WAVESHARE 8DP-CAPLCD 8 Inch Capacitive Touch LCD IPS Display Instruction Manual

8DP-CAPLCD 8 Inch Capacitive Touch LCD IPS Display Instruction Manual

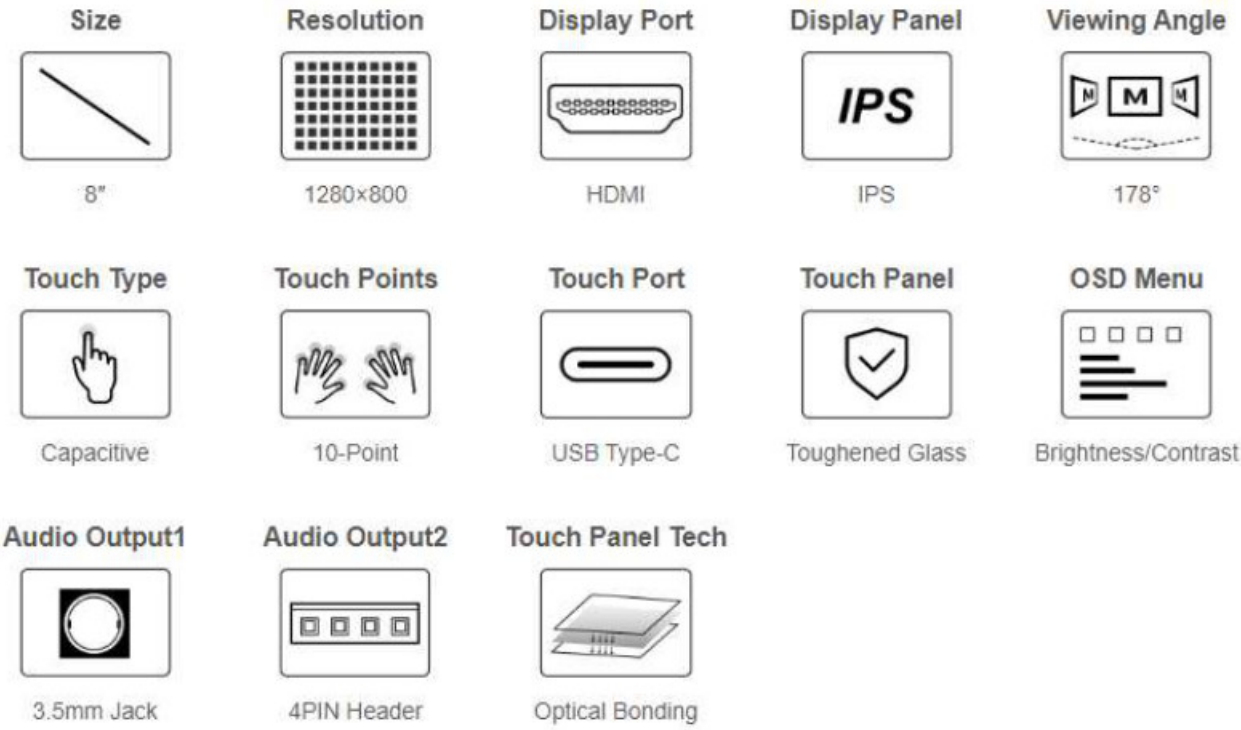
Contents

Overview

Introduction
8DP-CAPLCD is a mini universal capacitive touch screen with HD resolution and is compatible with most standard HDMI devices.
As it is thin and light with toughened glass capacitive touch panel, 8DP-CAPLCD is excellent in display and has a smooth multi-touch effect.
The baseboard comes with fixed nuts, which enables users to integrate it into an all-in-one project more conveniently.
Features

- 8-inch IPS screen with a hardware resolution of 1280 x 800.
- 10-point capacitive touch, with tempered glass panel, hardness up to 6H.

- Adopting optical bonding touch technology, the display effect is better.
- Supports Raspberry Pi OS / Ubuntu / Kali and Retropie when used with Raspberry Pi.
- Supports Windows 11 / 10 / 8.1 / 8 / 7 when used as a computer monitor.
- Support multi-language OSD menu (can be used for power control, adjusting brightness/contrast, etc.)
- Support HDMI audio output, onboard 3.5mm headphone jack, and 4PIN speaker jack.



