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GeekPi DeskPi Pro V2

GeekPi DeskPi Pro V2 NAS Storage Kit for Raspberry Pi 4 - Instruction Manual

Comprehensive guide for setting up, operating, and maintaining your DeskPi Pro V2 NAS Storage Kit with Raspberry Pi 4.

1. INTRODUCTION

The GeekPi DeskPi Pro V2 is a versatile NAS storage kit designed for the Raspberry Pi 4 Model B. It transforms your Raspberry Pi into a powerful home media center or web server by expanding its storage capabilities and enhancing its cooling performance. This kit features a 2.5-inch HDD/SSD interface, full-size HDMI ports, additional USB ports, and an integrated ICE Tower Cooler with PWM fan control.

This manual provides detailed instructions to help you assemble, configure, and troubleshoot your DeskPi Pro V2 kit, ensuring optimal performance and longevity for your Raspberry Pi 4.

2. PACKAGE CONTENTS

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

- 1 x DeskPi Pro Case
- 1 x Brand New ICE Tower Cooler
- 1 x 12V 2A Power Supply
- 1 x USB Connector
- 1 x Instruction Manual



Image: All components included in the GeekPi DeskPi Pro V2 kit.

3. SETUP INSTRUCTIONS

Follow these steps to assemble your DeskPi Pro V2 NAS Storage Kit with your Raspberry Pi 4.

3.1. Prepare Raspberry Pi 4

Apply the provided thermal pads to the designated areas on your Raspberry Pi 4 board. These pads ensure efficient heat transfer to the ICE Tower Cooler.

