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Sheet: /UI_POT/ File: UI_POT.kicad_sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1		Id: 2/10

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



Sheet: /UI_BUTTON/
File: UI_BUTTON.kicad_sch

Title:

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Sheet: /UI_LED/
File: UI_LED.kicad_sch

Title:

Size: A4

Date:

Rev:

KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1

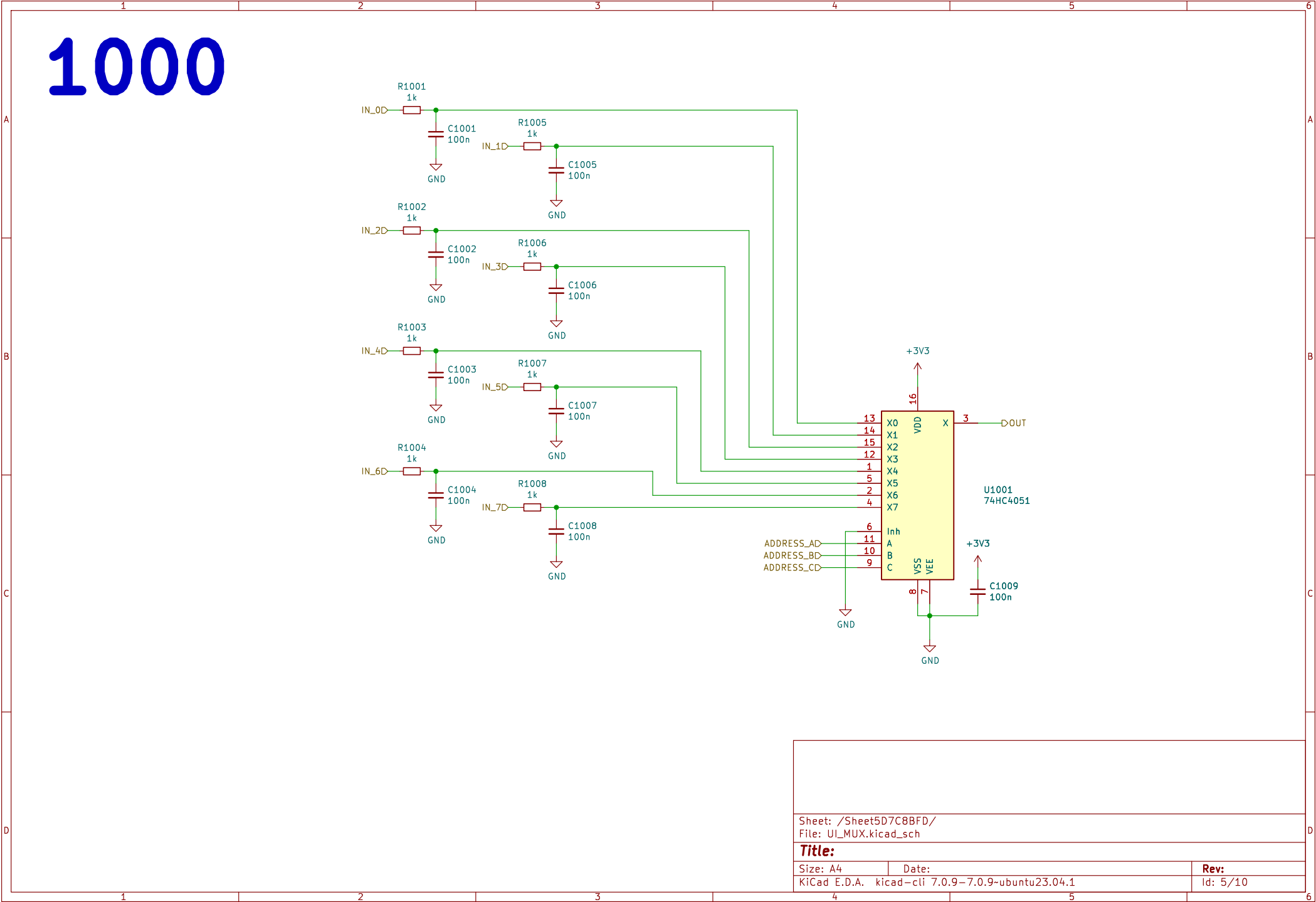
Id: 4/10

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The schematic diagram illustrates the internal wiring of a 74HC4051 8-to-1 multiplexer. The device is represented by a yellow rectangular component with pins numbered 1 through 16. The data inputs (X0 to X7) are connected to external inputs IN_0D through IN_7D via 1k resistors (R1001-R1008) and 100nF capacitors (C1001-C1008) to ground. The address inputs (A, B, C) are connected to ADDRESS_AD, ADDRESS_BD, and ADDRESS_CD via 100nF capacitors (C1009) to ground. The output (X) is connected to DOUT. Power is supplied by +3V3 to VDD (pin 16) and VEE (pin 7) with 100nF capacitors (C1009) to ground. VSS (pin 8) is also connected to ground.

Sheet: /Sheet5D7C8BFD/
File: UI_MUX.kicad_sch

Title:		
Size: A4	Date:	Rev:
KiCad E.D.A.	kicad-cli 7.0.9-7.0.9-ubuntu23.04.1	Id: 5/10

