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› ORICO M2PVC3-G20 20Gbps M.2 NVMe SSD Enclosure Adapter User Manual

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Model: M2PVC3-G20 | Brand: ORICO

INTRODUCTION

The ORICO M2PVC3-G20 is a high-performance external enclosure designed for M.2 NVMe Solid State Drives. It features a USB 3.2 Gen 2x2 Type-C interface, offering data transfer speeds up to 20Gbps. This enclosure includes a built-in cooling fan and an aluminum heatsink to ensure optimal thermal management for your NVMe SSD, extending its lifespan and maintaining performance during intensive operations.

PACKAGE CONTENTS

Please verify that all items are present in the package:

- 1 x ORICO M2PVC3-G20 M.2 NVMe SSD Enclosure (Grey)
- 1 x USB Type-C to Type-C Data Cable (0.15m)
- 1 x USB Type-A to Type-C Data Cable (0.15m)
- 1 x Screwdriver
- 1 x Thermal Silica Gel Pad (Sponge Mat)
- 1 x Set of Fasteners (screws, rubber stoppers)

Package List



C2A cable



C2C cable



screwdriver



Sponge mats



The image displays the ORICO M2PVC3-G20 enclosure along with its accessories: a USB-C to USB-C cable, a USB-A to USB-C cable, a screwdriver, and thermal pads.

COMPATIBILITY

This enclosure is designed for specific M.2 NVMe SSD types. Please review the compatibility requirements carefully:

- **Supported SSD Type:** M.2 NVMe M-Key (PCI-E based) SSDs.
- **Supported SSD Sizes:** 2230, 2242, 2260, 2280.
- **Maximum Storage Capacity:** Up to 2TB.
- **Supported Operating Systems:** Windows, macOS, Linux.

The following SSD types are NOT supported:

- SATA-based B Key (B+M-Key) M.2 SSDs.
- PCIe AHCI SSDs.
- M.2 SSDs from Mac devices.
- mSATA SSDs.
- Non-M.2 form factor SSDs.

Only for NVMe M-Key M.2 SSD (PCI-E based)



*Do Not for NGFF B-Key or B+M Key M.2 SSD(SATA based)

This image illustrates the compatible M.2 NVMe M-Key SSD sizes (2230, 2242, 2260, 2280) that can be installed in the enclosure.

