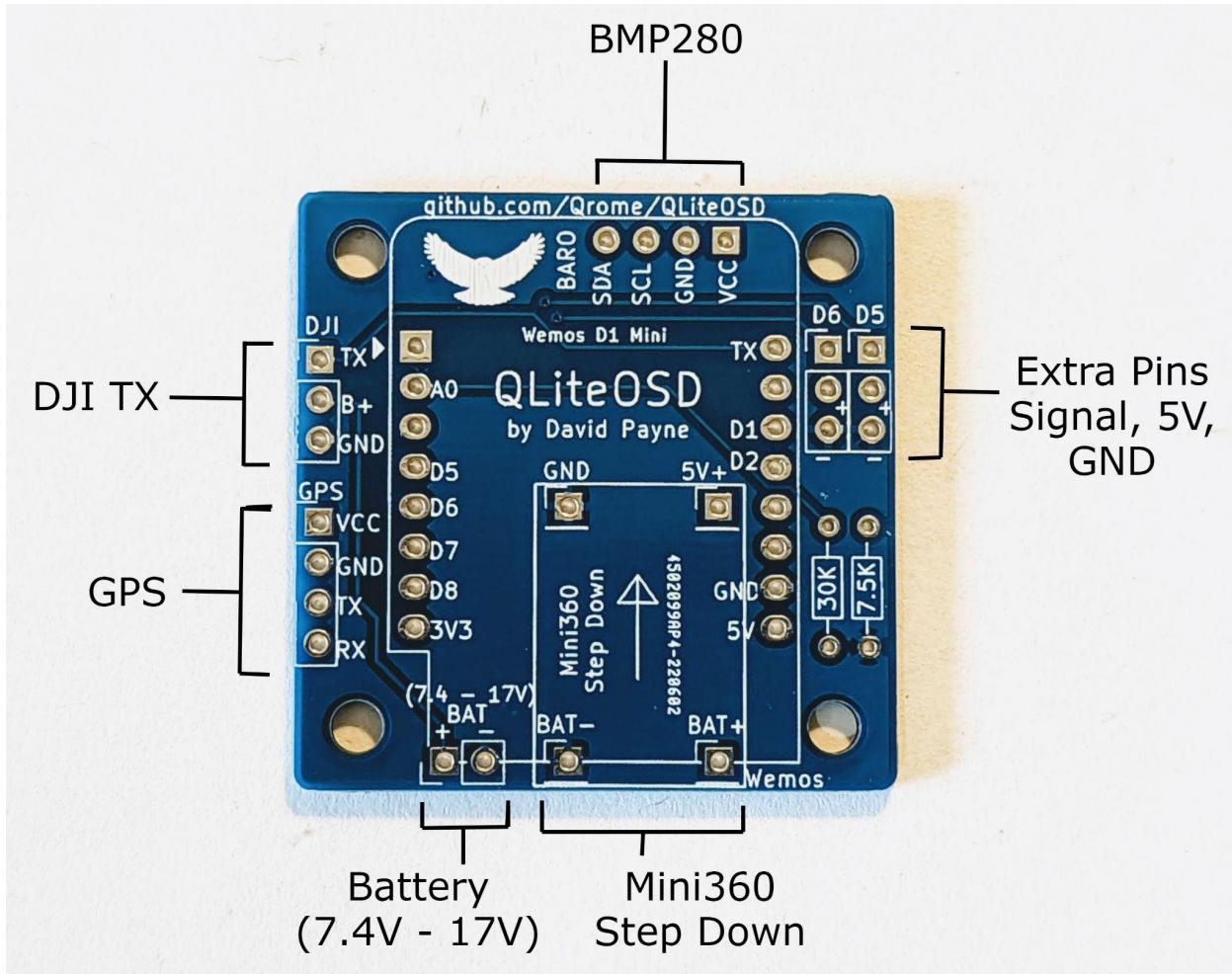


QLiteOSD Board v1.0 Assembly

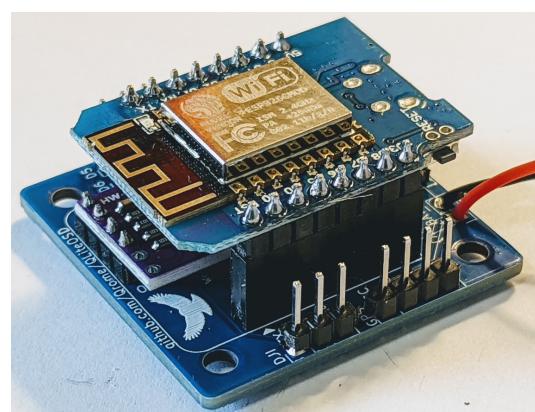


Introduction

The **QLiteOSD** is an Arduino based On Screen Display (OSD) for DJI FPV transmitter systems when you want all the OSD and none of the Flight Controller. This is a less expensive option for gaining full OSD for DJI FPV when you don't need, or want a Flight Controller.

Features

- Flight Pack Voltage (7.4 to 17V)
 - Per cell voltage
- Powers DJI Air Unit or Caddx Vista (B+ pin)
- Altitude
- GPS (optional and not included) Supports:
 - Latitude
 - Longitude

