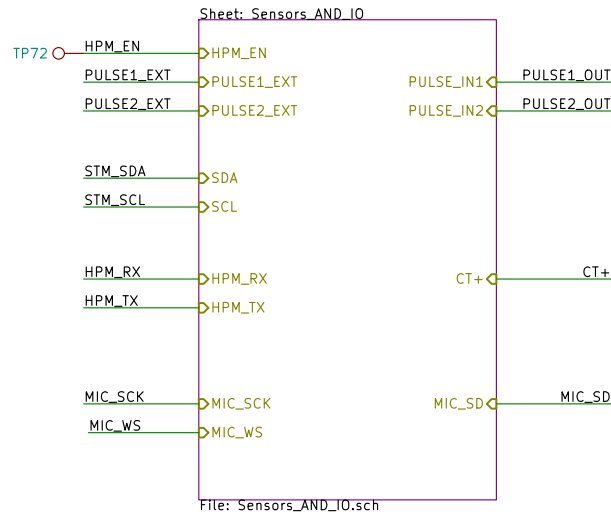


STM

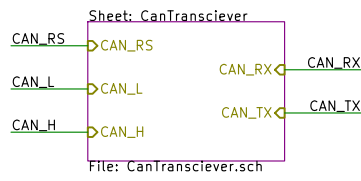


Sensors and IO



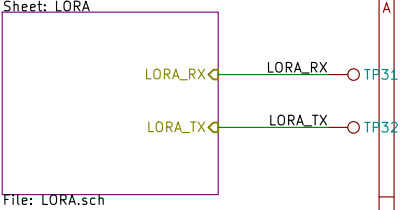
Communication

CAN Transciever

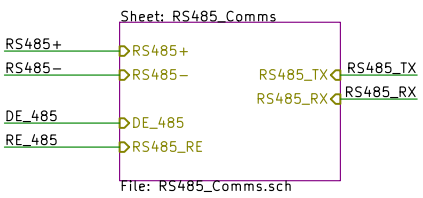


Note: Low power mode selected through RS

LORA

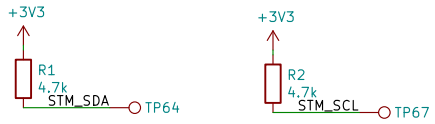


