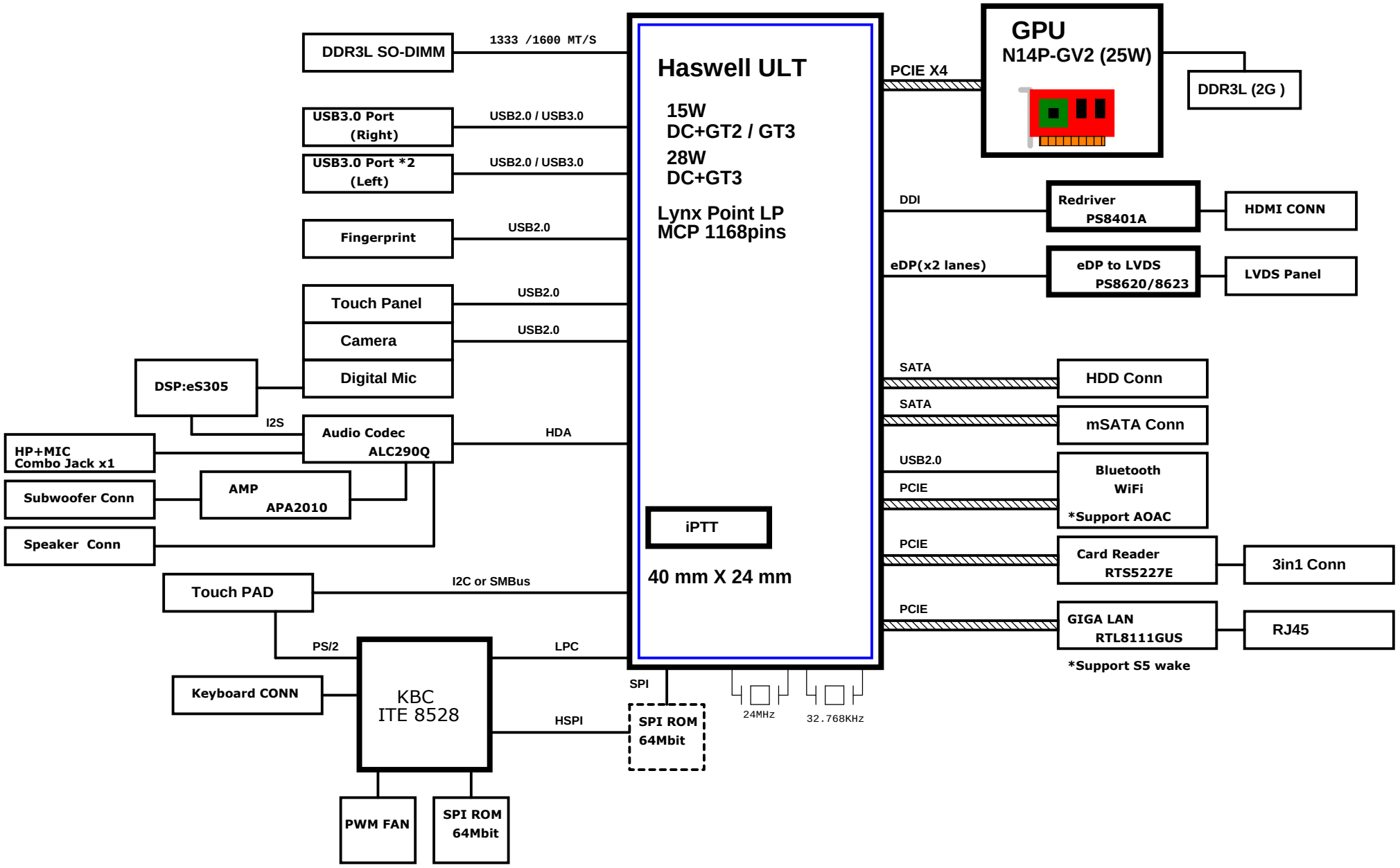
JW8B/C BLOCK DIAGRAM



Quanta Computer Inc.
PROJECT : JW8B

Size	Document Number	Rev
	Block Diagram	A

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HSIO Port	USB3.0	PCIE	SATA
1	USB3.0_1 CN6		
2	USB3.0_2 CN4		
3	USB3.0_3 CN5	PCIE1 X	
4	USB3.0_4 X	PCIE2 Card Reader	
5		PCIE3 GIGA LAN	
6		PCIE4 WIFI	
7		PCIE5 GPU 4X	
8		PCIE5 GPU 4X	
9		PCIE5 GPU 4X	
10		PCIE5 GPU 4X	
11		PCIE6 X	SATA3 X
12		PCIE6 X	SATA2 mSATA
13		PCIE6 X	SATA1 HDD
14		PCIE6 X	SATA0 X

PCIE CLK
CLK0 X
CLK1 Card Reader
CLK2 GIGA LAN
CLK3 WIFI
CLK4 GPU 4X
CLK5 X

USB2.0
USB2.0_0 CN4
USB2.0_1 CN6
USB2.0_2 CN5
USB2.0_3 Finger Print
USB2.0_4 Camera
USB2.0_5 eTP
USB2.0_6 Blue Tooth
USB2.0_7 Touch Screen

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Size	Document Number	Rev
	PORT ASSIGNMENT	A

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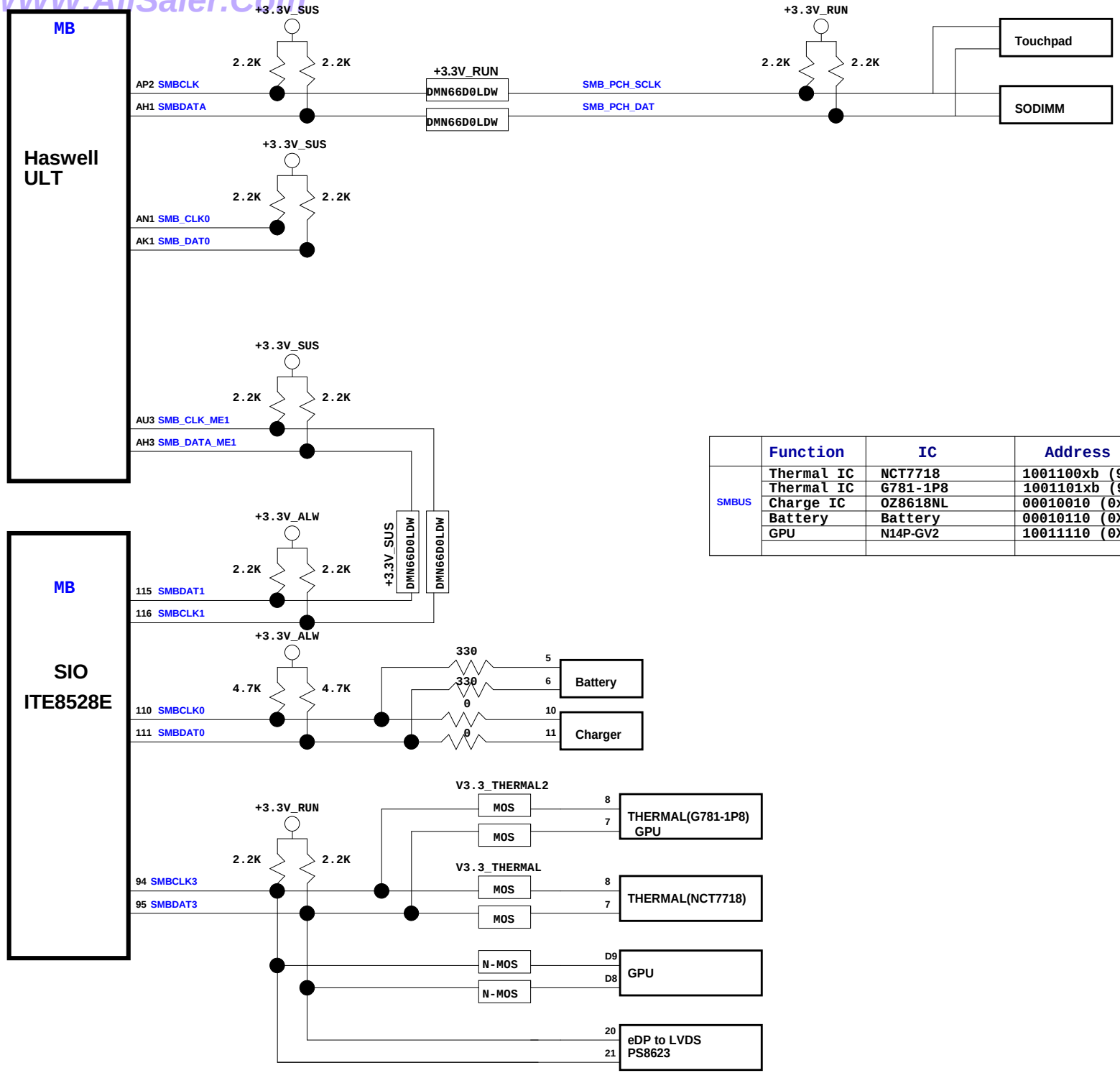

	Function	IC	Address
SMBUS	Thermal IC	NCT7718	1001100xb (98h)
	Thermal IC	G781-1P8	1001101xb (9Ah)
	Charge IC	OZ8618NL	00010010 (0x12h)
	Battery	Battery	00010110 (0X16h)
	GPU	N14P-GV2	10011110 (0X9Eh)

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Size	Document Number	Rev
	SMBUS	A

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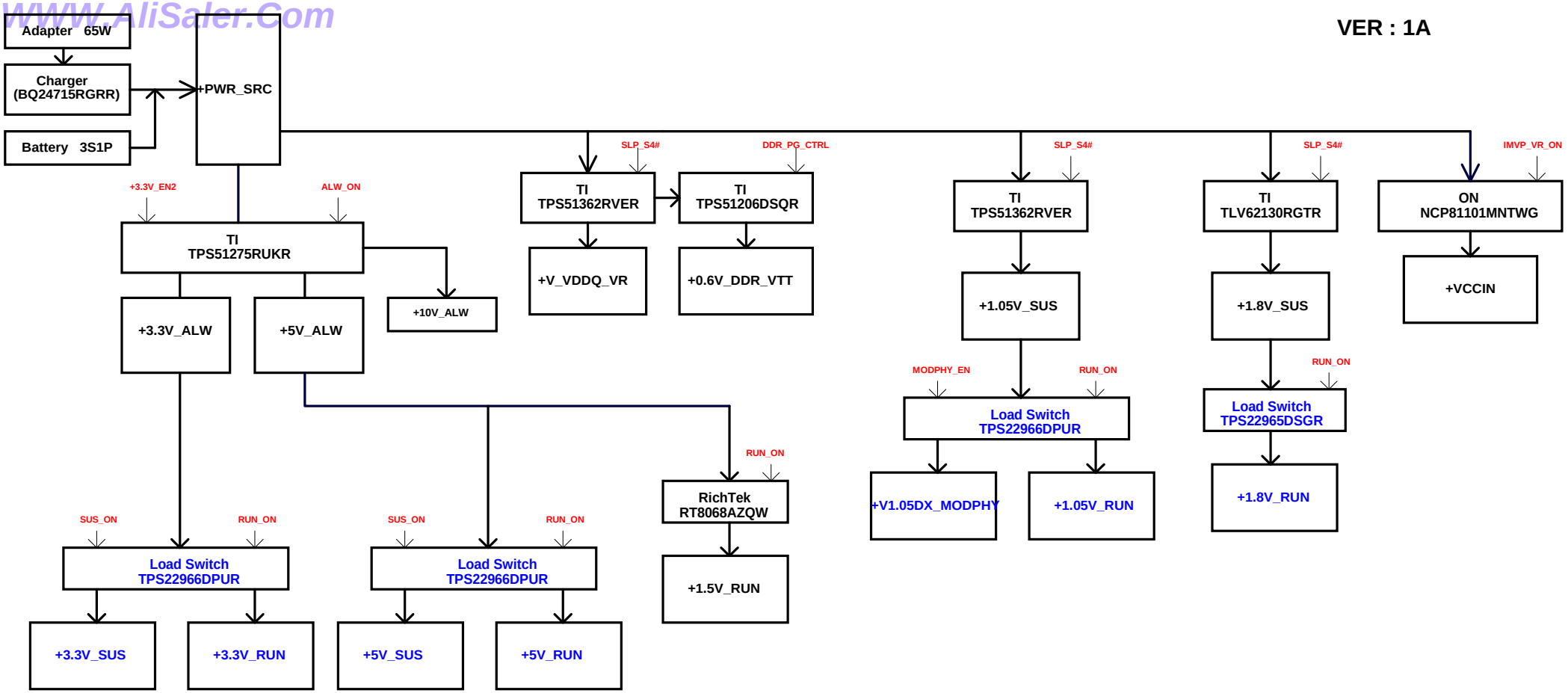
VER : 1A



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Size	Document Number	Rev
	Power Block Diagram	A
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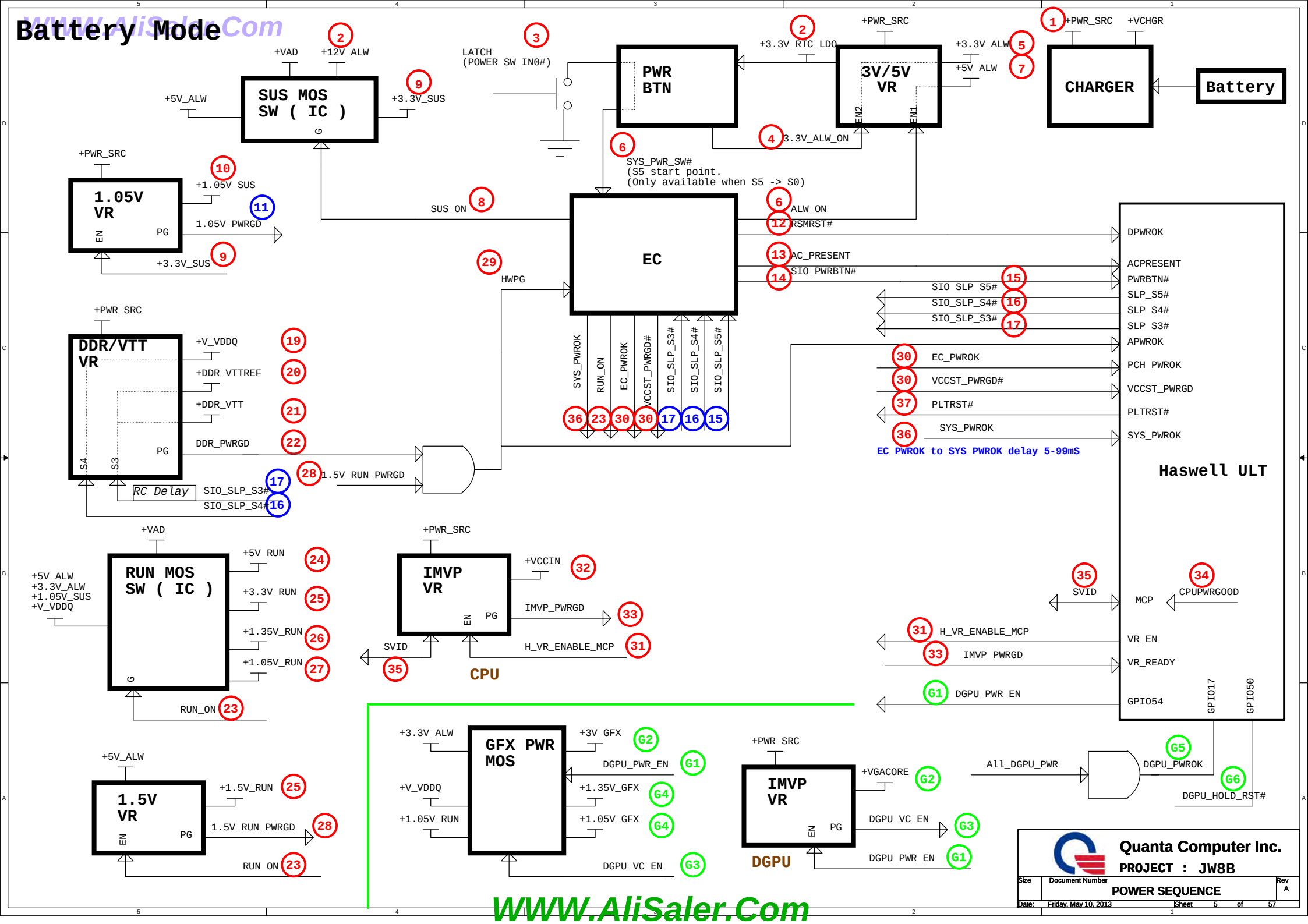
Battery Mode



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Size	Document Number	Rev
	POWER SEQUENCE	A
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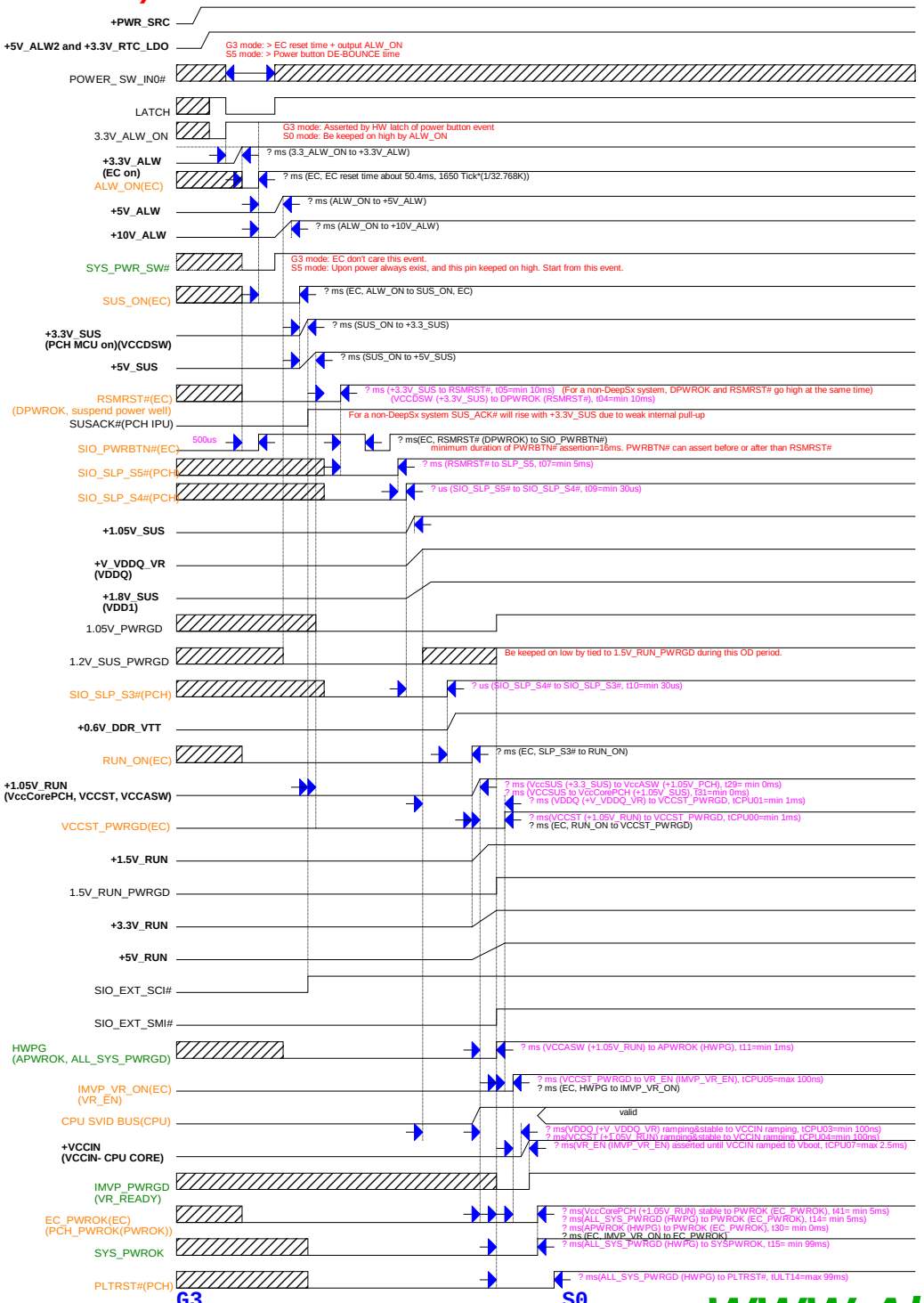
Power Sequence (G3 to S0)

Shark Bay ULT PSS, 490828, Rev1.1



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Size	Document Number	Rev
	G3 to S0	A
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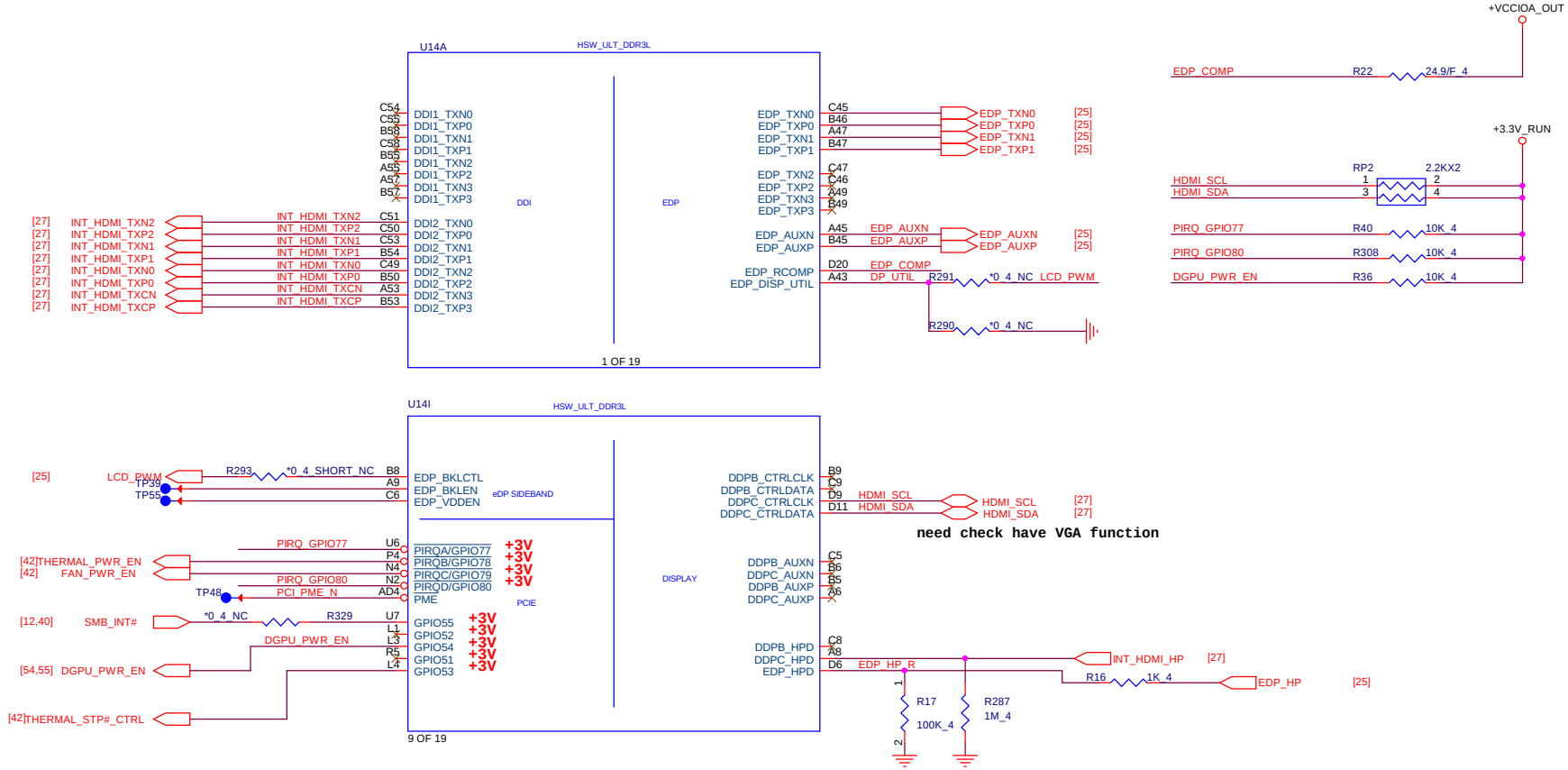
Haswell ULT (DISPLAY)



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PROJECT : JW8B

Size	Document Number	Rev
	Haswell ULT 1/12	A

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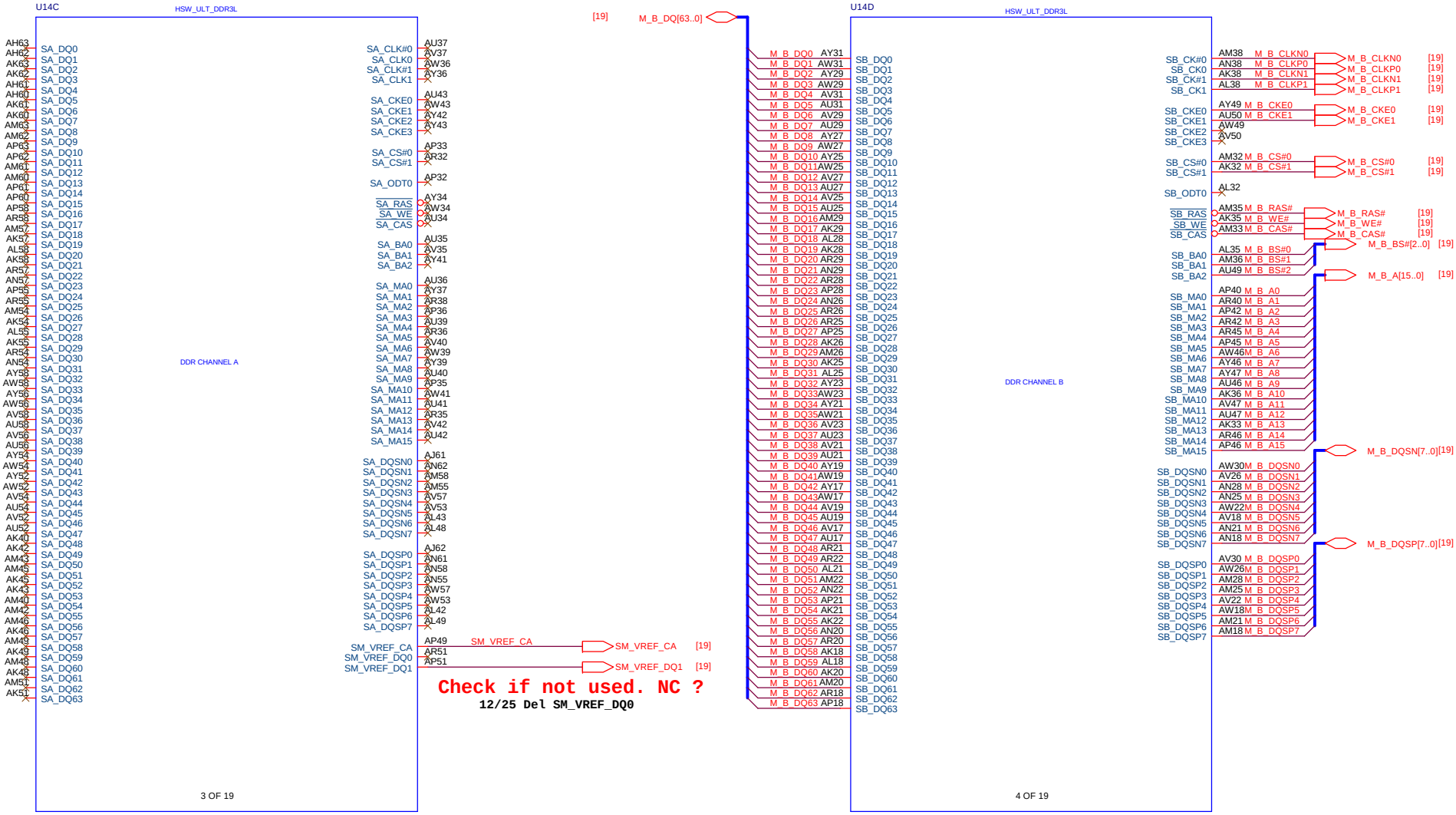
Haswell ULT (DDR3L)



