

Travelstar™ 7K500

2.5-INCH HIGH-PERFORMANCE HARD DRIVES

HITACHI
Inspire the Next

High-performance storage for notebook PCs with optional data encryption technology

Highlights

- > Proven fifth-generation technology
- > Up to 500GB¹ of capacity
- > Low power consumption
- > Highest operating shock
- > Halogen-free for eco-friendly footprint
- > Serial ATA 3Gb/s
- > Encryption options; newest conforms to Trusted Computing Group (TCG) – Opal specification
- > Enhanced-availability (EA) models for applications needing around-the-clock access in lower-transaction environments

Applications / Environments

- > Notebook PCs
- > Gaming PCs
- > Compact desktop systems
- > Small-form-factor video devices
- > Blade servers (EA)
- > Network routers (EA)
- > Video surveillance (EA)
- > Compact RAID systems (EA)



500, 320, 250, 160 and 120GB
7200 RPM | SATA 3Gb/s



Features and Benefits

	Feature / Function	Benefits
Capacity	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 *
Performance	Up to 1245Mb/s media transfer rate	Outstanding application performance in PCMark® Vantage testing
Reliability	400G operating shock 1000G non-operating shock	Industry-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
Power	1.8W read/write power 0.2W standby power	Long battery life for more “unplugged” notebook time
Acoustics	Quiet acoustics	Nearly inaudible operation
Interface	SATA 3Gb/s	High data throughput
Security	Bulk Data Encryption	Helps guard against data theft

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

High-performance mobile storage without sacrificing capacity or power

Travelstar™ 7K500 is the industry’s only fifth-generation 7200 RPM 2.5-inch hard drive with capacities ranging from 120GB to 500GB, matching Hitachi 5400 RPM capacities. The 250GB per platter one- and two-disk models deliver up to 56% higher capacity and 16% better application performance than its predecessor. Hitachi provides best-of-breed operating shock and outstanding power management in Travelstar 7K500 for sturdy unplugged notebook performance. With its halogen-free production and low power consumption, the 7K500 carries the Hitachi EcoTrac classification. Designed to support the high-performance needs of multi-tasking commercial users and consumers on-the-go, Travelstar 7K500 offers speed without sacrificing battery life, capacity or audio quality. 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.

Encryption and TCG Opal specification

Travelstar 7K500 features optional Bulk Data Encryption (BDE), now with a 3Gb/s SATA interface, for hard-drive-level data security. A new encryption model of the 7K500 conforms to the Trusted Computing Group Opal specification, supporting industry standardization. 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. It also speeds and simplifies the drive re-deployment process. By deleting the encryption key, the data is rendered unreadable, thereby eliminating the need for time-consuming data-overwrite.

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

Hitachi offers enhanced-availability models that employ specific microcode to allow the Travelstar 7K500 to provide 24x7 access to data. These models broaden the product line to make it more suitable for data-intensive applications requiring around-the-clock operation. The 7K500 provides high performance, capacity, 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.

Specifications

Model(s)	Standard models	BDE Option Models	EA Models
	HTS725050A9A364 HTS725032A9A364 HTS725025A9A364 HTS725016A9A364 HTS725012A9A364	HTS725050A9A365 HTS725032A9A365 HTS725025A9A365 HTS725016A9A365 HTS725012A9A365	HTE725050A9A364 HTE725032A9A364 HTE725025A9A364 HTE725016A9A364
Configuration			
Interface	SATA 3Gb/s	←	←
Capacity (GB) ¹	500 / 320 / 250 / 160 / 120	←	500 / 320 / 250 / 160
Sector size (bytes)	512	←	←
Recording zones	24	←	←
Areal density (max, Gbit/sq.in.)	370	←	←
Performance			
Data buffer (MB) ²	16	←	←
Rotational speed (RPM)	7200	←	←
Latency average (ms)	4.2	←	←
Media transfer rate (max, Mbits/sec)	1245	←	←
Interface transfer rate (MB/sec)	300	←	←
Seek time		←	←
Average (typical) ms (read) ³	12	←	←
Track to track (typical) ms (read)	1	←	←
Full stroke (typical) ms (read)	20	←	←
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)	2.0W	←	←
Read / Write (average)	1.8W	←	←
Performance idle (average)	1.7W	←	← Idle (Avg.)
Active idle (average)	1.0W	←	N/A
Low power idle (average)	0.69W	←	N/A
Standby (average)	0.2W	←	←
Sleep	0.1W	←	←
Physical size			
Height (mm)	9.5	←	←
Dimensions (width x depth, mm)	70 x 100	←	←
Weight (max, g)	115 / 95	←	←
Environmental (Operating)			
Shock (half sine wave)	400 G/2ms, 225 G/1ms	←	←
Ambient temperature	5° - 55° C	←	←
Environmental (Non-Operating)			
Shock (half sine wave)	1000 G/1 ms	←	←
Ambient temperature	-40° - 65° C	←	←
Acoustics (A-weighted sound power)			
Idle (typical, Bels)	2.5	←	←
Seek (typical, Bels)	2.8	←	←

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

HTS725050A9A364 = 500GB, SATA 3Gb/s

H = Hitachi

T = Travelstar

S = Standard (vs E for Enhanced Availability)

72 = 7200 RPM

50 = Full capacity—500GB

50 = Capacity this model, 50 = 500GB

(32 = 320GB, 25 = 250GB,

16 = 160GB, 12 = 120GB)

A = Generation code

9 = 9.5mm z-height

A3 = Interface, SATA 3Gb/s (SA = 1.5Gb/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 830KB 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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The EcoTrac symbol identifies Hitachi hard drives that deliver on the principles of lower operating costs, safer product disposal and a more sustainable environment.

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