RS485 Transciever

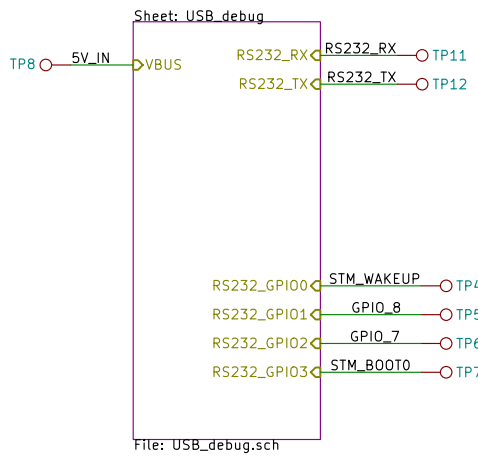


Note: Low power mode selected through DE along with RE

STM I2C Pullup



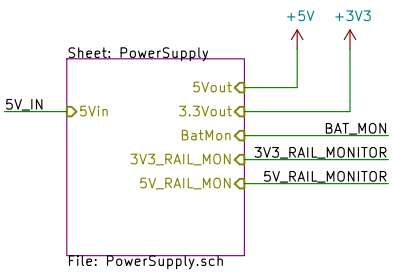
USB Debug



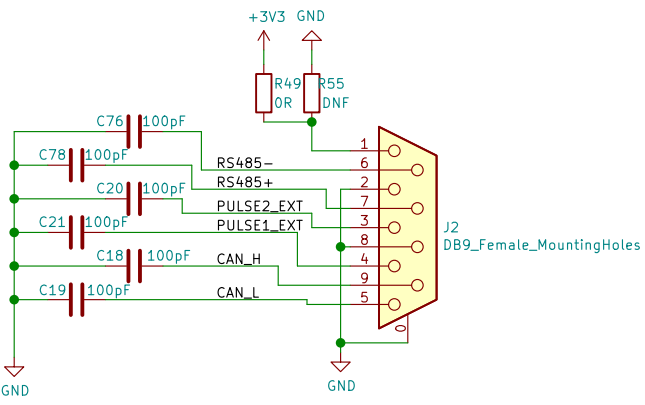
Easy access gnd pins for debug



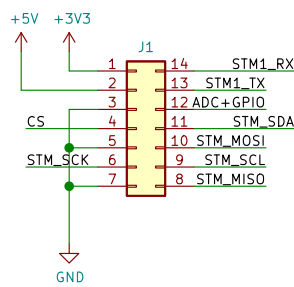
