

Common Sheets:
500 GRID
600 USB_POWER
700 MCU

Module Specific:
800 HWCFG
900 LED
1000 UI

Sheet: /		
File: PCBA-P016_BU16.kicad_sch		
Title:		
Size: A3	Date:	Rev:
KiCad E.D.A. 8.0.4	Id: 1/10	

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Sheet: /UI_POT/
File: UI_POT.kicad_sch

Title:

Size: A4

Date:

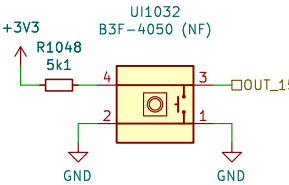
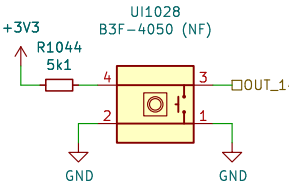
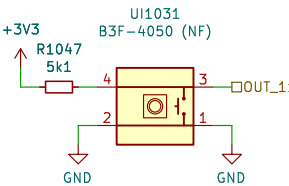
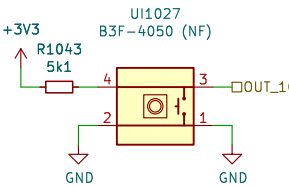
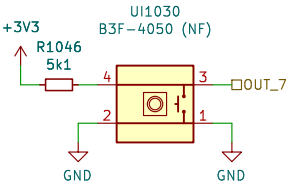
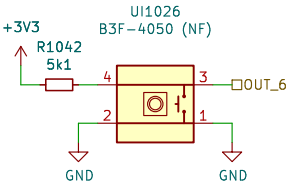
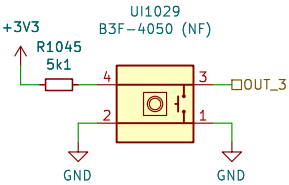
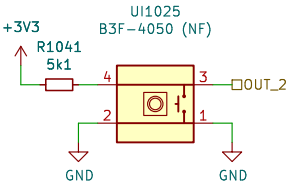
Rev:

KiCad E.D.A. 8.0.4

Id: 2/10

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



Sheet: /UI_BUTTON/
File: UI_BUTTON.kicad_sch

Title:

Size: A4

Date:

KiCad E.D.A. 8.0.4

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Id: 3/10

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Sheet: /UI_LED/
File: UI_LED.kicad_sch

Title:

Size: A4
KiCad E.D.A. 8.0.4

Date:

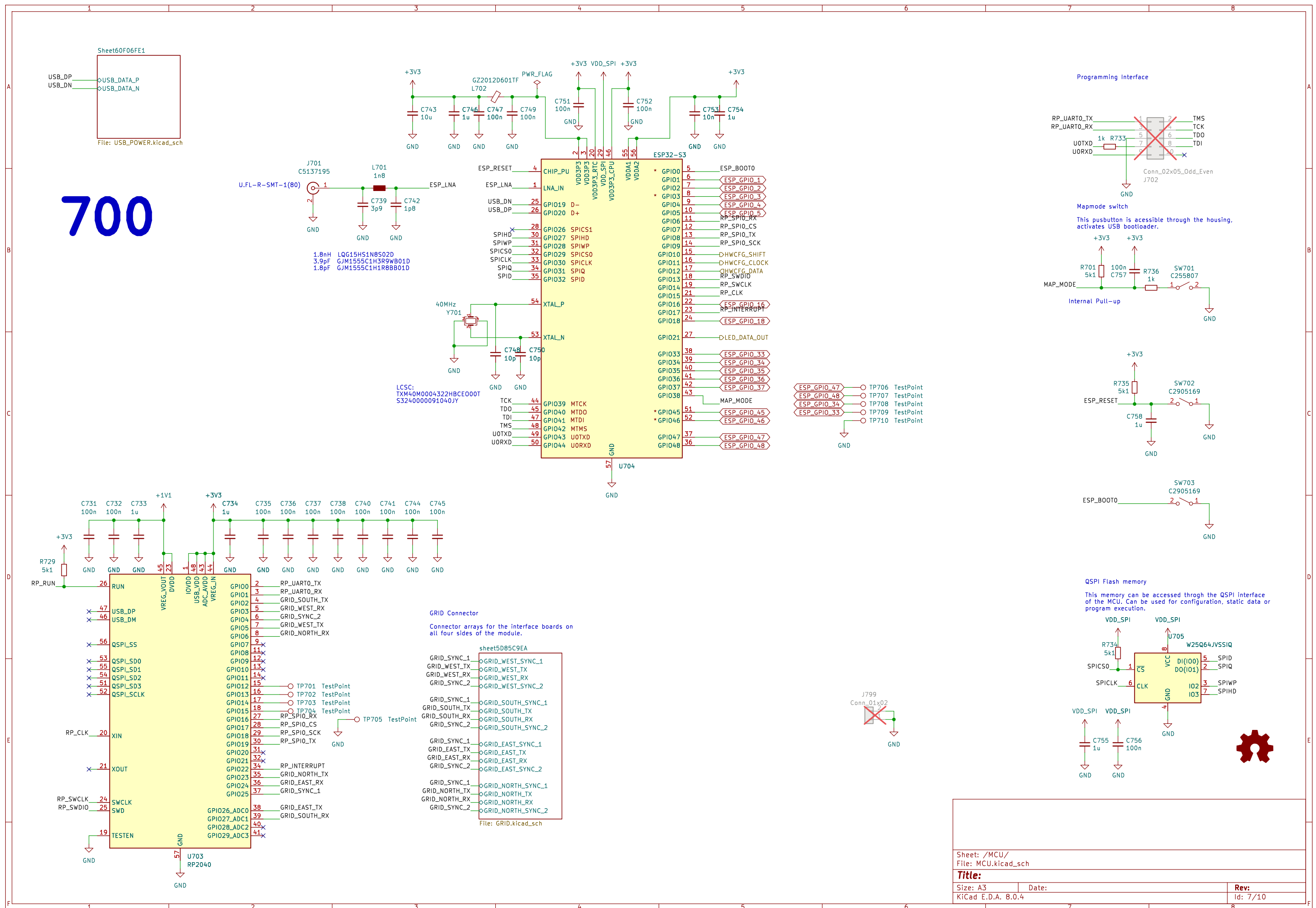
Rev:
Id: 4/10

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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. 8.0.4	Id: 8/10	

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+

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

C602
1u

TP605

+3V3

J601
TYPE-C-32-M-12

VBUS
VBUS

CC1
A5
B5

CC2
A7
B7

D-
D-
D+
D+
A6
B6

SBU1
A8
BB

SBU2

SHIELD
SHIELD
SHIELD

GND
A1B12
A12B1

PWR_FLAG

GND

R601
5k1

R602
5k1

C603
4n7

R603
1M

GND

GND

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

Title:

Size: A4 Date: Rev:

KiCad E.D.A. 8.0.4 Id: 9/10

Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. 8.0.4		Id: 9/10

800

Board Identification

Grid firmware can identify the hardware and the board revision thorough 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:
KiCad E.D.A. 8.0.4		Id: 10/10

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. 8.0.4	Id: 10/10