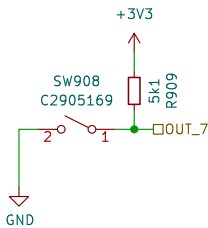
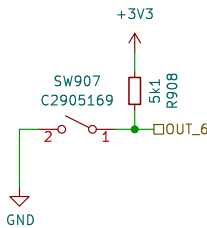
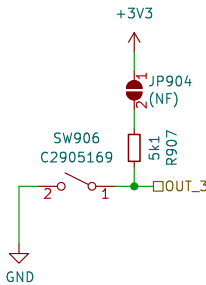
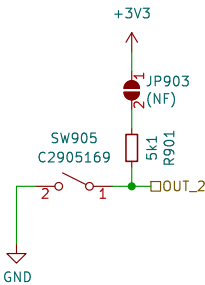
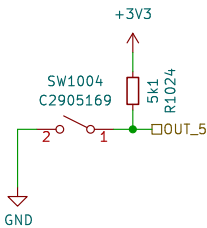
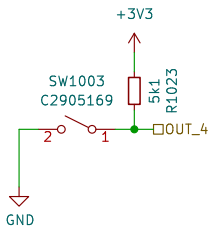
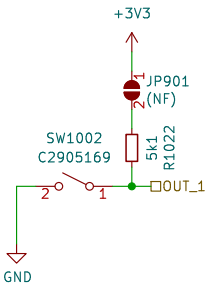
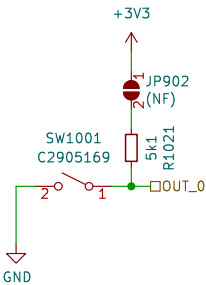
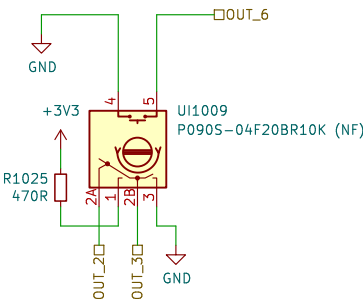
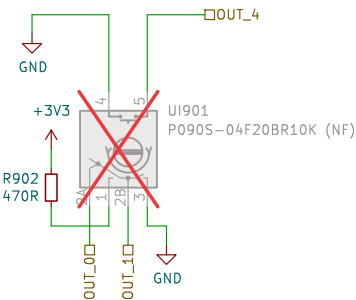


1000



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File: UI_POT_BTN.kicad_sch

Title:

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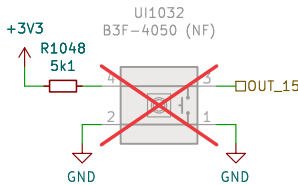
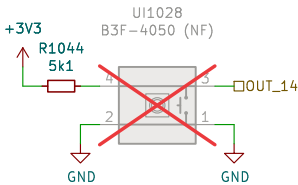
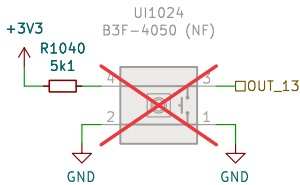
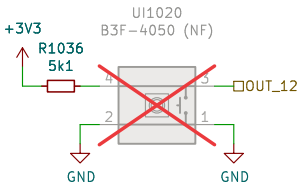
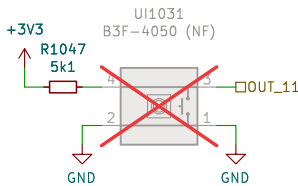
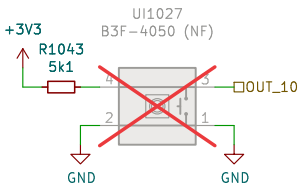
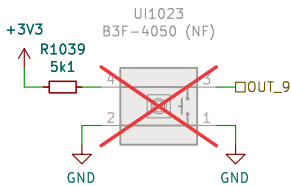
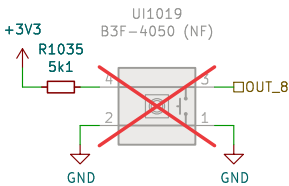
KiCad E.D.A. kicad-cli 7.0.11+1