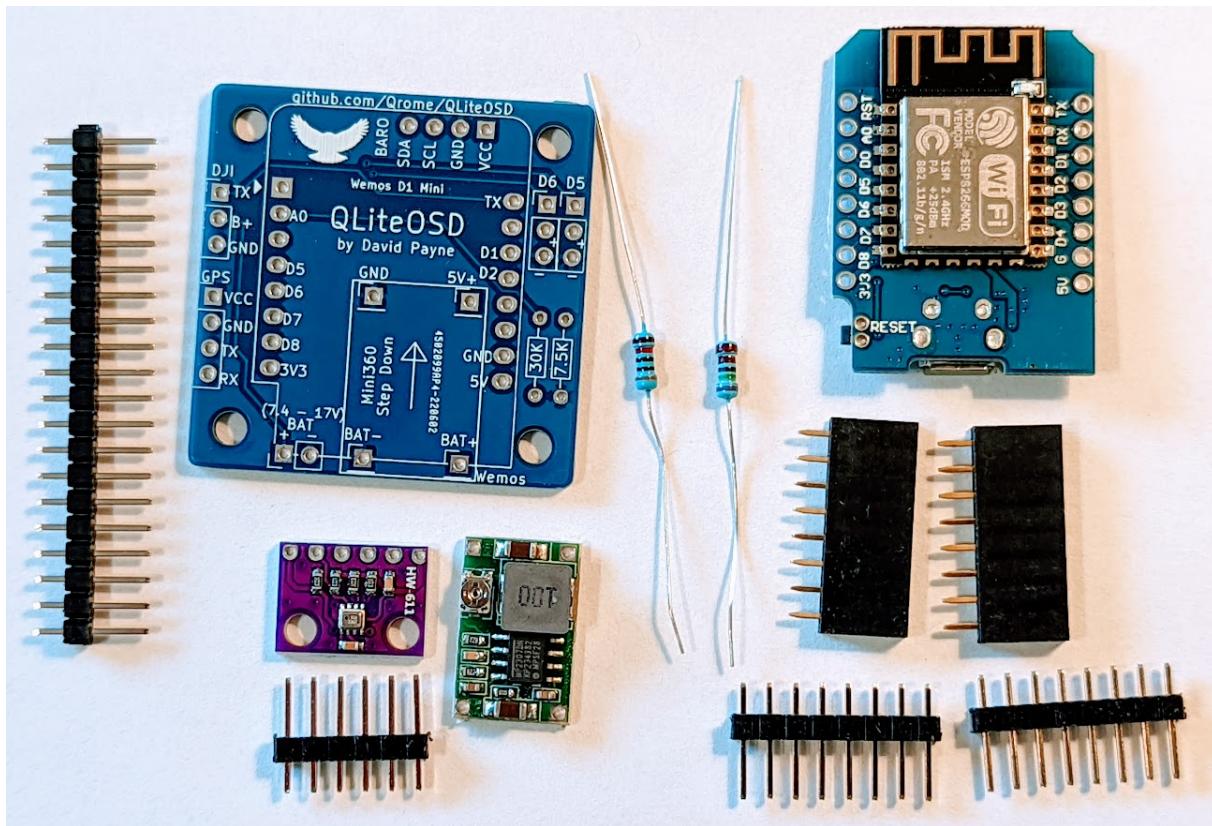


- Home Arrow
- Ground Speed
- Distance From Home



Basic Kit

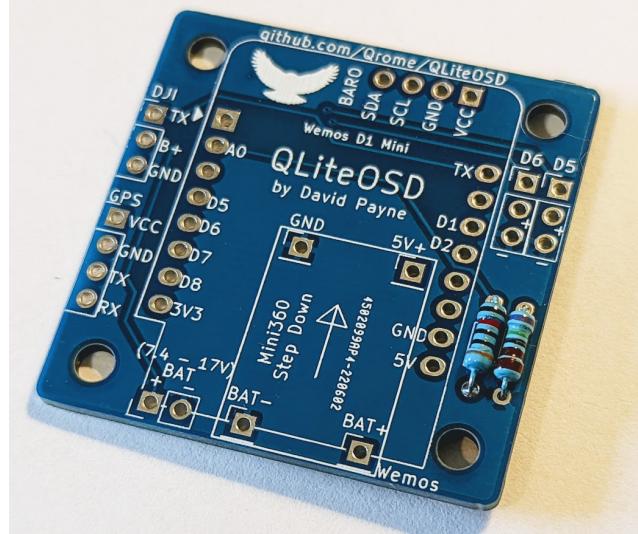
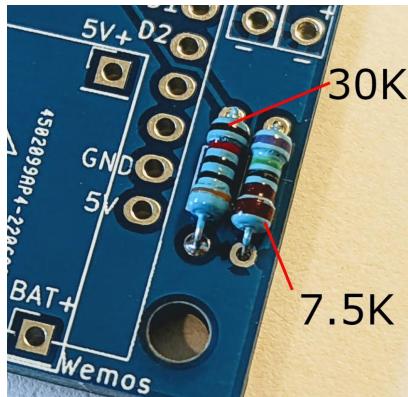
- **QLiteOSD Main Board**
- **Wemos D1 Mini (ESP8266) Micro Controller**
