

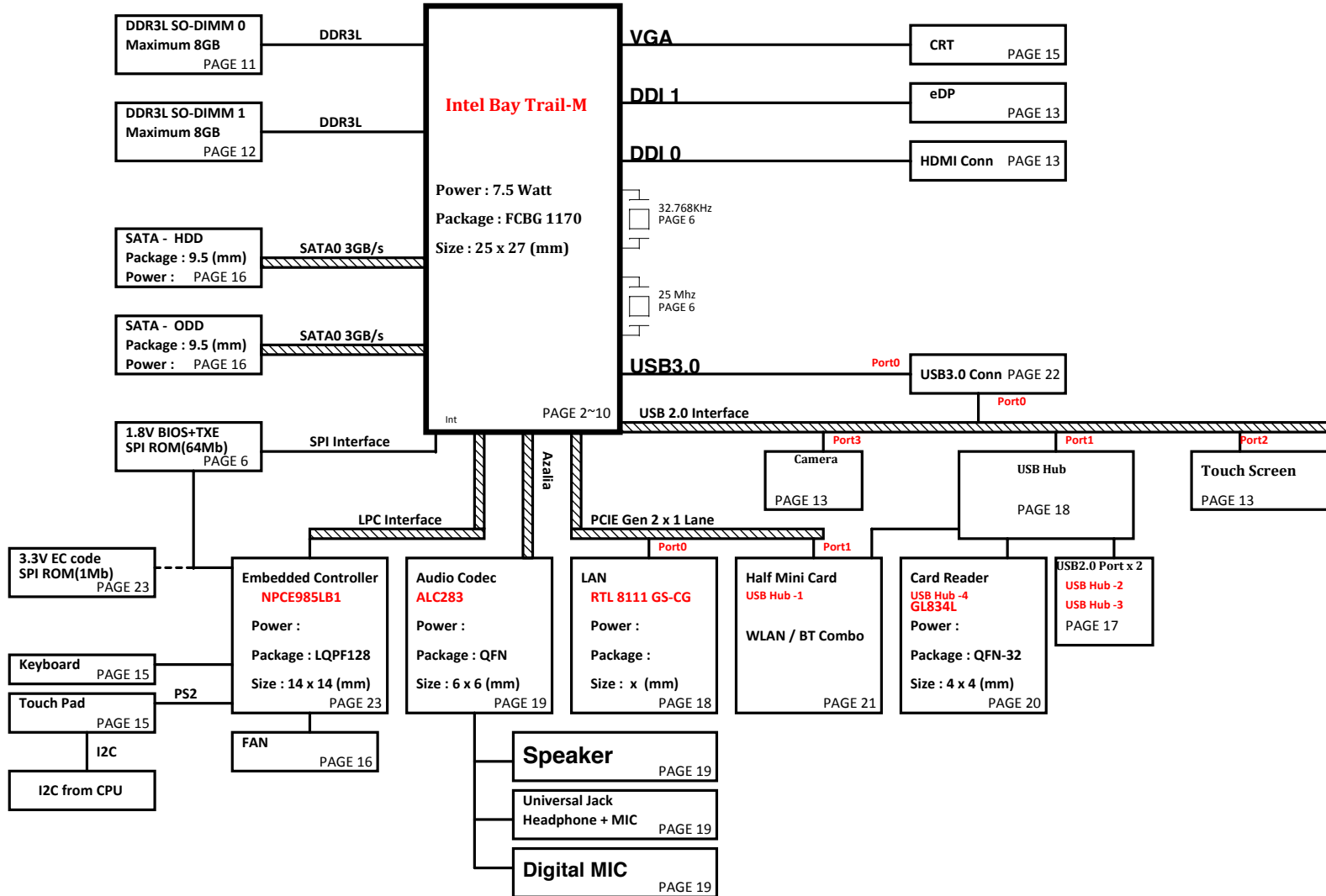



ZQM UMA (14")

Intel Bay Trail-M Platform Block Diagram

PCB 6L STACK UP

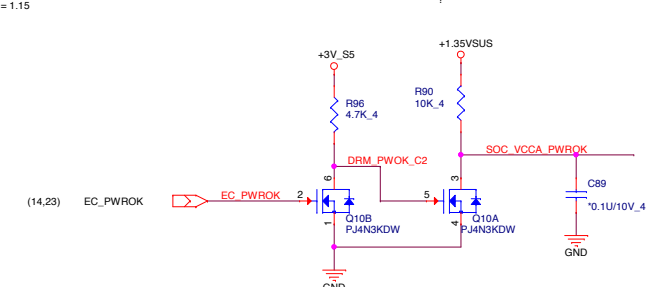
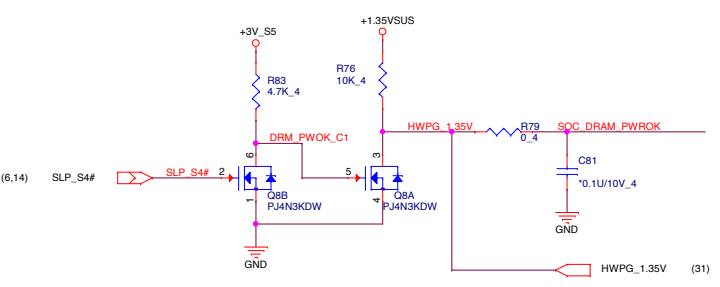
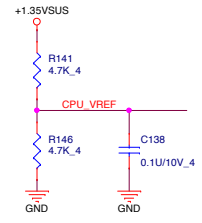
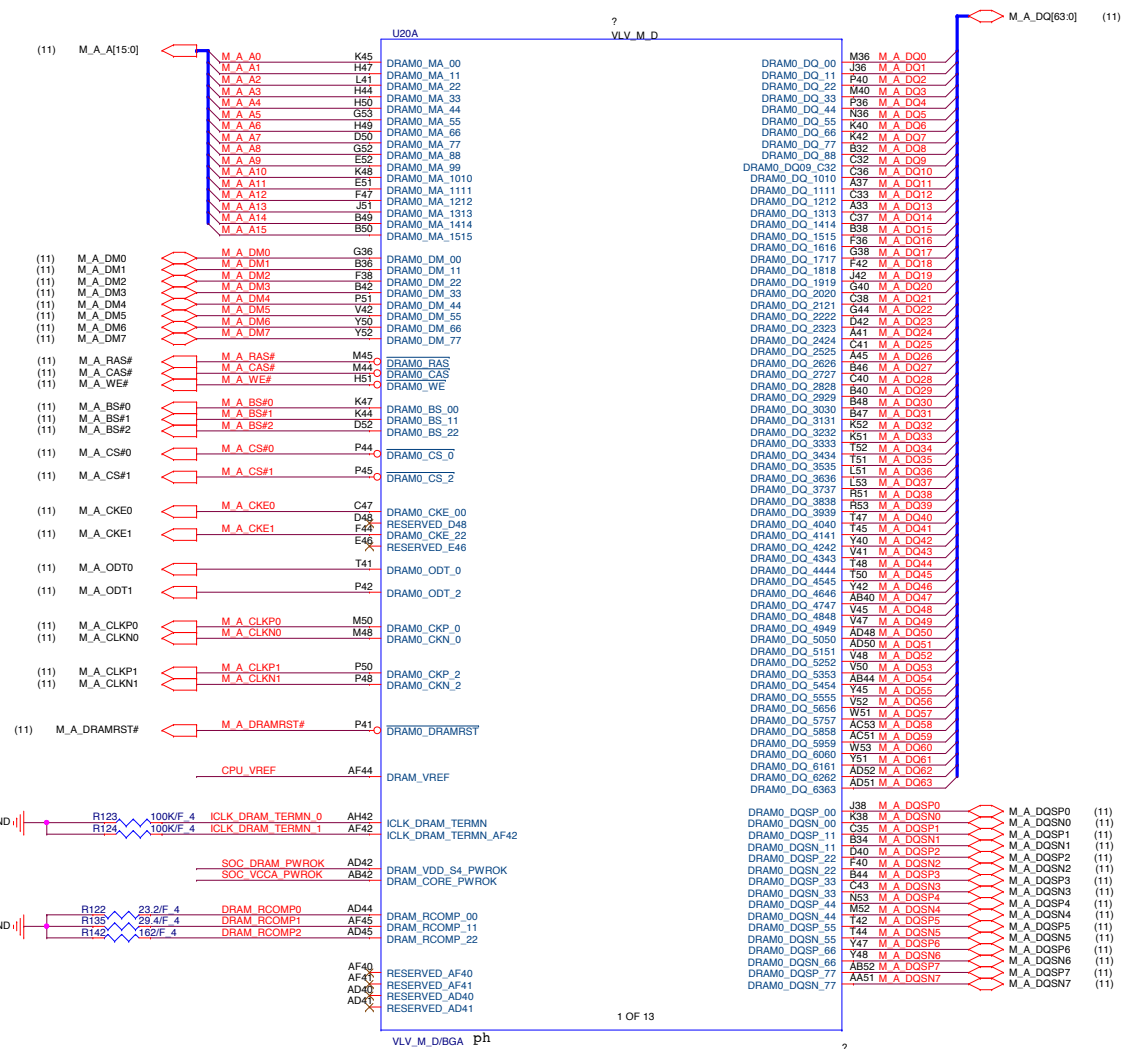
- LAYER 1 : TOP
- LAYER 2 : SVCC
- LAYER 3 : IN1(High)
- LAYER 4 : IN2(Low)
- LAYER 5 : SGND
- LAYER 6 : BOT



