

Sheet, Microcontroller

Intersectoral Extension

File: Sensors.sch

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File: Actuators.sch

File: Peripheral.sch



Chris3Arcadia

Size: A4	Date: 2020-06-03
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Rev: 1.0

Id: 1/5

Microcontroller Module

MOD1E NUCLEO-F429ZI

MOD1F NUCLEO-F429ZI

MOD1A NUCLEO-F429ZI

MOD1C NUCLEO-F429ZI

MOD1D NUCLEO-F429ZI

MOD1B NUCLEO-F429ZI

Sheet: /Microcontroller/
File: Microcontroller.sch

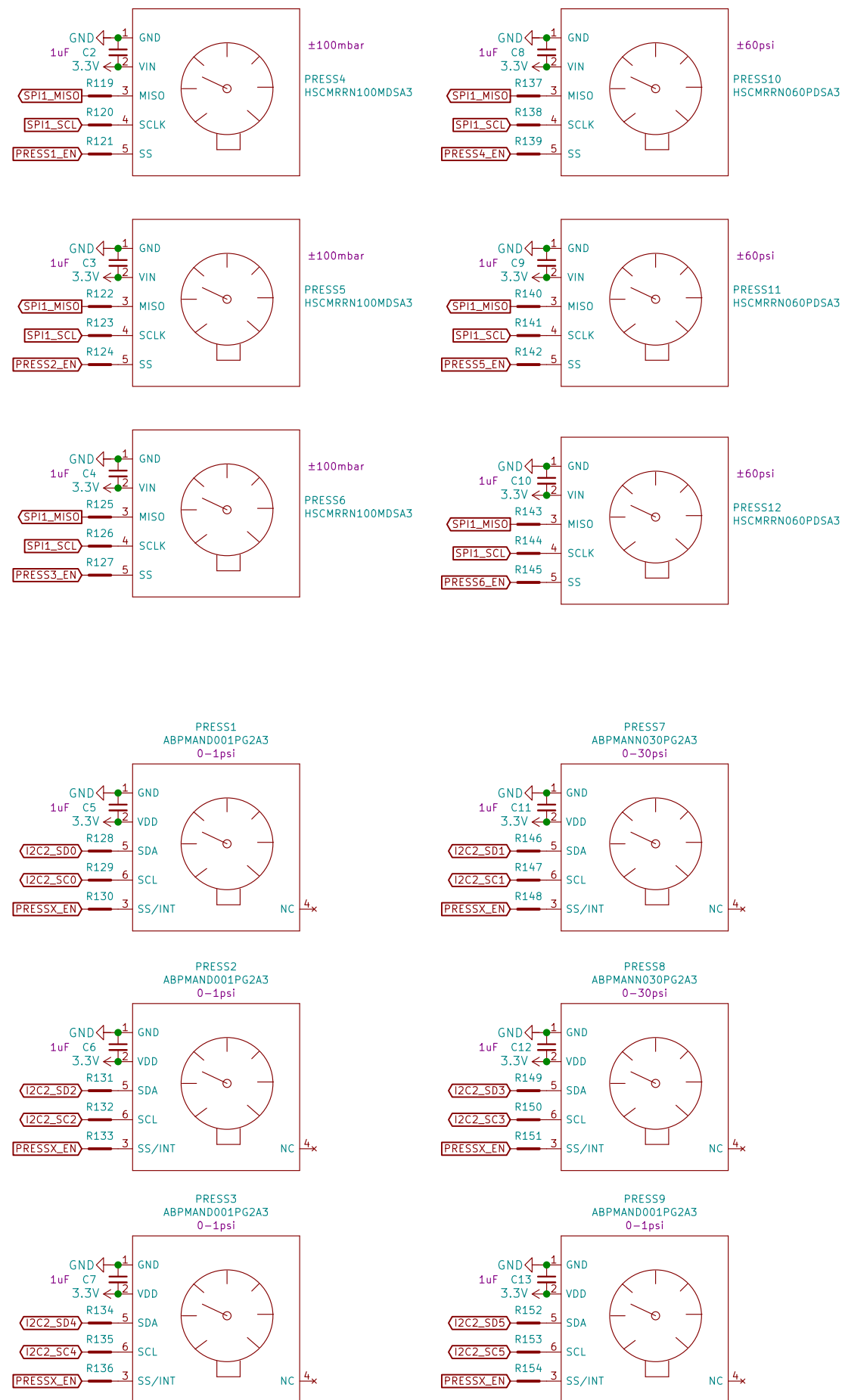
Title: Pufferfish Controller

Size: User **Date:** 2020-06-03 **Rev:** 1.0

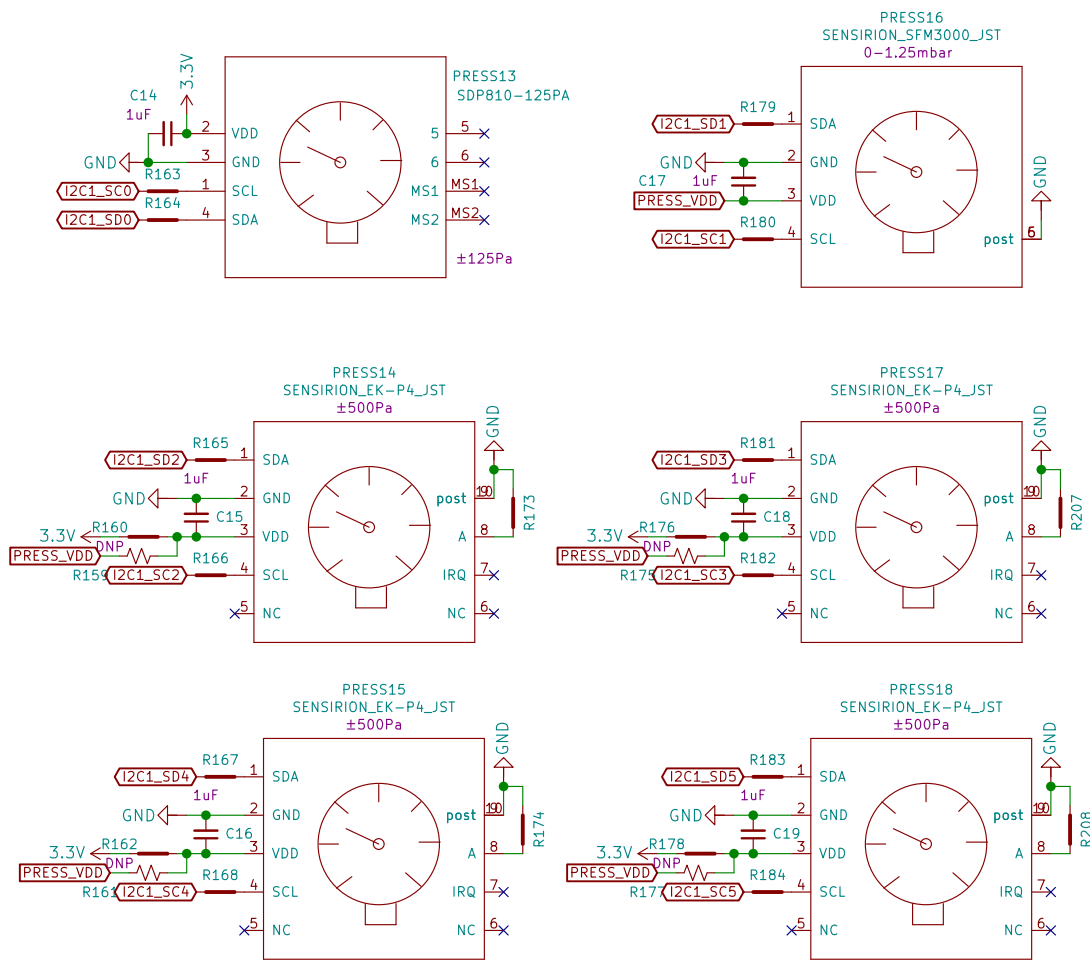
KiCad E.D.A. kicad (5.1.5-0-10_14) **Id:** 2/5

