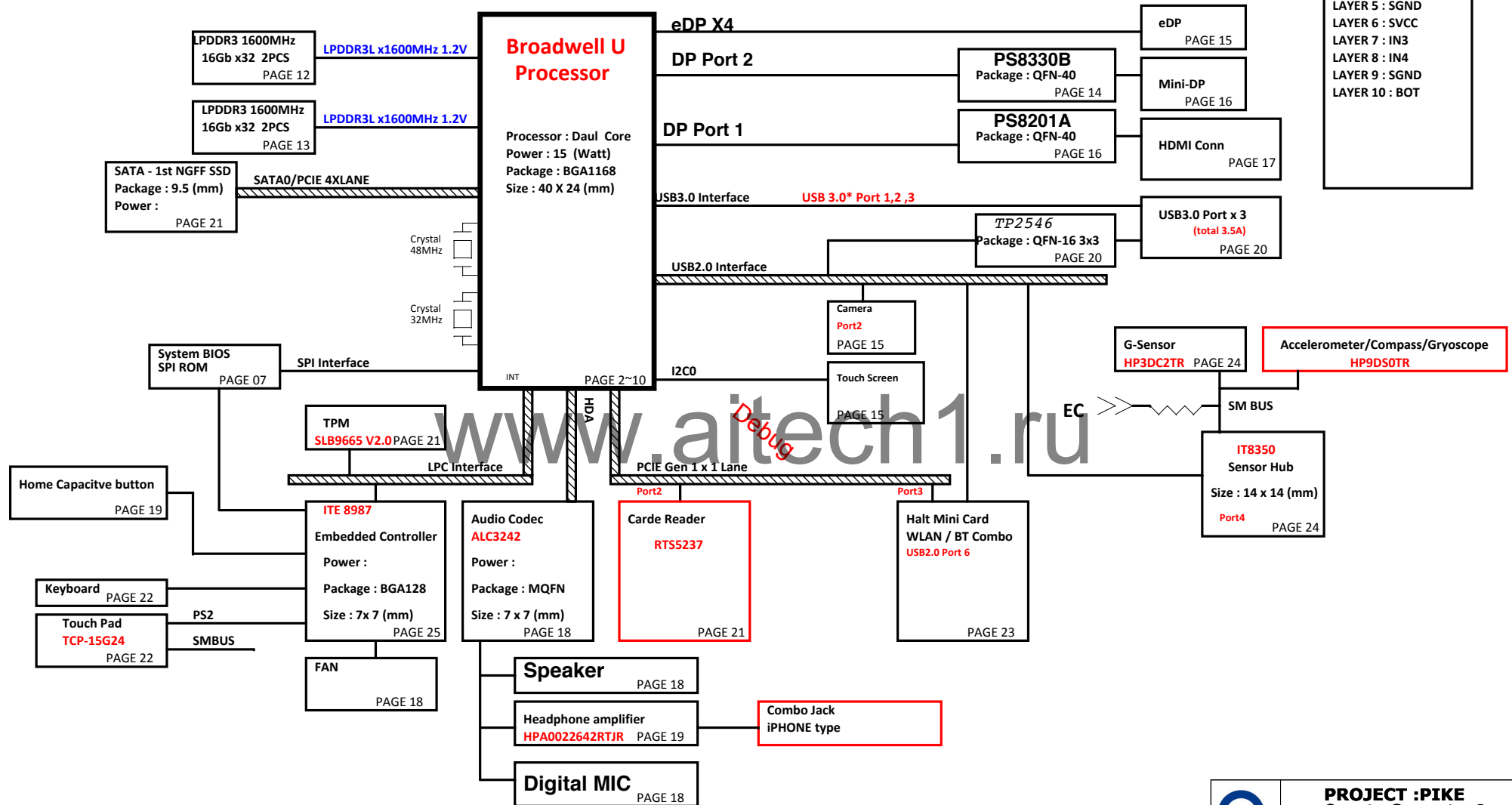
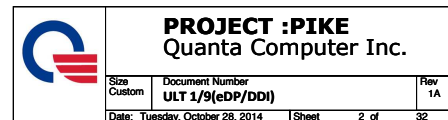


# 13" Pike Intel Crescent Bay ULT Platform Block Diagram

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

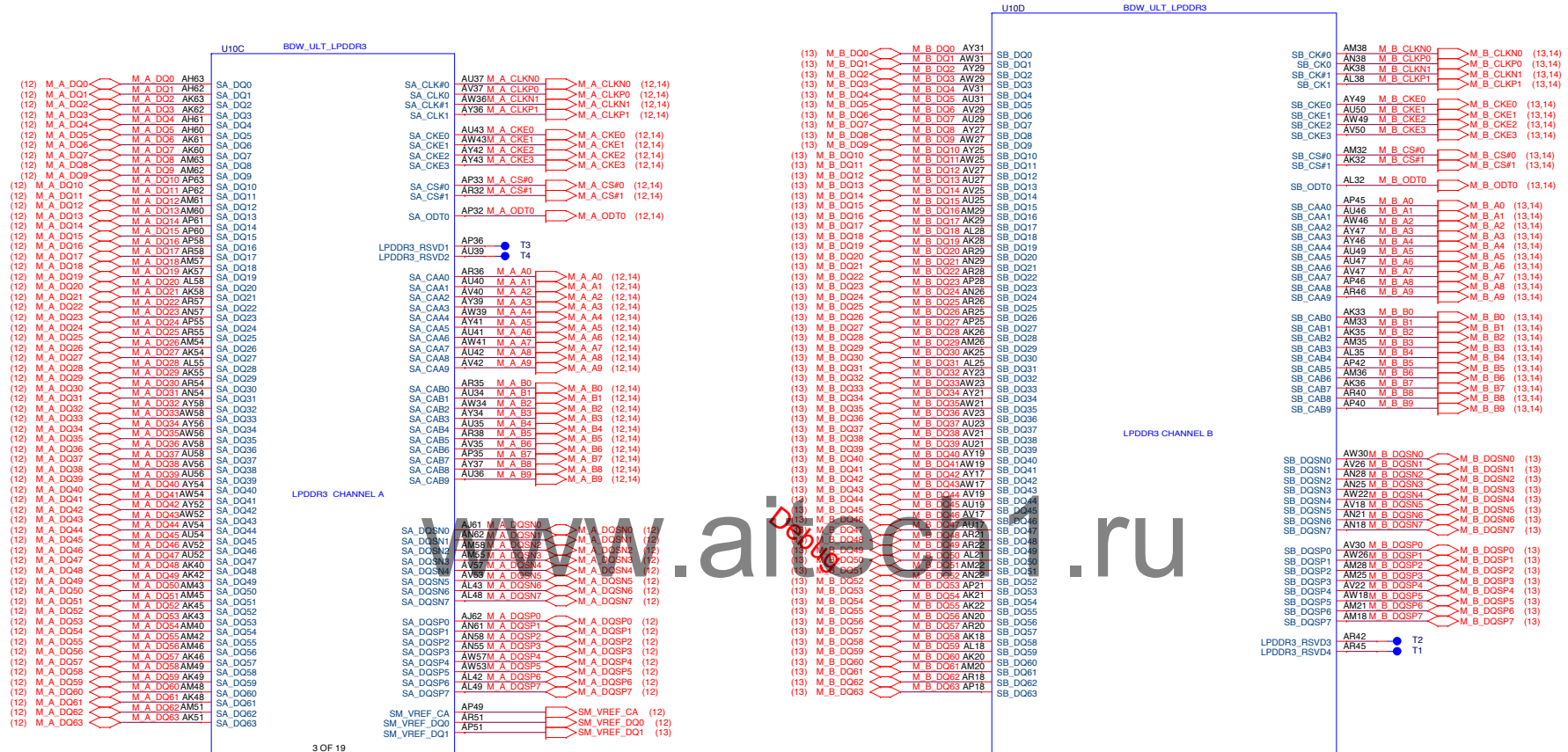




# Broadwell ULT Processor LPDDR3)

03

(12) M\_A\_DQ[63:0]  
(13) M\_B\_DQ[63:0]  
(12) M\_A\_DQSN[7:0]  
(12) M\_A\_DQSP[7:0]  
(13) M\_B\_DQSN[7:0]  
(13) M\_B\_DQSP[7:0]



3 OF 19

4 OF 19

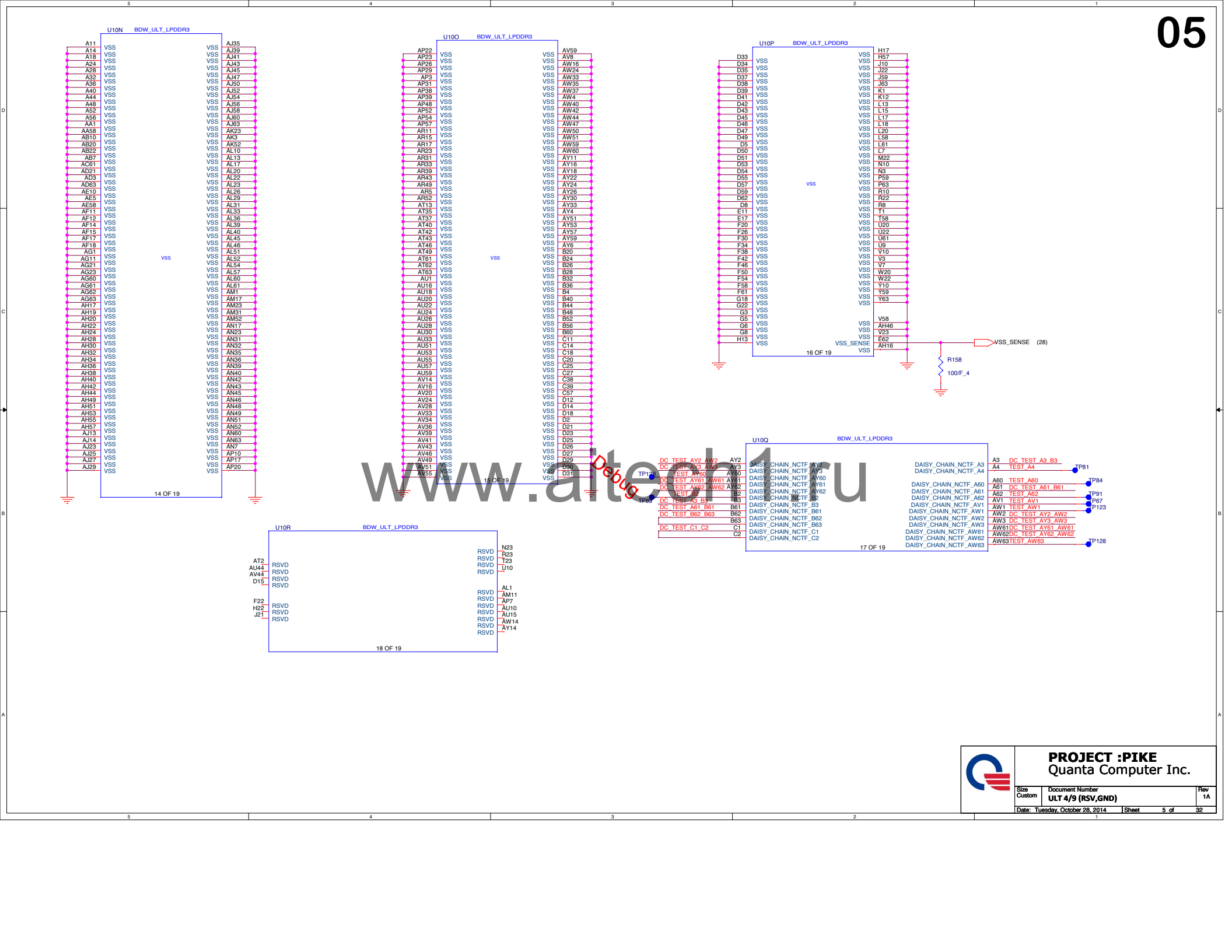


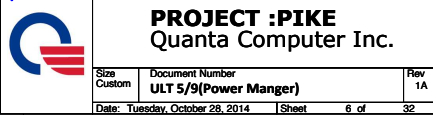
**PROJECT :PIKE**  
Quanta Computer Inc.

