Treedix 2.8 inch TFT LCD Display

Treedix 2.8 inch TFT LCD Display User Manual

Model: 2.8 inch TFT LCD Display

Brand: Treedix

1. Introduction

This manual provides essential information for the proper setup, operation, and maintenance of your Treedix 2.8 inch TFT LCD Display. Please read these instructions carefully before using the product to ensure optimal performance and longevity. This display is designed for use with Raspberry Pi 2B, 3B, 3B+, and 4B models.

2. Product Overview

2.1 Key Features

- 2.8 inch standard display with 320 × 240 resolution.
- SPI interface with resistive touch screen for touch control.
- Utilizes Raspberry Pi GPIO interface, eliminating the need for a separate power supply.
- Compatible with Raspberry Pi 2B / 3B / 3B+ / 4B, supporting the Raspbian operating system.
- Requires driver installation for display functionality.

2.2 Package Contents

- 1 x 2.8 inch TFT LCD Display
- 1 x Touch Pen

2.3 Product Components and Dimensions

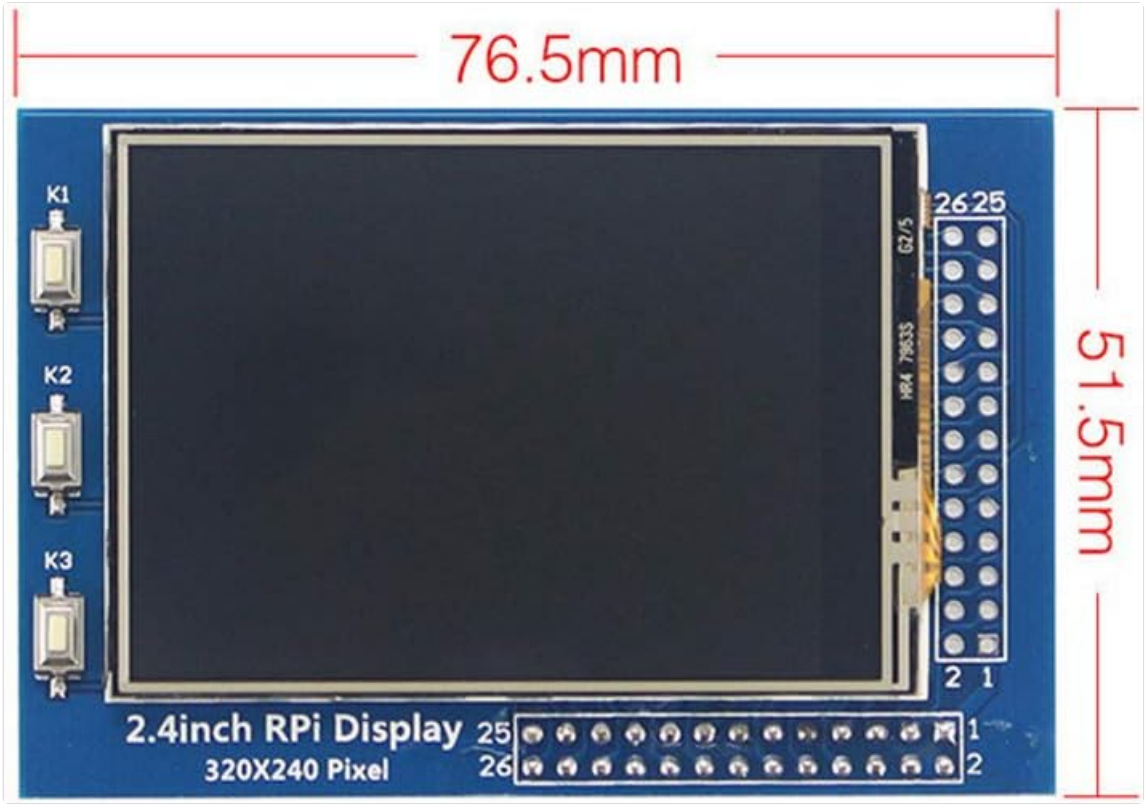

Figure 1: Front view of the display, showing its 76.5mm width and 51.5mm height, along with three tactile buttons (K1, K2, K3) on the left side.

