

# Mycroft Mark 2

SJ201-Raspberry Pi 4 Daughterboard

Sheet: xmos

XMOS  
Microphone  
Array

File: xmos.sch

USB

Sheet: Power

Power

File: Power.sch

Sheet: RaspberryPi

Raspberry Pi  
& USB Hub

File: RaspberryPi.sch

Sheet: AudioAmp

Audio Amplifier  
&  
USB Sound Card

File: AudioAmp.sch

USB

MIPI DSI  
Connector

Sheet: Monitor

Monitor  
& Touch

File: monitor.sch

H1  
MountingHole  
H2  
MountingHole  
H3  
MountingHole  
H4  
MountingHole



## Mycroft

Sheet: /  
File: Mycroft - Mark 2.sch

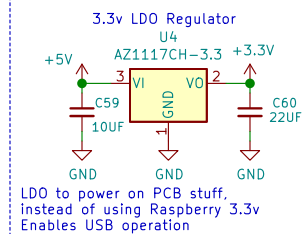
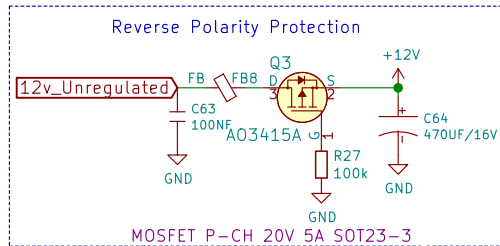
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Size: A Date: 2020-07-14  
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Rev: 0.60  
Id: 1/6



