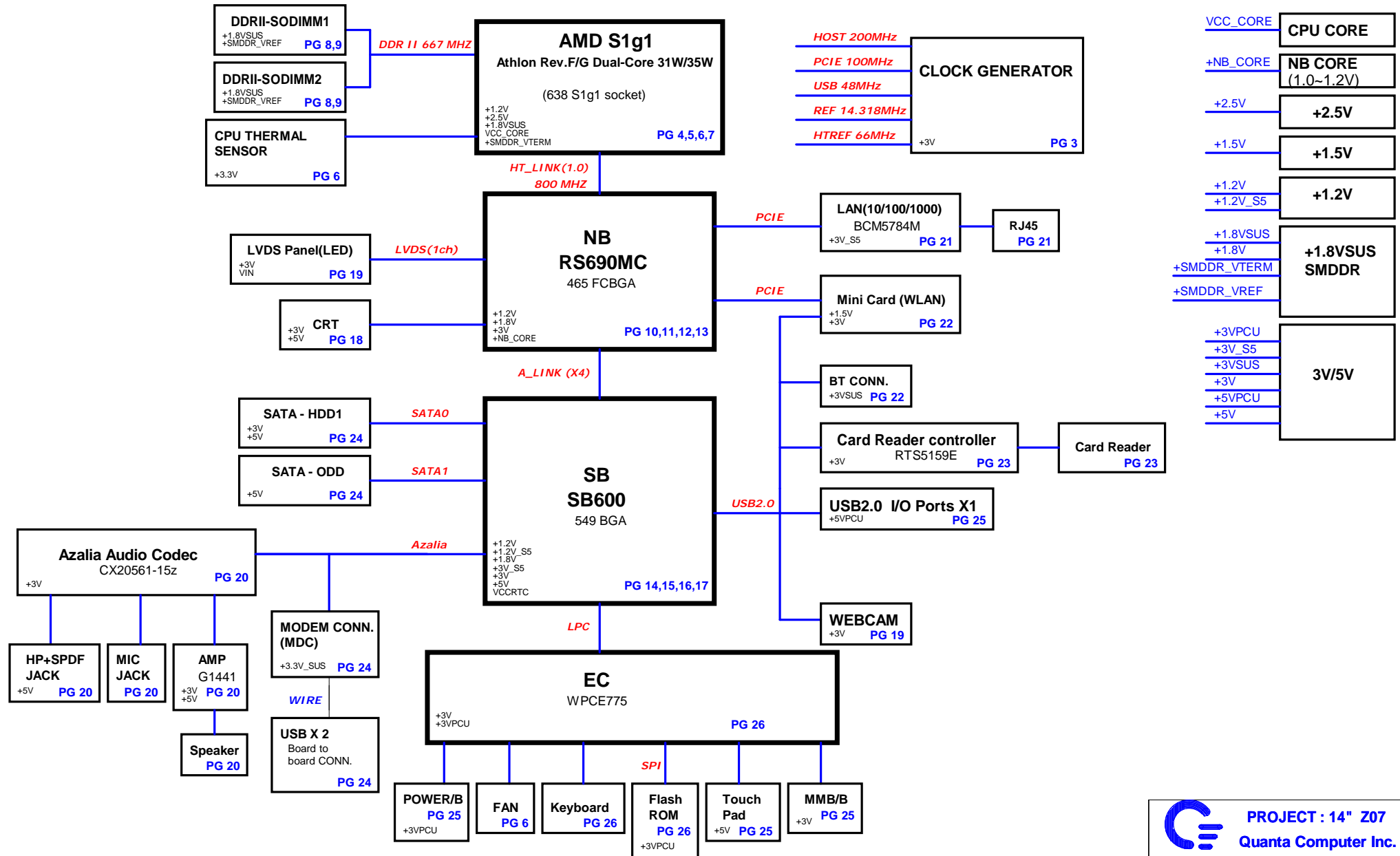
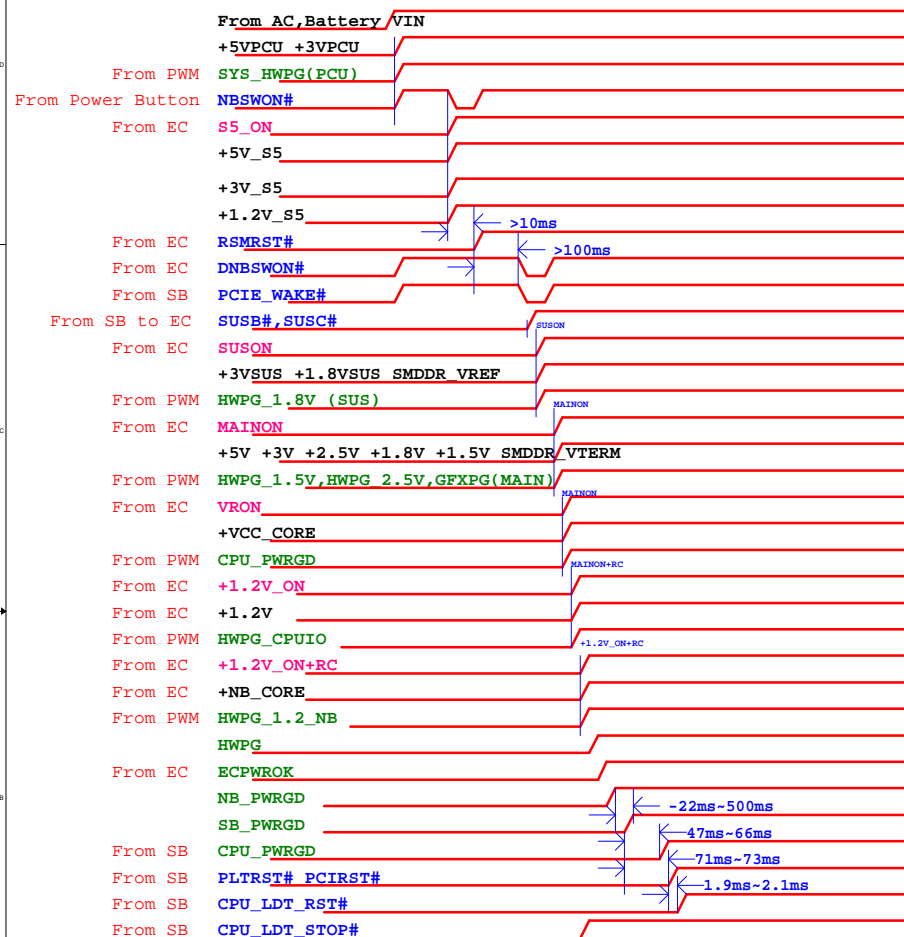


# Z07 SYSTEM BLOCK DIAGRAM

01



## Z07 Power On Sequence

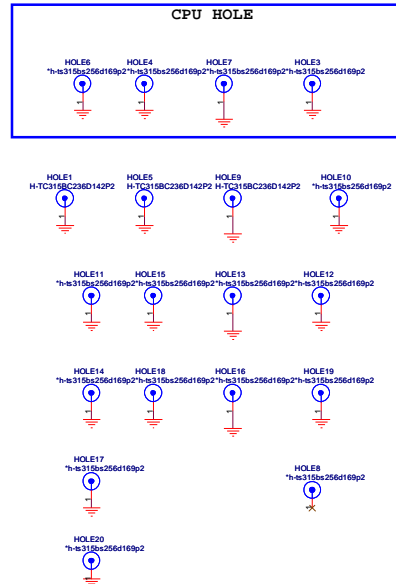


\*Note: EC will sampling SUSB# & SUSC# every 5ms.

## AMD SB600 SMBUS Table

	CLK GEN	RAM	Mini Card (HD-Decoder)	Mini-card(WL)	New Card	HDMI
SB600 SDATA0/SCLK0(+3V)	V	V	V	V	V	
SB600 SDATA0/SCLK0(+3V_S5)						V
Power	+3V	+3V	+3V	+3V (Atheros)	+3V	+3V_S5
Reserve MOS ckt	V	V	V	V	V	V

## CPU HOLE

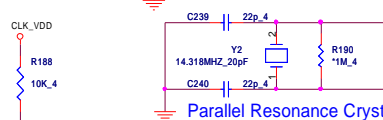
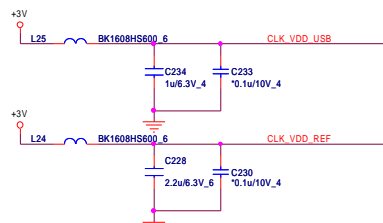
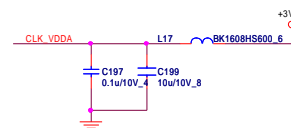
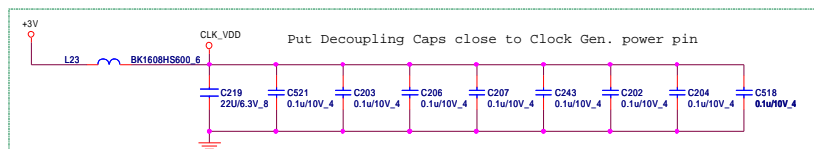


## EC SMBUS Table

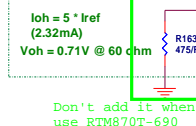
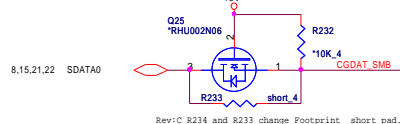
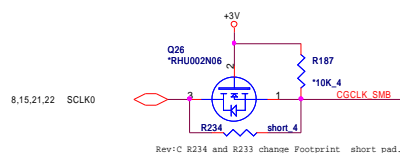
	Battery	CPU thermal Sensor	EC EEPROM	VGA thermal Sensor	Touch Sensor	HDMI CEC
EC775 SDATA1/SCLK1(+3VPCU)	V					
EC775 SDATA2/SCLK2(+3VPCU)		V	V			
EC775 SDATA3/SCLK3(+3VPCU)				V	V	V
EC775 SDATA4/SCLK4(+3VPCU)						
Power	+3VPCU	+3V	+3VPCU	+3V	+3VPCU	+5VPCU
Reserve MOS ckt	X	V	X	V	X	V



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### Clock Gen I2C



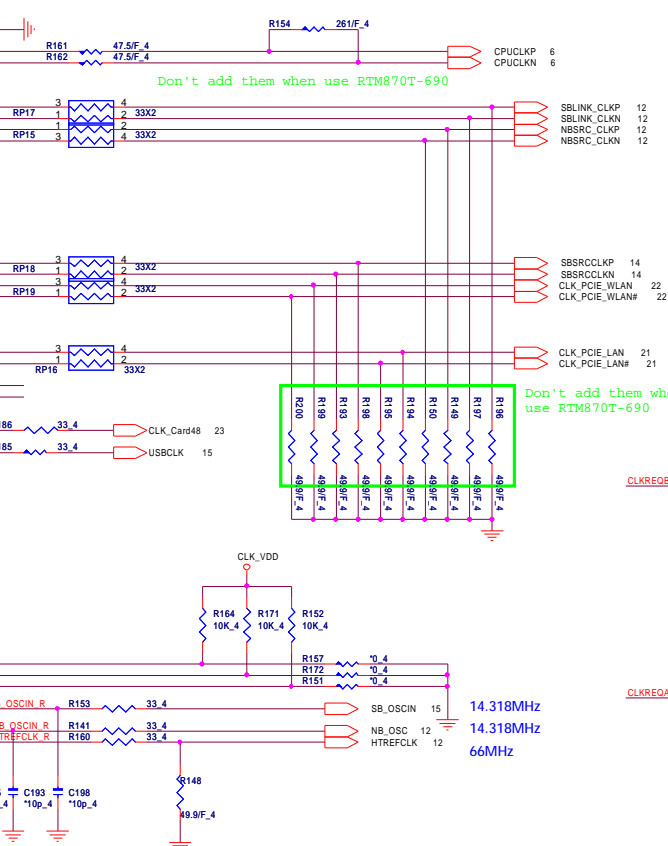
CLKREQA# CONTROL SRC5,6,7  
CLKREQB# CONTROL SRC2,3,4 ATIG3  
CLKREQC# CONTROL SRC0,1 ATIG0,1,2

