TERRAMASTER D9-320

TERRAMASTER D9-320 Hard Drive Enclosure Instruction Manual

Model: D9-320

1. Introduction

This manual provides detailed instructions for the setup, operation, and maintenance of your TERRAMASTER D9-320 9-Bay USB 3.2 Gen2 10Gbps Type-C External Hard Drive Enclosure. Please read this guide thoroughly before using the device to ensure optimal performance and longevity.

2. Product Overview

The TERRAMASTER D9-320 is a high-capacity, high-speed direct-attached storage (DAS) solution designed for professionals and users requiring extensive data storage. It features 9 independent drive bays, USB 3.2 Gen2 connectivity, and intelligent power management.

Key Features:

- **9 Independent Power Supply for 9 Drives:** Each drive bay has its own power switch, allowing individual control over drives to save energy and extend lifespan.
- **Super-large Storage Space:** Supports up to 9 x 3.5" or 2.5" SATA HDDs/SSDs, with a maximum capacity of 30TB per drive, totaling up to 270TB. Note: The D9-320 operates with individual disks and does not support hardware RAID arrays.
- **High Speed:** Utilizes USB 3.2 Gen2 protocol for data transmission speeds up to 10Gbps. Read/write speeds can reach up to 1,030MB/s with 9 HDDs and 510MB/s with a single SSD.
- **Plug and Play, Highly Compatible:** Driver-free operation with MAC, Windows, and Linux operating systems. Features a USB Type-C interface and includes both USB Type C-C and Type A-C cables. Compatible with USB 4.0, USB 3.2, USB 3.1, USB 3.0, Thunderbolt 5, Thunderbolt 4, and Thunderbolt 3.
- **Better Heat Dissipation:** Equipped with an intelligent temperature-controlled fan system (3 low-noise fans) that adjusts speed based on hard disk temperature, ensuring optimal operating conditions. Supports hot-swapping for convenient drive replacement without powering off.

What's in the Box:

- TERRAMASTER D9-320 Enclosure
- Power Adapter
- USB Type C-C Cable
- USB Type A-C Cable
- Quick Installation Guide

Product Visuals:

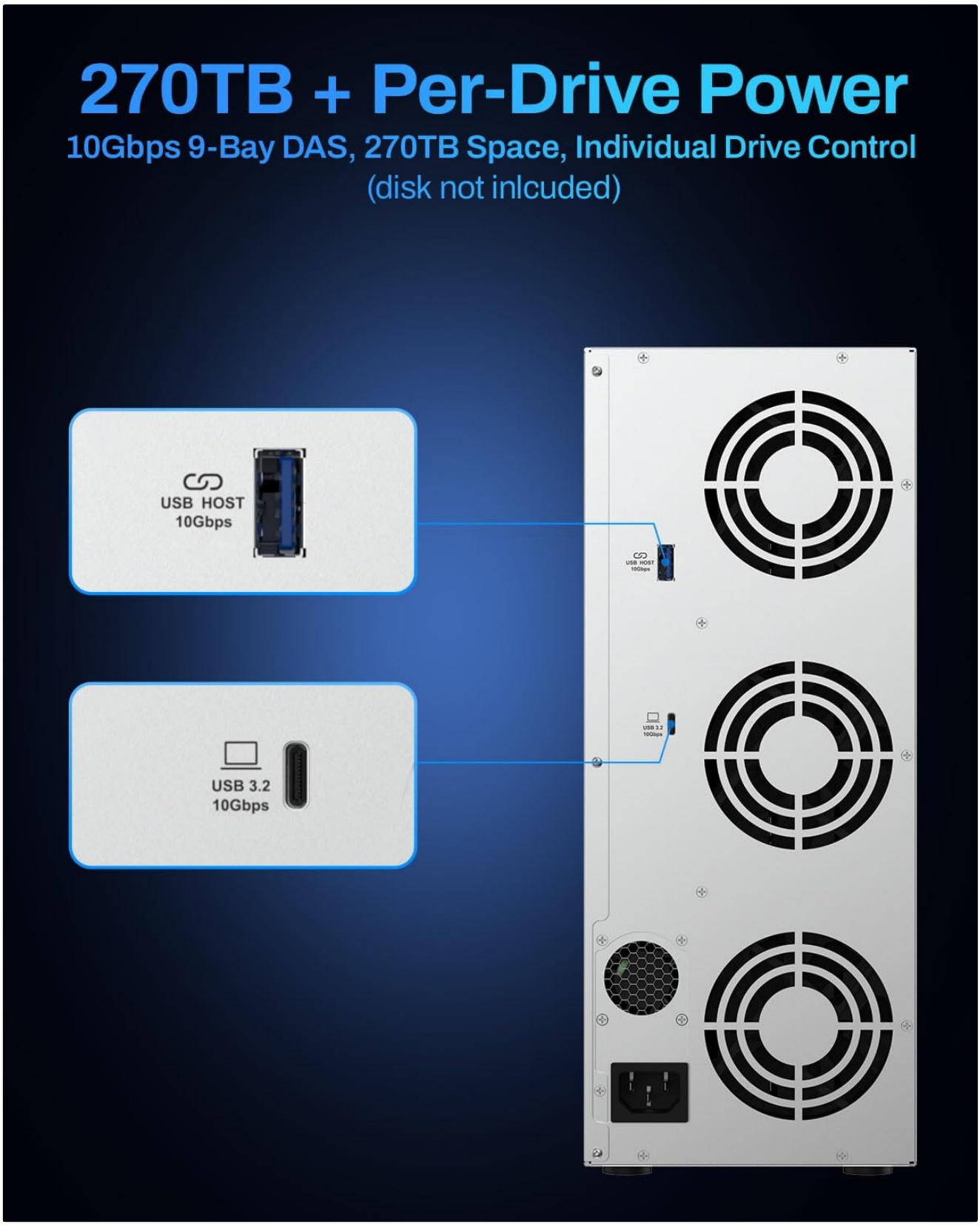

Figure 1: Rear view of the D9-320 enclosure, highlighting the USB 3.2 Gen2 Type-C port, USB Host port, and three large cooling fans for efficient heat dissipation.

Figure 2: Front view of the D9-320, showcasing the nine individual drive bays and their corresponding independent power switches for precise control over each installed hard drive.

