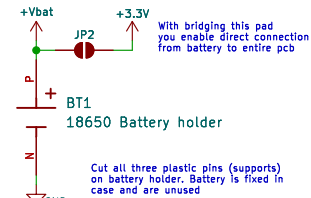


## Battery

- 18650 cell - Lilon

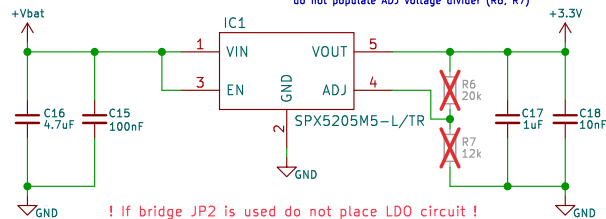


## LDO: Battery >> 3.3V

- SPX5205M5-L/TR

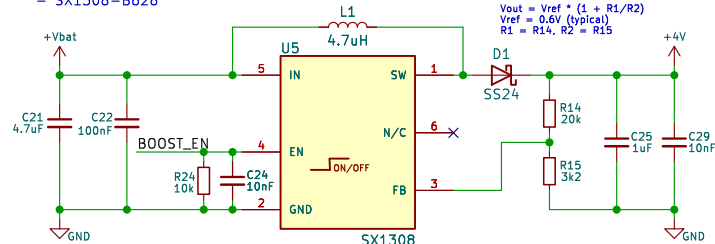
$$V_{out} = 1.235V \cdot (1 + R1/R2)$$
$$220\Omega \cdot R2 < 470\Omega \cdot (R2 > 10k\Omega)$$
$$R1 = R6, R2 = R7$$

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



## Step-up converter: Battery >> 4V

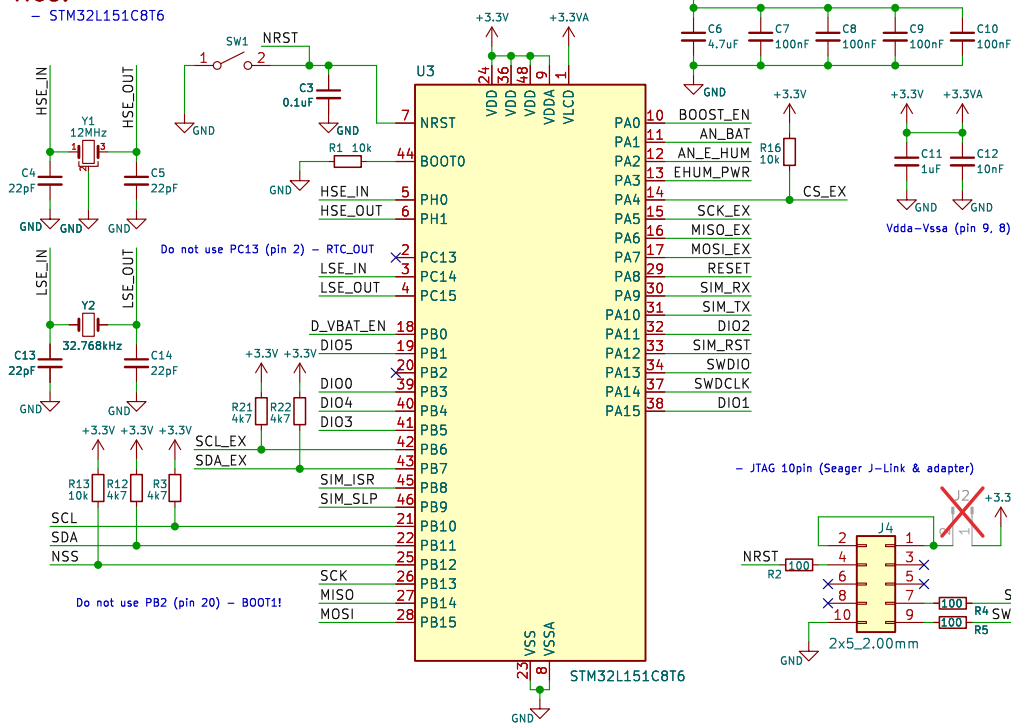
- SX1308-B628



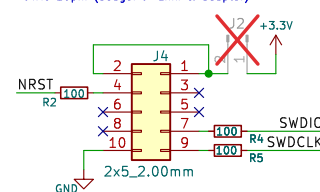
! Place only if you use SIM module instead of LoRa !

## MCU:

- STM32L151C8T6

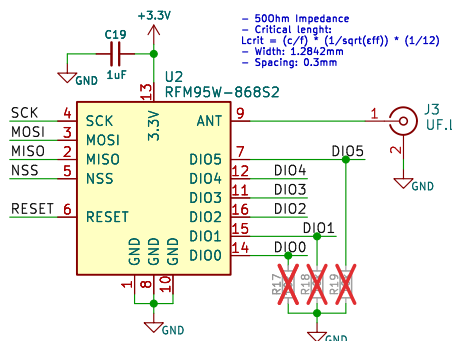


- JTAG 10pin (Seager J-Link & adapter)



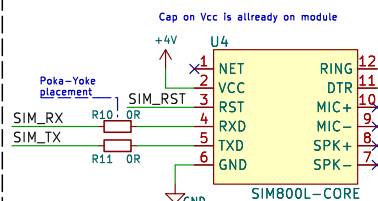
## LoRa module

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



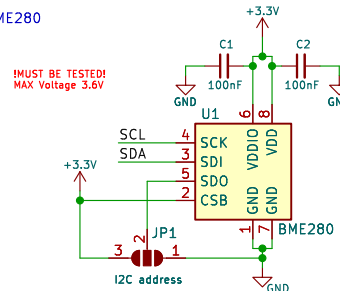
## SIM module:

- SIM800L
- \* optional



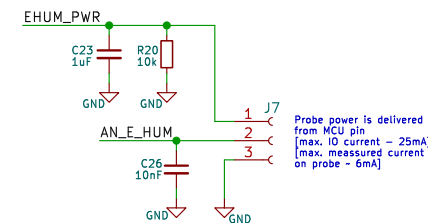
## TEMP/HUM/PRESS:

- BME280



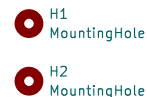
SDO -> GND (2:1): 0x60\* (0b0110 0000)  
SDO -> VDD (2:3): 0x61 (0b0110 0001)  
\*: used in software

## Ground HUM sensor:

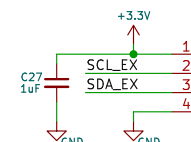


## Mounting holes:

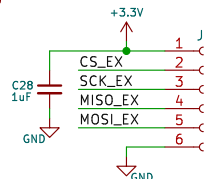
- 2.5mm



## 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