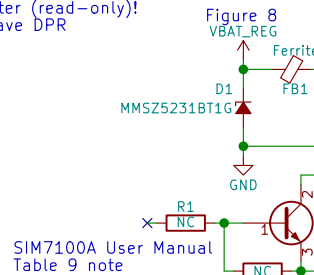


2 AT Interface Synopsis

2.1 Interface settings

Between Customer Application and the Module, standardized RS-232 interface is used for the communication, and default values for the interface settings as following:
115200bps, 8 bit data, no parity, 1 bit stop, no data stream control.

Find AT Command to set TX Power
Not TXPWR Parameter (read-only)!
Module does not have DPR

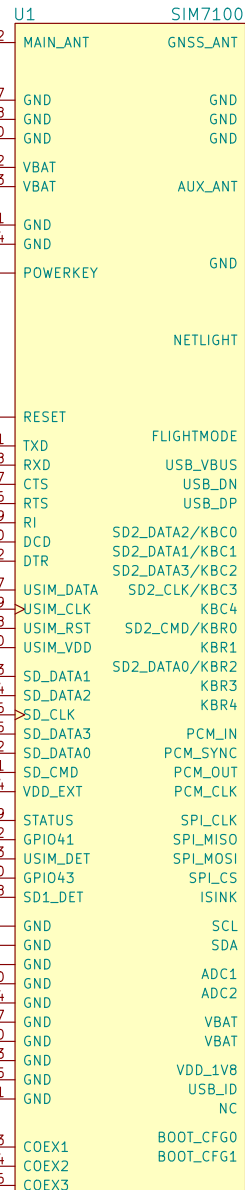
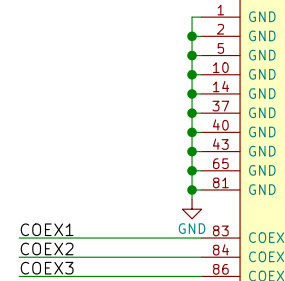


Pull Up RI/WoWWAN on the Host Side to 1.8V

Reset
Figure 14 module
Figure 4 xtrnl ckt

ESD protection near card
100nF on VDD of SIM

Status
SIM_Detect
Implemented by
card holder



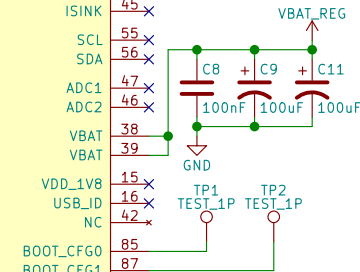
W_DISABLE1
External Circuit
mPCIe Figure 5

Module Table 30 &
mPCIe 3.6 note 2
says this is fine

Traced by 900hm+/-10%
Differential Impedance!
Add same TVS Diode to
USB_D+ on Main Board

Can transmit PCM
data over USB!
CLK xtrnl NC Cap to GND

Suggests NAU8810 CODEC
with SIM7100 connected
to I2C?!



"Alternatively, and primarily for Tablet
platforms, the 3.3 V regulated power rail can
be replaced with a direct VBAT connection."
- M.2 Spec Table 41

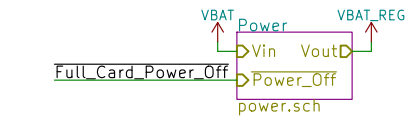
Can be swapped
around in layout

UART_DCD
UART_RTS
UART_DTR
HSIC Strobe
HSIC Data

UIM-PWR
UIM-DATA
UIM-CLK
UIM-RESET
PCM_SYNC
UART_CTS
PCM_OUT
PCM_IN
PCM_CLK

UART_TX
W_DISABLE1
Full_Card_Power_Off

VBAT
PWR_FLAG



Used Table 30
M.2_Key_B

74	75	CONFIG_4	✗
72	73		
70	71		
68	69	CONFIG_1	●
66	67	Reset	✗
64	65	ANTCTL3	✗
62	63	ANTCTL2	✗
60	61	ANTCTL1	✗
58	59	ANTCTL0	✗
56	57		●
54	55		✗
52	53		✗
50	51		●
48	49		✗
46	47	Reset	✗
44	45		●
42	43		✗
40	41		✗
38	39		●
36	37	USB3.0-Rx+	✗
34	35	USB3.0-Rx-	✗
32	33		●
30	31	USB3.0-Tx+	✗
28	29	USB3.0-Tx-	✗
26	27		●
24	25	UART_RX	●
22	23	UART_RI/WOWWAN	●
20	21	CONFIG_0	●

Port Configuration 3 / State 7
(Audio + HSIC, no GNSS)

Not Provided

GNU GPLv3
Copyright 2018
Purism SPC

Sheet: /
File: m2_simcom_7100.sch

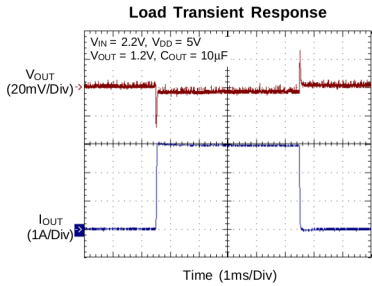
Title: M.2 SIMCom 7100

Size: A4 Date: 2018-03-20
KiCad E.D.A. kicad 4.0.7

Rev: 0.5.0
Id: 1/2

AP7176BFN-7 DFN drop-in
MIC37303 DFN counterpart to recommended LDO

Dropout Voltage	V _{DROP}	I _{OUT} = 2A	--	250	350	mV
		I _{OUT} = 3A	--	350	450	



This tantalum input cap
may not be needed!

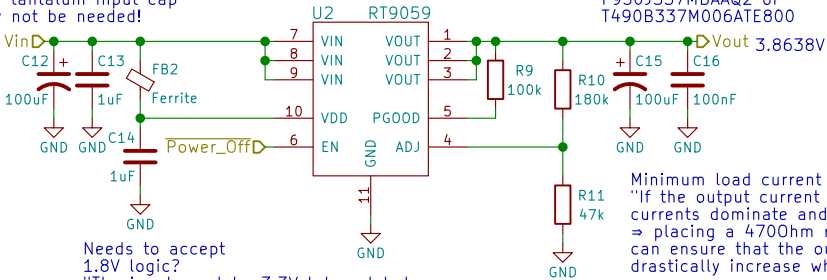


Figure 9 shows a 330µF output cap
could use instead:
F950J337MBAAQ2 or
T490B337M006ATE800

Needs to accept
1.8V logic?
"The input must be 3.3V tolerant but
can be driven by either 1.8V or 3.3V GPIO"
How about BTO/CTO, specify that it
requires 3.3V and user can levelshift
VIH_min=2.4V

Minimum load current = 7mA
"If the output current is too small, leakage
currents dominate and the output voltage rises"
⇒ placing a 4700hm resistor on the output
can ensure that the output voltage doesn't
drastically increase when place in <5mA sleep mode

Sheet: /Power/
File: power.sch

Title:

Size: A4
KiCad E.D.A. kicad 4.0.7

Date:

Rev:
Id: 2/2