 **Quanta Computer Inc.**
PROJECT : ZQM

Size	Document Number	Rev
		C3C

Intel Block Diagram
 Date: Wednesday, April 02, 2014 Sheet 1 of 34

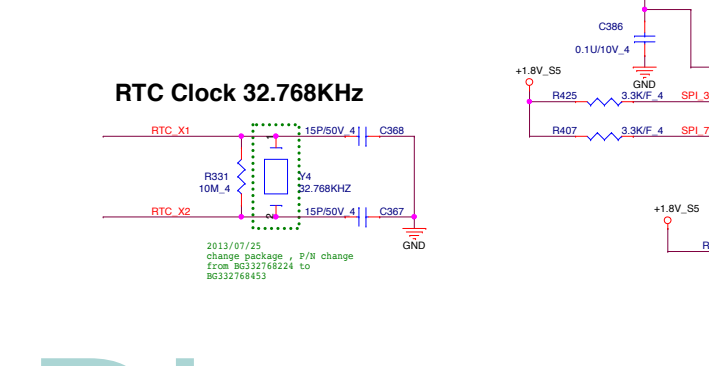
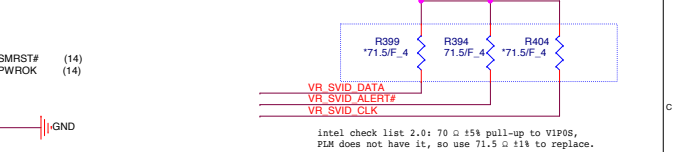
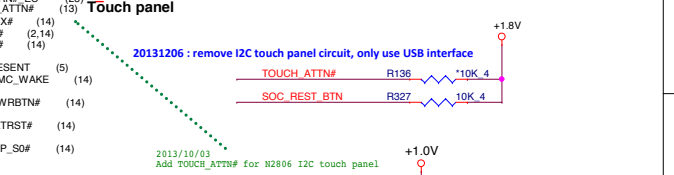
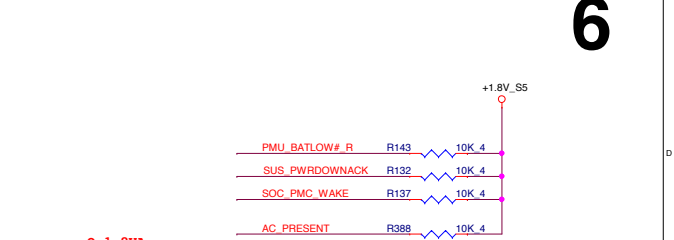
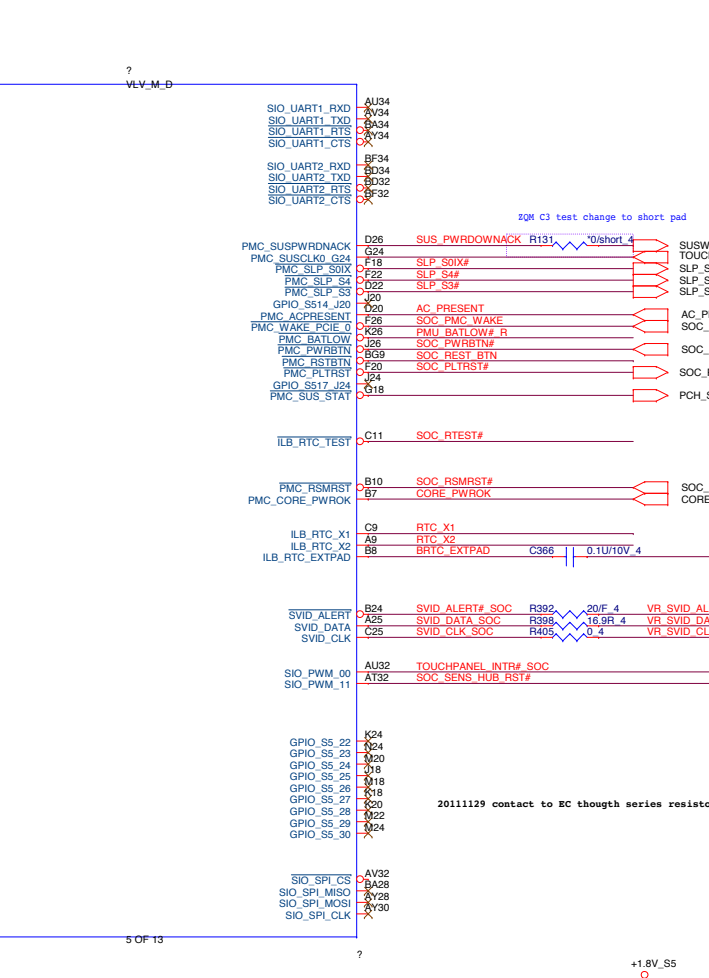
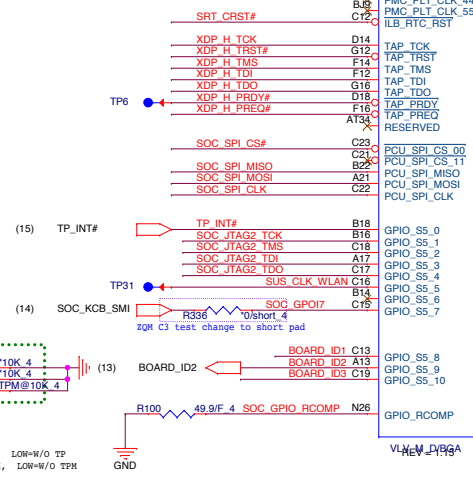
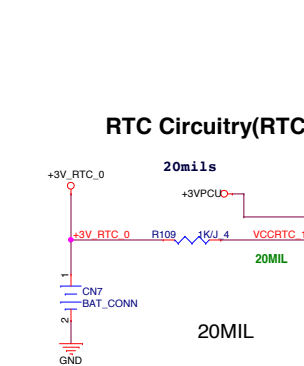
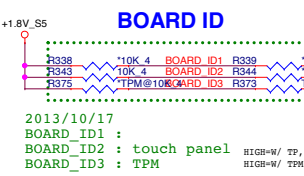
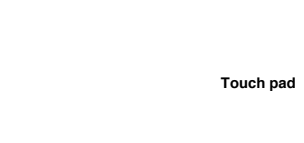
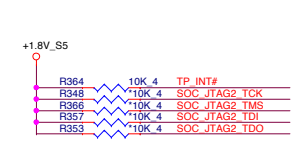
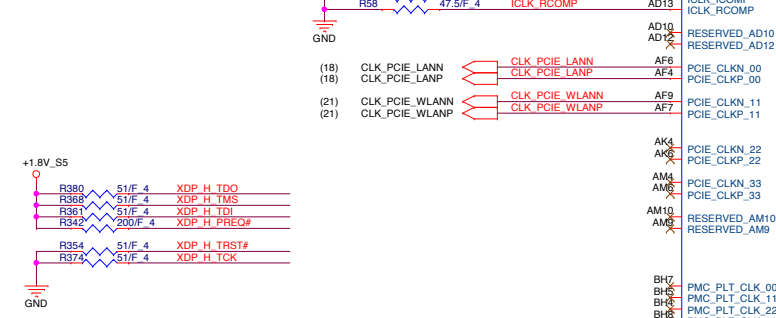
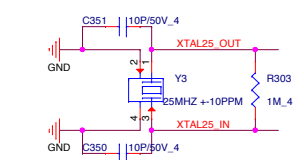


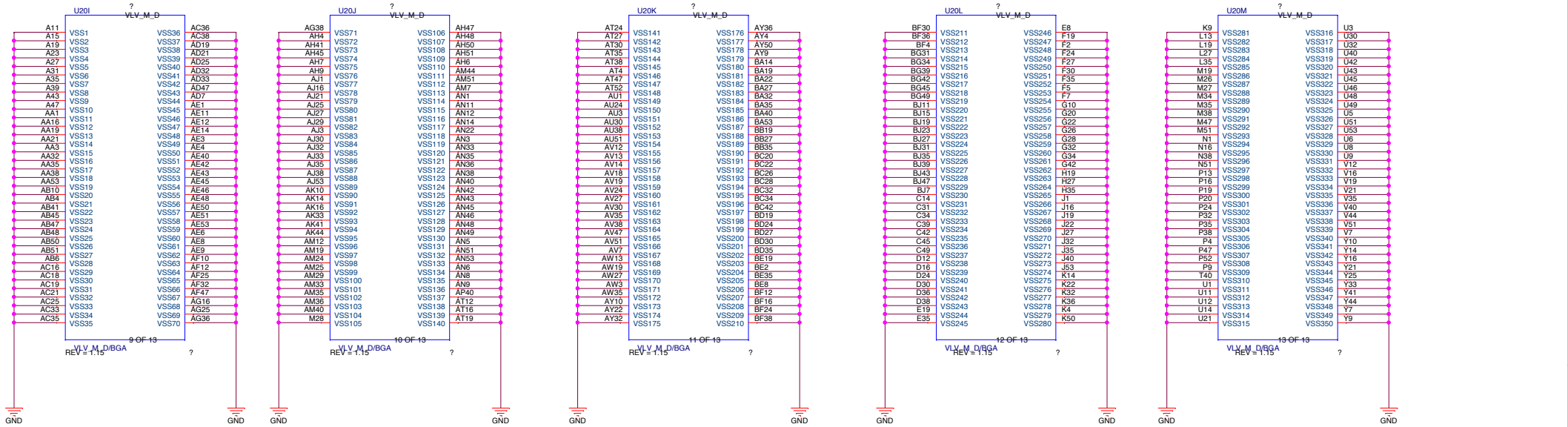
Quanta Computer Inc.
PROJECT : ZQM


Rev C3C

Document Number
Valley 1/9 (DDR4)

Date: Wednesday, April 02, 2014 Sheet 2 of 34

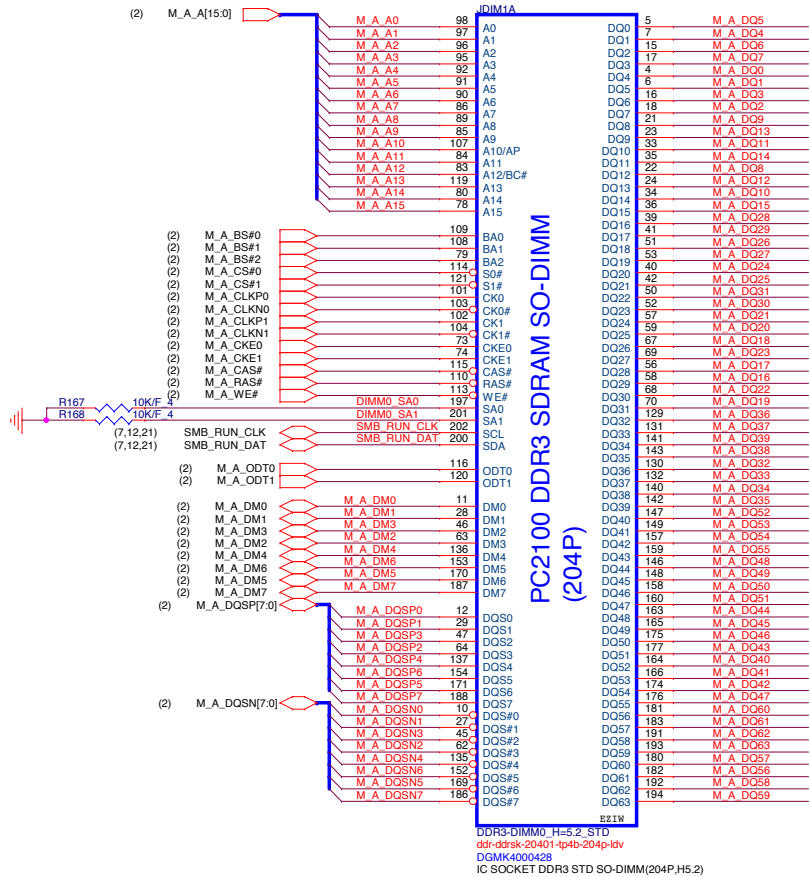




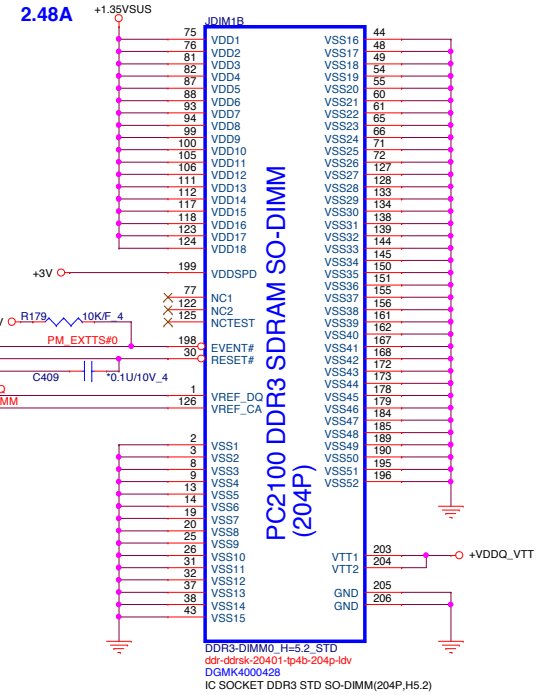
 **Quanta Computer Inc.**
PROJECT : ZQM

Size	Document Number	Rev
	Valley 9/9 (GND)	C3C
Date:	Wednesday, April 02, 2014	Sheet 10 of 34

