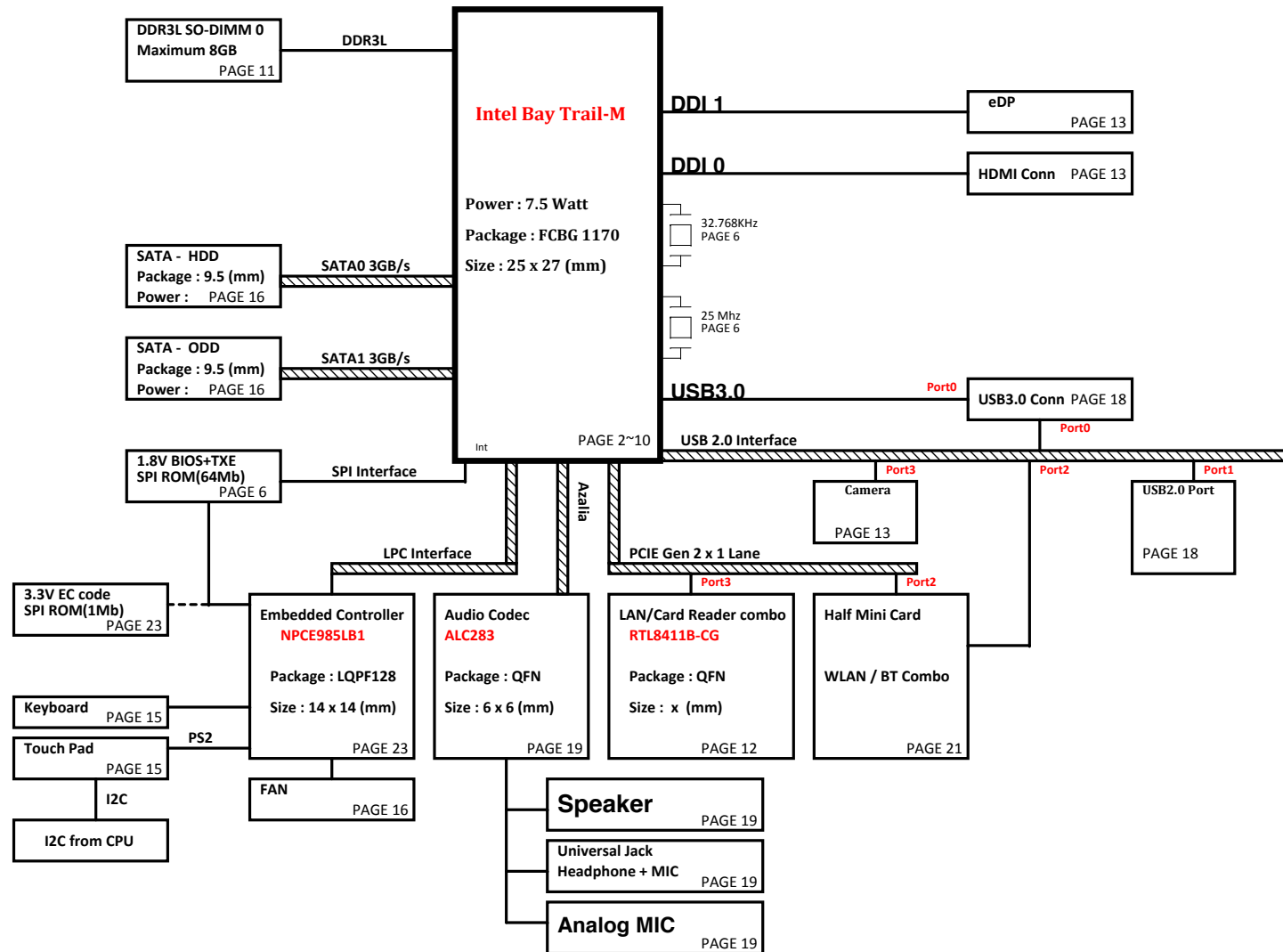


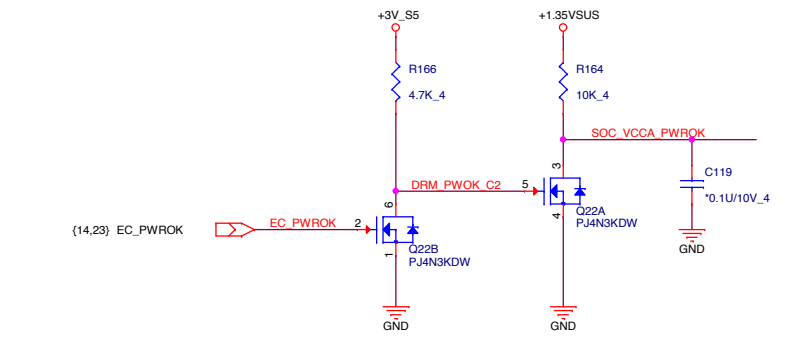
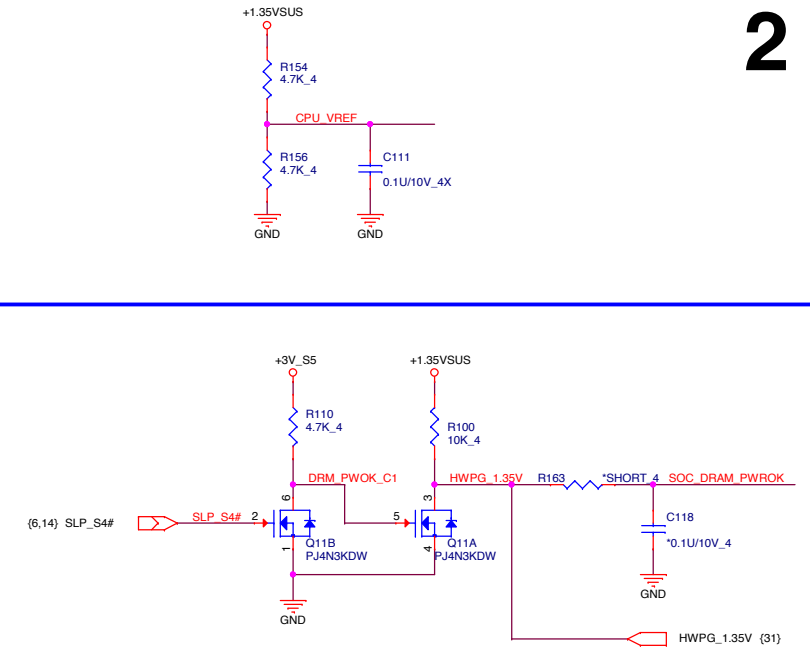
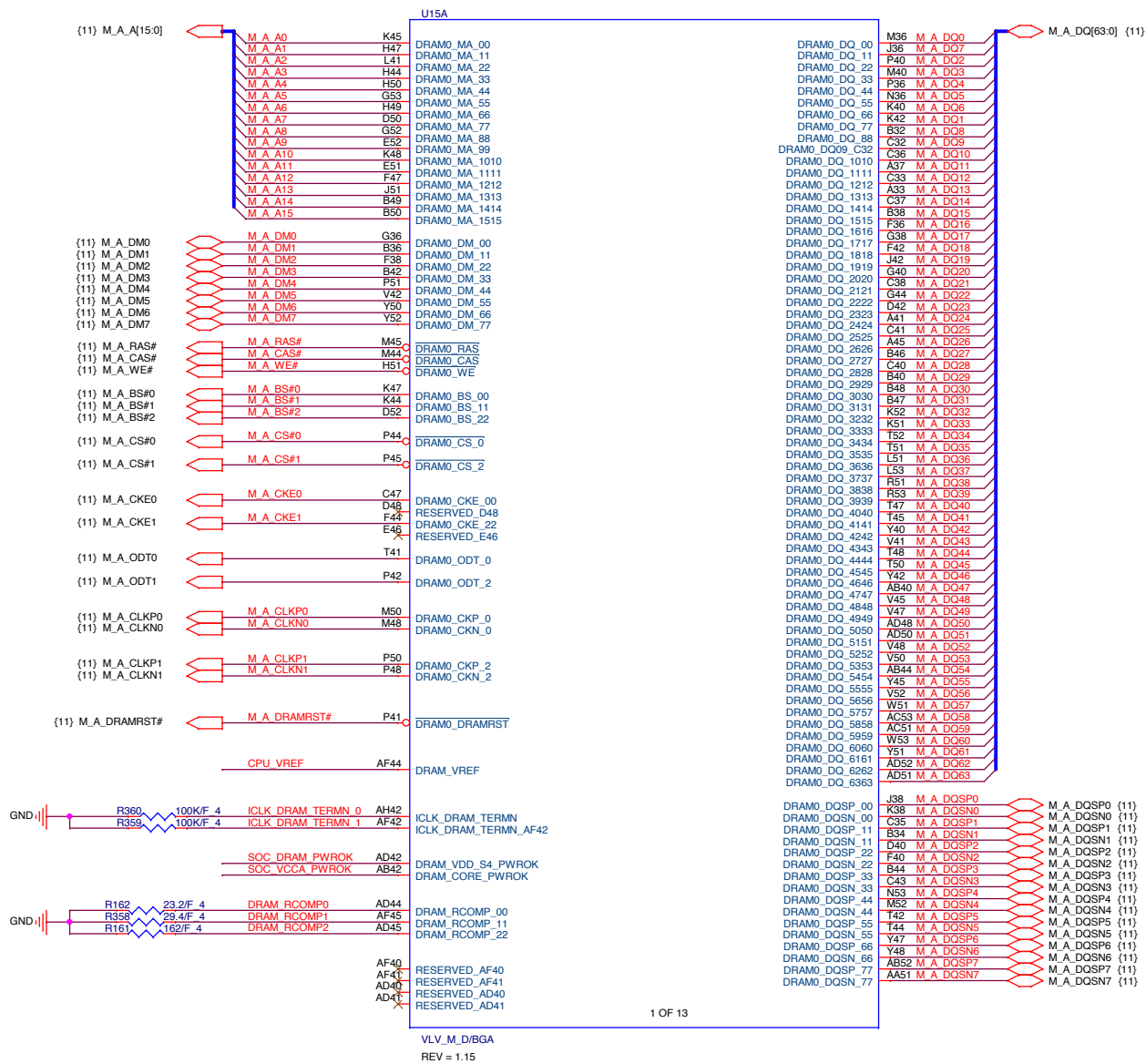
Z8A UMA(14")


Intel Bay Trail-M Platform Block Diagram

PCB 4L STACK UP

LAYER 1 : TOP
LAYER 2 : SVCC
LAYER 3 : SGND
LAYER 4 : BOT


www.schematic-x.blogspot.com



 **Quanta Computer Inc.**
PROJECT : Z8A

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Valley 1/9 (DDRA)		
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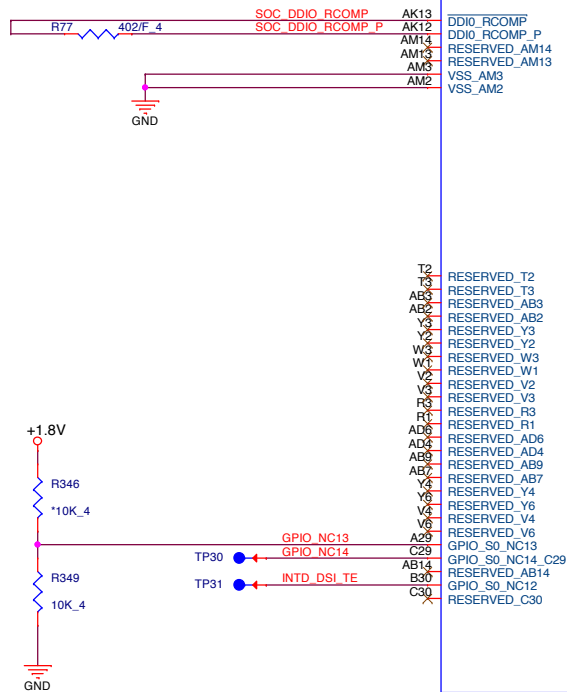
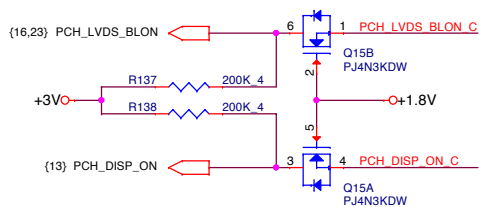
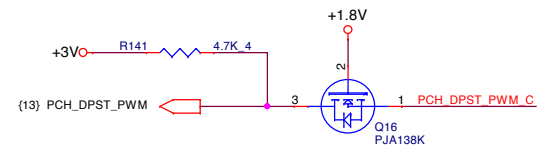
AT41  DRAM1_DRAMRST

DRAM1_DQSP_00	BF40
DRAM1_DQSN_00	BD40
DRAM1_DQSP_11	BG35
DRAM1_DQSN_11	BH34
DRAM1_DQSP_22	BA38
DRAM1_DQSN_22	AV38
DRAM1_DQSP_33	BH44
DRAM1_DQSN_33	BG43
DRAM1_DQSP_44	AU53
DRAM1_DQSN_44	AV52
DRAM1_DQSP_55	BP42
DRAM1_DQSN_55	BP44
DRAM1_DQSP_66	AK47
DRAM1_DQSN_66	AK48
DRAM1_DQSP_77	AH52
DRAM1_DQSN_77	AJ51

VLV_M_D/BGA
REV = 1.15

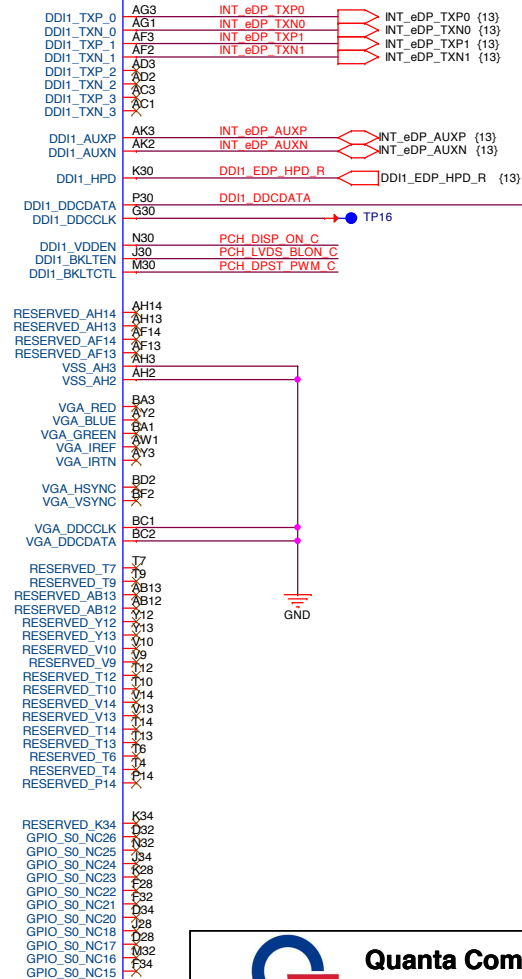


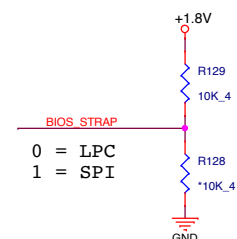
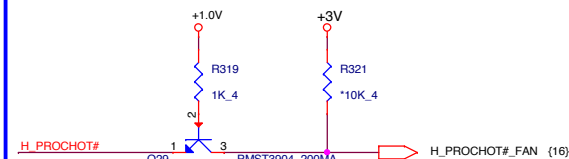
Size	Document Number Valley 2/9 (DDB)	Rev 1A
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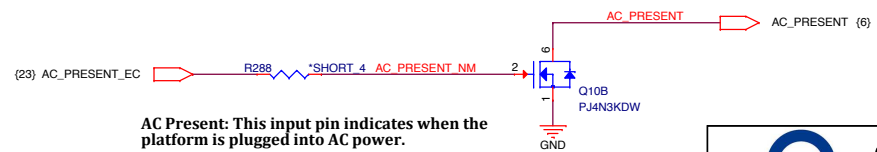
VLV_M_D/BGA

REV = 1.15



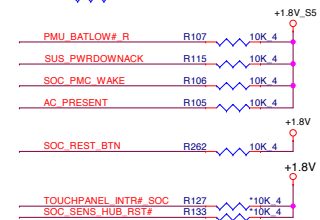
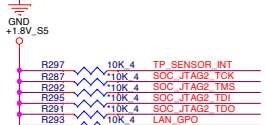
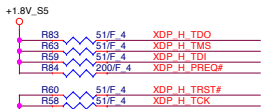
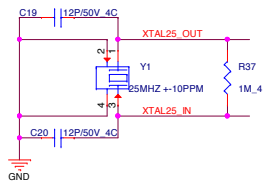


AC Present: This input pin indicates when the platform is plugged into AC power.

