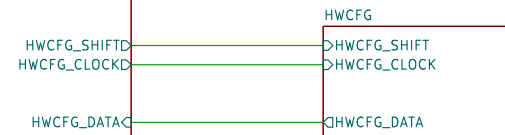


**Common Sheets:**  
500 GRID  
600 USB\_POWER  
700 MCU

**Module Specific:**  
800 HWCFG  
900 LED  
1000 UI



1000



Sheet: /UI_POT/ File: UI_POT.kicad_sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. 8.0.3	Id: 2/10	

1000

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



Sheet: /UI_BUTTON/ File: UI_BUTTON.kicad_sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. 8.0.3	Id: 3/10	

# 900



Sheet: /UI\_LED/  
File: UI\_LED.kicad\_sch

**Title:**

Size: A4

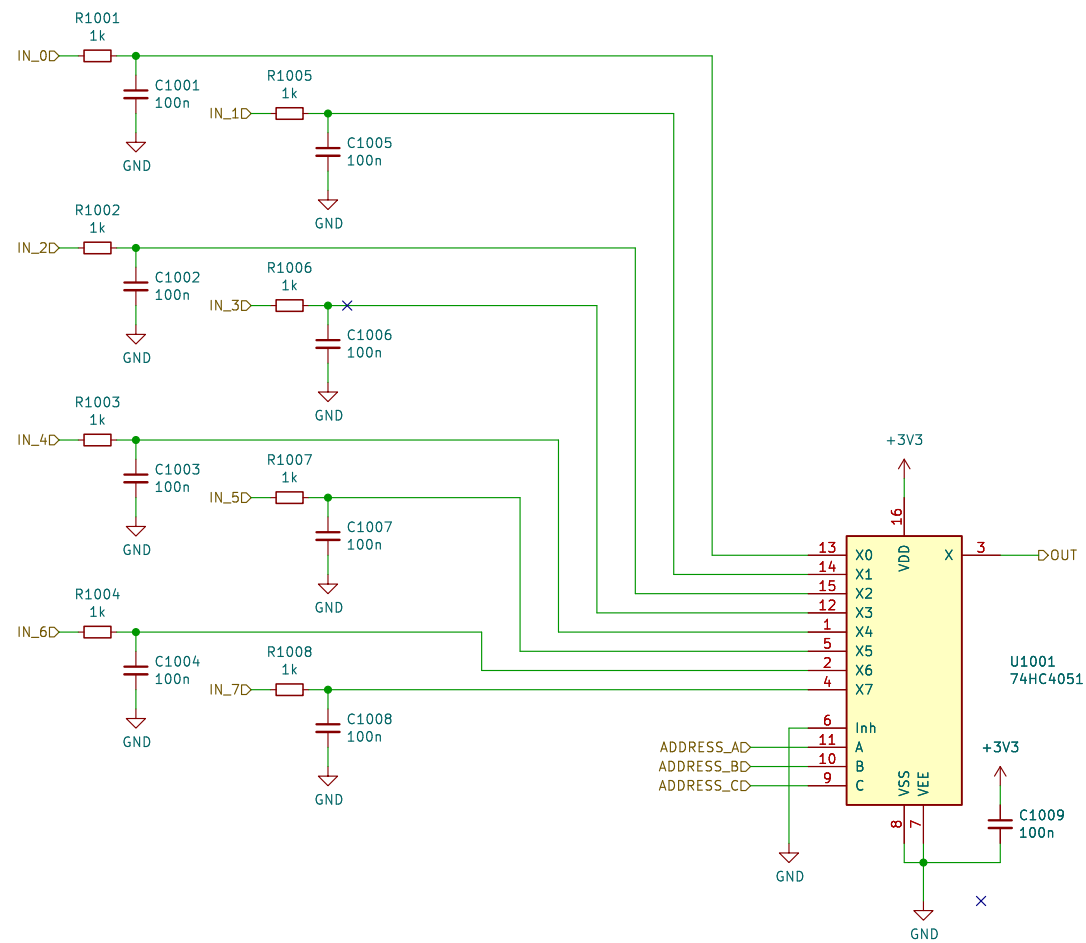
Date:

KiCad E.D.A. 8.0.3

**Rev:**

Id: 4/10

1000



1000





500

GRID Connector  
Bi-Directional Data  
2x SYNC

Board Mounting Pattern

W501 Conn\_01x08

J501 Conn\_01x04

J502 Conn\_01x04

J503 Conn\_01x04

J504 Conn\_01x04

J505 Conn\_01x04

J506 Conn\_01x04

J507 Conn\_01x04

J508 Conn\_01x04

GRID\_NORTH\_SYNC\_2

GRID\_NORTH\_SYNC\_RX

GRID\_NORTH\_TX

GRID\_NORTH\_SYNC\_1

GRID\_WEST\_SYNC\_1

GRID\_WEST\_TX

GRID\_WEST\_RX

GRID\_WEST\_SYNC\_2

GRID\_EAST\_SYNC\_2

GRID\_EAST\_RX

GRID\_EAST\_TX

GRID\_EAST\_SYNC\_1

GRID\_SOUTH\_SYNC\_1

GRID\_SOUTH\_SYNC\_TX

GRID\_SOUTH\_RX

GRID\_SOUTH\_SYNC\_2

5V

GND

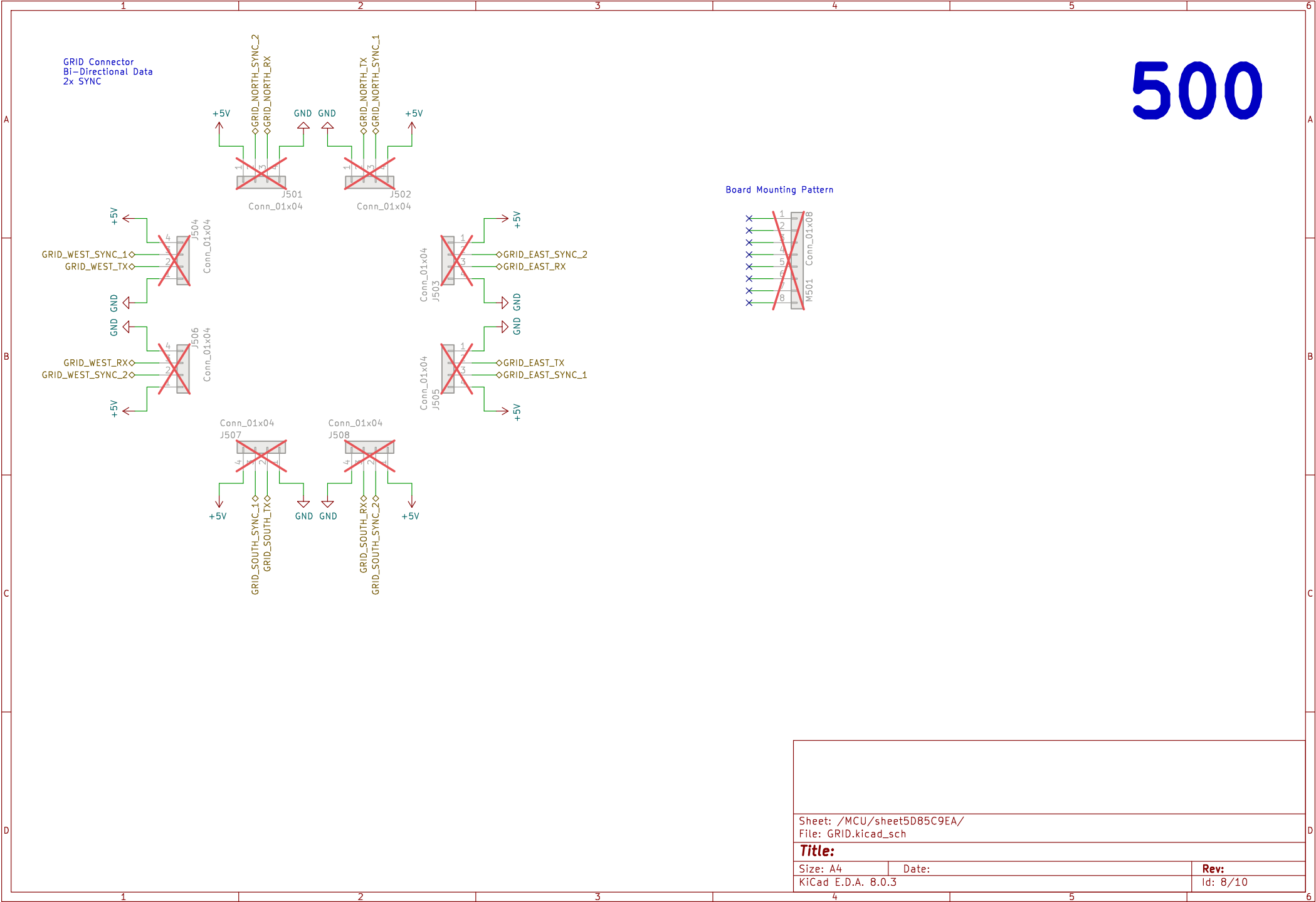
Sheet: /MCU/sheet5D85C9EA/  
File: GRID.kicad\_sch

Title:

Size: A4 Date:

Rev:

KiCad E.D.A. 8.0.3 Id: 8/10



<b>Title:</b>		
Size: A4	Date:	Rev:
KiCad E.D.A. 8.0.3		Id: 8/10

Size: A4	Date:	Rev:
KiCad E.D.A. 8.0.3		Id: 8/10

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# 600

## 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

Date:

KiCad E.D.A. 8.0.3

Rev:

Id: 9/10

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	Date:	Rev:
KiCad E.D.A. 8.0.3	Id: 10/10	