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Power States

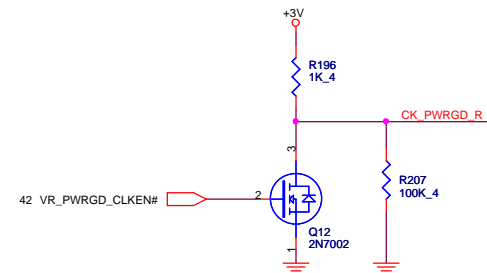
POWER PLANE	VOLTAGE	PAGE	DESCRIPTION	CONTROL SIGNAL	ACTIVE IN
VIN	10V~+20V	16,36,37,38,39,40,41,42	MAIN POWER		S0~S5
+3VRTC	+3.0V~+3.3V	9,12,34	RTC		S0~S5
3VPCU	+3.3V	9,16,20,23,28,32,34,36,37,40,42	ITE8502 POWER	3V5V_EN	S0~S5
5VPCU	+5V	36,37,38,39,40,42	DC/DC POWER IC SOURCE	3V5V_EN	S0~S5
+15V	+15V	16,31,36,38,39,40	LARGE POWER	3V5V_EN	S0~S5
LANVCC	+3.3V	20,36	LAN POWER	LAN_ON	
5V_S5	+5V	12,22,23,36	PCH SUS POWER	S5_ON	S0~S3
3V_S5	+3.3V	8,9,10,11,12,36	Sys Management,PCH Resume Well, Intel HD Audio,USB,WLAN,WiMAX POWER	S5_ON	S0~S3
5VSUS	+5V	16,32,36,41,42	SLP_S4# CTRLD POWER	SUSON	S0~S3
3VSUS	+3.3V	8,23,27,34,36,42	SLP_S4# CTRLD POWER	SUSON	S0~S3
1.5VSUS	+1.5V	4,6,12,14,15,36,38,39	DDR3 SODIMM POWER	SUSON	S0~S3
0.75VSMDDR_VTERM	+0.75V	14,15,36,38	DDR3 SODIMM REFERENCE POWER	MAINON	S0
+5V	+5V	8,12,16,17,18,19,21,28,30,34,36,37	SLP_S3# CTRLD POWER	MAINON	S0
+3V	+3.3V	3,4,8,9,10,11,12,14,15,16,17,18,19,20,21,22 23,24,25,26,27,29,30,31,32,33,34,36,37,38, 39,40,41,42,43	SLP_S3# CTRLD POWER	MAINON	S0
+1.8V	+1.8V	6,12,26,36,42	LVDS,NVM POWER	MAINON	S0
+1.5V	+1.5V	12,24,25,27,38,39	Mini PCIe,Express Card POWER	MAIND	S0
+1.05V_VTT	+1.05V	3,4,6,8,10,11,12,36,39,41,43	AuBurndale VTT POWER/PCH CORE POWER	MAINON	S0
+VCC_GFX_CORE		6,36,42	VGA CORE POWER	GFXVR_EN	S0
VCC_CORE		6,36,41	CPU CORE POWER	VRON	S0
LCDVCC	+3.3V	16	LCD Power	ENVDD	S0
+5V_ODD	+5V	21	ODD Power	MAINON#	S0
+5V_HDD	+5V	21	HDD Power	MAINON#	S0
BAT-V	+10V~+17V	37	MAIN BATTERY	CHG_PBATT	S0~S5



