

TERRAMASTER D4-320

TERRAMASTER D4-320 External Hard Drive Enclosure User Manual

Model: D4-320 | Brand: TERRAMASTER

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, maintenance, and troubleshooting of your TERRAMASTER D4-320 External Hard Drive Enclosure. Please read this manual thoroughly before using the device to ensure proper functionality and to prevent data loss or damage.

The TERRAMASTER D4-320 is a high-performance 4-bay Direct Attached Storage (DAS) device designed for expanding storage capacity with high-speed data transfer capabilities. It is ideal for users requiring large storage for video editing, photo backup, music libraries, and general data archiving.

2. PRODUCT OVERVIEW

The D4-320 enclosure offers a robust and efficient solution for managing multiple hard drives. Its design focuses on ease of use, high-speed performance, and effective heat dissipation.

Front View



The front panel of the D4-320 features four hot-swappable drive bays and LED indicators for each drive, showing activity and status.

Indicator Lights



Micro-Perforated Indicator Lights

Generates no light pollution while clearly displaying work status

Micro-perforated indicator lights provide clear work status without excessive light pollution.

Rear View



10Gbps USB 3.2 Type-C Interface

Supports USB 4/3.2/3.1/3.0/2.0, Thunderbolt 3/4

The rear panel includes the USB 3.2 Gen2 Type-C port, DC 12V power input, and a cooling fan.

Cooling System

Reliable Cooling Innovation

The Smart fan, side and bottom vents dissipate heat, extending lifespan.



The intelligent temperature-controlled fan and optimized internal structure ensure efficient heat dissipation and quiet operation.

3. KEY FEATURES

- **High-Speed Data Transmission:** Utilizes USB 3.2 Gen2 protocol for speeds up to 10Gbps. Achieves up to 1,016 MB/s with four HDDs and 510 MB/s with a single SSD.
- **Large Capacity Support:** Supports individual HDDs up to 30TB, with a total capacity of 120TB. Compatible with 3.5-inch SATA HDDs, 2.5-inch SATA HDDs, and 2.5-inch SATA SSDs.
- **Plug-and-Play Compatibility:** Supports 4 individual disks (no RAID function). Driver-free operation with MAC, Windows, and Linux operating systems. USB Type-C interface is compatible with USB 3.0, 3.1, 3.2, Thunderbolt 3, and Thunderbolt 4.
- **Hot Swappable:** Allows replacement of hard disks without powering off the device, enhancing convenience and efficiency.

- **Tool-Free Hard Drive Management:** Features a tool-free hard drive tray design for easy installation and removal. Includes TerraMaster's unique Push-lock design for secure tray insertion.
- **Efficient Heat Dissipation & Quieter Operation:** Incorporates an intelligent temperature-controlled fan and specialized sound-absorbing panels. Noise levels are reduced by up to 50% compared to previous generations, with standby noise below 21 dB(A).

High-Speed Performance

Superspeed 1016MB/s

4 HDDs - Total R/W speed 1016MB/s (no RAID function)
1 SSD - 510MB/s R/W speed



Experience rapid data transfer with 10Gbps USB 3.2 Gen2, enabling quick access and backup of large files.

Quiet Operation

Remarkably Quiet HDD Storage

Added noise-reduction measures to minimize disturbance,
exceptionally quite at 21dB(A)



Advanced noise reduction measures ensure the D4-320 operates exceptionally quietly, even under load.

4. PACKAGE CONTENTS

Please verify that all items listed below are included in your package:

- TERRAMASTER D4-320 External Hard Drive Enclosure (Diskless)
- Power Adapter
- USB C to C Cable

- Quick Installation Guide (This manual)
- Accessory Kit (includes screws for 2.5-inch drives)

5. SETUP GUIDE

5.1 Installing Hard Drives

The D4-320 features a tool-free design for 3.5-inch hard drives. For 2.5-inch drives (HDDs/SSDs), screws are required.

1. **Prepare the Drive Tray:** For 3.5-inch drives, simply open the side clips of the drive tray. For 2.5-inch drives, secure the drive to the tray using the provided screws.
2. **Insert the Drive:** Place your 3.5-inch hard drive into the tray, ensuring it snaps securely into place. For 2.5-inch drives, ensure they are firmly attached to the tray.
3. **Slide Tray into Enclosure:** Gently slide the loaded drive tray into an empty bay of the D4-320 enclosure until it clicks into place. The unique Push-lock design will automatically secure the tray.
4. **Repeat for Additional Drives:** Install up to four drives as needed.

100% Tool-Free to Install HDDs

Install or remove a hard drive in just 10 seconds without the need for any tools.



Tool-free installation for 3.5-inch HDDs, allowing quick setup.

Innovative and Unique Push-Lock Design

Insertion activates lock, streamlining hard drive installation.



