Data Sheet

Savvio® 10K.5

The Optimal Balance of Capacity, Performance and Power in a 10K, 2.5-Inch Enterprise Drive

Key Advantages

- Improves storage efficiency with 50% increase in capacity and 18% increase in sustained data rate performance over previous generation
- Delivers the highest-capacity 2.5-inch, 10K-RPM hard drive (up to 900GB) to manage more data without increasing the number of drives
- First SFF drive platform to offer four capacity points on a single platform
- PowerChoice™ technology for T10-compliant power management enables systems tailored for performance and power consumption
- Reduces system design, qualification and inventory costs for OEMs
- Protection Information (PI) protects against inadvertent data change.[1]
- Self-Encrypting Drive (SED) option (AES-256) cuts IT drive retirement costs while securely protecting data where it lives—on the drive.[2]
- FIPS 140-2 Validated™ drives protect *Sensitive but Unclassified* and *Protected* class data.[2,3]
- Seagate Unified Storage architecture reduces complexity and costs.

Best-Fit Applications

- Mission-critical servers and external storage arrays
- Power- and space-constrained data centers
- Compliance or data security initiatives

1 Protection Information (PI) feature 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

Savvio® 10K.5

The Optimal Balance of Capacity, Performance and Power in a 10K, 2.5-Inch Enterprise Drive

Improves Storage Efficiency

The Savvio® 10K.5 drive is the highest-capacity 2.5-inch, 10K drive and the first SFF drive to offer four capacity points on a single platform. This drive enables improved storage efficiency by providing up to 900GB in a single drive, helping data centers manage more data without increasing the number of drives, all while increasing sustained data rates by 18% (over previous generation) and maintaining favorable power consumption rates. The small form factor allows enterprises to solve space constraints through higher-density storage.

Seagate PowerChoice™ technology enables OEMs and data centers to tailor systems for performance and power consumption, enabling green IT initiatives.

Reduces Costs and Complexity

The Savvio 10K.5 drive reduces system complexity by standardizing on a common form factor, storage interface and encryption technology. This means fewer device types, form factors, interfaces and security technologies need to be deployed, inventoried and managed.

Enables Smoother Transitions

OEMs and data centers have the flexibility to maintain or upgrade capacity, transition from 3.5- to 2.5-inch form factors, and/or migrate from Fibre Channel to SAS drives in one or more steps. With four capacity points on the same drive platform, the Savvio 10K.5 drive enables easier support for current systems and optimized return on existing investments.

Protects Data

Protection Information and Self-Encrypting Drive options protect data from corruption during the storage process and from exposure should the device by lost, stolen, or retired—helping organizations meet compliance and data security objectives. Seagate Instant Secure Erase makes drive retirement and repurposing safe, fast and affordable.

www.seagate.com

FIPS 140-2 INSIDE

Seagate Secure™

Unified Storage™

Seagate 5-Year Warranty

Specifications	900GB[1]	600GB[1]	450GB[1]	300GB[1]
SAS Model Number	ST9900805SS	ST9600205SS	ST9450405SS	ST9300605SS
SED Model Number	ST9900705SS[2]	ST9600105SS[2]	ST9450305SS[2]	ST9300505SS[2]
SED FIPS 140-2 SAS Model Number	ST9900605SS[2,3]	ST9600005SS[2,3]	ST9450205SS[2,3]	ST9300405SS[2,3]
FC Model Number	ST9900805FC	ST9600205FC	ST9450405FC	ST9300605FC
Capacity				
Formatted 512 Bytes/Sector (GB)	900	600	450	300
External Transfer Rate (MB/s) 6Gb/s Serial Attached SCSI 4Gb/s Fibre Channel	 600 400	 600 400	 600 400	 600 400
Performance				
Spindle Speed (RPM)	10K	10K	10K	10K
Average Latency (ms)	3.0	3.0	3.0	3.0
Seek Time Average Read/Write (ms) Track-to-Track Read/Write (ms)	 3.7/4.1 0.2/0.4	 3.4/3.8 0.2/0.4	 3.4/3.8 0.2/0.4	 3.4/3.8 0.2/0.4
Sustained Transfer Rate Outer to Inner Diameter (MB/s) Cache, Multisegmented (MB)	 168 to 93 64	 168 to 93 64	 168 to 93 64	 168 to 93 64
Configuration/Reliability				
Disks	3	2	2	1
Heads	6	4	3	2
Nonrecoverable Read Errors per Bits Read	1 per 10E16	1 per 10E16	1 per 10E16	1 per 10E16
Annualized Failure Rate (AFR)	0.44%	0.44%	0.44%	0.44%
Power Management				
Typical Op (A), Random Read +5V/+12V	0.46/0.48	0.46/0.45	0.48/0.46	0.46/0.43
Power Idle (W)	4.4	3.8	3.8	3.5
Environmental				
Temperature, Operating (°C)	5 to 55	5 to 55	5 to 55	5 to 55
Temperature, Nonoperating (°C)	–40 to 70	–40 to 70	–40 to 70	–40 to 70
Shock, Operating: 11ms (Gs)	40	40	40	40
Shock, Nonoperating: 2ms (Gs)	400	400	400	400
Acoustics Idle (bels—sound power)	3.0	3.0	3.0	3.0
Vibration, Operating: <500Hz (Gs)	0.5	0.5	0.5	0.5
Vibration, Nonoperating: <500Hz (Gs)	3.0	3.0	3.0	3.0
Physical				
Height (in/mm, max)[4]	0.591/15.00	0.591/15.00	0.591/15.00	0.591/15.00
Width (in/mm, max)[4]	2.760/70.10	2.760/70.10	2.760/70.10	2.760/70.10
Depth (in/mm, max)[4]	3.955/100.45	3.955/100.45	3.955/100.45	3.955/100.45
Weight (lb/kg)	0.451/0.205	0.475/0.215	0.477/0.216	0.465/0.211
Carton Unit Quantity	30	30	30	30
Cartons per Pallet	50	50	50	50
Cartons per Layer	10	10	10	10
Warranty				
Limited Warranty (years)	5	5	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.
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
4 These base deck dimensions conform to the Small Form Factor Standard (SFF-8201) found at www.sffcommittee.org. For connector-related dimensions, see SFF-8223.

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