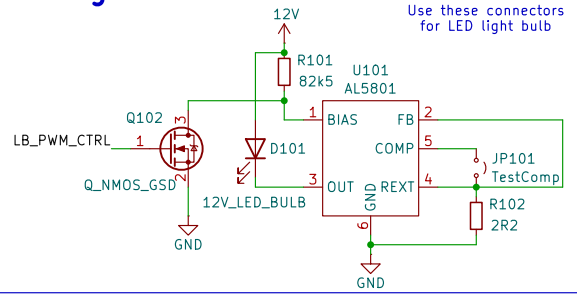
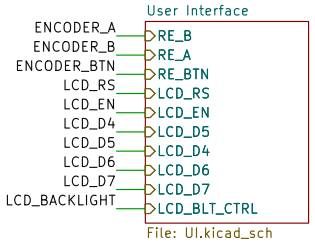
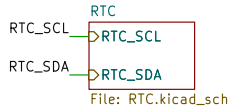
LED Light bulb control



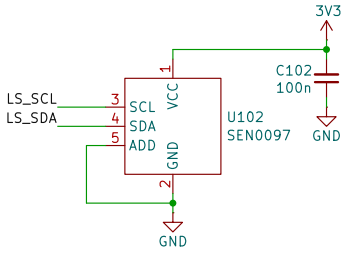
User interface control



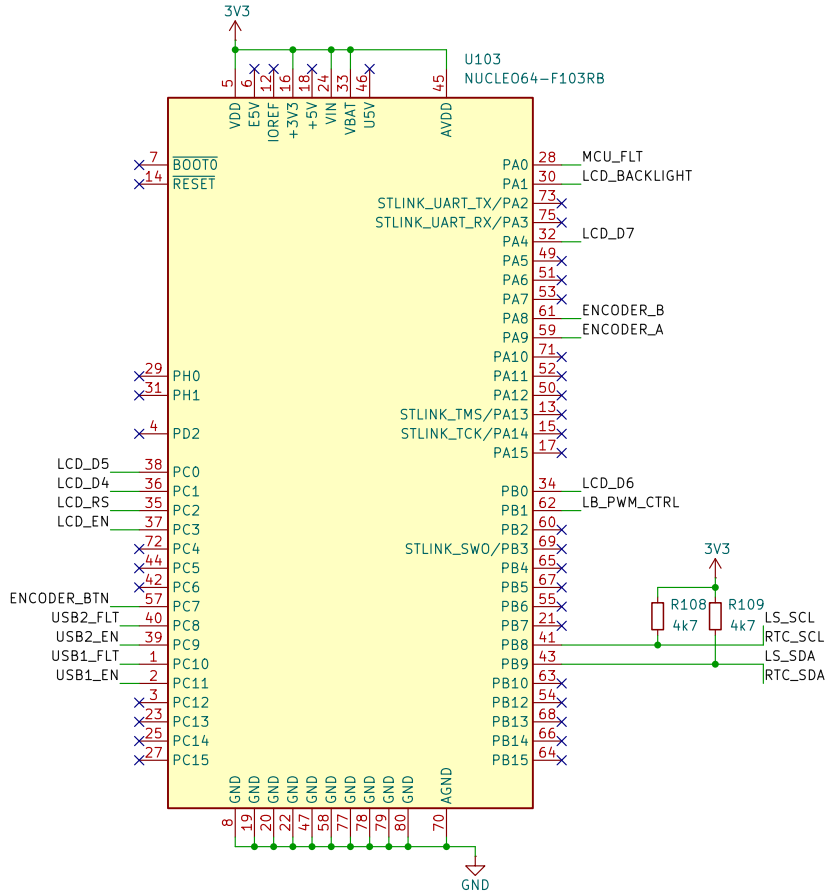
Real Time Clock



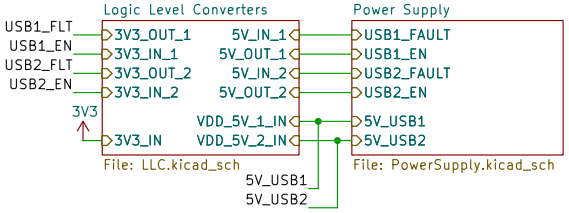
Light Sensor



MCU (Nucleo-F103RB)

