

Display Shield ESP8266 & ESP32

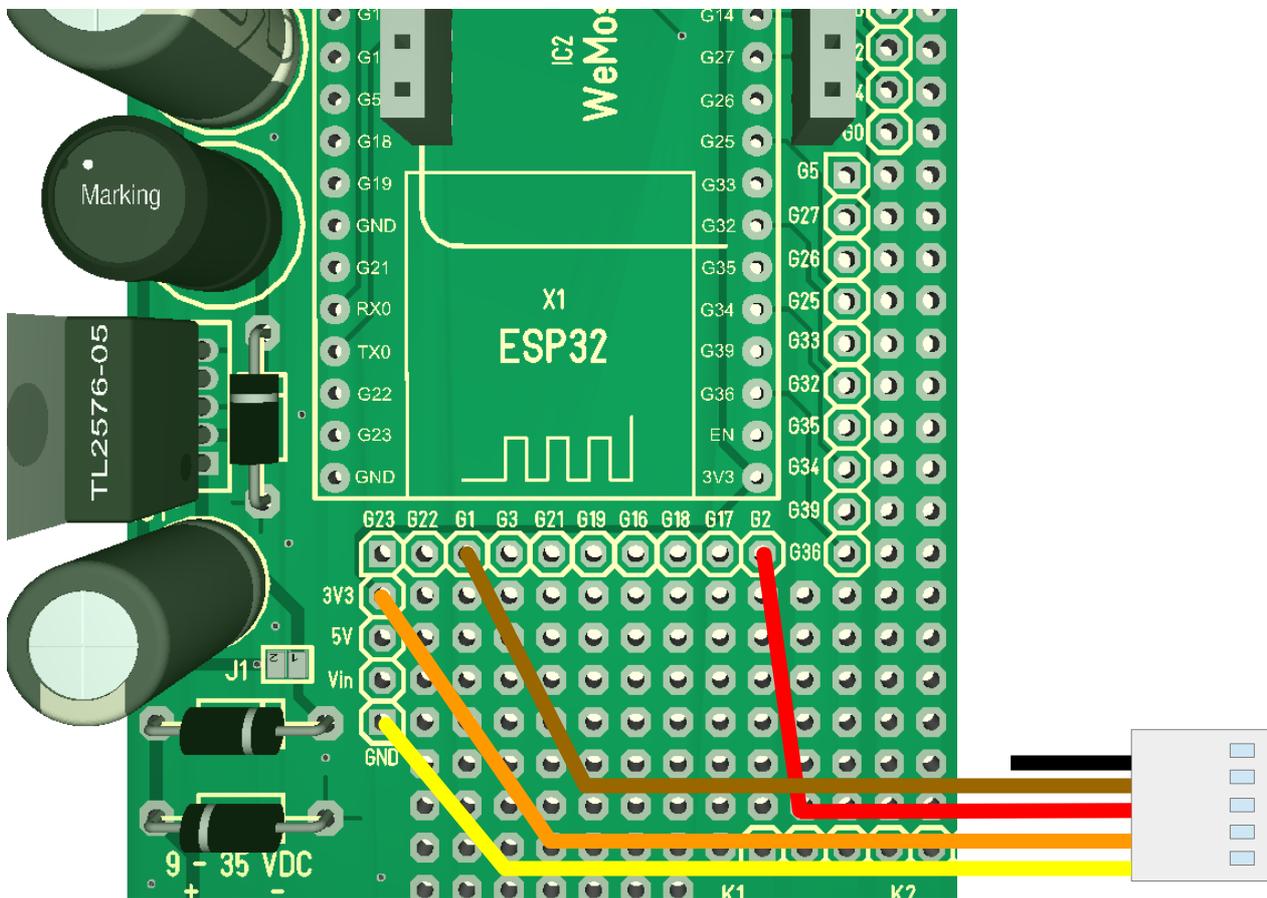
construction and programming manual

Rev.	Date	Description
A	2018-01-19	First release
B	2020-09-04	Changed to display shield version 2.x

