

Report

Error in T-WRISTBAND LiLyGo

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Sommario

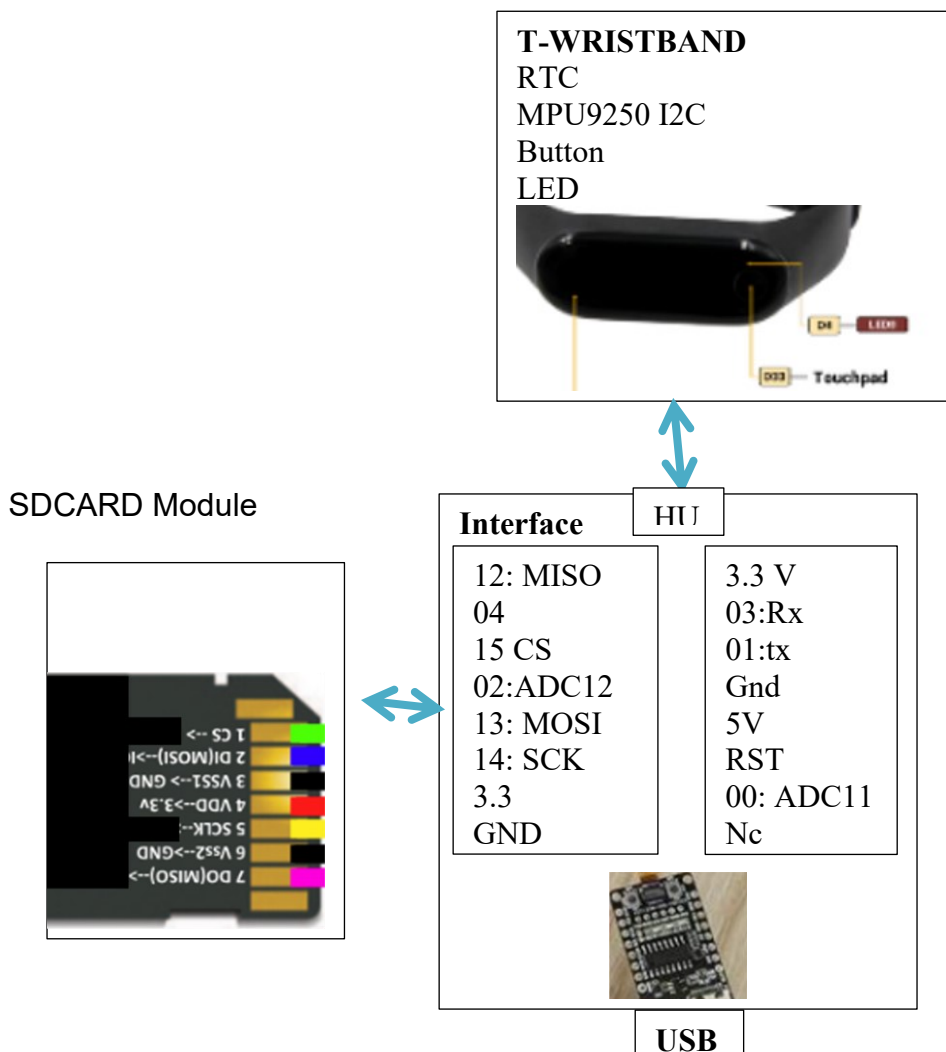
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|----------|---|----------|
| 1 | Error List..... | 3 |
| 1.1 | SDcard reader ERROR in T WRISTBAND..... | 3 |
| 1.2 | IDE and sketch..... | 10 |

1 Error List

List of error and solution found in the project.