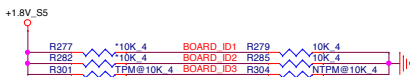


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BOARD ID



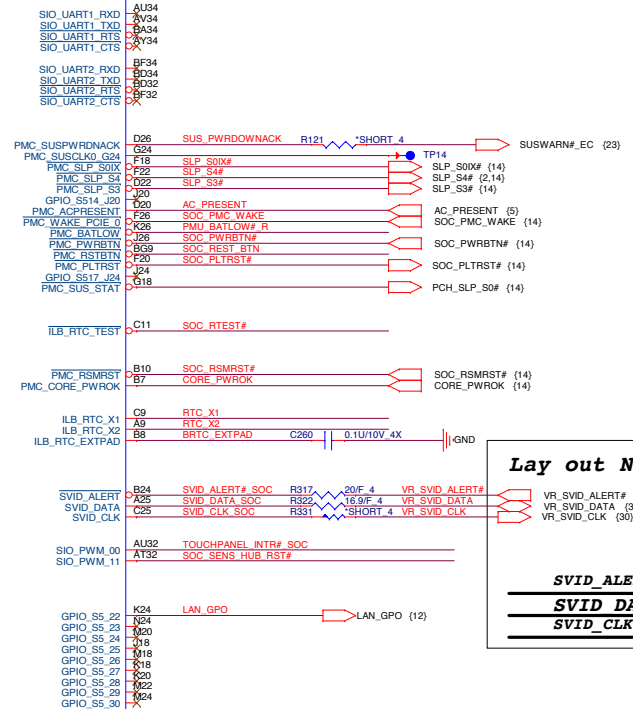
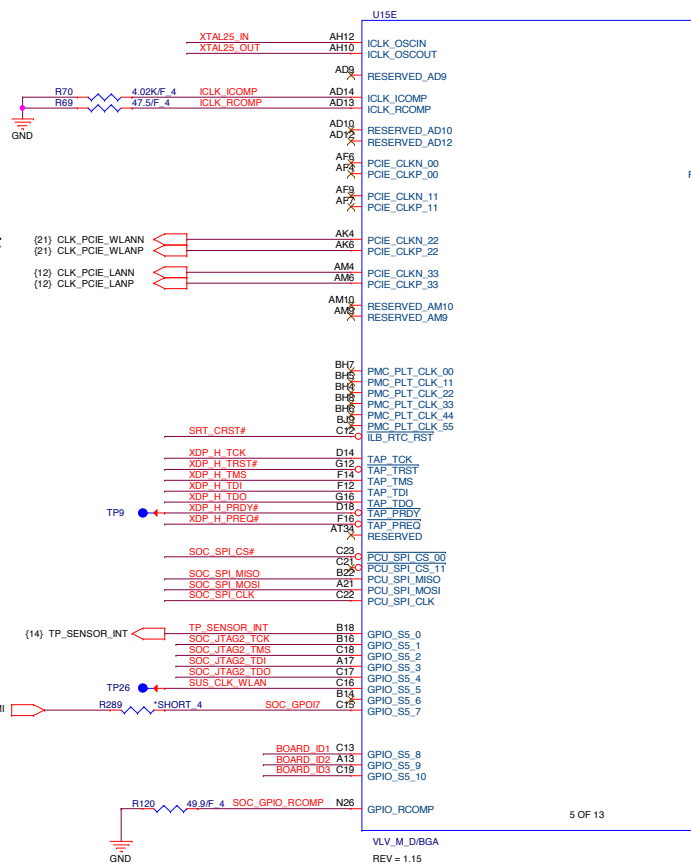
BOARD_ID1 No use (Default "L")
BOARD_ID2 "B1" W/ touch panel; "Low" W/O touch panel
BOARD_ID3 "B" for TPM; "L" for W/O TPM

WLAN clk

LAN clk

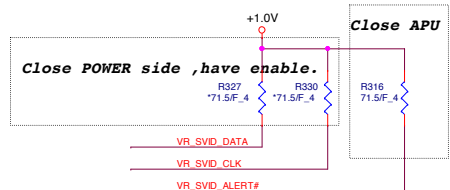
Touch pad

(14) TP_SENSOR_INT
(14) SOC_KCB_SMI

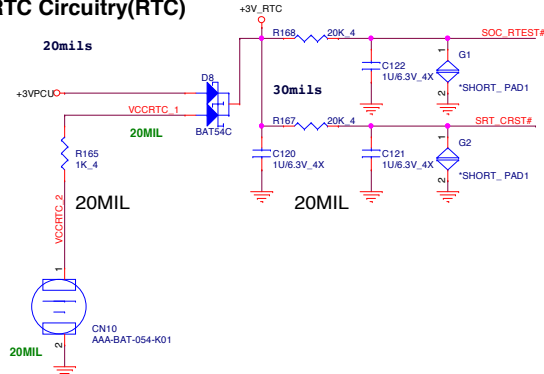


Lay out Note:

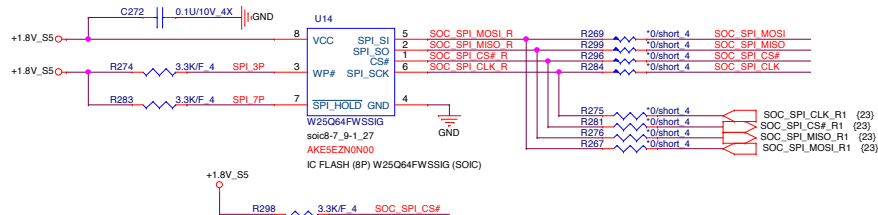
SVID_ALERT#
SVID_DATA
SVID_CLK



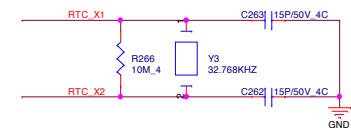
RTC Circuitry(RTC)



SPI NOR FLASH




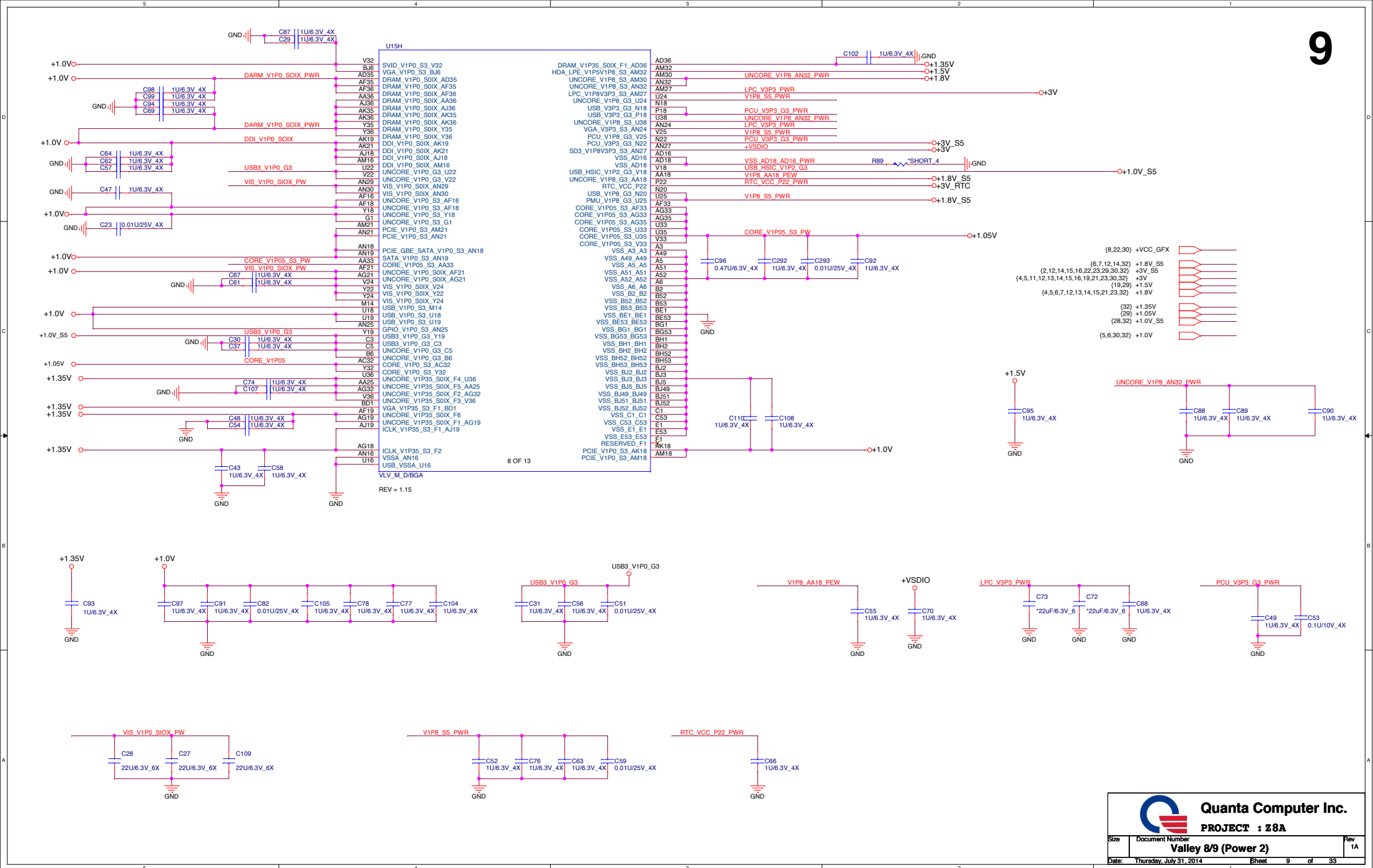
RTC Clock 32.768KHz

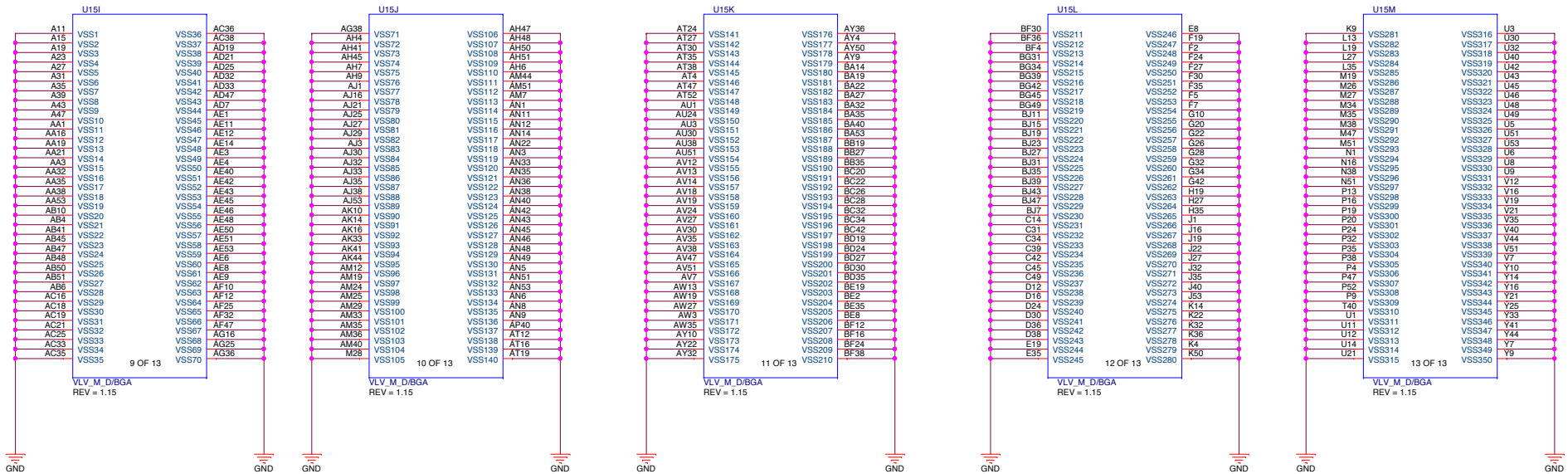




CAMERA

 Quanta Computer Inc. PROJECT : Z8A	
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Valley 6/9 (USB/LPC/I2C)	
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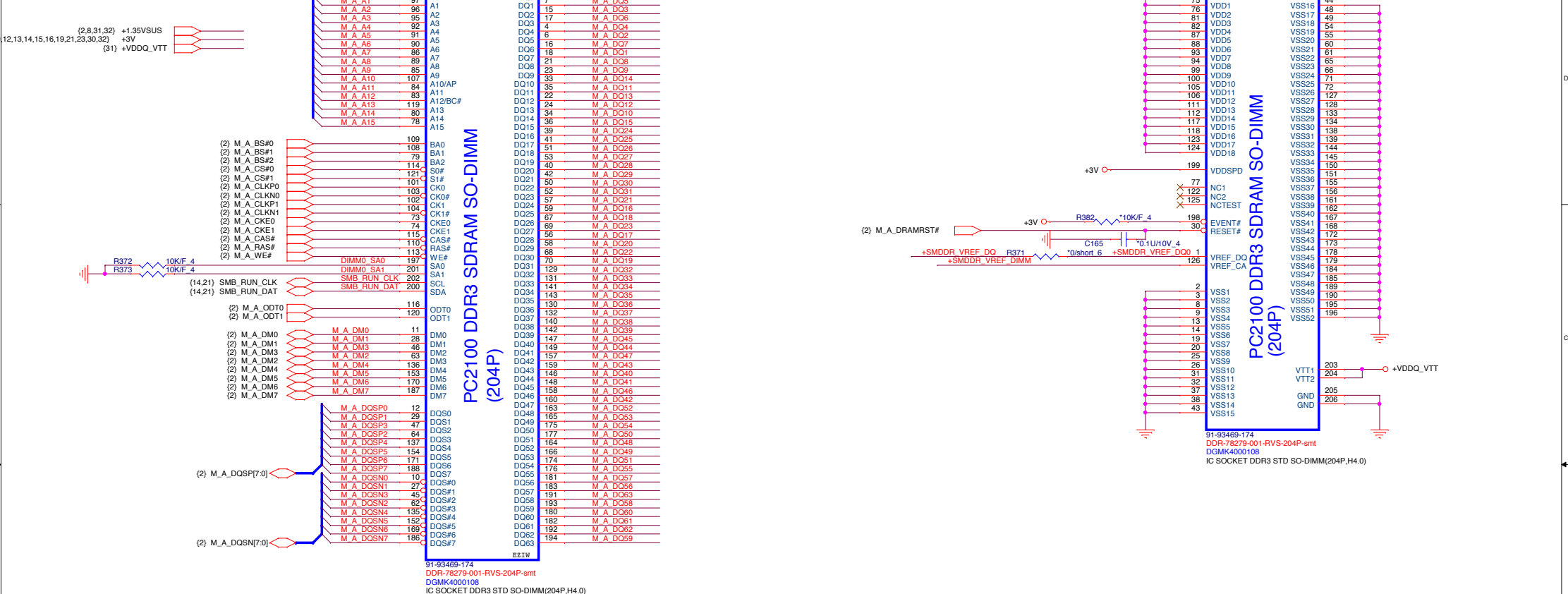




