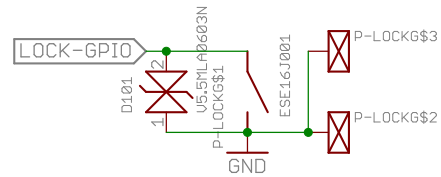
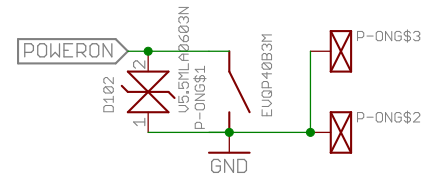


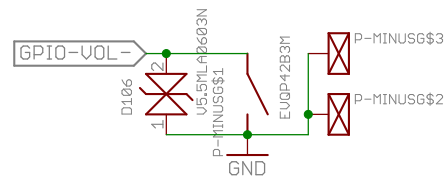
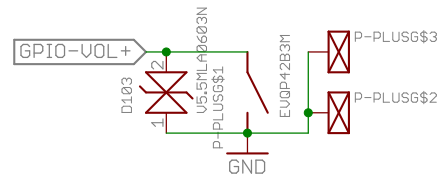
lock switch



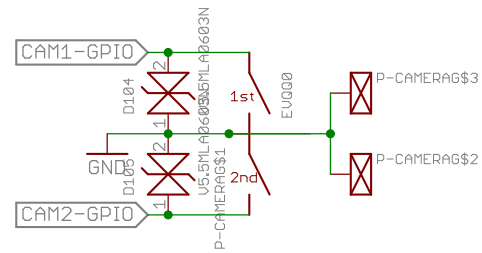
on-off



volume



camera trigger



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: GTA04b7

Document Number:

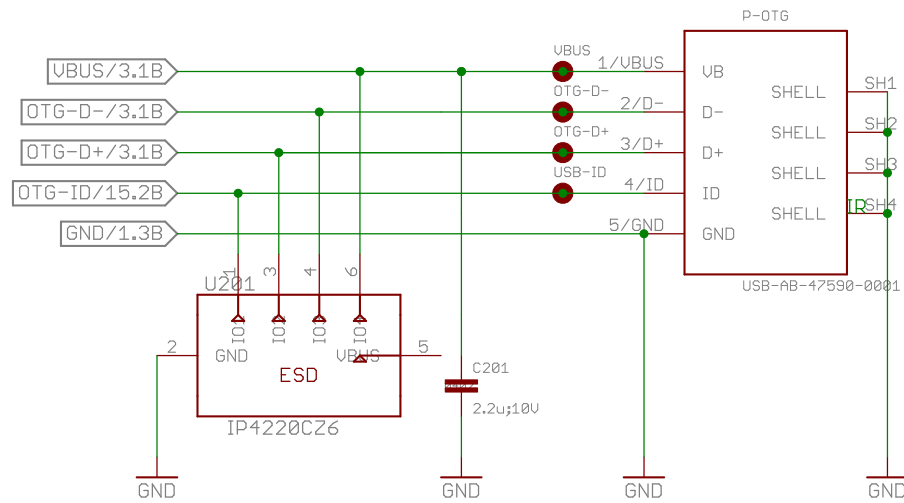
REV:

Date: 03.10.14 23:14

Sheet: 1/29

Ok for U2b

Layout: place test points in battery bay



## OTG

TITLE: GTA04b7

Document Number:

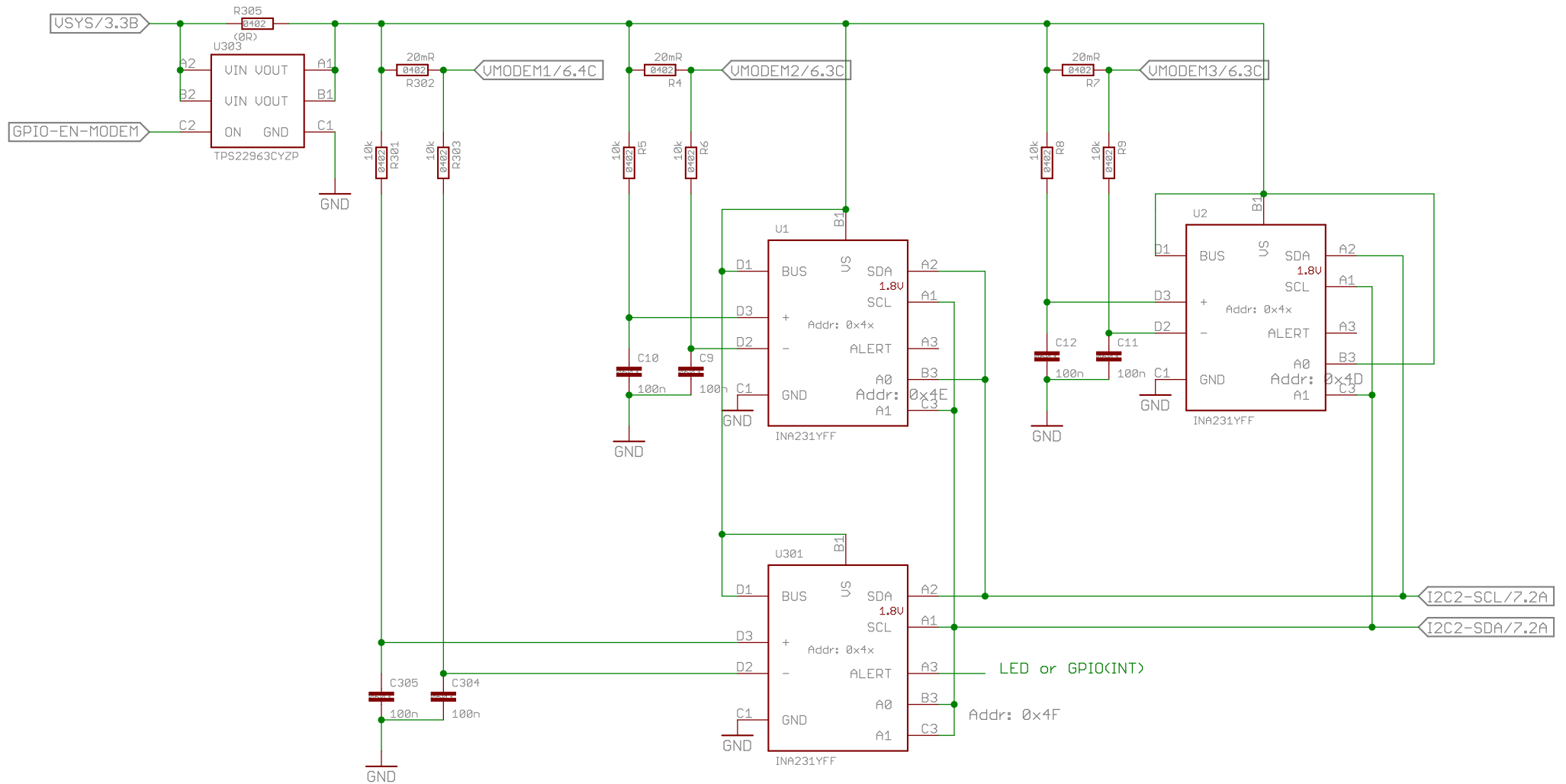
REV:

Date: 03.10.14 23:14

Sheet: 2/29



Ok for U2b



# Modem Power

TITLE: GTA04b7

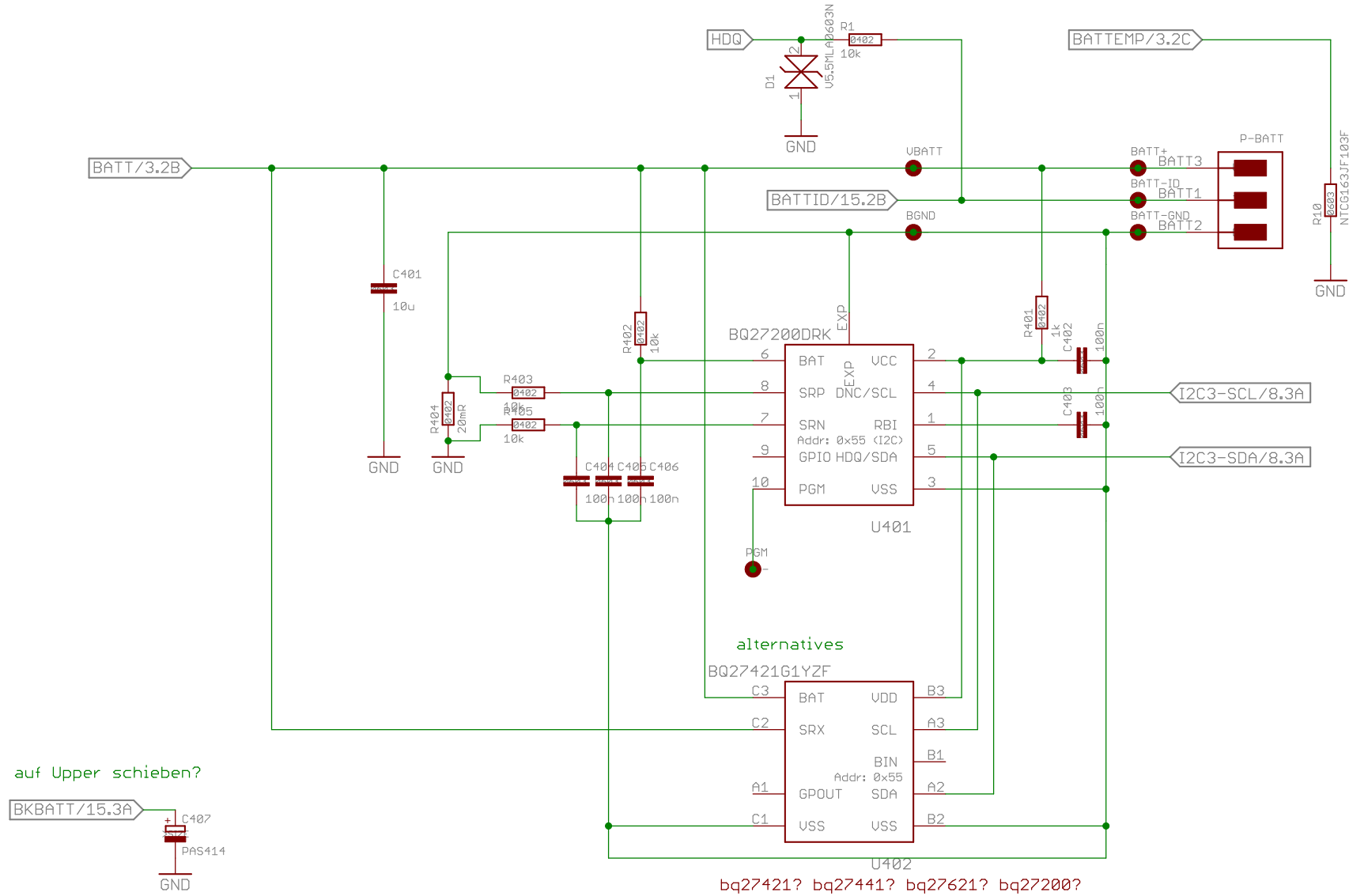
Document Number:

REV:

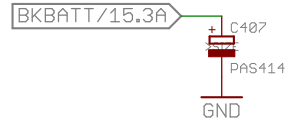
Date: 03.10.14 23:14

Sheet: 4/29

Ok for U2b



auf Upper schieben?



battery cage to GND?

