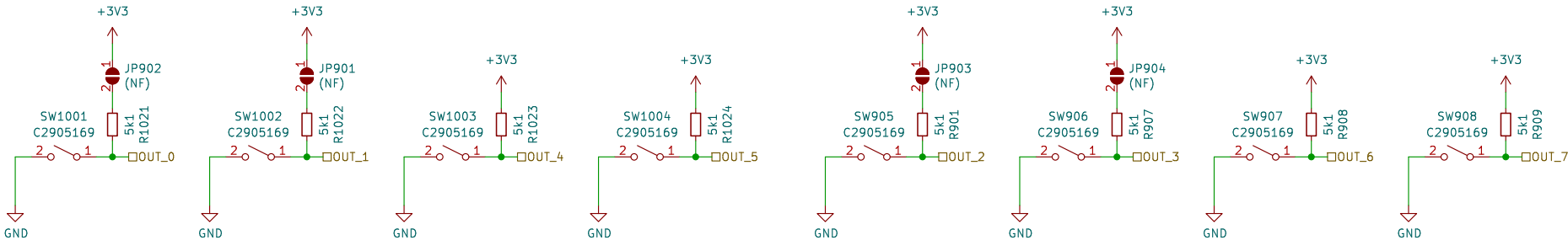


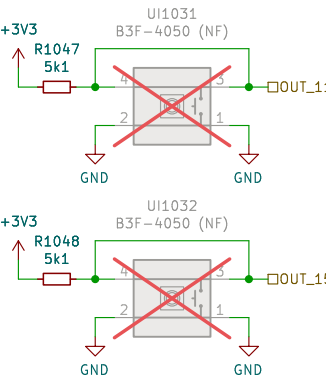
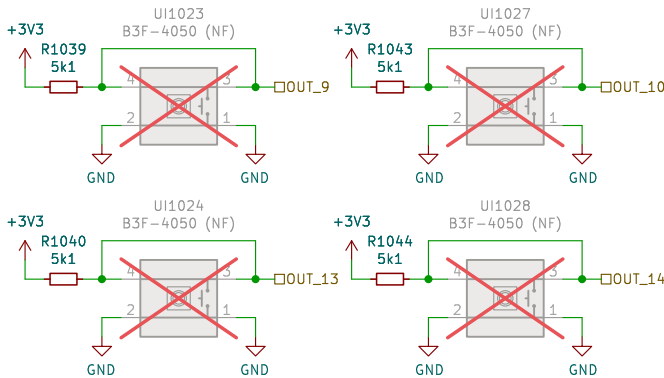
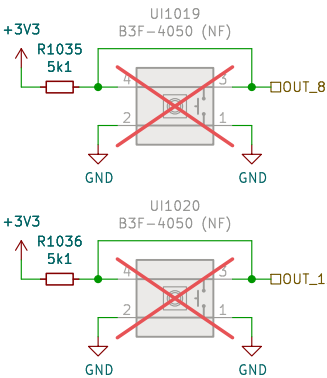
1000



Sheet: /UI_POT_BTN/ File: UI_POT_BTN.kicad_sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. 8.0.3		Id: 2/11

1000

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



Sheet: /UI_BUTTON/ File: UI_BUTTON.kicad_sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. 8.0.3	Id: 3/11	

900



Sheet: /UI_LED/
File: UI_LED.kicad_sch

Title:

Size: A4

Date:

KiCad E.D.A. 8.0.3

Rev:

Id: 4/11

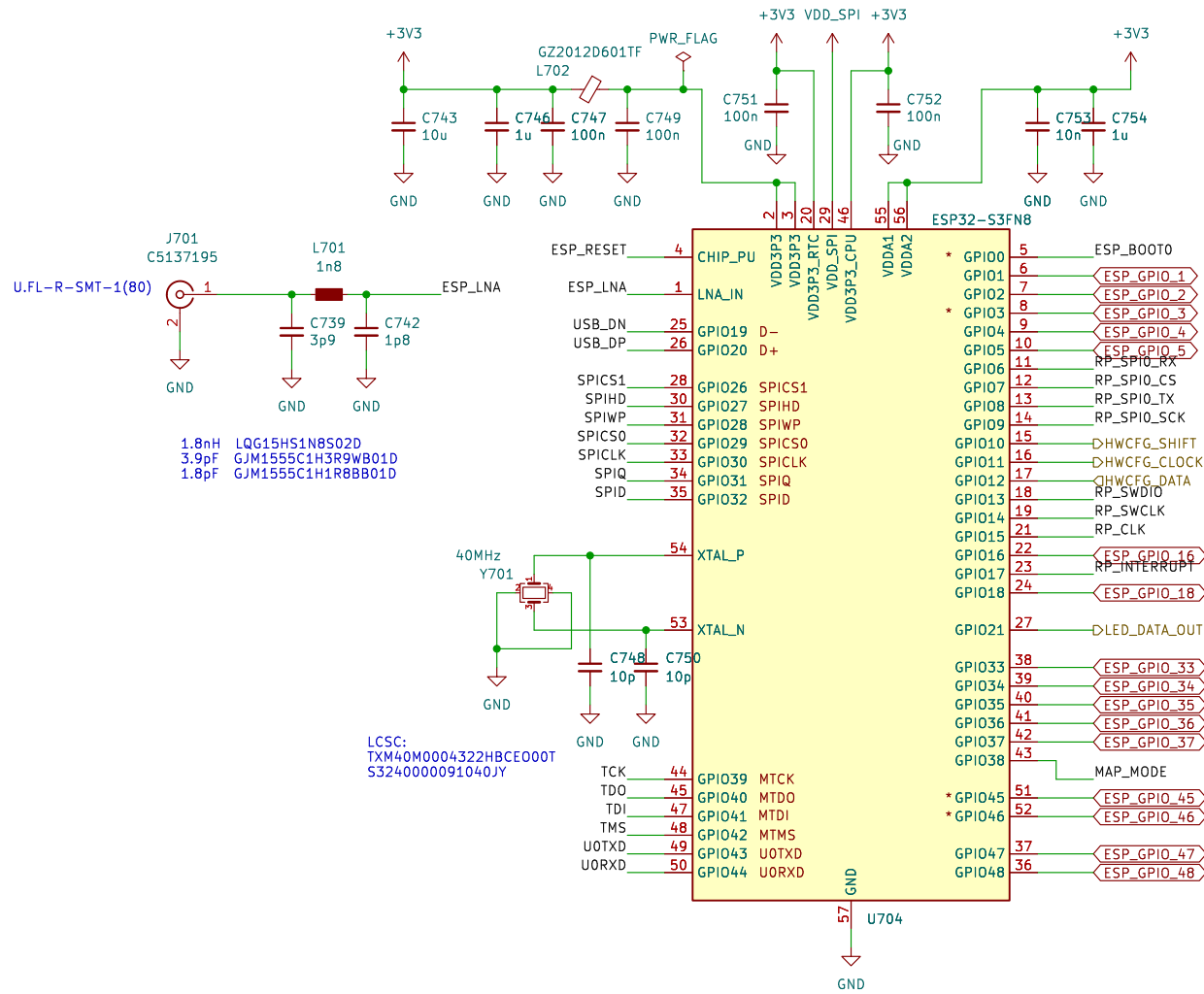
1000



1000



700



500

GRID Connector
Bi-Directional Data
2x SYNC

Board Mounting Pattern



Sheet: /MCU/sheet5D85C9EA/ File: GRID.kicad_sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. 8.0.3	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.



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

Title:

Size: A4

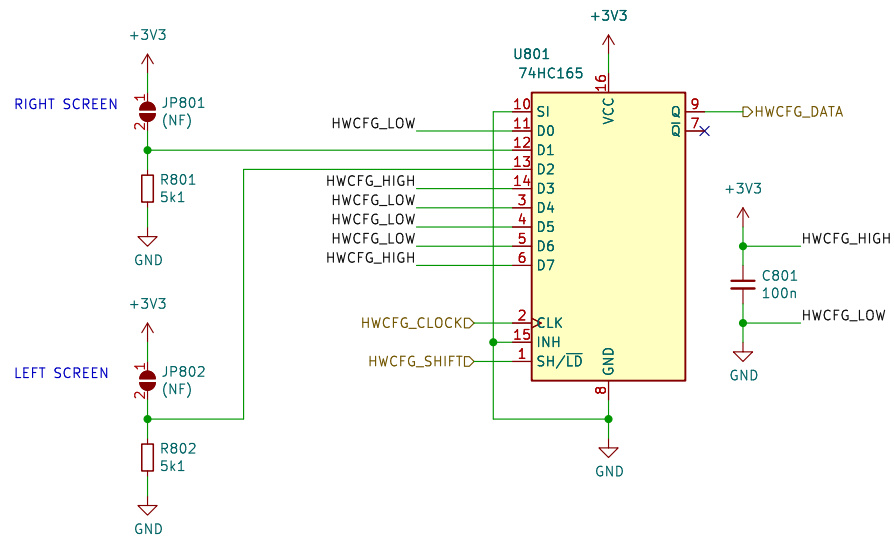
Date:

KiCad E.D.A. 8.0.3

Rev:

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:

Size: A4

Date:

KiCad E.D.A. 8.0.3

Rev:

Id: 10/11

1000

Schematic diagram of a display module showing two identical units, U1003 and U901, both labeled "DISPLAY_TEK1 (NF)". Each unit contains an "ST7789 320x240 LCD SPI Interface".

The diagram illustrates the electrical connections for the display module, including power supply, backlight, and data/control signals.

Power Supply:

- U1003:** VCC is connected to +3V3. GND is connected to GND. A 470R resistor (R1017) is connected between +3V3 and GND.
- U901:** VCC is connected to +3V3. GND is connected to GND. A 470R resistor (R903) is connected between +3V3 and GND.

Backlight:

- U1003:** BACKLIGHT is connected to +3V3 through a 5k1 resistor (R1018).
- U901:** BACKLIGHT is connected to +3V3 through a 5k1 resistor (R1026).

Data/Control Signals:

- U1003:** D/C, CS, SCLK, SDIO, and RESET are connected to the corresponding pins of the ST7789 LCD.
- U901:** D/C, CS, SCLK, SDIO, and RESET are connected to the corresponding pins of the ST7789 LCD.

Capacitors:

- U1003:** C1020 (1u) and C1019 (100n) are connected between +3V3 and GND.
- U901:** C920 (1u) and C919 (100n) are connected between +3V3 and GND.

Logic Inverter:

- U902 (74HC1G14GV):** The input is connected to CS of U901. The output is connected to CS of U1003.

The diagram is marked with a large red "X" and a "1000" in the top left corner.

Sheet: /UI_DISPLAY/		
File: UI_DISPLAY.kicad_sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. 8.0.3		Id: 11/11

Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. 8.0.3		Id: 11/11