Waveshare 10.4HP-CAPQLED Quantum Dot Display User Guide

10.4HP-CAPQLED

1600×720
Raspberry Pi, Jetson Nano, PC
HDMI, USB

Contents

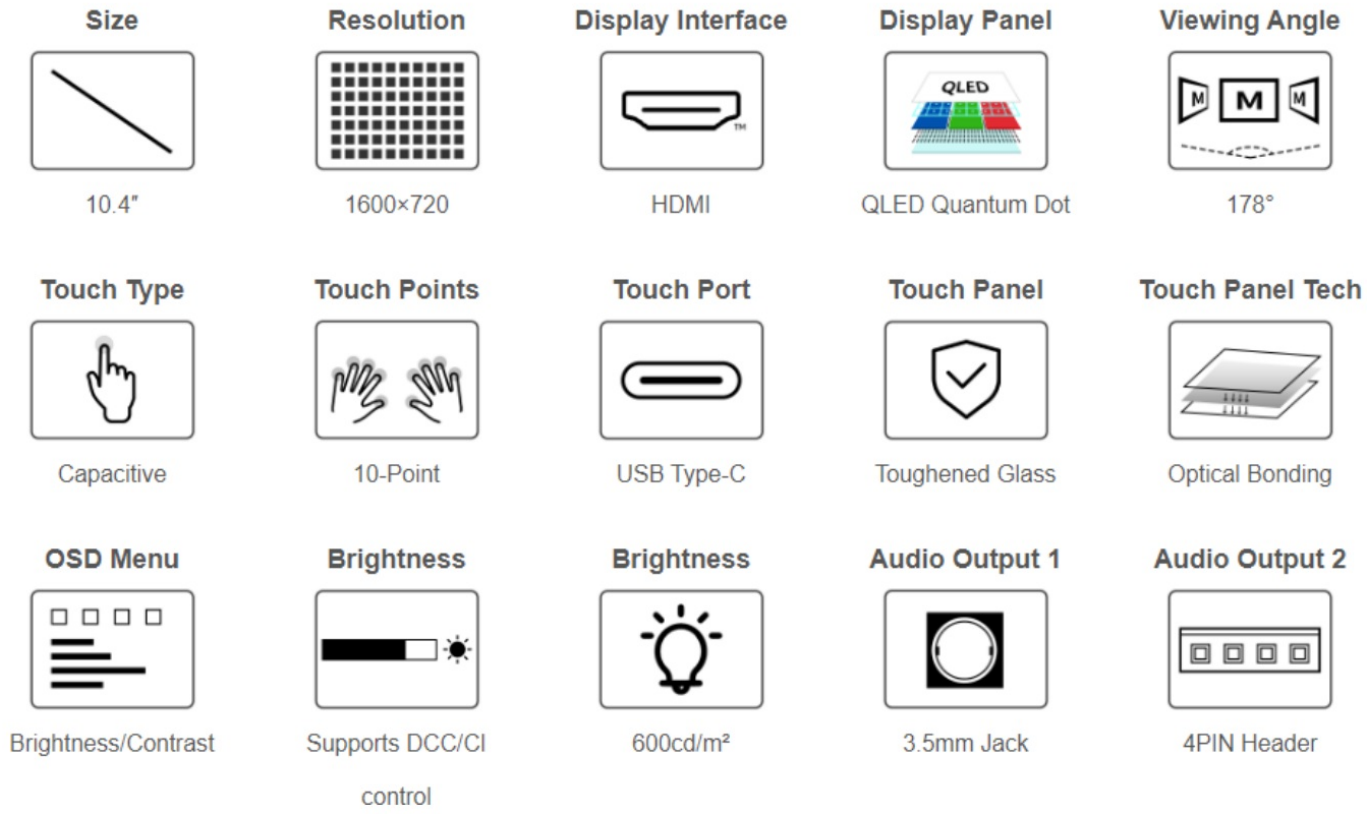
Overview

I Introduction

The 10.4HP-CAPQLED is a small, high-resolution universal capacitive touch screen compatible with most standard HDMI devices.
Featuring a small, thin body, toughened glass panel, excellent display performance, and smooth multi-touch effect.
The baseboard comes with its own fixing nuts for integrated projects.

