SMART DISPLAY MODULE SPECIFICATION

10.1 Inch Smart Display with TOUCH	
Model:	DX80480050-HMD-RB-A
Version:	V1.1
Date:	2024-11-04

Customer Confirmation

Approved by	Notes

REVISION HISTORY

Revision	Date	Contents of Revision Change	Remark
V1.0	20240528	Preliminary release	
V1.1	20241104	Convert to English version	

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1. Introduction

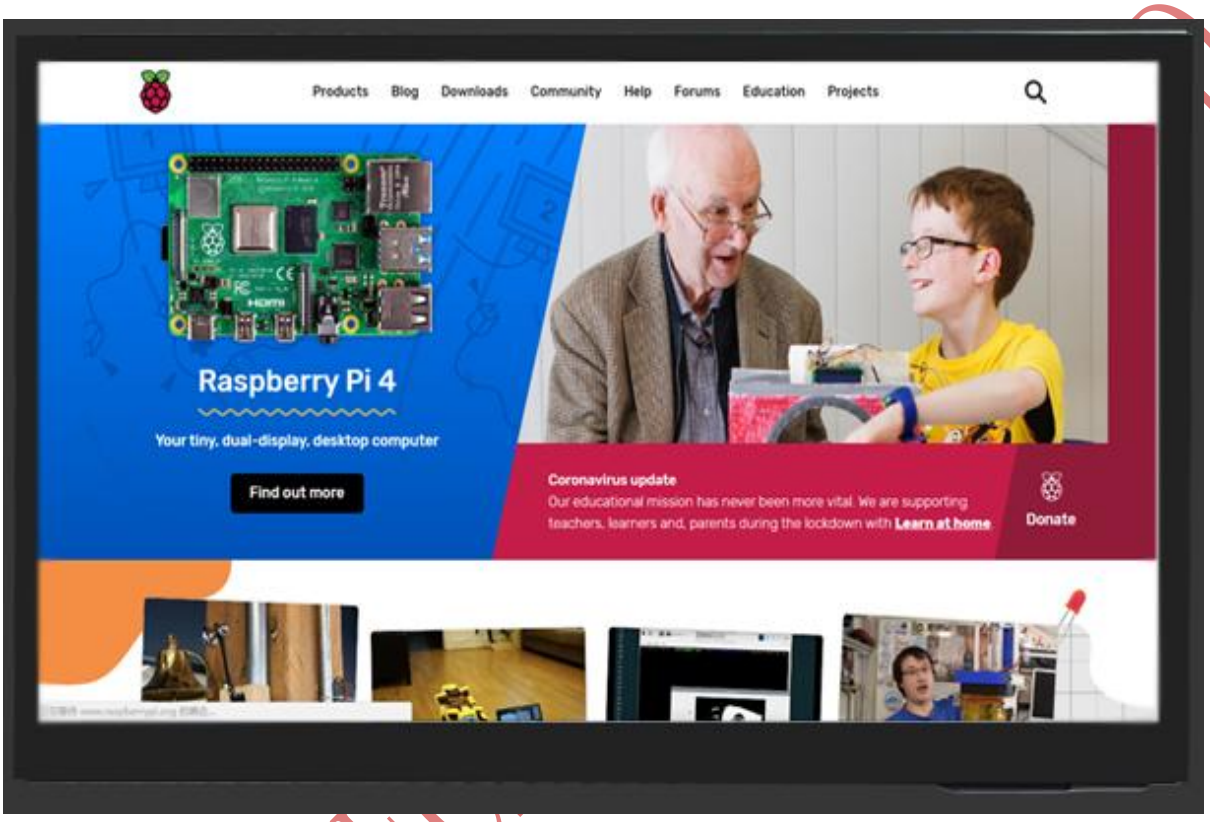
1.1 Features

1) 5 - inch standard display with a hardware resolution of 1024*600
2) Support audio output. Stereo dual - speaker outputs shocking sound quality, and there is a 3.5 - mm audio output interface.
3) With capacitive touch screen, supporting 5 - point touch control and USB touch, driver - free.
4) Built - in OSD menu adjustment function (can adjust contrast/brightness/power on/off, etc.).
5) Compatible with mainstream mini PCs such as Raspberry Pi, BB Black, and Banana Pi.
6) When used as a Raspberry Pi display, it supports systems like Raspbian, Ubuntu, and WIN10IOT, with single - point touch control and is driver - free.
