Mixed-Signal Demo PCB

[1] Power

Power

File: Power.kicad_sch

[2] MCU

MCU

File: MCU.kicad_sch

[3] ADC

ADC

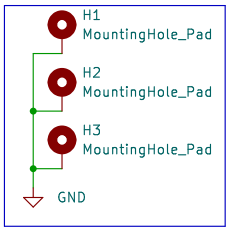
File: ADC.kicad_sch

[4] DAC

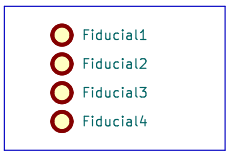
DAC

File: DAC.kicad_sch

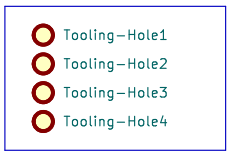
Mounting Holes (M3)



Fiducials



Tooling Holes



Ceyhun Pempeci

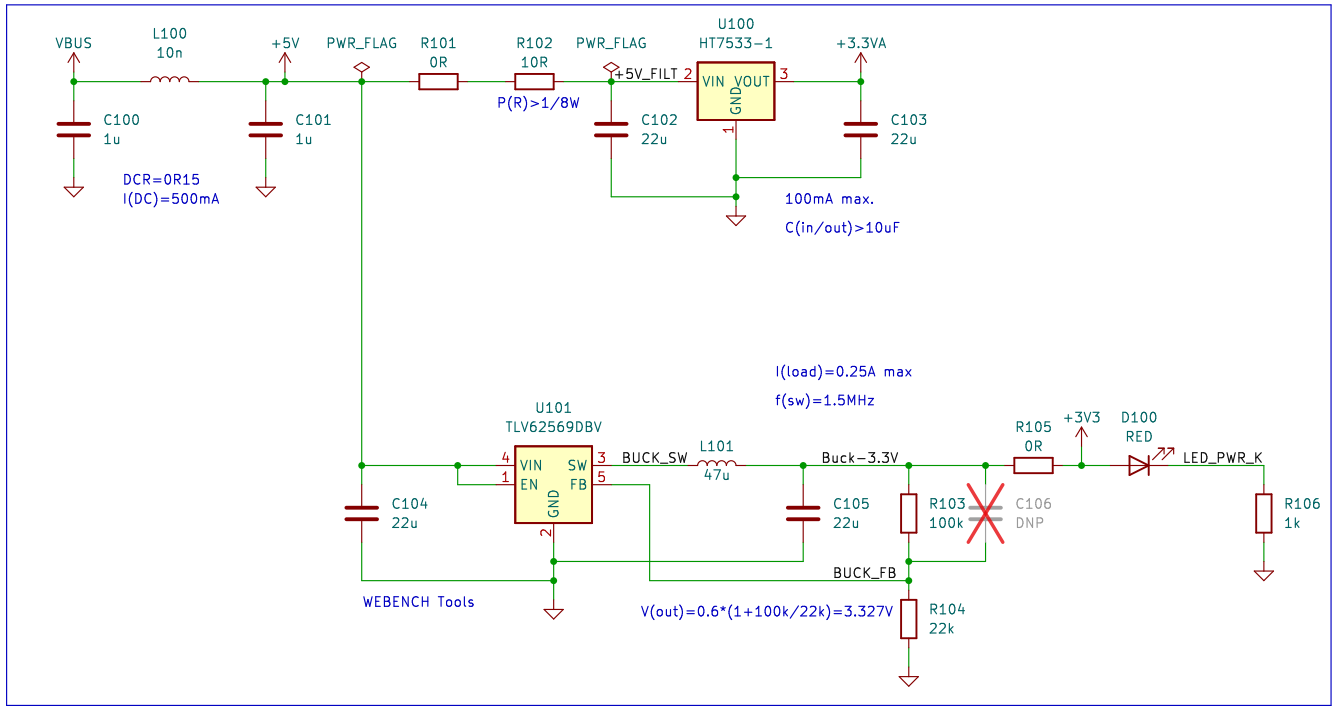
Sheet: /
File: MixedSignalKicad.kicad_sch

Title: Mixed Signal PCB

Size: A4	Date: 2024-04-14	**Rev: 1.0**
KiCad E.D.A. kicad 7.0.8		Id: 1/5

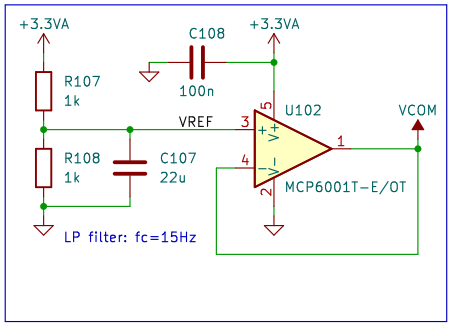
[1] Power

Input Filtering & Analogue and Digital Supplies



VBUS power comes from USB Type C connector (schematic page 2)

