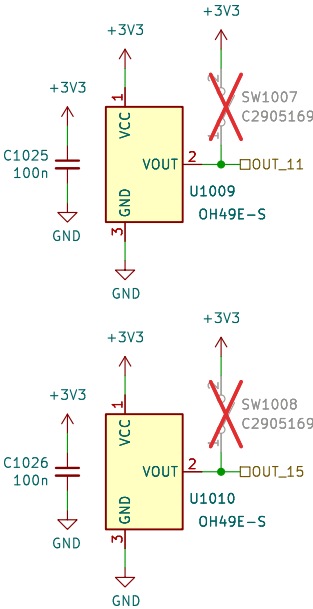
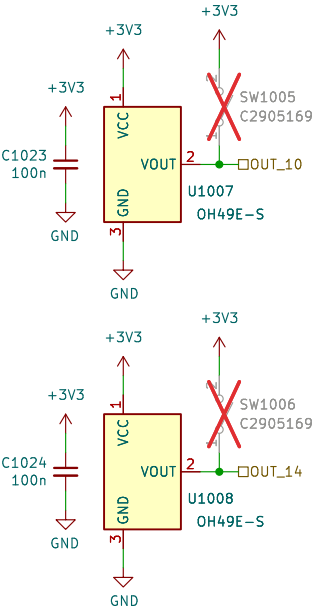
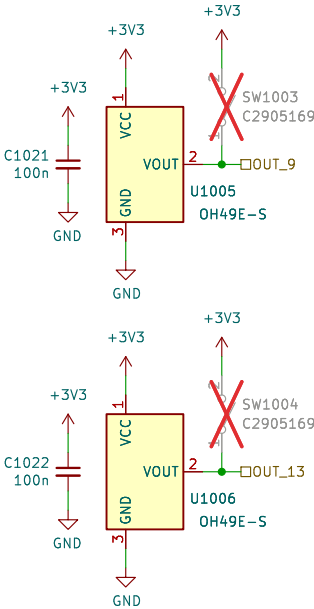
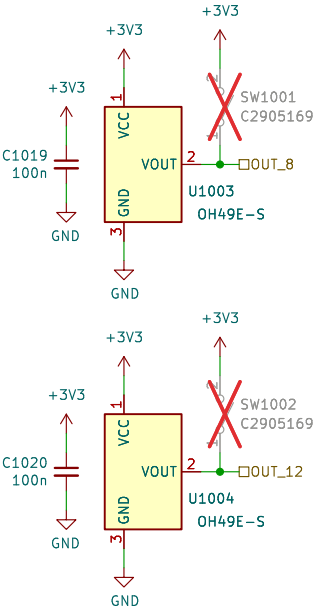


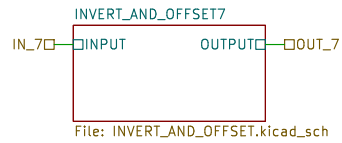
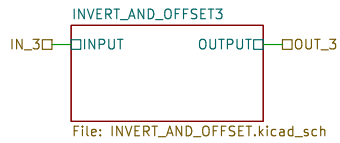
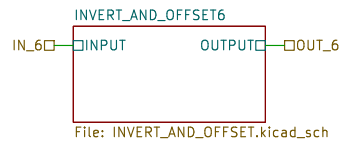
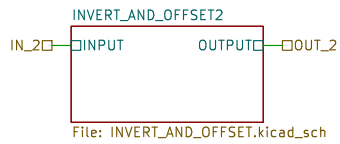
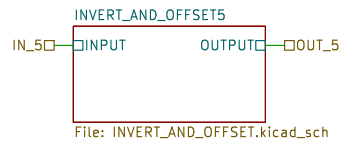
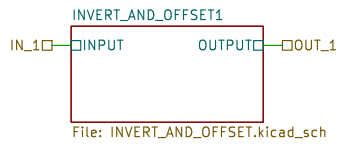
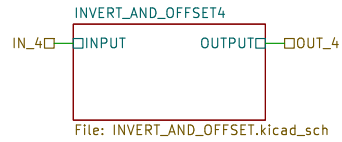
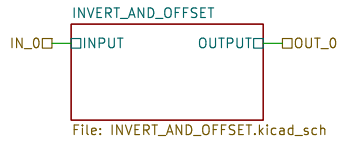
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Simulation:
<http://tinyurl.com/y229mt4>



Sheet: /UI_BUTTON/ File: UI_BUTTON.kicad_sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. 9.0.1		Id: 2/28

simulation



Sheet: /UI_HALL_PREAMP/
File: UI_HALL_PREAMP.kicad_sch

Title:

Size: A4	Date:
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SIZE: A1	
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Date:

Rev:

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900



Sheet: /UI_LED/
File: UI_LED.kicad_sch

Title:

Size: A4

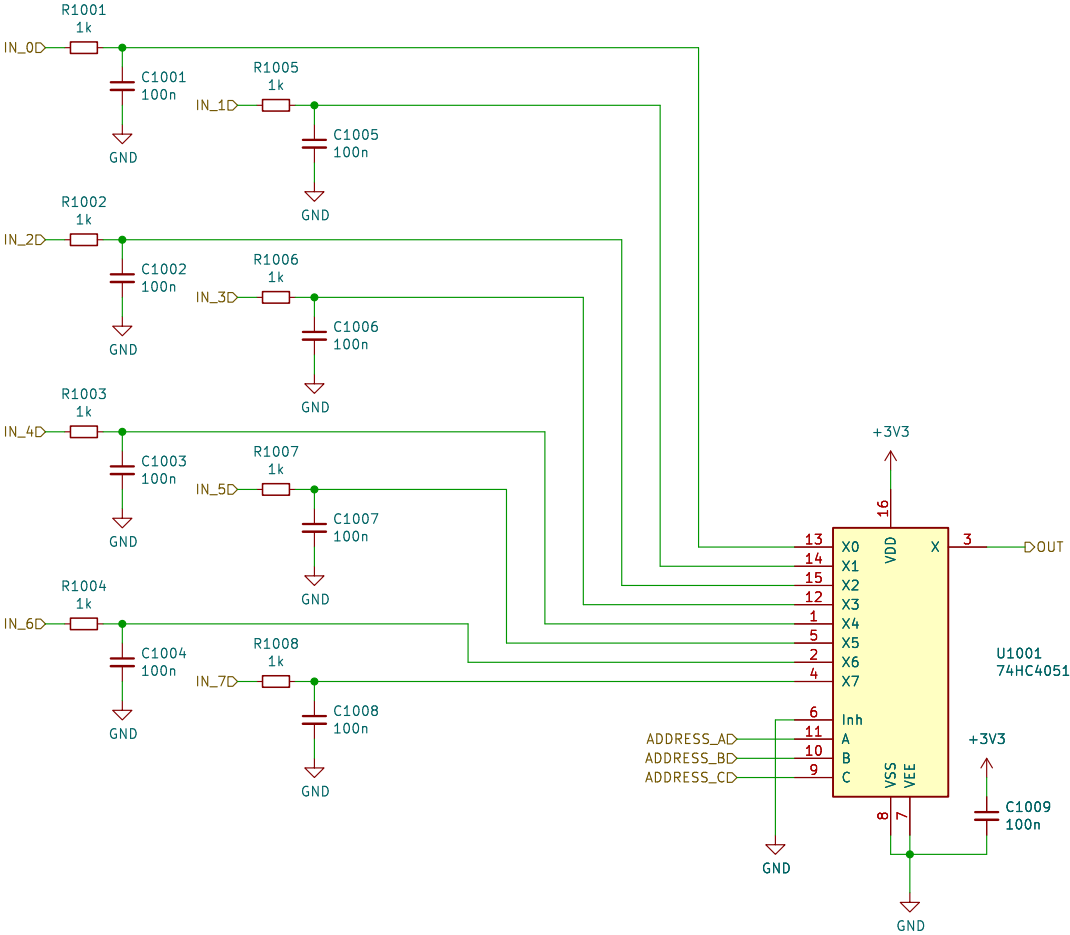
Date:

KiCad E.D.A. 9.0.1

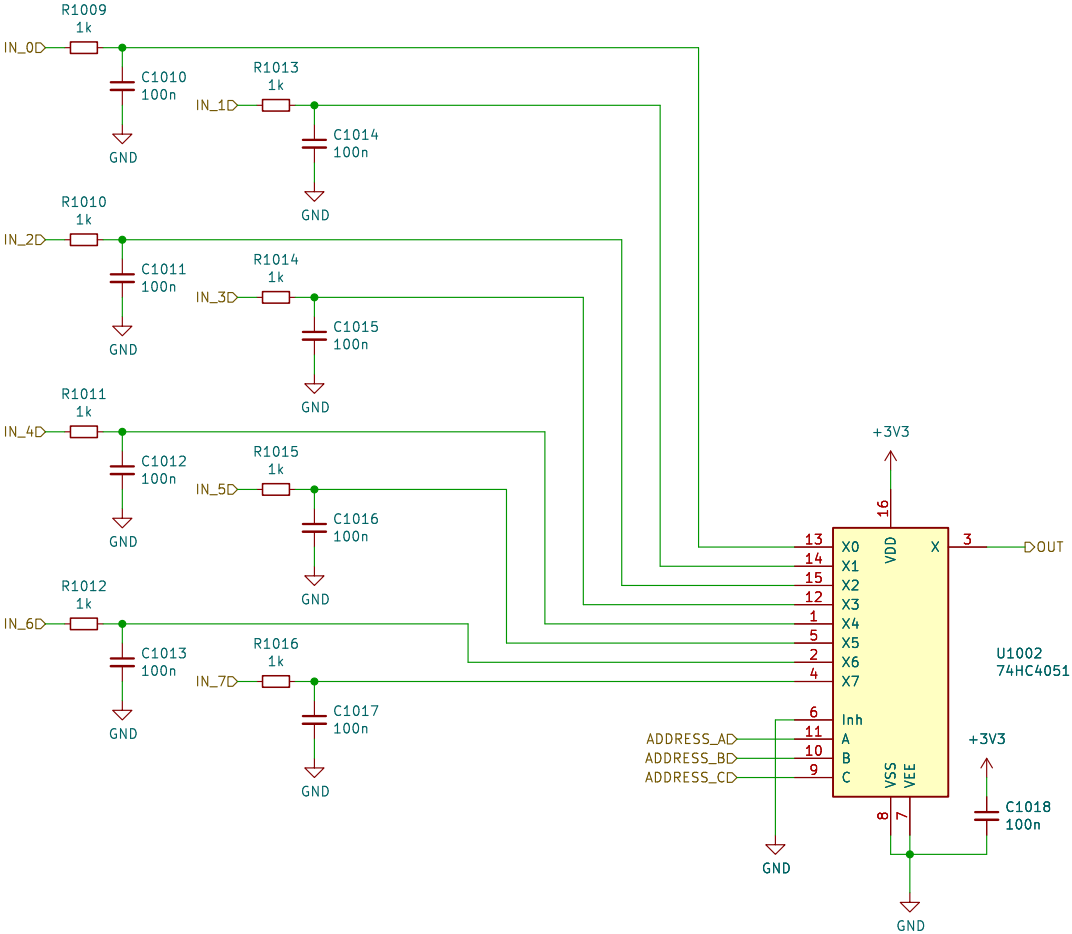
Rev:

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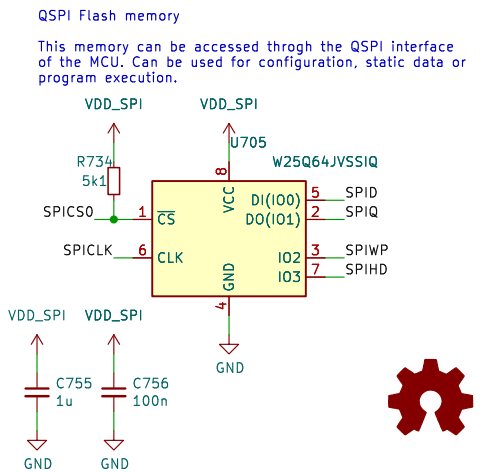
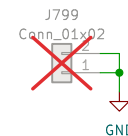
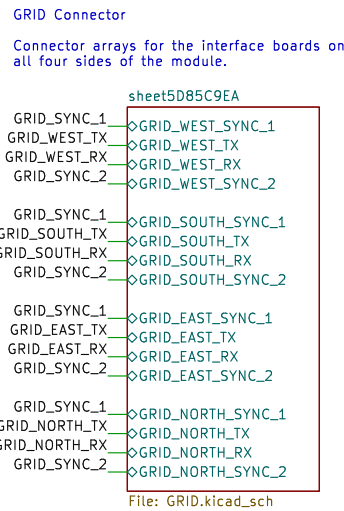
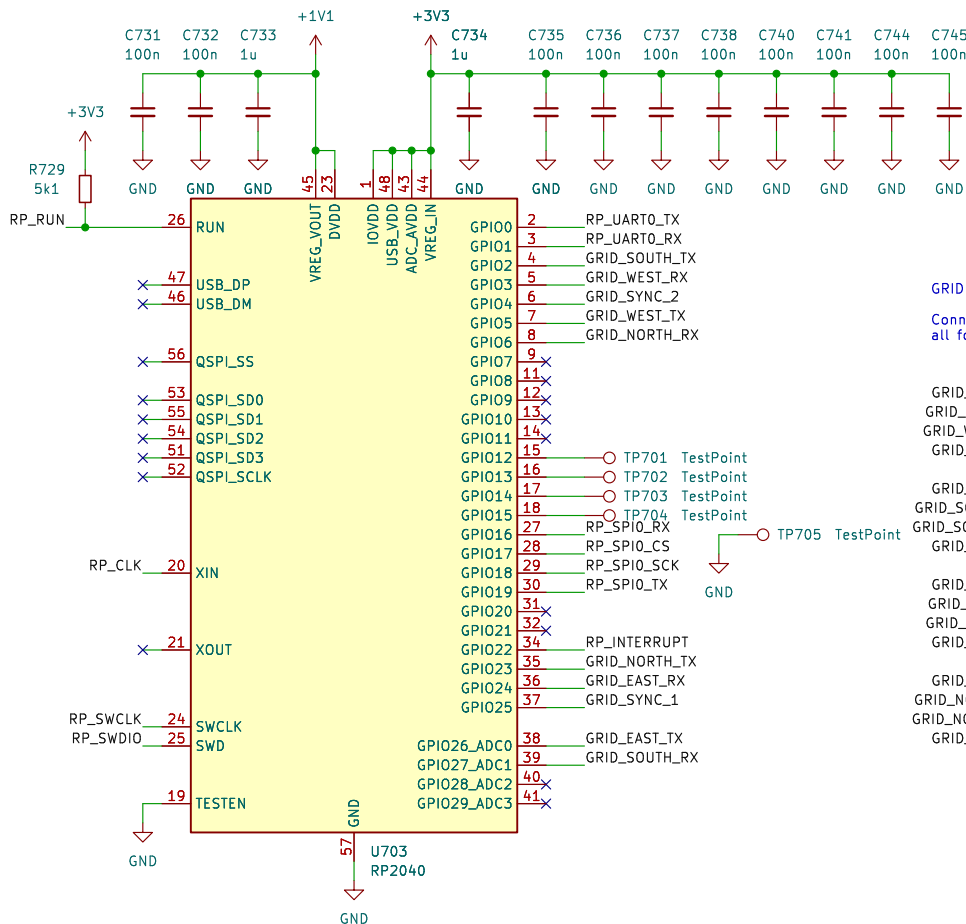
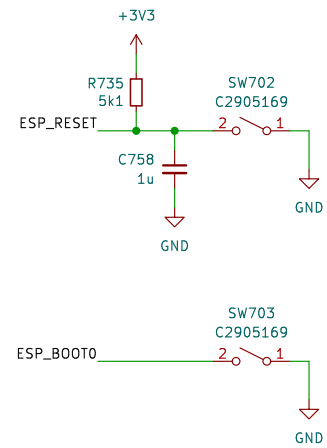
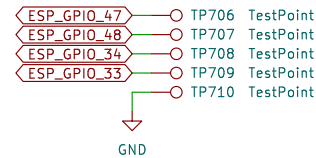
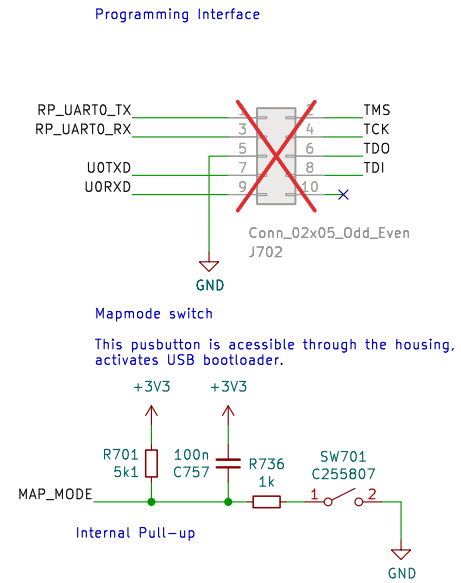
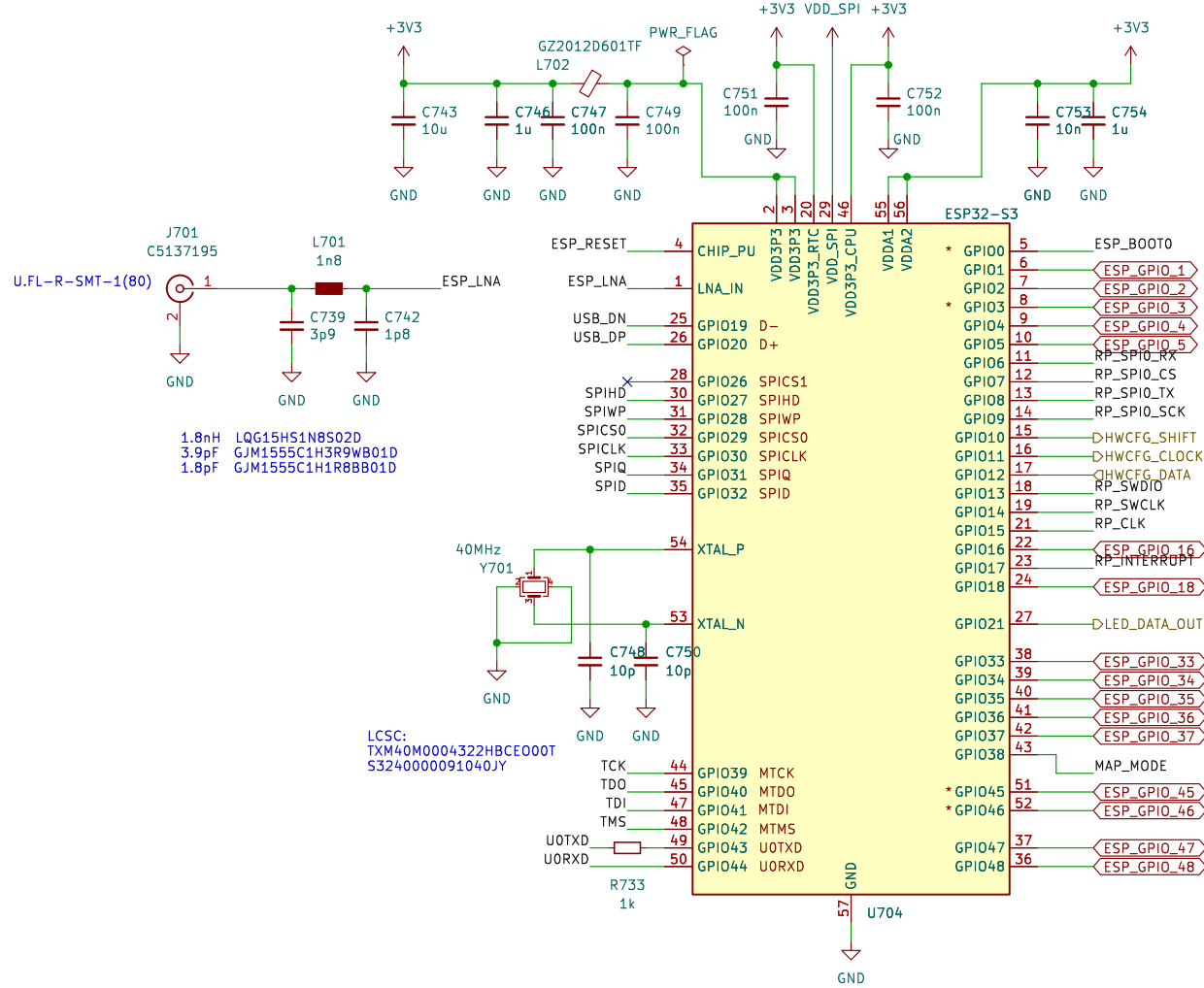
1000



