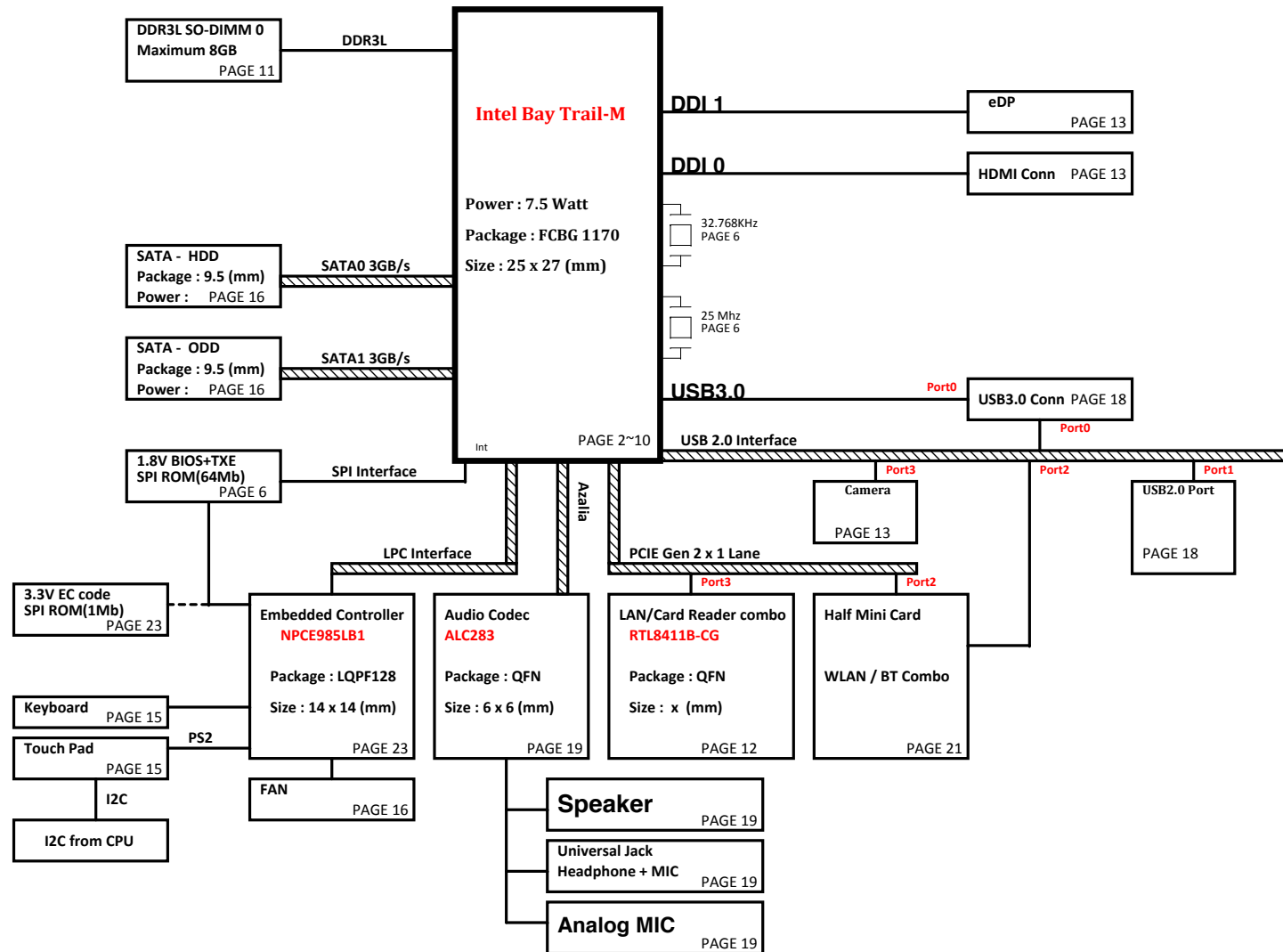


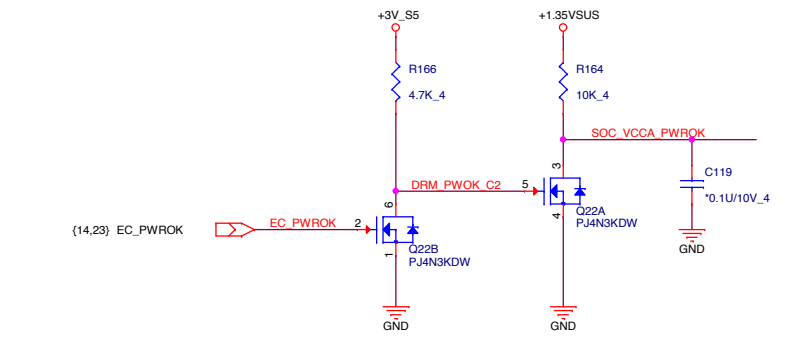
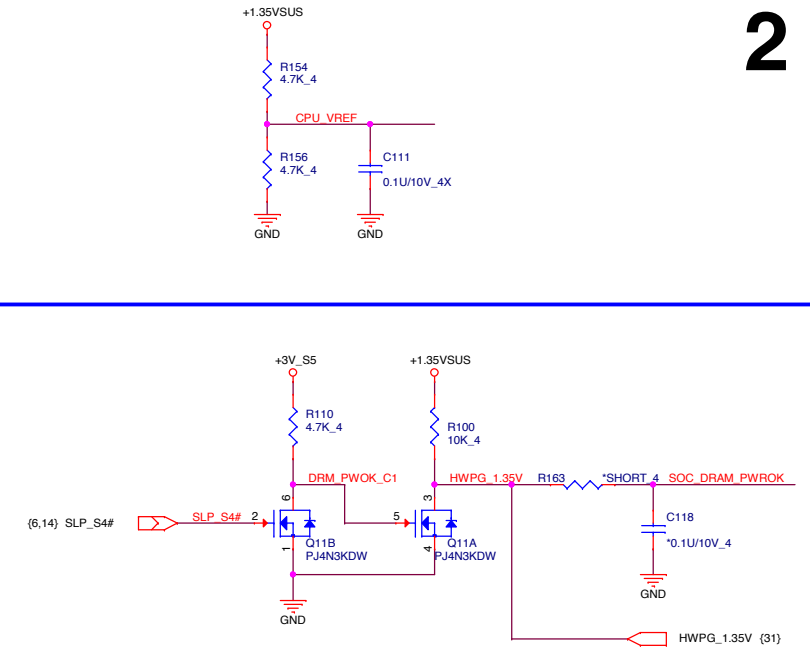
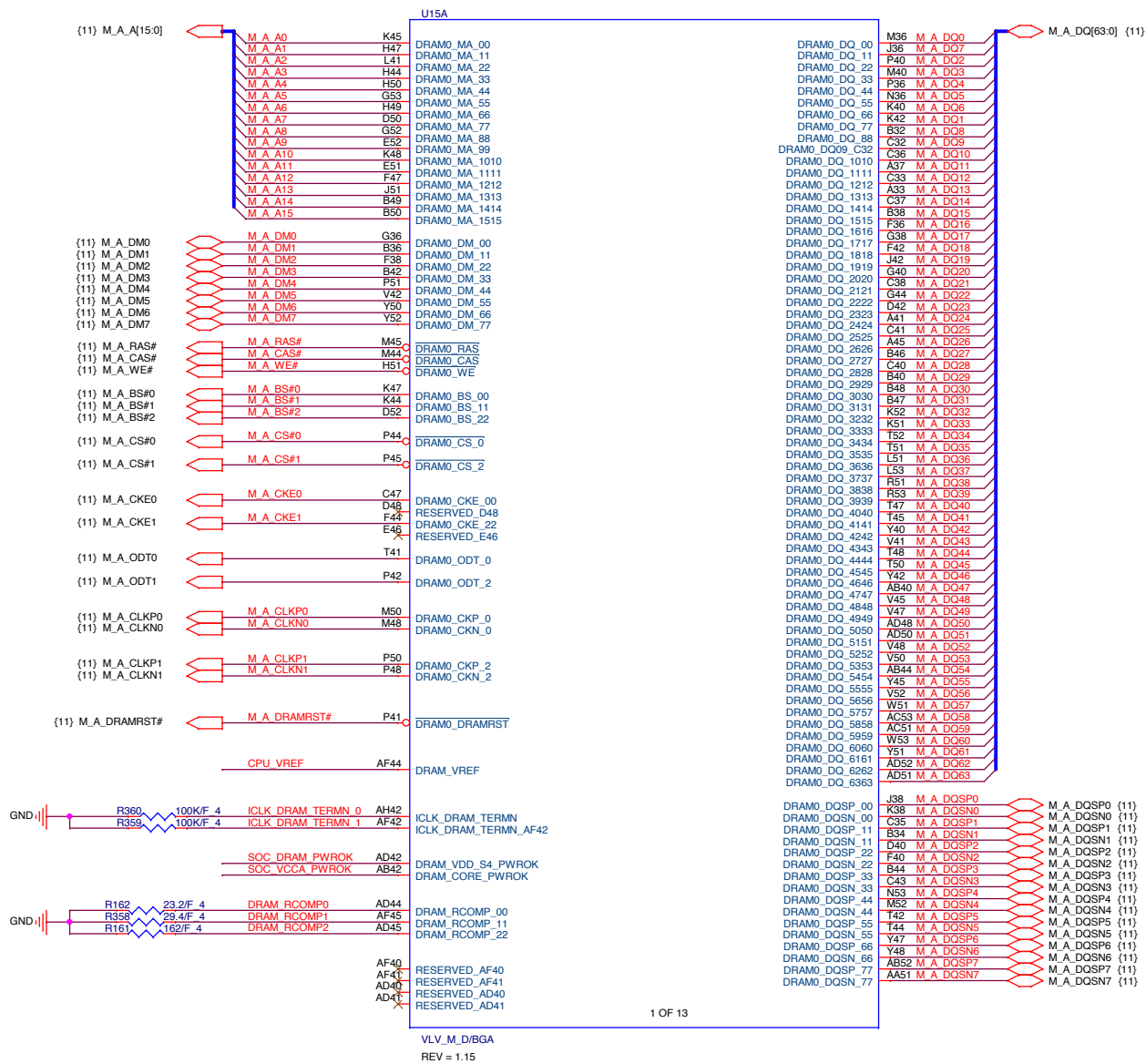
Z8A UMA(14")

Intel Bay Trail-M Platform Block Diagram

PCB 4L STACK UP

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





2 OF 13

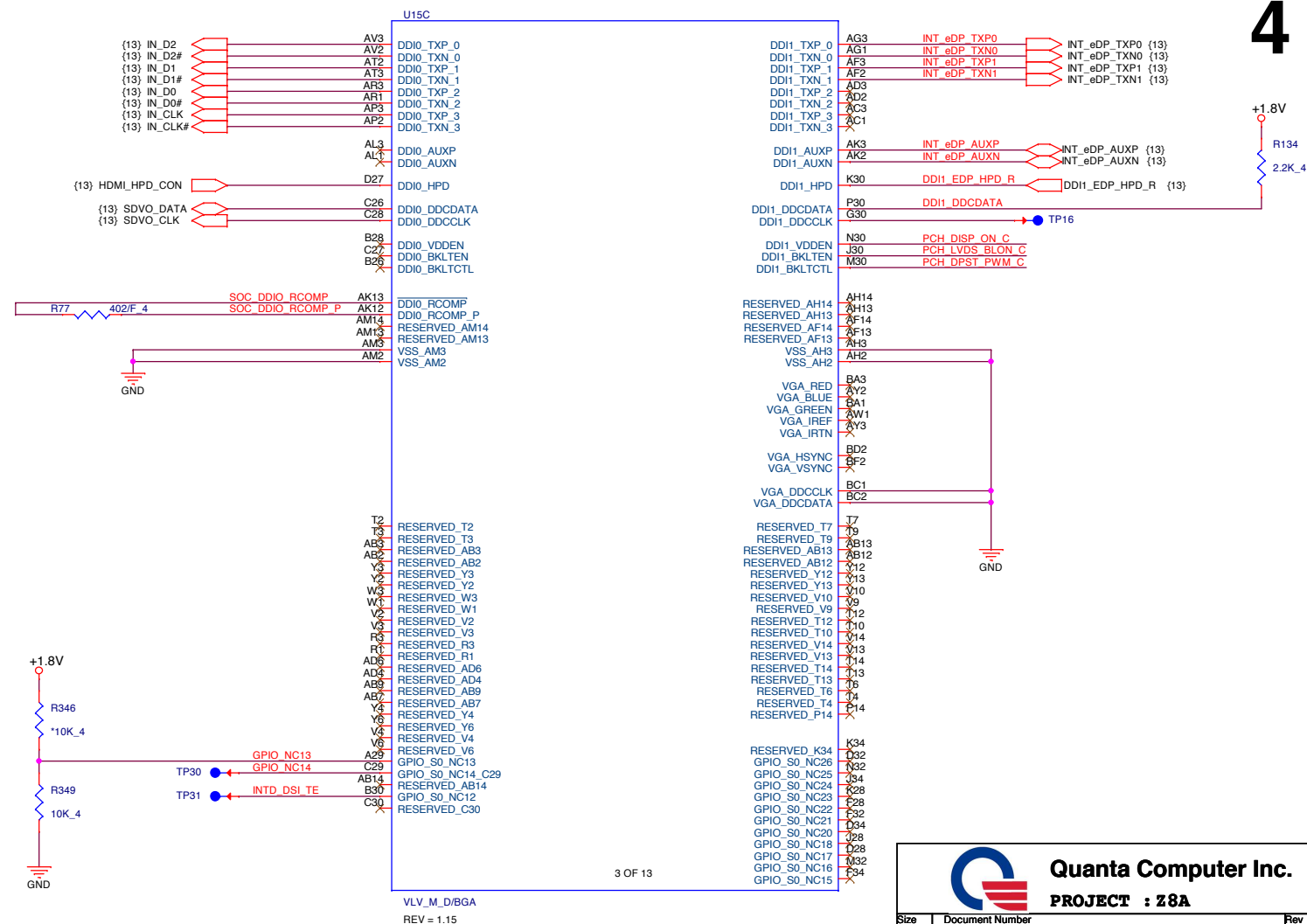
AT41  DRAM1_DRAMRST

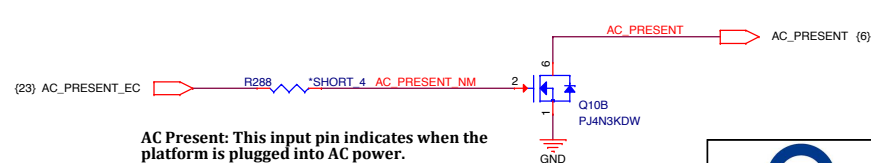
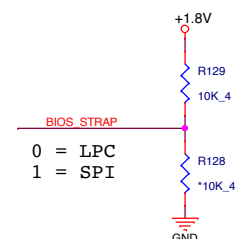
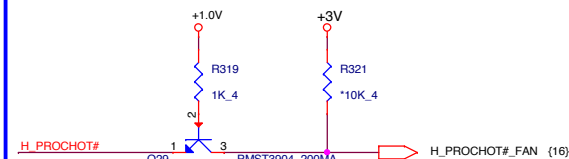
DRAM1_DQSP_00	BF40
DRAM1_DQSN_00	BD40
DRAM1_DQSP_11	BG35
DRAM1_DQSN_11	BH34
DRAM1_DQSP_22	BA38
DRAM1_DQSN_22	AV38
DRAM1_DQSP_33	BH44
DRAM1_DQSN_33	BG43
DRAM1_DQSP_44	AU53
DRAM1_DQSN_44	AV52
DRAM1_DQSP_55	BP42
DRAM1_DQSN_55	BP44
DRAM1_DQSP_66	AK47
DRAM1_DQSN_66	AK48
DRAM1_DQSP_77	AH52
DRAM1_DQSN_77	AJ51

