

ACASIS TBU401

ACASIS 40Gbps M.2 NVMe SSD Enclosure (TBU401) Instruction Manual

Comprehensive guide for setting up, operating, and maintaining your ACASIS 40Gbps M.2 NVMe SSD Enclosure, Model TBU401, compatible with USB4 and various NVMe SSD sizes.

1. INTRODUCTION

The ACASIS 40Gbps M.2 NVMe SSD Enclosure (Model TBU401) provides a high-speed, portable solution for external data storage. Designed for M.2 NVMe SSDs, it offers exceptional data transfer rates and broad compatibility with various devices and operating systems. This manual provides essential information for proper setup, operation, and maintenance of your enclosure.



Figure 1: ACASIS 40Gbps M.2 NVMe SSD Enclosure (TBU401) and included USB-C cable.

2. PACKAGE CONTENTS

Verify that all items listed below are present in your package:



Figure 2: Contents of the ACASIS TBU401 package.

- ACASIS 40Gbps M.2 NVMe SSD Enclosure (TBU401)
- 40Gbps USB-C to USB-C Cable

- User Manual
- Silicone Thermal Pads (x2)
- SSD Size Adapter
- Rubber Stopper

3. SETUP AND INSTALLATION

The ACASIS TBU401 features a tool-less design for easy and quick installation of your M.2 NVMe SSD.

ACASIS JHL7440

Low Power Advantage



Temperature Performance at 40Gbps



Figure 3: Visual guide for tool-free SSD installation.

1. **Open the bottom plate:** Gently slide the bottom cover of the enclosure to open it.
2. **Insert NVMe SSD:** Align your M.2 NVMe SSD with the slot and insert it firmly. Secure the SSD with the provided fixed rubber stopper to prevent it from falling off.
3. **Apply Thermal Pad:** Place a silicone thermal pad onto the SSD to aid in heat dissipation.

4. **Close the lower cover:** Slide the bottom cover back into place until it clicks securely.
5. **Connect to computer:** Use the certified 40Gbps USB-C cable to connect the enclosure to your computer. The device is plug-and-play and requires no drivers.

4. COMPATIBILITY

The TBU401 enclosure offers broad compatibility with various NVMe SSDs, operating systems, and host devices.

4.1. SSD Compatibility

The image shows the TBU401 enclosure on the left, which is a silver, vertical, rectangular device. To its right are four M.2 NVMe SSDs of different lengths, labeled 2280, 2260, 2242, and 2230, representing the compatible sizes.

Compatible with NVMe SSDs

M.2 form factor compatible with sizes:2230/2242/2260/2280

PCI EXPRESS	nvm EXPRESS	NVMe M.2	✓
	M KEY NVME/PCIE	✓	
	M&B KEY NVME/PCIE	✓	
	M&B KEY NGFF/SATA	✗	
	B KEY NGFF/SATA	✗	

Figure 4: Supported M.2 NVMe SSD types and sizes.

- **SSD Type:** Supports M-Key and B+M Key NVMe PCIe SSDs.
- **SSD Sizes:** Compatible with M.2 form factors 2230, 2242, 2260, and 2280.
- **Capacity:** Supports NVMe SSDs up to 8TB.
- **Note:** SATA NGFF SSDs or mSATA SSDs are not supported.

4.2. Device and System Compatibility

Compatibility List (partial)

Compatible Devices

Macbook ProMacbook AirMac MiniSurface Pro 8Dell XPS 13Dell XPS 15

Dell Latitude 5540HP ENVY x360ASUS Zenbook 14XAcer Swift Go 14iPad Pro

Compatible Interface

Compatible with USB4,USB 3.2/3.1/3.0/2.0

Systems

Windows
Windows 7 and above

macOS
macOS 10.2 and above

Linux
Linux 5.6 and above

Figure 5: Partial compatibility list for devices and operating systems.

- **Compatible Interfaces:** Fully compatible with USB4, and backward compatible with USB 3.2, USB 3.1, USB 3.0,

and USB 2.0.

- **Operating Systems:** Supports Windows (7 and above), Mac OS (10.2 and above), Linux (5.6 and above), and Android.
- **Drivers:** No drivers required for operation.

5. PERFORMANCE

The ACASIS TBU401 enclosure is equipped with JHL7440 + RTL9210 dual chips, ensuring stable and reliable data transfer at high speeds.

5.1. Data Transfer Speeds



Figure 6: Example Disk Speed Test results on a MacBook Pro with Samsung 980 Pro.

- **Theoretical Max Speed:** 40Gbps.

