



File: UI_BUTTON.kicad_sch

UI_LED

LED_DATA_IN

LED_DATA_OUT

File: UI_LED.kicad_sch

MCU

LED_DATA_OUT

File: MCU.kicad_sch

Sheet5D7C8BFD

ANA_0

ANA_1

ANA_4

ANA_5

ANA_8

ANA_9

ANA_12

ANA_13

IN_0

IN_1

IN_2

IN_3

IN_4

IN_5

IN_6

IN_7

OUTD

ADDRESS_A

ADDRESS_B

ADDRESS_C

ESP_GPIO_1

ESP_GPIO_18

ESP_GPIO_37

ESP_GPIO_36

ESP_GPIO_35

File: UI_MUX.kicad_sch

sheet5D8763D6

ANA_2

ANA_3

ANA_6

ANA_7

ANA_10

ANA_11

ANA_14

ANA_15

IN_0

IN_1

IN_2

IN_3

IN_4

IN_5

IN_6

IN_7

OUTD

ADDRESS_A

ADDRESS_B

ADDRESS_C

ESP_GPIO_2

ESP_GPIO_5

ESP_GPIO_4

ESP_GPIO_3

File: UI_MUX.kicad_sch

HWCFG

HWCFG_SHIFT

HWCFG_CLOCK

HWCFG_DATA

File: HWCFG.kicad_sch

Common Sheets:

500 GRID

600 USB_POWER

700 MCU

Module Specific:

800 HWCFG

900 LED

1000 UI

Sheet: /

File: PCBA-TEK2.kicad_sch

Title:

Size: A3

Date:

Rev:

KiCad E.D.A.

kicad-cli 7.0.11+1

Id: 1/10

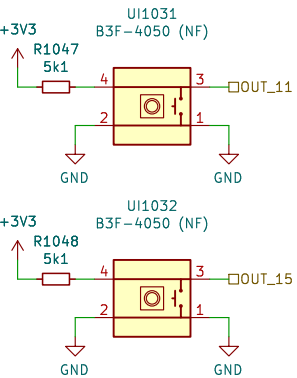
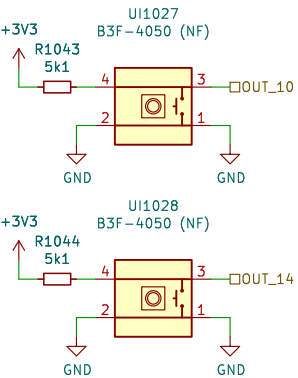
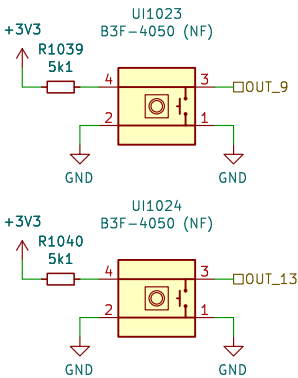
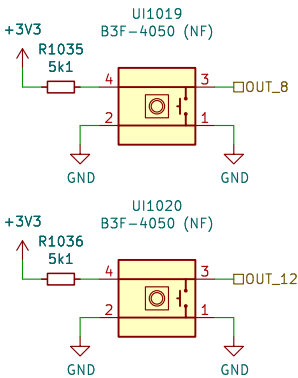
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Sheet: /UI_POT/ File: UI_POT.kicad_sch		
Title:		
Size: A4	Date:	Rev:
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1000

Simulation:
<http://tinyurl.com/y229mt4>



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File: UI_BUTTON.kicad_sch

Title:

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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

Date:

