Mycroft Mark 2

SJ201—Raspberry Pi 4 Daughterboard

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XMOS Microphone Array

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USB

Sheet: Power

Power

File: Power.sch

Sheet: RaspberryPi

Raspberry Pi & USB Hub

File: RaspberryPi.sch

USB

Sheet: AudioAmp

Audio Amplifier & USB Sound Card

File: AudioAmp.sch

MIPI DSI Connector

Sheet: Monitor

Monitor & Touch

File: monitor.sch

H1 MountingHole

H2 MountingHole

H3 MountingHole

H4 MountingHole

Mycroft

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Title:

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Power

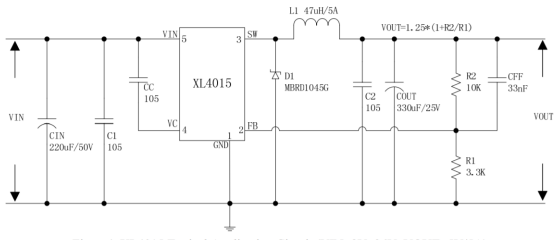
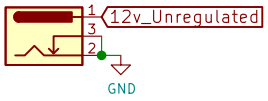


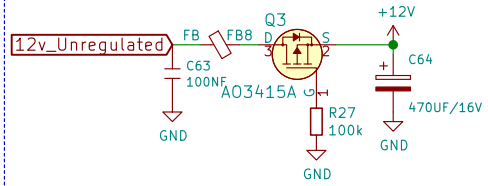
Figure4. XL4015 Typical Application Circuit (VIN=8V~36V, VOUT=5V/5A)

Reference Diagram

J1
Barrel_Jack



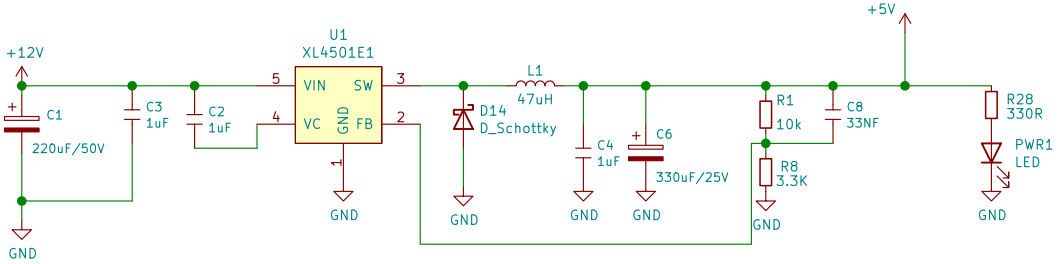
Reverse Polarity Protection



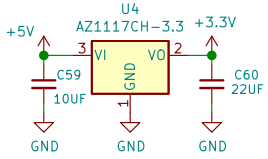
MOSFET P-CH 20V 5A SOT23-3

VIN=8V ~ 36V, VOUT=5V/5A

FB Resistor
VOUT=1.25*(1+R2/R1)

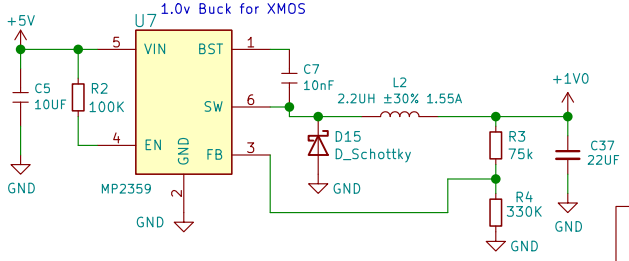


3.3v LDO Regulator



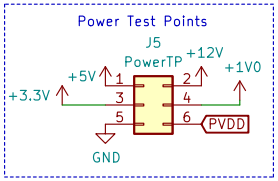
LDO to power on PCB stuff,
instead of using Raspberry 3.3v
Enables USB operation

