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› ELECROW 5-Inch Resistive Touch Screen Display (Model RPA05010R) User Manual

ELECROW RPA05010R

ELECROW 5-Inch Resistive Touch Screen Display (Model RPA05010R) User Manual

800x480 HD Resolution, Compatible with Raspberry Pi, Banana Pi, Jetson Nano, Windows

1. PRODUCT OVERVIEW

The ELECROW 5-inch Resistive Touch Screen TFT LCD Display offers an 800x480 HD resolution, providing a clear and vibrant full-color display with a wide viewing angle and fast response time. This industrial-grade resistive touchscreen is designed for durability, supporting use with gloved hands or non-conductive tools, and boasts a 1 million touch lifespan. It features manual backlight control, allowing users to turn off the backlight to reduce power consumption.

This versatile display is compatible with various platforms, including Raspberry Pi 5/4/3B+/3B/2B+/Zero, Banana Pi, and Jetson Nano. When used with Raspberry Pi, it utilizes GPIO for touch functionality and power supply, and an HD interface for display. It can also function as a standard HDMI-compatible PC monitor, though touch functionality is not available in this mode, and requires adjusting the output resolution to 800x480 with a 5V 2A power supply.

5" Raspberry Pi Resistive Touchscreen Monitor

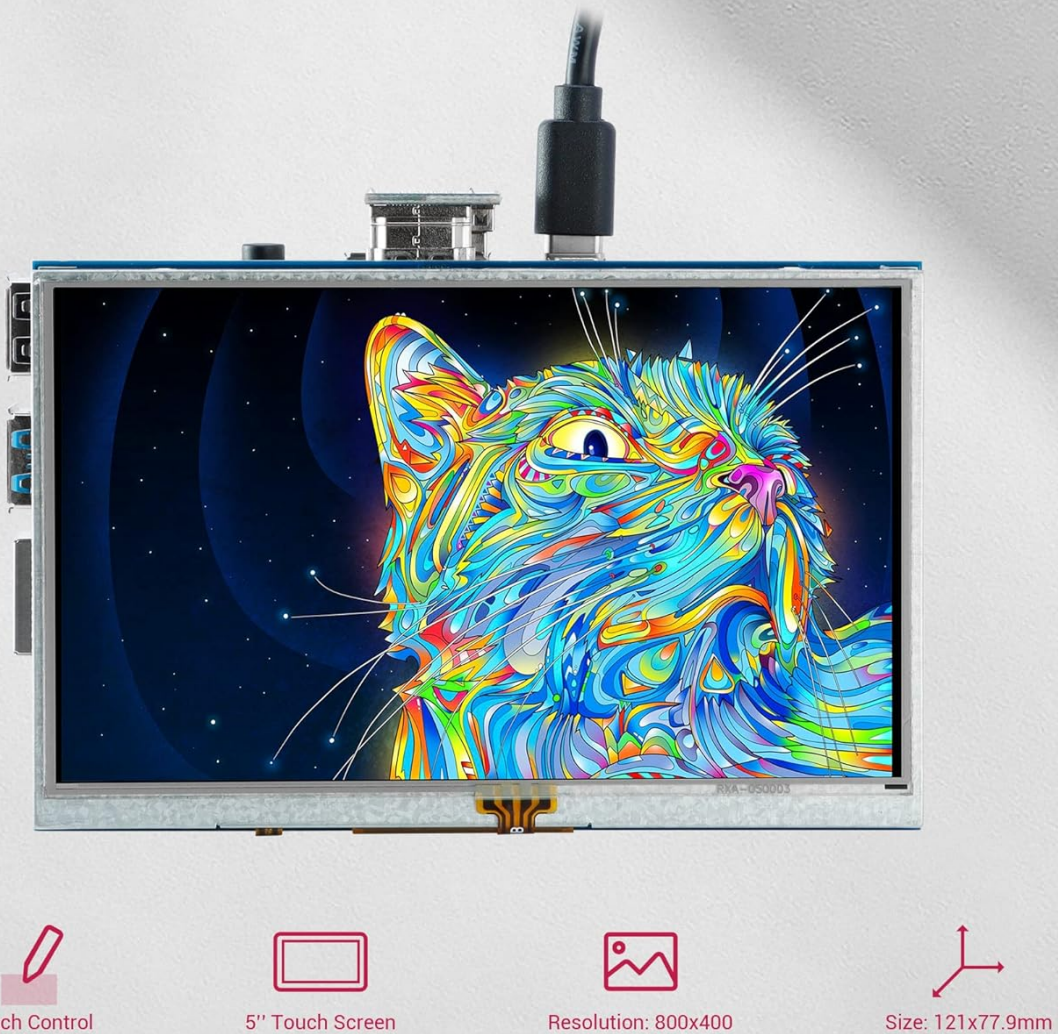


Figure 1: ELECROW 5-Inch Resistive Touch Screen Display.

2. PACKAGE CONTENTS

Please verify that all items listed below are included in your package:

- 5-inch touchscreen x 1
- CD x 1 (containing drivers and documentation)
- Touch Pen x 1
- HD Adapter x 1
- Copper Pillars (4PCS) x 1

5 Inch 800*480px Screen

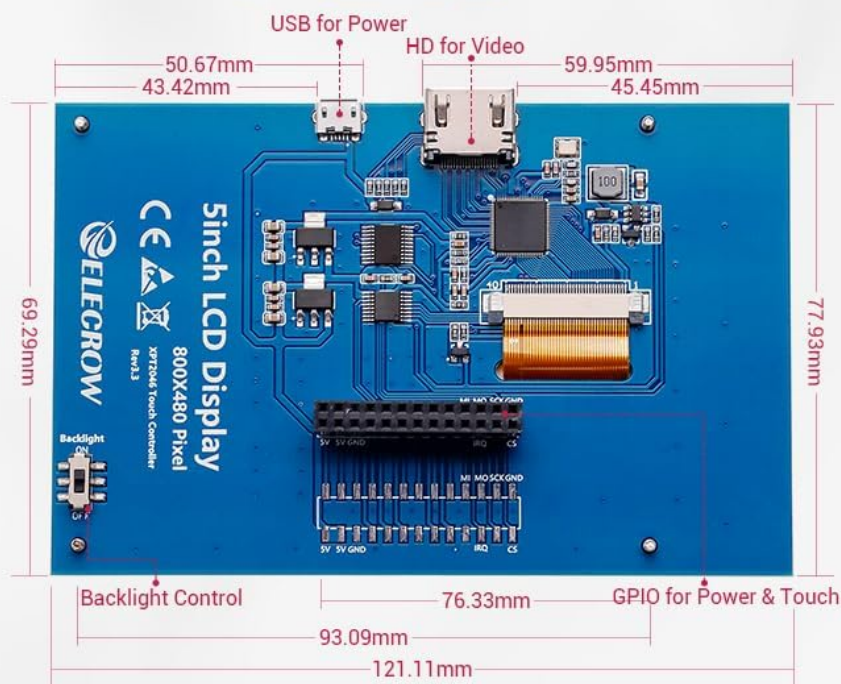


Figure 2: Included components: 5-inch touchscreen, touch pen, HD adapter, and copper pillars.

3. SPECIFICATIONS

Feature	Specification
Brand	ELEGROW
Screen Size	5 Inches
Resolution	800x480 Pixels (SVGA)
Aspect Ratio	16:9
Screen Surface Description	Glossy
Refresh Rate	60 Hz
Display Type	LCD

Viewing Angle	170 Degrees
Connectivity Technology	USB, HDMI
Voltage	5 Volts
Item Dimensions (D x W x H)	1"D x 4.7"W x 3"H
Item Weight	113 Grams
Model Number	RPA05010R

4. SETUP GUIDE

4.1 Connecting to Raspberry Pi

This display is designed to connect directly to your Raspberry Pi via its GPIO pins for touch and power, and an HD interface for video. Ensure your Raspberry Pi is powered off before making connections.

