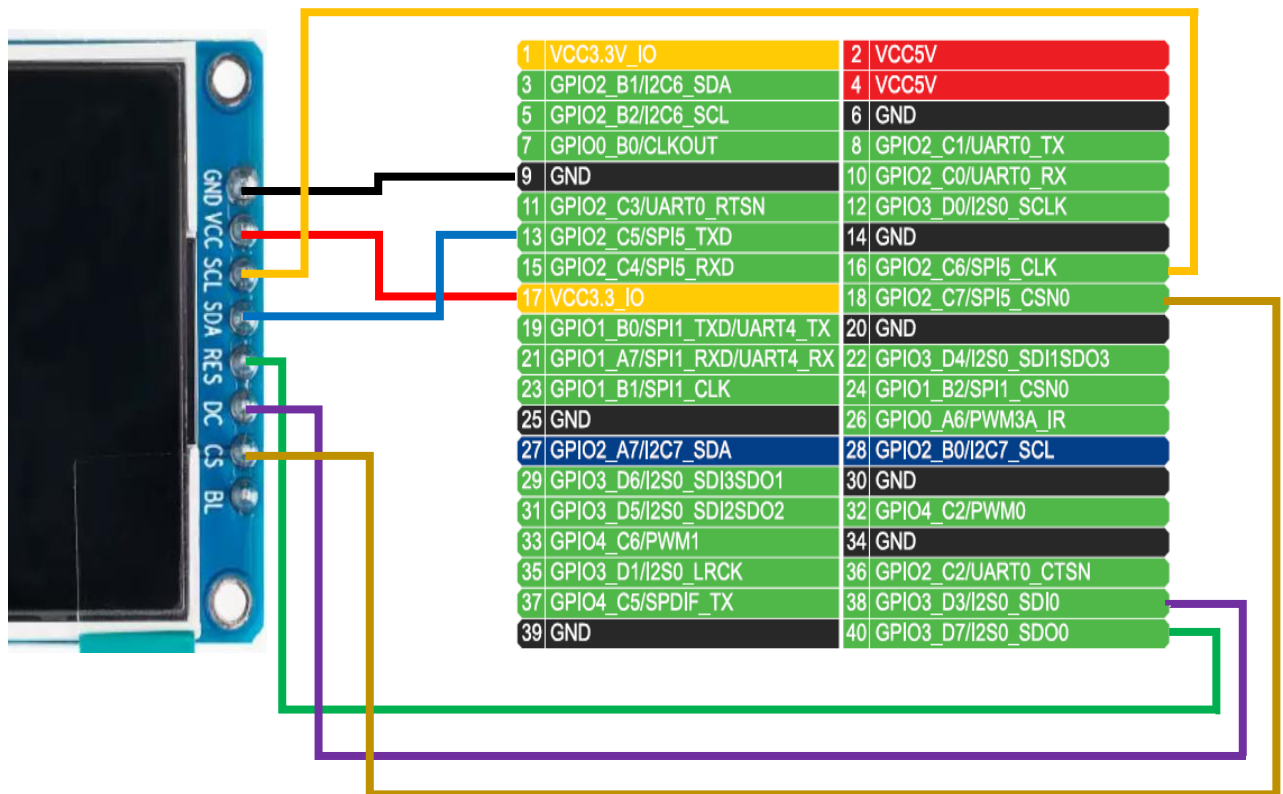


## Tinker Board 2S 使用 ST7735 屏幕

### 1、硬件连接



### 2、系统配置

修改/boot/config.txt

```
$ sudo mousepad /boot/config.txt
```

```
#intf:spi1=off >>> intf:spi1=on
```

```
#intf:spi5=off >>> intf:spi5=on
```

```
##### Hardware Interface Config #####

## Note: uart4 and spi1 are the same pins. Set the latter one while both on. ##

intf:fiq_debugger=on
#intf:uart0=off
#intf:uart4=off
#intf:i2c6=off
#intf:i2c7=off
#intf:i2s0=off
#intf:spdif=off
intf:spi1=on
intf:spi5=on
#intf:pwm0=off
#intf:pwm1=off
#intf:pwm3a=off
#intf:test_clkout2=off

##### Driver Config #####
```

