10.1_inch_800x1280_mini_HDMI_IPS_Display_SKU_DFR0615-DFRobot

SKU:DFR0615

Introduction



This is a 10.1" mini-HDMI IPS Display with 800 × 1280 resolution. It supports mini-HDMI video signal input and microUSB power supply. It only requires 500mA to light up the screen and you can adjust the backlight brightness through the USB port. It supports 100-level backlight adjustment, you can use script to control the brightness. The screen supports three major operating systems such as Linux, Windows, and MACOS, especially the Raspberry Pi. It works directly with Raspberry Pi, Lattepanda, and other devices with HDMI output, which can basically achieve full platform compatibility.

NOTE:

- This is a vertical screen. Linux systems such as Raspberry Pi can rotate the screen through the config.txt configuration file. The configuration file is shown below. When the Windows system is used in the first time, please rotate the screen angle in the system.
- When using the Raspberry Pi to supply power the screen, you need to ensure that the Raspberry Pi has sufficient power supply capacity. The screen will consume about 0.5A@5V of current, so please pay attention to the power supply output of the wall adapter. You must still ensure the The Raspberry Pi works stably.
- The screen's micro-USB port and mini-HDMI port must be connected to the same device to ensure that the signals share the same GND, otherwise problems such as splash screens will occur.

Feature

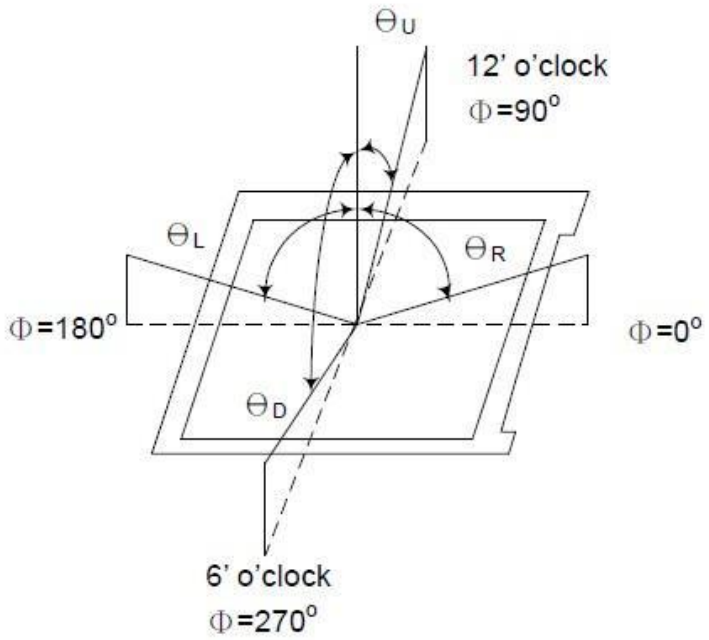
- mini-HDMI port
- USB 5V@500mA power supply

Specification

- Screen Size: 10.1 "
- Screen Resolution: 800 × 1280 (WXVGA)
- Video Signal Interface: Mini-HDMI
- Screen Color: 16.7M colors
- Brightness: 200cd / m2 (support 0 ~ 100 classification)
- Working Current: 5V @ 500mA (micro-USB)
- Screen: 16.7M colors
- Support System: Linux / Windows / MacOS
- Screen Size: 245mm × 160mm × 9mm
- Display Area: 135.36mm × 216.68mm

Viewing Angle

Note (1) Definition of Viewing Angle :



Tutorial

This screen supports three operating systems: Linux, Windows and MACOS. Among them, Windows and MAC systems can be set to configure the output resolution. Linux needs to be set by commands.

Raspberry Pi Tutorial

When you use the 10.1" screen on the Raspberry Pi, the resolution may not adapt. You need to manually configure the Raspberry Pi 's HDMI output to reset the resolution. (Insufficient power will also prevent the screen from turning on.)

- Install the operating system image in the microSD card, we recommend the official **Raspbian System**, Click to read the tutorial **Installing Tutorial**.
- After the system image is installed, the microSD card will be divided into two partitions: the system image partition and the boot system boot configuration partition. We need to modify the system configuration file ** config.txt ** in the boot disk.
- Insert the SD card into the computer through the card reader, enter the boot disk, find the directory ** / boot / config.txt **, modify or add the following items: (If there is no config.txt file, please create a new one, the first file may need to be created when starting)

```
#remove black borders
[HDMI:0]
dtparam=audio=on
hdmi_ignore_edid=0xa5000080
config_hdmi_boost=4
hdmi_timings=800 0 48 8 16 1280 0 12 6 18 0 0 0 60 0 71000000 5
hdmi_driver=2
hdmi_group=2
hdmi_mode=87
display_rotate=3
[HDMI:1]
dtparam=audio=on
hdmi_ignore_edid=0xa5000080
config_hdmi_boost=4
hdmi_timings=800 0 48 8 16 1280 0 12 6 18 0 0 0 60 0 71000000 5
hdmi_driver=2
hdmi_group=2
hdmi_mode=87
```

```
display_rotate=3
```

- *display_rotate=0, 1, 2, 3** means 0, 90, 180, 270 degree rotating angle, please use 1 or 3 since this is a vertical screen.
- Save the data and plug microSD card into Raspberry Pi. Connect the screen to the HDMI/HDMI0 port, then we can see the desktop.
- For RPi 4 model B, there are 2 HDMI ports, we have to config it one by one.**[HDMI:0]/[HDMI:1]**

WIndows and the other Systems

In the first usage with Windows and MacOS, please use the system screen rotation function:

Brightness Control

Raspberry Pi

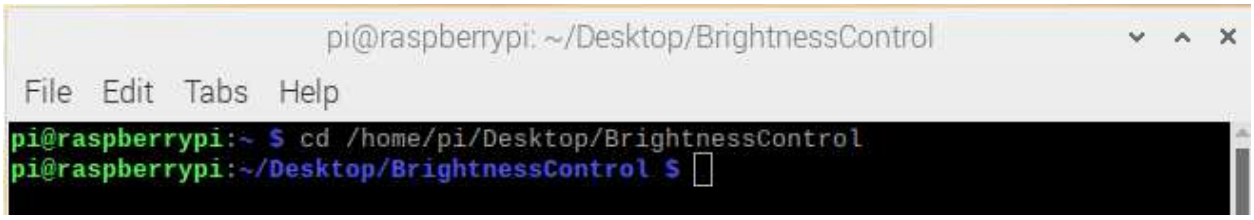
Connect **USB** and **HDMI** to Raspberry Pi:

1. Download Brightness Control Software: BrightnessControl（Github）

2. Copy the downloaded compressed file to any user path on the Raspberry Pi, such as the desktop: **/home/pi/Desktop**



3. Navigate to your home folder：




```
cd /home/pi/Desktop/BrightnessControl
```

4. Configure boot and start environment, run：




```
5. sudo chmod 777 setup.sh
```

```
./setup.sh
```

6. Brightness Control：




```
python SetBrightness.py
```

WIndows and the other Systems

Connect **USB** and **HDMI** to PC:
There will be a COM port in device manager, open the serial port, set baudrate to 115200bps, send **HEX** data: 55 AA **FF** 0D 0A, **FF** is the brightness, 00~FF.

FAQ

Q&A	**Some general Problems/FAQ/Tips**
Q	There is a screen flicker, what can I do?

Q&A	Some general Problems/FAQ/Tips
A	Check the screen USB power, it must have the same GND with HDMI device.
Q	No display/black screen, how?
A	If you are using Raspberry Pi, please check the wiki for the HDMI configuration.

More Documents

- Brightness Control(Linux)