Power Supply and Battery



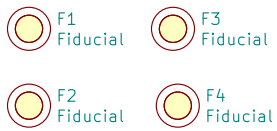
External Connector



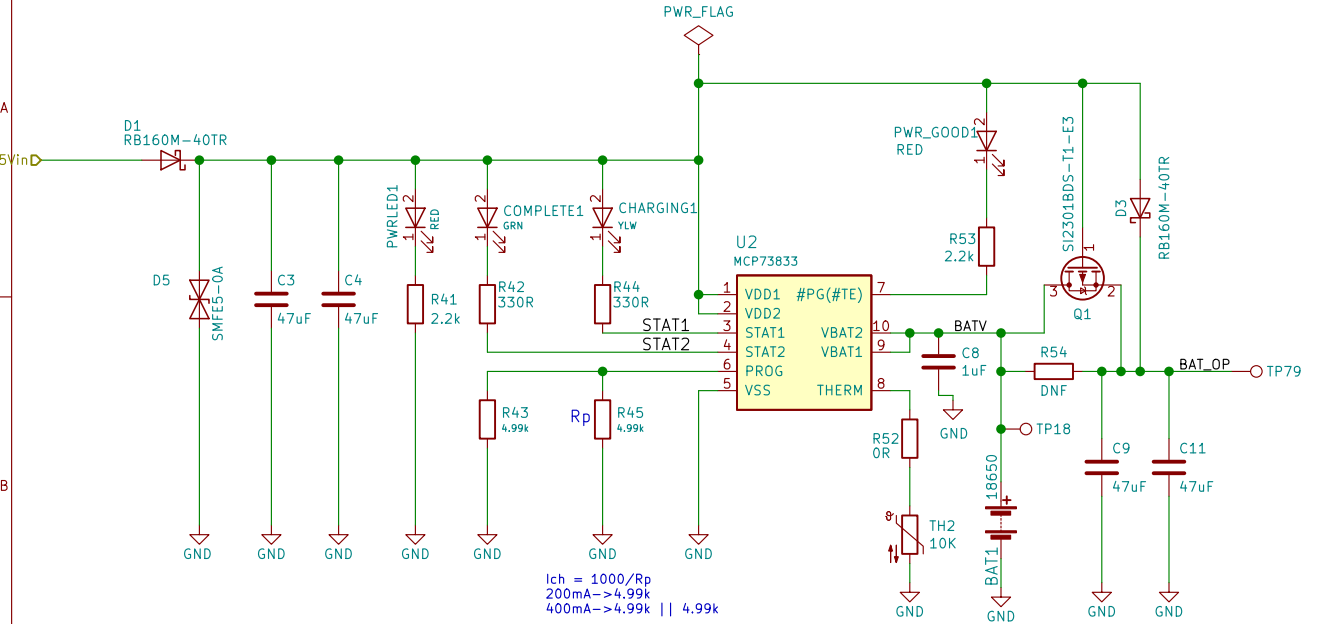
Optional module



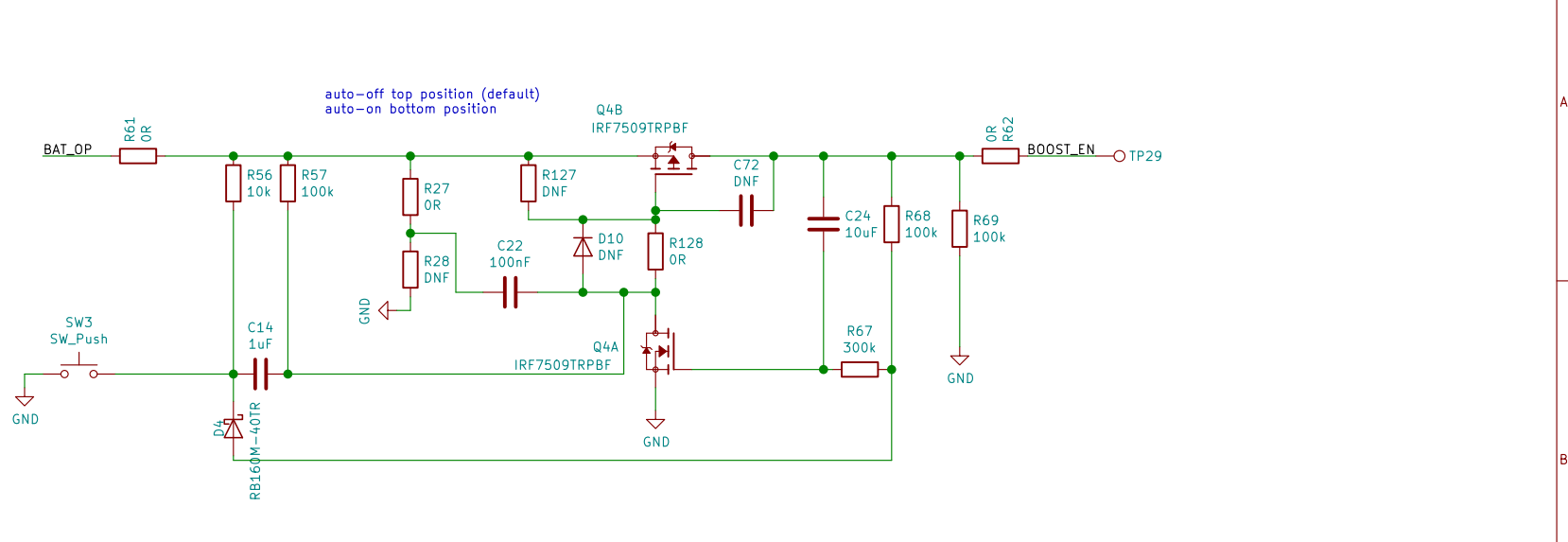
Fiducials



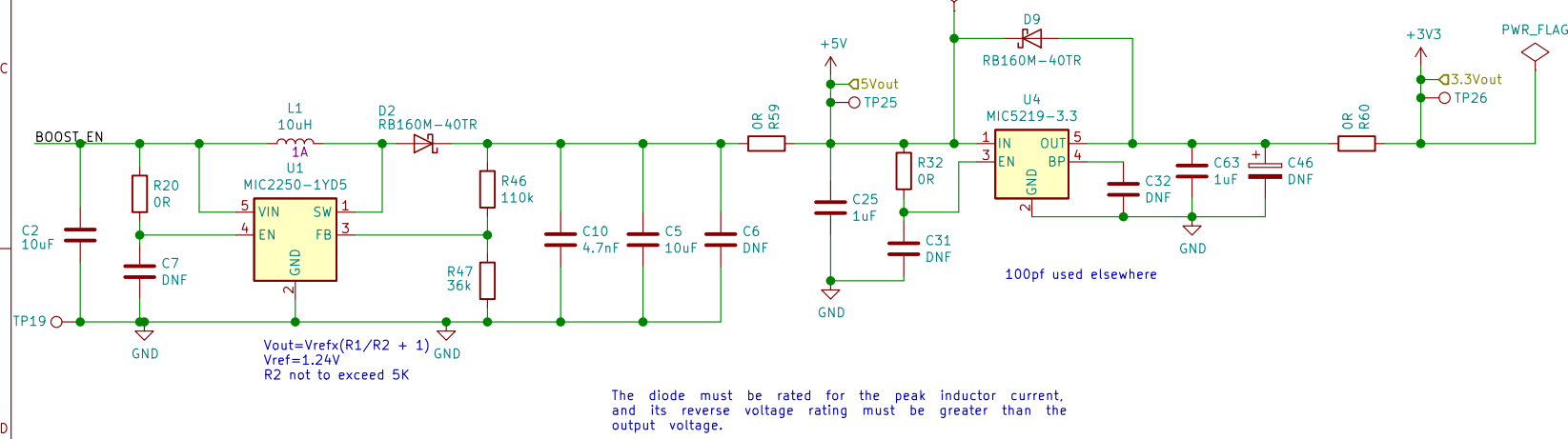
Li_Ion Battery Charge Controller



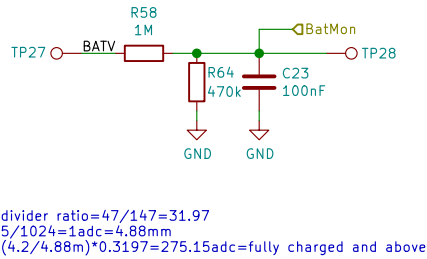
