

Elecrow Limited

**RR040I 4 inch HD 800x480 Resolution IPS
TFT Touch Screen Display for Raspberry Pi**

Part Number:DIS10204D
Customer:_____

Date:_20250120_____

Version: V1.0.0

CONTENTS

1.Description.....	2
2.Features.....	6
3.Specifications.....	7
4.Interface Function.....	8
5.Usage.....	10

1. Description

4.0-inch IPS small monitor, supports HDMI-compatible input, refresh rate up to 60FPS. The physical resolution is 800x480. Compatible with and can be directly inserted into all versions of Raspberry Pi motherboards. With HDMI-compatible interface, used to connect the mainboard and LCD display for HD transmission. Support Raspbian/Ubuntu Mate/Kali/RetroPie system. It can be used as a Raspberry Pi monitor with touch control (need to install touch driver) and a standard HD output device for computer display (no touch function). Connect Raspberry Pi with GPIO, support backlight brightness adjustable.

Model : DIS10204D

Support Multiple Systems



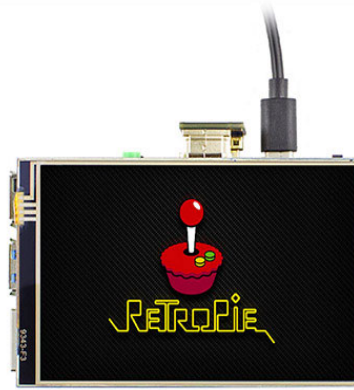
Raspbian



Ubuntu

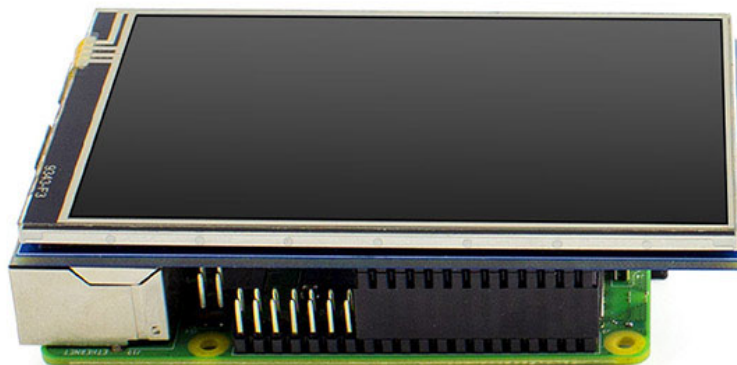


Kali



RetroPie

Connect Raspberry Pi with GPIO



Note: Not included Raspberry Pi

HD interface to connect the main board
and LCD display for HD transmission



Note: Not included Raspberry Pi



***When working with Raspberry Pi 4,
for the system image of Raspberry Pi after 2021-10-30,
for example on Bullseye, please modify "dtoverlay =vc4-kms-
v3d" to "dtoverlay =vc4 -fkms-v3d" in the config file,
otherwise it may fail to start. But on Buster, please commen
t out "dtoverlay =vc4-fkms-V3D" by adding #.**

