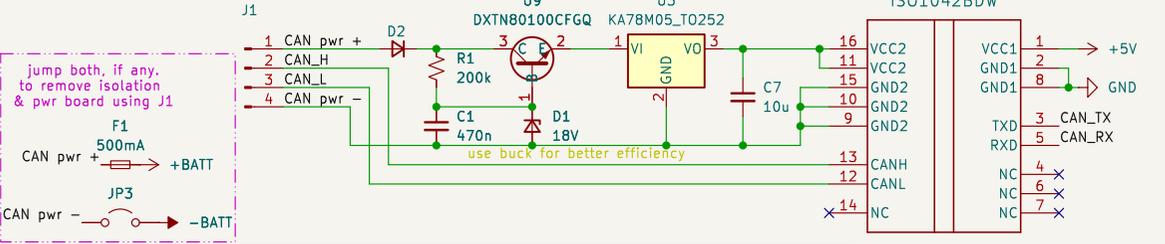


CAN bus interface

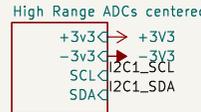
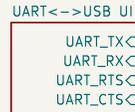
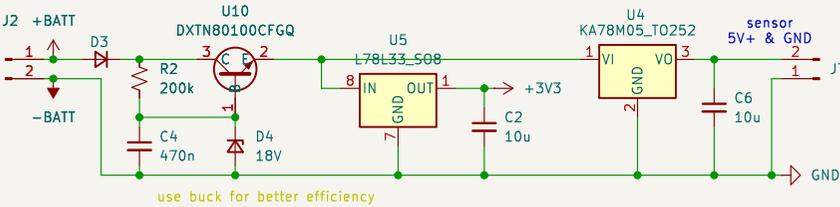
- 1500Vdc isolation from board
- (8,90)Vdc operating (connector limited 94dV)
- +/-94Vdc tolerant (connector limited 94dV)
- 5V CAN signals

- can optionally power board, see solder jumpers

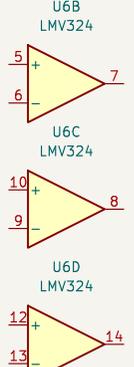
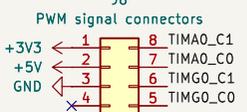
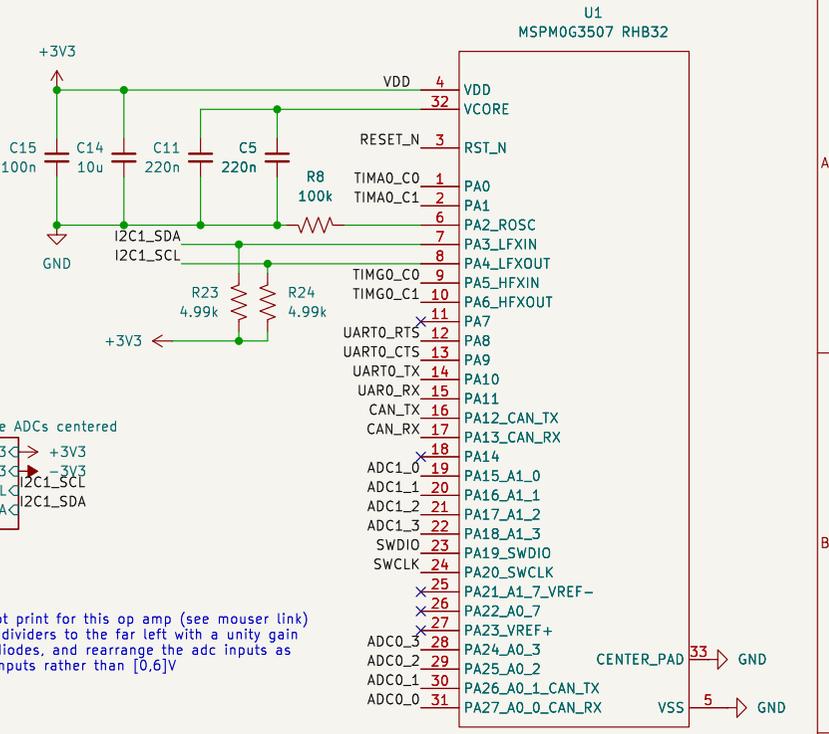
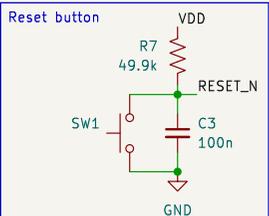
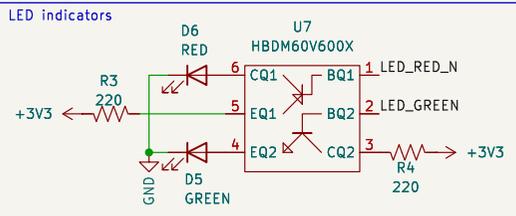
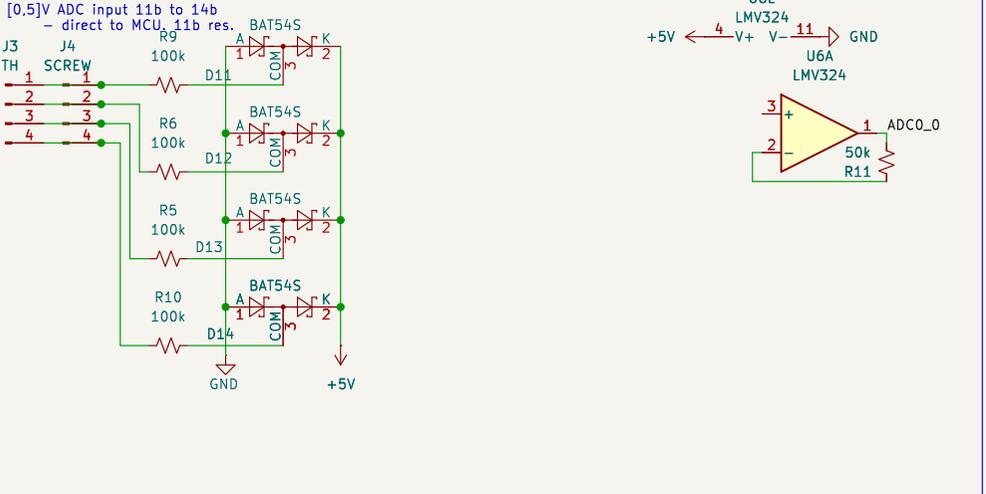