1.1 SDcard reader ERROR in T WRISTBAND

1.1.1 Schema a blocchi della board



1.1.2 The sketch

The sketch must test the function for read/write from SDCARD (SDCARD 8GByte formatted ok) using library SD.h

The used pin are:

```
#define SDSPI_CLK 14
#define SDSPI_MISO 12
#define SDSPI_MOSI 13
#define SDSPI_CS 15
```

We have test VSPI and HSPI

The sketch:

```
#include "FS.h"
#include "SD.h"
#include "SPI.h"
```

```
// SPIClass spi = SPIClass(VSPI);
SPIClass spi = SPIClass(HSPI);
void setup(){
```

```
spi.begin(SDSPI_CLK,SDSPI_MISO, SDSPI_MOSI, SDSPI_CS);
```

```
    if (!SD.begin(SDSPI_CS, spi,400000))
    {
        Serial.println("Card Mount Failed");
        return;
    }
```

```
uint8_t cardType = SD.cardType();
```

```
if(cardType == CARD_NONE){
    Serial.println("No SD card attached");
    return;
}
```

....

See the complete sketch in cap. 1.2

NOTE This program in another board TTGO T8 running OK with

```
#define SDSPI_CLK 14
#define SDSPI_MISO 2
#define SDSPI_MOSI 15
#define SDSPI_CS 13
```

1.1.3 Execution: TEST and Error

- a) After connect the SDCARD Module to Interface we can't upload the software from IDE Arduino; the error is:

```
esptool.py v4.5.1
Serial port COM10
Connecting.....
Chip is ESP32-PICO-D4 (revision v1.0)
Features: WiFi, BT, Dual Core, 240MHz, Embedded Flash, VRef calibration in efuse, Coding Scheme None
Crystal is 40MHz
MAC: 50:02:91:8d:72:7c
Uploading stub...
Running stub...
Stub running...
Changing baud rate to 921600
Changed.
WARNING: Failed to communicate with the flash chip, read/write operations will fail. Try checking the chip connections or
removing any other hardware connected to IOs.
Configuring flash size...
Flash will be erased from 0x00001000 to 0x00005fff...
Flash will be erased from 0x00008000 to 0x00008fff...
Flash will be erased from 0x0000e000 to 0x0000ffff...
Flash will be erased from 0x00010000 to 0x0005efff...
Compressed 18992 bytes to 13112...

A fatal error occurred: Packet content transfer stopped (received 8 bytes)
A fatal error occurred: Packet content transfer stopped (received 8 bytes)
```

- b) But if we disconnect the SDCARD Board, we can upload the program

If we connect now the SDCARD Board , the sketch running but with error; the same error there is also without SDCARD
8 GB. The error is
ets Jun 8 2016 00:22:57

```
rst:0x1 (POWERON_RESET),boot:0x33 (SPI_FAST_FLASH_BOOT)
flash read err, 1000
ets_main.c 371
ets Jun 8 2016 00:22:57
```

```
rst:0x10 (RTCWDT_RTC_RESET),boot:0x33 (SPI_FAST_FLASH_BOOT)
flash read err, 1000
ets_main.c 371
ets Jun  8 2016 00:22:57
```

