

ACASIS TBU405MAX

ACASIS 40Gbps M.2 NVMe SSD Enclosure & Dual Monitor Dock User Manual

Model: TBU405MAX

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your ACASIS 40Gbps M.2 NVMe SSD Enclosure and Dual Monitor Dock (Model: TBU405MAX). This device is designed to expand connectivity and storage capabilities for your computer, particularly Mac mini/MacBook, by integrating a high-speed NVMe SSD enclosure with a versatile docking station.



Figure 1: ACASIS TBU405MAX Product Overview. This image displays the main unit of the ACASIS docking station surrounded by its various connection cables, including USB-C, USB-A, and HDMI, highlighting its multi-functional capabilities.

2. PRODUCT OVERVIEW

2.1 Key Features

- **40Gbps M.2 NVMe SSD Enclosure:** Supports M.2 NVMe SSDs (2280/2260/2242/2230 B+M/M-Key) up to 8TB capacity with data transfer speeds up to 2800MB/s.
- **Dual 4K@60Hz HDMI Outputs:** Connect two external monitors for extended or mirrored display.
- **High-Speed USB Ports:** Includes 2 x USB-A 10Gbps and 1 x USB-C 10Gbps ports for connecting peripherals and fast data transfer.
- **PD 100W Power Delivery:** USB-C input for 100W power delivery to the dock, with 60W output to charge the host device.
- **Intelligent Fan Cooling:** Integrated silent turbo fan and all-aluminum body for efficient heat dissipation, preventing thermal throttling.
- **Wide Compatibility:** Compatible with M1/M2 Mac devices, iPad Pro, Windows, macOS, Linux, and various USB/Thunderbolt interfaces.

2.2 Components and Interfaces

Familiarize yourself with the various ports and indicators on the docking station:

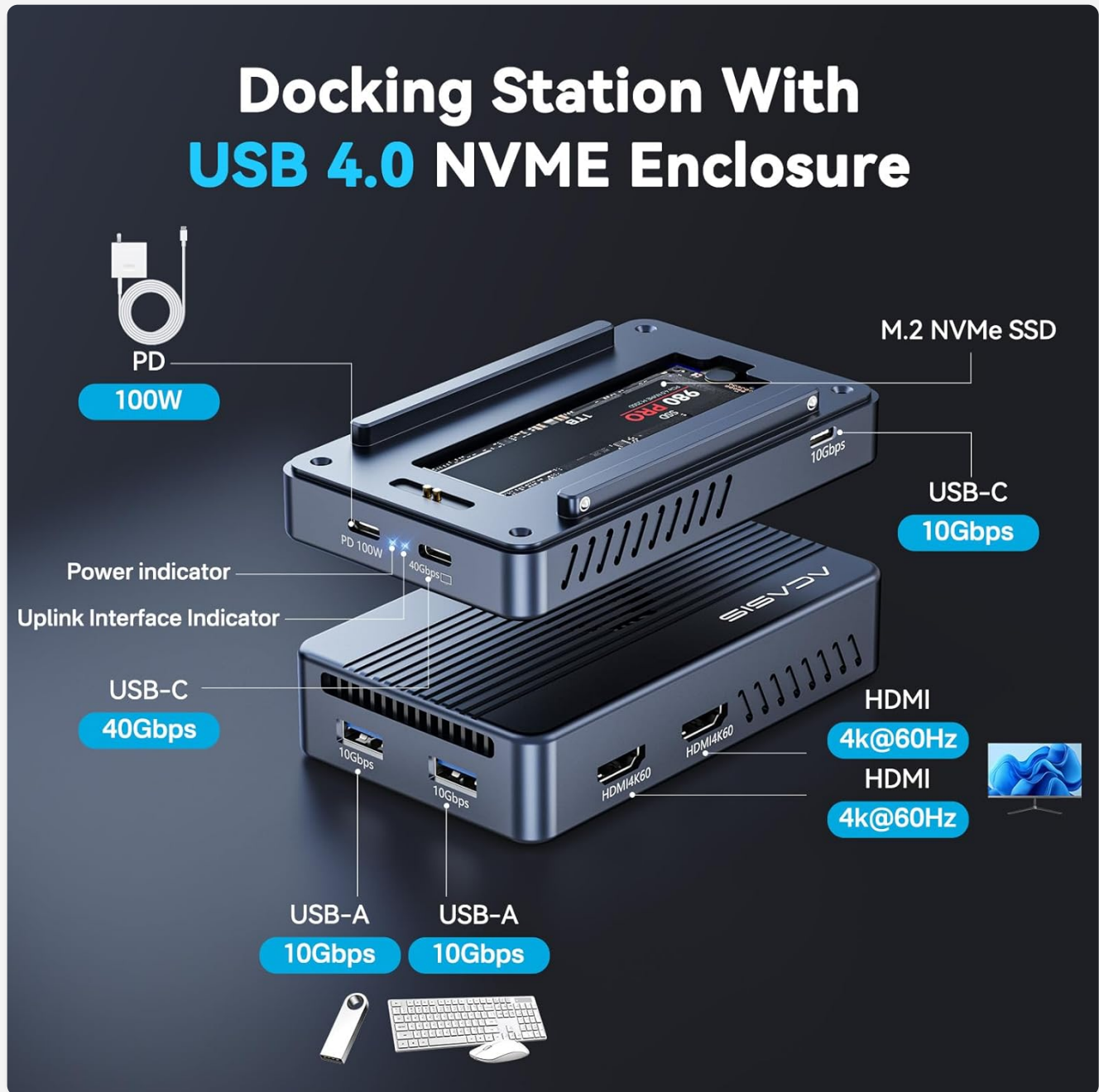


Figure 2: Docking Station Interfaces. This diagram illustrates the top and side views of the ACASIS docking station, clearly labeling its ports including USB-C (40Gbps), HDMI (4K@60Hz), USB-A (10Gbps), and power delivery (PD 100W) input, along with power and uplink indicators.

- **USB-C (40Gbps) Host Port:** Connects to your computer (Mac mini/MacBook, etc.).
- **HDMI 4K@60Hz Ports (x2):** For connecting external displays.
- **USB-A 10Gbps Ports (x2):** For connecting USB peripherals.
- **USB-C 10Gbps Port (x1):** For connecting USB-C peripherals.
- **PD 100W Input:** Power input for the docking station.
- **M.2 NVMe SSD Slot:** Internal slot for installing an M.2 NVMe SSD.
- **Power Indicator:** Lights up when the device is powered.
- **Uplink Interface Indicator:** Indicates connection status to the host.

3. SETUP GUIDE

3.1 SSD Installation

To install an M.2 NVMe SSD into the enclosure, follow these steps:

1. **Open Bottom Cover:** Gently slide or open the bottom cover of the enclosure.
2. **Insert SSD:** Align your M.2 NVMe SSD (2280/2260/2242/2230 B+M/M-Key) with the slot and insert it firmly. Secure the SSD with the provided retaining rubber plug.
3. **Apply Thermal Paste:** Apply the included silicone thermal paste to the SSD for optimal heat dissipation.
4. **Close Cover:** Close the hard disk case, ensuring the fan connection contacts are aligned.
5. **Connect:** Connect the enclosure to your computer.



Note: For a stable connection and proper function, ensure the SSD is correctly installed before connecting the power supply to the PC.



3.2 Connecting the Docking Station

1. **Power Connection:** Connect a PD 100W power adapter (not included) to the PD 100W input port on the docking station. This is crucial for stable operation and charging.

2. **Host Connection:** Use the provided USB-C cable to connect the 40Gbps USB-C host port on the docking station to a compatible USB-C/Thunderbolt port on your computer.
3. **Display Connection:** Connect your external monitors to the HDMI 4K@60Hz ports using HDMI cables.
4. **Peripheral Connection:** Connect your USB peripherals (keyboard, mouse, USB drives, etc.) to the available USB-A and USB-C ports.

Note: For Windows systems utilizing a Thunderbolt interface, it may be necessary to download and install the Thunderbolt driver from Intel's official website to ensure full functionality.

