

2.4inch_Squareline_Demo

Download Introduction

1. Operation before downloading cases

(1) Place all the lib library files provided in the folder into the libraries file of the arduino.

~~测试 > esp32_homeassistant_hmi > lib			
名称	修改日期	类型	大小
Adafruit_Sensor-master	1/17/2024 4:34 PM	文件夹	
Arduino_GFX	1/18/2024 11:16 AM	文件夹	
async-mqtt-client-develop	1/8/2024 4:20 PM	文件夹	
AsyncTCP-master	1/8/2024 4:20 PM	文件夹	
Crowbits_DHT20	1/18/2024 11:14 AM	文件夹	
DHT-sensor-library-master	1/17/2024 4:29 PM	文件夹	
FT6236	1/18/2024 11:32 AM	文件夹	
gt911-arduino	1/18/2024 11:32 AM	文件夹	
LovyanGFX	1/18/2024 11:13 AM	文件夹	
lvgl	1/18/2024 11:33 AM	文件夹	
TFT_eSPI	1/18/2024 11:13 AM	文件夹	
U8g2	1/18/2024 11:33 AM	文件夹	
UI	1/18/2024 11:33 AM	文件夹	
XPT2046_Touchscreen	1/18/2024 11:33 AM	文件夹	
lv_conf.h	8/3/2023 9:55 AM	C/C++ Header	26 KB

(2) Copy User_Setup.h from the case User_Setup file to the TFT_eSPI folder in the libraries of the arduino.

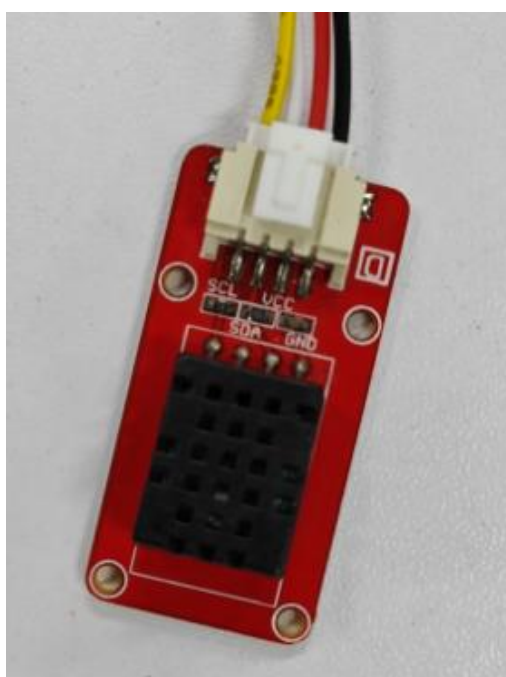
Name	Date modified	Type	Size
User_Setup	27/09/2023 15:52	File folder	
2.4-2.8-3.5inch_Squareline_Demo.ino	27/09/2023 14:43	INO File	4 KB
README.md	27/09/2023 15:26	Markdown docu...	1 KB
ui.c	25/09/2023 11:32	nddfile	2 KB
ui.h	25/09/2023 11:32	nddfile	1 KB
ui_comp_hook.c	25/09/2023 11:32	nddfile	1 KB
ui_events.h	25/09/2023 11:32	nddfile	1 KB
ui_helpers.c	25/09/2023 11:32	nddfile	8 KB
ui_helpers.h	25/09/2023 11:32	nddfile	4 KB
ui_img_cat_png.c	25/09/2023 11:34	nddfile	1,226 KB
ui_Screen1.c	25/09/2023 11:42	nddfile	2 KB

~~测试 > esp32_homeassistant_hmi > homeassistant_mqtt_demo > 2.4inch_Squareline_Demo > User_Setup			
名称	修改日期	类型	大小
User_Setup.h	1/2/2024 2:36 PM	C/C++ Header	16 KB

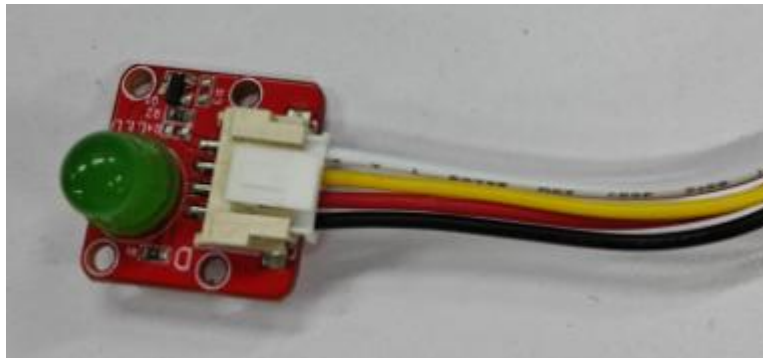
duino > libraries > TFT_eSPI	
名称	修改日期
docs	11/7/2023 5:08 AM
examples	11/7/2023 5:08 AM
Extensions	11/7/2023 5:08 AM
Fonts	11/7/2023 5:08 AM
Processors	11/7/2023 5:08 AM
TFT_Drivers	11/7/2023 5:08 AM
Tools	11/7/2023 5:08 AM
User_Setups	11/7/2023 5:08 AM
CMakeLists.txt	6/19/2023 11:21 PM
Kconfig	6/19/2023 11:21 PM
keywords.txt	6/19/2023 11:21 PM
library.json	6/19/2023 11:21 PM
library.properties	6/19/2023 11:21 PM
license.txt	6/19/2023 11:21 PM
README.md	6/19/2023 11:21 PM
README.txt	6/19/2023 11:21 PM
TFT_config.h	6/19/2023 11:21 PM
TFT_eSPI.cpp	6/19/2023 11:21 PM
TFT_eSPI.h	6/19/2023 11:21 PM
User_Setup.h	1/2/2024 2:36 PM
User_Setup.h.9341	6/19/2023 11:21 PM
User_Setup_Select.h	6/19/2023 11:21 PM

Sensor wiring:

(1) Temperature and humidity sensor (Crowtail-DHT20-V1.0) with IIC interface



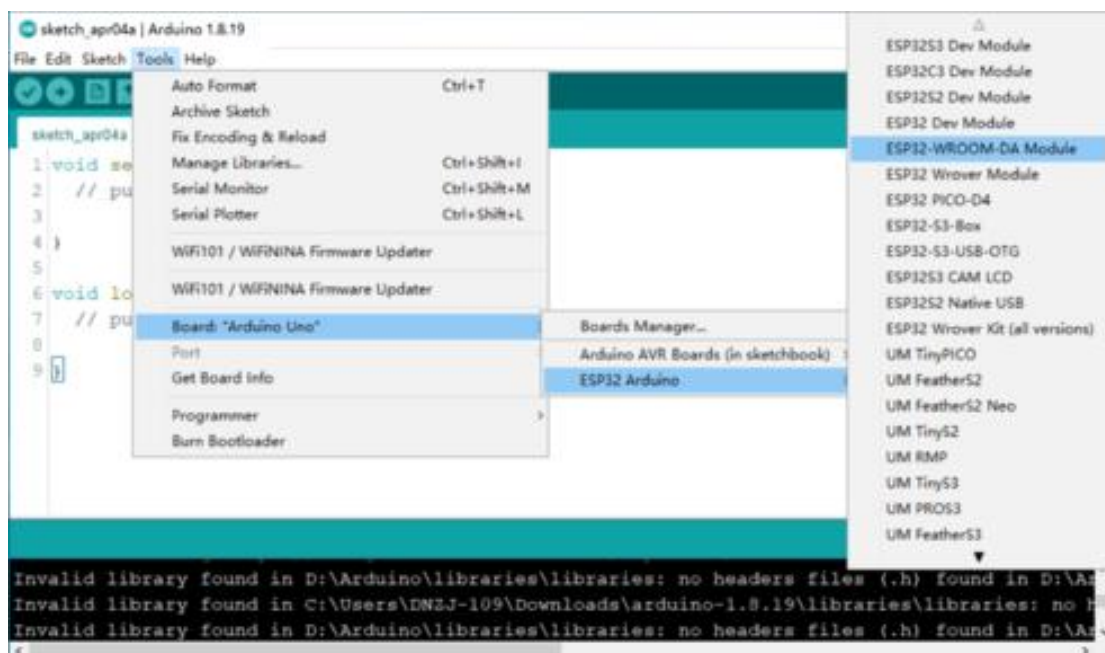
(2) LED to IO32 port

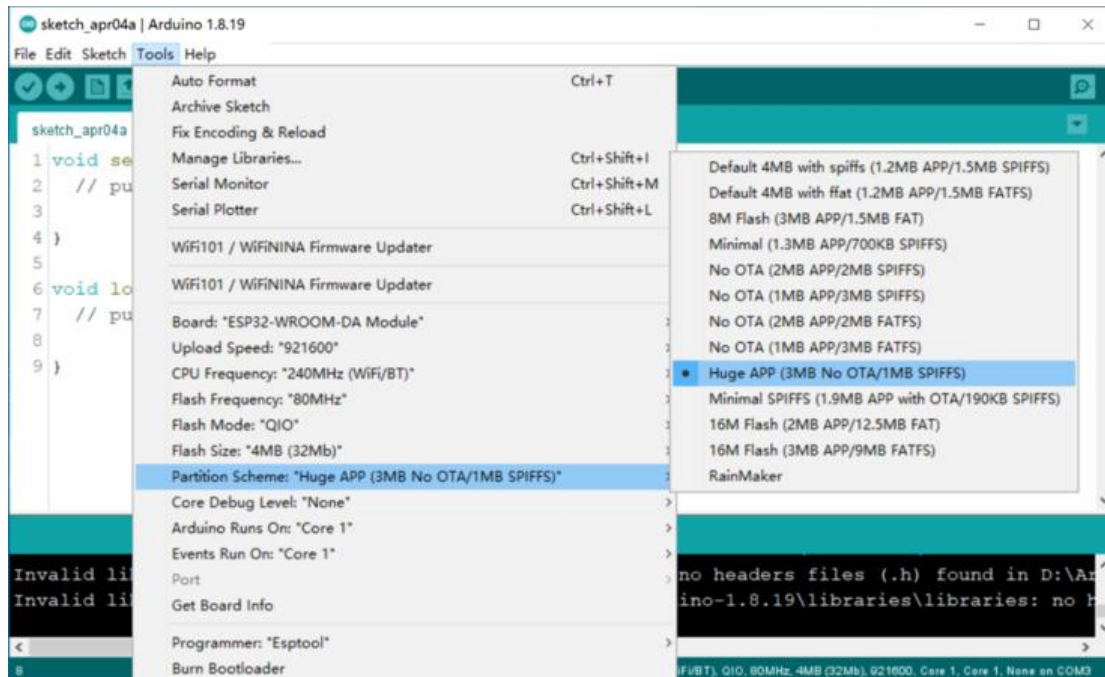


2. Use arduino software to open 2.4inch_Squareline_Demo.ino, arduino related operations can refer to this screen wiki

(https://www.elecrow.com/wiki/index.php?title=ESP32_Display_2.4%27%27_Intelligent_Touch_Screen_Wi-Fi%26BLE_240*320_HMI_Display)

Download Settings:





3. Download the programme.

4. Operational effects.



5. Explanation of key points with MQTT

(1) WiFi and server address settings, the network needs to be in the same LAN, the server address and port that is the address and port automatically generated by Raspberry Pi.



```
File Edit Sketch Tools Help
2.4Inch_Squareline_Demo ui.c ui.h ui_events.h ui_helpers.c ui_helpers.h ui_img_small_hum_png.c ui_img_small_logo_png.c ui_img_small_off_1_1.c
10 }
11 #include <AsyncMqttClient.h>
12 #include <Crowbits_DHT20.h>
13
14 #define Display_24          //according to the board you using ,if you using
15
16 #define LED 32
17
18 #define WIFI_SSID "yanfa_software"
19 #define WIFI_PASSWORD "yanfa-123456"
20
21 // Raspberry Pi Mosquitto MQTT Broker
22 #define MQTT_HOST IPAddress(192, 168, 50, 233)
23
24 // For a cloud MQTT broker, type the domain name
25 // #define MQTT_HOST "example.com"
26 #define MQTT_PORT 1885
27
```

WiFi

Address

(2) MQTT theme settings, the specific parameters are set according to the contents of the configuration.yaml file on the MQTT server.

```
28 // Temperature MQTT Topics
29 #define MQTT_PUB_LED_S  "esp32/led/state"
30 #define MQTT_PUB_LED_C  "esp32/led/command"
31 #define MQTT_PUB_TEMP  "esp32/temperature"
32 #define MQTT_PUB_HUM   "esp32/humidity"
33 #define mqtt_username   "elecrow"
34 #define mqtt_password   "elecrow2014"
35
```