

Schematic sheets:

Block Diagram:



CPU+SRAM
2
File: [cpu_sram.kicad_sch](#)

















FPGA
3
File: [fpga.kicad_sch](#)

VIA, RTC, SNES
4
File: [via_rtc.kicad_sch](#)

USB-Terminal
5
File: [usbdev.kicad_sch](#)

VA-Board, PS2
6
File: [b2b-conn.s.kicad_sch](#)

Power Supply
7
File: [pwrsup.kicad_sch](#)

- | | |
|--|--|
|  FID101 |  H101 |
|  Fiducial |  MountingHole |
|  FID102 |  H102 |
|  Fiducial |  MountingHole |
|  FID103 |  H103 |
|  Fiducial |  MountingHole |
|  FID104 |  H104 |
|  Fiducial |  MountingHole |

Sheet: /
File: open65.kicad_sch

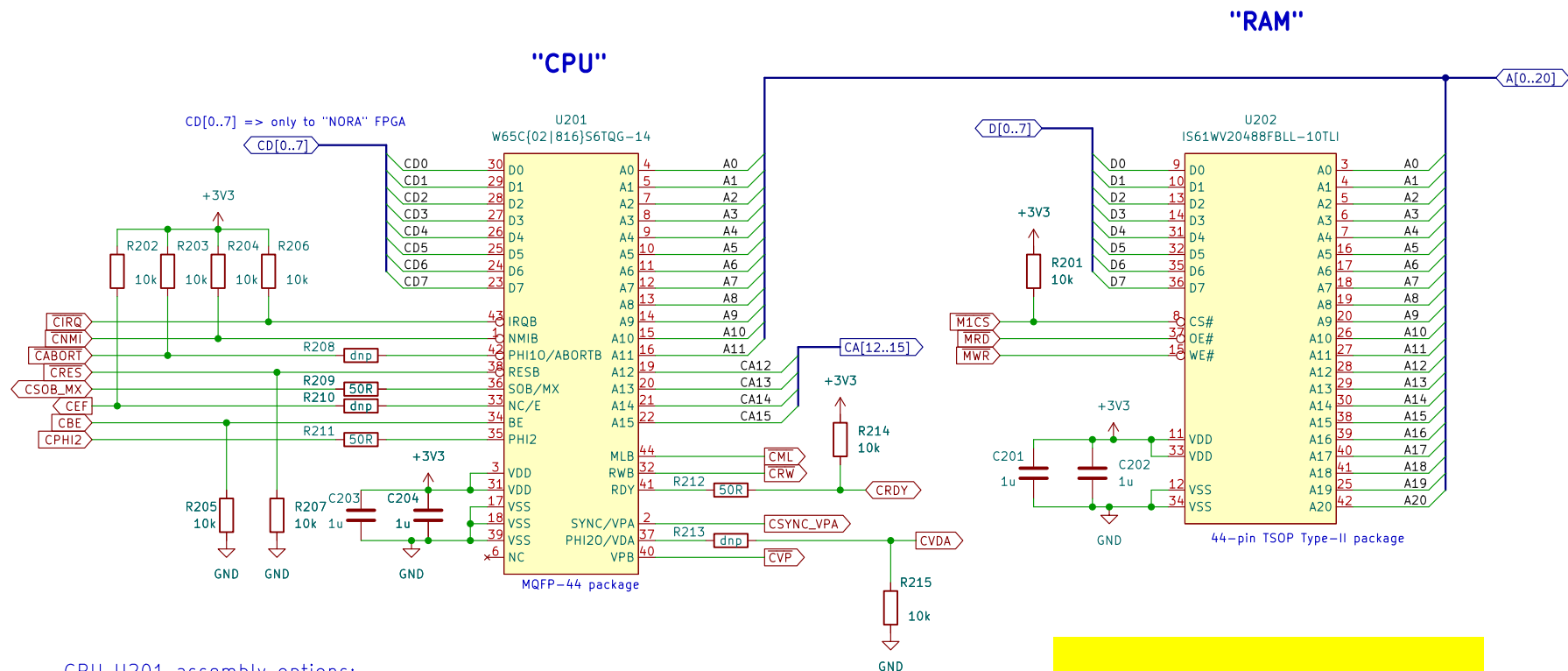
Title: OpenX65

Size: A4	Date: 2023-03-30
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Size: 17	Date: 20
KiCad E.D.A.	kicad (6.0.7)

