

Test platform introduction:

Development board: Raspberry Pi development board for each model

System: Raspbian for Raspberry Pi

GPIO library: bcm2835、wiringpi

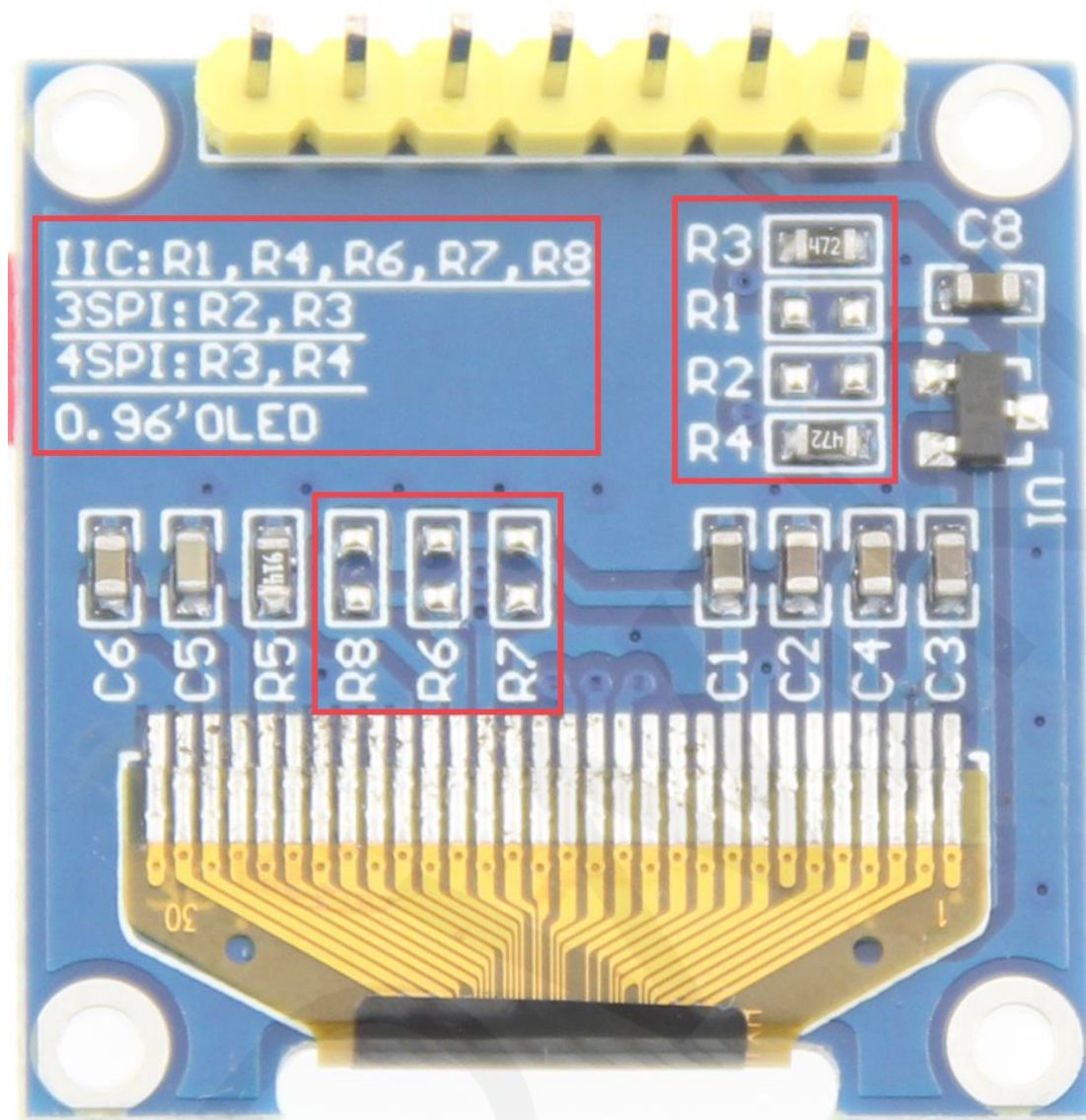
Wiring instructions:

wiringPi 编码	BCM 编码	功能名	物理引脚 BOARD编码		功能名	BCM 编码	wiringPi 编码
		3.3V	1	2	5V		
8	2	SDA.1	3	4	5V		
9	3	SCL.1	5	6	GND		
7	4	GPIO.7	7	8	TXD	14	15
		GND	9	10	RXD	15	16
0	17	GPIO.0	11	12	GPIO.1	18	1
2	27	GPIO.2	13	14	GND		
3	22	GPIO.3	15	16	GPIO.4	23	4
		3.3V	17	18	GPIO.5	24	5
12	10	MOSI	19	20	GND		
13	9	MISO	21	22	GPIO.6	25	6
14	11	SCLK	23	24	CE0	8	10
		GND	25	26	CE1	7	11
30	0	SDA.0	27	28	SCL.0	1	31
21	5	GPIO.21	29	30	GND		
22	6	GPIO.22	31	32	GPIO.26	12	26
23	13	GPIO.23	33	34	GND		
24	19	GPIO.24	35	36	GPIO.27	16	27
25	26	GPIO.25	37	38	GPIO.28	20	28
		GND	39	40	GPIO.29	21	29

