

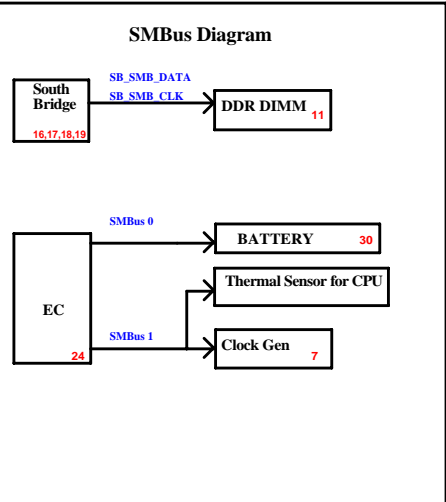
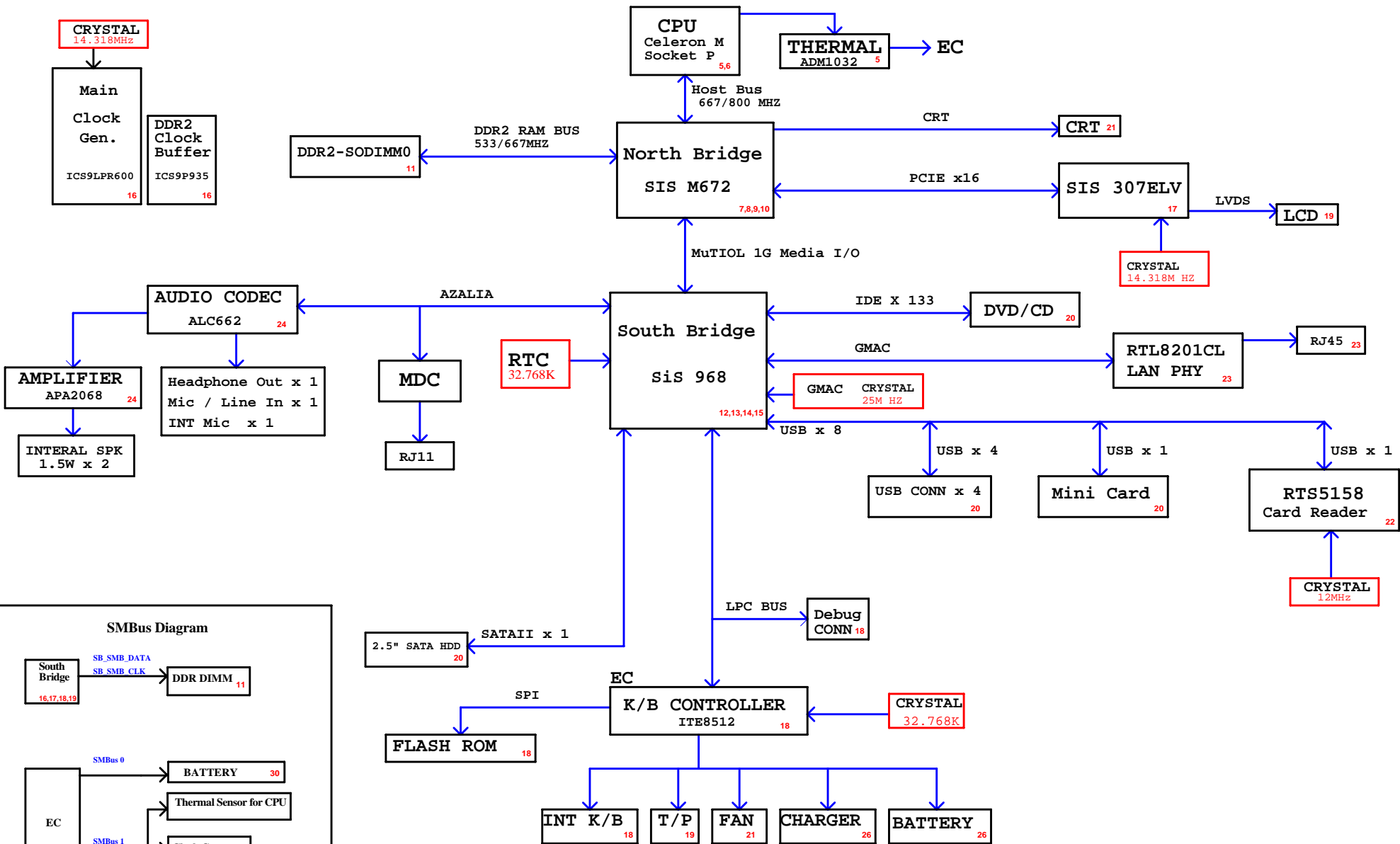


U50SI1 REV:C P/N LIST

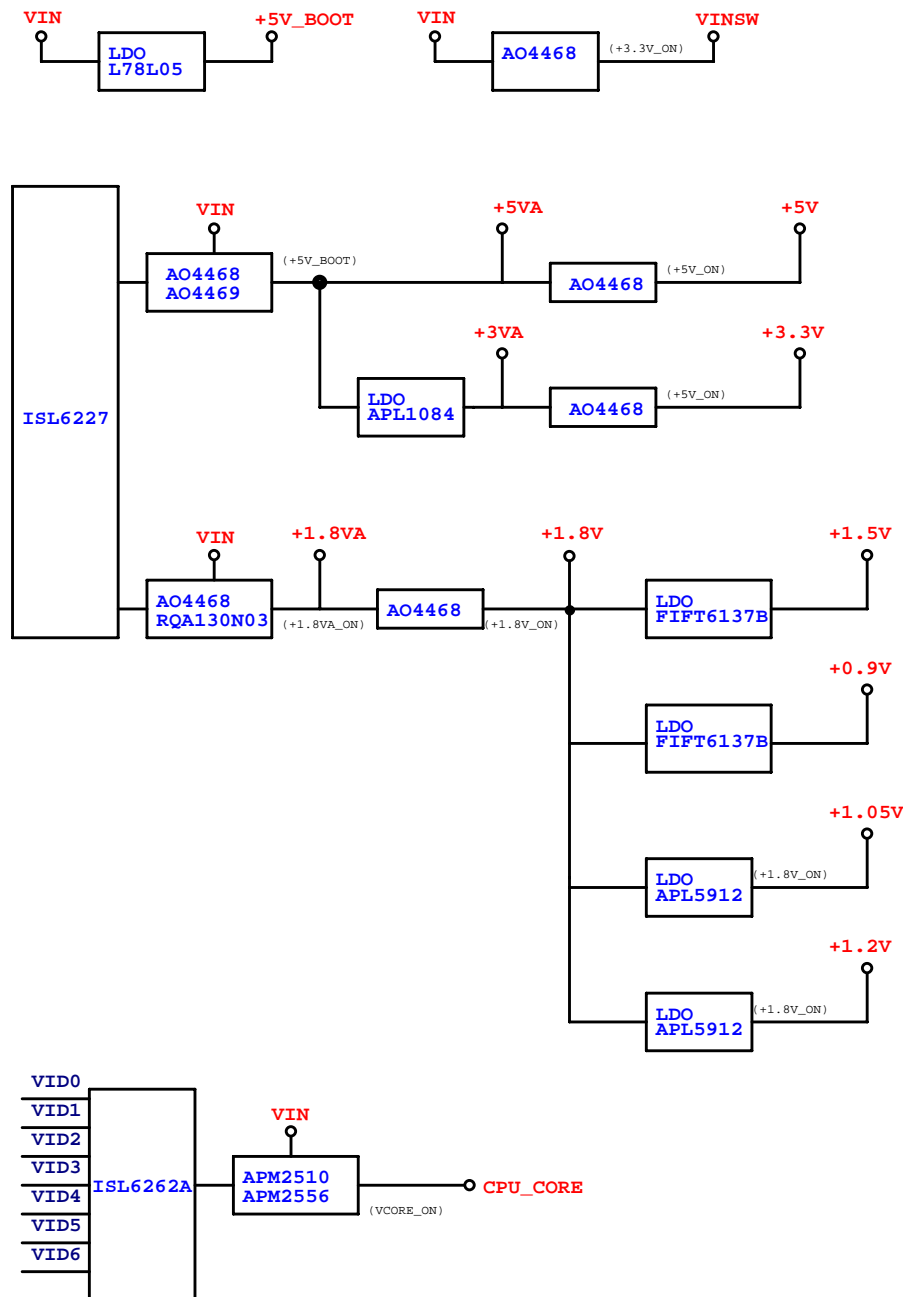
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U50SI1