Rev: rev01

Id: 1/7



CPU U201 assembly options:

- W65C02S6TQG-14 => 8-bit CPU
=> do not populate R208, R210, R213
- W65C816S6TQG-14 => 16-bit CPU (not 100% compatible with the 8-bit!!)
=> R208=R210=R213=50ohm

OpenX65 MOTHERBOARD
FOR X65.EU DESIGNED BY JSYKORA.INFO

Sheet: /CPU+SRAM/
File: cpu_sram.kicad_sch

Title: OpenX65 – CPU and SRAM

Size: A4 Date: 2023-03-30

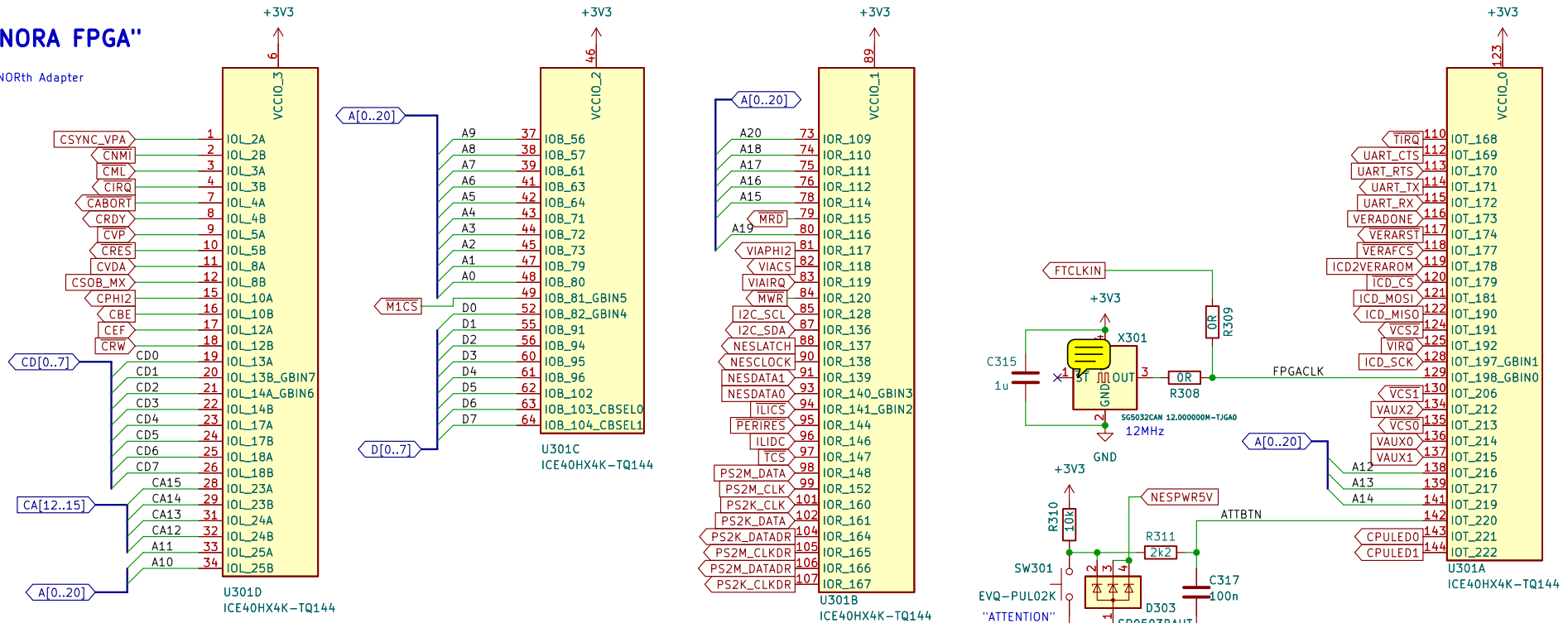
KiCad E.D.A. kicad (6.0.7)

