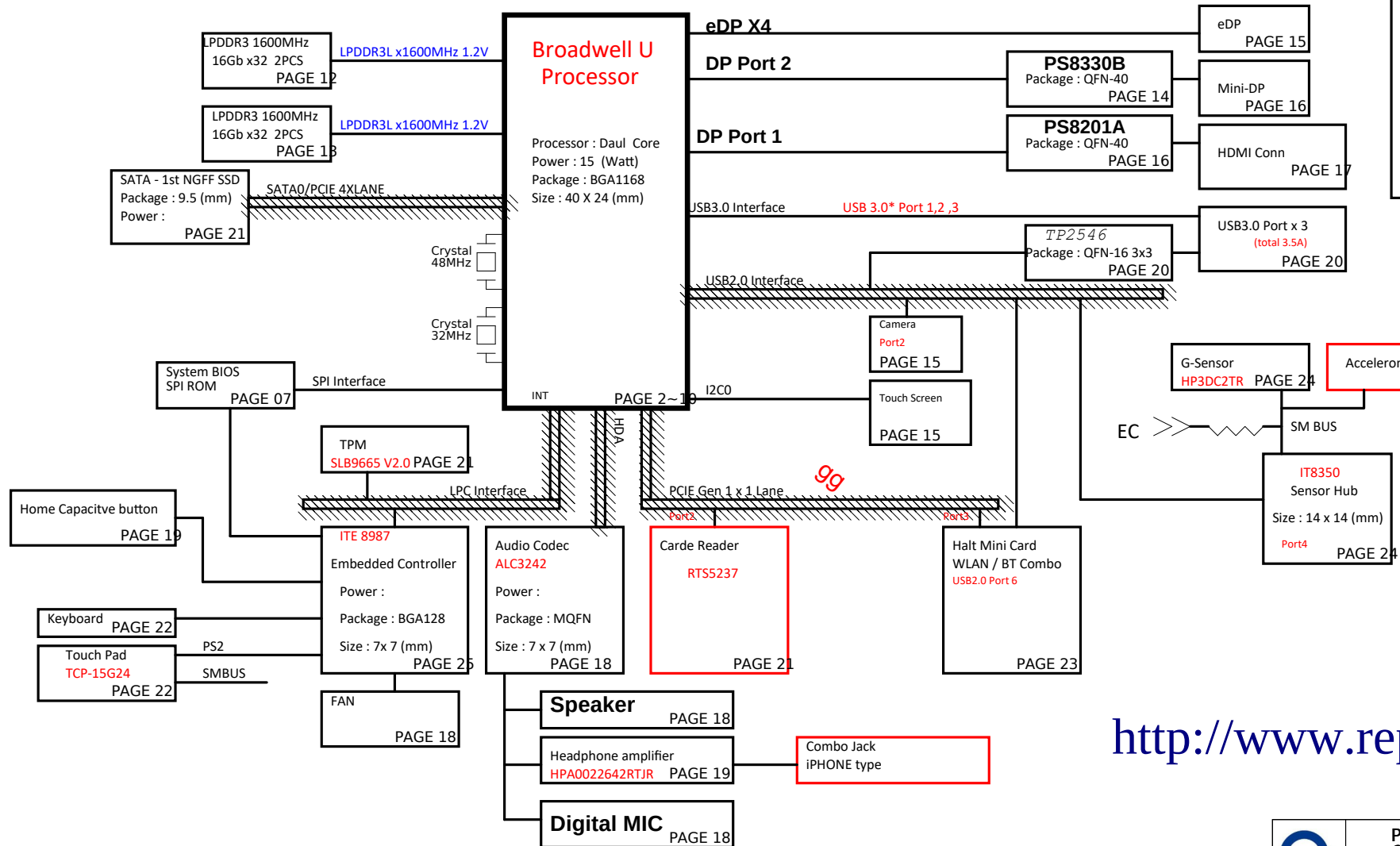


13"

# Pike Intel Crescent Bay ULT Platform Block Diagram

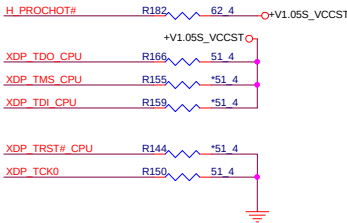
PCB 10L STACK UP

LAYER 1 : TOP  
 LAYER 2 : SGND  
 LAYER 3 : IN1(High)  
 LAYER 4 : IN2(Low)  
 LAYER 5 : SGND  
 LAYER 6 : SVCC  
 LAYER 7 : IN3  
 LAYER 8 : IN4  
 LAYER 9 : SGND  
 LAYER 10 : BOT



<http://www.repair1.ru/>

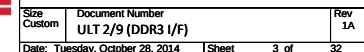




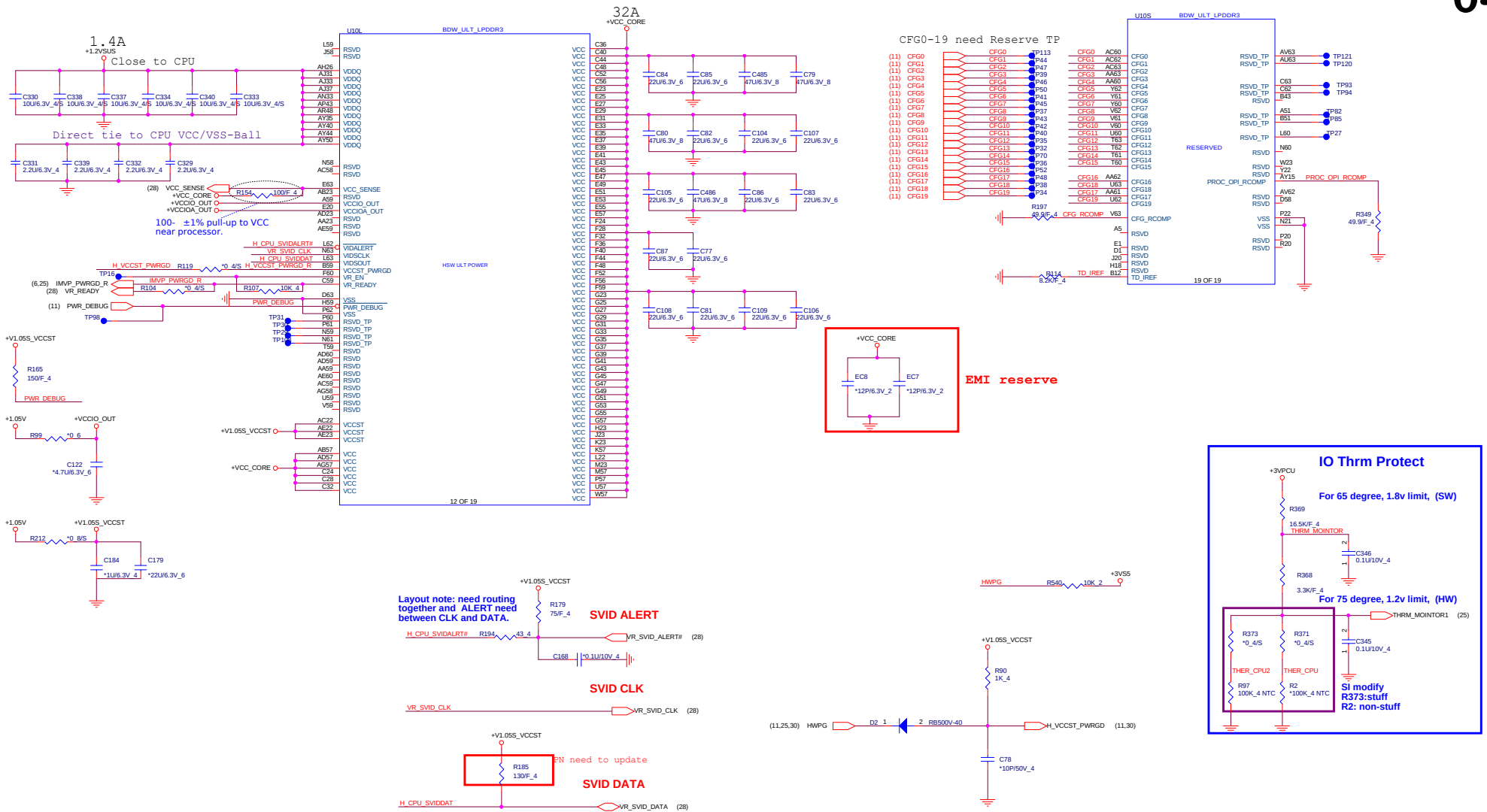
<http://www.repair1.ru/>



# 03







### Processor Strapping

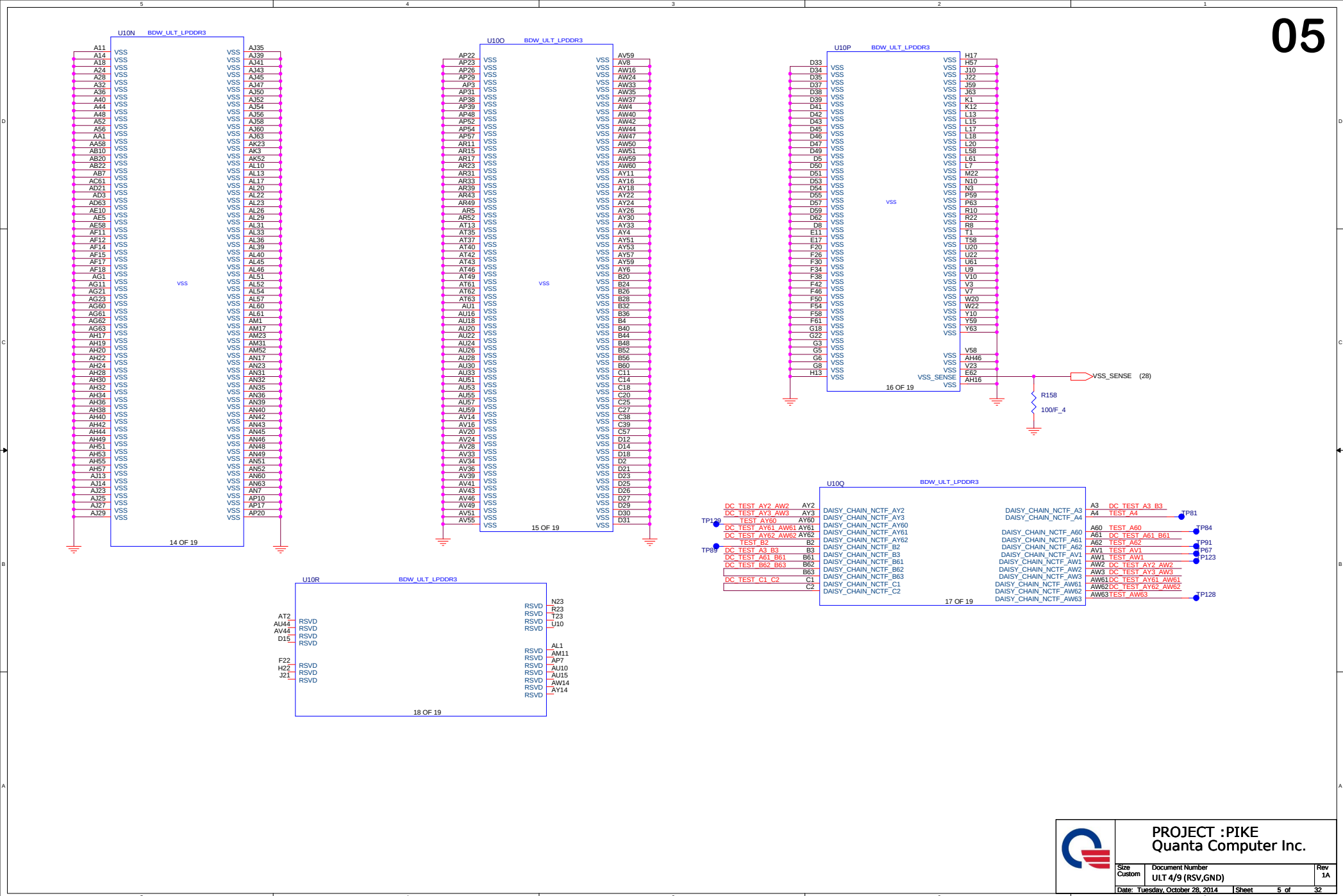
The CFG signals have a default value of '1' if not terminated on the board.