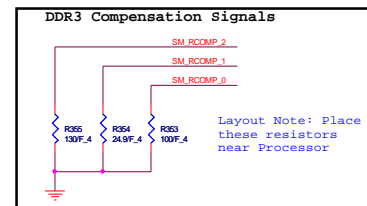
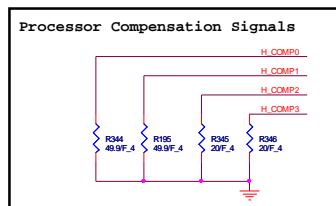
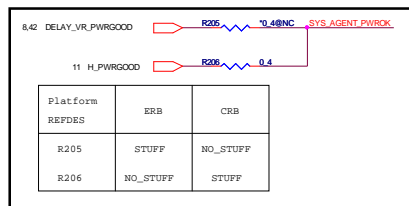
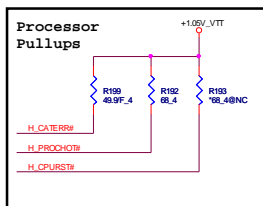
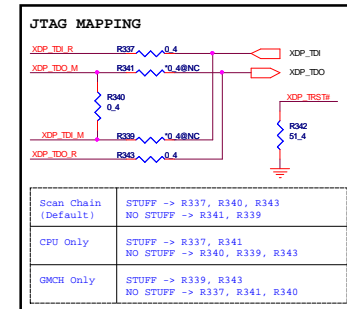
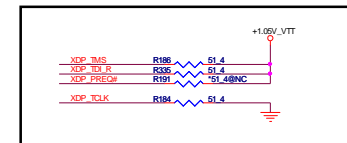
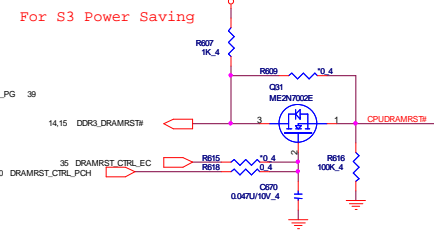
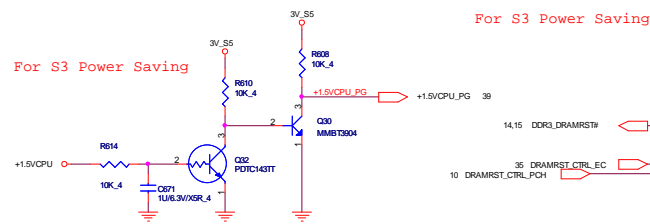
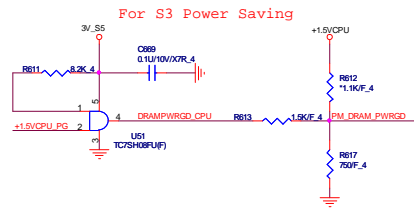
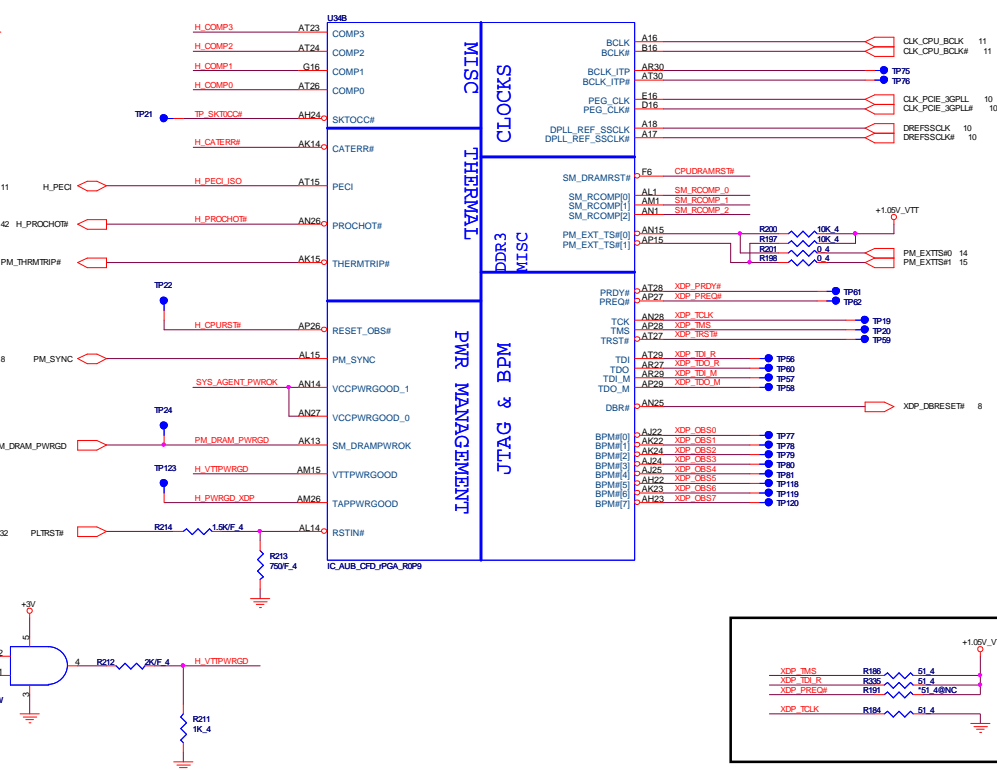
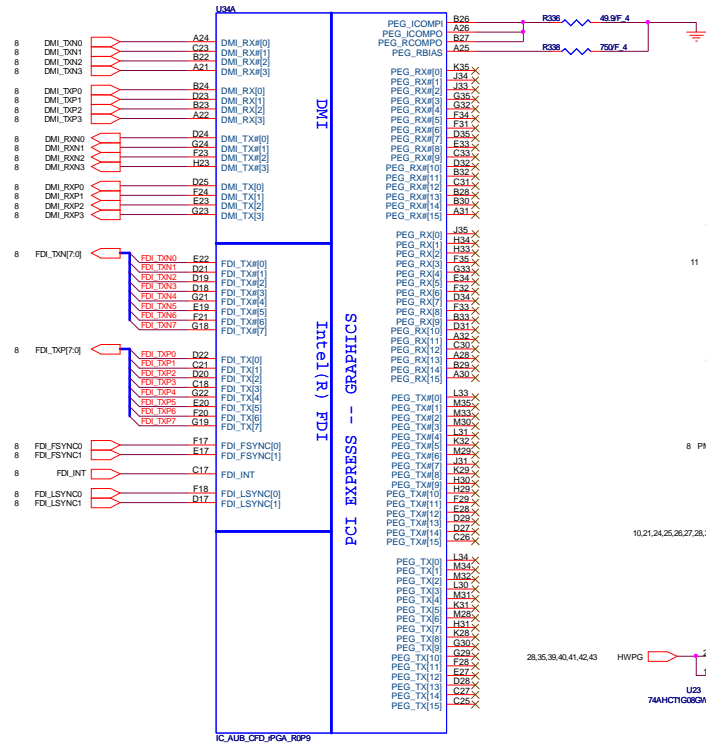
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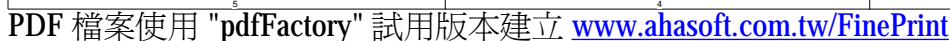












