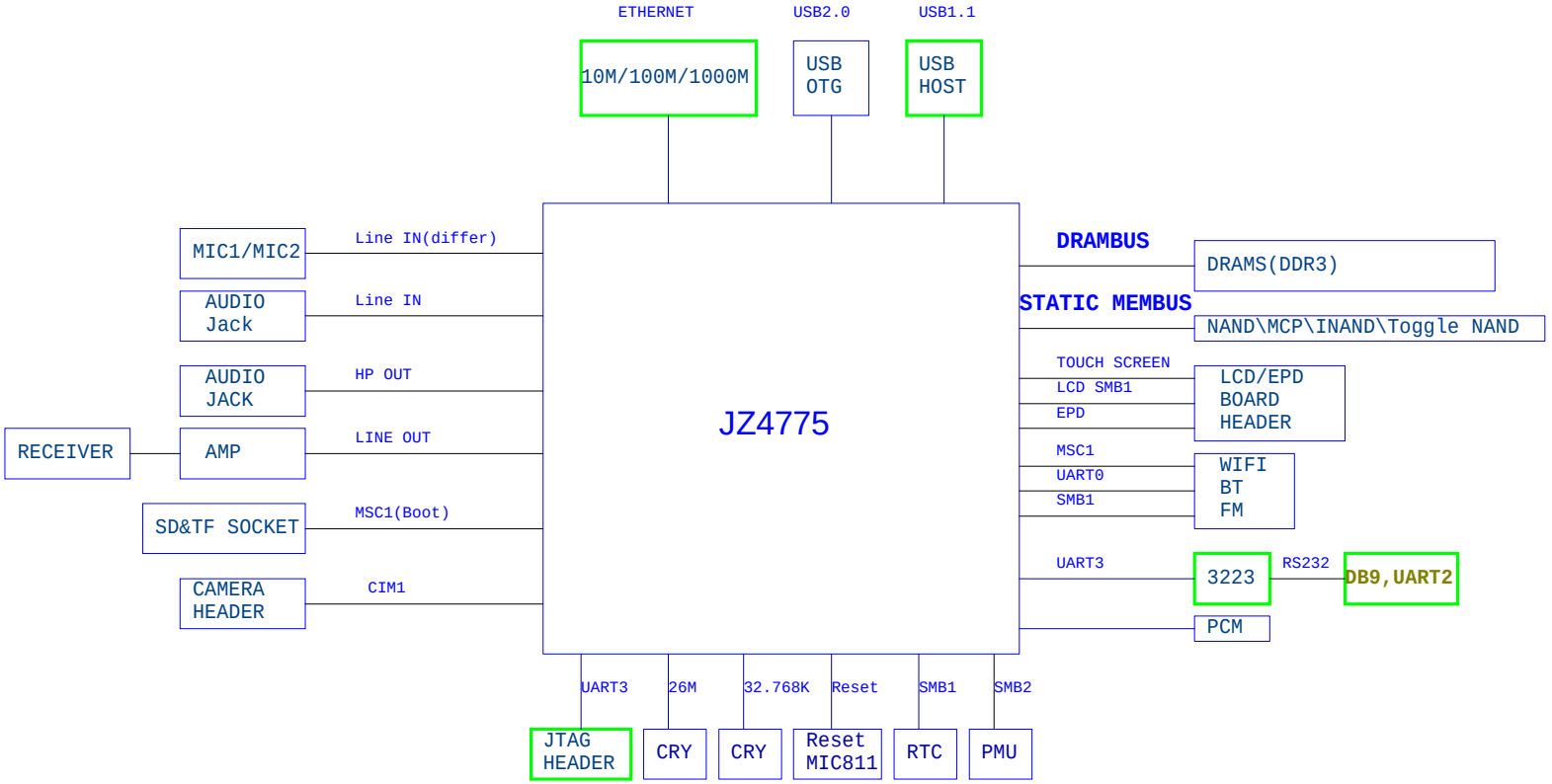
INGENIC

RD_JZ4775_MENSA_BOARD
Schematic Revision 1.0.1

Title	Page
COVER SHEET	1
SYSTEM ARCHITECTURE	2
POWER ARCHITECURE	3
DDR3	4
Nand/Camera	5
AUDIO/KEY	6
RTC	7
LCD/EPD	8
PMU	9
IW8101/IW8103	10
IW8103B/MT5913	11
USB OTG/SD CARD/PCM	12
DEBUG	13
HISTORY	14

