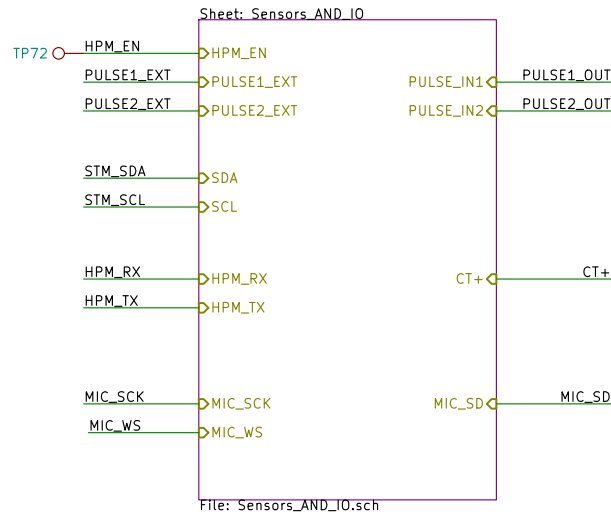


STM

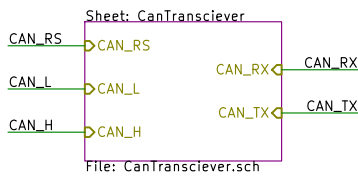


Sensors and IO



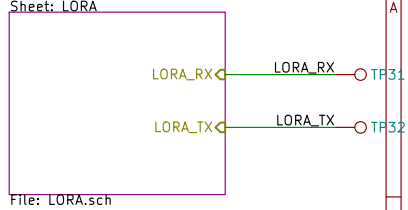
Communication

CAN Transciever

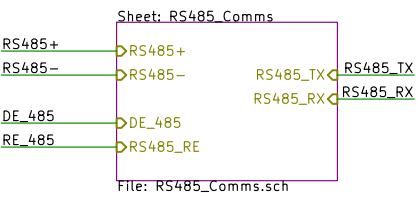


Note: Low power mode selected through RS

LORA

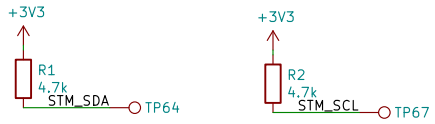


RS485 Transciever

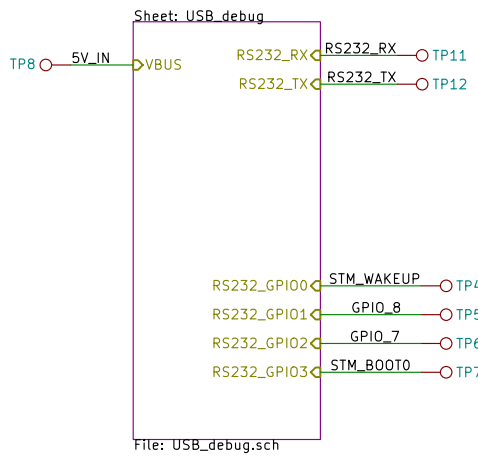


Note: Low power mode selected through DE along with RE

STM I2C Pullup



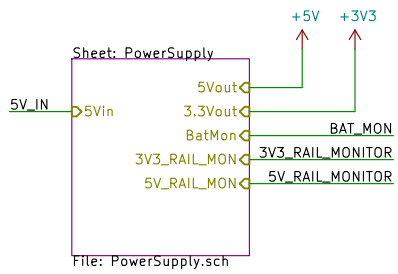