c) If we disconnect the SDCARD Board the script running

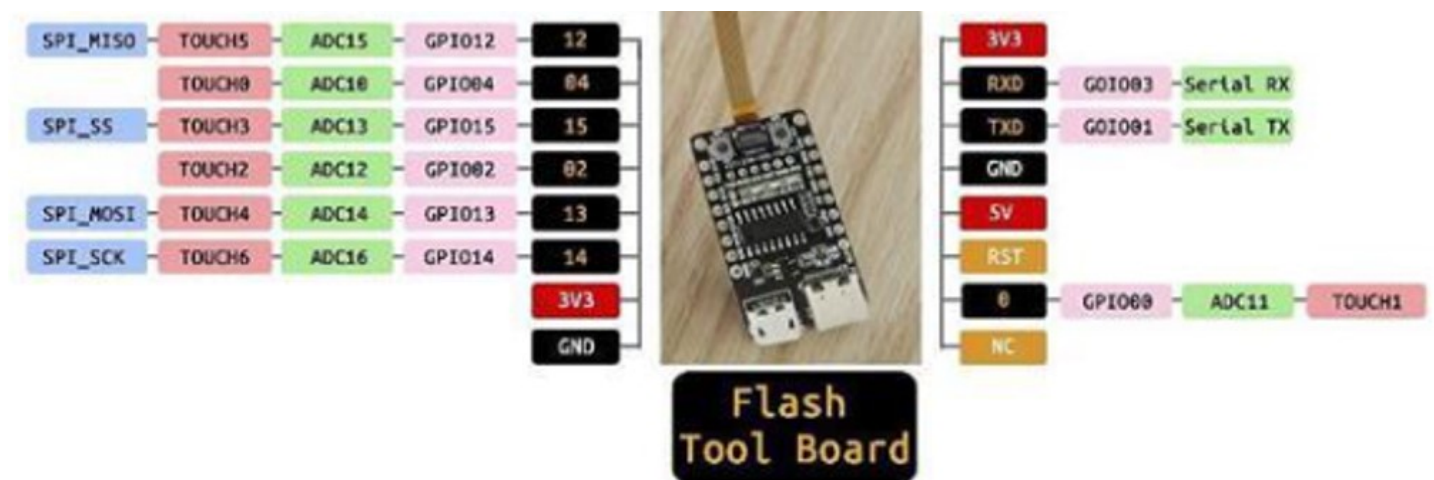
```
ets Jun  8 2016 00:22:57
```

```
rst:0x1 (POWERON_RESET),boot:0x13 (SPI_FAST_FLASH_BOOT)
configsip: 188777542, SPIWP:0xee
clk_drv:0x00,q_drv:0x00,d_drv:0x00,cs0_drv:0x00,hd_drv:0x00,wp_drv:0x00
mode:DIO, clock div:1
load:0x3fff0030,len:1344
load:0x40078000,len:13964
load:0x40080400,len:3600
entry 0x400805f0
Card Mount Failed
```

Follow the board used, modules and the connection between its.

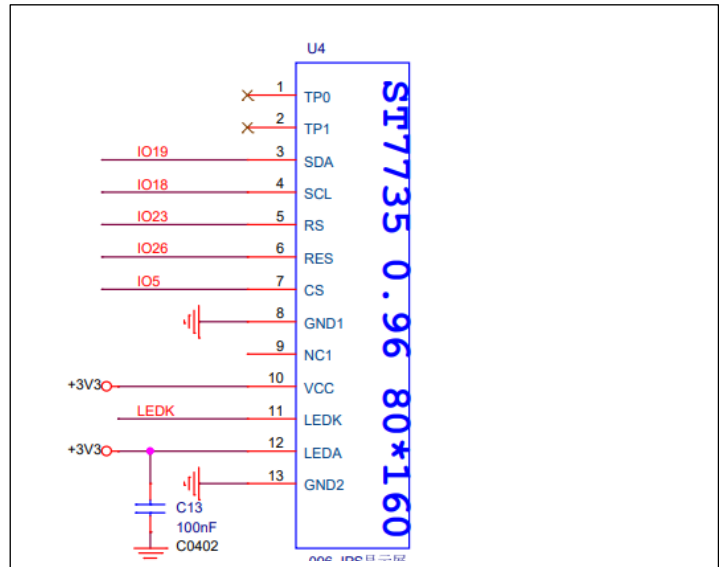
1.1.4 Used Module

Flash Tool Board

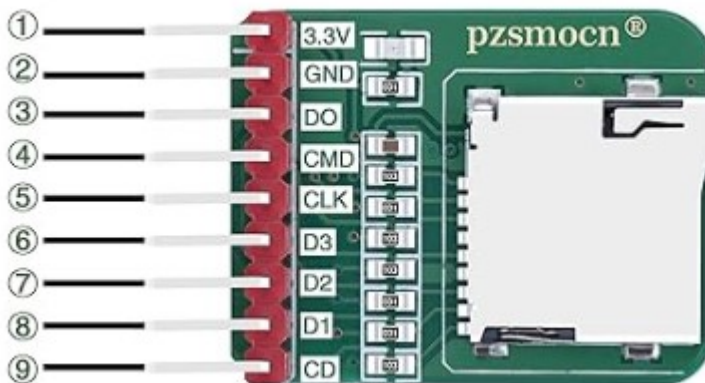


Display that use SPI

| Nome | Pin |
|------------|--------|
| TFT Driver | ST7735 |
| TFT_MISO | N/A |
| TFT_MOSI | 19 |
| TFT_SCLK | 18 |
| TFT_CS | 5 |
| TFT_DC | 23 |
| TFT_RST | 26 |
| TFT_BL | 27 |