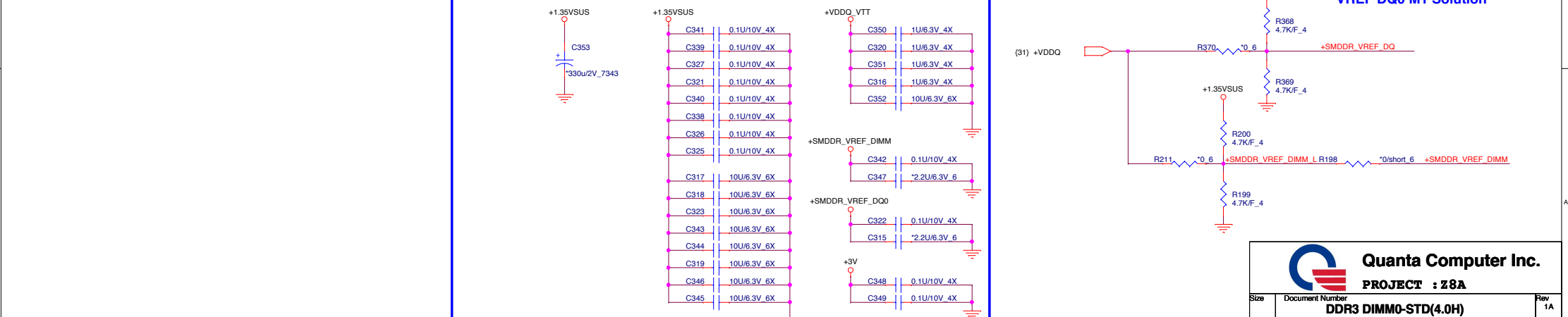
Quanta Computer Inc.

PROJECT : Z8A

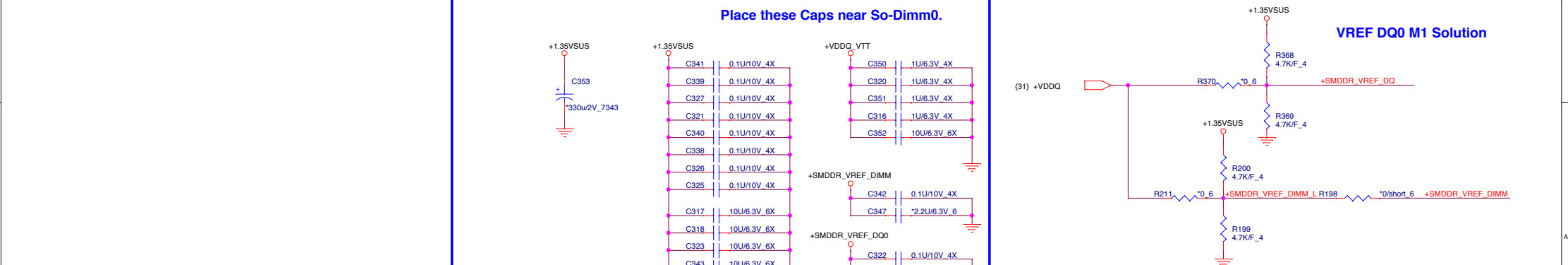
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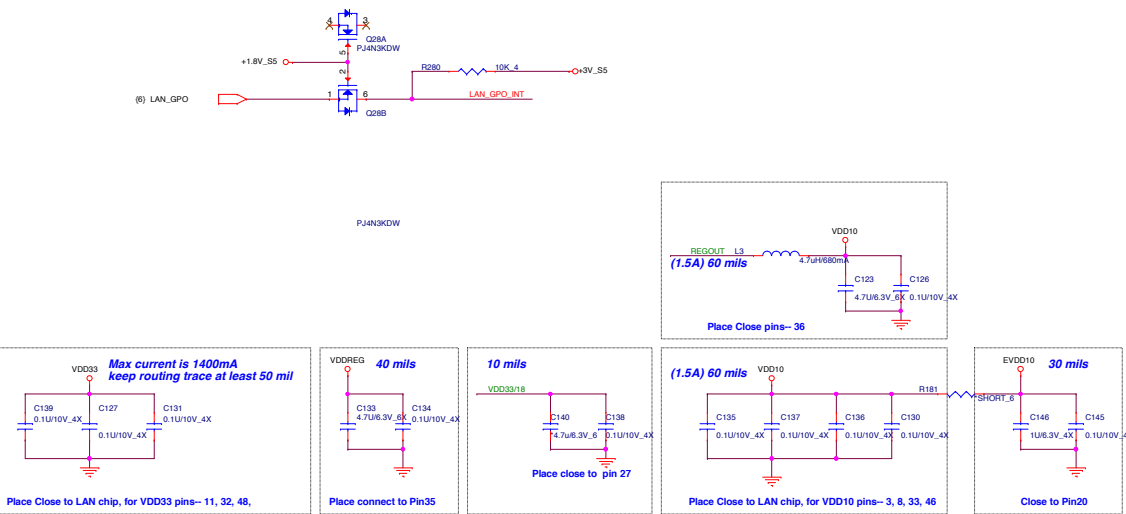
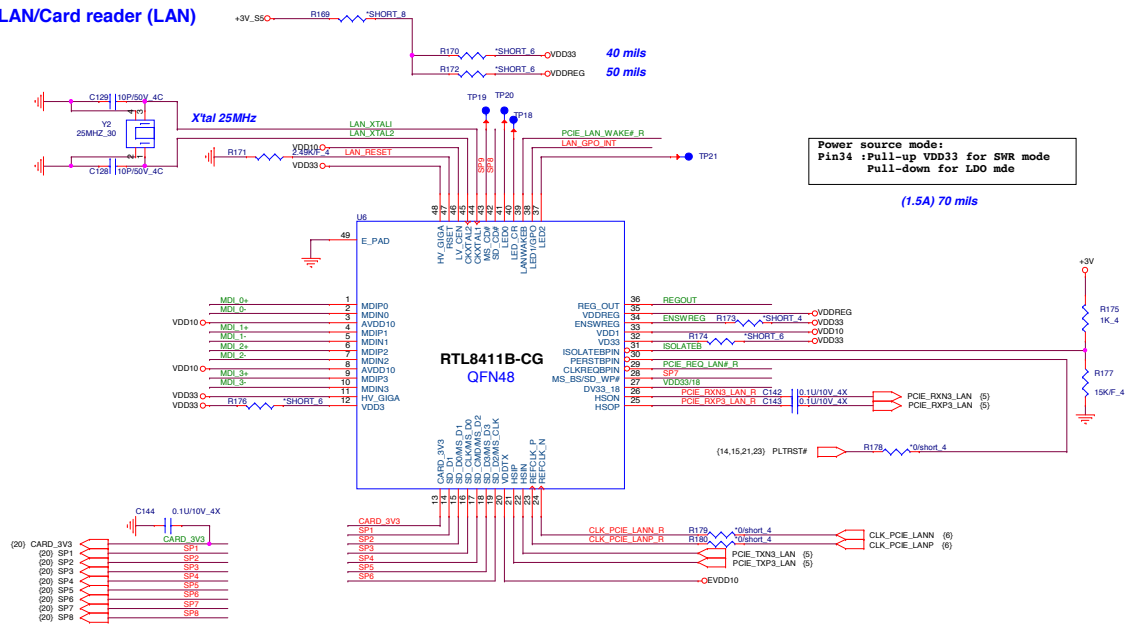
Place these Caps near So-Dimm0.



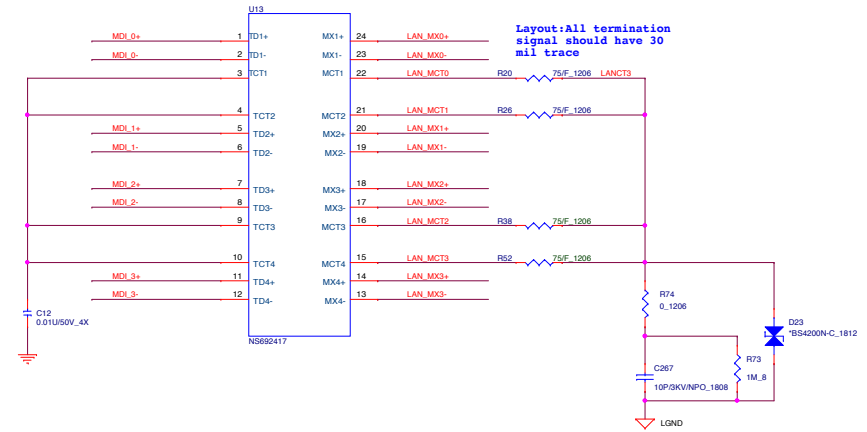
VREF DQ0 M1 Solution



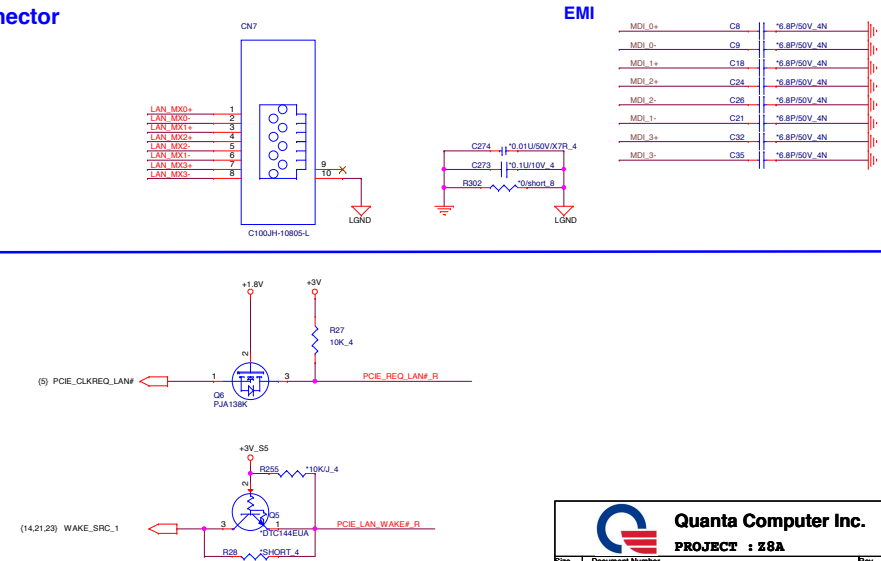
LAN/Card reader (LAN)



Transformer (LAN)

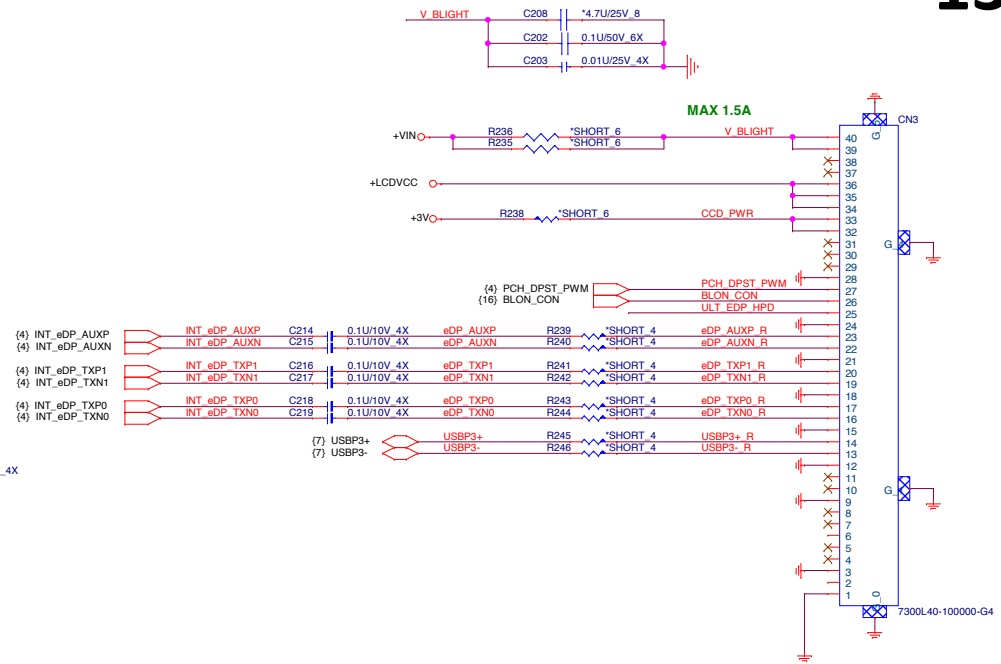
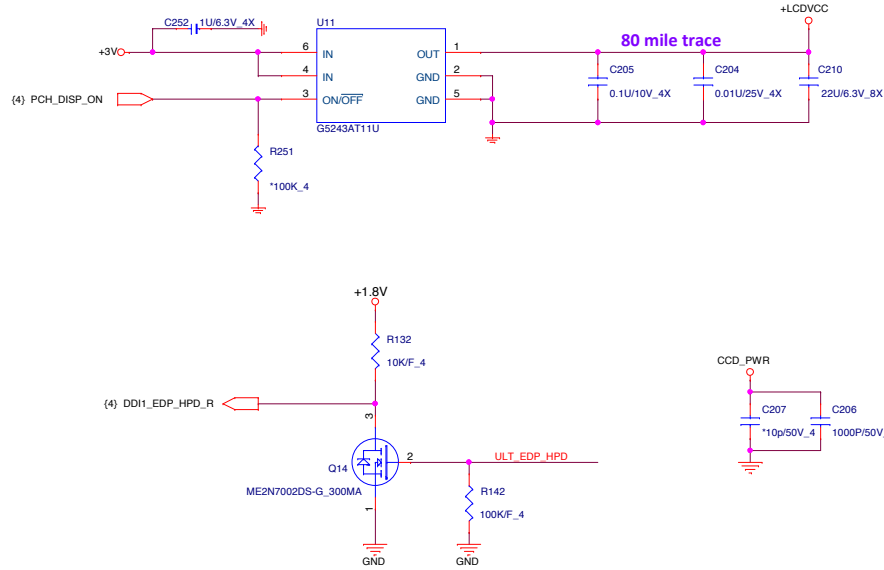


RJ45 Connector



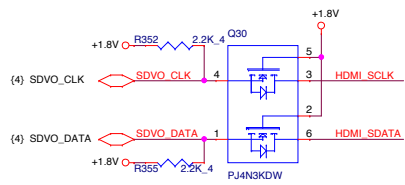
LCD POWER SWITCH

13

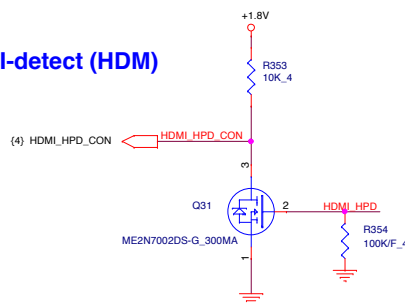


HDMI Conn.

