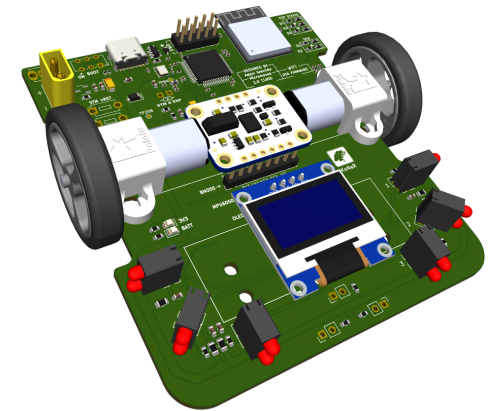
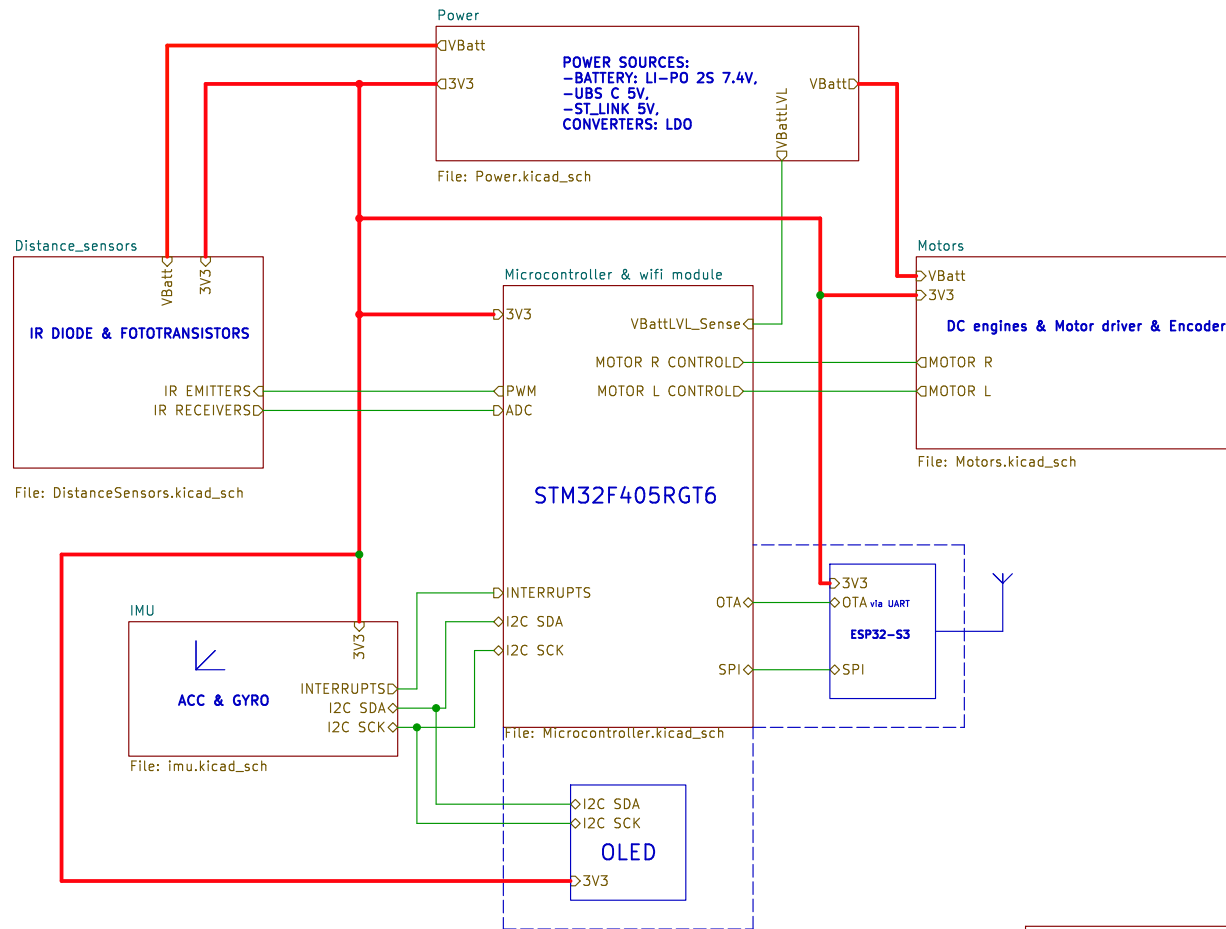


