

















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+conns.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

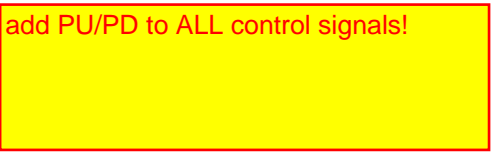
Title: OpenX65

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

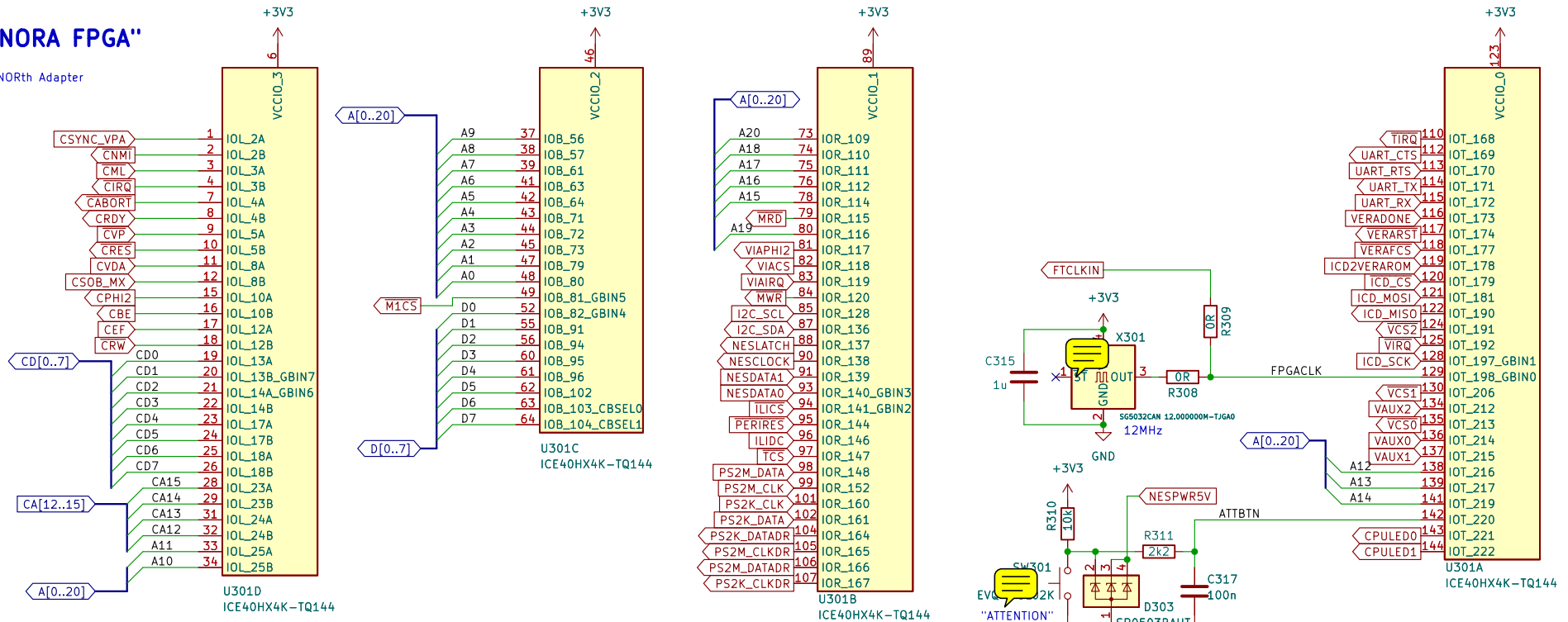


a) W65C02S6TQG-14 => 8-bit CPU
=> do not populate R208, R210, R213

