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> Whadda Raspberry Pi 4 Starter Kit (4GB) with Cooling Case User Manual

Whadda WPK4-4GB

Whadda Raspberry Pi 4 Starter Kit (4GB) with Cooling Case User Manual

Model: WPK4-4GB | Brand: Whadda

1. INTRODUCTION

This manual provides essential information for setting up, operating, and maintaining your Whadda Raspberry Pi 4 Starter Kit (4GB). This comprehensive kit is designed to facilitate various electronic and programming projects, offering a robust platform for learning and experimentation. Please read these instructions carefully before use to ensure proper functionality and safety.



Image 1: Whadda Raspberry Pi 4 Starter Kit with Cooling Case, showing the assembled Raspberry Pi 4 board inside a transparent and black cooling case with a fan visible on top.

2. PACKAGE CONTENTS

Verify that all items listed below are present in your package:

- 1x Raspberry Pi 4 Model B (4GB RAM version)
- 1x Cooling Case for Raspberry Pi 4
- 1x 32GB MicroSD Card (pre-loaded with NOOBS or Raspberry Pi OS Lite)
- 1x USB Type-C Power Supply with 4 Travel Adapters (EU, UK, US, AU)
- 1x Ultra-thin Ethernet Cable

3. SAFETY INFORMATION

Observe the following safety guidelines to prevent damage to the device or injury:

- Do not expose the Raspberry Pi or its components to water or excessive moisture.
- Avoid operating the device in extreme temperatures or direct sunlight.
- Use only the provided power supply or a compatible 5.1V 3A USB-C power adapter.
- Handle the circuit board by its edges to avoid electrostatic discharge.
- Keep out of reach of small children due to small components.

4. SETUP INSTRUCTIONS

Follow these steps to assemble and prepare your Raspberry Pi 4 Starter Kit:

4.1. Installing the Raspberry Pi into the Cooling Case

1. Carefully place the Raspberry Pi 4 board into the bottom part of the cooling case, aligning the ports with the case openings.
2. Attach the fan to the designated pins on the Raspberry Pi's GPIO header (typically 5V and Ground pins). Refer to the case's specific instructions for fan connection.
3. Secure the top part of the cooling case, ensuring all components are properly seated and the fan is unobstructed.



Image 2: Top view of the Raspberry Pi 4 board securely installed within the cooling case, showing the fan and various components.

4.2. Inserting the MicroSD Card

Locate the MicroSD card slot on the Raspberry Pi board. Gently insert the provided 32GB MicroSD card until it clicks into place. Ensure the card is inserted correctly to avoid damage.



Image 3: Bottom view of the Raspberry Pi 4 in its cooling case, highlighting the MicroSD card slot where the operating system is stored.

4.3. Connecting Peripherals

Connect your monitor(s) using the HDMI ports, a keyboard and mouse to the USB ports, and the Ethernet cable if a wired network connection is desired. The Raspberry Pi 4 supports dual 4K displays via its two micro-HDMI ports.

4.4. Powering On

Once all peripherals are connected, plug the USB Type-C power supply into the Raspberry Pi's power port and then into a wall outlet. The Raspberry Pi will automatically begin to boot up.

5. OPERATING INSTRUCTIONS

The Raspberry Pi 4 runs a Linux-based operating system, typically Raspberry Pi OS. Upon first boot, you may be guided through an initial setup wizard to configure language, keyboard layout, Wi-Fi, and update software.

5.1. Cooling Performance

The included cooling case significantly improves thermal management. Without active cooling, the Raspberry Pi 4 can reach high temperatures under heavy load, potentially leading to performance throttling.