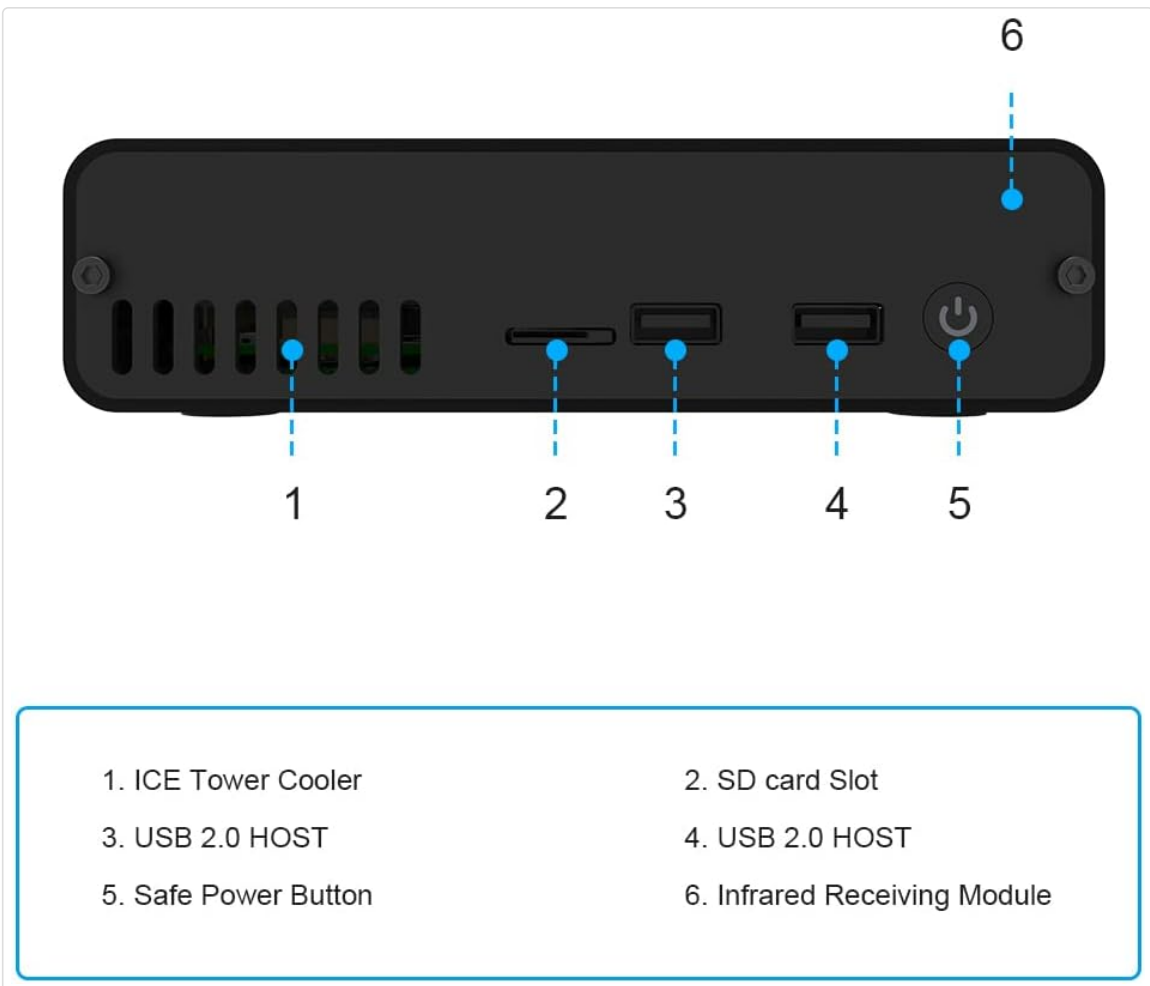


Image: Thermal pads correctly placed on the Raspberry Pi 4's main chips.

3.2. Install ICE Tower Cooler

Attach the ICE Tower Cooler to the Raspberry Pi 4, ensuring the fan connector is aligned with the appropriate pins on the Pi's GPIO header. Secure it with the provided screws.

STEP5

5. Then Turn the Raspberry Pi over and combine it with the motherboard of DeskPi Pro. Please align all the interfaces and insert them tightly. After that, connect the small FPC cable from motherboard to TF card adapter, and insert the fan cable to the motherboard as following figures. Finally, do remember screw M2.5x5 flat head screw on top of DeskPi Pro PCB. It will make the Raspberry Pi and PCB more stable, it will connect to M2.5x19 copper pillar.

STEP6

6. Insert the motherboard back into DeskPi Pro aluminum case and fix it with M2.5x4 screws. and fix the acrylic panel with screws too.

DeskPi Pro Assembling Guide



Image: The ICE Tower Cooler mounted on the Raspberry Pi 4.

3.3. Connect Raspberry Pi to DeskPi Pro V2 Expansion Board

Carefully connect the Raspberry Pi 4 (with cooler installed) to the DeskPi Pro V2 expansion board. Ensure all ports, including the USB-C power, HDMI, and audio connections, are properly aligned and seated.



PRODUCT FEATURES

- 12V 2.0A Power
- Full Size HDMI 2.0
- 2.5 SSD/HDD Expansion
- Front USB 2.0 Host and Power Button
- Easy access to the SD-Card
- Aluminum Alloy Case
- Brand New Ice tower cooler inside
- Neat cable management
- Easy Installation

COMPATIBILITY

- Raspberry Pi 4

PACKAGE INCLUDE

- DeskPi Pro Case
- Brand New ICE Tower Cooler
- 12V 2.0A Power Supply
- USB Connector
- Instruction Manual



Image: Raspberry Pi 4 board securely connected to the DeskPi Pro V2 expansion board.

3.4. Install 2.5-inch HDD/SSD (Optional)

If you plan to use a 2.5-inch SATA HDD or SSD, install it onto the designated slot on the DeskPi Pro V2 expansion board. Secure the drive with the provided screws.



Image: A 2.5-inch SSD being installed into the DeskPi Pro V2 expansion board.

3.5. Assemble Case

Carefully place the assembled Raspberry Pi and expansion board into the DeskPi Pro V2 aluminum alloy case. Ensure all components fit snugly and align with the case openings. Secure the case with

the provided screws.