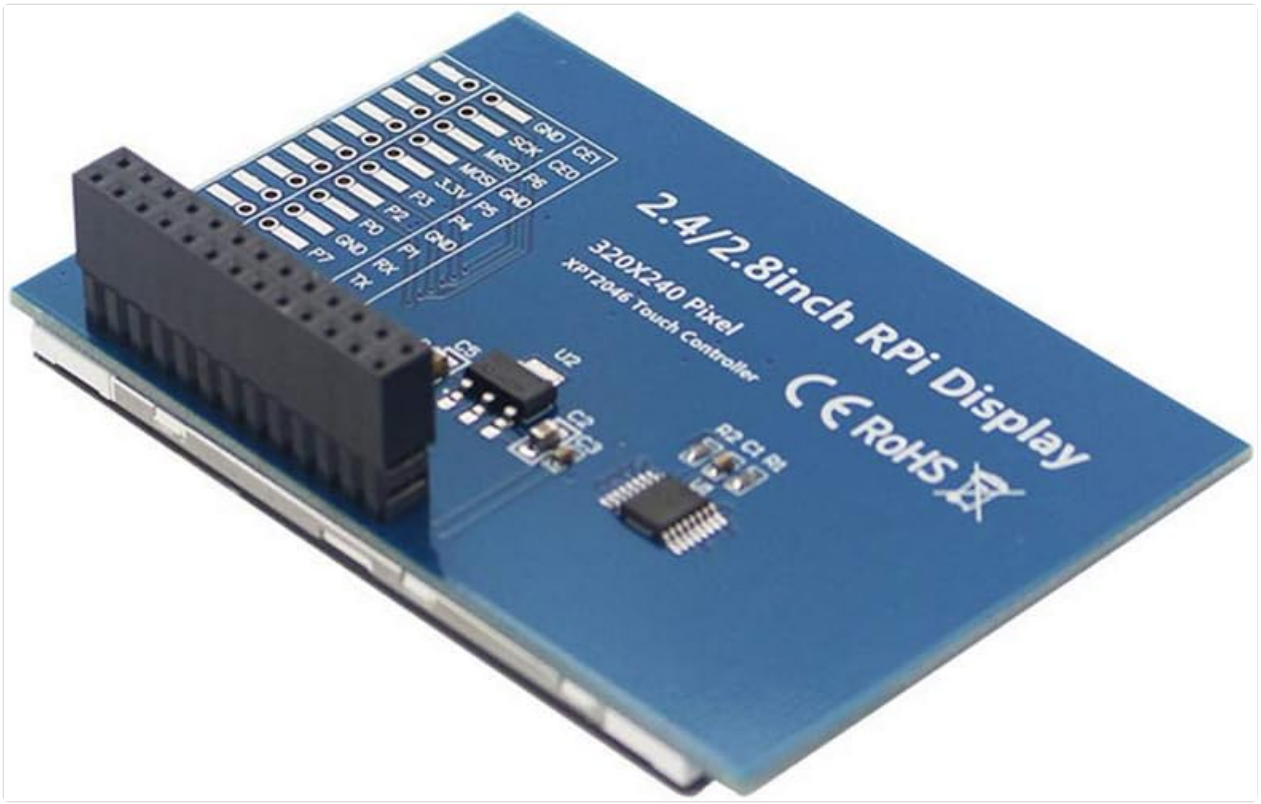

Figure 2: Angled back view of the display, highlighting the 40-pin GPIO header for connection to a Raspberry Pi.

