2 AA rechargeable NiMH batteries

N0	N0	P0	P0
GND			
N1	N1	P1	P1 V_BATT

For external 5V power
and current measurements

5V -> 1.8-3V. Useful for debugging

JP2

U1
LP38692MP-ADJ/NOPBMP05A-M

J1

VBUS
D-
D+
ID
GND

SHIELD

USB3135-XX-X_REVB

V_USB

V_5V

GND

D2

TPD1E10B06DPYR

GND

C3
1uF

GND

VEN
NC

GND
VIN
VOUT

1
2

5
4
3

Vout = 1.25 * (1+ R1/R2)
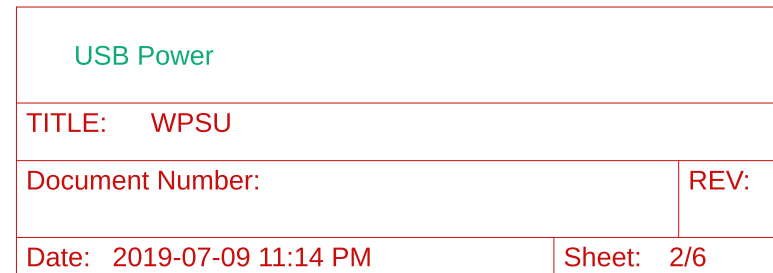R2 < 12k

GND

V_USBREG

R1
3.92k

R4
TC33X-2-103E

C4
1uF

GND

R2
8.9k

GND

USB Power

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JP5

V_USBREG 1
V_IN 2
V_BATT 3

Jumper to select
V_BATT or V_USB
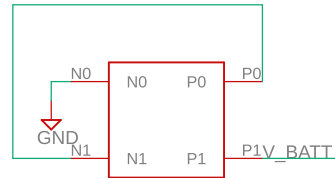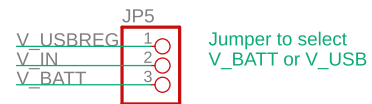
CE Truth Table
CE=1: V_SoC=3.3V
CE=0: V_SoC = V_IN

1.8-3V -> 3.3V

R8
10k

BATT_ADC

IC1
XCL103E333CR-G

V_IN

C2
10uF

GND

BST_EN

R3
100k

GND

GND

1	VBAT	VOUT	6
2	GND_1	L1	7
3	CE	L2	8
4	GND_2	EP	9
5	LX		

GND

V_SOC

D1
3.3V

C1
10uF

GND

GND

pull down EN to conserve
power in sleep
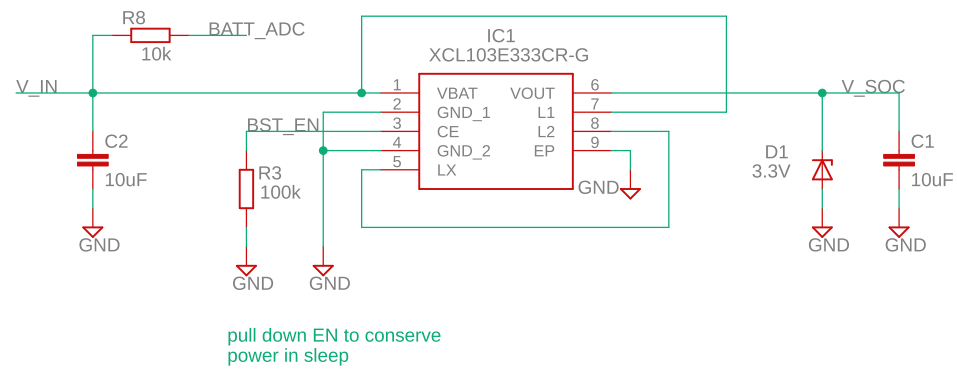
Power Regulation

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JP3

1
2
3   LED_R
4   LED_G
5   LED_B
6   BST_EN
7   MISO
8
9   V_SOC
10   BATT_ADC
11
12   PSU_PWR_EN
13   SCLK
14   SS1
15   SS2
16