- **1 X 30K Resistor**
- **1 X 7.5K Resistor**
- **Mini360 Voltage Step Down to 5.5 to 6.0V**
- **BMP280 (3v3 I2C) board - Barometer Sensor**
- Header Pins



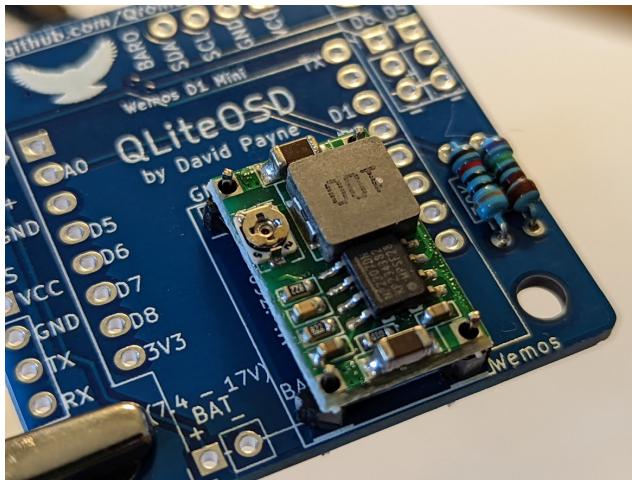
QLiteOSD Build Video: <https://www.youtube.com/watch?v=reYGkunSCh4>

