

# Western Digital EIDE Hard Drives



## WD Caviar®

Western Digital's popular WD Caviar Enhanced IDE (EIDE) product family is a smart combination of exceptional performance and high capacity designed for the demands of today's sophisticated applications and capacity-consuming digital content.

### PRODUCT FEATURES

- **7200 RPM** – The optimum rotational speed for high-capacity drives—performance to match capacity.
- **80 GB per platter** – State-of-the-art areal density and maximum capacity with drives as large as 250 GB.
- **Ultra ATA/100** – Up to 100 MB/s burst transfer rates.
- **2 MB and 8 MB Cache Buffer** – Fast data transfer rates.
- **Fluid Dynamic Bearings (FDB)** – For noise-sensitive computing environments.

### Capacity

120, 160, 200, and 250 GB

### Areal Density

80 GB

### Model Numbers

WD1200BB, WD1200JB,  
WD1600BB, WD1600JB,  
WD2000BB, WD2000JB,  
WD2500BB, and  
WD2500JB



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#### Physical Specifications

	120 GB	160 GB	200 GB	250 GB
Model numbers	WD1200BB WD1200JB	WD1600BB WD1600JB	WD2000BB WD2000JB	WD2500BB WD2500JB
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	40-pin EIDE	40-pin EIDE	40-pin EIDE	40-pin EIDE
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch
Actuator type	Voice Coil	Voice Coil	Voice Coil	Voice Coil
Bytes per sector (STD)	512	512	512	512
Dedicated landing zone	Yes	Yes	Yes	Yes
Actuator Latch/Auto Park	Yes	Yes	Yes	Yes

#### Performance Specifications

##### Data Transfer Rate

Buffer to host	100 MB/s (Mode 5 Ultra ATA) <sup>2</sup> 66.6 MB/s (Mode 4 Ultra ATA) <sup>2</sup> 33.3 MB/s (Mode 2 Ultra ATA) <sup>2</sup> 16.6 MB/s (Mode 2 DMA) <sup>2</sup> 16.6 MB/s (Mode 4 PIO) <sup>2</sup>
Buffer to disk	748 Mbits/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	2 MB (WD1200BB, WD1600BB, WD2000BB, WD2500BB) 8 MB (WD1200JB, WD1600JB, WD2000JB, WD2500JB)
Drive ready Ttme	9.0 sec average
Start/Stop cycles	50,000 min
Master/Slave support	Yes
LBA support	Yes
IORDY support	Yes
Error rate	<1 in 10 <sup>14</sup> bits read
(Non-recoverable)	

#### 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	1.32 lb. (0.60 kg) ± 10%

#### Power Requirements (average)

Mode	12V (±10%)	5V (±5%)	Power
Read/Write <sup>3</sup>	530 mA	450 mA	8.6W
Idle	510 mA	400 mA	8.1W
Standby	30 mA	150 mA	1.1W
Sleep	30 mA	120 mA	1.0W

<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> Maximum burst rate running the specified PIO, DMA, or Ultra ATA transfer mode.

<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.

<sup>6</sup> Three-year standard warranty on WD Caviar Special Edition hard drives. One-year standard warranty on all other Western Digital products. These standard warranties may be subject to variations imposed by local law or regulations. Extended warranties may be available. For extended warranty information, visit our Web site at [support.wdc.com](http://support.wdc.com).

#### 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 5-20 Hz, 0.195 inches (double amplitude) 20-500 Hz, 4.0G (0 to peak)
Non-operating	

##### 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

##### Warranty<sup>6</sup>

1 year	WD1200BB, WD1600BB, WD2000BB, WD2500BB
3 years	WD1200JB, WD1600JB, WD2000JB, WD2500JB

#### For service and literature:

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