

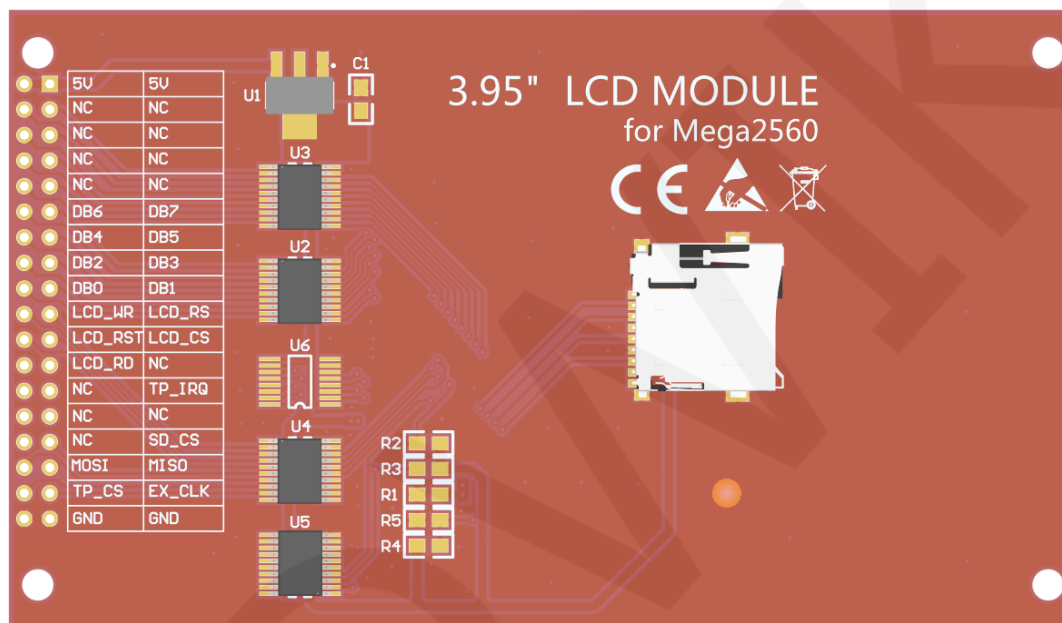
## Test platform introduction:

Development board: Arduino MEGA2560

MCU: AVR\_ATmega2560

## Wiring instructions:

**This module can be directly plugged into the Mega2560 and no need to manually wire**



Picture1. Pin silkscreen picture

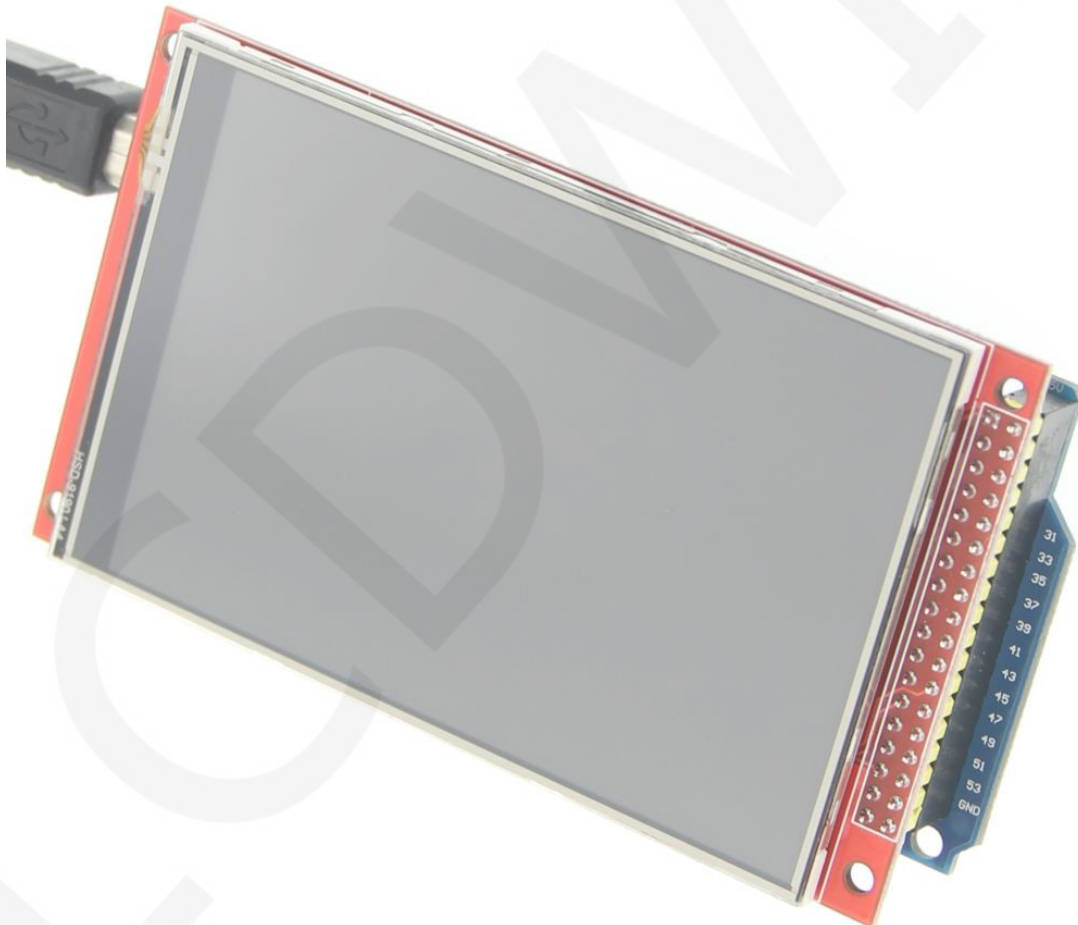
### Note:

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

### 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 40 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.



Mega2560 directly inserted picture

## Arduino MEGA2560 microcontroller test program directly insert instructions

Number	Module Pin	Corresponding to MEGA2560 development board direct plug pins	Remarks
1	5V	5V	Power pin
2	DB0	37	Data bus 8-bit pin
3	DB1	36	
4	DB2	35	
5	DB3	34	
6	DB4	33	
7	DB5	32	
8	DB6	31	
9	DB7	30	
10	NC	not used	Undefined, reserved
11	NC		
12	NC		
13	NC		
14	NC		
15	NC		
16	NC		
17	NC		
18	LCD_RS	38	LCD register / data selection pin
19	LCD_WR	39	LCD write control pin
20	LCD_CS	40	LCD chip select control pin
21	LCD_RST	41	LCD reset control pin
22	LCD_RD	43	LCD read control pin
23	NC	not used	Undefined, reserved
24	TP_IRQ	44	Touch screen interrupt control pin
25	SD_CS	48	Extended reference: SD card select pin
26	MISO	50	SPI bus input pin
27	MOSI	51	SPI bus output pin

28	TP_CS	53	Touch screen chip select pin
29	EX_CLK	52	SPI bus clock pin
30	GND	GND	Power ground pin

## Demo function description:

1. This set of test program procedures is applicable to Mega2560 platforms;
2. 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 mode);
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. 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 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\_show\_bmp\_picture is a picture display test, read the bmp picture in

the SD card and display it;

H. Example\_08\_switch\_test is the switch display and touch test;

I. Example\_09\_display\_phonecall is a telephone dialing interface display and touch test;

J. Example\_10\_touch\_pen is a touch pen test;

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

L. touch\_screen\_calibration 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 and set it to 1
//if using 8bit mode on Mega2560 and the data pin is from 30 to 37,please uncomment the below macro definition and set it to 0
//if using 8bit mode on UNO or Mega2560 and the data pin is from 2 to 9,please comment the below macro definition
#define USE_8BIT_SHIELD_ON_MEGA 0
```

`CONFIG_USE_8BIT_BUS 1` //Defined as 1, Use 8-bit data bus mode

`CONFIG_USE_8BIT_BUS 0` //Defined as 0, Use 16-bit data bus mode

**The following macro definitions are only valid in 8-bit mode**

`USE_8BIT_SHIELD_ON_MEGA 1` // Defined as 1, Use MEGA2560 platform high  
8-bit mode (connect module DB8~DB15 data line)

`USE_8BIT_SHIELD_ON_MEGA 0` // Defined as 0, Use MEGA2560 platform low  
8-bit mode (connect module DB0~DB7 data line)

`//#define USE_8BIT_SHIELD_ON_MEGA` // if not defined, use UNO platform 8-bit  
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.