

# WD RE2 SATA Hard Drives

Enterprise-class  
24 x 7 Reliability  
High Capacity



## INTERFACE

SATA

## WIDTH/HEIGHT

3.5-inch/1-inch

## ROTATIONAL SPEED

7200 RPM

## CAPACITIES

400 GB

## MODEL NUMBERS

WD4000YR

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

WD produces the world's most reliable server class SATA drives. With 1.2 million hours MTBF, 100% duty cycle, 5-year warranty, next-generation 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 Features

- **Superior reliability** — designed and manufactured to enterprise-class standards to provide best-in-class enterprise reliability in high duty cycle environments. With 1.2 million hours MTBF at 100% duty cycle, these drives have the highest available reliability rating on a high-capacity drive.
- **High capacity** — 400 GB of storage packed with enterprise-class features and low cost-per-gigabyte value.
- **Fast** — with a next-generation SATA interface, 1.5 Gb/s data transfer rate, native command queuing (NCQ), and 16 MB cache, these drives deliver optimum performance.
- **RAID-specific, time-limited error recovery (TLER)** — a feature pioneered by WD, prevents 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.
- **SecureConnect™** — provides a 500 percent stronger cable-to-drive connection than first-generation SATA hard drives and cables. Also ensures backward compatibility with legacy SATA cables and backplanes.  
*Note:* SecureConnect supports only legacy power and does not allow connection to a SATA power supply.
- **FlexPower™** — connector technology that accepts power from either industry-standard or new SATA power supplies.
- **5-year warranty**

## Applications

Servers, network attached storage, scientific computing, life sciences, video surveillance, enterprise backup, nearline storage, 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 SATA Hard Drives



## Drive Specifications

	<b>400 GB</b>
Formatted capacity <sup>1</sup>	400,088 MB
User sectors per drive	781,422,768
WD model number	WD4000YR
Actuator latch/auto park	Yes
Bytes per sector (STD)	512
Dedicated landing zone	Yes
Form factor	3.5-inch
Interface	SATA 1.5 Gb/s
RoHS compliant <sup>2</sup>	Yes

## Performance Specifications

Average latency	4.2 ms
Buffer	16 MB
Cache	
Read	Adaptive
Write	Yes
Data transfer rate (buffer to host)	
Buffer to host	1.5 Gb/s (maximum)
Buffer to disk	65 MB/s (sustained)
Drive ready time	12.0 sec (average)
Error rate (non-recoverable)	<1 in 10 <sup>15</sup> bits read
LBA support	Yes
Rotational speed	7200 RPM
Seek time	
Full stroke	21 ms (average)
Read	8.7 ms (average)
Track-to-track	0.6 ms (average)
Start/stop cycles	50,000 minimum

## 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%

## Power Requirements<sup>3</sup>

Mode	12V (±5%)	5V (±5%)	Power
Idle <sup>4</sup>	450 mA	690 mA	8.9W
Read/Write	550 mA	850 mA	10.75W
Sleep	16 mA	360 mA	2W
Standby	16 mA	370 mA	2W

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

## Environmental Specifications<sup>5</sup>

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

## Operating Temperature and Humidity

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

## Non-Operating Temperature and Humidity

Temperature	–40°C to 70°C
Humidity	5–95% RH non-condensing
Thermal gradient	30°C/hour

## Acoustics (Average)

Idle mode <sup>6</sup>	29 dBA
Performance seek mode <sup>0</sup>	34 dBA
Quiet seek mode <sup>3</sup>	30 dBA

## Reliability (Average)

MTBF <sup>5</sup>	1.2 M hours
Warranty <sup>8</sup>	5-year



## For service and literature:

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<sup>1</sup> 1 gigabyte (GB) = 1 billion bytes. Total accessible capacity varies depending on operating environment.

<sup>2</sup> WD complies with the Restriction of Hazardous Substances (RoHS) Directive 2002/95/EC of the European Parliament, which is effective in the EU beginning July 1, 2006. RoHS 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.

<sup>3</sup> After 24 power-on hours.

<sup>4</sup> Average current.

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

<sup>6</sup> 20 KHz cutoff.

<sup>7</sup> 100% duty cycle at 50°C on base casting.

<sup>8</sup> Five-year standard warranty on WD RE2 hard drives. Extended warranties may be available. For extended warranty information, visit our Web site at [support.wdc.com](http://support.wdc.com).