

# 900



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

**Title:**

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

Date:

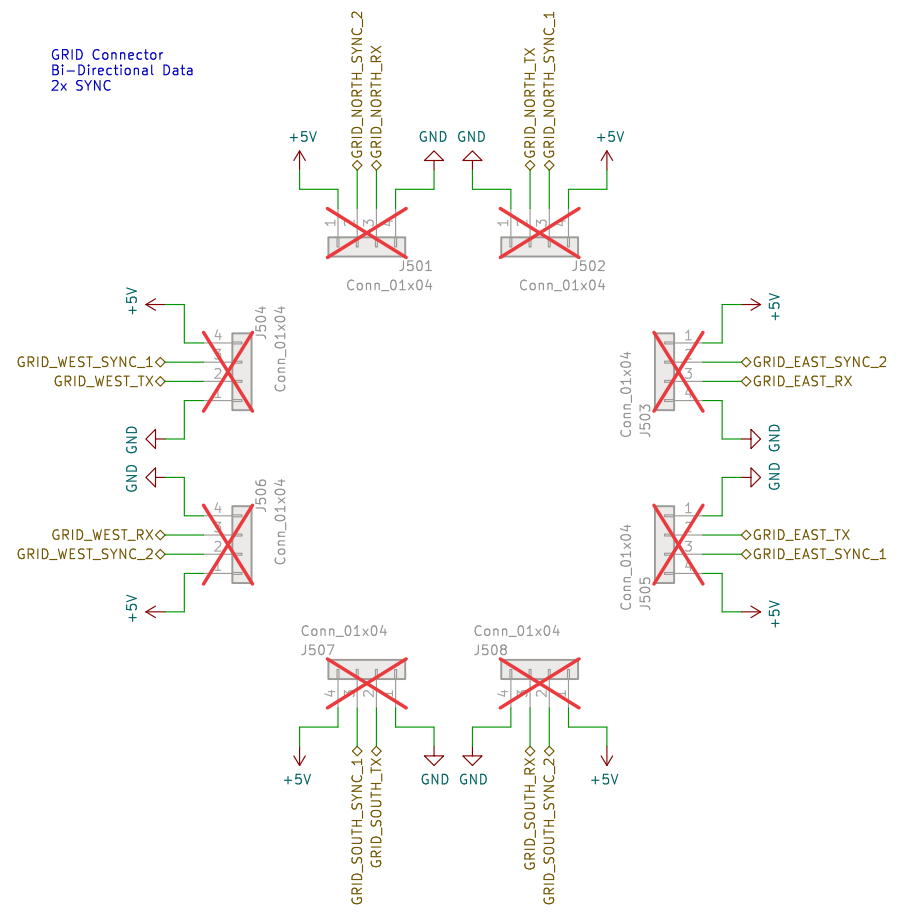
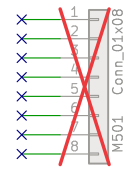
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500

GRID Connector  
Bi-Directional Data  
2x SYNC

Board Mounting Pattern



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

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

U601  
C5451661

VBUS  
USB\_DATA\_N  
USB\_DATA\_P  
GND

TP601  
GND

TP602  
VB

TP603  
D-

TP604  
D+

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

U602  
LN1134A332MR-G

VBUS +5V  
GZ2012D601TF  
L601

PWR\_FLAG

C601  
1u

C602  
1u

TP605

+3V3

J601  
TYPE-C-32-M-12

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

A9B4  
A4B9  
A5  
B5  
A7  
B7  
A6  
B6  
A8  
B8  
A1B12  
A12B1

PWR\_FLAG

GND  
5k1  
R601  
5k1  
R602  
GND

C603  
4n7  
R603  
1M  
GND  
GND

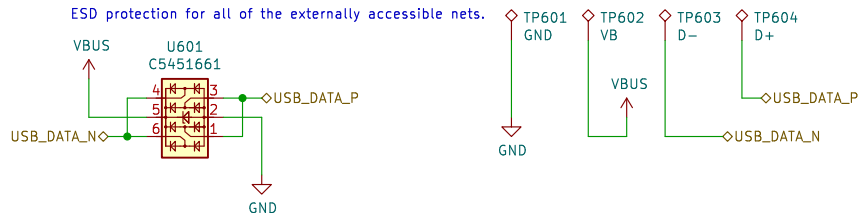
Sheet: /MCU/Sheet60F06FE1/  
File: USB\_POWER.kicad\_sch

