

Travelstar™ E5K500

2.5-INCH HARD DISK DRIVES

HITACHI
Inspire the Next

Enhanced Availability, high-capacity storage for 24 x 7 access to data

Highlights

- > Up to 500 GB¹ of capacity
- > 3-disk configuration with 12.5mm z-height
- > Rotational Vibration Safeguard
- > Frugal on power consumption
- > Serial ATA 3 Gb/s
- > Designed for applications needing around-the-clock access in lower transaction environments

Applications

- > Blade servers
- > Multi-drive systems
- > Point-of-sale terminals
- > Network routers
- > Video surveillance

Features and Benefits

	Feature / Function	Benefits
Capacity	Up to 500 GB of storage	High-capacity storage in a 2.5" package Capacity equivalence of 500 hrs of video*
Performance	Rotational Vibration Safeguard	Compensates for vibration & shock effects to maintain performance
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
	TrueTrack Technology™	Tracking accuracy in high shock or vibration
Power	1.9W read/write power	Comparable profile to 2-disk models
Acoustics	Quiet acoustics	Nearly inaudible operation
Interface	SATA 3 Gb/s	High data throughput

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



500 & 400 GB | 5400 RPM
SATA 3 Gb/s

Highest-capacity storage for high availability applications

Hitachi is first to introduce a 500 GB, 5400 RPM 2.5-inch hard drive with enhanced availability. Travelstar™ E5K500 uses a three-disk design to deliver up to 500 GB of capacity. This new drive is extremely energy-efficient, with a power profile nearly identical to its 2-disk predecessor, the Travelstar E5K250. Designed to address the needs for high-capacity storage in non-stop applications, the E5K500 is well-suited for blade servers and other multi-drive environments. Travelstar E5K500 delivers the features, design innovations and technologies to address around-the-clock access to data in lower transaction environments.

Technology and design innovation

Travelstar E5K500 is Hitachi's fourth-generation mobile drive to use perpendicular magnetic recording technology to deliver breakthrough capacity and reliability. Multi-drive or rack systems present an additional challenge for drive stability and performance. These systems can inadvertently experience vibrations within the system enclosure. To mitigate any adverse impact on system performance, the Travelstar E5K500 is the first mobile drive to feature Hitachi patented Rotational Vibration Safeguard (RVS) technology. RVS serves as an "early warning" system for the drive, enabling it to sense a possible disturbance in advance and take the necessary steps to stabilize the drive head and maintain performance.

Around-the-clock data operation

Hitachi employs specific firmware enhancements to allow the Travelstar E5K500 to deliver 24 x 7 access to data. These models broaden the product line to make it more suitable for data-intensive applications requiring round-the-clock operation. Travelstar E5K500 provides leadership capacity, performance, durability and power utilization on a proven platform for quality and reliability. The E5K500 can support the stringent demands of "always-on" applications in lower transaction environments.

Specifications

Model(s)	HTE545050KTA300 HTE545040KTA300
Interface	SATA 3 Gb/sec
Capacity (GB) ¹	500 / 400
Sector size (bytes)	512
Recording zones	24
Data heads (physical)	6
Data disks	3
Max. areal density (Gbits/sq. inch)	260 / 211
Performance	
Data buffer (MB) ²	8
Rotational speed (RPM)	5400
Latency average (ms)	5.5
Media transfer rate (Mbits/sec, max)	824 / 775
Interface Transfer Rate (MB/sec, max)	300
Seek time (read, typical) (avg. ms) ³	12
Track to track (read, typical) (avg. ms)	1
Full stroke	20
Reliability	
Load/unload	600,000
Power on hours (POH) per month	730
Availability ⁴ (hrs/day x days/wk)	24 x 7
Power	
Requirement	+5 VDC (+ -5%)
Startup (W, peak, max.)	5.0
Seek (W, avg.)	2.3
Read / Write (W, avg.)	1.9
Idle (W, avg.)	1.8
Standby (W, avg.)	0.2
Sleep (W)	0.1
Physical size	
z-height (mm)	12.5 mm
Dimensions (width x depth, mm)	70 x 100
Weight (max, g)	148
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
Acoustics (A-weighted sound power)	
Idle (typical)	2.2
Seek (typical)	2.4

¹ One GB is equal to one billion bytes when referring to hard drive capacity; accessible capacity may be less

² Upper 951.3KB out of 8MB used for firmware

³ Excludes command overhead

⁴ Intended for low duty cycle, non mission-critical applications in PC, nearline, and consumer electronics environments, which vary from application to application

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Hitachi quality and service

Hitachi Travelstar 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

HTE545050KTA300 = 500 GB, SATA 3 Gb/s

H = Hitachi

T = Travelstar

E = Enhanced Availability (vs S for Standard)

54 = 5400 RPM

50 = Full capacity — 500 GB

50 = Capacity this model, 50 = 500 GB
(40 = 400 GB)

K = Generation code

T = 12.5mm z-height

A3 = Interface, SATA 3 Gb/s

0 = Reserved

0 = Reserved

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