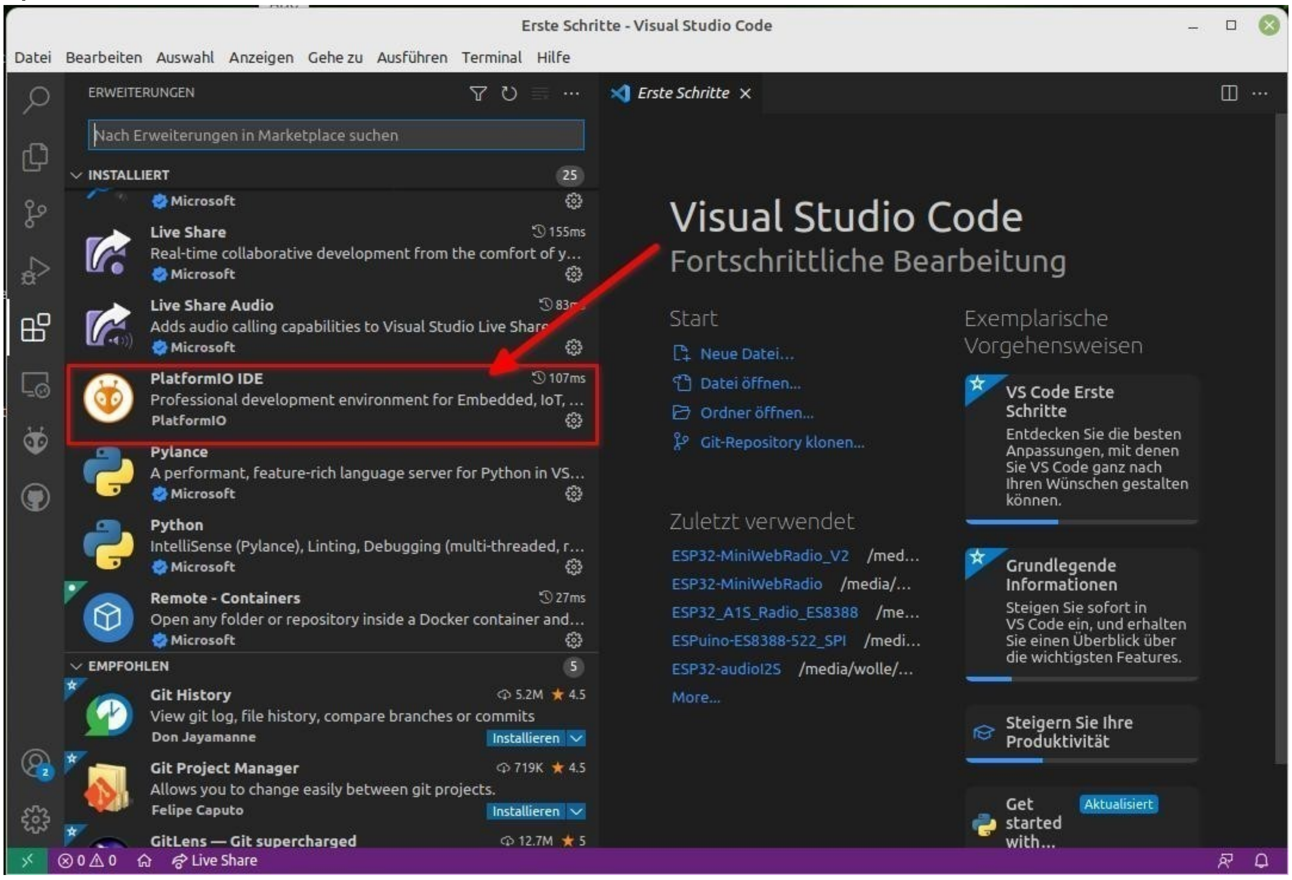
How to install ESP32-MiniWebRadio-V4

1) Install **Visual Studio Code** on your PC
2) Add extension **PlatformIO IDE**


Erste Schritte - Visual Studio Code
Datei Bearbeiten Auswahl Anzeigen Gehe zu Ausführen Terminal Hilfe
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Live Share Audio
Adds audio calling capabilities to Visual Studio Live Share
PlatformIO IDE
Professional development environment for Embedded, IoT, ...
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A performant, feature-rich language server for Python in VS...