Chris3Arcadia

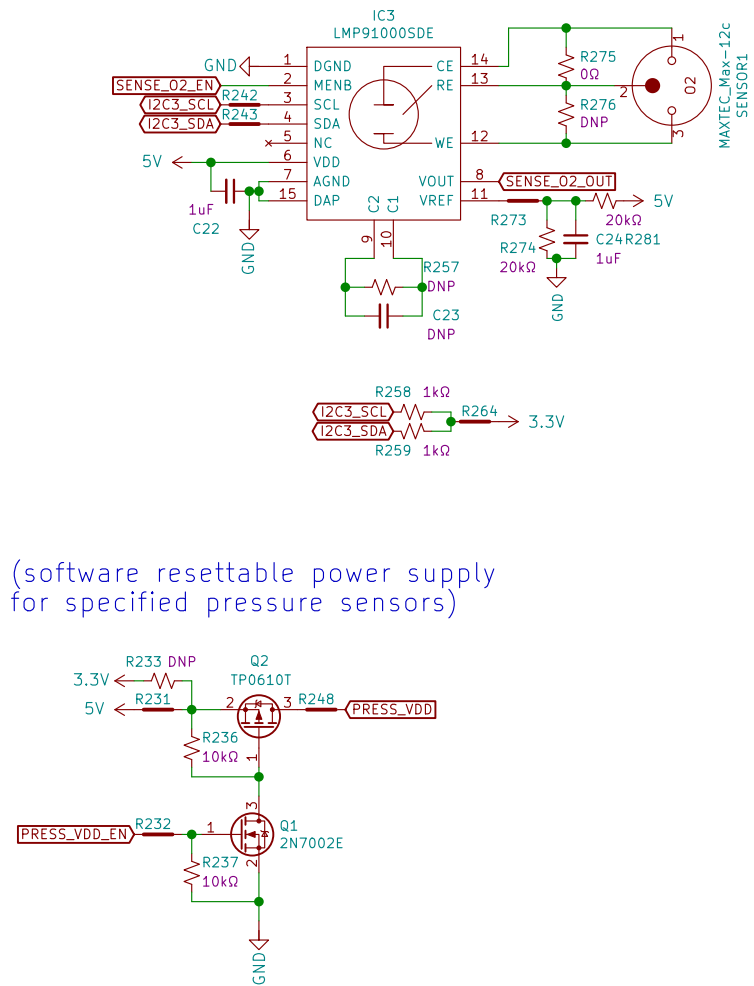
Pressure Sensors



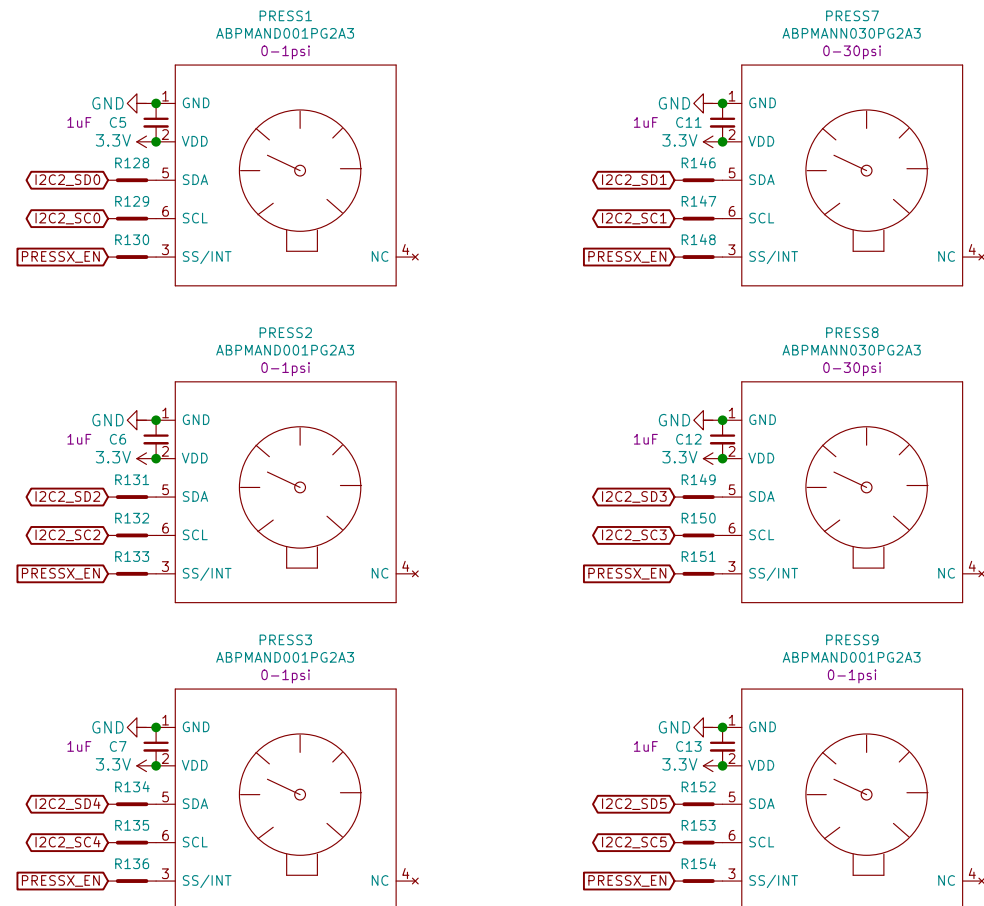
Flow Sensors



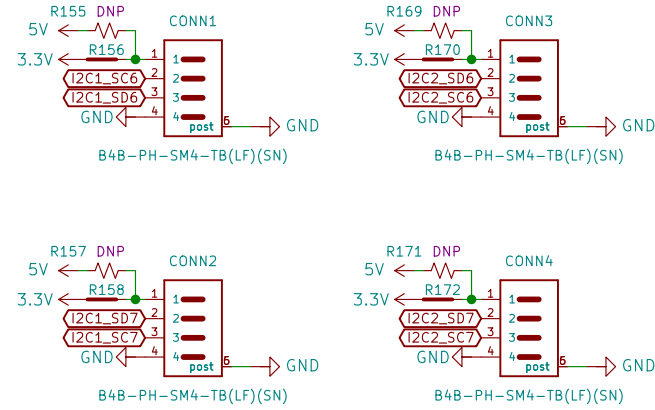
Oxygen Sensor



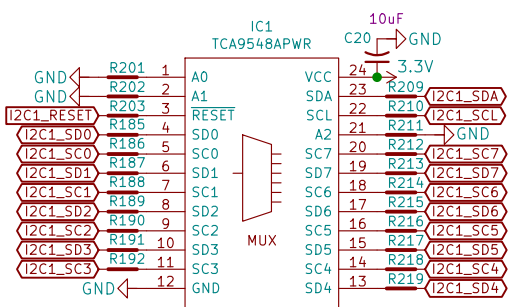