Size	Document Number	Rev
Custom	ULT 2/9 (DDR3 I/F)	1A
Date:	Tuesday, October 28, 2014	Sheet 3 of 32

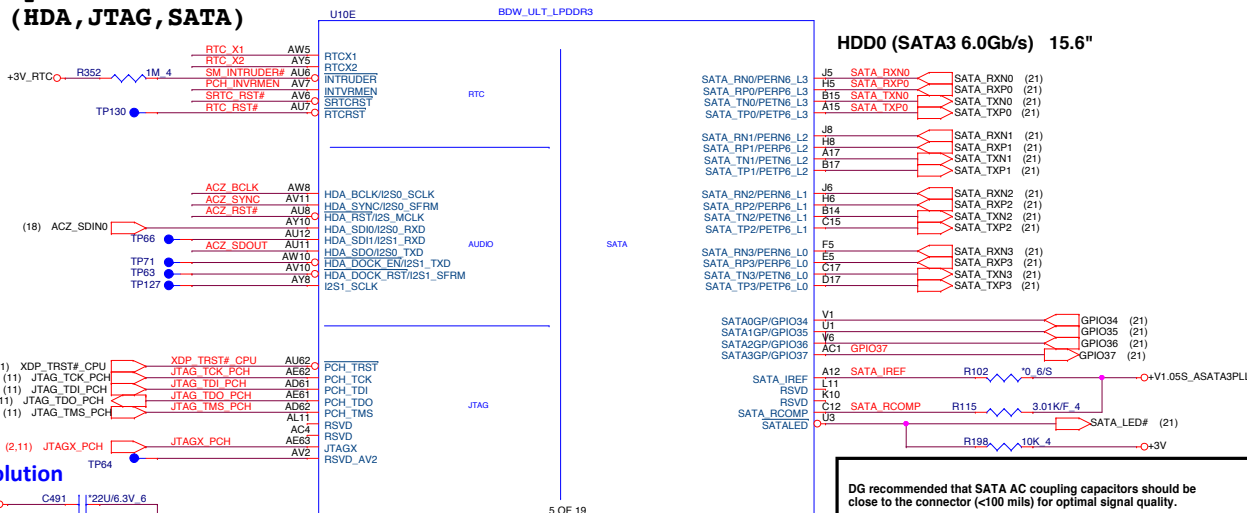




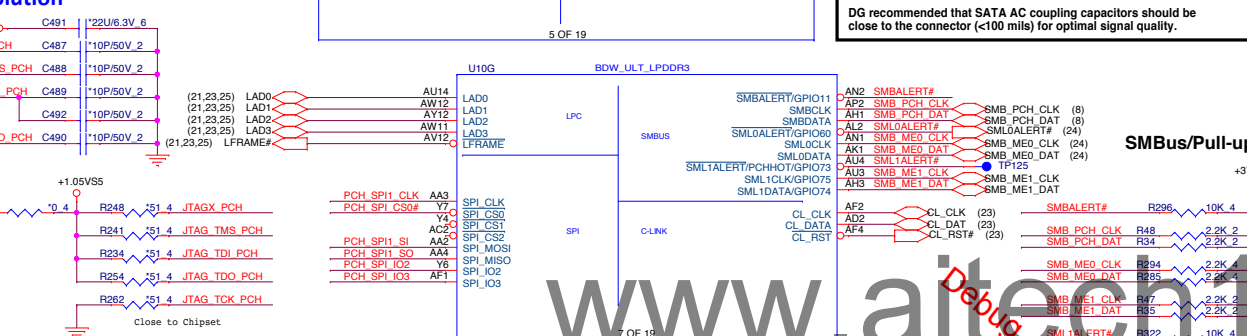









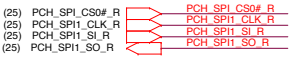
## Lynx Point-LP Platform Controller Hub (HDA, JTAG, SATA)



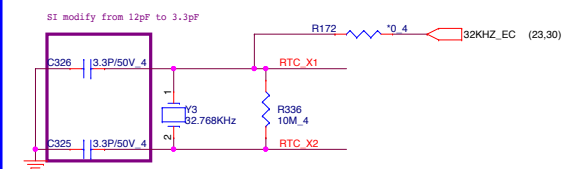
## TP64



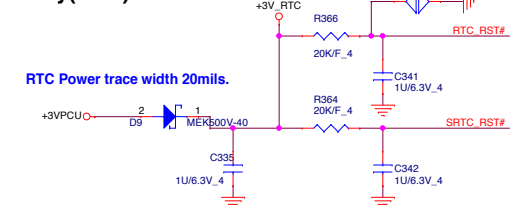
### PCH Strap Table

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 Overidden							
GSPI0_MOSI /GPIO86	Boot BIOS Selection	PWROK	<table border="1" data-bbox="682 1052 848 1104"><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							
										

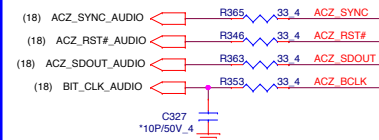
### RTC Clock 32.768KHz



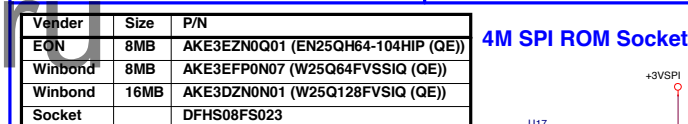
### RTC Circuitry(RTC)



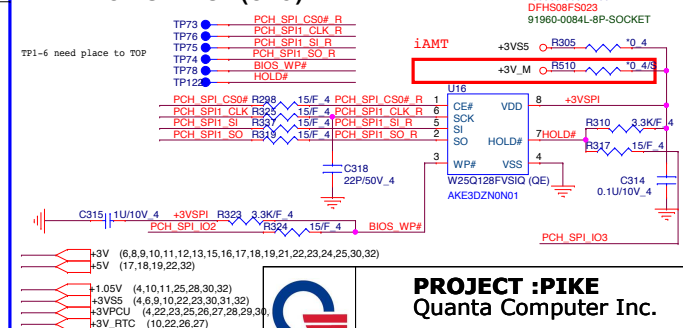
## HDA Bus(CLG)