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Allows you to change easily between git projects.
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Zuletzt verwendet
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Steigern Sie Ihre Produktivität
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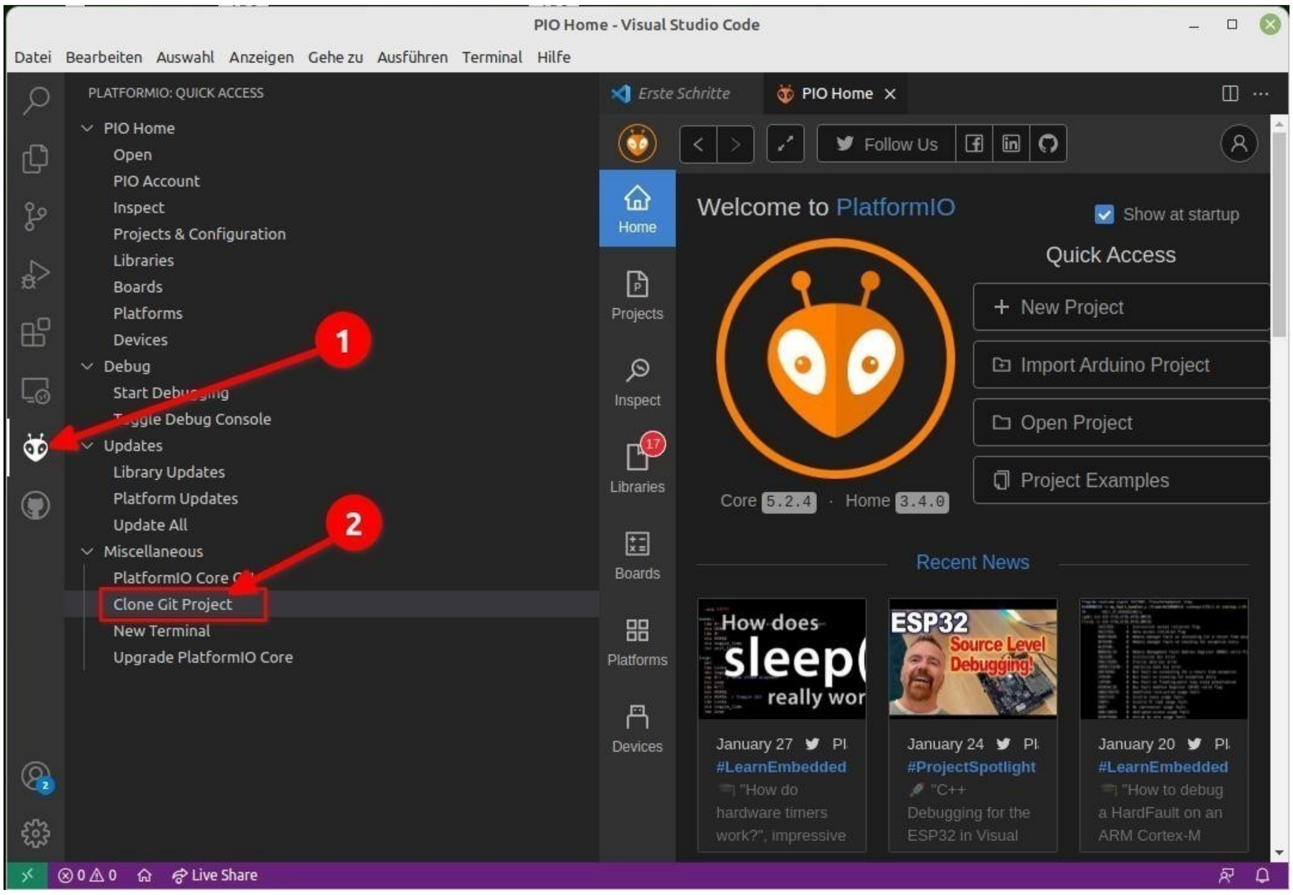
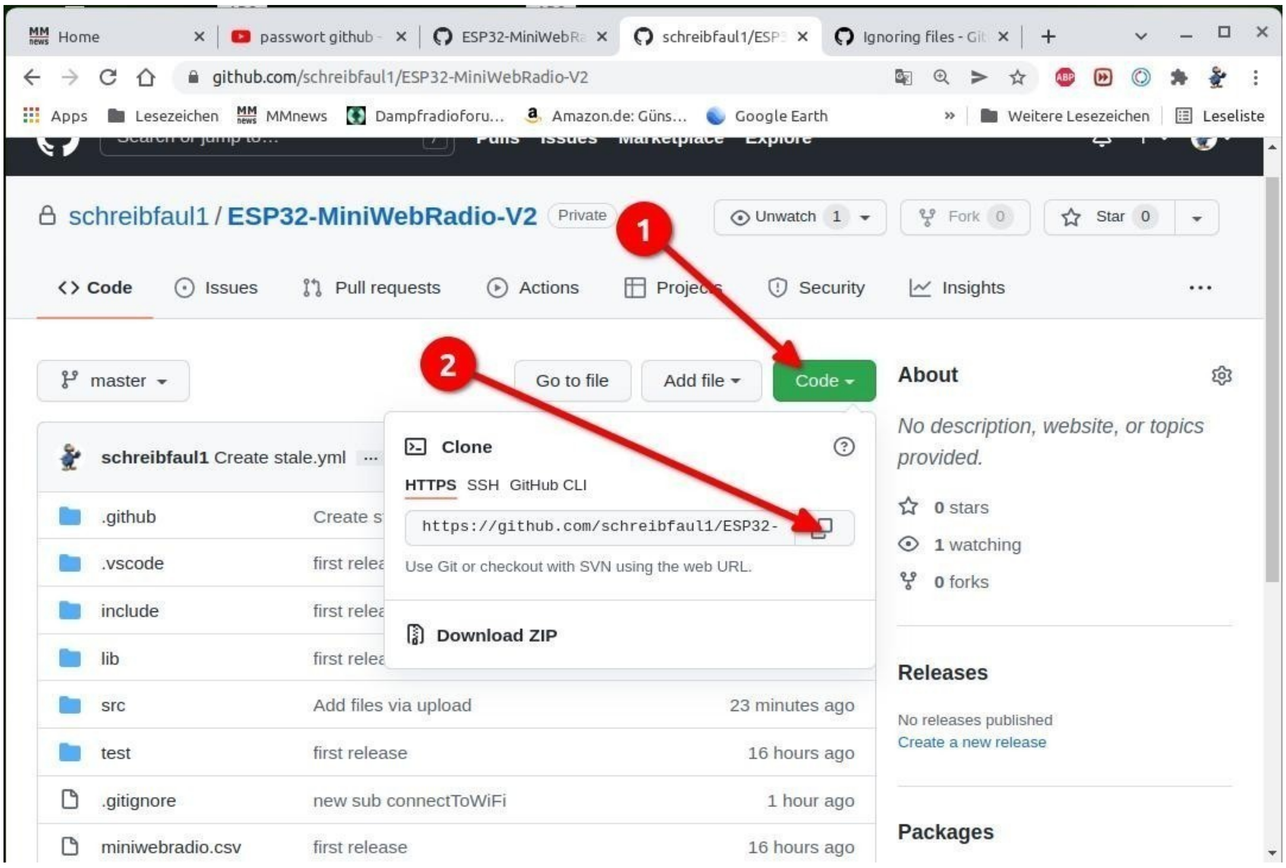
3) open **PlatformIO** and select **Clone Git Project**



4) goto Github, press **Code** and copy the URL



https://github.com/schreibfaul1/ESP32-

Use Git or checkout with SVN using the web URL.

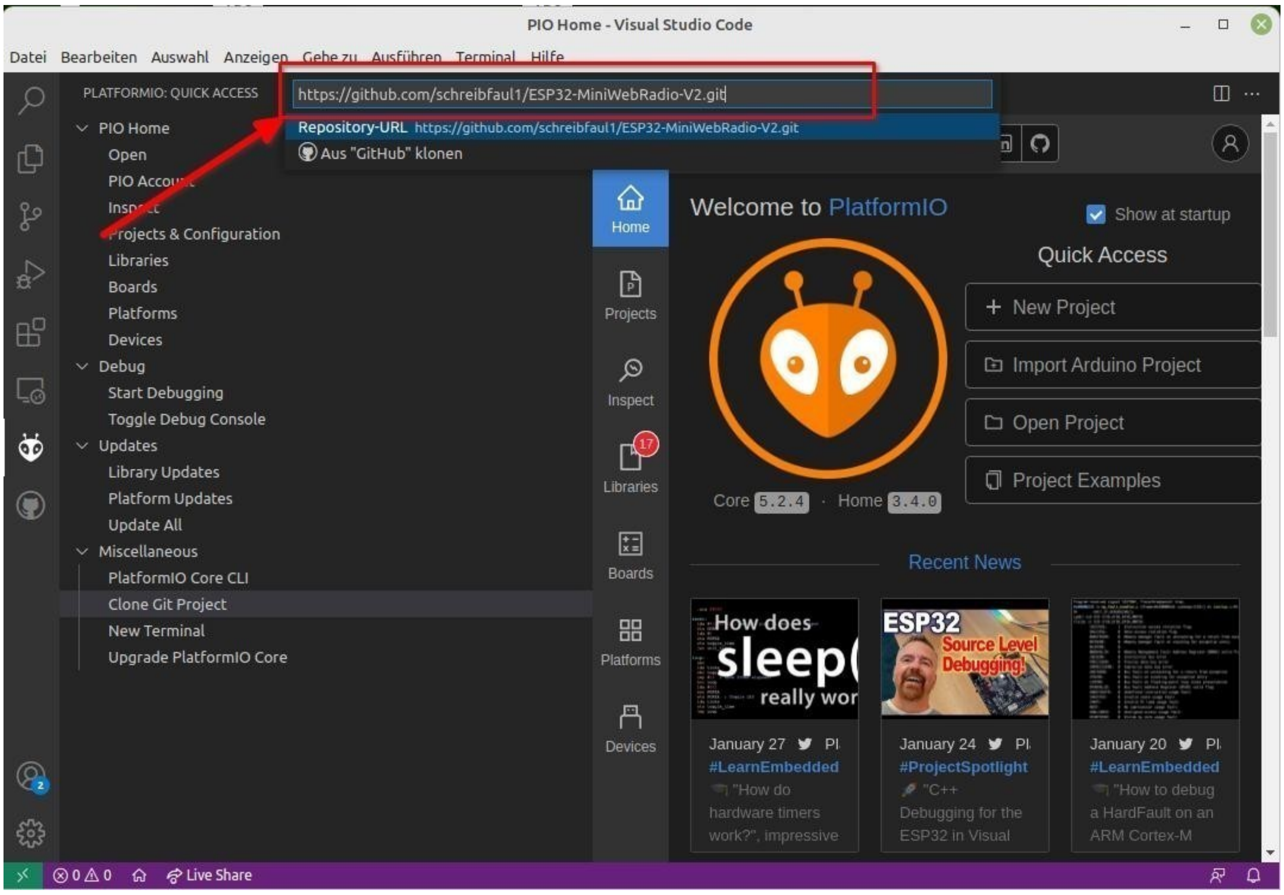
No description, website, or topics provided.