Assembly Steps

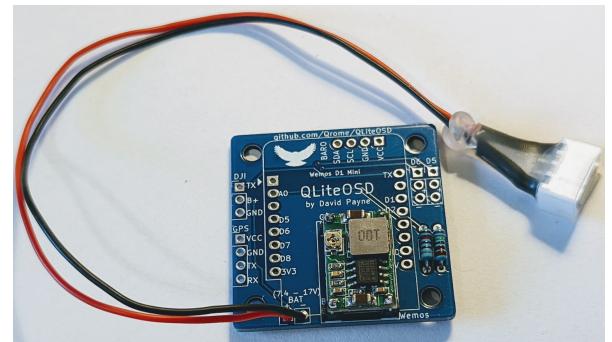
1. Add the **30K** and **7.5K Resistors** and solder the back. Trim the excess wire off the back.



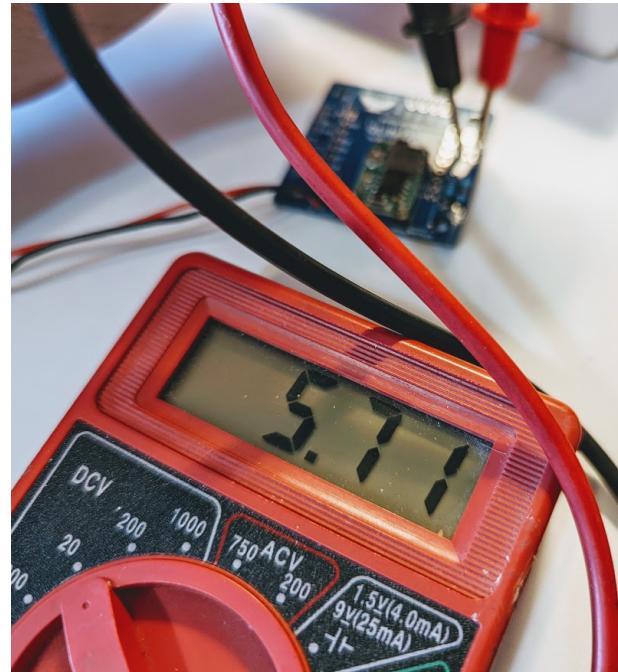
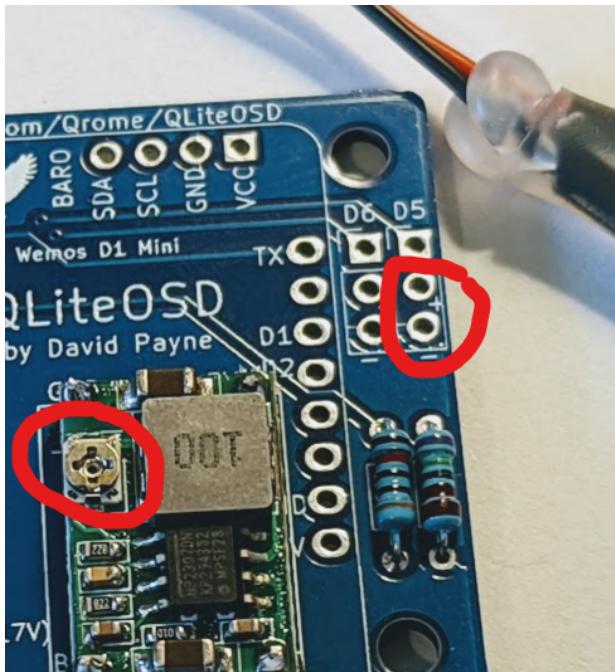
2. Add the **Mini360 Step Down**.
 - a. Clip 4 individual header pins.
 - b. Place them in the QLITEOSD Board long pin down through the hole.
 - c. Place the **Mini360** onto the short ends of the pins.
 - d. Solder the pins on the **Mini360**
 - e. Solder the long pins on the back of the QLITEOSD board.
 - f. Trim the long pins on the back.