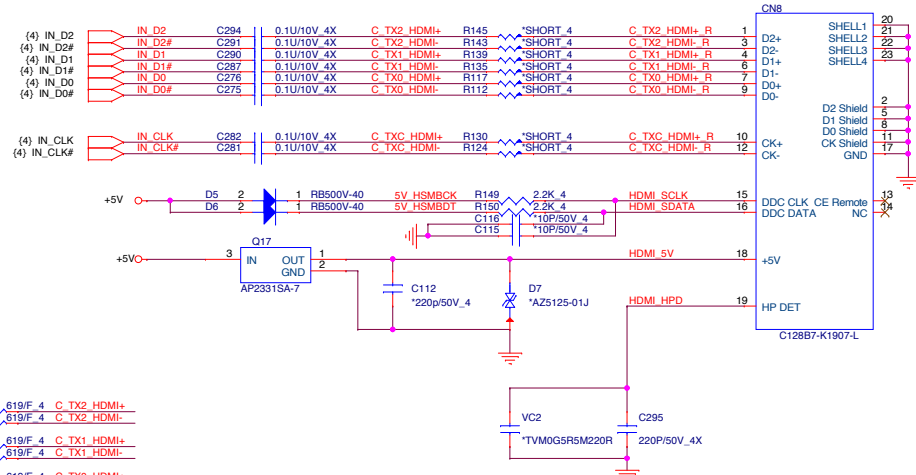
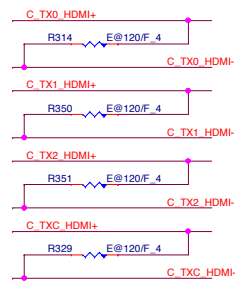
HDMI SMBus Isolation



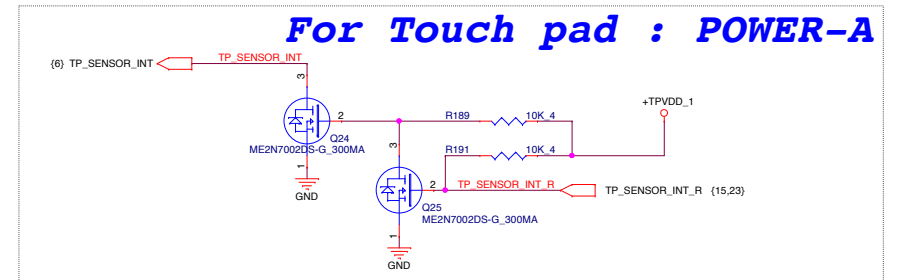
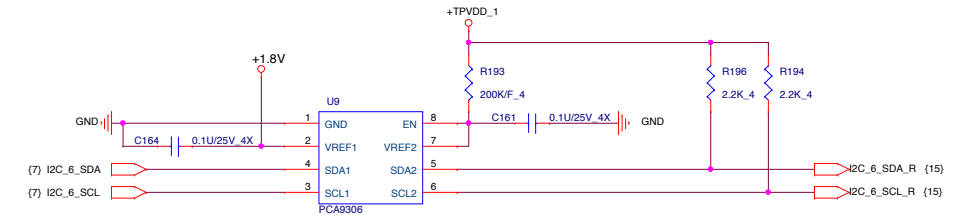
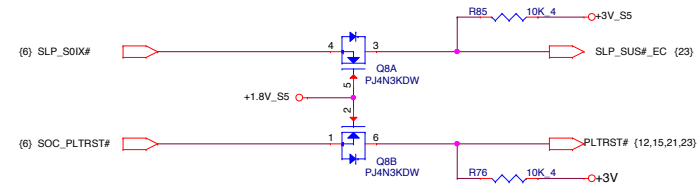
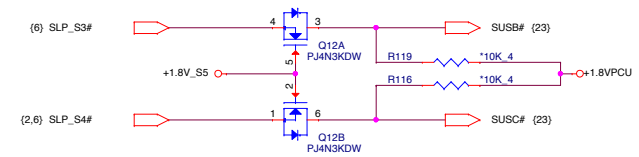
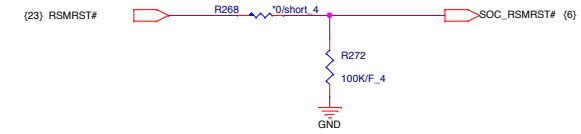
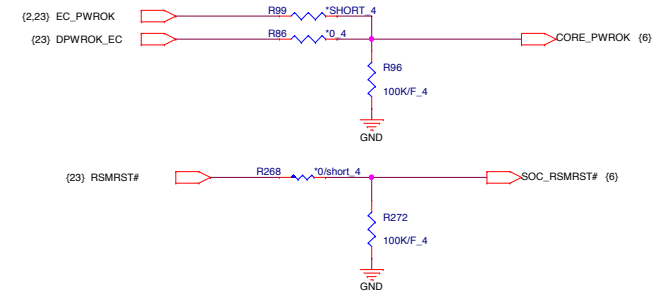
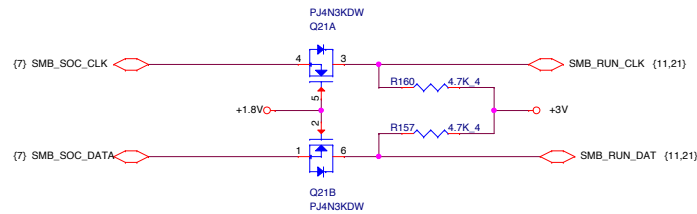
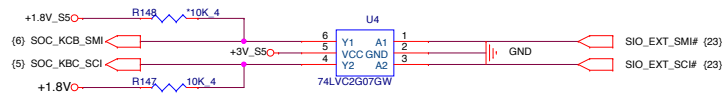
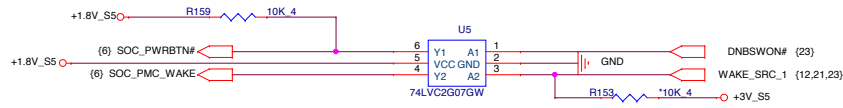
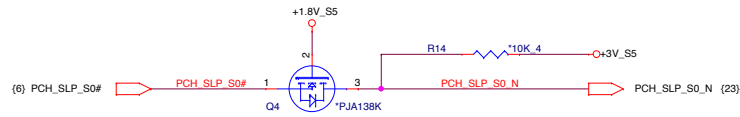
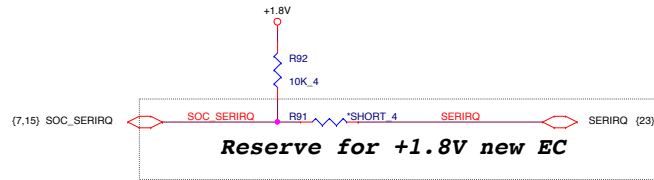
HDMI-detect (HDM)



EMI (EMC)



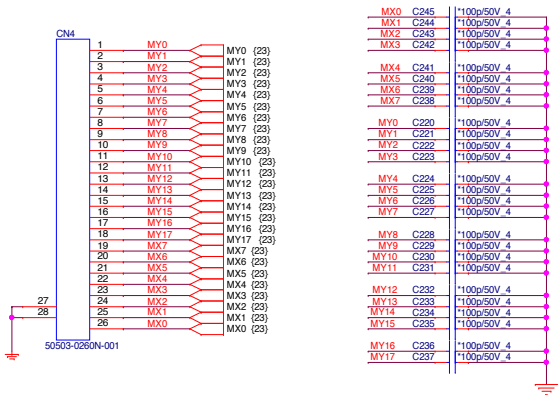
(6,7,9,12,32) +1.8V_S5
 (2,9,12,15,16,22,23,29,30,32) +3V_S5
 (4,5,6,7,9,12,13,15,21,23,32) +1.8V
 (4,5,9,11,12,13,15,16,19,21,23,30,32) +3V



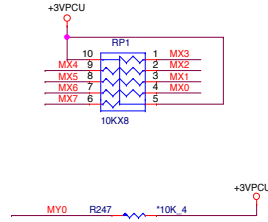
Quanta Computer Inc.
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KEYBOARD (KBC)

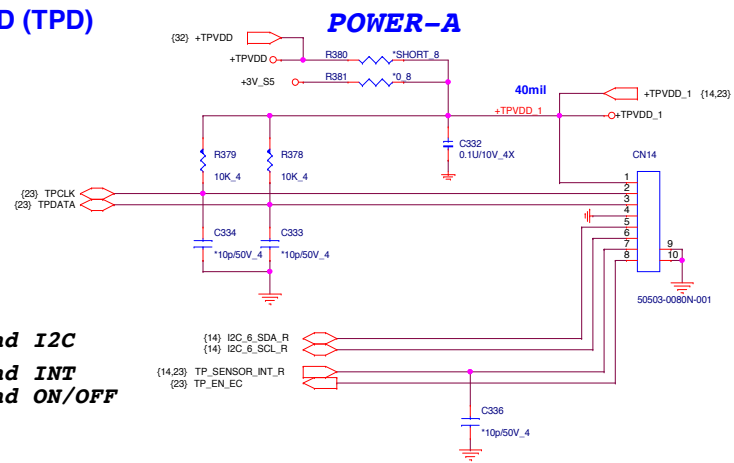


INTERNAL KEYBOARD STRIP SET (KBC)

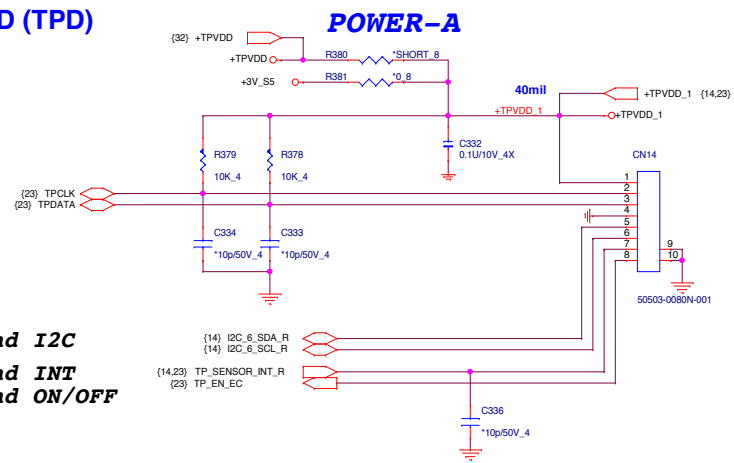


TOUCH PAD (TPD)

Touch pad I2C
Touch pad INT
Touch pad ON/OFF

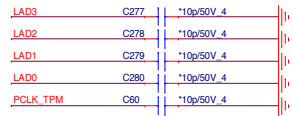
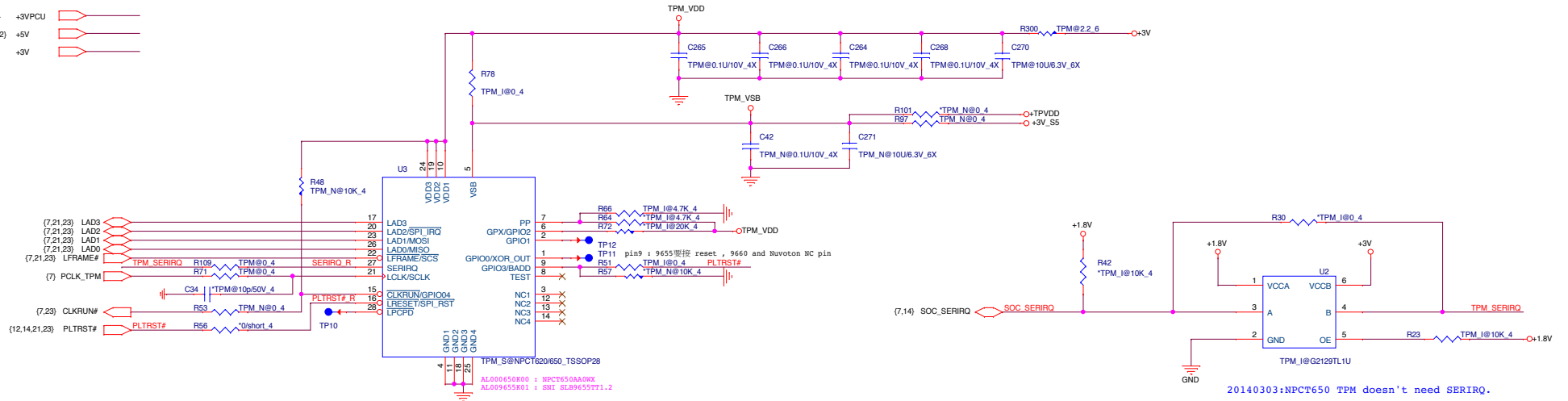


POWER-A



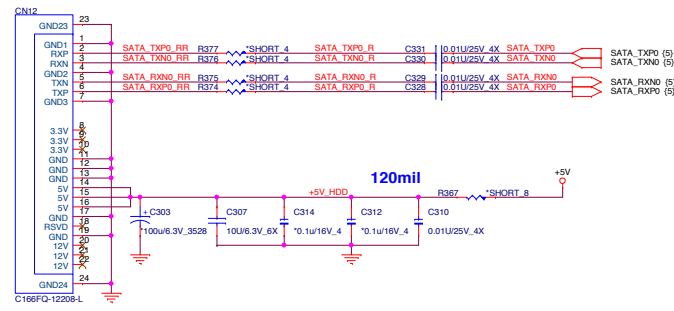
TPM (TPM)

(6,8,16,19,23,25,26,27,32) +3VPCU
(13,16,19,32) +5V
(4,5,9,11,12,13,14,16,19,21,23,30,32) +3V

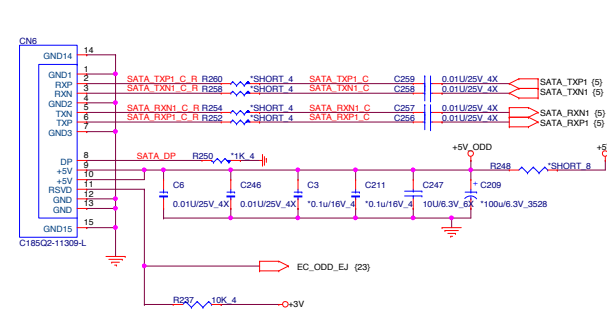


TPM_N for 新唐
TPM_I for 英飛凌---- default

2.5" SATA HDD (HDD)