Latched powerbutton Circuit



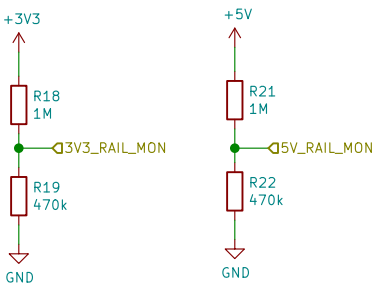
5V and 3V3 Power Supplies

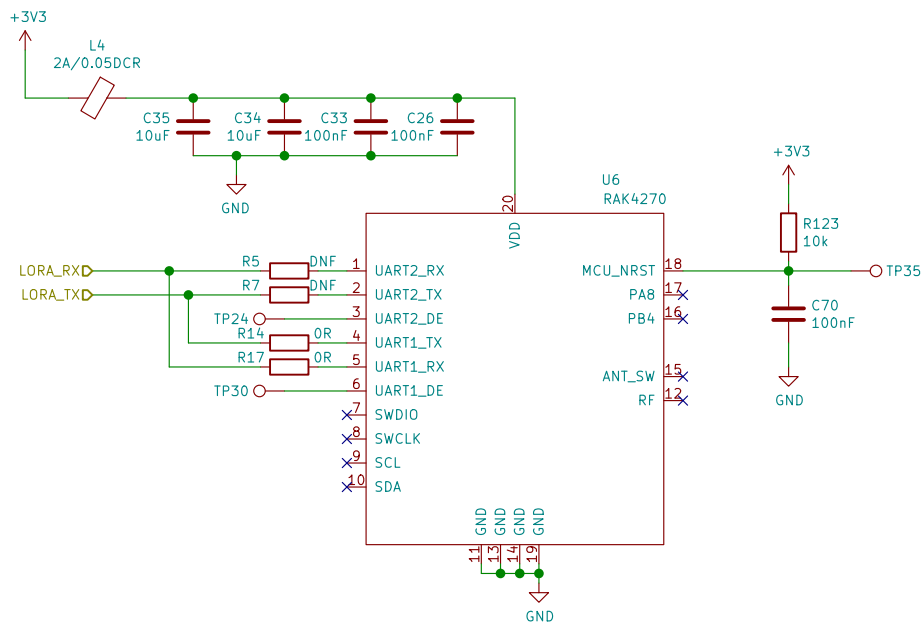


Battery Voltage Monitor



Voltage Rail Monitor





Devtank LTD

Sheet: /LORA/

File: LORA.sch

Title: Open Smart Monitor

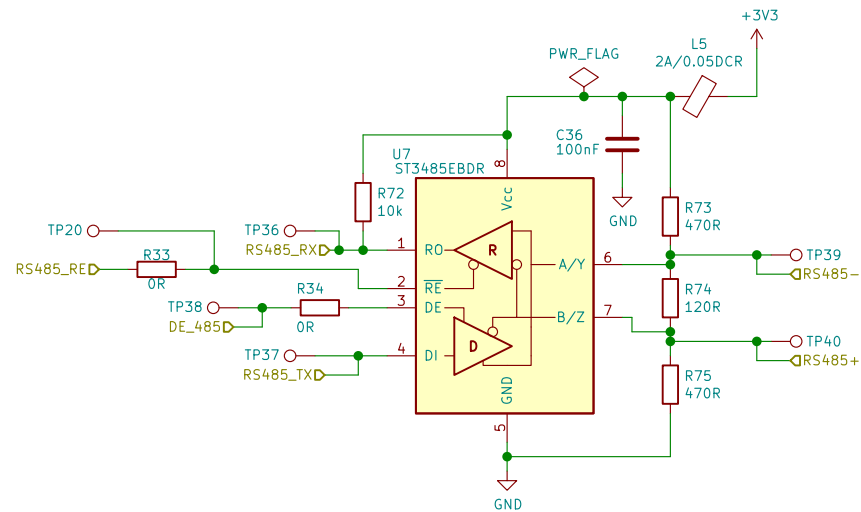