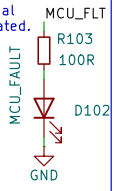


Power Supply Control

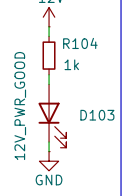


Indicator LEDs

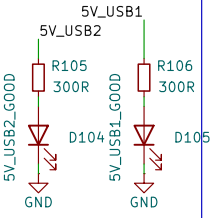
Indicates general fault. Is controled by MCU which generates blink error codes. If there is no fault active a "heartbeat" signal shoud be generated. (Should be red)



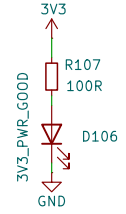
Indicates that 12V ext. PS is working (Should be blue)



Indicates that 5V pwr for both USBs are working (Should be orange or yellow)



Indicates that 3V3 pwr supply is working (Should be green)



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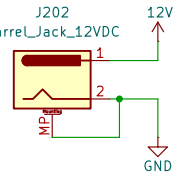
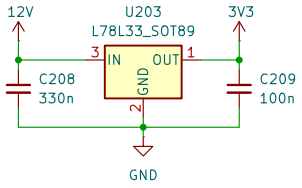
Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.7		Id: 1/5

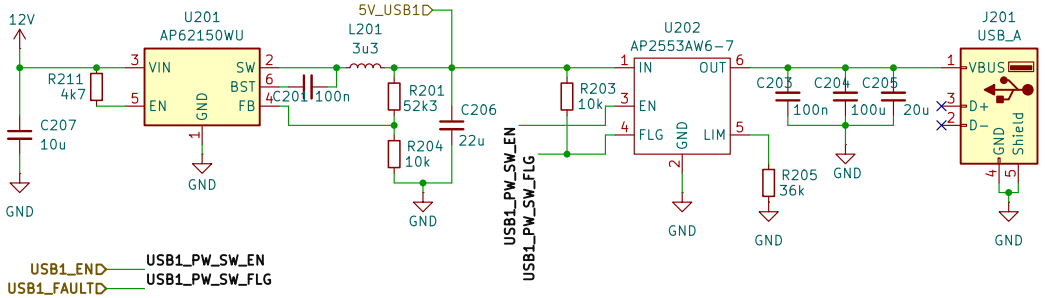
12V External PS connector



Control logic PS

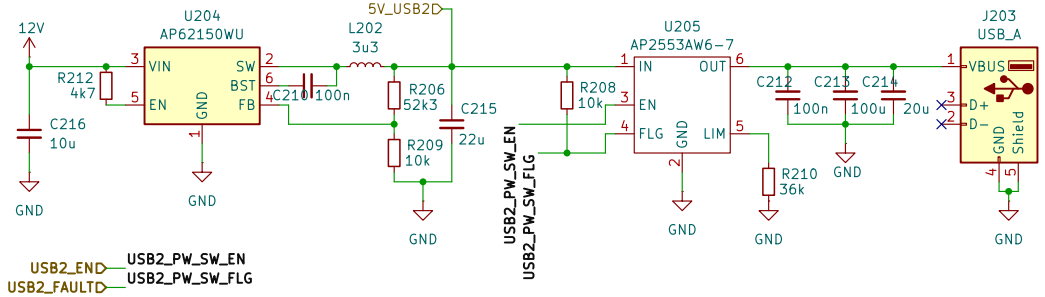


USB1 PS



USB1 and USB2 power supplies are separated to ensure that they are independent of each other
(if one USB is shorted/faulty, the other one can be functional)
and decrease the load of used DC-DC converters, so less efficient
and less complex ones can be used (and there is less heat dicipation)

USB2 PS



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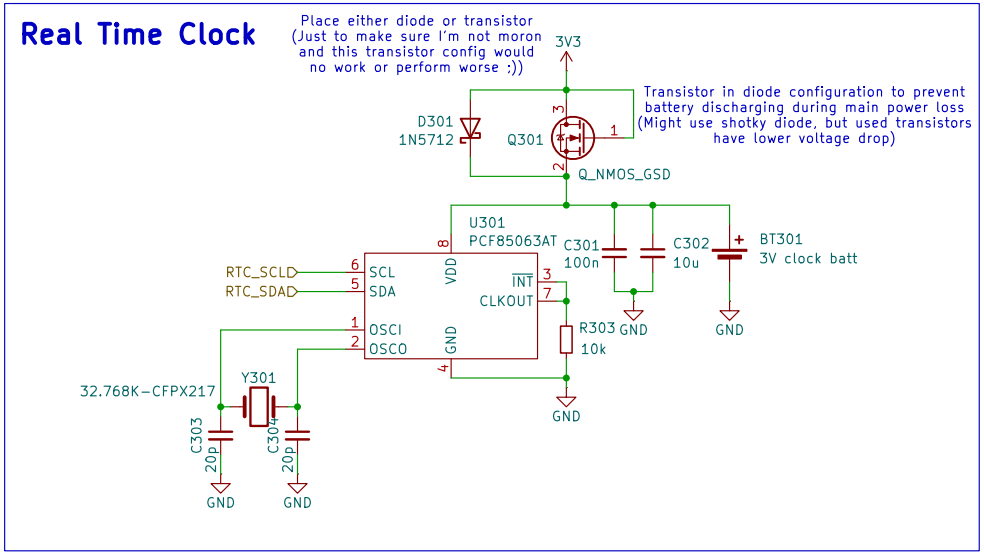
KiCad E.D.A. 8.0.7		Id: 3/5