0 stars
1 watching
0 forks

No releases published
Create a new release

schreibfaul1 Create stale.yml		
.github	Create s	
.vscode	first relea	
include	first relea	
lib	first relea	
src	Add files via upload	23 minutes ago
test	first release	16 hours ago
.gitignore	new sub connectToWiFi	1 hour ago
miniwebradio.csv	first release	16 hours ago

5) paste the URL in PlatformIO, press ENTER and choose a folder on your PC

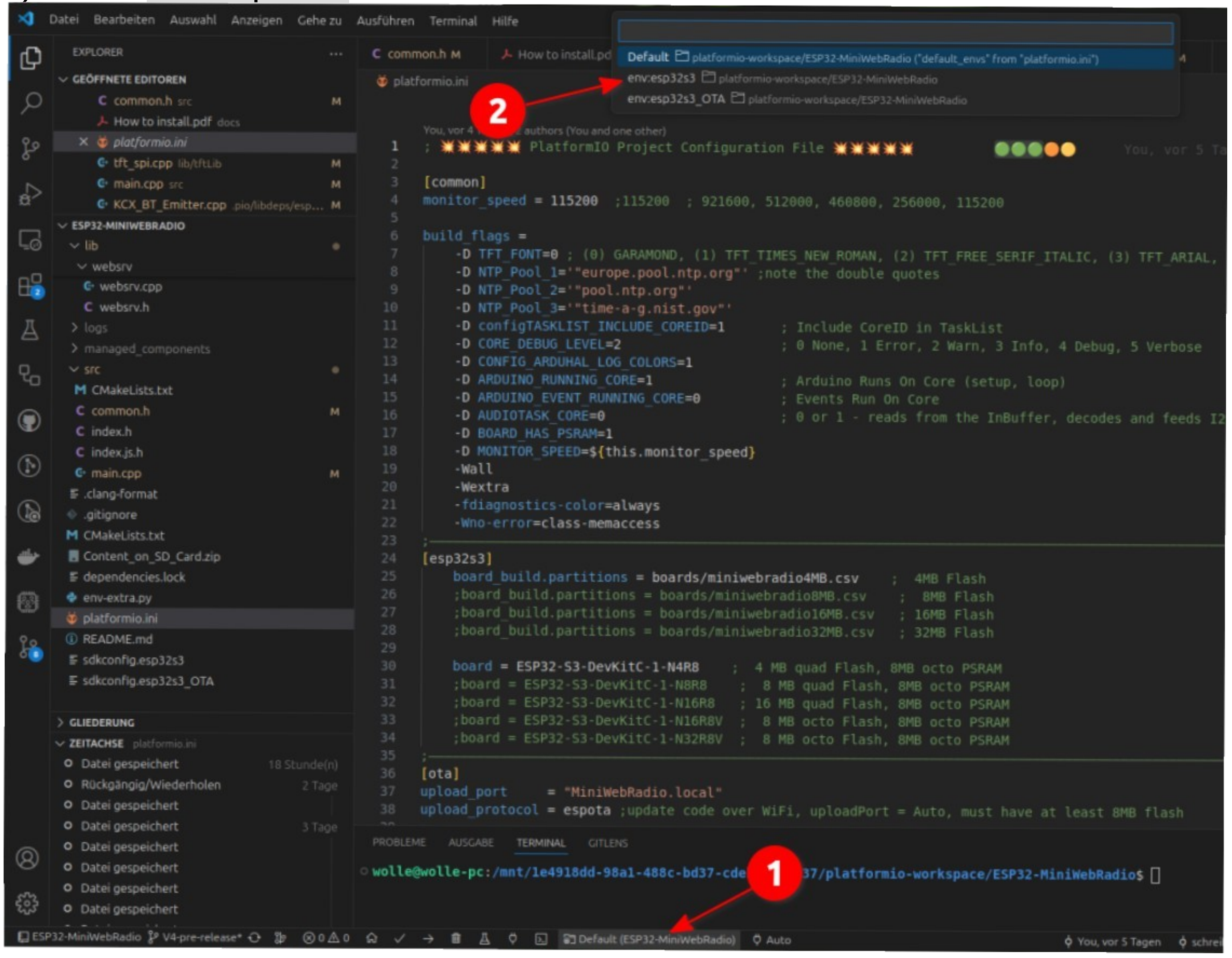


https://github.com/schreibfaul1/ESP32-MiniWebRadio-V2.git

Repository-URL https://github.com/schreibfaul1/ESP32-MiniWebRadio-V2.git

Aus "GitHub" klonen

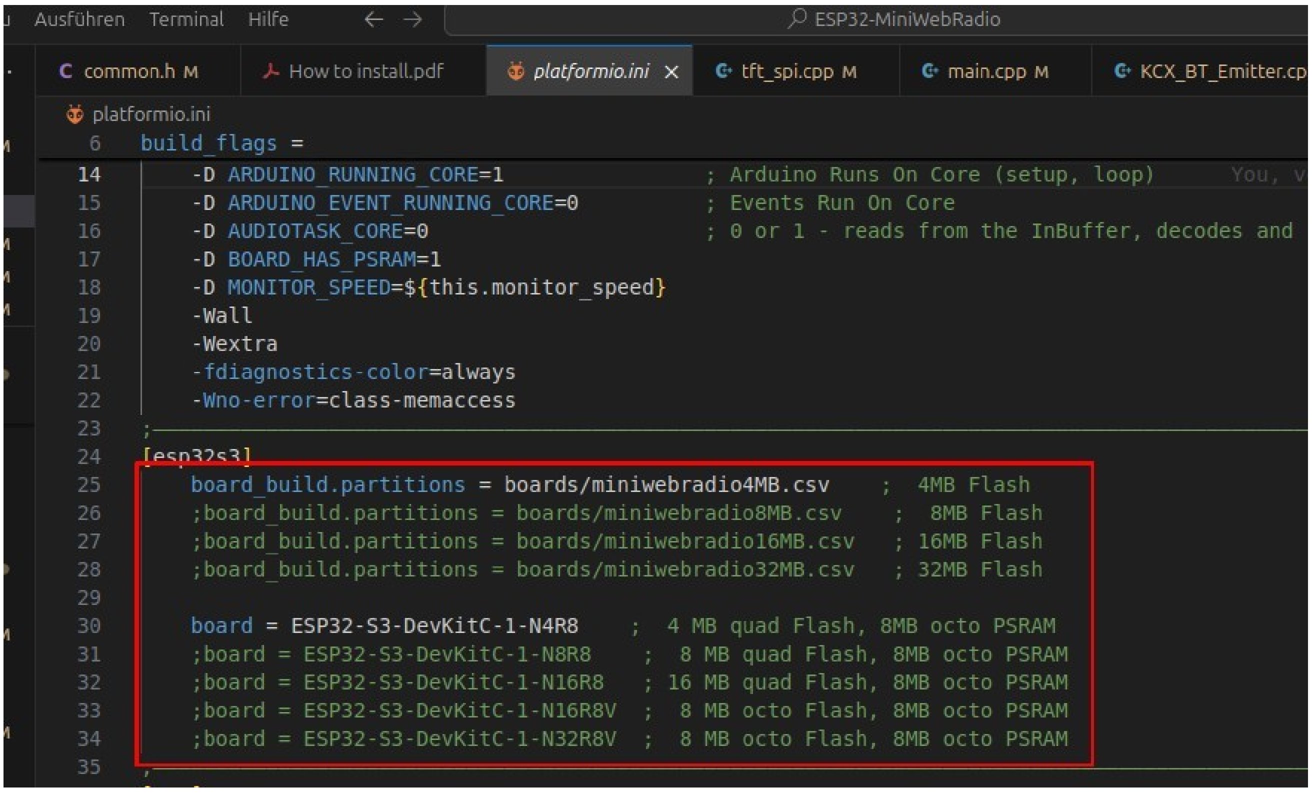
6) select env:esp32s3


Default platformio-workspace/ESP32-MiniWebRadio ("default_envs" from "platformio.ini")
env:esp32s3 platformio-workspace/ESP32-MiniWebRadio
env:esp32s3_OTA platformio-workspace/ESP32-MiniWebRadio
2
1
Default (ESP32-MiniWebRadio)
Auto

```ini
; ✸✸✸✸✸ PlatformIO Project Configuration File ✸✸✸✸✸

[common]
monitor_speed = 115200  ;115200  ; 921600, 512000, 460800, 256000, 115200

build_flags =
    -D TFT_FONT=0 ; (0) GARAMOND, (1) TFT_TIMES_NEW_ROMAN, (2) TFT_FREE_SERIF_ITALIC, (3) TFT_ARIAL,
    -D NTP_Pool_1='"europe.pool.ntp.org"' ;note the double quotes
    -D NTP_Pool_2='"pool.ntp.org"'
    -D NTP_Pool_3='"time-a-g.nist.gov"'
    -D configTASKLIST_INCLUDE_COREID=1       ; Include CoreID in TaskList