3. Solder your flight battery pack connector (of your choice). Note: this can be **7.4V to 17V** and will be the battery that the voltage will be read from. This battery will also power your DJI FPV transmitter unit.

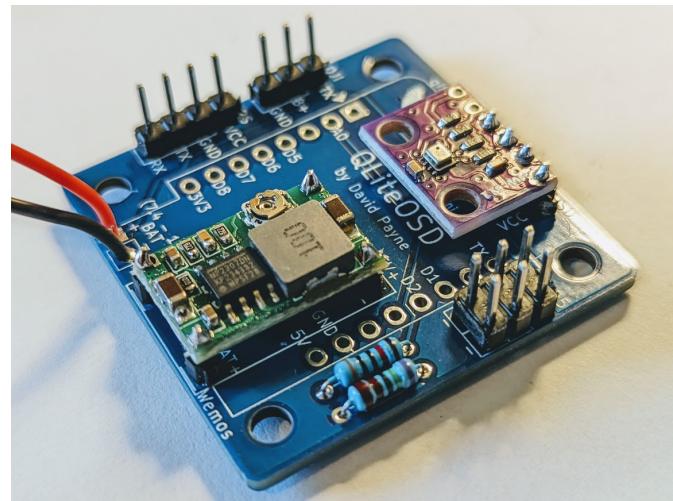


4. Adjust the voltage out from the **Mini360**. This should be set in the range of **5.5V to 6.0V** – it is not recommended to go much over 6.0V. If you have it set to this range the default voltage reading will be quite accurate.
 - a. Connect your flight battery
 - b. Adjust the dial potentiometer with a small flat screwdriver by turning it all the way to the right then back left as you test the voltage on the 5V and GND pins on the QLiteOSD board (see pins circled below).
 - c. Output Voltage should be somewhere in the **5.5V to 6.0V** range.

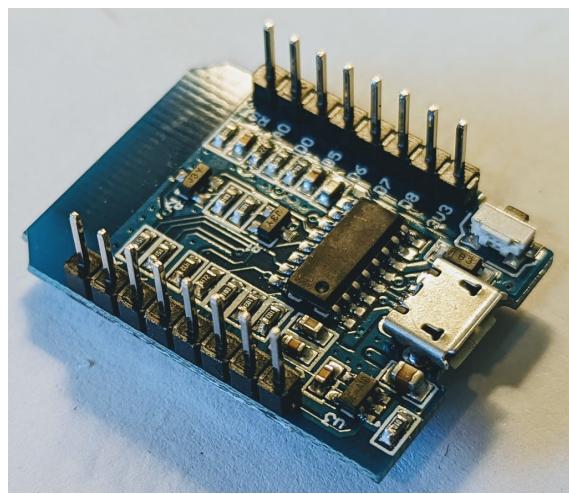
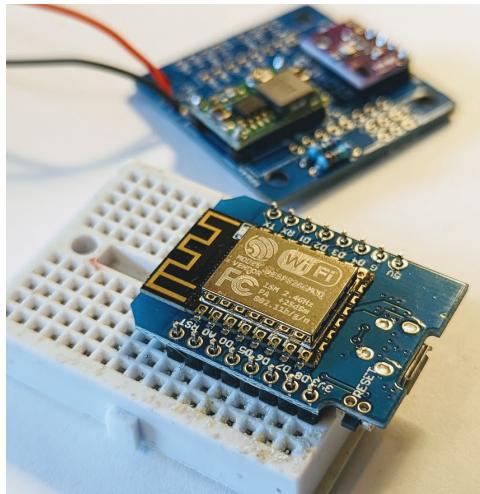


5. Solder on the **BMP280** (3v3) altitude sensor board using 4 pins. VCC, GND, SCL, and SDA found on the QLightBoard marked by the word BARO. This board uses the I2C pins. Make sure the pins on the **BMP280** are aligned perfectly with the QLiteOSD. Note: VCC is defaulted to running 3.3V from the Wemos D1 Mini. (Solder bridge not required).