4. OPERATING INSTRUCTIONS

4.1 Multi-Display Modes

The docking station supports various multi-display configurations depending on your operating system and host device capabilities:

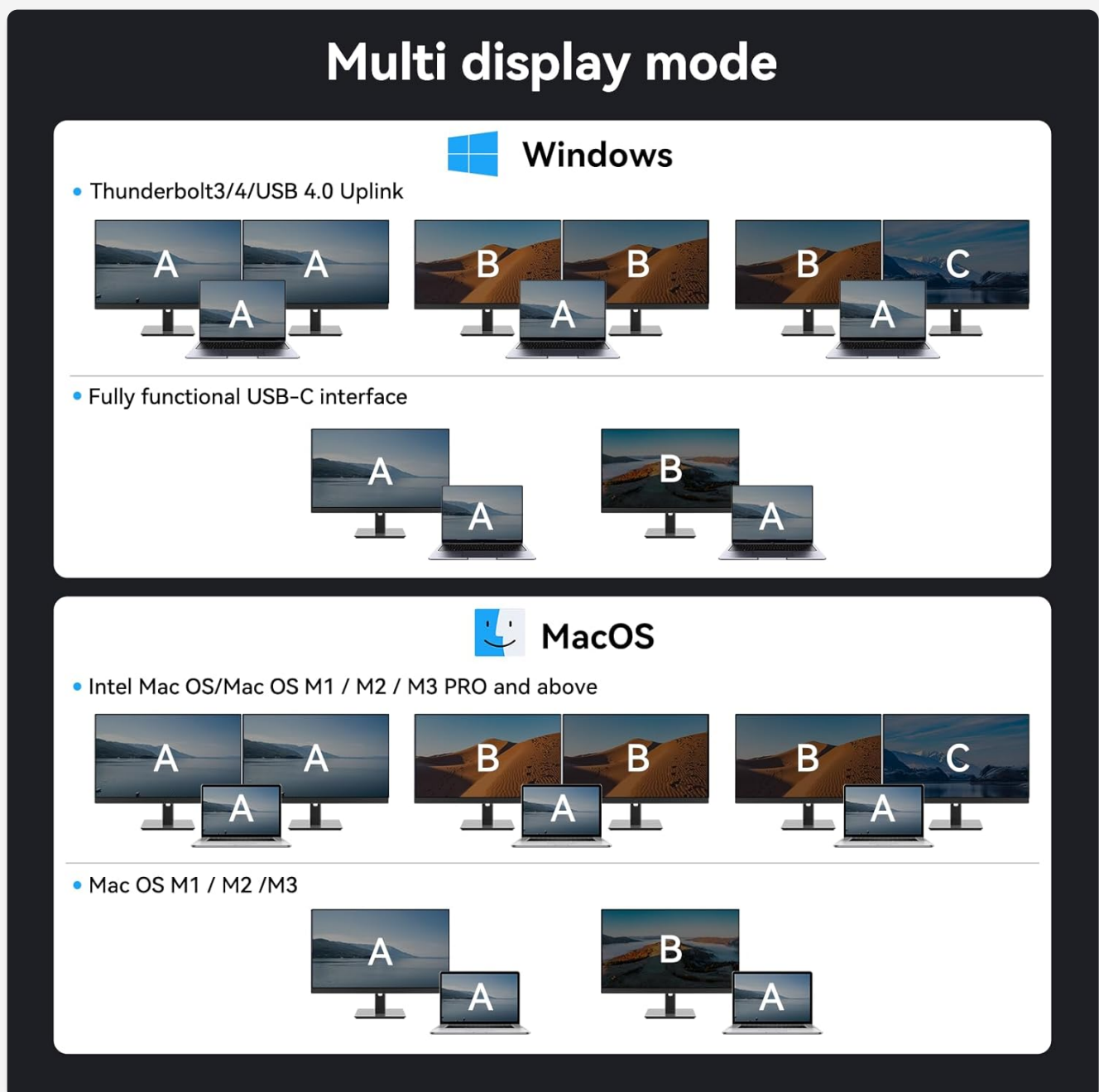


Figure 5: Multi-Display Configurations. This image illustrates various display modes for both Windows and macOS systems, showing how the ACASIS dock supports extended and mirrored displays across multiple monitors, including specific configurations for Intel