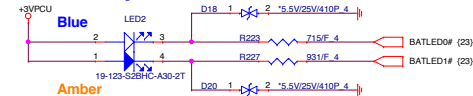


SATA ODD Connector

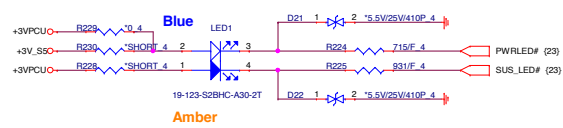


LED/SW (UIF)

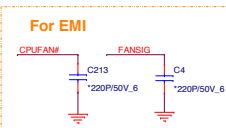
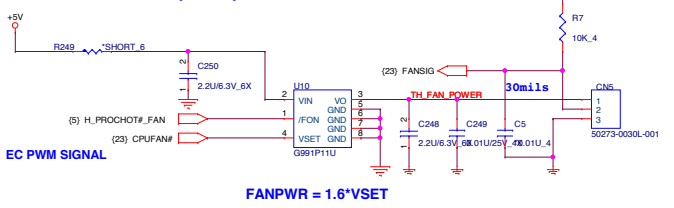
Battery indicator



PWR indicator

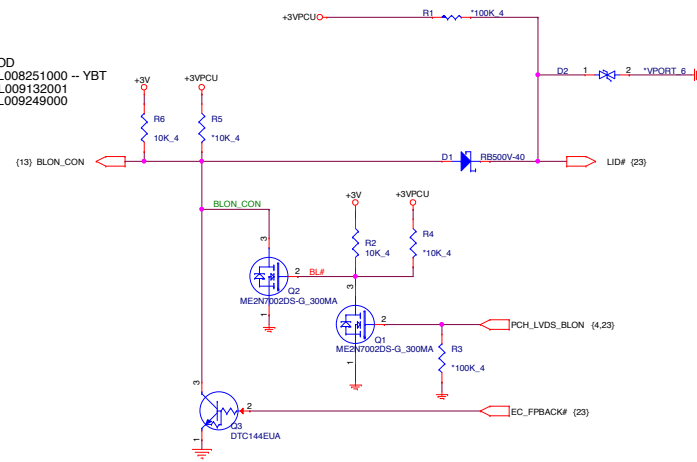


CPU FAN CTRL(THM)

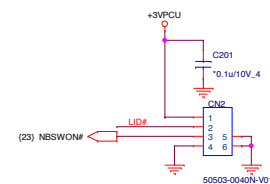


HALL IC (HSR)

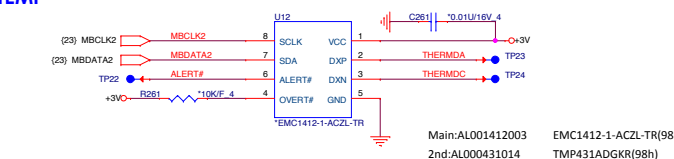
1st source : EOD
2nd source : AL008251000 -- YBT
3rd source : AL009132001
4th source : AL009249000



PWR button DB CON




CPU Thermal sensor(THS) / MB Local TEMP



Main:AL001412003 EMC1412-1-ACZL-TR(98h)
2nd:AL000431014 TMP431ADGKR(98h)

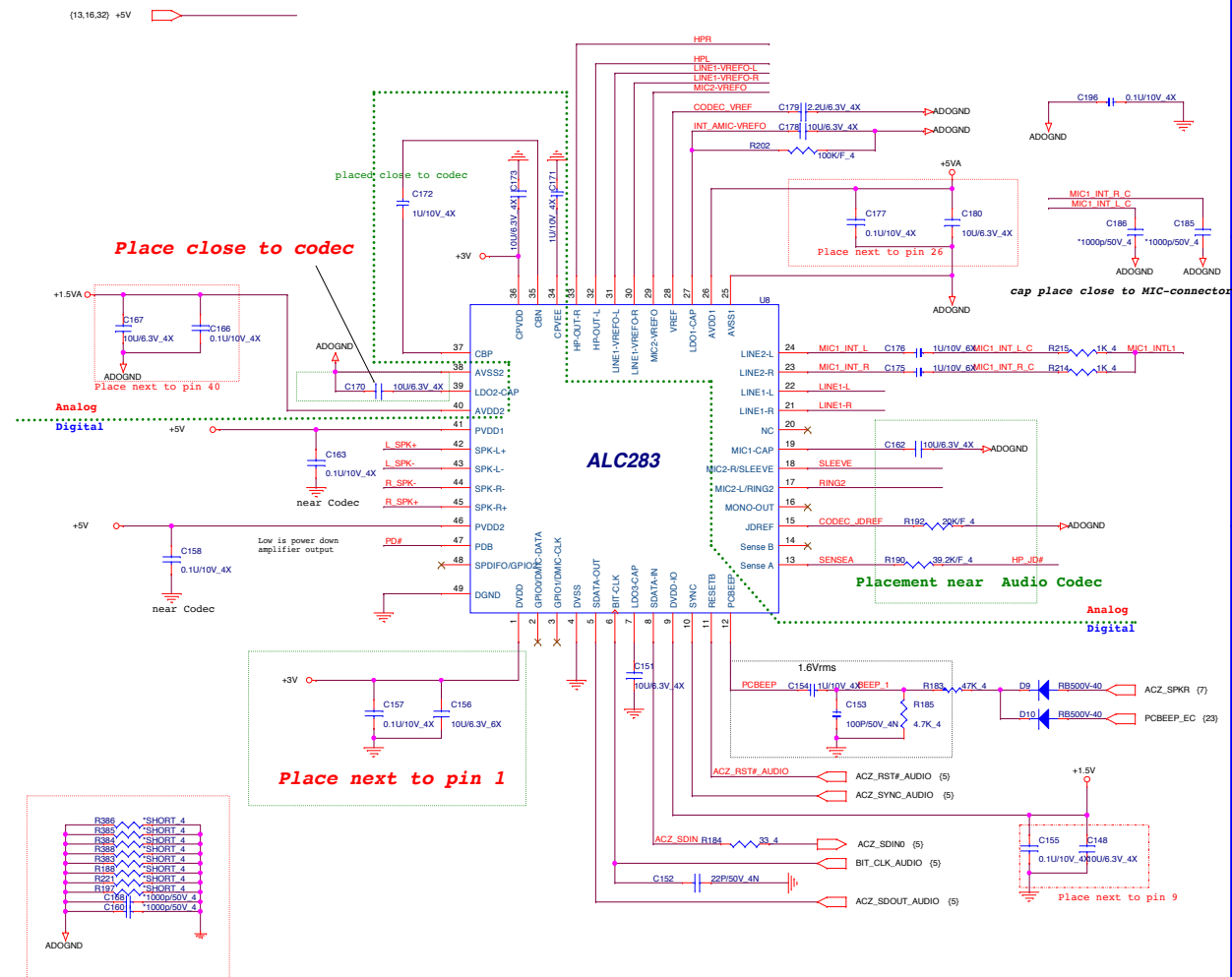
D
C
B
A

D
C
B
A

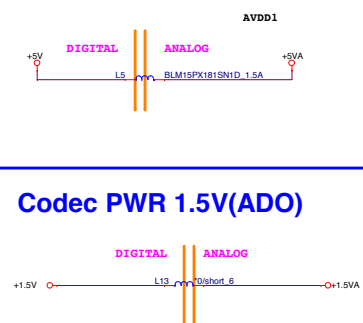
			Quanta Computer Inc.		
			PROJECT : Z8A		
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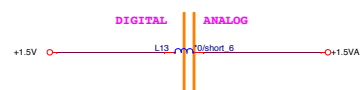
Codec(ADO)



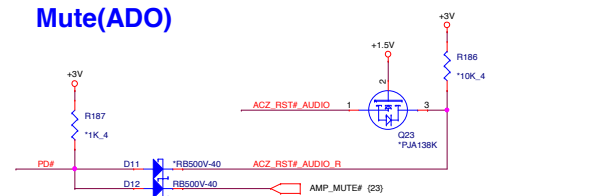
Codec PWR 5V(ADO)



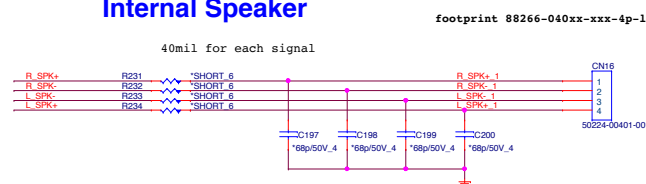
Codec PWR 1.5V(ADO)



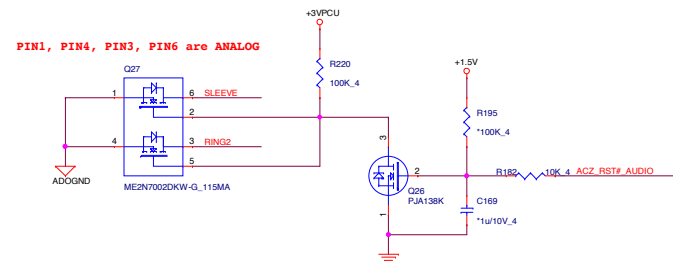
Mute(ADO)



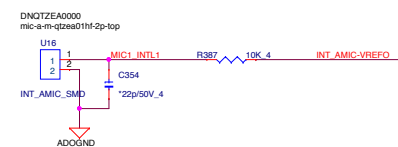
Internal Speaker



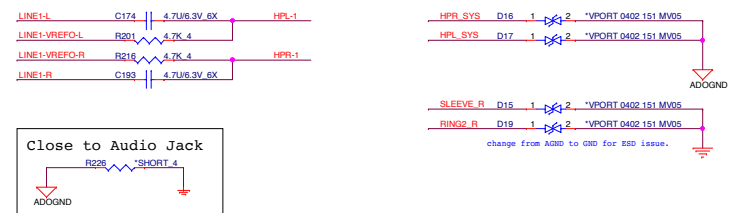
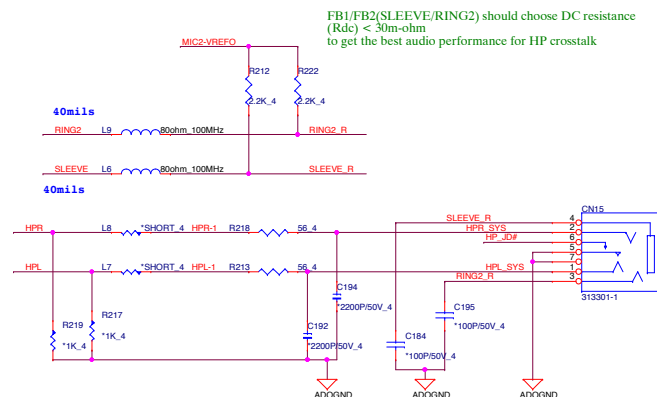
Grounding circuit(ADO)



INT MIC array



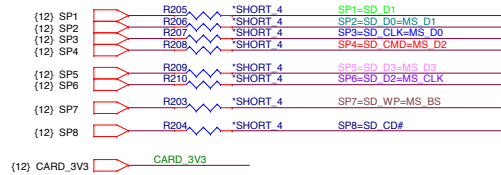
HEADPHONE/MIC/LINE combo



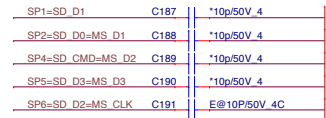
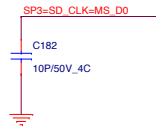
CARD READER CONNECTOR (MMC)

Share Pin

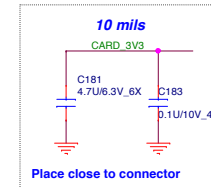
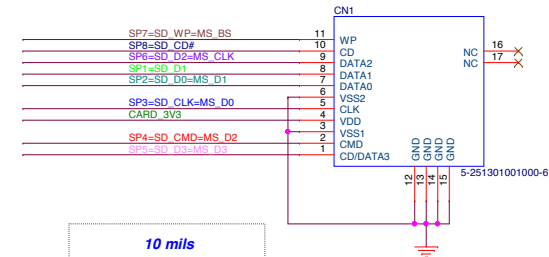
SP1	SD_D1	
SP2	SD_D0	MS_D1
SP3	SD_CLK	MS_D0
SP4	SD_CMD	MS_D2
SP5	SD_D3	MS_D3
SP6	SD_D2	MS_CLK
SP7	SD_WP	MS_BS
SP8	SD_CD#	
SP9		MS_INS#



EMI

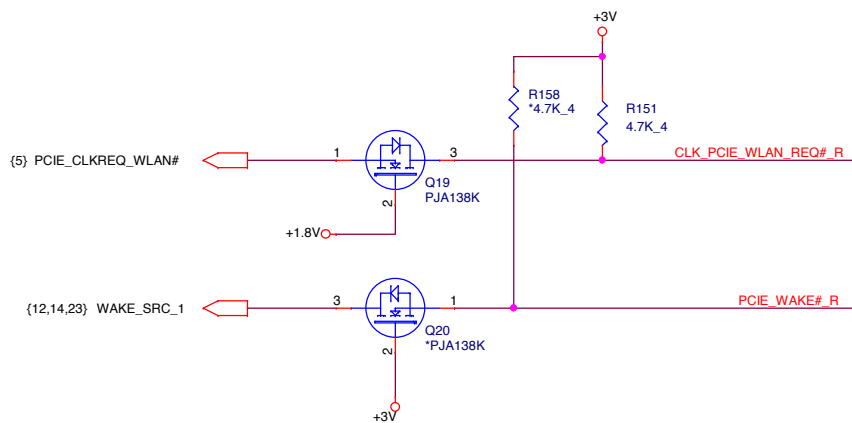
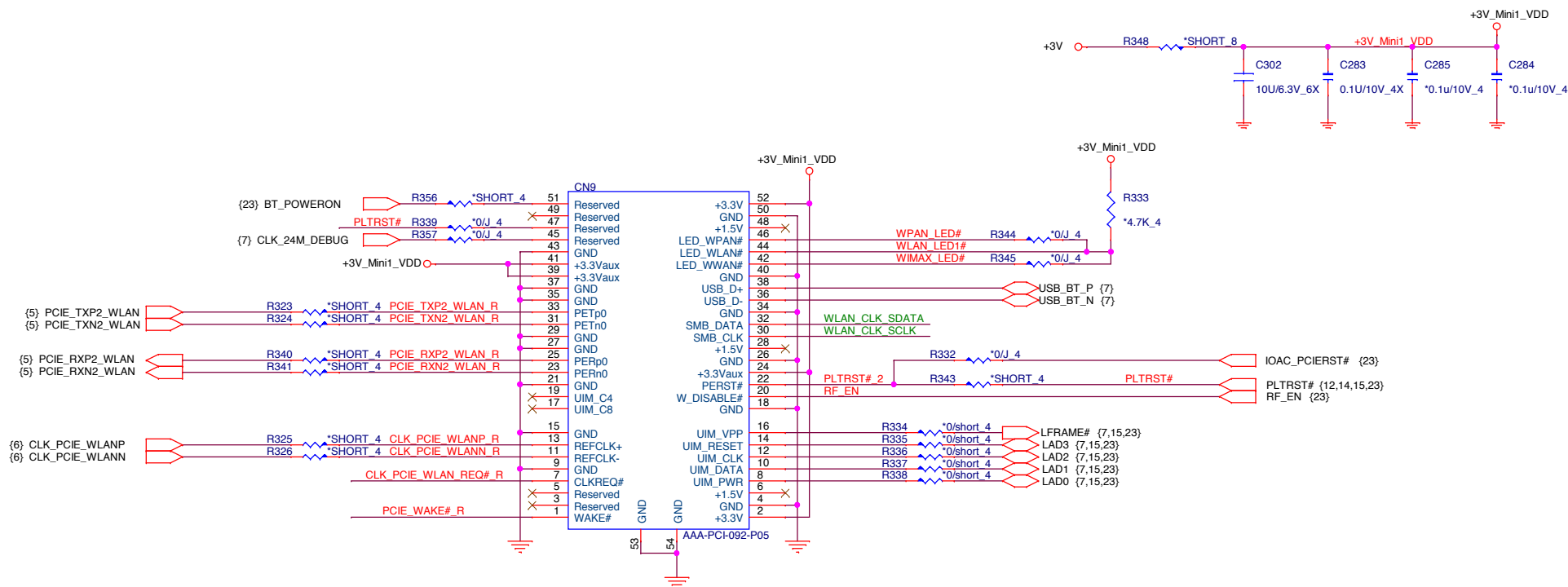