Parameters

Item	Description	Unit
Model	8DP-CAPLCD	/
Size	8	Inch
Viewing Angle	178	Deg
Resolution	1280 x 800	Pixels
Touch screen dimensions	194.00 (H) × 119.00 (V) × 2 (D)	mm
Display dimensions	114.66 (H) × 184.16 (V) × 2.6 (D)	mm
Display area	107.64 (H) × 172.22 (V)	mm
Pixel pitch	0.13455 (H) × 0.13455 (V)	mm
Color gamut	62%	NTSC
Maximum brightness	400	cd/m²
Contrast	1200:01:00	/
Backlight adjustment	OSD menu dimming	/
Refresh Rate	60	Hz
Display port	Standard HDMI port	/
Power port	5V Type-C power supply	/
Power Consumption	4	Watt
Weight	406	g

Electrical Specifications

Parameter	Minimum Value	Standard	Maximum Value	Unit	Note
Input Voltage	4.75	5	5.25	V	Note 1
Input Current	750	800	TBD	mA	Note 2
Operating Temperature	0	25	60	℃	Note 4
Storage Temperature	-10	25	70	℃	Note 4

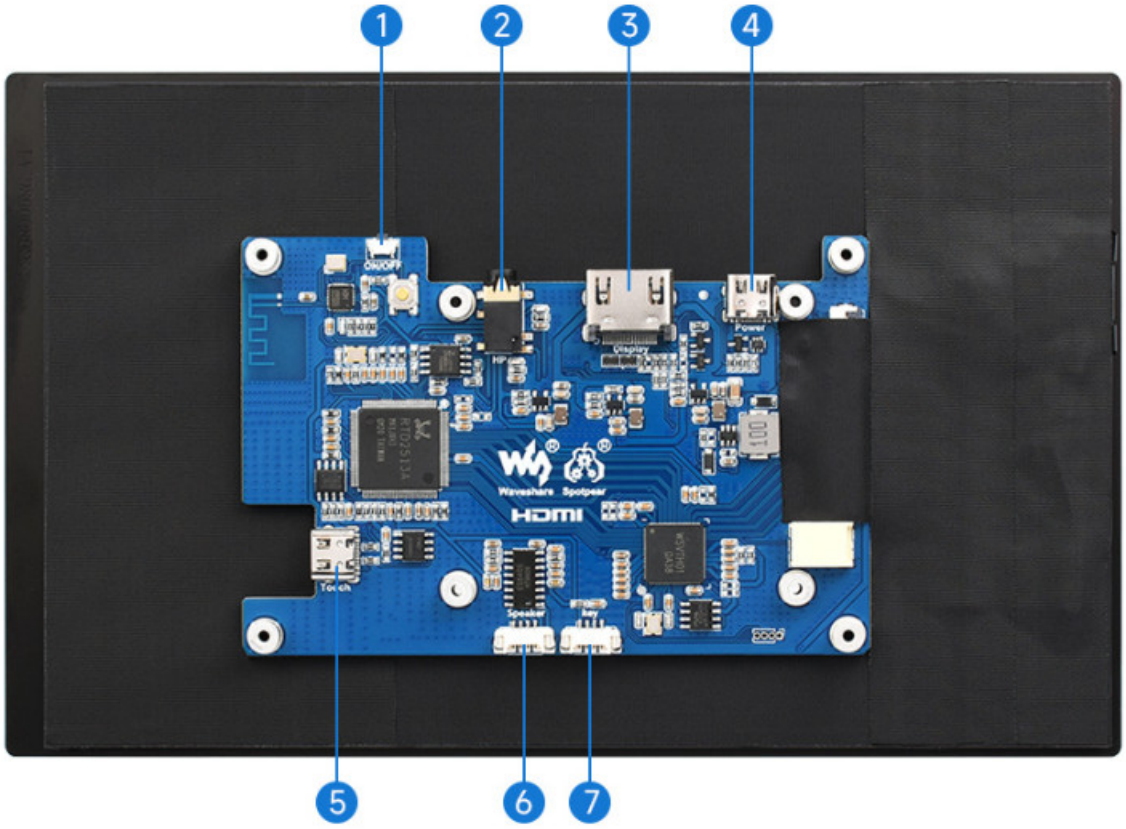
- **Note** 1: Input voltage exceeding the maximum value or improper operation may cause permanent damage to the device.
- **Note** 2: The input current must be ≥750mA, otherwise, it will cause startup failure or abnormal display, and it may cause permanent damage to the device if it is in an abnormal state for a long time.
- **Note** 3: Please do not store the display in a high-temperature and high-humidity environment for a long time. The display must work within the limited value range, otherwise, the display may be damaged.

