

Test platform introduction:

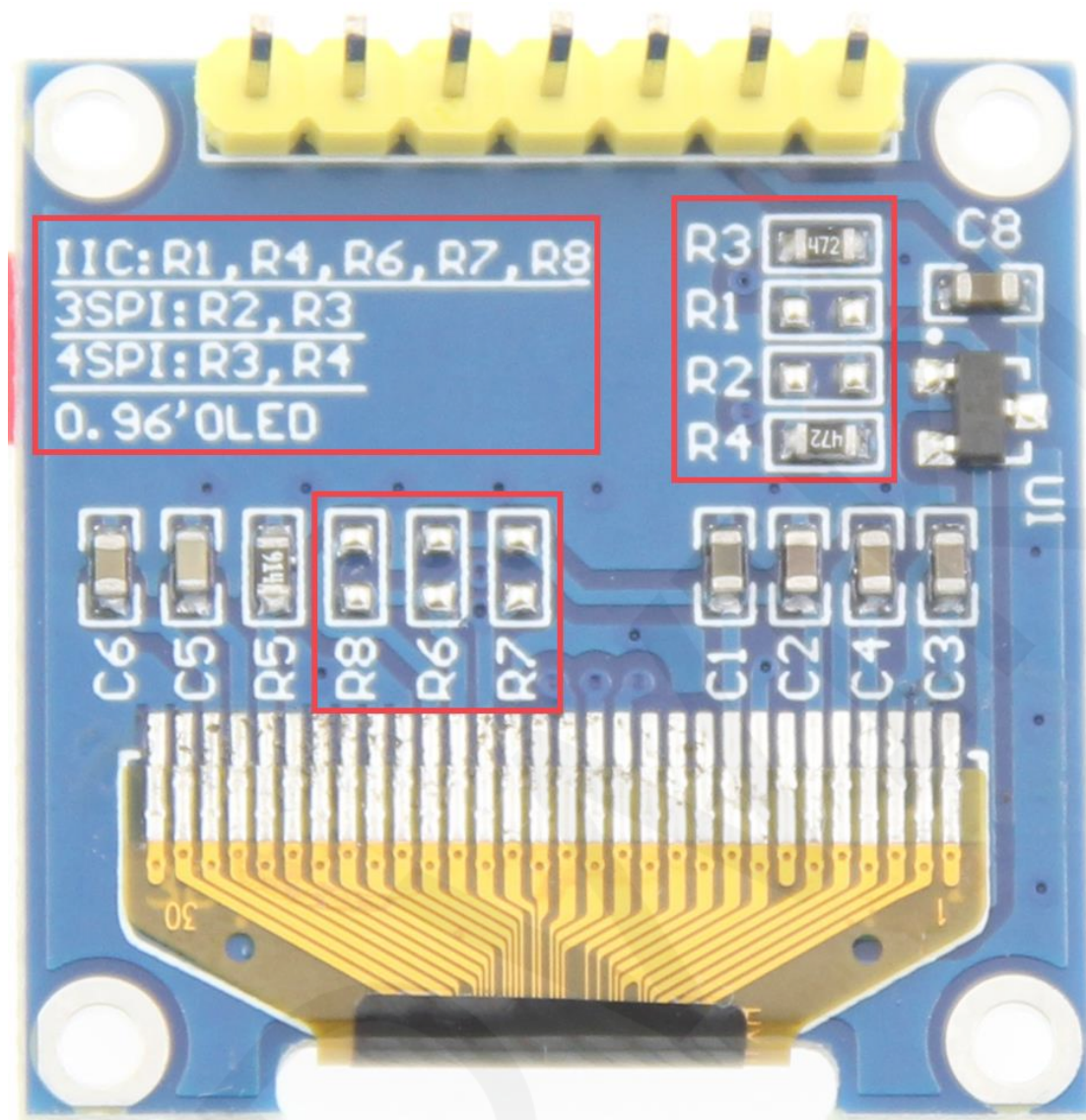
Development board: STC89/STC12 development board

MCU : STC89C52RC、STC12C5A60S2

Wiring instructions:



Picture1. Pin silkscreen picture



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 P13 pin of the MCU. of.
2. About VCC supply voltage: The OLED display module can be connected to 3.3V or 5V.

| STC89C52RC and STC12C5A60S2 microcontroller test program wiring instructions | | | |
|--|------------|---|-------------------|
| Number | Module Pin | Corresponding to STC89/STC12 development board wiring pin | Remarks |
| 1 | GND | GND | OLED power ground |

| | | | |
|---|-----|---------|---|
| 2 | VCC | 3.3V/5V | OLED power positive (3.3V~5V) |
| 3 | D0 | P17 | OLED SPI and IIC bus clock signals |
| 4 | D1 | P15 | OLED SPI and IIC bus data signals |
| 5 | RES | P33 | 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 | P12 | 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 | P13 | OLED chip select signal, low level enable (this pin need to connected to the power GND when selecting IIC bus) |

Demo function description:

1. This set of test program procedures is applicable to the STC89C52RC and STC12C5A60S2 platforms;
2. 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(STC89C52RC only software SPI function);
3. Please follow the above wiring instructions to find the corresponding development board and MCU for wiring;
4. STC89C52RC microcontroller RAM is only 25KB, can only burn less than 25KB program, so the test content is simple;
5. This test program contains the following test items:
 - A. The main interface displays the test;

- B. simple black and white color brush screen test;
- C. English display test
- D. symbol and number display test;
- E. Chinese display test;
- F. BMP monochrome picture display test