

Western Digital WD4005FFBX

Western Digital 4TB WD Red Pro NAS Internal Hard Drive (WD4005FFBX) User Manual

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, maintenance, and troubleshooting of your Western Digital 4TB WD Red Pro NAS Internal Hard Drive, model WD4005FFBX. Designed for high-intensity 24x7 multi-user commercial and enterprise Network Attached Storage (NAS) environments, this drive delivers performance, scalability, and dependability for storing and managing large volumes of data.



Image 1.1: Western Digital Red Pro NAS Drive, designed to expand network storage capabilities.



NAS for Business

Image 1.2: Illustrates the use of NAS solutions in a business environment.

2. PRODUCT OVERVIEW

The WD Red Pro series is specifically engineered for demanding NAS systems. Key features of the WD4005FFBX model include:

- **Capacity:** 4TB (1GB = 1 billion bytes and 1TB = 1 trillion bytes. Actual user capacity may be less depending on operating environment.)
- **Rotational Speed:** 7200 RPM for enhanced performance.
- **Interface:** SATA 6 Gb/s for fast data transfer rates.
- **Recording Technology:** CMR (Conventional Magnetic Recording) for consistent write performance, especially in RAID configurations.
- **Cache:** 256 MB for improved responsiveness.
- **Form Factor:** 3.5-inch internal hard drive.
- **Workload Rate:** Rated for 550TB/yr workload rate (Annualized Workload Rate = TB transferred x (8760 / recorded

power-on hours). The maximum rated workload is specified for operating at typical temperature of 40C. Workload Rate will vary depending on your hardware and software components and configurations.)

- **Compatibility:** Extensively tested with a wide range of NAS system vendors to ensure compatibility with most NAS enclosures.