    -D CORE_DEBUG_LEVEL=2                    ; 0 None, 1 Error, 2 Warn, 3 Info, 4 Debug, 5 Verbose
    -D CONFIG_ARDUHAL_LOG_COLORS=1
    -D ARDUINO_RUNNING_CORE=1                ; Arduino Runs On Core (setup, loop)
    -D ARDUINO_EVENT_RUNNING_CORE=0          ; Events Run On Core
    -D AUDIOTASK_CORE=0                      ; 0 or 1 - reads from the InBuffer, decodes and feeds I2
    -D BOARD_HAS_PSRAM=1
    -D MONITOR_SPEED=${this.monitor_speed}
    -Wall
    -Wextra
    -fdiagnostics-color=always
    -Wno-error=class-memaccess
;
[esp32s3]
    board_build.partitions = boards/miniwebradio4MB.csv    ;  4MB Flash
    ;board_build.partitions = boards/miniwebradio8MB.csv    ;  8MB Flash
    ;board_build.partitions = boards/miniwebradio16MB.csv   ; 16MB Flash
    ;board_build.partitions = boards/miniwebradio32MB.csv   ; 32MB Flash

    board = ESP32-S3-DevKitC-1-N4R8    ;  4 MB quad Flash, 8MB octo PSRAM
    ;board = ESP32-S3-DevKitC-1-N8R8    ;  8 MB quad Flash, 8MB octo PSRAM
    ;board = ESP32-S3-DevKitC-1-N16R8   ; 16 MB quad Flash, 8MB octo PSRAM
    ;board = ESP32-S3-DevKitC-1-N16R8V  ;  8 MB octo Flash, 8MB octo PSRAM
    ;board = ESP32-S3-DevKitC-1-N32R8V  ;  8 MB octo Flash, 8MB octo PSRAM
;
[ota]
upload_port     = "MiniWebRadio.local"
upload_protocol = espota ;update code over WiFi, uploadPort = Auto, must have at least 8MB flash
```