VLV_M_D/BGA
REV = 1.15



Size	Document Number Valley 2/9 (DDB)	Rev 1A
Date:	Thursday, July 31, 2014	Sheet 3 of 33





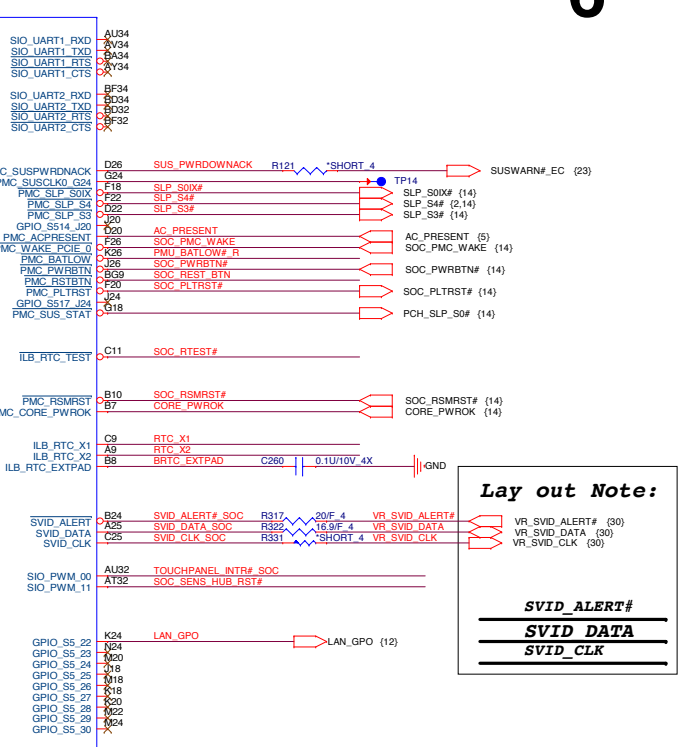
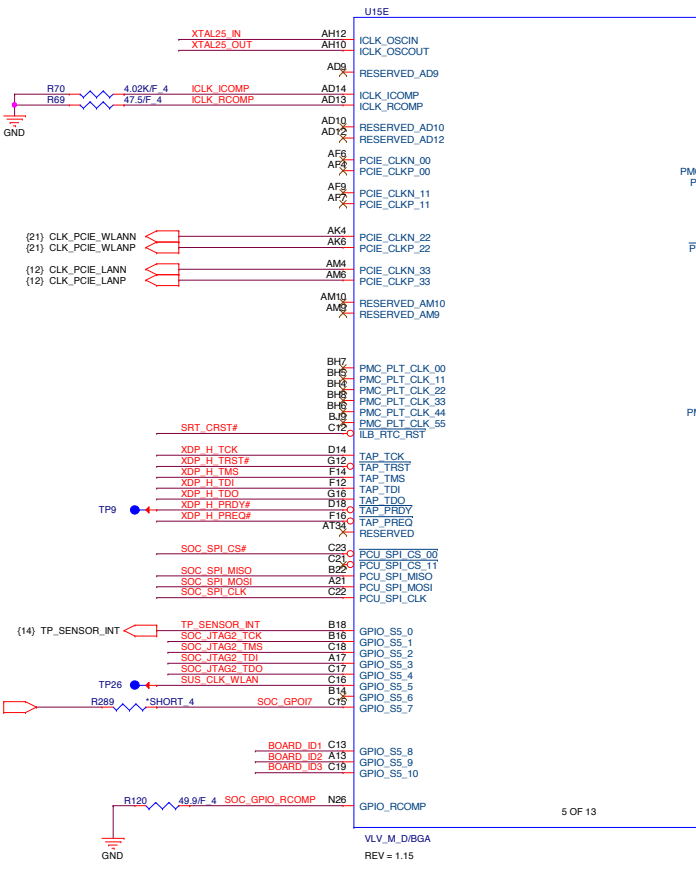
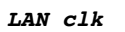
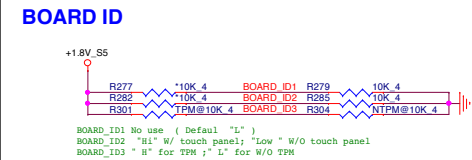
AC Present: This input pin indicates when the platform is plugged into AC power.



Size	Document Number Valley 4/9 (SD/PCIE/SATA)	Rev 1A
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Size	Document Number Valley 4/9 (SD/PCIE/SATA)	Rev 1A
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Date: Thursday, July 31, 2014 Sheet 5 of 33

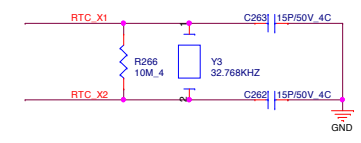
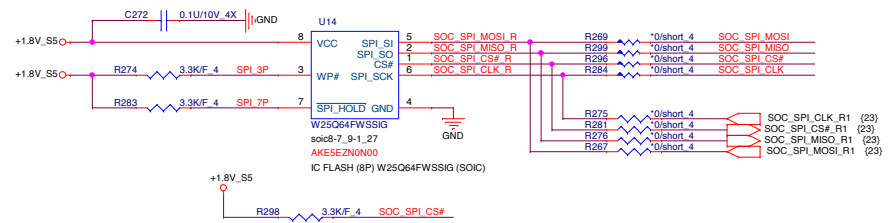
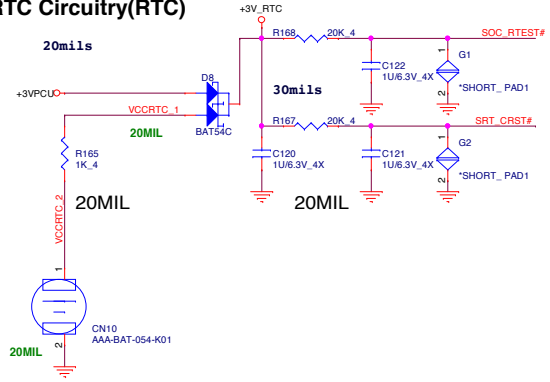
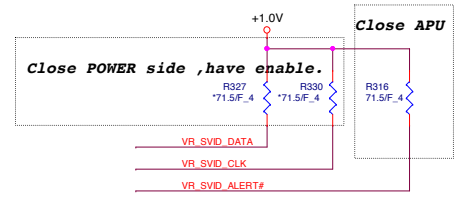


Lay out Note:

SVID_ALERT#

SVID_DATA

SVID_CLK



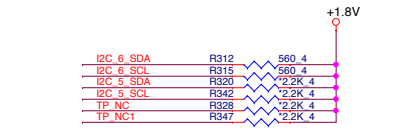
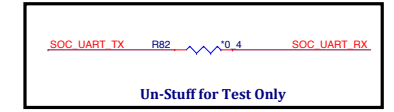
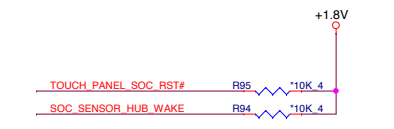
Port 1 is debug port

USB 3.0


USB 2.0

BT

CAMERA

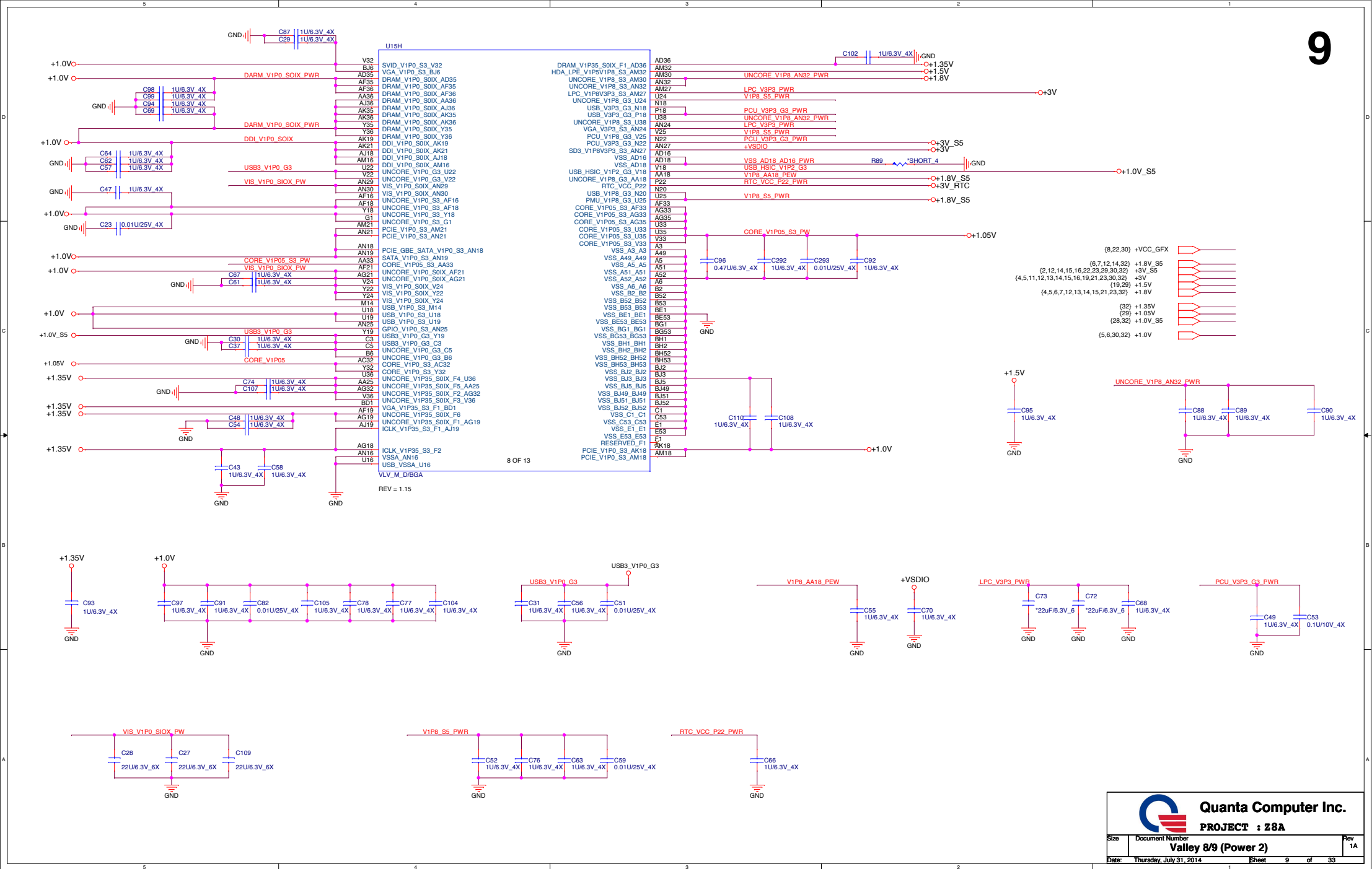


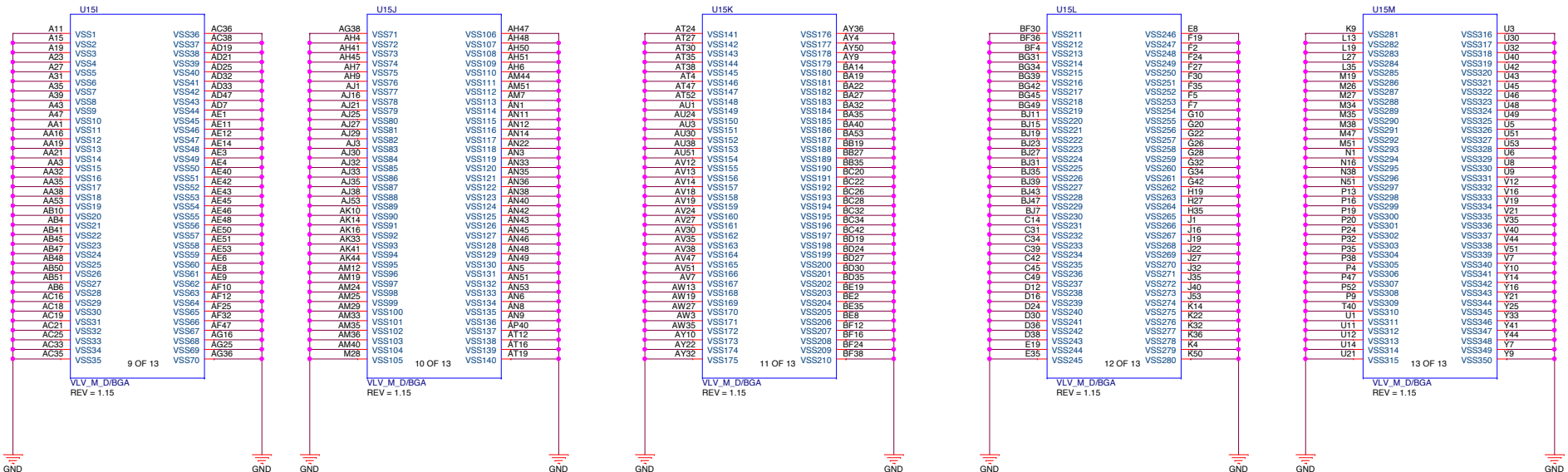
I2C pull up:
Standard/ Fast Mode --> 560 ohm
High speed mode --> CLK- 560 ohm;
DATA- 910 ohm




Quanta Computer Inc.
PROJECT : Z8A

Size	Document Number	Rev
	Valley 6/9 (USB/LPC/I2C)	1A
Date: Thursday, July 31, 2014		Sheet 7 of 33