1.0v Buck for XMOS



VFB = 0.6V
VO = 0.6 x (1 + 30/47) = 0.98V

Power Test Points



Power Converter		
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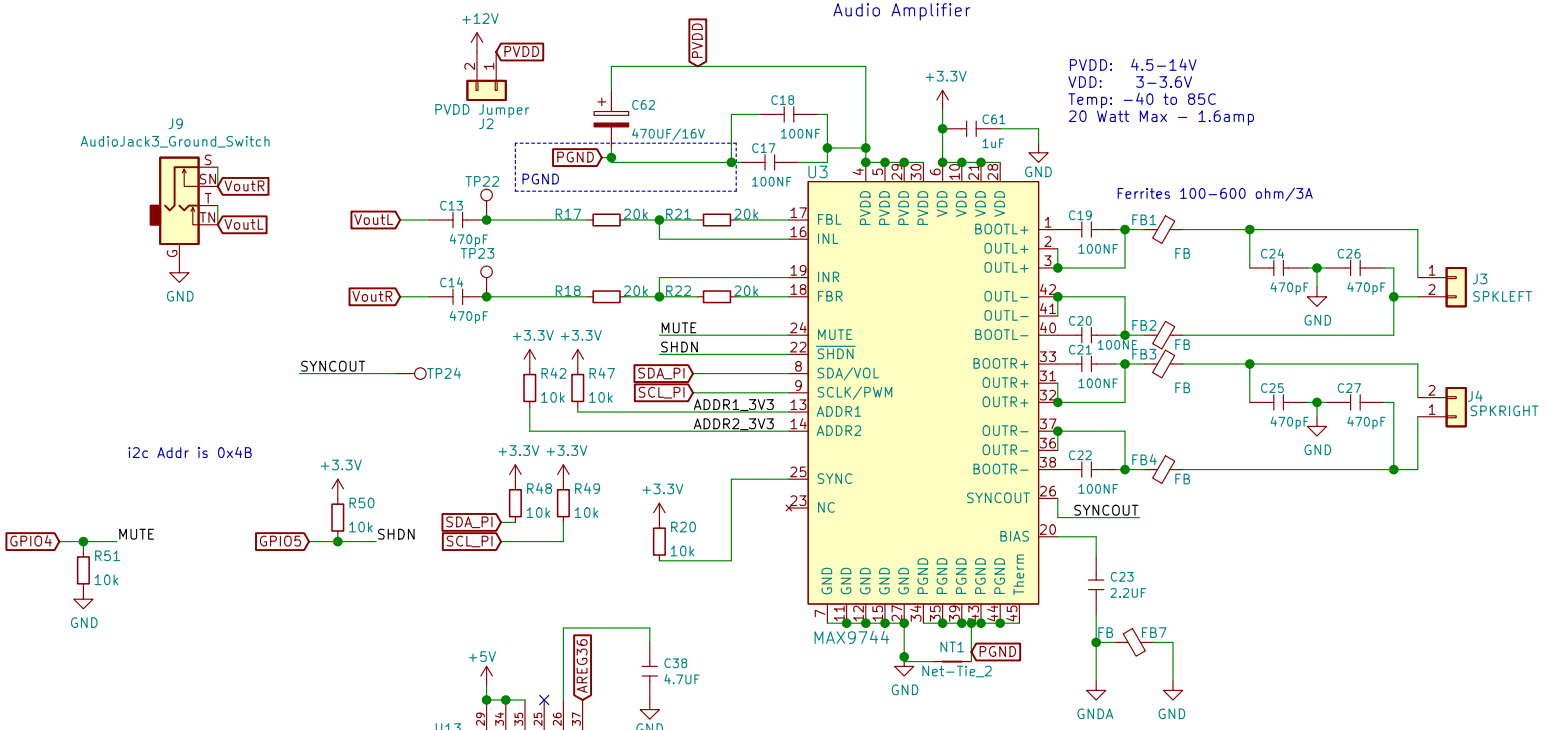
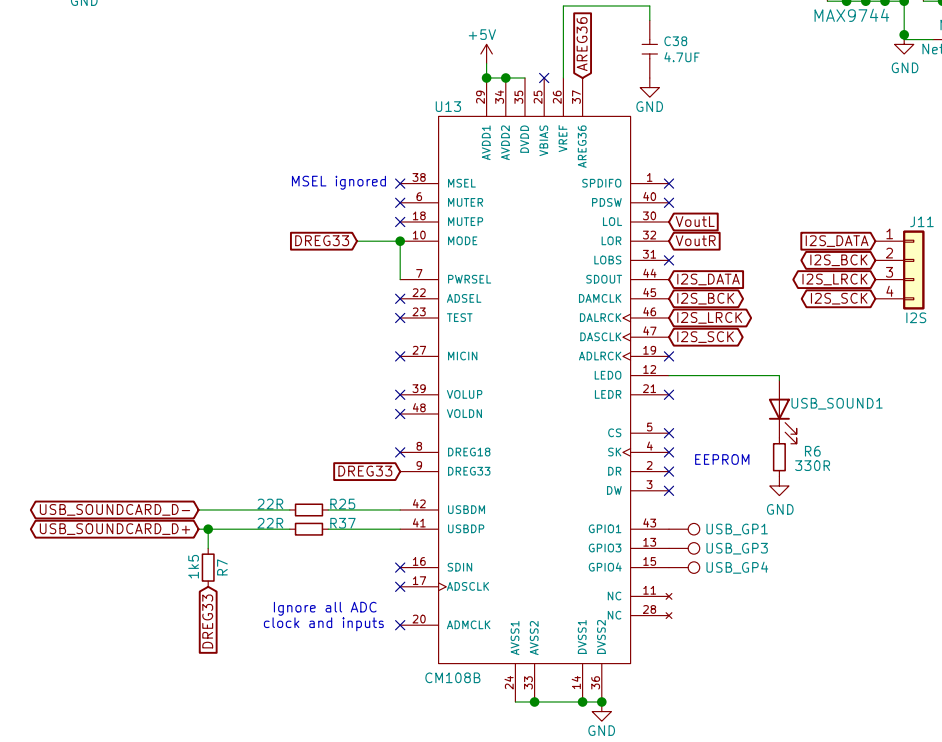
Audio Amp & USB Sound Card