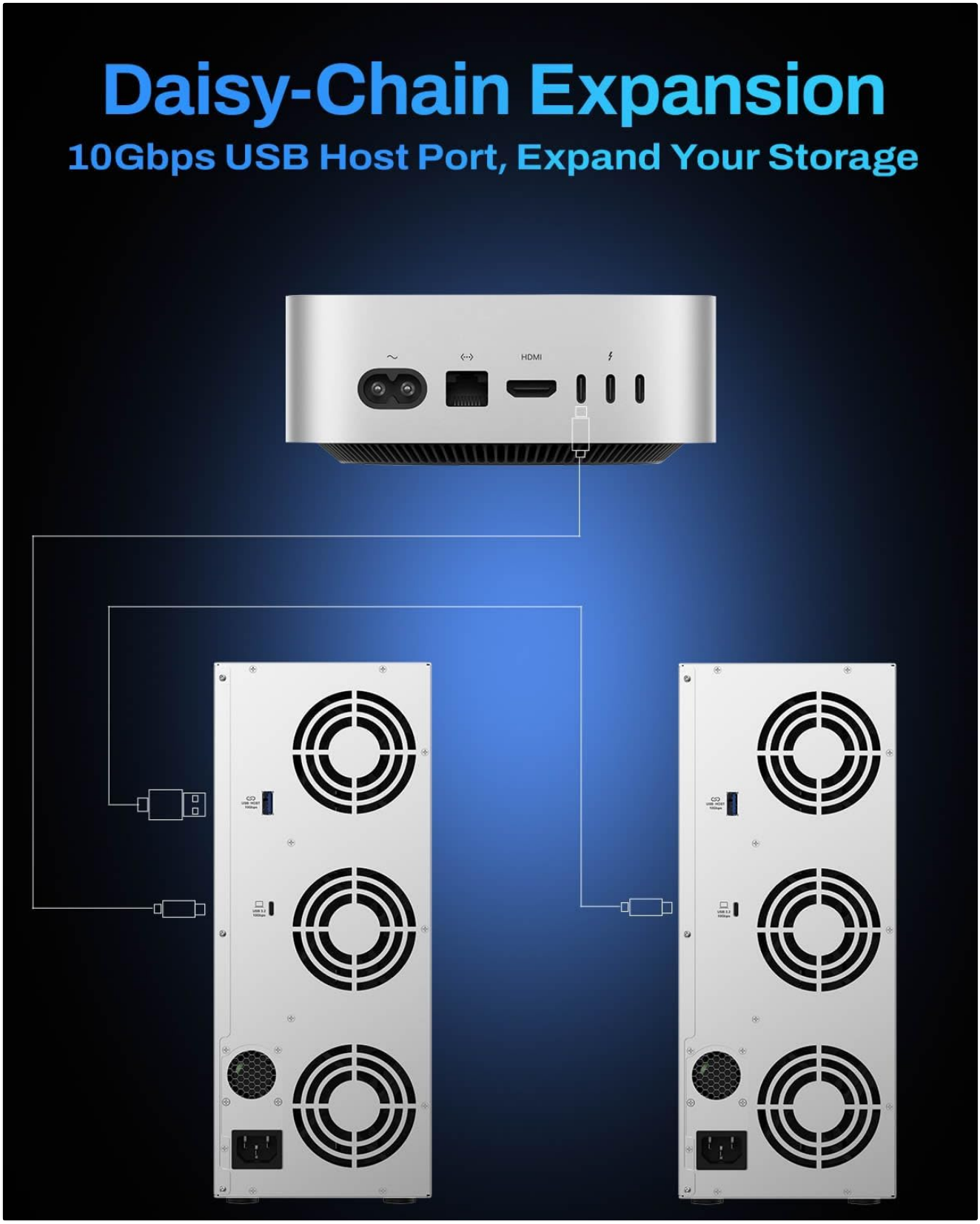

Figure 3: Illustration of daisy-chain expansion, demonstrating how multiple D9-320 units can be connected via the 10Gbps USB Host port to expand storage capacity.

Figure 4: Visual representation of the D9-320's massive 270TB storage capability, with examples of how many photos, movies, music, and documents can be stored.

Figure 5: Display of the D9-320's universal compatibility, showing seamless integration with Mac OS, Windows, Linux, TOS 6, Unraid, Proxmox, and TrueNAS systems.

