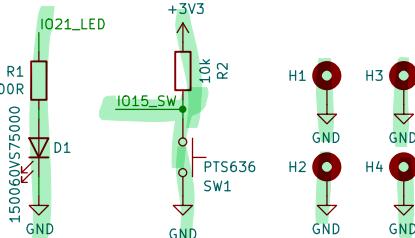
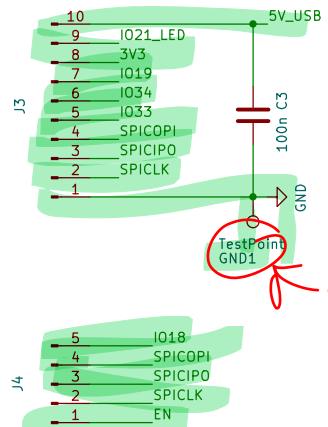
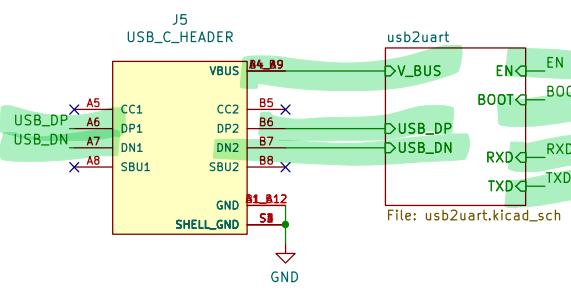
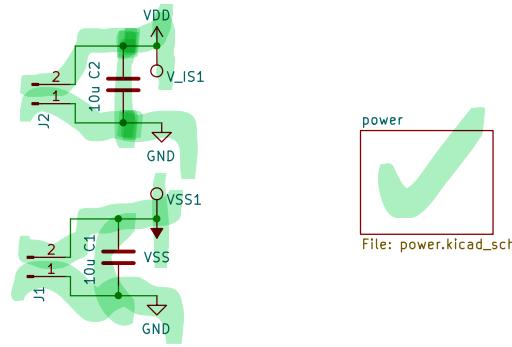
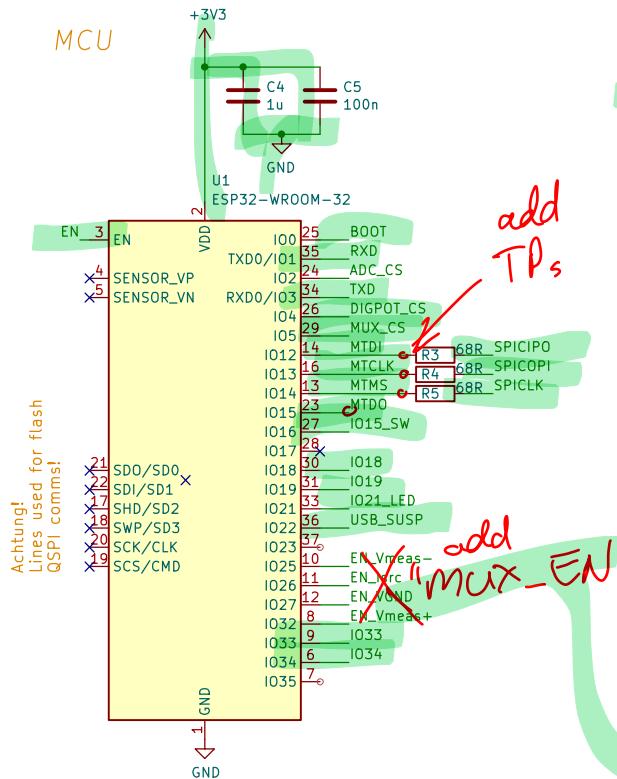