SD/MMC CARD READER (MMC)

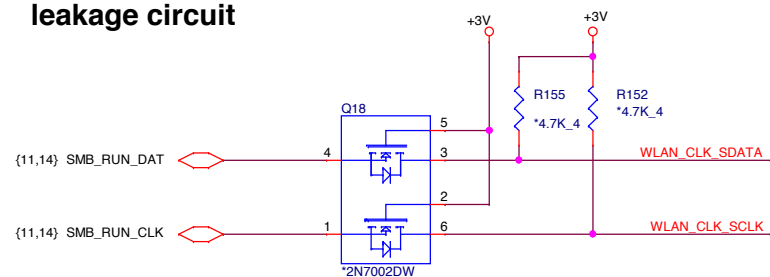


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	Cardreader GL834L	1A
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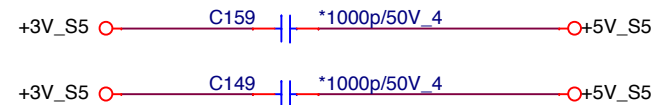
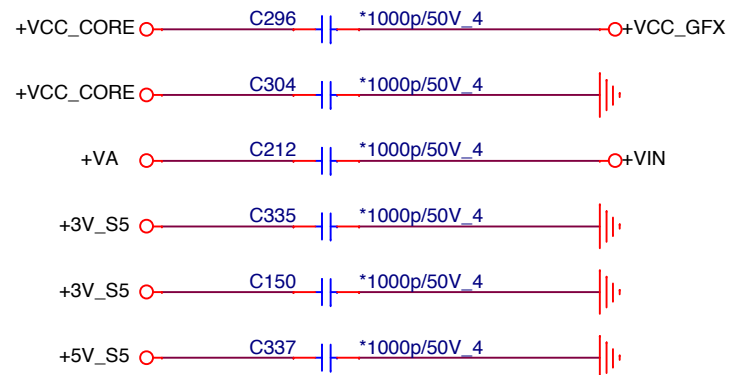
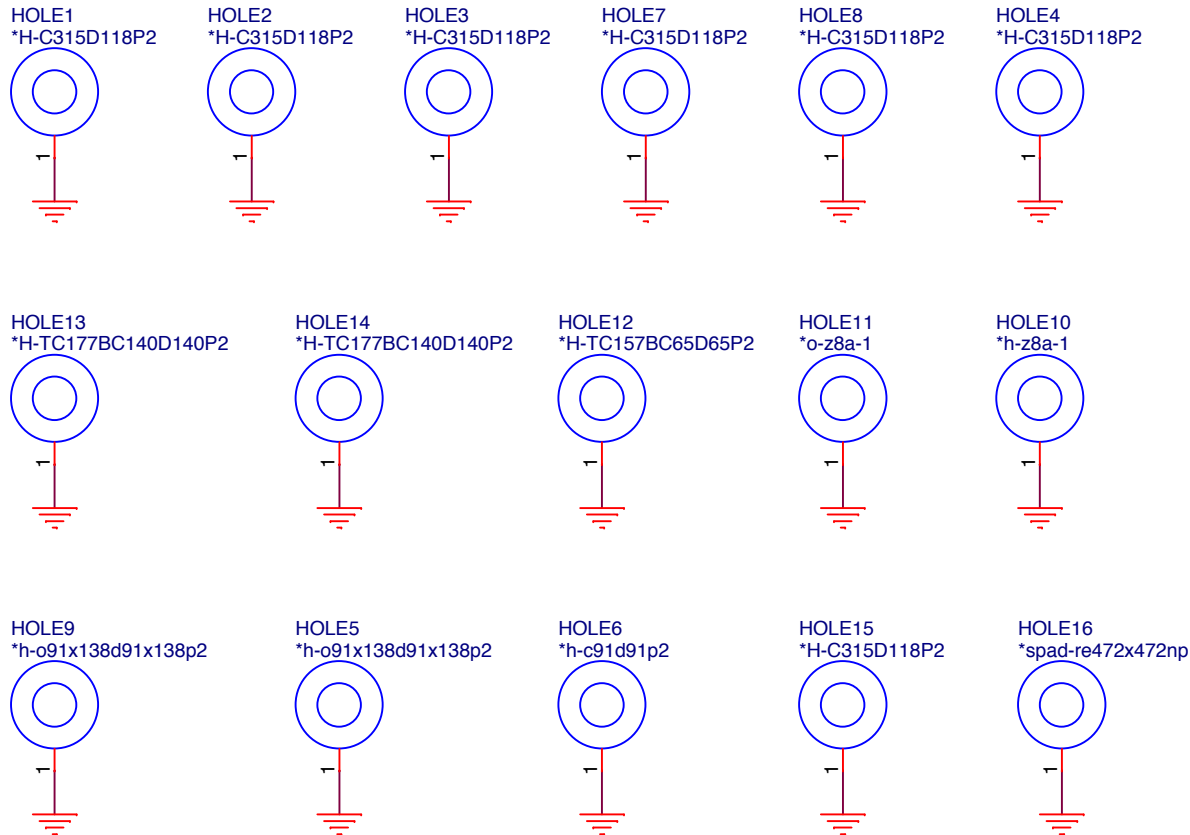



leakage circuit

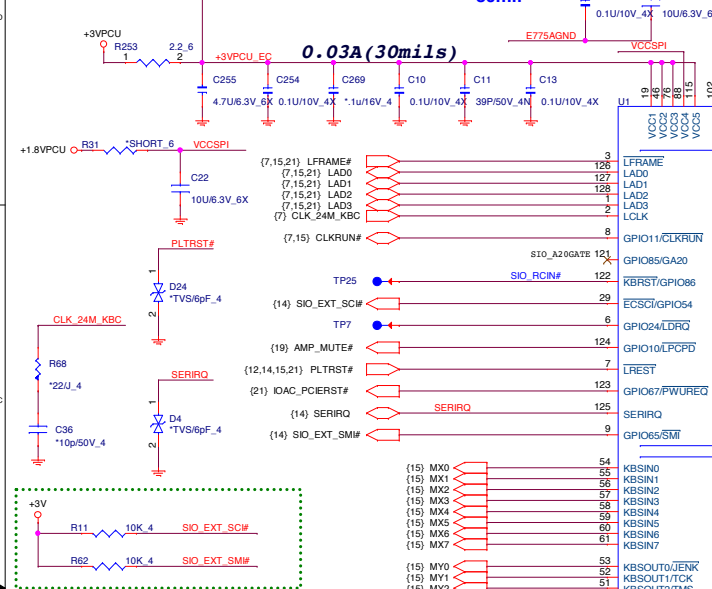


{4,5,6,7,9,12,13,14,15,23,32} +1.8V

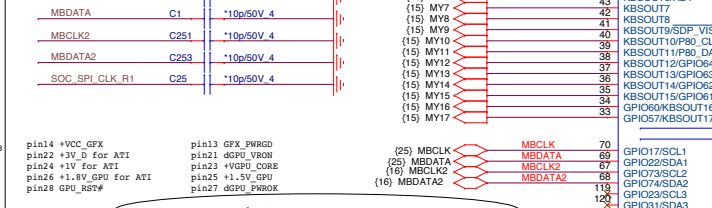
{4,5,9,11,12,13,14,15,16,19,23,30,32} +3V



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		Thermal / Hole
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[illegible]

Component	Pin	Signal	Pin	Signal	Pin	Signal
MBDATA	C1	*10p50V_4	(15)	MV7	42	KBSOUT7
			(15)	MV8	43	KBSOUT8
MBCLK2	C251	*10p50V_4	(15)	MV9	40	KBSOUT10SDP_VIS
			(15)	MV10	41	KBSOUT10F80_CLK
MBDATA2	C25	*10p50V_4	(15)	MV11	38	KBSOUT11F80_DA
			(15)	MV12	37	KBSOUT12/GPIO6E
			(15)	MV13	35	KBSOUT13/GPIO6B
			(15)	MV14	36	KBSOUT14/GPIO6C
SOC_SPI_CLK_R1	C25	*10p50V_4	(15)	MV15	34	KBSOUT15/GPIO6F
			(15)	MV16	33	GPIOD6/KBSOUT16
			(15)	MV17	30	GPIOD7/KBSOUT17
pin14 +VCC_GFX			(25)	MBCLK1	70	GPIOD7/SLC1
pin12 +V1_D for ATI	pin13 GFX_PWRGD		(25)	MBCLK2	67	GPIOD7/SDA1
pin14 +V for ATI	pin13 GFX_VMON		(16)	MBCLK2	67	GPIOD7/SLC2
pin26 +1.8V_GPU for ATI	pin123 +VGD0_CORE		(16)	MBDATA2	118	GPIOD7/SDA2
pin28 +V_GPU SS#	pin125 +1.5V_GPU				119	GPIOD7/SLC3
	pin127 +VGD0_PWRGD				120	GPIOD7/SLC4



(14,15) TP_SENSOR_INT_R ← TP_SENSOR_INT_R R54 00U.4 TP_INT_EC# 77 GPIO27PDSAT2
(25,30) MAINON ← 77 GPIO00032CLKIN

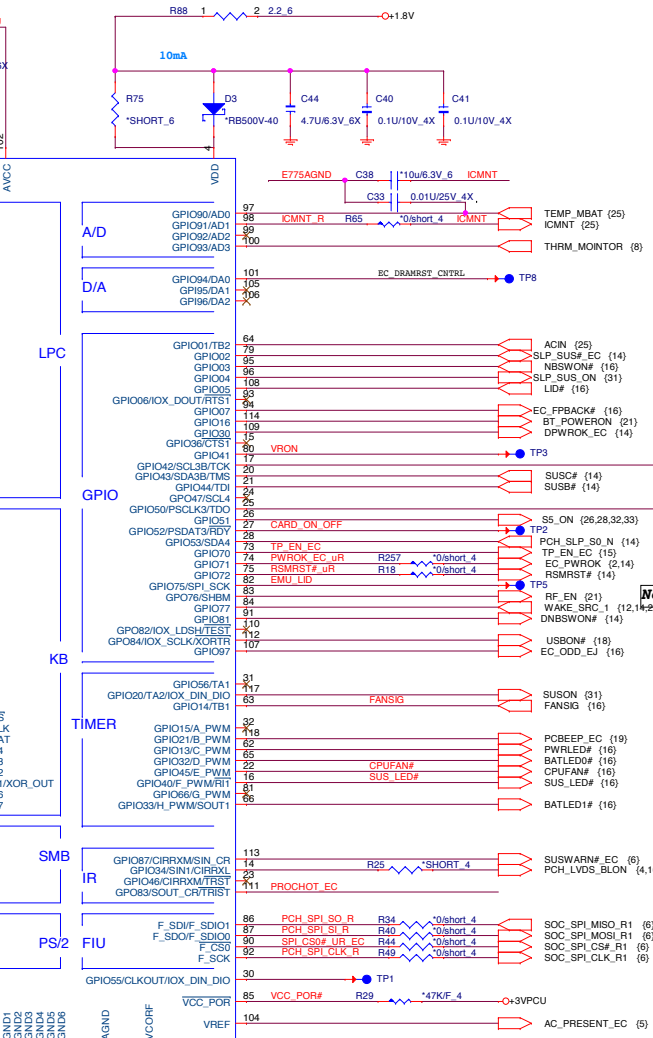
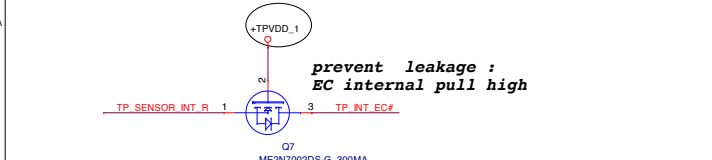
R50 0short.4 +1.05V VTT_EC
R46 43.4 EC_PECR_R

TP6

PECI interface should be used on Bay Trail platform, thus VTT pin can wire to GND and PECI signal can be left un-connected.

12 VTT
13 PECI
NPCE98S1BDX

prevent leakage :
EC internal pull high



SM Bus 1	Battery
SM Bus 2	PCH
SM Bus 3	GPU

MBLCK MBDATA TP_EN_EC MBLCK2 MBDATA2

R13 4.7K 4
R12 4.7K 4
R15 10KJ 4
R8 10KJ 4
R10 10KJ 4

Change FU resistor(R424,R428) from 10K to 4.7K

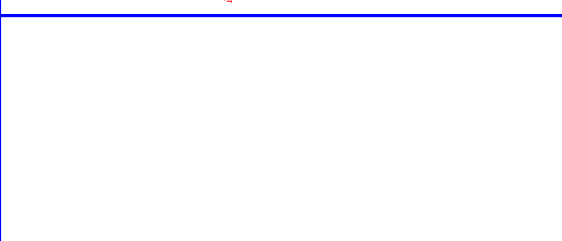
PROCHOT_EC

R93 100K 4

Q9 ME2N7002DS-G_300MA

H_PROCHOT# (5.30)

Q47 need Replacement at BOT layer.



