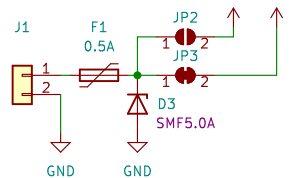
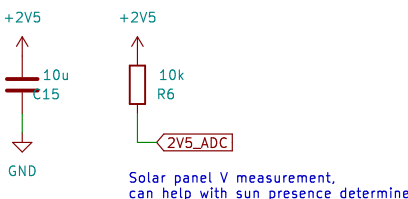


2V Panel > MPPT Boost 5V > 4V2 Charger > LiFePO4 Cell > Buck/Boost 3V3

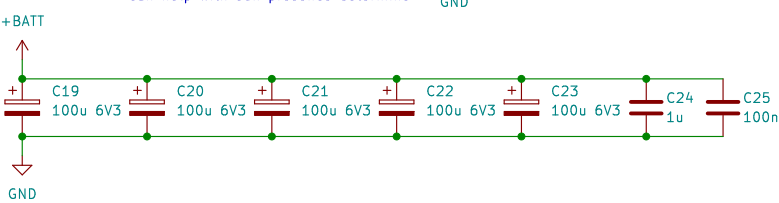
JP2 Solar Panel IN 2V 160+160mA
Vmp=2V, Voc=2.3V,
Imp=320mA, Isc=400mA
OR
JP2: 5V DC Power supply



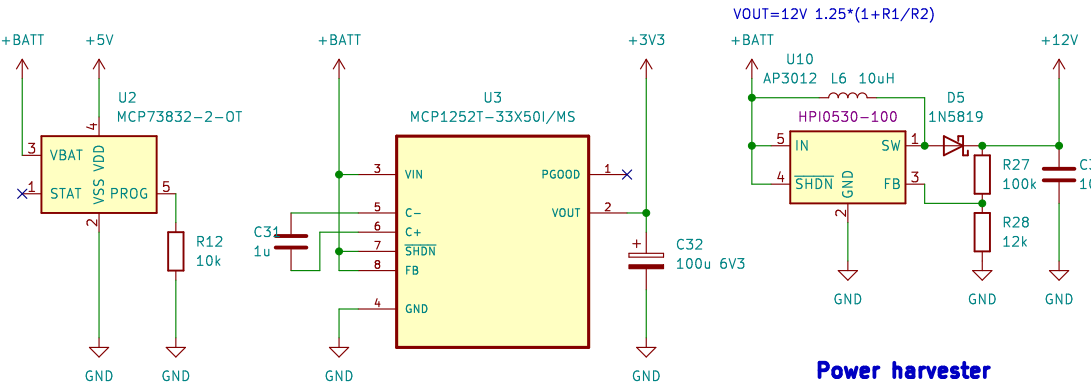
Polyfuse protects from:
1. Reverse polarity (with TVS)
2. Short circuit



Solar panel V measurement, can help with sun presence determine

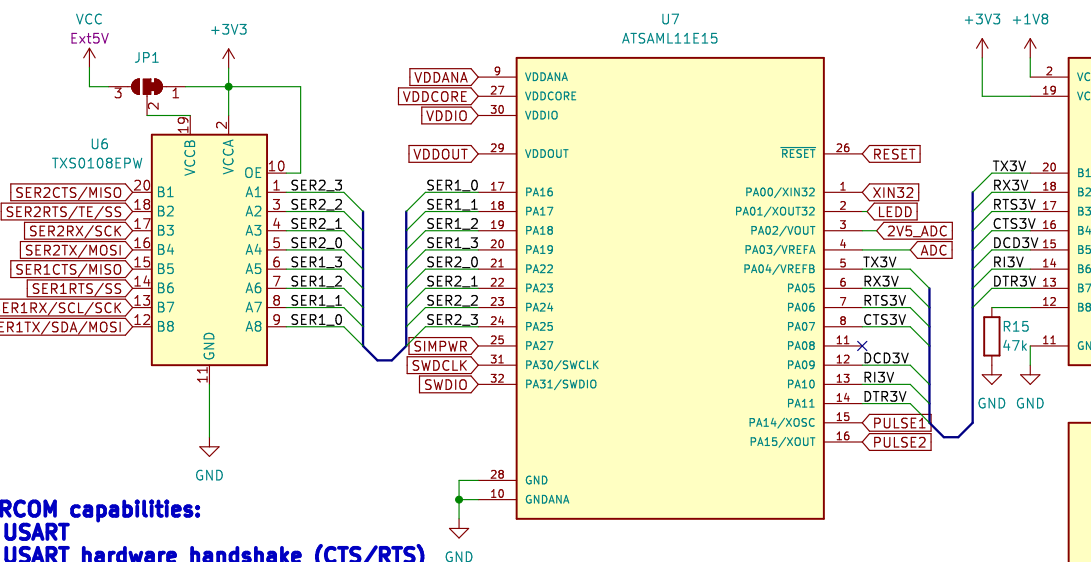


Polyfuse protects from:
1. BAT reverse polarity (with TVS)
2. Overcurrent, SIM7070 up to 0.5A
VBAT can be measured by SIM7070