Quanta Computer Inc.		
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Size	Document Number: Haswell ULT 2/12	Rev: A
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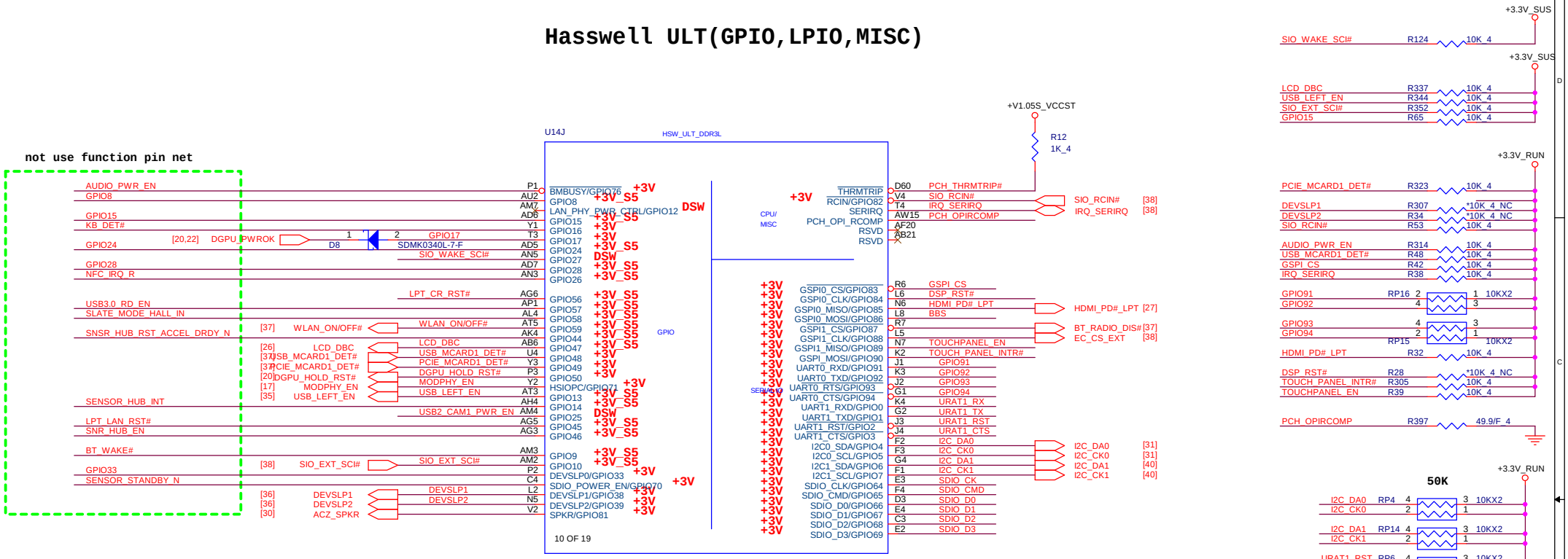
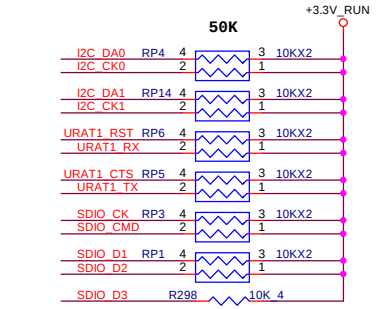
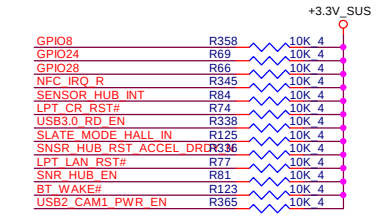
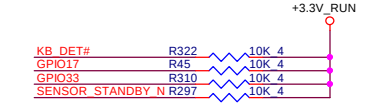
Hasswell ULT(GPIO,LPIO,MISC)







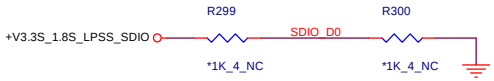


No Reboot Strap(GPIO81)	
NC	Default
PU	EN

GPIO86:Boot BIOS Strap Bit	
PU	LPC
PD	SPI (Default IPD)

TLS CONFIDENTIALITY STRAP(GPIO15)	
NC	Default
PU	EN

GPIO66 : Top-Block Swap	
R1547	ENABLE
R1547_NC	DISABLE(Default)



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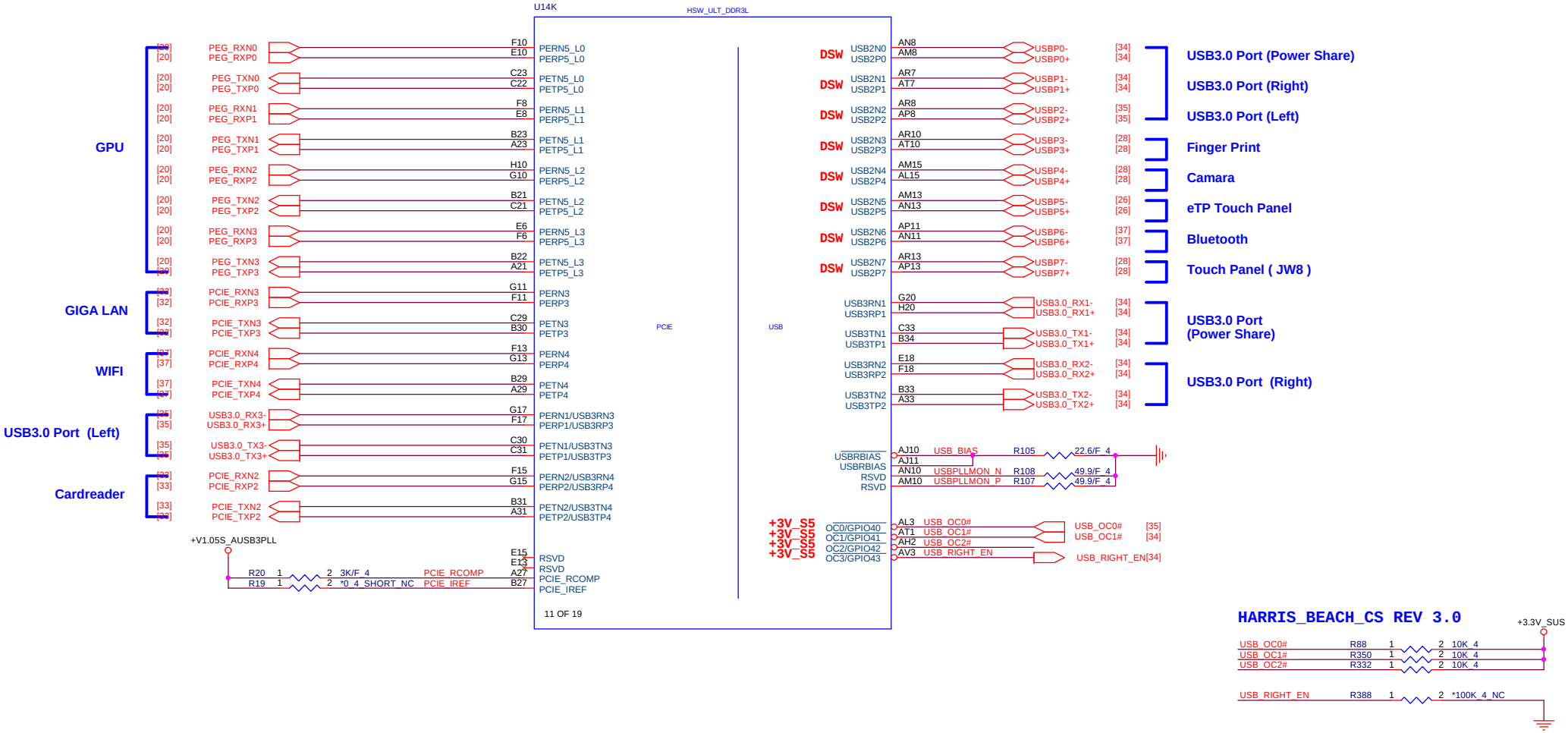
Haswell ULT (PCIE,USB)



HARRIS_BEACH_CS REV 3.0

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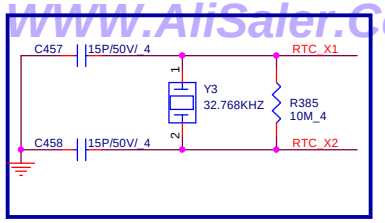
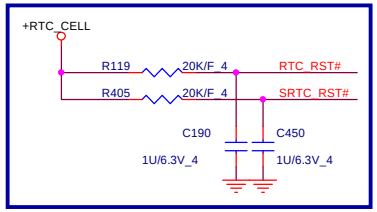
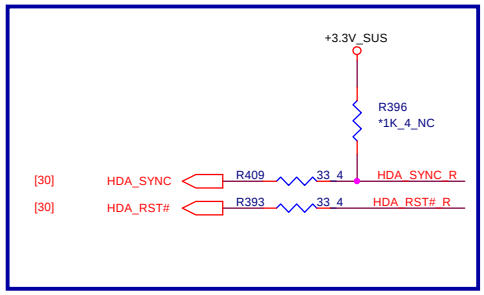
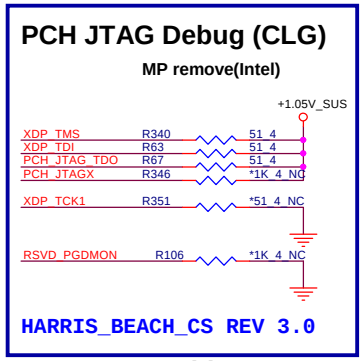
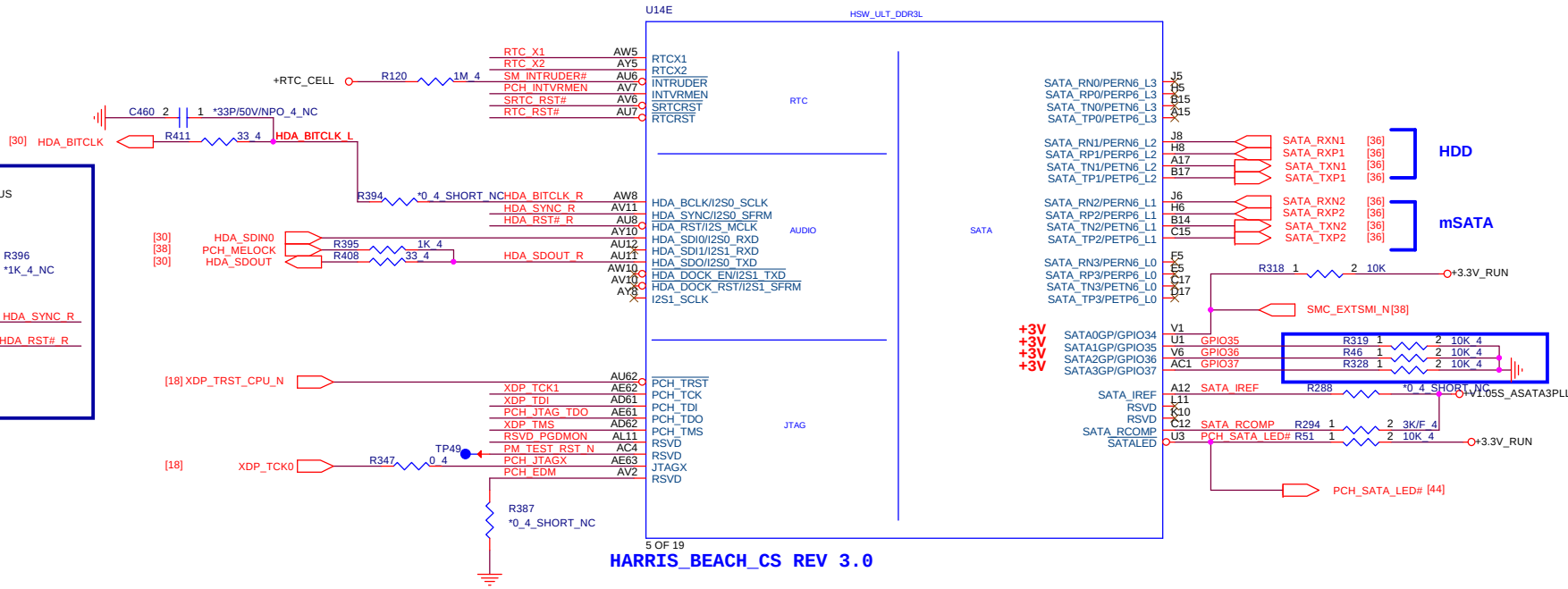
Haswell ULT (RTC, HDA, JTAG, SATA)











DFXTESTMODE
HIGH - DFXTESTMODE DISABLED(DEFAULT)
LOW - DFXTESTMODE ENABLED

PCH Strap Table

Pin Name	Strap description	Sampled	Configuration	note
SPKR	No reboot mode setting	PWROK	0 = Default (weak pull-down 20K) 1 = Setting to No-Reboot mode	
HDA_SDO	Flash Descriptor Security Override / Intel ME Debug Mode	PWROK	0 = Security Effect (Int PD) 1 = Can be Override	
INTVRMEN	Integrated 1.05V VRM enable	ALWAYS	Should be always pull-up	+RTC_CELL R407 *330K_4_NC PCH_INTVRMEN R392 330K_4

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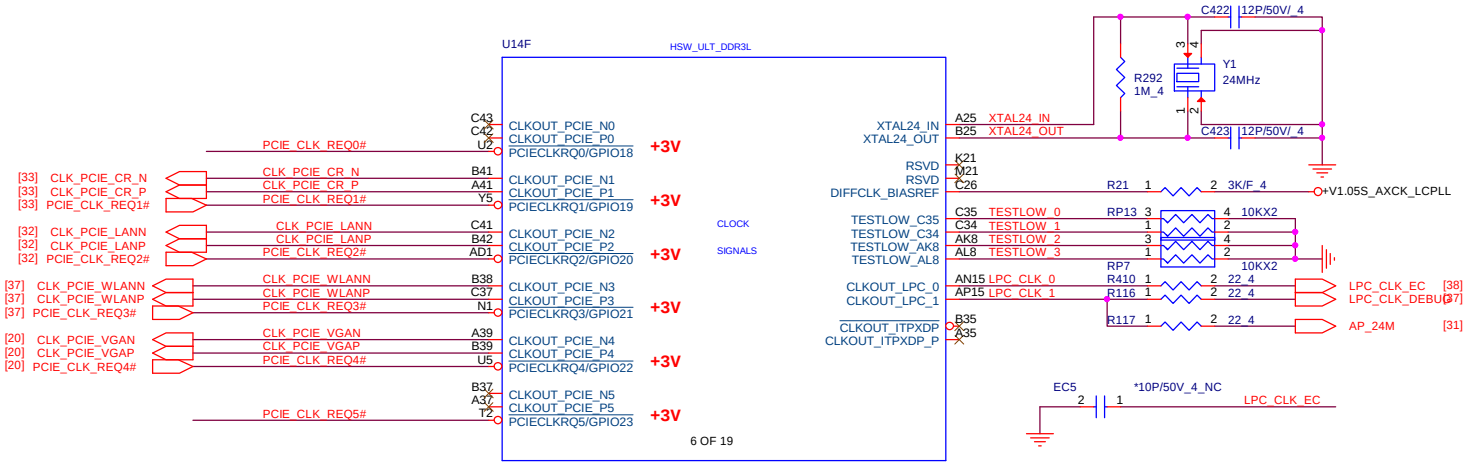
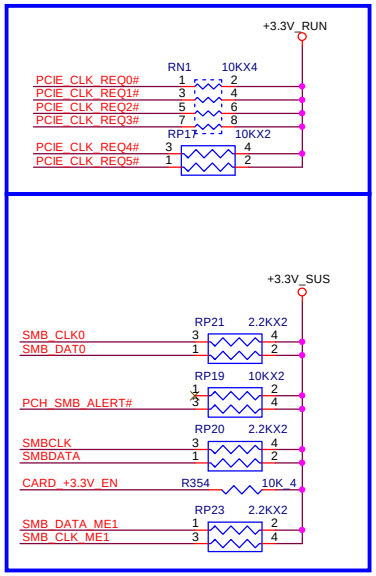
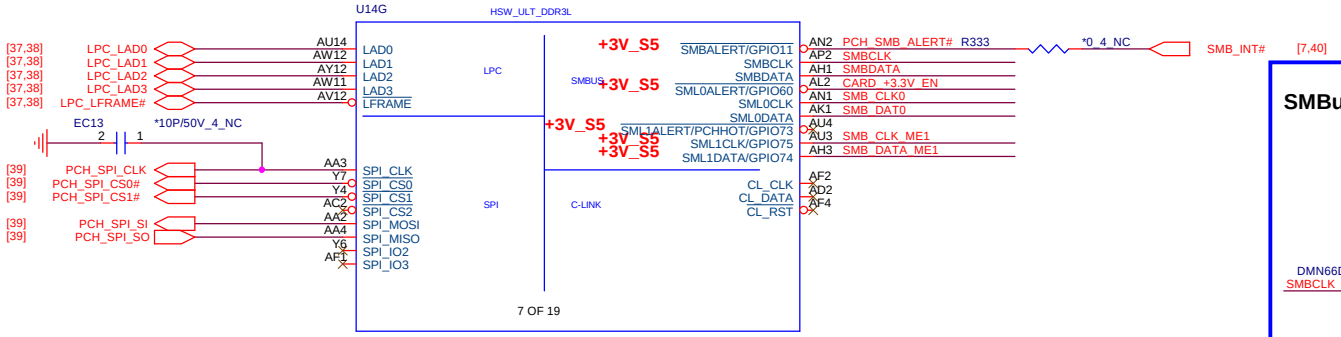
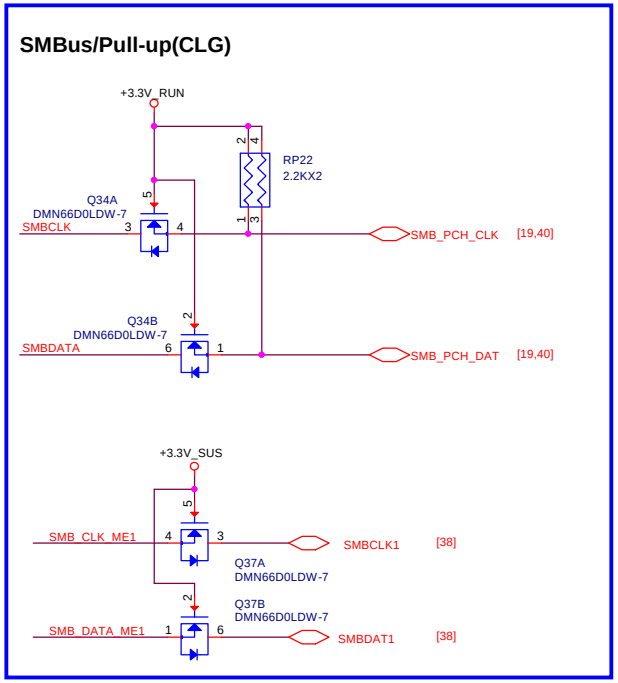
Haswell ULT (CLK)





Haswell ULT (LPC/SPI/SMB/CLINK)





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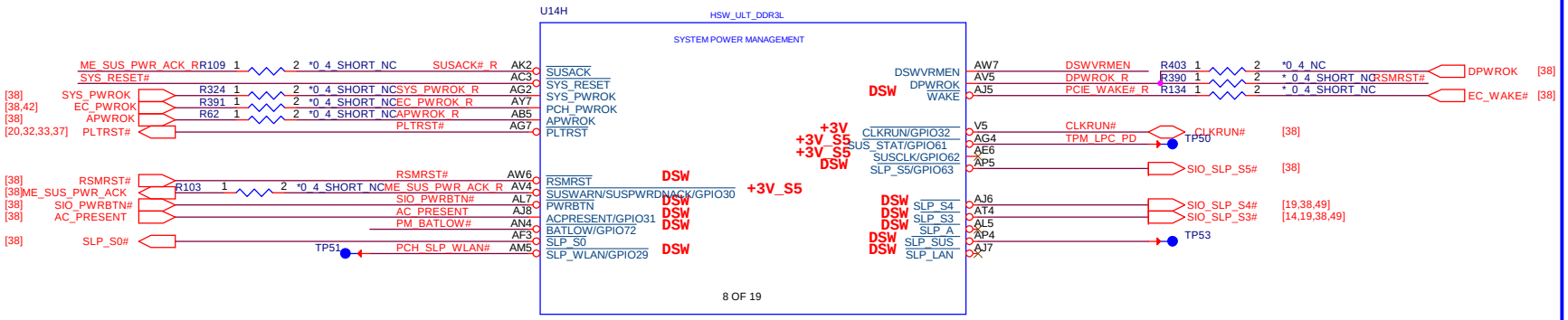
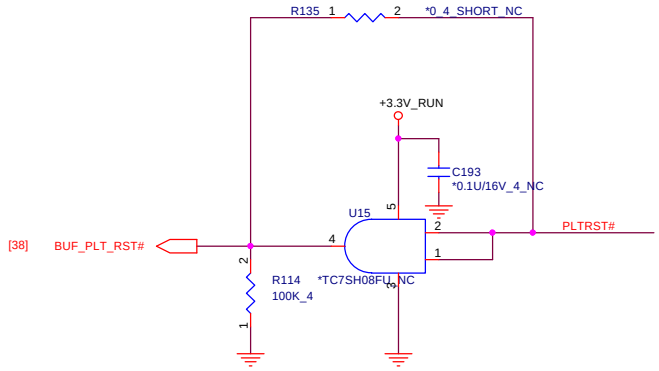
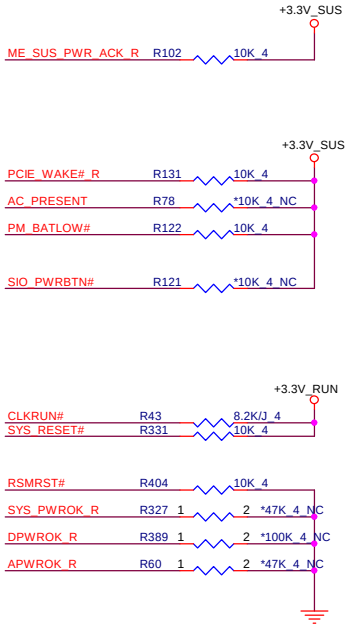
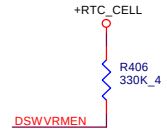
Haswell ULT (SYSTEM POWER MANAGEMENT)





PCH Pull-high/low(CLG)





On Die DSW VR Enable
High = Enable (Default)
Low = Disable

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Haswell ULT MCP(POWER)