Features

- 10.4-inch QLED screen with 1600×720 hardware resolution.
- 10-point capacitive touch with up to 6H hardness toughened glass panel
- Optical bonding technique for better display.
- 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.
- Multi-language OSD menu support (can be used for power control, adjusting brightness/contrast, etc.)
- Supports HDMI audio output, onboard 3.5mm headphone jack, and 4PIN header.



Specification

Item	Description	Unit
Model	10.4HP-CAPQLED	/
Dimensions	10.	Inch
Viewing angle	178	Deg
Resolution	1600×720	Pixels
Touch screen dimensions	260.00(H)x120.00(V)x1.45(D)	mm
Display screen dimensions	237.6(H)x106.92(V)x4.53(D)	mm
Display area	106.92(W)x237.6(H)	mm
Pixel pitch	0.0528(H)x0.1536(V)	mm
Color gamut	94%	NTSC
Brightness (Max)	600	cd/m2
Contrast	1000	/
Backlight	OSD menu dimming	/
Refresh rate	60	Hz
Display interface	Standard HDMI port	/
Power port	5V Type-C interface	/
Power consumption	4.2	Watt
Weight	337	g

Electrical Parameters

Parameter	Min. Value	Standard Value	Max. Value	Unit	Note
Input Voltage	4.75	5.00	5.25	V	Note 1
Input Current	800	850	TBD	mA	Note 2
Operating Temperature	0	25	60	°C	Note 3
Storage Temperature	-10	25	70	°C	Note 3

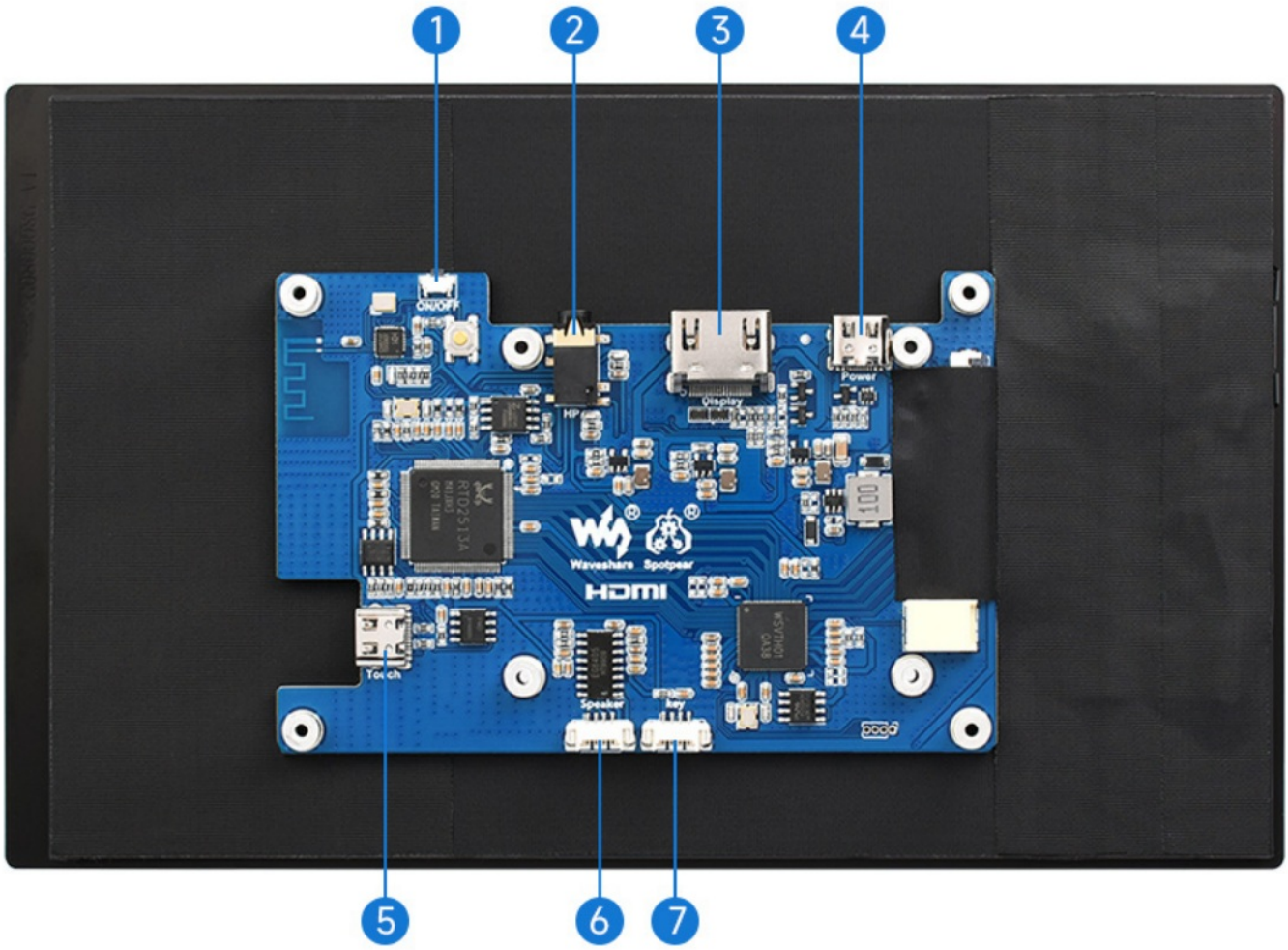
- **Note** 1: Input voltage exceeding the maximum value or improper operation may cause permanent damage to the device.
- **Note** 2: The input current should be >800mA, otherwise it will lead to start-up failure or abnormal display, and a long time in an abnormal state may cause permanent damage to the device.
- **Note** 3: Please do not put the display in a high temperature and high humidity storage environment for a long time, the display needs to work within the limit value, otherwise it will be possible to damage the display.