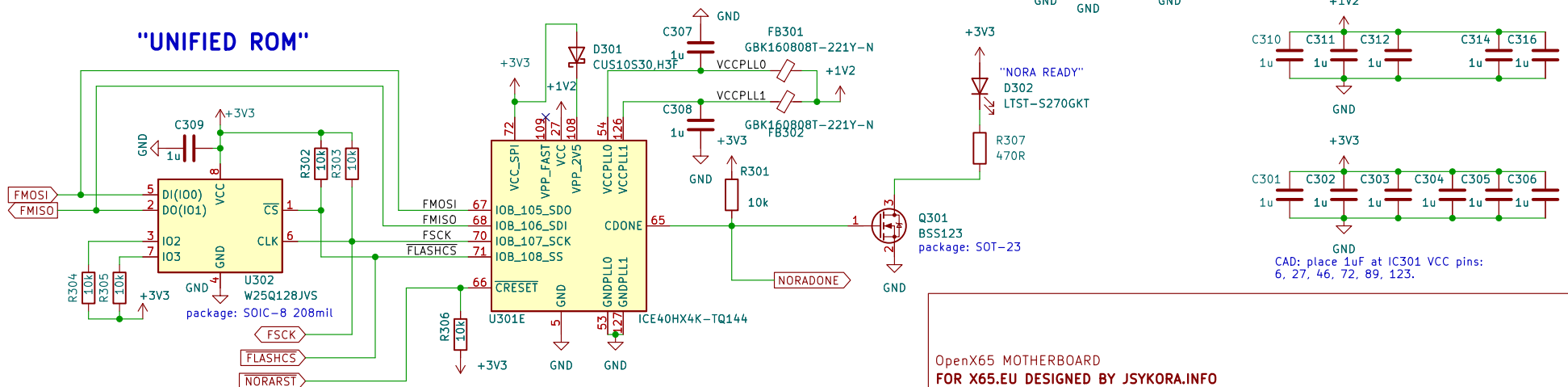
b) W65C816S6TQG-14 => 16-bit CPU (not 100% compatible with the 8-bit!!)
=> R208=R210=R213=50ohm

"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

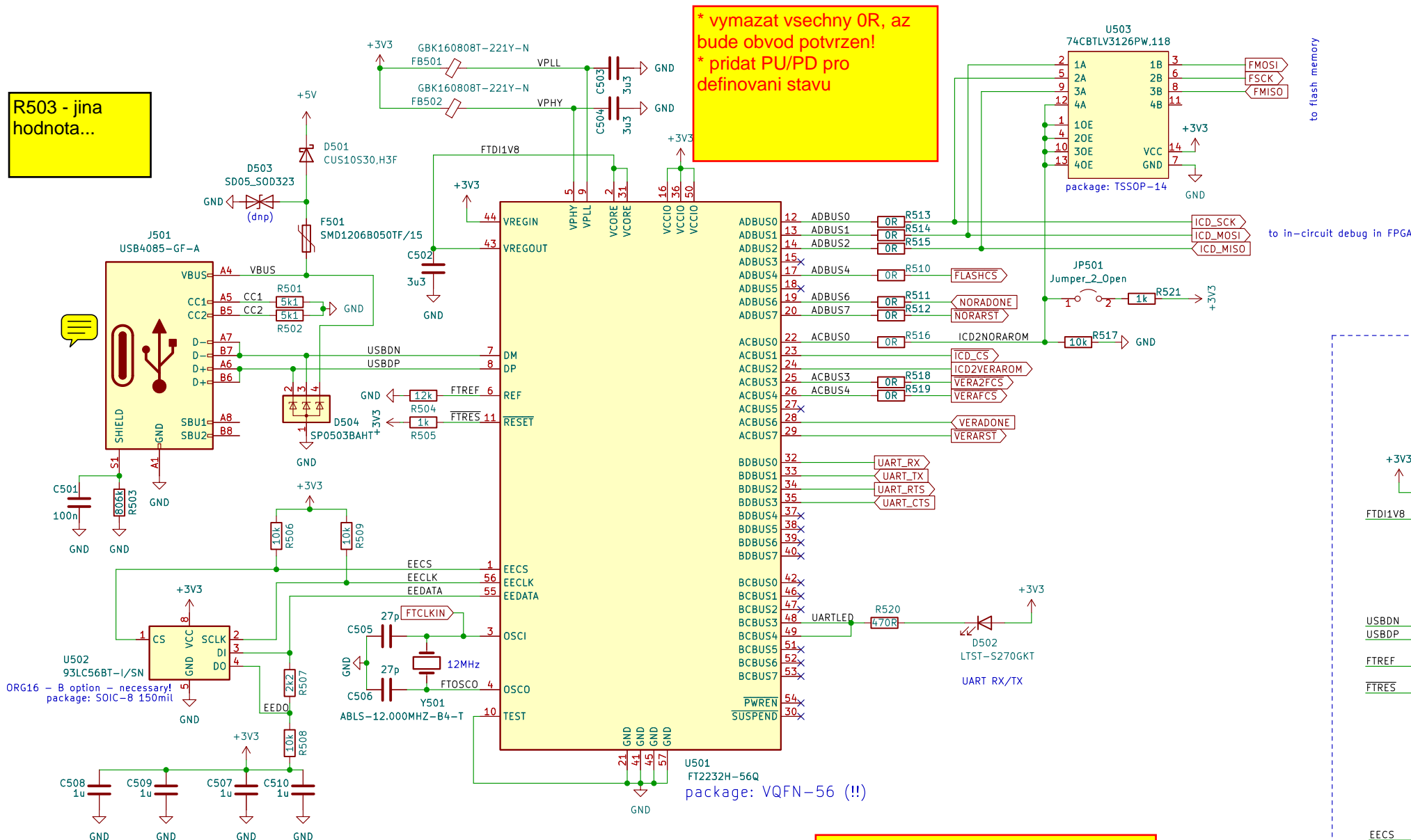
ICE40HX DS: VPP_FAST, used only for fast production programming.
must be left floating or unconnected in applications.

