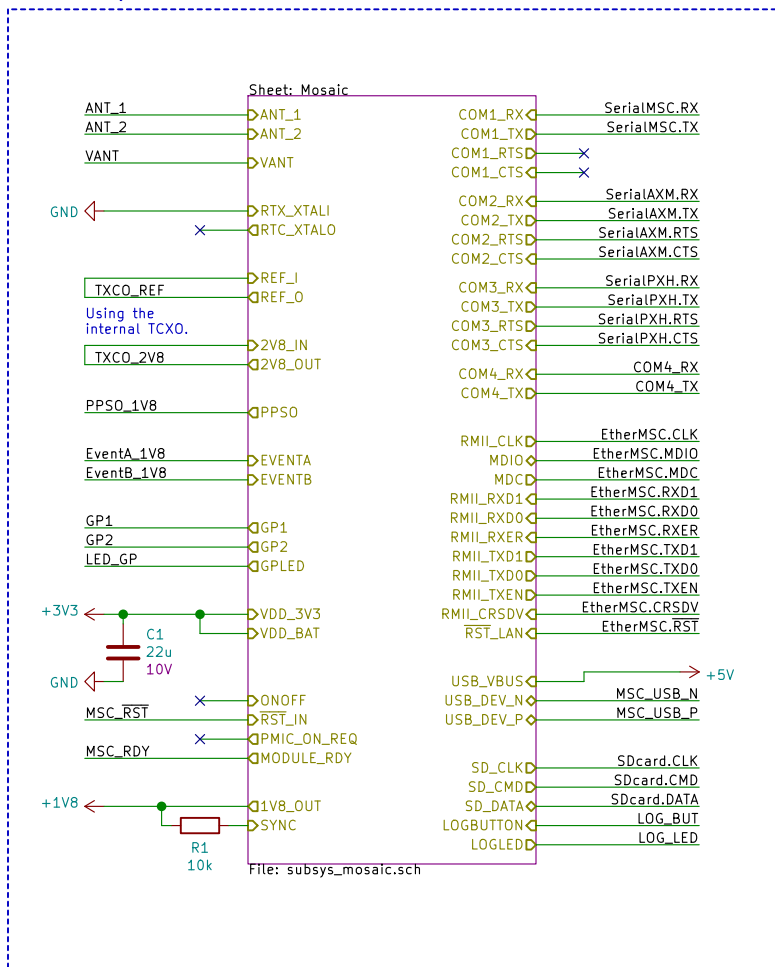
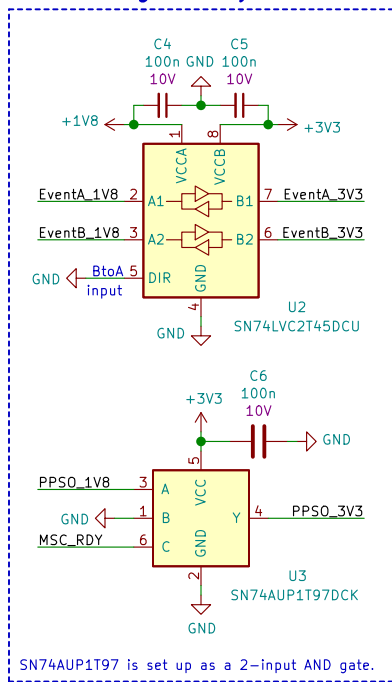


