**ACASIS TBU405 Plus**

# ACASIS Mac mini Dock Dual Monitor with 40Gbps M.2 NVMe SSD Enclosure

Model: TBU405 Plus | Brand: ACASIS

## 1. INTRODUCTION

The ACASIS Mac mini Dock (Model TBU405 Plus) is a versatile 6-in-1 expansion hub designed to enhance your computing experience. It integrates a high-speed 40Gbps M.2 NVMe SSD enclosure with comprehensive connectivity options, including dual DisplayPort 1.4 outputs for extended display setups, and multiple USB 3.1 ports for peripherals. This dock is engineered for efficient heat dissipation and broad compatibility, making it an ideal solution for users seeking expanded storage, display capabilities, and interface options for their Mac mini, MacBook, iPad Pro, and other compatible devices.

Figure 1.1: ACASIS Mac mini Dock with connected cables.

# 2. PRODUCT FEATURES

- **6-In-1 Functionality:** Combines a 40Gbps NVMe enclosure with a docking station featuring 2x DisplayPort 1.4, 2x USB-A 10Gbps, and 1x USB-C 10Gbps ports.

- **Dual Monitor Display:** Supports single-screen resolutions up to 8K@60Hz and dual-screen resolutions up to 4K@60Hz, ideal for multitasking and multimedia.

- **Efficient Heat Dissipation:** Equipped with built-in cooling fans and an aluminum alloy body with metal thermal conduction slots to maintain optimal operating temperatures.

- **Internal Storage Expansion:** Supports M.2 SSDs up to 8TB with read/write speeds up to 2800MB/s. Compatible with 2230, 2242, 2260, and 2280 M.2 SSD sizes.

- **Universal Compatibility:** Works with M1/M2 Pro/Max Mac devices, iPad Pro, Windows, macOS, and Linux operating systems. Compatible with USB4, USB 3.2, USB 3.1, USB 3.0, and USB 2.0 standards.

# USB **3.1** Docking Station With USB **4.0** Nvme Enclosure



**DP1.4**
Single 8K or Dual 4K60 Display

**DC(5V/3A)**

**DP1.4**
Single 8K or Dual 4K60 Display

**USB 4.0**
40Gbps

**USB 3.1**
10Gbps

**USB 3.1**
10Gbps

**Type-C**
10Gbps

Figure 2.1: Port layout and specifications.



# 2 In 1

**40Gbps Nvme Enclosure**
+
**USB 3.1 Dual Monitors Dock**

Solution for Low memory few interfaces and Expand more screens

Figure 2.2: Overview of 2-in-1 functionality.

# 3. SETUP GUIDE

## 3.1 M.2 NVMe SSD Installation

1. Carefully open the SSD enclosure section of the dock.

2. Insert your M.2 NVMe SSD into the designated slot. Ensure it is fully seated.

3. Secure the SSD using the provided rubber anchor pin.

4. Apply the appropriate heat transfer pad(s) to the SSD for optimal thermal performance. Two different thicknesses may be provided; choose the one that ensures good contact with the thermal conduction plate.

5. Close the enclosure securely.



Single 8K or Dual 4K60 Display
Work More Efficiency and Productive

| | Thunderbolt 4 Laptop | MacBooks |
|---|---|---|
| Single Monitor | 8K@60Hz | 8K@60Hz |
| Dual Monitor | 4K@60HZ | 4K@60HZ |

Figure 3.1: Internal view and SSD installation area.

## 3.2 Connecting the Dock

1. Connect the provided Thunderbolt/USB4 cable from the dock's 40Gbps port to your host device (e.g., Mac mini, MacBook, iPad Pro).

2. If external power is required or recommended for stable operation, connect a DC 5V/3A power adapter (not included, but port available) to the dock's DC 5V port.

3. Connect your monitors to the DisplayPort 1.4 outputs on the dock.

4. Connect any USB peripherals (e.g., keyboard, mouse, external drives) to the USB-A 10Gbps or USB-C 10Gbps ports.

# 4. OPERATING INSTRUCTIONS

## 4.1 Dual Monitor Setup

The ACASIS dock supports extending your display to up to two external monitors. For optimal performance, ensure your monitors and cables support the desired resolutions.

