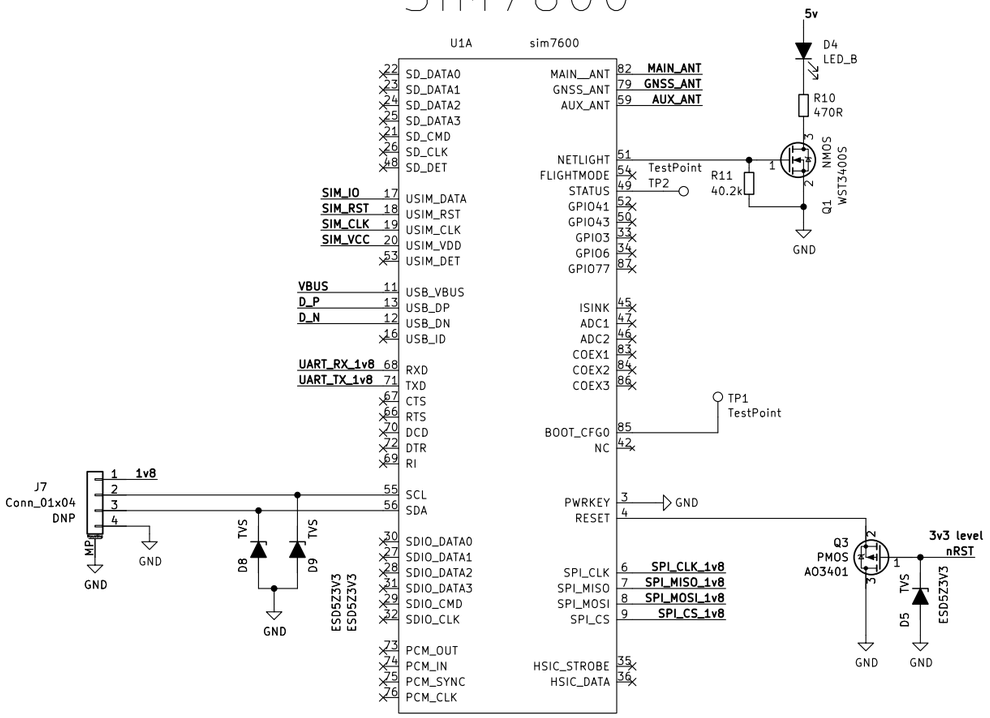
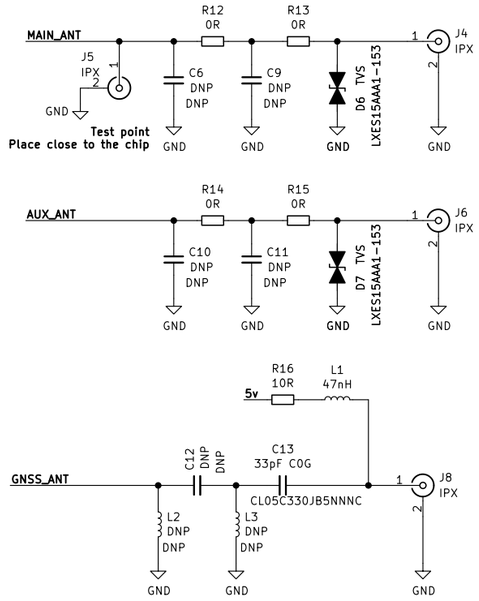
SIM7600



Antennas



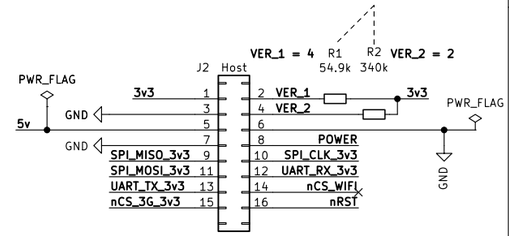
Host connector

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

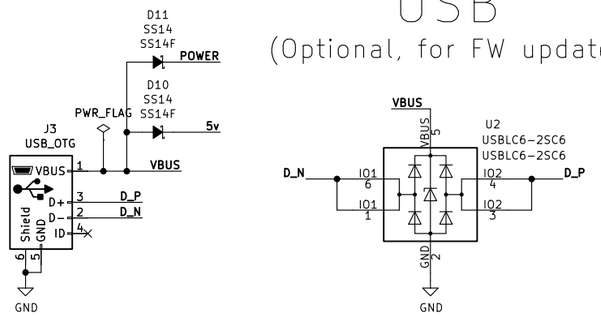


We use a 2x10 female pin socket that fits perfectly in a 2x8 shrouded pin header on the host side. A 2x8 shrouded header is wider than a 2x8 socket, allowing off-by-1 pin insertion.

