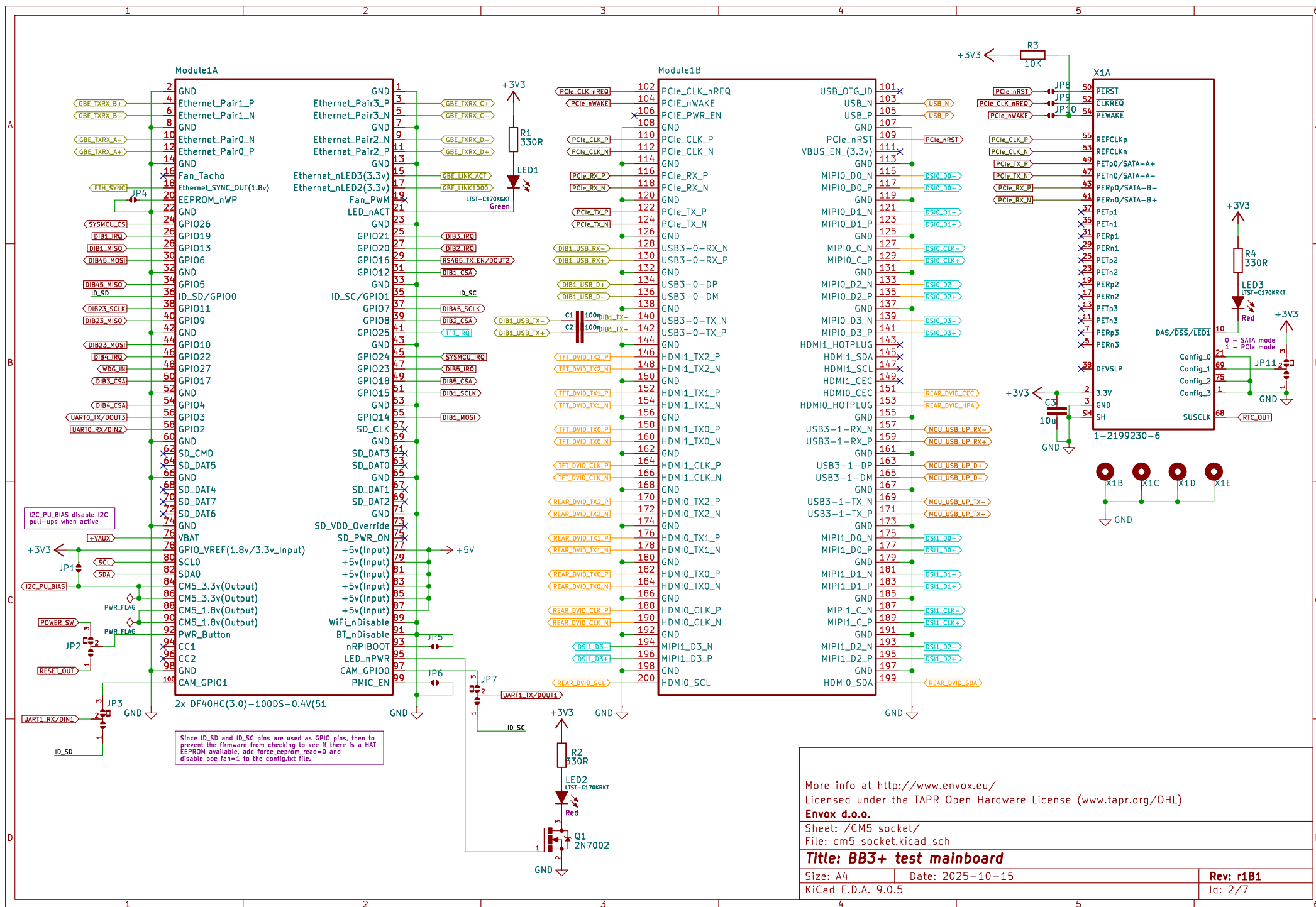


<https://github.com/eez-open/eez-bb3plus>
More info at <http://www.envox.eu/>
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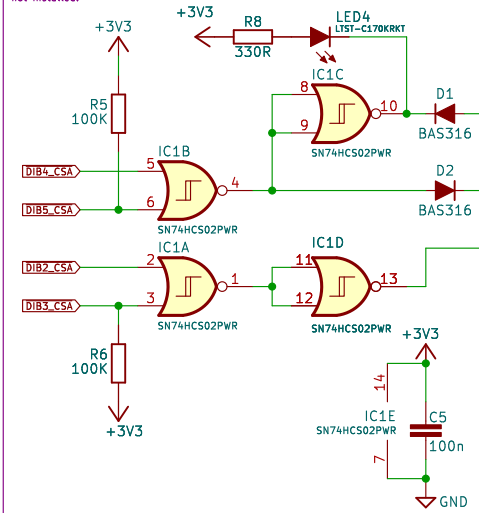
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File: BB3plus test mainboard.kicad_sch

Title: BB3+ test mainboard	
Size: A4	Date: 2025-10-15
KiCad E.D.A. 9.0.5	Rev: r1B1
Id: 1/7	

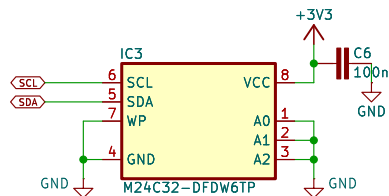


System 32-bit MCU

The System MCU is programmed so that the Master MCU first simultaneously activates DIB4_CSA and DIB5_CSA and then simultaneously activates DIB2_CSA and DIB3_CSA which will reset the System MCU and put it into bootloader mode. Simultaneous activation of two CSA (Chip Select) signals on the same SPI channel should never occur in normal operation. 