

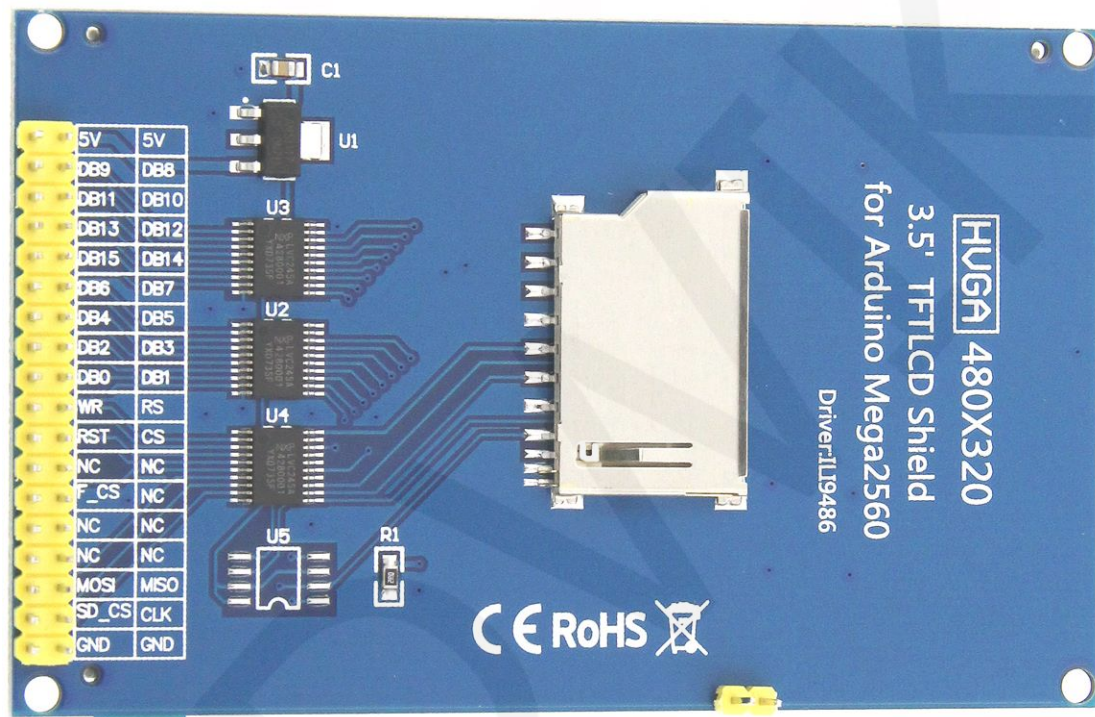
C51 Test platform introduction:

Development board: STC89/STC12 development board

MCU: STC89C52RC, STC12C5A60S2

Crystal frequency : 12MHZ

Wiring instructions:



Pin Silkscreen picture

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 low 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	DB8	P20	Data bus high 8-bit pin
11	DB9	P21	
12	DB10	P22	
13	DB11	P23	
14	DB12	P24	
15	DB13	P25	
16	DB14	P26	
17	DB15	P27	
18	RS	P12	LCD register / data selection pin
19	WR	P11	LCD write control pin
20	CS	P13	LCD chip select control pin
21	RST	P14	LCD reset control pin
22	NC	No need to connect	Undefined, reserved
23	F_CS	No need to connect	Extended application: SPI flash Chip Select Pin
24	MISO	No need to connect	SPI bus input pin (extended application)
25	MOSI	No need to connect	SPI bus output pin (extended application)
26	CLK	No need to connect	SPI bus clock pin (extended application)
27	SD_CS	No need to connect	Extended reference: SD card select pin
28	GND	GND	Power ground pin

STC12C5A60S2 microcontroller test program wiring instructions

Number	Module Pin	Corresponding to STC12 development board wiring pin	Remarks
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1	5V	5V	Power pin
2	DB0	P00	Data bus low 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	DB8	P20	Data bus high 8-bit pin
11	DB9	P21	
12	DB10	P22	
13	DB11	P23	
14	DB12	P24	
15	DB13	P25	
16	DB14	P26	
17	DB15	P27	
18	RS	P12	LCD register / data selection pin
19	WR	P11	LCD write control pin
20	CS	P13	LCD chip select control pin
21	RST	P33	LCD reset control pin
22	NC	No need to connect	Undefined, reserved
23	F_CS	No need to connect	Extended application: SPI flash Chip Select Pin
24	MISO	No need to connect	SPI bus input pin (extended application)
25	MOSI	No need to connect	SPI bus output pin (extended application)
26	CLK	No need to connect	SPI bus clock pin (extended application)
27	SD_CS	No need to connect	Extended reference: SD card select pin
28	GND	GND	Power ground pin

Demo function description:

1. This set of test program procedures is applicable to the STC89C52RC and STC12C5A60S2 platforms;
2. This set of test program uses the 16-bit parallel port of the single-chip platform to transmit data, so the test program needs to be set to 16-bit mode. For the specific setting method, see the mode switching instructions.
3. Please follow the above wiring instructions to find the corresponding development board and MCU for wiring;
4. STC89C52RC microcontroller RAM is only 25KB, so only a simple brush test;
5. This set of tests supports display switching in four directions. For details, see the display direction switching instructions.
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;
7. the module does not have a touch screen, so there is no touch screen handwritten test items;

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 mode
```

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

Note: Different hardware corresponds to different modes. If

the mode is switched on the software, the hardware should be modified accordingly. Otherwise, the module will not work properly if the hardware and software modes do not match.

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
```