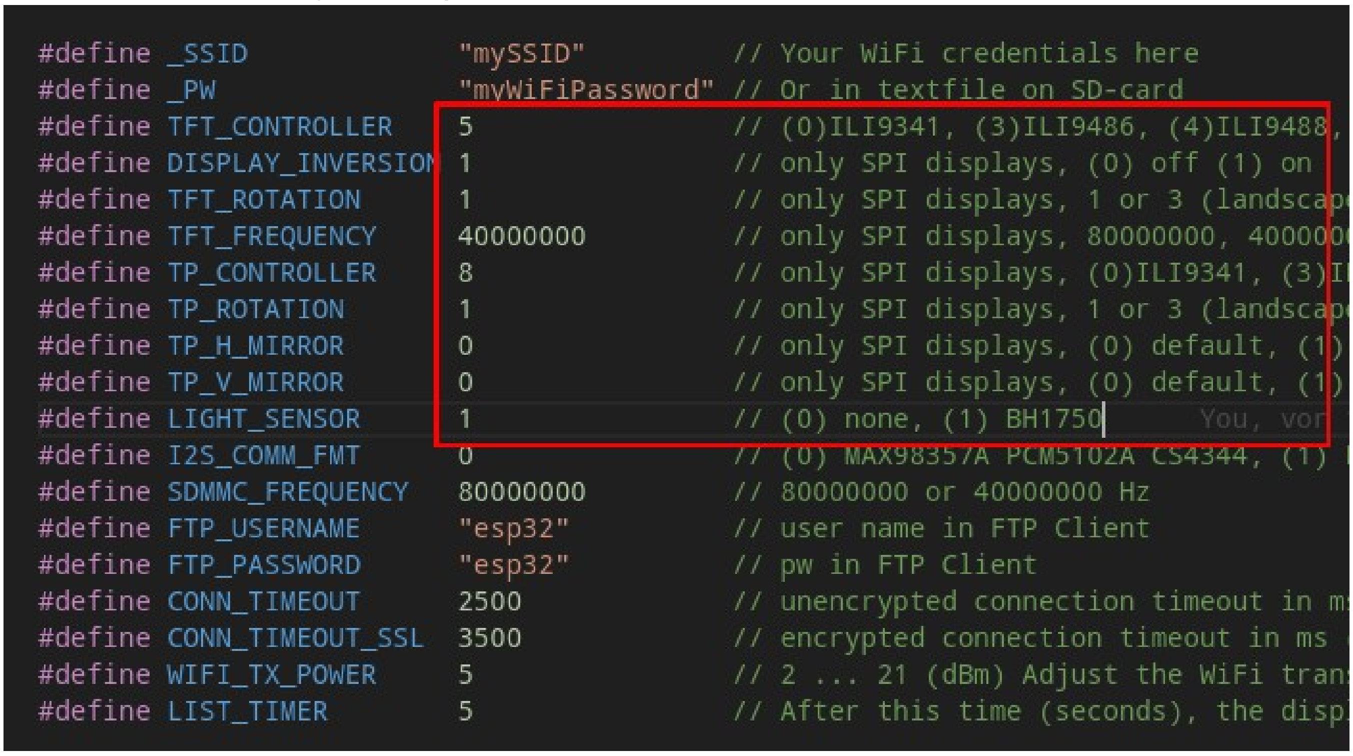
```
wolle@wolle-pc:/mnt/1e4918dd-98a1-488c-bd37-cde    37/platformio-workspace/ESP32-MiniWebRadio$
```

7) select the appropriate board and partition in platform.ini



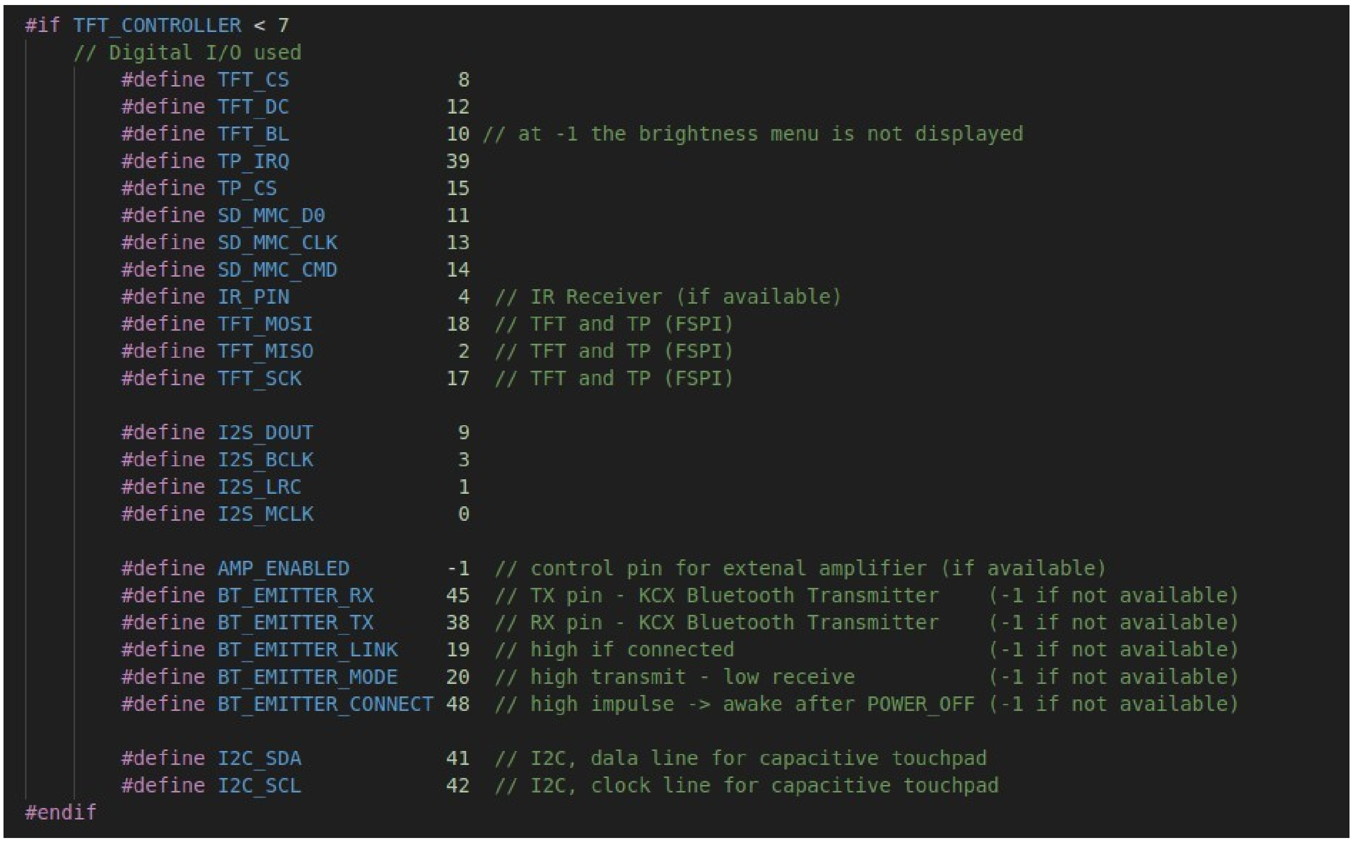
```ini
build_flags =
    -D ARDUINO_RUNNING_CORE=1                ; Arduino Runs On Core (setup, loop)
    -D ARDUINO_EVENT_RUNNING_CORE=0          ; Events Run On Core
    -D AUDIOTASK_CORE=0                      ; 0 or 1 - reads from the InBuffer, decodes and
    -D BOARD_HAS_PSRAM=1
    -D MONITOR_SPEED=${this.monitor_speed}
    -Wall
    -Wextra
    -fdiagnostics-color=always
    -Wno-error=class-memaccess
;
[esp32s3]
    board_build.partitions = boards/miniwebradio4MB.csv    ;  4MB Flash
    ;board_build.partitions = boards/miniwebradio8MB.csv    ;  8MB Flash
    ;board_build.partitions = boards/miniwebradio16MB.csv   ; 16MB Flash
    ;board_build.partitions = boards/miniwebradio32MB.csv   ; 32MB Flash

    board = ESP32-S3-DevKitC-1-N4R8    ;  4 MB quad Flash, 8MB octo PSRAM
    ;board = ESP32-S3-DevKitC-1-N8R8    ;  8 MB quad Flash, 8MB octo PSRAM
    ;board = ESP32-S3-DevKitC-1-N16R8   ; 16 MB quad Flash, 8MB octo PSRAM
    ;board = ESP32-S3-DevKitC-1-N16R8V  ;  8 MB octo Flash, 8MB octo PSRAM
    ;board = ESP32-S3-DevKitC-1-N32R8V  ;  8 MB octo Flash, 8MB octo PSRAM
```

