Test platform introduction:

This set of STM32 test programs use the development board of the ALIENTEK, as follows:

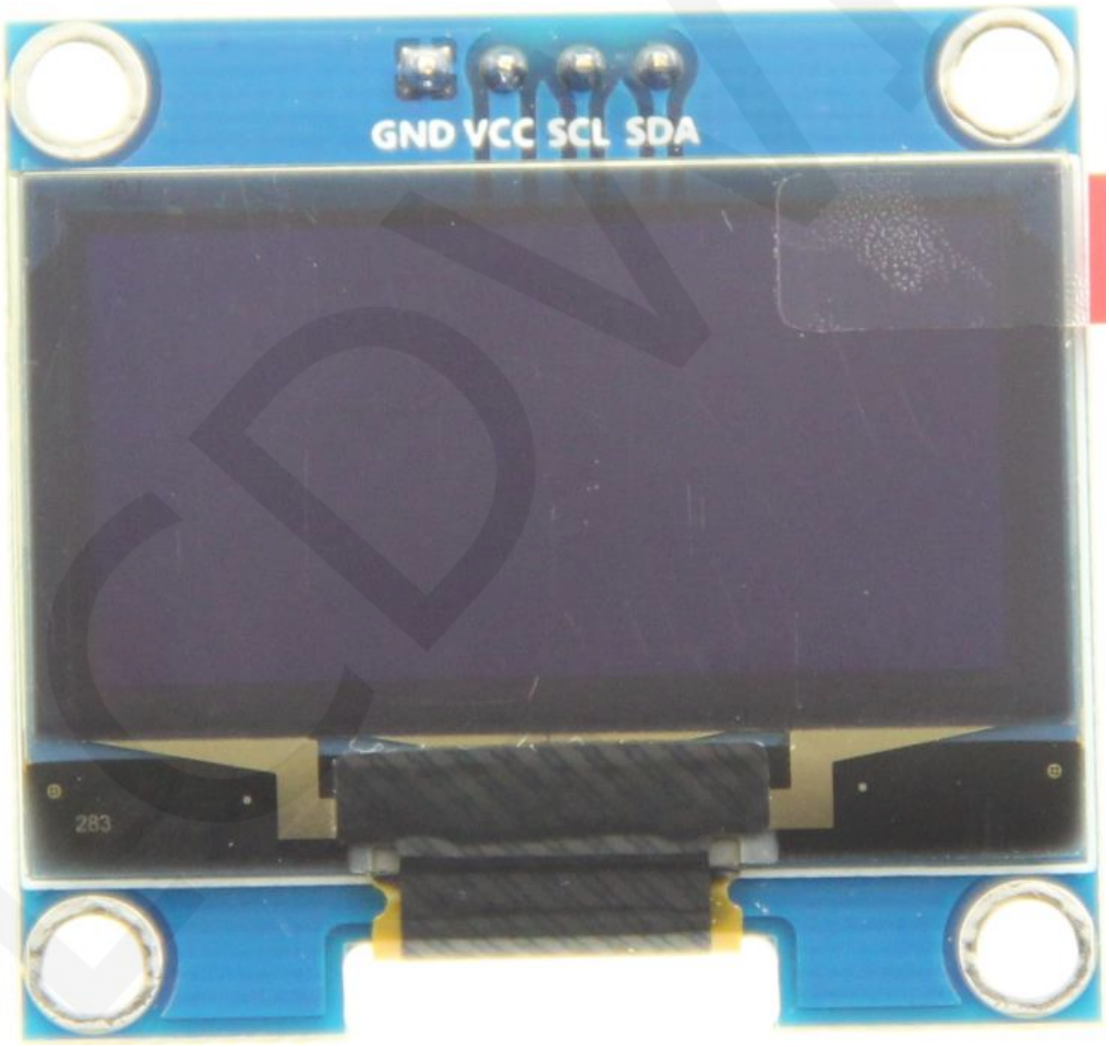
Development board: MiniSTM32, Elite STM32, WarShip STM32,Explorer STM32F4, Apollo STM32F4/F7

