TREBLEET Grey_TB3 Mode Only

USB4 SSD Enclosure User Manual

Model: Grey_TB3 Mode Only | Brand: TREBLEET

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your TREBLEET USB4 SSD Enclosure. This high-performance enclosure is designed to convert an NVMe M.2 2280 SSD into a portable external drive, offering data transfer speeds up to 2800 MB/s. It is compatible with Thunderbolt 3, Thunderbolt 4, and USB4 interfaces, making it a versatile solution for various computing environments.
Please read this manual thoroughly before using the product to ensure optimal performance and longevity.

2. Safety Information

- Keep the device away from water, moisture, and extreme temperatures.
- Do not attempt to disassemble or modify the enclosure. This may void the warranty and cause damage.
- Ensure proper ventilation. The enclosure is designed for passive cooling, and the metal housing may become warm during high-load operation. Handle with care.
- Use only the provided accessories or certified compatible cables to prevent damage and ensure optimal performance.
- Avoid dropping or subjecting the device to strong impacts.

3. Package Contents

Verify that all items are present in your package:

- 1x USB4 SSD Enclosure
- 1x USB4 40Gbps Cable
- 1x Screwdriver

4. Product Overview

The TREBLEET USB4 SSD Enclosure is a compact and robust device designed for high-speed data transfer and storage. Its key features include:

- **Interface:** PCIe Rev. 3.0, compatible with Thunderbolt 3, Thunderbolt 4, and USB4 ports.
- **Data Transfer Rate:** Up to 40Gbps, with read speeds up to 2800 MB/s (dependent on NVMe M.2 SSD model).
- **LED Indicators:** 4 x LED indicators for status monitoring.
- **Power:** TB3 bus powered.
- **Functionality:** Hot Plug, Plug & Play.
- **Cooling:** Passive cooling via metal housing with integrated cooling fins.
- **Compatibility:** Windows 7/7-64/8.1/8.1-64/10/10-64/11, Mac OS 10.13 and later.

Figure 4.1: TREBLEET USB4 SSD Enclosure connected to a laptop, demonstrating its compact size and connectivity.

