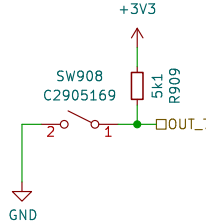
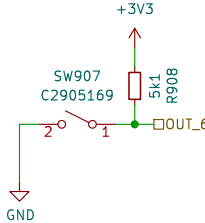
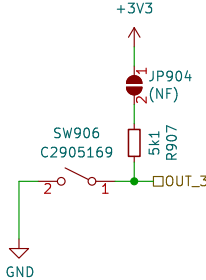
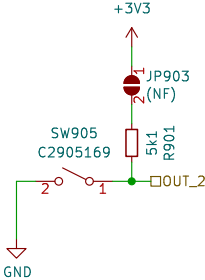
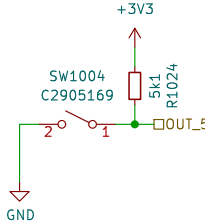
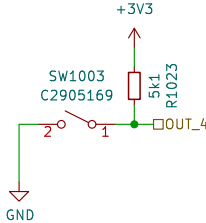
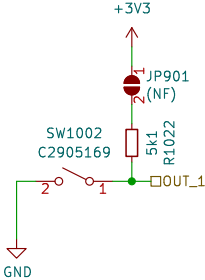
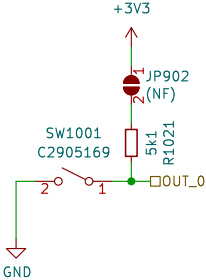
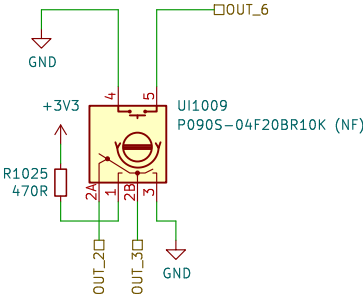
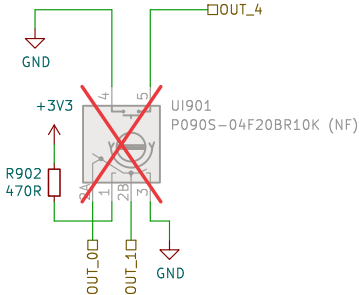


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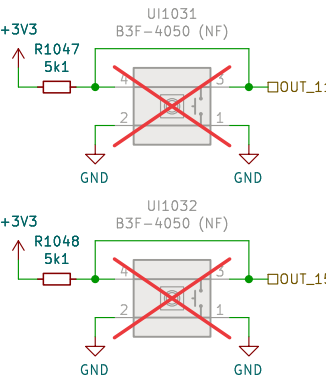
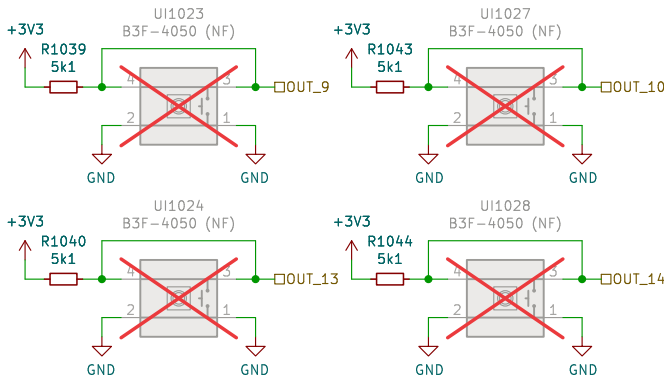
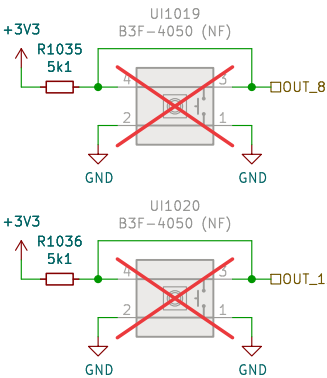
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Simulation:
<http://tinyurl.com/y229mty4>



