SunFounder TS-10

SunFounder 10.1 Inch IPS Touch Screen (Model: TS-10) Instruction Manual

All-in-One Solution for Raspberry Pi 5, 4, 3, Zero 2W

Introduction

This manual provides detailed instructions for setting up and operating your SunFounder 10.1 inch IPS HD 1280x800 LCD Touch Screen. This versatile display is designed for use with various Single Board Computers (SBCs) including Raspberry Pi 5, 4, 3B+, 3B, and Zero 2W, offering a 10-point capacitive touch experience and wide 178° viewing angles. It features a built-in 5.1V/5A Type-C USB output for Raspberry Pi 5 and dual audio capabilities.
The display is driver-free for the latest Raspberry Pi OS and supports Windows, Ubuntu, and Android without additional setup, making it ideal for DIY projects, smart home interfaces, secondary displays, and more.

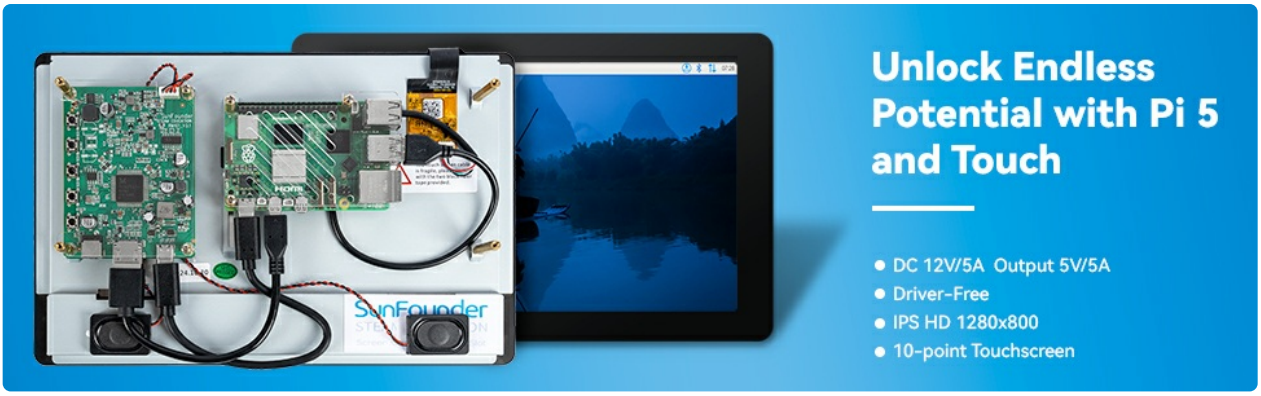

Image: SunFounder 10.1 inch IPS Touch Screen connected to a Raspberry Pi 5, highlighting its compatibility and features.

What's in the Box

Please verify that all the following components are included in your package:

- 1 x 10.1" IPS Touch Screen
- 7 x M2.5 x 14.4 Copper Standoffs
- 2 x M2.5 x 22 Copper Standoffs
- 1 x HDMI Cable
- 1 x Micro USB Cable
- 1 x USB Touch Screen Cable
- 1 x 12V Power Adapter
- 1 x HDMI to Micro HDMI Cable
- 2 x Tapes
- 4 x M2.5 x 30 Copper Standoffs
- 1 x Type-C USB Cable
- 1 x Speaker (pair)
- 5 x M2.5 x 18 Copper Standoffs
- 1 x USB Touch Screen Cable
- 1 x Acrylic Stand
- 6 x M2.5 Screws
- 2 x Wrenches
- 1 x Screwdriver
- 1 x User Manual

Image: All components included in the package, laid out for easy identification.

Setup

1. Connecting to Raspberry Pi 5

The SunFounder 10.1 inch display is designed for easy integration with Raspberry Pi 5. It features a built-in 5.1V/5A Type-C USB output to power your Raspberry Pi 5 directly, ensuring stable operation.

1. Mount your Raspberry Pi 5 onto the back of the display using the provided standoffs and screws. The adjustable mounting rails allow for secure placement.
2. Connect the display's HDMI input to your Raspberry Pi 5's HDMI output using the provided HDMI cable.
3. Connect the display's USB-C power output to your Raspberry Pi 5's USB-C power input.
4. Connect the USB Touch Screen Cable from the display to an available USB port on your Raspberry Pi 5 for touch functionality.
5. Plug the 12V power adapter into the display's DC input.