- **Tested Speeds:** Up to 2805.58MB/s read and 2734.79MB/s write (results may vary by system configuration and SSD used).
- **Expected Speeds:** Due to the 18Gbps available bandwidth of the DisplayPort signal, expected read/write speeds are typically between 2500-3000MB/s.

5.2. Official Product Video: ACASIS 40Gbps NVMe Enclosure Overview

Video 1: An official product video from CZ-Store showcasing the ACASIS 40Gbps NVMe Enclosure, highlighting its features and design.

6. OPERATING INSTRUCTIONS

The ACASIS TBU401 is designed for ease of use. Once your NVMe SSD is installed, simply connect the enclosure to your device using the provided USB-C cable. It is plug-and-play, requiring no additional drivers for most compatible operating systems.

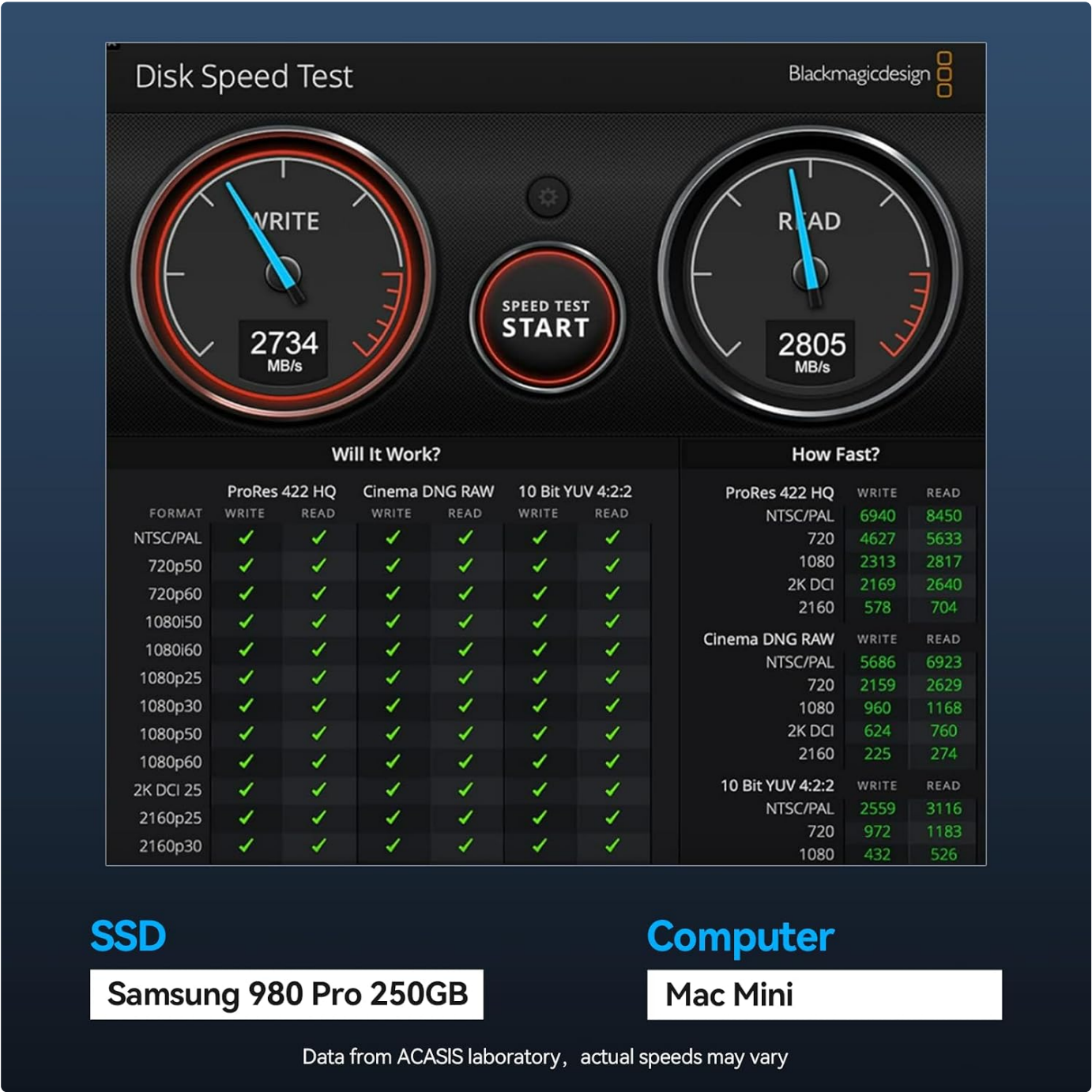


Figure 7: The ACASIS TBU401 in use, connected to a laptop for data transmission.

