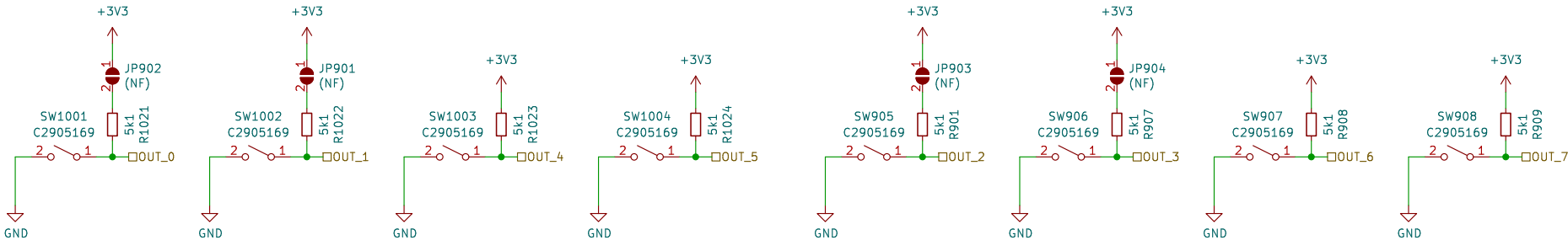


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Sheet: /UI_POT_BTN/
File: UI_POT_BTN.kicad_sch

Title:

Size: A4

Date:

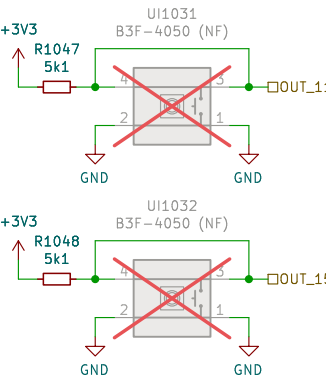
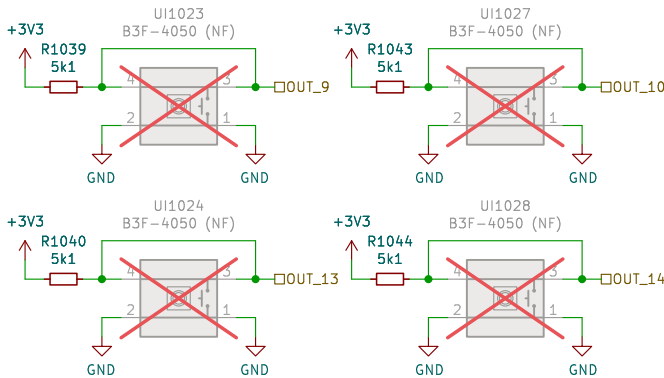
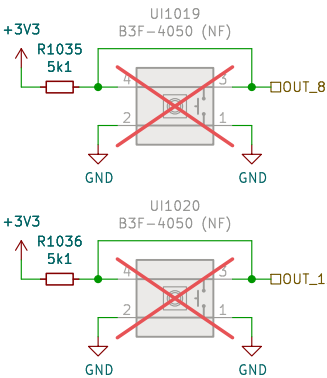
KiCad E.D.A. 8.0.3

Rev:

Id: 2/11

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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