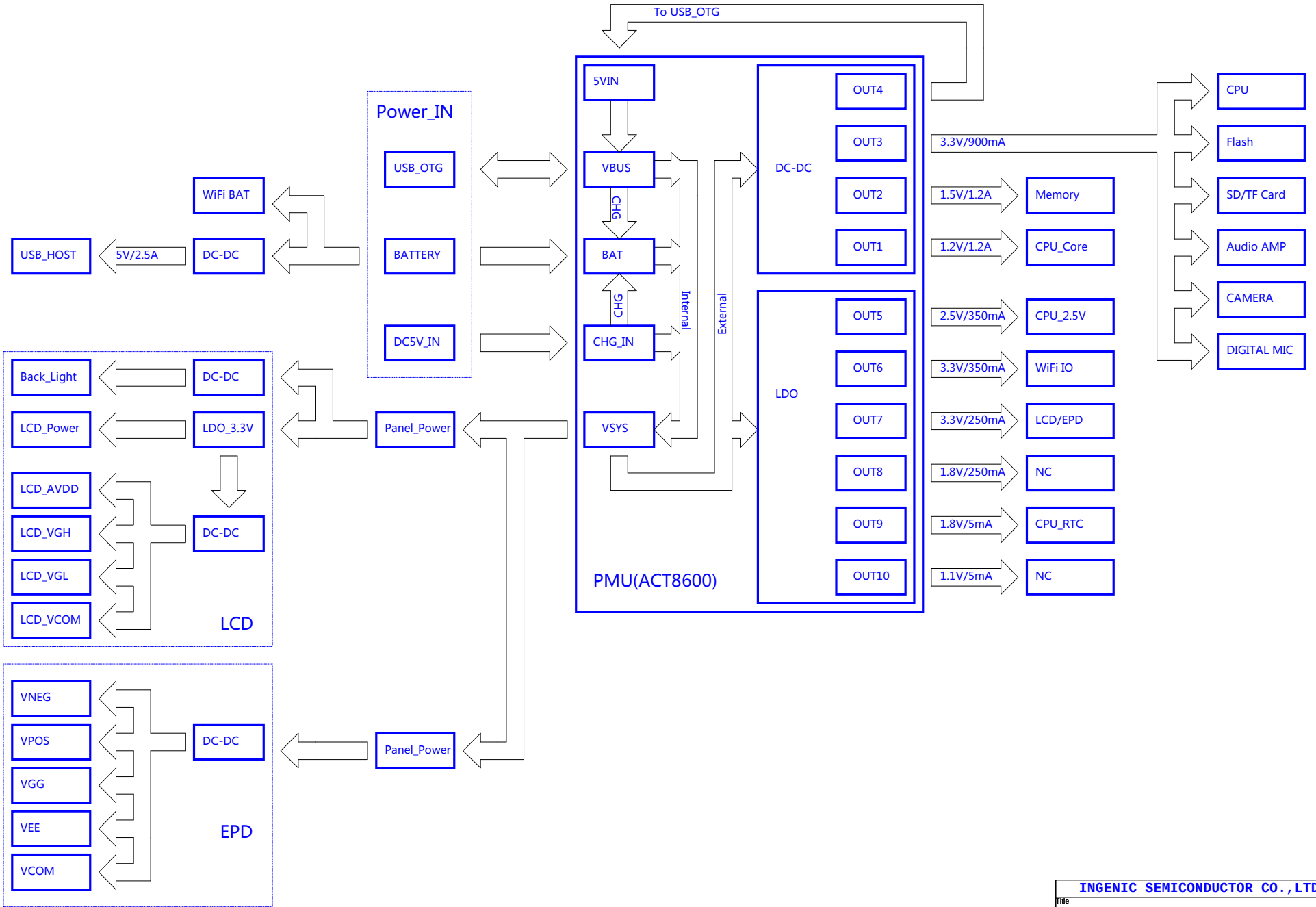
INGENIC SEMICONDUCTOR CO.,LTD

Title: RD_JZ4775_MENSA_BOARD		
Size: A3	Document Number: COVER	Rev: V1.0.1
Date: Monday, March 11, 2013	Sheet 1 of 14	