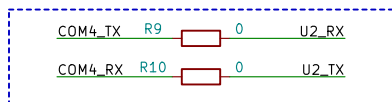
## Mosaic x5/H



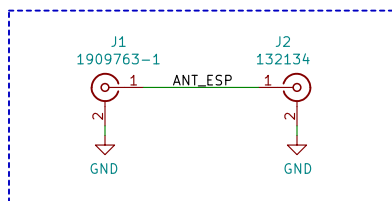
## Greco timing circuitry



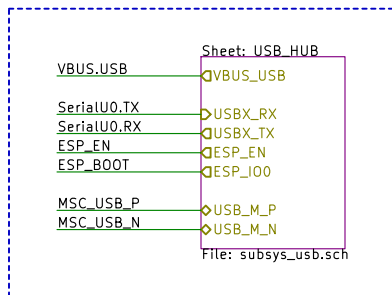
## Inboard Serial



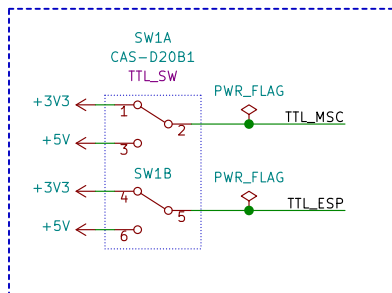
## WiFi antenna



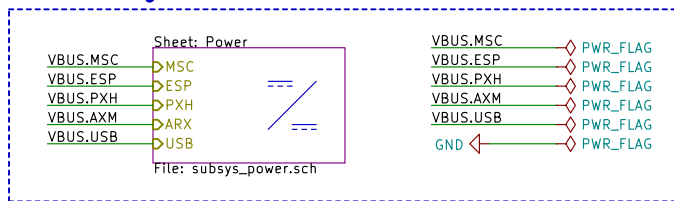
## USB connector and HUB



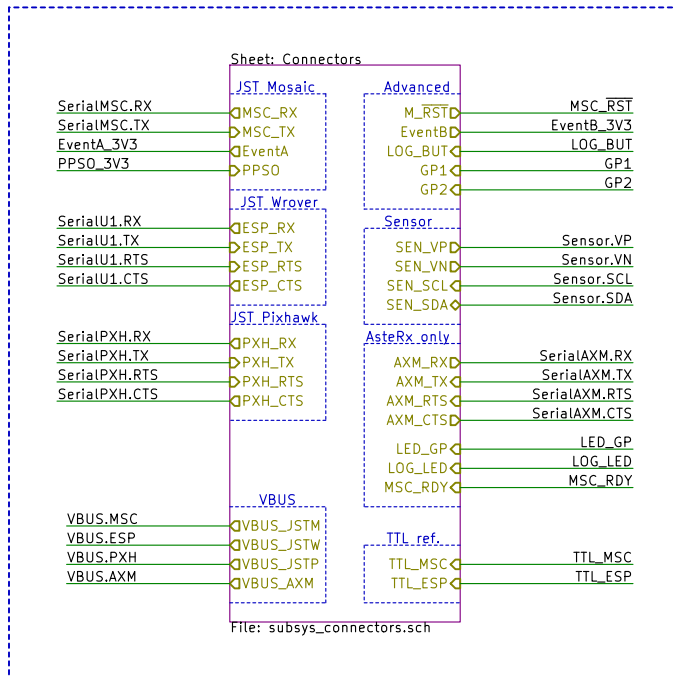
## TTL switch



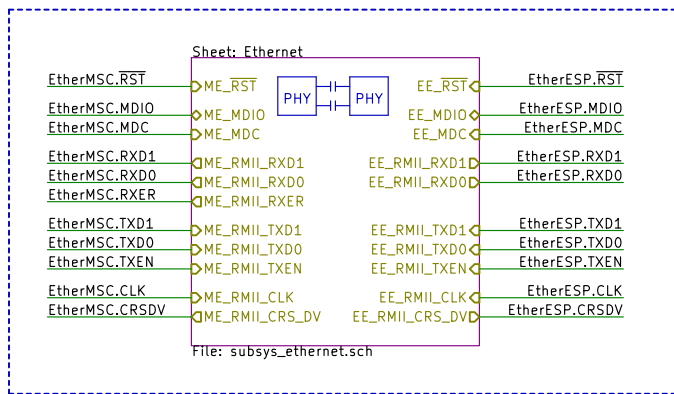
## Power management



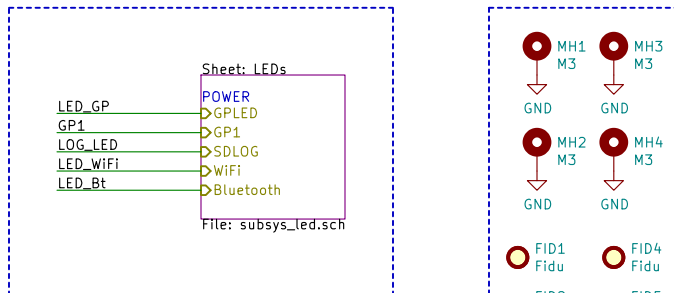