EDID Sequence Parameters

If the system of the main control board can automatically identify the EDID for display, there is no need to set the relevant timing parameters additionally.
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 W dth
89.00	1600	320	720	65	180	32	10	10

Onboard Interface



1. Backiight ON/OFF
2. Audio Jack
3. HDMI Port
4. Power Supply
5. Touch Port
6. Speaker Header
7. Button Board Header

User Manual
Working with Raspberry Pi
Hardware Connection

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

Software Setting

Raspberry Pi OS / Ubuntu / Kali and Retropie systems are supported for Raspberry Pi.
When the LCD works on these systems of Raspberry Pi, the resolution must be set manually, ot herwise, it will result in incorrect display resolution and affect the experience.

1. Please download the newest image from 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 **SDFormattere** to format the TF card.
4. Open **Win32DiskImager**, choose the image prepared in the first step, and click “Write” to program the system image.
5. After programming, open the config.txt file in the root directory of the TF card and enter the following codes at the end of config.txt. Then, save and safely eject the TF card.
   hdmi_group=2
   hdmi_mode=87
   hdmi_timings=1600 0 80 32 112 720 0 30 3 33 0 0 0 60 0 87000000 0
6. Insert the TF card into the Raspberry Pi, power up the Raspberry Pi, wait for a few seconds normally and then it will display normally.

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 **heret**.
Working with PC
Support Windows 11/10/8.1/8/7
How to use:

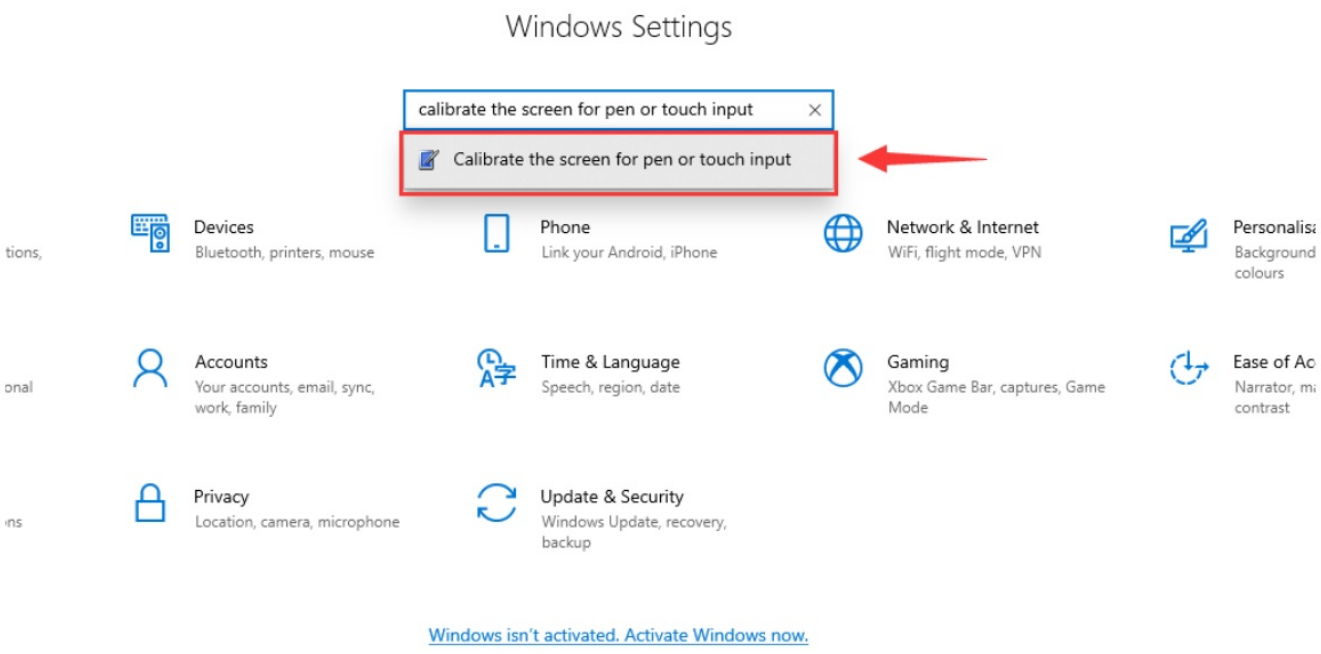
1. Connect the Touch port of the LCD to the USB interface of the PC, and Windows will automatically recognize the touch function.
2. Connect the HDMI interface of the LCD to the HDMI interface of the PC, and Windows will automatically recognize the display function.

- Note:
- Some PCs do not support HDMI devices plug-and-play, usually after rebooting the system can be used normally.
- If the power supply of the USB interface is insufficient, the LCD will flicker, after connecting the external 5V 1A power adapter to the LCD's Power interface, it can be restored to normal use.

