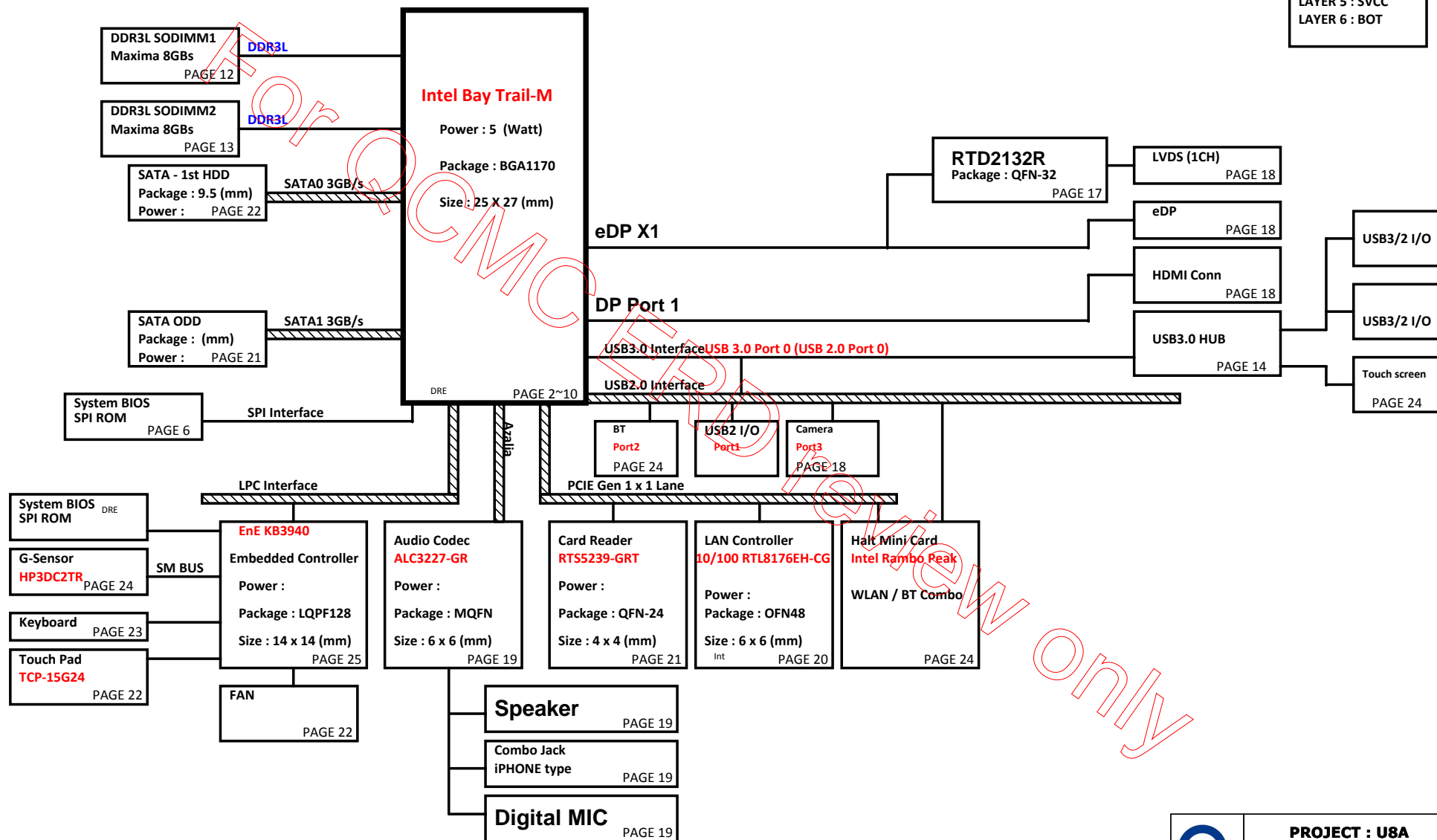
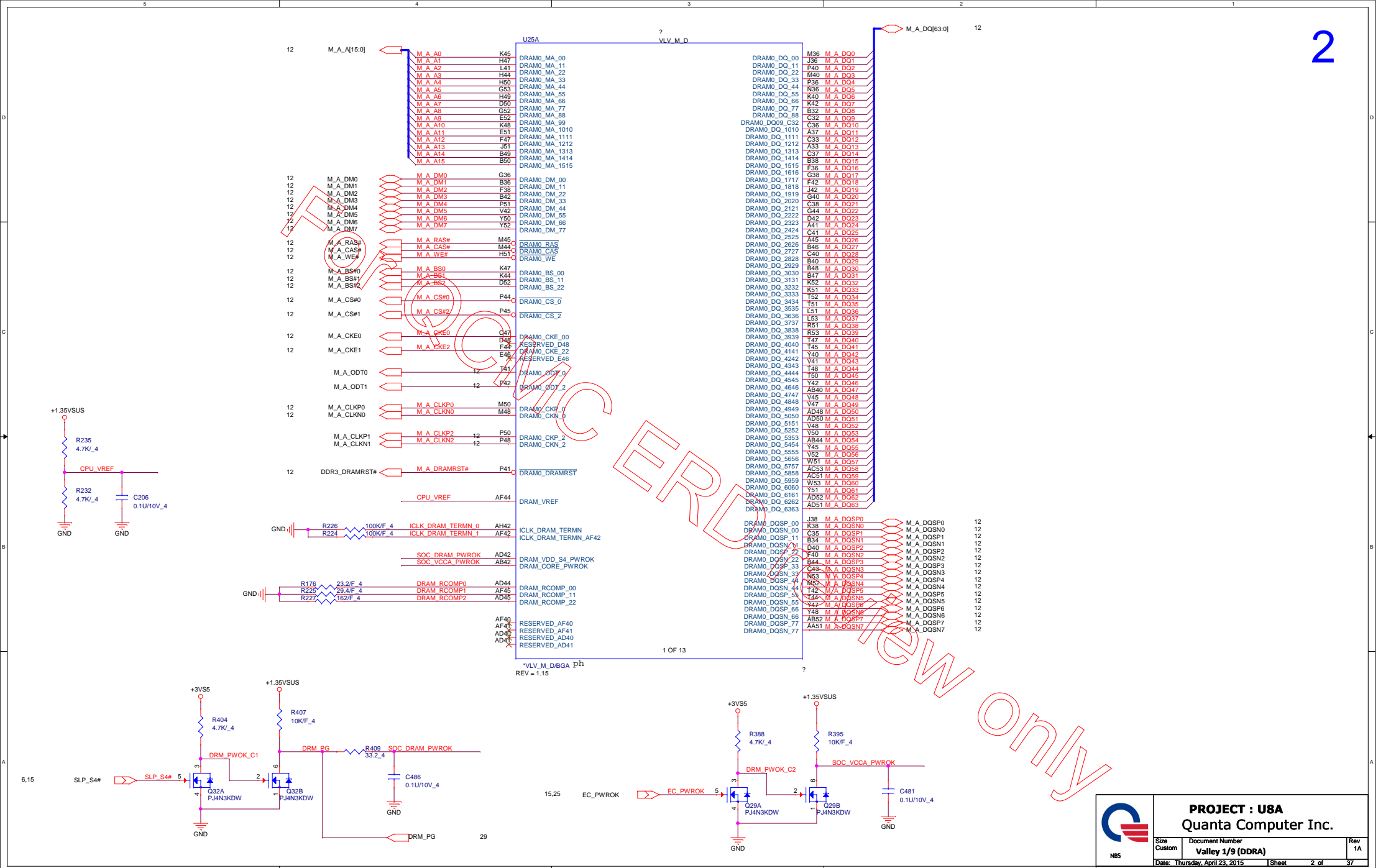


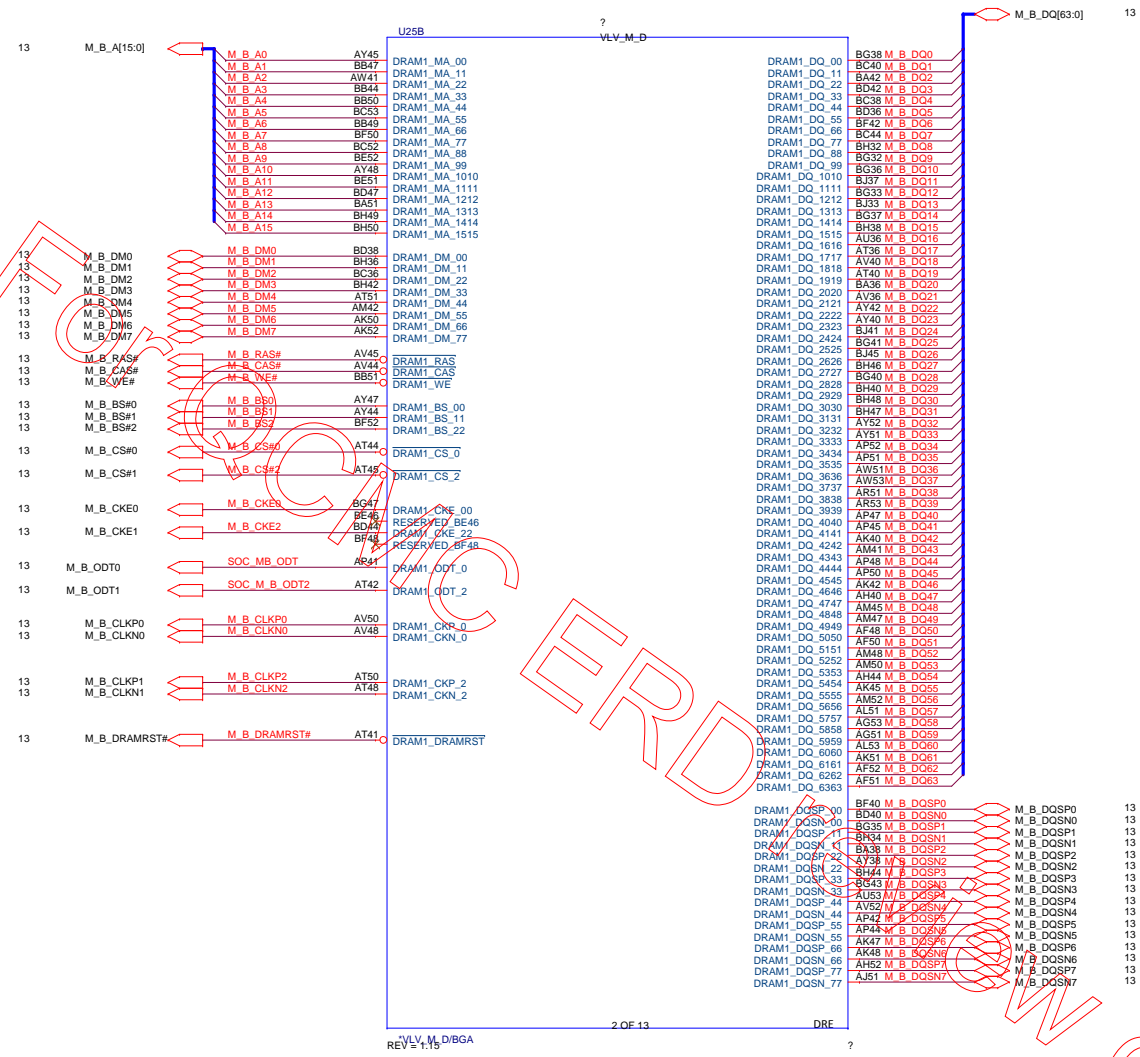
# U87/U88 UMA (14"/15.6") Ultra/Slim Intel Bay trail-M Platform Block Diagram

