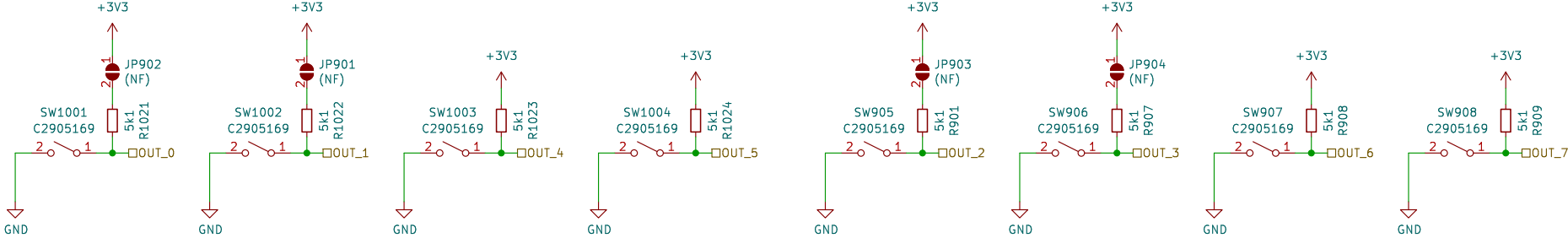
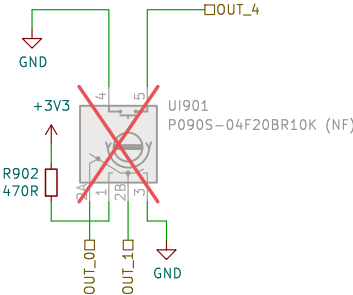


1000



| | | |
|---|-------|----------|
| Sheet: /UI_POT_BTN/ File: UI_POT_BTN.kicad_sch | | |
| Title: | | |
| Size: A4 | Date: | Rev: |
| KiCad E.D.A. 8.0.6 | | Id: 2/20 |

1000

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



| | | |
|---|----------|------|
| Sheet: /UI_BUTTON/ File: UI_BUTTON.kicad_sch | | |
| Title: | | |
| Size: A4 | Date: | Rev: |
| KiCad E.D.A. 8.0.6 | Id: 3/20 | |

900



Sheet: /UI_LED/
File: UI_LED.kicad_sch

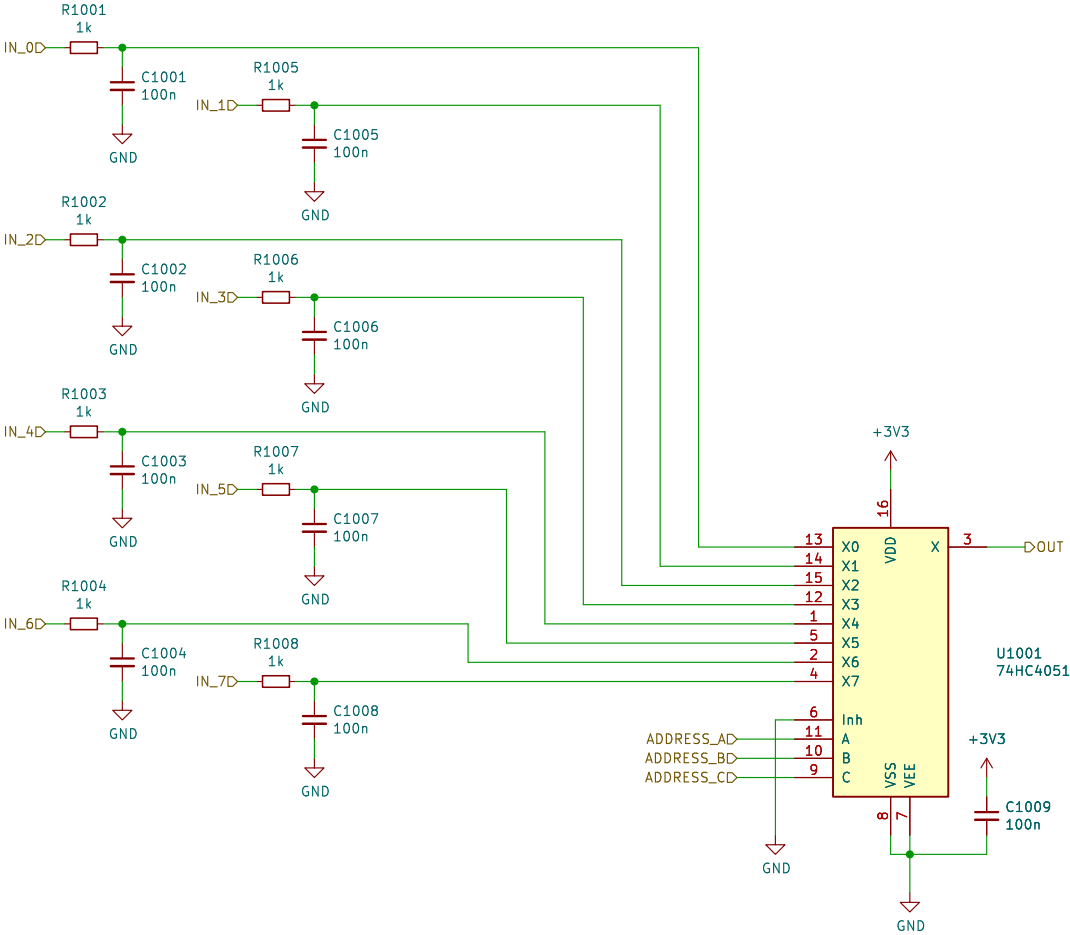
Title:

Size: A4
KiCad E.D.A. 8.0.6

Date:

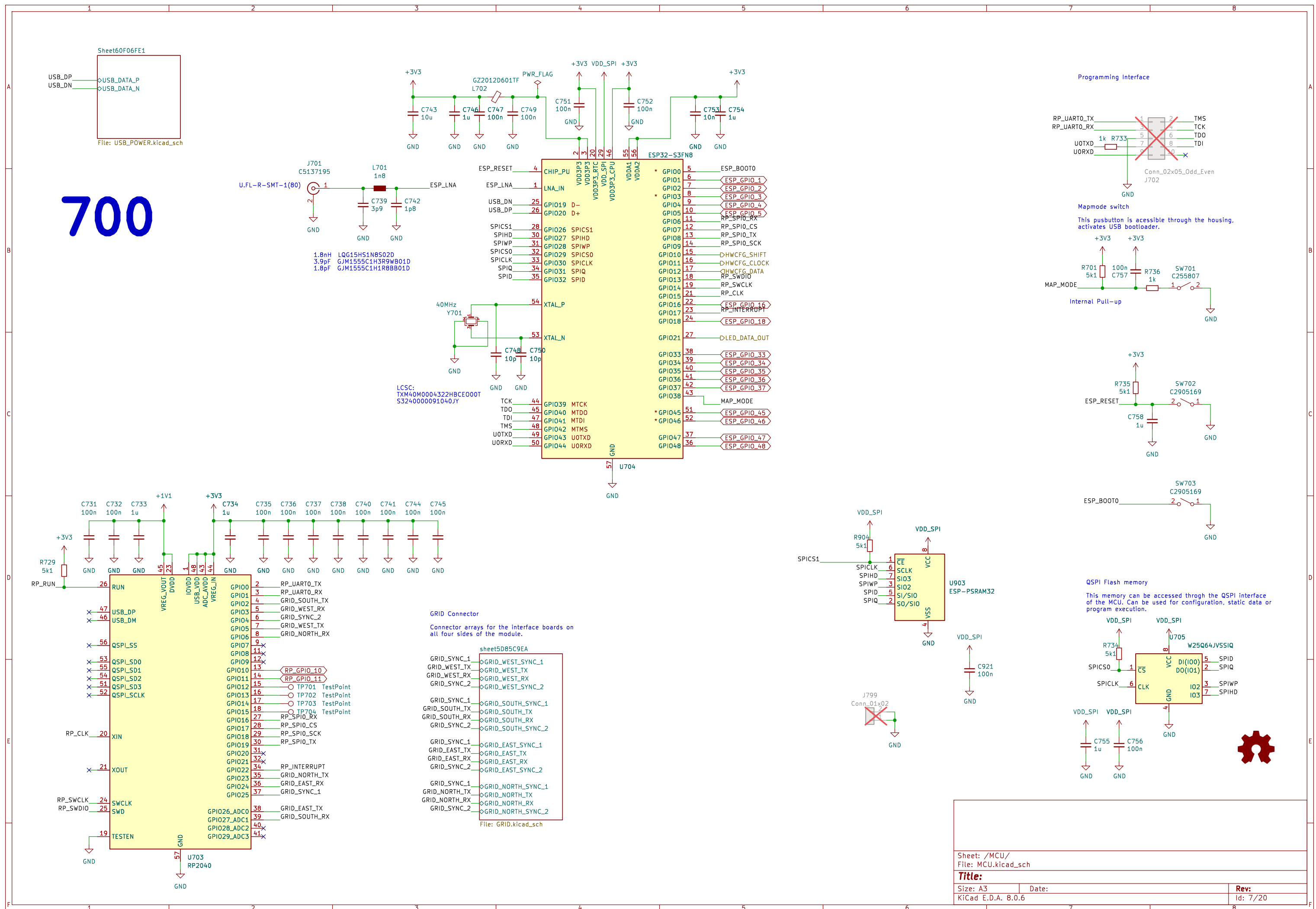
Rev:
Id: 4/20

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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. 8.0.6 | Id: 8/20 | |

600

ESD Diodes
ESD protection for all of the externally accessible nets.

TP601 GND
TP602 VB
TP603 D-
TP604 D+

VBUS
USB_DATA_N
USB_DATA_P
GND

U601
C5451661

VBUS
VBUS
CC1
CC2
D-
D-
D+
D+
SBU1
SBU2
SHIELD
SHIELD
SHIELD
GND
GND

PWR_FLAG
VBUS

A9B4
A4B9
A5
B5
A7
B7
A6
B6
A8
BB
A1B12
A12B1

GND
5k1
5k1
GND
GND

R601
R602

C603
4n7
R603
1M

+3V3 LDO Regulators
