

2.5 inch ATA-5 hard disk drives
Capacities: 20, 30, 40, & 60 GB.

HITACHI
Inspire the Next

Hitachi Travelstar DK23EA /DK23EB hard disk drives

Highlights

- ▶ *20,30,40 or 60 GB 4200 RPM in 9.5mm high package for maximum capacity slimline portable applications*
- ▶ *20 and 40 GB 5400 RPM in 9.5mm high package for applications that require increased performance*
- ▶ *250G/2ms operating shock*
- ▶ *ATA-5 interface with 2048kB read/write cache*
- ▶ *Ultra DMA mode 5 (100 MB/s max.) supported*
- ▶ *GMR head and ME²PRML read channel technology*
- ▶ *3-bit RISC microprocessor, shock sensor, S.M.A.R.T.*
- ▶ *Fluid Dynamic Bearing Motors for improved acoustic and shock characteristics*



Hitachi Travelstar DK23EA and DK23EB hard disk drives specifications

Product name	Travelstar DK23EA	Travelstar DK23EB
Model number	DK23EA-60, DK23EA-40, DK23EA-30, DK23EA-20	DK23EB-40, DK23EB-20
Performance		
Interface	ATA-5	ATA-5
Capacity (GB)	60/40/30/20	40/20
Sector size (bytes)	512	512
Number of cylinders	42,0091	42,091
Disks	2/2/1/1	2/1
Data heads	4/3/2/2	4/2
Seek Time (nominal)		
1 track (ms)	3	3
Average (ms)	13	13
Full track (ms)	24	24
Average latency (ms)	71	56
Rotational speed (RPM)	4,200	5,400
Read technology	ME ² PRML, ID-less format	ME ² PRML, ID-less format
Internal transfer rate (MB/s)	22.1 – 42.8/19.4 – 37.1/22.1 – 42.8/19.4–37.1	278 – 44.1
Recording density (Max.(Mtpm))	28.6/25.4/28.6/25.54	24.1
Track density (Mtpm)	2.76	2.48
Interface transfer rate	100MB/sec Ultra DMA mode-5 16.6MB/sec PIO mode-4	100MB/sec Ultra DMA mode-5 16.6MB/sec PIO mode-4
Data buffer (MB) ¹	2	2
Physical size		
Height (mm)	9.5	9.0
Width (mm)	70	70
Depth (mm)	100	100
Weight (g)	95/95/91/91	95/91
Power		
Requirement	+5VDC(±5%)	+5VDC(±5%)
Dissipation (typical)		
Seek (max. peak)	0.45	0.45
Spin up (average)	0.90	0.90
Idle (average)	0.14	0.17
Read/Write (average)	0.40	0.42/0.40
Sleep (average)	0.02	0.02
Stand-by (average)	0.03	0.03
Temperature		
Operating	5° to 55° C (41° to 131° F)	5° to 55° C (41° to 131° F)
Non-operating	-40° to 70° C (140° to 158° F)	-40° to 70° C (140° to 158° F)
Reliability		
Error rate (non-recoverable)	< 1 per 10 ¹³ bits transferred	< 1 per 10 ¹³ bits transferred
Preventive Maintenance	Non required	Non required
Environmental characteristics		
Relative humidity		
Operating	5% - 90%	5% - 90%
Non-operating	5% - 95%	5% - 95%
Maximum wet bulb (non-condensing)		
Operating	29° C (84.2° F)	29° C (84.2° F)
Non-operating	40° C (140° F)	40° C (140° F)
Shock (half sine wave)		
Operating	2,450m/s ² (250G) or less (2ms)	2,450m/s ² (250G) or less (2ms)
Non-operating	7,840m/s ² (800G) or less (2ms)	7,840m/s ² (800G) or less (2ms)
Vibration		
Operating	1G (22 - 500Hz)	1G (22 - 500Hz)
Non-operating	5G (22 - 500Hz)	5G (22 - 500Hz)
Acoustic noise (Bels)		
Idle (typical)	2.4	2.8
Seek	3.1	3.1

HITACHI
Inspire the Next

Hitachi Global Storage Technologies

For more information

Internet and e-mail:

- www.hgst.com
- N. America: support_usa@hgst.com
- EMEA: support_uk@hgst.com
- Asia Pacific: support_ap@hgst.com

Hitachi hard drive product information:

- US: 1 888 426-5214
- For a complete list of worldwide phone numbers, visit www.hgst.com/support

© Copyright Hitachi Global Storage Technologies 2003

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

Produced in the United States
5/03, revised 7/03
All rights reserved

¹ Space reserved for firmware

Travelstar™ is a trademark of
Hitachi Global Storage Technologies.

Other product names are trademarks or registered
trademarks of their respective companies.

Adaptive Battery Life Extender, and Drive Fitness Test
are trademarks of Hitachi Global Storage Technologies.

References in this publication to Hitachi Global Storage
Technologies products, programs or services do not
imply that Hitachi Global Storage Technologies intends
to make these available in all countries in which Hitachi
Global Storage Technologies operates.

Product information is provided for information pur-
poses only and does not constitute a warranty.

Information is true as of the date of publication and is
subject to change. Actual results may vary.

This publication is for general guidance only.

Photographs may show design models.