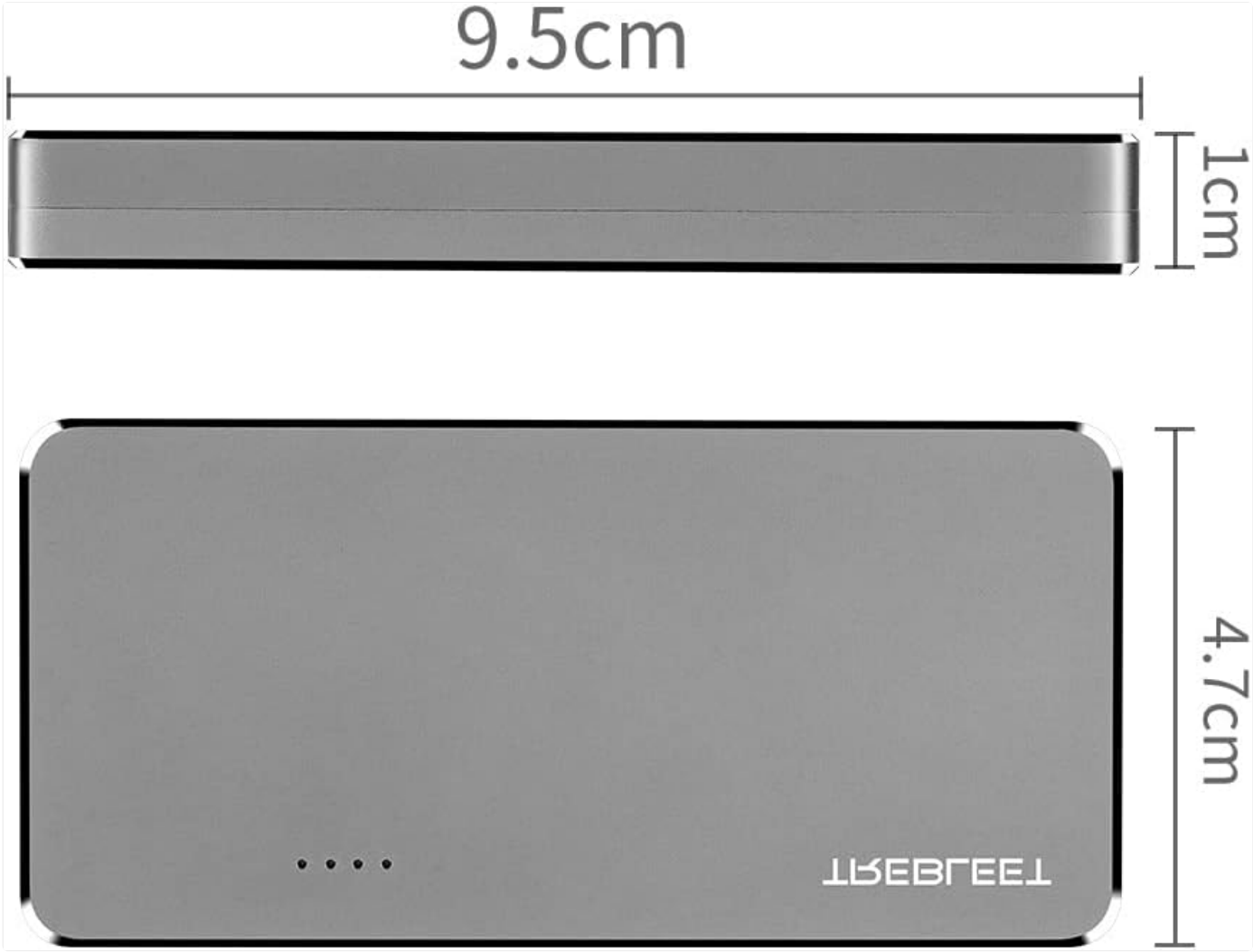

Figure 4.2: Physical dimensions of the enclosure: 9.5cm length, 4.7cm width, and 1cm thickness.

5. Setup: NVMe M.2 SSD Installation

Follow these steps to install your NVMe M.2 2280 SSD into the enclosure:

1. **Open the Enclosure:** Use the provided screwdriver to carefully remove the screws securing the enclosure's cover. Gently slide open the enclosure.
2. **Insert the SSD:** Locate the M.2 slot inside the enclosure. Align your NVMe M.2 2280 SSD with the slot's key and gently insert it at an angle.
3. **Secure the SSD:** Once inserted, push the SSD down until it is flat. Use the small screw provided in the toolkit to secure the SSD in place at the opposite end of the connector.
4. **Apply Thermal Pad (Optional but Recommended):** If a thermal pad is included or you wish to use one, carefully place it on top of the installed NVMe SSD to aid in heat dissipation.
5. **Close the Enclosure:** Carefully replace the cover and secure it with the screws using the screwdriver. Ensure the enclosure is fully closed and sealed.

Figure 5.1: Exploded view illustrating the components and the process of installing an NVMe M.2 SSD into the enclosure.

Important Note: This product is passively dissipated through the aluminum alloy shell. When working under high load, the surface of the shell will feel warm. This is normal and part of its design for efficient heat transfer. Please be careful when touching it during prolonged high-load operation.

6. Operating Instructions

After installing the SSD, connect the enclosure to your computer using the provided USB4 cable.

6.1 Connecting to Your Computer

- Connect one end of the USB4 cable to the enclosure's port.
- Connect the other end of the USB4 cable to a free Thunderbolt 3, Thunderbolt 4, or USB4 port on your PC or laptop.
- The enclosure is bus-powered, meaning it draws power directly from your computer's port. No external power adapter is needed.

- The LED indicators on the enclosure will illuminate to show power and activity status.

