Deskstar™ 7K3000
3.5-INCH HARD DISK DRIVES

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Enormous capacity and exceptional performance for desktop computing

Highlights

> Up to 3TB[1] for the highest capacity needs
> 7200 RPM performance
> 6Gb/s SATA interface for improved performance over previous generation product
> Eco-friendly, Halogen-free design
> Designed to leverage new platforms and modern operating systems

Applications

> Consumer and commercial computers
> External storage
> PC gaming
> Video editing arrays

Features and Benefits

	Feature / Function	Benefits
Capacity	3TB 2TB & 1.5TB models available	Highest capacity available in a single hard drive
Performance	64MB cache buffer SATA 6Gb/s interface	Faster data processing
Reliability	Thermal Fly-height Control (TFC)	Better soft error rate for improved reliability and performance
	Head load/unload	Protects disk during non-operation
	LDPC and CRC protection	Data integrity enhanced throughout circuits
	SMART command transport	Adaptive error correction
	Internal thermal sensor	Improves data integrity
Power	Advanced Power Management HiVERT™ technology	Reduces power during idle periods Best-of-breed power consumption

3TB, 2TB and 1.5TB | 7200 RPM
SATA 6Gb/s

Big storage paves the way for new platforms

The Deskstar™ 7K3000 is Hitachi's first hard drive to deliver an enormous three terabytes of storage capacity and 7200 RPM performance in a standard 3.5-inch form factor. The 7K3000 is also the first Hitachi hard drive with a 6Gb/s SATA interface, which along with its 64MB cache buffer delivers a big boost to performance over the previous generation product. The Deskstar 7K3000 is designed to allow manufacturers to leverage the benefits of the latest components and operating systems to deliver high-performance, high-capacity, power-efficient systems. Manufacturers planning to use the highest capacity 3TB drive in systems should consult the Hitachi High Capacity Technology Brief. Deskstar 7K3000 is also available in 2TB and 1.5TB models that accommodate existing systems, as well as new designs.

Excellent performance and energy efficiency

The Deskstar 7K3000 delivers an extraordinary blend of capacity, performance and power efficiency. All capacities will ship with 64MB cache buffer and 6Gb/s SATA interface. This configuration shows an improvement of up to 27% over previous generation products in PCMark Vantage testing scores. In addition, the 2TB 7K3000 offers idle power savings of up to 30% over previous generation products, making it an ideal storage platform for desktop computing. Leveraging eighth-generation power management technology, including power-saving innovations like HiVERT™ technology, this drive delivers excellent power efficiency and thermal emissions to help manufacturers meet energy compliance targets and extend drive life.

Eco-friendly storage

The Deskstar 7K3000 demonstrates Hitachi ecological leadership with its halogen-free design and power-efficient operation. Both 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.

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Specifications

Model(s)	HDS723030ALA640
	HDS723020BLA642
	HDS723015BLA642

Configuration

Interface	SATA 6Gb/s
Capacity (TB)[1]	3 / 2 / 1.5
Sector size (bytes)	512
Max. areal density (Gbits/sq. in.)	411

Performance

Data buffer (MB)[2]	64
Rotational speed (RPM)	7200
Media transfer rate (Mbits/s, max)	1656
Interface transfer rate (MB/s, max)	600

Reliability

Error rate (non-recoverable, bits read)		1 in 10^{14}
Load/unload cycles (at 40˚C)	*3TB*	600,000
	<3TB	300,000
Availability[3] (hrs/day x days/wk)		24x7

Acoustics

Idle (Bels, typical)	*3TB*	2.9
	<3TB	2.7

Power

Requirement	*3TB*	+5 VDC (+/-5%) +12 VDC (+10%/-8%)
	<3TB	+5 VDC (+/-5%) +12 VDC (+/-10%)
Startup current (A, max.)		1.2 (+5V), 2.0 (+12V)
Idle (W)	*3TB*	6.8
	<3TB	5.2

Physical size

z-height (mm)		26.1
Dimensions (width x depth, mm)		101.6 (+/-0.25) x 147
Weight (typical, g, max.)	*3TB*	690
	<3TB	680

Environmental (operating)

Ambient temperature	*3TB*	5º to 60º C
	<3TB	0º to 60º C
Relative humidity (non-condensing)		8% to 90%
Shock (half-sine wave, G (2ms))		70
Vibration, random (G RMS 5 to 500 Hz)		0.67 (XYZ)

Environmental (non-operating)

Ambient temperature		-40º to 70º C
Relative humidity (non-condensing)		5% to 95%
Shock (half-sine wave, G)	*3TB*	300 (1ms)
	<3TB	300 (2ms)
Vibration, random (G RMS 2 to 200 Hz)		1.04 (XYZ)

[1] 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.

[2] Portion of buffer capacity used for drive firmware

[3] Intended for low duty cycle, non mission-critical applications in PC, gaming and external storage 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's 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

HDS723030ALA640 = 3TB, 64MB buffer
H = Hitachi
D = Deskstar
S = Series prefix
72 = 7200 RPM
30 = Full capacity—3TB
30 = Capacity this model, 30 = 3TB
    (20 = 2TB, 15 = 1.5TB)
A = Generation code
L = 26.1mm z-height
A6 = Interface, SATA 6Gb/s
4 = 64MB buffer
0 = Reserved (2 = Reserved)

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