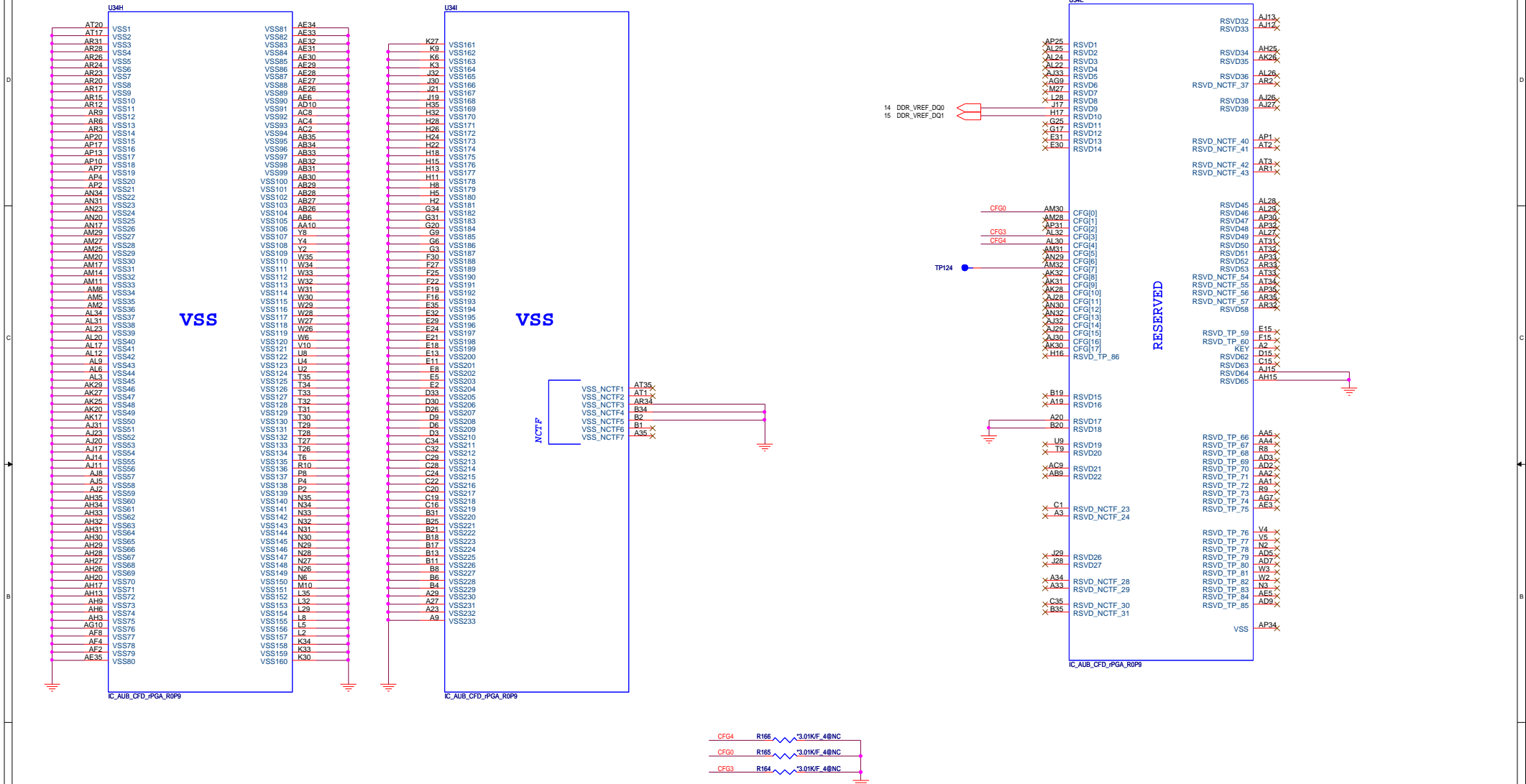






## ARRANDALE PROCESSOR (GND)

## ARRANDALE PROCESSOR( RESERVED, CFG)

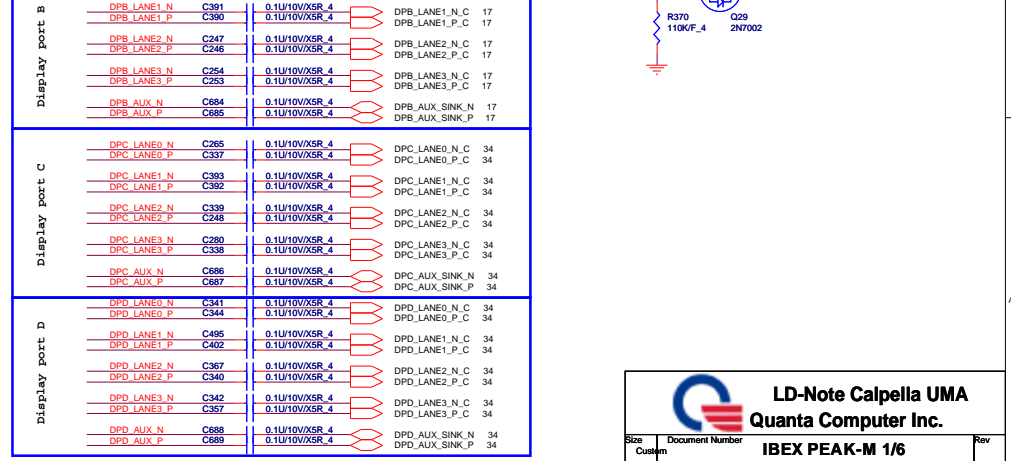