6.2 Initializing and Formatting the SSD

For a new SSD, you will need to initialize and format it before use. The process varies slightly between operating systems:

For Windows:

1. Right-click on the "Start" button and select "Disk Management".
2. Locate your new SSD (it will likely appear as "Unallocated" space).
3. Right-click on the unallocated space and select "Initialize Disk". Choose MBR or GPT partition style (GPT is recommended for drives larger than 2TB).
4. After initialization, right-click on the unallocated space again and select "New Simple Volume". Follow the wizard to create a new partition and format it (NTFS is common for Windows).

For macOS:

1. Open "Disk Utility" (Applications > Utilities > Disk Utility).
2. Select your new SSD from the sidebar (ensure you select the drive itself, not an existing volume).
3. Click the "Erase" button.
4. Choose a Name, Format (APFS or Mac OS Extended (Journaled) are common for macOS), and Scheme (GUID Partition Map is recommended). Click "Erase".

Figure 6.1: Example performance test results on a MacBook Pro M1 Max, showing high read and write speeds achievable with a compatible NVMe SSD.

7. Maintenance

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the enclosure. Do not use liquid cleaners or solvents.
- **Storage:** When not in use, store the enclosure in a cool, dry place away from direct sunlight and extreme temperatures.
- **Firmware Updates:** Periodically check the TREBLEET official website for any available firmware updates for the enclosure to ensure optimal performance and compatibility.

8. Troubleshooting

Q: The enclosure is not detected by my computer.

A: Ensure the USB4 cable is securely connected to both the enclosure and a compatible port on your computer (Thunderbolt 3/4 or USB4). Try a different port or cable. For new SSDs, ensure it has been initialized and formatted (refer to Section 6.2).

Q: Data transfer speeds are lower than expected.

A:

- Verify that your computer's port supports Thunderbolt 3/4 or USB4. Connecting to a standard USB port will result in lower speeds.
- Ensure your NVMe M.2 SSD is capable of high speeds. The enclosure's maximum speed is dependent on the SSD model.
- Using PCIe 4.0 NVMe SSDs on this product will default to PCIe 3.0 speed.
- For Mac computers equipped with M1 series chips, the reading speed of NVMe hard drives may be slower than on Macs with Intel chips due to chip limitations.
- Refer to the NVMe SSD Compatibility List (Section 9) for known compatibility issues.

Q: The enclosure feels warm during operation.

A: This is normal. The aluminum alloy shell acts as a passive heatsink. During high-load operations, it will naturally become warm as it dissipates heat from the SSD. Ensure adequate airflow around the device.

Q: My NVMe SSD is not recognized or has compatibility issues.

A: NVMe SSDs may have compatibility issues with certain operating systems or the enclosure itself. Please consult the compatibility report provided in Section 9 to facilitate the selection of the right NVMe for your setup.

9. NVMe SSD Compatibility

While the TREBLEET USB4 SSD Enclosure is designed for broad compatibility, some NVMe SSD models may exhibit specific behaviors or limitations, especially with certain operating systems or chipsets (e.g., Apple M1). We recommend reviewing the following compatibility list for guidance.

NVMe SSD Compatibility List (in TB3/USB4 mode)

Brand	Model	Mac OS	Windows OS
SK Hynix	Gold P31	X	✓-Not suitable for Windows 7 or earlier.
Samsung	980 PRO (Gen4)	✓- Normal WRITE speed on M1 computer. Recommended.	✓
Samsung	970 EVO PLUS	X- Not compatible with Mac OS.	X- Not suitable for Windows 7 or earlier. Some Windows users do face
Samsung	970 EVO	✓	✓