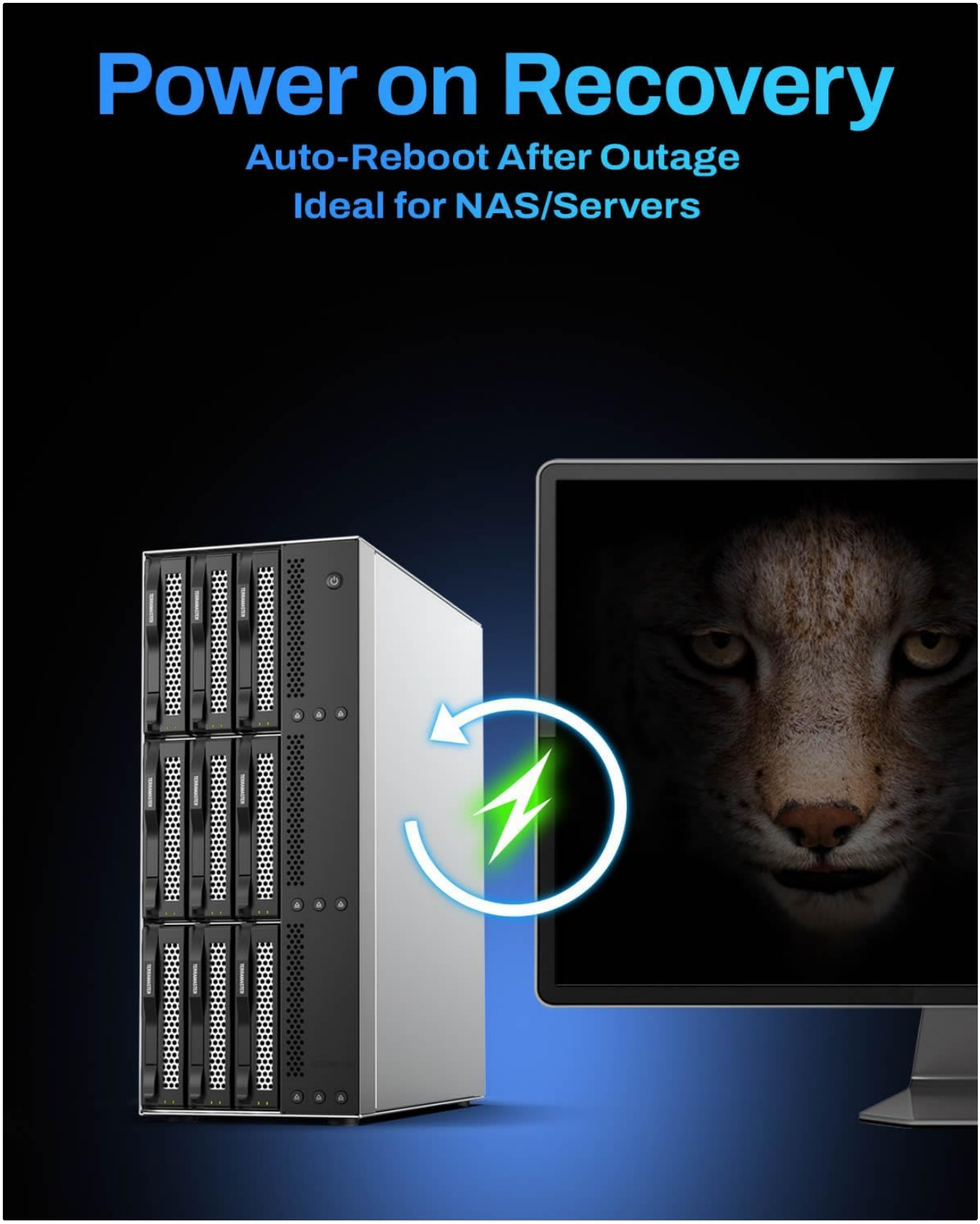

Figure 6: Illustration of the D9-320's Power On Recovery feature, which automatically reboots the device after a power outage, ideal for servers and NAS setups.

Figure 7: Depiction of the D9-320's ultra-quiet cooling system, featuring 4 temperature sensors and auto-adjusting fan speeds for optimal hard drive temperature and silent operation.

Figure 8: Image illustrating the D9-320's smart power-saving feature, which puts the device into auto-sleep mode when inactive to minimize HDD wear and extend lifespan.

3. Setup

3.1 Hardware Installation

1. **Unpack the Enclosure:** Carefully remove the D9-320 enclosure and all accessories from the packaging.
2. **Prepare Hard Drives:** The D9-320 supports 3.5-inch and 2.5-inch SATA HDDs/SSDs. For 3.5-inch drives, simply slide them into the trays. For 2.5-inch drives, use the provided screws to secure them to the trays

before insertion.

3. **Insert Drives:** Gently push each prepared hard drive into an available bay until it clicks securely into place. The D9-320 features tool-free drive installation for 3.5-inch drives.

3.2 Connecting to Your Computer

1. **Connect Power:** Connect the provided power adapter to the DC IN port on the rear of the D9-320, then plug the power cord into an electrical outlet.
2. **Connect USB Cable:** Use either the USB Type C-C cable or the USB Type A-C cable (depending on your computer's port) to connect the D9-320 to your computer. Ensure a secure connection for optimal 10Gbps data transfer.
3. **Power On:** Press the master power switch on the front panel of the D9-320. Then, individually press the power switch for each drive bay you wish to activate.

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Video 1: Official TERRAMASTER D9-320 USB3.2 10Gbps 9-Bay USB Storage overview, demonstrating key features, setup, and operation.

4. Operating Instructions

4.1 Independent Power Control

Each drive bay on the D9-320 has an independent power switch. This allows you to power on or off individual drives without affecting others. This feature is useful for managing power consumption and protecting unused drives.

- To power on a drive, press its corresponding switch. The indicator light for that bay will illuminate.
- To power off a drive, press its corresponding switch again. The indicator light will turn off.

4.2 Hot Swapping Drives

The D9-320 supports hot-swapping, meaning you can replace a hard drive without powering down the entire enclosure or your computer. This is ideal for continuous operation and quick drive management.