# Fuel Gauge

TITLE: GTA04b7

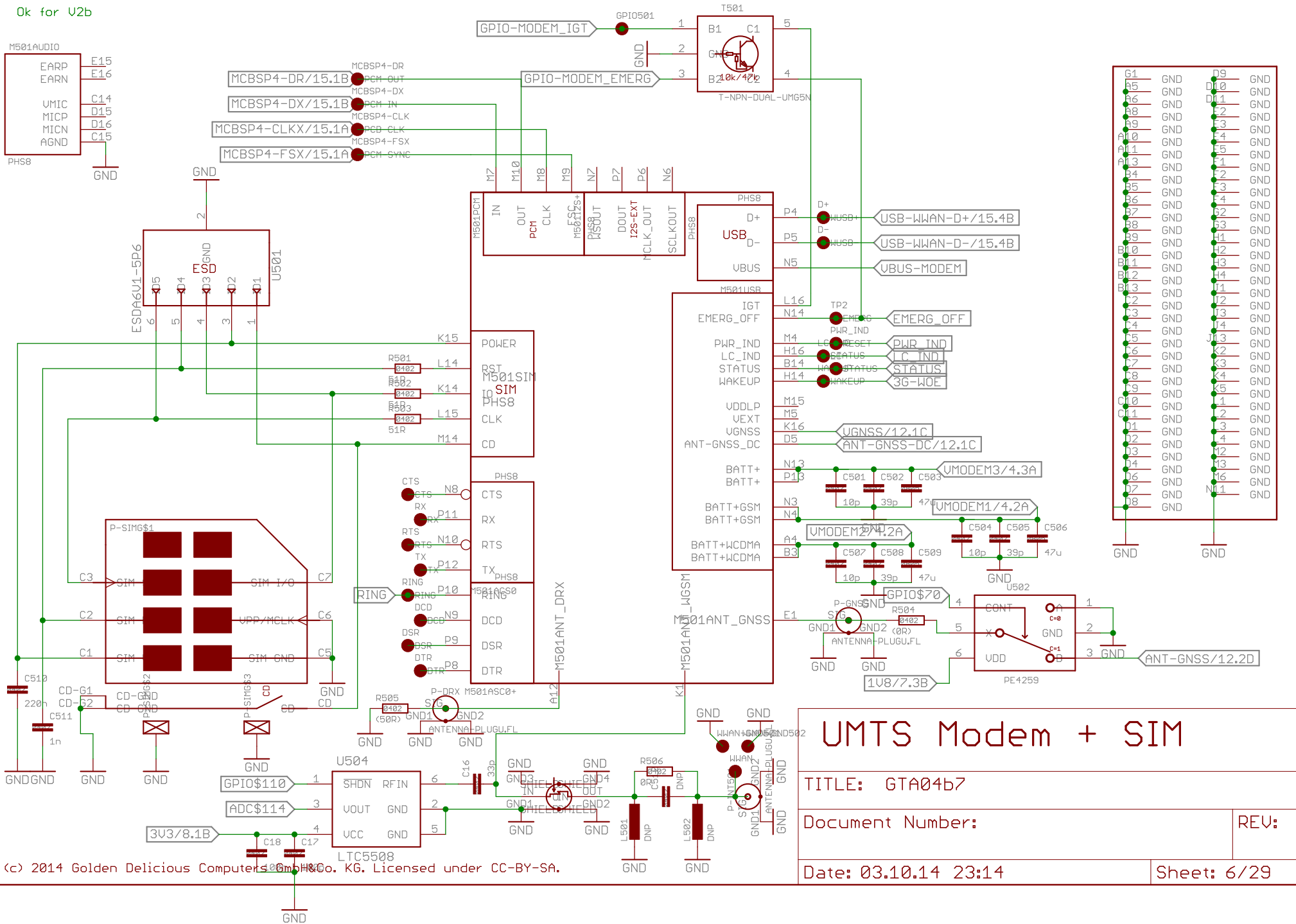
Document Number:

REV:

Date: 03.10.14 23:14

Sheet: 5/29

Ok for U2b



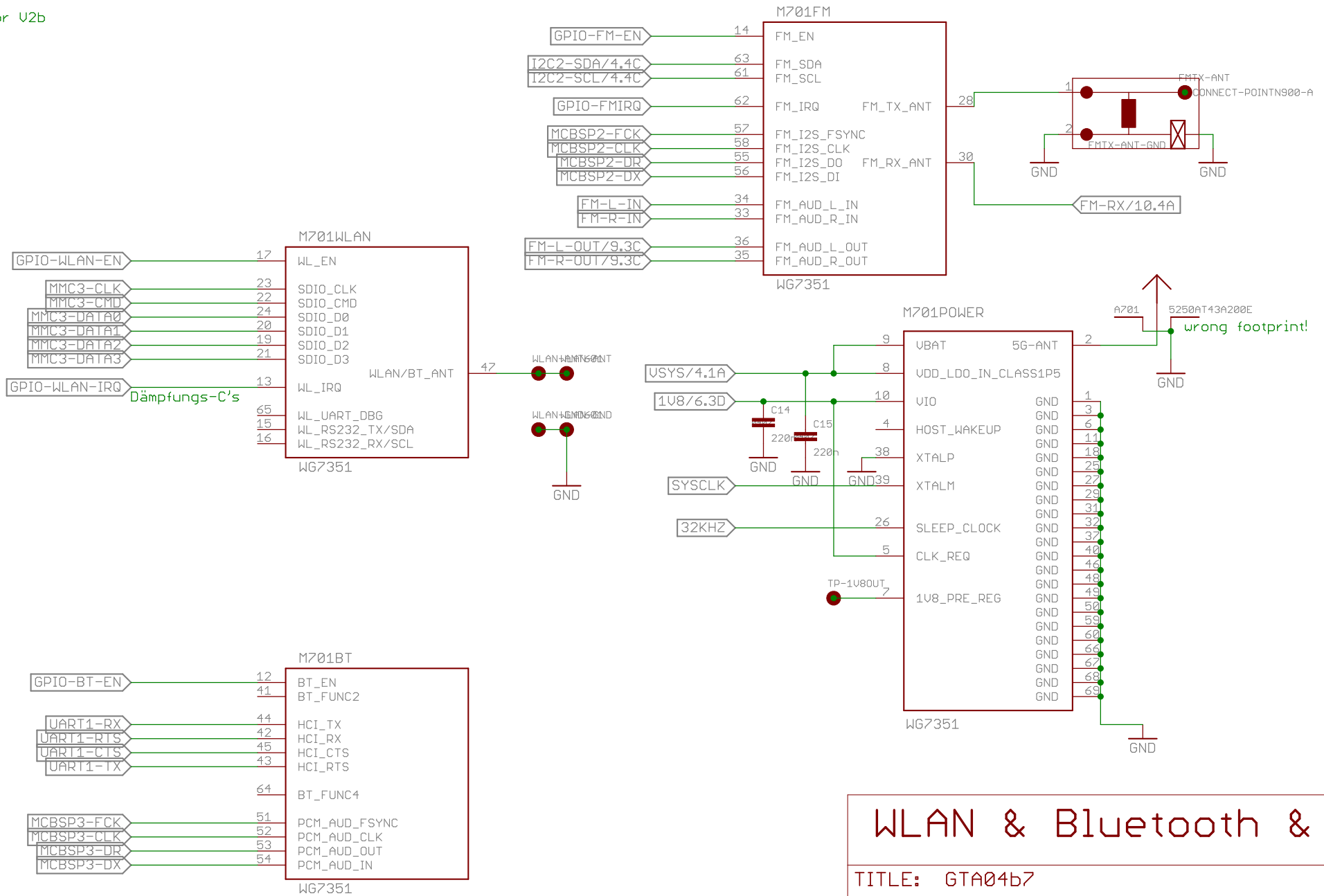
**UMTS Modem + SIM**

TITLE: GTA04b7

Document Number: \_\_\_\_\_ REV: \_\_\_\_\_

Date: 03.10.14 23:14 Sheet: 6/29

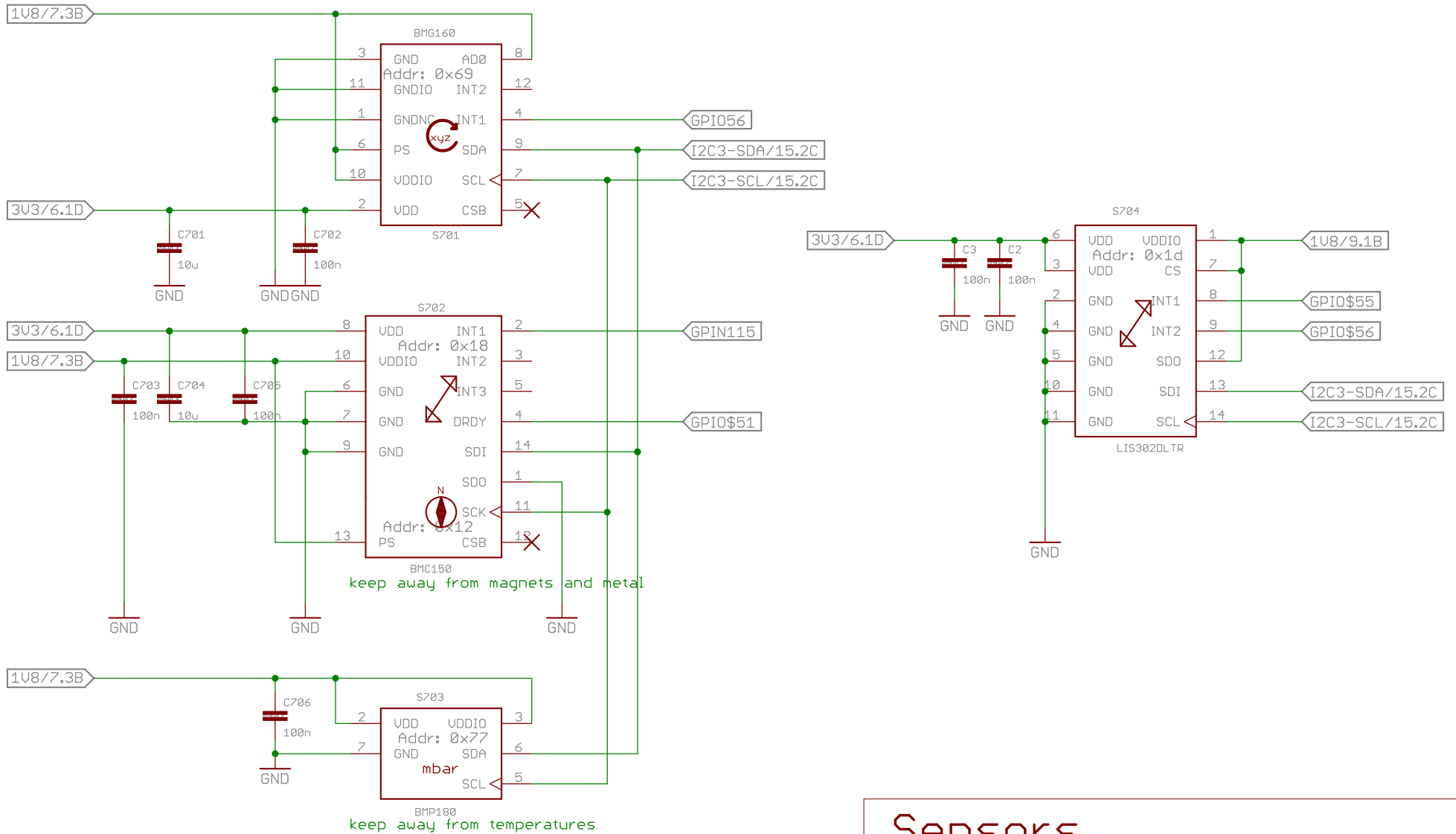
Ok for U2b



# WLAN & Bluetooth & FM

TITLE: GTA04b7	
Document Number:	REV:
Date: 03.10.14 23:14	Sheet: 7/29

Ok for U2b



# Sensors

TITLE: GTA04b7

Document Number:

REV:

Date: 03.10.14 23:14

Sheet: 8/29

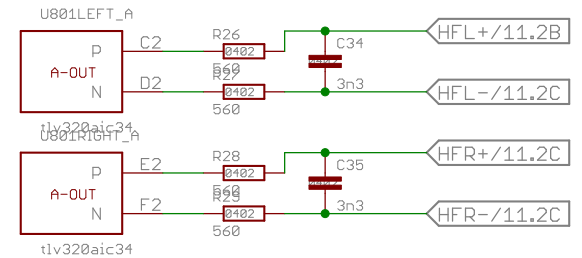
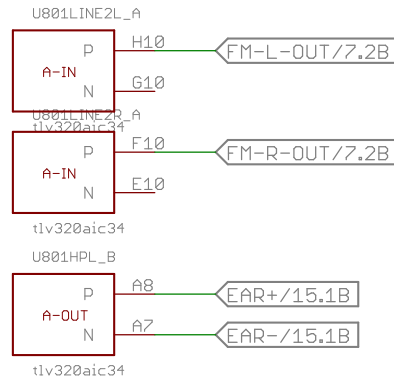
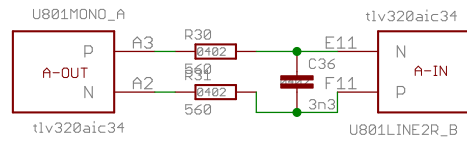
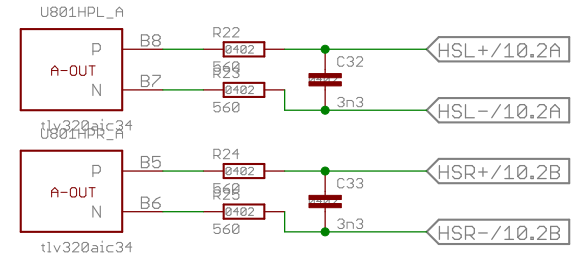
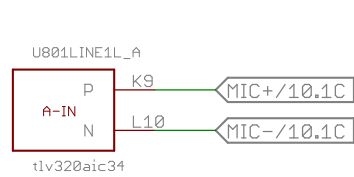
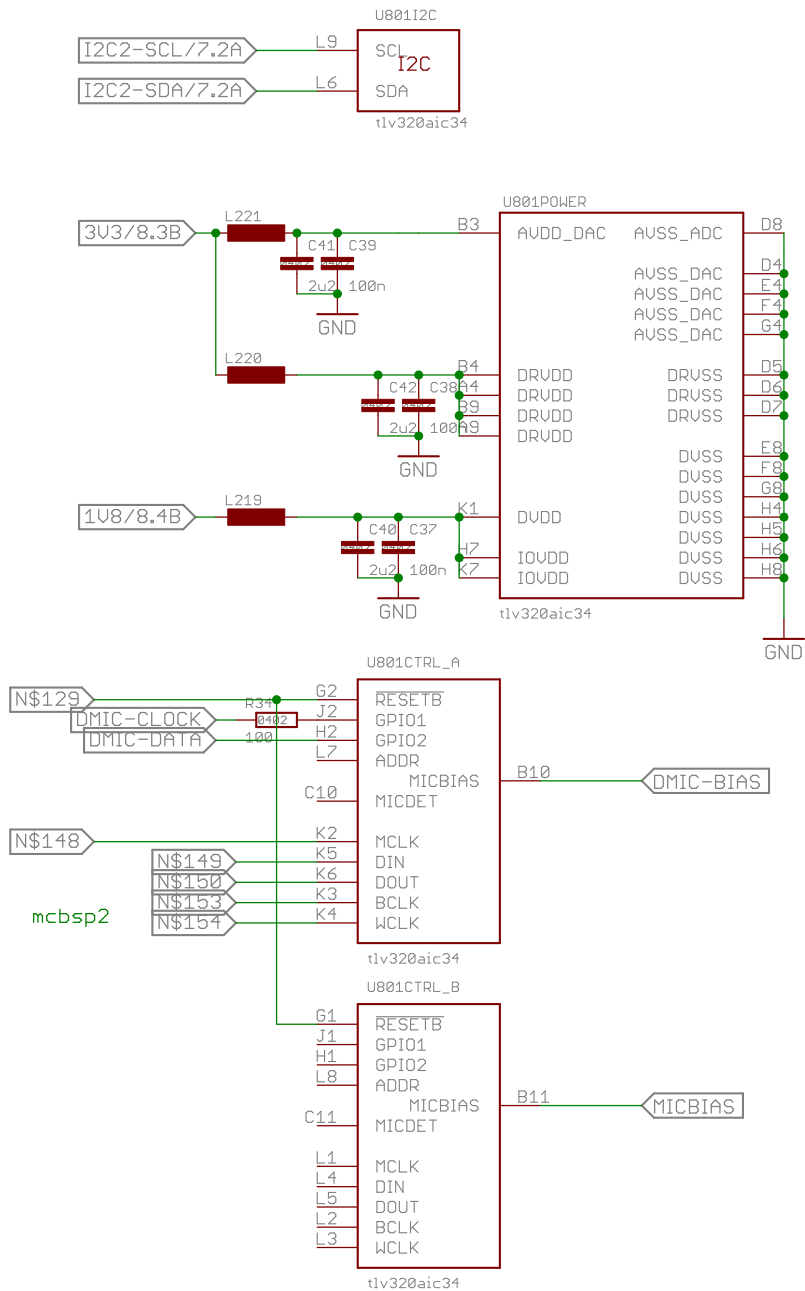


Ok for V2b

conflict with bmc150?

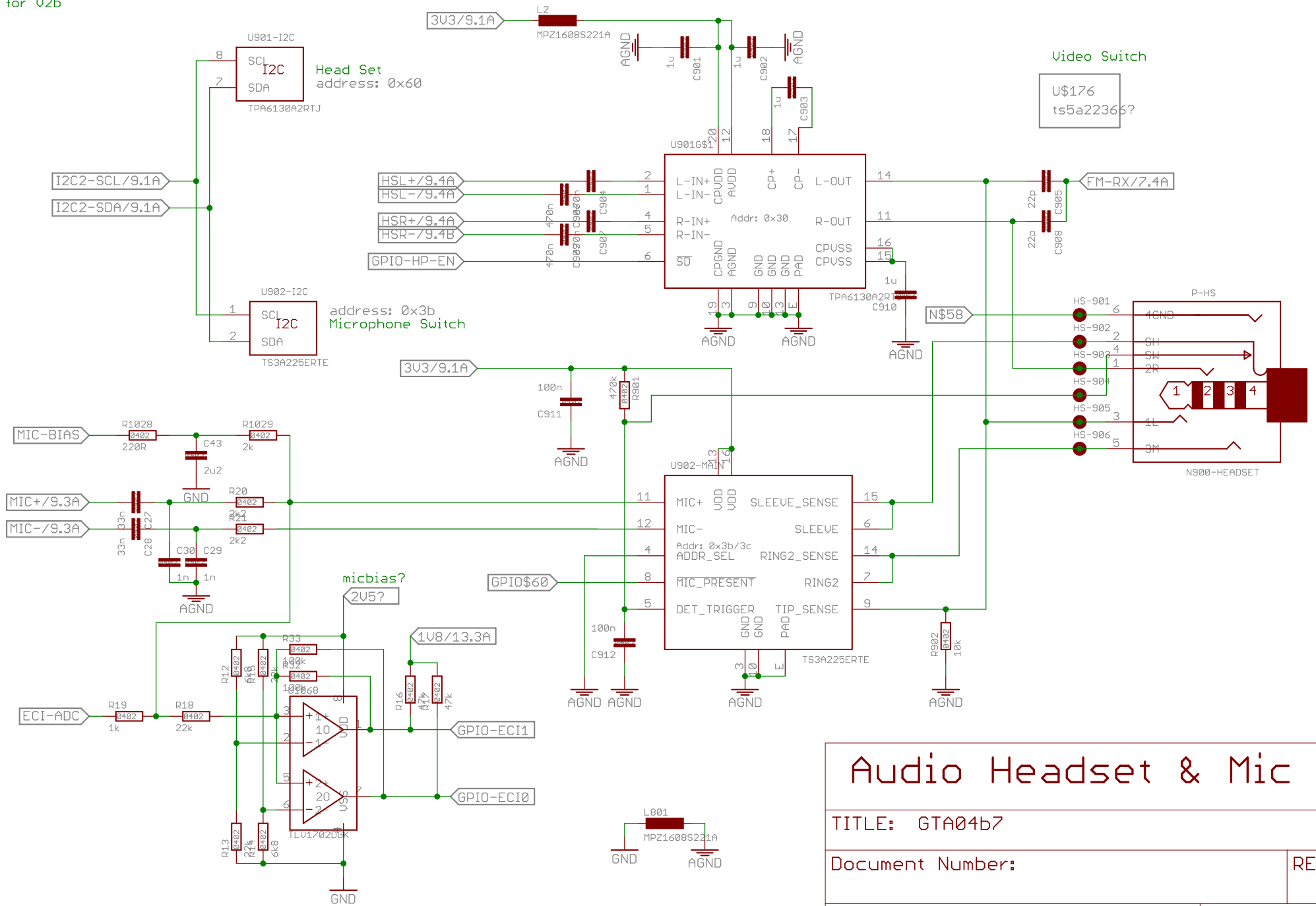
address: 0x18-0x1b

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)

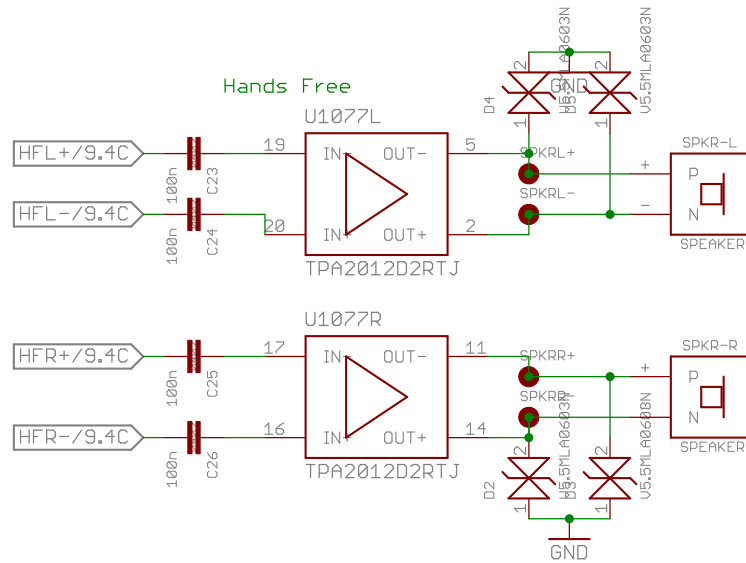
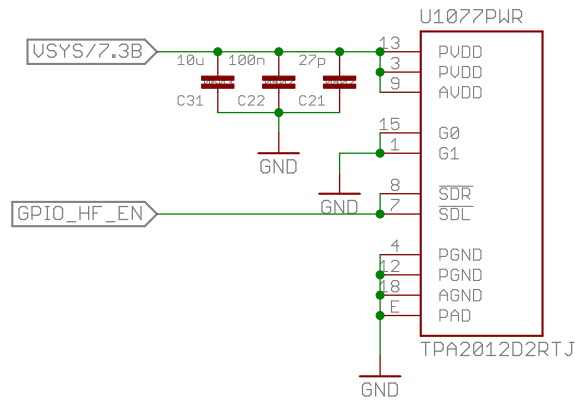


<h1>Audio Codec</h1>	
TITLE: GTA04b7	
Document Number:	REV:
Date: 03.10.14 23:14	Sheet: 9/29

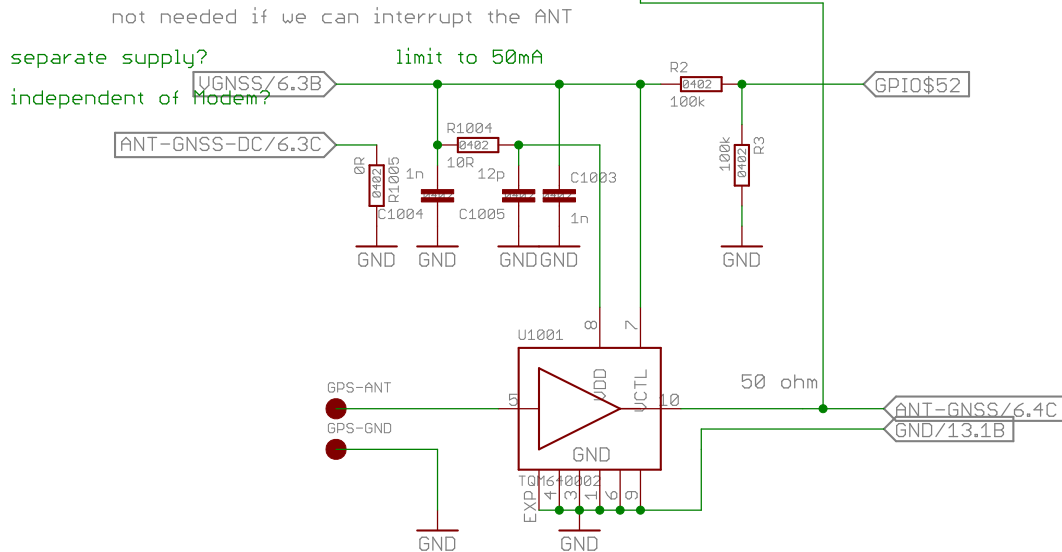
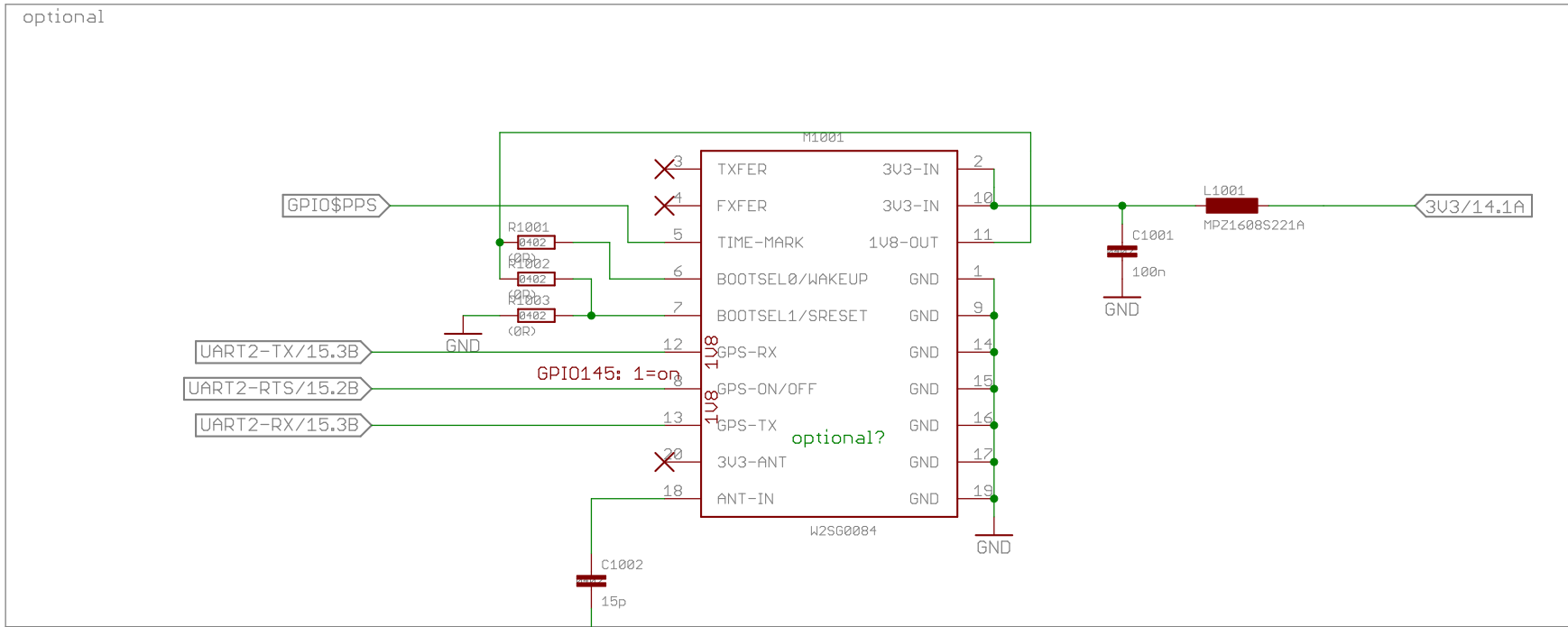
Ok for U2b