	1	0	Circuit
CFG3 (Physical Debug Enable) DFX Privacy	Disable:	Enable: Set DFX Enable in DFX interface MSR	CFG3 R199 *1K_4
CFG4 (DP Presence Strap)	Disable: No physical DP attached to eDP	Enable: An ext DP device is connected to eDP	CFG4 R314 1K_4

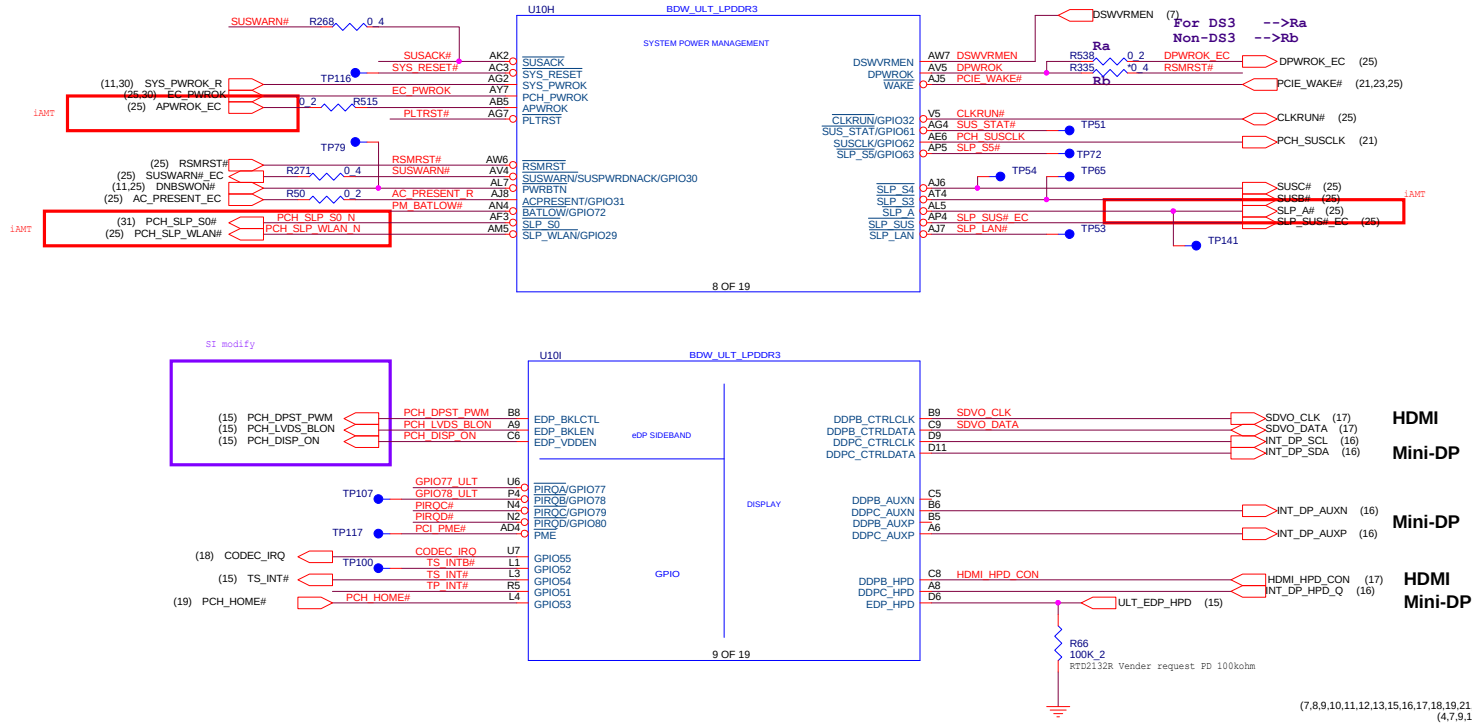
**PROJECT : PIKE**  
Quanta Computer Inc.

Size: Custom  
Document Number: 04 - ULT 3/9 (POWER-1)  
Date: Tuesday, October 28, 2014  
Sheet: 4 of 92









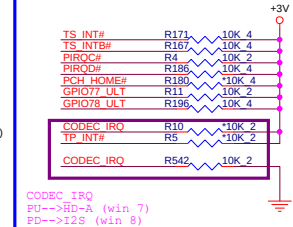
## PCH Pull-high/low(CLG)

## PLTRST#(CLG)

Check Q16 Rise/Fall time less than 100ns

## System PWR\_OK(CLG)

## PCI Pull-up (CLG)

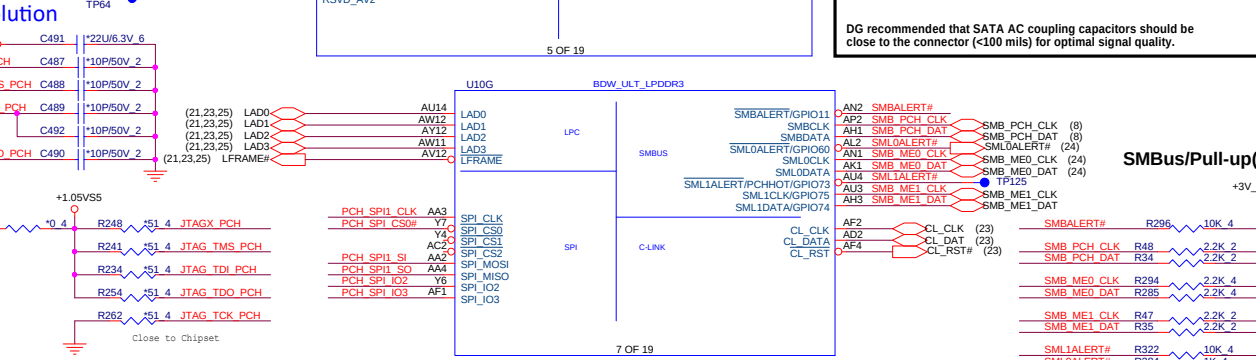
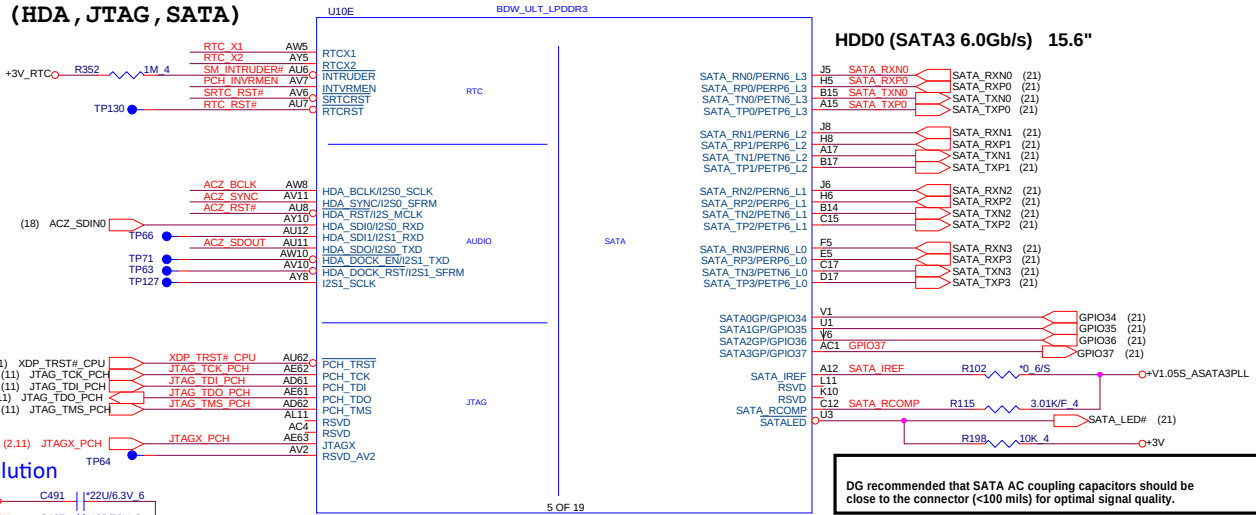


**PROJECT :PIKE**  
**Quanta Computer Inc.**

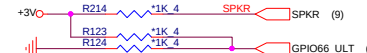
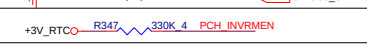



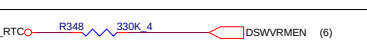
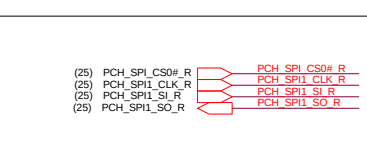
Size	Document Number	Rev
Custom	ULT 5/9(Power Manger)	1A
Date: Tuesday, October 28, 2014	Sheet 6 of 32	



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

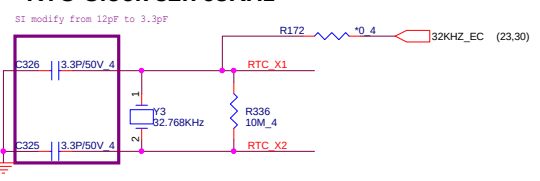


## PCH Strap Table

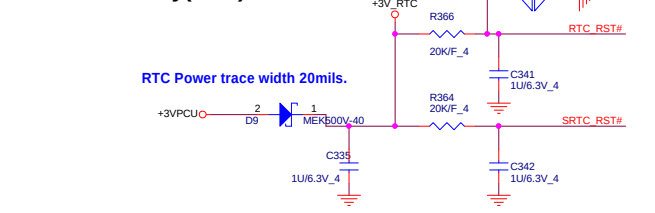
Pin Name	Strap description	Sampled	Configuration	Circuit						
SPKR	No reboot mode setting	PWROK	0 = Default (weak pull-down 20K) 1 = Setting to No-Reboot mode							
SDIO_D0 /GPIO66	Top-Block Swap	PWROK	0 = "top-block swap" mode 1 = Default (weak pull-up 20K)							
INTVRMEN	Integrated 1.05V VRM enable	ALWAYS	Should be always pull-up							
HDA_SDO /I2S0_TXD	Flash Descriptor Security Only for Interposer	PWROK	0 = Default (weak pull-down 20K) 1 = Can be Overriden							
GSPI0_MOSI /GPIO86	Boot BIOS Selection	PWROK	<table border="1"><thead><tr><th>GNT0#</th><th>Boot Location</th></tr></thead><tbody><tr><td>1</td><td>LPC</td></tr><tr><td>0</td><td>SPI(Default)</td></tr></tbody></table>	GNT0#	Boot Location	1	LPC	0	SPI(Default)	
GNT0#	Boot Location									
1	LPC									
0	SPI(Default)									
GPIO15	TLS Confidentiality	PWROK	0 = ME Crypto Transport Layer Security cipher suite with no confidentiality(Default) 1 = Intel ME Crypto TLS cipher suite with confidentiality							
DSWVRMEN	Deep Sx Well On-Die Voltage Regulator Enable	ALWAYS	Should be always pull-up							
										

DG recommended that SATA AC coupling capacitors should be close to the connector (<100 mils) for optimal signal quality.

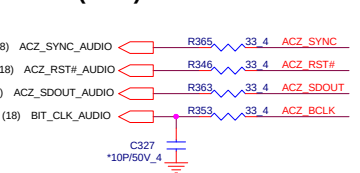
## RTC Clock 32.768KHz



## RTC Circuitry(RTC)



## HDA Bus(CLG)

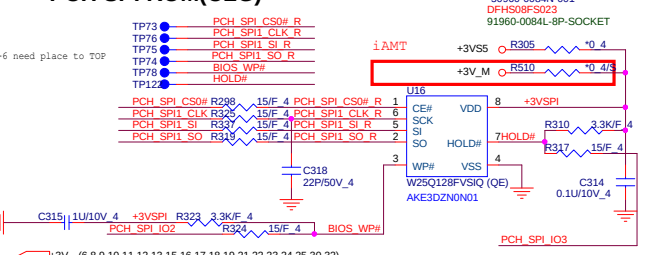


## GPIO Pull UP

Vender	Size	PIN
EON	8MB	AKE3EZ00Q01 (EN25QH64-104HIP (QE))
Winbond	8MB	AKE3EFP0N07 (W25Q64FVSIQ (QE))
Winbond	16MB	AKE3DZN0N01 (W25Q128FVSIQ (QE))
Socket		DFHS08FS023