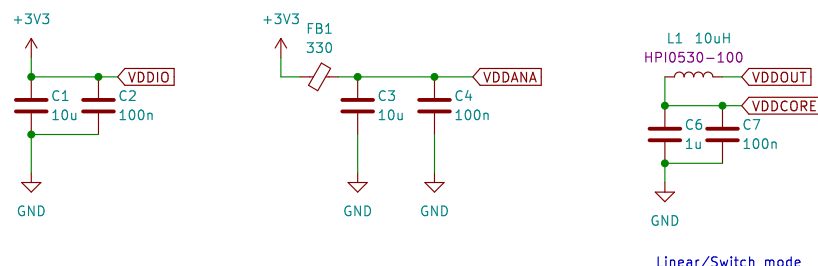
Power harvester
2V Solar panel OR 5V DC

10k for 100mA fast charge, can be adjusted

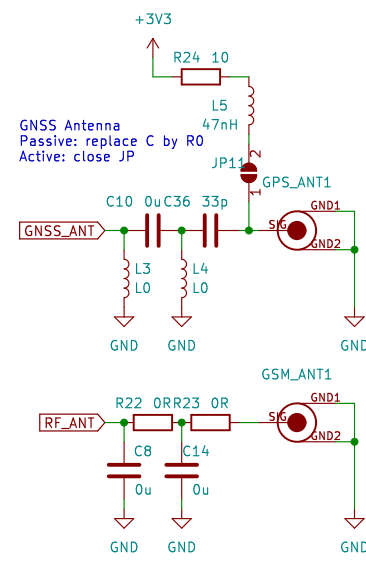
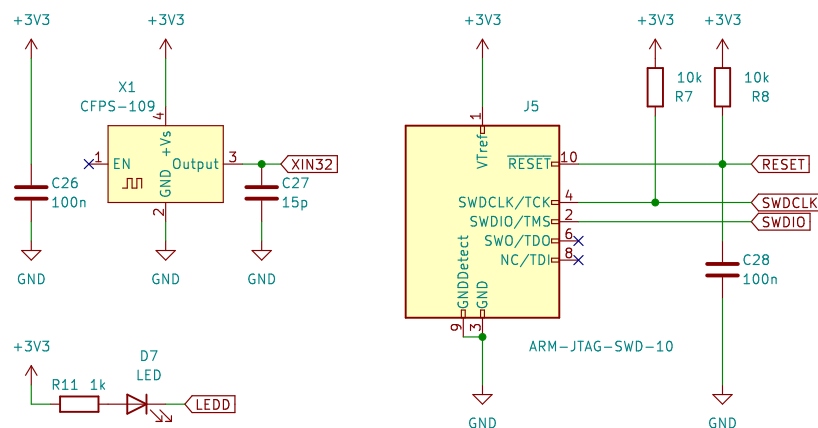


SERCOM capabilities:

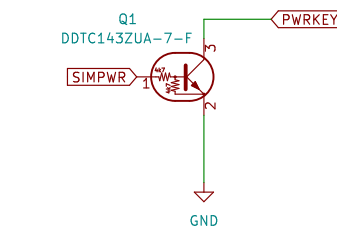
1. USART
2. USART hardware handshake (CTS/RTS)
3. RS485 (3V3) (only SERCOM2)
4. LIN client (only SERCOM2)
5. I2C host (only SERCOM0)
6. I2C client (only SERCOM0)
7. SPI host
8. SPI client



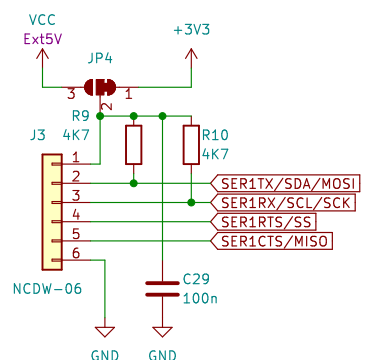
MCU Power



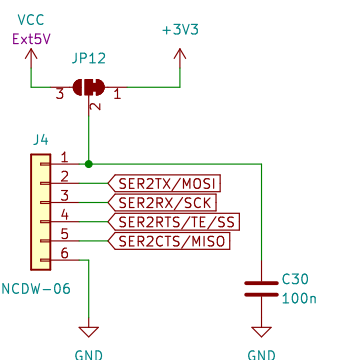
RF



ADC Sensor

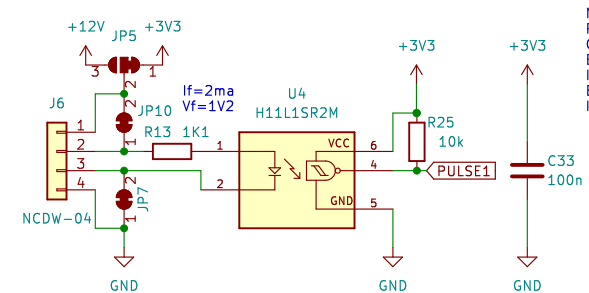


Sensor 1 serial

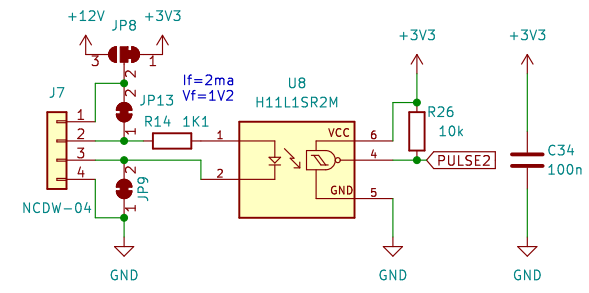


Sensor 2 serial

Inverting optocoupler



NPN input: (1+2), use (3),(4)
PNP input: (3+4), use (1),(2)
Gercon: (1+2), use (3),(4)
External power: adjust R
Internal power
External GND
Internal GND



PULSE Sensors, optocoupler galvanic isolation

Solar power
apolisskiy

Sheet: /

File: nb-iot-saml11-sim7070-solar-platform.kicad_sch

Title: NB-IoT platform based on SAML11, SIM7070

Size: A3 Date: 2022-09-18

Rev: 1.0

KiCad E.D.A. kicad (6.0.7-1)

Id: 1/1