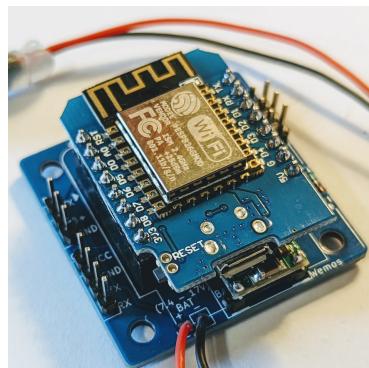
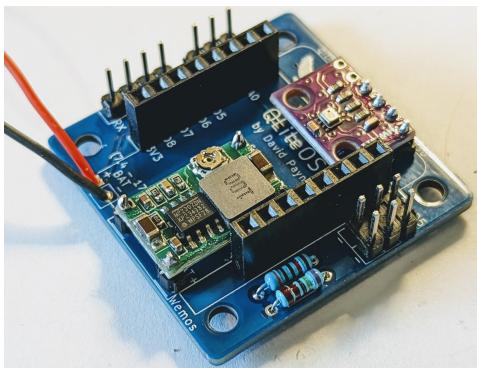
- a. Place the 4 pins long ends down through the QLightOSD
- b. Place the **BMP280** over the short ends ensuring VCC pins line up between the boards. Solder the 4 pins on **BMP280** and back of the main board.
- c. Trim the 4 long pins on the back of the main board used to connect the **BMP280**.
- d. Solder the rest of the header pins to the boards unless you plan to solder wires directly.



6. Solder the male header pins onto the **Wemos D1 Mini** (ESP8266) board.
 - a. Put the header pins into a breadboard to help ensure they are correctly spaced and lined up straight.
 - b. Solder pins.



- Pace the female header pins for the **Wemos D1 Mini** into the QLliteOSD board and hold them in place by putting the **Wemos D1 Mini** into the socket. Solder the female header pins on the bottom of the QLliteOSD board.

