

## TERRAMASTER D5-Thunderbolt3

# TERRAMASTER D5 Thunderbolt 3 5-Bay External Hard Drive Enclosure User Manual

Model: D5-Thunderbolt3

## 1. INTRODUCTION

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This manual provides detailed instructions for the installation, operation, and maintenance of your TERRAMASTER D5 Thunderbolt 3 5-Bay External Hard Drive Enclosure. Designed for professionals, this device offers high-speed data storage and robust data protection through various RAID configurations. Please read this manual thoroughly before using the product to ensure proper setup and optimal performance.

## 2. PRODUCT OVERVIEW

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The TERRAMASTER D5 Thunderbolt 3 is a professional-grade 5-bay external hard drive enclosure, featuring a durable aluminum-alloy shell and efficient cooling. It is designed to accommodate five 3.5-inch or 2.5-inch SATA hard drives or solid-state drives (SSDs).

### 2.1 Front Panel



**Image Description:** The front panel of the TERRAMASTER D5 enclosure, showing five vertical drive bays. To the left, there are five small LED indicators labeled HDD 1 through HDD 5, and a Power LED. Below these indicators is a power button.

- **HDD Indicators (1-5):** These LEDs illuminate to indicate the status of each installed hard drive.
- **Power Indicator:** Shows the power status of the enclosure.
- **Power Button:** Used to power on or off the device.

## 2.2 Rear Panel

The rear panel includes connectivity ports and cooling fans.

# Next-Gen NAS Performance Powered by TOS 6



**Image Description:** A rear view of the TERRAMASTER D5 enclosure, highlighting the robust aluminum-alloy construction. The back panel features two large cooling fans, Thunderbolt 3 ports, and a DisplayPort.

- **Thunderbolt 3 Ports:** Two 40Gbps Thunderbolt 3 interfaces for high-speed data transfer and daisy-chaining.
- **DisplayPort:** Allows for multi-screen display configurations.
- **Power Input:** Connects to the power adapter.
- **Cooling Fans:** Two 80mm fans ensure optimal heat dissipation.

## 3. SETUP

### 3.1 Drive Installation

The D5 Thunderbolt 3 enclosure is diskless, meaning hard drives or SSDs must be purchased separately and installed. It supports both 3.5-inch and 2.5-inch SATA HDDs and SSDs.

1. Ensure the enclosure is powered off and disconnected from your computer.
2. Gently pull the handle of an empty drive tray to slide it out of the enclosure.
3. For 3.5-inch drives, align the drive with the screw holes on the tray and secure it with the provided screws. For 2.5-inch drives, use the designated mounting points and screws.
4. Slide the loaded drive tray back into the bay until it clicks securely into place.
5. Repeat for all desired drives.

### 3.2 Connecting to Your Computer

The D5 Thunderbolt 3 enclosure requires a computer with a Thunderbolt 3 or Thunderbolt 4 port. It is not compatible with standard USB ports.

1. Connect the power adapter to the enclosure's power input and then to a power outlet.
2. Connect one end of the Thunderbolt 3 cable to a Thunderbolt 3 port on the D5 enclosure and the other end to a Thunderbolt 3 or 4 port on your computer.
3. Press the power button on the front panel of the D5 enclosure. The power indicator and HDD indicators

will light up.