Address A0H



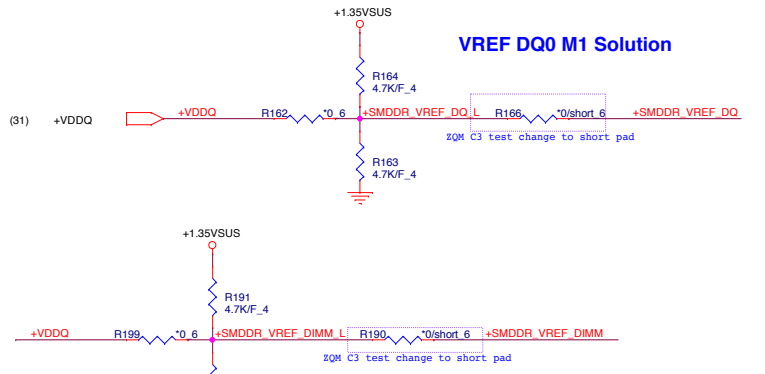
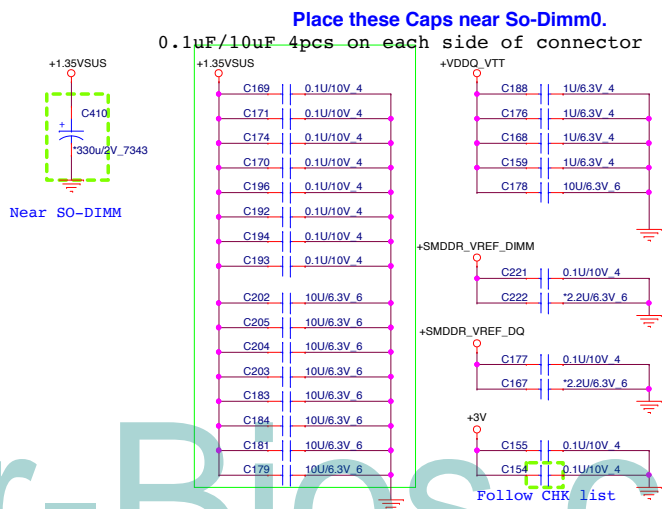
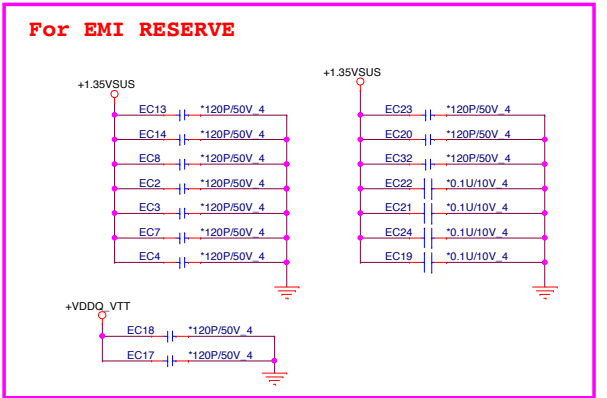
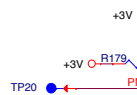
M.A_DQ[63:0] (2)



(2) M.A_DRAMRST#

(12) +SMDDR_VREF_DQ

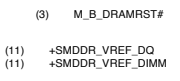
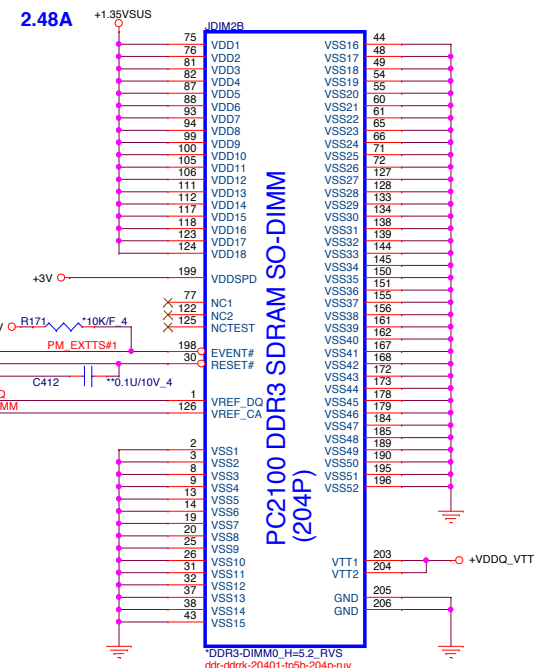
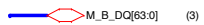
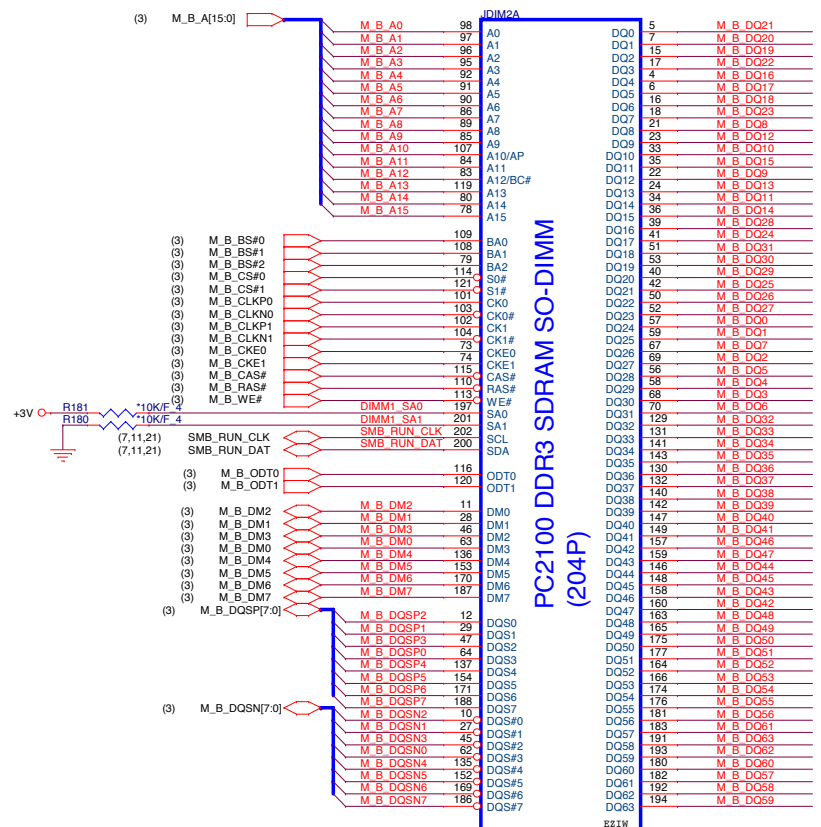
(12) +SMDDR_VREF_DIMM



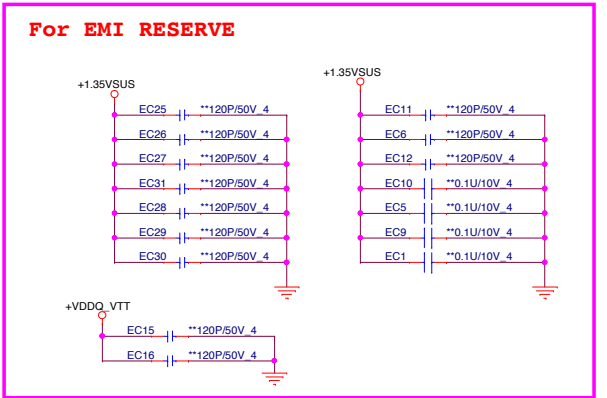
Quanta Computer Inc.

PROJECT : ZQM

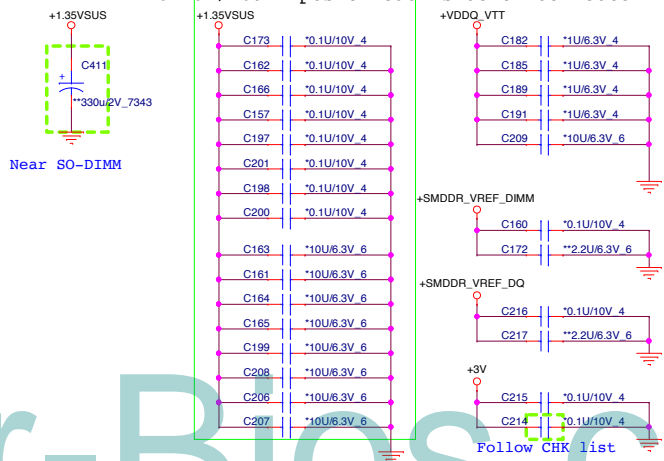
Size	Document Number	Rev
	DDR3 DIMM0-STD(5.2H)	C3C
Date	Wednesday, April 02, 2014	Sheet 11 of 34



DDR3-DIMM0_H=5.2_RVS
 ddr-ddrk-20401-tp5b-204p-ruv
 *DGMK4000412
 IC SOCKET DDR3 RVS SO-DIMM(204P,H5.2)



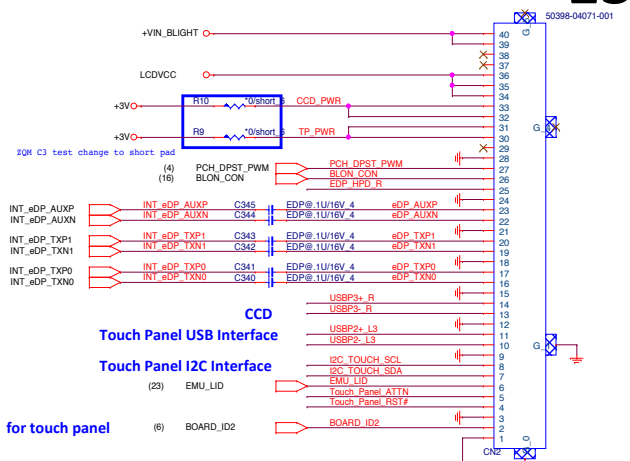
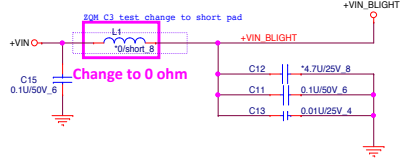
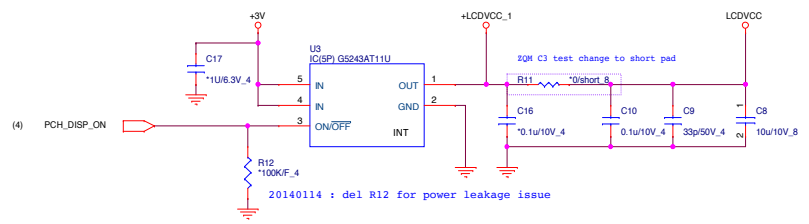
Place these Caps near So-Dimm1.
 0.1uF/10uF 4pcs on each side of connector



Quanta Computer Inc.
PROJECT : ZQM

Sheet	Document Number	Rev
Date	DDR3 DIMM1-STD(5.2H)	C3C
Wednesday, April 02, 2014	Sheet 12 of 34	

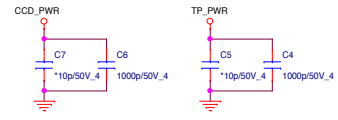
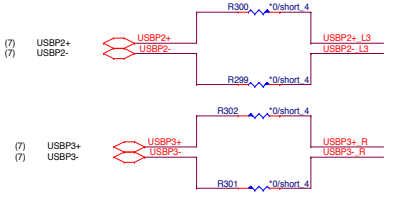
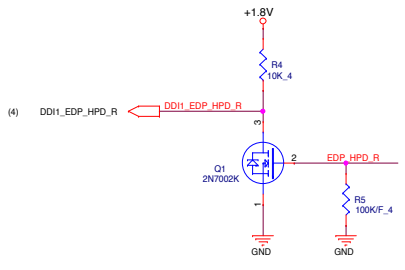
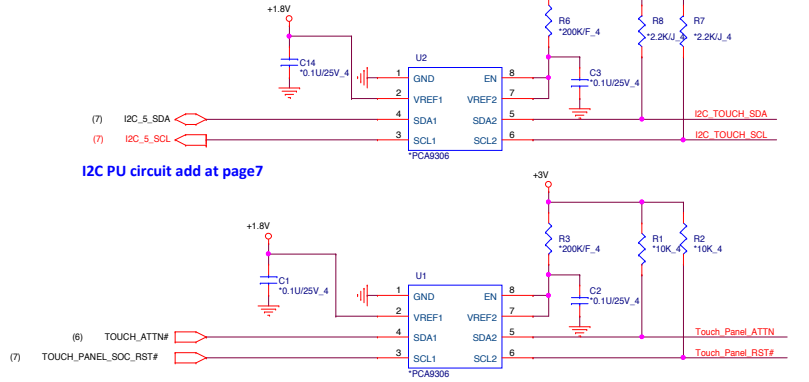
EDP Conn.



