



Designed specifically with SMB customers in mind, WD Red Pro drives are available for up to 24 bay medium to large-scale 24x7 NAS environments. Engineered to handle increased workloads from your business, WD Red Pro drives are extensively tested and carry a long 5-year limited warranty.

## NAS for Big Business

Increase the efficiency and productivity of your business with WD Red Pro hard drives for up to 24 bay NAS systems. WD Red Pro comes equipped with NASware™ 3.0, which increases system compatibility allowing for seamless integration with your existing network infrastructure. Add value to your business by enabling your employees to quickly share their files and back up folders reliably with WD Red Pro NAS hard drives in your NAS solution.

## Exclusive NASware 3.0 technology

Our exclusive advanced firmware technology, NASware 3.0 enables seamless integration, robust data protection and optimal performance for NAS systems operating under heavy demand.

## Built for optimum NAS compatibility

Desktop drives aren't purpose-built for NAS. But WD Red Pro drives with NASware 3.0 technology are purpose-built for NAS. Our exclusive technology takes the guesswork out of selecting a drive and balances performance and reliability in NAS and RAID environments. Simply put, a WD Red Pro drive is one of the most compatible drives available for medium to large NAS enclosures. But don't take our word for it. WD Red Pro drives are a reflection of an extensive NAS partner technology engagement and compatibility-testing resulting in a leading compatibility list for NAS systems.

## Larger NAS Bay Shock Protection

In a Network Attached Storage device, a desktop hard drive is not typically designed for NAS environments. WD Red Pro drives are equipped with a multi-axis shock sensor that automatically detects subtle shock events and dynamic fly height technology which adjusts each read-write function to compensate and protect the data. This combination of technology further protects the drives in larger 1 to 24 bay NAS environments and helps increase hard drive reliability.

## Highlights

- Available in large capacities with support for 1–24 bays
- 5-year limited warranty
- Enhanced reliability with 3D Active Balance™ Plus technology and error recovery controls with NASware 3.0 technology
- Extended drive testing to ensure each drive is tested for extended reliable operation
- Vibration & Shock protection

|                |            |
|----------------|------------|
| INTERFACE      | MODELS     |
| SATA 6 Gb/s    | WD141KFGX  |
| FORM FACTOR    | WD121KFBX  |
| 3.5-inch       | WD101KFBX  |
| PERFORMANCE    | WD8003FFBX |
| CLASS          | WD6003FFBX |
| 7200 RPM Class | WD4003FFBX |
| CAPACITIES     | WD2002FFSX |
| 2TB to 14TB    |            |

