

Sheet: /		
File: PCBA-EN16.kicad_sch		
Title:		
Size: A3	Date:	Rev:
KiCad E.D.A. kicad-cli 7.0.11+1	Id: 1/23	



Sheet: /UI_ENC/ENCODER_8/
File: UI_ENC_FILTER.kicad_sch

Title:

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

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

Title:

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

Date:

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900



Sheet: /UI_LED/
File: UI_LED.kicad_sch

Title:

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

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Sheet: /UI_ENC/ENCODER_5/
File: UI_ENC_FILTER.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		
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600

ESD Diodes

ESD protection for all of the externally accessible nets.

TP601 GND

TP602 VB

TP603 D-

TP604 D+

VBUS

USB_DATA_N

USB_DATA_P

GND

U601 C5451661

VBUS

VBUS

PWR_FLAG

VBUS

J601 TYPE-C-32-M-12

VBUS

VBUS

CC1

CC2

D-

D-

D+

D+

SBU1

SBU2

SHIELD

SHIELD

SHIELD

GND

GND

A9B4

A4B9

A5

B5

A7

B7

A6

B6

A8

BB

A1B12

A12B1

PWR_FLAG

GND

GND

R601 5k1

R602 5k1

C603 4n7

R603 1M

GND

GND

+3V3 LDO Regulators

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

VBUS +5V

GZ2012D601TF L601

PWR_FLAG

C601 1u

U602 LN1134A332MR-G

IN

EN

OUT

NC

GND

5

4

1u

C602

TP605

UI

+3V3

GND

GND

GND

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

Title:

Size: A4 Date: Rev:

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4	5	6

800

OPEN IF EN16
CLOSED IF NO DETENT

JP801 (NF)

R801 5k1

+3V3

GND

DATA_IND

U801 74HC165

HWCFG_HIGH

HWCFG_LOW

HWCFG_CLOCKD

HWCFG_SHIFTD

+3V3

GND

C801 100n

HWCFG_HIGH

HWCFG_LOW

HWCFG_DATA

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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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_6/
File: UI_ENC_FILTER.kicad_sch

Title:

Size: A4

Date:

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

Rev:

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

Title:

Size: A4

Date:

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

Rev:

Id: 14/23



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

Title:

Size: A4

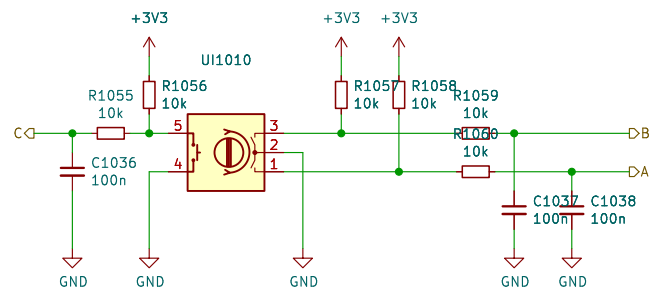
Date:

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

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Sheet: /UI_ENC/ENCODER_14/
File: UI_ENC_FILTER.kicad_sch

Title:

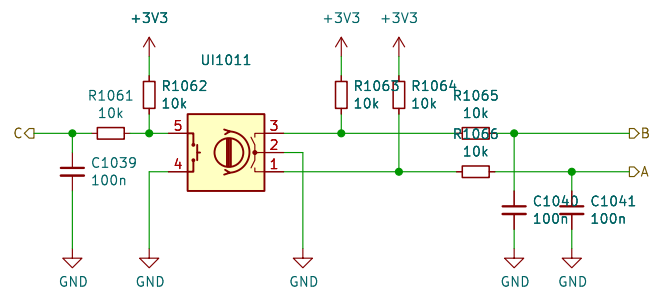
Size: A4

Date:

Rev:

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Id: 17/23



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

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Size: A4

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Rev:

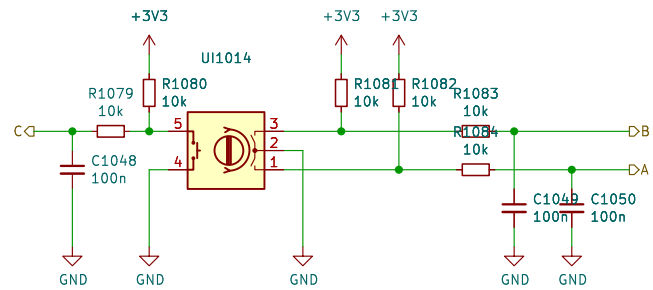
Id: 19/23



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

Title:

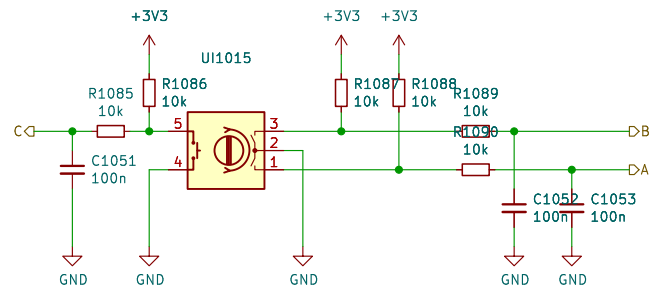
Size: A4	Date:	Rev:
KiCad E.D.A. kicad-cli 7.0.11+1		Id: 20/23



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

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Size: A4	Date:	Rev:
KiCad E.D.A. kicad-cli 7.0.11+1		Id: 21/23



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

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Size: A4
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Sheet: /UI_ENC/ENCODER_9/
File: UI_ENC_FILTER.kicad_sch

Title:

Size: A4

Date:

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

Rev:

Id: 23/23