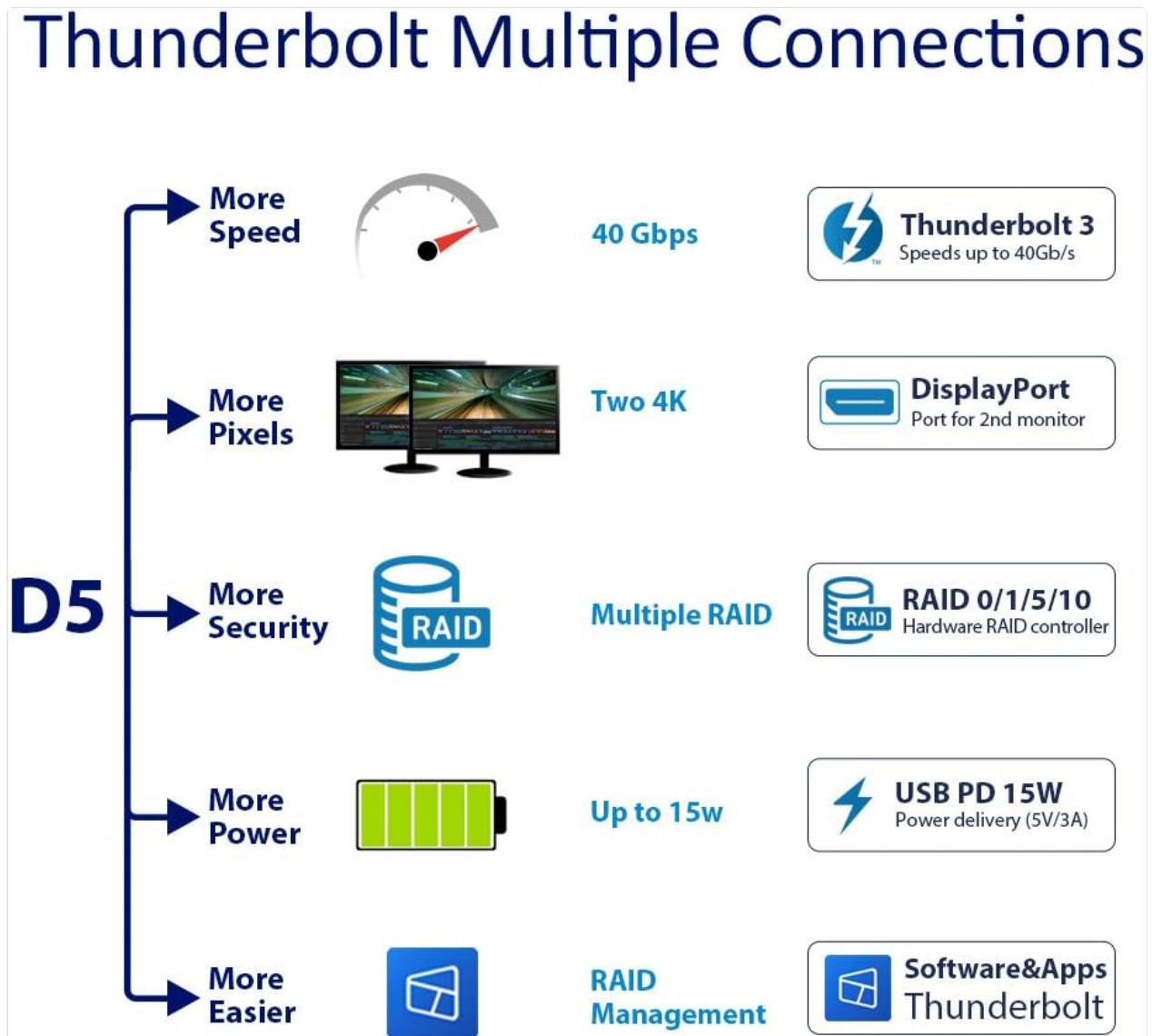
4. Your computer should detect the new storage device. You may need to initialize and format the drives or configure RAID settings using the TERRAMASTER RAID Manager software (available for download from the TERRAMASTER website).

**Note:** The D5 Thunderbolt 3 supports daisy-chaining up to 6 devices. It also provides up to 15W of power delivery to recharge compatible Mac laptops through the Thunderbolt 3 connection.

## 4. OPERATING

### 4.1 RAID Configuration

The D5 Thunderbolt 3 features a hardware RAID controller supporting multiple RAID levels to optimize for speed, capacity, or data redundancy.



**Image Description:** A graphic depicting a cylindrical data storage unit with labels for RAID 0, RAID 1, RAID 5, RAID 10, and JBOD, emphasizing the hardware RAID controller.

Supported RAID modes include:

- **RAID 0 (Striping):** Maximizes performance and capacity by striping data across all drives without redundancy.
- **RAID 1 (Mirroring):** Provides data redundancy by mirroring data across two drives.
- **RAID 5 (Striping with Parity):** Offers a balance of performance, capacity, and data redundancy with

distributed parity. Requires at least three drives.

- **RAID 10 (Striping and Mirroring):** Combines RAID 0 and RAID 1 for both performance and redundancy. Requires at least four drives.
- **JBOD (Just a Bunch Of Disks):** Treats each drive as a separate, independent volume.
- **Single Disk:** Each drive operates as an individual volume without any RAID configuration.

RAID configuration is typically managed through the TERRAMASTER RAID Manager software. Refer to the software's documentation for detailed steps on creating, modifying, and managing RAID arrays, including features like Online RAID Level Migration (ORLM) and RAID Online Capacity Expansion (OCE).

## 4.2 Multi-Screen Display

Leveraging its Thunderbolt 3 and DisplayPort interfaces, the D5 Thunderbolt 3 supports connecting up to three screens for an expanded workspace.