## Connectors



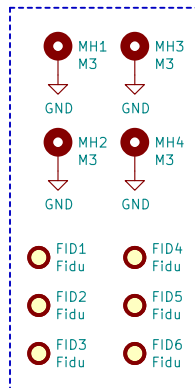
## Ethernet link



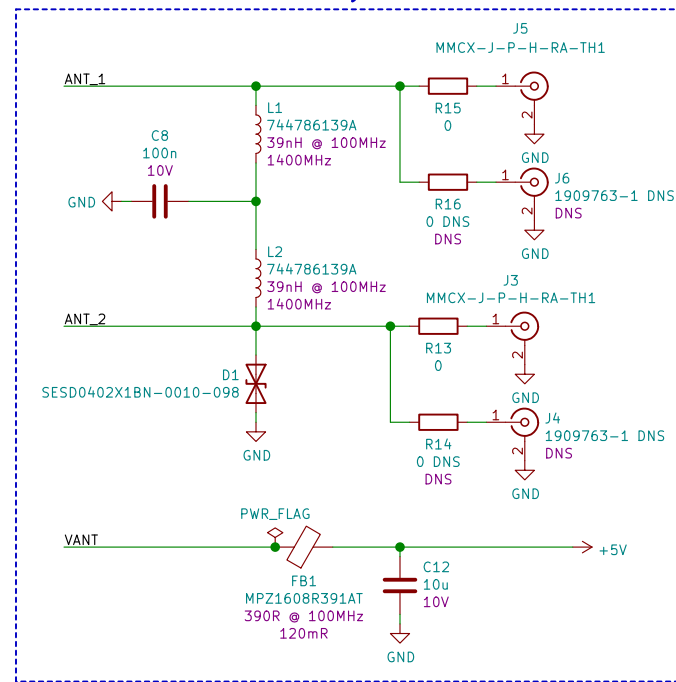
## LEDs and their drivers



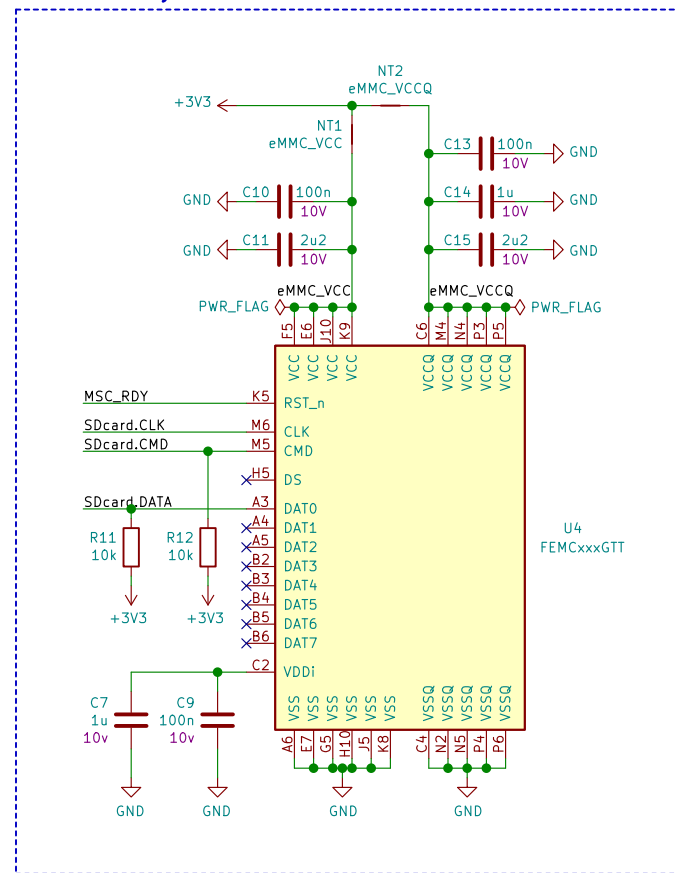
## Mechanical



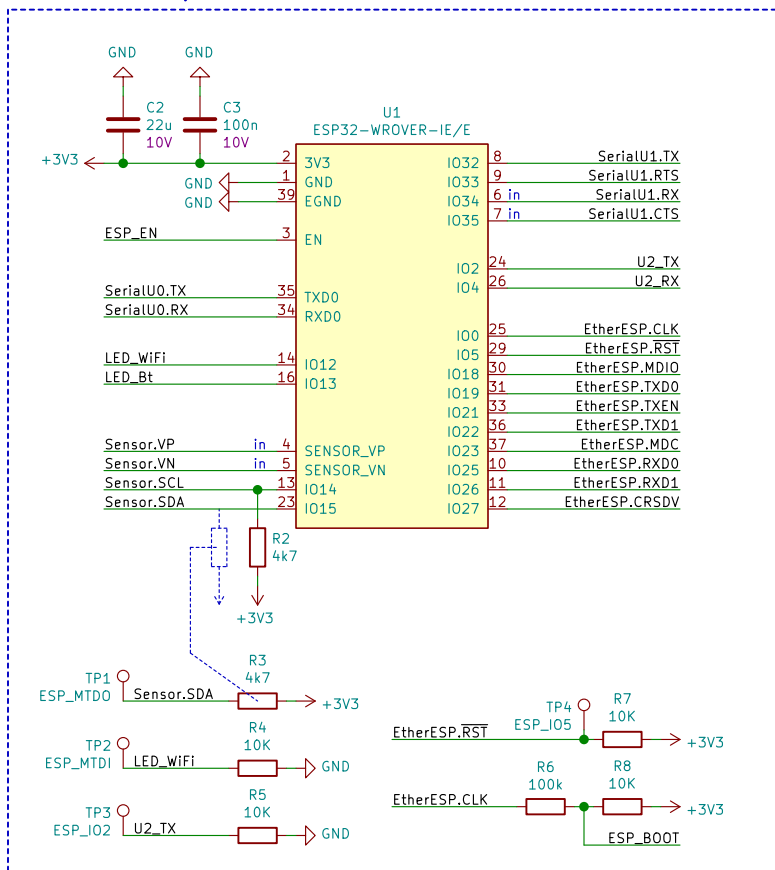
## GNSS antenna &amp; VANT circuitry



## eMMC memory



## ESP32 Wrover E/IE

Sheet: /  
File: mowi.sch

Title: mowi

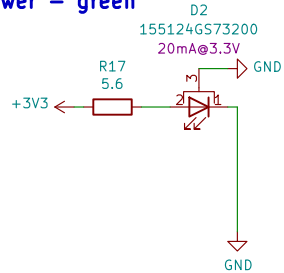
Size: A3  
KiCad E.D.A. kicad (5.1.10)-1

