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> [waveshare](#) /

> waveshare 7-inch Touch Display Kit for Raspberry Pi Zero (Model Zero-DISP-7A) User Manual

## waveshare Zero-DISP-7A

# waveshare 7-inch Touch Display Kit for Raspberry Pi Zero (Model Zero-DISP-7A) User Manual

## INTRODUCTION

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This manual provides detailed instructions for the waveshare 7-inch Touch Display Kit, model Zero-DISP-7A. This kit is specifically designed for use with Raspberry Pi Zero series boards, offering an IPS display with a resolution of 1024x600 pixels and 5-point capacitive touch functionality. Please read this manual thoroughly before installation and operation.

## PACKAGE CONTENTS

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

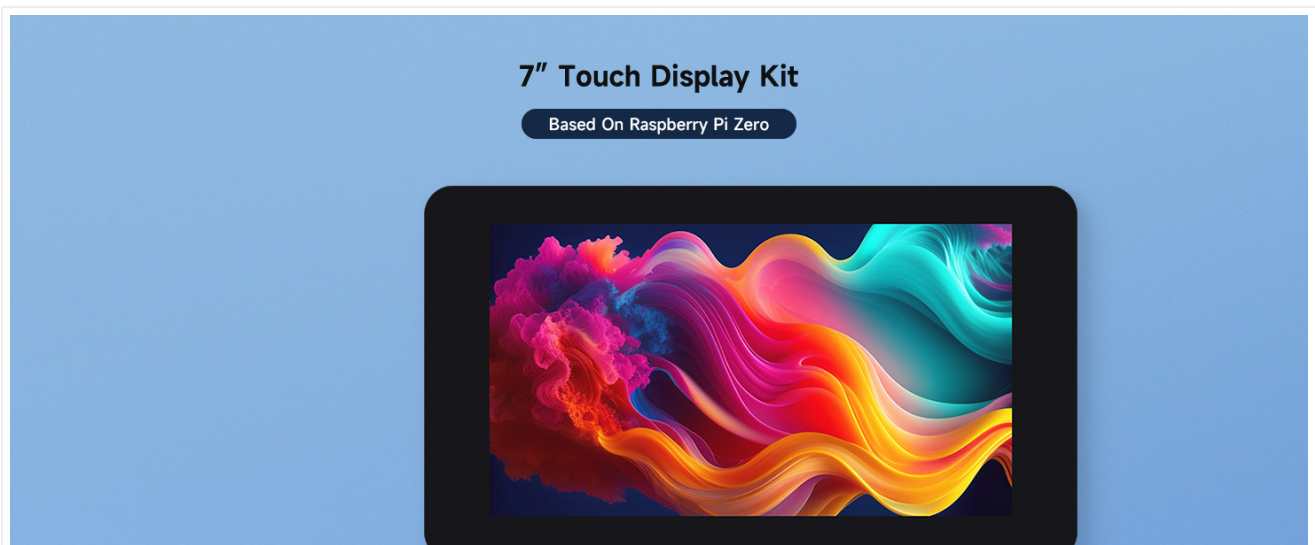


Image description: An overhead view showing the 7-inch display, a small control button board, a connecting cable, and a set of standoffs, representing the complete package contents.

- 7-inch IPS Touch Display
- Control Button Board

- Connecting Cable
- Mounting Hardware (Standoffs)

## KEY FEATURES

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- Specially designed connectors for Raspberry Pi Zero, enabling easy integration for an all-in-one mini computer.
- Connectivity includes a Mini HDMI port and two USB Micro male ports (one for HUB, one for power supply).
- 170° viewing angle IPS display with fast response, precise, and natural color reproduction, ensuring no ripples on touch for an improved touch experience.
- 7-inch capacitive touch screen supporting 5-point multi-touch, enhancing human-computer interaction. (Note: Actual number of touch points depends on software and system.)
- Integrated headphone jack and a 4-pin speaker header for audio output.

## INTERFACE INTRODUCTION

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This section details the various ports and connectors on the display expansion board.