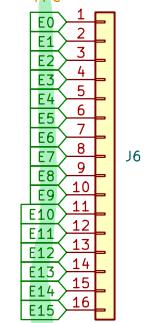
TO BATTS BETWEEN (+/-) 5-20 V



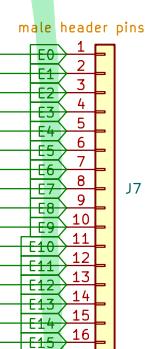
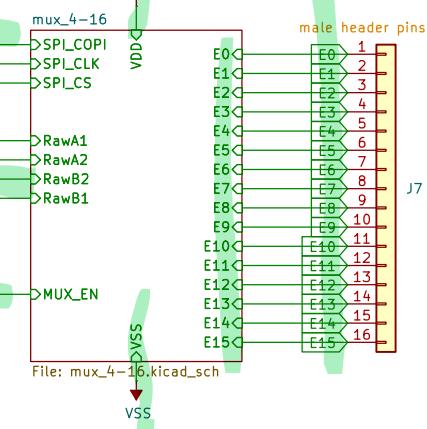
MCU



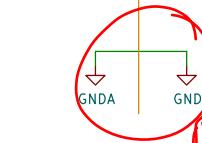
electrodes conn:



MUX EIT Electrodes



<NEXT REV (v1.3) changes doc link>



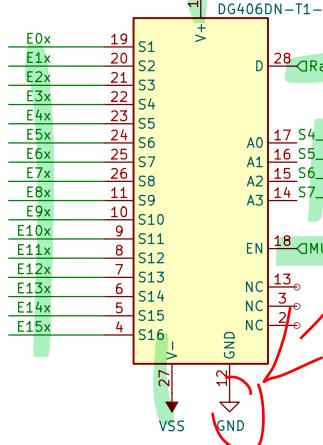
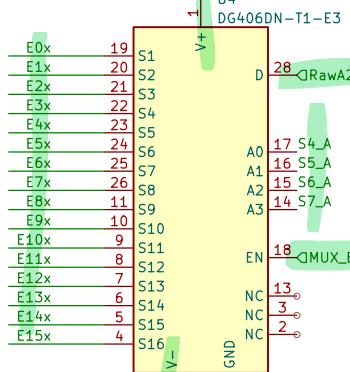
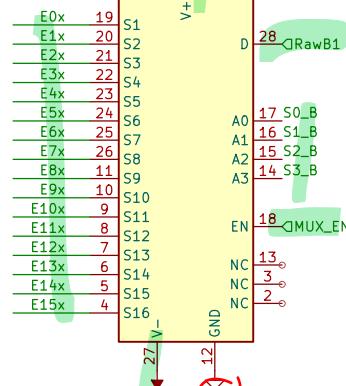
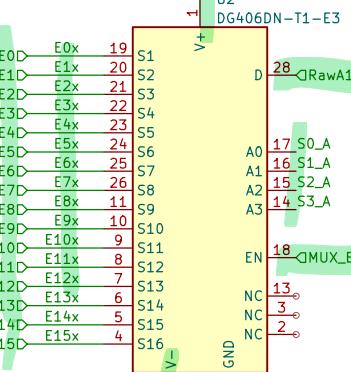
filter between  
GNDs? or Q2 resistor

'mux\_4-16' description:  
This board is designed to de/multiplex 16:4 signals  
using low cost hardware for use within an ERT  
application.

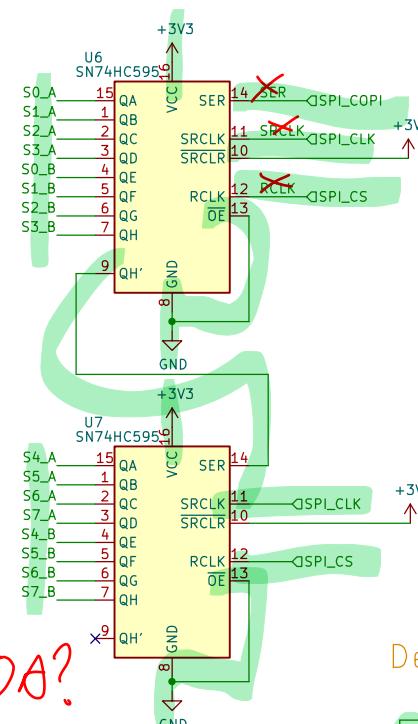
#### Functional requirements:

- Switch analog voltages 0 – 20 V
- Be controlled via 3V3 SPI
- Easily plugged into an SMU current source and voltage measurement ports
- Appropriate MUX
  - Low on-resistance < 200 Ohm
  - Low leakage current < 1 uA
  - Low charge injection ??? pC
  - Low pin crosstalk (crosstalk between analogue signal and select line???)
  - Max continuous current ~100mA
  - Minimise noise entry points... PCB routing considerations.

