Acasis TBU405Pro Max

ACASIS TBU405Pro Max 40Gbps Dual Bay M.2 NVMe SSD Enclosure User Manual

Model: TBU405Pro Max | Brand: Acasis

Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your ACASIS TBU405Pro Max 40Gbps Dual Bay M.2 NVMe SSD Enclosure. This device is designed to expand your storage capabilities and enhance your workstation with high-speed data transfer and versatile display output options. Please read this manual thoroughly before use to ensure proper functionality and to prevent damage to the device or your data.

What's in the Box

Please check the contents of your package. If any items are missing or damaged, contact customer support.

- ACASIS TBU405Pro Max Dual Bay M.2 NVMe SSD Enclosure
- 100W Power Supply Adapter
- Thunderbolt Cable (50cm)
- Thermal Pads (x4)
- Silicone Stoppers (x4)
- Size Adapter Plates (x2)
- User Manual

Image: The package includes the enclosure, power adapter, Thunderbolt cable, thermal pads, silicone stoppers, size adapter plates, and user manual.

Setup

1. SSD Installation (Tool-Free)

1. **Open the SSD enclosure:** Gently open the top cover of the enclosure.
2. **Insert the SSD:** Align the gold finger slot of your M.2 NVMe SSD (2230/2242/2260/2280 sizes supported) with the connector in the enclosure and insert it at approximately a 30-degree angle. Secure it

with the provided silicone stopper.

3. **Attach the thermal pad:** Place the thermal pad on top of the installed SSD(s) to ensure optimal heat dissipation.
4. **Close the enclosure:** Carefully close the top cover until it clicks into place.

Image: Visual guide for the tool-free SSD installation process.

2. Power Connection

Connect the provided 100W power supply adapter to the DC IN port on the enclosure and plug it into a power outlet. An external power supply is required for operation.

3. Connecting to Your Computer

Use the supplied Thunderbolt 4 cable to connect the enclosure to a Thunderbolt 3, Thunderbolt 4, or USB4 port on your computer. Ensure the connection is secure.

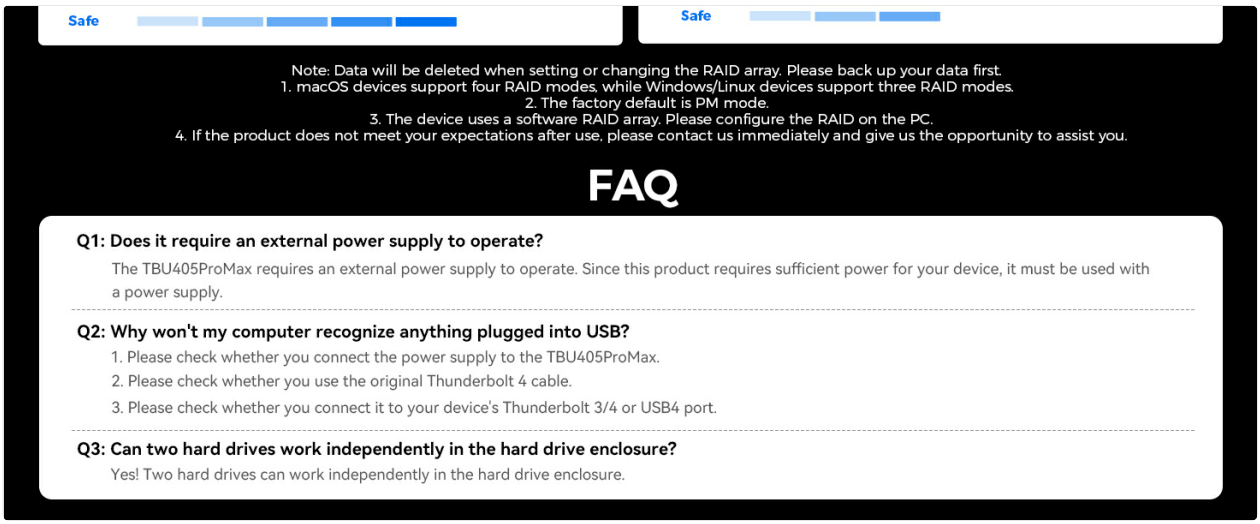

Image: Partial compatibility list for devices and operating systems.