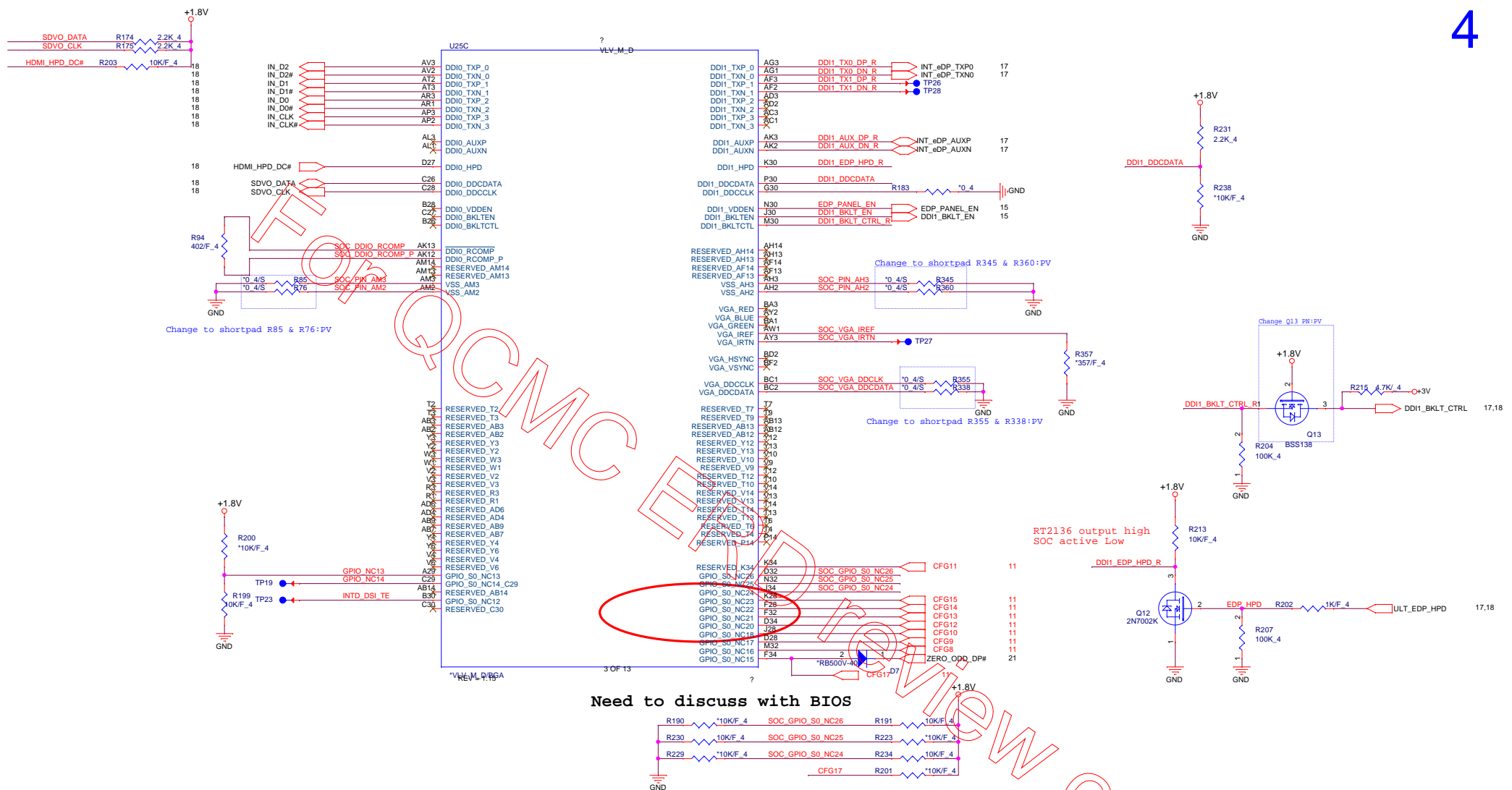
PCB 6L STACK UP

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



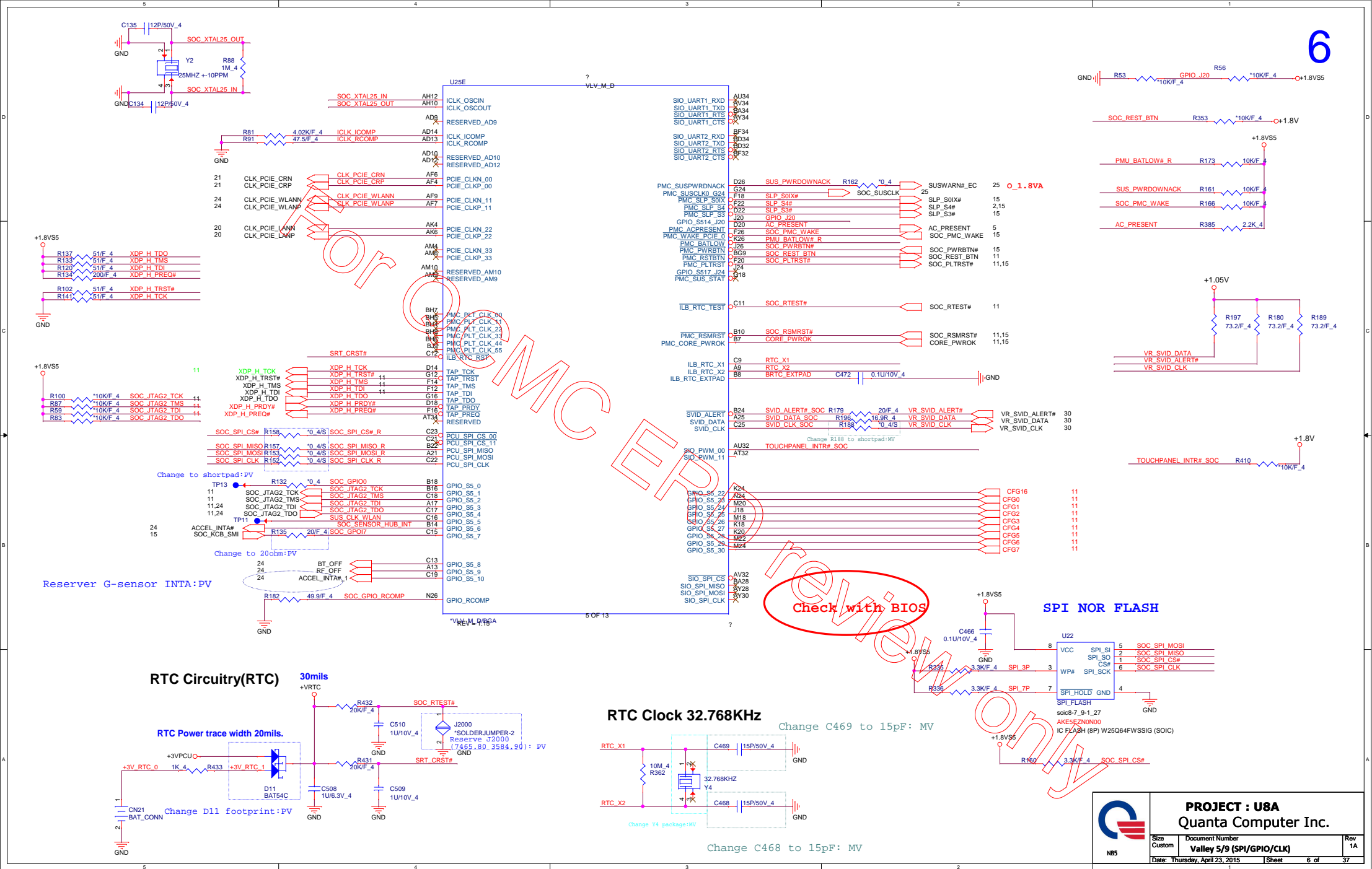






GPIO26	0	1	0=W/FAN , 1=Fanless
GPIO25	0	0	
GPIO24	0	1	0=14", 1=15"





+1.8VS5



Add HUB power detect circuit: PV

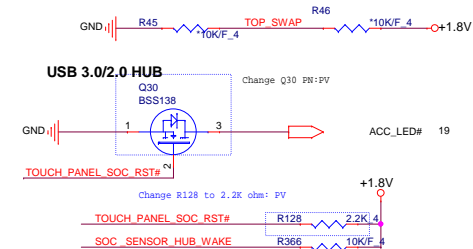
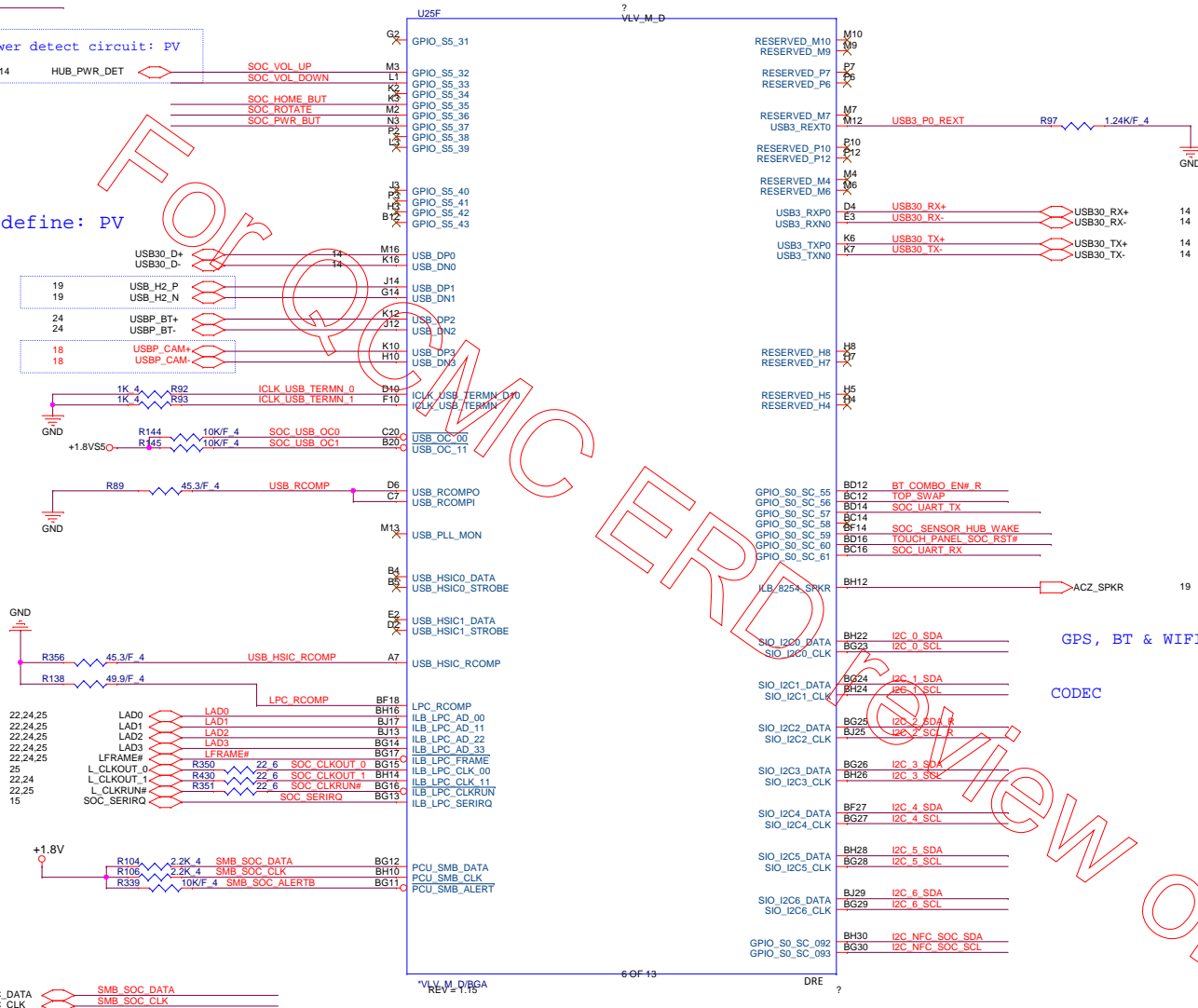
Change USB port define: PV

**USB 3.0/2.0 HUB**

USB2.0 CONN

BT

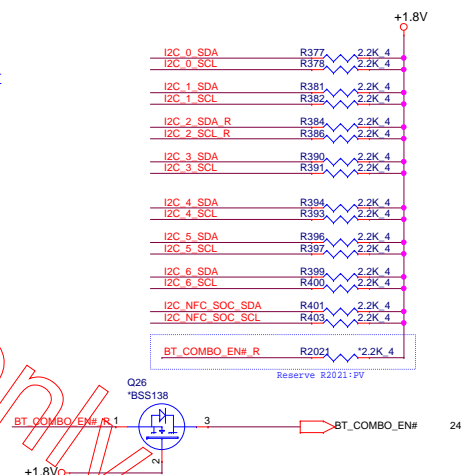
## Camera



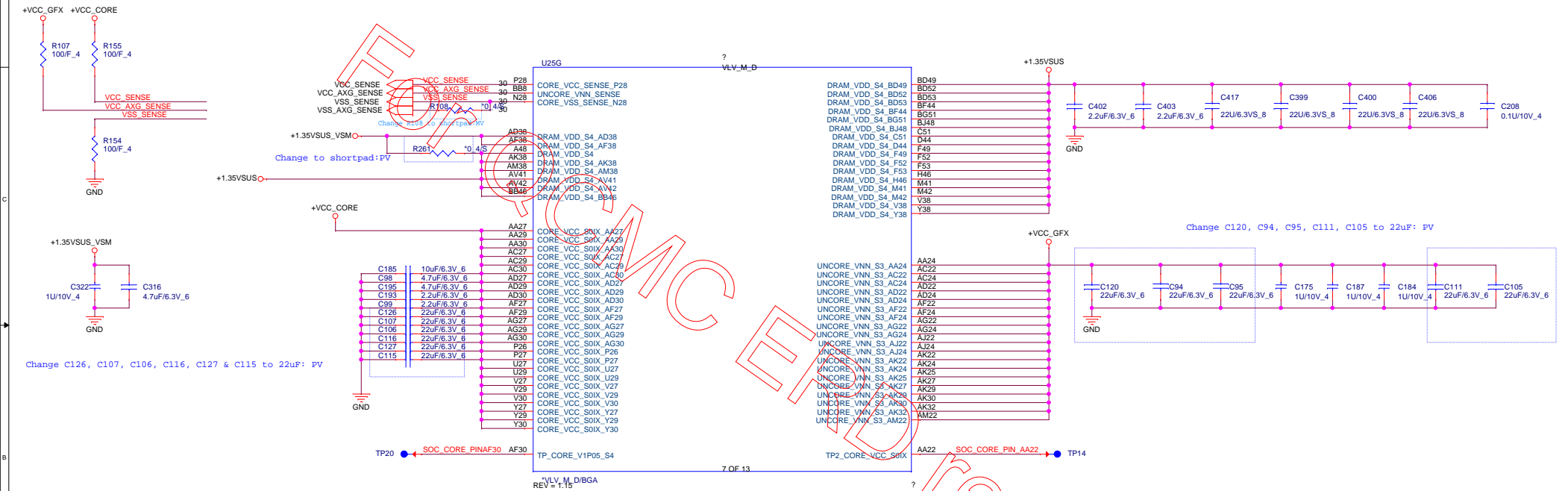
**Un-Stuff for Test Only**

GPS, BT & WIFI

CODEC





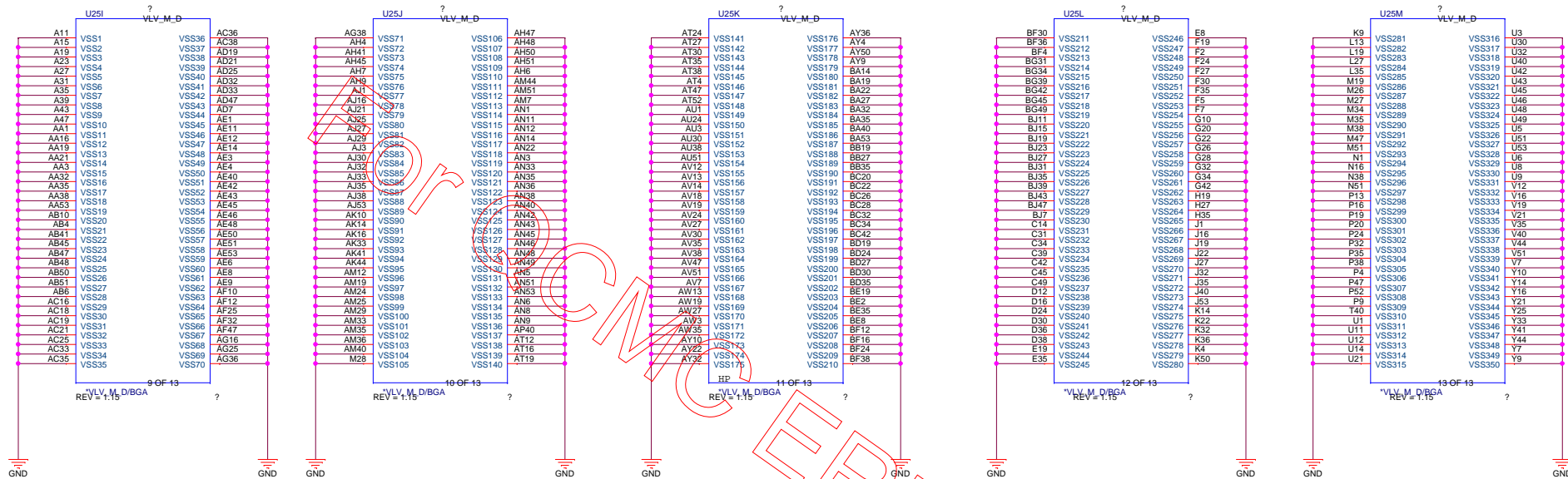


**PROJECT : U8A**  
**Quanta Computer Inc.**

Size	Document Number	Rev
Custom	Valley 7/9 (Power 1)	1A
Date: Thursday, April 23, 2015	Sheet 8 of 37	