1. **Safely Eject (Software):** Before removing a drive, ensure all data transfer to/from that drive is complete. Safely eject the drive through your operating system's disk management utility (e.g., "Safely Remove Hardware" in Windows, "Eject" in macOS).
2. **Power Off Drive:** Press the independent power switch for the drive you wish to remove.
3. **Remove Drive:** Gently pull the drive tray out of the bay.
4. **Insert New Drive:** Place the new hard drive into an empty tray (or replace the old one) and slide it into the desired bay until it locks.
5. **Power On New Drive:** Press the independent power switch for the newly inserted drive. Your operating system should detect the new drive.

4.3 Disk Management (Operating System)

After inserting new drives, they may need to be initialized, partitioned, and formatted by your operating system before use. Refer to your OS's documentation for specific steps:

- **Windows:** Use Disk Management (search "Disk Management" in Start menu). New drives will appear as "Unallocated." Right-click to initialize (GPT recommended for large drives), then create a New Simple Volume to format.
- **macOS:** Use Disk Utility (Applications > Utilities > Disk Utility). Select the new drive and choose "Erase" to

format it (e.g., APFS or Mac OS Extended).

- **Linux:** Use tools like GParted, fdisk, or parted to partition and format new drives.

Once formatted, your drives will appear as accessible storage volumes on your computer, ready for data transfer.

5. Maintenance

5.1 Heat Dissipation

The D9-320 features an intelligent temperature-controlled fan system to maintain optimal operating temperatures for your hard drives. Ensure the rear fans are not obstructed to allow for proper airflow. Regular cleaning of dust from the fan grilles is recommended to maintain cooling efficiency.

5.2 Smart Power-Saving

The enclosure is designed with a smart power-saving mode that automatically puts inactive hard drives to sleep. This reduces power consumption and minimizes wear on the drives, extending their lifespan. No user configuration is typically required for this feature.

5.3 Auto Power Recovery

In the event of a power outage, the D9-320 is equipped with an auto power recovery function. It remembers its last power state and automatically restores operation once power is re-established. This ensures continuous data availability, especially in server or NAS environments.

6. Troubleshooting

Common Issues and Solutions:

- **Drive Not Detected:**
  - Ensure the drive's independent power switch is ON.
  - Verify the USB cable is securely connected to both the enclosure and your computer.
  - Try a different USB port or cable.
  - Check your operating system's Disk Management (Windows) or Disk Utility (macOS) to see if the drive is detected but uninitialized/unformatted.
  - Ensure the hard drive is properly seated in its bay.
- **Slow Data Transfer Speeds:**
  - Confirm you are using a USB 3.2 Gen2 compatible port and cable on your computer.
  - Check for other devices consuming USB bandwidth.
  - Ensure your hard drives are healthy and not experiencing performance issues.
- **Enclosure Overheating:**
  - Ensure adequate ventilation around the enclosure; do not block the rear fans.
  - Clean any dust accumulation from the fan grilles.
  - Verify the fans are operating correctly.
- **Intermittent Disconnections:**
  - Check all cable connections (power and USB) for looseness.

- Ensure your computer's USB drivers are up to date.
- Avoid placing the enclosure near strong electromagnetic interference sources.

If issues persist, please refer to the support section or contact TERRAMASTER customer service.

7. Specifications

Model	D9-320
Brand	TERRAMASTER
Compatible Devices	Windows, Mac, Linux
Hard Disk Form Factor	3.5 Inches, 2.5 Inches (SATA HDD/SSD)
Max Number of Supported Devices	9
Max Capacity Per Drive	30TB
Total Storage Capacity	Up to 270TB (30TB x 9)
Data Transfer Rate	10 Gigabits Per Second (USB 3.2 Gen2)
Hardware Interface	USB 3.2 Gen 2 (Type-C)
Product Dimensions	13.15 x 5.31 x 11.61 inches
Item Weight	14.3 pounds (6.5 Kilograms)
Material	Metal

8. Warranty and Support

TERRAMASTER offers a standard warranty for its products. You can extend your product warranty by six months by registering your product on the official TERRAMASTER website.
For technical support, warranty claims, or any inquiries, please visit the official TERRAMASTER support page or contact them via the following channels:

- **Official Website:** www.terra-master.com
- **Support Page:** support.terra-master.com
- **Email Support:** support@terra-master.com
- **Sales Inquiries:** sales@terra-master.com
- **Facebook:** @terramasterofficial
- **Skype:** terramaster-support

TERRAMASTER provides quick service and responds to all customer queries within 24 hours.