CPU VDDQ

Haswell ULT 15W : 4.2A

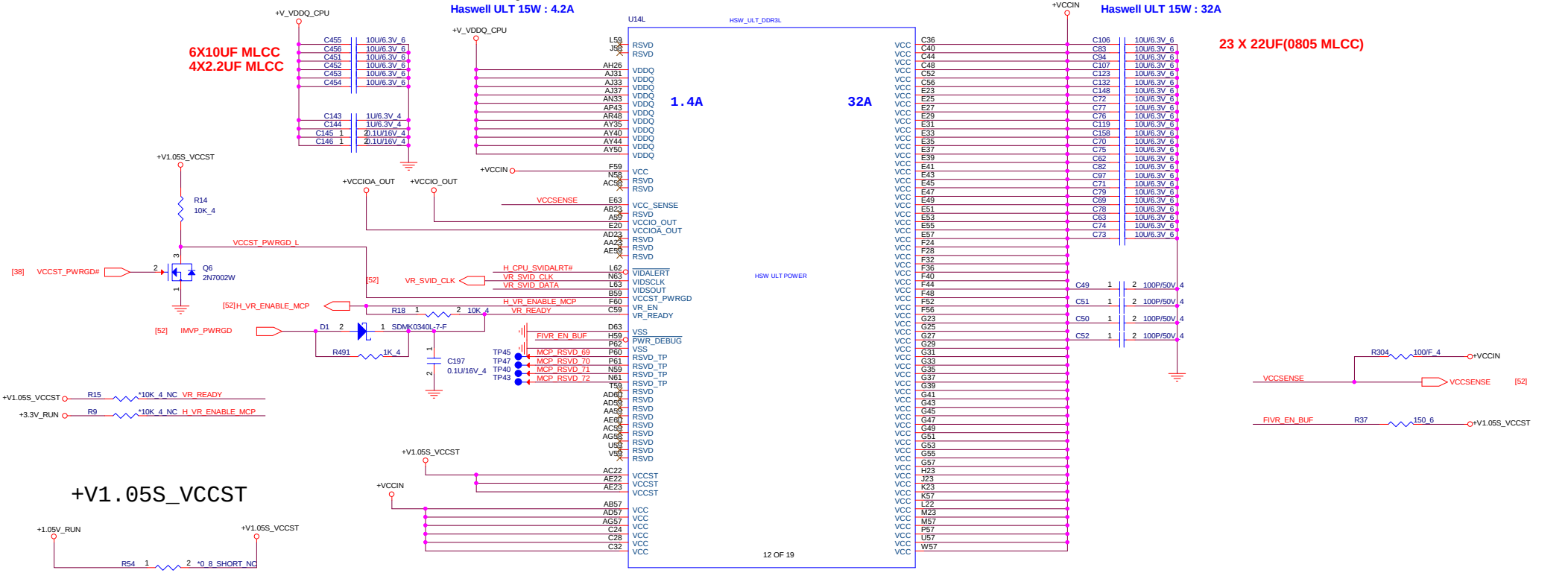
6X10UF MLCC
4X2.2UF MLCC

CPU VCC

1/21: 22Ux23 --> 10Ux23

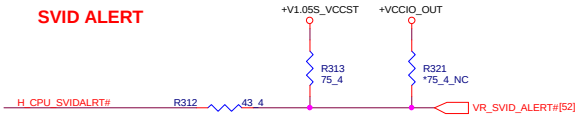
Haswell ULT 15W : 32A

23 X 22UF(0805 MLCC)

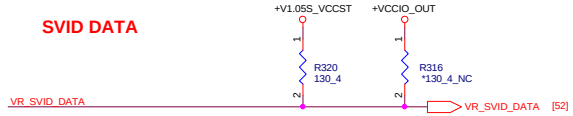


+V1.05S_VCCST

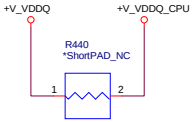
SVID ALERT



SVID DATA



S3 Power reduce



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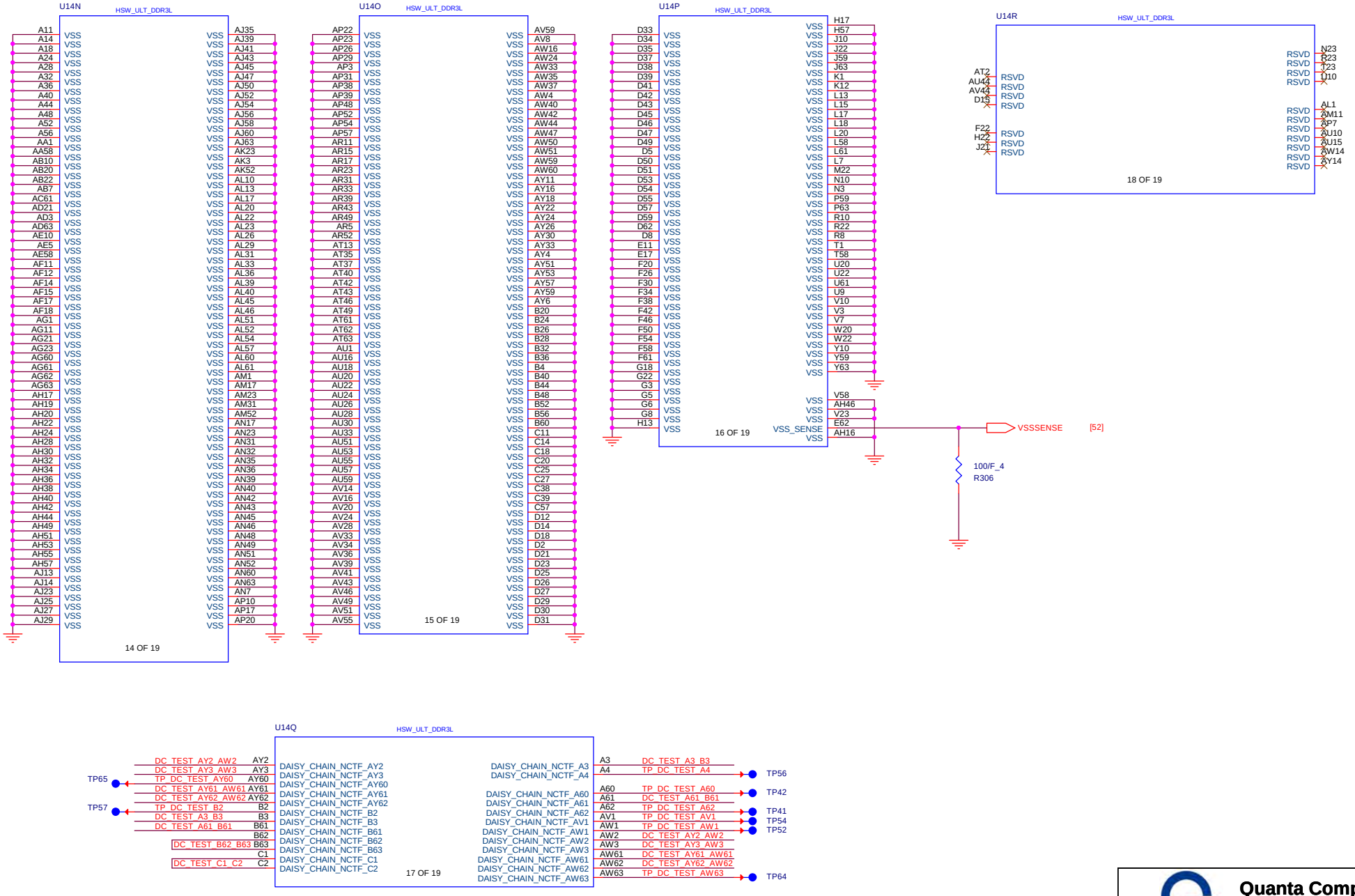
Haswell ULT (GND)



Quanta Computer Inc.		
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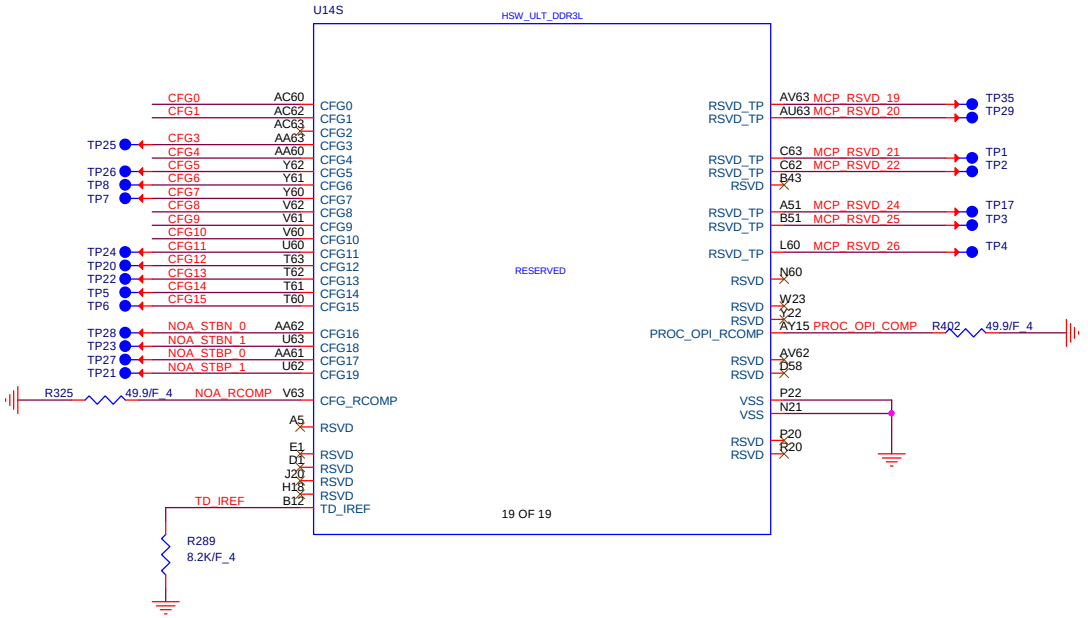
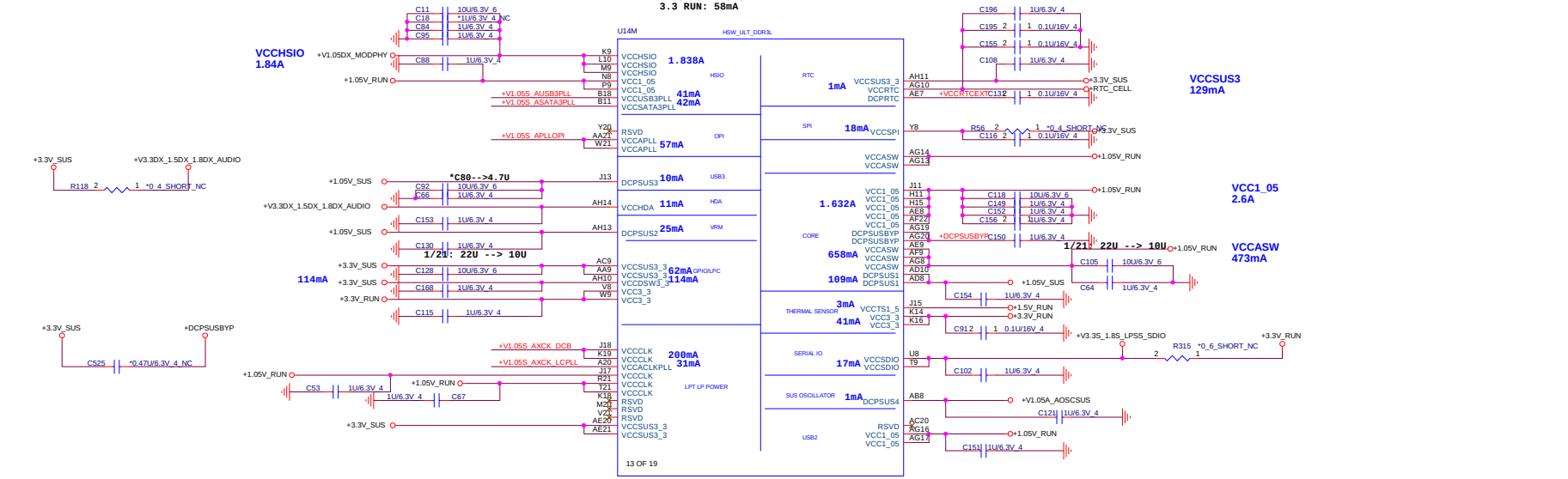


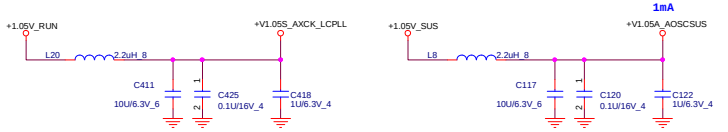
Processor Strapping

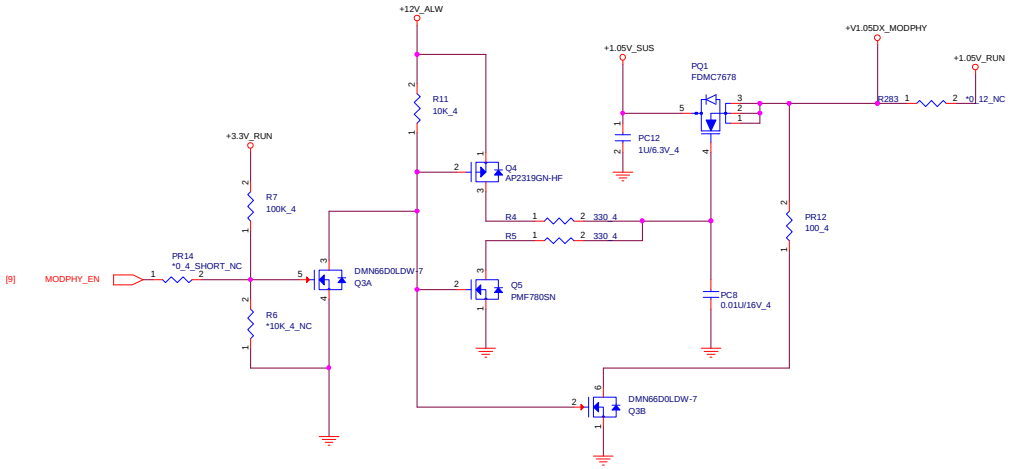
	1	0	
CFG0 EAR-STALL/NOT STALL RESET SEQUENCE AFTER PCU PLL IS LOCKED	(DEFAULT) NORMAL OPERATION; NO STALL	STALL	CFG0 R339 *1K_4_NC
CFG1 PCH/ PCH LESS MODE SELECTION	(DEFAULT) NORMAL OPERATION	PCH-LESS MODE	CFG1 R334 *1K_4_NC
CFG3 PHYSICAL_DEBUG_ENABLED (DFX PRIVACY)	DISABLED NO PHYSICAL DISPLAY PORT ATTACHED TO EMBEDDED DISPLAY PORT	ENABLED AN EXTERNAL DISPLAY PORT DEVICE IS CONNECTED TO THE EMBEDDED DISPLAY PORT	CFG3 R330 *1K_4_NC
CFG4 DISPLAY PORT PRESENCE STRAP	DISABLED NO PHYSICAL DISPLAY PORT ATTACHED TO EMBEDDED DISPLAY PORT	ENABLED AN EXTERNAL DISPLAY PORT DEVICE IS CONNECTED TO THE EMBEDDED DISPLAY PORT	CFG4 R61 1K_4
CFG 8 ALLOW THE USE OF NOA ON LOCKED UNITS	DISABLED(DEFAULT); IN THIS CASE, NOA WILL BE DISABLED IN LOCKED UNITS AND ENABLED IN UN-LOCKED UNITS	ENABLED; NOA WILL BE AVAILABLE REGARDLESS OF THE LOCKING OF THE UNIT	CFG8 R326 *1K_4_NC
CFG9 NO SVID PROTOCOL CAPABLE VR CONNECTED	VRS SUPPORTING SVID PROTOCOL ARE PRESENT	NO VR SUPPORTING SVID IS PRESENT. THE CHIP WILL NOT GENERATE (OR RESPOND TO) SVID ACTIVITY	CFG9 R58 *1K_4_NC
CFG10 SAFE MODE BOOT	POWER FEATURES ACTIVATED DURING RESET	POWER FEATURES (ESPECIALLY CLOCK GATINE ARE NOT ACTIVATED	CFG10 R57 *1K_4_NC

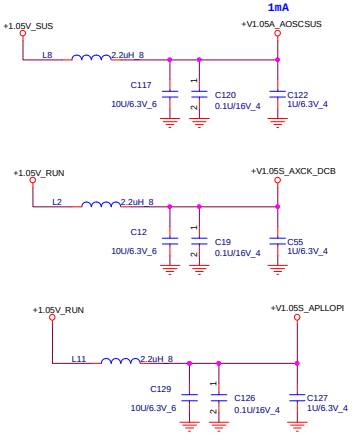
Haswell ULT PCH(POWER)

3.3 SUS: 205mA
1.05 SUS: 2066mA
1.05 RUN: 2578mA
3.3 RUN: 58mA









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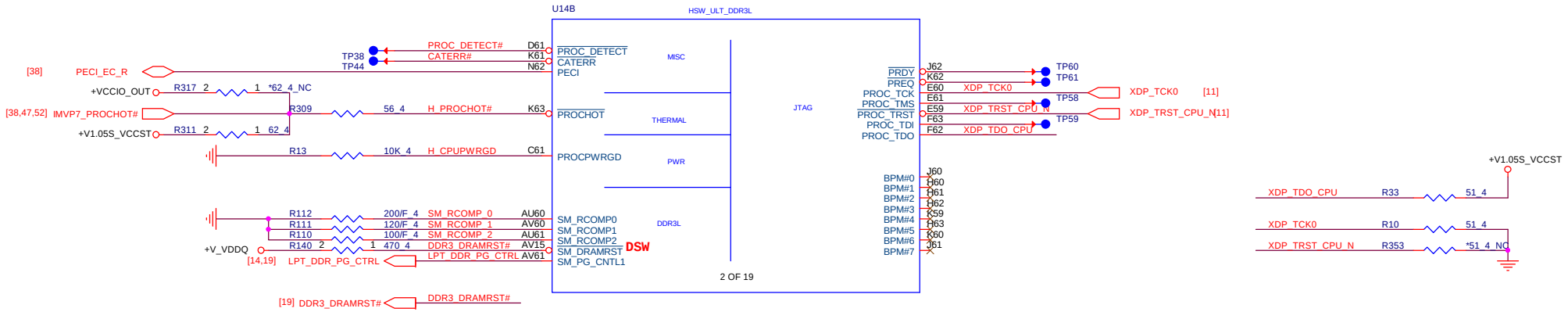

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JDIM1A

PC2100 DDR3 SDRAM SO-DIMM (204P)

DDR3-DIMM1_H=4.0_RVS
ddr-ddrk-20401-tp4b-204p-ruv
DGMK4000005

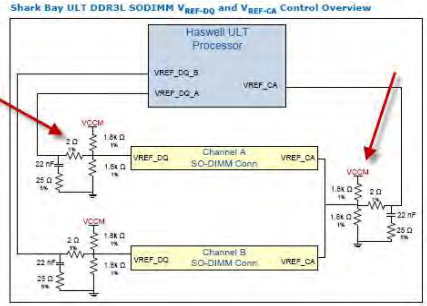
JDIM1B

PC2100 DDR3 SDRAM SO-DIMM (204P)

DDR3-DIMM1_H=4.0_RVS
ddr-ddrk-20401-tp4b-204p-ruv
DGMK4000005

2.48A

Figure 91. Shark Bay ULT DDR3L SODIMM V_{REF-DQ} and V_{REF-CA} Control Overview



M3 VREF + M1 VREF

M3 VREF + M1 VREF

DDR3L SODIMM ODT GENERATION

Place these Caps near So-Dimm1.

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PEX_IOVDD + PEX_IOVDDQ = 1.042A

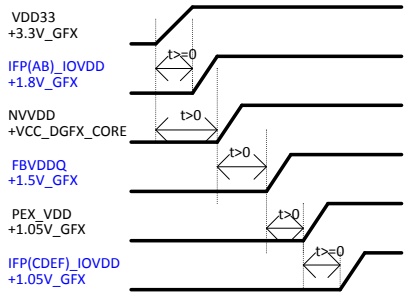
PEX_PLL_HVDD + PEX_SVDD_3V3 = 143mA

PEX_PLLVDD = 130mA

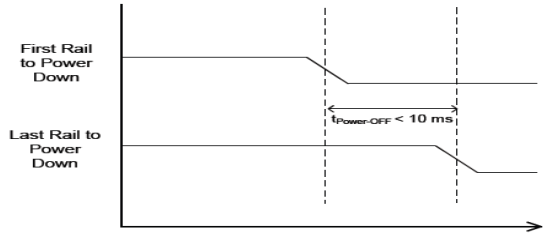
NVDD = 32.22 ~ 26.66 A

VDD33 = 56mA

Power up sequence



Power down sequence



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U13B

2/14 FBA

R335 Dis@10K/F_4 PS_FB_CLAMP F3

PS_FB_CLAMP [23,38,55]

FB_CLAMP | NC

GF117/GK208 | GF119

FBA_ODT_L VMA_CMD2 R86 Dis@10K/F_4

FBA_ODT_H VMA_CMD18 R303 Dis@10K/F_4

FBA_RST# VMA_CMD5 R341 Dis@10K/F_4

FBA_CKE_L VMA_CMD3 R369 Dis@10K/F_4

FBA_CKE_H VMA_CMD19 R27 Dis@10K/F_4

FBA_D0	E18	VMA_DQ0	[24] VMA_CMD0 C27 FBA_CMD0
FBA_D1	F18	VMA_DQ1	VMA_CMD1 C26 FBA_CMD1
FBA_D2	E16	VMA_DQ2	TP63 E24 FBA_CMD2
FBA_D3	F17	VMA_DQ3	[24] VMA_CMD2 F24 FBA_CMD3
FBA_D4	D20	VMA_DQ4	[24] VMA_CMD3 D27 FBA_CMD4
FBA_D5	D21	VMA_DQ5	[24] VMA_CMD4 D26 FBA_CMD5
FBA_D6	F20	VMA_DQ6	[24] VMA_CMD5 F25 FBA_CMD6
FBA_D7	E21	VMA_DQ7	[24] VMA_CMD6 F26 FBA_CMD7
FBA_D8	E15	VMA_DQ8	[24] VMA_CMD7 F23 FBA_CMD8
FBA_D9	D15	VMA_DQ9	[24] VMA_CMD8 G22 FBA_CMD9
FBA_D10	F15	VMA_DQ10	[24] VMA_CMD9 G23 FBA_CMD10
FBA_D11	F13	VMA_DQ11	[24] VMA_CMD10 G24 FBA_CMD11
FBA_D12	C13	VMA_DQ12	[24] VMA_CMD11 F27 FBA_CMD12
FBA_D13	B13	VMA_DQ13	[24] VMA_CMD12 G25 FBA_CMD13
FBA_D14	E13	VMA_DQ14	[24] VMA_CMD13 G27 FBA_CMD14
FBA_D15	D13	VMA_DQ15	[24] VMA_CMD14 G26 FBA_CMD15
FBA_D16	B15	VMA_DQ16	[24] VMA_CMD15 M24 FBA_CMD16
FBA_D17	C16	VMA_DQ17	[24] VMA_CMD16 M23 FBA_CMD17
FBA_D18	A13	VMA_DQ18	TP46 K24 FBA_CMD18
FBA_D19	A15	VMA_DQ19	[24] VMA_CMD18 K23 FBA_CMD19
FBA_D20	B18	VMA_DQ20	[24] VMA_CMD19 M27 FBA_CMD20
FBA_D21	A18	VMA_DQ21	[24] VMA_CMD20 M26 FBA_CMD21
FBA_D22	A19	VMA_DQ22	[24] VMA_CMD21 M25 FBA_CMD22
FBA_D23	C19	VMA_DQ23	[24] VMA_CMD22 K26 FBA_CMD23
FBA_D24	B24	VMA_DQ24	[24] VMA_CMD23 K22 FBA_CMD24
FBA_D25	C23	VMA_DQ25	[24] VMA_CMD24 J23 FBA_CMD25
FBA_D26	A25	VMA_DQ26	[24] VMA_CMD25 J25 FBA_CMD26
FBA_D27	A24	VMA_DQ27	[24] VMA_CMD26 J24 FBA_CMD27
FBA_D28	A21	VMA_DQ28	[24] VMA_CMD27 K27 FBA_CMD28
FBA_D29	B21	VMA_DQ29	[24] VMA_CMD28 K25 FBA_CMD29
FBA_D30	C20	VMA_DQ30	[24] VMA_CMD29 J27 FBA_CMD30
FBA_D31	C21	VMA_DQ31	[24] VMA_CMD30 J26 FBA_CMD31
FBA_D32	R22	VMA_DQ32	TP62
FBA_D33	R24	VMA_DQ33	
FBA_D34	T22	VMA_DQ34	
FBA_D35	R23	VMA_DQ35	
FBA_D36	N25	VMA_DQ36	
FBA_D37	N26	VMA_DQ37	
FBA_D38	N23	VMA_DQ38	
FBA_D39	N24	VMA_DQ39	
FBA_D40	V23	VMA_DQ40	
FBA_D41	V22	VMA_DQ41	
FBA_D42	T23	VMA_DQ42	
FBA_D43	U22	VMA_DQ43	
FBA_D44	Y24	VMA_DQ44	
FBA_D45	AA24	VMA_DQ45	
FBA_D46	Y22	VMA_DQ46	
FBA_D47	AA23	VMA_DQ47	
FBA_D48	AD27	VMA_DQ48	
FBA_D49	AB25	VMA_DQ49	
FBA_D50	AD26	VMA_DQ50	
FBA_D51	AC25	VMA_DQ51	
FBA_D52	AA27	VMA_DQ52	
FBA_D53	AA26	VMA_DQ53	
FBA_D54	W26	VMA_DQ54	
FBA_D55	Y25	VMA_DQ55	
FBA_D56	R26	VMA_DQ56	
FBA_D57	T25	VMA_DQ57	
FBA_D58	N27	VMA_DQ58	
FBA_D59	R27	VMA_DQ59	
FBA_D60	V26	VMA_DQ60	
FBA_D61	V27	VMA_DQ61	
FBA_D62	W27	VMA_DQ62	
FBA_D63	W25	VMA_DQ63	

FBA_DQM0	D19	VMA_DM0
FBA_DQM1	D14	VMA_DM1
FBA_DQM2	C17	VMA_DM2
FBA_DQM3	C22	VMA_DM3
FBA_DQM4	P24	VMA_DM4
FBA_DQM5	W24	VMA_DM5
FBA_DQM6	AA25	VMA_DM6
FBA_DQM7	U25	VMA_DM7

FBA_DQS_WP0	E19	VMA_WDQS0
FBA_DQS_WP1	C15	VMA_WDQS1
FBA_DQS_WP2	B16	VMA_WDQS2
FBA_DQS_WP3	B22	VMA_WDQS3
FBA_DQS_WP4	R25	VMA_WDQS4
FBA_DQS_WP5	W23	VMA_WDQS5
FBA_DQS_WP6	AB26	VMA_WDQS6
FBA_DQS_WP7	T26	VMA_WDQS7

FBA_DQS_RN0	F19	VMA_RDQS0
FBA_DQS_RN1	C14	VMA_RDQS1
FBA_DQS_RN2	A16	VMA_RDQS2
FBA_DQS_RN3	A22	VMA_RDQS3
FBA_DQS_RN4	P25	VMA_RDQS4
FBA_DQS_RN5	W22	VMA_RDQS5
FBA_DQS_RN6	AB27	VMA_RDQS6
FBA_DQS_RN7	T27	VMA_RDQS7