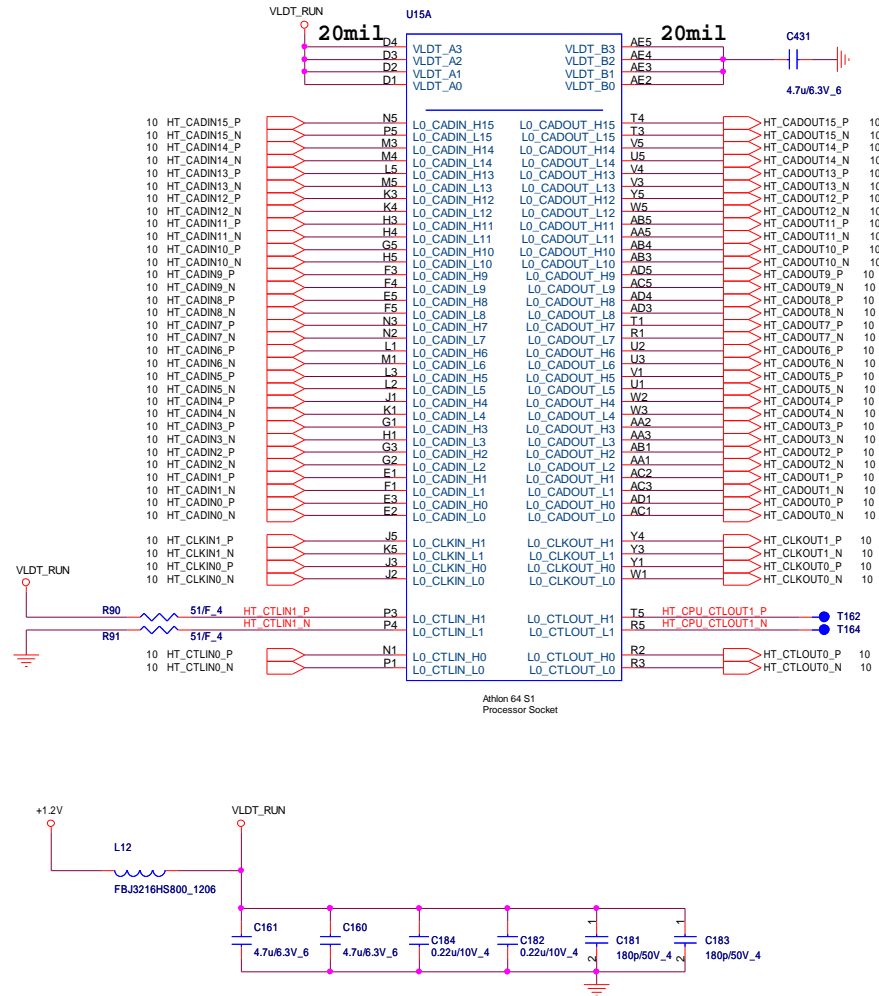
Silego: AL084605K05 ; SLG84605TTR

### EXT CLK FREQUENCY SELECT TABLE(MHZ)

FS2	FS1	FS0	CPU	SRCCLK [2:1]	HTT	PCI	USB	COMMENT
0	0	0	HI-Z	100.00	HI-Z	HI-Z	48.00	Reserved
0	0	1	X	100.00	X/3	X/6	48.00	Reserved
0	1	0	180.00	100.00	60.00	30.00	48.00	Reserved
0	1	1	220.00	100.00	36.56	73.12	48.00	Reserved
1	0	0	100.00	100.00	66.66	33.33	48.00	Reserved
1	0	1	133.33	100.00	66.66	33.33	48.00	Reserved
1	1	1	200.00	100.00	66.66	33.33	48.00	Normal Turion/Sempron operation

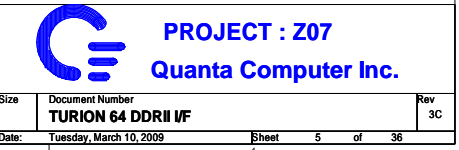
Add 10p for IMI issue (Suggestion by Silego)





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**Quanta Computer Inc.**

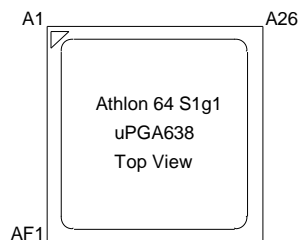
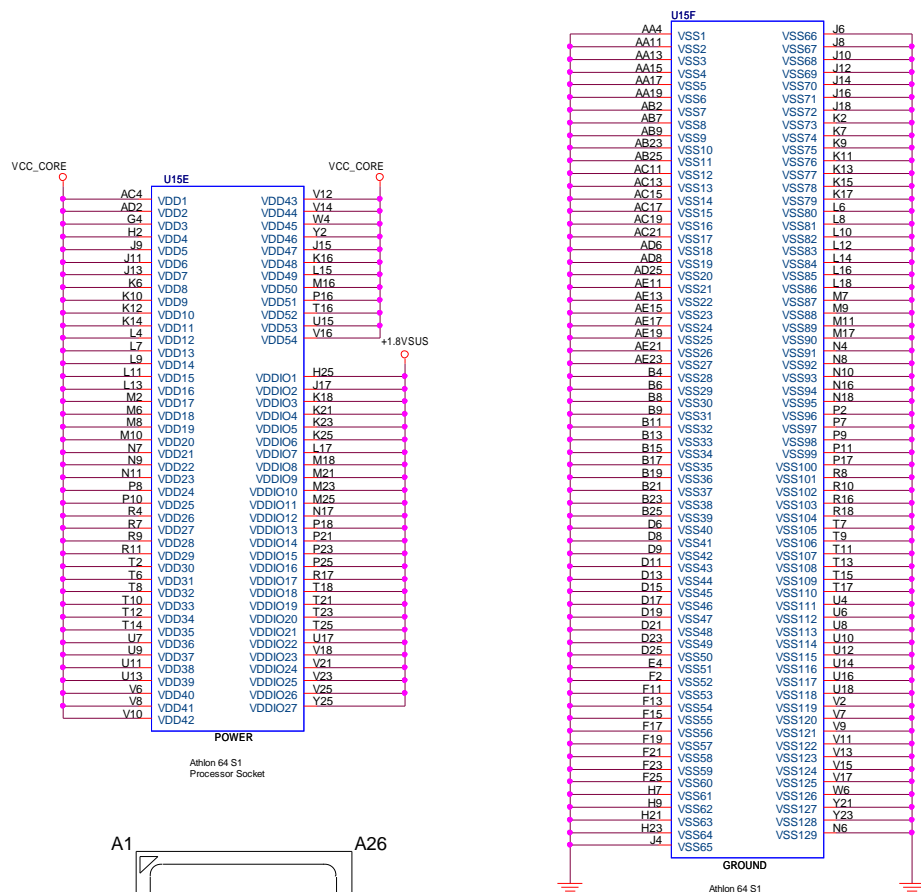
## 5



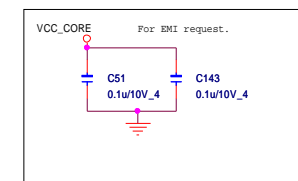
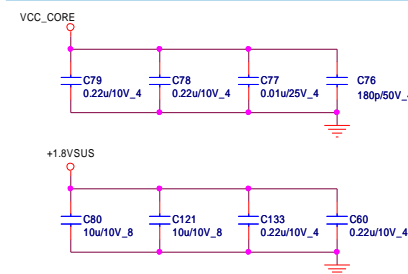
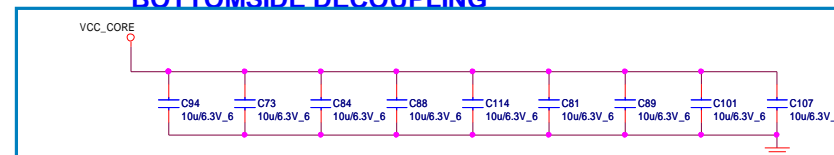
## 6

# PROCESSOR POWER AND GROUND

7

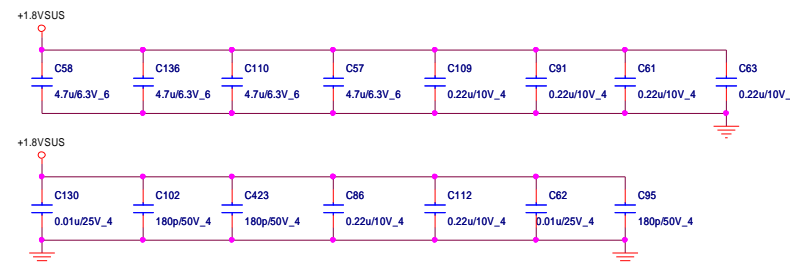


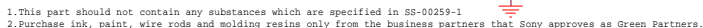
## BOTTOMSIDE DECOUPLING



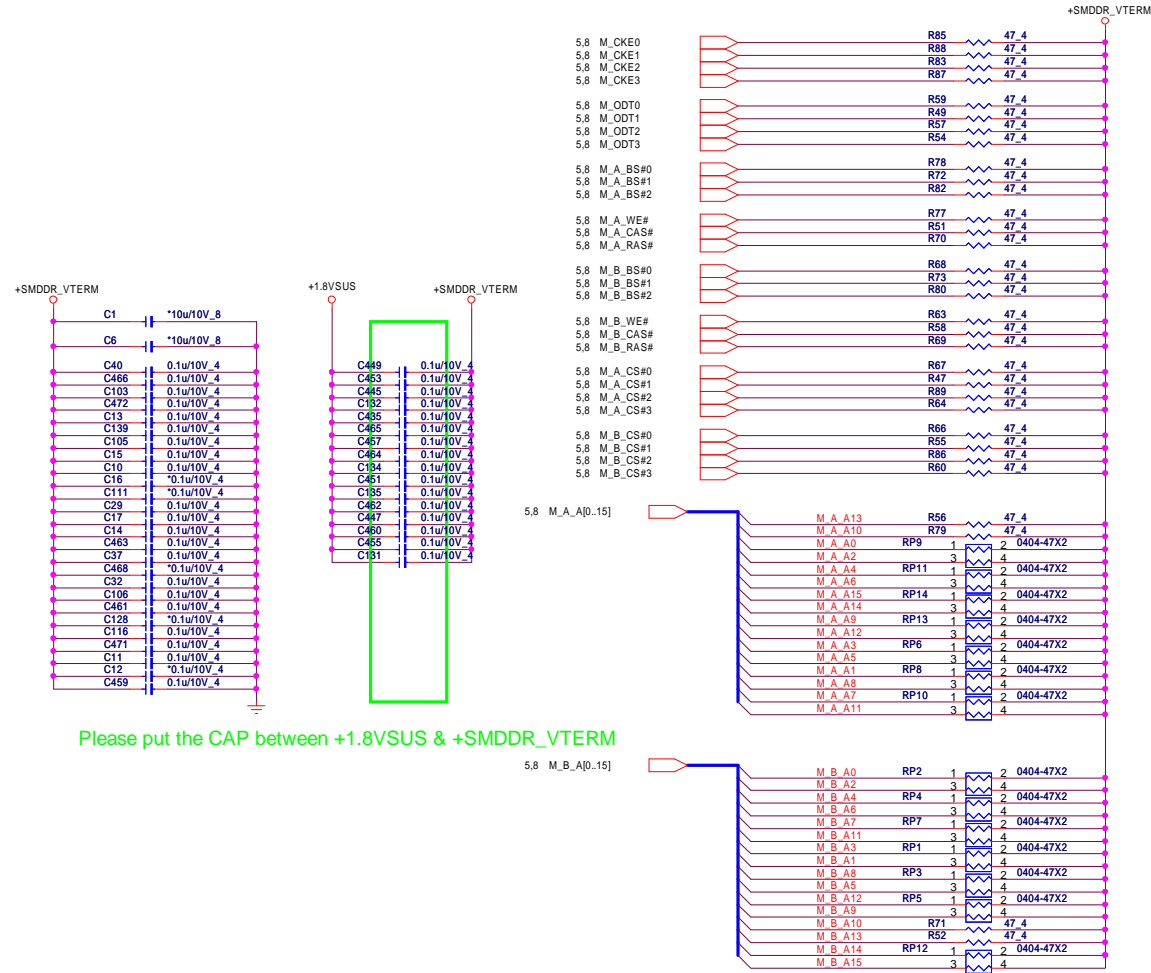
## DECOUPLING BETWEEN PROCESSOR AND DIMMs

