

The diagram illustrates a voltage divider circuit used for I2C pull-up. A +3.3V supply is connected to the top of two resistors, R2 and R3, both with a value of 5.1k. The bottom of R2 is connected to the SDA_0 pin, and the bottom of R3 is connected to the SCL_0 pin. The other ends of R2 and R3 are connected to a common ground point.

The diagram illustrates two decoupling capacitor networks. The top network is connected to a +1V1 supply and includes capacitors C4 (100nF), C5 (100nF), and C6 (2.2uF) in parallel. A note indicates '2u2 @ VREG_OUT 100n @ DVDD x2'. The bottom network is connected to a +3.3V supply and includes capacitors C7 (100nF), C8 (100nF), C9 (100nF), C10 (100nF), C11 (100nF), C12 (100nF), and C13 (2.2uF) in parallel.

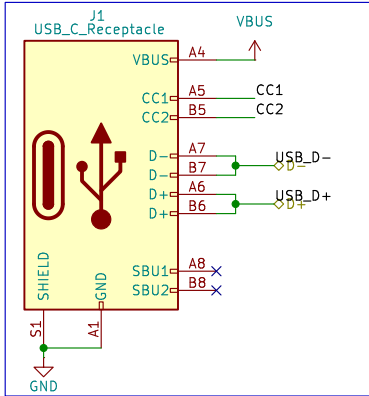
[illegible]

The diagram illustrates the SPI interface circuit for the ATmega328P microcontroller. It shows three signal lines: GPIO11, GPIO10, and QSPI_CS. GPIO11 is connected to R18 (1k) and R17 (10k), with a 100nF capacitor C26 to ground. GPIO10 is connected to R27 (1k) and R7 (10k), with a 100nF capacitor C24 to ground. QSPI_CS is connected to R20 (1k) and a switch SW5. The switch SW5 is controlled by SW4 and SW2. The circuit is powered by +3.3V and grounded.

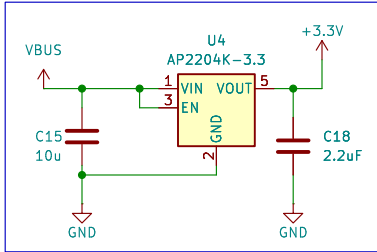
A horizontal number line with a tick mark at 5 and another tick mark at 10.

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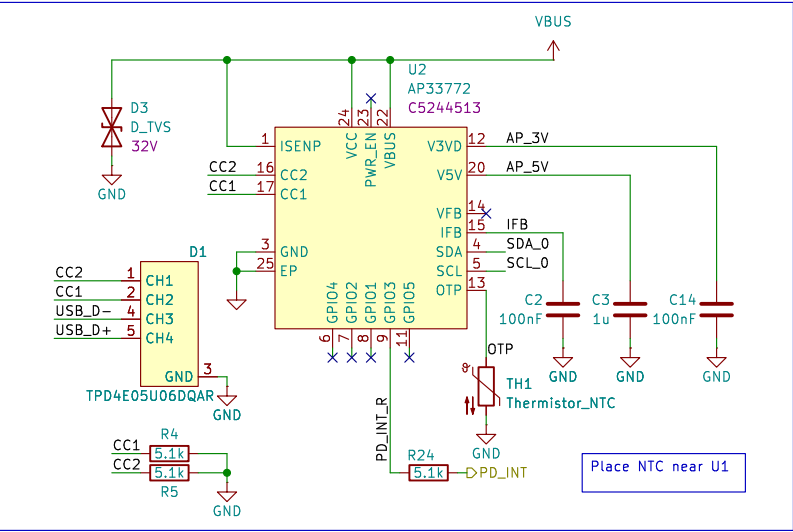
USB-C Connector



