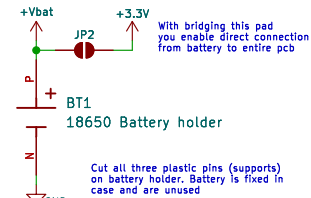


Battery

- 18650 cell - Lilon

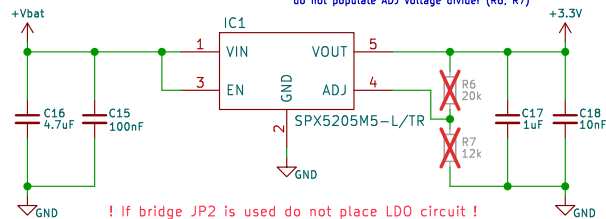


LDO: Battery >> 3.3V

- SPX5205M5-L/TR

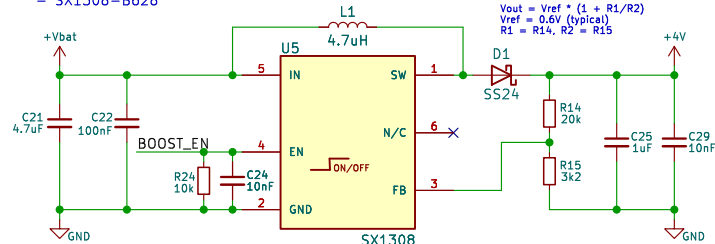
$$V_{out} = 1.235V * (1 + R1/R2)$$
$$220\Omega \approx R2 < 470\Omega \text{ (R2} > 10k\Omega \text{)}$$
$$R1 = R6, R2 = R7$$

If you use fixed output voltage version do not populate ADJ voltage divider (R6, R7)

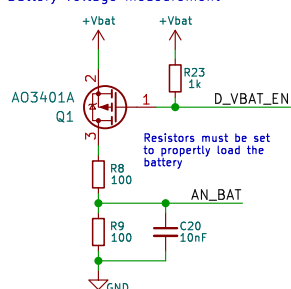


Step-up converter: Battery >> 4V

- SX1308-B628

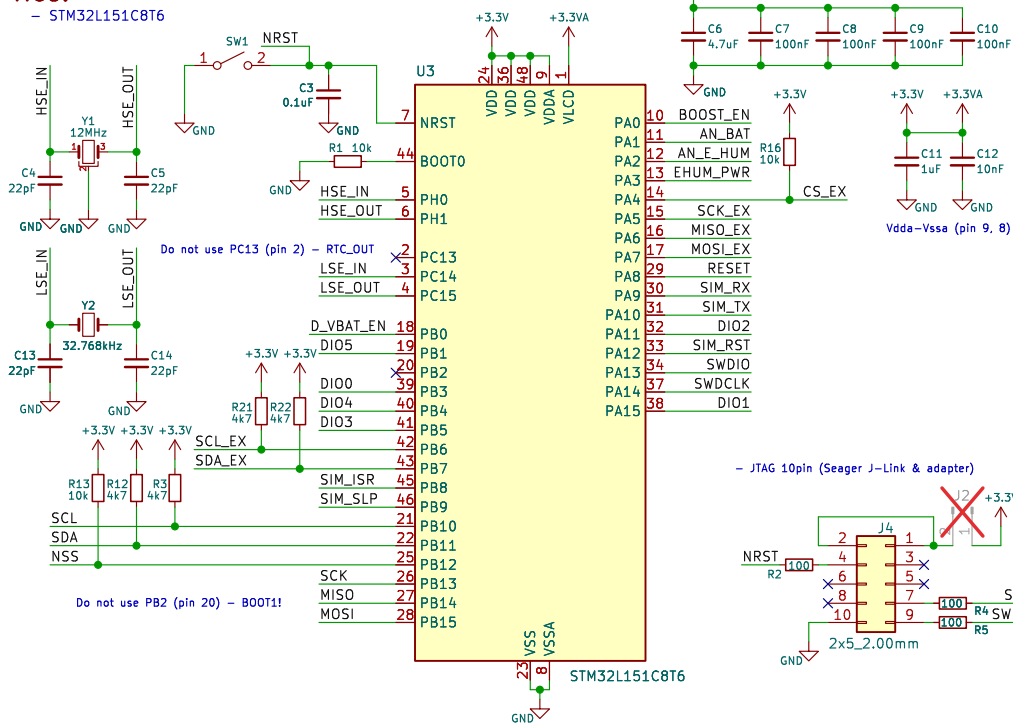


- Battery voltage measurement



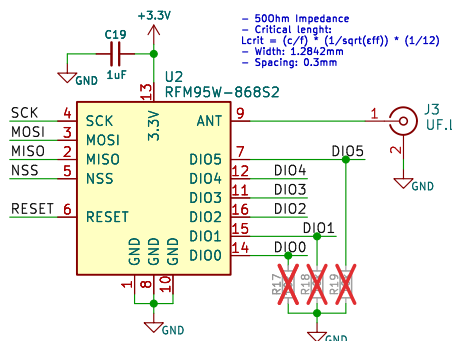
MCU:

- STM32L151C8T6



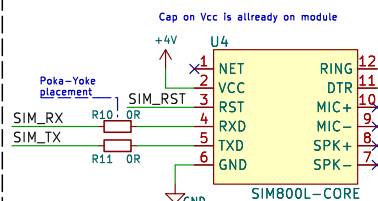
LoRa module

- *RFM95W / SX1276
- *: used (868MHz)
- PWR range: 1.8V-3.7V



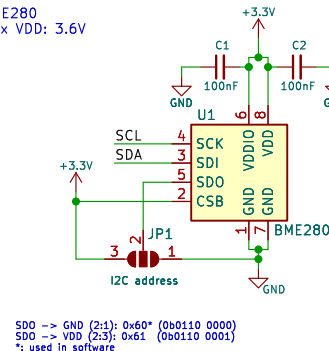
SIM module:

- SIM800L
- * optional

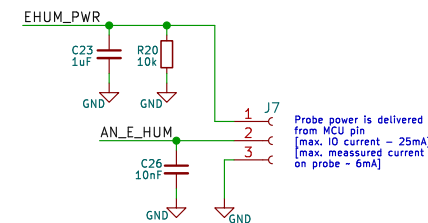


TEMP/HUM/PRESS:

- BME280
- Max VDD: 3.6V

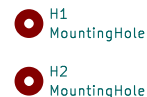


Ground HUM sensor:

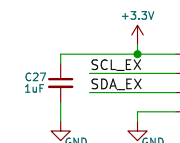


Mounting holes:

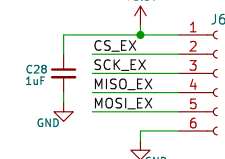
- 2.5mm



I2C expansion:



SPI expansion:



Tinta T.

Sheet: /

File: LoRa_Node.kicad_sch

Title: Greenhouse LoRa node (SIM)

Size: A4 Date: 2025-07-20

KiCad E.D.A. 9.0.1

Rev: 4.1

Id: 1/1