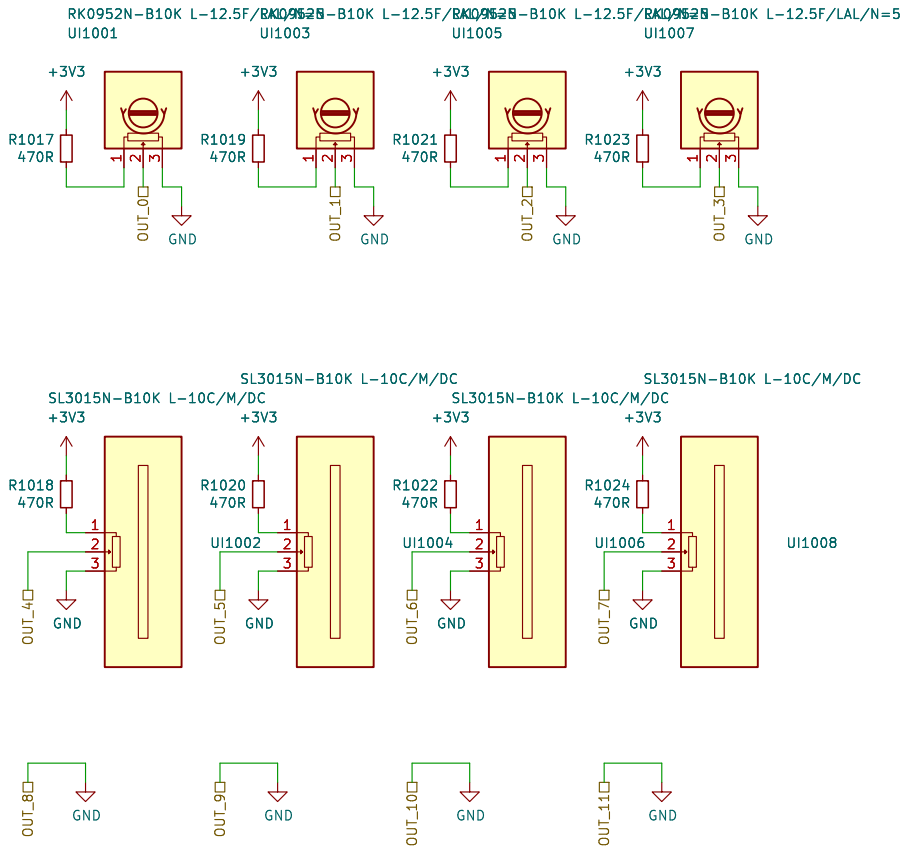


Common Sheets:
500 GRID
600 USB_POWER
700 MCU

Module Specific:
800 HWCFG
900 LED
1000 UI

Sheet: /		
File: PCBA--PBF4.kicad_sch		
Title:		
Size: A3	Date:	Rev:
KiCad E.D.A. 9.0.1	Id: 1/15	

1000



Sheet: /UI_POT/
File: UI_POT.kicad_sch

Title:

Size: A4

Date:

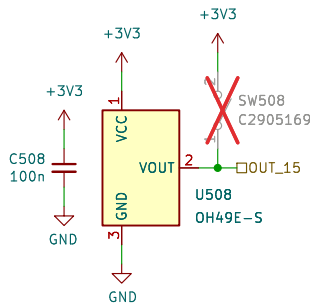
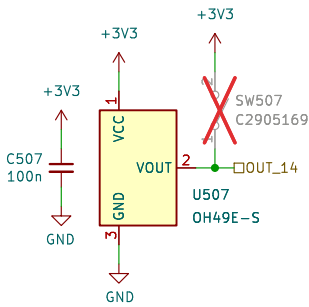
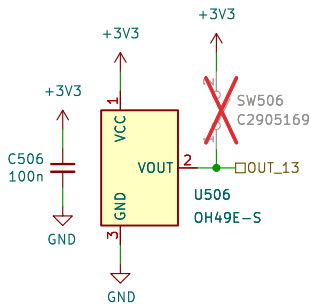
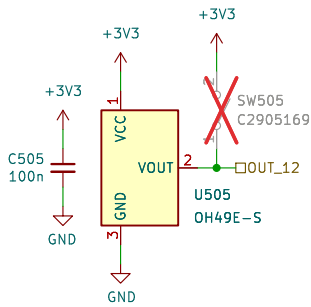
KiCad E.D.A. 9.0.1