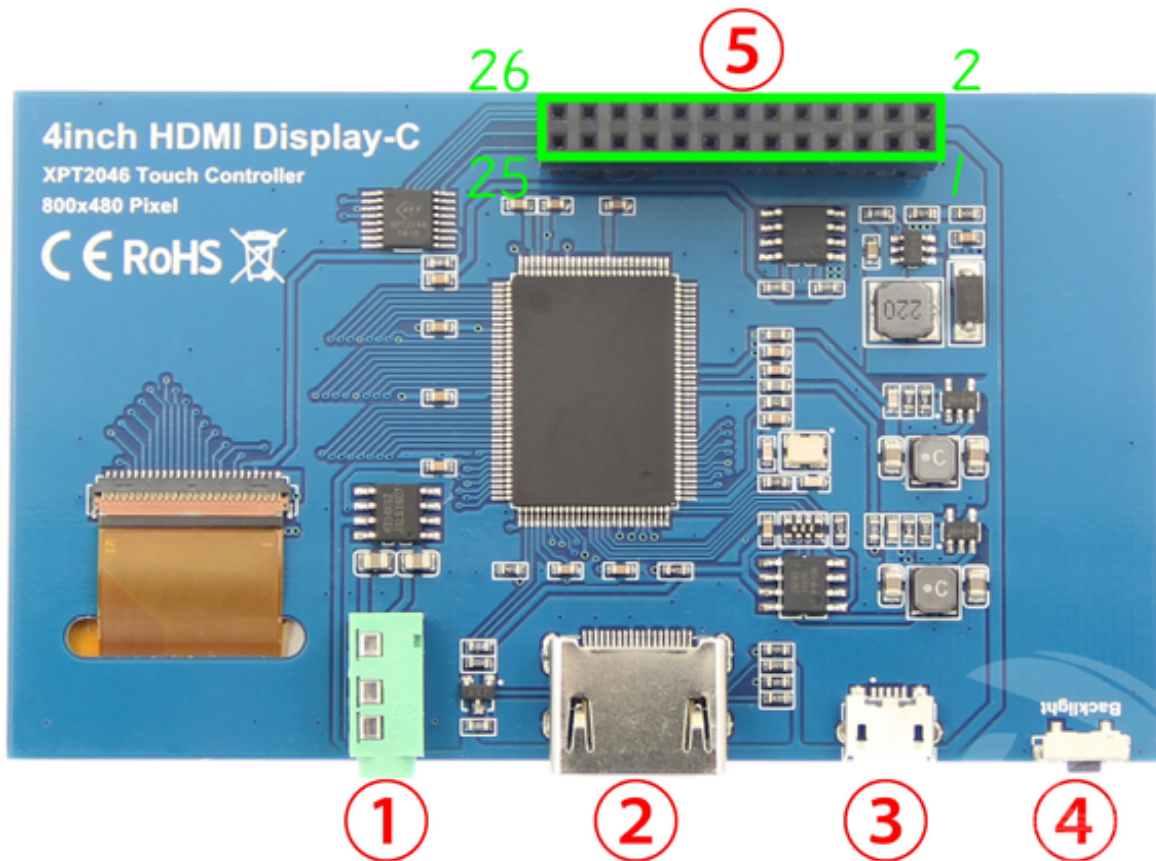
2.Features

- Raspberry Pi monitor with touch control (need to install touch driver)
- It can be used as standard HDMI output device for computer display (no touch function)
- Compatible with and can be directly inserted into all versions of Raspberry Pi motherboard (Raspberry Pi 1 generation B and Zero need additional HDMI cable)
- Compatible with Raspberry Pi A, B, A+, B+, and Pi 2/3/4/5 versions.
- Support HDMI audio output, backlight brightness adjustable.

3. Specifications

- Model:RR040IScreen
- Size:4inch
- Resolution: 800*480 (Pixel)
- LCDType:TFT
- ModuleInterface:HDMI-compatibleinterface • TouchScreenController :XPT2046
- LCDDriverIC:NT35510
- Backlight:LED
- Powerconsumption:0.16A*5V
- USBcablefor5V/1Apower
- Workingtemperature () :-20~70
- BacklightLifespan : 50000h
- ModulePCBSize:98.60*58.05(mm)
-
-

4.Interface Function



①3.5mm Head phone Jack:Output audio signal.

②HDMI : Used to connect the mainboard and LCDdisplay for HDMI transmission.

MicroUSB : Get 5V Power from USB,If ⑤-13*2Pin Socket has been connected that this USB interface can be No Connect.

④ Backlight adjustment button:

Short press backlight change 10%,

long press a few seconds to close backlight; short press to open backlight.

⑤ 13*2 Pin Socket : Get +5V Power from raspberry Pi to LCD at the same time transfer touch signal back to Raspberry Pi.

13*2 Pin Socket interface definition:

Pin	Name	Description
1、 17	3.3V	Power supply + 3.3V
2、 4	5V	Power supply +5V
3、 5、 7、 8、 10、 11、 12、 13、 15、 16、 18、 24	NC	NC
6、 9、 14、 20、 25	GND	GND
19	TP_SI	SPI data input of touch panel
21	TP_SO	SPI data output of touch panel
22	TP_IRQ	The touch panel is interrupted and the low level is detected when the touch panel is pressed down
23	TP_SCK	Touch the SPI clock signal of the panel
26	TP_CS	Touch panel select signal, low level select touch panel

5. Usage

Step1 : Install Raspbian official image

1) Please download the image of the latest version from RaspberryPi's website : <https://www.raspberrypi.org/downloads/raspbian/>

2) Download the compressed file to your PC and unpack it to get the .img file.

3) The TF card is connected to the PC and formatted using the “ SDFormatter ” software.

