

# Travelstar™ 5K320

2.5-INCH HARD DRIVES

**HITACHI**  
Inspire the Next

High-capacity storage for notebook PCs and mobile applications

## Highlights

- > Up to 320GB<sup>1</sup> of capacity
- > Low power consumption
- > Serial ATA 3Gb/s
- > Security option: Bulk Data Encryption
- > 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
- > Blade servers (EA)
- > Network routers (EA)
- > Video surveillance (EA)

## Features and Benefits

	Feature / Function	Benefits
<b>Capacity</b>	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 *
<b>Performance</b>	Up to 729Mb/s media transfer rate	Excellent application performance in PCMark Vantage testing
<b>Reliability</b>	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
<b>Power</b>	1.8W read/write power 0.55W low power idle	Long battery life for more “unplugged” notebook time
<b>Acoustics</b>	Quiet acoustics	Richer audio-listening experience for music, movies and games
<b>Interface</b>	SATA 3Gb/s	High data throughput
<b>Security</b>	Bulk Data Encryption (SATA 1.5Gb/s)	Helps guard against data theft

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

## Reliable, high-capacity storage for mobile applications

Travelstar™ 5K320 is a 5400 RPM 2.5-inch hard drive with capacities ranging from 80GB to 320GB. The 160GB per platter one- and two-disk models are designed for use in notebook PCs, set-top boxes, gaming consoles and other mobile applications. The 5K320 raises the standard for hard drive reliability with design enhancements that include altitude-sensing Thermal Fly-height Control (TFC), an improved actuator latch and fourth generation perpendicular magnetic recording (PMR) head technology. Along with the attention to ruggedness, Hitachi continues to deliver excellent performance and low-power leadership. Designed to support the multi-tasking needs of consumers and commercial users balancing mobile computing and movies, music, photos and games on the go, Travelstar 5K320 delivers the right capacity and performance options to meet the needs of IT and consumer electronics manufacturers. Hitachi offers optional hard-drive-level encryption for users looking for increased data security and models with enhanced availability to deliver high-capacity storage for non-stop environments.

## Data security option

Travelstar 5K320 features optional Bulk Data Encryption (BDE) with a SATA 1.5Gb/s interface for hard-drive-level data security. The data is scrambled using a key as it is written to the disk then descrambled with the key as it's retrieved, giving users a higher level of data protection than traditional password-based security previously available. Another benefit is that it 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.

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

Hitachi provides enhanced-availability models that employ specific microcode to allow the Travelstar 5K320 to deliver 24x7 access to data. These models broaden the product line to make it more suitable for data-intensive applications requiring round-the-clock operation. The 5K320 provides high capacity, performance, durability and efficient power utilization on a proven platform for quality and reliability. EA models support the stringent demands of “always-on” applications in lower-transaction environments.



320, 250, 160, 120 and  
80 GB | 5400 RPM  
SATA 3Gb/s and 1.5Gb/s

## Specifications

Model(s)	Standard models	BDE Option Models	EA Models
	HTS543232L9A300	HTS543232L9SA01	HTE543232L9A300
	HTS543225L9A300	HTS543225L9SA01	HTE543225L9A300
	HTS543216L9A300	HTS543216L9SA01	HTE543216L9A300
	HTS543212L9A300	HTS543212L9SA01	HTE543212L9A300
	HTS543280L9A300	HTS543280L9SA01	

  

Configuration	SATA 3Gb/s	SATA 1.5Gb/s	SATA 3Gb/s
Interface			
Capacity (GB) <sup>1</sup>	320 / 250 / 160 / 120 / 80	←	320 / 250 / 160 / 120
Sector size (bytes)	512	←	←
Recording zone	24	←	←
Data heads	4 / 3 / 2 / 2 / 1	←	4 / 3 / 2 / 2
Disks	2 / 2 / 1 / 1 / 1	←	2 / 2 / 1 / 1
Areal density (max, Gbit/sq.in.)	250	←	←

  

Performance	SATA 3Gb/s	SATA 1.5Gb/s	SATA 3Gb/s
Data buffer (MB) <sup>2</sup>	8	←	←
Rotational speed (RPM)	5400	←	←
Latency average (ms)	5.5	←	←
Media transfer rate (max, Mbits/sec)	729	←	←
Interface transfer rate (MB/sec)	300	150	300
Seek time		←	←
Average (typical) ms (read) <sup>3</sup>	12	←	←
Track to track (typical) ms (read)	1	←	←
Full stroke (typical) ms (read)	20	←	←

  

Reliability	SATA 3Gb/s	SATA 1.5Gb/s	SATA 3Gb/s
Load / Unload cycle	600,000	←	←
Power on hours (POH) per month	N/A	←	730
Availability <sup>4</sup>	N/A	←	24x7

  

Power	SATA 3Gb/s	SATA 1.5Gb/s	SATA 3Gb/s
Requirement	+5VDC (+/-5%)	←	←
Dissipation (typical)			
Startup (peak, max)	5.0W	←	←
Seek (average)	2.2W	←	←
Read / Write (average)	1.8W	←	←
Performance idle (average)	1.7W	←	← Idle (Avg.)
Active idle (average)	0.8W	←	N/A
Low power idle (average)	0.55W	←	N/A
Standby (average)	0.2W	←	←
Sleep	0.1W	←	←

  

Physical size	SATA 3Gb/s	SATA 1.5Gb/s	SATA 3Gb/s
Height (mm)	9.5	←	←
Dimensions (width x depth, mm)	70 x 100	←	←
Weight (max, g)	102 // 95	←	←

  

Environmental (Operating)	SATA 3Gb/s	SATA 1.5Gb/s	SATA 3Gb/s
Shock (half sine wave)	400 G/2ms, 200G/1ms	←	←
Ambient temperature	5 - 55° C	←	←

  

Environmental (Non-Operating)	SATA 3Gb/s	SATA 1.5Gb/s	SATA 3Gb/s
Shock (half sine wave)	1000 G/1 ms	←	←
Ambient temperature	-40 - 65° C	←	←

  

Acoustics (A-weighted sound power)	SATA 3Gb/s	SATA 1.5Gb/s	SATA 3Gb/s
Idle (typical, Bels)	2.4	←	←
Seek (typical, Bels)	2.6	←	←

## 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

HTS543232L9A300 = 320GB, SATA 3Gb/s

H = Hitachi

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,

12 = 120GB, 80 = 80GB)

L = Generation code

9 = 9.5mm z-height

A3 = Interface, SATA 3Gb/s (SA = 1.5Gb/s)

0 = Reserved

0 = Feature code, 0 = None (1 = BDE)

### Information and Technical Support

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

[www.hitachigst.com/partners](http://www.hitachigst.com/partners) (Partner Web site)

### North America

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Direct: 1 507 322-2370

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### EMEA and UK

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### Germany

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### Program Support

Partners First™ Program

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

<sup>2</sup> Upper 736KB out of 8MB used for firmware

<sup>3</sup> Excludes command overhead

<sup>4</sup> 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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