Multiplexer for I2C Sensors



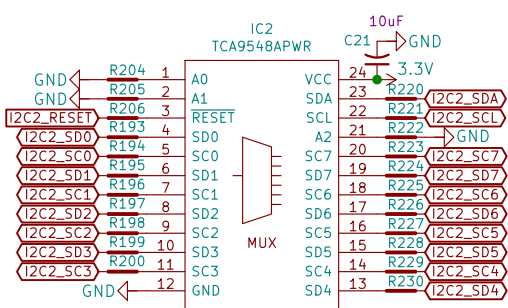
(unused I2C lines are routed to JST connectors for off board devices)



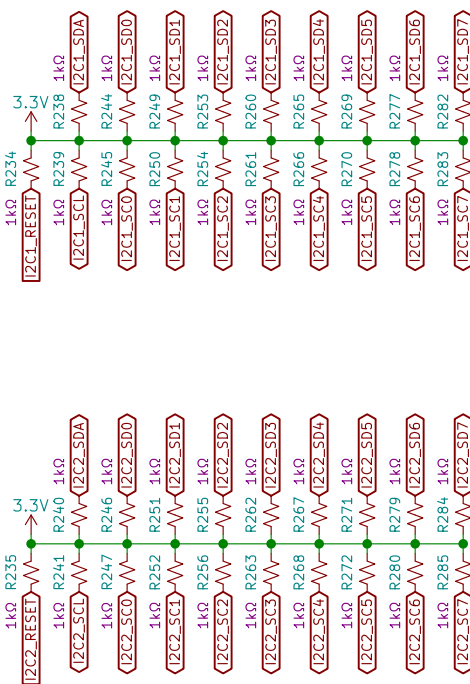
(for flow sensors)