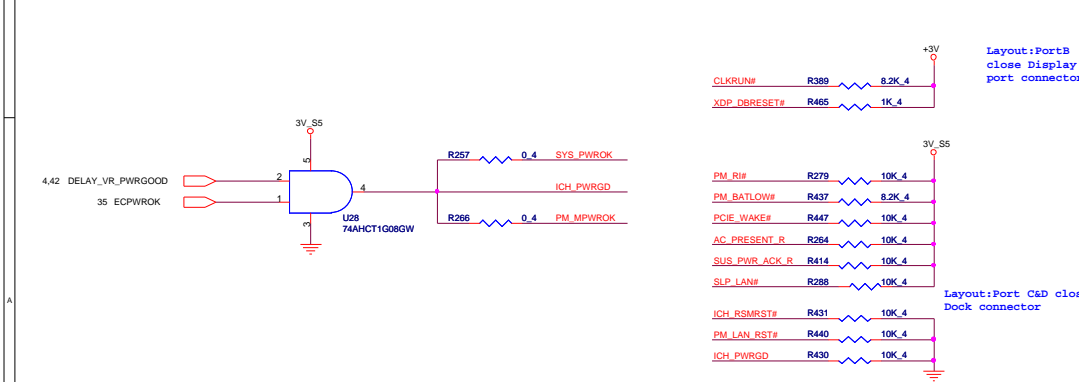
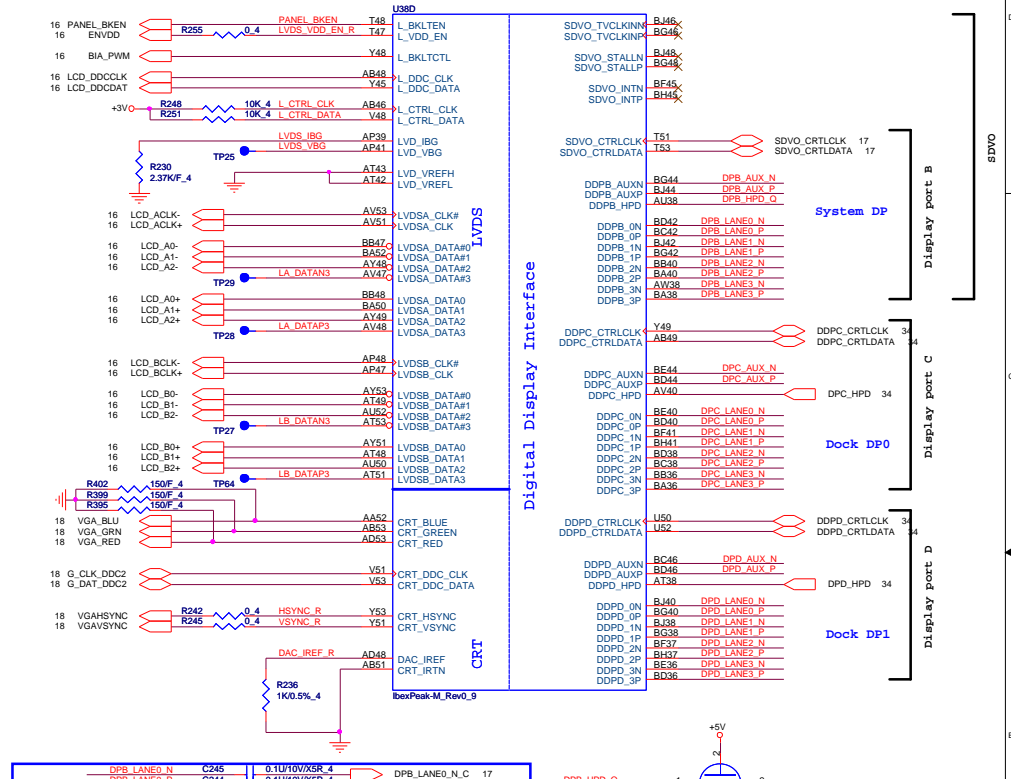
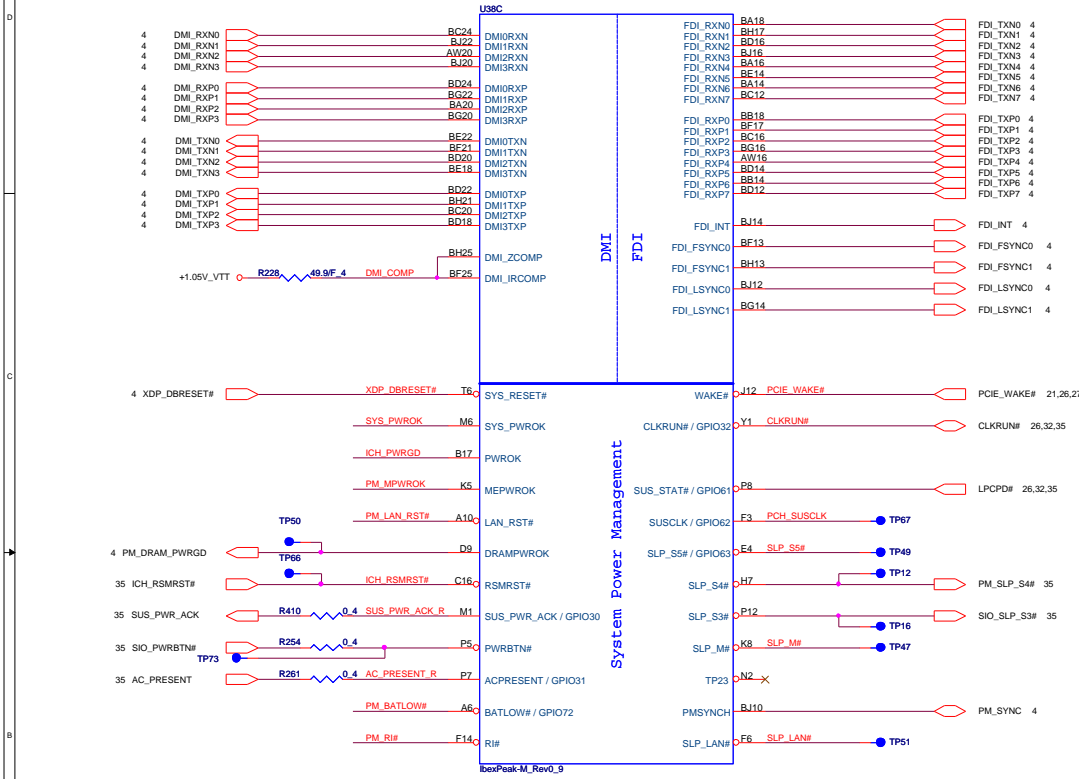