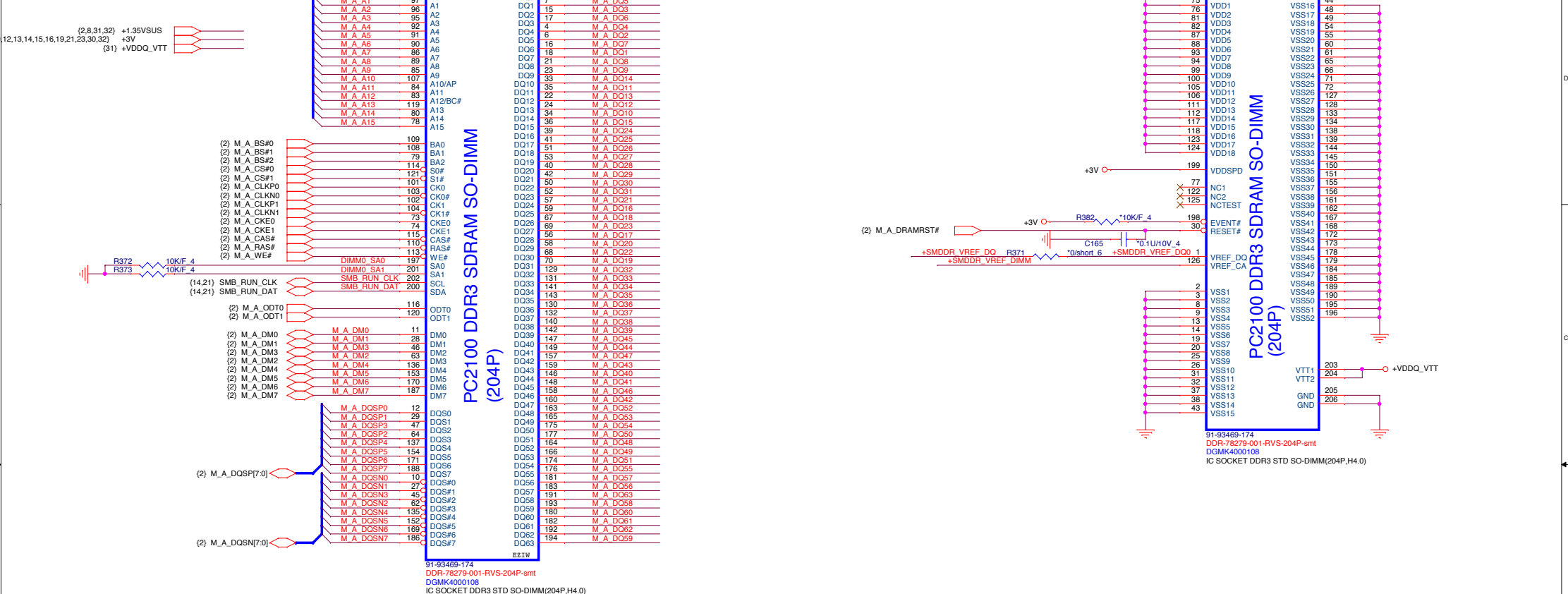




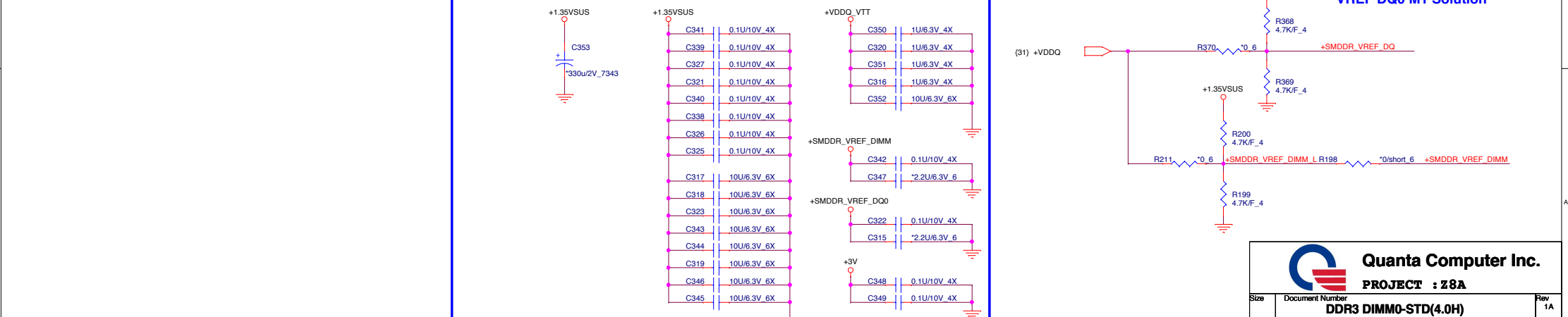


Quanta Computer Inc.
PROJECT : Z8A

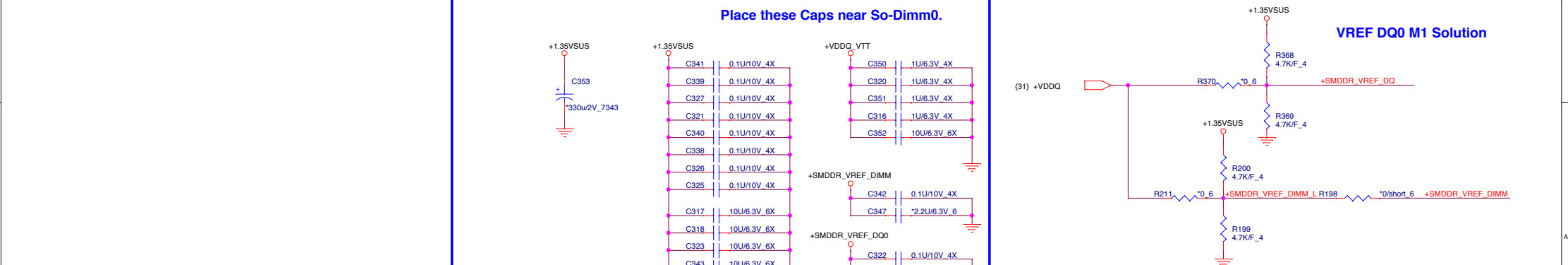
Size	Document Number	Rev
	Valley 9/9 (GND)	1A
Date: Thursday, July 31, 2014		
Sheet 10 of 33		



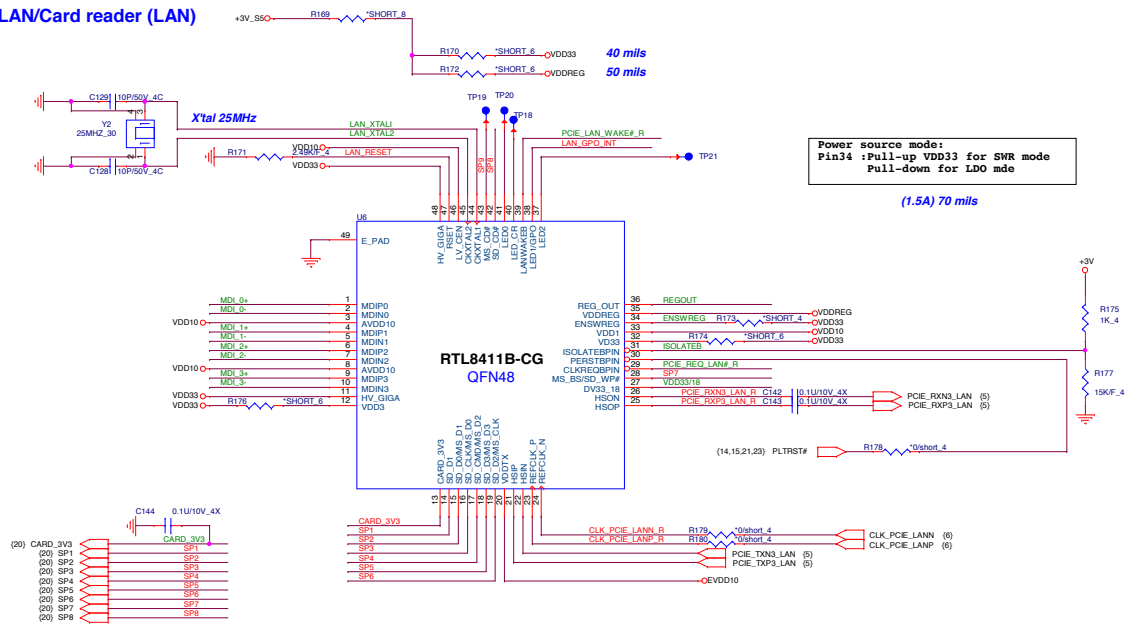
Place these Caps near So-Dimm0.



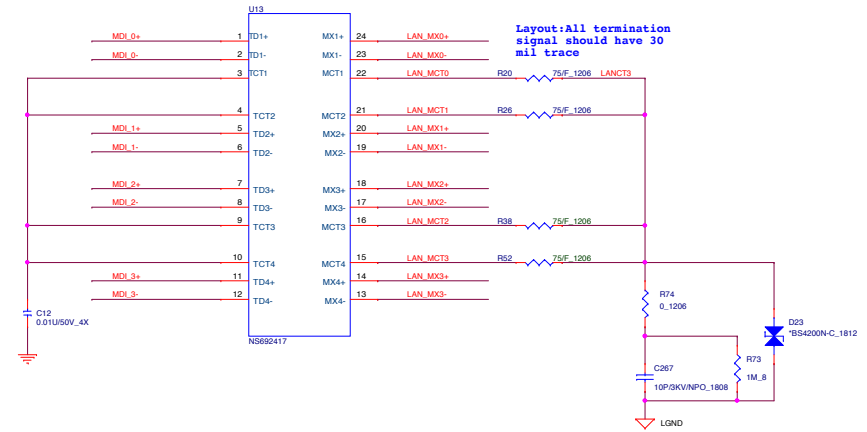
VREF DQ0 M1 Solution



LAN/Card reader (LAN)

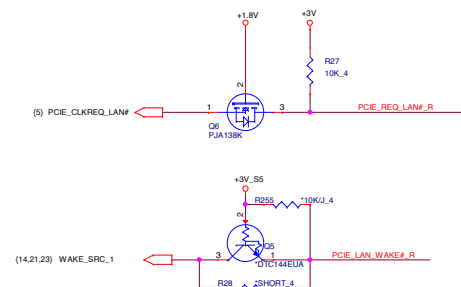
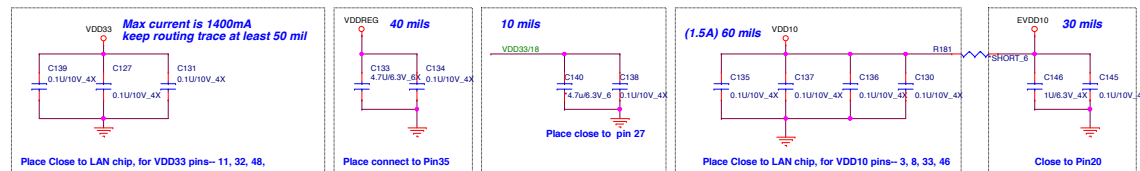
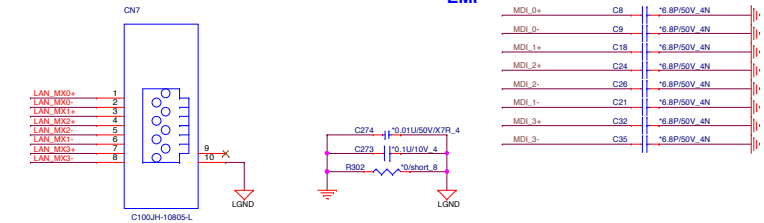


Transformer (LAN)



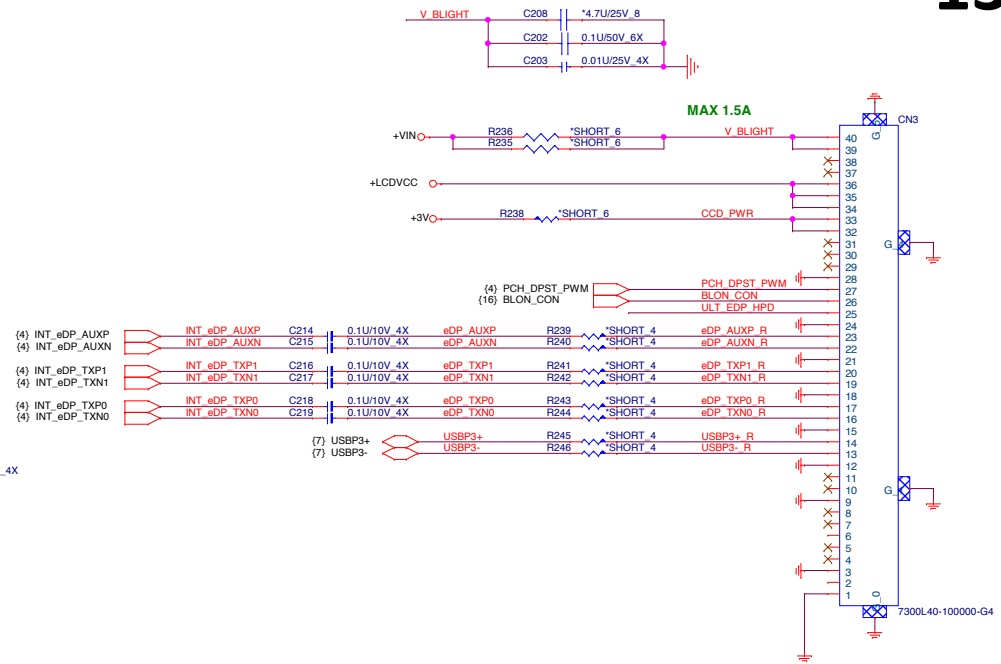
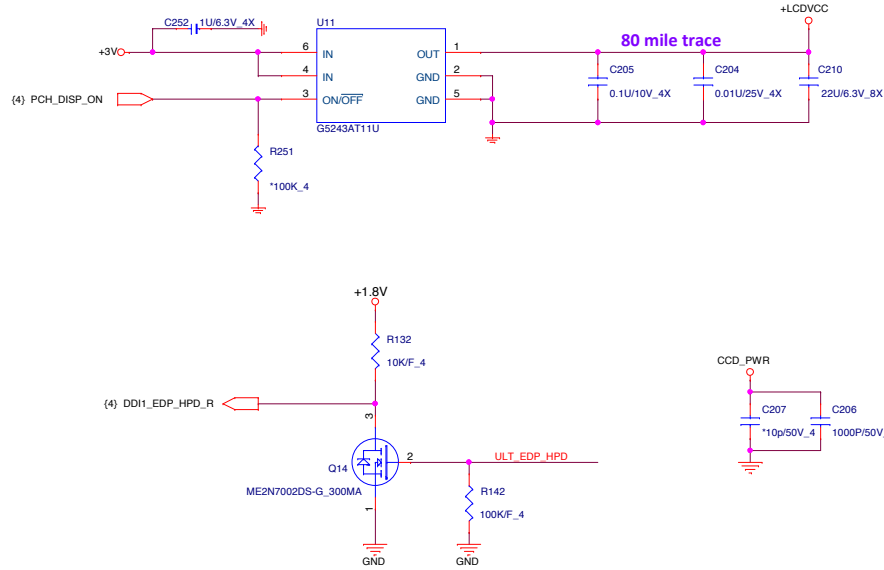
RJ45 Connector

EMI



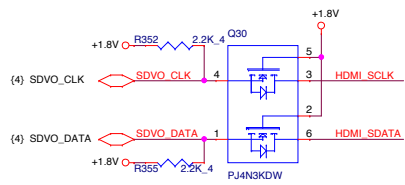
LCD POWER SWITCH

13

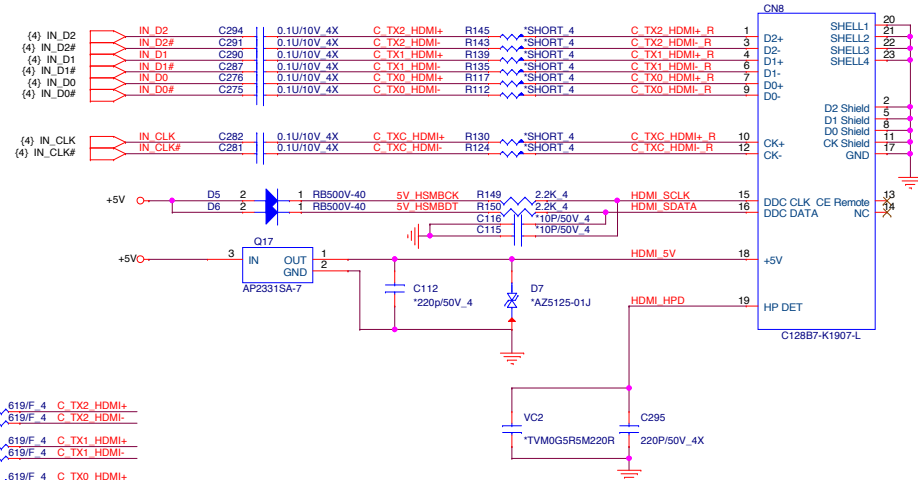
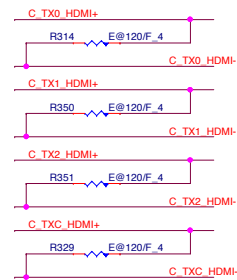


HDMI Conn.

