





Sheet: /UI\_ENC/ENCODER\_8/  
File: UI\_ENC\_FILTER.kicad\_sch

**Title:**

Size: A4

Date:

KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1

**Rev:**

Id: 2/23



Sheet: /UI\_ENC/ENCODER\_11/  
File: UI\_ENC\_FILTER.kicad\_sch

**Title:**

Size: A4

Date:

KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1

**Rev:**

Id: 3/23

# 900



Sheet: /UI\_LED/  
File: UI\_LED.kicad\_sch

**Title:**

Size: A4  
KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1

Date:

Rev:  
Id: 4/23



Sheet: /UI\_ENC/ENCODER\_5/  
File: UI\_ENC\_FILTER.kicad\_sch

**Title:**

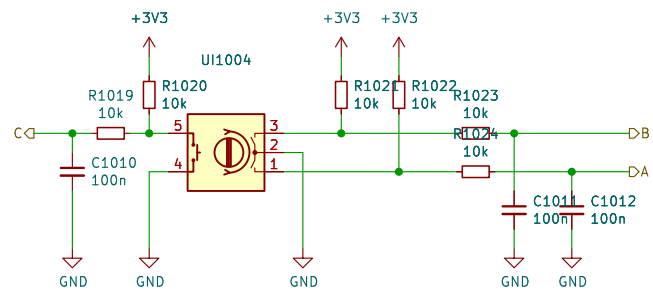
Size: A4

Date:

KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1

Rev:

Id: 5/23



Sheet: /UI\_ENC/ENCODER\_12/  
File: UI\_ENC\_FILTER.kicad\_sch

**Title:**

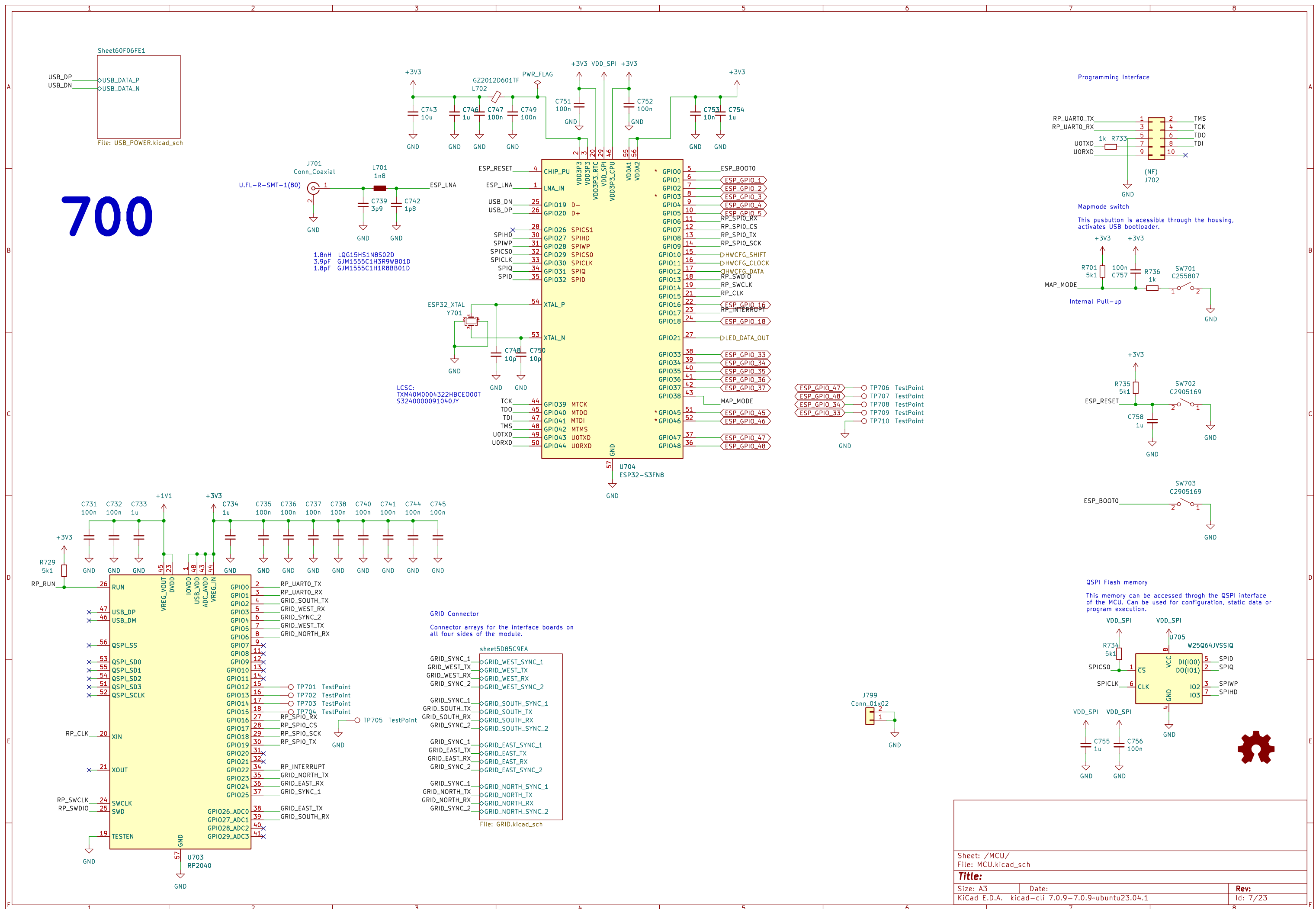
Size: A4

Date:

KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1

**Rev:**

Id: 6/23



# 500

GRID Connector  
Bi-Directional Data  
2x SYNC

Connector:  
AFB10-S08LCA-00  
or  
TE Connectivity 84982-8

Board Mounting Pattern



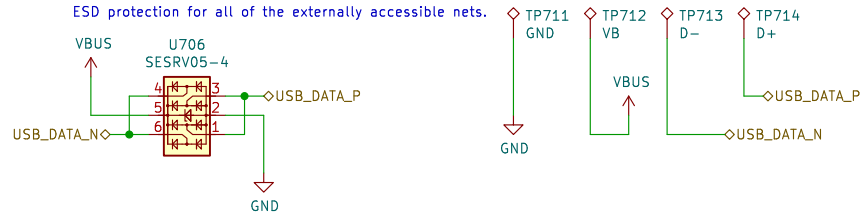
Sheet: /MCU/sheet5D85C9EA/ File: GRID.kicad_sch		
<b>Title:</b>		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1		Id: 8/23



# 600

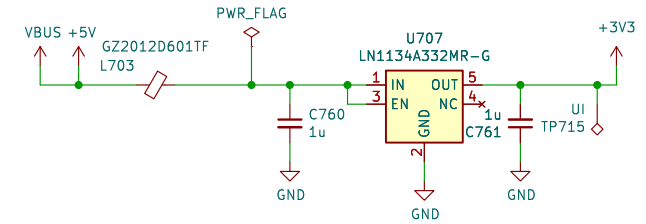
## ESD Diodes

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. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1

Rev:

Id: 9/23

800

OPEN IF EN16  
CLOSED IF NO DETENT

U801  
74HC165

DATA\_IND

HWCFG\_HIGH

HWCFG\_LOW

HWCFG\_CLOCK

HWCFG\_SHIFT

+3V3

GND

R801  
5k1

JP801  
(NF)

C801  
100n

HWCFG\_DATA

HWCFG\_HIGH

HWCFG\_LOW

Model Codes (D3-D0):

RevA 0000  
RevB 0001  
RevC 0010  
RevD 0011  
...

Revision Codes (D7-D4):

Po16 0000  
Bo16 0001  
PBF4 0010  
EN16 0011  
...

Sheet: /HWCFG/  
File: HWCFG.kicad\_sch

Title:

Size: A4 Date: KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1 Id: 10/23

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/ File: HWCFG.kicad_sch		
<b>Title:</b>		
Size: A4	Date:	<b>Rev:</b>
KiCad E.D.A.	kicad-cli 7.0.9-7.0.9-ubuntu23.04.1	Id: 10/23



Sheet: /UI\_ENC/ENCODER\_0/  
File: UI\_ENC\_FILTER.kicad\_sch

**Title:**

Size: A4

Date:

Rev:

KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1

Id: 11/23



Sheet: /UI\_ENC/ENCODER\_6/  
File: UI\_ENC\_FILTER.kicad\_sch

**Title:**

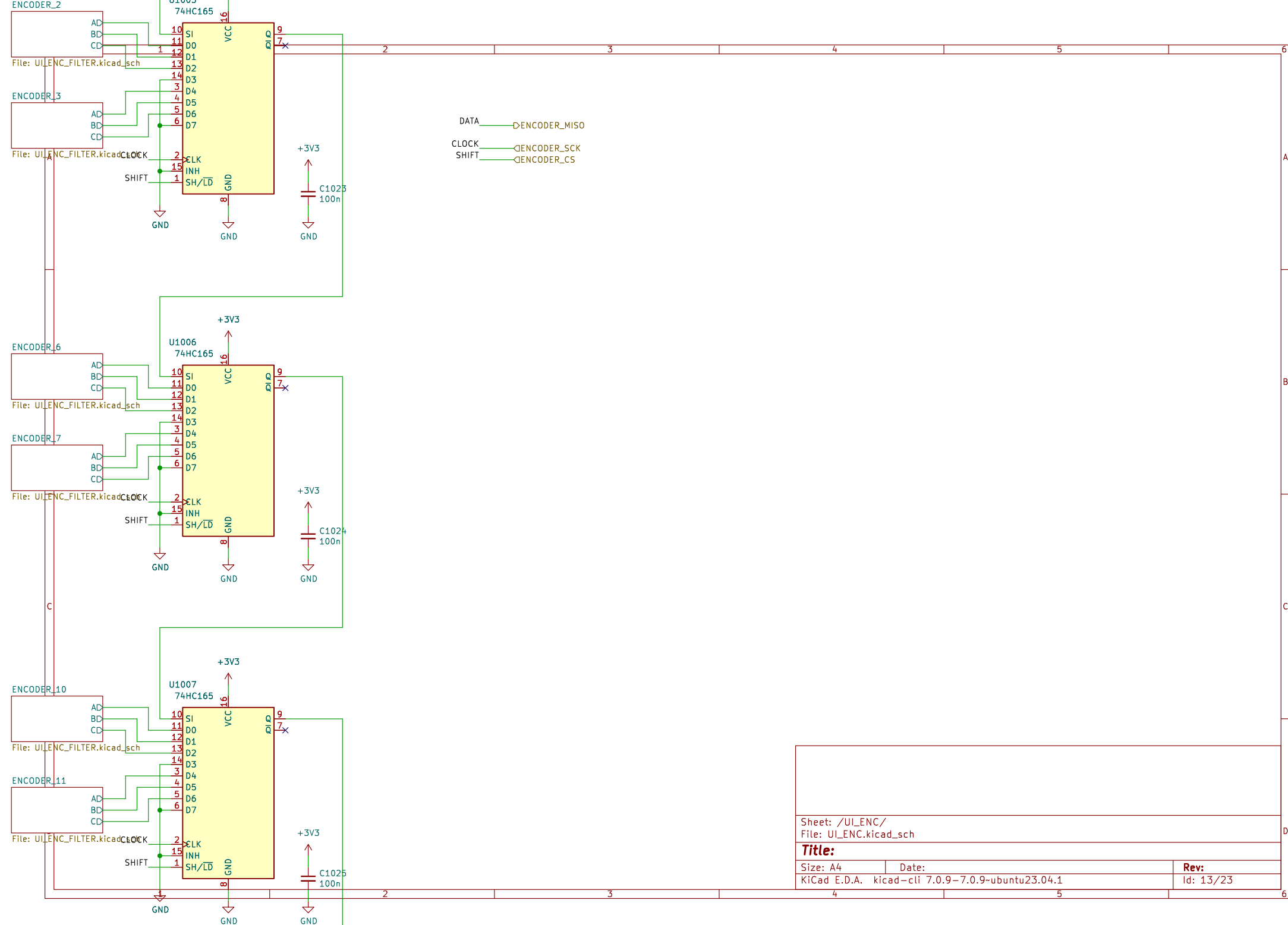
Size: A4

Date:

KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1

Rev:

Id: 12/23



Sheet: /UI_ENC/ File: UI_ENC.kicad_sch		
<b>Title:</b>		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1		Id: 13/23



Sheet: /UI\_ENC/ENCODER\_3/  
File: UI\_ENC\_FILTER.kicad\_sch

**Title:**

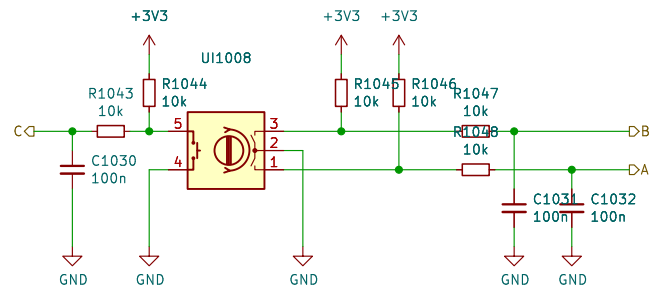
Size: A4

Date:

KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1

**Rev:**

Id: 14/23



Sheet: /UI\_ENC/ENCODER\_1/  
File: UI\_ENC\_FILTER.kicad\_sch

**Title:**

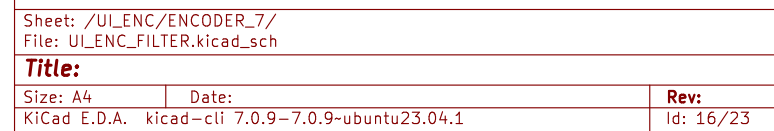
Size: A4

Date:

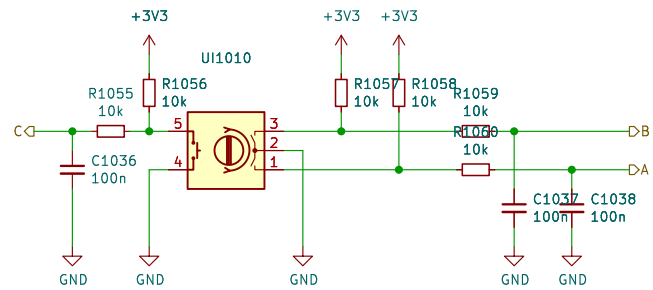
KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1

**Rev:**

Id: 15/23







Sheet: /UI\_ENC/ENCODER\_14/  
File: UI\_ENC\_FILTER.kicad\_sch

**Title:**

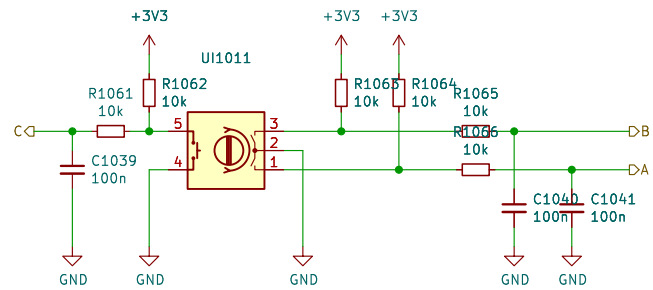
Size: A4

Date:

KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1

Rev:

Id: 17/23



Sheet: /UI\_ENC/ENCODER\_13/  
File: UI\_ENC\_FILTER.kicad\_sch

**Title:**

Size: A4

Date:

KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1

Rev:

Id: 18/23



Sheet: /UI\_ENC/ENCODER\_10/  
File: UI\_ENC\_FILTER.kicad\_sch

**Title:**

Size: A4

Date:

KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1

**Rev:**

Id: 19/23



Sheet: /UI\_ENC/ENCODER\_15/  
File: UI\_ENC\_FILTER.kicad\_sch

**Title:**

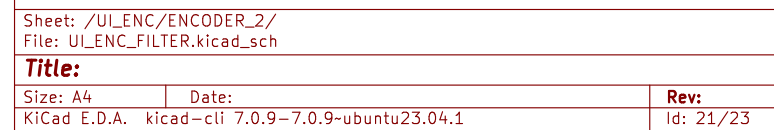
Size: A4

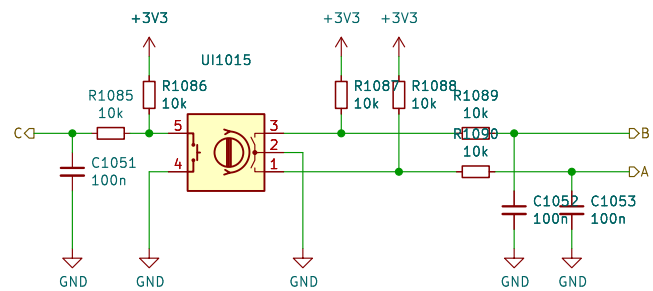
Date:

KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1

**Rev:**

Id: 20/23





Sheet: /UI\_ENC/ENCODER\_4/  
File: UI\_ENC\_FILTER.kicad\_sch

**Title:**

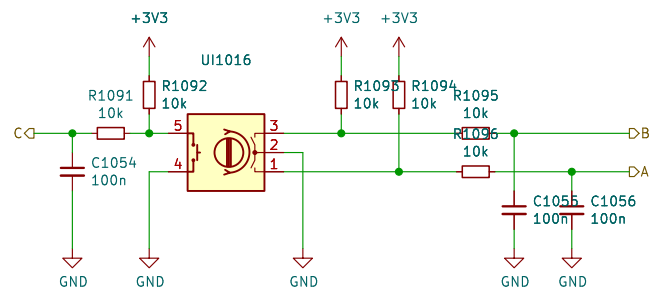
Size: A4

Date:

KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1

Rev:

Id: 22/23



Sheet: /UI\_ENC/ENCODER\_9/  
File: UI\_ENC\_FILTER.kicad\_sch

**Title:**

Size: A4

Date:

KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1

Rev:

Id: 23/23