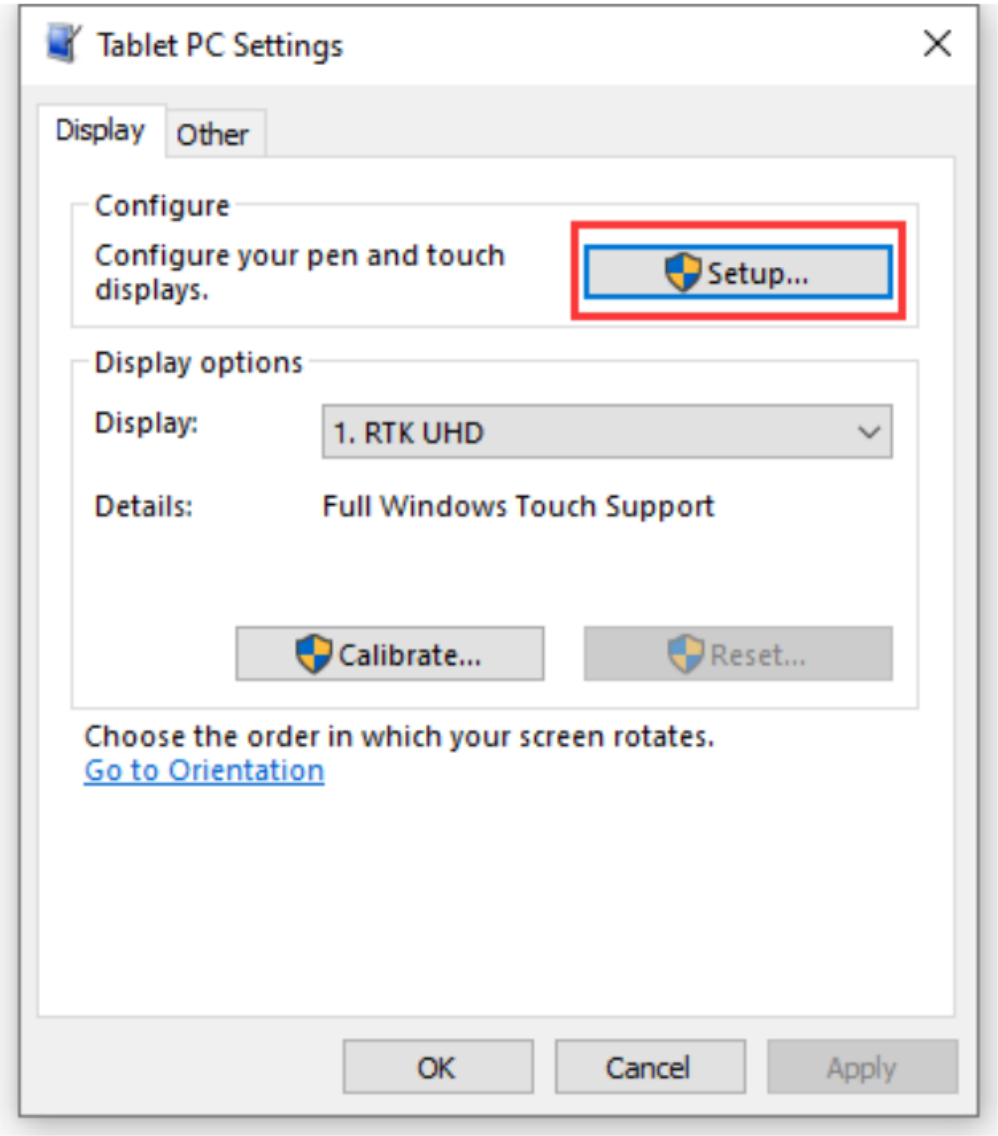
Windows Touch Calibration

Take Windows 10 as an example:

- 1. Enter the Windows setting 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:



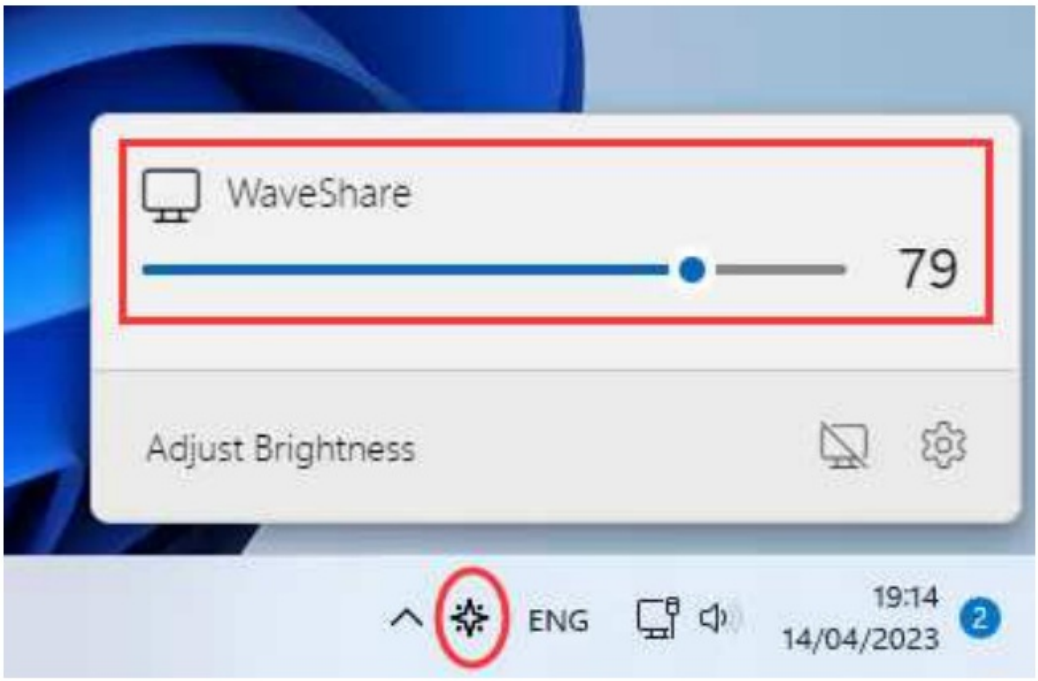
- 3. The following text prompt will appear on the screen. Please tap the touch screen with your finger, and the computer will recognize it as a touch screen.