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Id: 2/15

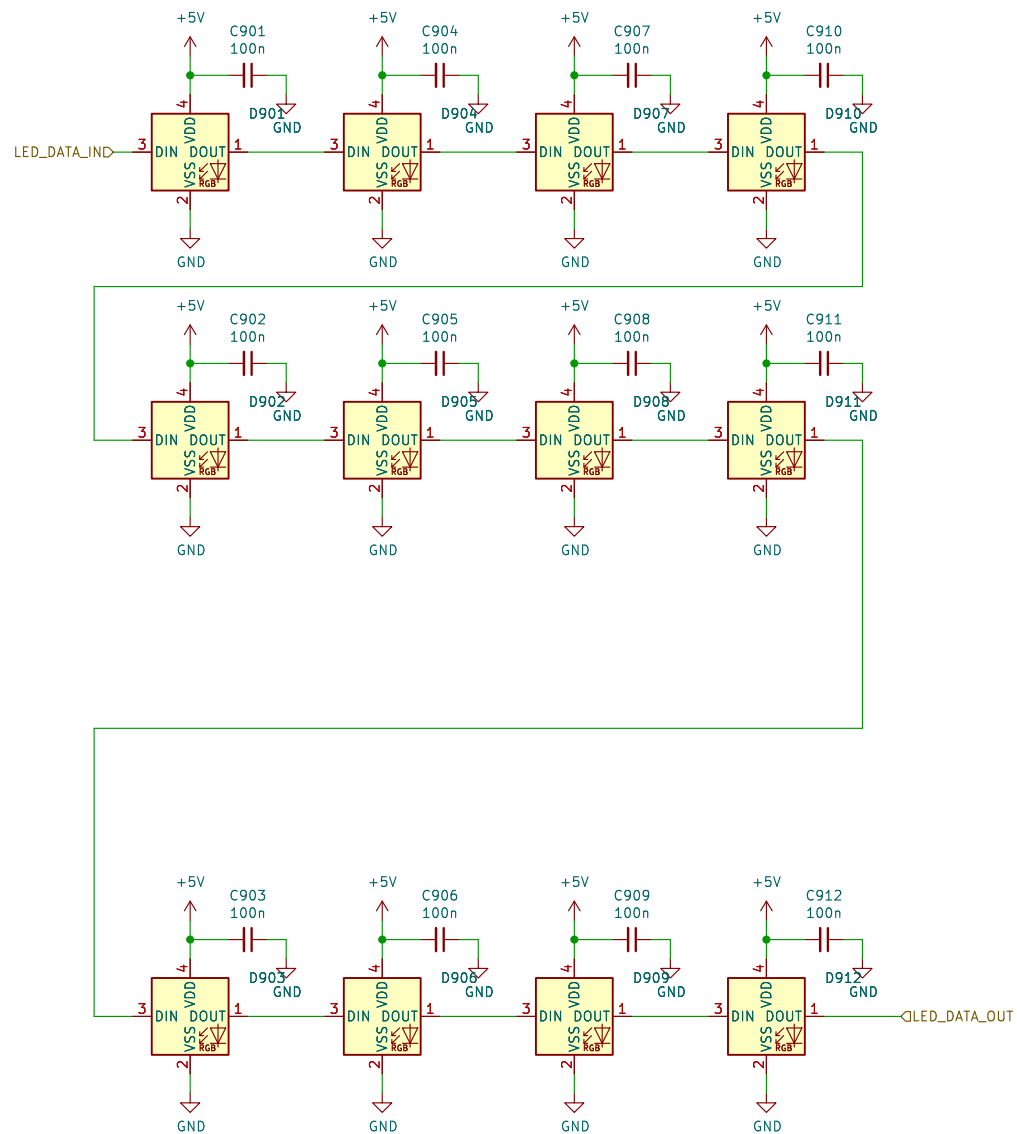
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Simulation:
<http://tinyurl.com/y229mty4>



Sheet: /UI_BUTTON/ File: UI_BUTTON.kicad_sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. 9.0.1	Id: 3/15	