Keyed female sockets are very uncommon.

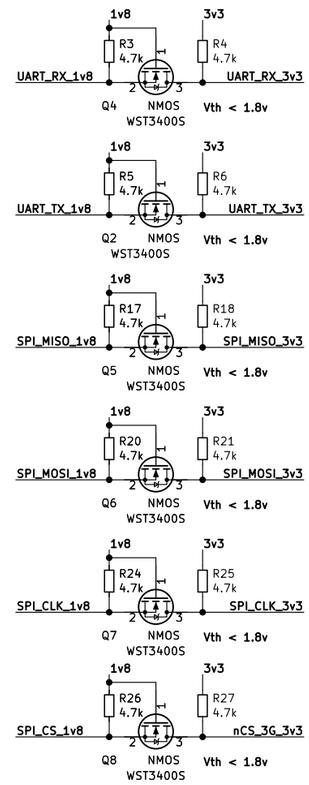
USB

(Optional, for FW update)



Level shifters

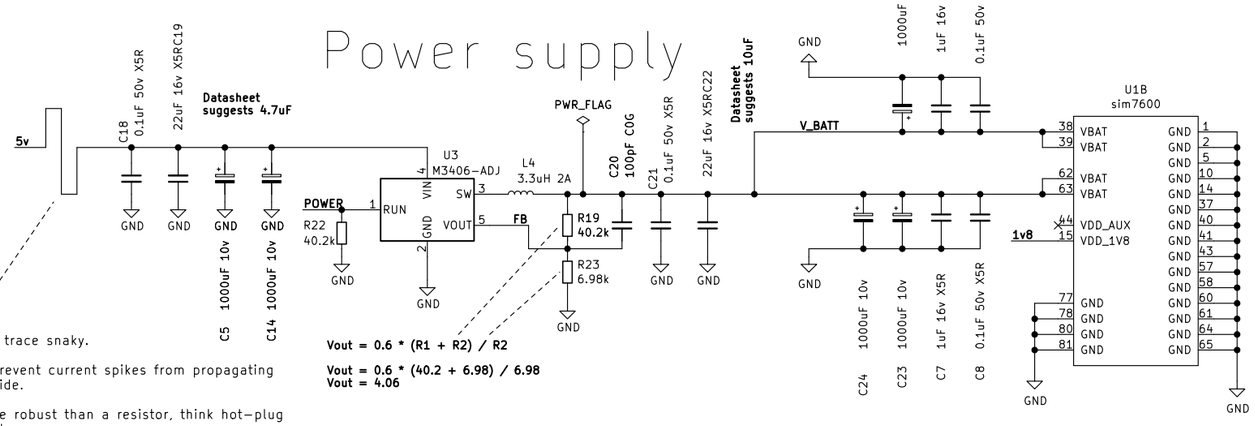
1.8v <-> 3.3v



H1 MountingHole_Pad
H2 MountingHole_Pad
FID1 Fiducial
FID2 Fiducial
FID3 Fiducial
FID4 Fiducial
FID5 Fiducial
FID6 Fiducial

PCB1
P-1000011 Bare PCB

Power supply



~0.2R copper trace snaky.

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

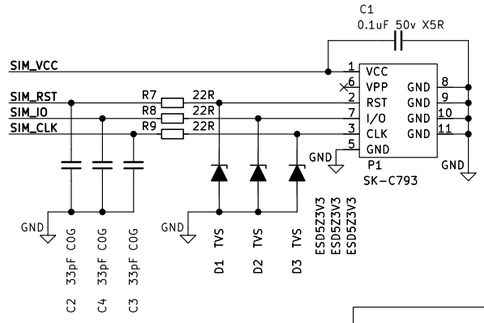
Snake is more robust than a resistor, think hot-plug inrush current.

Vout = 0.6 * (R1 + R2) / R2

Vout = 0.6 * (40.2 + 6.98) / 6.98

Vout = 4.06

USIM Card



Alexey Zaytsev / Okra Solar

Sheet: /
File: P-1000011_Okra Cicada 4G PCBA.kicad_sch

Title: Ciacada 4G

Size: A3	Date: 2020-05-15	**Rev: 2.0**
KiCad E.D.A. kicad (6.0.8)		Id: 1/1