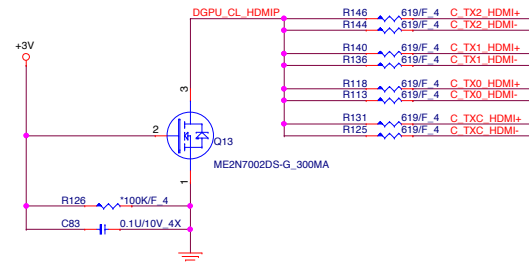
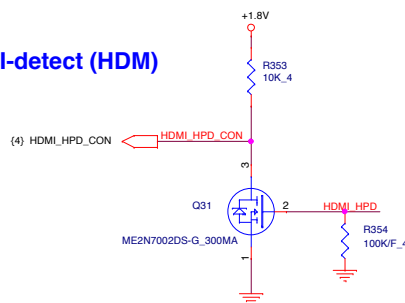
HDMI SMBus Isolation



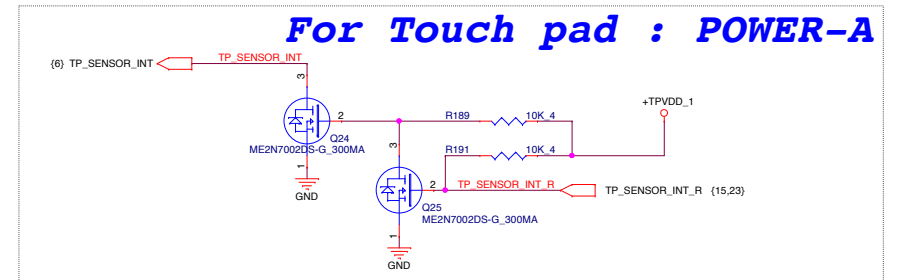
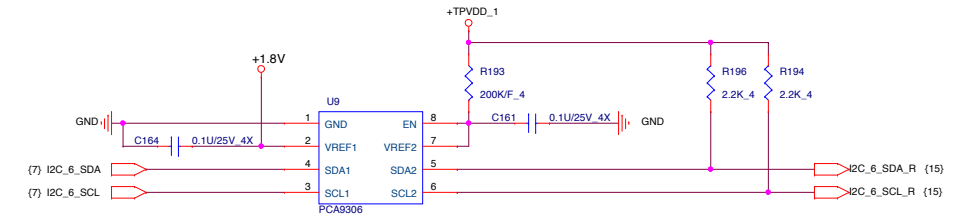
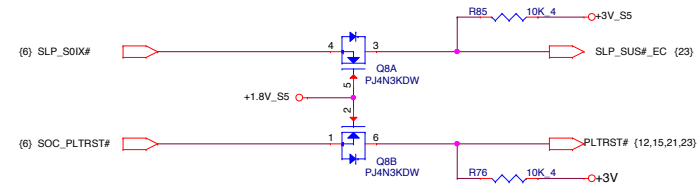
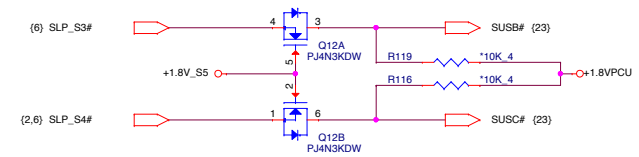
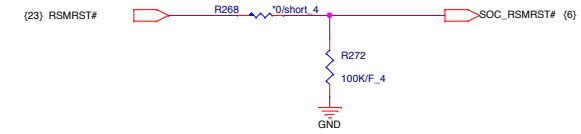
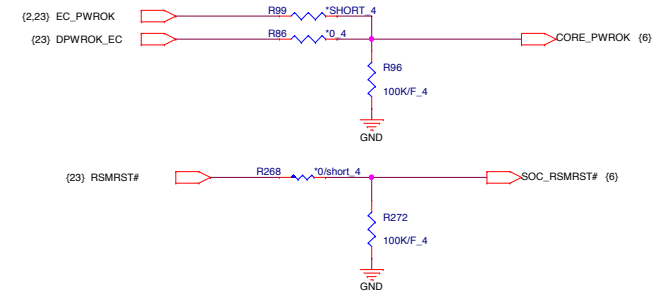
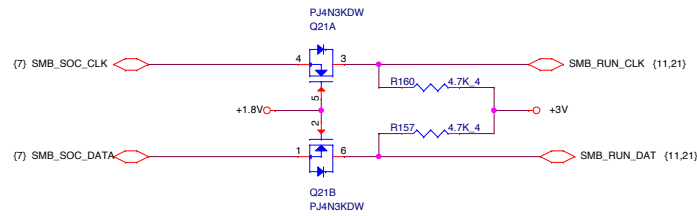
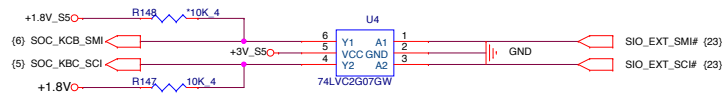
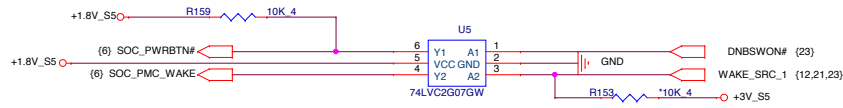
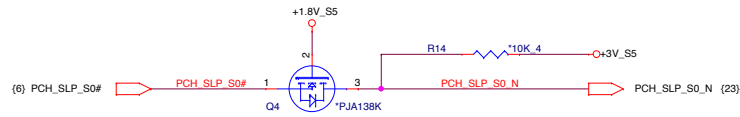
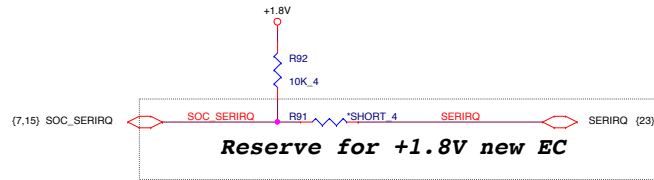
EMI (EMC)



HDMI-detect (HDM)



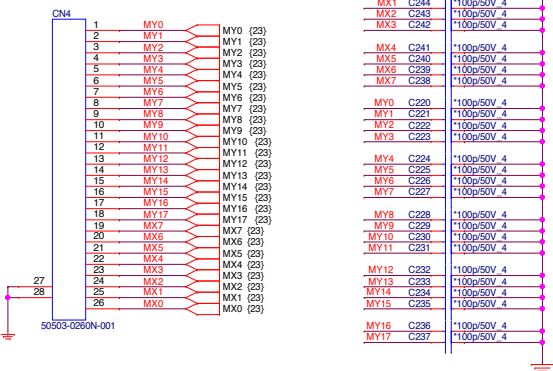
(6,7,9,12,32) +1.8V_S5
 (2,9,12,15,16,22,23,29,30,32) +3V_S5
 (4,5,6,7,9,12,13,15,21,23,32) +1.8V
 (4,5,9,11,12,13,15,16,19,21,23,30,32) +3V



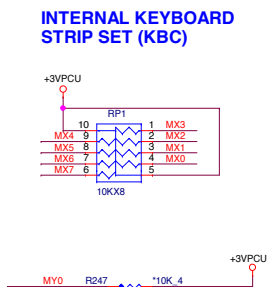
Quanta Computer Inc.
PROJECT : z8A

Size	Document Number	Rev
	Level Shifter	1A
Date:	Thursday, July 31, 2014	Sheet 14 of 33

KEYBOARD (KBC)

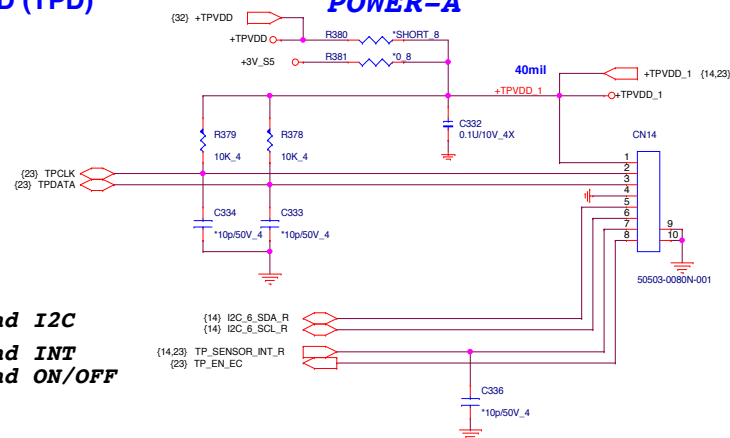


TOUCH PAD (TPD)

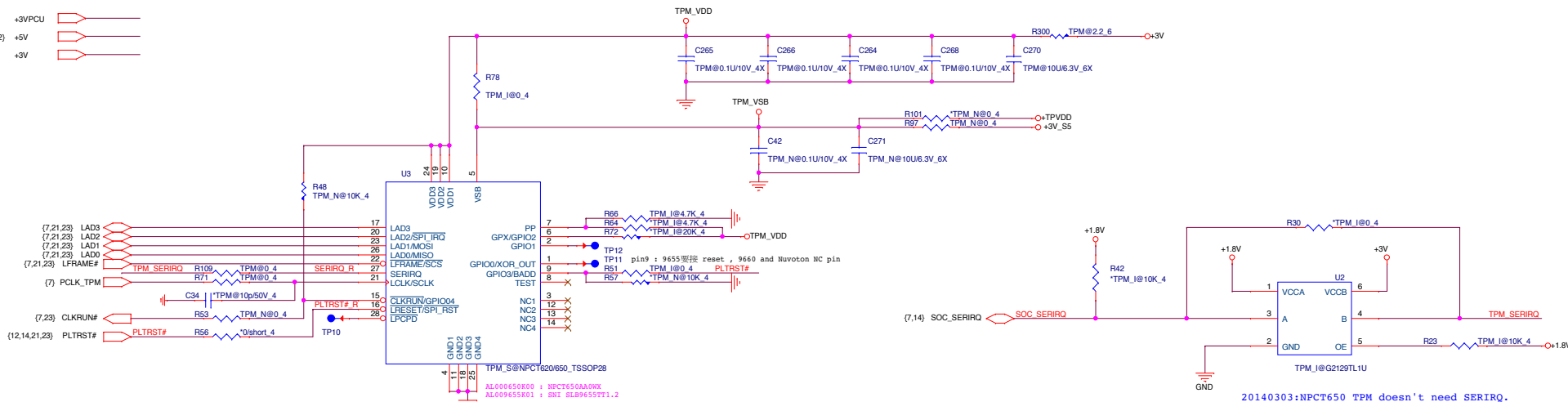


Touch pad I2C
Touch pad INT
Touch pad ON/OFF

POWER-A



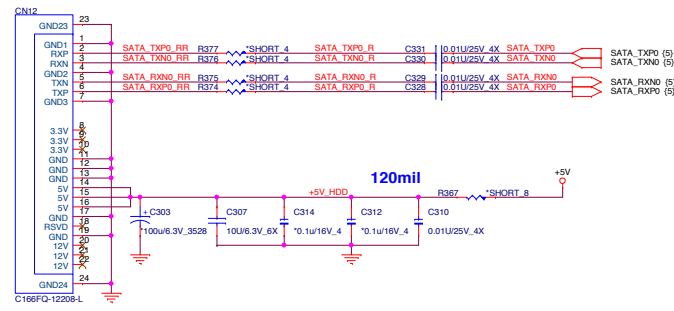
TPM (TPM)



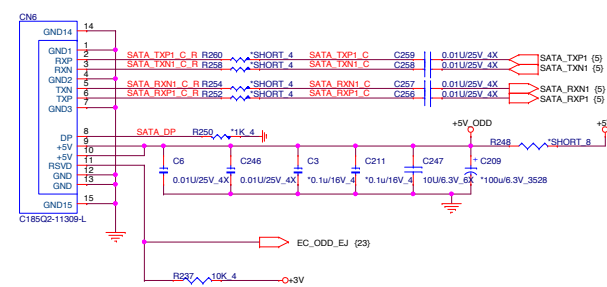
20140303:NPCT650 TPM doesn't need SERIRQ.

