

VSDISPLAY K003187

VSDISPLAY 12.3 Inch 2K LCD Screen 2400x900 with USB-C LCD Controller Board User Manual

Model: K003187 | Brand: VSDISPLAY

1. INTRODUCTION

This manual provides detailed instructions for the setup, operation, maintenance, and troubleshooting of your VSDISPLAY 12.3 Inch 2K LCD Screen with USB-C LCD Controller Board. Please read this manual thoroughly before use to ensure proper functionality and to prevent damage to the product.

2. PRODUCT OVERVIEW

2.1. LCD Controller Board (VS-AP2K)

- **Input Power Adapter:** USB-C connector.
- **Input:** USB-C.
- **Output:** eDP USB (max 500mA).
- **Audio Output:** Speaker.
- **OSD (On-Screen Display) Functions:** Brightness, Contrast, Volume (+/-), Language, and more.
- **Supported OSD Languages:** English, Chinese, French, Deutsch, Italian, Espanol, Portugues, Turkce, Polski, Nederlands, Korean, Japanese.
- **Standby Mode:** Enters standby when no signal input, consuming less than 0.3W.
- **Board Size:** 60.8mm x 60.2mm x 4mm.

2.2. 12.3 Inch 2K LCD Screen (VS123T-01)

- **Display Mode:** ADS, Normally Black, Transmissive.
- **Resolution:** 2400(RGB)×900.
- **Outline Size:** 300 × 123.3 × 3.5 mm (H×V×D).
- **Display Area:** 291.6 × 109.35 mm (H×V).
- **Brightness:** 250 cd/m² (Typical).
- **Contrast Ratio:** 1500:1 (Typical) (TM).

- **Viewing Angle:** 85/85/85/85 (Typical) (CR≥10) [Left / Right / Up / Down].
- **Signal Interface:** Parallel LVDS (2 ch, 8-bit), 68 pins, FPC.
- **Backlight:** WLED.
- **Input Voltage:** 3.3V (Typical).

2.3. Key Features

- **Clear Display:** Vivid and clear 2400x900 resolution for an enhanced visual experience.
- **Lightweight & Thin:** Compact design for space-saving and easy installation.
- **Versatile Application:** Ideal for DIY projects, PC/laptop extension, custom PC cases, car displays, game monitors, or as a replacement panel.

3. SETUP INSTRUCTIONS

Follow these steps to correctly assemble and connect your VSDISPLAY LCD screen and controller board.

1. **Unpack Components:** Carefully remove all items from the packaging. Verify that all components listed in the packing list are present and undamaged.
2. **Connect LCD to Controller Board:** Gently connect the signal cable from the 12.3-inch LCD screen to the corresponding eDP port on the USB-C LCD Controller Board. Ensure the connection is secure and properly aligned.
3. **Connect Keyboard:** Attach the provided keyboard with its cable to the designated port on the controller board. This keyboard is used for OSD menu navigation.
4. **Power Connection:** Connect a USB-C power adapter (not included) to the USB-C input port on the controller board. The board requires 3.3V input.
5. **Connect to Source Device:** Use a USB-C cable to connect the controller board to your PC, laptop, or other compatible source device. The USB-C port on the controller board serves as both power input and signal input.

