



Sheet: /UI_ENC/ENCODER_11/
File: UI_ENC_FILTER.kicad_sch

Title:

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KiCad E.D.A. 8.0.3	

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900



Sheet: /UI_LED/
File: UI_LED.kicad_sch

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Sheet: /UI_ENC/ENCODER_5/
File: UI_ENC_FILTER.kicad_sch

Title:

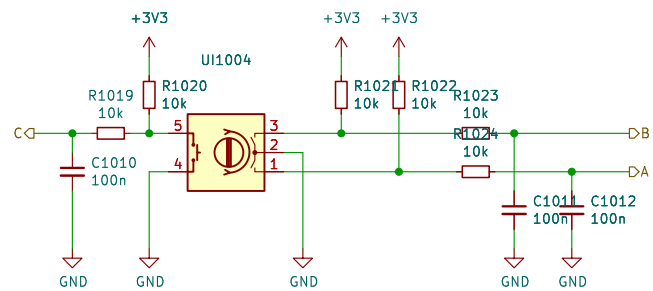
Size: A4

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Sheet: /UI_ENC/ENCODER_12/
File: UI_ENC_FILTER.kicad_sch

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500

GRID Connector
Bi-Directional Data
2x SYNC

Board Mounting Pattern



Sheet: /MCU/sheet5D85C9EA/ File: GRID.kicad_sch		
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600

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

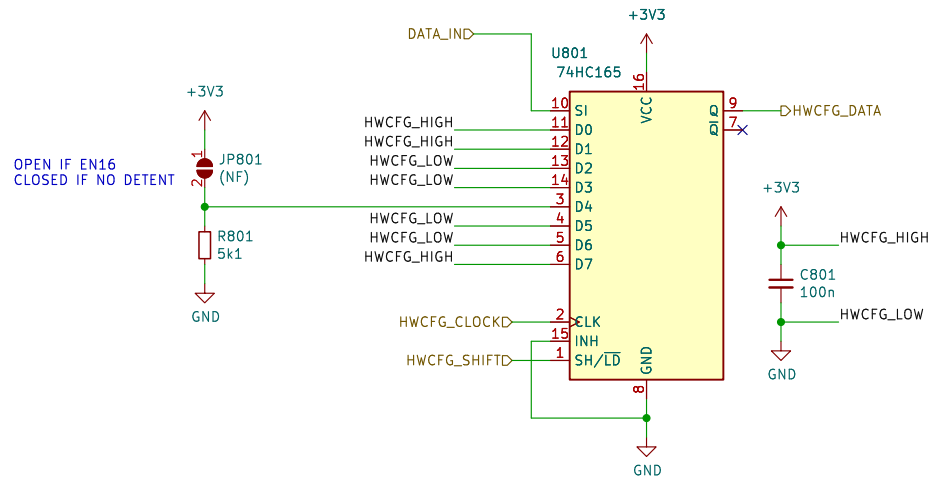
+3V3 LDO Regulators
Regulators for generating independent power rails for the microcontroller and the user interface.

The schematic shows the following components and connections:

- USB Type-C Connector (J601):** TYPE-C-32-M-12. Pins include VBUS, CC1, CC2, D-, D+, SBU1, SBU2, and SHIELD.
- USB-to-UART Bridge (U601):** C5451661. Pins include VBUS, USB_DATA_N, USB_DATA_P, and GND.
- +3V3 LDO Regulator (U602):** LN1134A332MR-G. Pins include IN, EN, OUT, NC, and GND.
- ESD Protection Diodes (TP601-TP604):** TP601 (VBUS to GND), TP602 (VBUS to VBUS), TP603 (D- to D-), TP604 (D+ to D+).
- Passive Components:**
 - Capacitors: C601 (1uF), C602 (1uF), C603 (4nF).
 - Resistors: R601 (5k1), R602 (5k1), R603 (1M).

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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/
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Sheet: /UI_ENC/ENCODER_0/
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Sheet: /UI_ENC/ENCODER_6/
File: UI_ENC_FILTER.kicad_sch

Title:

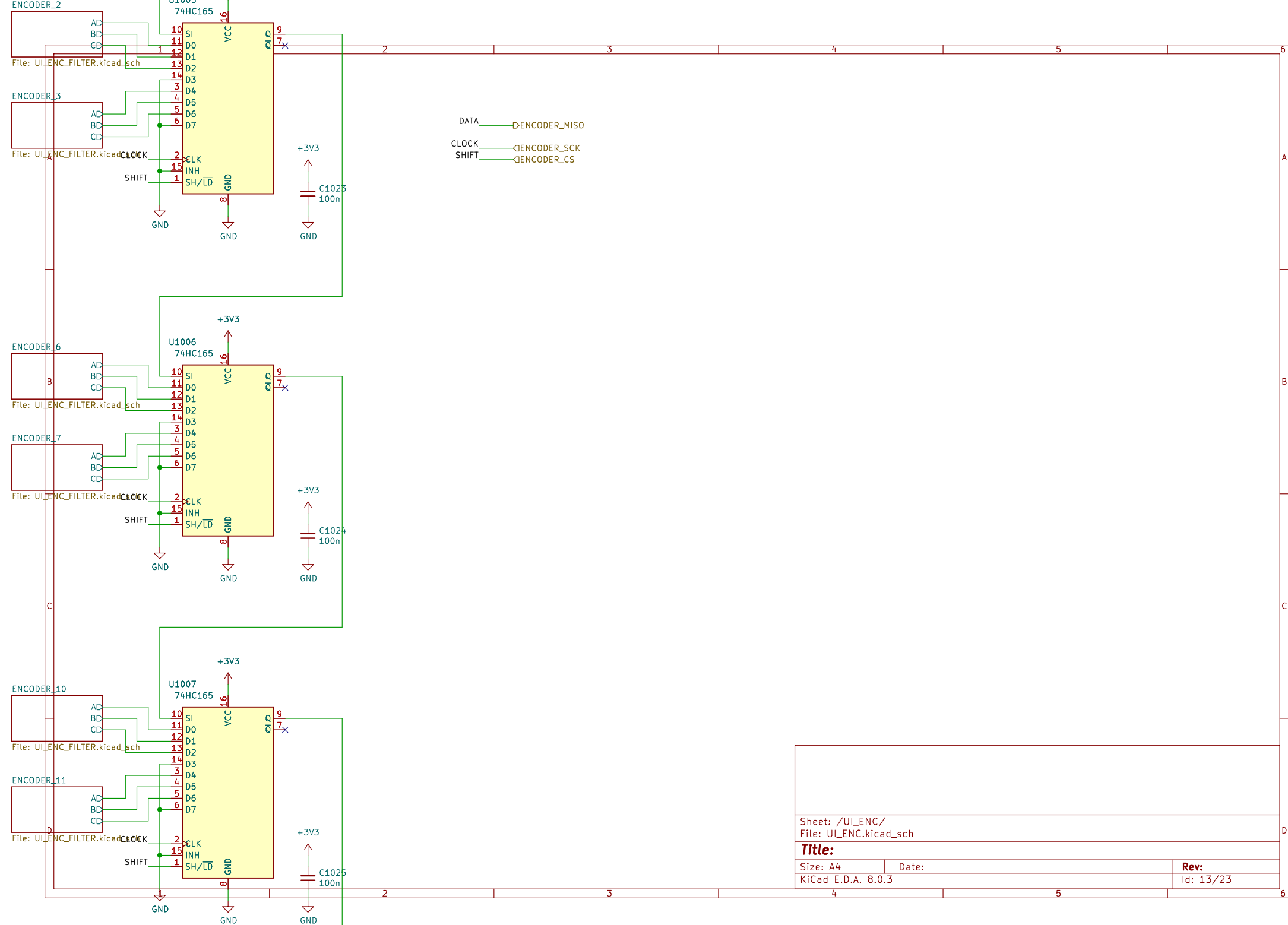
Size: A4

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Sheet: /UI_ENC/ENCODER_3/
File: UI_ENC_FILTER.kicad_sch

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Sheet: /UI_ENC/ENCODER_1/
File: UI_ENC_FILTER.kicad_sch

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Sheet: /UI_ENC/ENCODER_13/
File: UI_ENC_FILTER.kicad_sch

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Sheet: /UI_ENC/ENCODER_10/
File: UI_ENC_FILTER.kicad_sch

Title:

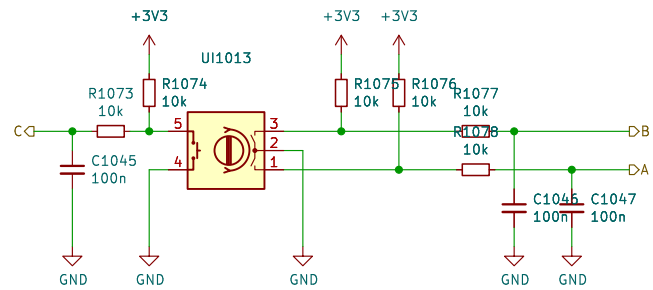
Size: A4

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Sheet: /UI_ENC/ENCODER_15/
File: UI_ENC_FILTER.kicad_sch

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

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Sheet: /UI_ENC/ENCODER_4/
File: UI_ENC_FILTER.kicad_sch

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Sheet: /UI_ENC/ENCODER_9/
File: UI_ENC_FILTER.kicad_sch

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