Ok for U2b



<h1>Audio Handsfree</h1>	
TITLE: GTA04b7	
Document Number:	REV:
Date: 03.10.14 23:14	Sheet: 11/29



# GPS

TITLE: GTA04b7

Document Number:

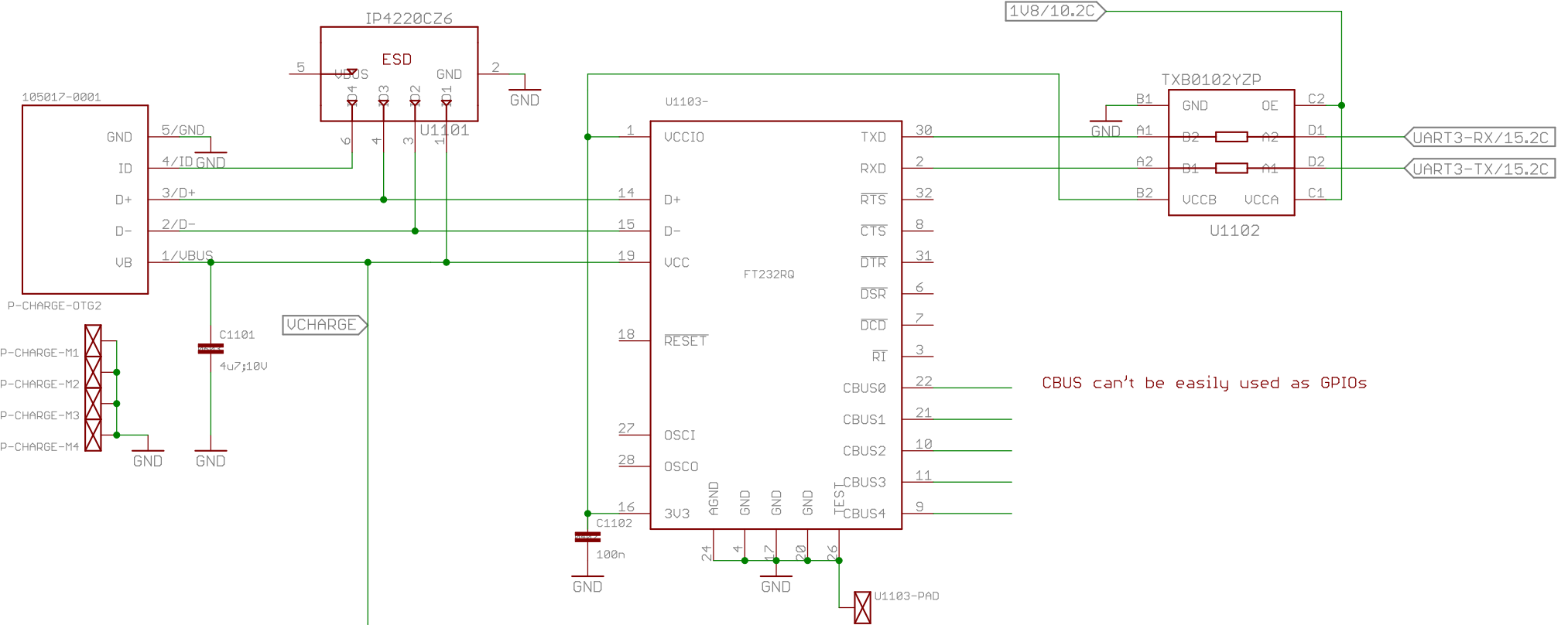
REV:

Date: 03.10.14 23:14

Sheet: 12/29

Ok for U2b

replace by tpd4s012dryr? less space?



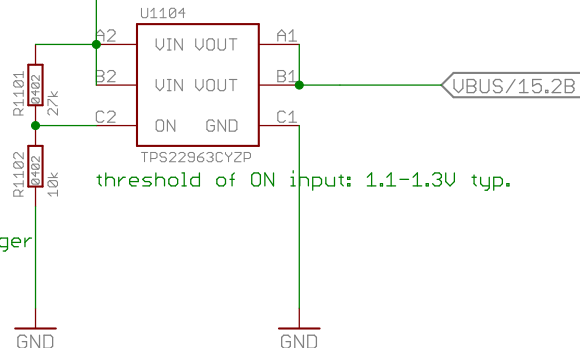
CBUS can't be easily used as GPIOs

Charging bypass

do we need to control D+/D- of USB3 to enable high charging current?

latchup risk by reverse current? (limited to 2.1 uA)

may need controller!  
make threshold@4.5V



threshold of ON input: 1.1-1.3V typ.

not needed if we use BQ24161B charger  
has 2 separate power inputs

# Charger/Console

TITLE: GTA04b7

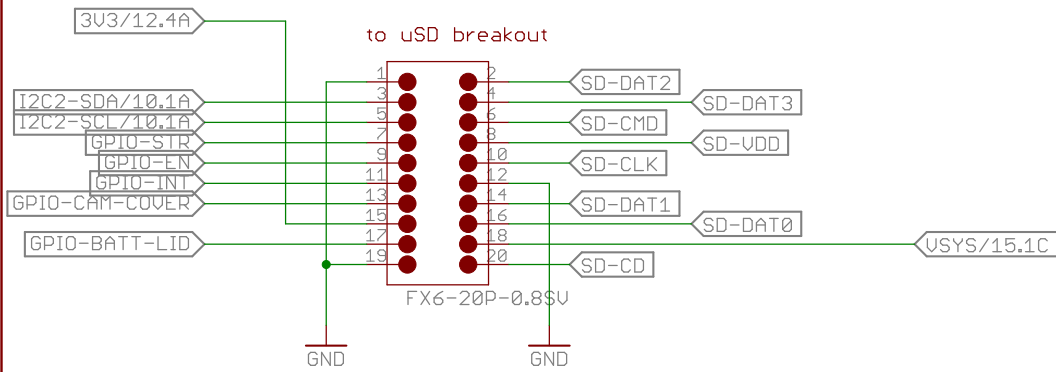
Document Number:

REV:

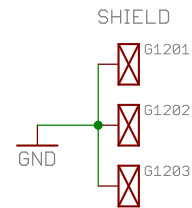
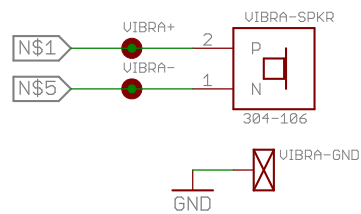
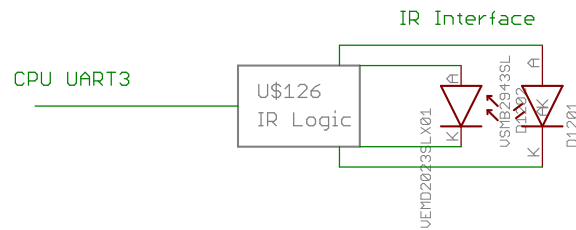
Date: 03.10.14 23:14

Sheet: 13/29

Ok for U2b

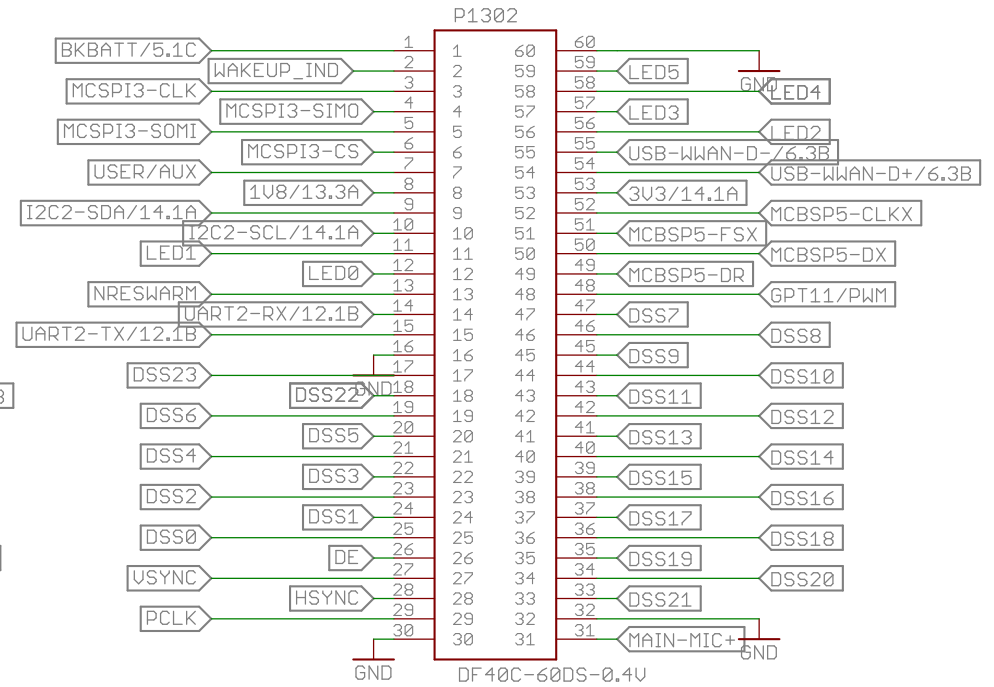
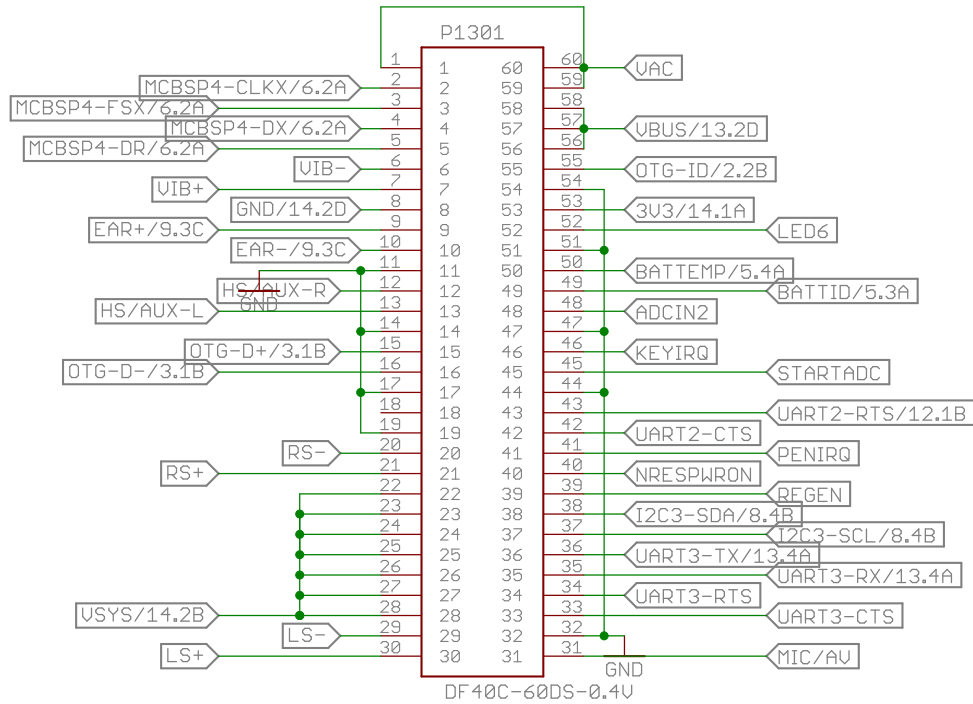


2nd microphone on lower board? Or on bottom of upper?



