Data Sheet

Travelstar™ 7K500

2.5-Inch Mobile 7200 RPM 9.5mm Hard Disk Drives

Highlights

- Proven fifth-generation technology
- Up to 500GB[1] of capacity
- Low power consumption
- Highest operating shock
- Halogen-free for eco-friendly footprint
- Serial ATA 3Gb/s
- Encryption options for data security
- 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)

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 HGST 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. HGST 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 HGST 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. HGST 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 Option

Travelstar 7K500 features optional Bulk Data Encryption (BDE), now with a 3Gb/s SATA 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. 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. For information about the 7K500 encryption model designed to the Trusted Computing Group Opal specification, please contact your HGST representative.

Enhanced Availability (EA)—for 24x7 Access to Data

HGST 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.

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 1254Mb/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 0.7W low power idle	Low energy use and long battery life for more "unplugged" notebook time
Acoustics	Quiet acoustics	Nearly inaudible operation
Interface	SATA 3Gb/s	High 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.



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

EcoTrac

HGST
a Western Digital company

HGST Quality and Service

HGST Travelstar hard disk 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

HTS725050A9A364 = 500GB, SATA 3Gb/s

H = HGST
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
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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Program Support

Partners First Program
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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] 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

Specifications	Standard Models	EA Models
Models	HTS725050A9A364 HTS725050A9A361 HTS725032A9A364 HTS725032A9A361 HTS725025A9A364 HTS725025A9A361 HTS725016A9A364 HTS725016A9A361 HTS725012A9A364 HTS725012A9A361	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	←
Aerial density (Gbit/sq.in, max)	370	←
Performance		
Data buffer (MB)[2]	16	←
Rotational speed (RPM)	7200	←
Latency average (ms)	4.2	←
Media transfer rate (Mbits/s, max)	1245	←
Interface transfer rate (MB/s)	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		
Startup (W, peak, max)	5.5	←
Seek (W, average)	2.0	←
Read/Write (W, average)	1.8	←
Performance idle (W, average)	1.7	← Idle (Avg.)
Active idle (W, average)	1.0	N/A
Low power idle (W, average)	0.7	N/A
Standby (W, average)	0.2	←
Sleep (W)	0.1	←
Physical size		
Height (mm, max)	9.5	←
Dimensions (width x depth, mm)	70 x 100	←
Weight (g, max)	115 / 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)	2.5	←
Seek (Bels, typical)	2.8	←

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