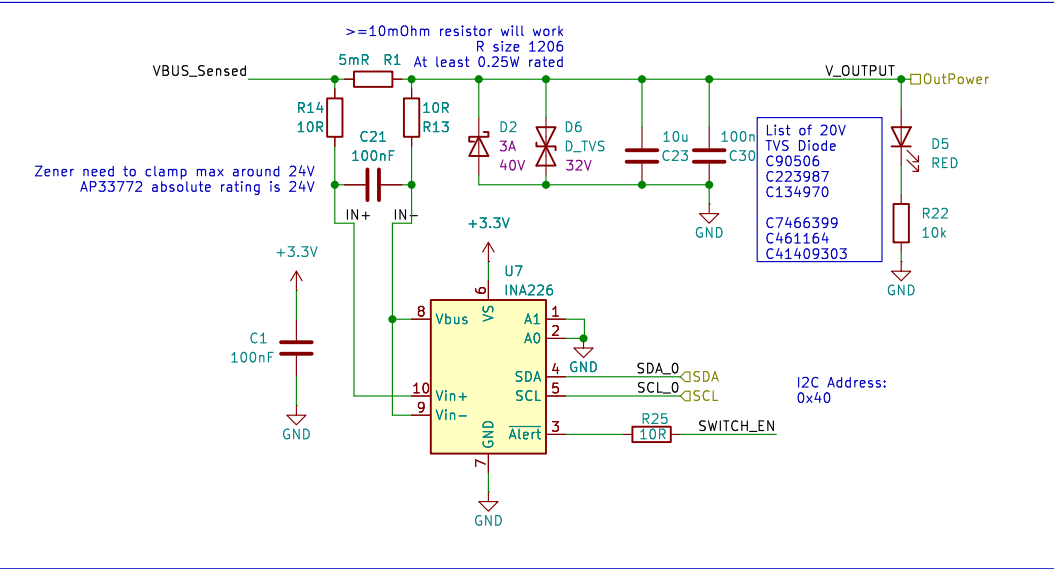
LDO 3.3V



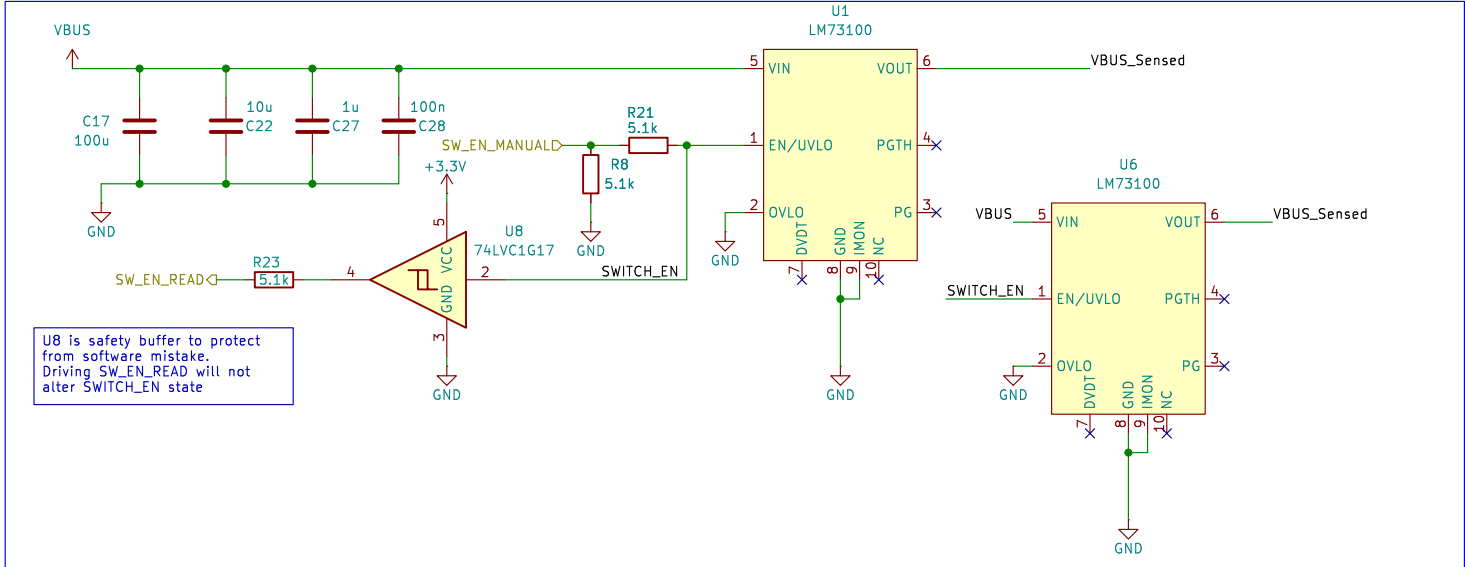
USB PD Controller



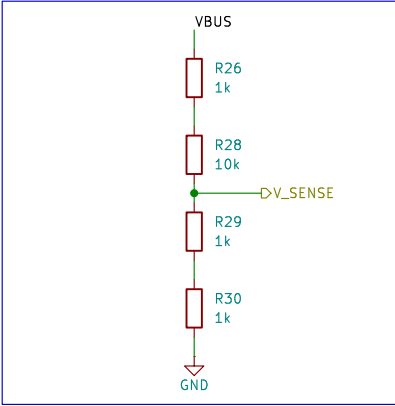
Current Sensor



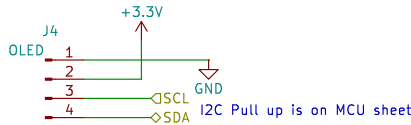
23V, 5A switch for power, 28mOhm



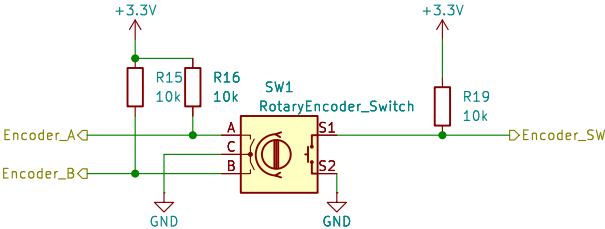
Input Voltage Sensing



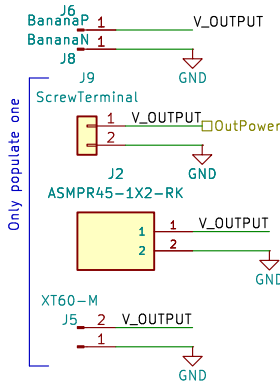
OLED_Pins



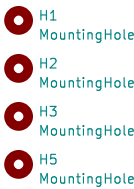
Rotary Encoder



Output Connectors

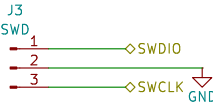


Mounting Holes



Output connector consideration:
+ Banana Jack -> Standard for power supply
+ Screw terminal 3.5mm, 5mm pitch both introduce gap in the case and result in dust
+ Terminal block plug-in
+ XT60 -> Doable
+ XT30 -> Doable
+ DC barrel jack - Tend to rated up to only 2A, fire hazard.
+ Anderson Powerpole -> Slightly large for given space

Programming



Sheet: /Connection/
File: Connection.kicad_sch

Title:

Size: USLegal
KiCad E.D.A. 9.0.5

Date:

Rev:

Id: 4/4