



WD VelociRaptor®

Workstation Hard Drives

WD VelociRaptor drives offer an unmatched combination of high performance and high reliability, perfect for workstations, high-end video and photo editing, low-end servers and performance enthusiasts' systems. Comes with a 3.5-inch mounting frame for easy installation into today's high-performance systems and chassis.



INTERFACE

SATA 6 Gb/s

WIDTH/HEIGHT

3.5-inch/1-inch

ROTATIONAL SPEED

10,000 RPM

CAPACITIES

250 and 500 GB; 1 TB

MODEL NUMBERS

WD1000DHTZ
WD5000HHTZ
WD2500HHTZ

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

Product Benefits

Ultra fast

Designed around a 10,000 RPM spin speed, these SATA 6 Gb/s drives include a 64 MB cache and deliver the ultimate performance for photo and video editing.

Rock-solid reliability

With 1.4 million hours MTBF, these drives have the highest available reliability rating on a high capacity SATA drive.

High capacity

State-of-the-art technology delivers a balance of high performance and high capacity perfect for data-intensive workloads that require large amounts of storage such as video editing, 3D rendering and scientific modeling.

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.

Advanced Format (AF)

Technology adopted by WD and other drive manufacturers as one of multiple ways to continue growing hard drive capacities. AF is a more efficient media format that enables increased areal densities.

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.

Pre-emptive Wear Leveling (PWL)

Ensures reliability for applications that perform a high incidence of read/write operations at the same physical location on the disk.

5-year limited warranty

Applications

High-performance computing, 3D rendering, digital content creation and editing, scientific computing and image management.

PUT YOUR LIFE ON IT®



WD VelociRaptor

Specifications ¹	1 TB	500 GB	250 GB
Model number	WD1000DHTZ	WD5000HHTZ	WD2500HHTZ
Interface	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s
Formatted capacity	1 TB	500 GB	250 GB
User sectors per drive	1,953,525,168	976,773,168	488,397,168
Advanced Format (AF)	Yes	Yes	Yes
SATA latching connector	Yes	Yes	Yes
Form factor	3.5-inch	3.5-inch	3.5-inch
RoHS compliant ²	Yes	Yes	Yes
Performance			
Data transfer rate (max)			
Buffer to host	6 Gb/s	6 Gb/s	6 Gb/s
Host to/from drive (sustained)	200 MB/s	200 MB/s	200 MB/s
Cache (MB)	64	64	64
Rotational speed (RPM)	10,000	10,000	10,000
Average drive ready time (sec)	8	8	8
Reliability/Data Integrity			
Load/unload cycles ³	600,000	600,000	600,000
Non-recoverable read errors per bits read	<10 in 10 ¹⁶	<10 in 10 ¹⁶	<10 in 10 ¹⁶
Limited warranty (years) ⁴	5	5	5
Power Management			
12VDC (A, max)	1.8	1.8	1.8
Average power requirements (W)			
Random Read/Write	5.1	5.1	5.1
Sequential Read/Write	5.8	5.8	5.8
Idle	4.2	4.2	4.2
Standby and Sleep	1.1	1.1	1.1
Environmental Specifications⁵			
Temperature (°C)			
Operating	5 to 55	5 to 55	5 to 55
Non-operating	-40 to 70	-40 to 70	-40 to 70
Shock (Gs)			
Operating (2 ms, read/write)	30	30	30
Operating (2 ms, read)	65	65	65
Non-operating (2 ms)	300	300	300
Average acoustics (dBA) ⁶			
Idle mode	30	30	30
Performance seek mode	37	37	37
Physical Dimensions			
Height (in./mm, max)	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
Width (in./mm, ± .01 in.)	4/101.6	4/101.6	4/101.6
Weight (lb./kg, ± 10%)	1.10/0.50	1.10/0.50	1.10/0.50

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 RoHS Directive 2011/65/EU.

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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