

900



Sheet: /UI_LED/
File: UI_LED.kicad_sch

Title:

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

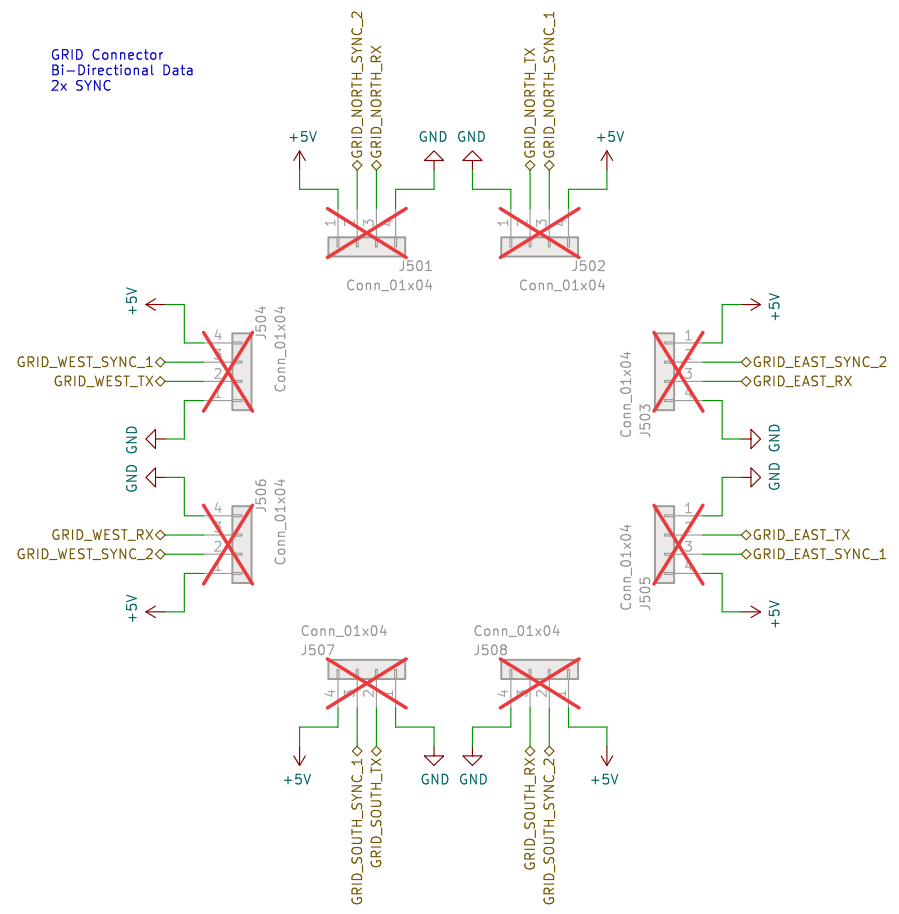
Date:

Rev:
Id: 4/11

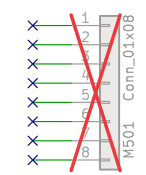


500

GRID Connector
Bi-Directional Data
2x SYNC



Board Mounting Pattern

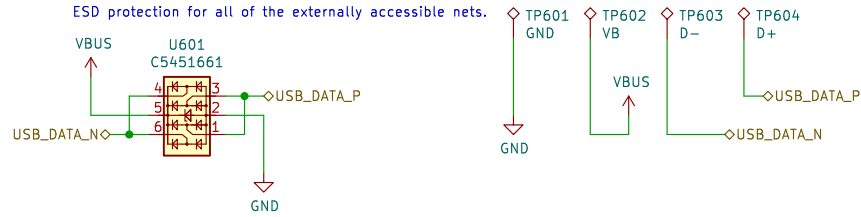


Sheet: /MCU/sheet5D85C9EA/ File: GRID.kicad_sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad-cli 7.0.11+1		Id: 8/11

600

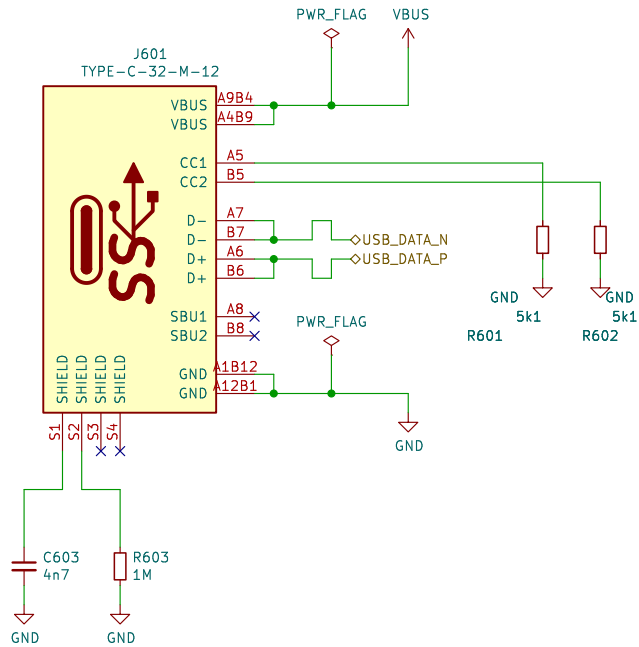
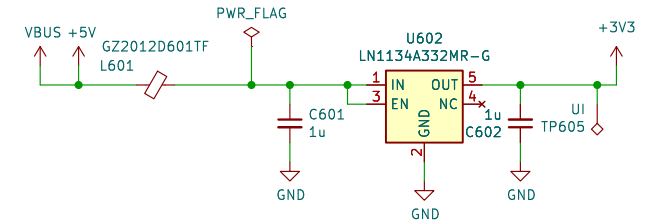
ESD Diodes

