

Increased capacity and exceptional performance provide desktop equivalency for mobile computing solutions



IBM Travelstar 8GS

Highlights

Desktop equivalency

The highest available storage capacity of 8.1 and 6.4 GB and superior performance provide desktop equivalency in a premium notebook computer.

Advanced design

An advanced electro-mechanical design reduces disk spacing—five disks are stacked in only 17 mm—to provide an industry-leading capacity of 8.1 GB.

Performance leadership

An industry-leading media transfer rate (max. 1076 Mbits/sec), a 512 KB data buffer, 4900 RPM, and an Ultra DMA interface transfer rate of 33.3 MB/sec help meet demanding application requirements.

Superior power management

Enhanced Adaptive Battery Life Extender™ 2.0 power management technology includes Performance Idle, Active Idle, and Low Power Idle modes. It selects the appropriate mode to minimize power usage and increase battery life.

Integrated Lead Suspension

An innovative new technology, Integrated Lead Suspension (ILS), reduces the number of moving parts and helps improve drive reliability.

Rugged design

Industry-leading 17 mm shock ratings of 400 G/2 ms (non-operating) and 125 G/2 ms (operating) help increase reliability.

Leading drive technology

With its ability to quickly access large amounts of data with its performance-optimized design and superior capacity of 8.1 and 6.4 GB, the Travelstar 8GS provides outstanding performance on the go for premium notebook computing. The Travelstar 8GS is ideally suited for the increased demands of integrated image, video, Internet/intranet, and multimedia applications in a mobile computing environment. The Travelstar 8GS provides enough capacity for users to load CD applications onto the drive and run them on the go.

To provide this high level of performance, the Travelstar 8GS employs proven IBM technology. Magnetoresistive Extended (MRX) advanced head technology increases areal density, thereby reducing the number of disks and heads required to provide each capacity point. The MRX head technology increases areal density to over 3 Gbits/square inch, and its pico slider enables more disk surface to be read.

IBM's proven head Load/Unload technology enables the use of smooth disks, allowing lower fly height that results in higher areal density. No-ID™ sector formatting also increases storage capacity by eliminating the overhead caused by the duplicate storage of each data sector's ID field. The Partial Response Maximum Likelihood (PRML) digital channel enables higher areal densities, significantly contributing to the drive's overall capacity and performance. In addition, S.M.A.R.T. (Self-Monitoring Analysis and Reporting

Technology) protocol support improves data availability by alerting the system of impending drive failure.

All of these innovative IBM technologies enable the Travelstar 8GS to provide the exceptional capacity, performance, power management, shock resistance, and reliability required by today's premium notebooks.

IBM quality and service

The Travelstar 8GS is backed by a three-year warranty and a wide range of technical support and services, which may include qualification support and integration assistance. This comprehensive support package helps ensure that IBM customers can continue to develop and manufacture high-quality, cost-effective systems.



Travelstar 8GS 2.5-inch 8.1 GB, 17 mm hard disk drive

Travelstar 8GS 2.5-inch 8.10 and 6.48 GB full-height disk drives at a glance DYLA-28100/26480

Configuration	Interface	ATA-3		
	Capacity	8.10/6.48 GB ¹		
	Sector size	512 Bytes		
	Recording zones	8		
	User cylinders	8320		
	Data heads	10/8		
	Disks	5/4		
	Areal density (max)	3.09 Gbits/sq. in.		
	Recording density (max)	221.0 KBPI		
	Track density	14 KTPI		
Performance	Data buffer	512 KB ²		
	Rotational speed	4900 RPM		
	Latency (average)	6.1 ms		
	Media transfer rate	107.6 to 64.6 Mbits/sec		
	Interface transfer rate	33.3 MB/sec Ultra DMA, Mode-2; 16.6 MB/sec PIO, Mode-4		
	Seek time (typical read)			
	Average	12 ms		
	Track-to-track	4 ms		
Full-track	23 ms			
Reliability	Error rate (non-recoverable)	≤ 1 per 1.0 E13 bits transferred		
	Load/unload cycles	300,000 ³		
Power	Power requirement	+5VDC (±5%)		
	Dissipation (typical) ⁴			
	Startup (max peak)	5.0W	Performance idle (avg.)	2.0W
	Seek (avg.)	2.6W	Active idle (avg.)	1.3W
	Read (avg.)	2.5W	Low power idle (avg.)	0.85W
	Write (avg.)	2.7W	Standby (avg.)	0.3W
			Sleep	0.1W
	Power consumption efficiency ⁵	0.0001 Watts/MB		
Physical size	Height	17 mm		
	Width	70 mm		
	Depth	100 mm		
	Weight (max)	182 g		
Environmental characteristics		Operating	Non-operating	
	Ambient temp	5 to 55° C	-40 to 65° C	
	Relative humidity	8 % to 90 %	5 % to 95 %	
	Maximum wet bulb	29.4° C	40° C	
	Shock (half sine wave)	125 G/2 ms	400 G/2 ms	
	Vibration (random(RMS))	0.67 G (5 to 500 Hz)	3.01 G (5 to 500 Hz)	
	(Swept sine)	1 G 0-P (5 to 500 Hz)		
Warranty	3 years			

¹ 1 GB = 1,000,000,000 Bytes; 1 MB = 1,000,000 Bytes

² Upper 53 KB used for firmware

³ With controlled power off

⁴ Dissipation is reduced by the Enhanced Adaptive Battery Life Extender

⁵ Idle power dissipation/formatted capacity

General product information for other IBM hard disk drive products is available by calling 1 800 IBM-7777 and asking for Dept. Star 30 (outside of North America, call 1 416 383-5161 or fax 1 905 316-4733). Information is also available via the Internet (www.storage.ibm.com/oem) or fax.

You can contact IBM's TECHFAX system by dialing 1 415 855-4773 from a touch tone phone. (International callers must call from a phone connected to a fax machine.) Follow the voice prompts to receive a TECHFAX directory.

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