Operating Instructions

1. RAID Configuration

The TBU405Pro Max supports multiple RAID array modes for flexible storage management. Please back up your data before changing RAID settings, as data will be deleted during configuration.

- **PM Mode (Windows/macOS/Linux):** Multiple independent disks coexist. Data on each disk is isolated. No protection for data security. Provides simple disk access method. Single/dual drive read/write speed is around 1200MB/s.
- **RAID 0 (macOS/Linux):** Data is distributed across two disks (striping). Theoretical storage speed is doubled. Advantage: Fast transfer speeds. Disadvantage: Single disk failure causes total data loss. Single/dual drive read/write speed is around 2500MB/s.
- **RAID 1 Mode (Windows/macOS/Linux):** Two disks mirror each other for backup (cloning). Advantage: Data safe if one disk fails, easy recovery. Disadvantage: Effective storage capacity is halved. Single/dual drive read/write speed is around 1200MB/s.
- **LARGE Mode (macOS only):** Combines multiple disks into one large volume. Total capacity is the sum of all disk capacities. Provides maximum storage space. Single/dual drive read/write speed is around 1200MB/s.

The device uses a software RAID array. You must configure the RAID on your PC. The factory default is PM mode.

Image: Overview of multiple RAID array modes and their characteristics.

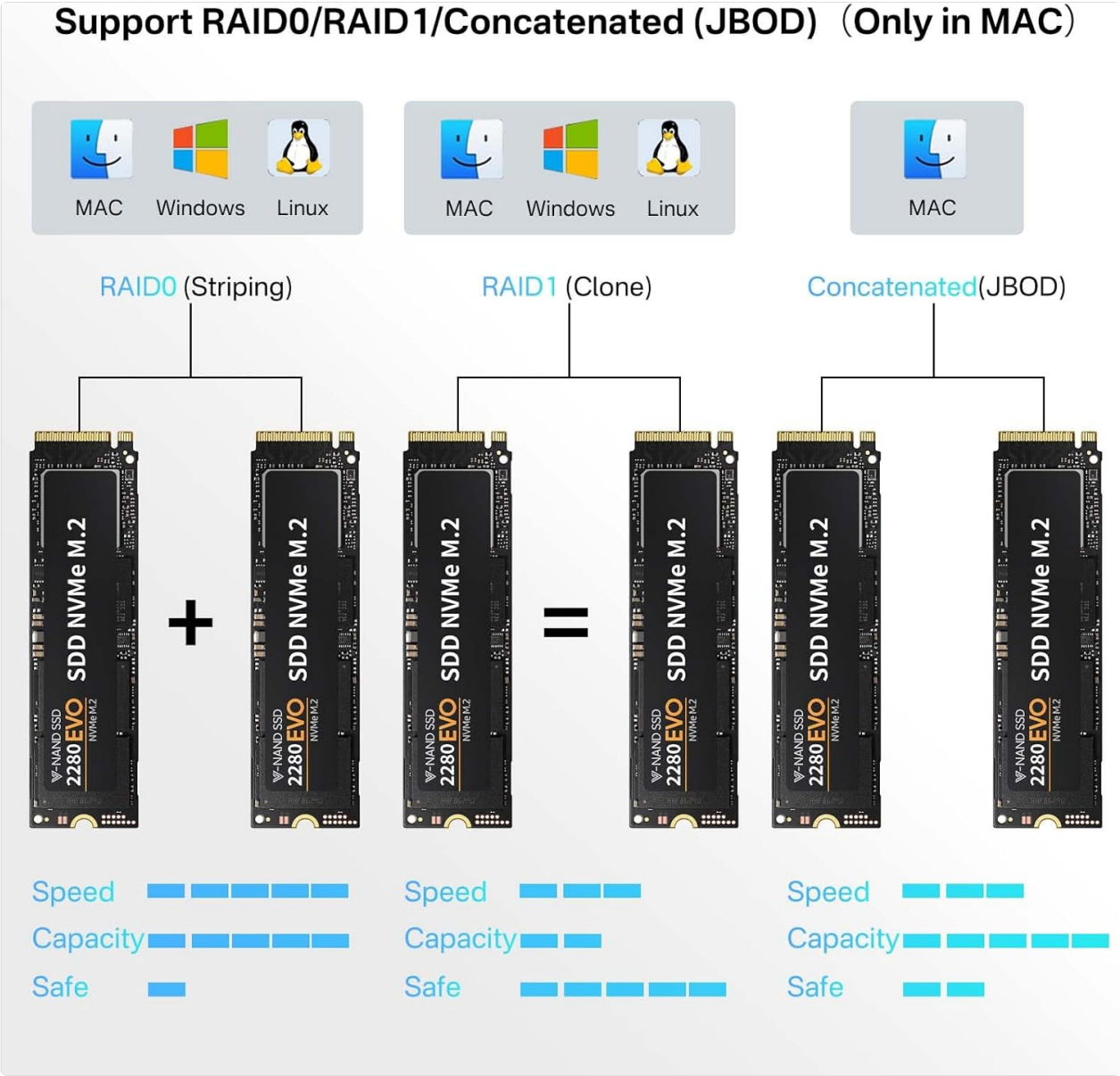

Image: RAID0, RAID1, and Concatenated (JBOD) modes supported, with JBOD being macOS only.

2. Display Output

The enclosure supports single 8K 60Hz or dual 4K 60Hz display output via its HDMI 2.0 and USB-C 40Gbps ports. Your computer must support USB-C DP Alt Mode for video output.

- **Single Monitor:** Up to 8K@60Hz via USB-C 40Gbps or 4K@60Hz via HDMI 2.0.
- **Dual Monitor:** Up to 4K@60Hz for both USB-C 40Gbps and HDMI 2.0 outputs.

Note: Computers with M1, M2, or M3 chips can only output to a single display.

Image: Display output capabilities for single 8K or dual 4K 60Hz monitors.

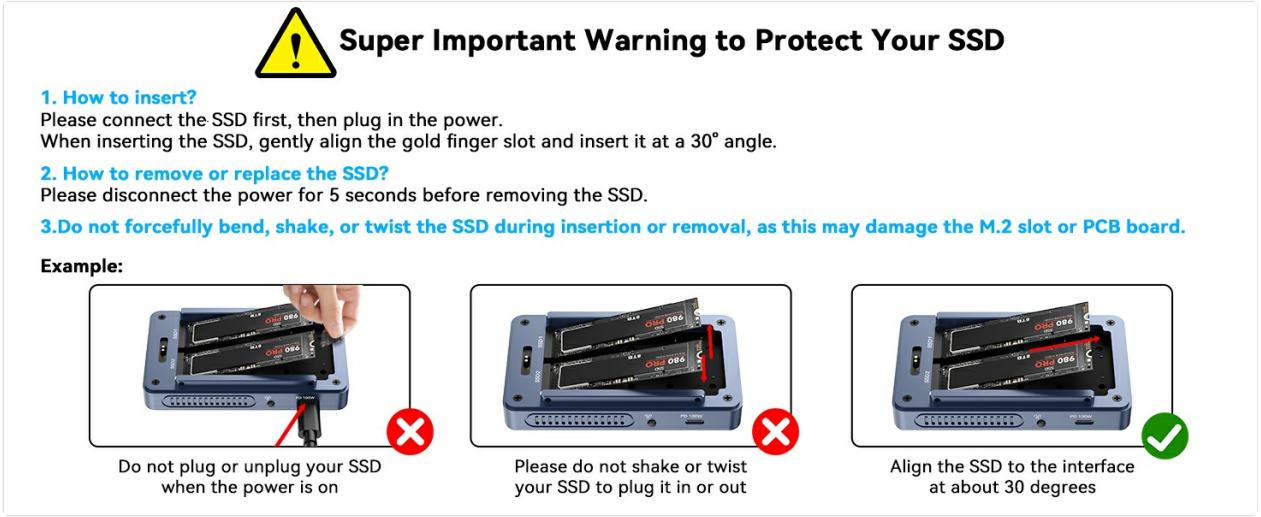

Image: MacOS display configurations (Mode AAA and Mode AAB).

