

WD Caviar® Black™

Desktop Hard Drives

Maximum performance
for power computing



Interface

SATA 3Gb/s

Width/Height

3.5-inch/1-inch

Rotational Speed

7200 RPM

Capacities

750 GB and 1 TB

Model Numbers

WD1001FALS
WD7501AALS

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

WD Caviar Black drives combine a high performance electronics architecture with a rock solid mechanical architecture to deliver the perfect storage solution for your fully-loaded PC or maxed out gaming machine. Cool drive operation, no-touch head technology, leading-edge vibration protection ensure enhanced reliability. And we back it all up with a 5-year warranty.

Product Features

High Performance Electronics Architecture

- **Dual processor** — Twice the processing power to maximize performance.
- **32 MB cache** — Bigger, faster cache means faster performance.

Rock Solid Mechanical Architecture

- **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.
- **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.
- **Perpendicular Magnetic Recording (PMR)** — WD Caviar Black drives employ PMR technology to achieve even greater areal density.

Compatible — We perform tests on hundreds of systems and a multitude of platforms in our FIT Lab™ and Mobile Compatibility Lab to give our customers confidence that our drives will work in their systems.

5 Year Warranty

WD Caviar Black 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.

WD Caviar Black

Desktop Hard Drives

Specifications	1 TB	750 GB
Model number	WD1001FALS	WD7501AALS
Interface	SATA 3 Gb/s	SATA 3 Gb/s
Formatted capacity ¹	1,000,204 MB	750,156 MB
User sectors per drive	1,953,525,169	1,465,149,168
LBA support	Yes	Yes
SATA latching connector	Yes	Yes
Actuator latch/auto park	Yes	Yes
Form factor	3.5-inch	3.5-inch
RoHS compliant ²	Yes	Yes
Compatibility	Windows® 2000/XP/Vista	Windows® 2000/XP/Vista
Performance		
Data transfer rate (max)		
Buffer to host	3 Gb/s	3 Gb/s
Host to/from drive (sustained)	145 Mbytes/s	145 Mbytes/s
Cache (MB)	32	32
Average latency (ms)	4.2	4.2
Rotational speed (RPM)	7200	7200
Average drive ready time (sec)	13	13
Configuration/Organization		
Heads/disks	6/3	5/3
Bytes per sector (STD)	512	512
Reliability/Data Integrity		
Load/unload cycles ³	50,000	50,000
Non-recoverable read errors per bits read	<1 in 10 ¹⁵	<1 in 10 ¹⁵
Limited warranty (years) ⁴	5	5
Power Management		
12VDC ± 10% (A, peak)	2.075	2.075
Average power requirements (W)		
Read/Write	8.4	8.4
Idle	7.8	7.8
Standby	1	1
Sleep	1	1
Environmental Specifications⁵		
Temperature (°C)		
Operating	0 to 60	0 to 60
Non-operating	-40 to 70	-40 to 70
Shock (Gs)		
Operating (2 ms, read)	30	30
Operating (2 ms, read/write)	65	65
Non-operating (1 ms)	250	250
Average acoustics (dBA) ⁶		
Idle mode	24	24
Performance seek mode	33	33
Quiet seek mode	29	29
Physical Dimensions		
Height (in./mm, max)	1.028/25.4	1.028/25.4
Length (in./mm, max)	5.787/147	5.787/147
Width (in./mm, ± .01 in.)	4/101.6	4/101.6
Weight (lb./kg, ± 10%)	1.52/0.69	1.52/0.69



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¹One gigabyte (GB) = one billion bytes. One terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment.

²WD products manufactured and sold worldwide after August 1, 2005, 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.

³Controlled unload at ambient condition.

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

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

⁶Sound power level.