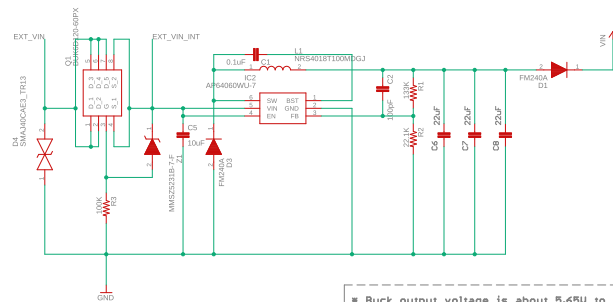
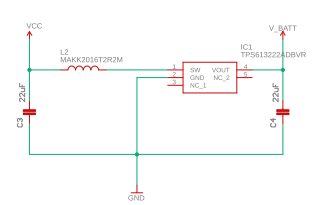


6V to 36V Buck



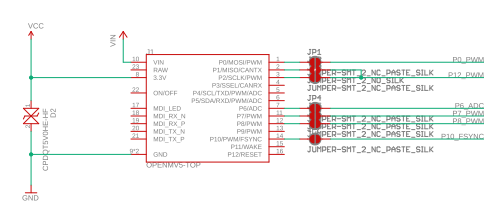
■ Buck output voltage is about 5.65V to be 5V after the diode forward voltage drop.

3.3V to 5V Boost

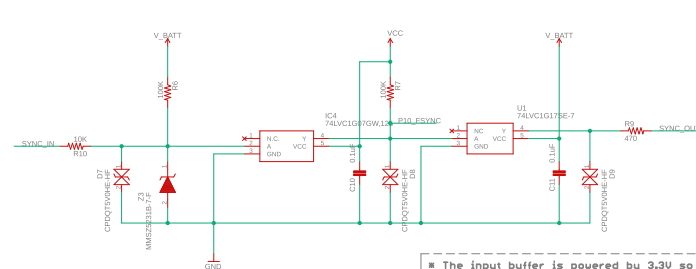


■ 3.3V is used to create the 5V rail so it can be turned off in low power mode.

Shield Headers



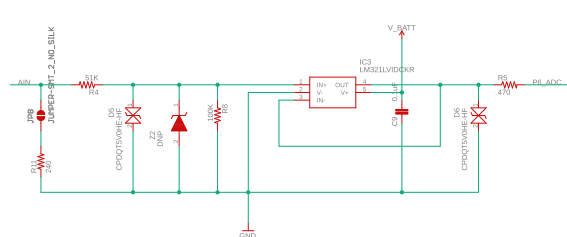
FSYNC Input and Output



■ The input buffer is open drain so that SYNCIN is DR'ed with multiple shields attached.

■ The input buffer is powered by 3.3V so that it can accept 3.3V inputs.

ADC Input

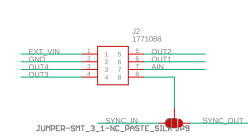


■ The shunt resistor when connected allows the ADC circuit to read 4-28mA sensors.

■ The front end scales a 0-5V signal down to 0-3.3V. Reverse/Over-Voltage is clamped.

■ The opamp is powered by 5V so that it can pass 0-3.3V signals (0-5V on input).

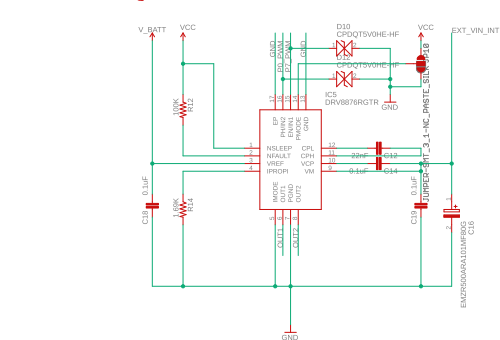
Terminal



Mechanical

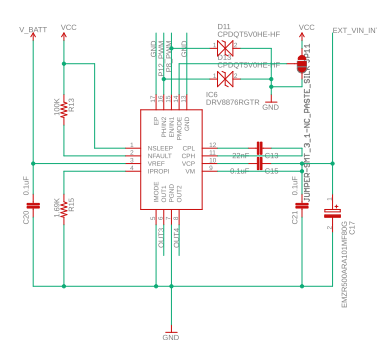
○ ○ ○ ○ ○ ○ ○ ○ ○ ○

H-Bridge Drivers



■ PHODE States:
 ---Low--- (Speed/Direction Mode)
 P7 = PHH
 P7=0% -> Out1,Out2=L,L (motor break)
 P7=1%-100% (below)
 P8 = Direction
 P8=L -> Out1,Out2=L,H (motor reverse)
 P8=H -> Out1,Out2=H,L (motor forward)
 ---High--- (H-Bridge Mode - Can be PHMed)
 P8,P8=L,L -> Out1,Out2=H,L (motor coast)
 P8,P8=L,H -> Out1,Out2=H,L (motor forward)
 P8,P8=H,L -> Out1,Out2=L,H (motor reverse)
 P8,P8=H,H -> Out1,Out2=L,L (motor break)
 ---Float--- (Independent Mode - Can be PHMed)
 P7=L -> Out1=L
 P7=H -> Out1=H
 P8=L -> Out2=L
 P8=H -> Out2=H

 The current is limited to 3A total for the chip.



■ PHODE States:
 ---Low--- (Speed/Direction Mode)
 P8 = PHH
 P8=0% -> Out3,Out4=L,L (motor break)
 P8=1%-100% (below)
 P12 = Direction
 P12=L -> Out3,Out4=L,H (motor reverse)
 P12=H -> Out3,Out4=H,L (motor forward)
 ---High--- (H-Bridge Mode - Can be PHMed)
 P12,P8=L,L -> Out3,Out4=H,L (motor coast)
 P12,P8=L,H -> Out3,Out4=H,L (motor forward)
 P12,P8=H,L -> Out3,Out4=L,H (motor reverse)
 P12,P8=H,H -> Out3,Out4=L,L (motor break)
 ---Float--- (Independent Mode - Can be PHMed)
 P8=L -> Out3=L
 P8=H -> Out3=H
 P12=L -> Out4=L
 P12=H -> Out4=H

 The current is limited to 3A total for the chip.

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