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PCB 0YR LA-A031P REV0 M/B

S1



FRAME  
EC0MV000200

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# Compal Confidential

## Schematics Document

VSJEV  
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MT8317

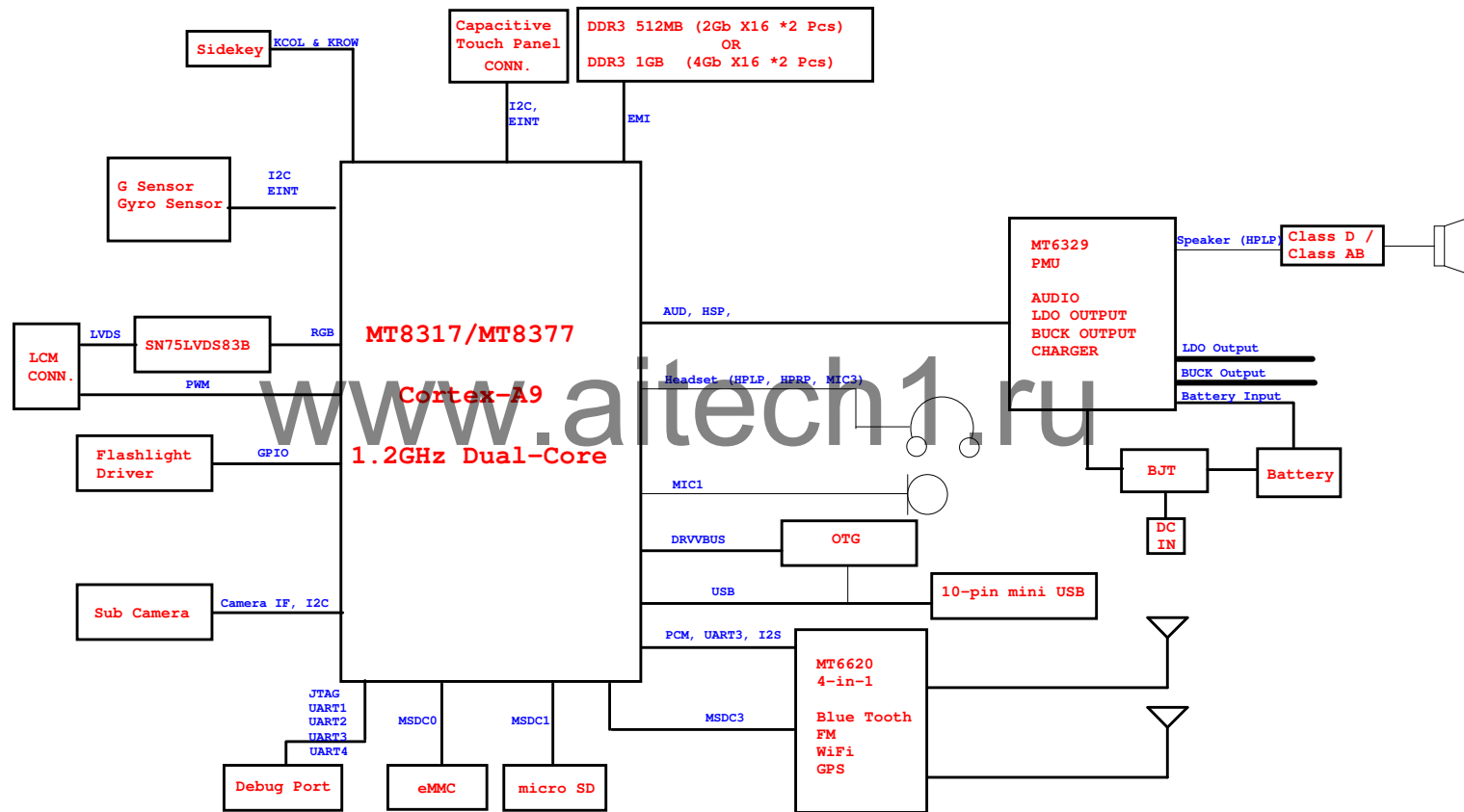
LA-A031P

2013-01-02

REV:1B

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Issued Date	2012/11/03	Deciphered Date	2013/11/03	Title Cover Page	
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# E70 system block diagram



Voltage Rails

MT6329 Power Plane	Function	Power Level	IDLE	Sleep mode
VCORE_PMU	VCORE switching output	0.75 ~ 1.3	ON	Low voltage
VAPROC_PMU	VPROC switching output	0.75 ~ 1.3	ON	Low voltage
VTXO_PMU	LDO output for TCXO	2.8V	ON	OFF
VCAMA_PMU	LDO output for camaera analog	2.8V	ON	Gating by SW
VDD12_INT_PMU	LDO output used for 1.2V SRAM	1.2V	ON	Low voltage
VIO28_IC	LDO output used for 2.8V IO	2.8V	ON	Gating by SW
VCAM_IO	VCAM_IOPMU	1.8V	ON	Gating by SW
VMC_PMU	SD card I/O and eMMC power	3.3V	ON	Gating by SW
VMCH	SD card power	3.3V	ON	Gating by SW
VGP	Reserve for LCM 3.3V	3.3V	ON	Gating by SW
VGP2	Touch panel GT927 power	2.8V	ON	Gating by SW

I2C address

Device	Address(7 bit)	Address(8bit)	
		Write	Read
Gyro (MPU-3050)	0x68	0xD0	0xD1
G-sensor (MC3210)	0x4C	0x98	0x99
Touch screen (GT927)	0x5D	0xBA	0xBB
Camera (OV7675)	0x21	0x42	0x43
Charge (NCP1851)	0x36	0x6C	0x6D
PMU(MT6329)			
Codec			