EDID Sequence Parameter

If the system of the main control board can automatically identify the EDID for display, there is no need to additionally set related sequence parameters.
Otherwise, you can refer to the following EDID settings:

Pixel Clock	H Addressable	H Blanking	V Addressable	V Blanking	H Front Porch	H Sync Width	V Front Porch	V Sync Width	H Image Size	V Image Size	H Border	V Border
77	1280	232	800	56	160	32	20	6	294	165	0	0

Interface Introduction



1. Backlight ON/OFF
2. Audio Jack
3. HM! Port
4. Power Supply
5. Touch Port OSpeaker Header
6. Button Board Header

User Guide
Working With Raspberry Pi
Hardware Connection

1. Connect the Touch port to the USB port of the Raspberry Pi.
2. Connect the HDMI port to the HDMI port of the Raspberry Pi.

Software Setting

Support Raspberry Pi OS/Ubuntu/Kali and Retropie system.
When LCD works with the Raspberry Pi systems, you must set the resolution manually. Otherwis
e, the resolution will be wrong and it will affect your experience.

1. Please download the latest image in the **official Raspberry Pi website** .
2. Download the compressed file on the PC and unzip it to get the ".img" file.
3. Connect the TF card to the PC and use **SDFormatter** to format the TF card.
4. Open Win32DiskImager.zip , select the system image prepared in the first step, and click "write" to program the system image.
5. After programming, you can open the "config.txt" file in the TF card root directory. Add the following code at the end of "config.txt", save it and then safely remove the TF card.
6.

```
hdmi_group=2
hdmi_mode=87
hdmi_cvt 1280 800 60 6 0 0 0
hdmi_drive=1
```

Insert the TF card into the Raspberry Pi, power on the Raspberry Pi, and wait for a few seconds for a normal display.

Linux Software Brightness Adjustment
Using the DDC/CI program, here is an example of the ddcutil tool .

```
#Install ddcutil tool:
sudo apt-get install ddcutil -y
#Detect DDC/CI monitor support:
sudo ddcutil detect
#Adjust monitor brightness, <value> should be modified to 0-100
sudo ddcutil setvcp 10 <value>
```

For more information about ddcutil function commands, please **click here** .
Working With PC
Support Windows 11/10/8.1/8/7
How To Use

1. Connect the Touch port of the LCD to the USB port of the PC, and Windows will automatically identify the touch function.
2. Connect the HDMI port of the LCD to the HDMI port of the PC, and Windows will automatically identify the display function.

   • **Note:**

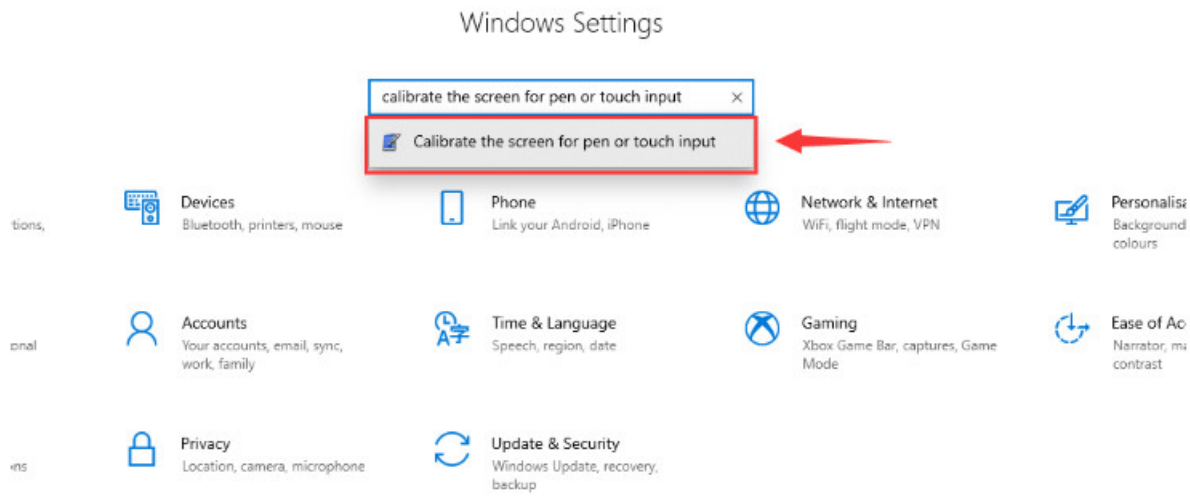
   • Some PCs do not support the plug-and-play function of the HDMI device, but it can be used normally after restarting the system.

