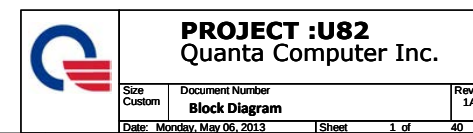
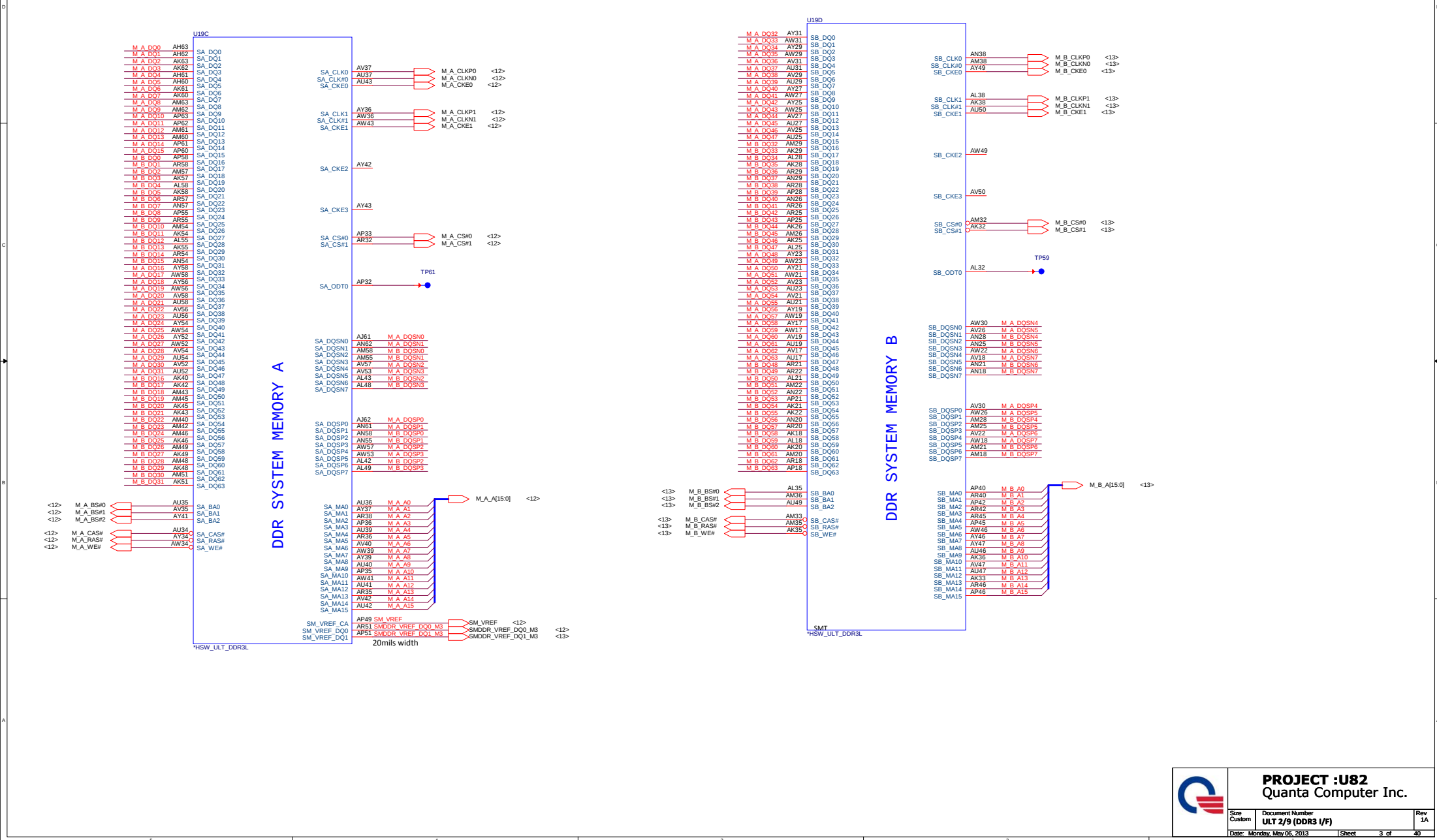


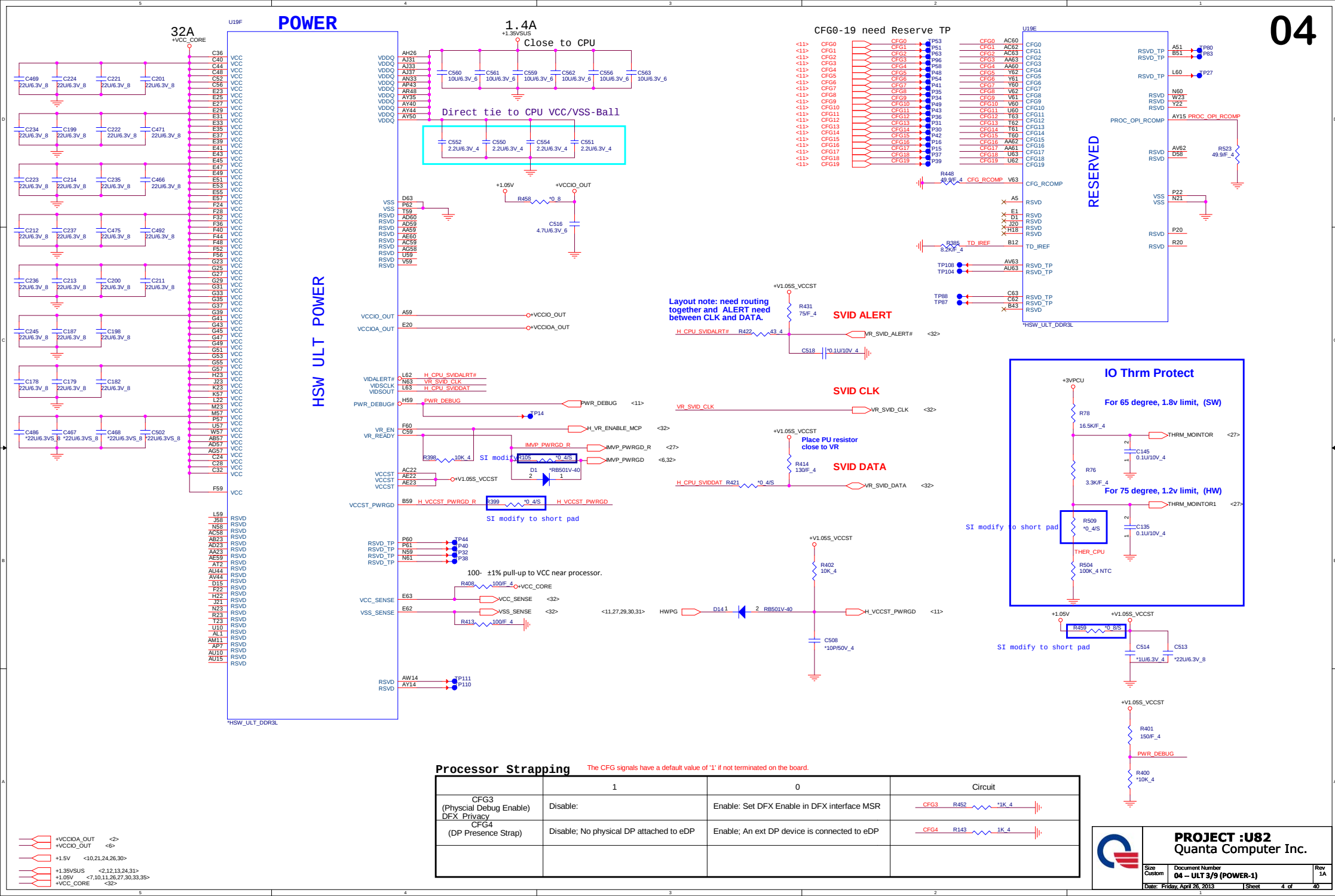
LAYER 1 : TOP
LAYER 2 : SGND
LAYER 3 : IN1(High)
LAYER 4 : IN2(Low)
LAYER 5 : SVCC
LAYER 6 : BOT

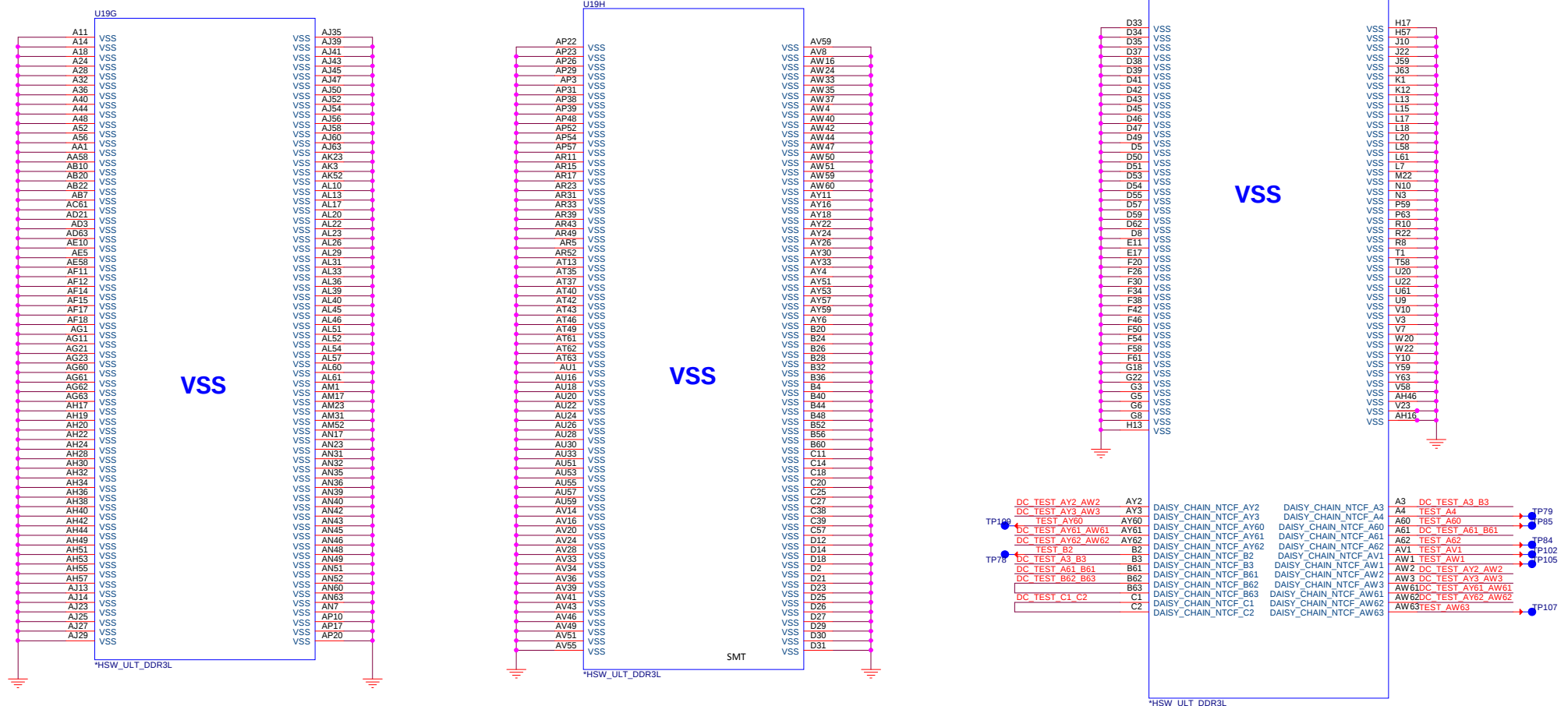




Haswell ULT Processor (DDR3L)







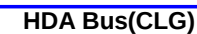
07



HDD0 (SATA3 6.0Gb/s)

mSATA (SATA4 6Gb/s)

ODD (SATA3 6.0Gb/s)

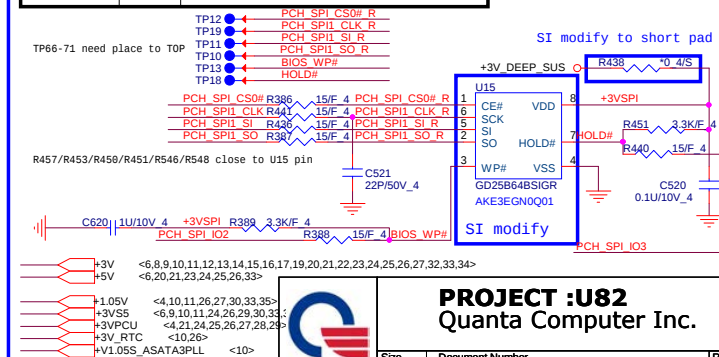


GPIO Pull UP



Vender	Size	P/N
MXIC	8MB	AKE3EZNOZ00 (MX25L6473EM2I-10G)
Winbond	8MB	AKE3EFP0N07 (W25Q64FVSSIQ)
GigaDevice	8MB	AKE3EGN0Q01 (GD25B64BSIGR)
Socket		DFHS08FS023

PCH SPI ROM(CLG)



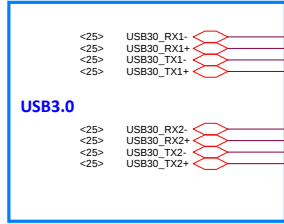
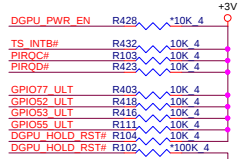
PROJECT :U82
Quanta Computer Inc.

Size Custom	Document Number ULT 6/9(SATA/HDA)	Rev 1A
Date: Friday, April 26, 2013	Sheet	7 of 40

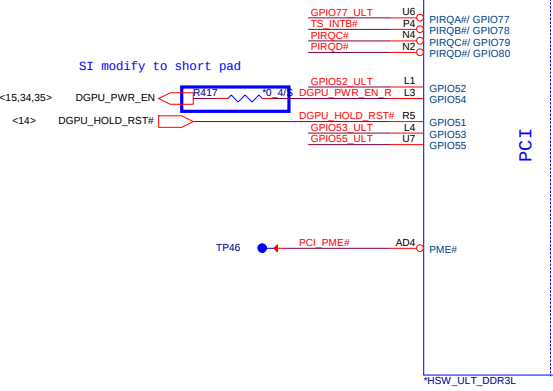
Lynx Point-LP Platform Controller Hub

(HDA, JTAG, SATA)

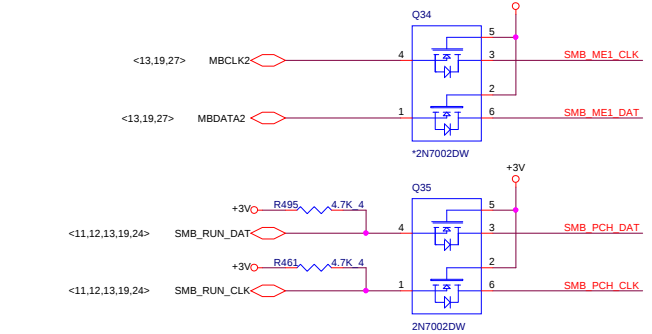
PCI/USBOC# Pull-up(CLG)



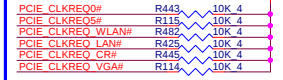
20111130 Modify USB3.0 for HM70



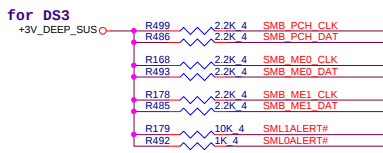
SMBus/Pull-up(CLG)



CLK_REQ/Strap Pin(CLG)



SMBus/Pull-up(CLG)



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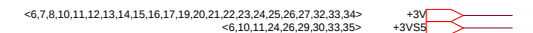
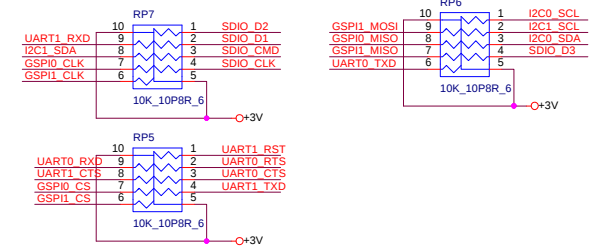
Size	Document Number	Rev
Custom	ULT 7/9 (PCIE/USB/CLK)	1A
Date:	Friday, April 26, 2013	Sheet 8 of 40