- **Windows (Thunderbolt 3/4/USB 4.0 Uplink):** Supports extended displays (A+A, B+B, B+C) and mirrored displays.
- **Windows (Fully functional USB-C interface):** Supports extended displays (A+A, B+A) and mirrored displays.
- **macOS (Intel Mac OS/Mac OS M1/M2/M3 PRO and above):** Supports extended displays (A+A, B+B, B+C) and mirrored displays.
- **macOS (Mac OS M1/M2/M3):** Supports extended displays (A+A, B+A) and mirrored displays.

Adjust display settings through your operating system's display preferences.

4.2 Data Transfer and Charging

The docking station provides high-speed data transfer and efficient power delivery:



Lightning Fast Speed
Supports Data Transfer Speed up to **40Gbps**

40Gbps

The actual speed varies by different SSDs and computers used

Read	2800 MB/S	SSD	Samsung 990 Pro 2TB
Write	2800 MB/S	Computer	MacBook M4 Pro

Figure 6: Lightning Fast Data Transfer. This image highlights the 40Gbps data transfer capability of the ACASIS dock and provides example read/write speeds of 2800MB/s when used with a Samsung 990 Pro 2TB SSD and a MacBook M4 Pro, emphasizing its high performance.

- **SSD Data Transfer:** The integrated NVMe enclosure supports speeds up to 2800MB/s for reading and writing

data to the installed SSD. Actual speeds may vary based on the SSD model and host computer.

- **USB Port Speeds:** The USB-A and USB-C ports support 10Gbps data transfer for connected peripherals.
- **PD 100W Fast Charging:** When connected to a 100W PD power adapter, the docking station can deliver up to 60W of power to charge your host laptop while simultaneously powering all connected external devices.

