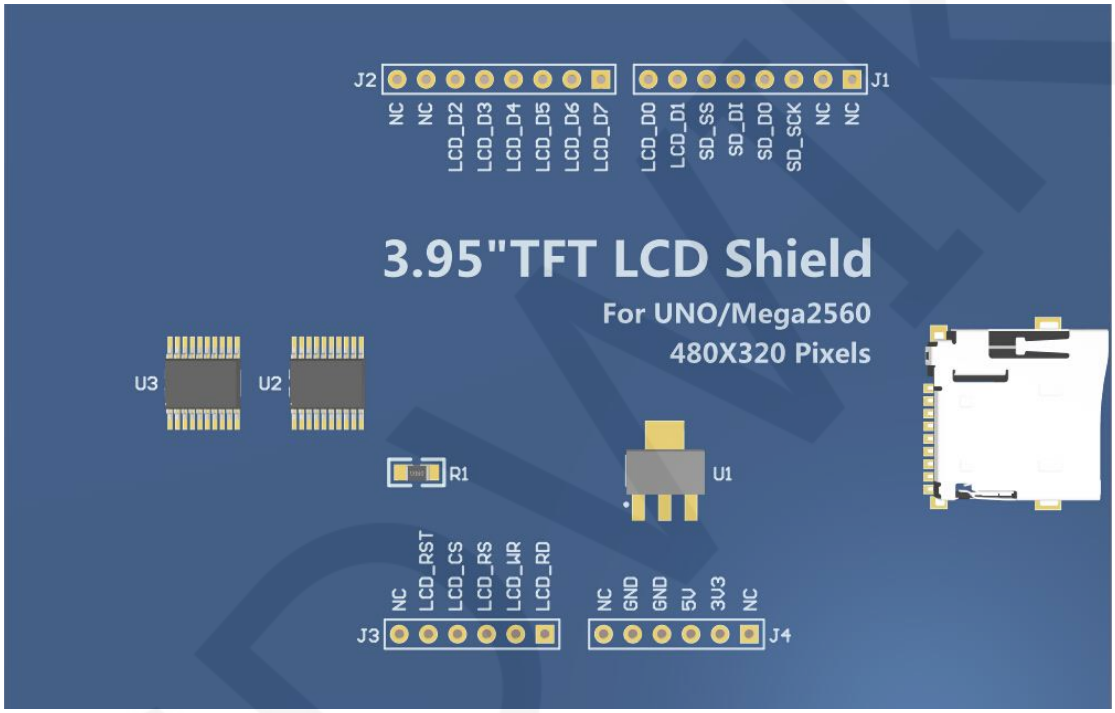
Test platform introduction:

Development board: Arduino UNO,MEGA2560

MCU:AVR_ATmega328,AVR_ATmega2560

Wiring instructions:

This module can be directly inserted into the Arduino UNO and Mega2560, no need to manually wire



Picture1. Pin silk screen picture

Note:

1. **The pins labeled NC in figure 1 are not used；**

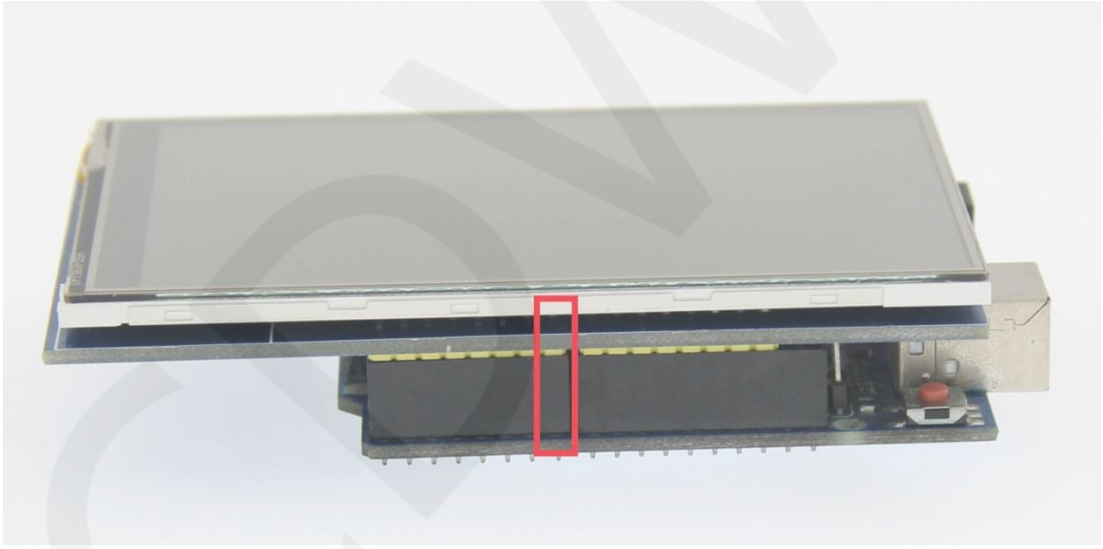
Important Note:

1. **The following pin numbers 1~20 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:**