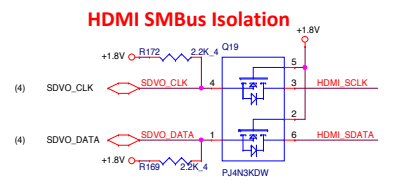
EMU_LID	Touch Pad Function
H	OK
L	No Function

Touch Panel level shift

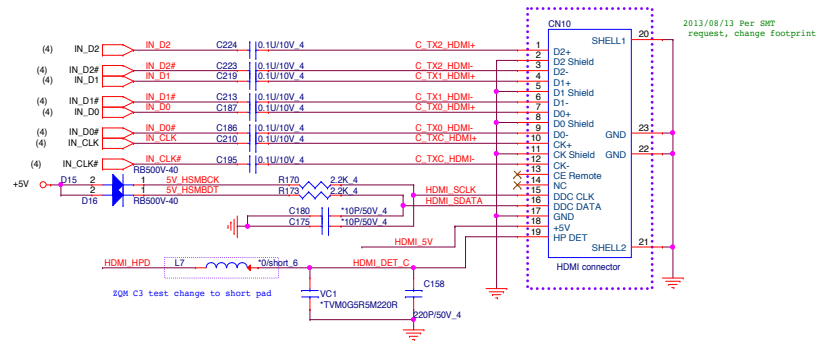
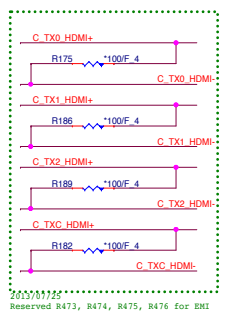
20131206:remove I2C touch panel circuit, only use USB interface



HDMI Conn.

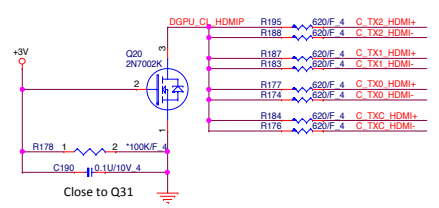


EMI (EMC)

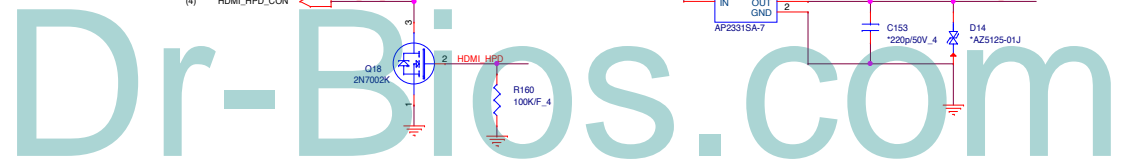
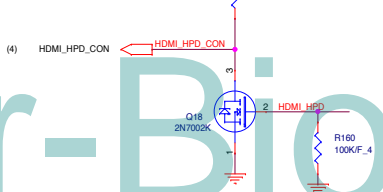


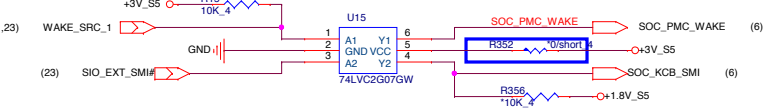
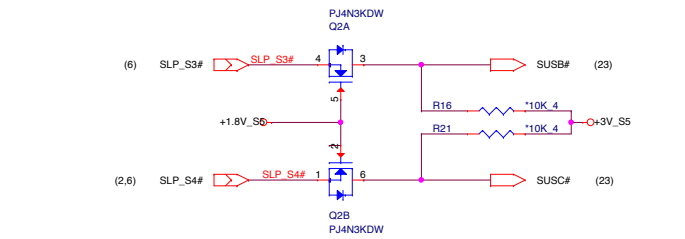
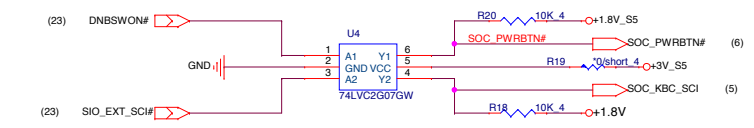
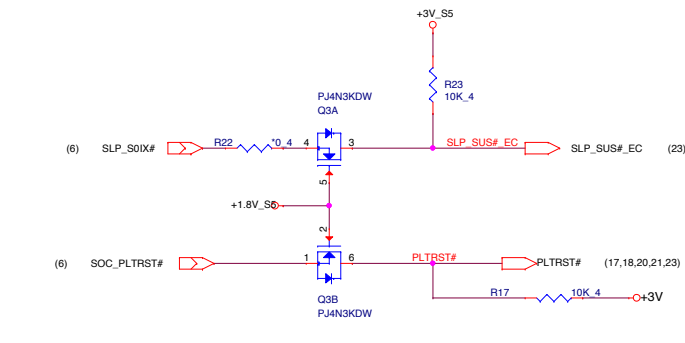
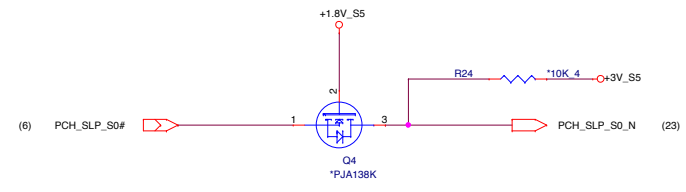
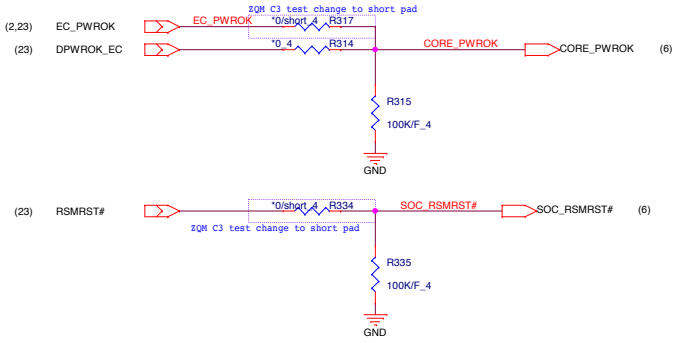
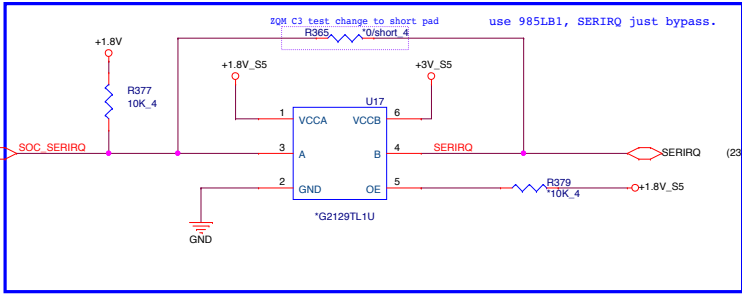
HDMI-Level shift (HDM)

Close to HDMI connector



HDMI-detect (HDM)

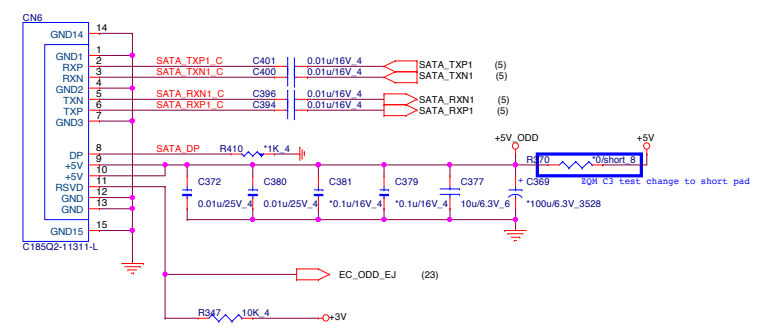




Quanta Computer Inc.
PROJECT : ZQM

Size	Document Number	Rev
	Level Shifter	C3C
Date:	Wednesday, April 02, 2014	Sheet 14 of 34

SATA ODD Connector

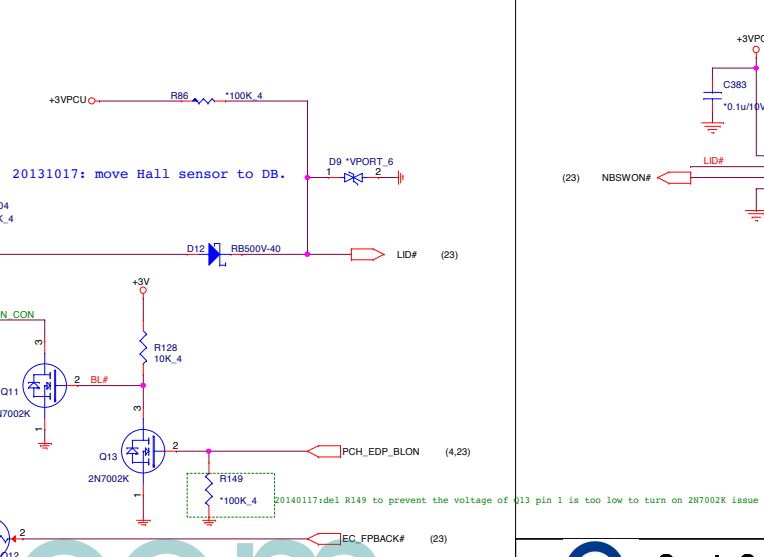


ODD Power (SATA)

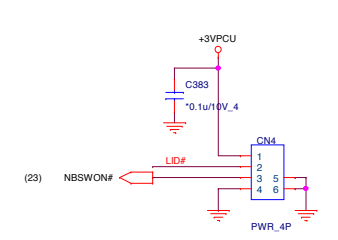


HALL IC (HSR)

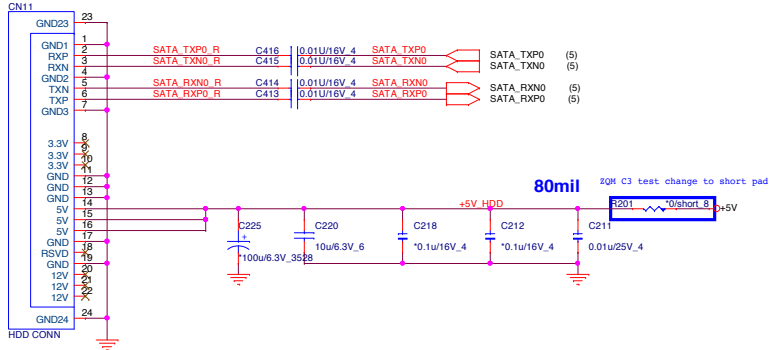
1st source : EOD
 2nd source : AL008251000 -- YBT
 3rd source : AL009132001
 4th source : AL009249000



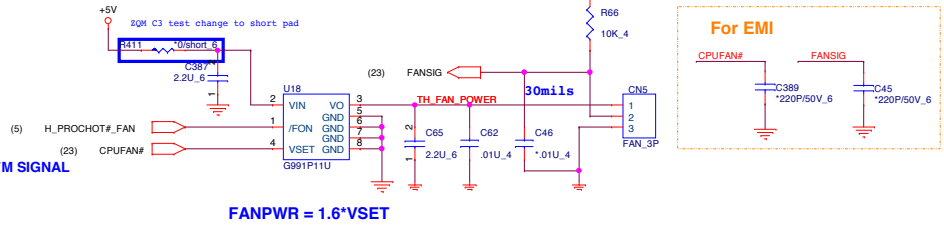
PWR button DB CON



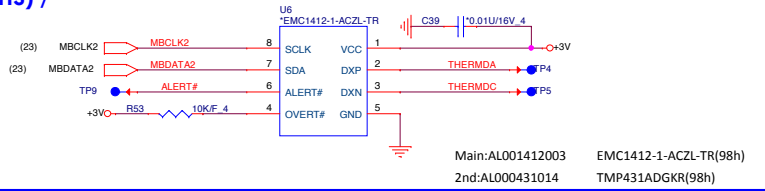
2.5" SATA HDD (HDD)