Bias Generator



Ceyhun Pempeci		
Sheet: /Power/		
File: Power.kicad_sch		
Title: Mixed Signal PCB		
Size: A4	Date: 2024-04-14	**Rev: 1.0**
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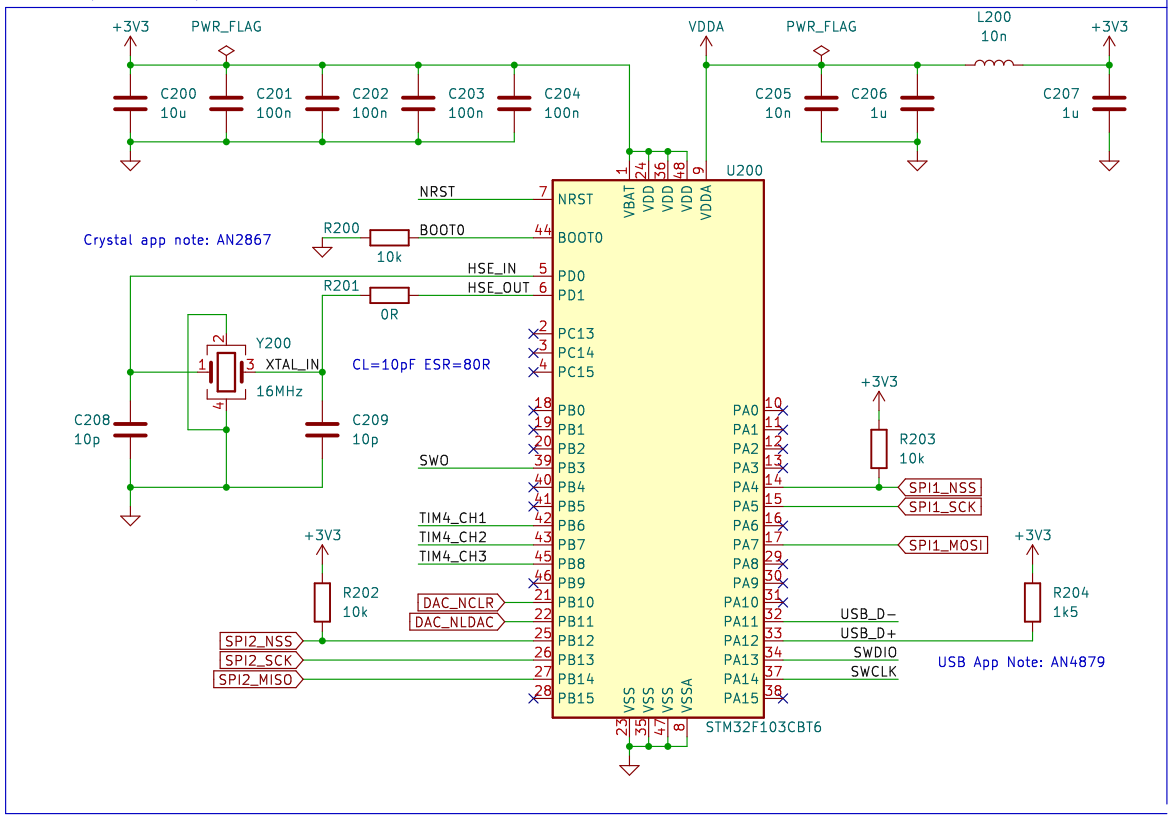
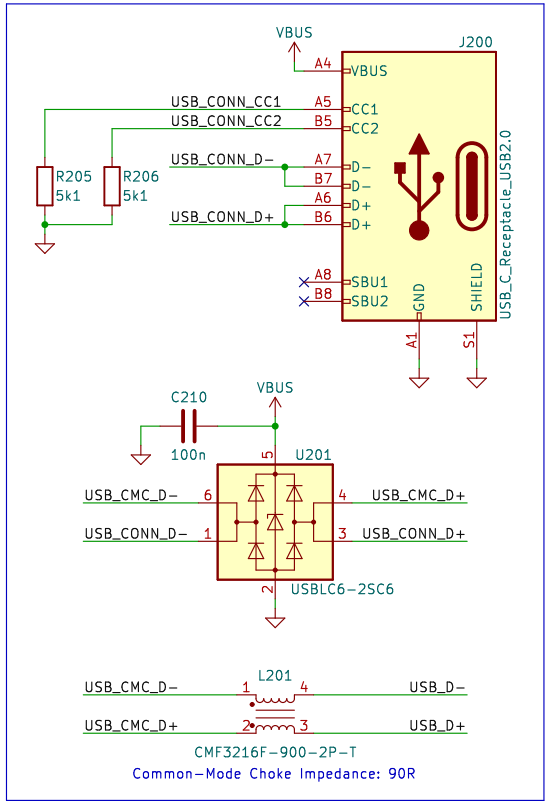
[2] Microcontroller & USB