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Date: 2021-09-22

Rev: B

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

Id: 3/9



AB
Devtank LTD

Sheet: /RS485_Comms/
File: RS485_Comms.sch

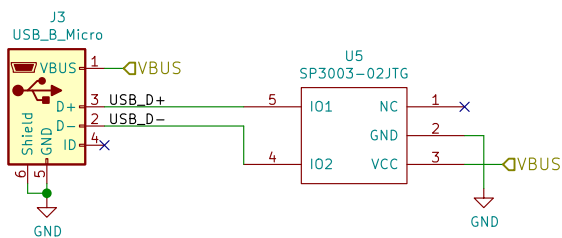
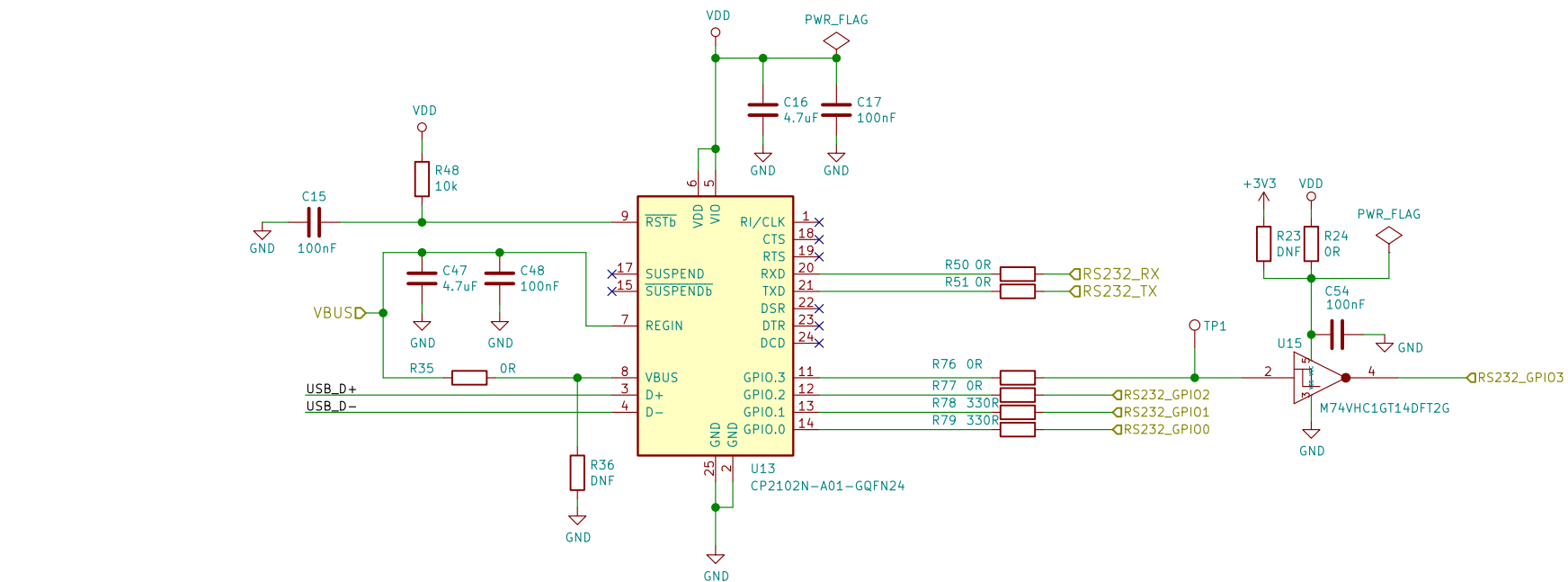
Title: Open Smart Monitor