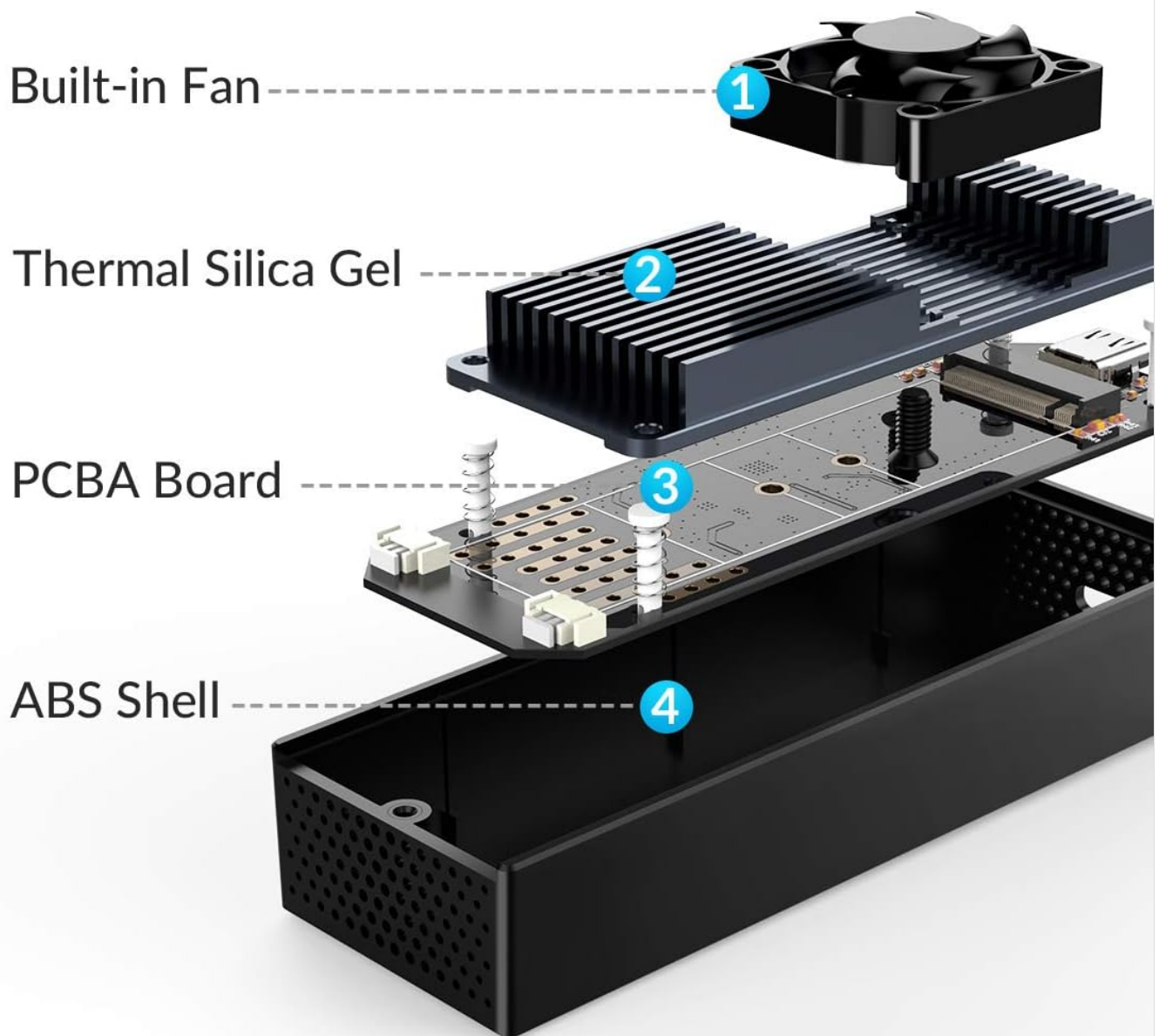
SETUP AND INSTALLATION

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

1. **Disassemble the Enclosure:** Use the provided screwdriver to loosen the screw on the enclosure. Gently slide open the aluminum cover to reveal the internal PCB (Printed Circuit Board) and heatsink assembly.
2. **Remove PCB Assembly:** Carefully detach the PCB assembly from the enclosure shell.
3. **Install the SSD:** Insert your M.2 NVMe SSD into the M-Key slot on the PCB. Ensure it is fully seated.

4. **Secure the SSD:** Use the provided rubber fastener or screw to secure the end of the SSD to the PCB, preventing it from moving.
5. **Apply Thermal Pad:** Peel off the protective films from both sides of the thermal silica gel pad. Place the pad onto the SSD chip, ensuring good contact.
6. **Reattach Heatsink/Fan:** Place the heatsink/fan assembly over the SSD and thermal pad, aligning it with the mounting holes on the PCB. Secure it with the provided screws.
7. **Connect Fan Cable:** Connect the small fan power cable to the designated port on the PCB.
8. **Reassemble Enclosure:** Carefully slide the entire PCB and heatsink/fan assembly back into the aluminum enclosure shell.
9. **Secure the Cover:** Close the aluminum cover and tighten the screw to secure the enclosure.

Built-in Fan to Enhance Heat Dissipation



This image provides an exploded view of the enclosure's internal components, highlighting the built-in fan, thermal pad, and PCB.

Installation Video Guide

Your browser does not support the video tag.

This video demonstrates the step-by-step installation process of an M.2 NVMe SSD into the ORICO M2PVC3-G20 enclosure, including securing the SSD, applying the thermal pad, and reassembling the unit.

OPERATING INSTRUCTIONS

Once your SSD is installed, connect the enclosure to your device:

1. **Connect to Host Device:** Use one of the provided USB cables (Type-C to Type-C or Type-A to Type-C) to connect the enclosure to a compatible port on your computer, laptop, smart TV, smart router, PS4, or other supported device.
2. **Verify Connection:** The enclosure should be recognized by your operating system. For optimal 20Gbps transfer speeds, ensure your host device's USB port is USB 3.2 Gen 2x2 compatible. If connected to a USB 3.1 Gen 2 port, speeds will be up to 10Gbps; for USB 3.1 Gen 1, speeds will be up to 5Gbps.
3. **Initialize New SSDs:** If you are using a brand new SSD, it may not appear immediately in your file explorer. You will need to initialize and partition the SSD through your computer's Disk Management utility (Windows) or Disk Utility (macOS) before it can be used.
4. **Data Transfer:** Once recognized, you can drag and drop files to and from the SSD enclosure like any other external drive.

Ultra High Speed

The best transmission speed is 20Gbps



This image shows the enclosure connected to a laptop, demonstrating its capability for ultra-high-speed data transfer.

Multi-scene Application



PC

Transfer data at any time



SmartPhone

Enjoy your life anywhere

This image illustrates the versatility of the enclosure, showing it connected to both a PC for data transfer and a smartphone for media access.

MAINTENANCE

Proper maintenance helps ensure the longevity and performance of your ORICO M2PVC3-G20 enclosure:

- **Heat Dissipation:** The aluminum housing and built-in fan are designed to dissipate heat. Ensure the ventilation holes are not obstructed to allow for proper airflow.
- **Cleaning:** Periodically clean the exterior of the enclosure with a soft, dry cloth. Avoid using liquid cleaners or

solvents.

