

Travelstar™ Z7K320

2.5-INCH HARD DRIVES

HITACHI
Inspire the Next

Low profile, high-performance storage for notebook PCs and mobile applications

Highlights

- > New 7mm z-height for greater design flexibility
- > 7200 RPM high-performance HDD
- > Up to 320GB¹ 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
- > Compact desktop PCs
- > External storage
- > Gaming PCs
- > Compact video devices
- > Blade servers (EA)
- > Network routers (EA)
- > Video surveillance (EA)
- > Compact RAID systems (EA)



320, 250 and 160GB
7200 RPM | SATA 3Gb/s



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 *
Performance	Up to 1334Mb/s media transfer rate	Faster downloads and up to 18% better application performance than 5400 RPM models at same capacity **
Power	1.8W read/write power 0.8W low power idle	Low energy use and long battery life for more "unplugged" notebook time
Reliability	400G operating shock 1000G non-operating shock TrueTrack™ technology	Robust design to help protect against bumps and rough handling 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
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

High-performance, quiet HDD solution for mobile applications

Travelstar™ Z7K320 is the industry's first 7200 RPM, 7mm, 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 compact systems. The Z7K320 offers design flexibility to accommodate new thinner and more robust devices/systems and delivers up to 18% better application performance than 5400 RPM models of the same capacity. Along with continued focus on superior shock protection and low-power consumption, Hitachi delivers best-of-breed acoustics. Hitachi offers optional hard-drive-level encryption for increased data security and models with enhanced availability to deliver high-performance storage for non-stop environments. Travelstar Z7K320 provides the right balance of performance and capacity to meet the multi-tasking needs of commercial and consumer users on the go.

Data security option

Travelstar Z7K320 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 Hitachi representative.

Enhanced Availability (EA)—for 24x7 access to data

Hitachi provides enhanced-availability models of the Travelstar Z7K320 that deliver 24x7 access to information for data-intensive applications requiring round-the-clock operation. The new, slimmer profile provides for additional cooling, especially important in dense blade server designs. The Z7K320 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.

Specifications

Model(s)	Standard models HTS723232A7A364 HTS723225A7A364 HTS723216A7A364	Self-encrypting Models HTS723232A7A361 HTS723225A7A361 HTS723216A7A361 HTS723232A7A365 HTS723225A7A365 HTS723216A7A365	EA Models HTE723232A7A364 HTE723225A7A364
Configuration			
Interface	SATA 3Gb/s	←	←
Capacity (GB) ¹	320 / 250 / 160	←	320 / 250
Sector size (bytes)	512	←	←
Recording zones	24	←	←
Areal density (max, Gbit/sq.in.)	477	←	←
Performance			
Data buffer (MB) ²	16	←	←
Rotational speed (RPM)	7200	←	←
Latency average (ms)	4.2	←	←
Media transfer rate (max, Mbits/sec)	1334	←	←
Interface transfer rate (MB/sec)	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	N/A	←	24x7
Power			
Requirement	+5VDC (+/-5%)	←	←
Dissipation (typical)			
Startup (peak, max)	5.5W	←	←
Seek (average)	2.1W	←	←
Read / Write (average)	1.8W	←	←
Performance idle (average)	1.7W	←	← Idle (Avg.)
Active idle (average)	1.0W	←	N/A
Low power idle (average)	0.8W	←	N/A
Standby (average)	0.2W	←	←
Sleep	0.1W	←	←
Physical size			
Height (max, mm)	7	←	←
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° - 60° C	←	←
Environmental (Non-Operating)			
Shock (half sine wave)	1000G/1 ms	←	←
Ambient temperature	-40° - 65° C	←	←
Acoustics (A-weighted sound power)			
Idle (typical, Bels)	2.3	←	←
Seek (typical, Bels)	2.4	←	←

Hitachi quality and service

Hitachi mobile hard drives are designed to the highest quality standards and contain field-proven components. Hitachi 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

HTS723232A7A364 = 320GB, SATA 3Gb/s

H = Hitachi

T = Travelstar

S = Standard (vs E for Enhanced Availability)

72 = 7200 RPM

32 = Full capacity—320GB

32 = Capacity this model, 32 = 320GB
(25 = 250GB, 16 = 160GB)

A = Generation code

7 = 7mm z-height

A3 = Interface, SATA 3Gb/s

6 = 16MB cache

4 = No encryption (0 = No BDE hardware,

1 = Bulk Data Encryption,

5 = TCG Opal Encryption)

Information and Technical Support

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¹ One GB is equal to one billion bytes when referring to hard drive capacity. Accessible capacity may be less.

² Upper 1568KB out of 16MB 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

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