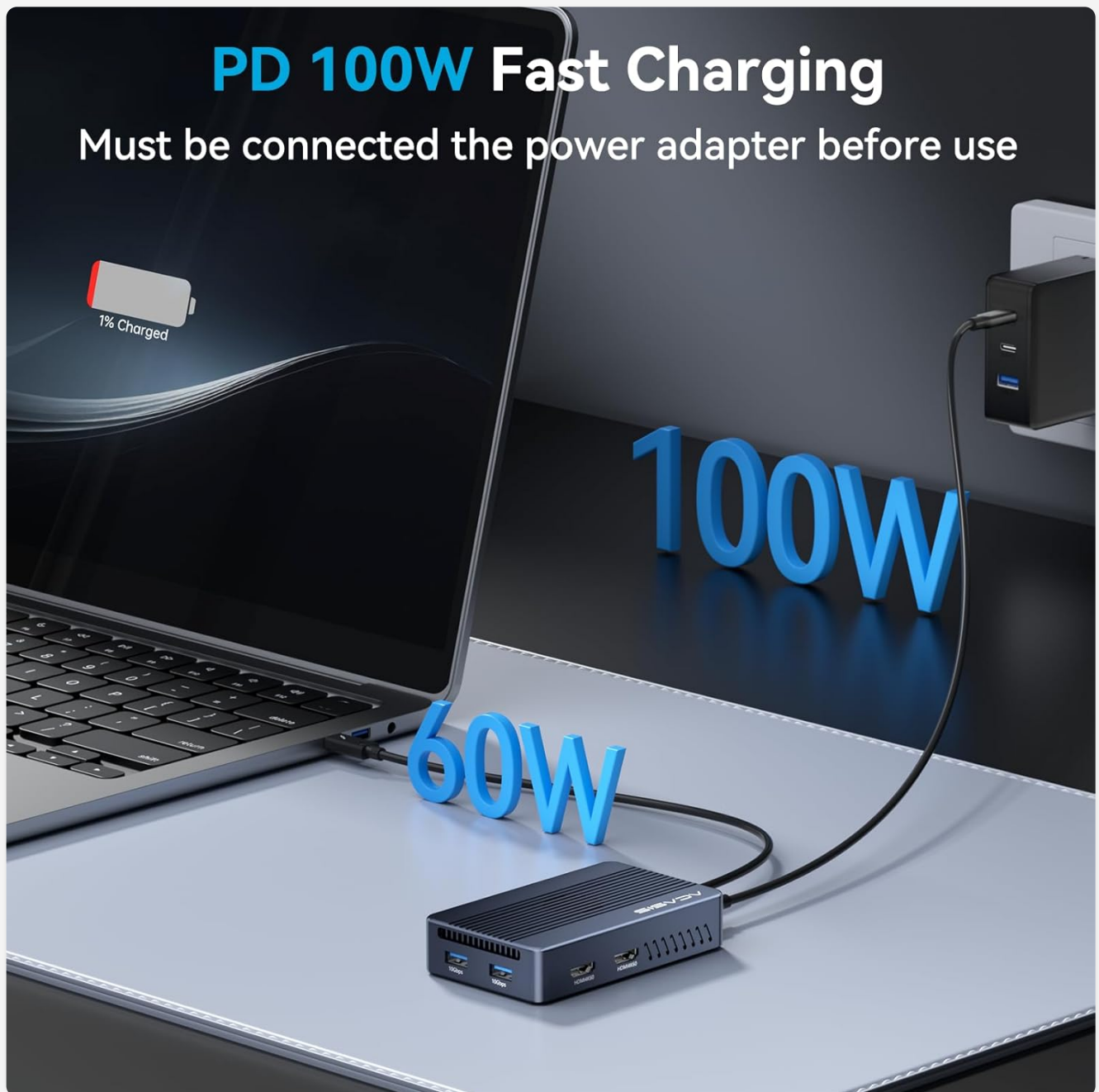


Figure 7: PD 100W Fast Charging. This image demonstrates the ACASIS docking station providing 60W power output to a laptop, while receiving 100W power input from a wall adapter, illustrating its fast charging capability for the host device.

5. MAINTENANCE

5.1 Cooling System

The ACASIS TBU405MAX features an intelligent fan cooling system and an all-aluminum body to maintain optimal operating temperatures, especially during heavy loads (e.g., dual monitor output, SSD data transfer, PD charging). This design helps prevent thermal throttling and ensures consistent performance.