1.) Electrical connection

1.1 Wiring example for ESP8266 (D1 Mini and ArduiBox ESP)

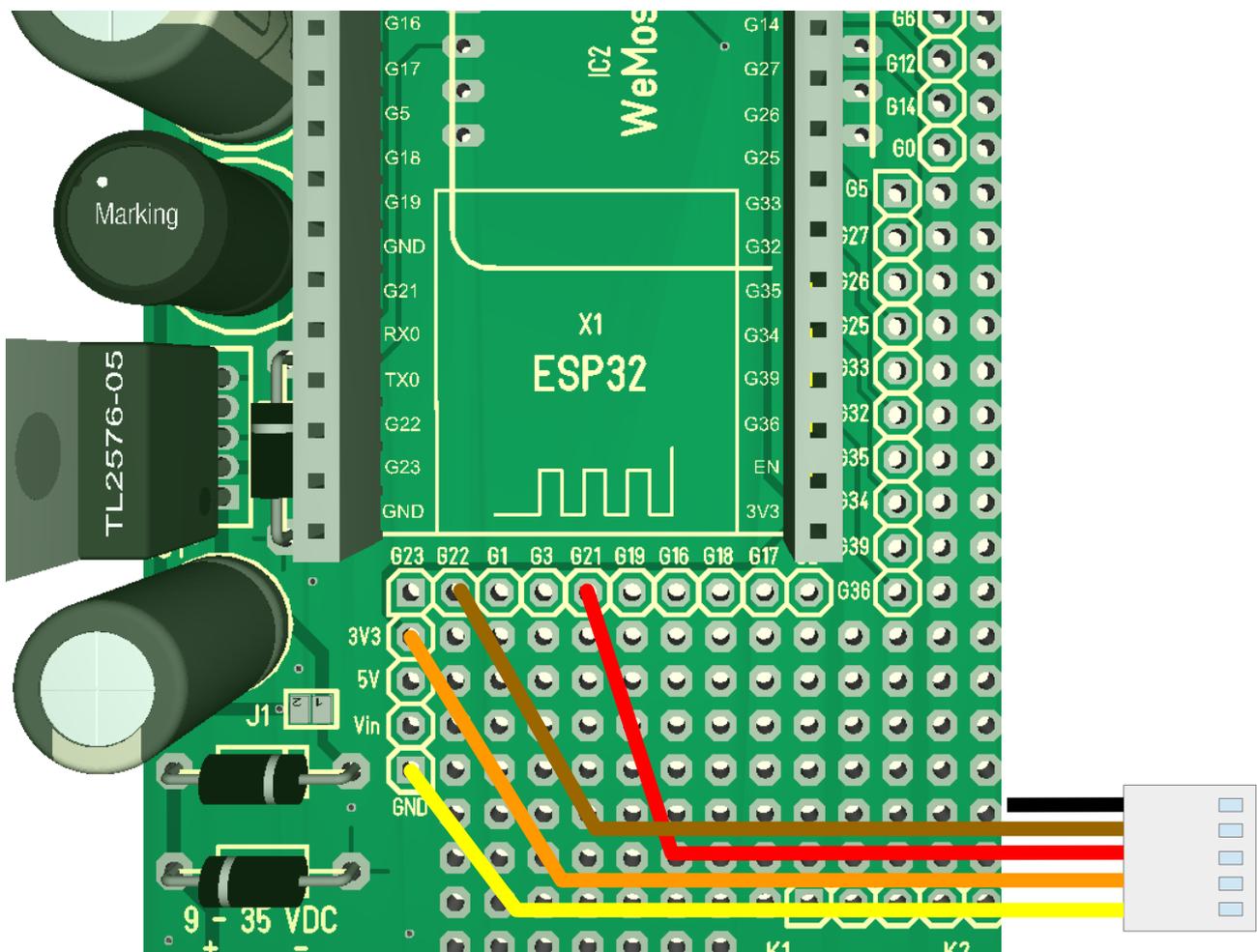
Pin	Cable color	Arduino	Description
1	black	N.C.	Optional Interrupt line – not used ¹
2	brown	D1 (G1)	SCL – I2C clock
3	red	D2 (G2)	SDA – I2C data
4	orange	3,3V	3,3V power supply
5	yellow	GND	Ground connection



¹ This line will generate an interrupt whenever a button is pressed. If you want, you can connect this wire with a digital input of your choice. In our programming example we don't use this line!

1.2 Wiring example for ESP32 (ESP32 DEV KIT C and ArduiBox ESP)

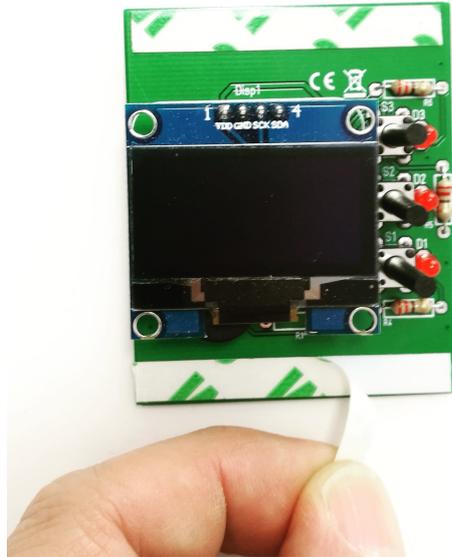
Pin	Cable color	Arduino	Description
1	black	N.C.	Optional Interrupt line – not used ²
2	brown	GPIO22 (G22)	SCL – I2C clock
3	red	GPIO21 (G21)	SDA – I2C data
4	orange	3,3V	3,3V power supply
5	yellow	GND	Ground connection



² This line will generate an interrupt whenever a button is pressed. If you want, you can connect this wire with a digital input of your choice. In our programming example we don't use this line!