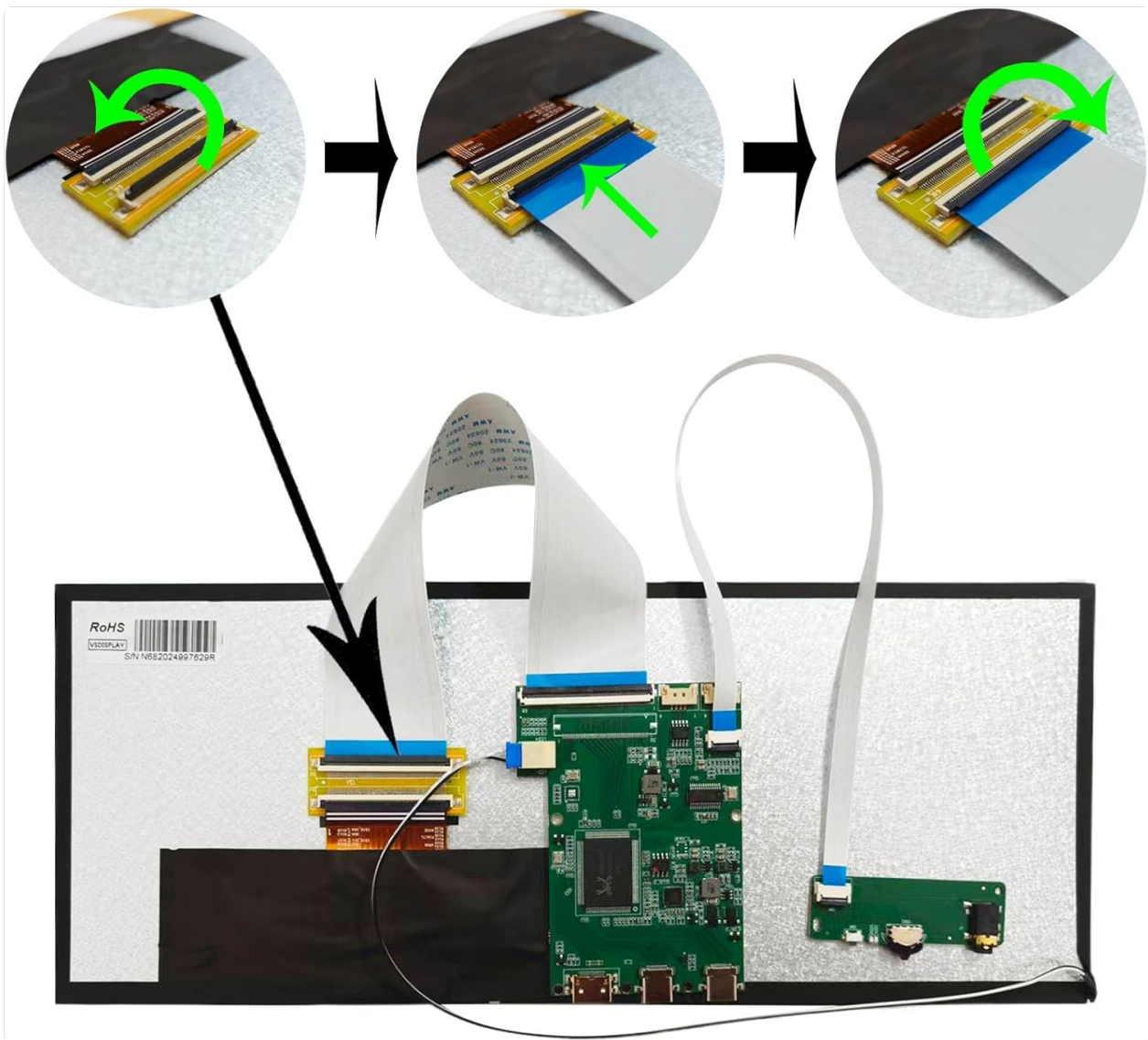


Figure 3.1: Connection diagram for the LCD screen, controller board, and keyboard. The image illustrates how to connect the ribbon cables from the LCD panel to the controller board and the keyboard to the controller board.

