

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

# Buttons

TITLE: Neo900

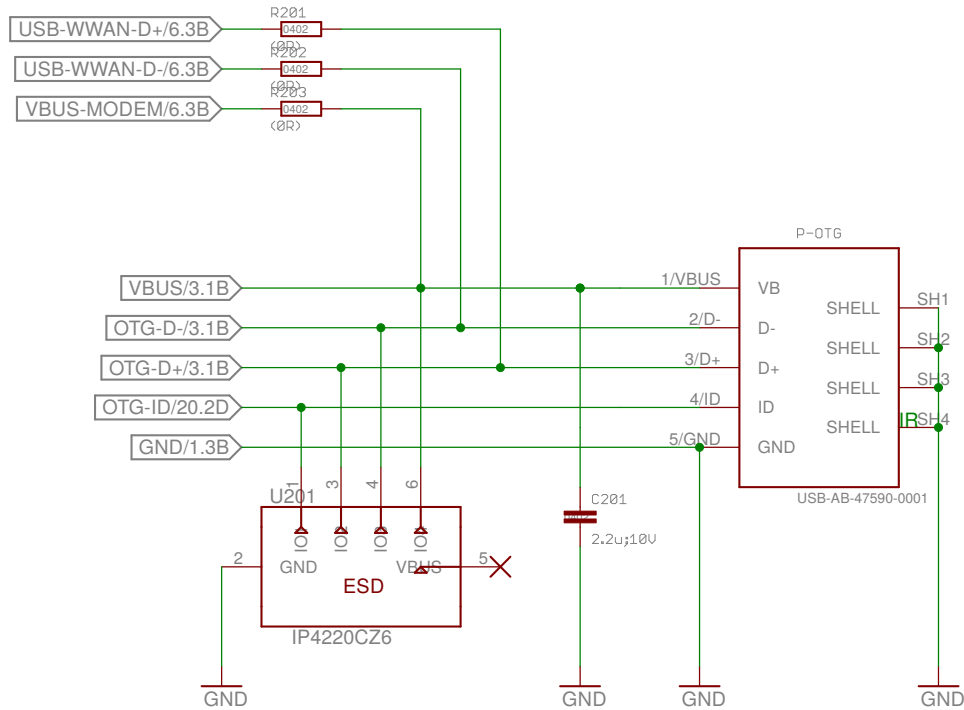
Document Number:

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V2b

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



# OTG

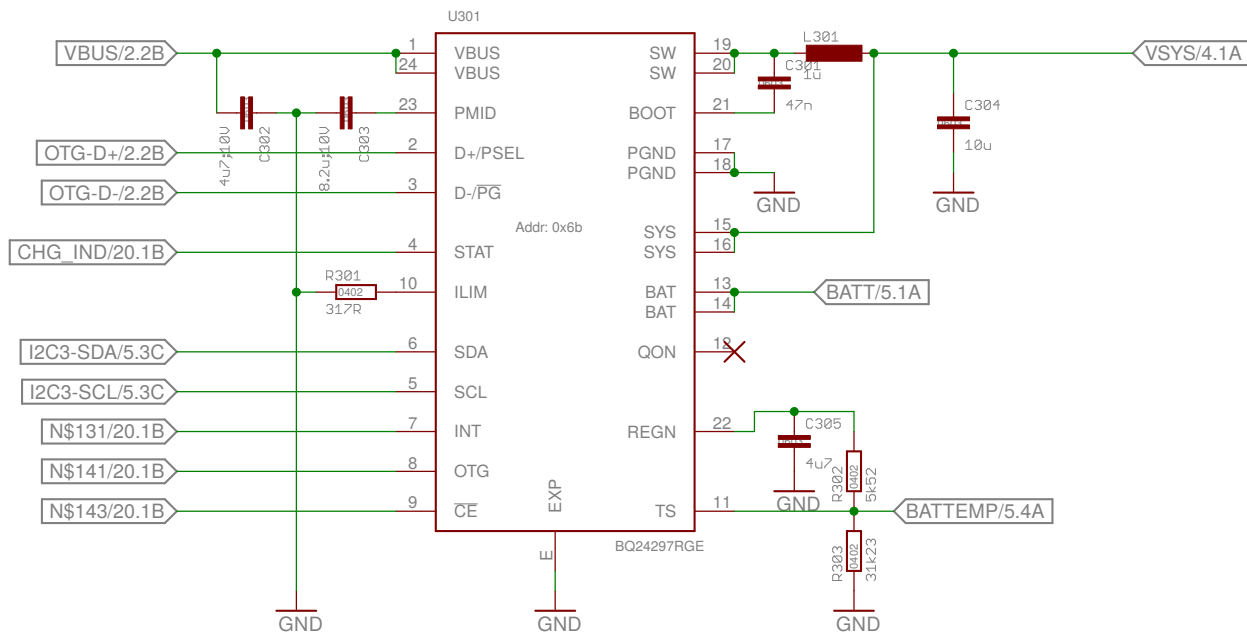
TITLE: Neo900

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# Charger/OTG-Booster

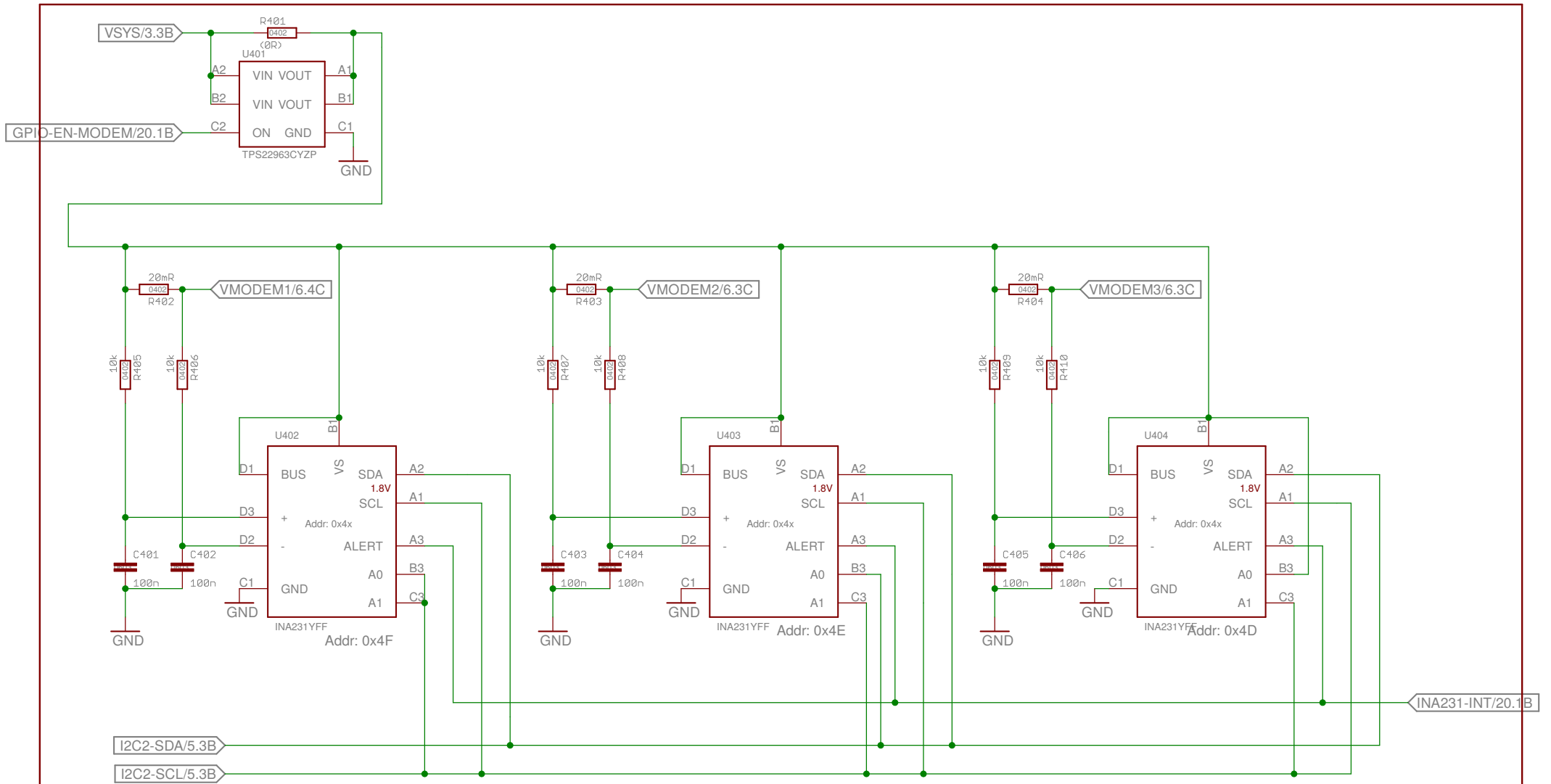
TITLE: Neo900

Document Number:

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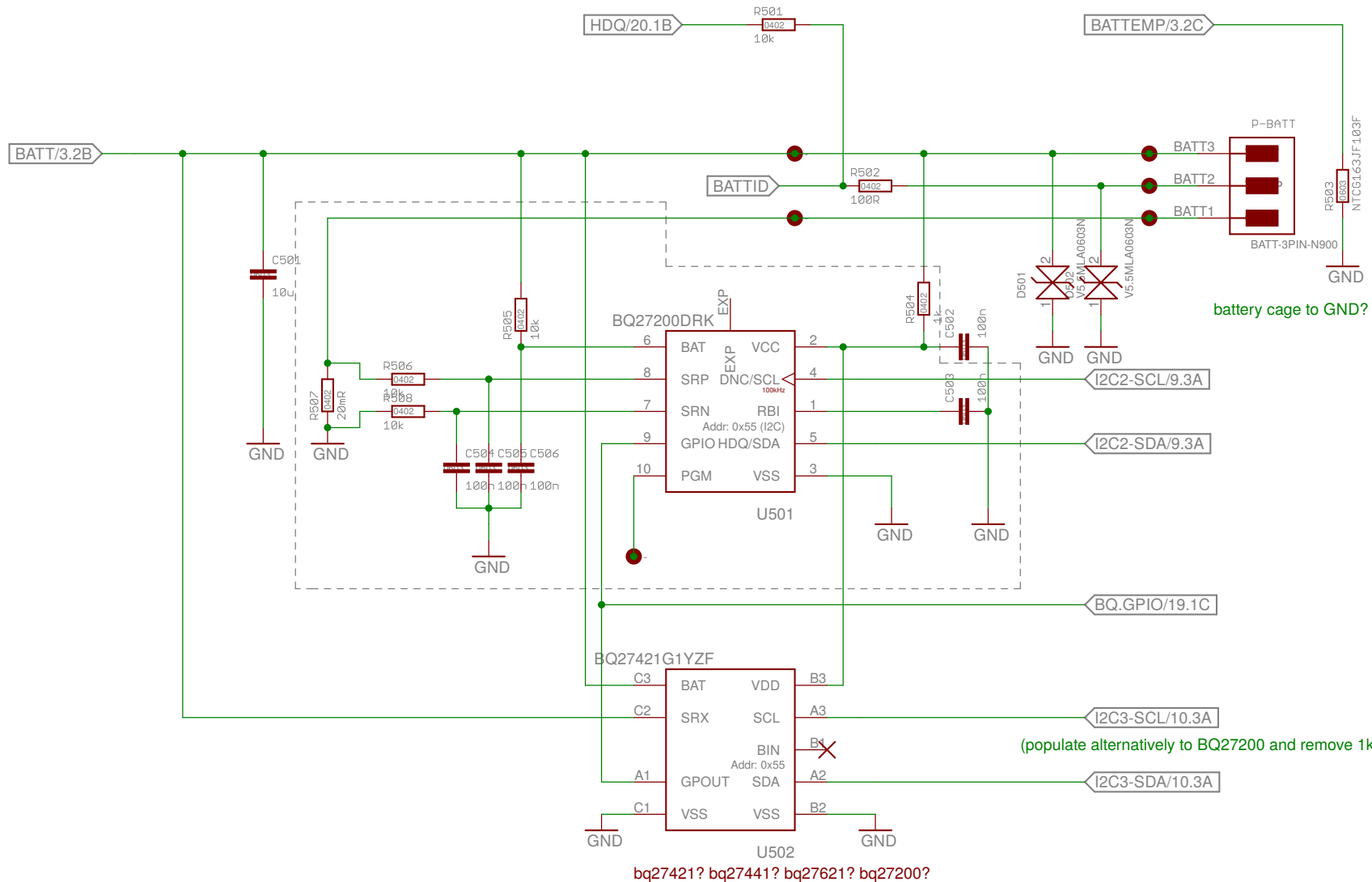
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# Modem Power

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battery cage to GND?

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

bq27421? bq27441? bq27621? bq27200?

# Fuel Gauge

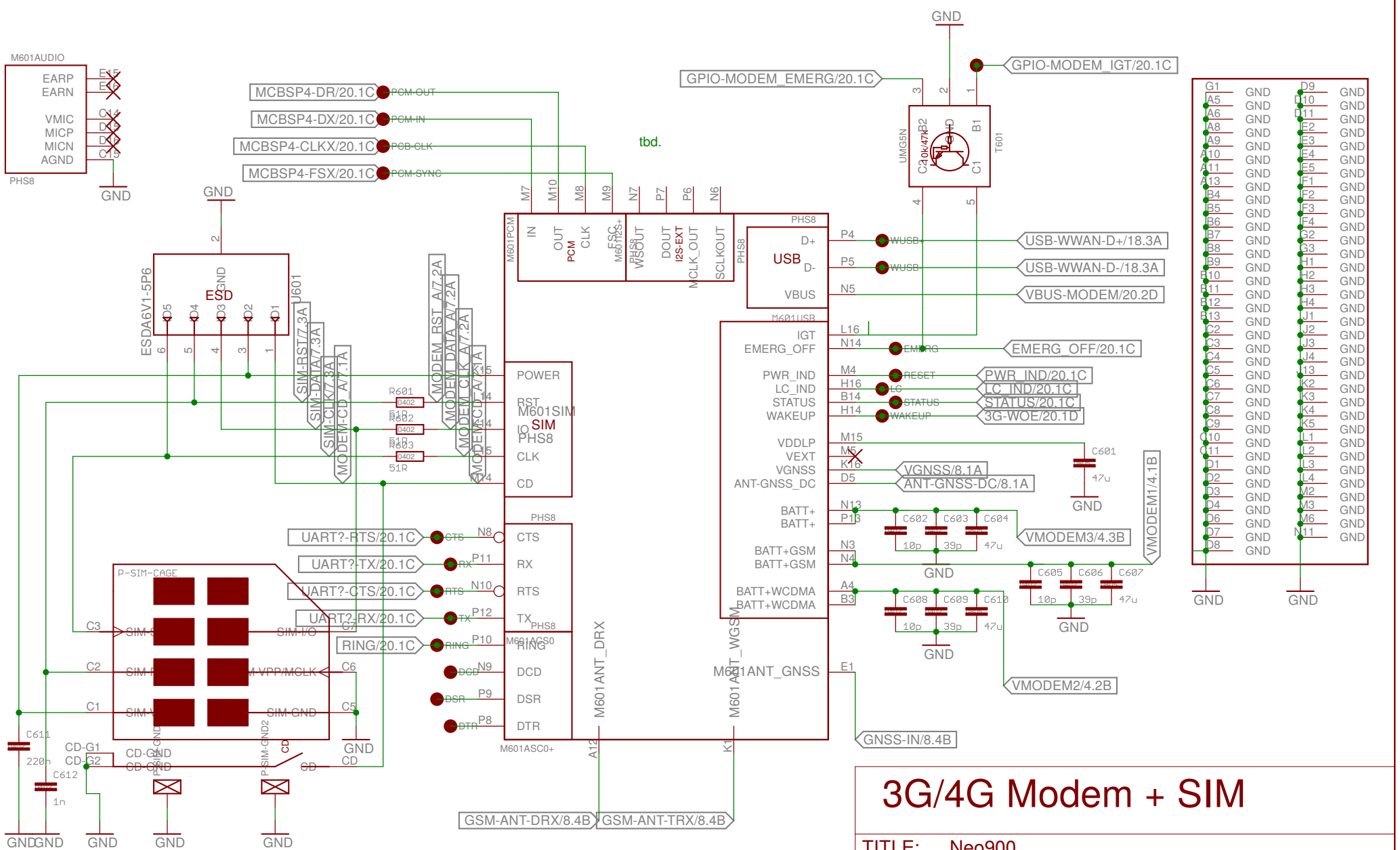
TITLE: Neo900

Document Number:

