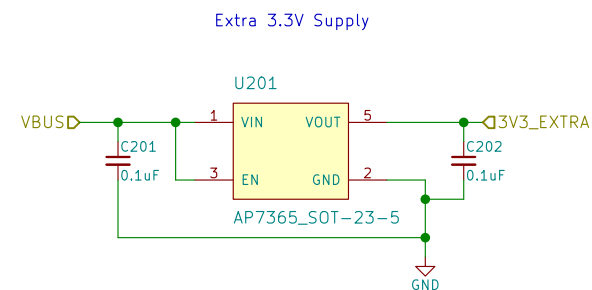
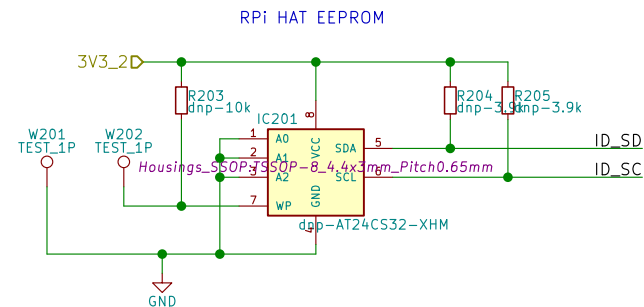
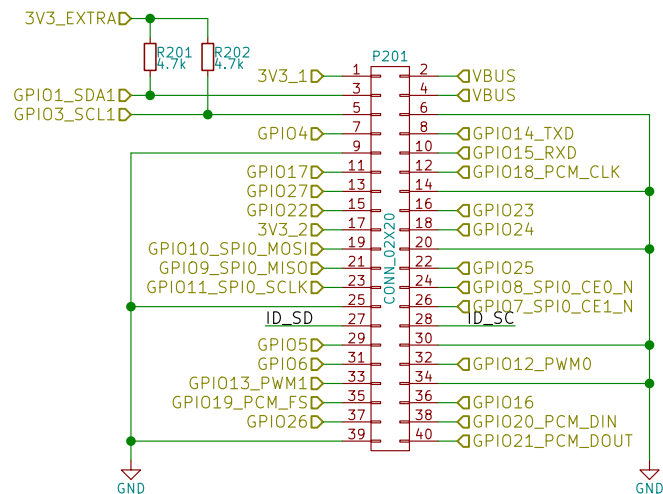


Pi Model B+			
3V3	1	2	3V
GPIO2	3	4	3V
GPIO3	5	6	Ground
GPIO4	7	8	GPIO14
Ground	9	10	GPIO15
GPIO17	11	12	GPIO18
GPIO27	13	14	Ground
GPIO23	15	16	GPIO23
3V3	17	18	GPIO24
GPIO10	19	20	Ground
GPIO5	21	22	GPIO25
GPIO11	23	24	GPIO8
Ground	25	26	GPIO7
ID_SD	27	28	ID_SC
GPIO5	29	30	Ground
GPIO6	31	32	GPIO12
GPIO13	33	34	Ground
GPIO15	35	36	GPIO16
GPIO26	37	38	GPIO20
Ground	39	40	GPIO21



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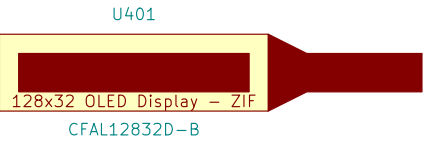
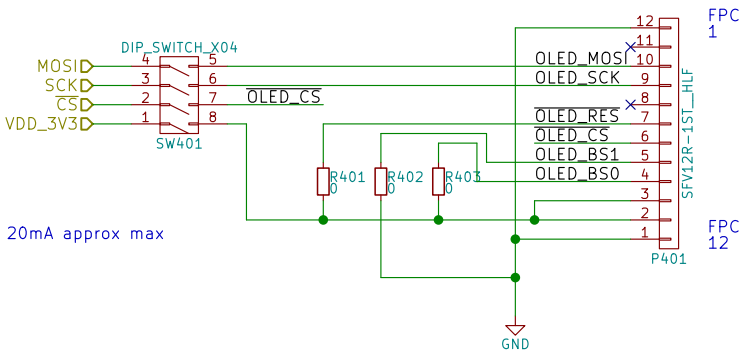
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5V VDD to safely sample RPi VBUS.