1000



700



800

U801
74HC165

16 VCC +3V3

8 GND

15 GND

1 SH/LD HWCFG_SHIFTD

2 CLK HWCFG_CLOCKD

15 INH

10 SI

11 D0

12 D1

13 D2

14 D3

3 D4

4 D5

5 D6

6 D7

9 Q HWCFG_DATA

7 X

+3V3

HWCFG_HIGH

C801
100n

HWCFG_LOW

GND

GND

Board Identification

Grid firmware can identify the hardware and the board revision thorough 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: 10/28

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)

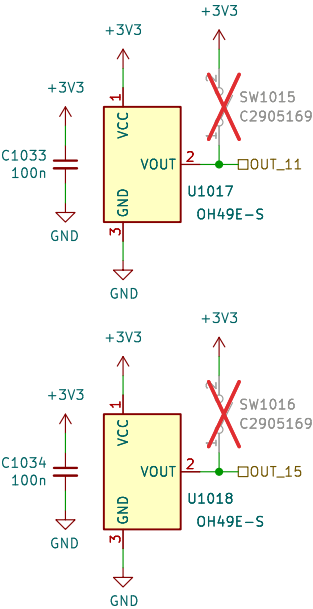
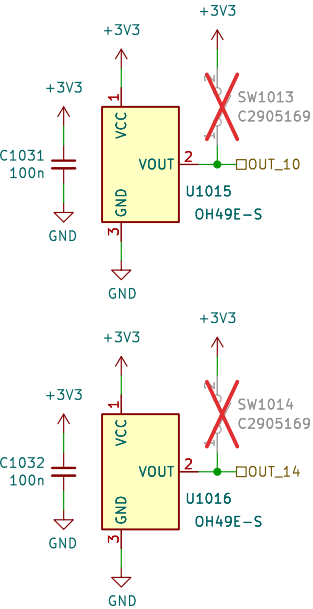
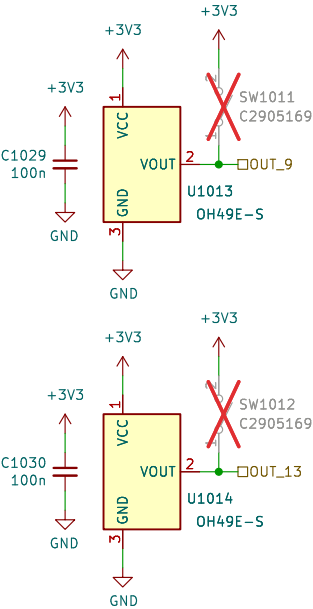
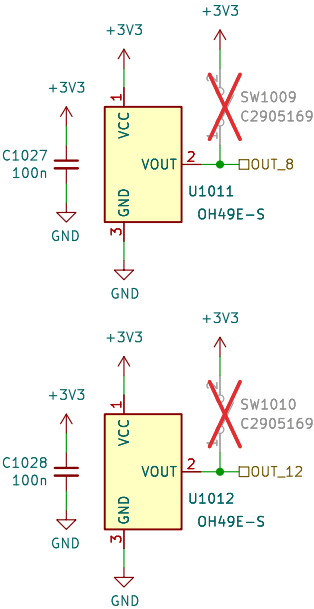
Po16	0000
Bo16	0001
PBF4	0010
EN16	0011
...	

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

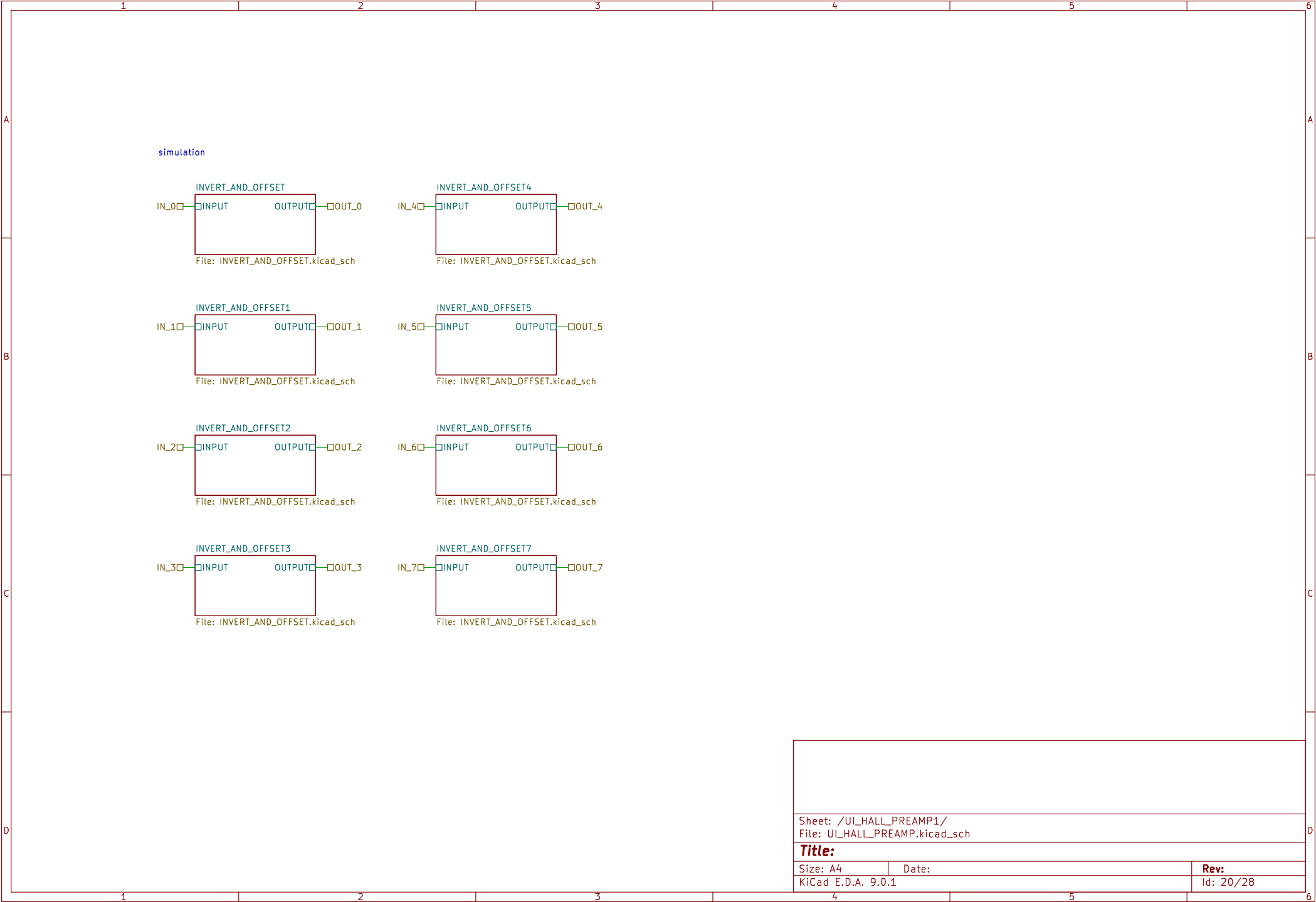
Sheet: /HWCFG/		D
File: HWCFG.kicad_sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. 9.0.1		Id: 10/28

1000

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



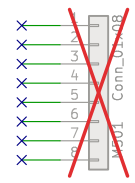
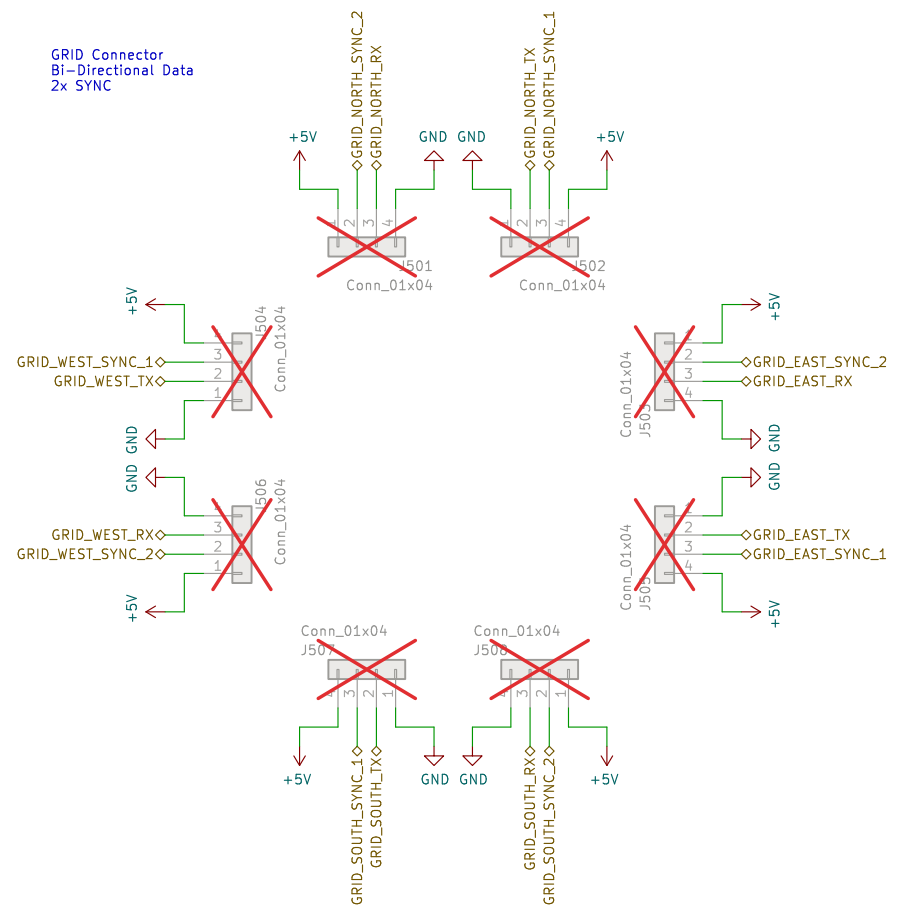
Sheet: /UI_BUTTON1/ File: UI_BUTTON.kicad_sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. 9.0.1	Id: 19/28	



500

GRID Connector
Bi-Directional Data
2x SYNC

Board Mounting Pattern



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

Title:

Size: A4

Date:

Rev:

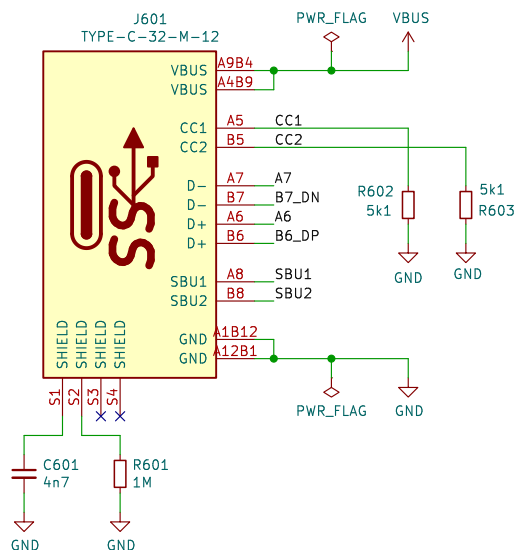
KiCad E.D.A. 9.0.1

Id: 8/28

600

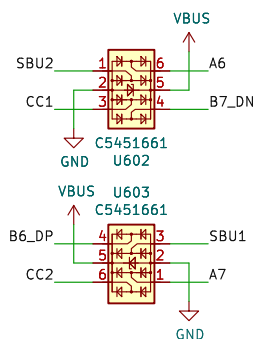
USB Port

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



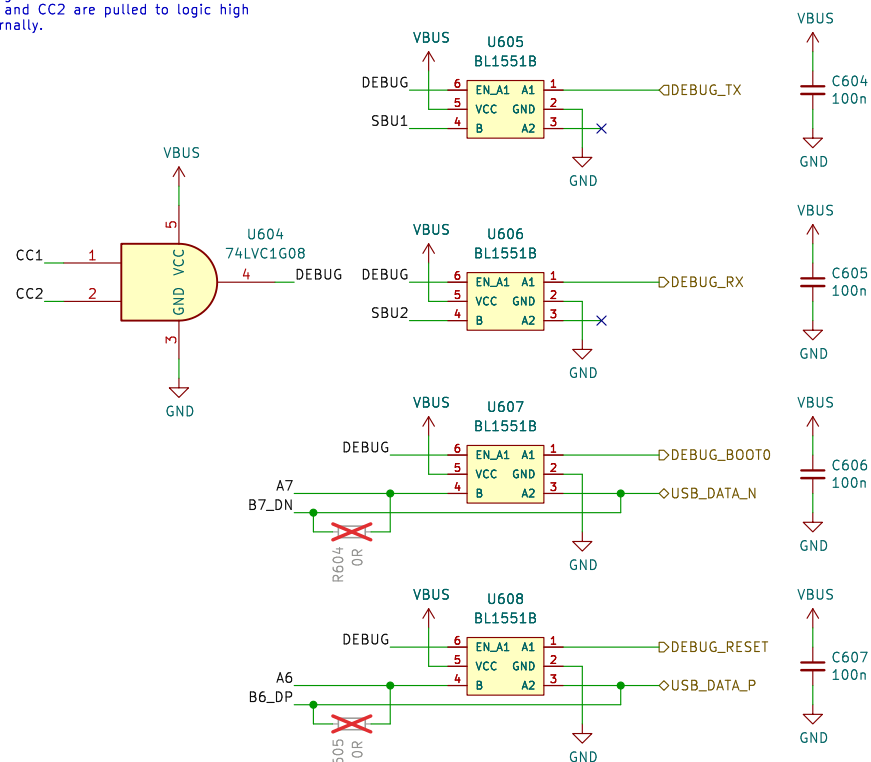
ESD Prot.

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



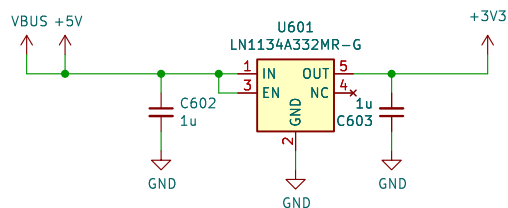
Debug-Mode Multiplexing

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

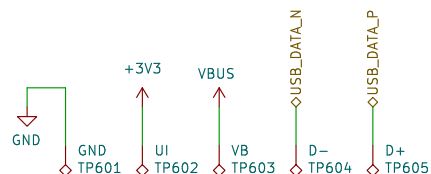


3V3 LDO

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



Testpoints



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

Title:

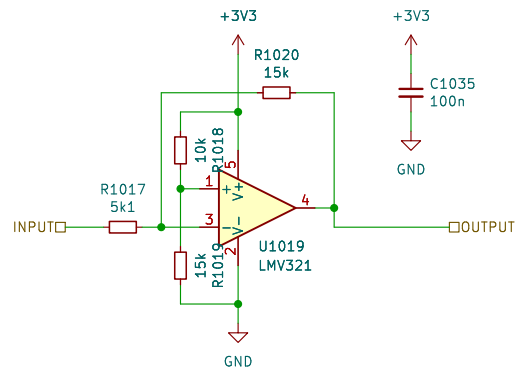
Size: A4	Date:
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SIZE: A1	
KiCad E.D.A. 9.0.1	

Date:

Rev:	
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Id: 9/28



Sheet: /UI_HALL_PREAMP/INVERT_AND_OFFSET7/
File: INVERT_AND_OFFSET.kicad_sch

Title:

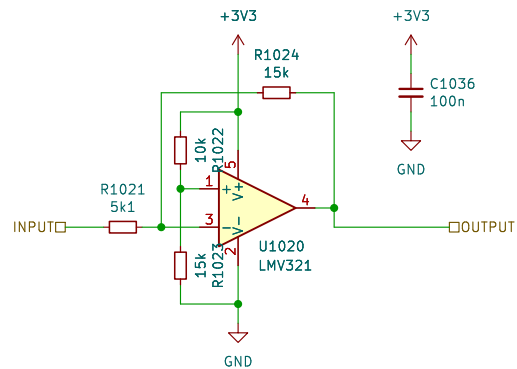
Size: A4

Date:

Rev:

KiCad E.D.A. 9.0.1

Id: 11/28



Sheet: /UI_HALL_PREAMP/INVERT_AND_OFFSET6/
File: INVERT_AND_OFFSET.kicad_sch

Title:

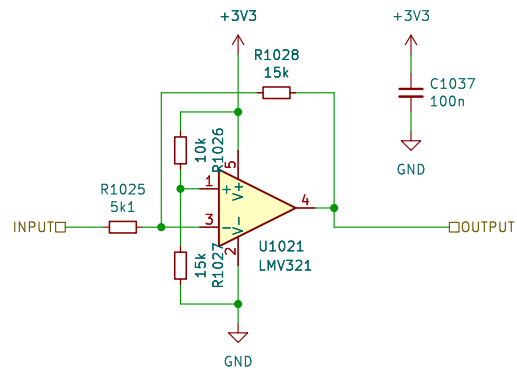
Size: A4

Date:

Rev:

KiCad E.D.A. 9.0.1

Id: 12/28



Sheet: /UI_HALL_PREAMP/INVERT_AND_OFFSET4/
File: INVERT_AND_OFFSET.kicad_sch

Title:

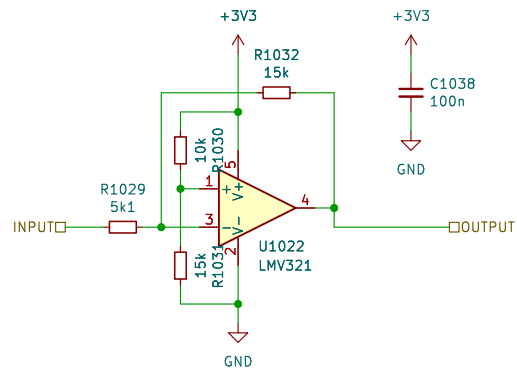
Size: A4

Date:

Rev:

KiCad E.D.A. 9.0.1

Id: 13/28



Sheet: /UI_HALL_PREAMP/INVERT_AND_OFFSET5/
File: INVERT_AND_OFFSET.kicad_sch

Title:

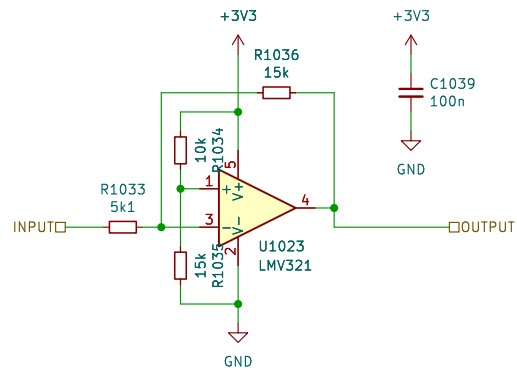
Size: A4

Date:

Rev:

KiCad E.D.A. 9.0.1

Id: 14/28



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

Title:

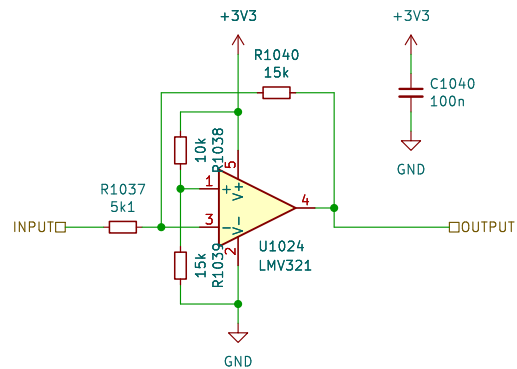
Size: A4

Date:

KiCad E.D.A. 9.0.1

Rev:

Id: 15/28



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

Title:

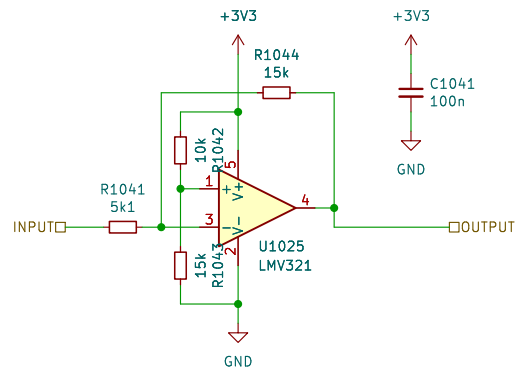
Size: A4

Date:

Rev:

KiCad E.D.A. 9.0.1

Id: 16/28



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

Title:

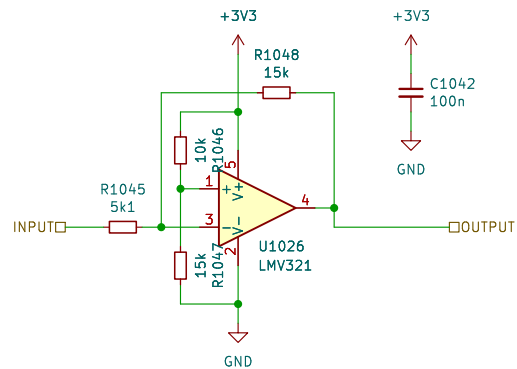
Size: A4

Date:

Rev:

KiCad E.D.A. 9.0.1

Id: 17/28



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

Title:

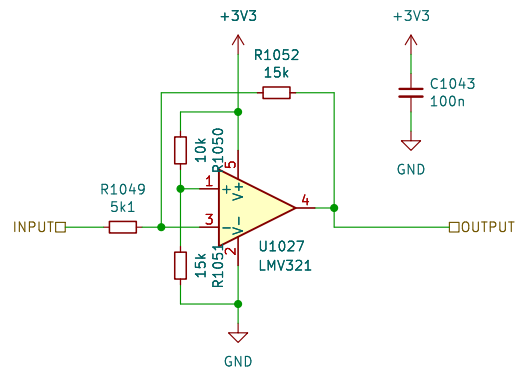
Size: A4

Date:

Rev:

KiCad E.D.A. 9.0.1

Id: 18/28



Sheet: /UI_HALL_PREAMP1/INVERT_AND_OFFSET7/
File: INVERT_AND_OFFSET.kicad_sch

Title:

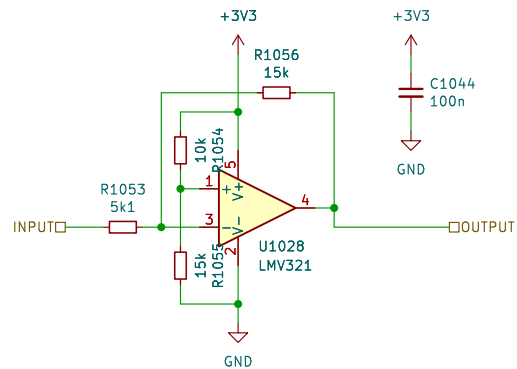
Size: A4

Date:

Rev:

KiCad E.D.A. 9.0.1

Id: 21/28



Sheet: /UI_HALL_PREAMP1/INVERT_AND_OFFSET6/
File: INVERT_AND_OFFSET.kicad_sch

Title:

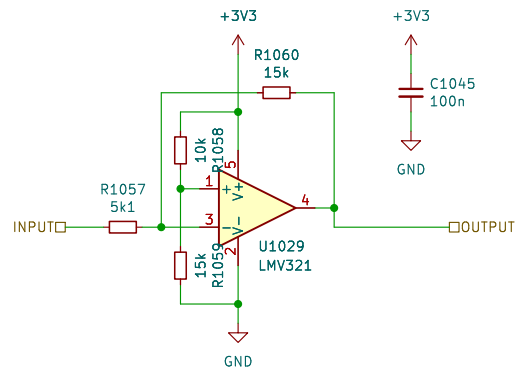
Size: A4

Date:

Rev:

KiCad E.D.A. 9.0.1

Id: 22/28



Sheet: /UI_HALL_PREAMP1/INVERT_AND_OFFSET4/
File: INVERT_AND_OFFSET.kicad_sch

Title:

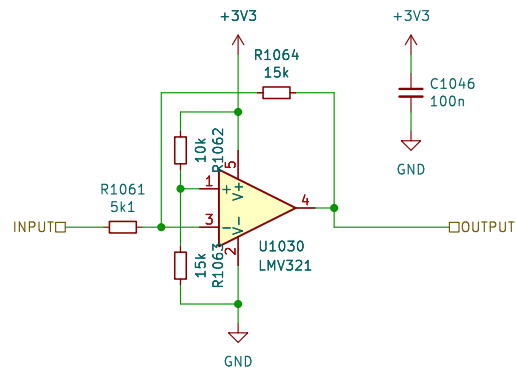
Size: A4

Date:

Rev:

KiCad E.D.A. 9.0.1

Id: 23/28



Sheet: /UI_HALL_PREAMP1/INVERT_AND_OFFSET5/
File: INVERT_AND_OFFSET.kicad_sch

Title:

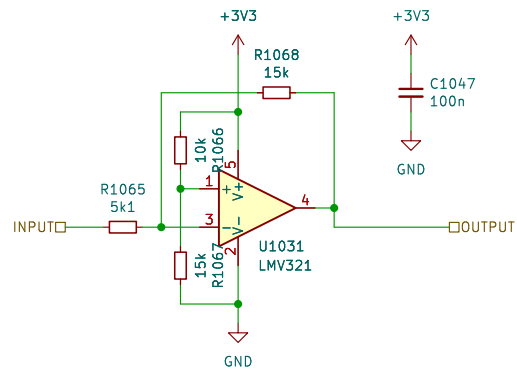
Size: A4

Date:

Rev:

KiCad E.D.A. 9.0.1

Id: 24/28



Sheet: /UI_HALL_PREAMP1/INVERT_AND_OFFSET/
File: INVERT_AND_OFFSET.kicad_sch

Title:

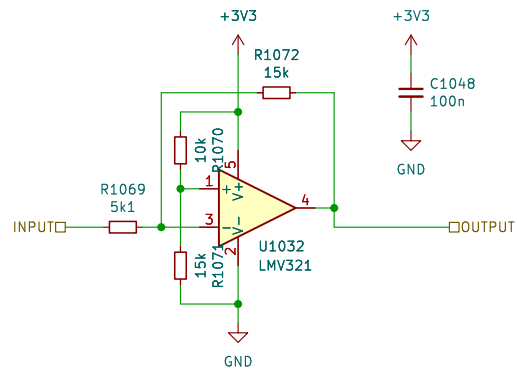
Size: A4

Date:

Rev:

KiCad E.D.A. 9.0.1

Id: 25/28



Sheet: /UI_HALL_PREAMP1/INVERT_AND_OFFSET1/
File: INVERT_AND_OFFSET.kicad_sch

Title:

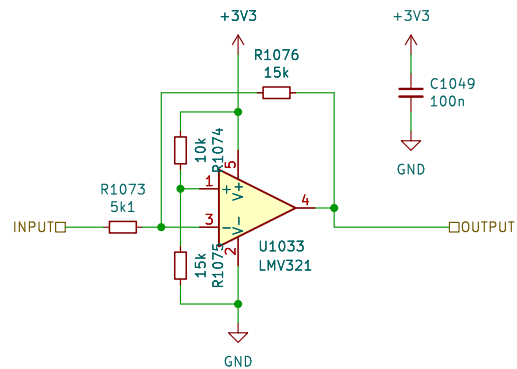
Size: A4

Date:

Rev:

KiCad E.D.A. 9.0.1

Id: 26/28



Sheet: /UI_HALL_PREAMP1/INVERT_AND_OFFSET2/
File: INVERT_AND_OFFSET.kicad_sch

Title:

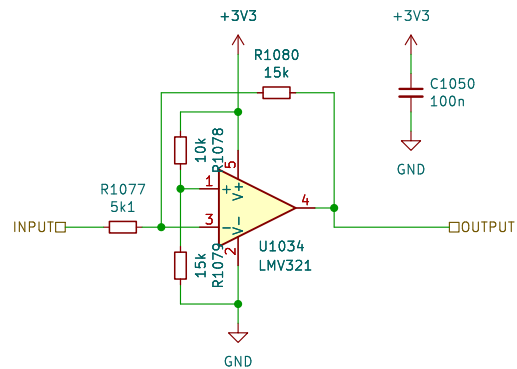
Size: A4

Date:

Rev:

KiCad E.D.A. 9.0.1

Id: 27/28



Sheet: /UI_HALL_PREAMP1/INVERT_AND_OFFSET3/
File: INVERT_AND_OFFSET.kicad_sch

Title:

Size: A4

Date:

Rev:

KiCad E.D.A. 9.0.1

Id: 28/28