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900



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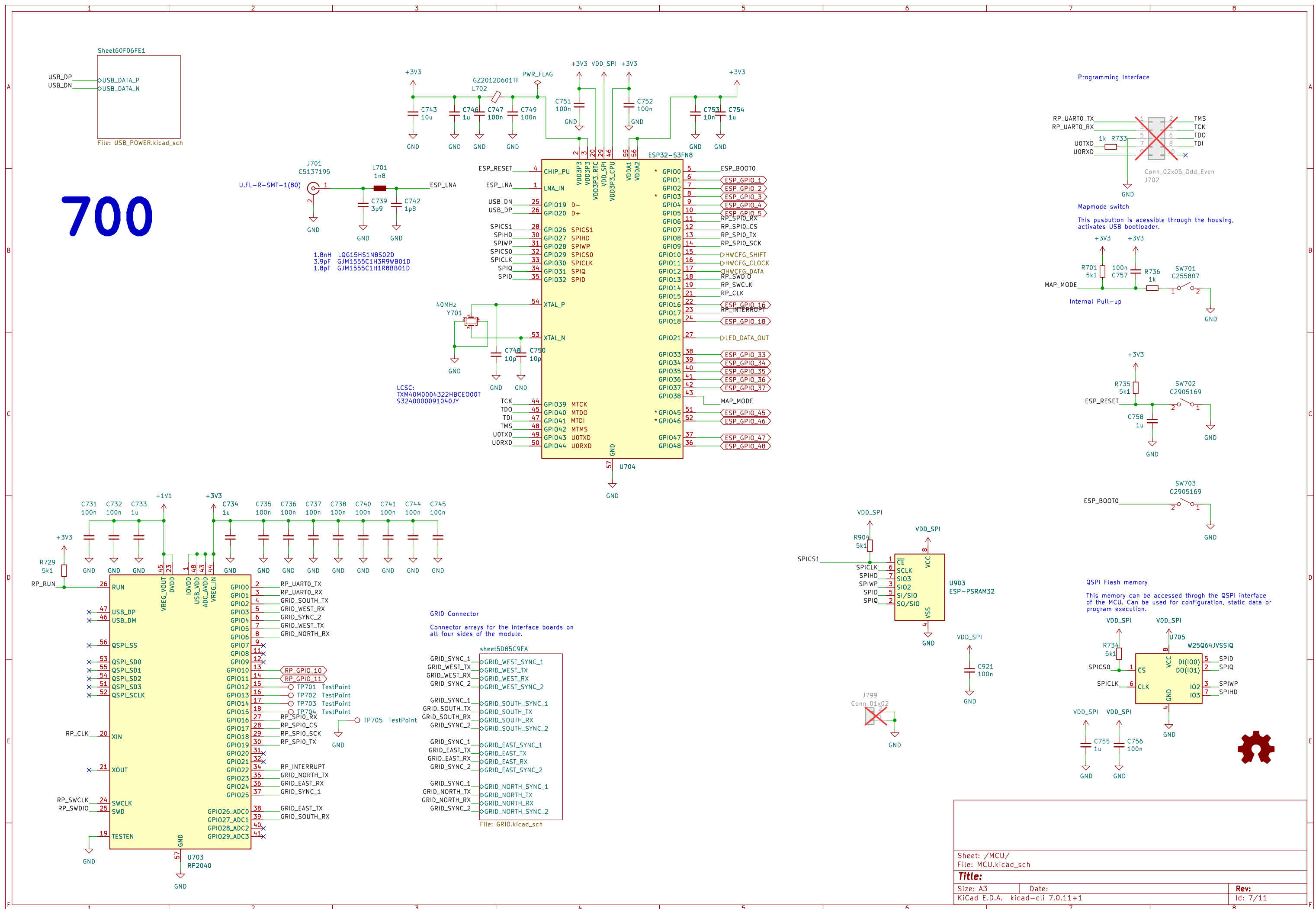
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500

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:** C601 (1uF), C602 (1uF), C603 (4nF), C604 (1uF).
 - Resistors:** R601 (5k1), R602 (5k1), R603 (1M).
- Power Rails:** VBUS, +5V, +3V3, GND, PWR_FLAG, USB_DATA_N, USB_DATA_P.

**Sheet: /MCU/Sheet60F06FE1/
File: USB_POWER.kicad_sch**

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ESD protection for all of the externally accessible nets.