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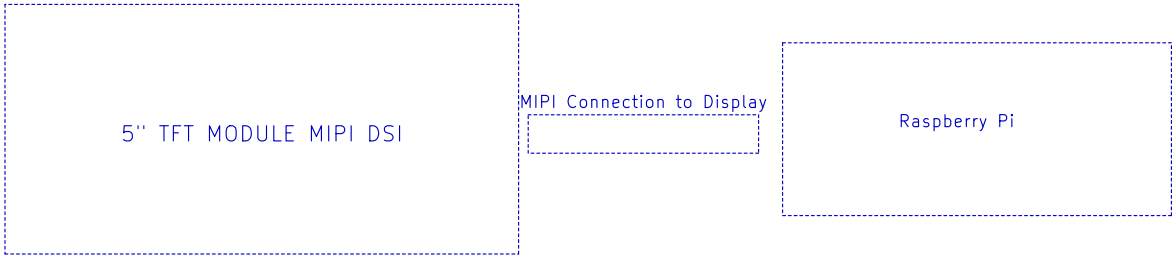
Monitor & Touch



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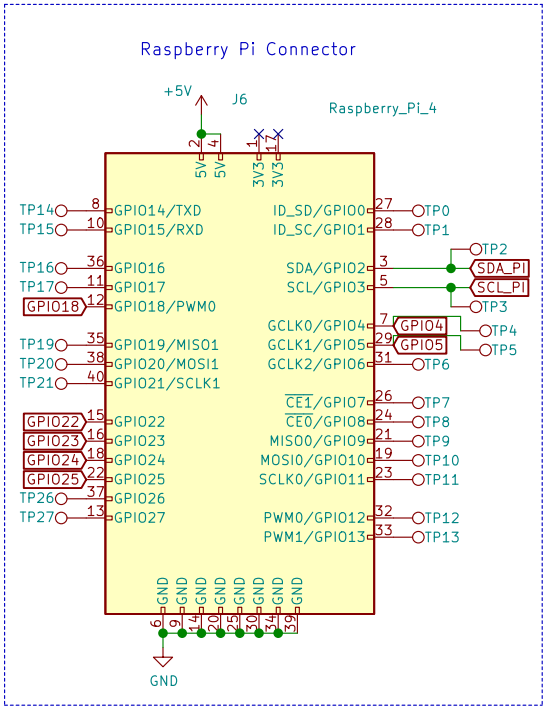