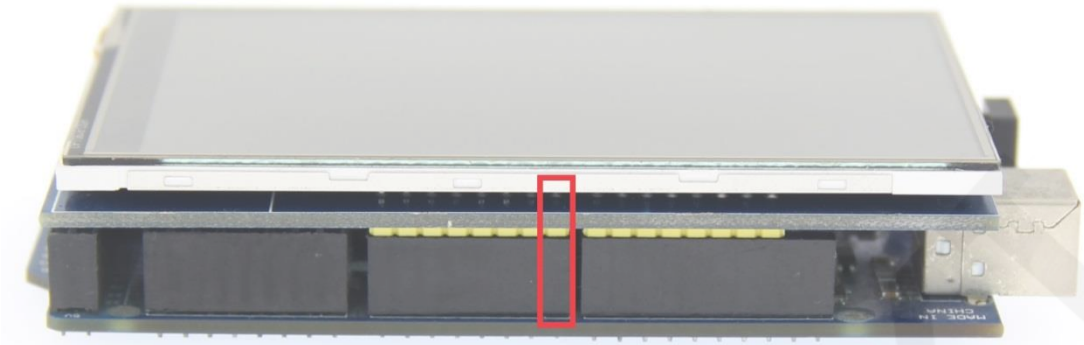
LCD_CS is 13 pin on our module. It may be x pin on different size bare screen. The following wiring program instructions tell you to connect LCD_CS signal to the A3 pin of Arduino microcontroller.

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.**

As shown in the picture below, align the **LCD_D7** pin of the module with the **7** pins of the Arduino (UNO and Mega2560), and then plug it in:



UNO directly inserted picture



Mega2560 directly inserted picture

Direct insertion instructions for Arduino UNO and MEGA2560 microcontroller test program pins			
Number	**Module Pin**	**Corresponding to UNO and MEGA2560 development board direct plug pins**	**Remarks**
1	**5V**	5V	Power positive 5V pin
2	**3V3**	3.3V	Power positive 3.3V pin
3	**GND**	GND	Power ground pin
4	**LCD_D0**	8	8-bit data bus pin
5	**LCD_D1**	9	
6	**LCD_D2**	2	
7	**LCD_D3**	3	
8	**LCD_D4**	4	
9	**LCD_D5**	5	
10	**LCD_D6**	6	
11	**LCD_D7**	7	
12	**LCD_RST**	A4	LCD reset control pin
13	**LCD_CS**	A3	LCD chip select control pin
14	**LCD_RS**	A2	LCD register / data selection control pin
15	**LCD_WR**	A1	LCD write control pin
16	**LCD_RD**	A0	LCD read control pin

17	SD_SS	10	SD card selection control pin
18	SD_DI	11	SD card input pin
19	SD_DO	12	SD card output pin
20	SD_SCK	13	SD card clock control pin

Demo function description:

1. This set of test program procedures is applicable to UNO and Mega2560 platforms;
2. This set of test program supports 8-bit and 16-bit data bus mode switching, but the product module can only use 8-bit data bus mode. For the specific switching method, see the following mode setting instructions;
3. Please select the corresponding 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 and the TouchScreen library. Before compiling, you need to copy the dependent libraries 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 swipe test that does not depend on the library, can be used to detect the LCD hardware;
   B. Example_02_clear_screen is a simple solid color brush test;
   C. Example_03_colligate_test is a comprehensive test, including graphics, lines, text display;
   D. Example_04_display_graph is a graphical display test, including graphics drawing and filling test;
   E. Example_05_display_scroll for character and graphic scroll display test;

F. Example_06_display_string is a character display test;

G. Example_07_read_piexl is a test for reading pixel color values;

H. Example_08_display_phonecall for phone dialing interface display and touch test;

I. Example_09_show_bmp_picture is a picture display test, read the bmp picture in the SD card and display it (only for UNO platform);

J. Example_10_switch_test for switch display and touch test;

K. Example_11_touch_pen for touch stroke drawing test;

L. SDCard Exten Example for the Arduino platform SD card function test, including writing and reading;

M. TouchScreen_Calibr is a touch screen calibration program;

Mode setting description:

Open the lcd_mode.h file of the LCDWIKI_KBV library, as shown below:

```
//if using 8bit mode,set the below macro definition to 1
//if using 16bit mode,set the below macro definition to 0
#define CONFIG_USE_8BIT_BUS 1

//if using 8bit mode on Mega2560 and the data pin is from 22 to 29,please uncomment the below macro definition
//if using 8bit mode on UNO and the data pin is from 2 to 9,please comment the below macro definition
//#define USE_8BIT_SHIELD_ON_MEGA
```

CONFIG_USE_8BIT_BUS 1 //Use 8-bit mode

CONFIG_USE_8BIT_BUS 0 //Use 16-bit mode

The following settings are only valid in 8-bit mode:

define USE_8BIT_SHIELD_ON_MEGA // If defined, use pins 22 to 29 of the MEGA2560 platform

//#define USE_8BIT_SHIELD_ON_MEGA // If not defined, use UNO or MEGA2560 platform pins 2 to 9

Note:

1. **The data bus of this module can only use UNO or MEGA2560 platform 2 to 9 pins in 8-bit mode;**
2. **Not every LCD screen supports 8-bit/16-bit mode. Please check with us to see if you have purchased it;**

3. **If the software has done 8/16 bit switching, the hardware needs to be changed to the corresponding mode to be able to drive normally. The module hardware does not support 8/16-bit switching. For details, please refer to the module schematic. Please consult us how to modify the bare screen;**