- **Single Monitor:** Up to 8K@60Hz resolution.

- **Dual Monitors:** Up to 4K@60Hz resolution per monitor.

After connecting your monitors, configure display settings in your operating system:

- **macOS:** Go to System Settings (or System Preferences) > Displays. You can arrange displays, set resolutions, and choose between extended desktop (Mode: ABC) or mirrored displays (Mode: AAA/AAB).

- **Windows:** Right-click on the desktop and select Display settings. You can detect, arrange, and set resolutions for multiple displays. Choose between Extend these displays (Mode: ABC) or Duplicate these displays (Mode: AAB).

# Lower Running Temperature
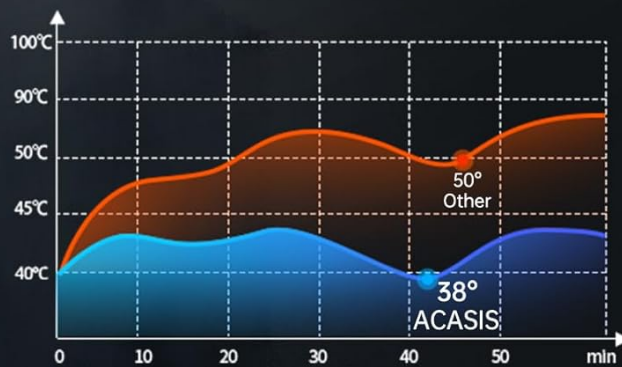


**Temperature test**

Data from ACASIS laboratory

Figure 4.1: Dual monitor display capabilities.

## MacOS



Mode:AAA

Mode:AAB

Mode:ABC

Figure 4.2: macOS Display Modes.

Figure 4.3: Windows Display Modes.

## 4.2 Data Transfer and Storage

The integrated M.2 NVMe SSD enclosure supports high-speed data transfer, making it suitable for large files and demanding applications.

- **SSD Speed:** Up to 2800MB/s read and write speeds for the internal NVMe SSD.

- **USB Ports:** USB-A and USB-C ports offer 10Gbps data transfer rates for connected peripherals.

Figure 4.4: 8TB SSD support.



Figure 4.5: High-speed data transfer.

## 4.3 Usage Scenarios

The ACASIS dock is designed for a variety of applications:

- **Professional Use:** Chart design, video meetings, and STEM applications.

- **Entertainment:** Computer gaming, family movies, and general multimedia consumption.

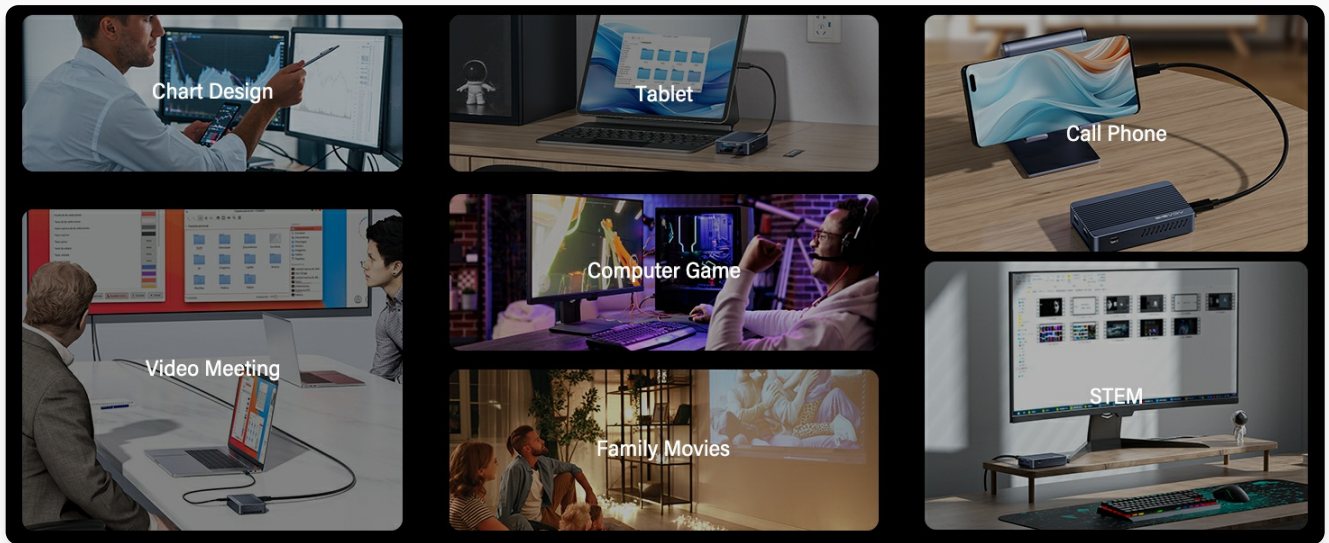- **Productivity:** Expanding interfaces for tablets and smartphones.



