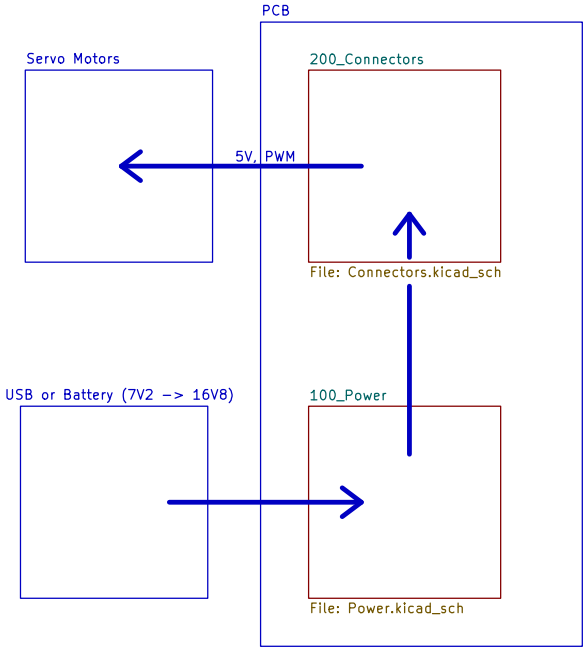
Project Block Diagram



Project Goals:

Be able to power 12 servos plus all on board electronics.

Have power switching between USB and Battery.

Have long range radio for communication.

Use GPS, barometer, magnetometer, gyroscope, and acceleromter to perform sensor fusion.

Use JTAG for debugging embedded software.

Be programmable through the ESP-IDF programming framework.

Able to be used in a variety of robotic systems: quadrupeds, drones, rockets, and fixed wings.

ToDos:

Maybe switch regulator to SiC437/SiC431.

Confirm power specifications.

Fix block diagram (it is outdated).

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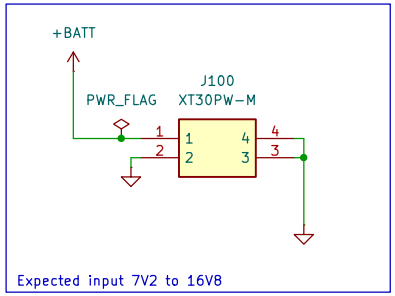
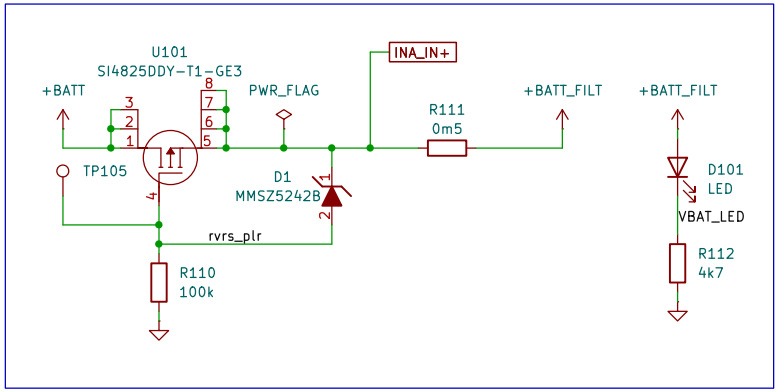
Title: PDB AURA		
Size: A4	Date: 25-05-2025	**Rev: 0.0.1**
KiCad E.D.A. 9.0.2		Id: 1/3

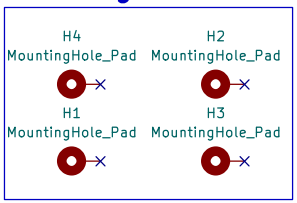
Battery



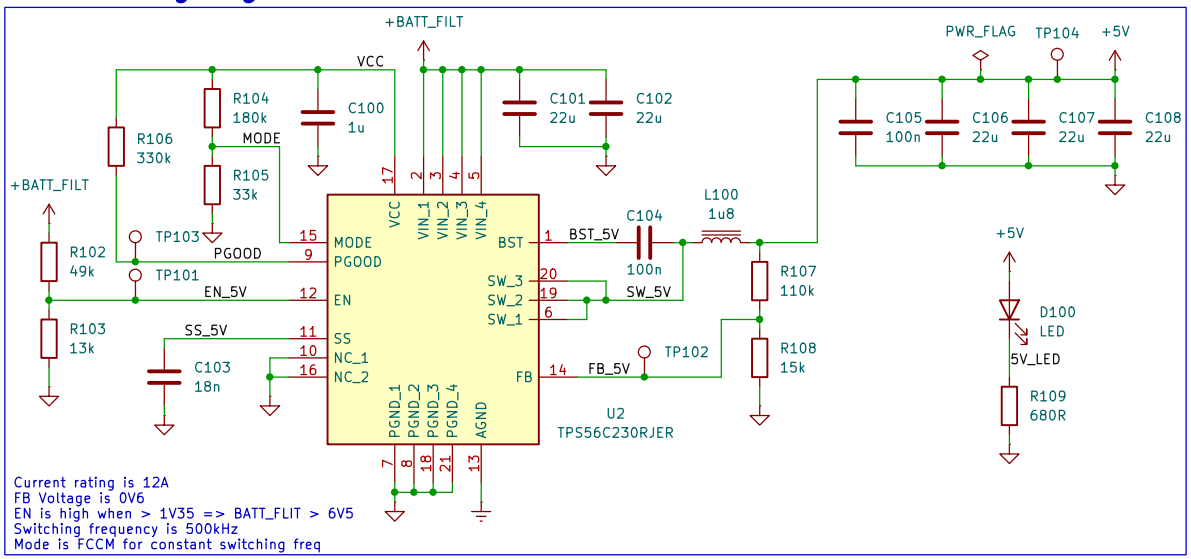
Reverse polarity protection



Mounting



5V Switching Regulator



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Size: A4	Date: 07-05-2025	**Rev: 0.0.1**
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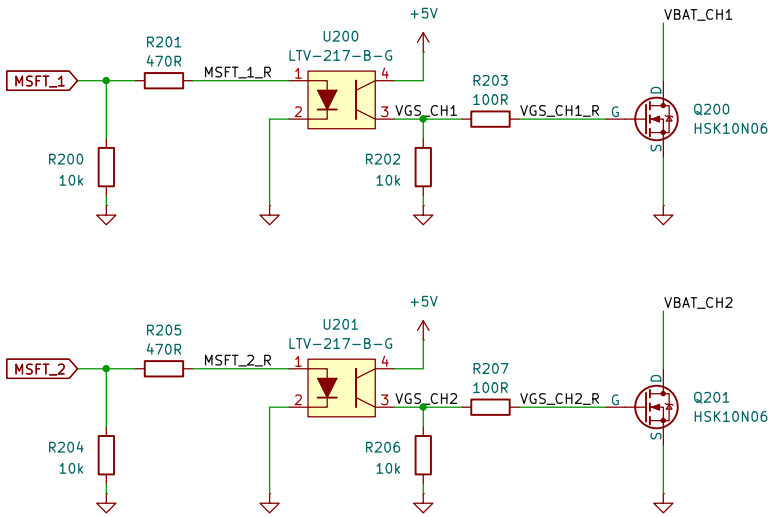
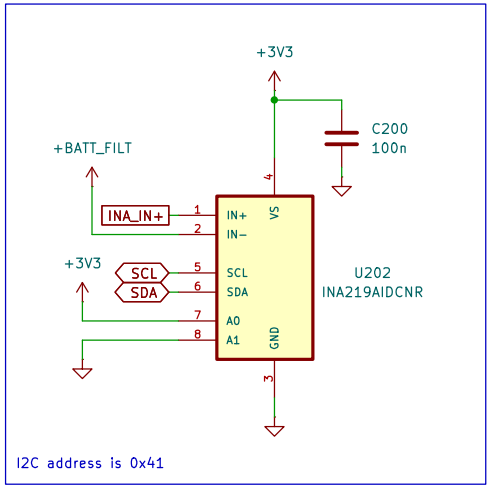
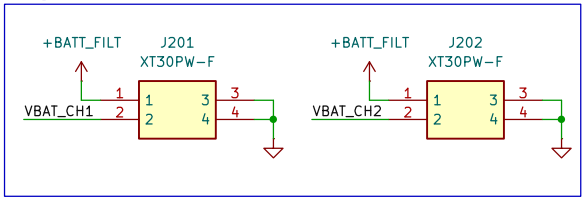
High power switches



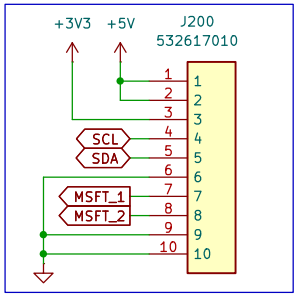
Power Sensing



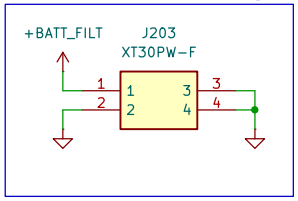
High Power Outputs



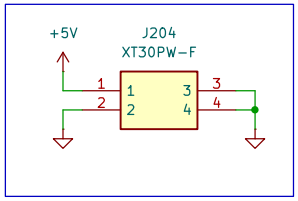
MCU Connector



VBAT Pass Through



Servo 5V



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Title: Actuator Outputs

Size: A4	Date: 08-05-2025	**Rev: 0.0.1**
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