PLACE CLOSE TO PROCESSOR AS POSSIBLE

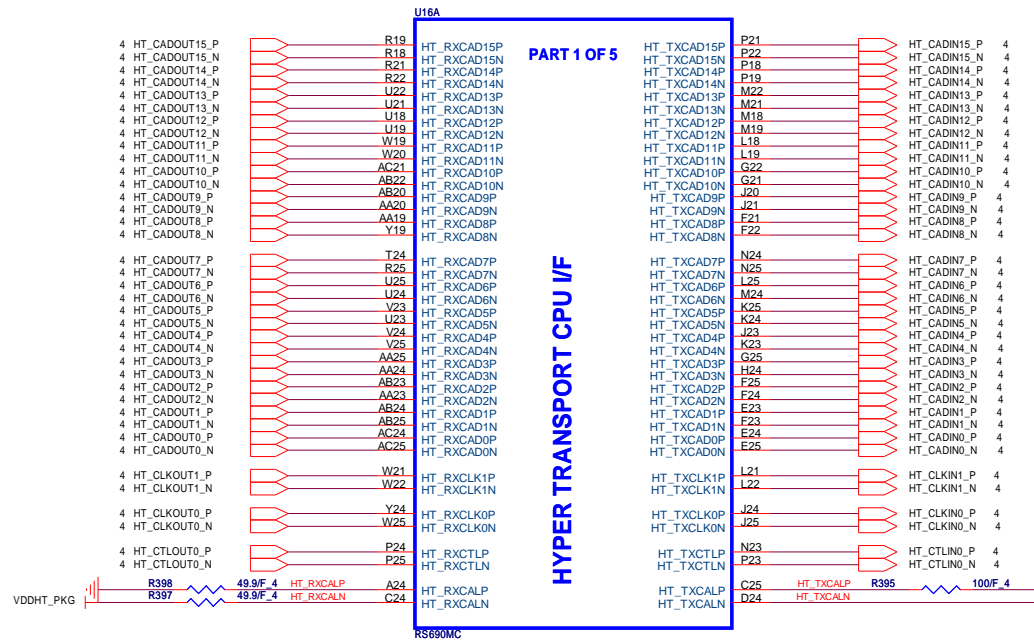






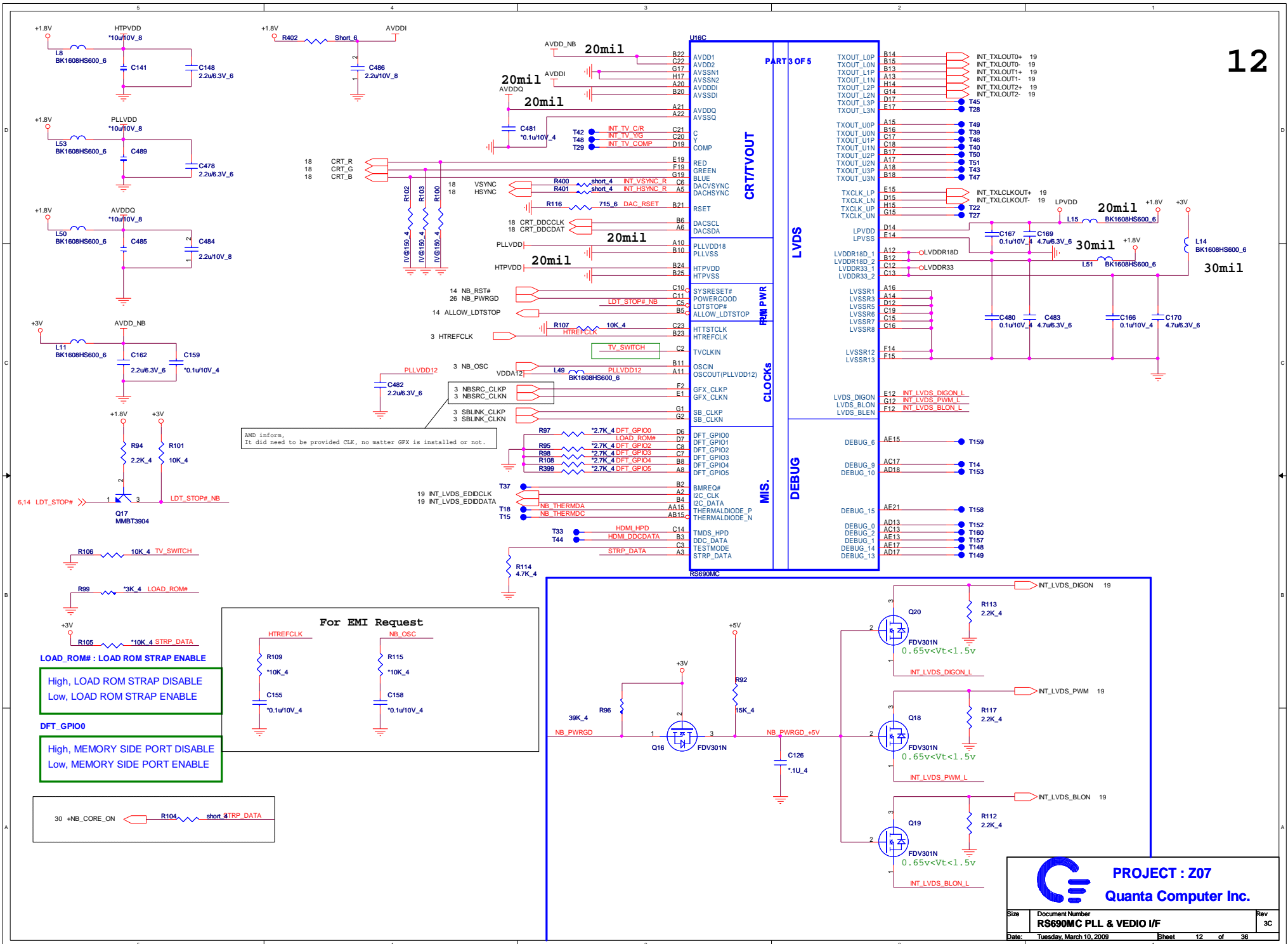


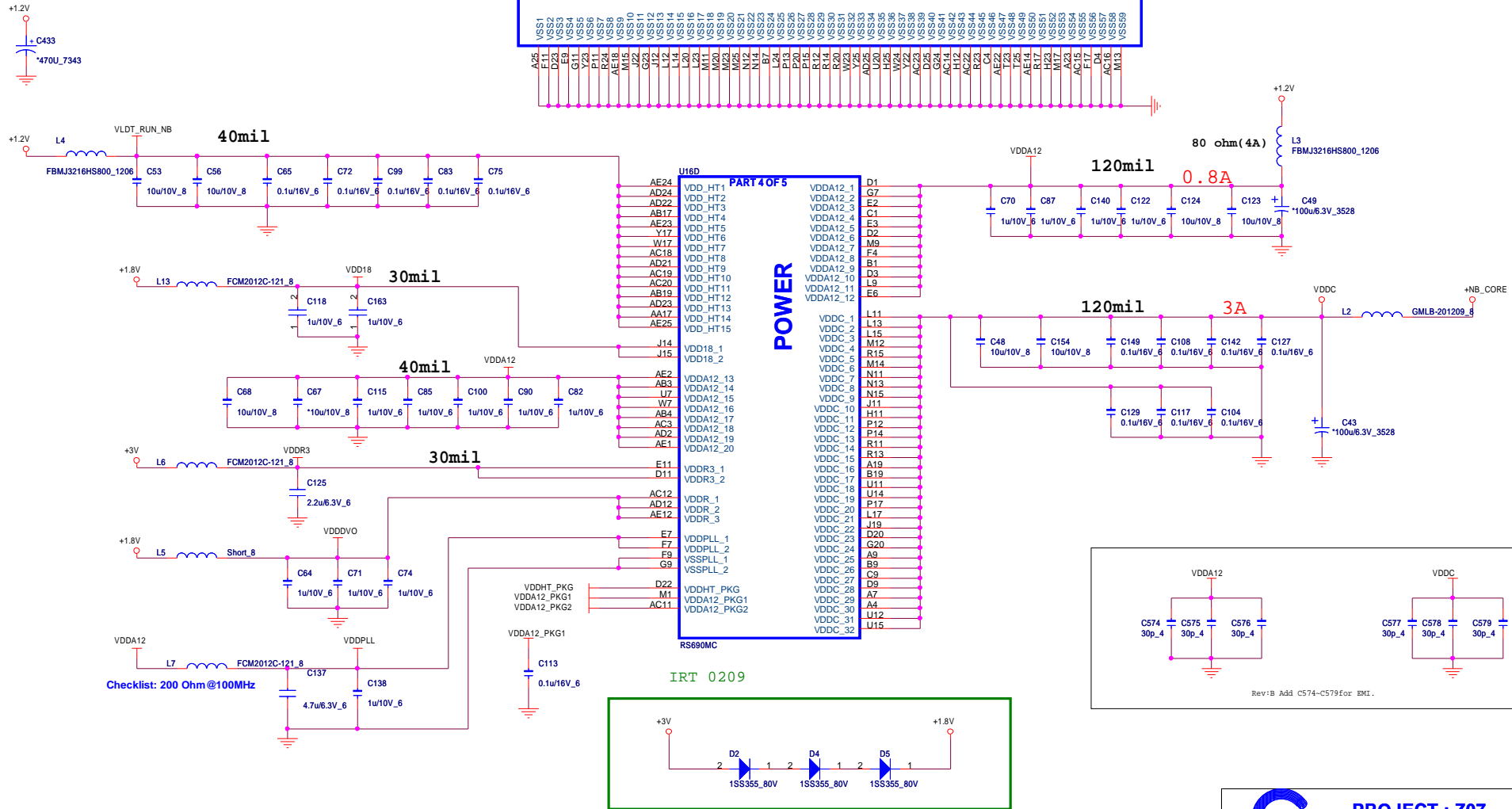
**PROJECT : Z07**  
**Quanta Computer Inc.**



