

Data Sheet

Savvio® 10K.3

Lowest-power, high-capacity 2.5-inch drive for the enterprise

2.5-inch form factor • 10K RPM •

300 GB and 146 GB • 6-Gb/s Serial Attached SCSI

Key Advantages

- Seagate® PowerTrim™ technology dynamically reduces power
- 75% power savings over comparable 3.5-inch 300-GB capacity drives
- 70% smaller size over 3.5-inch drives reduces overall system cooling costs
- 40% reduction in £/IOPS over comparable 3.5-inch drives
- 60% improvement in system-level performance over 3.5-inch 15K drives
- Third-generation 2.5-inch 10K-RPM enterprise drive with proven reliability
- Supports 6-Gb/s transfer rates and SAS 2.0 feature set
- Self-Encrypting Drive (SED) option cuts IT drive retirement expenses while protecting data securely and is one of the easiest, most cost-effective security measures you can implement*
- Delivers on Seagate unified storage architecture strategy to converge best-in-class technologies (Serial Attached SCSI, small form factor and SED security*) to enable powerful, yet simple, external storage and internal server storage solutions that strengthen business efficiencies while cutting TCO and boosting ROI



Best-fit Applications

- Mainstream enterprise servers and storage arrays
- Power-constrained data centres
- Databases
- Transaction processing
- Rack, tower and blade servers
- Space-constrained data centres
- Government-grade, data-at-rest security when drives leave your control*
- Drive retirement cost reduction and drive life extension strategies*

*Requires TCG-compliant host or controller support

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Lowest-power, high-capacity 2.5-inch drive for the enterprise



Smaller, Faster, more Energy-Efficient — and Secure*

Solution designers value the Savvio 10K.3 drive's design flexibility because it enables them to provide more competitive solutions afforded by the smaller size, higher capacity, lower power consumption, greater performance and greater reliability. The Savvio 10K.3 drive is the innovative market enabler for green/low-power solutions. And its capacity — up to 300 GB — makes this 2.5-inch drive the right drive for external storage applications.

The Savvio 10K.3 drive reduces system power consumption and cooling requirements with PowerTrim technology and is the industry's lowest-power 2.5-inch, Tier-1, mission-critical, enterprise-ready drive.

More Robust, with Higher Integrity

The drive supports the new, more robust, SAS 2.0 features to meet rigorous enterprise requirements (faster data transfers at 6-Gb/s speeds and a higher level of data integrity for interface communications).

The Savvio 10K.3 drive is the industry's only third-generation small form factor enterprise drive and has the industry's highest field-proven reliability. It optimises return on investment with the best combination of low power, high capacity and high performance for your customers' mission-critical Tier-1 systems. And it enables distributors to standardise on a 2.5-inch form factor with SAS 2.0 (6 Gb/s) — reducing design/support costs by minimising the need to design/support disparate drive sizes and interfaces.

The Savvio 10K.3 drive has the industry's only government-grade, Self-Encrypting Drive (SED) option for 2.5-inch enterprise drives to protect customers' data at rest.*

Unified Storage Architecture

By using small form factor drives, a common SAS interface and SED security capabilities, Seagate unified storage architecture delivers a best-in-class foundation for powerful, yet simple, storage solutions for the data centre. Unified storage architecture:

- Enables superior multi-drive servers and storage solutions that reduce costs and design complexity for OEMs and system builders
- Lowers TCO while improving ROI by providing large enterprises and SMBs with lower-cost multi-drive servers and storage
- Reduces storage complexity and enables peace of mind for the IT manager

*Requires TCG-compliant host or controller support

Specifications	300 GB ¹	146 GB ¹
Model Number	ST9300603SS ST9300503SS ²	ST9146803SS ST9146703SS ²
Capacity		
Formatted 512 Kbytes/Sector (GB)	300	146.8
External Transfer Rate (MB/s)		
3-Gb/s Serial Attached SCSI	300	300
6-Gb/s Serial Attached SCSI	600	600
Performance		
Spindle Speed (RPM)	10K	10K
Average Latency (ms)	3.0	3.0
Seek Time		
Average Read/Write (ms)	3.6/4.2	3.6/4.2
Track-to-Track Read/Write (ms)	0.2/0.3	0.2/0.3
Sustained Transfer Rate, Outer to Inner Diameter (MB/s)	129 to 67	129 to 67
Cache, Multi-segmented (MB)	16	16
Configuration/Reliability		
Discs	2	1
Heads	4	2
Non-recoverable Read Errors per Bits Read	1 sector per 10 ¹⁶	1 sector per 10 ¹⁶
Annualised Failure Rate (AFR)	0.55%	0.55%
Power Management		
Typical Op (amps) +12V/+5V	0.35/0.39	0.35/0.42
Power Idle (watts)	3.5	3.2
Environmental		
Temperature, Operating (°C)	5 to 55	5 to 55
Temperature, Non-operating (°C)	-40 to 70	-40 to 70
Shock, Operating: 2 ms (Gs)	60	60
Shock, Non-operating, 2 ms (Gs)	300	300
Acoustics Idle (bels — sound power)	3.1	3.1
Vibration, Operating: <400 Hz (Gs)	0.5	0.5
Vibration, Non-operating: <500 Hz (Gs)	2.4	2.4
Physical		
Height (in/mm)	0.583/14.8	0.583/14.8
Width (in/mm)	2.76/70	2.76/70
Depth (in/mm)	3.957/100.5	3.957/100.5
Weight (lb/kg)	0.50/0.227	0.50/0.227

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

² Self-Encrypting Drive model; requires TCG-compliant host or controller support

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