

Travelstar™ 5K250

2.5-INCH HARD DISK DRIVES

HITACHI
Inspire the Next

High-capacity notebook PC storage with new data encryption technology

Highlights

- > Capacity range up to 250 GB ¹
- > Highest 5400 RPM application performance in PCMark testing
- > Industry-leading operating shock of 400G
- > Best-of-breed low power consumption
- > Serial ATA 3 Gb/s & 1.5 Gb/s
- > New security option: Bulk Data Encryption

Applications

- > Notebook PCs
- > External storage
- > Gaming consoles
- > Portable video players

Features and Benefits

	Feature / Function	Benefits
Capacity	Up to 250 GB of storage	* Capacity equivalence of 250 hours of video, 89 movies, 62,500 4-min songs or 125 games
Performance	Up to 665 MB/s media transfer rate	10-25% faster application performance than competitive 5400 RPM in PCMark testing
Power	1.8W read/write power 0.55W low power idle	Longer 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 soft error rate for improved reliability and performance
	TrueTrack Technology™	Tracking accuracy in high shock or vibration environments
Acoustics	Quiet acoustics	Richer audio-listening experience for music, movies and games
Interface	SATA 3 Gb/s & 1.5 Gb/s	High data throughput
Security	Bulk Data Encryption option	Helps guard against data loss & piracy

*Actual storage may vary depending on the compression rate applied.



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

Balanced capacity and performance for mobile computing

The Travelstar™ 5K250 is Hitachi's highest capacity, 5400 RPM hard drive for notebook PCs. With more than a 56% capacity improvement and 8% better application performance than its predecessor, this drive is the work horse of the mobile product line. The 5K250 offers a maximum capacity of 250 GB with best-of-breed performance in PCMark testing. Travelstar 5K250, with outstanding power management, delivers the lowest 5400 RPM power consumption, providing longer battery life for notebook users. Hitachi has improved the shock performance of the 5K250 by almost 23% to an industry-leading 400G, enhancing its ability to withstand rough handling. The acoustics have also been improved over the previous generation product, allowing users to enjoy high quality audio on their laptops. In addition, Hitachi offers optional Bulk Data Encryption for users looking for increased data security. Travelstar 5K250 is designed to address the balanced requirements of notebook PC and mobile computing users – high capacity, ruggedness, power-efficiency and speed.

Bulk Data Encryption

Travelstar 5K250 is Hitachi's first 5400 RPM product with optional hard drive-level Bulk Data Encryption to help guard against data loss and piracy. This new technology, where data is scrambled using a key as it is written to the disk then descrambled with the key as it's retrieved, gives users a higher level of data protection than traditional password-based security available today. An additional benefit of Bulk Data Encryption is speeding and simplifying 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-erasure.

Specifications

Model(s)	HTS542525K9A300 HTS542516K9A300 HTS542512K9A300 HTS542580K9A300	HTS542525K9SA00 HTS542516K9SA00 HTS542512K9SA00 HTS542580K9SA00
Interface	SATA 3 Gb/sec	SATA 1.5 Gb/sec
Capacity (GB) ¹	250 / 160 / 120 / 80	←
Sector size (bytes)	512	←
Recording zones	24	←
Data heads (physical)	4 / 3 / 2 / 2	←
Data disks	2 / 2 / 1 / 1	←
Max. areal density (Gbits/sq. inch)	205	←
Performance		
Data buffer (MB) ²	8	←
Rotational speed (RPM)	5400	←
Latency average (ms)	5.5	←
Media transfer rate (Mbits/sec, max)	665	←
Interface Transfer Rate (MB/sec, max)	300	150
Seek time (read, typical) (avg. ms) ³	11	←
Track to track (read, typical) (avg. ms)	1	←
Full stroke	20	←
Reliability		
Load/unload	600,000	←
Power		
Requirement	+5 VDC (+ -5%)	←
Startup (W, peak, max.)	5.0	←
Seek (W, avg.)	2.2	←
Read / Write (W, avg.)	1.8	←
Performance idle (W, avg.)	1.7	←
Active idle (W, avg.)	0.8	←
Low power idle (W, avg.)	0.55	←
Standby (W, avg.)	0.2	←
Sleep (W)	0.1	←
Physical size		
z-height (mm)	9.5 mm	←
Dimensions (width x depth, mm)	70 x 100	←
Weight (max, g)	102 // 95	←
Environmental (Operating)		
Shock (half-sine wave)	400G / 2ms, 200G / 1ms	←
Ambient temperature	5 to 55° C	←
Environmental (Non-operating)		
Shock (half-sine wave)	1000G / 1ms	←
Ambient temperature	-40 to 65° C	←
Acoustics (A-weighted sound power)		
Idle (typical)	2.4	←
Seek (typical)	2.6	←

¹ One GB is equal to one billion bytes; accessible capacity may be less

² Upper 736KB out of 8MB used for firmware

³ Excludes command overhead

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Hitachi quality and service

Hitachi Travelstar mobile hard disk 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

HTS542525K9A300 = 250 GB, SATA 3 Gb/s

H = Hitachi

T = Travelstar

S = Standard (vs C for Compact)

54 = 5400 RPM

25 = Full capacity — 250 GB

25 = Capacity this model, 25 = 250 GB

(16 = 160 GB, 12 = 120 GB, 80 = 80 GB)

K = Generation code

9 = 9.5mm z-height

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

0 = Reserved

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