

# Deskstar™ 5K1000.B

3.5-INCH HARD DISK DRIVES

**HITACHI**  
Inspire the Next

Energy-efficient, cool, quiet, single-disk PC storage

## Highlights

- > New one-disk 1TB<sup>1</sup> hard drive
- > Advanced Format
- > 512 byte emulation (512e)
- > CoolSpin™ technology
- > Up to 23% power savings over 7K1000.D
- > Best-in-class power utilization and heat emission
- > Quiet acoustics

## Applications

- > Personal storage
- > Environmentally friendly computers
- > Home and small office storage appliances



1TB  
SATA 6Gb/s

## Features and Benefits

	Feature / Function	Benefits
<b>Capacity</b>	1TB of storage	* Up to 250 hours of high-definition video, 1000 hours of standard video, 350 movies, 250,000 4-min songs or 500 video games
<b>Power</b>	Advanced Power Management	Reduces power during idle periods
	HiVERT™ technology	Best-of-breed power efficiency
	CoolSpin™ motor design	Requires low peak power enabling more cost-effective and cooler power supplies
<b>Acoustics</b>	Excellent acoustics	Ultra quiet operation
<b>Reliability</b>	Thermal Fly-height Control (TFC)	Better soft error rate for improved reliability and performance
	Head load/unload ramp	Protects disk during non-operation
	SMART Command Transport (SCT)	Adaptive error correction
	ECC and CRC protection	Data integrity enhanced through circuits
	Internal thermal sensor	Improves data integrity

\*Actual storage may vary depending on the compression rate applied. Capacities represented may not be combined.

## CoolSpin design for desktop computers

The Deskstar™ 5K1000.B hard drive provides 1TB of capacity in a single-disk design and features innovative CoolSpin technology to deliver a new level of power efficiency and quiet operation for energy-conscious, environmentally friendly computers. This 1TB/platter hard drive uses Advanced Format, which increases physical sector size from 512 bytes to 4096 (4K) bytes, thereby increasing capacities and error correction capabilities. Consult the Hitachi Advanced Format Technology Brief for more information on these drives. CoolSpin technology is an optimization of motor speed to provide an ideal balance of performance, power utilization and acoustics. With low power, capacity and cool operation, the 3.5-inch Deskstar 5K1000.B enables a new generation of personal computers.

## Power efficient for cooler operation and longer life

The CoolSpin technology and other Hitachi power management techniques give the Deskstar 5K1000.B its 23% power savings over the Deskstar 7K1000.D. HiVERT technology helps efficiently manage power consumption. These innovations, along with eighth-generation Advanced Power Management, give the Deskstar 5K1000.B the lowest power profile of the Hitachi Deskstar hard drive family to enable the biggest reduction in overall system power requirements. This helps PC manufacturers achieve ENERGY STAR ratings. ENERGY STAR 5.0 are specifications released by the U.S. Environmental Protection Agency (EPA) to enable energy-efficient designs for PCs and other computer equipment.



## Innovation for a more sustainable environment

The Deskstar 5K1000.B demonstrates Hitachi's ecological leadership with its halogen-free design and power-efficient operation. Both of these features helped qualify the drive for the Hitachi EcoTrac classification, which identifies products that minimize environmental impact in the areas of product design, manufacturing, operation and disposal.

## Specifications

Model(s)	HDS5C1010DLE630
<b>Configuration</b>	
Interface	SATA 6Gb/s
Capacity (GB) <sup>1</sup>	1TB
Sector size (bytes) <sup>2</sup>	512e
Max. areal density (Gbits/sq. in)	566
<b>Performance</b>	
Data buffer (MB) <sup>3</sup>	32
Media transfer rate (Mbits/sec, max.)	1443
Interface transfer rate (MB/sec, max.)	600
<b>Reliability</b>	
Error rate (non-recoverable, bits read)	1 in 10 <sup>14</sup>
Load/unload cycles	300,000
Availability <sup>4</sup> (hrs/day x days/wk)	24x7
<b>Power</b>	
Requirement	+5 VDC (+/-5%) +12 VDC (+/-10%)
Startup (A, max.)	0.6 (+5V) & 1.5 (+12V)
Idle (W, avg.)	3.0
<b>Physical size</b>	
z-height (mm, max.)	26.1
Dimensions (width x depth, mm, typical)	101.6 x 147
Weight (g, max.)	450
<b>Environmental (operating)</b>	
Ambient temperature	0° to 60° C
Relative humidity (non-condensing)	8% to 90%
Shock (half-sine wave, G (2ms))	70
Vibration, random (G RMS)	0.67 (XY)
<b>Environmental (non-operating)</b>	
Ambient temperature	-40° to 70° C
Relative humidity (non-condensing)	5% to 95%
Shock (half-sine wave, G (2ms))	350
Vibration, random (G RMS)	1.04 (XYZ)
<b>Acoustics</b>	
Idle (Bels, typical)	2.1

<sup>1</sup> One GB is equal to one billion bytes and one TB equals 1,000GB (one trillion bytes) when referring to hard drive capacity. Accessible capacity may be less.

<sup>2</sup> Advanced Format drive: 4K physical sectors with 512 byte emulation

<sup>3</sup> Portion of buffer capacity used for drive firmware

<sup>4</sup> Intended for low duty cycle, non mission-critical applications in PC, nearline, and consumer electronics environments, which may vary from application to application. Note that customer environments may vary from application to application.

## Hitachi quality and service

All Hitachi hard drives are designed to the highest quality standards with field-proven components. They are backed by Hitachi worldwide technical support and integration services, enabling customers around the globe to bring their products to market quickly.

### How to read the Deskstar model number

HDS5C1010DLE630 = 1TB/32MB buffer

H = Hitachi

D = Deskstar

S = Standard

5C = CoolSpin technology

10 = Full capacity — 1TB

10 = Capacity this model, 10 = 1TB

D = Generation code

L = 26.1mm z-height

E6 = SATA 6Gb/s

3 = 32MB buffer

0 = Reserved

### Information and Technical Support

[www.hitachigst.com](http://www.hitachigst.com) (Main Web site)

[www.hitachigst.com/AdvancedFormat](http://www.hitachigst.com/AdvancedFormat)

[www.hitachigst.com/partners](http://www.hitachigst.com/partners) (Partner Web site)

### North America

[support\\_usa@hitachigst.com](mailto:support_usa@hitachigst.com)

Toll free: 1 888 426-5214, Direct: 1 408-717-8087

### Asia Pacific

[support\\_ap@hitachigst.com](mailto:support_ap@hitachigst.com) / 65 6840 9595

### EMEA and UK

[support\\_uk@hitachigst.com](mailto:support_uk@hitachigst.com) / 44 20 7133 0032

### Germany

[support\\_uk@hitachigst.com](mailto:support_uk@hitachigst.com) / 49 6929 993601

### Program Support

Partners First Program

[channelpartners@hitachigst.com](mailto:channelpartners@hitachigst.com)

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 3403 Yerba Buena Road  
 San Jose, CA 95135 USA

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The EcoTrac symbol identifies Hitachi hard drives that deliver on the principles of lower operating costs, safer product disposal and a more sustainable environment.