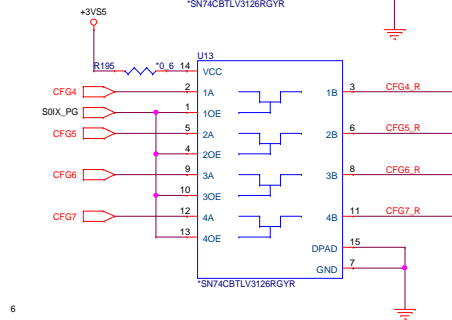
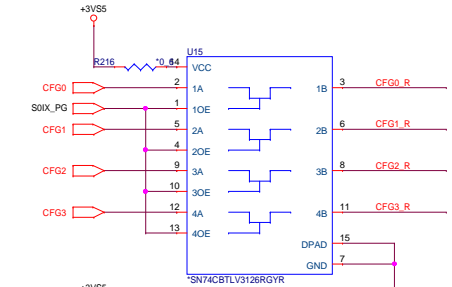
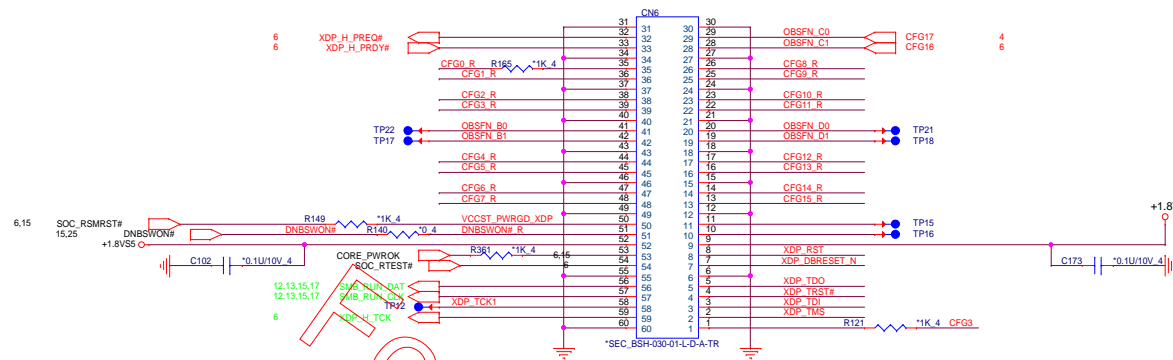




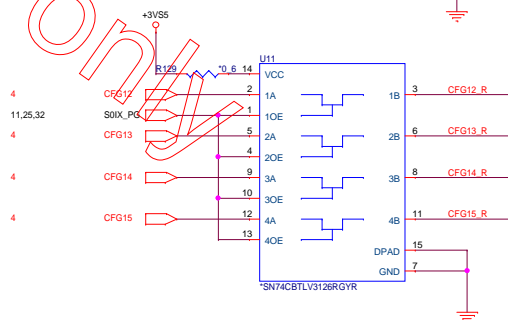
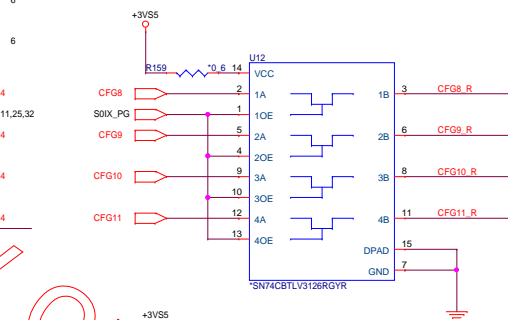
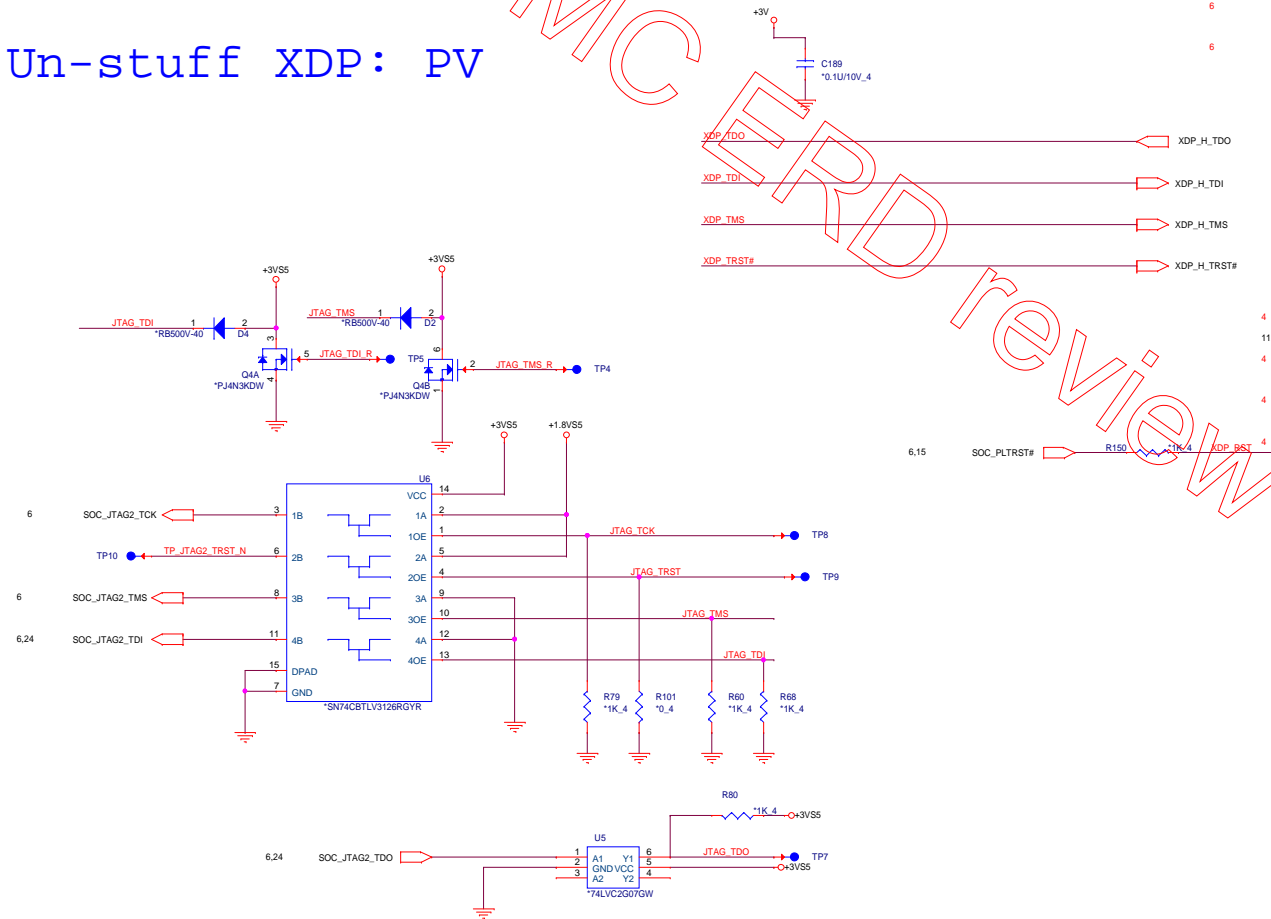


**PROJECT : U8A**  
**Quanta Computer Inc.**

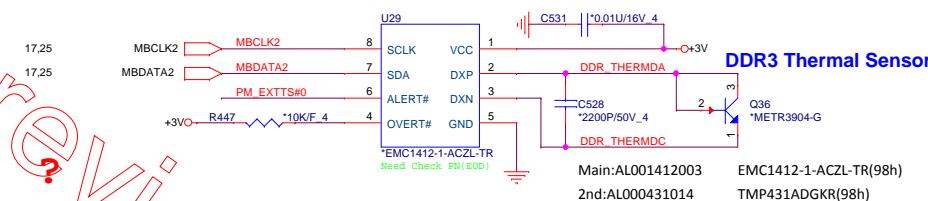
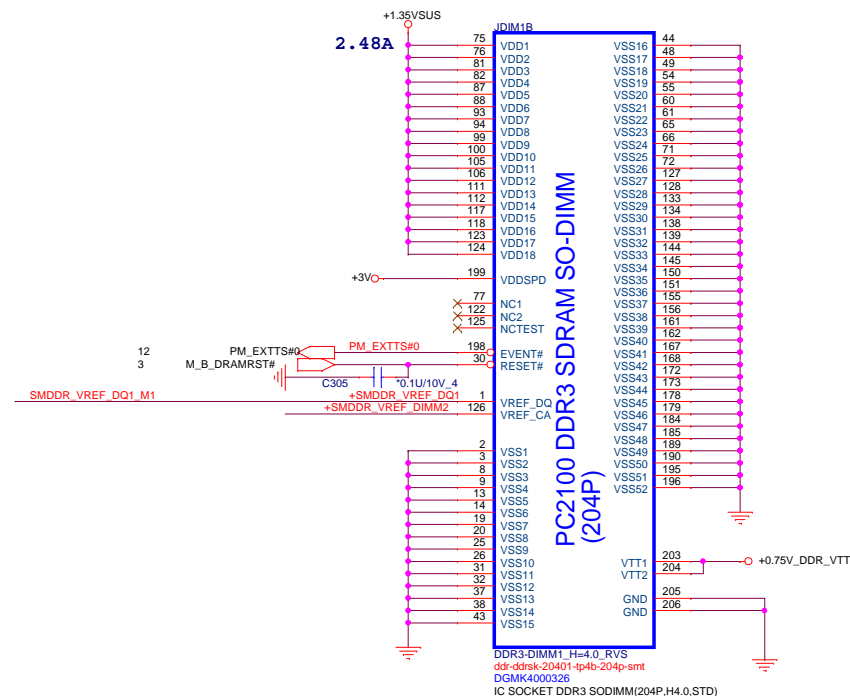
Size	Document Number	Rev
Custom	Valley 9/9 (GND)	1A
Date: Thursday, April 23, 2015	Sheet 10 of 37	



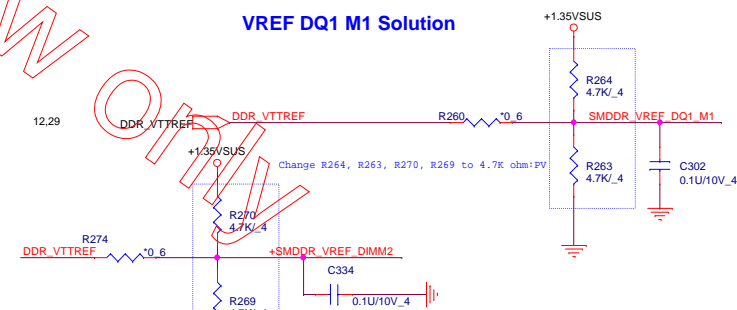
Un-stuff XDP: PV



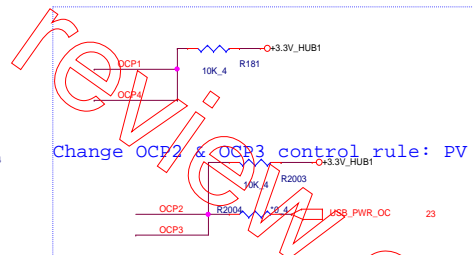


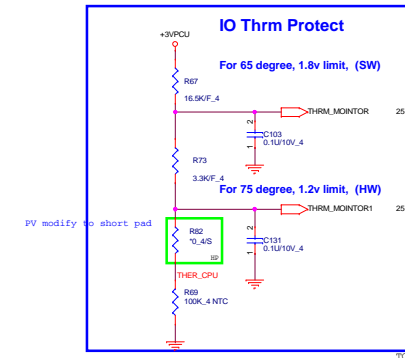
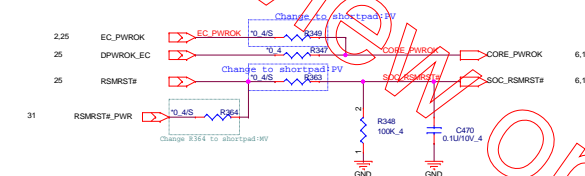
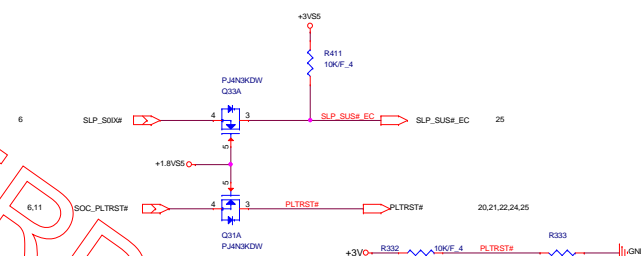
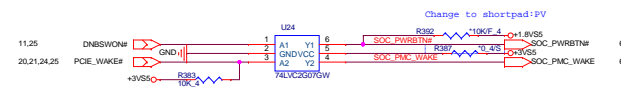
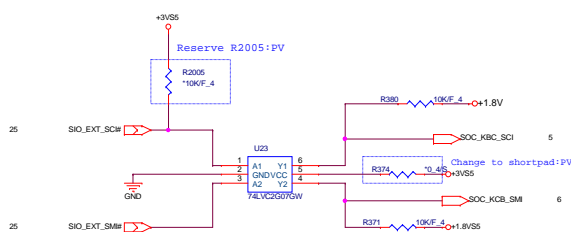
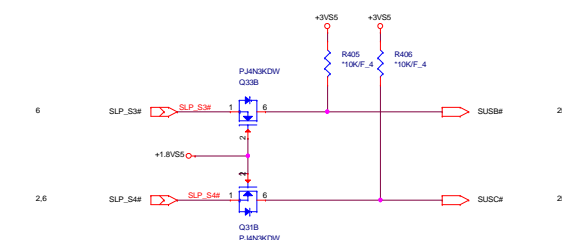
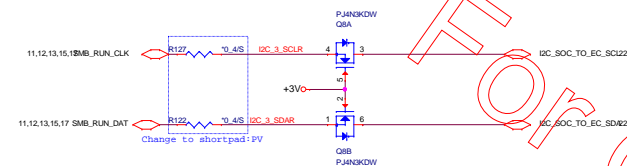
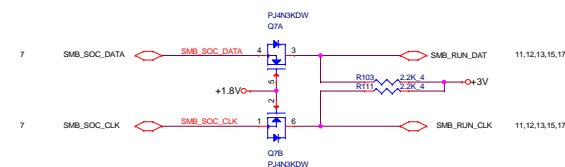
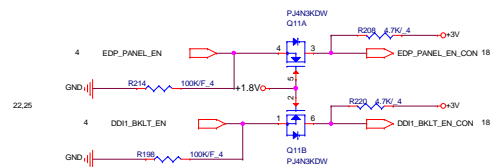
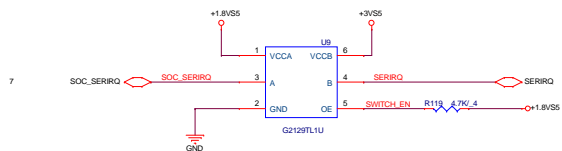


