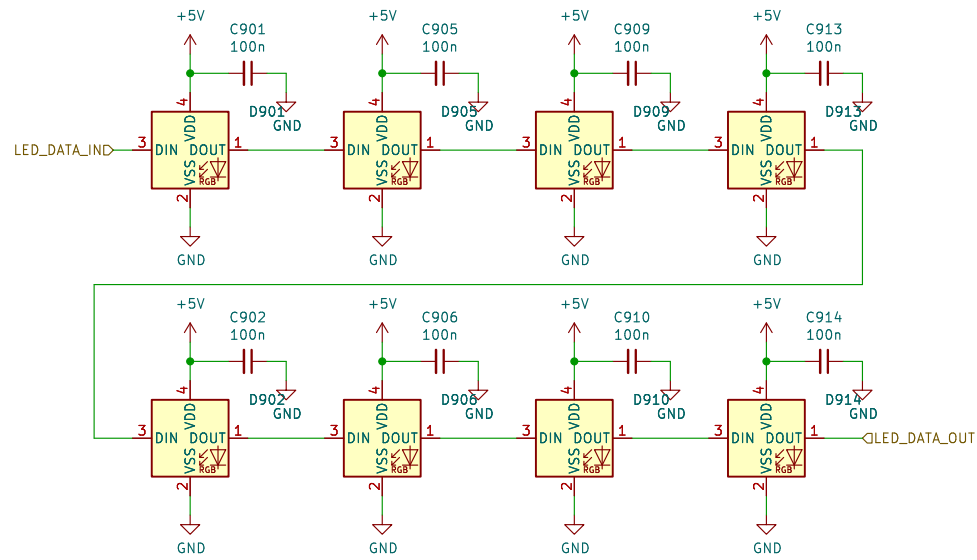




# 900



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

**Title:**

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500

GRID Connector  
Bi-Directional Data  
2x SYNC

Board Mounting Pattern



Sheet: /MCU/sheet5D85C9EA/ File: GRID.kicad_sch		
<b>Title:</b>		
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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:**

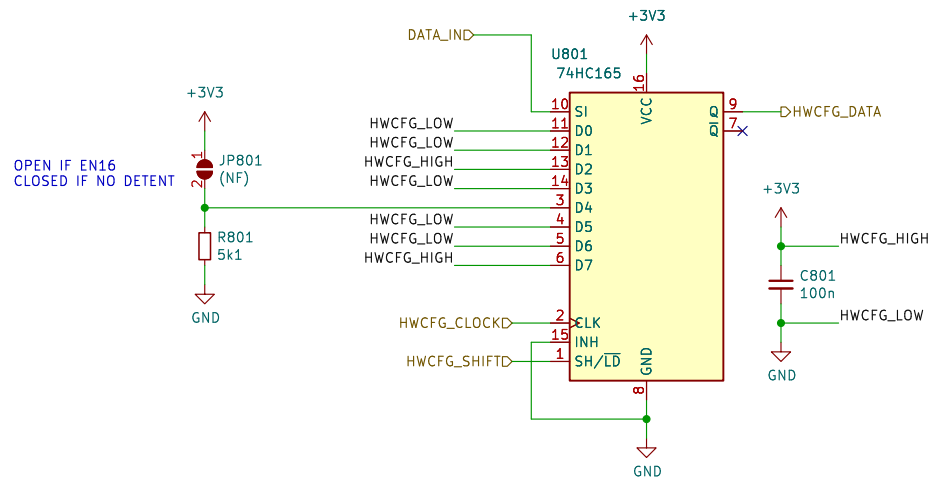
- J601 (TYPE-C-32-M-12):** USB Type-C connector. Pins A9B4, A4B9, A5, B5, A7, B7, A6, B6, A8, B8, A1B12, A12B1, and shields S1, S2, S3, S4 are shown. S1 and S2 are connected to GND via C603 (4n7) and R603 (1M).
- ESD Protection:** U601 (C5451661) diodes protect USB\_DATA\_N, USB\_DATA\_P, and VBUS. TP601, TP602, TP603, and TP604 are test points for GND, VB, D-, and D+ respectively.
- +3V3 LDO Regulator:** U602 (LN1134A332MR-G) converts VBUS +5V to +3V3. It includes a 1uF input capacitor (C601), a 1uF output capacitor (C602), and a 5k1 resistor (R602) for the PWR\_FLAG signal.
- Other Components:** R601 (5k1) and R602 (5k1) are pull-up resistors for USB\_DATA\_N and USB\_DATA\_P. C603 (4n7) and R603 (1M) are connected to the shields of J601.