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

2.5" SATA HDD (HDD)

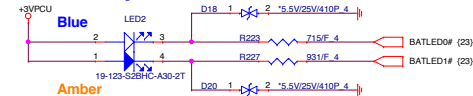


SATA ODD Connector

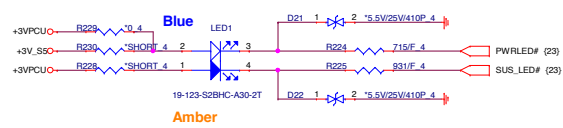


LED/SW (UIF)

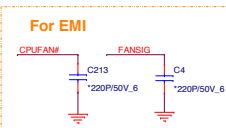
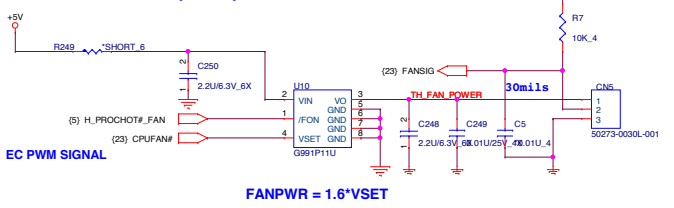
Battery indicator



PWR indicator

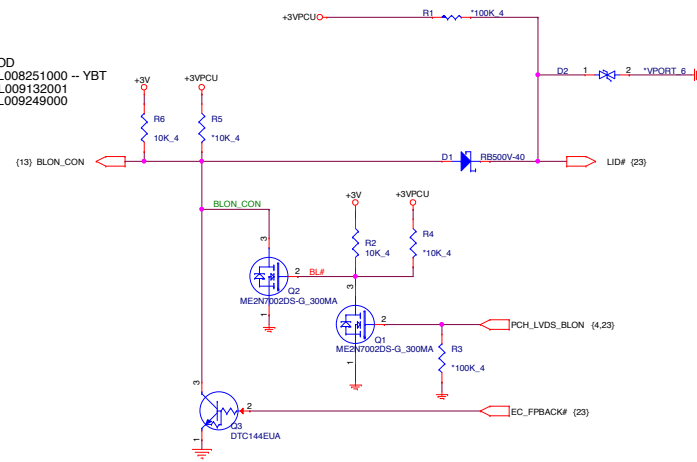


CPU FAN CTRL(THM)

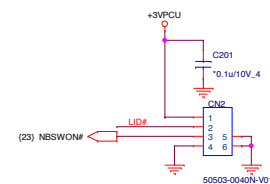


HALL IC (HSR)

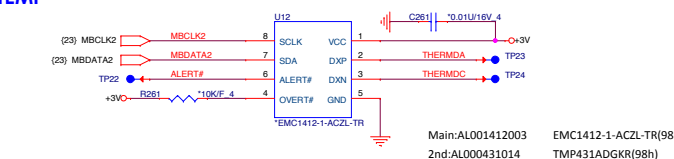
1st source : EOD
2nd source : AL008251000 -- YBT
3rd source : AL009132001
4th source : AL009249000



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

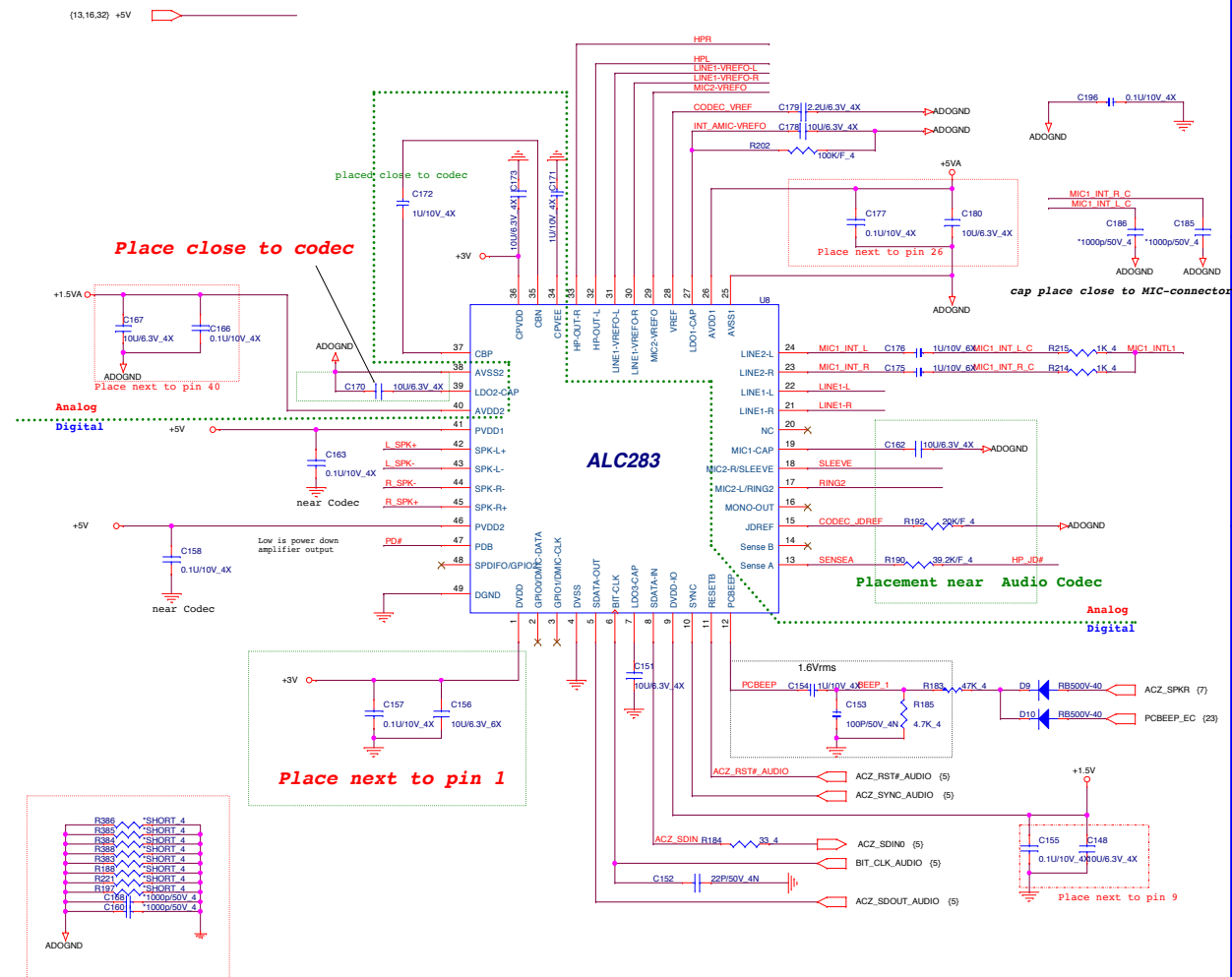
D
C
B
A

			Quanta Computer Inc.		
			PROJECT : Z8A		
Size	Document Number				Rev
	USB HUB -1				1A
Date:	Thursday, July 31, 2014		Sheet	17	of 33

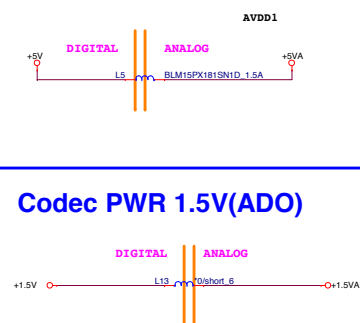


5	4	3	2	1
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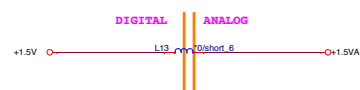
Codec(ADO)



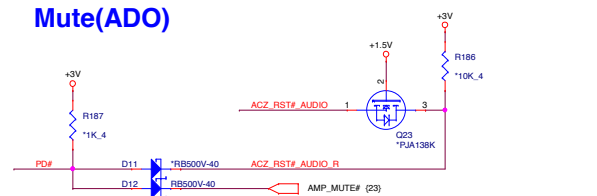
Codec PWR 5V(ADO)



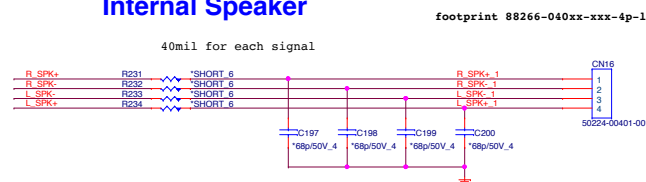
Codec PWR 1.5V(ADO)



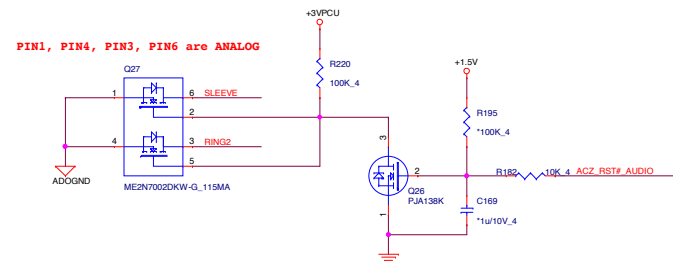
Mute(ADO)



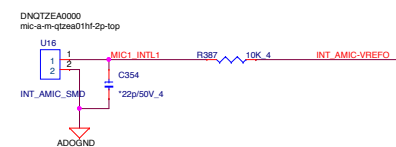
Internal Speaker



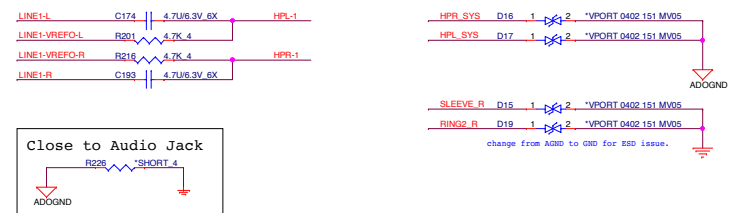
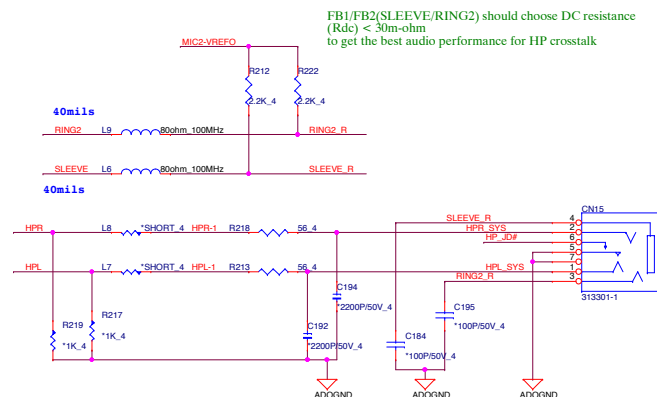
Grounding circuit(ADO)



INT MIC array



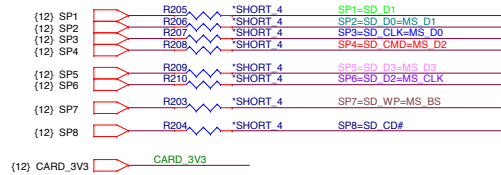
HEADPHONE/MIC/LINE combo



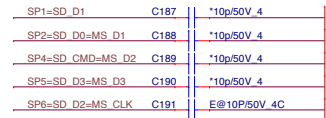
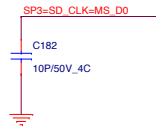
CARD READER CONNECTOR (MMC)

Share Pin

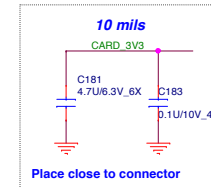
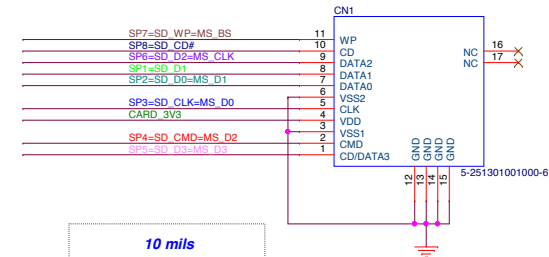
SP1	SD_D1	
SP2	SD_D0	MS_D1
SP3	SD_CLK	MS_D0
SP4	SD_CMD	MS_D2
SP5	SD_D3	MS_D3
SP6	SD_D2	MS_CLK
SP7	SD_WP	MS_BS
SP8	SD_CD#	
SP9		MS_INS#



EMI

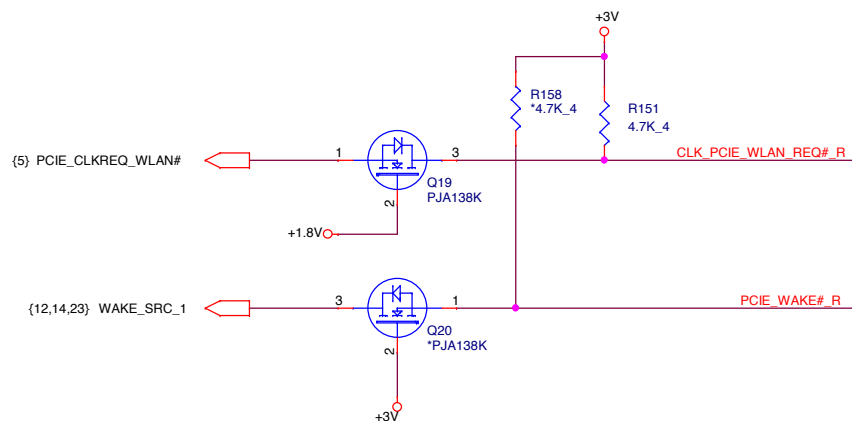
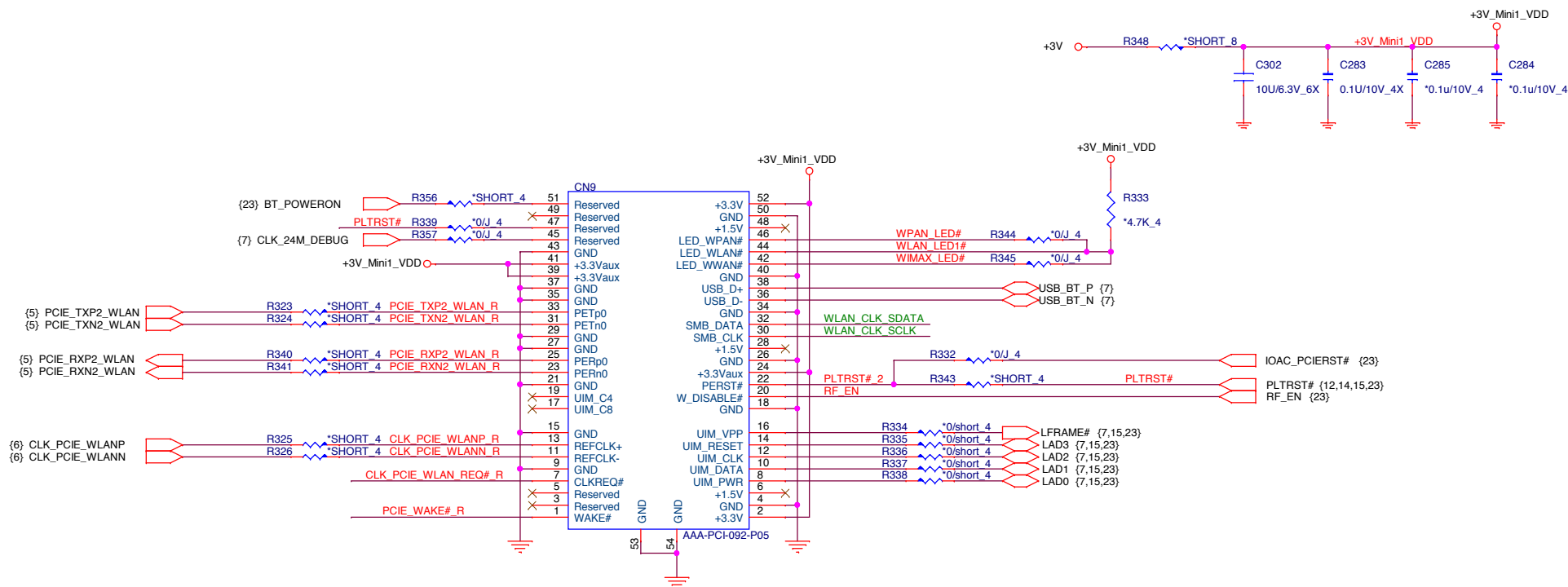