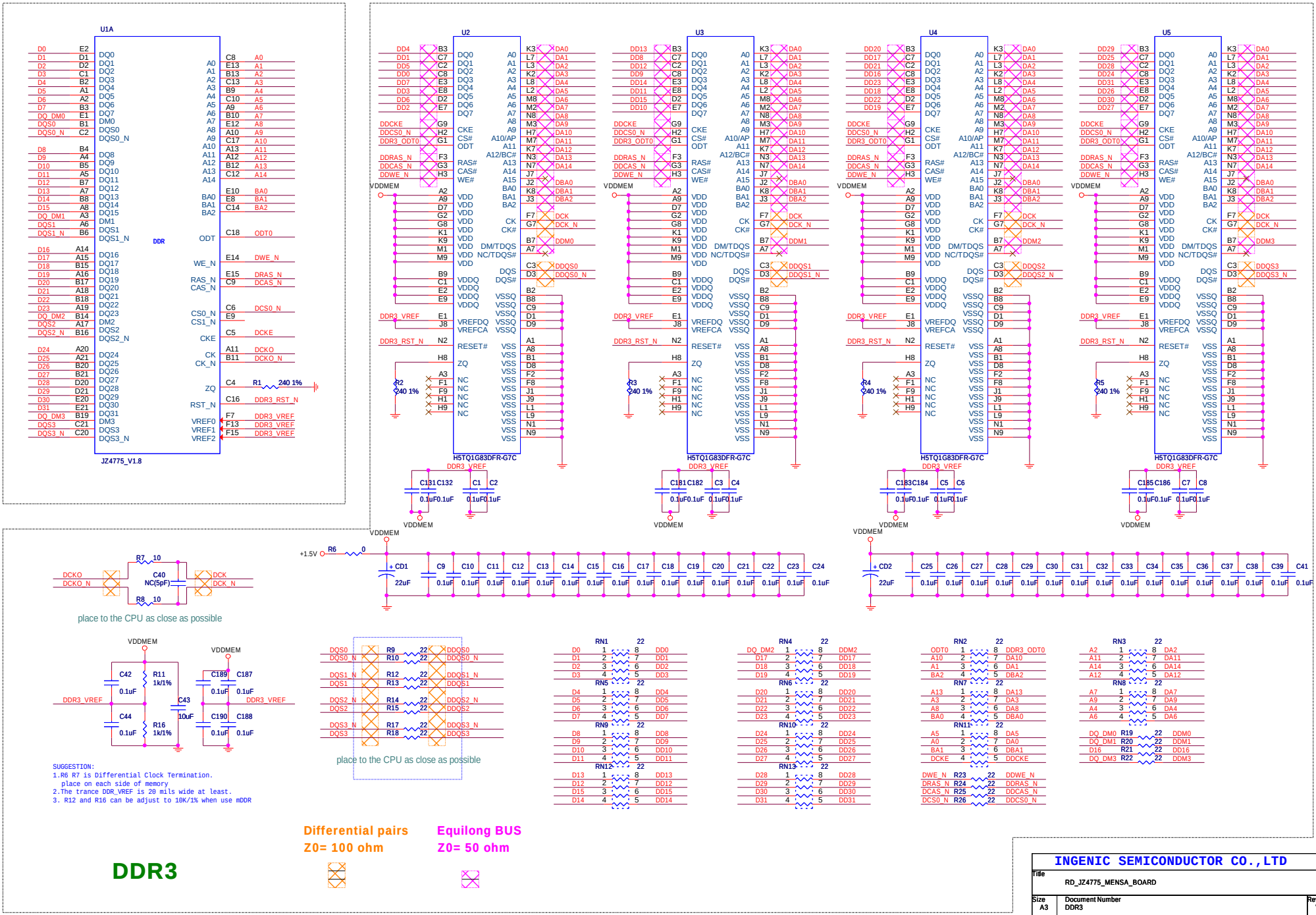


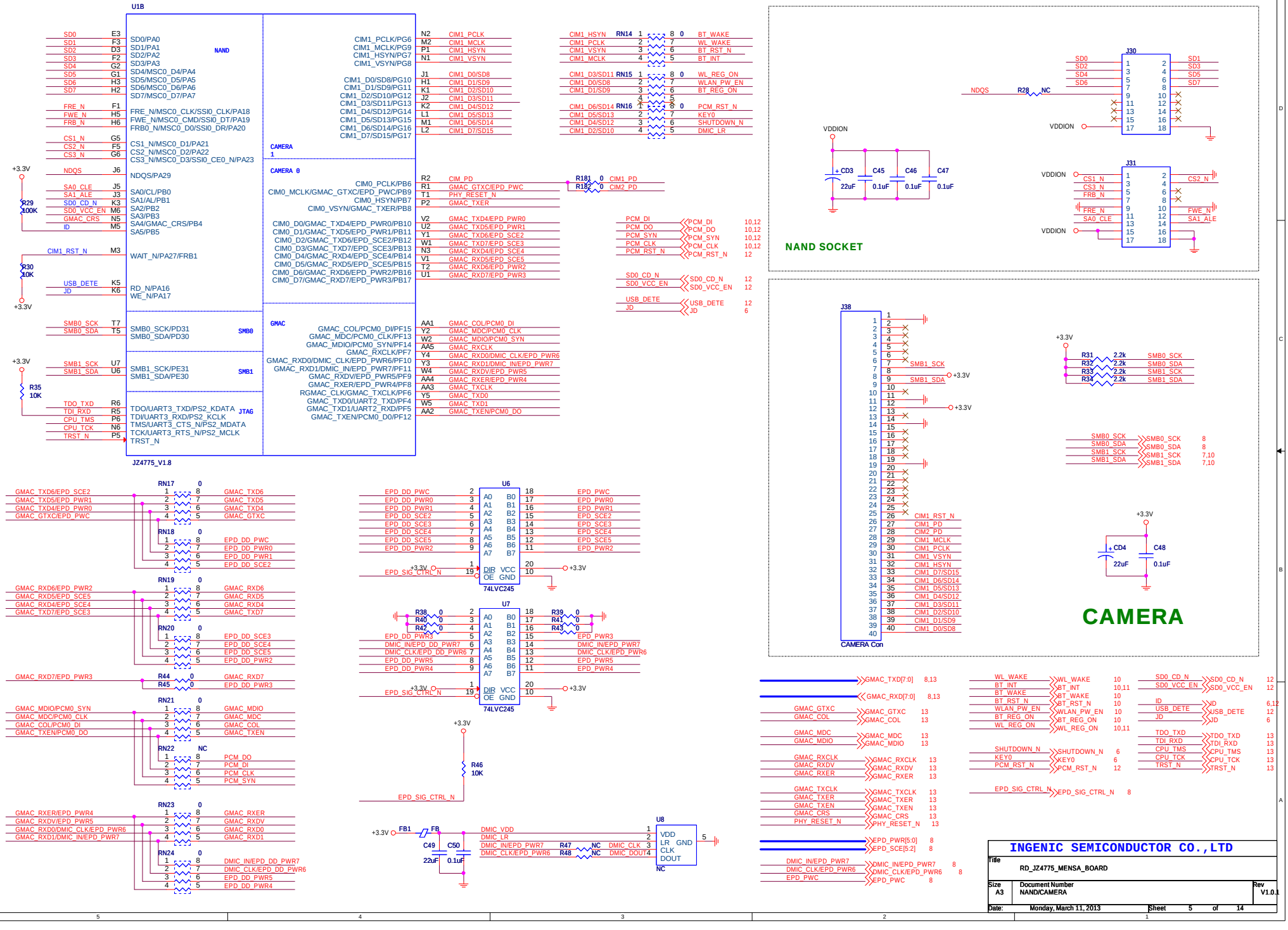
The green cloor is the debug board

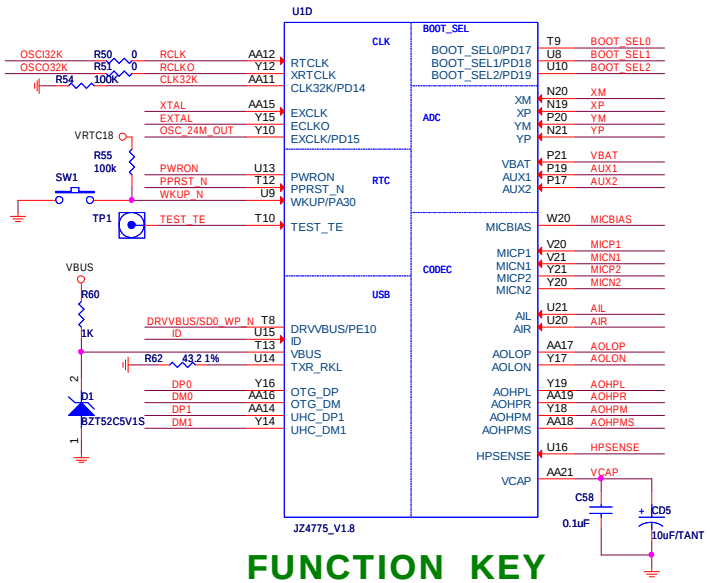
INGENIC SEMICONDUCTOR CO.,LTD		
Title: RD_JZ4775_MENSA_BOARD		
Size: A3	Document Number: SYSTEM ARCHITECTURE	Rev: V1.0.1
Date: Monday, March 11, 2013	Sheet 2 of 14	



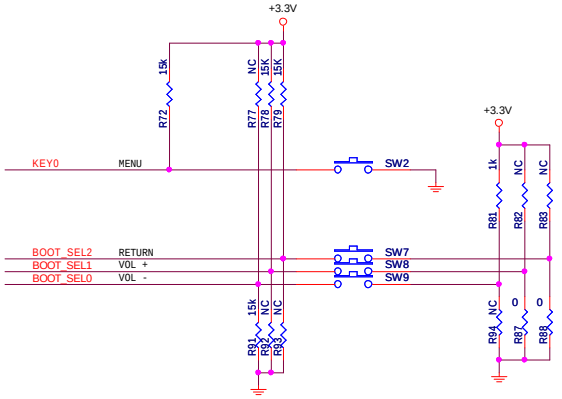
INGENIC SEMICONDUCTOR CO.,LTD		
Title: RD_JZ4775_MENSA_BOARD		
Size: A3	Document Number: POWER ARCHITECUTRE	Rev: V1.0.1
Date: Monday, March 11, 2013	Sheet 3 of 14	


U1A
JZ4775_V1.8
U2
U3
U4
U5
H5TQ1G83DFR-G7C
DDR
VDDMEM
DDR3_VREF
DDR3_RST_N
R2 240 1%
R3 240 1%
R4 240 1%
R5 240 1%
R6 0
R7 10
R8 10
C40 NC(5pF)
place to the CPU as close as possible
SUGGESTION:
1.R6 R7 is Differential Clock Termination.
place on each side of memory
