Deskstar™ 7K1000.D

3.5-INCH HARD DISK DRIVES

HITACHI
Inspire the Next

Energy-efficient, single-disk storage for power-friendly PCs

Highlights

> New one-disk 1TB[1] hard drive
> Advanced Format
> 512 byte emulation (512e)
> Up to 16% idle power savings over previous generation product
> Eco-friendly halogen-free design

Applications

> Consumer and commercial computers
> Personal storage
> PC gaming

1TB, 750, 500, 320 and 250GB
7200 RPM | SATA 6Gb

Features and Benefits

	Feature / Function	Benefits
Capacity	Up to 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
Power	Advanced Power Management	Reduces power during idle periods
	HiVERT™ technology	Best-of-breed power consumption
Reliability	Thermal Fly-height Control (TFC)	Better soft error rate for improved reliability and performance
	Head load/unload	Protects disk during non-operation
	ECC and CRC protection	Data integrity enhanced throughout circuits
	SMART command transport	Adaptive error correction
	Internal thermal sensor	Improves data integrity
Performance	32MB cache buffer	Faster data processing

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

1TB capacity, fewer parts

The Deskstar™ 7K1000.D is Hitachi's first one-disk, 1TB, 7200 RPM 3.5-inch hard drive for use in power-friendly consumer and commercial desktop computers. This fourth-generation 1TB hard drive from Hitachi uses Advanced Format, which increases the sector size on HDDs from 512 bytes to 4096 (4K) bytes, thereby increasing capacities and improving error correcting capabilities. Consult the Hitachi Advanced Format Technology Brief for more information on these drives. Leveraging eighth-generation power management technology, as well as power-saving HiVERT™ innovations pioneered on the popular 2.5-inch line of notebook hard drives from Hitachi, this new desktop drive provides up to 16% idle power savings over the previous model, delivering best-in-class power management and thermal emissions.

Innovation for a more sustainable environment

The Deskstar 7K1000.D demonstrates Hitachi's 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.

Power efficiency supports ENERGY STAR™ 5.0

The ENERGY STAR 5.0 specifications released by the U.S. Environmental Protection Agency (EPA) are recognized around the world as a way of identifying energy-efficient PCs and other computer equipment. PCs that meet the ENERGY STAR 5.0 criteria are expected to become increasingly popular with both corporations and consumers. Some corporations are choosing to purchase ENERGY STAR PCs as part of their "green" initiatives. The low power profile of the Deskstar 7K1000.D hard drive enables a reduction in overall system power requirements, which helps PC manufacturers achieve ENERGY STAR ratings.

ADVANCED AF FORMAT

Eco Trac

Specifications

Model(s)	HDS721010DLE630 HDS721075DLE630 HDS721050DLE630 HDS721032DLE630 HDS721025DLE630
Configuration	
Interface	SATA 6Gb/s
Capacity (GB)[1]	1TB / 750 / 500 / 320 / 250
Sector size (bytes)[2]	512e
Max. areal density (Gbits/sq. in.)	569
Performance	
Data buffer (MB)[3]	32
Rotational speed (RPM)	7200
Media transfer rate (Mbits/s, max)	1822
Interface transfer rate (MB/s, max)	600
Reliability	
Error rate (non-recoverable, bits read)	1 in 10^{14}
Load/unload cycles (at 40°C)	300,000
Availability[4] (hrs/day x days/wk)	24x7
Power	
Requirement	+5 VDC (+/-5%) +12 VDC (+/-10%)
Startup current (A, max.)	0.6 (+5V), 2.0 (+12V)
Idle (W, avg.)	3.7
Physical size	
z-height (mm)	26.1
Dimensions (width x depth, mm, typical)	101.6 x 147
Weight (g, max.)	450
Environmental (operating)	
Ambient temperature	0° to 60° 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	-40° to 70° C
Relative humidity (non-condensing)	5% to 95%
Shock (half-sine wave, G (2ms))	350
Vibration, random (G RMS 2 to 200 Hz)	1.04 (XYZ)
Acoustics	
Idle (Bels, typical)	2.5

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 may be less. Lower capacity models may not be available in all markets.
2 Advanced Format drive: 4K physical sectors with 512 byte emulation
3 Portion of buffer capacity used for drive firmware
4 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'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

HDS721010DLE630 = 1TB/32MB buffer
H = Hitachi
D = Deskstar
S = Standard model
72 = 7200 RPM
10 = Full capacity—1TB
10 = Capacity this model, 10 =1TB (75 = 750GB, 50 = 500GB, 32 = 320GB, 25 = 250GB)
D = Generation code
L = 26.1mm z-height
E6 = SATA 6Gb/s
3 = 32MB buffer
0 = Reserved

Information and Technical Support

www.hitachigst.com (Main Web site)
www.hitachigst.com/AdvancedFormat
www.hitachigst.com/partners (Partner Web site)

North America
support_usa@hitachigst.com
Toll free: 1 888 426-5214, Direct: 1 408-717-8087

Asia Pacific
support_ap@hitachigst.com / 65 6840 9595

EMEA and UK
support_uk@hitachigst.com / 44 20 7133 0032

Germany
support_uk@hitachigst.com / 49 6929 993601

Program Support
Partners First Program
channelpartners@hitachigst.com

Hitachi Global Storage Technologies
3403 Yerba Buena Road
San Jose, CA 95135 USA

Hitachi Global Storage Technologies