Picture1. GPIO map



Picture 2. Module pin silk screen



Picture 2. Rear view of the module

NOTE:

1. This module supports IIC, 3-wire SPI and 4-wire SPI interface bus mode switching (shown in red box in Figure 2). The details are as follows:
 - A. Using 4.7K resistance to solder only R3 and R4 resistors, then choose 4-wire SPI bus interface (default);
 - B. Using 4.7K resistance to solder only R2 and R3 resistors, then select the 3-wire SPI bus interface;
 - C. Using 4.7K resistance to solder only R1, R4, R6, R7 and R8 resistors, then select the IIC bus interface;

2. After the interface bus mode is switched, you need to select the corresponding software and the corresponding wiring pins (as shown in Figure 1) for the module to operate normally. The corresponding wiring pins are described as follows:

- A. select the 4-wire SPI bus interface, all pins need to be used;
- B. select the 3-wire SPI bus interface, only the DC pin does not need to be used(it can not be connected), other pins need to be used;
- C. select the IIC bus interface, only need to use the four pins GND, VCC, D0, D1, At the same time, the RES pin is connected to the high level (can be connected to the VCC), the DC and CS pins are connected to the power GND;

important:

1. The following pin numbers 1~7 refer to the module pin number of our company with PCB backplane. If you purchase a bare screen, please refer to the pin definition of the bare screen specification, refer to the wiring according to the signal type instead of directly according to the following. The module pin number is used for wiring. For example: CS is 7 feet on our module. It may be x pin on different size bare screen. The following wiring instructions tell you that the CS signal is connected to the 24 pin of the MCU. of.
2. About VCC supply voltage: The OLED display module can be connected to 3.3V or 5V.

Raspberry Pi test program wiring instructions			
Number	Module Pin	Corresponding to development board wiring pin	Remarks
1	GND	GND (Physical pin: 6,9,14,20,25,30,34,39)	OLED power ground
2	VCC	5V/3.3V (Physical pin: 1,2,4)	OLED power positive (3.3V~5V)

3	D0	Physical pin: 23 BCM coding: 11 wiringPi coding: 14	OLED SPI and IIC bus clock signals
4	D1	Physical pin: 19 BCM coding: 10 wiringPi coding: 12	OLED SPI and IIC bus data signals
5	RES	Physical pin: 5 BCM coding: 3 wiringPi coding: 9	OLED reset signal, low level reset (this pin need to connected to the high level (can be connected to the VCC) when selecting IIC bus)
6	DC	Physical pin: 3 BCM coding: 2 wiringPi coding: 8	OLED command / data input select signal, high level: data, low level: command (this pin is not required(it can not be connected) when selecting 3-wire SPI bus; this pin need to connected to the power GND when selecting IIC bus)
7	CS	Physical pin: 24 BCM coding: 8 wiringPi coding: 10	OLED chip select signal, low level enable (this pin need to connected to the power GND when selecting IIC bus)

NOTE:

Physical pin refers to the GPIO pin code of the RaspBerry Pi development board.

BCM encoding refers to the GPIO pin coding when using the BCM2835 GPIO library.

WiringPi coding refers to the GPIO pin coding when using the wiringPi GPIO library.

Which GPIO library is used in the code, the pin definition needs to use the corresponding GPIO library code, see Picture 1 GPIO map table for details.

Demo function description:

1. This set of test program is applicable to Raspberry Pi model development boards;

2. This set of test programs includes programs using bcm2835, wiringPi GPIO library, and python programs. For specific operation instructions, see the module user documentation;
3. This test program uses two standard SPI buses (3-wire SPI and 4-wire SPI) to transmit data. Each standard SPI contains software spi and hardware spi function tests;
4. Please select the corresponding test program and development board to wire according to the above wiring instructions;
5. This set of test procedures contains the following test items:
 - A. The main interface displays the test;
 - B. simple black and white brush screen test;
 - C. rectangular drawing and filling test;
 - D. circular drawing and filling test;
 - E. triangle drawing and filling test;
 - F. English display test;
 - G. number and symbol display test;
 - H. Chinese display test;
 - I. BMP monochrome picture display test;
 - J. menu 1 shows the test;
 - K. menu 2 shows the test;