Faster Cooling without Speed Dropping

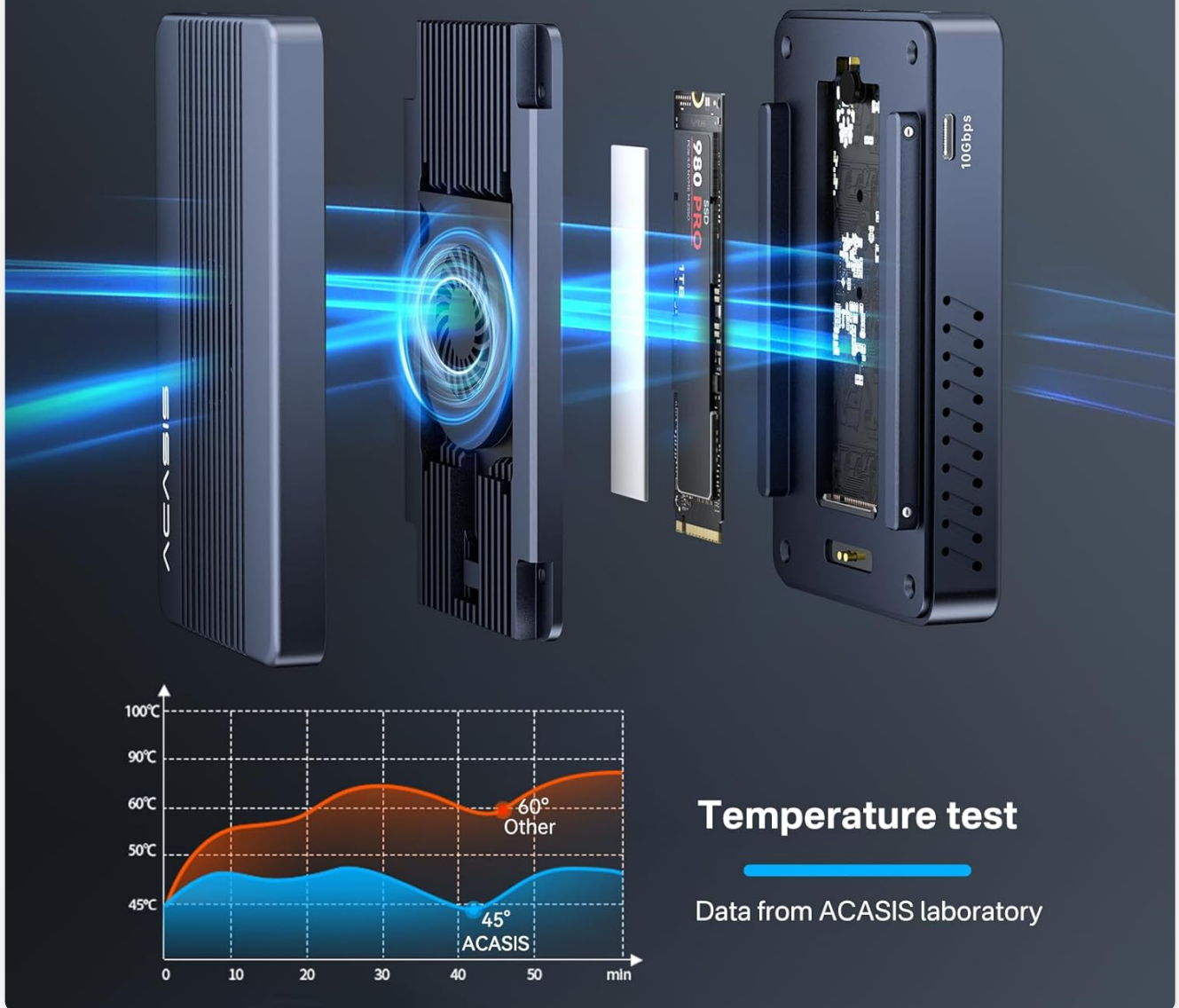


Figure 8: Efficient Cooling System. This image details the internal cooling mechanism of the ACASIS dock, featuring a silent turbo fan and aluminum heat dissipation structure. It also includes a temperature test graph comparing ACASIS's lower operating temperature (45°C) against other devices (60°C), demonstrating its superior cooling performance.

5.2 General Care

- Keep the device clean and free from dust. Use a soft, dry cloth for cleaning.
- Avoid exposing the device to extreme temperatures, humidity, or direct sunlight.
- Do not attempt to disassemble the device beyond SSD installation, as this may void the warranty.
- Ensure proper ventilation around the device to facilitate airflow for the cooling fan.

6. TROUBLESHOOTING

6.1 Common Issues and Solutions

Problem	Possible Cause	Solution
---------	----------------	----------

Problem	Possible Cause	Solution
Device not recognized / No display output.	Loose connection, insufficient power, incompatible port, missing driver (Windows Thunderbolt).	<ul style="list-style-type: none"> • Ensure all cables are securely connected. • Verify the PD 100W power adapter is connected and functional. • Try a different USB-C/Thunderbolt port on your host device. • For Windows Thunderbolt, install the latest Thunderbolt driver from Intel's website. • Restart your computer.
SSD not detected or slow speeds.	Improper SSD installation, incompatible SSD, thermal throttling.	<ul style="list-style-type: none"> • Re-check SSD installation (refer to Section 3.1). • Ensure the SSD is M.2 NVMe (B+M or M-Key) and compatible. • Verify thermal paste application. • Ensure the cooling fan is operating. • Format the SSD if it's new and not initialized.
Peripherals not working or disconnecting.	Insufficient power, faulty peripheral, port issue.	<ul style="list-style-type: none"> • Ensure the PD 100W power adapter is connected. • Try connecting the peripheral to a different USB port on the dock or directly to your computer. • Test the peripheral with another device.
Docking station feels hot.	Normal operation under load, blocked ventilation.	<ul style="list-style-type: none"> • Some warmth is normal during operation, especially with high data transfer or charging. • Ensure the device is placed on a flat surface with adequate airflow around it. • Do not cover the ventilation holes.