1uF/10uF 4pcs on each side of connector



Size Custom	Document Number <b>DDR3 DIMM1-STD(4.0H)</b>	Rev 1A
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## S5 to S0 Cold Boot Sequence without S0ix

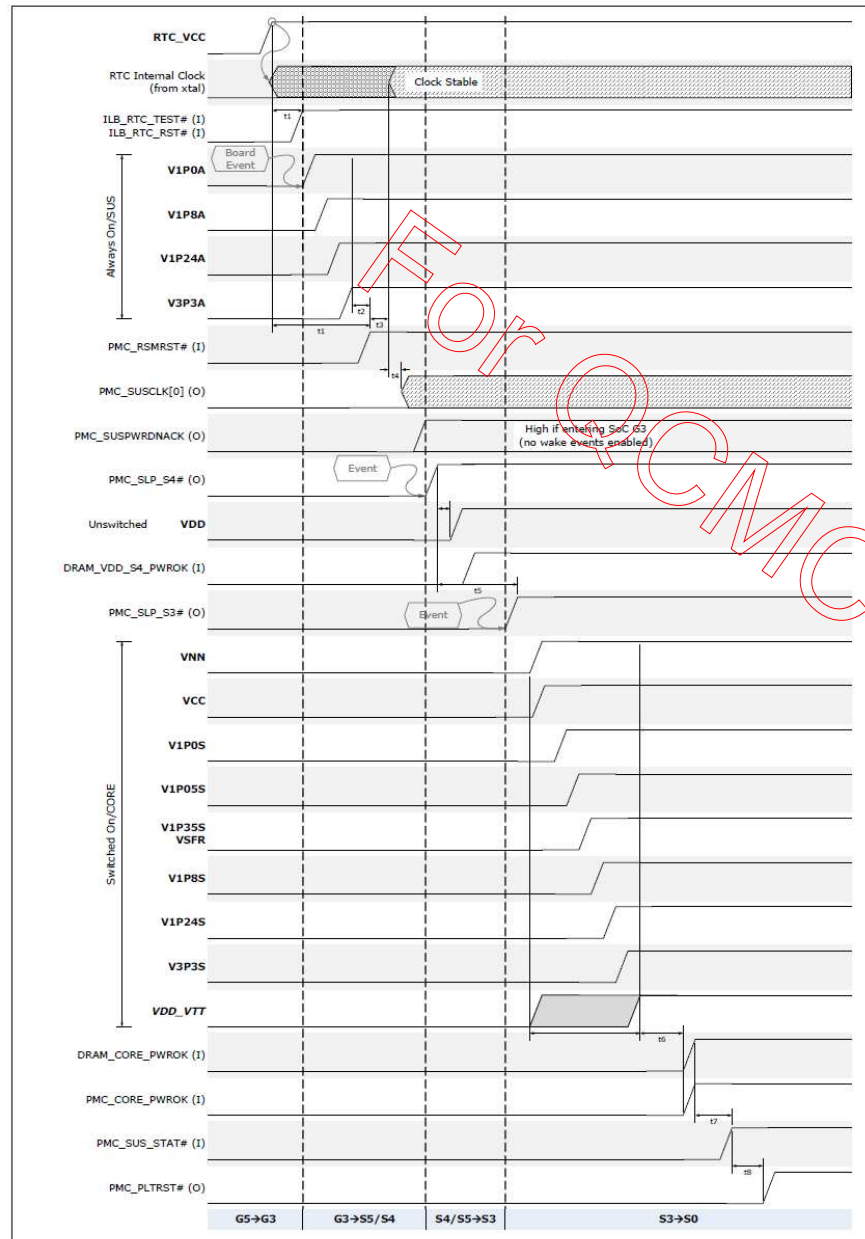


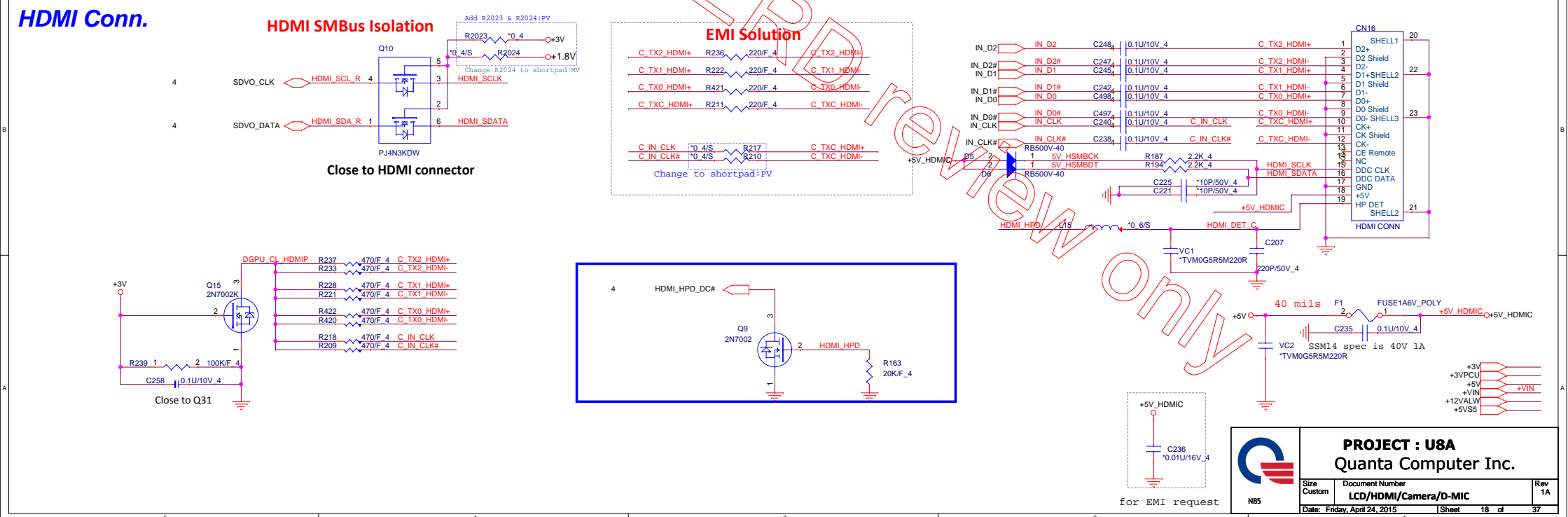
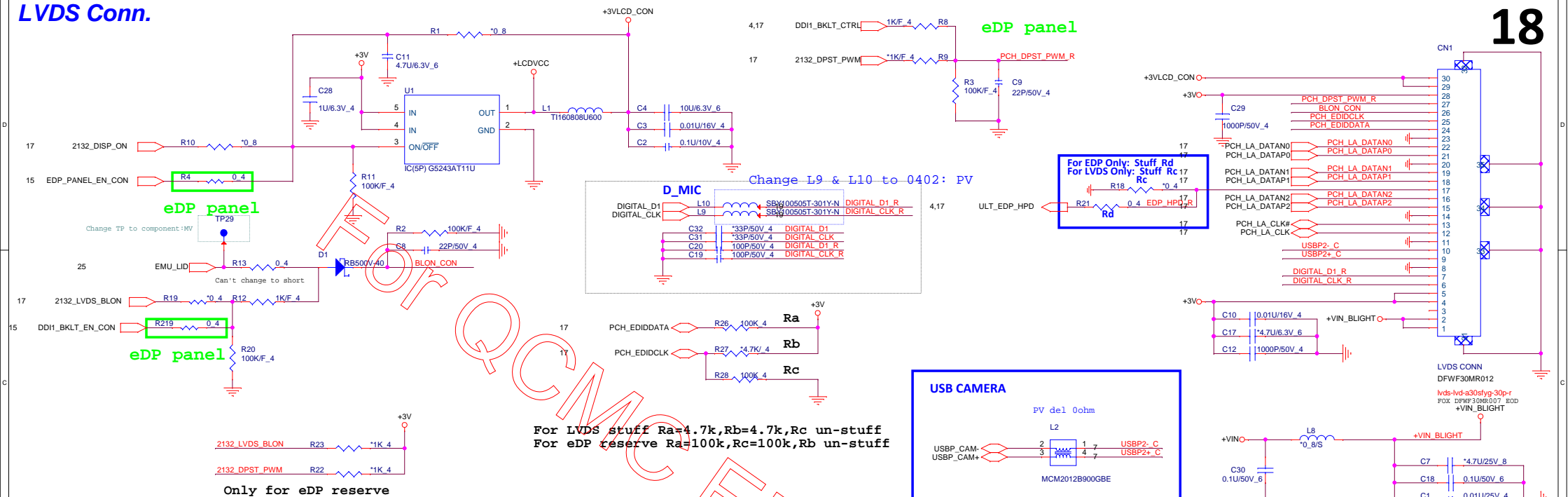
Table 4-12. Cold Boot Timing Spec

Parameter	Description	Min	Typ	Max	Units
T0	RTC_VCC stable to ILB_RTC_TEST# high	9			ms
T1	VR ramp up time from 10% to 90% voltage level			2	ms
T2	Rail to subsequent rail turn on delay	10		2000	us
T3	VSUS stable to PMC_RSMRST# high	10			ms
T4	S and SX rails stable to PMC_CORE_PWROK	100			ms

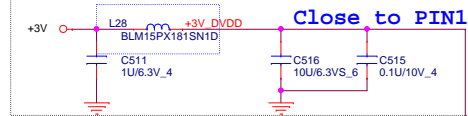
### NOTES:

1. T1 and T2 are recommended time for all the VR rails unless specified otherwise. The VR ramp up time T2 and subsequent rail delay T3 are put in place to avoid inrush current which may be caused by multiple loads turning on simultaneously or fast charging of VR output decoupling.
2. Violation of rail-to-rail sequencing may cause the SoC part long term reliability issue.
3. Platform devices other than SoC sequencing are not explicitly shown as they are not limited by the SoC sequencing requirement.



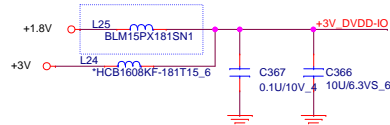


Change L29 to 0402: PV



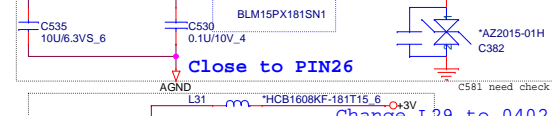
Close to PIN1

Change L25 to 0402: PV



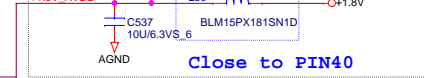
&gt;40mils trace

Change L26 to 0402: PV



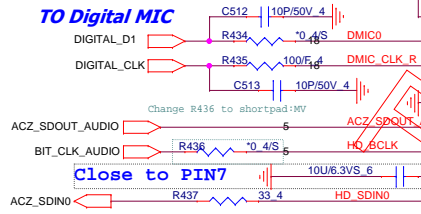
Close to PIN26

Change L29 to 0402: PV



Close to PIN40

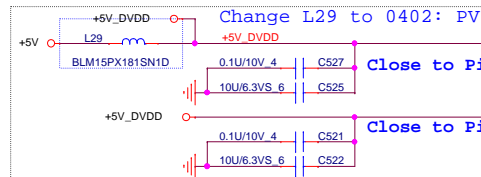
TO Digital MIC



Close to PIN7

Close to Pin 34,35,36

TO Internal Speakers

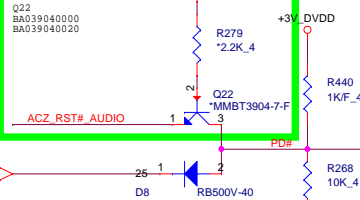


Change L29 to 0402: PV

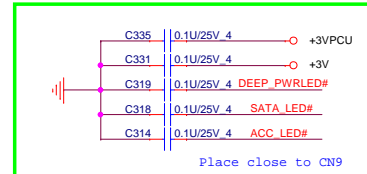
Close to Pin 41

Close to Pin 46

for intel HSW ULT

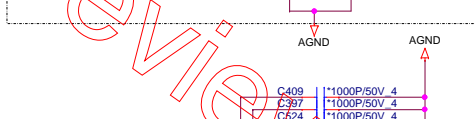
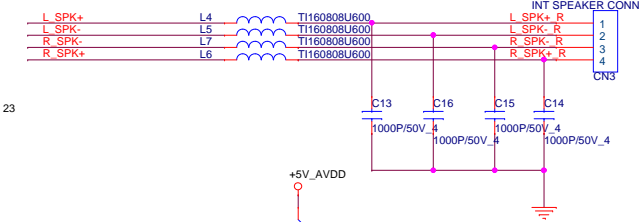