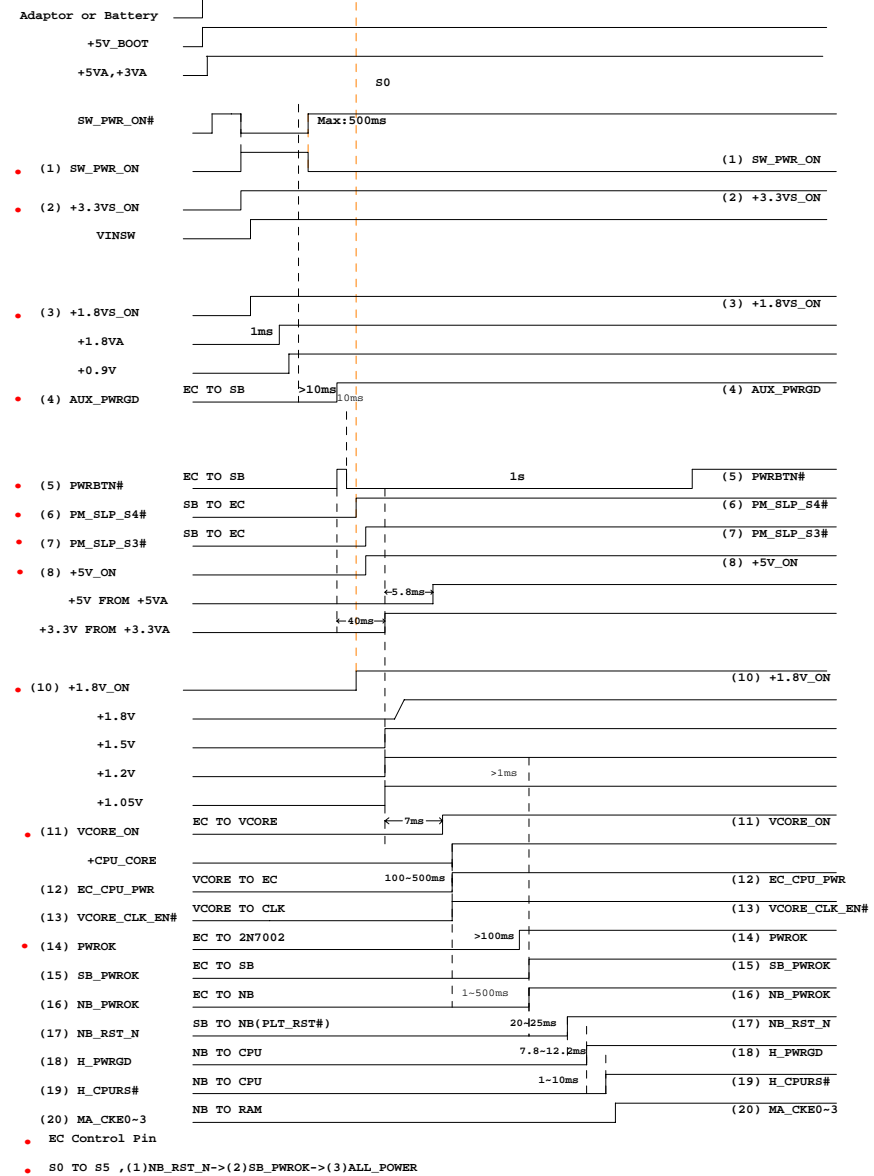
SYSTEM BLOCK DIAGRAM



POWER BLOCK DIAGRAM



POWER Sequence



SIS968 GPIO	
GPIO0	NC
GPIO1	NC
GPIO2	PM_THROTTLING#
GPIO3	EC_EXTSMI#
GPIO4	PM_CLKRUN#
GPIO5	NC
GPIO6	NC
GPIO7	NC
GPIO8	NC
GPIO9	NC
GPIO10	SLP_S5#
GPIO11	AGPSTOP_N
GPIO12	DPSLP#
GPIO13	SB_DPRSPLVR
GPIO14	NC
GPIO15	SLP_S3#
GPIO16	NC
GPIO17	H_A20GATE
GPIO18	H_RCIN#
GPIO19	SB_SMB_CLK
GPIO20	SB_SMB_DATA

ITE8512E GPIO	
GPA0	AUX_PWRGD
GPA1	DDR_V_SW#
GPA2	BTL_BEEP
GPA3	RFLED_ON
GPA4	SCROLL/3G_LED
GPA5	NUM_LED
GPA6	CAPS_LED
GPA7	PWRON_LED
GPB0	PM_SLP_S5#
GPB1	PM_SLP_S3#
GPB2	WEBCAM_ON
GPB3	BAT_SMBCLK
GPB4	BAT_SMBDAT
GPB5	H_A20GATE
GPB6	H_RCIN#
GPB7	BT_ON
GPC0	EC_VID5
GPC1	SMBCLK_EC
GPC2	SMBDAT_EC
GPC3	EC_VID2
GPC4	RF_SW_ON#
GPC5	EC_VID1
GPC6	INTERNET#
GPC7	SILENT#
GPD0	EC_PREST#
GPD1	PWRBTN#
GPD2	EC_LPCRST#
GPD3	EC_EXTSCI#
GPD4	EC_EXTSMI#
GPD5	H_PROCHOT#
GPD6	CHG_ON
GPD7	LCDSW
GPE0	EC_PWR_ON
GPE1	SET_V
GPE2	PWROK
GPE3	VCORE_ON
GPE4	LID#
GPE5	AC_IN/OUT#
GPE6	FAN_SPD# or RTCRST
GPE7	AMP_MUTE#
GPF0	3G_ON
GPF1	EC_BSEL1
GPF2	CHG_G_LED
GPF3	CHG_R_LED
GPF4	TP_CLK
GPF5	TP_DATA
GPF6	VGA_SMBCLK
GPF7	VGA_SMBDAT
GPG0	EC_VID3
GPG1	EC_WDOG_OK
GPG2	FLFRAME#
GPG6	NEW_CARD_PWR_ON#
GPH0	+1.8V_ON
GPH1	+1.8VS_ON
GPH2	SENBAT_V
GPH3	+3.3VS_ON
GPH4	+5V_ON
GPH5	VDD_CORE_ON
GPH6	EC_VID4

del VGA_TEMP

ITE8512E GPIO	
GPIO0	BATT_TEMP
GPIO1	ADAPTOR_I
GPIO2	BAT_V
GPIO3	CPPE#
GPIO4	BAT_I
GPIO5	EC_CPU_PWR
GPIO6	DDR2_TEMP
GPIO7	ADAP_IN
GPJ0	EC_BRGHT
GPJ1	CHG_I
GPJ2	FAN_CTRL0
GPJ3	SILENT_LED
GPJ4	SMP1_EN#
GPJ5	PM_THROTTLING#