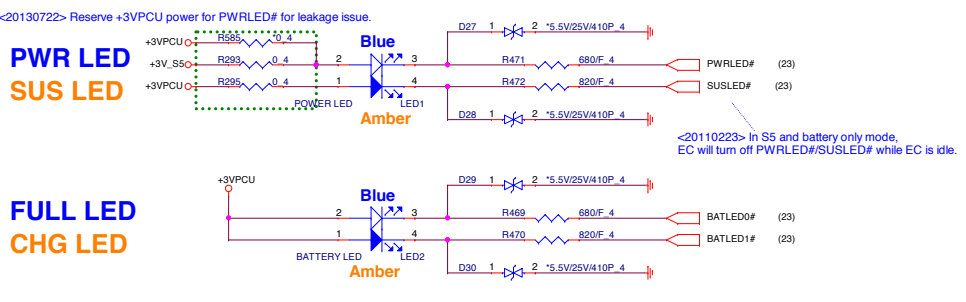
CPU FAN CTRL(THM)



CPU Thermal sensor(THS) / MB Local TEMP

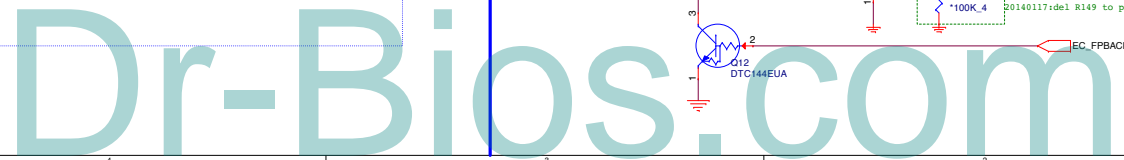


LED/SW (UIF)

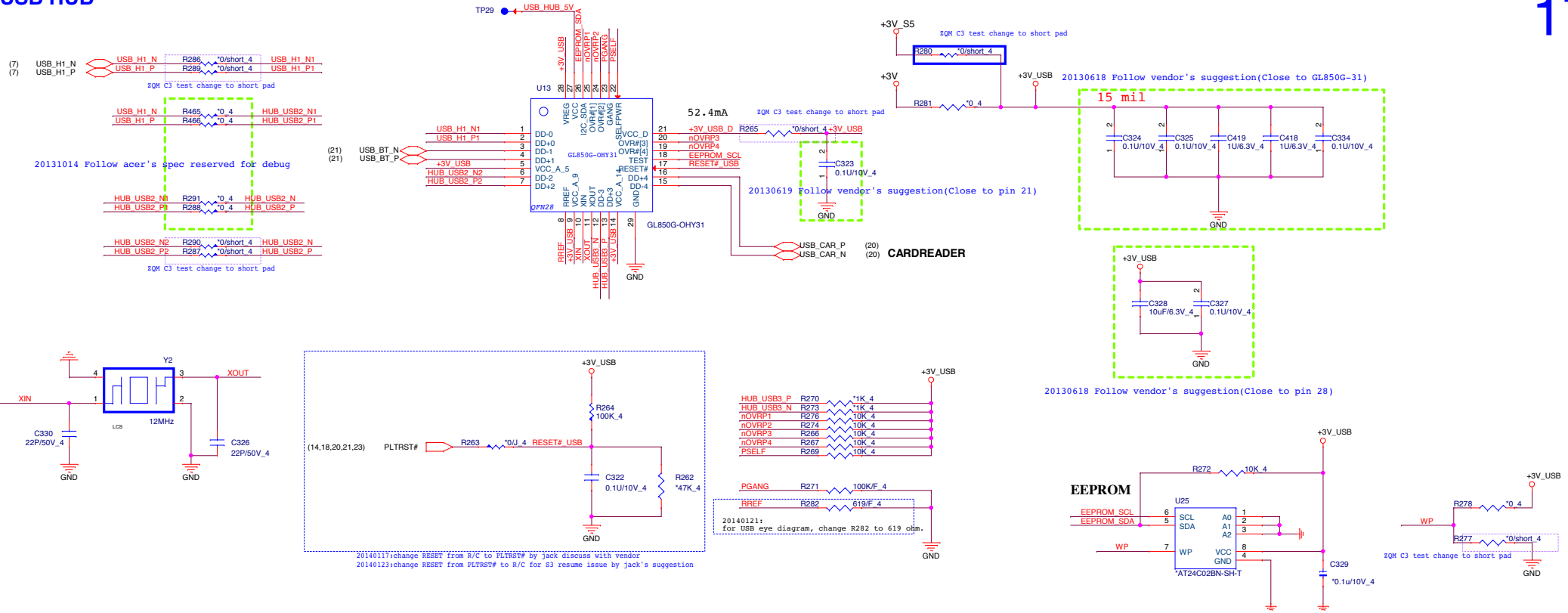


WLAN LED

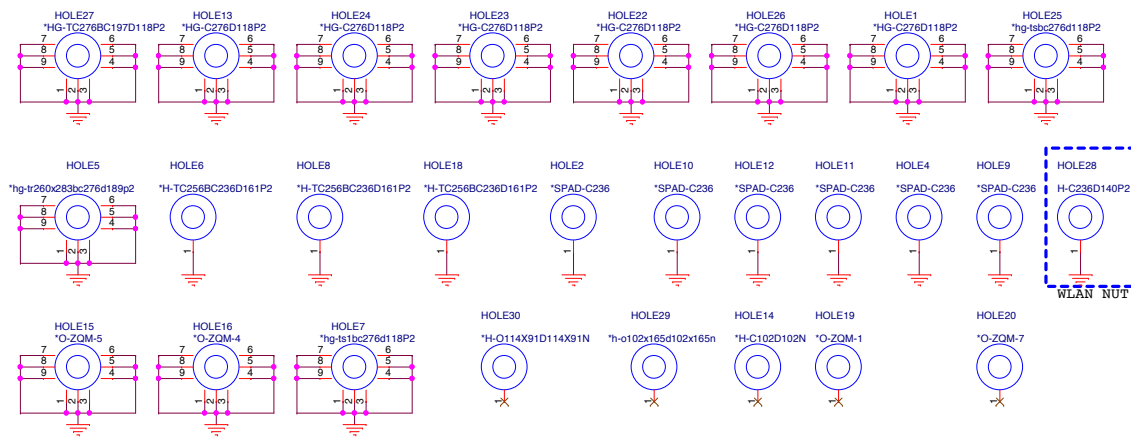
delete the circuit



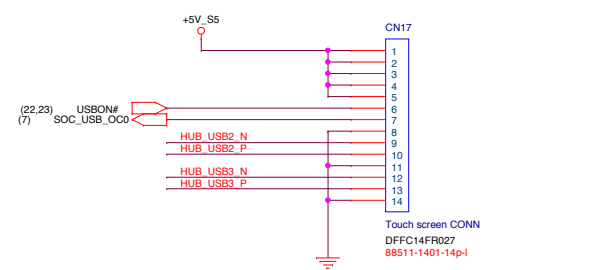
USB HUB



HOLE(OTH)

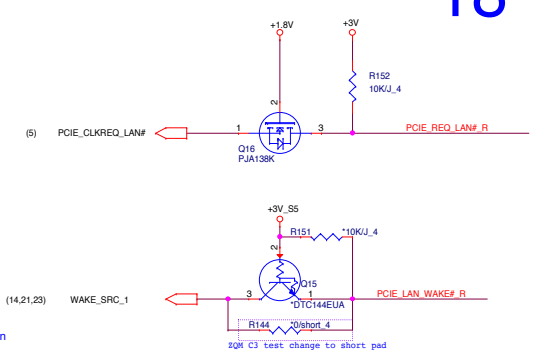
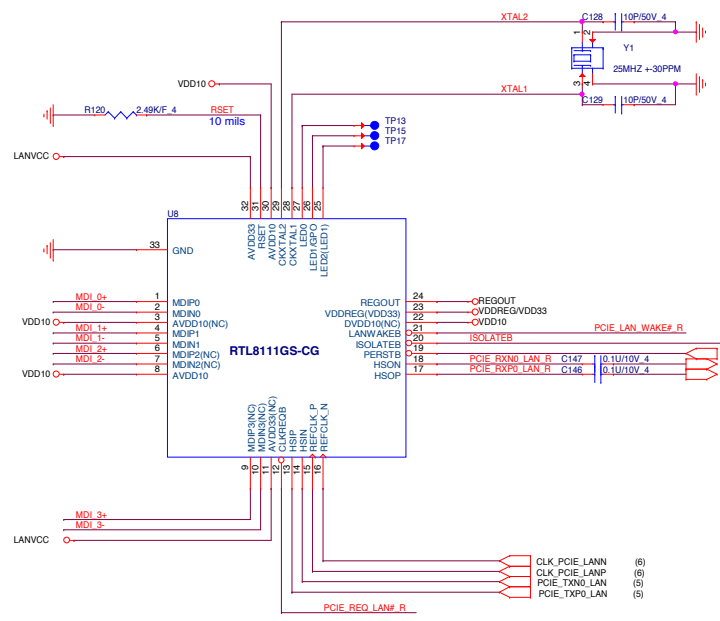


USB DB CONNECTOR



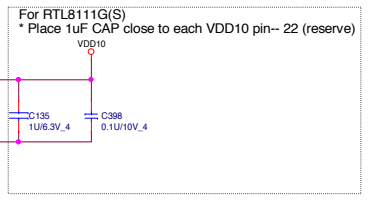
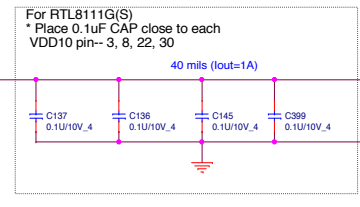
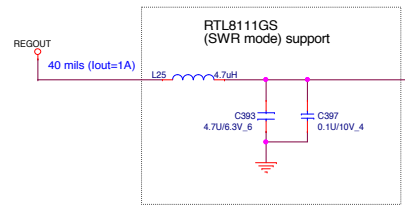
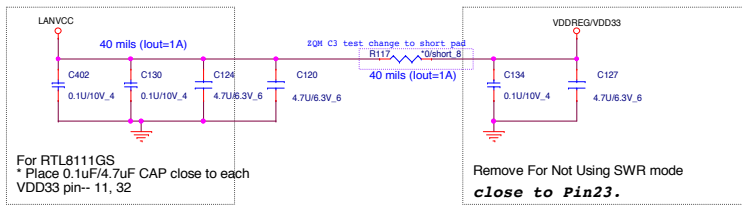
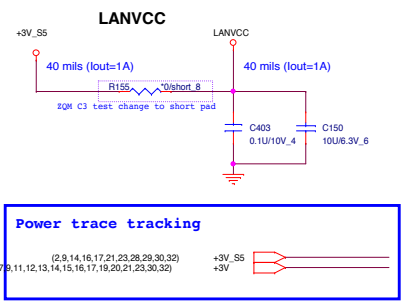
Quanta Computer Inc.
PROJECT : ZQM

Size	Document Number	Rev
	USB BOARD CONN	C3C
Date: Wednesday, April 02, 2014	Sheet 17 of 34	

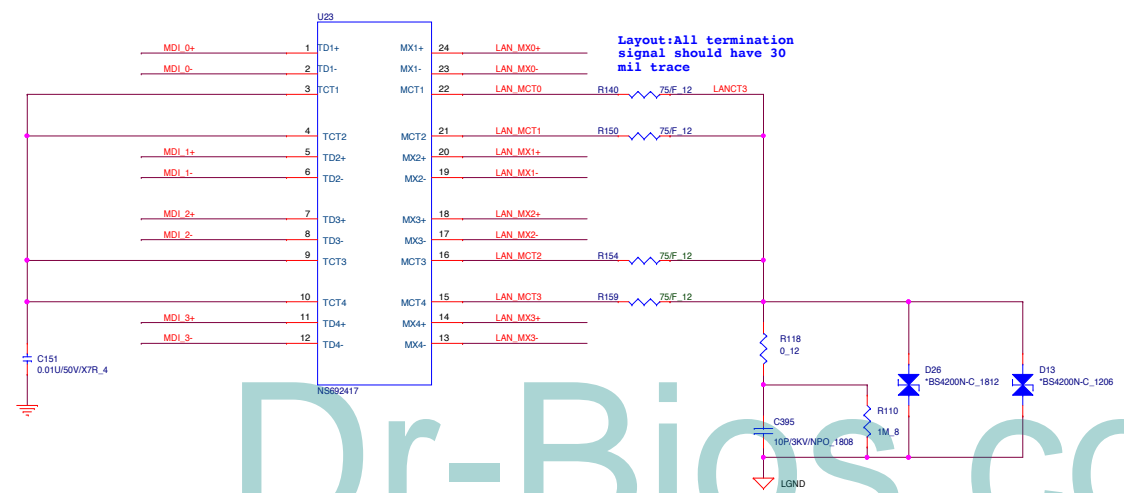


Consider VCC33 may be connected to Main Power or chipset/bios's GPO, the pull-down resistor R14 can be NC only when Main Power or chipset/bios's GPO can ensure to drive the ISOLATEB pin to a voltage level < 0.8V at the system state S1-S5.