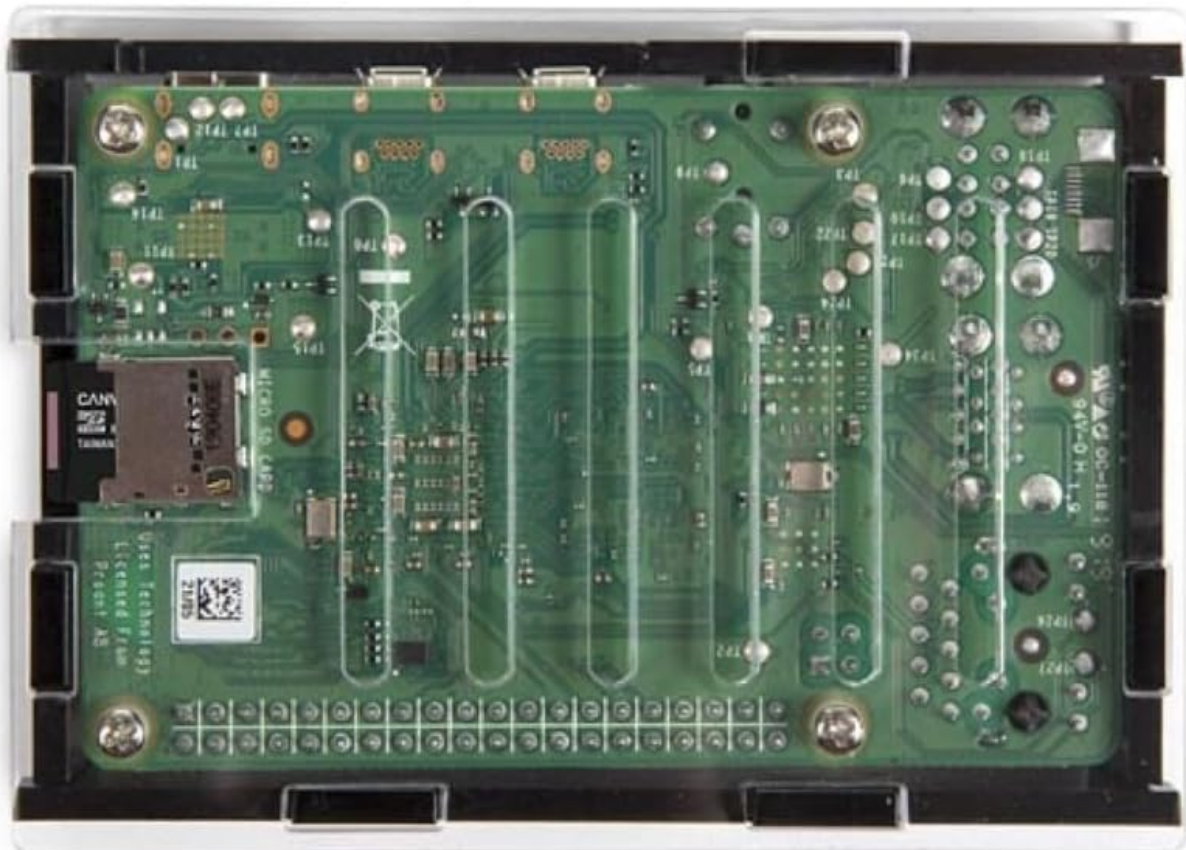


Image 4: Thermal image illustrating high temperatures (up to 80°C) on a Raspberry Pi 4 after a CPU-intensive benchmark without a cooling case.

With the cooling case, temperatures are maintained at a much lower level, ensuring stable and optimal performance even during demanding tasks.

