

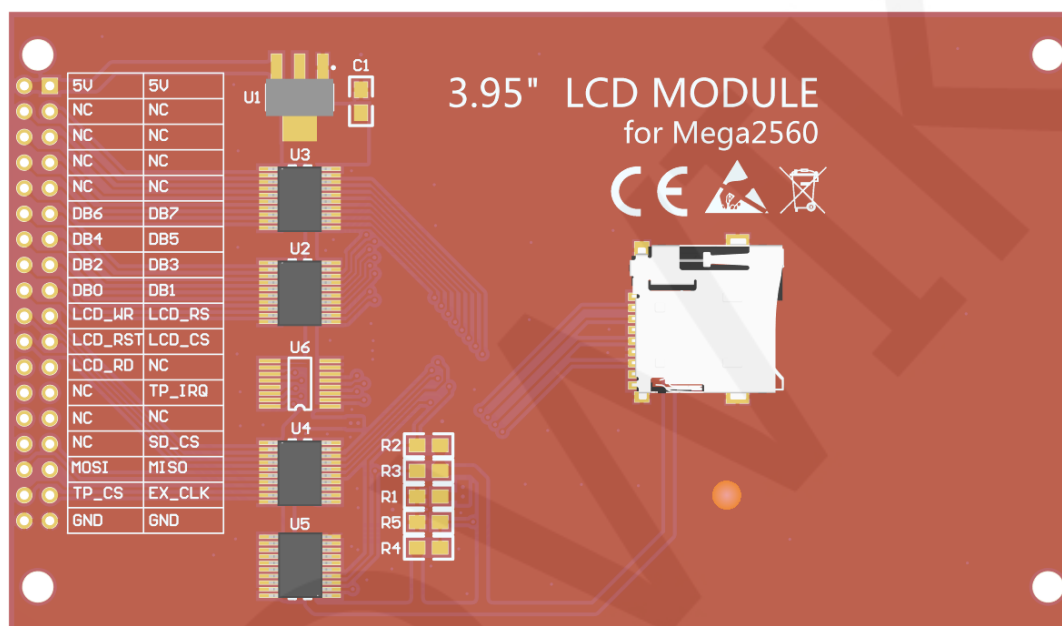
Test platform introduction:

Development board: STC89/STC12 development board

MCU: STC89C52RC, STC12C5A60S2

Crystal frequency : 12MHZ

Wiring instructions:



Picture1. Pin silkscreen picture

Note:

1. The pins labeled NC in Picture 1 are not used and do not require wire connection;

Important Note:

1. The following pin numbers 1~30 are the pin number of Module pin with PCB backplane of our company. 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 Wire according to the following module pin numbers. For example: LCD_CS is 20 pin on our module. It may be x pin on different size

bare screen. The following wiring program instructions tell you to connect LCD_CS signal to the P1.3 pin of C51 microcontroller.

- 2. About VCC supply voltage: If you purchase a module with PCB backplane, VCC/VDD can be connected to 5V (module has integrated ultra low dropout 5V to 3.3V circuit), if you buy a bare screen LCD, remember only Can connect to 3.3V.**
- 3. About the backlight voltage: the module with the PCB backplane has access to 3.3 V and no more manual access is required. If you are buying a bare screen, the LEDA is connected to 3.0V-3.3V and the LEDKx is grounded.**

STC89C52RC microcontroller test program wiring instructions

Number	Module Pin	Corresponding to STC89 development board wiring pin	Remarks
1	5V	5V	Power pin
2	DB0	P30	Data bus 8-bit pin
3	DB1	P31	
4	DB2	P32	
5	DB3	P33	
6	DB4	P34	
7	DB5	P35	
8	DB6	P36	
9	DB7	P37	
10	NC	No need to connect	Undefined, reserved
11	NC		
12	NC		
13	NC		
14	NC		
15	NC		