## 4M SPI ROM Socket

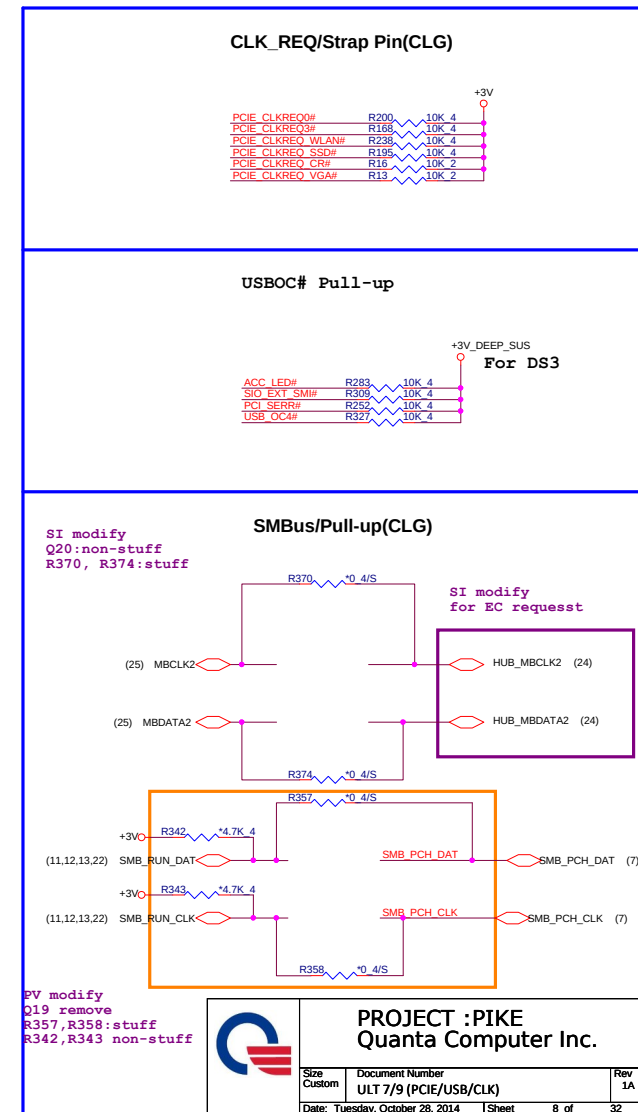
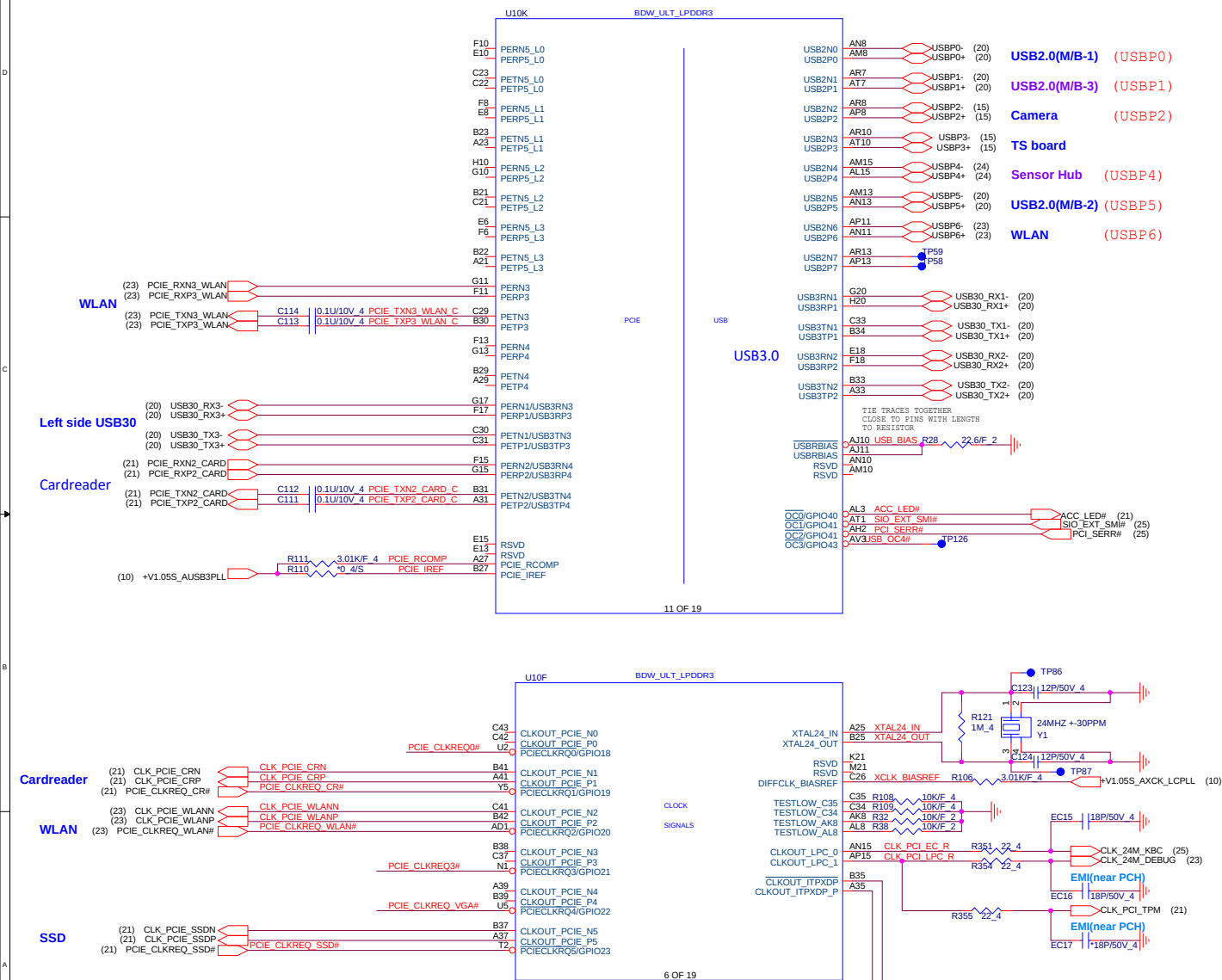
## PCH SPI ROM(CLG)



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**Quanta Computer Inc.**

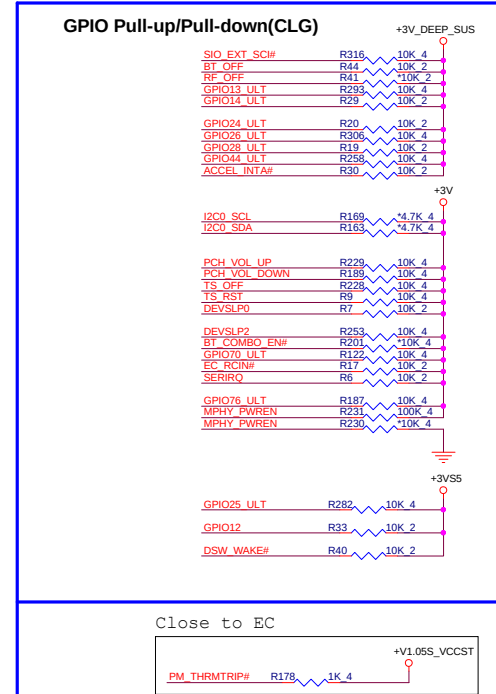
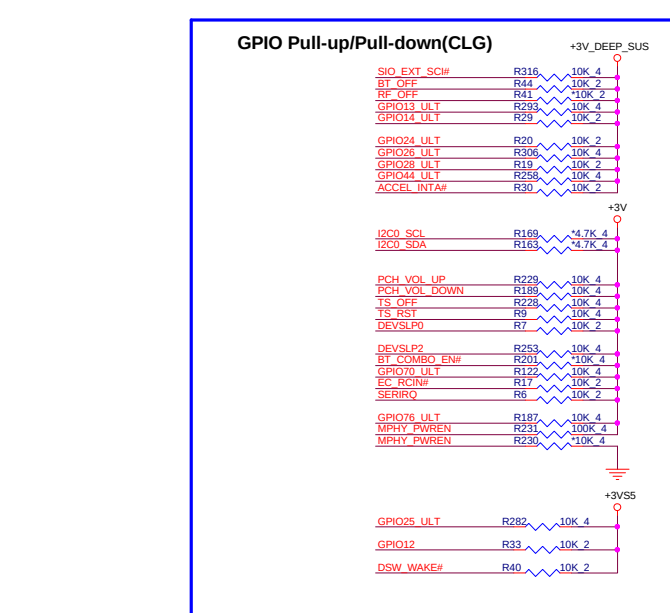
Size Custom	Document Number	Rev
	ULT 6/9(SATA/HDA)	1A
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## 09



The diagram shows a 10K resistor ladder network. It consists of a vertical chain of resistors on the left, each labeled with a resistor number (R23, R42, R37, R45, R22, R21) and a value (\*10K\_2). These resistors are connected to a horizontal bus. Each resistor is also labeled with a board ID (BOARD\_ID0 through BOARD\_ID5). The horizontal bus is connected to a 3V3\_DEEP\_SLEEP signal source. The resistors are connected to the bus in a way that they form a ladder network. The resistors are connected to the bus in a way that they form a ladder network. The resistors are connected to the bus in a way that they form a ladder network.

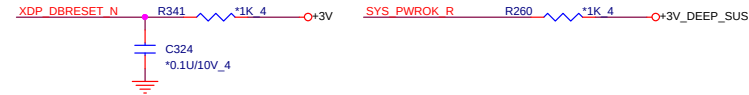
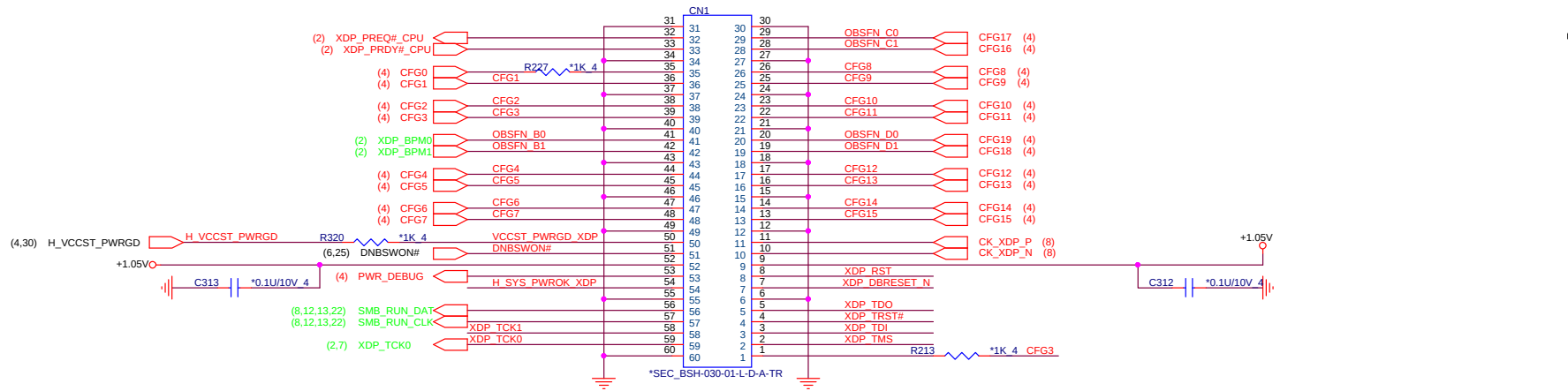
<http://www.repair1.ru/>



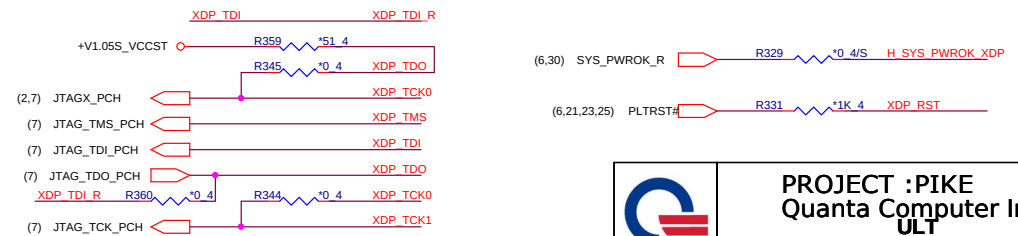
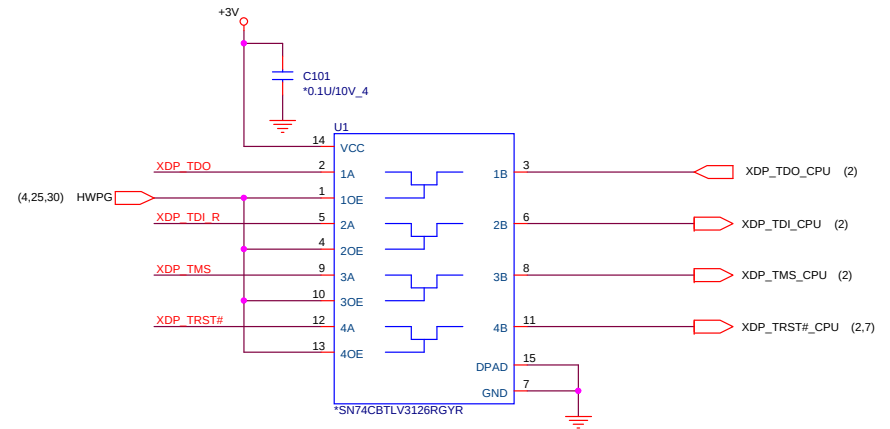
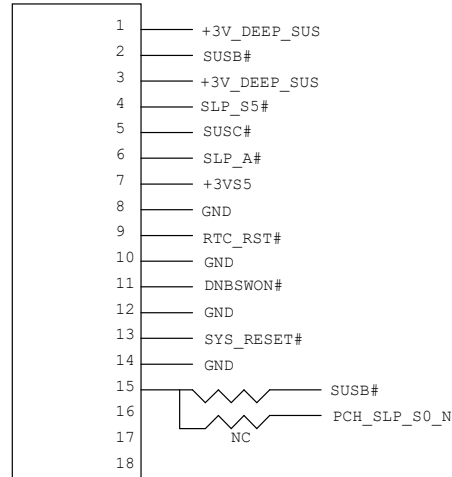