USB Debug



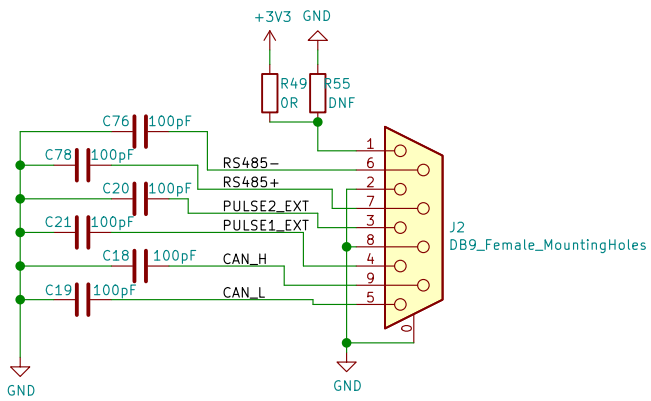
Easy access gnd pins for debug



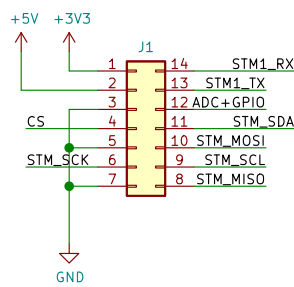
Power Supply and Battery



External Connector



Optional module

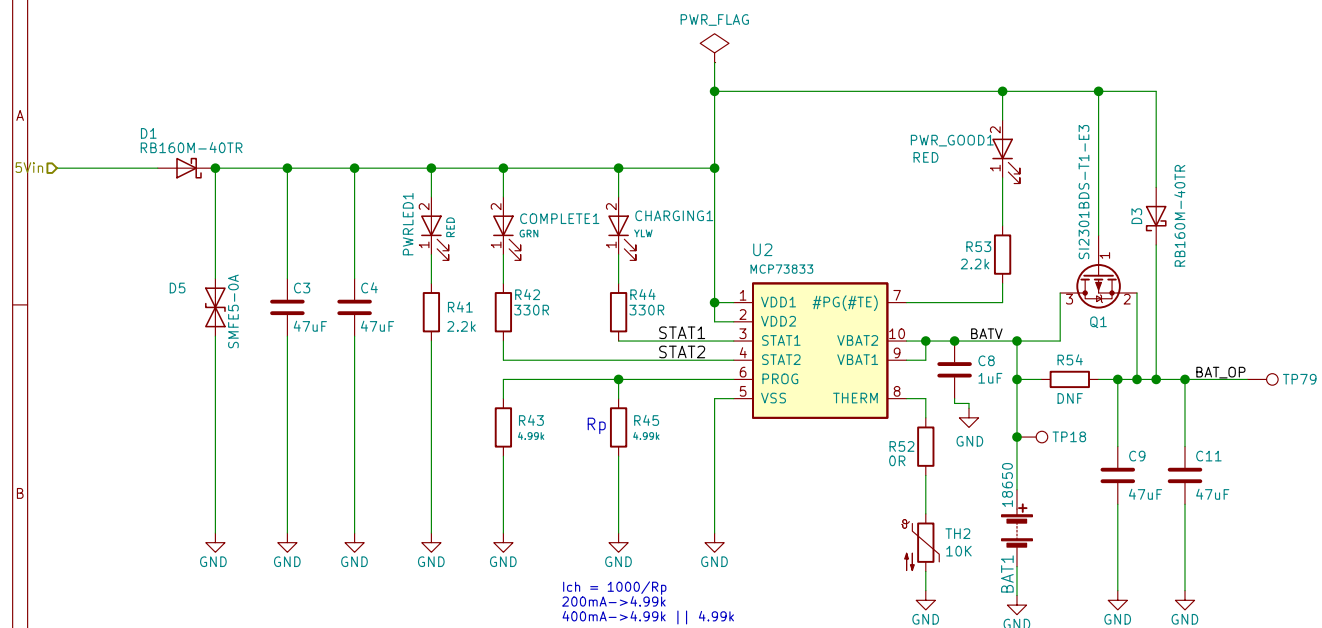


Fiducials

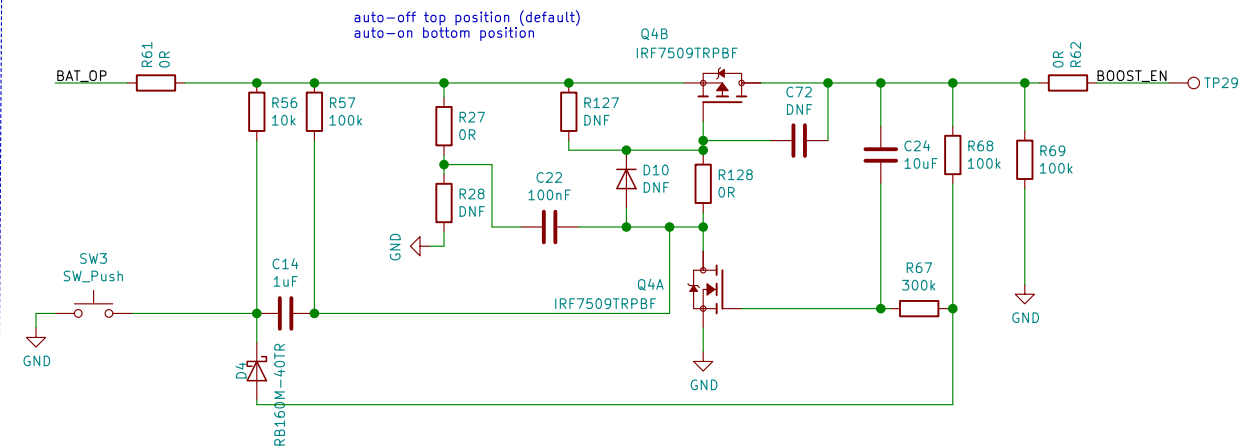


Part No: 304-010		
Devtank LTD		
Sheet: /		
File: OSM_env01.sch		
Title: Open Smart Monitor		
Size: A3	Date: 2021-09-29	Rev: B
KiCad E.D.A. kicad 5.1.5+dfsg1-2build2		Id: 1/9