Figure 4.6: Diverse usage scenarios.

# 5. MAINTENANCE

## 5.1 Cleaning

To maintain optimal performance and appearance, regularly clean the exterior of the dock with a soft, dry, lint-free cloth. Avoid using abrasive cleaners or solvents.

## 5.2 Heat Dissipation

The ACASIS dock features a built-in cooling fan and an aluminum alloy body designed for efficient heat dissipation. To ensure proper airflow:

- Ensure the dock is placed on a flat, stable surface with adequate ventilation.

- Do not block the ventilation grilles or fan opening.

- Periodically check for dust accumulation in the fan area and gently clean if necessary using compressed air (ensure the fan is not spinning during cleaning).

# 6. TROUBLESHOOTING

If you encounter issues with your ACASIS Mac mini Dock, please refer to the following common troubleshooting steps:

- **No Display Output / Display Issues:**

    - Ensure all DisplayPort cables are securely connected to both the dock and the monitors.
    - Verify that your monitors are set to the correct input source (DisplayPort).
    - Check your operating system's display settings to ensure the external displays are detected and configured correctly (extended or mirrored).
    - Try using different DisplayPort cables or monitors to rule out cable/monitor issues.
    - Some portable monitors may require external power; ensure they are adequately powered. The dock does not provide power delivery to the host or external monitors.

- **Slow NVMe SSD Speed:**

    - Ensure the M.2 NVMe SSD is properly installed and secured with the rubber anchor pin.
    - Verify that the heat transfer pads are correctly applied to ensure good thermal contact, as overheating can throttle SSD performance.
    - Confirm that your host device's port (e.g., Thunderbolt 4/USB4) is capable of 40Gbps speeds.
    - Check the health and firmware of your M.2 NVMe SSD.

- **Fan Noise or Malfunction:**

    - Ensure the dock's ventilation grilles are not obstructed.
    - If the fan is excessively loud or not spinning, contact ACASIS customer support.

- **USB Devices Not Recognized:**

    - Ensure USB devices are properly connected to the dock's USB ports.
    - Try connecting the USB device directly to your host computer to confirm it functions independently.
    - Restart your host computer and the dock.

If these steps do not resolve your issue, please contact ACASIS customer support for further assistance.

# 7. SPECIFICATIONS

| Feature | Specification |
| --- | --- |
| Model Number | TBU405 Plus |
| Memory Storage Capacity (SSD) | Up to 8 TB |
| Compatible Devices | Mac mini, MacBook Pro/Air (M1/M2 Pro/Max), iPad Pro, Windows PCs, Linux PCs |
| Hard Disk Form Factor | M.2 (2230/2242/2260/2280) |

| Feature | Specification |
| --- | --- |
| Max Number of Supported Displays | 2 |
| Data Transfer Rate (Host) | 40 Gigabits Per Second (Thunderbolt/USB4) |
| Data Transfer Rate (USB Ports) | 10 Gigabits Per Second (USB 3.1) |
| SSD Read/Write Speed | Up to 2800 MB/s |
| Hardware Interface | Solid State Drive, USB, USB Type C, DisplayPort |
| Material | Aluminum |
| Product Dimensions | 3.94 x 2.36 x 0.79 inches |
| Item Weight | 7.1 ounces (200 Grams) |
| UPC | 781108279337 |

# 8. WARRANTY AND SUPPORT

ACASIS is committed to providing high-quality products and excellent customer service. We strive to bring a better user experience for digital product users.

