# 3.5inch SPI Module ILI9488 SKU:MSP3520
From LCD wiki

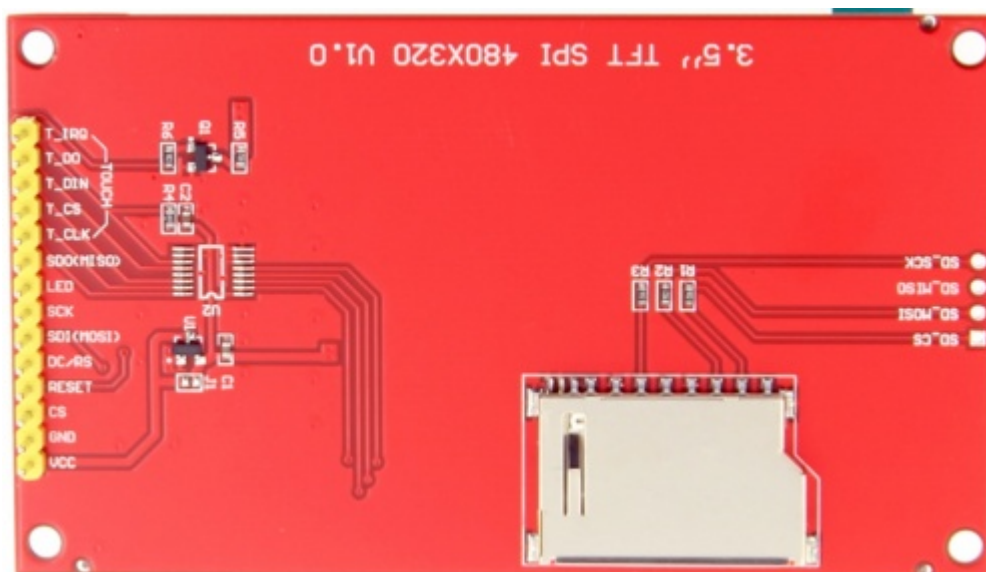## Product Picture



## Product Description

- 3.5-inch color screen,support 65K color display,display rich colors
- 480X320 resolution, optional touch function
- Using the SPI serial bus, it only takes a few IOs to illuminate the display
- Easy to expand the experiment with SD card slot
- Provide a rich sample program
- Military-grade process standards, long-term stable work

- Provide underlying driver technical support

# Product Parameters

| Name | Parameter |
|------|-----------|
| Display Color | RGB 65K color |
| SKU | have touch screen: MSP3520 |
| | have no touch screen: MSP3521 |
| Screen Size | 3.5(inch) |
| Type | TFT |
| Driver IC | ILI9488 |
| Resolution | 480*320 (Pixel) |
| Module Interface | 4-wire SPI interface |
| Active Area (AA area) | 48.96x73.44(mm) |
| Module PCB Size | 56.34x98(mm) |
| Operating Temperature | -20℃~60℃ |
| Storage Temperature | -30℃~70℃ |
| VCC power voltage | 3.3V~5V |
| Logic IO port voltage | 3.3V(TTL) |
| Power Consumption | TBD |
| Rough Weight(Package containing) | No touch: 45 (g) / With touch: 57 (g) |

# Interface Definition



| Number | Pin Label | Description |
|--------|-----------|-------------|
| 1 | VCC | 5V/3.3V power input |

| 2 | GND | Ground |
|---|---|---|
| 3 | CS | LCD chip select signal, low level enable |
| 4 | RESET | LCD reset signal, low level reset |
| 5 | DC/RS | LCD register / data selection signal,<br><br>high level: register, low level: data |
| 6 | SDI(MOSI) | SPI bus write data signal |
| 7 | SCK | SPI bus clock signal |
| 8 | LED | Backlight control, high level lighting,<br><br>if not controlled, connect 3.3V always bright |
| 9 | SDO(MISO) | SPI bus read data signal, if you do not need to the read function, you can not connect it |
| (The following is the touch screen signal line wiring, if you do not need to touch function or the module itself does not have touch function, you can not connect them) | | |
| 10 | T_CLK | Touch SPI bus clock signal |
| 11 | T_CS | Touch screen chip select signal, low level enable |
| 12 | T_DIN | Touch SPI bus input |
| 13 | T_DO | Touch SPI bus output |
| 14 | T_IRQ | Touch screen interrupt signal, low level when touch is detected |

# Product Documentation

- **3.5 inch SPI Module User Manual** (http://www.lcdwiki.com/res/MSP3520/3.5inch_SPI_Module_MSP3520_User_Manual_EN.pdf)
- **3.5 inch TFT Specifications** (http://www.lcdwiki.com/res/MSP3520/QD3503_Specification_V1.1.pdf)
- **3.5 inch SPI Module Size Picture** (http://www.lcdwiki.com/images/2/20/3.5inch_SPI_Size.png)
- **3.5 inch SPI Module Schematic** (http://www.lcdwiki.com/res/MSP3520/3.5寸SPI模块原理图.pdf)
- **3.5 inch QD3503 TFT LCD Schematic and PCB Package Library** (http://www.lcdwiki.com/res/MSP3520/Altium_3.5_48pin_QD3503_Package_library.zip)
- **Driver IC ILI9488 Data sheet** (http://www.lcdwiki.com/res/MSP3520/ILI9488%20Data%20Sheet.pdf)

# Program Download

- **3.5 inch SPI Module Package(ILI9488)** (http://www.lcdwiki.com/res/Program/Common_SPI/3.5inch/SPI_ILI9488_MSP3520_V1.1/3.5inch_SPI_Module_ILI9488_MSP3520_V1.1.zip)

# Reference Materials

- **Arduino IDE software use illustration** (http://www.lcdwiki.com/res/PublicFile/Arduino_IDE_Use_Il lustration_EN.pdf)
- **C51 Keil and stc-isp software use illustration** (http://www.lcdwiki.com/res/PublicFile/C51_Keil% 26stc-isp_Use_Illustration_EN.pdf)
- **STM32 keil software use illustration** (http://www.lcdwiki.com/res/PublicFile/STM32_Keil_Use_Ill ustration_EN.pdf)
- **PCtoLCD2002 software use illustration** (http://www.lcdwiki.com/res/PublicFile/PCtoLCD2002_U se_Illustration_EN.pdf)
- **Image2Lcd software use illustration** (http://www.lcdwiki.com/res/PublicFile/Image2Lcd_Use_Illu stration_EN.pdf)
- **Chinese and English display modulo settings** (http://www.lcdwiki.com/Chinese_and_English_di splay_modulo_settings)

# How to use on Arduino

- **Module instructions for use on the Arduino** (http://www.lcdwiki.com/Run_Arduino_Demo_in_spi _model)

# Common Software

- **PCtoLCD2002** (http://www.lcdwiki.com/res/software/PCtoLCD2002.zip)
- **Image2Lcd** (http://www.lcdwiki.com/res/software/Image2Lcd.zip)

BACK TO TOP

Last modified

- 3 years ago

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