## THE WESTERN DIGITAL ADVANTAGE

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

## Specifications

|   | 14TB                    | 12TB                    | 10TB                    | 8TB                     | 6TB                     | 4TB                     | 2TB                     |
|---|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| <b>Model Number<sup>1</sup></b>   | WD141KFGX               | WD121KFBX               | WD101KFBX               | WD8003FFBX              | WD6003FFBX              | WD4003FFBX              | WD2002FFSX              |
| <b>Interface</b>  | 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             |
| <b>Formatted capacity<sup>2</sup></b>                                   | 14TB                    | 12TB                    | 10TB                    | 8TB                     | 6TB                     | 4TB                     | 2TB                     |
| <b>Form factor</b>  | 3.5-inch                | 3.5-inch                | 3.5-inch                | 3.5-inch                | 3.5-inch                | 3.5-inch                | 3.5-inch                |
| <b>Native command queuing</b>   | Yes                     | Yes                     | Yes                     | Yes                     | Yes                     | Yes                     | Yes                     |
| <b>Advanced Format (AF)</b>   | Yes                     | Yes                     | Yes                     | Yes                     | Yes                     | Yes                     | Yes                     |
| <b>RoHS compliant<sup>3</sup></b>                                       | Yes                     | Yes                     | Yes                     | Yes                     | Yes                     | Yes                     | Yes                     |
| <b>Performance</b>  |                         |                         |                         |                         |                         |                         |                         |
| <b>Interface Transfer Rate (max) Interface Speed</b>                    | 6 Gb/s                  | 6 Gb/s                  | 6 Gb/s                  | 6 Gb/s                  | 6 Gb/s                  | 6 Gb/s                  | 6 Gb/s                  |
| <b>Interface Transfer Rate<sup>2</sup> (max) Internal Transfer Rate</b> | 255 MB/s                | 240 MB/s                | 240 MB/s                | 235 MB/s                | 238 MB/s                | 217 MB/s                | 164 MB/s                |
| <b>Cache (MB)<sup>2</sup></b>   | 512                     | 256                     | 256                     | 256                     | 256                     | 256                     | 64                      |
| <b>Performance Class</b>  | 7200 RPM Class          | 7200 RPM Class          | 7200 RPM Class          | 7200 RPM Class          | 7200 RPM Class          | 7200 RPM Class          | 7200 RPM Class          |
| <b>Reliability/Data Integrity</b>                                       |                         |                         |                         |                         |                         |                         |                         |
| <b>Load/unload cycles<sup>4</sup></b>                                   | 600,000                 | 600,000                 | 600,000                 | 600,000                 | 600,000                 | 600,000                 | 600,000                 |
| <b>Non-recoverable errors per bits read</b>                             | <10 in 10 <sup>14</sup> | <10 in 10 <sup>14</sup> | <10 in 10 <sup>14</sup> | <10 in 10 <sup>14</sup> | <10 in 10 <sup>14</sup> | <10 in 10 <sup>14</sup> | <10 in 10 <sup>14</sup> |
| <b>MTBF (hours)<sup>5</sup></b>   | 1,000,000               | 1,000,000               | 1,000,000               | 1,000,000               | 1,000,000               | 1,000,000               | 1,000,000               |
| <b>Workload Rate (TB/year)<sup>6</sup></b>                              | 300                     | 300                     | 300                     | 300                     | 300                     | 300                     | 300                     |
| <b>Limited warranty (years)<sup>7</sup></b>                             | 5                       | 5                       | 5                       | 5                       | 5                       | 5                       | 5                       |
| <b>Power Management<sup>8</sup></b>                                     |                         |                         |                         |                         |                         |                         |                         |
| <b>12VDC ±5% (A, peak)</b>  | 1.85                    | 1.8                     | 1.8                     | 2.08                    | 1.79                    | 1.79                    | 1.9                     |
| <b>5VDC ±5% (A, peak)</b>   |                         |                         |                         |                         |                         |                         |                         |
| <b>Average power requirements (W)</b>                                   |                         |                         |                         |                         |                         |                         |                         |
| Read/Write  | 6.2                     | 6.0                     | 5.7                     | 8.8                     | 7.2                     | 7.2                     | 7.8                     |
| Idle  | 3.0                     | 2.8                     | 2.8                     | 4.6                     | 3.7                     | 3.7                     | 6.0                     |
| Standby and Sleep   | 0.8                     | 0.6                     | 0.5                     | 0.7                     | 0.4                     | 0.4                     | 1.4                     |
| <b>Environmental Specifications<sup>9</sup></b>                         |                         |                         |                         |                         |                         |                         |                         |
| <b>Temperature (°C)</b>   |                         |                         |                         |                         |                         |                         |                         |
| Operating   | 0 to 65                 | 0 to 65                 | 0 to 65                 | 0 to 65                 | 0 to 65                 | 0 to 65                 | 0 to 65                 |
| Non-operating   | -40 to 70               | -40 to 70               | -40 to 70               | -40 to 70               | -40 to 70               | -40 to 70               | -40 to 70               |
| <b>Shock (Gs)</b>   |                         |                         |                         |                         |                         |                         |                         |
| 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                     | 300                     | 300                     |
| <b>Acoustics (dBA)<sup>10</sup></b>                                     |                         |                         |                         |                         |                         |                         |                         |
| Idle  | 20                      | 20                      | 20                      | 29                      | 29                      | 29                      | 29                      |
| Seek (average)  | 36                      | 36                      | 36                      | 36                      | 36                      | 36                      | 31                      |
| <b>Physical Dimensions</b>  |                         |                         |                         |                         |                         |                         |                         |
| <b>Height (in./mm, max)</b>   | 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              |
| <b>Length (in./mm, max)</b>   | 5.787/147               | 5.787/147               | 5.787/147               | 5.787/147               | 5.787/147               | 5.787/147               | 5.787/147               |
| <b>Width (in./mm, ± .01 in.)</b>  | 4/101.6                 | 4/101.6                 | 4/101.6                 | 4/101.6                 | 4/101.6                 | 4/101.6                 | 4/101.6                 |
| <b>Weight (lb/kg, ± 10%)</b>  | 1.52/0.69               | 1.46/0.66               | 1.43/0.65               | 1.58/0.72               | 1.58/0.72               | 1.58/0.72               | 1.58/0.72               |

Specifications subject to change without notice.

<sup>1</sup> Not all products may be available in all regions of the world

<sup>2</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>3</sup> 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.

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

<sup>5</sup> MTBF specifications are based upon internal testing using a 40°C base casting temperature. MTBF is based on a sample population and is estimated by statistical measurements and acceleration algorithms. MTBF does not predict an individual drive's reliability and does not constitute a warranty.

<sup>6</sup> Workload Rate is defined as the amount of user data transferred to or from the hard drive. Workload Rate is annualized (TB transferred X (8760 / recorded power-on hours)). Workload Rate will vary depending on your hardware and software components and configurations.

<sup>7</sup> See <http://support.wd.com/warranty> for regionally specific warranty details.

<sup>8</sup> Power measurements at room-ambient temperature.

<sup>9</sup> No non-recoverable errors during operating tests or after non-operating tests.

<sup>10</sup> Sound power level.

## Western Digital

5601 Great Oaks Parkway  
San Jose, CA 95119, USA  
US (Toll-Free): 800.801.4618  
International: 408.717.6000

[www.westerndigital.com](http://www.westerndigital.com)

© 2018 Western Digital Corporation or its affiliates. All rights reserved. Produced 4/18. Rev. 7/18. Western Digital, the Western Digital Logo, NASware and WD Red are registered trademarks or trademarks of Western Digital Corporation or its affiliates in the U.S. and/or other countries. All other marks are the property of their respective owners. Pictures shown may vary from actual products. Product specifications subject to change without notice.

