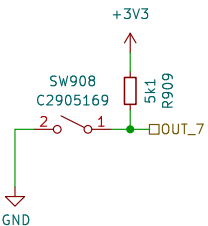
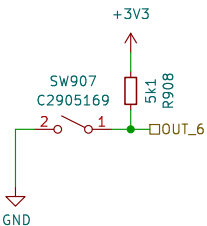
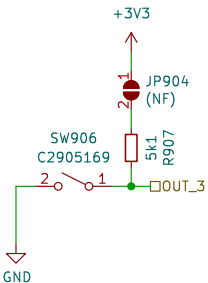
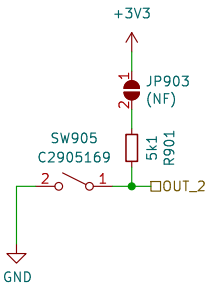
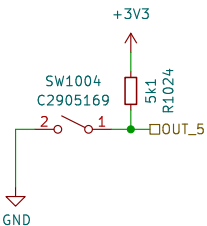
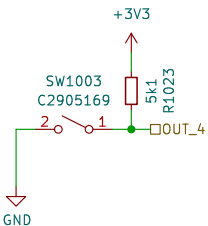
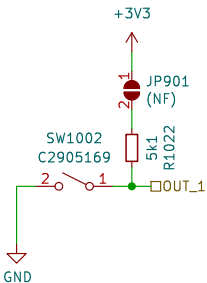
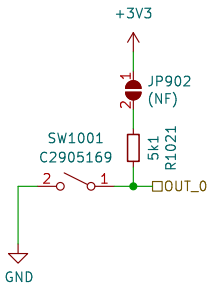


Common Sheets:
500 GRID
600 USB_POWER
700 MCU

Module Specific:
800 HWCFG
900 LED
1000 UI

1000



Sheet: /UI_POT_BTN/
File: UI_POT_BTN.kicad_sch

Title:

Size: A4 Date:

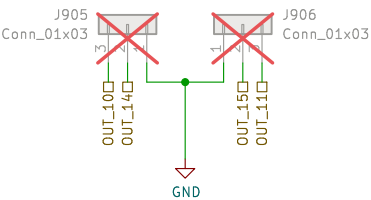
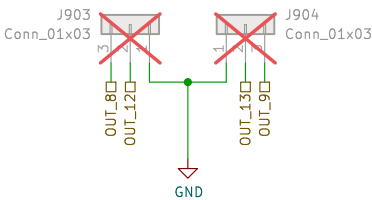
KiCad E.D.A. 8.0.4

Rev:

Id: 2/11

1000

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



Sheet: /UI_BUTTON/
File: UI_BUTTON.kicad_sch

Title:

Size: A4

Date:

KiCad E.D.A. 8.0.4

Rev:

Id: 3/11

900



Sheet: /UI_LED/
File: UI_LED.kicad_sch

Title:

Size: A4

Date:

KiCad E.D.A. 8.0.4

Rev:

Id: 4/11

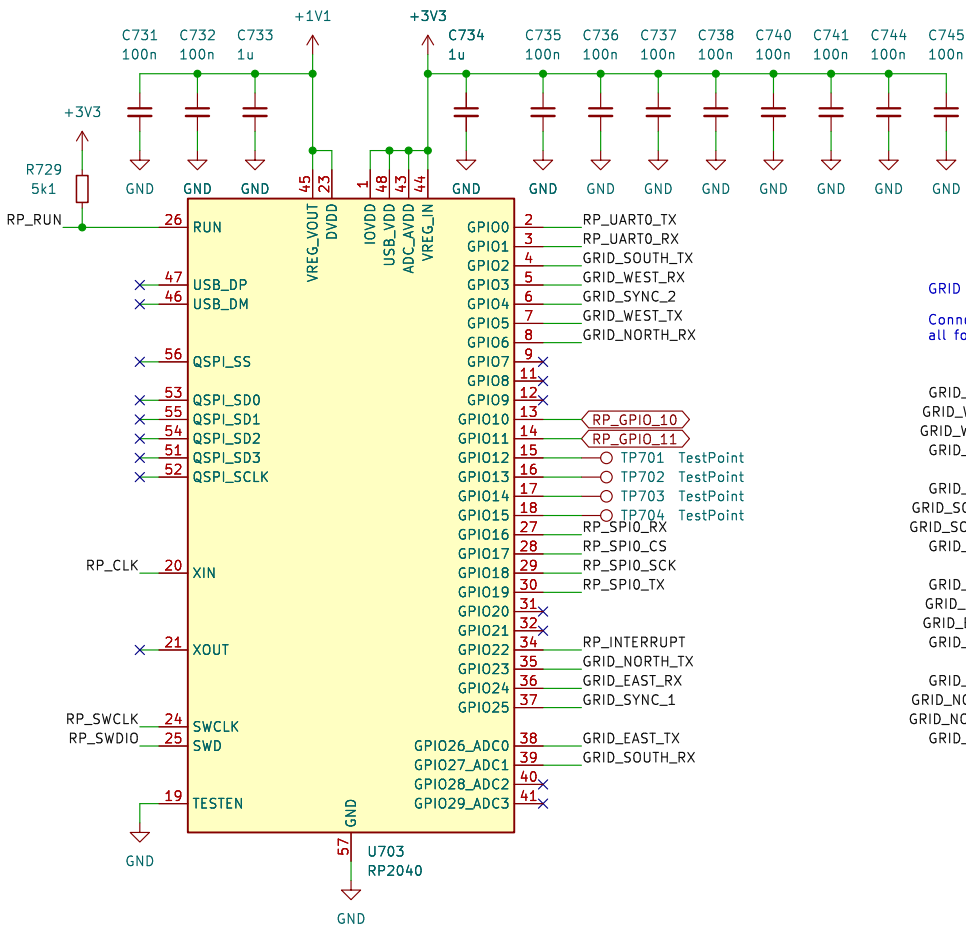
1000



1000

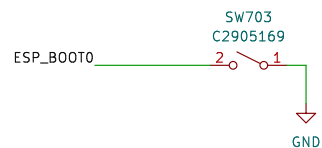
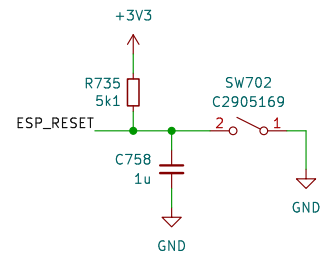
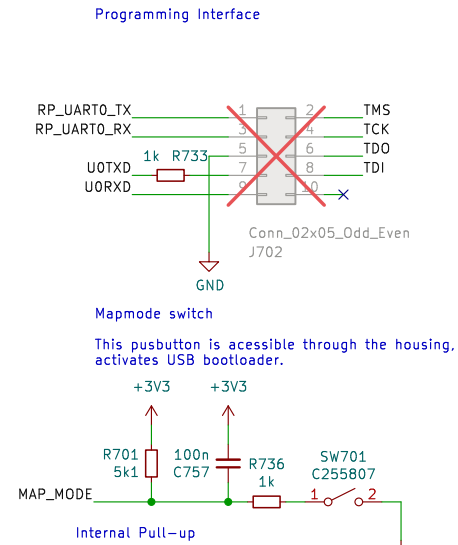
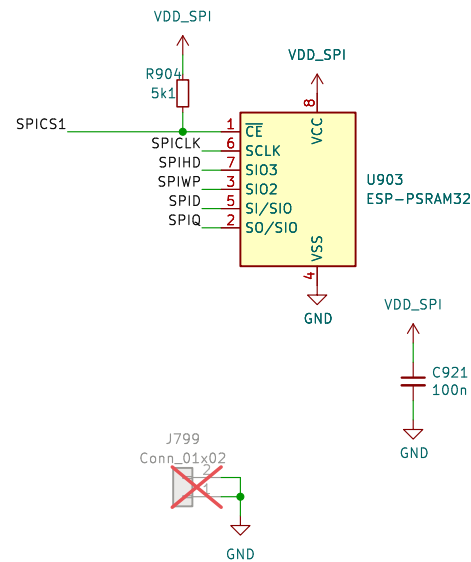
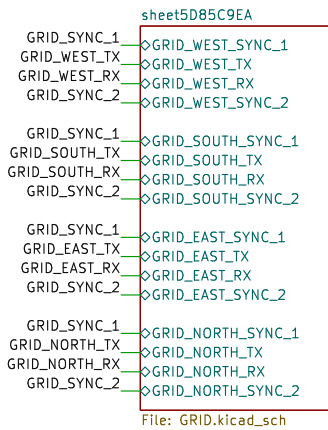


700



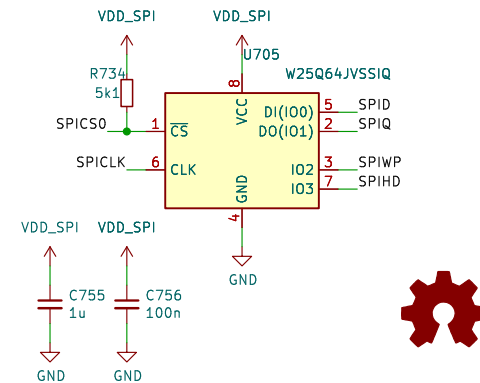
GRID Connector

Connector arrays for the interface boards on all four sides of the module.



