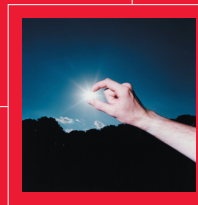


## Hitachi Deskstar® 7K500

### HARD DISK DRIVES



500GB | 7200 RPM | ATA 133 and Serial ATA II 3.0Gb/s

### Seemingly Infinite Storage

#### Highlights

- > 500 GB of capacity with either SATA II or Parallel ATA interface
- > Rotational Vibration Safeguard
- > All SATA-II features supported
- > "Smooth Stream" technology for enhanced video streaming
- > Native Command Queuing for extreme performance
- > Optional low-power mode

#### Capacity Leadership

The Deskstar 7K500 sustains the leadership momentum with a 25 percent capacity increase over the previous generation and double the capacity in the same space as a 250GB drive. A 2TB (terabyte) system can now be achieved with just four standard form factor ATA drives. This capacity milestone enhances system reliability by reducing the number of drives needed to support the most demanding applications.

#### 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

#### Applications

- > Digital video recorders
- > Video editing and streaming
- > Home media servers
- > Nearline storage for:
  - Disk-to-disk backup
  - Fixed content
  - Archiving
  - Data disaster prevention / recovery
- > Digital surveillance
- > Performance PCs and workstations
- > Gaming PCs

#### Features and Benefits

	Feature / Function	Benefits
Capacity	500GB	Highest capacity available in the industry
		* 56 hours of HDTV broadcast, or
		* 125,000 high quality, 4 minute MP3 recordings
Performance	High interface transfer rates	Faster system boot-up
	SATA II 3.0 Gb/s interface	300MB/s burst data rate for faster data access
	Rotational Vibration Safeguard	Optimum performance in multi-drive systems
Reliability	ECC and CRC protection	Data integrity enhanced throughout circuits
	Optional low-power mode	Reduces system heat/cooling requirements
		Enables industry-leading acoustics
	Load / unload ramp	Protects user data when power is removed
	Internal thermal sensor	Improves data integrity

\*Actual storage may vary depending on the compression rate applied.

The 7K500 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 7K500 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.

The Streaming Feature Set has features that enable an AV system to maximize performance of the disk drive. The Configure Stream command allows the system to tell the disk drive how many simultaneous streams will be used and if they are read or write streams. This information enables the Deskstar to optimize its buffer management.

#### Hitachi Quality and Service

The Hitachi Deskstar 7K500 extends the company's long-standing tradition of performance and reliability 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 7K500 ideal not only for standard PC systems but also for ATA entry-servers, personal video recorders and other non-PC computing requirements.

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

# Hitachi Deskstar® 7K500

<b>Product</b>	<b>Deskstar 7K500</b>	<b>Deskstar 7K500</b>
<b>Model names</b>	HDS725050KLA780	HDS725050KLA360

## Specifications

<b>Configuration</b>	<b>Parallel-ATA</b>	<b>Serial-ATA</b>
Interface	ATA 133	SATA-II 3.0Gb/s
Capacity (GB) <sup>1</sup>	500	←
Disks / heads	5 / 10	←
<b>Performance</b>		
Data buffer <sup>2</sup> (MB)	8	16
Rotational speed (RPM)	7,200	←
Media transfer rate (max. Mbits/sec)	817	←
Interface transfer rate (max. MB/sec)	133	300
Sustained data rate (MB/sec)	64.8 - 31 (zone 0 - 29)	←
Seek time, average (read, typical (ms)) <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)	3.1	←
<b>Power</b>		
Requirement	+5 VDC (+/- 5%) +12 VDC (+10 %/-8%)	←
Dissipation		←
Startup current (max. A)	2.0 (+12V) & 1.1 (+5V)	2.0 (+12V) & 1.2 (+5V)
Idle (W)	9.0	9.6
<b>Physical Size</b>		
Height (mm)	25.4	←
Width (mm)	101.6	←
Depth (mm)	146	←
Weight (max. g)	700	←
<b>Environmental Characteristics</b>		
Operating		
Ambient temperature	5° to 55° C	←
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	-40° to 65° C	←
Relative humidity (non-condensing)	5% to 95%	←
Shock (half sine wave, 2ms) (G)	225	←
Vibration (random (RMS)) (G)	1.04 (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 271 KB used for drive firmware.

<sup>3</sup> Includes 0.3ms 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

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



### 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)

### How to Read the Deskstar Model Number

**Example:**

**HDS725050KLA360** = 500GB/16MB

**H** = Hitachi

**D** = Deskstar

**S** = Standard (vs T for Two-disk for example)

**72** = 7200 RPM

**50** = full capacity = 500GB

**50** = model capacity = 500GB

**K** = generation code

**L** = height

**A3** = SATA II - 3.0Gb/s (or AT = ATA)

**6** = 16MB buffer (or 8 for 8MB)

**0** = Reserved

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

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