Real Time Clock



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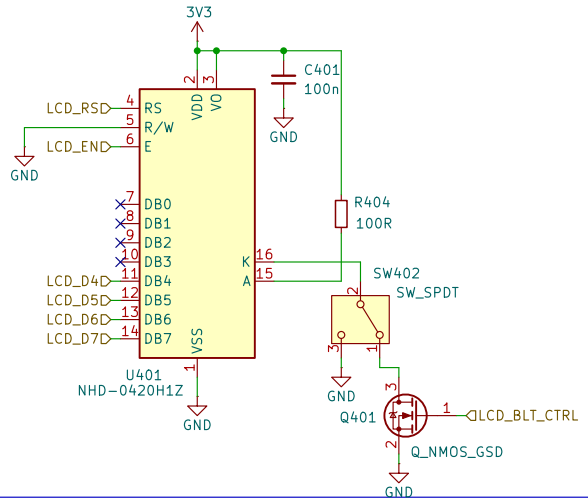
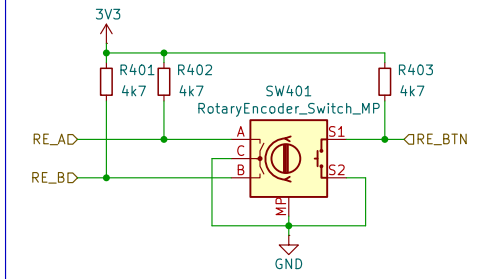
KiCad E.D.A. 8.0.7	Id: 4/5

Control display



Rotary Encoder

Used to contol user interface



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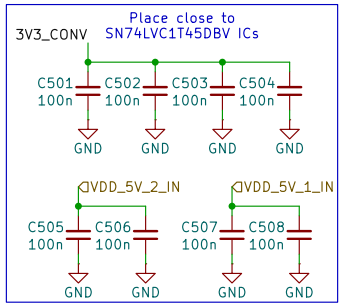
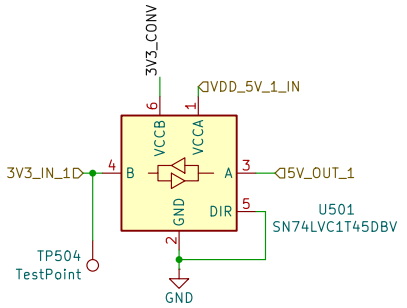
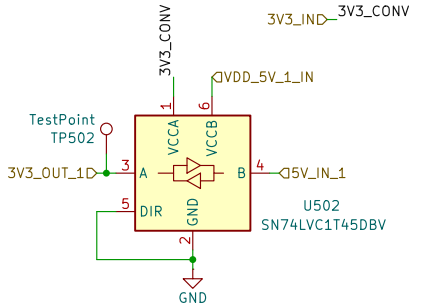
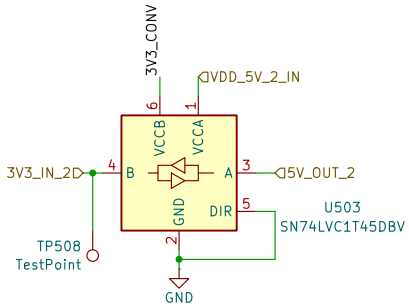
KiCad E.D.A. 8.0.7		Id: 5/5

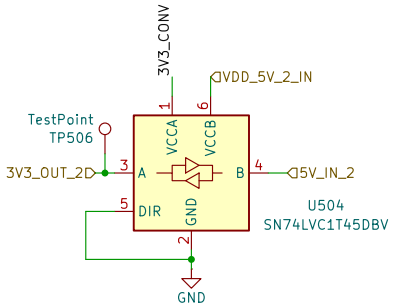
Logic Level Conversion for USB PS control











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