1. Align the display's GPIO pins with the Raspberry Pi's GPIO header. Carefully press the display onto the Raspberry Pi until it is securely seated.
2. Connect the HD adapter between the display's HD port and the Raspberry Pi's HDMI port.
3. Power on your Raspberry Pi.

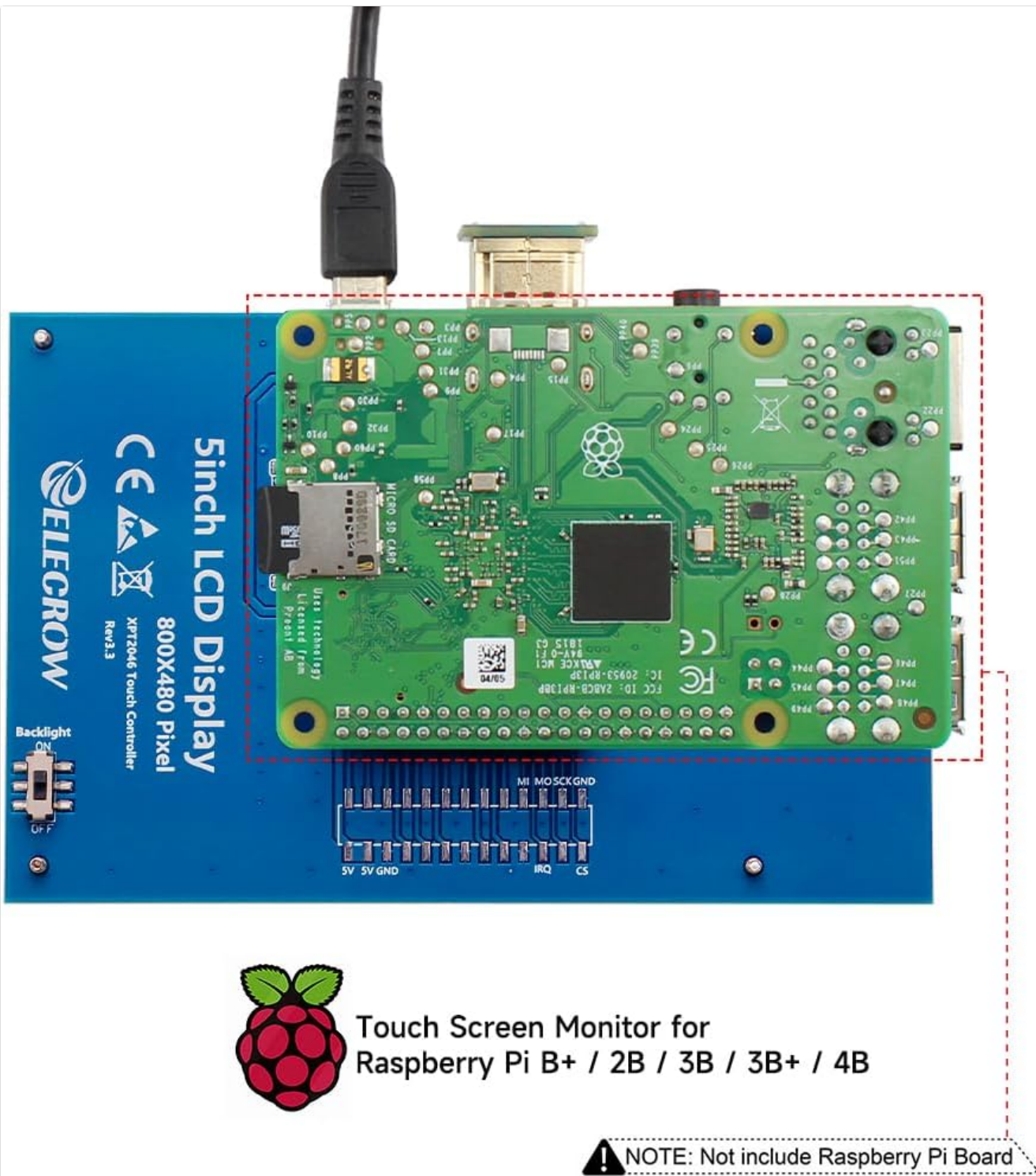


Figure 3: Connecting the 5-inch display to a Raspberry Pi.