7. MAINTENANCE AND HEAT DISSIPATION

The enclosure is constructed from rugged aluminum alloy, which acts as an effective heatsink. Combined with the included silicone thermal pads, this design ensures efficient heat dissipation without the need for a noisy mechanical fan.

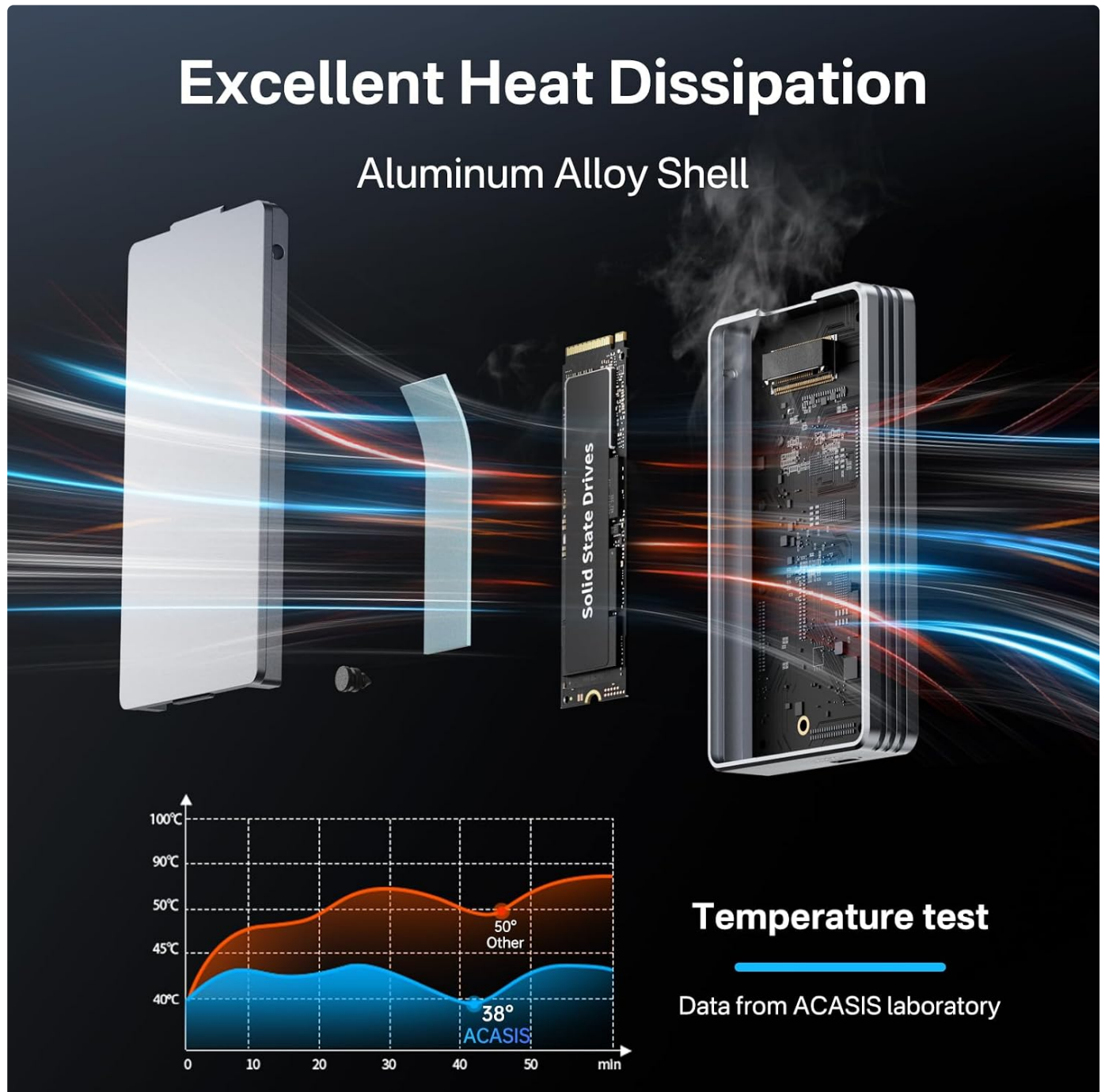


Figure 8: Illustration of the enclosure's heat dissipation mechanism.

To maintain optimal performance and longevity of your SSD, ensure the thermal pad is correctly placed during installation. Keep the enclosure clean and free from dust buildup to prevent any obstruction of the heat-dissipating surfaces.