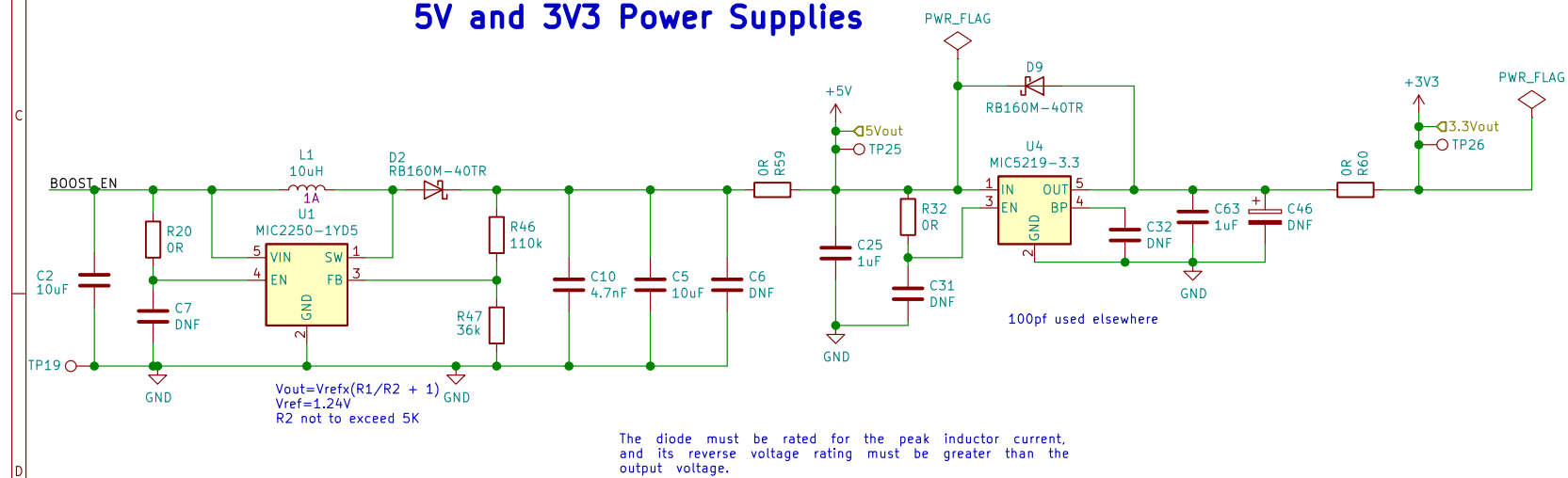
## Li\_Ion Battery Charge Controller



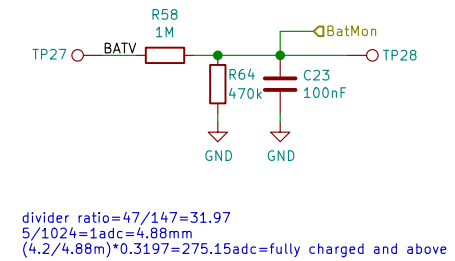
## Latched powerbutton Circuit



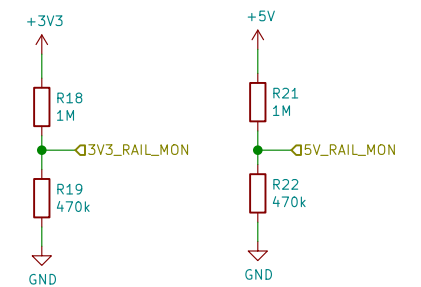
## 5V and 3V3 Power Supplies

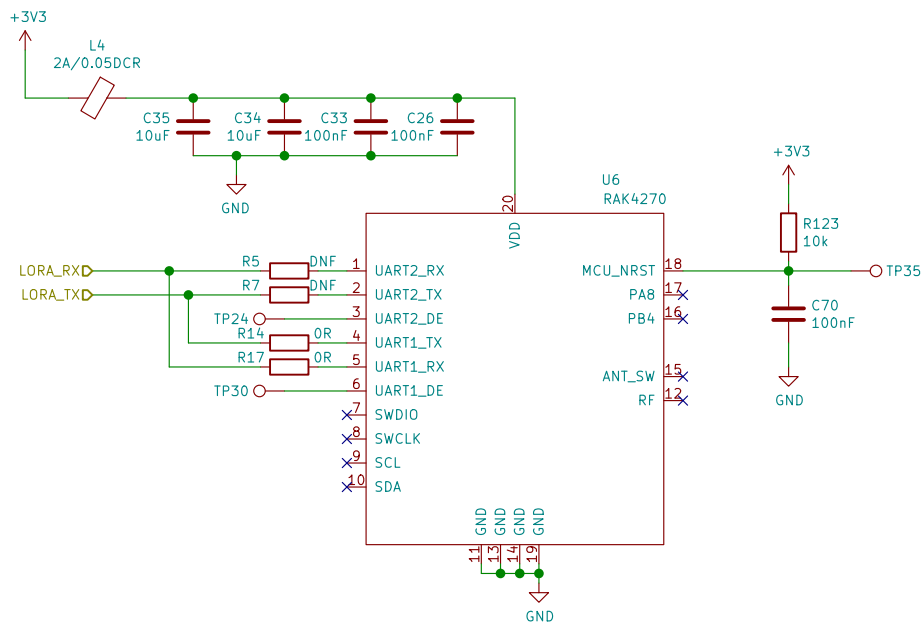


## Battery Voltage Monitor



## Voltage Rail Monitor





Part No: 304-010