900



Sheet: /UI_LED/
File: UI_LED.kicad_sch

Title:

Size: A4

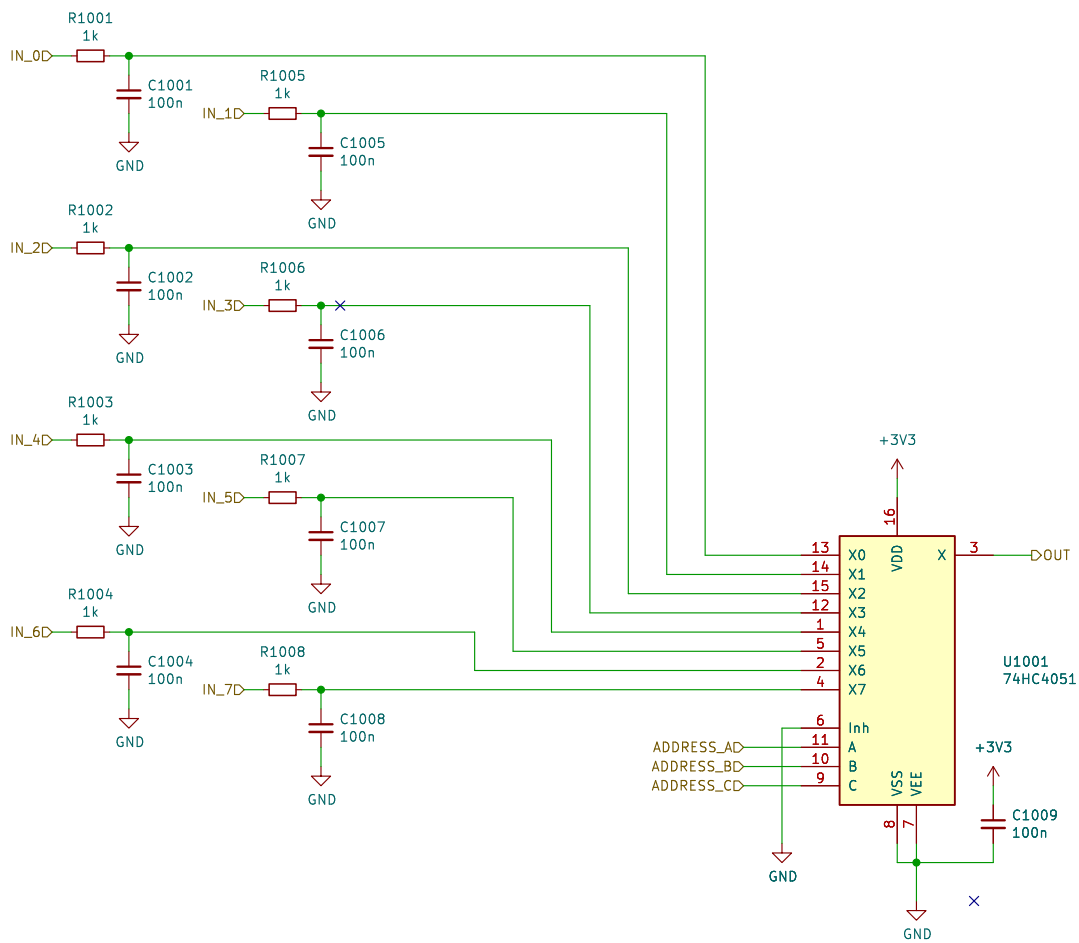
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KiCad E.D.A. 9.0.1