[1] Micromouse – Top level Schematic



Schematics drawn by: Adam Iwachów

Sheet: /
 File: Micromouse.kicad_sch

Title:

Size: A4
 KiCad E.D.A. kicad 7.0.8

Date:

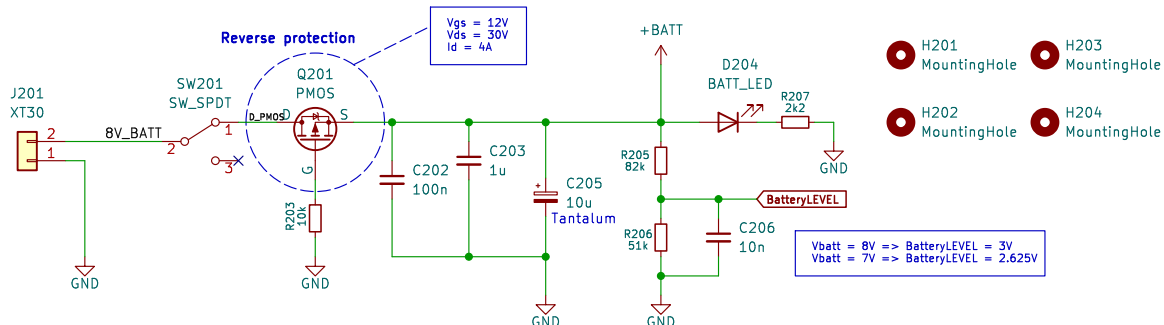
Rev:
 Id: 1/6

[2] POWER SUPPLY

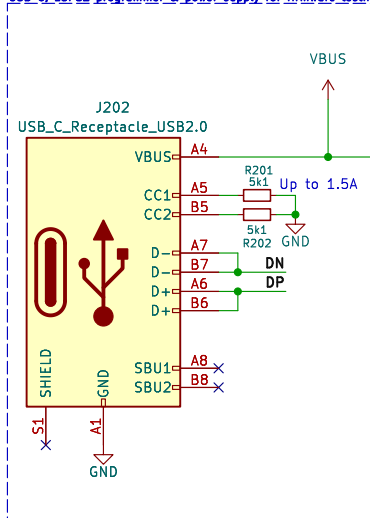
There are 3 possible ways to power board

1. via USB
2. via ST-LINK
3. via BATTERY

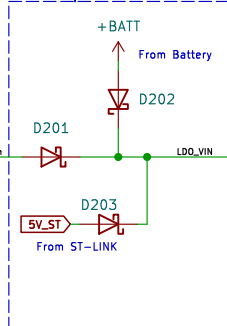
BATTERY LI PO 2S (?)



USB C, ESP32 programmer & power supply for firmware testing

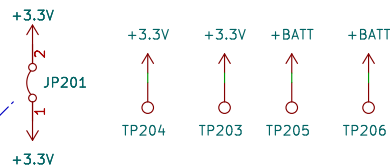
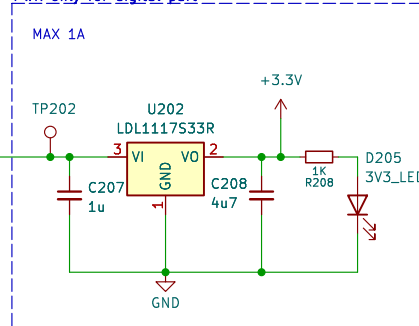


Reverse protection

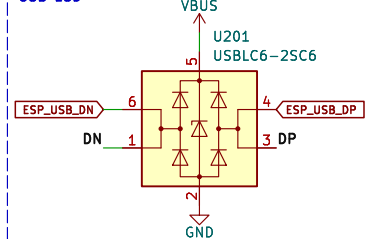


If USB or ST-LINK is plugged and at the same time VBatt is provide, Vbus and ST_5V are blocked

