Arduino-er: ESP32-DevKitC + 2.8inch 240x320 SPI TFT (ILI9341) us...

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# Arduino-er

Arduino development: from beginner to beginner





viettel Money Hoàn 50% phí xét tuyển Đại Học

Saturday, June 27, 2020

This post show how to use ESP32-DevKitC to drive a 2.8inch 240x320 SPI TFT (wih ILI9314 using serial interface), using TFT\_eSPI library.

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ESP32 + 1.3 inch 240x240 IPS LCD (ST7789 SPI interface), using TFT\_eSPI library



Install ESP8266 Board to Arduino IDE



ESP32-DevKitC + 2.8inch 240x320 SPI TFT (ILI9341) using TFT\_eSPI library



Arduino Nano + DHT11, Temperature & Humidity sensors



Simple Compass - Arduino Nano + GY-271(HMC5883L) + mini-OLED

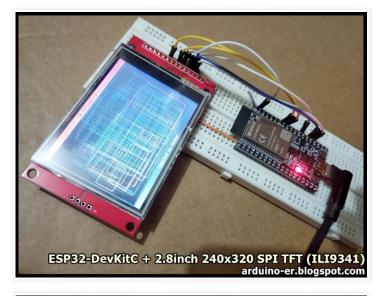


Arduin Uno as ISP to burn Bootloader to Mega 2560



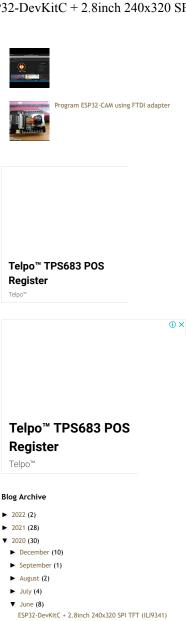
HMC5883L library with calibration, for Arduino

Install VS Code/PlatformIO IDE on Ubuntu 20.04, to program Arduino/ESP8266/STM32.





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Install ESP32/ESP8266 to Arduino IDE on Ubuntu 20....

TFT Touch Screen shield (ILI9341 8 bit) + Uno. cal...

2.8" 320\*240 TFT Touch Screen shield (ILI9341 8 bi...

Fixed fatal error: Wire.h: No such file or directo...

Install Arduino IDE 1.8.13 on Ubuntu 20.04

Install JDK (OpenJDK) on Ubuntu 20.04

May (4)

April (1)

2019 (14)

2018 (6)

2017 (23)

2016 (67)

2015 (89)

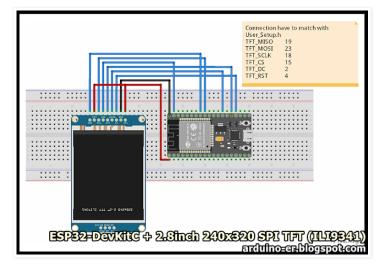
2014 (102)

2013 (178)

Arduno Uno + GY-521 module (MPU-6050)

ESP32-DevKitC + 2.8inch 240x320 SPI TFT (ILI9341) using ...

Connection:



I connect ESP32-DevKitC and Display board follow the default setting of TFT\_eSPI library.

TFT\_MISO 19
TFT\_MOSI 23
TFT\_SCLK 18
TFT\_SC 15
TFT\_CS 15
TFT\_DC 2
TFT\_RST 4

I found the Fritzing parts here:

ESP32S-HiLetgo Dev Boad with Pinout Template

https://forum.fritzing.org/t/esp32s-hiletgo-dev-boad-with-pinout-template/5357

2.2 320x240 TFT ILI9341.fzpz (it should be logically same as the 2.8" display I use) https://forum.fritzing.org/t/2-2-ili9342-tft/1813

Setup Library in Arduino IDE:

Menu > Sketch > Include Library > Manager Libraries...

Search and install TFT\_eSPI

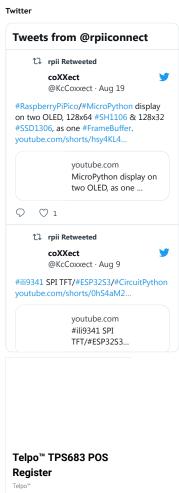


Then have to edit User\_Setup.h to fix your circuit.

Telpo™ TPS683 POS

**Register** Telpo™

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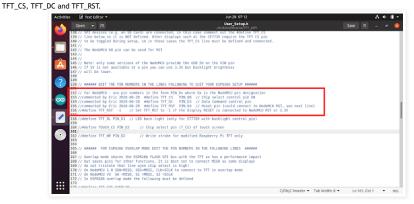




- Confirm ILI9341\_DRIVER is defined

comment the original define of:





- un-comment the pin define under "For ESP32 Dev board (only tested with ILI9341 display)" TFT\_MISO, TFT\_MOSI 23, TFT\_SCLK, TFT\_CS, TFT\_DC and TFT\_RST.

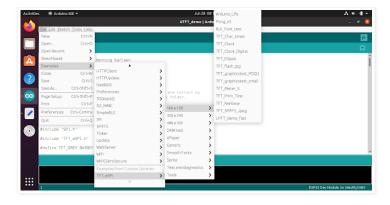


Of overlap mode the TFT chip select MUST connect to pin 03
TFT CS = DML 03
TFT \*\*\*\*\* EDIT THE PIN NUMBERS IN THE LINES FOLLOWING TO SUIT YOUR ESP32 SETUP \*\*\*\*\* narmanie sy fron te mapped to any puiss emented by friz 2020-06-028 [TF MICO 20 MIT MICO 2020-06-028] [TF GC 13 // Chip select control pin [TF GC 2 // Data Command control pin [TF GC 4 // Macci pain (could connect to RST pin) [MIT MICO 4 // Macci pin (could connect to RST pin) [MIT MICO 4 // Macci pin (could connect to RST pin) [MIT MICO 4 // Macci pin (TF MICO 4 // Mico)] [MIT MICO 4 // Mico)] [MIT MICO 4 // Mico)] define TFT\_MR 22 // Write strobe for modified Raspberry Pi TFT only For the MSStack module use these #define lines #define TFT MISO 19 #define TFT MSS 123 #define TFT CSKL 18 #define TFT CSKL 18 C/ObjC Header ▼ Tab Width: 8 ▼ Ln 185, Col 4 ▼ INS

Then, you can try any example under TFT\_eSPI.

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Using TFT\_eSPI, if you load a new copy of TFT\_eSPI then it will over-write your setups if they are kept within the TFT\_eSPI folder. It's suggested to create a new folder in your Arduino library folder called "TFT\_eSPI\_Setups". You then place your custom setup.h files in there. After an upgrade simply edit the User\_Setup\_Select.h file to point to your custom setup file.

#### check it

- ~ ESP32 + 1.3 inch 240x240 IPS LCD (ST7789 SPI interface), using TFT\_eSPI library
- ~ ESP32 + 2.4" 320X240 Display (SPI ILI9341), using TFT\_eSPI, prepare user setup file.

by: Erik label: ESP32, ILI9341 SPI, TFT\_eSPI

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### Labels

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