MCU (STM32F1)

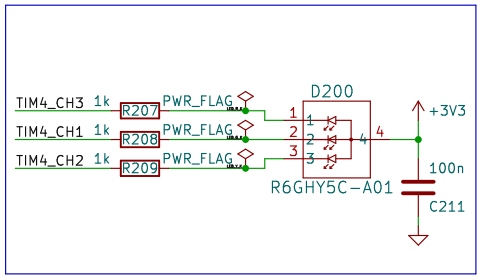


USB Type C

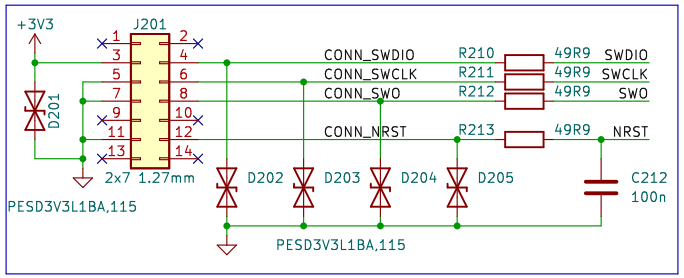


Signal Path:
Connector <–> ESD Protection <–> Common–Mode Choke <–> Pull–Up <–> MCU

RGB LED



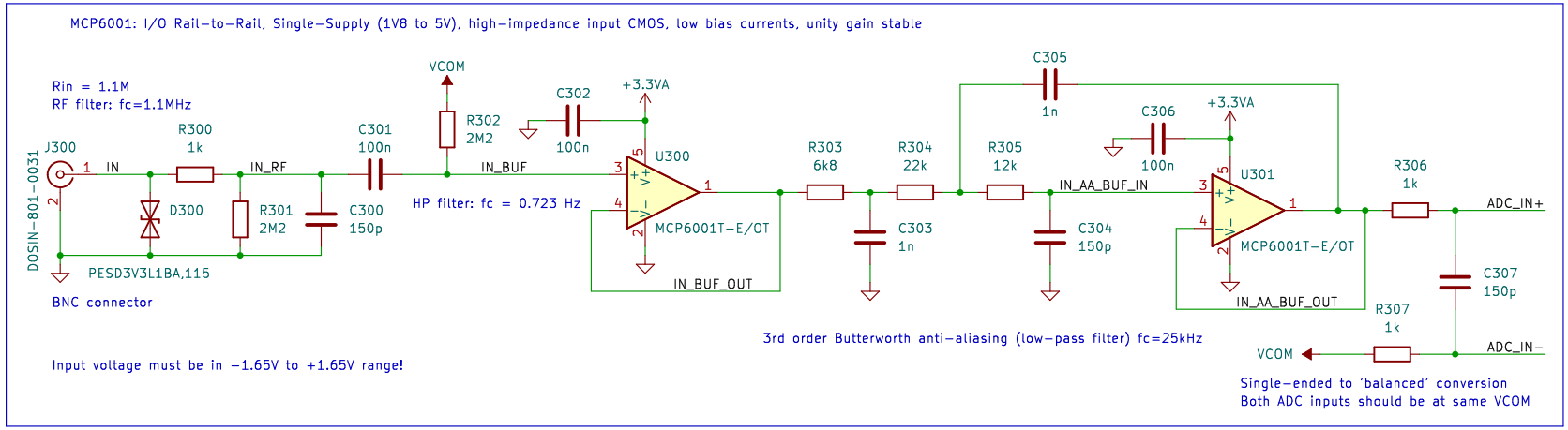
SWD Header



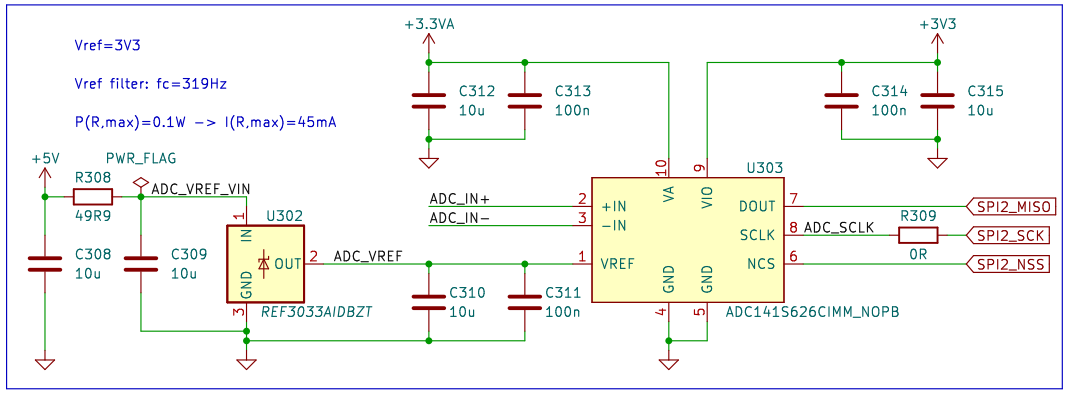
Ceyhun Pempeci		
Sheet: /MCU/		
File: MCU.kicad_sch		
Title: Mixed Signal PCB		
Size: A4	Date: 2024–04–14	**Rev: 1.0**
KiCad E.D.A. kicad 7.0.8		Id: 3/5

[3] ADC & Analogue Front-End