PWR only for digital part



USB ESD



Drawn by: Adam Iwachów

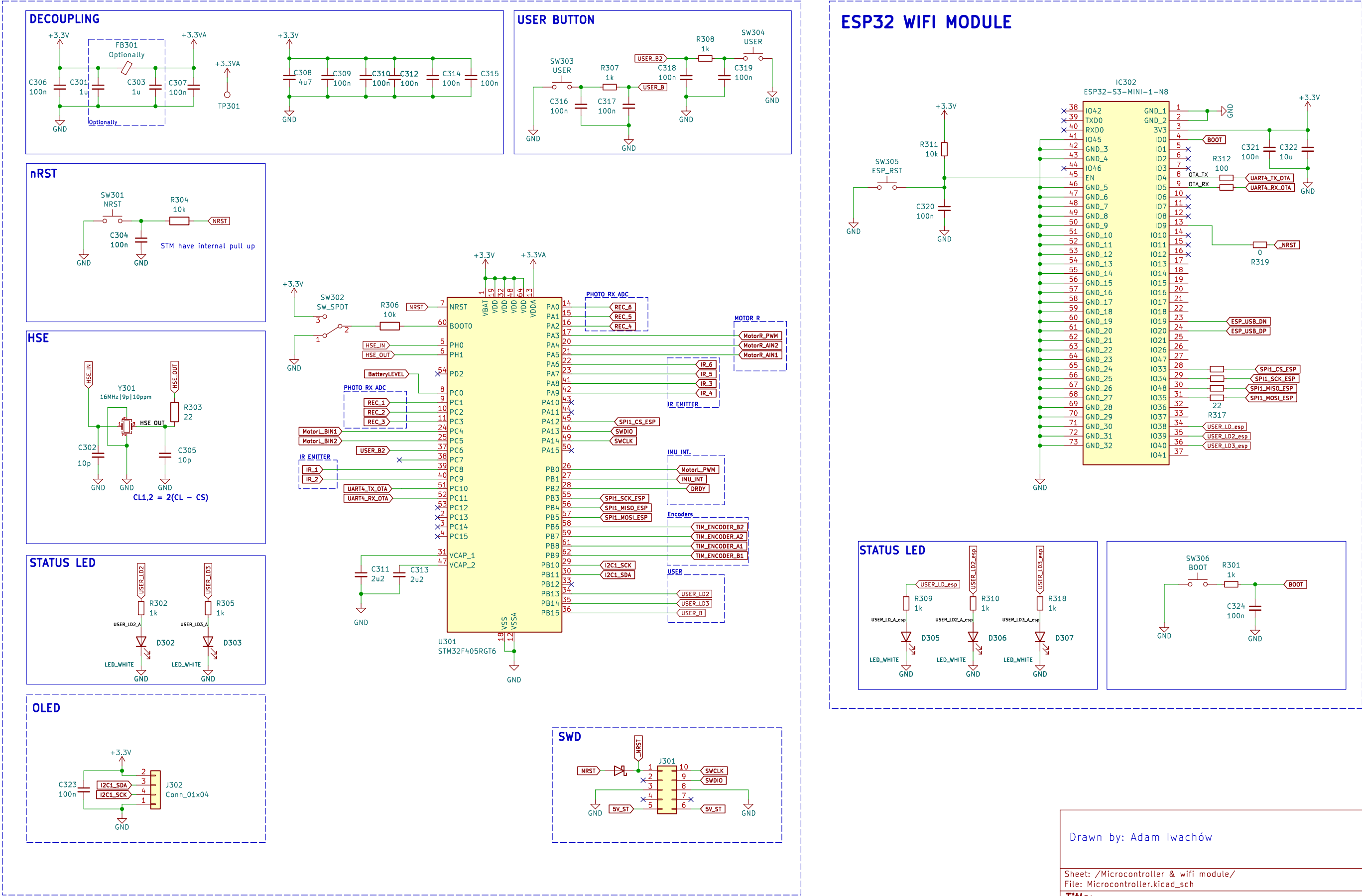
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File: Power.kicad_sch