100K pullup resistors ensure that RESET and BOOT0 are inactive if the Master MCU is not installed.

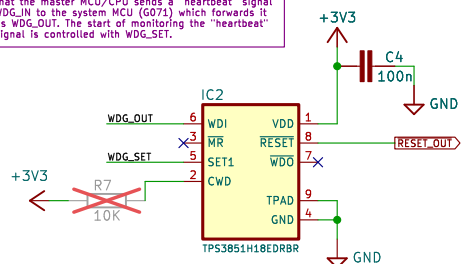


EEPROM

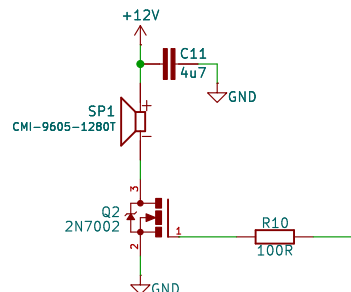


Watchdog/supervisor

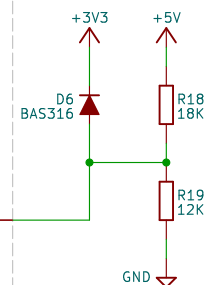
The watchdog signal is daisy chained in such a way that the master MCU/CPU sends a "heartbeat" signal WDG_IN to the system MCU (G071) which forwards it as WDG_OUT. The start of monitoring the "heartbeat" signal is controlled with WDG_SET.



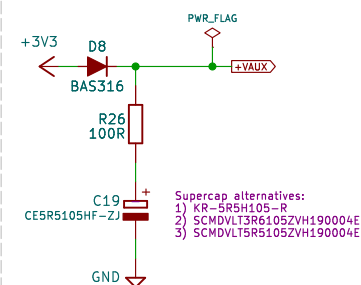
Audio out



5V monitoring

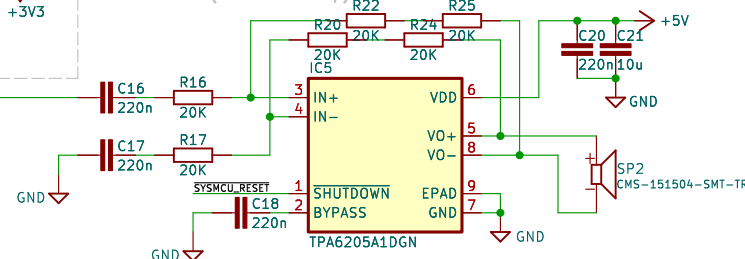


Supercap for RTC



Supercap alternatives:
1) KR-5R5H105-R
2) SCMDVLT3R6105ZVH190004E
3) SCMDVLT5R5105ZVH190004E

