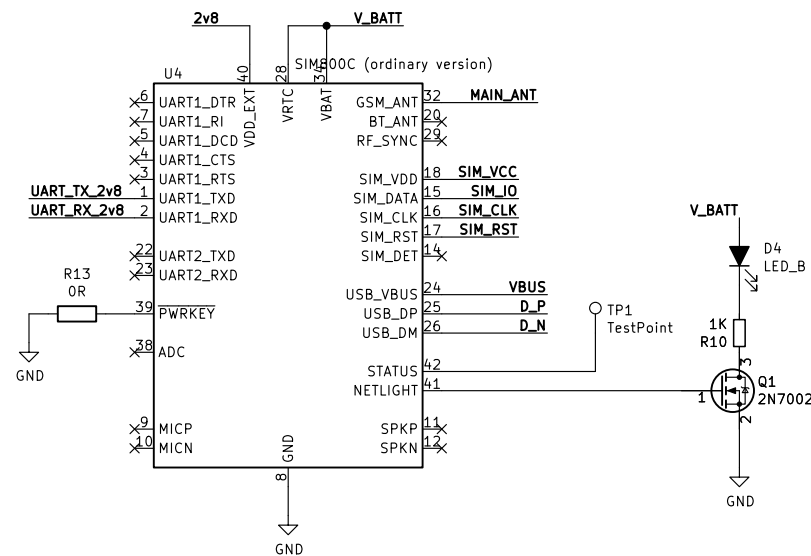
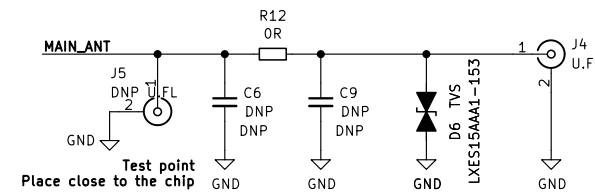


SIM800C



Antennas



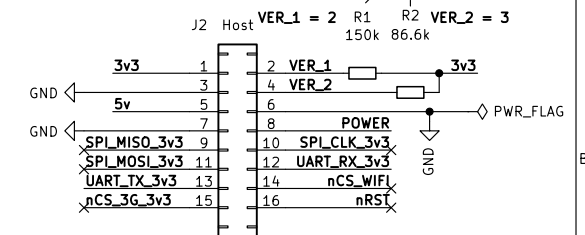
Host connector

Maj version

0	Dev
1	
2	2G
3	
4	4G
5	
6	WiFi
7	
8	
9	

The version resistor forms a voltage divider with a 40.2K resistor on the host board. The host then can read the version as an analog voltage value. Check out the table.

Version	V_in	ADC voltage	R_bottom	R_bottom	Standard
0	3.3	0	40200	#DIV/0!	DNP
1	3.3	0.35	40200	338829	340K
2	3.3	0.7	40200	149314	150K
3	3.3	1.05	40200	86143	86.6K
4	3.3	1.4	40200	54557	54.9K
5	3.3	1.75	40200	35606	35.7K
6	3.3	2.1	40200	22971	22.6K
7	3.3	2.45	40200	13947	14K
8	3.3	2.8	40200	7179	7.15K
9	3.3	3.15	40200	1914	1.91K

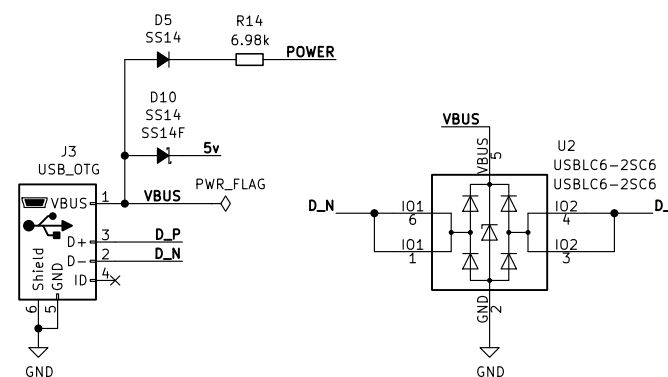


We use a 2x10 female pin socket that fits perfectly in a 2x8 shrouded pin header on the host side. A 2x8 shrouded header is wider than a 2x8 socket, allowing off-by-1 pin insertion.

Keyed female sockets are very uncommon.