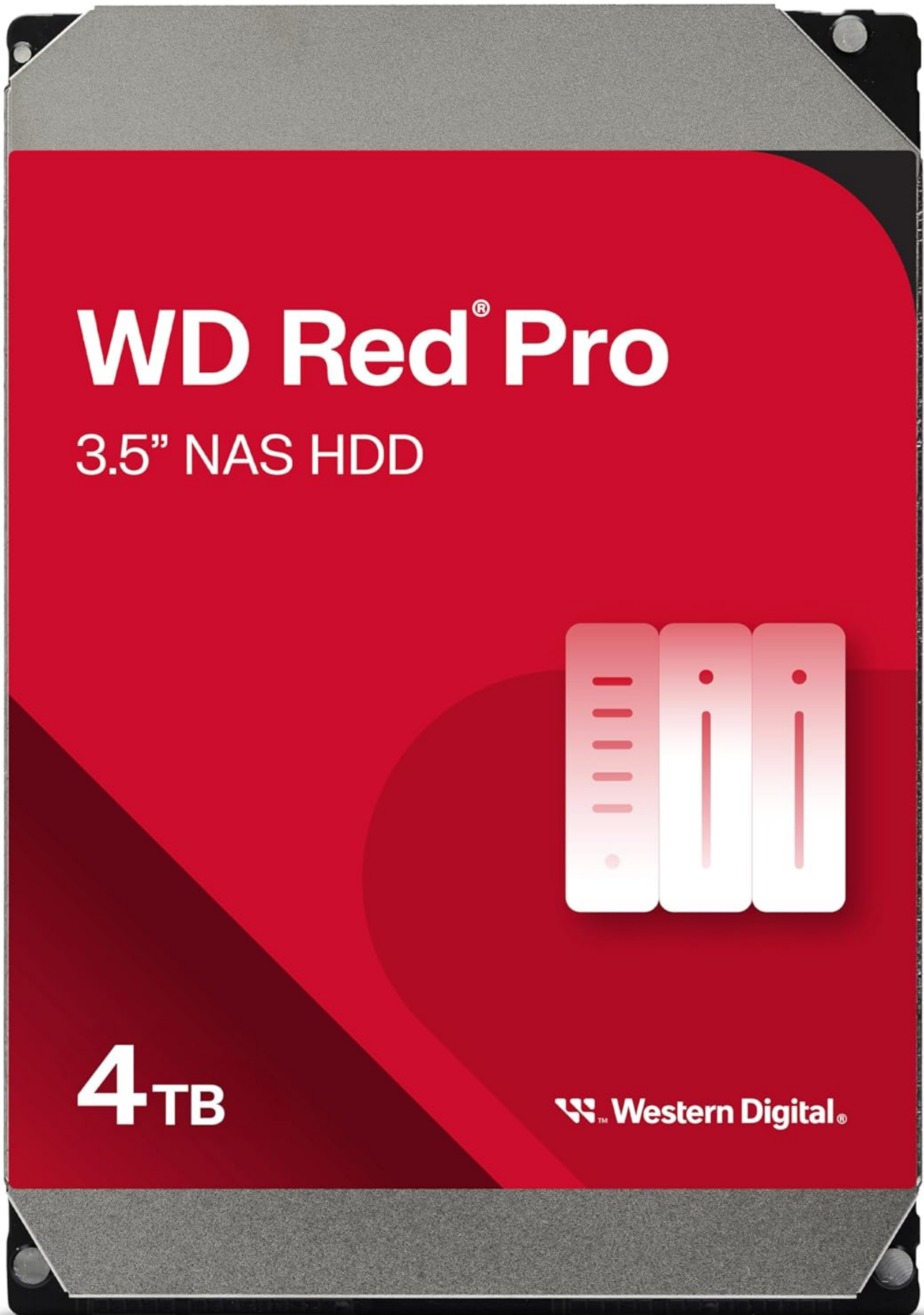


Image 2.1: Front view of the Western Digital 4TB WD Red Pro 3.5-inch NAS HDD.



Larger NAS Bay Shock Protection

Image 2.2: Illustrates the drive's design for larger NAS bays, featuring shock protection.

WD Red NAS Family

Performance - Reliability - Power Efficiency




Western Digital®

Image 2.3: Overview of the Western Digital Red NAS Family, highlighting various drive types.

3. SETUP AND INSTALLATION

Proper installation is crucial for the optimal performance and longevity of your WD Red Pro drive. Always refer to your NAS enclosure's specific installation guide for detailed instructions.

3.1 Safety Precautions

- Always handle the hard drive by its edges to avoid touching the circuit board or connectors.
- Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage.
- Ensure your NAS enclosure is powered off and unplugged before installation.

3.2 Physical Installation

1. **Prepare the NAS:** Power down and unplug your NAS device. Open the drive bays according to your NAS manufacturer's instructions.

2. **Mount the Drive:** Secure the WD Red Pro drive into a drive tray or directly into the NAS bay using the provided screws. Ensure the SATA data and power connectors align correctly.
3. **Connect Cables:** If not using a tool-less tray, connect the SATA data cable from the drive to the NAS motherboard and the SATA power cable from the power supply to the drive.
4. **Insert into NAS:** Slide the mounted drive tray or the drive itself securely into the designated bay until it clicks into place or is fastened.
5. **Close NAS:** Close the drive bays and secure the NAS enclosure.



Image 3.1: A Western Digital Red Pro NAS HDD being installed into a drive bay of a NAS enclosure.

3.3 Initial Configuration (Software)

1. **Power On:** Plug in and power on your NAS device.
2. **Access NAS Interface:** Log in to your NAS operating system (e.g., Synology DSM, QNAP QTS, etc.) via a web browser.
3. **Detect Drive:** Navigate to the storage or disk management section. The newly installed drive should be detected.
4. **Initialize and Format:** Follow the on-screen prompts to initialize, format, and create storage pools or volumes. If you are adding the drive to an existing RAID array, ensure you select the correct option for expanding or rebuilding the array.
5. **RAID Configuration:** For multi-drive NAS systems, configure your desired RAID level (e.g., RAID 1, RAID 5, RAID 6, RAID 10) based on your data redundancy and performance requirements.

4. OPERATING INSTRUCTIONS

Once installed and configured, your WD Red Pro drive operates as part of your NAS system. These drives are designed for continuous 24/7 operation.