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<6,7,9,10,11>

+3V
+3V_DEEP_SUS

09

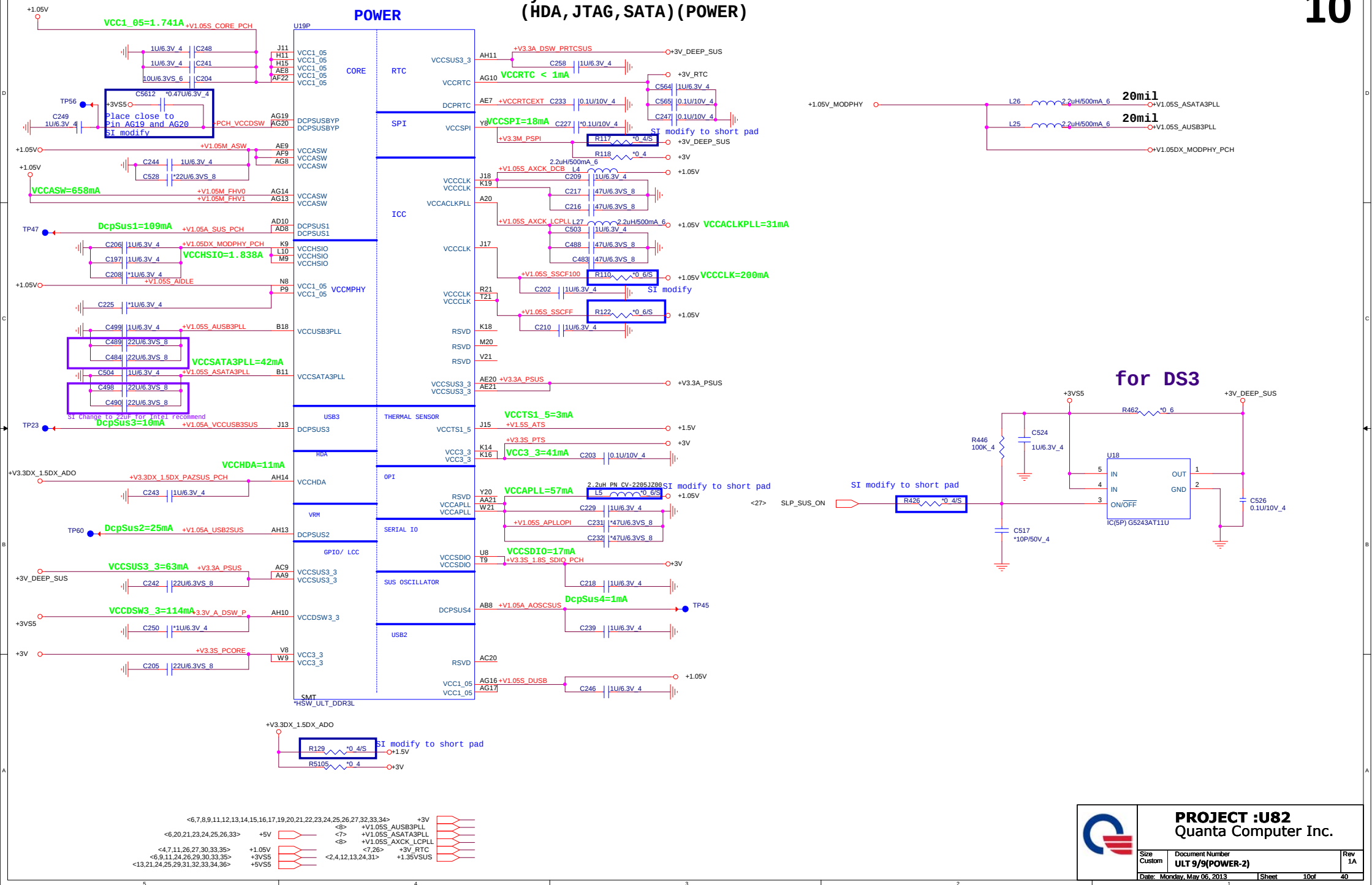


The diagram shows a 4x4 array of Rb atoms. Each element is labeled with its row and column indices (e.g., R132, R158, R155, R160, R463 in the first column; R133, R159, R154, R167, R466 in the second column). Each element is connected to a central point by a wavy line, representing a spring. The central point is connected to a red line labeled 'O+3V_DEEP_SUS'. A table on the right shows the mapping of the array elements to the 'Rb' and 'Ra' columns of the 'Stuff' table.

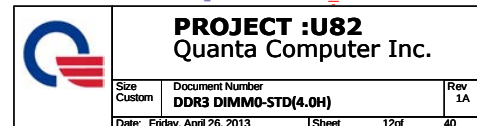
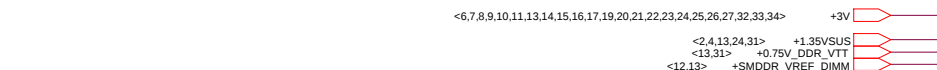
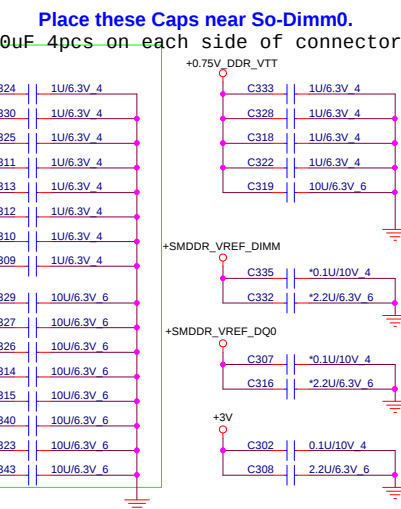
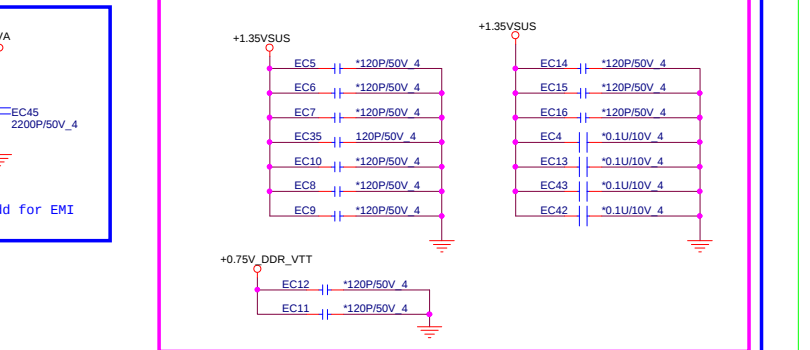
Stuff	Ra
NC	Rb

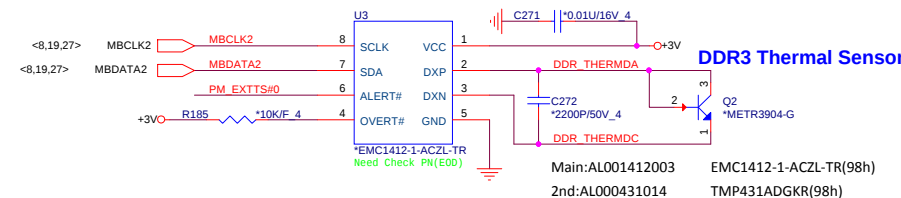
	DIS	UM/
Stuff	Ra	Rb
NC	Rb	Ra

Lynx Point-LP Platform Controller Hub (HDA, JTAG, SATA) (POWER)

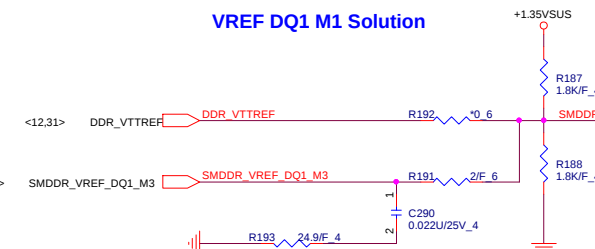






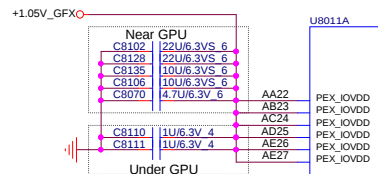
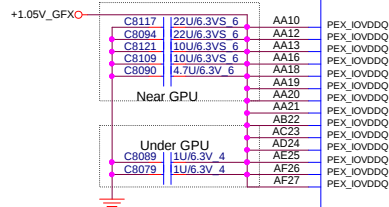


1uF/10uF 4pcs on each side of connector

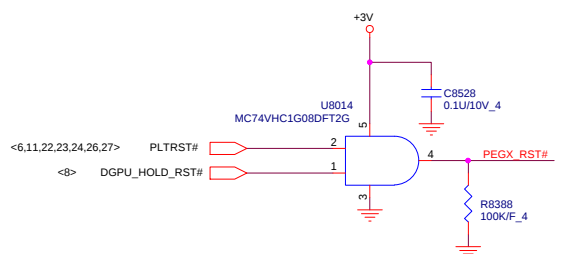
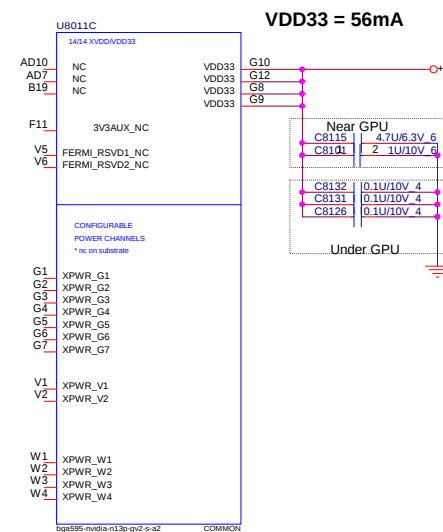
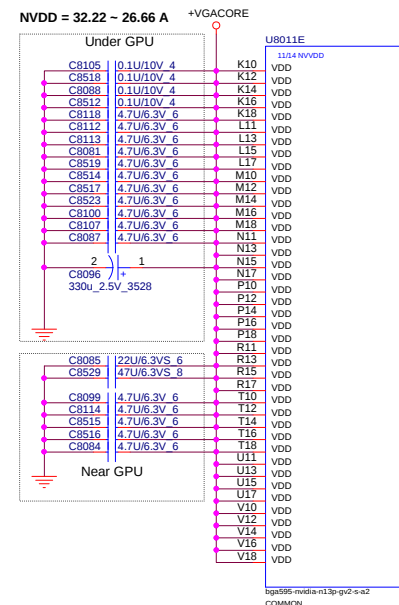
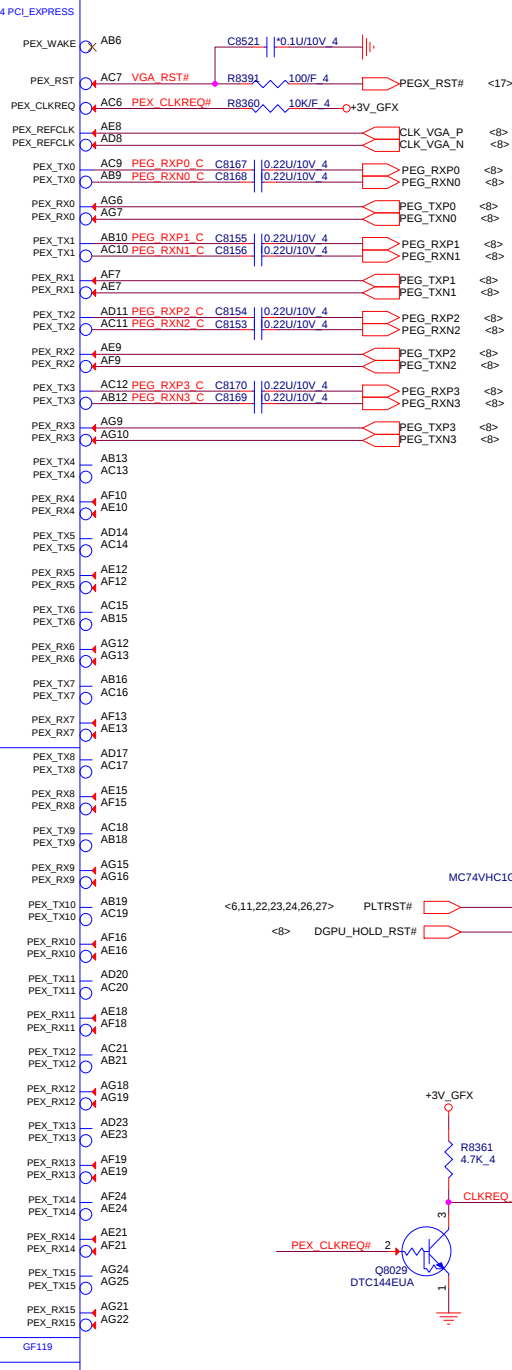
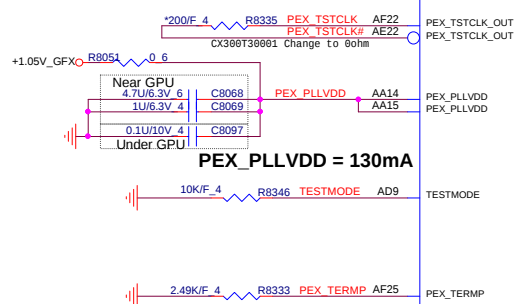
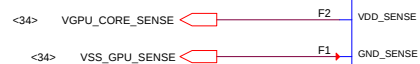
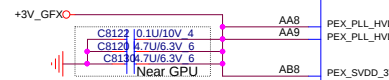


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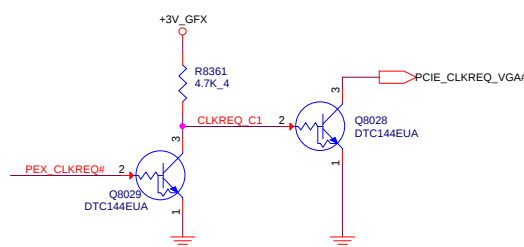
Size Custom	Document Number DDR3 DIMM1-RVS(4.0H)	Rev 1A
Date: Friday, April 26, 2013	Sheet 13 of	40


$$\text{PEX_IOVDD} + \text{PEX_IOVDDQ} = 1.042\text{A}$$


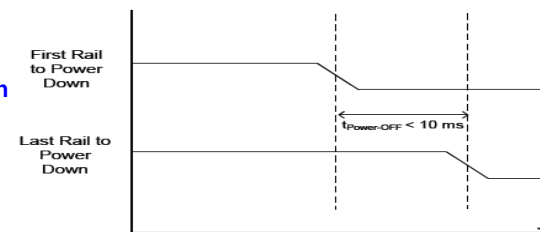
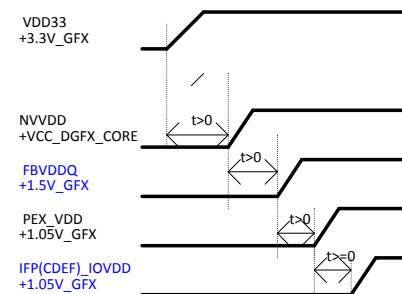
PEX_PLL_HVDD +
PEX_SVDD_3V3 = 143mA