Audio out (AB-class amp)



More info at <http://www.envox.eu/>

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Sheet: /System MCU, Watchdog, EEPROM/

File: system_mcu.kicad_sch

Title: BB3+ test mainboard

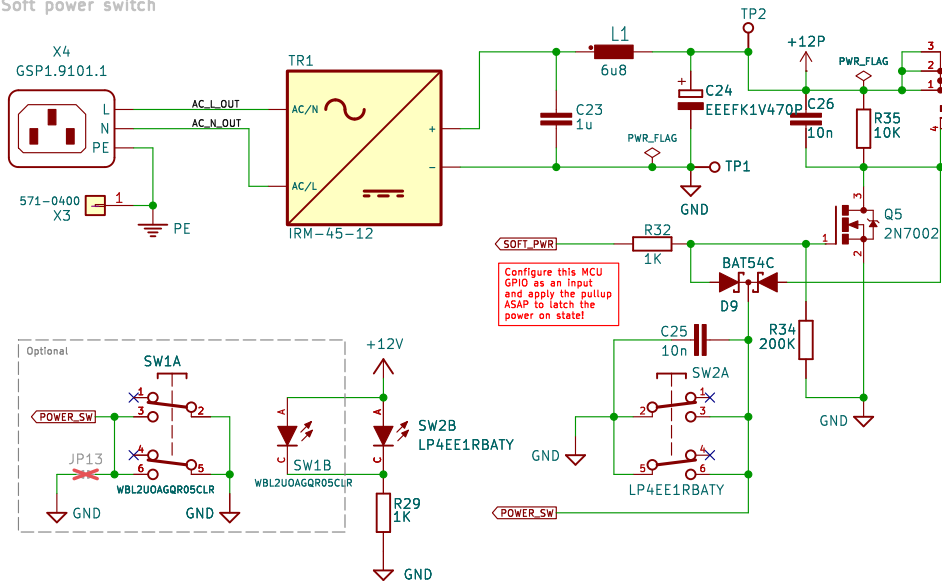
Size: A4 Date: 2025-10-15

KiCad E.D.A. 9.0.5