8. TROUBLESHOOTING

8.1. Why can't I reach the expected speed of 2500-3000 MB/s?

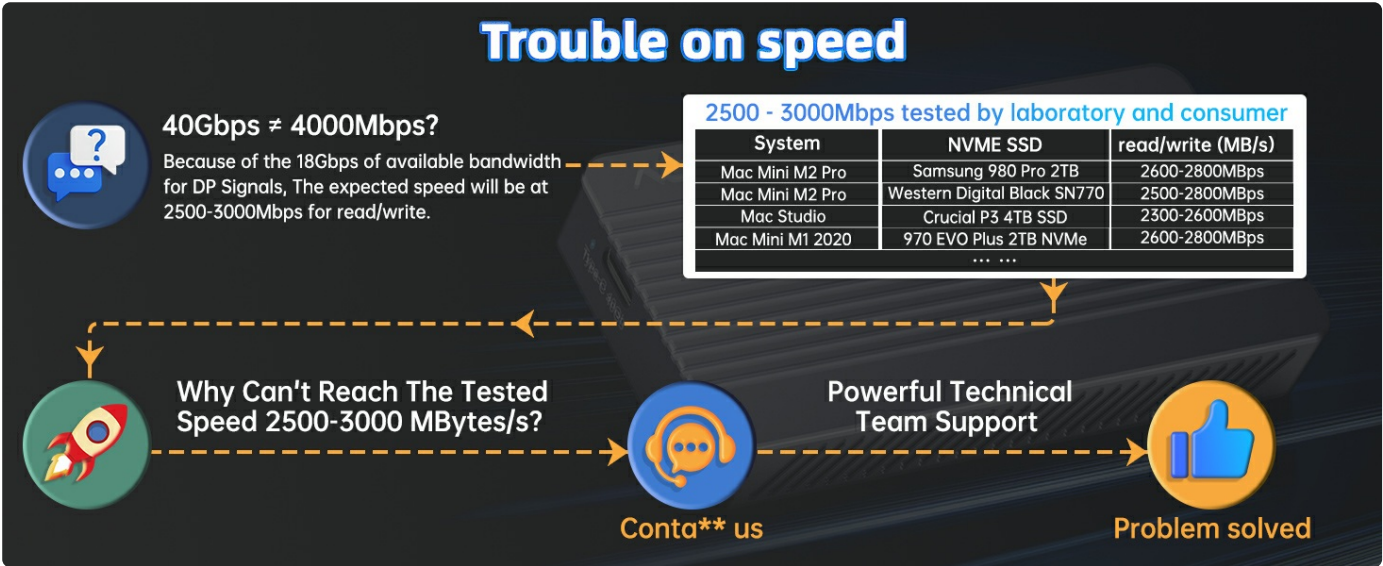


Figure 9: Explanation of potential speed discrepancies.

The theoretical 40Gbps bandwidth does not directly translate to 4000MB/s in real-world scenarios. This is primarily due to the 18Gbps available bandwidth of the DisplayPort (DP) signal, which is utilized by the USB4 interface. Therefore, expected real-world read/write speeds are typically between 2500-3000MB/s.

If your speeds are significantly lower than this range, please ensure:

- You are using the certified 40Gbps cable provided with the enclosure.
- Your host device (computer, laptop) supports USB4 or Thunderbolt 3/4.
- The NVMe SSD installed is capable of high speeds (e.g., PCIe Gen3 or Gen4 NVMe SSDs).
- The SSD is properly seated and secured within the enclosure.

For further assistance, please contact ACASIS technical support.

9. SPECIFICATIONS

Feature	Detail
Brand	ACASIS
Model Number	TBU401
Hardware Interface	Thunderbolt / USB4 (backward compatible with USB 3.2/3.1/3.0/2.0)
Chipset	JHL7440 + RTL9210 Dual Chip
Compatible SSD Type	M.2 NVMe PCIe (M-Key, B+M Key)
Supported SSD Sizes	2230, 2242, 2260, 2280
Max Memory Storage Capacity	8 TB
Data Transfer Rate (Expected)	2500-3000 MB/s (Read/Write)
Material	Aluminum Alloy

Product Dimensions	4.09"L x 2.13"W x 0.63"H (approx. 3.94 x 0.57 x 2.4 inches)
Item Weight	137 Grams (approx. 4.8 ounces)
Compatible Devices	Laptop, Desktop, Tablet (Mac, PC, Linux, Multimedia, Gaming, Business)

10. WARRANTY AND SUPPORT

ACASIS is committed to providing high-quality products and excellent customer service.

AFTER-SALES SERVICE

support@acasis.com

**7x24 hours online**
service anytime

**High-quality service**
considerate service

Figure 10: ACASIS After-Sales Service details.

- **Email Support:** support@acasis.com
- **Service Availability:** 7x24 hours online service.
- **Quality Assurance:** High-quality and considerate service is provided for all ACASIS products.

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