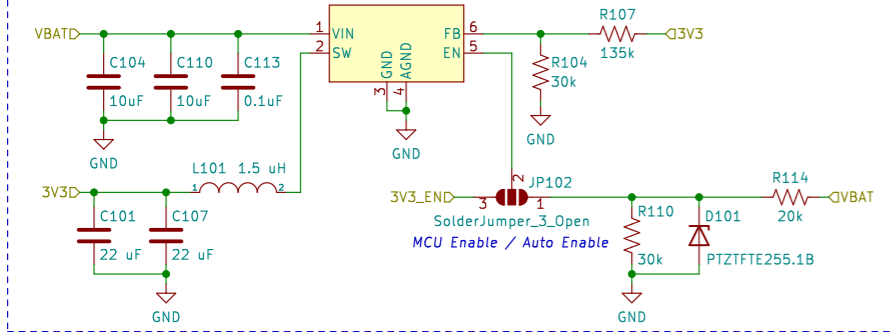


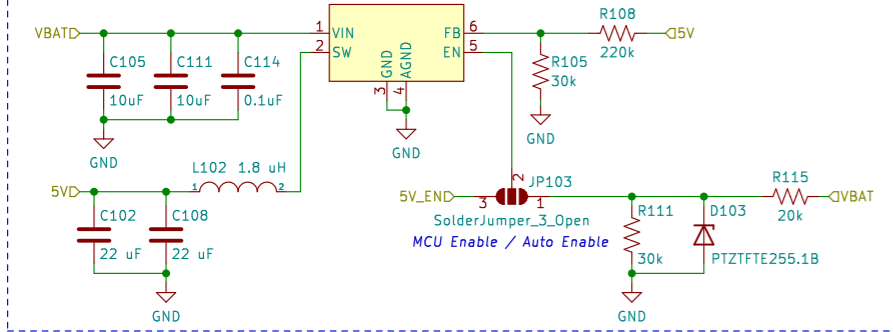
3V3 Voltage Regulator

TPS564247DRLR



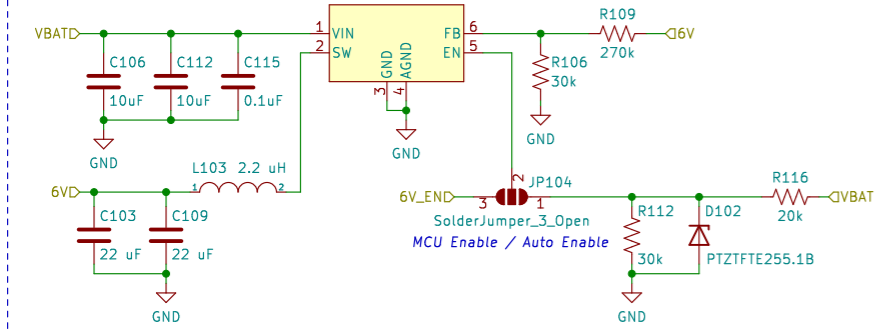
5V Voltage Regulator

TPS564247DRLR



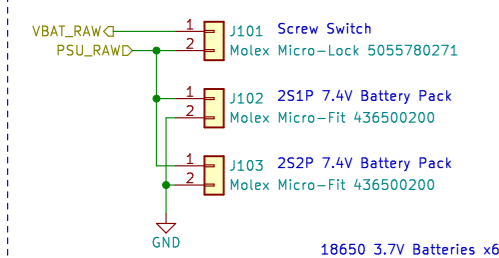
6V Voltage Regulator

TPS564247DRLR



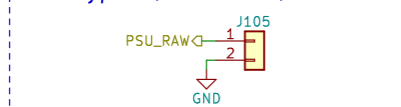
Battery Connectors

2S3P 18650 7.4V

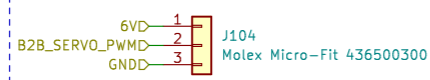


Bench Power Supply