**PROJECT : Z07**  
**Quanta Computer Inc.**



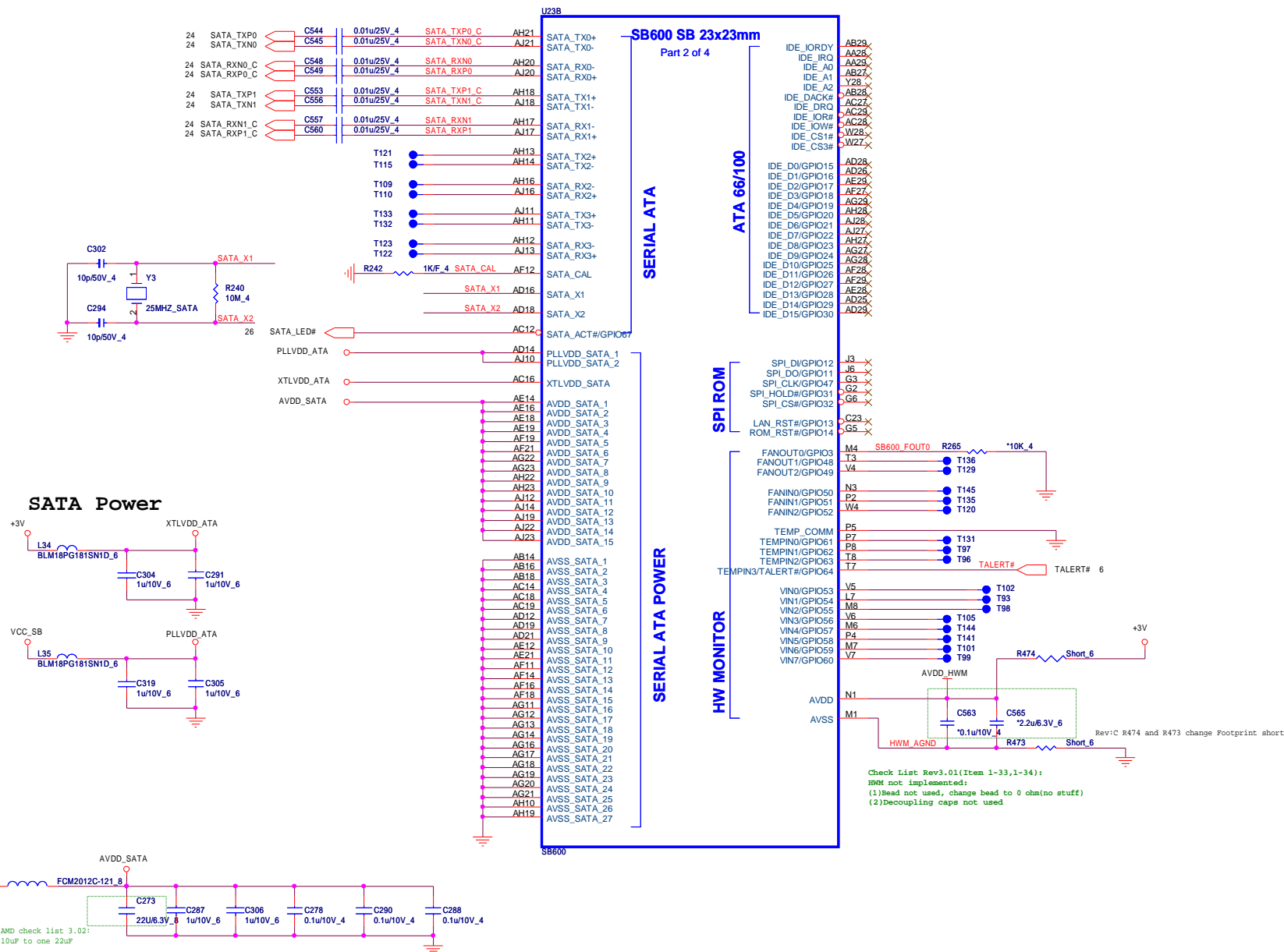




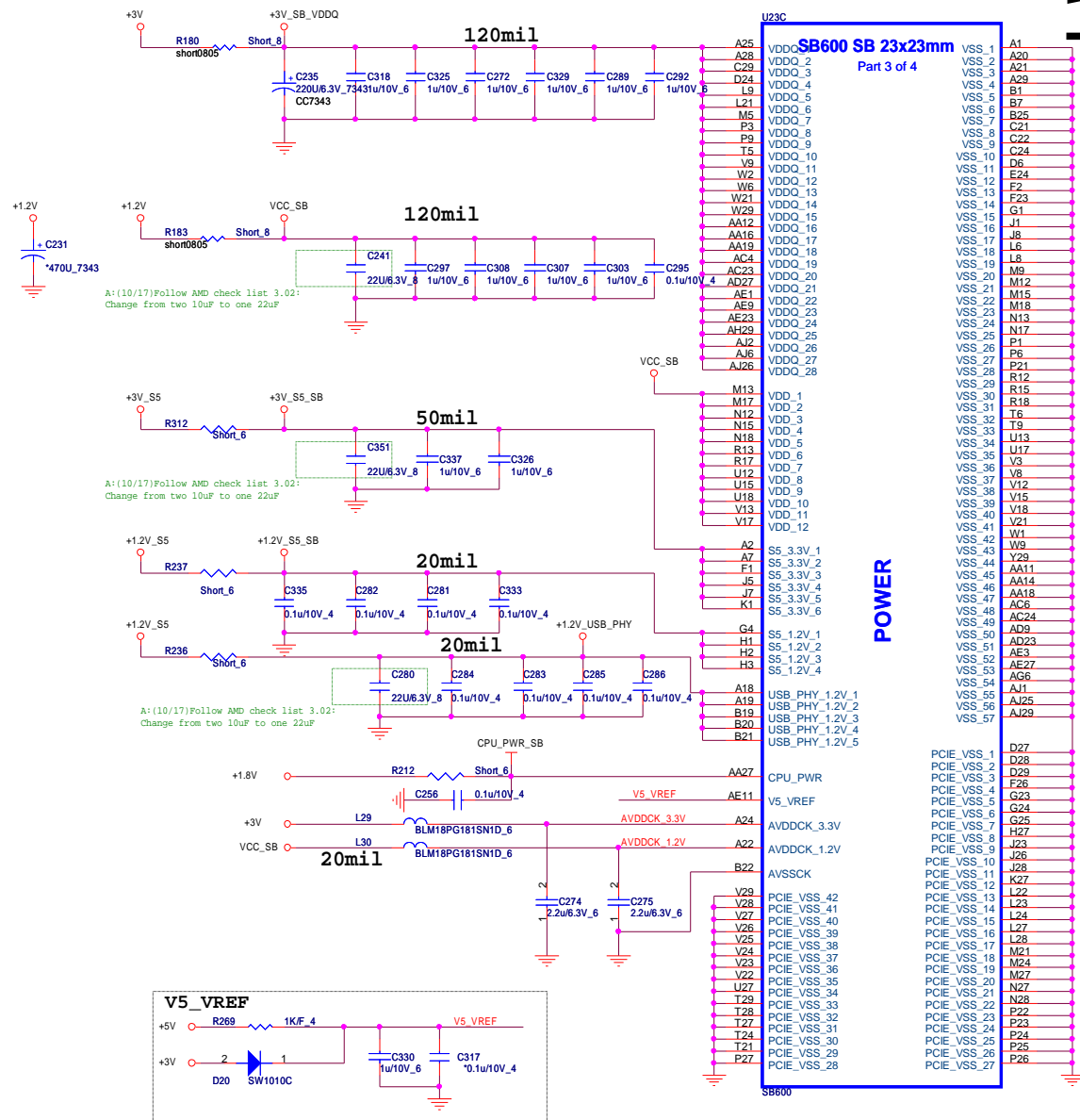
**PROJECT : Z07**  
**Quanta Computer Inc.**



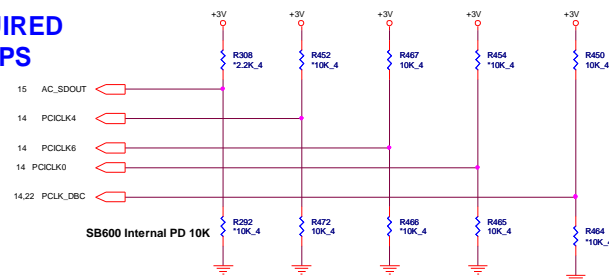








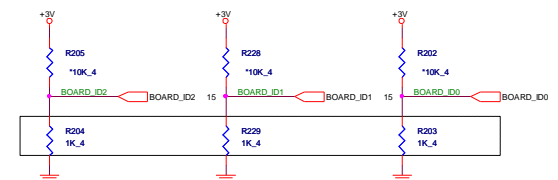
## REQUIRED STRAPS



	AC_SDOUT	PCICLK4	PCICLK6	PCI_CLK0	PCI_CLK1
PULL HIGH	USE DEBUG STRAPS	USE INT. PLL48	CPU IF=K8 DEFAULT	ROM TYPE: H, H = PCI ROM H, L = SPI ROM L, H = LPC ROM L, L = FWH ROM	DEFAULT
PULL LOW	IGNORE DEBUG STRAPS DEFAULT	USE EXT. 48MHZ DEFAULT	CPU IF=P4		

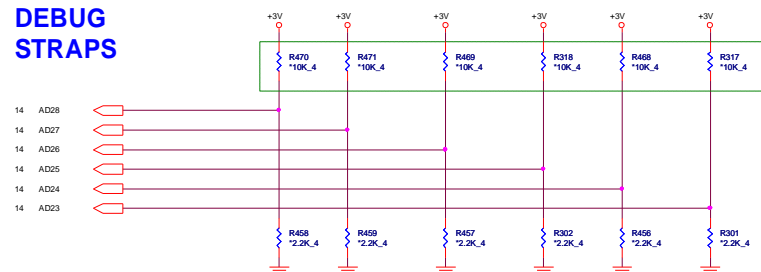
Board ID	ID3	ID1	ID0
			H L
			H L
	L	L	L

&lt;---- Before



(1)Because GPIO pin of South Bridge have internal PU or PD.It will let Board ID become floating(+1.5V) when external circuit PD  
(2)Change external Pull down to 1K ohm for all BOARD\_ID

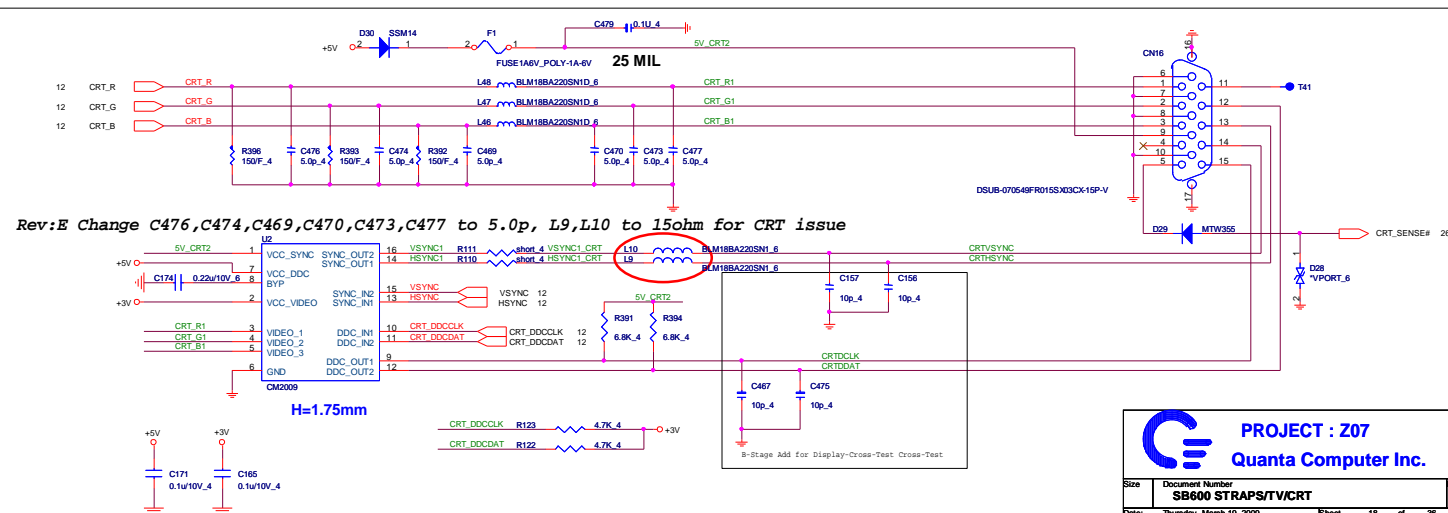
## DEBUG STRAPS



Check List Rev3.01: No external resistor (internal pull up)

	PCI_AD28	PCI_AD27	PCI_AD26	PCI_AD25	PCI_AD24	PCI_AD23
PULL HIGH	USE LONG RESET DEFAULT	USE PCI PLL DEFAULT	USE ACPI BCLK DEFAULT	USE IDE PLL DEFAULT	USE DEFAULT PCIE STRAPS DEFAULT	BOOTFAILTIMER DISABLED DEFAULT
PULL LOW	USE SHORT RESET	BYPASS PCI PLL	BYPASS ACPI BCLK	BYPASS IDE PLL	USE EEPROM PCIE STRAPS	BOOTFAILTIMER ENABLED

## CRT PORT



PROJECT : Z07		
Quanta Computer Inc.		
Size	Document Number	Rev
	SB600 STRAPS/TVCR	3C
Date	Thursday, March 19, 2009	Sheet 18 of 36

INVCC0 : ??A

Short INVCC0 to INVCC0

VIN

C28 10U/25V/X6S\_1206

C22 1000p\_4

R31

C34 0.1u/50V\_6

INVCC0

12 INT\_LVDS\_26 CON

+3V0

R27 4.7K\_4

R26 4.7K\_4

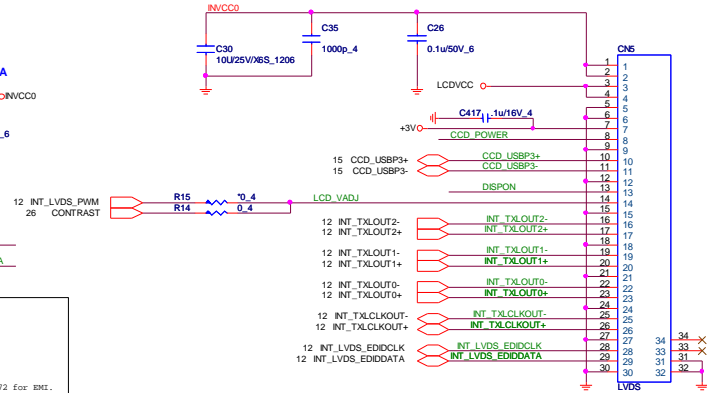
INT\_LVDS\_EDIDCLK

INT\_LVDS\_EDIDDATA

C573 30p\_4

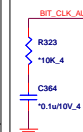
C572 30p\_4

Rev:B Add C573,C572 Err BM1.

[illegible][illegible]

**(CX20561-15Z for QFN)**

For EMI Request



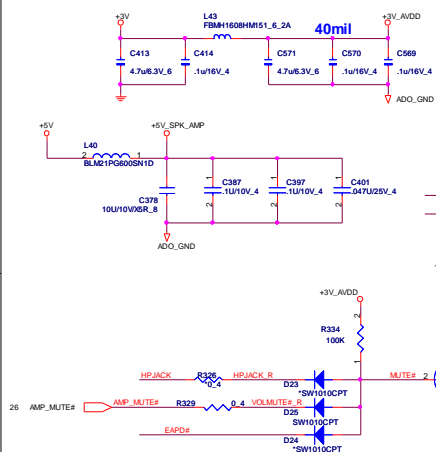
add EAPD 8/21

The diagram shows a 5V source connected to a network of resistors. A node is labeled 'add EAPD 8/21'. The network includes resistors R341 and R344.