8) Enter your access data in settings**.h** and select the parameters according to the HW used.
If you use a SPI display (TFT_Controller <7), further settings such as ROTATION or TP_VERSION may be required



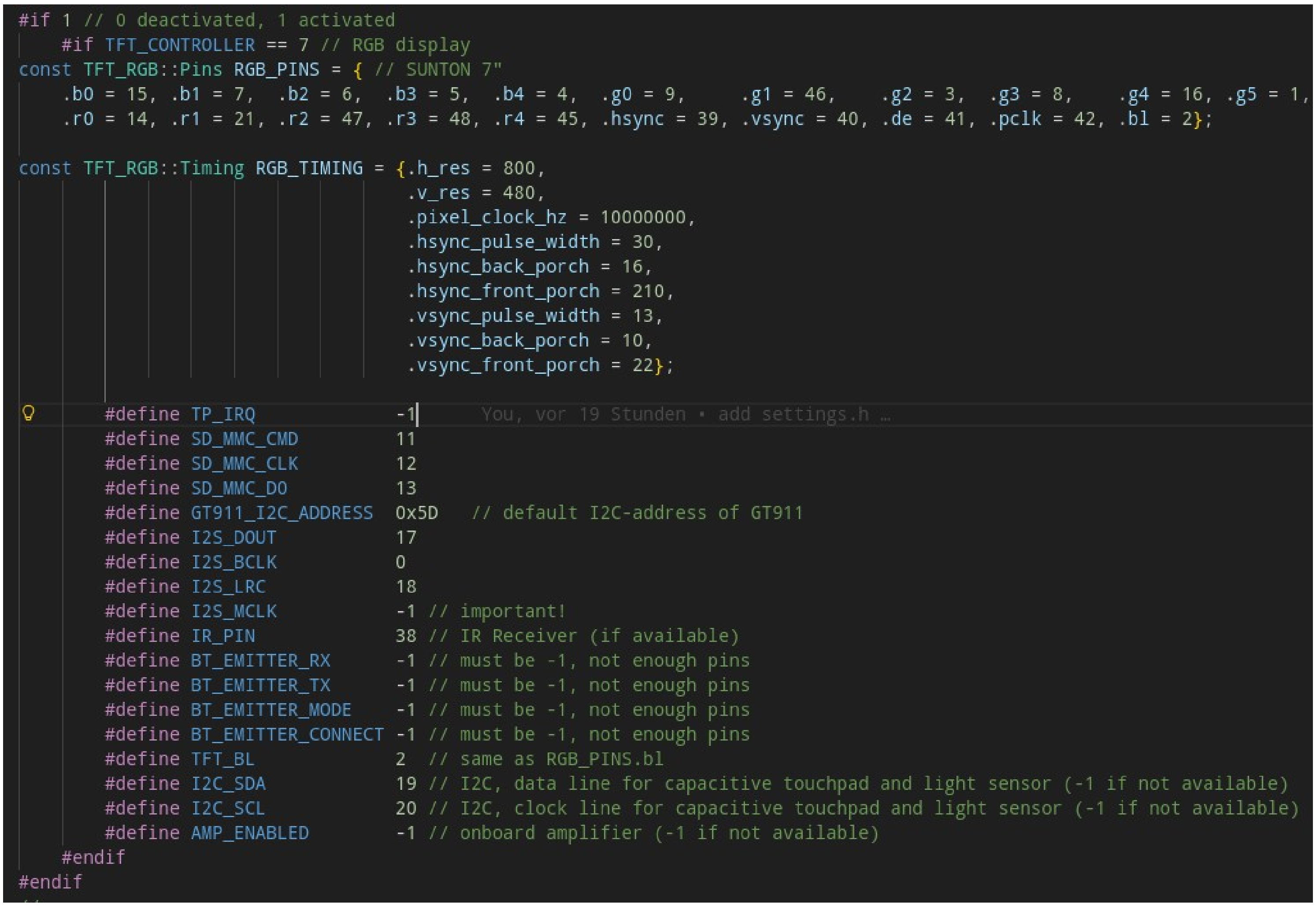
```
#define _SSID              "mySSID"          // Your WiFi credentials here
#define _PW                "myWiFiPassword"  // Or in textfile on SD-card
#define TFT_CONTROLLER     5                 // (0)ILI9341, (3)ILI9486, (4)ILI9488,
#define DISPLAY_INVERSION  1                 // only SPI displays, (0) off (1) on
#define TFT_ROTATION       1                 // only SPI displays, 1 or 3 (landscap
#define TFT_FREQUENCY      40000000          // only SPI displays, 80000000, 400000
#define TP_CONTROLLER      8                 // only SPI displays, (0)ILI9341, (3)I
#define TP_ROTATION        1                 // only SPI displays, 1 or 3 (landscap
#define TP_H_MIRROR        0                 // only SPI displays, (0) default, (1)
#define TP_V_MIRROR        0                 // only SPI displays, (0) default, (1)
#define LIGHT_SENSOR       1                 // (0) none, (1) BH1750       You, vor
#define I2S_COMM_FMT       0                 // (0) MAX98357A PCM5102A CS4344, (1)
#define SDMMC_FREQUENCY    80000000          // 80000000 or 40000000 Hz
#define FTP_USERNAME       "esp32"           // user name in FTP Client
#define FTP_PASSWORD       "esp32"           // pw in FTP Client
#define CONN_TIMEOUT       2500              // unencrypted connection timeout in m
#define CONN_TIMEOUT_SSL   3500              // encrypted connection timeout in ms
#define WIFI_TX_POWER      5                 // 2 ... 21 (dBm) Adjust the WiFi tran
#define LIST_TIMER         5                 // After this time (seconds), the disp
```

Further below you will find the assignment of the ESP32-S3/P4 pins that you can change if necessary



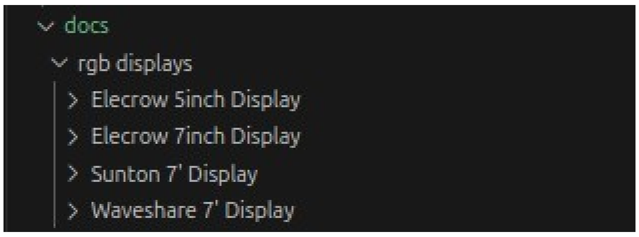
```
#if TFT_CONTROLLER < 7
    // Digital I/O used
        #define TFT_CS                8
        #define TFT_DC               12
        #define TFT_BL               10 // at -1 the brightness menu is not displayed
        #define TP_IRQ               39
        #define TP_CS                15
        #define SD_MMC_D0            11
        #define SD_MMC_CLK           13
        #define SD_MMC_CMD           14
        #define IR_PIN                4  // IR Receiver (if available)
        #define TFT_MOSI             18  // TFT and TP (FSPI)
        #define TFT_MISO              2  // TFT and TP (FSPI)
        #define TFT_SCK              17  // TFT and TP (FSPI)

        #define I2S_DOUT              9
        #define I2S_BCLK              3
        #define I2S_LRC               1
        #define I2S_MCLK              0

        #define AMP_ENABLED          -1  // control pin for extenal amplifier (if available)
        #define BT_EMITTER_RX        45  // TX pin - KCX Bluetooth Transmitter    (-1 if not available)
        #define BT_EMITTER_TX        38  // RX pin - KCX Bluetooth Transmitter    (-1 if not available)
        #define BT_EMITTER_LINK      19  // high if connected                     (-1 if not available)
        #define BT_EMITTER_MODE      20  // high transmit - low receive           (-1 if not available)
        #define BT_EMITTER_CONNECT 48  // high impulse -> awake after POWER_OFF (-1 if not available)

        #define I2C_SDA              41  // I2C, dala line for capacitive touchpad
        #define I2C_SCL              42  // I2C, clock line for capacitive touchpad
#endif
```

