

# Deskstar™ 5K3000

3.5-INCH HARD DISK DRIVES

**HITACHI**  
Inspire the Next

Energy-efficient, cool, quiet PC storage with enormous capacity

## Highlights

- > Up to 3TB<sup>1</sup> capacity
- > CoolSpin™ technology
- > Excellent power utilization and heat emission
- > Up to 29% power savings over 7K3000
- > Quiet acoustics
- > Built on award-winning proven design

## Applications

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



3TB, 2TB and 1.5TB  
SATA 6Gb/s

## Features and Benefits

	Feature / Function	Benefits
<b>Capacity</b>	Up to 3TB of storage, 2TB & 1.5TB models available	* Up to 750 hours of high-definition video, 3000 hours of standard video, 1050 movies, 750,000 4-min songs or 1500 video games
<b>Power</b>	Advanced Power Management	Reduces power during idle periods
	HiVERT™ technology	Excellent 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
	LDPC 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™ 5K3000 hard drive provides an enormous 3TB capacity and features innovative CoolSpin technology to deliver a greater level of power efficiency and quiet operation for energy-conscious, environmentally-friendly computers. Key to CoolSpin technology is an optimization of motor speed to provide an ideal balance of performance, power utilization and acoustics. The CoolSpin technology, along with other Hitachi power management techniques, gives the Deskstar 5K3000 its 29% power savings over the Deskstar 7K3000. This new 3TB is the first Hitachi CoolSpin hard drive with a 6Gb/s SATA interface. With low power, high capacity and cool operation, the 3.5-inch Deskstar 5K3000 allows manufacturers to leverage the benefits of the latest components and operating systems to deliver more eco-friendly systems. Manufacturers planning to use the highest capacity 3TB drive in systems should consult the Hitachi High Capacity Technology Brief.

## Power efficient for cooler operation and longer life

CoolSpin and HiVERT technologies combine to create this new class of hard drive that delivers excellent power utilization and thermal emissions. HiVERT technology helps efficiently manage power consumption. These innovations, along with eighth-generation Advanced Power Management, make the Deskstar 5K3000 the ideal choice for energy-efficient PCs that run cooler, require less power and last longer.

## Innovation for a more sustainable environment

The Deskstar 5K3000 demonstrates Hitachi 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 (Preliminary)

Model(s)		HDS5C3030ALA630 HDS5C3020ALA632 HDS5C3015ALA632
<b>Configuration</b>		
Interface		SATA 6Gb/s
Capacity (TB) <sup>1</sup>		3TB / 2TB / 1.5TB
Sector size (bytes)		512
Max. areal density (Gbits/sq. in)		411
<b>Performance</b>		
Data buffer (MB) <sup>2</sup>		32
Media transfer rate (Mbits/sec, max.)		1366
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	3TB <3TB	600,000 300,000
Availability <sup>3</sup> (hrs/day x days/wk)		24x7
<b>Power</b>		
Requirement	3TB <3TB	+5 VDC (+/-5%) +12 VDC (+10%/-8%) +5 VDC (+/-5%) +12 VDC (+/-10%)
Startup (max. A)		1.2 (+5V) & 2.0 (+12V)
Performance Idle (W, avg.)	3TB <3TB	4.8 4.4
<b>Physical size</b>		
z-height (mm, max.)		26.1
Dimensions (width x depth, mm, typical)		101.6 (+/-0.25) x 147
Weight (g, max.)	3TB <3TB	690 680
<b>Environmental (operating)</b>		
Ambient temperature	3TB <3TB	5° to 60° C 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)	3TB <3TB	300 (1ms) 300 (2ms)
Vibration, random (G RMS)		1.04 (XYZ)
<b>Acoustics (A-weighted sound power)</b>		
Idle (Bels, typical)	3TB <3TB	2.5 2.4

<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 will vary from the stated capacity due to formatting and partitioning of the hard drive, the computer's operating system, and other factors.

<sup>2</sup> Portion of buffer capacity used for drive firmware

<sup>3</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

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## 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

HDS5C3030ALA630 = 3TB/32MB buffer

H = Hitachi

D = Deskstar

S = Standard

5C = CoolSpin technology

30 = Full capacity – 3TB

30 = Capacity this model, 30 = 3TB

(20 = 2TB, 15 = 1.5TB)

A = Generation code

L = 26.1mm z-height

A6 = SATA 6Gb/s

3 = 32MB buffer

0 = Reserved (2 = Reserved)

## Information and Technical Support

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

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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.

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