Samsung	970 PRO	✓- Normal WRITE speed on M1 computer. Recommended.	✓
Samsung	960 EVO	✓	✓
Samsung	960 PRO	✓	TBA
Samsung	PM961	TBA	✓
Samsung	PM981	TBA	TBA
Western Digital	BLUE SN550	✓	✓
Western Digital	BLACK SN750 BLACK SN700	X- Not compatible with Mac OS. Slow WRITE speed on M1 computer	✓- Some Windows 10 users do face incompatibility issues.
Western Digital	BLACK SN850 (Gen4)	✓	✓- Some of our customers did face incompatibility issues. But there's a client who mentioned that it works wonderfully with our USB3.1 Gen2 10Gbps enclosure.
Western Digital	BLACK SN770 (Gen4)	✓- Normal WRITE speed on M1 computer. Recommended.	✓
Intel	660P / 670P / 760P	X- Not compatible with Mac OS. Slow WRITE speed on M1 computer	✓
Crucial	P5	TBA	✓-Some did face incompatibility issues with Windows OS.
Crucial	P2	✓- Mac OS HighSierra or newer version will recognize this drive.	✓
Crucial	P1	✓	✓
Sabrent	Rocket Q	X- Not compatible with Mac OS / reported by customer on 14DEC2021	✓
Sabrent	Rocket	X- Not compatible with Mac OS / reported by customer on 20SEP2021	X – Windows users facing incompatibility issues.
Sabrent	Rocket 4（Gen4）	X- Not compatible with Mac OS.	✓- Compatible with Windows OS overall. Only small amount of users facing incompatibility issues.
Sabrent	Rocket 4 Plus（Gen4）	X- Not compatible with Mac OS.	✓
Sabrent	Rocket Q4（Gen4）	X - Not compatible with Mac OS.	✓
Adata	XPG SX8200 Pro	X - Some facing incompatibility issues; some don't.	X - Some facing incompatibility issues; some don't.
Adata	XPG SX6000 Pro	✓	✓- Compatible with Windows OS overall. Only small amount of users facing incompatibility issues.
Silicone Power	A60	✓	✓- Compatible with Windows OS overall. Only some users mentioned that the drive didn't last long.
Silicone Power	A80	✓	✓
Silicone Power	US70 (Gen4)	✓	✓
TeamGroup	TM8FP6001T0C101 TM8FP4001T0C101 TM8FPD001T0C101	✓	✓
Seagate	Barracuda 510	✓	✓- Compatible with Windows OS overall. Only small amount of users facing incompatibility issues or messing up the BIOS.
Seagate	FireCuda (Gen4)	X- Not compatible with Mac OS or failing when big files are being transferred.	TBA
PNY	PNY XLR8 CS3030	✓	✓- Compatible with Windows OS overall. Only some users mentioned that the drive didn't last long.
Corsair	MP400	✓- Normal WRITE speed on M1 computer. Recommended.	✓- Compatible with Windows OS overall. Only some users mentioned that the drive didn't last long.

Figure 9.1: NVMe SSD Compatibility List detailing tested SSDs and their performance/issues in TB3/USB4 mode. Please refer to this list for optimal SSD selection.

Note: This list is updated periodically. If your SSD is not listed or you encounter issues, please contact customer support.

10. Specifications

Model	USB4 SSD Enclosure (Grey_TB3 Mode Only)
Interface	PCIe Rev. 3.0, Thunderbolt 3, Thunderbolt 4, USB4
Max Data Transfer Rate	40 Gigabits Per Second (40Gbps)
Max Read Speed	2800 MB/s (dependent on NVMe M.2 SSD)
Compatible SSD Type	NVMe M.2 2280
Material	Metal (Aluminum Alloy)
Dimensions (LxWxH)	3.74 x 1.85 x 0.39 inches (9.5 x 4.7 x 1 cm)
Item Weight	5.6 ounces (0.16 Kilograms)
Power Source	TB3 Bus Powered
Operating System Compatibility	Windows 7/7-64/8.1/8.1-64/10/10-64/11, Mac OS 10.13 and later

11. Customer Support

If you have any questions about this item, require technical assistance, or encounter any issues, please do not hesitate to contact TREBLEET customer service. You can expect a reply within 24 hours.
For the most up-to-date contact information, please visit the official TREBLEET website or refer to your product packaging.