Travelstar™ 5K500.B

2.5-Inch Mobile 5400 RPM
9.5mm Hard Disk Drives

Highlights

- Up to 500GB[1] of capacity
- Lowest power consumption in its class
- Halogen-free for eco-friendly footprint
- Serial ATA 3Gb/s
- Security: Bulk Data Encryption option
- 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)

Reliable, High-Capacity Storage for Mobile Applications

Travelstar™ 5K500.B, a 5400 RPM, 250GB/platter, 2.5-inch hard drive with capacities ranging from 120GB to 500GB, is designed for use in notebook PCs, external storage, gaming consoles and other mobile applications. The 5K500.B demonstrates HGST's ecological leadership with its halogen-free production and focus on low power consumption, and carries the EcoTrac classification. The 5K500.B elevates hard drive reliability with the industry's first Iterative Detection Read Channel for improved signal processing. HGST offers optional hard-drive-level encryption for increased data security and enhanced availability models to deliver high-capacity storage for non-stop environments. Travelstar 5K500.B delivers the balance of capacity, ruggedness and low-power to meet the needs of consumers and commercial users in an eco-friendly footprint.

Encryption Option

Travelstar 5K500.B features 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 is rendered unreadable, thereby eliminating the need for time-consuming data-overwrite.

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

HGST provides enhanced availability models that allow the Travelstar 5K500.B to deliver 24x7 access to data for data-intensive applications requiring round-the-clock operation. The 5K500.B provides high capacity, durability and low 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 *
Power	1.4W read/write power 0.5W low power idle	Lowest energy use and long battery life for more "unplugged" notebook time
Reliability	400G operating shock 1000G non-operating shock	Best protection against bumps and rough handling
	Altitude-sensing Thermal Fly-height Control (TFC	Better soft error rate for improved reliability
	TrueTrack™ technology	Tracking accuracy in high shock or vibration environments
Performance	Up to 875Mb/s media transfer rate	Excellent application performance in PCMark® Vantage Testing
Acoustics	Quiet acoustics	Richer audio-listening for music, movies and games
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
5400 RPM | SATA 3Gb/s

EcoTrac

HGST
a Western Digital company

Travelstar™ 5K500.B

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

HTS545050B9A300 = 500GB, SATA 3Gb/s

- H = HGST
- T = Travelstar
- S = Standard (vs E for Enhanced Availability)
- 54 = 5400 RPM
- 50 = Full capacity — 500GB
- 50 = Capacity this model, 50 = 500GB (32 = 320GB, 25 = 250GB, 16 = 160GB, 12 = 120GB)
- B = Generation code
- 9 = 9.5mm z-height
- A3 = SATA 3Gb/s
- 0 = Reserved
- 0 = Feature code (0 = No BDE hardware, 1 = Bulk data encryption)

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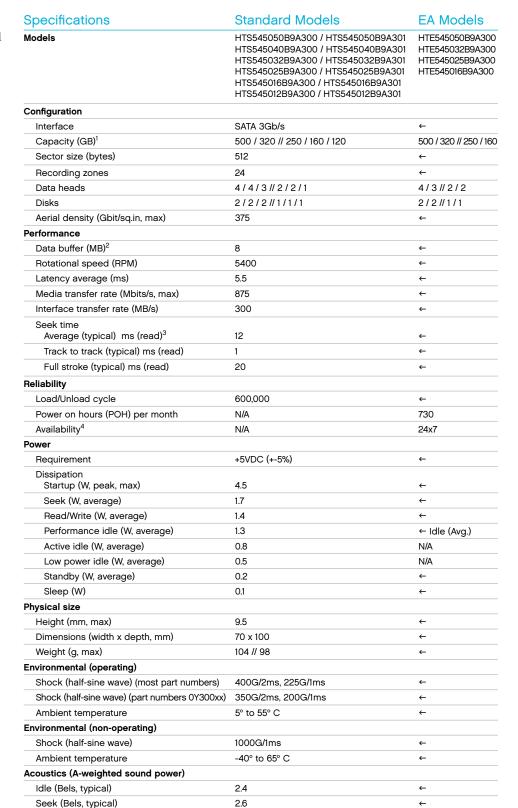support__ap@hgst.com / 65 6840 9595

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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	HTS545050B9A300 / HTS545050B9A301 HTS545040B9A300 / HTS545040B9A301 HTS545032B9A300 / HTS545032B9A301 HTS545025B9A300 / HTS545025B9A301 HTS545016B9A300 / HTS545016B9A301 HTS545012B9A300 / HTS545012B9A301	HTE545050B9A300 HTE545032B9A300 HTE545025B9A300 HTE545016B9A300
Configuration		
Interface	SATA 3Gb/s	←
Capacity (GB)[1]	500 / 320 // 250 / 160 / 120	500 / 320 // 250 / 160
Sector size (bytes)	512	←
Recording zones	24	←
Data heads	4 / 4 / 3 / 2 / 2 / 1	4 / 3 / 2 / 2
Disks	2 / 2 / 2 // 1 / 1 / 1	2 / 2 // 1 / 1
Aerial density (Gbit/sq.in, max)	375	←
Performance		
Data buffer (MB)[2]	8	←
Rotational speed (RPM)	5400	←
Latency average (ms)	5.5	←
Media transfer rate (Mbits/s, max)	875	←
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)	4.5	←
Seek (W, average)	1.7	←
Read/Write (W, average)	1.4	←
Performance idle (W, average)	1.3	← Idle (Avg.)
Active idle (W, average)	0.8	N/A
Low power idle (W, average)	0.5	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)	104 // 98	←
Environmental (operating)		
Shock (half-sine wave) (most part numbers)	400G/2ms, 225G/1ms	←
Shock (half-sine wave) (part numbers 0Y300xx)	350G/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 (Bels, typical)	2.4	←
Seek (Bels, typical)	2.6	←

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