The innovative Push-Lock design ensures secure and effortless tray sliding.

5.2 Connecting the Enclosure

1. **Connect Power:** Plug the power adapter into the DC 12V port on the rear of the D4-320, then connect it to a power outlet.
2. **Connect to Computer:** Use the provided USB C to C cable to connect the D4-320's USB 3.2 Gen2 Type-C port to a compatible USB-C or Thunderbolt port on your computer.
3. **Power On:** Press the power button on the rear of the D4-320. The indicator lights on the front panel will illuminate.
4. **System Recognition:** Your operating system (Windows, macOS, or Linux) should automatically detect the connected drives. You may need to initialize and format new drives through your operating system's disk management utility before use.

6. OPERATION

6.1 Power On/Off

To power on the D4-320, press the power button on the rear panel. To power off, press and hold the power button until the device shuts down. Always ensure data transfer is complete before powering off.

6.2 Hot Swapping Drives

The D4-320 supports hot swapping, allowing you to replace or remove drives while the device is powered on and connected. Ensure that no data is being actively written to or read from the drive you intend to remove. Safely eject the drive through your operating system before physically removing it from the enclosure.



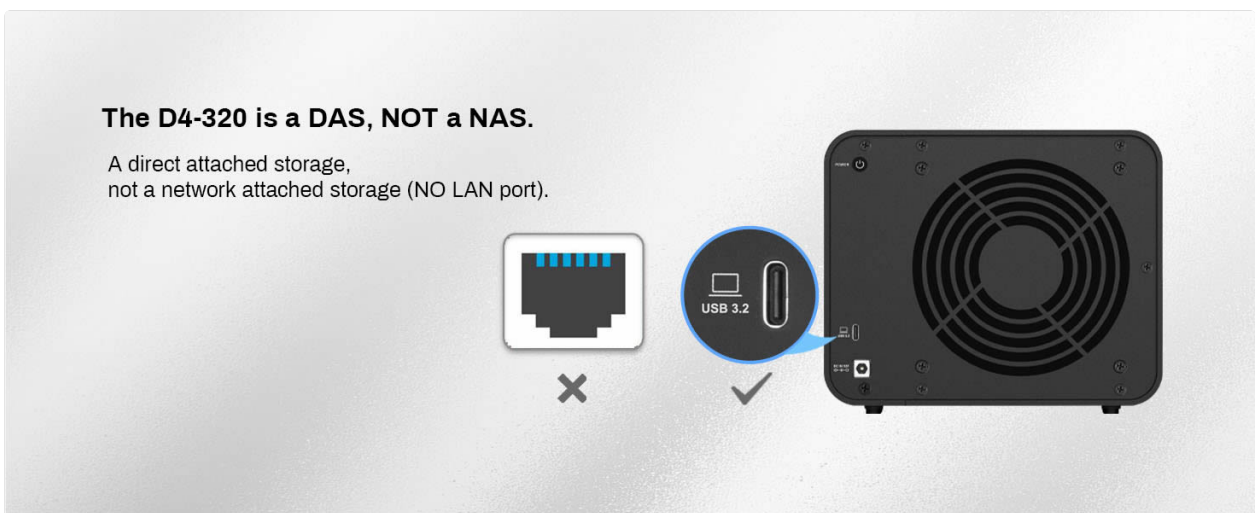
Hot swappable feature allows for convenient drive replacement during operation.

6.3 Compatibility

The D4-320 is compatible with Windows, macOS, and Linux operating systems. It connects via USB Type-C and supports various USB and Thunderbolt interfaces, ensuring broad compatibility with modern computers.

6.4 Data Transfer

The D4-320 operates as a Direct Attached Storage (DAS) and does not have network capabilities (NO LAN port). Data transfer is managed directly through the USB connection to your computer. It supports individual disk mode, meaning each installed drive appears as a separate volume to your operating system. It does not support hardware RAID functions internally, but software RAID can be configured via your operating system if desired.



The D4-320 is a DAS (Direct Attached Storage), not a NAS (Network Attached Storage).

