

WD RE3

Enterprise Hard Drives

High performance
Enhanced reliability
5-year limited warranty



Interface

SATA

Width/Height

3.5-inch/1-inch

Rotational Speed

7200 RPM

Capacities

250 to 500 GB

Model Numbers

WD5002ABYS
WD3202ABYS
WD2502ABYS

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

WD RE3 drives combine 16 MB cache with SATA 3 Gb/s transfer rate for lightning-fast performance in demanding server and storage applications. Technologically advanced acoustics minimize noise. Cool drive operation and enhanced reliability features help protect the drive and the data stored on it.

Product Benefits

Dual processor - Twice the processing power results in a 20% performance improvement over the previous generation.

RAFF™ - Our 4th generation RAFF technology includes sophisticated electronics to monitor the drive and correct both linear and rotational vibration for up to a 60% performance improvement in high vibration environments over the previous generation of drives.

IntelliSeek™ - Calculates optimum seek speeds to lower power consumption, noise, and vibration in active seek modes without degrading performance.

Multi-axis shock sensor - An additional 3rd sensor has been added to automatically detect subtle high frequency shock events in all axis enabling compensation 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.

3rd generation dynamic fly height - Each read-write head's fly height is adjusted in real time for optimum reliability.

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

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 RE3 drives utilize PMR technology to achieve even greater areal density, reliability, and design margin.

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Applications

Ideal for servers, video surveillance, and other demanding write-intensive applications.

The WD Promise



WD understands the importance of the information you save to your hard drive and we are committed to protecting that data with exceptionally reliable products, advanced data protection technology, and superior customer support. No one does more to safeguard your data than WD.

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Enterprise Hard Drives

Drive Specifications

	250 GB	320 GB	500 GB
Formatted capacity ¹	250,059 MB	320,072 MB	500,107 MB
User sectors per drive	488,397,168	625,142,448	976,773,168
Model number	WD2502ABYS	WD3202ABYS	WD5002ABYS
Actuator latch/auto park	Yes	Yes	Yes
Bytes per sector (STD)	512	512	512
Dedicated landing zone	Yes	Yes	Yes
Form factor	3.5-inch	3.5-inch	3.5-inch
Interface	SATA 3 Gb/s	SATA 3 Gb/s	SATA 3 Gb/s
Native Command Queuing	Yes	Yes	Yes
RoHS compliant ²	Yes	Yes	Yes

Performance Specifications

Average latency	4.2 ms
Buffer	16 MB
Cache	
Read	Adaptive
Write	Yes
Data transfer rate	
Buffer to host ³	3 Gb/s (maximum)
Host to/from drive	126 Mbytes/s sustained (max)
Drive ready time	12.0 sec (average)
Error rate (non-recoverable)	<1 in 10 ¹⁵ bits read
LBA support	Yes
MTBF ⁴	1,200,000 hours
Rotational speed	7200 RPM
Seek time	
Full stroke	21 ms (average)
Read ⁵	8.9 ms (average)
Track-to-Track	0.6 ms (average)
Limited warranty	5-year

Physical Dimensions

Height	1.028 in (25.4 mm)
Length	5.787 in (147.0 mm)
Width	4.0 in (101.6 mm) ±0.01 in
Weight ⁵	1.39 lb (0.63 kg) ± 10%

Environmental Specification⁶

Shock

Operating (2 ms)	30G (write), 65G (read)
Non-operating (1 ms) ⁵	300G

Note: Half-sine wave, measured in 2 ms duration and without isolation.

Vibration

Operating	
Random	0.004 g ² /Hz (10 to 300 Hz) 0.008 g ² /Hz (300 to 500 Hz)
Linear	20–300 Hz, 0.75G (0 to peak)
Non-operating	
Random	0.05 g ² /Hz (10 to 300 Hz) 0.01 g ² /Hz (300 to 500 Hz)
Linear	20–500 Hz, 4.0G (0 to peak)

Operating Temperature and Humidity

Temperature	0°C to 60°C
Humidity	5–95% RH non-condensing
Thermal gradient	20°C/hour (maximum)

Non-Operating Temperature and Humidity

Temperature	–40°C to 65°C
Humidity	5–95% RH non-condensing
Thermal gradient	30°C/hour

Acoustics (Average)⁵

Idle mode ⁷	25 dBA
Performance seek mode ⁸	29 dBA
Quiet seek mode	26 dBA



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

² WD 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.

³ Effective maximum SATA 3 Gb/s transfer rate.

⁴ After 24 power-on hours.

⁵ Maximum drive capacity model.

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

⁷ 20 KHz cutoff.

⁸ Sound power level.