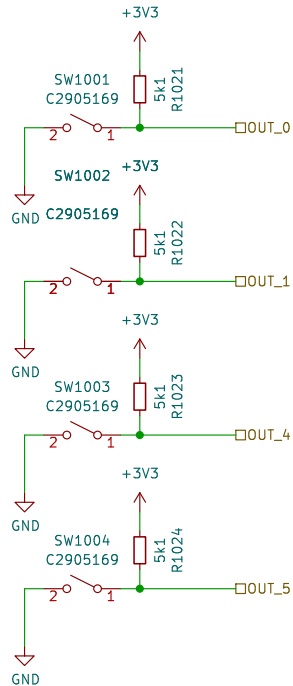
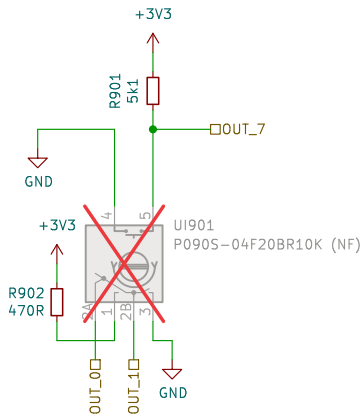
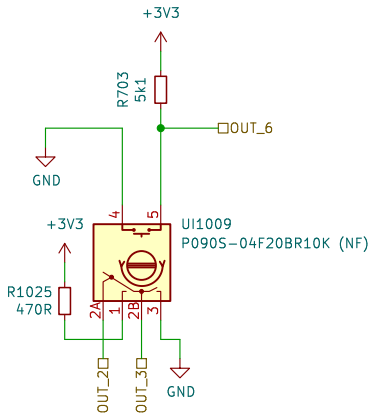
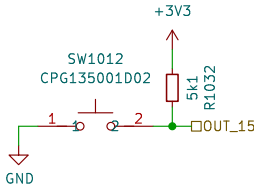
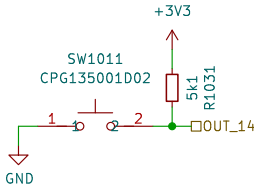
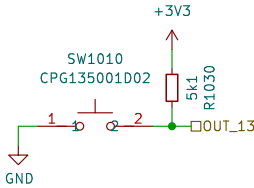
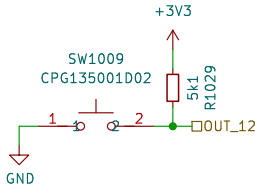
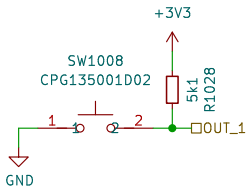
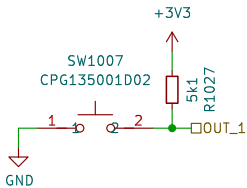
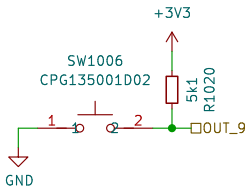
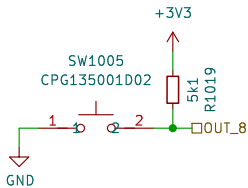


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Simulation:  
<http://tinyurl.com/y229mt4>



Sheet: /UI_BUTTON/ File: UI_BUTTON.kicad_sch		
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Size: A4	Date:	Rev:
KiCad E.D.A. kicad-cli 7.0.11+1		Id: 3/11