[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!)

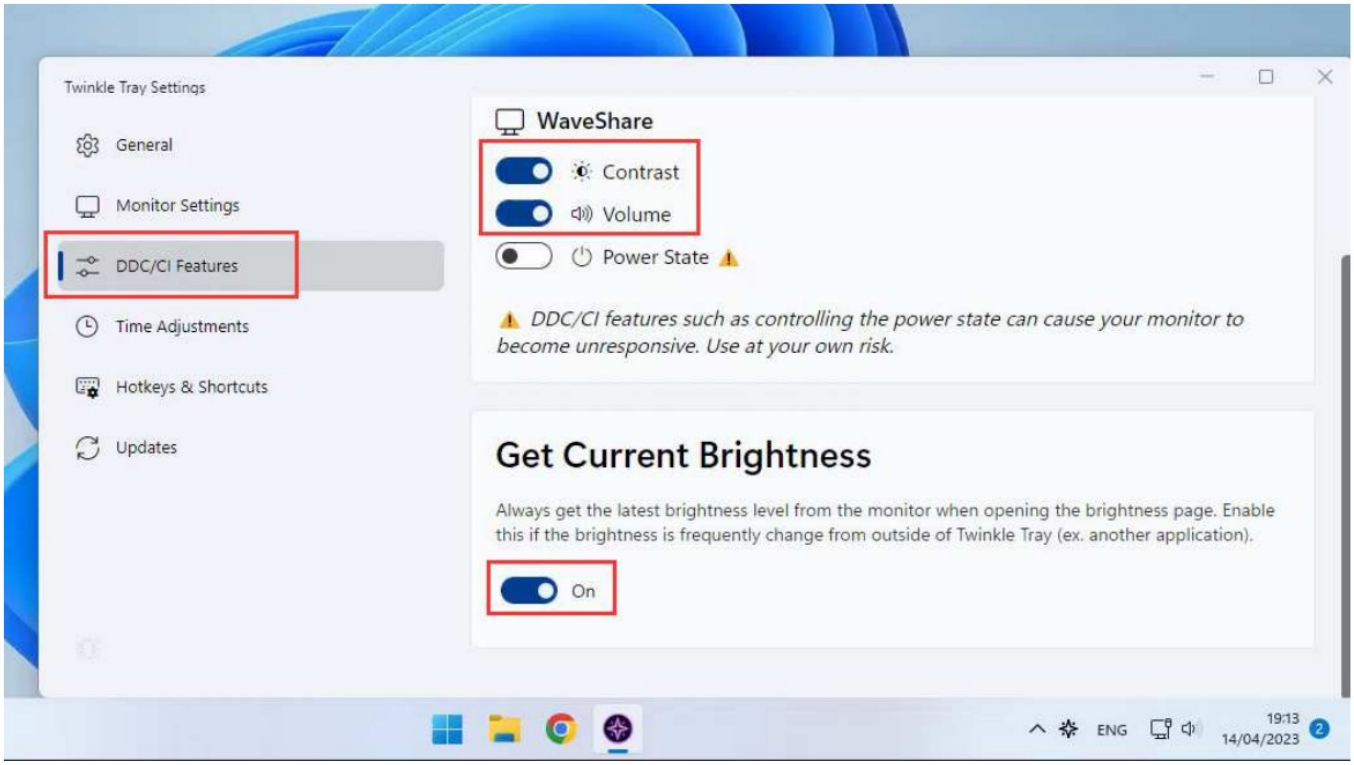
Tap this screen with a single finger to identify it as the touchscreen.
If this is not the Tablet PC screen, press Enter to move to the next screen. To close the tool, press Esc.

