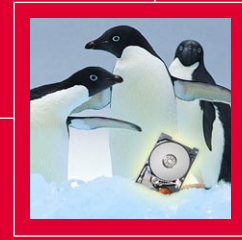


## Hitachi Travelstar® 4K120

### 2.5-INCH HARD DISK DRIVES



120GB, 100GB, 80GB, 60GB and 40GB | 4200 RPM | ATA-7

Most power-efficient, super cool operation

#### Highlights

- > Performance that rivals other 4200 RPM mobile drives
- > Coolest operation
- > Optimum power efficiency with Enhanced ABLE™ and HiVERT™
- > Industry-leading robustness in both non-op and operating shock
- > Parallel ATA-7 with option for A/V streaming
- > RoHS compliant

#### Applications

- > Notebook PCs
- > External storage solutions
- > Free-to-air Set Top Boxes
- > Digital jukeboxes
- > Entry-level DVR and PVR devices

#### Extending the concept of cool

The Travelstar 4K120 extends Hitachi's hard drive leadership with a series of hard drives offering storage capacities of 120GB to 40GB which set new standards for power efficiency and heat dissipation. The two-platter 120GB drive consumes up to 178% less power than other 4200 RPM drives through a combination of Enhanced Adaptive Battery Life Extender™ (ABLE) and Hitachi Voltage Efficiency Regulator Technology™ (HiVERT)— innovations invented by Hitachi. This directly results in longer battery and service life of the Travelstar drive as well as the host system supported. While lower power is usually associated with reduced performance, Hitachi maintains its high standard for performance with a 16% boost in sustained data throughput from its previous generation 4200 RPM

drives, to provide a winning combination of high capacity, cool and quiet operation, performance, as well as superior shock tolerance on a proven platform for quality and reliability.

#### Enhanced storage options

The Travelstar 4K120 is the first 2.5-inch hard drive to utilize the ATA/ATAPI-7 standard as well as the AV Streaming Command Set, trademarked by Hitachi as Smooth Stream™ Technology. Hitachi introduced Smooth Stream on its 3.5-inch Deskstar 7K400 product line and now incorporates that industry-leading expertise in Travelstar drives. When Smooth Stream is enabled, the Travelstar 4K120 offers cooler and quieter operation for challenging A/V environments that require less power, noise or a smaller footprint. Hitachi enhances the storage options available for consumer electronics devices that require high quality audio and video at maximum value with the Travelstar 4K120.

#### Features and Benefits

	Feature / Function	Benefits
Capacity	120GB, 100GB, 80GB, 60GB, 40GB	Highest capacity available in 4200 RPM with broad range of capacity options
Performance	Up to 380Mb/sec media transfer rate Optimized cache	Performance that surpasses other 4200 RPM drives
Reliability	300G operating shock 1000G non-operating shock	Exceptional tolerance of rough handling and improved durability
	600,000 load/unload cycles	Minimizes disk wear and protects user data
	TrueTrack Technology™	Tracking accuracy in high shock or vibration environments
Acoustics	Fluid Dynamic Bearing Motors (FDB)	Barely audible operation
Power	High Voltage Efficiency Regulator Technology™ (HiVERT)	Increases power efficiency and reduces heat emission for longer battery usage and enhanced service life
	Enhanced Adaptive Battery Life Extender™ (ABLE)	Maximizes power utilization while maintaining performance for optimum user experience
Interface	Parallel ATA-7	Mainstream legacy applications
	Smooth Stream™ Technology ready	Optional feature for A/V applications

#### Hitachi quality and service

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

## Hitachi Travelstar® 4K120

Product	Travelstar 4K120
Model names	HTS421212H9AT00 HTS421210H9AT00 HTS421280H9AT00 HTS421260H9AT00 HTS421240H9AT00

<b>Specifications</b>	
Configuration	PATA
Interface	ATA-7
Capacity (GB) <sup>1</sup>	120 / 100 / 80 // 60 / 40
Sector size (Bytes)	512
Recording zones	24
Data heads (physical)	4 / 4 / 3 // 2 / 2
Data disks	2 / 2 / 2 // 1 / 1
Max. areal density (Gbits/sq. inch)	98

<b>Performance</b>	
Data buffer (MB) <sup>2</sup>	8 // 2
Rotational speed (RPM)	4200
Latency average (ms)	7.1
Media transfer rate (Mbits/sec, max)	380
Interface transfer rate (MB/sec, max)	100 Ultra DMA mode-5 16.6 PIO mode-4
Seek time (read, typical)	
Average (ms)	11
Track to track (ms)	1.0 R / 1.1 W
Full stroke (ms)	20 R / 21 W

<b>Reliability</b>	
Load/Unload cycle	600,000

<b>Power</b>	
Requirement	+5VDC (+-5%)
Dissipation (Typical)	
Startup (peak, max.)	4.5W
Seek	1.7W
Read (avg.)	1.4W
Write (avg.)	1.4W
Performance idle (avg.)	1.25W
Active idle (avg.)	0.65W
Low power idle (avg.)	0.45W
Standby (avg.)	0.15W
Sleep	0.1W

<b>Physical Size</b>	
Height (mm)	9.5
Width (mm)	70
Depth (mm)	100
Weight - max (g)	99 // 95

<b>Environmental characteristics</b>	
<b>Operating</b>	
Ambient temperature	5° to 55° C
Shock (half sine wave)	300 G / 2ms
<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.)	2.3 // 2.0
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.

## Hitachi Global Storage Technologies



### For more information:

Internet:

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

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

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> 65 6840 9595 (Asia Pacific)

> 44 20 7133 0032 (EMEA and UK)

> 49 6929 993601 (Germany)

### How to Read the Travelstar Model Number

**HTS421212H9AT00** = 120GB/8MB

**H** = Hitachi

**T** = Travelstar

**S** = Standard

**42** = 4200 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

**0** = Reserved

**0** = Reserved

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