**Devtank LTD**

Sheet: /LORA/

File: LORA.sch

**Title: Open Smart Monitor**

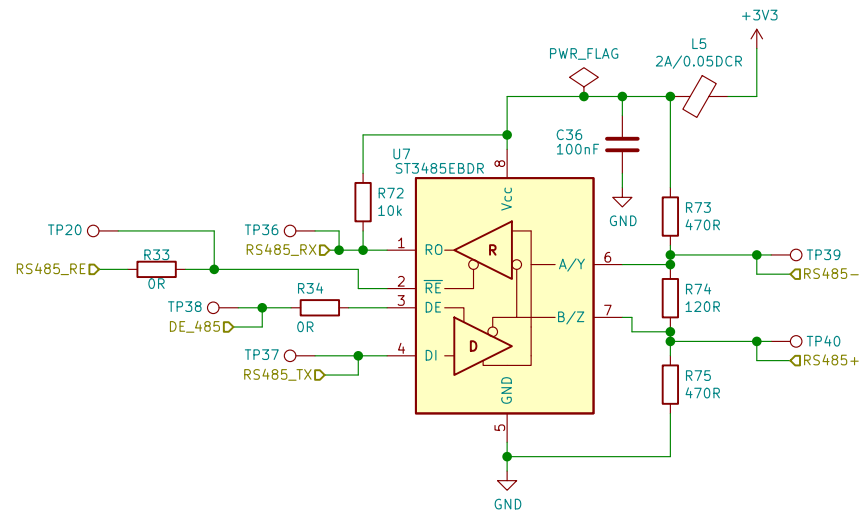
Size: A4

Date: 2021-09-29

**Rev: B**

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Id: 3/9



Part No: 304-010

**Devtank LTD**

Sheet: /RS485\_Comms/

File: RS485\_Comms.sch