   • If the power supply of the USB port is insufficient, the LCD will flicker. After connecting an external 5V 1A power adapter to the Power interface of the LCD, it can be operated normally.

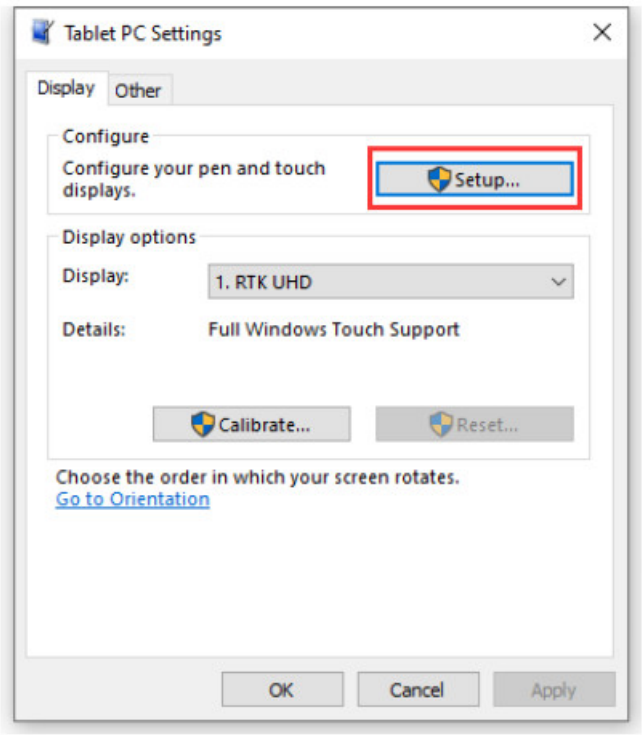
Windows Touch Calibration

Take Windows 10 as an example:

1. Enter the Windows settings of the system, type in the search bar and click “Calibrate the screen for pen or touch input” (as shown in the picture below):
2.



Click “Setup” in the pop-up “Tablet PC Settings” interface:

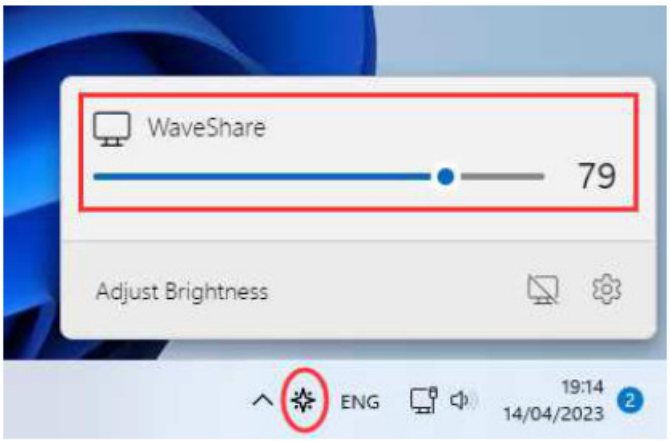


3. The following text prompt will appear on the screen. Please tap the touch screen with your finger, and the computer will recognize it as a touch screen.