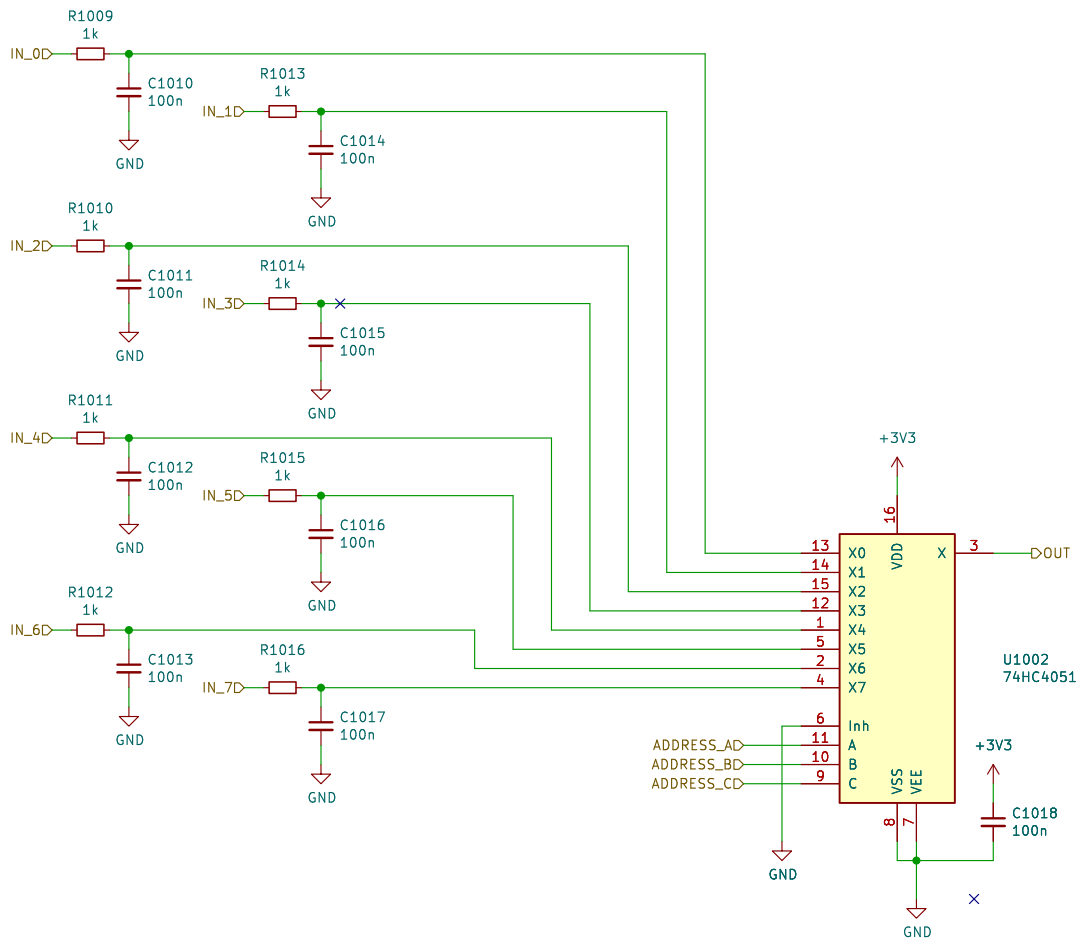
Rev:

Id: 4/15

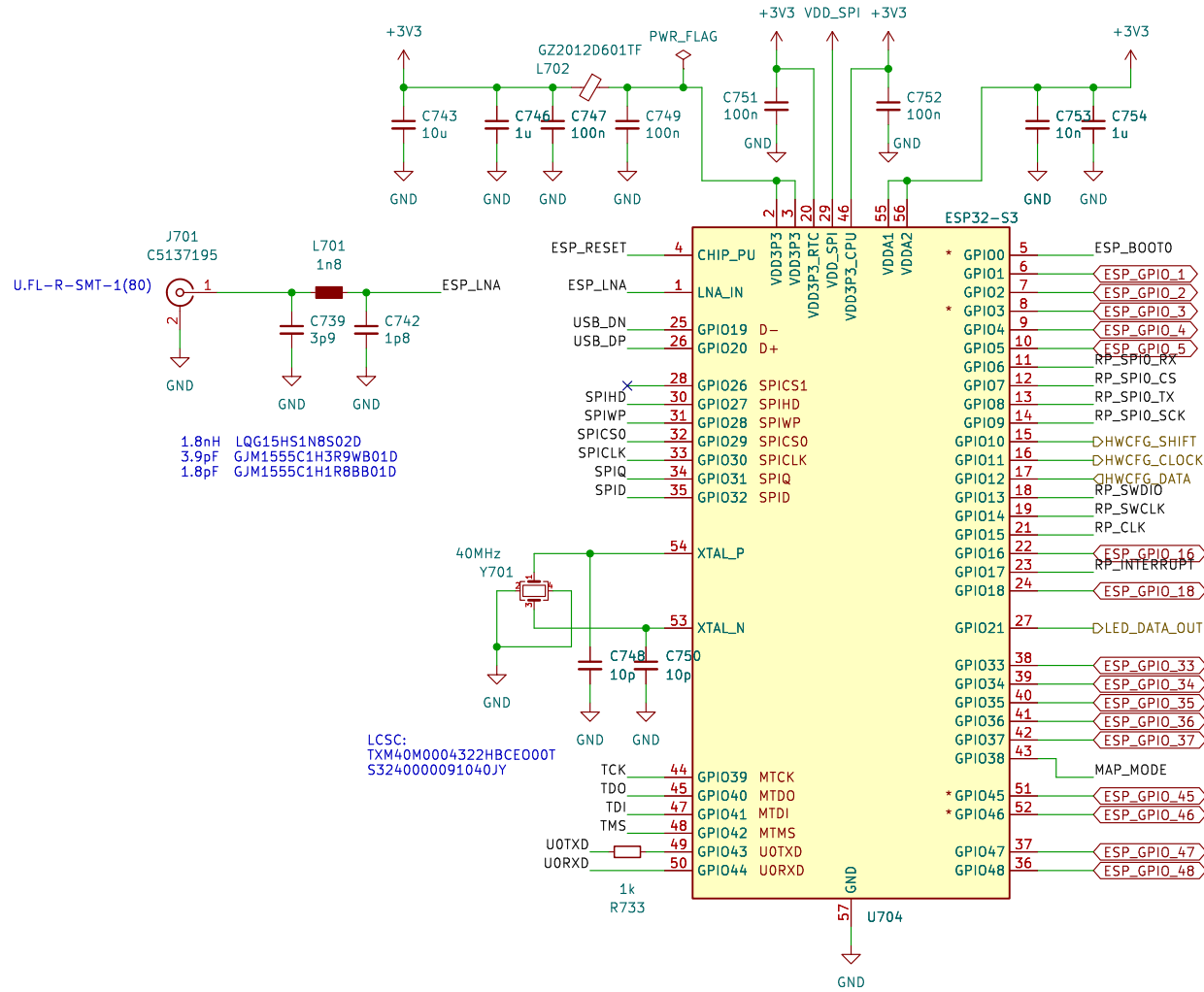
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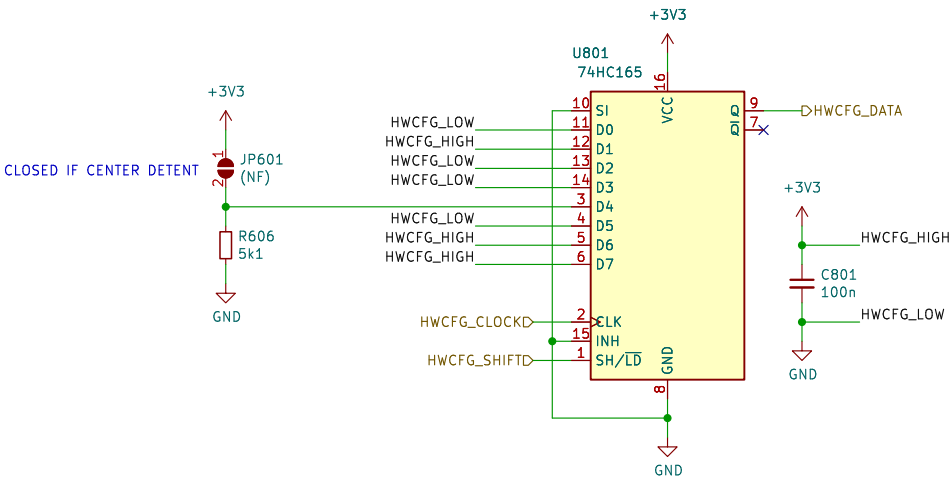
1000



700



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)

