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Inspire the Next

Hitachi Deskstar® 7K400

HARD DISK DRIVES

400GB | **7200 RPM** | **Ultra ATA/133 and Serial ATA 1.5Gb/s**

Seemingly Infinite Storage

Highlights

> 400 GB of capacity with either Serial or Parallel ATA interface
> Rotational Vibration Safeguard
> ATA-7 Streaming Feature Set
> Robust mechanical enhancements
> Latching SATA connector

Capacity Leadership

The Deskstar 7K400 answers the market demand for higher density storage. This drive provides 60% more capacity in the same space of a 250GB drive for those desiring the highest capacity. A 1U enclosure can now provide 1.6 terabytes – 600 GB more than available with 250 GB drives!

Why Serial ATA?

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

> Thinner interface cable
> Improved point-to-point interface cabling
> Hot-plug connection capability
> Reduced pin count

Applications

> Digital video recorder
> Nearline Storage for:
  – Disk-to-disk backup
  – Fixed content
  – Archive
  – Data disaster prevention / recovery
> Performance PCs and workstation
> Gaming PCs
> Home media server
> Video editing and streaming

Features and Benefits

	Feature / Function	Benefits
Capacity	400GB	45 hours of HDTV broadcast, or
		40,000 typical library books, or
		100,000 high quality, 4 minute MP3 recordings, or
		400,000 x-rays
Performance	Rotational Vibration Safeguard	Maintains drive performance in high rotational vibration environments and multi-drive systems
Reliability	Latching SATA connector	Prevents disconnects due to excessive shock or vibration
	Load / unload ramp	Protects user data when power is removed
	Fixed shaft Fluid Dynamic Bearing (FDB) spindle motor	Low acoustics
		Reliable operation in AV and nearline applications

ATA-7, Extending HDD Functionality

The Deskstar 7K400 incorporates the latest ATA-7 feature set. These include:

> AV command set – enables the added controls of the Streaming Feature Set
> Enhanced S.M.A.R.T. features – including Selective Self Test

The Deskstar 7K400 with ATA Streaming Feature Set provides important features for AV storage applications. These key features enable system developers to:

> Read drive attributes and configure the drive buffer for optimum performance
> Stream error logging to reduce time delays for system error processing
> Handle stream errors to enable full error recovery

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® 7K400

Product	Deskstar 7K400	Deskstar 7K400
Model names	HDS724040KLAT80	HDS724040KLSA80

Specifications

Configuration	Parallel-ATA	Serial-ATA
Interface	Ultra ATA/133	Serial ATA 1.5Gb/s
Capacity (GB)[1]	400	←
Disks / heads	5/10	←
Performance		
Data buffer[2] (MB)	8	←
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 - 29.8 (zone 0 - 29)	←
Seek time, average (read, typical (ms))[3]	8.5	←
Reliability		
Error rate (non-recoverable)	1 in 10E14	←
Start/stops (at 40° C)	50,000	←
Acoustic		
Idle (Bels)	3.1	←
Power		
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
Physical Size		
Height (mm)	25.4	←
Width (mm)	101.6	←
Depth (mm)	146	←
Weight (max. g)	700	←
Environmental Characteristics		
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)	←

[1] GB equals one billion bytes when referring to hard drive capacity; accessible capacity may be less.
[2] Buffer capacity includes 271 KB used for drive firmware.
[3] Includes command overhead.

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.

For more information:

Internet:
> www.hgst.com (Main Web site)

> www.hgst.com/vpp (Reseller Web site)

Technical Support E-mail:
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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:
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 = height
AT = ATA (or SA = SATA)
2 = 2MB buffer (or 8 = 8MB)
0 = Reserved