## 8.1 Warranty

ACASIS offers a 365-day money-back guarantee, allowing you to try our products with confidence. Please retain your proof of purchase for warranty claims.

## 8.2 Customer Support

For any inquiries, technical assistance, or support needs, please contact our dedicated customer service team:

- **Email:** support@acasis.com
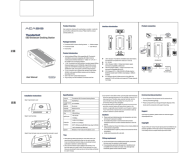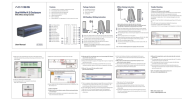- **Service Hours:** 7x24 hours online service available anytime.
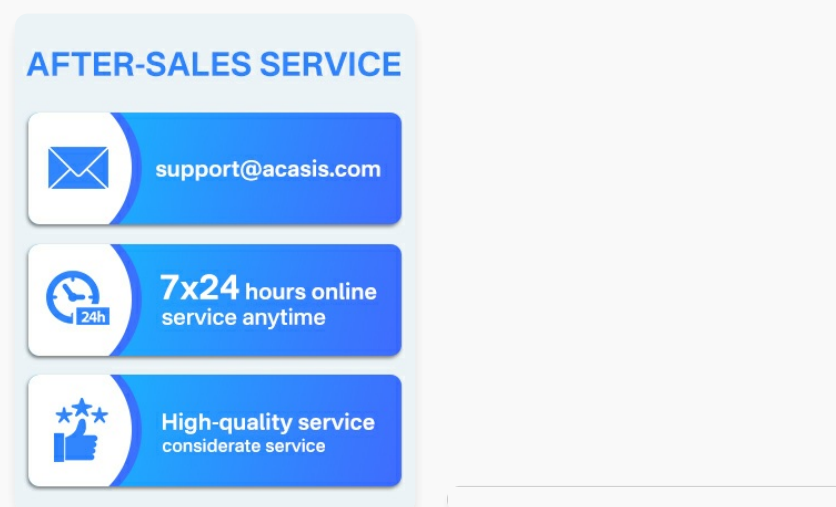


Figure 8.1: ACASIS After-Sales Service and Customer Commitment.

## Related Documents

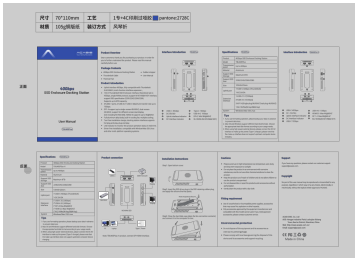| | |
|---|---|
|  | **ACASIS Thunderbolt SSD Enclosure Docking Station TBU405Plus User Manual**<br>User manual for the ACASIS TBU405Plus Thunderbolt SSD Enclosure Docking Station. Learn about product features, specifications, interface connections, installation, and usage guidelines. |
|  | **ACASIS CM073 10-in-1 USB-C Hub with M.2 SSD Enclosure User Manual**<br>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. |
|  | **ACASIS EC-DM201 Dual NVMe M.2 Enclosure User Manual and Cloning Guide**<br>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. |
|  | **ACASIS EC-1401 6-in-1 USB-C SSD Enclosure and Docking Station User Manual**<br>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. |

Documents - ACASIS – TBU405 Plus
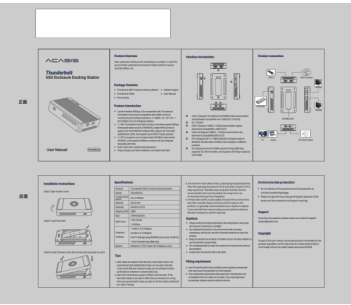


**ACASIS Thunderbolt SSD Enclosure Docking Station TBU405Plus User Manual**
User manual for the ACASIS TBU405Plus Thunderbolt SSD Enclosure Docking Station. Learn about product features, specifications, interface connections, installation, and usage guidelines.
lang: score:26 filesize: 568.41 K page_count: 1 document date: 2024-02-26