

Data Sheet

Momentum® 7200.4

Industry-leading 7200-RPM performance
meets extreme green low power
consumption levels

**Up to 500 GB • 7200 RPM • SATA 3Gb/s with NCQ •
Optional G-Force Protection™ technology**

Key Advantages

- Highest available notebook performance increases productivity in all environments.
- SATA 3Gb/s interface with Native Command Queuing (NCQ) and command ordering
- 16-MB cache on every capacity
- Green features:
 - Leverages Seagate® laptop power management technology, delivering the lowest-power 500-GB 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
- Optional G-Force Protection feature adds another layer of robustness for road warriors.
- QuietStep™ technology enables ultra-quiet load/unload acoustics
- State-of-the-art cache and on-the-fly error-correction algorithms
- Fluid dynamic bearing motor for quiet operation
- Support for S.M.A.R.T. drive monitoring and reporting



Best-Fit Applications

- High-performance and mainstream laptop PCs
- Small form factor PCs
- Workstations
- Non-mission-critical blade servers and industrial applications

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Seagate Leadership

Seagate Technology, a leader in storage, is dedicated to building products that meet the needs of the consumer and integrator, allowing them to build solutions that are state of the art, maximizing useful system life.

Seagate also works hand in hand with major technology players to develop new platforms and interfaces for system builders. Unlike many competitors, Seagate takes a leadership role, as well as learning from our customers, to develop the future of storage and what it means to computing.

As a result, Seagate continually delivers innovations that are mainstays of storage today:

- Products: 7200-RPM desktop and laptop drives, security drives
- Technologies: Serial ATA, perpendicular recording, encryption, hybrid drives
- Features: Freefall protection, power management, enterprise security, green components

Seagate customers can build a storage foundation with the confidence that they are using products that will perform today and in the future, enhancing business and operational continuity.

G-Force Protection

The G-Force Protection feature provides enhanced data protection against shock that may occur while the drive is operating. This feature is designed to decrease the likelihood of data loss by detecting a freefall event and unloading the actuator before a shock takes place in falls of greater than 8 inches (nominal).

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.

Specifications	500 GB ¹	320 GB ¹	250 GB ¹	160 GB ¹
Model Number	ST9500420AS ST9500420ASG	ST9320423AS ST9320423ASG	ST9250410AS ST9250410ASG	ST9160412AS ST9160412ASG
Interface Options	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ	SATA 3Gb/s NCQ
Performance				
Cache (MB)	16	16	16	16
Spindle Speed (RPM)	7200	7200	7200	7200
Configuration/Organization				
Bytes per Sector	512	512	512	512
Logical CHS	16,383/16/63	16,383/16/63	16,383/16/63	16,383/16/63
Reliability/Data Integrity				
Recording Method	16/17 EPRML	16/17 EPRML	16/17 EPRML	16/17 EPRML
Head-Rest Method	QuietStep™ Ramp Load	QuietStep™ Ramp Load	QuietStep Ramp Load	QuietStep Ramp Load
Load/Unload Cycles	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
Power Management				
Power (W)				
Seek, Typical	1.554	1.554	1.554	1.554
Idle, Typical	0.67	0.67	0.67	0.67
Environmental				
Temperature (°C)				
Operating	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
Shock (Gs)				
Operating: 2 ms	350	350	350	350
Nonoperating: 1 ms	1000	1000	1000	1000
Acoustics (bels—sound power)				
Idle, Typical	2.3	2.3	2.3	2.3
Seek, Typical	2.5	2.5	2.5	2.5
Physical				
Height (in/mm)	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
Depth (in/mm)	3.951/100.35	3.951/100.35	3.951/100.35	3.951/100.35
Weight (lb/g)	0.238/110	0.238/110	0.227/105	0.227/105

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

www.seagate.com
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