Size Custom	Document Number ULT 9/9(Power-2)	Rev 1A
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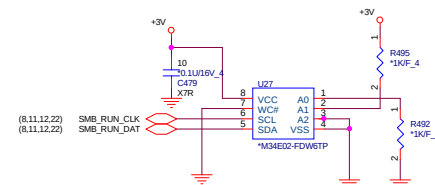
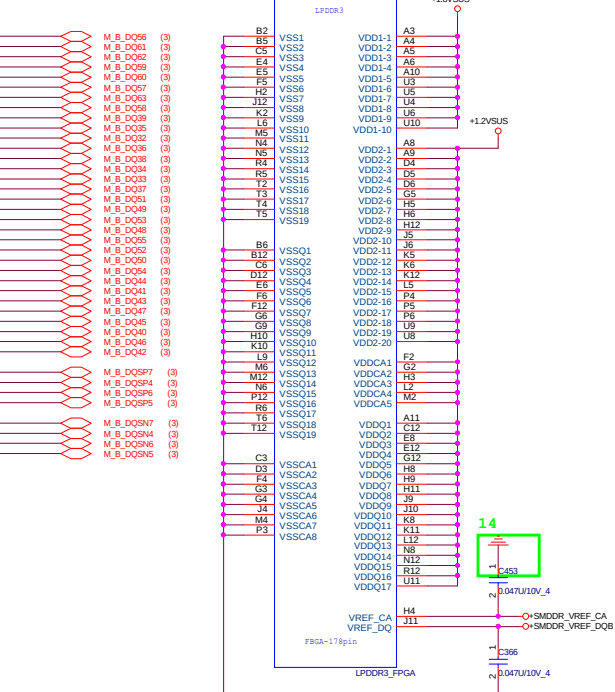
## APS



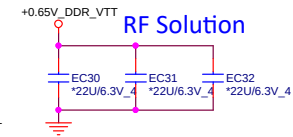
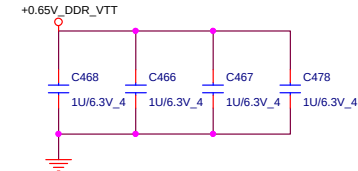
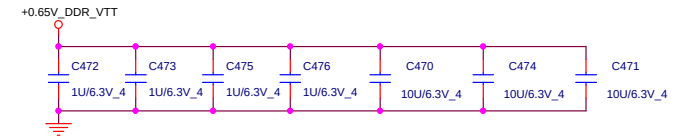
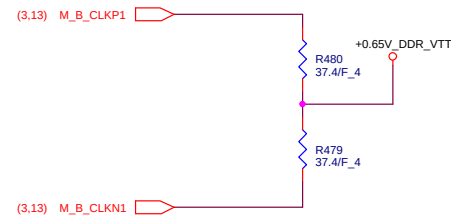
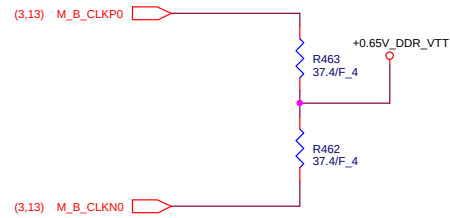
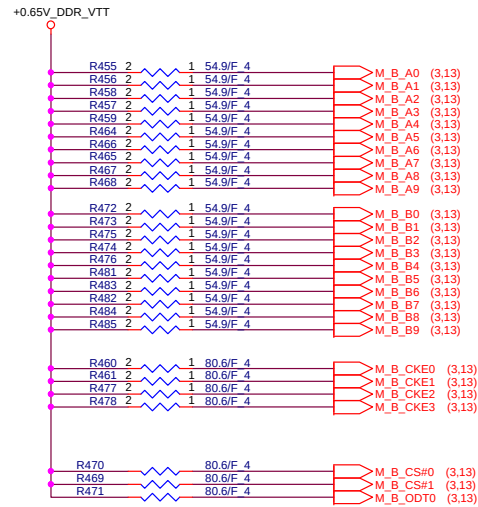
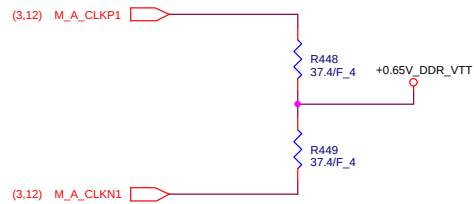
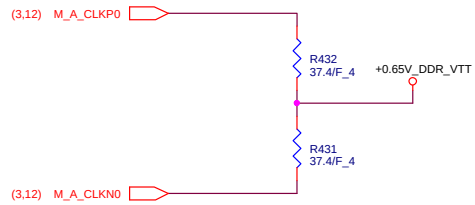
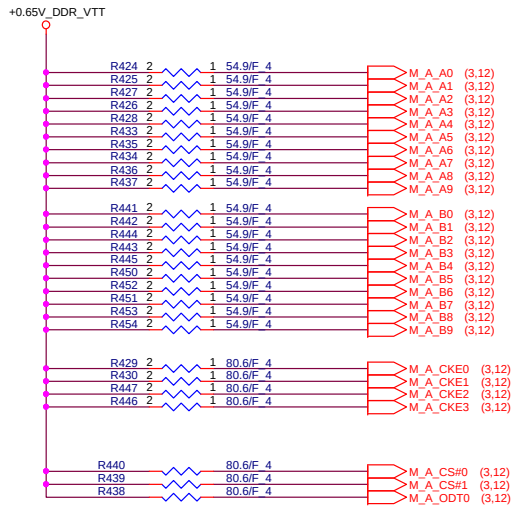






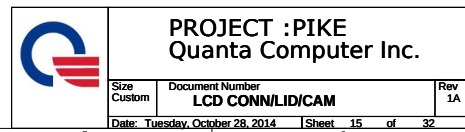









## 15

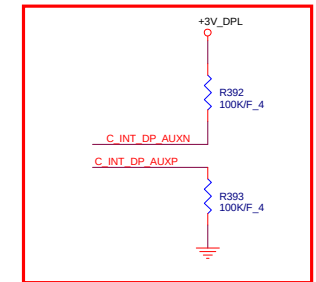
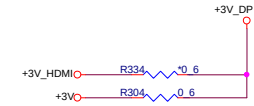
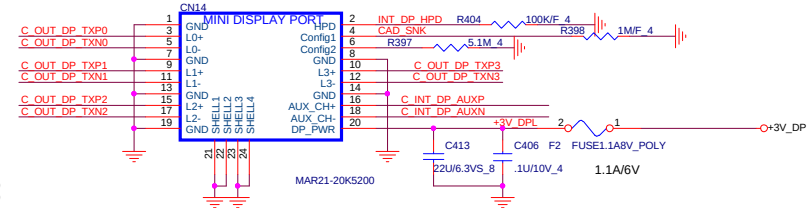
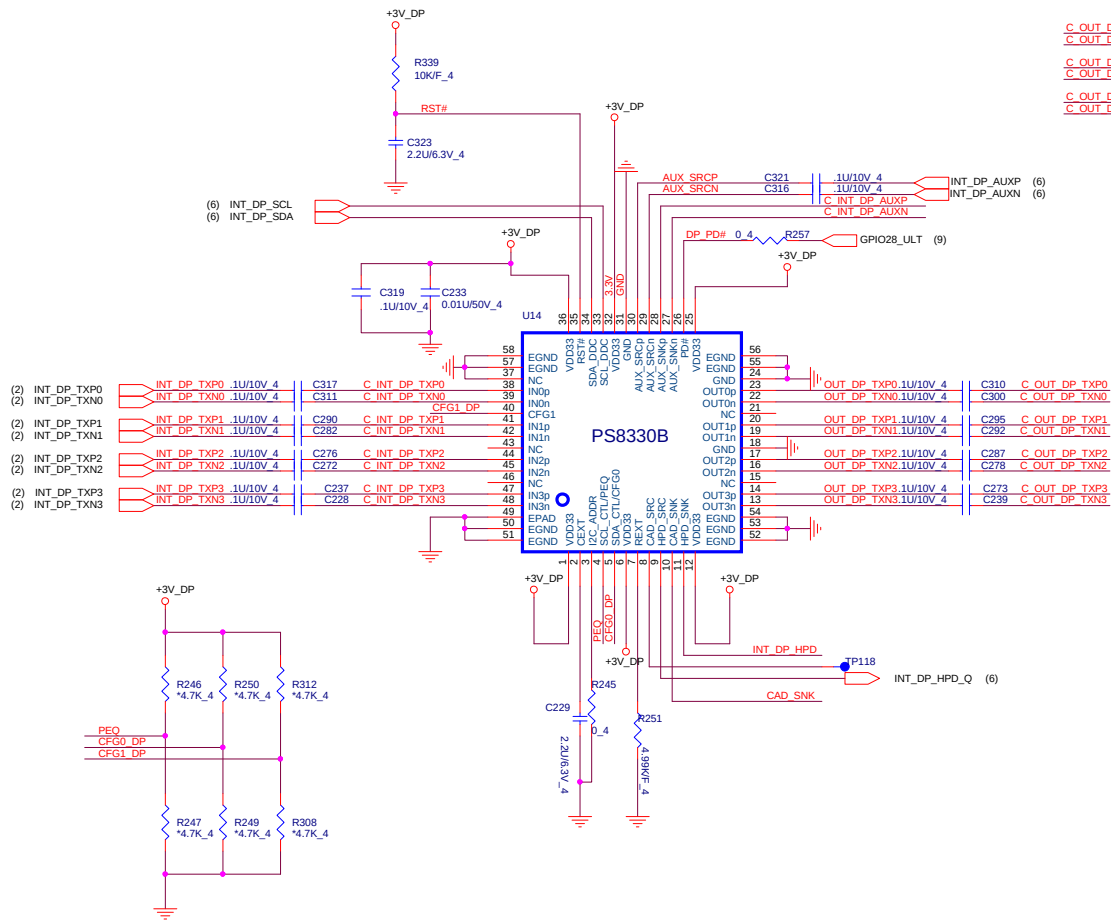




## Mini Display

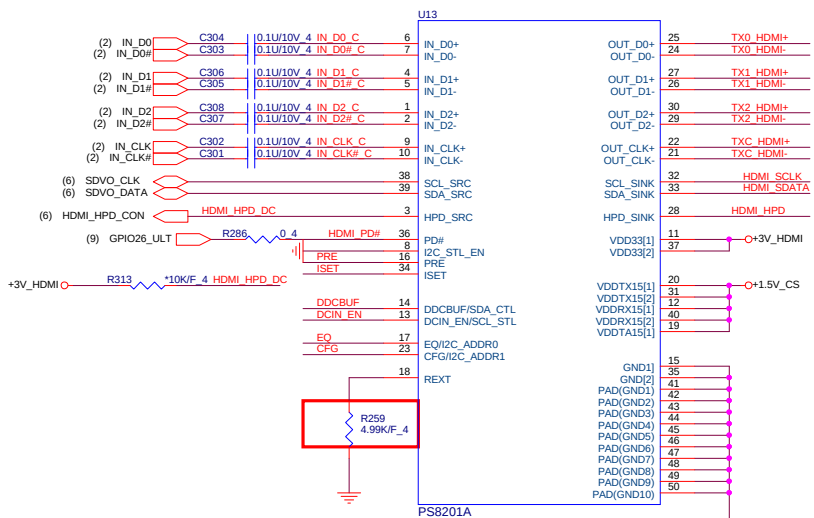


+5V (17,18,19,22,32)  
+3V (6,7,8,9,10,11,12,13,15,17,18,19,21,22,23,24,25,30,32)

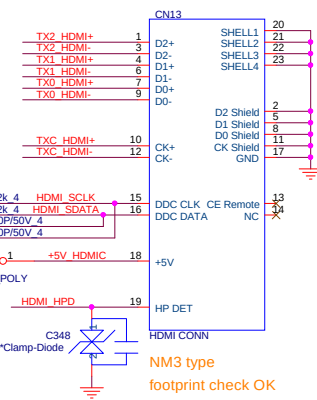
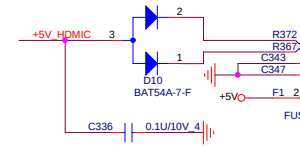
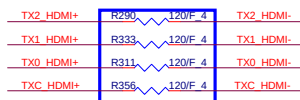


for intel recommend



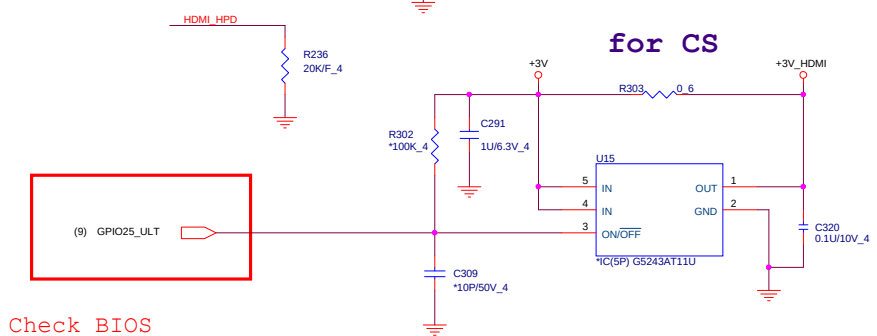


## EMI Solution

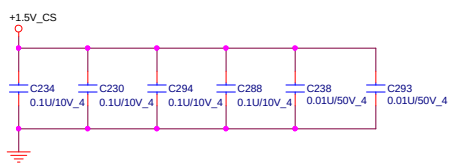
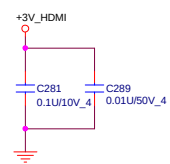
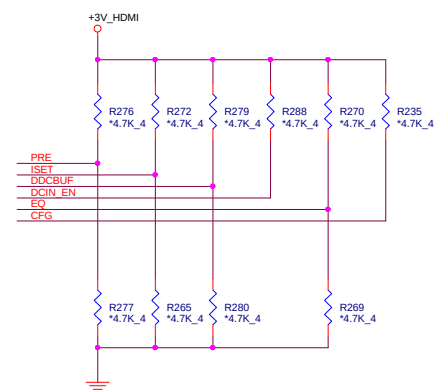
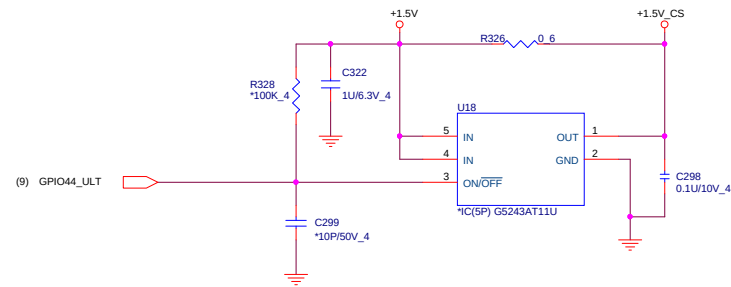


