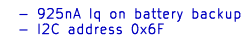
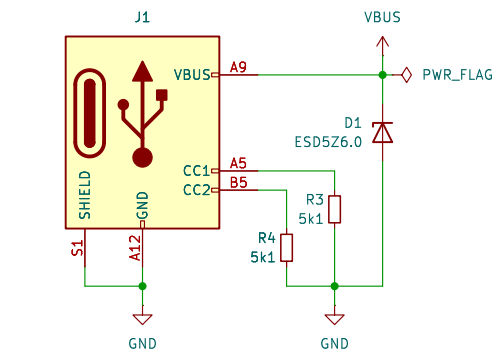


- I2C pullups plus very weak pull downs
- Prevent I2C engine errors when floating during sleep



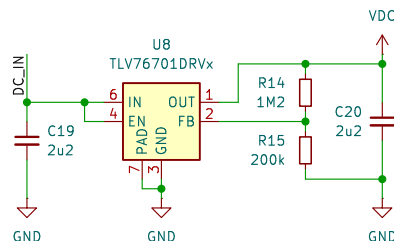
## Connectors

- USB-C charger, JST PH for battery and solar
- Battery cable compatible with Adafruit 1S lipo batteries
- DC\_IN optimized for 6V, 1.5W solar panel
- DC\_IN can be used with any DC power source up to 16V



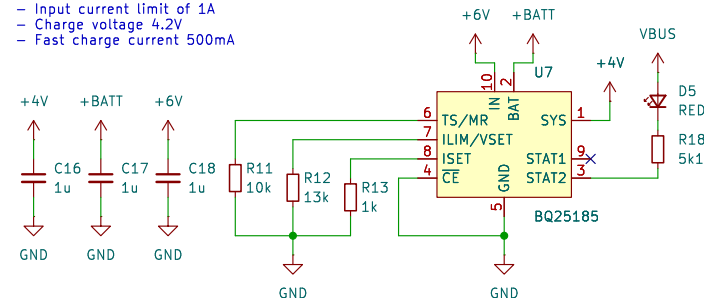
## Linear Regulator

- VDC set point to 5.6V
- VDC tracks DC\_IN when DC\_IN < 5.6 + V\_DO
- V\_DO is 0.4V @ 500mA
- VDC 2.5V - 16V
- Iout up to 1A
- Iq is 50 uA (1.5uA in shutdown)



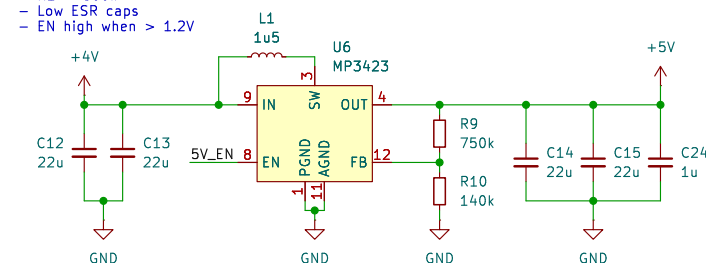
## Battery Charger

- Input current limit of 1A
- Charge voltage 4.2V
- Fast charge current 500mA



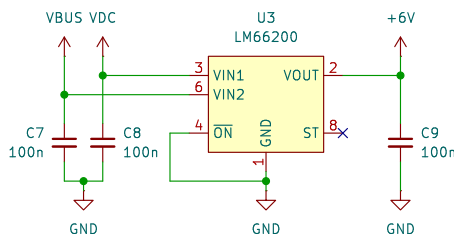
## 5V Boost Converter

- Output 5.13V, 3A
- $0.807 \times (1 + R1/R2)$
- $R1 > 600k$
- Low ESR caps
- EN high when > 1.2V



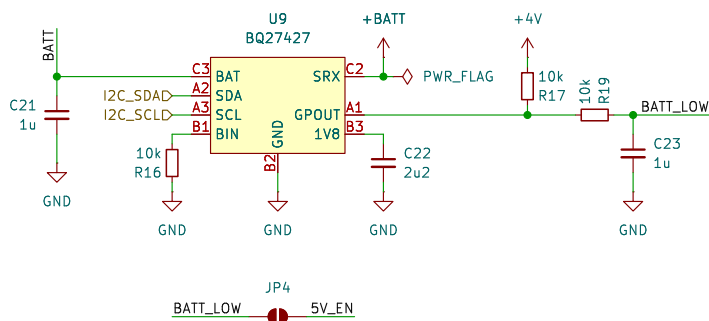
## Power Multiplexer

- Input 1.6V - 5.5V
- Up to 2.5A per channel
- 1.32uA Iq



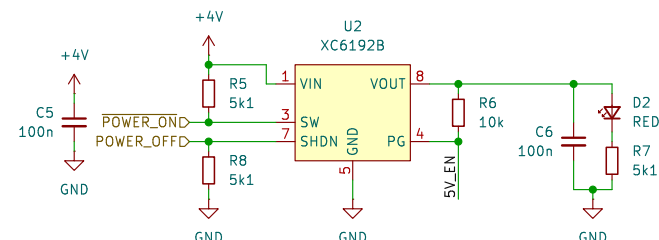
## Battery Fuel Gauge

- Integrated sense resistor
- 50uA in normal mode, 9uA in sleep mode
- Auto sleep mode when low current (< 10mA)
- I2C address 0x55
- Lowpass filter on GPOUT to prevent disabling the system on SOC updates (1-ms pulse low)
- RC time constant of 10ms



## Load Switch

- Iq 10nA in shutdown
- POWER\_ON pull low to wake from sleep
- Pulse SHDN high to enter sleep mode



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