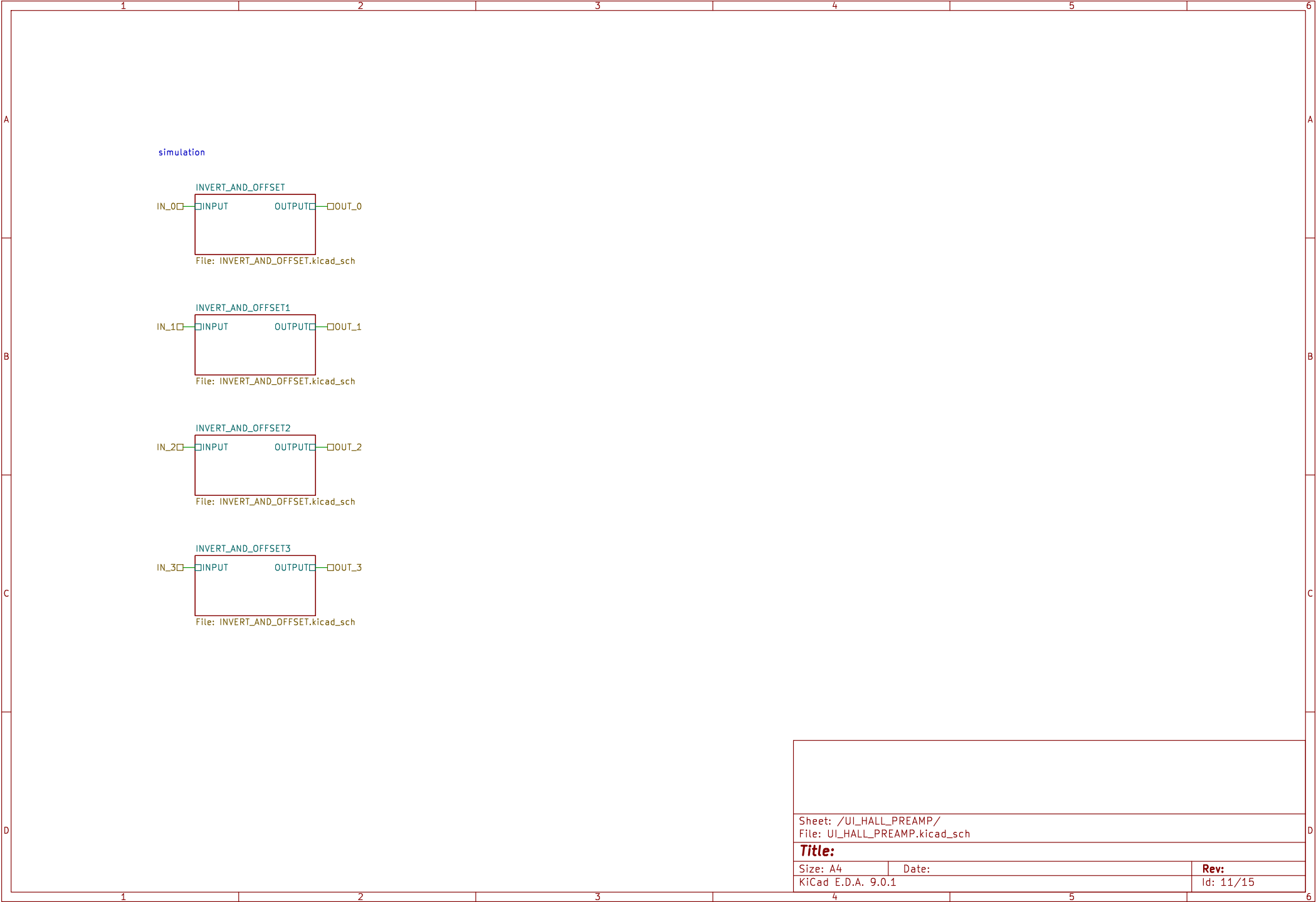
Model Codes (D3–D0):

- Po16 0000
- Bo16 0001
- PBF4 0010
- EN16 0011
- ...