Size: A4 Date: 2021-09-22

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

Rev: B

Id: 4/9



AB
Devtank LTD

Sheet: /USB_debug/
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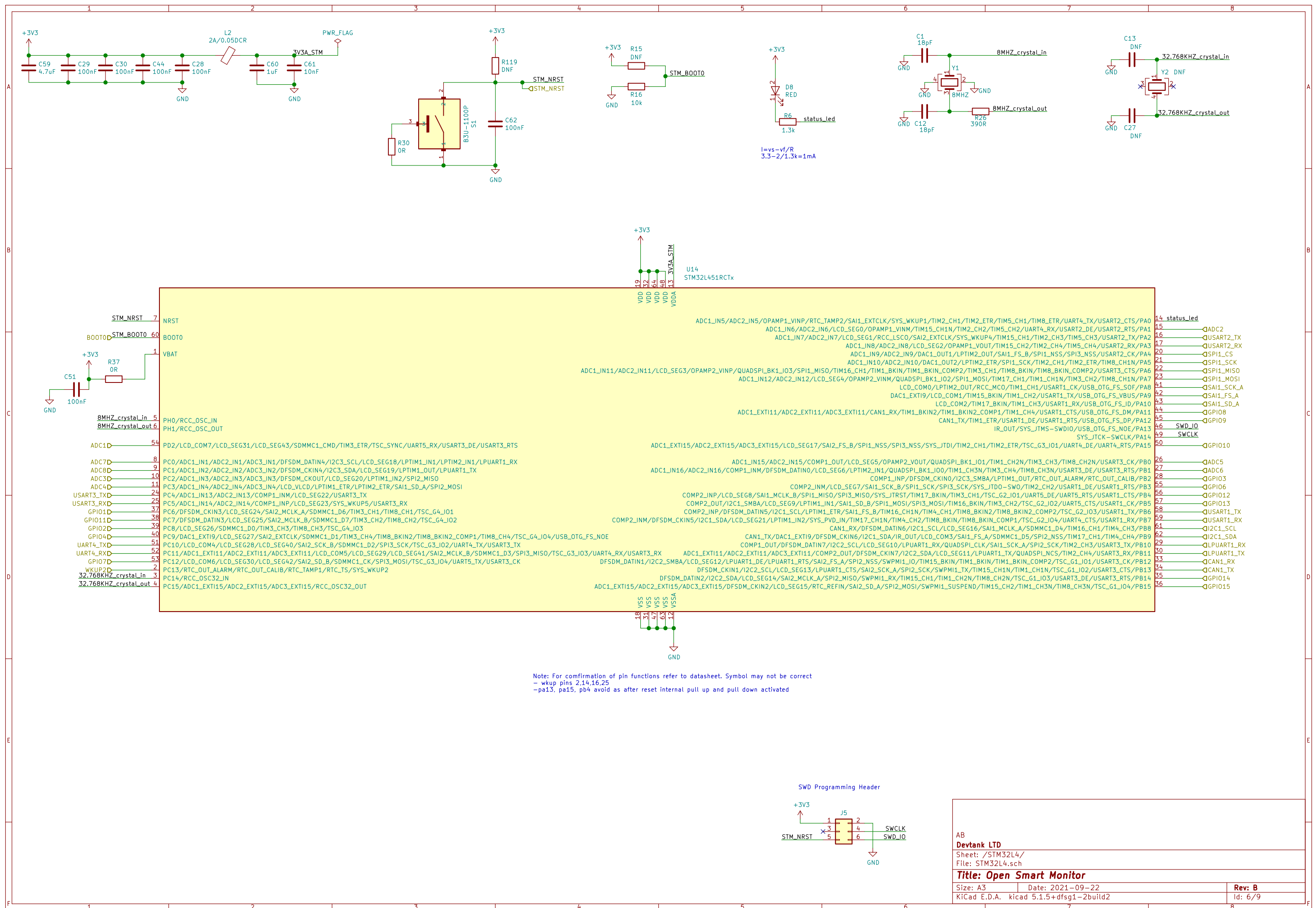
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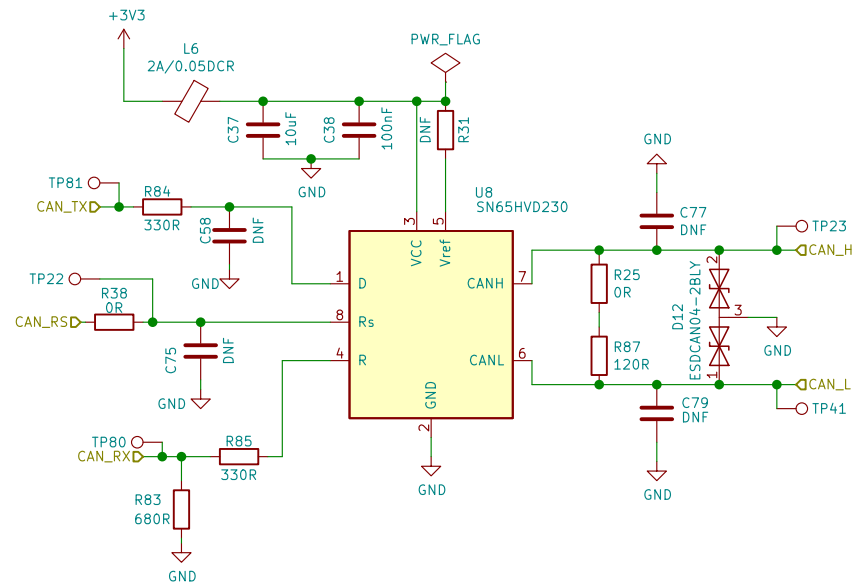
Size: A4 Date: 2021-09-22