**Title:**

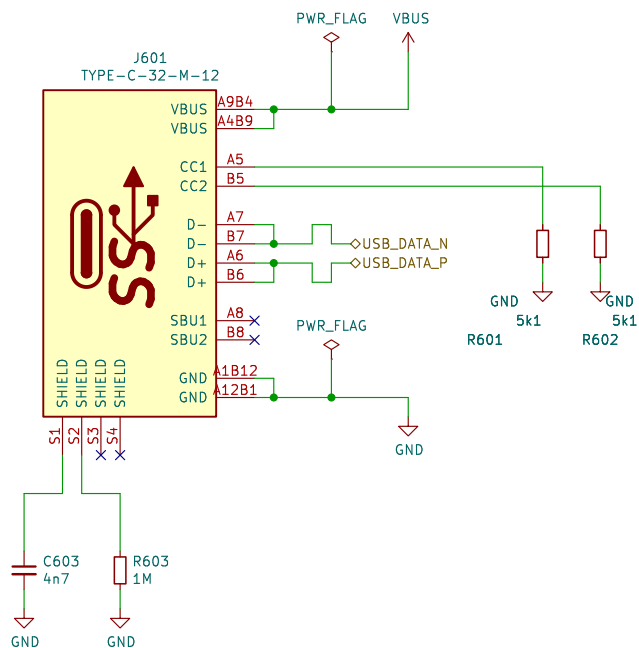
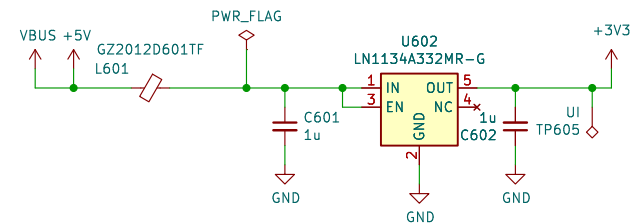
Size: A4  
Date:  
KiCad E.D.A. kicad-cli 7.0.11+1

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ESD protection for all of the externally accessible nets.



Regulators for generating independent power rails for the microcontroller and the user interface.



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File: USB\_POWER.kicad\_sch

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OPEN IF EN16  
CLOSED IF NO DETENT

U801  
74HC165

DATA\_IND

+3V3

VCC

Q0

Q1

Q2

Q3

Q4

Q5

Q6

Q7

HWCFG\_DATA

HWCFG\_HIGH

HWCFG\_LOW

HWCFG\_CLOCKD

HWCFG\_SHIFTD

SI

D0

D1

D2

D3

D4

D5

D6

D7

CLK

INH

SH/LD

GND

R801  
5k1

JP801  
(NF)

C801  
100n

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  
...

