Data Sheet

Travelstar™ Z5K320

2.5-Inch Mobile 5400 RPM 7mm Hard Disk Drives

Highlights

- New 7mm z-height for greater design flexibility
- Up to 320GB[1] of capacity
- Best-of-breed acoustics
- Low power consumption
- Halogen-free for eco-friendly footprint
- 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)

Quiet, Rugged, Low-Power HDD Solution for Mobile Applications

Travelstar™ Z5K320 is a 7mm, 5400 RPM 2.5-inch hard drive with capacities ranging from 160GB to 320GB. The 320GB 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. The Z5K320 also accommodates new thinner and more robust device designs. These models deliver best-of-breed acoustics for near silent operation. Along with continued focus on superior shock protection and low power consumption, HGST leads on the environmental front with its Halogen-free production. HGST offers optional hard-drive-level encryption for increased data security and models with enhanced availability to deliver high-capacity storage for non-stop environments. Travelstar Z5K320 delivers the right balance of capacity, power-management and design flexibility to meet the needs of mobile applications in an eco-friendly footprint.

Data Security Option

Travelstar Z5K320 is the fourth generation to feature optional Bulk Data Encryption (BDE) for hard-drive-level data security. With BDE, the data is scrambled using a key as it is written to the disk, then descrambled with the key as it is retrieved, giving users the highest level of data protection available. It also speeds and simplifies the drive re-deployment process. 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 self-encrypting drives 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 Z5K320 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 Z5K320 provides high capacity, performance and durability 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 320GB storage	Up to 80 hours of high-definition video, 320 hours of standard video, 114 movies, 80,000 4-min songs or 160 games *
Power	1.6W read/write power 0.55W low power idle	Low energy use and long battery life for more "unplugged" notebook time
Reliability	400G operating shock 1000G non-operating shock	Robust design to help protect against bumps and rough handling
	TrueTrack™ technology	Prevents slow performance or errors in high shock or vibration environments
Acoustics	Improved acoustics	Quieter for a richer audio-listening experience for music, movies and games.
Performance	Up to 994Mb/s media transfer rate	Fast downloads and excellent application performance**
Interface	SATA 3Gb/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.
** In PCMark® Vantage testing

320GB, 250GB and 160GB
5400 RPM | SATA 3Gb/s

EcoTrac

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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

HTS543232A7A384 = 320GB, SATA 3Gb/s

H = HGST
T = Travelstar
S = Standard (vs E for Enhanced Availability)
54 = 5400 RPM
32 = Full capacity — 320GB
32 = Capacity this model, 32 = 320GB (25 = 250GB, 16 = 160GB)
A = Generation code
7 = 7mm z-height
A3 = SATA 3Gb/s
8 = 8MB cache
4 = No encryption (1 = Bulk data encryption, 5 = TCG Opal Encryption)

Information and Technical Support

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Program Support

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[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] Portion of buffer used for firmware
[3] Excludes command overhead
[4] Designed for low duty cycle, non mission-critical applications in PC, nearline and consumer electronics environments, which vary application to application

Specifications	Standard Models	EA Models
Models	HTS543232A7A384 HTS543232A7A381 HTS543232A7A385 HTS543225A7A384 HTS543225A7A381 HTS543225A7A385 HTS543216A7A384 HTS543216A7A381 HTS543216A7A385	HTE543232A7A384 HTE543225A7A384
Configuration		
Interface	SATA 3Gb/s	←
Capacity (GB)[1]	320 / 250 / 160	320 / 250
Sector size (bytes)	512	←
Recording zones	24	←
Aerial density (Gbit/sq.in, max)	477	←
Performance		
Data buffer (MB)[2]	8	←
Rotational speed (RPM)	5400	←
Latency average (ms)	5.5	←
Media transfer rate (Mbits/s, max)	994	←
Interface transfer rate (MB/s)	300	←
Seek time Average (typical) ms (read)[3]	13	←
Track to track (typical) ms (read)	1	←
Full stroke (typical) ms (read)	25	←
Reliability		
Load/Unload cycle	600,000	←
Power on hours (POH) per month	N/A	730
Availability[4] (hrs/day x days/wk)	N/A	24x7
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	← Idle (Avg.)
Active idle (W, average)	0.8	N/A
Low power idle (W, average)	0.55	N/A
Standby (W, average)	0.2	←
Sleep	0.1	←
Physical size		
Height (mm, max)	7	←
Dimensions (width x depth, mm)	70 x 100	←
Weight (g, max)	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)	1.9	←
Seek (Bels, typical)	2.0	←

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