Rev:

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



Sheet: /UI_BUTTON/
File: UI_BUTTON.kicad_sch

Title:

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

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Sheet: /UI_LED/
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Title:

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

Date:

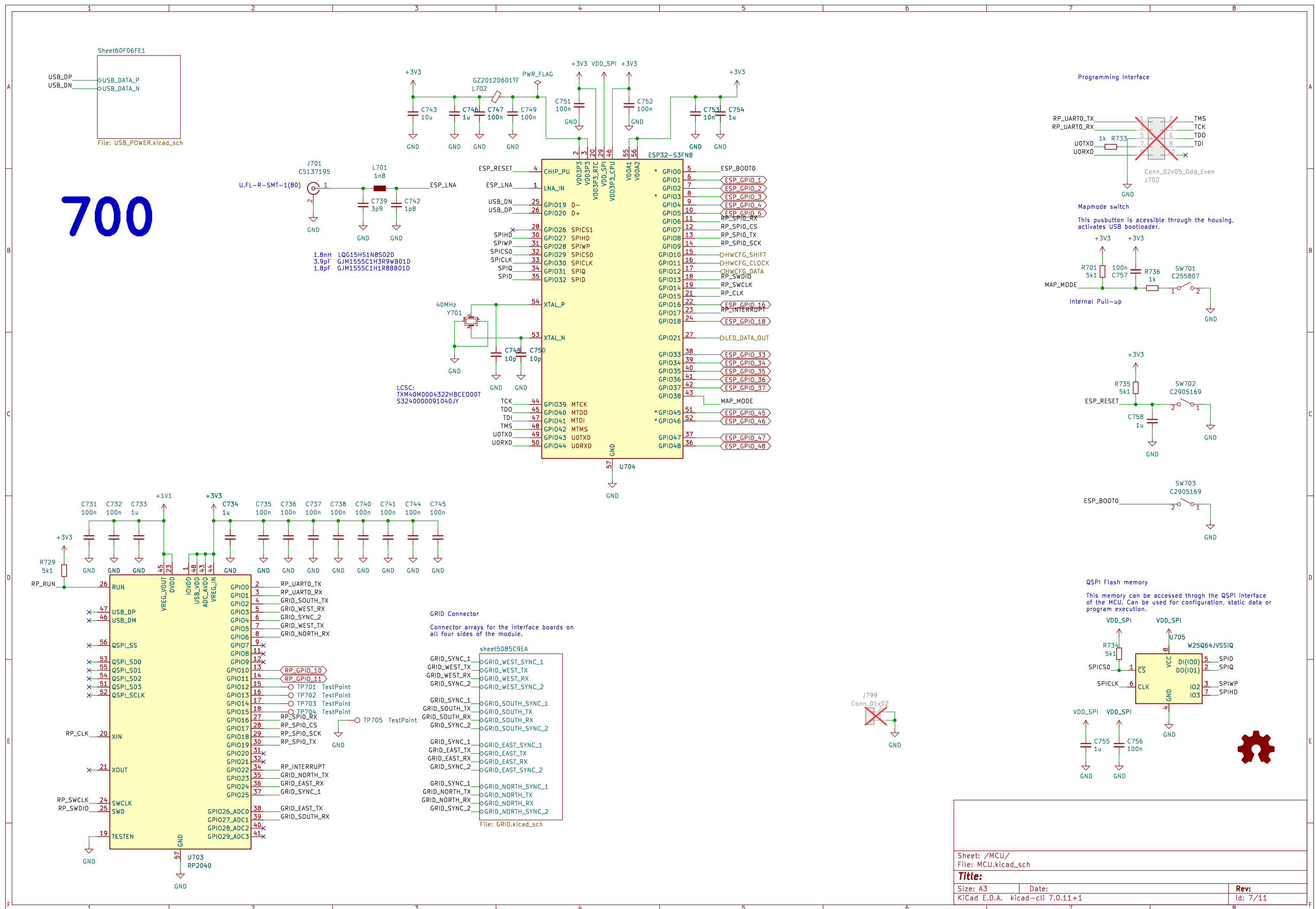
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GRID Connector
Bi-Directional Data
2x SYNC



Board Mounting Pattern



Sheet: /MCU/sheet5D85C9EA/ File: GRID.kicad_sch		
Title:		
Size: A4	Date:	Rev:
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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.



