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**matei**

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File: ayab-esp32.kicad\_sch

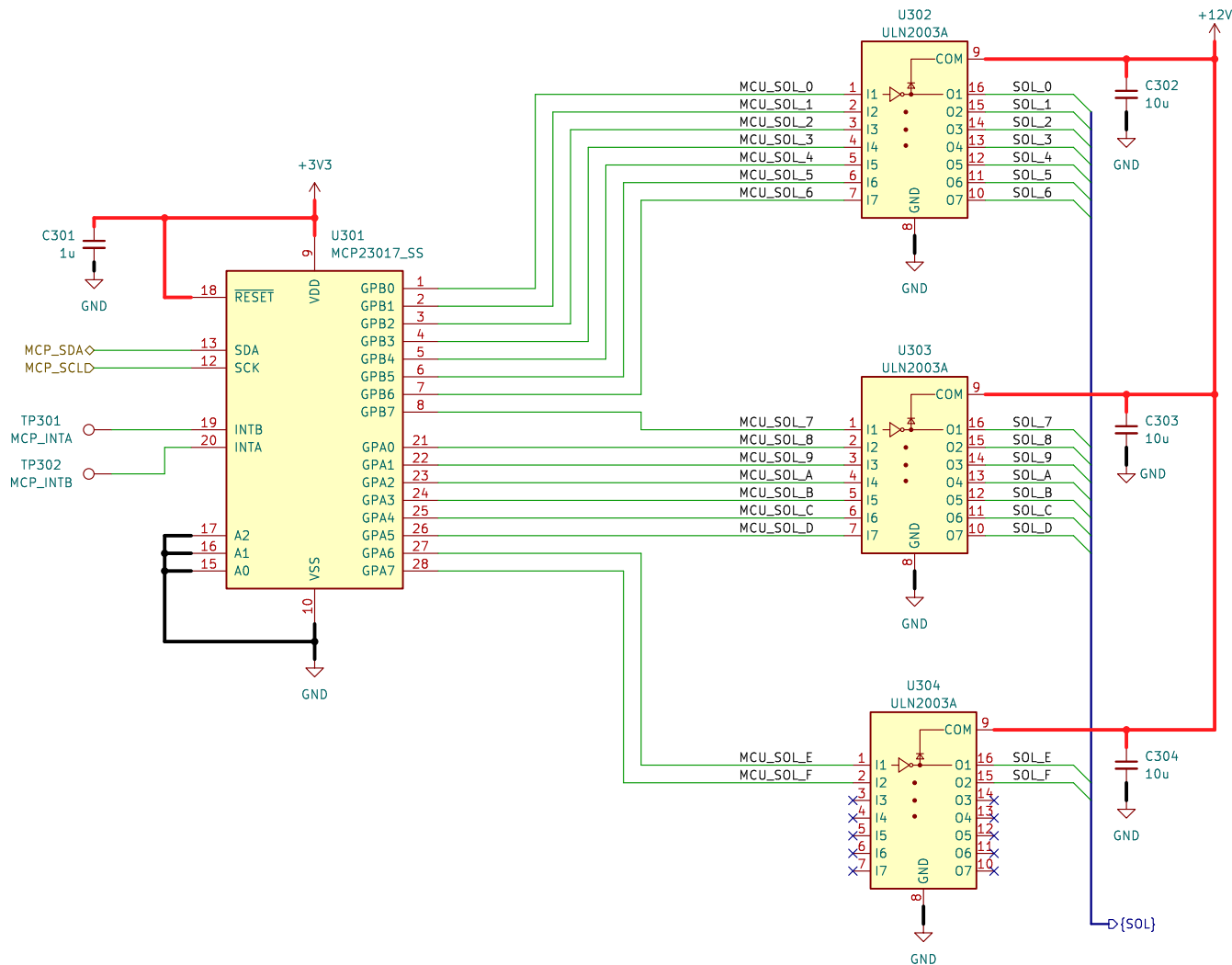
**Title: AYAB-ESP32 overview**

Size: A4	Date: 2023-07-17	Rev: 0.1
KiCad E.D.A. kicad 7.0.6-0		Id: 1/8





# SOLENOID DRIVERS



unmodified machine is 26W  
assuming all power is  
used by solenoids - 130mA each  
ULN2003A max current 500mA each output  
2.5A package current max

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Sheet: /SOLENOID DRIVERS/  
File: solenoids.kicad\_sch