+1.35V_GFX R68 *Dis@60.4/F_4_NC R64 *Dis@60.4/F_4_NC

FBA_DEBUG F22 FBA_DEBUG0

FBA_DEBUG1 J22 FBA_DEBUG1

[24] VMA_CLKP0 VMA_CLKP0 D24 FBA_CLK0

[24] VMA_CLKN0 VMA_CLKN0 D25 FBA_CLK0

[24] VMA_CLKP1 VMA_CLKP1 J22 FBA_CLK1

[24] VMA_CLKN1 VMA_CLKN1 J22 FBA_CLK1

FBA_WCK01	D18	
FBA_WCK01	C18	
FBA_WCK23	D17	
FBA_WCK23	D16	
FBA_WCK45	T24	
FBA_WCK45	U24	
FBA_WCK67	V24	
FBA_WCK67	V25	

FB_PLLAVDD = 55mA

+1.05V_GFX L3 Dis@PBY160808T-300Y-N FB_PLLAVDD F16 FB_PLLAVDD

P22 FB_PLLAVDD

C96 Dis@1U/6.3V_4

C142 Dis@0.1U/16V_4

C138 Dis@0.1U/16V_4

H22 FB_DLLAVDD | FB_PLLAVDD

GF119/GK208 | GF117

FB_DLLAVDD = 15mA

FB_VREF_PROBE D23 FB_VREF_PROBE TP9

FBVDDQ + FBVDD = 3.116A

+1.35V_GFX

U13C

12/14 FBVDDQ

C57 Dis@0.1U/16V_4

C81 Dis@0.1U/16V_4

C140 Dis@0.1U/16V_4

C56 Dis@0.1U/16V_4

C109 Dis@2.2U/6.3V_6

C141 Dis@1U/6.3V_4

C124 Dis@4.7U/6.3V_6

C133 Dis@10U/6.3V_6

C134 Dis@10U/6.3V_6

B26 C25 E23 E26 F14 F21 G13 G14 G15 G16 G18 G19 G20 G21 H24 H26 J21 K21 L22 L24 L26 M21 N21 R21 T21 V21 W21 — FBVDDQ

[24] VMA_DQ[63..0]

[24] VMA_DM[7..0]

[24] VMA_WDQS[7..0]

[24] VMA_RDQS[7..0]

FB_CAL_PD_VDDQ D22 FB_CAL_PD_VDDQ R80 Dis@40.2/F_4 +1.35V_GFX

FB_CAL_PU_GND C24 FB_CAL_PU_GND R73 Dis@42.2/F_4

FB_CALTERM_GND B25 FB_CAL_TERM_GND R359 Dis@51.1/F_4

U13F

13/14 GND

A2 AB17 AB20 AB24 AC2 AC22 AC26 AC5 AC8 AD12 AD13 A26 AD15 AD16 AD18 AD19 AD21 AD22 AE11 AE14 AE17 AE20 AB11 AF1 AF11 AF14 AF17 AF20 AF23 AF5 AF8 AG2 AG26 AB14 B1 B11 B14 B17 B20 B23 B27 B5 B8 E11 E14 E17 E2 E20 E22 E25 E5 E8 H2 H23 H25 H5 K11 K13 K15 K17 L10 L12 L14 L16 L18 L2 L23 L25 L5 M11 — GND

M13 M15 M17 N10 N12 N14 N16 N18 P11 P13 P15 P17 P2 P23 P26 P5 R10 R12 R14 R16 R18 T11 T13 T15 T17 U10 U12 U14 U16 U18 U2 U23 U26 U5 V11 V13 V15 V17 Y2 Y23 Y26 Y5 — GND

AA7 AB7 — GND

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	DGPU 2/5 (Memory)	A

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U13G
4/14 IFPAB
IFPAB

U13J
7/14 IFPEF
IFPE
IFPF

U13K
3/14 DACA

U13H
5/14 IFPC
IFPC

U13I
6/14 IFPD
IFPD

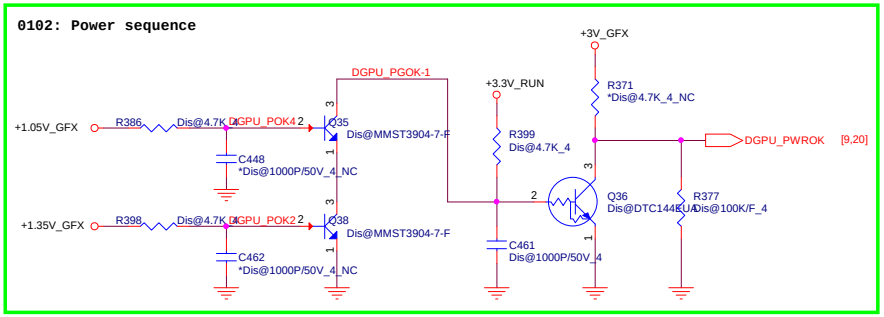
U13M
9/14 XTAL_PLL

PLLVDD = 38mA

SP_PLLVDD = 17mA

VID_PLLVDD = 41mA

0102: Power sequence



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PROJECT : JW8B			
Size	Document Number		Rev
	DGPU 3/5 (Display)		A
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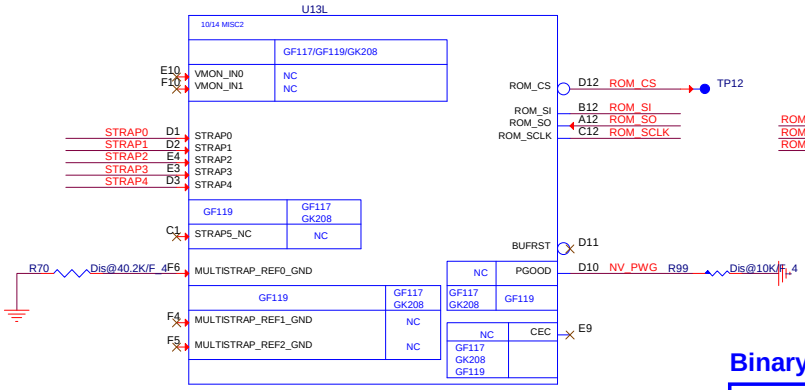
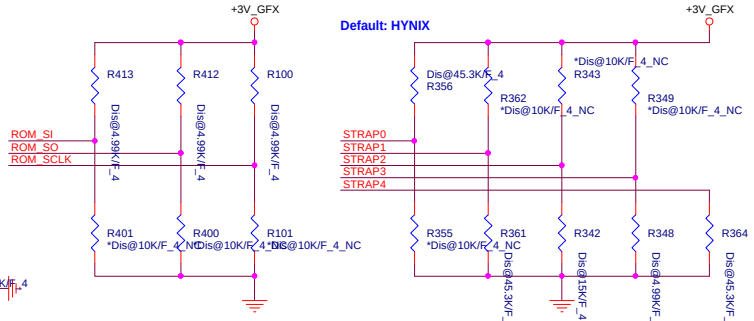
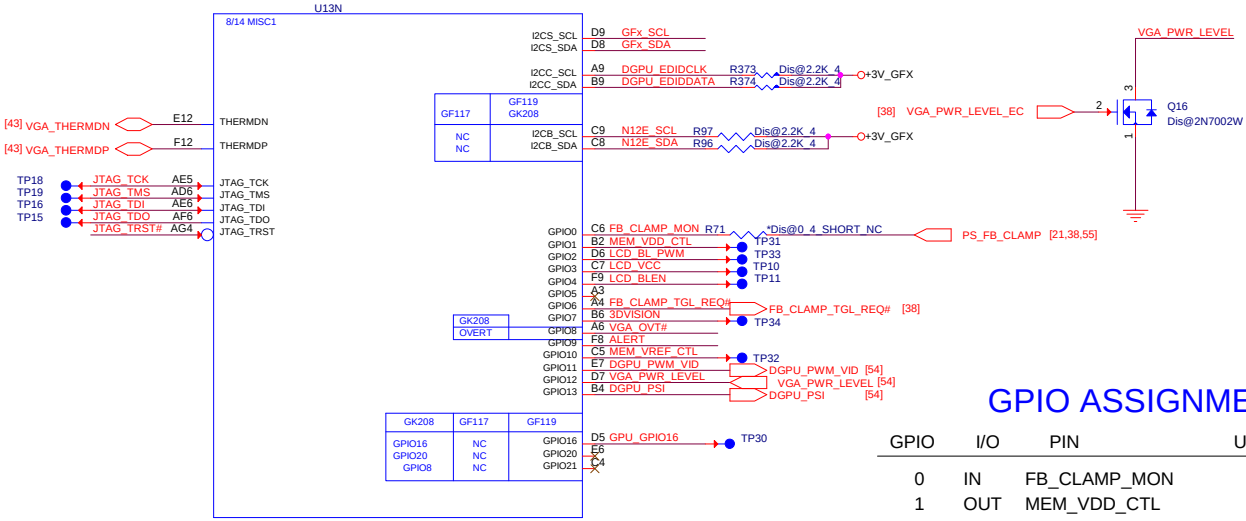




4.99K: CS24992FB00 RES CHIP 4.99K 1/16W +-1% (0402)
45K: CS34502FB00 RES CHIP 45K 1/16W +-1%(0402)
15K: CS31502FB24 RES CHIP 15K 1/16W +-1% (0402)
30.1K: CS33012FB18 RES CHIP 30.1K 1/16W +-1%(0402)
34.8K : CS33482FB22 RES CHIP 34.8K 1/16W +-1% (0402)

Binary Strap Mode Mapping

Strap Pin name	Strap Mapping	Resistance	Note
ROM_SCLK	PCI_DEVID[4] SUB_VENOOR PCI_DEVID[5] PEX_PLL_EN	5Kohm , H	1000 , SUB: no Video BIOS
ROM_SI	RAM_CFG[2] RAM_CFG[1] RAM_CFG[0]	5Kohm , H	4.99K 1000 --> Micron MT41K128M16JT-107G:K (Default) 30.1K 1101 --> Micron MT41K256M16HA-107G:E 34.8K 1110 --> Hynix H5TC4G63AFR-11C
ROM_SO	FB[1] FB[0] SMB_ALT_ADDR VGA_DEVICE	5Kohm , H	1000 , FB: 256 MB (Default) SMB:0x9E
STRAP0	User strap [3:0]	45Kohm , H	1111 , EDID is used
STRAP1	3GIO_CFG[3:0]	45Kohm , D	1111 , USER defined
STRAP2	PCI_DEVID[3:0]	15Kohm , D	010010 , N14P-GV2
STRAP3	SOR[3:0]_EXPOSED	5Kohm , D	0000 , IFPx port not use
STRAP4	RESERVED PCIE_SPEED_GEN3 PCIE_MAX_SPEED DP_PLL_VDD33V	45Kohm , D	0111 , PCIE GEN3 setting

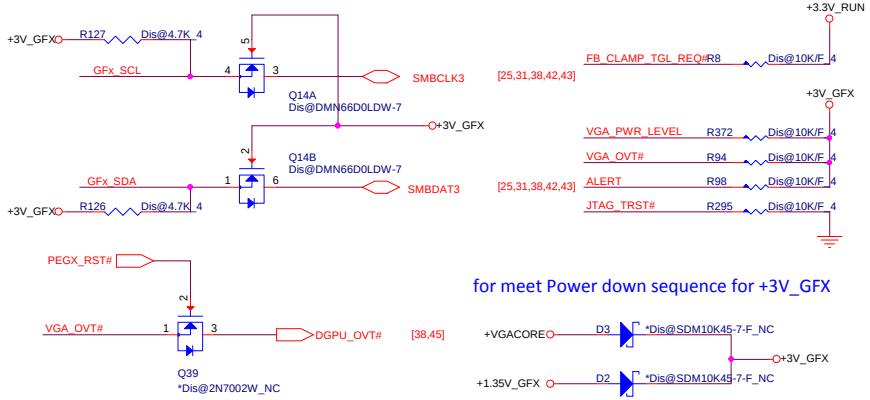


GPIO ASSIGNMENTS (GB2-64)

GPIO	I/O	PIN	USAGE
0	IN	FB_CLAMP_MON	FB Clamp monitor
1	OUT	MEM_VDD_CTL	MEMORY VDD ID
2	OUT	LCD_BL_PWM	LCD BACKLIGHT PWM
3	OUT	LCD_VCC	PANEL POWER ENABLE
4	OUT	LCD_BLEN	PANEL BACKLIGHT ENABLE
5		RESERVE	
6	OUT	FB_CLAMP_TGL_REQ#	# --> FB Clamp toggle request
7	OUT	3DVision	3D VISION LEFT/RIGHT VISION
8	I/O	OVERT	ACTIVE LOW THERMAL OVER TEMP
9	I/O	ALERT	ACTIVE LOW THERMAL ALERT
10	OUT	MEM_VREF_CTL	MEMMORY VREF CONTROL
11	OUT	PWM_VID	GPU Core VDD PWM control
12	IN	PWR_LEVEL	Power Detect ,HIGH=AC, LOW=DC
13	OUT	PSI	Phase Shedding
14	IN	HPD_A	HOT PLUG DETECT FOR IFPAB
15	IN	HPD_C	HOT PLUG DETECT FOR IFPC
16	OUT	FRM_LCK	MEMMORY VDD CONTROL
17	IN	HPD_D	HOT PLUG DETECT FOR IFPD
18	IN	HPD_E	HOT PLUG DETECT FOR IFPE
19	IN	HPD_F or HPD_B	HOT PLUG DETECT FOR IFPF
20/21		RESERVE	

VRAM Configuration Table

RAMCFG [3:0]	DESCRIPTION	Vendor	DELL P/N	QCI P/N
0000 1000 0x8	MT41K128M16JT-107G:K (FCBGA)(96P)	Micron	NA	AKD5DGSTL00
1101 0xD	MT41K256M16HA-107G:E	Micron	NA	AKD5PGSTL00
1110 0xE	H5TC4G63AFR-11C	Hynix	NA	AKD5PGWTW05



for meet Power down sequence for +3V_GFX

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	DGPU 4/5 (MIO/GPIO)	A

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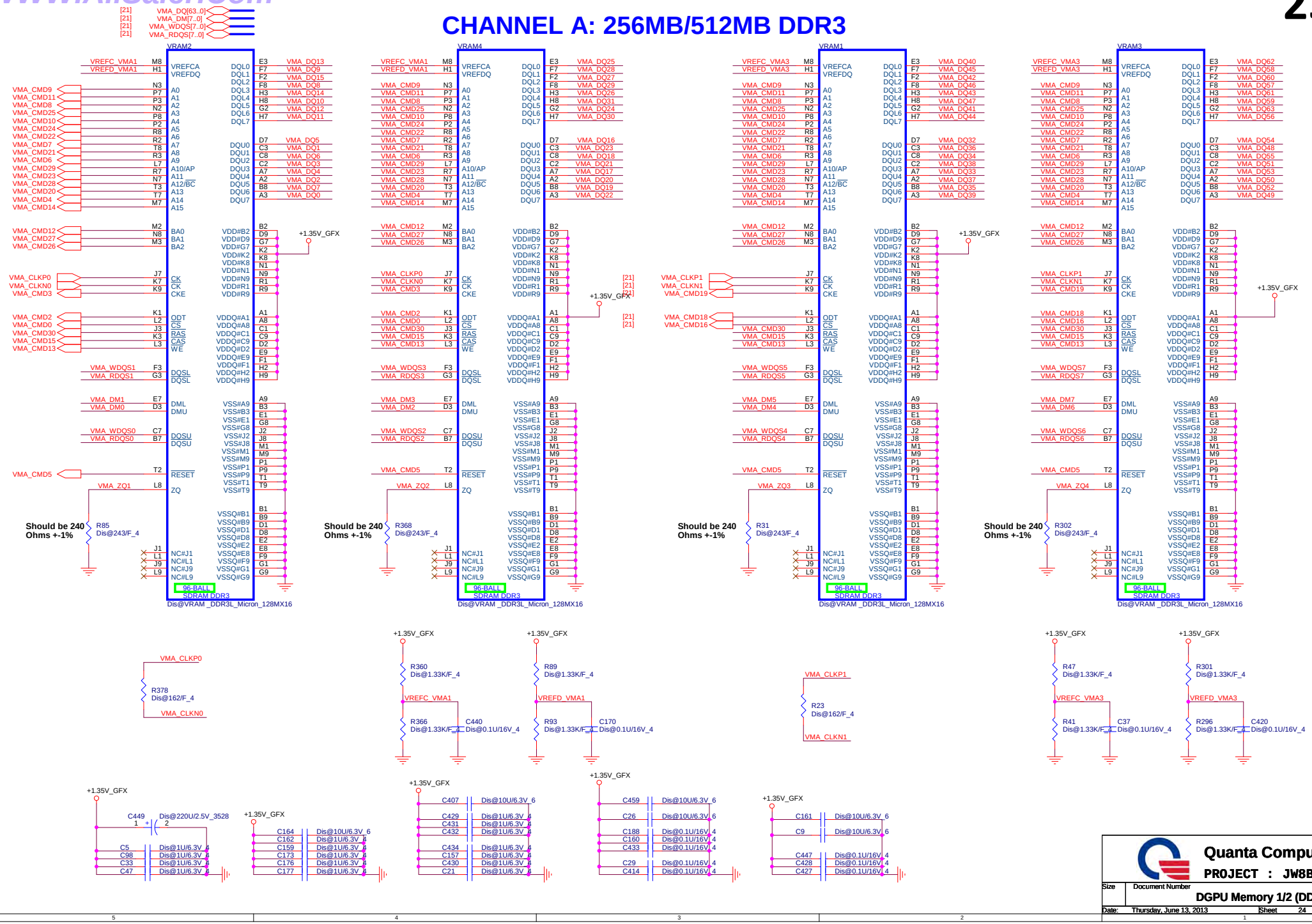
CHANNEL A: 256MB/512MB DDR3



Quanta Computer Inc.

PROJECT : JW8B

Size	Document Number	Rev
	DGPU Memory 1/2 (DDR3)	A

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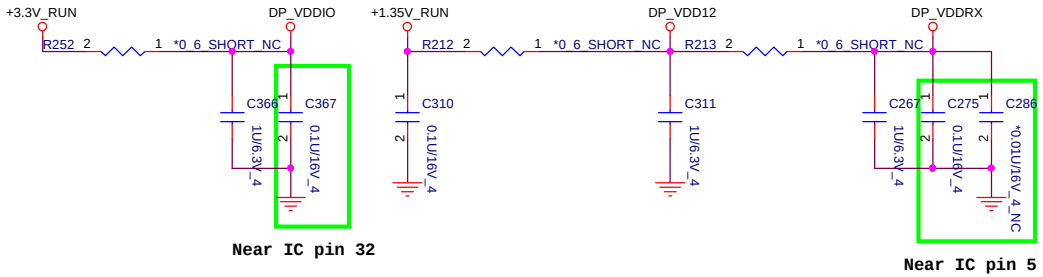

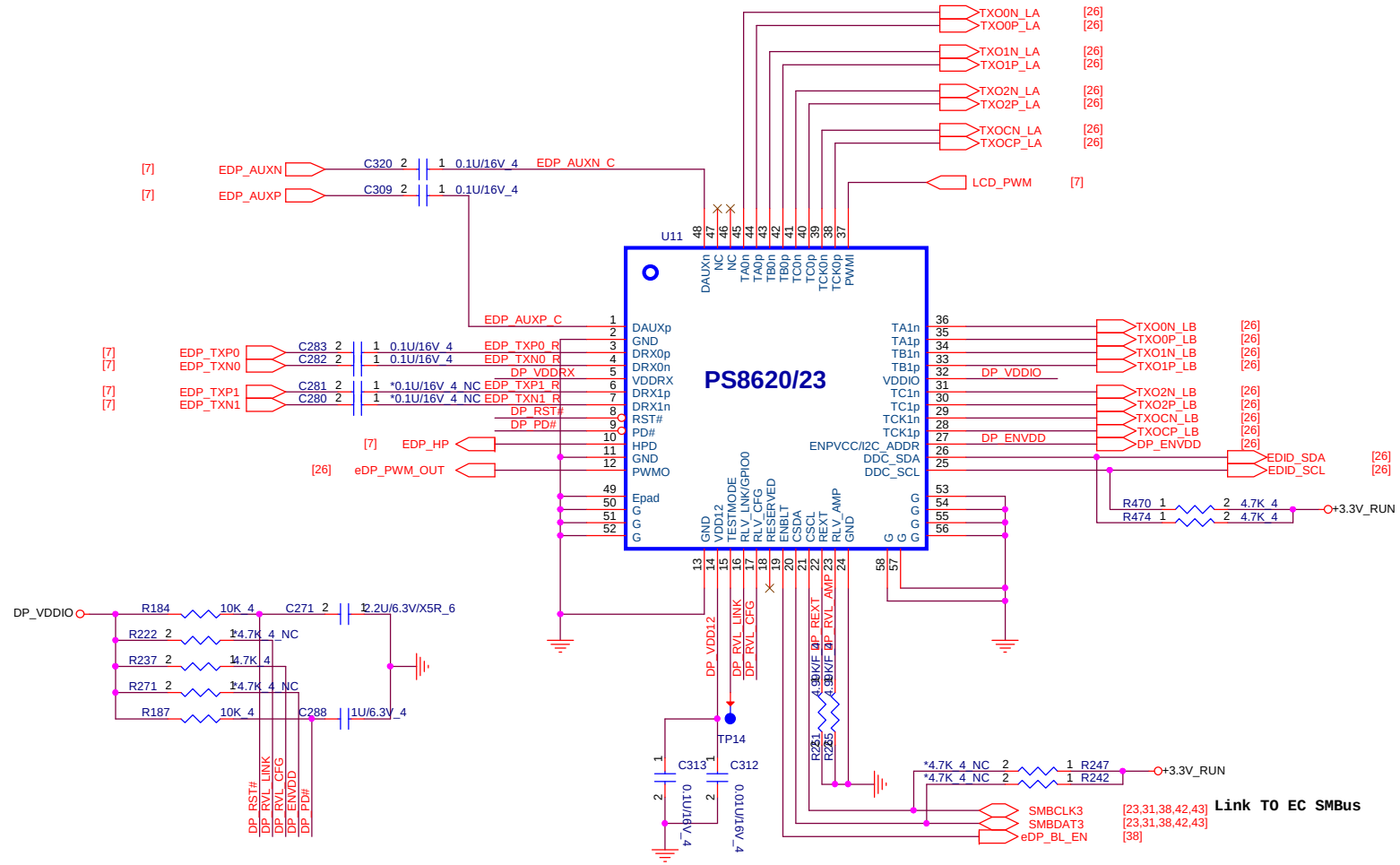

DP_ENVDD: I2C Slave address selection, internal pull-down ~80K
L: 0x10h~0x1Fh
H: 0x90h~0x9Fh

DP_RVL_LINK: LVDS single link or dual link selection, internal pull-down ~80K
L: Single link LVDS
H: Dual link LVDS

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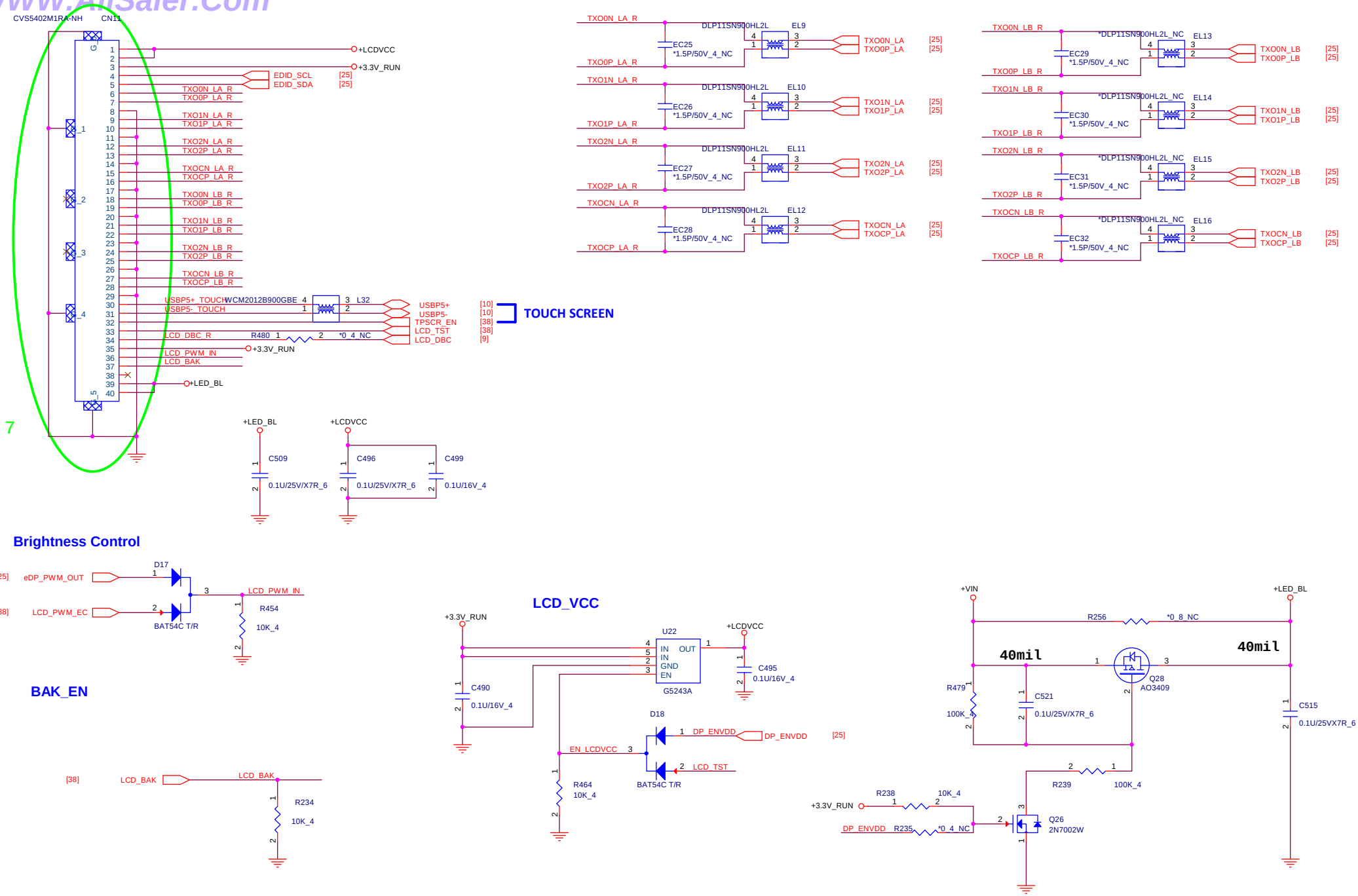

