and locking them in place—all within three-tenths of a second.

Market Opportunity

Demand for drives for laptop computers continues to grow exponentially. The laptop transition is driven by technology, as the performance gap between desktops and laptop PCs continues to close, making it possible to run the same applications on a laptop that users would previously have run on a desktop. Users no longer have to sacrifice performance for mobility.

Seagate Global Customer Support

- Get presales and technical support at support.seagate.com.
- Visit our knowledge base for answers to common support questions.
- Find documentation for current and legacy drives
- Utilize our online troubleshooting and diagnostic tools.
- Download DiscWizard™ to help migrate data from an older drive.
- Seagate also offers multi-lingual phone, email and chat support.

Specifications	320 GB ¹	250 GB ¹	160 GB ¹	120 GB ¹	80 GB ¹
Model Number	ST9320421AS ST9320421ASG	ST9250421AS ST9250421ASG	ST9160411AS ST9160411ASG	ST9120411AS ST9120411ASG	ST980411AS ST980411ASG
Interface Options	SATA 3Gb/s with NCQ	SATA 3Gb/s with NCQ	SATA 3Gb/s with NCQ	SATA 3Gb/s with NCQ	SATA 3Gb/s with NCQ
Performance					
Transfer Rate (MB/s)					
Sustained Internal	80	80	80	80	80
Maximum External	300	300	300	300	300
Cache (MB)	16	16	16	16	16
Average Latency (ms)	4.17	4.17	4.17	4.17	4.17
Spindle Speed (RPM)	7200	7200	7200	7200	7200
Configuration/Organization					
Disks/Heads	2/4	2/3	1/2	1/2	1/1
Bytes per Sector	512	512	512	512	512
Reliability/Data Integrity					
G-Force Protection™	Available	Available	Available	Available	Available
Head-Rest Method	QuietStep™ Ramp Load	QuietStep™ Ramp Load	QuietStep™ Ramp Load	QuietStep™ Ramp Load	QuietStep™ Ramp Load
Load/Unload Cycles	>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
Annualized Failure Rate (AFR)	0.48%	0.48%	0.48%	0.48%	0.48%
Mean Time Between Failures (MTBF, hours)	500,000	500,000	500,000	500,000	500,000
Power Management					
Startup Current 5V (amps max)	1.0	1.0	1.0	1.0	1.0
Power Management (W)					
Seek Avg	2.3	2.3	2.3	2.3	2.3
Read/Write Avg	2.1	2.1	2.1	2.1	2.1
Idle/Standby Avg	0.75/0.21	0.75/0.21	0.75/0.21	0.75/0.21	0.75/0.21
Environmental					
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: 2 msec	350	350	350	350	350
Nonoperating: 1 msec	1000	1000	1000	1000	1000
Acoustics (bels—sound power)					
Idle	2.3	2.3	2.3	2.3	2.3
Seek	2.5	2.5	2.5	2.5	2.5
Physical					
Height (in/mm)	.374/9.5	.374/9.5	.374/9.5	.374/9.5	.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
Depth (in/mm)	3.957/100.5	3.957/100.5	3.957/100.5	3.957/100.5	3.957/100.5
Weight (lb/kg)	.243/110	.243/110	.243/110	.243/110	.243/110

¹ One gigabyte, or GB, equals one billion bytes when referring to hard drive capacity.

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

AMERICAS Seagate Technology LLC 920 Disc Drive, Scotts Valley, California 95066, United States, 831-438-6550
 ASIA/PACIFIC Seagate Technology International Ltd. 7000 Ang Mo Kio Avenue 5, Singapore 569877, 65-6485-3888
 EUROPE, MIDDLE EAST AND AFRICA Seagate Technology SAS 130-136, rue de Silly, 92773, Boulogne-Billancourt Cedex, France 33 1-4186 10 00

Copyright © 2008 Seagate Technology LLC. All rights reserved. Printed in USA. Seagate, Seagate Technology and the Wave logo are registered trademarks of Seagate Technology LLC in the United States and/or other countries. DiscWizard, G-Force Protection, Momentum and QuietStep are either trademarks or registered trademarks of Seagate Technology LLC or one of its affiliated companies in the United States and/or other countries. All other trademarks or registered trademarks are the property of their respective owners. When referring to hard drive capacity, one gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes. Your computer's operating system may use a different standard of measurement and report a lower capacity. In addition, some of the listed capacity is used for formatting and other functions, and thus will not be available for data storage. Seagate reserves the right to change, without notice, product offerings or specifications. DS1649.3-0812US, December 2008