

## Hitachi Travelstar™ 5K120

### 2.5-INCH HARD DISK DRIVES



120GB, 100GB, 80GB and 60GB | 5400 RPM | ATA-6 and SATA 1.5Gb/sec

Additional capacity options for notebook PC hard drives

#### Highlights

- > 60GB per platter, capacities up to 120GB
- > Based on proven technology
- > Improved power utilization
- > Improved performance
- > PATA and SATA models

#### Applications

- > Notebook systems
- > External storage
- > Gaming consoles
- > Portable video players

#### Expanded capacity with proven technology

Hitachi delivers the Travelstar 5K120, a 2.5-inch, 5400 RPM hard drive based on proven technology. The 5K120 is a 60GB per platter product, offering storage capacities from 60 to 120GB. Travelstar 5K120 improves on the already best-of-breed low-power consumption of its predecessor while delivering improved performance. This drive brings together optimum design and parts commonality with a common manufacturing process to the Travelstar 4K120, which facilitates an evolutionary transition. Hitachi has also implemented iridium-manganese-chromium heads (IrMnCr) for improved reliability. Travelstar 5K120 is targeted at portable computing applications where the key capacity requirements fall within 60 and 120 GB. Hitachi has expanded its 5400 RPM line-up to satisfy the mobile storage needs of OEM and distribution customers.

#### Features and Benefits

	Feature / Function	Benefits
Capacity	Up to 120GB of storage 60GB, 80GB, 100GB models	*Capacity equivalent of 120 hours standard video, 43 movies, 30,000 4-min songs, or 60 games
Performance	510Mb/sec media transfer rate	Excellent application performance based on PCMark 05 testing
Reliability	300G operating shock 1000G non-operating shock	Exceptional ruggedness to withstand tougher handling and improve portability
	600,000 load/unload cycles	Protects user data
	IrMnCr read head	Better performance and reliability
Acoustics	FDB motor & design enhancements	Barely audible operation
Power	0.55W low power idle (PATA) Enhanced Adaptive Battery Life Extender™ (ABLE)	Industry-leading power management implementation low-power and longer battery life
Interface	Parallel ATA	ATA-6
	Serial ATA	Supports Native Command Queuing (NCQ)

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

#### Category leadership

Hitachi has the broadest mobile product line in the industry. Travelstar 5K120 is its newest 2.5-inch hard drive based on reliable longitudinal magnetic recording technology. Hitachi has led the industry in driving portability with its focus on lowering power consumption, making drives operate more quietly and improving performance and shock robustness to support the most demanding applications. The 5K120 continues that tradition while offering another capacity range option. Travelstar 5K120 delivers the critical attributes to address mobile computing needs of the most demanding users.

#### 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 Travelstar 5K120

Product Model names	Travelstar 5K120	Travelstar 5K120
	HTS541212H9AT00	HTS541212H9SA00
	HTS541210H9AT00	HTS541210H9SA00
	HTS541280H9AT00	HTS541280H9SA00
	HTS541260H9AT00	HTS541260H9SA00

### Specifications

Configuration	Parallel ATA	Serial ATA
Interface	ATA-6	Serial ATA 1.5 Gb/s
Capacity (GB) <sup>1</sup>	120 / 100 / 80 // 60	←
Sector size (Bytes)	512	←
Recording zones	24	←
Data heads (physical)	4 / 4 / 3 // 2	←
Data disks	2 / 2 / 2 // 1	←
Max. areal density (Gbits/sq. inch)	104 / 87 / 94 // 104	←
<b>Performance</b>		
Data buffer (MB) <sup>2</sup>	8	←
Rotational speed (RPM)	5400	←
Latency average (ms)	5.5	←
Media transfer rate (Mbits/sec, max)	510	←
Interface transfer rate (MB/sec, max)	100 Ultra DMA mode-5 16.6 PIO mode-4	150
Seek time (read, typical)		
Average (ms)	11	←
<b>Reliability</b>		
Load/Unload cycle	600,000	←
<b>Power</b>		
Requirement	+5VDC (+-5%)	←
Dissipation (Typical)		
Startup (peak, max.)	5.0W	←
Read (avg.)	1.8W	1.9W
Write (avg.)	1.8W	1.9W
Active idle (avg.)	0.75W	0.85W
Low power idle (avg.)	0.55W	0.65W
Standby (avg.)	0.2W	0.28W
Sleep	0.1W	0.2W
<b>Physical Size</b>		
Height (mm)	9.5	←
Width (mm)	70	←
Depth (mm)	100	←
Weight - max (g)	102 / 102 / 102 // 95	←
<b>Environmental characteristics</b>		
<b>Operating</b>		
Ambient temperature	5° to 55° C	←
Shock (half sine wave)	300 G / 2ms, 160G / 1ms	←
<b>Non-operating</b>		
Ambient temperature	-40° to 65° C	←
Shock (half sine wave)	1000 G / 1 ms	←
<b>Acoustics (A-Weighted Sound Power (Bels))</b>		
Idle (typ.)	2.5 // 2.2	←
Op (typ.)	2.7 // 2.4	←
RoHS compliant <sup>3</sup>	yes	←

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

<sup>2</sup> Upper 428KB reserved for firmware

<sup>3</sup> RoHS refers to the European Union Directive 2002/95/EC on the restriction of certain hazardous substances in electrical and electronic equipment. Information provided to show consistency with European industry standards.

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### How to Read the Travelstar Model Number

**HTS541212H9AT00** = 120GB/8MB

**H** = Hitachi

**T** = Travelstar

**S** = Standard (E = Enhanced Availability)

**54** = 5400 RPM

**12** = Full capacity – 120GB

**12** = Capacity this model 12 = 120GB (10 = 100GB, 80 = 80GB, 60 = 60GB)

**H** = Generation code

**9** = 9.5mm z-height

**AT** = ATA interface (SA = Serial ATA interface)

**0** = Reserved

**0** = Reserved

### For more information:

Internet:

> [www.hitachigst.com](http://www.hitachigst.com) (Main Web site)

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