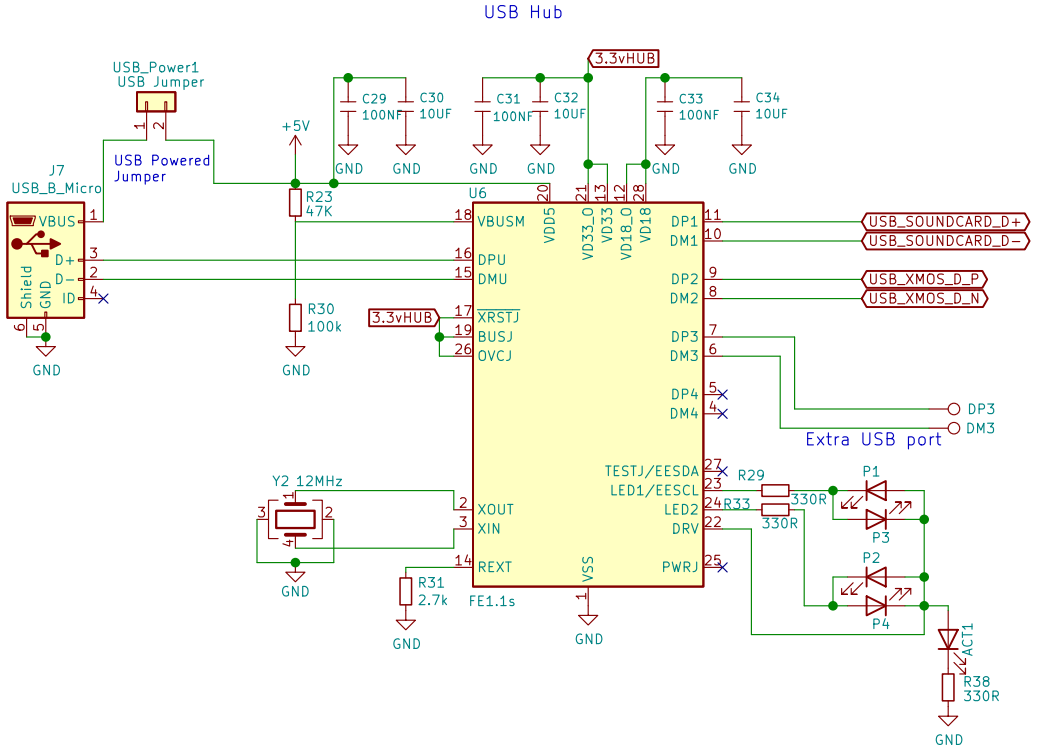
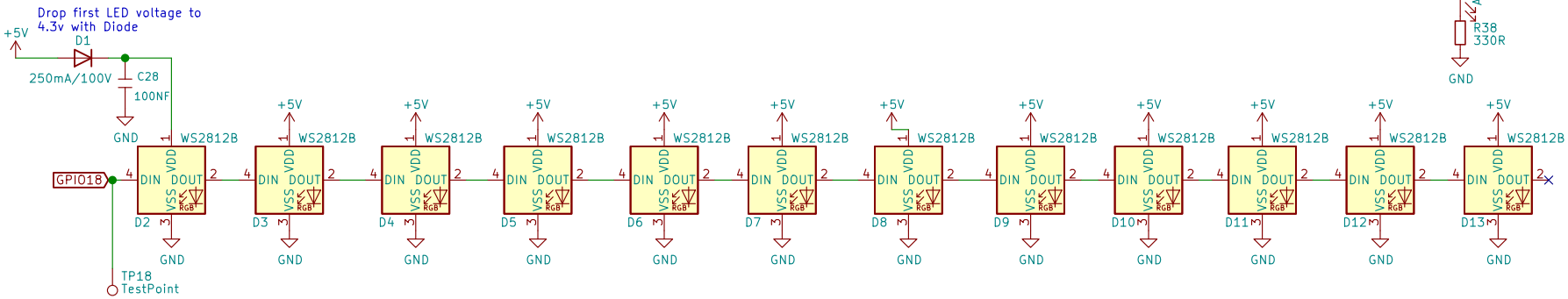
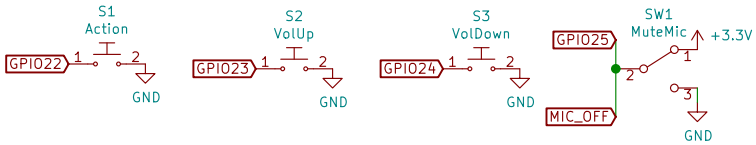
Raspberry Pi & USB Hub