Misc (lower)	
TITLE: GTA04b7	
Document Number:	REV:
Date: 03.10.14 23:14	Sheet: 14/29

pin assignment tbd. (draft copied from GTA04Custom)



B2B to upper board

TITLE: GTA04b7

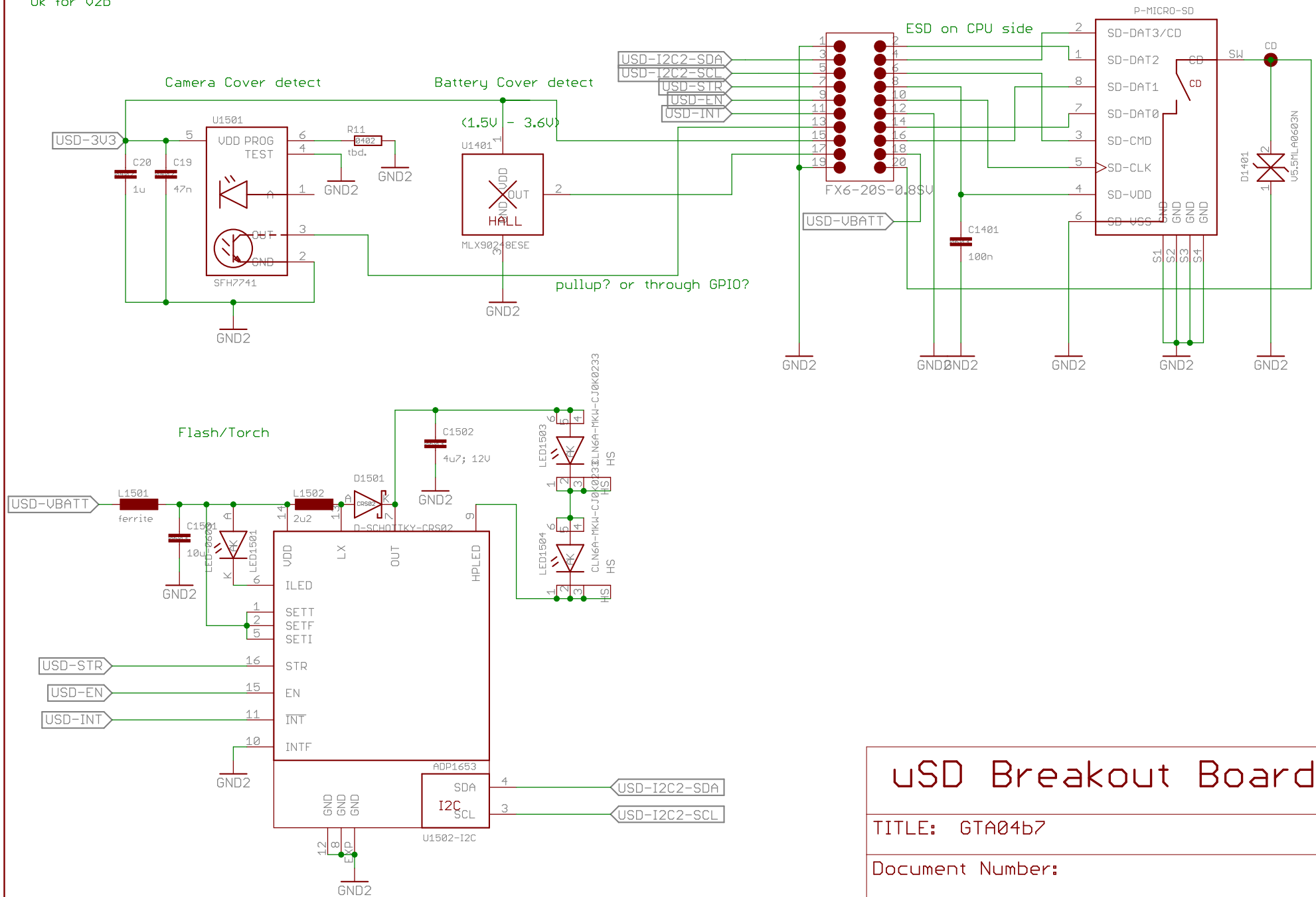
Document Number:

REV:

Date: 03.10.14 23:14

Sheet: 15/29

Ok for V2b



# uSD Breakout Board

TITLE: GTA04b7

Document Number:

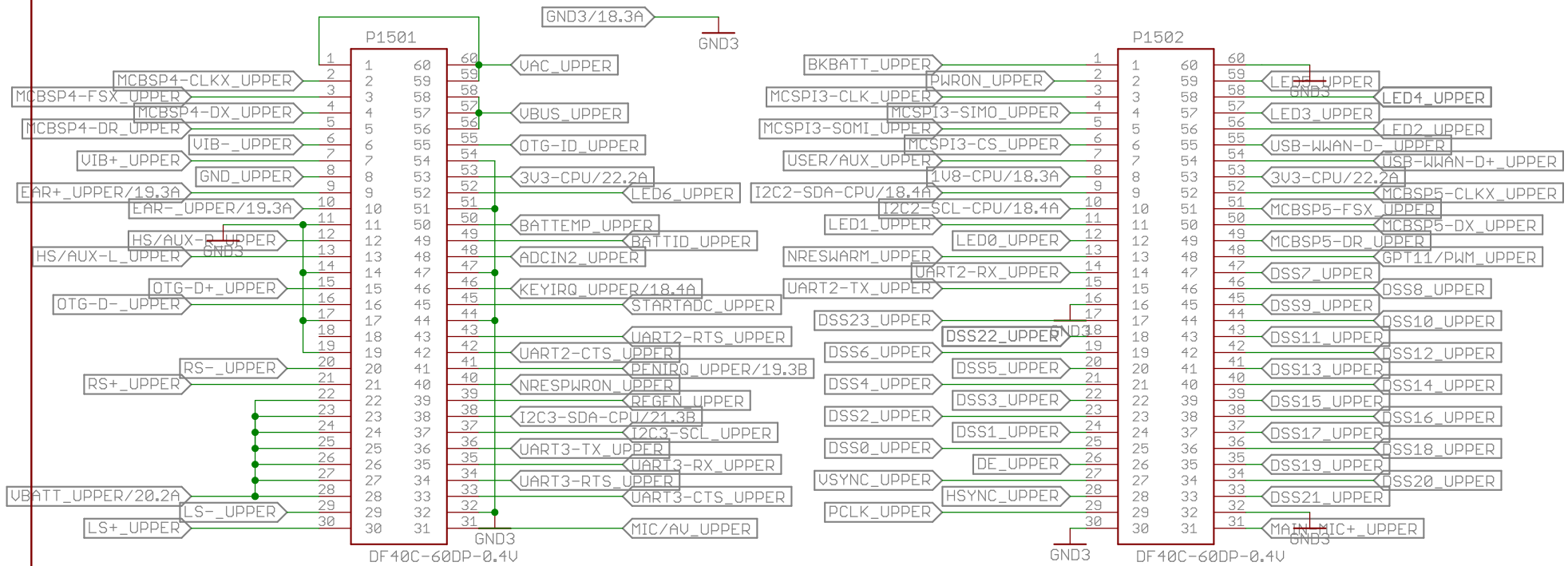
REV:

Date: 03.10.14 23:14

Sheet: 16/29



to be adjusted to lower board connector

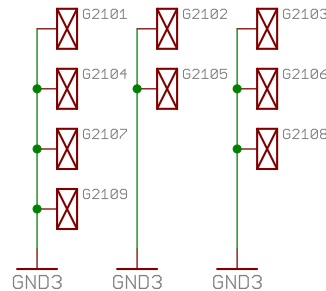


no longer needed:  
DSS  
keyirq, penirq

additionally needed:  
main camera CSI-A

lockswitch: 113 cam-focus: 58 cam-trigger: 69

SHIELD



# B2B to lower board

TITLE: GTA04b7

Document Number:

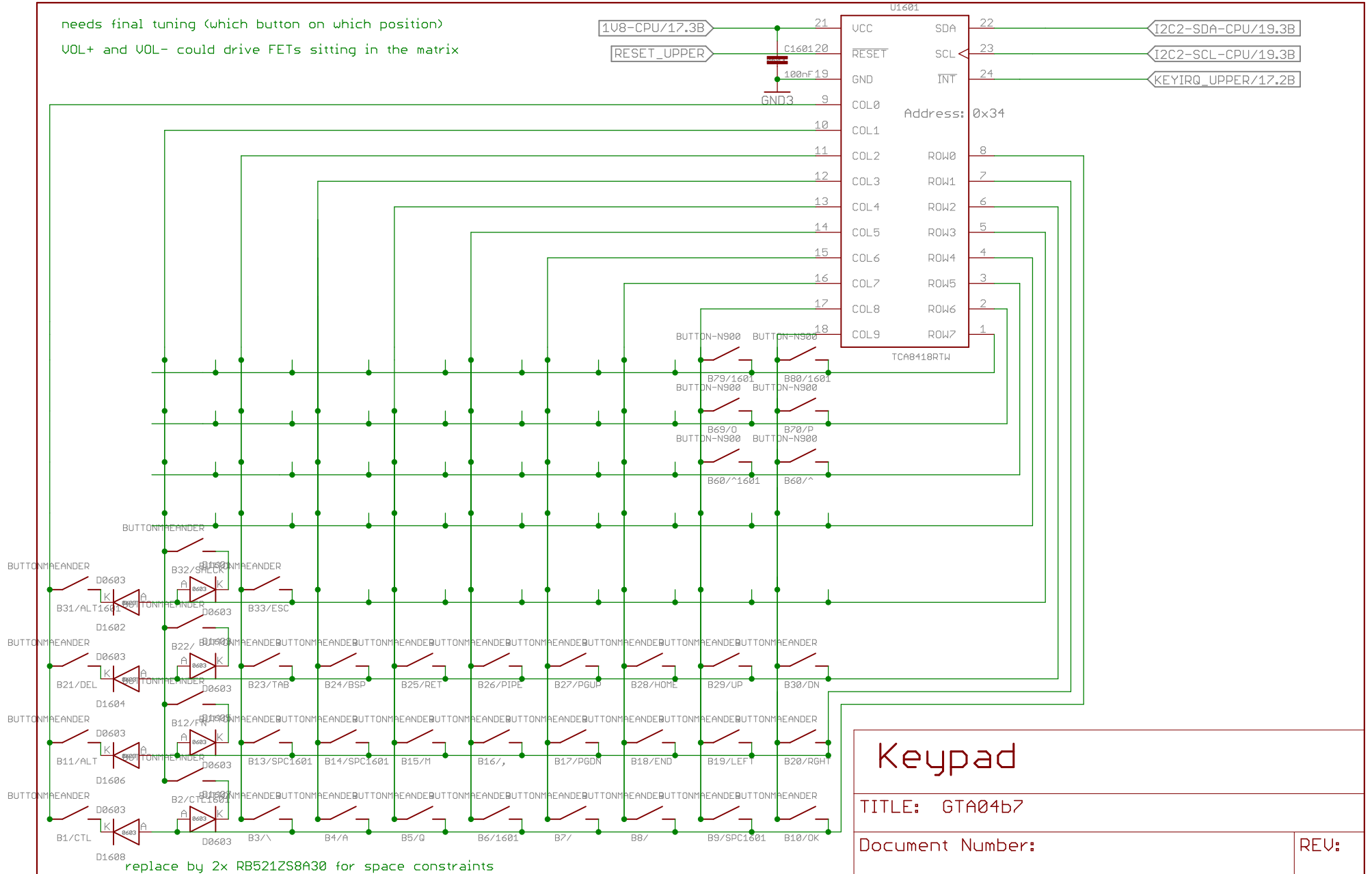
REV:

Date: 03.10.14 23:14

Sheet: 17/29

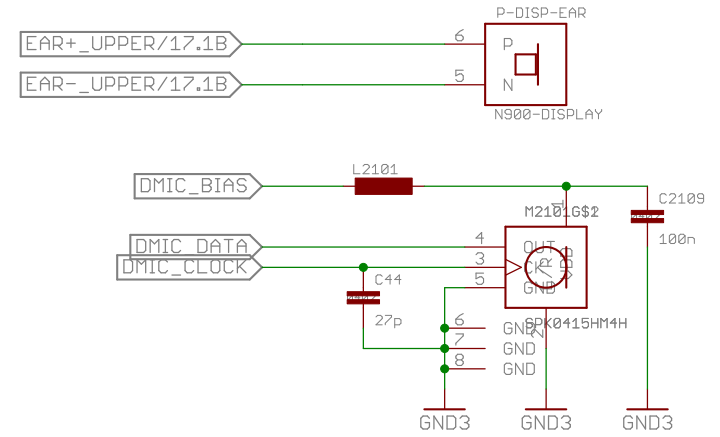
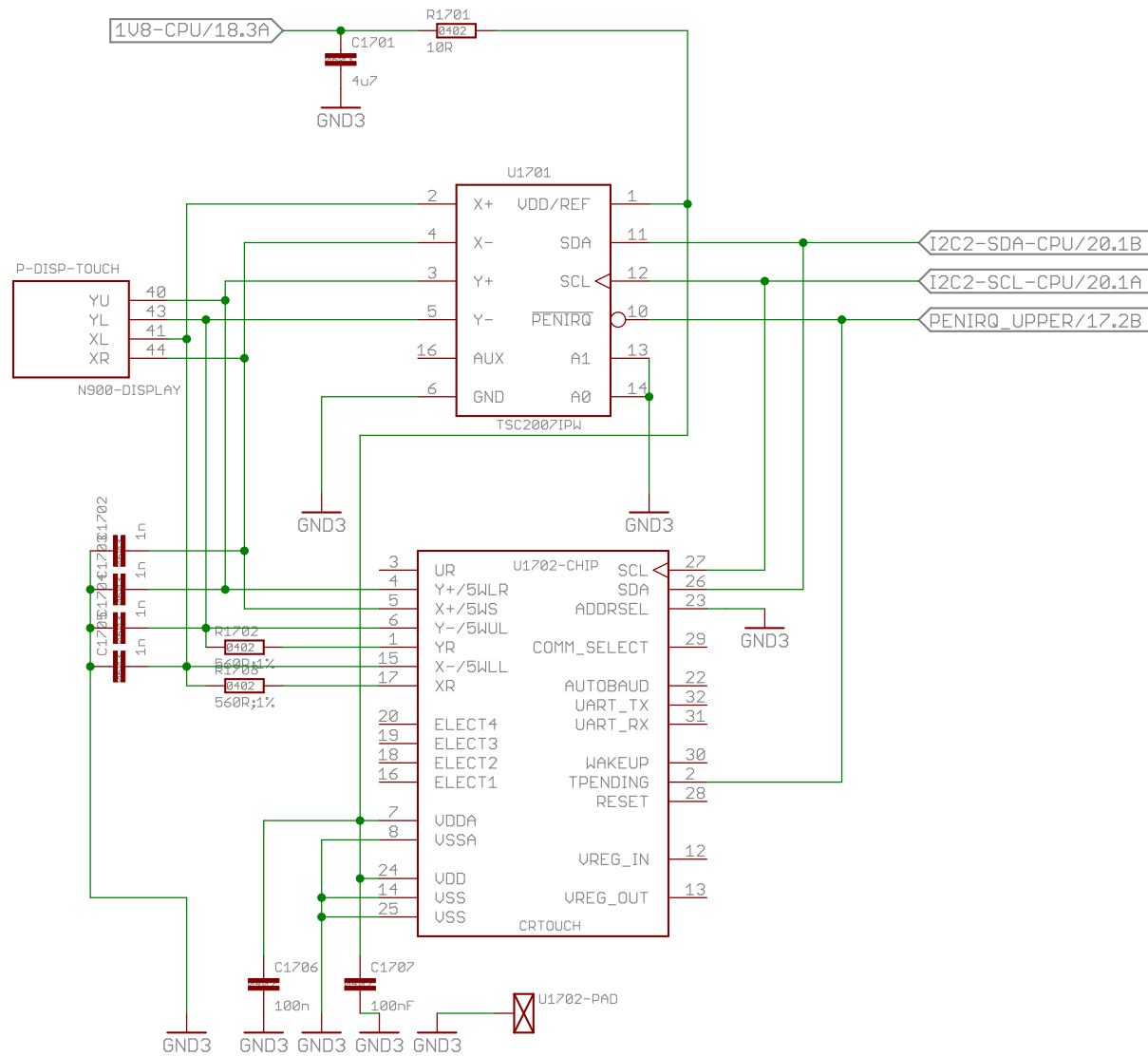
Ok for V2b

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



<h1>Keypad</h1>	
TITLE: GTA04b7	
Document Number:	REV:
Date: 03.10.14 23:14	Sheet: 18/29

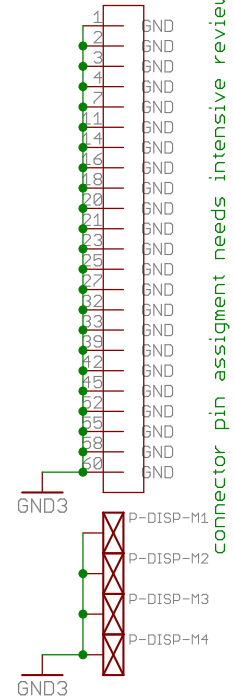
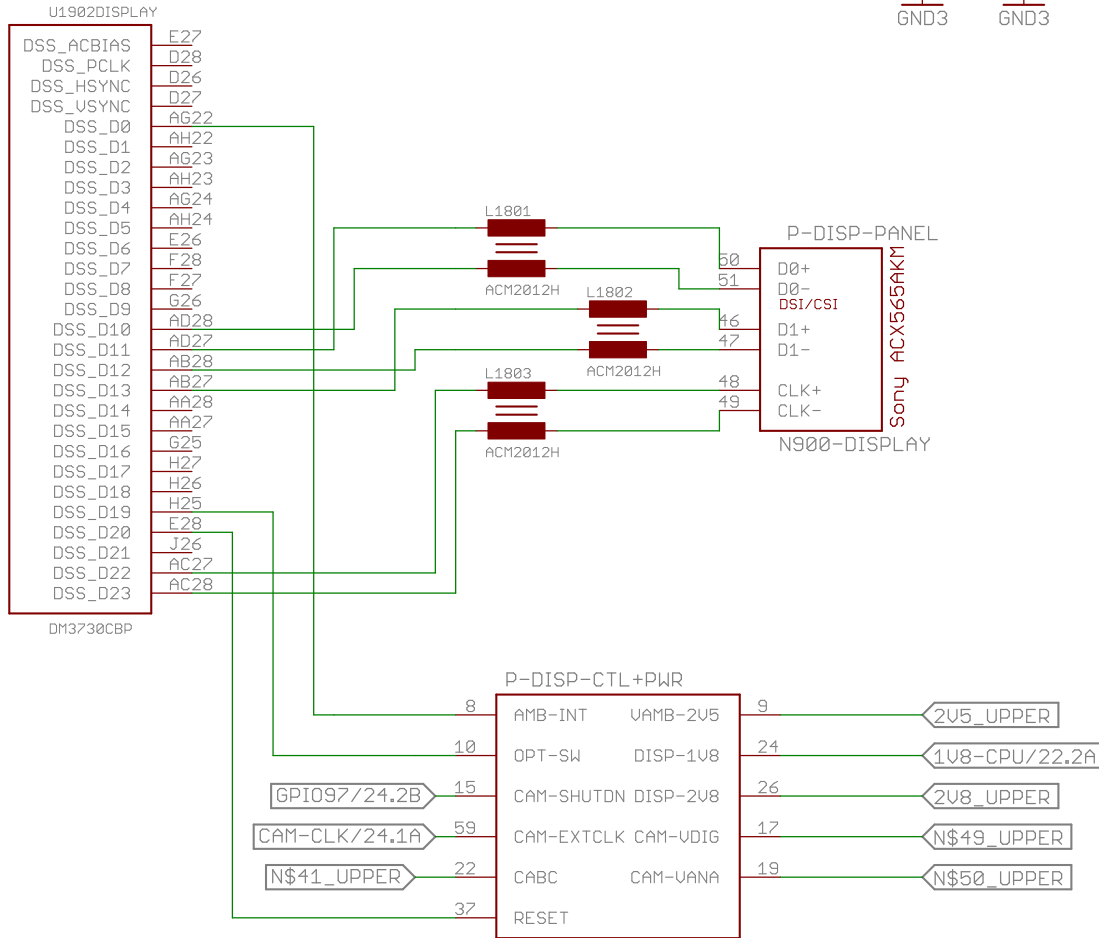
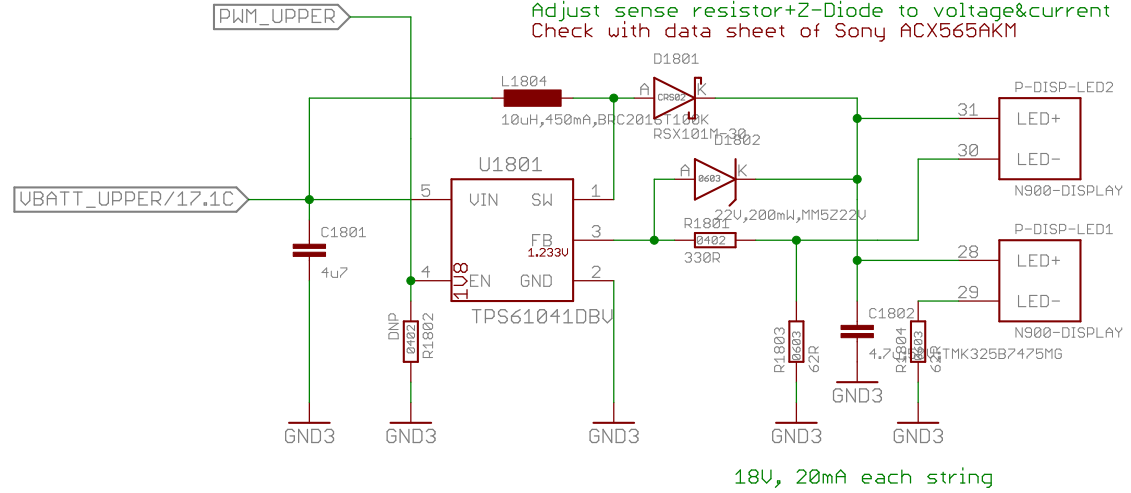
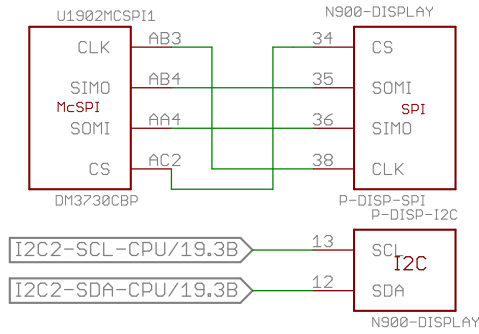
Ok for U2b



# Display-Peripherals

TITLE: GTA04b7	
Document Number:	REV:
Date: 03.10.14 23:14	Sheet: 19/29

Ok for U2b

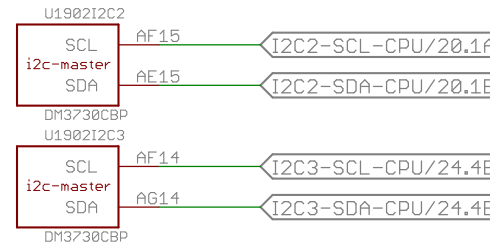
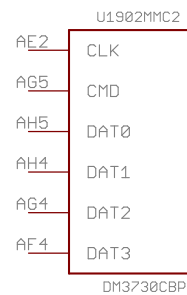
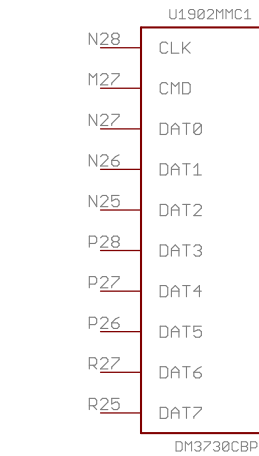
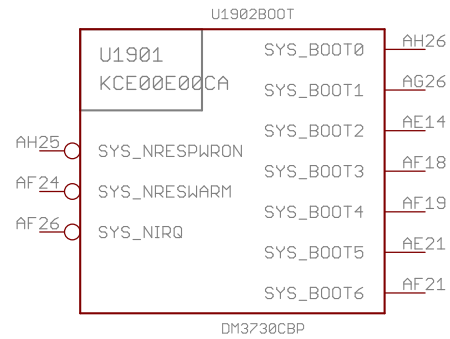


# Display-Panel&Power

TITLE: GTA04b7	
Document Number:	REV:
Date: 03.10.14 23:14	Sheet: 20/29

Ok for U2b

POP or eMMC or both?