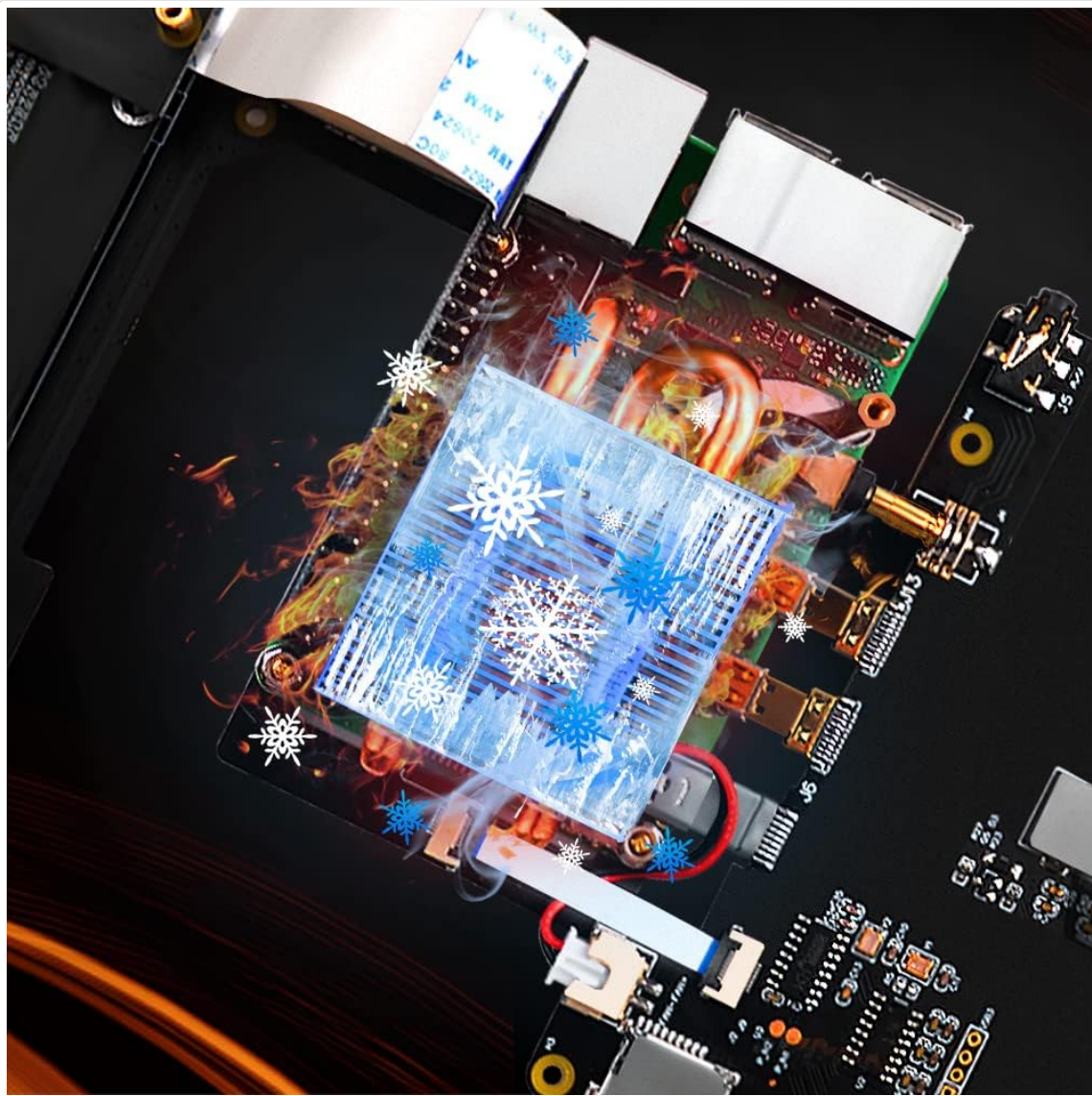


Image: Visual guide showing the steps to combine the Raspberry Pi with the DeskPi Pro V2 case.

3.6. Connect USB 3.0 Bridge

Connect the USB 3.0 bridge to the appropriate ports on the back of the case. This bridge facilitates high-speed data transfer for your installed HDD/SSD.

12.0V 2.0A Power Supply



Over voltage protection
short circuit protection
over current protection.

under voltage protection
over temperature protection

Image: The USB 3.0 bridge connected to the rear of the DeskPi Pro V2 case.