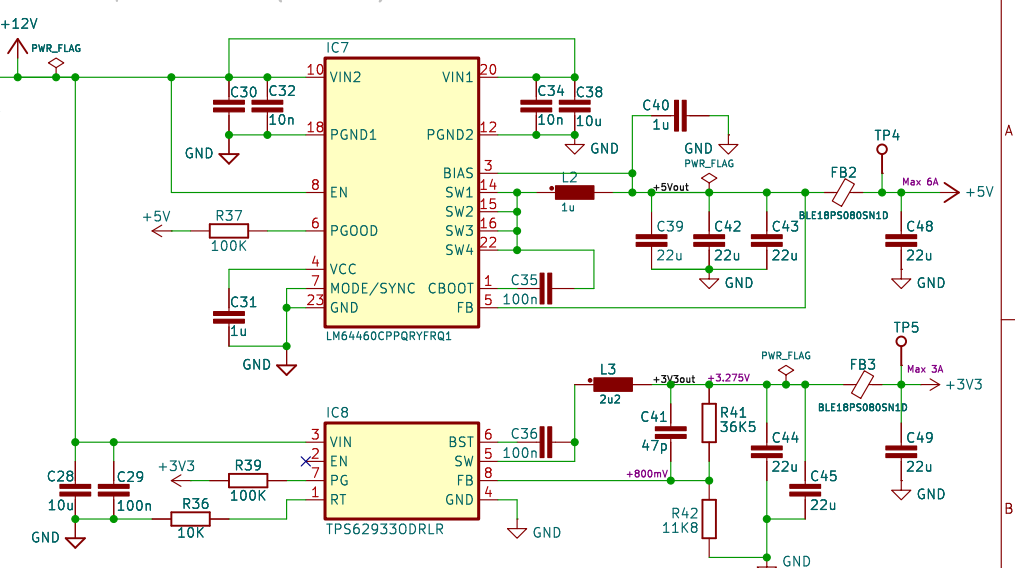
Rev: r1B1

Id: 3/7

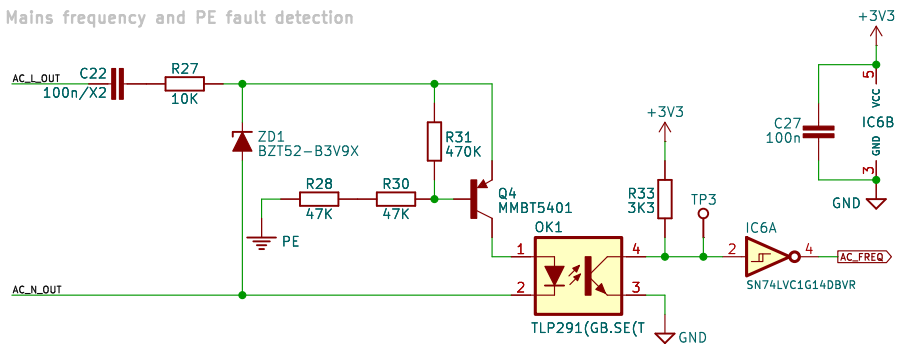
Soft power switch



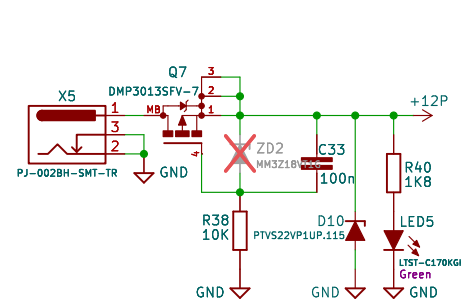
DC-DC stepdown converters (+5V, +3V3)



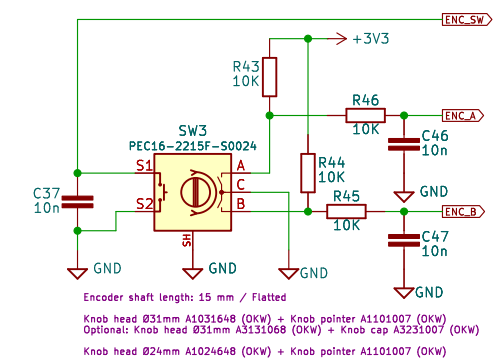
AC Mains frequency and PE fault detection



