

Sheet: /UI\_POT\_BTN/
File: UI\_POT\_BTN.kicad\_sch

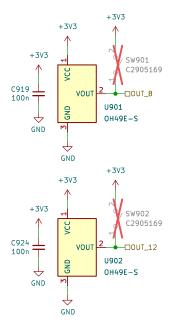
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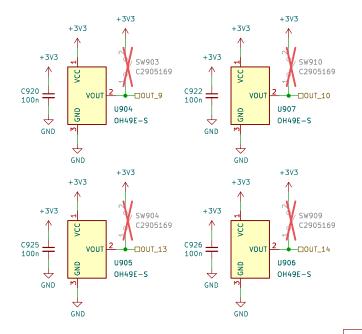
 Size: A4
 Date:
 Rev:

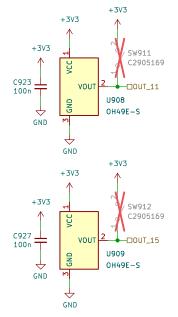
 KiCad E.D.A. 8.0.8
 Id: 2/22

Simulation:

http://tinyurl.com/y229mty4





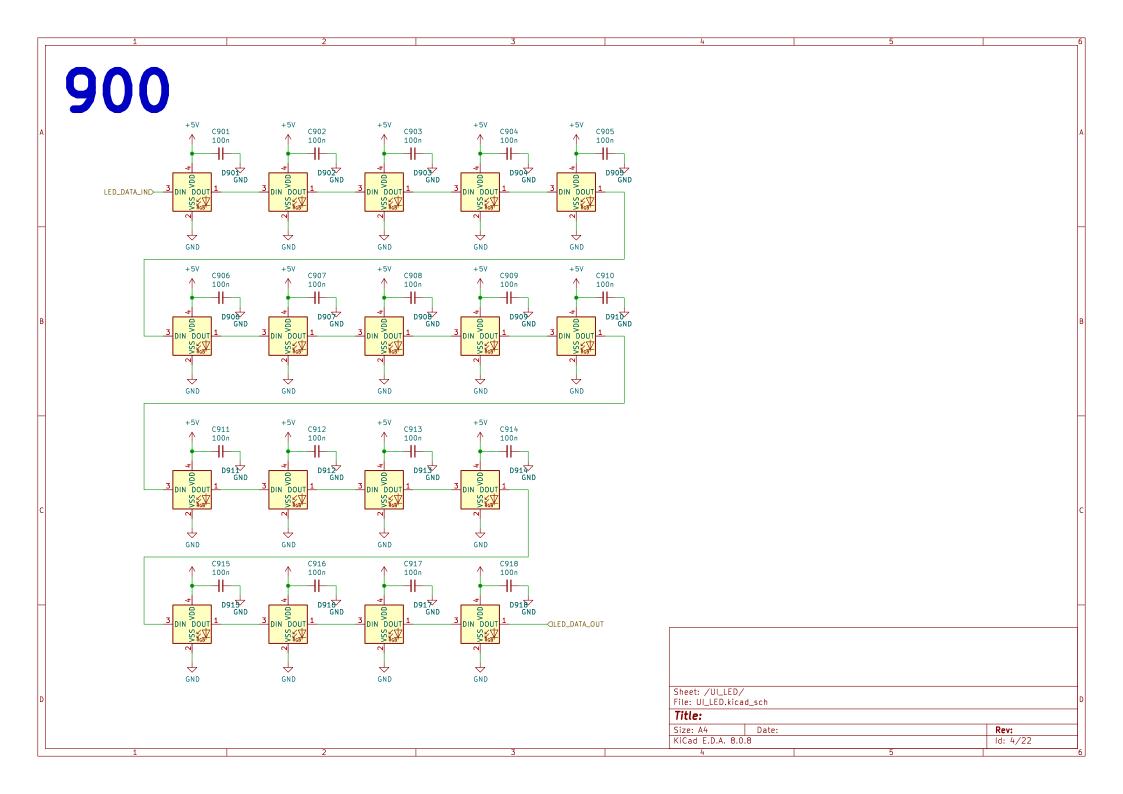


Sheet: /UI\_BUTTON/ File: UI\_BUTTON.kicad\_sch

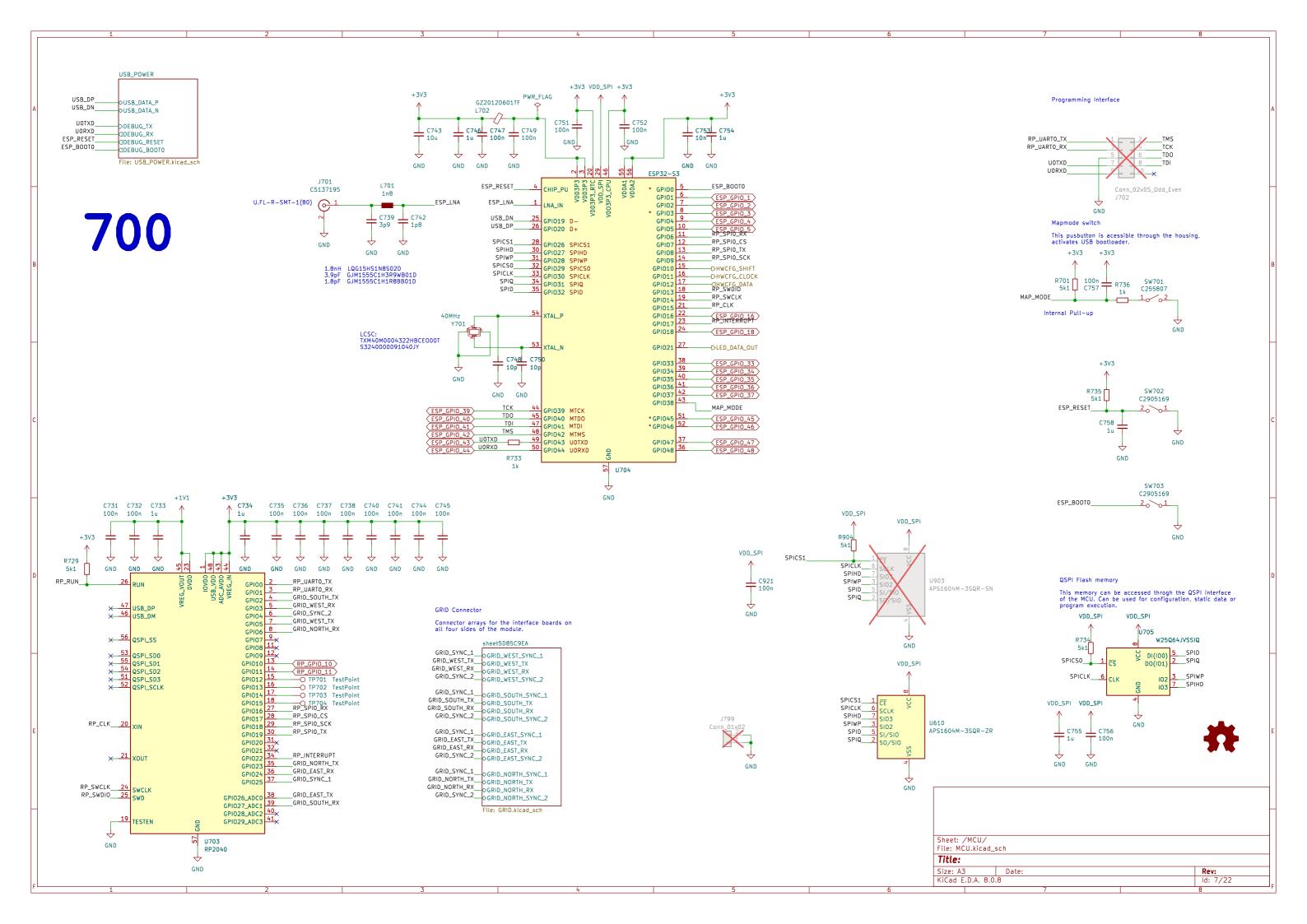
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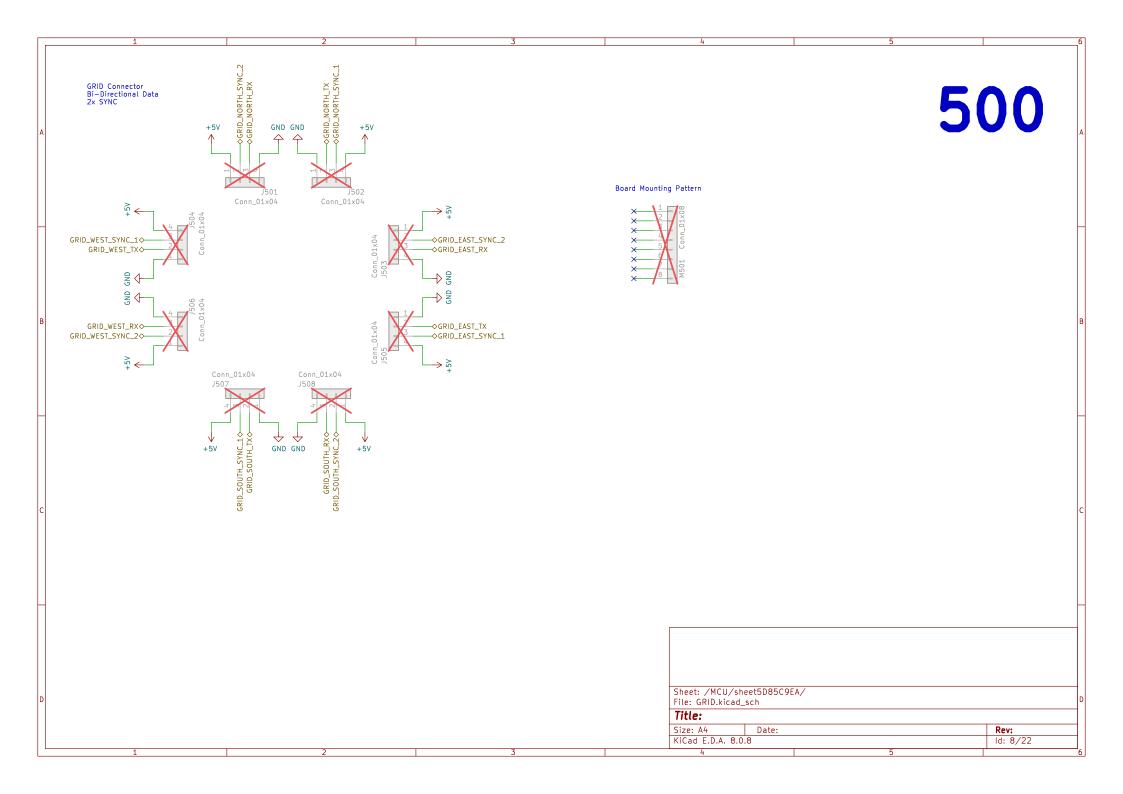
 Size: A4
 Date:
 Rev:

 KiCad E.D.A. 8.0.8
 Id: 3/22



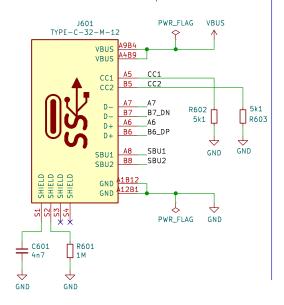
1000 R1001 1k C1001 1k C1005 GND R1002 1k GND IN\_2D-----R1006 C1002 1k C1006 GND R1003 GND IN\_4D-----+3٧3 R1007 C1003 1 k + C1007 100n 13 X0 Q2 X1 X1 X1 X2 X2 X3 X4 X4 X5 X5 X5 X6 X7 GND \_D0UT R1004 GND 1 k IN\_6D-----R1008 C1004 U1001 74HC4051 1 k C1008 100n 11 10 9 GND ADDRESS\_AD +3V3 ADDRESS\_BD-VSS ADDRESS\_CD-GND + C1009 GND GND Sheet: /Sheet5D7C8BFD/ File: UI\_MUX.kicad\_sch Title: Size: A4 Date: KiCad E.D.A. 8.0.8 ld: 5/22 1000 R1009 1k C1010 1k C1014 GND R1010 1k GND IN\_2D-----C1011 1k C1015 GND R1011 GND 1k IN\_4D-----+3٧3 R1015 C1012 1 k + C1016 100n 13 14 15 12 1 5 2 4 GND X0 8 \_D0UT R1012 X2 GND 1 k Х3 IN\_6D-----C1013 1k X5 U1002 74HC4051 C1017 100n 11 10 9 GND ADDRESS\_AD +3V3 ADDRESS\_BD-VSS ADDRESS\_CD-GND + C1018 GND Sheet: /sheet5D8763D6/ File: UI\_MUX.kicad\_sch Title: Size: A4 Date: KiCad E.D.A. 8.0.8 ld: 6/22