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 7.0.11+1

Rev:

Id: 9/11

800

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:		
Size: A4	Date:	Rev:
KiCad E.D.A.	kiCad-cli 7.0.11+1	Id: 10/11

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
...
```

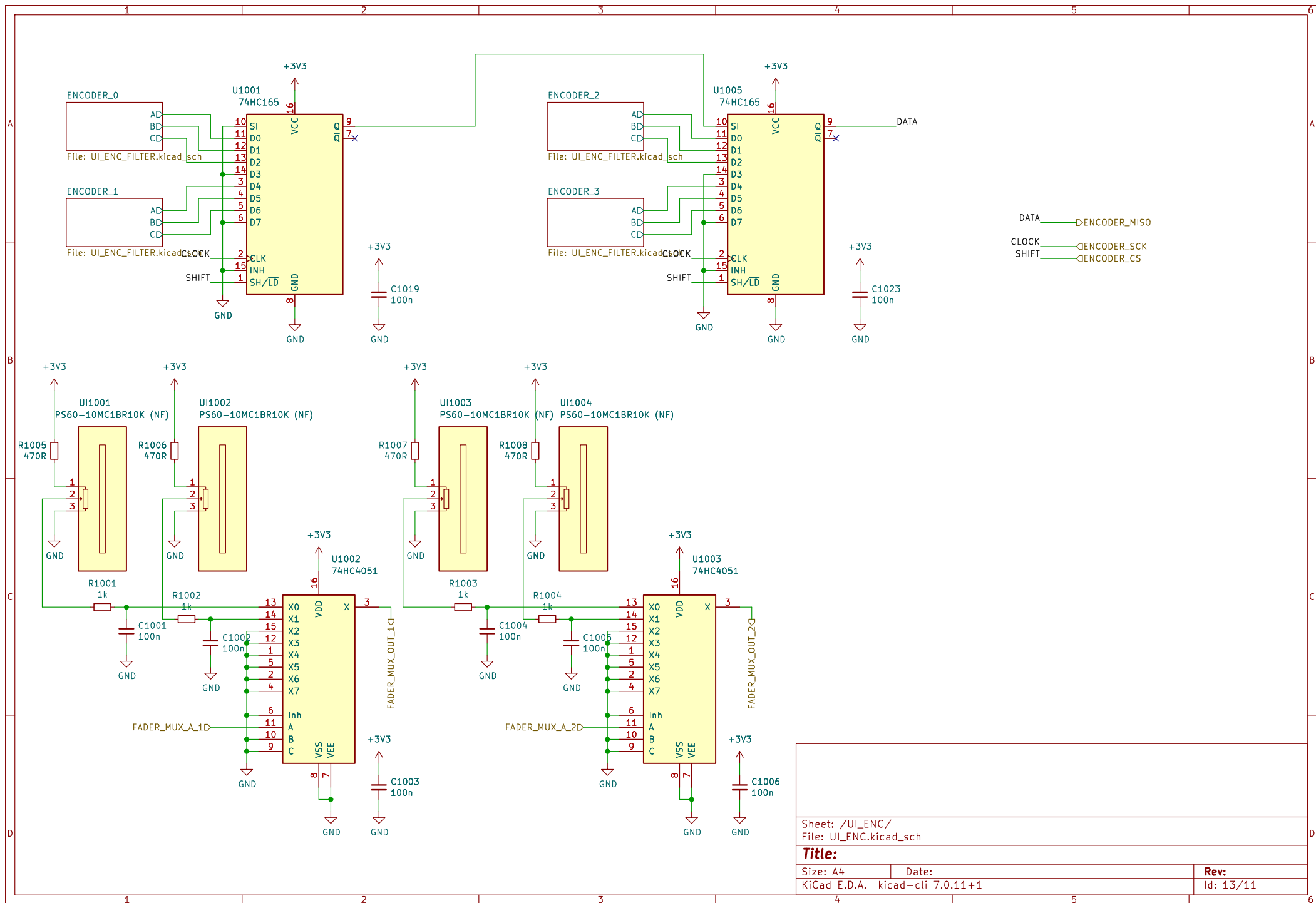
Sheet: /HWCFG/ File: HWCFG.kicad_sch	
Title:	
Size: A4	Date:
KiCad E.D.A. kicad-cli 7.0.11+1	Id: 10/11



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

Title:

Size: A4	Date:	Rev:
KiCad E.D.A. kicad-cli 7.0.11+1		Id: 11/11



Rev:
Id: 14/11



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

Title:

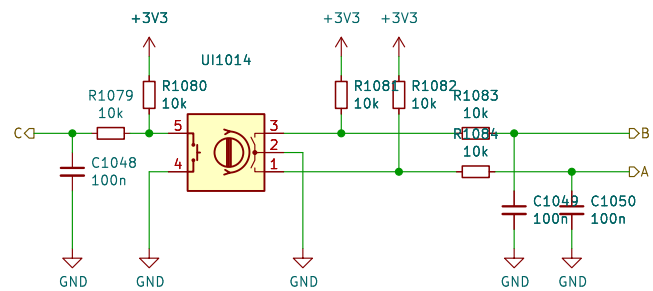
Size: A4

Date:

Rev:

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

Id: 15/11



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