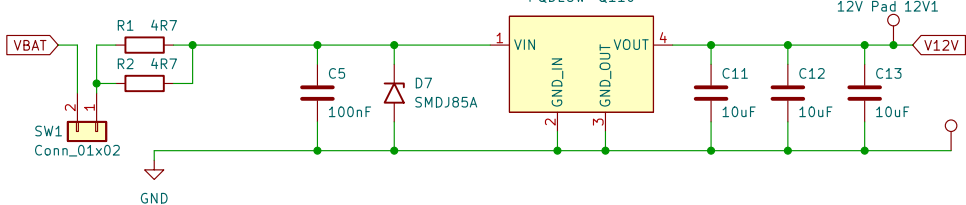
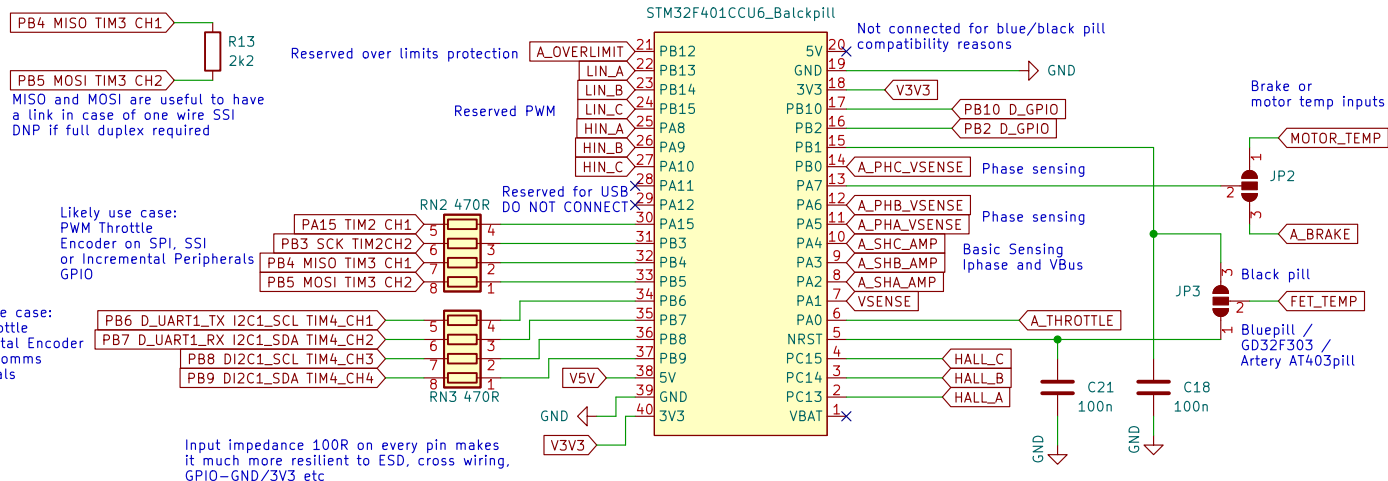
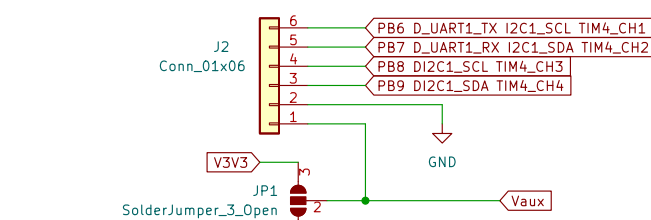
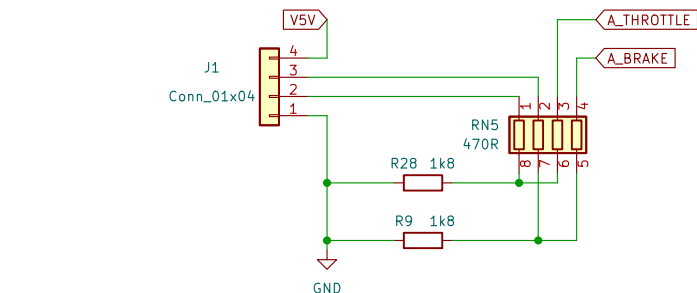
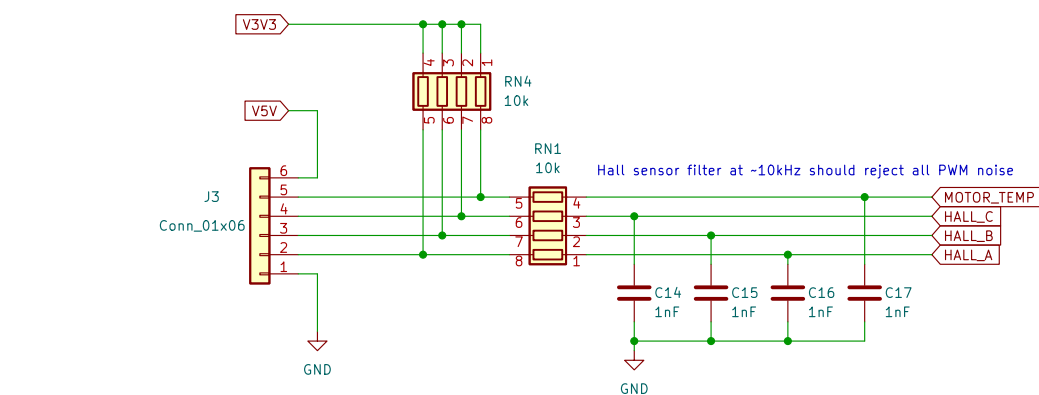
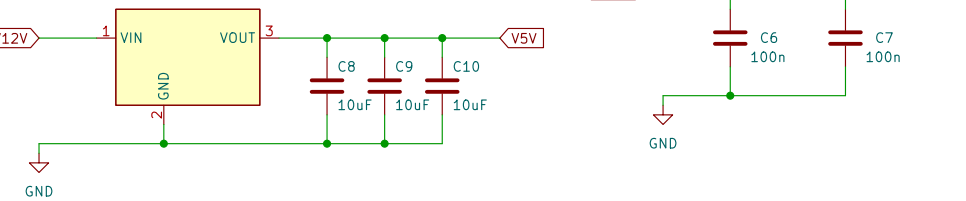


Footprint for CUI isolated module for up to 160V operation.
Only allows 500mA.
HiLink HLK-10011012
CUI PQDE6W-Q110
Or anything that exceeds your battery voltage and gives 12V out



DCDC modules widely available as drop
in replacement for TO-220 regulators

TO220_replacement_module



The "Pill" is chosen as a generic STM32 module that should allow easy compatibility with multiple firmwares:
VESC with GD32F303CG pill (Netzplüschler mod. note CG)
EBICS with F103 Bluepill (Stancecoke)
SmartESC V3 (Casainho)
SmartESC V2 (Netzplüschler/Koxox3)
MESC with F401 Blackpill (MxiemmingFOC)
STM32 Motor Control Workbench (F401, F103)
Maybe others?
Pills are simply boards with an MCU, a regulator, USB and Boot0 button.

PB4 MISO TIM3 CH1
PB5 MOSI TIM3 CH2
MISO and MOSI are useful to have a link in case of one wire SSI DNP if full duplex required

Likely use case:
PWM Throttle
Encoder on SPI, SSI
or Incremental Peripherals
GPIO

Likely use case:
PWM Throttle
Incremental Encoder
Screen Comms
Peripherals
GPIO

Input impedance 100R on every pin makes it much more resilient to ESD, cross wiring, GPIO-GND/3V3 etc