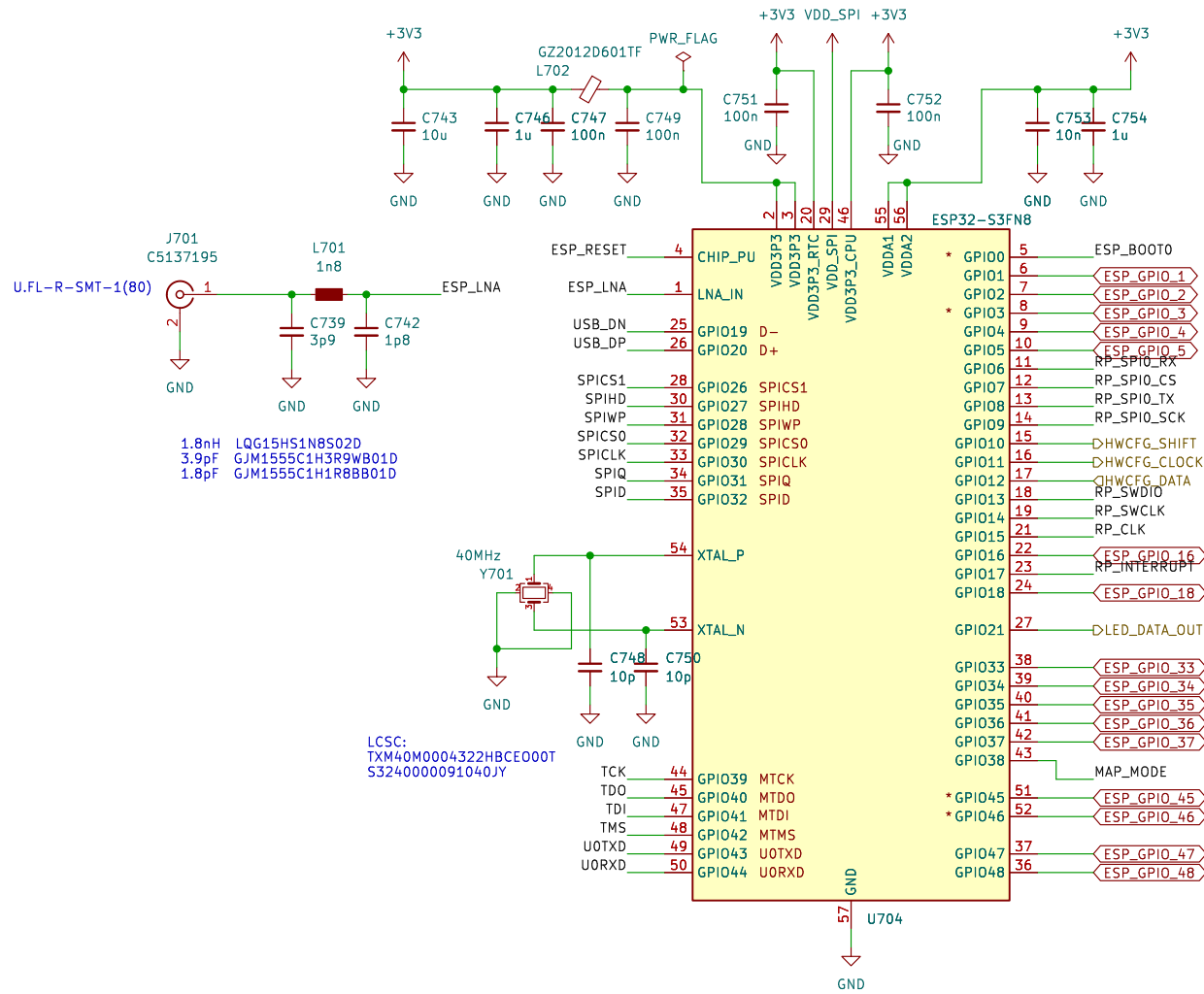
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700



500

GRID Connector
Bi-Directional Data
2x SYNC

Board Mounting Pattern

M501 Conn_01x08

J501 Conn_01x04

J502 Conn_01x04

J503 Conn_01x04

J504 Conn_01x04

J505 Conn_01x04

J506 Conn_01x04

J507 Conn_01x04

J508 Conn_01x04

GRID_NORTH_SYNC_2

GRID_NORTH_RX

GRID_NORTH_TX

GRID_NORTH_SYNC_1

GRID_EAST_SYNC_2

GRID_EAST_RX

GRID_EAST_TX

GRID_EAST_SYNC_1

GRID_SOUTH_SYNC_2

GRID_SOUTH_RX

GRID_SOUTH_TX

GRID_SOUTH_SYNC_1

GRID_WEST_SYNC_2

GRID_WEST_RX

GRID_WEST_TX

GRID_WEST_SYNC_1

+5V

GND

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

Title:

Size: A4 Date: Rev:

KiCad E.D.A. 8.0.3 Id: 8/11

Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. 8.0.3		Id: 8/11

Size: A4	Date:	Rev:
KiCad E.D.A. 8.0.3		Id: 8/11

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3	Id: 8/11
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Id: 8/11

6

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

The schematic shows a 74HC165 counter-chip (U801) configured as a shift register. It is connected to two screens via jumper pins (JP801, JP802) and resistors (R801, R802). The chip's output (Q) is connected to HWCFG_DATA. The chip also has inputs for HWCFG_LOW, HWCFG_HIGH, HWCFG_CLOCKD, and HWCFG_SHIFTD. Power is supplied by +3V3 and ground.

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:	Rev:
KiCad E.D.A. 8.0.3		Id: 10/11

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.