Date: 2021-08-10

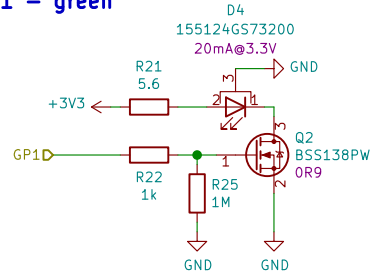
Rev: v1.0

Id: 1/7

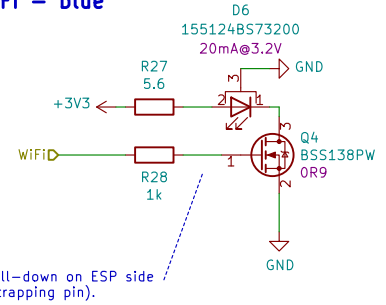
## 1: Power – green



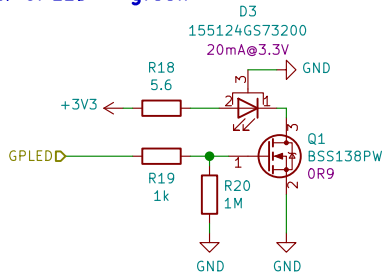
## 3: GP1 – green



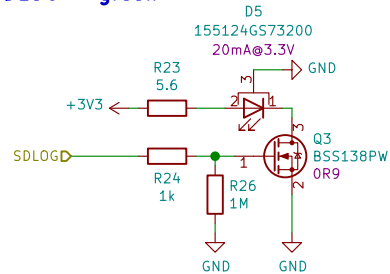
## 5: WiFi – blue



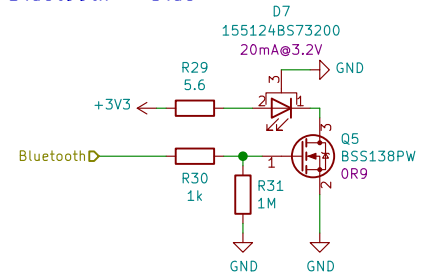
## 2: GPLED – green



## 4: SDLOG – green



## 6: Bluetooth – blue



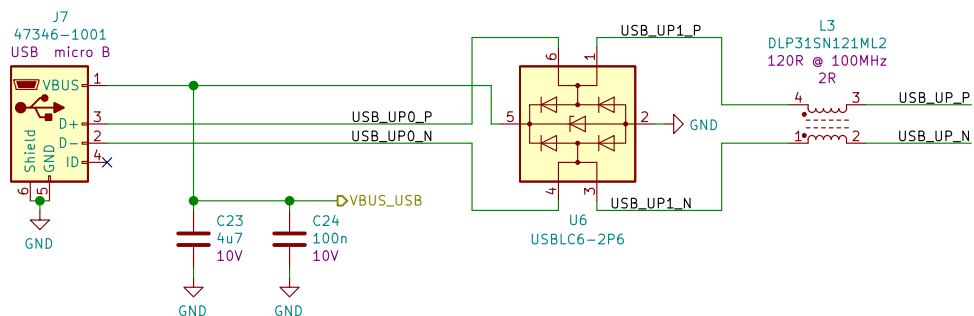
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File: subsys\_led.sch