## GPIO Pull UP

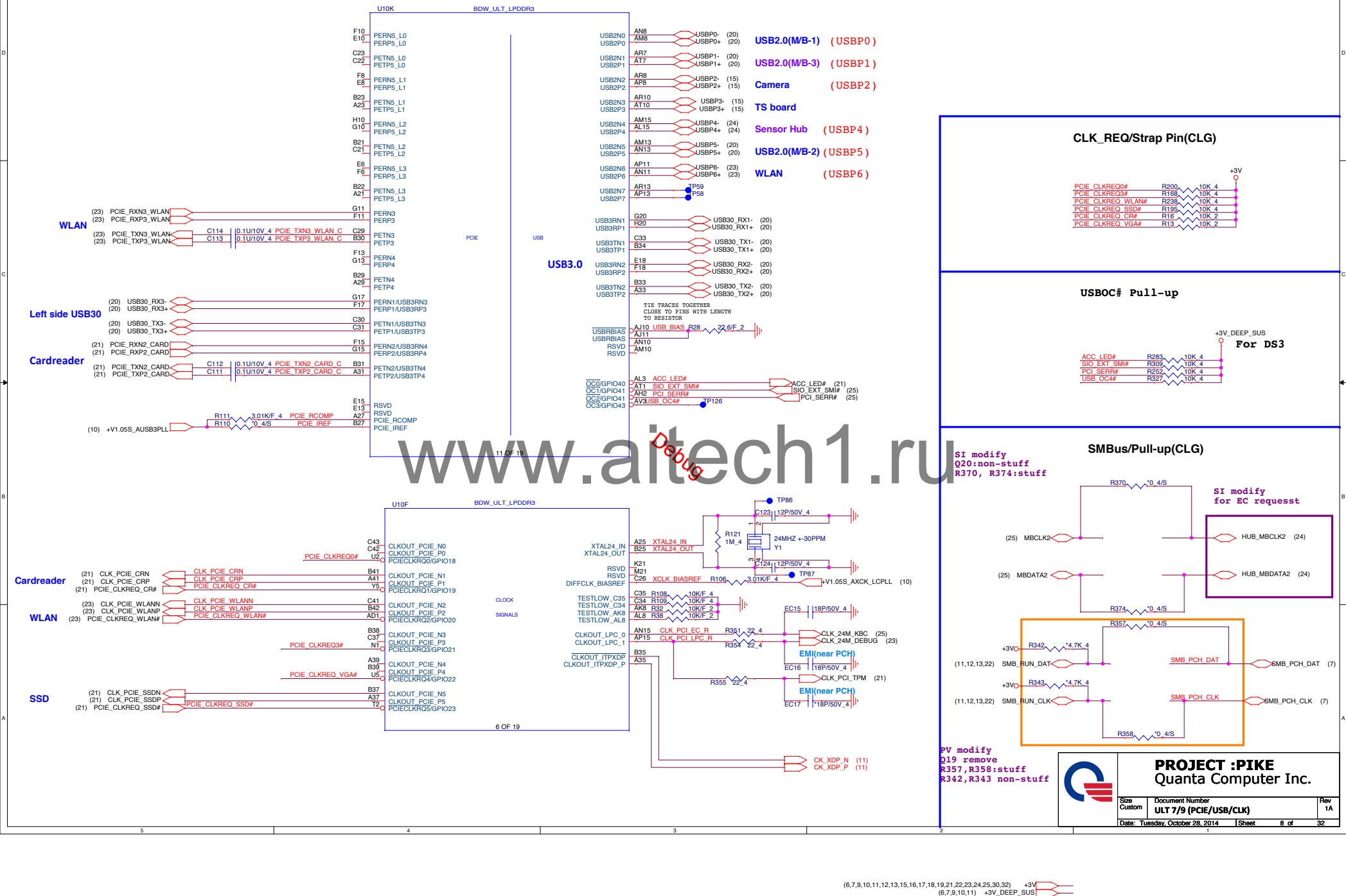


## PCH SPI ROM(CLG)



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

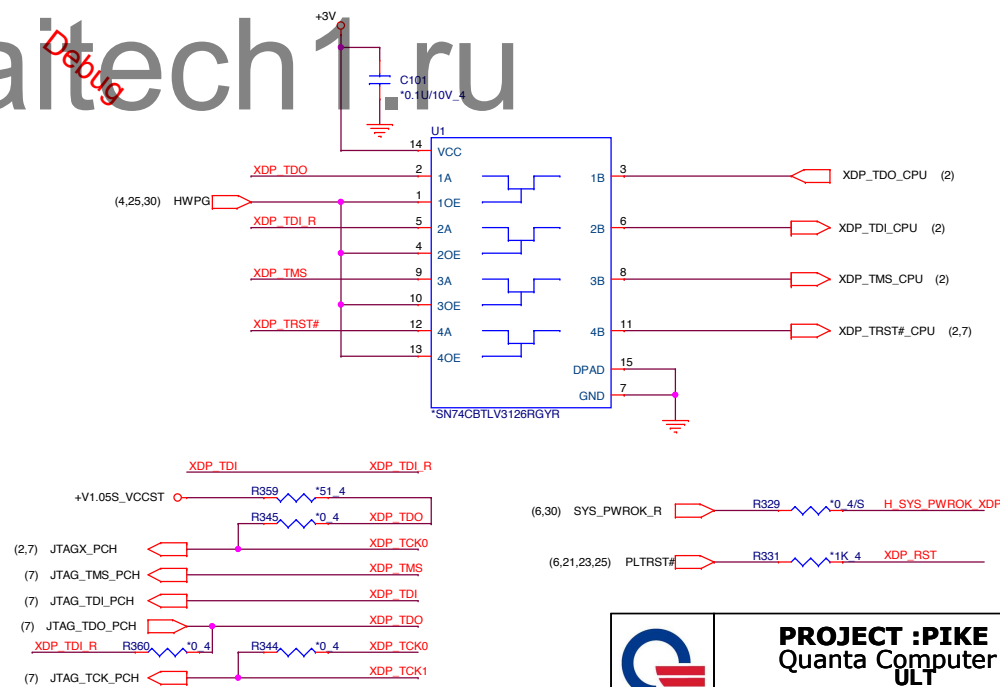
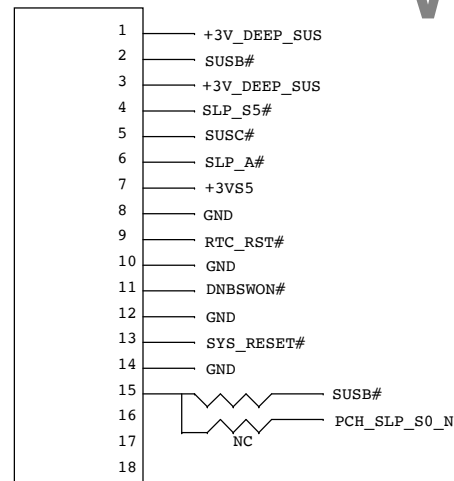
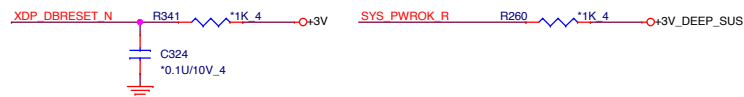
08



(6,7,9,10,11,12,13,15,16,17,18,19,21,22,23,24,25,30,32) +3V  
(6,7,9,10,11) +3V\_DEEP\_SUS

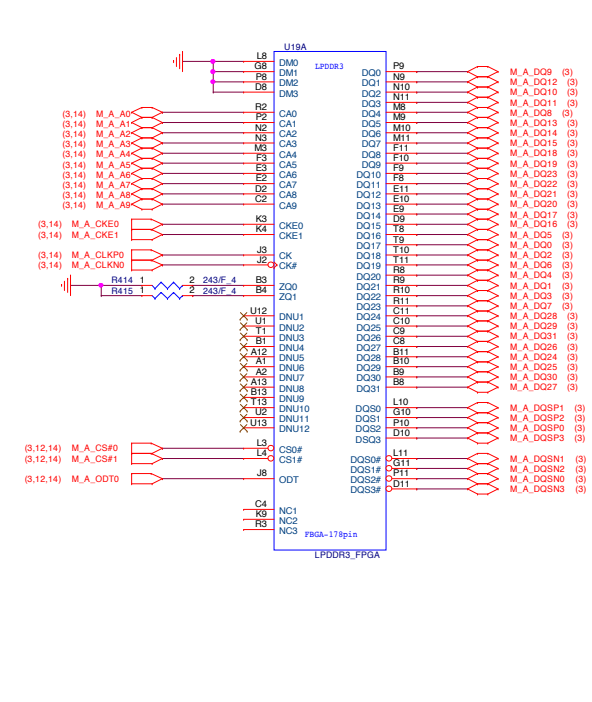




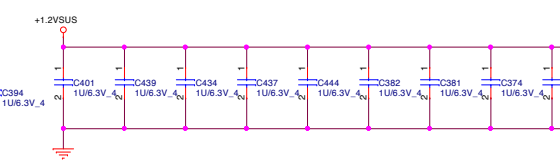
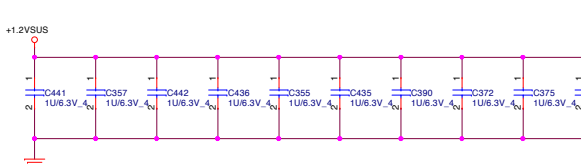
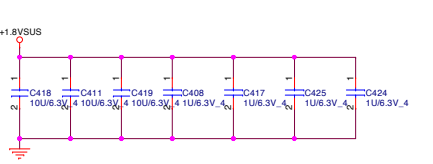
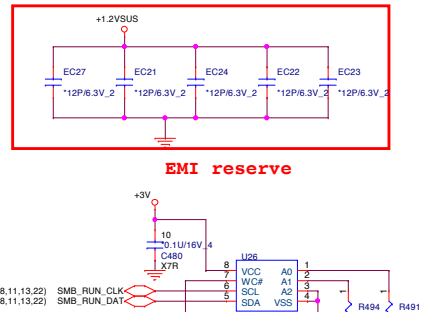
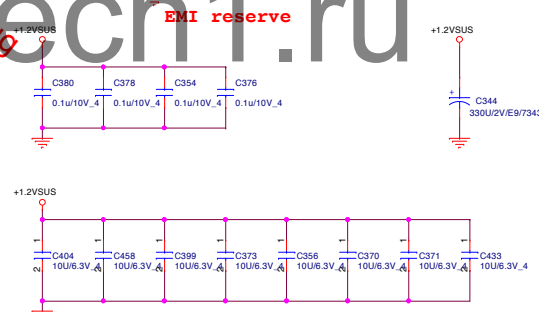
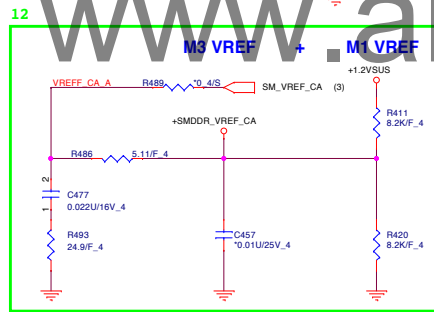
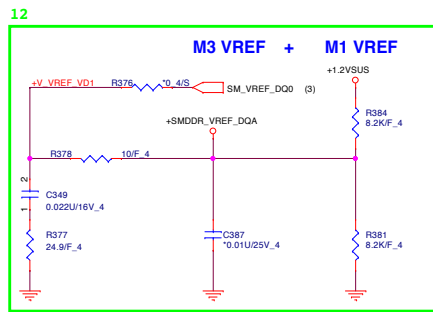
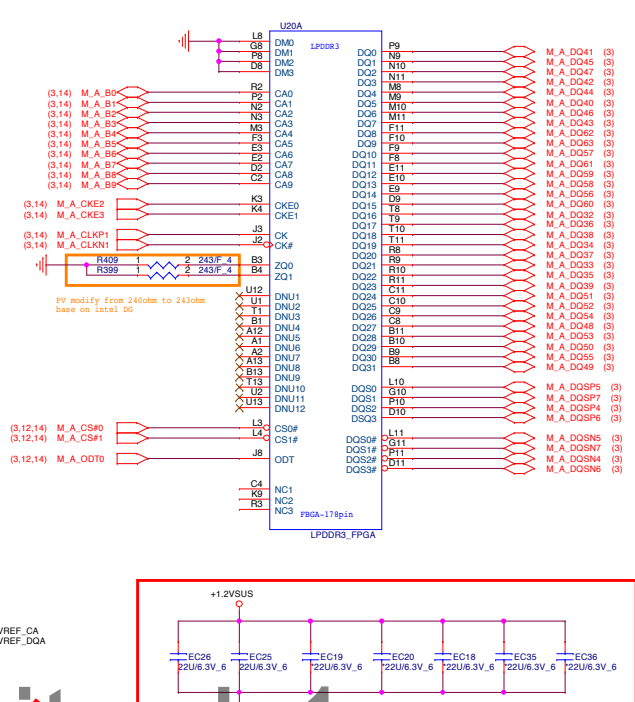




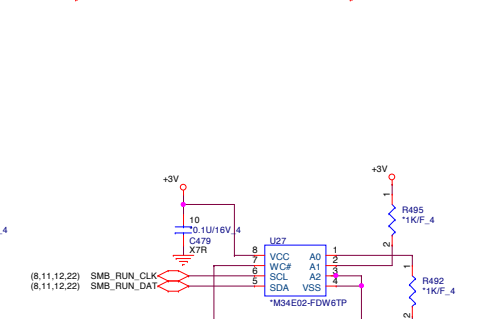
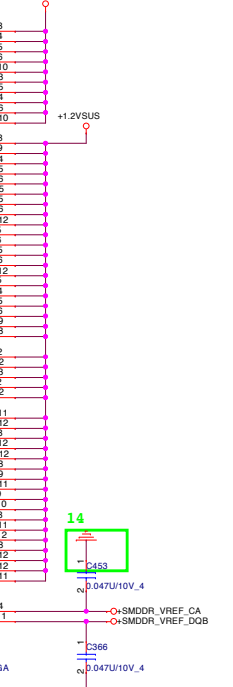
bit:0-31