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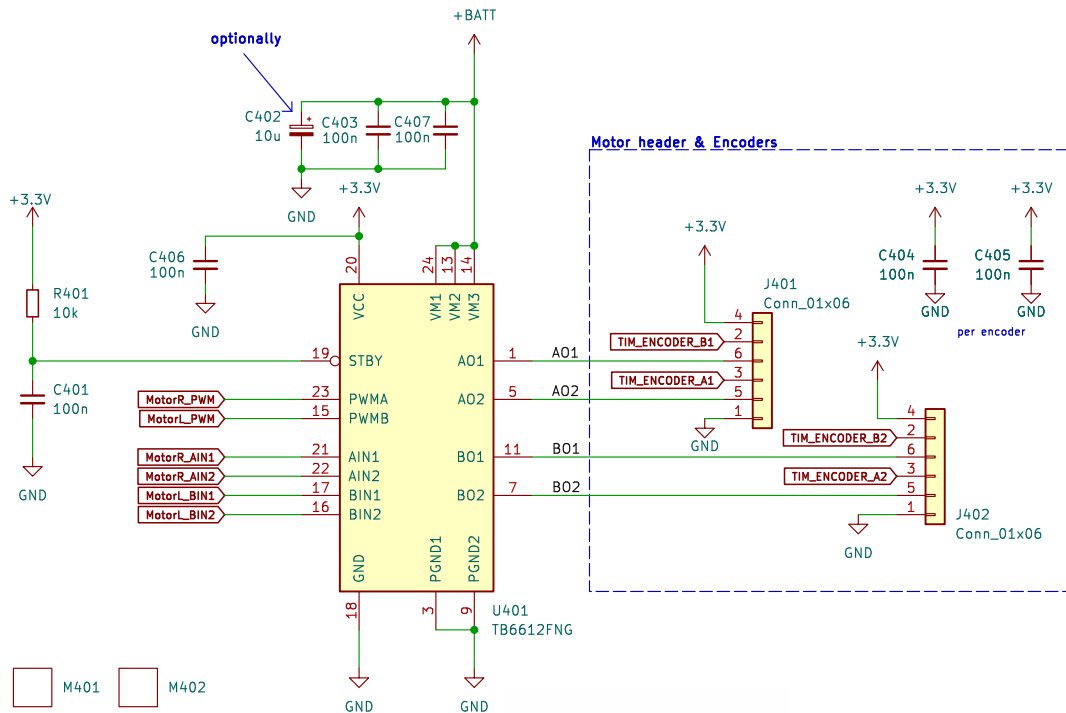
Size: User	Date:
KiCad E.D.A. kicad 7.0.8	

Rev:
Id: 2/6

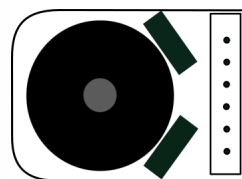
[3] Microcontroller & WIFI module



[4] MOTORS DRIVER

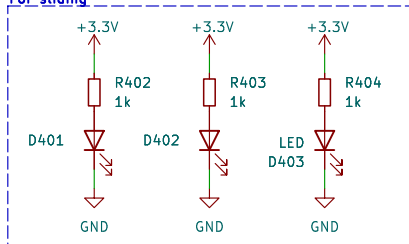


- H401 MountingHole
- H402 MountingHole
- H403 MountingHole
- H404 MountingHole



- 1.Motor +
- 2.Encoder + (3.3V/5V)
- 3.Encoder A Phase
- 4.Encoder B Phase
- 5.Encoder GND
- 6.Motor -

For sliding



Drawn by: Adam Iwachów

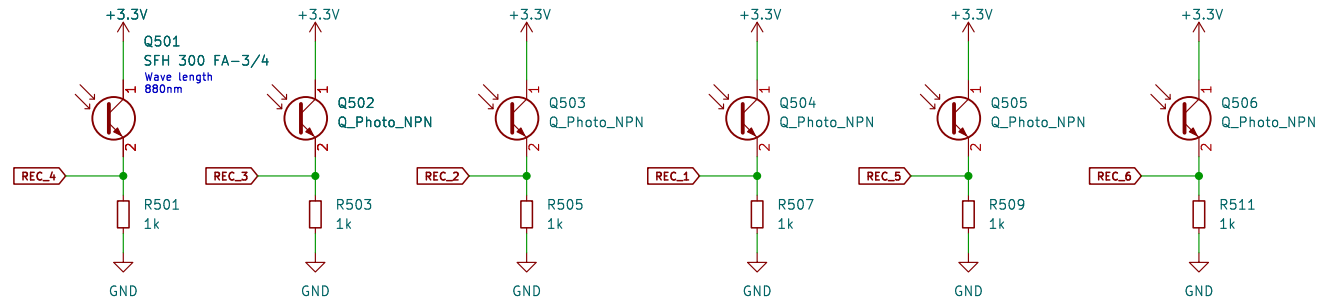
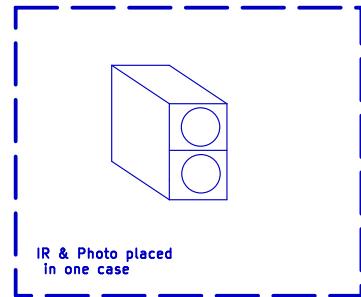
Sheet: /Motors/
File: Motors.kicad_sch