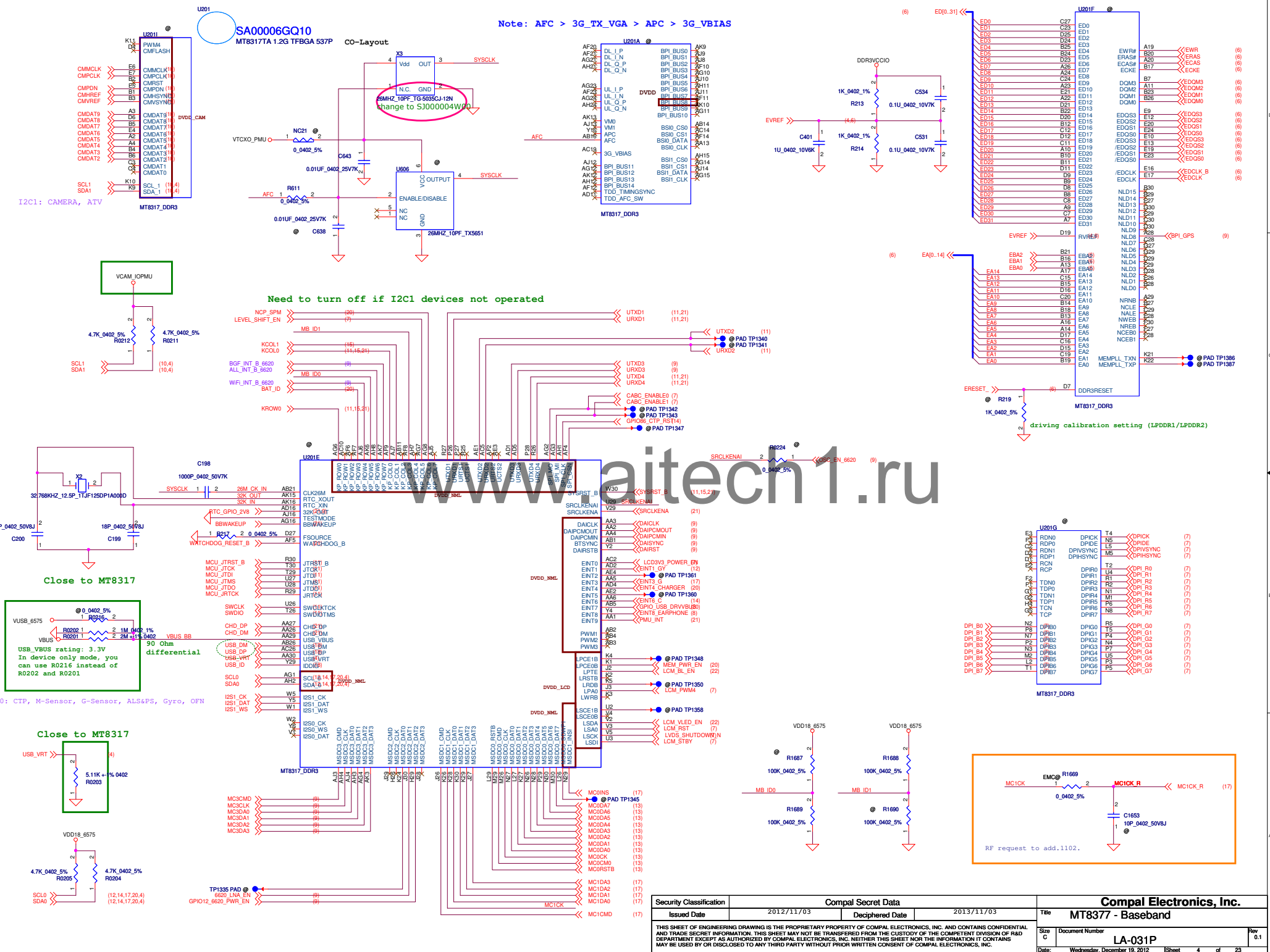
Main board ID

MB_ID0	MB_ID1	
0	0	PCB1.0+mCube
0	1	reserve
1	0	PCB2.0+STK8311
1	1	PCB2.0+KXTIK

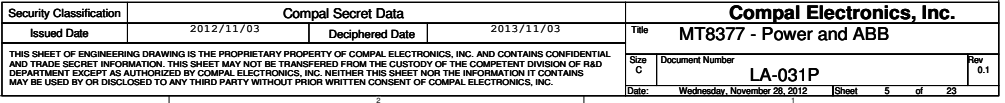
Battery ID

BAT_ID	
1	LG
0	Sanyo

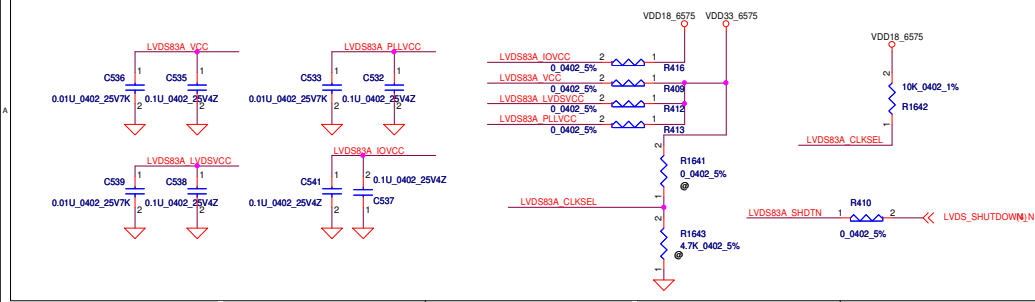
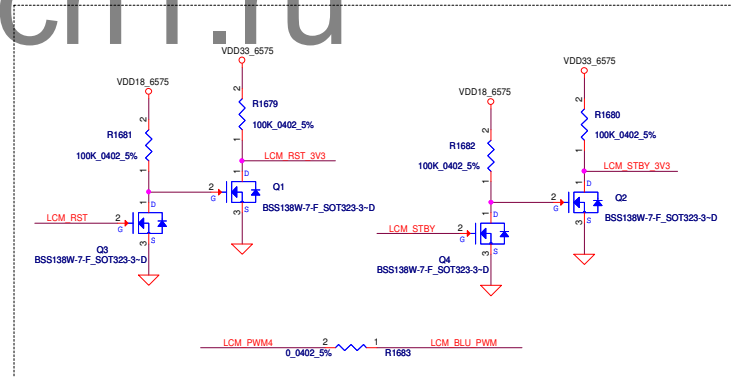
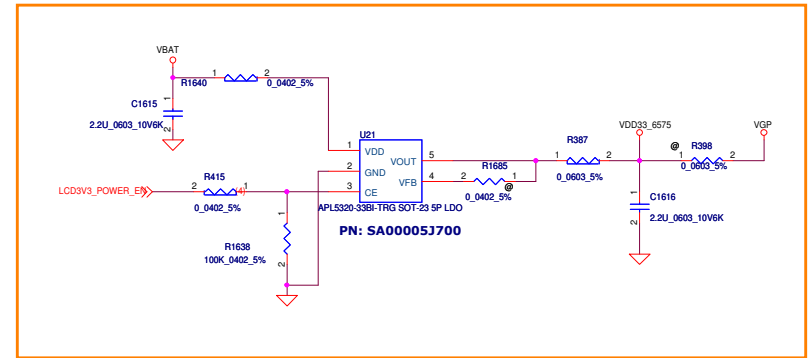
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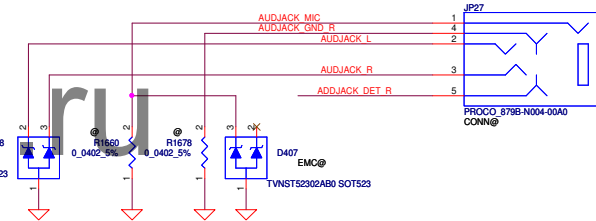
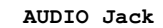




