

Miuzei Raspberry Pi 4 Model B Case

Miuzei Case for Raspberry Pi 4 Model B with Cooling Fan and Heat Sinks

Instruction Manual

INTRODUCTION

This manual provides detailed instructions for the assembly, operation, and maintenance of your Miuzei Case for Raspberry Pi 4 Model B. This case is designed to protect your Raspberry Pi and enhance its thermal performance through a 5V DC cooling fan and four heat sinks. Please read these instructions carefully before proceeding with installation.

PACKAGE CONTENTS

Before assembly, please verify that all components are present:

- Acrylic Case Layers (Top, Middle, Bottom)
- 5V DC Cooling Fan
- 4 x Heat Sinks (various sizes for CPU, RAM, USB controller, Ethernet controller)
- Set of Screws and Nuts for assembly
- Small Screwdriver

SETUP AND ASSEMBLY

Follow these steps to assemble your Miuzei Raspberry Pi 4 case:

1. **Prepare Acrylic Layers:** Carefully peel off the protective film from both sides of all acrylic case layers. This film prevents scratches during shipping.
2. **Apply Heat Sinks:** Identify the four main chips on your Raspberry Pi 4 Model B: the CPU (largest chip), RAM, USB controller, and Ethernet controller. Select the appropriately sized heat sink for each chip. Remove the adhesive backing from each heat sink and firmly press it onto the corresponding chip. Ensure good contact for optimal heat

transfer.

3.



Figure 1: Proper placement of heat sinks on the Raspberry Pi 4 Model B. Ensure each heat sink covers its respective chip completely.

4. **Mount Raspberry Pi to Bottom Layer:** Place your Raspberry Pi 4 Model B onto the bottom acrylic layer, aligning the mounting holes. Secure it using the provided screws and nuts.
5. **Install Cooling Fan:** Attach the 5V DC cooling fan to the top acrylic layer using the smaller screws. Ensure the fan is oriented correctly to blow air **downwards** onto the Raspberry Pi for effective cooling.
6. **Connect Fan to GPIO Pins:** Connect the fan's red wire to the 5V pin (Pin 4) and the black wire to a Ground (GND) pin (e.g., Pin 6) on the Raspberry Pi's GPIO header. For quieter operation at slightly reduced cooling, you may connect the red wire to the 3.3V pin (Pin 1) instead.
7. **Assemble Middle and Top Layers:** Carefully stack the middle acrylic layer, followed by the top layer with the fan installed, onto the bottom layer with the Raspberry Pi. Align all cutouts and mounting holes.
8. **Secure Case:** Use the remaining screws and nuts to secure all layers of the case together. Do not overtighten.
- 9.



Figure 2: The Miuzei Raspberry Pi 4 case fully assembled, ready for use.

OPERATING INSTRUCTIONS

Once assembled, the Miuzei case provides passive cooling via heat sinks and active cooling via the 5V DC fan. The fan will operate continuously when the Raspberry Pi is powered on, providing a consistent airflow to dissipate heat from the components.

Temperature Monitoring

You can monitor your Raspberry Pi's CPU temperature using the following command in the terminal:

```
vcgencmd measure_temp
```

Optimal operating temperatures for the Raspberry Pi 4 are generally below 80°C. The cooling solution provided by this case is designed to keep temperatures significantly lower under typical loads.

MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your Miuzei case and Raspberry Pi.

- **Dust Removal:** Periodically inspect the fan and case for dust accumulation. Use a soft brush or compressed air to gently remove dust from the fan blades and heat sinks. Excessive dust can impede airflow and reduce cooling efficiency.
- **Fan Inspection:** Check the fan for any unusual noises or reduced rotation speed. If the fan becomes excessively noisy or stops working, it may need replacement.
- **Case Cleaning:** Wipe the acrylic surfaces with a soft, damp cloth. Avoid using harsh chemicals that could damage the acrylic.

TROUBLESHOOTING

Fan Not Spinning or Noisy

- **Check Connections:** Ensure the fan's red and black wires are securely connected to the correct GPIO pins (5V/GND or 3.3V/GND).
- **Power Supply:** Verify that your Raspberry Pi's power supply is adequate. An underpowered Pi might not supply enough current to the fan.
- **Obstructions:** Check for any physical obstructions preventing the fan blades from spinning freely.
- **Dust:** Clean any dust buildup on the fan blades.

High Raspberry Pi Temperatures

- **Heat Sink Contact:** Ensure all heat sinks are firmly attached to their respective chips with good thermal contact.
- **Fan Orientation:** Confirm the fan is blowing air downwards onto the Raspberry Pi.
- **Airflow:** Ensure the case vents are not blocked and there is adequate ambient airflow around the case.
- **Workload:** High CPU usage will naturally increase temperature. If temperatures are consistently high under normal load, re-check assembly.

Case Does Not Fit

- **Model Compatibility:** This case is specifically designed for the **Raspberry Pi 4 Model B**. It is not compatible with older Raspberry Pi models (e.g., Raspberry Pi 3B+ or earlier) due to differences in port layout and board dimensions.
- **Assembly Order:** Double-check that all layers are stacked in the correct order and orientation.

SPECIFICATIONS

Feature	Specification
Brand	Miuzei
Case Type	Raspberry Pi 4 Model B
Material	Acrylic, Aluminum (for heat sinks)
Cooling Method	Air (Active with fan, Passive with heat sinks)
Fan Count	1
Fan Voltage	5V DC (connects to Raspberry Pi GPIO)
Item Weight	0.13 Kilograms (approx. 4.6 ounces)
Package Dimensions	5.1 x 3.5 x 1.8 inches

WARRANTY AND SUPPORT

For warranty information or technical support, please contact Miuzei customer service through the retailer where the product was purchased or visit the official Miuzei website. Please have your product model number and purchase date available when contacting support.

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