SD/MMC CARD READER (MMC)

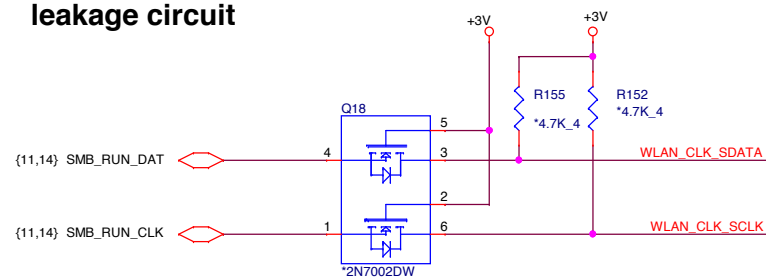


Quanta Computer Inc.
PROJECT : Z8A

Size	Document Number	Rev
	Cardreader GL834L	1A
Date: Thursday, July 31, 2014	Sheet 20 of 33	

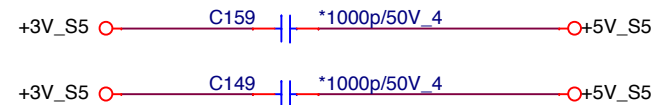
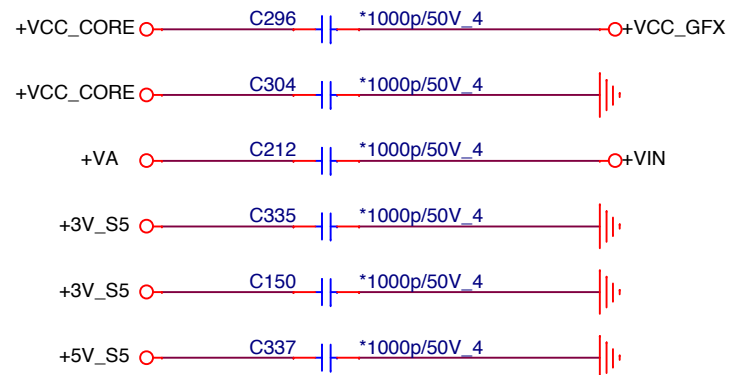
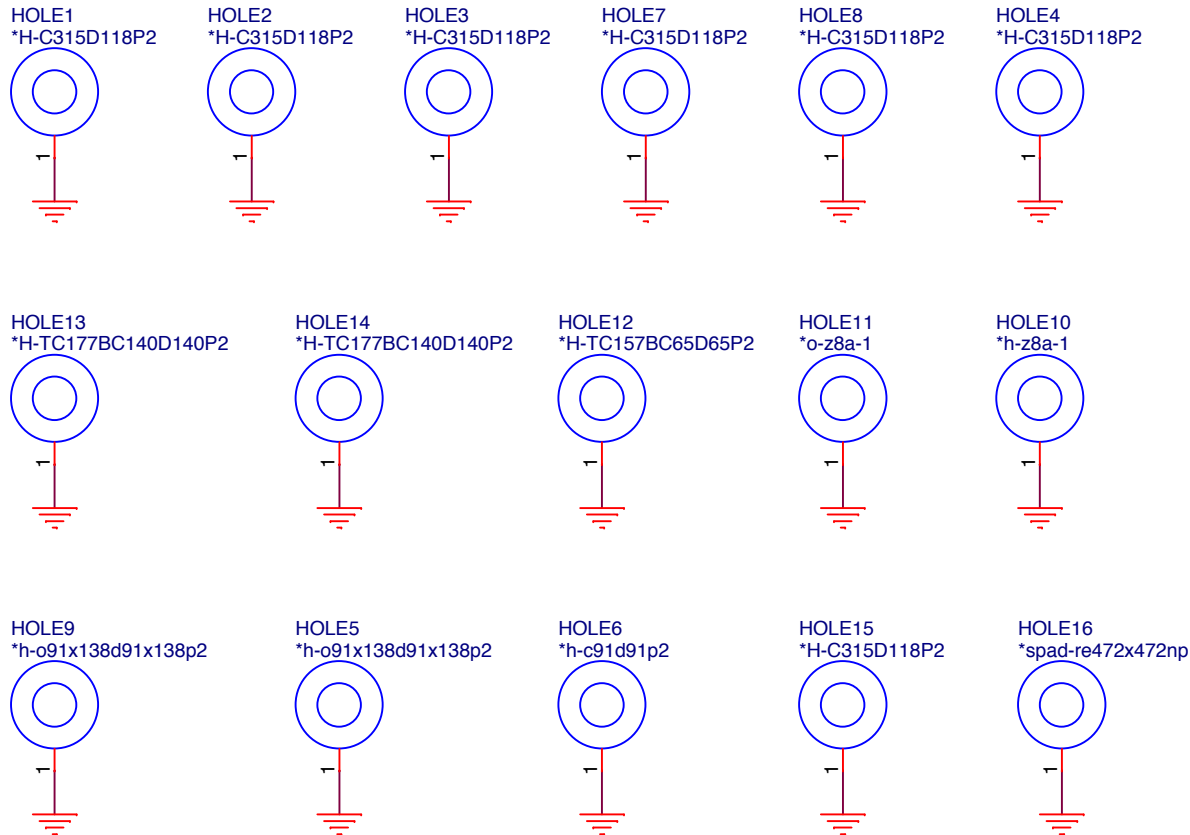



leakage circuit

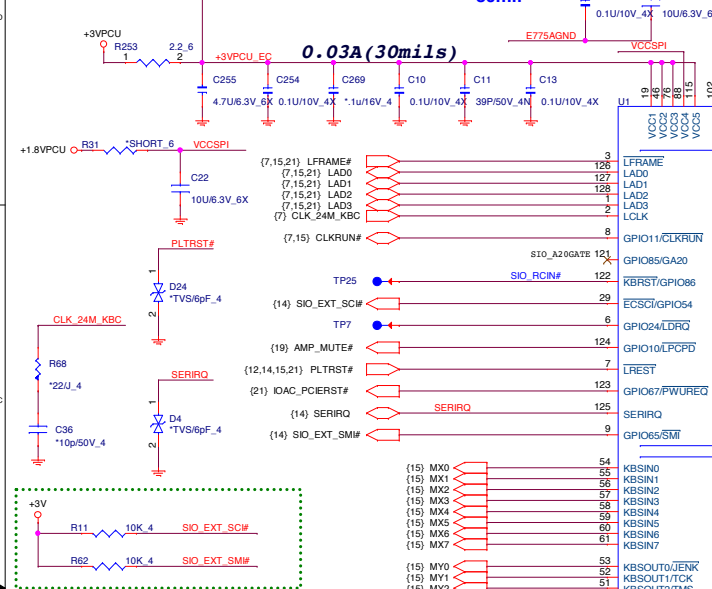


{4,5,6,7,9,12,13,14,15,23,32} +1.8V

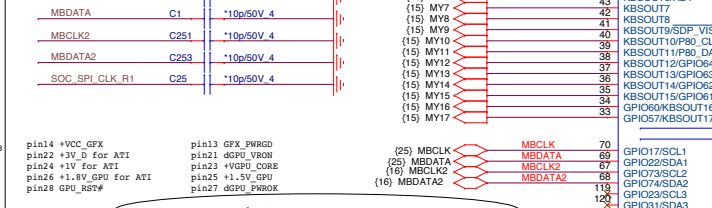
{4,5,9,11,12,13,14,15,16,19,23,30,32} +3V



 Quanta Computer Inc. PROJECT : Z8A		Rev 1A
		Thermal / Hole
Size	Document Number	Date: Thursday, July 31, 2014
Sheet 22 of 33		

[illegible]

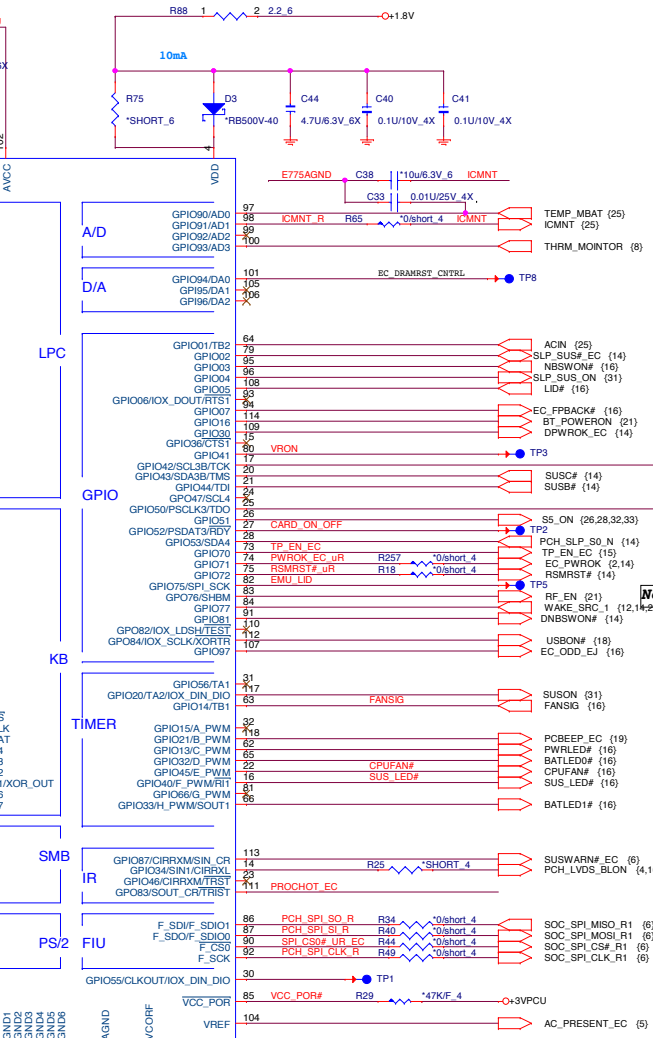
Component	Pin	Signal	Pin	Signal	Pin	Signal
MBDATA	C1	*10p50V_4	(15)	MV7	42	KBSOUT7
			(15)	MV8	43	KBSOUT8
MBCLK2	C251	*10p50V_4	(15)	MV9	40	KBSOUT10SDP_VIS
			(15)	MV10	41	KBSOUT10F80_CLK
MBDATA2	C25	*10p50V_4	(15)	MV11	38	KBSOUT11F80_DA
			(15)	MV12	37	KBSOUT12/GPIO6E
			(15)	MV13	35	KBSOUT13/GPIO6E
			(15)	MV14	34	KBSOUT14/GPIO6E
SOC_SPI_CLK_R1	C25	*10p50V_4	(15)	MV15	36	KBSOUT15/GPIO6E
			(15)	MV16	33	GPIOD6/KBSOUT16
			(15)	MV17	34	GPIOD6/KBSOUT17
			(15)	MV18	33	GPIOD6/KBSOUT18
pin14 +VCC_GFX	pin13	GFX_PWRGD	(25)	MBCLK1	70	GPIOD7/SLC1
pin12 +V1_0 for ATI	pin13	GFX_VMON	(25)	MBCLKA	69	GPIOD7/SDA1
pin14 +V1 for ATI	pin123	VGGPU_CORE	(16)	MBCLK2	67	GPIOD7/SLC2
pin26 +1.8V_GPU for ATI	pin125	+1.5V_GPU	(16)	MBDATA2	118	GPIOD7/SDA2
pin26 GPU_SSP#	pin127	GPU_PWDOK			120	GPIOD7/SLC3



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

TP_SENSOR_INT_R 1 3 TP_INT_EC#

Q7
ME2N7002DS-G 300MA



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

Q9

ME2N7002DS-G_300MA

H_PROCHOT# (530)

R93 100K 4

Q47 need Replacement at BOT layer.

```
2013/07/31
SMBus Tr fail (spec
1000 ns max, result
1046 ns)
Change PU
resister(R424,R428)
from 10K to 4.7K
```

T# {5,30}

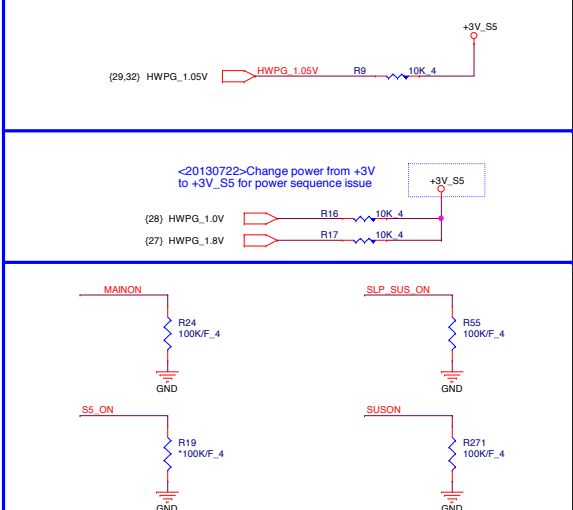
ayer.

pin91 in 985L is 1.8V only

EC_PWROK

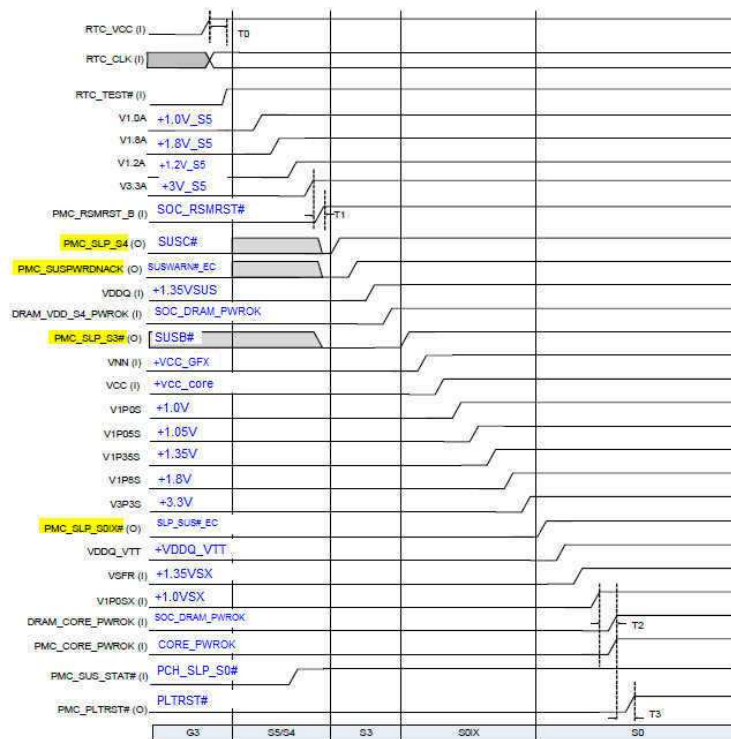
<20090721_FAE suggestion>
Stuff 100K and close to EC side
for improving power consumption