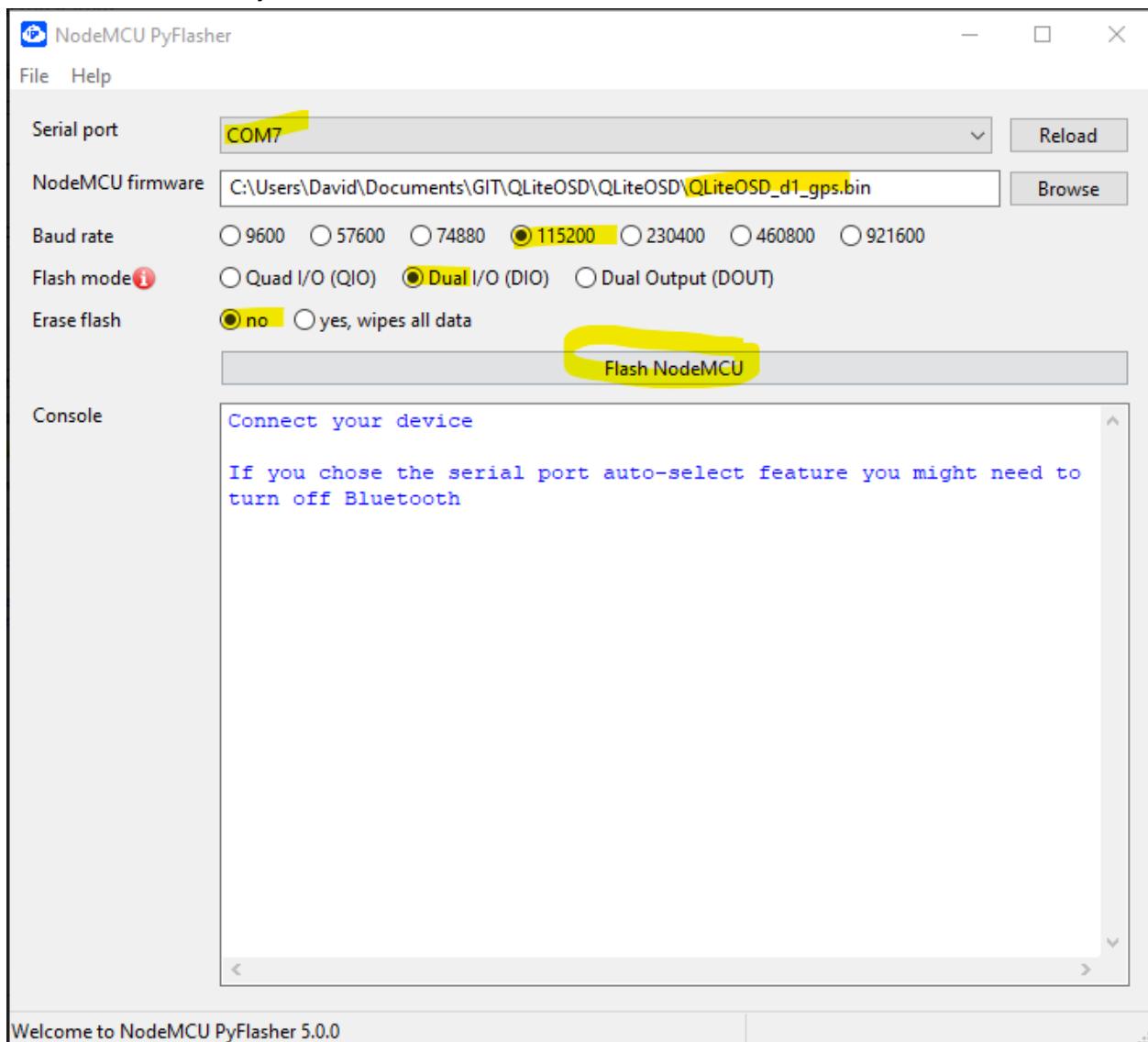


Assembly complete. Now you need to load the firmware to the **Wemos D1 Mini** (ESP8266). This can be done by loading a pre-compiled binary file or by downloading the QLITEOSD source code and compiling and loading it to the board.

Loading Firmware from Binary File

1. Load the CH340 USB drivers so that the Wemos D1 mini will show up on your system.

- a. Download CH340 drivers from SparkFun:
<https://learn.sparkfun.com/tutorials/how-to-install-ch340-drivers/all#drivers-if-you-need-them>
- b. Install by following the prompts.
2. Download and install the NodeMCU Pyflasher tool from GitHub:
<https://github.com/marcelstoer/nodemcu-pyflasher/releases/tag/v5.0.0>
 - a. Extract to a folder on your computer where you can run it from.
3. Plug in the USB port to the Wemos D1 Mini – the board should show up on Windows as a COM port with a number next to it. (i.e. COM3)
4. Run the NodeMCU-Pyflasher tool.



- a. Select the Serial Port (the new com port as your device being plugged in).
- b. Browsed and select the QLiteOSD firmware compiled binary file.
- c. Baud rate 115200
- d. Dual I/O

- e. Erase flash - no
 - f. Press the “Flash NodeMCU” button.
 - g. Wait for it to load the firmware 100%
5. Unplug and plug it back in again. If the QLiteOSD blue LED is flashing steady, then it is ready to be used.

Note: It is not advised to leave the DJI VTx on for any extended period of time. If you have it sitting for more than a couple of minutes, you should put a fan on the DJI VTx to help keep it cool.

*This is a kit. Basic knowledge of electronics is required and some skill for soldering and working with battery powered systems is required. THE COMPANY SHALL NOT, IN ANY CIRCUMSTANCES, BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, FOR ANY REASON WHATSOEVER.