3.7. Setup Video Guide

For a comprehensive visual guide on the setup process, please refer to the official video below:

Video: Detailed setup instructions for the DeskPi Pro V2 Case for Raspberry Pi 4.

4. OPERATING INSTRUCTIONS

4.1. Power On/Off and Safe Shutdown

The DeskPi Pro V2 features a safe shutdown and reset function via an onboard MCU. After installing the necessary driver, you can use the power button for controlled shutdown and reset operations.

4.2. Front USB Ports

The front USB ports are USB 2.0. To ensure they function correctly, you may need to enable the `thedwc2` function in your operating system. For Raspberry Pi OS, modify the `/boot/config.txt` file by adding `dtoverlay=dwc2,dr_mode=host`, then save and reboot the Pi board.

4.3. ICE Tower Cooler Fan Control

The built-in ICE Tower Cooler includes a PWM fan. This fan supports adjustable temperature and speed control. Ensure your operating system is compatible with tested systems and that the fan driver

is correctly installed for optimal performance.

4.4. Audio Output

By default, the system audio may output through the HDMI interface. To adjust the output to the 3.5mm Audio Jack (analogue), use the raspi-config tool in your Raspberry Pi OS.

5. MAINTENANCE

To ensure the longevity and optimal performance of your DeskPi Pro V2, consider the following maintenance tips:

- **Keep it Clean:** Regularly clean the exterior of the case and ensure the fan vents are free from dust and debris to maintain efficient cooling.
- **Check Connections:** Periodically verify that all internal FPC cables and external connections (USB, HDMI, power) are securely seated.
- **Software Updates:** Keep your Raspberry Pi operating system and any installed drivers up to date to benefit from performance improvements and bug fixes.

6. TROUBLESHOOTING

Here are solutions to common issues you might encounter:

- **Front USB ports are not working:** Enable the dwc2 function on your OS. For Raspberry Pi OS, modify `/boot/config.txt` by adding `dtoverlay=dwc2,dr_mode=host`, save, and reboot.
- **Front USB Ports do not support USB 3.0:** The front USB ports are USB 2.0.
- **DeskPi Pro shows 'low voltage' warning:** Replug the power supply. Ensure you are using the provided power supply that supports QC protocol.
- **Only power light on, system and display not starting:** Unplug the Type-C power cable, flip the plug, and re-insert it.
- **Abnormal signal and voltage of RPi 40 PIN IO port:** Disassemble the DeskPi Pro cover and check if both ends of the 40PIN FPC cable are correctly plugged in.
- **RPi system cannot start after boot screen:** First, check if the system has been flashed to the card and installed correctly. If the system still fails to start, disassemble the DeskPi Pro cover to check if both ends of the 8 PIN FPC cable connected to the card adapter board are correctly inserted.
- **Abnormal infrared receiver:** Disassemble the DeskPi Pro cover to check if the shorting cap of the IO expansion board is correctly installed in the designated position.
- **No sound output from 3.5mm Audio Port:** By default, system audio is outputted through HDMI. Use the raspi-config tool to adjust the output to Audio Jack (analogue).
- **Unable to fix aluminum alloy shell and internal PCB copper pillar:** Ensure every component is installed at its designated position, connectors are tight, and installation direction is correct. Fix diagonal screws lightly first, then screw all screws into the copper column and tighten them.
- **The fan doesn't run:** Ensure your operating system is compatible with tested systems and that the fan driver is correctly installed.

7. SPECIFICATIONS

Feature	Specification
Brand	GeekPi
Series	DeskPi Pro V2
Item Weight	1.43 pounds (650 Grams)
Package Dimensions	8.11 x 6.46 x 1.85 inches
Color	Black
Number of USB 2.0 Ports	2
Number of USB 3.0 Ports	1
Motherboard Compatibility	Mini ITX (for Raspberry Pi 4)
Case Type	Raspberry Pi
Cooling Method	Air (with ICE Tower Cooler)
Material	Acrylic

8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation included with your product or visit the official GeekPi website. If you encounter any issues not covered in this manual, please contact GeekPi customer service for assistance.