Rev:
Id: 4/10

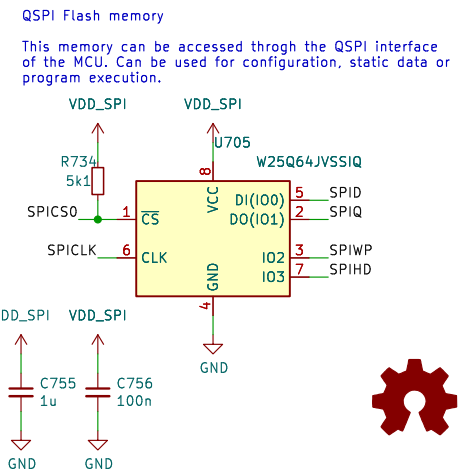
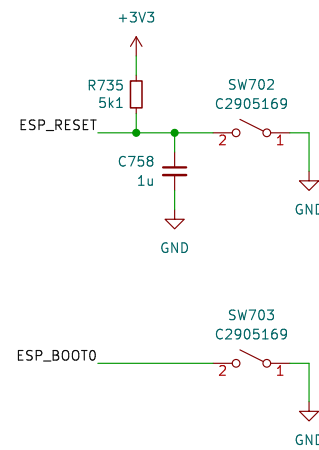
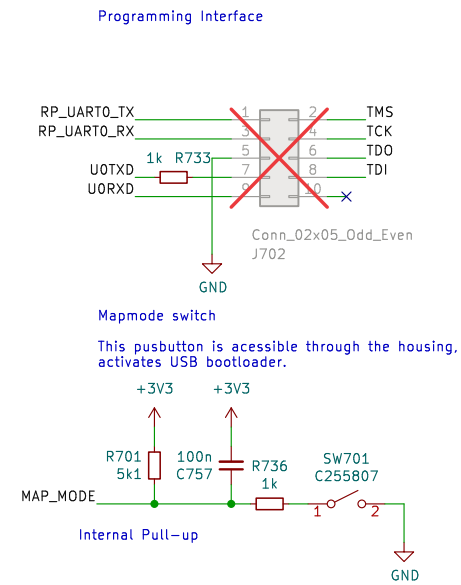
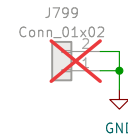
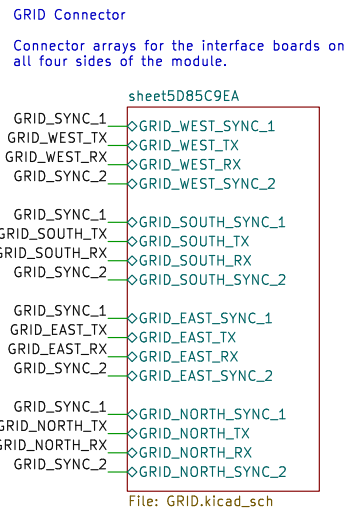
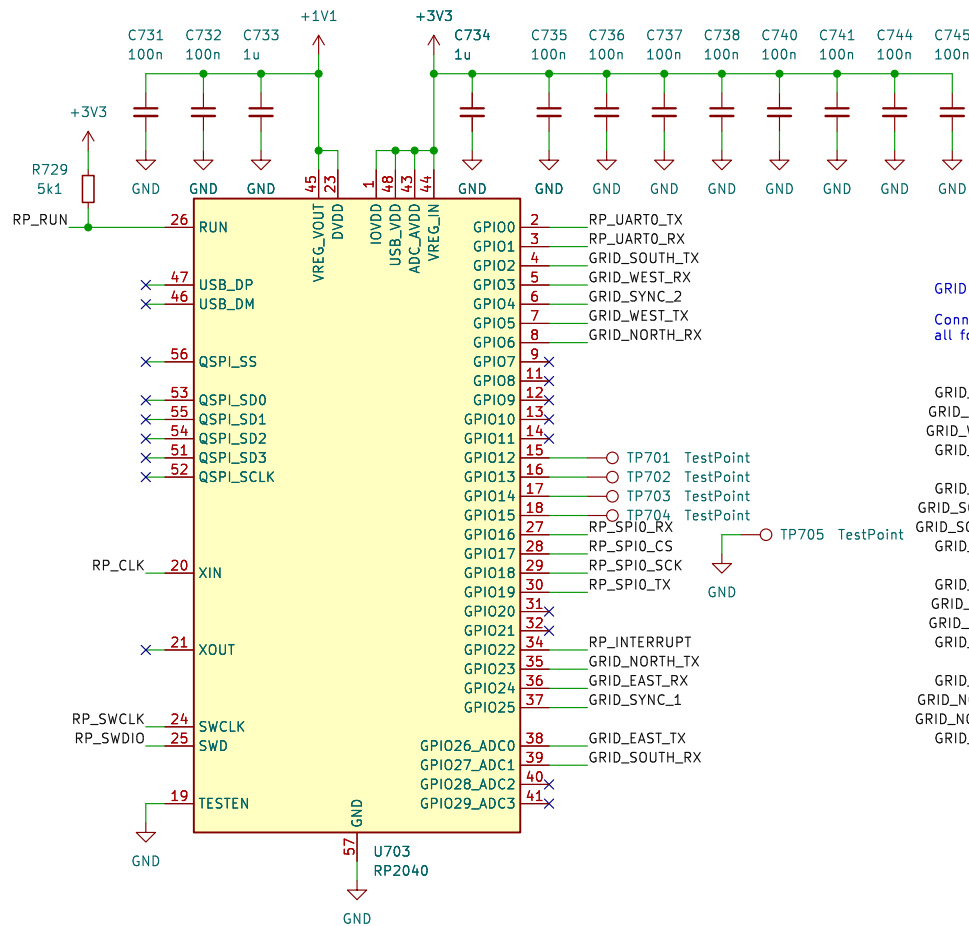
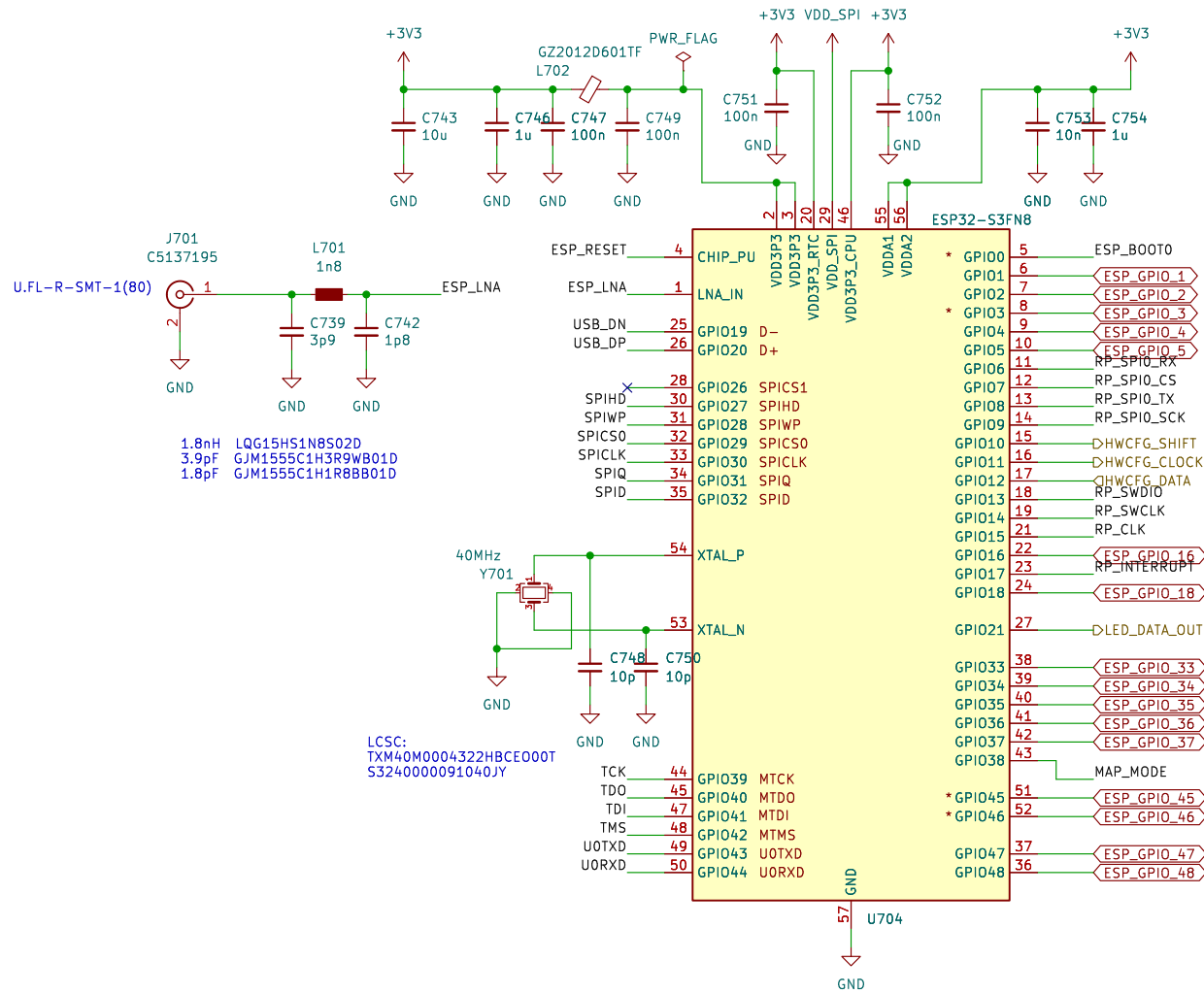
1000