7.4V Typical, 8.4V MAX, 35W MAX

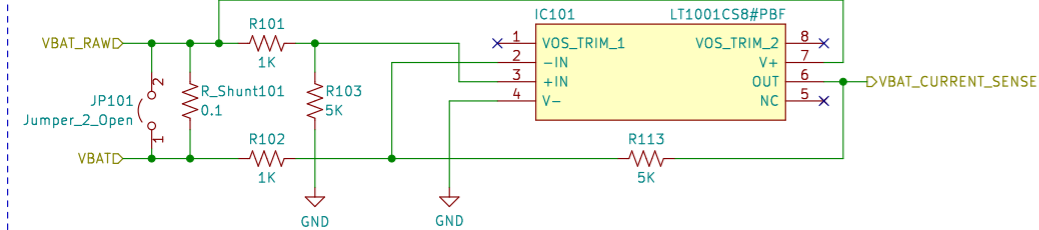


Servo Connector



Current Sensing Shunt Resistor

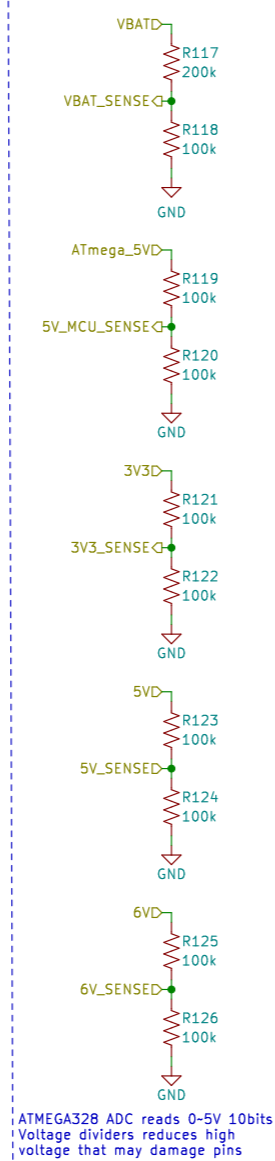
PFS35-0R1F1



Connect jumper to bypass shunt resistor in event of failure.

Grid Size: 1.27mm

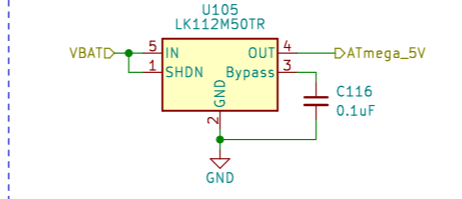
Voltage Sensing



ATMEGA328 ADC reads 0-5V 10bits
Voltage dividers reduces high voltage that may damage pins