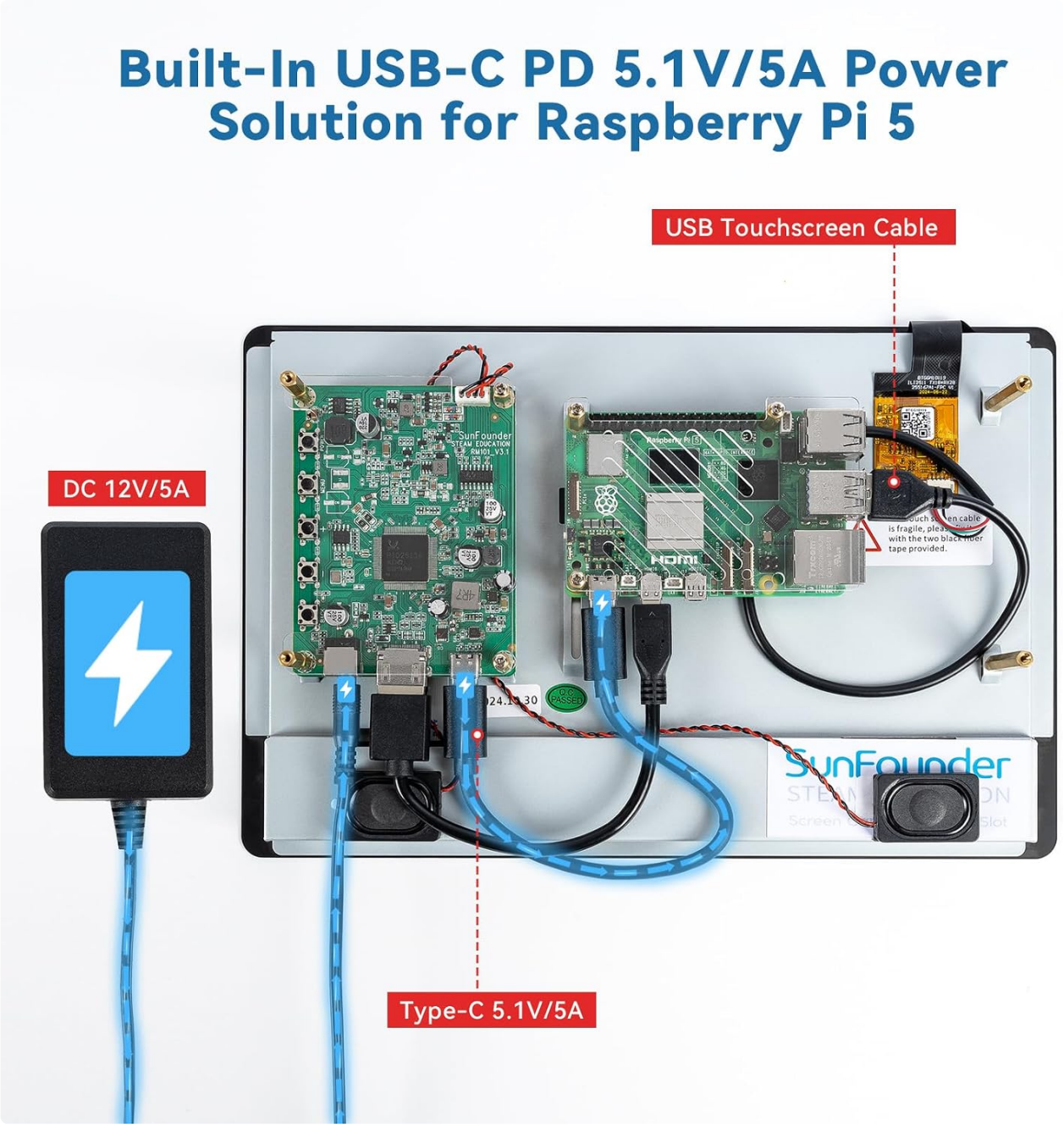

Image: Detailed connection diagram for the display with Raspberry Pi 5, showing power and data connections.

2. General Setup for Other SBCs/Devices

For other compatible SBCs or devices, the setup process is similar, utilizing the adjustable mounting and standard HDMI/USB connections.

