

**Hitachi Deskstar® T7K250**  
**HARD DISK DRIVES**



250GB and 160GB | 7200 RPM | ATA 133 and Serial ATA 3.0Gb/s

**High Performance Storage.**

**Highlights**

- > **SATA 3.0Gb/s and PATA 133 interfaces available with capacities up to 250GB**
- > **ECC & CRC protection within drive circuitry**
- > **Low power design reduces system costs and drives high reliability**
- > **Quiet operating modes ideal for use in noise-sensitive environments**

**Applications**

- > Personal computers
- > Digital video recorders
- > Entry servers
- > Extreme PC gaming
- > Video editing

**SATA 3.0Gb/s Features**

- > 3.0Gb/s (300 MB/s) interface data rate
- > NCQ (native command queuing)
- > Staggered (delayed) spin-up

The T7K250 provides all of these enhancements to enable faster data access and better power management to the system.

**A/V Streaming Feature Set**

The Deskstar T7K250 is the second generation Deskstar drive to enable the host system to optimize storage of data. This is achieved by Hitachi's "Smooth Stream" technology which gives the host control over the drive's error recovery process. This important ATA-7 Standards feature fine tunes the Deskstar to capture long audio or video data streams.

**Features and Benefits**

	Feature / Function	Benefits
Performance	High interface transfer rate	Faster system boot-up
		Quicker screen refreshes
	Leading seek times	Faster access to data
	"Smooth Stream" technology	Improved performance for A/V storage applications
	NCQ (Native Command Queuing)	Faster data processing
Capacity	250GB and 160GB	Popular capacity points
Reliability	Leading low power	Cooler system operation
		Enables lower cost power supply and fan
	Head load/unload	Protects disk during non-operation
		Reduces power during idle periods
	ECC and CRC protection	Data integrity enhanced throughout circuits
	Optional low-power mode	Reduces power requirement in multi-drive systems
Reduces system heat / cooling requirements		
	Internal thermal sensor	Improves data integrity
Acoustics	Low acoustic levels	Quieter system operation

**Hitachi Quality and Service**

The Hitachi Deskstar T7K250 extends the company's long-standing tradition of performance leadership. Hitachi's standardized features in desktop solutions enable fast transfer rates, low power utilization and quiet acoustics.

Hitachi is dedicated to provide a breadth of hard disk drive solutions to satisfy all of today's demanding computing needs. Hitachi drives are backed by an array of technical support and services, which may include customer and integration assistance.

## Hitachi Deskstar® T7K250

<b>Product Model names</b>	<b>Deskstar T7K250</b> HDT722525DLAT80 HDT722516DLAT80	<b>Deskstar T7K250</b> HDT722525DLA380 HDT722516DLA380
----------------------------	--	--

### Specifications

Configuration	Parallel-ATA	Serial-ATA
<b>Interface</b>	ATA-133	SATA 3.0Gb/s
Capacity (GB) <sup>1</sup>	250 / 160	←
Data heads (physical)	4 / 3	←
Data disks	2	←
<b>Performance</b>		
Data buffer <sup>2</sup>	8 MB	←
Rotational speed (rpm)	7,200	←
Media transfer rate (max. Mbits/sec)	843.2	←
Interface transfer rate (max. MB/sec)	133	300
Sustained data rate (MB/sec)	67.8- 32.9 (zone 0 - 29)	←
Average seek time (ms) (read, typical) <sup>3</sup>	8.5	←
<b>Reliability</b>		
Error rate (non-recoverable)	1 in 10E14	←
Start/stops (at 40° C)	50,000	←
Availability <sup>4</sup>	24/7	←
<b>Acoustic</b>		
Idle (Bels)	2.8	←
<b>Power</b>		
Requirement	+5 VDC (+/- 5%) +12 VDC (+10 %/-8%)	←
Dissipation		
Startup current (max. A)	1.88 (+12V) & 0.9 (+5V)	1.88 (+12V) & 1.2 (+5V)
Idle (W)	5.2	6.2
<b>Physical Size</b>		
Height (mm)	25.4	←
Width (mm)	101.6	←
Depth (mm)	146	←
Weight (max. g)	640	←
<b>Environmental characteristics</b>		
Operating		
Ambient temperature (C)	5° to 55°	←
Relative humidity (non-condensing)	8% to 90%	←
Shock (half sine wave, 2ms) (G)	55	←
Vibration (random (RMS)) (G)	0.67 for horizontal 0.56 for vertical	←
Non-operating		
Ambient temperature (C)	-40° to 65°	←
Relative humidity (non-condensing)	5% to 95%	←
Shock (half sine wave, 2ms) (G)	350	←
Vibration (random (RMS)) (G)	1.04 rms (XYZ)	←
RoHS compliant <sup>5</sup>	Some part numbers	←

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

<sup>2</sup> Buffer capacity includes 270 or less KB used for drive firmware.

<sup>3</sup> Includes command overhead.

<sup>4</sup> Low duty cycle, non mission-critical applications in PC, nearline and consumer electronics customer environments are different from application to application.

<sup>5</sup> RoHS refers to the European Union Directive 2002/95/EC on the restriction of certain hazardous substances in electrical and electronic equipment. Visit [www.hitachigst.com/rohs](http://www.hitachigst.com/rohs) for compliance information.

Specific application environments such as temperature and duty cycle will affect the overall reliability rates. For specific application environment reliability rates, please consult Hitachi technical support.

## Hitachi Global Storage Technologies



### How to Read the Model Number

#### Example:

**HDT722516DLA380** = 250GB/8MB

**H** = Hitachi

**D** = Deskstar

**T** = Two-disk (or S for Standard)

**72** = 7200 RPM

**25** = full capacity = 250GB

**16** = model capacity = 160GB

**D** = generation code

**L** = 1-inch form factor

**A3** = SATA 3.0 Gb/s (or AT for Parallel ATA)

**8** = 8MB buffer

**0** = Reserved

### For more information:

Internet:

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

> [www.hitachigst.com/vpp](http://www.hitachigst.com/vpp) (Reseller Web site)

Technical Support E-mail:

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

> [support\\_ap@hitachigst.com](mailto:support_ap@hitachigst.com) (Asia Pacific)

> [support\\_uk@hitachigst.com](mailto:support_uk@hitachigst.com) (EMEA and UK)

Technical Support Phone Numbers:

> 1 888 426-5214 (N. America)

> 65 6840 9595 (Asia Pacific)

> 44 20 7133 0032 (EMEA and UK)

> 49 6929 993601 (Germany Support)

© 2005 Hitachi Global Storage Technologies

Hitachi Global Storage Technologies  
5600 Cottle Road  
San Jose, CA 95193

Produced in the United States 5/05, revised 4/06  
All rights reserved.

Deskstar® is a trademark of Hitachi Global Storage Technologies. References in this publications 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 it operates.

Product information is provided for information purposes 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.