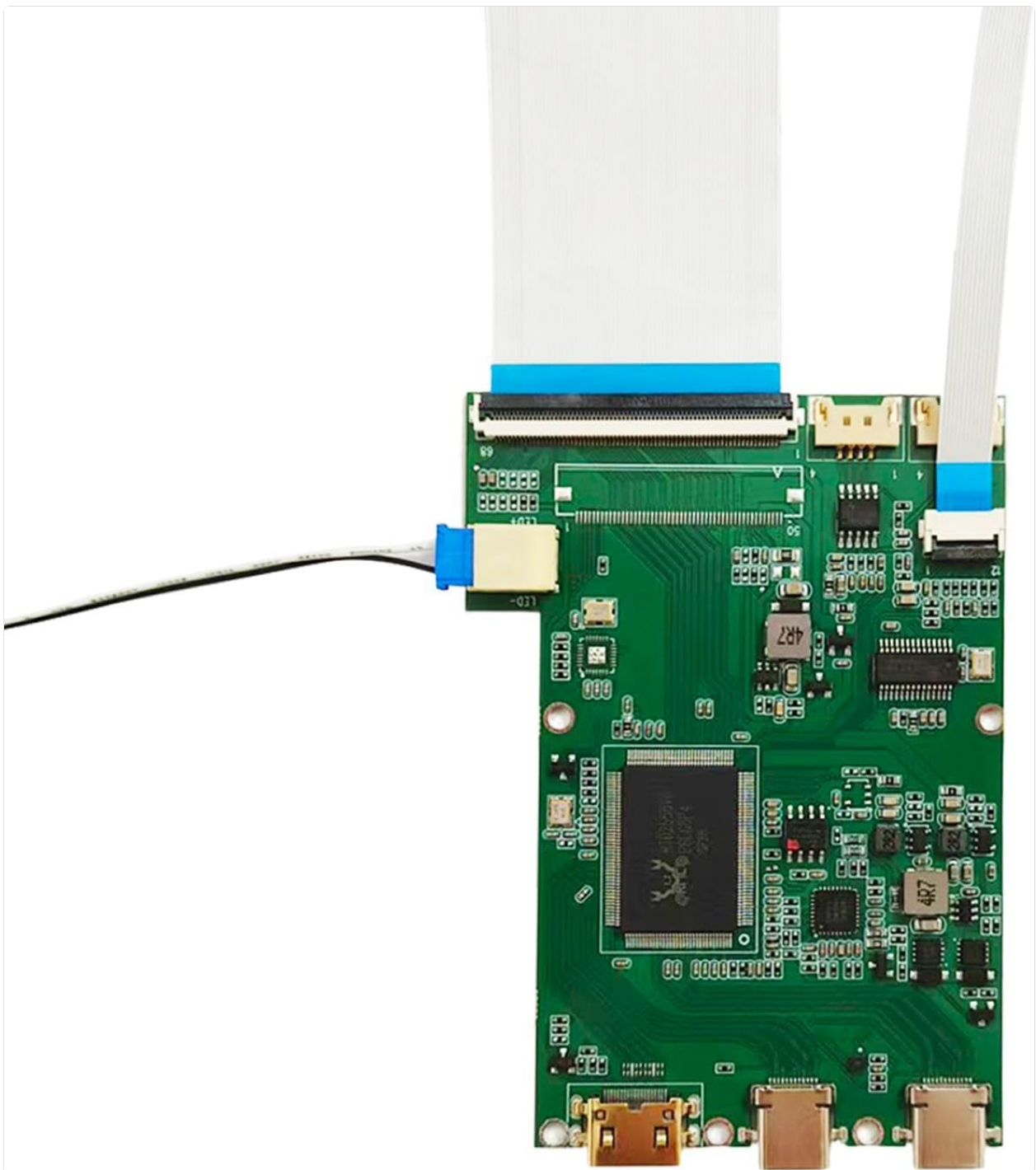


Figure 3.2: Front view of the VSDISPLAY USB-C LCD Controller Board, showing various ports and components, including the USB-C input.