**Title: Open Smart Monitor**

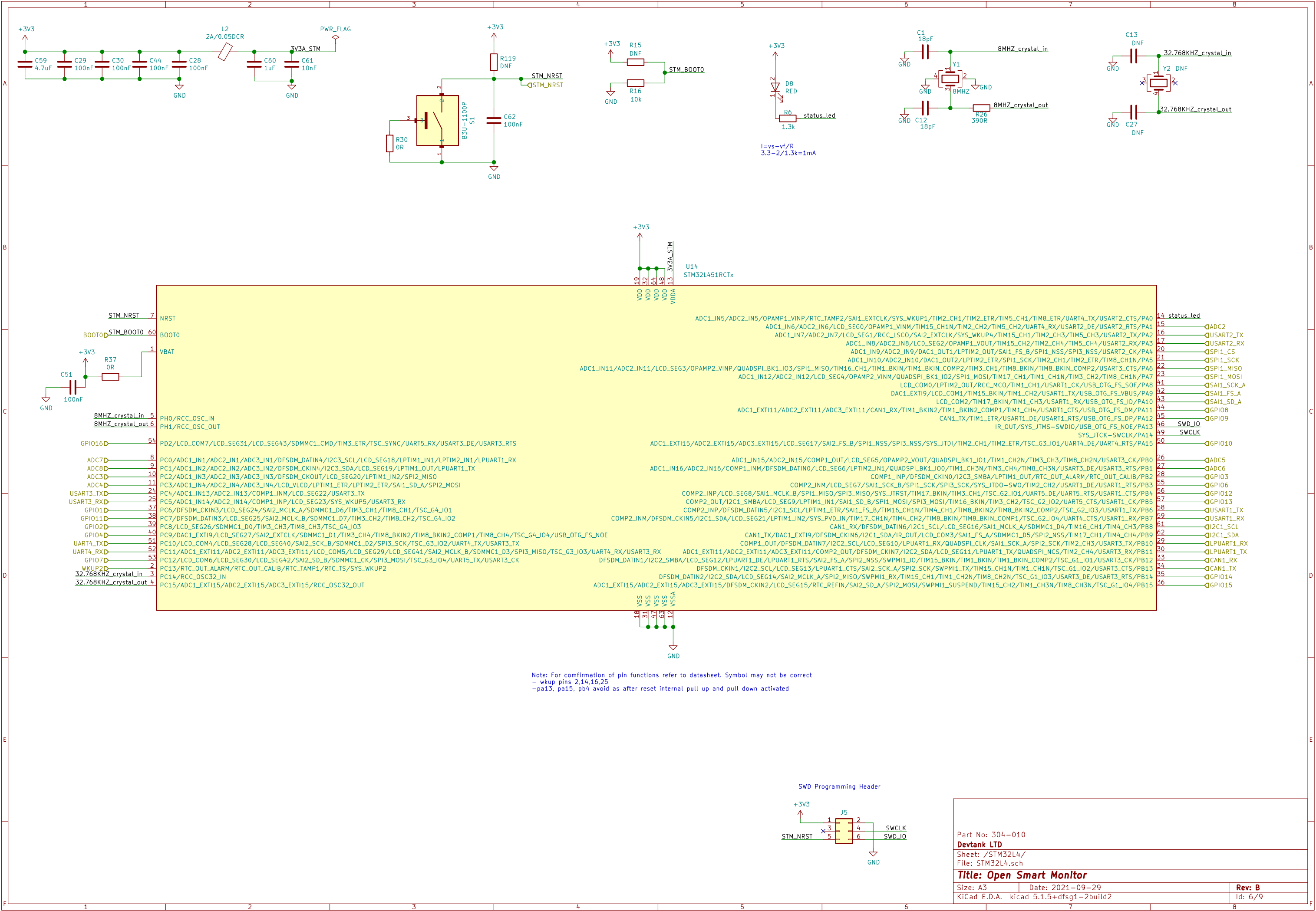
Size: A4 Date: 2021-09-29

KiCad E.D.A. kicad 5.1.5+dfsg1-2build2

**Rev: B**

Id: 4/9

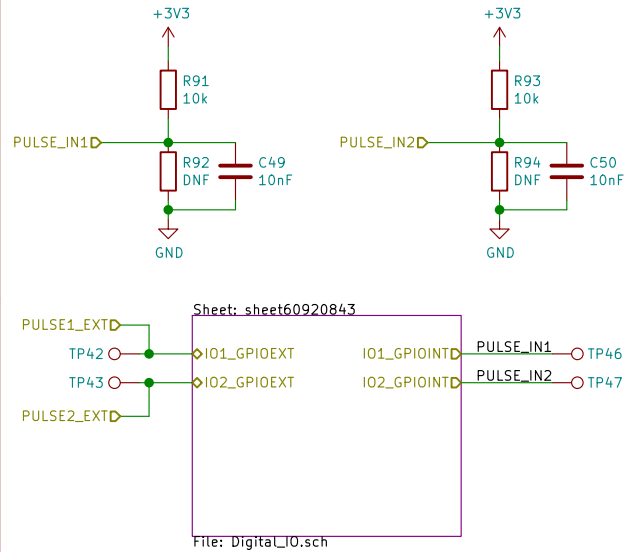




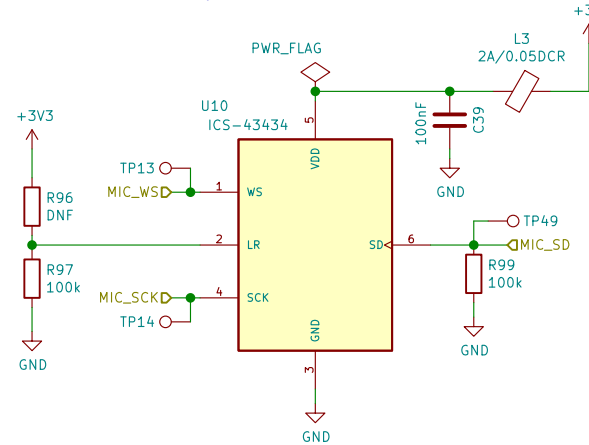


Id: 7/9

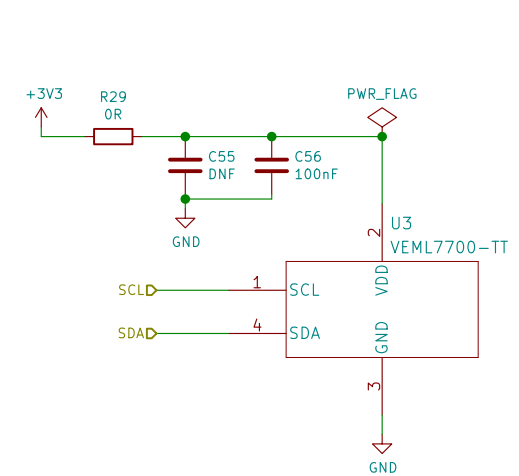
## Pulse Inputs



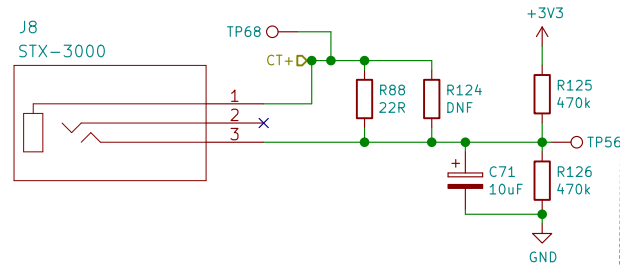