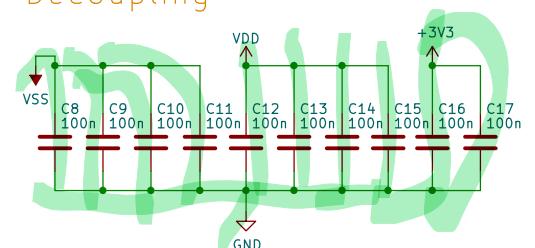
## MUXs



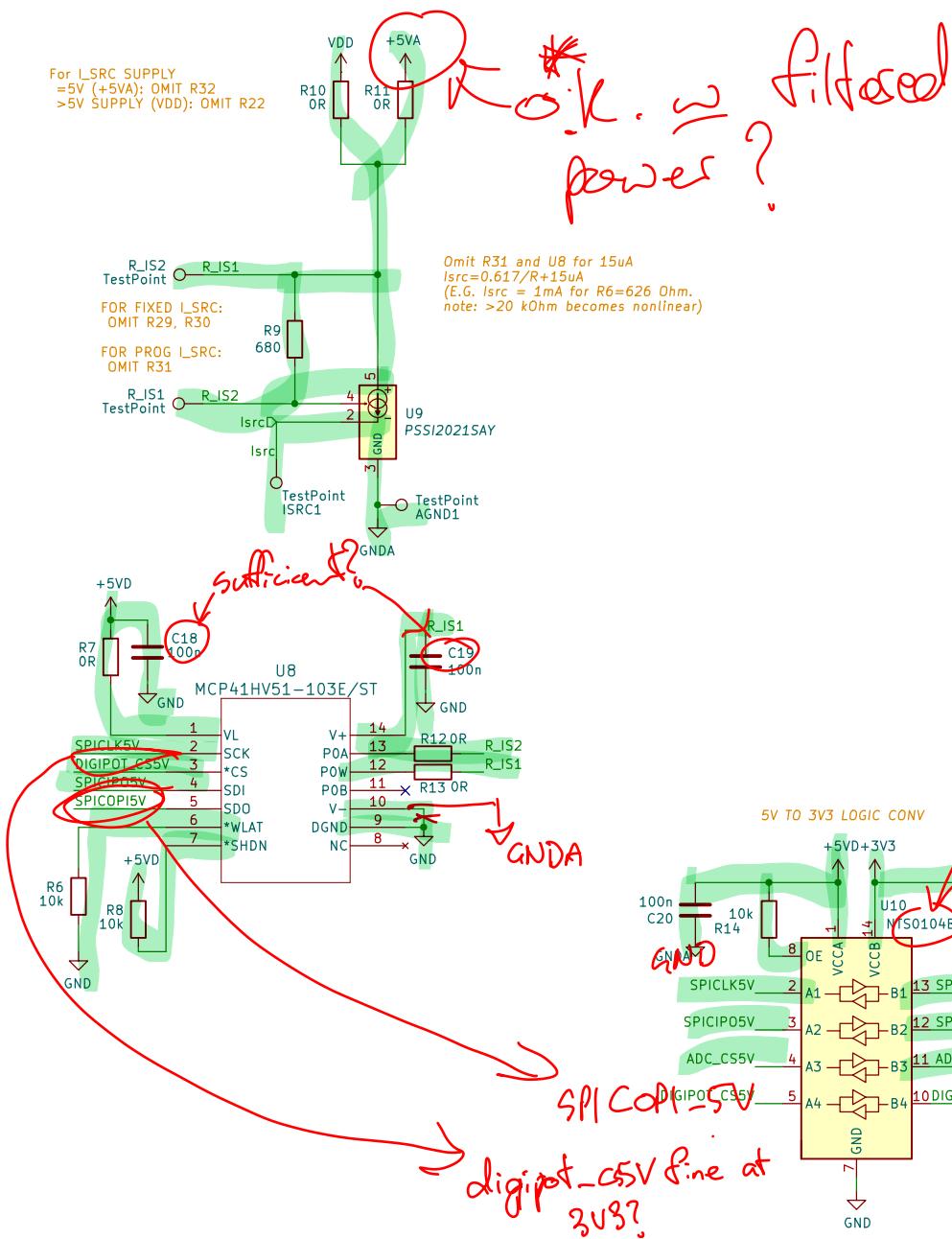
## MUX select