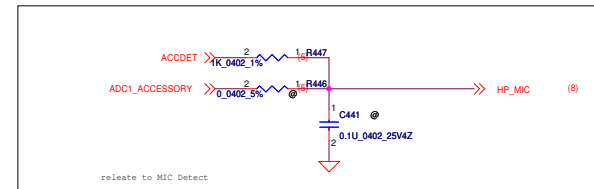


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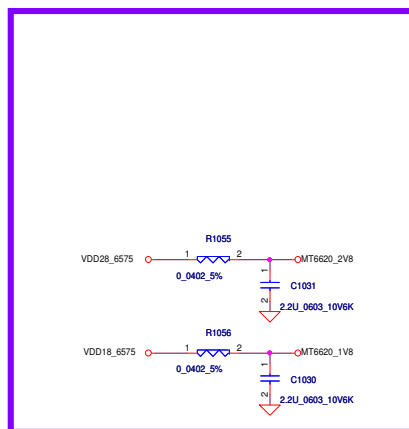
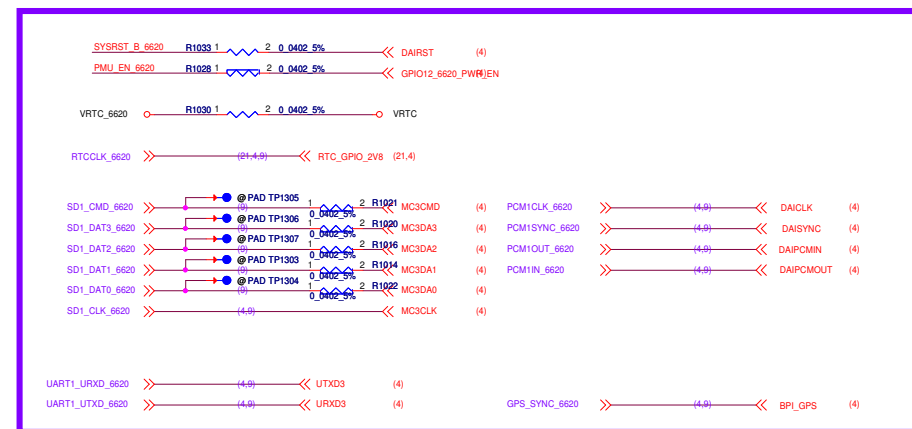
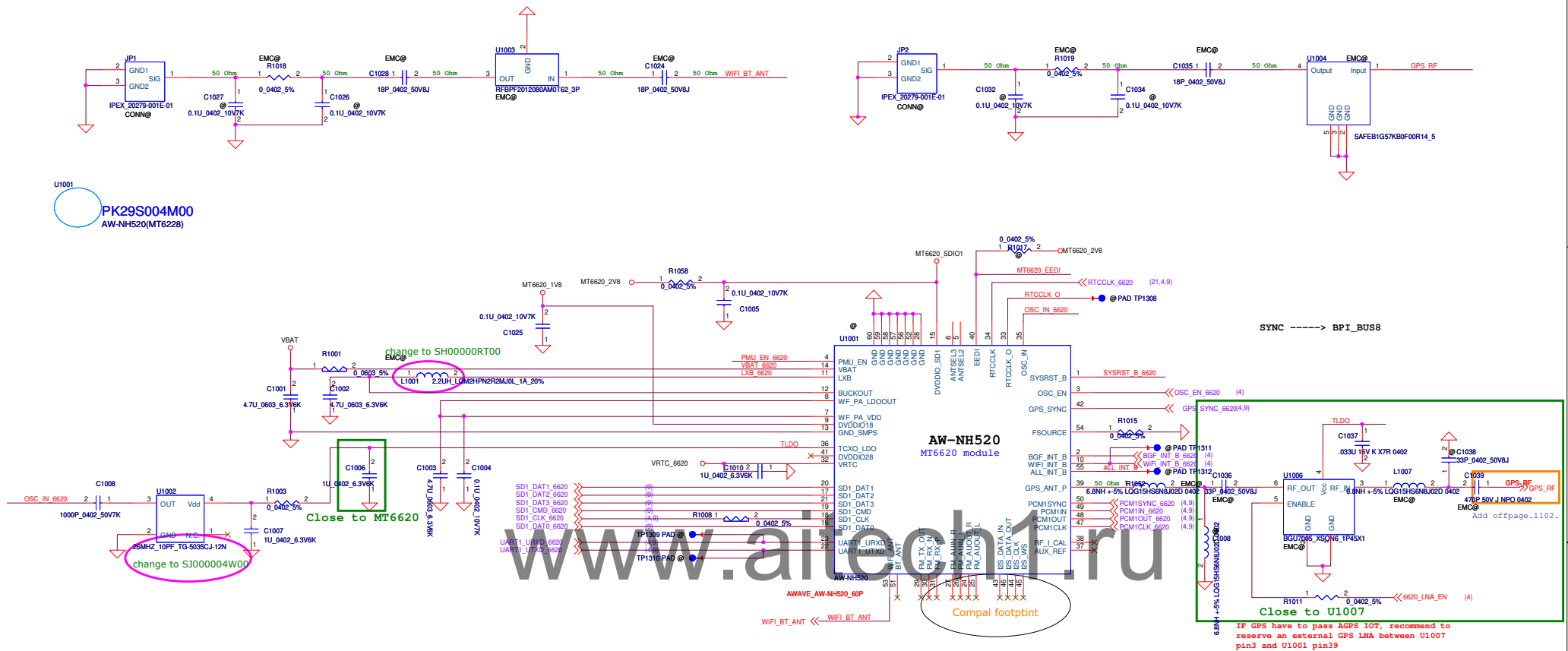


GND of C454(10uF) and headset should tie together and single via to GND plane



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clock setting		XTEST	EEDI	ANTSEL_3	
	2.8V TCXO or OSC	0	0	0	Default
	1.8V TCXO or OSC	0	1	0	
	XTAL	0	0	1	
	external clock mode	0	1	1	

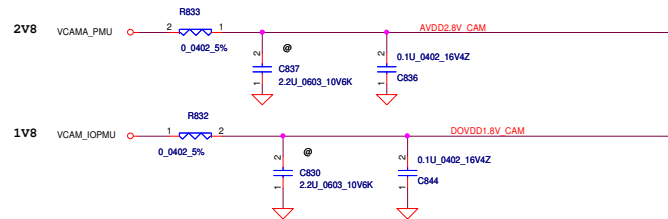
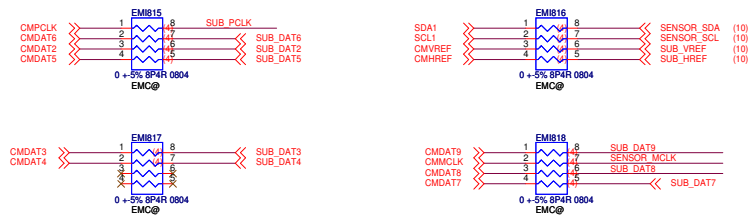
  

WIFI host interface		XTEST	ANTSEL_2	ANTSEL_1	
	WIFI :SDIO1	0	0	0	Default
	WIFI :SDIO2	0	0	1	
	WIFI :SPI	0	1	0	
	WIFI :reserved	0	1	1	

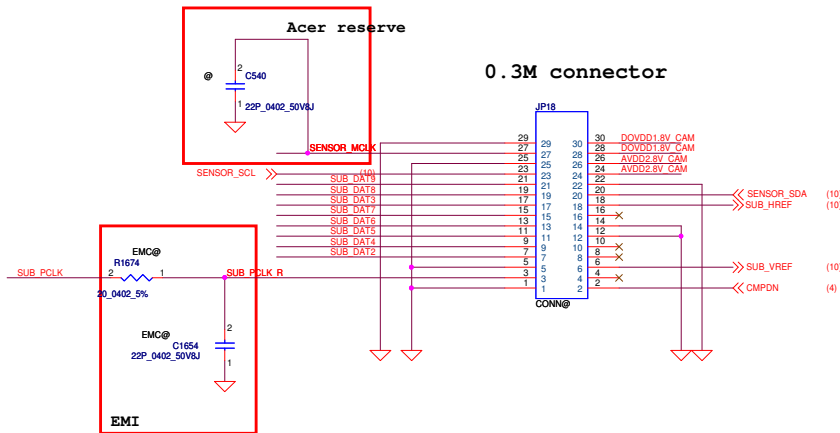
  

BT/common host interface		XTEST	ANTSEL_0		
	UART1	0	0		Default
	SDIO2	0	1		

# Sub Camera



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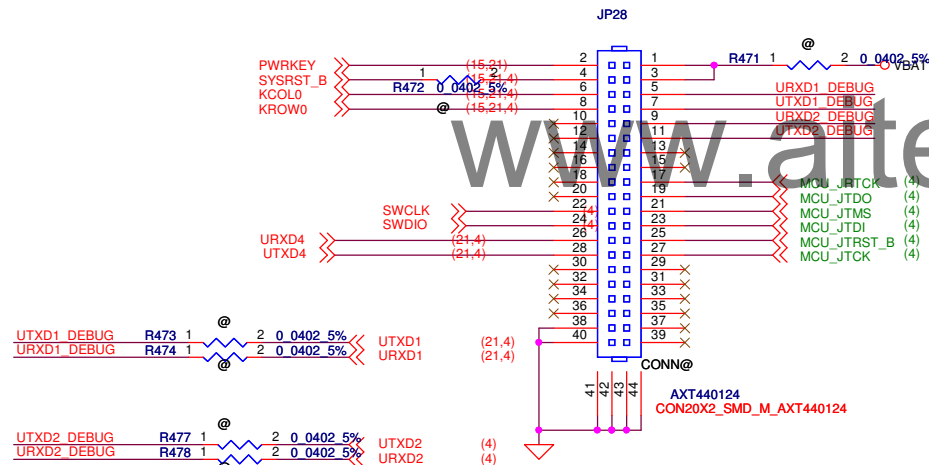
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## SD CARD

### MSDC1

## USB OTG Power

## Common Debug

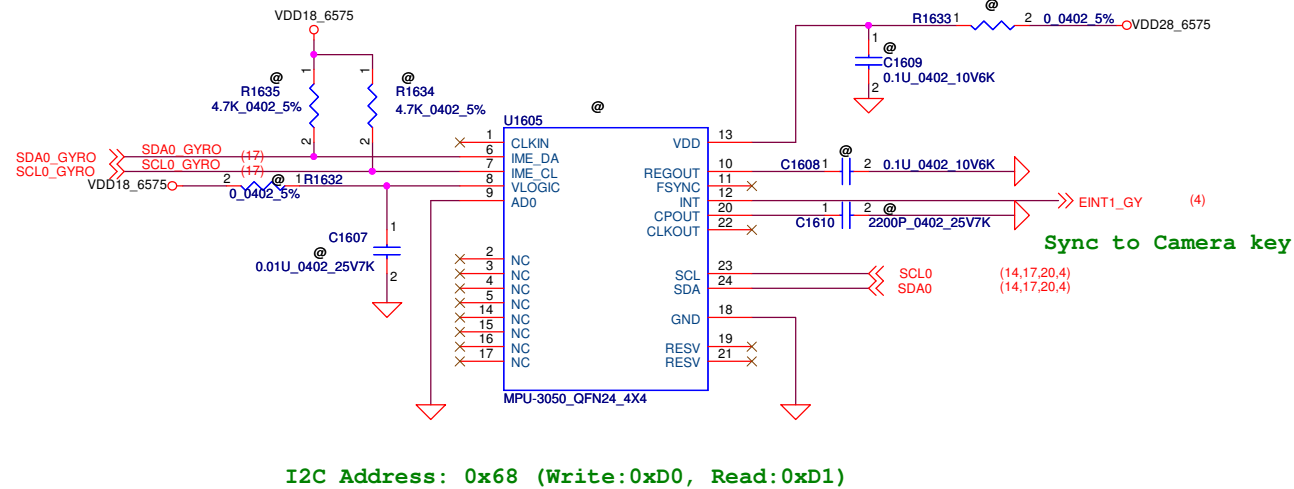


## USB HS IF

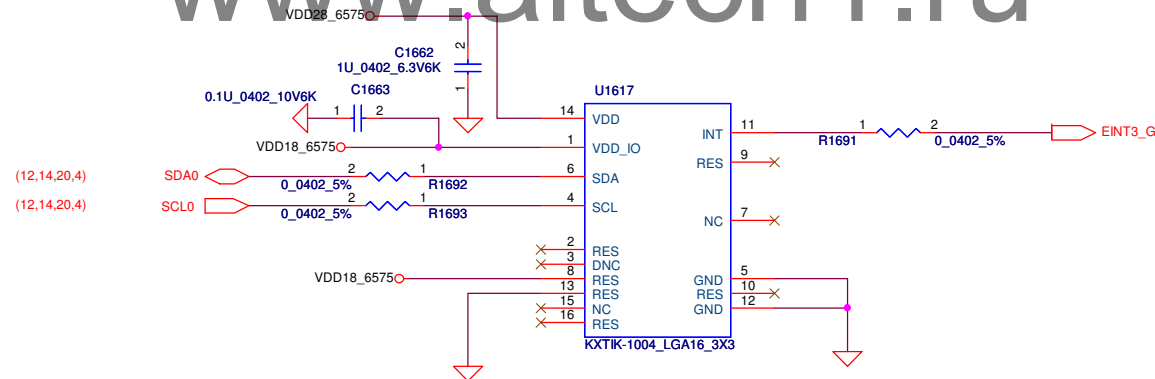
If mini-A connector insert => CID < 0V => Low  
If mini-B connector insert => CID > 1.2V => High  
IDPULLUP pin is replaced by 1.2V power source.

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## Gyro Sensor



## G Sensor

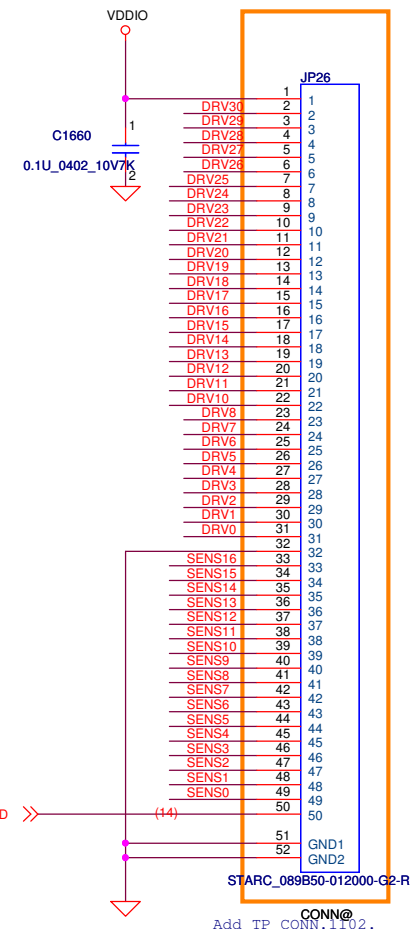
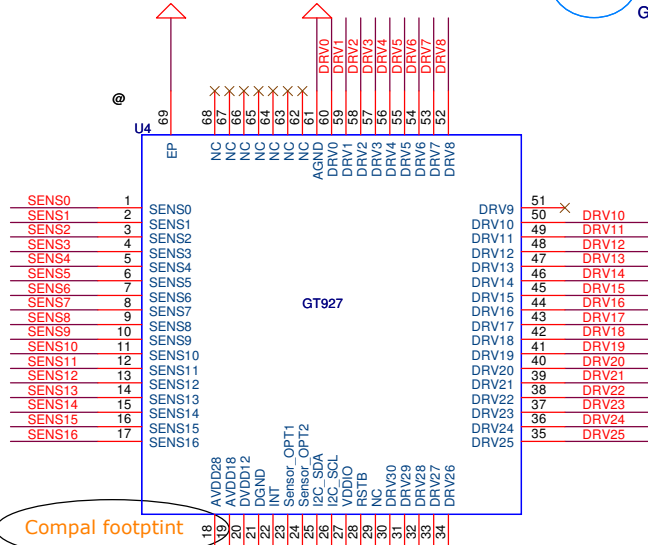
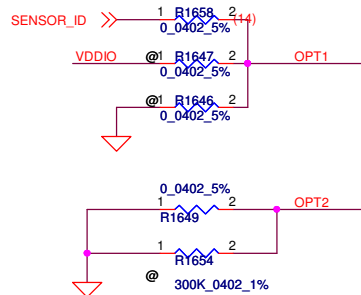
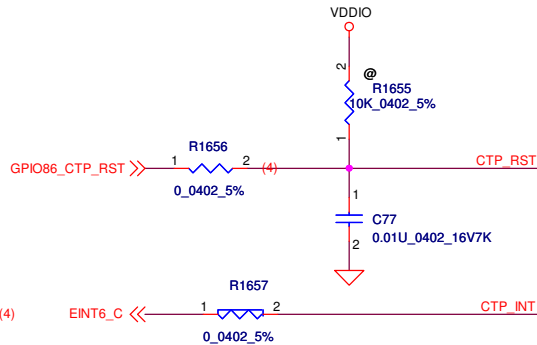
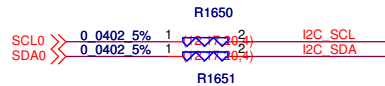
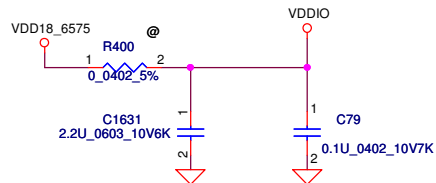
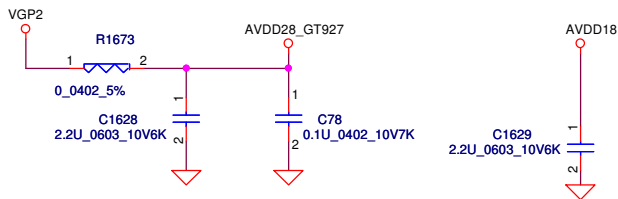


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## Close to Memory

[illegible]

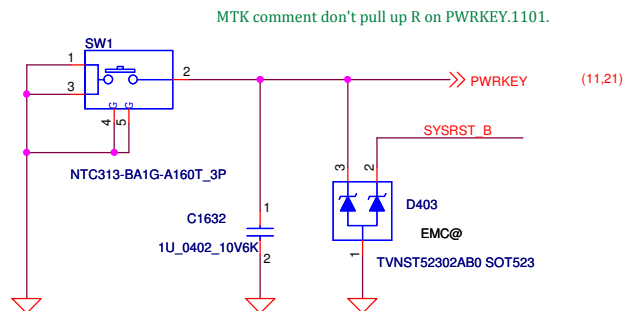
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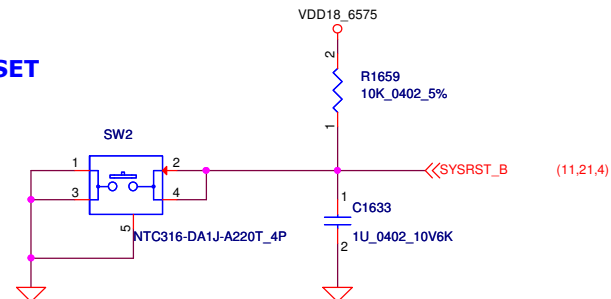
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## Power-on Button

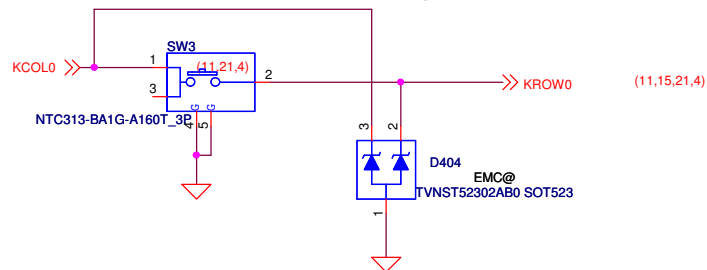


Compal GND MTK GND

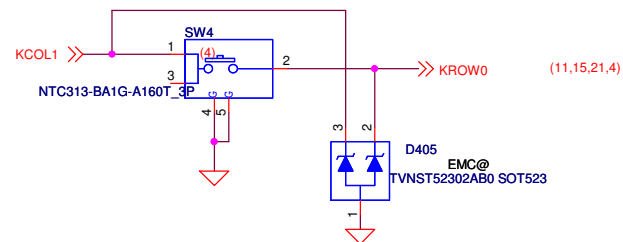
## RESET



## Volume Up (Download Key)

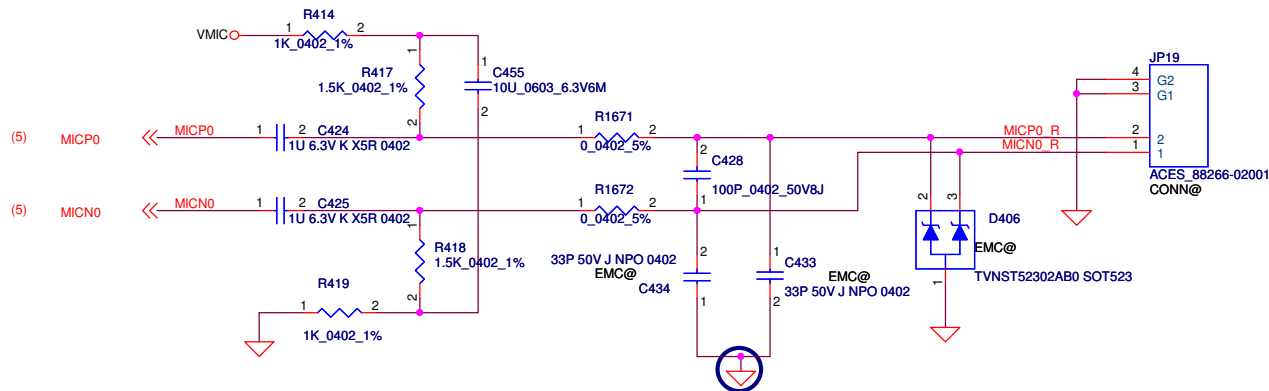


## Volume Down



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# MIC



Modify MIC CONN SCH.1102.

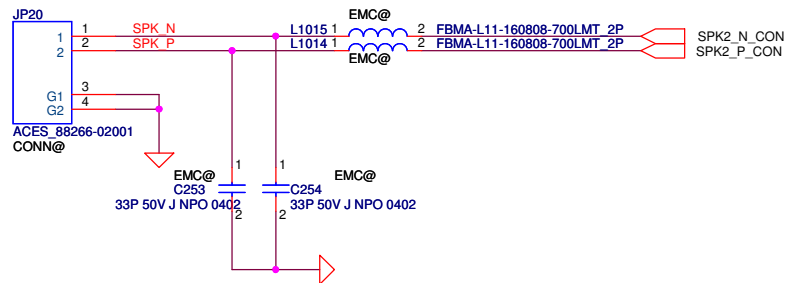
Compal GND

MTK GND

# SPAKER

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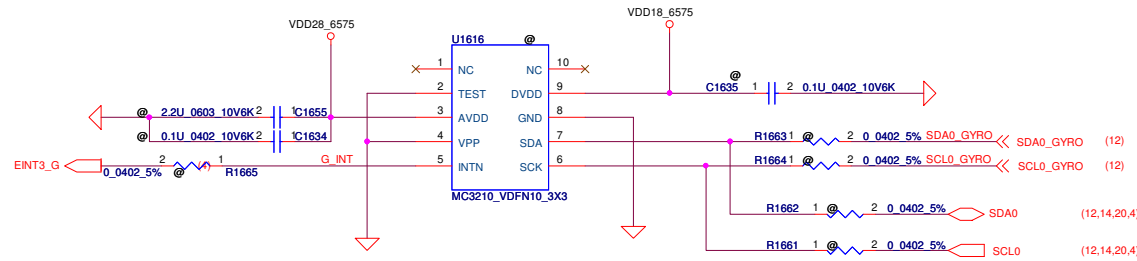
Confirm L17/L18 add or not?.1101.



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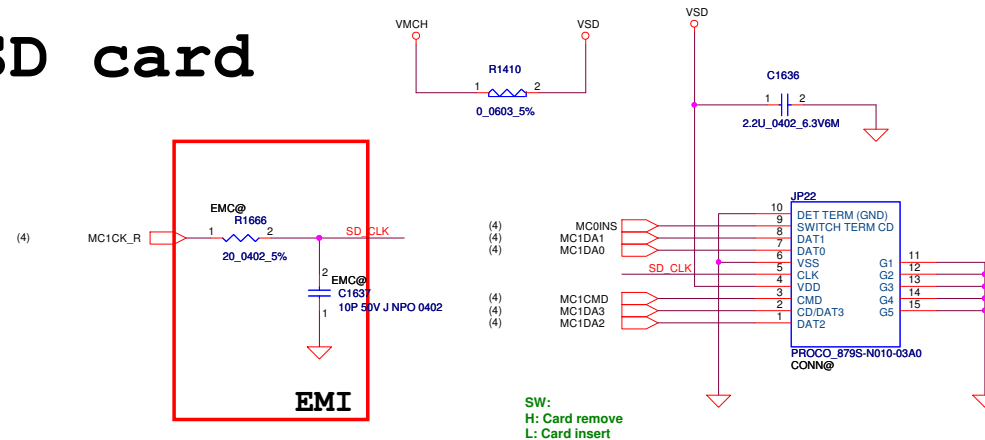
# G-sensor



Compal GND MTK GND

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# SD card

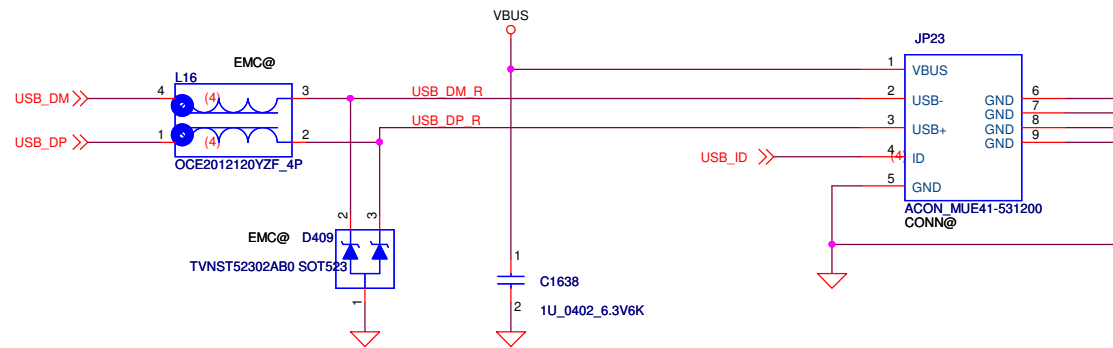


SW:  
H: Card remove  
L: Card insert

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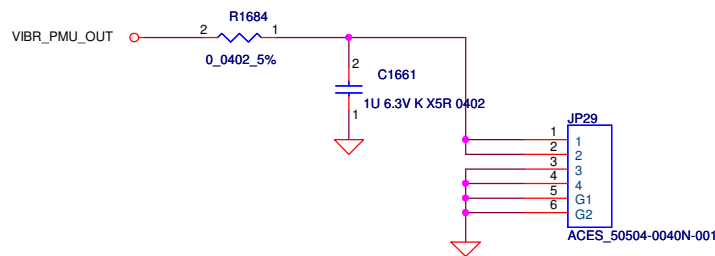
## Micro-USB

If mini-A connector insert => CID < 0V => Low  
 If mini-B connector insert => CID > 1.2V => High  
 IDPULLUP pin is replaced by 1.2V power source.



Compal GND MTK GND

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 Vibrator



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				Connector-3(USB)		
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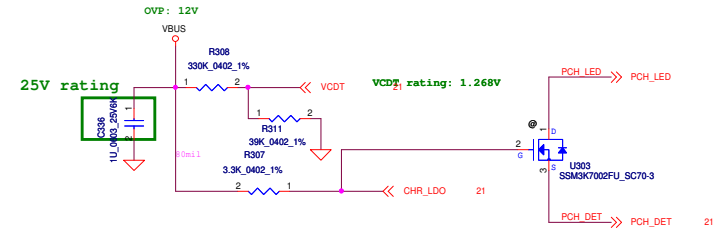
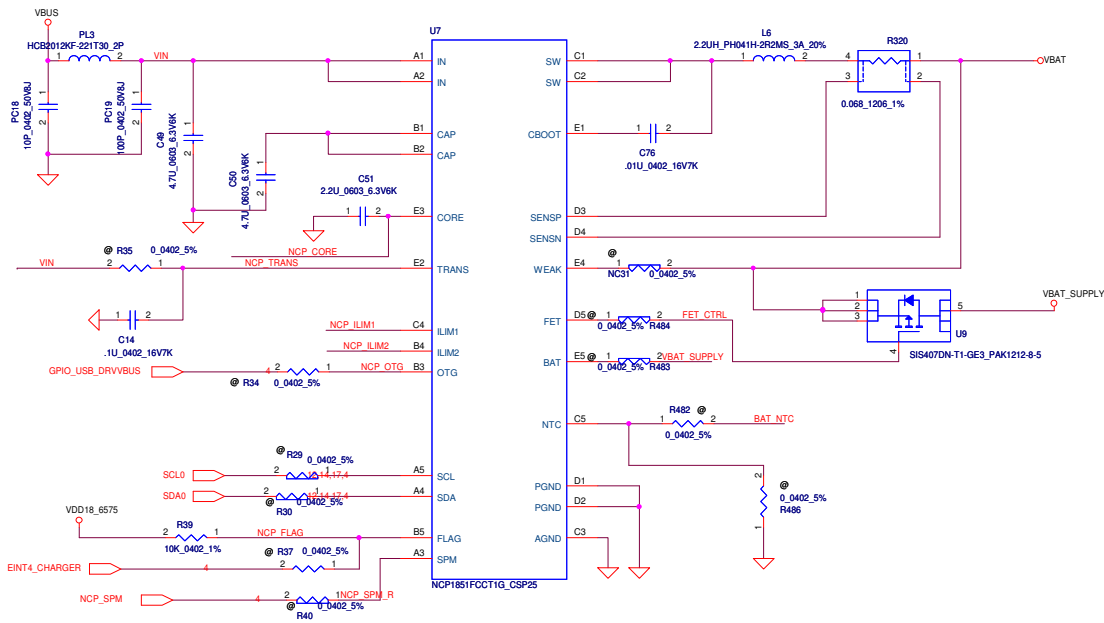
RF Antenna change to use MTK



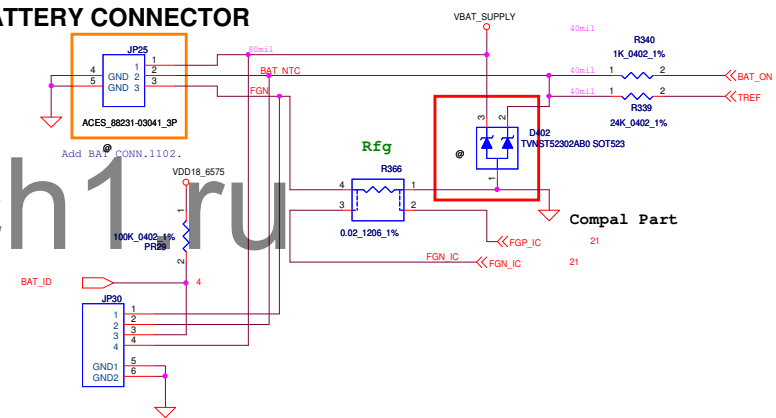
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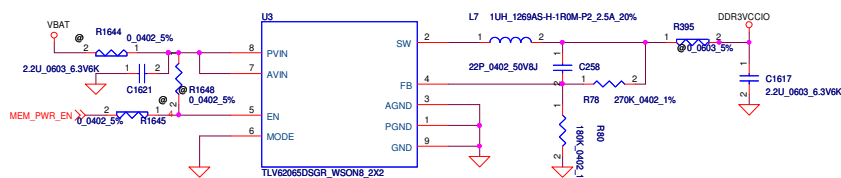
## Charger



## BATTERY CONNECTOR

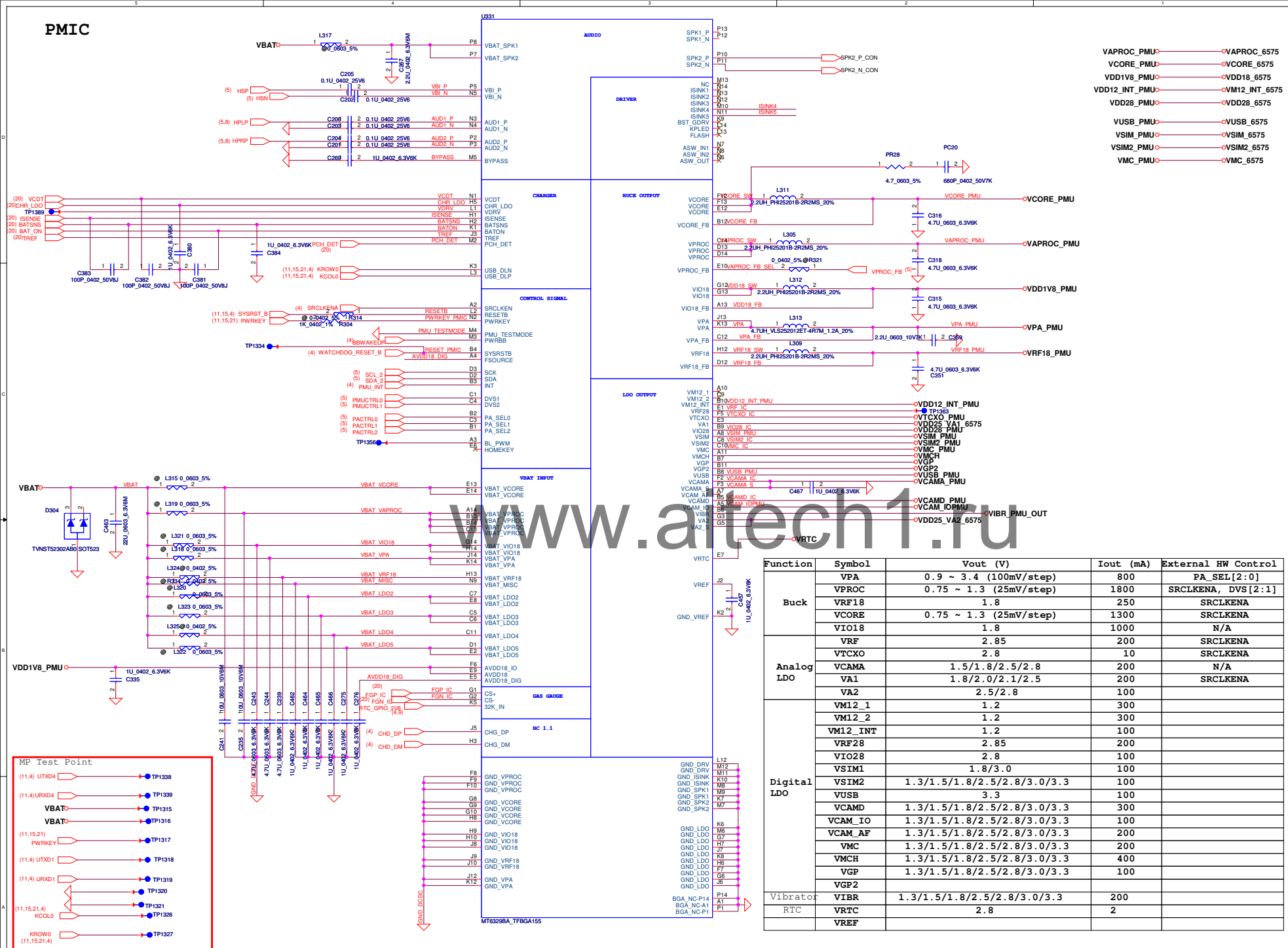


## DDR3



ILIM1	ILIM2	INPUT CURRENT LIMIT
0	0	100 mA
0	1	Automatic Charge Current
1	0	500 mA
1	1	900 mA

# PMIC





only part unumber:  
P4: SA00006GQ10 (U201, CPU)  
P6: memory \*2  
P9: PK29S004M00 (WIFI), SM140000700 (U1003)  
P13: eMMC  
P14: SA00006GS00 (U4, touch IC)

2012/11/09  
P4: change X2021 PN to S3100004Z00  
P7: swap JP3 pin, change TP1390 to +LCD\_VCOM  
P8: change D407 connection  
P9: L1001 change to SH00000RT00  
del C1009, C1029, R1009, R1010, R1049, R1050, R1051, R1053  
add TP1309, TP1310, TP1311, TP1312  
P13: change EMI Srping S2/S3/S4 footprint  
P14: del R1652, R1653

2012/11/09  
P4: change loaction: X2021- X2, C0201->C200, C0202->C199, C0203->C198  
P8: change C1039 to SE071471J80  
P10: del net:CMDAT0, CMDAT1, SUB\_DAT0, SUB\_DAT1  
reserve C540

2012/11/11  
P11: del R475, R476, R479, R480

2012/11/12  
P4: change CPU footprint  
P7: change U1615 footprint  
P9: change U1003 footprint  
P10: change R1674 to 20ohm  
P14: change GT927 footprint  
P20: update power circuit

2012/11/13  
P6: update RN1~RN12 footprint  
P10: update EMI15~EMI18 footprint  
P17: updat U1616 footprint

2012/11/15  
update PWR circuit.  
update Block diagram  
update I2C address

2012/11/20  
P7: change U21 solution and add co-lay circuit  
P8: change R457 footprint to 0603  
P9: update U1001 library  
P10: change EMI815~EMI818 to SD3090000800  
P11: change CON1710 to JP28  
P11: remove net: UTXD3/URXD3 on debug connector  
P18: add vibrator function  
update power circuit

2012/11/22  
P5: R327 change to short pad  
P7: add R1685  
P7: R410,R387,R54,R57,R62,R409,R412,R413,R416,R1640,R372,R415,R373 change to short pad  
P9: R1055,R1056,R1028 change to short pad  
P10: R832,R833 change to short pad  
P11: R471 change to short pad  
P13: R538,R540 change to short pad  
P14: R1673,R1650,R1651,R1656,R1657 change to short pad  
P17: R1410,R1661,R1662,R1665 change to short pad  
P18: change JP29 footprint to ACES\_50504-0040N-001\_4P

2012/11/23  
P5: L301, L302 change to short pad  
P7: add R1686 for EMI solution  
P9: R1001,R1008,R1014, R1015, R1016, R1020, R1021, R1022 change to short pad  
P11: change R471, R472, R473, R474, R477, R478 un-mount  
P13: change R540 to 0-ohm  
P14: change R1656 to 0-ohm  
P17: change R1661, R1662 to 0-ohm  
update power circuit

2012/11/25  
P4: del net:CMDAT0, CMDAT1, CMRST, URXD1\_MD,  
URXD2\_MD, UTXD1\_MD, UTXD2\_MD  
P9 del net: I2S\_CLK\_6620, I2S\_WS\_6620  
P13: add H6, H7  
P13: change R538 footprint to R0402\_0ohm-S  
P14: del net: DRV9  
P17: JP22.10 conect to GND  
update power circuit

2012/11/27  
update power circuit  
P8: update bead location  
P4: add MB ID pin and BAT\_ID

2012/12/18  
P7: modify U2 statement

2012/12/19  
P3: add MB\_ID, BAT\_ID define

2012/12/28  
P12: co-lay KXTF9 G-sensor  
P17: R1665 change to non short pad

2013/01/02  
P12: co-lay KXTIK/STK8311

2013/01/04  
P12: update U1617 symbol  
remove R1694

2013/01/07  
Update POWER circuit  
P12. C1662 change to 1uF

2013/01/07a  
Update POWER circuit (remove R305)

2013/01/08  
Update POWER circuit  
(remove JP30 pin3 GND)

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