CPU				
CPU	CORE (V)	ICC (mA)	W	TEMP (°C)
2.0G	1.525	35.7	54.3	69
2.2G	1.525	37.5	57.1	70
2.26G	1.525	38.1	58.0	70
2.4G	1.525	39.3	59.8	71
2.5G	1.525	40	61.0	72
2.53G	1.525	40.4	61.5	72
2.6G	1.525	41.05	62.6	72
2.66G	1.525	43.35	66.1	74
2.8G	1.525	44.86	68.4	75
3.06G	1.525	55.9	85.2	81
VCC	ICC (mA)	W	TEMP (°C)	
+1.5V	120	0.18	70	
+1.05V	2500	2.625		

672MX			
VCC	ICC (mA)	W	TEMP (°C)
+1.2V	2303	2.76	70
+1.8V	1215	2.18	
+1.05V	80	0.084	

SIS968			
VCC	ICC (mA)	W	TEMP (°C)
+3.3V	86	0.283	70
+1.8V	851	1.531	
+1.05V	22	0.022	

307LV			
VCC	ICC (mA)	W	TEMP (°C)
+3.3V	236	1.107	70
+1.8V	565	0.778	

SMART POWER TABLE

VID6	VID5	VID4	VID3	VID2	VID1	VID0	VCORE	+_mV
0	0	0	0	0	0	0	1.5000	-0mV
0	0	0	0	0	0	1	1.4875	-2.5mV
0	0	0	0	0	1	0	1.4750	-5mV
0	0	0	0	1	0	0	1.4500	-50mV
0	0	0	1	0	0	0	1.4000	-100mV
0	0	1	0	0	0	0	1.3000	-200mV
0	1	0	0	0	0	0	1.1000	-400mV
1	0	0	0	0	0	0	0.7000	-800mV
0	0	1	1	0	1	1	1.1625	
0	0	1	0	0	0	1		
0	0	1	0	0	1	0		
0	0	1	0	1	0	0		
0	0	1	0	1	1	0		
0	0	1	1	0	0	1		
0	0	1	1	0	1	0		

CLOCK GENERATOR+BUFFER			
VCC	ICC (mA)	W	TEMP (°C)
+3.3V	400	1.32	70
+1.8V	300	0.54	

ITE8512E			
VCC	ICC (mA)	W	TEMP (°C)
+3.3V	200	0.66	70
+3.3VA	500	1.65	

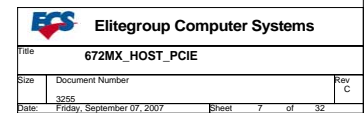
RTS5158			
VCC	ICC (mA)	W	TEMP (°C)
+5V	76	0.38	85

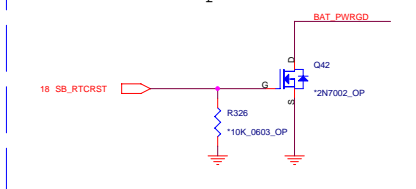
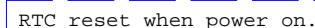
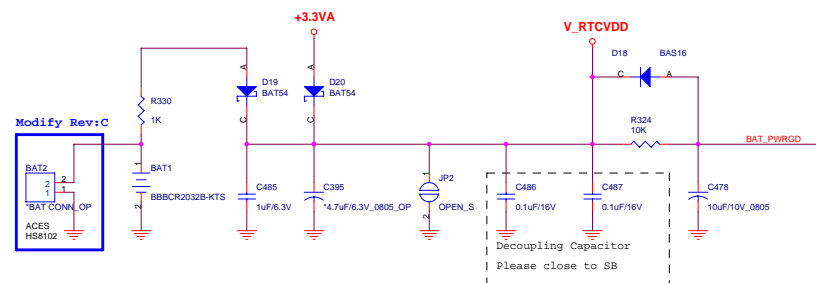
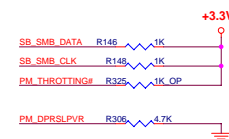
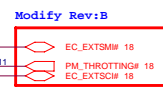
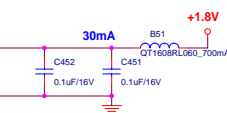
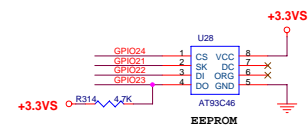
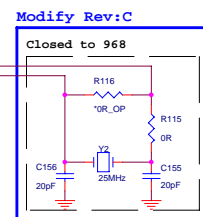
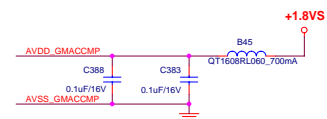
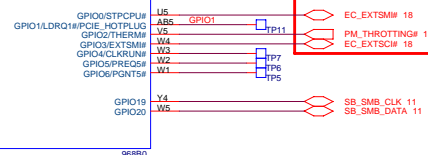
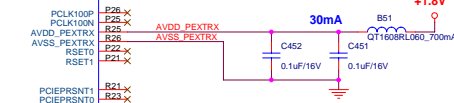
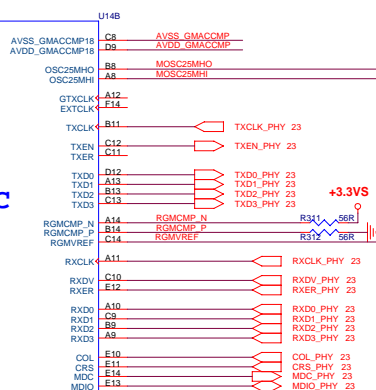
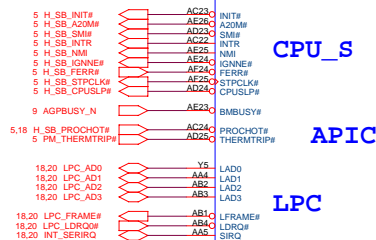
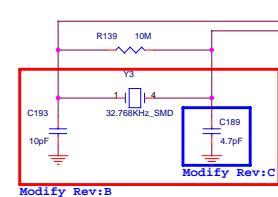
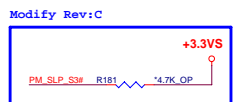
RTL8201CL			
VCC	ICC (mA)	W	TEMP (°C)
+3.3V	20	0.396	85



ALC662			
VCC	ICC (mA)	W	TEMP (°C)
+3.3V	23	0.075	70
+5VA	38	0.19	

APA2068			
VCC	ICC (mA)	W	TEMP (°C)
5V	20	0.1	85

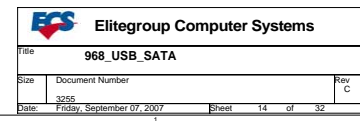
ADM1032			
VCC	ICC	W	TEMP (°C)
+3.3V	170uA	0.56mW	150