**Title: mowi**

Size: User Date: 2021-08-10  
KiCad E.D.A. kicad (5.1.10)-1

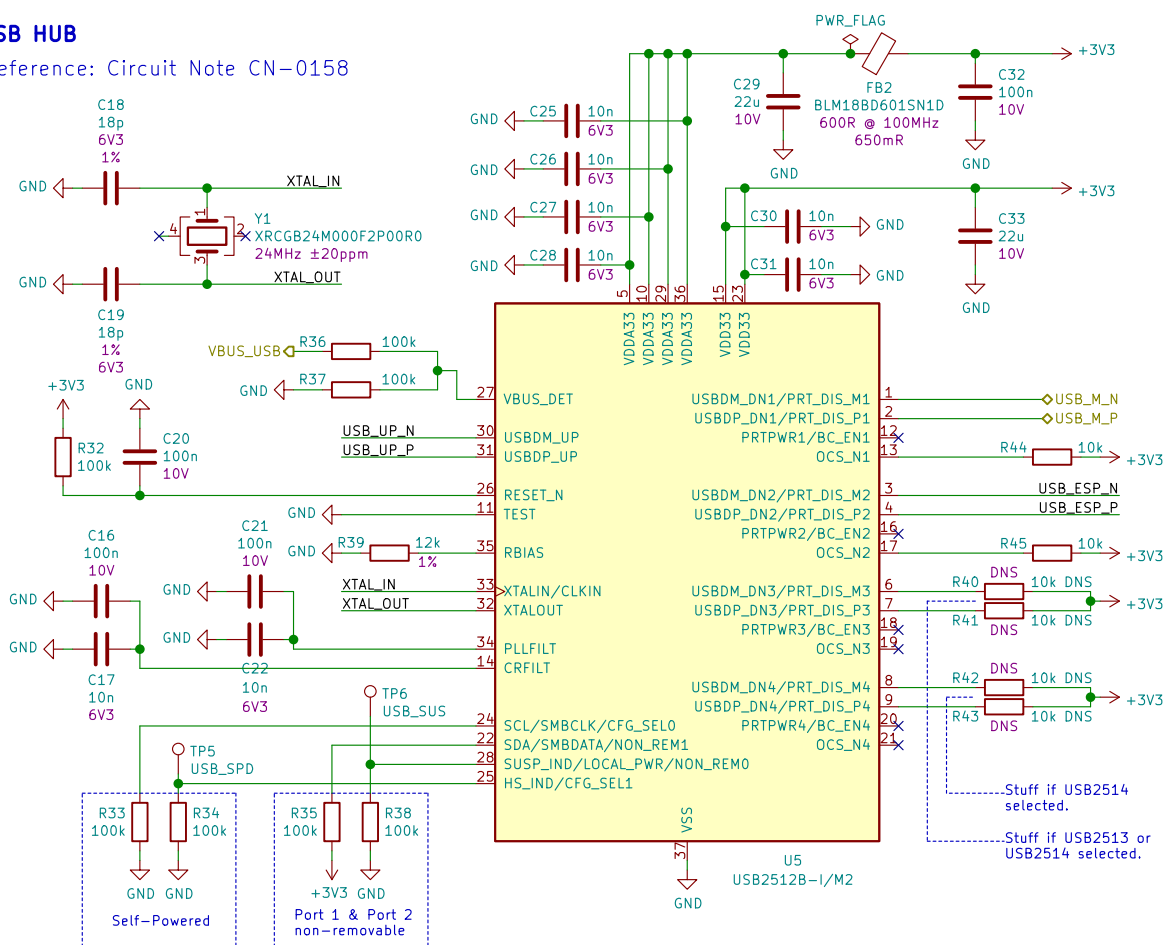
**Rev: v1.0**  
Id: 2/7

## USB connector



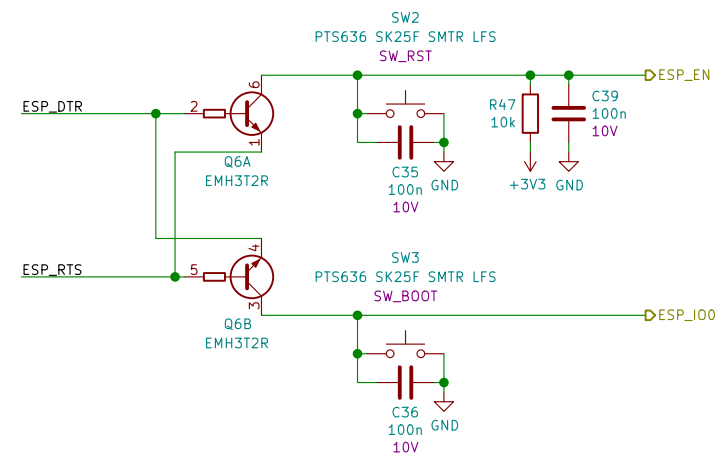
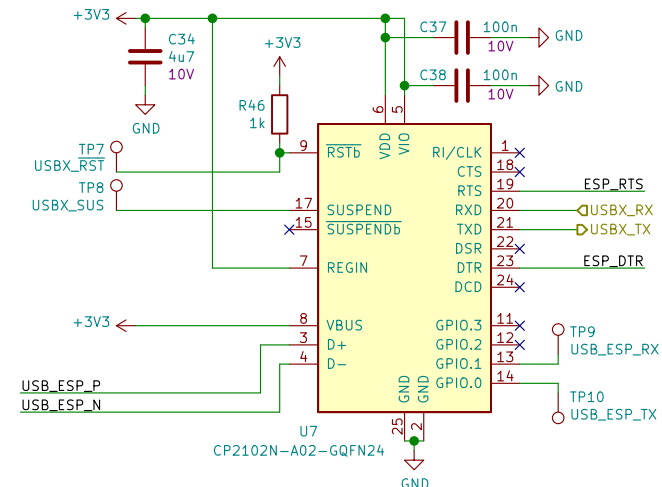
## USB HUB

Reference: Circuit Note CN-0158



## USB to Serial and auto program of ESP32 Wrover

Reference: ESP32\_DevKitc\_V4



Referenced set-up circuitry using two SS8050 devices with base resistors replaced with a single component EMH3.