NM3 type  
footprint check OK

## for CS



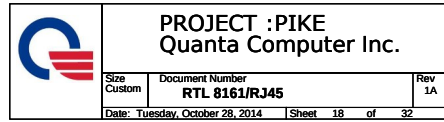
Check BIOS



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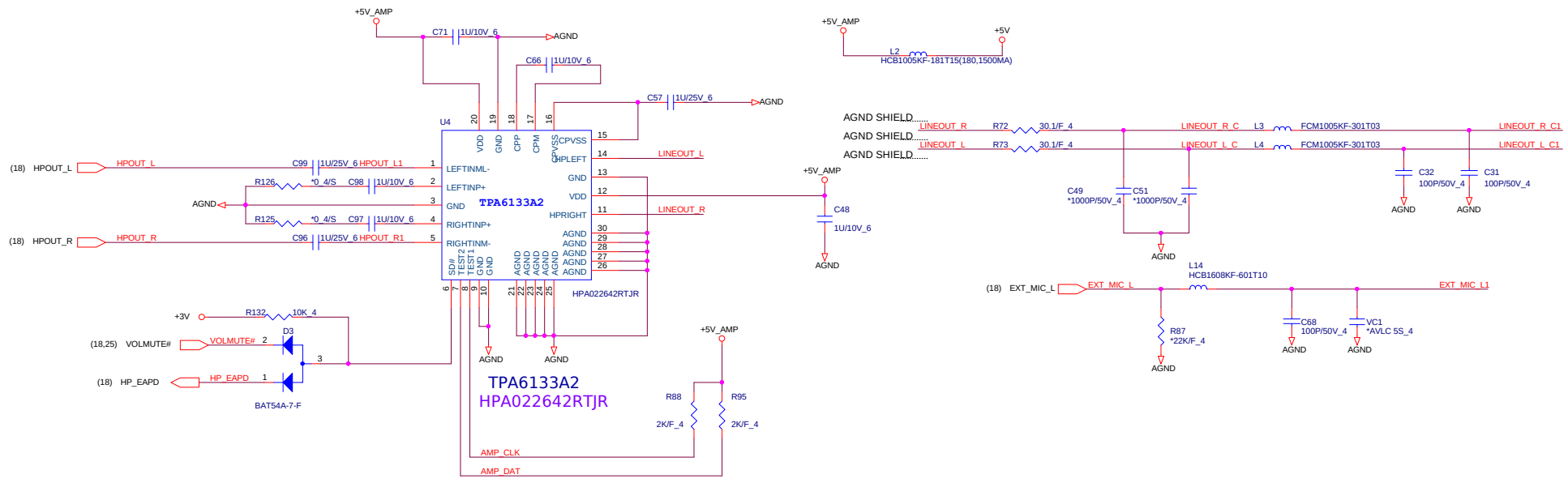
Size	Document Number	Rev
Custom	HDMI	1A
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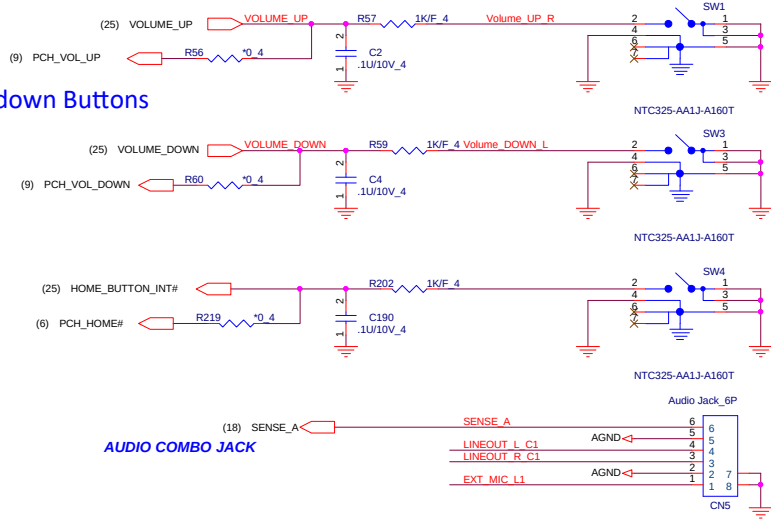


# Head Phone out

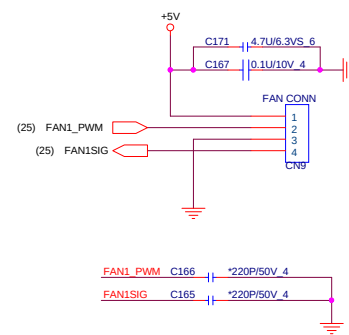



## Audio combo JACK & Volume up/down Button

### Volume up/down Buttons



## FAN





**PROJECT :PIKE**  
**Quanta Computer Inc.**

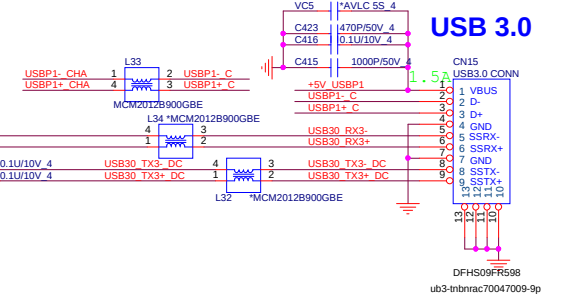
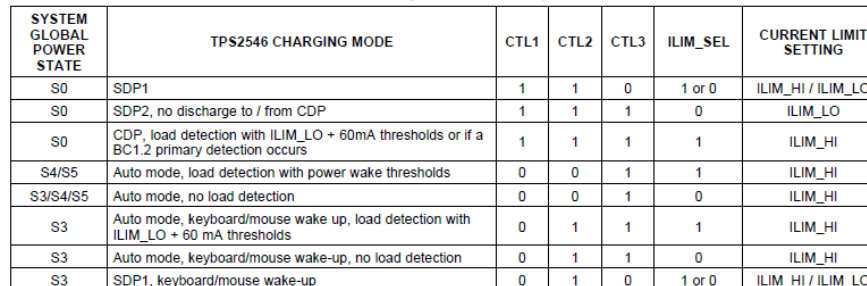
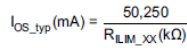
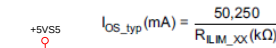
(6,7,8,9,10,11,12,13,15,16,17,18,21,22,23,24,25,30,32) +3V  
(17,18,22,32) +5V  
(20,28,29,31,32) +5VSS

Size Custom	Document Number <b>Audio/AMP HPA022642RTJR</b>	Rev 1A
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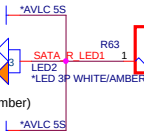


Diagram illustrating the pull-up resistors for the USB states:

- R554: 10K 4, connected to USB\_STATE1
- R555: 10K 4, connected to USB\_STATE2
- R556: 10K 4, connected to USB\_STATE3
- R557: \*10K 4, connected to MAINON



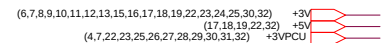




## 1



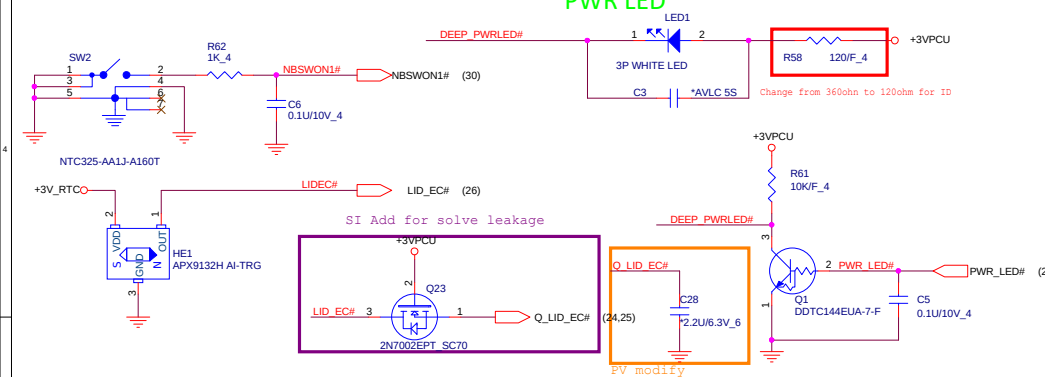
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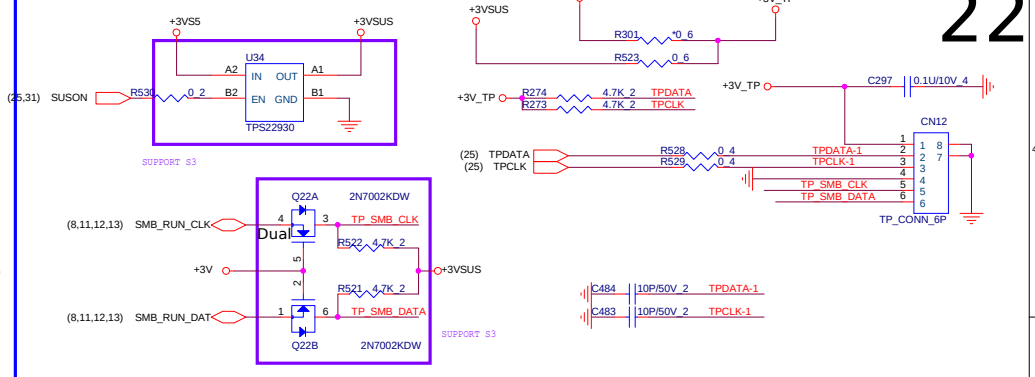
Size Custom	Document Number HDD/mSATA/FAN/LED	Rev 1A
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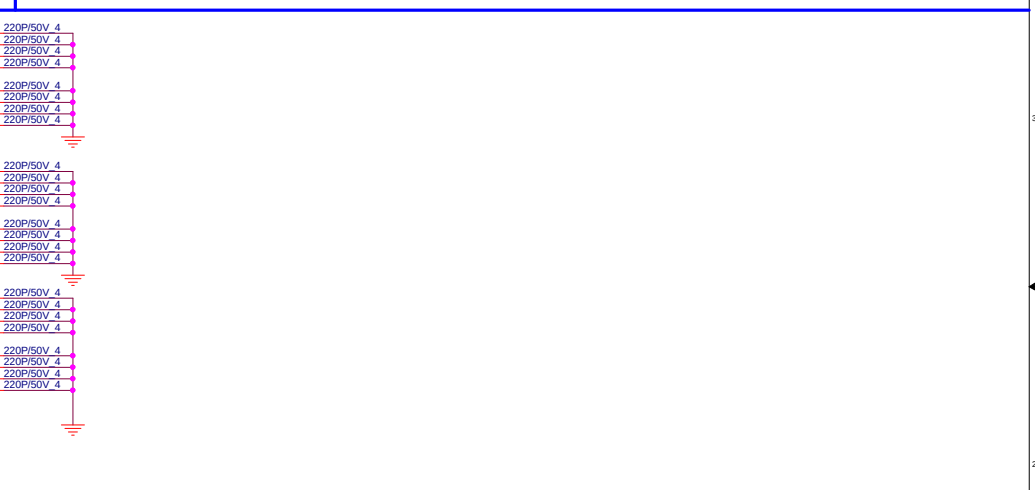
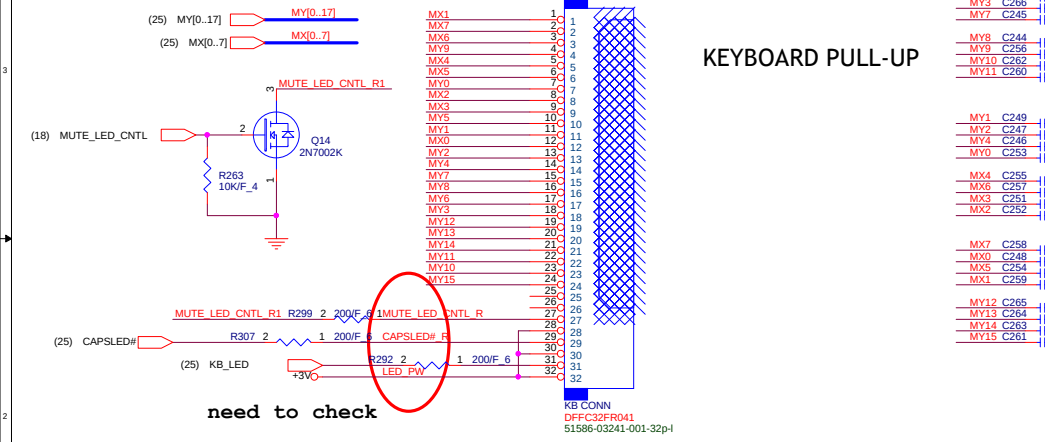
# Power Button