USB 2.0 AND AUDIO COMBO JACK

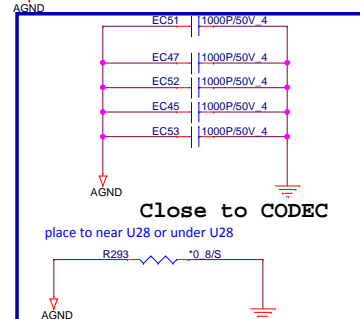


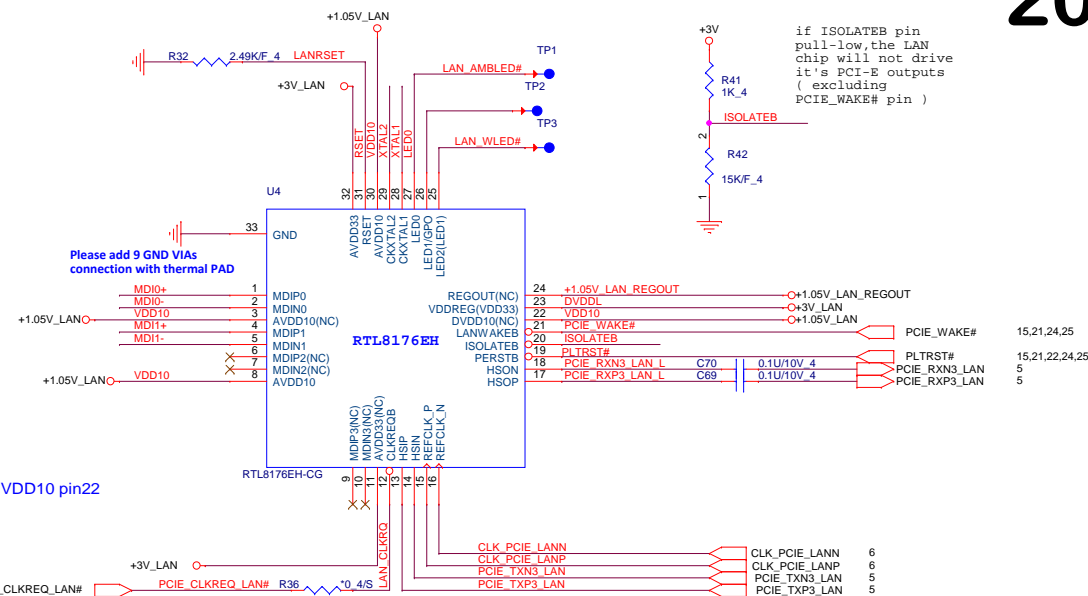
PV del 0ohm

Check layout mount location

Close to Speaker  
Speaker 4 ohm: 40mils

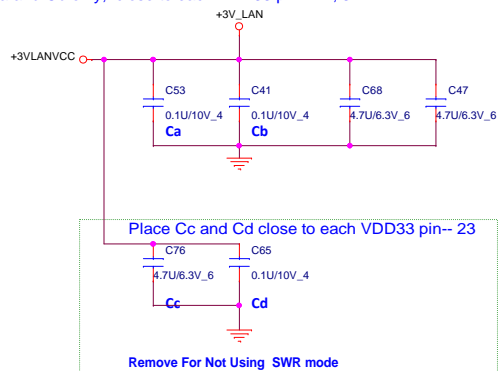
Change Q35 PR:PV

Close to CODEC  
place to near U28 or under U28

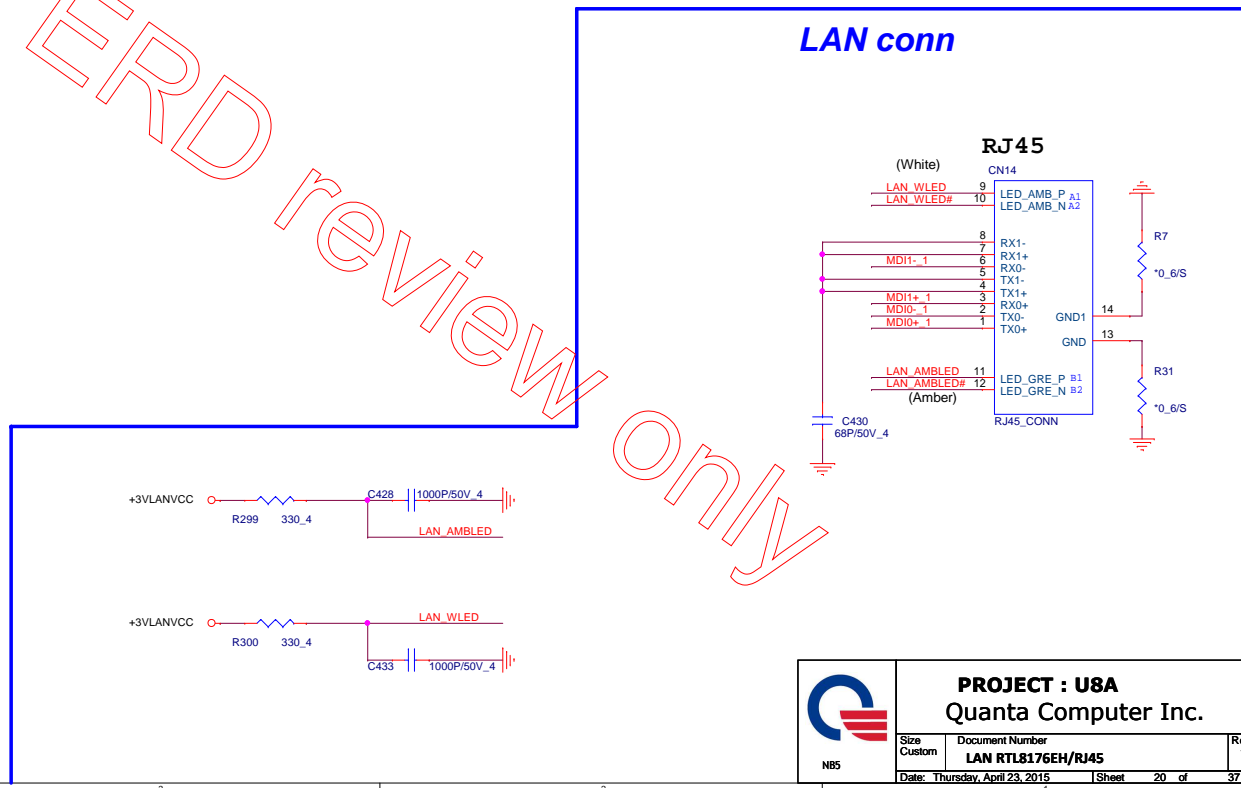


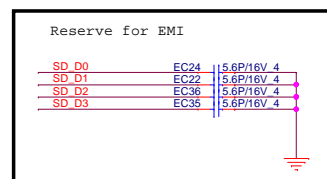
BOT: TST1284R LF DB0EL5LAN00

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



4,9,11,12,13,14,15,17,18,19,21,22,23,24,25,32  
32 +3VLANVCC

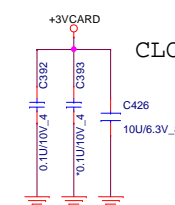
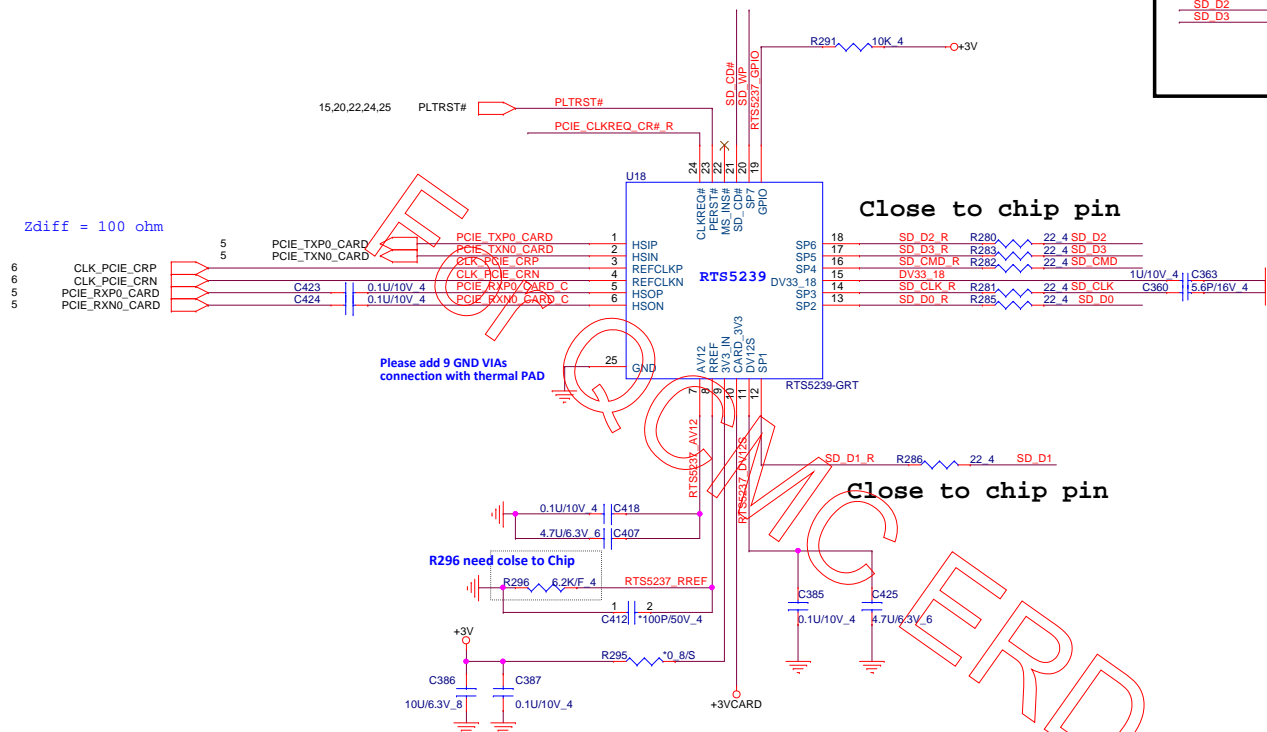




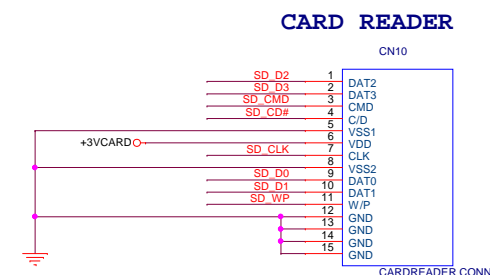
SP1	SD D1	
SP2	SD D0	MS D1
SP3	SD CLK	MS D0
SP4	SD CMD	MS D2
SP5	SD D3	MS D3
SP6	SD D2	MS CLK
SP7	SD WP	MS BS

## Share Pin

SD / MMC



CLOSE CONN

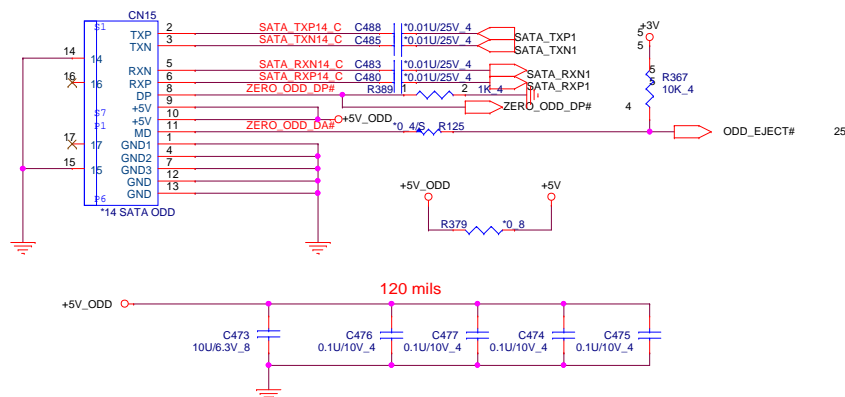


R3X Type

## SATA ODD CONNECTOR

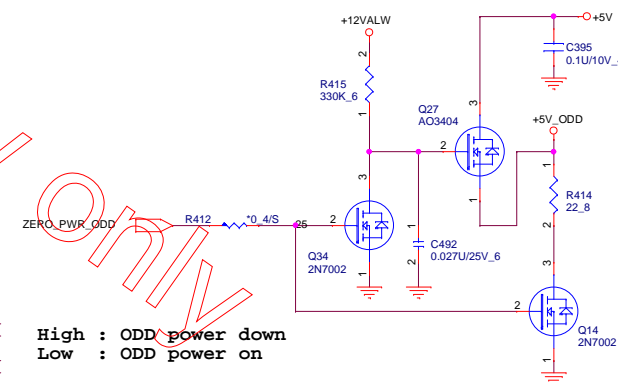
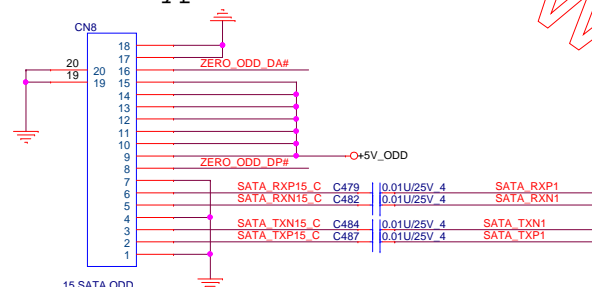
**14" SATA ODD**

Bypass CAP close conn



**15" SATA ODD**

New Type



High : ODD power down  
Low : ODD power on

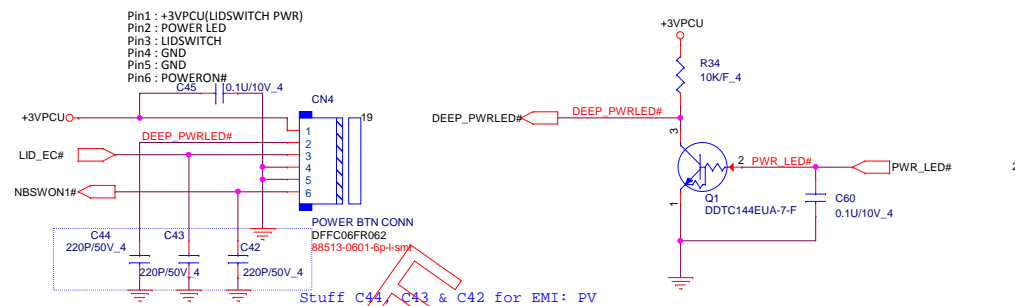


**PROJECT : U8A**  
Quanta Computer Inc.

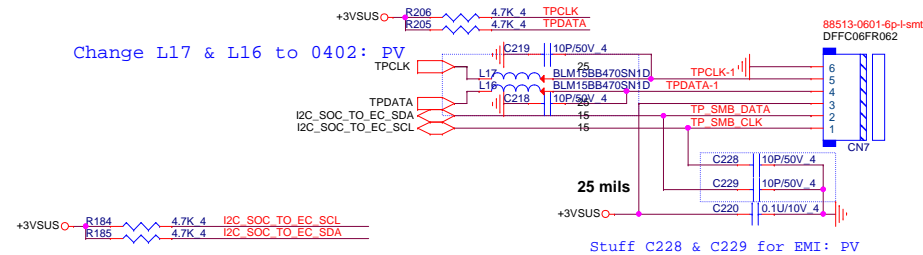
Size Custom	Document Number <b>CR RT55239 &amp; CR SOCKET</b>	Re 1
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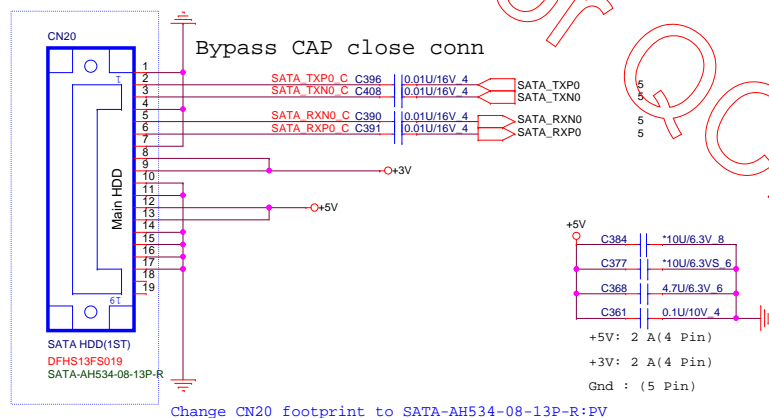
## Power Botton Connector