Title:

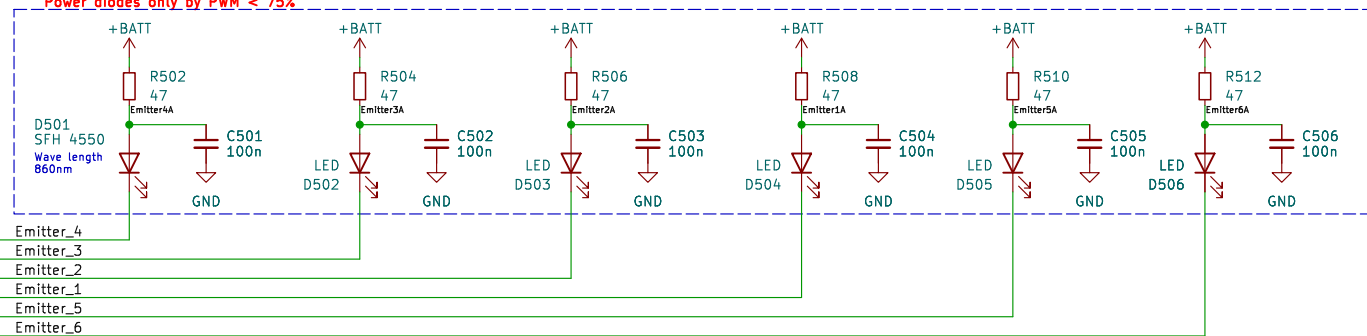
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KiCad E.D.A. kicad 7.0.8

Rev:
Id: 4/6

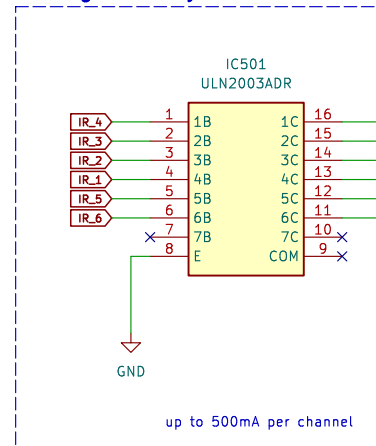
[5] IR RECEIVERS & EMITTERS



Diode max dc current = 100mA
 $I_d = 6.5V / 47\Omega = 0.14A$
Power diodes only by PWM < 75%



Darlington array



IMPORTANT Note*
IR DIODES ARE POWERED ONLY IF VBATT IS PLUGED IN

Drawn by: Adam Iwachów

Sheet: /Distance_sensors/
File: DistanceSensors.kicad_sch

Title:

Size: A4

Date:

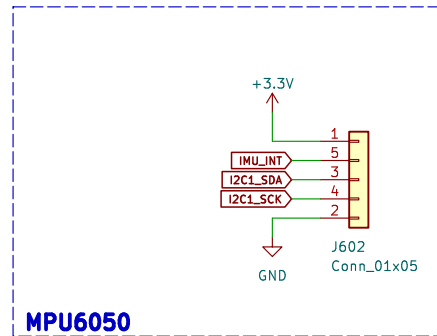
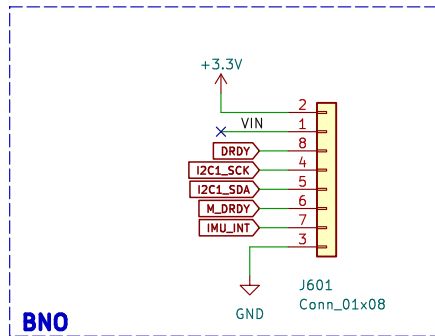
KiCad E.D.A. kicad 7.0.8

Rev:

Id: 5/6

[6] Accelerometer & gyroscope

Note*
There are two possible imu's modules to choose
Each of them have internal I2C pull ups



Drawn by: Adam Iwachów

Sheet: /IMU/
File: imu.kicad_sch

Title:

Size: A5
KiCad E.D.A. kicad 7.0.8

Date:

Rev:

Id: 6/6