**Title: SOLENOID DRIVERS**

Size: A4 Date: 2023-07-17

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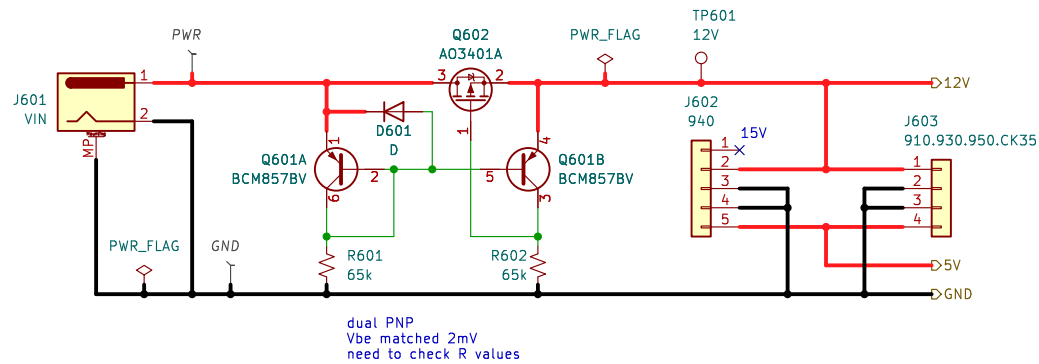
**Rev: 0.1**

Id: 3/8



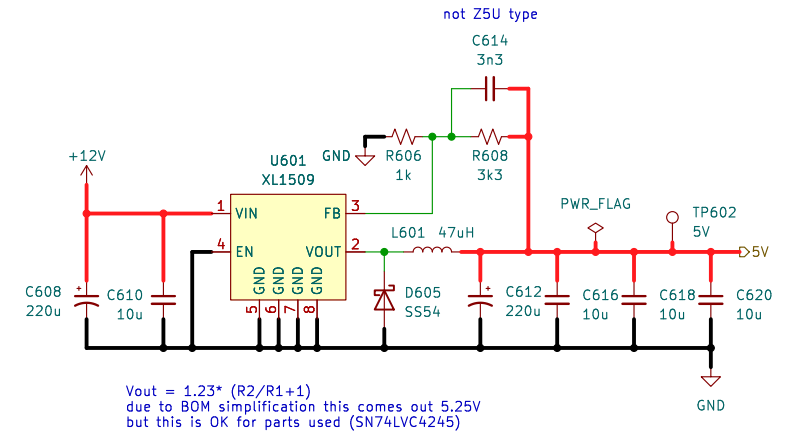
Id: 5/8

BARREL JACK / BROTHER INPUT  
POLARITY PROTECTION  
ZERO VOLT DIODE



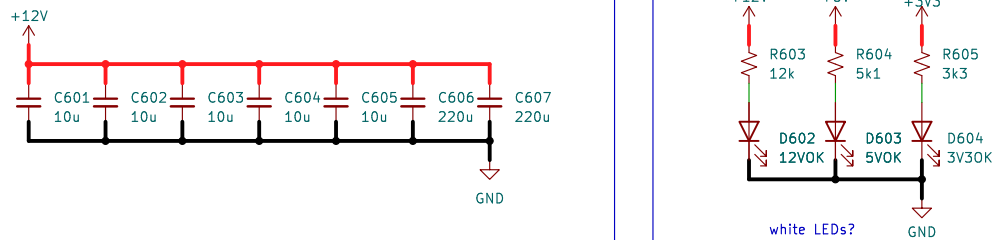
dual PNP  
Vbe matched 2mV  
need to check R values

## 5V SUPPLY

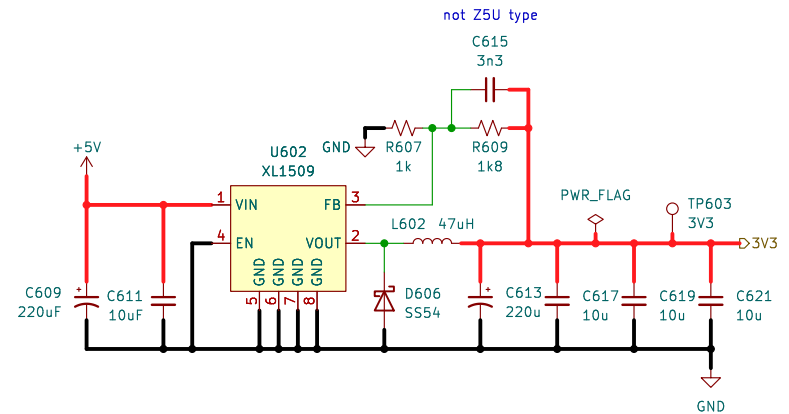


$V_{out} = 1.23 \cdot (R2/R1 + 1)$   
due to BOM simplification this comes out 5.25V  
but this is OK for parts used (SN74LVC4245)