2.The trance DDR_VREF is 20 mils wide at least.
3. R12 and R16 can be adjust to 10K/1% when use mDDR
Differential pairs
Z0= 100 ohm
Equilong BUS
Z0= 50 ohm
DDR3
INGENIC SEMICONDUCTOR CO.,LTD
RD_JZ4775_MENSA_BOARD
DDR3
V1.0.1
Monday, March 11, 2013
Sheet 4 of 14


U1B
NAND
CAMERA 1
CAMERA 0
SMB0
SMB1
JTAG
CAMERA
JZ4775_V1.8
NAND SOCKET
J30
J31
J38
CAMERA Con
CAMERA
U6
U7
U8
74LVC245
INGENIC SEMICONDUCTOR CO.,LTD
RD_JZ4775_MENSA_BOARD
NAND/CAMERA
V1.0.1
Monday, March 11, 2013

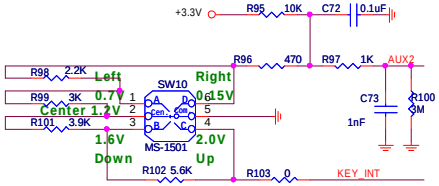


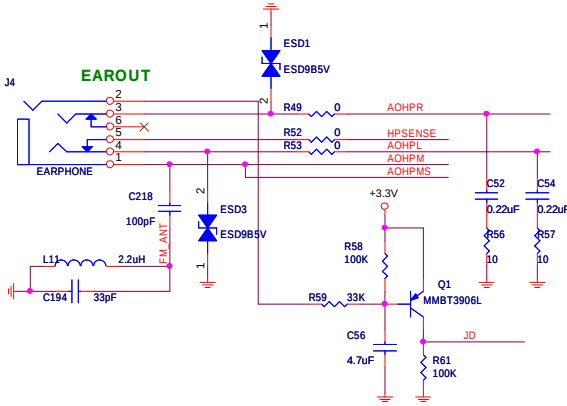
FUNCTION KEY



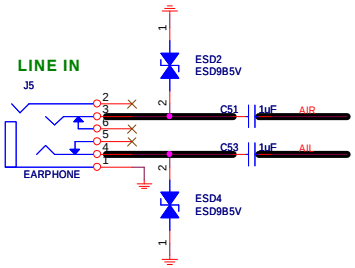
Boot Mode Select

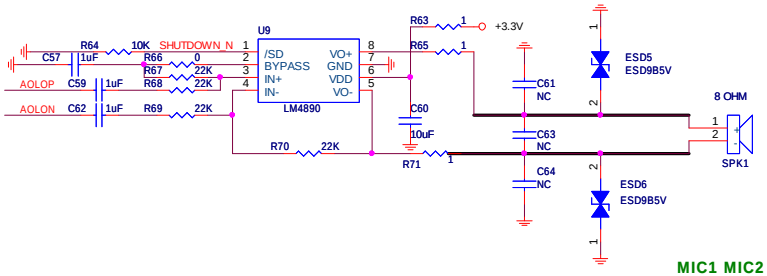
BOOT_SEL[2:1:0]	BOOT FROM
111	USB Boot
110	NAND Boot
101	MSC0 Boot
000	SPI Boot
100	MSC1 Boot
011	eMMC Boot
010	NOR Boot(CS2)