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

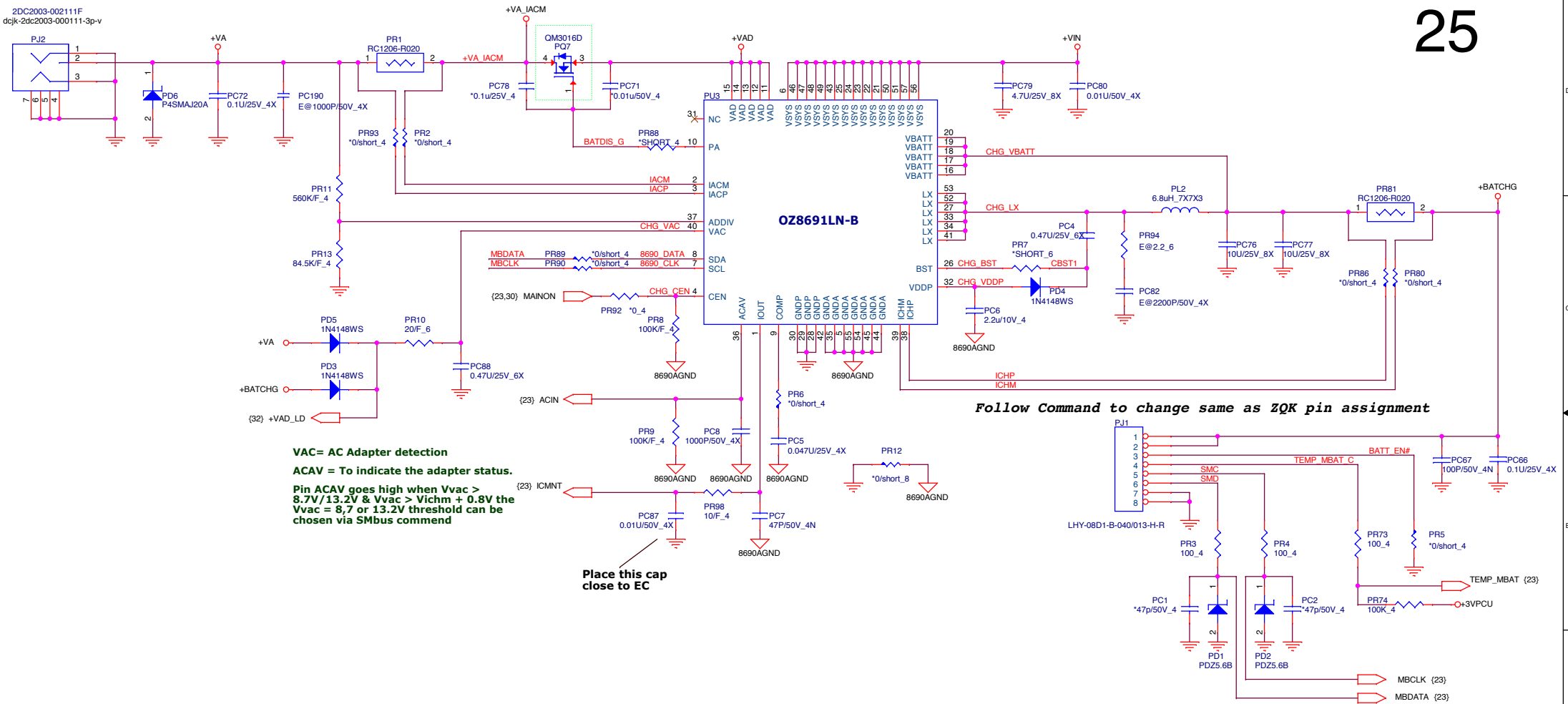


Bay Trail-M S4/S5 to S0 (Power Up) Sequence

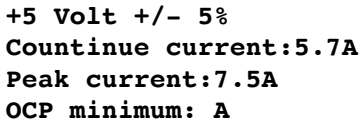
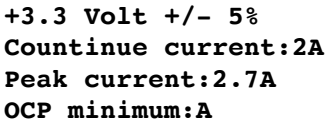
24



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



26



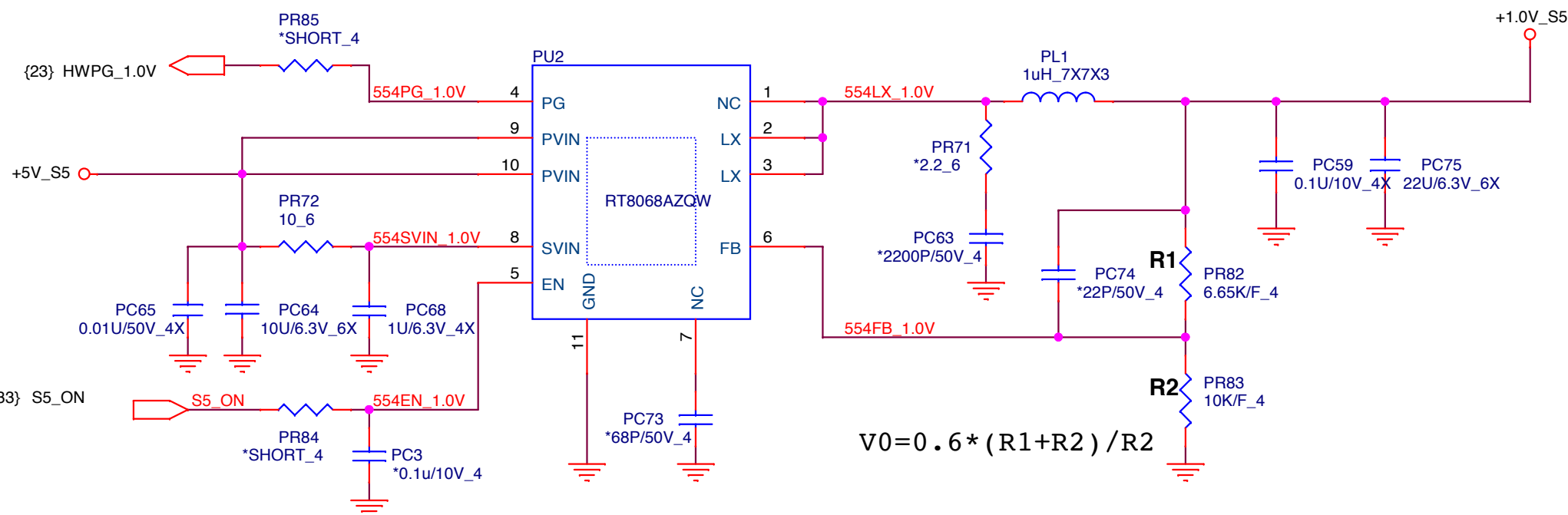
$$V_0 = 0.6 * (R_1 + R_2) / R_2$$

{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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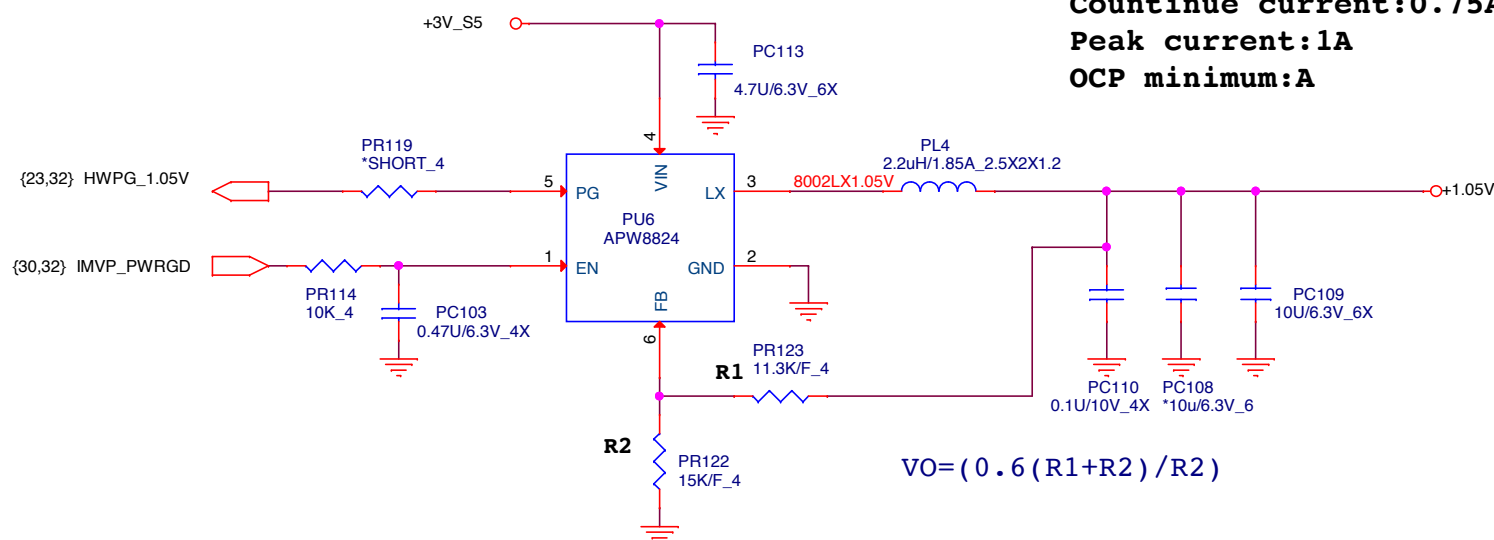
PROJECT : Z8A

Size	Document Number	Rev
	+1.0V	1A

Date: Thursday, July 31, 2014 Sheet 28 of 33

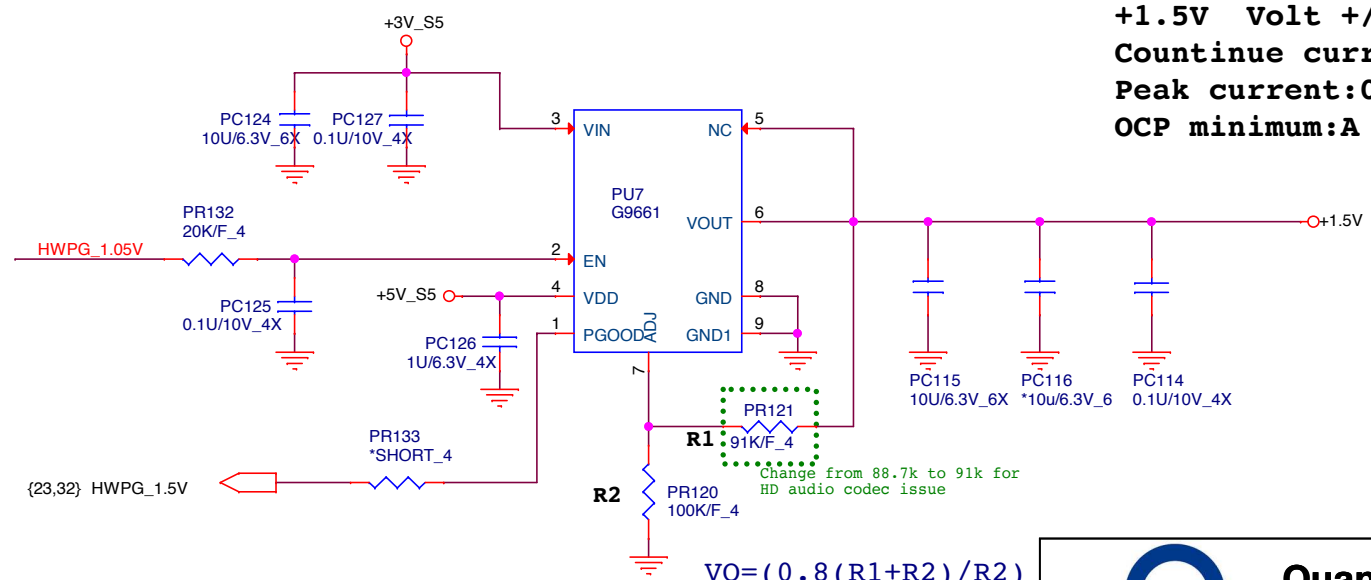
{2,9,12,14,15,16,22,23,30,32} +3V_S5
 {9} +1.05V
 {9,19} +1.5V

