

# Western Digital Serial ATA Hard Drives



## WD Caviar® SE

Based on our time-tested 7200 RPM WD Caviar platform, this new drive has been designed from the ground up to deliver enterprise-class reliability, lightning-fast SATA II performance, and maximum capacity.

### PRODUCT BENEFITS

#### Fast

With a leading-edge SATA II interface, this drive delivers optimum performance.

- 300 Mb/sec data transfer rates
- Native Command Queuing (available June 2005)
- Up to 16 MB Cache

#### Reliable

Designed and manufactured to enterprise-class standards to provide enhanced reliability in high duty cycle environments.

#### High Capacity

250 GBs of storage packed with enterprise-class features and low-cost-per-gigabyte value.

### THE WD PROMISE



WD understands the importance of the information you save to your hard drive and we are committed to protecting that data with exceptionally reliable products, advanced data protection technology, and superior customer support. No one does more to safeguard your data than WD.

#### Capacity

120, 160, 200, and 250 GB

#### Areal Density

80 GB

#### Model Numbers

WD1200JS, WD1600JS,  
WD2000JS, WD2000KS,  
WD2500JS, and  
WD2500KS



# Western Digital Serial ATA Hard Drives



## WD Caviar SE

### Physical Specifications

	120 GB	160 GB	200 GB	250 GB
Model numbers	WD1200JS	WD1600JS	WD2000JS WD2000KS	WD2500JS WD2000KS
Formatted capacity <sup>1</sup>	120,034 MB	160,041 MB	200,049 MB	250,059 MB
User sectors per drive	234,441,648	312,581,808	390,721,968	488,397,168
Interface	SATA II	SATA II	SATA II	SATA II
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch
Bytes per sector (STD)	512	512	512	512
Dedicated landing zone	Yes	Yes	Yes	Yes
Actuator latch/auto park	Yes	Yes	Yes	Yes
SATA latching connector	Yes	Yes	Yes	Yes

### Performance Specifications

#### Data Transfer Rate

Buffer to host	300 MB/s <sup>2</sup>
Buffer to disk	748 Mb/s max

Average read seek	8.9 ms (average)
Track-to-track seek	2.0 ms (average)
Full stroke read seek	21 ms (average)
Average latency	4.2 ms
Rotational speed	7200 RPM
Read cache	Adaptive
Write cache	Yes
Buffer	8 MB (WD1200JS, WD1600JS, WD2000JS, WD2500JS) 16 MB (WD2000KS, WD2500KS)
Drive ready time	9.0 sec average
Start/stop cycles	50,000 min
LBA support	Yes
Error rate (non-recoverable)	<1 in 10 <sup>14</sup> bits read

### Physical Dimensions

Height	1.028 in. (26.1 mm) max
Length	5.787 in. (147.0 mm) max
Width	4.0 in. (101.6 mm) ± .01 in.
Weight (Typ)	1.32 lb. (0.60 kg)
Standard Drive	

### Power Requirements (average)

Mode	12V (±10%)	5V (±5%)	Power
Read/Write <sup>3</sup>	450 mA	800 mA	9.5W
Idle	430 mA	730 mA	8.75W
Standby	20 mA	270 mA	1.6W
Sleep	20 mA	250 mA	1.5W

<sup>1</sup> Western Digital defines a megabyte (MB) as 1,000,000 bytes, and a gigabyte (GB) as 1,000,000,000 bytes. Some operating systems use the binary numbering system, which results in a lower reported capacity.

<sup>2</sup> Effective maximum SATA II transfer rate (300 Gb/s). The SATA 1.0 transfer rate of 1.5 Gb/s is also supported.

<sup>3</sup> 20% duty cycle.

<sup>4</sup> No non-recoverable errors during operating tests or after non-operating tests.

<sup>5</sup> Sound power level.

### Environmental Specifications<sup>4</sup>

#### Shock

Operating (2 ms)	30G (write), 65G (read)
Non-operating (2 ms)	300G (2-platter), 250G (3-platter)

Half sine wave measured in 2 ms duration, measured without isolation.

#### Vibration

Operating	Linear: 20-300 Hz, 0.75G (0 to peak) Random: 10 to 300 Hz, 0.004 g <sup>2</sup> /Hz
Non-operating	5-20 Hz, 0.195 inches (double amplitude) 20-500 Hz, 4.0G (0 to peak)

#### Operating Temperature & Humidity

Temperature	5° C to 55° C
Humidity	5-95% RH non-condensing
Thermal Gradient	20° C/hour max

#### Non-Operating Temperature & Humidity

Temperature	-40° C to 65° C
Humidity	5-95% RH non-condensing
Thermal Gradient	30° C/hour

#### Acoustics (average)

	2-platter	3-platter
Idle mode <sup>5</sup>	26 dBA	28 dBA
Performance seek mode 0 <sup>5</sup>	31 dBA	33 dBA
Quiet seek mode 3 <sup>5</sup>	27 dBA	29 dBA

#### For service and literature:

support.wdc.com  
www.westerndigital.com

800.ASK.4WDC North America  
949.672.7199 Spanish  
+800.6008.6008 Asia Pacific  
+31.20.4467651 EMEA

Western Digital and WD Caviar are registered trademarks; and WD and the WD logo are trademarks of Western Digital Technologies, Inc. Other marks may be mentioned herein that belong to other companies. Product specifications subject to change without notice.

© 2005 Western Digital Technologies, Inc.  
All rights reserved.

Western Digital  
20511 Lake Forest Drive  
Lake Forest, California U.S.A. 92630

2879-001138-A00 04/05