# CPU + PoP RAM/NAND

TITLE: GTA04b7

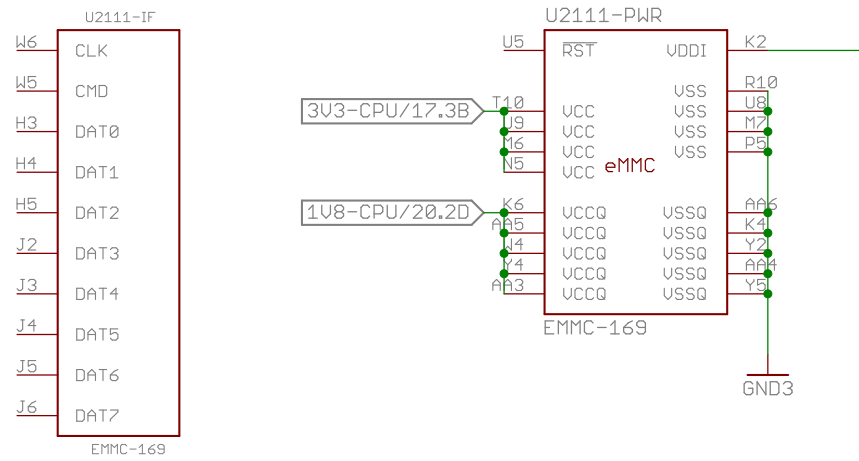
Document Number:

REV:

Date: 03.10.14 23:14

Sheet: 21/29

Ok for V2b



## eMMC

TITLE: GTA04b7

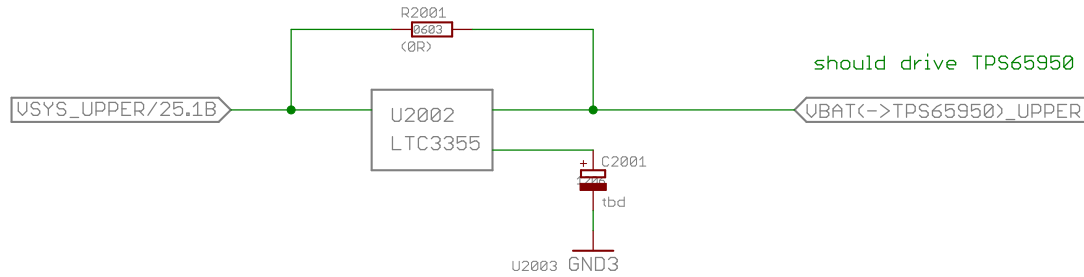
Document Number:

REV:

Date: 03.10.14 23:14

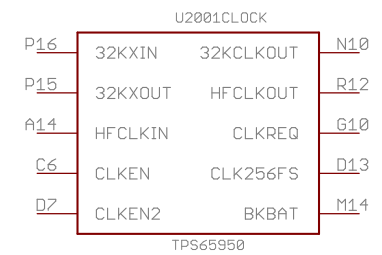
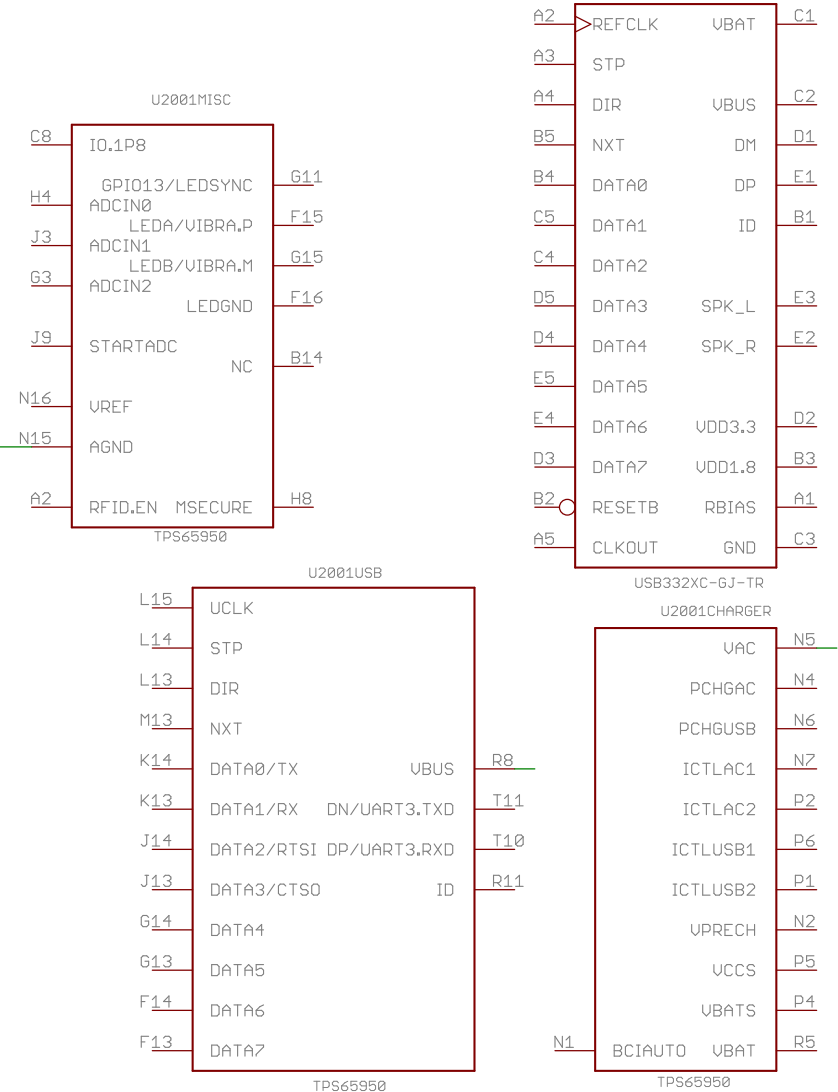
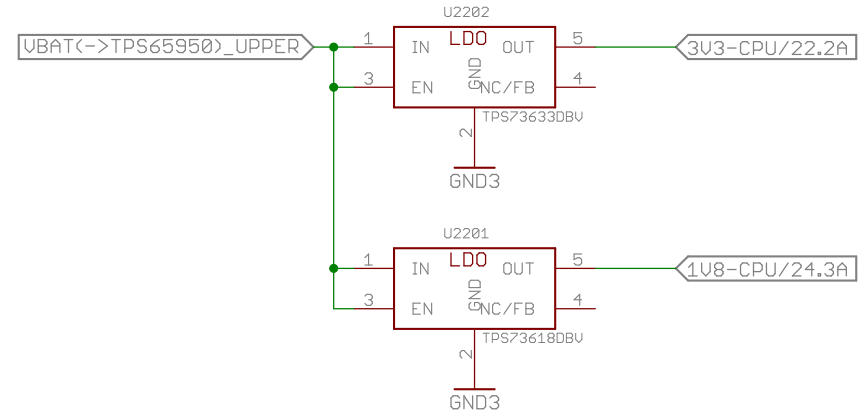
Sheet: 22/29

Ok for U2b



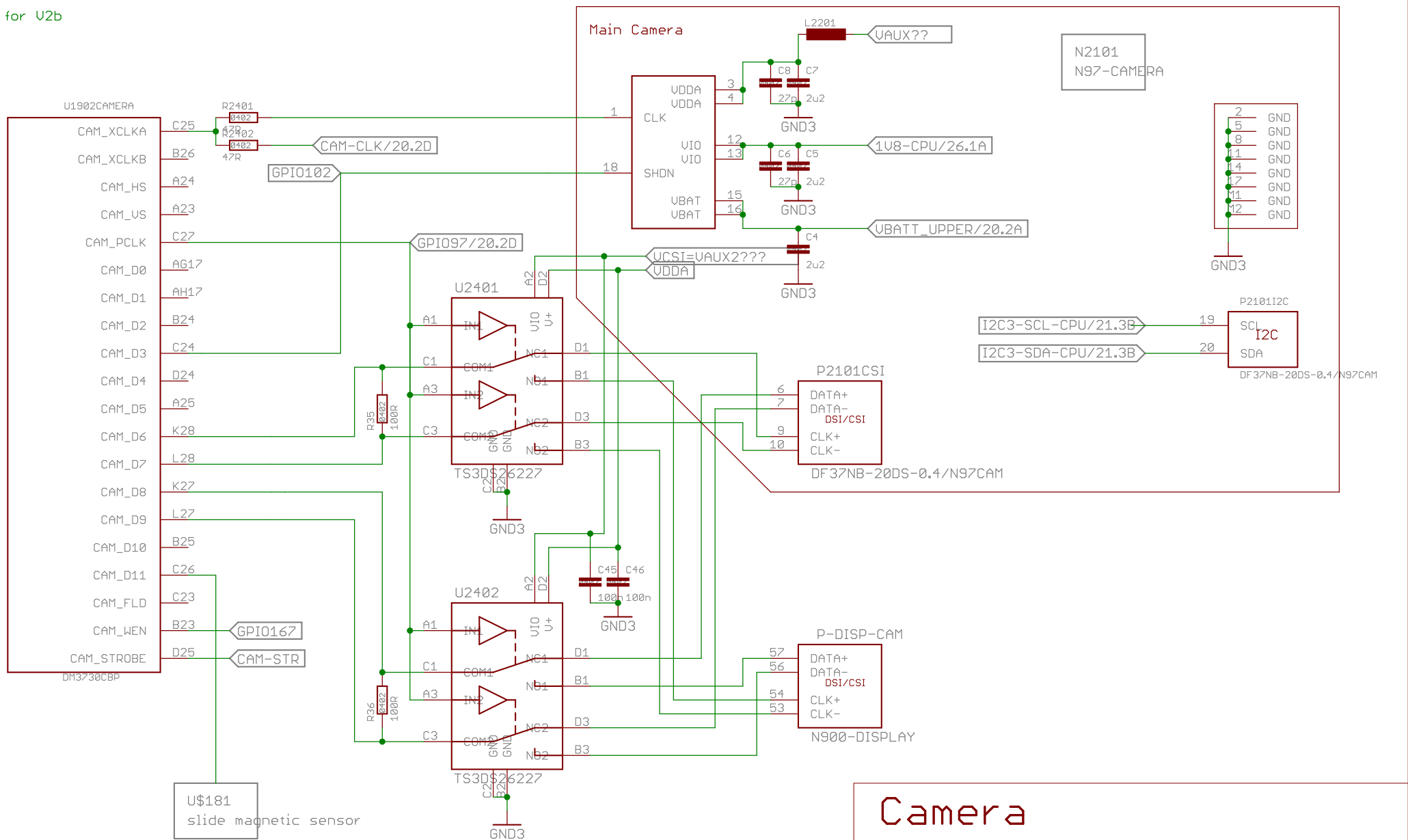
should drive TPS65950

simple capless 400mA LDO for TPS65950 substitute



<h1>PMU+Codec</h1>	
TITLE: GTA04b7	
Document Number:	REV:
Date: 03.10.14 23:14	Sheet: 23/29