Revision Codes (D7–D4):

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

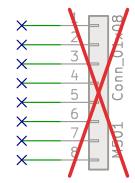
Sheet: /HWCFG/ File: HWCFG.kicad_sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. 9.0.1	Id: 10/15	



500

GRID Connector
Bi-Directional Data
2x SYNC

Board Mounting Pattern

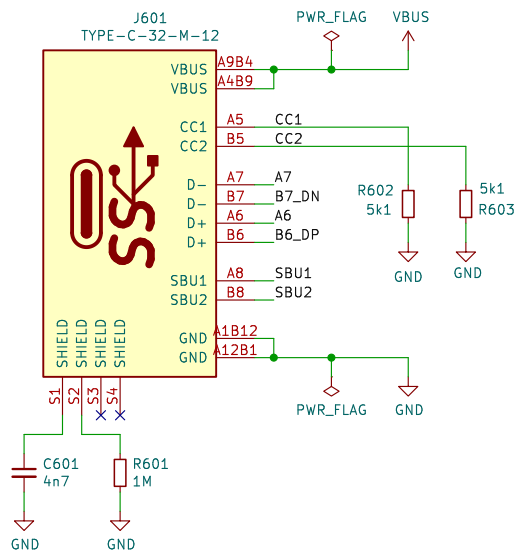


Sheet: /MCU/sheet5D85C9EA/ File: GRID.kicad_sch		
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Size: A4	Date:	Rev:
KiCad E.D.A. 9.0.1		Id: 8/15

600

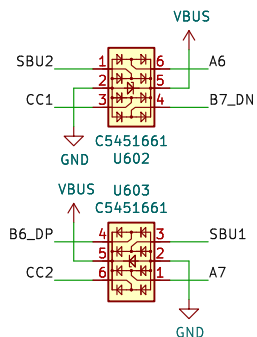
USB Port

USB C upstream facing port configured for 5V 3A power consumption.



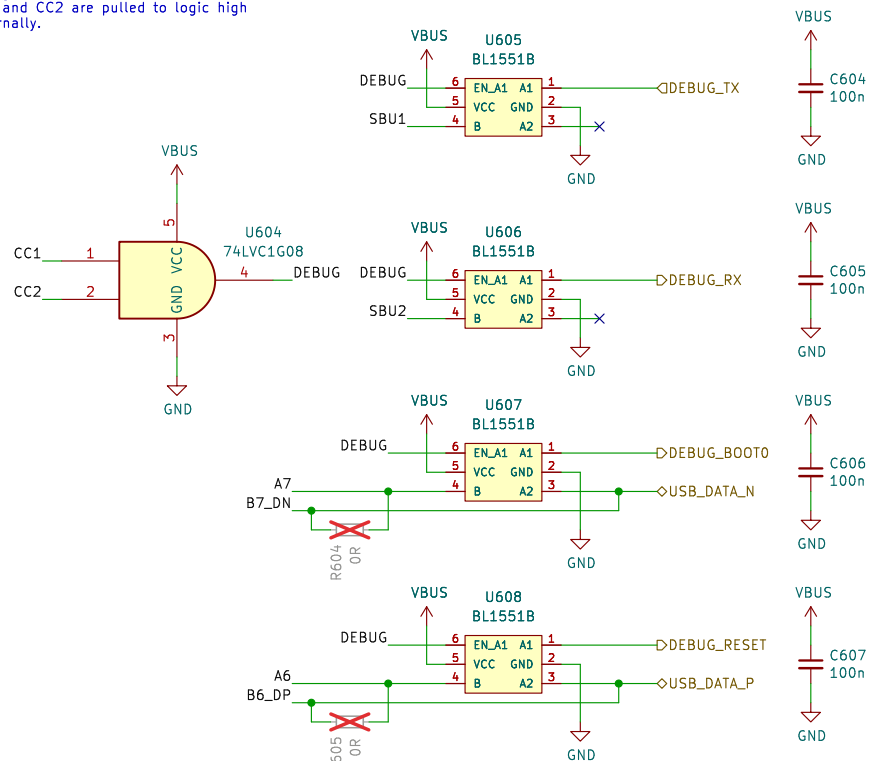
ESD Prot.

ESP protection for all 8 signals externally accessible via the USB C connector.



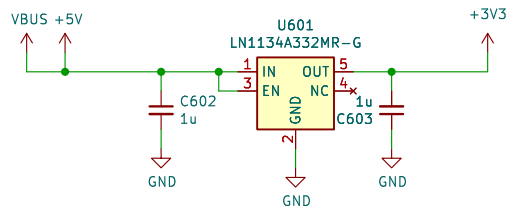
Debug-Mode Multiplexing

Debug.mode is activated when both CC1 and CC2 are pulled to logic high externally.

