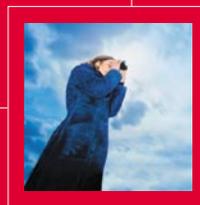# HITACHI
Inspire the Next

Hitachi Deskstar® 7K250

HARD DISK DRIVES

250GB, 160GB, 120GB, 80GB and 40GB | 7200 RPM | Serial ATA and Parallel ATA

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, backed by industry-leading benchmark performance

> Serial ATA 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 for easy integration into noise sensitive environments

Why Serial ATA?

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. The interface transfer rate increases by 50%. System integration is simplified with:

> Lower profile interface cable

> Improved point-to-point interface cabling

> Hot-plug connection capability

> Reduced pin count

Features and Benefits

	Feature / Function	Benefits
Performance	High data transfer rate	Faster system boot-up
		Quicker screen refreshes
	Leading seek times	Faster access to data
	8MB buffer size	Faster data processing
Capacity	250GB	Greater storage capacity in multi-drive systems
		Meets increasing demand for local storage due to growth of email and large files
		Meets user needs by enabling longer PC lifecycles
Reliability	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
Acoustics	Low acoustic levels	Quieter system operation
		Important for fan-less systems (all-in-one, PVR, etc.)
Integration	SATA interface	Thinner and longer cabling for easy cable routing
		Backwards compatible with Ultra ATA-100

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 7K250 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 7K250 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™ 7K250

Hitachi Global Storage Technologies

Product	Deskstar 7K250	Deskstar 7K250
Model names	HDS722540VLAT20	HDS722540VLSA80
	HDS722580VLAT20	HDS722580VLSA80
	HDS722512VLAT20	HDS722512VLSA80
	HDS722512VLAT80	HDS722516VLSA80
	HDS722516VLAT20	HDS722525VLSA80
	HDS722516VLAT80	
	HDS722525VLAT80	

Specifications

Configuration	Parallel–ATA	Serial–ATA
Interface	ATA-100	Serial ATA-150
Capacity (GB)[1]	250 / 160 / 120 / 80 / 40	←
Data heads (physical)	6 / 4 / 3 / 2 / 1	←
Data disks	3 / 2 / 2 / 1 / 1	←
Performance		
Data buffer[2]	8 MB / 2 MB	8 MB
	(3D-8MB, 2D-2MB/8MB, 1D-2MB)	
Rotational speed (rpm)	7,200	←
Media transfer rate (max. Mbits/sec)	757	←
Interface transfer rate (max. MB/sec)	100	150
Sustained data rate (MB/sec)	61.4 - 29.7	←
Average seek time (ms) (read, typical)[3]	8.5 / 8.8 (1 disk)	←
Reliability		
Error rate (non-recoverable)	1 in 10E14	←
Start/stops (at 40°C)	50,000	←
Acoustic		
Idle (Bels)	2.6 (1 disk)	←
	2.8 (2 disks)	←
	3.0 (3 disks)	←
Power		
Requirement	+5 VDC (+/- 5%)	←
	+12 VDC (+10 %/-8%)	←
Dissipation		
Startup current (max. A)	1.72 (+12V) & 0.68 (+5V)	←
Idle (W)	5.0 (1 disk)	5.6 (1 disk)
	5.9 (2 disks)	6.5 (2 disks)
	7.0 (3 disks)	7.6 (3 disks)
Physical Size		
Height (mm)	25.4	←
Width (mm)	101.6	←
Depth (mm)	146	←
Weight (max. g)	640	←
Environmental characteristics		
Operating		
Ambient temperature (C)	5° to 55°	←
Relative humidity (non-condensing)	8% to 80%	←
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 (1 and 2 disks)	←
	300 (3 disks)	←
Vibration (random (RMS)) (G)	1.04 rms (XYZ)	←

[1] GB equals one billion bytes when referring to hard drive capacity; accessible capacity may be less.
[2] Buffer capacity includes 270 or less KB used for drive firmware.
[3] Includes command overhead.

How to Read the Model Number

Example:
HDS722516VLAT20 = 160GB/2MB
H = Hitachi
D = Deskstar
S = Standard
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 = 2MB buffer (or 8 = 8MB)
0 = Reserved