**Metadata:**

- Sheet: /MCU/Sheet60F06FE1/
- File: USB\_POWER.kicad\_sch
- Title:
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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:

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

**Title:**

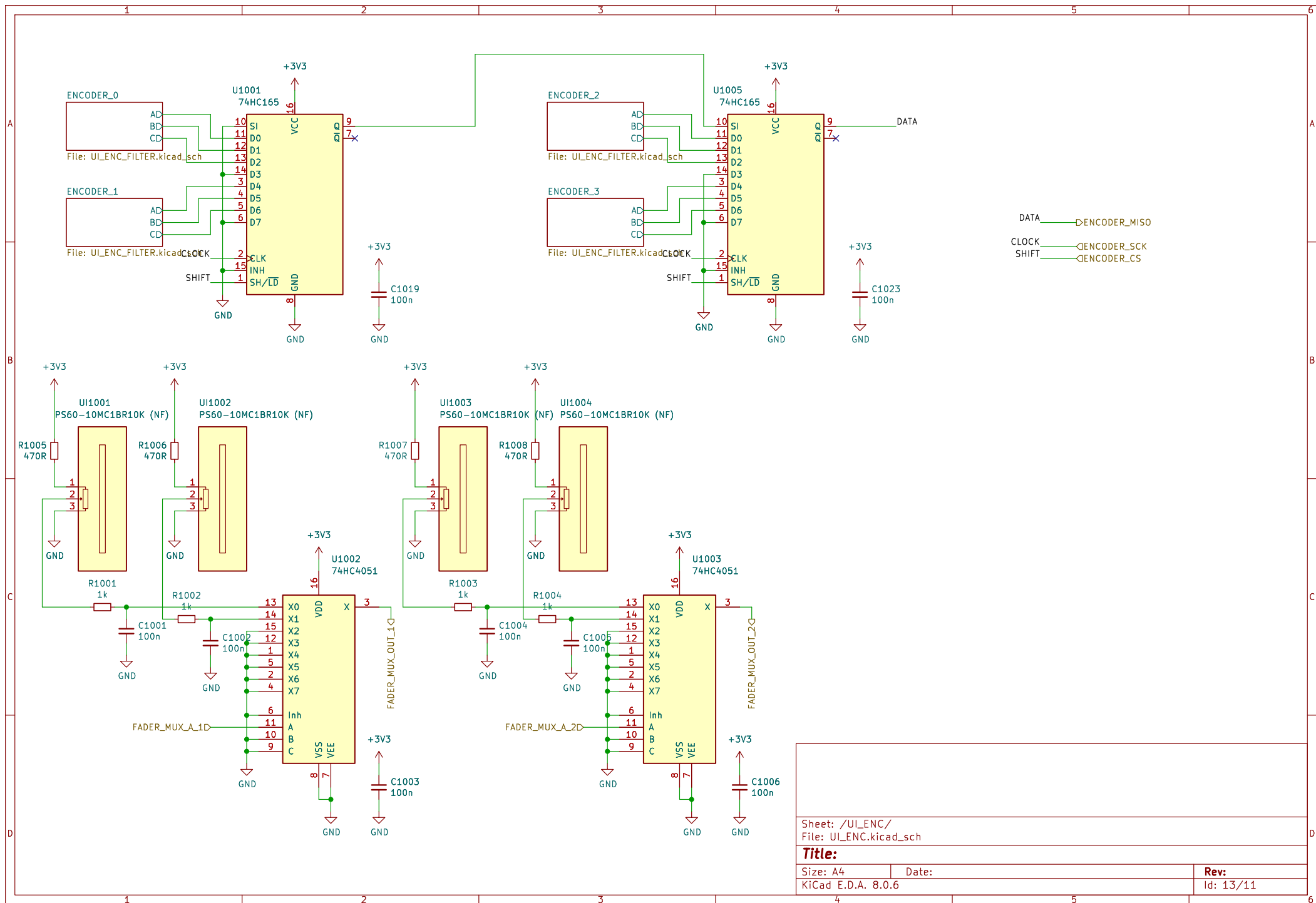
Size: A4

Date:

**Rev:**

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

**Title:**

Size: A4

Date:

**Rev:**

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

**Title:**

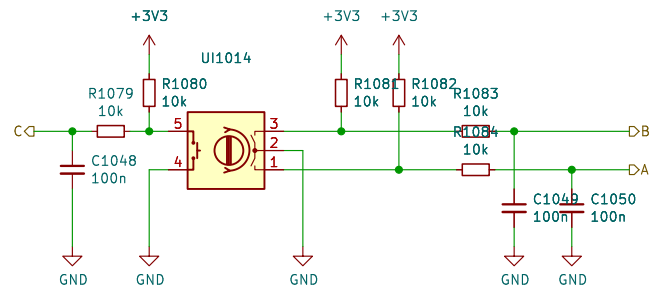
Size: A4

Date:

**Rev:**

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Sheet: /UI\_ENC/ENCODER\_2/  
File: UI\_ENC\_FILTER.kicad\_sch

**Title:**

Size: A4

Date:

Rev:

KiCad E.D.A. 8.0.6

Id: 21/11