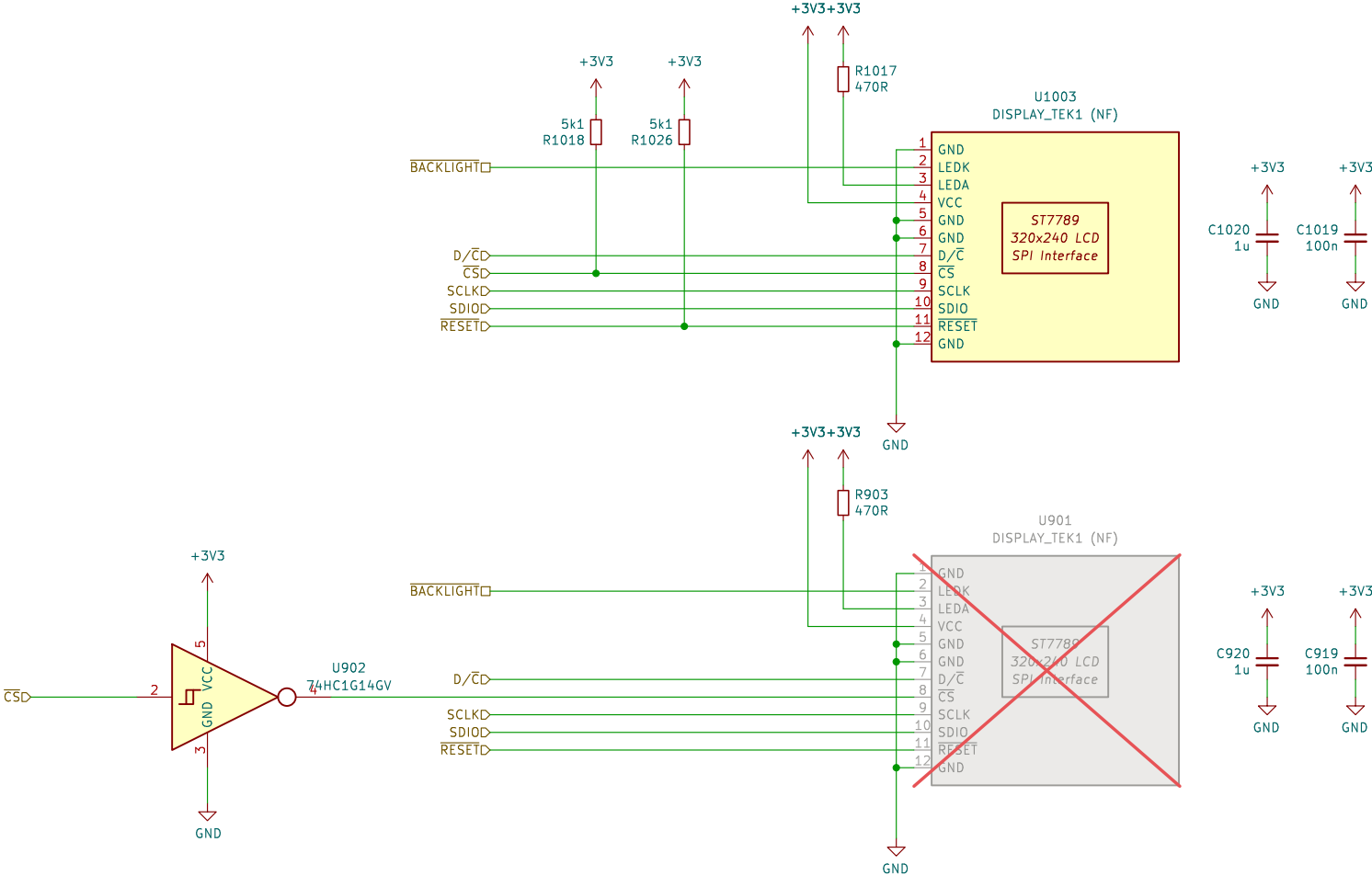
D0: MODEL (LSB)
D1: MODEL
D2: MODEL
D3: MODEL (MSB)
D4: REVISION (LSB)
D5: REVISION
D6: REVISION
D7: REVISION (MSB)

Po16	0000
Bo16	0001
PBF4	0010
EN16	0011
...	

```
RevA 0000
RevB 0001
RevC 0010
RevD 0011
...
```

Sheet: /HWCFG/		D
File: HWCFG.kicad_sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. 8.0.3		Id: 10/11

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