Image: Windows display configurations (Mode AAB and Mode ABC).

3. Data Transfer Speeds

The upstream interface offers up to 1200MB/s per drive. With dual NVMe SSDs configured in RAID 0, speeds can accelerate to 2000-2500MB/s. The 40Gbps downstream interface supports daisy chaining, enabling up to 40Gbps bandwidth.

RAID LEVEL	SYSTEM	CAPACITY	SPEED
RAID(striping)	MAC Windows Linx	×2	×2
RAID1(clone)	MAC Windows Linx	×1	×1
Concatenated JBDD	MAC	×2	×1

Image: Storage speed boost with RAID 0 configuration.

4. Power Delivery

The enclosure supports PD 100W fast charging for the host device. Ensure the power adapter is connected before use to provide sufficient power.

Image: PD 100W fast charging capability.

Maintenance

1. Heat Dissipation

The TBU405Pro Max features a built-in cooling fan, an aluminum alloy body, and metal thermal conductive strips to ensure optimal temperature management for NVMe PCIe Gen4 SSDs. This design helps prevent overheating during intensive operations like 4K video editing or gaming.

Image: Multiple heat dissipation features of the enclosure.

2. SSD Handling Precautions

Important Warning to Protect Your SSD:

- Always disconnect the power for at least 5 seconds before removing or inserting an SSD. Do not plug or unplug your SSD when the power is on.
- Do not forcefully bend, shake, or twist the SSD during insertion or removal. This may damage the M.2 slot or PCB board.
- When inserting the SSD, gently align the gold finger slot and insert it at a 30-degree angle.

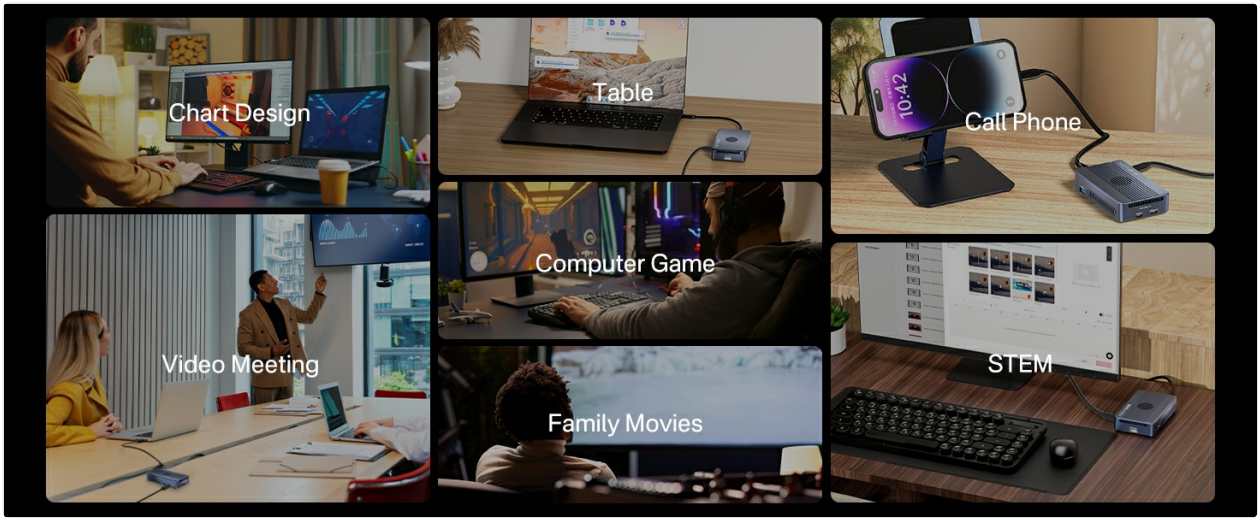

Image: Super Important Warning to Protect Your SSD.