Rev: rev01

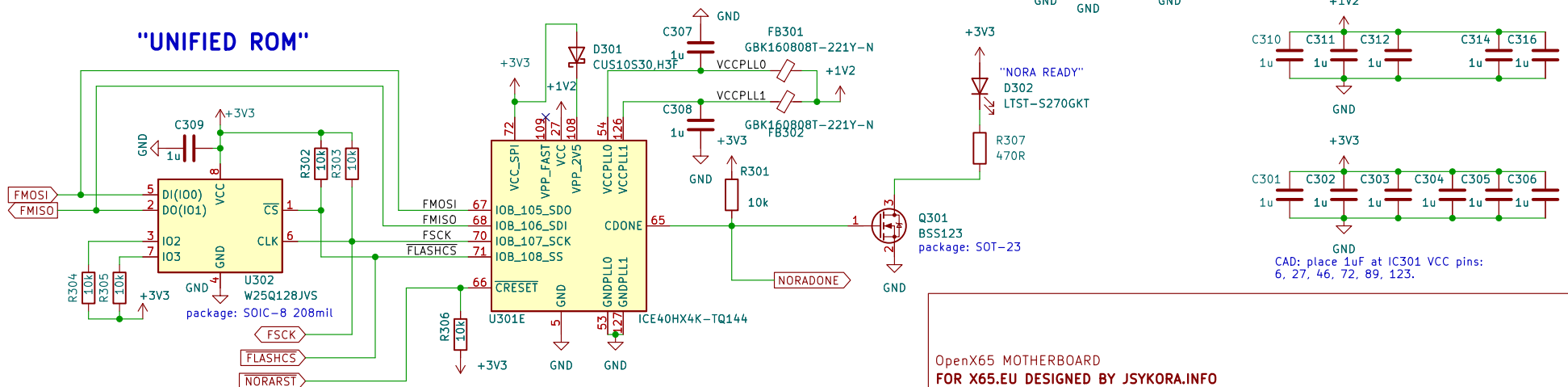
Id: 2/7

"NORA FPGA"

= NORTH Adapter



"UNIFIED ROM"



OpenX65 MOTHERBOARD
FOR X65.EU DESIGNED BY JSYKORA.INFO

Sheet: /FPGA/
File: fpga.kicad_sch

Title: OpenX65 – NORA FPGA

Size: A4 Date: 2023-03-30
KiCad E.D.A. kicad (6.0.7)

Rev: rev01
Id: 3/7

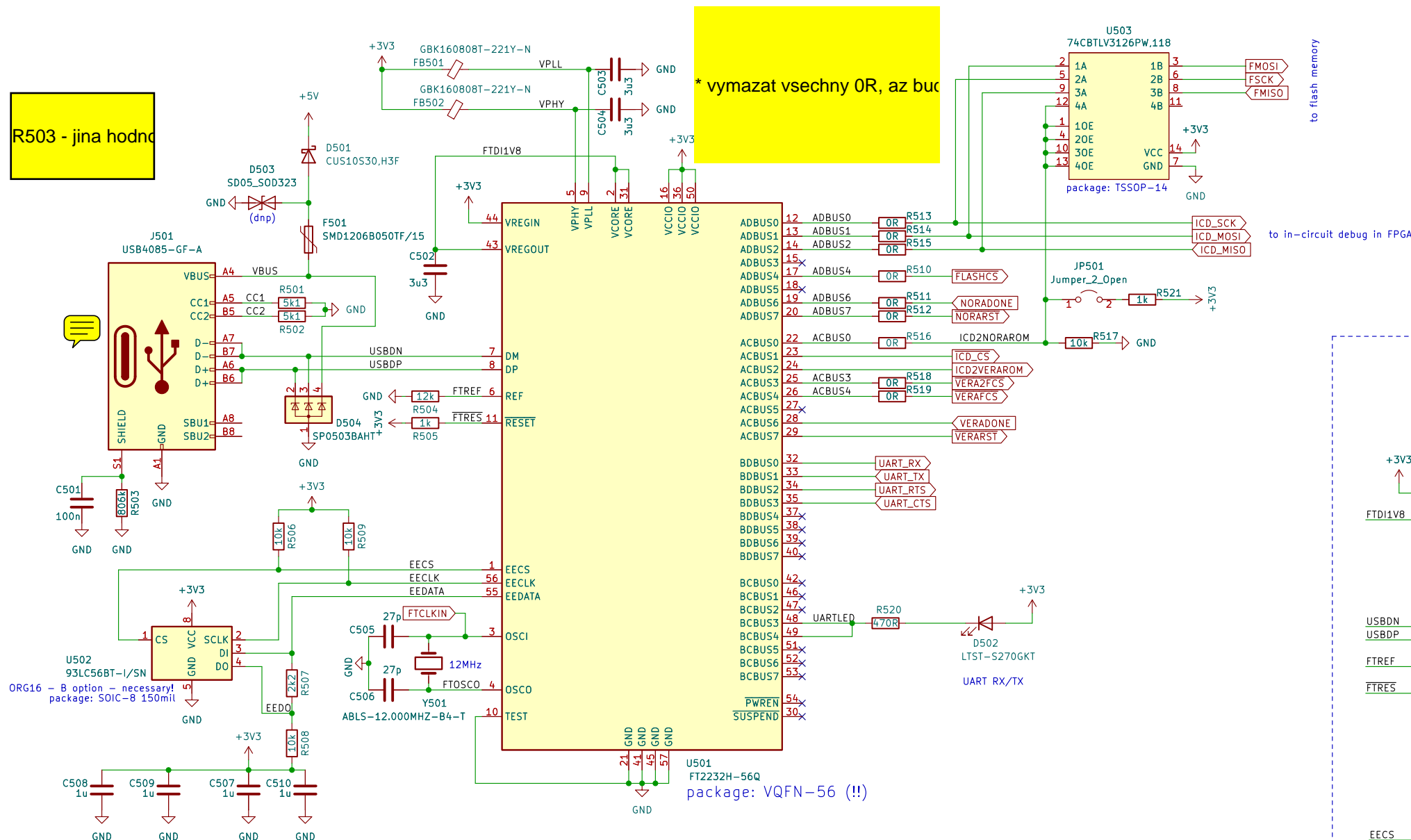
ICE40HX DS: VPP_FAST, used only for fast production programming.
must be left floating or unconnected in applications.