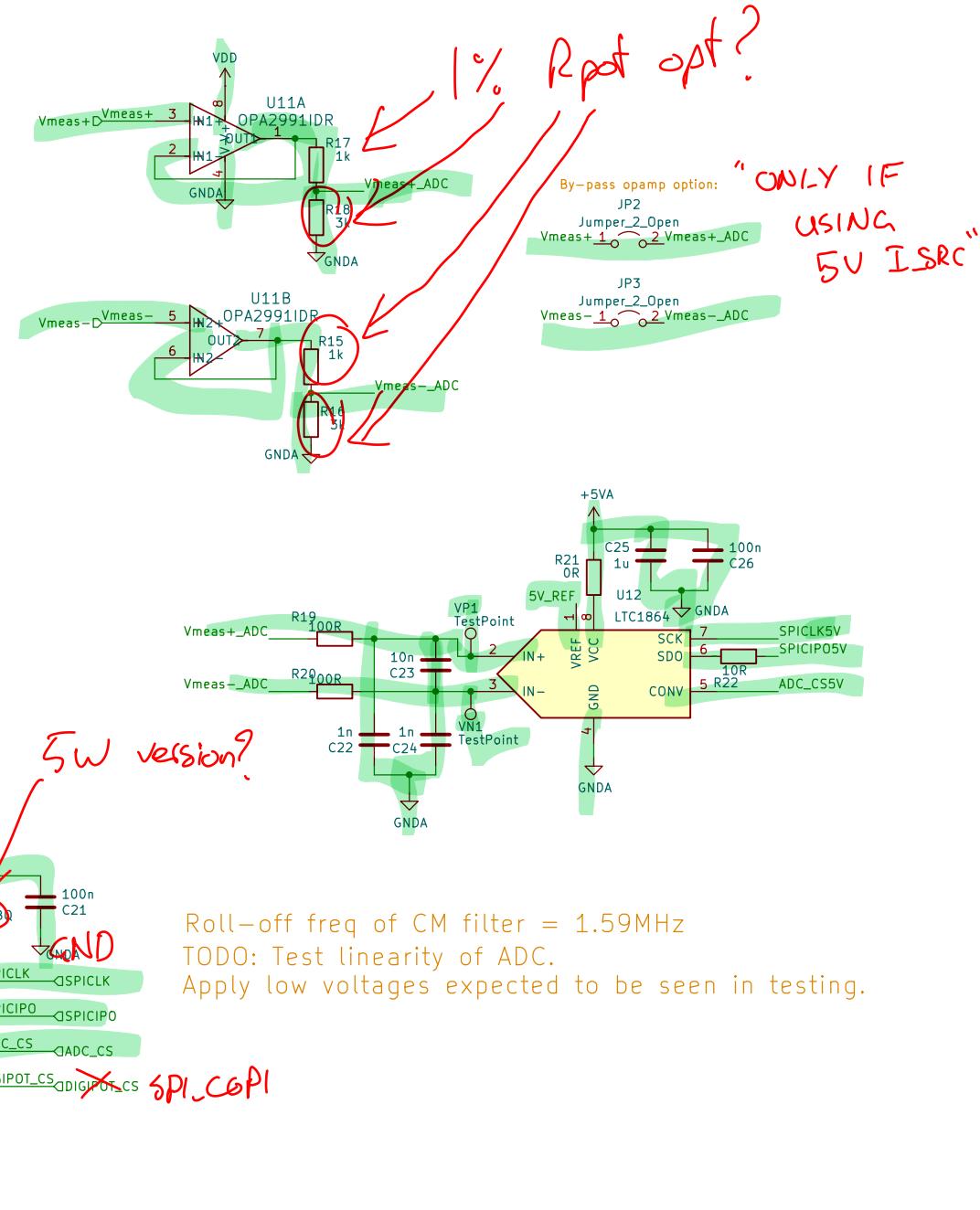
## Decoupling



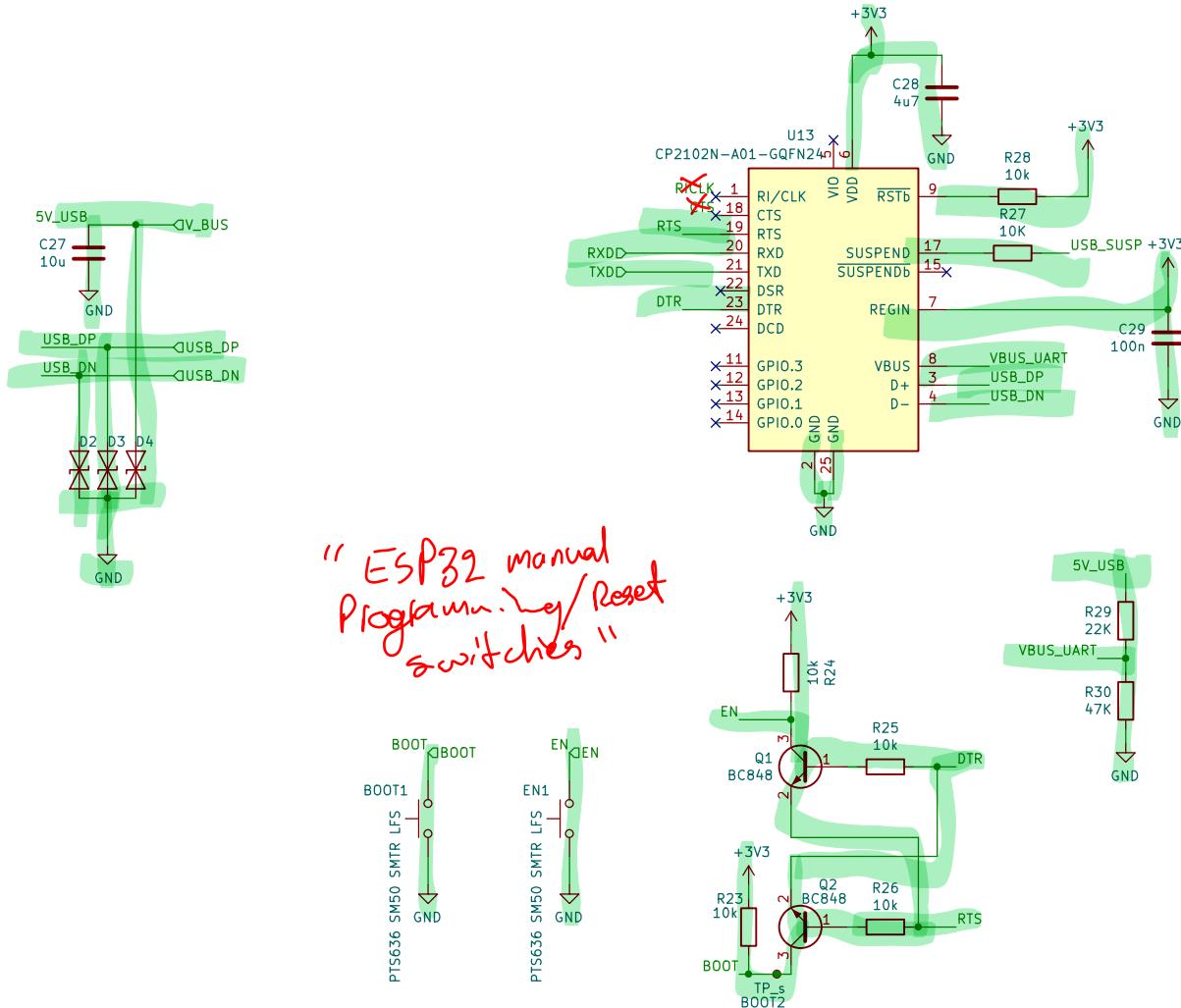
Signal Drive – Programmable current source



## Signal Read – Conditioning and ADC



## USB-UART Converter for Programming



## Power

