

Data Sheet

# Savvio® 15K.3

Highest-performing, small form factor  
15K hard drive

**2.5-inch form factor • 15K RPM •  
300GB and 146GB • 6Gb/s Serial Attached SCSI**

### Key Advantages

- Stores twice the amount of Tier 1 data without increasing the total number of drives
- Enables Tier 1 applications to process more transactions within a given time period to help increase revenue generation, improve customer satisfaction and complete critical business processes faster
- Supports 6Gb/s SAS for more robust topologies and higher reliability
- 20% improved annualized failure rate (0.44% AFR) with third-generation, 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 generation; up to 10% faster random read and up to 8% faster random write performance vs. legacy 3.5-inch, 15K drives<sup>1</sup>
- Helps protect data from corruption during the storage process and from exposure should the device be lost, stolen or retired<sup>2</sup>
- Reduces system complexity, and OEM design and data center operating costs
- Optional Self-Encrypting Drive (SED) models help companies be compliant with corporate and government data security mandates, helps protect data at rest throughout the life of the drive, and reduces drive retirement costs<sup>2</sup>



### Best-Fit Applications

- High-performance Tier 1 enterprise servers that manage *hot* and *warm* data
- Blade, rack and tower servers hosting transaction-based applications with many simultaneous, random data read requests (banking, e-commerce, reservation systems, etc.)
- Power- and space-constrained data centers
- Green IT and drive retirement cost reduction initiatives
- Compliance and data security initiatives
- Enterprises transitioning from legacy 3.5-inch hard drive-based systems to higher-performing, smaller 2.5-inch hard drive-based solutions

<sup>1</sup> Actual improvement varies depending on queue depth and transfer size.

<sup>2</sup> Requires TCG-compliant host or controller support. Not available in all models or countries.

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

## Protects Data

The Savvio 15K.3 drive provides Protection Information<sup>1</sup> and Self-Encrypting Drive<sup>2</sup> 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 from exposure if the device is lost, stolen or retired.

## Reduces Complexity and Costs

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

<sup>1</sup> Protection Information (PI) requires PI-compliant host or controller support.  
<sup>2</sup> Self-Encrypting Drives require TCG-compliant host or controller support.

Specifications	300GB <sup>1</sup>	146GB <sup>1</sup>
Standard Model	ST9300653SS	ST9146853SS
SED Model	ST9300553SS <sup>2</sup>	ST9146753SS <sup>2</sup>
Interface	6Gb/s SAS	6Gb/s SAS
External Transfer Rate (MB/s)	600	600
Formatted 512 Bytes/Sector (GB)	300	146.8
<b>Performance</b>		
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 Data Transfer Rate, Outer to Inner Diameter (MB/s)	202 to 151	202 to 151
Cache, Multisegmented (MB) <sup>3</sup>	64	64
<b>Configuration/Reliability</b>		
Disks	2	1
Heads	4	2
Nonrecoverable Read Errors per Bits Read	1 LBA per 10E16	1 LBA per 10E16
Annualized Failure Rate (AFR)	0.44%	0.44%
<b>Power Management</b>		
Typical Op (A) +12V/+5V	0.45/0.50	0.42/0.48
Average Operating Power (W)	7.92	7.41
Average Idle Power (W)	4.23	3.86
<b>Environmental</b>		
Ambient Temperature (C°)		
Operating	5 to 55	5 to 55
Nonoperating	-40 to 70	-40 to 70
Temperature Change per Hour, Operating, Max	20	20
Temperature Change per Hour, Nonoperating, Max	20	20
Shock, 2ms (Gs)		
Operating, Max	60	60
Nonoperating, Max	300	300
Vibration		
Operating: <400Hz (Gs)	0.5	0.5
Nonoperating: <500Hz (Gs)	2.4	2.4
<b>Physical</b>		
Height (in/mm,max) <sup>4</sup>	0.591/15.00	0.591/15.00
Width (in/mm, max) <sup>4</sup>	2.760/70.10	2.760/70.10
Depth (in/mm,max) <sup>4</sup>	3.955/100.45	3.955/100.45
Weight, typical (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
<b>Warranty</b>		
Limited Warranty (years)	5	5

<sup>1</sup> One gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes when referring to drive capacity.  
<sup>2</sup> Self-Encrypting Drive model requires TCG-compliant host or controller support.  
<sup>3</sup> Provides access to the full 64MB  
<sup>4</sup> These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at [www.sffcommittee.org](http://www.sffcommittee.org). For connector-related dimensions, see SFF-8223.



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