### 3、luma core 安装

```
$ sudo apt-get update
```

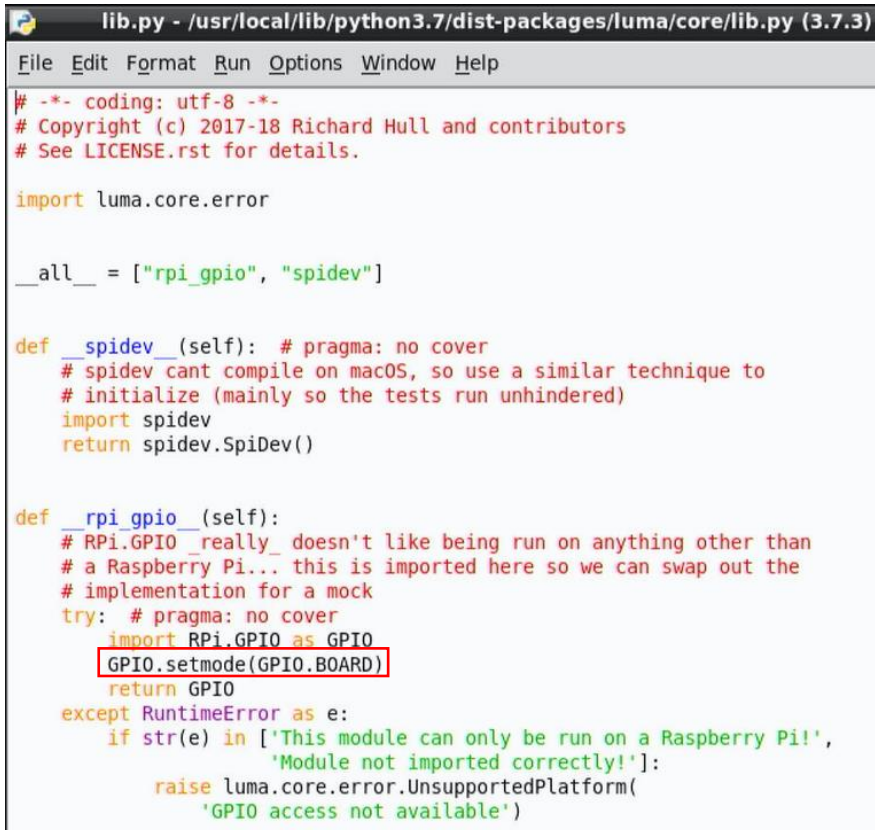
```
$ sudo apt-get install python3 python3-pip python3-pil libjpeg-dev zlib1g-dev libfreetype6-dev liblcms2-dev  
libopenjp2-7 libtiff5 -y
```

```
$ sudo python3 -m pip install luma.lcd
```

#### 4、配置 luma core lib 文件

```
$ sudo mousepad /usr/local/lib/python3.7/dist-packages/luma/core/lib.py
```

```
GPIO.setmode(GPIO.BCM) >>> GPIO.setmode(GPIO.BOARD)
```



```
lib.py - /usr/local/lib/python3.7/dist-packages/luma/core/lib.py (3.7.3)
File Edit Format Run Options Window Help
# -*- coding: utf-8 -*-
# Copyright (c) 2017-18 Richard Hull and contributors
# See LICENSE.rst for details.

import luma.core.error

__all__ = ["rpi_gpio", "spidev"]

def __spidev__(self): # pragma: no cover
    # spidev cant compile on macOS, so use a similar technique to
    # initialize (mainly so the tests run unhindered)
    import spidev
    return spidev.SpiDev()

def __rpi_gpio__(self):
    # RPi.GPIO really doesn't like being run on anything other than
    # a Raspberry Pi... this is imported here so we can swap out the
    # implementation for a mock
    try: # pragma: no cover
        import RPi.GPIO as GPIO
        GPIO.setmode(GPIO.BOARD)
        return GPIO
    except RuntimeError as e:
        if str(e) in ['This module can only be run on a Raspberry Pi!',
                    'Module not imported correctly!']:
            raise luma.core.error.UnsupportedPlatform(
                'GPIO access not available')
```

#### 5、安装 luma.example

```
$ sudo apt install python3-dev python3-pip libfreetype6-dev libjpeg-dev build-essential
```

```
$ sudo apt install libsdl-dev libportmidi-dev libsdl-ttf2.0-dev libsdl-mixer1.2-dev libsdl-image1.2-dev
```

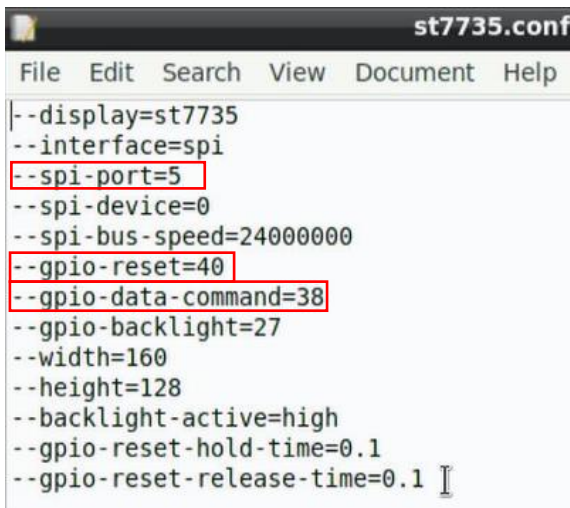
```
$ git clone https://github.com/rm-hull/luma.examples.git
```

```
$ cd luma.examples-master
```

```
$ sudo python3 -m pip install -e.
```

#### 6、修改 st7735 屏幕配置文件

```
$ sudo mousepad luma.examples-master/conf/st7735.conf
```



```
st7735.conf
File Edit Search View Document Help
|--display=st7735
--interface=spi
--spi-port=5
--spi-device=0
--spi-bus-speed=24000000
--gpio-reset=40
--gpio-data-command=38
--gpio-backlight=27
--width=160
--height=128
--backlight-active=high
--gpio-reset-hold-time=0.1
--gpio-reset-release-time=0.1
```

## 7、运行 clock sample

```
$ sudo python3 clock -f ../conf/st7735.conf
```