REV:  
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Date: 8 Oct 2015 06:01:13

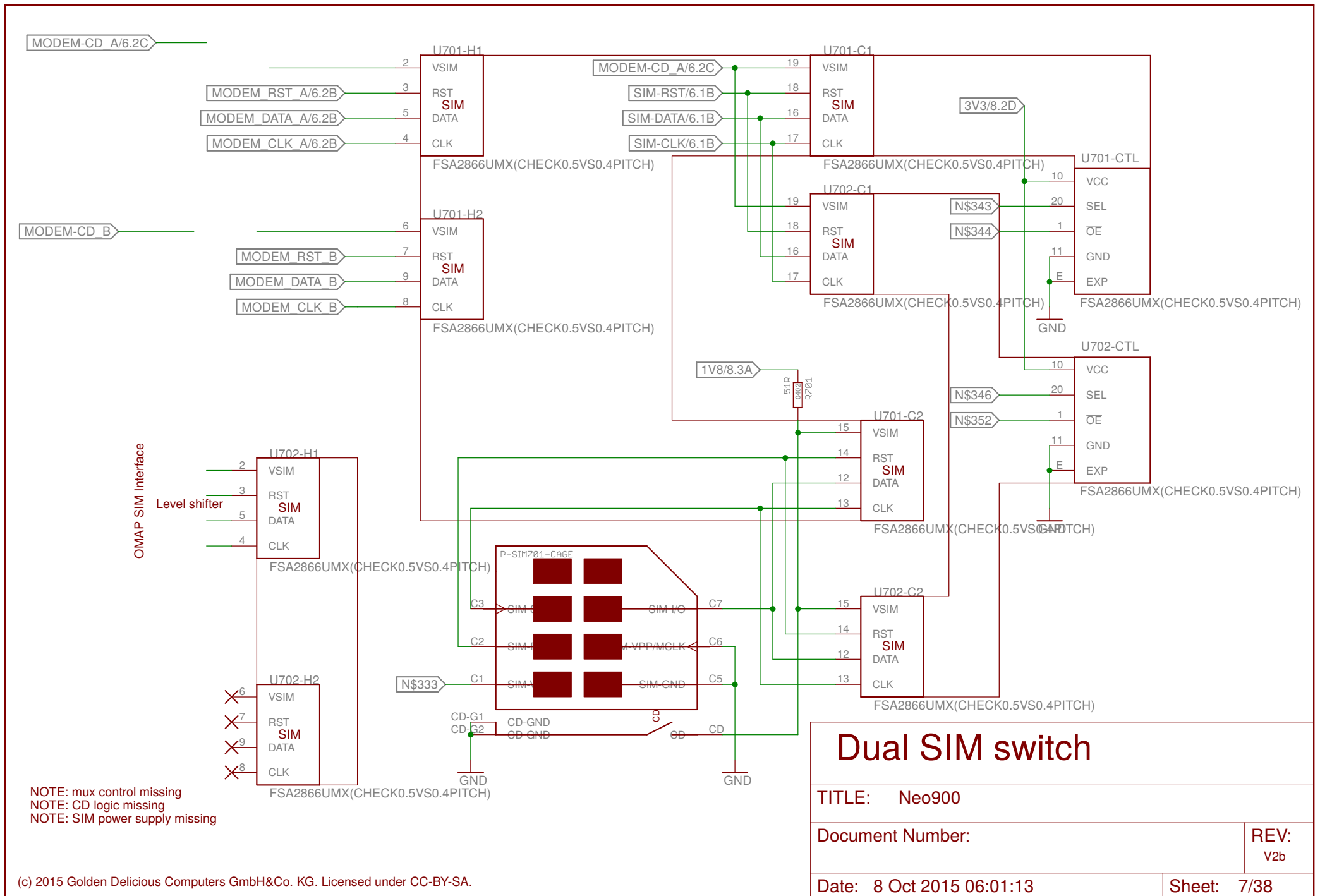
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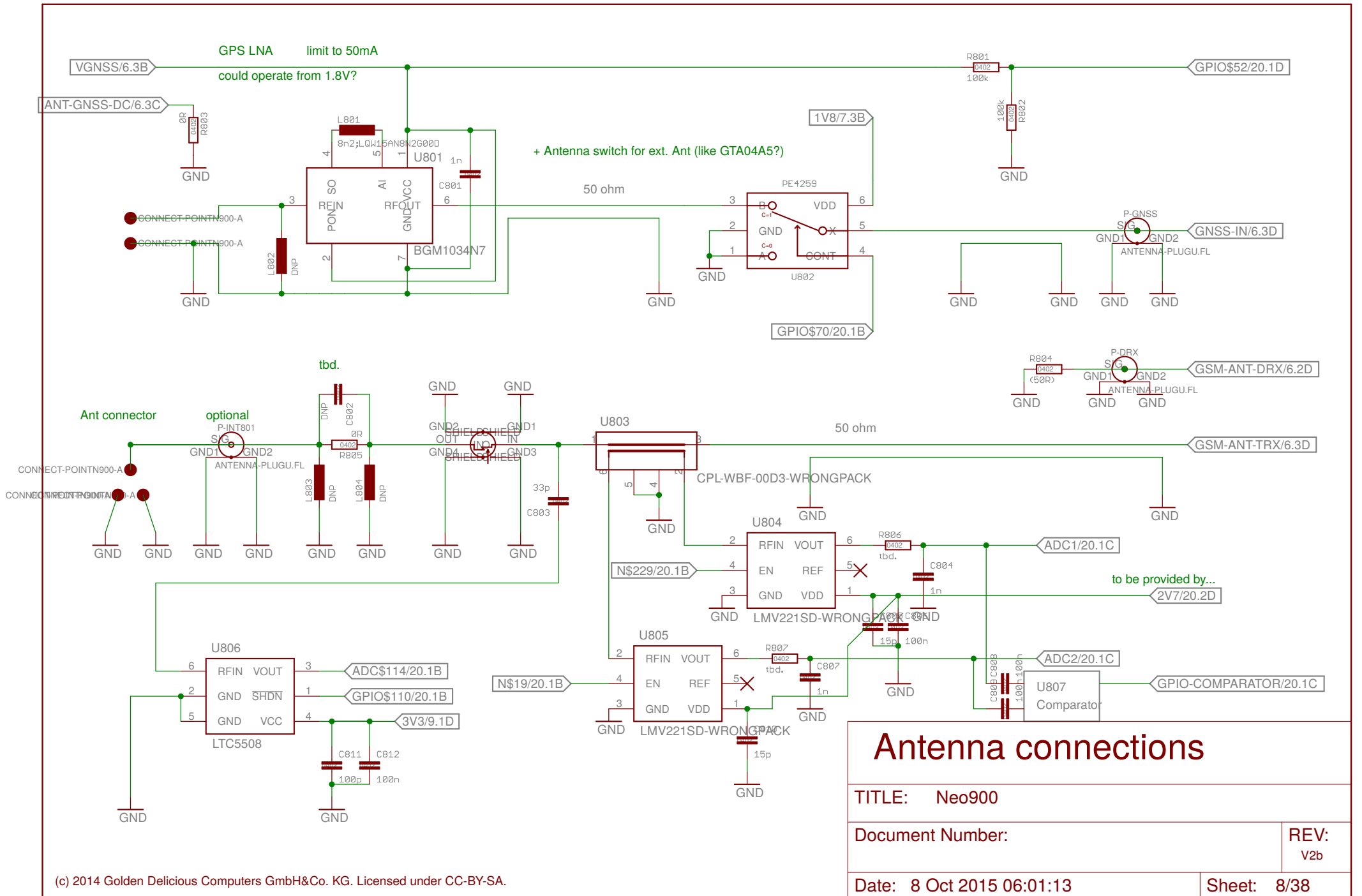


# 3G/4G Modem + SIM

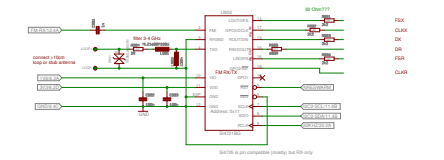
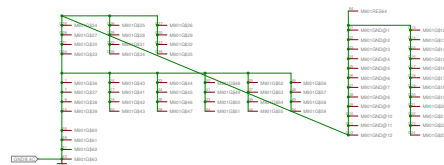
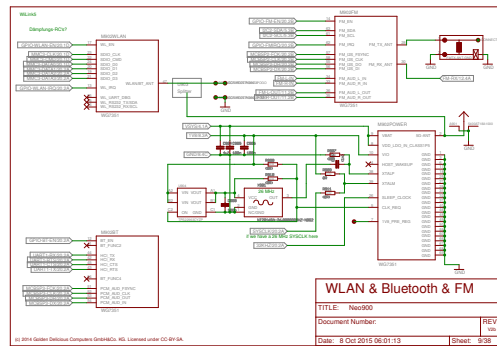
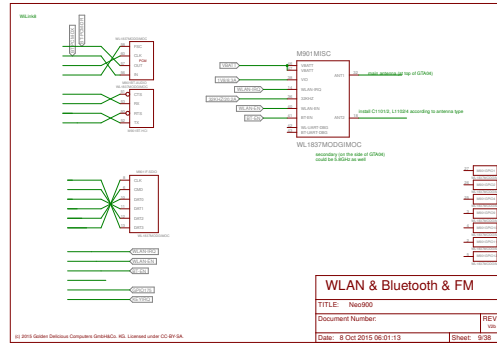
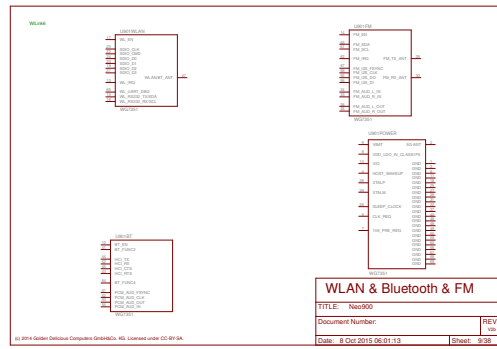
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Document Number:	REV: V2b
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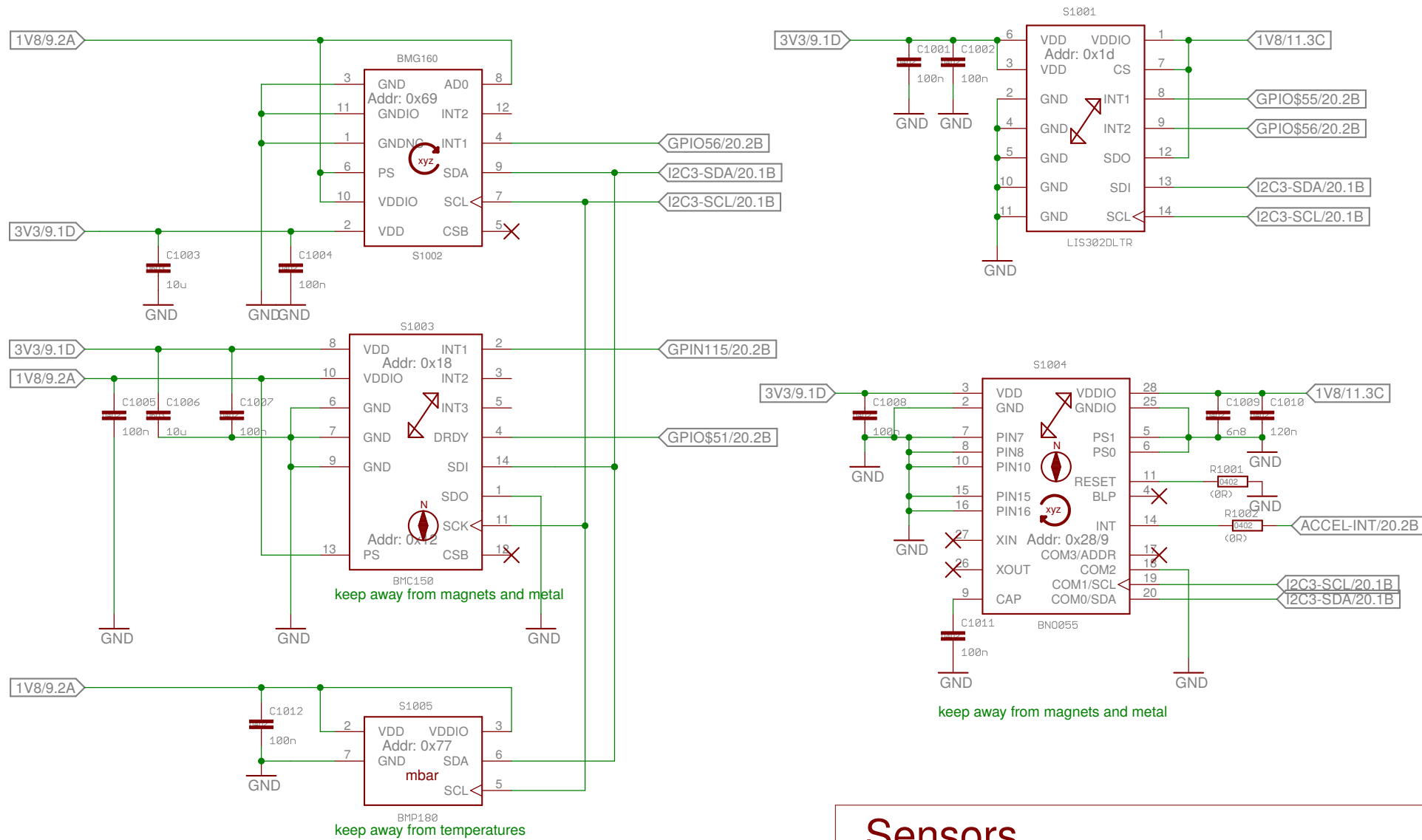
Can we connect UART in parallel to Bluetooth UART (i.e. if BT is disabled we can unbrick the Modem?)