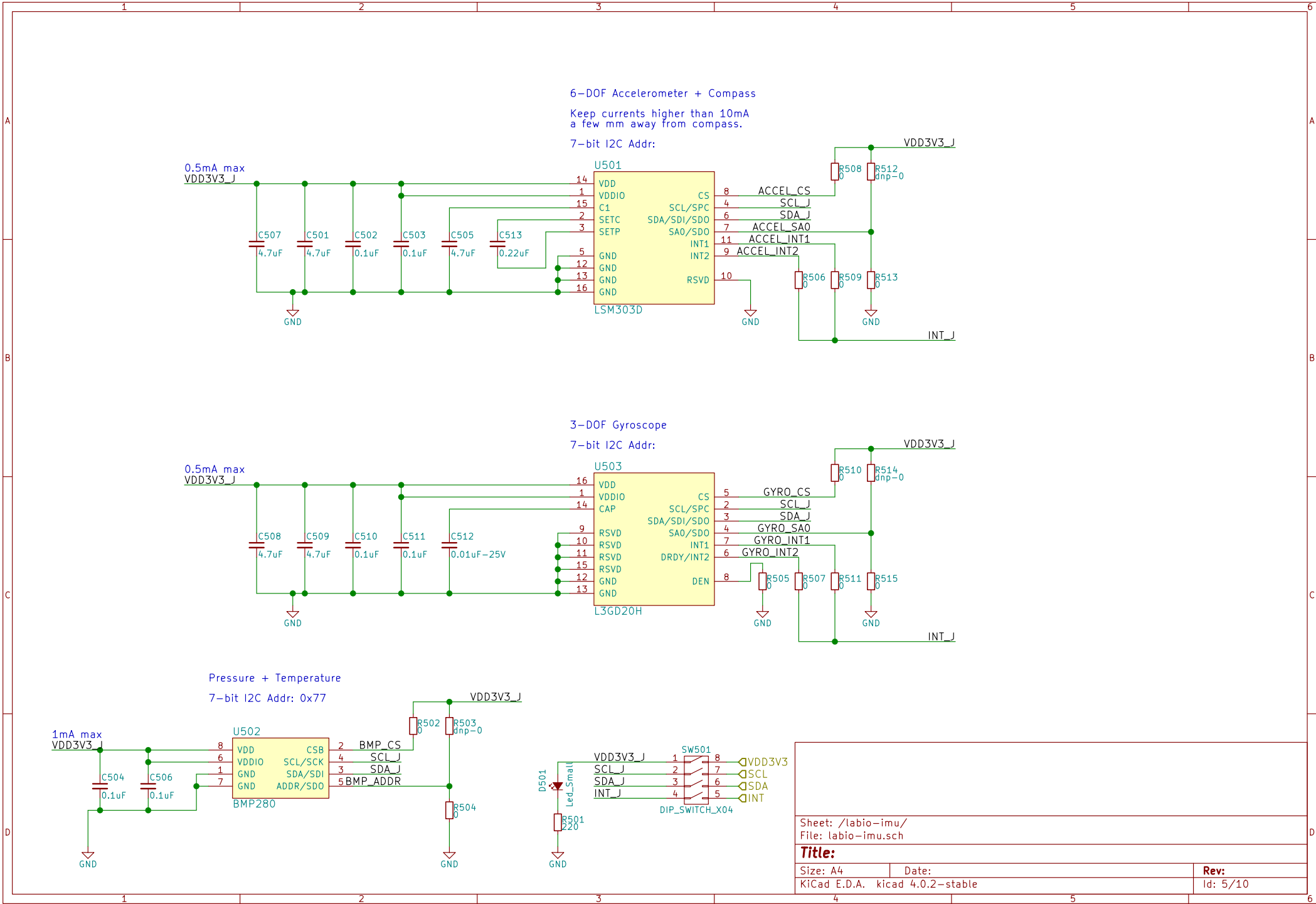
CFAL12832D-B* OLED Display
3-wire SPI mode.