CAD: place 1uF at IC301 VCC pins:
6, 27, 46, 72, 89, 123.

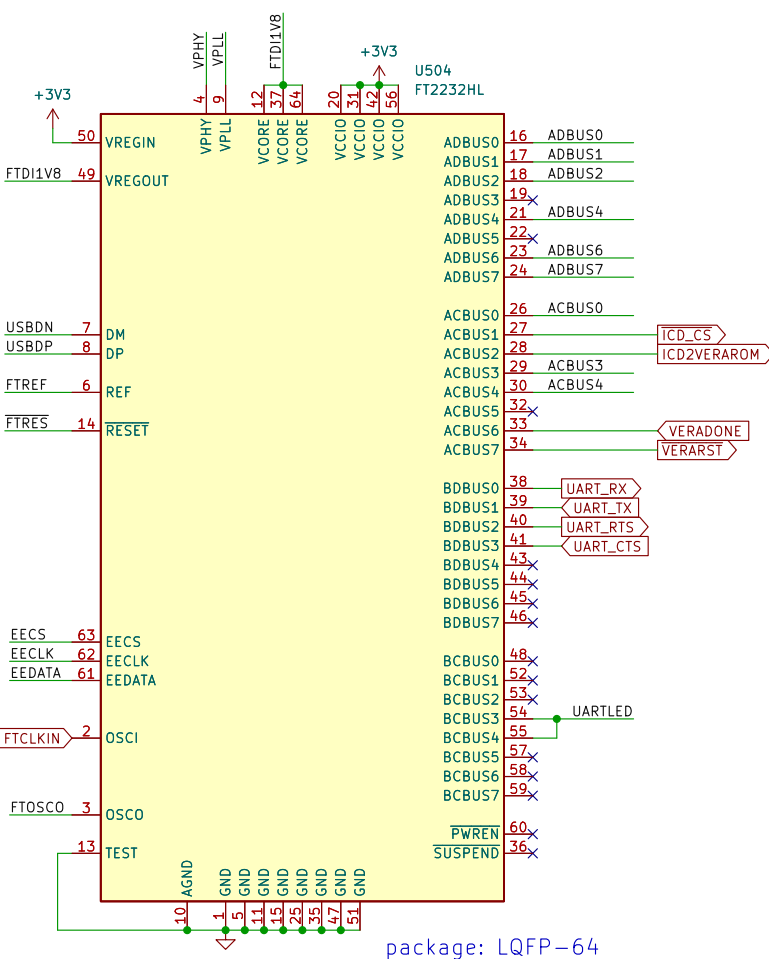
USB 2.0 WITH USB-C / UART TERMINAL AND ICD (In-Circuit Debugger)