Windows Software Brightness Adjustment

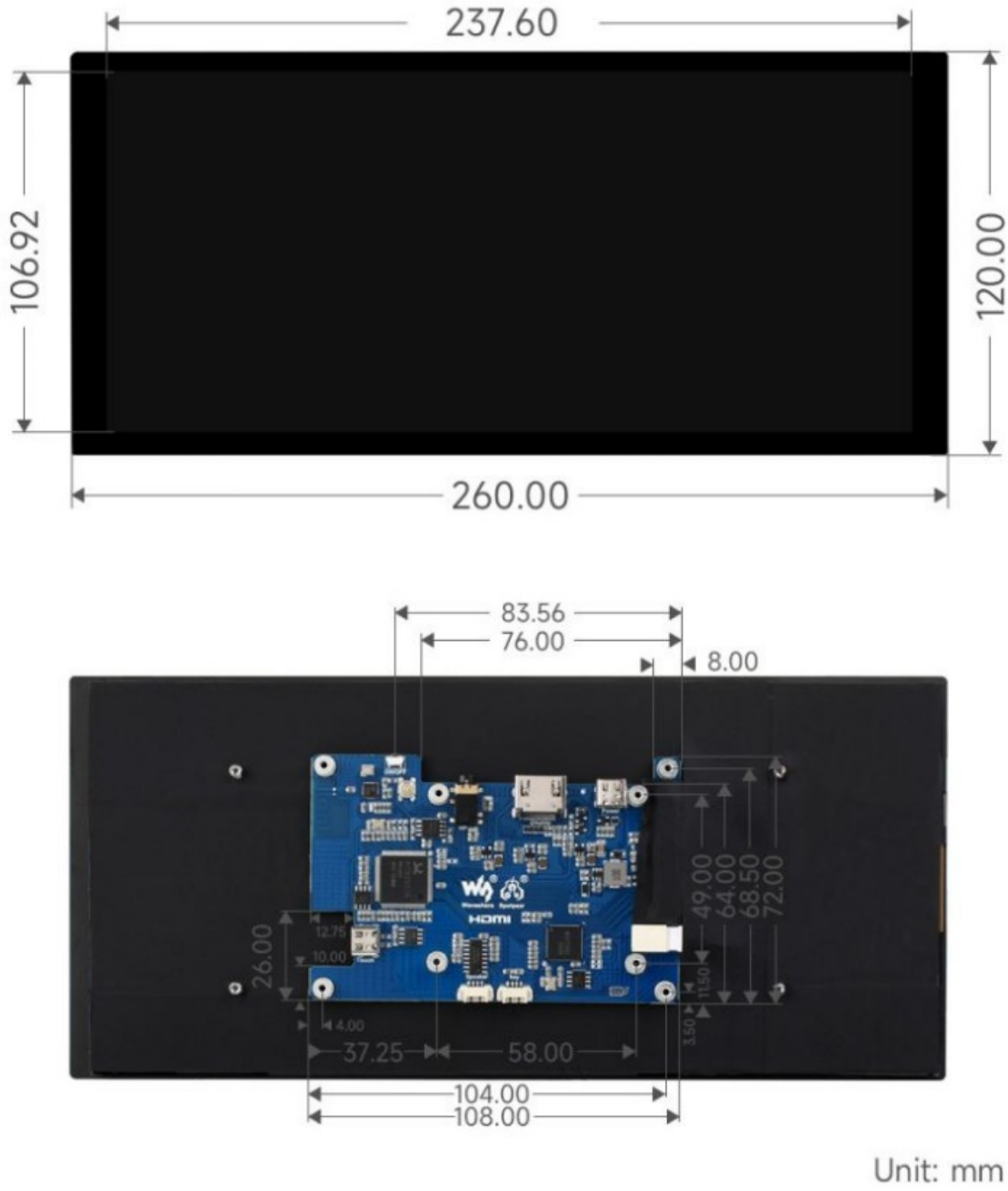
- 1. Download and install DDC/CI applications, such as the open-source Twinkle Tray.
- 2. Open the software dimming icon, it will recognize the Waveshare monitor and adjust the monitor backlight brightness by sliding the scroll bar.



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



Dimensions



Support
If you require technical support, please go to the page and open a ticket.

Documents / Resources

[Waveshare 10.4HP-CAPQLED Quantum Dot Display] [pdf] User Guide
10.4HP-CAPQLED Quantum Dot Display, 10.4HP-CAPQLED, Quantum Dot Display, Dot Displa y, Display

References

- User Manual

Manuals+, Privacy Policy

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