	1	0
CFG4 (Display Port Presence)	Disabled; No Physical Display Port attached to Embedded Display Port	Enabled; An external Display port device is connected to the Embedded Display port
CFG0 (PCI-Epress Configuration Select)	Single PEG	Bifurcation enabled
CFG3 (PCI-Epress Static Lane Reversal)	Normal Operation	Lane Numbers Reversed



IBEX PEAK-M (DMI, FDI, GPIO)

IBEX PEAK-M (LVDS, DDI)





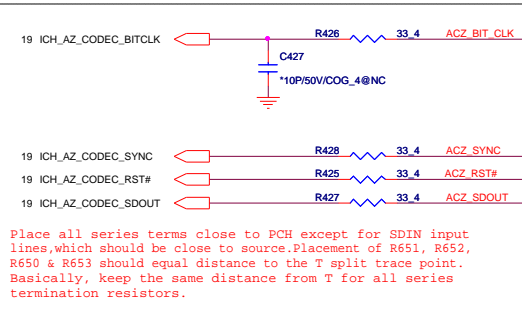
## RTC Circuitry

CMOS Settings	J2
Clear CMOS	1-2
Save CMOS	1-X (Default)

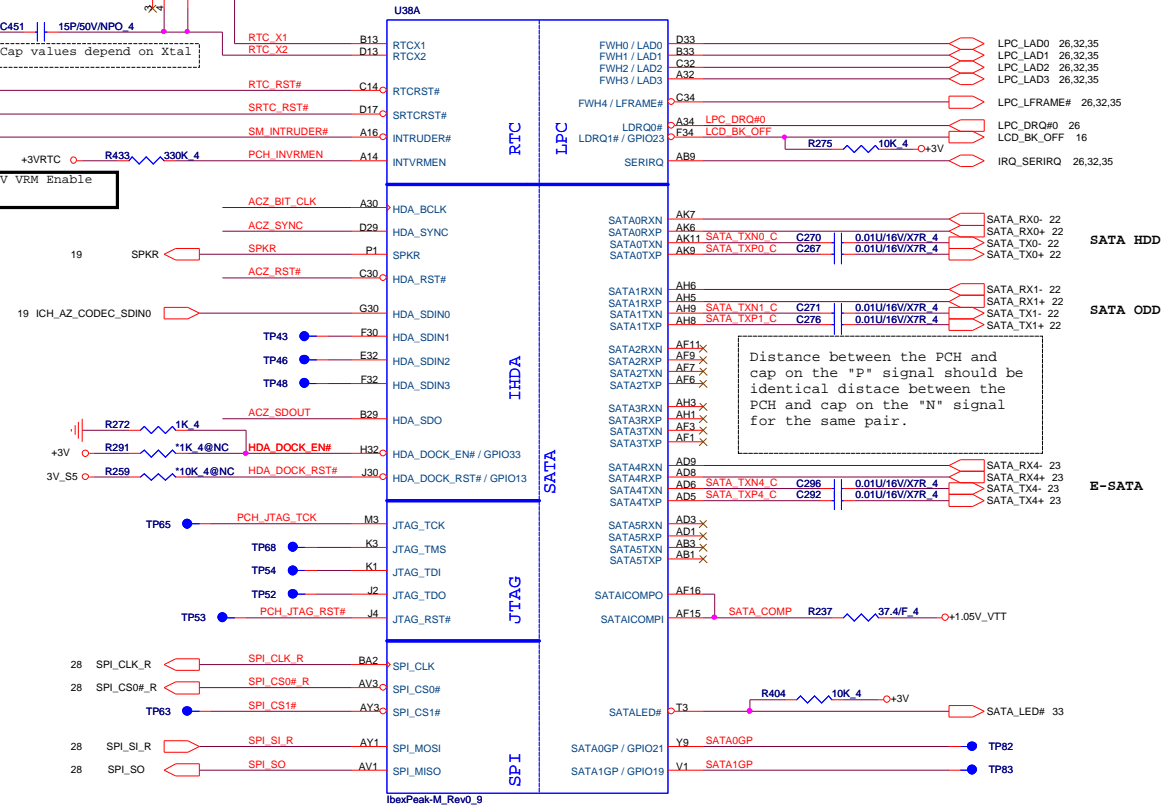
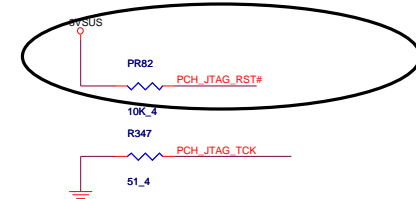
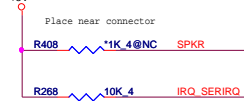
TPM Settings	J3
Clear ME RTC registers	1-2
Save ME RTC registers	1-X (Default)

