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› Waveshare 4.3-inch DSI QLED Display Instruction Manual

waveshare 4.3inch DSI QLED

Waveshare 4.3-inch DSI QLED Display Instruction Manual

Model: 4.3inch DSI QLED

1. INTRODUCTION

This manual provides detailed instructions for the Waveshare 4.3-inch DSI QLED Display. This display is designed for use with various Raspberry Pi models and other single-board computers, offering a high-resolution touch interface with QLED technology for superior visual performance.

2. PACKAGE CONTENT

Verify that all items listed below are included in your package. If any items are missing or damaged, please contact customer support.



Image: Contents of the Waveshare 4.3-inch DSI QLED Display package, including the display, FPC cables (15PIN 1.0 pitch 50mm and 160mm), DSI-Cable-12cm, and a screws pack.

- 4.3inch DSI QLED Display x1
- FPC 15PIN 1.0 pitch 50mm (opposite sides) x1
- FPC 15PIN 1.0 pitch 160mm (opposite sides) x1
- DSI-Cable-12cm x1
- Screws pack x1

3. KEY FEATURES

- **Compatibility:** Supports Raspberry Pi 5/4B/3B+/3A+/3B/2B/B+/A+, CM3/3+/4. Note: Some CM3/3+/4 base boards may require an extra adapter cable.
- **DSI Interface:** Utilizes DSI one-cable communication for streamlined integration in embedded engineering applications.
- **Display Performance:** Features a 160° wide viewing angle and QLED technology.
- **Color Gamut:** Achieves up to SRGB 92% and NTSC 78%. Chroma increases by 58.3% for more vivid colors.
- **Longevity:** QLED inorganic characteristics provide a color life of up to 60,000 hours without degradation.
- **Touch Functionality:** 5-point capacitive touch via I2C signal for flexible UI interaction.

4. DEVICE & SYSTEM SUPPORT

The 4.3-inch DSI QLED Display offers broad compatibility with various single-board computers and operating systems.



Image: Visual representation of compatible devices including Raspberry Pi models (Pi 3A+, 3B, 4B, 5), VisionFive2, and Core3566.

4.1. Raspberry Pi

- Supports Raspberry Pi OS: 5-points touch, driver-free.
- Supports Ubuntu / Kali / WIN10 IoT: single point touch, driver-free.
- Supports RetroPie / RoPieee: driver-free.
- Compatible with Pi 5/4B/3B+/3A+/3B/2B/B+/A+, CM3/3+/4.
- **Note:** CM3/3+/4 requires an extra adapter cable.

4.2. VisionFive2

- Supports Debian: single point touch, driver-free.

4.3. Core3566

- Supports Debian / Ubuntu: 5-point touch, driver-free.

5. INSTALLATION & SETUP

The display features an integrated structure design for DSI one-cable communication, simplifying installation.

5.1. Connecting to Raspberry Pi

Connect the DSI cable from the display to the DSI port on your Raspberry Pi board. Ensure the cable is securely seated in both connectors. The display is designed for direct connection without complex wiring.

4.3" DSI QLED Touch Display

Integrated Structure | Multi-Point Touch

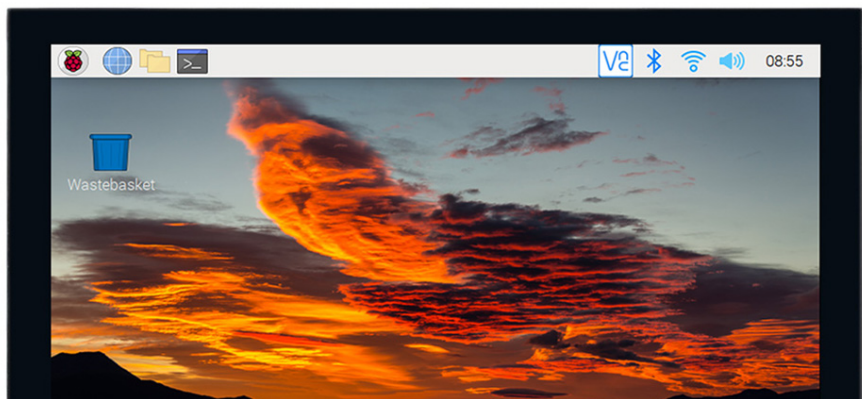
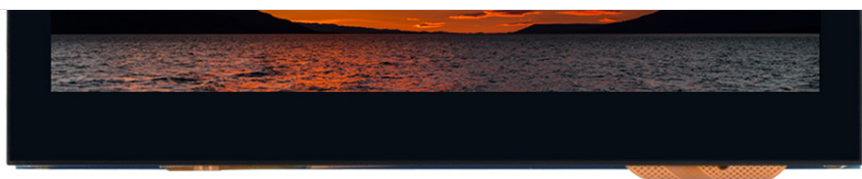


Image: The 4.3-inch DSI QLED Display connected to a Raspberry Pi 5 via the DSI interface.