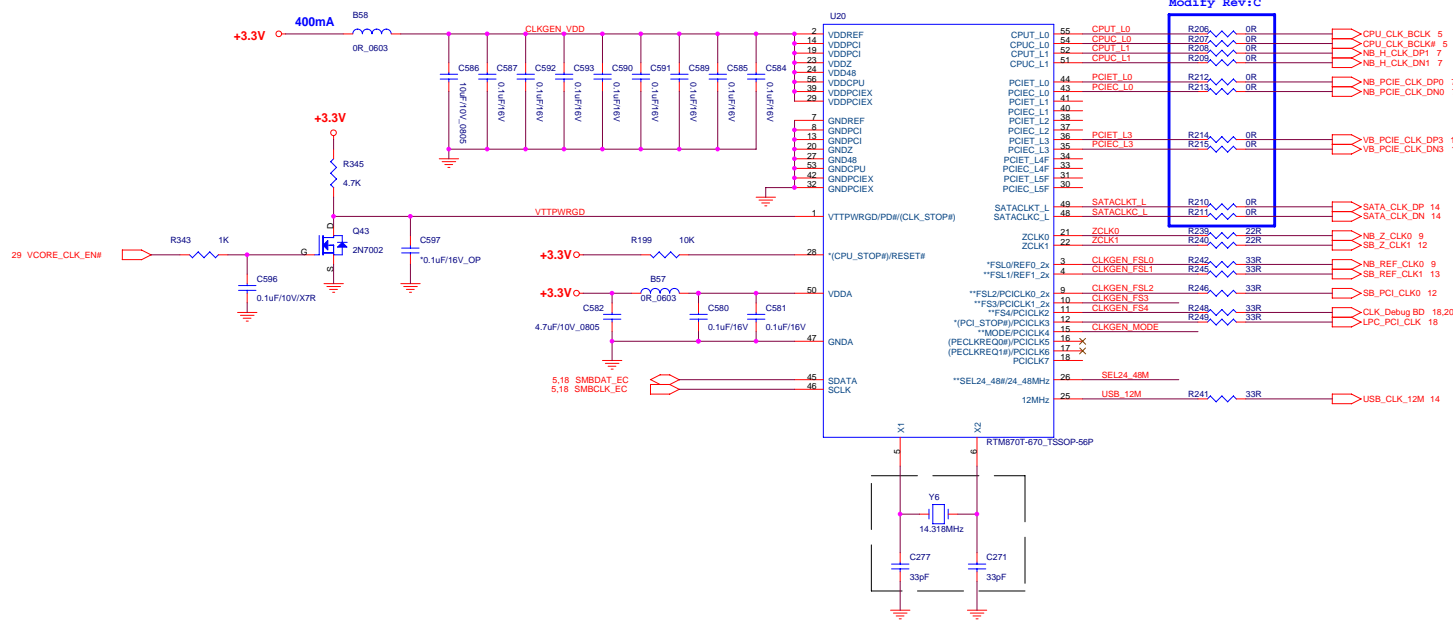




31	USB_DP6	
31	USB_DN6	

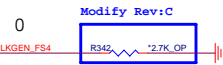
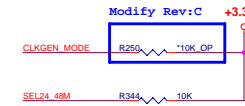
Modify Rev:C



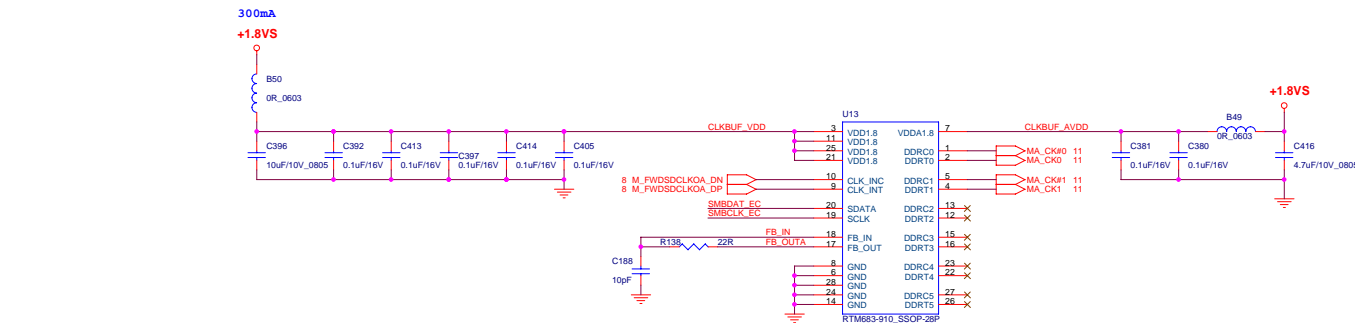


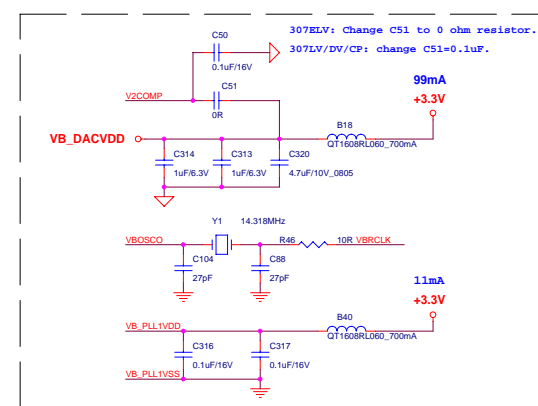
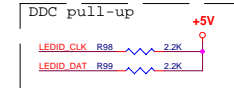
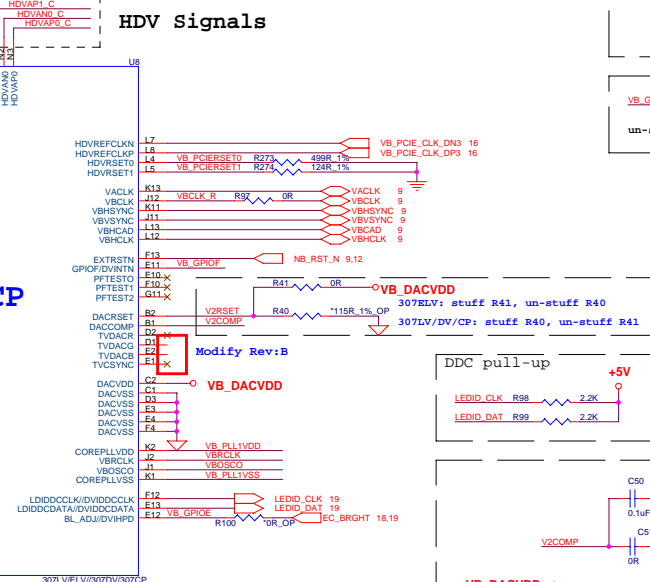
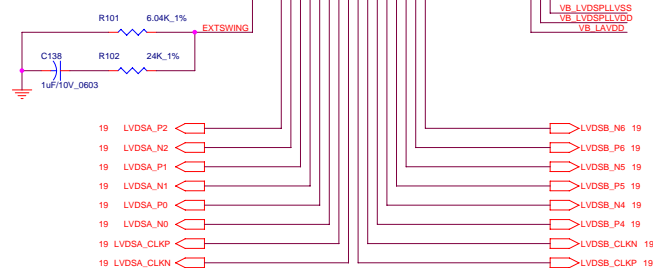
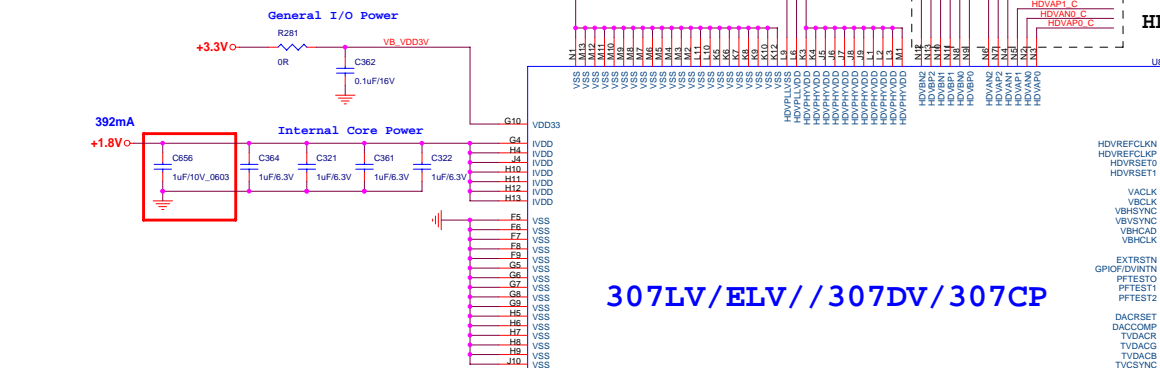
Please base on your design to choose the appropriate capacitor vaule.
 $C_{210} + C_{X1} + C_{trace1} = C1$
 $C_{211} + C_{X2} + C_{trace2} = C2$
 $C_{load} (refer\ to\ the\ crystal\ datasheet) = (C1 * C2) / (C1 + C2)$