## IBEX PEAK-M (HDA,JTAG,SATA)

INTVRMEN - Integrated SUS 1.1V VRM Enable  
High - Enable Internal VRs



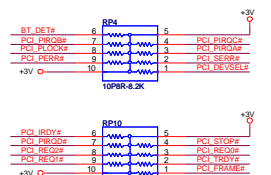
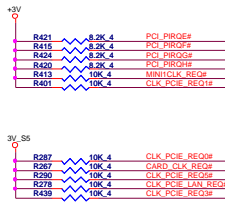
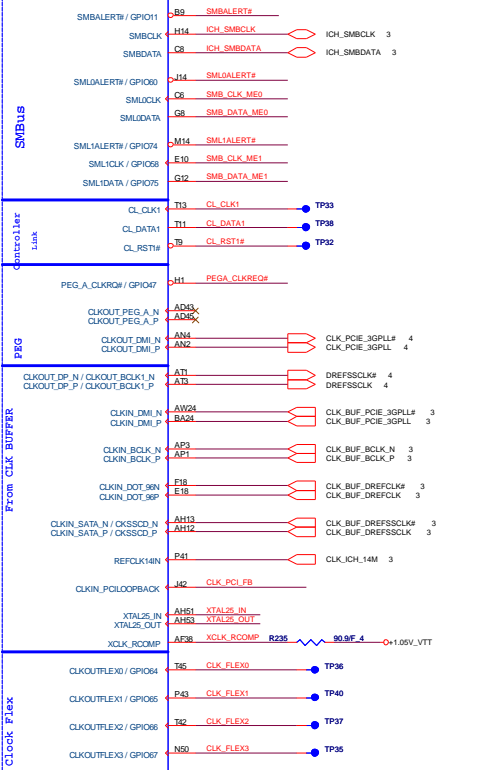
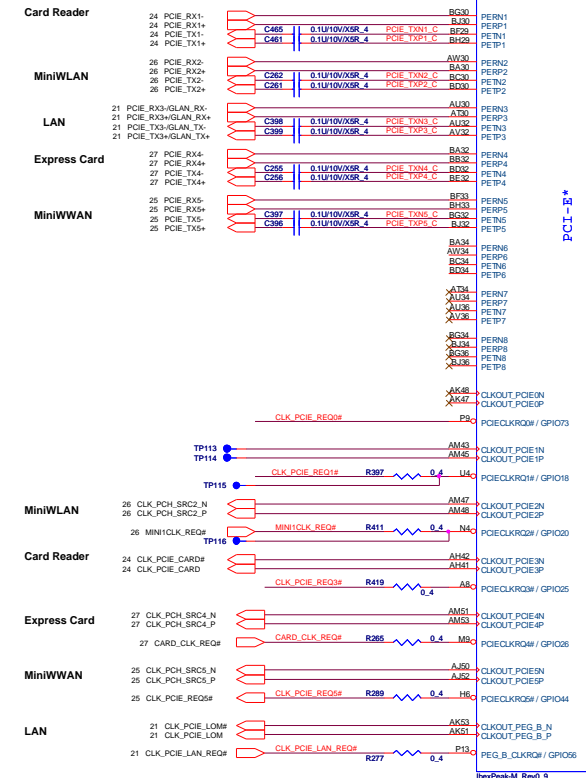
## No Reboot Strap



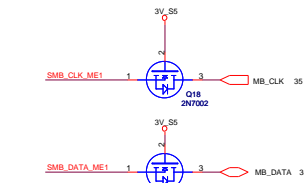
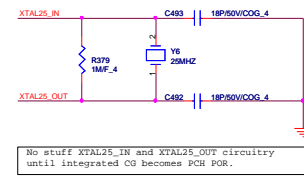
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Boot BIOS Strap		
PCI_GNT0#	PCI_GNT#1	Boot BIOS Location
0	0	LPC
0	1	PCI
1	0	Reserved (NAND)
1	1	SPI



**DMI Termination Voltage**

NV_CLE	Set to Vcc when LOW Set to Vcc/2 when HIGH
--------	---

NV\_AL#  $\xrightarrow{4.7K}$  1.8V  
 NV\_CLE  $\xrightarrow{4.7K}$   $\xrightarrow{4.7K}$  VCC

**Danbury Technology Enabled**

NV_AL#	High = Enable Low = Disable
--------	--------------------------------

Al6 swap override Strap	
Swap Override jumper	
GNT3#	Low = Al6 swap override/Top-Block Swap Override enabled High = Default

