

Hitachi Deskstar® 7K160

3.5-INCH HARD DISK DRIVES



160GB and 80GB | 7200 RPM | Parallel ATA 133 and Serial ATA 3.0Gb/s

Sweet Spot Storage

Highlights

- > SATA 3.0 Gb/s and PATA 133 interface
- > 160GB and 80GB sweet spot capacities
- > Native Command Queuing for maximum data speeds
- > Thermal Monitoring and Fly Height Control for enhanced reliability
- > SMART Command Transport optimized response times

Applications

- > Desktop computers
- > Storage upgrades
- > PC gaming
- > Industrial automation

Serial ATA Features

- > 3.0Gb/s interface data rate
- > Native Command Queuing
- > Staggered spin up
- > Hot plug capability
- > Scalable performance
- > System improvements
- > Click connect connector

Deskstar 7K160

The Deskstar 7K160 builds on Hitachi's award winning tradition with new 160GB per platter areal density technology. Desktop personal computers demand highly efficient designs. The Deskstar 7K160 meets these design points and delivers the sweet spot capacities for today's business applications.

Features and Benefits

	Feature / Function	Benefits
Performance	High interface transfer rate	Faster system boot-up
		Quicker screen refreshes
	8MB buffer size	Faster data processing
Capacity	160GB and 80GB	Most popular capacity points
Reliability	Thermal Fly Height Control (TFC)	Improves error rate
	Head load/unload	Protects disk during non-operation
		Reduces power during idle periods
	ECC and CRC protection	Data integrity enhanced throughout drive circuits
	SMART Command Transport (SCT)	Adaptive error correction
	Internal thermal sensor	Improves data integrity

Hitachi Quality and Service

The Hitachi Deskstar 7K160 extends on the companies reliability and performance leadership. Hitachi's standardized features in desktop and low duty cycle server solutions enable faster transfer rates, scalable performance and quicker boot up times.

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

Hitachi Deskstar® 7K160

Product	Deskstar 7K160	Deskstar 7K160
Model numbers	HDS721616PLAT80 HDS721680PLAT80	HDS721616PLA380 HDS721680PLA380

Specifications

Configuration	Parallel-ATA	Serial-ATA
Interface	PATA-133	SATA 3.0Gb/s
Capacity (GB) ¹	160 / 80	←
Data heads (physical)	2 / 1	←
Data disks	1	←

Performance

Data buffer ²	8 MB	←
Rotational speed (rpm)	7,200	←
Media transfer rate (max. Mbits/sec)	966	←
Interface transfer rate (max. MB/sec)	133	300
Average seek time (ms) (read, typical) ³	8.5	←

Reliability

Error rate (non-recoverable)	1 in 10E14	←
Start/stops (at 40° C)	50,000	←
Availability ⁴	24x7	←

Acoustic

Idle (Bels, typical)	2.8	←
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Power

Requirement	+5 VDC (+/- 5%) +12 VDC (+10 %/-8%)	←
Dissipation		←
Startup current (max. A)	1.9 A (12V) & 1.1 A (5V)	1.9 A (12V) & 1.3 A (5V)
Idle (W)	4.9	5.9

Physical Size

Height (max. mm)	26.1	←
Width (mm)	101.6	←
Depth (mm)	147	←
Weight (max. g)	560	←

Environmental characteristics

Operating		
Ambient temperature (C)	0° to 60°	←
Relative humidity (non-condensing)	8% to 90%	←
Shock (half sine wave, 2ms) (G)	70	←
Vibration (random (RMS)) (G)	0.67 for horizontal 0.67 for vertical	←
Non-operating		
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 ⁵	Yes	←

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 Does not include command overhead

⁴ Low duty cycle, non mission-critical applications in PC, nearline and consumer electronics. Customer environments are different from application to application.

⁵ RoHS refers to the European Union Directive 2002/95/EC on the restriction of certain hazardous substances in electrical and electronic equipment.

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How to Read the Deskstar Model Number

Example:

HDS721616PLAT80 = 160GB/8MB

H = Hitachi

D = Deskstar

S = Standard (or T for Two-disk for example)

72 = 7200 RPM

16 = full capacity = 160GB

16 = model capacity = 160GB (80 = 80GB)

P = generation code

L = 1-inch form factor

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

8 = 8MB buffer

0 = Reserved

For more information:

Internet:

> www.hitachigst.com (Main Web site)

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

Technical Support E-mail:

> support_usa@hitachigst.com (N. America)

> support_ap@hitachigst.com (Asia Pacific)

> 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 Support)

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Hitachi Global Storage Technologies
3403 Yerba Buena Road
San Jose, CA 95135

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