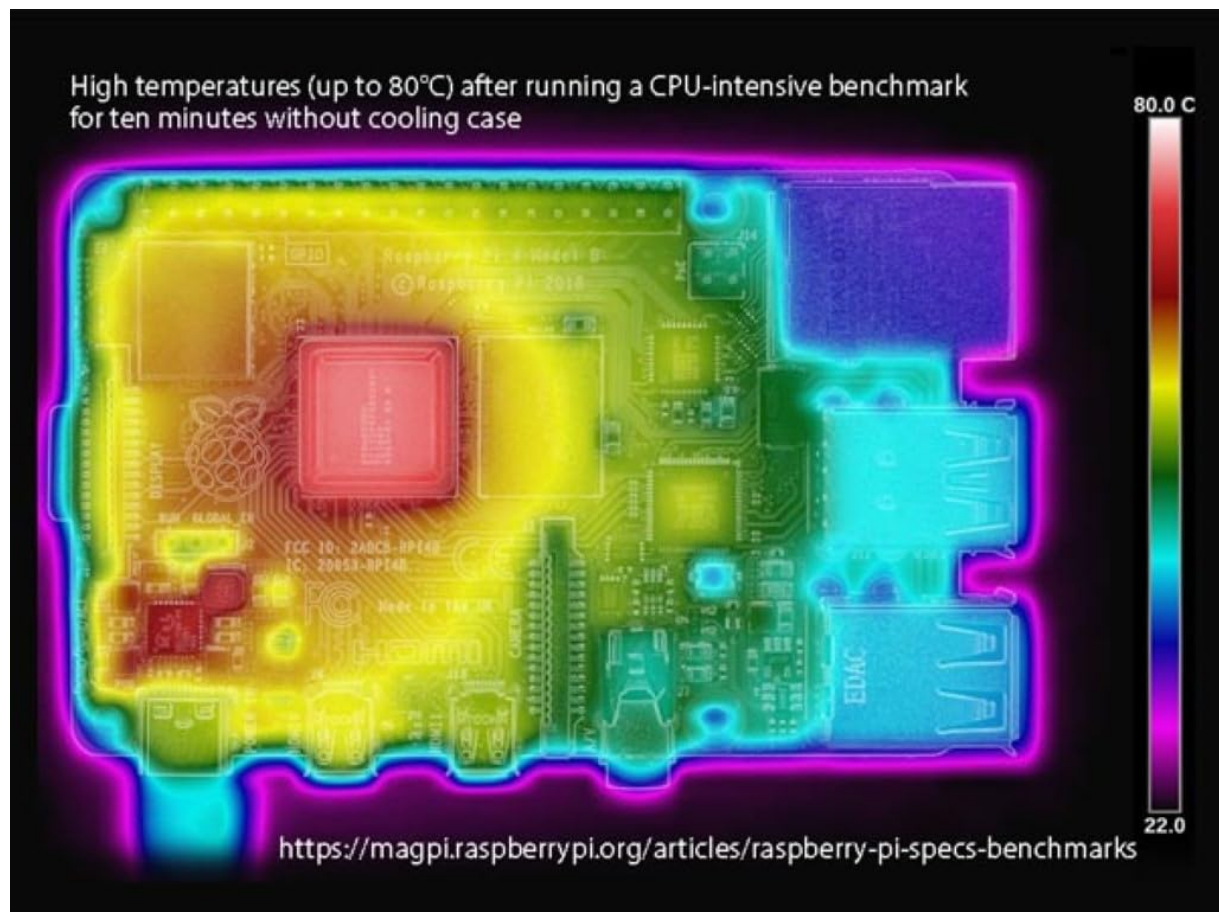


Image 5: Thermal image showing the Raspberry Pi 4 operating at approximately 45°C with the cooling case installed, demonstrating effective heat dissipation.

5.2. Connectivity

- **Ethernet:** Use the provided Ethernet cable for a stable wired network connection.
- **Wi-Fi:** Connect to wireless networks via the integrated 2.4 GHz and 5.0 GHz IEEE 802.11ac Wi-Fi.
- **Bluetooth:** Utilize Bluetooth 5.0 for connecting wireless peripherals such as keyboards, mice, or audio devices.
- **HDMI:** Connect up to two 4K displays using the micro-HDMI ports.
- **USB:** The Raspberry Pi 4 features two USB 2.0 ports and two USB 3.0 ports for various peripherals.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Raspberry Pi 4:

- **Cleaning:** Periodically clean the cooling fan and case vents to prevent dust buildup, which can hinder airflow and cooling efficiency. Use a soft brush or compressed air.
- **Software Updates:** Regularly update your Raspberry Pi OS to ensure you have the latest features, security patches, and bug fixes. This can typically be done via the terminal using `sudo apt update` and `sudo apt full-upgrade`.
- **MicroSD Card Care:** Avoid frequently removing and inserting the MicroSD card while the Raspberry Pi is powered on. Always shut down the system properly before removing the card to prevent data corruption.

7. TROUBLESHOOTING

If you encounter issues, refer to the following common troubleshooting steps:

- **No Display Output:** Ensure HDMI cables are securely connected and your monitor is set to the correct input. Try a different HDMI cable or monitor.
- **Power Issues:** Verify the USB-C power supply is correctly plugged into both the Raspberry Pi and a working power outlet. Ensure it is the recommended 5.1V 3A supply.
- **Overheating:** Check that the cooling fan is properly connected and spinning. Ensure the case vents are not blocked. If temperatures remain high, reduce workload or consider additional passive cooling.
- **Operating System Not Booting:** Re-seat the MicroSD card. If the issue persists, try re-flashing the operating system onto the MicroSD card using a reliable tool like Raspberry Pi Imager.
- **Peripheral Not Recognized:** Try connecting the peripheral to a different USB port. Ensure drivers are installed if required by the operating system.

For more detailed troubleshooting and community support, visit the official Raspberry Pi forums or the Whadda support website.

8. SPECIFICATIONS

Feature	Specification
Model Number	WPK4-4GB
Processor	Broadcom BCM2711, Quad-core Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz
RAM	4GB LPDDR4-3200 SDRAM
Storage	32GB MicroSD Card (included)
Connectivity	2.4 GHz and 5.0 GHz IEEE 802.11ac wireless, Bluetooth 5.0, Gigabit Ethernet
USB Ports	2x USB 3.0, 2x USB 2.0 (Total 4)
Video Output	2x micro-HDMI ports (up to 4Kp60 supported)
Power Input	5.1V DC via USB-C connector (minimum 3A)
Dimensions (Product)	5.8 x 17.5 x 15.5 cm
Weight (Product)	480 grams
Manufacturer	Velleman Group nv
Country of Origin	Belgium

9. WARRANTY AND SUPPORT

The Whadda Raspberry Pi 4 Starter Kit (WPK4-4GB) comes with a **2-year warranty** from the date of purchase, covering manufacturing defects. Please retain your proof of purchase for warranty claims. For technical support, inquiries, or warranty service, please contact Whadda customer support or visit the Velleman Group nv website. Contact information can typically be found on the product packaging or the official Whadda brand store.

Manufacturer: Velleman Group nv

