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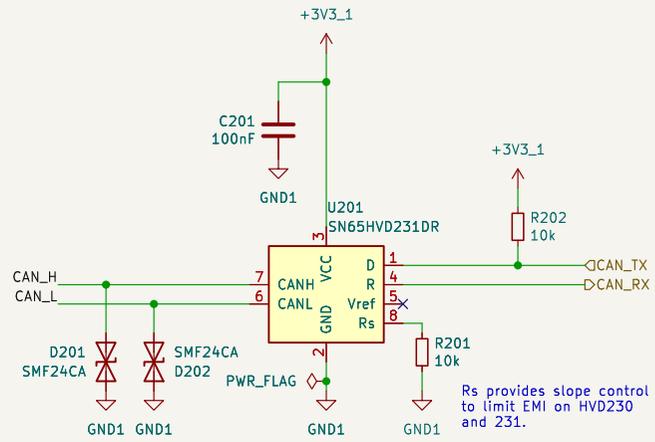
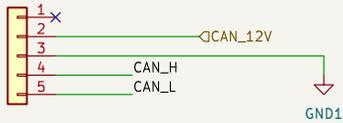
Sheet: /
 File: SH-wg.kicad_sch

Title: Sailor Hat WiFi Gateway

Size: A4	Date: 2022-03-17	Rev: 1.0.0
KiCad E.D.A. 9.0.0		Id: 1/8

NMEA 2000

J201
Conn_01x05



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Sheet: /CAN bus/
File: canbus.kicad_sch

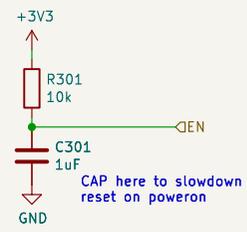
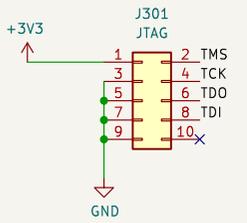
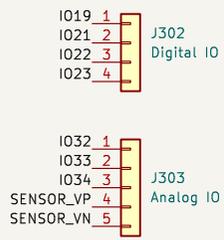
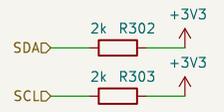
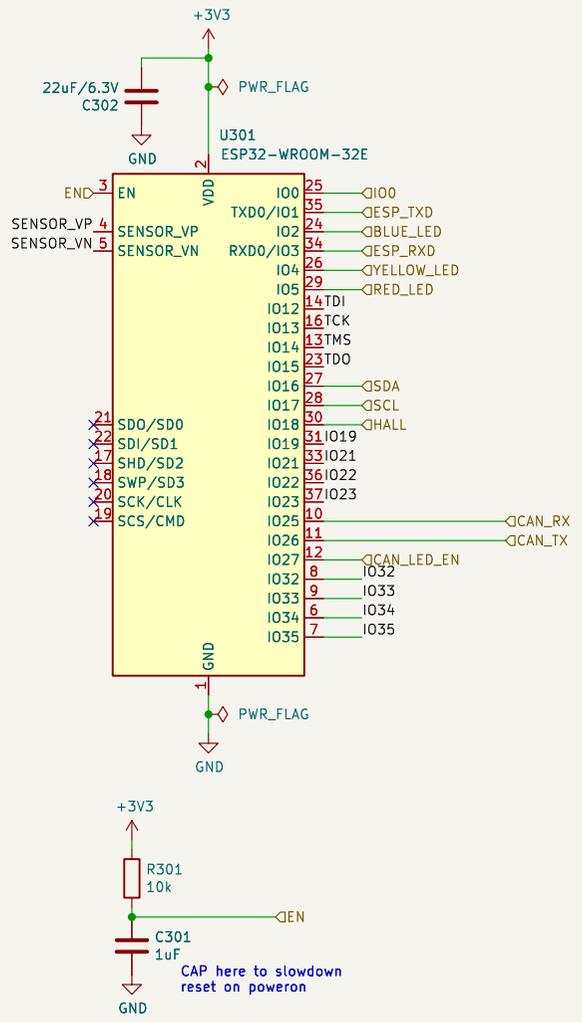
Title: Sailor Hat WiFi Gateway

Size: A4 Date: 2022-03-17

Rev: 1.0.0

KiCad E.D.A. 9.0.0

Id: 2/8



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Sheet: /ESP32/ File: ESP32.kicad_sch	
Title: Sailor Hat WiFi Gateway	
Size: A4	Date: 2022-03-17
KiCad E.D.A. 9.0.0	Rev: 1.0.0 Id: 3/8

Mounting holes



Decoupling caps

+3V3

C401 100nF

C402 100nF

C403 100nF

C404 100nF

C405 100nF

C406 100nF

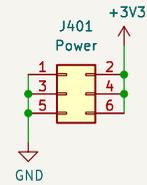
C407 100nF

C408 100nF

C409 100nF

C410 100nF

GND



G401 Hat Labs pictogram

G402 Hat Labs logo

G403 Hat Labs logo large

G404 WEEE logo

G405 OSHW logo

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Sheet: /Bottom PCB/
File: PCB.kicad_sch

Title: Sailor Hat WiFi Gateway

Size: A4 Date: 2022-03-17

KiCad E.D.A. 9.0.0

Rev: 1.0.0

Id: 7/8



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Sheet: /I2C/
 File: I2C.kicad_sch