If the ISOLATEB pin can not be well-controlled to a voltage level < 0.8V at S1-S5, the pull-down resistor R14 is needed to make sure the LAN chip is well isolated.

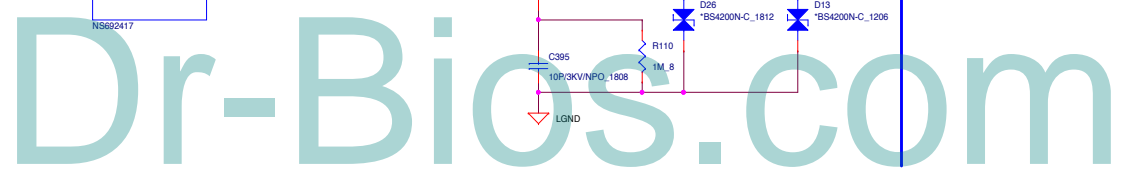
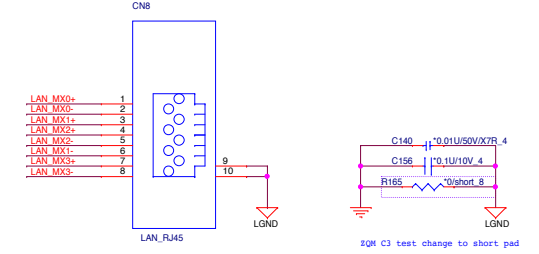


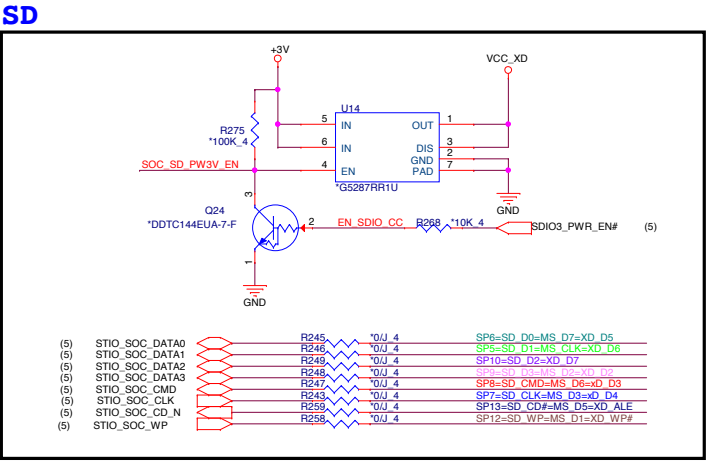
Transformer



RJ45 Connector

Need Check P/N and F/P



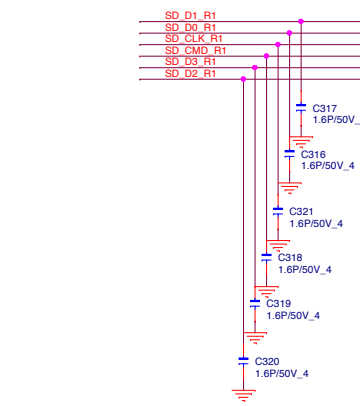
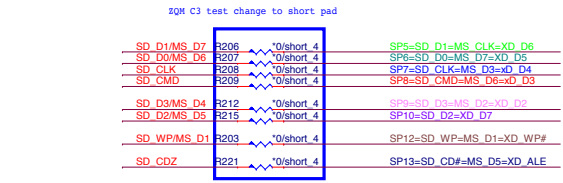
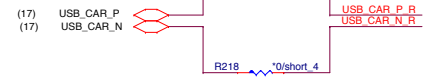
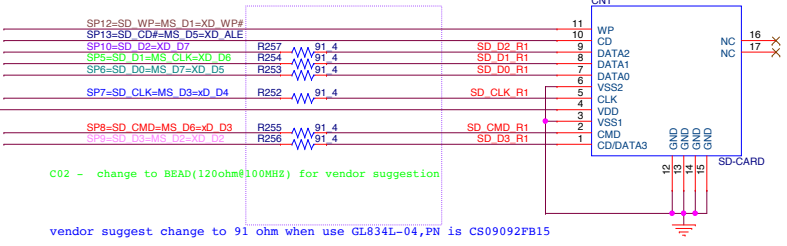
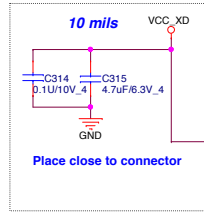


CARD READER CONNECTOR (CRD)

Share Pin

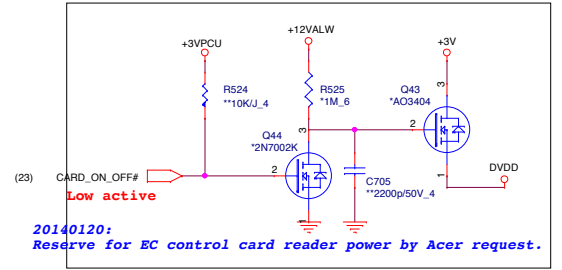
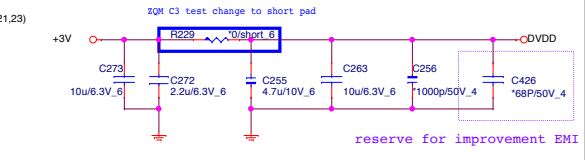
SP1	SD D7	MS_INS#	xD_RD#
SP2	SD D6	xD_RE#	
SP3	SD D5	xD_CE#	
SP4	SD D4	xD_WE#	
SP5	SD D1	MS_CLK	xD_D6
SP6	SD D0	MS_D7	xD_D5
SP7	SD CLK	MS_D3	xD_D4
SP8	SD CMD	MS_D6	xD_D3
SP9	SD D3	MS_D2	xD_D2
SP10	SD D2	xD_D7	
SP11	MS_BS	xD_CLE	
SP12	SD_WP	MS_D1	xD_WP#
SP13	SD_CD#	MS_D5	xD_ALE
SP14	MS_D4	xD_D0	
SP15	MS_D0	xD_D1	
SP16	MS_D0	xD_CD#	

SD/MMC CARD READER (CRD)



2013/07/24 vendor suggest change from 160R to 330R for rising time and falling time over 2ns issue.

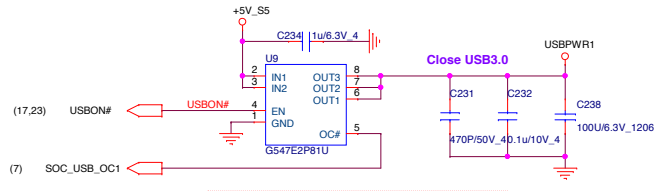
2014/03/03
 1.This resistor is for bead solution to reduce signal voltage in GL834L-03.
 2.We modified SD signal driving ability from GL834L-03 to GL834L-04 and change solution from bead to resistor.
 3.Then this resistor maybe make some USB-C card compatibility fail in GL834L-04, so must remove this resistor.



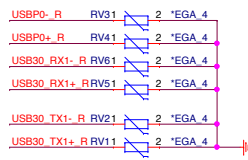
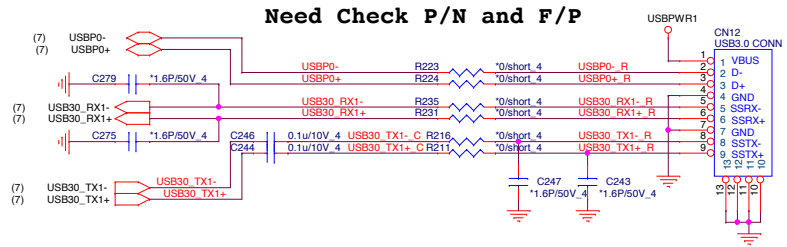
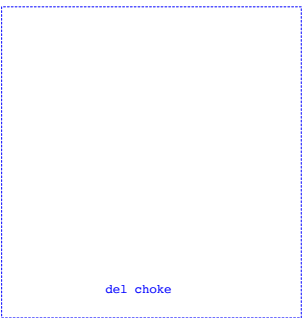
Quanta Computer Inc.
PROJECT : ZQM
Cardreader GL834L