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

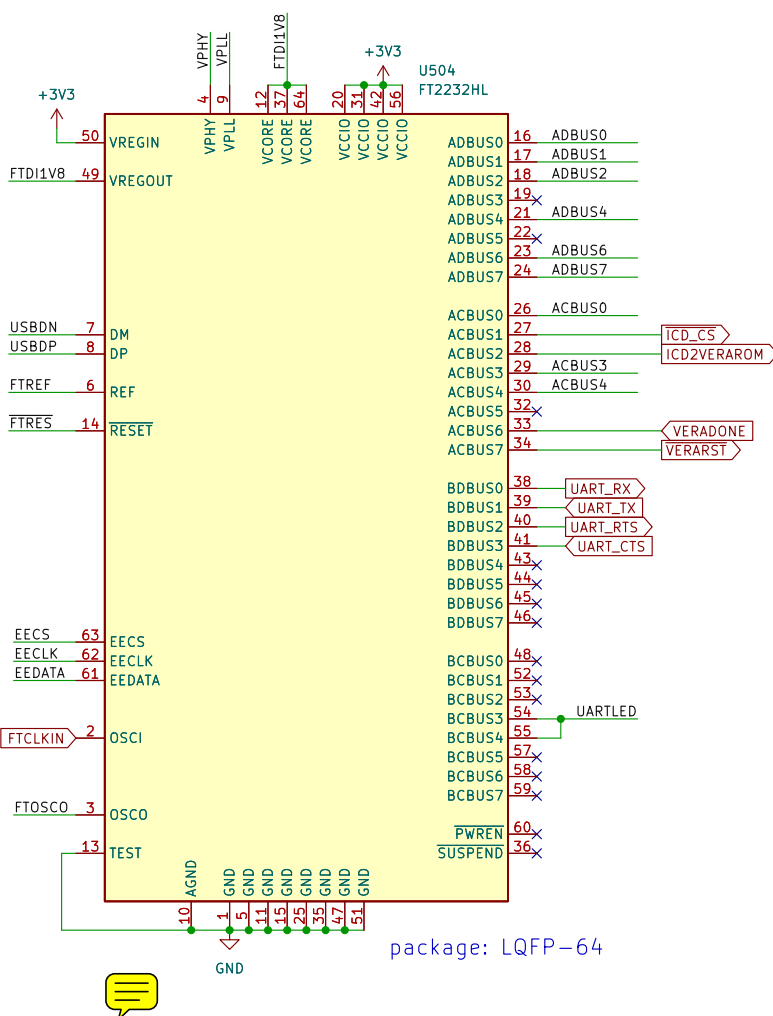
USB 2.0 WITH USB-C / UART TERMINAL AND ICD (In-Circuit Debugger)

R503 - jina hodnota...

* vymazat vsechny 0R, az bude obvod potvrzen!
* pridat PU/PD pro definovani stavu



Alternative assembly: FT232HL in LQFP-64 package



nVERAFCS -> active high;
nVERA2FCS -> AURAFCS;
nVERARST -> nVRST;
ICD2VERAROM -> nARST

ICD2NORAROM -> ICD2FLASH

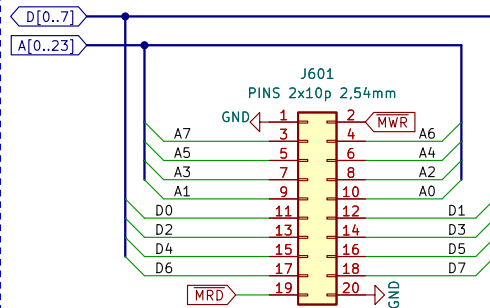
OpenX65 MOTHERBOARD
FOR X65.EU DESIGNED BY JSYKORA.INFO
Sheet: /USB-Terminal/
File: usbdev.kicad_sch

