

REV	Description	DATE	BY
1c	Initial Production Release. First HW prototyp.	15/06/2015	MG
2a	* P02_WLAN: Footprint for X1 and X2 fixed * P02_WLAN: Levelshifters are now activated by GPIO1_25 * P05_GSM: Crossed 'UART1_TXD' with 'UART1_RXD' * P05_GSM: Crossed 'I2C2_SDA' (cts) with 'I2C2_SCL' (rts) * P05_GSM: R156 set to "install" and R157 to "DNI" -> GSM levelshifter is set activ by VDD_3V3B * PCB: Cutout for RJ45 connector enlarged	30/07/2015	MG

PAGE NO.	SCHEMATIC PAGE
1	COVER PAGE
2	WIFI 1 OF 2: POWER AND SIGNAL LEVEL SHIFTING
3	WIFI 2 OF 2: WIFI MODULE
4	GSM 1 OF2: POWER
5	GSM 2 OF 2: SIGNAL LEVEL SHIFTING AND SIM CARD
6	BLE
7	EXP CONN AND LCD CONN

Title

P01_Title Page.SchDoc

Size

Document Number

Rev

2a

Date:

30.07.2015

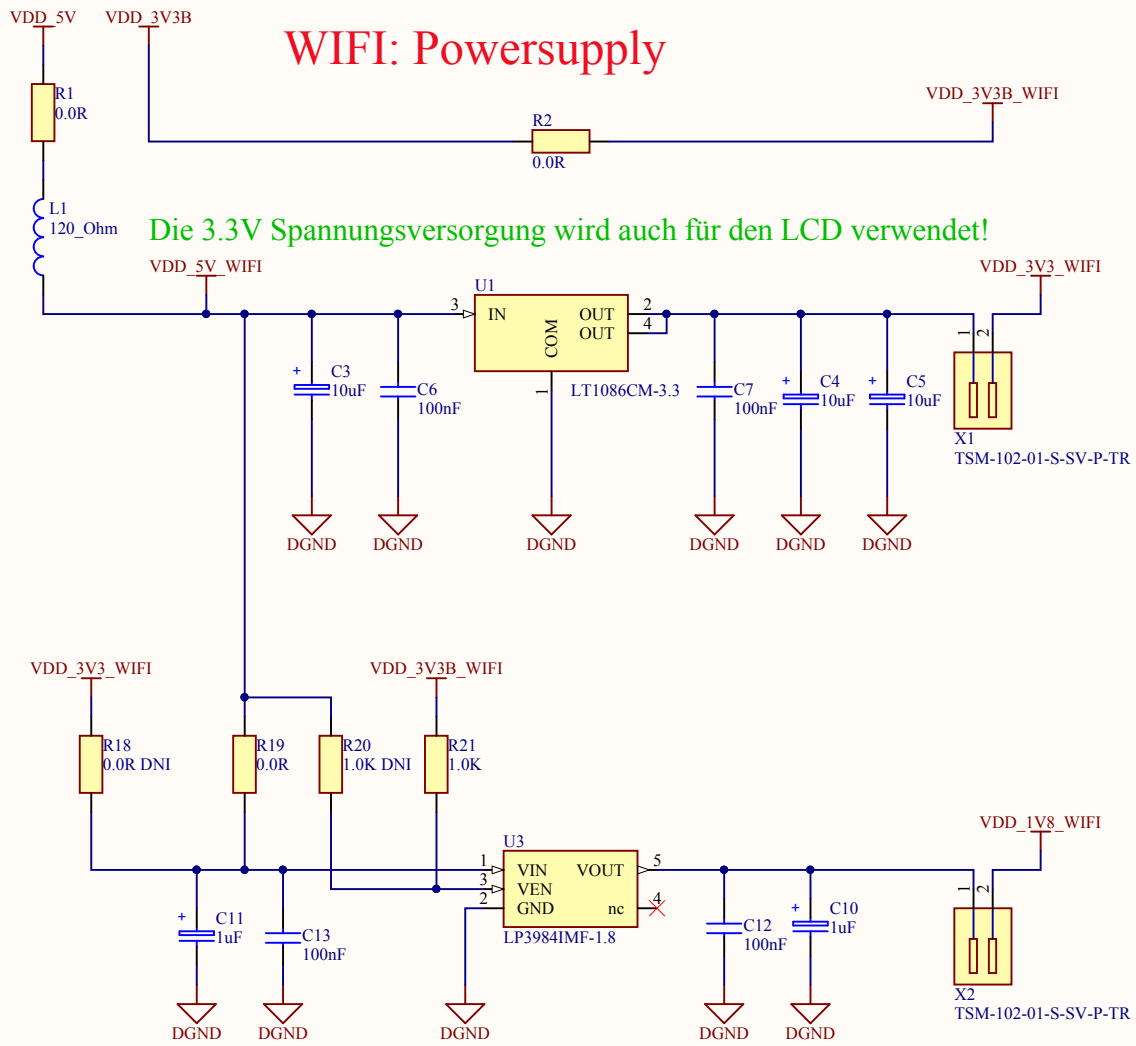
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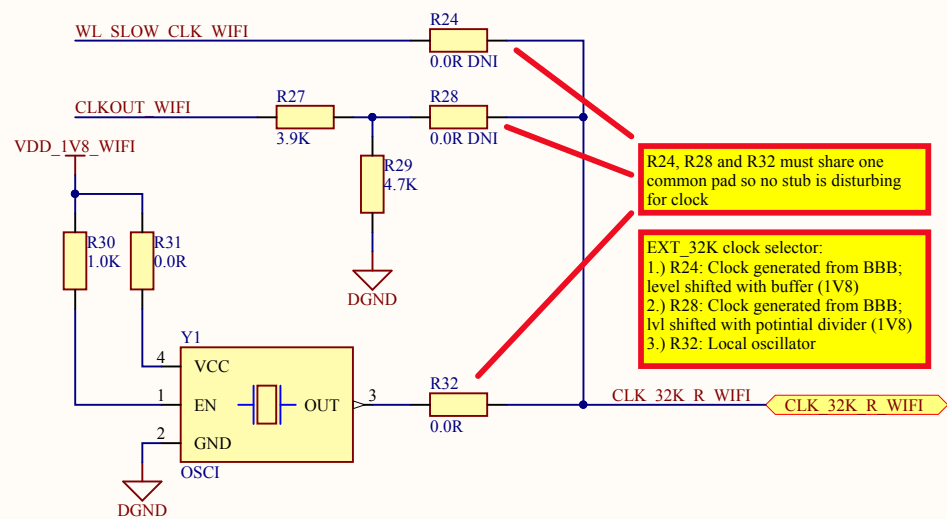
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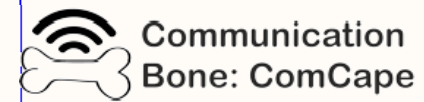
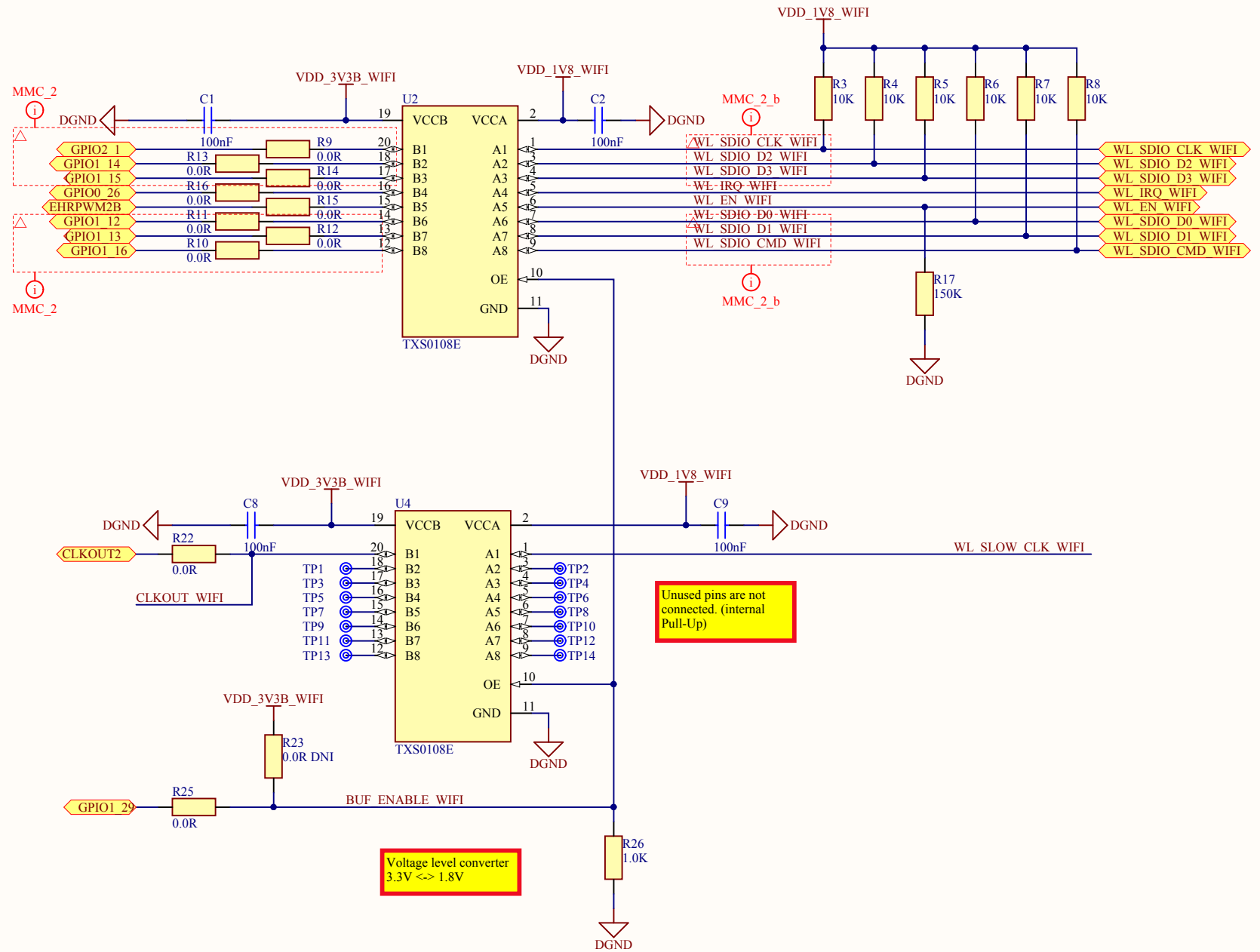
WIFI: Powersupply



WIFI: Slow Clock 32kHz



WIFI: Voltage level shifting



Title	P02_WiFi 1 of 2.SchDoc
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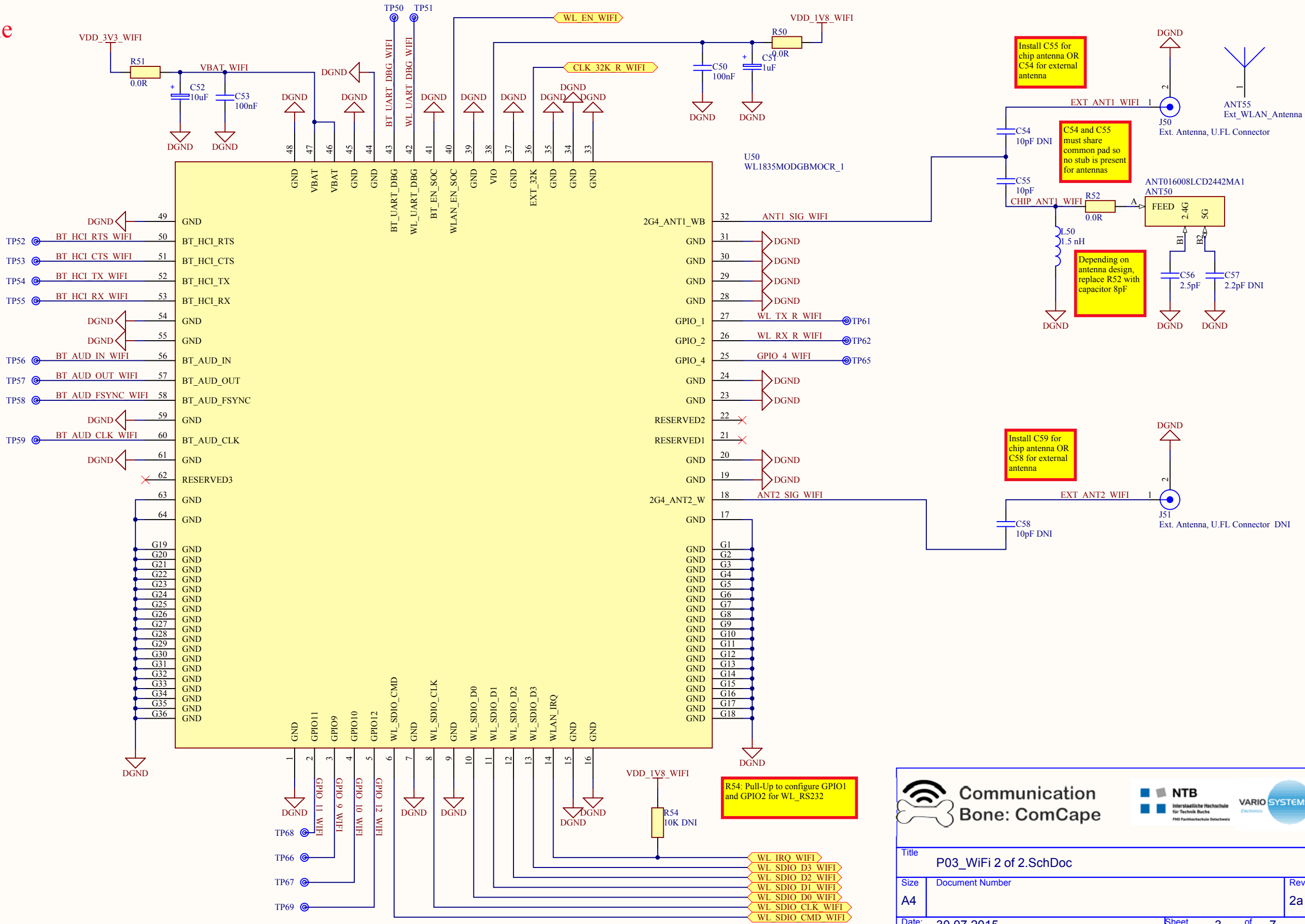
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WIFI: Module



GSM: 1.5 Ampere power supply

1.5A linear power supply. The same supply is used for WIFI. This power supply may not provide enough power for the GSM module. There is a 3.6V version of the LT1086, which may be better suited than the 3.3V supply.

GSM: Powersource selector

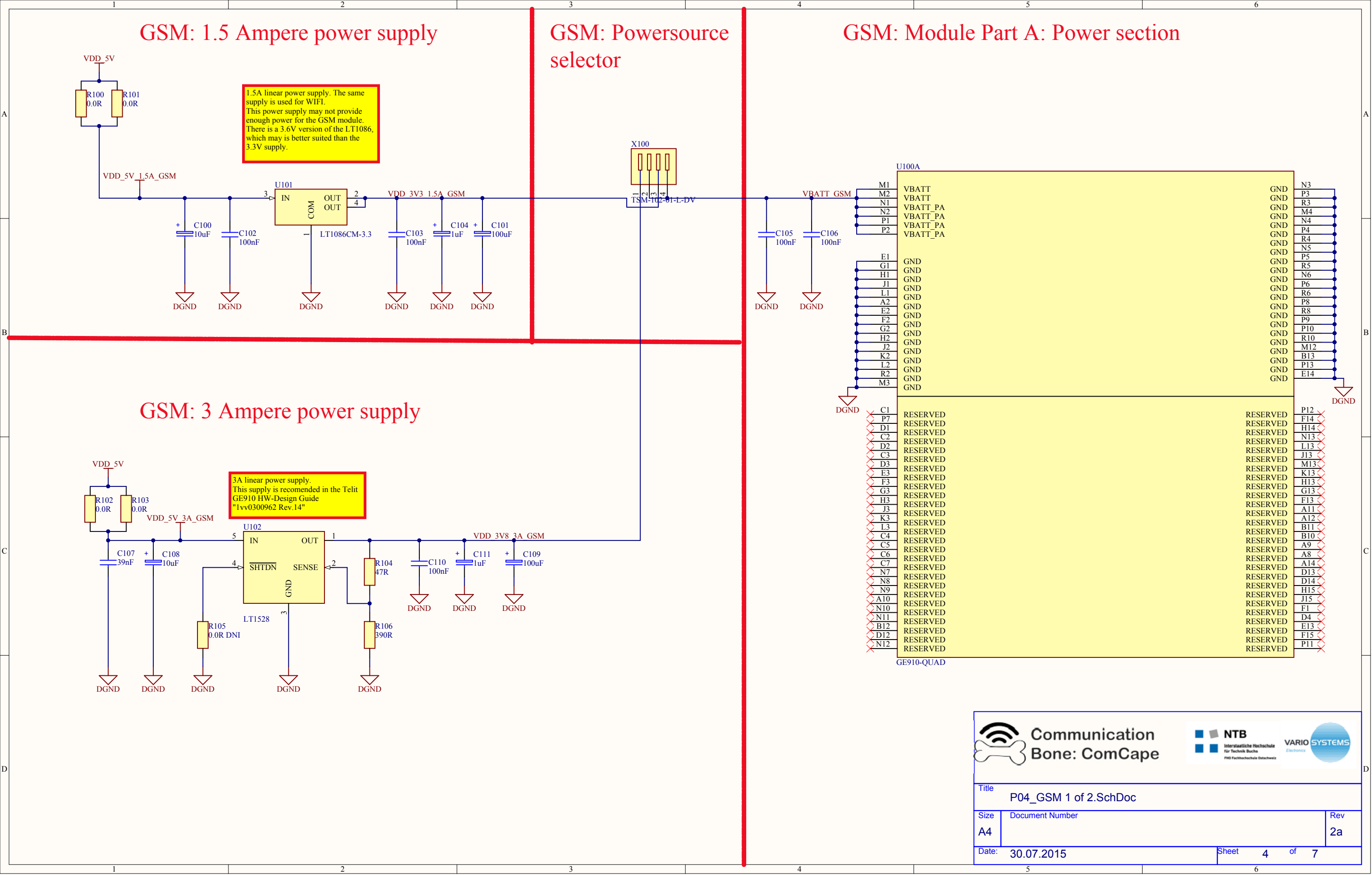
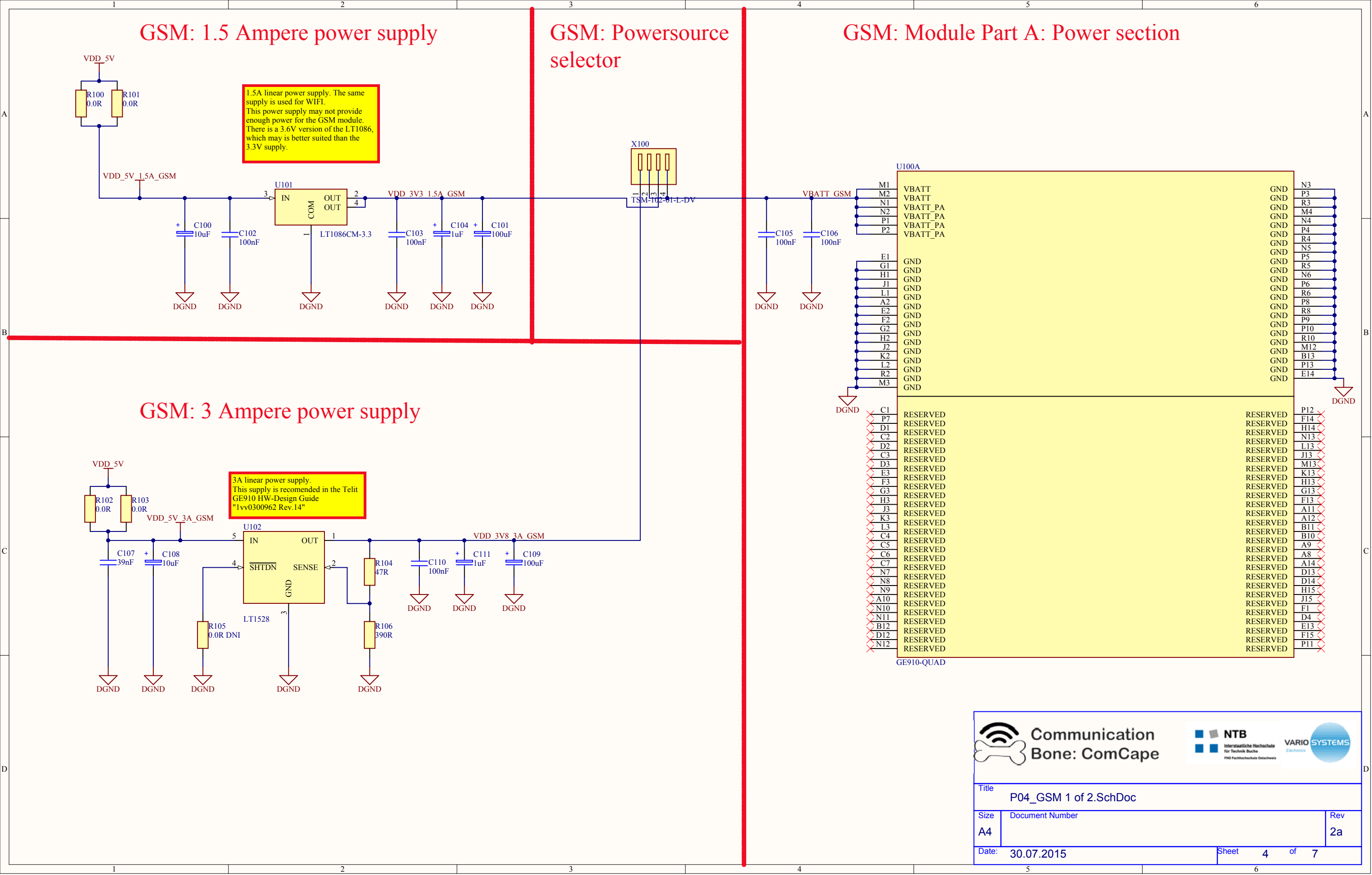
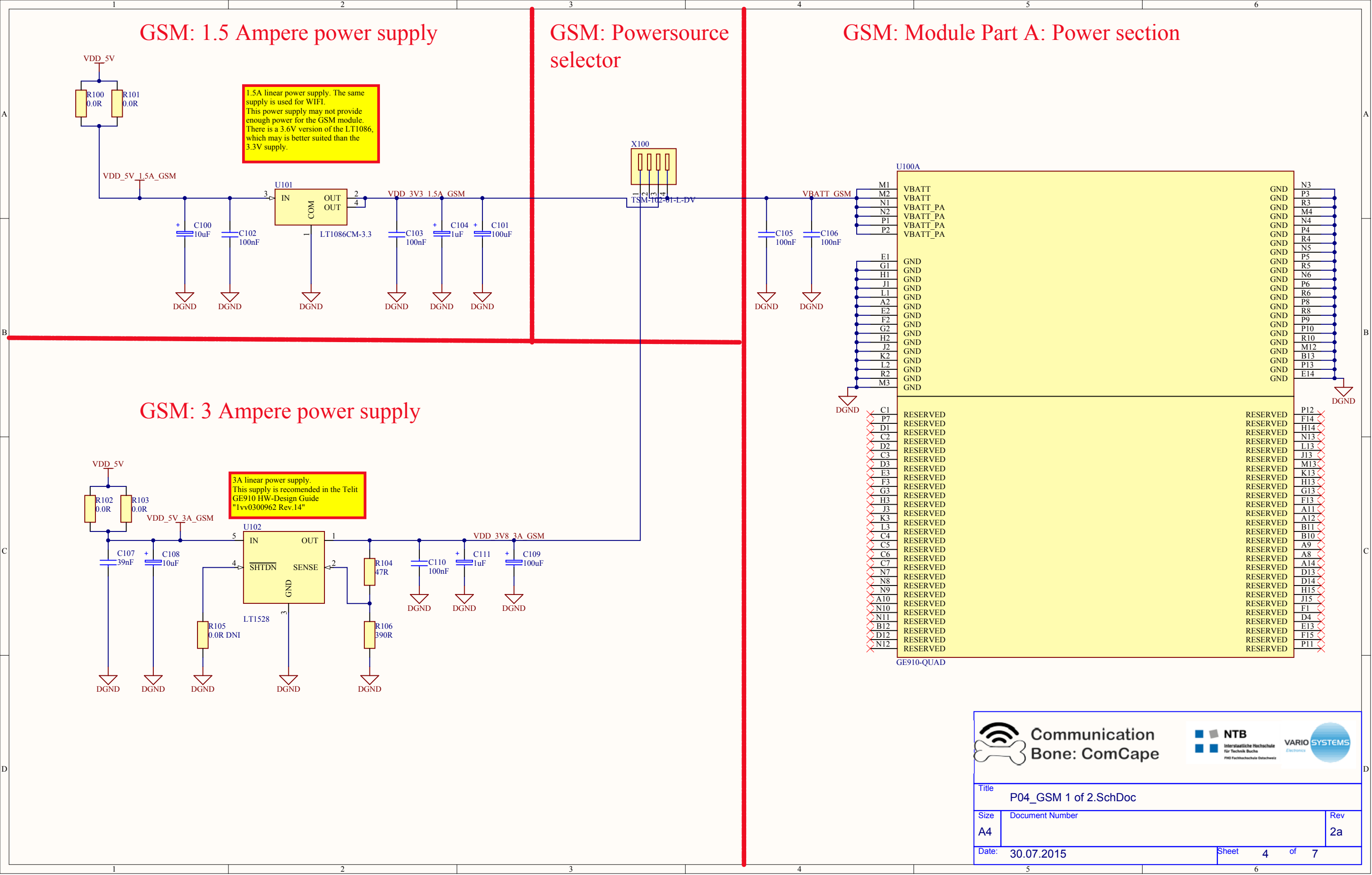
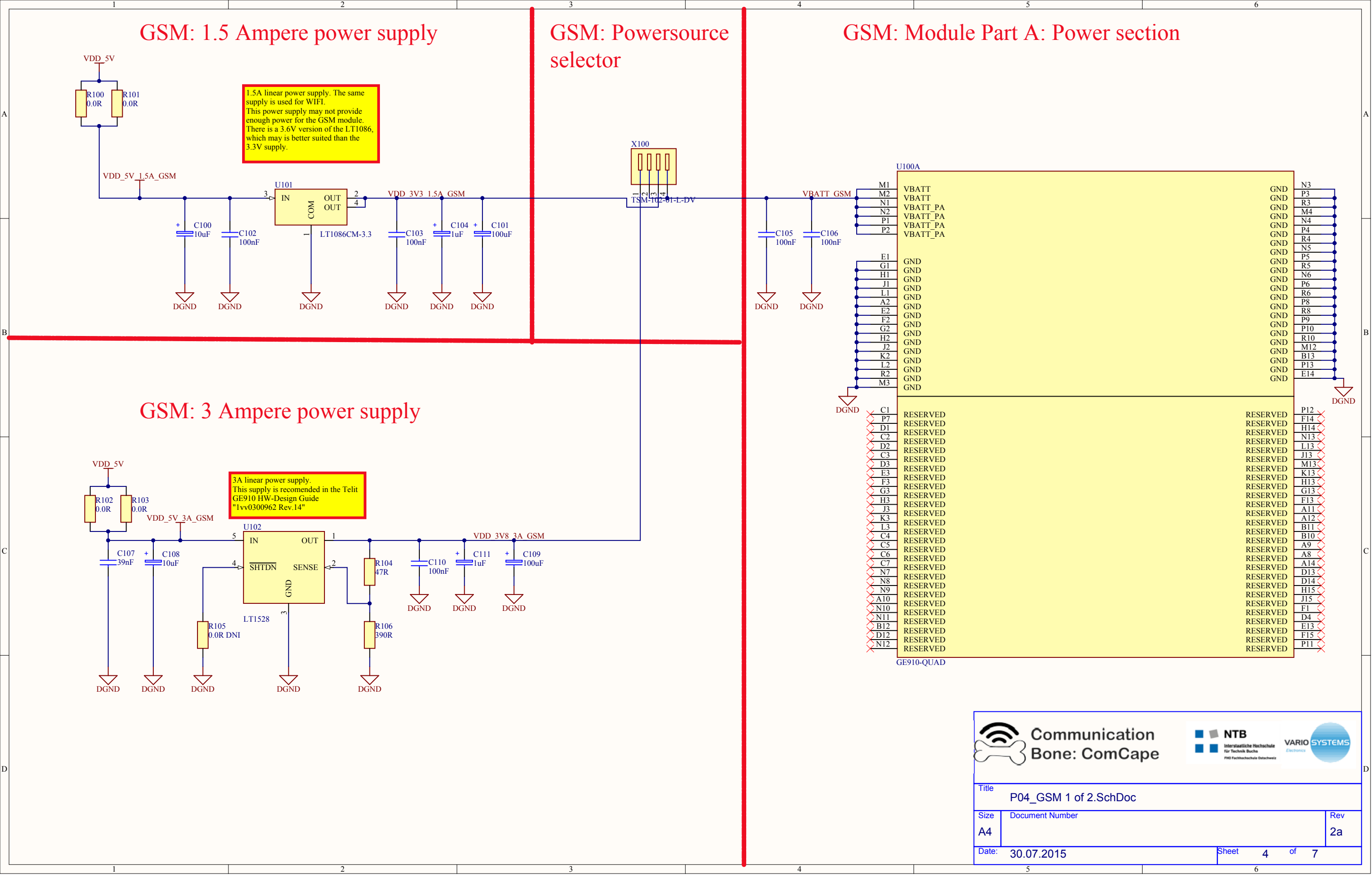
GSM: Module Part A: Power section

GSM: 3 Ampere power supply

3A linear power supply. This supply is recommended in the Telit GE910 HW-Design Guide "Ivv0300962 Rev.14"

Pin List for U100A (GE910-QUAD):

Pin	Signal	Pin	Signal
M1	VBATT	N3	GND
M2	VBATT	P3	GND
N1	VBATT_PA	R3	GND
N2	VBATT_PA	M4	GND
P1	VBATT_PA	N4	GND
P2	VBATT_PA	P4	GND
E1	GND	R4	GND
G1	GND	N5	GND
H1	GND	P5	GND
J1	GND	R5	GND
L1	GND	N6	GND
A2	GND	P6	GND
E2	GND	R6	GND
F2	GND	N8	GND
G2	GND	P8	GND
H2	GND	R8	GND
J2	GND	P9	GND
K2	GND	N10	GND
L2	GND	P10	GND
R2	GND	R10	GND
M3	GND	N12	GND
		P12	GND
		R12	GND
		N13	GND
		P13	GND
		R13	GND
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		P28	GND
		R28	GND
		N29	GND
		P29	GND
		R29	GND
		N30	GND
		P30	GND
		R30	GND

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GSM: Module Part A: Power section

GSM: 3 Ampere power supply

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Communication Bone: ComCape

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VARIO SYSTEMS Electronics

Title: P04_GSM 1 of 2.SchDoc

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GSM: 1.5 Ampere power supply

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Communication Bone: ComCape

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GSM: 1.5 Ampere power supply

VDD_5V

R100 0.0R R101 0.0R

VDD_5V_1.5A_GSM

C100 10uF C102 100nF

U101 IN COM OUT OUT LT1086CM-3.3

VDD 3V3 1.5A GSM

C103 100nF C104 1uF C101 100uF

DGND DGND DGND DGND DGND DGND

X100 TSM-102-01-L-DV

GSM: Powersource selector

VBATT GSM

C105 100nF C106 100nF

DGND DGND

GSM: 3 Ampere power supply

VDD_5V

R102 0.0R R103 0.0R

VDD_5V_3A_GSM

C107 39nF C108 10uF

U102 IN SHTDN SENSE OUT LT1528

VDD 3V8 3A GSM

C110 100nF C111 1uF C109 100uF

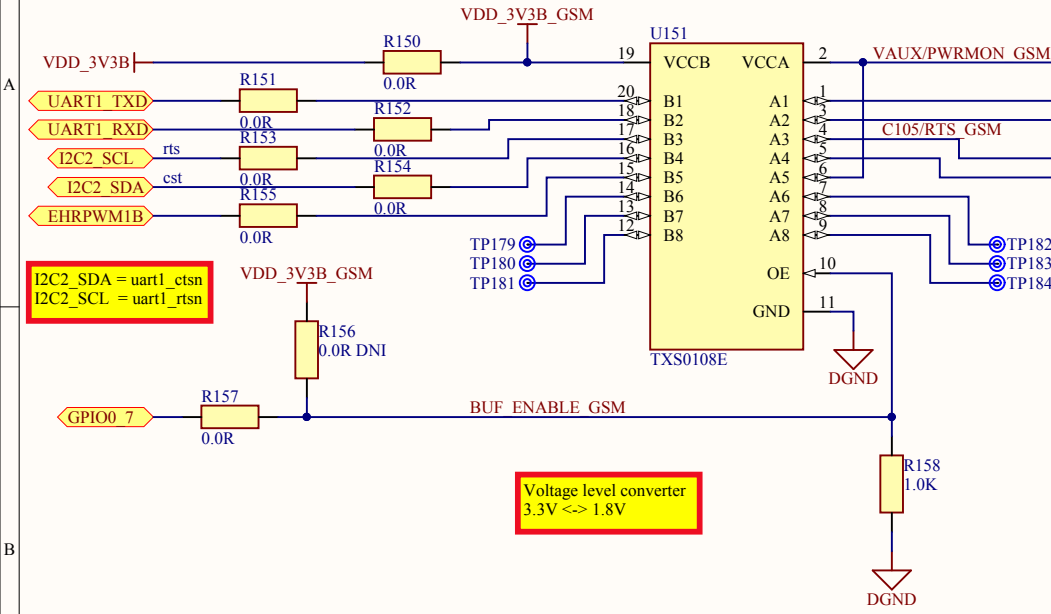
R104 47R R105 0.0R DNI R106 390R

DGND DGND DGND DGND DGND DGND

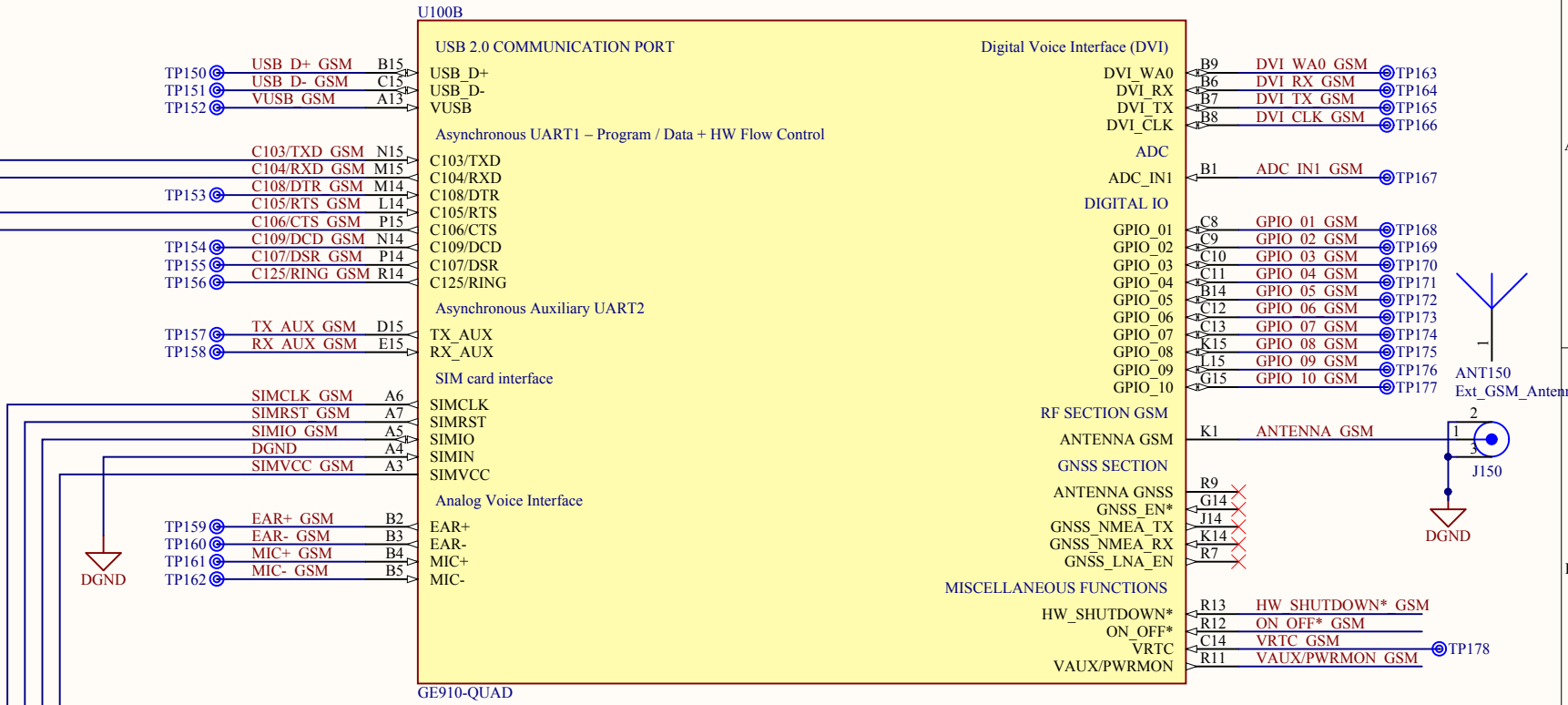
GSM: Module Part A: Power section

M1	VBATT	N3	GND
M2	VBATT	P3	GND
N1	VBATT_PA	R3	GND
N2	VBATT_PA	M4	GND
P1	VBATT_PA	N4	GND
P2	VBATT_PA	P4	GND
E1	GND	R4	GND
G1	GND	N5	GND
H1	GND	P5	GND
J1	GND	R5	GND
L1	GND	N6	GND
A2	GND	P6	GND
E2	GND	R6	GND
F2	GND	N8	GND
G2	GND	P8	GND
H2	GND	R8	GND
J2	GND	P9	GND
K2	GND	N10	GND
L2	GND	P10	GND
R2	GND	R10	GND
M3	GND	N12	GND
		P12	GND
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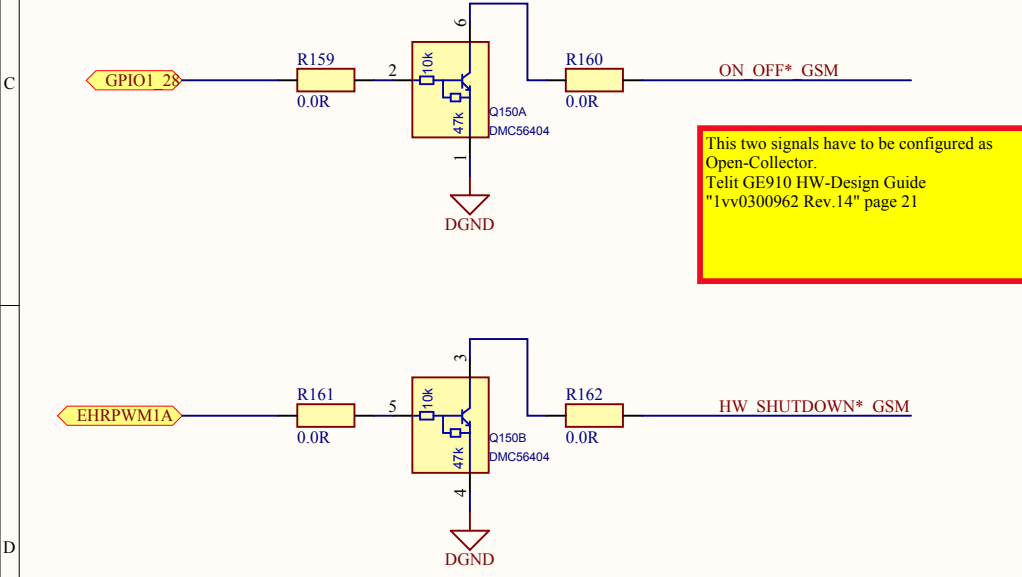
GSM: Voltage level shifting



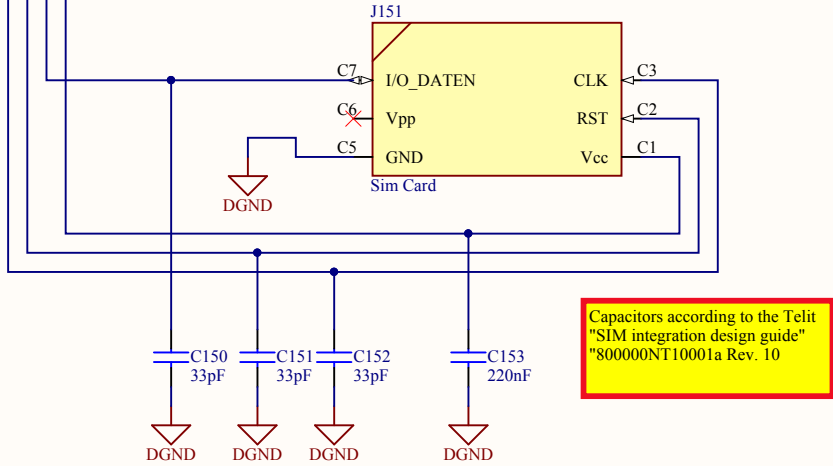
GSM: Module Part B: Signal section



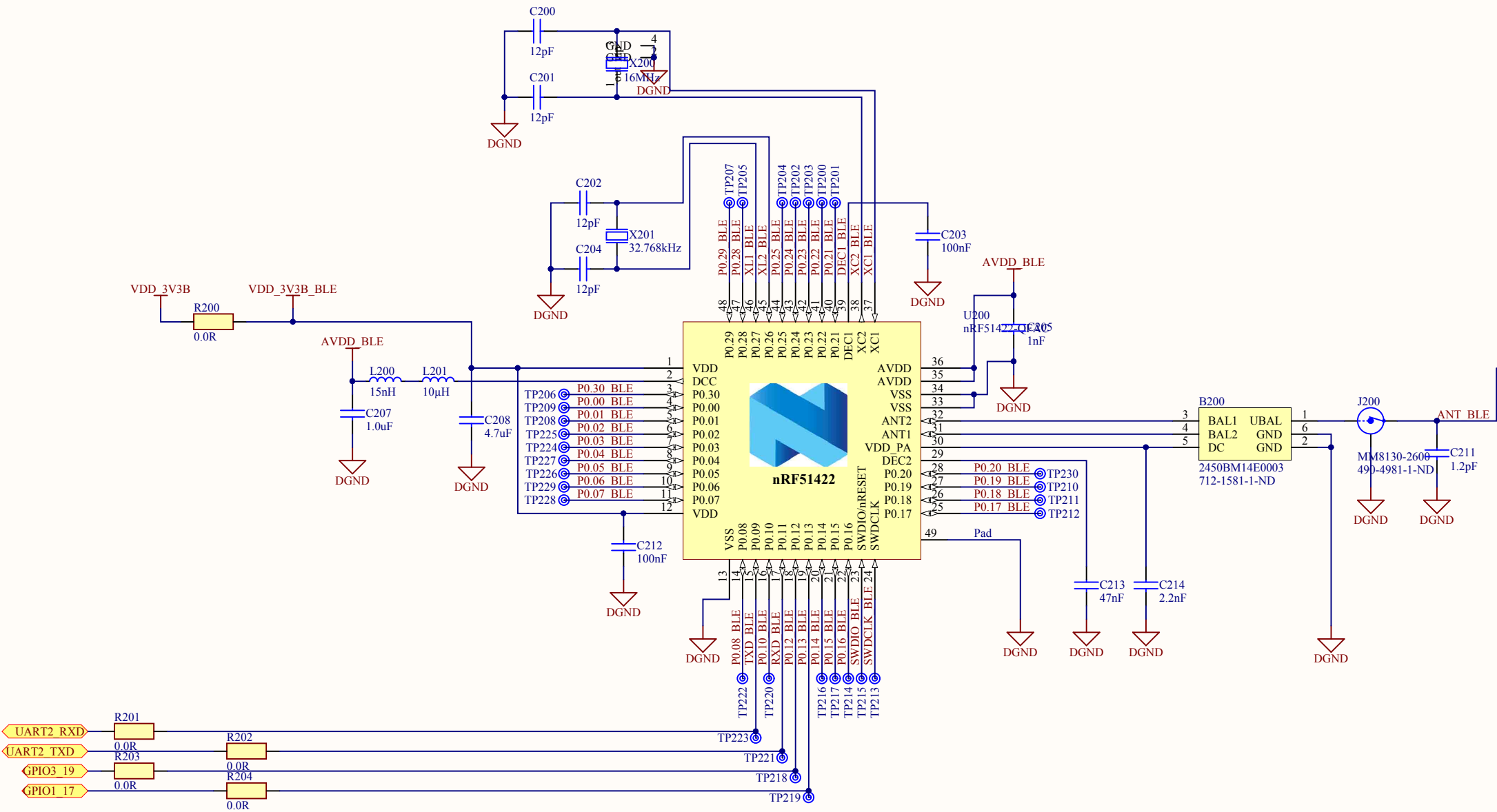
GSM: Push-Pull to Open-Collector



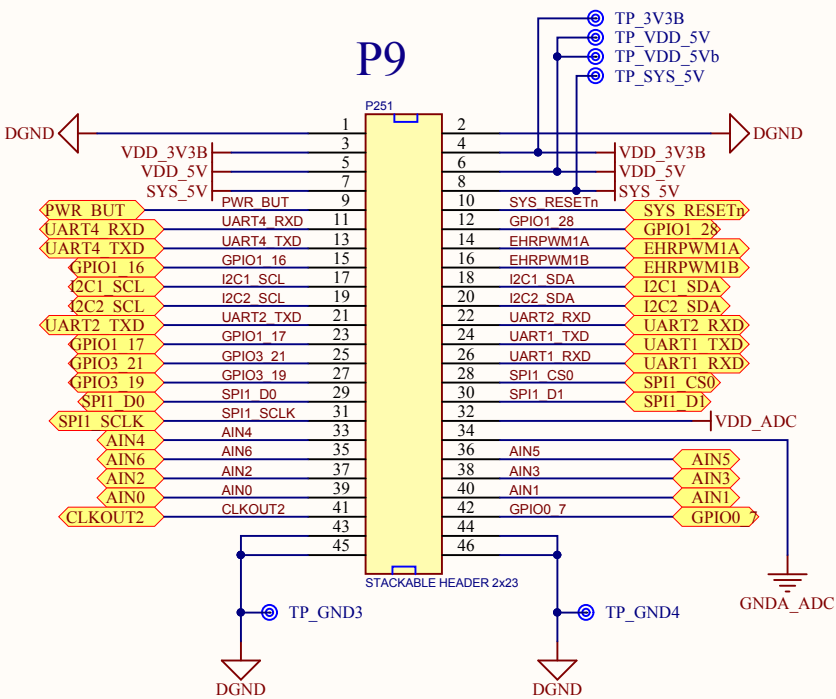
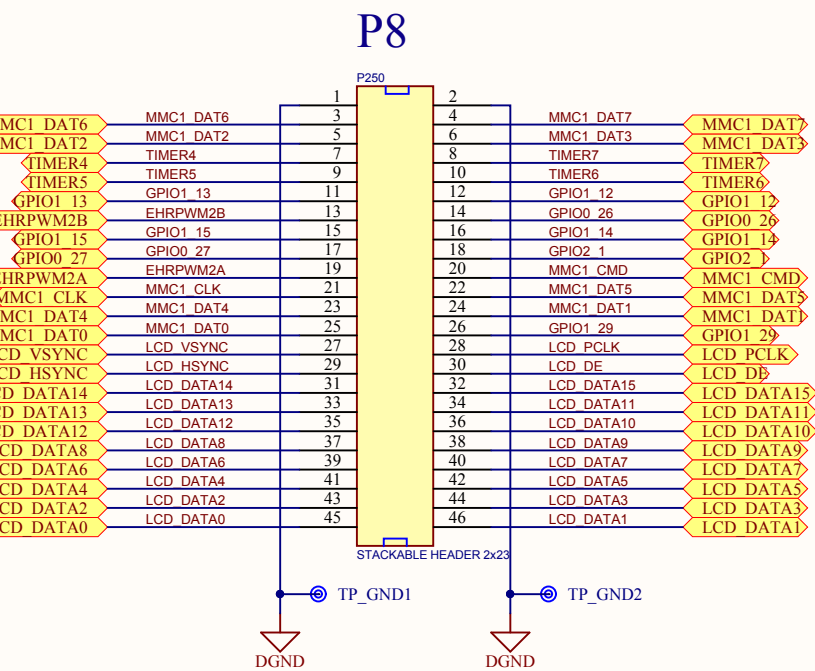
GSM: SIM card connector



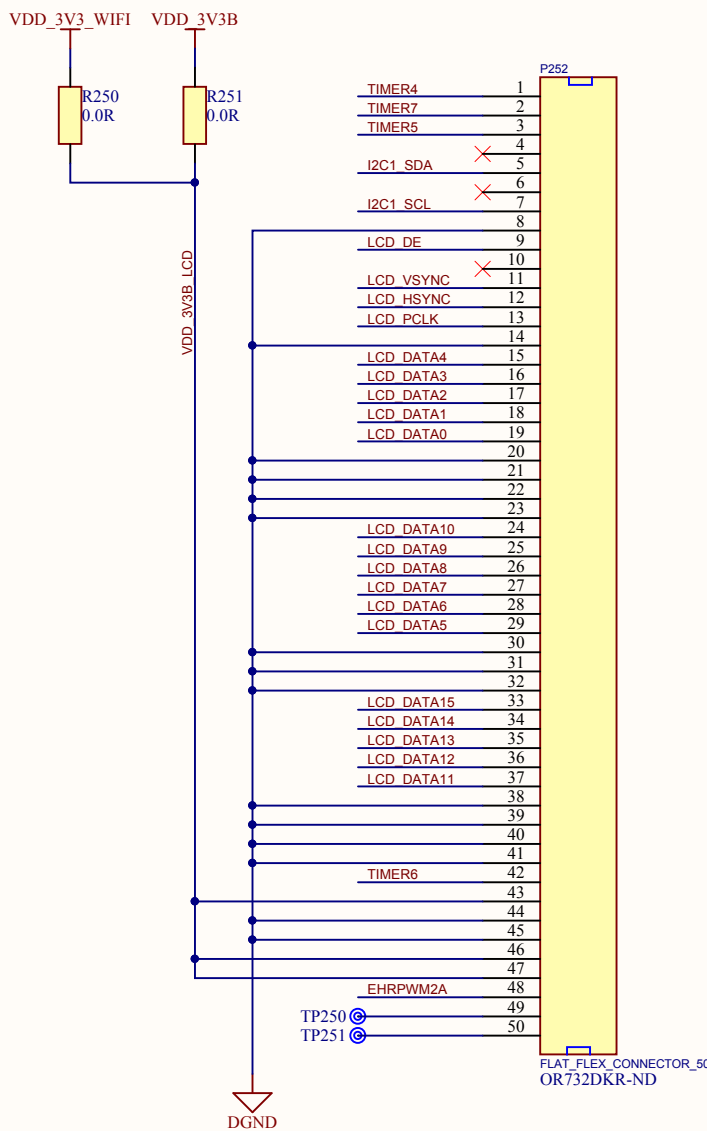
BLE: Module



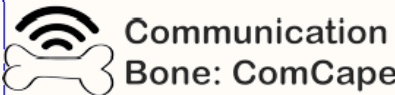
BBB: Header



LCD: Connector



BOM250
BOM Part: Flat Flex Cable 50 Pin; 2"
Flat Flex Cable



Title
P07_Exp Conn, LCD Conn.SchDoc

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