CPU_CLK_BCLK	C567	*10pF_OP
CPU_CLK_BCLK#	C568	*10pF_OP
NB_H_CLK_DP1	C569	*10pF_OP
NB_H_CLK_DN1	C570	*10pF_OP
NB_PCIE_CLK_DP0	C573	*10pF_OP
NB_PCIE_CLK_DN0	C574	*10pF_OP
SATA_CLK_DP	C571	*10pF_OP
SATA_CLK_DN	C572	*10pF_OP
NB_Z_CLK0	C598	*10pF_OP
SB_Z_CLK1	C599	*10pF_OP
NB_REF_CLK0	C260	*10pF_OP
SB_REF_CLK1	C600	*10pF_OP
LPC_PCI_CLK	C602	*10pF_OP
SB_PCI_CLK0	C601	*10pF_OP

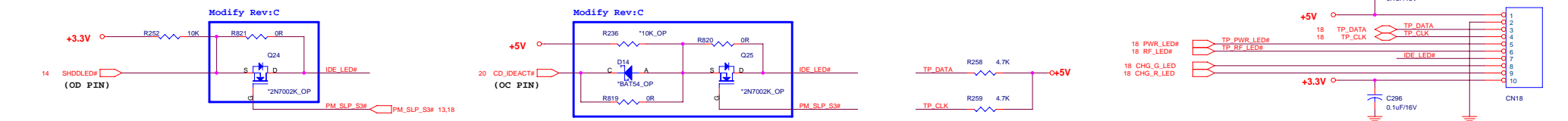


	BSEL4	BSEL3	BSEL2	BSEL1	BSEL0	CPU MHz	ZCLK
FSB533	0	0	0	0	1	133	133
FSB667	0	0	0	1	1	166	133
FSB800	0	0	0	1	0	200	133

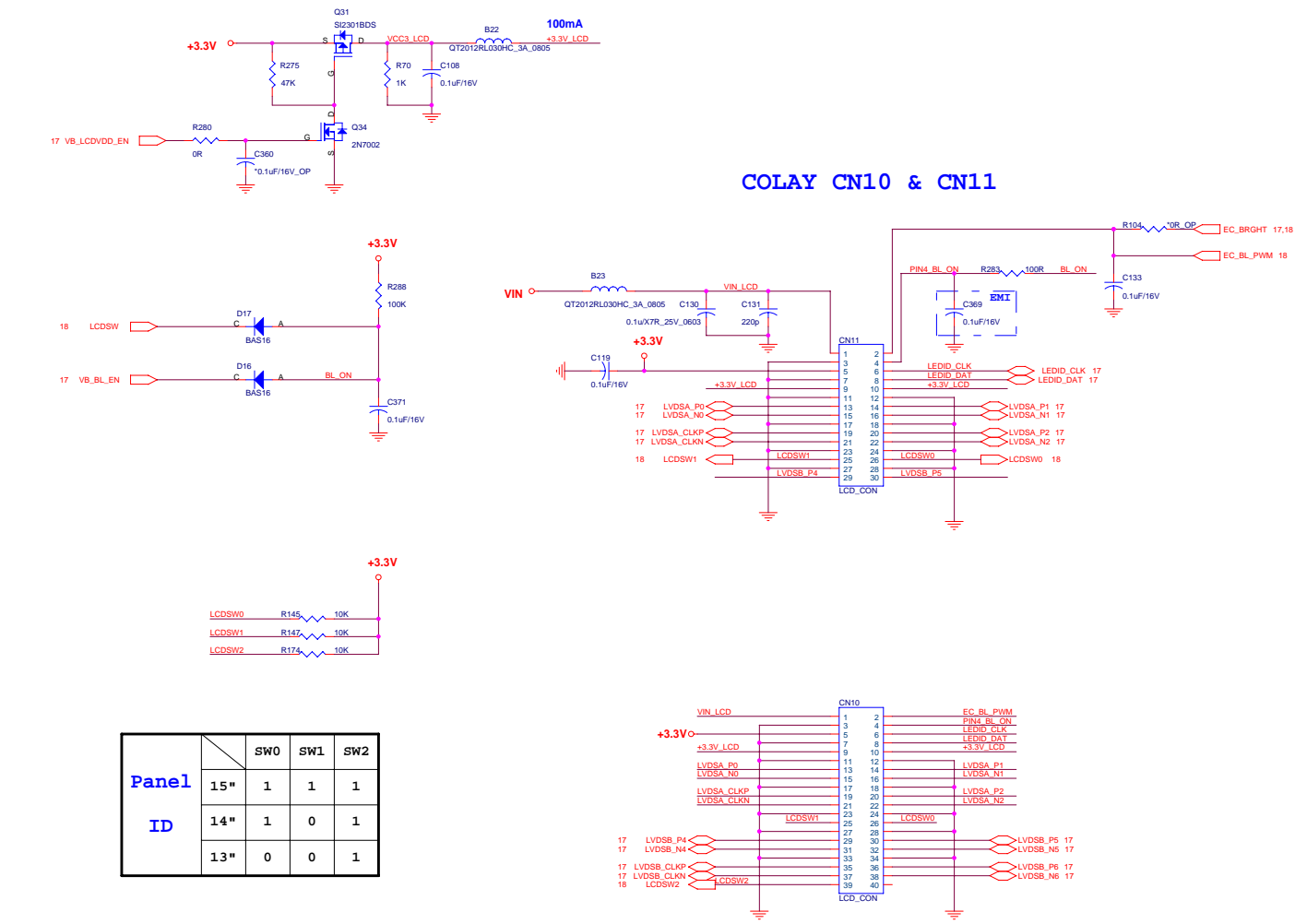




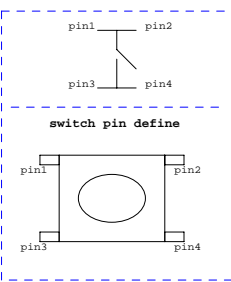
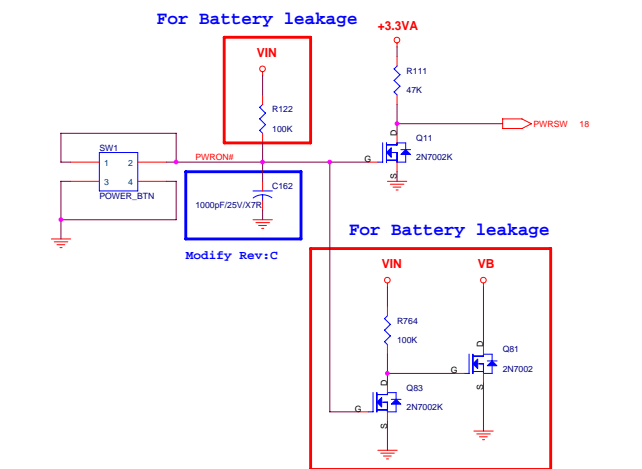
Touch Pad



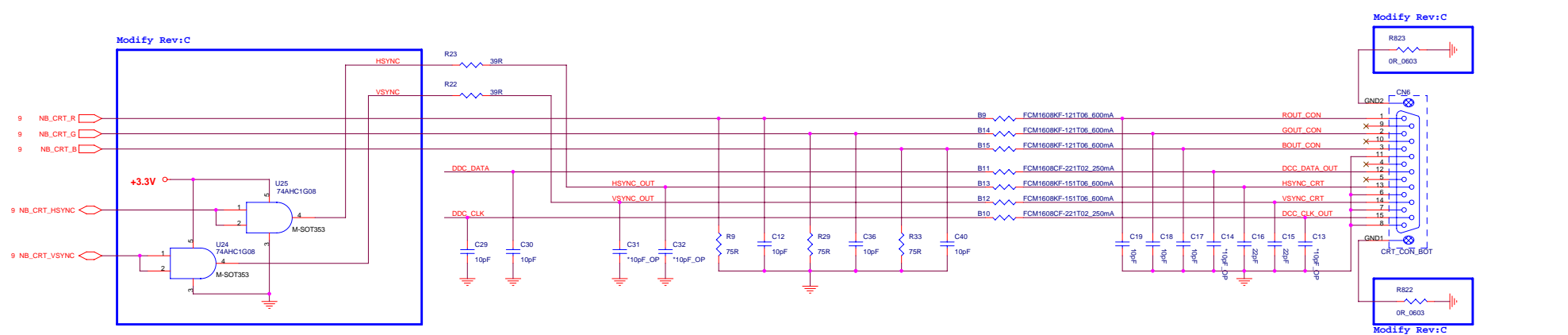
LCD



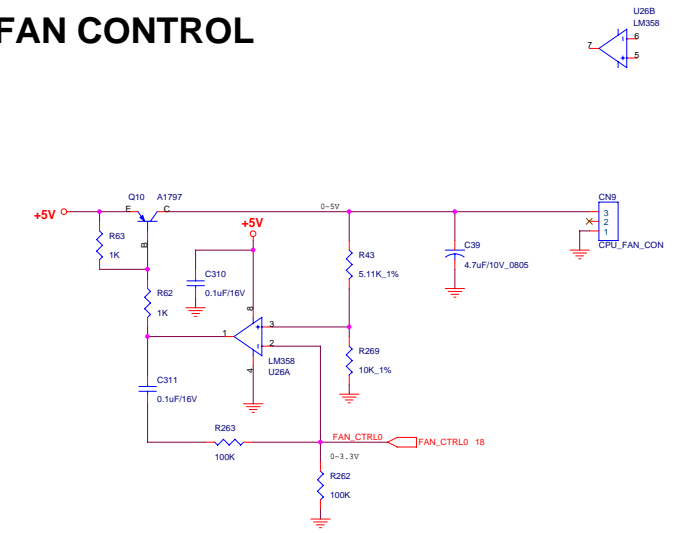
PWR SW



CRT

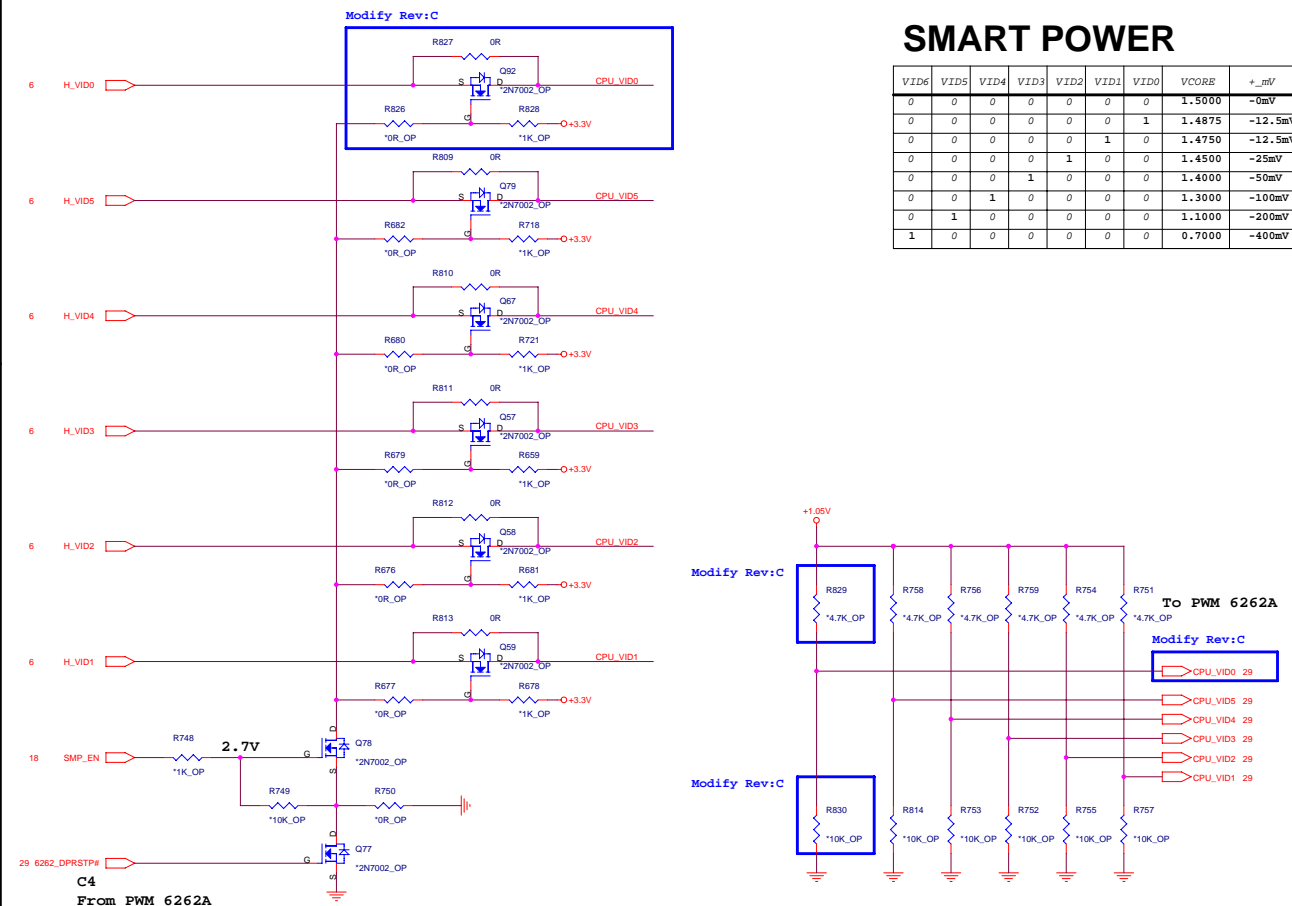


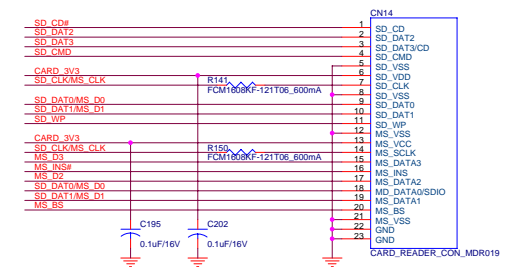
CPU FAN CONTROL





SMART POWER

VID6	VID5	VID4	VID3	VID2	VID1	VID0	VCORE	+_mV
0	0	0	0	0	0	0	1.5000	-0mV
0	0	0	0	0	0	1	1.4875	-12.5mV
0	0	0	0	0	1	0	1.4750	-12.5mV
0	0	0	0	1	0	0	1.4500	-25mV
0	0	0	1	0	0	0	1.4000	-50mV
0	0	1	0	0	0	0	1.3000	-100mV
0	1	0	0	0	0	0	1.1000	-200mV
1	0	0	0	0	0	0	0.7000	-400mV



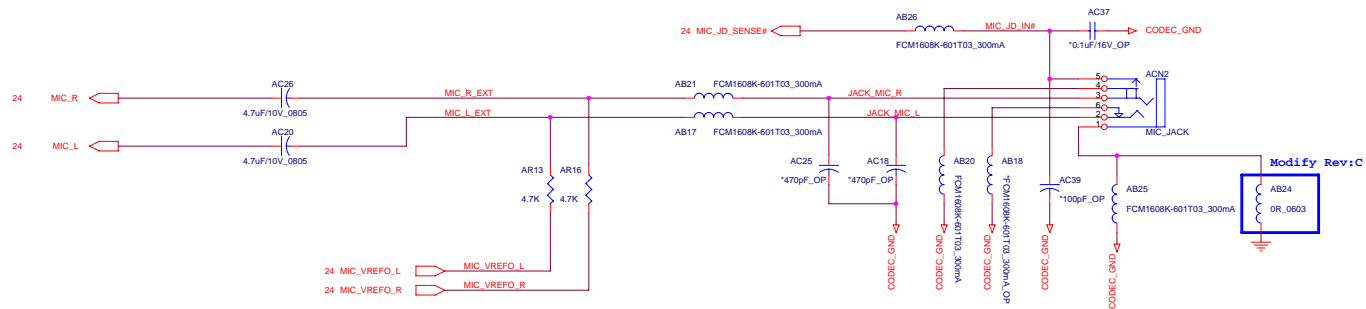


25 HP_JD_SENSE#  HP_JD_SENSE#  AR19
39.2K_1%

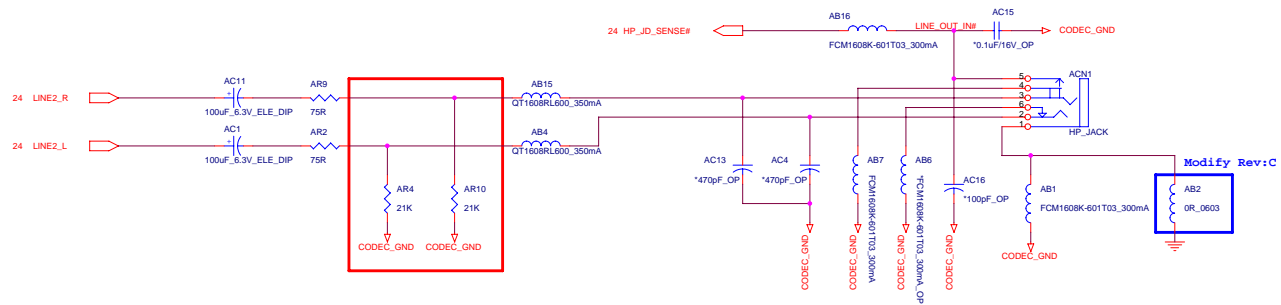
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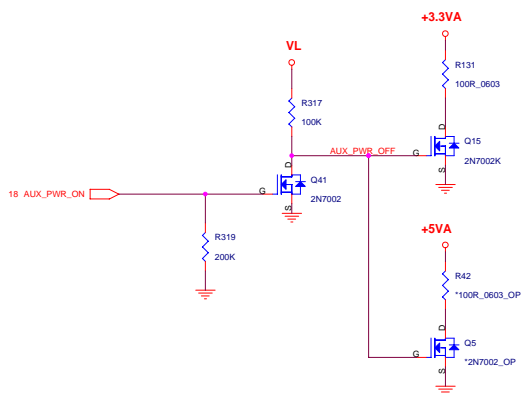
The schematic diagram illustrates the audio amplifier circuit. It features a central IC (likely a TPA608) with various pins connected to different components. The power supply section includes a +5V_AMP input and AMP_GND connections, with capacitors AC3 (0.1uF/16V) and AC9 (4.7uF/10V_0805) for decoupling. The input section shows FRONT_R and FRONT_L signals connected to the IC's input pins (IN-, IN+, LIN-, LIN+), along with a MUTE control line. The output section shows the IC's output pins (ROUT+, ROUT-, SE/BTL+, SE/BTL-) connected to four speakers (SPKR1+, SPKR1-, SPKL1-, SPKL+) through resistors AB13, AB15, AB11, and AB19. The IC is also connected to a volume control potentiometer (AR6) and a shutdown pin (SHUTDOWN#) connected to AMP_GND. The circuit is powered by a +5V_AMP supply and grounded to AMP_GND.