Brightness Control

BAK_EN

LCD_VCC

Quanta Computer Inc.		
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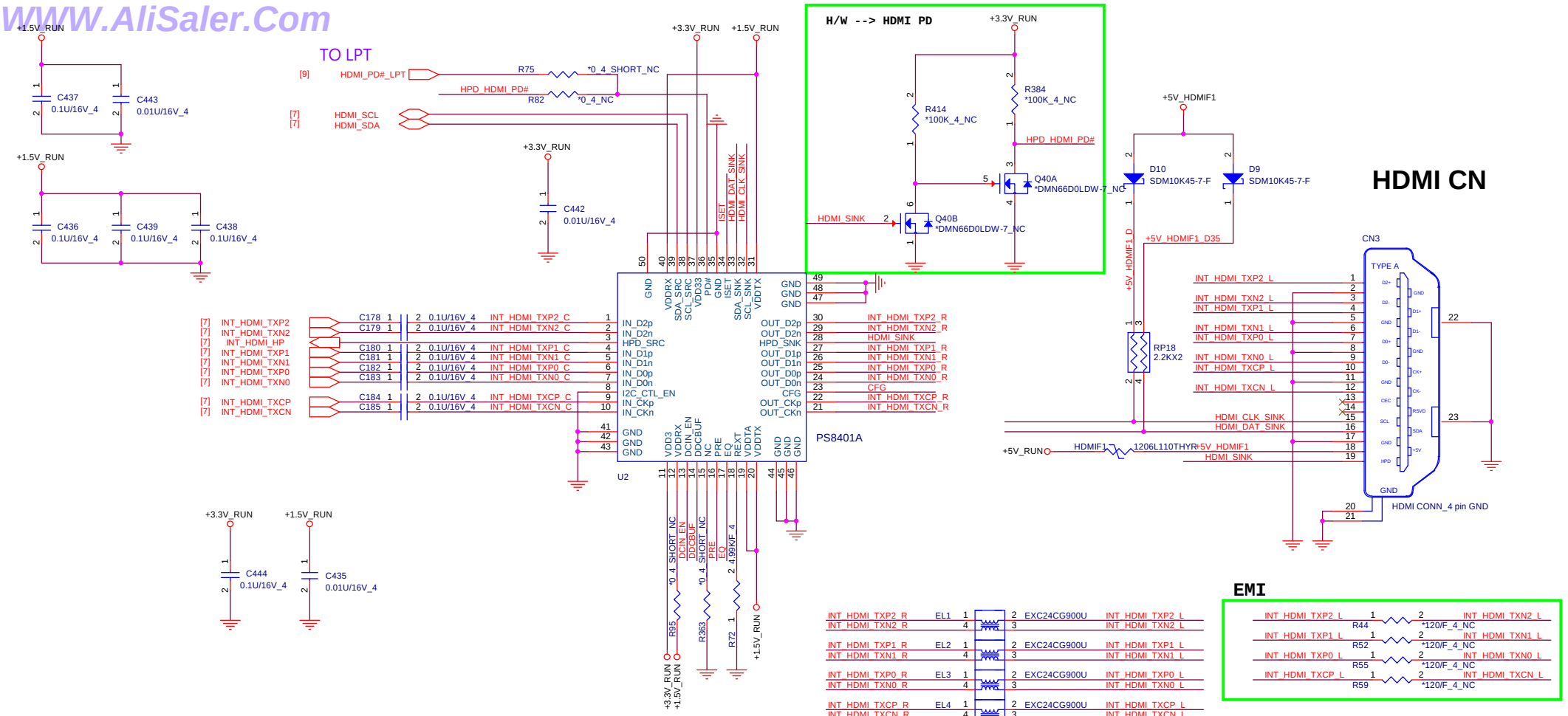
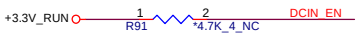
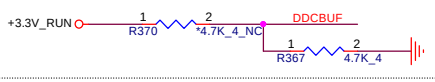


3 Level Input:
L:LOW,internal pull down
H:HIGH, external pull up
M:VDD3/2, both external pill-up and pull-down

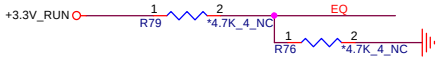


Int pull-down 150k , 3.3V IO

L:default,AC coupling input
H:DC coupling input



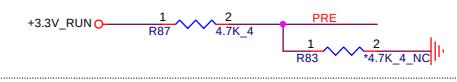
L:default,passive DDC pass-through
H:active DDC buffer with default threshold
M:passive DDC pass-through with internal ~10Kohm pull up



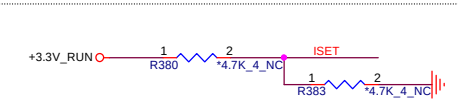
L:programmable EQ for channel loss up to 6.5dB @3Gbps
H:programmable EQ for channel loss up to 9.5dB @3Gbps
M:programmable EQ for channel loss up to 3dB @3Gbps

Int pull-down 150k , 3.3V IO

L:HDMI ID disable
H:HDMI ID enable



L:no pre-emphasis
H:1.6dB pre-emphasis
M:3.0dB pre-emphasis



L:default
H:increase +13%
M:increase -13%

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	HDMI	A

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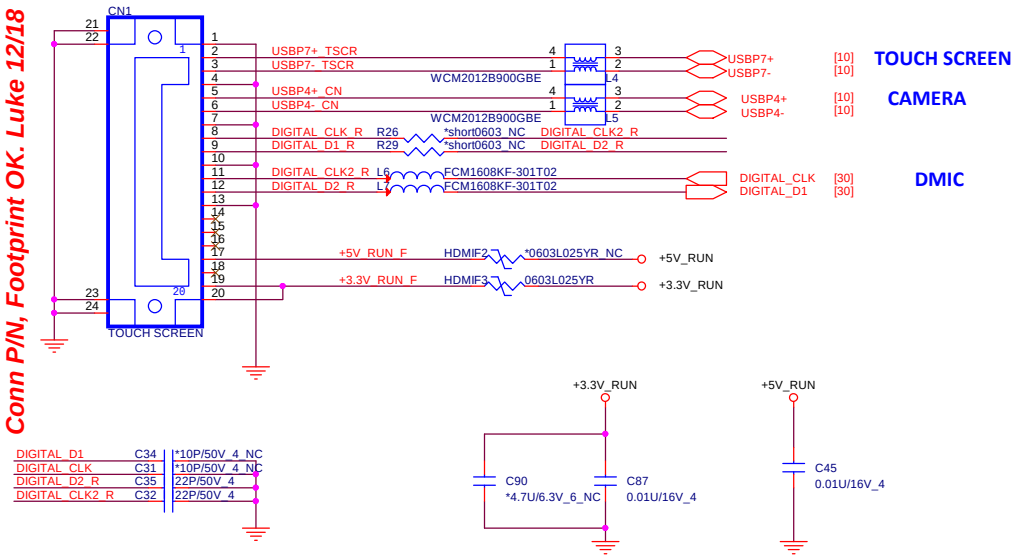
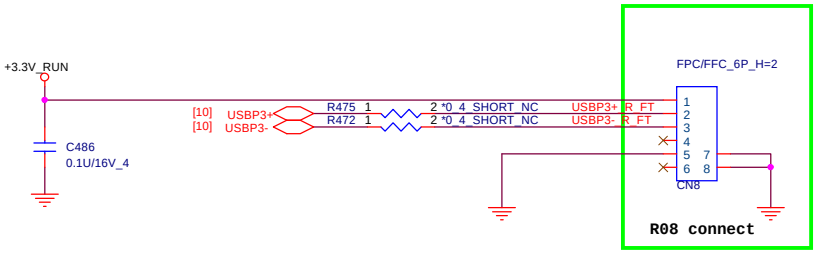
CAMERA / DMIC

Conn P/N, Footprint OK. Luke 12/18



Fingerprint



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	Camera/Fingerprint Conn	A

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Mini-PCIE

H15
h-tc236bc130d130pt

H16
h-tc236bc130d130pt

CPU BKT

H8
*INTEL-BKT-SHARK-ULT

H7
*H-TC394BC315D130P2

H10
*h-tc394bc315d138p2

H11
*h-tc394bc315d138p2

H13
*h-tc394bc315d138p2

H14
*h-tc276bc315d118p2

H3
*h-tc236bc315d98p2

H4
*h-tc236bc315d98p2

H6
*H-TSBC315D98P2

H12
*h-tc236bc315d98p2

H5
*h-tc315bc150d150pt

H9
*h-tc315i190bc150d150pt

H1
*h-c59d59n

H2
*h-c59d59n

Title	<Title>	
Size: Custom	Document Number <Doc>	Rev A
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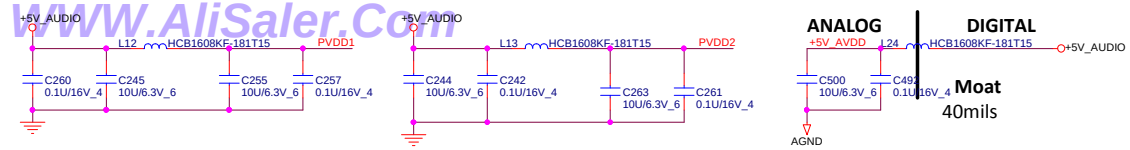
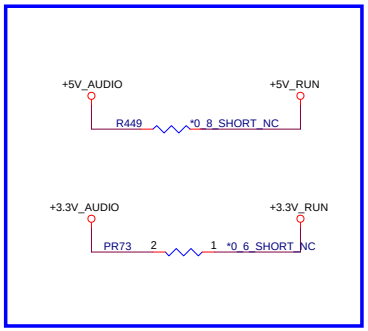
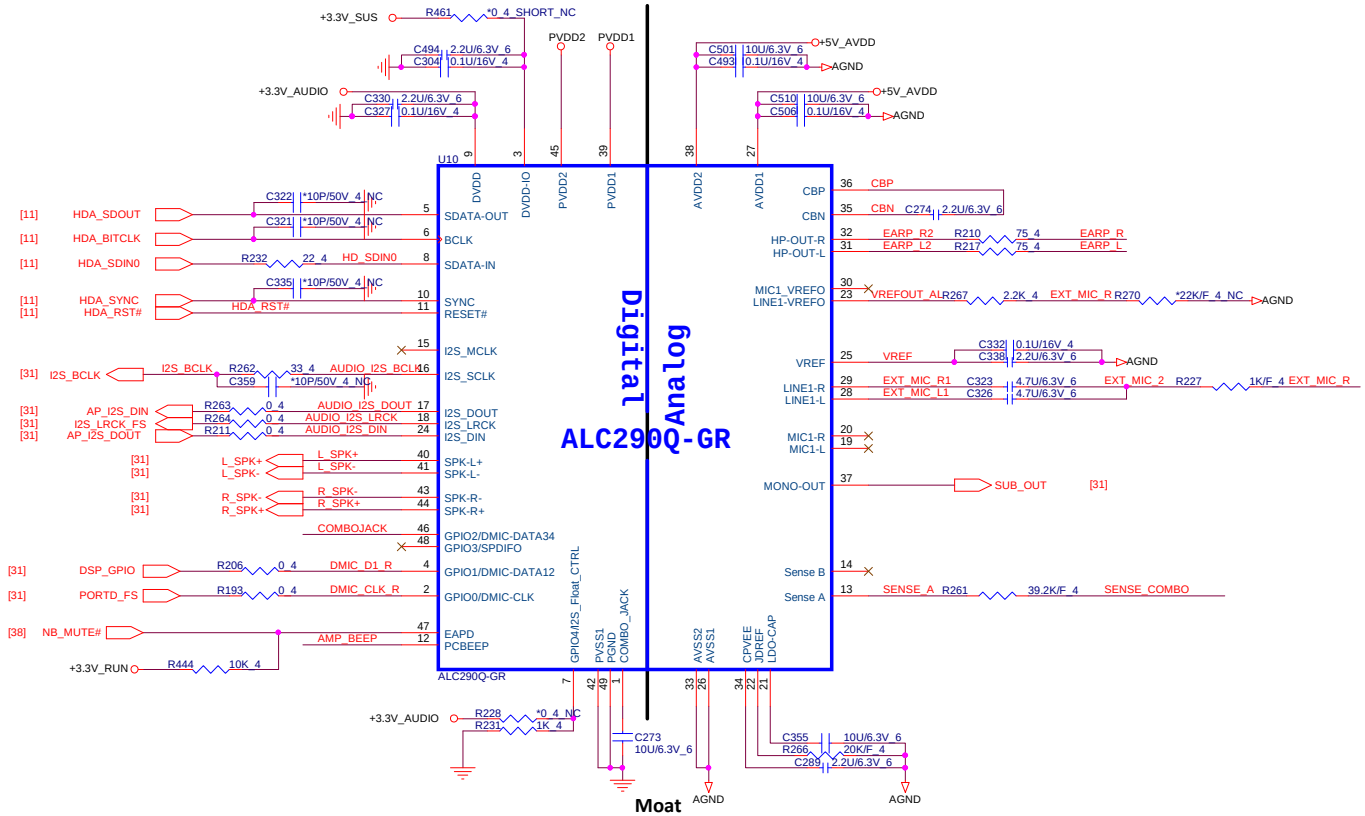
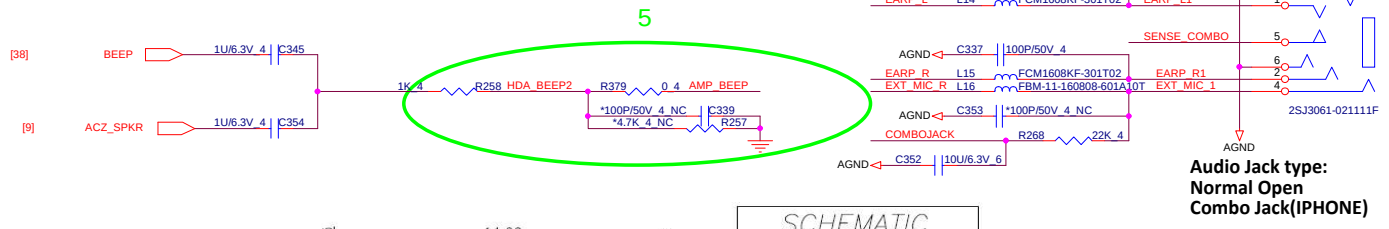


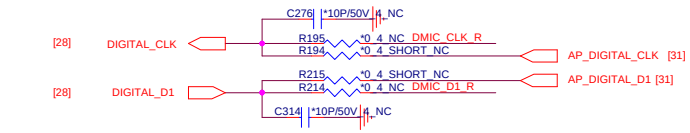


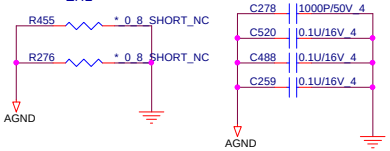


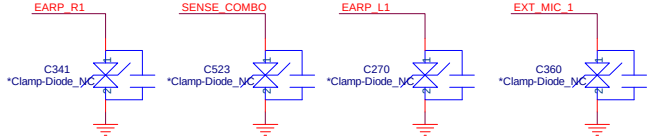
Audio Combo Jack

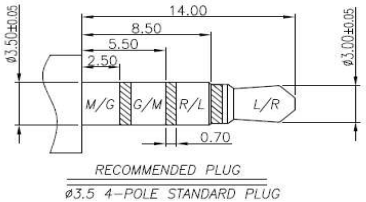


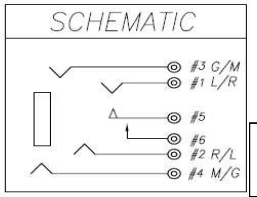
Audio Jack type:
Normal Open
Combo Jack(IPHONE)











Quanta Computer Inc.
PROJECT : JW8B

Size	Document Number	Rev
	Audio Codec ALC290	A
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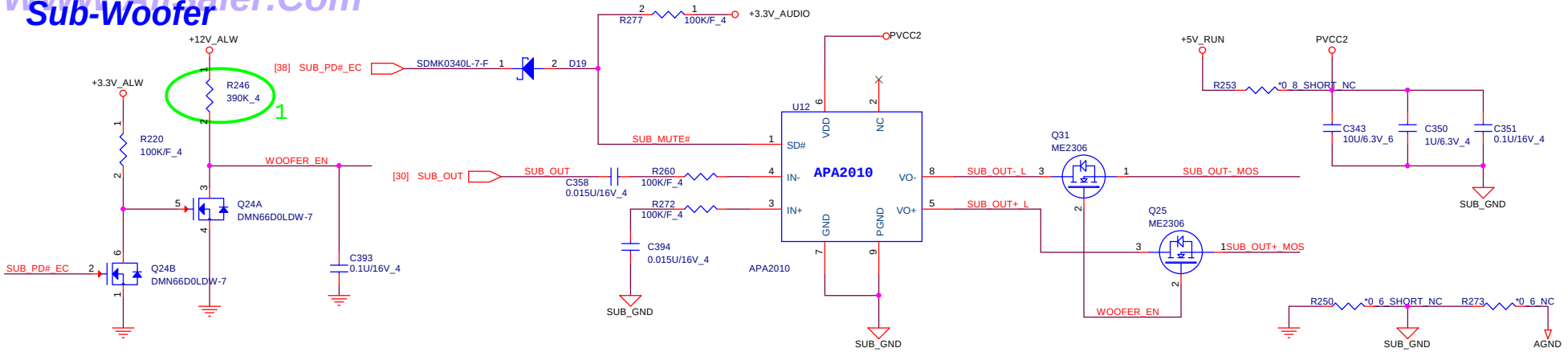
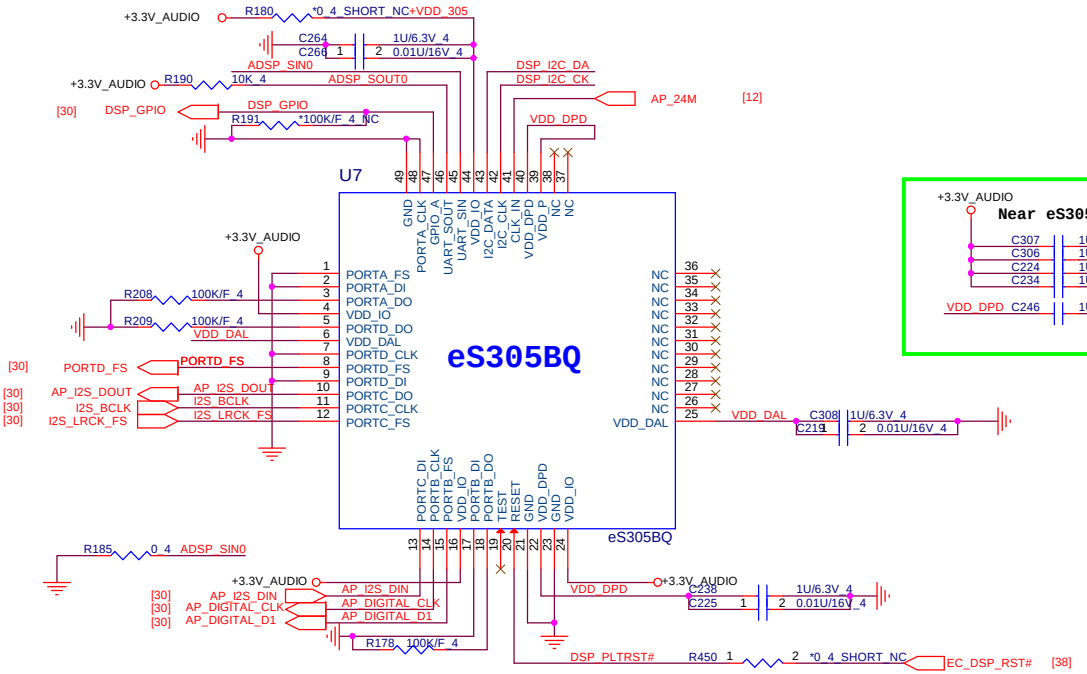
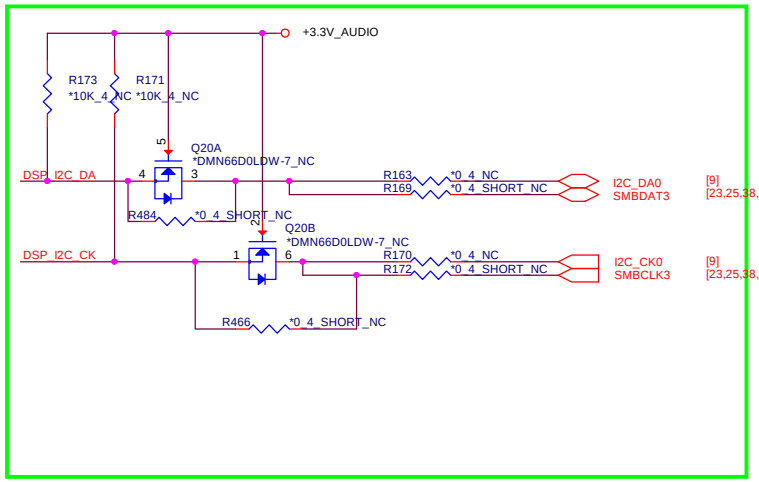
Sub-Woofer

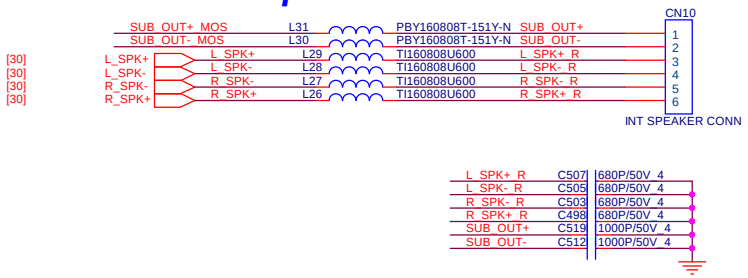


Audio Processor





Int. Speaker



Quanta Computer Inc.
PROJECT : JW8B

Size	Document Number	Rev
	AudioDSP/TouchScreen/Subwoofer	A
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JW8 have support S5 wave up

Each CAP near IC pin 3 , 8 , 22 , 30

near IC pin 22

near IC pin 23

SW mode

EMI

EMI

TRANSFORMER

FCE: NS692417, DB0KL3LAN02
BOT: NA0069R LF, DB0KL3LAN01

Quanta Computer Inc.
PROJECT : JW8B

Size	Document Number	Rev
	LAN(RTL8111GUS)/RJ45	A

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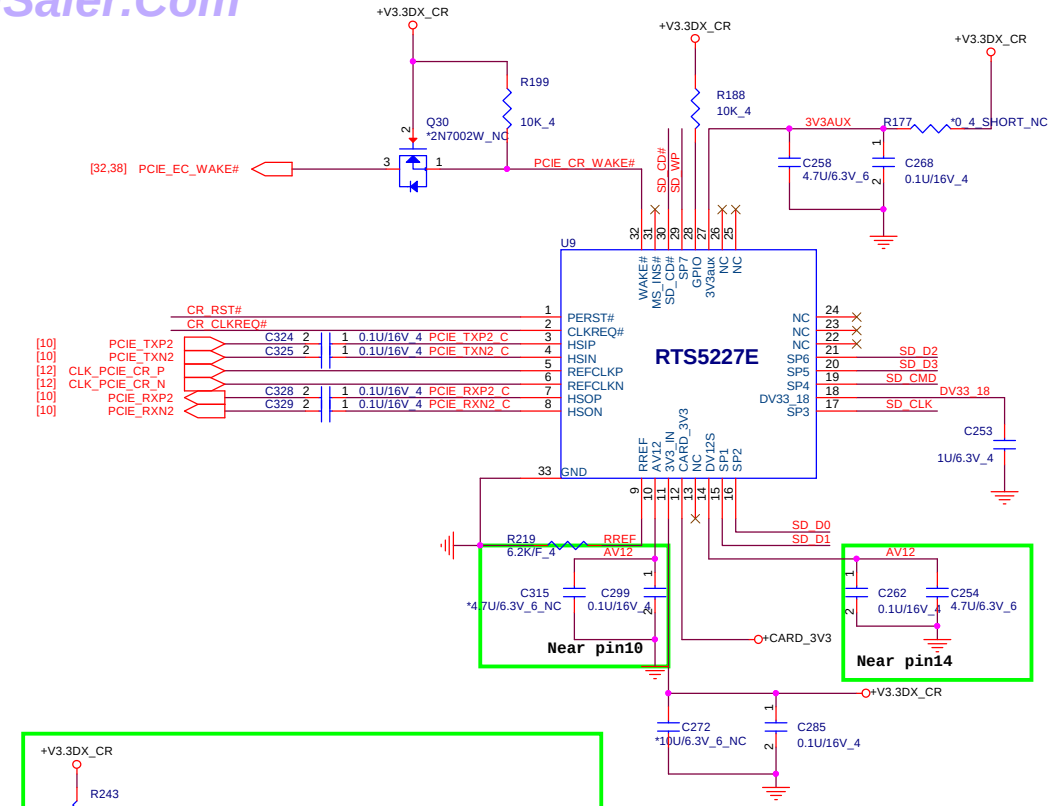
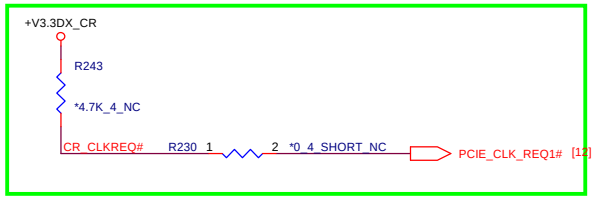
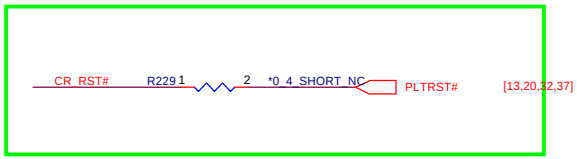
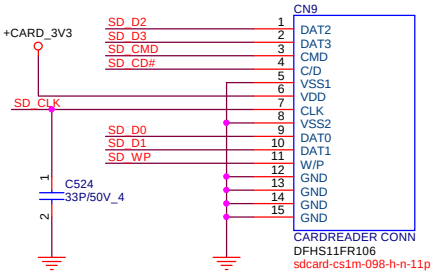
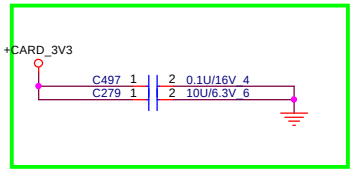


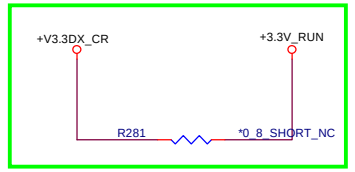




SD / MMC CARD READER







Quanta Computer Inc.