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

Rev: B

Id: 5/9





Note: C58 and 75 are filtering caps

AB

Devtank LTD

Sheet: /CanTransciever/

File: CanTransciever.sch

Title: Open Smart Monitor

Size: A4

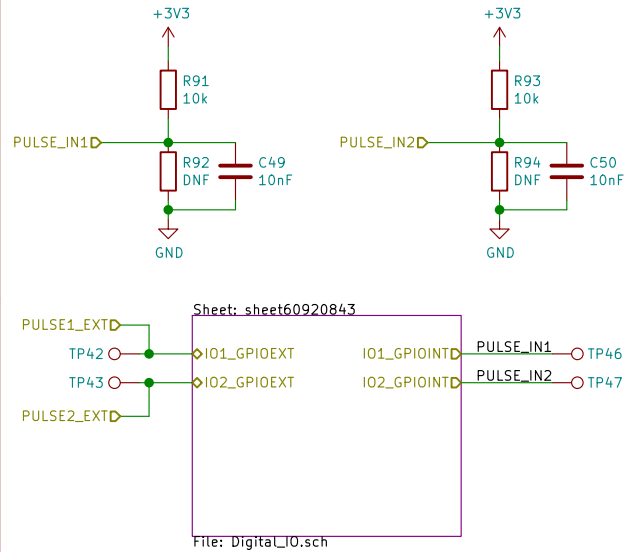
Date: 2021-09-22

Rev: B

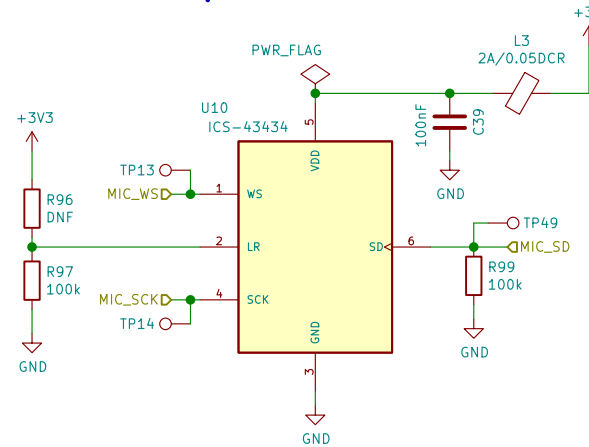
KiCad E.D.A. kicad 5.1.5+dfsg1-2build2

Id: 7/9

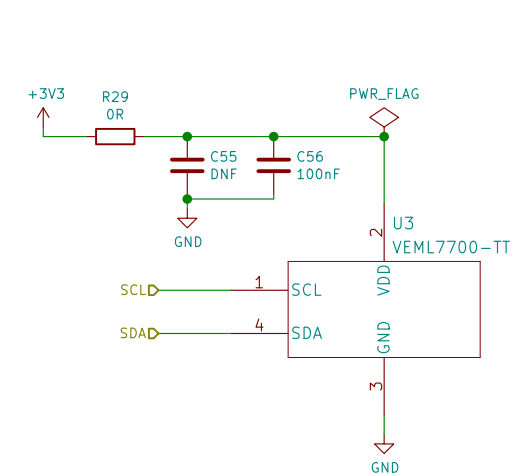
Pulse Inputs



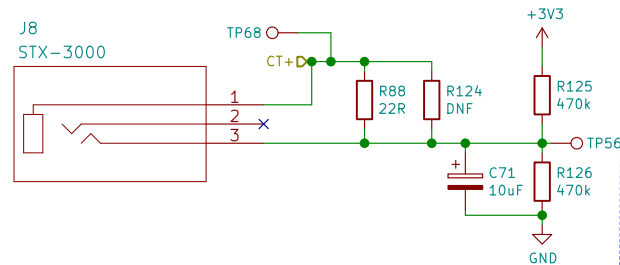
Microphone module



Light Sensor