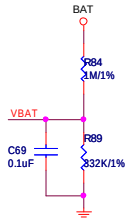


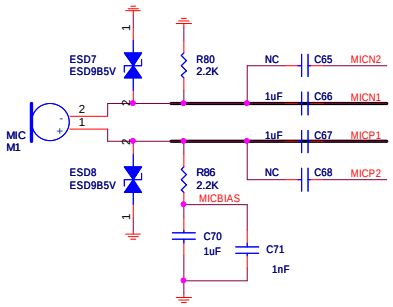


The AOHPMS and AOHPM must be connected at terminate, near the headphone Jack

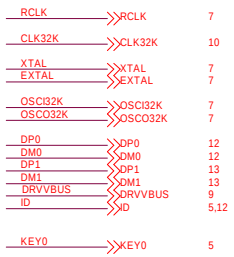


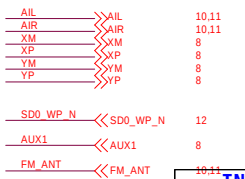


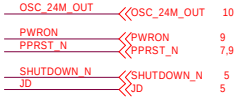




AUDIO

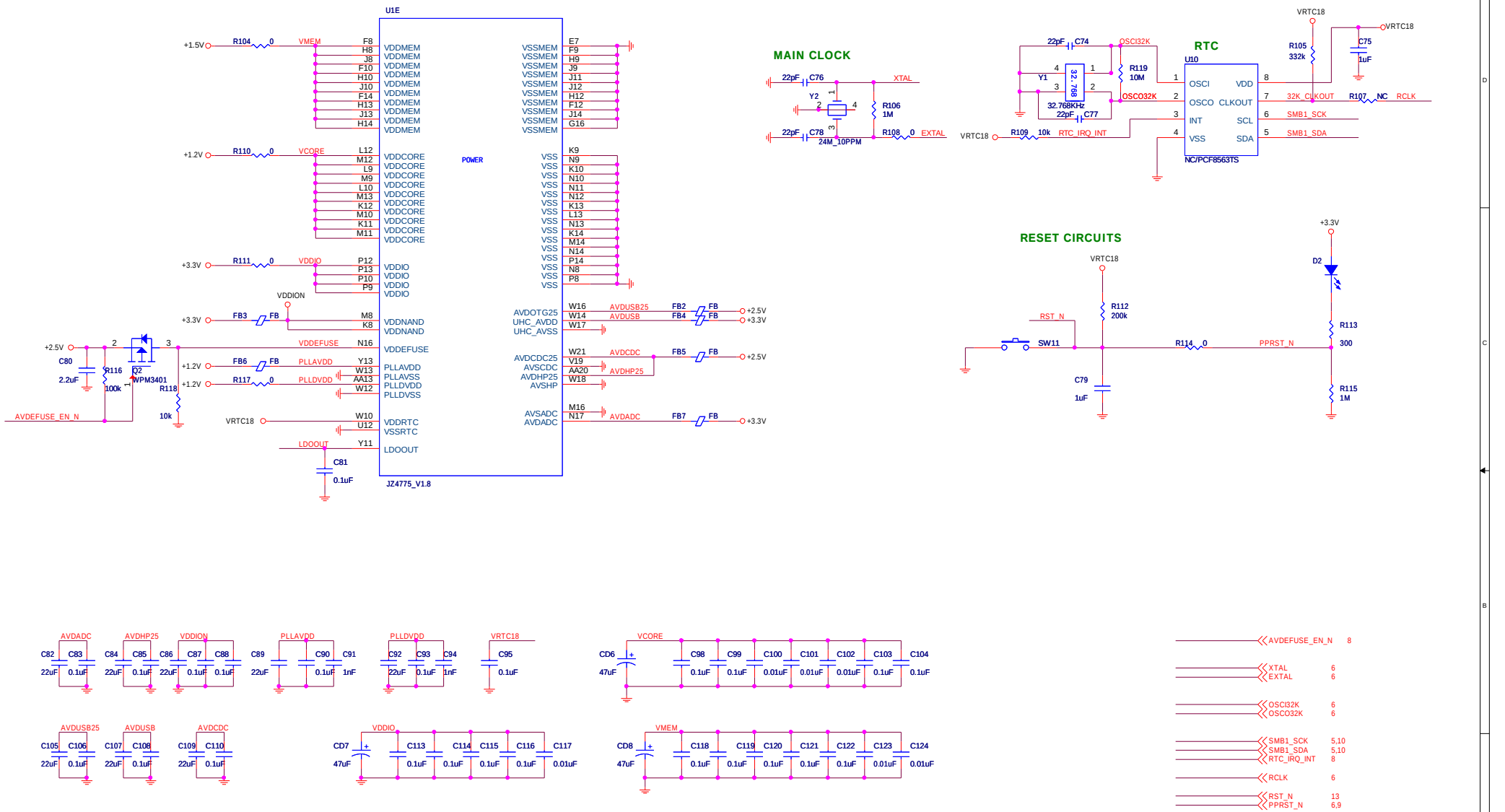


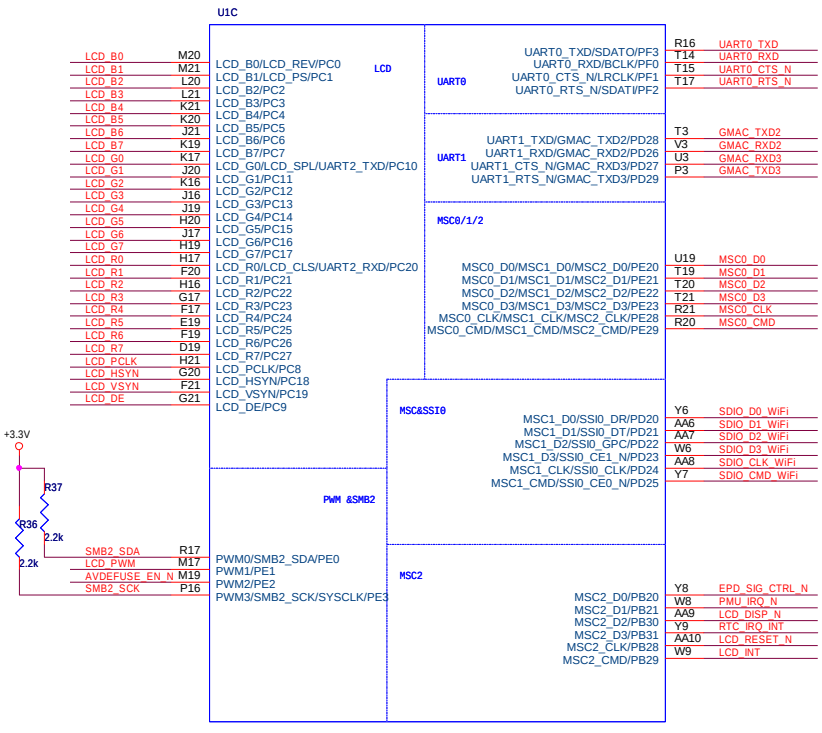


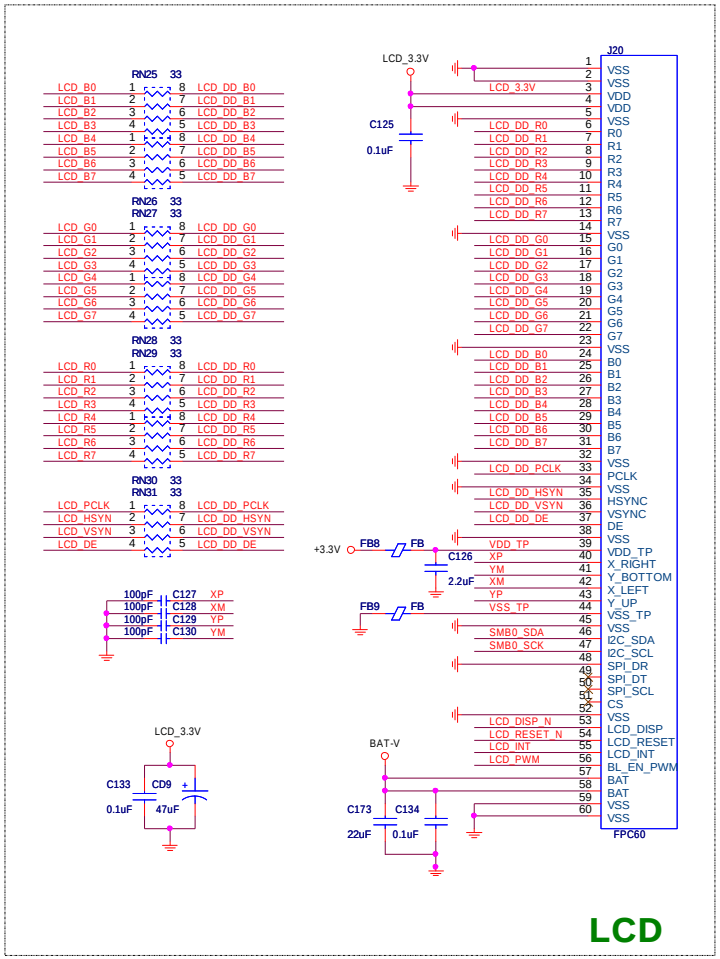


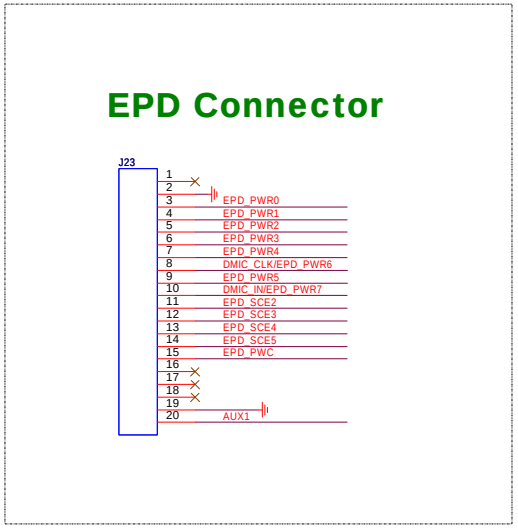
Title	RD_JZ4775_MENSA_BOARD
Size	A3
Document Number	AUDIO/KEY
Rev	V1.0.1
Date:	Monday, March 11, 2013
Sheet	6 of 14

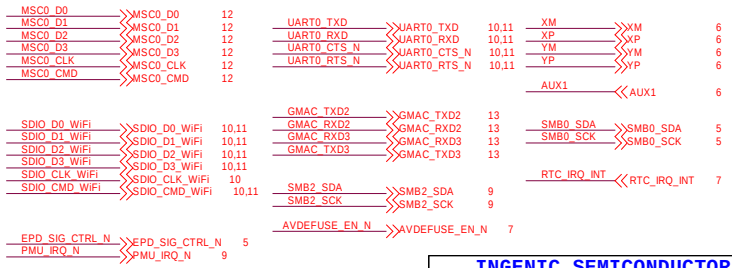
INGENIC SEMICONDUCTOR CO.,LTD


U1E
JZ4775_V1.8
POWER
MAIN CLOCK
RTC
U10
NC/PCF8563TS
RESET CIRCUITS
SW11
D2
INGENIC SEMICONDUCTOR CO.,LTD
RD_JZ4775_MENSA_BOARD
Monday, March 11, 2013

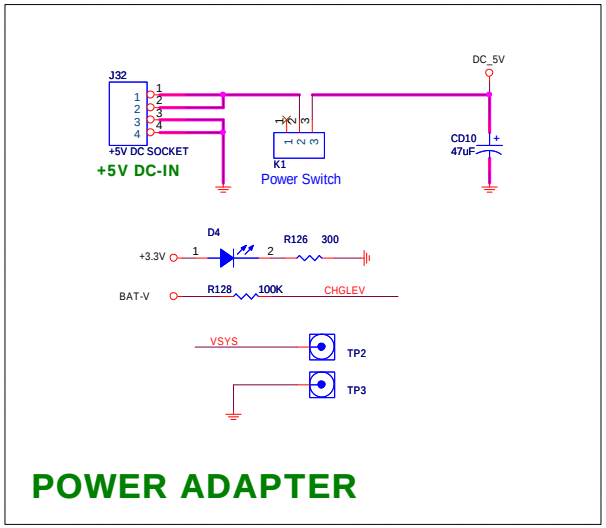


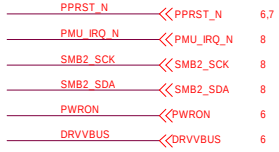


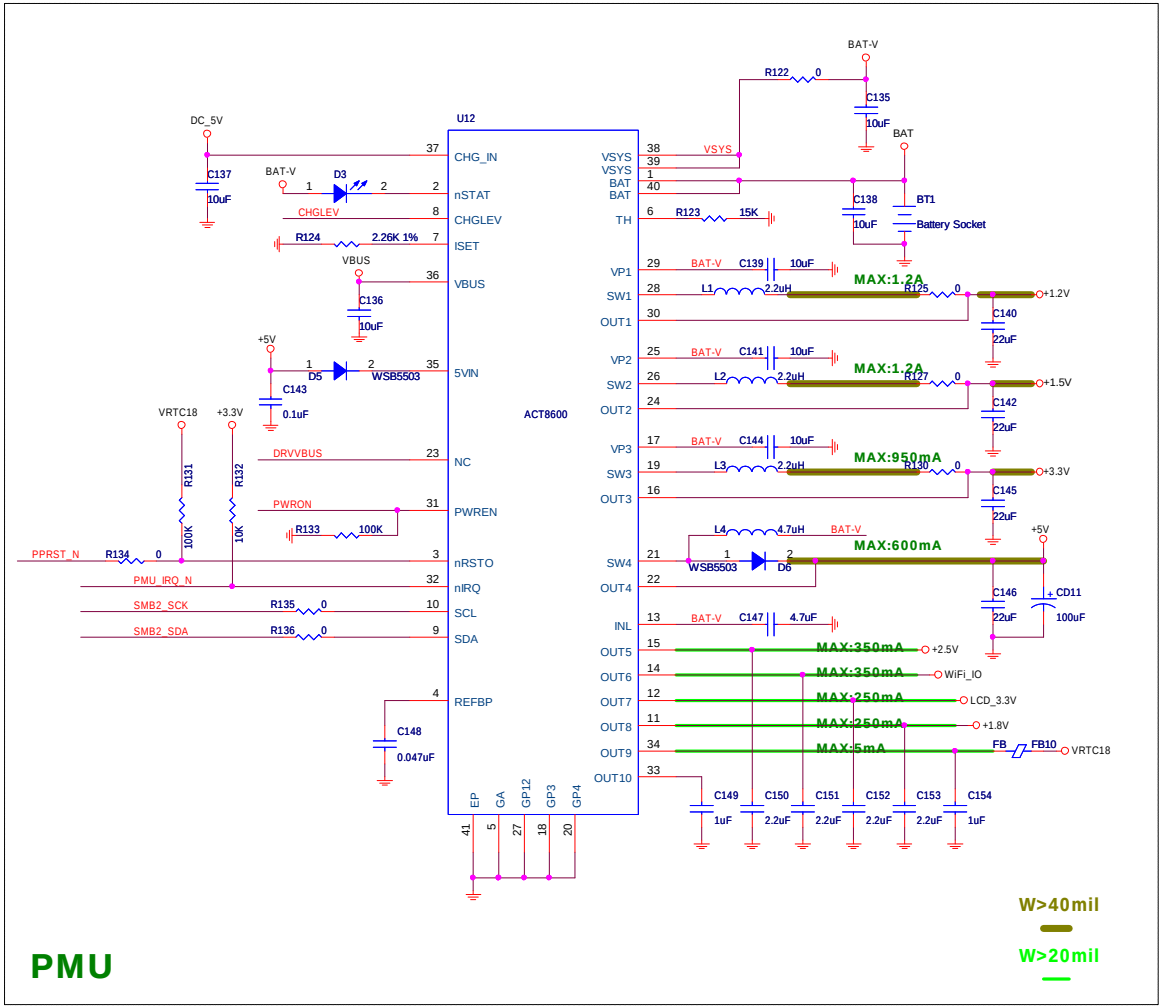




INGENIC SEMICONDUCTOR CO.,LTD		
Title: RD_JZ4775_MENSA_BOARD		
Size: A3	Document Number: LCD/EPD	Rev: V1.0.1
Date: Monday, March 11, 2013	Sheet 8 of 14	

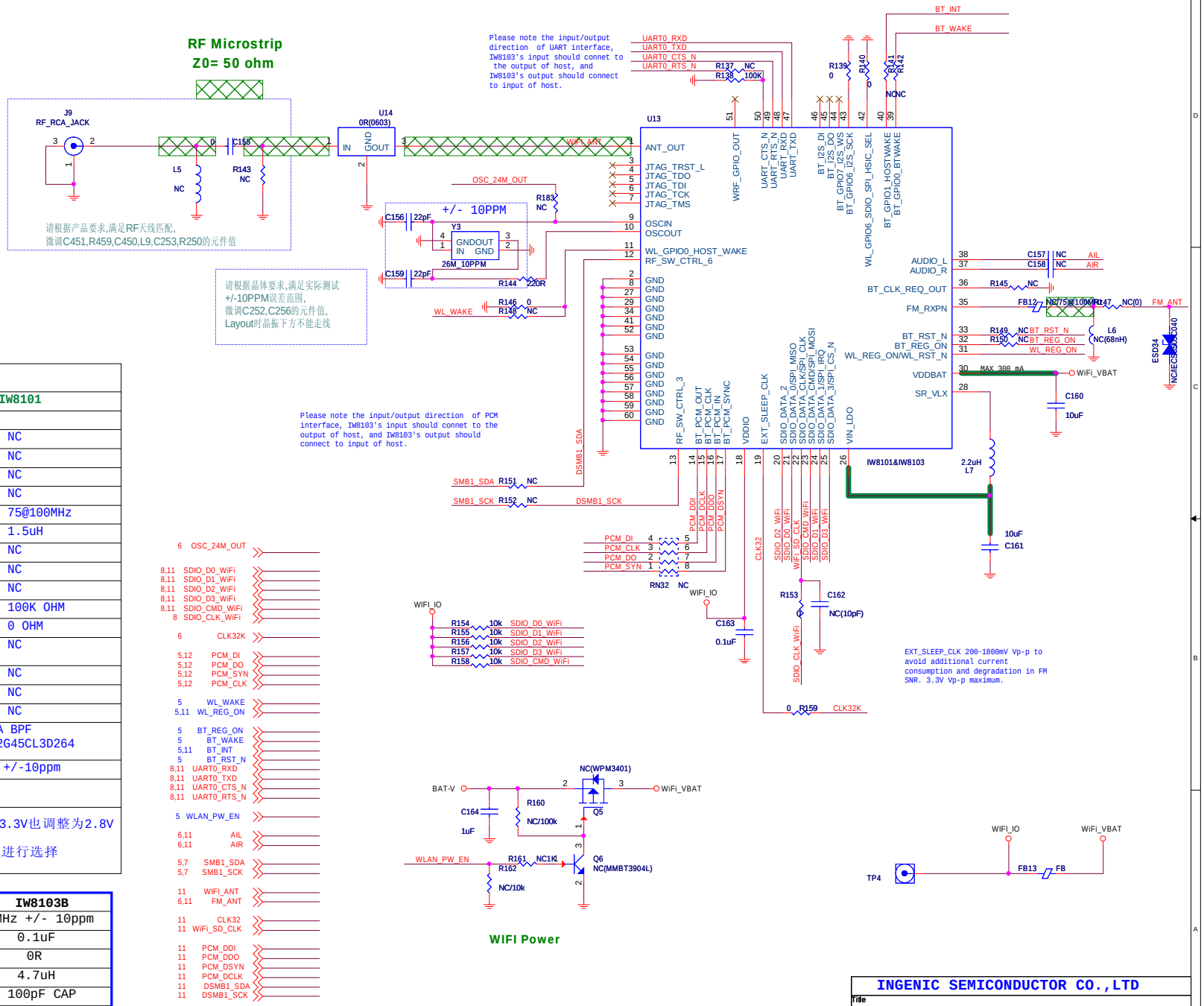






Title	RD_JZ4775_MENSA_BOARD
Size	A3
Document Number	PMU
Rev	V1.0.1
Date:	Monday, March 11, 2013
Sheet	9 of 14

INGENIC SEMICONDUCTOR CO.,LTD



Component select in IW8101 & IW8103

Part Number	IW8103	IW8101
	value	
C157,C158	1uF	NC
C164	1uF	NC
ESD34	TESB0R15V05B1X	NC
FB12	75@100MHz	NC
FB13	NC	75@100MHz
L7	2.2uH	1.5uH
Q5	WPM3401	NC
Q6	MMBT3904L	NC
RN32	0 OHM	NC
R138	NC	100K OHM
R139,R146	NC	0 OHM
R137,R141,R142,R147 R148,R149,R150	0 OHM	NC
R160	100K OHM	NC
R162	10K OHM	NC
R161	1K OHM	NC
U14	0 OHM	MURATA BPF LFB182G45CL3D264
Y3	37.4MHz,+/-10ppm	26MHz,+/-10ppm

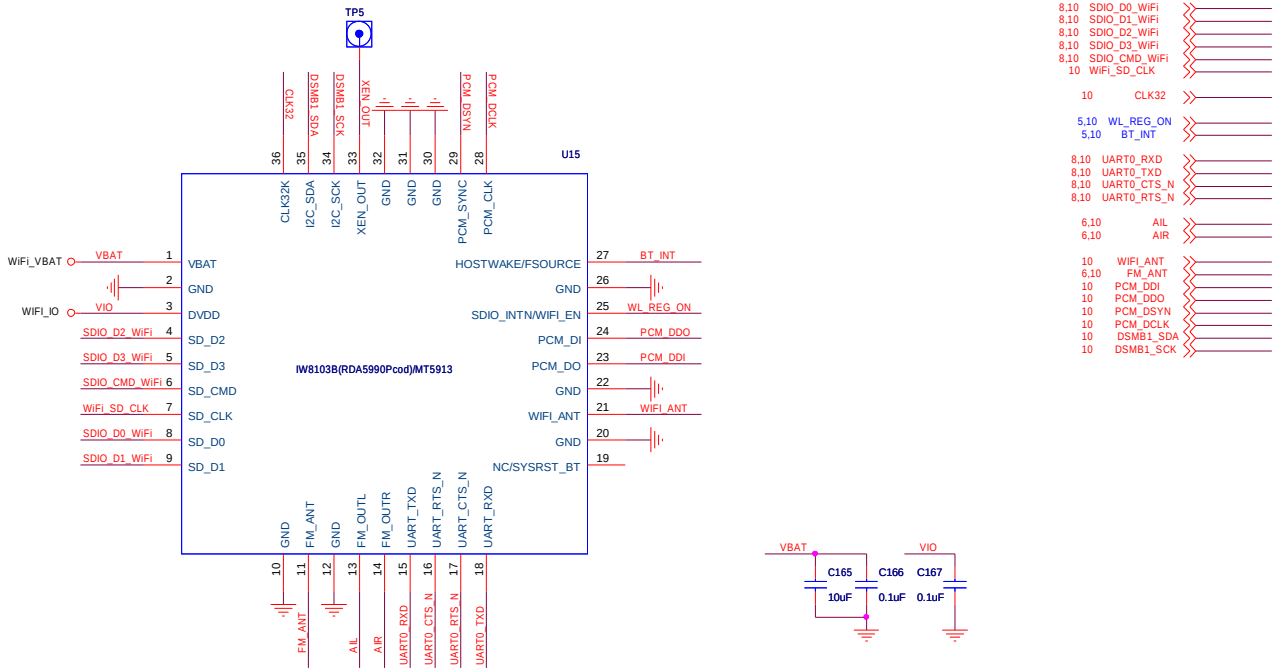
备注

使用IW8103，WIFI_IO电压调整为2.8V,同时系统的3.3V也调整为2.8V

清单内无标识的物料为共用料，请按原理图标识值进行选择

器件编号	IW8103	IW8103B
Y3	37.4MHz +/- 10ppm	26MHz +/- 10ppm
C157,C158	1uF	0.1uF
R151,R152	NC	0R
L7	2.2uH	4.7uH
FB12	75@100MHz Bead	100pF CAP
R140,R142	0R	NC

Company	INGENIC SEMICONDUCTOR CO.,LTD
Title	RD_JZ4775_MENSA_BOARD
Size	A3
Document Number	WIFI_IW8101/IW8103
Rev	V1.0.1
Date:	Monday, March 11, 2013
Sheet	10 of 14



8,10 SDIO_D0_WiFi
8,10 SDIO_D1_WiFi
8,10 SDIO_D2_WiFi
8,10 SDIO_D3_WiFi
8,10 SDIO_CMD_WiFi
10 WiFi_SD_CLK

10 CLK32

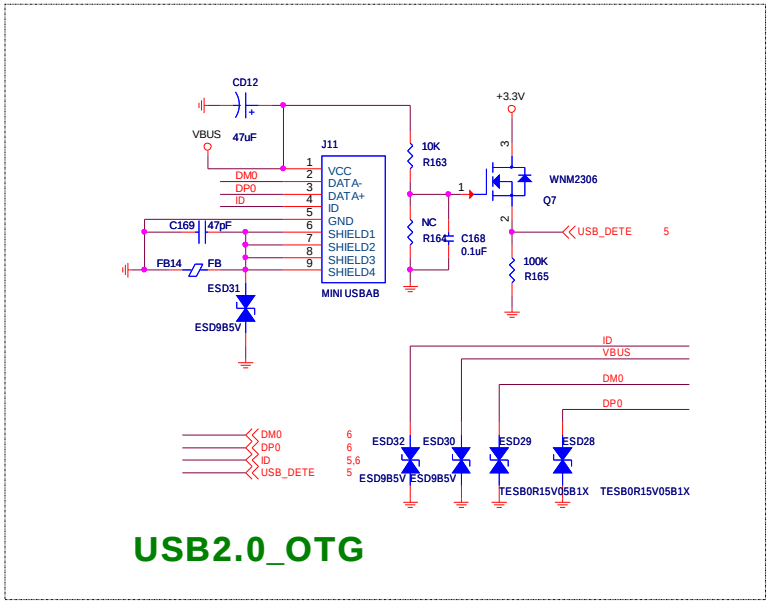
5,10 WL_REG_ON
5,10 BT_INT

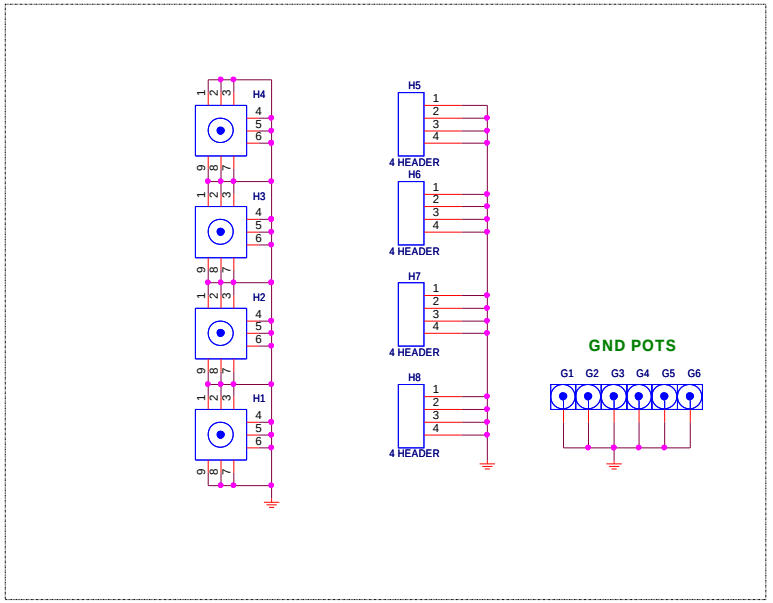
8,10 UART0_RXD
8,10 UART0_TXD
8,10 UART0_CTS_N
8,10 UART0_RTS_N

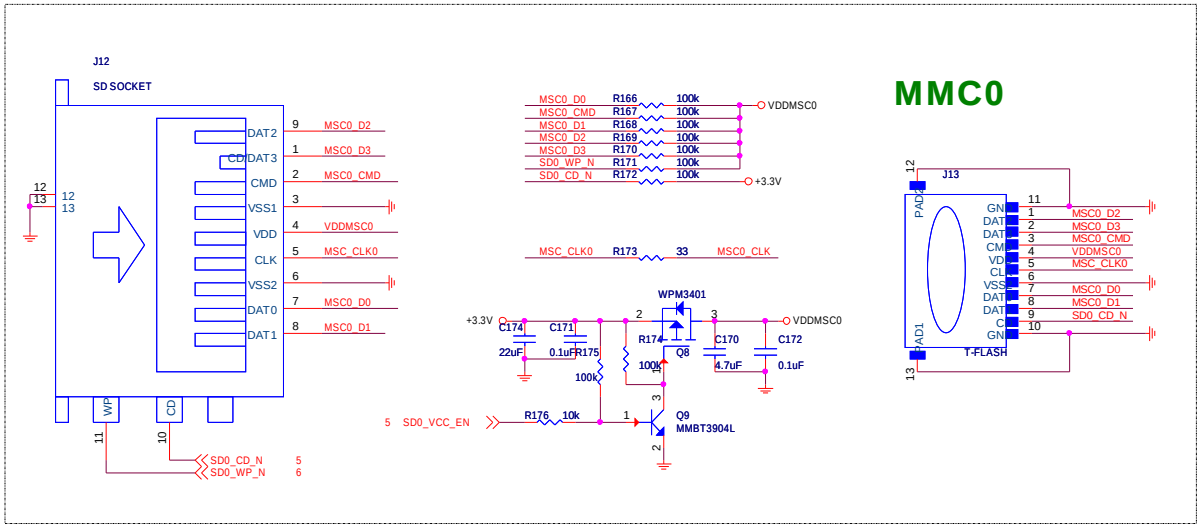
6,10 AIL
6,10 AIR

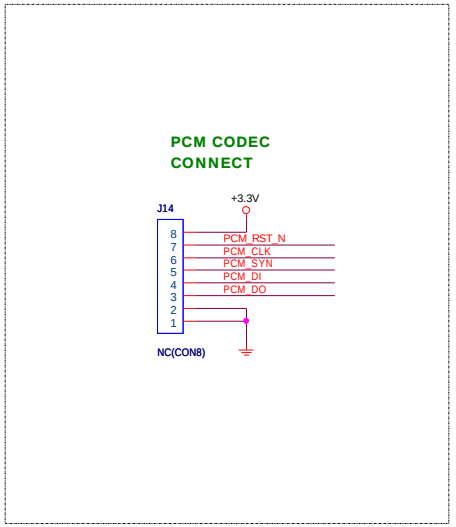
10 WIFI_ANT
6,10 FM_ANT
10 PCM_DDI
10 PCM_DDO
10 PCM_DSYN
10 PCM_DCLK
10 DSMB1_SDA
10 DSMB1_SCK

INGENIC SEMICONDUCTOR CO.,LTD			
Title: RD_JZ4775_MENSA_BOARD			
Size: A3	Document Number: WIFI_IW8103B/MT5913		Rev: V1.0.1
Date: Monday, March 11, 2013	Sheet 11 of 14		



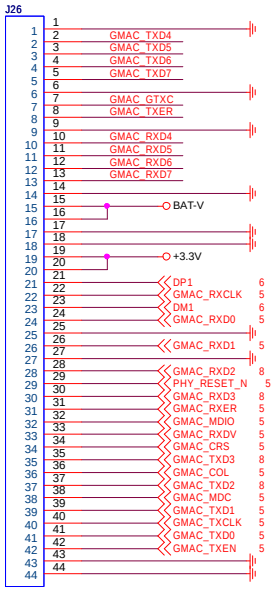




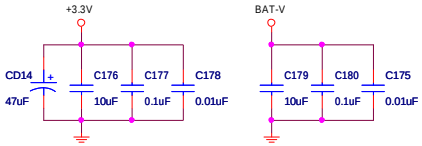


INGENIC SEMICONDUCTOR CO.,LTD		
Title: RD_JZ4775_MENSA_BOARD		
Size: A3	Document Number: USB OTG/SD CARD/PCM	Rev: V1.0.1
Date: Monday, March 11, 2013	Sheet 12 of 14	

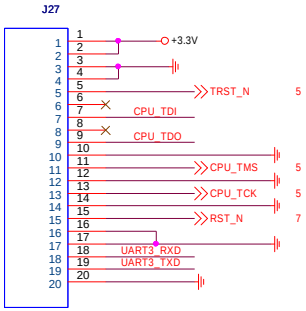
Ethernet & USB Con

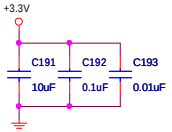


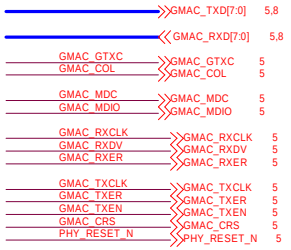
Ethernet & USB Con

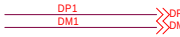


JDI & Uart Con









INGENIC SEMICONDUCTOR CO.,LTD		
Title: RD_JZ4775_MENSA_BOARD		
Size: A3	Document Number: DEBUG	Rev: V1.0.1
Date: Monday, March 11, 2013	Sheet 13 of 14	

Data	Revision	Change
Jan 8 2013	Rev1.0	1. First Revision
Feb 28 2013	Rev1.0.1	1. PAGE06: Change the Package of D1 2. PAGE06: R82 change to NC&R87 change to 0R 3. PAGE07: The power of AVDADC connect to +3.3V 4. PAGE07: Add R119 for 32.768k crystal 5. PAGE07: Delete the reset IC U11 6. PAGE10: Q6 change to NC 7. Change the power of VRTC from VRTC33 TO VRTC18 for save power 8. Change out1 of PMU to +1.2V 9. Connect the J12.12&J12.13 to GND 10. Change the package of U1 11. Change R62 from 44.2R 1% to 43.2R 1%. 12. Change all the I2C net name to SMB, such as SMB0_SCK etc.

INGENIC SEMICONDUCTOR CO.,LTD

Title: RD_JZ4775_MENSA_BOARD		
Size: A3	Document Number: REVISION HISTORY	Rev: V1.0.1
Date: Monday, March 11, 2013	Sheet 14 of 14	