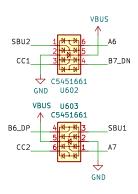


## **USB Port ESD Prot.**

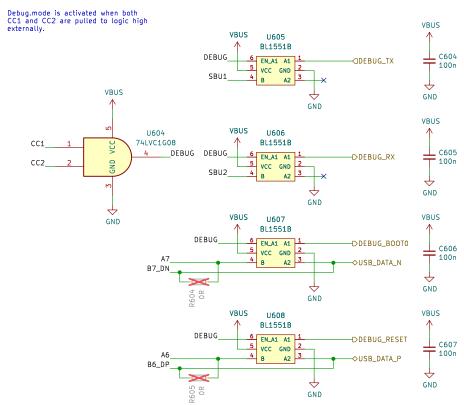
USB C upstream facing port configured for 5V 3A power consumption.



ESP protection for all 8 signals externally accessable via the USB C connector.

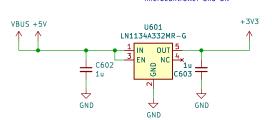


### Debug-Mode Multiplexing



### **3V3** LD0

LDO regulator for generating the +3V3 power rail for the microcontroller and UI.

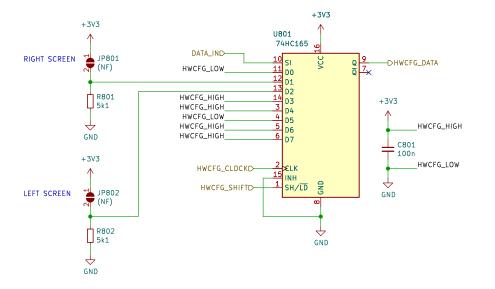


# **Testpoints**



Sheet: /MCU/USB\_POWER/ File: USB POWER.kicad sch Title: Size: A4 Date:

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#### Board Identification

Grid firmware can identify the hardware and the board revision thorugh a 3 wire serial interface using one or more shift register as read only memory. The content of the memory is defined by pulling the inputs high or low through pcb traces or solderable configuration jumpers.

4b'Model + 4b'Revision + nb'Reserved (Multiple shift registers)

```
DO: MODEL (LSB)
D1: MODEL
D2: MODEL
D3: MODEL (MSB)
D4: REVISION (LSB)
D5: REVISION
D6: REVISION (MSB)
D7: REVISION (MSB)
```

#### Model Codes (D3-D0):

Po16 0000 Bo16 0001 PBF4 0010 EN16 0011

### Revision Codes (D7-D4):

RevA 0000 RevB 0001 RevC 0010 RevD 0011

> Sheet: /HWCFG/ File: HWCFG.kicad\_sch

Title:

 Size: A4
 Date:
 Rev:

 KiCad E.D.A. 8.0.8
 Id: 10/22

Conn\_01x04 J902 +3V3 903 SMTS01625MTJ J909 SMTS01625MTJ \_BACKLIGHT\_PWM BACKLIGHT \_\_\_ GND GND <u>CS1</u> <u>CS0</u> \_D/C D/CD SCLK SCLKD-SDIO O J905 SMTS01625MTJ SDIOD-O J911 SMTSO1625MTJ RESET GND GND Conn\_01x04 Conn\_01x04

Conn\_01x04

Sheet: /UI\_DISPLAY/ File: UI\_DISPLAY.kicad\_sch

Title:

Size: A4 KiCad E.D.A. 8.0.8 ld: 11/22