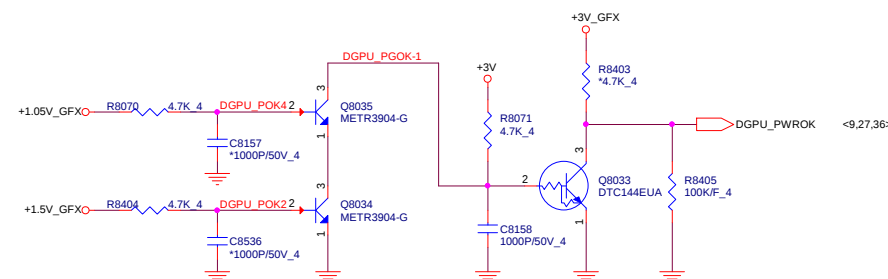
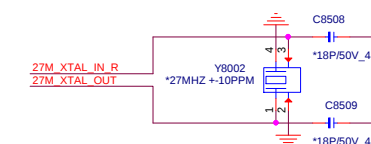
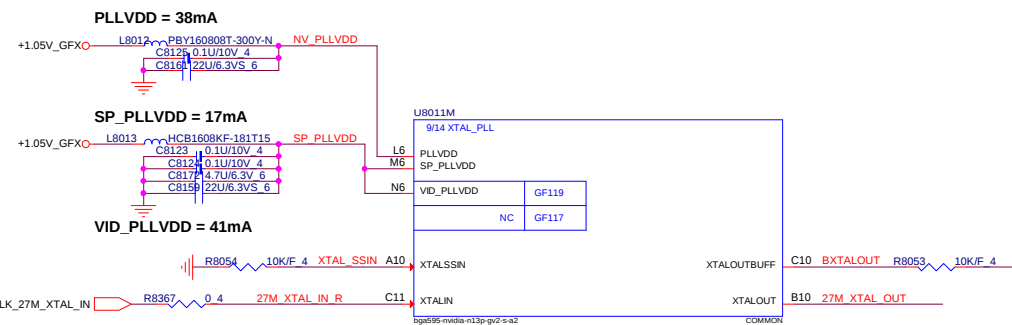
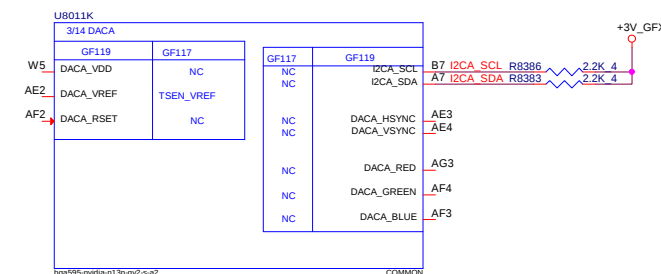
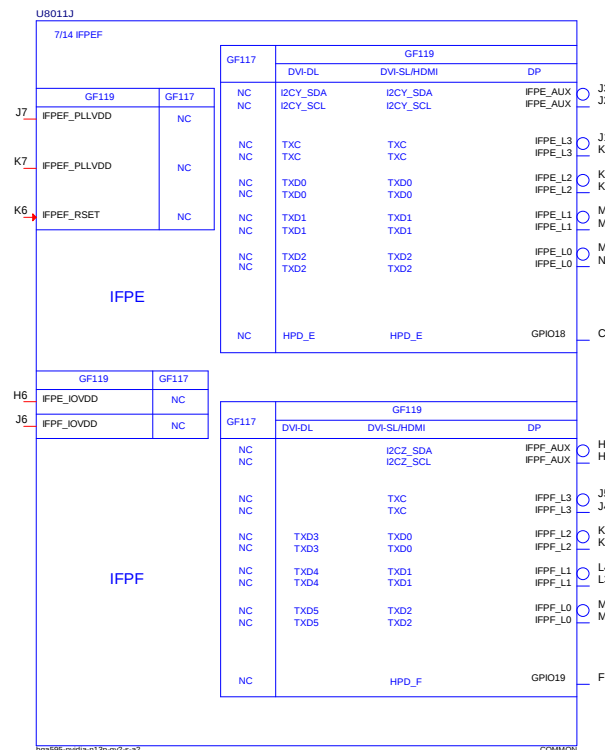
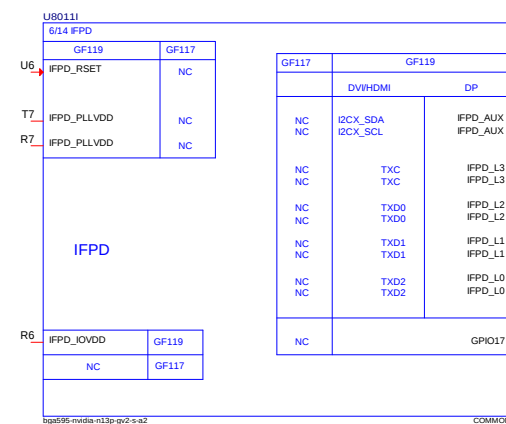
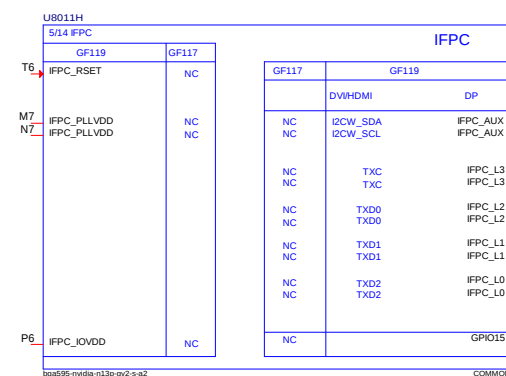
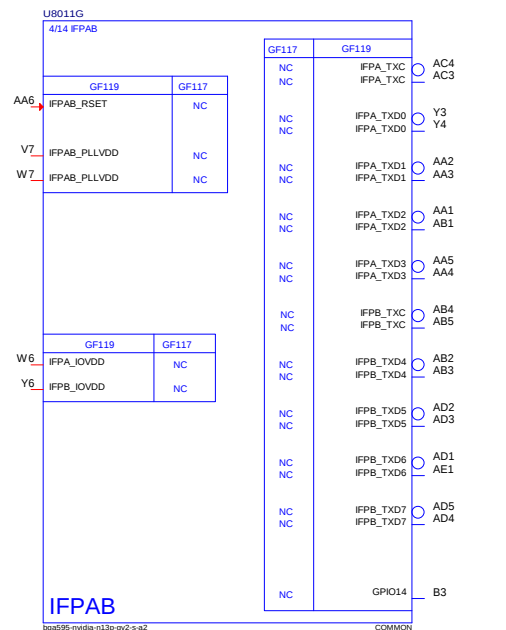
Power up sequence

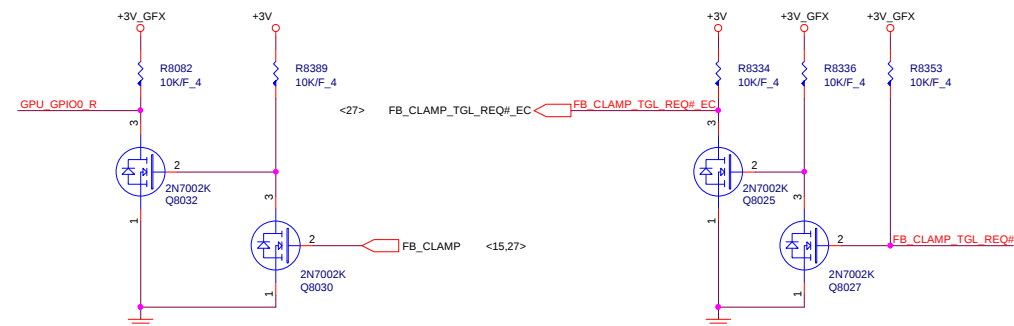
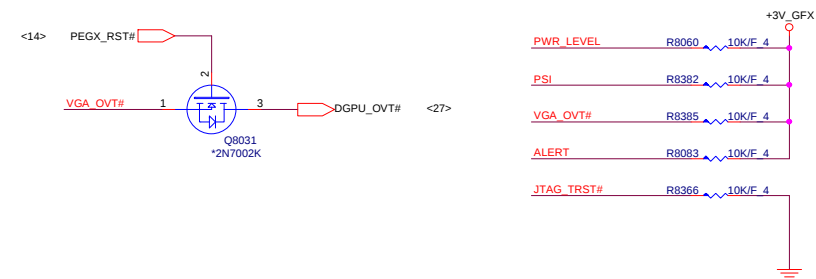


Power down sequence









VRAM Configuration Table

RAMCFG [3:0]	DESCRIPTION	Vendor	Vendor P/N	QCI P/N	
0000	DDR3 128Mx16x4, 64bit, 2Gb, 900MHz	...	MT41J128M16JT-17G6:K	AKD5MGSTL96	AKD5MGSTL98
0000	DDR3 128Mx16x4, 64bit, 2Gb, 900MHz	...	MT41J128M16JT-17G6:K	AKD5MGSTL96	AKD5MGSTL98
0110	DDR3 128Mx16x4, 64bit, 2Gb, 900MHz	...	H5T02663DFH-11C	AKD5MGSTW10	AKD5MGSTW11
0111	DDR3 128Mx16x4, 64bit, 2Gb, 900MHz	SAMSUNG	K4W2G1646E-BC11	AKD5MGST520	AKD5MGST522

GPIO ASSIGNMENTS

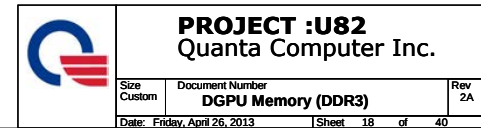
GPI/O	I/O	PIN	USAGE
0	IN	FB_CLAMP_MON	FB Clamp monitor
1	OUT	MEM_VDD_CTL	Memory VDD VID
2	OUT	LCD_BL_PWM	Panel Backlight PWM
3	OUT	LCD_VCC	PANEL POWER ENABLE
4	OUT	LCD_BLEN	PANEL BACKLIGHT ENABLE
5	OUT	Reserved	--
6	OUT	FB_CLAMP_TGL_REQ	Active low FB Clamp toggle request
7	OUT	3D_VISION	3D VISION LEFT/RIGHT signal
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	PWR_VID	GPU CORE_VDD PWM Control signal
12	IN	PWR_LEVEL	AC Power detect or power supply overdraw input
13	OUT	PSI	Phase Shedding

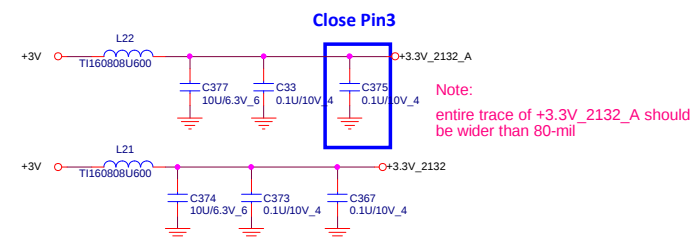
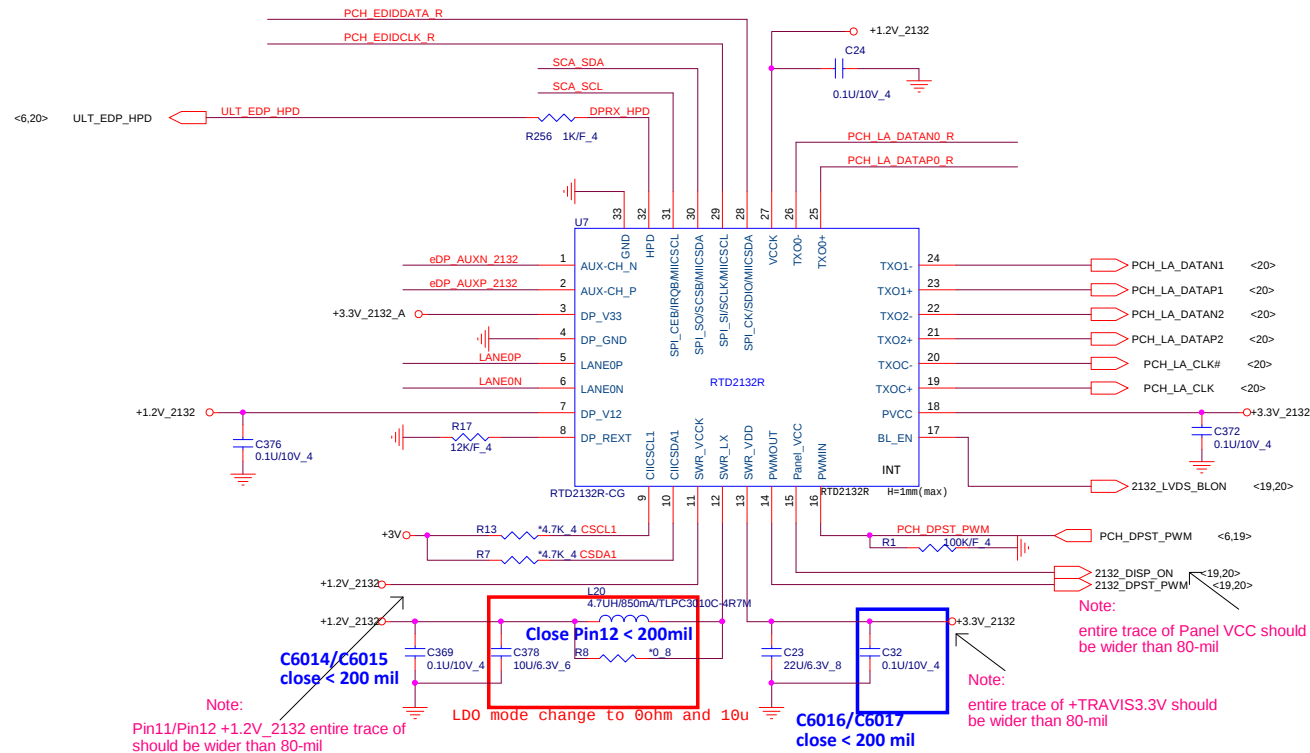
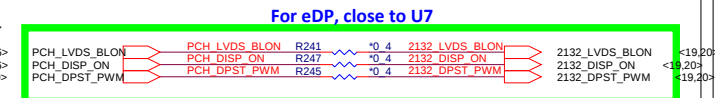
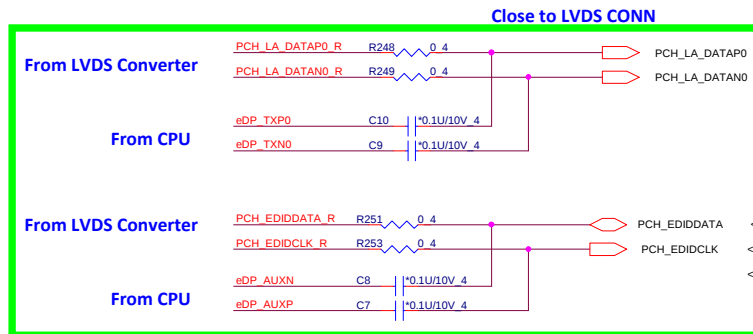
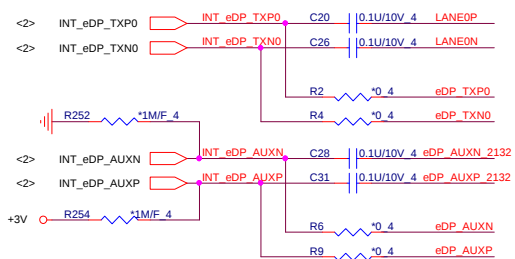


PROJECT :U82
Quanta Computer Inc.

Size Custom	Document Number N14M-GS (GPIO/STRAPS)	Rev 2A
Date: Friday, April 26, 2013		Sheet 17 of 40

