



WD VelociRaptor®

SATA Hard Drives

WD VelociRaptor hard drives deliver maximum speed and reliability for performance enthusiast systems, workstations, and low-end servers. With a superbly engineered combination of 10,000 RPM spin speed, SATA 6 Gb/s interface and a 32 MB cache, these drives are truly an evolution in performance.



INTERFACE

SATA 6 Gb/s (HLHX models)
SATA 3 Gb/s (HLFS models)

WIDTH/HEIGHT

3.5-inch/1-inch

ROTATIONAL SPEED

10,000 RPM

CAPACITIES

74, 150, 300, 450, and 600 GB

MODEL NUMBERS

WD6000HLHX WD3000HLFS
WD4500HLHX WD1500HLFS

WD740HLFS*

*This model/capacity is build-to-order only

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

Product Benefits

Killer speed

With up to SATA 6 Gb/s interface and 32 MB cache, next generation 10,000 RPM WD VelociRaptor are up to 15% faster than the award-winning previous generation.

Rock-solid reliability

Designed and manufactured to mission-critical enterprise-class standards to provide enterprise reliability in high duty cycle environments. With 1.4 million hours MTBF, these drives have the highest available reliability rating on a high-capacity SATA drive.

Monstrous capacity

WD VelociRaptor SATA drives are available in capacities up to 600 GB, double the capacity of the previous generation.

Ultra-cool operation

Consumes less idle power and uses similar active power as the previous generation WD VelociRaptor, while offering double the capacity and higher performance.

IcePack™ mounting frame

The 2.5-inch WD VelociRaptor is enclosed in a backplane-ready 3.5-inch enterprise-class mounting frame with a built-in heat sink that keeps this powerful little drive extra cool when installed in high-performance desktop chassis.

Rotary Acceleration Feed Forward (RAFF™)

Optimizes operation and performance when the drives are used in vibration-prone, multi-drive chassis.

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.

Environmentally conscious

In addition to being ROHS compliant, this generation of WD VelociRaptor is also a halogen free design.

5-year limited warranty

Applications

Performance enthusiast systems, workstations, and low-end servers.

PUT YOUR LIFE ON IT®



WD VelociRaptor

Specifications ¹	600 GB	450 GB	300 GB	150 GB	74 GB
Model number	WD6000HLHX	WD4500HLHX	WD3000HLFS	WD1500HLFS	WD740HLFS
Interface	SATA 6 Gb/s	SATA 6 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s
Formatted capacity	600,127 MB	450,098 MB	300,069 MB	150,039 MB	74,355 MB
User sectors per drive	1,172,123,568	879,097,968	586,072,368	293,046,768	145,226,112
Native command queuing	Yes	Yes	Yes	Yes	Yes
SATA latching connector	Yes	Yes	Yes	Yes	Yes
Actuator latch/auto park	Yes	Yes	Yes	Yes	Yes
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch
RoHS compliant ²	Yes	Yes	Yes	Yes	Yes
Performance					
Data transfer rate (max)					
Buffer to host	6 Gb/s	6 Gb/s	3 Gb/s	3 Gb/s	3 Gb/s
Host to/from drive (sustained)	145 MB/s	145 MB/s	126 MB/s	126 MB/s	126 MB/s
Cache (MB)	32	32	16	16	16
Rotational speed (RPM)	10,000	10,000	10,000	10,000	10,000
Average drive ready time (sec)	7	7	7	7	7
Reliability/Data Integrity					
Load/unload cycles ³	600,000	600,000	600,000	600,000	600,000
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
Limited warranty (years) ⁴	5	5	5	5	5
Power Management					
12VDC (A, max)	1.8	1.8	1.25	1.25	1.25
Average power requirements (W)					
Read/Write	6.4	6.4	6.0	6.0	6.0
Idle	4.3	4.3	4.5	4.5	4.5
Standby	0.7	0.7	0.4	0.4	0.4
Sleep	0.7	0.7	0.4	0.4	0.4
Environmental Specifications⁵					
Temperature (°C)					
Operating	5 to 55	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
Shock (Gs)					
Operating (2 ms, read/write)	30	30	30	30	30
Operating (2 ms, read)	65	65	65	65	65
Non-operating (2 ms)	300	300	300	300	300
Average acoustics (dBA) ⁶					
Idle mode	27	27	27	27	27
Performance seek mode	34	34	34	34	34
Physical Dimensions					
Height (in./mm, max)	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1	1.028/26.1
Length (in./mm, max)	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
Weight (lb./kg, ± 10%)	1.08/0.49	1.08/0.49	1.08/0.49	1.08/0.49	1.08/0.49

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.

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