QSPI Flash memory

This memory can be accessed through the QSPI interface of the MCU. Can be used for configuration, static data or program execution.

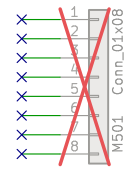


500

GRID Connector
Bi-Directional Data
2x SYNC



Board Mounting Pattern

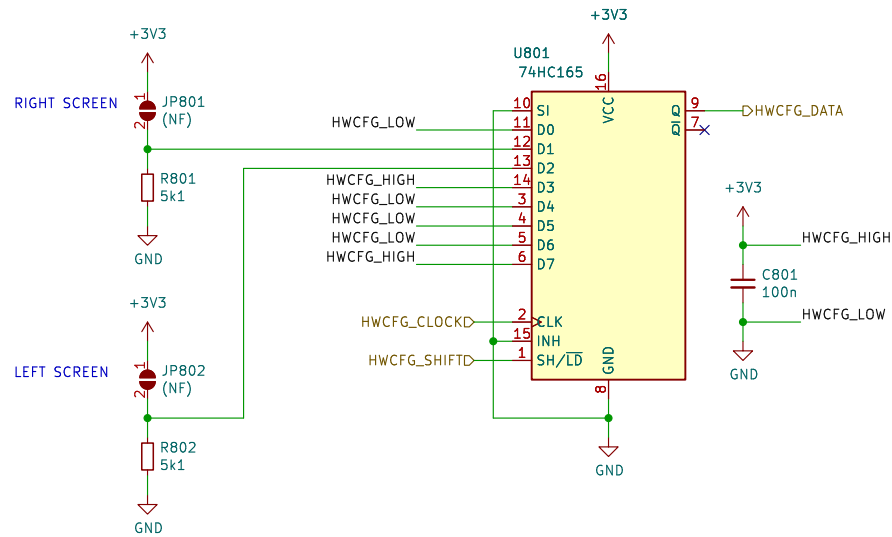


Sheet: /MCU/sheet5D85C9EA/ File: GRID.kicad_sch		
Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. 8.0.4		Id: 8/11

[illegible]

Title:		
Size: A4	Date:	Rev:
KiCad E.D.A. 8.0.4		Id: 9/11
4	5	6

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:

KiCad E.D.A. 8.0.4

Rev:

Id: 10/11

1000

The schematic diagram illustrates the electrical connections for a display interface on a 1000-series PCB. It features two display modules, U1003 and U901, both identified as 'DISPLAY_TEK1 (NF)'. U1003 is an ST7789 320x240 LCD with an SPI interface, while U901 is a similar module but is marked with a large red 'X', indicating it is not to be used. The circuit includes a 74HC1G14GV (U902) inverter, resistors R1018, R1026, R1017, and R903, and capacitors C1020, C1019, C920, and C919. Power supply connections for +3V3 and GND are shown throughout the schematic. A large blue '1000' is in the top left corner.

U1003 DISPLAY_TEK1 (NF)

- 1 GND
- 2 LEDK
- 3 LEDA
- 4 VCC
- 5 GND
- 6 GND
- 7 D/CE
- 8 CS
- 9 SCLK
- 10 SDIO
- 11 RESET
- 12 GND

U901 DISPLAY_TEK1 (NF)

- 1 GND
- 2 LEDK
- 3 LEDA
- 4 VCC
- 5 GND
- 6 GND
- 7 D/CE
- 8 CS
- 9 SCLK
- 10 SDIO
- 11 RESET
- 12 GND

U902 74HC1G14GV

- 2 CS
- 3 GND
- 5 VCC

Resistors:

- R1018: 5k1
- R1026: 5k1
- R1017: 470R
- R903: 470R

Capacitors:

- C1020: 1u
- C1019: 100n
- C920: 1u
- C919: 100n

Power Supply:

- +3V3
- GND

Sheet Information:

Sheet: /UI_DISPLAY/
File: UI_DISPLAY.kicad_sch

Title:

Size: A4 Date: Rev: 11/11

KiCad E.D.A. 8.0.4