MCU Connections
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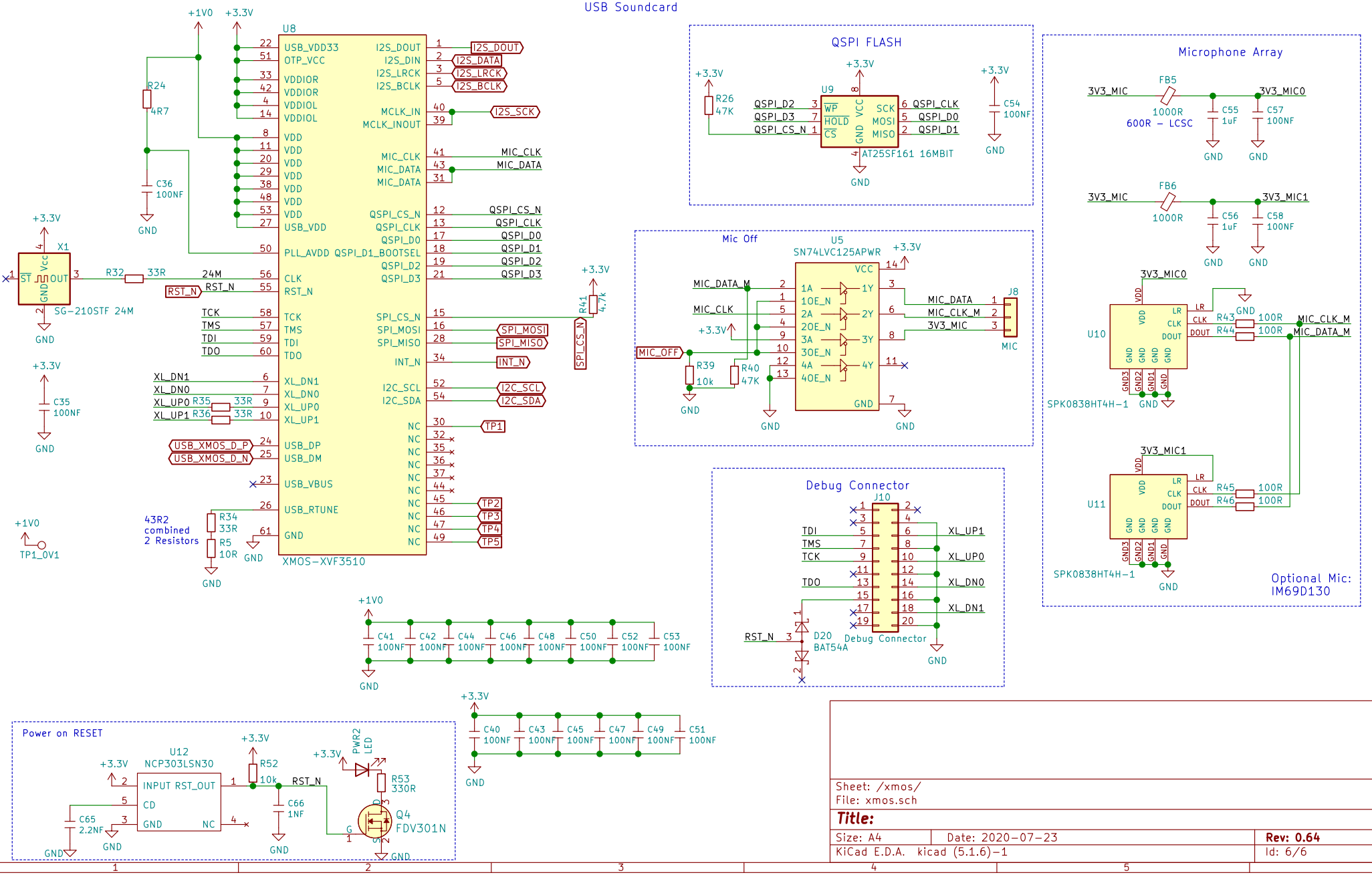
XMOS Audio Processor

I2S Data from
USB Soundcard



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