## INDICATORS



## 3V3 SUPPLY



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Sheet: /PSU/

File: psu.kicad\_sch

**Title: POWER SUPPLY**

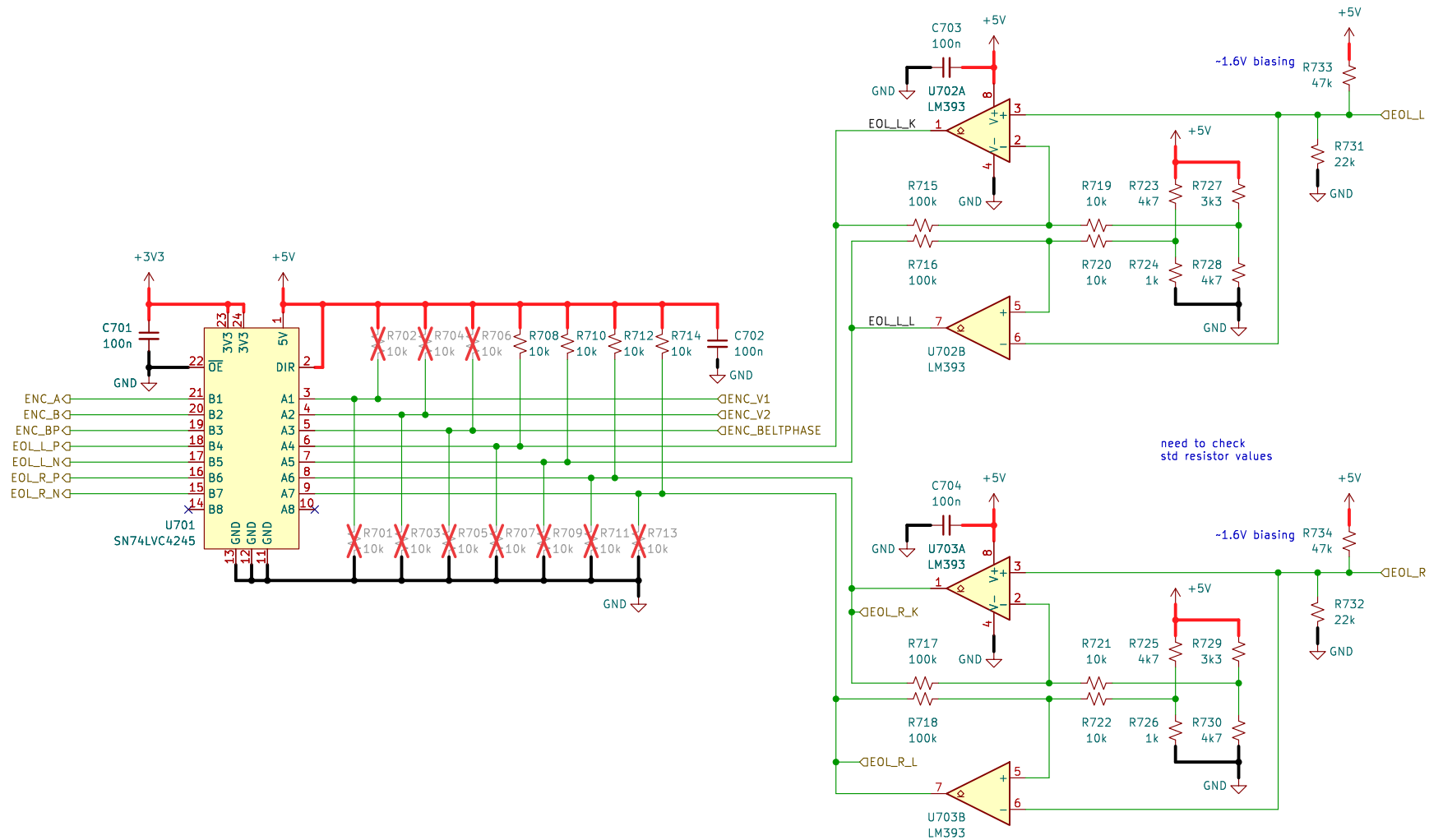
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Sheet: /IO CONDITIONING/