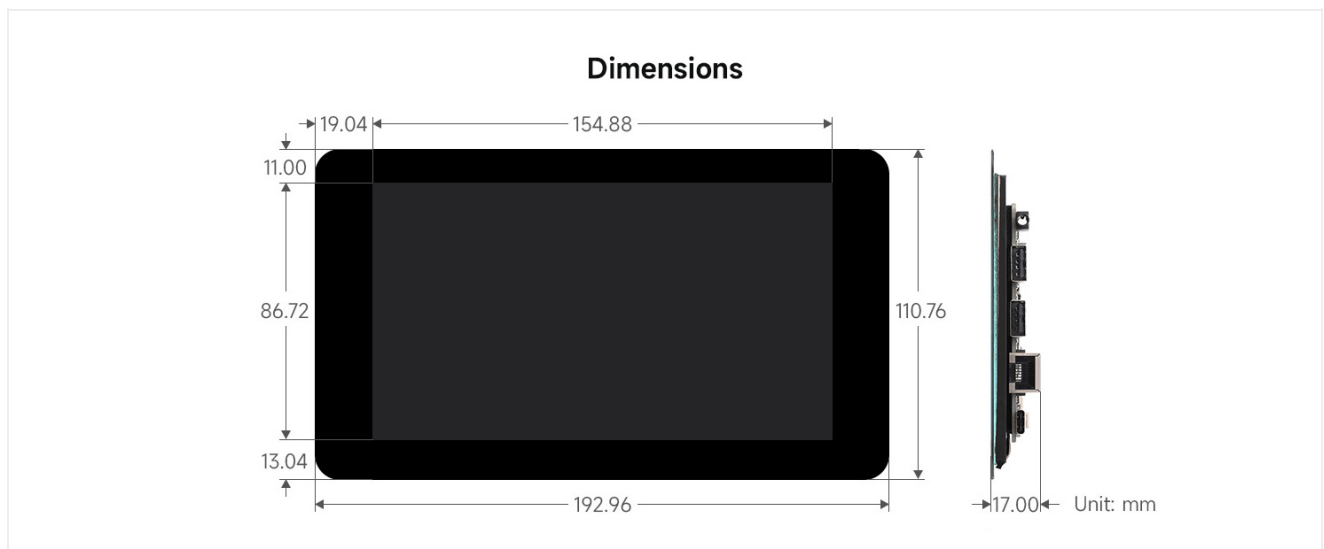


Image description: A detailed diagram of the display's rear circuit board, with numbered callouts indicating the location and function of each interface.

1. Audio Jack
2. USB Ports (x2)
3. Ethernet Port
4. Power Supply (USB Type-C)
5. Speaker Header (4PIN)
6. Button Board Header
7. Raspberry Pi Zero Connectors

## SETUP INSTRUCTIONS

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### Connecting to Raspberry Pi Zero

The display kit is designed for direct connection to a Raspberry Pi Zero.

## Designed For Raspberry Pi Zero Series

Specially Designed Connectors for Pi Zero, Easy to Build All-in-one Mini Computer



\* for reference only, the Raspberry Pi Zero is NOT included.

## Specifications

<b>ZERO CONNECTORS</b>	Mini HDMI port, USB Micro male port ×2 (1× HUB, 1× Power supply)
<b>DISPLAY</b>	7inch 1024 × 600 pixels, 5-point capacitive touch
<b>NETWORKING</b>	100M Ethernet RJ45 port
<b>USB</b>	USB 2.0 port ×2
<b>AUDIO</b>	Headphone jack, 4PIN speaker header
<b>POWER INPUT</b>	USB Type-C Interface, 5V

Image description: An image illustrating the waveshare 7-inch display board with a Raspberry Pi Zero securely connected, demonstrating the compact integration.

1. Carefully align the Raspberry Pi Zero with the dedicated connectors on the display expansion board.
2. Gently press the Raspberry Pi Zero into place until it is securely seated. Ensure all pins are correctly aligned to prevent damage.
3. Connect the provided control button board to the designated header on the display board.
4. Connect the display to a power source using the USB Type-C power input.
5. Connect the Mini HDMI port to your Raspberry Pi Zero's HDMI output.

## Software Configuration

For optimal performance, ensure your Raspberry Pi OS is updated and configured for the 1024x600 resolution. Refer to the official Raspberry Pi documentation for specific display configuration steps.

## OPERATING THE DISPLAY

### Power On/Off

Once connected and powered, the display will automatically turn on. To power off, safely shut down your Raspberry Pi Zero.

### Touch Functionality

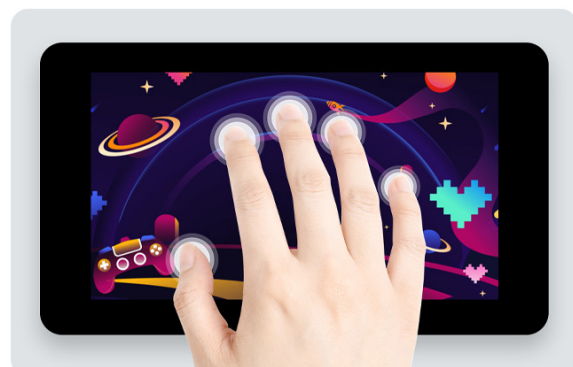
#### IPS Display Panel

170° Viewing Angle, Fast Response, Precise And Natural Color  
No Ripples On Touch, Better Touch Experience



#### 5-Point Capacitive Touch

7inch Capacitive Touch Screen, Supports 5-Point Touch\*  
Making Human-Computer Interaction More Convenient



\* the actual number of touch points depends on the software and system

Image description: A hand interacting with the 7-inch display, showing multiple touch points simultaneously, illustrating the 5-point capacitive touch capability.

