

900



Sheet: /UI_LED/
File: UI_LED.kicad_sch

Title:

Size: A4
KiCad E.D.A. kicad-cli 7.0.11+1

Date:

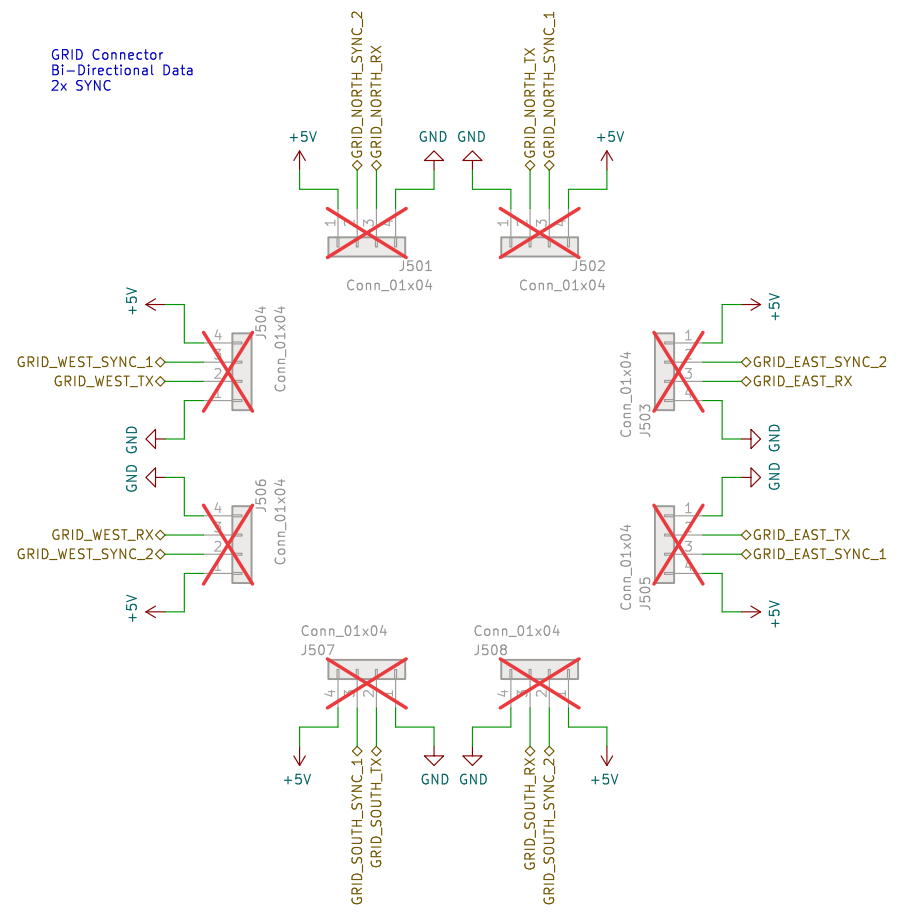
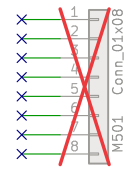
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500

GRID Connector
Bi-Directional Data
2x SYNC

Board Mounting Pattern



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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.

Components and Connections:

- USB Connector (J601):** TYPE-C-32-M-12. Pins include VBUS, CC1, CC2, D-, D+, SBU1, SBU2, and SHIELD.
- USB Connector (U601):** C5451661. Pins include VBUS, USB_DATA_N, USB_DATA_P, and GND.
- USB LDO Regulator (U602):** LN1134A332MR-G. Pins include IN, EN, OUT, NC, and GND.
- Capacitors:** C601 (1uF), C602 (1uF), C603 (4n7).
- Resistors:** R601 (5k1), R602 (5k1), R603 (1M).
- Test Points:** TP601 (GND), TP602 (VBUS), TP603 (D-), TP604 (D+), TP605 (GND).
- Power Rails:** VBUS, +5V, +3V3, GND, PWR_FLAG, USB_DATA_N, USB_DATA_P.

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

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4	5	6

800

OPEN IF EN16
CLOSED IF NO DETENT

+3V3

JP801 (NF)

R801 5k1

GND

HWCFG_LOW

HWCFG_LOW

HWCFG_HIGH

HWCFG_LOW

HWCFG_LOW

HWCFG_HIGH

HWCFG_CLOCKD

HWCFG_SHIFTD

U801 74HC165

VCC

+3V3

HWCFG_DATA

HWCFG_HIGH

C801 100n

HWCFG_LOW

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
...
```

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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
...
```

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Sheet: /UI_ENC/ENCODER_0/
File: UI_ENC_FILTER.kicad_sch

Title:

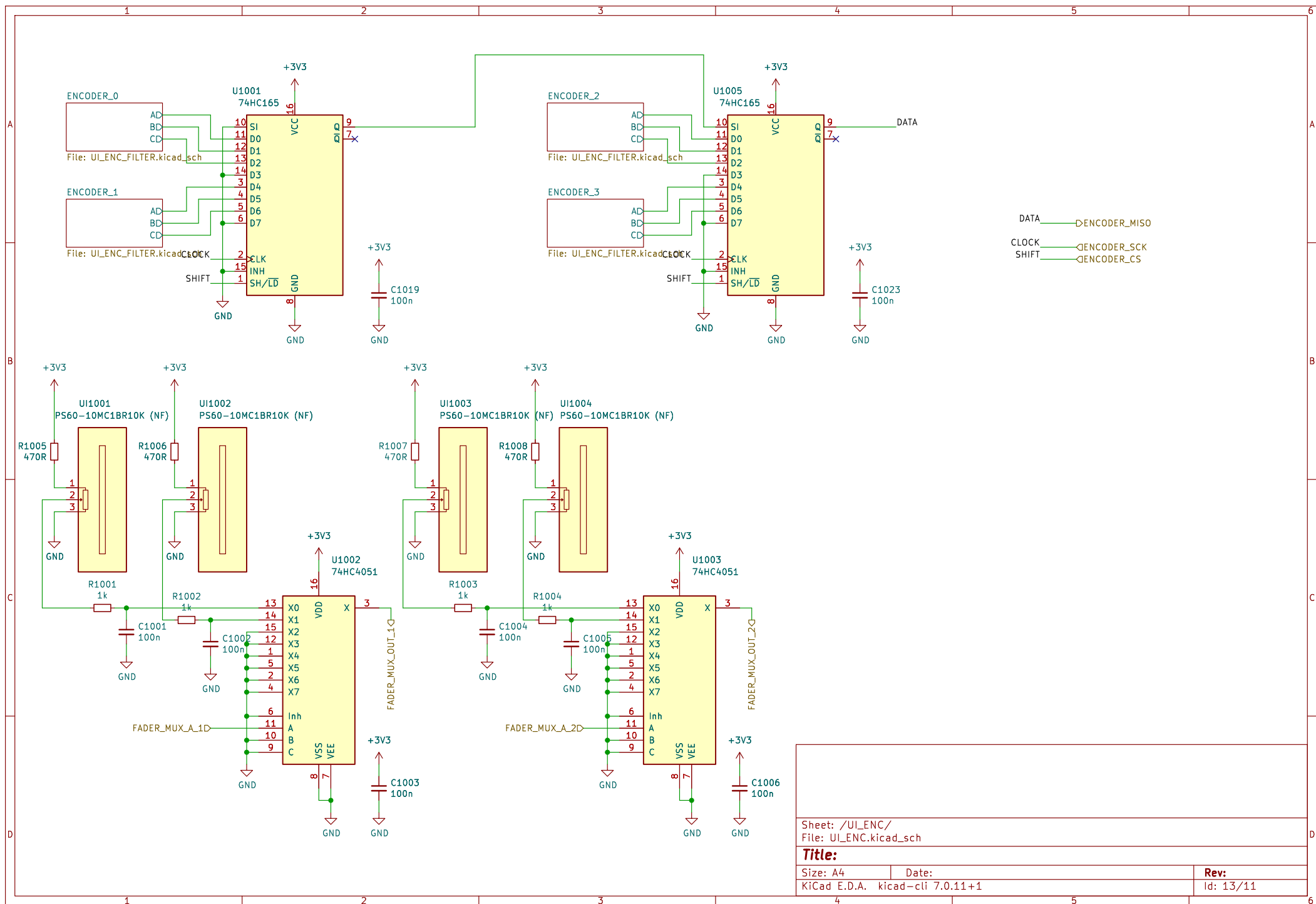
Size: A4

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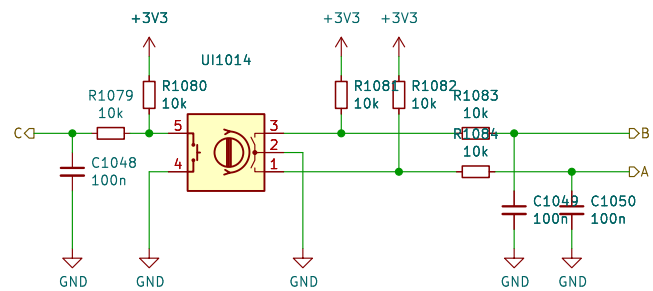
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Sheet: /UI_ENC/ENCODER_2/
File: UI_ENC_FILTER.kicad_sch

Title:

Size: A4

Date:

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