



# 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 <sup>1</sup>	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 <sup>2</sup>	Yes	Yes	Yes
<b>Performance</b>			
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
<b>Reliability/Data Integrity</b>			
Load/unload cycles <sup>3</sup>	600,000	600,000	600,000
Non-recoverable read errors per bits read	<10 in 10 <sup>16</sup>	<10 in 10 <sup>16</sup>	<10 in 10 <sup>16</sup>
Limited warranty (years) <sup>4</sup>	5	5	5
<b>Power Management</b>			
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
<b>Environmental Specifications<sup>5</sup></b>			
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) <sup>6</sup>			
Idle mode	30	30	30
Performance seek mode	37	37	37
<b>Physical Dimensions</b>			
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

<sup>1</sup> 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](http://www.sata-io.org) for details.

<sup>2</sup> 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.

<sup>3</sup> Controlled unload at ambient condition

<sup>4</sup> The term of the limited warranty may vary by region. Visit [support.wdc.com/warranty](http://support.wdc.com/warranty) for details.

<sup>5</sup> No non-recoverable errors during operating tests or after non-operating tests.

<sup>6</sup> Sound power level.

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