2.) *Mechanical assembly in Arduibox enclosure*

Remove the protection foil from the double adhesive tape first:



Glue the shield into the top shell:

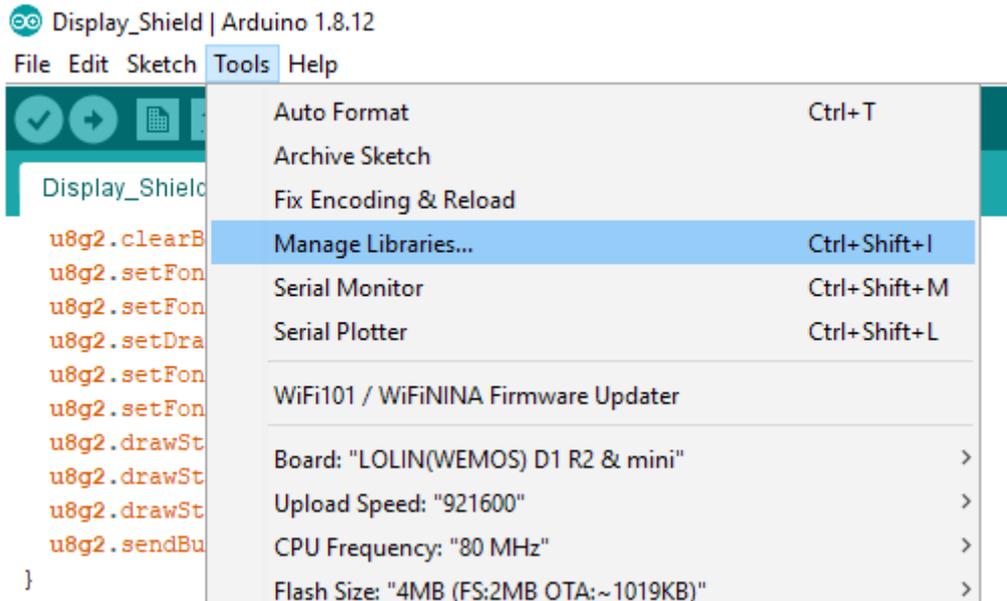


Place it exactly as in the picture above and close as possible to the left wall!