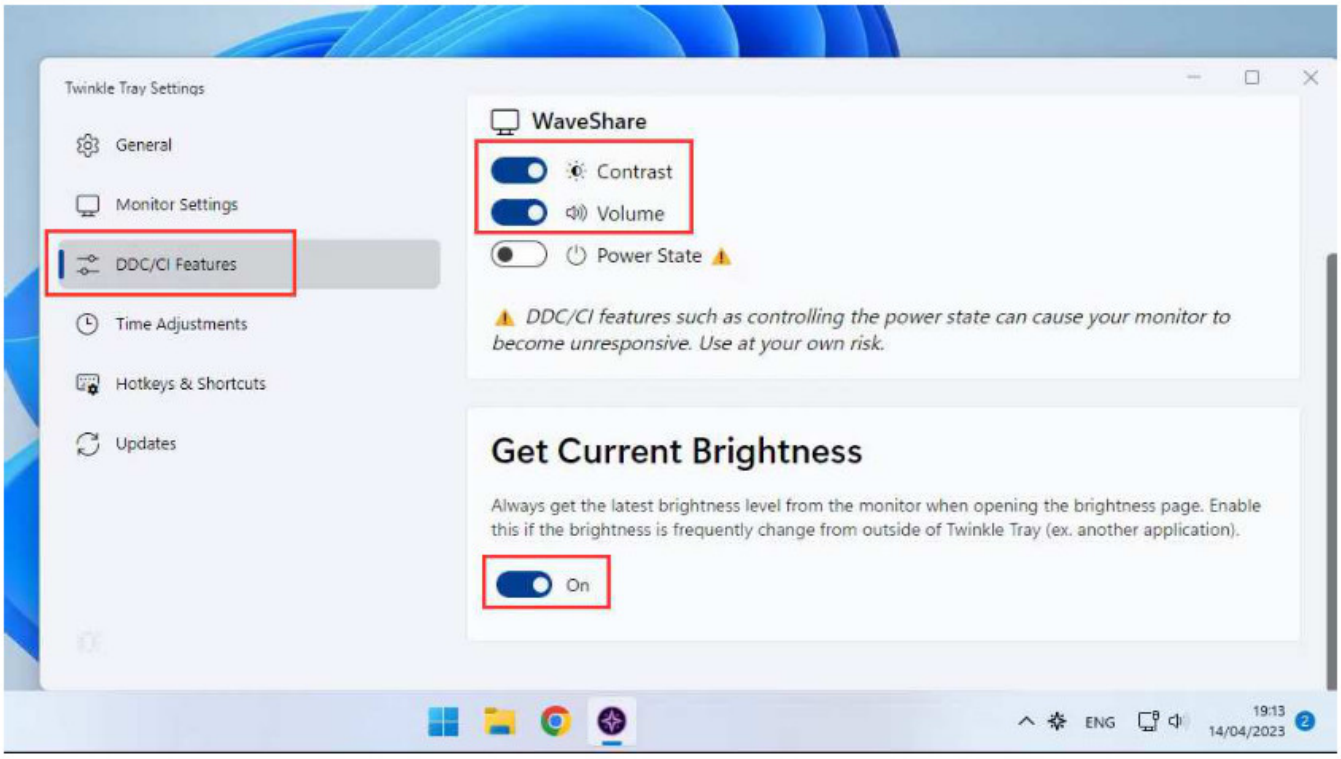
   Note If the touch screen is blank, press the “Enter” key, and the text prompt will switch to the touch screen. (The screen which displays the text prompt will be used as a touch screen!)

Tap this screen with a single finger to identify it as the touchscreen.
If this is not the Tablet PC screen, press Enter to move to the next screen. To close the tool, press Esc.

