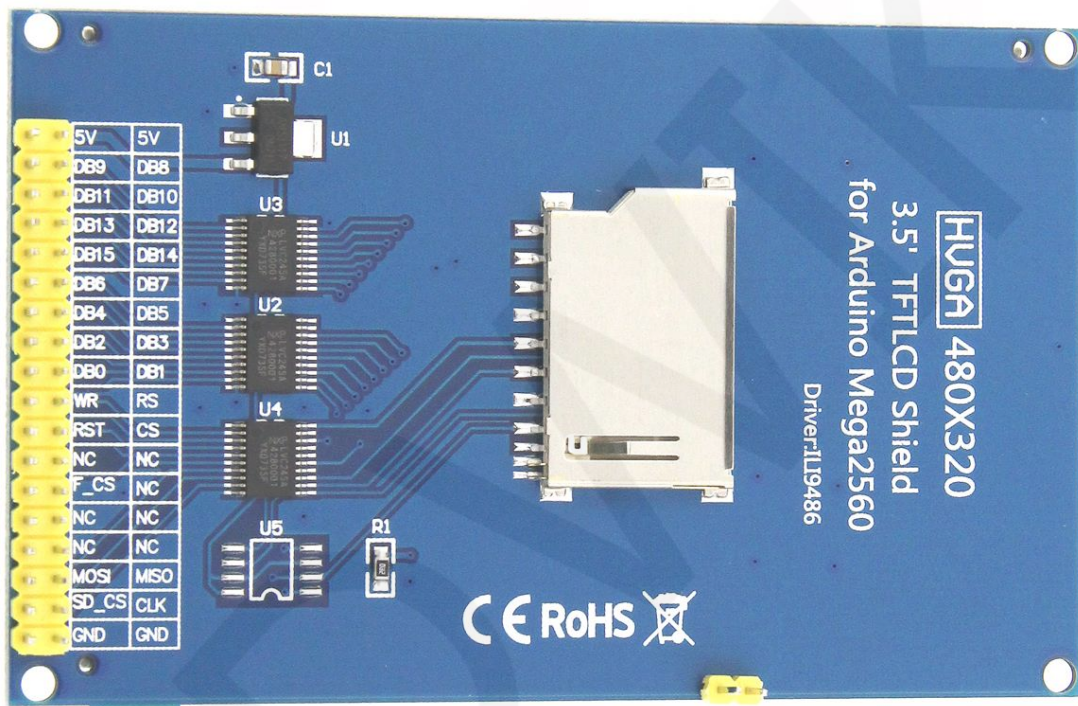# Test platform introduction:

Development board: Arduino MEGA2560

MCU: AVR_ATmega2560

Wiring instructions:

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

Pin Silkscreen picture

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 low 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	**DB8**	22	Data bus high 8-bit pin

11	DB9	23	
12	DB10	24	
13	DB11	25	
14	DB12	26	
15	DB13	27	
16	DB14	28	
17	DB15	29	
18	RS	38	LCD register / data selection pin
19	WR	39	LCD write control pin
20	CS	40	LCD chip select control pin
21	RST	41	LCD reset control pin
22	NC	No need to connect	Undefined, reserved
23	F_CS	45	Extended application: SPI flash Chip Select Pin
24	MISO	50	SPI bus input pin (extended application)
25	MOSI	51	SPI bus output pin (extended application)
26	CLK	52	SPI bus clock pin (extended application)
27	SD_CS	53	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 Mega2560 platforms;

2. this set of test program uses the platform 16-bit parallel port bus to transfer data, so the test program must be set to 16-bit mode, please see the mode setting instructions for the specific setting method;

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_clear_screen is a simple solid color brush test;

B. Example_02_colligate_test is a comprehensive test, including graphics, lines, text

display;

C. Example_03_display_string is a character display test；

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_show_bmp_picture is a picture display test, read the bmp picture in

the SD card and display it;

G. SDCard Exten Example for the Arduino platform SD card function test, including

writing and reading;

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 0

//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 macro definitions are only valid in 8-bit mode

define　USE_8BIT_SHIELD_ON_MEGA　//If defined, use the MEGA2560 platform

8-bit mode

//#define　USE_8BIT_SHIELD_ON_MEGA　// if not defined, use UNO platform 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.