## Reference Diagram

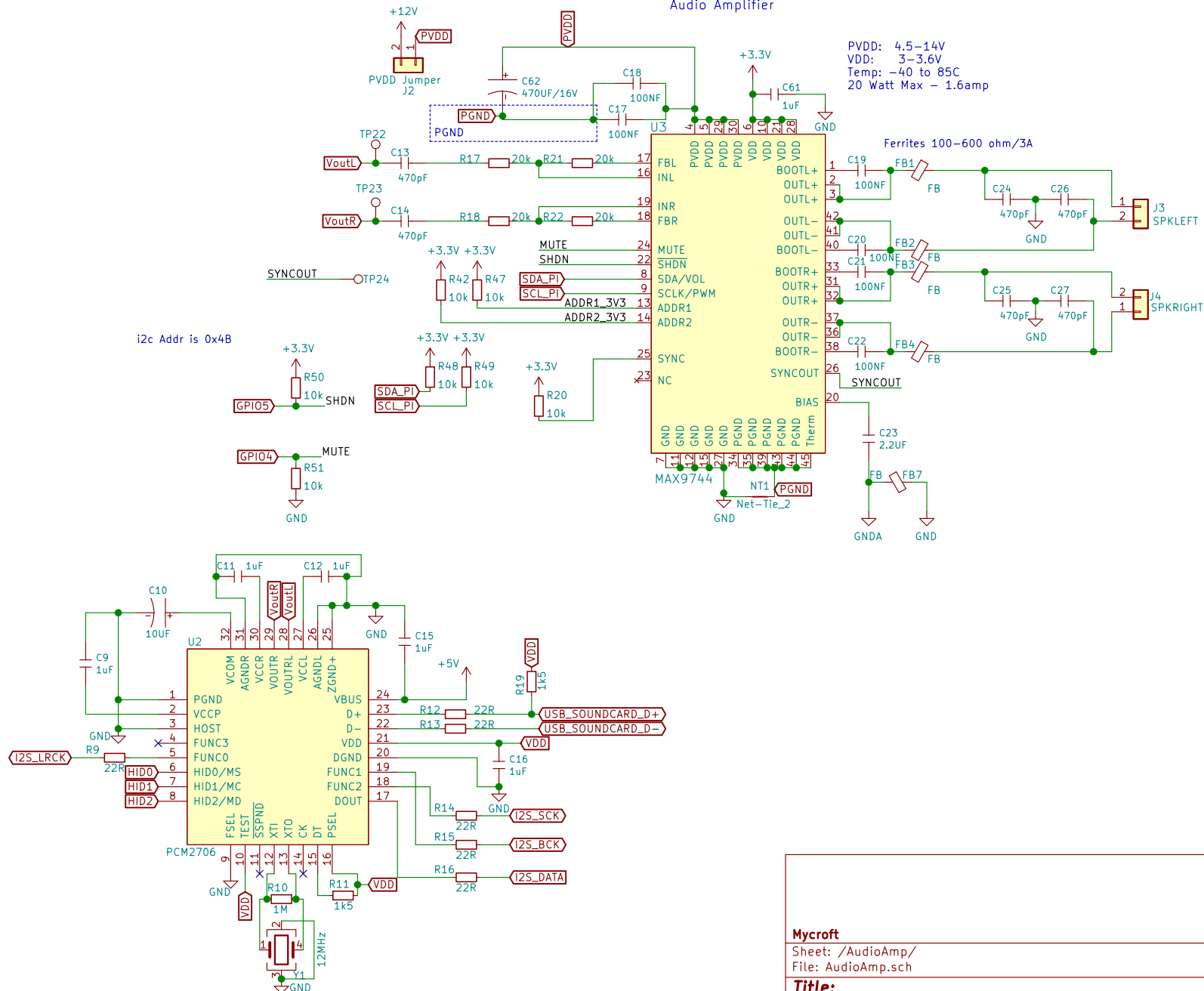


# Audio Amp & USB Sound Card

## Audio Amplifier

PVDD: 4.5-14V  
VDD: 3-3.6V  
Temp: -40 to 85C  
20 Watt Max - 1.6amp

i2c Addr is 0x4B



TODO: Add in LINE IN for testing purposes  
TODO: LINE OUT

**Mycroft**

Sheet: /AudioAmp/  
File: AudioAmp.sch

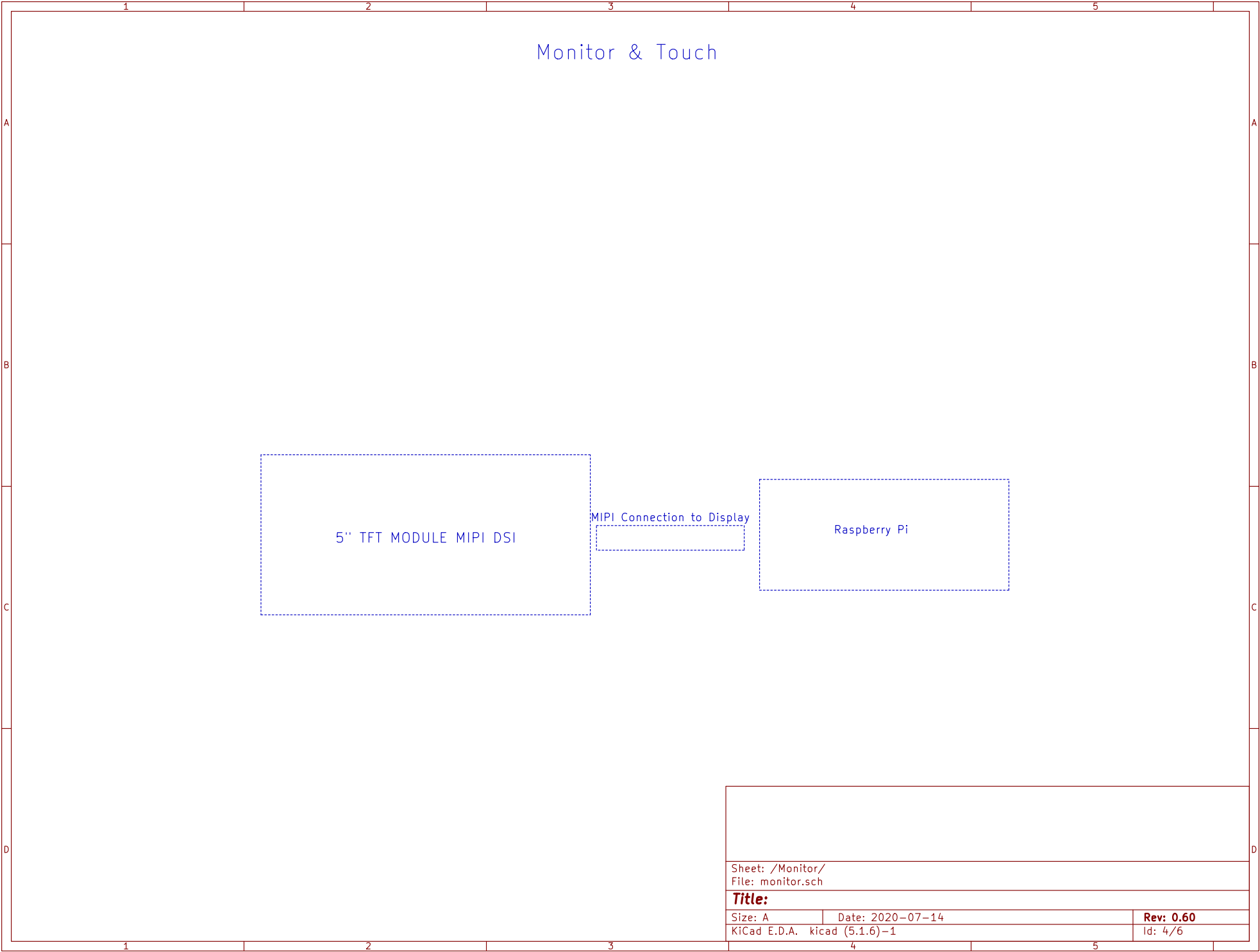
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Size: A Date: 2020-07-14