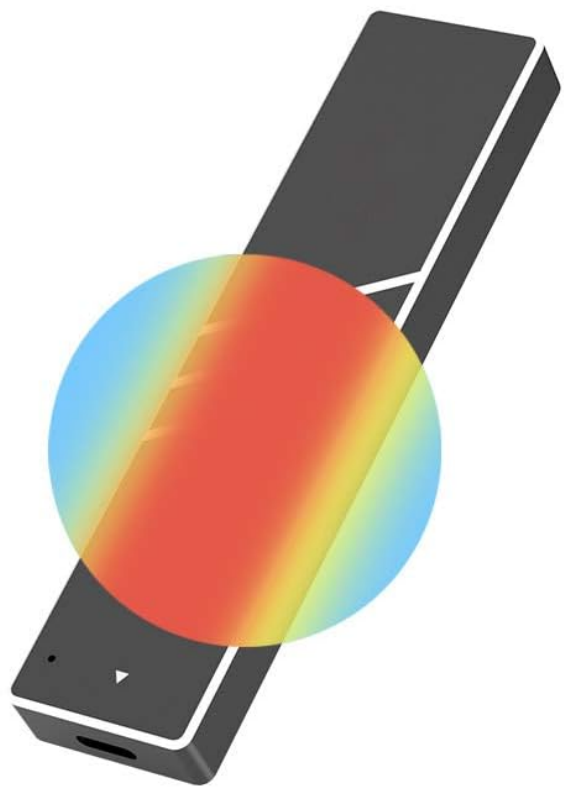
- **Storage:** Store the enclosure in a cool, dry place away from direct sunlight and extreme temperatures when not in use.
- **Cable Care:** Handle the USB cables carefully to prevent damage to the connectors or wiring.

Efficient Heat Dissipation

Aluminum alloy + heat sink+Efficient cooling fan dissipates heat



Measured Temperature **37.4°C**



Measured Temperature **60°C**

*This data comes from ORICO laboratory

This image demonstrates the efficient heat dissipation of the enclosure, showing a significantly lower operating temperature compared to an SSD without such cooling.

If you encounter issues with your ORICO M2PVC3-G20 enclosure, refer to the following common problems and solutions:

- **SSD Not Detected:**
 - Ensure the SSD is correctly installed and fully seated in the M-Key slot.
 - For new SSDs, initialize and partition the drive in your operating system's Disk Management (Windows) or Disk Utility (macOS).
 - Try connecting the enclosure to a different USB port or using a different USB cable.
 - Verify that your SSD is an M.2 NVMe M-Key (PCI-E based) type and not a SATA-based M.2 SSD.
- **Slow Data Transfer Speed:**
 - To achieve 20Gbps, your host device's USB port must be USB 3.2 Gen 2x2 compatible. Check your device's specifications.
 - Ensure you are using the provided USB 3.2 Gen 2x2 compatible cables.
 - Other factors like the SSD's performance, system load, and file types can affect transfer speeds.
- **Enclosure Becomes Hot During Operation:**
 - NVMe SSDs generate heat during high-speed operation. The aluminum housing acts as a heatsink, and the built-in fan provides active cooling. Some warmth is normal.
 - The enclosure has overheating protection. If the SSD overheats during large data transfers, it may automatically switch to read-only mode, reduce transfer speed, or temporarily stop transfers to prevent damage. Allow the SSD to cool down. Your data will not be lost.
 - Ensure ventilation holes are not blocked.
- **Connection Issues (e.g., intermittent disconnection):**
 - Ensure the USB cable is securely connected to both the enclosure and the host device.
 - This enclosure is compatible with USB Type-C interfaces, not Thunderbolt 3 interfaces. Confirm your port type.
 - Try a different USB port on your host device.

SPECIFICATIONS

Feature	Specification
Model	M2PVC3-G20
Brand	ORICO
Color	Grey
Material	Aluminum
Hardware Interface	USB Type-C
Connectivity Technology	USB
Data Transfer Rate	Up to 20Gbps (USB 3.2 Gen 2x2)
Compatible SSD Type	M.2 NVMe M-Key (PCI-E based)
Supported SSD Sizes	2230, 2242, 2260, 2280

Feature	Specification
Max Storage Capacity	2 TB
Cooling System	Built-in Fan, Aluminum Heatsink
Product Dimensions	8.27 x 4.29 x 1.26 inches
Item Weight	7.4 ounces
Compatible Devices	PCs, Laptops, Smart TVs, Smart Routers, PS4, etc.
Hardware Platform	Windows, macOS, Linux

WARRANTY AND SUPPORT

ORICO provides the following support for this product:

- **Warranty:** 12 months of worry-free service.
- **Technical Support:** Lifetime technical service support.

For warranty claims or technical assistance, please contact ORICO customer service through their official website or the platform where the product was purchased.