Sheet: /USB\_HUB/  
File: subsys\_usb.sch

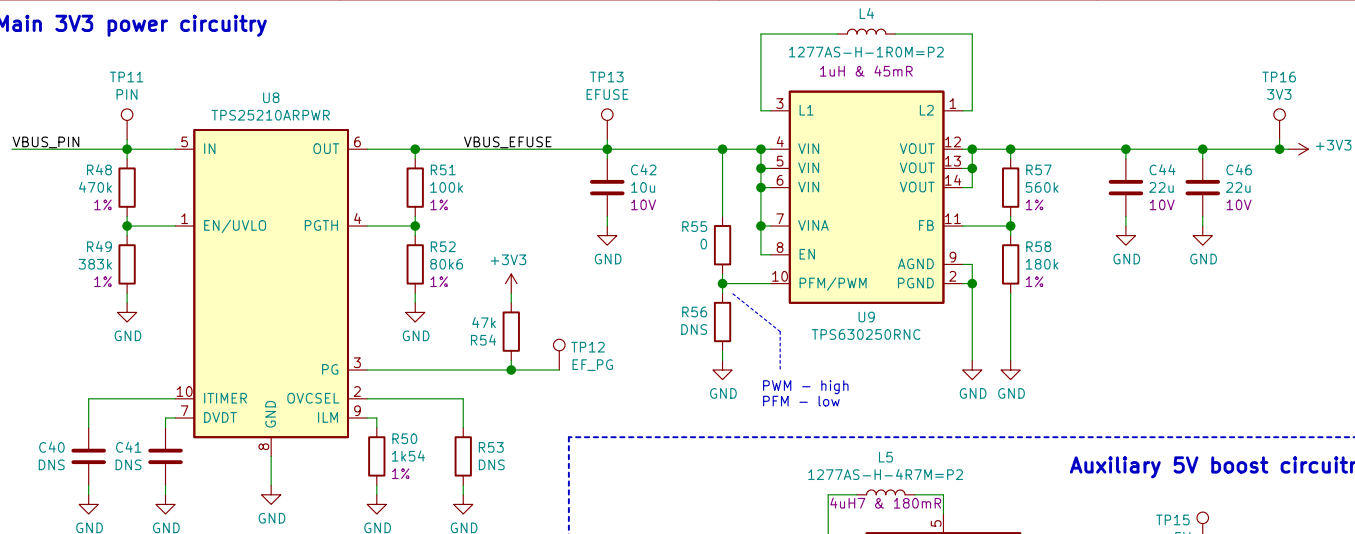
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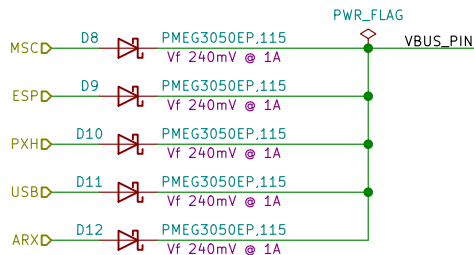
Rev: v1.0

Id: 3/7

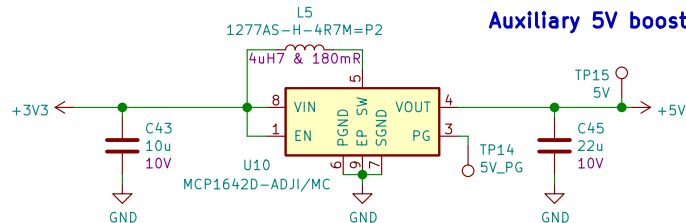
## Main 3V3 power circuitry



## Power inputs multiplexer



### Auxiliary 5V boost circuitry



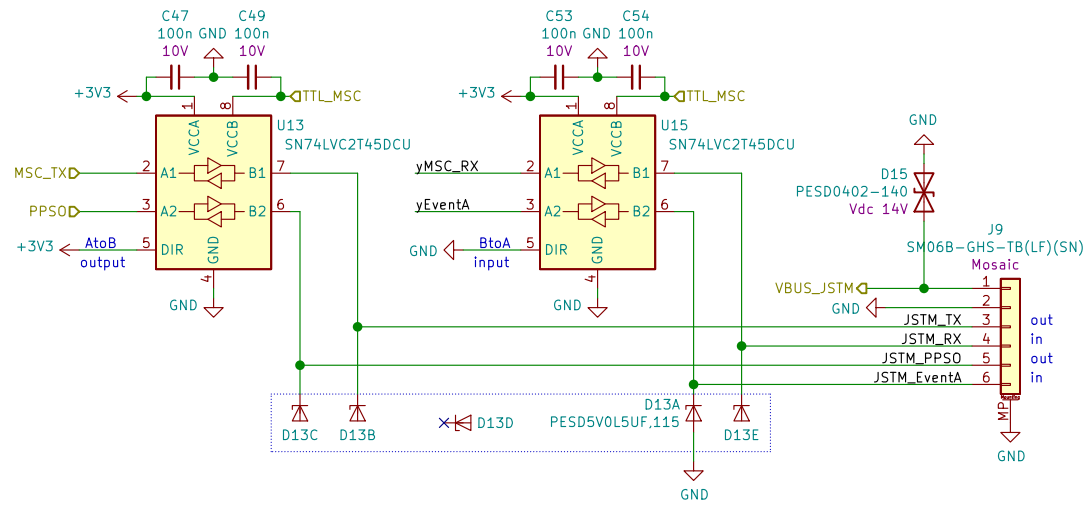
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File: subsys\_power.sch