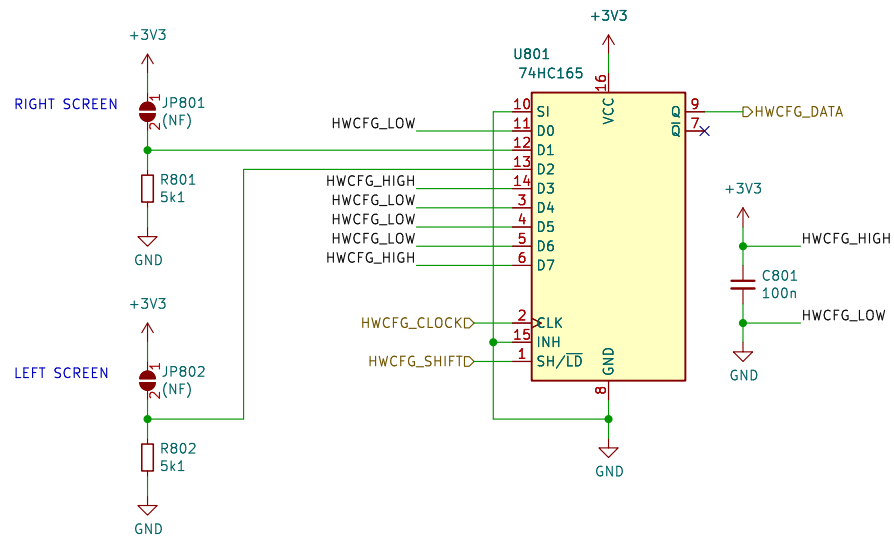


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Board Identification

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/
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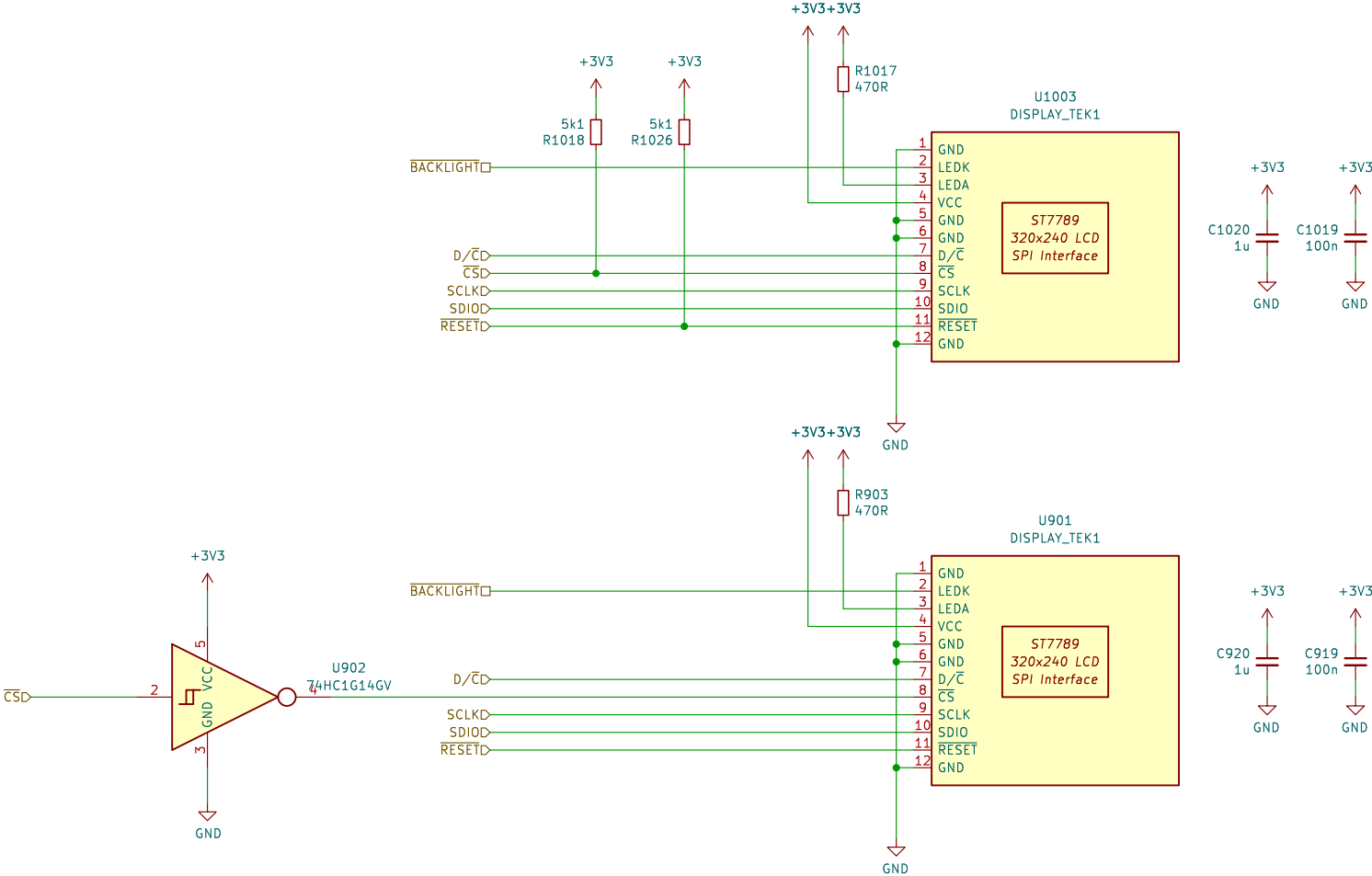
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Sheet: /UI_DISPLAY/ File: UI_DISPLAY.kicad_sch		
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