7) When used as a computer display, it supports Windows 7/8/8.1/10 with five - point touch control and is driver - free.
8) Supports common game consoles such as Microsoft Sony PS4, XBOX360, and Nintendo.
9) This product has passed CE and ROHS certifications.
10) main control chip：RTD2660H
    a) Embedded 3 DDC with DDC1/2B/CI
    b) Zoom scaling up and down
    c) Embedded one MCU with SPI flash controller.
    d) It contains 8 ADCs in D-connector,LED backlight,and key pad application
    e) It supports infrared remote function
    f) Require only one crystal to generate all timing.

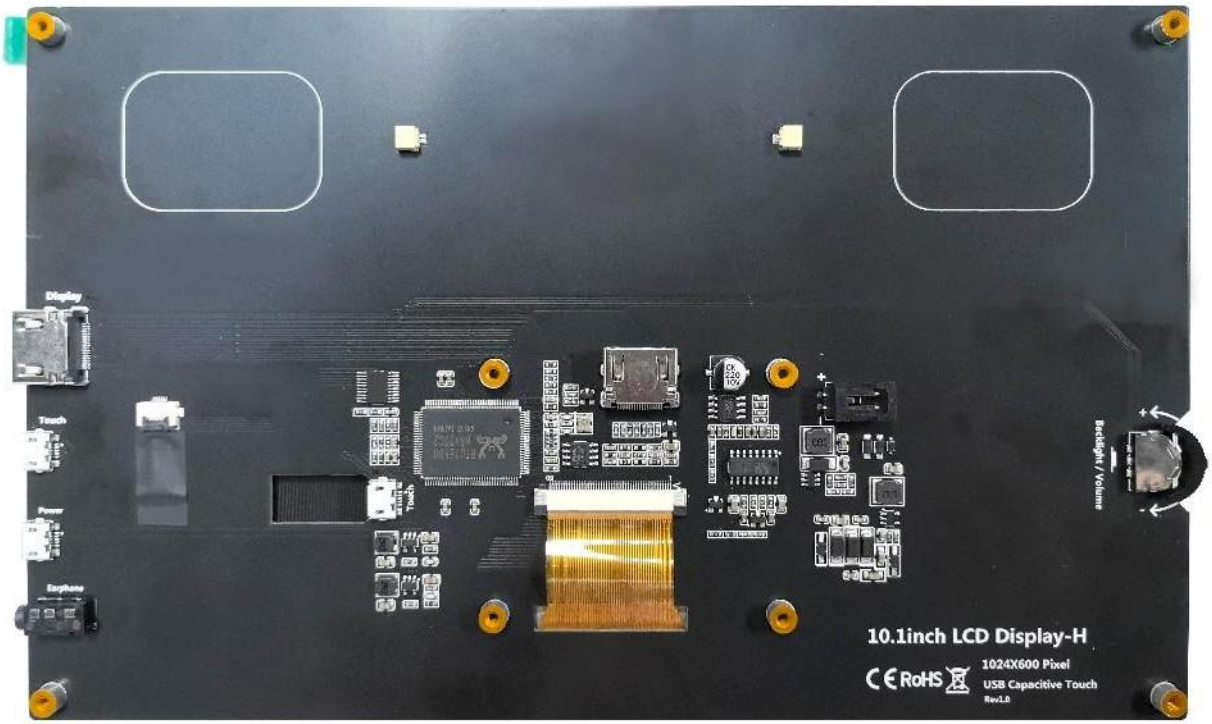
g) Programmable internal low-voltage-reset (LVR)

h) High resolution 6 channels PWM output, and wide range selectable PWM frequency.

i) Support input format up to 1920(WUXGA)/1440-pixel width(option)



1.2 Appearance picture



1.3 Hardware Description

① HDMI interface: Input HDMI signals. Connect using an HDMI cable. It is commonly used to connect to a computer, and the maximum supported resolution is 1920x1080.