Title: Sailor Hat WiFi Gateway

Size: A4 Date: 2022-03-17

Rev: 1.0.0

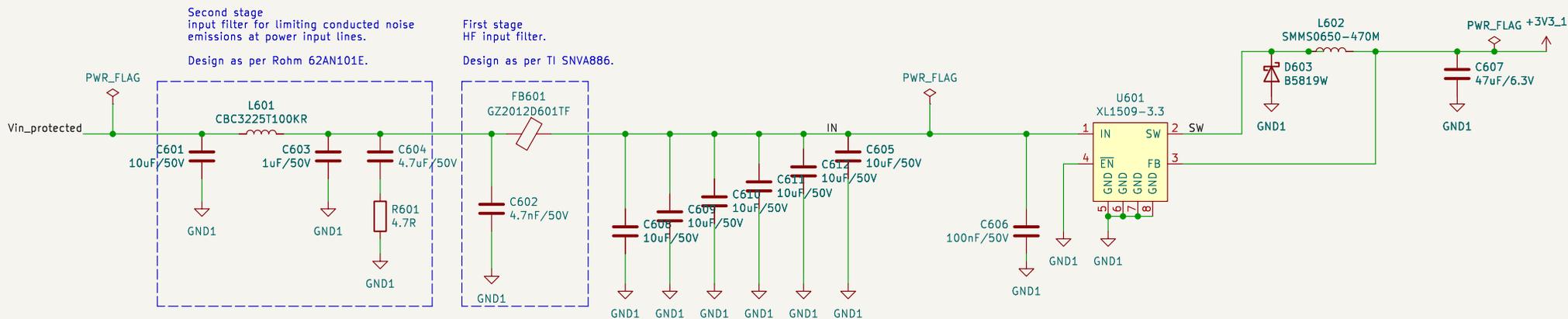
KiCad E.D.A. 9.0.0

Id: 8/8



Reverse polarity and current protection

Converter IC voltage range 4.5-50V, however, Vin needs to be a bit higher to give some headroom for the PTC fuse.



Bulk input capacitance is implemented with a number of 10uF MLCC caps to manage the cost.

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Sheet: /Power input/
 File: power-input.kicad_sch

Title: Sailor Hat WiFi Gateway

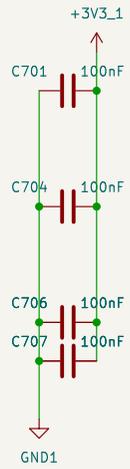
Size: A4 Date: 2022-03-17

KiCad E.D.A. 9.0.0

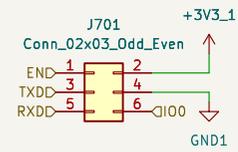
Rev: 1.0.0

Id: 8/8

Distributed bypass capacitors



Programming connector



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Sheet: /Mezzanine PCB/
File: PCB2.kicad_sch

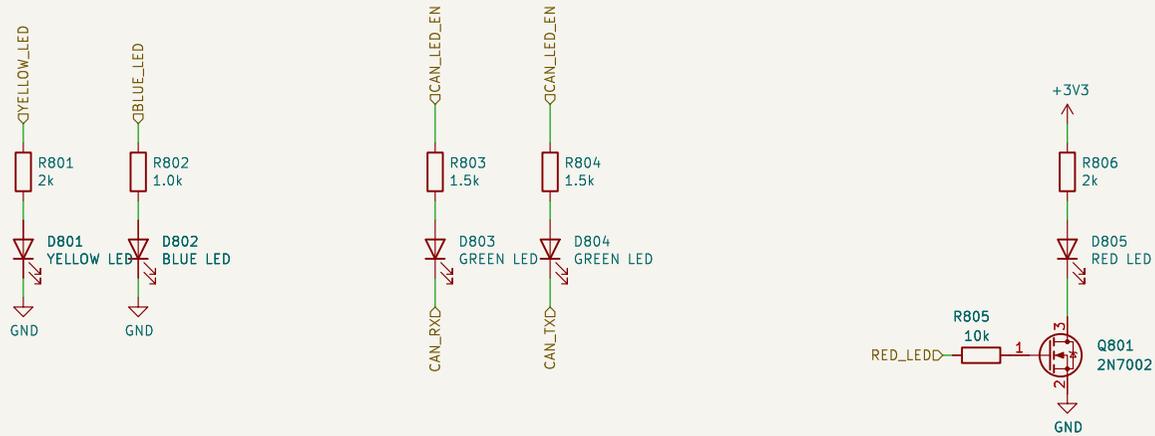
Title: Sailor Hat WiFi Gateway

Size: A4 Date: 2022-03-17

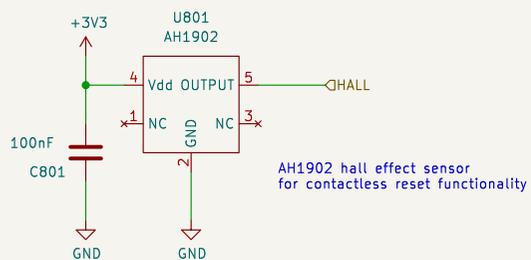
KiCad E.D.A. 9.0.0

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RED_LED is pulled high at boot. Having a driver transistor allows the LED to be turned on by the weak pull-up at boot, and still be controlled by software.



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Sheet: /User Interface/
 File: UI.kicad_sch

Title: Sailor Hat WiFi Gateway

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KiCad E.D.A. 9.0.0

Rev: 1.0.0

Id: 10/8