4.2 Connecting to Other HDMI-Compatible Devices (PC, Banana Pi, Jetson Nano)

The display can be used with standard HDMI-compatible devices. For these devices, the touch function is generally not supported.

1. Connect the display to your device using an HD cable (not included) and a micro USB cable (not included) for power.
2. Ensure the device's output resolution is set to 800x480. A 5V 2A power supply is recommended for the display.

Your browser does not support the video tag.

Video 1: Official ELECROW demonstration of the 5-inch Raspberry Pi screen and its connections.

5. OPERATING INSTRUCTIONS

5.1 Touch Functionality

The resistive touchscreen supports touch input, ideal for interactive projects. Use the included touch pen or your finger. The touch function is supported for Raspbian and Ubuntu systems when connected to a Raspberry Pi.



Figure 4: Demonstrating touch functionality with the included stylus.

5.2 Backlight Control

The display features manual backlight control. A switch on the display allows you to turn the backlight ON or OFF. Turning off the backlight can help reduce power consumption, which is beneficial for battery-powered projects.

6. MAINTENANCE

To ensure the longevity and optimal performance of your ELECROW 5-inch Resistive Touch Screen Display, follow these maintenance guidelines:

- **Cleaning:** Use a soft, lint-free cloth slightly dampened with water or a screen-cleaning solution. Avoid harsh chemicals, abrasive cleaners, or solvents that could damage the screen surface.
- **Handling:** Always handle the display by its edges. Avoid applying excessive pressure to the screen, especially the resistive touch layer, as this can cause damage.
- **Storage:** When not in use, store the display in a cool, dry place away from direct sunlight and extreme temperatures. Protect it from dust and physical impact.
- **Power:** Always use a stable 5V power supply. Incorrect voltage can damage the display.

7. TROUBLESHOOTING

If you encounter issues with your ELECROW 5-inch Resistive Touch Screen Display, refer to the following common problems and solutions:

7.1 Display Not Showing Image or Flickering

- **Power Supply:** Ensure the display is receiving adequate power (5V 2A recommended). Check all power connections.
- **HDMI Connection:** Verify that the HD adapter and HDMI cable are securely connected to both the display and your device.
- **Resolution:** If connecting to a PC or non-Raspberry Pi device, ensure the output resolution is manually set to 800x480.
- **Backlight:** Check the manual backlight switch on the display to ensure it is in the 'ON' position.

7.2 Touch Function Not Working

- **Compatibility:** The touch function is primarily supported for Raspbian and Ubuntu systems on Raspberry Pi. It is generally not available when used as a standard PC monitor.
- **GPIO Connection:** For Raspberry Pi, ensure the display is correctly seated on the GPIO pins.
- **Driver Installation:** Ensure the necessary drivers and configuration settings are correctly applied for your Raspberry Pi operating system. Refer to the included CD or ELECROW's official support resources for specific instructions.
- **Raspberry Pi 4 (Bullseye/Buster):**
 - For system images after 2021-10-30 (e.g., Bullseye), modify `dtoverlay = vc4-kms-v3d` to `dtoverlay = vc4-fkms-v3d` in the `config.txt` file.
 - For Buster, comment out `dtoverlay = vc4-fkms-V3D` by adding a '#' at the beginning of the line in `config.txt`.

Suitable for Your Creative DIY Projects



Figure 5: The display's versatility across different applications.

8. WARRANTY AND SUPPORT

This ELECROW 5-inch Resistive Touch Screen Display comes with a **1 Year Manufacturer Warranty**. For any technical issues, questions, or support needs, please contact the ELECROW support team. Refer to the contact information provided in the product packaging or on the official ELECROW website.