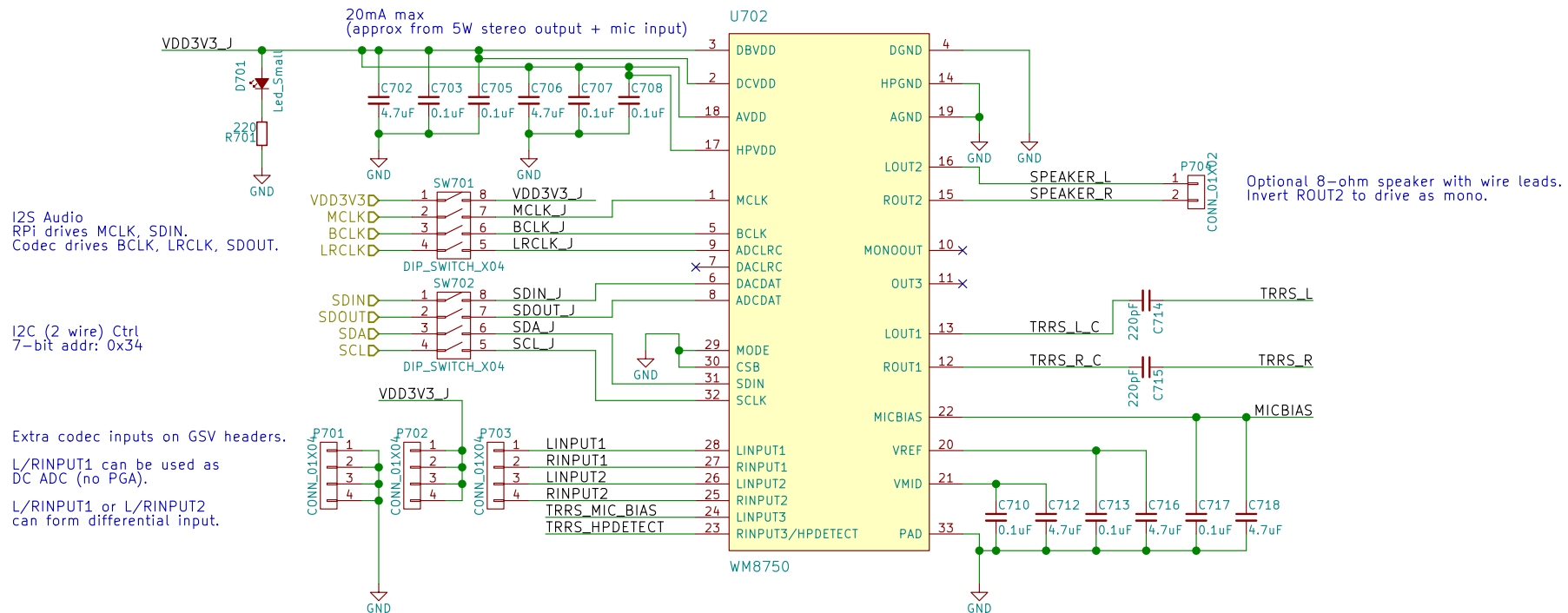
Note: top side ZIF connector has pins reversed from FPC.



