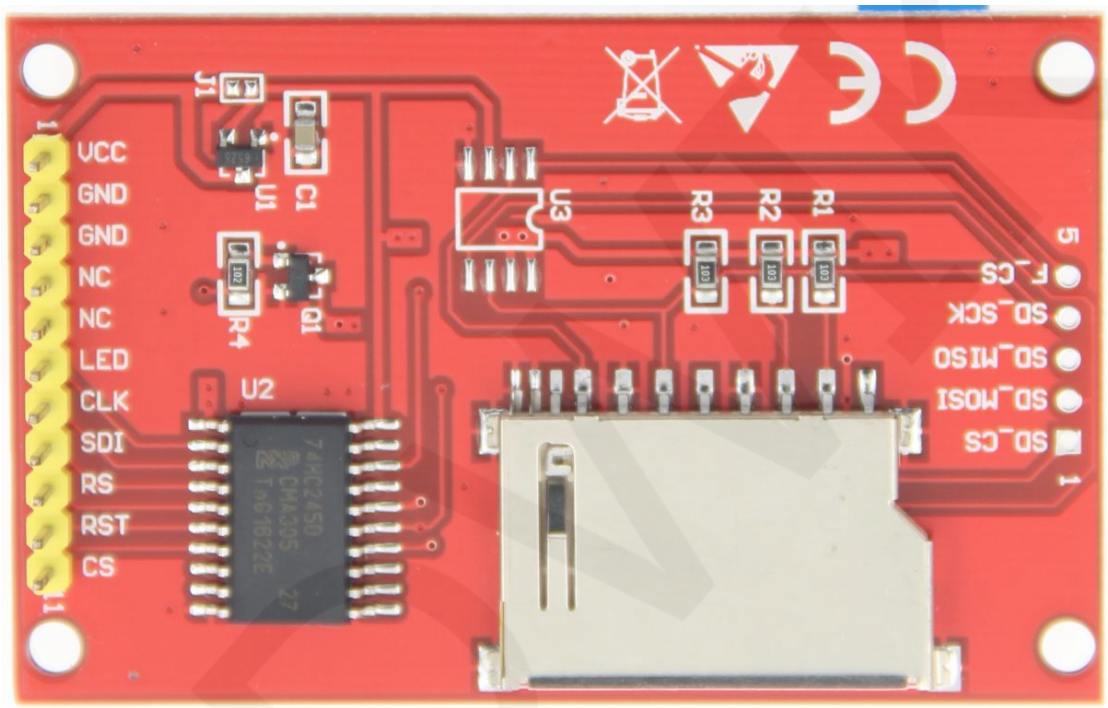
Test platform introduction:

Development board: Arduino UNO official version / MEGA2560 official version

MCU：AVR_ATmega328P/AVR_ATmega2560(corresponding to the development board in order)

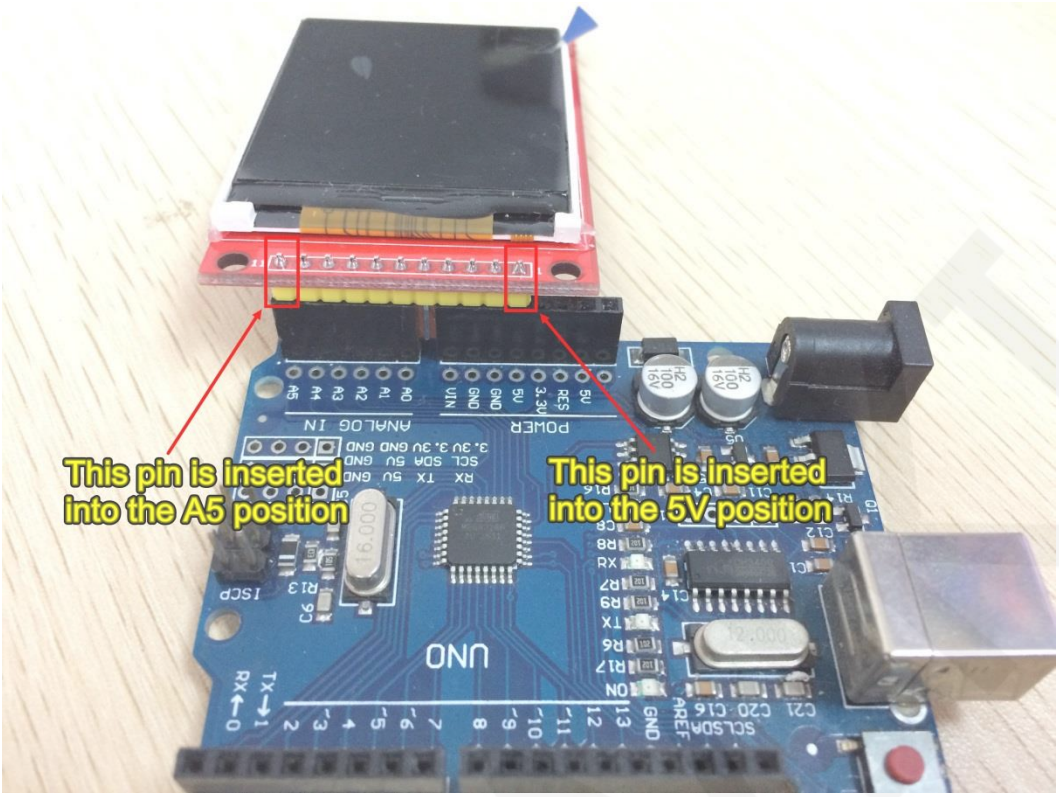
Wiring instructions:



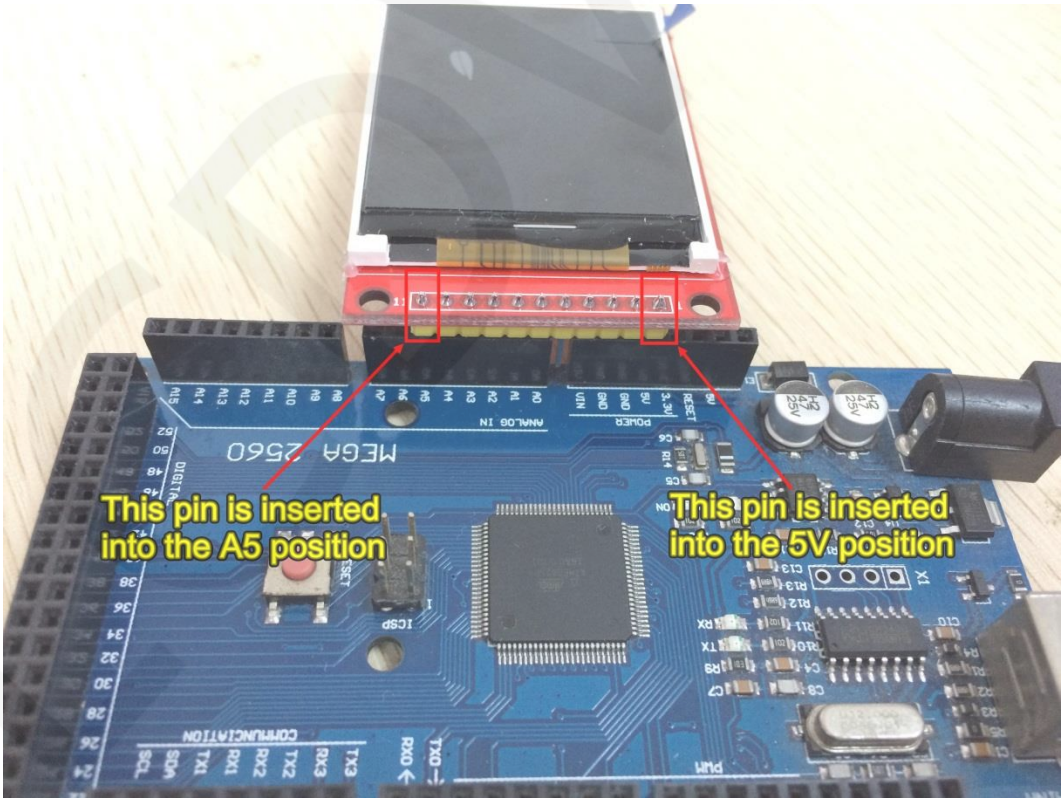
Picture 1. Pin silkscreen picture

When using the software SPI test program, the display module can be plugged directly into the Arduino UNO and Mega2560 development boards without manual wiring (as shown in Picture 2 and 3).

