

Travelstar™ E5K160

2.5-INCH HARD DISK DRIVES

HITACHI
Inspire the Next

Enhanced Availability (EA) models for 24 x 7 access to data

Highlights

- > High reliability mobile drive using perpendicular magnetic recording (PMR)
- > 80GB/platter, with capacities up to 160GB
- > Best-in-class for low-power utilization
- > Outstanding performance
- > PATA and SATA models
- > Designed for applications needing around-the-clock access in lower transaction environments

Applications

- > Blade servers
- > Network routers
- > Point-of-sale terminals
- > Web hosting
- > Video surveillance



160, 120, 80, 60GB | 5400 RPM
PATA and SATA 1.5Gb/s

Features and Benefits

	Feature / Function	Benefits
Capacity	Up to 160GB of storage	* Capacity equivalence of 160 hours standard video, 57 movies, 40,000 4-min songs or 80 video games
Performance	540Mb/s media transfer rate	Best 5400 RPM application performance based on PCMark testing
Reliability	325G operating shock 1000G non-operating shock	Exceptional ruggedness to withstand tougher handling and improve portability
	Advanced PMR head and media technology	Excellent soft error rate for improved performance Outstanding anti-corrosion properties
	IrMnCr read head	Better performance and reliability in harsh conditions
	Thermal Fly-height Control (TFC)	Better soft error rate for improved reliability
Power	Industry-leading power consumption	Systems design with minimal current draw
Acoustics	Fluid Dynamic Bearing (FDB) motors	Quiet operation
Interface	PATA	ATA-6
	SATA	NCQ, Hot Plug, Staggered Spin-up, Link Power Management™ and Asynchronous Notification.

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

New technology exceeds expectations

Travelstar™ 5K160, designed for demanding data-access applications, leverages Hitachi's perpendicular magnetic recording (PMR) to deliver superior technology and reliability. Hitachi employs specific microcode to allow the Travelstar E5K160 to deliver 24 x 7 access to data. With capacities up to 160GB, industry-leading performance, low-power consumption and excellent shock resistance, the E5K160 can support the stringent demands of "always-on" applications in lower transaction environments. The improved electronics design reduces the power consumption of this 5400 RPM drive to 10% below its industry-leading predecessor, and the E5K160 runs cooler than the competition. Hitachi has also implemented Thermal Fly-height Control (TFC) for improved error rates, and iridium-manganese-chromium (IrMnCr) read heads for improved reliability. This combination of attributes enables the Travelstar E5K160 to address the needs for rugged, reliable storage in non-stop environments.

Reliability leadership

With the transition to PMR technology, Travelstar E5K160 demonstrates reliability that parallels or exceeds conventional longitudinal technology.** Hitachi has successfully integrated second-generation PMR head and media technology with a new read channel and IrMnCr read heads by leveraging new materials, complex processes, tools and testing. This, combined with the proven storage technologies of award-winning Travelstar products, allows Hitachi to deliver high capacity hard drives suitable for around-the-clock applications in small space environments.

** Based on internal stress and reliability testing.

Specifications

Model(s)	HTE541616J9AT00 HTE541612J9AT00 HTE541680J9AT00 HTE541660J9AT00	HTE541616J9SA00 HTE541612J9SA00 HTE541680J9SA00 HTE541660J9SA00
Interface	ATA-6	Serial ATA 1.5Gb/s
Capacity (GB) ¹	160 / 120 / 80 / 60	←
Sector size (variable, Bytes/sector)	512	←
Recording zones	24	←
Data heads (physical)	4 / 4 / 2 / 2	←
Data disks	2 / 2 / 1 / 1	←
Max. areal density (Gbits/sq. in.)	131.5	←
Performance		
Data buffer (MB) ²	8	←
Rotational speed (RPM)	5400	←
Latency average (ms)	5.5	←
Media transfer rate (Mbits/sec, max)	540	←
Interface transfer rate (MB/sec, max)	100 Ultra DMA mode-5 16.6 PIO mode-4	150
Seek time (read, typical) (avg. ms) ³	11	←
Reliability		
Load/unload	600,000	←
Power on hours (POH) per month	730	←
Availability ⁴ (hrs/day x days/wk)	24x7	←
Power		
Requirement	+5 VDC (+/-5%)	←
Startup (W, peak, max.)	5.0	←
Read / Write (W, avg.)	1.8	←
Idle (W, avg.)	2.0	←
Standby (W, avg.)	0.2	0.25
Sleep (W)	0.1	0.2
Physical size		
z-height (mm)	9.5	←
Dimensions (width x depth, mm)	70 x 100	←
Weight (g, typ.)	102 / 102 / 95 / 95	←
Environmental (operating)		
Ambient temperature	5° to 55° C	←
Shock (half-sine wave)	325G (2ms), 160G (1ms)	←
Environmental (non-operating)		
Ambient temperature	-40° to 65° C	←
Shock (half-sine wave)	1000G (1ms)	←
Acoustics (A-weighted sound power)		
Idle (Bels, typ.)	2.5 / 2.5 / 2.2 / 2.2	←
Op (Bels, typ.)	2.7 / 2.7 / 2.4 / 2.4	←

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

² Upper 445KB of buffer capacity used for drive 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

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.

Hitachi drives are backed by an array of technical support and services, which may include customer and integration assistance. Hitachi is dedicated to providing a breadth of hard disk drive solutions to satisfy all of today's demanding computing needs.

How to read the Travelstar model number

HTE541616J9AT00 = 160GB/8 MB buffer

H = Hitachi

T = Travelstar

E = Enhanced Availability (vs S for Standard)

54 = 5400 RPM

16 = Full capacity — 160GB

16 = Capacity this model, 16 = 160GB

(12 = 120GB, 80 = 80GB, 60 = 60GB)

J = Generation code

9 = 9.5mm z-height

AT = ATA interface (SA = Serial ATA)

0 = Reserved

0 = Reserved

Information and Technical Support

www.hitachigst.com (Main Web site)

www.hitachigst.com/partners (Partner Web site)

North America

support_usa@hitachigst.com

Toll free: 1 888 426-5214, Direct: 1 507 322-2370

Asia Pacific

support_ap@hitachigst.com / 65 6840 9595

EMEA and UK

support_uk@hitachigst.com / 44 20 7133 0032

Germany

support_uk@hitachigst.com / 49 6929 993601

Program Support

Partners First™ Program

channelpartners@hitachigst.com

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3403 Yerba Buena Road
San Jose, CA 95135 USA

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