

Hitachi Travelstar® 5K100

2.5-INCH HARD DISK DRIVES



100GB, 80GB, 60GB, and 40GB | 5400 RPM | ATA-6 and SATA 1.5Gb/sec

Setting new standards in mobile

Highlights

- > Best in class for low power consumption
- > Industry-leading non-op and operating shock
- > Unprecedented load/unload durability at 600,000 cycles
- > Parallel and Serial ATA interfaces on all models
- > RoHS compliant

Raising the bar of design

The Travelstar 5K100 is Hitachi's centerpiece 5400 RPM offering in its comprehensive line-up of 2.5-inch hard drives. With capacities ranging from 100 to 40GB, industry-leading durability, quiet operation and superior power utilization, the 5K100 provides a winning combination of characteristics needed by mobile applications. Added to this is a blazing fast sustained data rate that exceeds other 5400 RPM 2.5-inch choices by up to 48 percent. Hitachi's unique Enhanced Adaptive Battery Life Extender™ (ABLE) design gives the 5K100 series its leadership in power utilization, enabling the 5K100 to consume as much as 67 percent less power than other drives in its class. Enhancements to the mechanical design establish a new standard in ruggedness with Hitachi doubling the specification for load/unload to an unprecedented 600,000 cycles.

Applications

- > Notebook and tablet PCs
- > Compact desktop systems
- > External storage solutions
- > Video editing and surveillance
- > Portable multimedia players
- > Gaming consoles

Features and benefits

	Feature / Function	Benefits
Capacity	Up to 100GB of storage	*Capacity equivalent to 100 hours of standard TV or 11.5 hours of HDTV, 40 hours of professional audio, or 25,000 4-minute songs
Performance	493 Mb/sec media transfer rate	Best of class performance in Windows applications; up to 48% faster than other
	Optimized caching	5400 RPM choices
Reliability	300G operating shock 1000G non-operating shock	Exceptional ruggedness to withstand tougher handling and harsh environments
	600,000 load/unload cycles	Double the industry standard Reduces disk wear and protects user data
	Enhanced Error Correction Code (ECC)	Improved data integrity
Acoustics	Fluid Dynamic Bearing Motors (FDB)	Almost inaudible operation
Power	0.60W low power idle Enhanced Adaptive Battery Life Extender™ (ABLE)	Industry-leading power management implementation for low power consumption and longer battery life
Interface	Parallel ATA	Mainstream and legacy operations
	Serial ATA	With NCQ, Hot Plug, Staggered Spin-up, Link Power Management™ and Asynchronous Notification

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

Next generation solutions

The 5K100 series is available with either the Parallel ATA or Serial ATA interface. The native SATA implementation offers throughput at 1.5 Gb/sec and supports Native Command Queuing (NCQ), Hot Plug, Staggered Spin-up, Link Power Management™, and other SATA extension features to meet the design requirements of forward-looking single drive systems as well as advanced multiple drive architectures.

Hitachi quality and service

Hitachi Travelstar hard disk drives are designed to the highest quality standards and contain field-proven components to provide superior quality products backed by Hitachi warranty. Hitachi provides worldwide technical support and services to enable global customers to speed their time to market.

Hitachi Travelstar® 5K100

Product Model names	Travelstar 5K100	Travelstar 5K100
	HTS541010G9AT00	HTS541010G9SA00
	HTS541080G9AT00	HTS541080G9SA00
	HTS541060G9AT00	HTS541060G9SA00
	HTS541040G9AT00	HTS541040G9SA00

Specifications

Configuration	Parallel ATA	Serial ATA
Interface	ATA-6	Serial ATA 1.5Gb/s
Capacity (GB) ¹	100 / 80 / 60 / 40	←
Sector size (Bytes)	512	←
Recording zones	16	←
Data heads (physical)	4 / 4 / 3 / 2	←
Data disks	2 / 2 / 2 / 1	←
Max. areal density (Gbits/sq. inch)	86 / 70 / 70 / 70	←

Performance

Data buffer (MB) ²	8	←
Rotational speed (RPM)	5400	←
Latency average (ms)	5.5	←
Media transfer rate (Mbits/sec, max)	493	←
Interface transfer rate (MB/sec, max)	100 Ultra DMA mode-5 16.6 PIO mode-4	150

Seek time (read, typical)

Average (ms)	12	←
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Reliability

Load/Unload cycle	600,000	←
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Power

Requirement	+5VDC (+/-5%)	←
Dissipation (Typical)		←
Startup (peak, max.)	5.0W	←
Read (avg.)	2.0W	←
Write (avg.)	2.0W	←
Active idle (avg.)	0.85W	1.2W
Low power idle (avg.)	0.60W	0.85W
Standby (avg.)	0.2W	0.4W
Sleep	0.1W	0.2W

Physical Size

Height (mm)	9.5	←
Width (mm)	70	←
Depth (mm)	100	←
Weight - typical (g)	102 / 102 / 102 / 95	←

Environmental characteristics

Operating		
Ambient temperature	5° to 55° C	←
Shock (half sine wave)	300 G / 2ms, 160G / 1ms	←
Non-operating		
Ambient temperature	-40° to 65° C	←
Shock (half sine wave)	1000 G / 1 ms	←
Acoustics (A-Weighted Sound Power (Bels))		
Idle (typ.)	2.5 / 2.5 / 2.5 / 2.2	←
Op (typ.)	2.7 / 2.7 / 2.7 / 2.4	←
RoHS compliant ³	yes	←

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

² Upper 417KB reserved for firmware

³ RoHS refers to the European Union Directive 2002/95/EC on the restriction of certain hazardous substances in electrical and electronic equipment.

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How to read the Travelstar model number

HTS541010G9AT00 = 100GB/8MB

H = Hitachi

T = Travelstar

S = Standard (E = Enhanced Availability)

54 = 5400 RPM

10 = Full capacity - 100GB

10 = Capacity this model 10 = 100GB (80 = 80GB, 60 = 60GB, 40 = 40GB)

G = Generation code

9 = 9.5mm z - height

AT = ATA interface (SA = Serial ATA interface)

0 = Reserved

0 = Reserved

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