4) Open the “ Win32DiskImager ” software, select the system image prepared in step 1) and click write to burn the system image.

5) Insert the TF card into the RaspberryPi.

6) Connect to RaspberryPi



As shown in the figure, connect the LCD module to the Raspberry Pi

Step2: Install the LCD driver

Install drivers in the Raspbian system

(Raspberry Pi requires Internet connection)

1) Log on to the Raspberry Pi terminal (User: pi; Password: raspberry)

2) Execute the following command

(copy and paste it by right-clicking on the Putty window):

```
sudo rm -rf LCD-show<br></br>
git clone https://github.com/goodtft/LCD-show.git
chmod -R 755 LCD-show
cd LCD-show/
sudo ./MPI4008-show
```

3) Wait for a moment after executing, the system will restart automatically. If the LCD can be normally displayed and touched, the installation of the driver is successful.

B. Use with Ubuntu, Kali or RetroPie official image

A. Install Ubuntu, Kali or RetroPie official image

1) Please download the image of the latest version from the following websites. Ubuntu: <https://ubuntu-mate.org/>

Raspberry Pi/RetroPie: <https://retropie.org.uk/download/>

Kali: <https://www.offensive-security.com/kali-linux-arm-images/>

2) Download the compressed file to your PC and unpack it to get the .img file.

3)The TF card is connected to the PC and formatted using the “ SDFormatter ” software.

4)Open the “ Win32DiskImager ” software,select the system image prepared in step1)and click write to burn the system image.

5)Insertt he TF card into the RaspberryPi.

6)Connect to RaspberryPi.

B.Install the LCD driver

Due to system differences,Ubuntu,Kali,RetroPie are temporarily unable to install drivers online.

Only the offline installation method can be used.

1)Download local drivers "LCD-show.tar.gz" (Note:if the version does not match,the LCD may not display properly)

Kali-2019.1-Drivers (seeattachment)

Ubuntu-18.04-Drivers (seeattachment)

RetroPie-Pi2-Pi3-Drivers (seeattachment)

RetroPie-Pi1-ZERO-Drivers (seeattachment)

2)Copy "LCD-show.tar.gz" to the Raspberry Pi system.

3)Log on to the Raspberry Pi terminal,Execute the following command.

```
tar -xvzf LCD-show.tar.gz
chmod -R 755 LCD-show
cd LCD-show/
sudo ./MPI4008-show
```

4)After the installation of the LCD driver is completed, the system will restart automatically.If the LCD can be normally displayed and touched,the installation of the driver is successful.3:Use as PCMonitor

1)Connected the computer HDMI output to the LCD HDMI interface by HDMI cable.

2)Power to Micro USB interface

3)If you have multiple monitors,please pull the other displayer,and make this LCD as the only displayer for testing.