The 7-inch display supports 5-point capacitive touch. This allows for multi-touch gestures, enhancing interaction with the Raspberry Pi Zero's operating system. Ensure your operating system has the necessary touch drivers installed and configured.

## On-Screen Display (OSD) Controls

The control button board provides access to the display's On-Screen Display (OSD) menu. Use these buttons to adjust settings such as brightness, contrast, and color balance.

- **Power:** Turns the display on or off.
- **Menu:** Accesses the OSD menu.
- **Up/Left:** Navigates up or left within the OSD menu.
- **Down/Right:** Navigates down or right within the OSD menu.
- **Exit:** Exits the OSD menu.

## MAINTENANCE

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- Keep the display clean using a soft, lint-free cloth. Avoid abrasive cleaners or solvents.
- Do not expose the device to extreme temperatures or humidity.
- Handle the display and connected components with care to prevent physical damage.

## TROUBLESHOOTING

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### Display Not Turning On

- Ensure the power supply is correctly connected and providing adequate power (5V).
- Verify the Raspberry Pi Zero is powered on and functioning correctly.
- Check all cable connections, especially the Mini HDMI and power cables.

### No Touch Response

- Confirm the USB connection for touch input is secure.
- Ensure the Raspberry Pi OS has the correct drivers and is configured for touch input.
- Restart the Raspberry Pi Zero.

### Image Quality Issues

- Adjust brightness, contrast, and color settings via the OSD menu.
- Ensure the Raspberry Pi Zero's display output resolution is set to 1024x600.
- Check the HDMI cable for any damage or loose connections.

## TECHNICAL SPECIFICATIONS

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## Interface Introduction

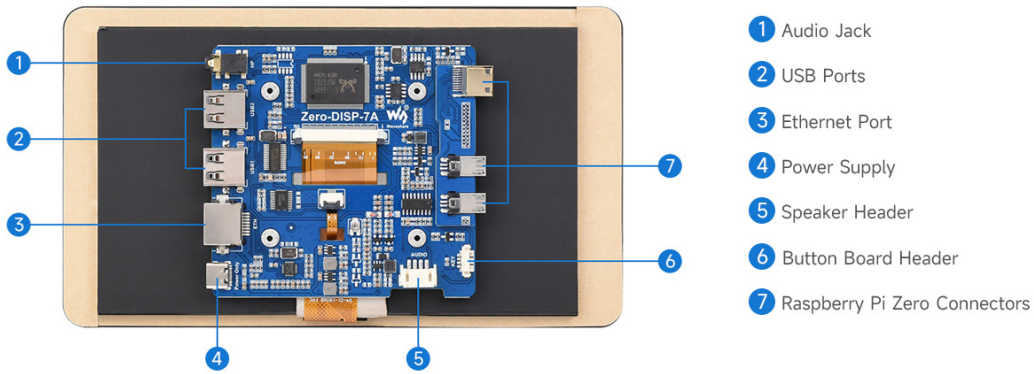


Image description: A technical drawing displaying the precise dimensions of the 7-inch display in millimeters, including width, height, and depth.

Feature	Detail
Brand	waveshare
Screen Size	7 Inches
Display Resolution	1024 x 600
Display Technology	LCD, IPS Panel
Touch Type	5-Point Capacitive
Viewing Angle	170 Degrees
Contrast Ratio	2000:1
Refresh Rate	60 Hz
Connectivity	Mini HDMI, USB Micro (x2), USB Type-C (Power)
Audio	Headphone Jack, 4PIN Speaker Header
Model Name	Zero-DISP-7A
Item Dimensions (D x W x H)	0.66"D x 7.5"W x 4.31"H
Item Weight	0.23 Kilograms
UPC	790885890987

## WARRANTY AND SUPPORT

This product comes with a standard manufacturer's warranty. For specific warranty details and duration, please refer to the documentation included with your purchase or contact waveshare customer support directly. For technical assistance, troubleshooting, or further inquiries, please visit the official waveshare website or contact their support team through the provided channels. Online resources and community forums for Raspberry Pi Zero

and waveshare products can also provide valuable information and peer support.