File: ioconditioning.kicad\_sch

**Title: I/O CONDITIONING**

Size: A4

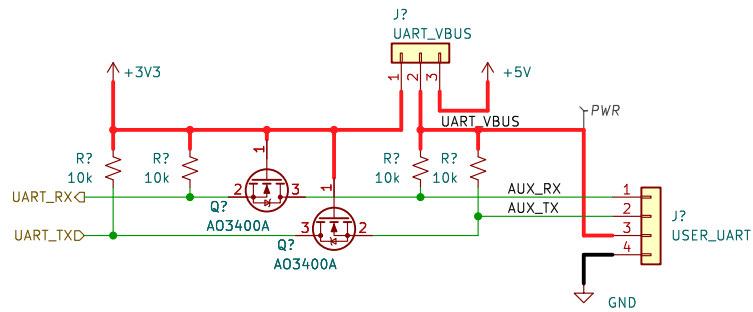
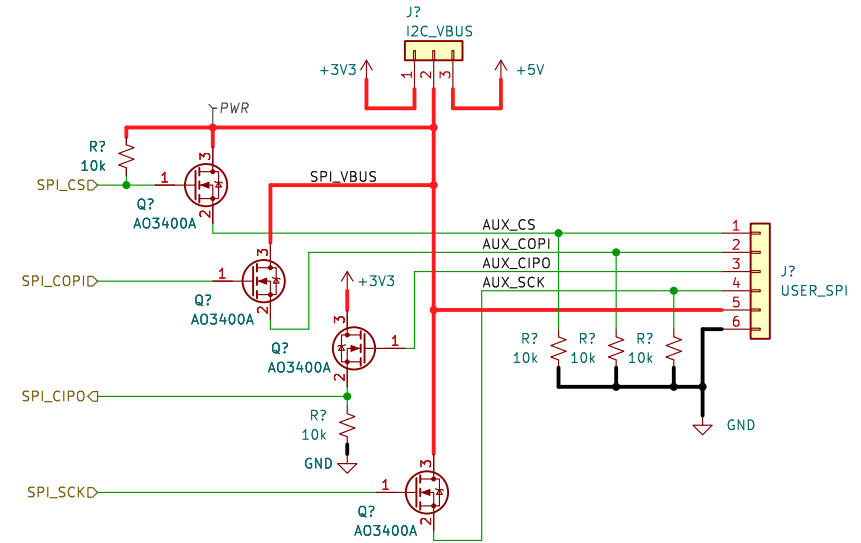
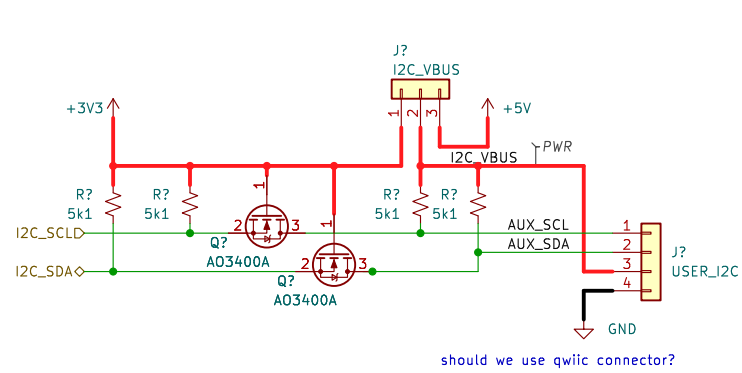
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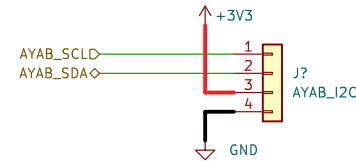
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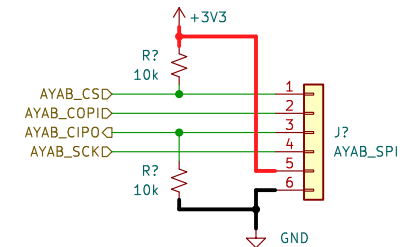
# AUX EXPANSION



## MCP-extenal control



## Future display



Sheet: /AUX-CONNECTORS/  
File: aux-connectors.kicad\_sch

### Title:

Size: A4  
KiCad E.D.A. kicad 7.0.6-0

Date:

Rev:  
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