MIC/Line In JACK

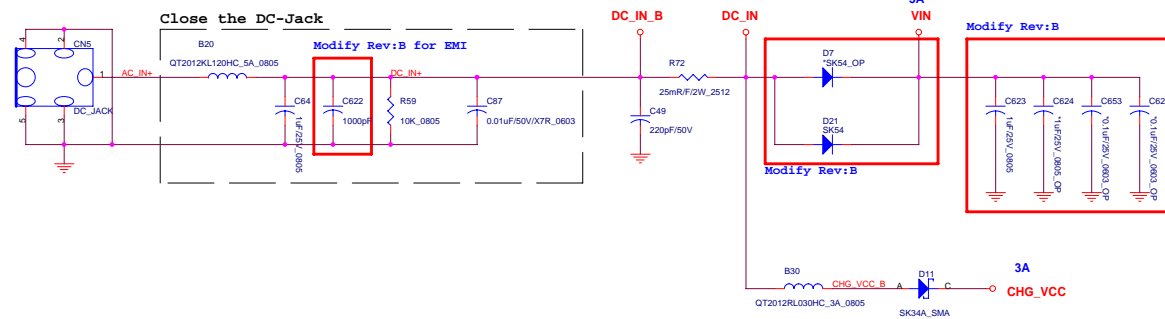


HeadPhone JACK





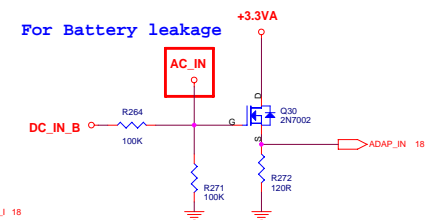
DC IN



2A-->1.456V
 2.5A-->1.82V
 3A-->2.185V
 3.25A-->2.33V
 3.5A-->2.55V

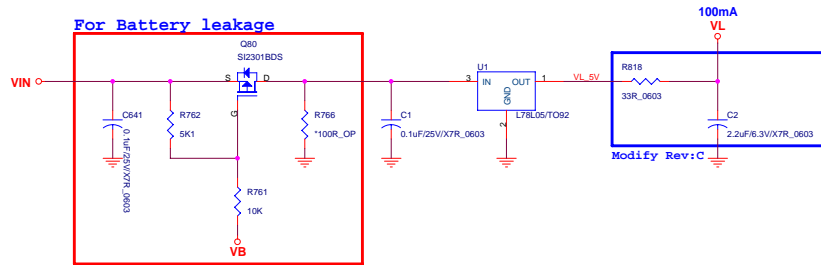
ADAPTOR_18

Modify Rev:C

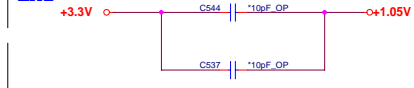


VL for ISL6227 Boost pin

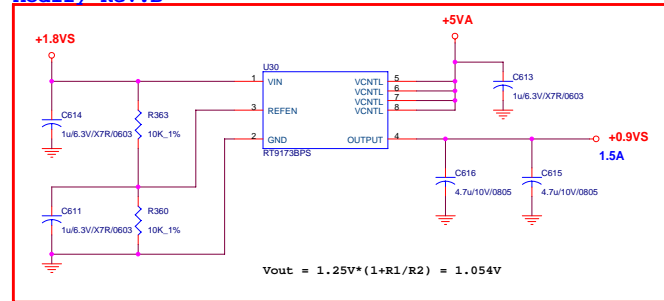
For Battery leakage



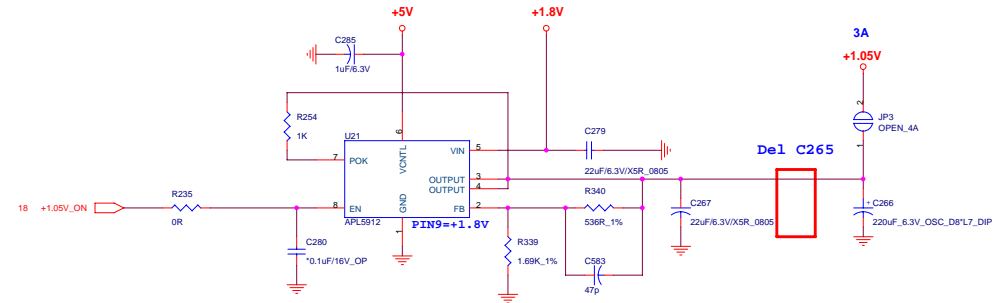
EMI



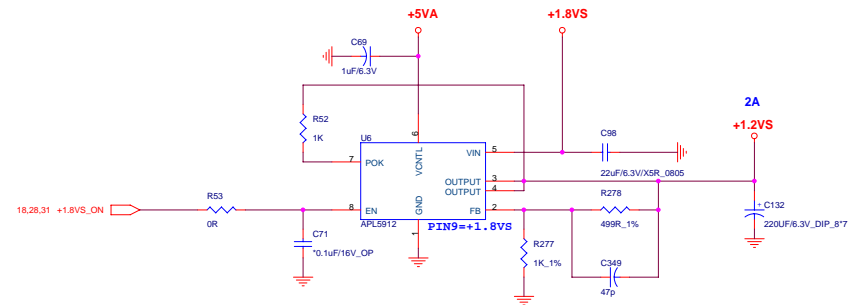
Modify Rev:B



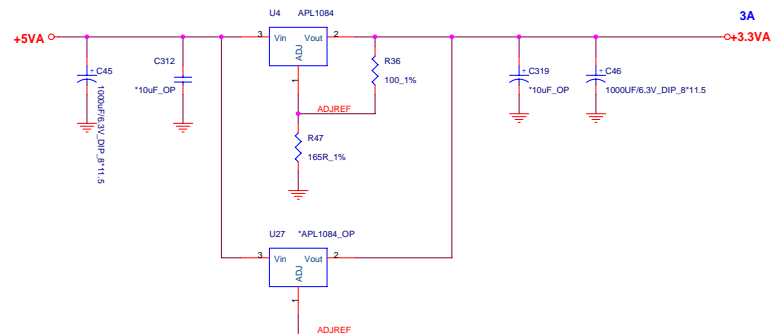
$$V_{out} = 1.25V \cdot (1 + R1/R2) = 1.054V$$



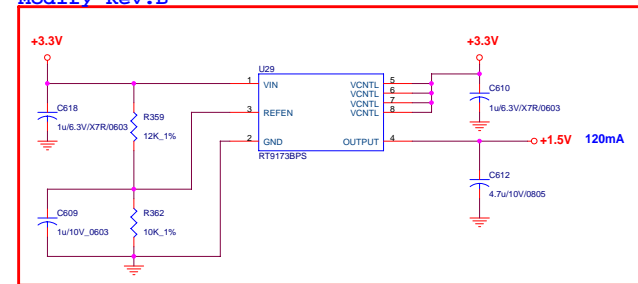
$$V_{out} = 0.8V \cdot (1 + R1/R2) = 1.054V$$

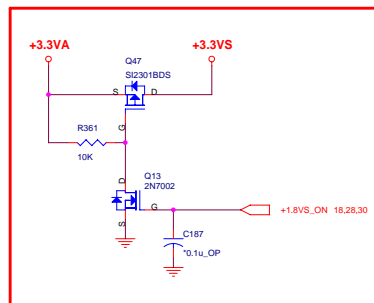
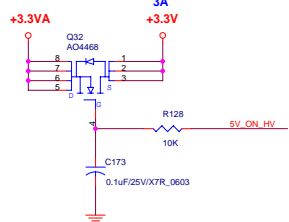
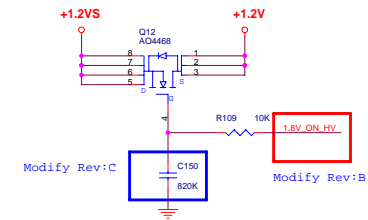
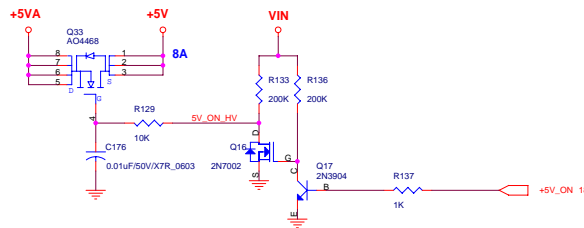
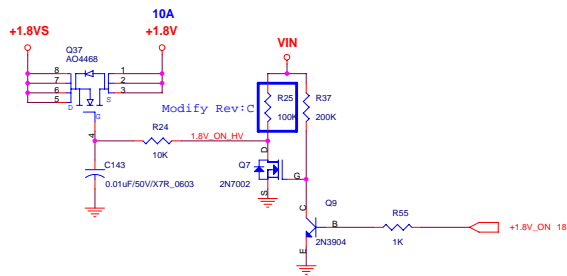


$$V_{out} = 0.8V \cdot (1 + R1/R2) = 1.2V$$



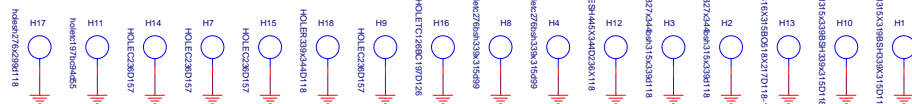
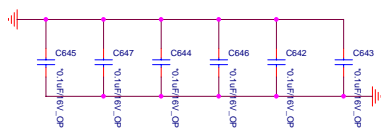
Modify Rev:B





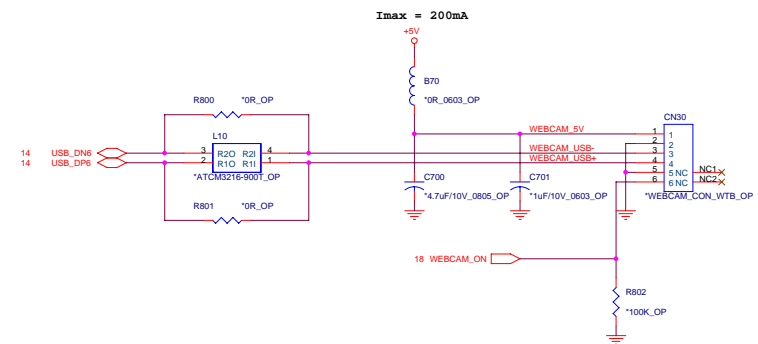
Modify Rev:B

For Vcore GND Shape Connecting



WEBCAM CONN

Modify Rev:C



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