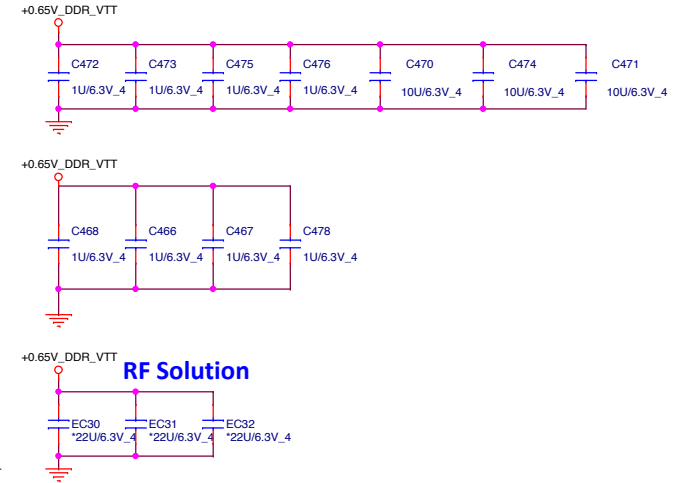
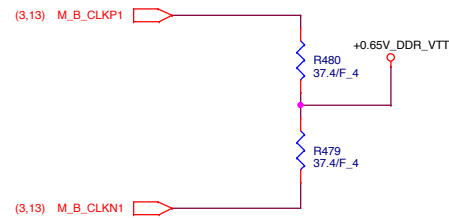
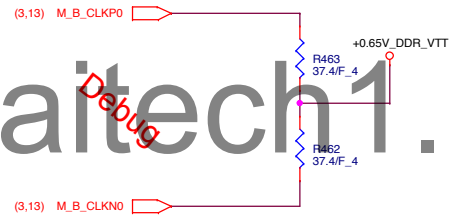
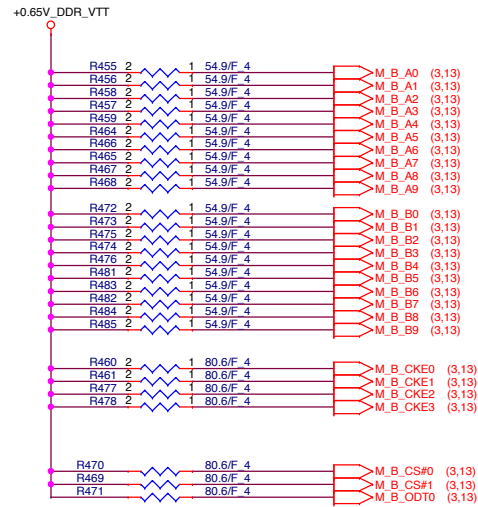
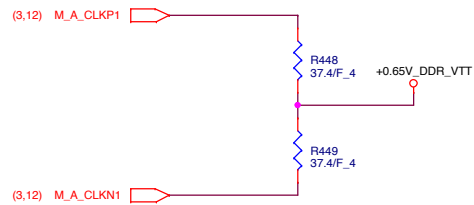
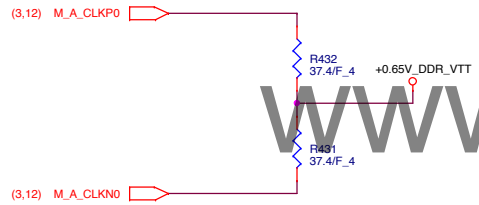
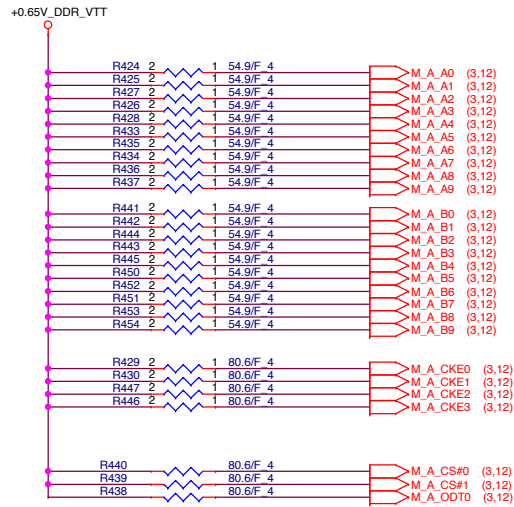


bit:32-63

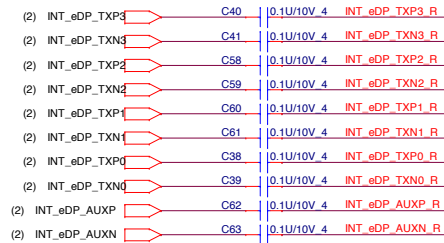
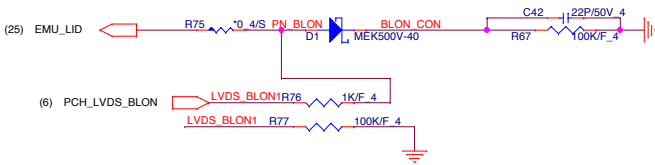




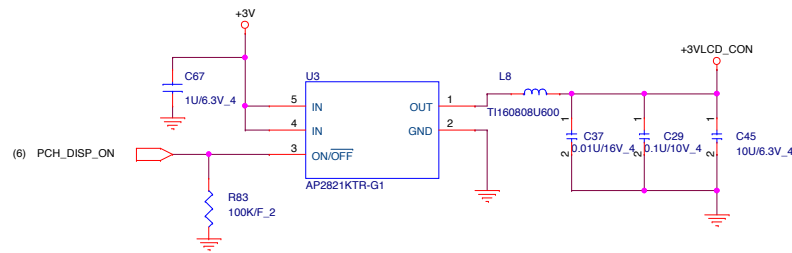
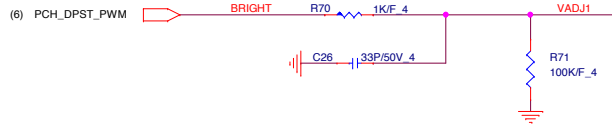
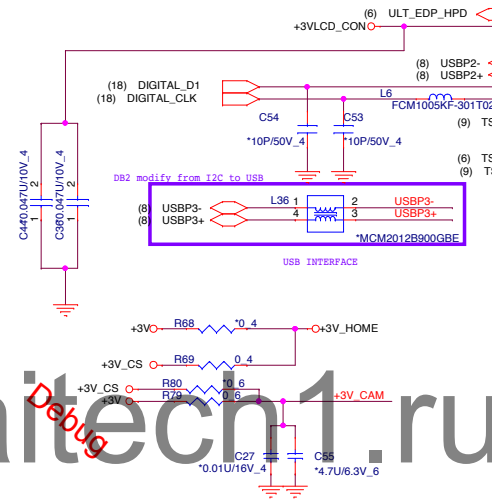
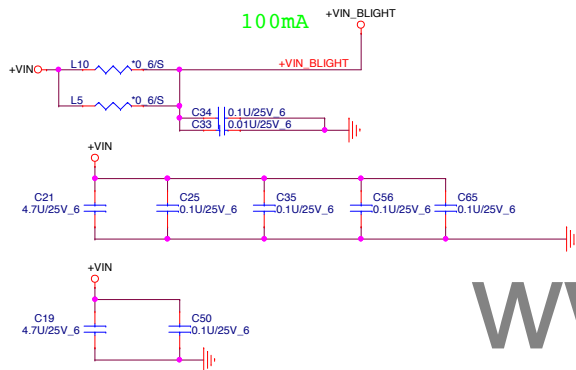
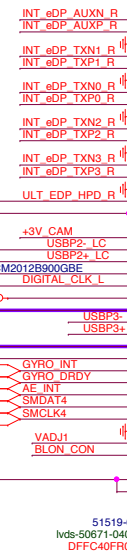




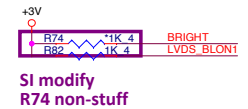
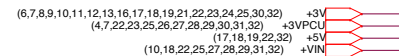
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Check

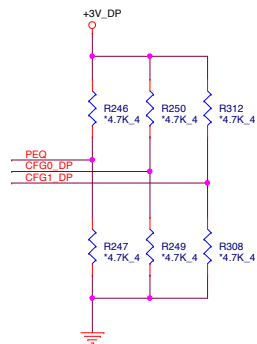


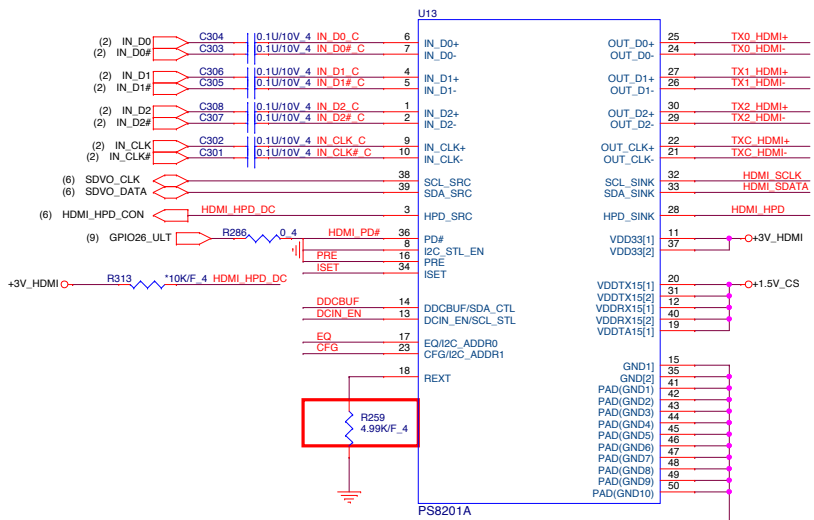
For EDP Only: stuff U3 Circuit



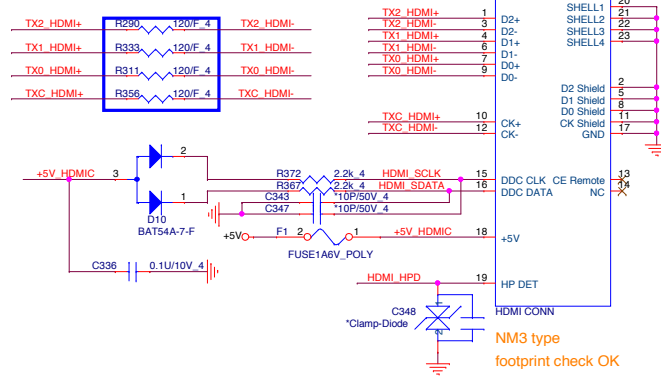
SI modify  
R74 non-stuff

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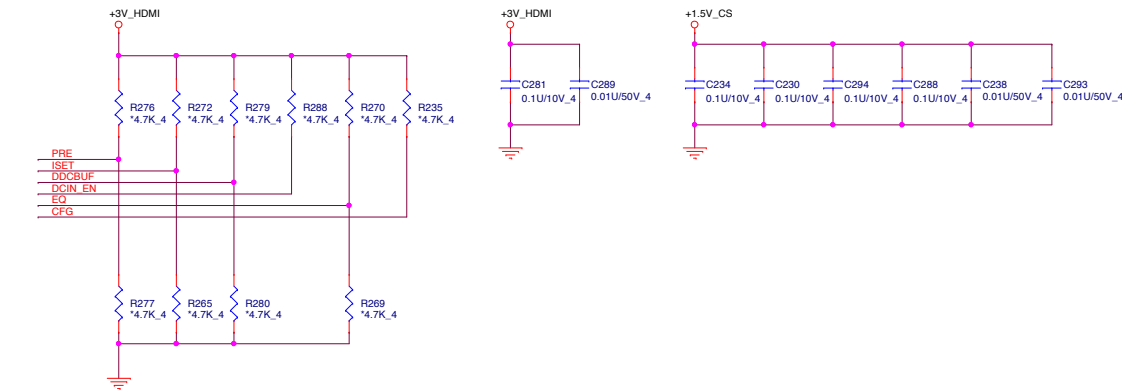
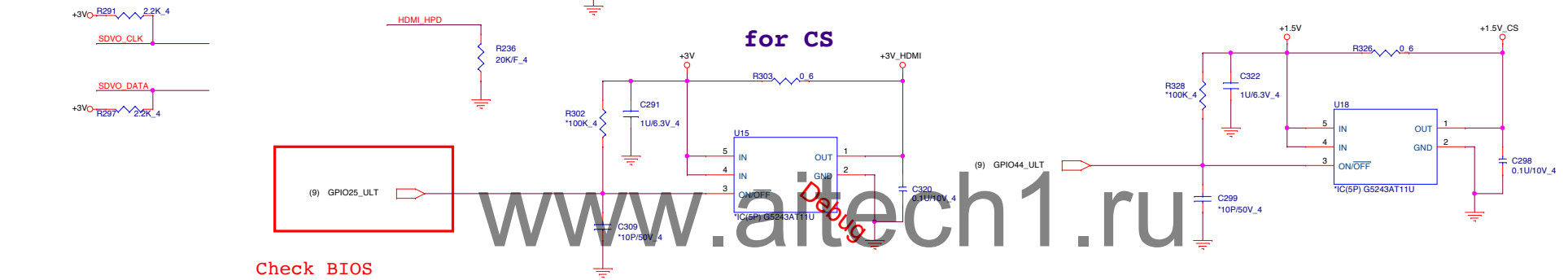