16	NC		
17	NC		
18	LCD_RS	P12	LCD register / data selection pin
19	LCD_WR	P11	LCD write control pin
20	LCD_CS	P13	LCD chip select control pin
21	LCD_RST	P14	LCD reset control pin
22	LCD_RD	P10	LCD read control pin
23	NC	No need to connect	Undefined, reserved
24	TP_IRQ	No need to connect (cannot test touch)	Touch screen interrupt control pin
25	SD_CS	No need to connect	Extended reference: SD card select pin
26	MISO	No need to connect (cannot test touch)	SPI bus input pin (extended application)
27	MOSI	No need to connect (cannot test touch)	SPI bus output pin (extended application)
28	TP_CS	No need to connect (cannot test touch)	Touch screen chip select pin
29	EX_CLK	No need to connect (cannot test touch)	SPI bus clock pin (extended application)
30	GND	GND	Power ground pin

STC12C5A60S2 microcontroller test program wiring instructions

Number	Module Pin	Corresponding to STC12 development board wiring pin	Remarks
1	5V	5V	Power pin
2	DB0	P00	Data bus 8-bit pin
3	DB1	P01	
4	DB2	P02	
5	DB3	P03	
6	DB4	P04	
7	DB5	P05	
8	DB6	P06	

9	DB7	P07	
10	NC	No need to connect	Undefined, reserved
11	NC		
12	NC		
13	NC		
14	NC		
15	NC		
16	NC		
17	NC		
18	LCD_RS	P12	LCD register / data selection pin
19	LCD_WR	P11	LCD write control pin
20	LCD_CS	P13	LCD chip select control pin
21	LCD_RST	P33	LCD reset control pin
22	LCD_RD	P10	LCD read control pin
23	NC	No need to connect	Undefined, reserved
24	TP_IRQ	P40	Touch screen interrupt control pin
25	SD_CS	No need to connect	Extended reference: SD card select pin
26	MISO	P35	SPI bus input pin (extended application)
27	MOSI	P34	SPI bus output pin (extended application)
28	TP_CS	P37	Touch screen chip select pin
29	EX_CLK	P36	SPI bus clock pin (extended application)
30	GND	GND	Power ground pin

Demo function description:

1. This set of test program procedures is applicable to the STC89C52RC and STC12C5A60S2 platforms;
2. Please follow the above wiring instructions to find the corresponding development board and MCU for wiring;
3. This set of test program supports 8-bit and 16-bit data bus mode switching. For

details, see the following mode setting instructions (This module only supports 8-bit data bus mode);

4. This set of tests supports display switching in four directions. For details, see the following display direction switching instructions;
5. STC89C52RC microcontroller RAM is only 25KB, so only a simple brush test;
6. STC12C5A60S2 microcontroller test program contains the following test items:
 - A. the main interface displays the test;
 - B. simple brush test;
 - C. rectangular drawing and filling test;
 - D. circular drawing and filling test;
 - E. triangle drawing and filling test;
 - F. English display test;
 - G. Chinese display test;
 - H. picture display test;
 - I. rotating display test;
 - J. Touch test

Mode switching instructions:

Find the macro definition `LCD_USE8BIT_MODEL` in `lcd.h`, as shown below:

```
#define LCD_USE8BIT_MODEL 1 //定义数据总线是否使用8位模式 0,使用16位模式.1,使用8位模式  
////////////////////////////////////
```

`LCD_USE8BIT_MODEL 0 // Use 16-bit data bus mode`

`LCD_USE8BIT_MODEL 1 // Use 8-bit data bus mode`

Note:

1. **This module hardware only supports 8-bit data bus mode. the corresponding software should be set to 8 as the mode, otherwise the module will run abnormally.**

Display direction switching instructions:

Find the macro definition `USE_HORIZONTAL` in `lcd.h` as shown below:

```
////////////////////////////////////// 用户配置区 ////////////////////////////////////////  
#define USE_HORIZONTAL 0 //定义液晶屏顺时针旋转方向 0-0度旋转, 1-90度旋转, 2-180度旋转, 3-270度旋转
```

`USE_HORIZONTAL 0` //0° Rotate

`USE_HORIZONTAL 1` //90° Rotate

`USE_HORIZONTAL 2` //180° Rotate

`USE_HORIZONTAL 3` //270° Rotate