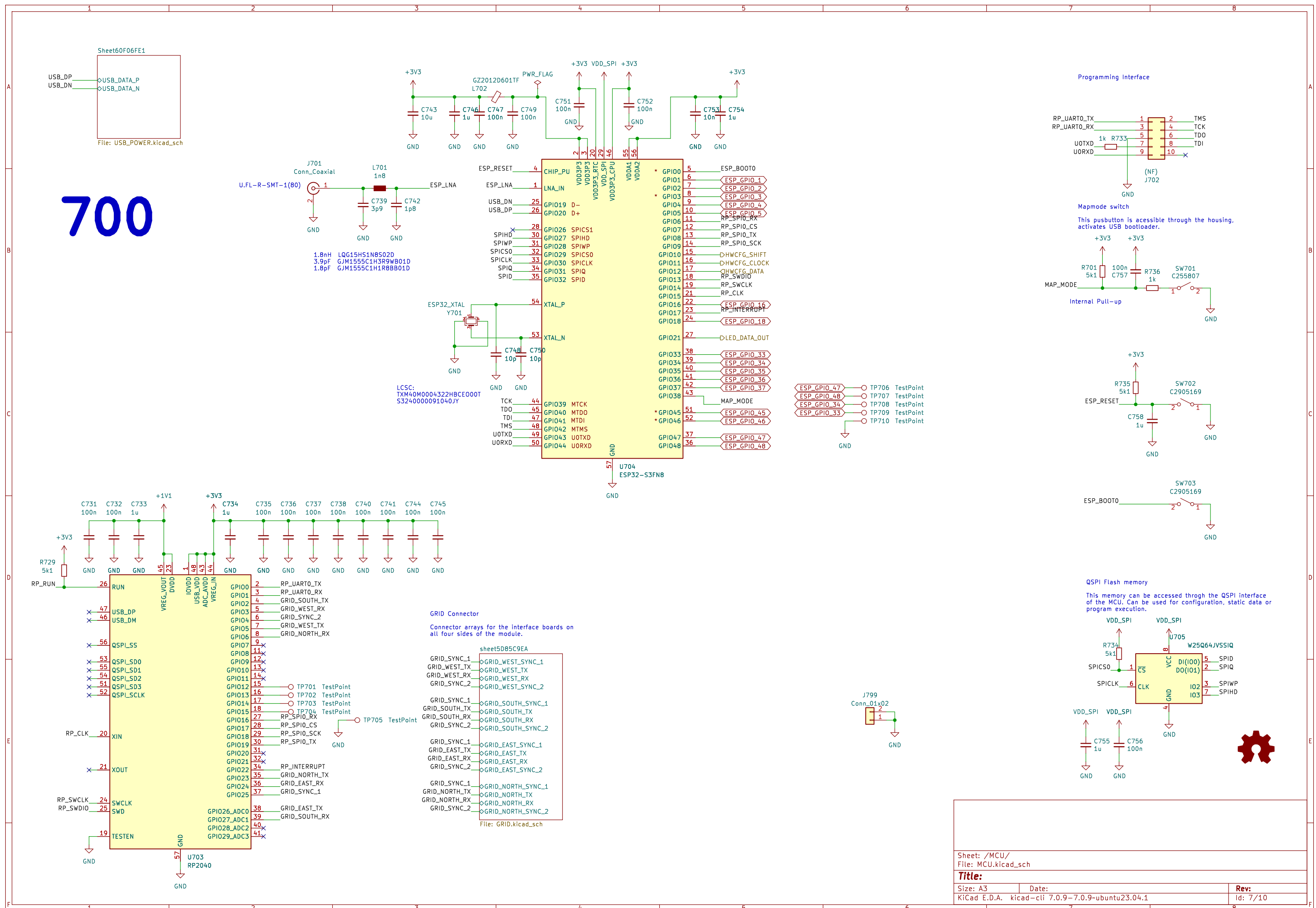


Title:		
Size: A4	Date:	Rev:
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GRID Connector
Bi-Directional Data
2x SYNC

Connector:
AFB10-S08LCA-00
or
TE Connectivity 84982-8

Board Mounting Pattern

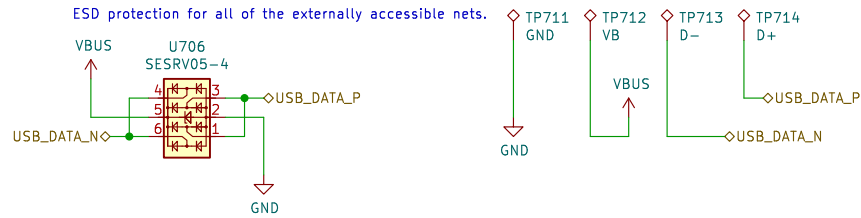


Sheet: /MCU/sheet5D85C9EA/ File: GRID.kicad_sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. kicad-cli 7.0.9-7.0.9-ubuntu23.04.1		Id: 8/10