When using the hardware SPI test program, the display module needs to be manually connected to the Arduino UNO and Mega2560 development boards using the DuPont line.



Picture 2. Module directly inserted into the Arduino UNO picture



Picture 3. Module directly inserted into the Arduino Mega2560 picture

Arduino UNO microcontroller test program wiring instructions				
Number	**Module Pin**	**Corresponding to UNO development board wiring pins**		**Remarks**
1	**VCC**	5V/3.3V		LCD power supply positive pin
2	**GND**	GND		LCD Power ground pin pin
3	**GND**	GND		LCD Power ground pin pin
4	**NC**	no need to connect		Not defined, reserved
5	**NC**	no need to connect		Not defined, reserved
6	**LED**	A0		LCD backlight control pin (high level lighting, if no control is required, connect directly to 5V/3.3V)
7	**CLK**	Software SPI	A1	LCD SPI bus clock pin
		Hardware SPI	13	
8	**SDI**	Software SPI	A2	LCD SPI bus write data pin
		Hardware SPI	11	
9	**RS**	A3		LCD data / command selection control pin (low level: command; high level: data)
10	**RST**	A4		LCD reset control pin (reset at low level)
11	**CS**	A5		LCD chip select control pin (enabled at low level)

Arduino MEGA2560 microcontroller test program wiring instructions			
Number	**Module Pin**	**Corresponding to MEGA2560 development board wiring pins**	**Remarks**
1	**VCC**	5V/3.3V	LCD power supply positive pin
2	**GND**	GND	LCD Power ground pin pin
3	**GND**	GND	LCD Power ground pin pin
4	**NC**	no need to connect	Not defined, reserved
5	**NC**	no need to connect	Not defined, reserved

6	**LED**	A0		LCD backlight control pin (high level lighting, if no control is required, connect directly to 5V/3.3V)
7	**CLK**	Software SPI	A1	LCD SPI bus clock pin
		Hardware SPI	52	
8	**SDI**	Software SPI	A2	LCD SPI bus write data pin
		Hardware SPI	51	
9	**RS**	A3		LCD data / command selection control pin (low level: command; high level: data)
10	**RST**	A4		LCD reset control pin (reset at low level)
11	**CS**	A5		LCD chip select control pin (enabled at low level)

Description:

1. When manually wiring, reduce the occupied IO port of the development board as follows:
   A. When the SPI multiplexed chip is not selected, ground the **CS** pin of the module to save 1 IO port;
   B. When the backlight is not needed, connect the module **LED** pin to 5V or 3.3V, saving 1 IO port;
   C. Connect the **RST** pin of the module to the reset end of the MCU to save 1 IO port;
2. Short-circuit the J1 pad on the PCB backplane, then **VCC** is connected with 3.3V voltage at this time. Never connect it to 5V, it will burn out;
3. After the module **VCC** and **GND** are connected, the **LED** pin is connected to 3.3V/5V or high level, and the backlight is normally lit to prove that the backlight is normal;

Demo function description:

1. This set of test program procedures is applicable to UNO and Mega2560 platforms;
2. This set of test programs uses the SPI bus to transfer data, including software spi and hardware spi functions;
3. Please select the corresponding test program and development board to follow the

above wiring instructions for wiring;

4. The version of the Arduino IDE used in this test program is 1.8.5. Please use the same or higher version for testing.
5. This set of test programs depends on the LCDWIKI library. Before compiling, you need to copy the LCDWIKI library in the Install libraries directory of the test package to the libraries folder of the Arduino project directory (the default Arduino project directory is C:\Users\Administrator\ Documents\Arduino\libraries);
6. This set of test procedures contains the following test items:
   A. Example_01_Simple_test is a simple screen test. This test program does not depend on any library and can be used directly to check whether the module hardware is normal.
   B. Example_02_clear_screen is a simple brush screen test, the screen is cycled in black, white, red, green and blue colors;
   C. Example_03_colligate_test is a comprehensive test, showing graphics, lines and statistics program running time;
   D. Example_04_display_graph is a graphical display test, showing various graphics;
   E. Example_05_display_scroll is a scroll test, showing text scrolling;
   F. Example_06_display_string is a text display test, showing Chinese and English in different sizes;