## EMI Solution



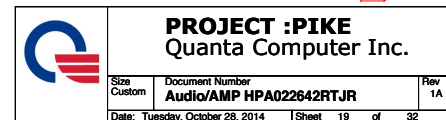
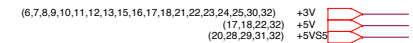
## for CS



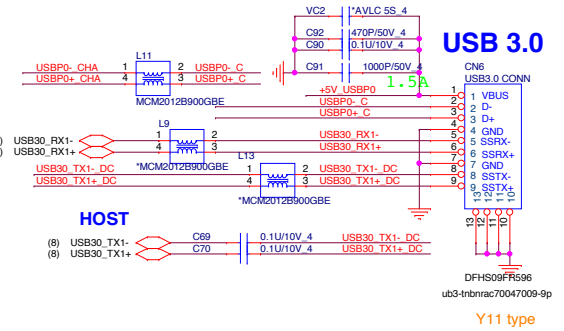
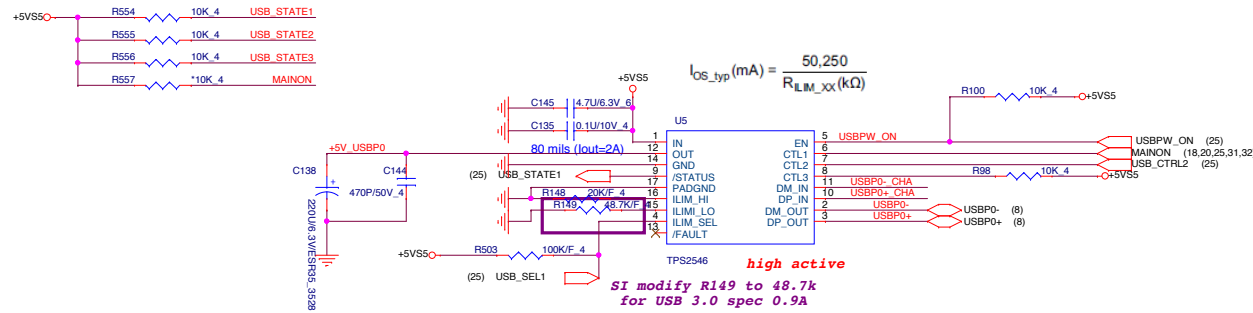




### ***Volume up/down Buttons***



PV ADD R554/R555/R556 10k for USB 3.0 PU



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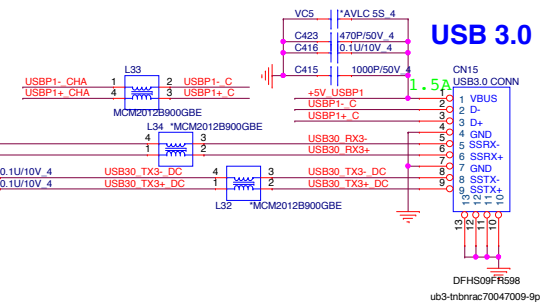
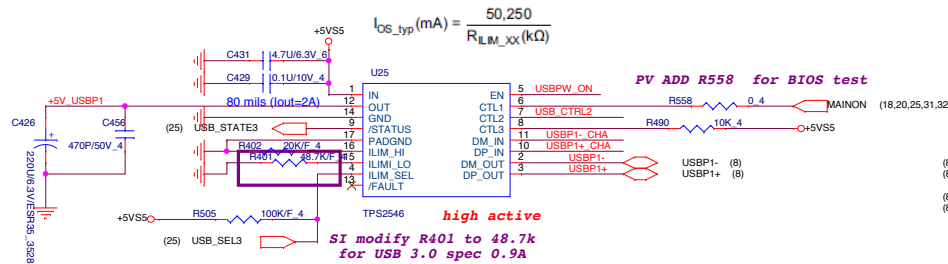


Table 3. Control Pin Settings Matched to System Power States

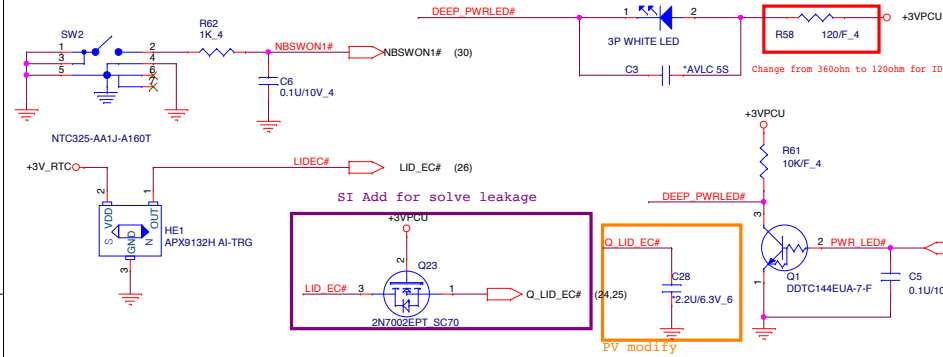
SYSTEM GLOBAL POWER STATE	TPS2546 CHARGING MODE	CTL1	CTL2	CTL3	ILIM_SEL	CURRENT LIMIT SETTING
S0	SDP1	1	1	0	1 or 0	ILIM_HI / ILIM_LO
S0	SDP2, no discharge to / from CDP	1	1	1	0	ILIM_LO
S0	CDP, load detection with ILIM_LO + 60mA thresholds or if a BC1.2 primary detection occurs	1	1	1	1	ILIM_HI
S4/S5	Auto mode, load detection with power wake thresholds	0	0	1	1	ILIM_HI
S3/S4/S5	Auto mode, no load detection	0	0	1	0	ILIM_HI
S3	Auto mode, keyboard/mouse wake up, load detection with ILIM_LO + 60 mA thresholds	0	1	1	1	ILIM_HI
S3	Auto mode, keyboard/mouse wake-up, no load detection	0	1	1	0	ILIM_HI
S3	SDP1, keyboard/mouse wake-up	0	1	0	1 or 0	ILIM_HI / ILIM_LO

