

High-capacity storage for handheld digital products  
at an affordable price

**HITACHI**  
Inspire the Next<sup>1</sup>

## Hitachi Microdrive 3K4 digital media

### Highlights

- ▶ **High-capacity, removable storage of up to 4GB in a one-inch hard drive**
- ▶ **Industry standard CF+\*\* Type II format and compatible with PC Card Type II using an adapter**
- ▶ **Reliable storage for data, photos, music, and videos from digital cameras, PDAs, handheld PCs, MP3 digital audio players, laptops and other portable handheld devices**
- ▶ **Incorporates leading-edge Hitachi technologies such as giant magnetoresistive (GMR) head technology, Femto sliders, load/unload features, Enhanced Adaptive Battery Live Extender\*, and True Track\* servo for maximum capacity, performance and reliability**



### Size matters

It's a fact: in the world of storage capacity, bigger is better. But when it comes to portability, small and light is the way to go. Hitachi's new Microdrive 3K4 digital media marries its go-anywhere size to 4 GB's of record-it-all storage. No bigger than a matchbook and just as light, the Microdrive will fit 75 hours of high-quality music into the change pocket of your jeans. Or swap out all those songs for a DVD movie. At 4GB, it's four times bigger than its predecessor and much more economical than standard flash memory. More capacity means more photos, more music, more data, more possibilities.

### Miniaturization leadership

Offered in 2GB and 4GB capacities on a single one-inch disk, Hitachi's new Microdrive 3K4 provides cost-effective personal storage. Weighing just over half an ounce (16 grams) and about the size of a matchbook, Hitachi's Microdrive continues to reign as the world's smallest hard disk drive. This new drive uses ultra-miniaturized components, including Hitachi's Femto slider technology which enables higher capacities and better power efficiency.

### Performance, portability and value

With a maximum sustained data rate of over 7MB/sec, Hitachi's 4GB Microdrive is the fastest product of its kind. No other product on the market offers a better combination of storage capacity, portability, compact size, performance and affordability.

The arrival of a 4GB capacity also enables and delivers a cost-effective solution for running complex operating systems in embedded applications, or portable digital devices like PDAs and handheld PCs.

## Hitachi Family of Microdrives specifications

**Product name** Microdrive 3K4-4  
Microdrive 3K4-2

**Model names** HMS360404D5CF00  
HMS360402D5CF00

### Configuration

Interface	CF+ (ATA and PCMCIA compatible)
Capacity (GB) <sup>1</sup>	4 / 2
Sector size (bytes)	512
Disks	1
Areal density (max. Gbits/inch <sup>2</sup> )	56.5
Recording density (max. KBPI)	628
Track density (KTPI)	90

### Performance

Data buffer (KB)	128
Rotational speed (rpm)	3600
Latency average (ms)	8.33
Media transfer rate (max. Mbits/sec)	571 - 979
Interface transfer rate (max. MB/sec) <sup>2</sup>	33
Sustained data rate (MB/sec)	4.3 - 7.2

Seek time (read, typical)	
Average (ms)	12
Track to track (ms)	1
Full track (ms)	22

### Reliability

Error rate (non-recoverable)	< 1 per 1.0 E 13 bits transferred
Start/stops (at 40° C)	300K

Power	+3.3V power supply	or	+5V power supply
Requirement	+3.3VDC, ±5%		+5VDC, ±5%
Current (write)	305 mA		314mA
Current (standby)	16 mA		18 mA
Power consumption efficiency	0.055 (watts/GB at idle)		0.090 (watts/GB at idle)

### Dimensions

Height (mm)	5 +0 / -0.10
Width (mm)	42.80/±0.10
Depth (mm)	36.40/±0.15
Weight (avg. g)	16

### Environmental characteristics

Operating	
Ambient temperature	0° to 70° C (70 deg. C top cover temperature)
Relative humidity (non-condensing)	8% to 90%
Max. wet bulb (non-condensing)	29.4° C
Shock (half sine wave)	200 G/2ms
Random Vibration (RMS)	0.67 G (5 - 500Hz)
Vibration (swept sine)	1.0 G 0 - Peak

Non-operating	
Ambient temperature	-40° to 70° C
Relative humidity (non-condensing)	5% to 95%
Max. wet bulb (non-condensing)	40° C
Shock (half sine wave)	2000 G/1ms
Random Vibration (RMS)	3.01 G (5 - 500Hz)
Vibration (swept sine)	5.0 G 0-Peak

<sup>1</sup> GB equals one billion bytes when referring to hard drive capacity; accessible capacity may be less.

<sup>2</sup> Ultra DMA mode 2 in IDE mode

**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  
8/03  
All rights reserved

Microdrive™ is a trademark of  
Hitachi Global Storage Technologies.

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

\* Enhanced Adaptive Battery Life Extender, and TrueTrack  
are trademarks of Hitachi Global Storage Technologies.

\*\* Hitachi is an authorized licensee of the CF+ trade-  
mark.

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.