

# Travelstar® Z5K500

## 2.5-Inch Mobile 5400 RPM 7mm Hard Disk Drives

### Highlights

- Up to 500GB<sup>1</sup> of capacity on a single disk
- Advanced Format, industry standard 4K sector size
- 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 and ultra-portable PCs
- Tablets
- Compact desktop PCs
- External storage
- Gaming consoles
- Compact video devices
- Blade servers (EA)
- Network routers (EA)
- Video surveillance (EA)

### Rugged, 500GB Single-disk HDD Solution for Slim Mobile Applications

Travelstar® Z5K500 is the second generation 7mm, 5400 RPM 2.5-inch hard drive from HGST, with capacities ranging from 250GB to 500GB and the second generation Advanced Format drive. Advanced Format increases the physical sector size on HDDs from 512 bytes to 4,096 (4K) bytes, which improves drive capacities and error correction capabilities. The 500GB per platter, one-disk models are designed as a direct replacement for standard 9.5mm HDDs, for use in notebook PCs, external storage and gaming consoles, as well as new, thinner and more robust device designs. The Z5K500 carries the EcoTrac classification due to its low power consumption and eco-friendly, halogen-free production. Travelstar Z5K500 delivers the right balance of capacity, power-management and design flexibility to meet the needs of mobile applications.

### Data Security Option

Travelstar Z5K500 is the sixth generation self-encrypting drive (SED) to feature HGST's Bulk Data Encryption (BDE). The SED model encrypts data in real time using protected keys, 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 Z5K500 that deliver 24x7 access to information for data-intensive applications requiring round-the-clock operation. The new thinner profile allows for additional cooling, especially important in dense blade server designs. The Z5K500 provides high capacity, durability and quiet acoustics 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
<b>Capacity</b>	Up to 500GB storage	Up to 125 hours of high-definition video, 500 hours of standard video, 178 movies, 125,000 4-min songs or 250 games *
<b>Power</b>	1.6W read/write power 0.5W low power idle	Low energy use and long battery life for more "unplugged" notebook time
<b>Reliability</b>	400G operating shock 1000G non-operating shock  TrueTrack™ technology	Best protection against bumps and rough handling  Tracking accuracy in high shock or vibration environments
<b>Acoustics</b>	Quiet acoustics	Richer audio-listening experience for music, movies and games
<b>Performance</b>	Up to 1004Mb/s media transfer rate	Fast downloads and excellent application performance**
<b>Interface</b>	SATA 6Gb/s	Fast data throughput
<b>Security Option</b>	Bulk Data Encryption	Helps guard against data theft

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

\*\*In PCMark® Vantage testing



500GB, 320GB and 250GB  
5400 RPM | SATA 6Gb/s



## 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

HTS545050A7E680 = 500GB, SATA 6Gb/s

H = HGST

T = Travelstar

S = Standard (vs E for Enhanced Availability)

54 = 5400 RPM

50 = Full capacity — 500GB

50 = Capacity this model, 50 = 500GB  
(32 = 320GB, 25 = 250GB)

A = Generation code

7 = 7mm z-height

E6 = SATA interface

6Gb/s with 512 emulation

8 = 8MB cache

0 = No encryption (1 = Bulk data encryption,  
5 = TCG Opal Encryption)

### Information and Technical Support

[www.hgst.com](http://www.hgst.com) (Main Web site)

[www.hgst.com/support](http://www.hgst.com/support) (Support Web site)

### Program Support

Partners First Program, [channelpartners@hgst.com](mailto:channelpartners@hgst.com)

[www.hgst.com/partners](http://www.hgst.com/partners) (Partners Web site)

<sup>1</sup> 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.

<sup>2</sup> Advanced Format drive: 4K physical sectors with 512 byte emulation

<sup>3</sup> Portion of buffer used for firmware

<sup>4</sup> Excludes command overhead

<sup>5</sup> Designed for low duty cycle, non mission-critical applications in PC, nearline and consumer electronics environments, which vary application to application

## Specifications

Model # / Part #	Standard Models	EA Models
	HTS545050A7E680 / OJ38065	HTE545050A7E680 / OJ39685
	HTS545050A7E681 / OJ39415	HTE545032A7E680 / OJ39683
	HTS545050A7E685 / OJ43135	
	HTS545032A7E680 / OJ38063	
	HTS545032A7E681 / OJ39413	
	HTS545032A7E685 / OJ43133	
	HTS545025A7E680 / OJ38062	
	HTS545025A7E681 / OJ39412	
	HTS545025A7E685 / OJ43132	
<b>Configuration</b>		
Interface	SATA 6Gb/s	SATA 6Gb/s
Capacity (GB) <sup>1</sup>	500 / 320 / 250	500 / 320
Sector size (bytes) <sup>2</sup>	512e	←
Recording zones	30	←
Areal density (max, Gbit/sq.in.)	630	←
<b>Performance</b>		
Data buffer (MB) <sup>3</sup>	8	←
Rotational speed (RPM)	5400	←
Latency average (ms)	5.5	←
Media transfer rate (max, Mbits/sec)	1004	←
Interface transfer rate (MB/sec)	600	600
Seek time		
Average (typical) ms (read) <sup>4</sup>	13	←
Track to track (typical) ms (read)	1	←
Full stroke (typical) ms (read)	25	←
<b>Reliability</b>		
Load/Unload cycle	600,000	←
Power on hours (POH) per month	N/A	730
Availability <sup>5</sup>	N/A	24x7
<b>Power</b>		
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	← Idle (Avg.)
Active idle, (W, average)	0.8	N/A
Low power idle, (W, average)	0.5	N/A
Standby, (W, average)	0.2	←
Sleep	0.1	←
<b>Physical size</b>		
Height (max, mm)	7	←
Dimensions (width x depth, mm)	70 x 100	←
Weight (max, g)	95	←
<b>Environmental (operating)</b>		
Shock (half-sine wave)	400G/2ms, 225G/1ms	←
Ambient temperature	0° to 60° C	←
<b>Environmental (non-operating)</b>		
Shock (half-sine wave)	1000G/1 ms	←
Ambient temperature	-40° to 65° C	←
<b>Acoustics (A-weighted sound power)</b>		
Idle (typical, Bels)	1.9	←
Seek (typical, Bels)	2.1	←



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