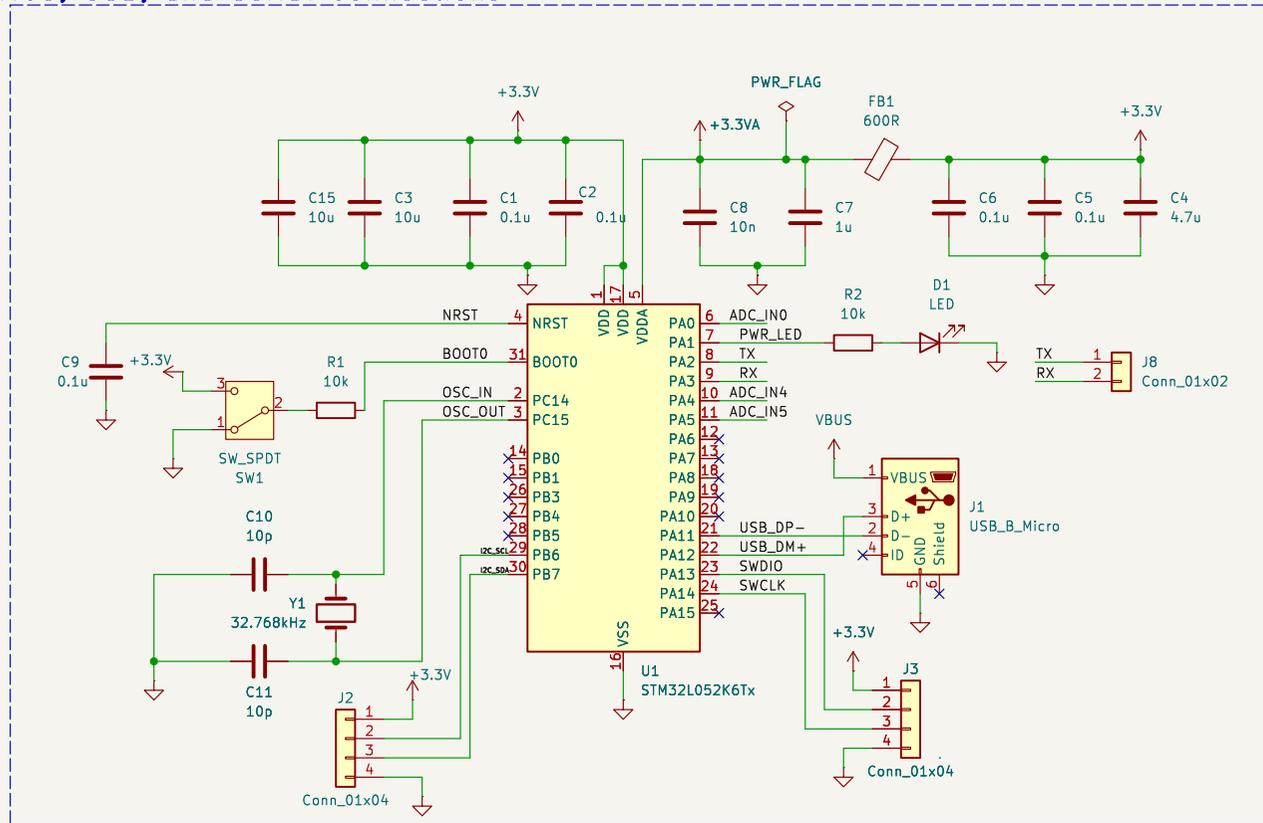
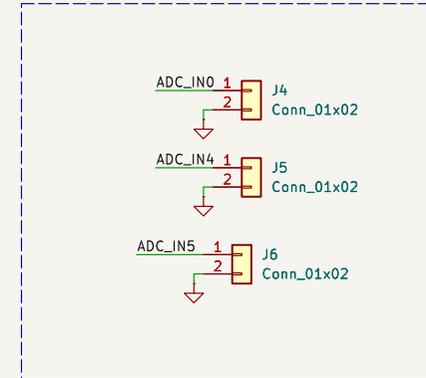


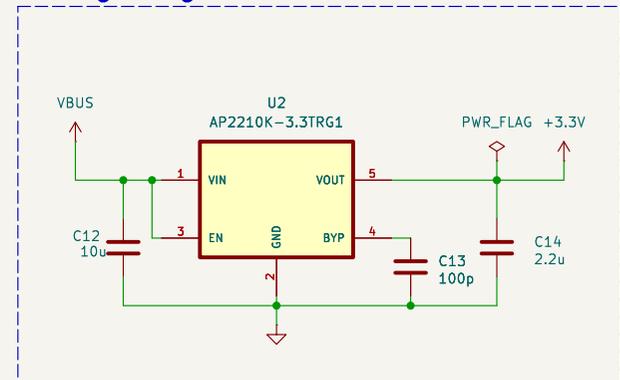
MCU, USB, and Serial Connections



Analog Connections



Voltage Regulation



1. C_{IN} needs to be atleast 1uF
2. C_{OUT} needs to be 2.2uF when bypass is used
3. Bypass capacitor needs to be no more than 100pF
4. $V_{IN} = (150C - 50C) / (0.3A * 200C/W) + 3.3 = 4.97V$, for $I_{OUT} = 300mA$ and $T_A = 50C$

MCU Decoupling Capacitor Values from the STM32 Documentation: AN4467
 Oscillator Capacitor: $C_{L1} - C_{S} = (C_{L1} * C_{L2}) / (C_{L2} + C_{L1})$, $C_{L1} = 12.5pF$, $C_{S} = 5pF$
 Ferrite Bead Value Reference: BOM from STM32 Nucleoboard PCB files
<https://www.st.com/en/evaluation-tools/nucleo-i412kb.html#cad-resources>

MCU Datasheet: <https://www.st.com/resource/en/datasheet/stm32l052c6.pdf>
 MCU Circuit Design: https://www.st.com/resource/en/application_note/an4467-getting-started-with-stm32l0xx-hardware-development-stmicroelectronics.pdf

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