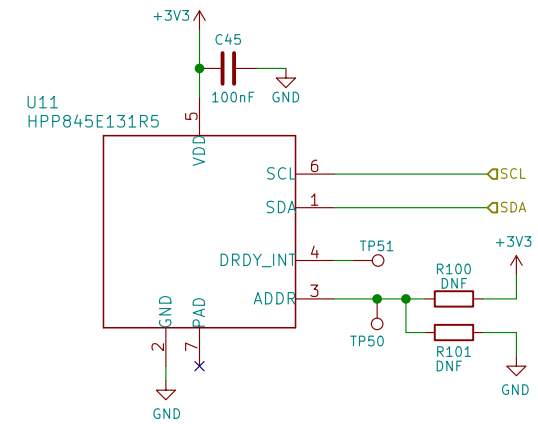


CT Clamp



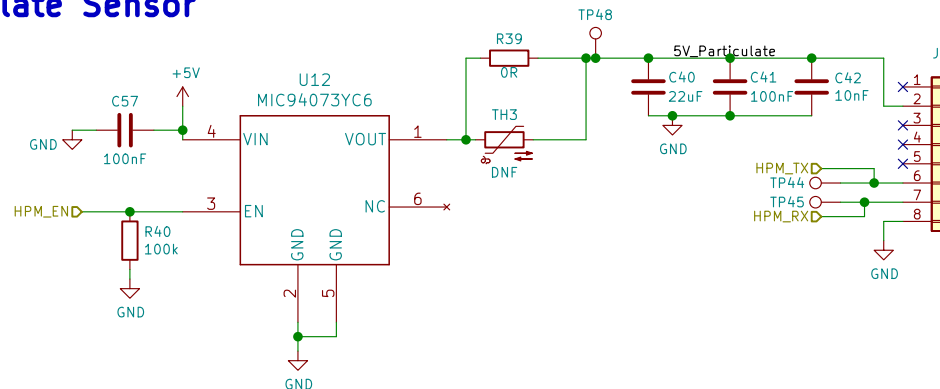
bypass capacitor few hundred ohms
<https://learn.openenergymonitor.org/electricity-monitoring/ct-sensors/interface-with-arduino>

Temp and Humidity



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

Particulate Sensor



AB
 Devtank LTD

Sheet: /Sensors_AND_IO/
 File: Sensors_AND_IO.sch

Title: Open Smart Monitor

Size: A4 Date: 2021-09-22

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

Rev: B

Id: 8/9

Max 3mA per GPIO