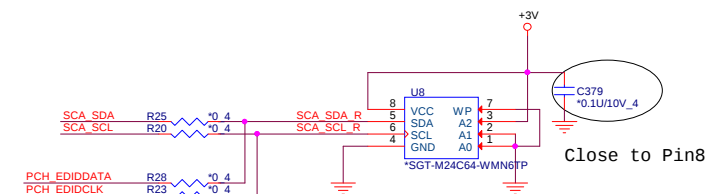
18





SCA_SCL pull high => EEPROM mode
SCA_SDA pull low => EEPROM Free mode

Address=0xA8



RTD2132S => R25, R20
RTD2132R => R28, R23

		MODE_CFG0(PIN30)	
		0	1
MODE_CFG1(PIN31)	0	X	EP MODE
	1	ROM ONLY MODE	EEPROM MODE

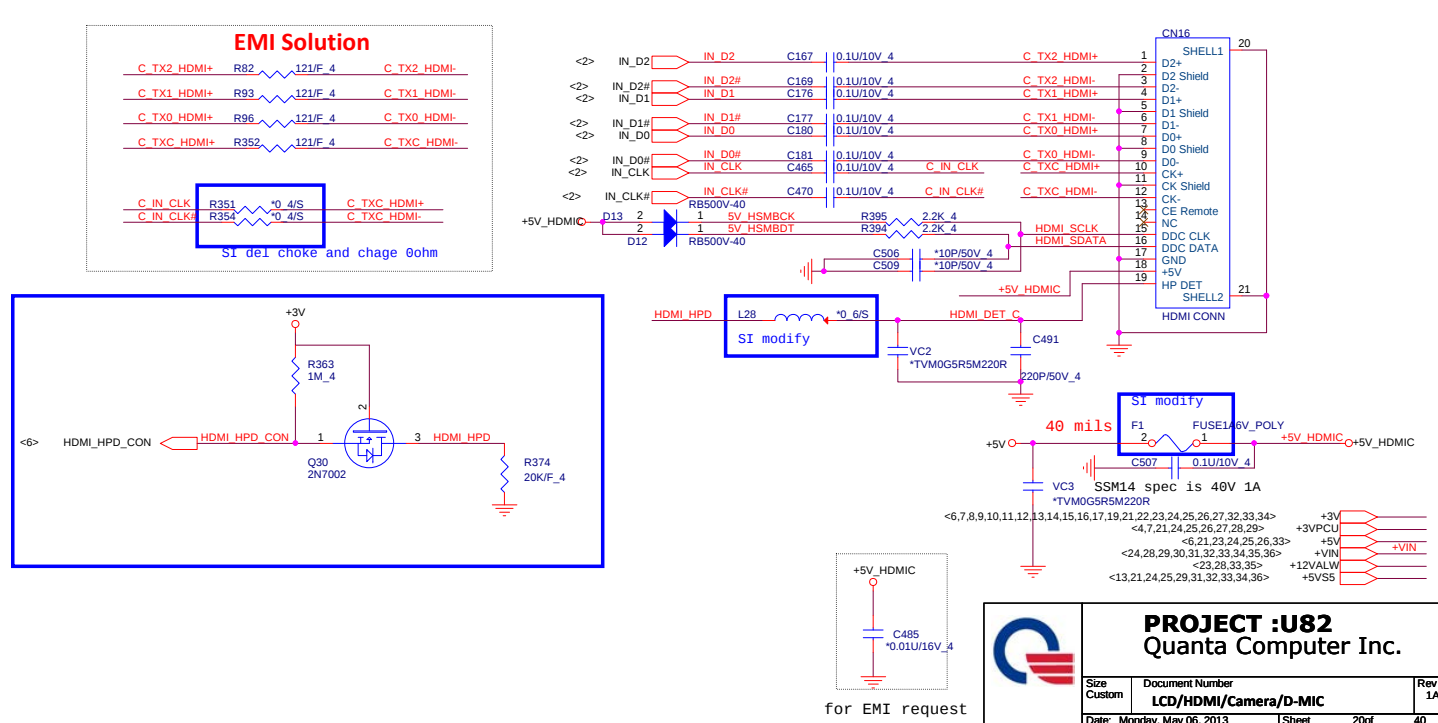
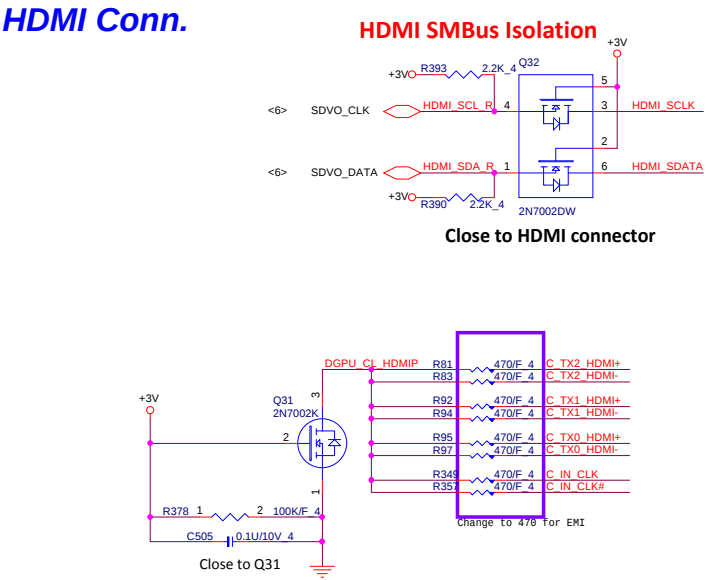


PROJECT :U82
Quanta Computer Inc.

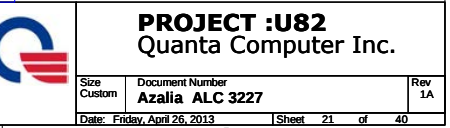
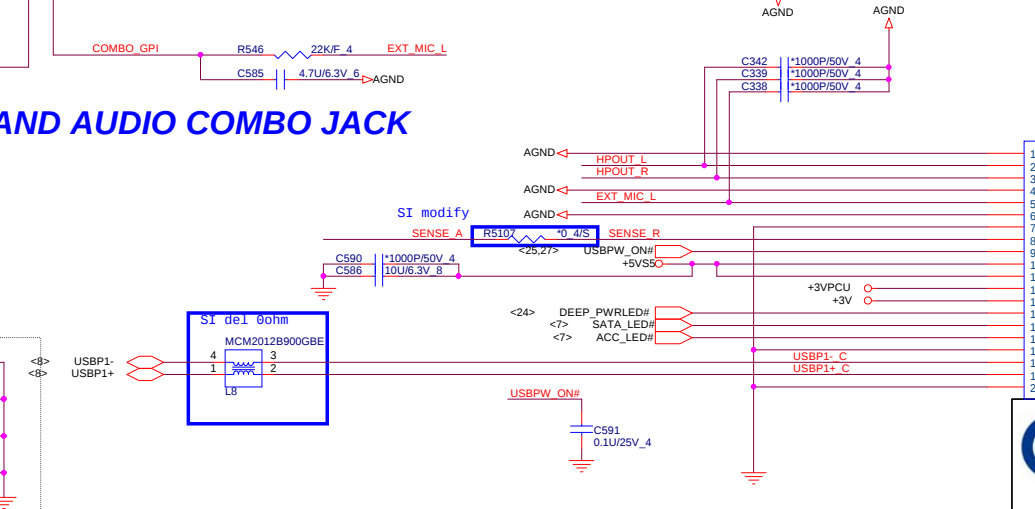
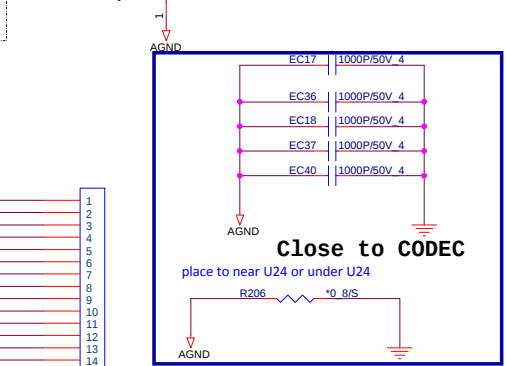
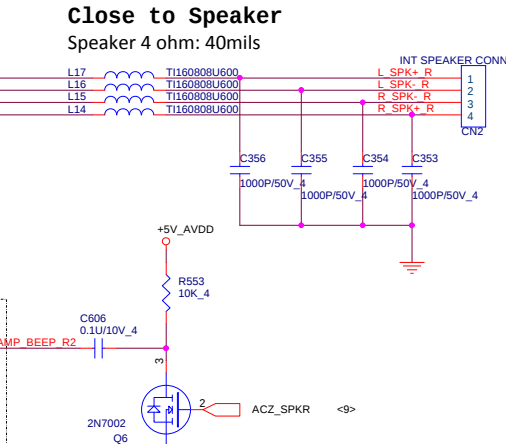
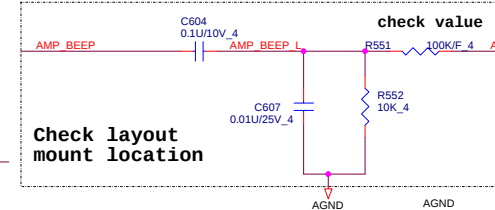
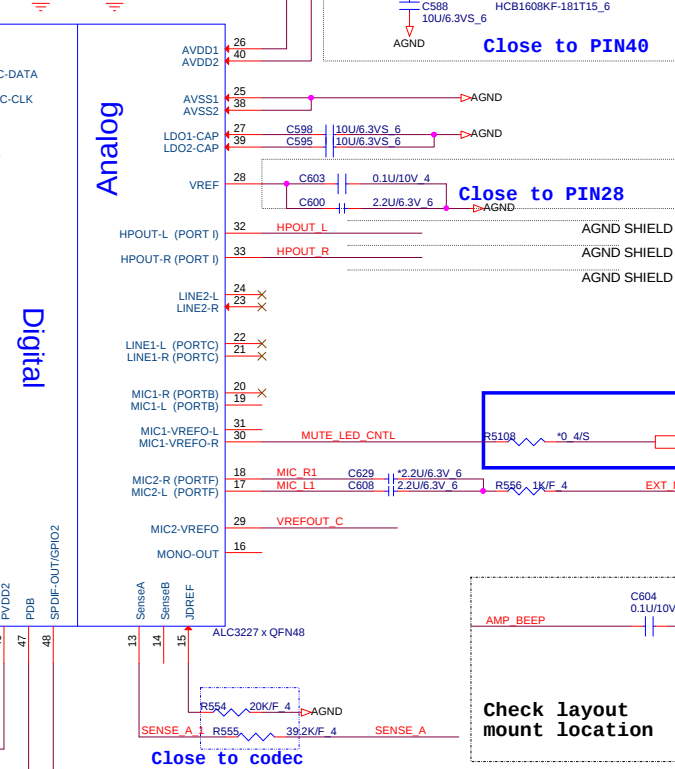
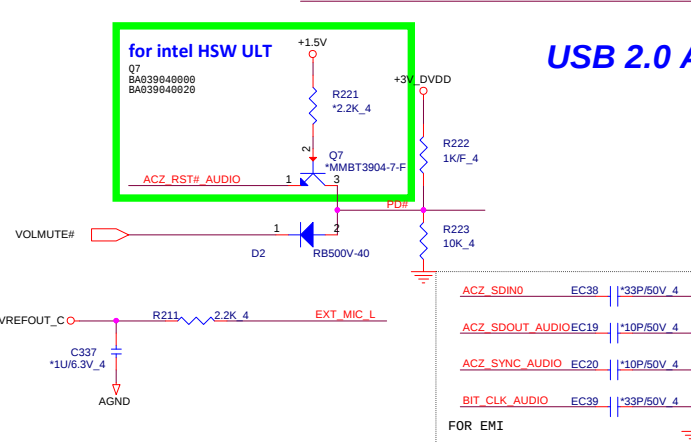
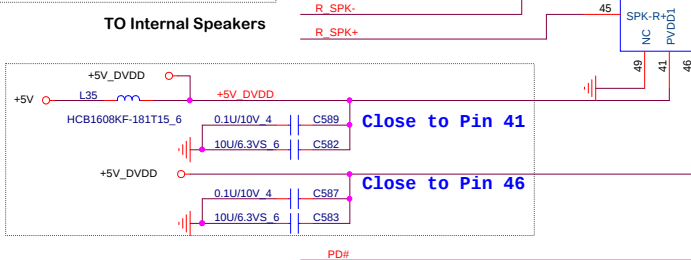
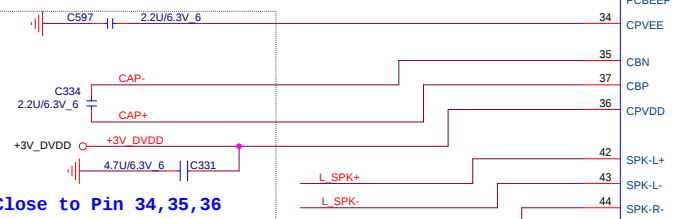
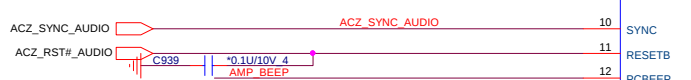
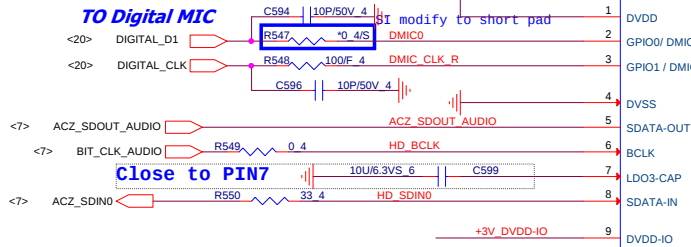
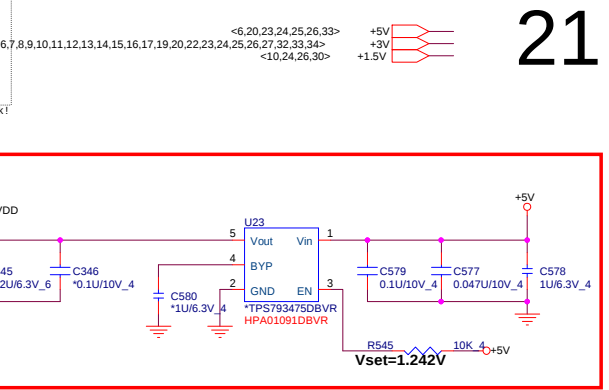
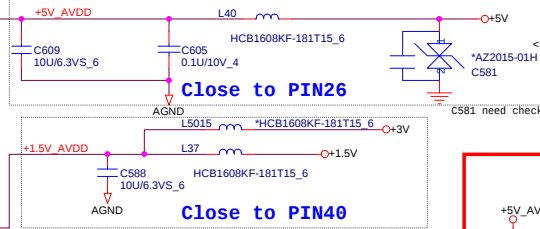
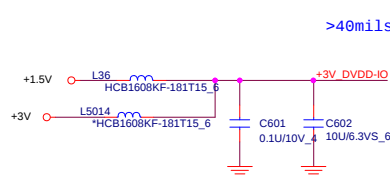
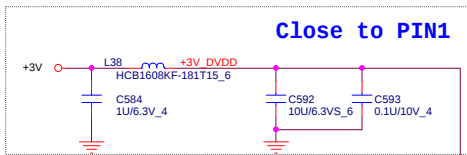
Size	Document Number	Rev
Custom	LVDS converter RTD2132R	1A
Date: Friday, April 26, 2013	Sheet 19 of 40	

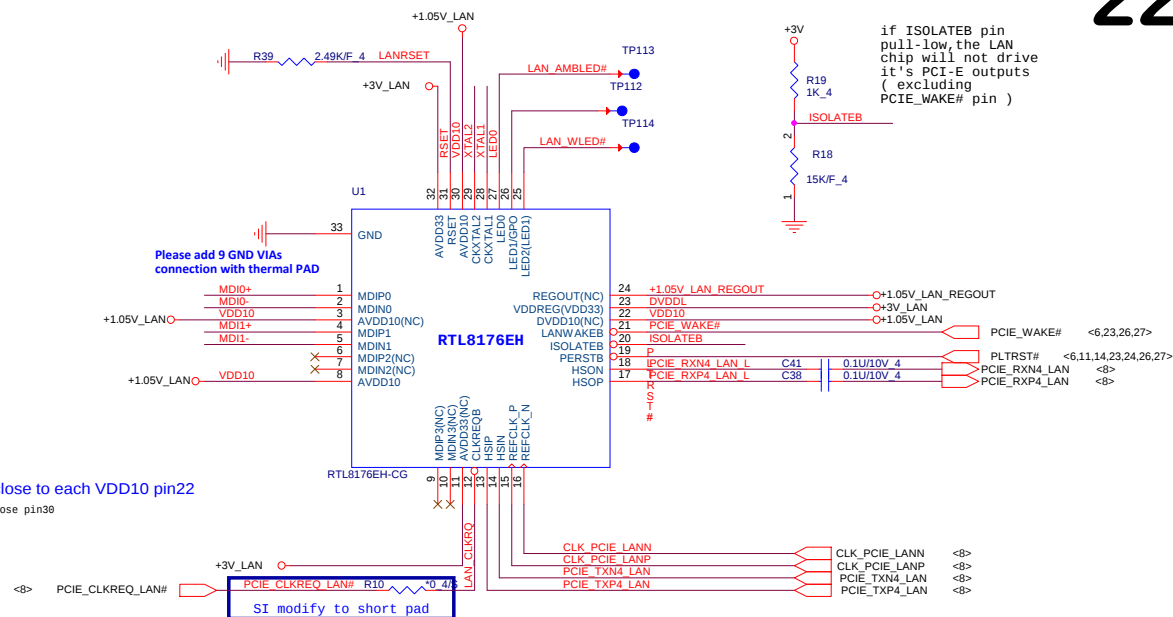
EE PROM R15, R12
EC OPTION R16, R11

HDMI Conn.