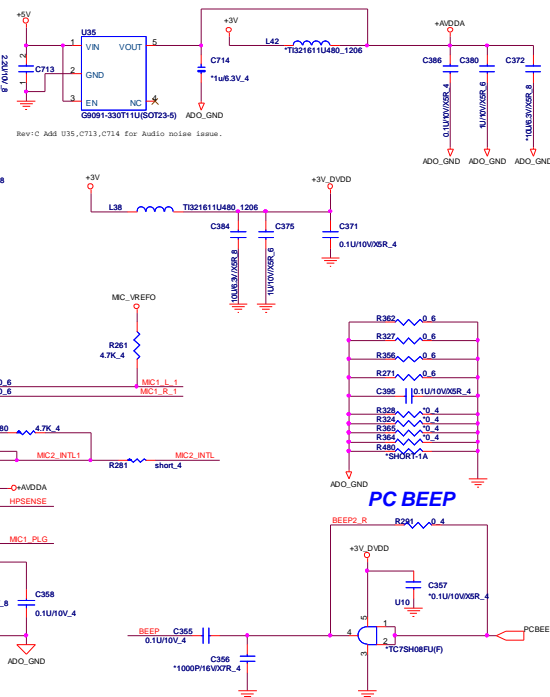
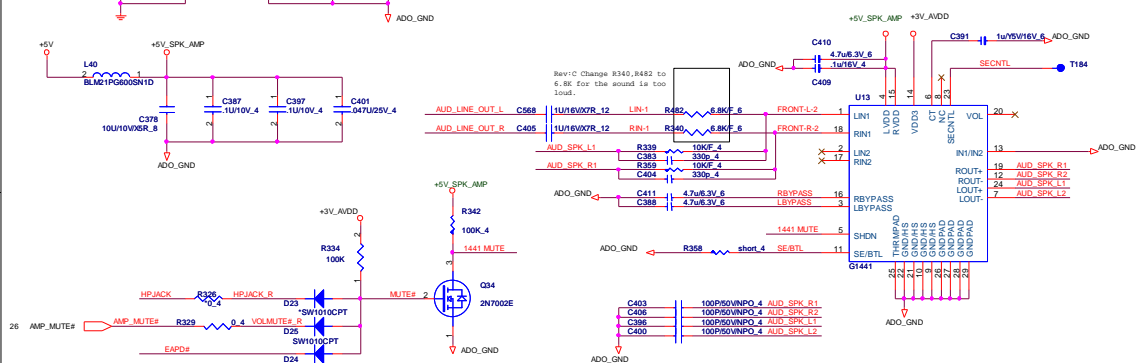
## PC Beep GAIN CONTROL

GAIN	GPIO1	GPIO2
0dB	10K	10K
-6dB	omit	omit
-12dB	10K	omit
-18dB	omit	10K

add pin 49 for QFN 8/21

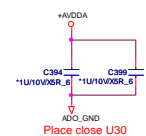
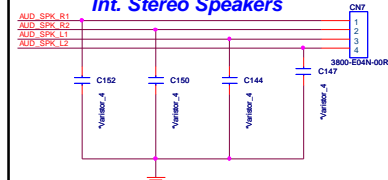


## AUDIO AMPLIFIER G1441

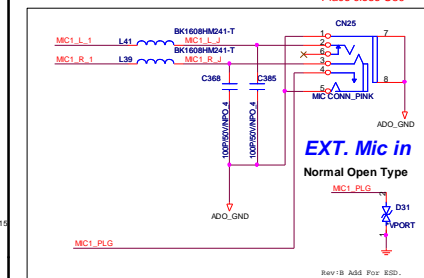


Port A – System headphone Jack (JD : HP\_PLG)  
Port C – System Stereo Microphone Jack (JD : MIC1\_PLG)  
Port D – System Speaker (JD : N/A)

### Int. Stereo Speakers



Place close U3

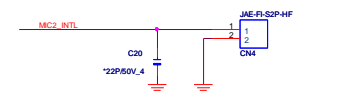


**EXT. Mic i**  
Normal Open Type

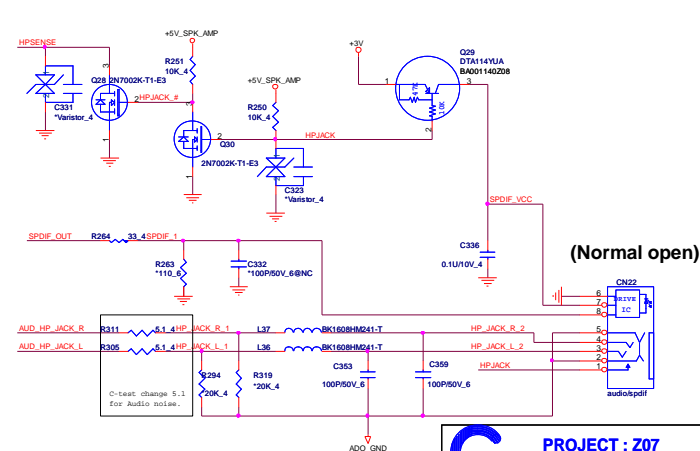
MC1\_PLG

Rev:B Add For ESD

### INT Single MIC



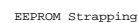
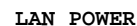
**Headphone out + Spdif Out (normal open)**



**(Normal open)**

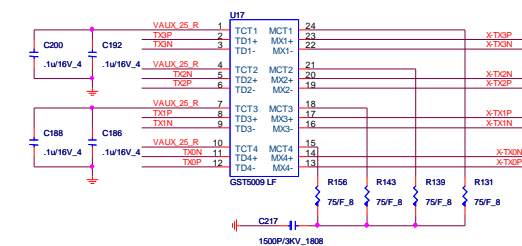


**PROJECT : Z07**  
**Quanta Computer Inc.**

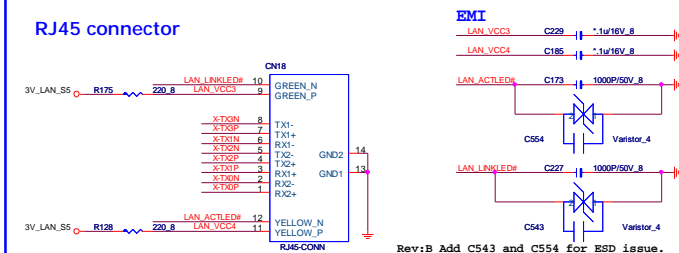


## Transformer

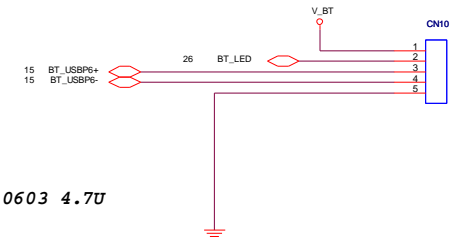
Source 2: FCE NS892402P DB0ZH1LAN06



## RJ45 connector

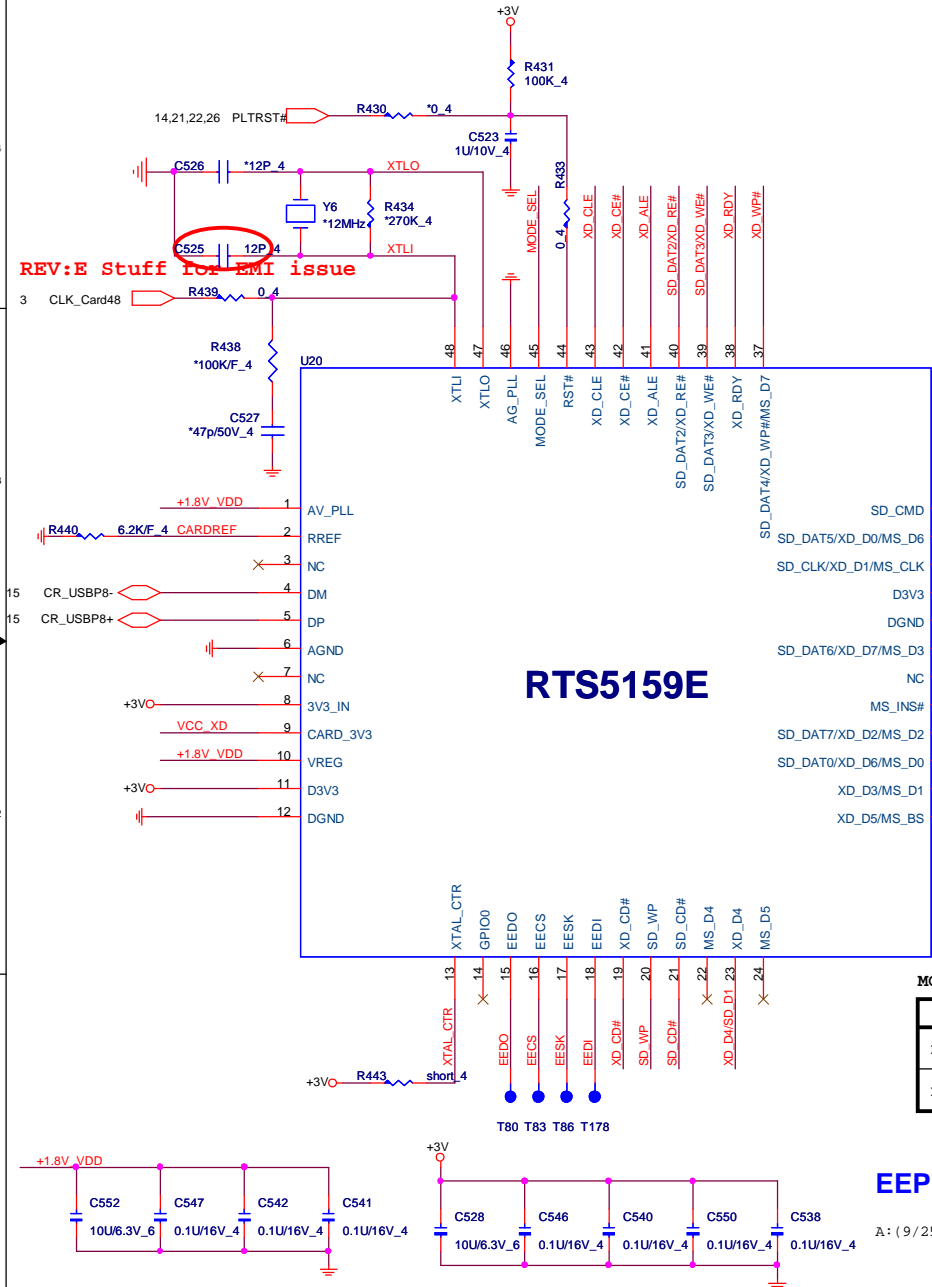


Rev:B Add C543 and C554 for ESD issue.



4 IN 1 CARD READER

23



SD DAT0/XD D6/MS D0 R244 33 4

XD D4/SD D1 R243 33 4

SD DAT2/XD RE# R442 33 4

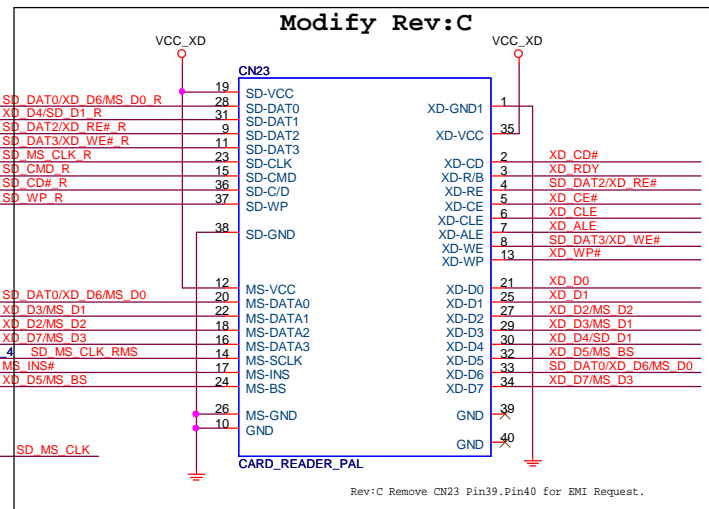
SD DAT3/XD WE# R245 33 4

SD MS\_CLK R446 33 4

SD CMD R445 33 4

SD CD# R246 33 4

SD WP R345 33 4



MODE\_SEL Table (Please refer to Realtek Application Notes for more detail description)

	R432	C524	Power mode	SD_D1 Out from
RTS 5158E	NC	NC	Power Saving	Pin23
RTS 5159	0 ohm	NC	Power Saving	Pin23

Power Saving mode need install Realtek icon driver.  
USB Hotfix KB941600 is also needed for Vista SP0 but SP1.

EEPROM

A:(9/25) Confirm with FAE, EEPROM is be used for external USB Card reader.  
(reserve for changing USB VID/PID).  
Internal USB Card reader don't need reserve it.

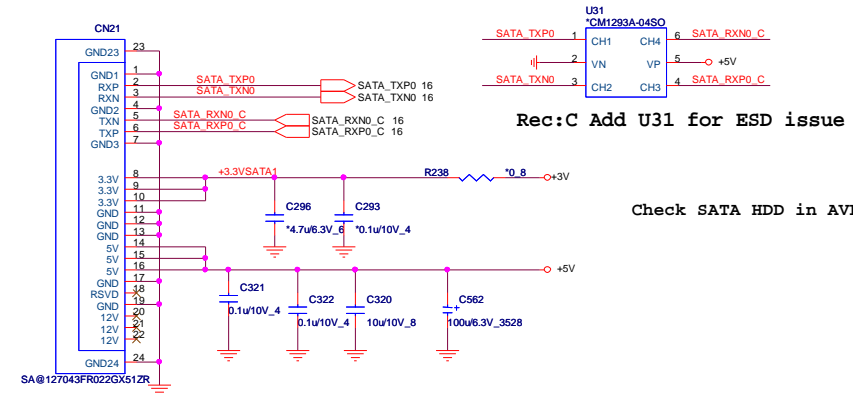
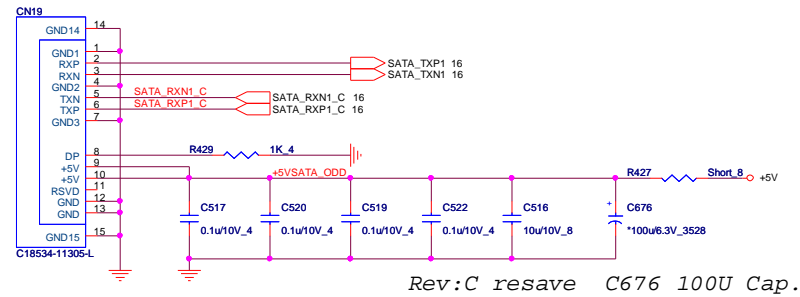
PROJECT : Z07

Quanta Computer Inc.