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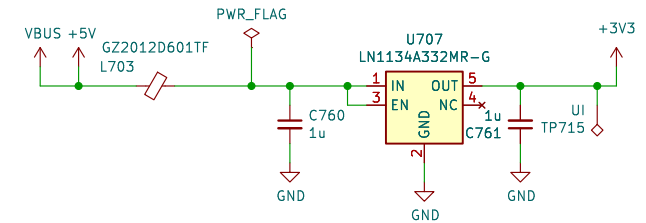
ESD Diodes

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

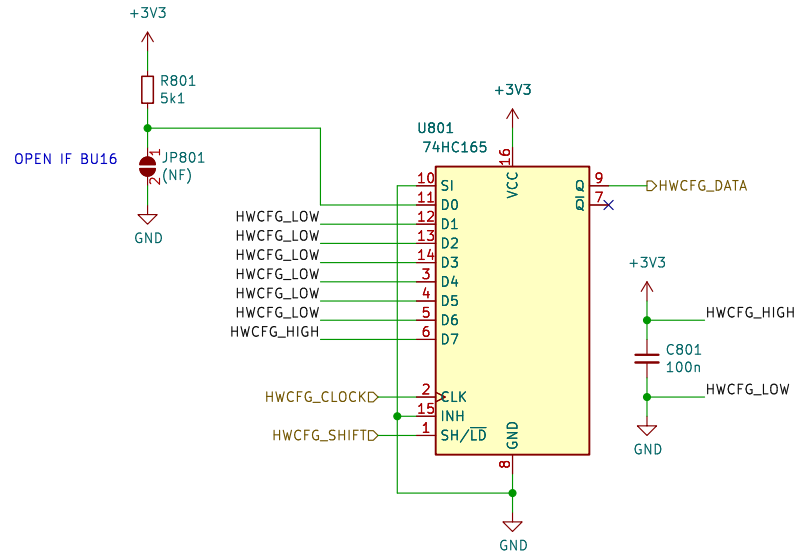
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Board Identification

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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