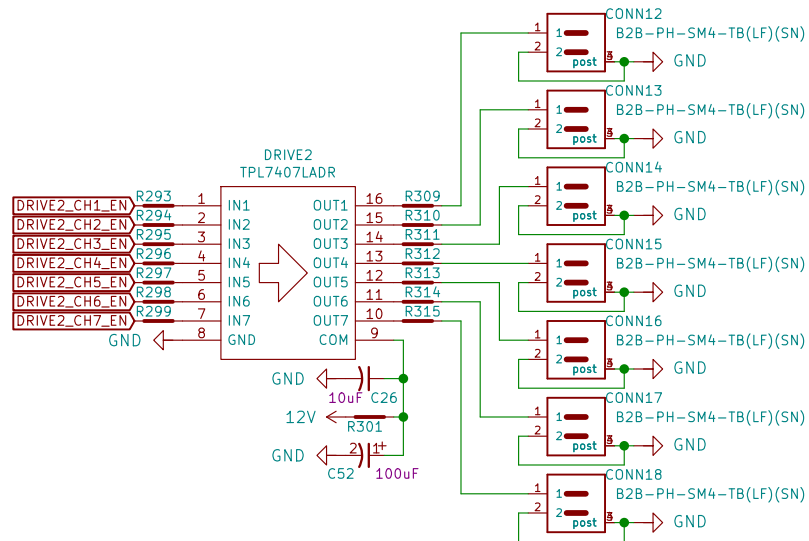
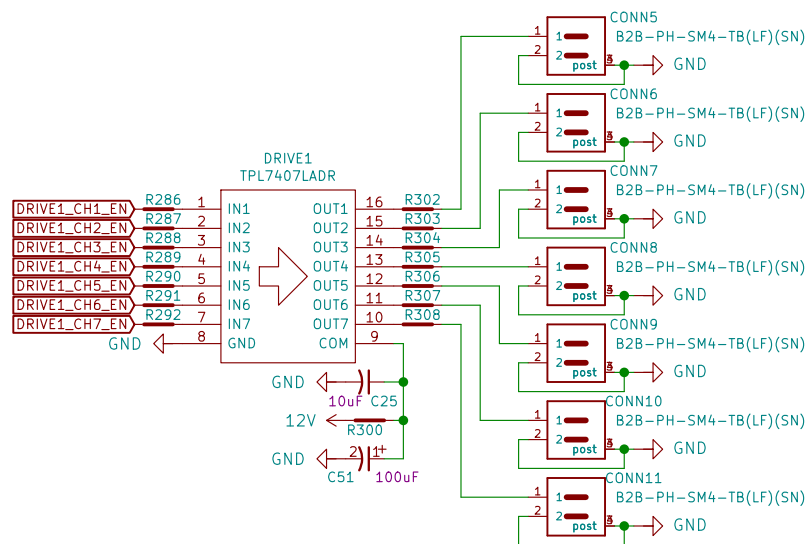
(for pressure sensors)



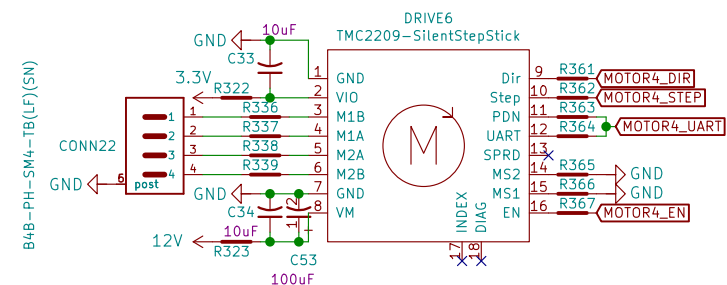
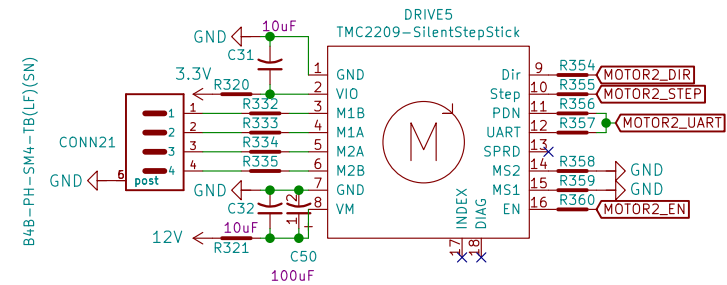
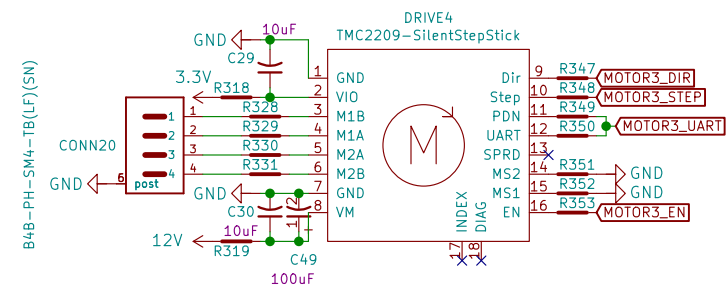
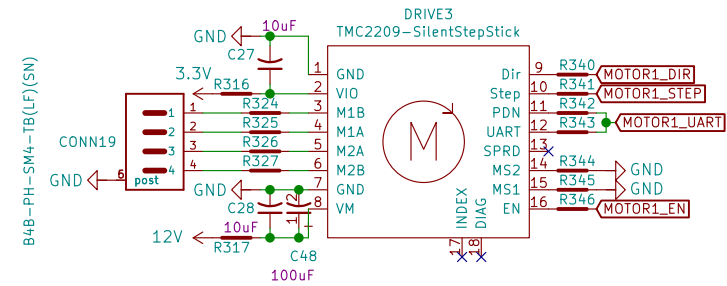
(pull-up resistors)