② Touch interface: Transmit touch signals. Connect using a Micro - USB cable. It provides touch and power supply functions and is often used to connect to a computer.

③ Power interface: Connect to a power source. Connect using a Micro - USB cable and only provides power supply function.

④ 3.5 - mm audio output interface: Output audio signals and connect to audio output devices, such as headphones.

⑤ Stereo dual - speakers: Large sound chambers, output shocking sound quality.

⑥ Touch interface: Transmit touch signals. Connect using a Micro - USB adapter. Only used to connect to a Raspberry Pi, providing touch and display power supply functions.

⑦ HDMI interface: Input HDMI signals. Connect using an HDMI adapter. Only used to connect to a Raspberry Pi, and the maximum supported resolution is 1024x600.

⑧ Cooling fan interface: Connect to a cooling fan.

⑨ SMT copper posts x 8: Used to connect the Raspberry Pi and the bracket.

⑩ Rotary wheel switch: Used to adjust the volume level and backlight brightness level. By default, turning it up is volume +, and turning it down is volume -. Press it once to enter the backlight brightness adjustment menu. Press it again to enter the volume adjustment menu. Press it once more to close the menu.

2. Operating Instructions

2.1 Using in Raspberry Pi Raspbian/Ubuntu Mate/Win10 IoT Core System

Step 1: Install the official image

A. Download the latest image from the official website.

B. Install the system according to the official tutorial steps.

Step 2: Modify the config.txt configuration file. After the burning in step 1 is completed, open the config.txt file in the root directory of the Micro SD card and add the following code at the end of the file. Save and safely eject the Micro SD card.

```
hdmi_force_edid_audio=1
max_usb_current=1
hdmi_force_hotplug=1
config_hdmi_boost=7
hdmi_group=2
hdmi_mode=87
hdmi_drive=2
display_rotate=0
hdmi_timings=1024 1 200 18 200 600 1 50 3 50 0 0 0 60 0 51200000
3
```

Note: Raspberry PI official 2021-10-30 system, also comment out dtoverlay=vc4-kms-v3d (modified to #dtoverlay=vc4-kms-v3d)

Step 3: Insert the Micro SD card into the Raspberry Pi, connect the HDMI cable between the Raspberry Pi and the LCD, connect one of the 4 USB ports of the Raspberry Pi with the USB cable, and connect the other end of the USB cable to the USB port of the LCD. Then power on the Raspberry Pi. If the display and touch are normal, it indicates that the driver is installed successfully.

2.2 How to Use as a Computer Monitor

Step 1: Use an HDMI cable to connect the computer's HDMI output signal to the HDMI interface of the LCD.

Step 2: Connect one end of the MicroUSB cable (either of the two MicroUSB ports can be used) to the USB Touch interface of the LCD and the other end to the USB port of the computer.

If there are multiple monitors, please unplug the interfaces of other monitors first and test this LCD as the only monitor.

3. Performance & Parameters

3.1 Voltage & Current

Item	Conditions	Min	Typ	Max	Unit
Power Voltage	Normal temperature		5		V
Operation Current		-	500	-	mA
Recommended Working Power Supply: USB 5V 1A					

3.2 Reliability Test

Item	Conditions	Min	Typ	Max	Unit
Working Temperature	At 5V voltage, humidity 60%	-10	25	65	C
Strage Temperature	-	-40	25	100	C
Working Humidity	25° C	10%	60%	90%	RH

4. Sipping List

1) High - definition 1024×600 10 - inch HDMI Display ×1
2) HDMI cable×1
3) USB cable ×1
4) Loudspeaker ×1
5) Copper pillar package (4PCS) ×1

5. Mechanical Drawing