**Title:** mowi

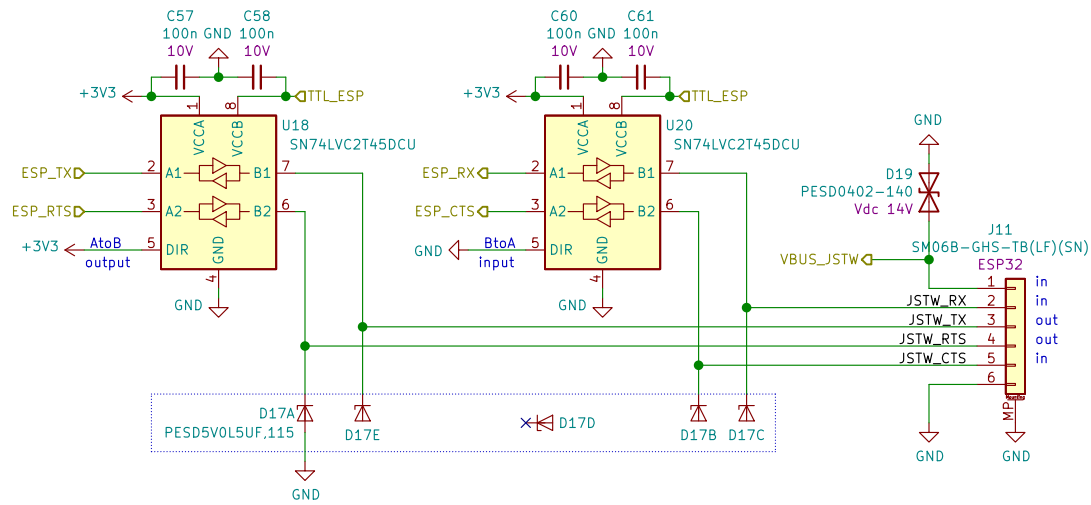
Size: User	Date: 2021-08-10
KiCad E.D.A. kicad (5.1.10)-1	

Rev: v1.0
Id: 4/7

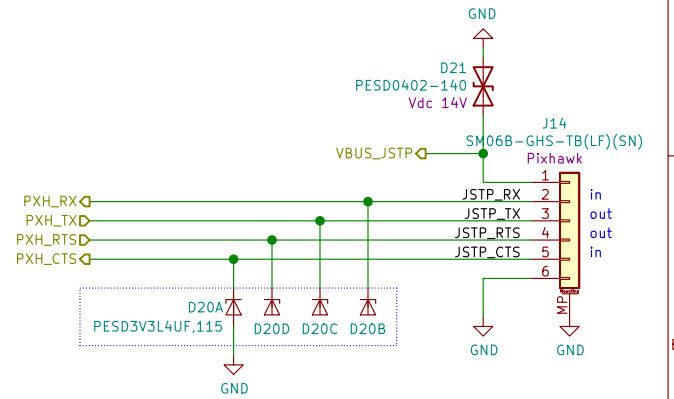
### JST connector for Mosaic – \*JSTM\*



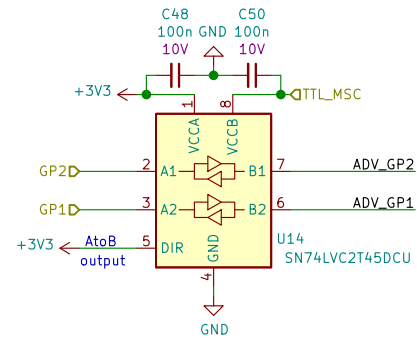
### JST connector for Wrover – \*JSTW\*



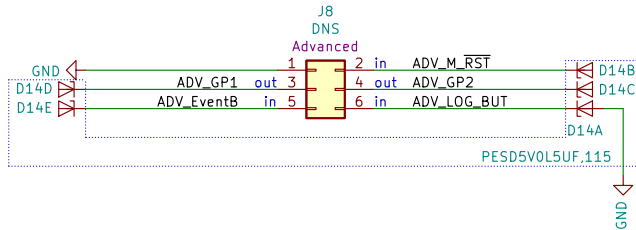
### JST connector for Pixhawk – \*JSTP\*



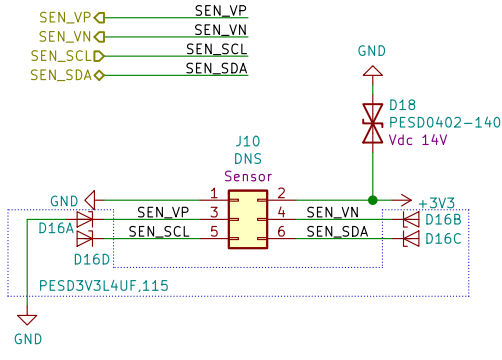
### Advanced connector – 2x3 2.54mm header



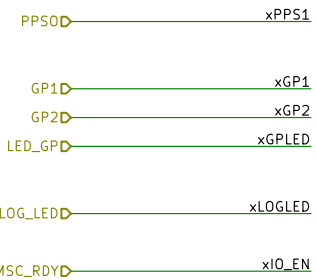
Connectors J8 and J10 are labeled as DNS. However their footprints can be sourced with a standard 02x03 2.54mm pitch socket / header.



