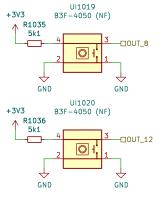
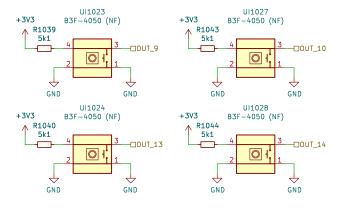


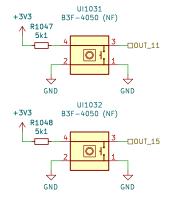
1000

Simulation:

http://tinyurl.com/y229mty4





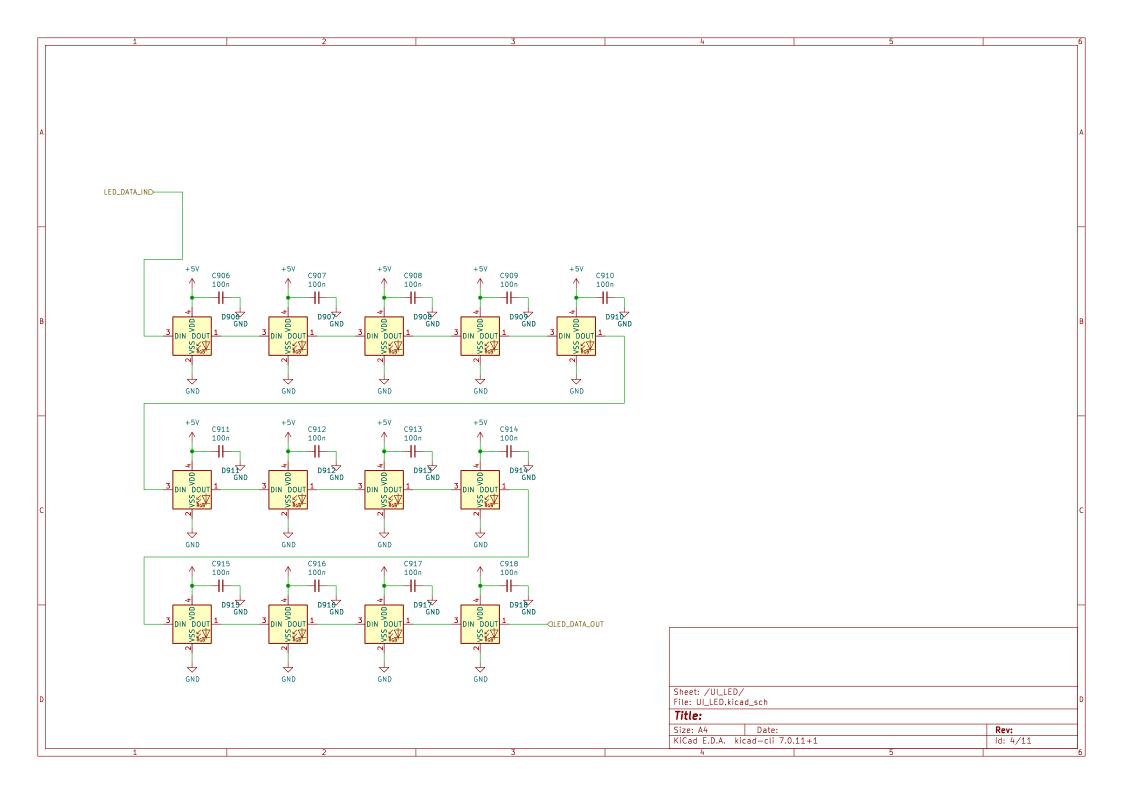


Sheet: /UI\_BUTTON/
File: UI\_BUTTON.kicad\_sch

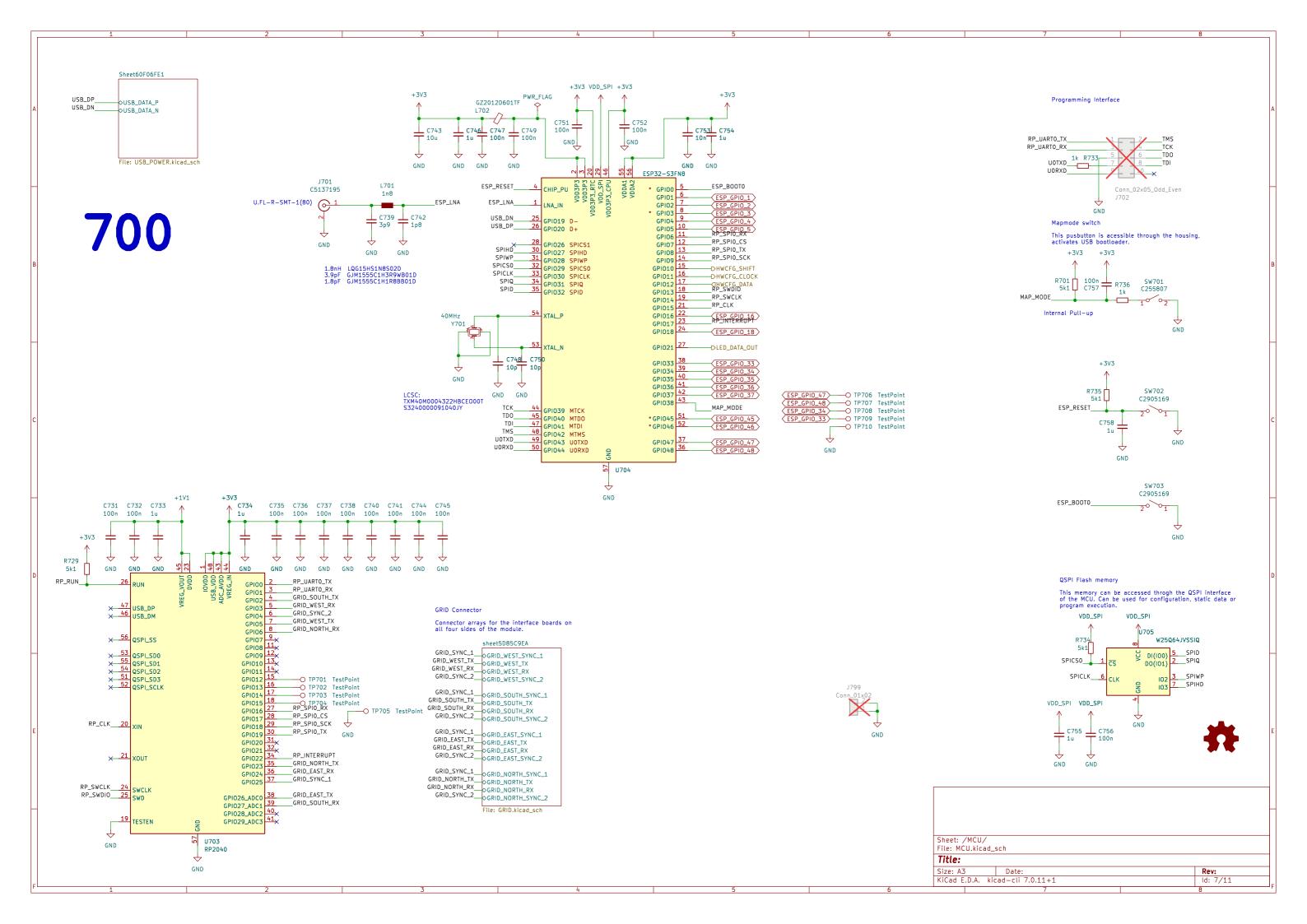
Title:

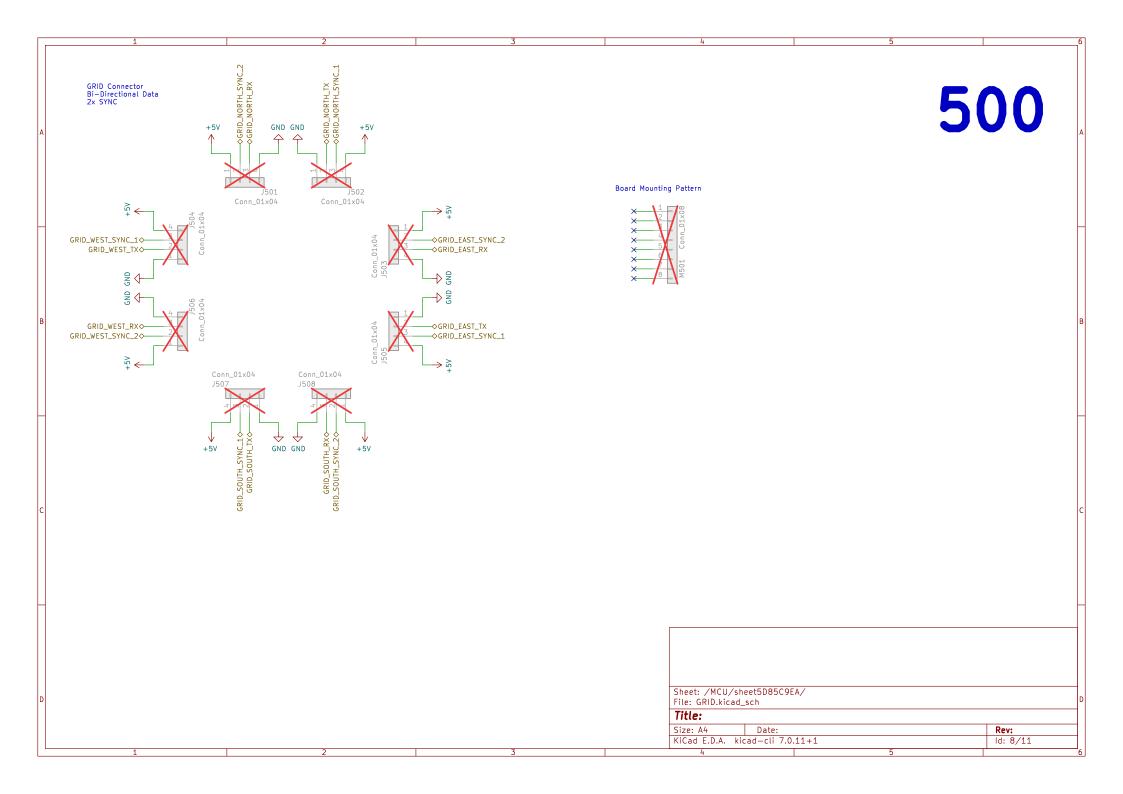
 Size: A4
 Date:
 Rev:

 KiCad E.D.A. kicad-cli 7.0.11+1
 ld: 3/11

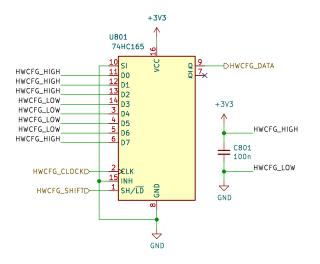


1000 R1001 1k C1001 1k C1005 GND R1002 1k GND IN\_2D-----R1006 C1002 1k C1006 GND R1003 GND IN\_4D-----+3٧3 R1007 C1003 1 k + C1007 100n 13 X0 A X1 X1 X2 X2 X3 GND \_DOUT R1004 GND 1k Х3 IN\_6D-----X5 R1008 C1004 U1001 74HC4051 1 k C1008 100n 11 10 9 GND ADDRESS\_AD +3V3 ADDRESS\_BD-VSS ADDRESS\_CD-GND + C1009 GND GND Sheet: /Sheet5D7C8BFD/ File: UI\_MUX.kicad\_sch Title: Size: A4 Date: Rev: KiCad E.D.A. kicad-cli 7.0.11+1 ld: 5/11 1000 R1009 1k C1010 1k C1014 GND R1010 1k GND IN\_2D-----C1011 1k + C1015 GND R1011 GND IN\_4D-----+3٧3 R1015 C1012 1 k + C1016 100n 13 14 15 12 1 5 2 4 GND X0 8 \_DOUT 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 GND Sheet: /sheet5D8763D6/ File: UI\_MUX.kicad\_sch Title: Size: A4 Date: Rev: KiCad E.D.A. kicad-cli 7.0.11+1 ld: 6/11





600 ESD Diodes ESD protection for all of the externally accessible nets.  $\Diamond$  TP601 ♦ TP602 ♦ TP603 ♦ TP604 GND VB VBUS U601 C5451661 VBUS → USB\_DATA\_P -
USB\_DATA\_P USB\_DATA\_N♦ ->USB\_DATA\_N GND GND +3V3 LDO Regulators Regulators for generating independent power rails for the microcontroller and the user interface. PWR\_FLAG +3V3 PWR\_FLAG VBUS VBUS +5V U602 LN1134A332MR-G GZ2012D601TF L601 J601 TYPE-C-32-M-12 OUT GND C601 VBUS TP605 A4B9 VBUS GND CC1 GND GND ->USB\_DATA\_N -◇USB\_DATA\_P **₩**GND GND SBU1 5k1 5k1 PWR\_FLAG B8 X SBU2 R601 R602 GND A1B12 GND 412B1 GND + C603 R603 GND GND Sheet: /MCU/Sheet60F06FE1/ File: USB\_POWER.kicad\_sch Title: Size: A4 Date: Rev: KiCad E.D.A. kicad-cli 7.0.11+1 ld: 9/11 800



## 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)
```

## 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. kicad-cli 7.0.11+1
 Id: 10/11

## 1000 +3V3+3V3 PWR\_FLAG R1017 470R 0R R1018 U1003 DISPLAY\_TEK1 GND LEDK LEDA -□-□BACKLIGHT GND 320×240 LCD SPI Interface ⊸D/C ⊸d<u>cs</u> SCLK SDIO RESET GND ⊸SCLK ⊸⊒SDIO RESET R1020 0R +3V3 GND ZM1001 5K1 1021 1001MS +3V3 +3V3 C1019 C1020 SW1002 +3V3 GND C2905169 GND SK1003 C5601865 2561 C560150653 +3V3 Sheet: /UI\_DISPLAY/ File: UI\_DISPLAY.kicad\_sch Title: Size: A4 Date: KiCad E.D.A. kicad-cli 7.0.11+1 ld: 11/11