

Data Sheet

## Savvio® 15K.2

Highest-performing, greenest drive  
for enterprise storage systems

**2.5-inch form factor • 15K RPM •  
146 GB and 73 GB • 6 Gb/s Serial Attached SCSI**

### Key Advantages

- 115% improvement in system-level performance over 3.5-inch 15K drives
- Seagate® PowerTrim™ technology dynamically reduces power by up to 70% over comparable 3.5-inch 15K drives
- IOPS/W are 2.5 times better than comparable 3.5-inch Tier-1 drives
- 70% smaller size than 3.5-inch drives reduces overall system cooling costs
- Second-generation 2.5-inch 15K enterprise drive with field-proven reliability
- Supports 6 Gb/s transfer rates and SAS 2.0 feature set
- TCG-compliant 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<sup>1</sup>
- FIPS Self-Encrypting Drive option provides all the benefits of SED and is NIST certified to meet US, Canada and UK government data encryption compliance requirements.<sup>1, 2</sup>
- Delivers on Seagate Unified Storage architecture strategy to converge best-in-class technologies (SAS, small form factor and SED security<sup>1</sup>) 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

- High-performance enterprise servers and storage arrays
- Power-constrained and/or space-constrained data centres
- US government-grade, data-at-rest security (for when drives leave your control)<sup>1</sup>
- Drive retirement cost reduction and drive life extension strategies<sup>1</sup>

<sup>1</sup> Requires TCG-compliant host or controller support. Not available in all countries.

<sup>2</sup> See FIPS 140-2 Level 2 Certificate at <http://csrc.nist.gov/groups/STM/cmvp/documents/140-1/1401vend.htm>.



FIPS 140-2 INSIDE



Unified Storage

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## The Innovative Market Enabler

The Seagate® Savvio® 15K.2 drive enables OEMs and system designers to increase revenue by building more compelling solutions with the highest performance and speed for Tier-1 mission-critical storage solutions. The drive enables low-power (green) solutions, and its 2.5-inch form factor is designed for space-constrained IT environments.

## Enabling More Powerful Solutions

The drive's implementation of 6 Gb/s SAS improves scalability, which makes it ideally suited for use in high-end network storage solutions. The SAS 2.0 feature set supports more robust topologies that can communicate over broader distances with high signal integrity to enable more powerful storage solutions.

## Strong Enough for National Security<sup>1</sup>

The Savvio 15K.2 drive is available in SED or FIPS SED models; both eliminate the need to overwrite or physically destroy drives, enable secure return of drives for warranty or expired lease purposes, and allow organisations to repurpose or sell hard drives securely. For added physical security and more stringent regulatory compliance needs, the FIPS SED model is FIPS 140-2 Validated™ for use with sensitive but unclassified or protected (A or B) class data.

These Seagate Secure™ models help OEMs and system builders gain competitive advantage, differentiate solutions (with strong data security), sell to new customers (who require strong data security) and protect brand equity (and customer confidence).

## Unified Storage Architecture

By using SFF drives, a common SAS interface and SED security<sup>1</sup> capabilities, Seagate Unified Storage architecture delivers a best-in-class foundation for powerful, yet simple, storage solutions for the data centre. Moreover, Unified Storage architecture enables superior multi-drive servers and storage solutions that reduce costs and design complexity for OEMs and other system builders, lowers TCO while improving ROI by providing large enterprises and SMBs with lower-cost multi-drive servers and storage, and reduces storage complexity and enables peace of mind for the IT manager.

<sup>1</sup> Requires TCG-compliant host or controller support. Not available in all countries.

[www.seagate.com](http://www.seagate.com)

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Specifications	146 GB <sup>1</sup>	73 GB <sup>1</sup>
Model Number	ST9146852SS ST9146752SS <sup>2</sup> ST9146652SS <sup>3</sup>	ST973452SS ST973352SS <sup>2</sup> ST973252SS <sup>3</sup>
<b>Capacity</b>		
Formatted 512 Kbytes/Sector (GB)	146.8	73.4
External Transfer Rate (MB/s)		
3-Gb/s Serial Attached SCSI	300	300
6-Gb/s Serial Attached SCSI	600	600
<b>Performance</b>		
Spindle Speed (RPM)	15K	15K
Average Latency (ms)	2.0	2.0
Seek Time		
Average Read/Write (ms)	2.9/3.3	2.9/3.3
Sustained Transfer Rate, Outer to Inner Diameter (MB/s)	160 to 122	160 to 122
Cache, Multi-segmented (MB)	16	16
<b>Configuration/Reliability</b>		
Discs	2	1
Heads	4	2
Non-recoverable Read Errors per Bits Read	1 sector per 10 <sup>16</sup>	1 sector per 10 <sup>16</sup>
Annualised Failure Rate (AFR)	0.55%	0.55%
<b>Power Management</b>		
Typical Op (amps) +12V/+5V	0.40/0.43	0.34/0.42
Power Idling (W)	4.1	3.7
<b>Environmental</b>		
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 Idling (bels — sound power)	3.3	3.3
Vibration, Operating: <400 Hz (Gs)	0.5	0.5
Vibration, Non-operating: <500 Hz (Gs)	2.4	2.4
<b>Encryption</b>		
Self-Encrypting Drive option <sup>2</sup>	Yes	Yes
FIPS Self-Encrypting Drive option <sup>3</sup>	Yes	Yes
<b>Physical</b>		
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)	0.44/0.201	0.43/0.195

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

<sup>2</sup> Self-Encrypting Drive model; requires TCG-compliant host or controller support. Not available in all countries.

<sup>3</sup> FIPS Self-Encrypting Drive model; requires TCG-compliant host or controller support. Not available in all countries.

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