12Vdc aux



Encoder with switch



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Sheet: /Miscellaneous/

File: misc.kicad_sch

Title: BB3+ test mainboard

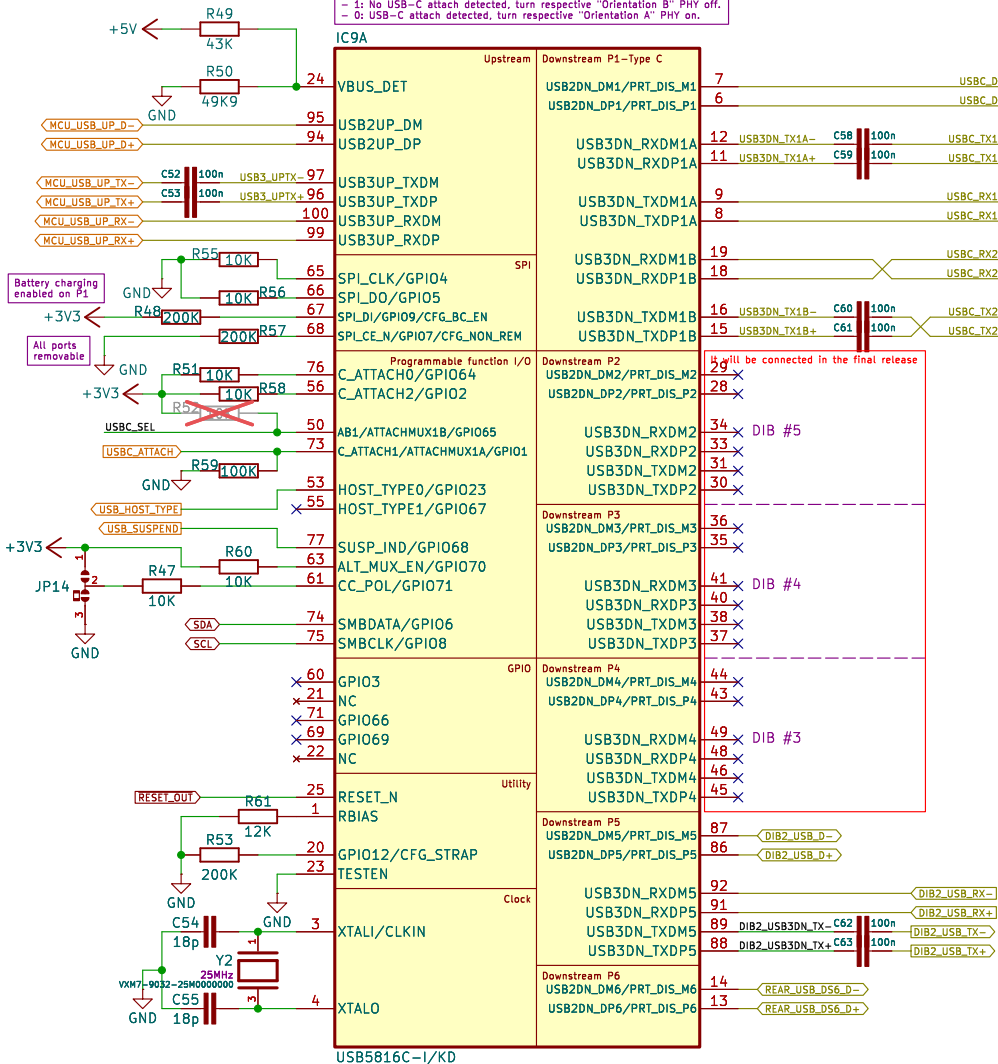
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KiCad E.D.A. 9.0.5