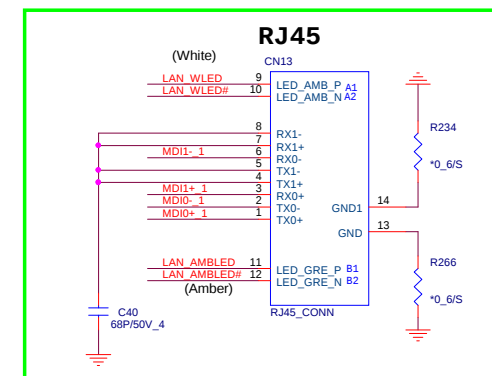
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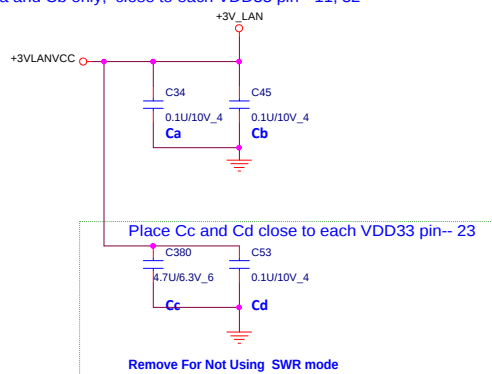
LAN conn

TWD Type



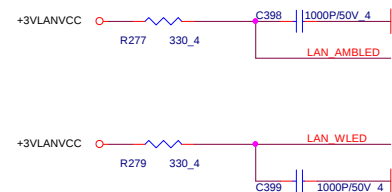
BOT: TST1284R LF DB0EL5LAN00

Stuff Ca and Cb only, close to each VDD33 pin-- 11, 32



<6,7,8,9,10,11,12,13,14,15,16,17,19,20,21,23,24,25,26,27,32,33,34>
<26,33>

+3V
+3VLAVCC



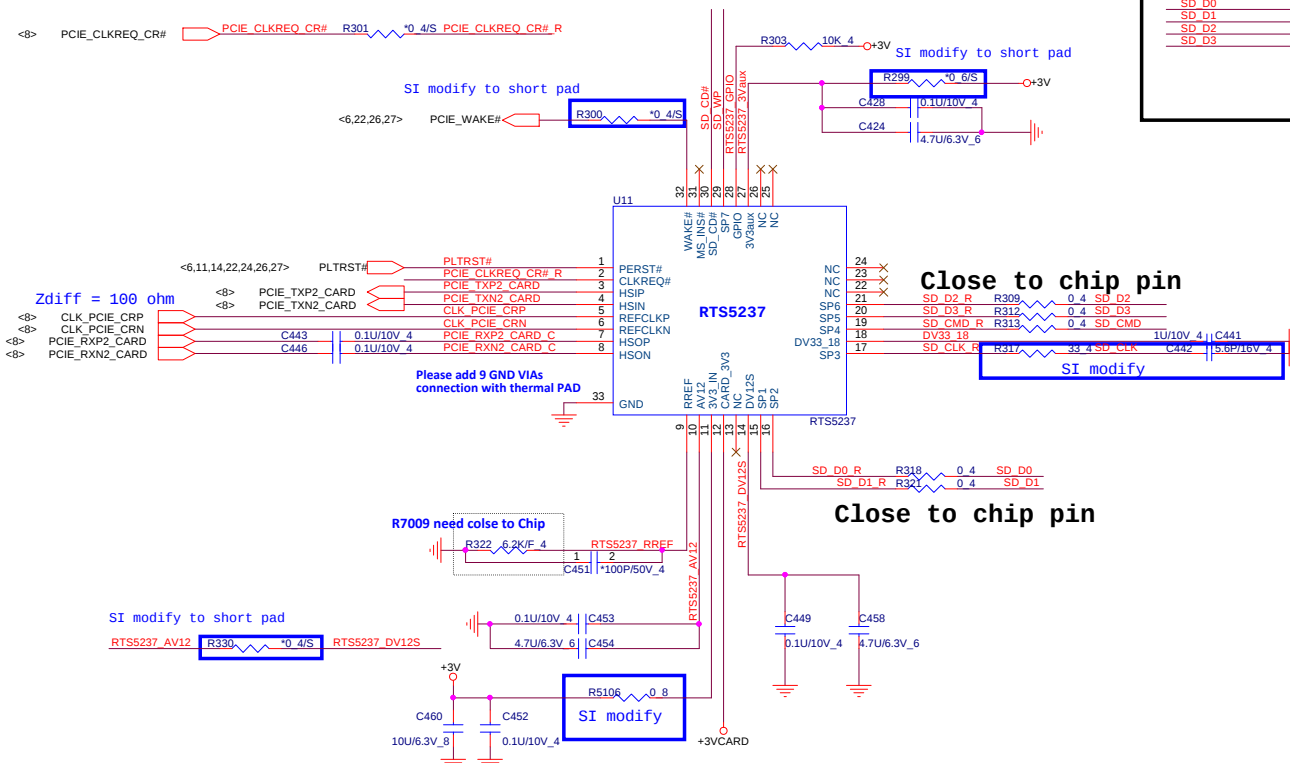
PROJECT :U82
Quanta Computer Inc.

Size Custom	Document Number LAN RTL8176EH/RJ45	Rev 1A
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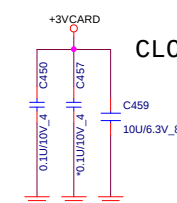
SP1	SD D1	
SP2	SD D0	MS D1
SP3	SD CLK	MS D0
SP4	SD CMD	MS D2
SP5	SD D3	MS D3
SP6	SD D2	MS CLK

Share Pin

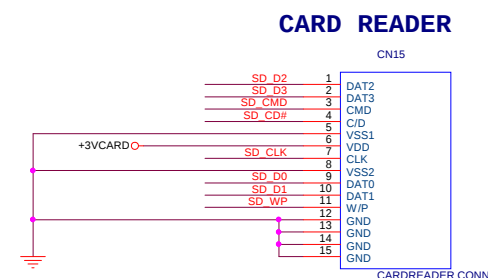
SD / MMC



Close to chip pin



CLOSE CONN



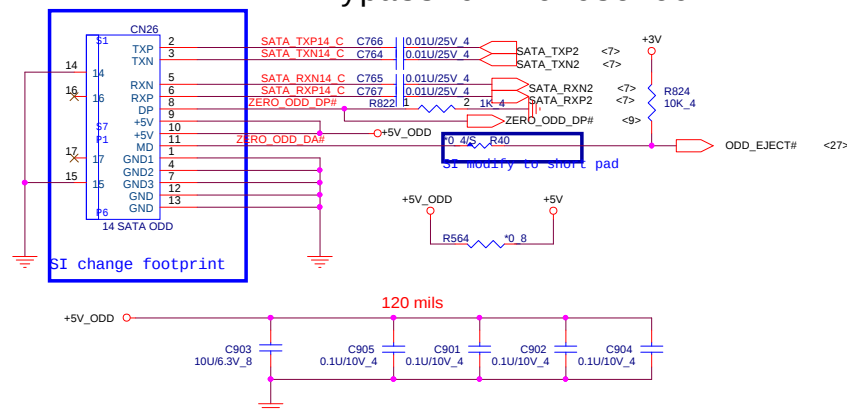
CARD READER

R3X Type

SATA ODD CONNECTOR

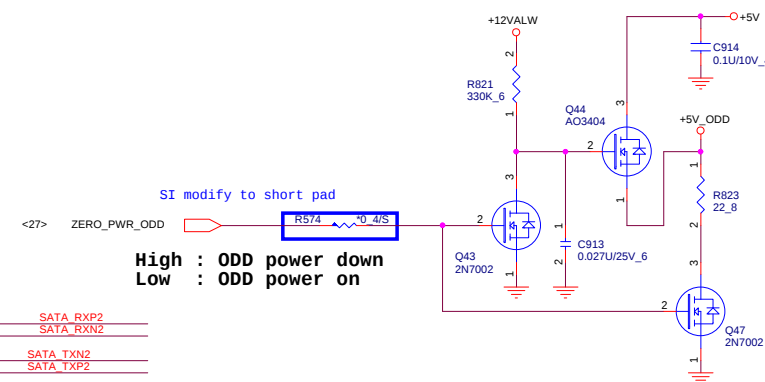
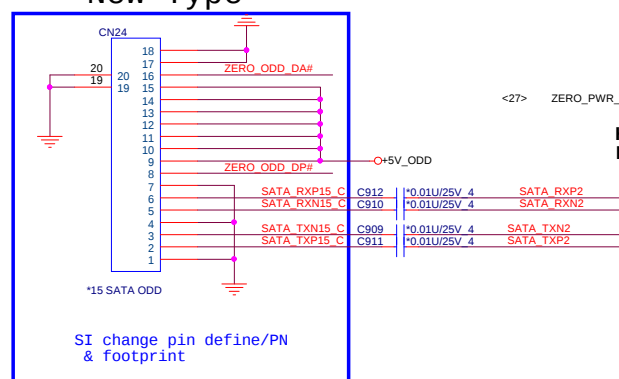
14" SATA ODD

Bypass CAP close conn



15" SATA ODD

New Type



SI modify to short pad

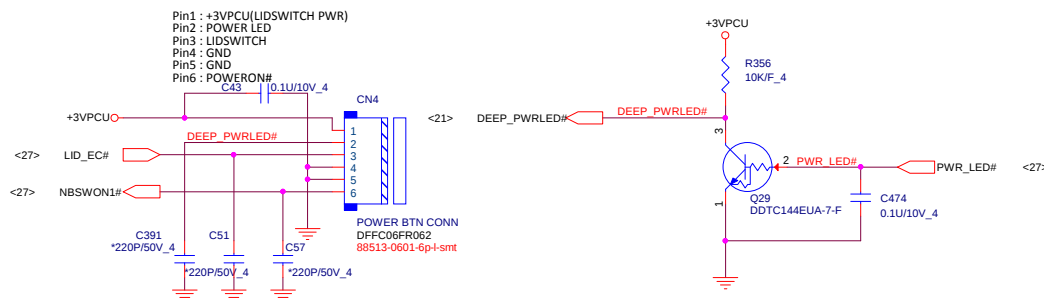
High : ODD power down
Low : ODD power on



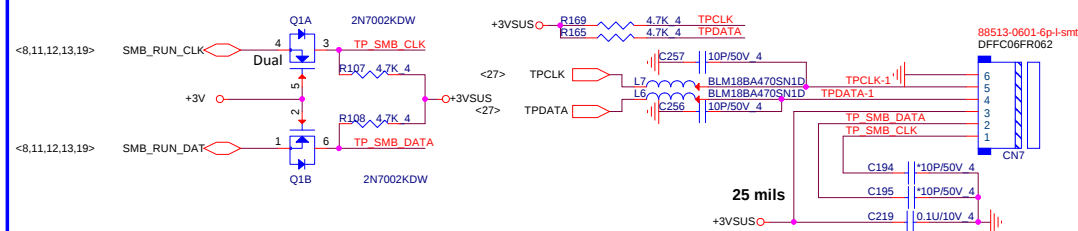
PROJECT :U82
Quanta Computer Inc.

Size Custom	Document Number CR RTS5237 & CR SOCKET	Rev 1A
Date: Friday, May 03, 2013		Sheet 23 of 40

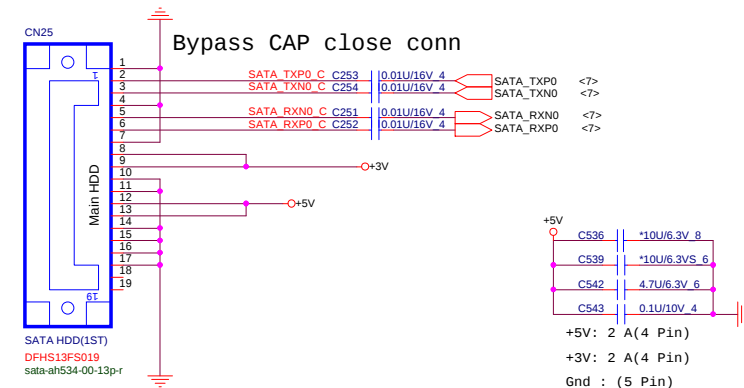
Power Botton Connector



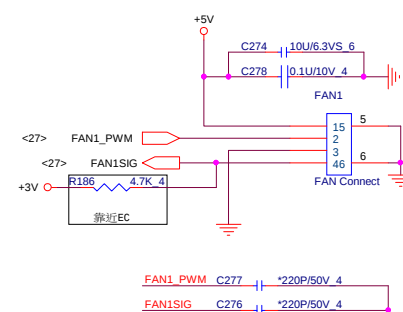
Touch Pad Connector



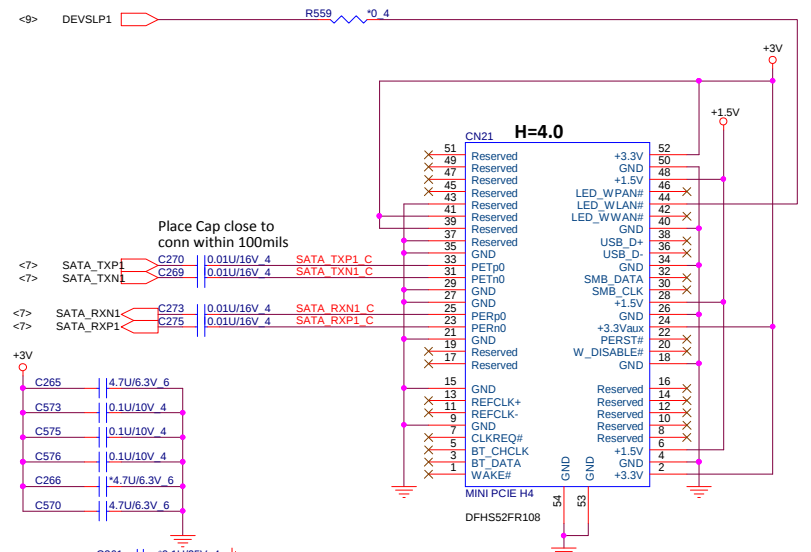
SATA HDD Connector(Cable type)



FAN

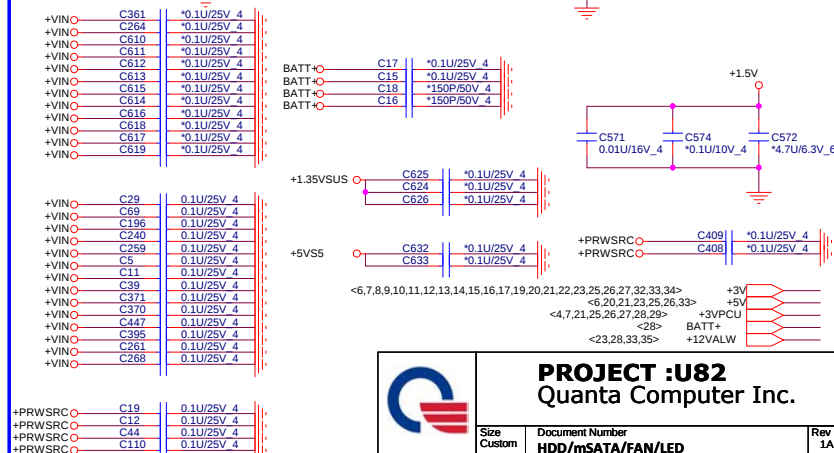
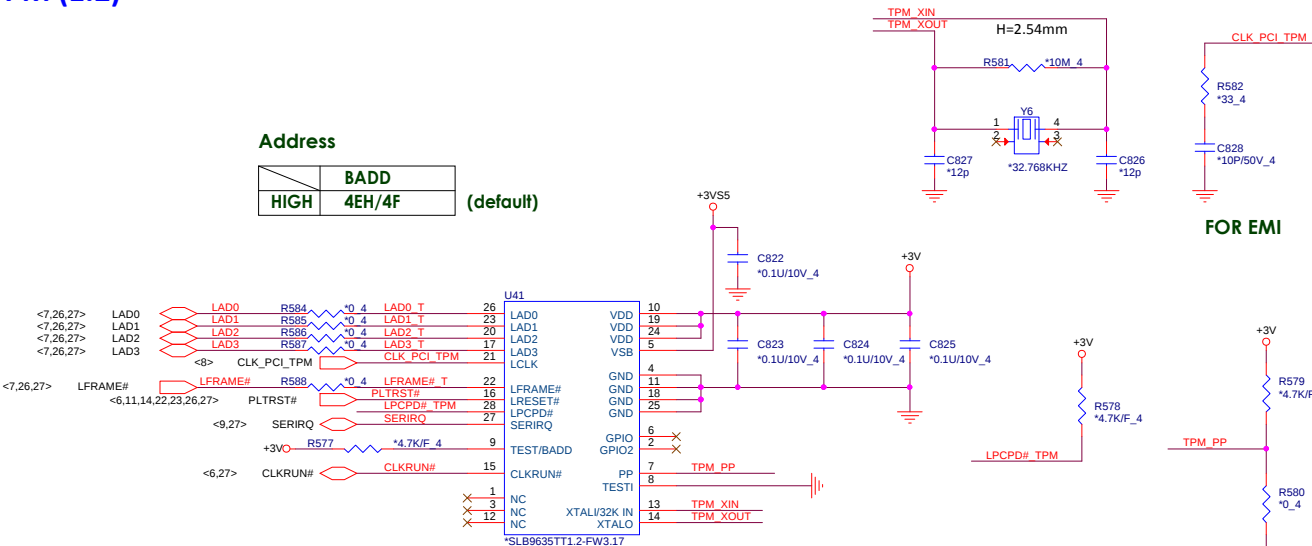


