WD Caviar® Green™
Power-saving Hard Drives
Cool, quiet, eco-friendly

As hard drive capacities increase, the power required to run those drives increases as well. WD Caviar Green drives make it possible for energy-conscious customers to build systems with higher capacities and the right balance of system performance, ensured reliability, and energy conservation.

Product Features

Reduced power consumption — WD has reduced power consumption by up to 40 percent compared to standard desktop drives with the combination of WD's IntelliSeek™, NoTouch™, and IntelliPower™ technologies.

Helps enable eco-friendly PCs — By using environmentally-conscious PCs with our WD Caviar Green drives on board, large organizations with many desktop computers can minimize their carbon footprint and save real money on electricity costs.

Cool and quiet — GreenPower™ technology yields lower operating temperatures for increased reliability and low acoustics for ultra-quiet PCs and external drives.

Perfect for external drives — External drive manufacturers can eliminate the need for a fan in a high-capacity product with a WD Caviar Green drive, the coolest and quietest in its class.

IntelliPower™ — A fine-tuned balance of spin speed, transfer rate, and caching algorithms designed to deliver both significant power savings and solid performance. Additionally, WD Caviar Green drives consume less current during startup allowing lower peak loads on systems as they are booted.

IntelliSeek™ — Calculates optimum seek speeds to lower power consumption, noise, and vibration.

NoTouch™ ramp load technology — The recording head never touches the disk media ensuring significantly less wear to the recording head and media as well as better drive protection in transit.

StableTrac™ — The motor shaft is secured at both ends to reduce system-induced vibration and stabilize platters for accurate tracking during read and write operations. (2 TB model only)

Native Command Queuing (NCQ) — Server feature for performance in random I/O transaction environments. It aggregates many small random data transfers and allows the disk to reorder the commands in a sequential order for faster access.

Perpendicular Magnetic Recording (PMR) — Employs PMR technology to achieve even greater areal density.

Low power spin-up — WD Caviar Green drives consume less current during startup allowing lower peak loads.

Advanced power technology — Electronic components deliver best-in-class low power consumption for reduced power requirements and increased reliability.

WD Caviar Green is part of WD's complete lineup of desktop hard drives.

WD Caviar® Black™ Maximum performance for power computing.	**WD Caviar® Blue™** Performance and reliability for everyday computing.	**WD Caviar® Green™** Cool, quiet, eco-friendly.

Interface
SATA

Width/Height
3.5-inch/1-inch

Rotational Speed
IntelliPower

Capacities
500 GB to 2 TB

Model Numbers
WD20EADS
WD15EADS
WD10EADS
WD10EAVS
WD7500AACS
WD7500AAVS
WD6400AACS
WD6400AAVS
WD5000AACS
WD5000AAVS

Note: Not all products may be available in all regions of the world.

