

Test platform introduction:

Development board: MSP430 development board

MCU : MSP430F149

Wiring instructions:



Picture1. Pin silkscreen picture

important:

1. The following pin numbers 1~8 refer to the module pin numbers of our company with PCB backplane. If you are buying 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 according to the following. The module pin number is used for

wiring. For example: DC is 6 feet on our module. It may be x pin on different size bare screen. The following wiring instructions tell you that the DC signal is connected to the P21 pin of the MCU.

2. About VCC supply voltage: The IPS display module can only be connected to 3.3V.

3. About backlight voltage: The module with PCB backplane has integrated triode backlight control circuit, only need to input high level or PWM wave on BL pin to backlight. If you are buying a bare screen, the LEDAx is connected to 3.0V-3.3V, and the LEDKx can be grounded.

MSP430F149 microcontroller test program wiring instructions			
Number	Module Pin	Corresponding to MSP430 development board wiring pin	Remarks
1	GND	GND	LCD Power ground
2	VCC	3.3V	LCD power supply is positive (3.3V)
3	SCL	P33	LCD SPI bus clock signal
4	SDA	P31	LCD SPI bus write data signal
5	RES	P22	LCD reset control signal(Low level reset)
6	DC	P21	LCD register / data selection control signal(Low level: register, high level: data)
7	CS	P23	LCD chip select control signal (low level enable)
8	BLK	P20	LCD backlight control signal (high level lighting, if you do not need control, please connect 3.3V)

Demo function description:

1. This set of test program procedures is applicable to the MSP430F149 platforms;
2. This module uses 4-line-SPI communication interface;
3. This test program includes software SPI and hardware SPI function tests ;
4. Please follow the above wiring instructions to find the corresponding development board and MCU for wiring;
5. This set of tests supports display switching in four directions. For details, see the display direction switching instructions.
6. This set of test program contains the following test items:
 - A. The main interface displays the test;
 - B. 3D menu display test;
 - C. simple brush test;
 - D. rectangular drawing and filling test;
 - E. circular drawing and filling test;
 - F. triangle drawing and filling test;
 - G. English display test;
 - H. Chinese display test;
 - I. picture display test;
 - J. rotating display test;

Display direction switching instructions:

Find the macro definition `USE_HORIZONTAL` in `lcd.h` as shown below:

```
////////////////////////////////////用户配置区////////////////////////////////////
#define USE_HORIZONTAL 0 //定义液晶屏顺时针旋转方向 0-0度旋转, 1-90度旋转, 2-180度旋转, 3-270度旋转

USE_HORIZONTAL 0 //0° Rotate
USE_HORIZONTAL 1 //90° Rotate
USE_HORIZONTAL 2 //180° Rotate
USE_HORIZONTAL 3 //270° Rotate
```