PROJECT : JW8B

Size	Document Number	Rev
	Card Reader RTS5179	A
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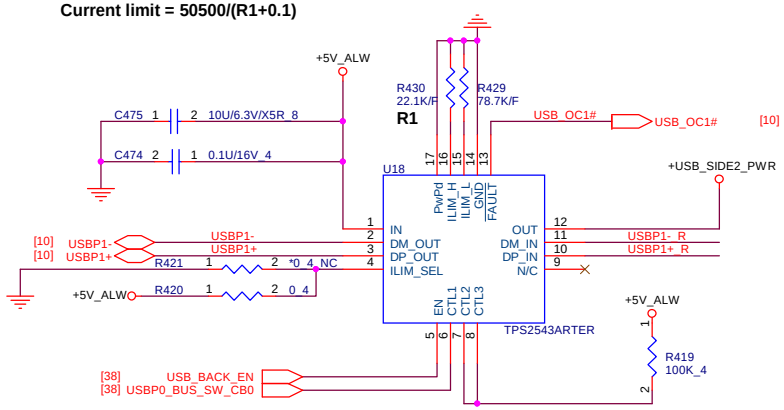
USB3.0 Power Share

USB Power share

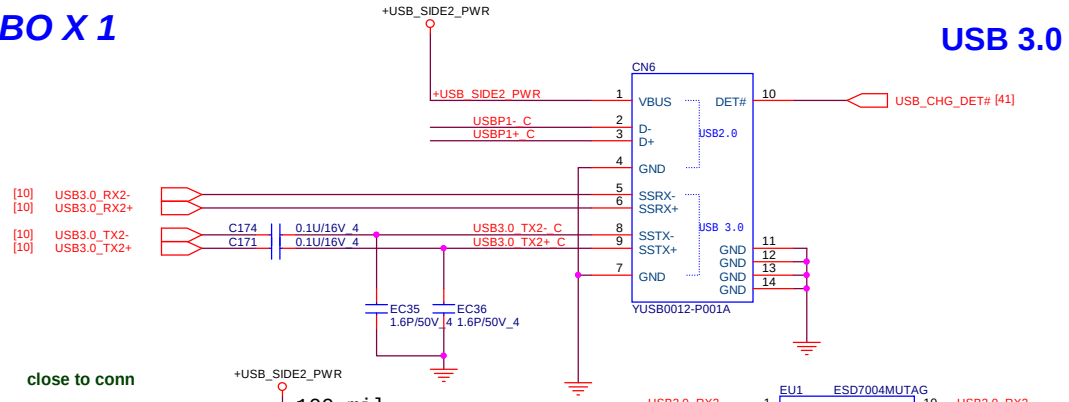
USBP0_BUS_SW_CB0	Mode
Low	DCP, Auto-detect
High	CDP, BC Spec 1.2

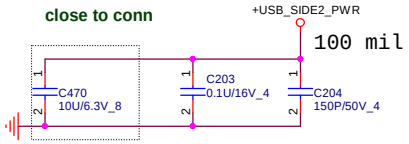
	R1	mA	
OC limitation	100k ohm	504	
	22.1k ohm	2274	Applied Now

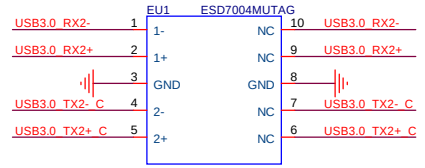
Current limit = 50500/(R1+0.1)

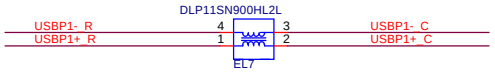


USB3.0/2.0 COMBO X 1



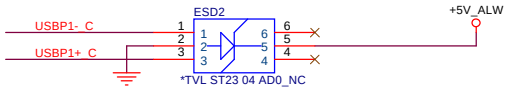






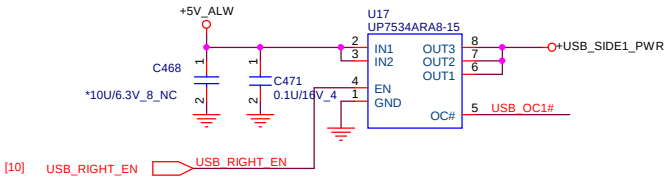
ESD Function

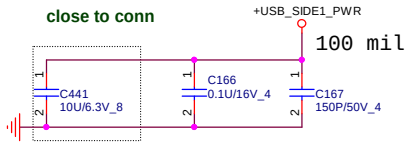
Place ESD diodes as close as USB connector.



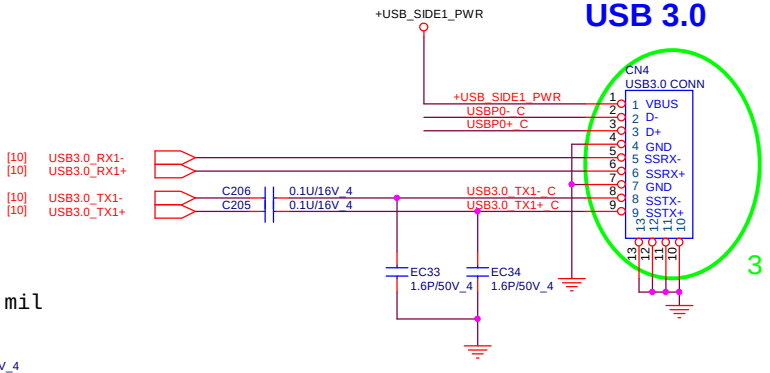
USB3.0/2.0 COMBO

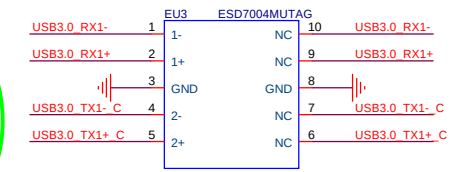
I continuous 1.5A
OC 2.0A M13 Request





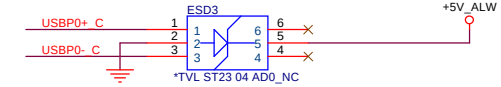
USB 3.0





ESD Function

Place ESD diodes as close as USB connector.



Quanta Computer Inc.
PROJECT : JW8B

Size	Document Number	Rev
	USB3/USB Charger	A

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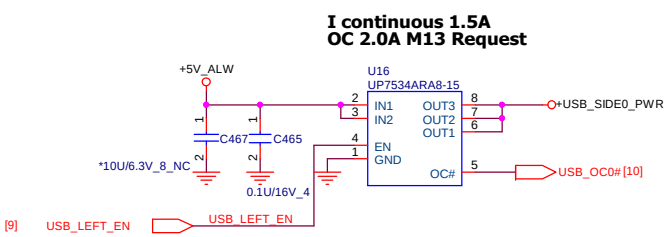
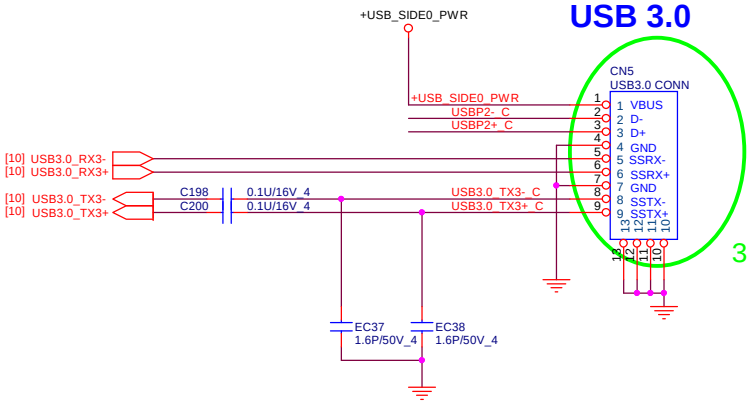
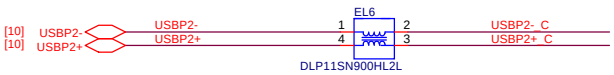
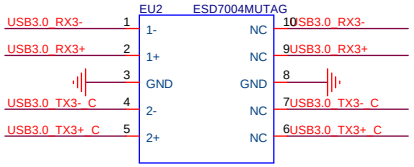


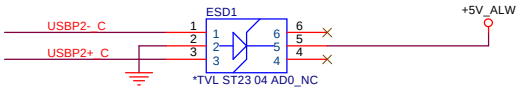






ESD Function

Place ESD diodes as close as USB connector.



Quanta Computer Inc.

PROJECT : JW8B

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	USB3/USB Charger	A
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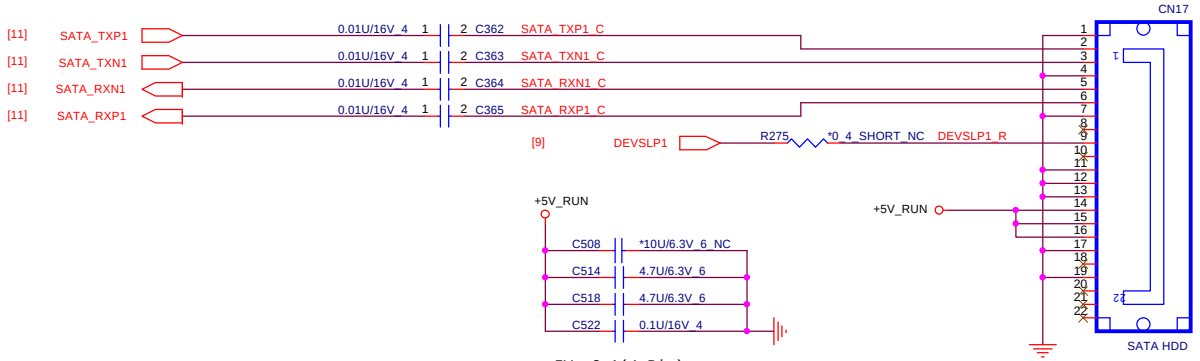
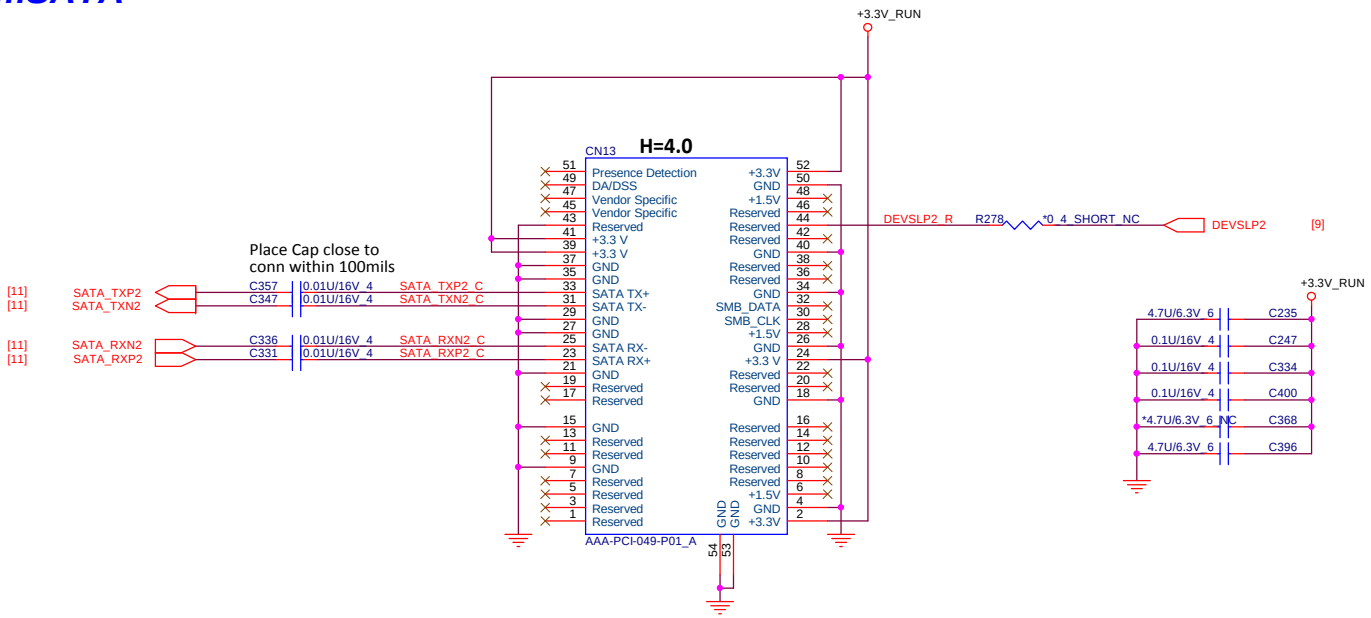
SATA HDD Connector



+5V: 2 A(4 Pin)
+3V: 2 A(4 Pin)
Gnd : (5 Pin)

mSATA



Quanta Computer Inc.		
PROJECT : JW8B		
Size	Document Number: SATA HDD/mSATA/EMI	Rev A
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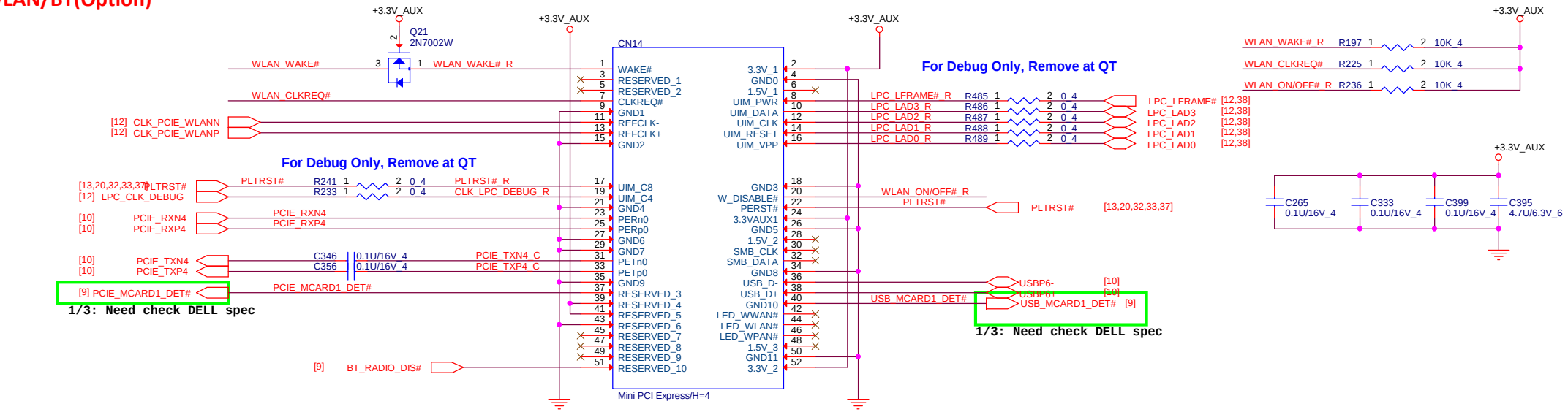
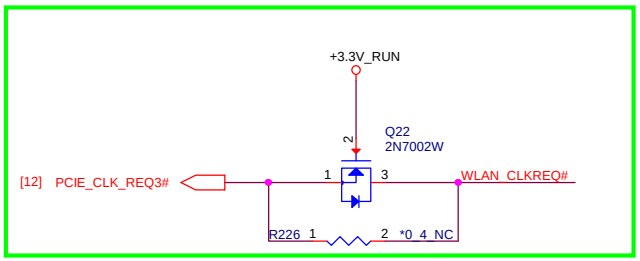
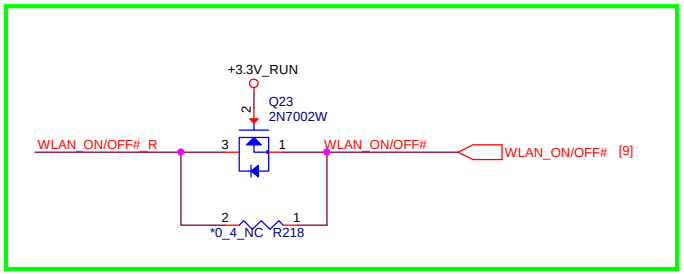
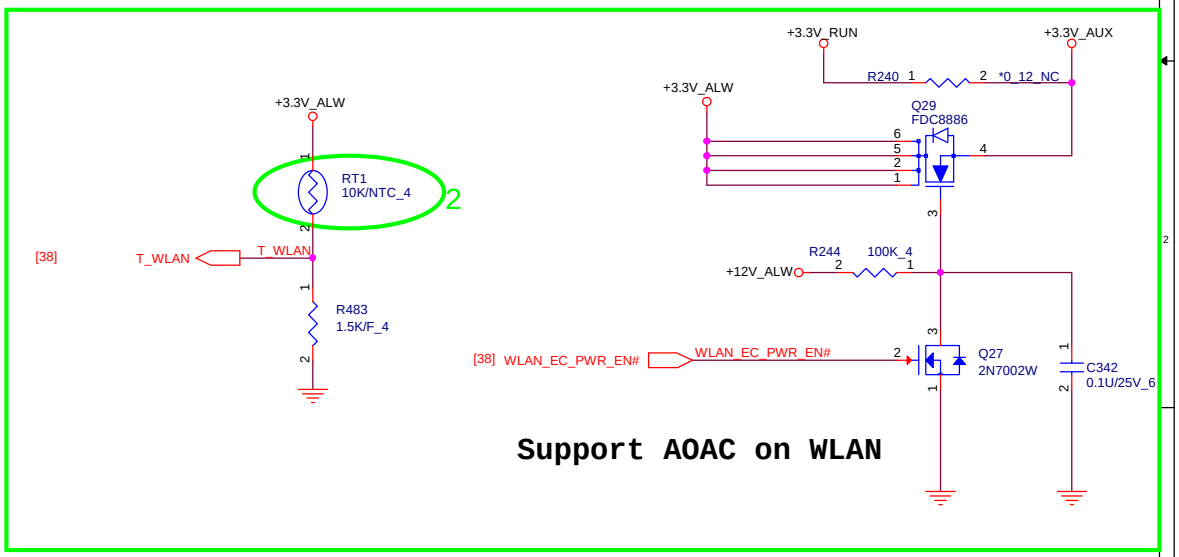
Mini Card
WLAN/BT(Option)









Quanta Computer Inc.		
PROJECT : JW8B		
Size	Document Number	Rev
	WLAN/BT	A
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Place these caps close to ITE8528.

IT8528

U23
IT8528

SM BUS
PS/2
LPC
GPIO
CIR
PWM
UART port
WAKE UP
EXTERNAL SERIAL FLASH
SPI ENABLE
KBMX
A/D D/A
CLOCK

Charge ,BAT
PCH

1/16: del EC_SLP_S4

Thermal

Co-lay for ITE8587

Board ID Straps

100K/F_4: CS41002FB28
45.3K/F_4: CS34532FB18
24.3K/F_4: CS32432FB19
12K/F_4 : CS31202FB15
6.49K/F_4: CS26492FB23
1.65K/F_4: CS21652FB29

BD0		
000	0.5V_PU 100K	UMA
001	1.0V_PU 45.3K	DIS
010	1.5V_PU 24.3K	UMA 28W
100	2.0V_PU 12K	DIS 28W
101	2.5V_PU 6.49K	
110	3.0V_PU 1.65K	
111	0V_NO PU	

BD1		
000	0.5V_PU 100K	SSI (X00)
001	1.0V_PU 45.3K	PT (X01)
010	1.5V_PU 24.3K	ST (X02)
100	2.0V_PU 12K	QT (AQO)
101	2.5V_PU 6.49K	
110	3.0V_PU 1.65K	WIN8.1 (ST)
111	0V_NO PU	WIN8.1 (QT)

Quanta Computer Inc.
PROJECT : JW8B

Size	Document Number	Rev
	SIO (ITE8528H)	A
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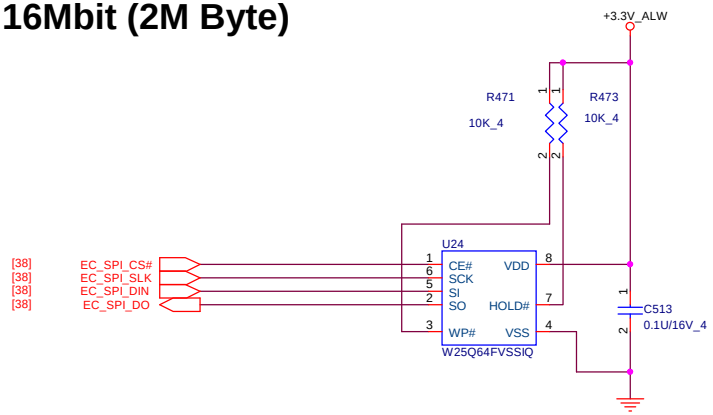
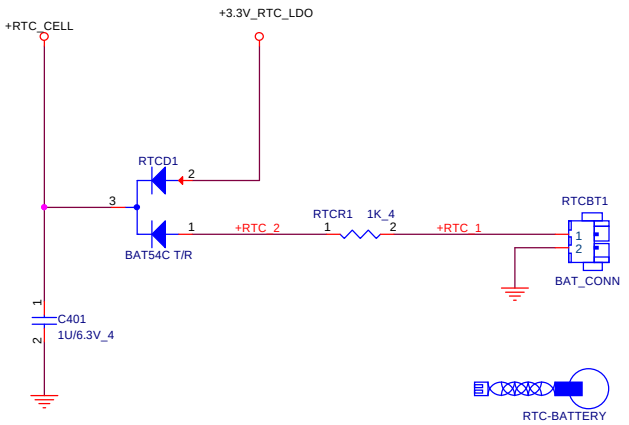
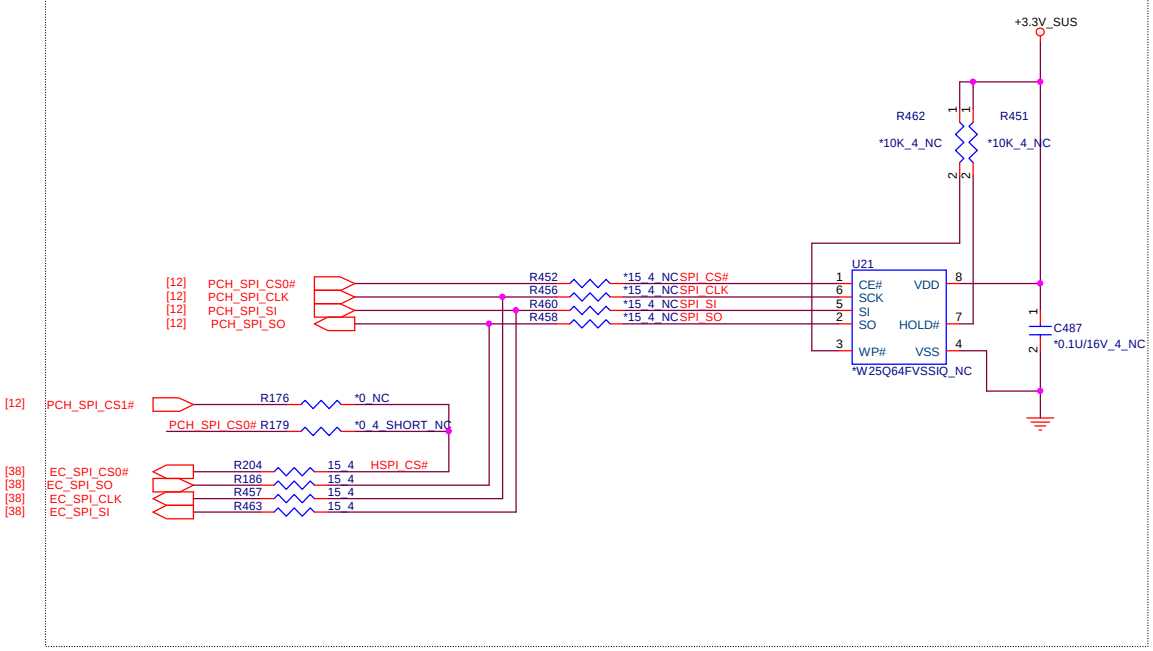
For EC 16Mbit (2M Byte)



RTC BATTERY



For PCH 64Mbit (8M Byte)



Quanta Computer Inc.

PROJECT : JW8B

Size	Document Number	Rev
	FLASH / RTC	A

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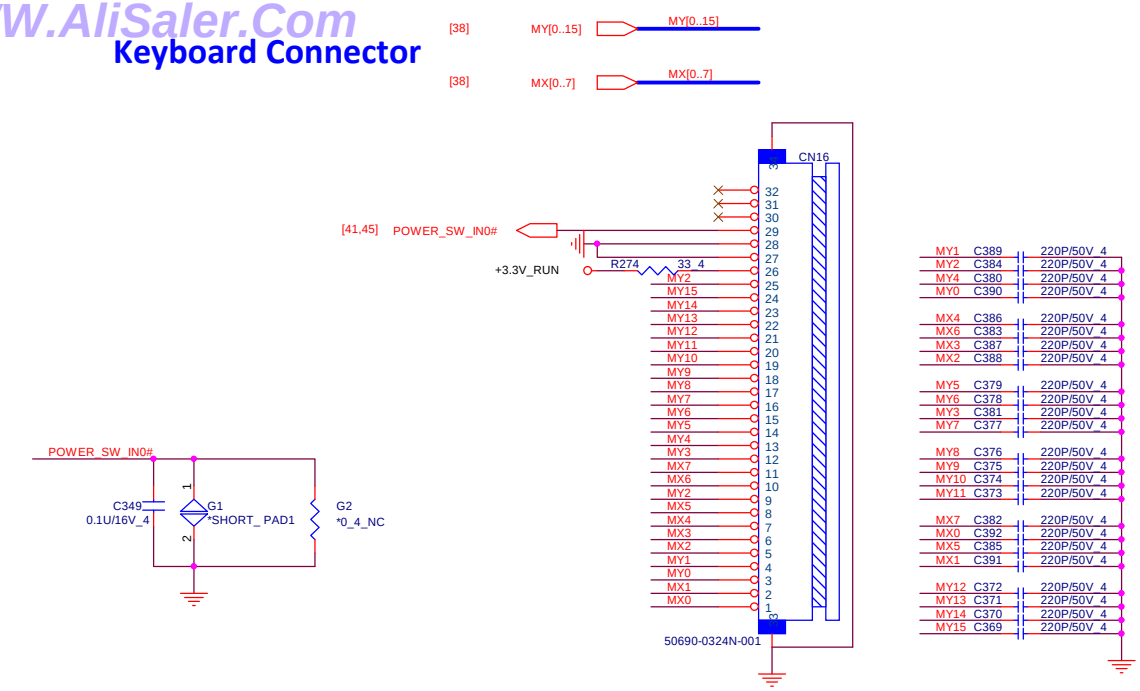
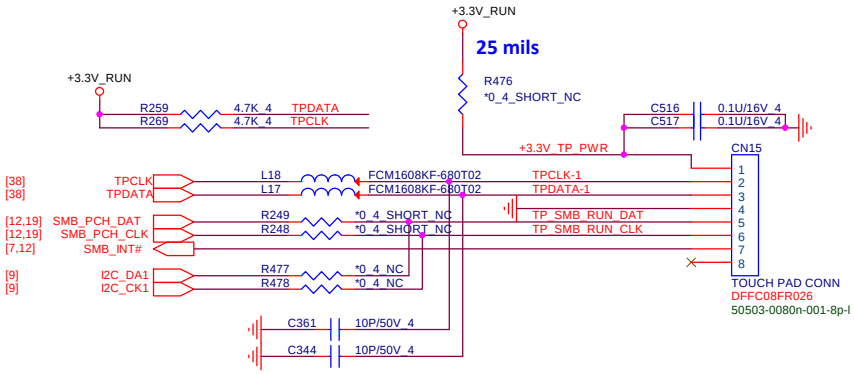
Keyboard Connector



Touch Pad Connector



Quanta Computer Inc.