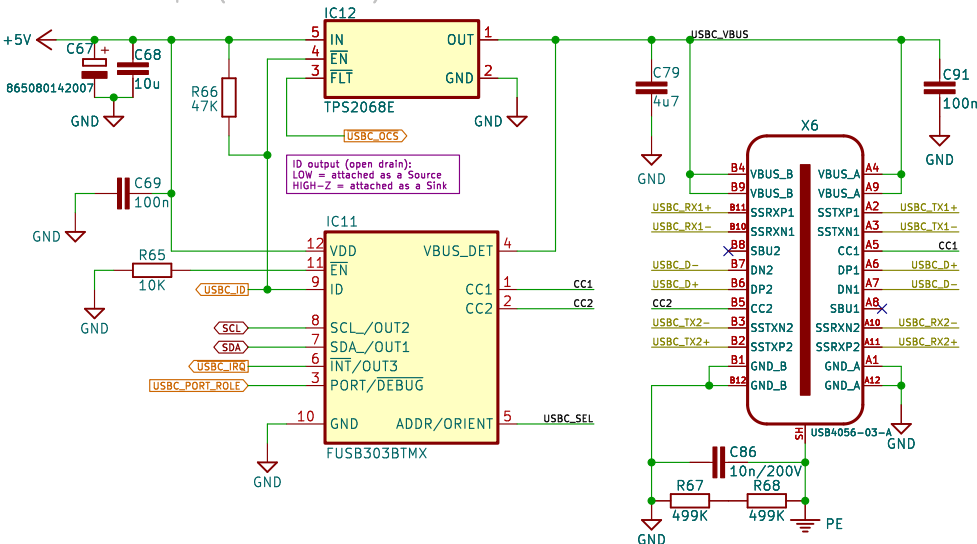
Rev: r1B1

Id: 4/7

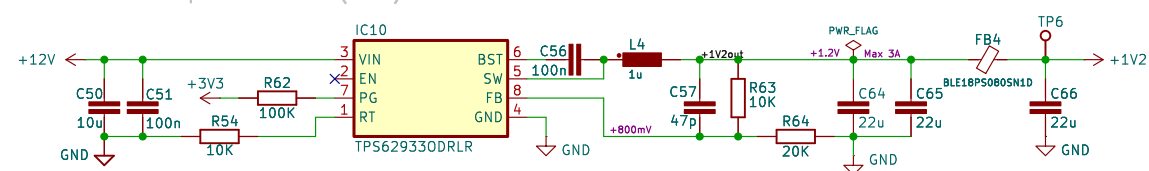
6-port USB hub



USB-C 3.0 front port (source max 1.5A)



USB hub DC-DC stepdown converter (+1V2)



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Sheet: /USB3 Hub, Front USB-C/