- **Data Access:** Access your data through network shares, FTP, or other protocols supported by your NAS.
- **Performance:** The 7200 RPM speed and SATA 6 Gb/s interface provide robust performance for demanding applications, including virtualization, large file transfers, and multiple concurrent users.
- **Workload Management:** The drive's firmware is optimized for NAS environments, handling high workloads efficiently and reliably.



Image 4.1: A server rack filled with multiple hard drives, representing a typical NAS environment.

5. MAINTENANCE

Regular maintenance helps ensure the longevity and reliability of your hard drive and the data stored on it.

- **Data Backup:** While RAID provides data redundancy, it is not a substitute for backups. Regularly back up critical data to an off-site location or another storage medium.
- **Monitor Drive Health:** Utilize your NAS operating system's tools to monitor the drive's S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology) status. This can provide early warnings of potential drive failures.
- **Ensure Proper Cooling:** Maintain adequate airflow within your NAS enclosure to prevent overheating, which can degrade drive performance and lifespan. Ensure NAS fans are clean and functioning correctly.
- **Firmware Updates:** Keep your NAS operating system and, if applicable, drive firmware updated to benefit from performance improvements and bug fixes.

6. TROUBLESHOOTING

If you encounter issues with your WD Red Pro drive, consider the following common troubleshooting steps:

- **Drive Not Detected:**
 - Verify that the drive is correctly seated in its bay and that all cables (SATA data and power) are securely connected.
 - Ensure the NAS is powered on and functioning correctly.
 - Try the drive in a different bay or with different cables if available.
- **Performance Issues:**
 - Check NAS resource utilization (CPU, RAM, network bandwidth).
 - Monitor drive health via S.M.A.R.T. data for any warnings.
 - Ensure the NAS firmware is up to date.

- **Unusual Noises:**
 - While some operational noise is normal, excessive clicking, grinding, or scraping sounds may indicate a failing drive. Back up data immediately and consider replacing the drive.
- **Error Messages:**
 - Consult your NAS operating system's documentation or support resources for specific error codes.
 - If errors persist, contact Western Digital support or your NAS manufacturer.

7. SPECIFICATIONS

Detailed technical specifications for the Western Digital 4TB WD Red Pro NAS Internal Hard Drive (WD4005FFBX):

Feature	Specification
Model Number	WD4005FFBX-SPCAUN0
Digital Storage Capacity	4 TB (4000 GB)
Hard Disk Interface	Serial ATA-600
Connectivity Technology	SATA
Hard Disk Form Factor	3.5 Inches
Hard Disk Description	Mechanical Hard Disk
Hard Drive Rotational Speed	7200 RPM
Cache Size	256 MB
Compatible Devices	Network Attached Storage (NAS)
Installation Type	Internal Hard Drive
Item Weight	1.47 pounds
Product Dimensions (LxWxH)	5.7 x 4.3 x 1.4 inches
Voltage	28 Volts
Special Feature	For RAID-optimized NAS system



MDL: WD4005FFBX-68CAUN0



S/N: 12345678

NASwareTM

Made in Thailand 28 APR 2023 R/N: 3VAHA2
5VDC: 0.7A 12VDC: 0.9A W/N: 50014EEL12345678

P/N: 0B47078



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WD4005FFBX
SATA 6Gb/s NX HA710



MDL: WD4005FFBX-68CAUN0



S/N: 12345678



P/N: 0B47078

NASwareTM

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Image 7.1: Product label showing model number WD4005FFBX, SATA 6Gb/s, and other details. Relevant identifiers include P/N: 0B47078, S/N: 12345678, MDL: WD4005FFBX-68CAUN0.

8. WARRANTY AND SUPPORT

Western Digital stands behind its products with a robust warranty and dedicated support services.

8.1 Limited Manufacturer's Warranty

The Western Digital 4TB WD Red Pro NAS Internal Hard Drive (WD4005FFBX) comes with a **5-Year Limited Manufacturer's Warranty**. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims.



Image 8.1: Illustrates the 5-Year Limited Manufacturer's Warranty for the WD Red Pro NAS HDD.

8.2 Technical Support

For technical assistance, warranty claims, or further information, please visit the official Western Digital support website:
<https://support.wdc.com>

You may also find helpful resources and FAQs on the Western Digital product page or through their customer service contact options.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question