(4,6,7,9,10,22,23,30,31,32) +5VSS  
 (28,29,31,32) +5VSS  
 (4,7,22,23,25,26,27,28,29,30,31,32) +3VPCU

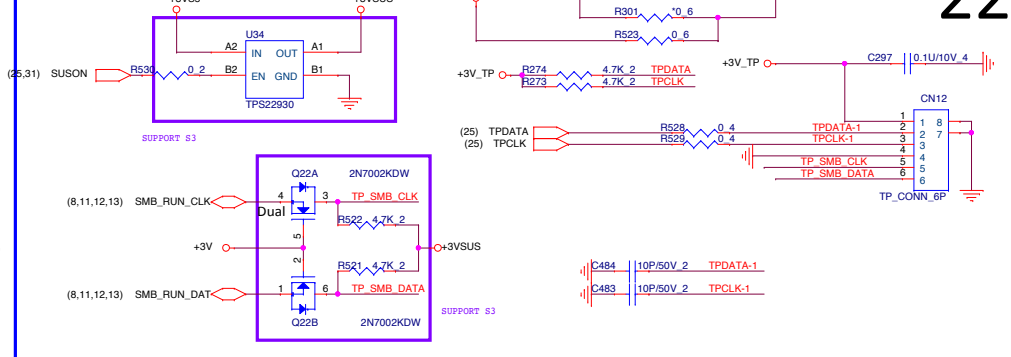


Rev  
1A

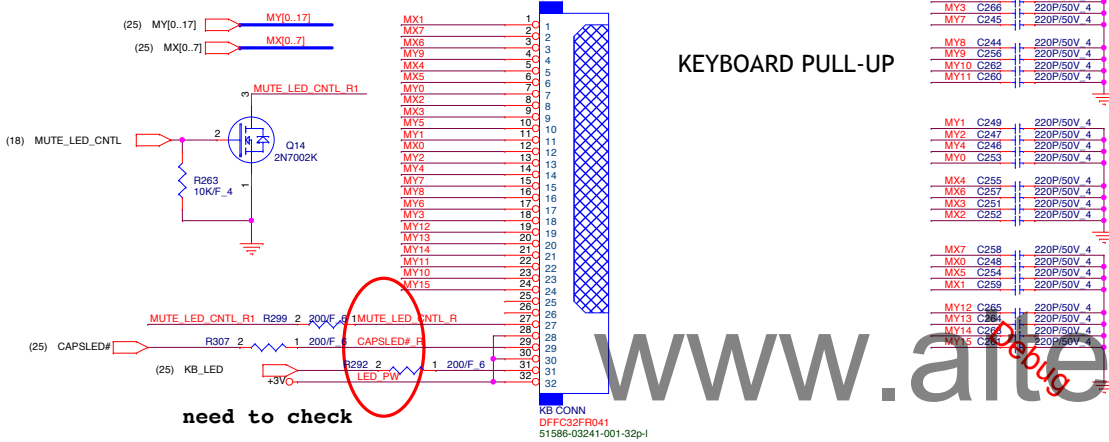
## Power Button



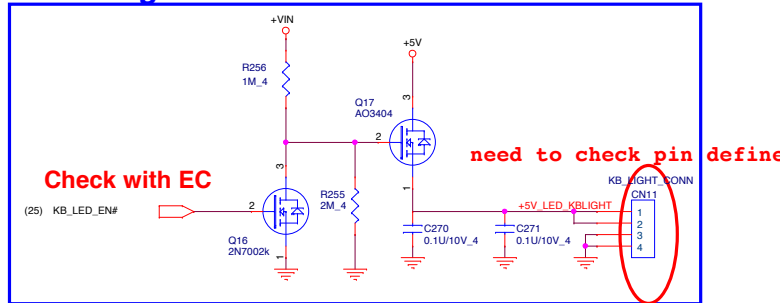
## Touch Pad Connector



## KEYBOARD Con.

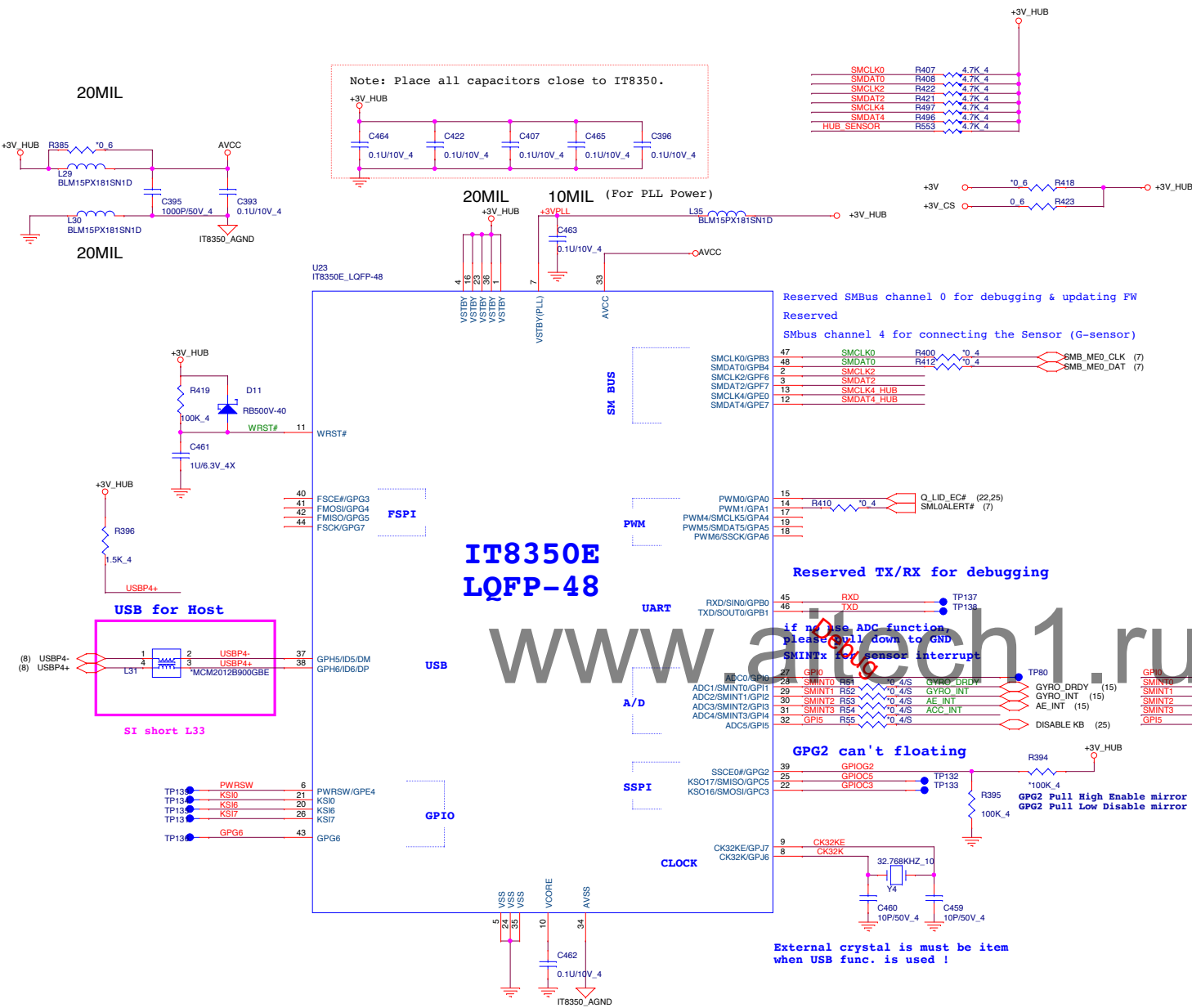
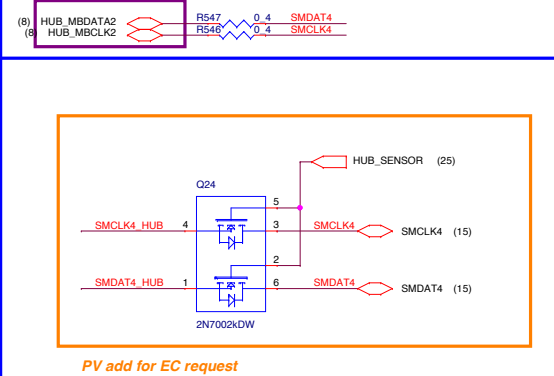
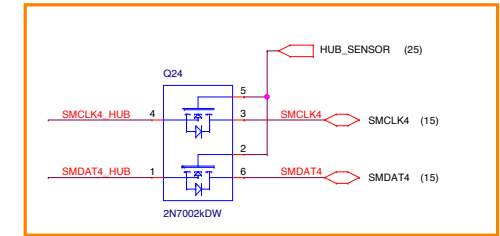
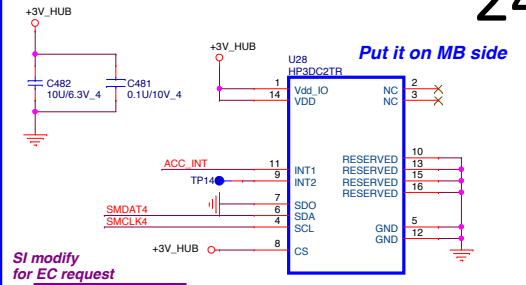


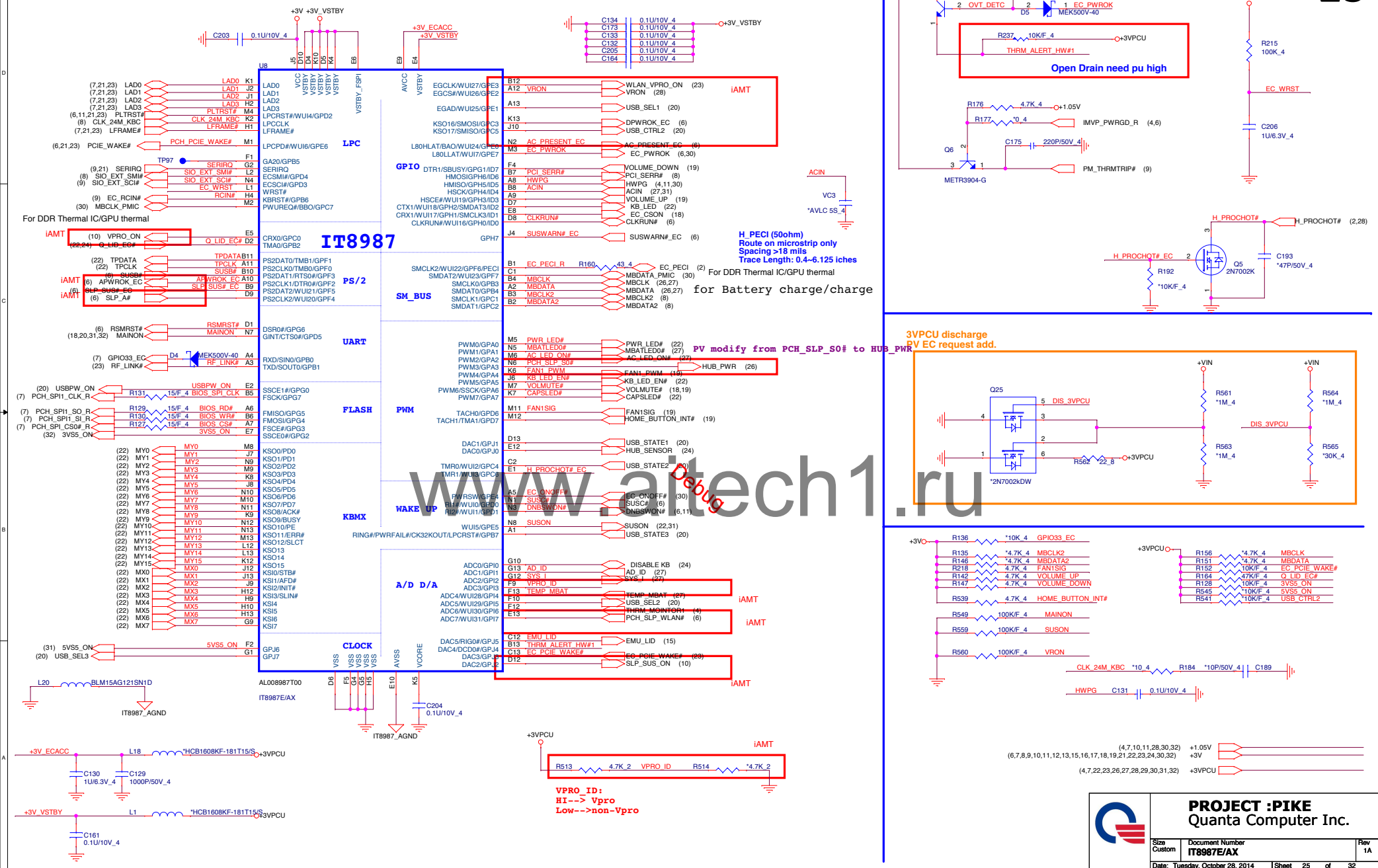
## KB backlight

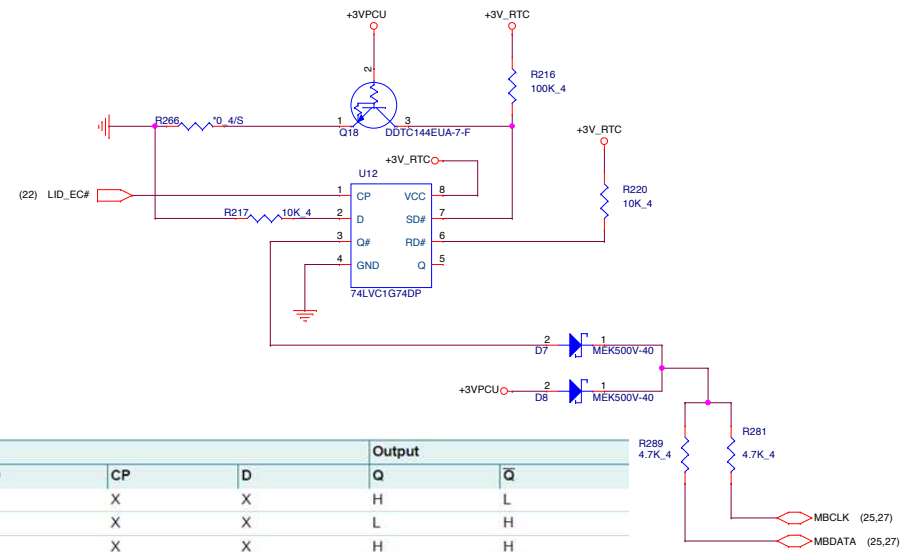
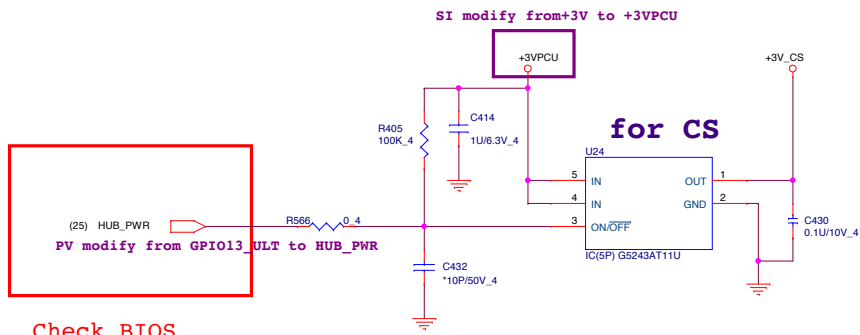




## Accelerometer Sensor







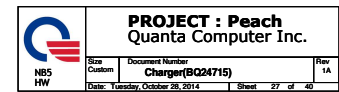
Input				Output	
SD	RD	CP	D	Q	Q̄
L	H	X	X	H	L
H	L	X	X	L	H
L	L	X	X	H	H

[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

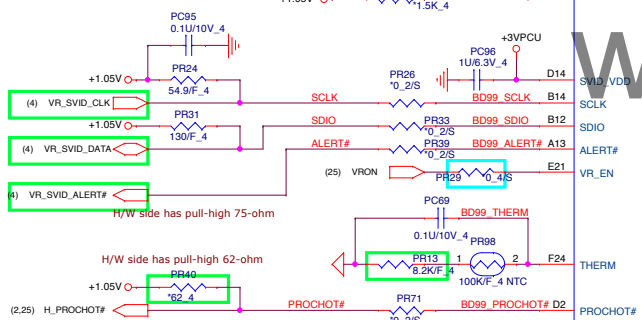
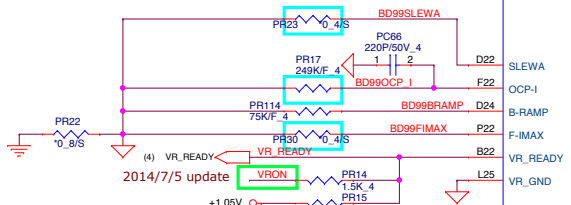
[1] H = HIGH voltage level;  
L = LOW voltage level;  
↑ = LOW-to-HIGH transition;  
Q<sub>n+1</sub> = state after the next LOW-to-HIGH CP transition.