Size	Document Number	Rev
		C3C
Date:	Wednesday, April 02, 2014	Sheet 20 of 34

USB 3.0 Connector

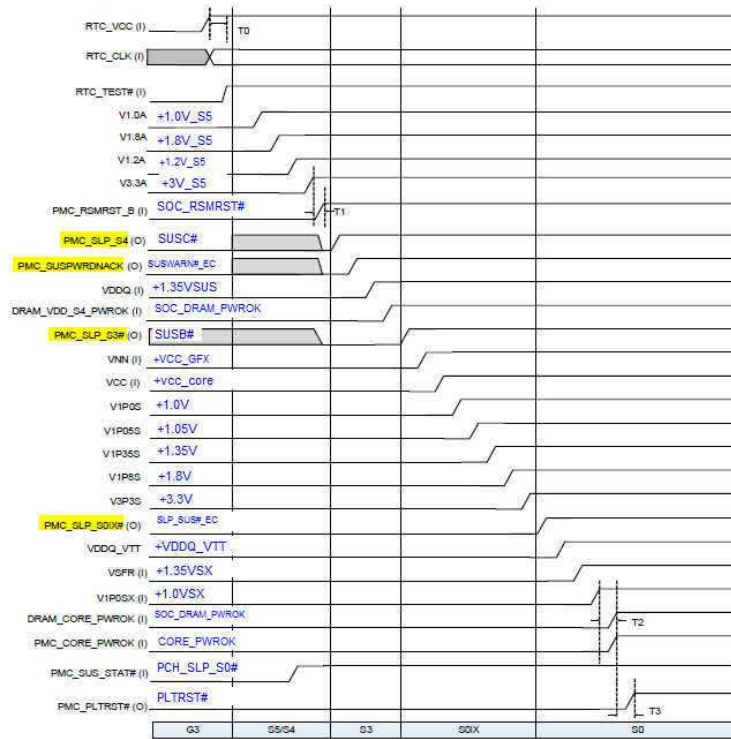


G547E2P81U: Enable: Low Active /2.5A



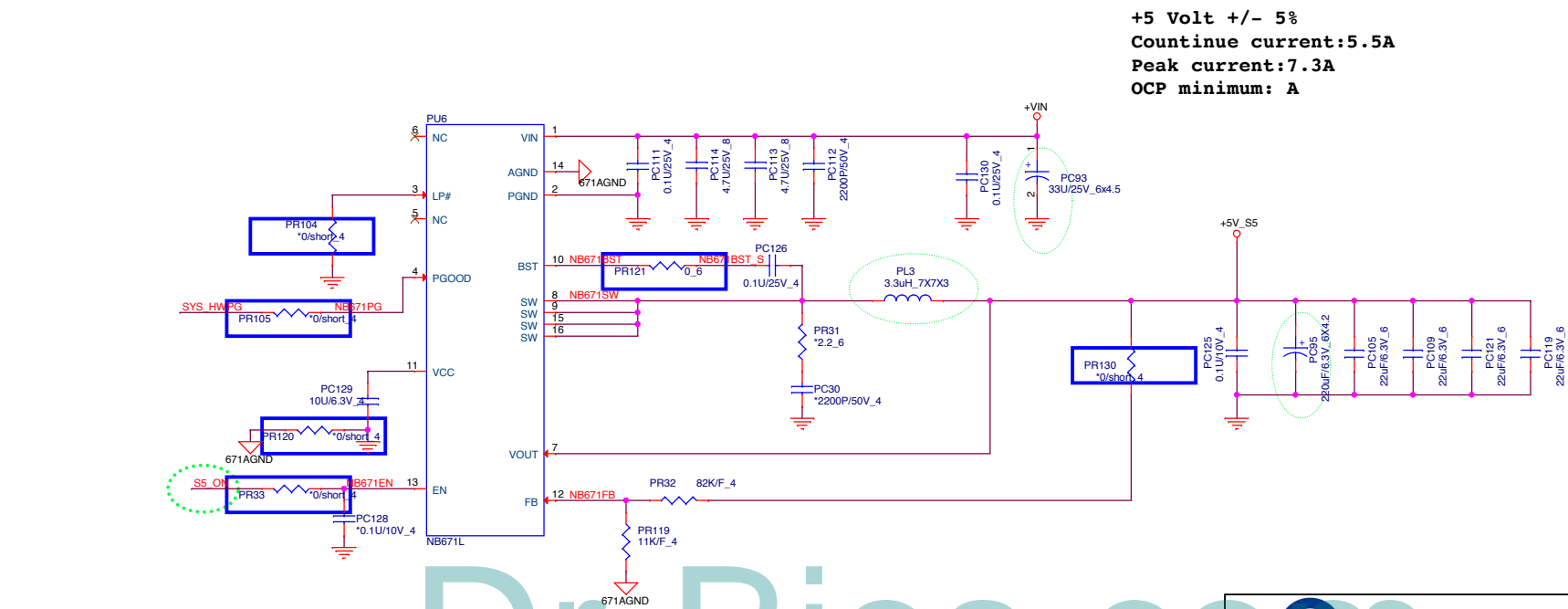
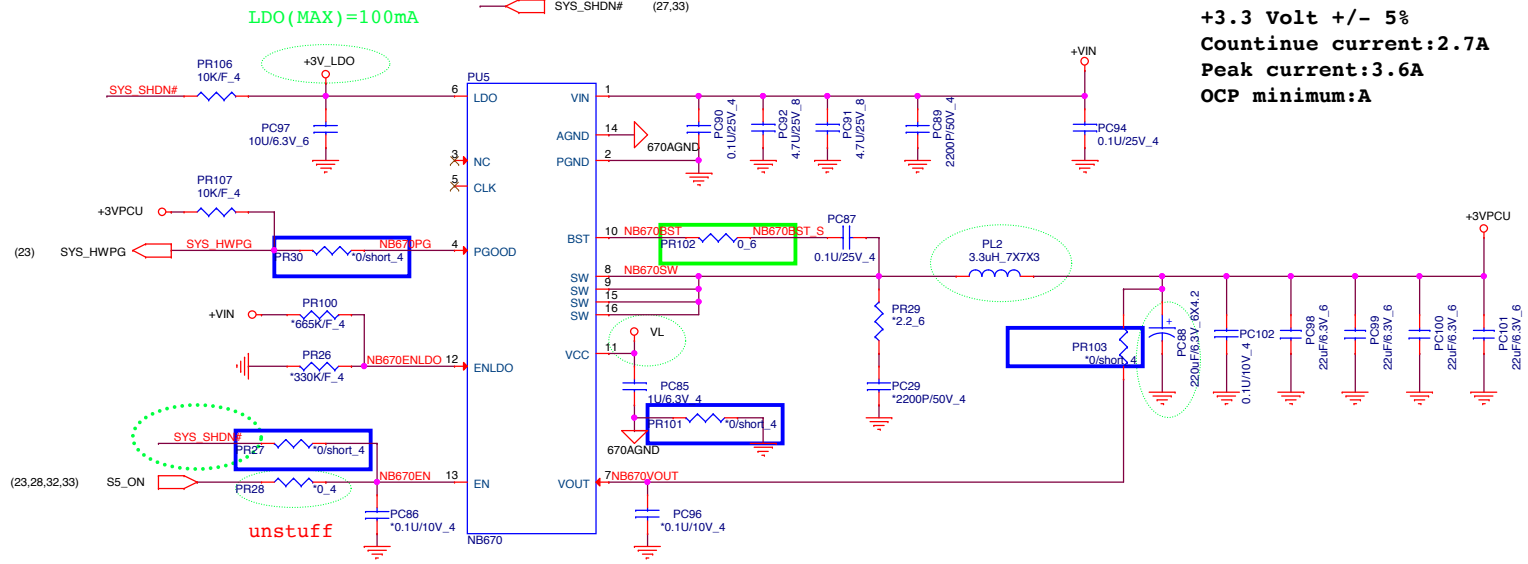
Quanta Computer Inc.
PROJECT : ZQM

Size	Document Number	Rev
		C3C
Touch Panel		
Date: Wednesday, April 02, 2014	Sheet 22 of 34	



ZOM C3 test change to short pad

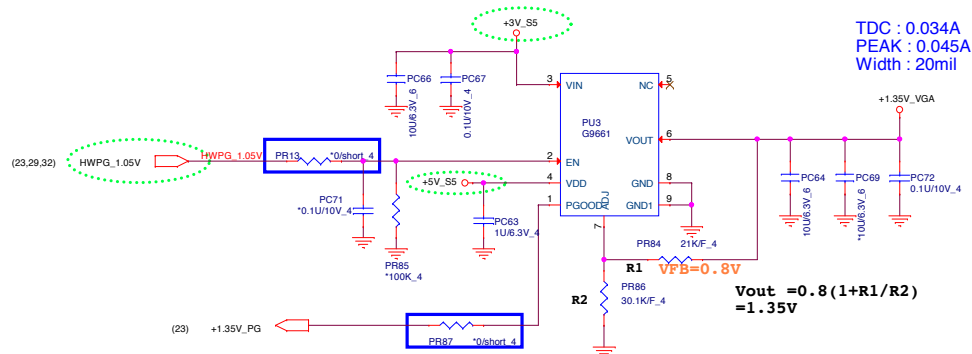
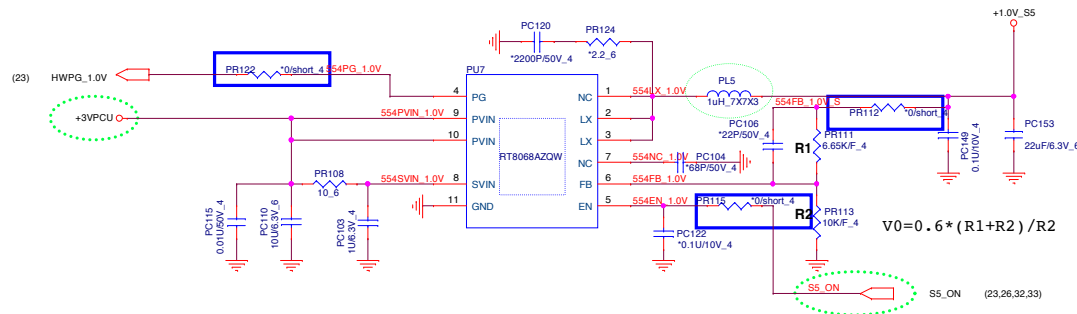
+3VPCU (6,8,15,16,19,20,23,25,27,28,32)
 +5V_S5 (17,22,28,29,30,31,32)
 SYS_SHDN# (27,33)



Dr-Bios.com

Quanta Computer Inc.
PROJECT :
+3VPCU/+5VS5 (NB670/NB671L)
 Size Document Number Rev C3C
 Date: Wednesday, April 02, 2014 Sheet 26 of 34

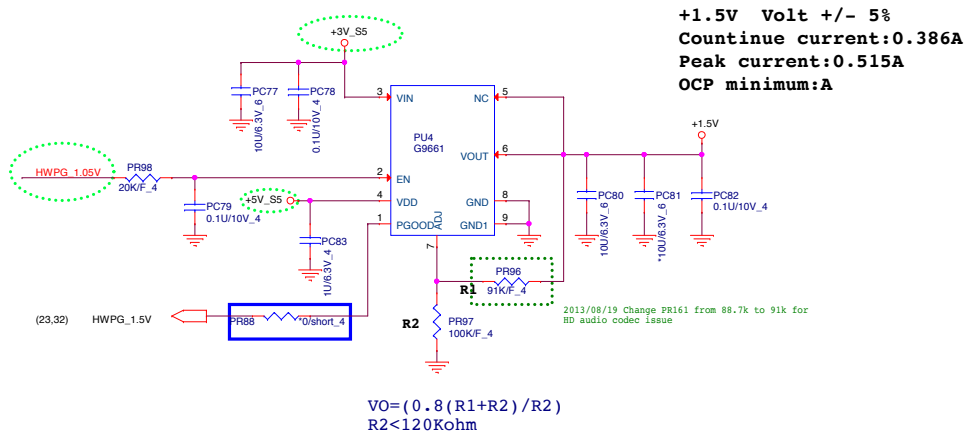
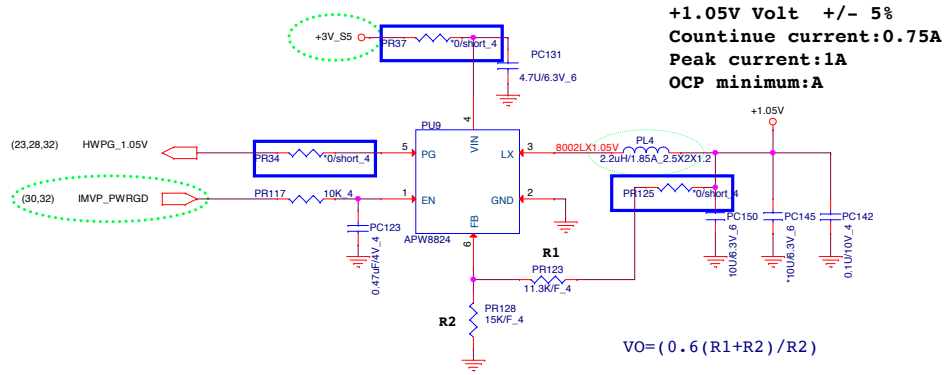
+1.0V Volt +/- 5%
Countinue current:2.3A
Peak current:3.1A
OCP minimum:A