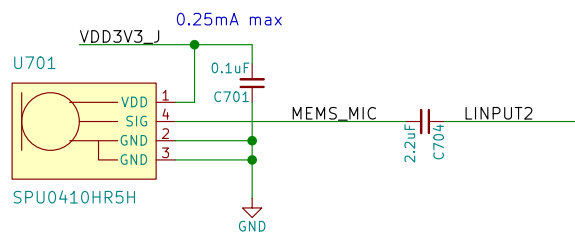
Interface				
Pin No	Sym	3 Wire SPI	4 Wire SPI	I2C
1	GND	GND	GND	GND
2	D2	NC	NC	SDA*
3	D1	SDA	SDA	SDA*
4	D0	CLK	SCLK	SCL
5	D/C#	NC	D/C	Vcc
6	RES#	RESET	RESET	RESET
7	CS#	GND	GND	GND
8	BS1	GND	GND	Vcc
9	BS0	Vcc	GND	GND
10	Vdd	Vcc**	Vcc**	Vcc**
11	Vbat	Vcc**	Vcc**	Vcc**
12	GND	GND	GND	GND

Microcontroller	Control lines defined by layout / code
+3.3v	Supply voltage
Ground	Supply ground
Notes:	
*	Tie D2 and D1 together
**	Okay to Tie Vdd and Vbat together

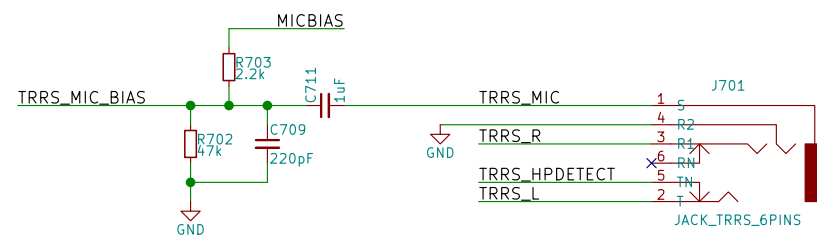




MEMS Microphone



Headset mic bias
Suggested by WM8750BL datasheet (pg. 56).



TRRS headset connector
for typical smartphone headset.

TRRS headset connector
for typical smartphone headset.

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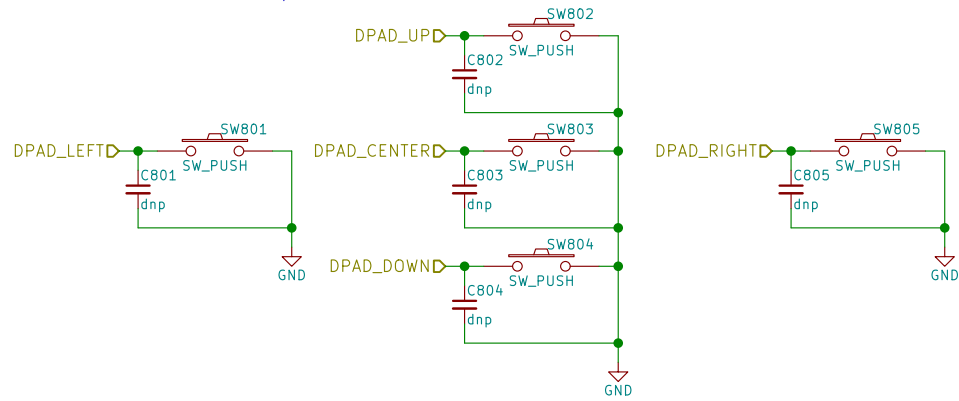
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D-Pad

Use RPi pull-ups.
Optional C for decoupling.
Individual IO lines for interrupts.



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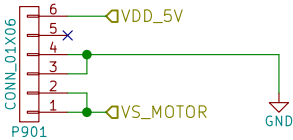
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External Power (Future)

Provides logic and motor power from power supply or battery pack with possible charging from USB (rpi) power.
2x motor power for current rating.



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RPi-like Mounting Holes

M3 for M3/no 4/M2.5 hardware.

H1001



hole

H1003



hole

H1004



hole

H1005



hole

H1007



hole

H1008



hole

H1009



hole

Heatsink Mounting

25x25mm with 30x30mm M3 holes

H1002



hole

H1006



hole

WiSE Lab

**Carnegie
Mellon**

WiSE Lab

**Carnegie
Mellon**

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