PWR

- (8,90)Vdc operating (connector limited 94dV)
- +/-94Vdc tolerant (connector limited 94dV)



TODO, find the correct foot print for this op amp (see mouser link) and replace the voltage dividers to the far left with a unity gain buffer, keep the clamp diodes, and rearrange the adc inputs as [0,5]V inputs rather than [0,6]V



TODO: this board needs 1 h bridge to drive the DC fans, either copy the one from the linked repo, make your own, or find one elsewhere. its ~3 a 12V to 24V motors, up to 120W each, ask george about heat sinks if needed. use the timers attached to J8, either all 4 or just 2; C1 and C0 are different compare values on the same timer

<https://github.com/gregclacker/FourWheelSteering/tree/sp>

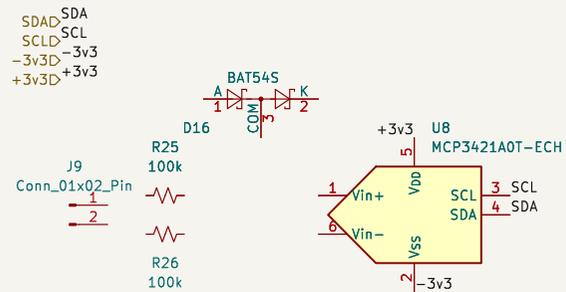
MCU side ADC's are used. 12b precision
UTA Racing. FSAE

Sheet: /
File: LV Sensor.kicad_sch

Title: CAN interfaced Sensor

Size: A4
KiCad E.D.A. 9.0.0

Date:
Rev: 1
Id: 1/3



TODO: set up 8 of these dogs (see datasheet about model number to I2C addr correlation).
 - 4 for +-20V
 - 1 for +-50V
 - 3 for +-5V

Vin+ and Vin- are what ever the ADC can handle

Sheet: /High Range ADCs centered/
 File: High Range ADCs centered.kicad_sch

Title:

Size: A4

Date:

Rev:

KiCad E.D.A. 9.0.0

Id: 2/3

UART_RXD UART_RX
UART_TXD UART_TX
UART_CTSD UART_CTS
UART_RTSD UART_RTS

TODO: find a IC that does the translation.
isolate the usb connection somehow to >100Vdc



Sheet: /UART<->USB UI/	
File: uart usb UI ftx based.kicad_sch	
Title:	
Size: A4	Date:
KiCad E.D.A. 9.0.0	Rev: 3/3