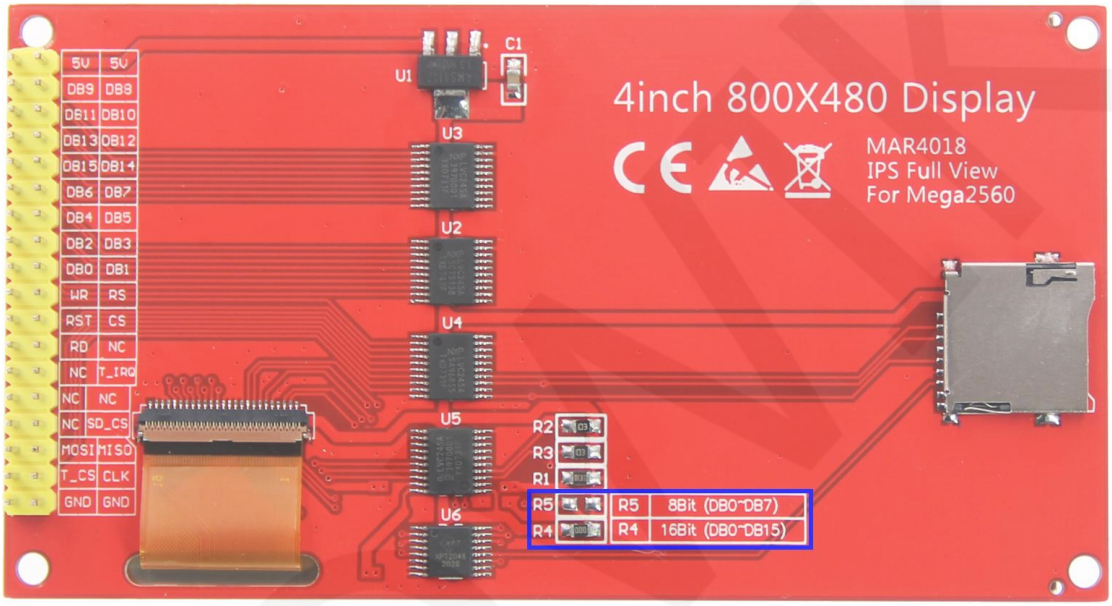
Test platform introduction:

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:

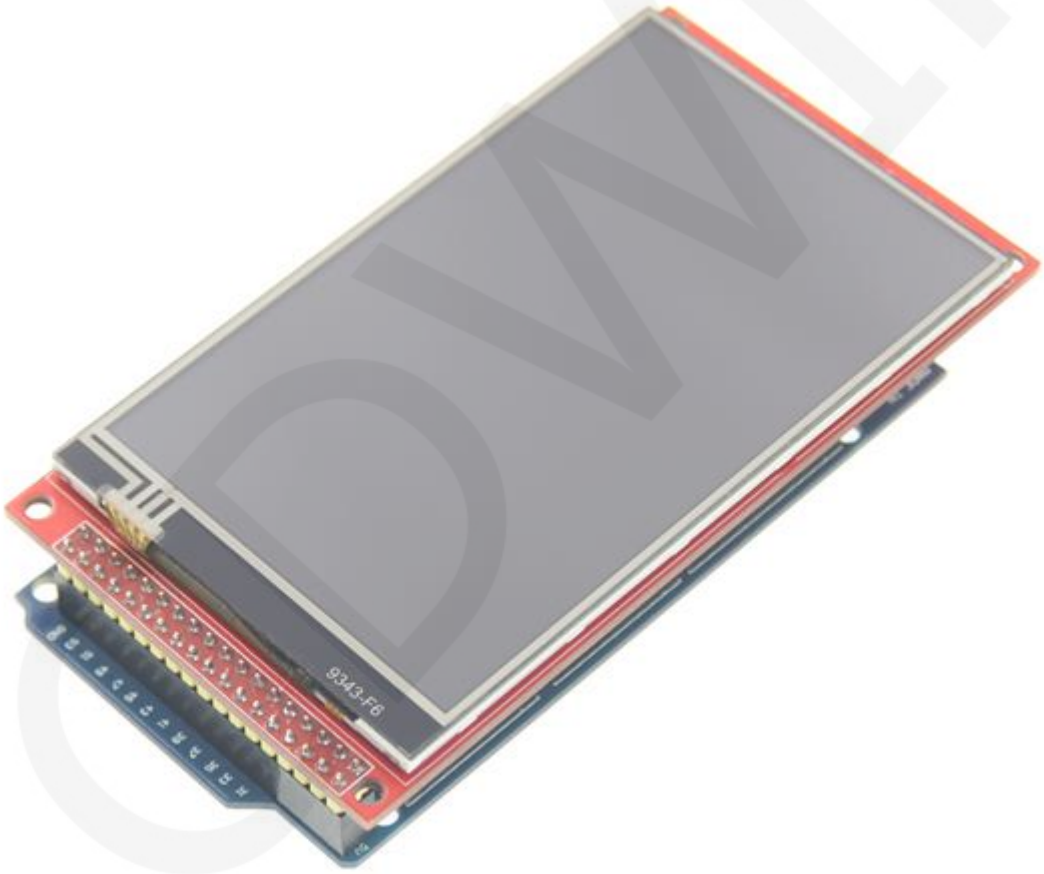
1. **The pins labeled NC in figure 1 are not used；**

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
		8-bit mode	16-bit mode	
1	5V	5V		Power pin
2	5V			
3	DB8	not used	22	Data bus high 8-bit pin
4	DB9		23	
5	DB10		24	
6	DB11		25	
7	DB12		26	
8	DB13		27	
9	DB14		28	
10	DB15		29	
11	DB7	30		Data bus low 8-bit pin
12	DB6	31		
13	DB5	32		
14	DB4	33		
15	DB3	34		
16	DB2	35		
17	DB1	36		
18	DB0	37		
19	RS	38		LCD register / data selection pin(high level:data, low level:register)
20	WR	39		LCD write control pin
21	CS	40		LCD chip select control pin(low level active)
22	RST	41		LCD reset control pin(low level active)
23	NC	not used		Undefined, reserved
24	RD	43		LCD read control pin
25	T_IRQ	44		Touch screen interrupt control pin(low level active)

26	NC	not used	Undefined, reserved
27	NC		
28	NC		
29	SD_CS	48	Extended reference: SD card select pin
30	NC	not used	Undefined, reserved
31	MISO	50	SPI bus input pin
32	MOSI	51	SPI bus output pin
33	TP_CS	53	Touch screen chip select pin(low level active)
34	EX_CLK	52	SPI bus clock pin
35	GND	GND	Power ground pin
36	GND		

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 supports 8-bit and 16-bit data bus mode switching, and defaults to 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_string is a character display test;

F. Example_06_switch_test is the switch display and touch 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_display_phonecall is a telephone dialing interface display and touch test;

I. Example_09_touch_pen is a touch pen test;

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

K. 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 supports 8-bit and 16-bit data bus mode switching. For details, see the blue box in Picture 1 above or refer to the module schematic (this module defaults to 16-bit data bus mode);
2. Not every LCD screen supports 8-bit/16-bit mode. Please check with us to see if you have purchased it;
3. After the 8/16-bit switch is performed on the software, the hardware also needs to be changed to the corresponding mode to be able to drive normally. Please consult us for how to modify the bare screen.