Data Sheet

Travelstar® Z5K1000

2.5-Inch Mobile 5400 RPM 7.0mm Hard Disk Drives

Highlights

- Up to 1TB[1] of capacity
- Advanced Format, 512-byte emulation
- 6Gb/s SATA interface
- Dual-stage Actuator (DSA)
- Low power consumption
- Halogen-free for eco-friendly design
- Self-encrypting models for data security

Applications/Environments

- Notebook and ultra-portable PCs
- External storage

Industry-leading Capacity in a 7.0mm Mobile Form Factor

Travelstar® Z5K1000 is the third generation 7.0mm, 5400 RPM, 2.5-inch hard drive from HGST, offering 750GB and 1TB capacities. This newest addition to the Travelstar family achieves the industry's highest 7.0mm capacity through an innovative two-disk design in a form factor that typically accommodates only one disk. The Z5K1000 is designed to expand the storage capacity for slim-design notebook PCs, which has been limited to 500GB based on past one-disk design capacities. HGST 7.0mm drives may also be used as direct replacements for standard 9.5mm HDDs in notebook PCs, especially slim-design, and external storage with thinner and more robust device designs. This new drive also leverages Advanced Format, which increases the physical sector size on hard drives from 512byte to 4096(4K) bytes to increase drive capacities and improve error correction capabilities.

The Travelstar Z5K1000 continues to demonstrate HGST's ecological leadership with its halogen-free design and power-efficient operation, and carries the EcoTrac classification. Travelstar Z5K1000 delivers the highest-available mobile capacity with excellent performance to meet the needs of consumers and commercial users in an eco-friendly, rugged design.

Encryption Option

Travelstar Z5K1000 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 with 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.

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 error rate for improved reliability
	Dual-stage Actuator (DSA) technology	Enhanced tracking accuracy in high shock or vibration environments
Performance	Up to 1061Mb/s media transfer rate	Best-of-breed 5400 RPM application performance in PCMark 7 and PCMark Vantage testing
Acoustics	Quiet acoustics	Richer audio-listening experience for music, movies and games
Interface	SATA 6Gb/s	Higher data throughput
Security Option	Bulk Data Encryption and TCG Opal models	Helps guard against data theft

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

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

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HGST Quality and Service

HGST's mobile hard 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

HTS541010A7E630 = 1TB, SATA 6Gb/s

H = HGST
T = Travelstar
S = Standard
54 = 5400 RPM
10 = Full capacity — 1TB
10 = Capacity this model, 10 = 1TB (75 = 750GB)
A = Generation code
7 = 7mm z-height
E6 = SATA interface 6Gb/s with 512 emulation
3 = 32MB cache
0 = No encryption (1 = Bulk data encryption, 5 = TCG Opal Encryption)

Information and Technical Support

www.hgst.com (Main Web site)
www.hgst.com/partners (Partner Web site)

North America

support_usa@hgst.com
Toll free: 1 888 426-5214, Direct: 1 408 717-8087

Asia Pacific

support_ap@hgst.com / 65 6840 9595

EMEA and UK

support_uk@hgst.com / 44 20 7133 0032

Germany

support_uk@hgst.com / 49 6929 993601

Program Support

Partners First Program
channelpartners@hgst.com

[1] One MB is equal to one million bytes, one GB is equal to one billion bytes and one TB equals 1,000GB (one trillion bytes) when referring to hard drive capacity. Accessible capacity will vary from the stated capacity due to formatting and partitioning of the hard drive, the computer's operating system, and other factors.
[2] Advanced Format drive: 4K physical sectors with 512 byte emulation
[3] Portion of buffer used for firmware
[4] Excludes command overhead

Specifications

Models	HTS541010A7E630 HTS541010A7E631 HTS541010A7E635 HTS541075A7E630 HTS541075A7E631 HTS541075A7E635
Configuration	
Interface	SATA 6Gb/s
Capacity (GB)[1]	1TB / 750
Sector size (bytes)[2]	512e
Areal density (max, Gbit/sq.in.)	648
Performance	
Data buffer (MB)[3]	32
Rotational speed (RPM)	5400
Latency average (ms)	5.5
Media transfer rate (max, Mbits/sec)	1061
Interface transfer rate (MB/sec)	600
Seek time Average (typical) ms (read)[4]	13
Track to track (typical) ms (read)	1
Full stroke (typical) ms (read)	25
Reliability	
Load/Unload cycle	600,000
Power	
Requirement	+5VDC (+-5%)
Dissipation (typical) Startup (W, peak, max)	4.5
Seek, (W, average)	1.8
Read/Write, (W, average)	1.6
Performance idle, (W, average)	1.5
Active idle, (W, average)	0.8
Low power idle, (W, average)	0.5
Standby, (W, average)	0.2
Sleep	0.1
Physical size	
Height (max, mm)	7.0
Dimensions (width x depth, mm)	70 x 100
Weight (max, g)	95
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 (Bels, typical)	2.1
Seek (Bels, typical)	2.2

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