Mini PCI-E Card 2- Full size mSATA



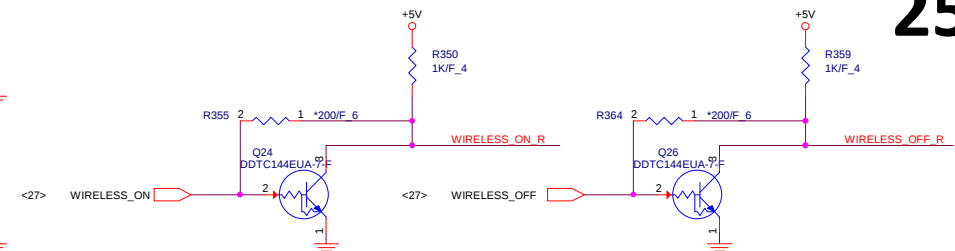
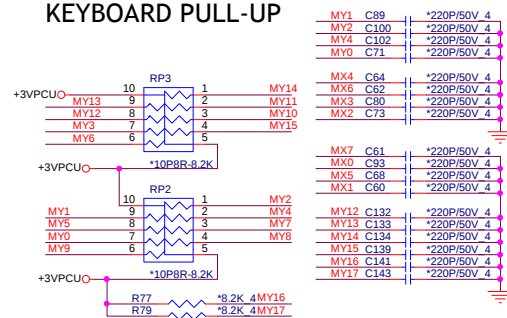
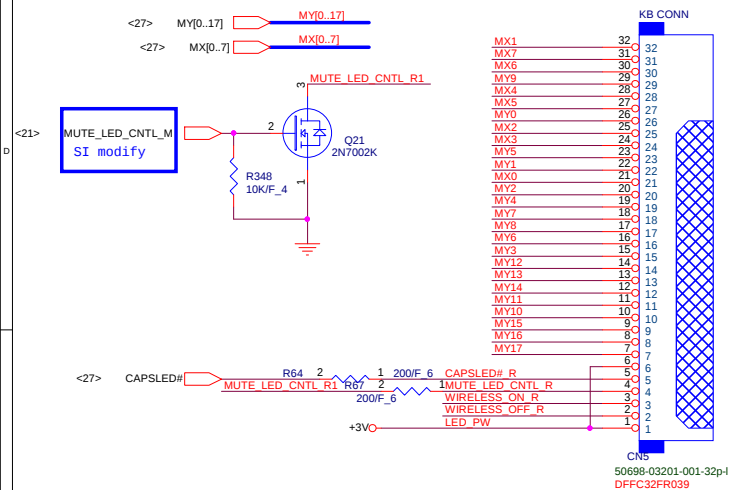
TPM (1.2)

	BADD	
HIGH	4EH/4F	(default)



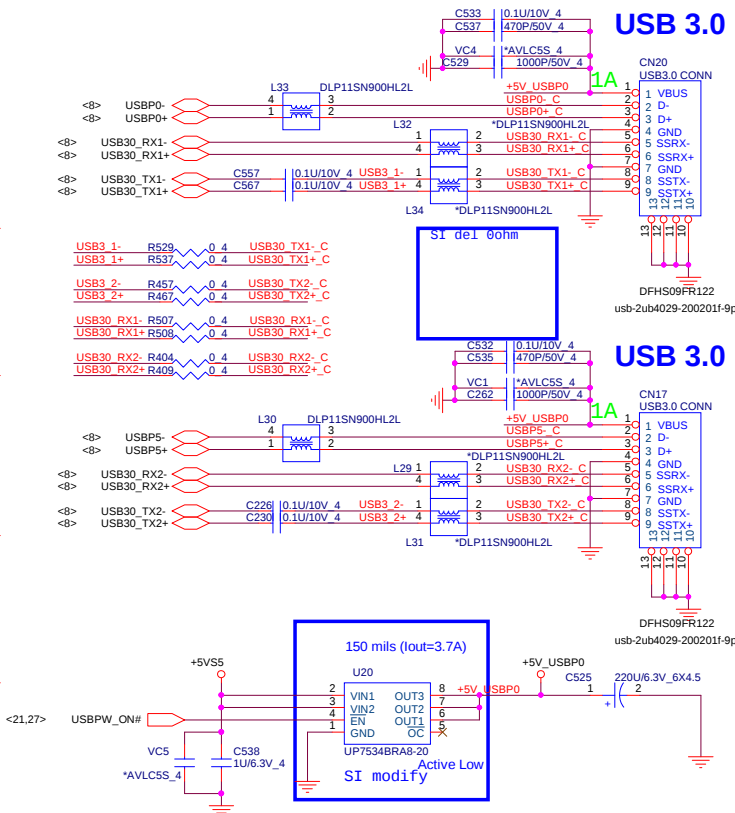
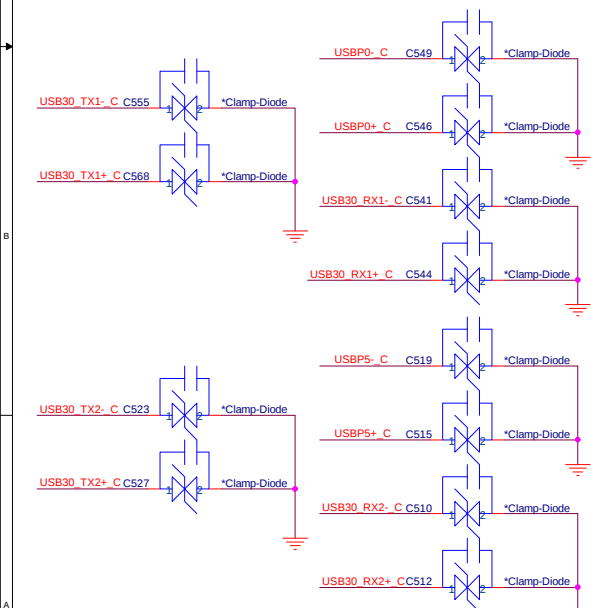
KEYBOARD Con.

25

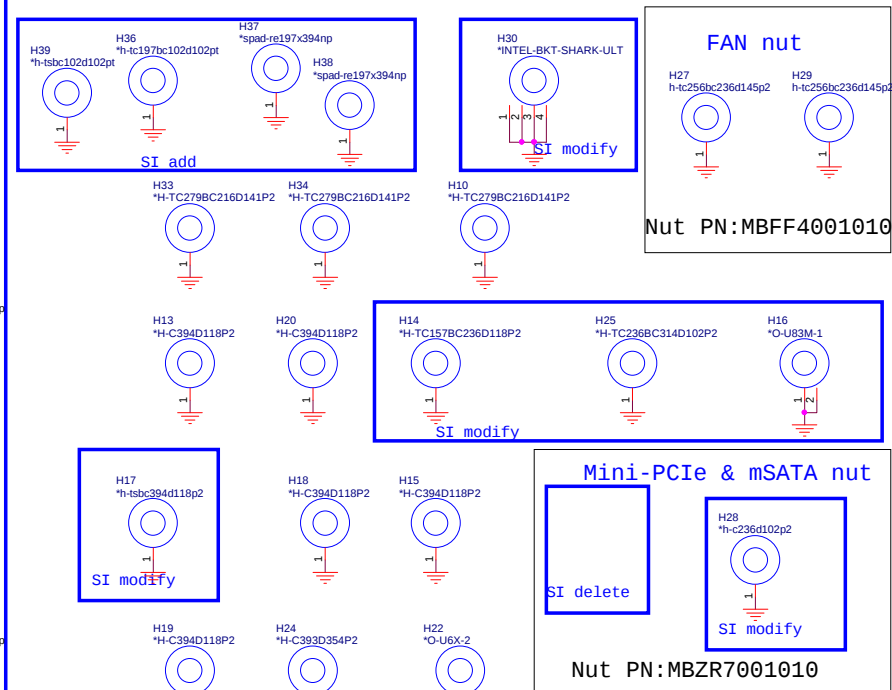


R6X Type

USB 2.0/3.0 Combo

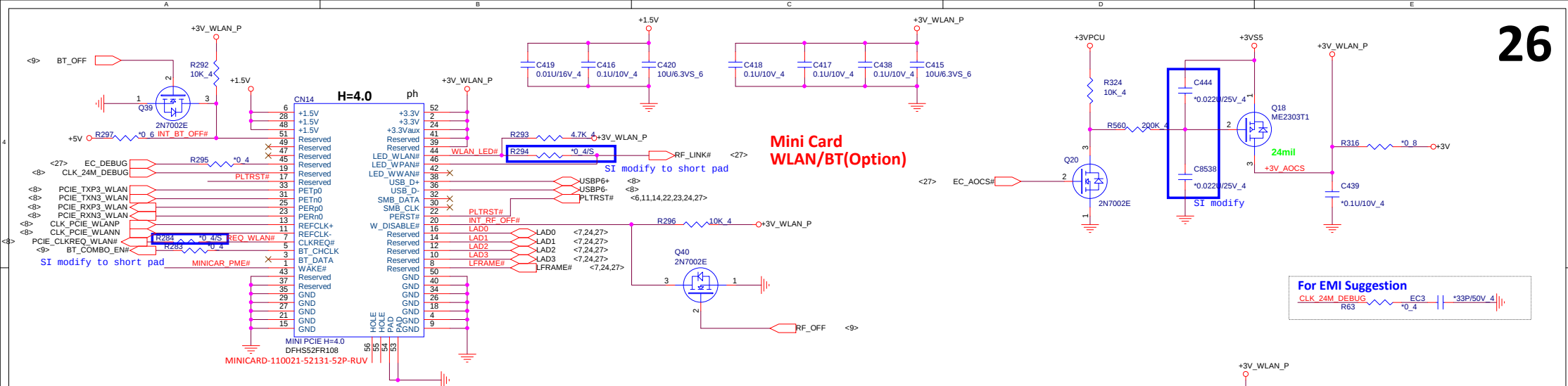


Hole

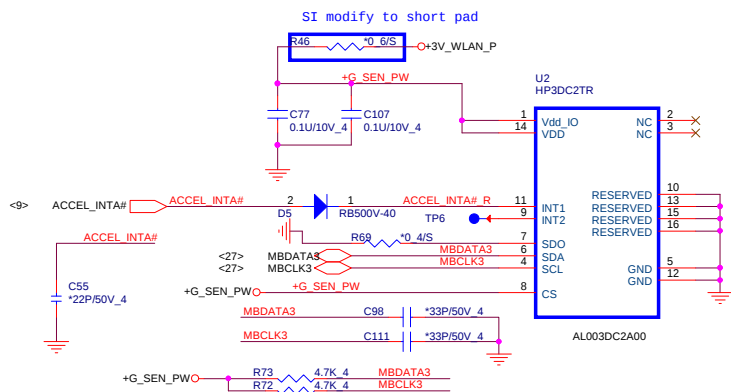


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Quanta Computer Inc.

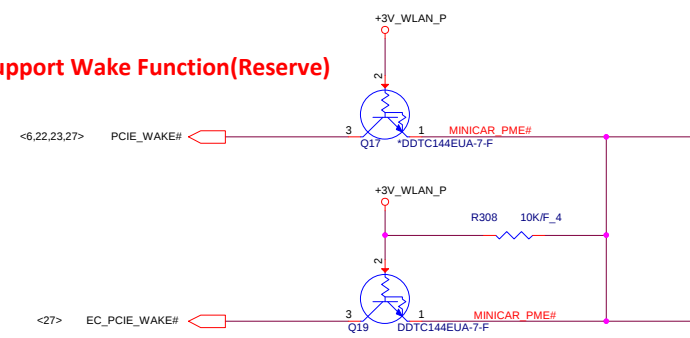
Size Custom	Document Number USB3.0/KB	Rev 1A
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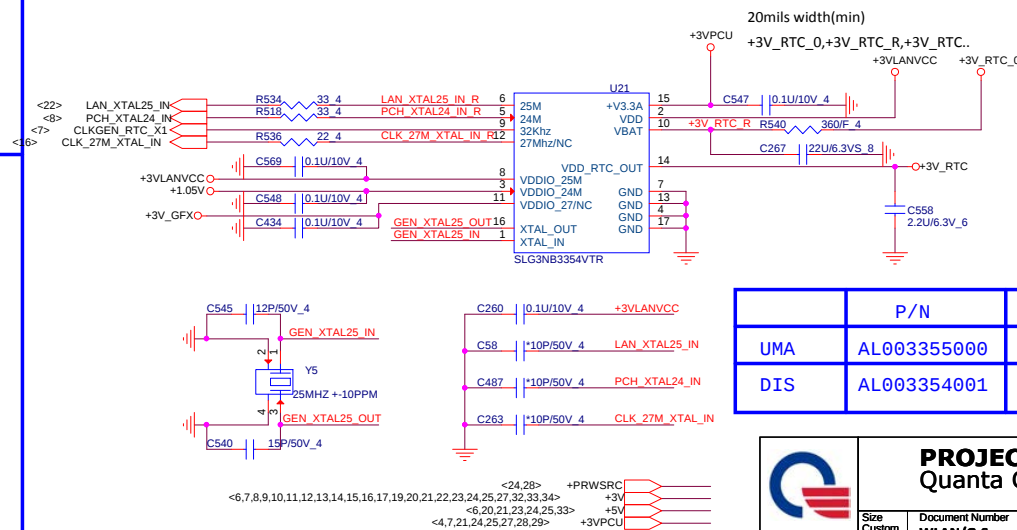
Accelerometer Sensor



Support Wake Function(Reserve)



Green CLK Circuitry



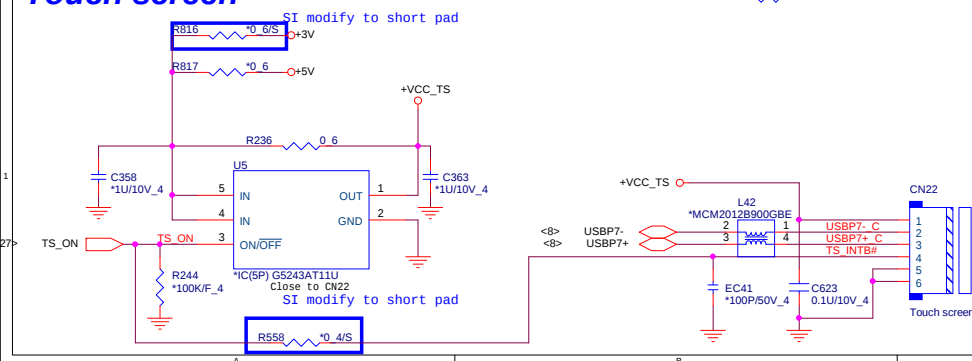
	P/N	R536	C434
UMA	AL003355000	N/A	N/A
DIS	AL003354001	Install	Install

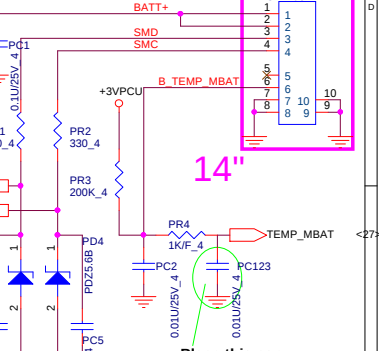


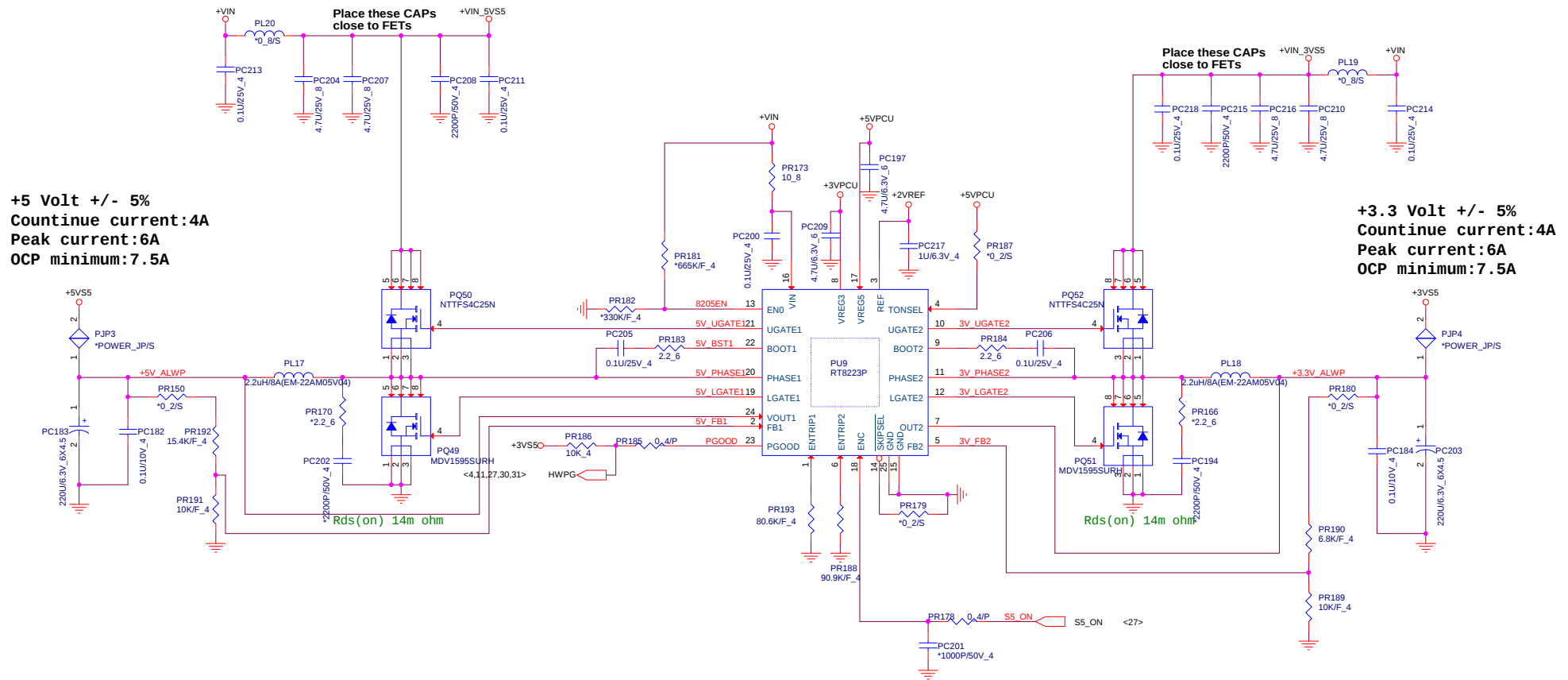
PROJECT :U82
Quanta Computer Inc.