Size	Resolution	Display Interface	Display Panel	Viewing Angle	Touch Type	Touch Points	Touch Interface	Touch Panel	Consumption	Certification 1	Certification 2
4.3"	800×480	DSI	QLED	160°	Capacitive	5-Point	I2C	Toughened Glass	Low Power	RoHS2.0	CE

Device & System Support



Raspberry Pi
Supports Raspbian, 5-points touch, driver free
Supports Ubuntu / Kali / WIN10 IoT, single point touch, driver free
Supports RetroPie, driver free
Supports Pi 5/4B/3B+/3A+/3B/2B/B+/A+, CM3/3+/4*

Image: The 4.3-inch DSI QLED Display connected to a Raspberry Pi 4B and a Raspberry Pi 3B+ via the DSI interface. Raspberry Pi boards are not included.

For CM3/3+/4 base boards, an additional adapter cable may be necessary depending on the specific base board design. Refer to your base board's documentation for DSI port specifics.

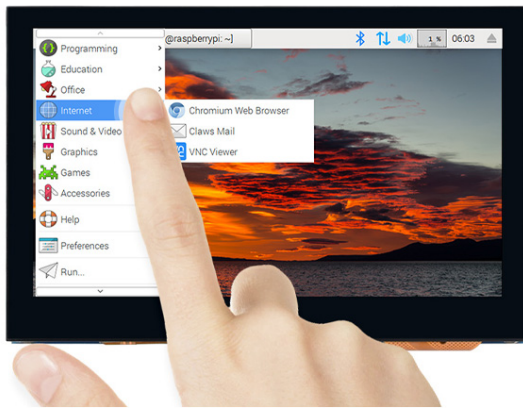
6. OPERATION

6.1. 5-Point Capacitive Touch

The display supports 5-point capacitive touch, allowing for multi-point UI interaction. The touch function adapts with an I2C signal. The actual touch points supported may vary depending on the operating system and software configuration.

5-Point Capacitive Touch

Gently Touch, And See What You Get, Enjoy Multi-Point UI Interaction Via Flexible Operation. Adapting Touch Function With I2C Signal, Support 5-Point Touch *



* the actual touch points depends on the operating system

Adjustable Brightness Via Software



Image: A hand demonstrating touch interaction on the display, navigating a graphical user interface.

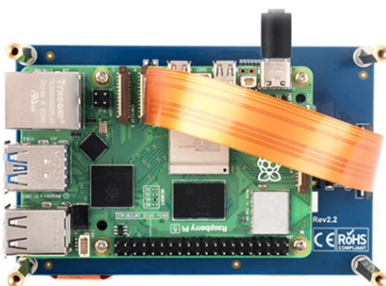
6.2. Adjustable Brightness Via Software

The display's brightness can be adjusted through software settings on your connected device. This allows for customization of the display's luminance to suit various environments and preferences.

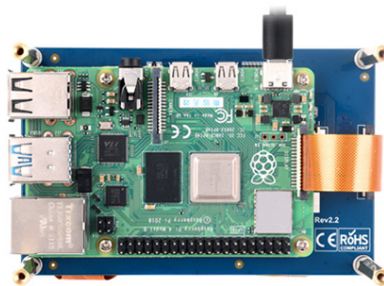
Integrated Structure Design

DSI One-Cable Communication For Embedding Engineering Applications
Quickly Provide Secondary Development Resources To Help Simple Development

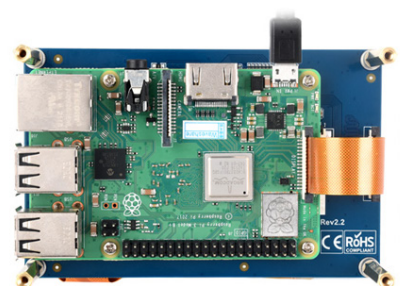
Working With Raspberry Pi 5 Via DSI Interface



Working With Raspberry Pi 4B Via DSI Interface



Working With Raspberry Pi 3B+ Via DSI Interface



for reference only, the Raspberry Pi boards are not included.

Image: A finger adjusting a brightness slider on the display's software interface.

7. QLED DISPLAY TECHNOLOGY

This display utilizes QLED (Quantum Dot Light Emitting Diode) technology, offering enhanced visual characteristics compared to traditional displays.



* CM3/3+/4 requires extra adapter board

VisionFive2
Supports Debian, single point touch, driver free

Core3566
Supports Debian / Ubuntu, 5-point touch, driver free

QLED Display Panel

Excellent Display Performance With 160° Wide Viewing Angle



Image: A diagram illustrating the layers of a QLED display, including liquid crystal, luminance improvement, diffuser, quantum dot, light guide, and blue LED. It also shows comparisons of color gamut and color degradation over time between QLED and non-QLED displays.

- **Wider Color Gamut:** The QLED display achieves a color gamut of up to SRGB 92% and NTSC 78%, providing a broader range of colors.
- **More Pure Chroma:** Chroma is increased by 58.3%, resulting in purer and more vivid colors.
- **Longer Lifetime:** Due to its inorganic nature, QLED technology offers a color life of up to 60,000 hours without significant color degradation, ensuring long-term performance.