Analogue Front-End



14-Bit S/H ADC

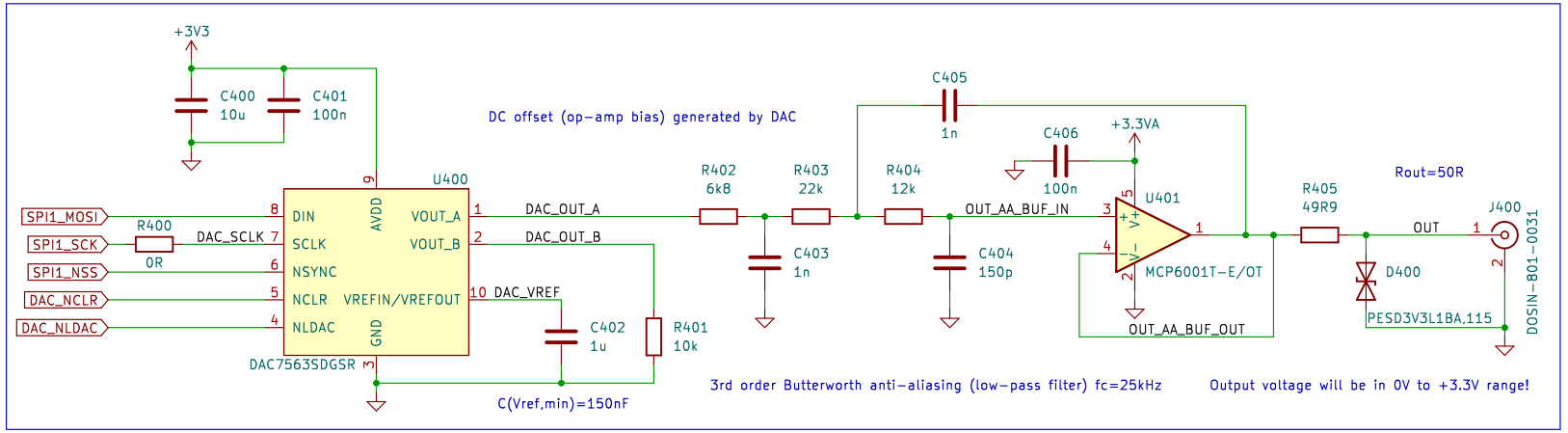


Ceyhun Pempeci		
Sheet: /ADC/		
File: ADC.kicad_sch		
Title: Mixed Signal PCB		
Size: A4	Date: 2024-04-14	**Rev: 1.0**
KiCad E.D.A. kicad 7.0.8		Id: 4/5

[4] DAC & Analogue Output Circuitry

DAC

Anti-Aliasing Filter and Output Connector (BNC)



Ceyhun Pempeci

Sheet: /DAC/
File: DAC.kicad_sch

Title: Mixed Signal PCB

Size: A4	Date: 2024-04-14	**Rev: 1.0**
KiCad E.D.A. kicad 7.0.8		Id: 5/5