



WD Re

Datacenter Capacity HDD

Durable capacity storage for high-availability deployments

Ideal for enterprise servers and storage, video surveillance, and other write-intensive applications, WD Re 7200 RPM Enterprise SATA hard drives offer up to 4 TB capacity, 64 MB cache, 4th generation vibration tolerance and 5-year limited warranty.



INTERFACE

SATA 6 Gb/s

WIDTH/HEIGHT

3.5-inch/1-inch

ROTATIONAL SPEED

7200 RPM

CAPACITIES

250 GB to 4 TB

MODEL NUMBERS

WD4000FYYZ	WD1003FBYZ
WD3000FYYZ	WD5003ABYZ
WD2000FYYZ	WD2503ABYZ
WD200MFYYZ	

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

Product Benefits

Industry's highest capacity nearline drive

WD Re SATA hard drives are available in capacities ranging from 250 GB to 4 TB to suit even the most demanding storage needs.

Highest performance for business-critical applications

WD Re delivers 6 Gb/s transfer rates, sustained sequential data rates of up to 171 MB/s and high random I/O rates.

Designed for quality and reliability

With a field-tested 1.2 million hour MTBF, this high performance drive delivers the highest level of reliability for 24x7 operation in up to 100% duty cycle applications.

Dual processor

Twice the processing power to maximize performance.

Vibration Protection

Enhanced RAFF™ technology includes sophisticated electronics to monitor the drive and correct both linear and rotational vibration in real time. The result is a significant performance improvement in high vibration environments over the previous generation of drives.

Dual actuator technology

A head positioning system with two actuators that improves positional accuracy over the data track(s). The primary actuator provides coarse displacement using conventional electromagnetic actuator principles. The secondary actuator uses piezoelectric motion to fine tune the head positioning to a higher degree of accuracy.

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.

Multi-axis shock sensor

Automatically detects the subtlest shock events and compensates to protect the data.

RAID-specific, time-limited error recovery (TLER)

Prevents drive fallout caused by the extended hard drive error-recovery processes common to desktop drives.

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.

Thermal extended burn-in test

Each drive is put through extended burn-in testing with thermal cycling to ensure reliable operation.

Dynamic fly height technology

Each read-write head's fly height is adjusted in real time for optimum reliability.

Applications

Ideal for servers, storage arrays, video surveillance and other demanding applications.



Specifications	4 TB	3 TB	2 TB	2 TB	1 TB	500 GB	250 GB
Model number	WD4000FYYZ	WD3000FYYZ	WD200MFYYZ	WD2000FYYZ	WD1003FBYZ	WD5003ABYZ	WD2503ABYZ
Interface	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s
Formatted capacity ¹	4 TB	3 TB	2 TB	2 TB	1 TB	500 GB	251 GB
User sectors per drive	7,814,037,168	5,860,533,168	3,907,029,168	3,907,029,168	1,953,525,168	976,773,168	490,350,672
Native command queuing	Yes	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	3.5-inch
RoHS compliant ²	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Performance							
Data transfer rate (max)							
Buffer to host	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s	6 Gb/s
Host to/from drive (sustained)	171 MB/s	168 MB/s	164 MB/s	164 MB/s	128 MB/s	128 MB/s	128 MB/s
Cache (MB)	64	64	64	64	64	64	64
Rotational speed (RPM)	7200	7200	7200	7200	7200	7200	7200
Reliability/Data Integrity							
Load/unload cycles ³	600,000	600,000	600,000	600,000	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	<10 in 10 ¹⁶	<1 in 10 ¹⁵	<1 in 10 ¹⁵	<1 in 10 ¹⁵
MTBF (hours) ⁴	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
AFR (%) ⁵	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Limited warranty (years) ⁶	5	5	5	5	5	5	5
Power Management							
Average power requirements (W)							
Sequential read	10.2	10.2	10.2	8.1	8.2	6.5	6.5
Sequential write	9.7	9.7	9.7	7.7	8.3	6.4	6.4
Random read/write	10.9	10.9	10.9	9	8.6	6.3	6.3
Idle	8.6	8.6	8.6	6.4	5.9	4.4	4.4
Environmental Specifications⁶							
Temperature (°C)							
Operating	5 to 55	5 to 55	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	-40 to 70	-40 to 70
Shock (Gs)							
Operating (2 ms, read/write)	30	30	30	30	30	30	30
Operating (2 ms, read)	65	65	65	65	65	65	65
Non-operating (2 ms)	300	300	300	300	300	350	350
Acoustics (dBA) ⁷							
Idle	31	31	31	31	28	27	27
Seek (average)	34	34	34	34	33	30	30
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	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	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	4/101.6
Weight (lb./kg, ± 10%)	1.66/0.75	1.66/0.75	1.66/0.75	1.66/0.75	1.49/0.68	0.99/0.45	0.99/0.45

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 6 Gb/s transfer rate calculated according to the Serial ATA specification published by the Serial ATA-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 8, 2011, 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 Product MTBF and AFR specifications are based upon a 40°C base casing and system workloads of up to 550 TB/year (workload is defined as the amount of user data transferred to or from the hard drive).

⁵ The term of the limited warranty may vary by region. Visit <http://support.wd.com/warranty> for details.

⁶ No non-recoverable errors during operating tests or after non-operating tests.

⁷ Sound power level.

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