**Image Description:** A visual representation of a multi-screen display setup. A MacBook is connected to the D5 enclosure via Thunderbolt 3. The D5 then connects to two 4K monitors, one via DisplayPort and another via its second Thunderbolt 3 port, enabling an extended desktop environment.

To set up a multi-screen display:

1. Connect your computer to the D5 enclosure via Thunderbolt 3.
2. Connect your primary external monitor to the DisplayPort on the D5 enclosure.
3. Connect a secondary external monitor to the second Thunderbolt 3 port on the D5 enclosure (using a

Thunderbolt 3 to DisplayPort adapter if necessary, or a Thunderbolt 3 monitor).

4. Configure display settings on your computer's operating system to extend or mirror your desktop across the connected screens.

## 5. MAINTENANCE

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Proper maintenance ensures the longevity and reliability of your TERRAMASTER D5 enclosure and the data stored within it.

- **Regular Checks:** Utilize the Storage Health Inspector (S.M.A.R.T.) feature through the TERRAMASTER RAID Manager software to monitor the health of your hard drives.
- **Automatic Rebuild:** The enclosure supports automatic RAID rebuild in case of a drive failure (for redundant RAID modes like RAID 1, 5, 10). Ensure you have a hot spare disk configured for immediate recovery.
- **Bad Sector Repair:** The system includes features for bad sector repair and remapping to maintain drive integrity.
- **Idle Mode:** The spin-down idle mode helps conserve power and extend drive lifespan when the device is not actively in use.
- **Firmware Updates:** Periodically check the TERRAMASTER website for firmware updates to ensure optimal performance and compatibility.
- **Cleaning:** Keep the enclosure clean and free of dust, especially around the fan vents, to ensure efficient cooling. Use a soft, dry cloth for cleaning.

## 6. TROUBLESHOOTING

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If you encounter issues with your TERRAMASTER D5 enclosure, consider the following troubleshooting steps:

- **No Power:** Ensure the power adapter is securely connected to both the enclosure and a working power outlet. Check the power button status.
- **Not Detected by Computer:** Verify that the Thunderbolt 3 cable is properly connected to both the enclosure and a Thunderbolt 3/4 port on your computer. Confirm your computer's operating system recognizes Thunderbolt devices.
- **Drive Not Recognized:** Check if the drive is properly seated in its tray and the tray is fully inserted into the bay. Ensure the drive is compatible (SATA HDD/SSD). If it's a new drive, it may need initialization and formatting.
- **RAID Array Issues:** Consult the TERRAMASTER RAID Manager software for detailed status and error logs. An automatic RAID rebuild might be in progress if a drive was recently replaced.
- **Performance Issues:** Ensure your drives are healthy and the RAID configuration is appropriate for your workload. Verify that your computer's Thunderbolt port is operating at full speed.
- **Overheating:** Ensure the enclosure's fan vents are not obstructed and the fans are operating. Place the enclosure in a well-ventilated area.

For persistent issues or advanced troubleshooting, please refer to the official TERRAMASTER support website or contact their customer service.

## 7. SPECIFICATIONS

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| Feature | Specification |
|---------|---------------|
|---------|---------------|

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|------------------------------|---|
| Model Number                 | 5BAY D5-Thunderbolt3                          |
| Brand                        | TERRAMASTER                                   |
| Material                     | Aluminum                                      |
| Drive Bays                   | 5   |
| Compatible Drives            | 3.5" SATA HDD, 2.5" SATA HDD/SSD              |
| Hardware Interface           | Thunderbolt 3 (40Gbps), SATA 6.0 Gb/s         |
| RAID Modes                   | RAID 0, RAID 1, RAID 5, RAID 10, JBOD, Single |
| Data Transfer Rate           | Up to 1035MB/s (with SSHD in RAID 0)          |
| Video Output                 | DisplayPort (supports multi-screen display)   |
| Power Delivery               | Up to 15W (Mac only)                          |
| Compatible Operating Systems | Mac, Windows (Thunderbolt 3/4 port required)  |
| Cooling                      | 2 x 80mm fans                                 |
| Product Dimensions (LxWxH)   | 11.81 x 11.02 x 8.27 inches                   |
| Item Weight                  | 7.9 pounds                                    |

## 8. WARRANTY AND SUPPORT

For warranty information, technical support, and driver/software downloads, please visit the official TERRAMASTER website. Keep your purchase receipt for warranty claims. TERRAMASTER provides resources and customer service to assist with any product-related inquiries or issues.