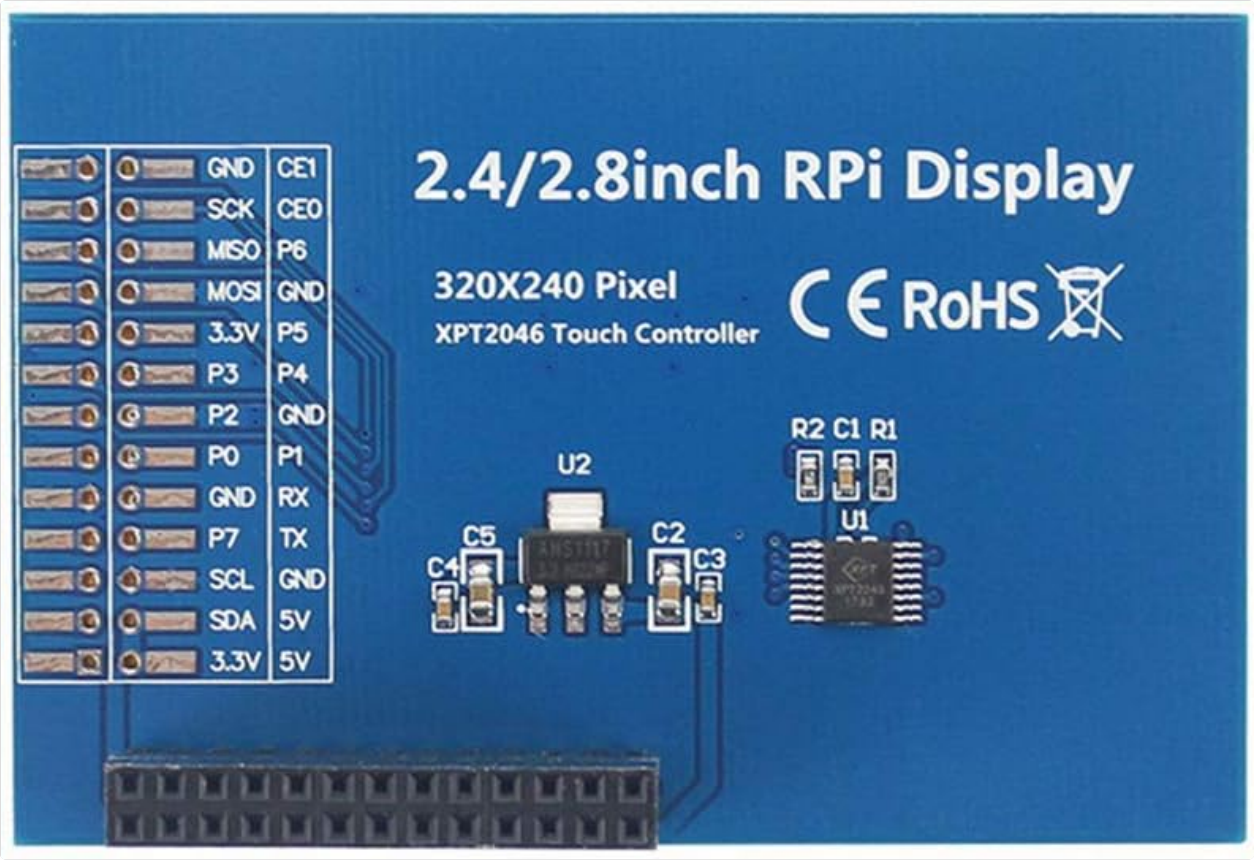

Figure 3: Detailed view of the display's back, illustrating the pinout labels for the GPIO interface, including GND, SCK, MISO, MOSI, 3.3V, 5V, and various GPIO pins.

Figure 4: The 2.8 inch TFT LCD Display shown mounted directly onto a Raspberry Pi, demonstrating its compact integration. The included touch pen is also visible.

3. Setup Instructions

3.1 Physical Connection

1. Ensure your Raspberry Pi is powered off and disconnected from any power source.
2. Carefully align the 40-pin GPIO header on the back of the 2.8 inch TFT LCD Display with the corresponding GPIO pins on your Raspberry Pi.
3. Gently press the display onto the Raspberry Pi's GPIO header until it is securely seated. Ensure all pins are correctly aligned to prevent damage.

3.2 Driver Installation

This display is not plug-and-play and requires specific drivers to function correctly. Driver installation typically involves configuring your Raspberry Pi's operating system (e.g., Raspbian) to recognize and utilize the display and its touch functionality.
Refer to the official Treedix product page or support documentation for detailed, up-to-date driver installation instructions specific to your Raspberry Pi model and operating system version. This usually involves running commands in the Raspberry Pi terminal to download and install the necessary software packages and configure the display settings.

4. Operating Instructions

4.1 Powering On

Once the display is physically connected and drivers are installed, power on your Raspberry Pi. The display should initialize and show the operating system's graphical interface.

4.2 Using the Touch Screen

The display features a resistive touch screen. Use the provided touch pen or a similar stylus for accurate input. Avoid using sharp objects or excessive force, as this may damage the screen.

4.3 System Compatibility

The display is designed to work with the Raspbian operating system. Compatibility with other operating systems may vary and might require different driver configurations.

5. Maintenance

5.1 Cleaning the Display

To clean the screen, gently wipe it with a soft, lint-free cloth. For stubborn smudges, slightly dampen the cloth with water or a screen-safe cleaning solution. Do not spray liquids directly onto the display.

5.2 Handling the Touch Pen

Store the touch pen in a safe place to prevent loss or damage. Avoid bending or applying excessive pressure to the pen tip.

5.3 Storage

When not in use, store the display in a cool, dry environment, away from direct sunlight and extreme temperatures. If storing for an extended period, consider placing it in its original packaging or an anti-static bag.

6. Troubleshooting

6.1 No Display Output

- **Check Physical Connection:** Ensure the display is firmly seated on the Raspberry Pi's GPIO header.
- **Verify Driver Installation:** Confirm that the correct drivers have been installed and configured according to the manufacturer's instructions. A missing or incorrect driver is a common cause for no display.
- **Power Supply:** Ensure your Raspberry Pi has adequate power. Although the display draws power from the GPIO, an underpowered Raspberry Pi can affect display performance.

6.2 Touch Screen Not Responding

- **Recalibrate Touch:** After driver installation, touch screen calibration may be required. Refer to driver documentation for calibration procedures.
- **Check Driver Status:** Ensure the touch screen drivers are correctly loaded and running.
- **Inspect for Damage:** Visually inspect the touch screen surface for any physical damage.

6.3 Incorrect Colors or Flickering

- **Driver Configuration:** Incorrect display settings or driver parameters can lead to color issues. Re-check your driver configuration.
- **Cable Integrity:** Although directly connected, ensure the GPIO pins are clean and free from debris.

7. Specifications

Feature	Specification
Size	2.8 inch
Type	TFT
Resolution	320 x 240 pixels
Effective Display Size	43.2 x 57.6 mm
Interface	SPI
Refresh Rate	5 Frames
Touch Panel Type	Resistive Touch
Compatibility	Raspberry Pi 2B / 3B / 3B+ / 4B

8. Warranty Information

Treedix products are typically covered by a limited warranty against defects in materials and workmanship. Specific warranty terms, duration, and conditions may vary. Please refer to the warranty card included with your purchase or visit the official Treedix website for detailed warranty information and registration procedures.

9. Support

For technical assistance, driver downloads, or further inquiries, please visit the official Treedix support website. You may find FAQs, additional documentation, and contact information for customer service there.
Website: Treedix Official Store on Amazon