## Microphone module



## Light Sensor

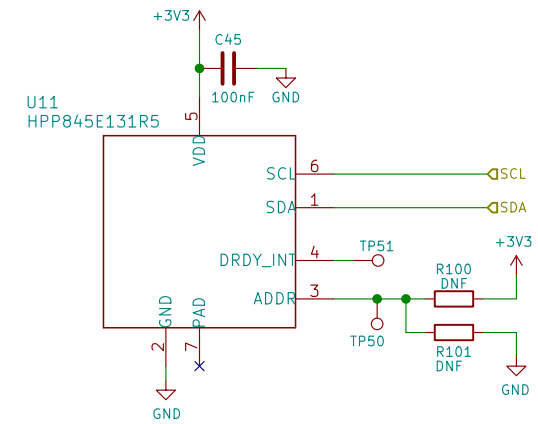


## CT Clamp



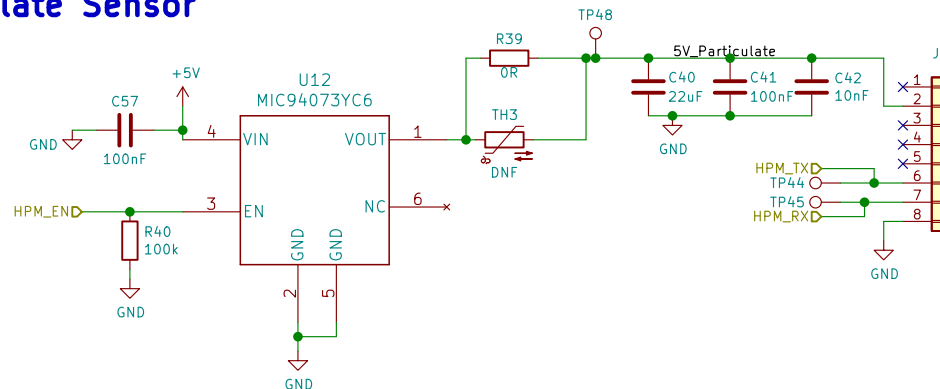
bypass capacitor few hundred ohms  
<https://learn.openenergymonitor.org/electricity-monitoring/ct-sensors/interface-with-arduino>

## Temp and Humidity



Note: Can use HDC1080/2080. For HTU21D leave pad 3,4 and ep unconnected

## Particulate Sensor



Part No: 304-010

Devtank LTD

Sheet: /Sensors\_AND\_I0/

File: Sensors\_AND\_I0.sch

**Title: Open Smart Monitor**

Size: A4 Date: 2021-09-29

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Rev: B

Id: 8/9



Max 3mA per GPIO

