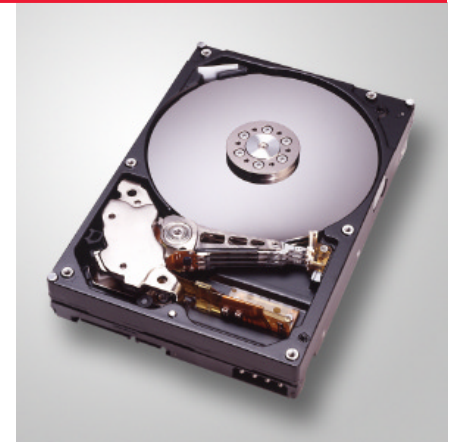


## Hitachi Deskstar 7K250 hard disk drives

### Highlights

- ▶ **Up to 250GB at 7200 rpm**
- ▶ **Serial-ATA or Parallel-ATA interface**
- ▶ **Industry-leading 8.5ms average seek time**
- ▶ **Lowest power requirements**
- ▶ **Optional low acoustic and power modes**



### Industry-leading performance

The Hitachi Deskstar 7K250 extends the company's long-standing tradition of performance leadership. This new series of Deskstar drives incorporates both new and proven technologies to boost the performance, capacity, and reliability to handle a wide range of advanced storage requirements.

Hitachi's standardized features in desktop solutions enable fast transfer rates, low power utilization and quiet acoustics. These features combine to make the Deskstar 7K250 ideal not only for standard PC systems but also for ATA entry-servers, personal video recorders and other non-PC computing requirements.

### Serial ATA technology

Serial ATA technology provides significant benefits to end-users and storage vendors by supplying a platform that overcomes the limitations of parallel-ATA hard drives. System integration is simplified with:

- Improved point-to-point interface cabling
- Hot-plug connection capability
- Reduced pin count
- Lower voltage signaling
- Smaller connectors and cables

System Requirements	Features	Benefits
<b>Performance</b>	High data transfer rate	Faster system boot-up Quicker screen refreshes
	Leading seek times	Faster access to data
	8MB buffer size	Faster data processing
<b>Capacity</b>	250GB	Greater storage capacity in multi-drive systems
<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 disk wear
	Optional low-power mode	Reduces power requirement in multi-drive systems Reduces system heat
	Internal thermal sensor	Improves data integrity
<b>Acoustics</b>	Low acoustic levels	Quieter system operation Important for fan-less systems (all-in-one, PVR, etc.)
	Optional low-acoustics mode	Further reduces system noise

### Hitachi quality and service

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 7K250 Specifications

Product name	Deskstar 7K250	Deskstar 7K250
Model names	HDS722540VLAT20 HDS722580VLAT20 HDS722512VLAT20 HDS722512VLAT80 HDS722516VLAT20 HDS722516VLAT80 HDS722525VLAT80	HDS722580VLSA80 HDS722512VLSA80 HDS722516VLSA80 HDS722525VLSA80
<b>Configuration</b>	<b>Parallel-ATA</b>	<b>Serial-ATA</b>
Interface	ATA Ultra-100	Serial ATA 1.5Gb/s
Capacity (GB) <sup>1</sup>	250/160/120/80/40	250/160/120/80
Sector size (bytes)	512	512
Recording zones	30	30
Data heads (physical)	6/4/3/2/1	6/4/3/2
Data disks	3/2/2/1/1	3/2/2/1
Max. areal density (Gbits/sq. inch)	62	62
Max. recording density (KBPI)	689	689
Track density (KTPI)	93.5 (3 disk) 90 (2/1 disk) 87 (1 disk)	93.5 (3 disk) 90 (2/1 disk) 87 (1 disk)
<b>Performance</b>		
Data buffer <sup>2</sup>	8 MB/2 MB (3D-8M,2D-2M/8M,1D-2M)	8 MB
Rotational speed (rpm)	7,200	7,200
Latency average (ms)	4.17	4.17
Media transfer rate (max. Mb/s)	757	757
Interface transfer rate (max. MB/sec)	100	150
Sustained data rate (MB/sec)	61.4 -29.7 (zone 0-29)	61.4 -29.7 (zone 0-29)
Seek time (read, typical) <sup>3</sup>		
Average (ms)	8.5/8.8 (1 disk)	8.5/8.8 (1 disk)
Track to track (ms)	1.1	1.1
Full track (ms)	15.1	15.1
<b>Reliability</b>		
Error rate (non-recoverable)	1 in 10E14	1 in 10E14
Start/stops (at 40° C)	50K	50K
<b>Acoustic</b>		
Idle (Bels)	3.0 (3 disks) 2.8 (2 disks) 2.6 (1 disk)	3.0 (3 disks) 2.8 (2 disks) 2.6 (1 disk)
<b>Power</b>		
Requirement	+5 VDC (+/- 5%), +12 VDC (+10%/-8%)	Same as Parallel-ATA
Dissipation		
Startup current (max. A)	1.72 (+12V) & 0.68 (+5V)	1.72 (+12V) & 0.68 (+5V)
Idle (W)	7.0 (3 disks) 5.9 (2 disks) 5.0 (1 disk)	7.6 (3 disks) 6.5 (2 disks) 5.6 (1 disk)
Height (mm)	25.4	25.4
Width (mm)	101.6	101.6
Depth (mm)	146	146
Weight (max. g)	640	640
<b>Environmental characteristics</b>		
Operating		
Ambient temperature	5° to 55° C	5° to 55° C
Relative humidity (non-condensing)	8% to 90%	8% to 90%
Max. wet bulb (non-condensing)	29.4° C	29.4° C
Shock (half sine wave, 2ms)	55G	55G
Vibration (random (RMS))	0.67G for horizontal, 0.56G for vertical	0.67G for horizontal, 0.56G for vertical
Non-operating		
Ambient temperature	-40° to 65° C	-40° to 65° C
Relative humidity (non-condensing)	5% to 95%	5% to 95%
Max. wet bulb (non-condensing)	35° C	35° C
Shock (half sine wave, 2ms)	300G (3 disks) 350G (2/1 disks)	300G (3 disks) 350G (2/1 disks)
Vibration (random (RMS))	1.04G rms (XYZ)	1.04G rms (XYZ)

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### For more information

#### Internet and e-mail:

- www.hgst.com
- N. America: support\_usa@hgst.com
- EMEA: support\_uk@hgst.com
- Asia Pacific: support\_sg@hgst.com

#### Hitachi hard drive product information:

- US: 1 888 426-5214
- For a complete list of worldwide phone numbers, visit www.hgst.com/support

#### How to read the HDD model number

Example:

HDS722516VLAT20 = 160GB / 2MB

H = Hitachi

D = Deskstar

S = Standard (vs A for Auto for example)

72 = 7200 rpm

25 = full capacity = 250GB

16 = model capacity = 160GB

V = generation code

L = 1-inch form factor

AT = ATA (or SA = SATA)

2 = 2 MB buffer (or 8 = 8 MB)

0 = Reserved

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This publication is for general guidance only.

Photographs may show design models.

<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 260 KB used for drive firmware.

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