# Sensors

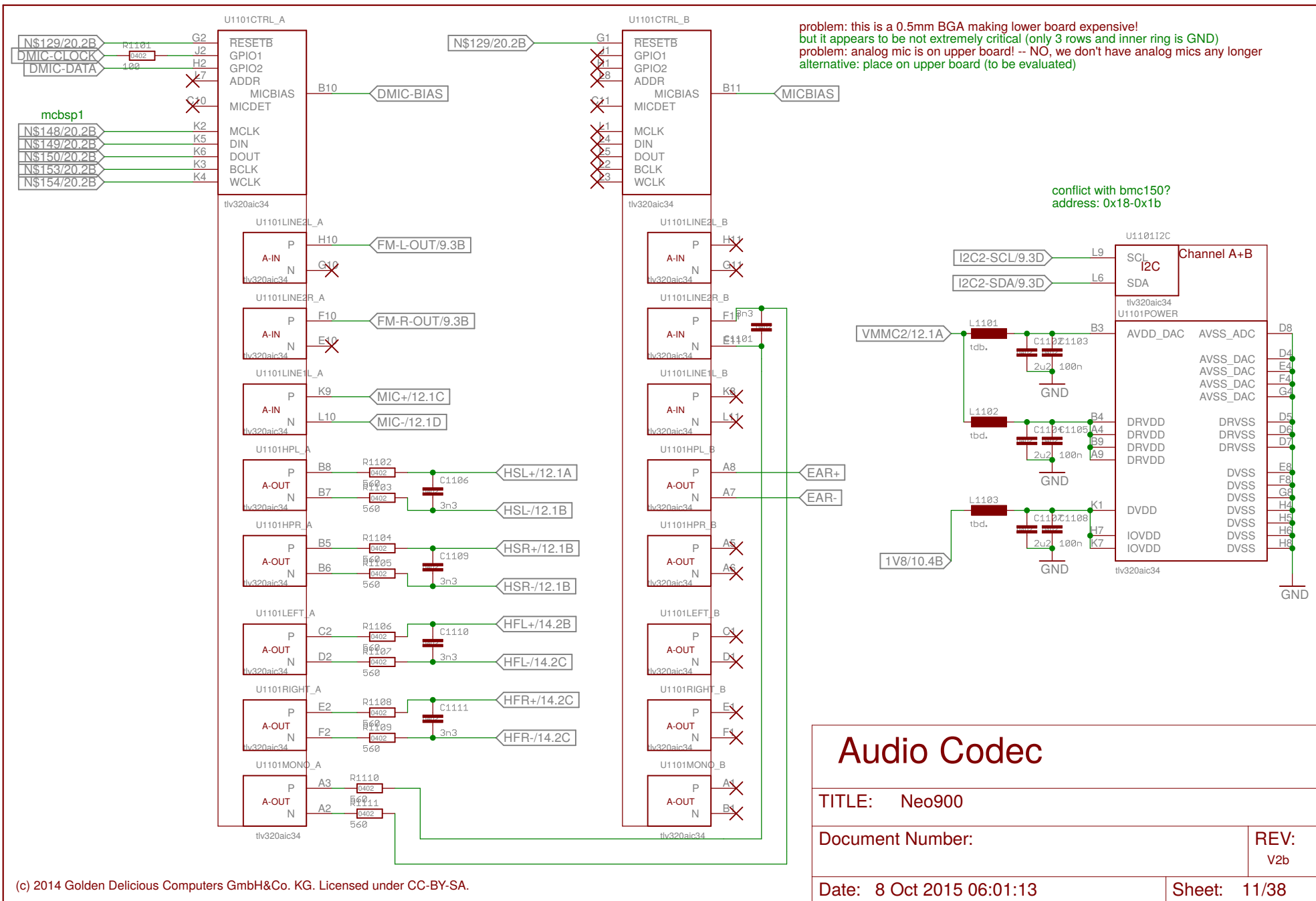
TITLE: Neo900

Document Number:

REV:  
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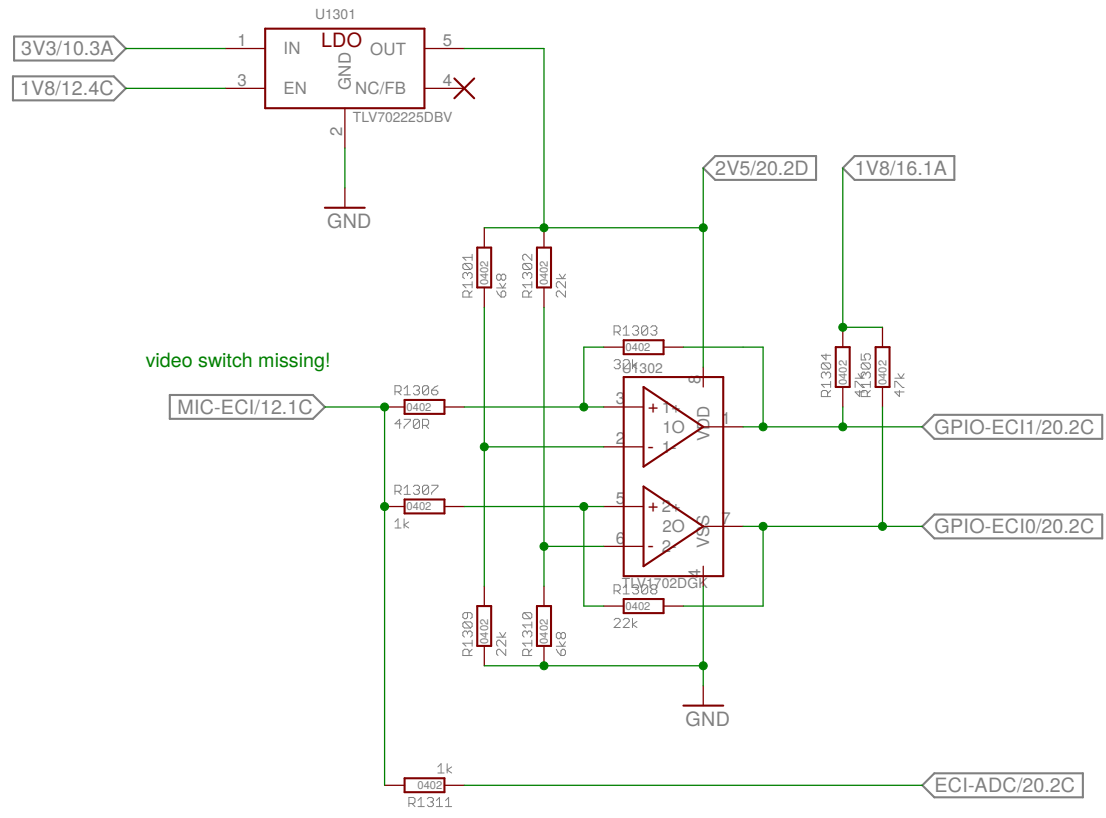
Date: 8 Oct 2015 06:01:13

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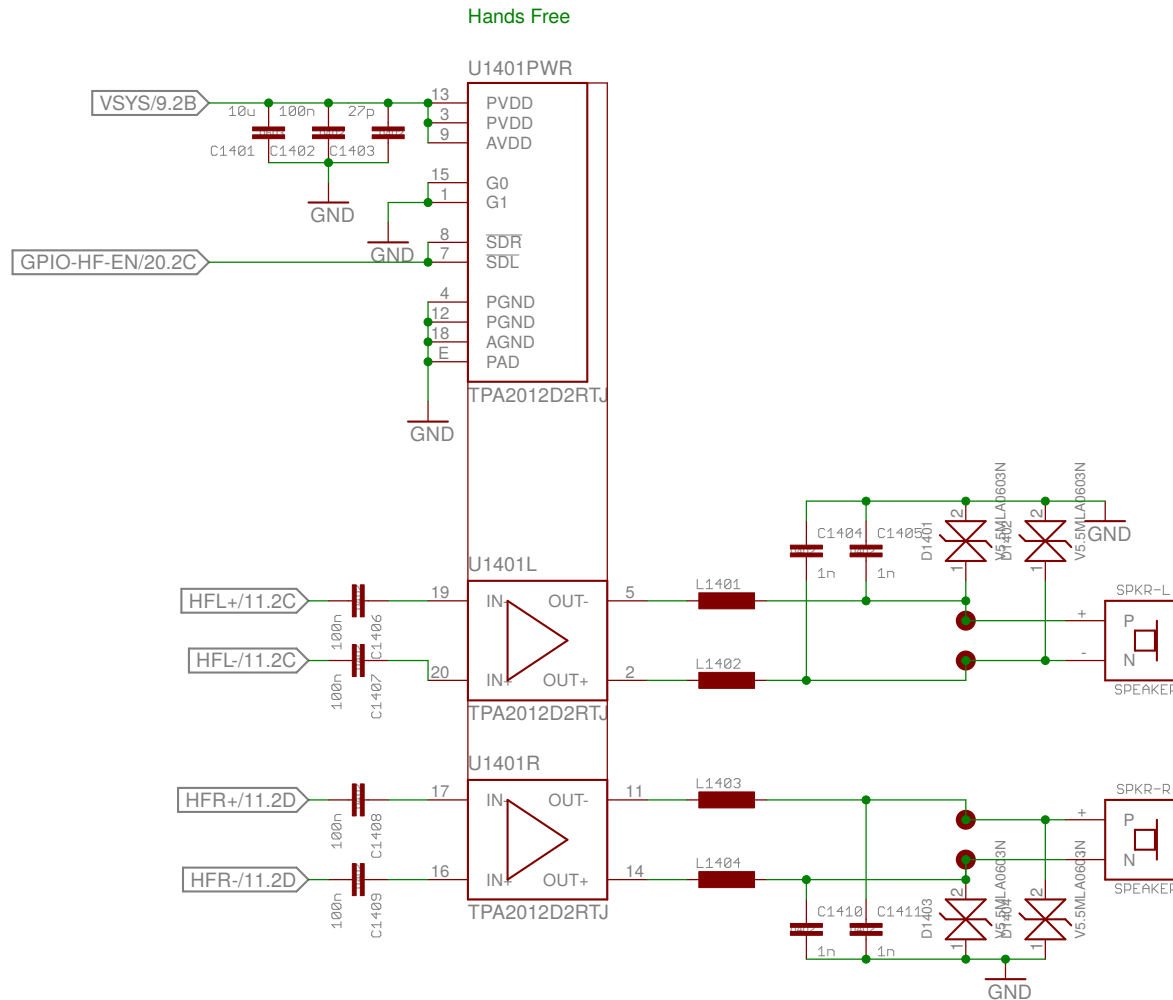
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video switch missing!

<h1>ECI</h1>	
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# Audio Handsfree

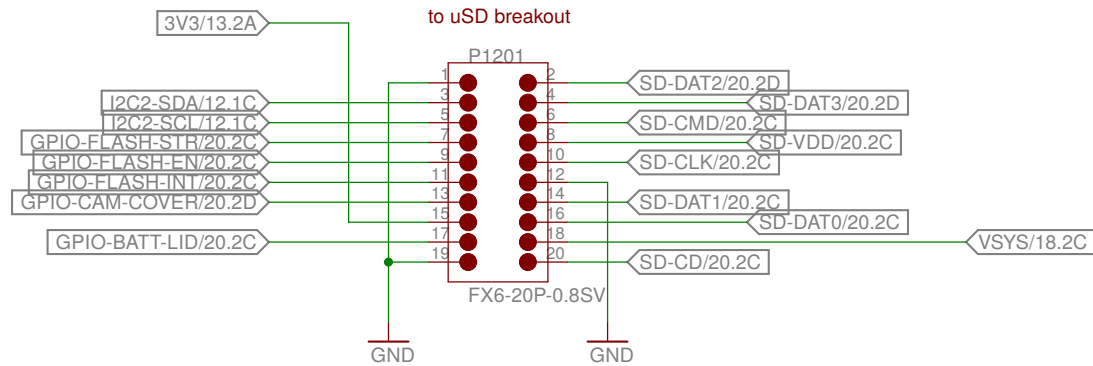
TITLE: Neo900

Document Number:

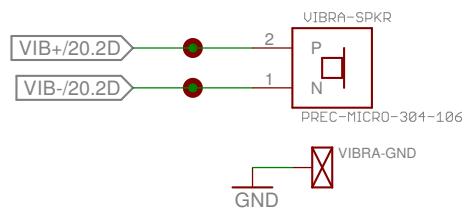
REV:  
V2b

Date: 8 Oct 2015 06:01:13

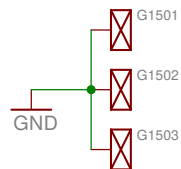
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Vibramotor



Shield



## Misc (lower)

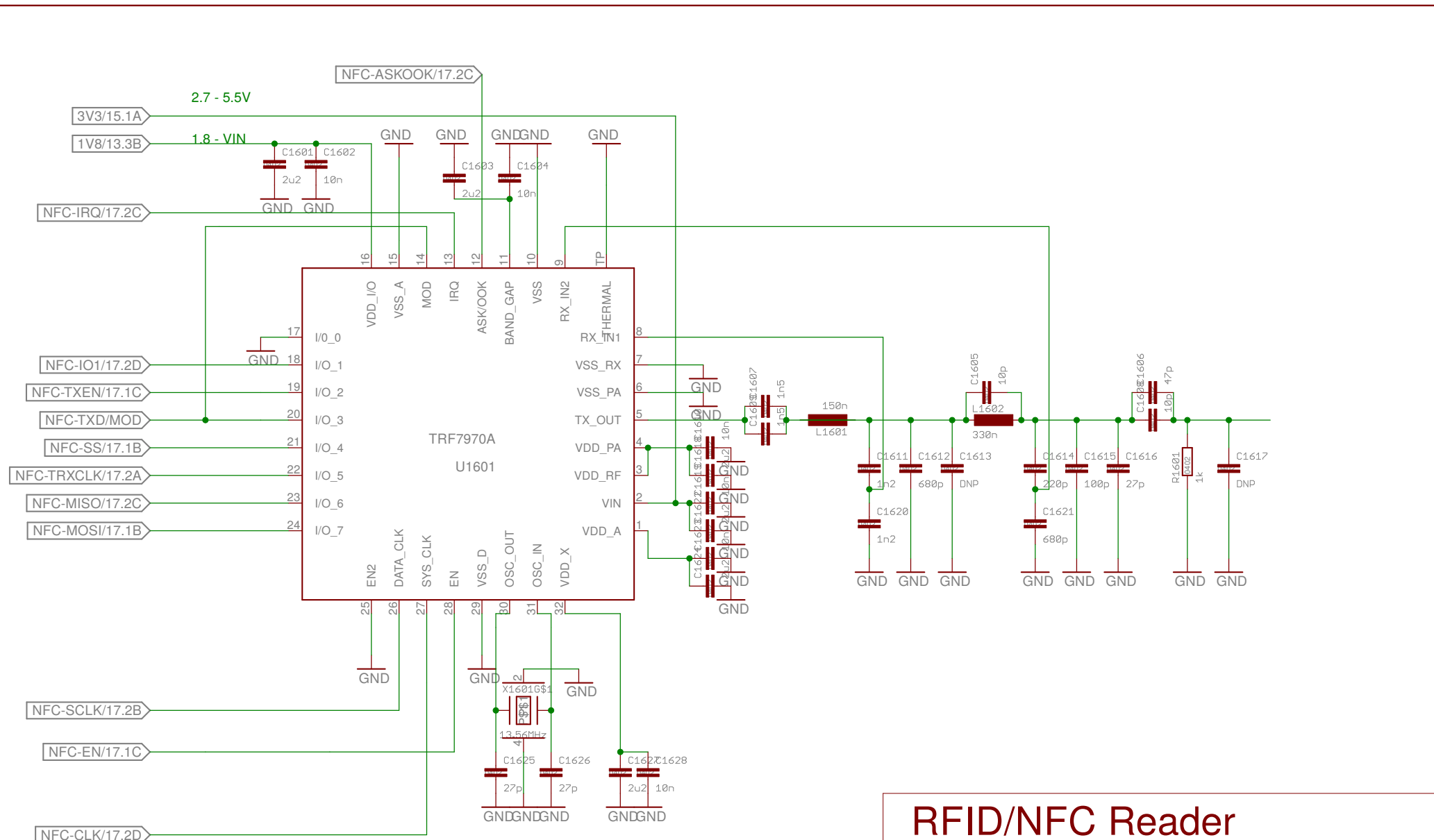
TITLE: Neo900

Document Number:

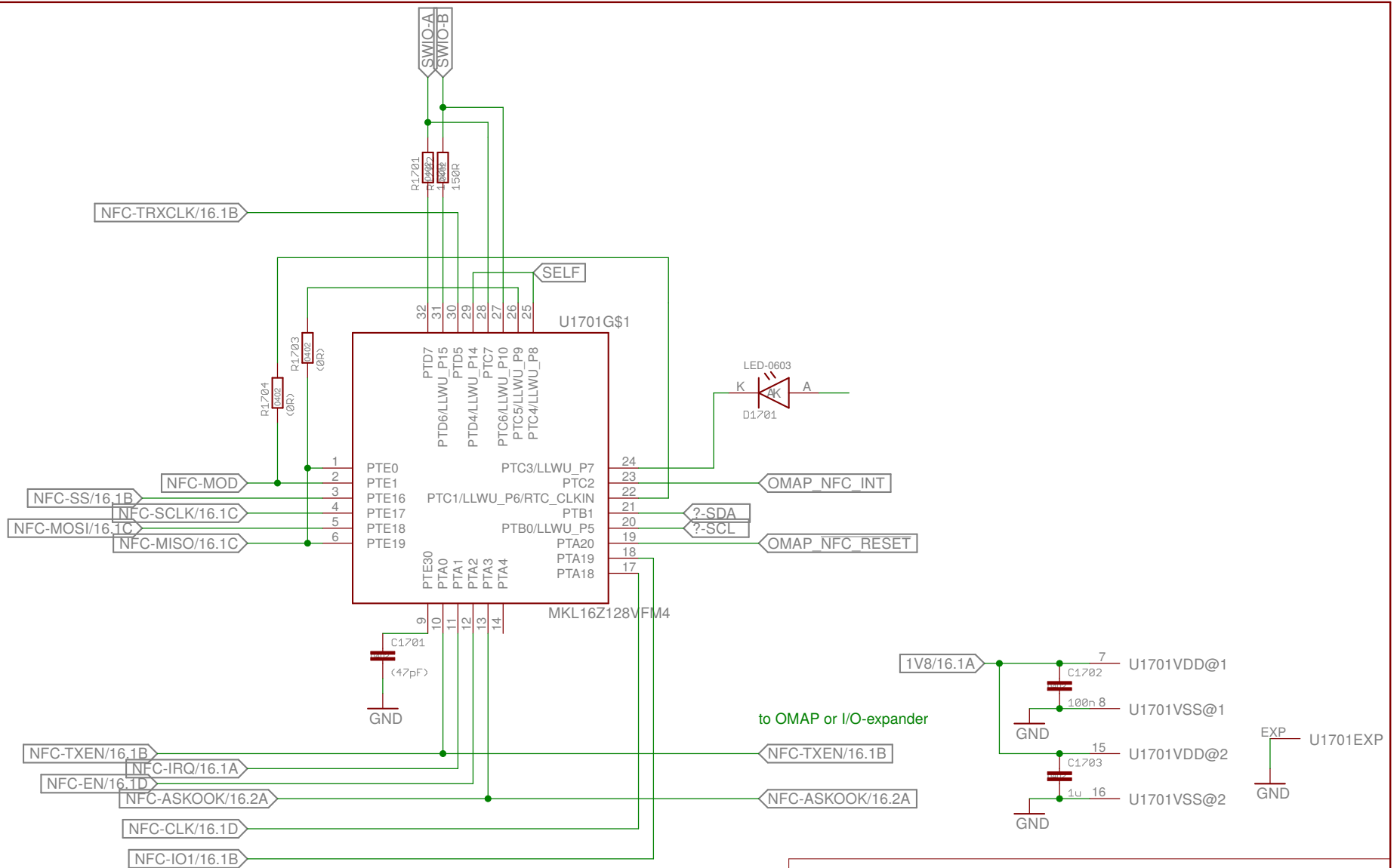
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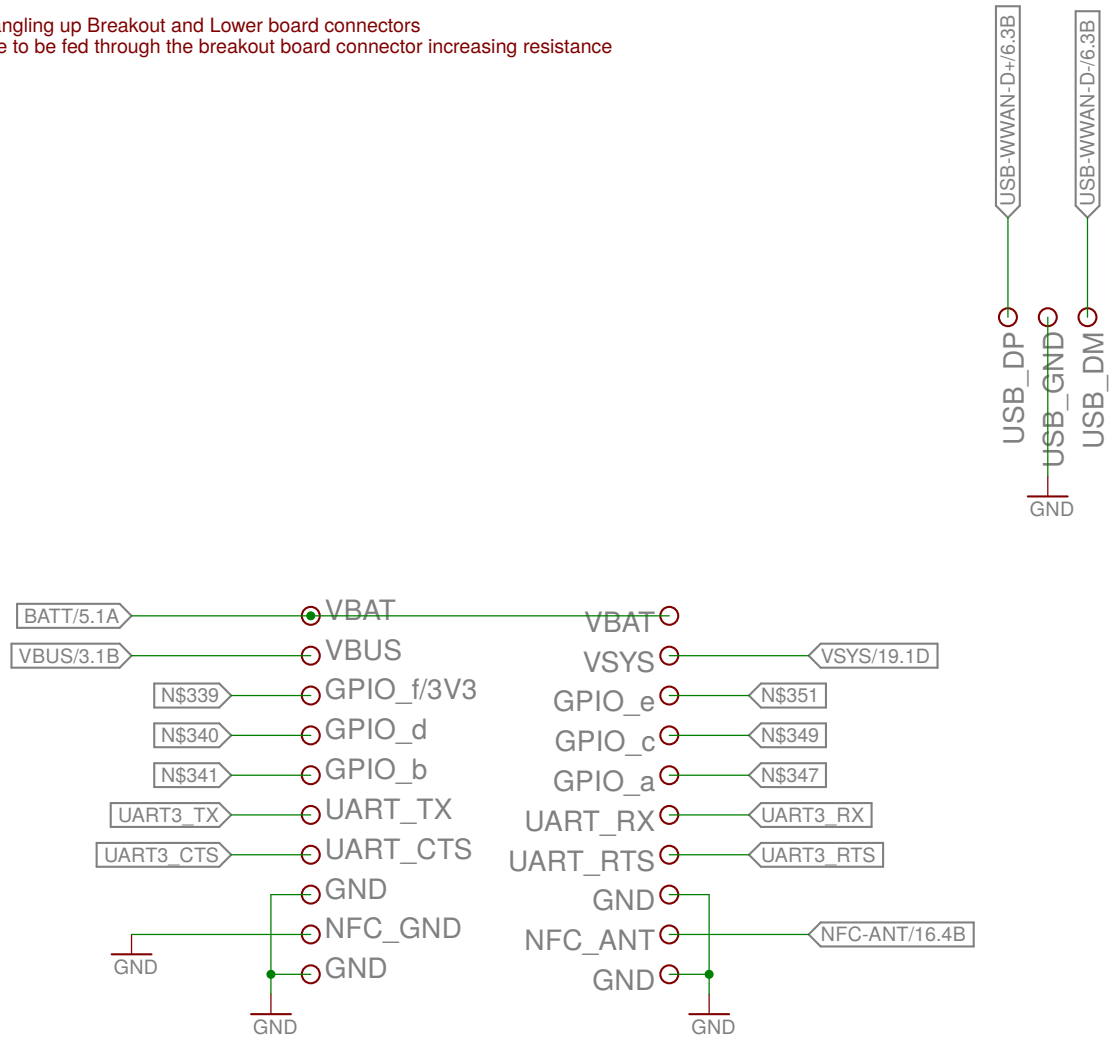




# RFID/NFC Controller

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



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?)

# Hackerbus

TITLE: Neo900

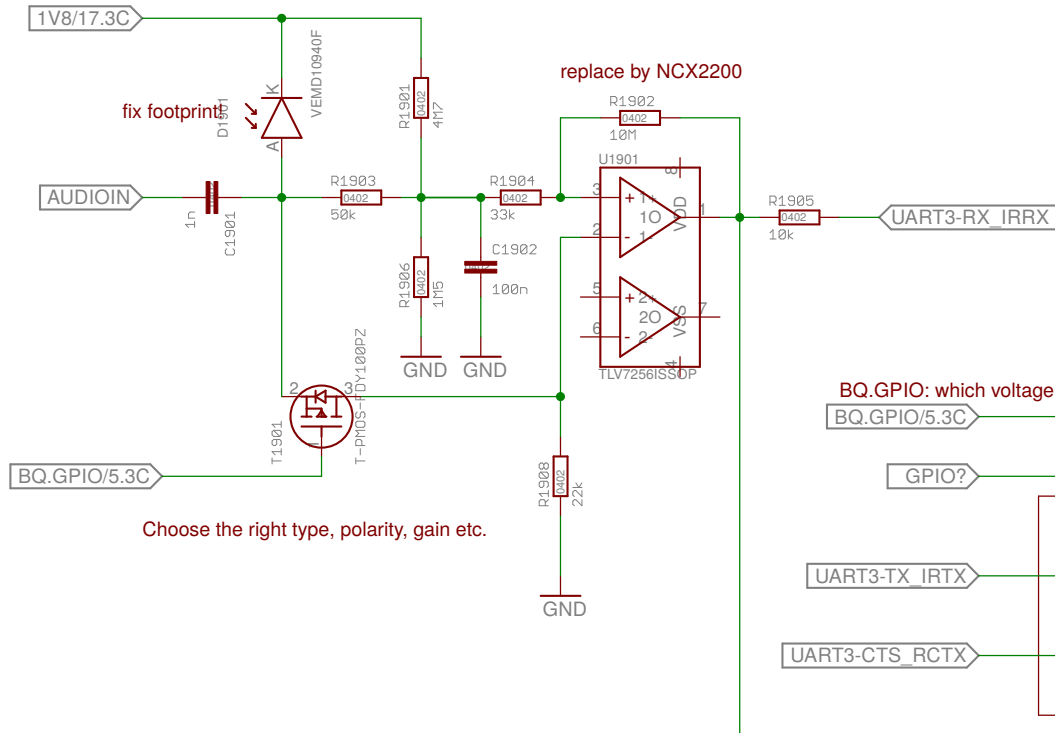
Document Number:

REV:  
V2b

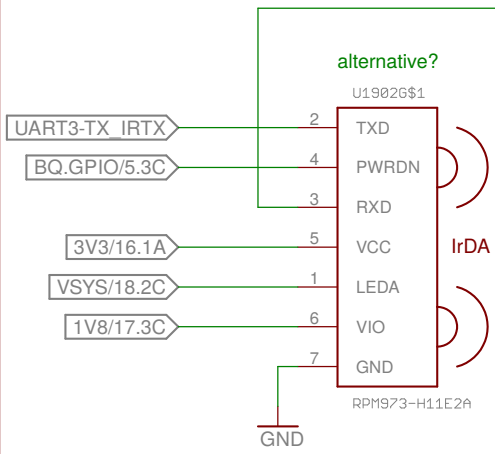
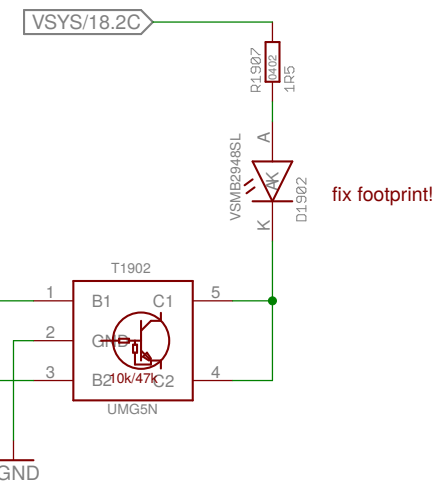
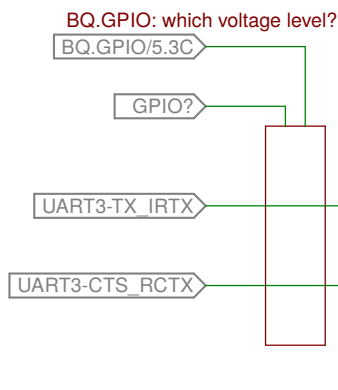
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NOTE: 1V8 may be quite noisy!



Choose the right type, polarity, gain etc.



# Infrared

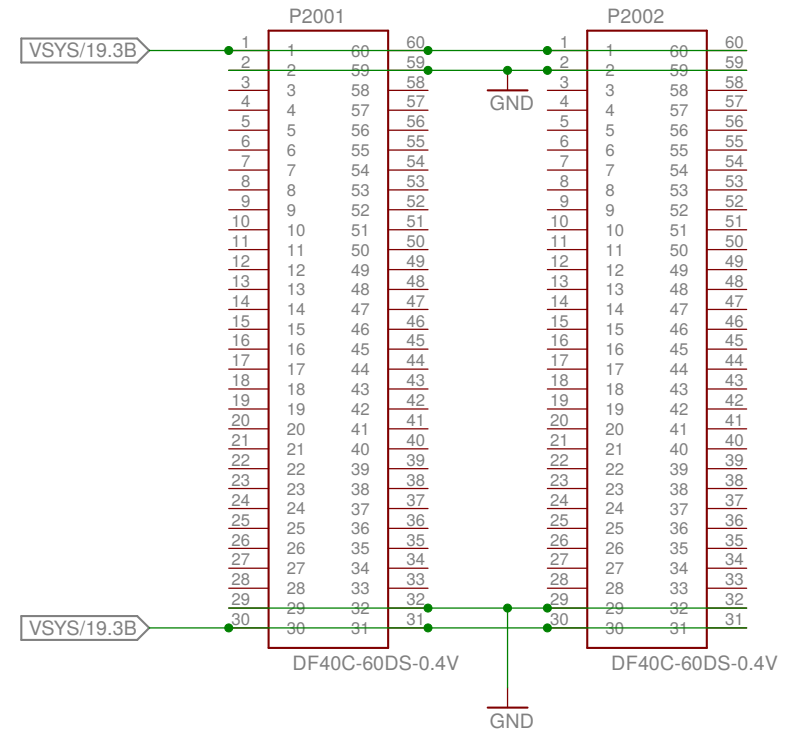
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ca. 130 signals (to be counted exactly after definition of upper/lower split)



