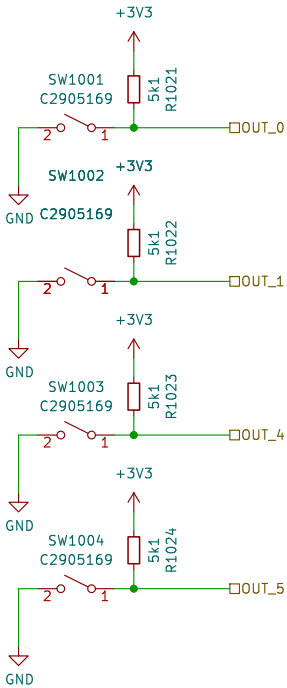
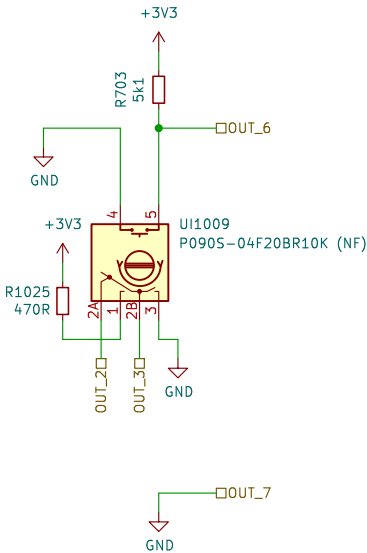


Common Sheets:  
500 GRID  
600 USB\_POWER  
700 MCU

Module Specific:  
800 HWCFG  
900 LED  
1000 UI

Sheet: /		
File: PCBA-TEK1.kicad_sch		
Title:		
Size: A3	Date:	Rev:
KiCad E.D.A. kicad-cli 7.0.11+1	Id: 1/11	

1000



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

**Title:**

Size: A4

Date:

KiCad E.D.A. kicad-cli 7.0.11+1

**Rev:**

Id: 2/11

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Simulation:  
<http://tinyurl.com/y229mt4>



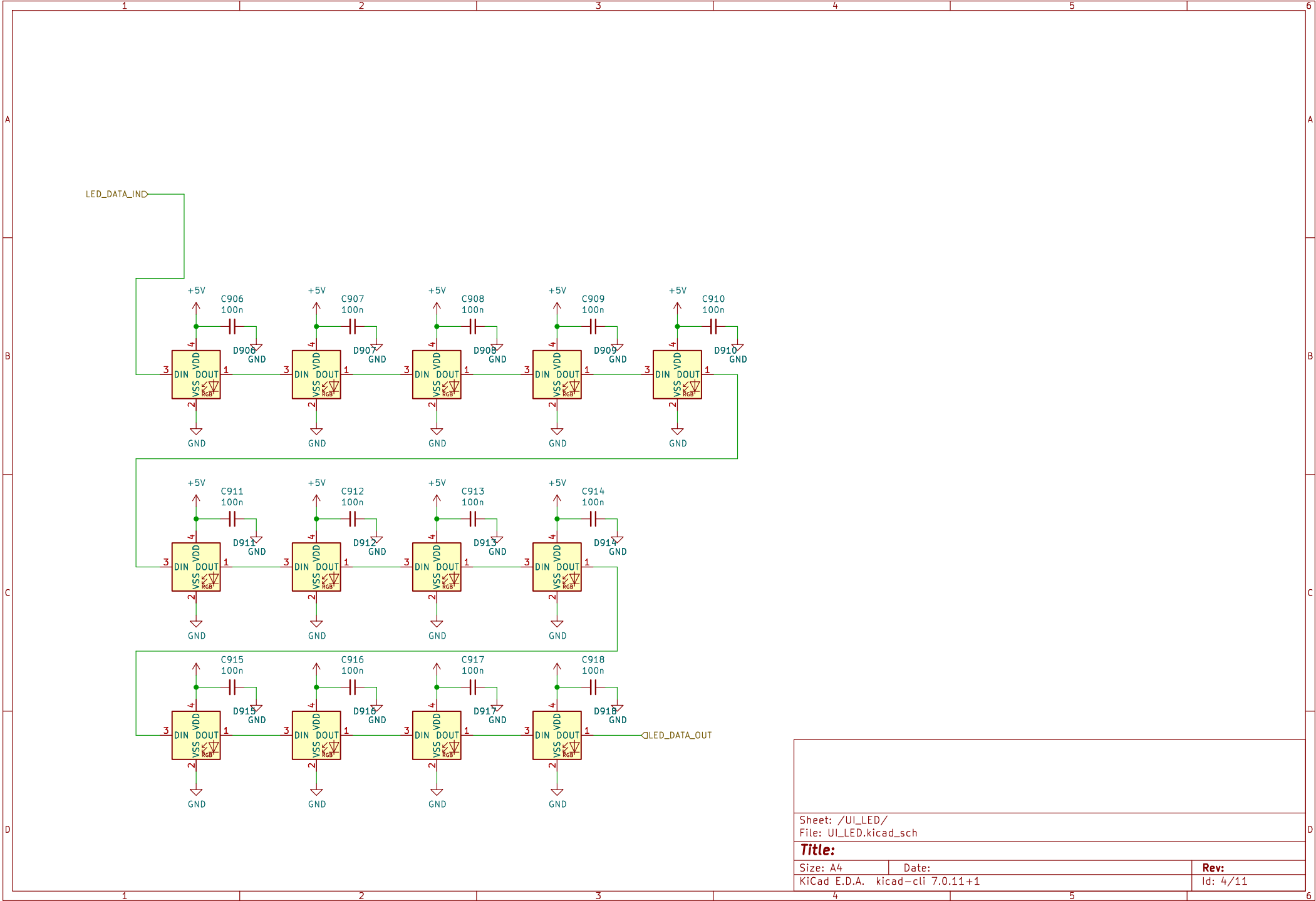
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File: UI\_BUTTON.kicad\_sch