MCU: STM32F103RCT6, STM32F103ZET6, STM32F407ZGT6, STM32F429IGT6,

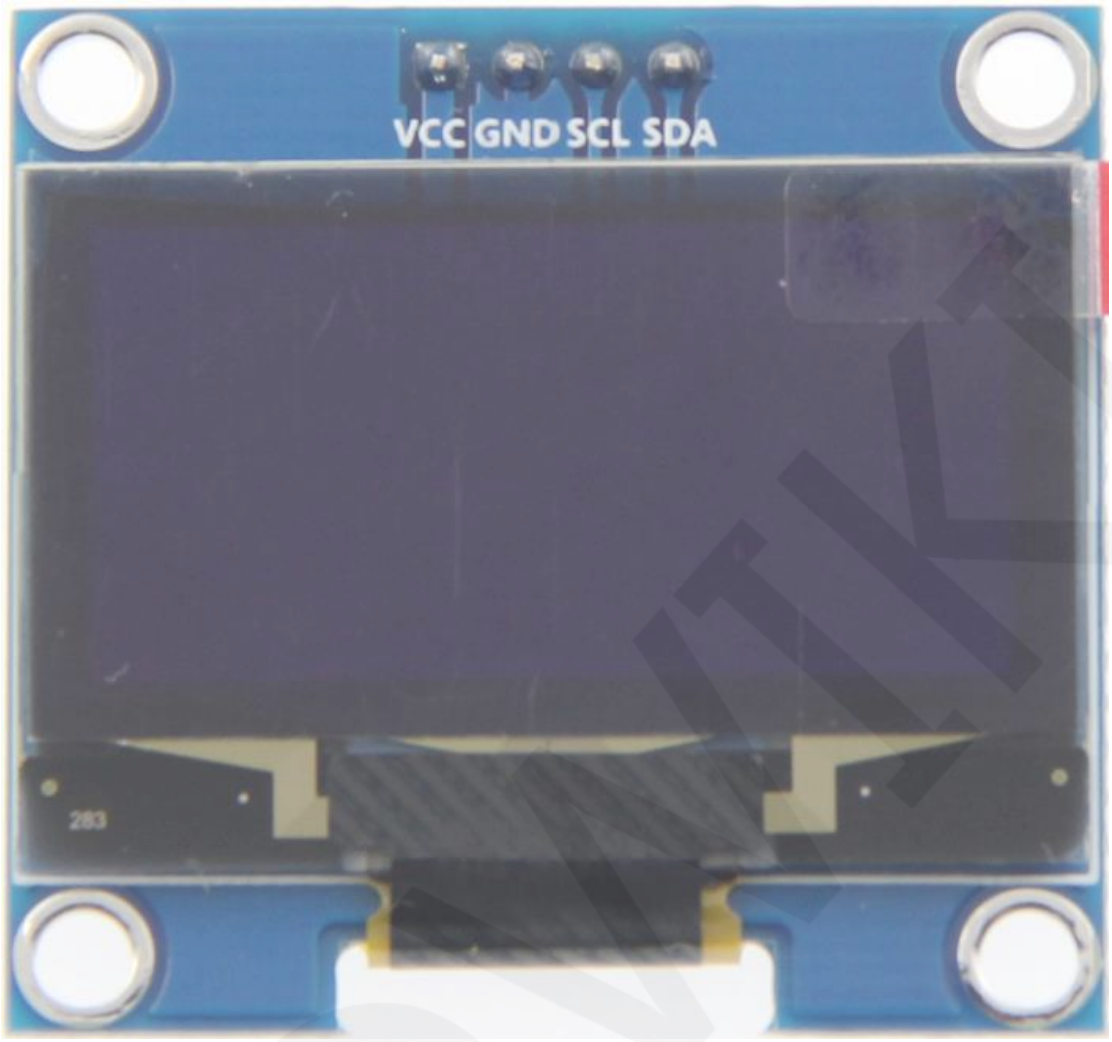
Main frequency: 72MHz, 72MHz, 168MHz, 180MHz (Corresponding to the above MCU)

Crystal frequency: 8MHz, 8MHz, 8MHz, 25MHz (Corresponding to the above MCU)

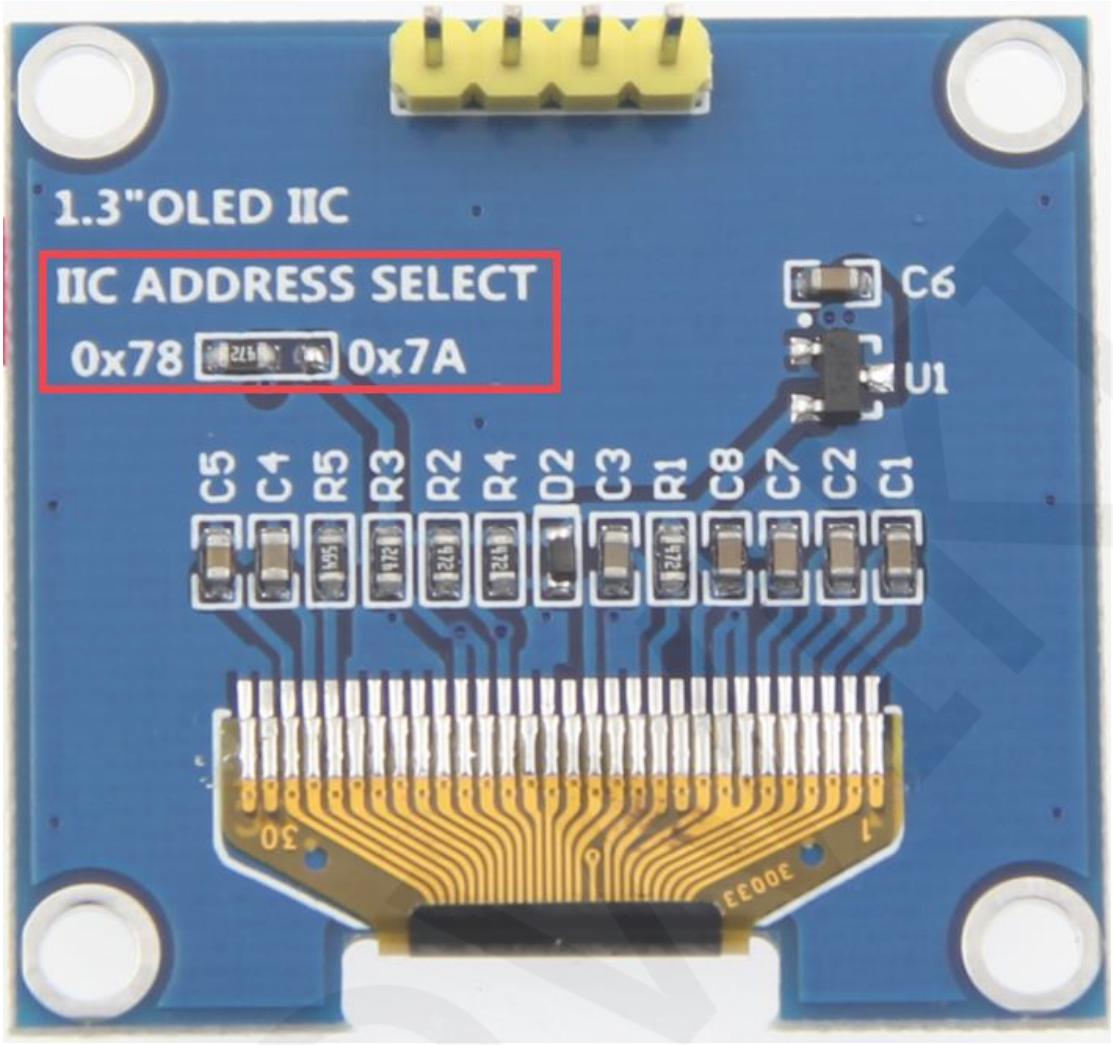
Wiring instructions:



Picture 1. Module pin silk screen (1 pin is GND)



Picture 2. Module pin silk screen (1 pin is VCC)



Picture 3. Rear view of the module

NOTE:

1. This module supports IIC slave device address switching (shown in red box in Picture 4), as follows:
   A. Solder the 0x78 side resistance, disconnect the 0x7A side, then select the 0x78 slave address (default);
   B. Solder the 0x7A side resistance, disconnect the 0x78 side, then select the 0x7A slave address;
2. The hardware switches the IIC from the set address, and the software also needs to be modified accordingly. For the specific modification method, see the following IIC slave device address modification instructions.

STM32F103RCT6 microcontroller test program wiring instructions			
Number	Module Pin	Corresponding to the MiniSTM32 development board wiring pin	Remarks
1	GND	GND	OLED power ground
2	VCC	5V/3.3V	OLED power positive (3.3V~5V)
3	SCL	PB13	OLED IIC bus clock signal
4	SDA	PB15	OLED IIC bus data signal

STM32F103ZET6 microcontroller test program wiring instructions			
Number	Module Pin	Corresponding to the Elite STM32 development board wiring pin	Remarks
1	GND	GND	OLED power ground
2	VCC	5V/3.3V	OLED power positive (3.3V~5V)
3	SCL	PB13	OLED IIC bus clock signal
4	SDA	PB15	OLED IIC bus data signal

STM32F407ZGT6 microcontroller test program wiring instructions			
Number	Module Pin	Corresponding to the Explorer STM32F4 development board wiring pin	Remarks
1	GND	GND	OLED power ground
2	VCC	5V/3.3V	OLED power positive (3.3V~5V)
3	SCL	PB3	OLED IIC bus clock signal
4	SDA	PB5	OLED IIC bus data signal

STM32F429IGT6 microcontroller test program wiring instructions			
Number	Module Pin	Corresponding to the Apollo STM32F4/F7 development board wiring pin	Remarks
1	GND	GND	OLED power ground
2	VCC	5V/3.3V	OLED power positive (3.3V~5V)
3	SCL	PF7	OLED IIC bus clock signal
4	SDA	PF9	OLED IIC bus data signal

Demo function description:

1. This test program is applicable to STM32F103RCT6, STM32F103ZET6, STM32F407ZGT6, STM32F429IGT6 four STM32 MCU platforms
2. This set of test programs uses the analog IIC bus to transfer data;
3. Please follow the wiring instructions above to find the corresponding development board and MCU for wiring;
4. This set of test procedures contains the following test items:
   - A. the main interface displays the test;
   - B. simple black and white color brush test;
   - C. rectangle drawing and filling test
   - D. circular drawing and filling test
   - E. triangle drawing and filling test
   - F. English display test;
   - G. symbol and digital display test
   - H. Chinese display test;
   - I. BMP monochrome picture display test;
   - J. menu display test

IIC slave device address modification instructions:

1. Open the iic.h file in the program and find the following:

```
//定义IIC从设备地址
#define IIC_SLAVE_ADDR 0x78
```

2. Modify the IIC_SLAVE_ADDR macro definition (default is 0x78):

   For example, change to 0x7A, then the IIC slave address is 0x7A;