# 900



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

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Size: A4  
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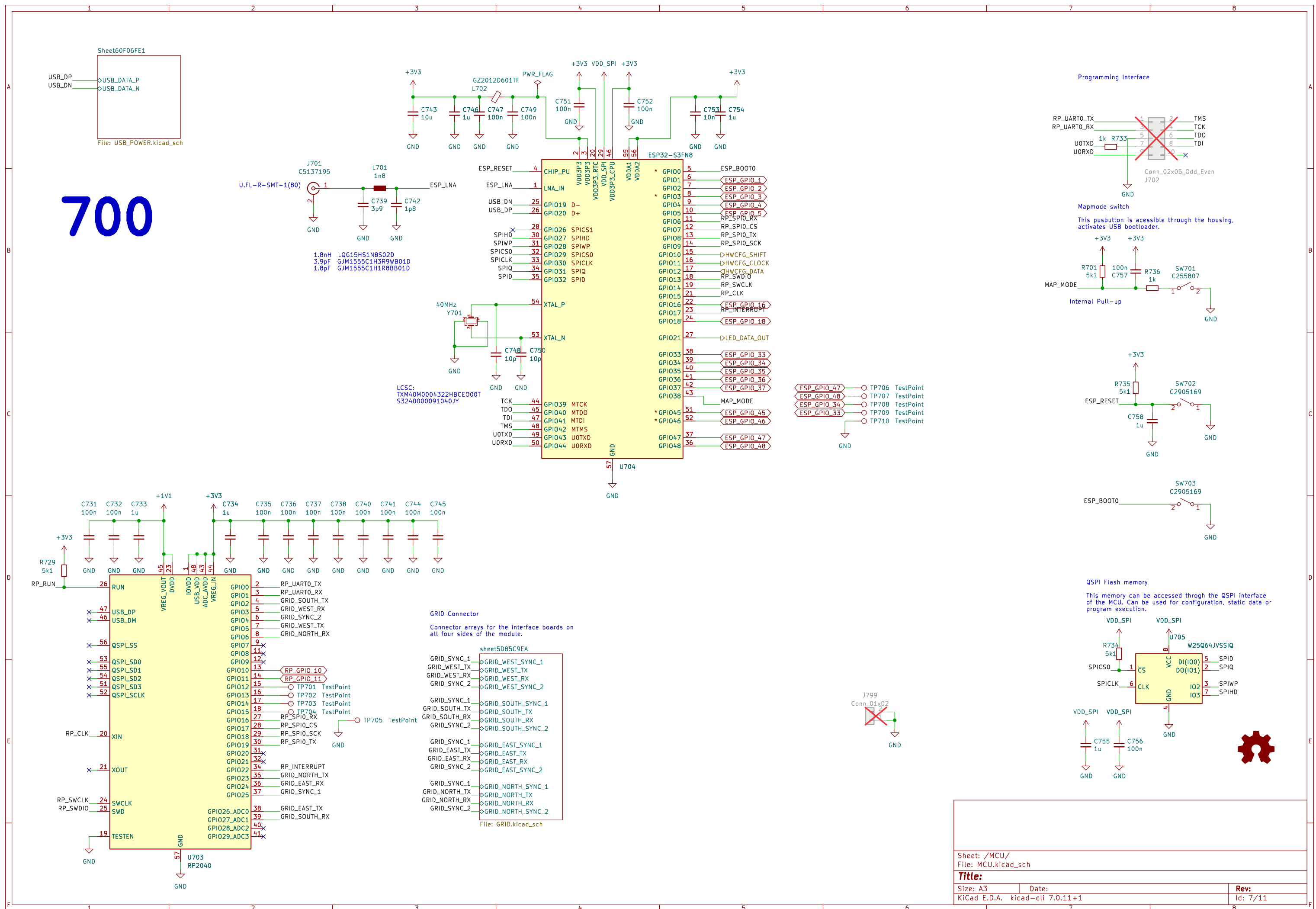
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Id: 4/11

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# 500

GRID Connector  
Bi-Directional Data  
2x SYNC

Board Mounting Pattern



Sheet: /MCU/sheet5D85C9EA/ File: GRID.kicad_sch		
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**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:**