**Title:**

Size: A4  
KiCad E.D.A. kicad-cli 7.0.11+1

Date:

Rev:  
Id: 3/11

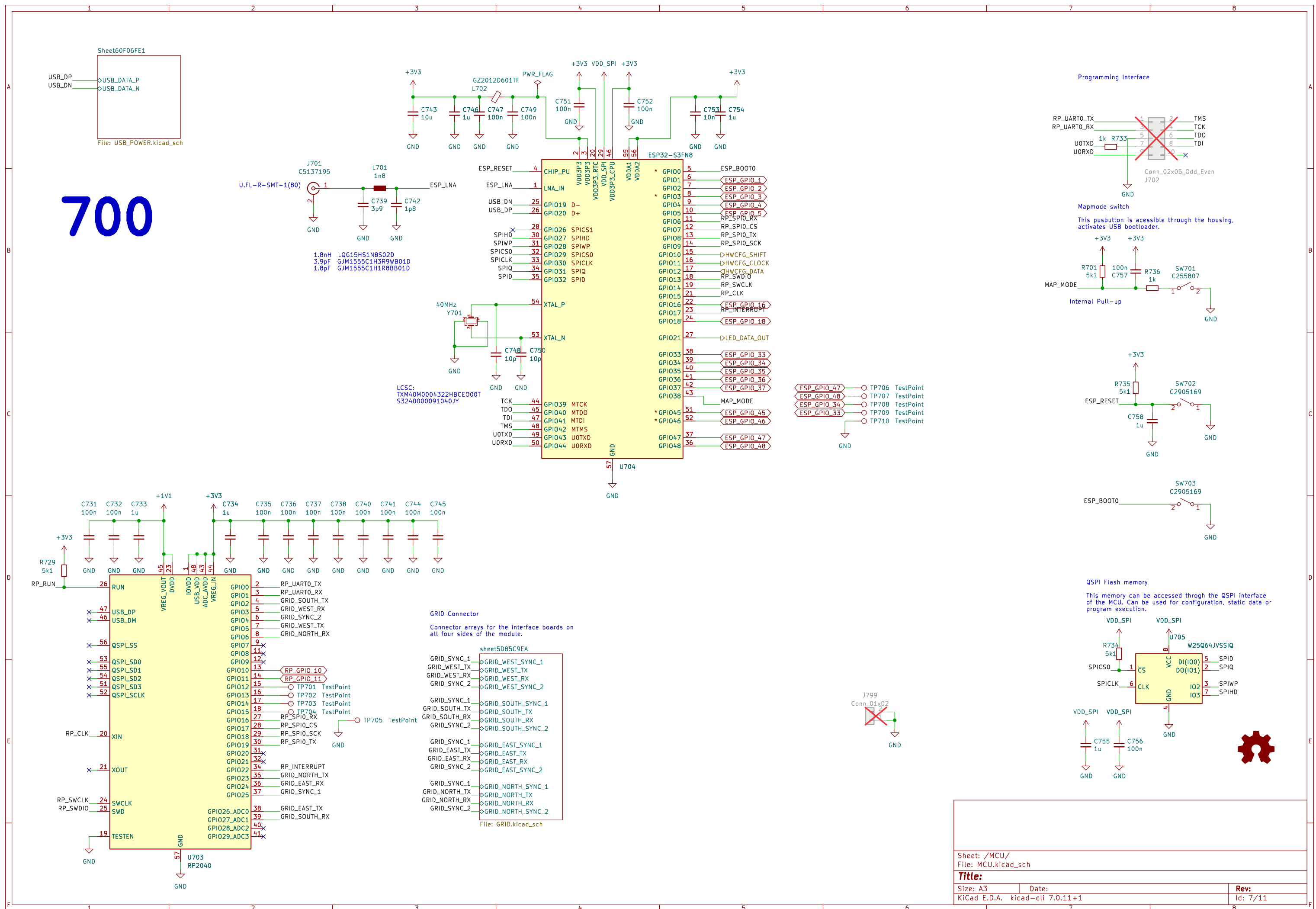


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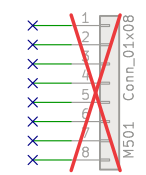


# 500

GRID Connector  
Bi-Directional Data  
2x SYNC



Board Mounting Pattern



Sheet: /MCU/sheet5D85C9EA/ File: GRID.kicad_sch		
<b>Title:</b>		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad-cli 7.0.11+1		Id: 8/11



**600**

**ESD Diodes**  
ESD protection for all of the externally accessible nets.

**+3V3 LDO Regulators**  
Regulators for generating independent power rails for the microcontroller and the user interface.