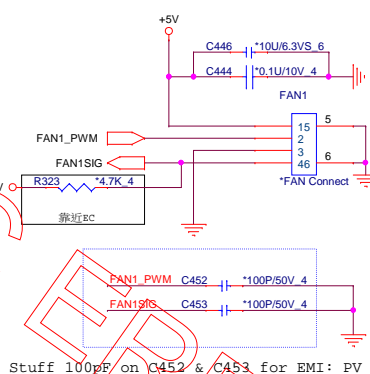
### Touch Pad Connector



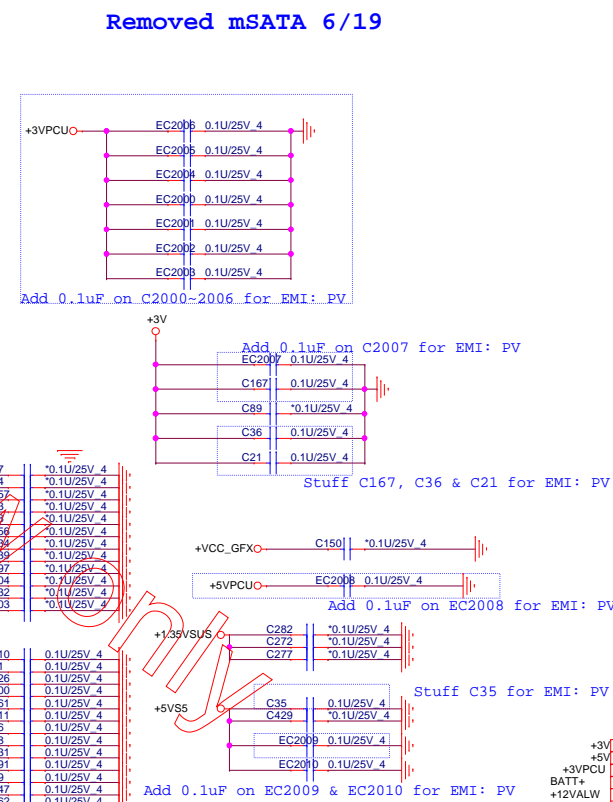
### SATA HDD Connector(Cable type)



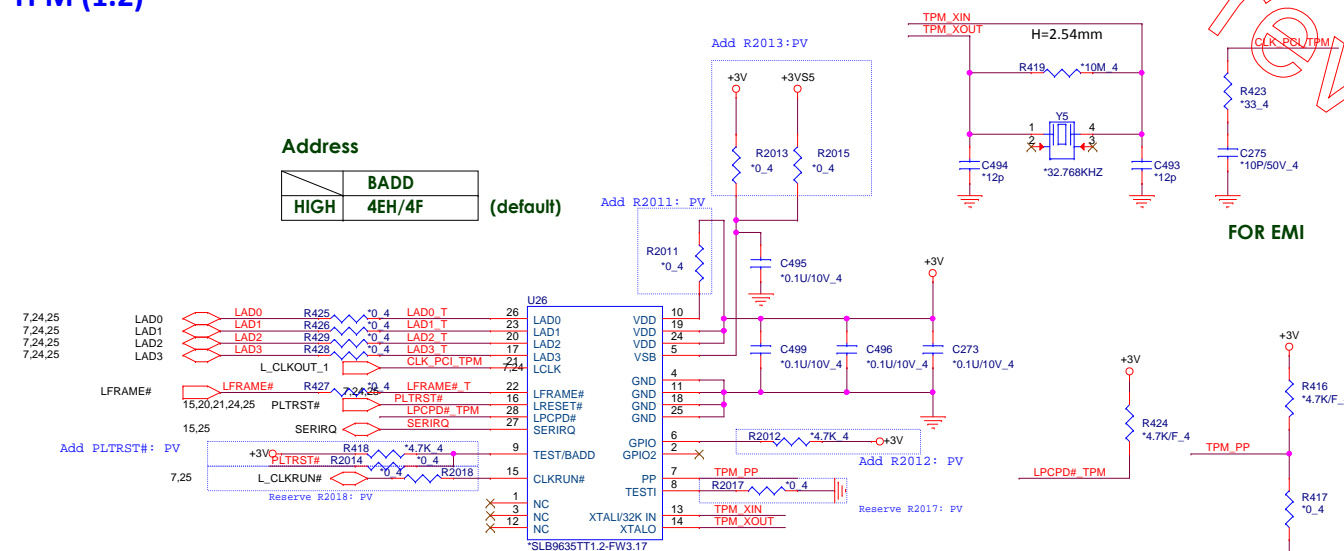
**FAN**



### Mini PCI-E Card 2- Full size mSATA



## TPM (1.2)





[illegible][illegible]

USBPW\_ON#

USB\_HUB\_PWR

R2002 10.0k

0.4

14

VCC3

\*AVLCS5\_4

C298 1uF/3.3V

UP7534BRA-20

VIN1

VIN2

EN

GND

OUT3

OUT2

OUT1

OC

8

7

6

5

4

3

2

1

+5V

Active Low

PV modify

USB 3.0

DFHS09FR43

ush-2uh4/29-2007


[illegible]

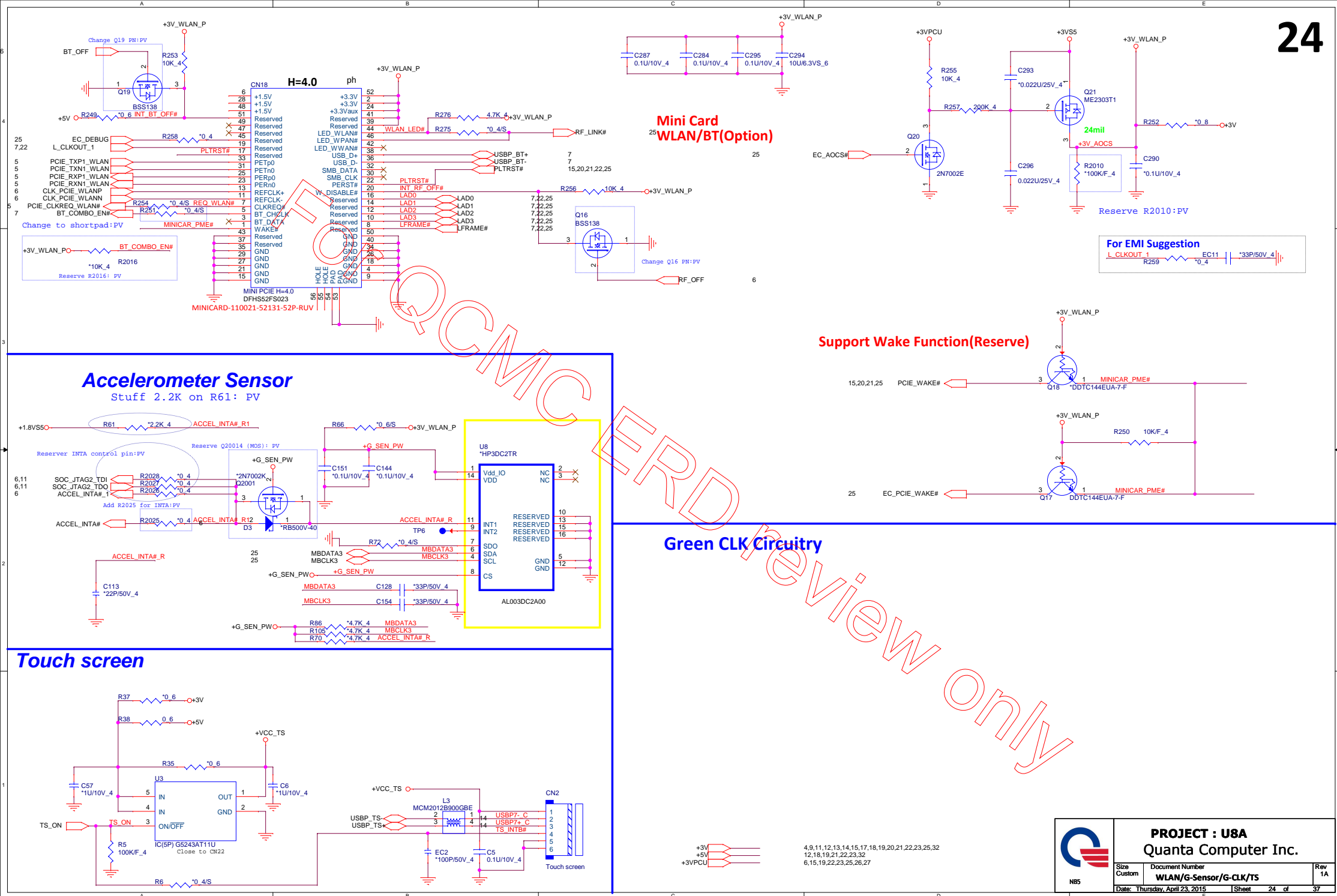
H17  
H-Tc256Bc236D146P2

H19  
h-tc256bc236d145p2

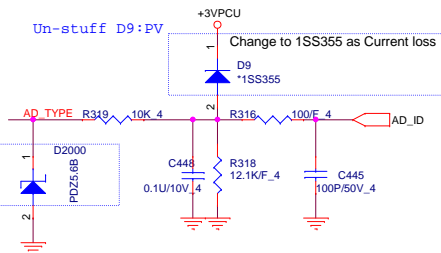
Nut PN:MBFF4001010

SI delete

 NBS	<b>PROJECT : USA</b> <b>Quanta Computer Inc.</b>		
	Size Custom	Document Number <b>USB3.0/KB</b>	Rev 1A
	Date: Thursday, April 23, 2015	Sheet 23 of	37

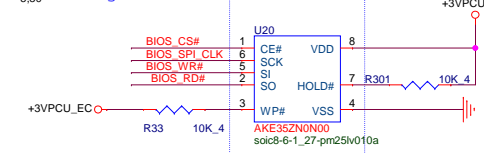


## adapter Type check

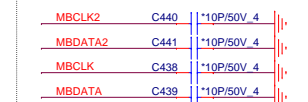


Vender	Size	P/N
WINBOND	128KB	W25X10CLSNIG(AKE35ZN0N00)
MXIC	128KB	MX25L1006EMI-10G(AKE35FN0Z02)
Socket		DFHS08FS023

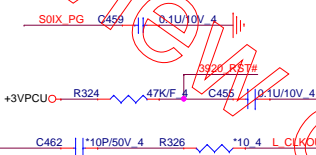
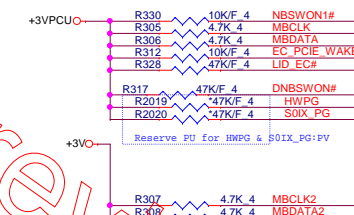
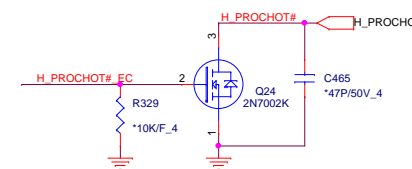
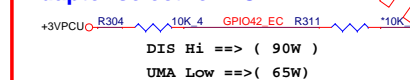
Change U20 from 1MB to 128KB:PV