Pin assignment must be optimized for final component placement

we might have to switch to 80 or 100 pin connectors



## B2B to upper board

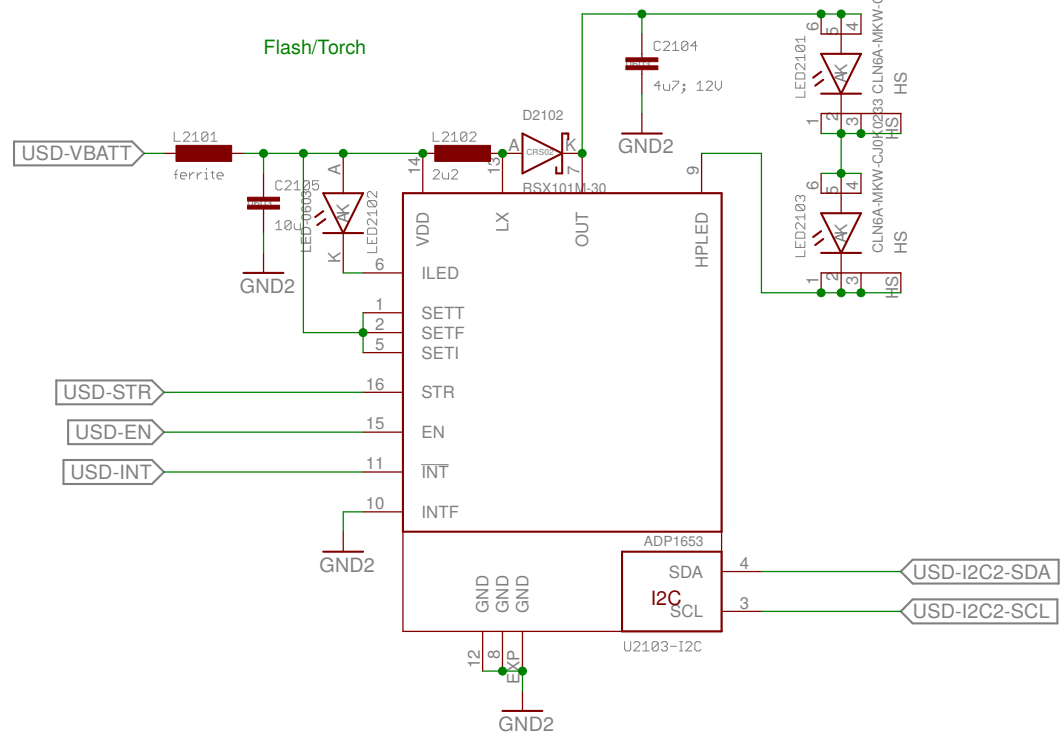
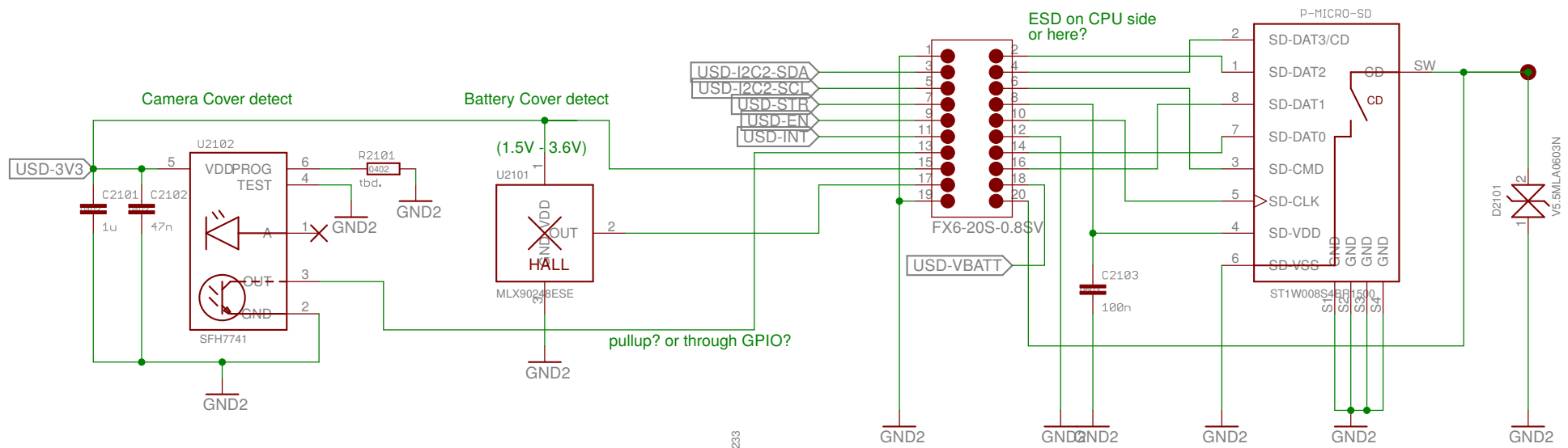
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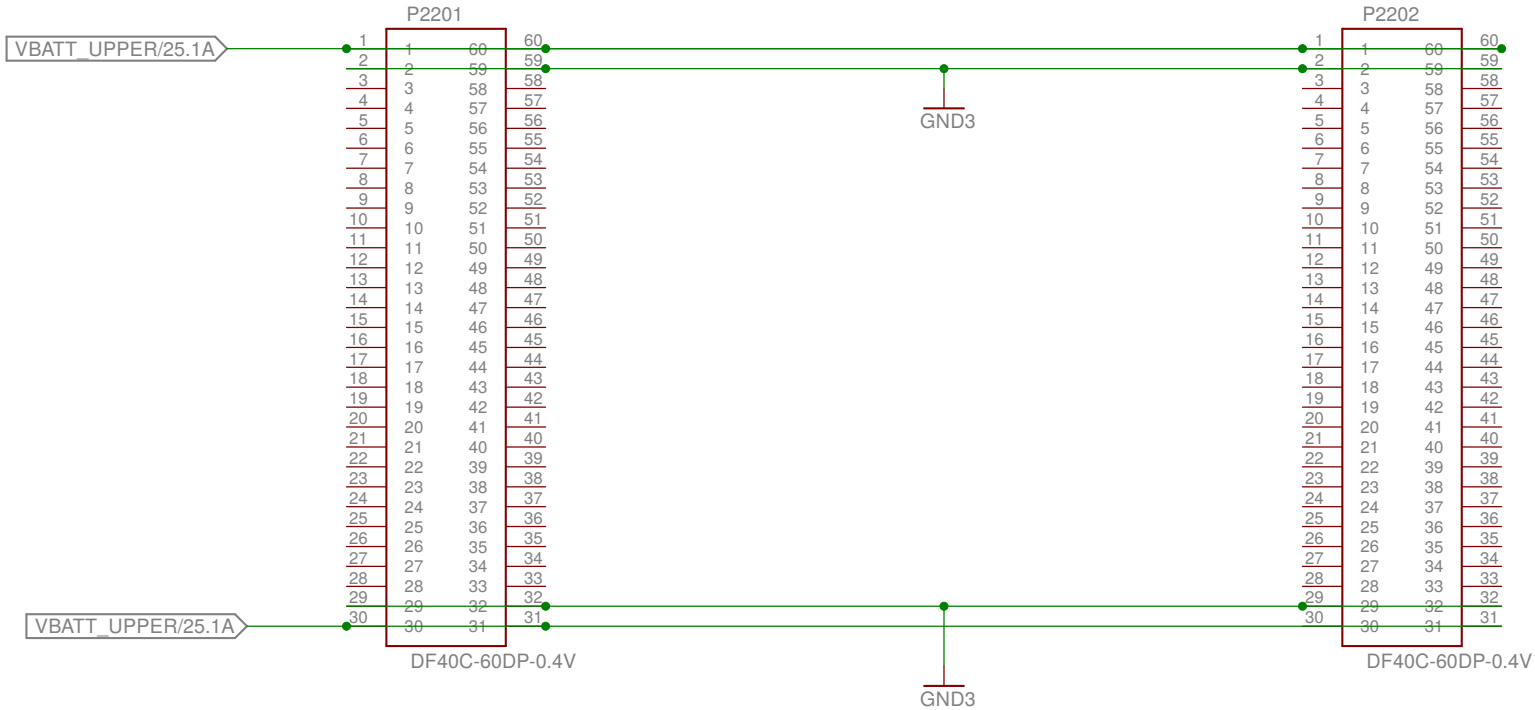


# μSD Breakout Board

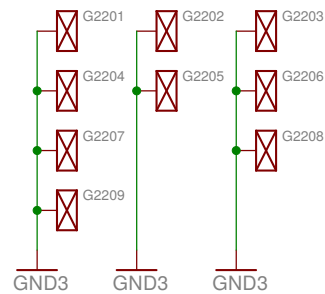
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to be adjusted to lower board connector



SHIELD



# B2B to lower board

TITLE: Neo900

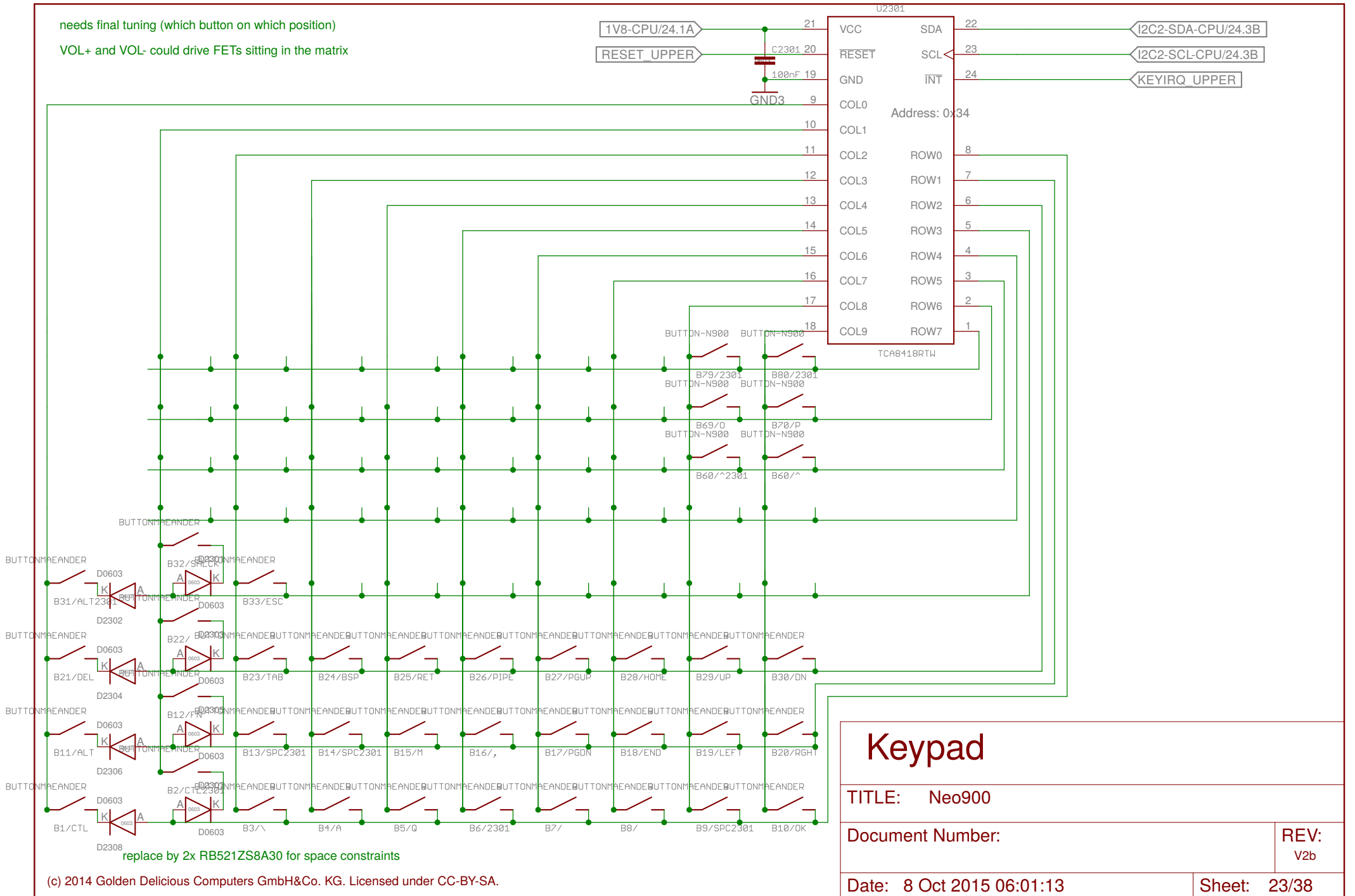
Document Number:

REV:  
V2b

Date: 8 Oct 2015 06:01:13

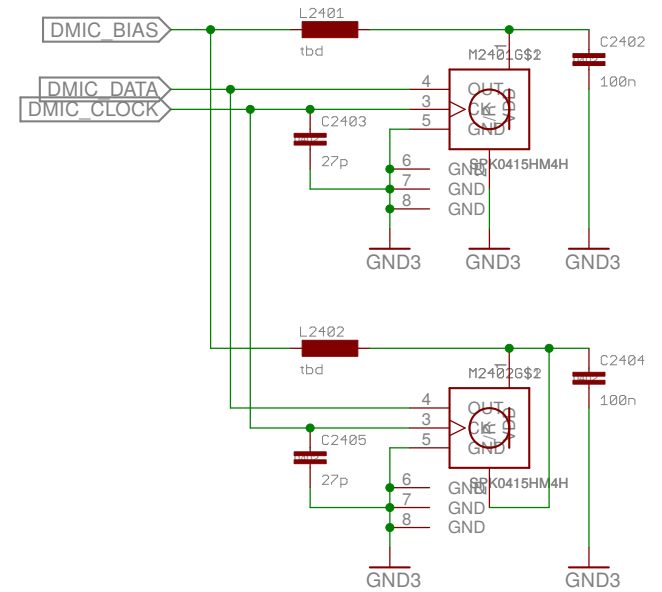
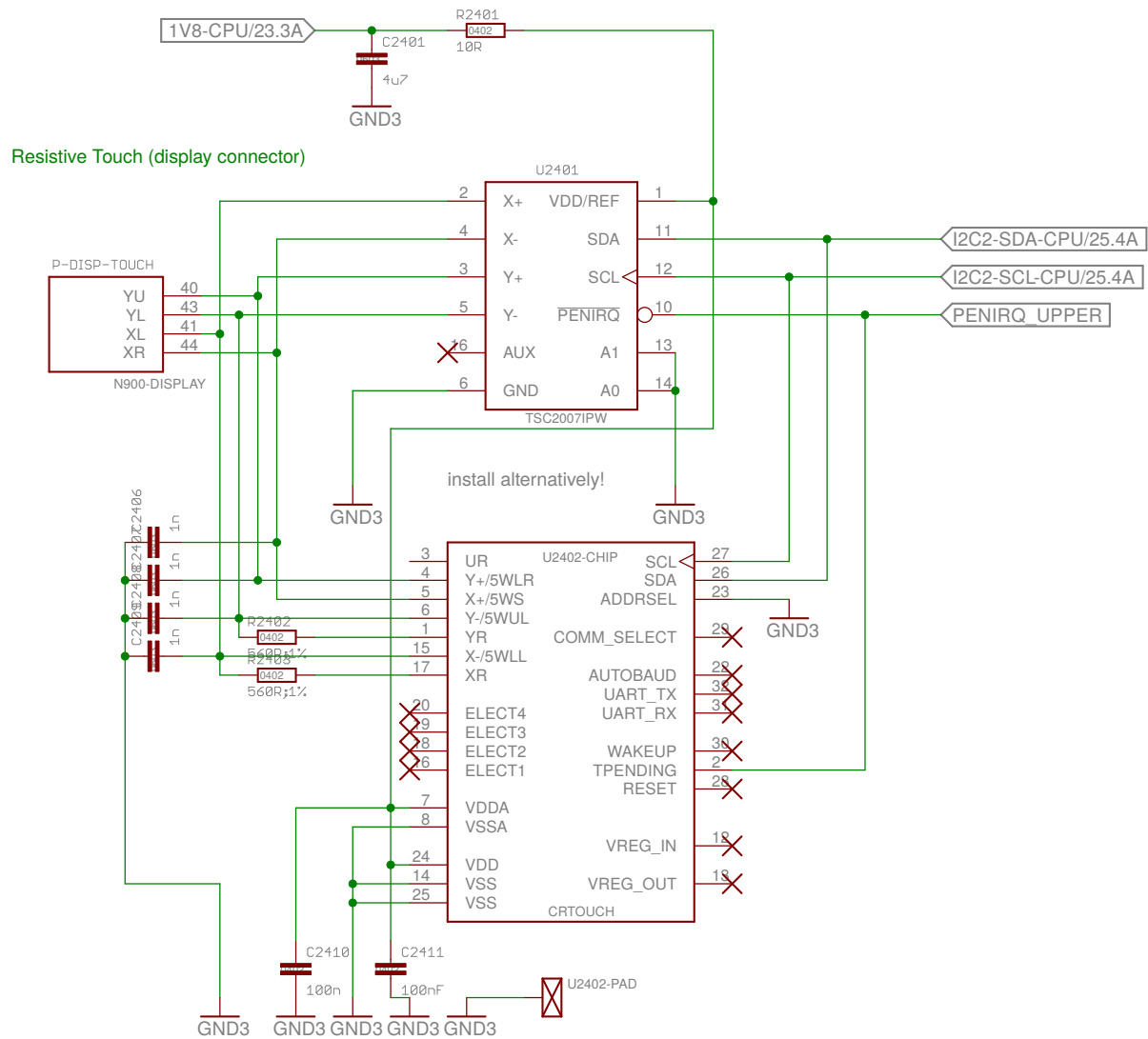
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needs final tuning (which button on which position)  
 VOL+ and VOL- could drive FETs sitting in the matrix