Title:		
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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
...
```

Sheet: /HWCFG/ File: HWCFG.kicad_sch	
<b>Title:</b>	
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Sheet: /UI\_ENC/ENCODER\_0/  
File: UI\_ENC\_FILTER.kicad\_sch

**Title:**

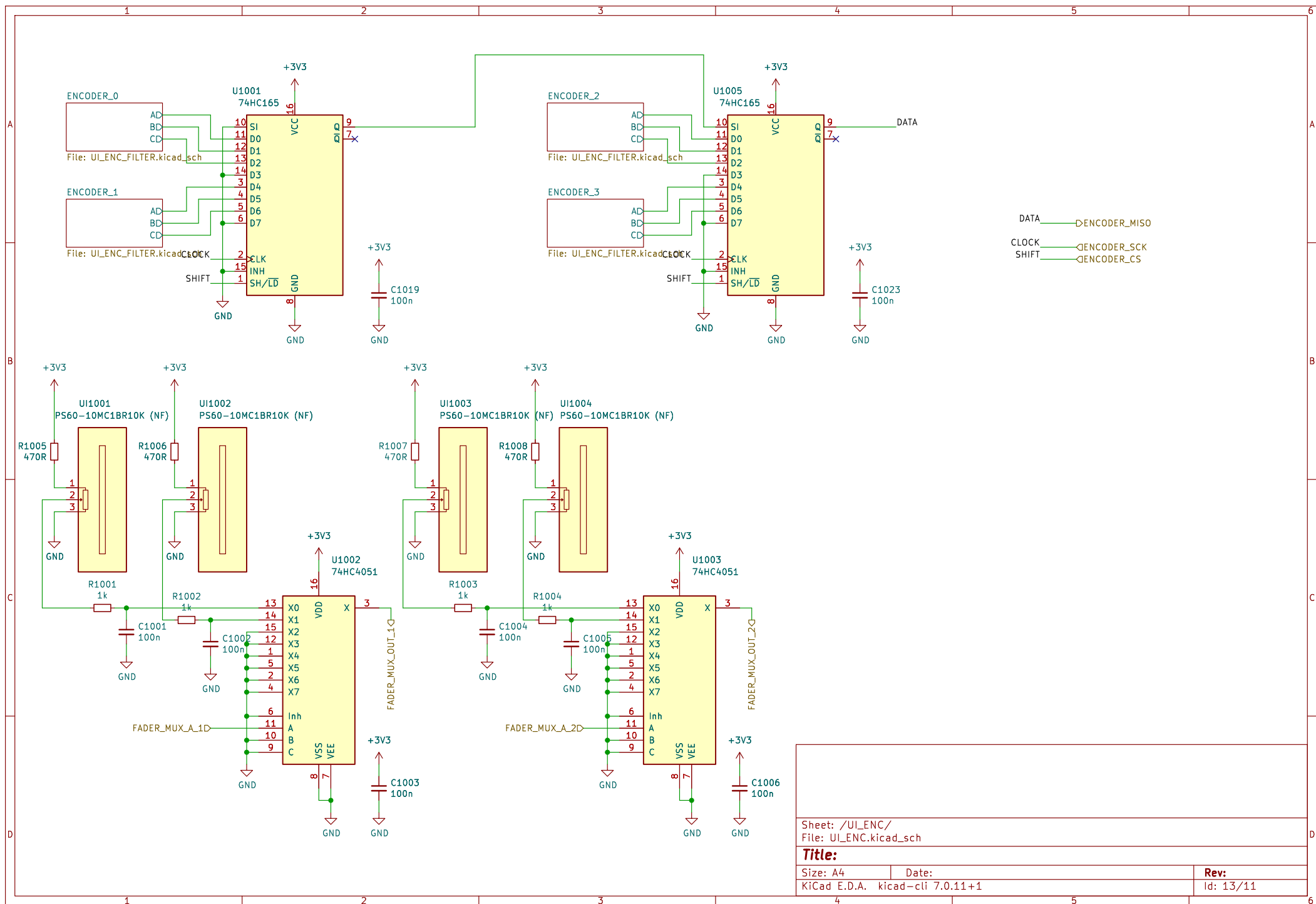
Size: A4

Date:

Rev:

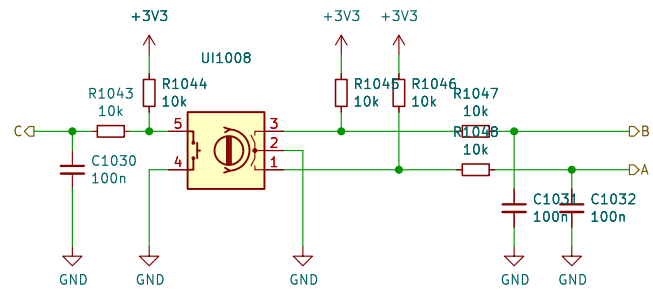
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Sheet: /UI\_ENC/ENCODER\_1/  
File: UI\_ENC\_FILTER.kicad\_sch

**Title:**

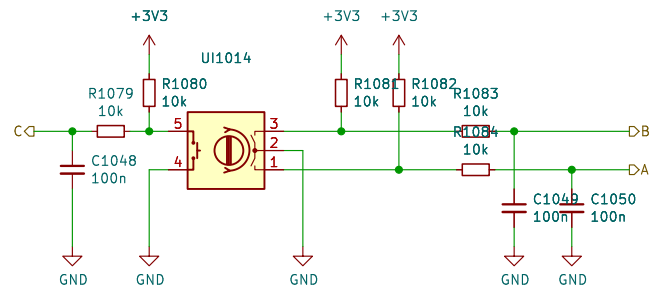
Size: A4

Date:

Rev:

KiCad E.D.A. kicad-cli 7.0.11+1

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

**Title:**

Size: A4

Date:

KiCad E.D.A. kicad-cli 7.0.11+1

**Rev:**

Id: 21/11