7. MAINTENANCE

7.1 Cleaning

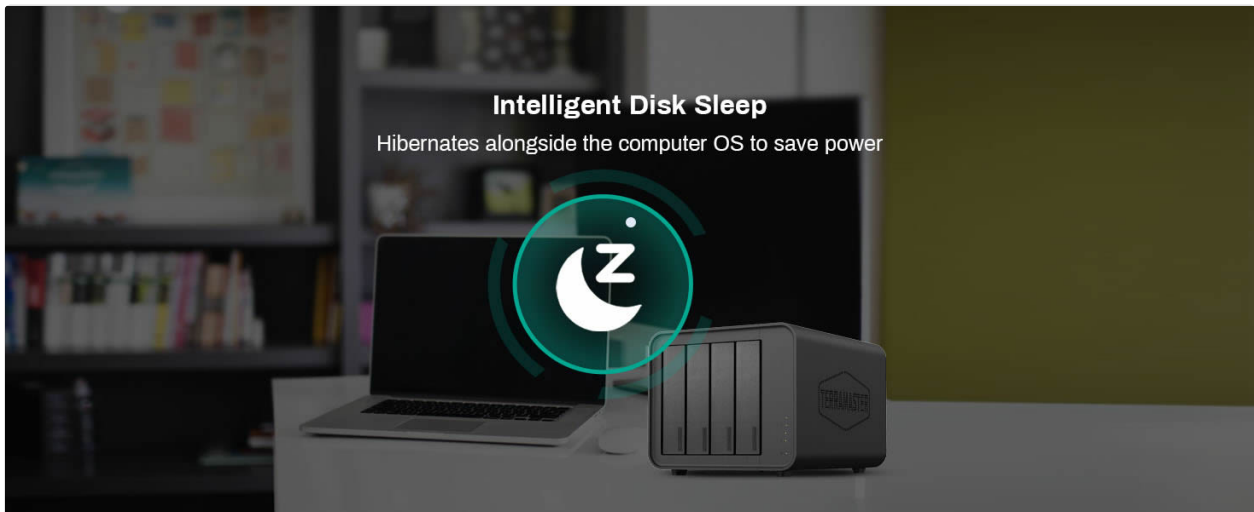
Regularly clean the exterior of the enclosure with a soft, dry cloth. Avoid using liquid cleaners or aerosols directly on the device. Ensure the fan vents are free from dust accumulation to maintain optimal airflow.

7.2 Fan Maintenance

The D4-320 features an intelligent cooling fan. If you notice increased noise or reduced cooling performance, inspect the fan for dust buildup. Use compressed air to gently clear any obstructions from the fan blades and vents.

7.3 Disk Sleep Function

The D4-320 supports intelligent disk sleep, which allows the drives to hibernate alongside your computer's operating system. This feature helps save power and prolong the lifespan of your hard drives.



Intelligent Disk Sleep hibernates with your OS to conserve power.

8. TROUBLESHOOTING

This section addresses common issues you might encounter with your D4-320 enclosure.

Problem	Possible Cause	Solution
Drives not recognized by computer.	New drives not initialized/formatted; loose cable connection; power issue.	Ensure drives are initialized and formatted via Disk Management (Windows) or Disk Utility (macOS). Check USB and power cable connections. Try a different USB port or cable.

Problem	Possible Cause	Solution
Slow data transfer speeds.	Connected to a slower USB port (e.g., USB 2.0); cable issue; drive performance limitations.	Ensure connection to a USB 3.2 Gen2 (10Gbps) or Thunderbolt port. Use the provided high-quality USB-C cable. Verify the performance of the installed drives.
Drives fail to spin up (especially with 4 drives).	Insufficient power supply for high-power draw drives (e.g., some enterprise HDDs).	Some high-capacity or enterprise drives may have higher peak power draw during spin-up. Try powering on with fewer drives, then hot-swapping the remaining drives. Contact TERRAMASTER support for potential higher wattage power supply options if issues persist.
Enclosure is noisy.	Fan obstruction; drive vibration.	Check fan vents for dust and clear if necessary. Ensure drives are securely seated in their trays.
Drives unexpectedly unmount or data corruption.	Unstable power supply; faulty drive; cable issue.	Ensure stable power connection. Test individual drives to identify a faulty one. Try a different USB cable. If issues persist, contact TERRAMASTER support.

9. TECHNICAL SPECIFICATIONS

Feature	Specification
Model Number	D4-320
Material	Plastic
Item Weight	3.1 Pounds (1.4 kg)
Product Dimensions (L x W x H)	8.74 x 7.04 x 6.06 inches (22.2 x 17.9 x 15.4 cm)
Compatible Devices	Linux, Mac, Windows
Max Number of Supported Devices	4 (individual disks)
Data Transfer Rate	10 Gigabits Per Second (USB 3.2 Gen2)
Hardware Interface	SATA 6.0 Gb/s, USB 3.2 Gen 2 Type-C
Max Single HDD Capacity	30TB
Total Max Capacity	120TB
Color	Black
Manufacturer	TERRAMASTER

10. WARRANTY AND SUPPORT

TERRAMASTER products typically come with a standard manufacturer's warranty. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official TERRAMASTER website. Keep your proof of purchase for warranty claims.

For technical support, product registration, driver downloads, and frequently asked questions, please visit the official TERRAMASTER support page. You can also contact TERRAMASTER customer service directly for assistance with any issues not covered in this manual.

TERRAMASTER Official Website: www.terra-master.com