GND

GND

JP4

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

Debug connector

Connector to
SoC board
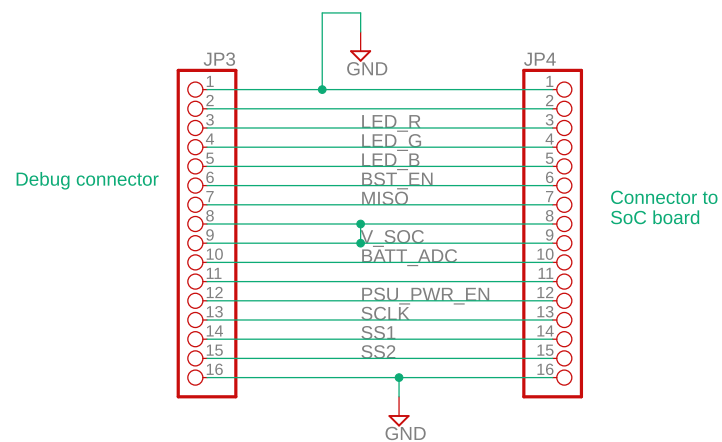
Soc & Debugging Headers

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LED_R
R5
100

1
2
ANODE_RED
COMMON_CATHODE

LED1
WP154A4SUREQBFZGW

ANODE_BLUE
ANODE_GREEN

3
4

R6 100
LED_B
LED_G
R7 100

GND

Load Switch
Disconnect power during sleep

U2

6

4

R9
1M

V_SOC

PSU_PWR_EN   5

SI1869DH-T1-E3

1

2 3

GND

V_PSU

Pressure Sensor Socket

IC3
1   6 SCLK
2   5 MISO
SS1 3   4

GND

IC2
1   6 SCLK
2   5 MISO
SS2 3   4

GND
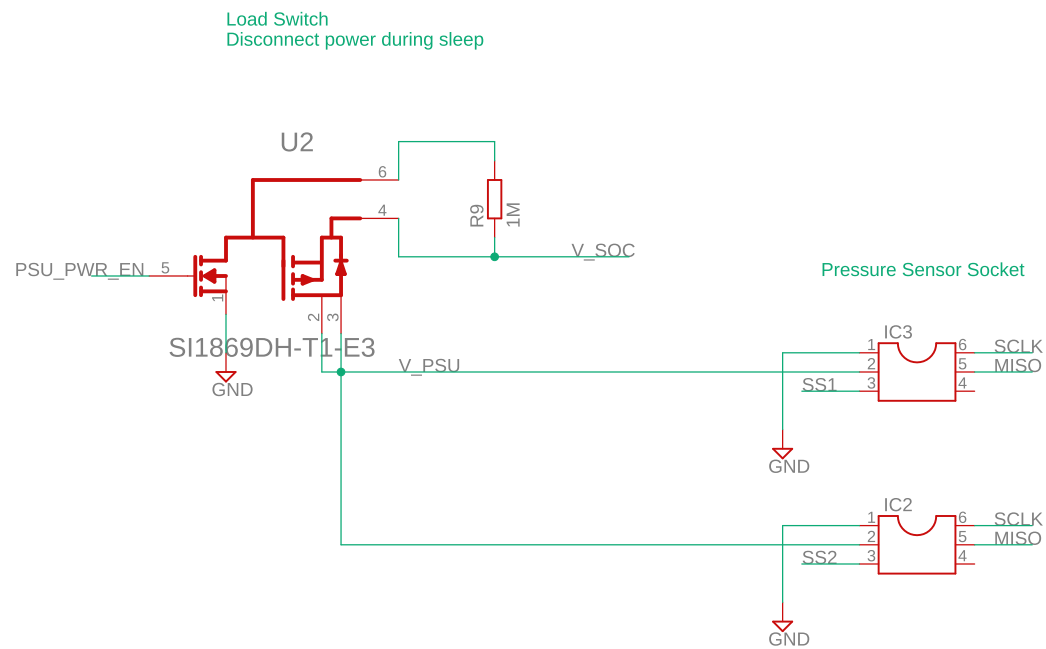
Pressure Sensor

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