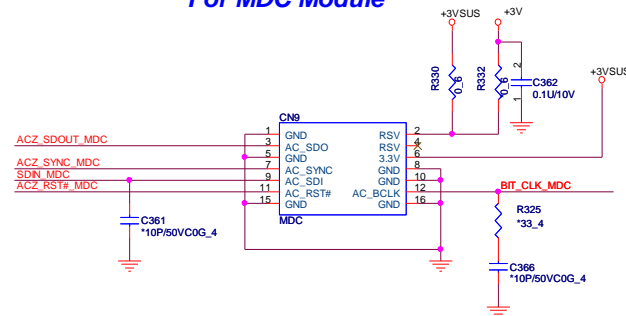
Size	Document Number	Rev
	Card Reader RTS5159	3C
Date:	Thursday, March 19, 2009	Sheet 23 of 36

## SATA ODD

## SATA HDD

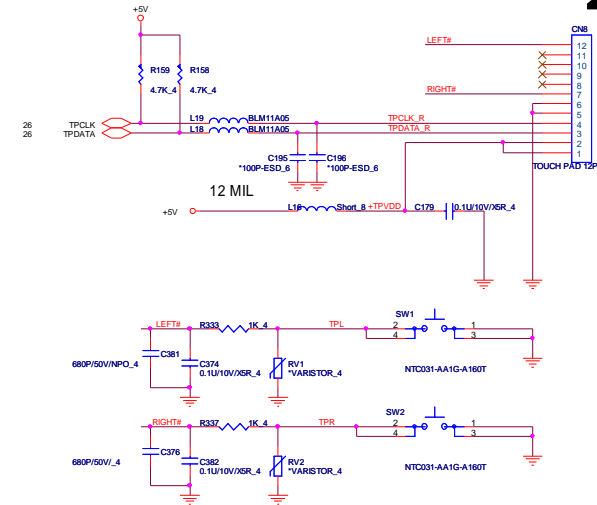


## For MDC Module

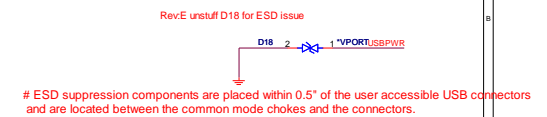




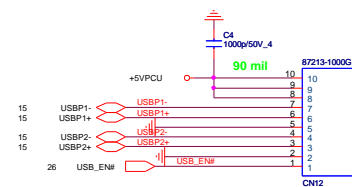
25



**USB PORT**



# Placed common mode chokes within 1.0" of the USB connectors



# KEYBOARD For New Keyboard use.

## I/O ADDRESS SETTING

BADDR1-0	Index	Data
0 0	XOR TREE TEST MODE	
0 1	CORE DEFINED	
1 0	2Eh	2Fh
1 1	164Eh	164Fh

SHBM-0: Enable shared memory with host BIOS

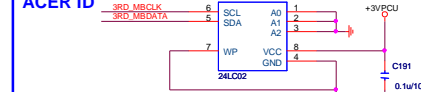


1/13 Confirm by vendor mail:  
Disabled (1) if using FW device on LPC.  
Enabled (0) if using SPI flash for both system BIOS and EC firmware

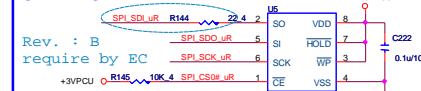
## SM BUS PU



## ACER ID

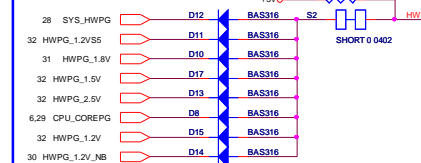


## SPI FLASH

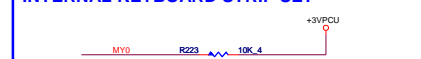


1/13 Confirm by vendor mail:  
If the Southbridge enables 'Long Wait Abort' by default, the flash device should be 50MHz (or faster)

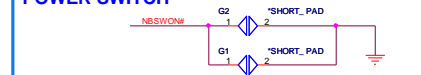
## HWPG



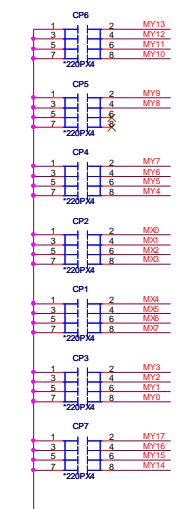
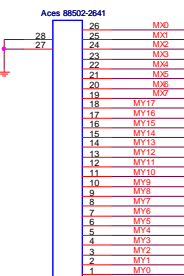
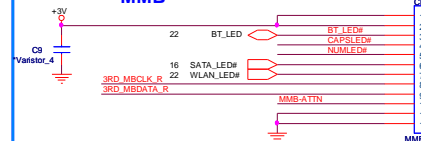
## INTERNAL KEYBOARD STRIP SET



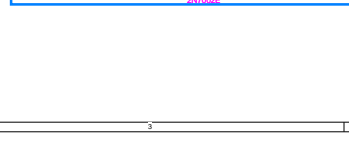
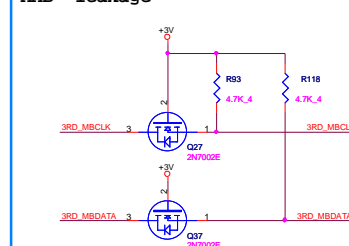
## POWER SWITCH



## MMB

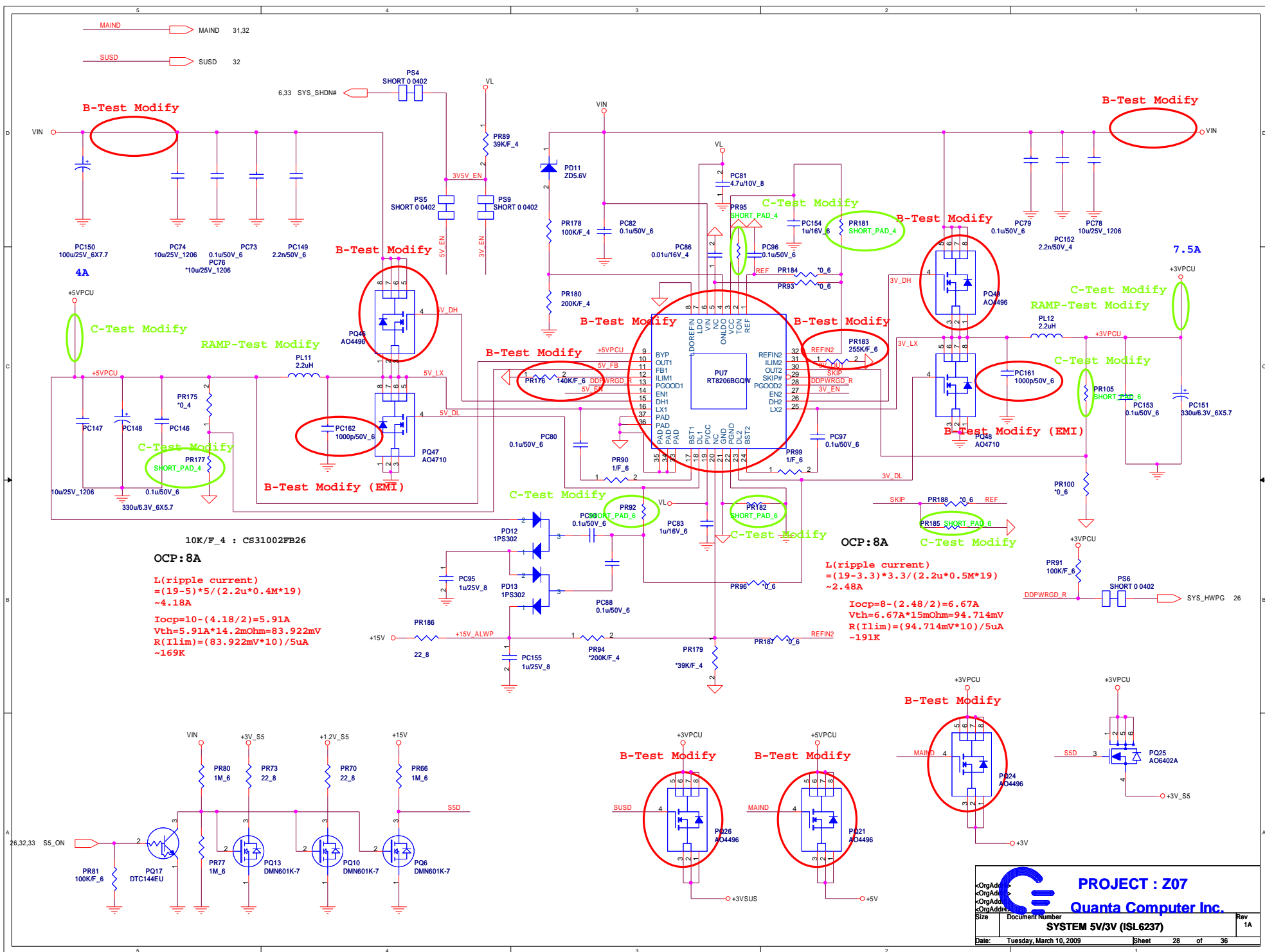


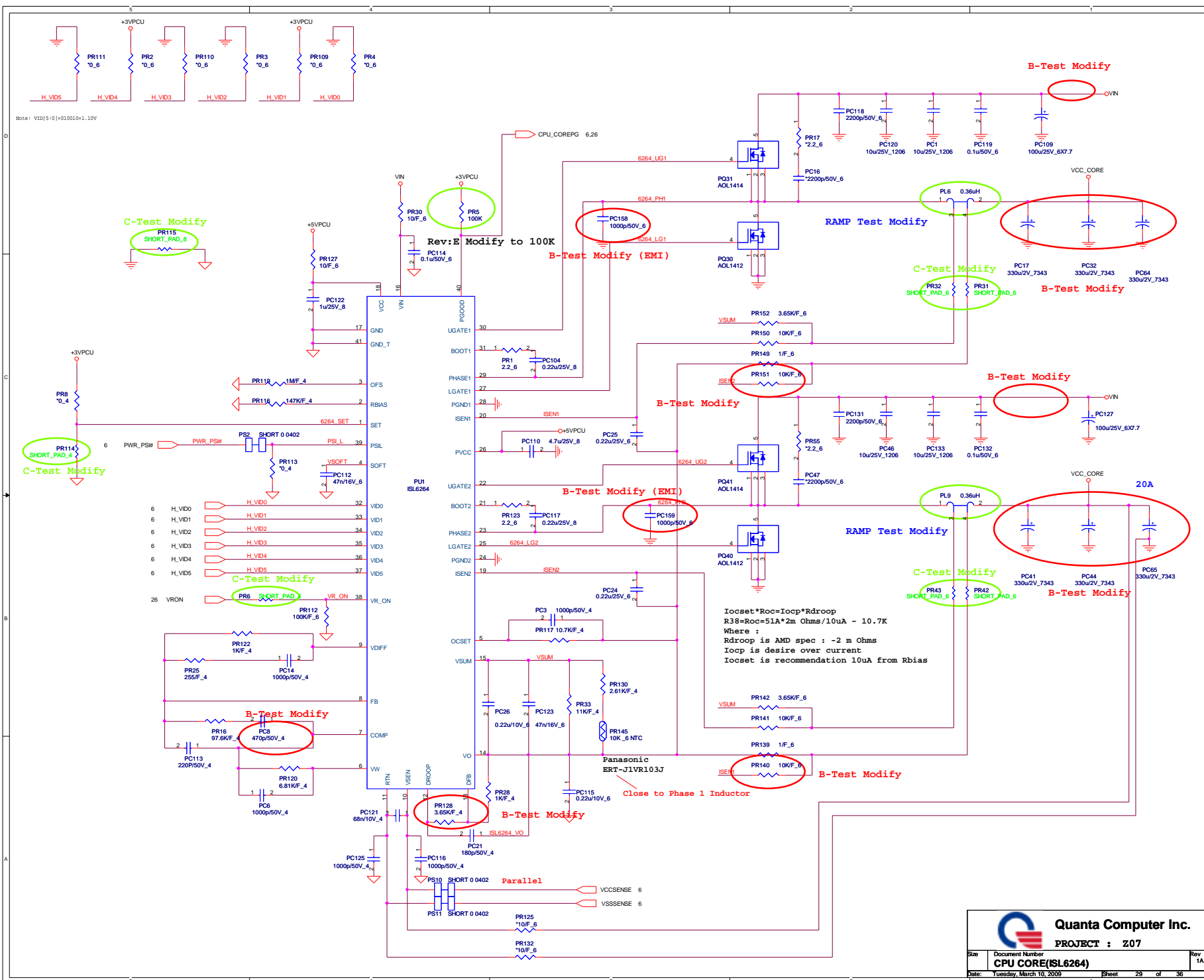
## Rev:C Add Q27,Q37,R93,R118 for MMB leakage