Reserve for ENE Hold time issue



## Adapter select for EC



Change L27 to 0402: PV

500mA

+3VPCU

+3VPCU\_EC

+3VPCU

C435

4.7U/6.3V\_6

L27

BLM156B470SN1D

C456

0.1U/10V\_4

C460

0.1U/10V\_4

C451

0.1U/10V\_4

C442

0.1U/10V\_4

C443

0.1U/10V\_4

C444

0.1U/10V\_4

C445

0.1U/10V\_4

C446

0.1U/10V\_4

C447

0.1U/10V\_4

C448

0.1U/10V\_4

C449

0.1U/10V\_4

C450

0.1U/10V\_4

C451

0.1U/10V\_4

C452

0.1U/10V\_4

C453

0.1U/10V\_4

C454

0.1U/10V\_4

C455

0.1U/10V\_4

C456

0.1U/10V\_4

C457

0.1U/10V\_4

C458

0.1U/10V\_4

C459

0.1U/10V\_4

C460

0.1U/10V\_4

C461

0.1U/10V\_4

C462

0.1U/10V\_4

C463

0.1U/10V\_4

C464

0.1U/10V\_4

C465

0.1U/10V\_4

C466

0.1U/10V\_4

C467

0.1U/10V\_4

C468

0.1U/10V\_4

C469

0.1U/10V\_4

C470

0.1U/10V\_4

C471

0.1U/10V\_4

C472

0.1U/10V\_4

C473

0.1U/10V\_4

C474

0.1U/10V\_4

C475

0.1U/10V\_4

C476

0.1U/10V\_4

C477

0.1U/10V\_4

C478

0.1U/10V\_4

C479

0.1U/10V\_4

C480

0.1U/10V\_4

C481

0.1U/10V\_4

C482

0.1U/10V\_4

C483

0.1U/10V\_4

C484

0.1U/10V\_4

C485

0.1U/10V\_4

C486

0.1U/10V\_4

C487

0.1U/10V\_4

C488

0.1U/10V\_4

C489

0.1U/10V\_4

C490

0.1U/10V\_4

C491

0.1U/10V\_4

C492

0.1U/10V\_4

C493

0.1U/10V\_4

C494

0.1U/10V\_4

C495

0.1U/10V\_4

C496

0.1U/10V\_4

C497

0.1U/10V\_4

C498

0.1U/10V\_4

C499

0.1U/10V\_4

C500

0.1U/10V\_4

C501

0.1U/10V\_4

C502

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C579

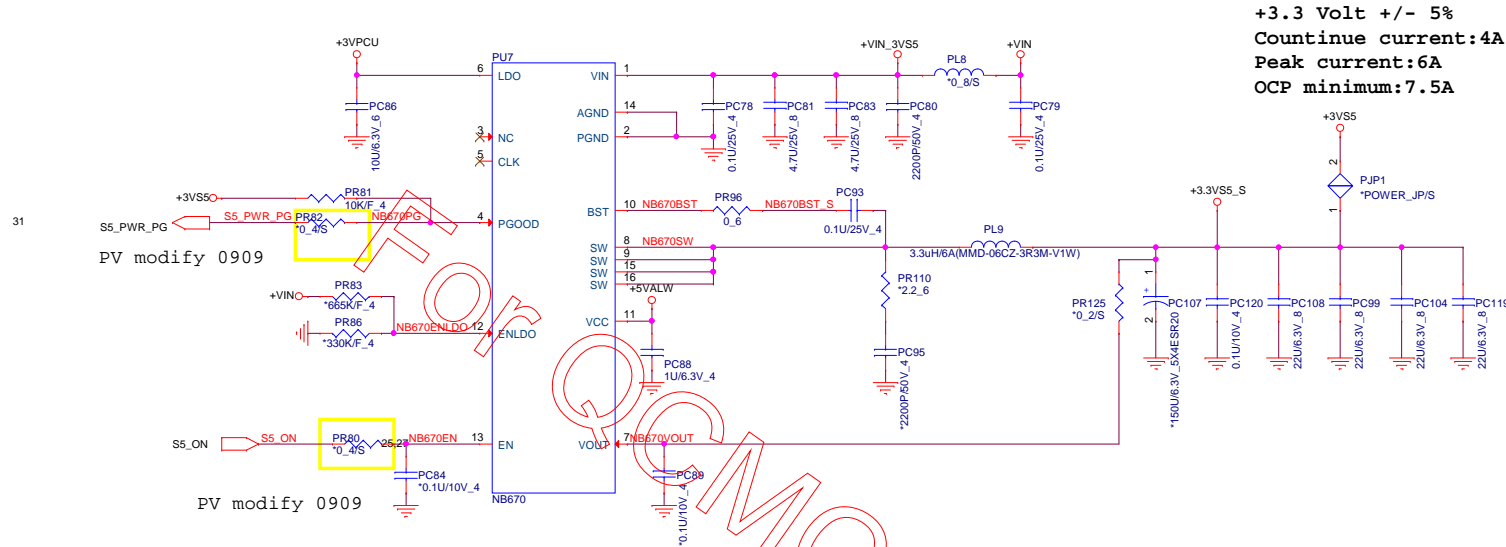
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C580

0.1U/10V\_4

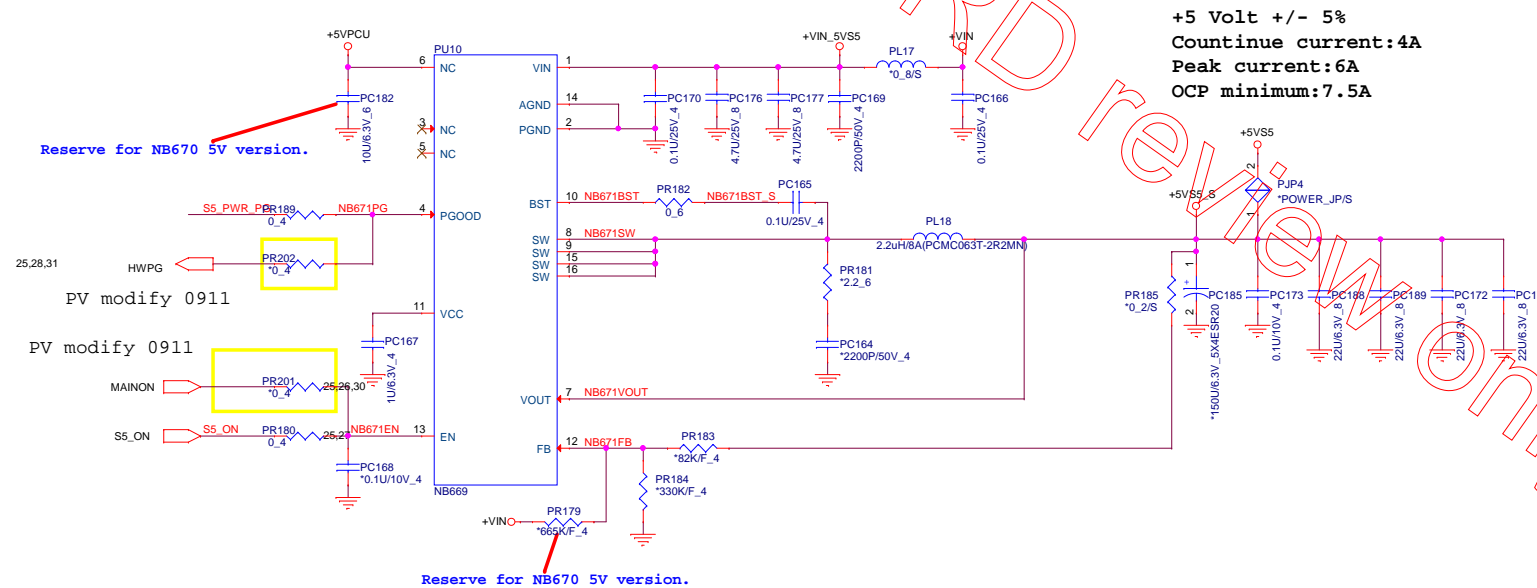
C581

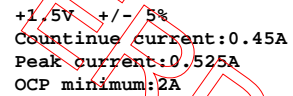
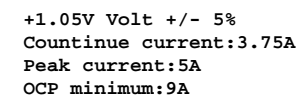




+3VS5  
+5VS5

2,9,11,14,15,22,24,28,30,31,32  
14,19,22,23,29,30,31,32

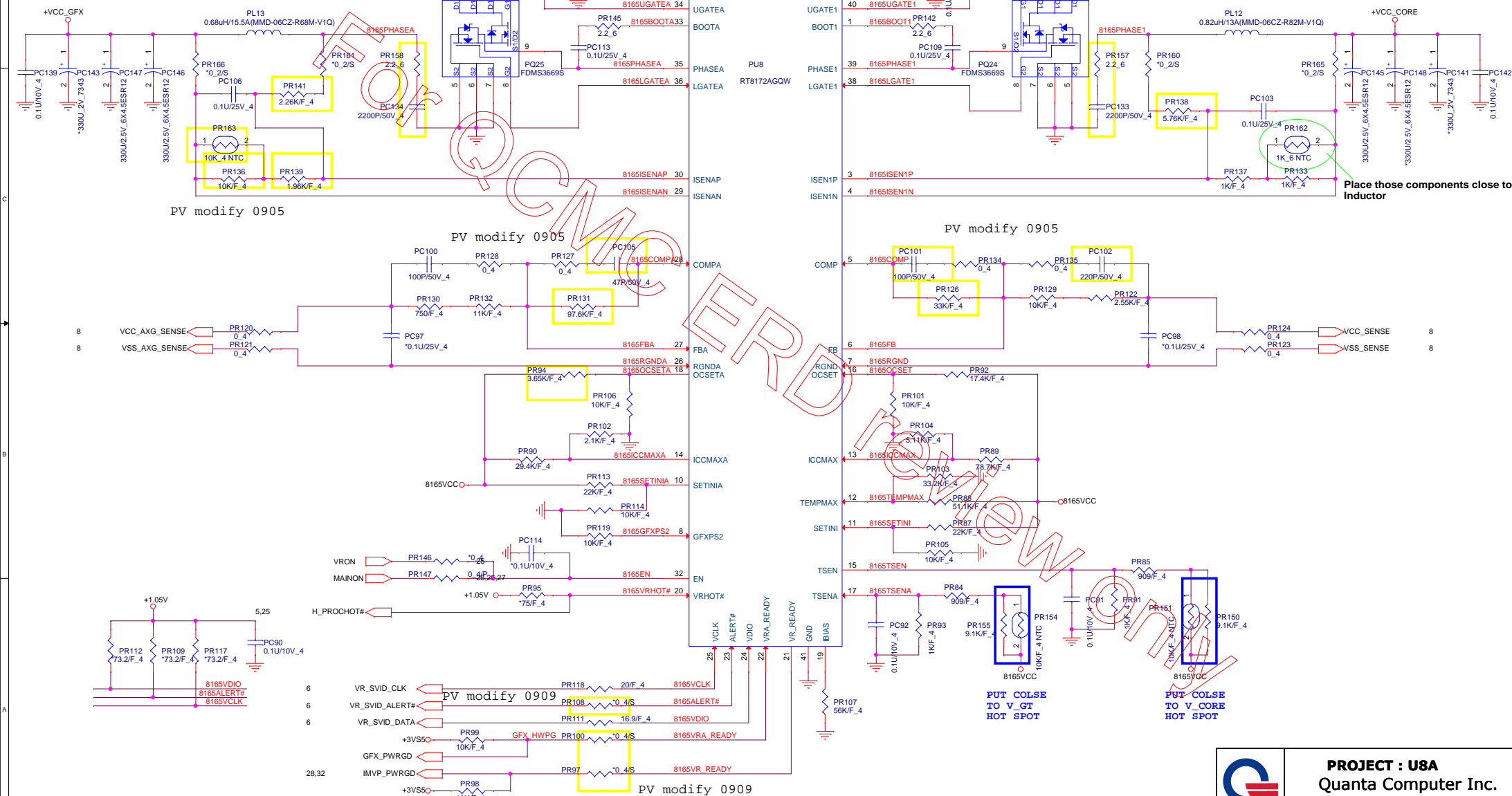


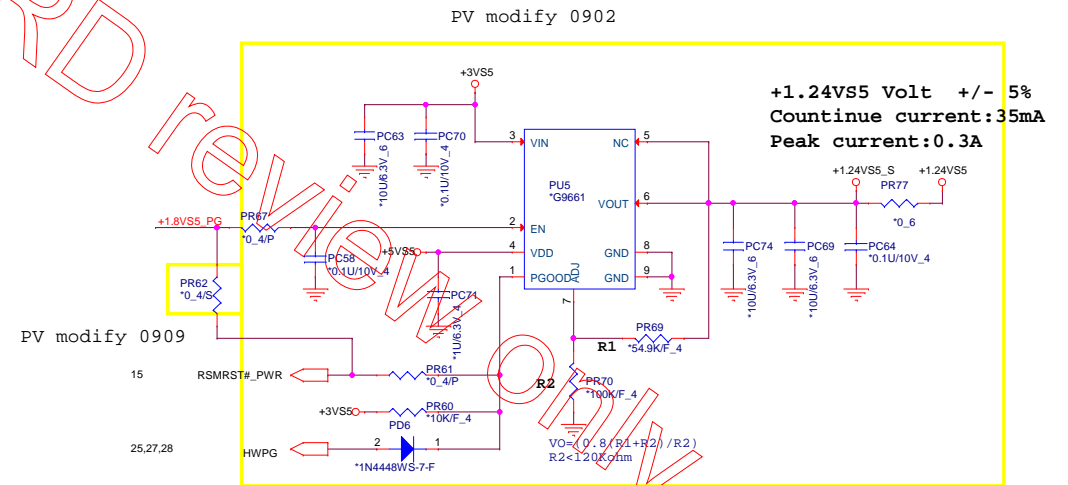
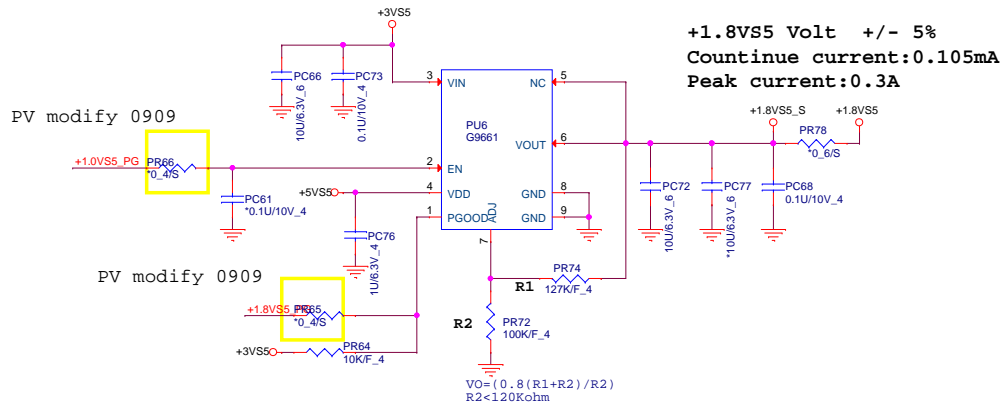
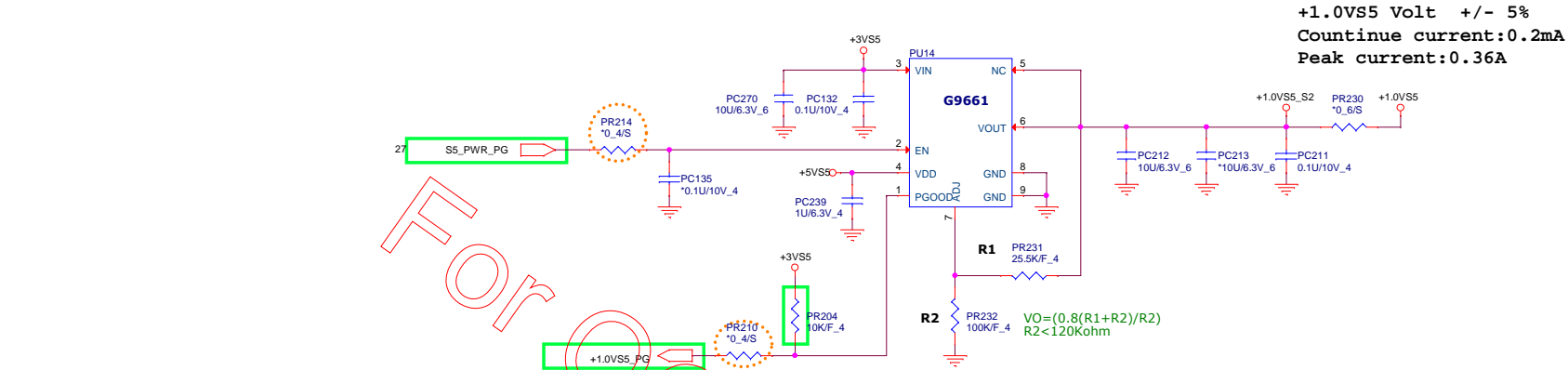