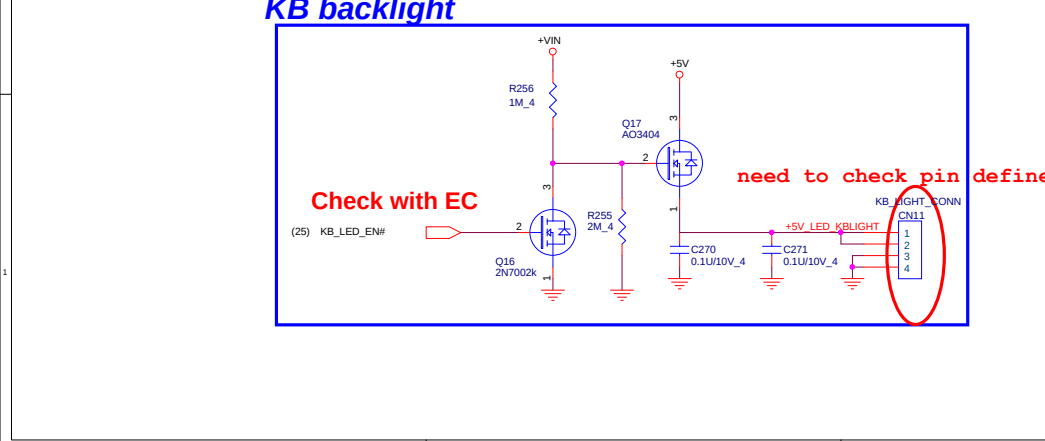
# Touch Pad Connector



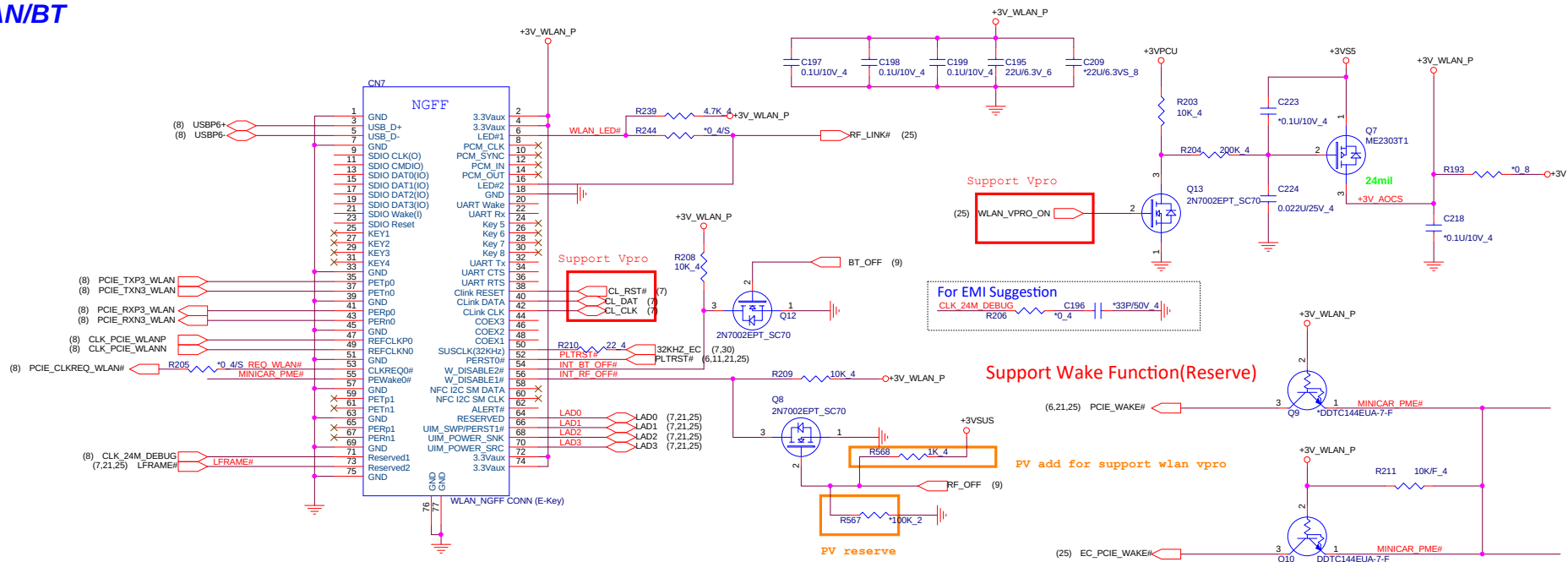
# KEYBOARD Con.



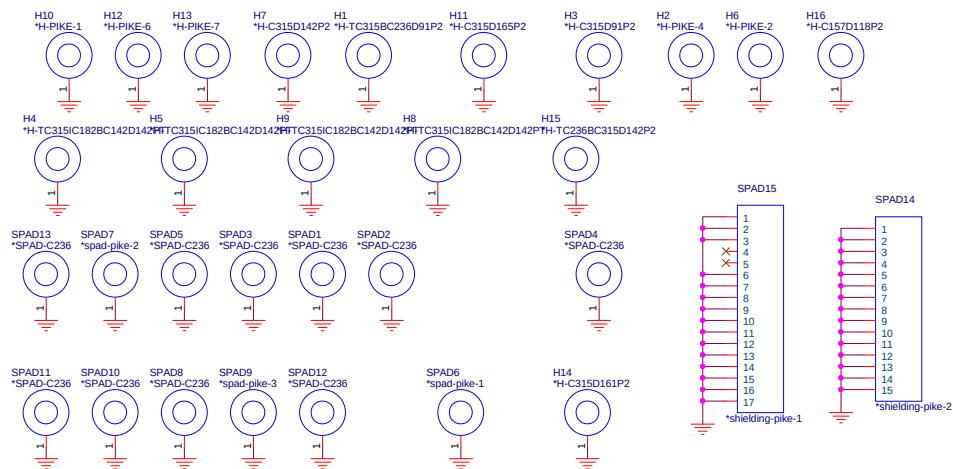
# KB backlight



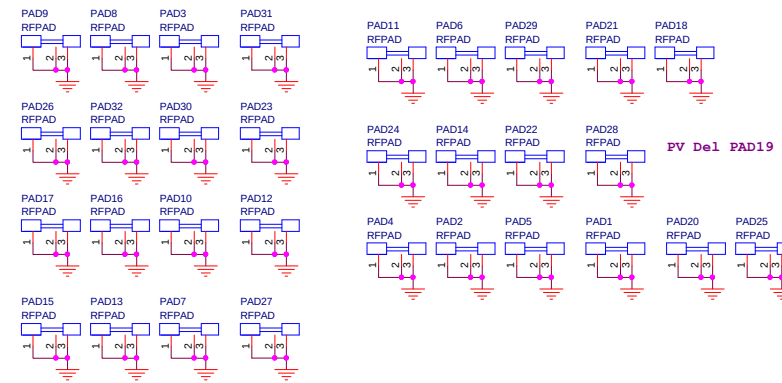




## Hole



## GND GUARD



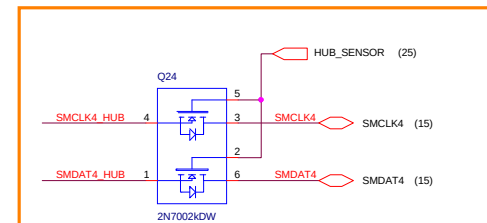
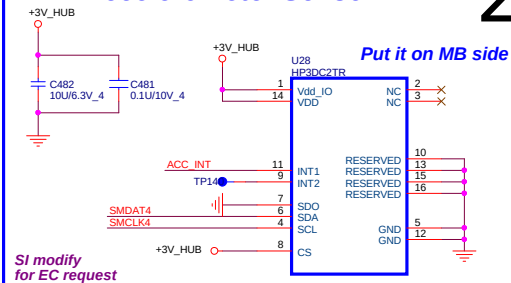
(6,7,8,9,10,11) +3V\_DEEP\_SUS  
(6,7,8,9,10,11,12,13,15,16,17,18,19,21,22,24,25,30,32) +3V  
(17,18,19,22,32) +5V  
(4,7,22,25,26,27,28,29,30,31,32) +3VPCU



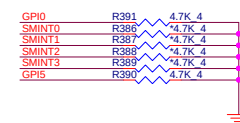
PROJECT :Y61  
Quanta Computer Inc.

Size	Document Number	Rev
Custom	WLAN/G-Sensor/G-CLK/TS	1A
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**PV add for EC request**



External crystal is must be item  
when USB func. is used !

32.768kHz clock lines:

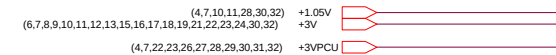
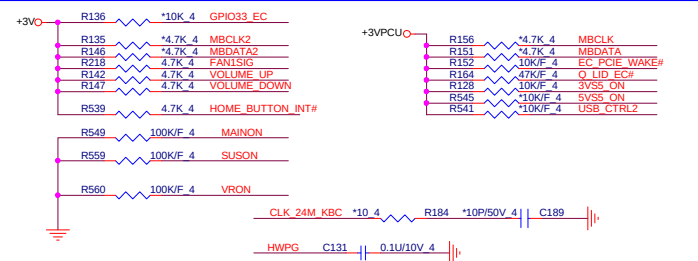
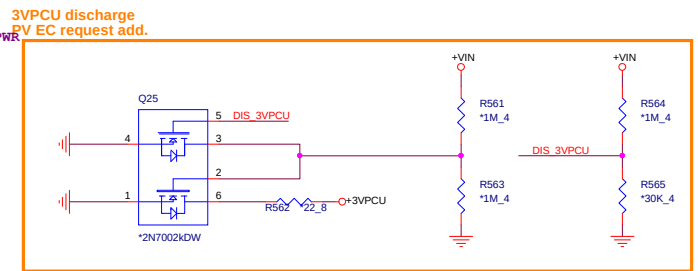
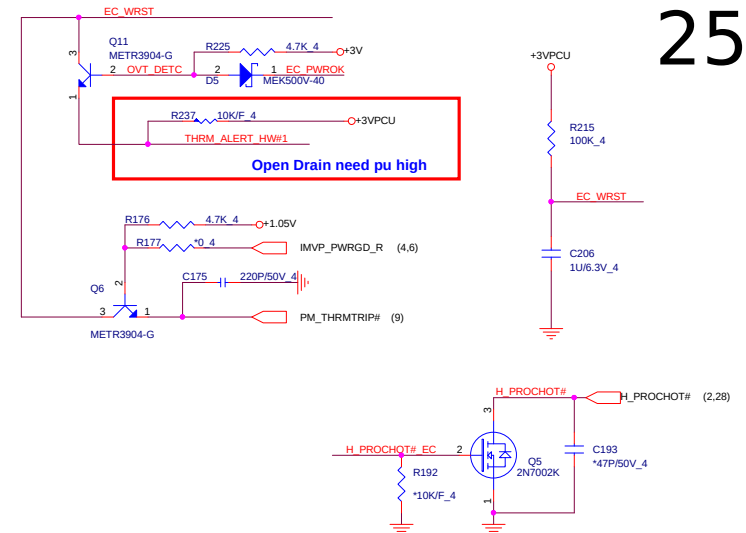
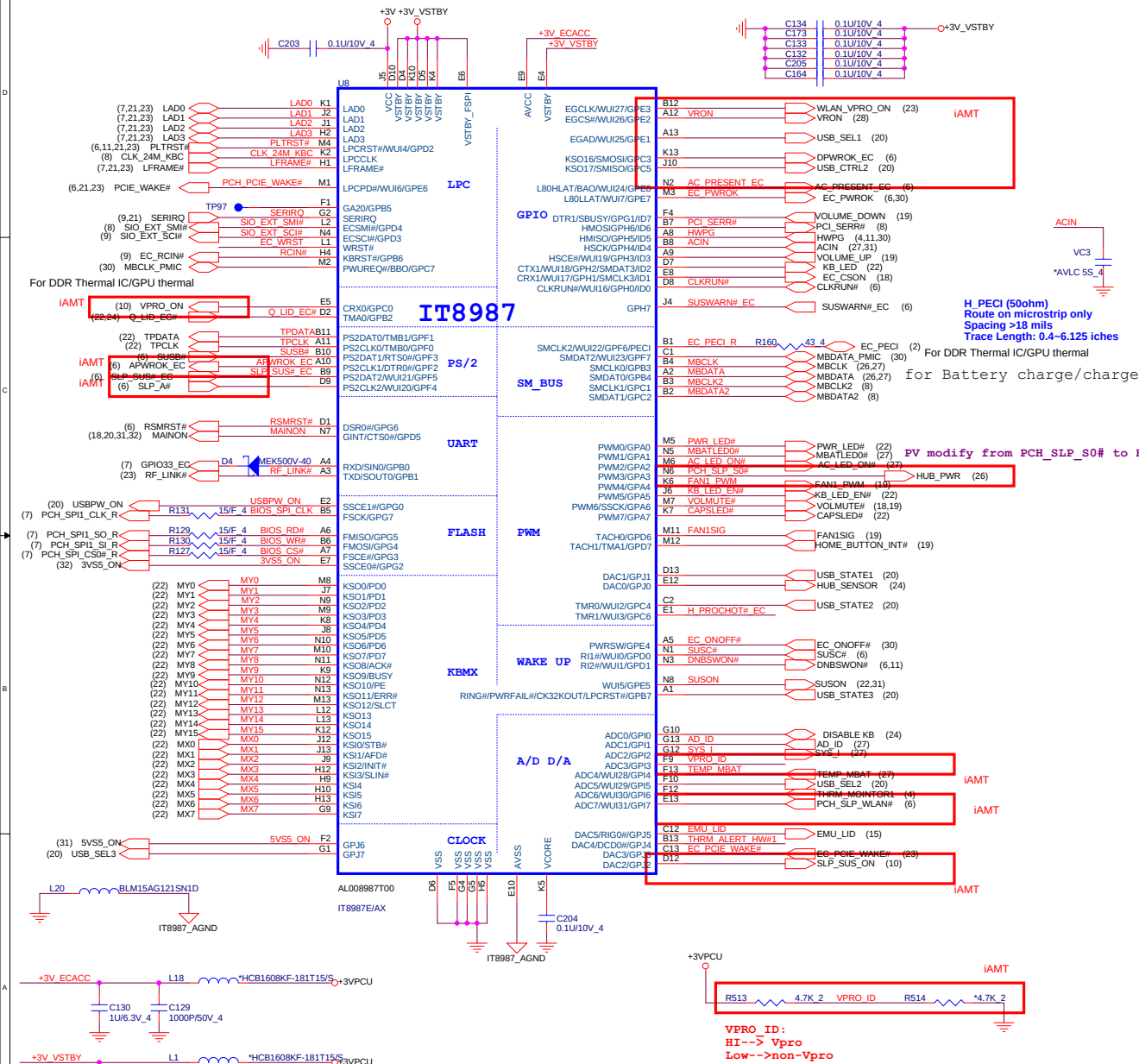
- If possible, please avoid using any through-hole.
- Please make the trace length short, and the trace width wide enough.
- The spacing to the closest neighbor should be wide enough.



PROJECT :PIKE  
Quanta Computer Inc.

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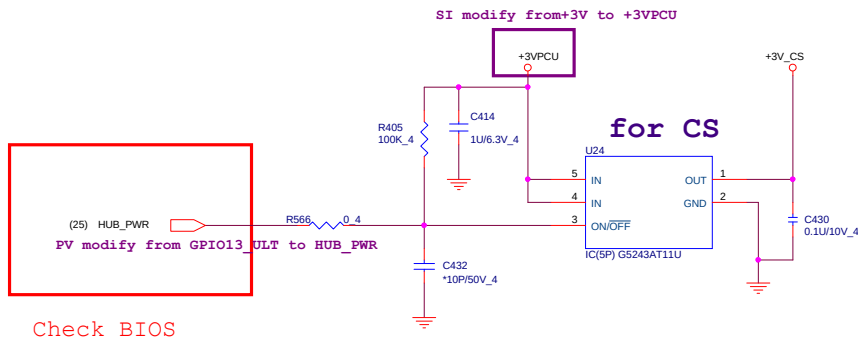




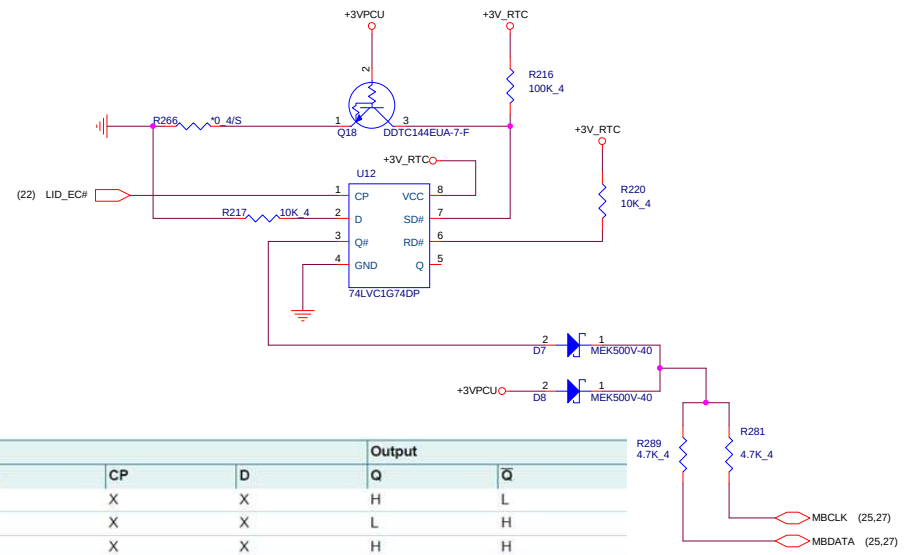
PROJECT :PIKE  
Quanta Computer Inc.

Size Custom	Document Number <b>IT8987E/AX</b>	Rev 1A
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Check BIOS



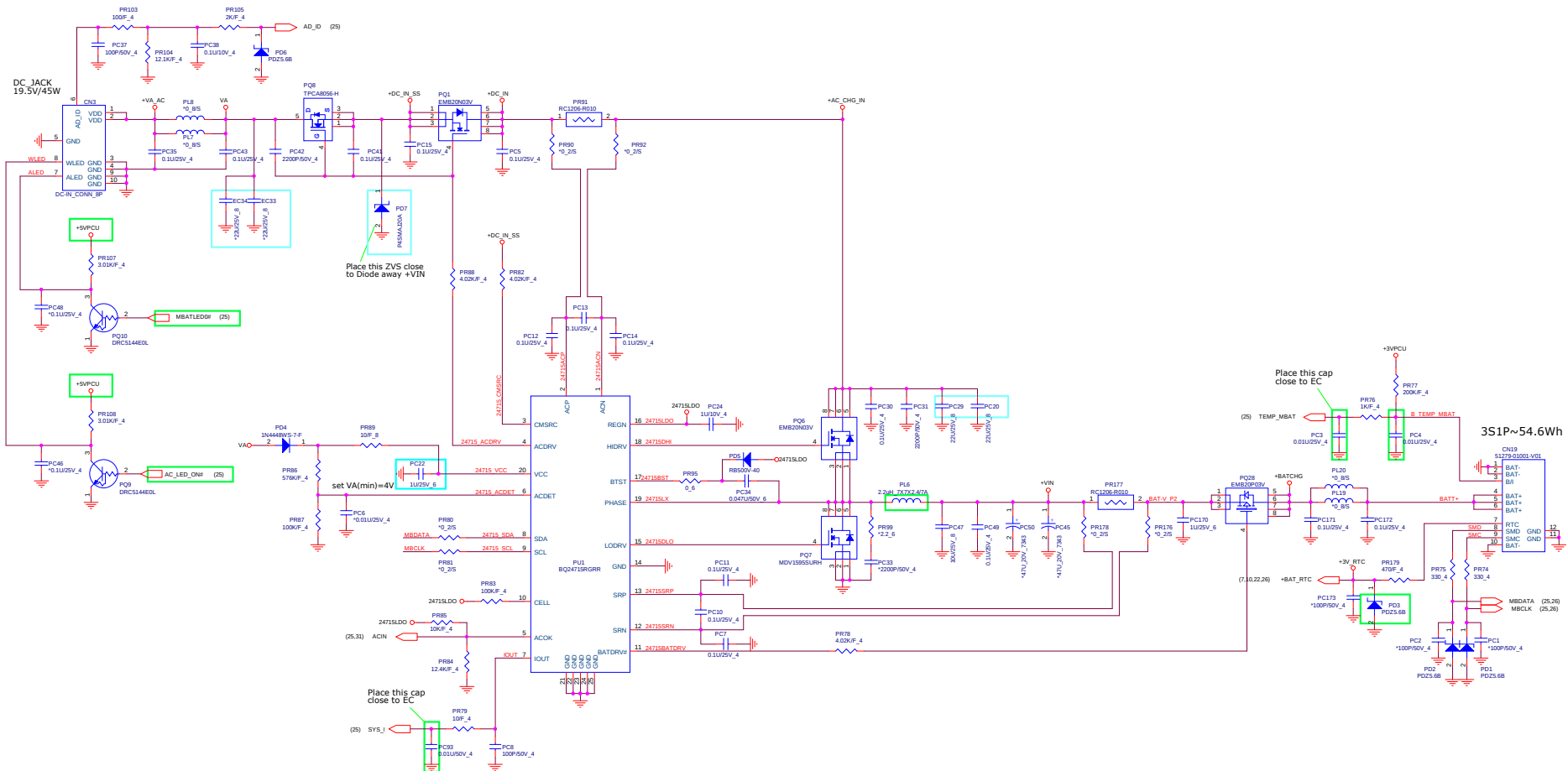
Input				Output	
SD	RD	CP	D	Q	Q̄
L	H	X	X	H	L
H	L	X	X	L	H
L	L	X	X	H	H

[1] H = HIGH voltage level;  
L = LOW voltage level;  
X = don't care.

Input				Output	
SD	RD	CP	D	Q <sub>n+1</sub>	Q̄ <sub>n+1</sub>
H	H	↑	L	L	H
H	H	↑	H	H	L

[1] H = HIGH voltage level;  
L = LOW voltage level;  
↑ = LOW-to-HIGH CP transition;  
Q<sub>n+1</sub> = state after the next LOW-to-HIGH CP transition.