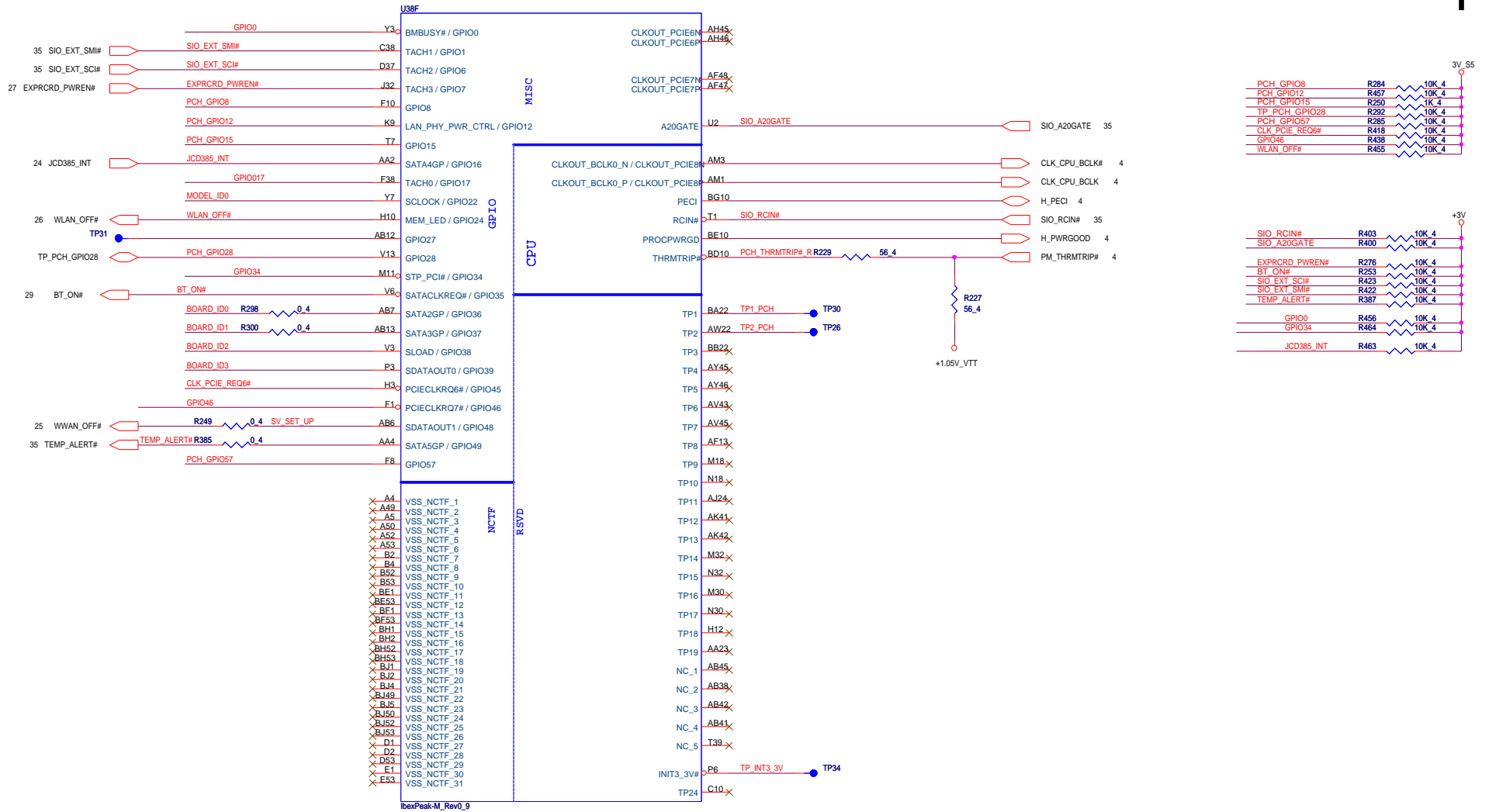


# IBEX PEAK-M (GPIO,VSS\_NCTF,RSVD)

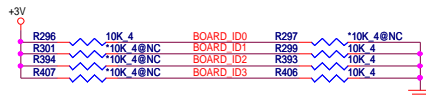
3,4,8,9,10,12,14,15,16,17,18,19,21,22,23,24,25,26,27,28,29,31,32,33,34,35,37,39,40,41,42  
4,8,9,10,12,23,26,28,37  
3,4,6,8,9,10,12,37,40,42,43

+3V  
3V\_SS  
+1.05V\_VTT

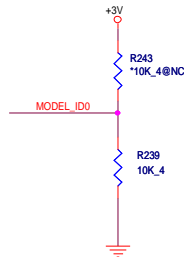
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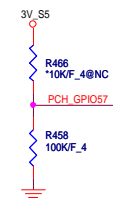
Board ID For Function	ID3 GPIO39	ID2 GPIO38	ID1 GPIO37	ID0 GPIO36
SDV	0	0	0	0
SIV	0	0	0	1
SIT	0	0	1	0
SVT	0	0	1	1
SOVP	0	1	0	0



