Travelstar® 5K1000

Highlights

- Up to 1TB[1] of capacity
- Advanced Format, 512 byte emulation
- 6Gb/s SATA interface
- Low power consumption
- Halogen-free for eco-friendly design
- Self-encrypting models for data security
- Enhanced-availability (EA) models for applications needing around-the-clock access in lower-transaction environments

Applications/ Environments

- Notebook PCs
- External storage
- Gaming consoles
- Small-form-factor video devices
- Network routers (EA)
- Video surveillance (EA)

1TB, 750GB and 640GB
5400 RPM | SATA 6Gb/s

1 TB of Storage Capacity for Mobile Platforms

Travelstar® 5K1000 is a 5400 RPM, 500GB/platter, 2.5-inch hard drive available in 640GB, 750GB and 1TB models. This standard 9.5mm, two-disk design, intended for use in notebook PCs, external storage, gaming consoles and other mobile applications, leverages Advanced Format, which increases the physical sector size on hard drives from 512 bytes to 4096 (4K) bytes to increase drive capacities and improve error correction capabilities. Consult the HGST Advanced Format Technology Brief for more information on using these hard drives. The Travelstar 5K1000 is the first 1TB 2.5-inch HDD with a 6Gb/s SATA interface and delivers best-of-breed 5400 RPM performance in PCMark 7 and PCMark Vantage testing. The 5K1000 continues to demonstrate HGST's ecological leadership with its halogen-free design and power-efficient operation. Travelstar 5K1000 delivers the highest mobile capacity with excellent performance to meet the needs of consumers and commercial users in an eco-friendly, rugged design.

Encryption Option

Travelstar 5K1000 is the seventh generation self-encrypting drive (SED) to feature HGST's Bulk Data Encryption. The SED encrypts data using protected keys in real time, providing users the highest level of data protection available. It also speeds and simplifies drive re-purposing. By deleting the encryption key, the data on the drive is rendered unreadable, thereby eliminating the need for time-consuming data-overwrite. For information about the SED models designed to the Trusted Computing Group (TCG) Opal Storage Security specification, please contact your HGST representative.

Enhanced Availability (EA)—for 24x7 Access to Data

HGST provides enhanced availability models of the Travelstar 5K1000 that allow 24x7 access to data to support applications that require round-the-clock operation. The 5K1000 provides high capacity, durability and low power utilization on a proven platform for quality and reliability. EA models support the stringent demands of "always-on" applications in lower-transaction environments.

Features and Benefits

	Feature / Function	Benefits
Capacity	Up to 1TB storage	Up to 250 hours of high-definition video, 1000 hours of standard video, 350 movies, 250,000 4-min songs or 500 games*
Power	• 1.6W read/write power • 0.5W low power idle	Low energy use and long battery life for more "unplugged" notebook time
Reliability	• 400G operating shock • 1000G non-operating shock	Best protection against bumps and rough handling
	• Thermal Fly-height Control (TFC)	Better soft error rate for improved reliability
	• TrueTrack™ technology	Tracking accuracy in high shock or vibration environments
Performance	Up to 998Mb/s media transfer rate	Best-of-breed 5400 RPM application performance in PCMark 7 and PCMark Vantage testing
	SATA 6Gb/s interface	
Acoustics	Quiet acoustics	Richer audio-listening experience for music, movies and games
Interface	SATA 6Gb/s	Fast data throughput
Security Option	Bulk Data Encryption	Helps guard against data theft

* Actual storage may vary depending on the compression rate applied. Capacities may not be combined.

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Specifications

	Standard Models	EA Models
Model / Part No.	HTS541010A9E680 HTS541010A9E681 HTS541075A9E680 HTS541075A9E681 HTS541064A9E680 HTS541064A9E681	HTE541010A9E680 HTE541075A9E680 HTE541064A9E68
Configuration		
Interface	SATA 6Gb/s	←
Capacity (GB)[1]	1TB / 750 / 640	←
Sector size (bytes)[2]	512e	←
Recording zones	30	←
Areal density (max, Gbit/sq.in.)	694	←
Performance		
Data buffer (MB)[3]	8	←
Rotational speed (RPM)	5400	←
Latency average (ms)	5.5	←
Media transfer rate (max, Mbits/sec)	998	←
Interface transfer rate (MB/sec)	600	←
Seek time Average (typical) ms (read)[4]	12	←
Track to track (typical) ms (read)	1	←
Full stroke (typical) ms (read)	20	←
Reliability		
Load/Unload cycle	600,000	←
Power on hours (POH) per month	N/A	730
Availability[5]	N/A	24x7
Power		
Requirement	+5VDC (+-5%)	←
Dissipation Startup (W, peak, max)	4.5	←
Seek, (W, avg.)	1.8	←
Read/Write, (W, avg.)	1.6	←
Performance idle, (W, avg.)	1.5	← Idle (avg.)
Active idle, (W, avg.)	0.8	N/A
Low power idle, (W, avg.)	0.5	N/A
Standby, (W, avg.)	0.2	←
Sleep (W)	0.1	←
Physical size		
Height (max, mm)	9.5	←
Dimensions (width x depth, mm)	70 x 100	←
Weight (max, g)	102	←
Environmental (operating)		
Shock (half-sine wave)	400G/2ms, 225G/1ms	←
Ambient temperature	0° to 60° C	←
Environmental (non-operating)		
Shock (half-sine wave)	1000G/1 ms	←
Ambient temperature	-40° to 65° C	←
Acoustics (A-weighted sound power)		
Idle (typical, Bels)	2.4	←
Seek (typical, Bels)	2.6	←

HGST Quality and Service

HGST Travelstar hard disk drives are designed to the highest quality standards and contain field-proven components. HGST provides worldwide technical support and integration services to enable global customers to bring their products to market quickly.

How to read the Travelstar model number

HTS727575A9E364 = 750GB, SATA 3Gb/s
H = HGST
T = Travelstar
S = Standard (vs E for Enhanced Availability)
54 = 5400 RPM
10 = Full capacity — 1TB
10 = Capacity this model, 10 = 1TB
(75 = 750GB, 64 = 640GB)
A = Generation code
9 = 9.5mm z-height
E6 = SATA 6Gb/s with 512 emulation
8 = 8MB cache
0 = No encryption (1 = BDE,
5 = TCG Opal Encryption)

[1] One GB is equal to one billion bytes when referring to hard drive capacity. Accessible capacity will vary depending on the operating environment and formatting.
[2] Advanced Format drive: 4K physical sectors with 512 byte emulation
[3] Portion of buffer used for firmware
[4] Excludes command overhead
[5] Designed for low duty cycle, non mission-critical applications in PC, nearline and consumer electronics environments, which vary application to application

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