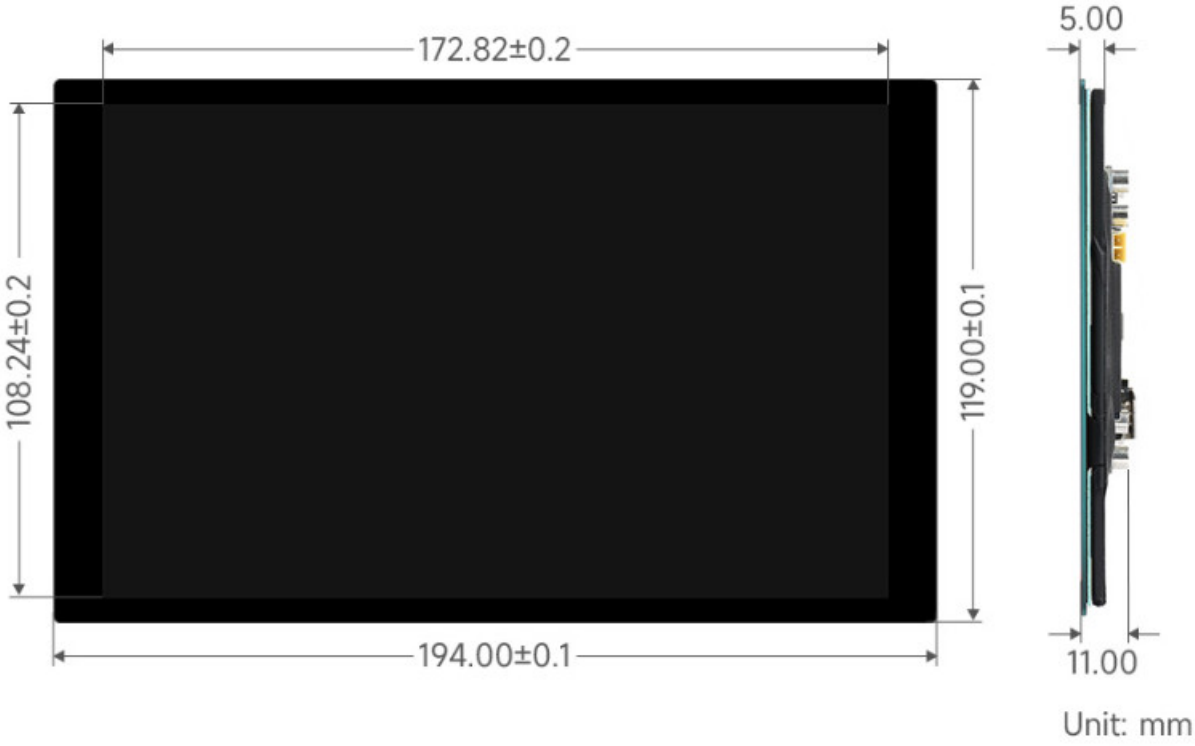
Windows Software Brightness Adjustment

1. Download and install DDC/CI applications, such as the open-source **Twinkle Tray** .
2. Open the software dimming icon, it will recognize the Waveshare monitor and adjust the monitor backlight brightness by sliding the scroll bar.
3. 

   You can also enter the DDC/CI application settings screen to enable contrast adjustment, volume adjustment, and other functions.



Outline Dimensions



Resources

3D Drawing
8DP-CAPLCD 3D Drawing
Support
If you require technical support, please go to the Resources
3D Drawing
8DP-CAPLCD 3D Drawing
Support
If you require technical support, please go to the **Support** page and open a ticket. page and open a ticket.

WAVESHARE

Documents / Resources

[WAVESHARE 8DP-CAPLCD 8 Inch Capacitive Touch LCD IPS Display] [pdf] Instruction Manual

8DP-CAPLCD, 8DP-CAPLCD 8 Inch Capacitive Touch LCD IPS Display, 8 Inch Capacitive Touch LCD IPS Display, Capacitive Touch LCD IPS Display, Touch LCD IPS Display, LCD IPS Display, IPS Display, Display

References

- ddcutil Documentation
- Command Overview - ddcutil Documentation
- Twinkle Tray: Brightness Slider for Windows
- Operating system images – Raspberry Pi
- Log in - Waveshare Wiki
- File:8DP-CAPLCD 90.jpg - Waveshare Wiki
- File:8DP-CAPLCD010.png - Waveshare Wiki

- File:8DP-CAPLCD10.jpg - Waveshare Wiki
- File:8DP-CAPLCD110.png - Waveshare Wiki
- File:8HP-CAPLCD Monito03.png - Waveshare Wiki
- File:8HP-CAPLCD Monitor04.png - Waveshare Wiki
- File:Win10 touch011.png - Waveshare Wiki
- File:Win10 touch02.png - Waveshare Wiki
- Waveshare Wiki
- User Manual