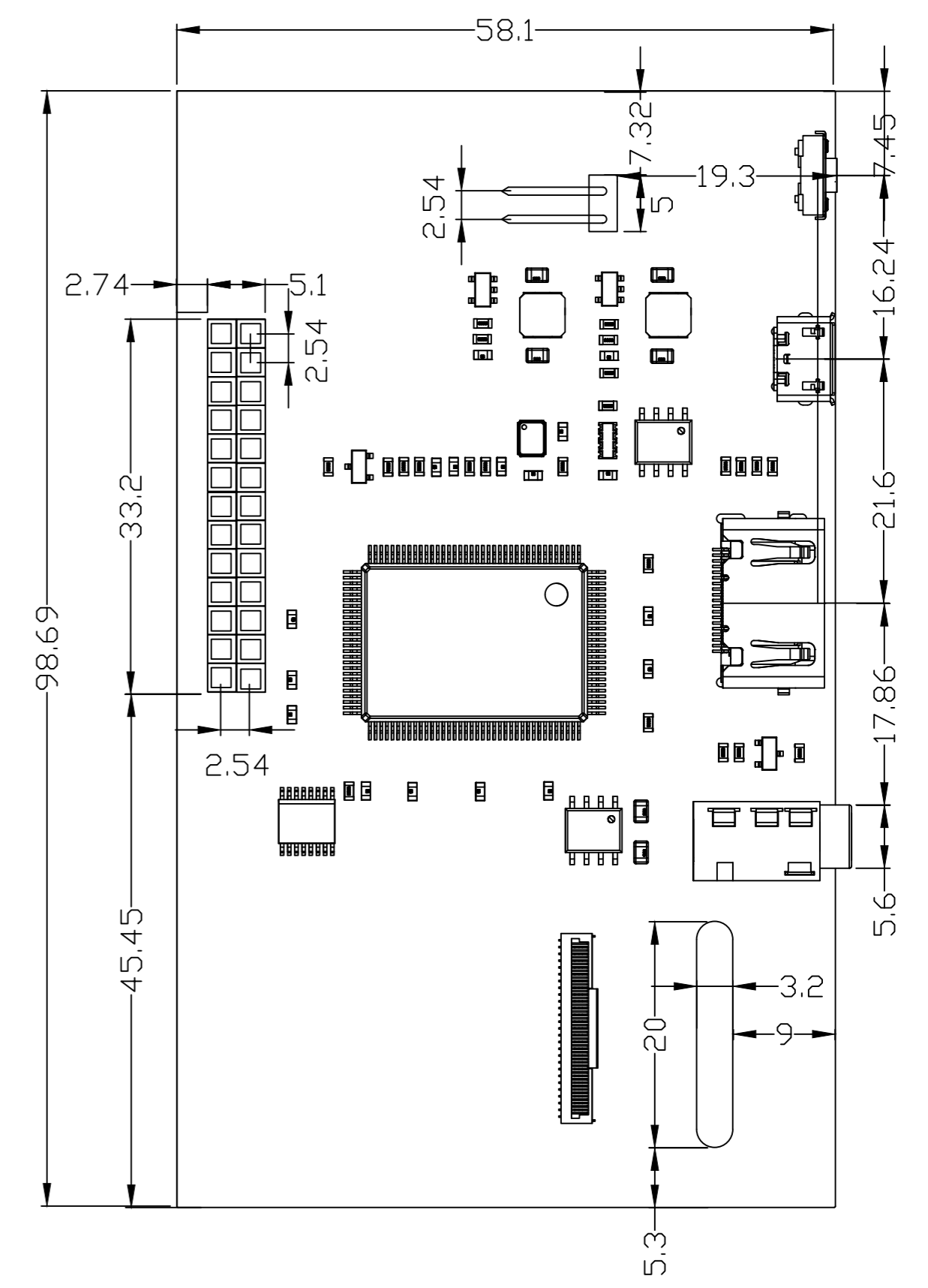
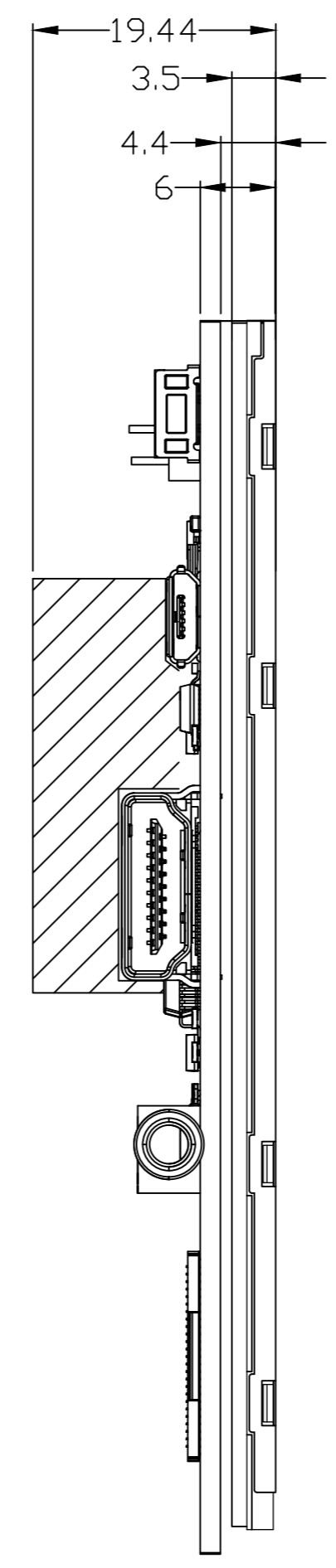
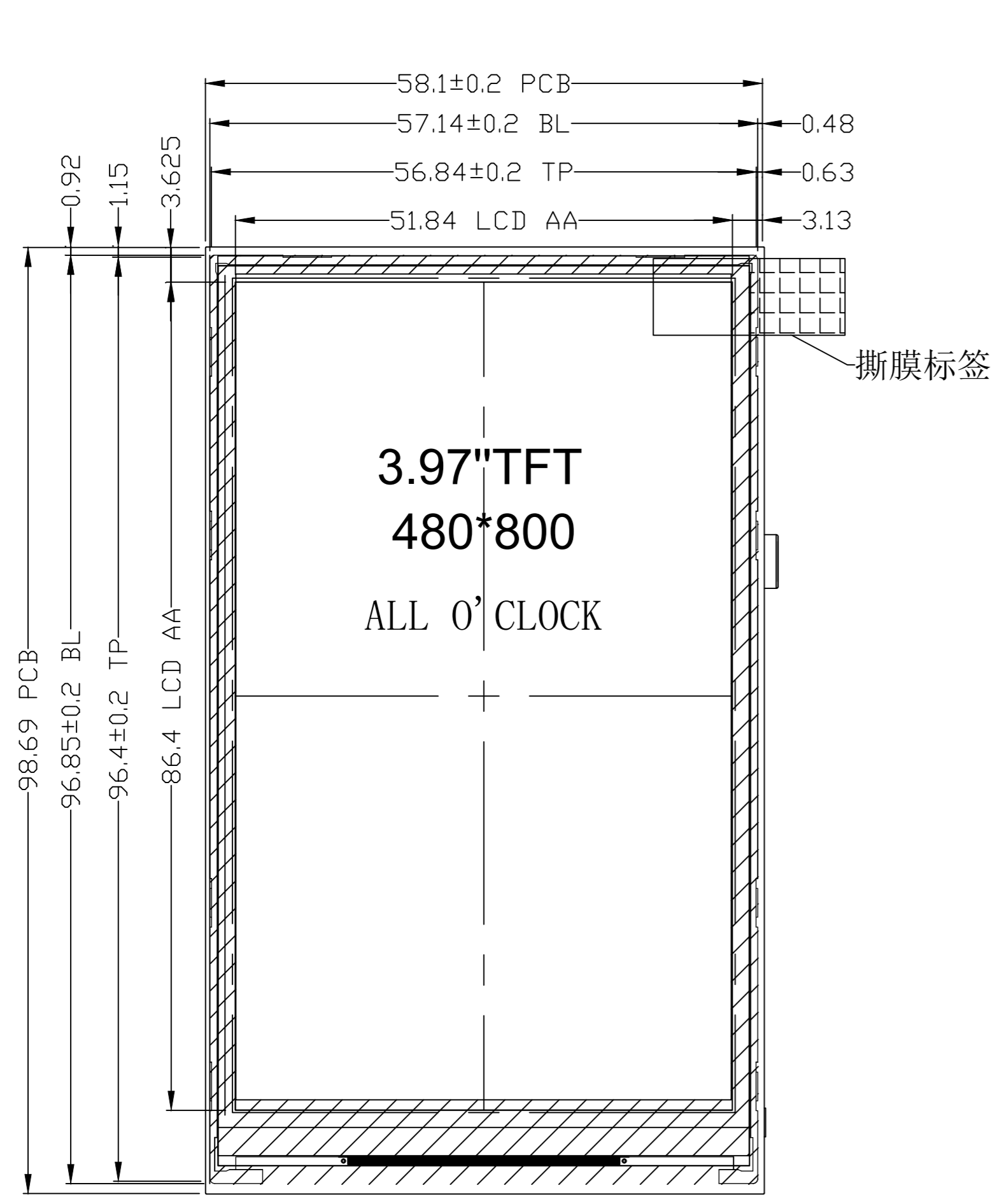
4)As computer monitors,the touch function will not be available.

If you have difficulty installing the driver,or if you still can't use the display properly after installing the driver, please try our already configured images for tested.

Just need download and write the image into the Micro SD card. DO NOT need any driver installation steps (see attachment for mirror)

6	7	8
REVISION	RECORD	Date

A
B
C
D
E



- NOTES:
1. DISPLAY TYPE: 3.97" TFT
 2. VIEWING DIRECTION: ALL 0' CLOCK
 3. RESOLUTION: 480*RGB*800
 4. POLARIZER MODE: TRANSMISSIVE/POSITIVE
 5. UNMARKER TOLERANCE: ±0.2
 6. OPERATING TEMP: -30°C ~ 80°C

					DRG DATE	
					DRAWING	
TITLE.	LCM OUTLINE	REV.	UNIT	SIZE	CHECK	
MODEL.	MPI 4008		mm	A4	APPROVE	