Title: OpenX65 - USB Terminal with UART and ICD

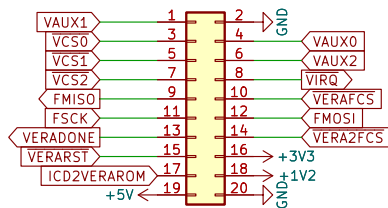
Size: A3 Date: 2023-03-30
KiCad E.D.A. kicad (6.0.7)

Rev: rev01
Id: 5/7

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

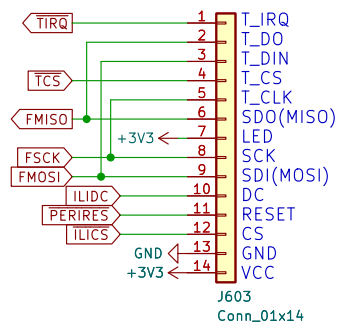
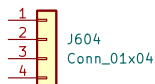


PINS 2x10p 2.54mm

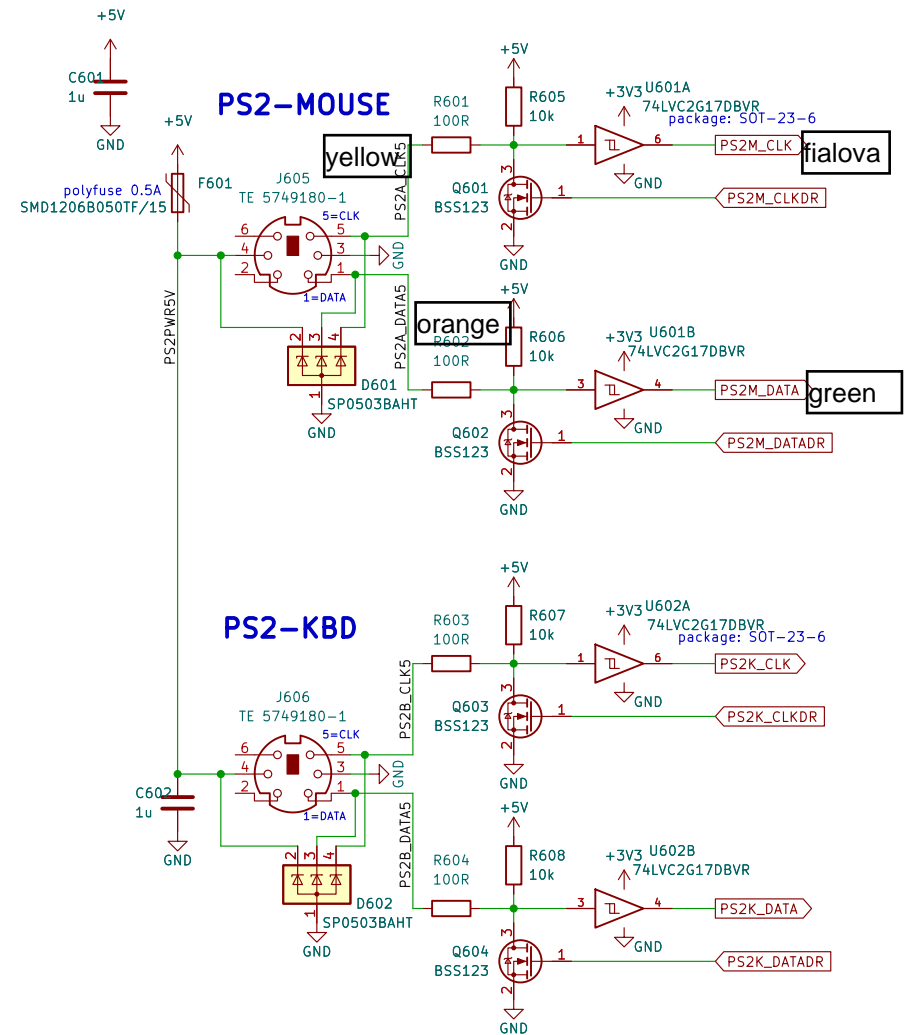
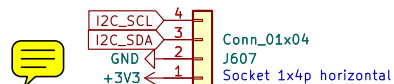


nVERAFCFS -> active high;
nVERA2FCFS -> AURAFCS;
nVERARST -> nVRST;
ICD2VERAROM -> nARST

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

