

Designed for mobile computing excellence: industry-leading capacity and acoustics

HITACHI
Inspire the Next

Hitachi Travelstar 80GN 2.5-inch hard disk drive

Highlights

- ▶ **Capacities from 80 to 20GB, 4200rpm, ATA-6 hard disk drive**
- ▶ **80GN offers high capacity and high performance in the industry with an 80GB, 9.5mm hard drive.**
- ▶ **80GN provides areal densities of up to 70Gbits/sq.inch, yielding up to 40GB of capacity per disk**
- ▶ **All models contain Fluid Dynamic Bearing (FDB) motor technology for industry-leading idle and operating acoustic performance**
- ▶ **Travelstar leverages latest laminated Antiferromagnetically-coupled (AFC) media, also known as “pixie dust”**
- ▶ **Travelstar provides operational shock rating of up to 200Gs (2ms)**

Leading-edge technology

The Hitachi Travelstar 80GN is a 9.5mm high, 4200 rpm, 2.5-inch mobile hard disk drive. The Travelstar 80GN brings a 26th generation addition to the long line of Travelstar family drives.

The innovative hard drive design combines AFC Media, Fluid Dynamic Bearing (FDB) motor technology, Giant Magnetoresistive (GMR) heads, 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 80GN provides exceptional quietness, storage capacity, performance, power management and quality required by today's demanding notebook systems.

The new Travelstar 80GN breaks current areal density records by allowing up to 70Gbits/ per square inch to be written on each disk. This was achieved by adding another coating of “Pixie Dust”—or an additional 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.

As a result, the Hitachi Travelstar drives are suitable for demanding, high-capacity Internet, digital audio, video streaming, and real-time multimedia applications—whether users are in the office or on the road.

Performance and reliability

The Hitachi Travelstar 80GN hard drive uses proven storage technologies such as TrueTrack Servo, Drive Fitness Test™ (DFT), Self-Monitoring Analysis, and Reporting Technology (S.M.A.R.T.), as well as an adaptive control device that helps maintain high performance and fast seek times at high environmental temperatures.

Advanced mobile systems

The Travelstar 40GNX redefined state-of-the-art storage for mobile computing. The reduced acoustics, high speeds, and capacities of Hitachi Travelstar drives support superior digital content creation

Hitachi Travelstar hard disk drive characteristics

Feature	Benefit
26th generation of Travelstar hard drives	Hitachi Travelstar 80GN has the industry-leading performance to enable mobile users to work with a new range of emerging storage-intensive applications.
Drive Noise Suppression System (DNSS) <ul style="list-style-type: none">Fluid Dynamic Bearing (FDB) motors on all models	Hitachi Travelstar 80GN incorporates state-of-the-art noise suppression technology for industry-leading quiet operation.
Fast Ultra-DMA 100 2.5-inch mobile hard drives	Hitachi Travelstar 80GN features industry-standard high data transfer rates to help ensure ultimate performance.
High max areal density of 70Gbits/sq. inch up to 40GB of capacity per disk	Hitachi Travelstar 80GN maximizes areal density resulting in to enable more data storage per disk in standard compact packages.
Operational shock rating of (200Gs/2ms) for a 2.5-inch mobile hard drive	Hitachi Travelstar 80GN provides exceptional ruggedness to help withstand shock during read/write operations.
Antiferromagnetically-coupled (AFC) media on all models	The Hitachi Travelstar family incorporates AFC "pixie dust" technology, allowing for higher areal density.

capabilities, higher quality digital audio and video, and significantly faster processing for data-intensive multimedia and Internet applications.

By using one of the new Travelstar drives in a laptop system, you can unchain your multimedia studio from the desktop, enabling high-end multimedia creativity as mobile as your imagination

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 Travelstar 80GN: 9.5mm, 4,200rpm, 80GB ATA-6 hard disk drive¹

Hitachi family of Travelstar 80GN hard disk drives specifications

Product name	Travelstar 80GN	Travelstar 80GN	Travelstar 80GN
Model name	IC25N080ATMR04	IC25N040ATMR04	IC25N020ATMR04
Configuration			
Interface	ATA-6	ATA-6	ATA-6
Capacity (GB)	80	40	20
Sector size (bytes)	512	512	512
Recording zones	16	16	16
Data heads	4	2	1
Disks	2	1	1
Max. areal density (Gbits/sq.inch)	70	70	70
Performance			
Data buffer (MB) ²	8	2	2
Rotational speed (rpm)	4,200	4,200	4,200
Latency (average ms)	71	71	71
Max. media transfer rate (Mbits/sec)	350	350	350
Max. interface transfer rate (MB/sec)	100MB/sec Ultra DMA mode-5	100MB/sec Ultra DMA mode-5	100MB/sec Ultra DMA mode-5
Seek time (ms)			
Average (typical)	12	12	12
Track to track (typical)	2.5	2.5	2.5
Full stroke (typical)	23	23	23
Power			
Requirement	+5VDC(±5%)	+5VDC(±5%)	+5VDC(±5%)
Dissipation (typical)			
Startup (max. peak)	4.7 W	4.7 W	4.7 W
Seek (average)	2.3 W	2.3 W	2.3 W
Read (average)	2.1 W	2.0 W	2.0 W
Write (average)	2.2 W	2.1 W	2.1 W
Performance idle (average)	1.85 W	1.85 W	1.85 W
Active idle (average)	0.95 W	0.85 W	0.85 W
Low power idle (average)	0.65 W	0.65 W	0.65 W
Standby (average)	0.25 W	0.25 W	0.25 W
Sleep	0.1 W	0.1 W	0.1 W
Power consumption efficiency (watts/GB)	0.008	0.016	0.033
Physical size			
Height (mm)	9.5	9.5	9.5
Width (mm)	70	70	70
Depth (mm)	100	100	100
Weight (g)	99	95	95
Environmental characteristics			
Operating			
Ambient temperature	5° to 55° C	5° to 55° C	5° to 55° C
Relative humidity (non-condensing)	8% - 90%	8% - 90%	8% - 90%
Maximum wet bulb (non-condensing)	29.4° C	29.4° C	29.4° C
Shock (half sine wave)	200Gs (2ms)	200Gs (2ms)	200Gs (2ms)
Vibration (RMS)			
Random (RMS)	0.67G (5 - 500Hz)	0.67G (5 - 500Hz)	0.67G (5 - 500Hz)
Swept sine	1G 0-P (5 - 500Hz)	1G 0-P (5 - 500Hz)	1G 0-P (5 - 500Hz)
Non-operating			
Ambient temp	-40° to 65° C	-40° to 65° C	-40° to 65° C
Relative humidity (non-condensing)	5% - 95%	5% - 95%	5% - 95%
Maximum wet bulb (non-condensing)	40° C	40° C	40° C
Shock (half sine wave)	800Gs/1ms	800Gs/1ms	800Gs/1ms
Vibration (random (RMS))	3.01G (5 - 500Hz)	3.01G (5 - 500Hz)	3.01G (5 - 500Hz)
Acoustics (A-Weighted Sound Power (Bels))			
Idle (typical)	2.3	2.0	2.0
Op (typical)	2.7	2.4	2.4
Idle (maximum)	2.6	2.3	2.3
Op (maximum)	2.9	2.6	2.6

For more information

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