8. SPECIFICATIONS

Detailed technical specifications for the 4.3-inch DSI QLED Display.

Dimensions

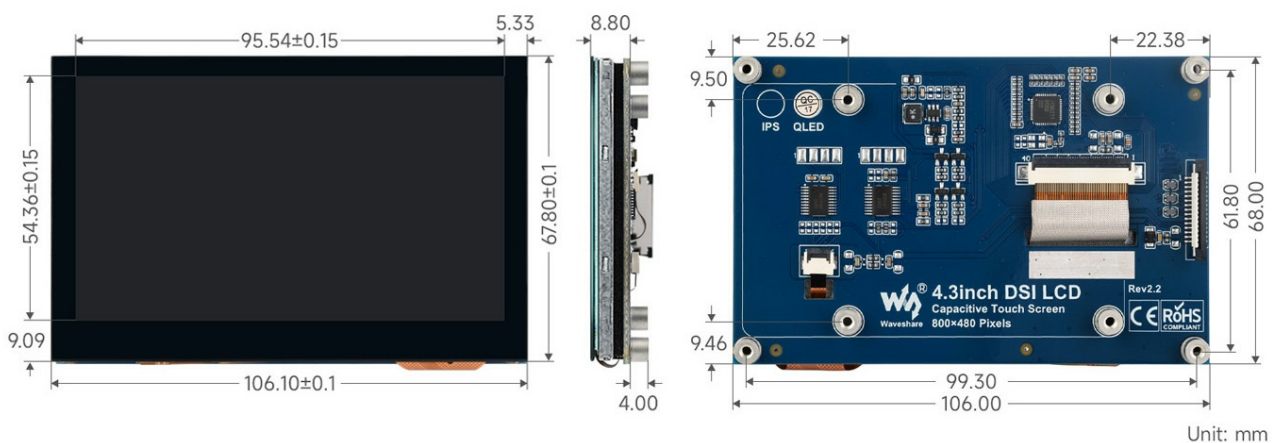


Image: Detailed technical drawing showing the dimensions of the 4.3-inch DSI QLED Display, including front, side, and rear views with measurements in millimeters.

Feature	Value
Screen Size	4.3 Inches
Resolution	800 x 480

Feature	Value
Display Interface	DSI
Display Panel Type	QLED
Viewing Angle	160°
Touch Type	Capacitive, 5-Point
Touch Interface	I2C
Product Dimensions	0.34 x 4.13 x 2.64 inches (8.6 x 104.9 x 67.1 mm)
Item Weight	5.6 ounces (158.7 grams)
Manufacturer	Waveshare

9. TROUBLESHOOTING

This section addresses common issues you might encounter with your Waveshare 4.3-inch DSI QLED Display.

9.1. Display Not Showing Image

- **Check DSI Cable:** Ensure the DSI cable is correctly and securely connected to both the display and the Raspberry Pi's DSI port. A loose connection is a common cause.
- **Power Supply:** Verify that your Raspberry Pi has an adequate power supply. Insufficient power can lead to display issues.
- **Software Configuration:** Confirm that your operating system is correctly configured to output to the DSI display. Some systems may require specific driver installations or configuration file modifications. Refer to the Waveshare product page or documentation for specific software setup guides.
- **Raspberry Pi 5 Compatibility:** While the display supports Raspberry Pi 5, some users have reported initial setup challenges. Ensure your Raspberry Pi OS is up-to-date and follow any specific instructions provided by Waveshare for Pi 5.

9.2. Touch Function Not Responding

- **I2C Connection:** The touch function uses an I2C signal. Ensure that the DSI connection, which carries the I2C data, is stable.
- **Operating System Support:** Confirm that your operating system fully supports the 5-point capacitive touch input. While many systems are driver-free, some specific distributions or older versions might require additional setup.
- **Calibration:** If touch is erratic, try recalibrating the touch screen through your operating system's settings, if available.

9.3. Display Brightness Issues

- **Software Adjustment:** Adjust the brightness using the software controls within your operating system.
- **Environmental Factors:** Ensure the display is not exposed to direct sunlight or extremely bright ambient light, which can make the screen appear dim.

10. MAINTENANCE

Proper care and maintenance will extend the life and performance of your display.

- **Cleaning:** Use a soft, lint-free cloth to gently wipe the screen surface. For stubborn smudges, slightly dampen the cloth with water or a screen-safe cleaning solution. Avoid harsh chemicals, abrasive materials, or excessive moisture.
- **Handling:** Always handle the display by its edges. Avoid applying pressure directly to the screen surface.
- **Storage:** When not in use, store the display in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Environmental Conditions:** Operate the display within its specified temperature and humidity ranges to prevent damage.

11. WARRANTY & SUPPORT

For warranty information, technical support, or further assistance, please refer to the official Waveshare website or contact their customer service directly. Keep your purchase receipt for warranty claims.

Your browser does not support the video tag.

Video: An overview of the Waveshare 4.3-inch DSI QLED Display, showcasing its features and functionality.

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ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