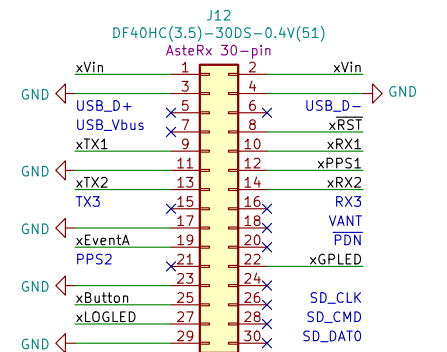
### Sensor connector – 2x3 2.54mm header



### Outputs only

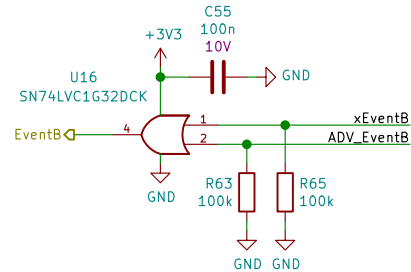
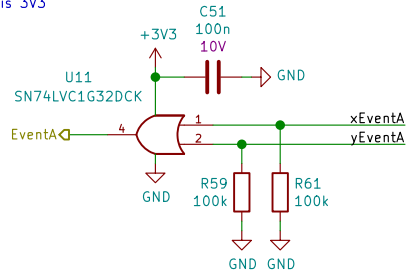


### AsteRx connectors



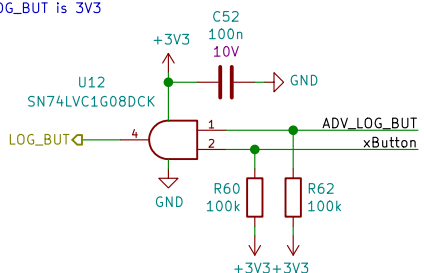
### EventA and EventB handling

Including voltage translation:  
– xEvent is 3V3  
– yEvent is 3V3 or 5V  
– Event is 3V3



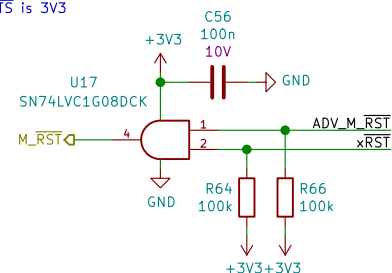
### LOG button handling

Including voltage translation:  
– xButton is 3V3  
– ADV\_LOG\_BUT is 3V3 or 5V  
– LOG\_BUT is 3V3

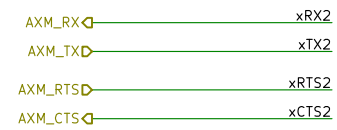
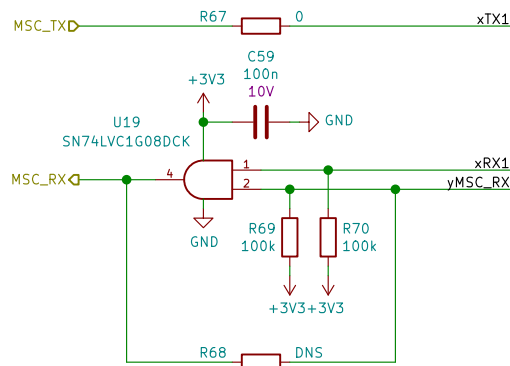


### Mosaic RST handling

Including voltage translation:  
– xRST is 3V3  
– ADV\_M\_RST is 3V3 or 5V  
– M\_RST is 3V3

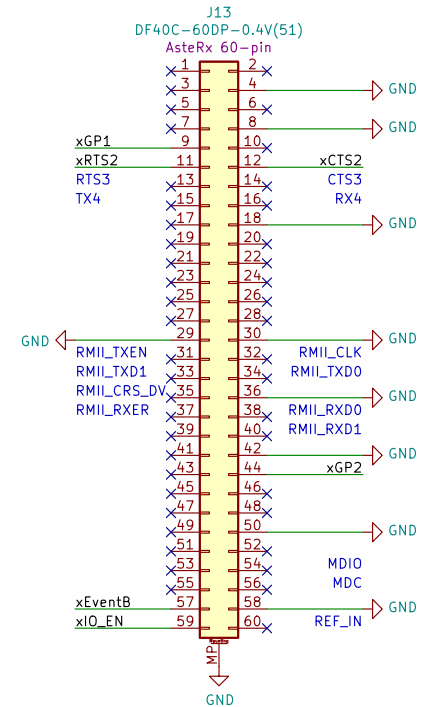


### Serial COM mating



Resistors R67 and R68 can be used to enable/disable serial communication with AsteRx-platform modules.

### AsteRx power input



Sheet: /Connectors/  
File: subsys\_connectors.sch

Title: mowi

Size: A3 Date: 2021-08-10  
KiCad E.D.A. kicad (5.1.10)-1

Rev: v1.0  
Id: 5/7