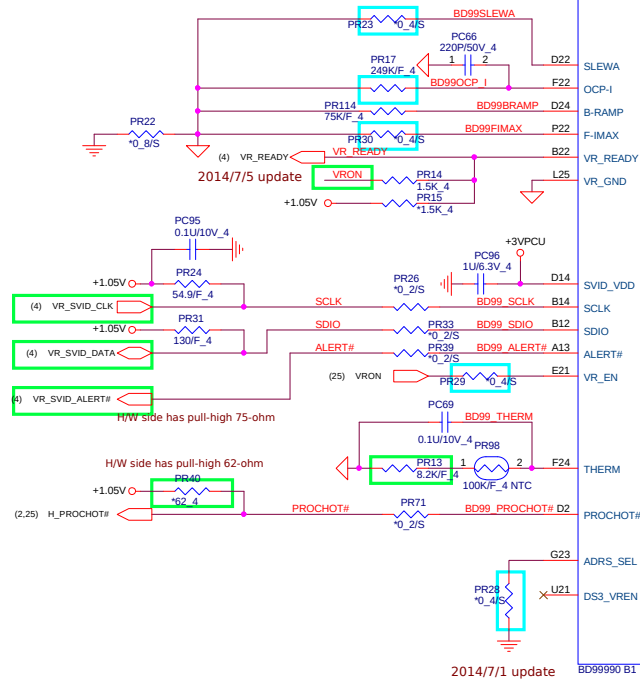




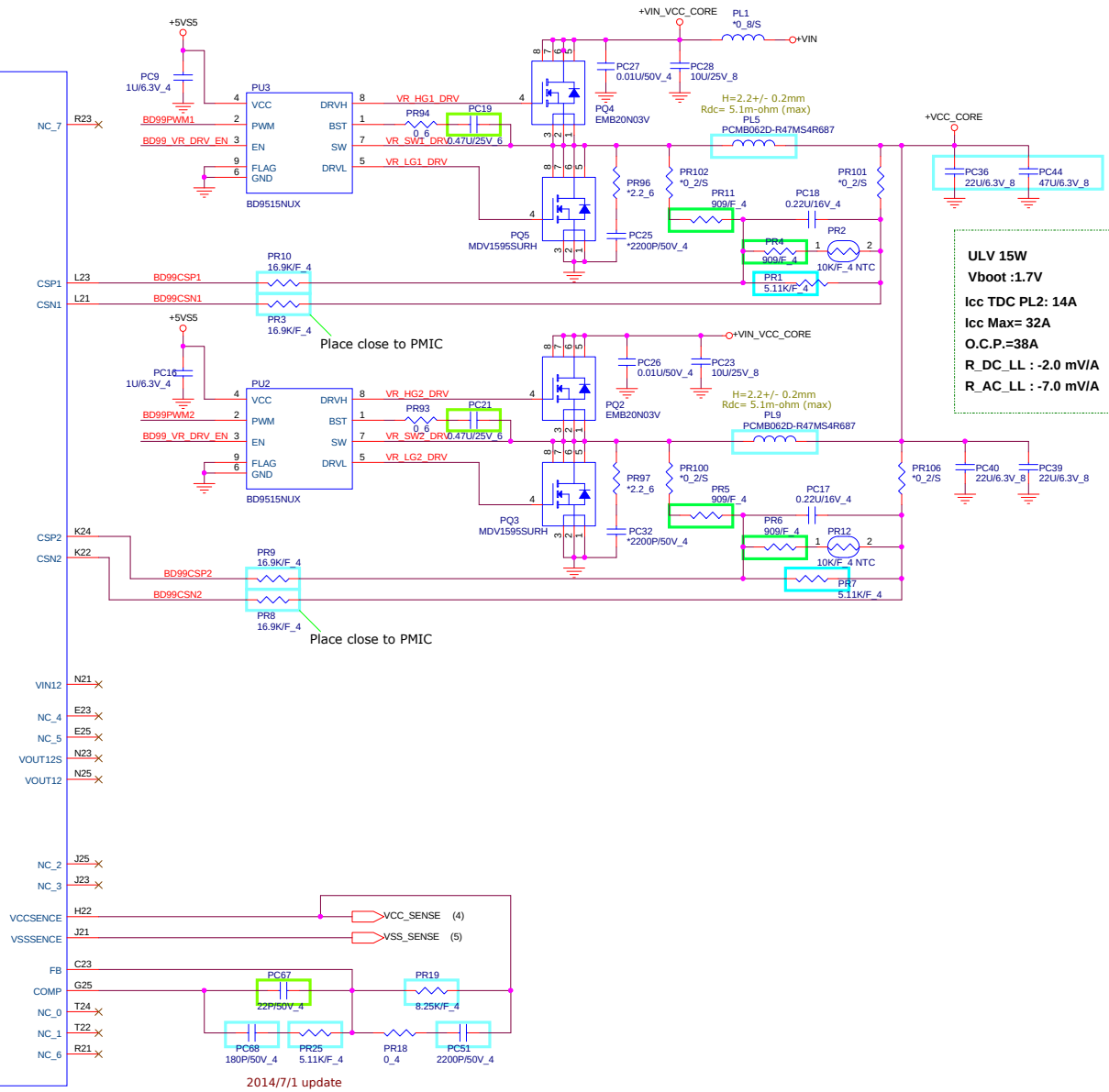



(10,15,18,22,25,27,29,31,32) +VIN  
(4,7,22,23,25,26,27,29,30,31,32) +3VPCU  
(4) +VCC\_CORE  
+3VSUS  
(4,6,7,9,10,22,23,30,31,32) +5VSS  
(20,29,31,32) +5VSS  
(17,18,19,22,32) +5V  
(4,7,10,11,25,30,32) +1.05V  
(12,13,18,29,30) +1.8VSUS

PU4-1  
NC\_7  
R23  
BD99PWM1 U25  
PWM1  
BD99 VR\_DRV\_EN C25  
VR\_DRV\_EN  
BD99PWM2 V24  
PWM2



Unit of BOM size is millimeter.  
0603 inch = 1608 mm  
0402 inch = 1005 mm



	PROJECT : Peach Quanta Computer Inc.		
	Size Custom	Document Number Charger(BQ24715)	Rev 1A
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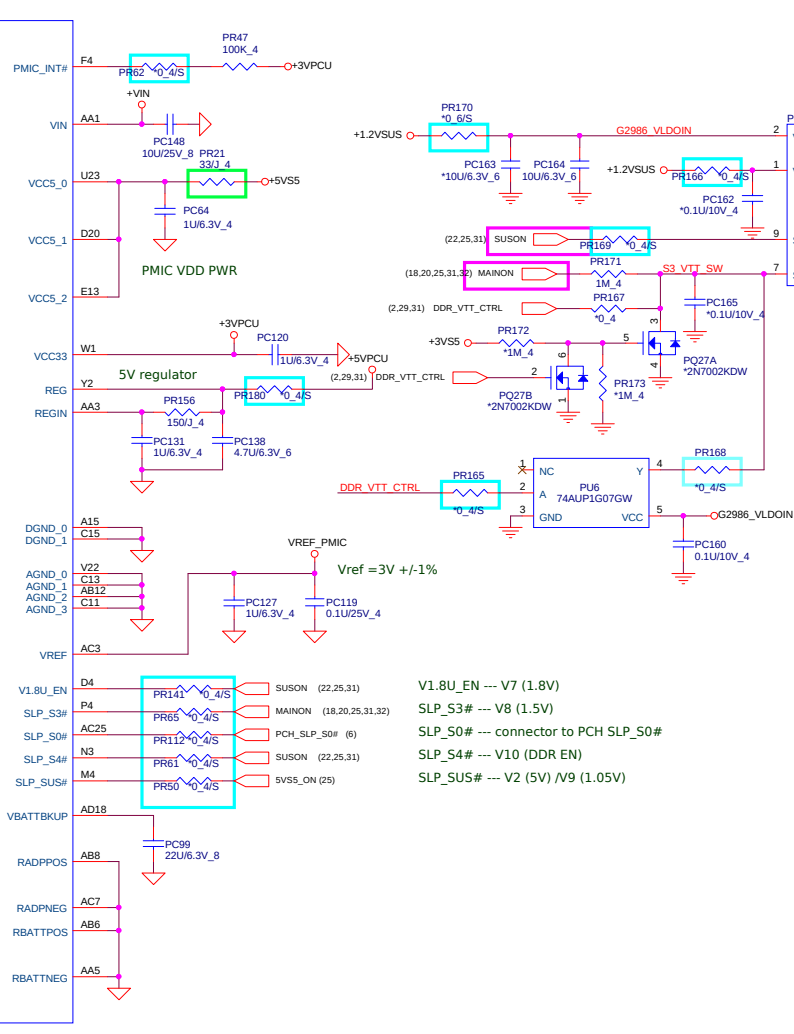




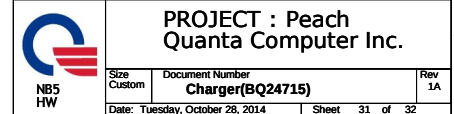








(2,4,12,13,29) +1.2VSUS  
(4,7,22,23,25,26,27,28,29,30,32) +3VPCU  
(6,7,8,9,10,11,12,13,15,16,17,18,19,21,22,23,24,25,30,32) +3V  
+3VSUS  
(4,6,7,9,10,22,23,30,32) +3VS5  
(29,31) +0.65V\_DDR\_VTT\_FB  
(14) +0.65V\_DDR\_VTT

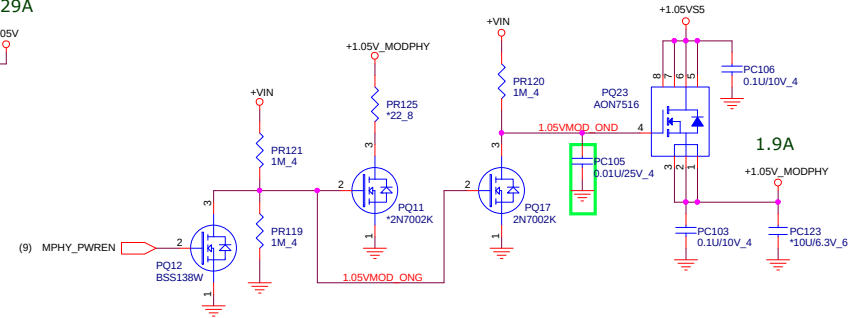
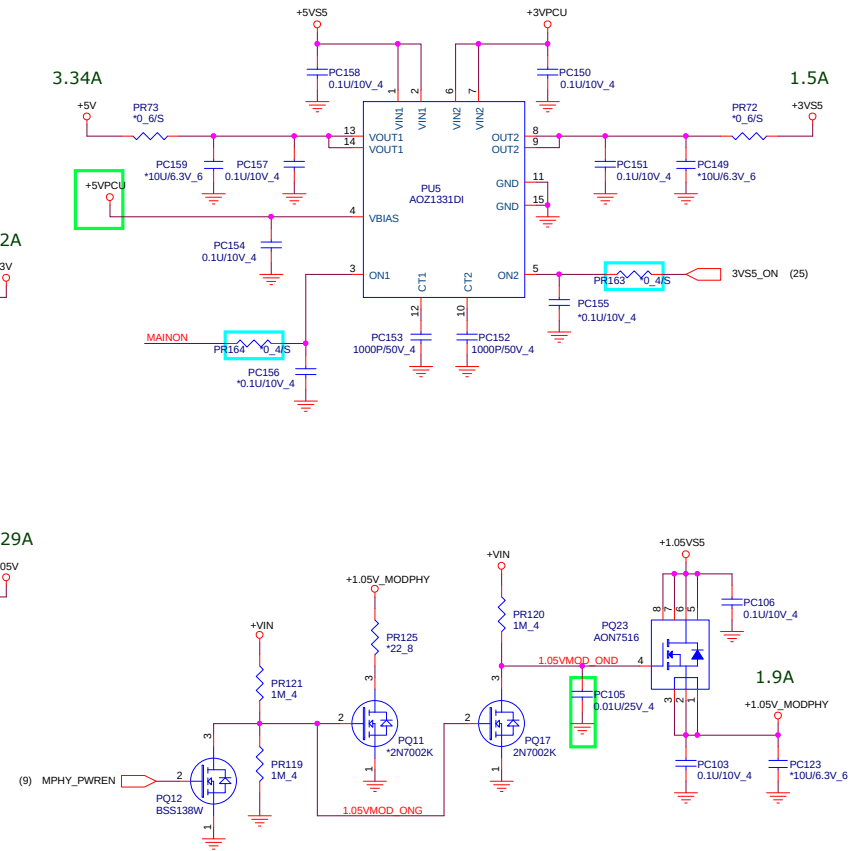
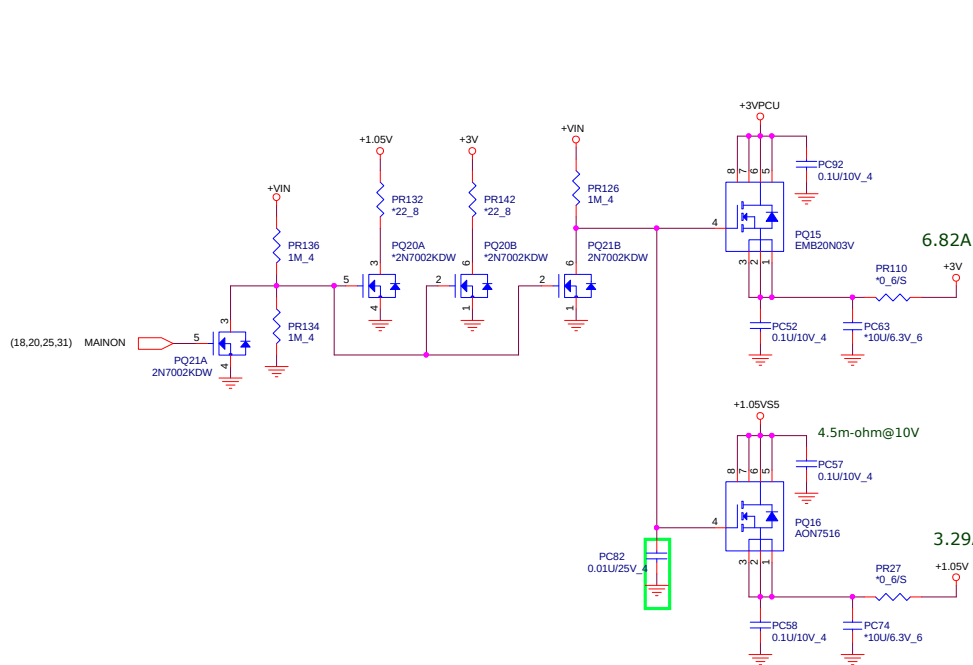





# Load switch

35

(10,15,18,22,25,27,28,29,31)	+VIN
(4,7,22,23,25,26,27,28,29,30,31)	+3VPCU
(6,7,8,9,10,11,12,13,15,16,17,18,19,21,22,23,24,25,30)	+3V
	+3VSUS
(4,6,7,9,10,22,23,30,31)	+3VS5
(20,28,29,31)	+5VS5
(17,18,19,22)	+5V
(4,7,10,11,25,28,30)	+1.05V
(10)	+1.05V_MODPHY



	PROJECT : W03		
	Quanta Computer Inc.		
	Size	Document Number	Rev
	Custom	Load switch	1A
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