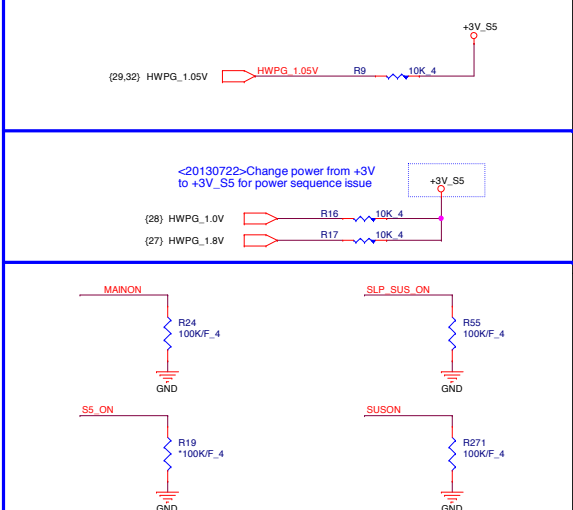
WCHPANEL_ON

pin91 in 985L is 1.8V only

EC_PWROK

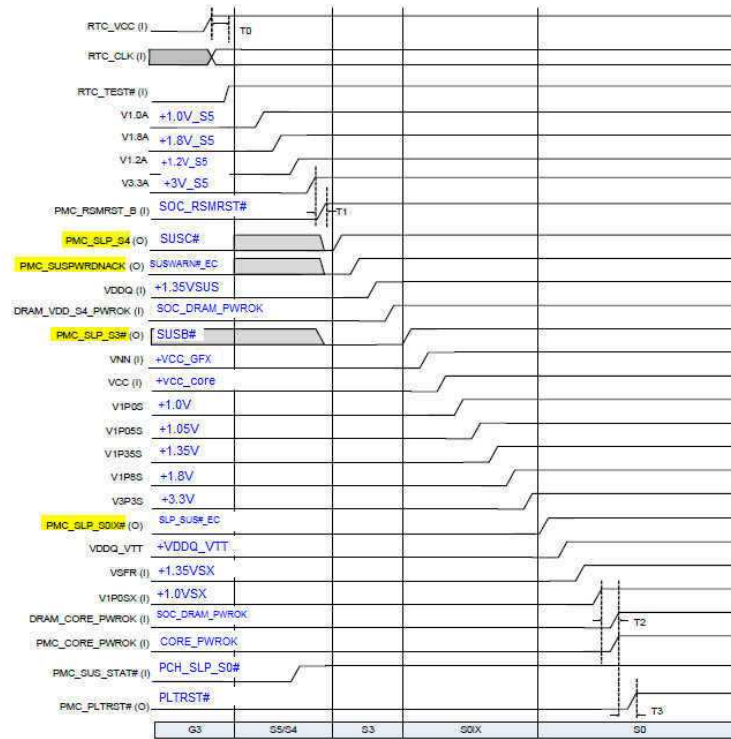
<20090721_FAE suggestion>
Stuff 100K and close to EC side
for improving power consumption

<20130722>Change power from +3V to +3V_S5 for power sequence issue

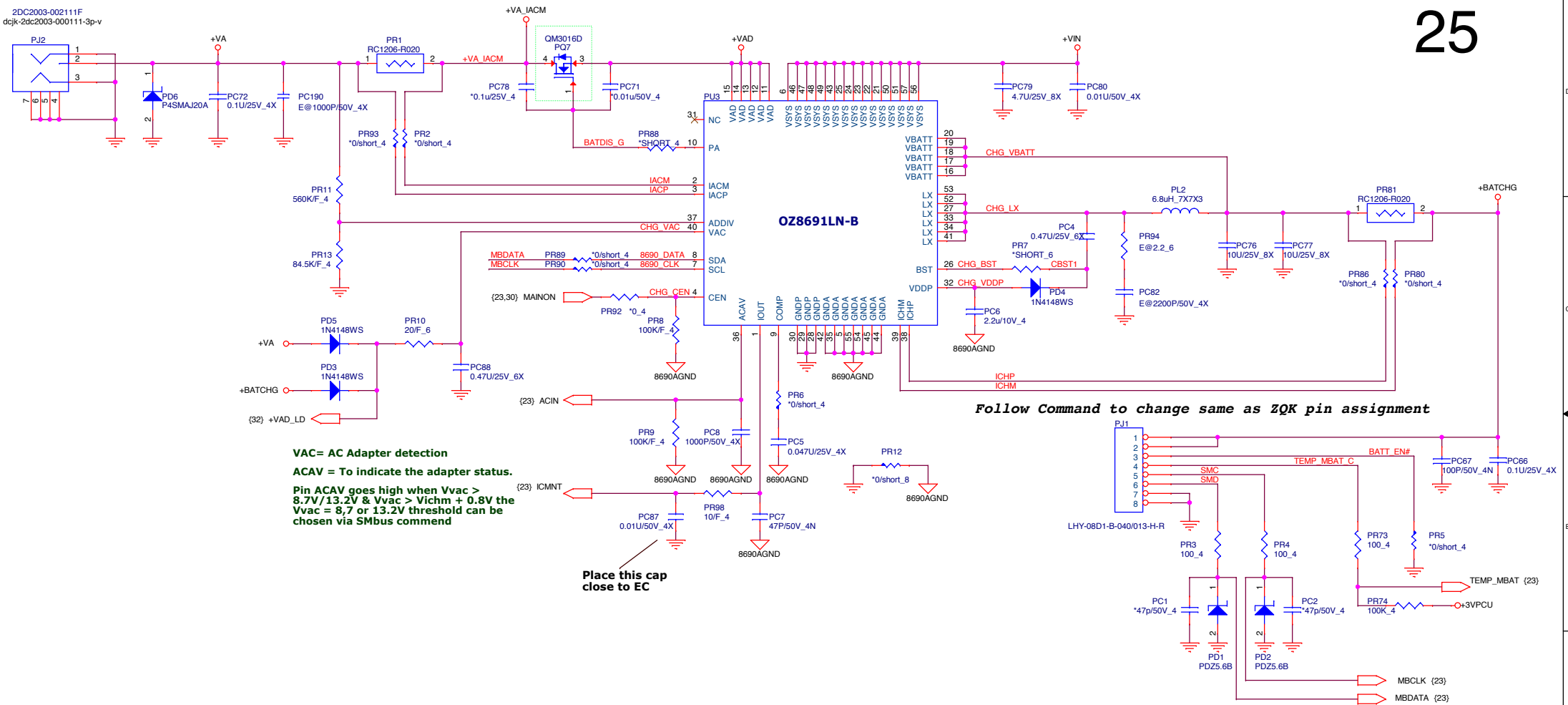


Bay Trail-M S4/S5 to S0 (Power Up) Sequence

24



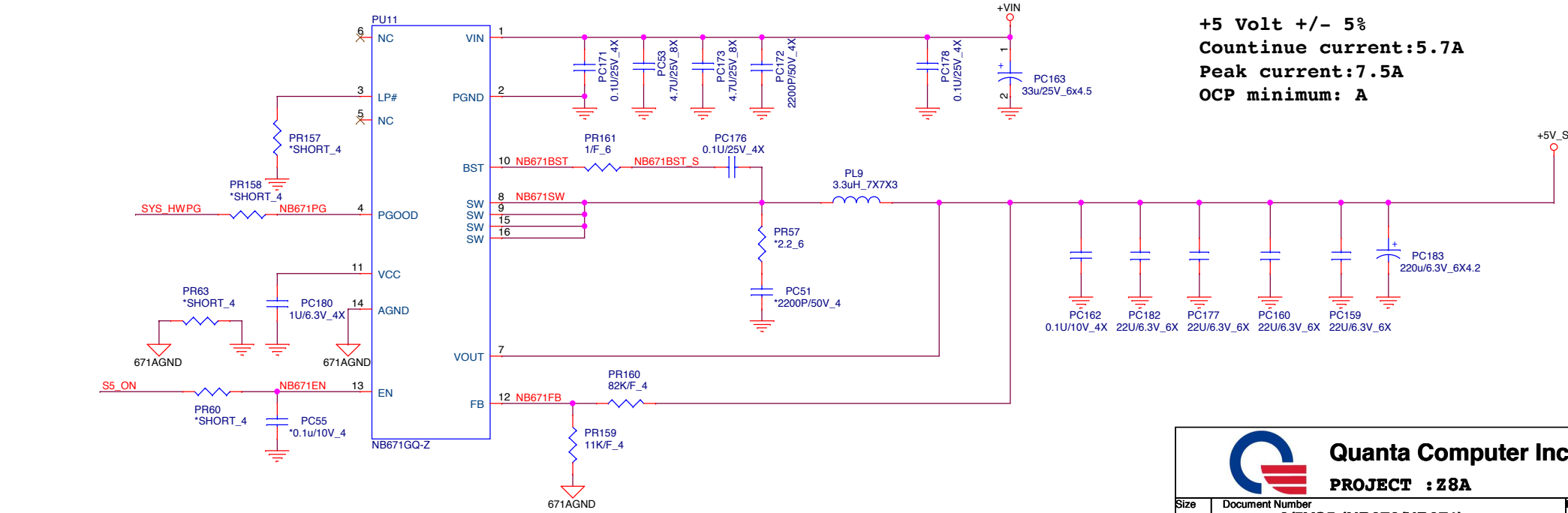
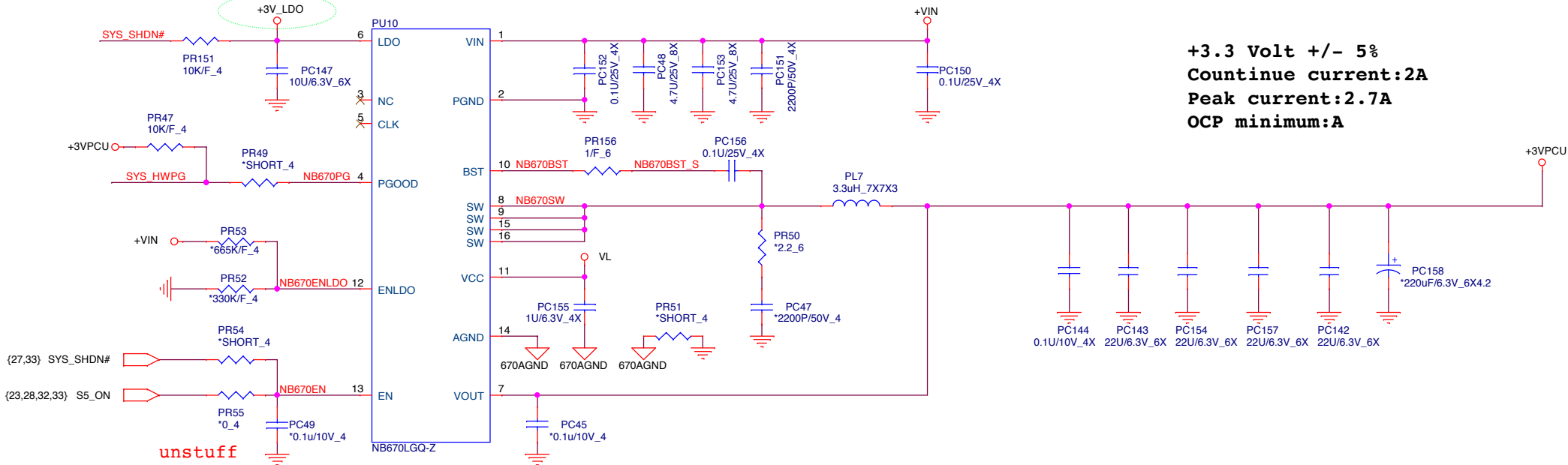
2DC2003-002111F
dcjk-2dc2003-000111-3p-v



DC/DC +3VPCU/+5V_S5

+3VPCU {6,8,15,16,19,23,25,27,32}
+5V_S5 {18,22,28,29,30,31,32}

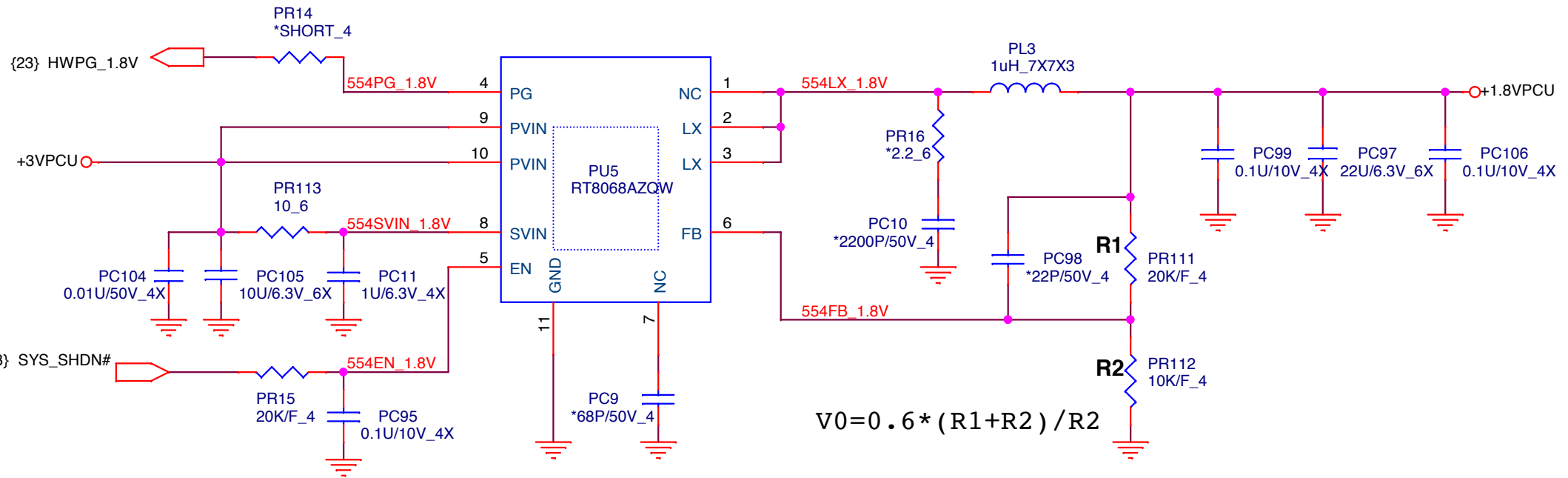
LDO(MAX)=100mA



{14,23,32} +1.8VPCU

{6,8,15,16,19,23,25,26,32} +3VPCU

+1.8V Volt +/- 5%
Countinue current:0.08A
Peak current:0.11A
OCP minimum:A



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	+1.8VPCU	1A

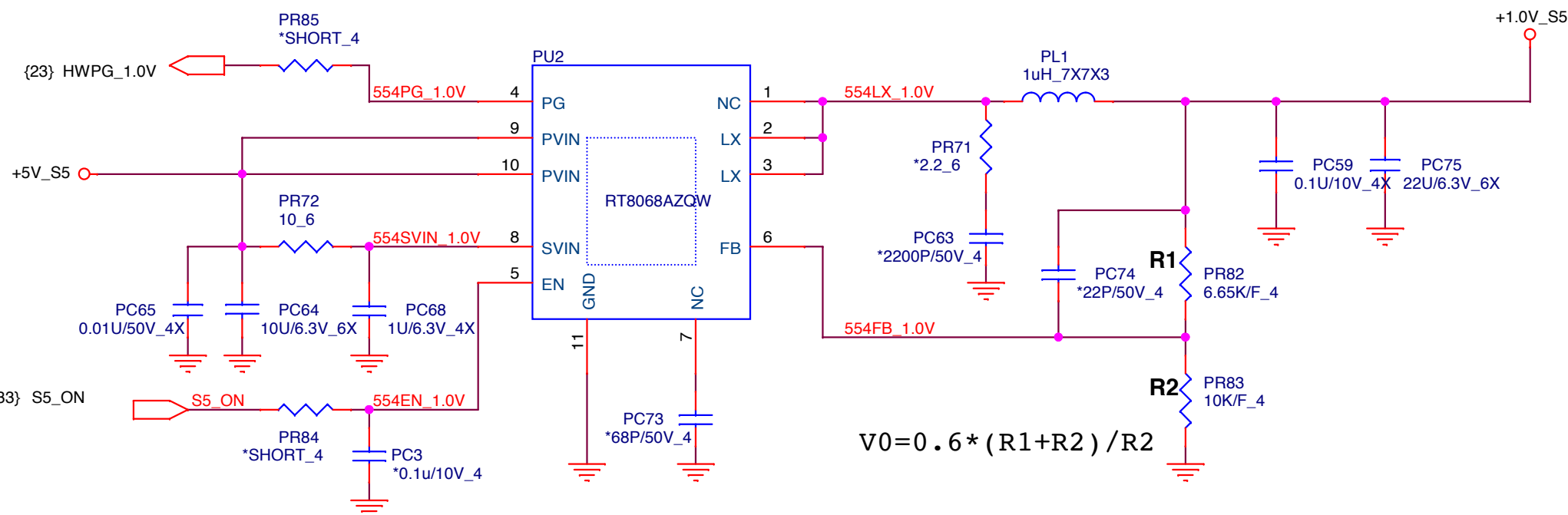
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{9,32} +1.0V_S5