Regulators for generating independent power rails for the microcontroller and the user interface.

VBUS +5V
GZ2012D601TF
L601
PWR_FLAG
C601
1u
GND
U602
LN1134A332MR-G
IN
EN
OUT
NC
GND
5
4
1u
C602
TP605
UI
+3V3

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

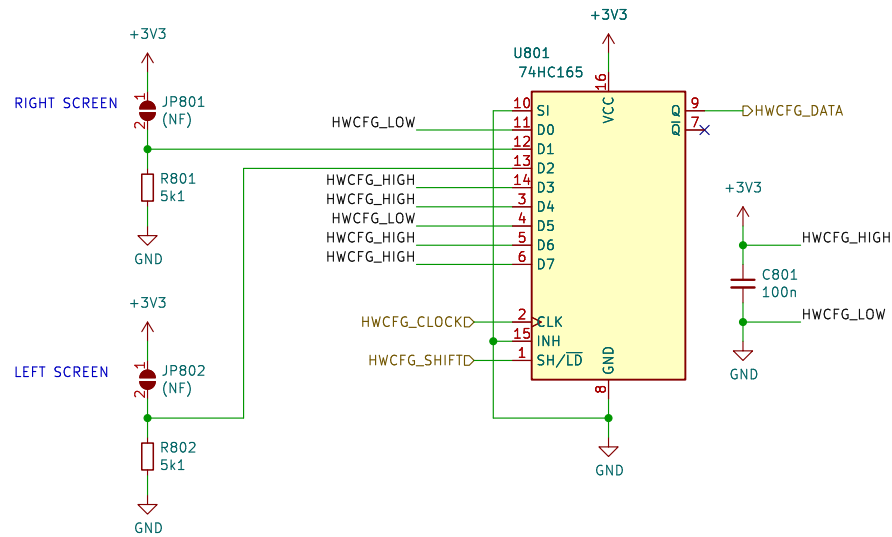
Title:

Size: A4 Date: Rev:

KiCad E.D.A. 8.0.6 Id: 9/20

| | | |
|--------------------|-------|-------------|
| Title: | | |
| Size: A4 | Date: | Rev: |
| KiCad E.D.A. 8.0.6 | | Id: 9/20 |

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. 8.0.6

Rev:

Id: 10/20

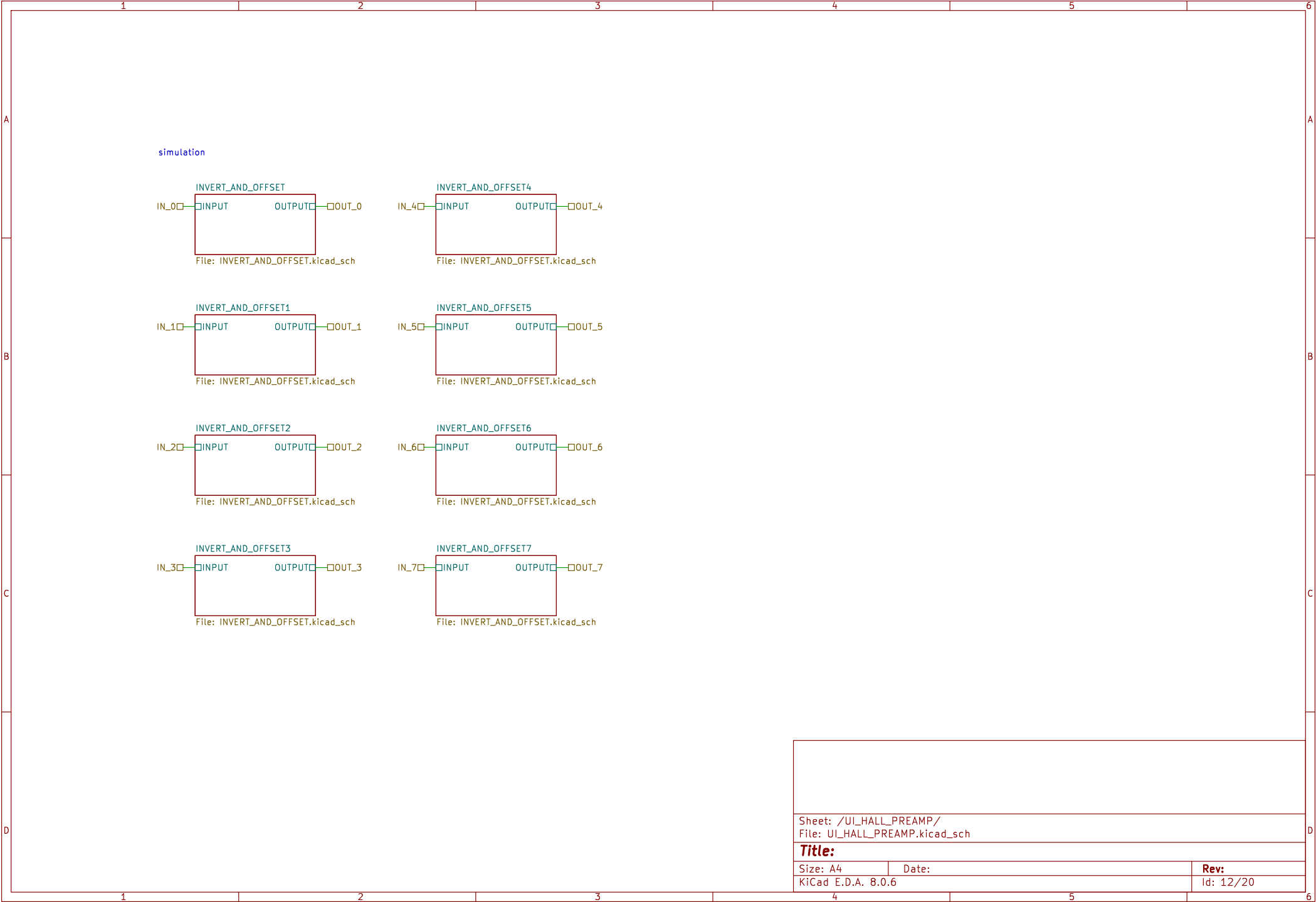
1000

BACKLIGHT \square BACKLIGHT_PWM

$\overline{CS1}$ CS1
 $\overline{CS0}$ CS0
D/ \overline{C} D/ \overline{C}
SCLKD SCLK
SDIOD SDIO
 \overline{RESET} RESET



| | | |
|----------------------------|-----------|------|
| Sheet: /UI_DISPLAY/ | | |
| File: UI_DISPLAY.kicad_sch | | |
| Title: | | |
| Size: A4 | Date: | Rev: |
| KiCad E.D.A. 8.0.6 | Id: 11/20 | |





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

Title:

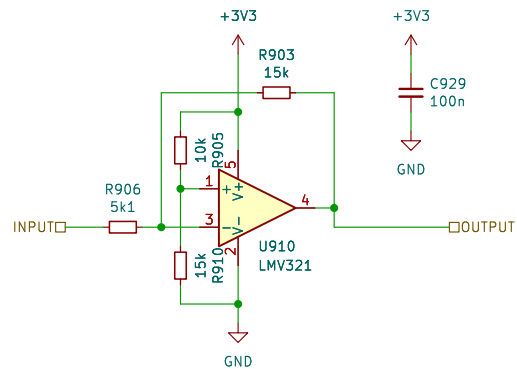
Size: A4

Date:

Rev:

KiCad E.D.A. 8.0.6

Id: 13/20



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

Title:

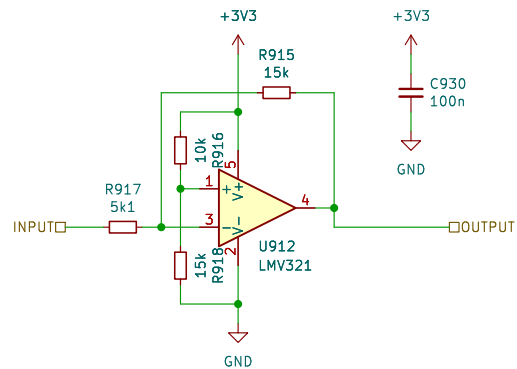
Size: A4

Date:

Rev:

KiCad E.D.A. 8.0.6

Id: 14/20



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

Title:

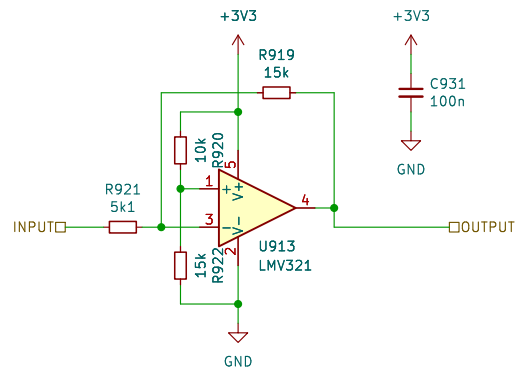
Size: A4

Date:

Rev:

KiCad E.D.A. 8.0.6

Id: 15/20



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

Title:

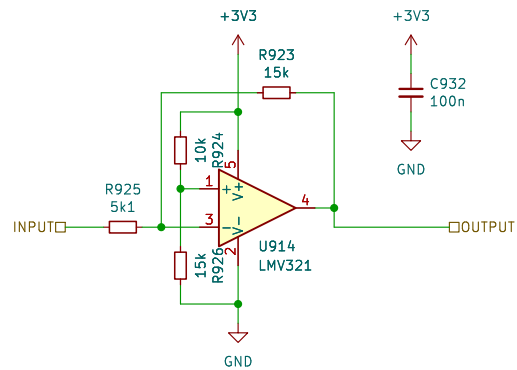
Size: A4

Date:

Rev:

KiCad E.D.A. 8.0.6

Id: 16/20



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

Title:

Size: A4

Date:

Rev:

KiCad E.D.A. 8.0.6

Id: 17/20



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

Title:

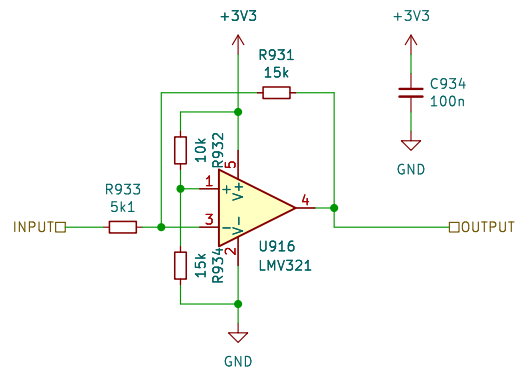
Size: A4

Date:

Rev:

KiCad E.D.A. 8.0.6

Id: 18/20



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

Title:

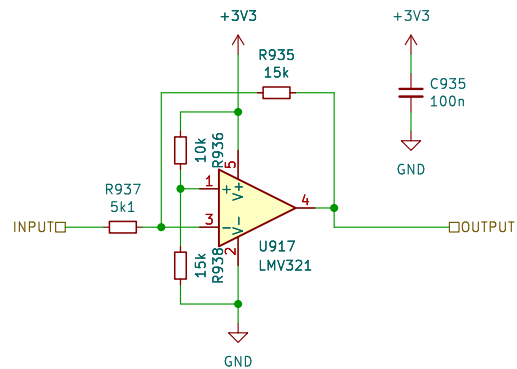
Size: A4

Date:

Rev:

KiCad E.D.A. 8.0.6

Id: 19/20



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

Title:

Size: A4

Date:

Rev:

KiCad E.D.A. 8.0.6

Id: 20/20