These settings apply to RGB-HMI displays (TFT_Controller == 7)



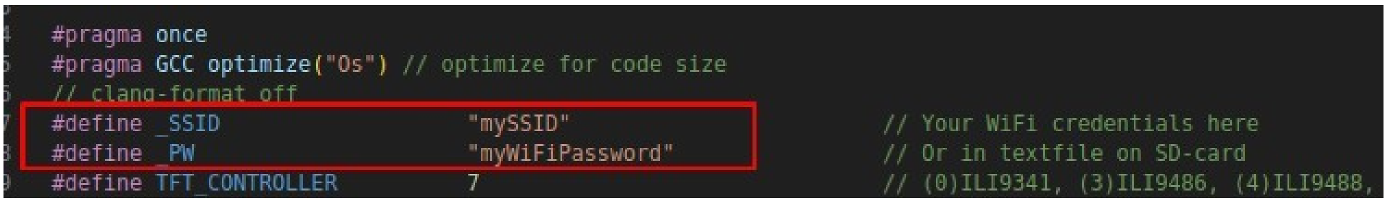
```
#if 1 // 0 deactivated, 1 activated
    #if TFT_CONTROLLER == 7 // RGB display
const TFT_RGB::Pins RGB_PINS = { // SUNTON 7"
    .b0 = 15, .b1 = 7,  .b2 = 6,  .b3 = 5,  .b4 = 4,  .g0 = 9,     .g1 = 46,    .g2 = 3,  .g3 = 8,    .g4 = 16, .g5 = 1,
    .r0 = 14, .r1 = 21, .r2 = 47, .r3 = 48, .r4 = 45, .hsync = 39, .vsync = 40, .de = 41, .pclk = 42, .bl = 2};

const TFT_RGB::Timing RGB_TIMING = {.h_res = 800,
                                    .v_res = 480,
                                    .pixel_clock_hz = 10000000,
                                    .hsync_pulse_width = 30,
                                    .hsync_back_porch = 16,
                                    .hsync_front_porch = 210,
                                    .vsync_pulse_width = 13,
                                    .vsync_back_porch = 10,
                                    .vsync_front_porch = 22};

        #define TP_IRQ              -1      You, vor 19 Stunden • add settings.h …
        #define SD_MMC_CMD          11
        #define SD_MMC_CLK          12
        #define SD_MMC_D0           13
        #define GT911_I2C_ADDRESS   0x5D   // default I2C-address of GT911
        #define I2S_DOUT            17
        #define I2S_BCLK            0
        #define I2S_LRC             18
        #define I2S_MCLK            -1 // important!
        #define IR_PIN              38 // IR Receiver (if available)
        #define BT_EMITTER_RX       -1 // must be -1, not enough pins
        #define BT_EMITTER_TX       -1 // must be -1, not enough pins
        #define BT_EMITTER_MODE     -1 // must be -1, not enough pins
        #define BT_EMITTER_CONNECT  -1 // must be -1, not enough pins
        #define TFT_BL              2  // same as RGB_PINS.bl
        #define I2C_SDA             19 // I2C, data line for capacitive touchpad and light sensor (-1 if not available)
        #define I2C_SCL             20 // I2C, clock line for capacitive touchpad and light sensor (-1 if not available)
        #define AMP_ENABLED         -1 // onboard amplifier (-1 if not available)
    #endif
#endif
```

For various RGB display you will find templates in the docs



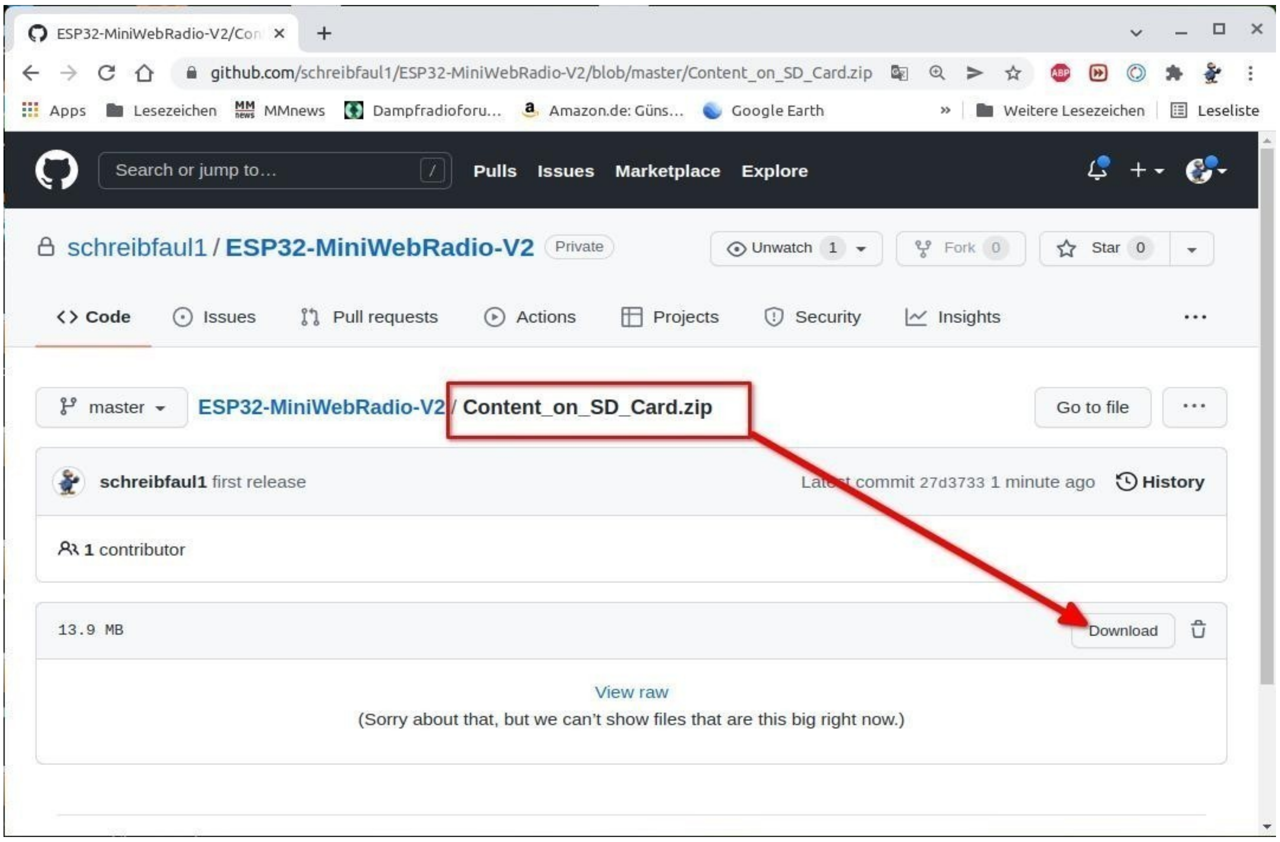
```
docs
  rgb displays
    > Elecrow 5inch Display
    > Elecrow 7inch Display
    > Sunton 7' Display
    > Waveshare 7' Display
```

