

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



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

High capacity. High performance. Low cost-per-megabyte. 3.5-inch drives for the desktop and beyond.

**Highlights**

- > Award-winning, 7200 RPM performance for better throughput in a variety of applications
- > Serial ATA II and Parallel ATA interfaces available with capacities up to 250GB
- > Low power design reduces system costs and drives high reliability in ATA-RAID and other multiple drive systems
- > Quiet operating modes ideal for use in noise-sensitive environments

**Why Serial ATA II 3.0Gb/s?**

The newly approved SATA-II specification has standardized three important features:

- > 3.0 Gb/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. The drive is also backward compatible for those wishing to upgrade their storage of SATA 1.0 systems.

**A/V Streaming Feature Set**

The Deskstar T7K250 is the second generation Deskstar drive to enable the host system to

**Features and Benefits**

	Feature / Function	Benefits
<b>Performance</b>	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
<b>Capacity</b>	250GB and 160GB	Popular capacity points
<b>Reliability</b>	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
<b>Acoustics</b>	Low acoustic levels	Quieter system operation
<b>Integration</b>	SATA II 3.0 Gb/s interface	Backwards compatible with SATA 1.5 Gb/s
		Thinner and longer cabling for easy cable routing

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.

**Applications**

- > Traditional PCs
- > Nearline Storage
- > ATA servers
- > PC gaming
- > Video surveillance
- > Video editing and streaming
- > Disk to disk backup and recovery
- > Media storage (PVR)
- > Virtual tape server
- > Industrial automation

**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. These features combine to make the Deskstar T7K250 ideal not only for standard PC systems but also for ATA entry-servers, personal video recorders and other non-PC computing requirements.

Hitachi is dedicated to provide a breadth of hard disk drive solutions to satisfy all of today's demanding computing needs.

## Hitachi Deskstar™ T7K250

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

Configuration	Parallel-ATA	Serial-ATA
<b>Interface</b>	ATA-133	SATA-II 3.0 Gb/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	←
<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>		
<b>Operating</b>		
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	←
<b>Non-operating</b>		
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>4</sup>	Yes	←

<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> RoHS refers to the European Union Directive 2002/95/EC on the restriction of certain hazardous substances in electrical and electronic equipment



### 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:

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> 1 888 426-5214 (N. America)

> 65 6840 9595 (Asia Pacific)

> 44 20 7133 0032 (EMEA and UK)

> 49 6929 993601 (Germany Support)

### 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 II 3.0 Gb/s (or AT for Parallel ATA)

**8** = 8MB buffer

**0** = Reserved

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