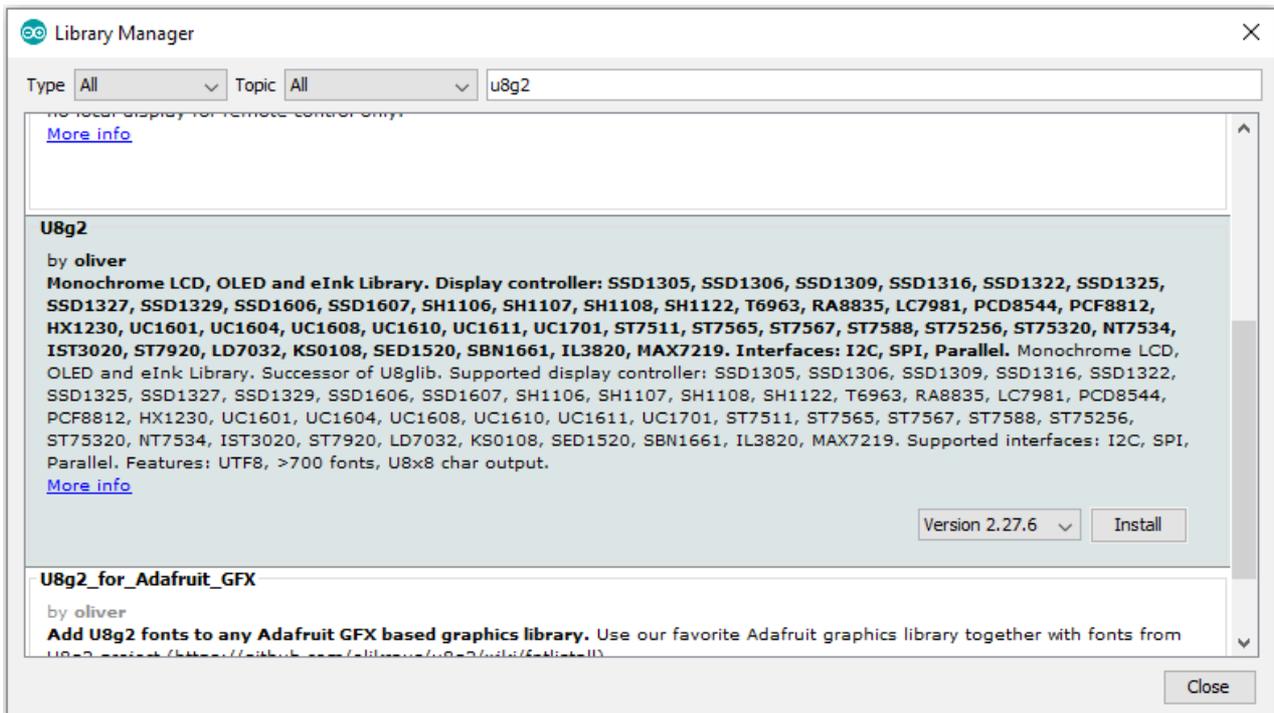
3.) Programming

3.1) Install SH1106 Library

You've to install the display library first. To open the library manager go to **Tools → Manage Libraries...**



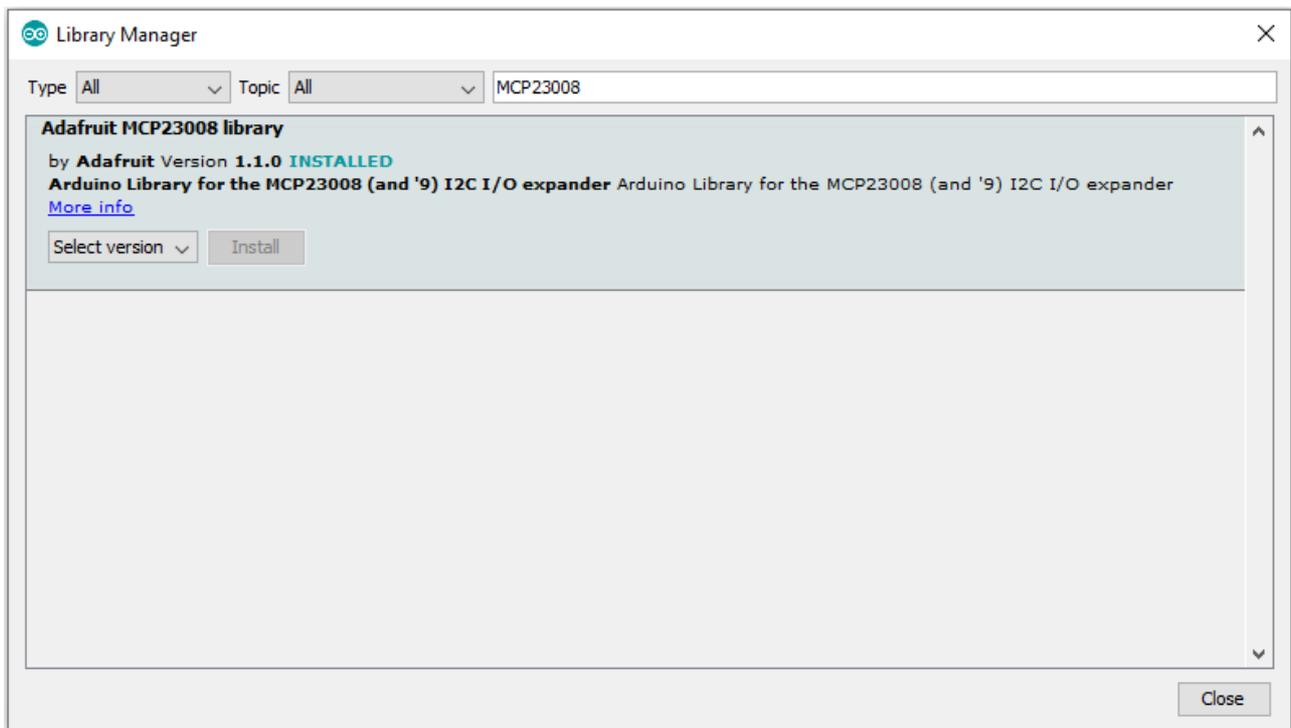
Now search for „u8g2“



Click the Install button. After some seconds „INSTALLED“ will be displayed.

3.2) Install Adafruit MCP23008 Library

Now repeat this procedure with „MCP23008“:



Click the Install button. After some seconds „INSTALLED“ will be displayed.

3.3) Run the demo

After installing the Adafruit libraries, restart the Arduino IDE.

You have to download our sample code for the OLED Shield from <https://www.hwhardsoft.de/english/projects/display-shield/>

Please open this sample in the Arduino IDE. After compilation and upload you

have to press the 3 buttons to view different screens and to test the beeper. Our demo contains only some samples of the possibilities of the u8g2 library.

You will find more examples for display driver in the Arduino IDE under

File > Examples > U8g2