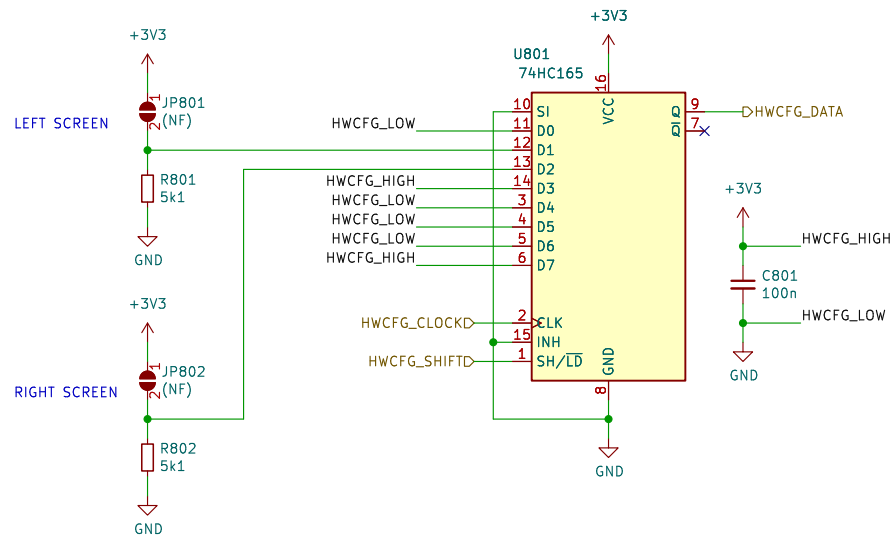
- J601 (TYPE-C-32-M-12):** USB Type-C connector. Pins A9B4, A4B9, A5, B5, A7, B7, A6, B6, A8, BB, A1B12, A12B1, S1, S2, S3, S4 are shown. Shield pins are connected to ground via S1, S2, S3, S4.
- U601 (C5451661):** ESD protection diodes for USB\_DATA\_N, USB\_DATA\_P, and VBUS.
- U602 (LN1134A332MR-G):** +3V3 LDO regulator. Input is VBUS +5V, output is +3V3. EN pin is connected to PWR\_FLAG. GND pin is connected to ground.
- Passive Components:**
  - Capacitors:** C603 (4n7), C601 (1u), C602 (1u).
  - Resistors:** R601 (5k1), R602 (5k1), R603 (1M).
- Power Rails:** VBUS, USB\_DATA\_N, USB\_DATA\_P, PWR\_FLAG, +3V3, GND.

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

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

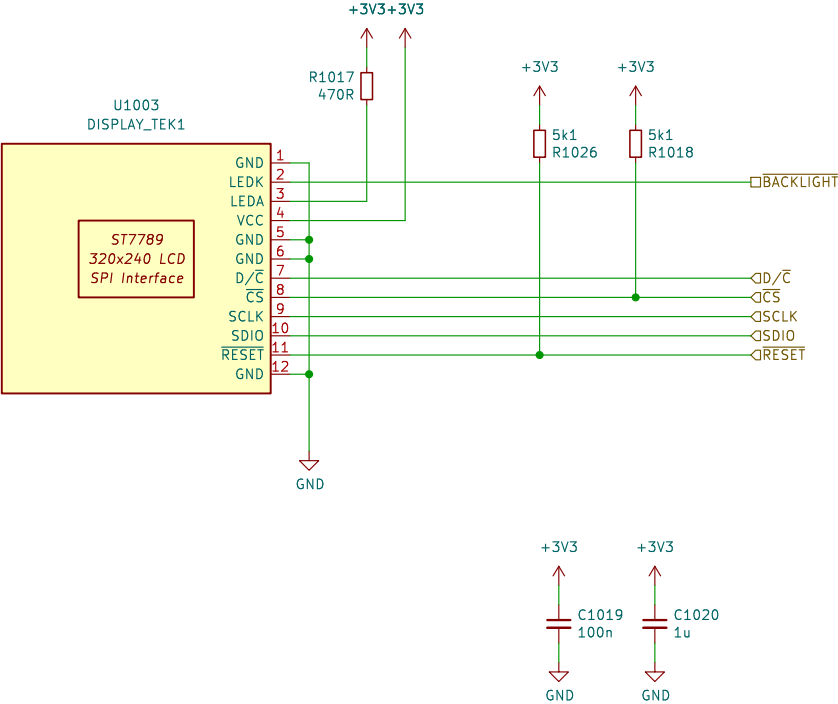
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KiCad E.D.A. kicad-cli 7.0.11+1

Date:

Rev:

Id: 10/11

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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