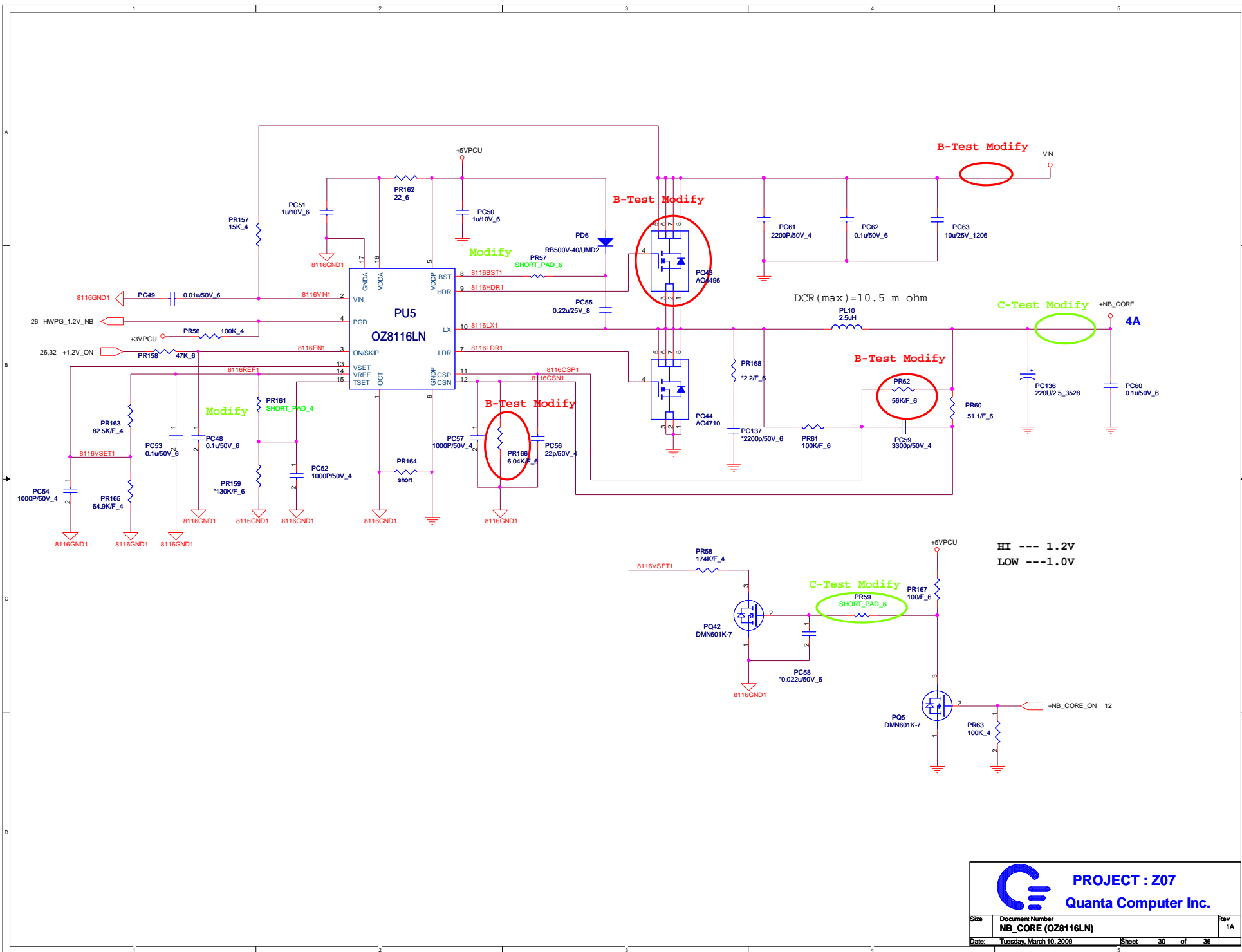


PROJECT : Z07  
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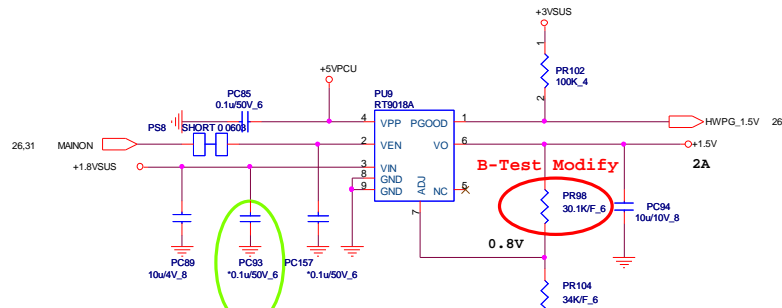




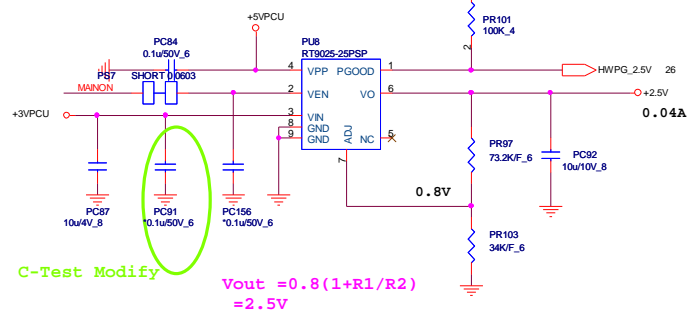
**PROJECT : Z07**  
**Quanta Computer Inc.**

Size	Document Number	Rev
	<b>NB_CORE (OZ8116LN)</b>	1A
Date:	Tuesday, March 10, 2009	Sheet 30 of 36

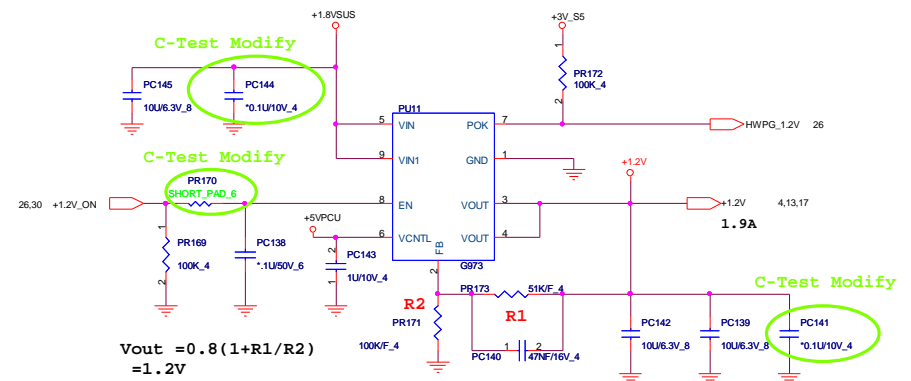




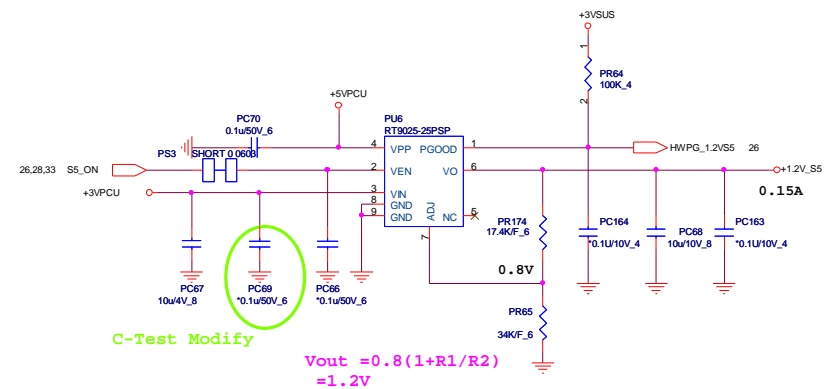
C-Test Modify



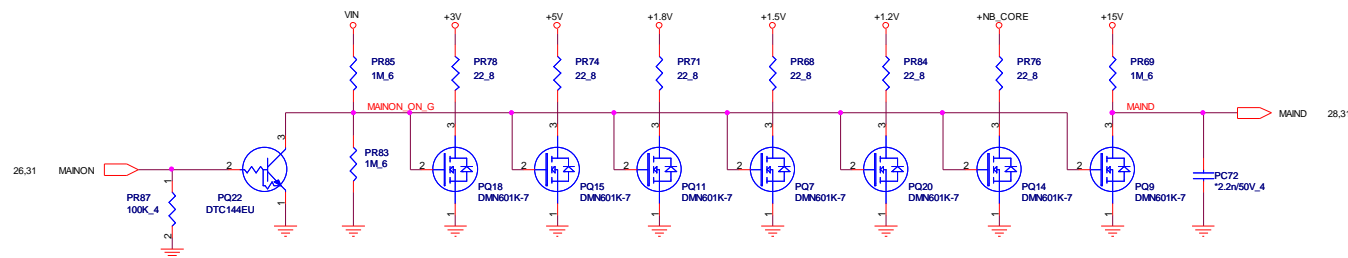
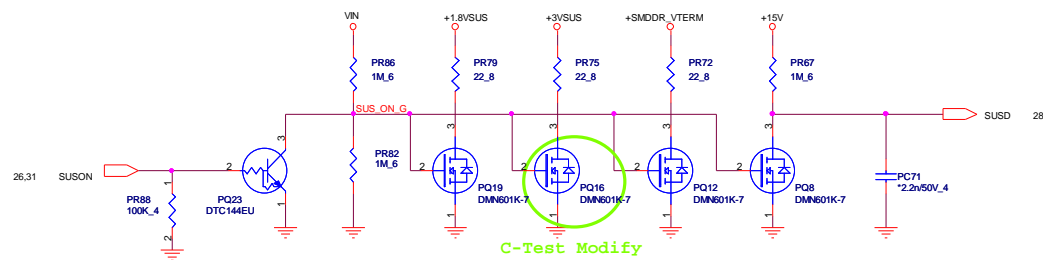
C-Test Modify