R503 - jina hodnot

* vymazat vsechny 0R, az bude



Alternative assembly: FT232HL in LQFP-64 package



OpenX65 MOTHERBOARD
FOR X65.EU DESIGNED BY JSYKORA.INFO

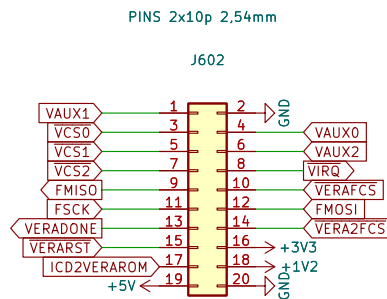
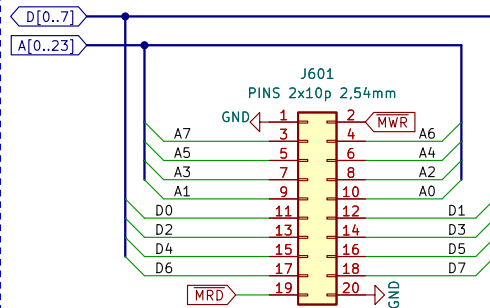
Sheet: /USB-Terminal/
File: usbdev.kicad_sch

Title: OpenX65 - USB Terminal with UART and ICD

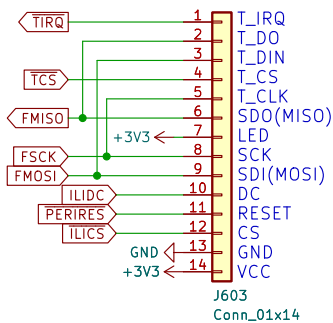
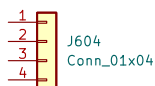
Size: A3 Date: 2023-03-30
KiCad E.D.A. kicad (6.0.7)

Rev: rev01
Id: 5/7

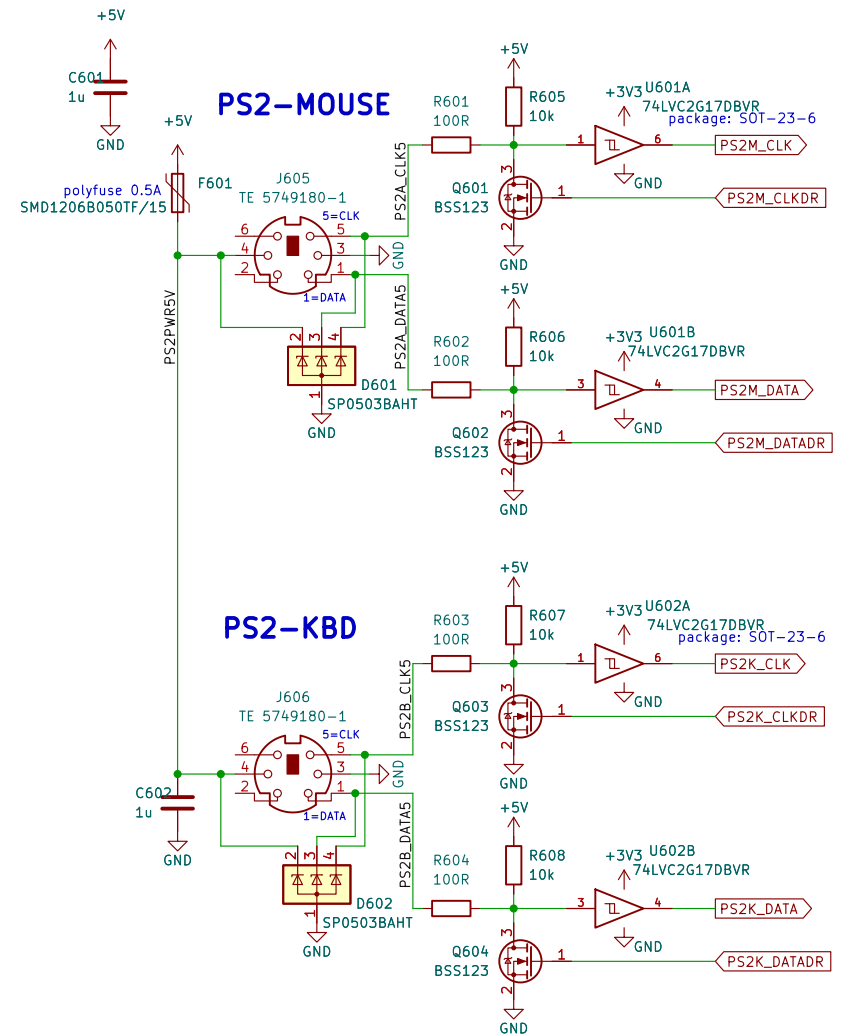
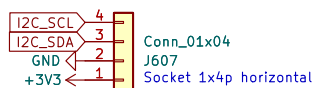
B-2-B CONNECTOR TO THE MULTIMEDIA BOARD "VA-BO"