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(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  
(4,6,7,9,10,22,23,30,31,32) +3VSUS  
(20,29,31,32) +5VS5  
(17,18,19,22,32) +5V  
(4,7,10,11,25,30,32) +1.05V  
(12,15,18,29,30) +1.8VSUS

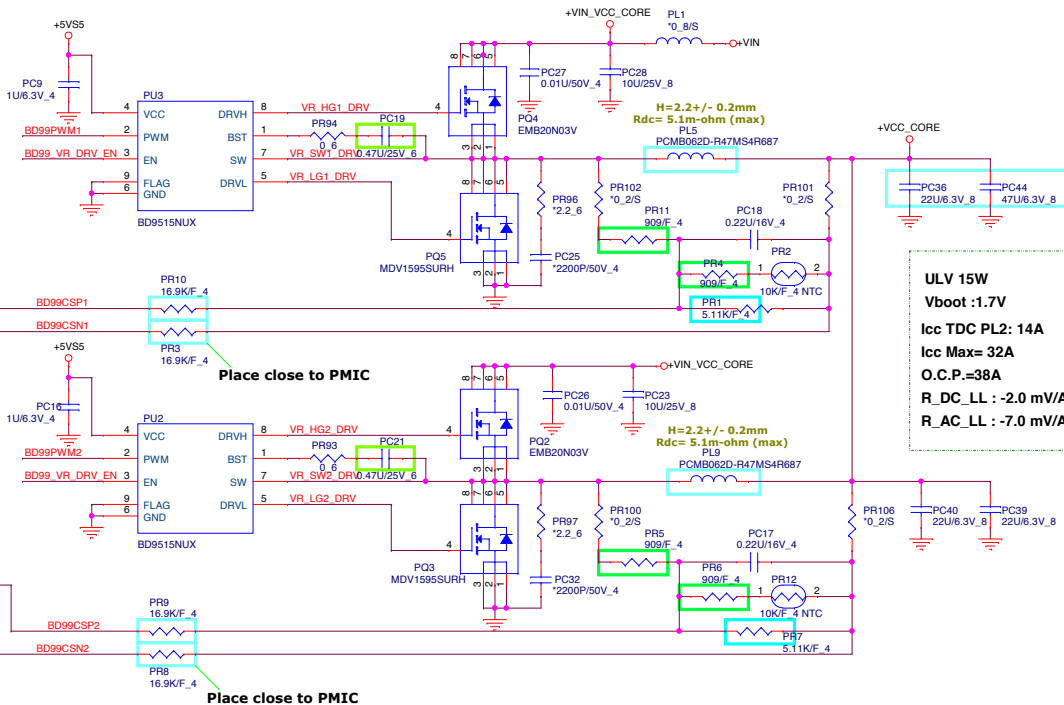
PU4-1  
PWM1 U25  
VR\_DRV\_EN C25  
VR\_DRV\_EN  
PWM2 V24



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

2014/7/1 update

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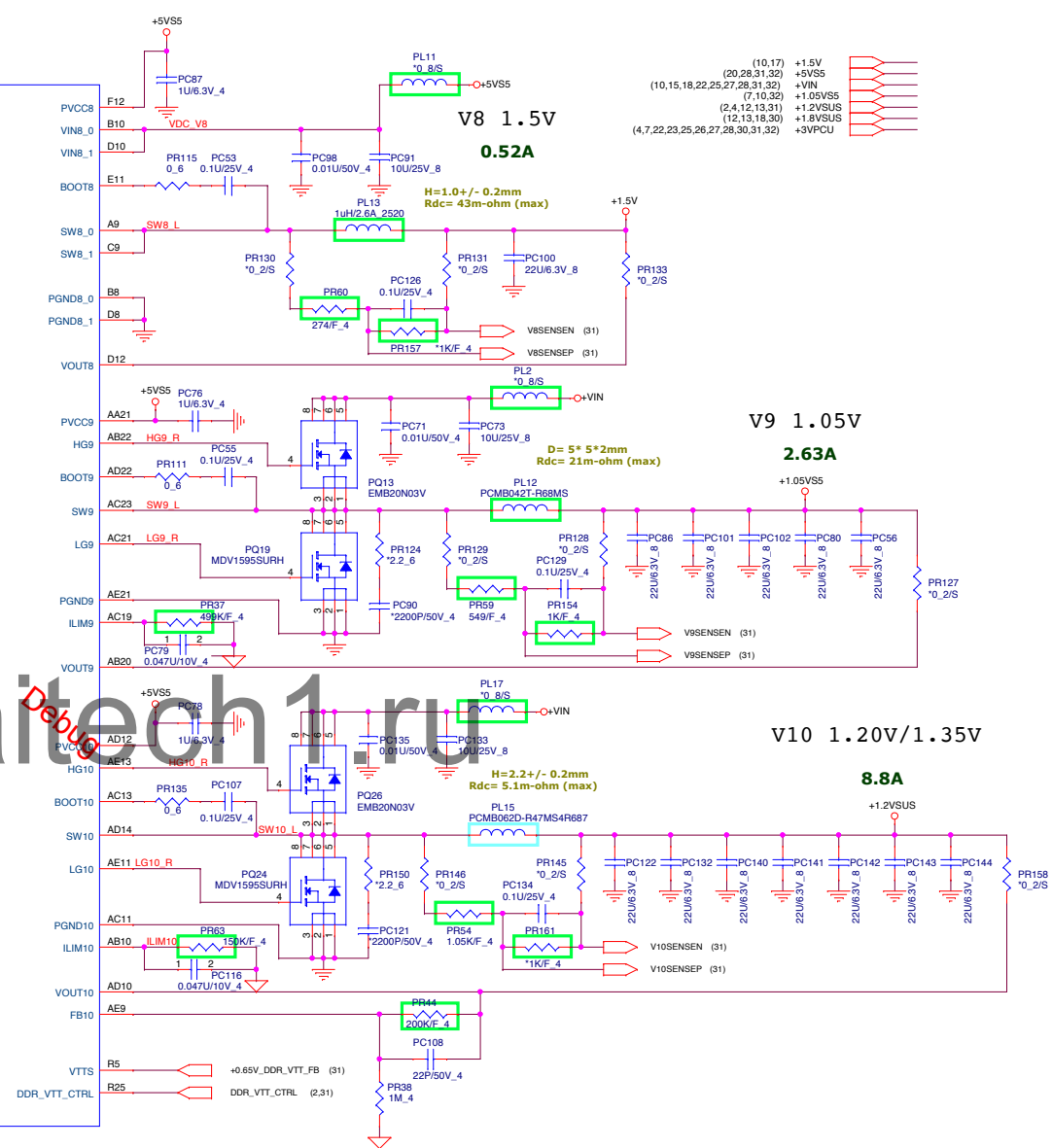
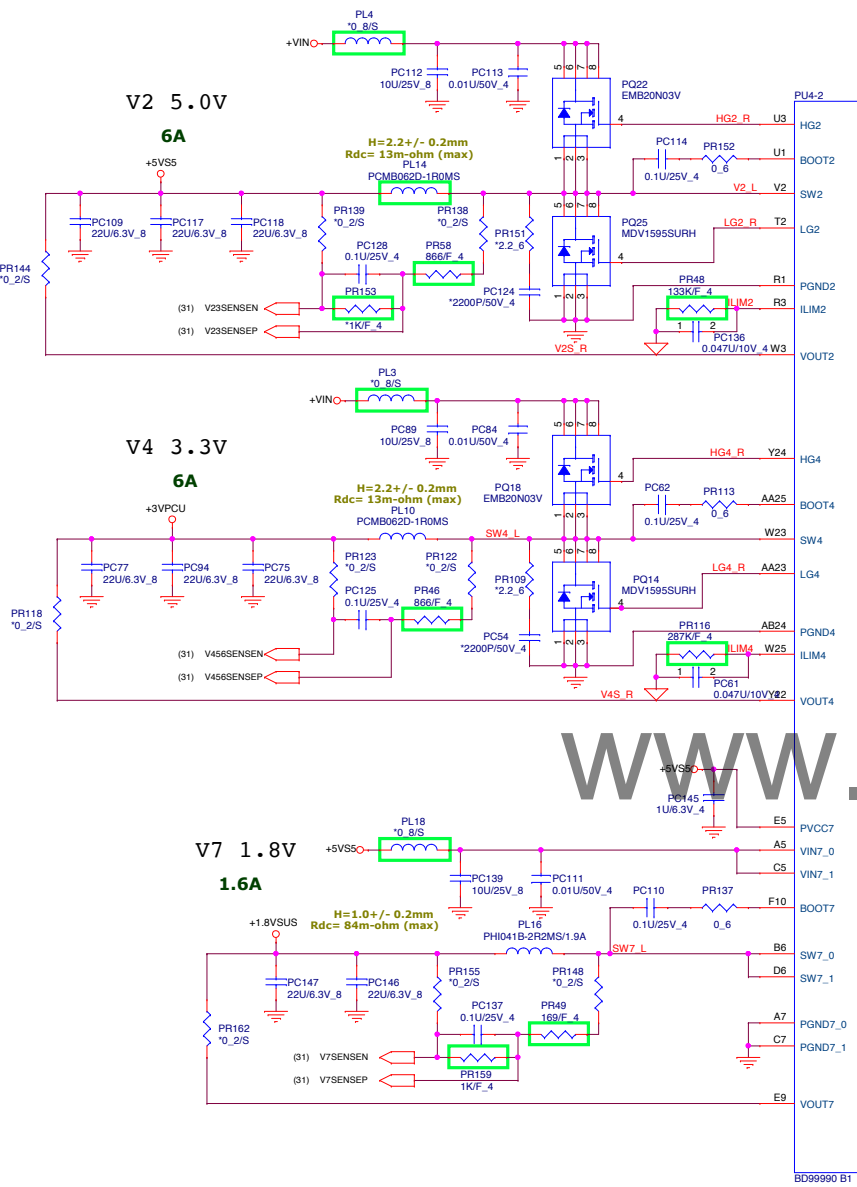