Ok for U2b



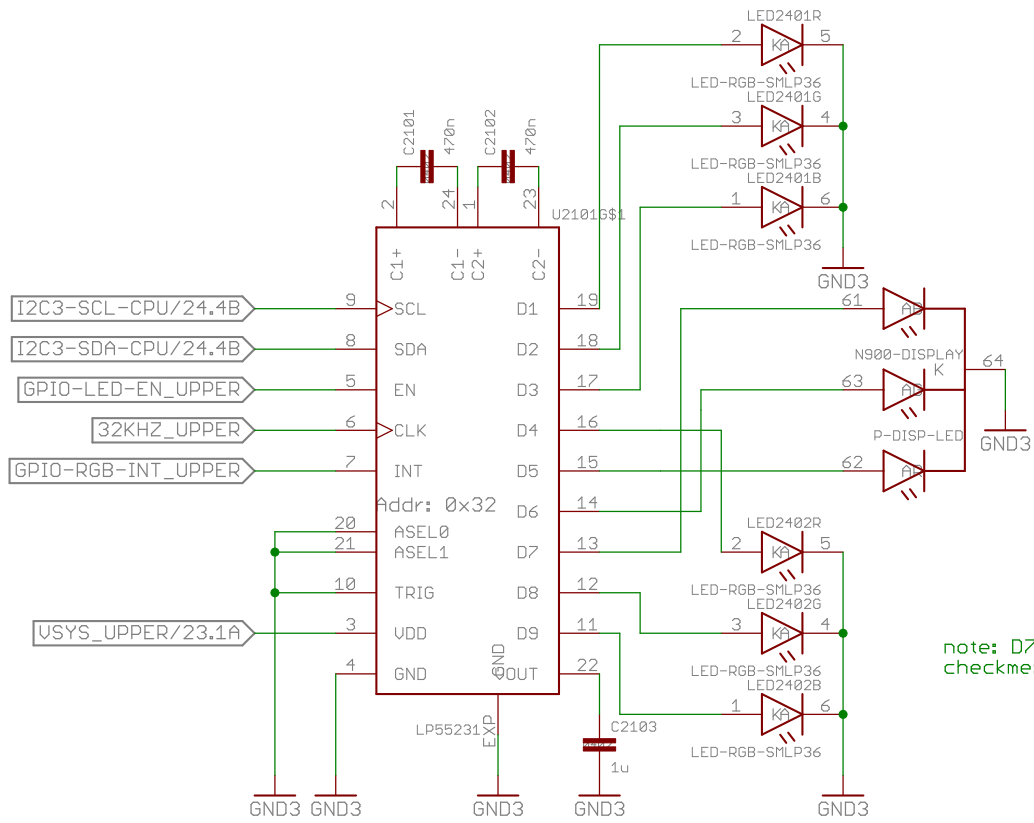
U\$181  
slide magnetic sensor

<h1>Camera</h1>	
TITLE: GTA04b7	
Document Number:	REV:
Date: 03.10.14 23:14	Sheet: 24/29



Ok for U2b

### AUX and Display LEDs



note: D7, D8, D9 are powered differently!  
checkme: assignment of LED location to output number

## LEDs

TITLE: GTA04b7

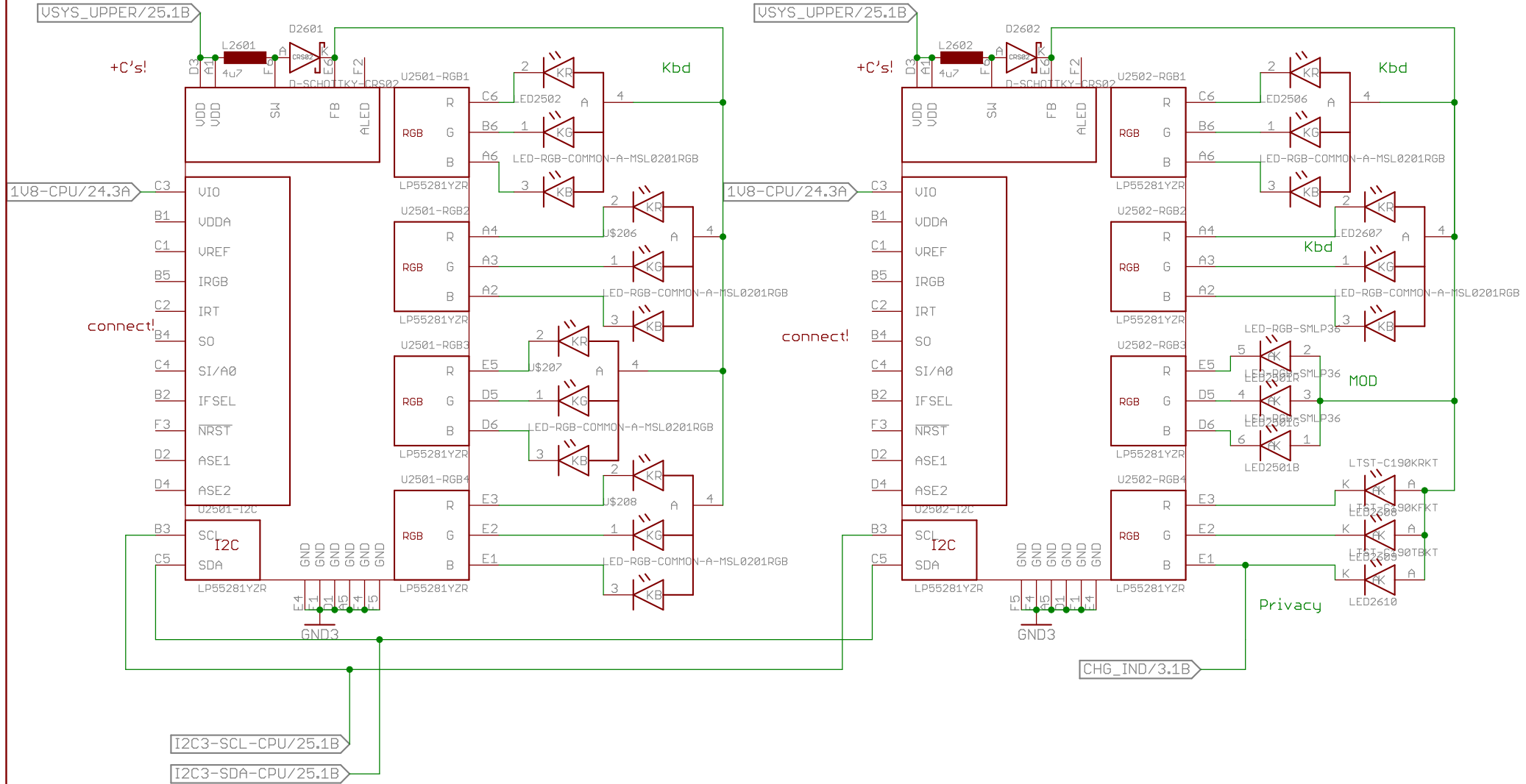
Document Number:

REV:

Date: 03.10.14 23:14

Sheet: 25/29

Ok for U2b



# Fancy LEDs

TITLE: GTA04b7

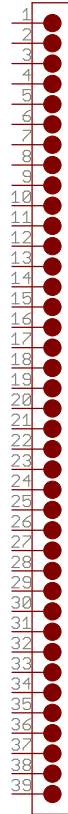
Document Number:

REV:

Date: 03.10.14 23:14

Sheet: 26/29

Connect to OMAP3



DSS, McSPI1, I2C, Camera, some GPIOs

## Connector to BB

TITLE: GTA04b7

Document Number:

REV:

Date: 03.10.14 23:14

Sheet: 27/29

53 signals + 3 power  
+ camera

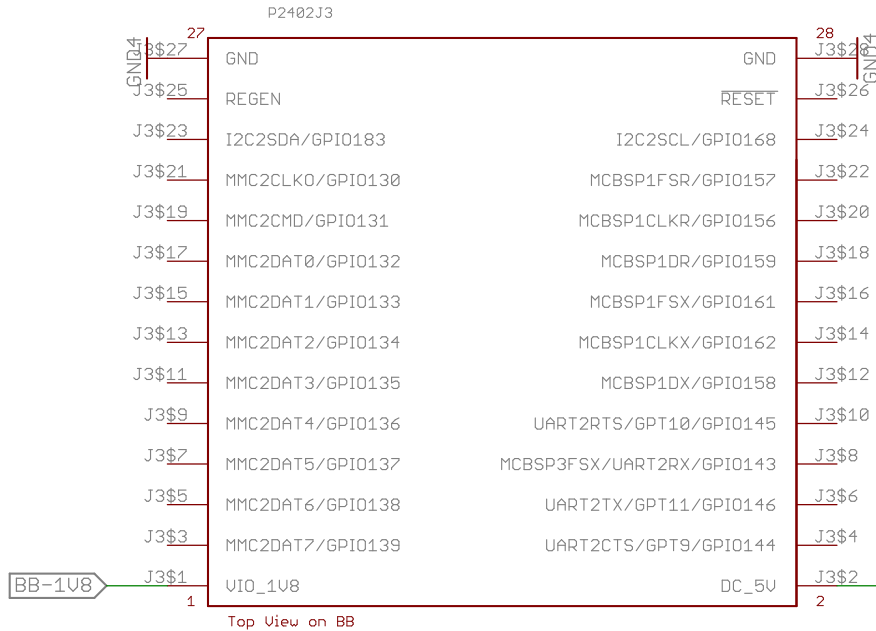


1v8???

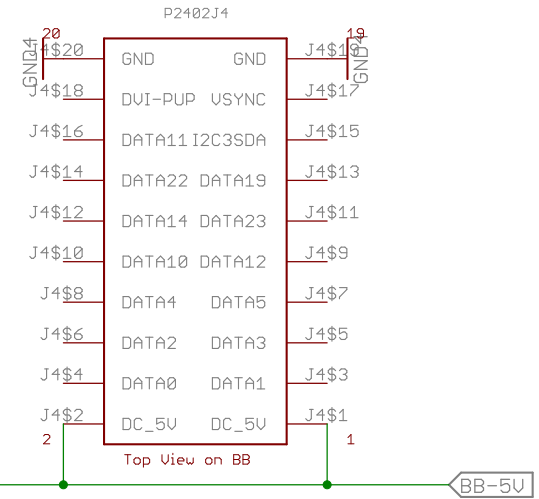
vsys

gnd

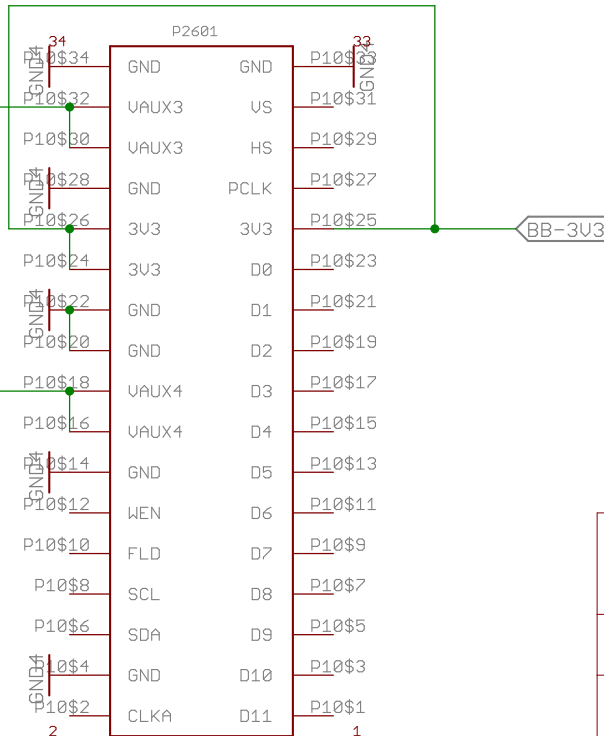
reverse?



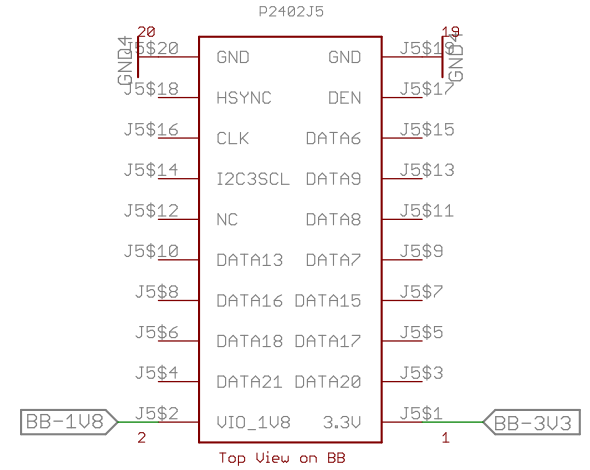
Top View on BB



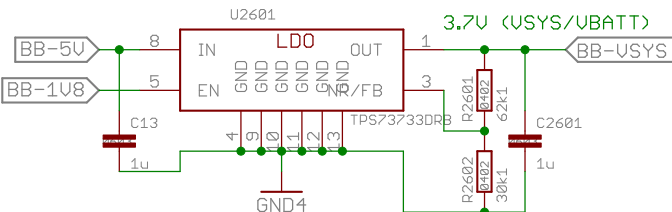
Top View on BB



Top View on BB



Top View on BB



# BB-XM Adapter

TITLE: GTA04b7

Document Number:

REV:

Date: 03.10.14 23:14

Sheet: 28/29

Ok for U2b

N2501  
molex flex cable

N2401  
N97-CAMERA-HOLE

N2502  
headset jack

N2503  
N900 case assembly

N2504  
STENCIL-TOP

N2505  
STENCIL-BOTTOM

## No-Solder Components

TITLE: GTA04b7

Document Number:

REV:

Date: 03.10.14 23:14

Sheet: 29/29