7. SPECIFICATIONS

Feature	Detail
Model Number	TBU405MAX
Brand	ACASIS
Data Transfer Rate	40 Gigabits Per Second (Host), 10 Gigabits Per Second (USB-A/C), up to 2800MB/s (SSD)
Memory Storage Capacity (SSD Enclosure)	Up to 8 TB

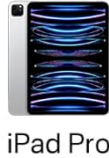
Feature	Detail
Compatible SSD Types	M.2 NVMe SSD (2280/2260/2242/2230 B+M M-Key)
Video Output	2 x HDMI 4K@60Hz
USB Ports	2 x USB-A 10Gbps, 1 x USB-C 10Gbps
Power Delivery (Input)	PD 100W (via USB-C)
Power Delivery (Output to Host)	60W
Hardware Interface	USB 3.2 Gen 2x2 (compatible with Thunderbolt 3/4/USB 4/3.2/3.1/3.0/2.0)
Compatible Devices	M1/M2 Mac, iPad Pro, Windows PCs, Linux PCs
Material	Aluminum
Item Weight	1.61 pounds (0.73 Kilograms)
Package Dimensions	6.18 x 4.61 x 3.39 inches
UPC	781108279788

Wide Compatibility

Devices



Macbook Pro / Air



iPad Pro



Dell XPS



Samsung



Phone



Systems



Windows



Mac OS



Android



Linux



iOS



Figure 9: Wide Compatibility. This image displays the broad compatibility of the ACASIS docking station, listing various devices such as Macbooks, iPad Pro, Dell XPS, Samsung phones, and systems including Windows, macOS, Linux, iOS, and Android.

8. WARRANTY AND SUPPORT

ACASIS products are designed for reliability and performance. For specific warranty information, please refer to the warranty card included with your product or visit the official ACASIS website. If you encounter any issues or require technical assistance, please contact ACASIS customer support through the contact information provided on the official website or your purchase platform.

For the latest drivers, firmware updates, and additional support resources, please visit the official ACASIS website: www.acasis.com

Related Documents - TBU405MAX

	<p>ACASIS EC-DM201 Dual NVMe M.2 Enclosure User Manual and Cloning Guide</p> <p>User manual and troubleshooting guide for the ACASIS EC-DM201 Dual NVMe M.2 Enclosure, covering installation, offline cloning, and usage as an enclosure or duplicator.</p>
	<p>ACASIS AC-M03 M.2 NVMe Enclosure & Duplicator: Offline Cloning Guide</p> <p>Step-by-step instructions for using the ACASIS AC-M03 M.2 NVMe enclosure and duplicator for offline SSD cloning. Learn how to clone your data between M.2 NVMe drives.</p>
	<p>ACASIS Dual M.2 NVMe SATA SSD Enclosure with RAID Mode User Manual</p> <p>Comprehensive user manual for the ACASIS Dual M.2 NVMe SATA SSD Enclosure with RAID Mode (Model EC-6604pro). Learn about package contents, product features, installation, RAID modes (RAID 0, RAID 1, JBOD, Clone), troubleshooting, and specifications.</p>
	<p>ACASIS Thunderbolt SSD Enclosure Docking Station TBU405Plus User Manual</p> <p>User manual for the ACASIS TBU405Plus Thunderbolt SSD Enclosure Docking Station. Learn about product features, specifications, interface connections, installation, and usage guidelines.</p>
 <p>Model CM073 User Manual</p>	<p>ACASIS CM073 10-in-1 USB-C Hub with M.2 SSD Enclosure User Manual</p> <p>User manual for the ACASIS CM073 10-in-1 USB-C Hub, detailing its features including M.2 SSD enclosure, 4K HDMI, USB 3.1 ports, Gigabit Ethernet, and SD/TF card reader.</p>
	<p>ACASIS EC-1401 6-in-1 USB-C SSD Enclosure and Docking Station User Manual</p> <p>User manual for the ACASIS EC-1401, a 6-in-1 USB-C Magnetic SSD Enclosure and Docking Station for Mobile Phones. Includes specifications, installation instructions, and troubleshooting FAQs in multiple languages.</p>