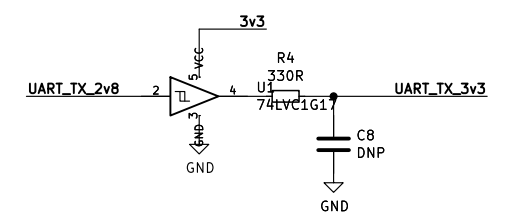
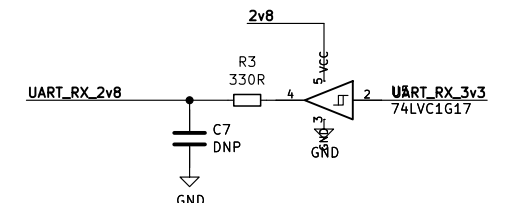
USB

(Optional, for FW update)

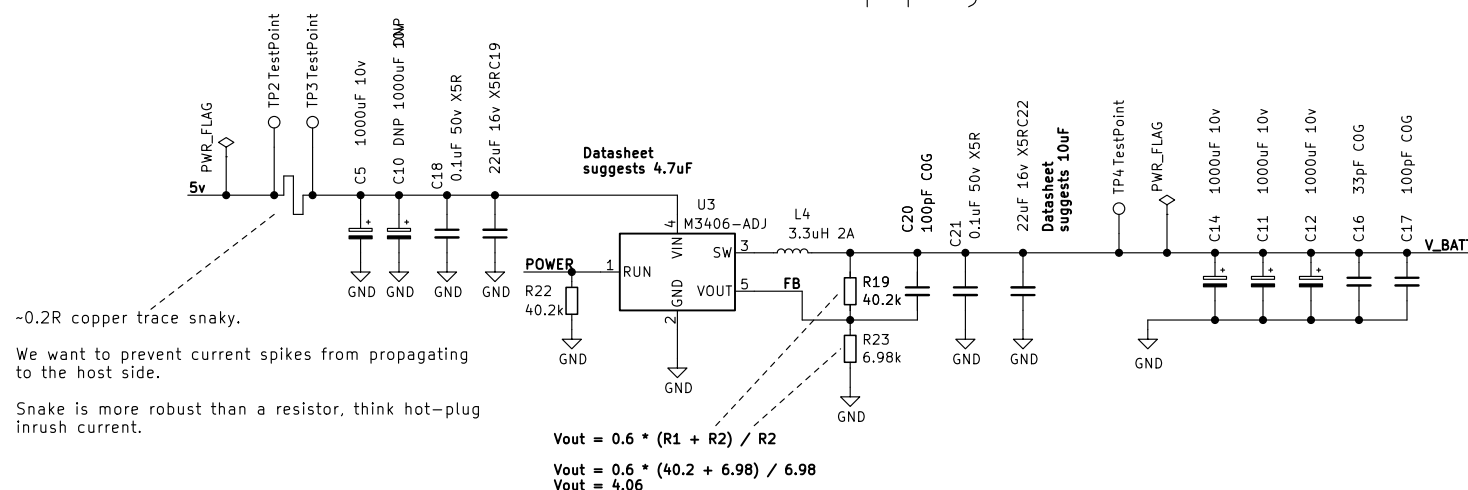


Level shifters

2.8v <-> 3.3v



Power supply



~0.2R copper trace snaky.

We want to prevent current spikes from propagating to the host side.

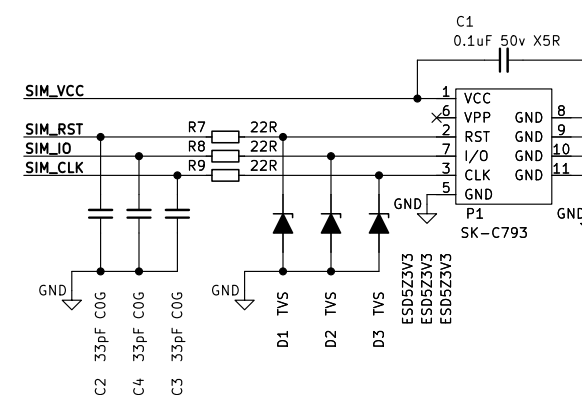
Snake is more robust than a resistor, think hot-plug inrush current.

$$V_{out} = 0.6 * (R1 + R2) / R2$$

$$V_{out} = 0.6 * (40.2 + 6.98) / 6.98$$

$$V_{out} = 4.06$$

USIM Card



Okra logo
P-1000010 Bare PCB

Alexey Zaytsev / Okra Solar

Sheet: /
File: P-1000010_Okra Cicada 2G PCBA.kicad_sch

Title: Cicada 2G

Size: A3 Date: 2020-05-15
KiCad E.D.A. eeschema (6.0.8)

Rev: 2.0
Id: 1/1