# Keypad

TITLE: Neo900	
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## Display-Peripherals

TITLE: Neo900

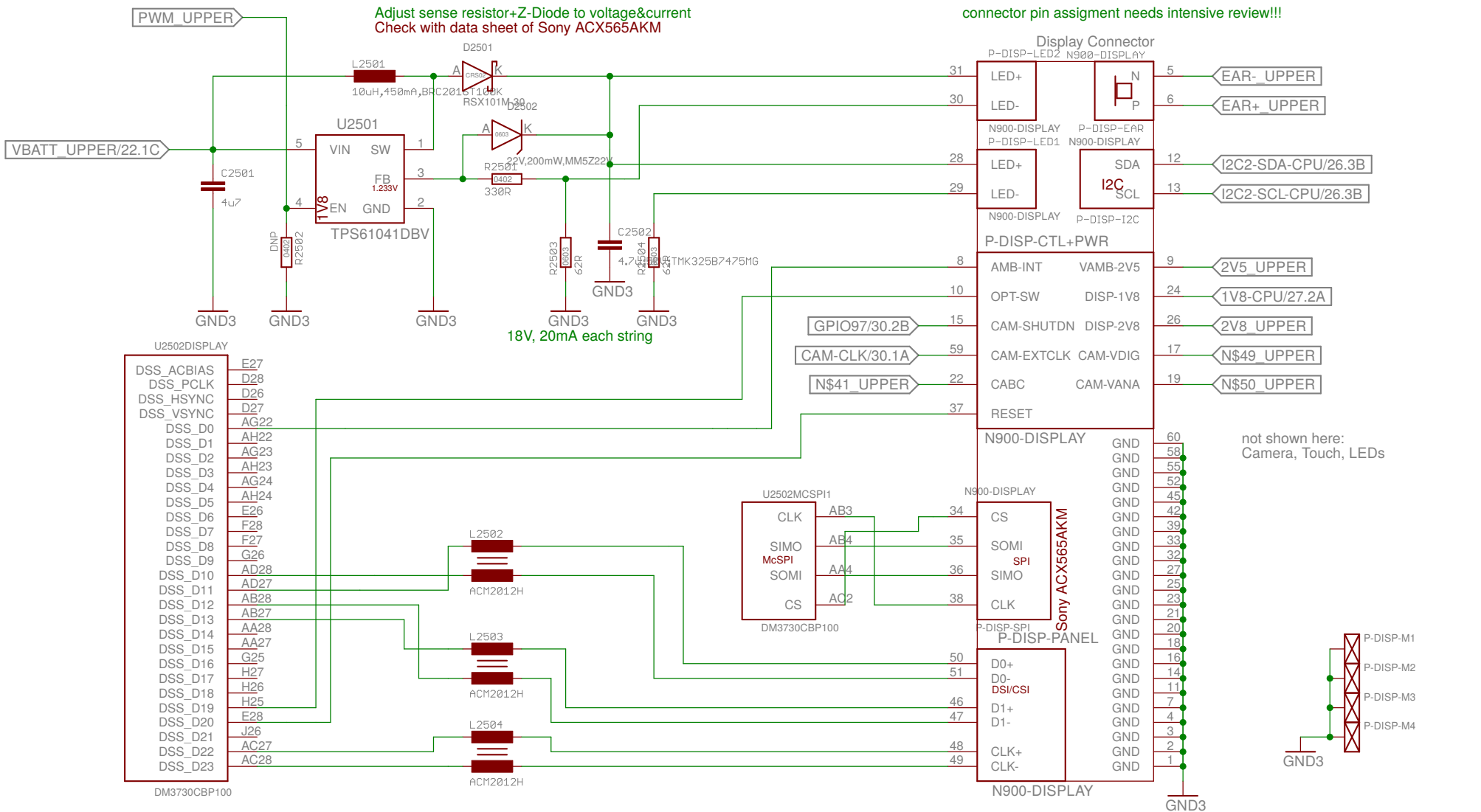
Document Number:

REV:  
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# Display-Panel&Power

TITLE: Neo900

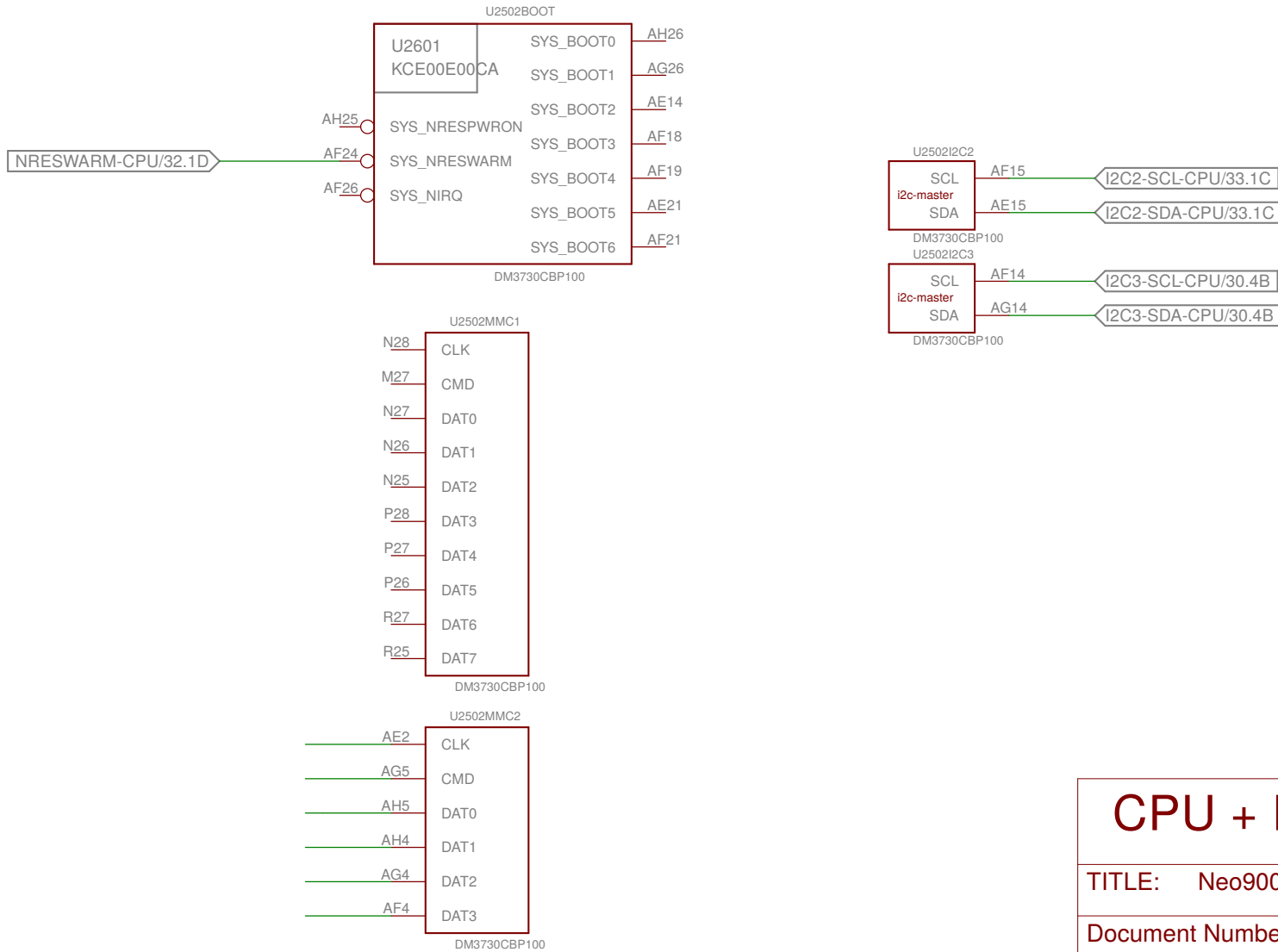
Document Number:

REV:  
V2b

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INCOMPLETE in V2



# CPU + PoP RAM/NAND

TITLE: Neo900

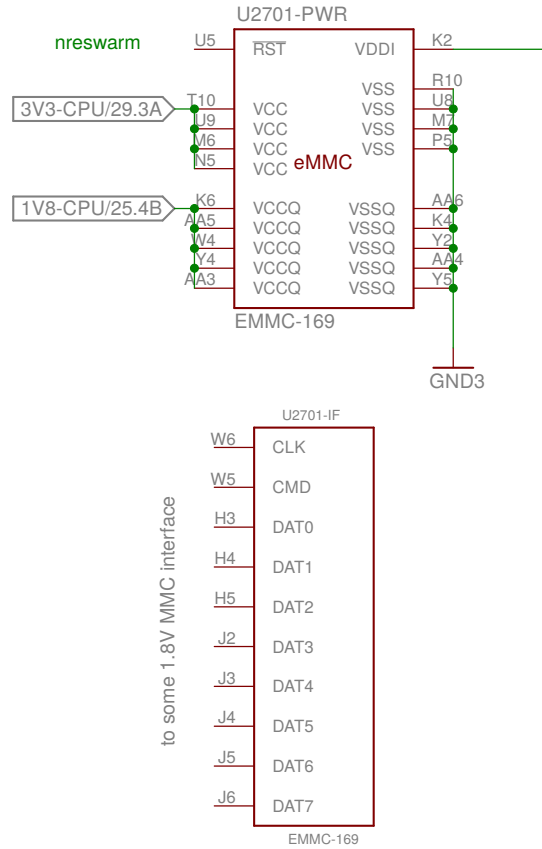
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INCOMPLETE in V2



## eMMC

TITLE: Neo900

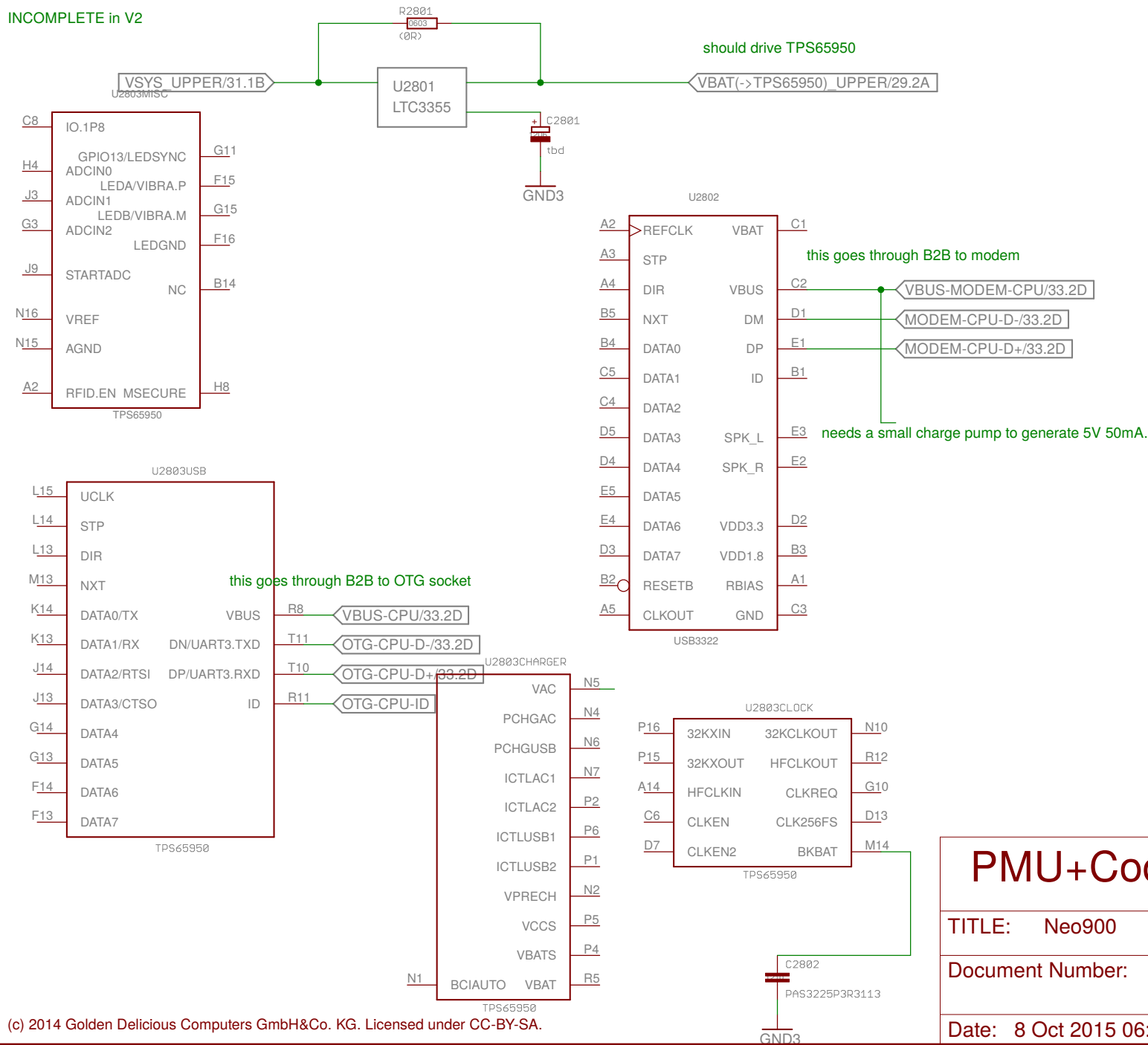
Document Number:

REV:  
V2b

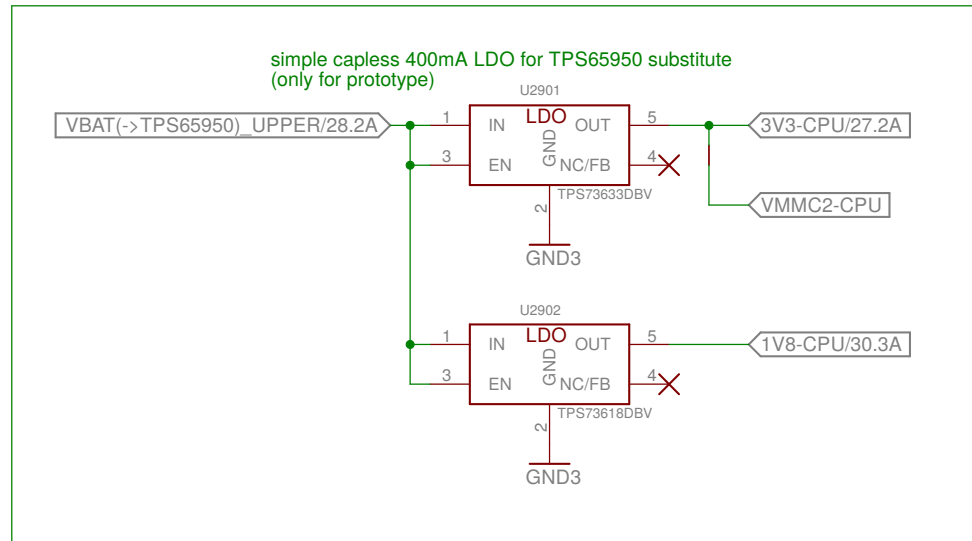
Date: 8 Oct 2015 06:01:13

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INCOMPLETE in V2



<h1>PMU+Codec</h1>	
TITLE: Neo900	
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## BB-XM Dummy (TWL4030)

TITLE: Neo900

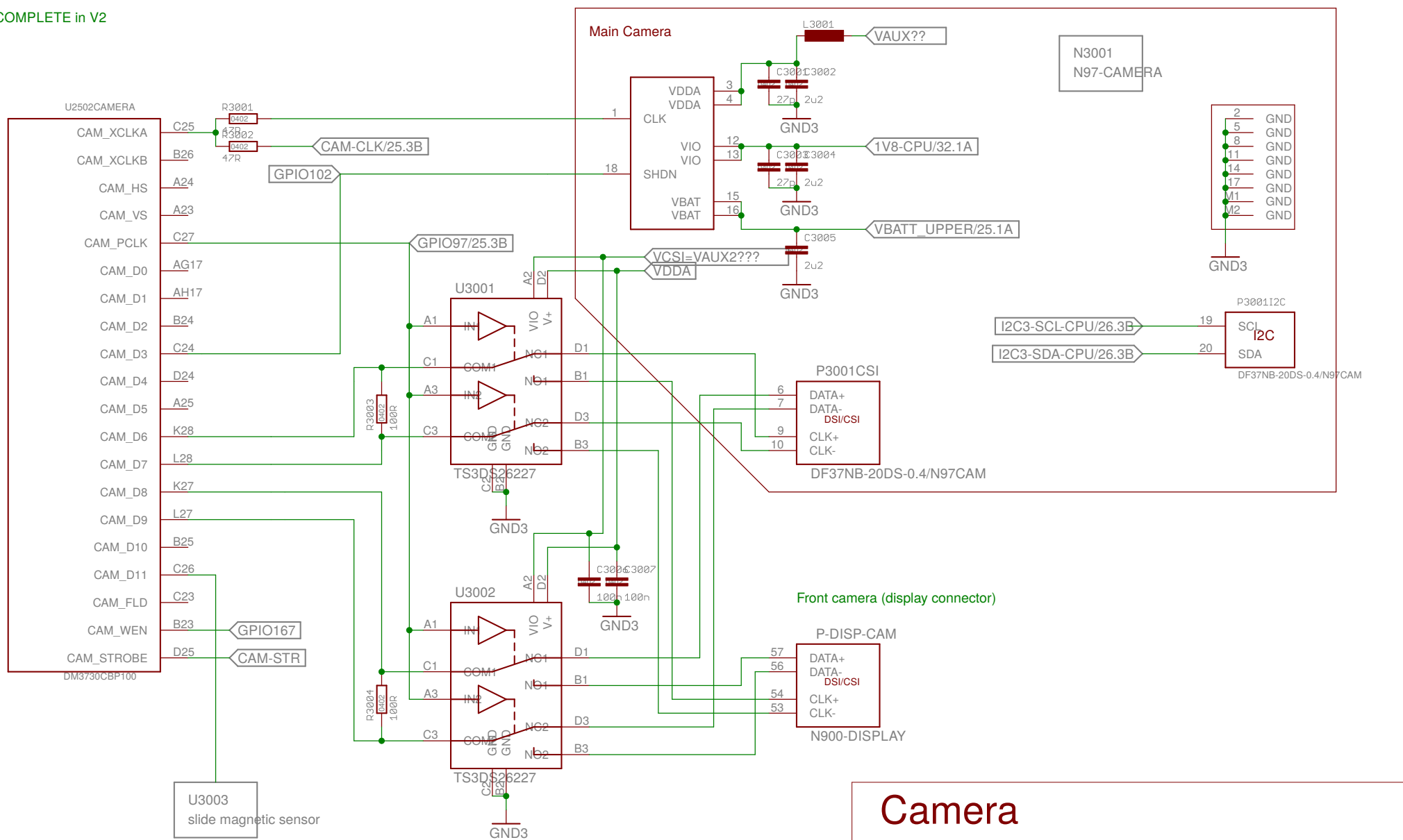
Document Number:

REV:  
V2b

Date: 8 Oct 2015 06:01:13

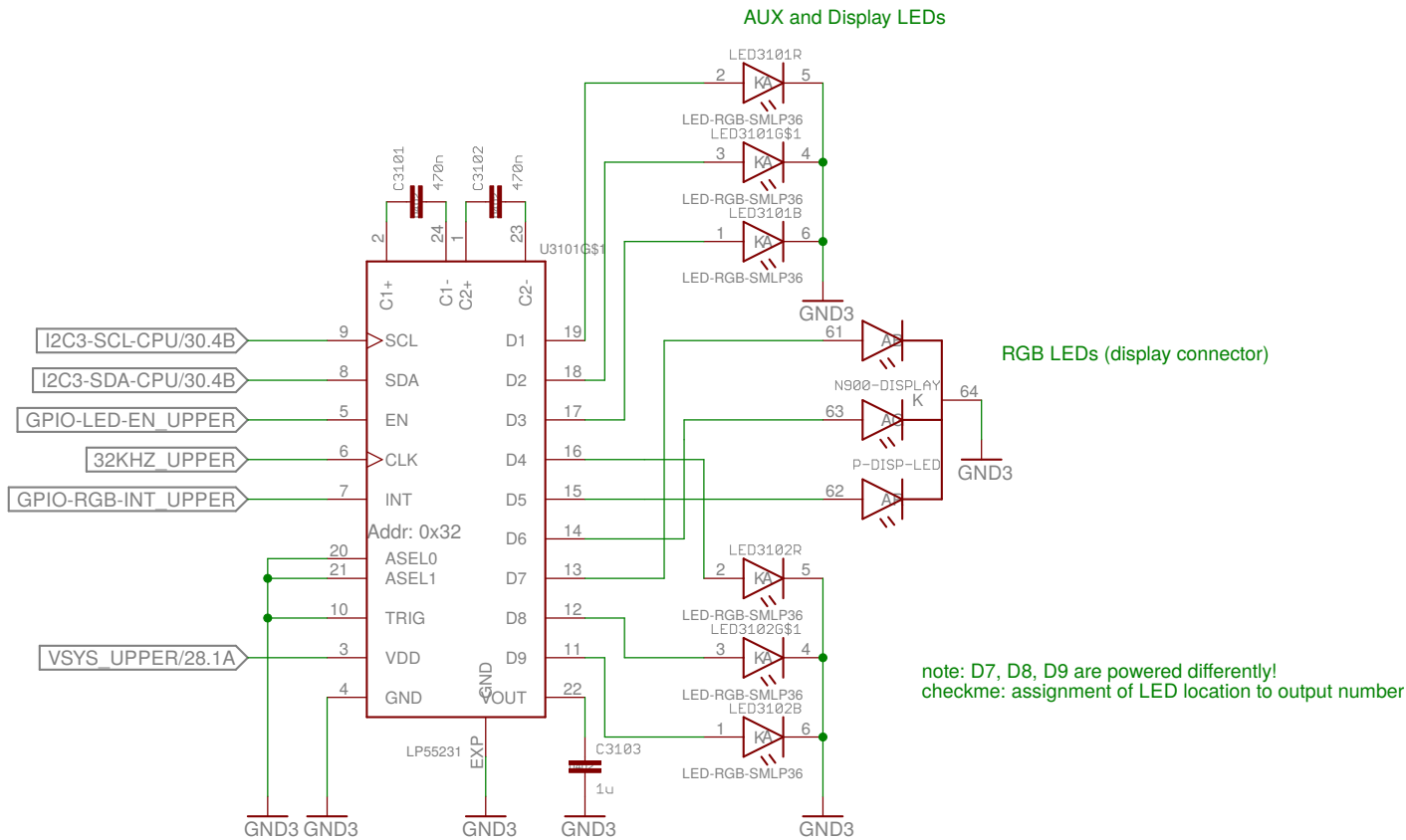
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INCOMPLETE in V2



# Camera

TITLE: Neo900	
Document Number:	REV: V2b
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# LEDs

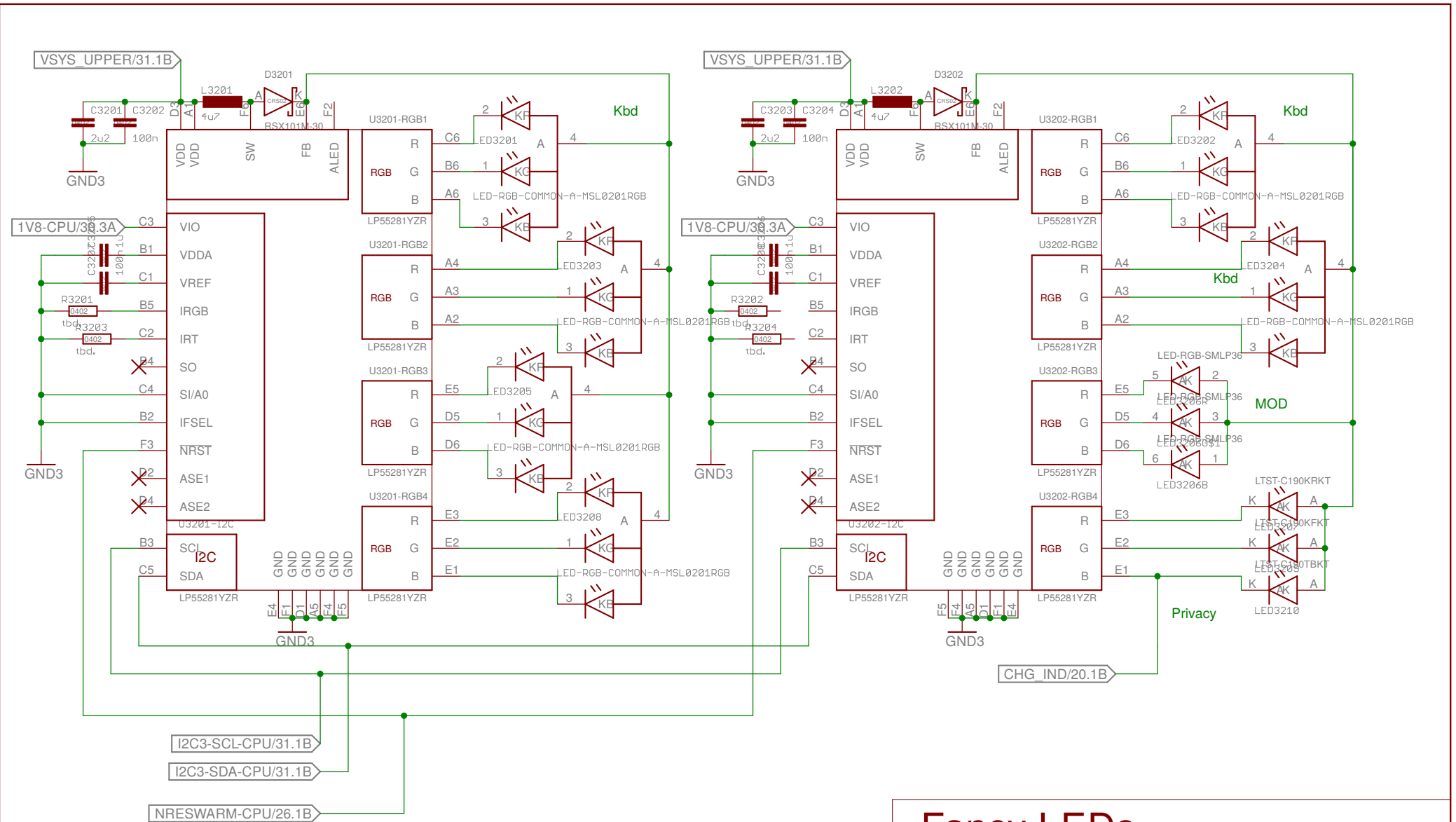
TITLE: Neo900

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## Fancy LEDs

TITLE: Neo900

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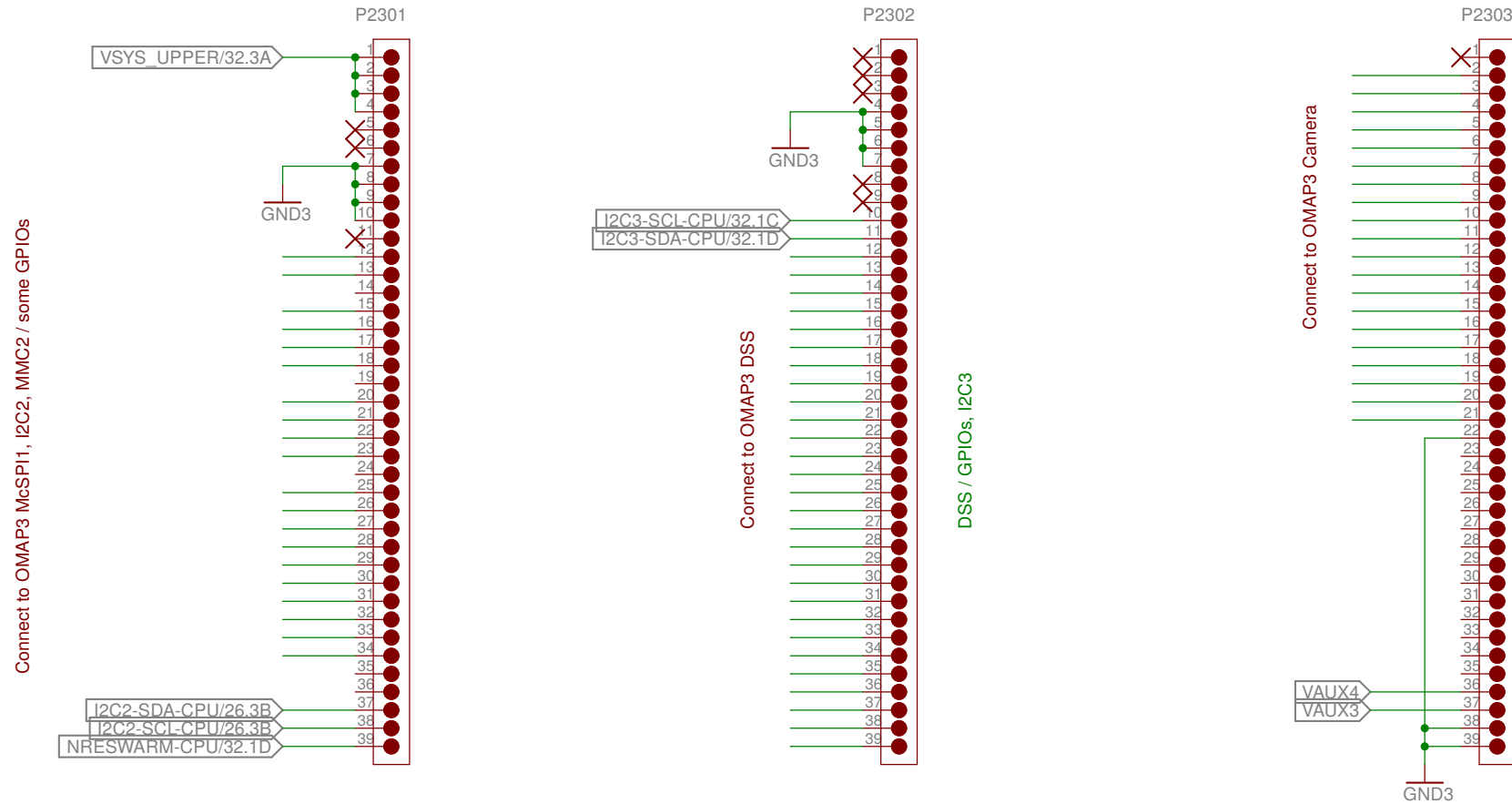
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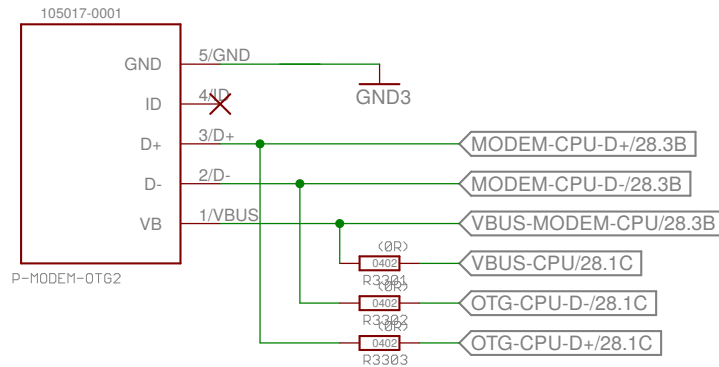
These connectors allow to "emulate" the DM3730 by connecting a BB-XM