PROJECT : JW8B

Size	Document Number	Rev
	KB/CLK Gen/FAN/TP	A

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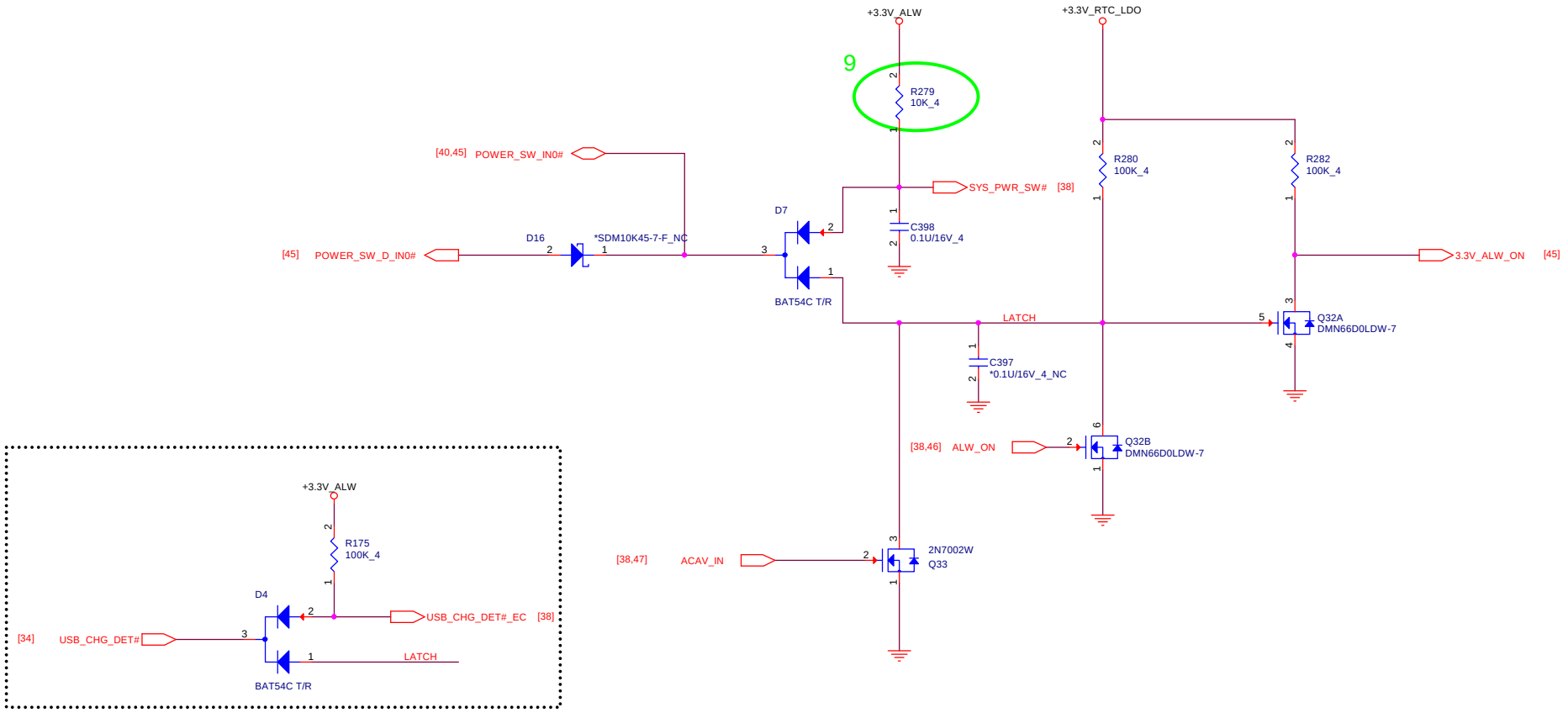
3VALW ON POWER LOGIC



Quanta Computer Inc.		
PROJECT : JW8B		
Size	Document Number: 3VALW ON POWER LOGIC	Rev: A
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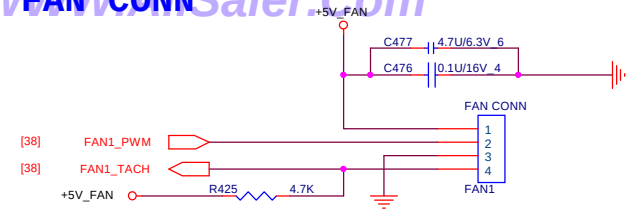
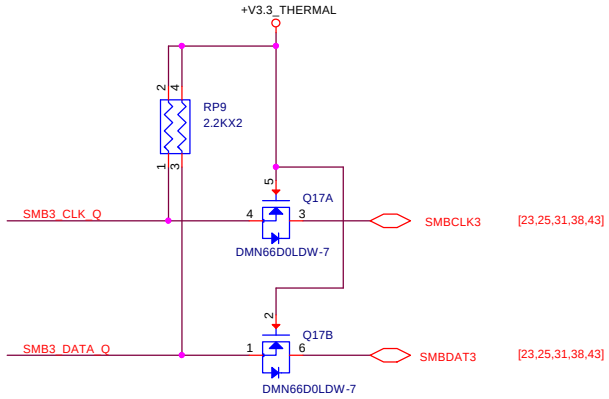
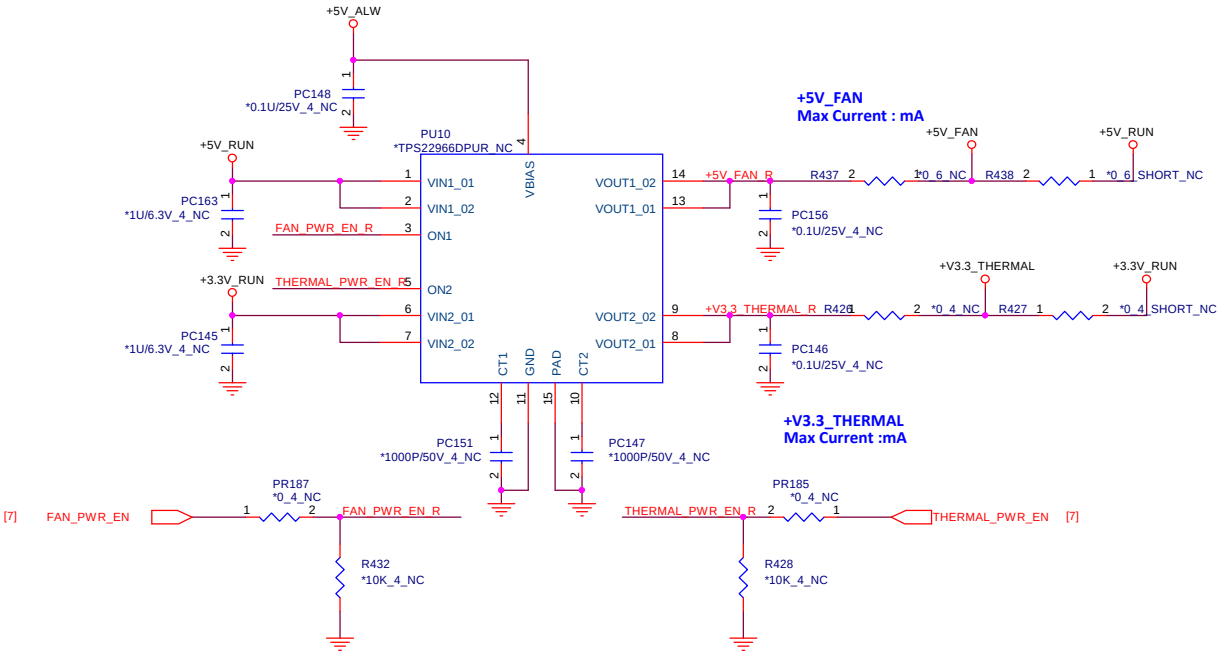
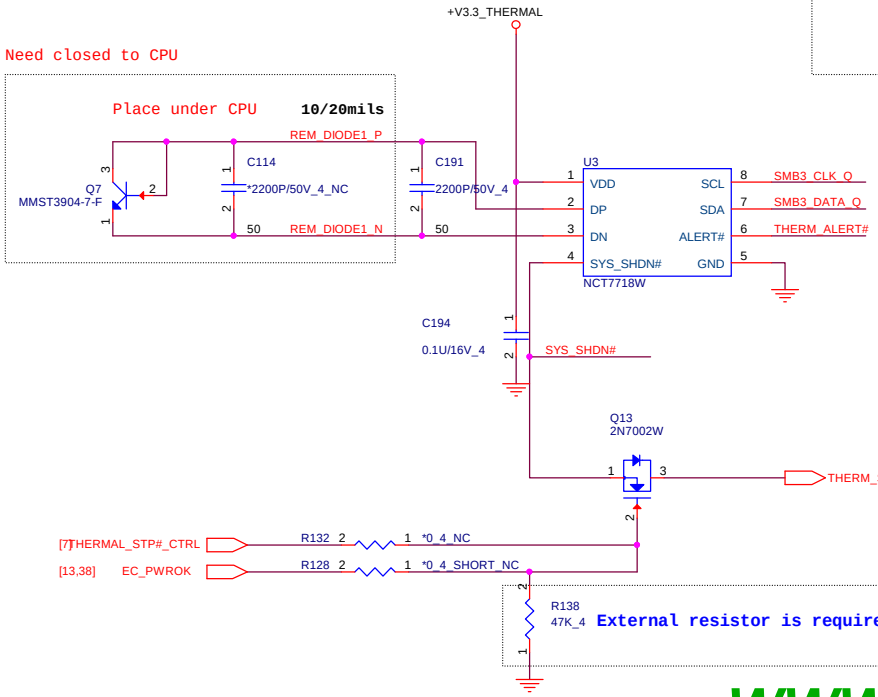
FAN CONN

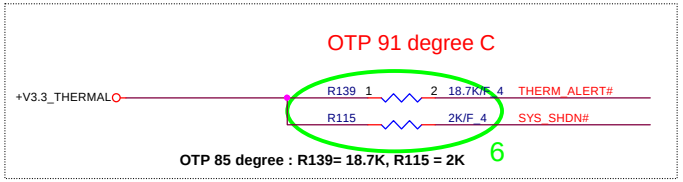






THERMAL IC





SYS_SHD# / ALERT#	2K	7.5K	10.5K	14K	18.7K
2K	77'C	87'C	97'C	107'C	117'C
7.5K	79'C	89'C	99'C	109'C	119'C
10.5K	81'C	91'C	101'C	111'C	121'C
14K	83'C	93'C	103'C	113'C	123'C
18.7K	85'C	95'C	105'C	115'C	125'C

Quanta Computer Inc.
PROJECT : JW8B

Size	Document Number	Rev
	FAN & THERMAL	A

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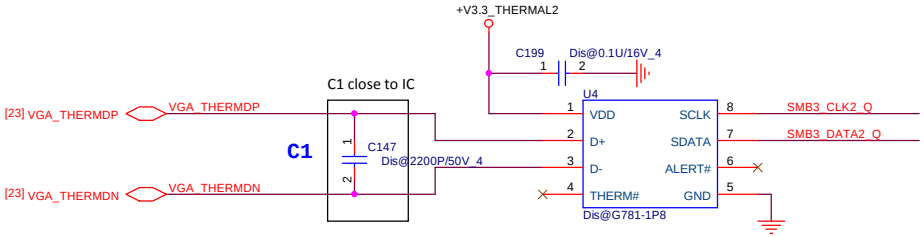
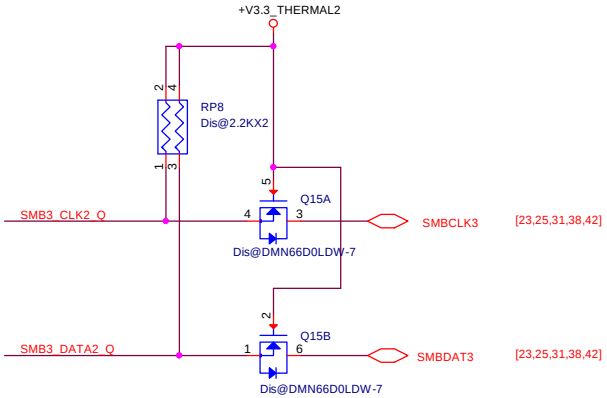
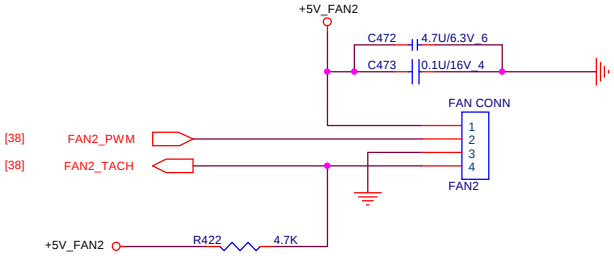
For GPU use

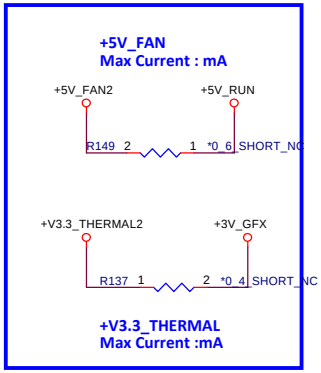
G781-1P8
SMBus address is 1001101xb (9Ah) (x is R/W bit).





FAN CONN





Quanta Computer Inc.		
PROJECT : JW8B		
Size	Document Number: Thermal GPU	Rev: A
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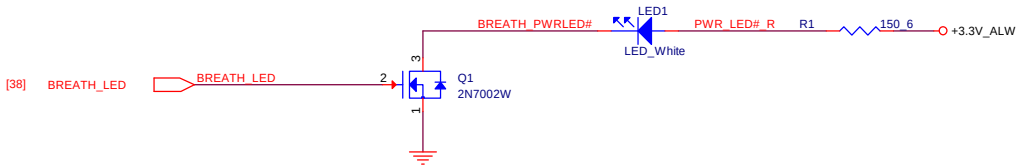
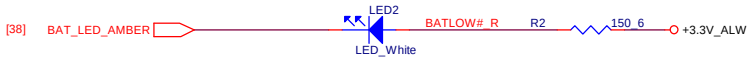
LED Status

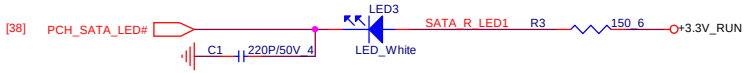
System status LED



Battrey charger LED



HDD access LED



Quanta Computer Inc.		
PROJECT : JW8B		
Size	Document Number: LED	Rev: A
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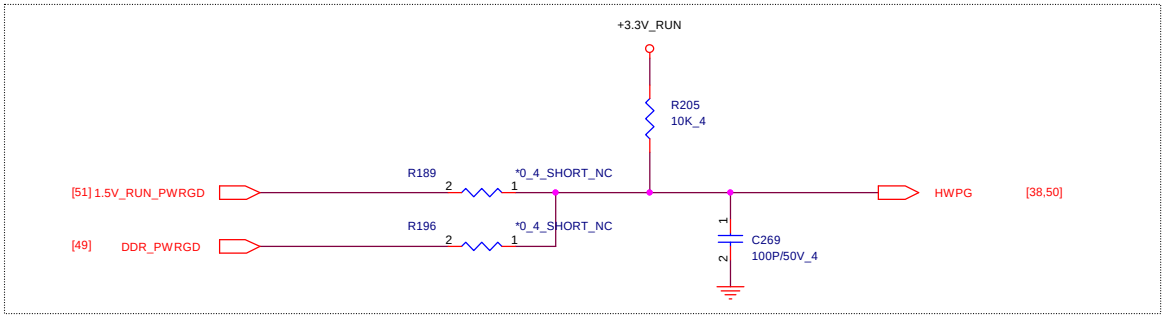
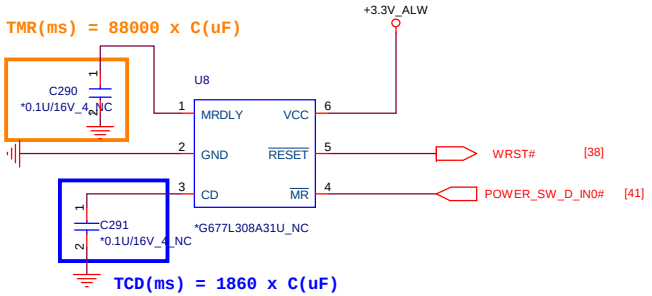


HW reset IC



Quanta Computer Inc.

PROJECT : JW8B

Size	Document Number	Rev
	System Reset Circuit	A

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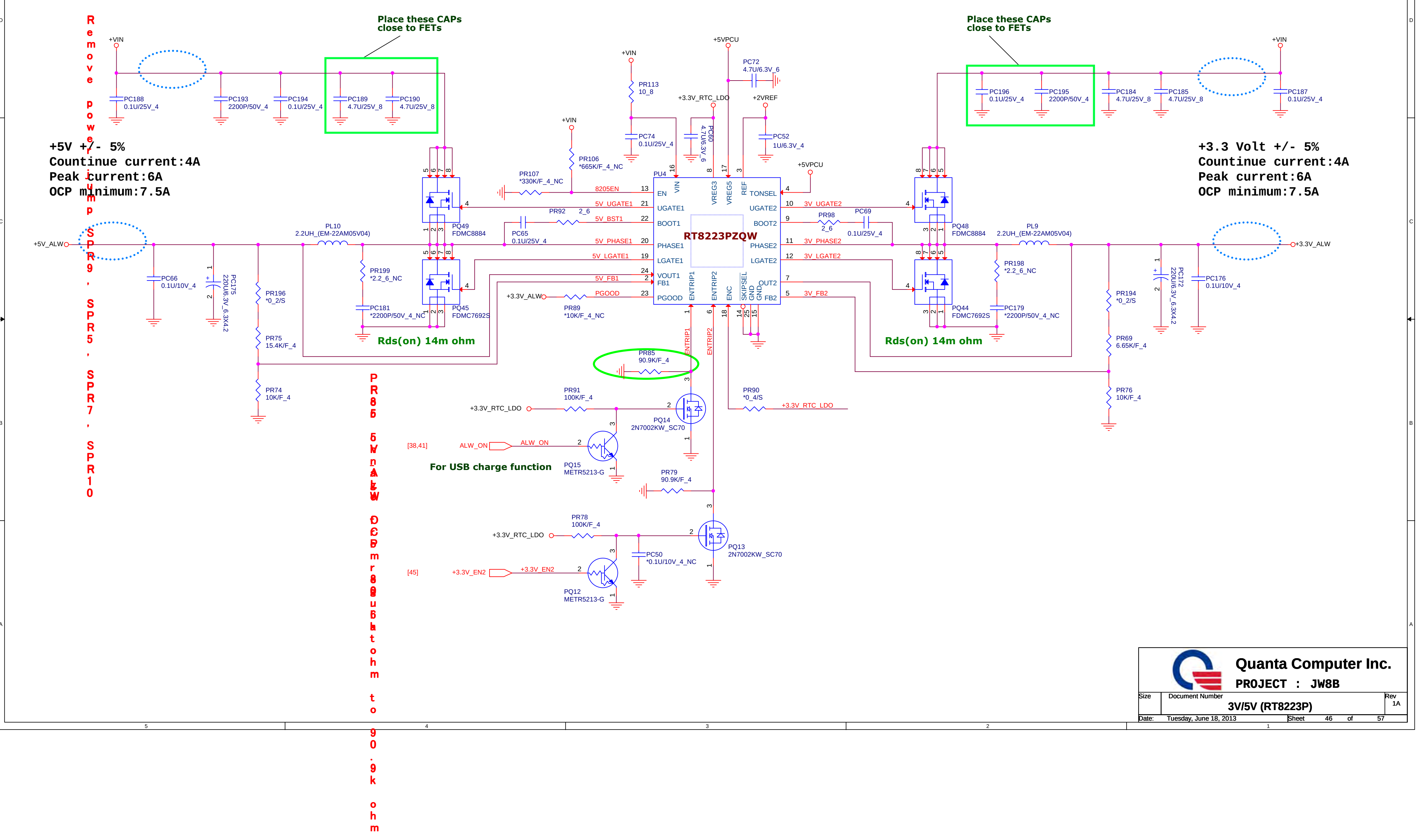
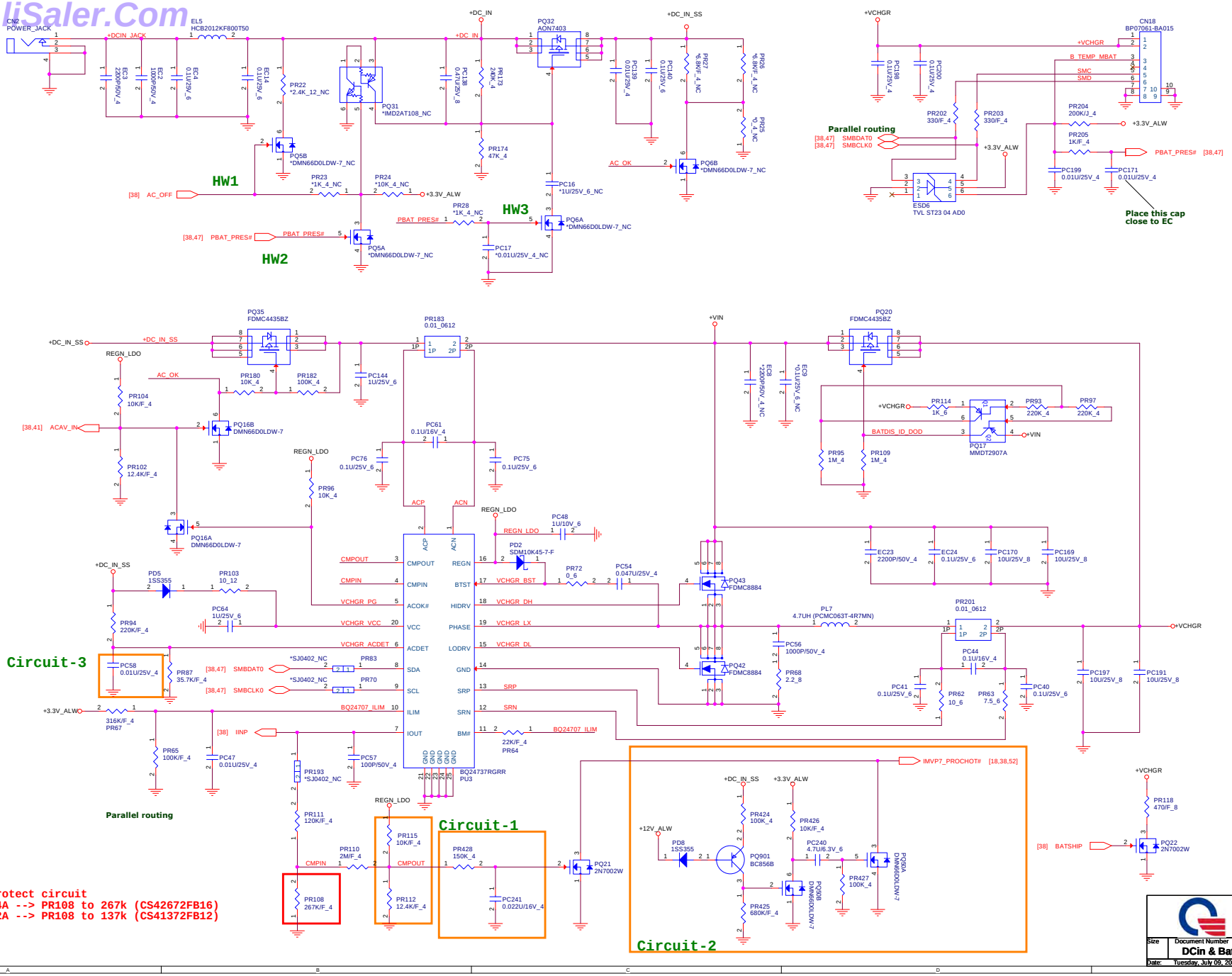
DC/DC +3V_ALW/+5V_ALW/+5V_ALW2 /+15V_ALW



Quanta Computer Inc.		
PROJECT : JW8B		
Size	Document Number: 3V/5V (RT8223P)	Rev 1A
Date: Tuesday, June 18, 2013	Sheet 46	of 57



Quanta Computer Inc.