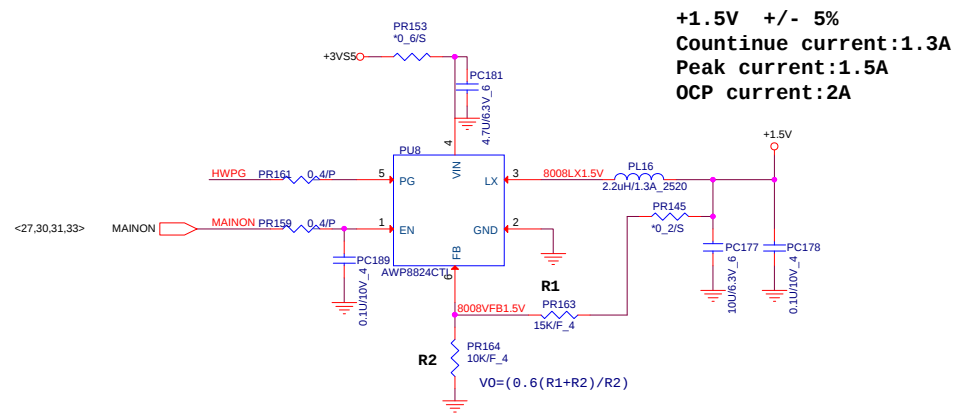
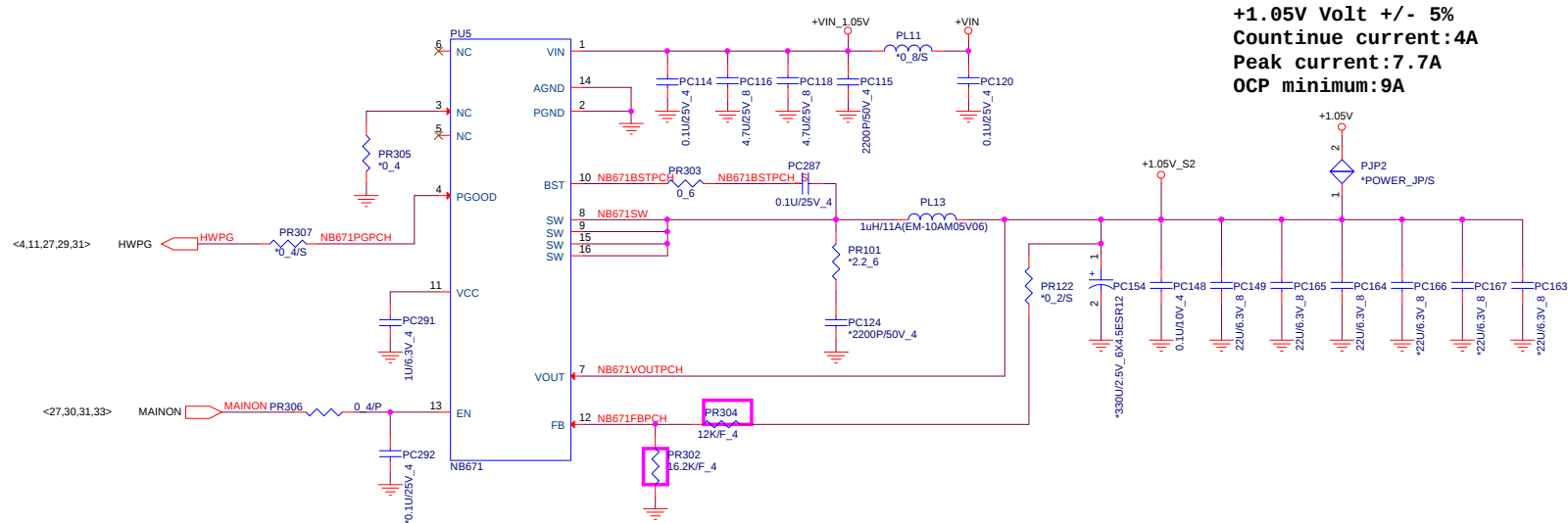
Size	Document Number	Rev
Custom	WLAN/G-Sensor/G-CLK/TS	1A
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Touch screen

