Seagate

Data Sheet

Savvio® 10K.5

The optimal balance of capacity, performance and power in a 10K, 2.5-inch enterprise drive

2.5-inch form factor • 10K RPM • 0.44% AFR • 900, 600, 450 and 300GB • 6Gb/s Serial Attached SCSI • 4Gb/s Fibre Channel

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 IT organizations to tailor systems for performance and power consumption
- Reduces system design, qualification and inventory costs for OEMs
- Enables data centers to better manage hard drive form factor, capacity and interface transitions
- Protection Information (PI) protects against inadvertent data change[1]
- Optional Self-Encrypting Drive (SED) models help companies be compliant with corporate and federal data security mandates and protect data at rest throughout the life of the drive should it be lost, stolen or retired[2]
- Seagate Unified Storage architecture reduces complexity and costs by converging disparate interfaces, form factors and security standards

Best-Fit Applications

- Mission-critical servers and external storage arrays
- Power- and space-constrained data centers
- Green IT and drive-retirement cost reduction initiatives
- Compliance or data security initiatives
- Migration from 3.5-inch drive systems to next-generation technology

1 Protection Information (PI) feature requires PI-compliant host or controller support.
2 Self-Encrypting Drive (SED) option requires TCG-compliant host or controller support. Not available in all models or countries.

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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 platform to offer four capacity points on a single SFF platform. This drive enables OEMs, system builders and end users to improve 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.

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

The 2.5-inch small form factor allows end-user enterprises to solve space constraints through higher-density storage.

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-inch 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.

Specifications

Specifications	900GB[1]	600GB[1]	450GB[1]	300GB[1]
Model Number	ST9900805SS ST9900705SS[2] ST9900805FC	ST9600205SS ST9600105SS[2] ST9600205FC	ST9450405SS ST9450305SS[2] ST9450405FC	ST9300605SS ST9300505SS[2] 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 (amps) +5V/+12V	0.46/0.48	0.46/0.45	0.48/0.46	0.46/0.43
Power Idle (watts)	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)[3]	0.591/15.00	0.591/15.00	0.591/15.00	0.591/15.00
Width (in/mm, max)[3]	2.760/70.10	2.760/70.10	2.760/70.10	2.760/70.10
Depth (in/mm, max)[3]	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

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 Drive, requires TCG-compliant host or controller support. Not available in all countries.
3 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 (SAS models) and SFF-8222 (FC models).

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Unified Storage™

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