

WD RE2

Enterprise Hard Drives

1.2 Million Hours MTBF

High Capacity

24 x 7 Reliability



Interface

SATA

Width/Height

3.5-inch/1-inch

Rotational Speed

7200 RPM

Capacities

400 to 750 GB

Model Numbers

WD4000YS
WD4000ABYS
WD5000YS
WD5000ABYS
WD7500AYYS

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

WD RE2 hard drives are the world's most reliable server-class SATA drives in the market. With 1.2 million hours MTBF, 5-year limited warranty, 3 Gb/s SATA technology, and best-in-class vibration tolerance, WD RE2 drives offer the best combination of superior reliability, high capacity, and optimum performance for enterprise applications.

Product Benefits

Superior reliability - Designed and manufactured to server-class standards to provide best-in-class enterprise reliability in high duty cycle environments. With 1.2 million hours MTBF, these drives have the highest available reliability rating on a high-capacity drive.

High capacity - Up to 750 GB of storage packed with server-class features and low cost-per-gigabyte value.

Fast - With a next-generation SATA interface, 3 Gb/s data transfer rate, Native Command Queuing (NCQ), and 16 MB cache, these drives deliver optimum performance.

Low power - Active Power Save™ delivers best-in-class seek mode power consumption through an advanced WD firmware which conserves power in active seek modes without degrading performance.

RAID-specific, Time-Limited Error Recovery (TLER) - A feature pioneered by WD, significantly reduces drive fallout caused by the extended hard drive error-recovery processes common to desktop drives.

Rotary Acceleration Feed Forward (RAFF™) - Provides best-in-class vibration tolerance by optimizing operation and performance when the drives are used in vibration-prone, multidrive systems such as rack-mounted servers or network storage.

5-year limited warranty

Applications

Servers, network attached storage, scientific computing, life sciences, video surveillance, enterprise backup, software build systems, document and image management, audio/video media applications, 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.

WD RE2

Enterprise Hard Drives

Drive Specifications

	400 GB	500 GB	750 GB
Formatted capacity ¹	400,088 MB	500,107 MB	750,156 MB
User sectors per drive	781,422,768	976,773,168	1,465,149,168
Model number	WD4000ABYS	WD5000ABYS	WD7500AYYS
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 Gb/s (maximum)
Buffer to disk ³	98 MB/s (sustained)
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	8.7 ms (YS average)
Track-to-Track	8.9 ms (AYYS average)
Limited warranty	0.6 ms (average)
	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	1.436 lb (0.653 kg) ±10% (YS)
	1.61 lb (0.730 kg) ±10% (AYYS)

Power Requirements (ABYS)

Mode	12V (±10%)	5V (±5%)	Power
Idle ⁵	450 mA	600 mA	8.4W
Read/Write	460 mA	650 mA	8.77W
Sleep	6 mA	180 mA	0.97W
Standby	6 mA	180 mA	0.97W

Note: 3.3V Serial ATA power not used in this product.

Power Requirements (AYYS)

Mode	12V (±10%)	5V (±5%)	Power
Idle ⁵	470 mA	700 mA	8.9W
Read/Write	500 mA	700 mA	9.5W
Sleep	6 mA	180 mA	0.97W
Standby	6 mA	180 mA	0.97W

Environmental Specification⁶

Shock

Operating (2 ms)	30G (write), 65G (read)
Non-operating (1 ms)	250G

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

Vibration

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

Operating Temperature and Humidity

Temperature	5°C to 55°C (AYYS/ABYS)
	5°C to 60°C (YS)
Humidity	5–95% RH non-condensing
Thermal gradient	20°C/hour (maximum)

Non-Operating Temperature and Humidity

Temperature	–40°C to 65°C (AYYS/ABYS)
	–40°C to 70°C (YS)
Humidity	5–95% RH non-condensing
Thermal gradient	30°C/hour

Acoustics (Average)

Idle mode ⁷	28 dBA
Performance seek mode ⁸	34 dBA
Quiet seek mode	30 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 Maximum drive capacity model.

⁴ After 24 power-on hours.

⁵ Average idle run current and power measured with power supply at nominal voltage and 35°C ambient.

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

⁷ 20 KHz cutoff.

⁸ Sound power level.