+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



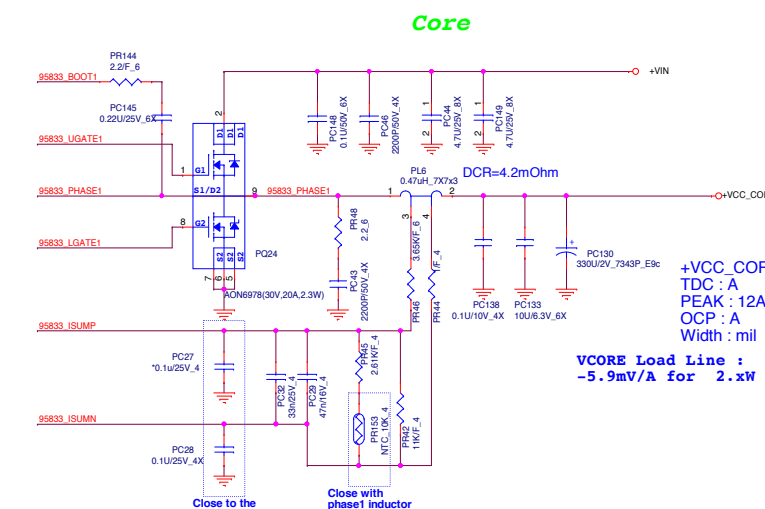
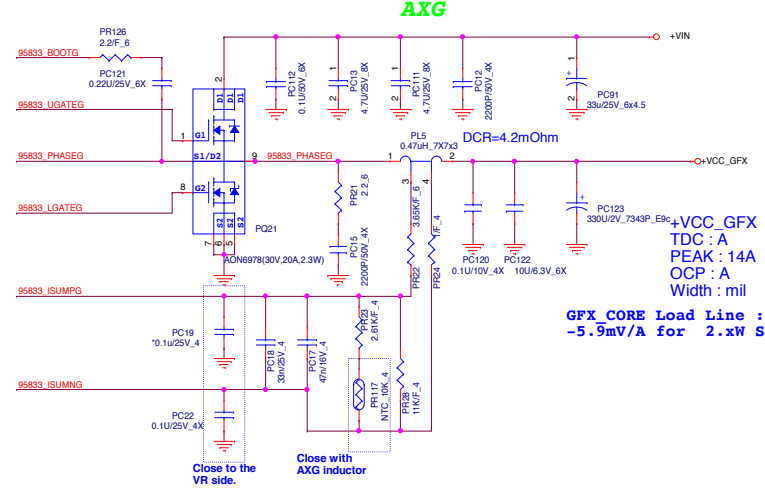
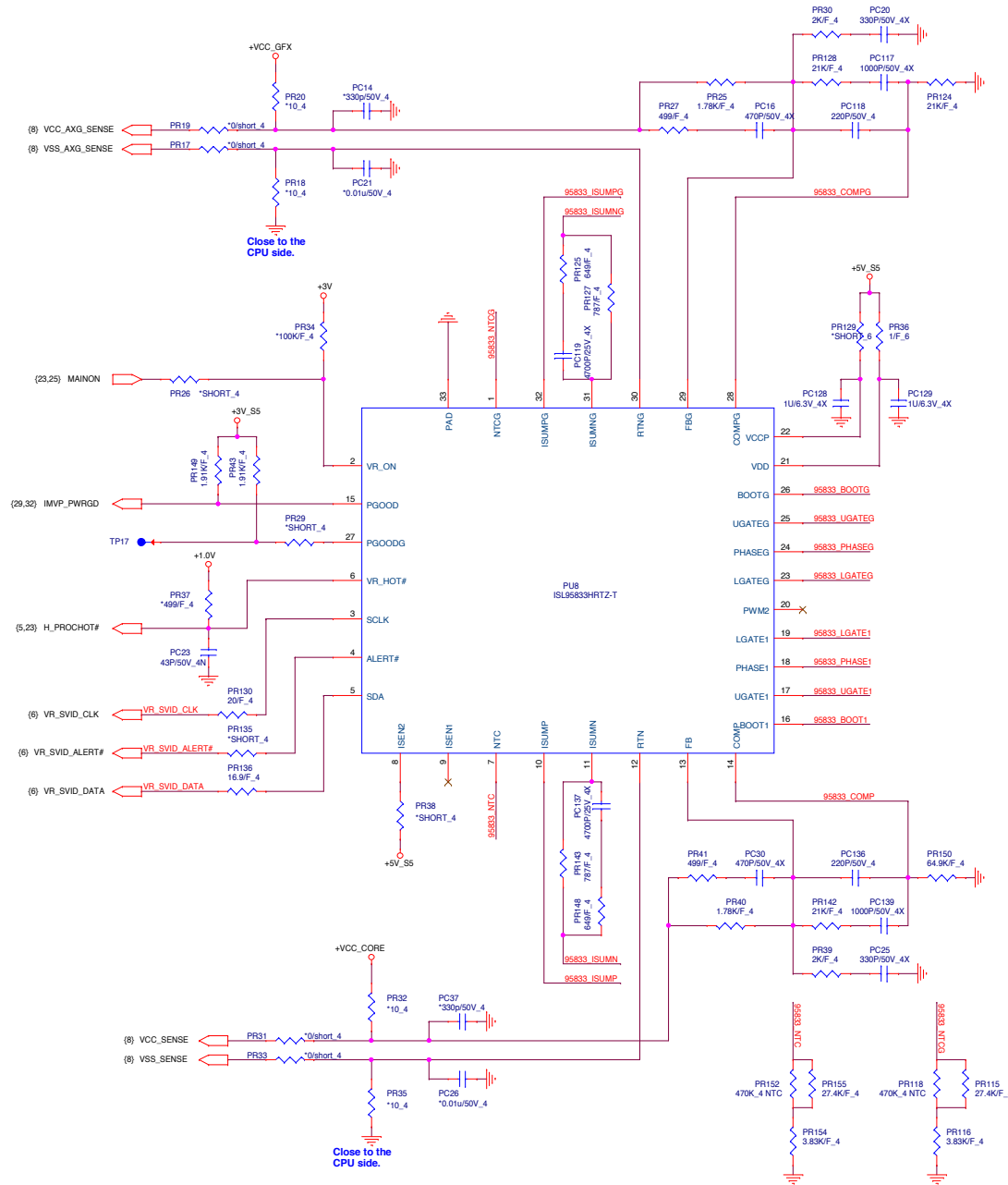
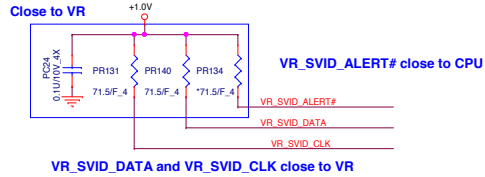
$$VO = (0.8 (R1 + R2) / R2)$$

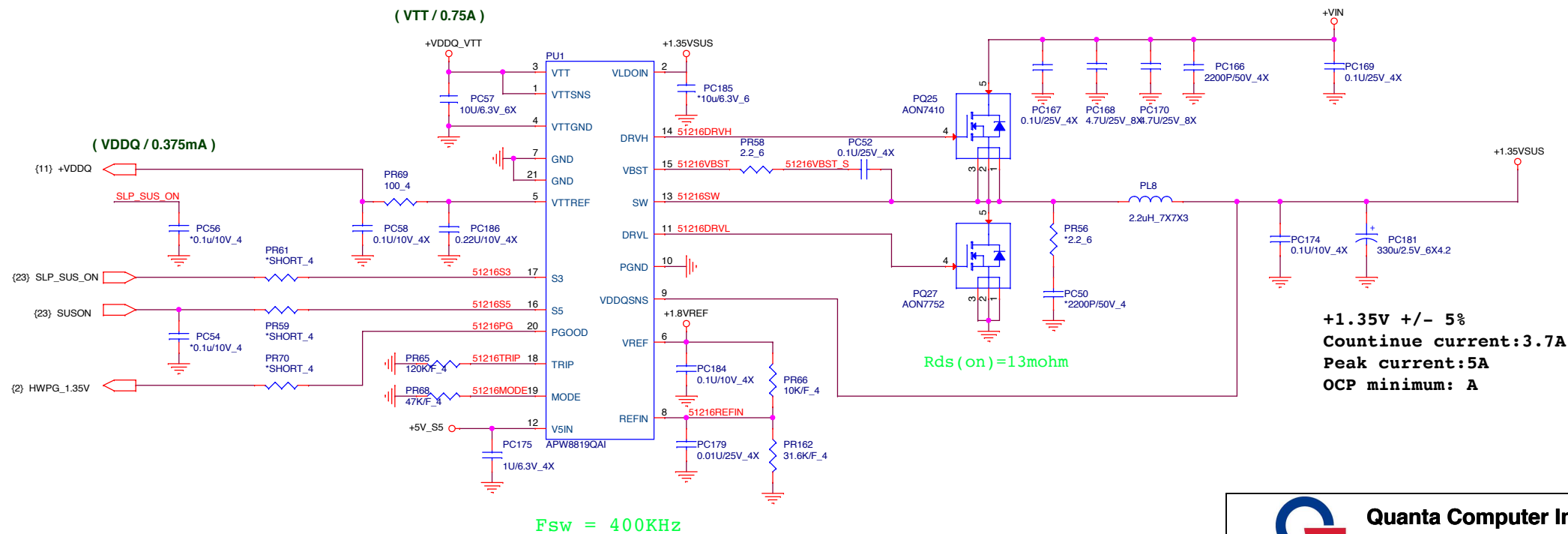
R2 < 120Kohm



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PROJECT : Z8A

20130617 Change +1.05V to +1.0V



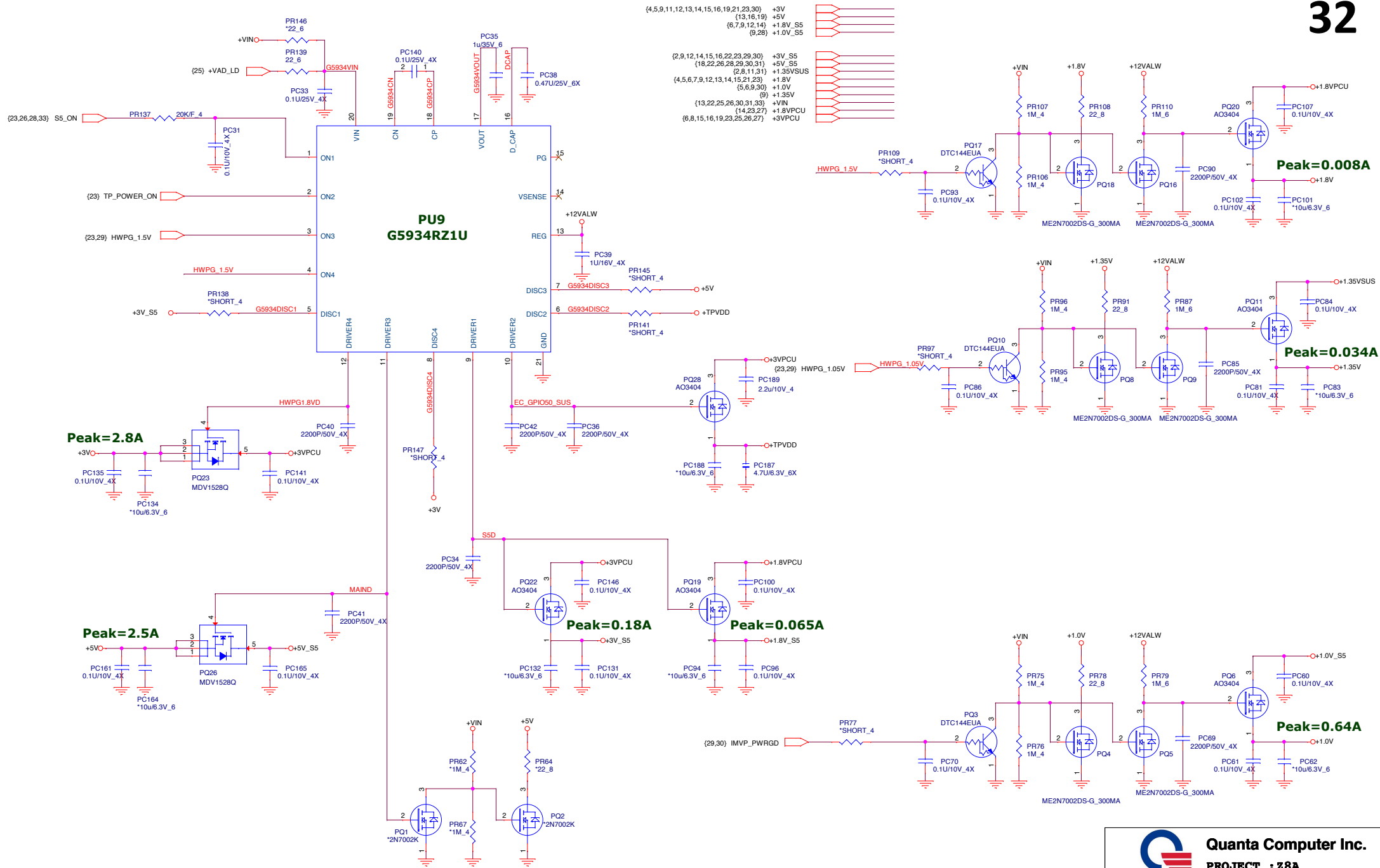


Quanta Computer Inc.

PROJECT :Z8A

Size	Document Number	Rev
	DDR3 (APW8819)	1A

Date: Thursday, July 31, 2014 Sheet 31 of 33

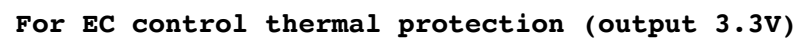


Quanta Computer Inc.

PROJECT : z8A

Size	Document Number	Rev
	Dis-charge IC (G5934)	1A

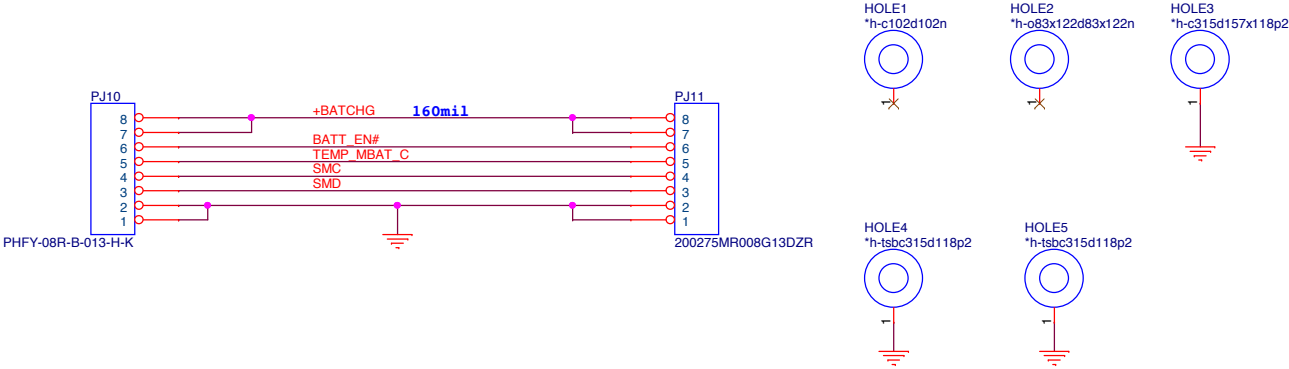
Date: Thursday, July 31, 2014 Sheet 32 of 33



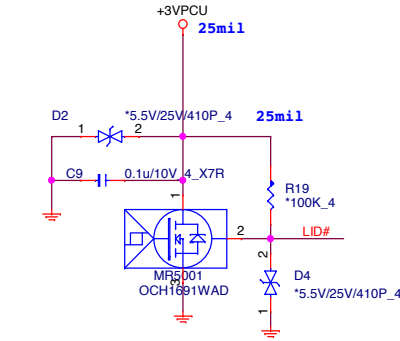
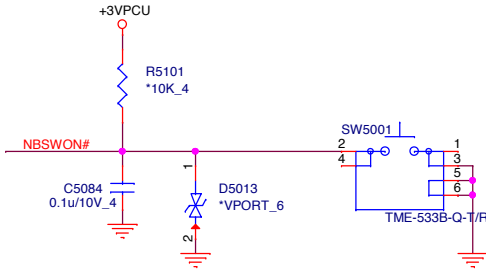
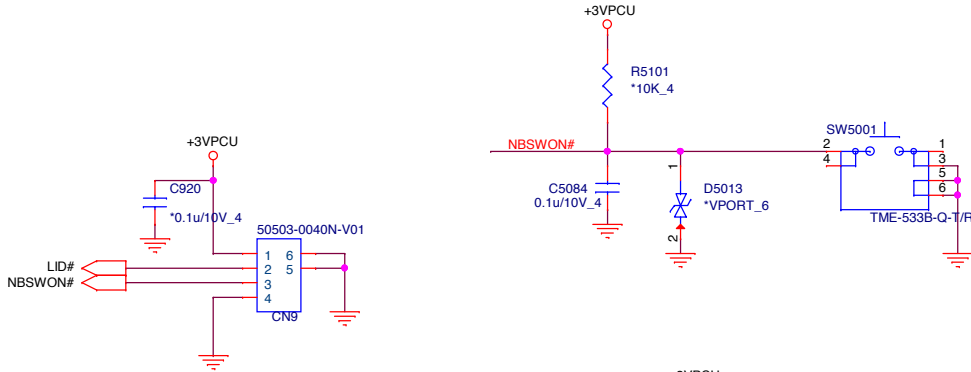
Model	REV	CHANGE LIST
Z8A MB	A1A	1.First Release
	C3A	1.Change C19/C20 value from 10P to 12P for crystal Vendor EA suggestion 2.Swap USB3+/USB3- signals to correct pin define for CCD yellow mark issue 3.Change L4 to 90 ohm common mode chock for EMI 4.Change Hole10 and Hole16 footprint for ME DXF update 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:
PROJECT : Z8A		Change list			PART NUMBER:		DRAWING BY:		REVISION:
Date: Thursday, July 21, 2017		Rev: 3A							

Battery Board.



Power Switch Board.



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