1. Secure your SBC to the display's back panel using appropriate standoffs and screws. Adjust the mounting rails as needed for your specific board.
2. Connect the display's HDMI input to your device's HDMI output. For devices with Micro HDMI, use the provided HDMI to Micro HDMI cable.
3. Connect the USB Touch Screen Cable from the display to an available USB port on your device for touch functionality.
4. Power the display using the 12V power adapter. Ensure your SBC is powered separately if the display does not provide direct power output for it.

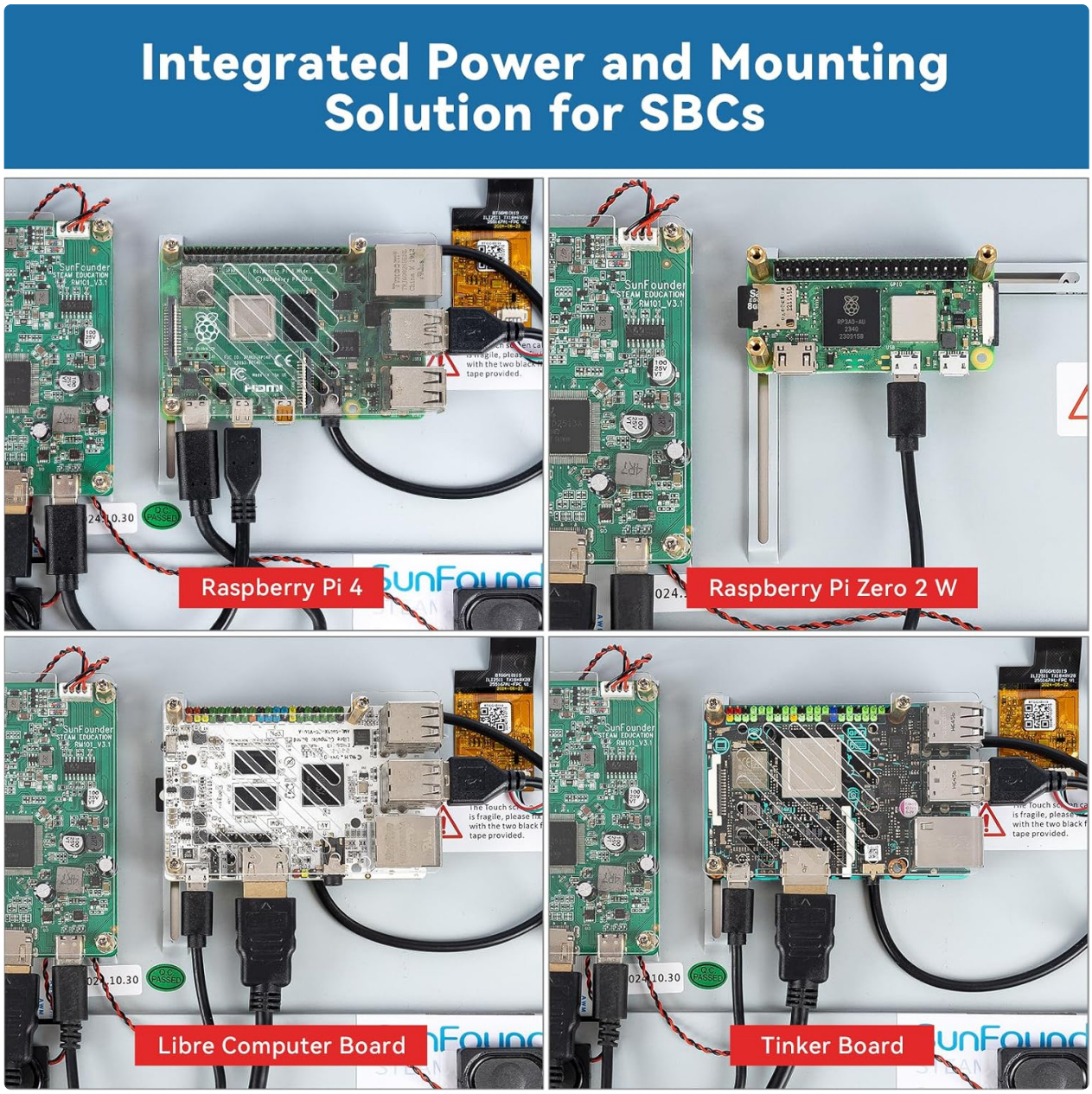

Image: Various SBCs like Raspberry Pi 4, Raspberry Pi Zero 2W, Libre Computer Board, and Tinker Board mounted on the display's back panel.

Installation Video

Your browser does not support the video tag.

Video: This video demonstrates the installation process of the SunFounder 10.1 inch touch screen with a Raspberry Pi, including connecting cables and mounting the board. It also shows the display's multi-OS compatibility and various applications like home assistant, programming, 3D printing, and gaming.

Operating

1. Touch Functionality

The display features 10-point capacitive touch, providing a smooth and responsive user experience. No calibration is typically needed for most supported operating systems.

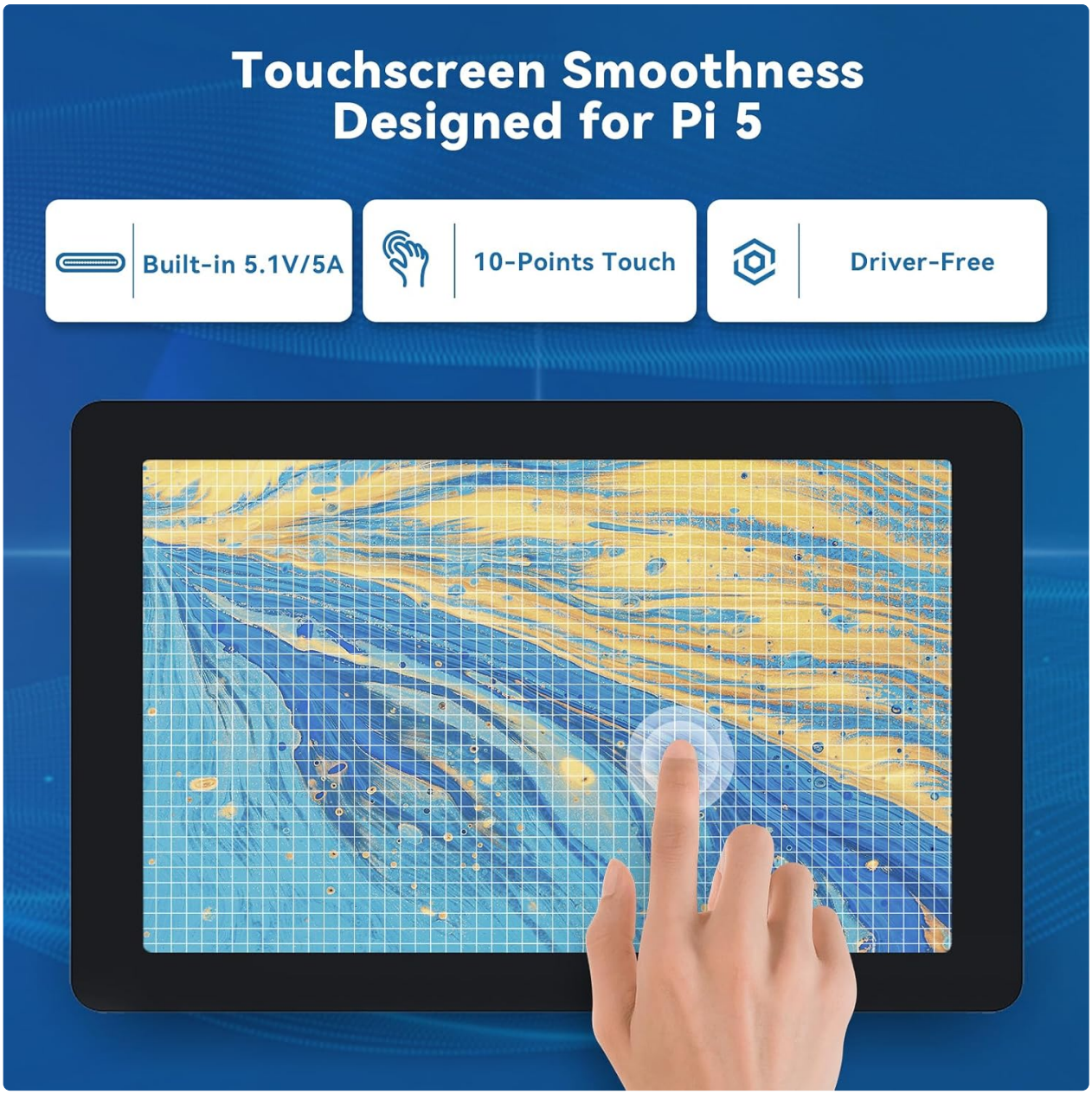

Image: A hand demonstrating the 10-point touch functionality on the display, emphasizing its smoothness and driver-free nature.

2. Operating System Compatibility

The display offers broad compatibility with various operating systems, ensuring a plug-and-play experience.

- **Raspberry Pi OS:** Driver-free and stable.
- **Windows:** Supports Windows 10/11.
- **Ubuntu:** Compatible with various Ubuntu distributions.
- **Android:** Supports Android devices.
- **Other OS:** Also compatible with Chrome OS, macOS, and Twister OS.

Image: The display showcasing its compatibility with multiple operating systems, including Raspberry Pi OS, Windows, Ubuntu, and Android.

3. Usage Scenarios

This touchscreen is adaptable for a wide range of applications:

- **Smart Home:** Ideal for Home Assistant interfaces.
- **Programming/DIY Projects:** Excellent for development and custom builds.
- **3D Printing:** Can serve as a control interface for 3D printers.
- **Gaming:** Suitable for retro gaming setups or as a compact gaming display.
- **Secondary Display:** Can extend the screen of laptops, Macbooks, PCs, Xbox, Nintendo Switch, and cameras.

Image: The display demonstrating its versatility across different applications, including smart home control, programming, 3D printing, and gaming.

Compatibility

The SunFounder 10.1 inch IPS Touch Screen offers extensive compatibility with various Single Board Computers and host devices. The unique back design with adjustable mounting points allows for flexible integration.

Item	Name	Display & Touch	Rear Fixing	Power Support	Note
	Raspberry Pi 5	✓	✓	✓	Perfectly Compatible
	Raspberry Pi 4 Model B	✓	✓	✓	Perfectly Compatible
	Raspberry Pi 3 Model B/B+	✓	✓	✓	Perfectly Compatible
	Raspberry Pi Zero 2 W/ Zero W	✓	✓	✓	need a miniHDMI to HDMI cable (not provided)
	Libre Computer AML-S905X-CC	✓	✓	✓	Perfectly Compatible
	Nvidia Jetson Nano Developer Kit	✓	✓	✓	Perfectly Compatible
	Rock Pi 4 Model C	✓	✓	✓	Perfectly Compatible
	Rock Pi X Model B	✓	✓	✓	Perfectly Compatible

Item	Name	Display & Touch	Rear Fixing	Power Support	Note
Single Board Computers	Rock Pi N10 Model A	✓	✓	✖	can not be fixed and need external power supply
	Odroid-C4	✓	✓	✖	can not be fixed and need external power supply
	Odroid-N2+	✓	✓	✖	can not be fixed and need external power supply
	Orange Pi 4B	✓	✓	✓	Perfectly Compatible
	LattePanda V1	✓	✓	✓	Perfectly Compatible
	LattePanda Delta 432	✓	✓	✖	can not be fixed and need external power supply
	Banana Pi M5	✓	✓	✖	too big to be fixed on the screen
Host Devices	Asus Tinker Board 2S	✓	✓	✖	need external power supply
	Raspberry Pi 400	✓	--	--	Compatible
	Laptop with HDMI	✓	--	--	Compatible
	Macbook	✓	--	--	2016 or later need USB-C to HDMI converter
	Xbox	✓	--	✖	need docker for HDMI signal
	Nintendo Switch	✓	--	✖	need docker for HDMI signal

Table: Compatibility matrix for the SunFounder 10.1 inch display with various Single Board Computers and other devices. ✓ indicates compatibility, ✖ indicates incompatibility or specific requirements, and '--' indicates not applicable.

Item	Name	Display & Touch	Rear Fixing	Power Support	Note
Single Board Computers	Raspberry Pi 5	✓	✓	✓	Perfectly Compatible
	Raspberry Pi 4 Model B	✓	✓	✓	Perfectly Compatible
	Raspberry Pi 3 Model B/B+	✓	✓	✓	Perfectly Compatible
	Raspberry Pi Zero 2 W/ Zero W	✓	✓	✓	need a miniHDMI to HDMI cable (not provided)
	Libre Computer AML-S905X-CC	✓	✓	✓	Perfectly Compatible
	Nvidia Jetson Nano Developer Kit	✓	✓	✓	Perfectly Compatible
	Rock Pi 4 Model C	✓	✓	✓	Perfectly Compatible
	Rock Pi X Model B	✓	✓	✓	Perfectly Compatible
	Rock Pi N10 Model A	✓	✗	✗	can not be fixed and need external power supply
	Odroid-C4	✓	✓	✓	Perfectly Compatible
	Odroid-N2+	✓	✗	✗	can not be fixed and need external power supply
	Orange Pi 4B	✓	✓	✓	Perfectly Compatible
	LattePanda V1	✓	✓	✓	Perfectly Compatible
	LattePanda Delta 432	✓	✗	✗	can not be fixed and need external power supply
	Pine A64-LTS	✓	✗	✓	too big to be fixed on the screen
	Banana Pi M5	✓	✓	✓	Perfectly Compatible
	Asus Tinker Board 2S	✓	✓	✗	need external power supply
Host Devices	Raspberry Pi 400	✓	–	✓	Compatible
	Laptop with HDMI	✓	–	✗	Compatible
	MacBook	✓	–	✗	2016 or later need USB-C to HDMI converter
	Xbox	✓	–	✗	Compatible
	Nintendo Switch	✓	–	✗	need docker for HDMI signal

Warm Tip: Please send message to us if you want to confirm whether your device is compatible with this screen.

Image: Visual representation of the compatibility table, showing checkmarks and crosses for different features across various devices.

Specifications

Feature	Detail
Screen Size	10.1 Inches
Resolution	1280 x 800 Pixels (HD)
Display Type	IPS LCD
Touch Type	10-Point Capacitive Touch
Viewing Angle	178° Wide View
Aspect Ratio	16:10
Input Voltage	12V (via included adapter)
Output Voltage (for RPi 5)	5.1V/5A Type-C USB
Audio	Dual Speakers, supports audio over HDMI
Product Dimensions	3.6 x 11.7 x 8.2 inches
Item Weight	1.87 pounds
Model Number	TS-10

Maintenance

To ensure the longevity and optimal performance of your SunFounder 10.1 inch IPS Touch Screen, please follow these maintenance guidelines:

- **Cleaning:** Use a soft, lint-free cloth slightly dampened with water or a screen-cleaning solution to clean the display surface. Avoid harsh chemicals, abrasive cleaners, or alcohol-based solutions, as these can damage the screen.
- **Handling:** Handle the display with care. Avoid applying excessive pressure to the screen or dropping the device.
- **Storage:** When not in use for extended periods, store the display in a cool, dry place away from direct sunlight and extreme temperatures.
- **Cable Management:** Ensure all cables are connected securely and are not under strain. Avoid bending cables sharply, especially the fragile touch screen ribbon cable.
- **Ventilation:** Ensure adequate airflow around the display and any attached SBC to prevent overheating.

Troubleshooting

If you encounter any issues with your SunFounder 10.1 inch IPS Touch Screen, please refer to the following common troubleshooting steps:

- **No Display:**
  - Check all power connections to ensure the display and your SBC are receiving adequate power.
  - Verify the HDMI cable is securely connected to both the display and your SBC. Try a different HDMI cable if available.
  - Ensure your SBC's operating system is configured to output video to the HDMI port.
- **Touch Not Working:**
  - Ensure the USB Touch Screen Cable is securely connected from the display to a USB port on your SBC.
  - For some operating systems, a specific driver or configuration might be required, although the display is generally driver-free for Raspberry Pi OS, Windows, Ubuntu, and Android. Refer to the online detailed tutorial for specific OS configurations if needed.
  - Check the integrity of the touch screen ribbon cable; ensure it is properly seated and secured with the provided tape.
- **Flickering Screen/Unstable Image:**
  - Ensure the power adapter is providing stable 12V power to the display.
  - Check the HDMI cable for damage or loose connections.
  - Reduce the resolution or refresh rate settings on your SBC if the issue persists.
- **No Audio:**
  - Verify that the audio output is correctly configured on your SBC to send audio via HDMI.
  - Ensure the speakers are properly connected to the display.
  - Check the volume settings on both the display and your SBC.

For further assistance, please visit the official SunFounder website or contact customer support.

Warranty and Support

SunFounder products are designed for reliability and performance. This product comes with a standard manufacturer's warranty. For specific warranty details, including coverage period and terms, please refer to the warranty card included in your product packaging or visit the official SunFounder website.
For technical support, troubleshooting guides, and additional resources, please visit theSunFounder Official Website. You can also reach out to their customer service team for personalized assistance.