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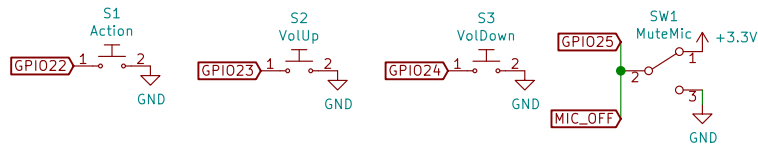
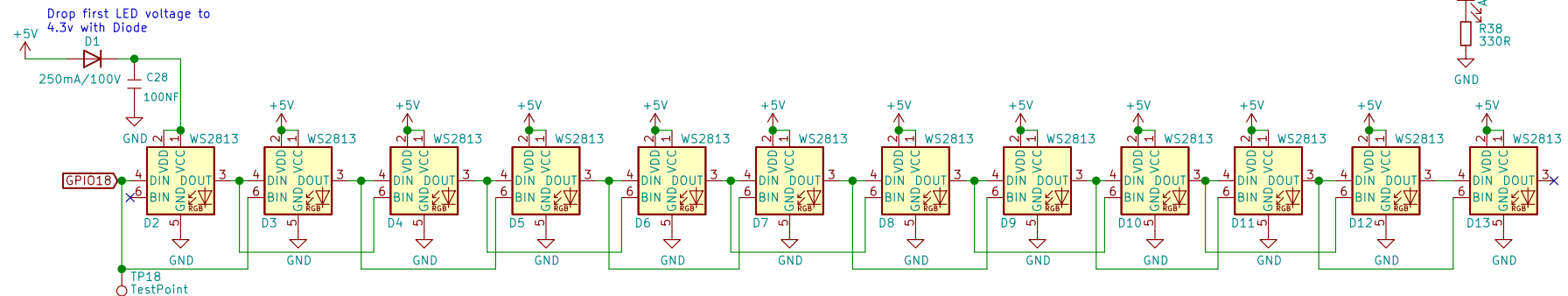
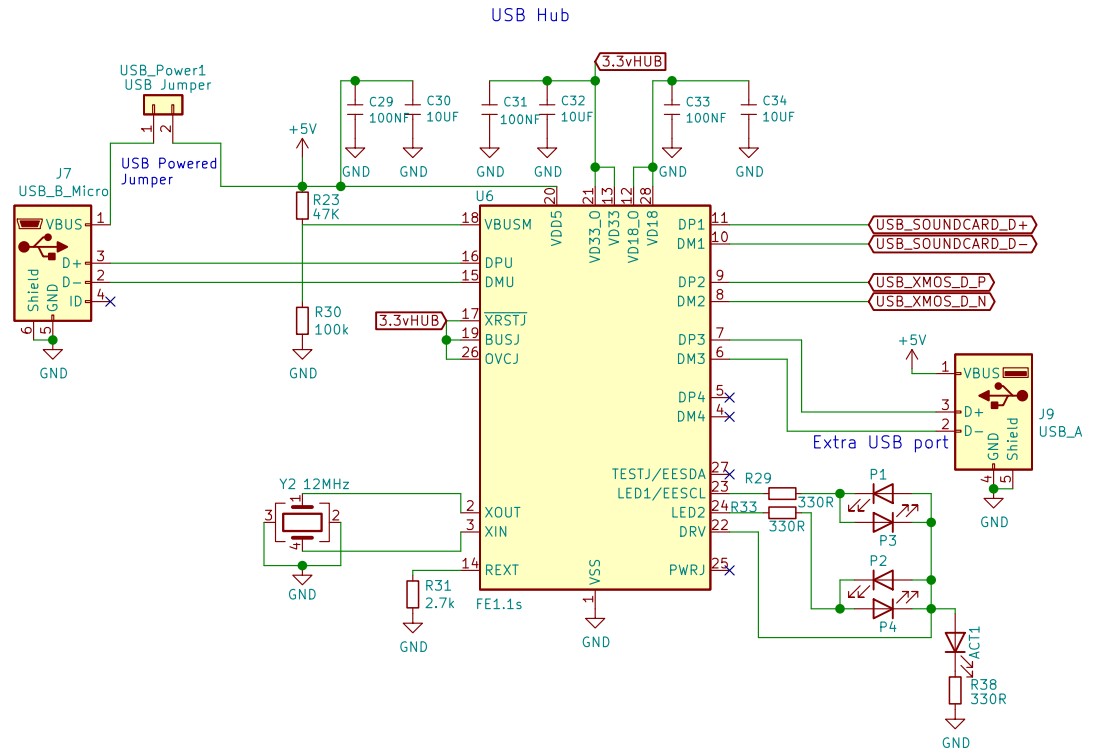
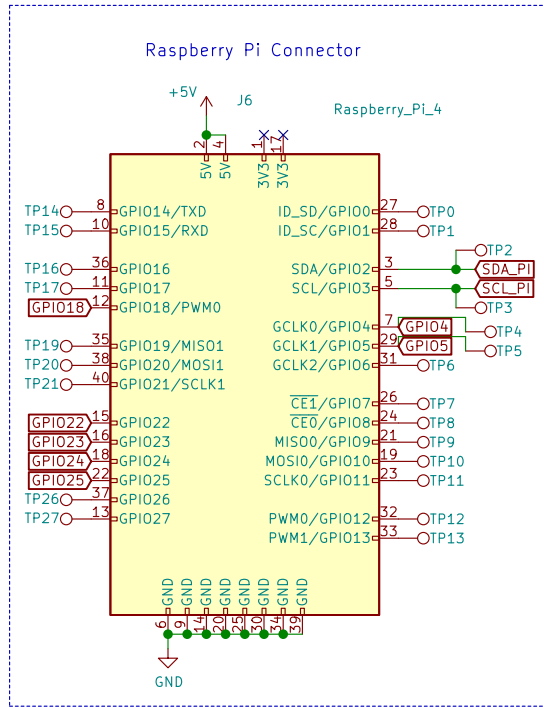
**Rev: 0.60**