File: usb3_hub.kicad_sch

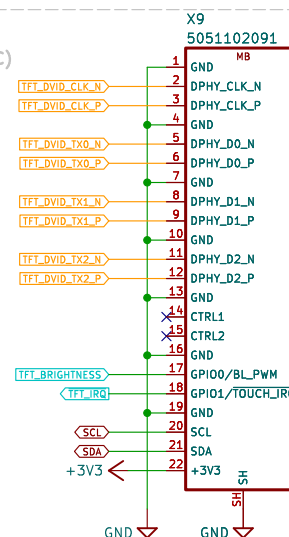
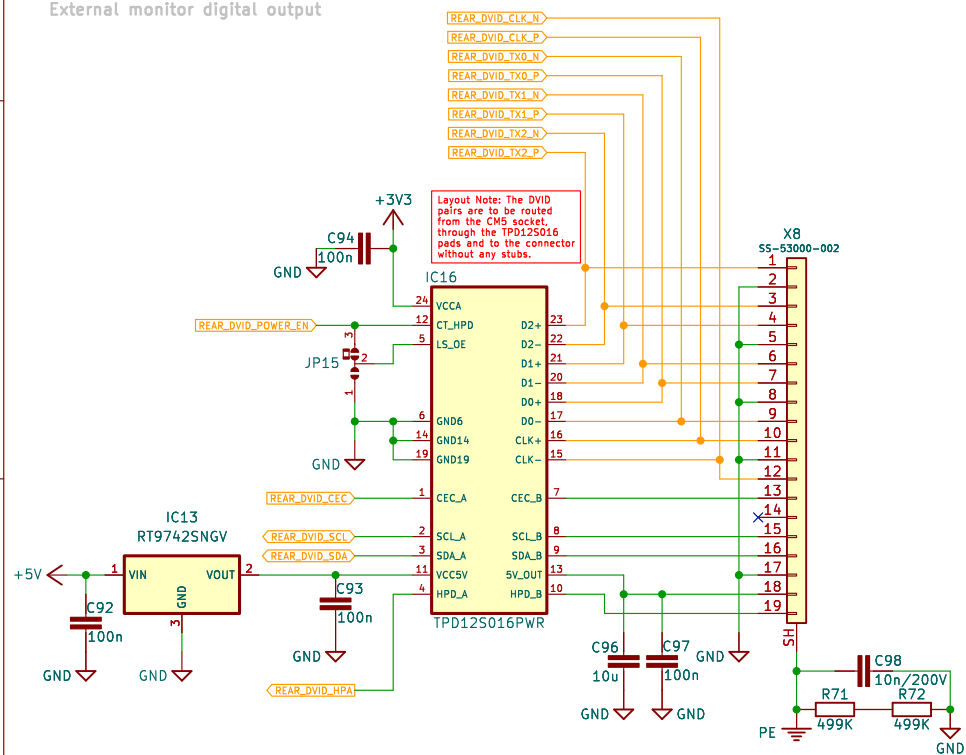
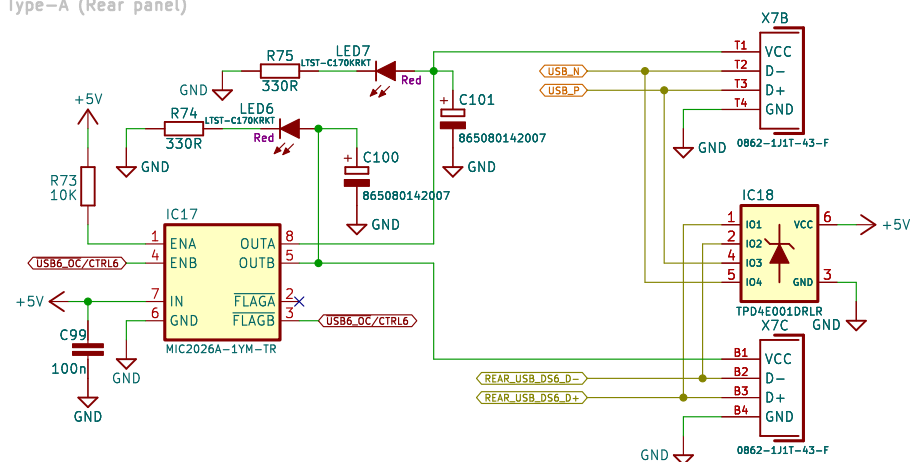
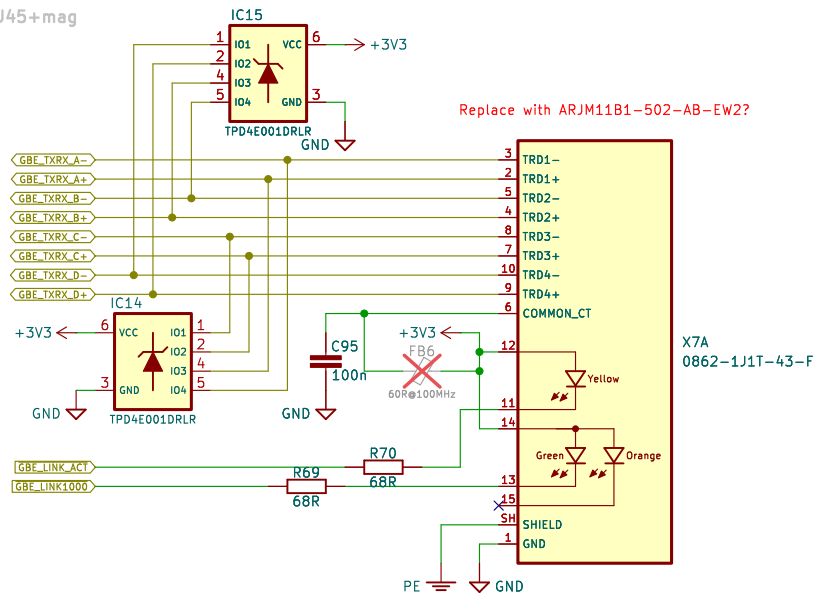
Title: BB3+ test mainboard

Size: A4	Date: 2025-10-15
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KiCad E.D.A. 9.0.5