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

Title:

Size: A4

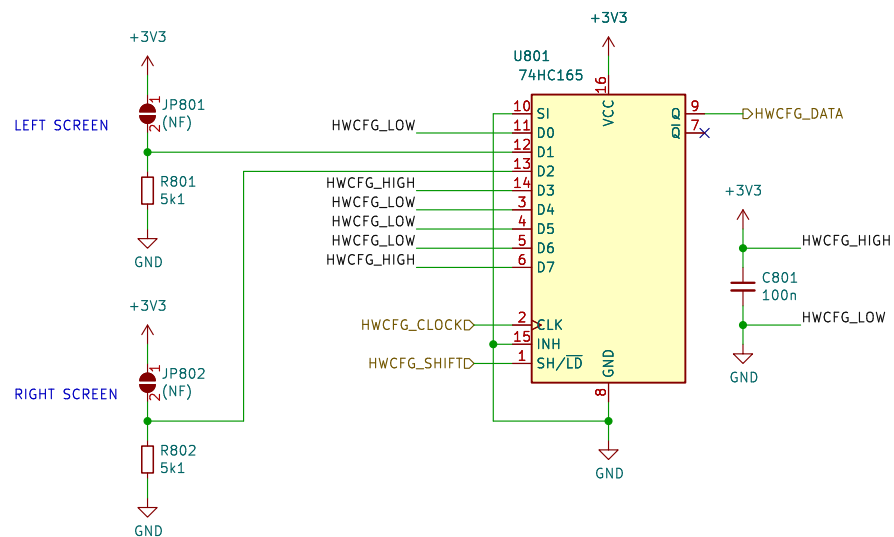
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Rev:

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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:

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

Date:

Rev:

Id: 10/11

The schematic diagram illustrates the electrical connections for a 1000 display module. It features two identical display units, U901 and U1003, both labeled as "DISPLAY_TEK1". Each unit contains an "ST7789 320x240 LCD SPI Interface".

Power Supply Connections:

- U901:** VCC (pin 4) and LEDK (pin 2) are connected to +3V3. GND (pin 1) and LEDA (pin 3) are connected to GND. A 470R resistor (R903) is connected between +3V3 and GND.
- U1003:** VCC (pin 4) and LEDK (pin 2) are connected to +3V3. GND (pin 1) and LEDA (pin 3) are connected to GND. A 470R resistor (R1017) is connected between +3V3 and GND.

Control and Data Connections:

- BACKLIGHT:** A common line connected to the LEDK (pin 2) of both display units.
- CS:** Connected to pin 8 of both display units.
- SCLK:** Connected to pin 9 of both display units.
- SDIO:** Connected to pin 10 of both display units.
- RESET:** Connected to pin 11 of both display units.
- D/CE:** Connected to pin 7 of both display units.

Capacitors:

- C920 (1uF):** Connected to +3V3 and GND.
- C919 (100nF):** Connected to +3V3 and GND.
- C1020 (1uF):** Connected to +3V3 and GND.
- C1019 (100nF):** Connected to +3V3 and GND.

Inverter (U902):

- U902 (74HC1G14GV):** A 1:1 inverter. Its input (pin 2) is connected to CS. Its output (pin 1) is connected to D/CE.

Resistors:

- R1018 (5k1):** Connected to +3V3 and CS.
- R1026 (5k1):** Connected to +3V3 and CS.

Legend:

- U901, U1003:** DISPLAY_TEK1
- U902:** 74HC1G14GV
- ST7789:** 320x240 LCD SPI Interface

Sheet Information:

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