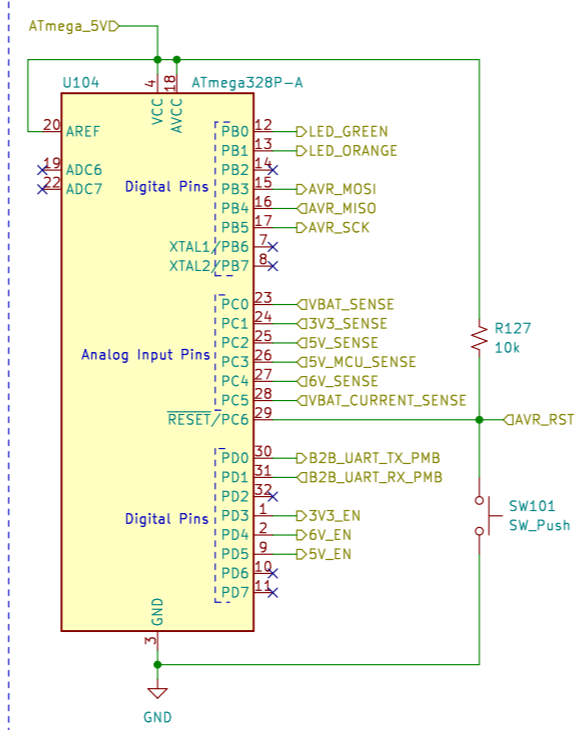
5V MCU Voltage Regulator

LK112M50TR



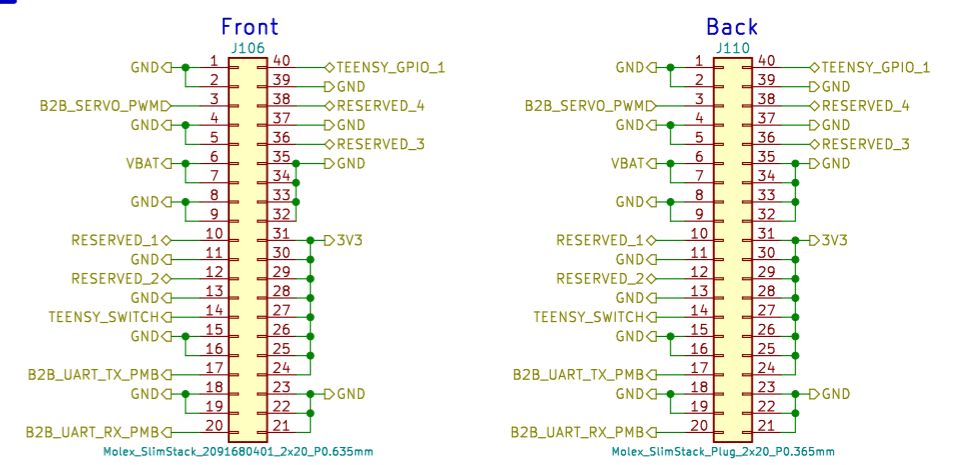
Microcontroller

ATmega328P-AU



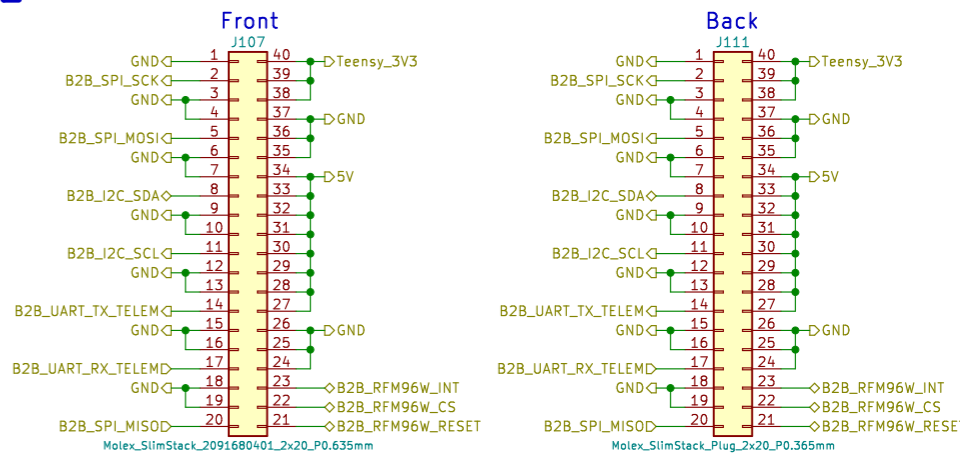
+Z

Board-To-Board Connectors

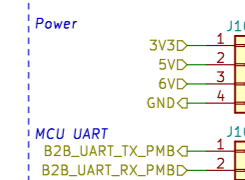


-Z

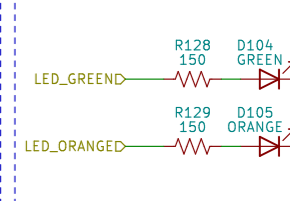
Board-To-Board Connectors



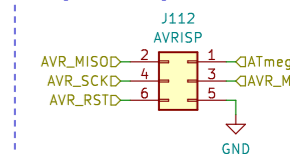
Debug Pins



Status LEDs



Programming Pins



Contributors: Peter Giannetos, Eisha Peyyeti, Danny Guller, Rishi Patel, Spencer Siegellak, David Zhang

Illinois Space Society

Sheet: /
File: TARS-MK4-PMB.kicad_sch

Title: TARS MK4 Power Management Board

Size: A3 Date: 2023-02-14

Rev: B

KiCad E.D.A. eeschema (6.0.0)

Id: 1/1

!!!WARNING: Using incorrect batteries or power sources may damage electronics!!!