GreenPower™ TECHNOLOGY

WD Western Digital®

PUT YOUR LIFE ON IT®

WD Caviar Green
Power-saving Hard Drives

Specifications[1]	2 TB	1.5 TB	1 TB	750 GB	640 GB	500 GB
Model number	WD20EADS	WD15EADS	WD10EADS WD10EAVS	WD7500AACS WD7500AAVS	WD6400AACS WD6400AAVS	WD5000AACS WD5000AAVS
Interface	SATA 3 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s
Formatted capacity	2,000,398 MB	1,500,301 MB	1,000,204 MB	750,156 MB	640,135 MB	500,107 MB
User sectors per drive	3,907,029,168	2,930,277,168	1,953,525,169	1,465,149,168	1,250,263,728	976,773,168
LBA support	Yes	Yes	Yes	Yes	Yes	Yes
SATA latching connector	Yes	Yes	Yes	Yes	Yes	Yes
Actuator latch/auto park	Yes	Yes	Yes	Yes	Yes	Yes
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch
RoHS compliant[2]	Yes	Yes	Yes	Yes	Yes	Yes
Performance						
Data transfer rate (max)						
Buffer to host	3 Gb/s	3 Gb/s	3 Gb/s	3 Gb/s	3 Gb/s	3 Gb/s
Host to/from drive (sustained)	100 MB/s	100 MB/s	111 MB/s	111 MB/s	108 MB/s	108 MB/s
Cache (MB)	32	32	32 (WD10EADS) 8 (WD10EAVS)	16 (WD7500AACS) 8 (WD7500AAVS)	16 (WD6400AACS) 8 (WD6400AAVS)	16 (WD6400AACS) 8 (WD6400AAVS)
Rotational speed (RPM)	IntelliPower	IntelliPower	IntelliPower	IntelliPower	IntelliPower	IntelliPower
Average drive ready time (sec)	14.5	14.5	14.3	14.3	14.3	14.3
Reliability/Data Integrity						
Load/unload cycles[3]	300,000	300,000	300,000	300,000	300,000	300,000
Non-recoverable read errors per bits read	<1 in 10^{15}	<1 in 10^{15}	<1 in 10^{15}	<1 in 10^{15}	<1 in 10^{15}	<1 in 10^{15}
Limited warranty (years)[4]	3	3	3	3	3	3
Power Management						
12VDC (A, peak)	1.759	1.759	1.671	1.671	1.392	1.392
Average power requirements (W)						
Read/Write	6	6	5.4	5.4	5.4	5.4
Idle	3.7	3.7	2.8	2.8	2.5	2.5
Standby	0.8	0.8	0.4	0.4	0.46	0.46
Sleep	0.8	0.8	0.4	0.4	0.46	0.46
Environmental Specifications[5]						
Temperature (ºC)						
Operating	0 to 60	0 to 60	5 to 55	5 to 55	5 to 55	5 to 55
Non-operating	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70
Shock (Gs)						
Operating (2 ms, read)	30	30	30	30	30	30
Operating (2 ms, read/write)	65	65	65	65	65	65
Non-operating (1 ms)	250	250	250	250	300	300
Average acoustics (dBA)[6]						
Idle mode	24	24	24	24	24	24
Performance seek mode	29	29	29	29	29	29
Quiet seek mode	25	25	25	25	25	25
Physical Dimensions						
Height (in./mm, max)	1.028/25.4	1.028/25.4	1.028/25.4	1.028/25.4	1.028/25.4	1.028/25.4
Length (in./mm, max)	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147
Width (in./mm, ± .01 in.)	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6
Weight (lb./kg, ± 10%)	1.61/0.73	1.61/0.73	1.39/0.63	1.39/0.63	1.32/0.60	1.32/0.60

[1] *As used for storage capacity, one megabyte (MB) = one million bytes, one gigabyte (GB) = one billion bytes, and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment. As used for buffer or cache, one megabyte (MB) = 1,048,576 bytes. As used for transfer rate or interface, megabyte per second (MB/s) = one million bytes per second, and gigabit per second (Gb/s) = one billion bits per second. Effective maximum SATA 3 Gb/s transfer rate calculated according to the Serial ATA specification published by the SATA-IO organization as of the date of this specification sheet. Visit www.sata-io.org for details.*

[2] *WD hard drive products manufactured and sold worldwide after June 1, 2006, meet or exceed Restriction of Hazardous Substances (RoHS) compliance requirements as mandated by the European Union for electrical and electronic products. The RoHS Directive 2002/95/EC of the European Parliament, which is effective in the EU beginning July 1, 2006, aims to protect human health and the environment by restricting the use of certain hazardous substances in new equipment, and consists of restrictions on lead, mercury, cadmium, and other substances.*

[3] *Controlled unload at ambient condition*

[4] *The term of the limited warranty may vary by region. Visit support.wdc.com/warranty for details.*

[5] *No non-recoverable errors during operating tests or after non-operating tests.*

[6] *Sound power level.*

For service and literature:
support.wdc.com
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