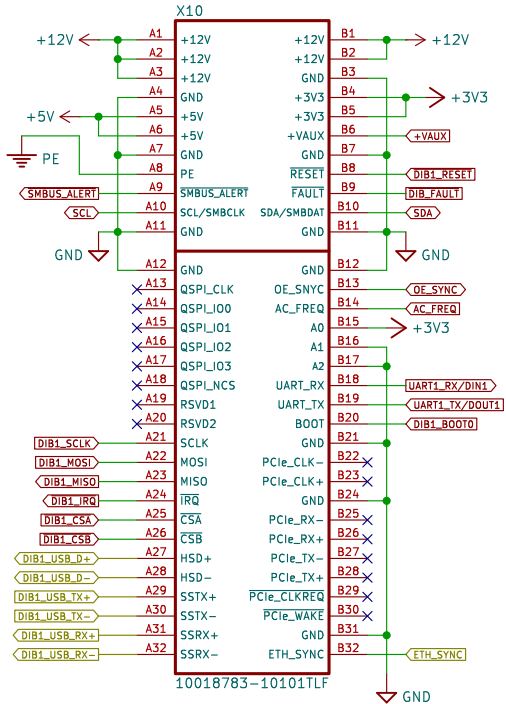
Rev: r1B1

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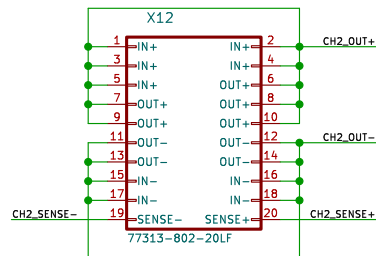
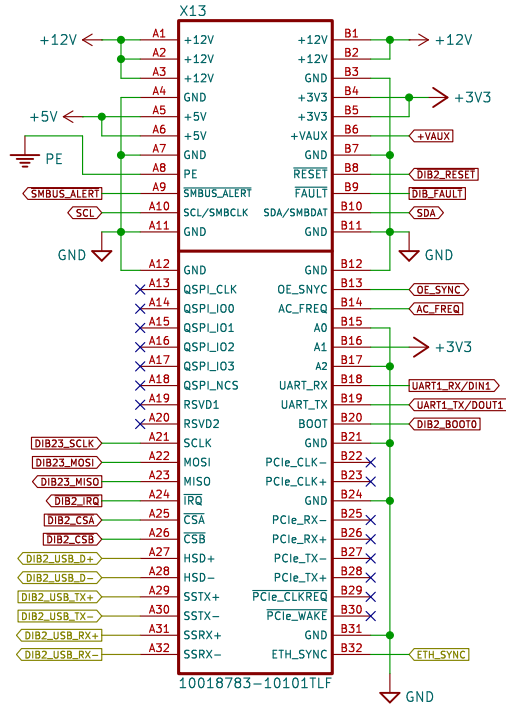


Id: 6/7

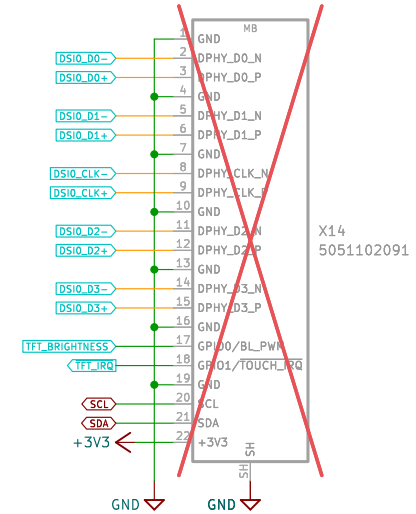
DIB 2.0 Signal connectors



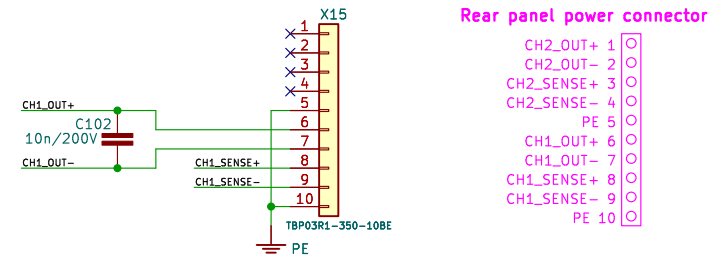
20-pin DIB v2.0 Power connector



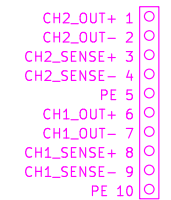
TFT Touchscreen display DSI output (22-pin FFC)



Rear front power outputs



Rear panel power connector



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Sheet: /DIB 2.0, TFT DSI/
File: dib.kicad_sch

Title: BB3+ test mainboard

Size: A4 Date: 2025-10-15

KiCad E.D.A. 9.0.5

Rev: r1B1

Id: 7/7