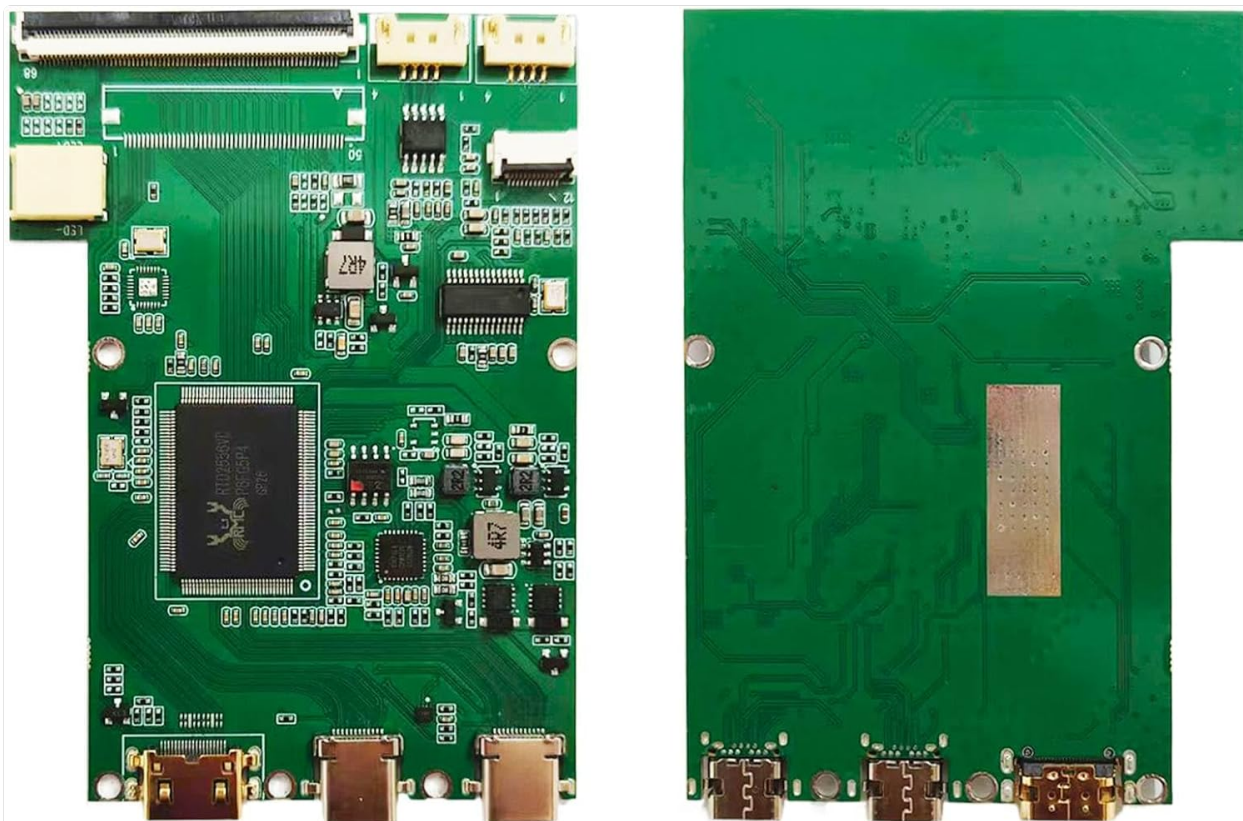


Figure 3.3: Front and back views of the VSDISPLAY USB-C LCD Controller Board, providing a comprehensive look at its design and layout.

4. OPERATING INSTRUCTIONS

4.1. Power On/Off

- The display will power on automatically when a USB-C power source is connected and a signal is detected.
- If no signal is detected, the board will enter a low-power standby mode.

4.2. OSD Menu Navigation

Use the connected keyboard to access and navigate the On-Screen Display (OSD) menu for various settings.

- **Menu Button:** Press to open the OSD menu.
- **Up/Down Buttons:** Navigate through menu options.
- **Left/Right Buttons:** Adjust values for selected options (e.g., Brightness, Contrast, Volume).
- **Exit Button:** Close the OSD menu.

4.3. Adjusting Settings

Within the OSD menu, you can adjust:

- **Brightness:** Control the overall luminance of the display.
- **Contrast:** Adjust the difference between the lightest and darkest areas of the image.
- **Volume:** Control the audio output level if external speakers are connected to the board.
- **Language:** Select your preferred language for the OSD menu.

5. MAINTENANCE

Proper care ensures the longevity and optimal performance of your display.

- **Cleaning the Screen:** Use a soft, lint-free cloth slightly dampened with water or a non-abrasive screen cleaner. Do not spray liquid directly onto the screen.
- **Cleaning the Controller Board:** Keep the controller board free from dust. Use a soft brush or compressed air. Do not use liquid cleaners on electronic components.
- **Handling:** The display panel and ribbon cables are delicate. Handle with extreme care to avoid bending or damaging the flexible printed circuits (FPC) and connectors. Avoid applying pressure to the screen surface.
- **Storage:** When not in use, store the components in a dry, dust-free environment, ideally in their original packaging or a protective enclosure.

6. TROUBLESHOOTING

If you encounter issues, refer to the following common problems and solutions.

- **No Display/Black Screen:**
 - Ensure the USB-C power adapter is correctly connected and providing sufficient power.
 - Verify that the USB-C signal cable is securely connected to both the controller board and the source device.
 - Check the signal output settings on your source device (PC/laptop) to ensure it is configured to output to an external display.
 - Confirm that the ribbon cables connecting the LCD panel to the controller board are properly seated and not damaged.
- **"USB-C not compatible with Windows" (as reported by some users):**
 - While the USB-C port is designed for signal input, some Windows systems may require specific drivers or configurations for display output over USB-C. Ensure your graphics drivers are up to date.
 - Test with another USB-C enabled device or operating system if possible to isolate the issue.
 - Consult your PC/laptop manufacturer's support for USB-C display output compatibility and driver information.
- **Image Distortion or Flickering:**
 - Check the signal cable for damage or loose connections.
 - Ensure the resolution and refresh rate settings on your source device are compatible with the display's specifications (2400x900).
 - Try adjusting the display settings via the OSD menu.
- **No Audio:**
 - Verify that external speakers are correctly connected to the audio output port on the controller board.
 - Check the volume settings in the OSD menu and on your source device.
 - Ensure the audio output is directed to the USB-C display in your source device's sound settings.

If problems persist after attempting these solutions, please contact VSDISPLAY customer support for further assistance.

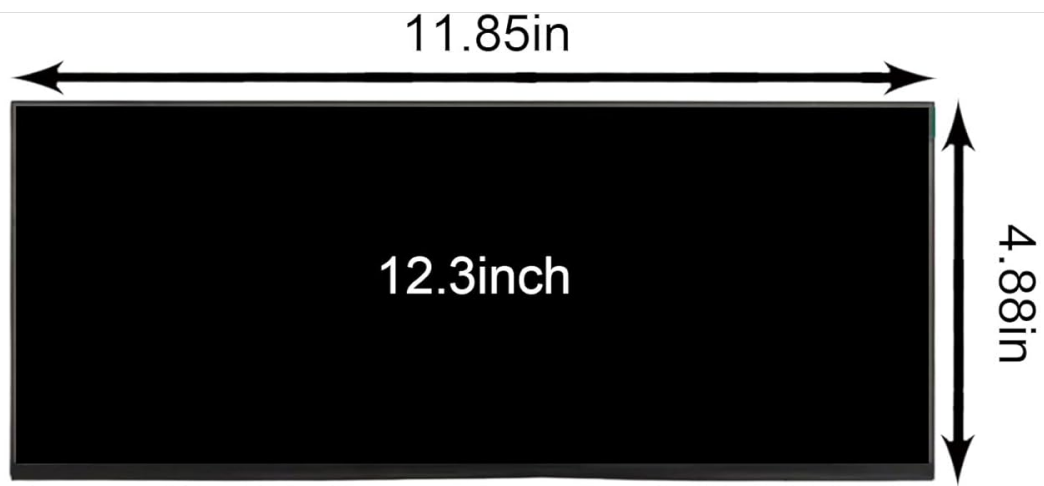
7. SPECIFICATIONS

Feature	Specification
Model Number	K003187
Screen Size	12.3 Inches
Resolution	2400x900 Pixels
Display Mode	ADS, Normally Black, Transmissive
Outline Size (H×V×D)	300 × 123.3 × 3.5 mm
Display Area (H×V)	291.6 × 109.35 mm
Brightness	250 cd/m ² (Typical)
Contrast Ratio	1500:1 (Typical)
Viewing Angle	85/85/85/85 (Typ.) [Left / Right / Up / Down]
Signal Interface	Parallel LVDS (2 ch, 8-bit), 68 pins, FPC
Backlight	WLED
Input Voltage (Screen)	3.3V (Typical)
Controller Board Input	USB-C
Controller Board Output	eDP USB (max 500mA)
Controller Board Audio Output	Speaker
Controller Board Size	60.8mm x 60.2mm x 4mm
Product Dimensions	0.14 x 4.85 x 11.81 inches
Item Weight	1.52 pounds
Screen Surface Description	Glossy

8. PACKING LIST

The following items are included in your package:

- 1 × USB-C LCD Controller Board (VS-AP2K)
- 1 × 12.3 inch VS123T-01 2400x900 2K LCD Screen
- 1 × Signal Cable
- 1 × Keyboard With Cable



Shipping list

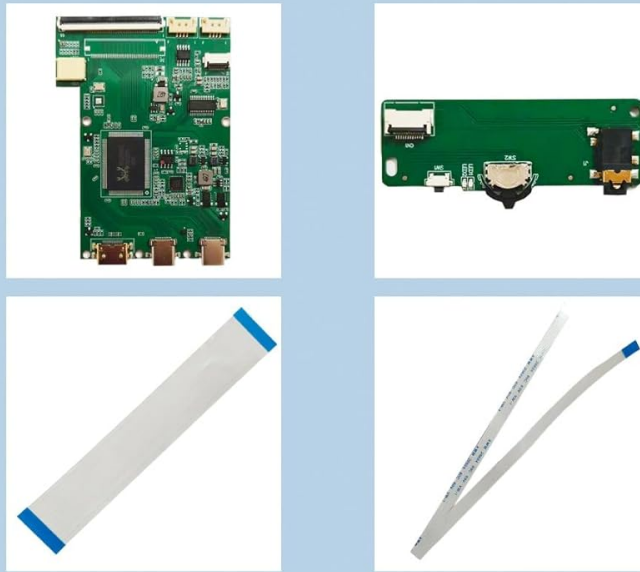


Figure 8.1: Visual representation of the items included in the packing list, including the controller board, LCD screen, signal cable, and keyboard.

9. WARRANTY AND SUPPORT

VSDISPLAY products are tested before packaging and shipment to ensure quality.

- **Product Support:** If you encounter any problems with your product, please feel free to contact VSDISPLAY customer support.
- **Warranty Information:** For detailed warranty terms and conditions, please refer to the documentation provided with your purchase or contact VSDISPLAY directly.