TFT LCD (ILI9341)



PMOD I2C



OpenX65 MOTHERBOARD
FOR X65.EU DESIGNED BY JSYKORA.INFO

Sheet: /VA-Board, PS2/
File: b2b-conns.kicad_sch

Title: OpenX65 – PS/2 and Multimedia Connector

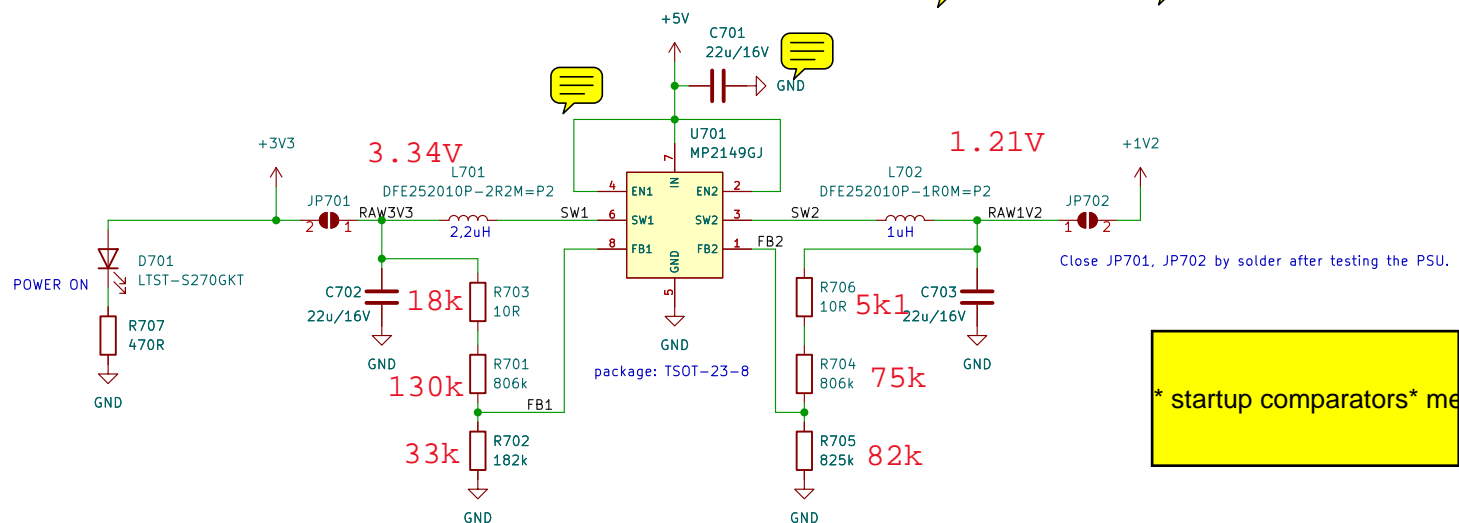
Size: A4 Date: 2023-03-30

KiCad E.D.A. kicad (6.0.7)

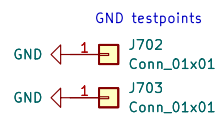
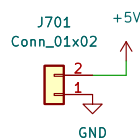
Rev: rev01

Id: 6/7

POWER SUPPLY 5V -> 3.3V, 1.2V



Alternative power input connector



OpenX65 MOTHERBOARD
FOR X65.EU DESIGNED BY JSYKORA.INFO

Sheet: /Power Supply/
File: pwrsup.kicad_sch

Title: OpenX65 – Power Supply

Size: A4 Date: 2023-03-30

KiCad E.D.A. kicad (6.0.7)

Rev: rev01

Id: 7/7