TROUBLESHOOTING

Frequently Asked Questions (FAQ)

Q1: Does it require an external power supply to operate?
A: Yes, the TBU405Pro Max requires an external power supply to operate. This product requires sufficient power for your device, so it must be used with a power supply.

Q2: Why won't my computer recognize anything plugged into USB?
A: 1. Please check whether you connect the power supply to the TBU405Pro Max. 2. Please check whether you use the original Thunderbolt 4 cable. 3. Please check whether you connect it to your device's Thunderbolt 3/4 or USB4 port.

Q3: Can two hard drives work independently in the hard drive enclosure?
A: Yes! Two hard drives can work independently in the hard drive enclosure.

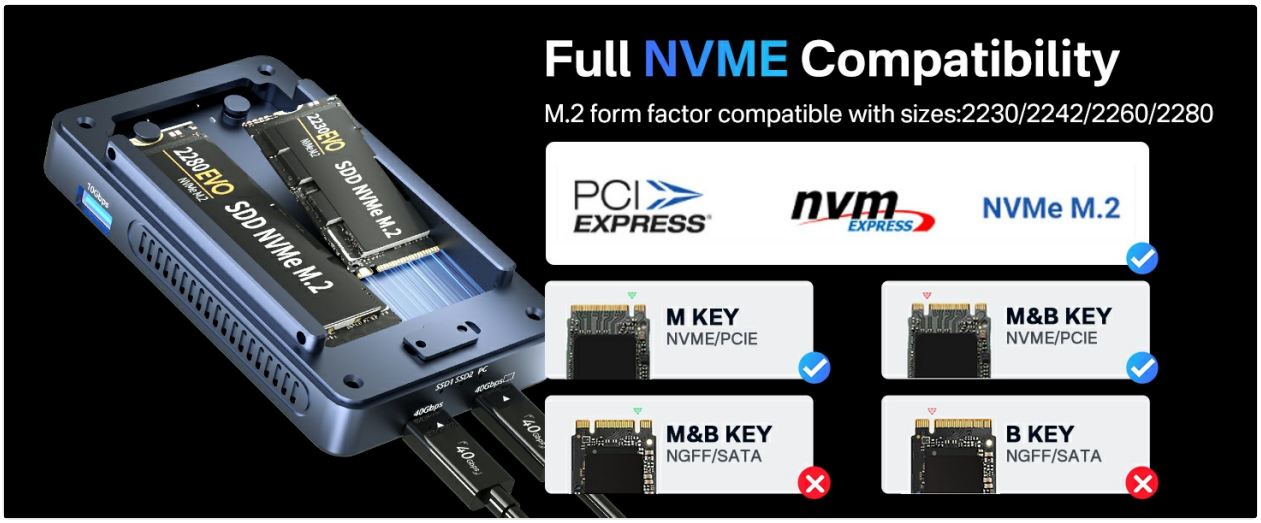

Image: Frequently Asked Questions.

Hard Disk Not Recognized or Frequently Disconnected

If you encounter issues with the hard disk not being recognized or frequent disconnections, follow these steps:

1. **Step 1: Check Compatibility**
    - Does your PC have a Thunderbolt 3/4 or USB4 interface?
    - Is the SSD free of heatsinks? (Heatsink-equipped SSDs are not compatible)
    - Is the SSD size (2230/2242/2260/2280) correctly positioned in the enclosure?
2. **Step 2: Check Connection and Power**
    - Use the genuine Thunderbolt 4 cable.
    - Connect to your PC's Thunderbolt port.
    - Use a 100W PD charger. (The power lamp should change from red to blue when power is supplied).
3. **Step 3: Physically Reconfirm Connection**
    - Reinsert the cable on both sides of the enclosure.
    - Replace the cover.
    - Confirm the SSD's position and secure it.
4. **Step 4: Confirm System and Software**
    - Check 'Disk Management' on Windows or 'Disk Utility' on Mac.
    - Perform a test with another Thunderbolt 3/4 or USB4 port on your PC.
    - Check operation in single disk mode (RAID configuration may be the cause).
5. **Step 5: Specific Test**
    - Replace with a known working NVMe SSD.
    - Use another Thunderbolt 4 cable.
    - Connect only the SSD enclosure.

Final Judgment: If the SSD is faulty, replace it. If the cable is faulty, replace it. If the issue persists after these

steps, the enclosure itself may be faulty. Please contact manufacturer support.

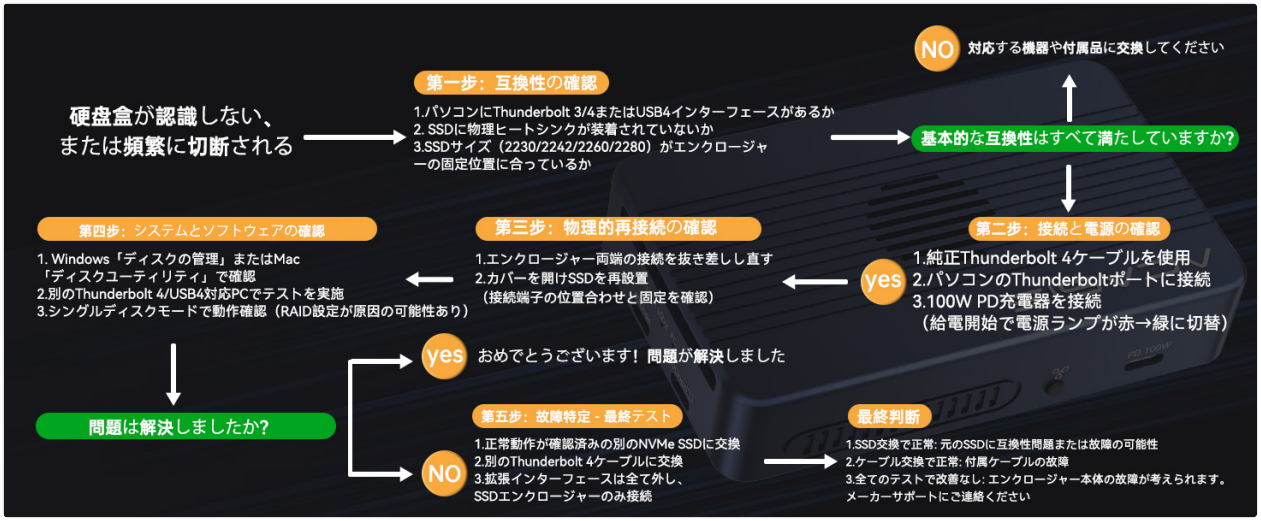

Image: Troubleshooting flowchart for hard disk issues.

Specifications

Feature	Detail
Brand	Acasis
Model Number	TBU405Pro Max
Hardware Platform	Windows, macOS, Linux
Material	Aluminum
Item Weight	137 grams
Max Memory Storage Capacity	16 TB
Compatible Devices	Desktop, Laptop
Number of Supported Devices	2 (M.2 NVMe SSDs)
Data Transfer Rate	40 Gigabits per second
Connectivity Interface	Thunderbolt, USB
Origin	China

Warranty & Support

Warranty Information

This product comes with a 1-year warranty from the date of purchase. Please retain your proof of purchase for warranty claims. The warranty covers manufacturing defects and malfunctions under normal use. It does not cover damage caused by misuse, accidents, unauthorized modifications, or improper installation.

Customer Support

For technical assistance, troubleshooting, or warranty inquiries, please contact ACASIS customer support

through the retailer where you purchased the product or visit the official ACASIS website for contact information.