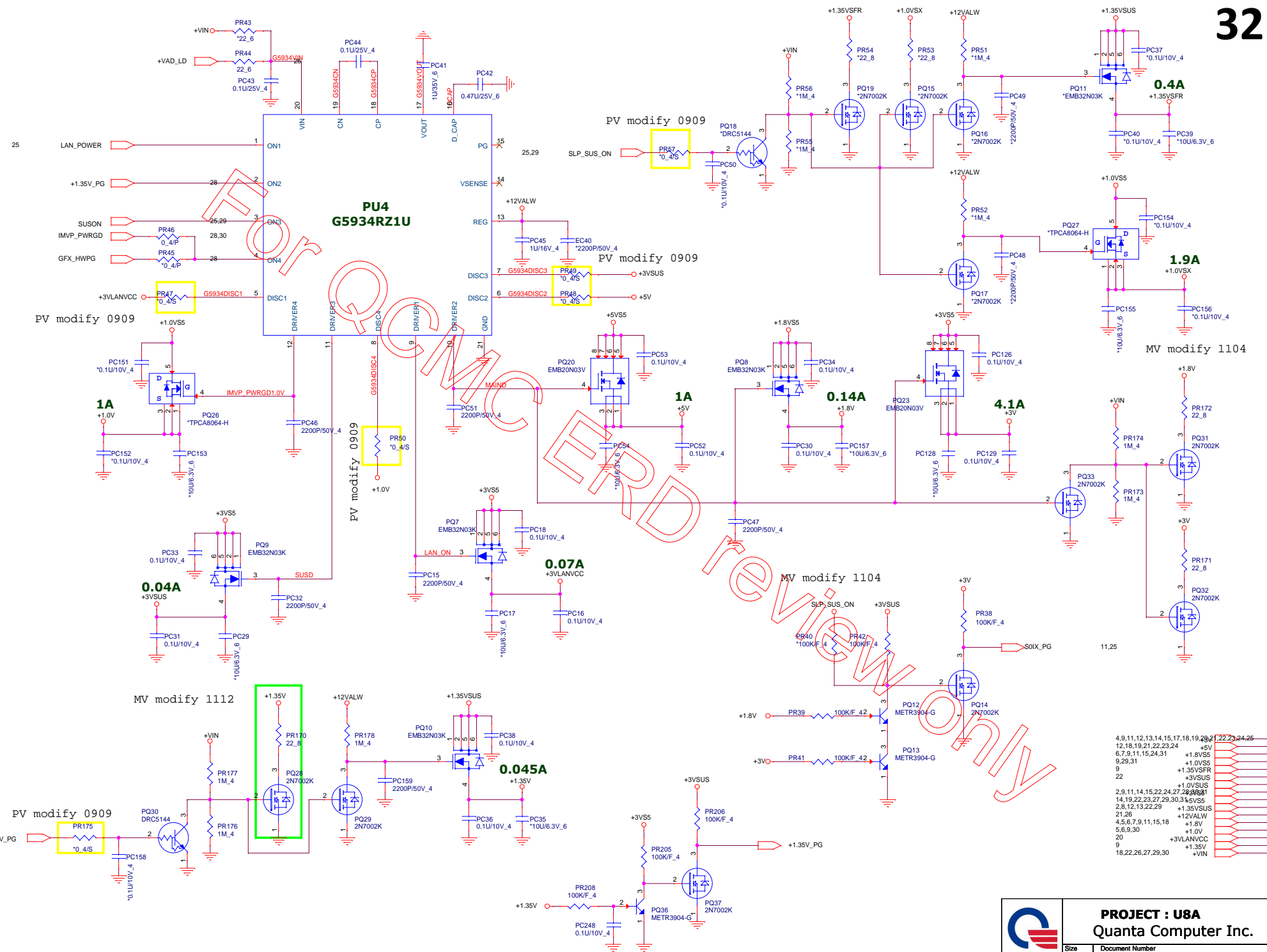




**+GFXORE Volt +/- 5%**  
**Countinue current:6A**  
**Peak current:14A**  
**OCF minimum:16.5A**







USB3.0	Port Assignment	Power control pin
PORT0	USB HUB	

USB2.0	Port Assignment	Power control pin
PORT0	USB HUB	N/A
PORT1	Right side USB Daughter BD	USBPW_ON#(from EC)
PORT2	BT	N/A
PORT3	Camera	N/A

USB HUB	Port Assignment	Power control pin
USB30 PORT1	USB2.0/USB3.0 COMBO 1st	USBPW_ON#(from EC)
USB30 PORT2	USB2.0/USB3.0 COMBO 2nd	USBPW_ON#(from EC)
USB30 PORT3	N/A	
USB30 PORT4	N/A	
USB20 PORT1	USB2.0/USB3.0 COMBO 1st	USBPW_ON#(from EC)
USB20 PORT2	USB2.0/USB3.0 COMBO 2nd	USBPW_ON#(from EC)
USB20 PORT3	TS	TS_ON
USB20 PORT4		

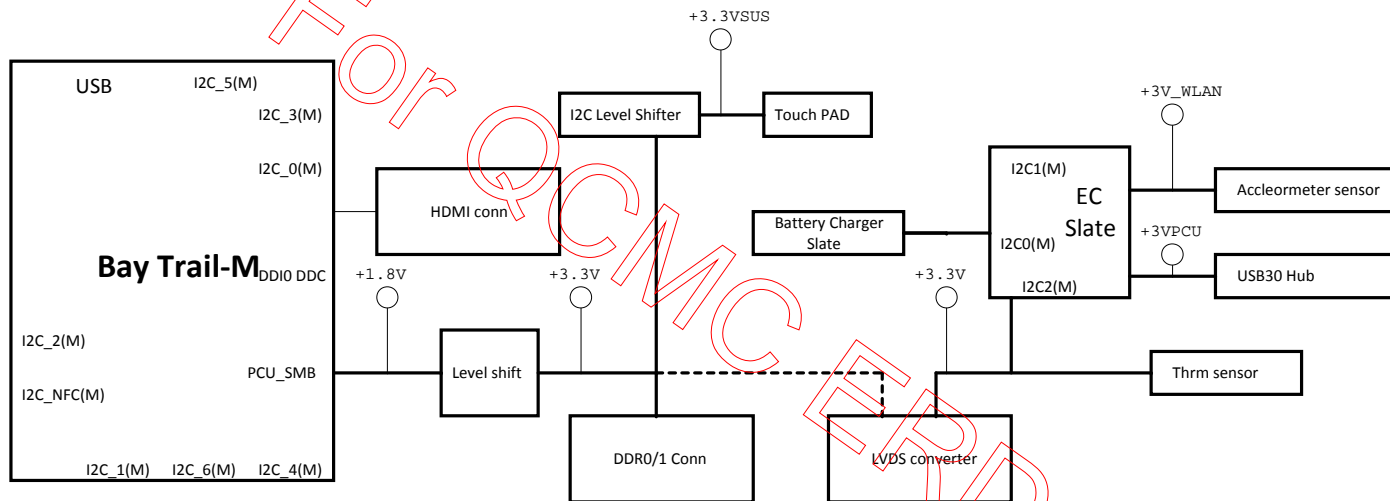
SATA Master	Port Assignment	Power control pin
SATA0	HDD	N/A
SATA1	ODD	ZERO_PWR_ODD

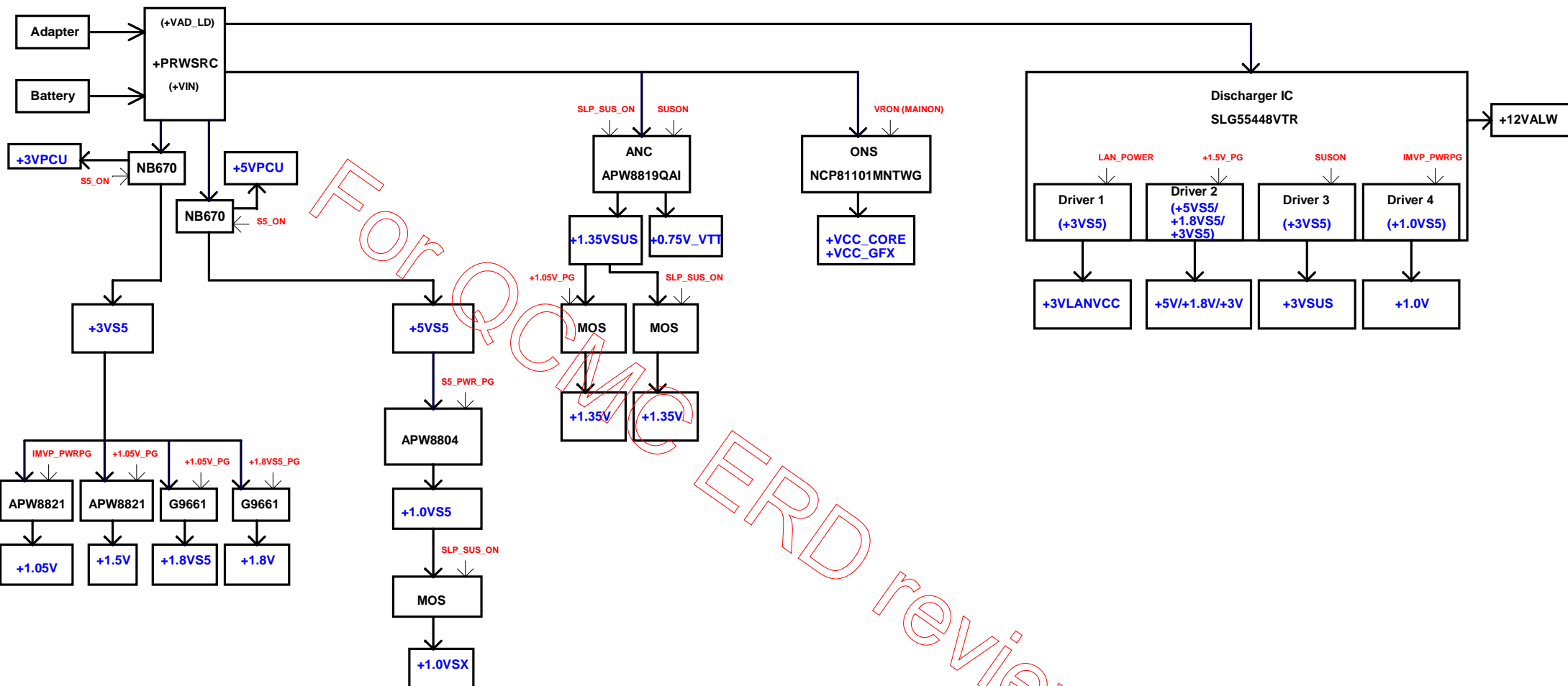
PCIE	Port Assignment	Control pin
PCIE 0	Card reader	
PCIE 1	WLAN	
PCIE 2	LAN	
PCIE 3	NC	

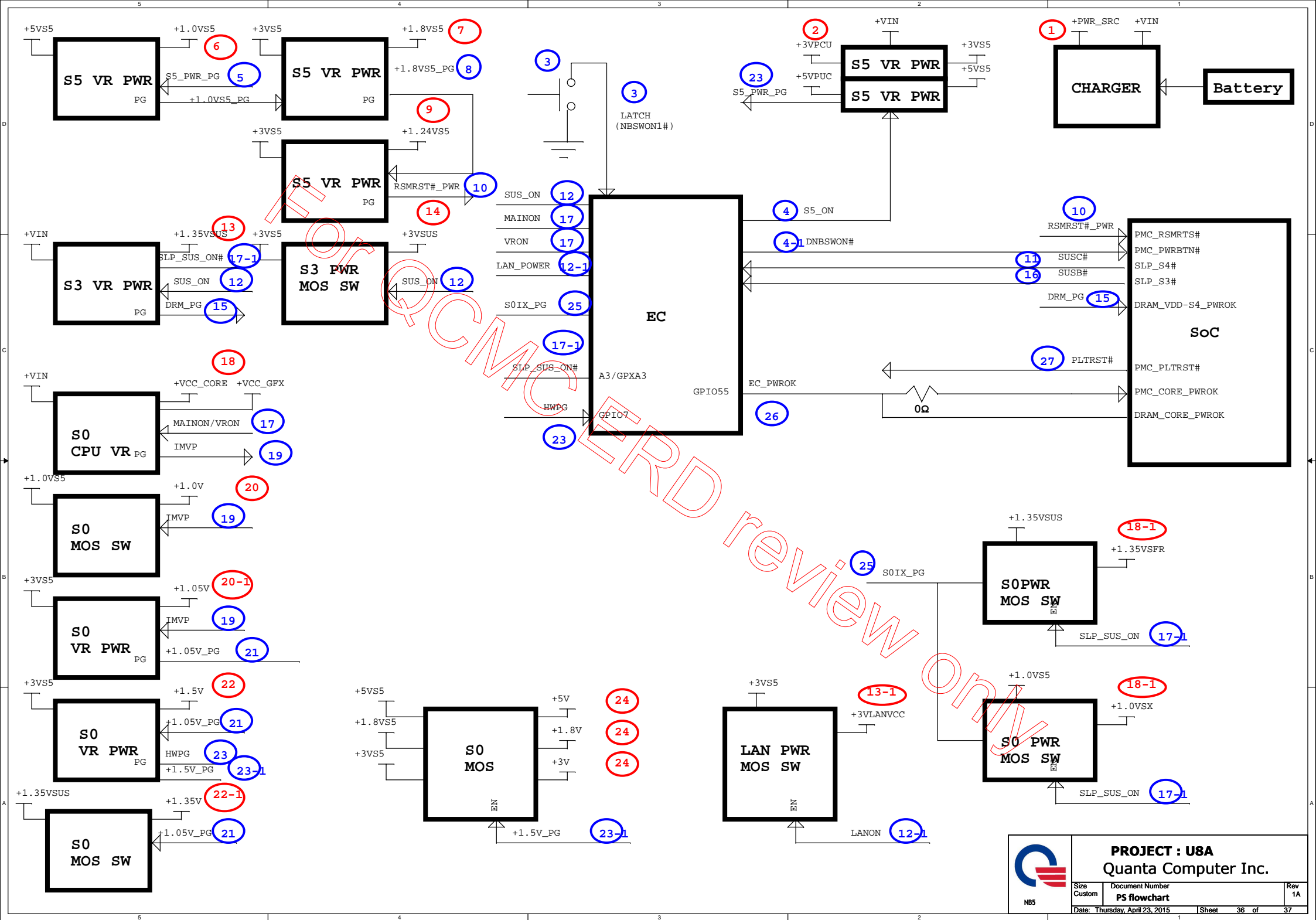


**PROJECT : U8A**  
Quanta Computer Inc.

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For QCMC ERD review only

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