**Components and Connections:**

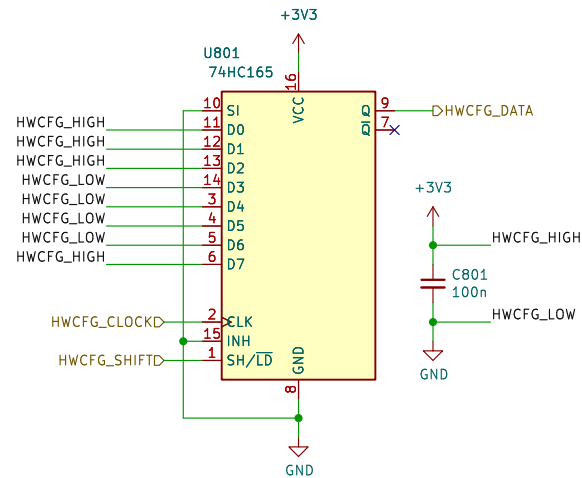
- J601 (TYPE-C-32-M-12):** USB Type-C connector. Pins A9B4, A4B9, A5, B5, A7, B7, A6, B6, A8, BB, A1B12, A12B1, and shields S1, S2, S3, S4 are shown.
- U601 (C5451661):** ESD protection diodes for USB\_DATA\_N, USB\_DATA\_P, and VBUS.
- U602 (LN1134A332MR-G):** +3V3 LDO regulator. Input is VBUS +5V, output is +3V3. Includes EN pin and GND connections.
- Passive Components:**
  - Capacitors:** C601 (1u), C602 (1u), C603 (4n7), L601 (GZZ012D601TF).
  - Resistors:** R601 (5k1), R602 (5k1), R603 (1M).
- Other Labels:** PWR\_FLAG, VBUS, USB\_DATA\_N, USB\_DATA\_P, GND, TP601, TP602, TP603, TP604, TP605, UI.

**Sheet: /MCU/Sheet60F06FE1/  
File: USB\_POWER.kicad\_sch**

Title:		Rev:
Size: A4	Date:	Id: 9/11
KiCad E.D.A. kicad-cli 7.0.11+1		

<b>Title:</b>		
Size: A4	Date:	<b>Rev:</b>
KiCad E.D.A. kicad-cli 7.0.11+1		Id: 9/11

800



#### Board Identification

Grid firmware can identify the hardware and the board revision through 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)

D0: MODEL (LSB)  
D1: MODEL  
D2: MODEL  
D3: MODEL (MSB)  
D4: REVISION (LSB)  
D5: REVISION  
D6: REVISION  
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:

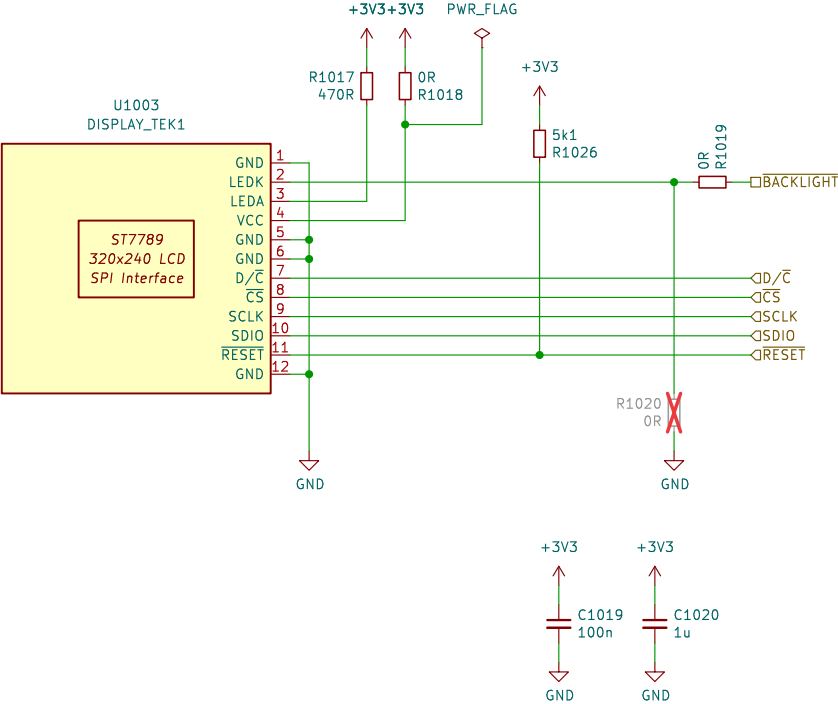
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KiCad E.D.A. kicad-cli 7.0.11+1

Date:

Rev:

Id: 10/11

1000



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

**Title:**

Size: A4  
KiCad E.D.A. kicad-cli 7.0.11+1

Date:

Rev:  
Id: 11/11