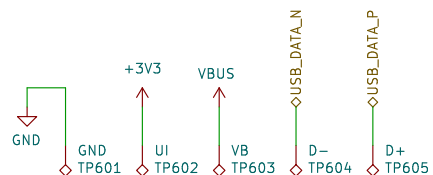


3V3 LDO

LDO regulator for generating the +3V3 power rail for the microcontroller and UI.



Testpoints



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

Title:

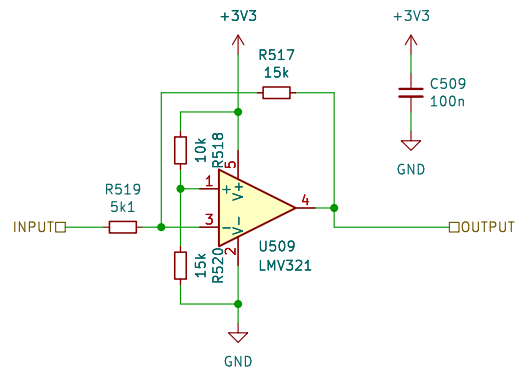
Size: A4	Date:
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KiCad E.D.A. 9.0.1

Date:

Rev:

Id: 9/15



Sheet: /UI_HALL_PREAMP/INVERT_AND_OFFSET/
File: INVERT_AND_OFFSET.kicad_sch

Title:

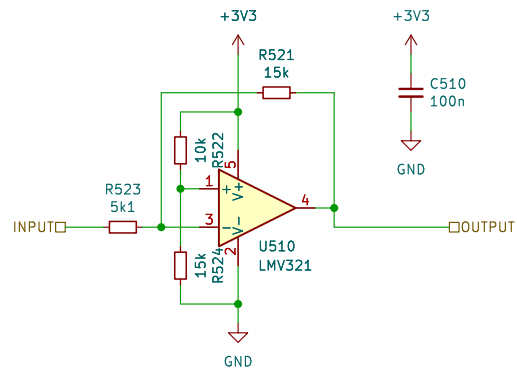
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Date:

Rev:

KiCad E.D.A. 9.0.1

Id: 16/15



Sheet: /UI_HALL_PREAMP/INVERT_AND_OFFSET1/
File: INVERT_AND_OFFSET.kicad_sch

Title:

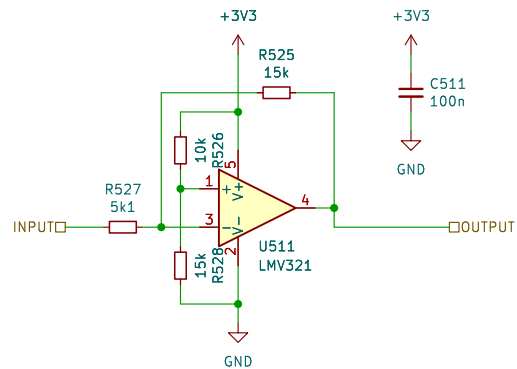
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Date:

Rev:

KiCad E.D.A. 9.0.1

Id: 17/15



Sheet: /UI_HALL_PREAMP/INVERT_AND_OFFSET2/
File: INVERT_AND_OFFSET.kicad_sch

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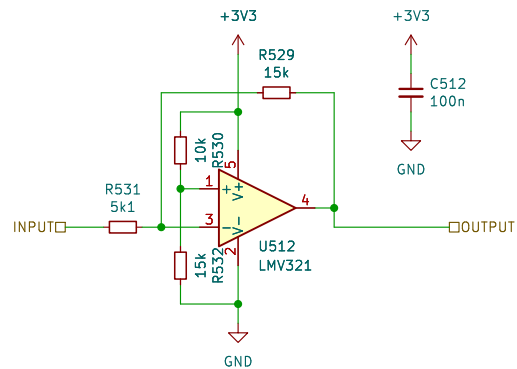
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Date:

Rev:

KiCad E.D.A. 9.0.1

Id: 18/15



Sheet: /UI_HALL_PREAMP/INVERT_AND_OFFSET3/
File: INVERT_AND_OFFSET.kicad_sch

Title:

Size: A4

Date:

Rev:

KiCad E.D.A. 9.0.1

Id: 19/15