For the first start you can enter the WiFi access data in common.h. Alternatively, the SSID can be selected on the display and the password is entered.



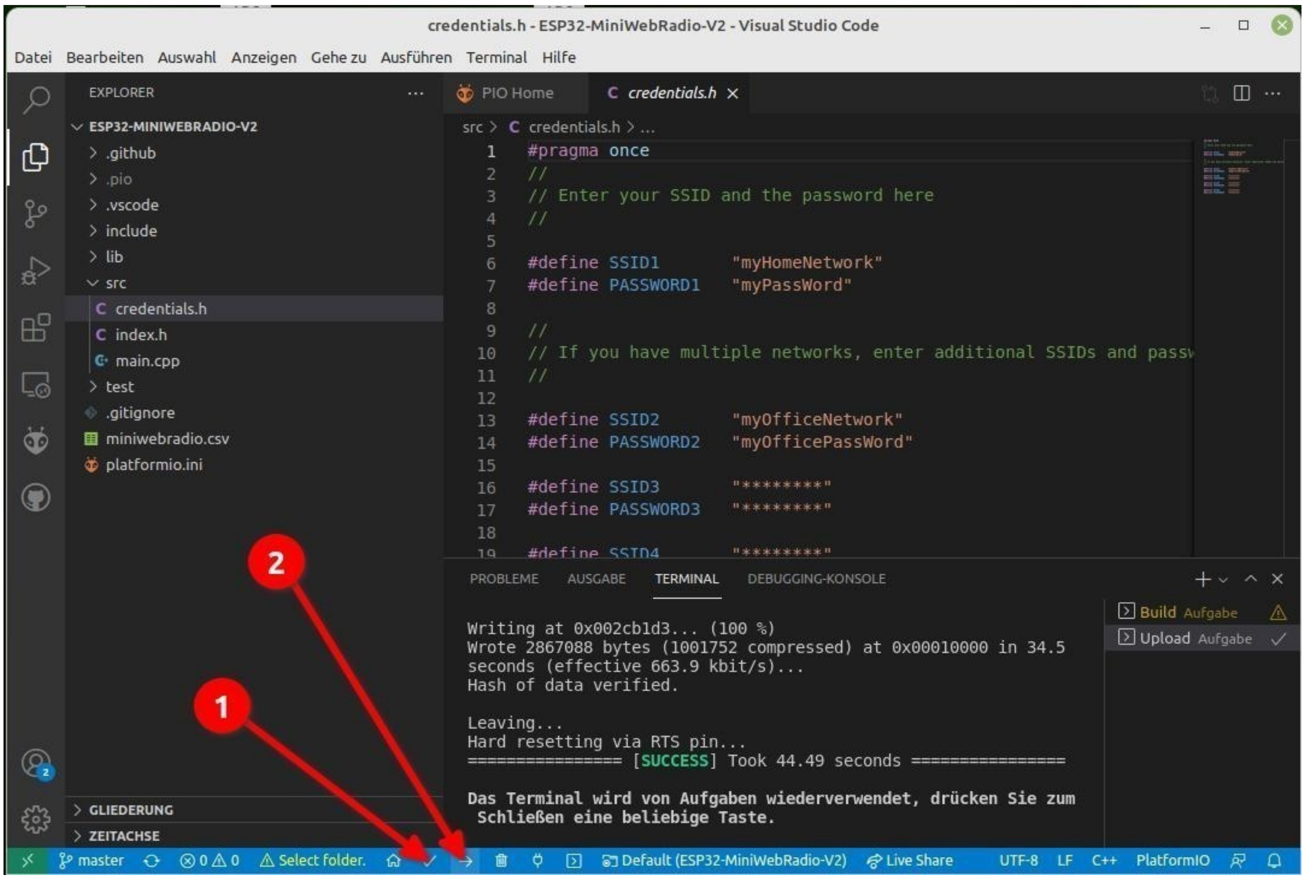
```
#pragma once
#pragma GCC optimize("Os") // optimize for code size
// clang-format off
#define _SSID                    "mySSID"                    // Your WiFi credentials here
#define _PW                      "myWiFiPassword"            // Or in textfile on SD-card
#define TFT_CONTROLLER           7                           // (0)ILI9341, (3)ILI9486, (4)ILI9488,
```

9) back to Github download the Content_On_SD_Card.zip file and extract to SD



ESP32-MiniWebRadio-V2/Con
github.com/schreibfaul1/ESP32-MiniWebRadio-V2/blob/master/Content_on_SD_Card.zip
Apps
Lesezeichen
MMnews
Dampfradioforu...
Amazon.de: Güns...
Google Earth
Weitere Lesezeichen
Leseliste
Search or jump to...
Pulls
Issues
Marketplace
Explore
schreibfaul1 / ESP32-MiniWebRadio-V2
Private
Unwatch 1
Fork 0
Star 0
Code
Issues
Pull requests
Actions
Projects
Security
Insights
master
ESP32-MiniWebRadio-V2 / Content_on_SD_Card.zip
Go to file
schreibfaul1 first release
Latest commit 27d3733 1 minute ago
History
1 contributor
13.9 MB
Download
View raw
(Sorry about that, but we can't show files that are this big right now.)

10) Connect the ESP32 to USB, press build and then upload, Thats all



```
#pragma once
//
// Enter your SSID and the password here
//

#define SSID1        "myHomeNetwork"
#define PASSWORD1    "myPassWord"

//
// If you have multiple networks, enter additional SSIDs and passw
//

#define SSID2        "myOfficeNetwork"
#define PASSWORD2    "myOfficePassWord"

#define SSID3        "********"
#define PASSWORD3    "********"

#define SSID4        "********"
```

```
Writing at 0x002cb1d3... (100 %)
Wrote 2867088 bytes (1001752 compressed) at 0x00010000 in 34.5
seconds (effective 663.9 kbit/s)...
Hash of data verified.

Leaving...
Hard resetting via RTS pin...
================ [SUCCESS] Took 44.49 seconds ================

Das Terminal wird von Aufgaben wiederverwendet, drücken Sie zum
 Schließen eine beliebige Taste.
```