{18,22,26,29,30,31,32} +5V_S5

{2,9,12,14,15,16,22,23,29,30,32} +3V_S5

+1.0V Volt +/- 5%
Countinue current:2.4A
Peak current:3.2A
OCP minimum:A



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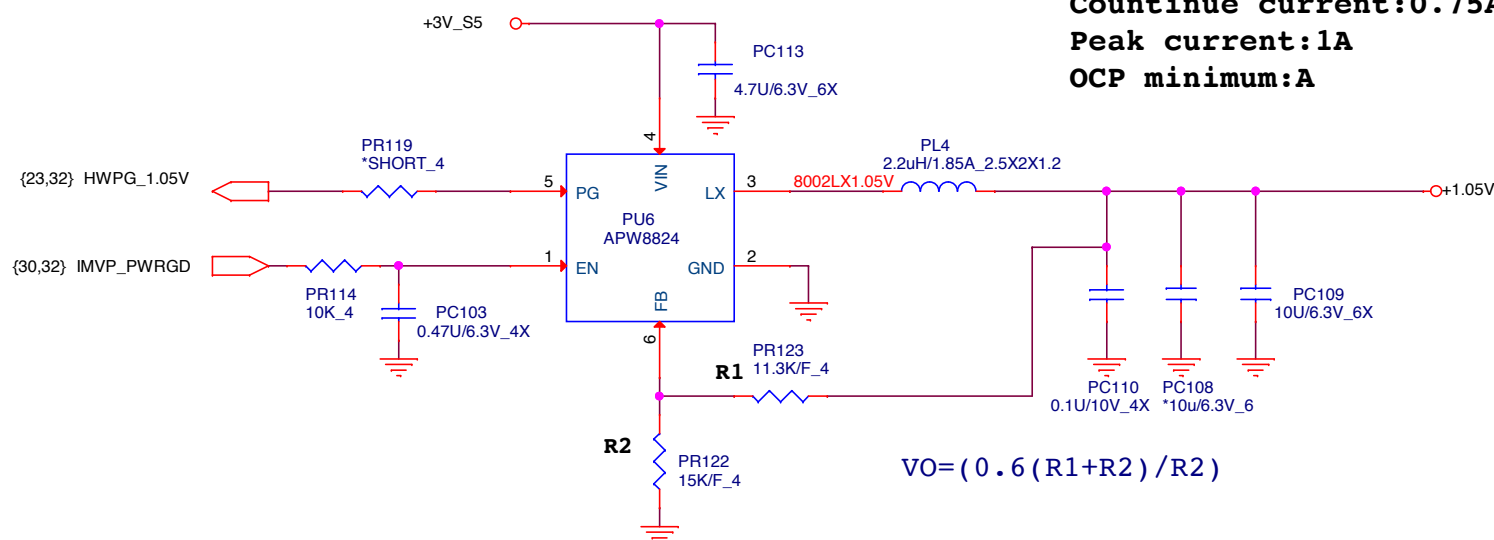
Size	Document Number +1.0V	Rev 1A
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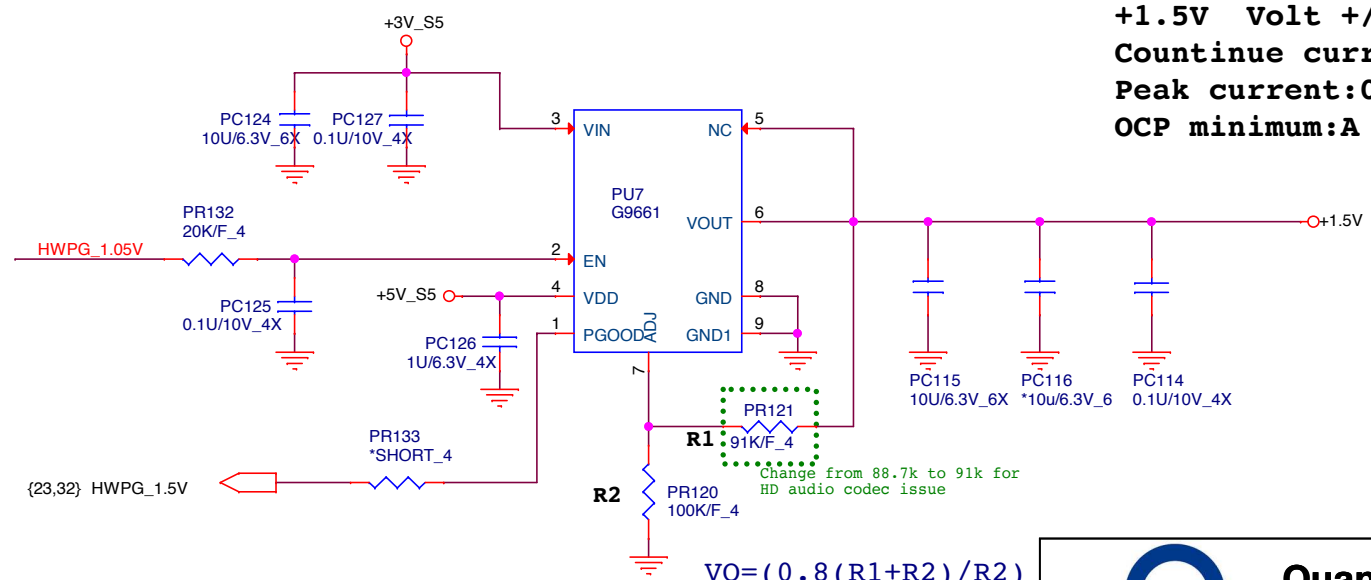
{2,9,12,14,15,16,22,23,30,32} +3V_S5
 {9} +1.05V
 {9,19} +1.5V

+1.05V Volt +/- 5%
Countinue current:0.75A
Peak current:1A
OCp minimum:A



$$VO = (0.6 (R1 + R2) / R2)$$

+1.5V Volt +/- 5%
Countinue current:0.023A
Peak current:0.03A
OCp minimum:A

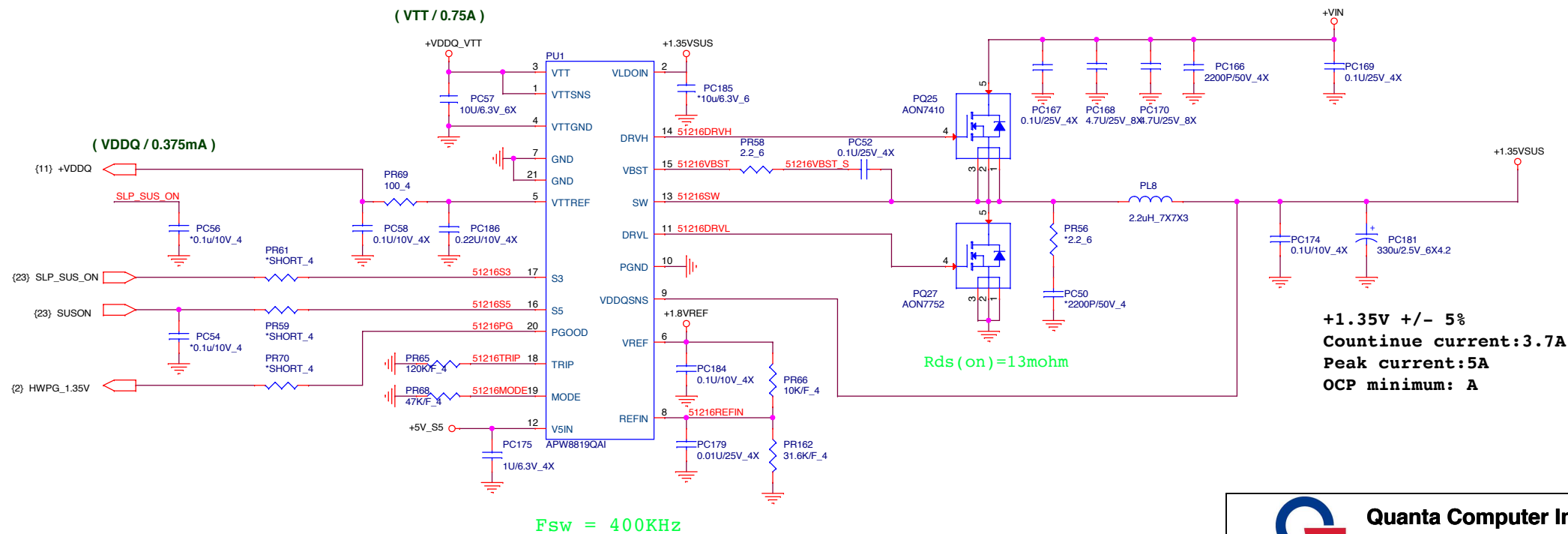


$$VO = (0.8 (R1 + R2) / R2)$$

R2 < 120Kohm



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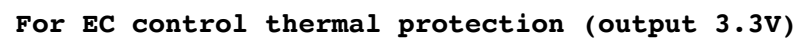


Quanta Computer Inc.


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Size	Document Number	Rev
	DDR3 (APW8819)	1A

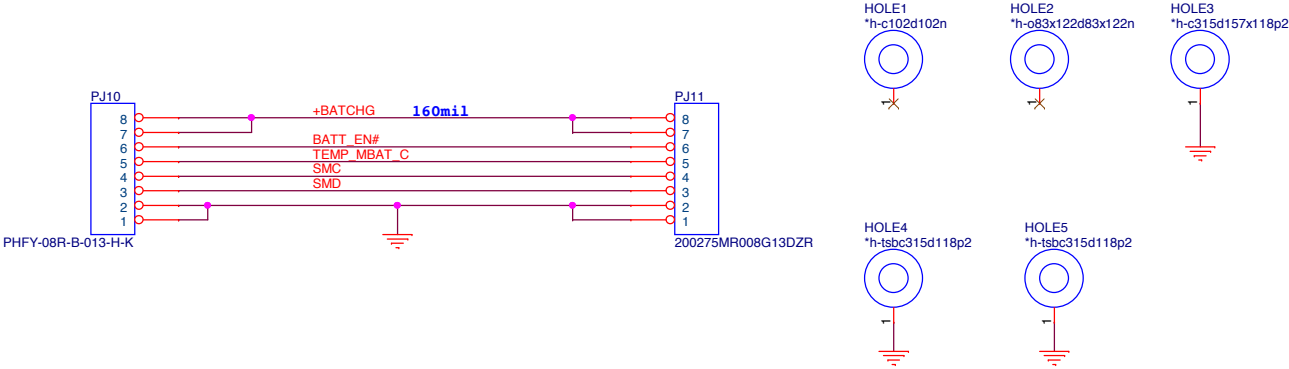
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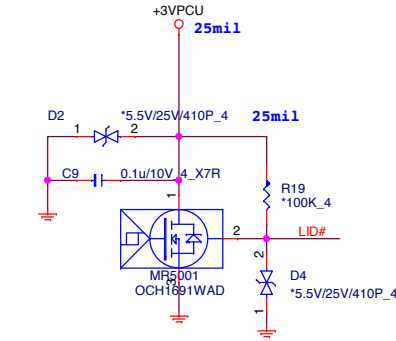
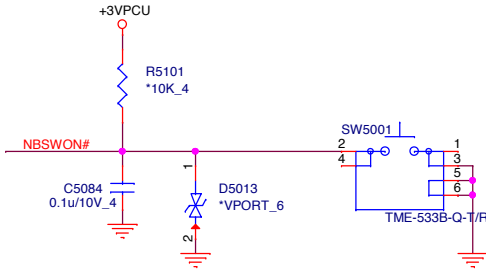
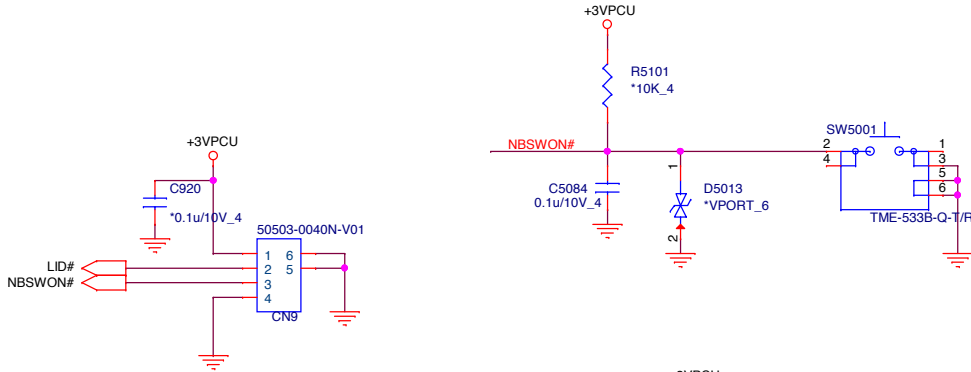
Model	REV	CHANGE LIST
Z8A MB	A1A	1.First Release
	C3A	1.Change C19/C20 value from 10P to 12P for crystal Vendor EA suggestion 2.Swap USB3+/USB3- signals to correct pin define for CCD yellow mark issue 3.Change L4 to 90 ohm common mode chock for EMI 4.Change Hole10 and Hole16 footprint for ME DXF update 5.Reverse D24 and D25 ESD components for ESD 6.Add PC190 1000p cap for EMI suggestion 7.Mount PR94 and PC82 for EMI suggestion
	E3A	1.Change R223,R224,R225,R227 value for LED brightness 2.Change Hole5 and Hole6 and Hole9 and Hole10 footprint for ME DXF update

		Quanta Computer Inc.		DOC NO.	PROJECT MODEL :	Z8A	APPROVED BY:		DATE:
File	Document Number	PROJECT : Z8A			PART NUMBER:		DRAWING BY:		REVISION:
Change list									
Date: Thursday, Aug 31, 2017		Sheet 34 of 34							

Battery Board.



Power Switch Board.



1st source : AL001691000 -- OCS
2nd source : AL008251000 -- YBT