INCOMPLETE  
prototype only

connect to respective CPU-pads



connect to BB  
by some Micro-USB cable



## Connector to BB

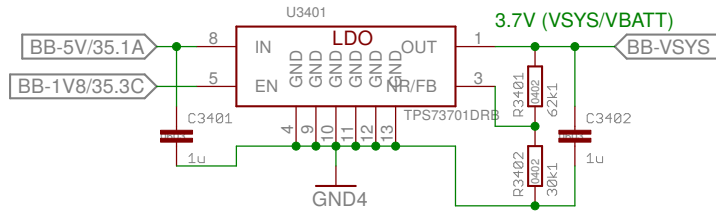
TITLE: Neo900

Document Number:

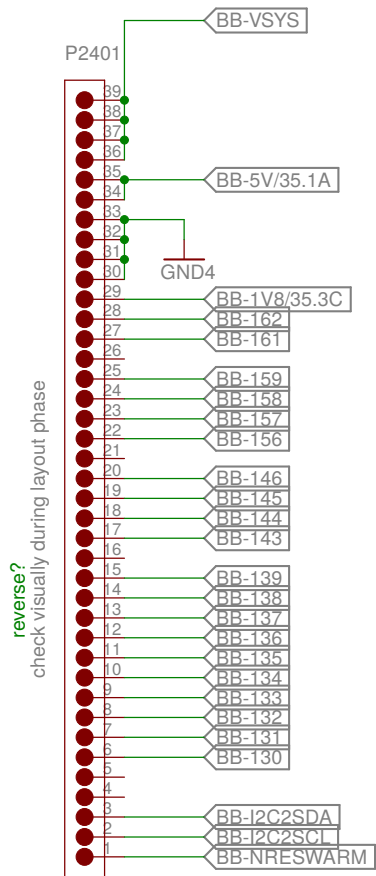
REV:  
V2b

Date: 8 Oct 2015 06:01:13

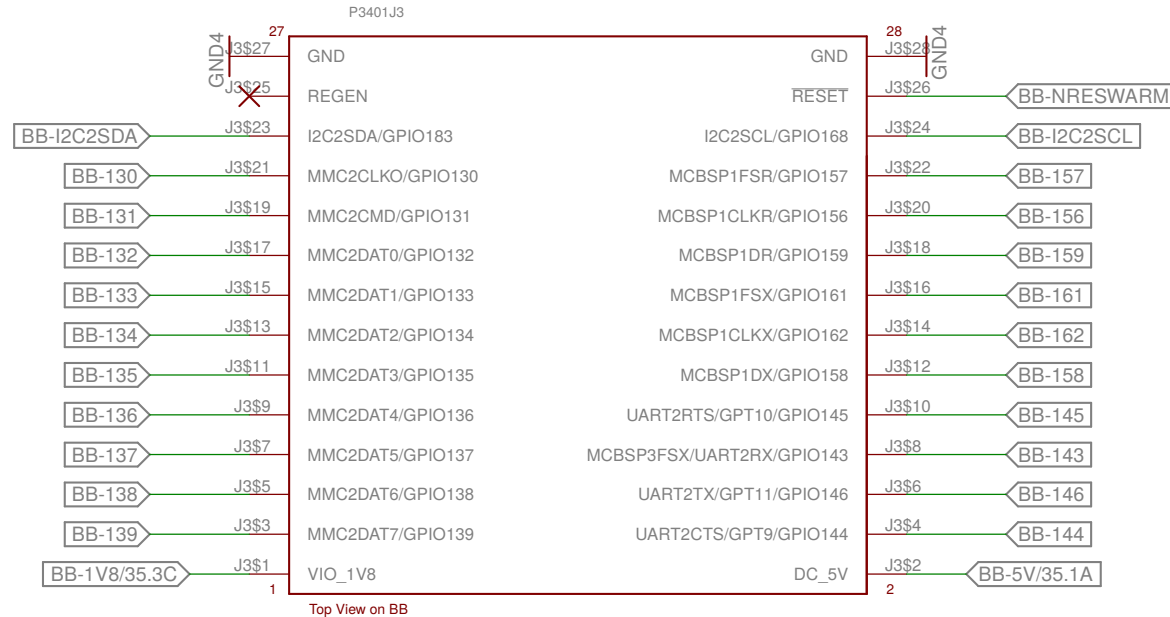
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Ersetzen durch 2A buck converter



reverse?  
check visually during layout phase



Top View on BB

# BB-XM Adapter (CPU)

TITLE: Neo900

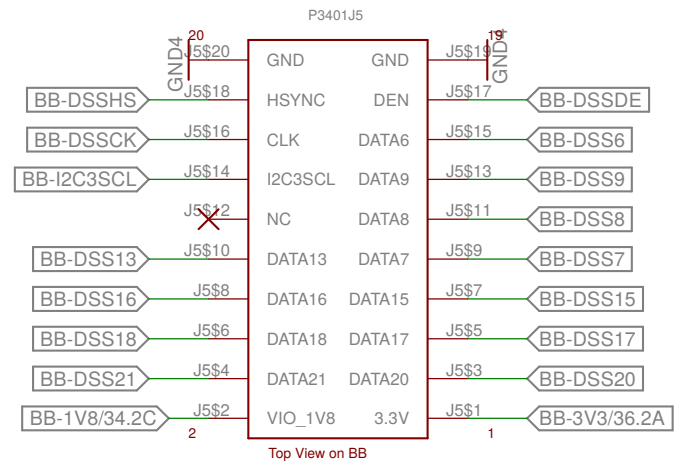
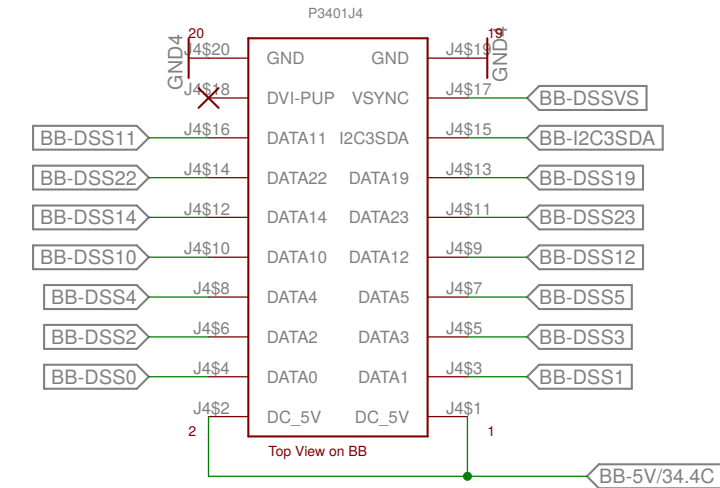
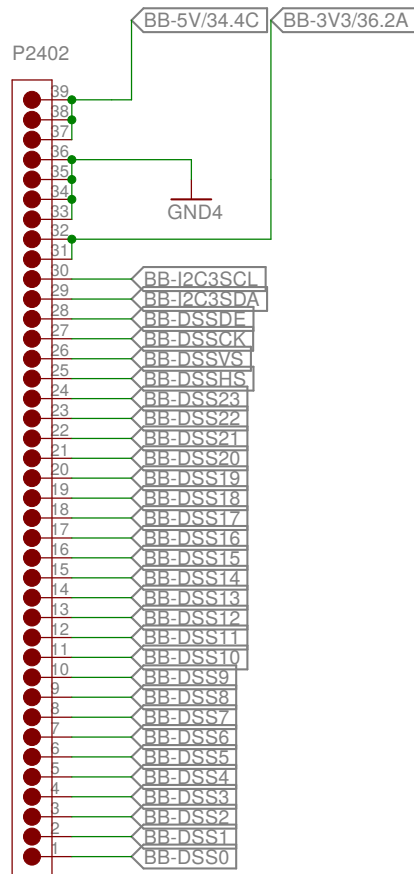
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REV:  
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reverse?  
check visually during layout phase



# BB-XM Adapter (DISP)

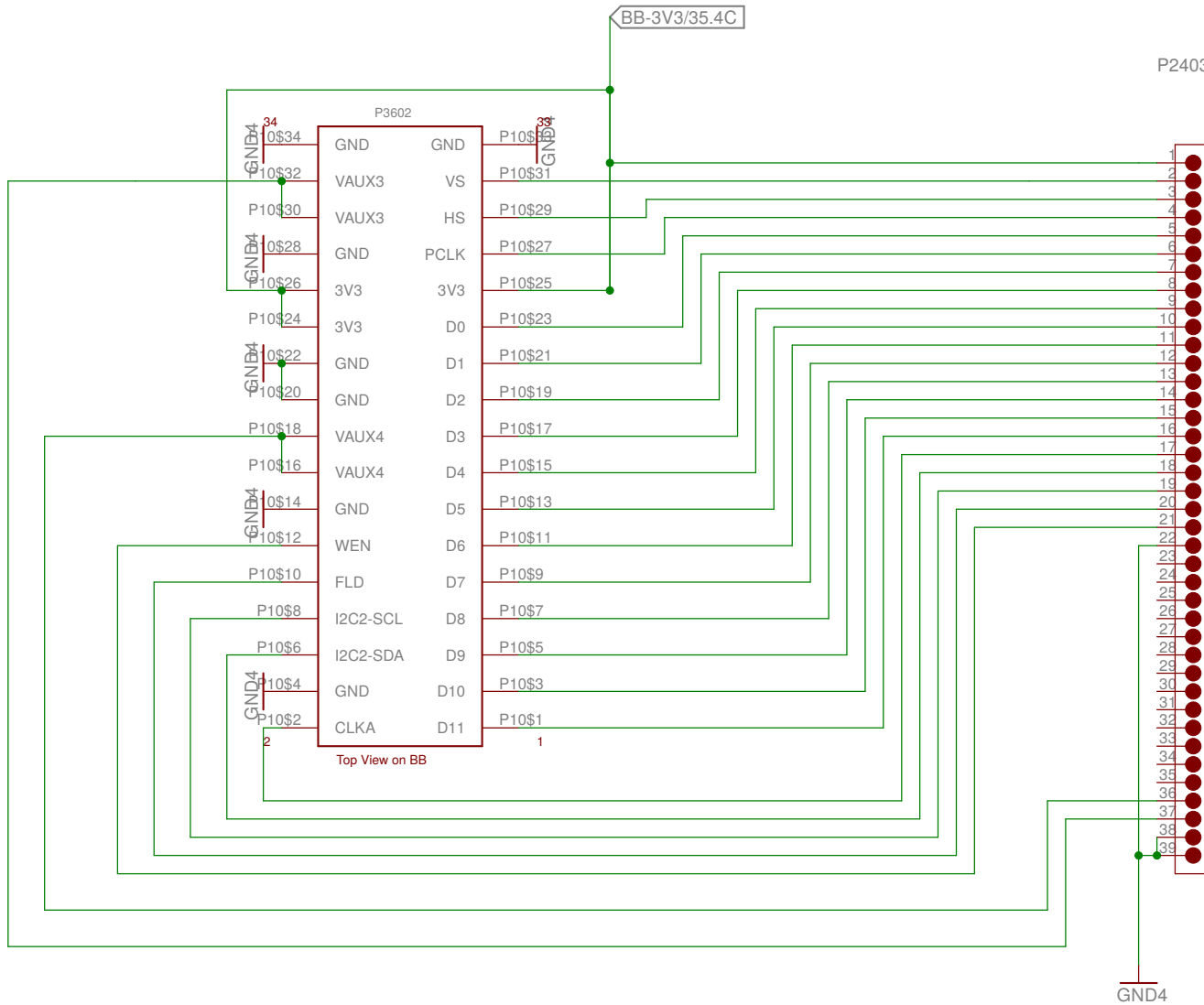
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reverse?  
check visually during layout phase

## BB-XM Adapter (CAM)

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

N3701  
15015-0439

CPU

N3702  
15015-0439

DISP

N3703  
15015-0439

CAM

N3704  
N900 case assembly

N3705  
N97-CAMERA-HOLE

N3706  
headset jack

N3707  
STENCIL-TOP

N3708  
STENCIL-BOTTOM

## No-Solder Components

TITLE: Neo900

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- 1: Buttons
- 2: OTG
- 3: Charger/OTG-Booster
- 5: Fuel Gauge
- 6: 3G/4G Modem + SIM
- 7: Dual SIM switch
- 8: Antenna connections
- 9: WLAN & Bluetooth & FM
- 10: Sensors
- 11: Audio Codec
- 12: Audio Headset & Mic
- 13: ECI
- 14: Audio Handsfree
- 15: Misc (lower)
- 16: RFID/NFC Reader
- 17: RFID/NFC Controller
- 18: Hackerbus
- 19: Infrared
- 20: B2B to upper board
- 21:  $\mu$ SD Breakout Board
- 22: B2B to lower board
- 23: Keypad
- 24: Display-Peripherals
- 25: Display-Panel&Power
- 26: CPU + PoP RAM/NAND
- 27: eMMC
- 28: PMU+Codec
- 29: BB-XM Dummy (TWL4030)
- 30: Camera
- 31: LEDs
- 32: Fancy LEDs
- 33: Connector to BB
- 34: BB-XM Adapter (CPU)
- 35: BB-XM Adapter (DISP)
- 36: BB-XM Adapter (CAM)
- 37: No-Solder Components
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