PROJECT : JW8B

Size	Document Number	Rev
	NC	A

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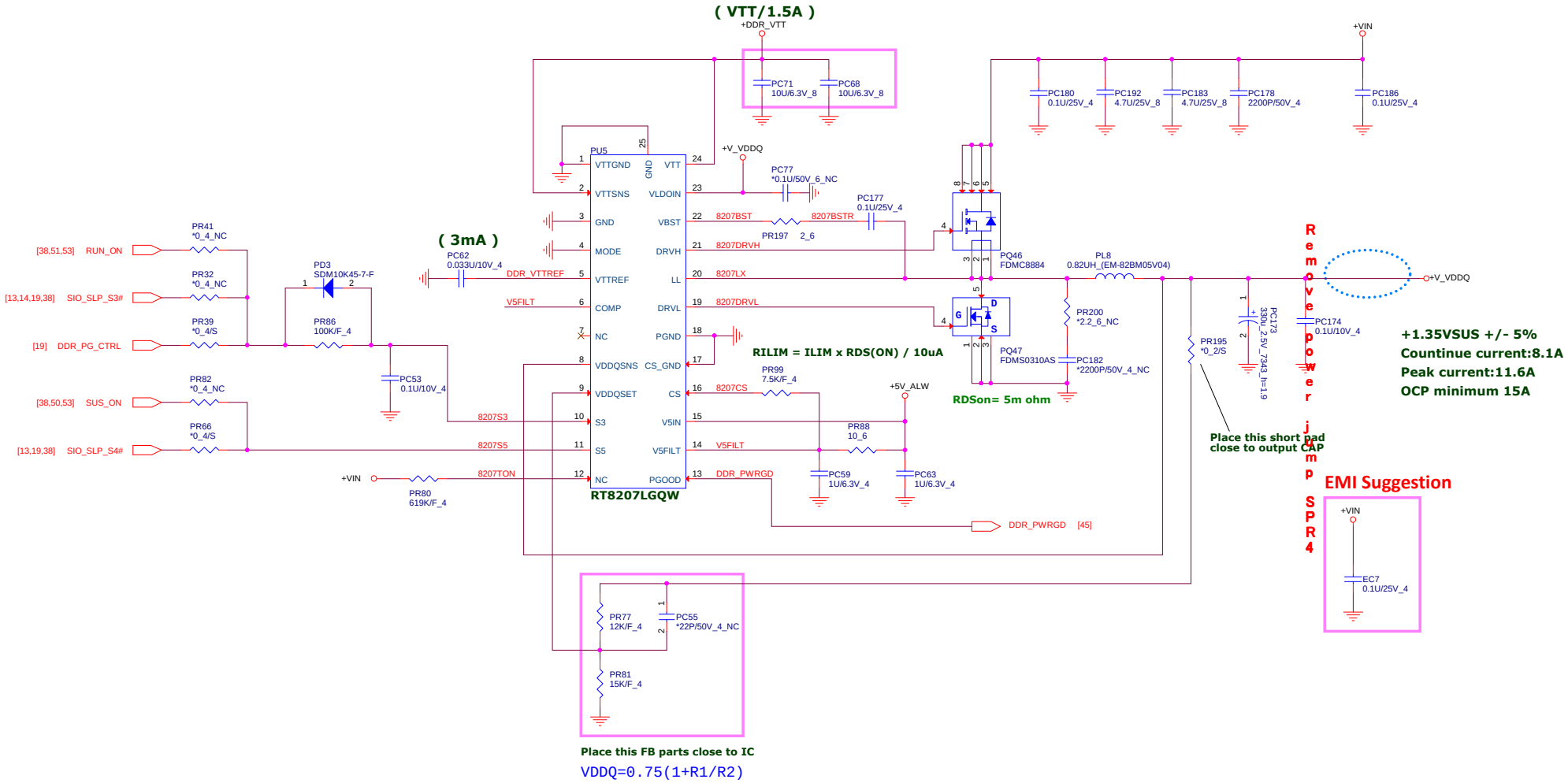
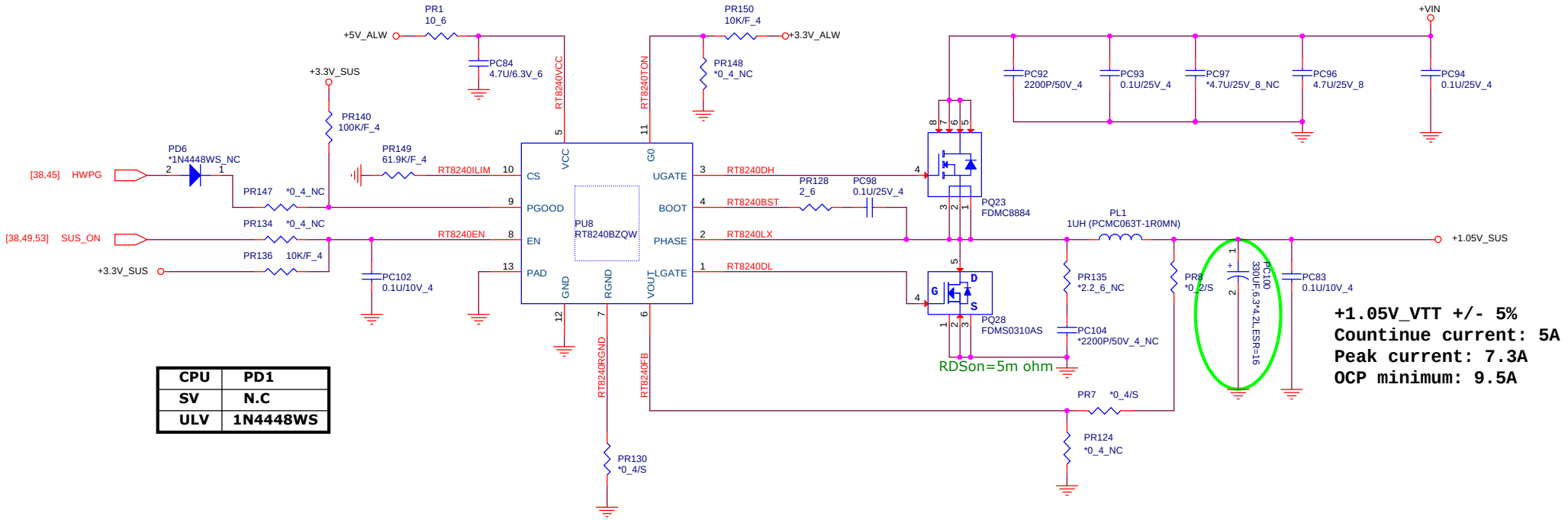


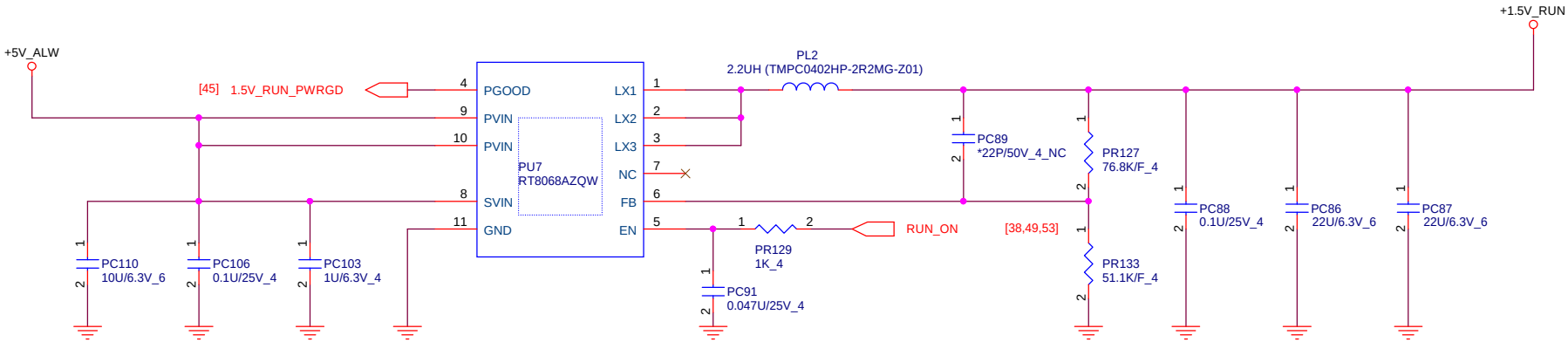
Quanta Computer Inc.		
PROJECT : JW8B		
Size	Document Number: DDR3L VDDQ(RT8207LGQW)	Rev: 1A
Date: Tuesday, July 09, 2013	Sheet 49 of 55	



CPU	PD1
SV	N.C
ULV	1N4448WS

+1.05V_VTT +/- 5%
Countinue current: 5A
Peak current: 7.3A
OCP minimum: 9.5A

Quanta Computer Inc.		
PROJECT : JW8B		
Size	Document Number: +1.05V_SUS (RT8240BZQW)	Rev: 1A
Date: Tuesday, July 09, 2013	Sheet 50 of 55	



+1.5V_RUN
1.5 Volt +/- 5%
Fsw : 1MHz
TDC : 1A
Max : 1.5A
OCP :3A

Quanta Computer Inc.		
PROJECT : JW8B		
Size	Document Number: +1.5V_RUN (RT8068AZQW)	Rev: 1A
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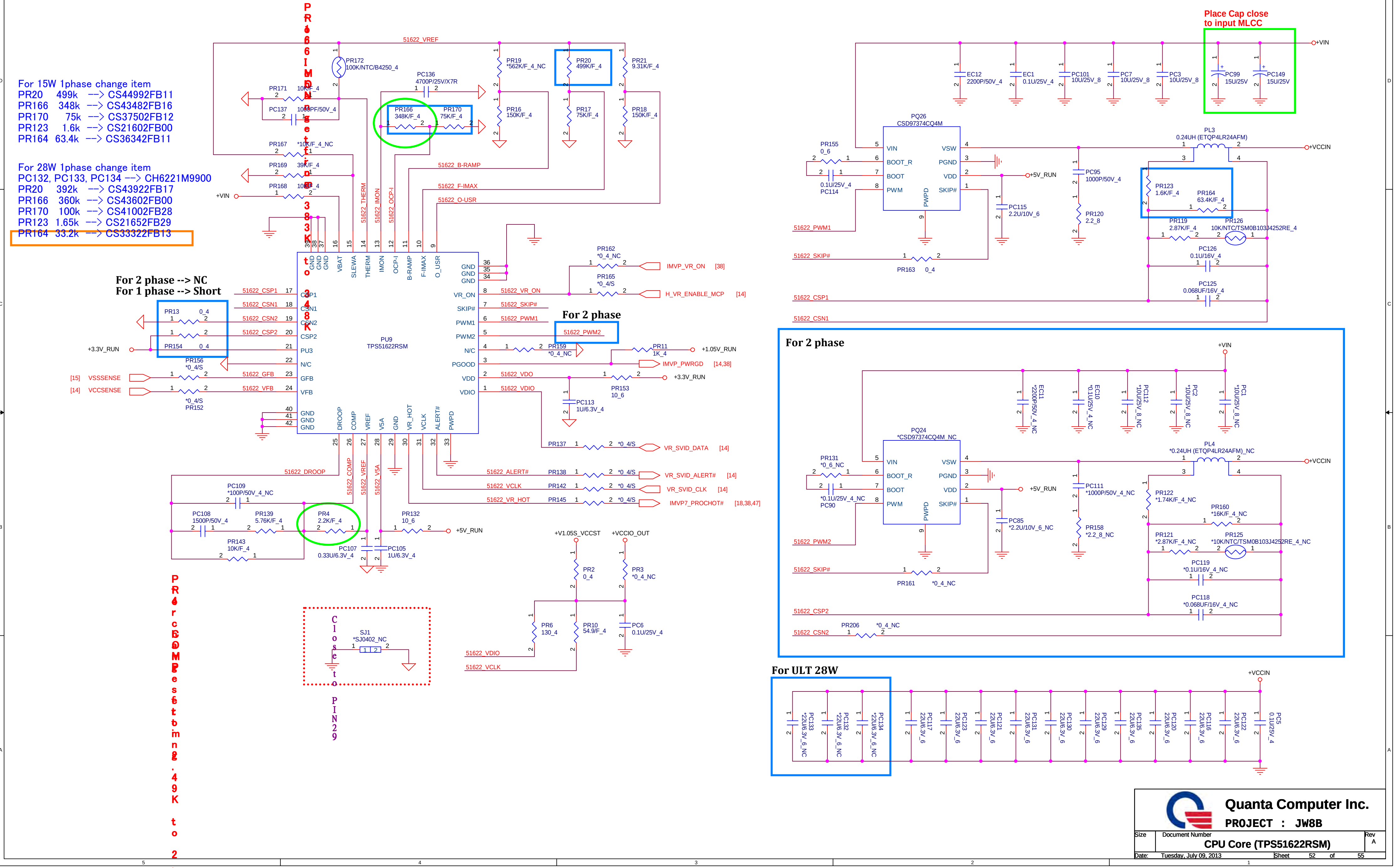
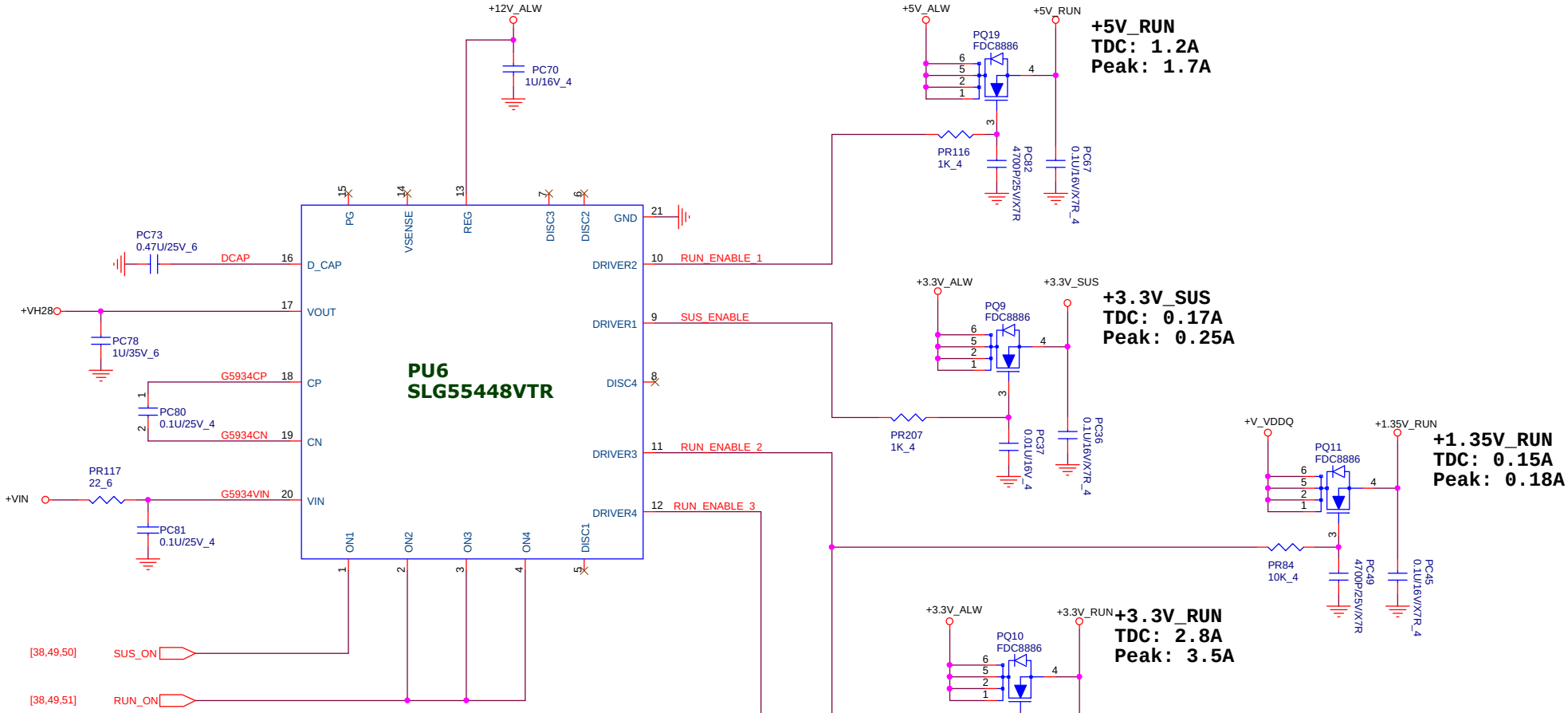
For 15W 1phase change item
PR20 499k --> CS44992FB11
PR166 348k --> CS43482FB16
PR170 75k --> CS37502FB12
PR123 1.6k --> CS21602FB00
PR164 63.4k --> CS36342FB11

For 28W 1phase change item
PC132, PC133, PC134 --> CH6221M9900
PR20 392k --> CS43922FB17
PR166 360k --> CS43602FB00
PR170 100k --> CS41002FB28
PR123 1.65k --> CS21652FB29
PR164 33.2k --> CS33322FB13



Quanta Computer Inc.
PROJECT : JW8B
Document Number: CPU Core (TPS51622RSM)
Rev A
Date: Tuesday, July 09, 2013 Sheet 52 of 55



DISC1, DISC2, DISC3, DISC4
dis-charge function

Quanta Computer Inc.
PROJECT : JW8B

Size	Document Number	Rev
	SUS_RUN Power Switch	1A
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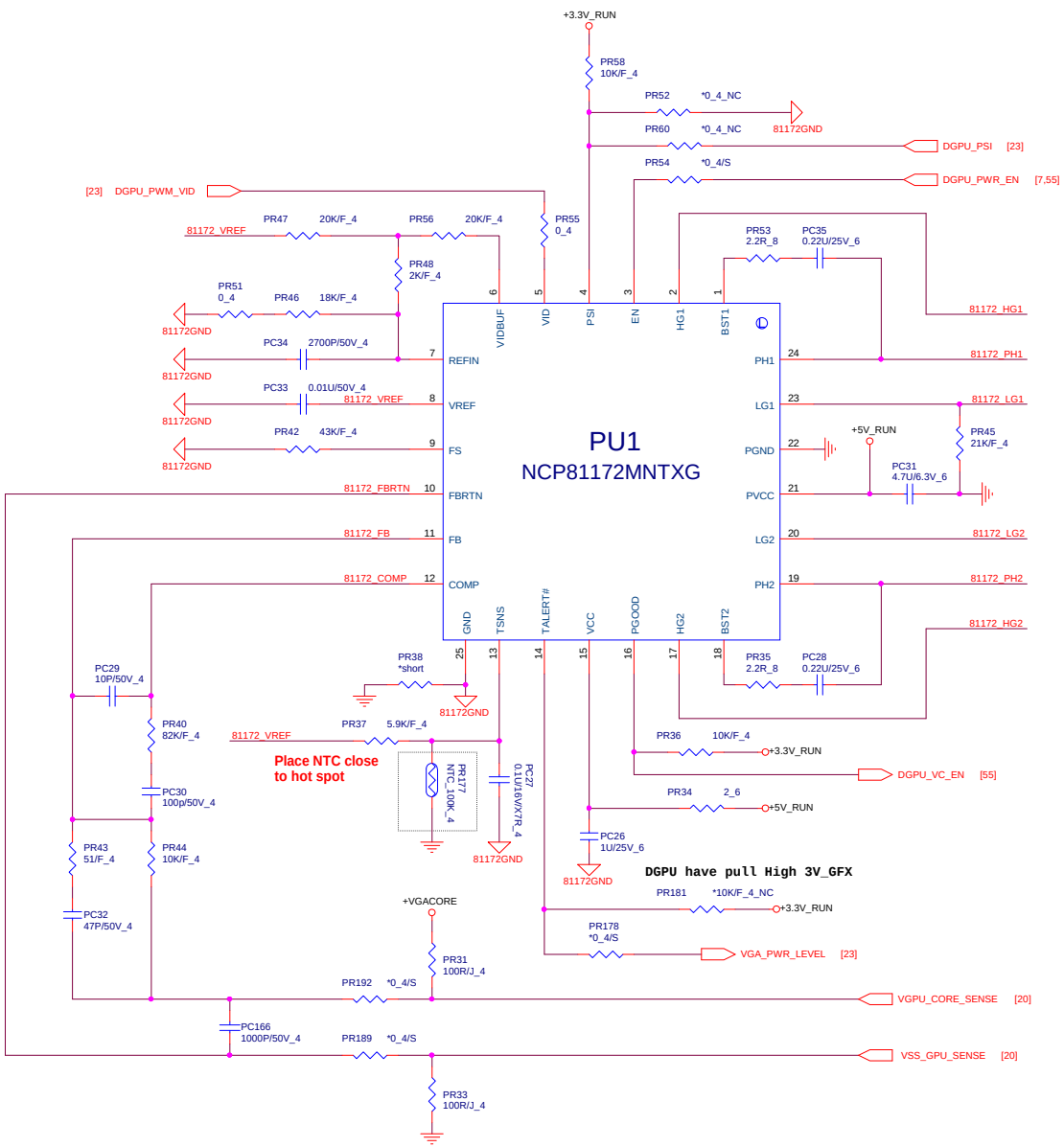

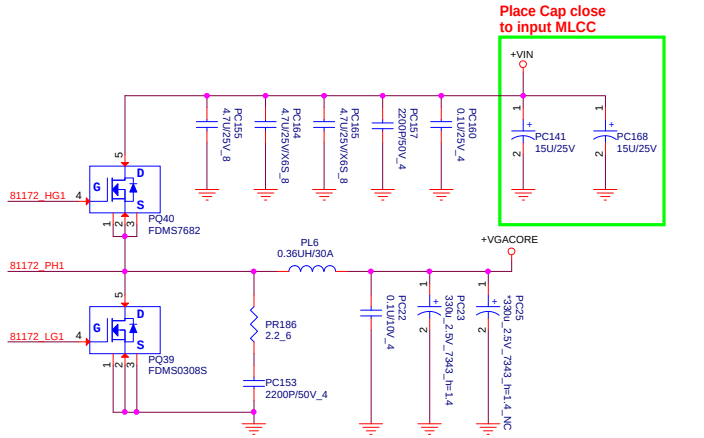

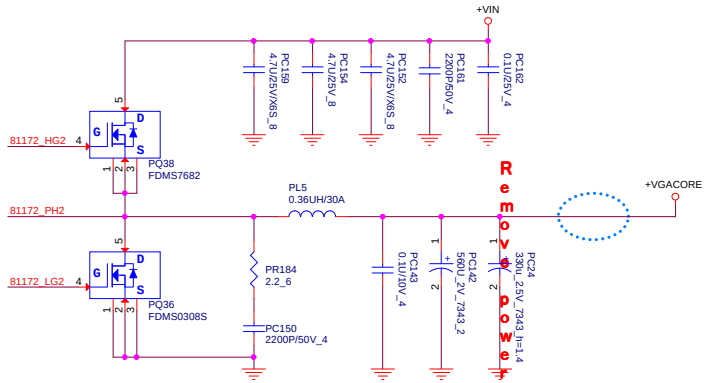

Remove power jump PR176 and PR30

Quanta Computer Inc.		
PROJECT : JW8B		
Size: D	Document Number: +VGA CORE (NCP3218G)	Rev: 3A
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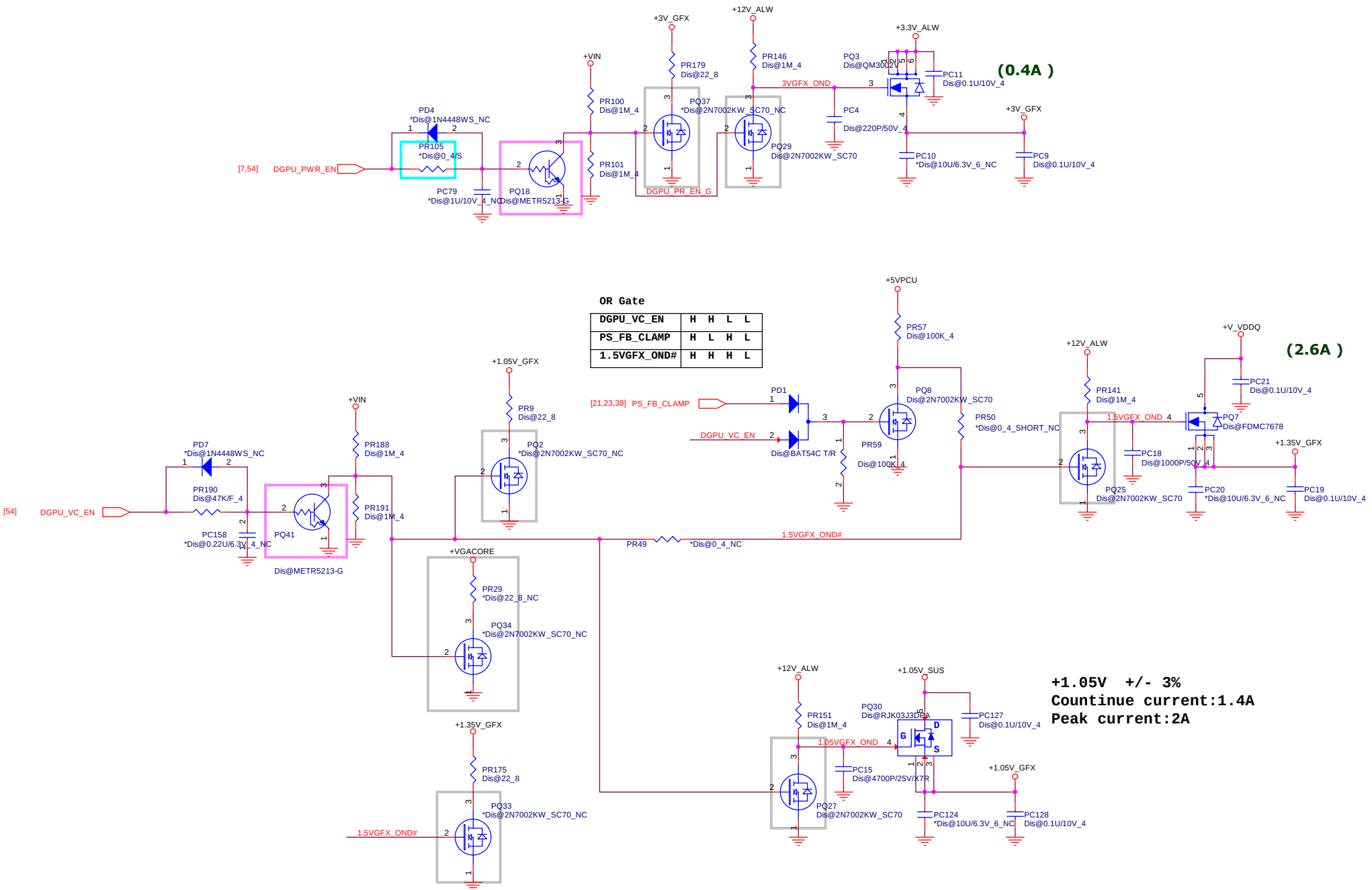

Quanta Computer Inc.
PROJECT : JW8B

Size	Document Number	Rev
	+VGA POWER	3A

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