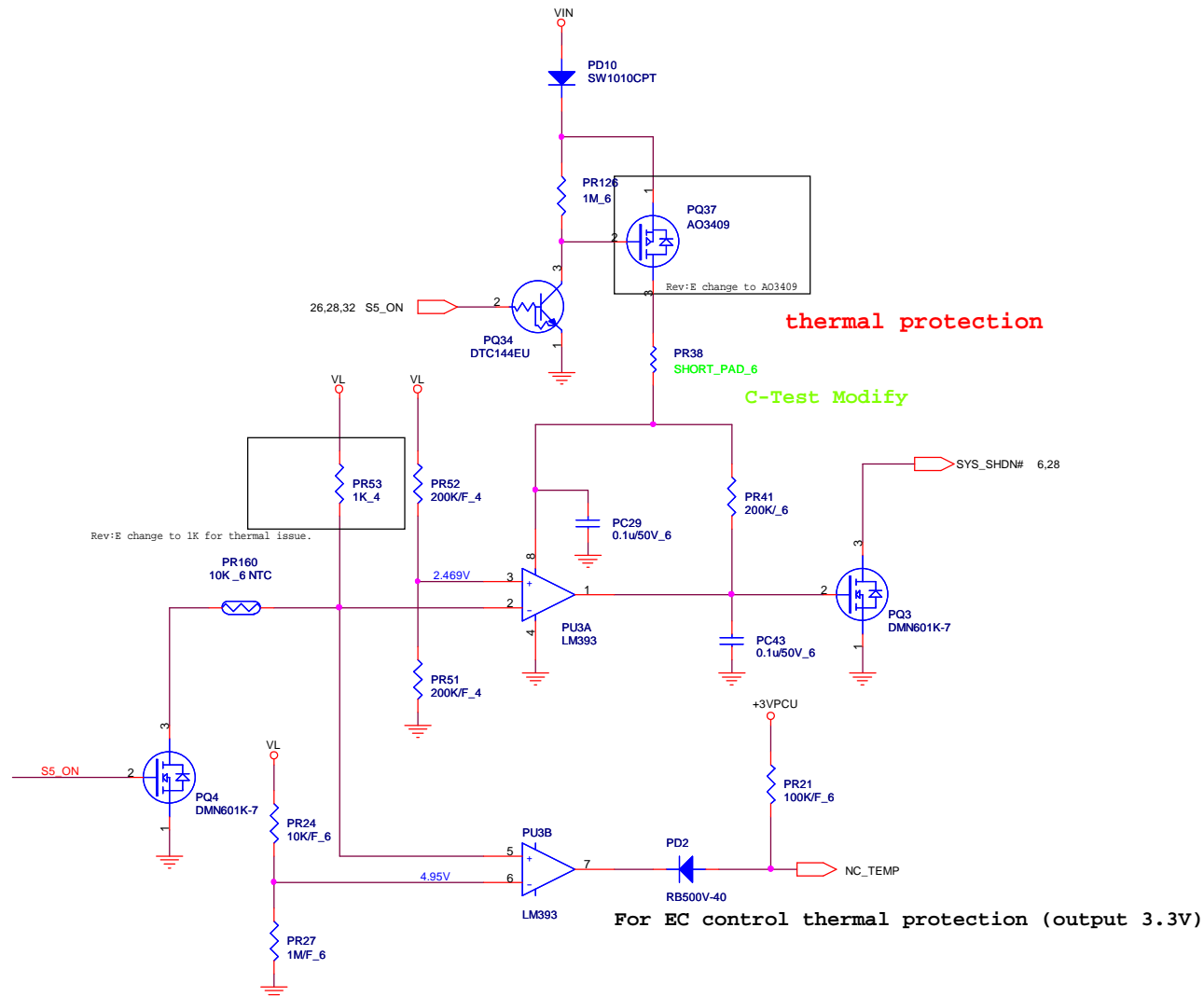
C-Test Modify

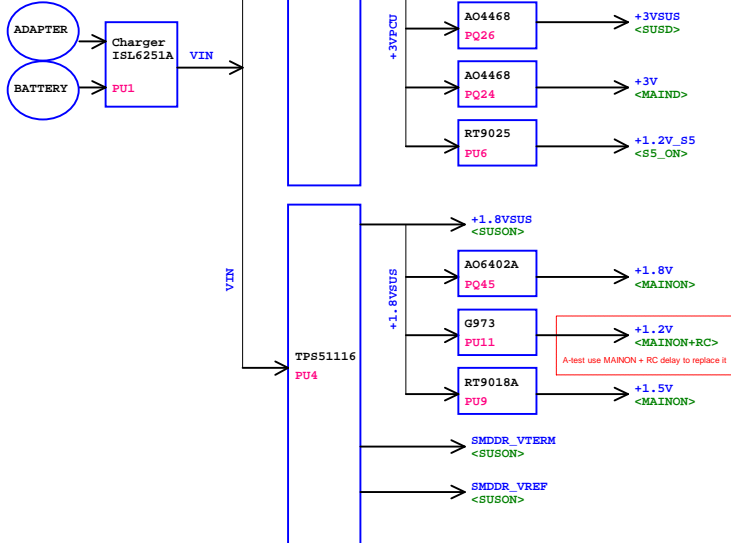


C-Test Modify









POWER	Distribution
VCC_CORE	CPU
+5VPCU	Battery LED , Power LED , USB , CIR , RTC
+3VPCU	HALL SENSOR , Battery LED , RF LED , kill SW , Jumper LED , KB , Power Board , EC , ID , SPI Flash , CIR
+NB_CORE	RS690M
+5V	CAMERA , Card Reader LED , ODD/HDD LED , Felica , T/P , T/sensor , CRT , HDMI , SB600 , CPU FAN , MXM , Headphone , EC , INT SPK AMP
+3V	HALL SENSOR , LCD PANEL , LVDS , WLAN , HD Decoder , NEW CARD , KB , KB LED , XD LED , Blue tooth , Touch sensor , Card Reader (OZ129) , ODD/HDD LED , CRT , TVOUT , REQUIRED STRAPS , DEBUG STRAPS , SB600 , RS690M , DDR , CPU Thermal monitor , CPU FAN , CLK , MXM , VR , FM Tuner MDC , Headphone , EC , LAN , Codec(CX 20561)
+3V_S5	WLAN , NEW CARD , SB600 , MXM , LAN
+3VSUS	Finger print , SB600
+2.5V	CPU
+1.2V_S5	SB600
+1.8VSUS	SB600 , DDR , CPU , HDT
+1.8V	SB600 , LCD , LVDS , RS690M
+1.2V	SB600 , RS690M , CPU , WLAN , HD Decoder , NEW CARD
+SMDDR_VTERM	DDR , CPU
+SMDDR_VREF	DDR
+5V_S5	



Model	REV	DATE	CHANGE LIST	NOTE
Z07	A1A			
HW	B1A	2008/11/24	Page 21 Add C543 and C554 for LAN ESD issue.	
		2008/12/04	Page 25 Change LED1 and LED2 Pin define to fix LED Color error	
		2008/12/05	Page 20 Change SPDIF CN22 Pindefine to Fix SPDIF no Function.	
		2008/12/05	Page 23 mount R432 for RT5159 in vista support auto-delink mode.	
		2008/12/08	Page 19 Change C28,C30 from 1210 to 1206.	
		2008/12/09	Page 32 Change PR98 to 30.1K to fix 1.5V only 1.1V	
		2008/12/09	Page 22,24,27 Change CN24,CN9,PJ1 Footprint to meet ME request.	
		2008/12/10	Page 16 Remove R265 for meet AMD schematic check list.	
		2008/12/11	Page 12 Remove R118,R93 for Meet AMD Layout check list.	
		2008/12/12	Page 21 Remove R132,R134 TO FIX eeprom error.	
		2008/12/16	Page 19 Add C572,C573 for EMI Request.	
		2008/12/16	Page 13 Add C574-C579 for EMI Request.	
		2008/12/19	Page 19 Add C145,C146 for EMI.	
		2008/12/19	Page 21 Add C151,C153,C580,C581,C582 For EMI request.	
		2008/12/20	Page 18 Add C467,C475,C157,C156 for Display-Cross-Test Cross-Test	
		2008/12/22	Page 19 change R366 to 470K for Meet Hall IC spec.	
Power	2008/12/12		Page27 : Delete PF1、PF2、PL7、PR15、PC7	
			Page27 : Add PC45 (CH22206K917)	
			Page27 : PR148 changes from CS37153F917 to CS32553F918	
			Page27 : PR146 changes from CS23303F919 to CS24703F916	
			Page27 : PQ36 changes from BAM44680003 to BAM44960000	
			Page28 : Delete JP2、JP3、PC75、PC77	
			Page28 : PQ21、PQ24、PQ26、PQ46、PQ49 changes from BAM44680003 to BAM44960000	
			Page28 : PJP1、PJP2、PJP6、PJP7 changes from SOLDERJUMPER-2 to SOLDERJUMPER-3	
			Page28 : Add PC161 (CH21006K917)、PC162 (CH21006K917)	
			Page28 : PR176 changes from CS41693F919 to CS41403F911	
			Page28 : PR183 changes from CS41963F916 to CS42553F910	
			Page28 : PU7 changes from AL006237000 to AL008206000	
			Page29 : Delete JP5、JP6、PR22、PR54、PC13、PC45	
			Page29 : Add PC158 (CH21006K917)、PC159 (CH21006K917)、PR140 (CS31003F949)、PR151 (CS31003F949)	
			Page29 : PC17、PC32、PC41、PC44、PC64、PC65 changes from CH733RM8858 to CH733RM8802	
			Page29 : PC8 changes from CH12206JB00 to CH14706KB18	
			Page29 : PR128 changes from CS21272FB15 to CS23652FB08	
			Page30 : Delete JP1	
			Page30 : PQ43 changes from BAM44680003 to BAM44960000	
			Page30 : PR62 changes from CS35103F919 to CS35603F917	
			Page30 : PR166 changes from CS25233F914 to CS26043F922	
			Page31 : Delete JP4、PR121、PC111	
			Page31 : PJP3、PJP4 changes from SOLDERJUMPER-2 to SOLDERJUMPER-3	
			Page31 : Add PC160 (CH21006K917)	
			Page31 : PR143 changes from CS25623F914 to CS28663F911	
			Page31 : PU4 changes from AL051116008 to AL008207000	
			Page32 : PR98 changes from CS31303F931 to CS33013F914	



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Model	REV	DATE	CHANGE LIST	NOTE
HW	CIA	2009/02/03	Change 0 Ohm to Short Pad, Remove R234,R233,R435,R473,R474,L1,R23,R284,R180,R183,R312,R237,R236,R212,R316,R316,R16,R17 0 Ohm for Cost	
		2009/02/03	For Wireless LED contral for EC , so remove R256.	
		2009/02/06	Rev:C change R447 to SBY100505-121Y-N, Add C583 for EMI Request.	
		2009/02/09	Rev:C change C151,C153,C580,C581,C582 from 470P to 0.1U and Add C583 1U,C585 0.1 for EMI Request.	
		2009/02/09	Rev:C Add C173,C227 1000P for EMI Request.	
		2009/02/09	Rev:C Change CN23 to Dip Footprint for SMT issue.	
		2009/02/10	Rev:C remove L56 for EMI Request.	
		2009/02/10	Rev:C Add U9 and for USB ESD issue, Reserve U31 for HDD ESD issue.	
		2009/02/11	Rev:C Change C562 to 3523 size 100U, Add Reserve C676 100U Cap for HDD Cost.	
		2009/02/11	Rev:C remove C21 for Camera Cost.	
		2009/02/11	Rec:C change C328 to 4.7U 0603 and remove C412,C407 for Mini-PCIE Cost.	
		2009/02/11	Rev:C Change C416 to 0.1U for Hass Cost issue.	
		2009/02/11	Rev:C Add R132,R134 and change U3 to AKE5AZB0A00 for support C24C02 for LAN Cost.	
		2009/02/11	Rev:C Change C408 to 0603 4.7U for BT Cost.	
		2009/02/11	Rev:C Add Q27,Q37,R93,R118 for MMB leakage	
		2009/02/11	Rev:C Add U35,C713,C714 for Audio noise issue.	
		2009/02/03	Remove R219,R210,R213,R296,R322,R331,R335,R338,R343,R346,R104,R402,R410,R413,R409,R388,R400,R401 0 Ohm for Cost	
Power			Rev:C Change R340,R482 to 6.8K for the sound is too loud.	
		2009/02/16	Rev:C Change U6 to only Silego for long run issue.	
		2009/02/16	Rev:C Change R353,R354 to 1M, remove R350,R351.	
			1. Page27 : Delete PC101、PC99	
			2. Page28 : Change PR95、PR177、PR181 from CS00002JB38 to short0402	
			3. Page28 : Change PR92、PR105、PR182、PR185 from CS00003J951 to short0603	
			4. Page28 : Delete PJP1、PJP2、PJP6、PJP7	
			5. Page29 : Change PR6、PR114 from CS00002JB38 to short0402	
			6. Page29 : Change PR115 from CS00004JA40 to short0805-Z05	
		2009/02/04	7. Page29 : Change PR31、PR32、PR42、PR43 from CS00003J951 to short0603	
			8. Page30 : Change PR59 from CS00003J951 to short0603	
			9. Page30 : Delete PJP5	
			10. Page31 : Delete PJP3、PJP4	
			11. Page31 : Change PR39、PR44、PR144、PR153 from CS00003J951 to short0603	
			12. Page32 : Change PR170 from CS00003J951 to short0603	
			13. Page32 : Delete PC93、PC144、PC141、PC91、PC69	
			14. Page32 : Add PQ16	



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Model	REV	DATE	CHANGE LIST	NOTE
HW	C3A	2009/03/02	Rev:E Change CN24 to Rev:A Footprint MIPCIE-AS0B223-S40N-7F-52P-NB5 for SMT Request. Rev:E Change CN5 to ZG8 Footprint msc-rb30-5-fg-30p-1-zg8	
		2009/03/03	Rev:E Change R315 to 16K , R310 Short, R295 68.1K , R263 150K for leakage.	
		2009/03/04	Rev:E remove 0402 0 ohm: R3,R4,R110,R111,R170,R201,R208,R214,R215,R224,R257,R262,R282,R281,R313,R306, R463,R361,R358,R423,R443,R336 Rev:E remove 0603 0 ohm: R121. Rev:E remove 0805 0 ohm: L5,R31,R427,L16	
		2009/03/05	Rev:E Add R348 100K for Conexant request. Page 25 Rev:E Add RV3 and RV4 for USB ESD issue(PN:CY00G050B00), and del U9.	
		2009/03/09	Page 20 Change CN25 footprint to audio-ja6331-023at9p-8p-h-nb4.	
		2009/03/10	Page 25 SWAP L61 Pin for layout issue.	
		2009/03/10	Page 20 Stuff U35, C713, unstuff L42	
		2009/03/16	Page 25 unstuff D18 for ESD issue	
		2009/03/16	Page 18 Change C476,C474,C469,C470,C473,C477 to 5.0P for CRT issue	
		2009/03/16	Page 18 Change L9,L10 to 15ohm for CRT issue	
		2009/03/16	Page 20 sutff R348 for vendor suggest	
		2009/03/16	Page 20 sutff C525 for EMI issue	
Power		2009/03/02	Rev:E change PR53 to 1K for thermal issue. Rev:E change PQ37 change to AO3409.  Rev:E change PL4 Footprint To CHOKE-PCMB104T-6R8MS Fom smt Issue. Rev:E change CS:PL8,PL11,PL12 Footprint To choke-pcmb104e-2r2ms Fom smt Issue.	
		2009/03/03	Rev:E change PR5 to 100K for leakage. Rev:E change PR7 to 10K for leakage.	
		2009/03/06	Page 29 change PL6,PL9 footprint from CHOKE-ETQP4LR36WFC-4P to choke-spm10040t-r45m200-4p	
		2009/03/09	Change PR38 } PR49 } PR57 } PR133 change to SHORT_PAD_6, PR161 change to SHORT_PAD_4.	



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