

Designed for mobile computing excellence. Industry-leading capacity, 80GBs at 5400RPMs.

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## Hitachi Travelstar 5K80 2.5-inch hard disk drive

### Highlights

- ▶ Capacities range from 20 to 80GB, 5400rpm, ATA-6 hard disk drive
- ▶ Offers high-capacity and high-performance with an 80GB, 9.5mm hard drive.
- ▶ Travelstar 5K80 provides areal densities of up to 70Gbits/sq.inch
- ▶ Providing operational shock rating of up to 200Gs (2ms)



### Driving technology for today's mobile hard disk drives

The Hitachi Travelstar 5K80 series is a 9.5mm high, 5400 RPM, 2.5-inch mobile hard disk drive ideal for today's data-intensive business needs. The Travelstar 5K80 brings a new generation of 5400 RPM mobile solutions to the long legacy of the Travelstar family of hard disk drives.

This next generation of mobile hard disk drives provides a design which combines years of research and development with award-winning technology including; Antiferromagnetically-coupled (AFC) technology "pixie dust", Giant Magnetoresistive (GMR) heads, Fluid Dynamic Bearing (FDB) motor technology, Partial Response Maximum Likelihood (PRML) digital channel, head load/unload technology, Enhanced Adaptive Battery Life Extender™ (ABLE) 3.0, and an ATA/100 interface. With this design, the Travelstar 5K80 provides the storage capacity, performance, power management, quality

and acoustics required by demanding computing/application requirements.

The new Travelstar 5K80 reaches areal densities of up to 70Gbits/ per square inch written on each disk. This feat was achieved by adding another layer of "Pixie Dust" - or in more technical terms, another ruthenium/magnetic layer to create a five-layer sandwich called laminated "Pixie Dust". These additional layers bring even higher thermal stability to the media, allowing data recording at ultra-high densities while maintaining data-integrity.

### Performance, quality and reliability

Designed to meet the demanding needs of today's data-intensive requirements, the Travelstar 5K80 leverages proven technologies such as True Track Servo, which eases system integration, enhances hard disk drive reliability, and adds robustness against vibration and disk shift, Drive Fitness Test™ (DFT), and S.M.A.R.T. (Self-Monitoring Analysis and Reporting)

technology which is designed to enable a hard drive to predict impending catastrophic failure.

As a result of the award-winning combination of technology designed into the Hitachi Travelstar 5K80 series of hard disk drives, they are suitable for demanding, high-capacity internet, digital audio and video editing, video streaming, and real-time multimedia applications - whether users are in the office or on the road.

### Innovation. Capability. Commitment.

Three reasons why Hitachi Global Storage Technologies is positioned to inspire and lead the evolution of storage technologies: *Hitachi quality, support, and service.*

The Hitachi Travelstar mobile hard disk drives share common field-proven components to provide manufacturers with superior quality hard drives backed by Hitachi warranty and technical support and services.

## Hitachi family of Travelstar 5K80 hard disk drives specifications

**Product name** Travelstar 5K80

Model name HTS548080M9AT00, HTS548060M9AT00  
HTS548040M9AT00, HTS548020M9AT00

### Configuration

Interface	ATA-6
Capacity (GB)	80/60/40/20
Sector size (bytes)	512
Recording zones	16
Data heads	4/3/2/1
Disks	2/2/1/1
Max. areal density (Gbits/sq.inch)	70

### Performance

Data buffer (MB) <sup>1</sup>	8
Rotational speed (rpm)	5,400
Latency (average ms)	5.5
Max. media transfer rate (Mbits/sec)	450
Max. interface transfer rate (MB/sec)	100MB/sec Ultra DMA mode-5 16.6MB/sec PIO mode-4
Seek time (ms)	
Average (typical)	12
Track to track (typical)	2.5
Full stroke (typical)	23

### Reliability

Error rate (non-recoverable)	< 1 per 10 <sup>13</sup> bits transferred
Load/unload cycle	300,000

### Power

Requirement	+5VDC(±5%)
Dissipation (typical)	
Startup (max. peak)	5.0W
Seek (average)	2.6W
Read (average)	2.5W
Write (average)	2.5W
Performance idle (average)	2.0W
Active idle (average)	1.3W
Low power idle (average)	0.85W
Standby (average)	0.25W
Sleep	0.1W
Power consumption efficiency (watts/GB)	0.011/0.014/0.024/0.043

### Physical size

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

### Environmental characteristics

#### Operating

Ambient temperature	5° to 55° C
Relative humidity (non-condensing)	8% - 90%
Maximum wet bulb (non-condensing)	29.4° C
Shock (half sine wave)	200Gs (2ms)
Vibration	
Random (RMS)	0.67G (5 - 500Hz)
Sine wave	1G (5 - 500Hz)

#### Non-operating

Ambient temp	-40° to 65° C
Relative humidity (non-condensing)	5% - 95%
Maximum wet bulb (non-condensing)	40° C
Shock (half sine wave)	800G/1ms
Vibration (sine wave)	5.0G (22 - 500Hz)

### Acoustics (A-Weighted Sound Power (Bels))

Idle (typical)	2.5/2.5/2.1/2.1
Op (typical)	2.9/2.9/2.6/2.6
Idle (maximum)	2.7/2.7/2.4/2.4
Op (maximum)	3.1/3.1/2.8/2.8

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### For more information

#### Internet and e-mail:

- [www.hgst.com](http://www.hgst.com)
- [support\\_usa@hgst.com](mailto:support_usa@hgst.com)

#### Hitachi hard drive product information:

- 1 888 426-5214
- 507-286-5825

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Hitachi Global Storage Technologies  
5600 Cottle Road  
San Jose, CA 95193

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