

Data Sheet

Savvio® 15K.3

Highest performing,
small form factor 15K hard drive

Key Advantages

- Stores twice the amount of Tier 1 data without increasing drive count
- Enables Tier 1 applications to process transactions more quickly to help increase revenue generation and improve customer satisfaction
- Supports 6Gb/s SAS for more robust topologies and higher reliability
- Delivers 20% improved annualised failure rate with field-proven reliability
- Provides up to 21% improvement in sequential data read-write performance over prior generation
- Delivers up to 3% faster random read and up to 4% faster random write performance vs. prior generation¹
- Reduces system complexity, and OEM design and data centre operating costs
- Self-Encrypting Drive (SED) option (AES-256) cuts IT drive retirement costs while protecting data securely where it lives — on the drive²
- FIPS 140-2 Validated™ Drives protect data classed as *Sensitive but Unclassified* and *Protected*.^{2,3}

Best-fit Applications

- High-performance Tier 1 enterprise servers
- Blade, rack and tower servers hosting transaction-based applications
- Power- and space-constrained data centres
- Compliance and data security initiatives

¹ Actual improvement varies depending on queue depth and transfer size.

² Self-Encrypting Drives (SED) and FIPS 140-2 Validated drives are not available in all models or countries. May require TCG-compliant host or controller support.

³ See FIPS 140-2 Level 2 Certificate at <http://csrc.nist.gov/groups/STM/cmvp/documents/140-1/1401val2011.htm#1635>



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Improves Performance

The Savvio 15K.3 drive enables Tier 1 applications to read and write both random and sequential data faster. Data centres can store and access important random data up to 10% faster and sequential data up to 21% faster over previous generations, enabling them to process more transactions within a given time period.

Doubles Capacity

Providing up to 300GB of capacity, the Seagate® Savvio 15K.3 drive stores twice the amount of data without increasing the total number of hard drives used. This helps data centres to keep up with the growth of data while improving storage efficiency.

Protects Data

The Savvio 15K.3 drive provides Protection Information¹ and Self-Encrypting Drive² options to help companies achieve corporate and/or government security compliance goals. The drive helps protect data from inadvertent change from the moment of creation until the end of life, and Seagate Instant Secure Erase makes drive retirement and repurposing safe, fast and affordable. Meets regulatory data security compliance requirements and is FIPS 140-2 Validated™ to protect data classed as Sensitive but Unclassified and Protected **

Reduces Complexity and Cost

The Savvio 15K.3 drive enables OEMs and data centres to standardise on the 2.5 inch small form factor (SFF), the 6Gb/s SAS interface and SED security, which reduce system complexity and minimise design, training and inventory expenses.

¹ Protection Information (PI) requires PI-compliant host or controller support.

² Self-Encrypting Drives (SED) and FIPS 140-2 Validated drives are not available in all models or countries. May require TCG-compliant host or controller support.

³ See FIPS 140-2 Level 2 Certificate at <http://csrc.nist.gov/groups/STM/cmvp/documents/140-1/1401val2011.htm#1635>

Specifications	300GB ¹	146GB ¹
Standard Model	ST9300653SS	ST9146853SS
SED Model	ST9300553SS ²	ST9146753SS ²
SED FIPS 140-2 Model	ST9300453SS ^{2,3}	ST9146653SS ^{2,3}
Interface	6Gb/s SAS	6Gb/s SAS
External Transfer Rate (MB/s)	600	600
Formatted 512 Bytes/Sector (GB)	300	146.8
Performance		
Spindle Speed (RPM)	15K	15K
Average Latency (ms)	2.0	2.0
Seek Time		
Average Read/Write (ms)	2.6/3.1	2.6/3.1
Track-to-Track Read/Write (ms)	0.2/0.4	0.2/0.4
Sustained Transfer Rate		
Outer to Inner Diameter (MB/s)	202 to 151	202 to 151
Cache, Multi-segmented (MB)	64	64
Configuration/Reliability		
Discs	2	1
Heads	4	2
Non-recoverable Read Errors per Bits Read	1 LBA per 10 ¹⁶	1 LBA per 10 ¹⁶
Annualised Failure Rate (AFR)	0.44%	0.44%
Power Management		
Typical Op (A) +12V/+5V	0.45/0.50	0.42/0.48
Average Operating Power (W)	7.92	7.41
Average Idling Power (W)	4.23	3.86
Environmental		
Ambient Temperature (°C)		
Operating	5 to 55	5 to 55
Non-operating	-40 to 70	-40 to 70
Temperature Change per Hour, Operating, Max	20	20
Temperature Change per Hour, Non-operating, Max	20	20
Shock, 2ms (Gs)		
Operating, Max	60	60
Non-operating, Max	300	300
Vibration		
Operating: <400Hz (Gs)	0.5	0.5
Non-operating: <500Hz (Gs)	2.4	2.4
Physical		
Height (in/mm, max) ⁴	0.591/15.00	0.591/15.00
Width (in/mm, max) ⁴	2.760/70.10	2.760/70.10
Depth (in/mm, max) ⁴	3.955/100.45	3.955/100.45
Weight (lb/kg)	0.441/0.200	0.426/0.193
Carton Unit Quantity	30	30
Cartons per Pallet	50	50
Cartons per Layer	10	10
Warranty		
Limited Warranty (years)	5	5

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

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⁴ These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at www.sffcommittee.org.

www.seagate.com



AMERICAS Seagate Technology LLC 10200 South De Anza Boulevard, Cupertino, California 95014, United States, +1 408 658 1000
 ASIA/PACIFIC Seagate Singapore International Headquarters Pte. Ltd. 7000 Ang Mo Kio Avenue 5, Singapore 569877, +65 6485 3888
 EUROPE, MIDDLE EAST AND AFRICA Seagate Technology SAS 16-18 rue du Dôme, 92100 Boulogne-Billancourt, France, +33 1 41 86 10 00

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