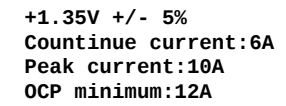


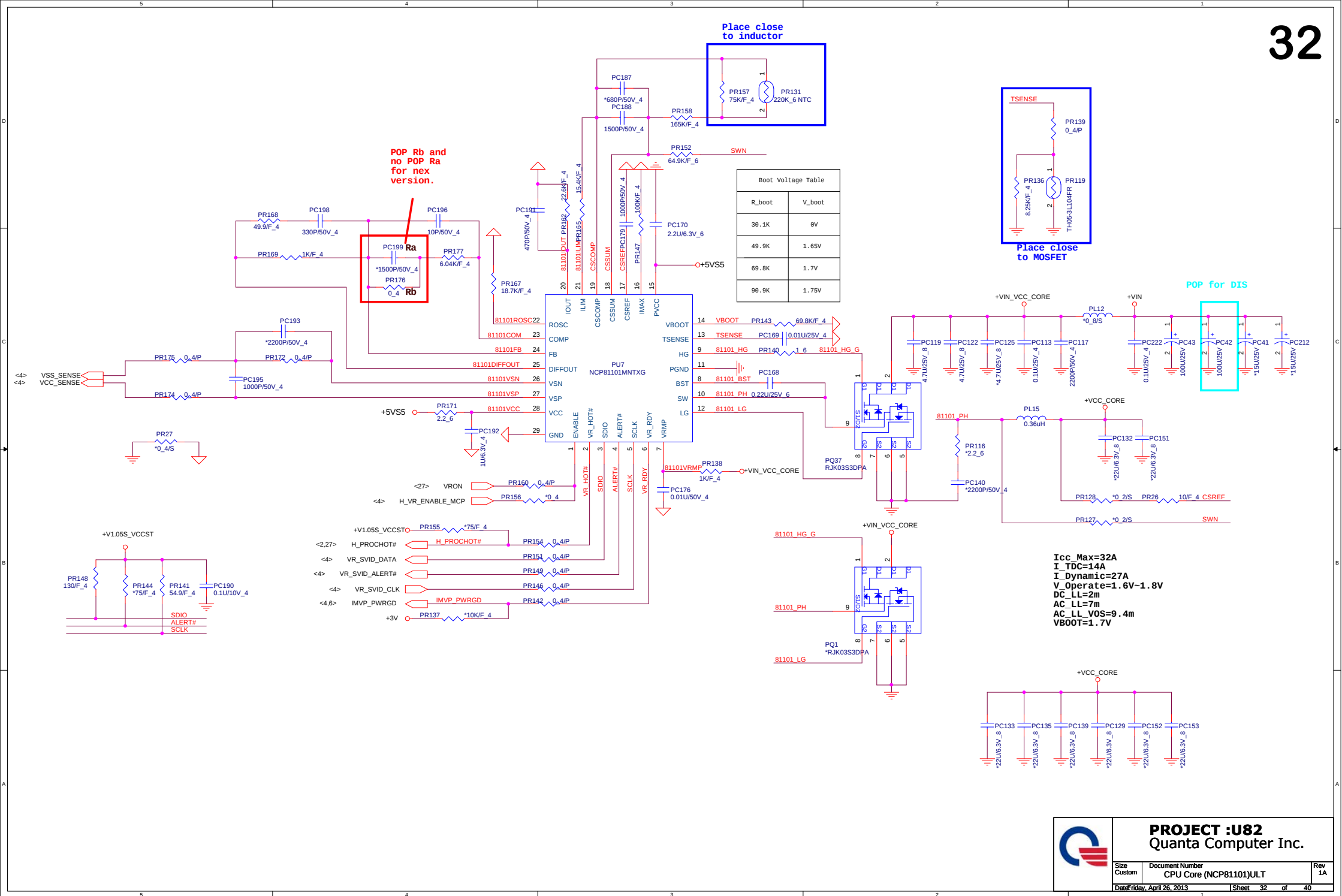


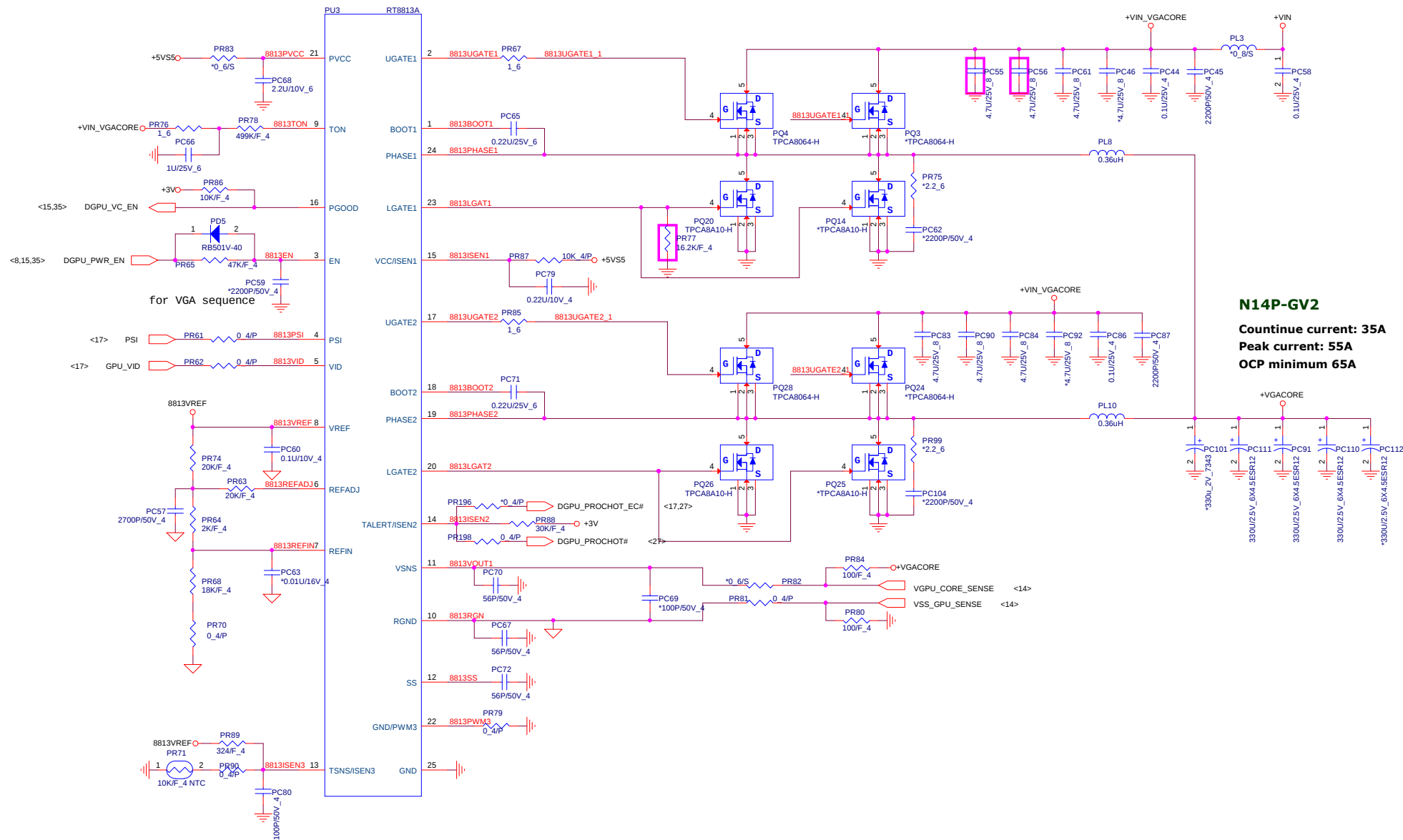


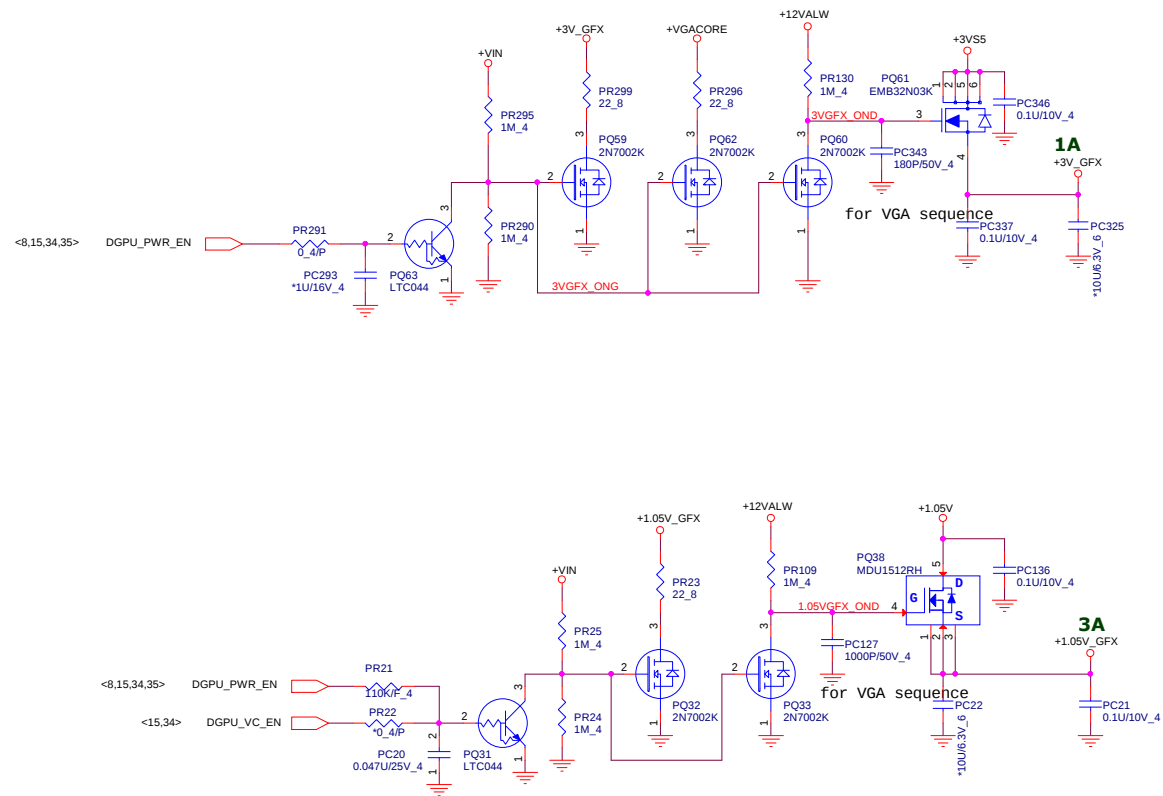


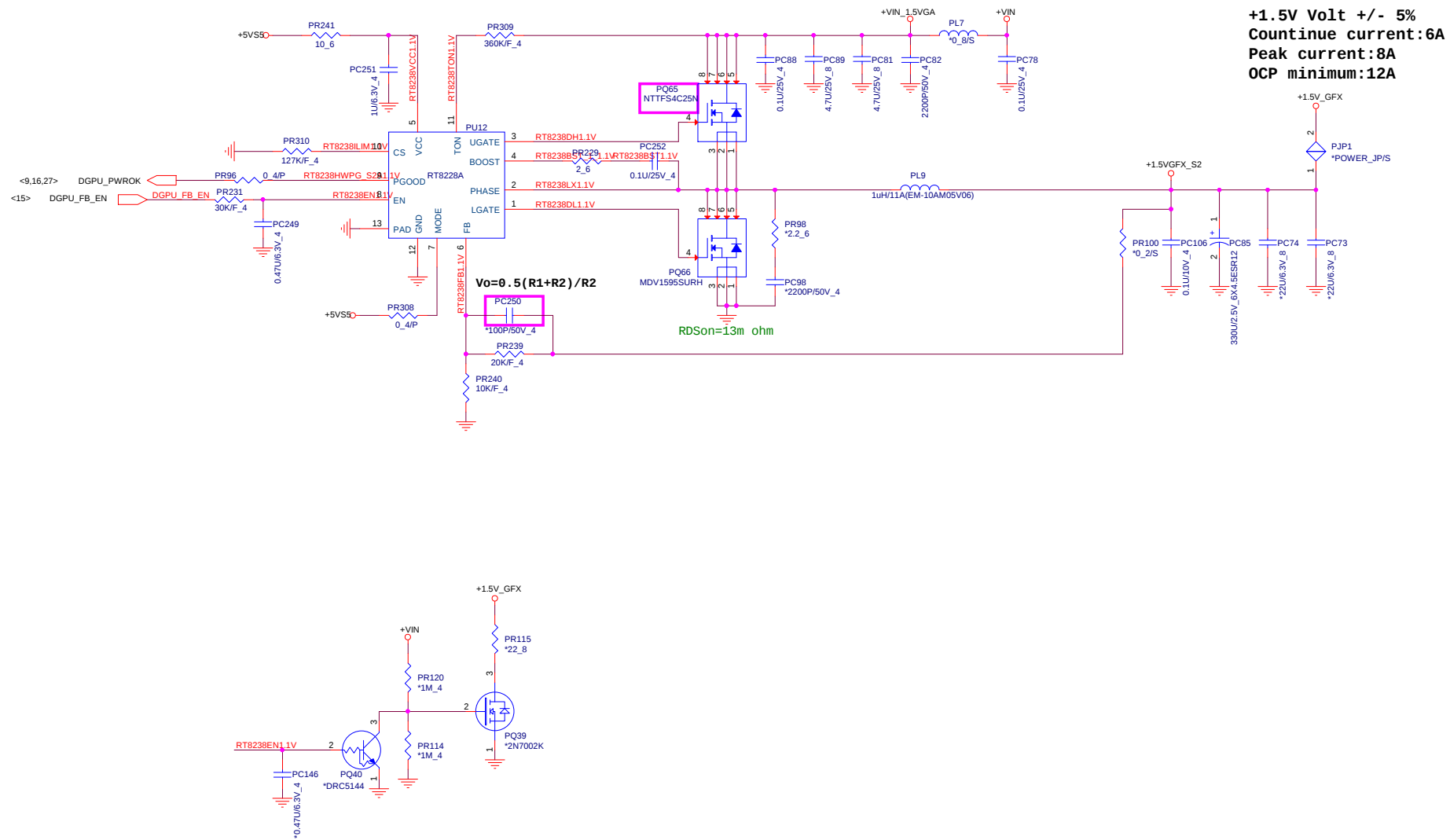
+VIN <20,24,28,29,31,32,33,34,35,36>
+3VSS <6,9,10,11,24,26,29,33,35>
+5VSS <13,21,24,25,29,31,32,33,34,36>
+5VPCU <13,28,29>











USB3.0	Port Assignment	Power control pin
PORT1	USB2.0/USB3.0 COMBO 1st	USBPW_ON#(from EC)
PORT2	USB2.0/USB3.0 COMBO 2nd	USBPW_ON#(from EC)
PORT3	NC	N/A
PORT4	NC	N/A

USB2.0	Port Assignment	Power control pin
PORT0	USB2.0/USB3.0 COMBO 1st	USBPW_ON#(from EC)
PORT1	USB2.0/USB3.0 COMBO 2nd	USBPW_ON#(from EC)
PORT2	Camera	N/A
PORT3	NC	N/A
PORT4	NC	N/A
PORT5	Left side USB daughter B	USBPW_ON#(from EC)
PORT6	WLAN	N/A
PORT7	Touch Screen 15" used	TS_ON(from EC)

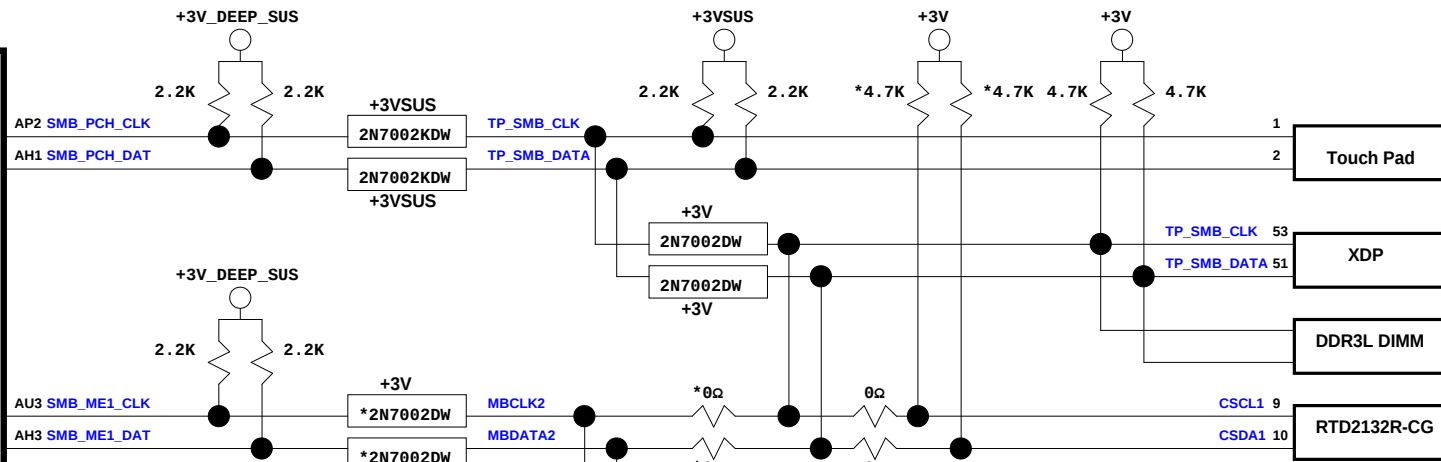
SATA Master	Port Assignment	Power control pin
SATA0	HDD	N/A
SATA1	mSATA	N/A
SATA2	NC	N/A
SATA3/PCIE	Card reader	N/A

PCIE	Port Assignment	Control pin
PCIE 5_L0	PEG0	
PCIE 5_L1	PEG1	
PCIE 5_L2	PEG2	
PCIE 5_L3	PEG3	
PCIE 1	NC	
PCIE 2	NC	
PCIE 3	WLAN	
PCIE 4	LAN	

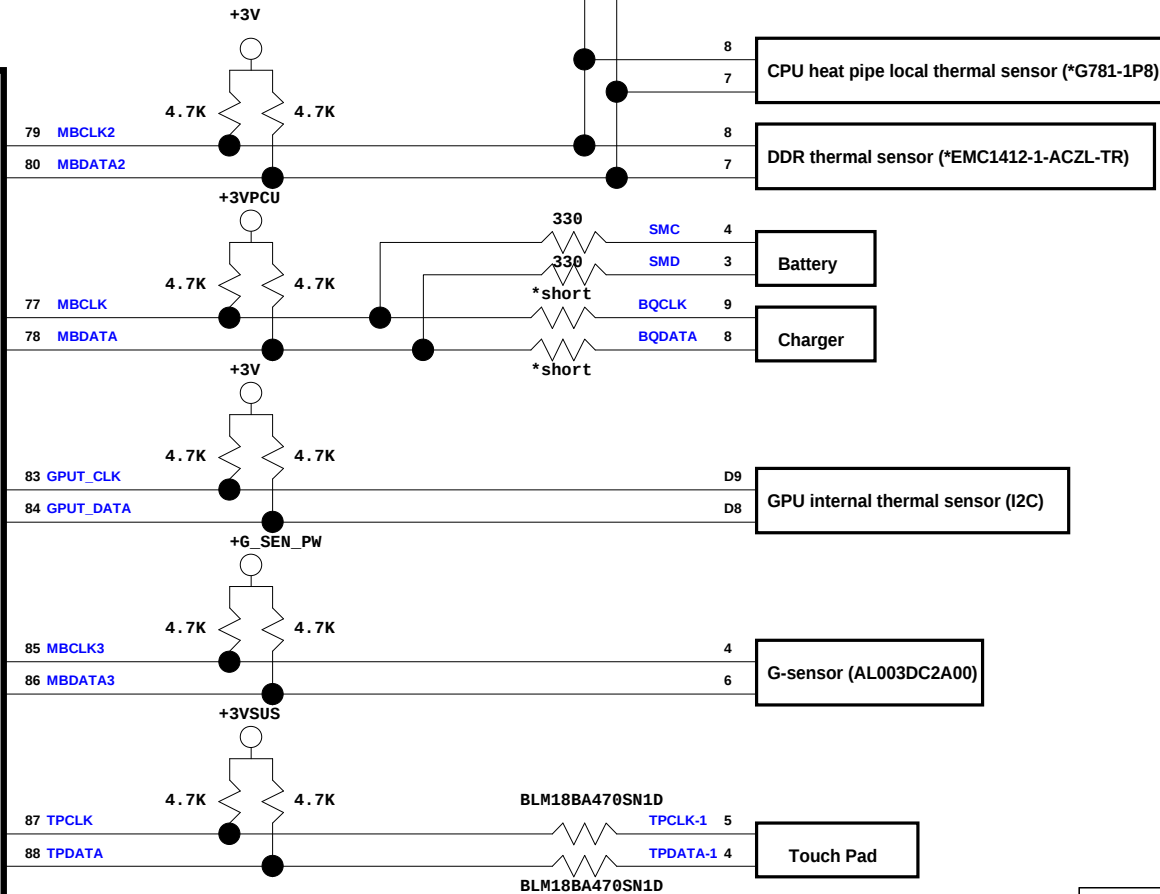


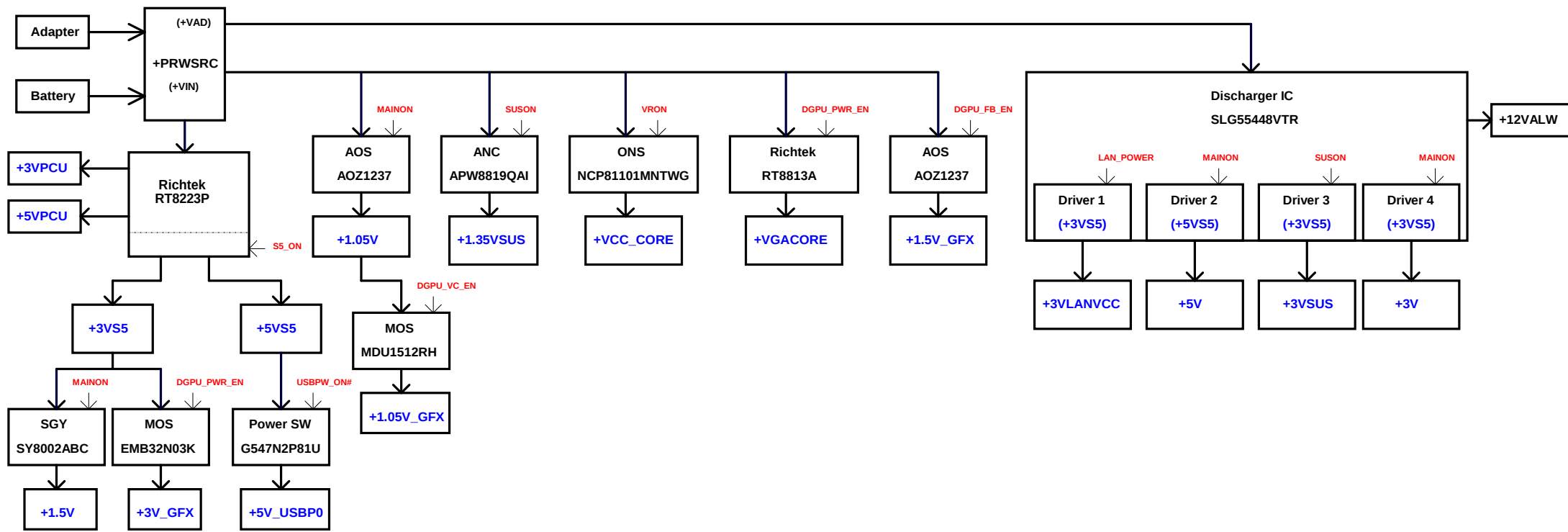
PROJECT :U82
Quanta Computer Inc.

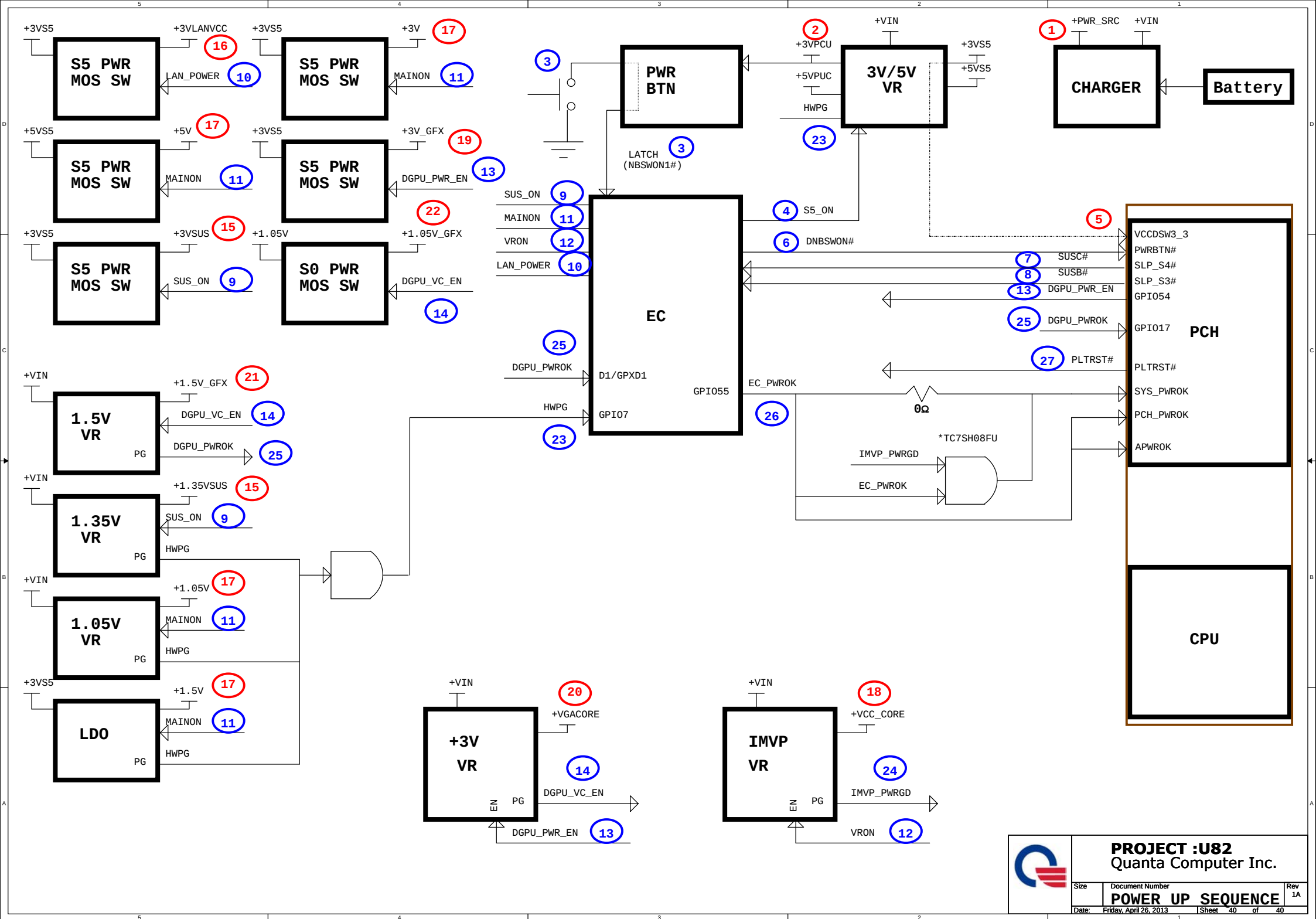
Haswell ULT



EC KB9010QF







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POWER UP SEQUENCE		
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