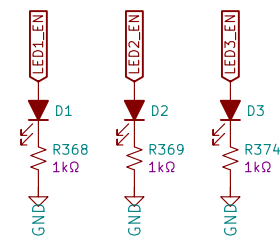
Solenoid Drivers



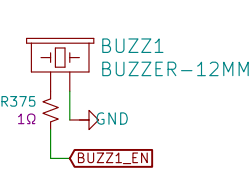
Motor Drivers



Indicators



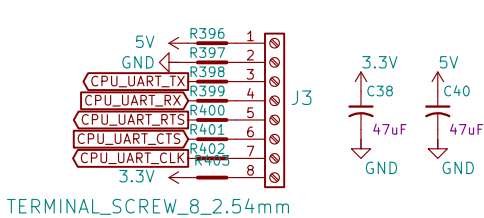
Alarms



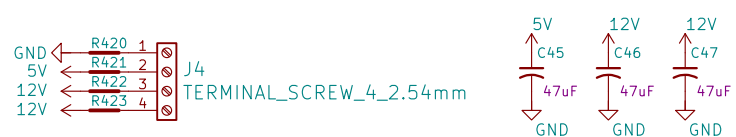
Logo

LOGO

MCU to CPU



MCU to Monitor & Fan

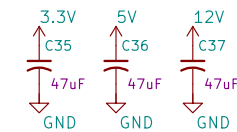


Power Supply

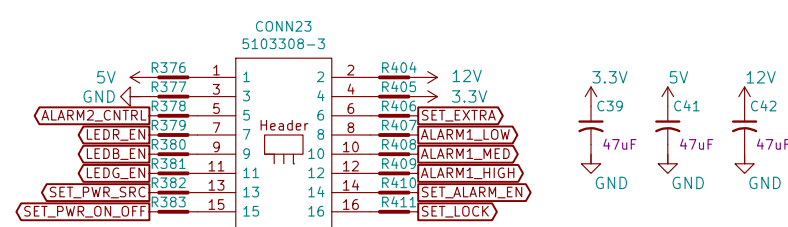
(supply line access)



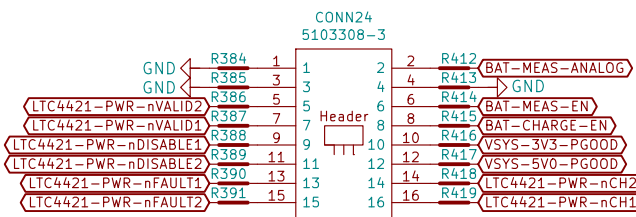
(bypass capacitors)



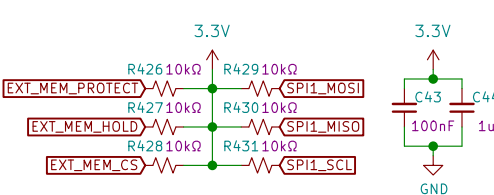
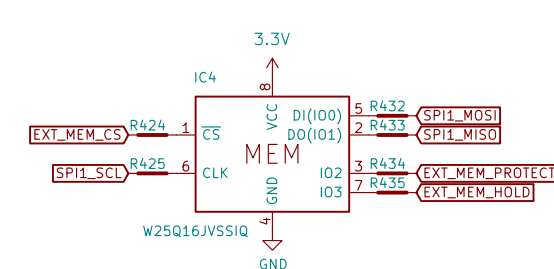
MCU to Interface Board



MCU to Power Board



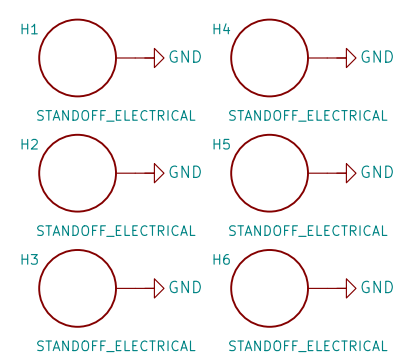
Memory



Dials & Buttons

(moved to interface board)

Standoffs



MCU General Purpose I/O Pins