2013/09/09 LDO for 1.35V

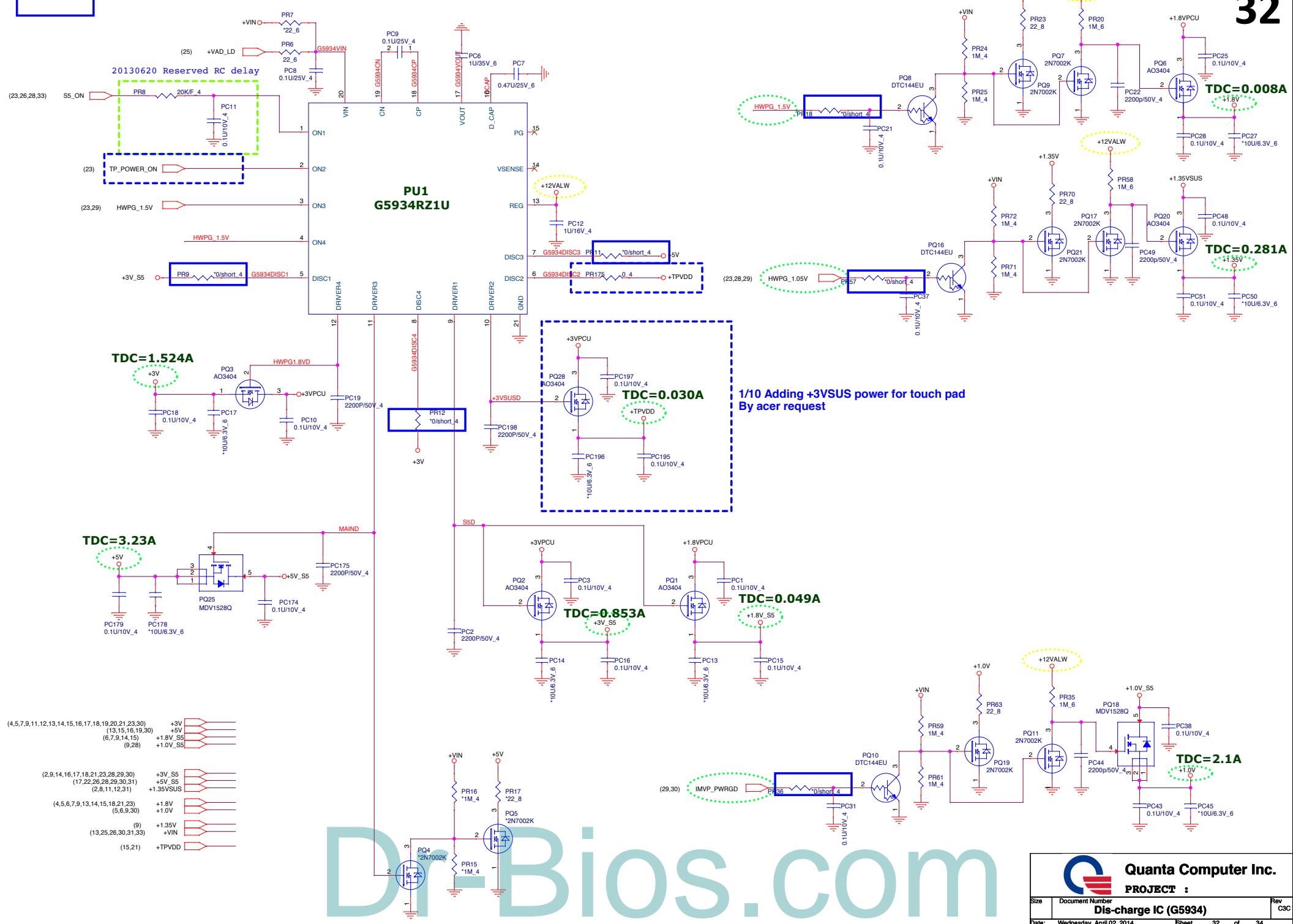
Quanta Computer Inc.		
PROJECT :		
Size	Document Number	Rev
	+1.0V/+1.35V_VGA	C3C
Date	Wednesday, April 02, 2014	Sheet 28 of 34

ZQM C3 test change to short pad



PROJECT : ZQM		
Size	Document Number	Rev
	+1.05V/1.5V	C3C
Date:	Wednesday, April 02, 2014	Sheet 29 of 34

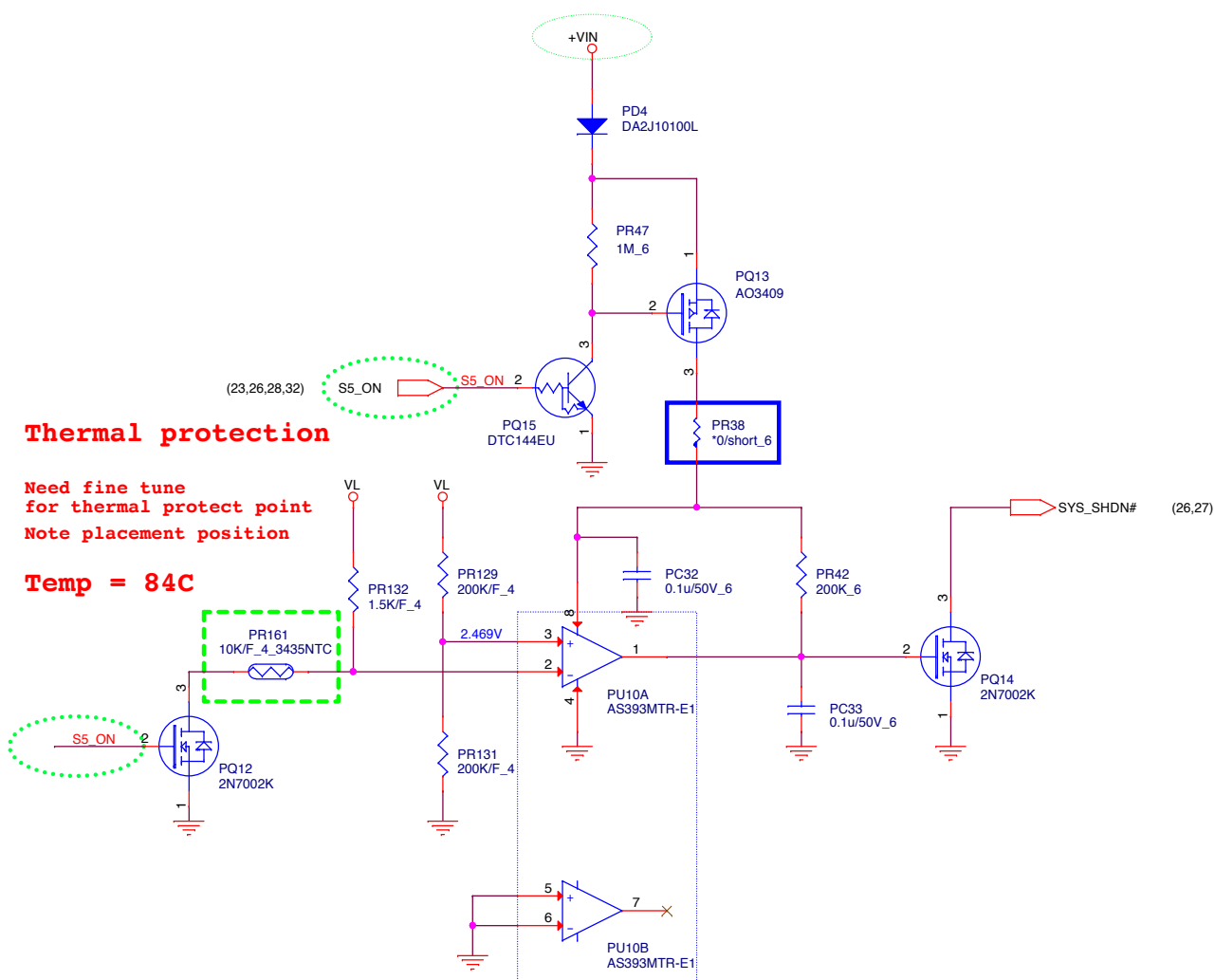
ZQM C3 test change to short pad



Dr-Bios.com

Quanta Computer Inc.
PROJECT :
Dis-charge IC (G5934)

Size	Document Number	Rev
		C3C
Date:	Wednesday, April 02, 2014	Sheet 32 of 34



Thermal protection

Need fine tune
for thermal protect point
Note placement position

Temp = 84C


For EC control thermal protection (output 3.3V)

Dr-Bios.com

Quanta Computer Inc.		
PROJECT :		
Size	Document Number	Rev
	Thermal	C3C
Date:	Wednesday, April 02, 2014	Sheet 33 of 34

Model	Date	CHANGE LIST
ZQM REV:A		1. FIRST RELEASED
ZQM REV:B	12/12	Change SPK connector,power FFC connector,LED footprint Change audio jack PN change audio RST circuit back to previous version and reserve D31,R185 and Q21
	12/16	Delete PC171 for power space not enough issue.
	12/18	SWAP CN14, Del Hole17 change Hole27 footprint change Hole5,Hole7,Hole25,Hole29 footprint stuff R175,R182,R186,R189 of HDMI for EMI stuff C228 for AudioI for EMI
ZQM REV:C	01/10	reserve 3V_S5 for touch pad power for Acer request to design design power add 3VSUS circuit for touch pad to use
	01/14	change R139 from 10K to 200K and del R12 for 3V power leakage issue change R115 from 47K to 10K for S5_ON signal, for PUI power enable level issue.
	01/16	change D11 PN to BCBAT54CZ13, footprint to sot323 213-2 1-1 3-2n7002w for small package and cost down change R461,R462 from 4.7K to 2.2K for intel document suggestion for 400KHz pull high signal. add Nuvoton TPM NPCT650 to colay with SLB9655
	01/17	change CN9 footprint to mipci-800055fb052gx00p1-52p-smt for SMT request change PUI1 footprint to qfn32-4x4-4-33p-is195812hrz-smt for SMT request change USB hub RESET pin from R/C to PLTRST#, because +3V_S5 power will keep even power off system in AC mode change R145 from 10K to 200K and del R149 to prevent the voltage of Q13 pin 1 is too low to turn on 2N7002K issue for PCH_EDP_BLON
	01/20	reserve power control circuit by EC card reade for Acer's request reserve power control signal of EC GPIO 52 for card reade for Acer's request modify U5 power to main level
	01/21	del power jumper change PU7 and PU8 PN to AL008068000 change R282 to 619 ohm for USB eye diagram.
	01/23	change card reader RESET from PLTRST# to R/C for S3 resume issue by jack's suggestion
	02/05	change R469 and R471 from 33 ohm to 220 ohm for ME request change U10 to Rev 4 and change R252-R257 from bead to 91 ohm for vendor's suggestion. update function code.
	02/07	reserve R175,R182,R186,R189 of HDMI for SDA HDMI fail.
	02/13	change PUI.2 from SUSON to TP_POWER_ON change PQ28.1 from +3VSUS to +TPVDD change all +3VSUS to +TPVDD.(TP and TPM) use EC GPIO50 to control TP power for Acer's request reserve +3VPCU for LED1.2 for leakage issue
	02/18	change 0 ohm to short pad SWAP R233 and L16, R285 and L19 by vendor's suggestion.
	02/19	change L16 and L19 footprint to 0402 size
	02/24	reserve GPIO34 as PCH_EDP_BLON for EC checking backlight on timing
	02/25	add hole 30 and del hole 21 for ME request
	02/27	change LED PN from BEB00028ZA0 to BEB00011ZA5 for Vf issue. change R469 and R471 from 220 ohm to 330 ohm for test result change R470 and R472 from 220 ohm to 680 ohm for test result
	03/03	remove R261 for this resister maybe make some UHS-I card compatibility fail in GL834L-04, so must remove this resister. remove U5 and R80 for Nuvoton FAE Mark said that TPM doesn't SERIRQ.
ZQM REV:Ramp	03/04	change C316-C321 to 1.6pF by vendor's suggestion.(don't large than 2.7P)
	03/04	reserve C706 for PTP touch pad sometimes will auto resume from S3.
	03/06	change R469 and R471 from 330 ohm to 680 ohm for test result change R470 and R472 from 680 ohm to 820 ohm for test result
	03/12	change Q16 to PJA138K
	03/18	reserve 3V_S5 power for TP to use.
	03/20	change SLEEVE R and RING2 R from ADOGND to GND for ESD issue. del all USB signal choke and change to short pad.
	03/21	change PR102 and PR121 from short pad to 0 ohm for power drop issue.
	03/24	Delete 1.35VSUS short jumper JP11

Dr-Bios.com

 Quanta Computer Inc.	PROJECT : ZQM	DOC NO.	PROJECT MODEL : ZQM	APPROVED BY:	DATE:
Change list			PART NUMBER:	DRAWING BY:	REVISION: