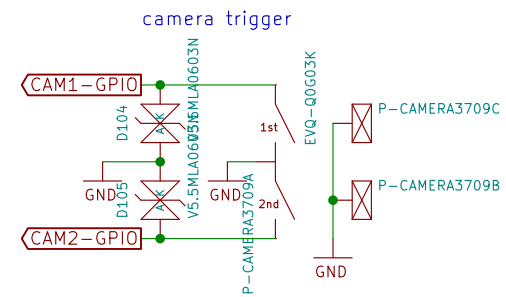
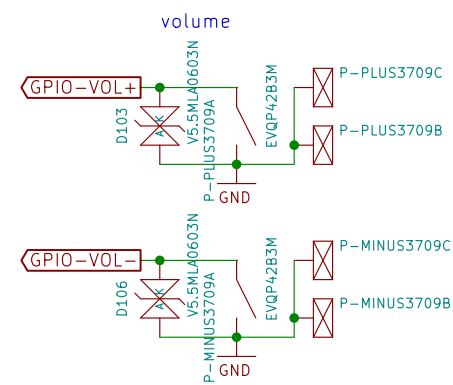
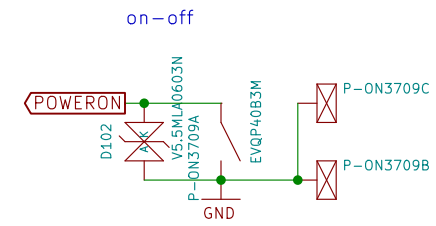
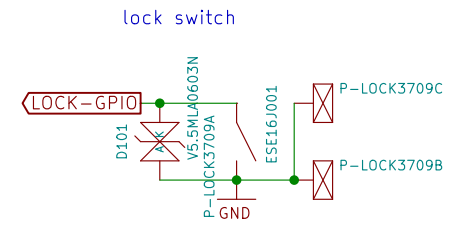


Sheet: /			
File: neo900.sch			
Title: neo900.sch			
Size: A3	Date: 16 JUL 2016	Rev:	
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04		1/38	

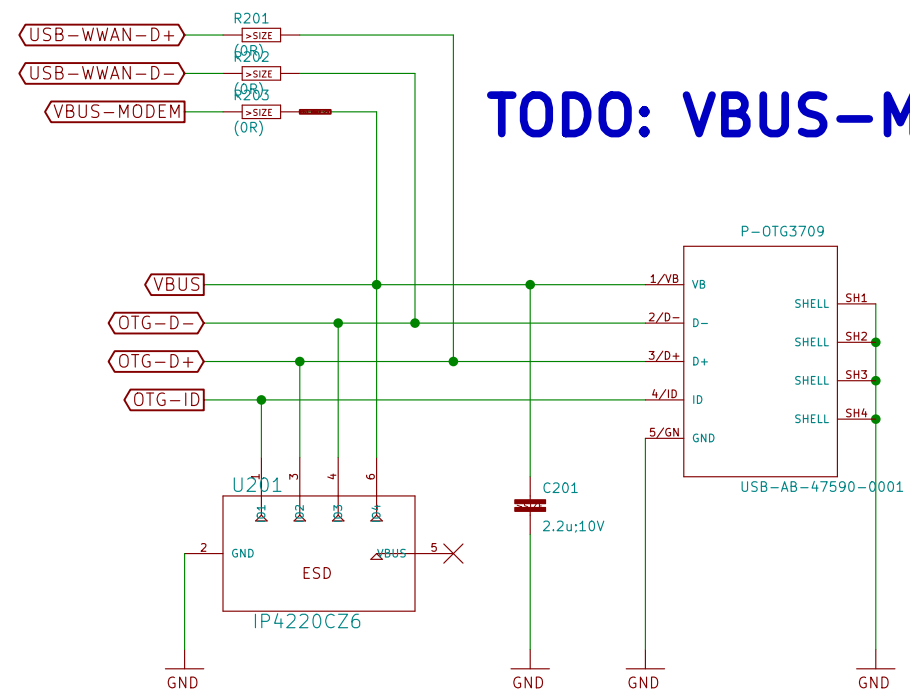


place in scan matrix? would need 3-4 wires to UPPER board instead of 2
 No. VOL+ or VOL- can either be connected to GPIOs
 or drive two FETs that sit in the keyboard matrix
 in any case it is sufficient to connect GPIO-VOL+ and VOL- to two pins on the B2B connector

(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

Buttons			
Sheet: /Buttons/ File: neo900_SS_1.sch			
Title: neo900.sch			
Size: A3	Date: 16 JUL 2016	Rev:	
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04		1-2/38uct	

can be used to test/operate the modem through the OTG port (w/o UPPER PCB)



TODO: VBUS-MODEM-CPU

(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

OTG

Sheet: /OTG/
File: neo900_SS_2.sch

Title: neo900.sch

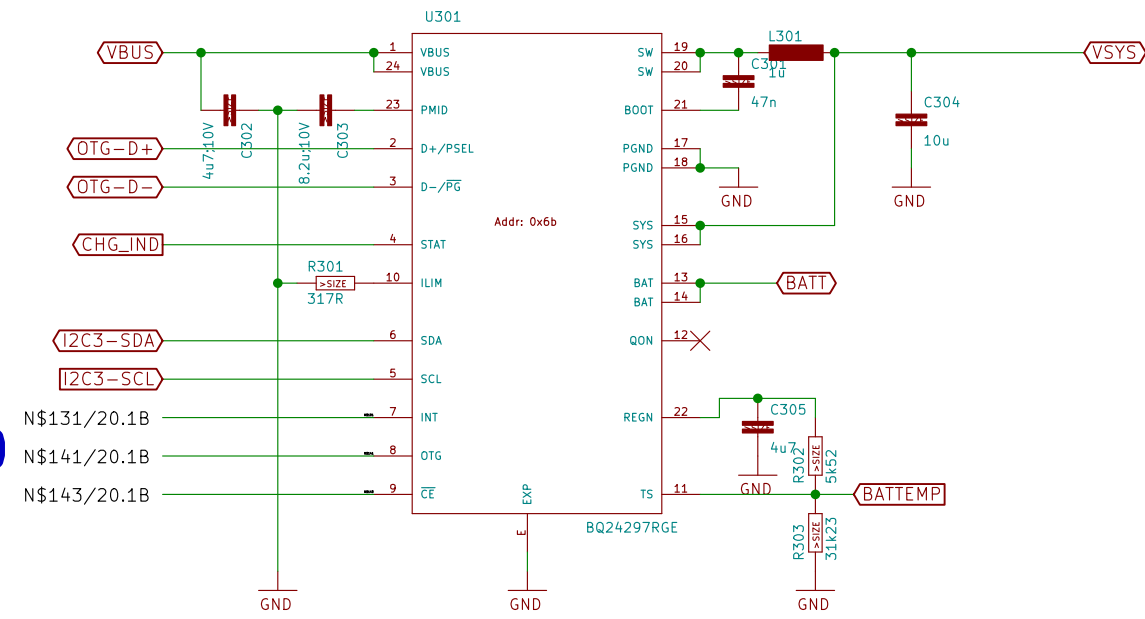
Size: A3 Date: 17 JUL 2016

KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04.1-1/38uct

Rev:

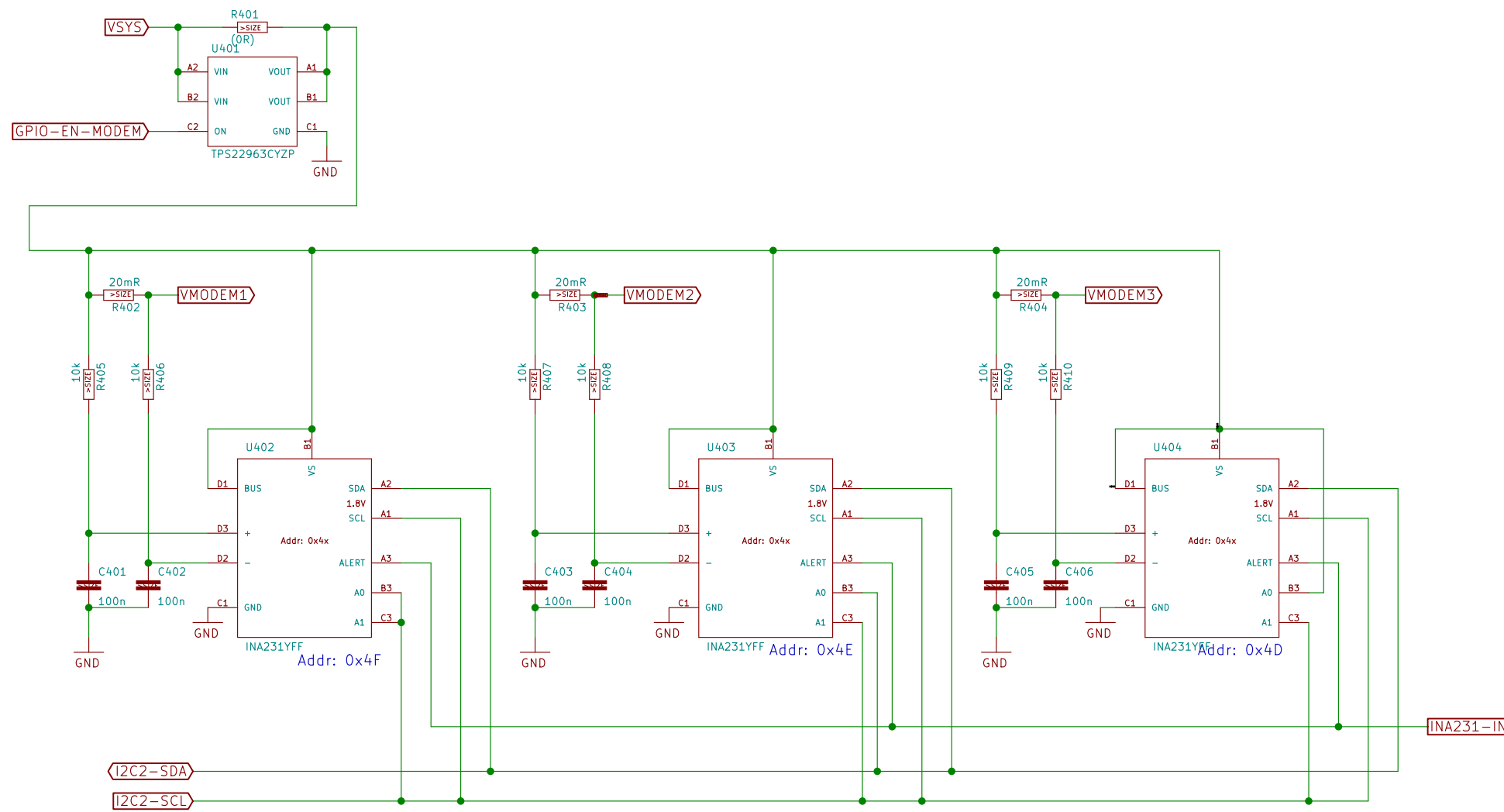
1.0

TODO



(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

Charger/OTG-Booster		
Sheet: /Charger/OTG-Booster/ File: neo900_SS_3.sch		
Title: neo900.sch		
Size: A3	Date: 17 JUL 2016	Rev:
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04.1-pp38uct		



(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

Modem Power

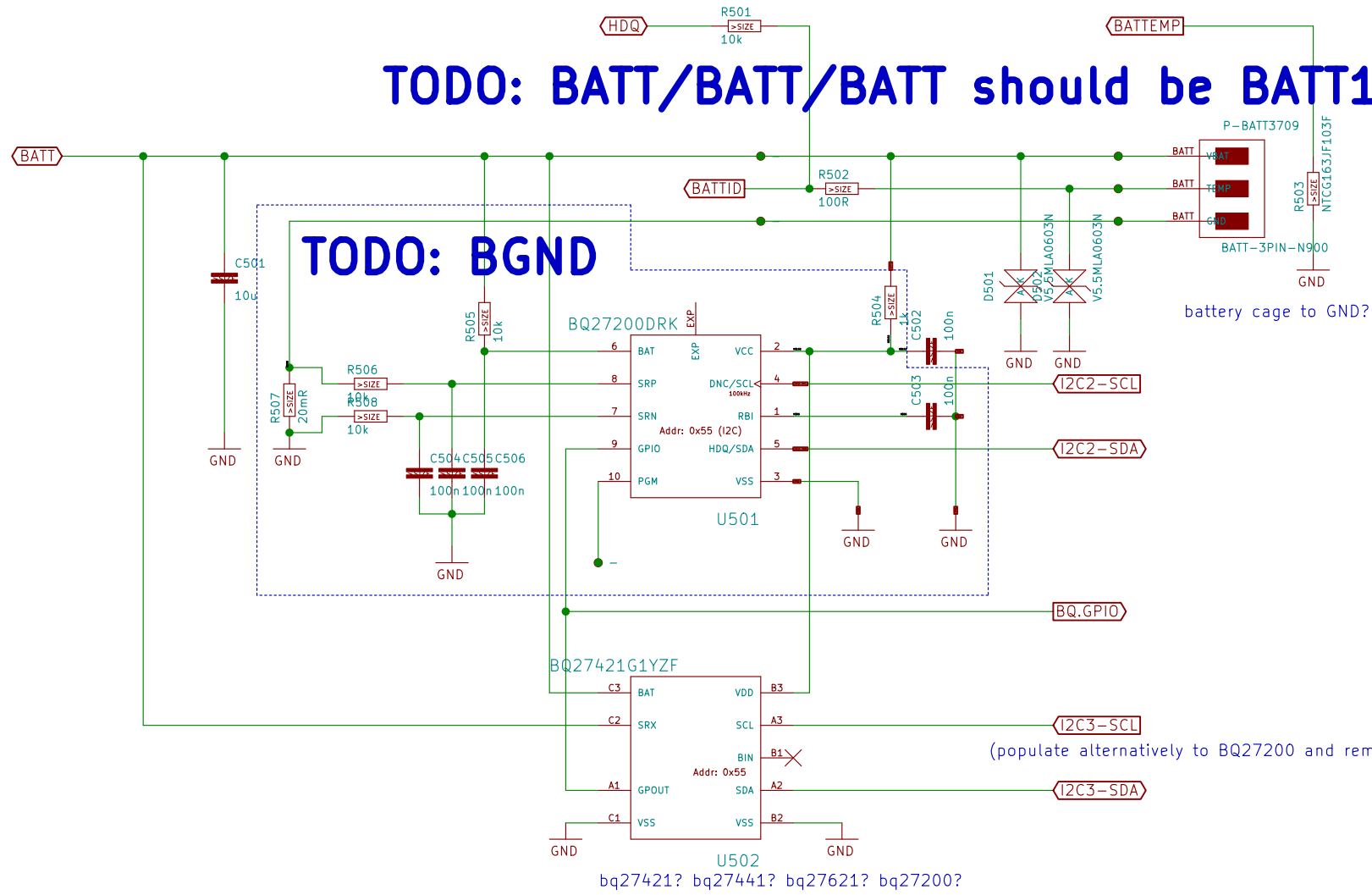
Sheet: /Modem Power/
File: neo900_SS_4.sch

Title: neo900.sch

Size: A3 Date: 17 JUL 2016

Rev:

KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04.1-5/38uct



TODO: BATT/BATT/BATT should be BATT1/BATT2/BATT3

TODO: BGND

battery cage to GND?

(populate alternatively to BQ27200 and remove 1k to BATT)

U502
bq27421? bq27441? bq27621? bq27200?

(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

Fuel Gauge			
Sheet: /Fuel Gauge/ File: neo900_SS_5.sch			
Title: neo900.sch			
Size: A3	Date: 17 JUL 2016	Rev:	
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04		1-6/38uct	

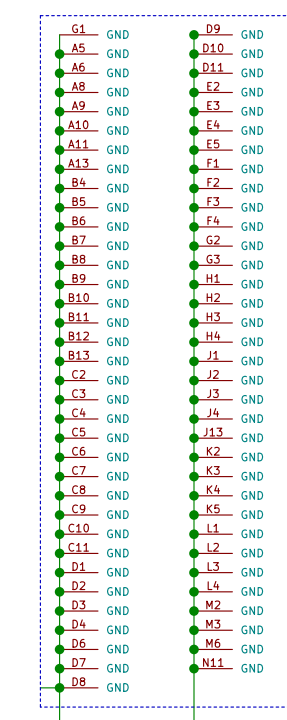
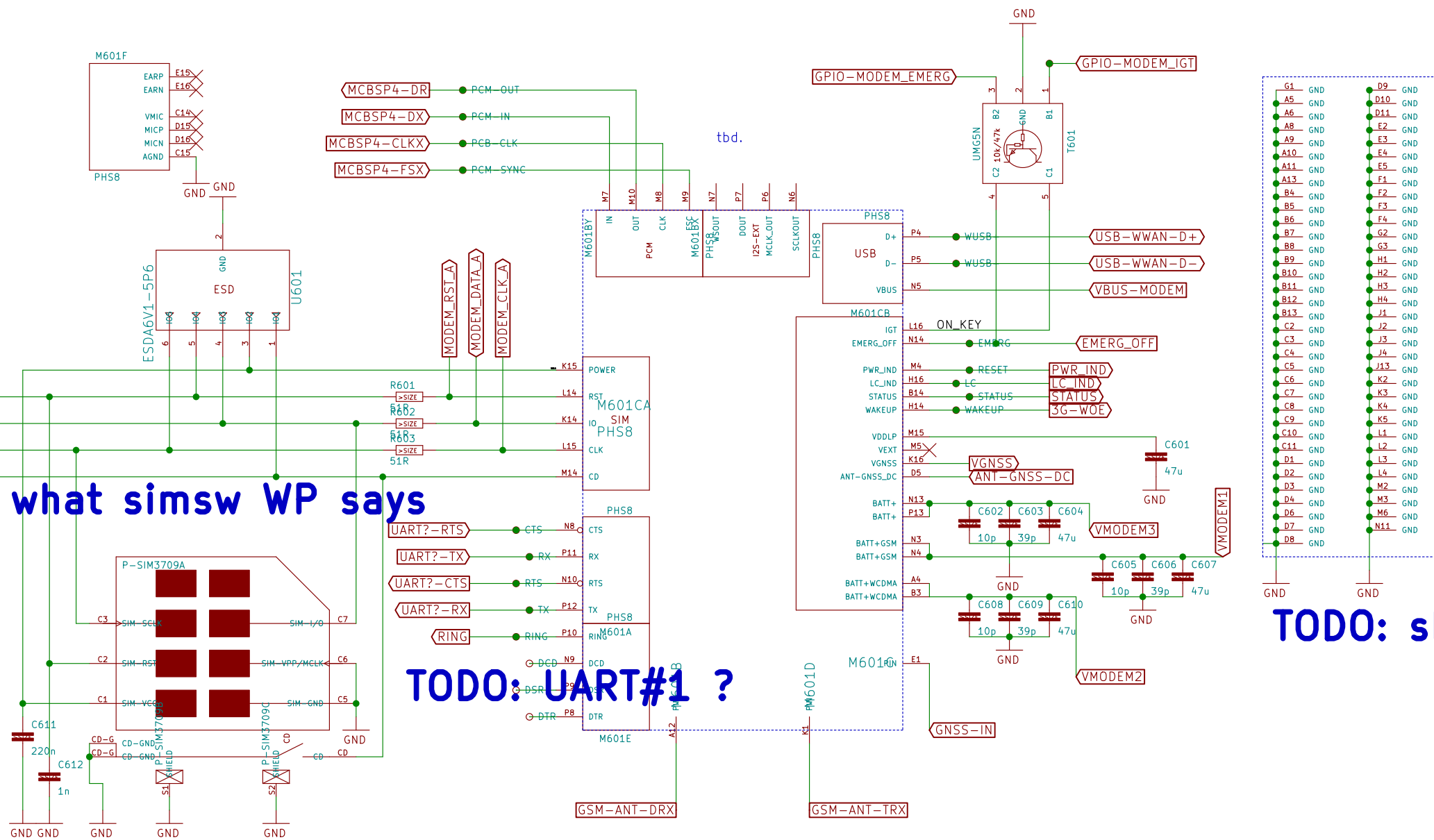
TODO: do what simsw WP says

TODO: UART#1 ?

TODO: shield connection near

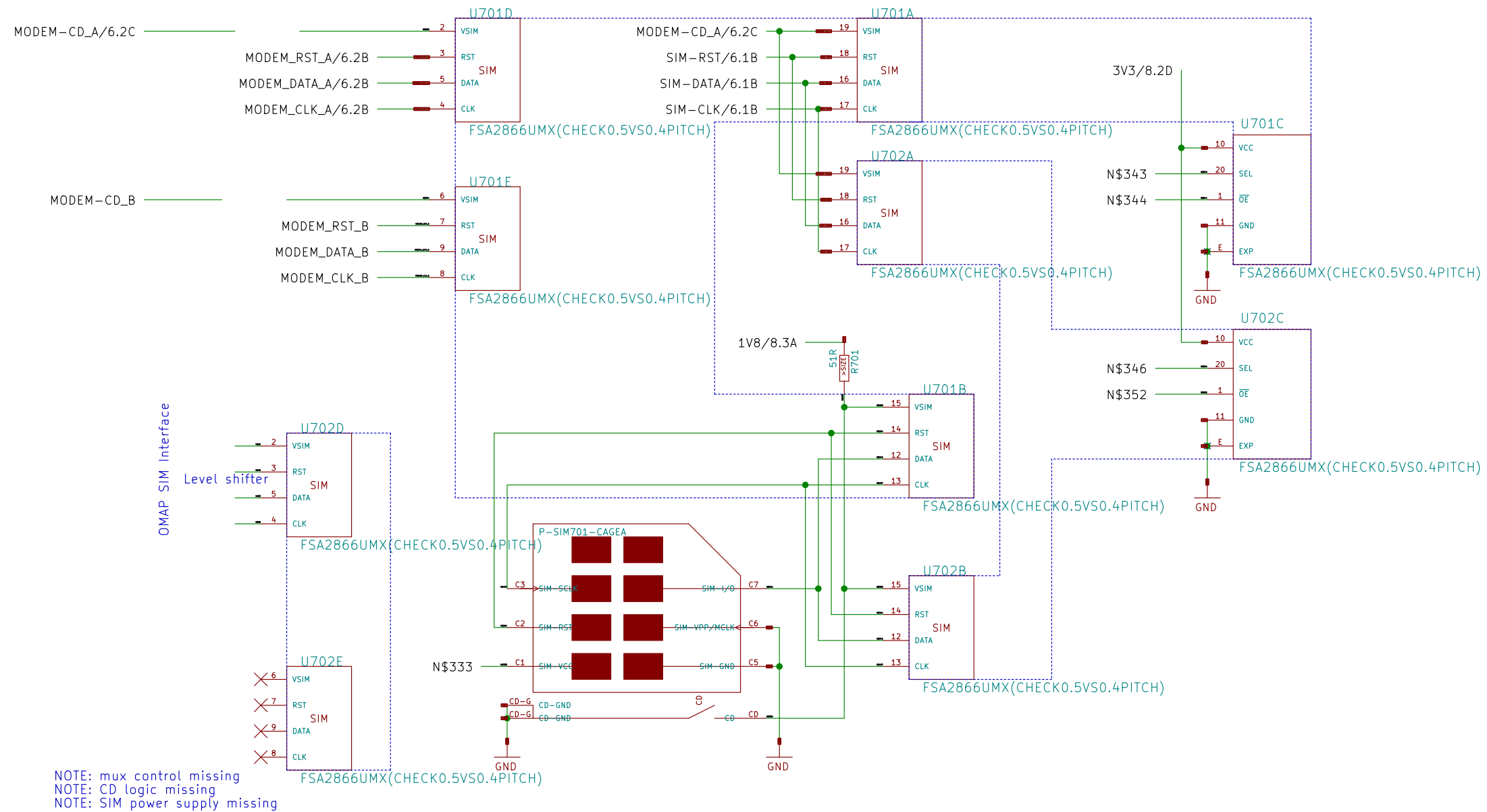
Can we connect UART in parallel to Bluetooth UART (i.e. if BT is disabled we can unbrick the Modem?)

(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.



3G/4G Modem + SIM		
Sheet: /3G/4G Modem + SIM/ File: neo900_SS_6.sch		
Title: neo900.sch		
Size: A3	Date: 17 JUL 2016	Rev:
KiCad E.D.A. eschema 4.1.0-alpha+201607120318+69754ubuntu16.04-1-388uct		

TODO: not cleaned up – needs total rewrite



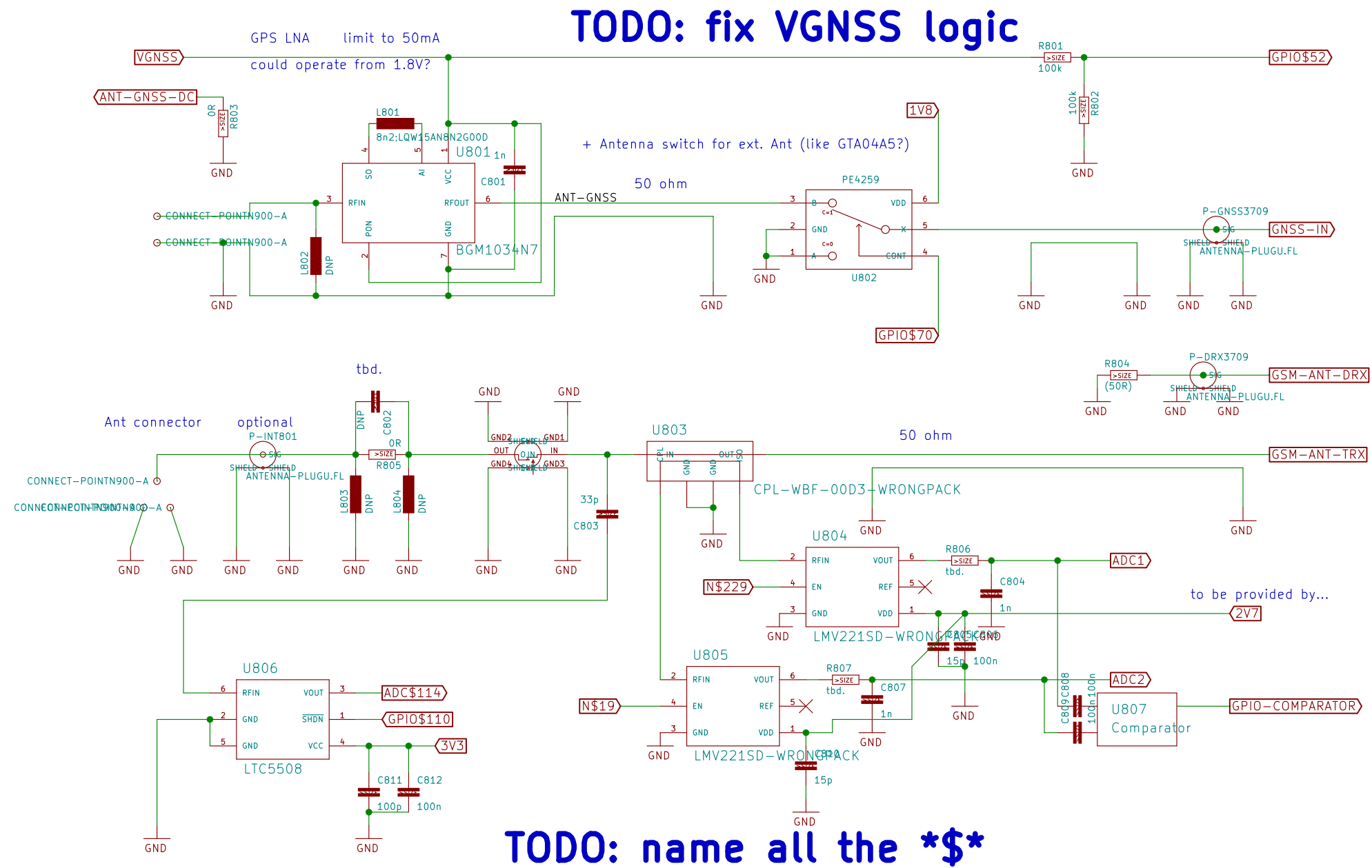
(c) 2015 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

Dual SIM switch

Sheet: /Dual SIM switch/
 File: neo900_SS_7.sch

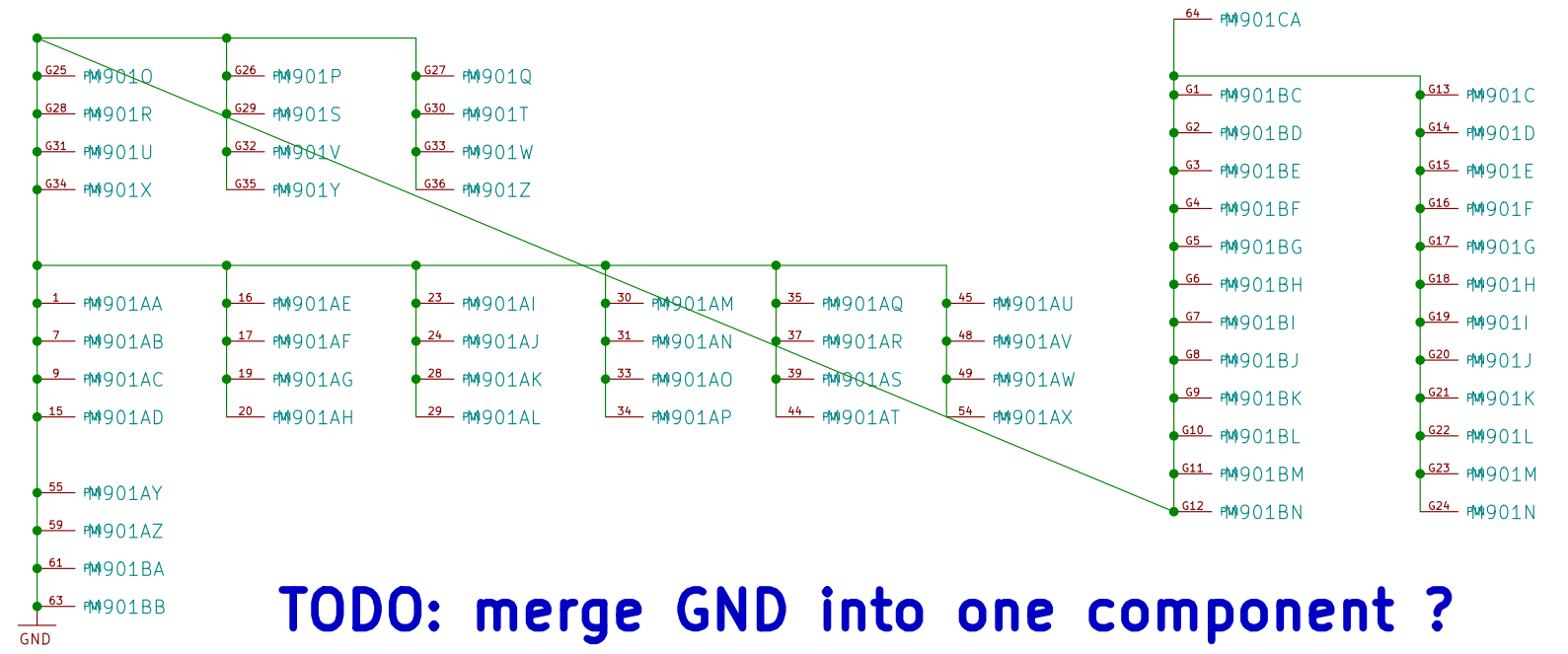
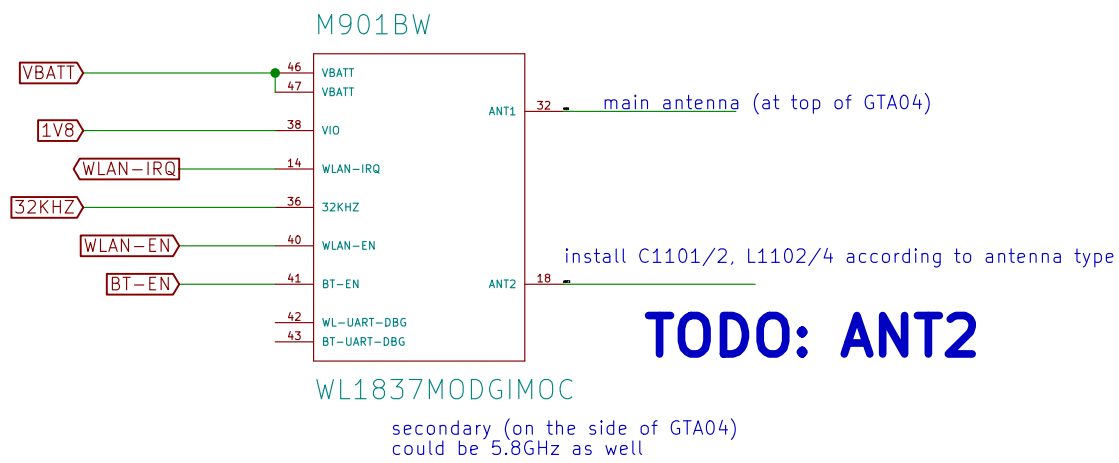
Title: neo900.sch

Size: A3	Date: 17 JUL 2016	Rev:
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04		1-8/38uct

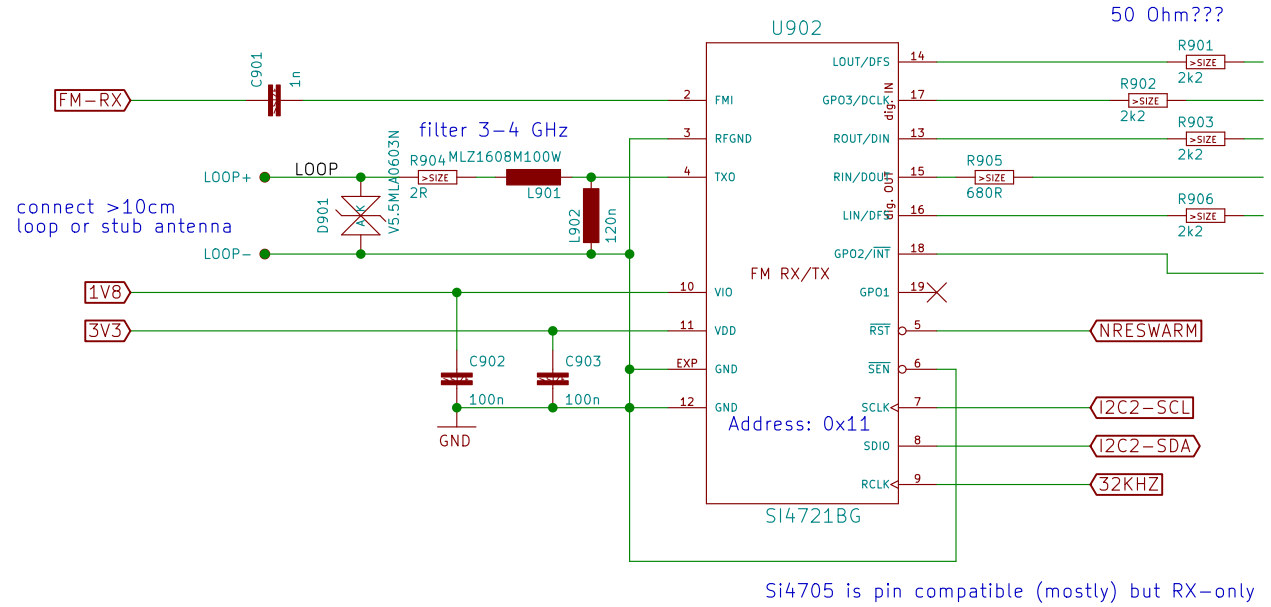
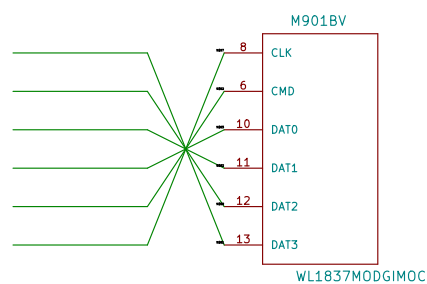
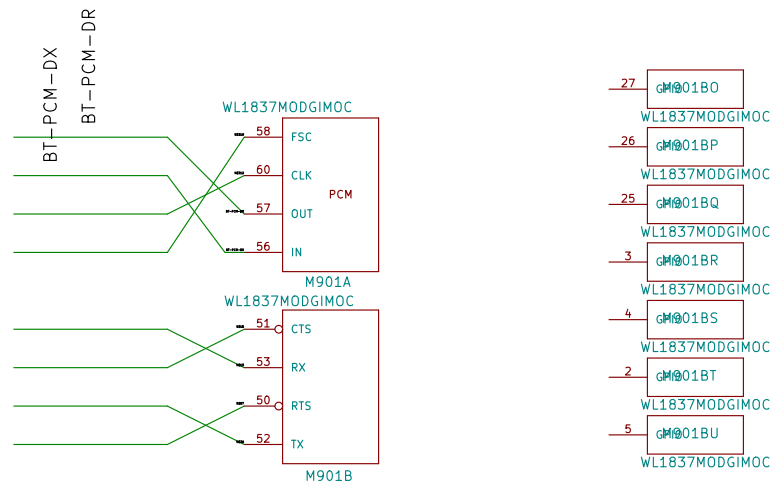


(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

Antenna connections		
Sheet: /Antenna connections/ File: neo900_SS_8.sch		
Title: neo900.sch		
Size: A3	Date: 17 JUL 2016	Rev:
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04-9/38uct		



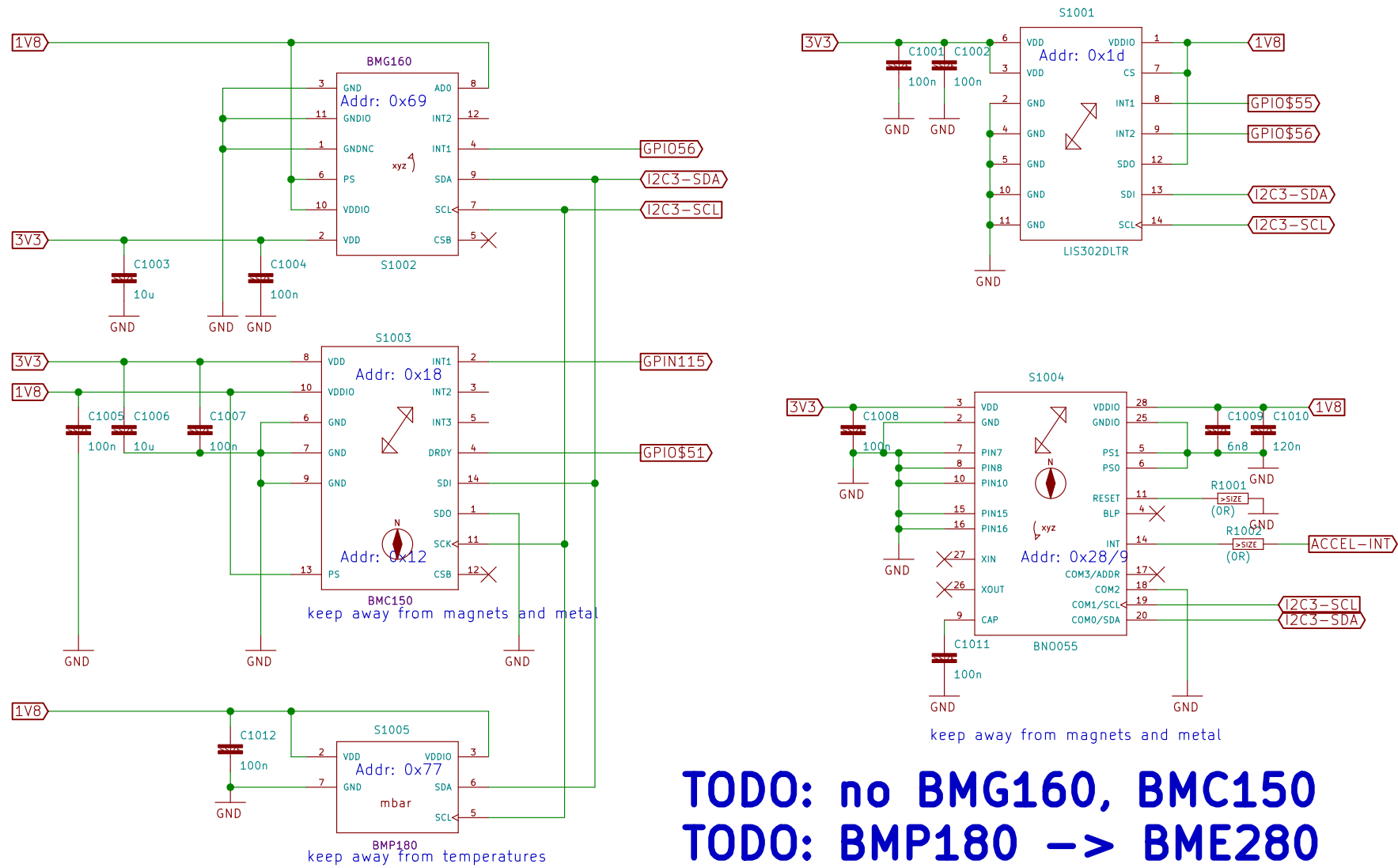
TODO: unfinished



TODO: unfinished

- FSX
- CLKX
- DX
- DR
- FSR
- CLKR

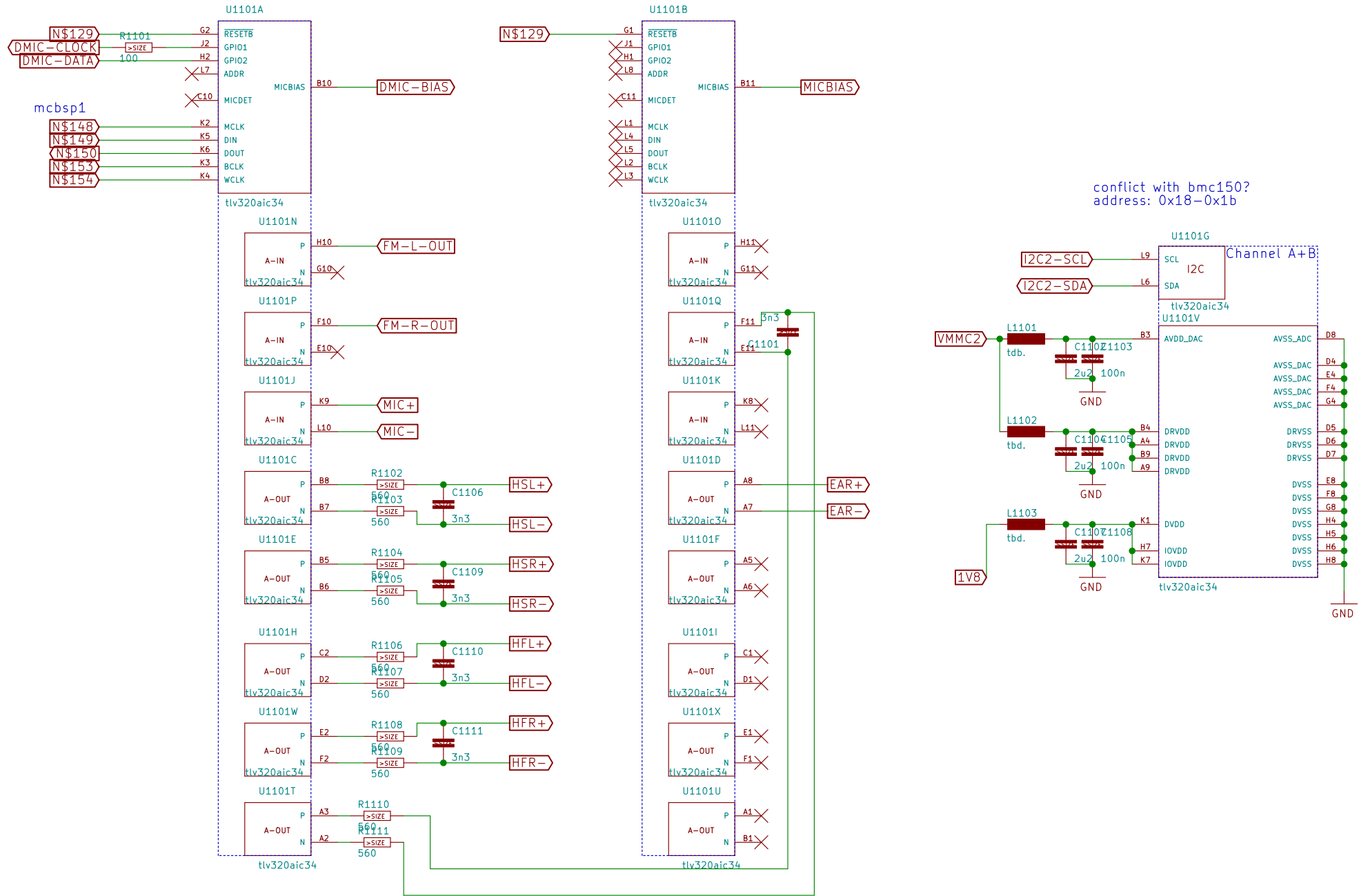
WLAN, Bluetooth, FM		
Sheet: /WLAN, Bluetooth, FM/		
File: neo900_SS_9.sch		
Title: neo900.sch		
Size: A3	Date: 17 JUL 2016	Rev:
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04-10086ct		



(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

Sensors		
Sheet: /Sensors/ File: neo900_SS_10.sch		
Title: neo900.sch		
Size: A3	Date: 17 JUL 2016	Rev:
KiCad E.D.A. eschema 4.1.0-alpha+201607120318+697546ubuntu16.04		1/1/2016

problem: this is a 0.5mm BGA making lower board expensive
 but it appears to be not extremely critical (only 3 rows and inner ring is GND)
 problem: analog mic is on upper board
 alternative: place on upper board (to be evaluated)



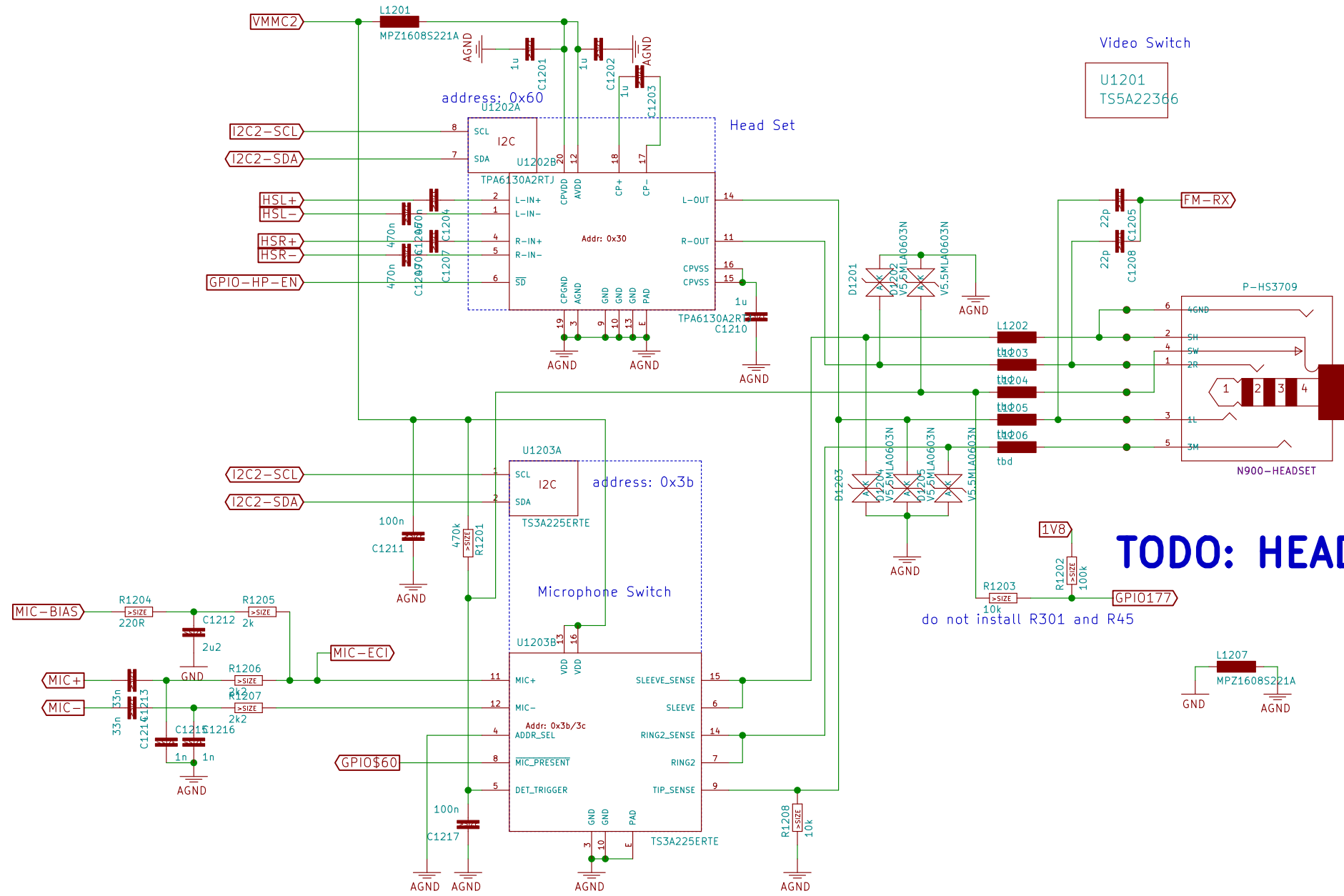
(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

Audio Codec

Sheet: /Audio Codec/
 File: neo900_SS_11.sch

Title: neo900.sch

Size: A3	Date: 17 JUL 2016	Rev:
KiCad E.D.A. eschema 4.1.0-alpha+201607120318+697546ubuntu16.04		12/08/2016

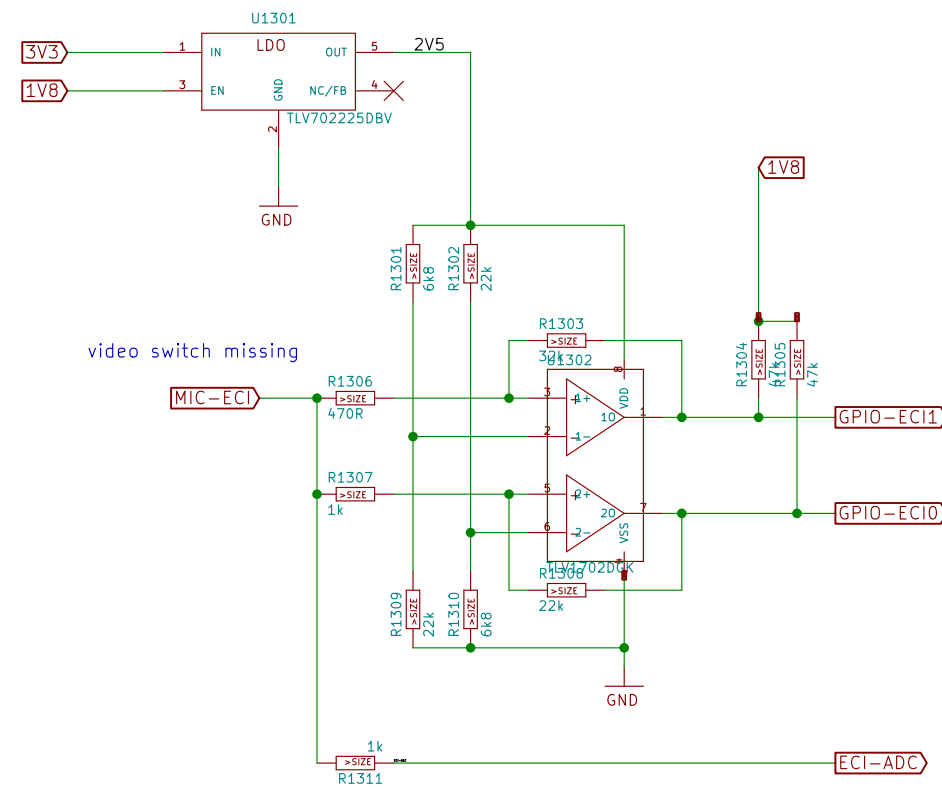


TODO: HEADPH_IND ?

do not install R301 and R45

(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

Audio Headset & Mic			
Sheet: /Audio Headset + Mic/			
File: neo900_SS_12.sch			
Title: neo900.sch			
Size: A3	Date: 17 JUL 2016	Rev:	
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04		13/06/2016	



TODO: draw comparator right

(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

ECI

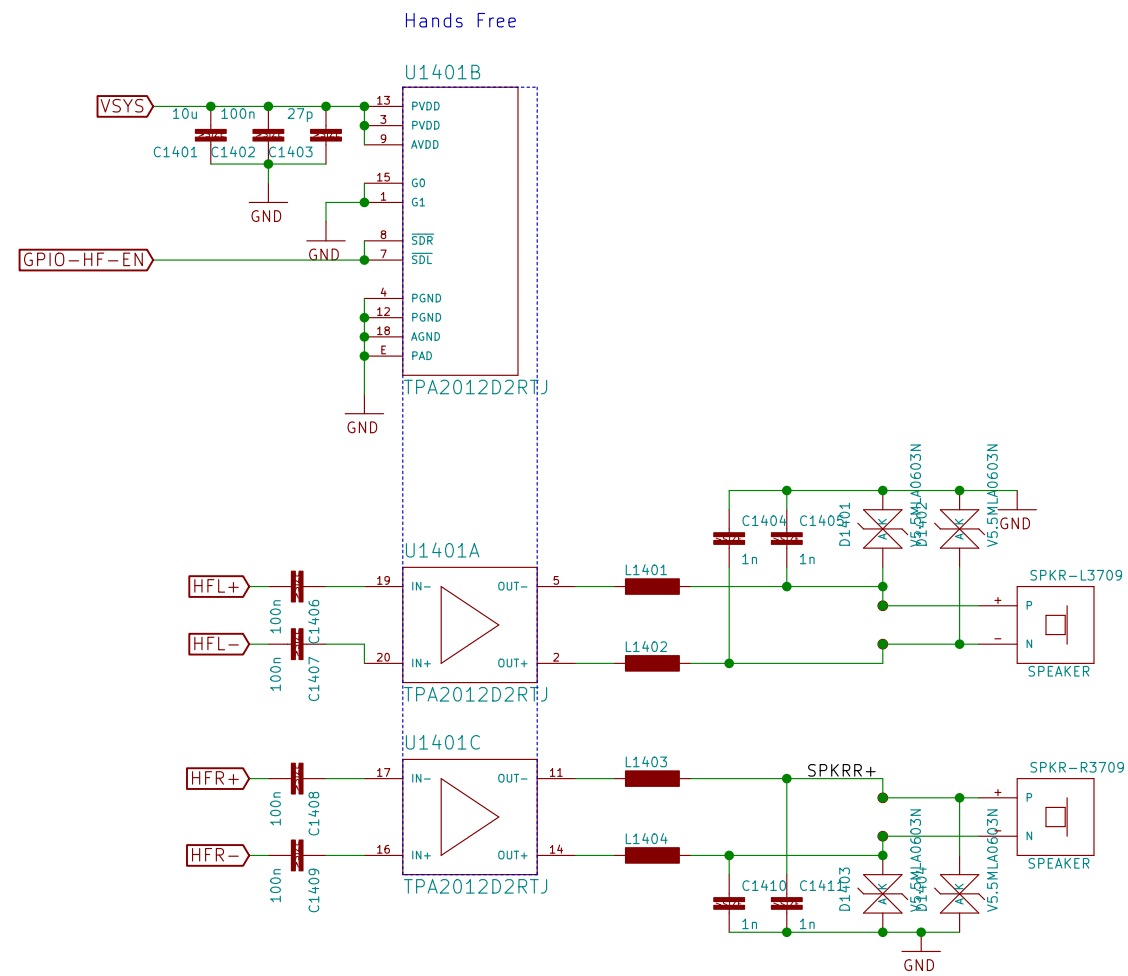
Sheet: /ECI/
File: neo900_SS_13.sch

Title: neo900.sch

Size: A3 Date: 17 JUL 2016

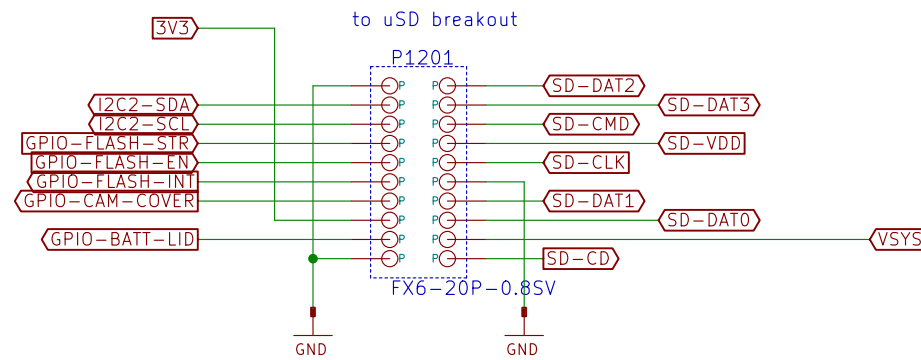
Rev:

KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04.1-14.0.ct

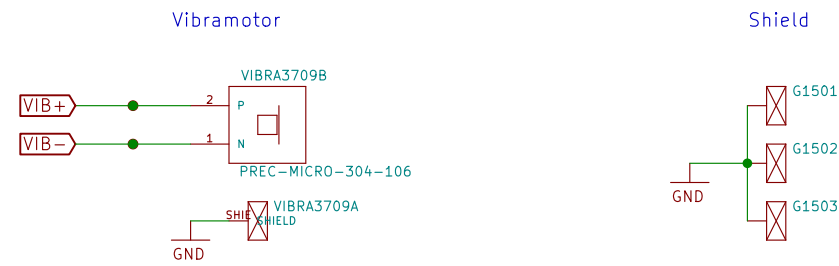


(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

Audio Handsfree			
Sheet: /Audio Handsfree/ File: neo900_SS_14.sch			
Title: neo900.sch			
Size: A3	Date: 17 JUL 2016	Rev:	
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04		15/08/2016	

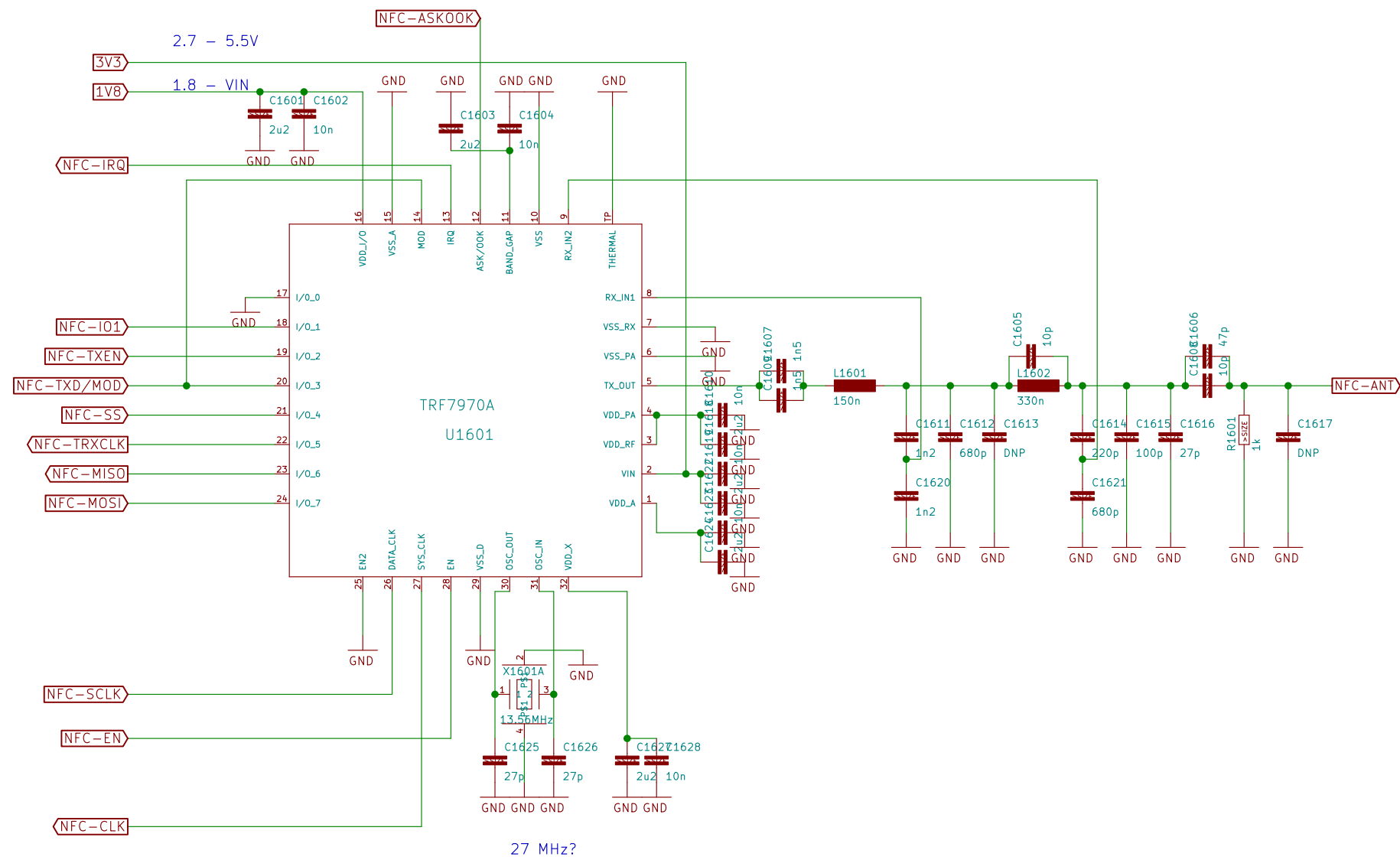


TODO: bogus connector (see HB WP)



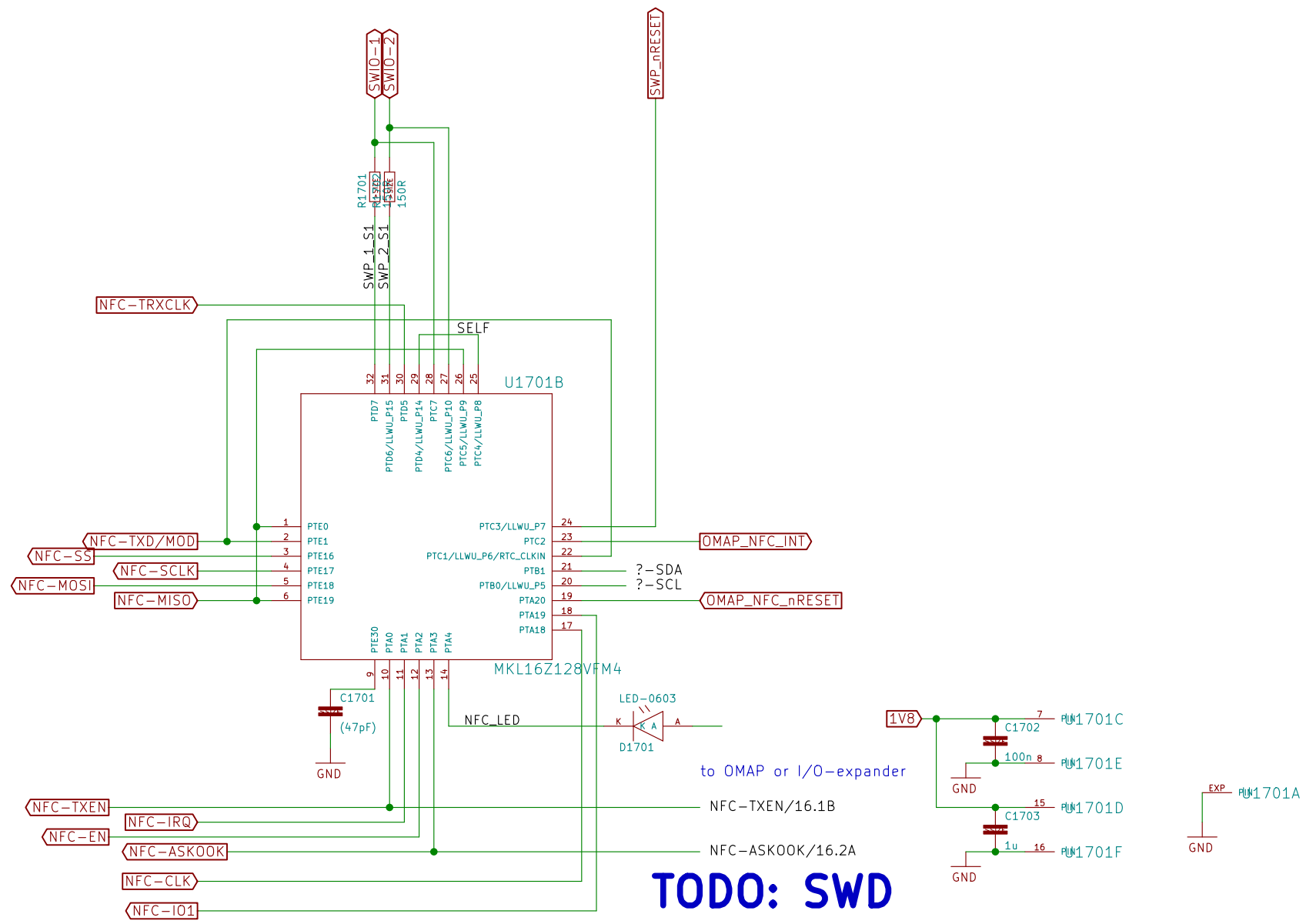
(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

Misc (lower)			
Sheet: /Misc (lower)/			
File: neo900_SS_15.sch			
Title: neo900.sch			
Size: A3	Date: 17 JUL 2016	Rev:	
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04		16/08/2016	



(c) 2015 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

RFID/NFC Reader		
Sheet: /RFID/NFC Reader/ File: neo900_SS_16.sch		
Title: neo900.sch		
Size: A3	Date: 17 JUL 2016	Rev:
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04		1-17/36ct

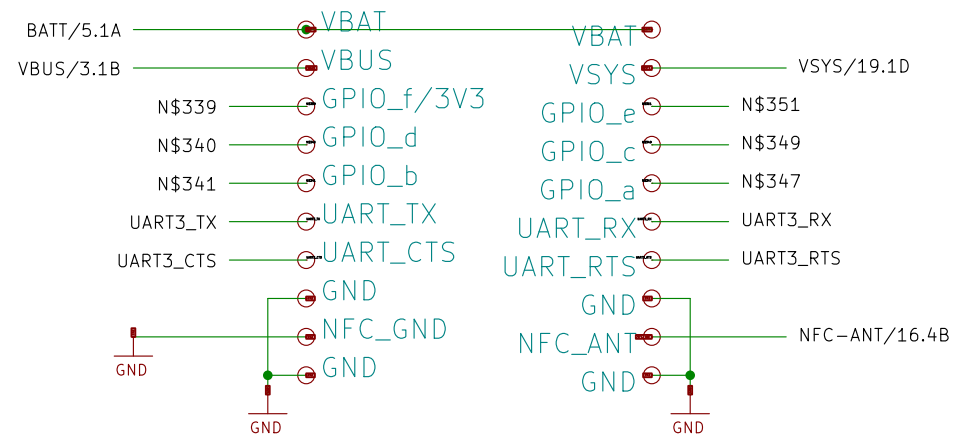
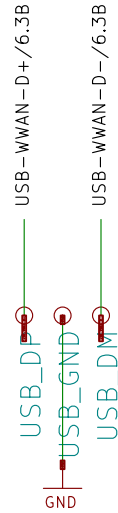


(c) 2015 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

RFID/NFC Controller		
Sheet: /RFID/NFC Controller/ File: neo900_SS_17.sch		
Title: neo900.sch		
Size: A3	Date: 17 JUL 2016	Rev:
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04.1-1p036ct		

NOTE: this is mangling up Breakout and Lower board connectors
 Signals may have to be fed through the breakout board connector increasing resistance

TODO: align with HB WP



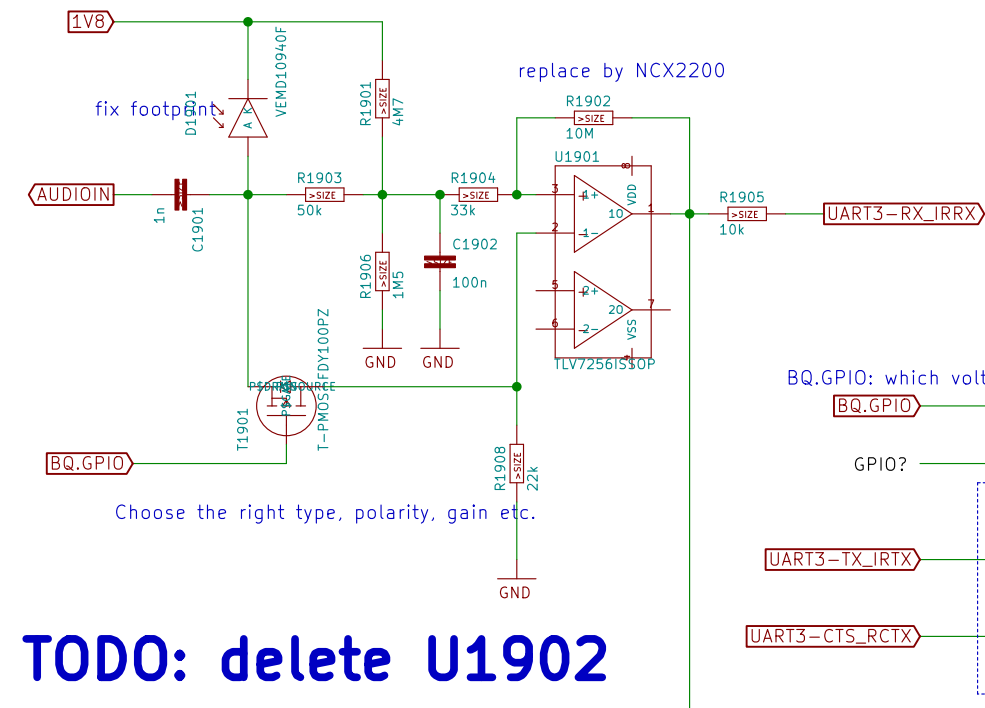
Missing 10 level shifter chip (or do we really have the space for 10x discrete T+R+D ca. 3x3mm each?)
 Missing 6x 2R for alternate function select (do we have the space for ca. 2.5 x 5mm?)

TODO: align with HB WP

(c) 2015 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

Hackerbus		
Sheet: /Hackerbus/ File: neo900_SS_18.sch		
Title: neo900.sch		
Size: A3	Date: 17 JUL 2016	Rev:
KiCad E.D.A. eschema 4.1.0-alpha+201607120318+697546ubuntu16.04		19/08/2016

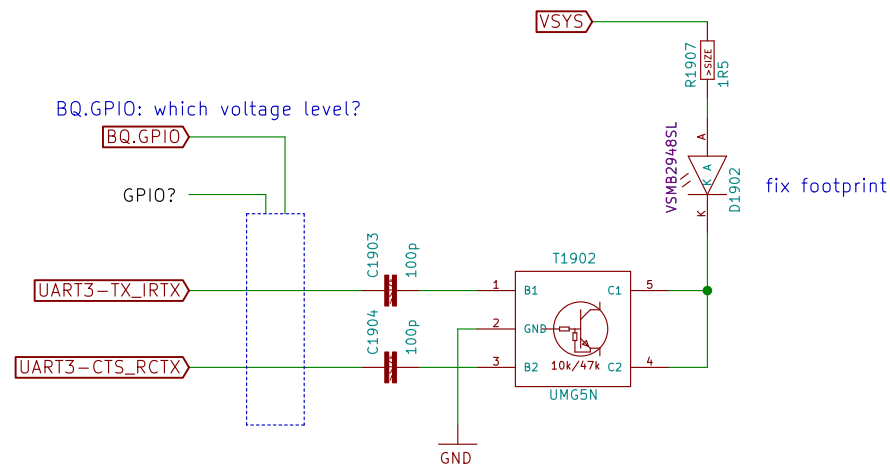
NOTE: 1V8 may be quite noisy



replace by NCX2200

Choose the right type, polarity, gain etc.

TODO: delete U1902

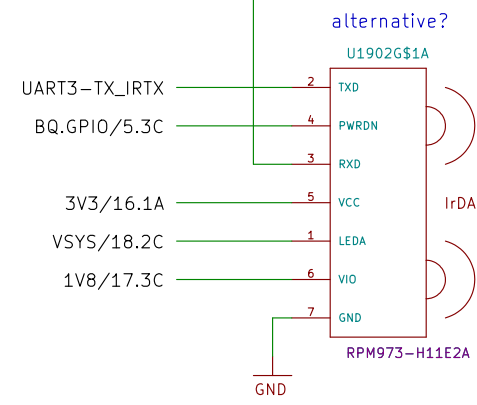


BQ.GPIO: which voltage level?

GPIO?

fix footprint

TODO: update to design in IR WP



(c) 2015 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

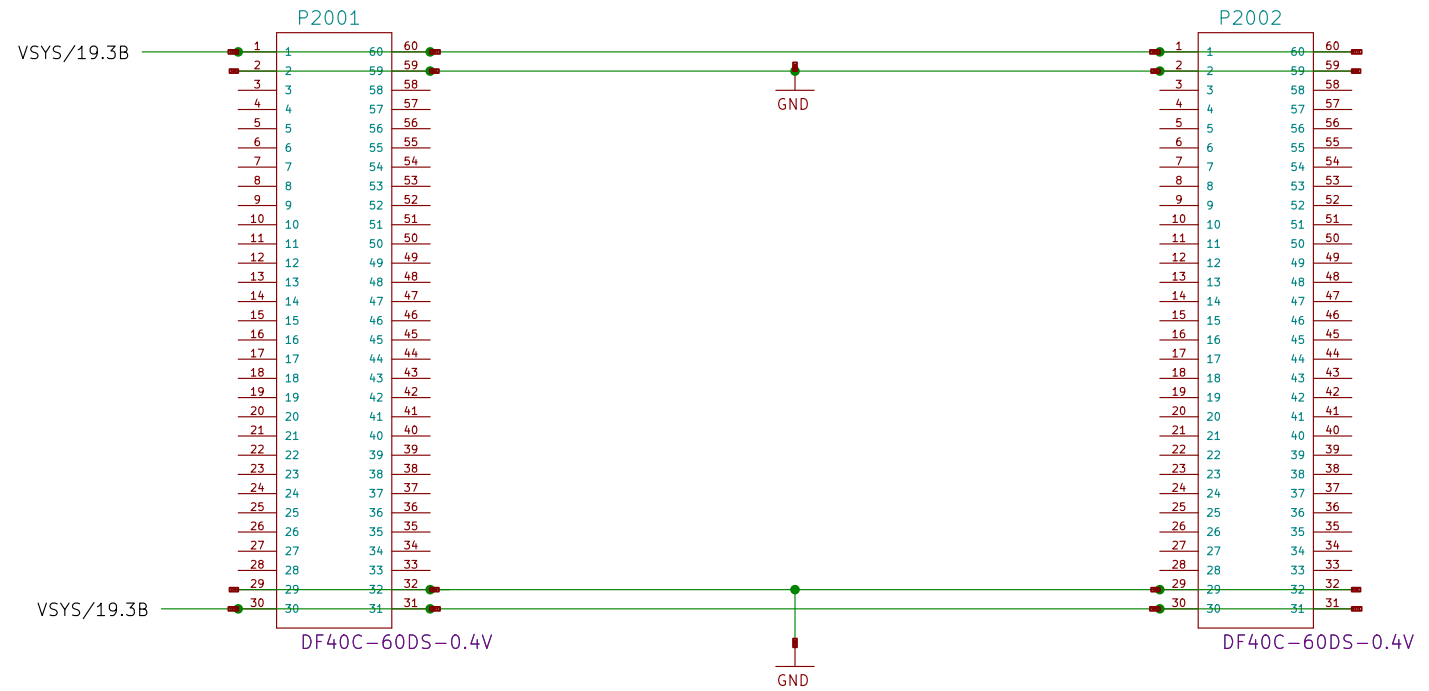
Infrared			
Sheet: /Infrared/			
File: neo900_SS_19.sch			
Title: neo900.sch			
Size: A3	Date: 17 JUL 2016	Rev:	
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04		2016 Oct	

TODO: update when details settle

ca. 130 signals (to be counted exactly after definition of upper/lower split)

LOCK-GPIO/1.2A	-----	MMC3-DATA1/9.1A	-----
POWERON/1.3A	-----	MMC3-DATA2/9.1A	-----
GPIO-VOL+/1.2B	-----	MMC3-DATA3/9.1A	-----
GPIO-VOL-/1.2B	-----	GPIO-WLAN-IRQ/9.1A	-----
CAM1-GPIO/1.3B	-----	GPIO-BT-EN/9.1C	-----
CAM2-GPIO/1.3C	-----	UART1-RX/9.1C	-----
I2C3-SDA/10.4C	-----	UART1-RTS/9.1C	-----
I2C3-SCL/10.4C	-----	UART1-CTS/9.1D	-----
CHG_IND/3.1B	-----	UART1-TX/9.1D	-----
N\$131/3.1C	-----	MCBSP3-FCK/9.1D	-----
N\$141/3.1C	-----	MCBSP3-CLK/9.1D	-----
N\$143/3.1C	-----	MCBSP3-DR/9.1D	-----
BATTEMP/5.4A	-----	MCBSP3-DX/9.1D	-----
GPIO-EN-MODEM/4.1A	-----	SYSCLK/9.3C	-----
I2C2-SDA/15.1A	-----	32KHZ/9.4A	-----
I2C2-SCL/15.1A	-----	GPIO-FM-EN/9.3A	-----
INA231-INT/4.4C	-----	GPIO-FMIRQ/9.3A	-----
HDQ/5.2A	-----	MCBSP2-FCK/9.3A	-----
GPIO\$70/8.3B	-----	MCBSP2-CLK/9.3A	-----
GPIO\$110/8.1D	-----	MCBSP2-DR/9.3A	-----
N\$19/8.2D	-----	MCBSP2-DX/9.3A	-----
N\$229/8.3C	-----	MCBSP2-INT/9.3A	-----
ADC\$114/8.1C	-----	GPIN115/10.3B	-----
ADC1/8.4C	-----	GPIO56/10.3A	-----
ADC2/8.4C	-----	GPIO\$51/10.3B	-----
GPIO-COMPARETOR/8.4D	-----	GPIO\$55/10.4A	-----
MCBSP4-DR/6.2A	-----	GPIO\$56/10.4A	-----
MCBSP4-DX/6.2A	-----	ACCEL-INT/10.4C	-----
MCBSP4-CLKX/6.2A	-----	N\$129/11.2A	-----
MCBSP4-FSX/6.2A	-----	N\$148/11.1A	-----
UART?-RTS/6.2C	-----	N\$149/11.1A	-----
UART?-CTS/6.2C	-----	N\$150/11.1A	-----
UART?-RX/6.2C	-----	N\$153/11.1A	-----
UART?-TX/6.2C	-----	N\$154/11.1A	-----
RING/6.2C	-----	GPIO-ECI1/13.3B	-----
GPIO-MODEM_JGT/6.3A	-----	GPIO-ECIO/13.3C	-----
GPIO-MODEM_EMERG/6.3A	-----	ECI-ADC/13.3C	-----
EMERG_OFF/6.3B	-----	VMMC2/12.1A	-----
PWR_IND/6.3B	-----	GPIO-HP-EN/12.1B	-----
LC_IND/6.3B	-----	GPIO\$60/12.2D	-----
STATUS/6.3B	-----	GPIO177/12.4C	-----
3G-WOE/6.3B	-----	GPIO-HF-EN/14.1B	-----
GPIO\$52/8.4A	-----	GPIO-FLASH-STR/15.1A	-----
GPIO-WLAN-EN/9.1A	-----	GPIO-FLASH-EN/15.1A	-----
MMC3-CLK/9.1A	-----	GPIO-FLASH-INT/15.1A	-----
MMC3-CMD/9.1A	-----	GPIO-BATT-LID/15.1B	-----
MMC3-DATA0/9.1A	-----	SD-CMD/15.2A	-----
		SD-CLK/15.2A	-----
		SD-CD/15.2B	-----
		SD-VDD/15.2A	-----
		SD-DAT0/15.2B	-----
		SD-DAT1/15.2B	-----
		SD-DAT2/15.2A	-----
		SD-DAT3/15.2A	-----
		VIB+/15.1D	-----
		VIB-/15.1D	-----
		3V3/19.1D	-----
		2V5/13.3B	-----
		1V8/19.1D	-----
		VBUS/18.1C	-----
		OTG-D-/3.1B	-----
		OTG-D+/3.1B	-----
		OTG-ID/2.2B	-----
		VBUS-MODEM/6.3B	-----
		USB-WWAN-D+/18.3A	-----
		USB-WWAN-D-/18.3A	-----
		2V7/8.4C	-----
		GPIO-CAM-COVER/15.1B	-----
		N\$38	-----

Pin assignment must be optimized for final component placement
we might have to switch to 80 or 100 pin connectors



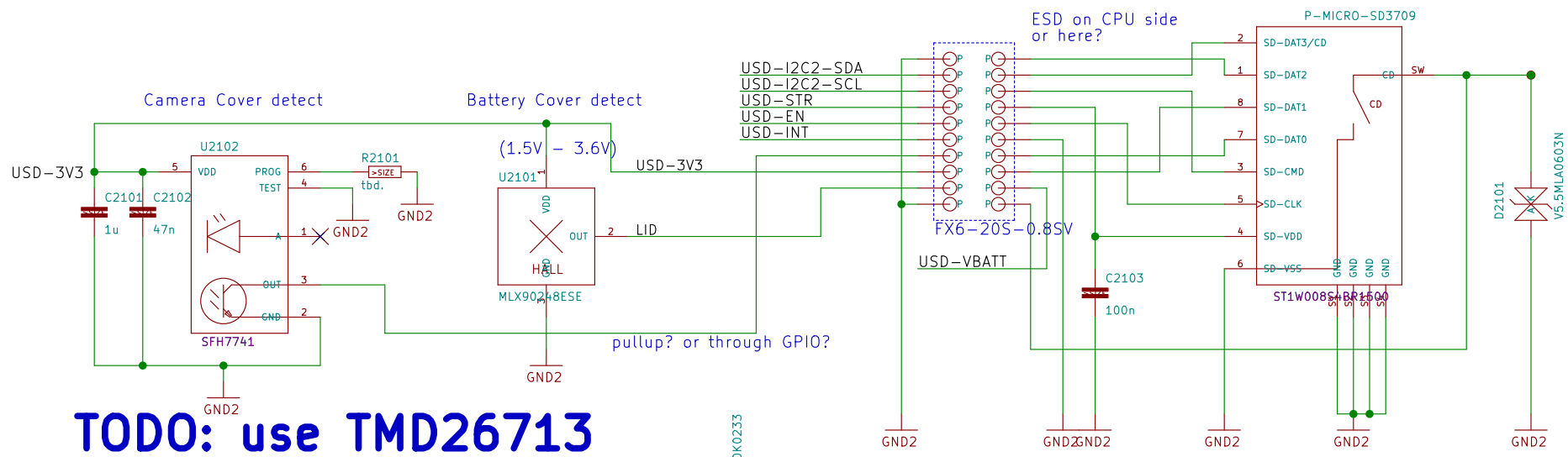
(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

B2B to UPPER

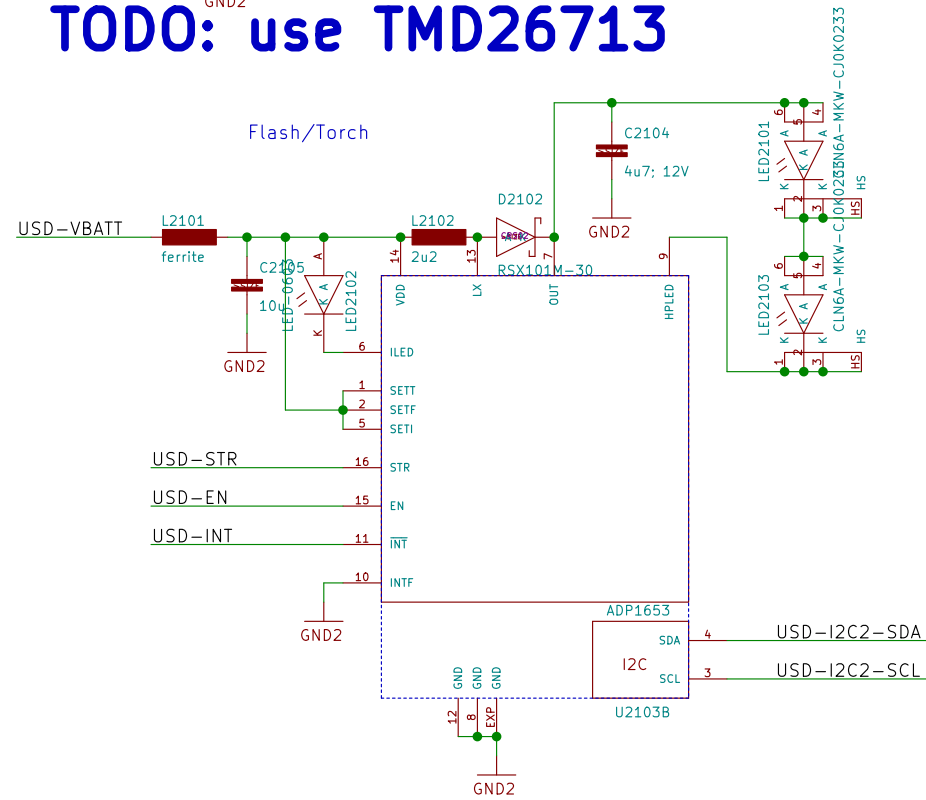
Sheet: /B2B to UPPER/
File: neo900_SS_20.sch

Title: neo900.sch

Size: A3	Date: 17 JUL 2016	Rev:
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04-21.0.ct		



TODO: use TMD26713



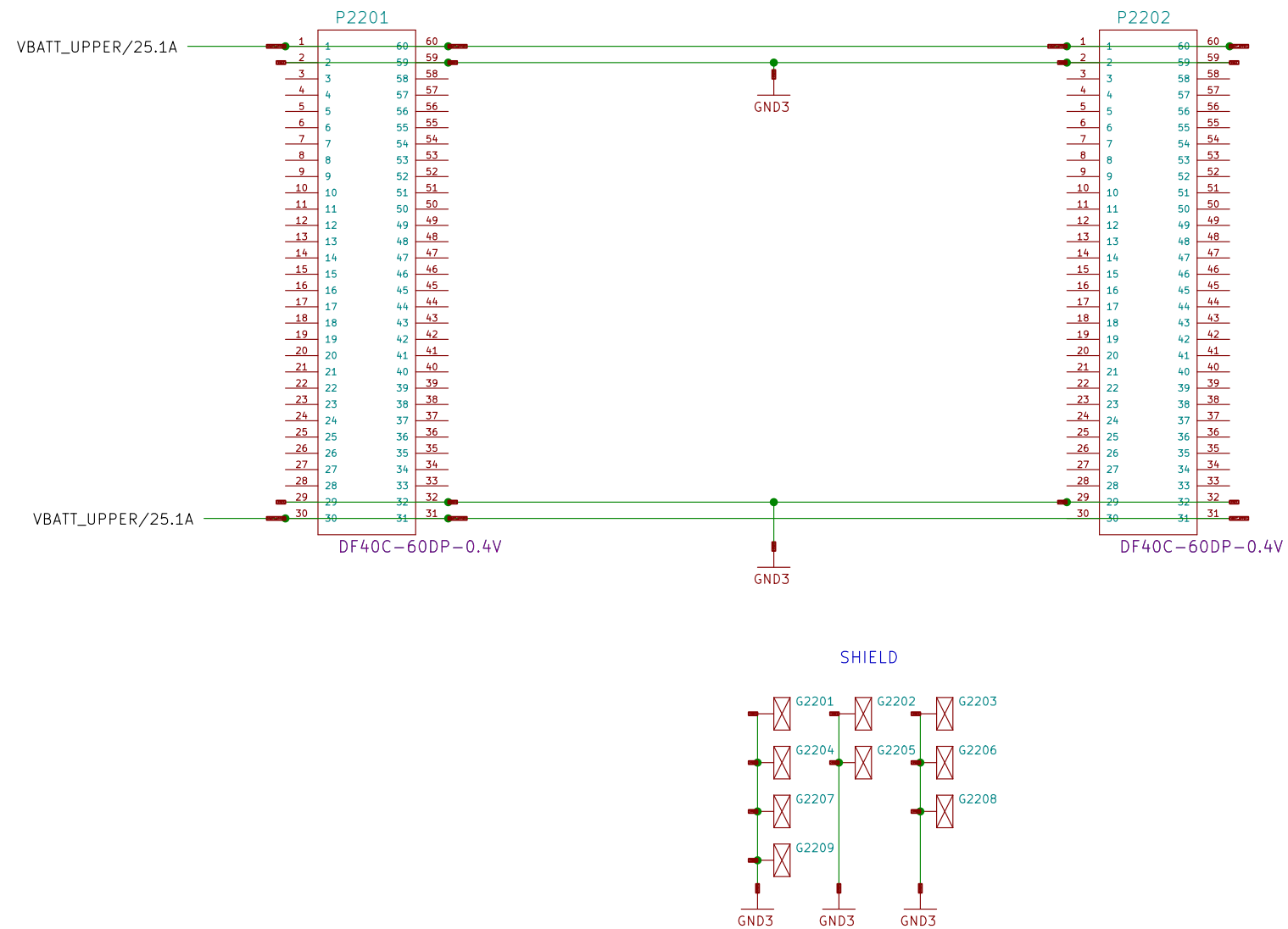
(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

TODO: flash controller is now on LOWER, not BOB

uSD Breakout Board		
Sheet: /uSD Breakout Board/ File: neo900_SS_21.sch		
Title: neo900.sch		
Size: A3	Date: 17 JUL 2016	Rev:
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04		20160801

TODO: track B2B to UPPER

to be adjusted to lower board connector



(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

B2B to LOWER

Sheet: /B2B to LOWER/
File: neo900_SS_22.sch

Title: neo900.sch

Size: A3 Date: 17 JUL 2016

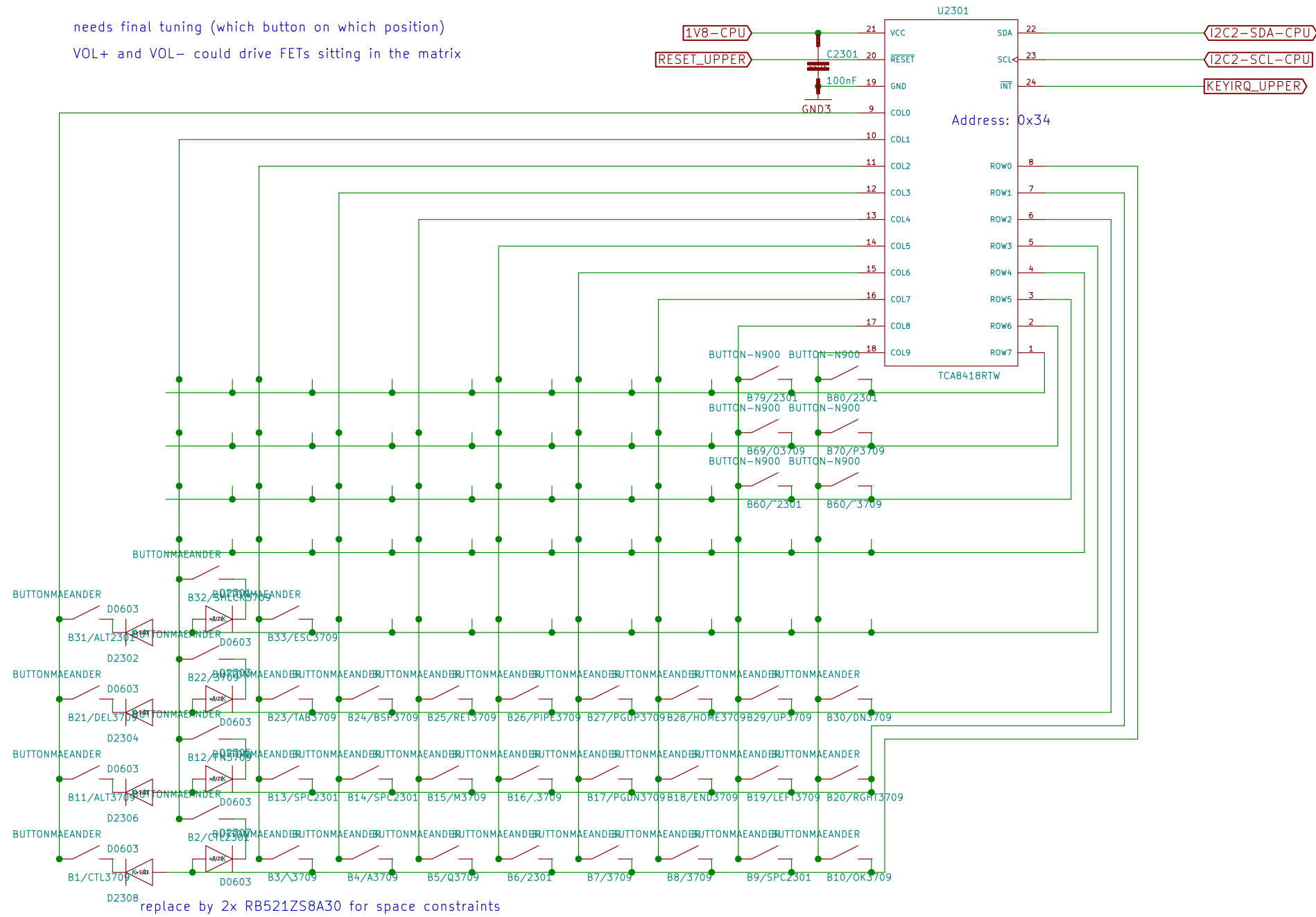
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04.1-23.06.ct

Rev:

1.0

TODO: *_UPPER names ?

needs final tuning (which button on which position)
VOL+ and VOL- could drive FETs sitting in the matrix



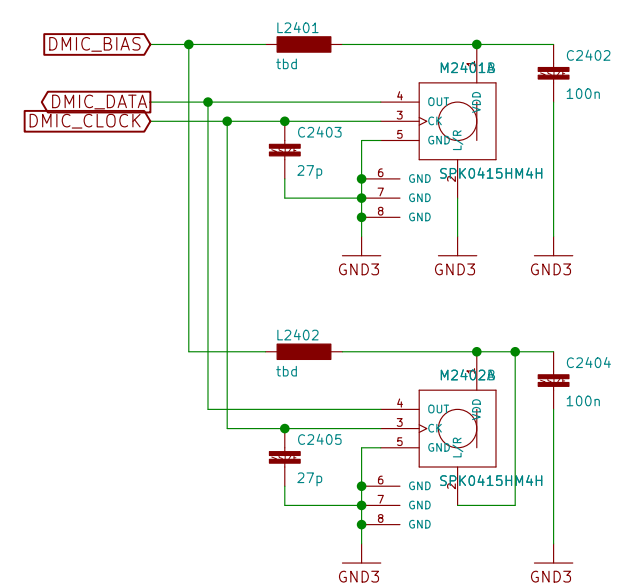
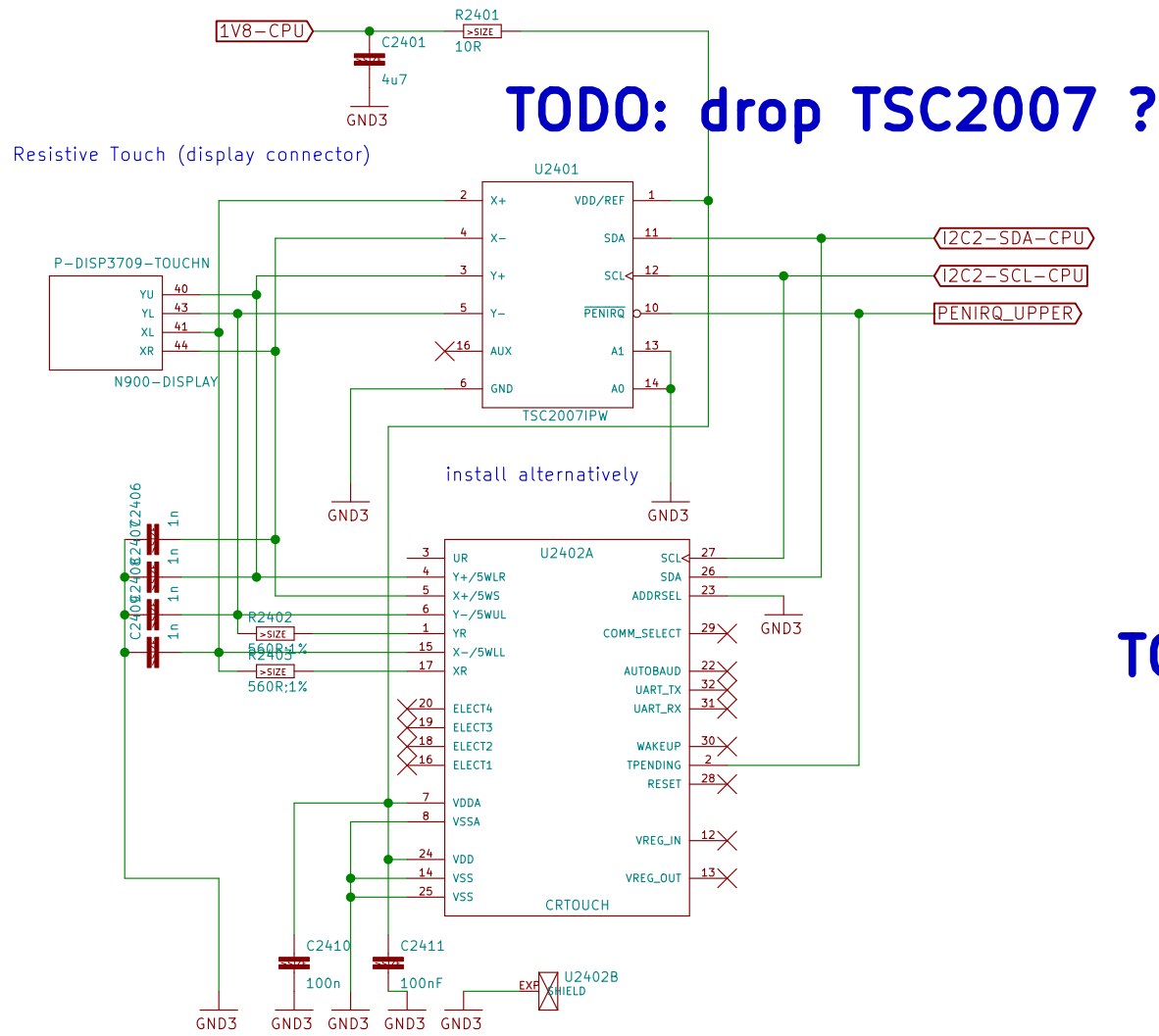
(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

Keypad

Sheet: /Keypad/
File: neo900_SS_23.sch

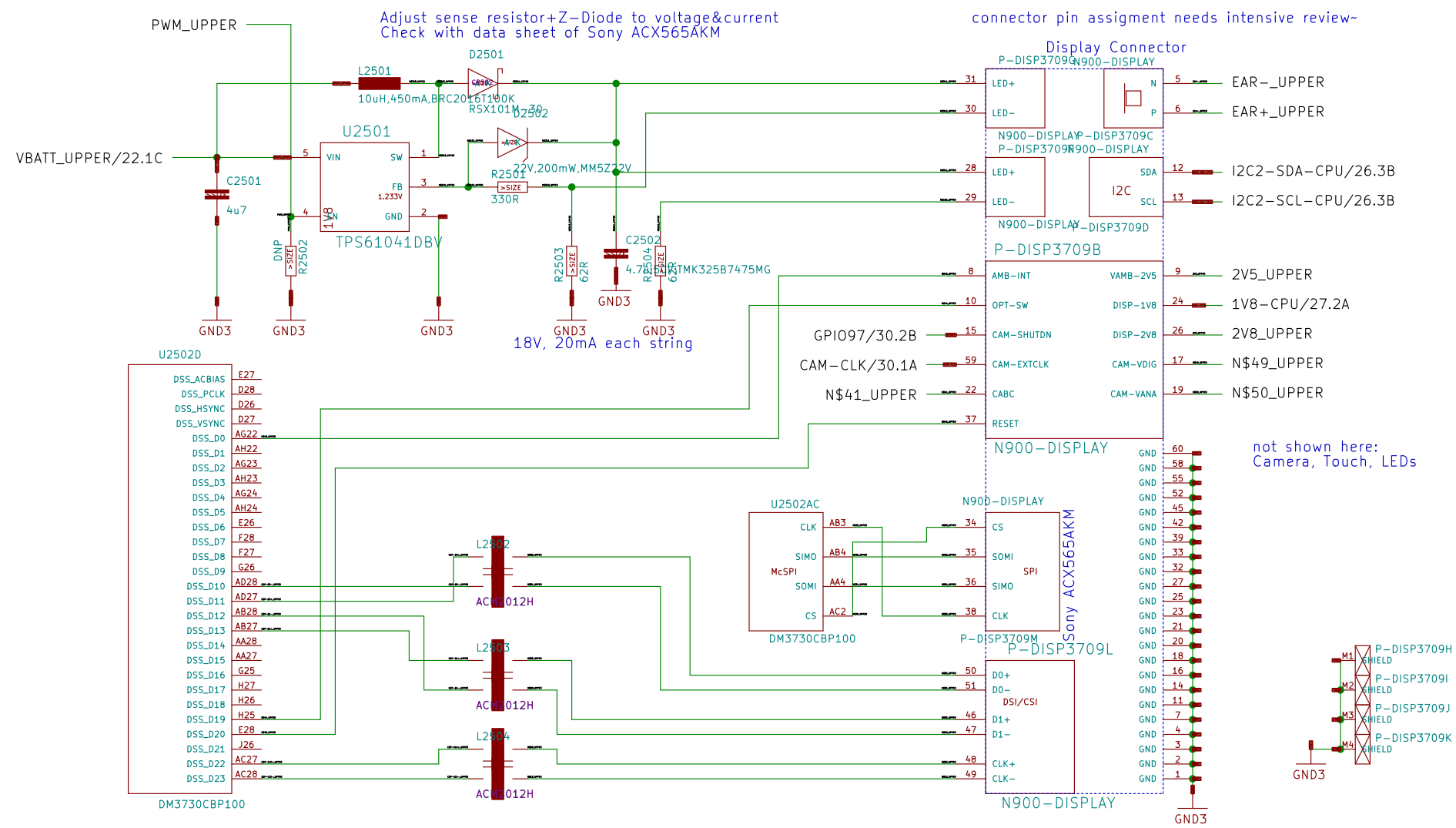
Title: neo900.sch

Size: A3	Date: 17 JUL 2016	Rev:
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04		4/1/2016



(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

Display-Peripherals			
Sheet: /Display-Peripherals/ File: neo900_SS_24.sch			
Title: neo900.sch			
Size: A3	Date: 17 JUL 2016	Rev:	
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04		25 Oct	



(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

Display-Panel&Power

Sheet: /Display-Panel&Power/
File: neo900_SS_25.sch

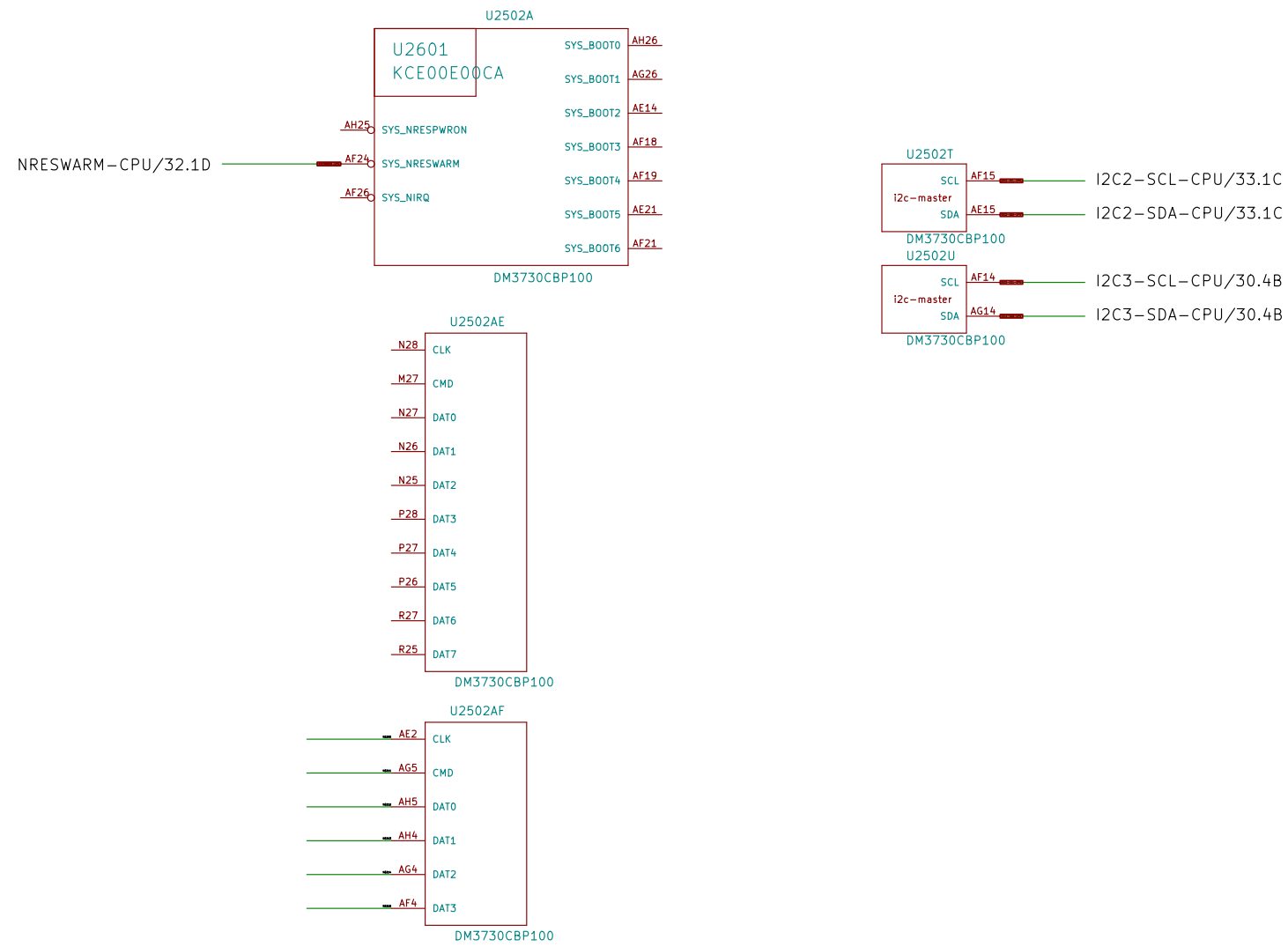
Title: neo900.sch

Size: A3 Date: 17 JUL 2016

Rev:

KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04-26.06.ct

INCOMPLETE in V2



(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

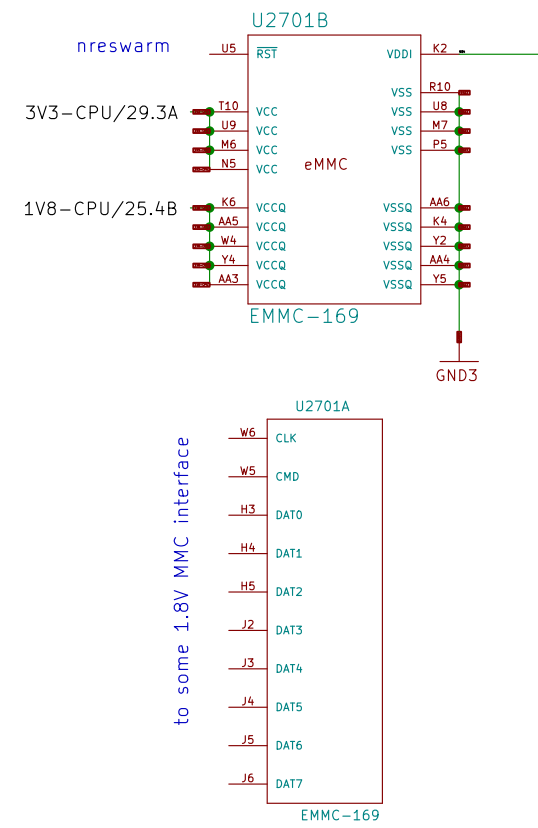
CPU + PoP RAM/NAND

Sheet: /CPU + PoP RAM/NAND/
File: neo900_SS_26.sch

Title: neo900.sch

Size: A3	Date: 17 JUL 2016	Rev:
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04		1-27/36ct

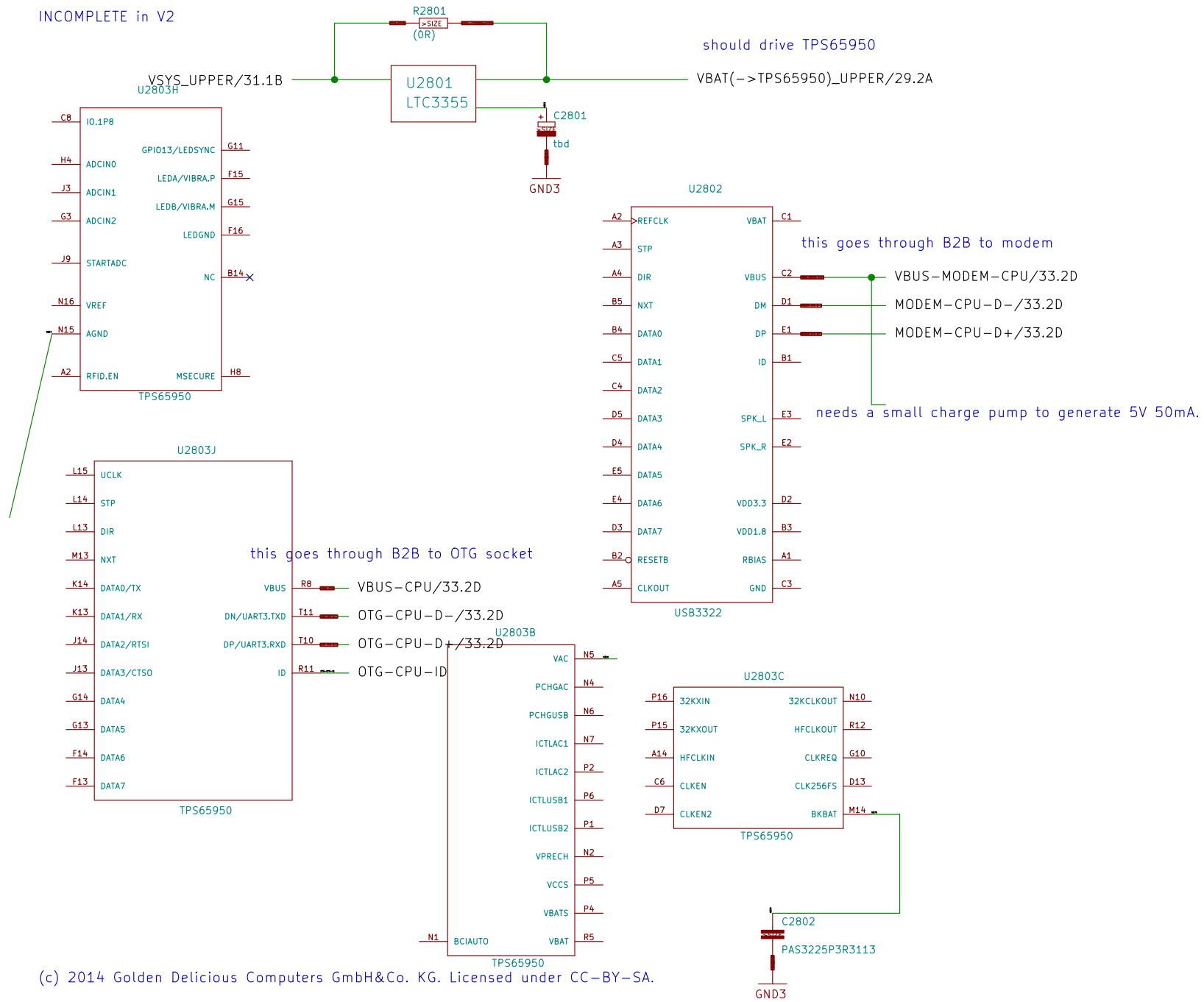
INCOMPLETE in V2



(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

eMMC		
Sheet: /eMMC/ File: neo900_SS_27.sch		
Title: neo900.sch		
Size: A3	Date: 17 JUL 2016	Rev:
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04		4.1.20160801

INCOMPLETE in V2



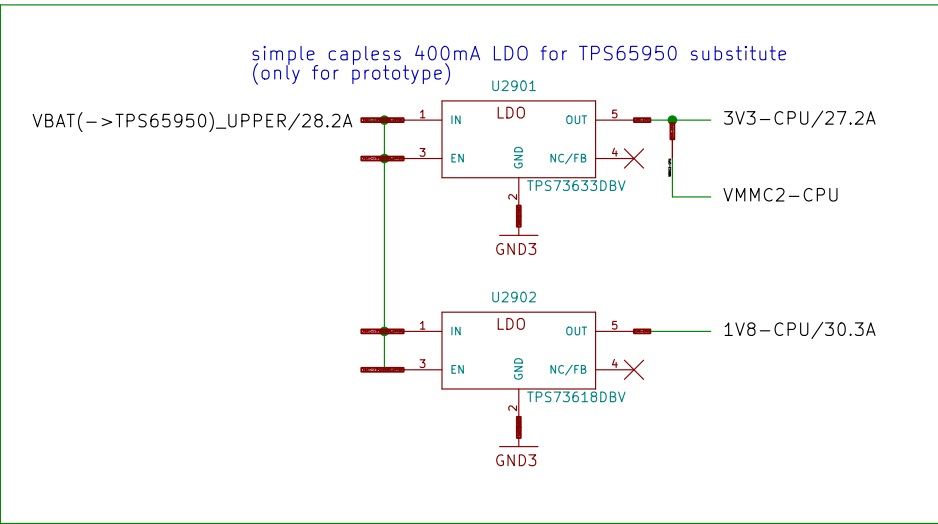
(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

PMU+Codec

Sheet: /PMU+Codec/
File: neo900_SS_28.sch

Title: neo900.sch

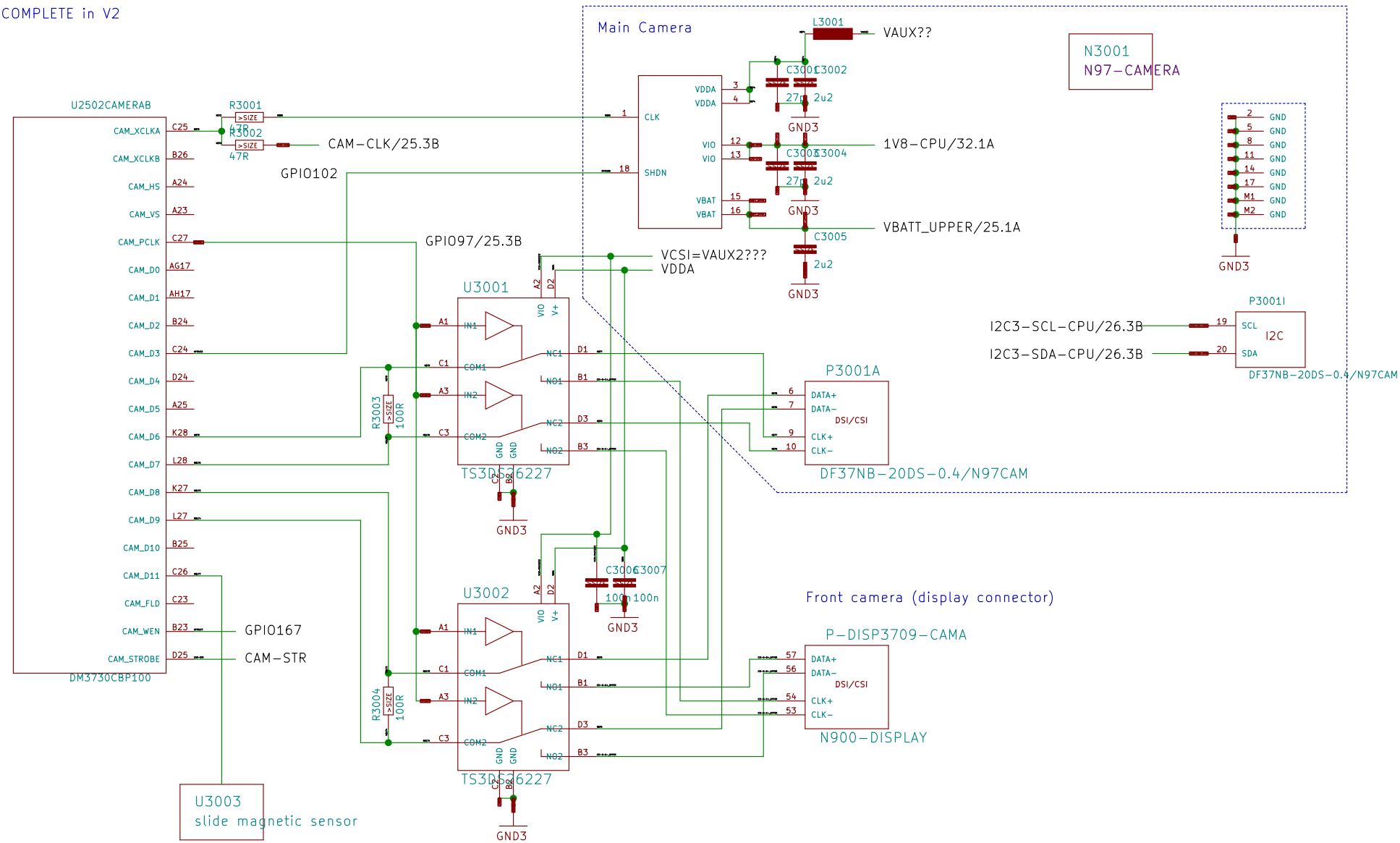
Size: A3	Date: 17 JUL 2016	Rev:
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04		1-29/36



(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

BB-XM Dummy (TWL4030)			
Sheet: /BB-XM Dummy (TWL4030)/			
File: neo900_SS_29.sch			
Title: neo900.sch			
Size: A3	Date: 17 JUL 2016	Rev:	
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04		1-30/36ct	

INCOMPLETE in V2



(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

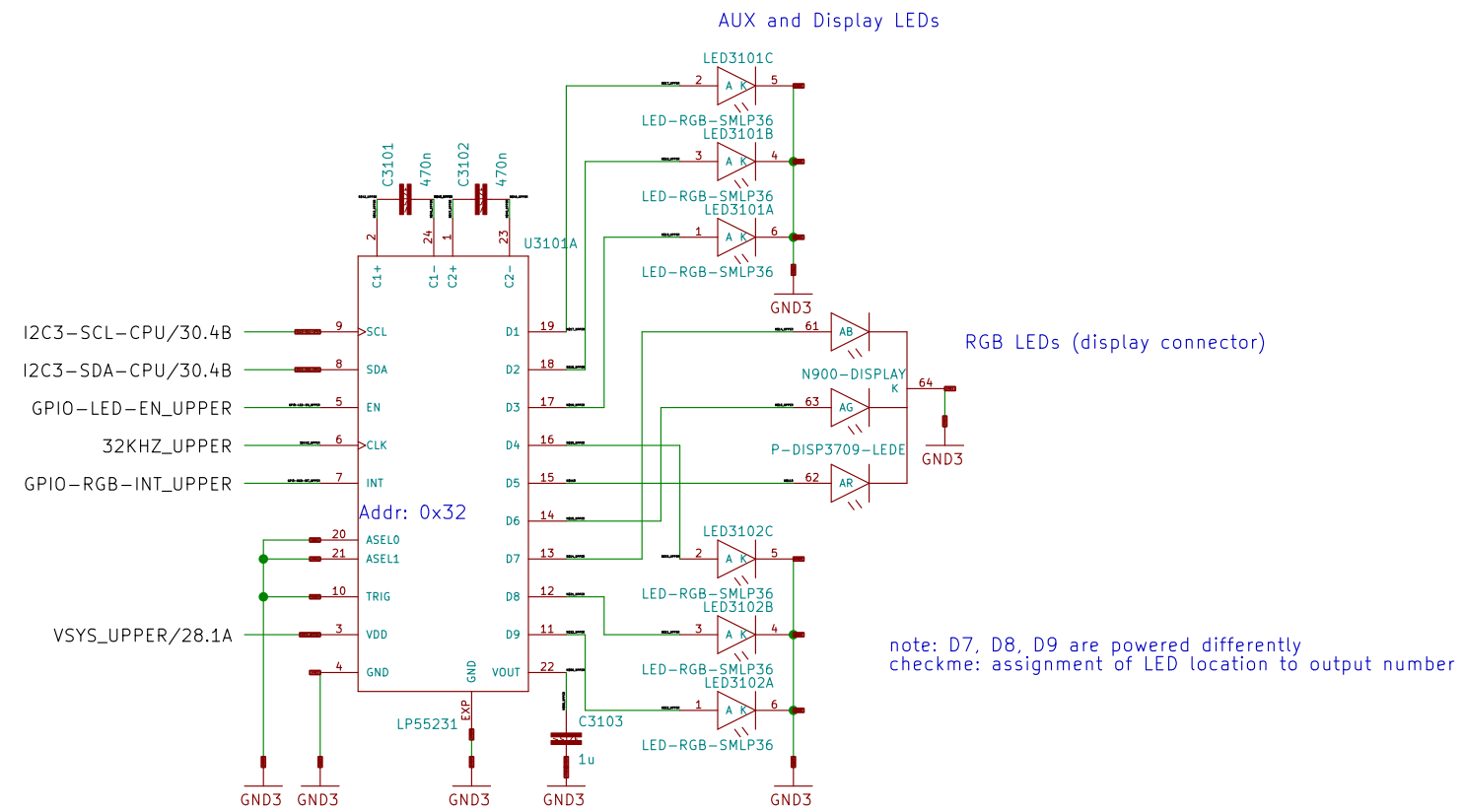
Camera

Sheet: /Camera/
File: neo900_SS_30.sch

Title: neo900.sch

Size: A3 Date: 17 JUL 2016

KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04-11.0.ct Rev: 1.0



(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

LEDs

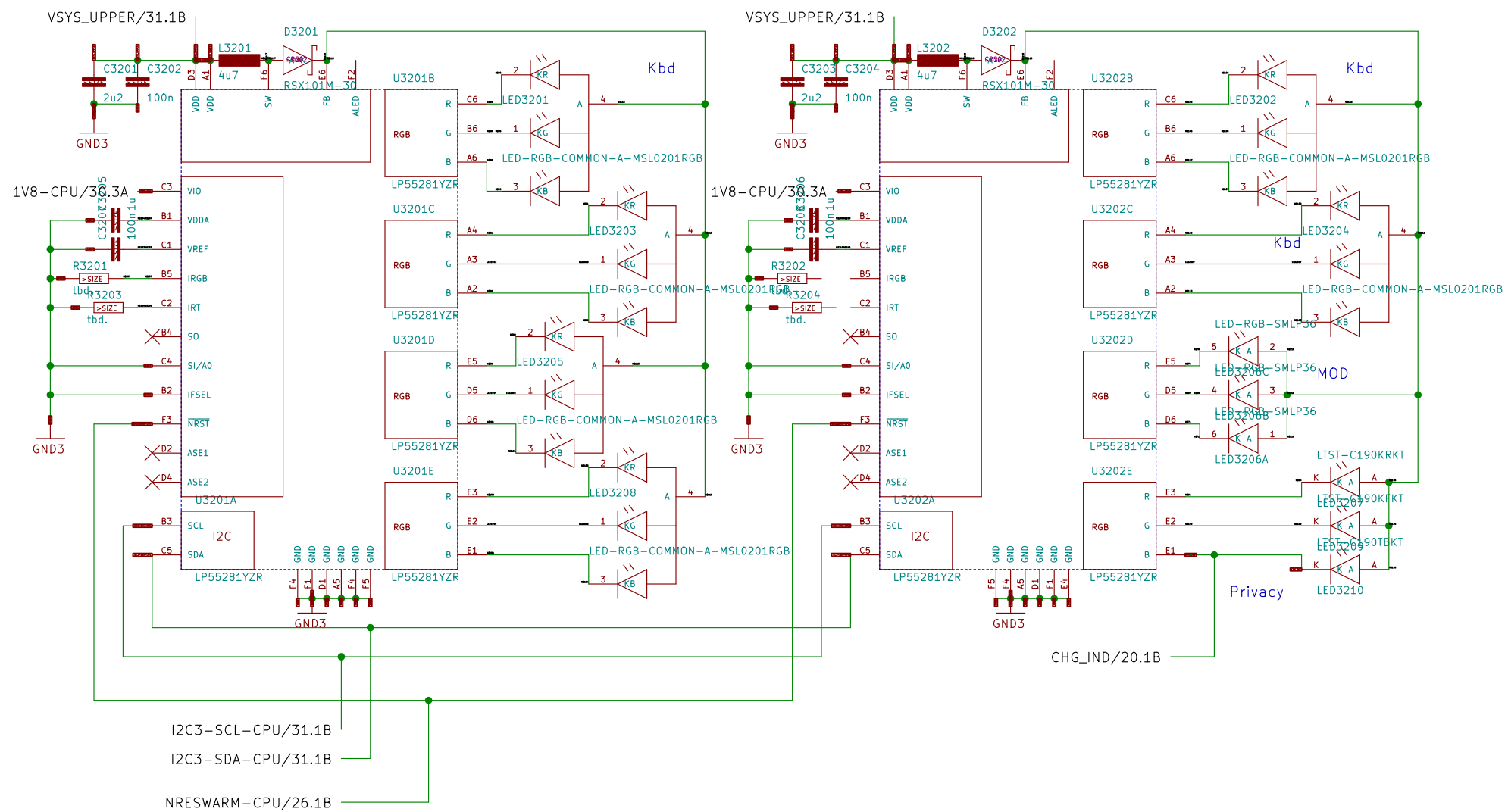
Sheet: /LEDs/
File: neo900_SS_31.sch

Title: neo900.sch

Size: A3 Date: 17 JUL 2016

Rev:

KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04-32bit



(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

Fancy LEDs

Sheet: /Fancy LEDs/
File: neo900_SS_32.sch

Title: neo900.sch

Size: A3 Date: 17 JUL 2016

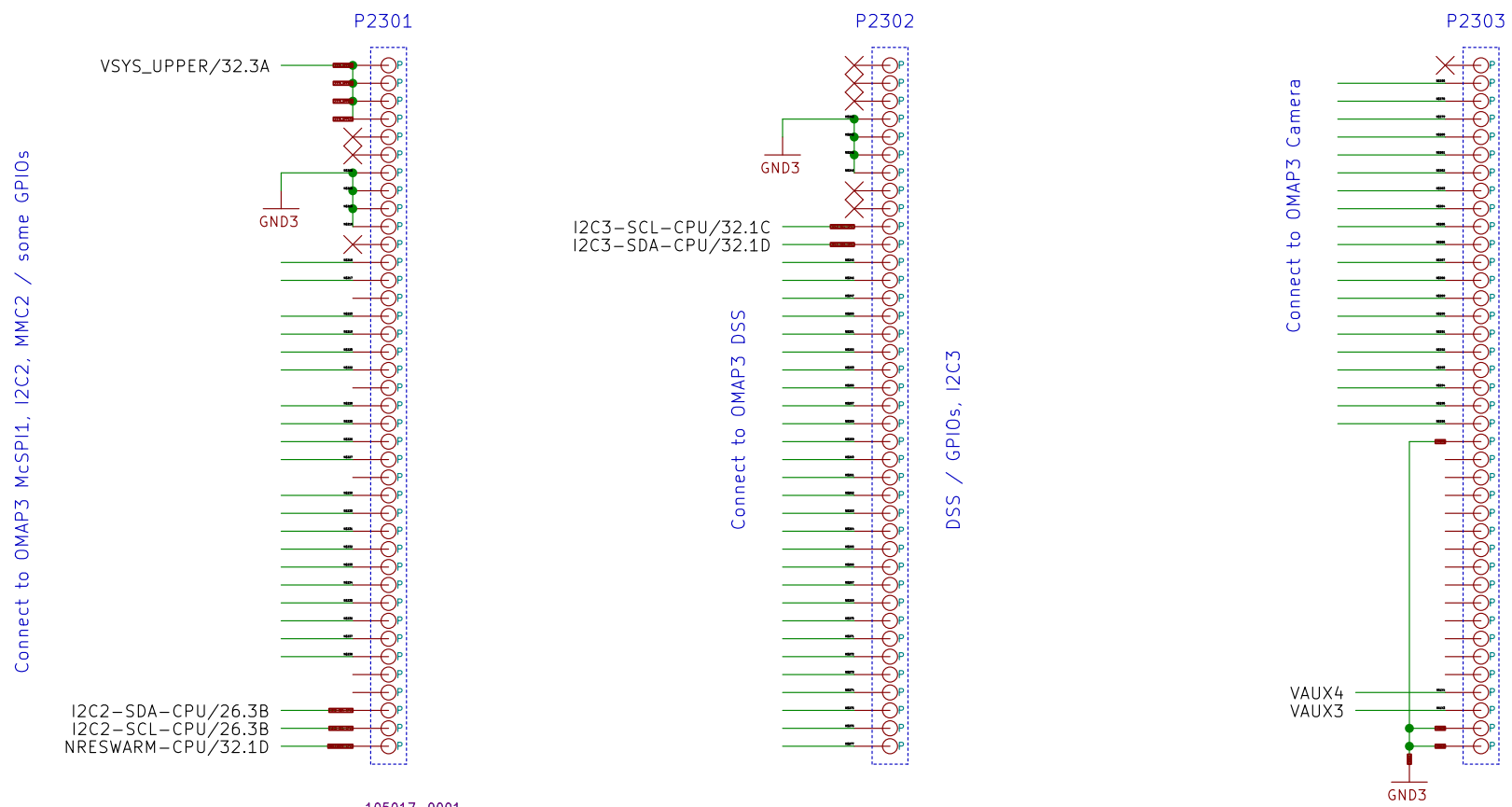
Rev:

KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04.1-3786ct

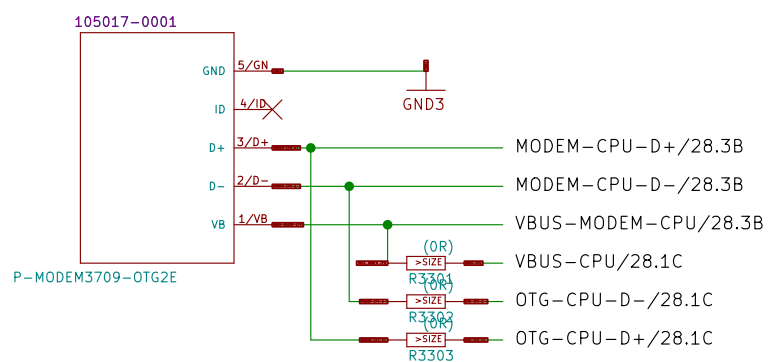
These connectors allow to "emulate" the DM3730 by connecting a BB-XM

INCOMPLETE
prototype only

connect to respective CPU-pads



connect to BB
by some Micro-USB cable



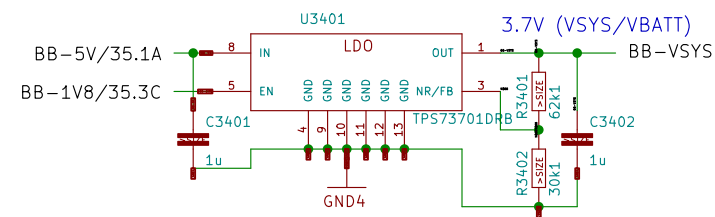
(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

Connector to BB-XM

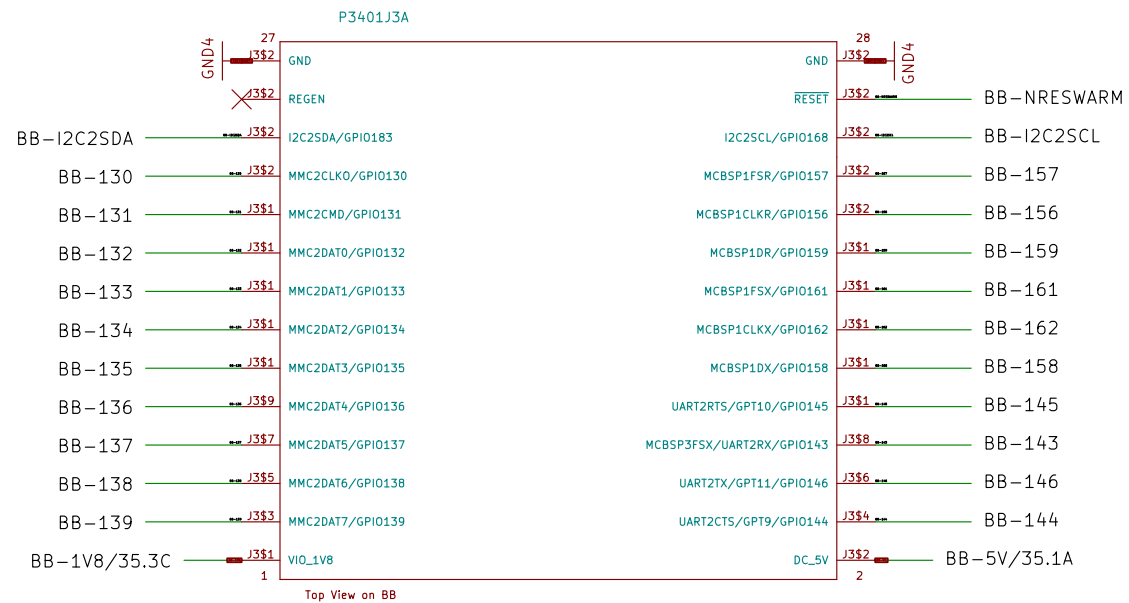
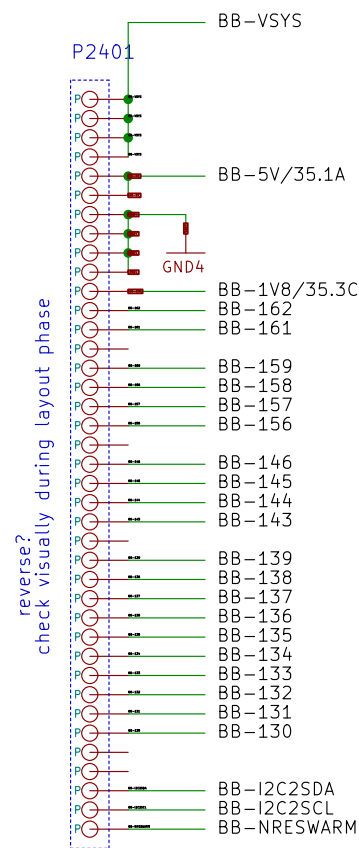
Sheet: /Connector to BB-XM/
File: neo900_SS_33.sch

Title: neo900.sch

Size: A3	Date: 17 JUL 2016	Rev:
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04		4/3/2016



Ersetzen durch 2A buck converter



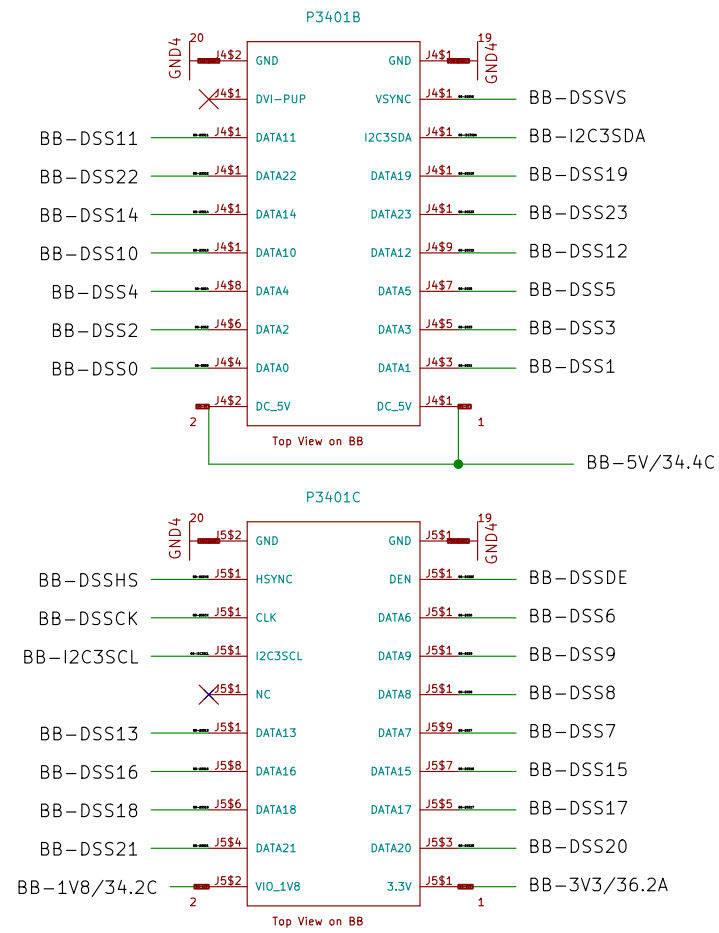
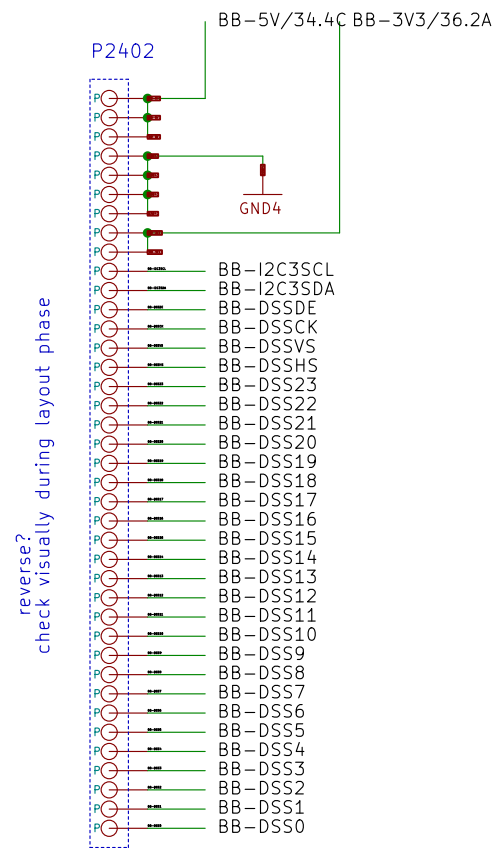
(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

BB-XM Adapter (CPU)

Sheet: /BB-XM Adapter (CPU)/
File: neo900_SS_34.sch

Title: neo900.sch

Size: A3 Date: 17 JUL 2016 Rev: 1
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04-1



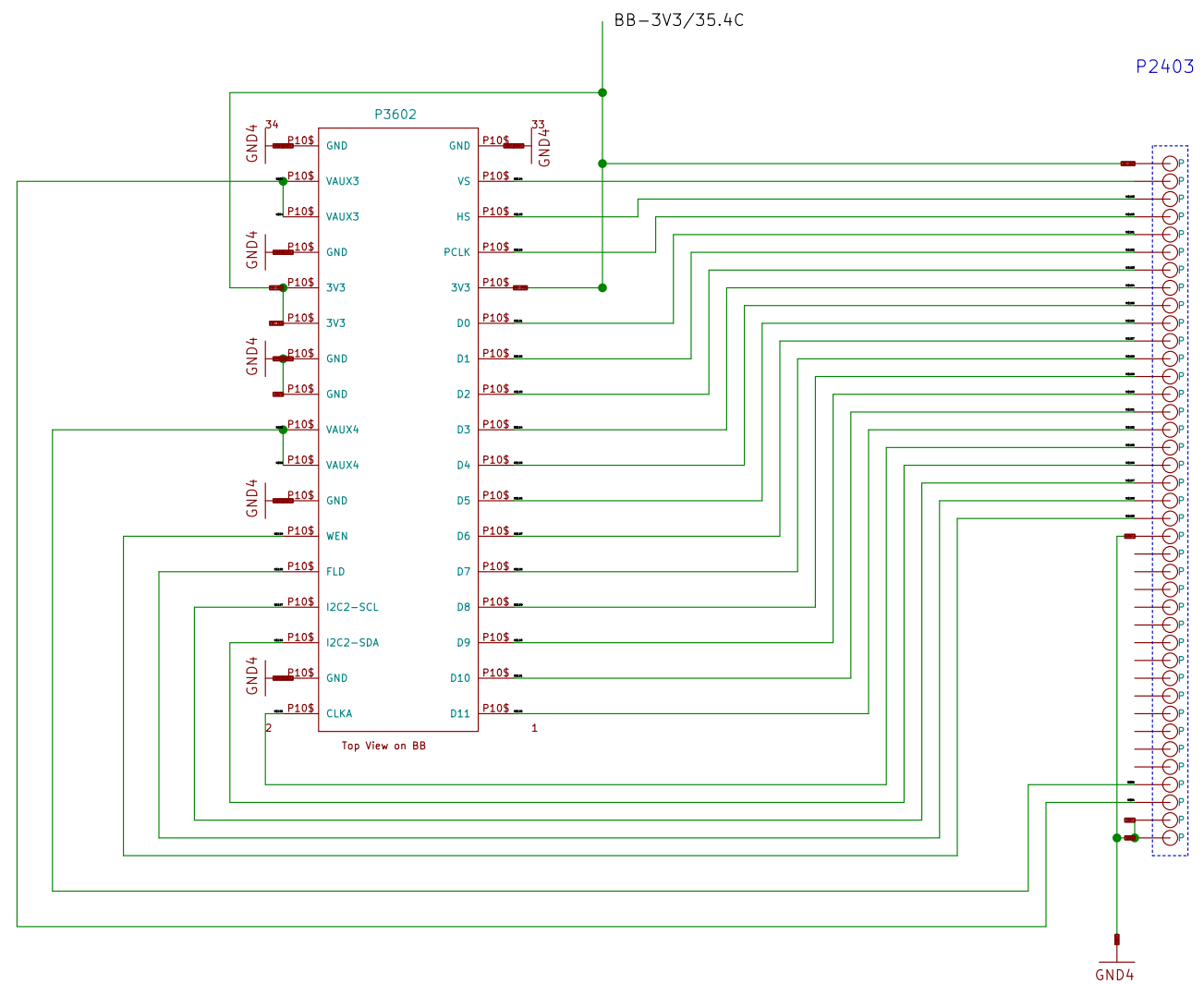
(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

BB-XM Adapter (DISP)

Sheet: /BB-XM Adapter (DISP)/
File: neo900_SS_35.sch

Title: neo900.sch

Size: A3	Date: 17 JUL 2016	Rev:
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04		1/1



(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

BB-XM Adapter (CAM)

Sheet: /BB-XM Adapter (CAM)/
File: neo900_SS_36.sch

Title: neo900.sch

Size: A3	Date: 17 JUL 2016	Rev:
KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04		1/1

Molex Jumper cables to connect BB-XM-Adapter to Uppwer board

N3701 15015-0439	N3702 15015-0439	N3703 15015-0439
CPU	DISP	CAM

N3704 N900 case assembly

N3705 N97-CAMERA-HOLE

N3706 headset jack

N3707 STENCIL-TOP

N3708 STENCIL-BOTTOM

(c) 2014 Golden Delicious Computers GmbH&Co. KG. Licensed under CC-BY-SA.

No-Solder Components

Sheet: /No-Solder Components/
File: neo900_SS_37.sch

Title: neo900.sch

Size: A3 Date: 17 JUL 2016

KiCad E.D.A. eeschema 4.1.0-alpha+201607120318+697546ubuntu16.04-1p06ct **Rev:**