SDCARD reader



| | Function (SD mode) | Function (SPI mode) |
|---|---------------------|---------------------------------|
| ① | Power supply (3.3V) | Power supply (3.3V) |
| ② | Power ground | Power ground |
| ③ | Data line 0 | Master in and slave out (MISO) |
| ④ | Command line | Master out slave in (MOSI) |
| ⑤ | Clock | Clock (SCK) |
| ⑥ | Data line 3 | Chip select / slave select (SS) |
| ⑦ | Data line 2 | Reserved |
| ⑧ | Data line 1 | Reserved |
| ⑨ | Reserved | Reserved |

1.2 IDE and sketch

1.2.1 IDE Arduino

| | |
|--|---------------|
| Formattazione automatica | Ctrl+T |
| Archivia sketch... | |
| Correggi codifica e ricarica | |
| Gestione librerie... | Ctrl+Maiusc+I |
| Monitor seriale | Ctrl+Maiusc+M |
| Plotter seriale | Ctrl+Maiusc+L |
| WiFi101 / WiFinINA Firmware Updater | |
| Manicken Upload Only | |
| Scheda: "ESP32 Dev Module" | > |
| Upload Speed: "921600" | > |
| CPU Frequency: "240MHz (WiFi/BT)" | > |
| Flash Frequency: "80MHz" | > |
| Flash Mode: "QIO" | > |
| Flash Size: "4MB (32Mb)" | > |
| Partition Scheme: "Default 4MB with spiffs (1.2MB APP/1.5MB SPIFFS)" | > |
| Core Debug Level: "Nessuno" | > |
| PSRAM: "Disabled" | > |
| Arduino Runs On: "Core 1" | > |
| Events Run On: "Core 1" | > |
| Erase All Flash Before Sketch Upload: "Disabled" | > |
| JTAG Adapter: "Disabled" | > |
| Porta: "COM10" | > |
| Acquisisci informazioni sulla scheda | |
| Programmatore | > |
| Scrivi il bootloader | |

1.2.2 sketch

```
#include "FS.h"
#include "SD.h"
#include "SPI.h"
```

```
#define SDSPI_CLK 14
#define SDSPI_MISO 12
#define SDSPI_MOSI 13
#define SDSPI_CS 15

// SPIClass spi = SPIClass(VSPI);
SPIClass spi = SPIClass(HSPI);
void setup(){

spi.begin(SDSPI_CLK,SDSPI_MISO, SDSPI_MOSI, SDSPI_CS);
Serial.begin(115200);
  Serial.print("MOSI: ");
  Serial.println(MOSI);
  Serial.print("MISO: ");
  Serial.println(MISO);
  Serial.print("SCK: ");
  Serial.println(SCK);
  Serial.print("SS: ");
  Serial.println(SS);

  if (!SD.begin(SDSPI_CS, spi,400000))
  {
  Serial.println("Card Mount Failed");
  return;
  }
  uint8_t cardType = SD.cardType();

  if(cardType == CARD_NONE){
  Serial.println("No SD card attached");
  return;
  }

  Serial.print("SD Card Type: ");
  if(cardType == CARD_MMC){
  Serial.println("MMC");
  } else if(cardType == CARD_SD){
  Serial.println("SDSC");
  } else if(cardType == CARD_SDHC){
  Serial.println("SDHC");
  } else {
```

```
    Serial.println("UNKNOWN");  
}  
  
uint64_t cardSize = SD.cardSize() / (1024 * 1024);  
Serial.printf("SD Card Size: %lluMB\n", cardSize);  
  
}  
  
void loop(){  
  
}
```