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Sheet: /Monitor/ File: monitor.sch		
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Size: A	Date: 2020-07-14	Rev: 0.60
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# Raspberry Pi & USB Hub



MCU Connections

**Mycroft**

Sheet: /RaspberryPi/  
 File: RaspberryPi.sch

**Title: Raspberry Pi**

Size: A Date: 2020-07-14  
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# XMOS Audio Processor

The schematic diagram illustrates the XMOS Audio Processor circuit, centered around the XMOS-XVF3510 (U8) microcontroller. The circuit is powered by a +3.3V regulator (U7, AP3428A) and a +1V0 regulator (U12, NCP303LSN30). The circuit includes a USB connection (U1, SG-210STF 24M), a QSPI FLASH (U9, AT25SF161 16MBIT), a Microphone Array (U10, MP34DT05), and an optional microphone (U11, MP34DT05). The circuit also features a Debug Connector (J10) and a Power on RESET circuit (U12, NCP303LSN30). The XMOS-XVF3510 is connected to a USB Soundcard (U8) via I2S and QSPI interfaces. The circuit is powered by a +3.3V regulator (U7, AP3428A) and a +1V0 regulator (U12, NCP303LSN30). The circuit includes a USB connection (U1, SG-210STF 24M), a QSPI FLASH (U9, AT25SF161 16MBIT), a Microphone Array (U10, MP34DT05), and an optional microphone (U11, MP34DT05). The circuit also features a Debug Connector (J10) and a Power on RESET circuit (U12, NCP303LSN30).

**Power on RESET**

U12: NCP303LSN30

U7: AP3428A

U9: AT25SF161 16MBIT

U10: MP34DT05

U11: MP34DT05

J10: Debug Connector

TP1, TP2, TP3, TP4, TP5: Test Points

Sheet: /xmos/  
File: xmos.sch  
Title:  
Size: A4  
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