



# WD Red™

## NAS Hard Drives

WD Red is the only hard drive designed for NAS systems that have 1-5 drive bays. The drives are designed and extensively tested for compatibility in the unique 24x7 operating environment and demanding system requirements of home and small office NAS.



### INTERFACE

SATA 6 Gb/s

### WIDTH/HEIGHT

3.5-inch/1-inch

### ROTATIONAL SPEED

IntelliPower™

### CAPACITIES

1 TB to 3 TB

### MODEL NUMBERS

WD30EFRX  
WD20EFRX  
WD10EFRX

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

## Product Features

### NAS compatibility

WD eliminates the confusion. WD Red is the only hard drive designed for NAS systems that have 1 to 5 drive bays. The drives are designed and extensively tested for compatibility in the unique 24x7 operating environment and demanding system requirements of home and small business NAS.

### Enhanced reliability

With a 35% MTBF improvement over standard desktop drives, the WD Red drive is designed and manufactured to be a more reliable and robust solution.

### The secret is in the technology-NASware™

Advanced firmware technology built into every WD Red drive, enables seamless integration, robust data protection and optimal performance for systems operating in NAS and RAID environments.

### Energy efficient

Innovative technology reduces power consumption and lowers the operating temperature, resulting in a more reliable and affordable solution for always on 24x7 NAS environments.

### 3D Active Balance Plus

Our enhanced dual-plane balance control technology significantly improves the overall drive performance and reliability. Hard drives that are not properly balanced may cause excessive vibration and noise in a multi-drive system, reduce the hard drive life span, and degrade the performance over time.

### Premium support

Exclusively for WD Red drive customers, free dedicated 24x7 support line.

### Longer warranty coverage

The WD Red drive is backed by a 3-year limited warranty for greater peace of mind.

## Applications

WD Red NAS hard drives are recommended for use in home and small office 1-5 bay NAS systems. For systems that use more than 5 bays or are rack mount solutions, please consider WD enterprise hard drives.\*

\* WD hard drives are designed and tested for use in specific applications and environments. This ensures that your hard drive is compatible with and functions properly in your application. Our hard drives are warranted against defects in materials and workmanship in the system for which they were designed. Use in systems other than for what the hard drive was designed could result in compatibility problems that affect proper function, unrelated to material and/or workmanship defects. For best results, be sure to select the appropriate product for your application by consulting our product spec sheets on our website at [www.wd.com](http://www.wd.com) or by calling our customer support line where we would be happy to help you through the selection process.

## The WD Advantage

WD puts our products through extensive Functional Integrity Testing (F.I.T) prior to any product launch. This testing ensures our products consistently meet the highest quality and reliability standards of the WD brand. WD also has a detailed Knowledge Base with more than 1,000 helpful articles as well as helpful software and utilities. Our customer support lines have longer operational hours to ensure you get the help you need when you need it. Our toll-free customer support lines are here to help or you can access our WD Support site for additional details.



WD Red™

Specifications <sup>1</sup>	3 TB	2 TB	1 TB
Model number	WD30EFRX	WD20EFRX	WD10EFRX
Interface	SATA 6 Gb/s	SATA 6 Gb/s	SATA 6 Gb/s
Formatted capacity	2,000,398 MB	2,000,398 MB	1,000,204 MB
User sectors per drive	3,907,029,168	3,907,029,168	1,953,525,168
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 Host to/from drive (sustained)	6 Gb/s 145 MB/s	6 Gb/s 145 MB/s	6 Gb/s 150 MB/s
Cache (MB)	64	64	64
Rotational speed (RPM) <sup>3</sup>	IntelliPower	IntelliPower	IntelliPower
<b>Reliability/Data Integrity</b>			
Load/unload cycles <sup>4</sup>	600,000	600,000	600,000
Non-recoverable read errors per bits read	<1 in 10 <sup>14</sup>	<1 in 10 <sup>14</sup>	<1 in 10 <sup>14</sup>
MTBF (hours) <sup>5</sup>	1,000,000	1,000,000	1,000,000
Limited warranty (years) <sup>6</sup>	3	3	3
<b>Power Management</b>			
12VDC (A, peak)	1.73	1.73	1.20
Average power requirements (W) Read/write Idle Standby Sleep	4.4 4.1 0.6 0.6	4.4 4.1 0.6 0.6	3.7 3.2 0.6 0.6
<b>Environmental Specifications<sup>7</sup></b>			
Temperature (°C, on the base casting) Operating Non-operating	0 to 70 -40 to 70	0 to 70 -40 to 70	0 to 70 -40 to 70
Shock (Gs) Operating (2 ms, read) Operating (2 ms, read/write) Non-operating (1 ms)	30 65 250	30 65 250	30 65 350
Average acoustics (dBA) <sup>8</sup> Idle mode Seek mode	23 24	23 24	21 22
<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%)	1.40/0.64	1.32/0.60	0.99/0.45

<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 6 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>A fine-tuned balance of spin speed, transfer rate and caching algorithms designed to deliver both significant power savings and solid performance. For each drive model, WD may use a different, invariable RPM.

<sup>4</sup>Controlled unload at ambient condition.

<sup>5</sup>Based on a typical NAS product environment under normal operating conditions.

<sup>6</sup>The term of the limited warranty may vary by region. Visit <http://support.wdc.com/warranty> for details.

<sup>7</sup>No non-recoverable errors during operating tests or after non-operating tests.

<sup>8</sup>Sound power level.

**WD Red is part of WD's complete lineup of internal hard drives.**



**WD Blue™**  
Desktop Hard Drives  
for everyday computing.



**WD Green™**  
Desktop Hard Drives  
for energy efficient applications.



**WD Black™**  
Desktop Hard Drives  
for performance users.



**WD Red™**  
NAS Hard Drives  
for home and small office NAS systems.

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**For service and literature:**

<http://support.wdc.com>  
[www.wd.com](http://www.wd.com)

800.ASK.4WDC (800.275.4932) North America  
800.832.4778 Spanish  
+800.6008.6008 Asia Pacific  
00800.27549338 Europe  
(toll free where available)  
+31.880062100 Europe/Middle East/Africa



Learn more about WD Red hard drives



**WD Red premium support**

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+800.55593733 Europe/Middle East/Africa  
Asia Pacific

Canada ICES-003 Class B / NMB-003 Classe B

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