



1000



Sheet: /UI_POT/
File: UI_POT.kicad_sch

Title:

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

Date:

Rev:

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Simulation:
<http://tinyurl.com/y229mty4>



Sheet: /UI_BUTTON/
File: UI_BUTTON.kicad_sch

Title:

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

Date:

Rev:

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Sheet: /UI_LED/ File: UI_LED.kicad_sch		
Title:		
Size: A4	Date:	Rev:
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500

GRID Connector
Bi-Directional Data
2x SYNC

Board Mounting Pattern



Sheet: /MCU/sheet5D85C9EA/ File: GRID.kicad_sch		
Title:		
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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+

VBUS
USB_DATA_P
USB_DATA_N

+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

IN
EN
GND

OUT
NC

5
4
2

1u
C602

UI
TP605

+3V3

J601
TYPE-C-32-M-12

VBUS
A9B4
A4B9

CC1
A5
B5

CC2
A7
B7

D-
D-
D+
D+
A6
B6

SBU1
A8
BB

SBU2
BB

SHIELD
SHIELD
SHIELD
SHIELD

GND
A1B12
A12B1

PWR_FLAG

GND

GND
5k1
R601

GND
5k1
R602

C603
4n7

R603
1M

GND

GND

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

Title:

Size: A4 Date: Rev:

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ESD protection for all of the externally accessible nets.



Size: A4

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800

The schematic diagram illustrates the board identification circuit. At the top left, a large blue "800" is displayed. The circuit includes a 74HC165 shift register (U801). Key components and connections are as follows:

- Jumpers:** JP701 (labeled "CLOSED IF PB44") and JP801 (labeled "OPEN IF BU16").
- Resistors:** R702 (5k1) and R801 (5k1).
- Capacitor:** C801 (100n).
- Power and Ground:** Connections for +3V3 and GND.
- Signal Lines:** HWCFG_LOW, HWCFG_HIGH, HWCFG_CLOCKD, and HWCFG_SHIFTD.
- Shift Register (U801):** Pins 1-16 are labeled: 1 SH/LD, 2 CLK, 3 D4, 4 D5, 5 D6, 6 D7, 7 Q, 8 VCC, 9 Q, 10 SI, 11 D0, 12 D1, 13 D2, 14 D3, 15 INH, 16 GND.

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:		
Size: A4	Date:	Rev:
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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			D
Title:			
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