ULV 15W  
Vboot : 1.7V  
Icc TDC PL2: 14A  
Icc Max= 32A  
O.C.P.=38A  
R\_DC\_LL : -2.0 mV/A  
R\_AC\_LL : -7.0 mV/A

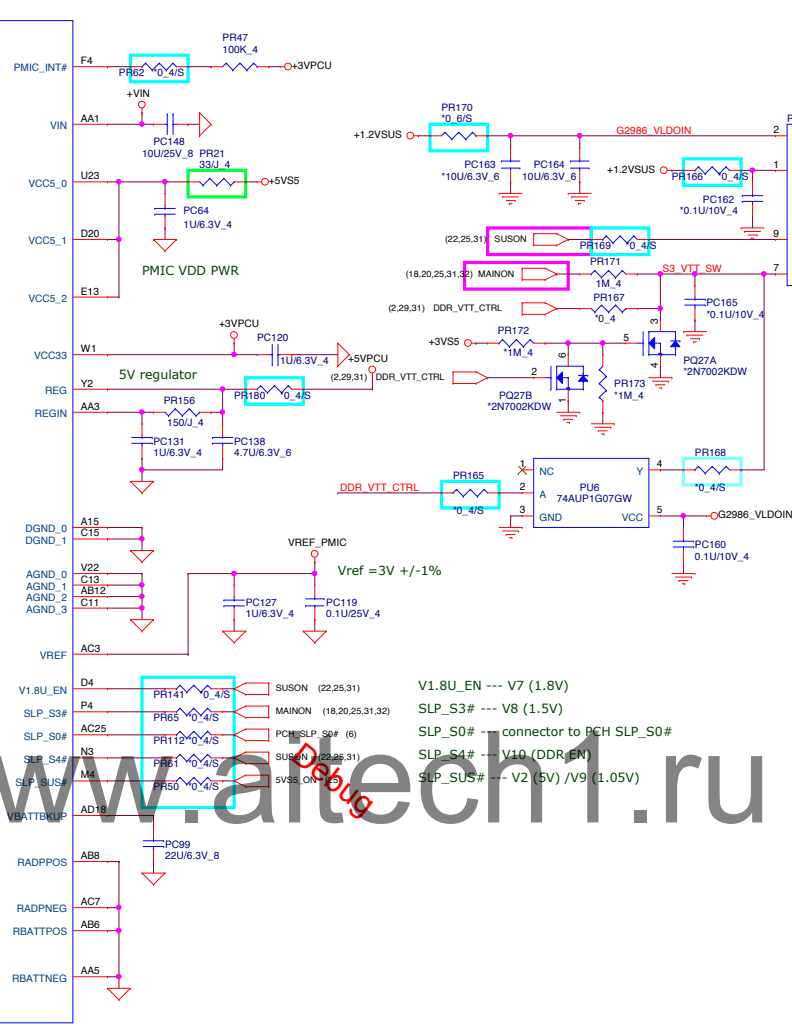
2014/7/1 update

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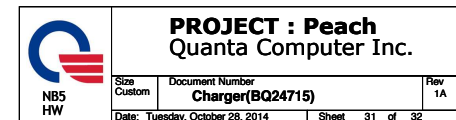








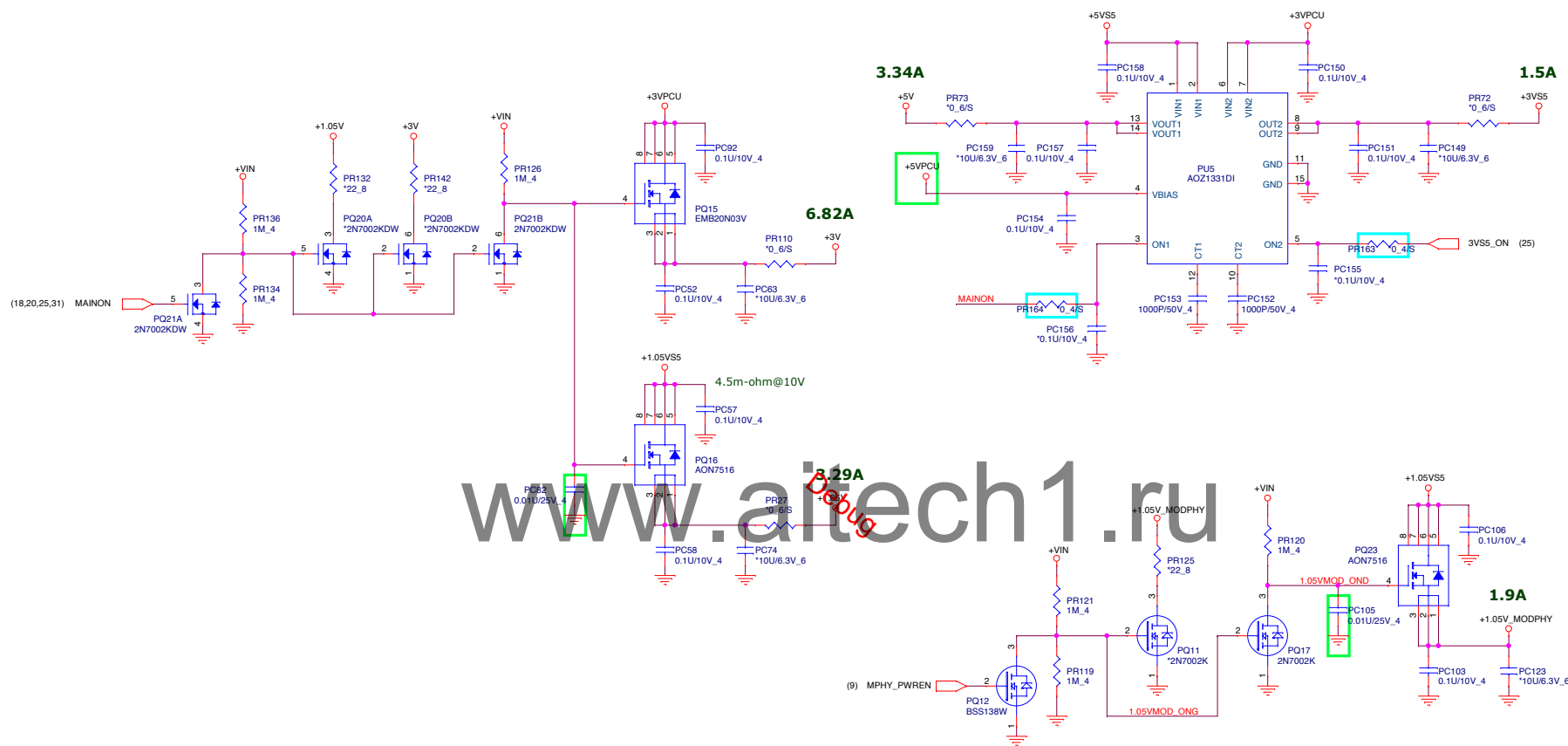
(2,4,12,13,29) +1.2VSUS  
(4,7,22,23,25,26,27,28,29,30,32) +3VPCU  
(6,7,8,9,10,11,12,13,15,16,17,18,19,21,22,23,24,25,30,32) +3V  
+3VSUS  
(4,6,7,9,10,22,23,30,32) +3VSS  
(29,31) +0.65V\_DDR\_VTT\_FB  
(14) +0.65V\_DDR\_VTT




# Load switch

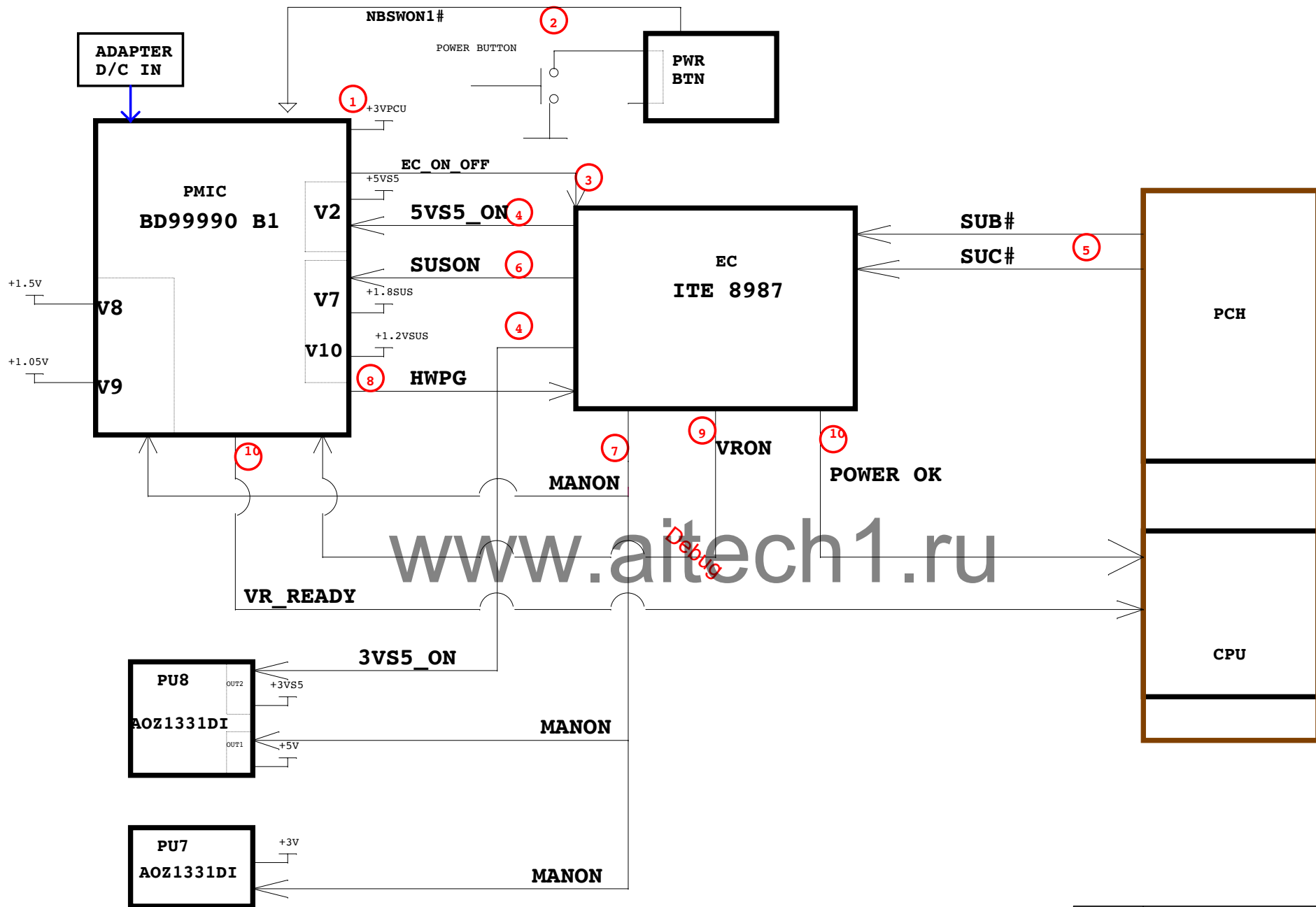
35

(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



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