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700



500

GRID Connector
Bi-Directional Data
2x SYNC

Board Mounting Pattern



Sheet: /MCU/sheet5D85C9EA/ File: GRID.kicad_sch		
Title:		
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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
USB_DATA_N
USB_DATA_P
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
GND
U602
LN1134A332MR-G
IN EN NC OUT
1 3 5 4
GND
C602 1u
TP605
GND
+3V3

J601
TYPE-C-32-M-12

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

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

PWR_FLAG
VBUS
USB_DATA_N
USB_DATA_P
GND
5k1
R601
5k1
R602
PWR_FLAG
GND

S1
S2
S3
S4

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.

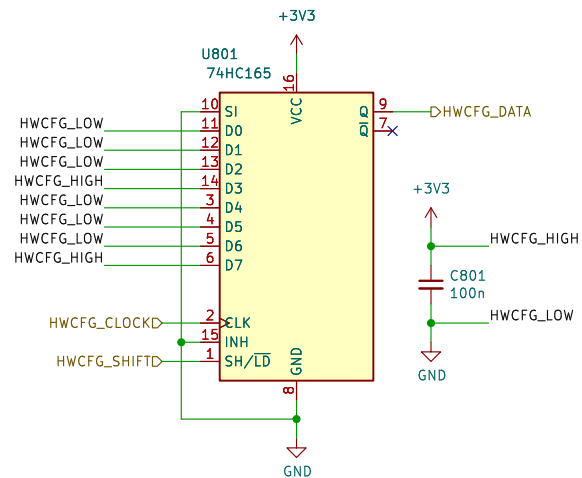


Size: A4

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800



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

Date:

Rev:

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