Model ID	MODEL_ID0
14 "	0
15 "	1



TPM physical presence	
PCH_GPIO57	Low: Default



SV_SET_UP	1-X High = Strong (Default)
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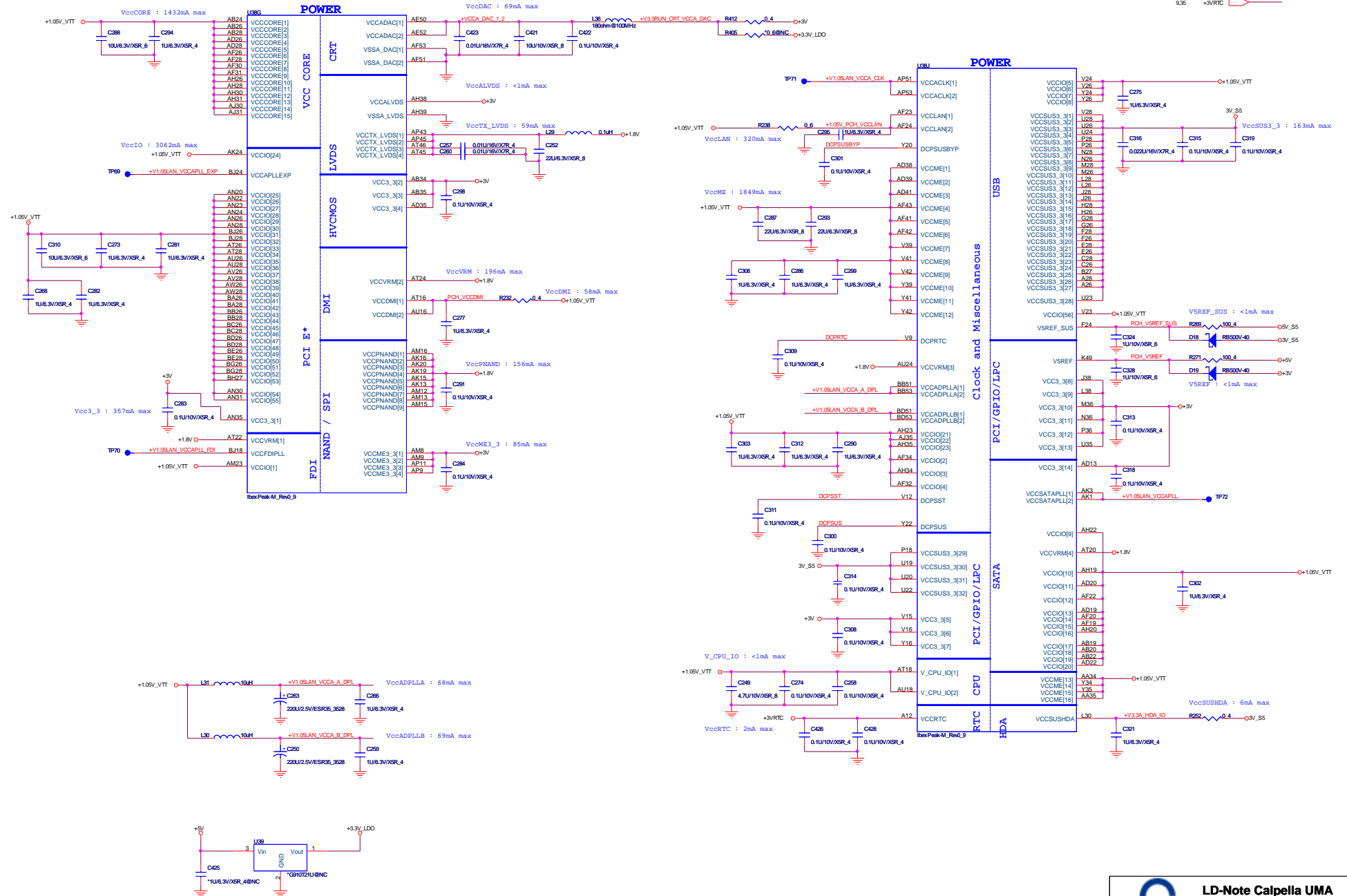
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**Quanta Computer Inc.**

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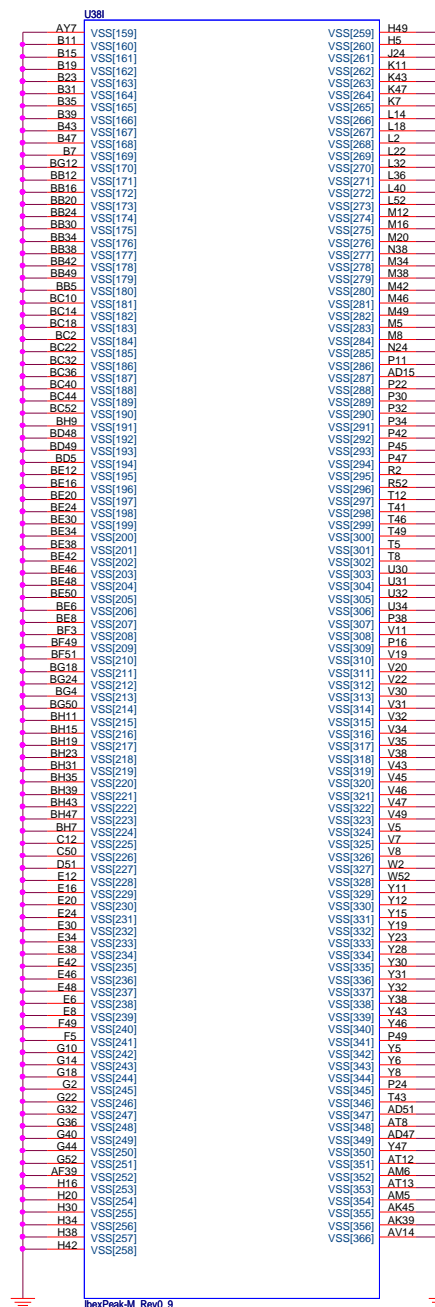
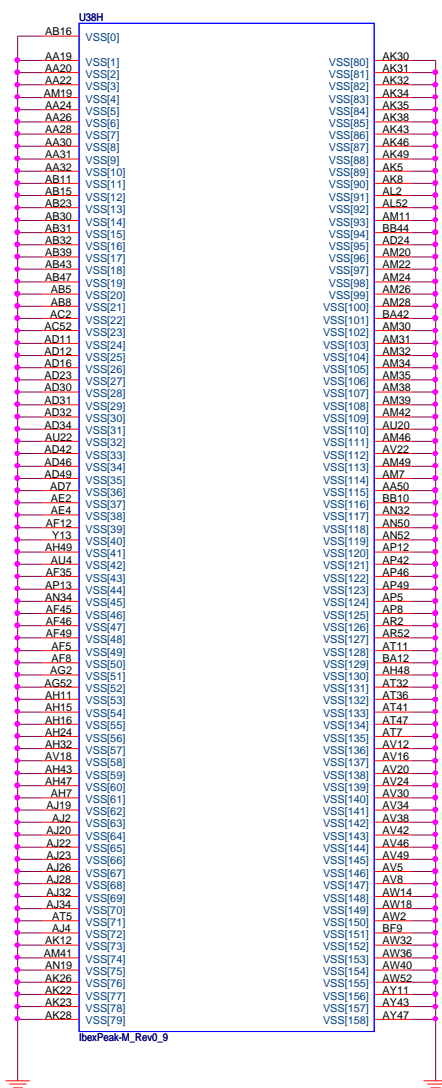


# IBEX PEAK-M (POWER)

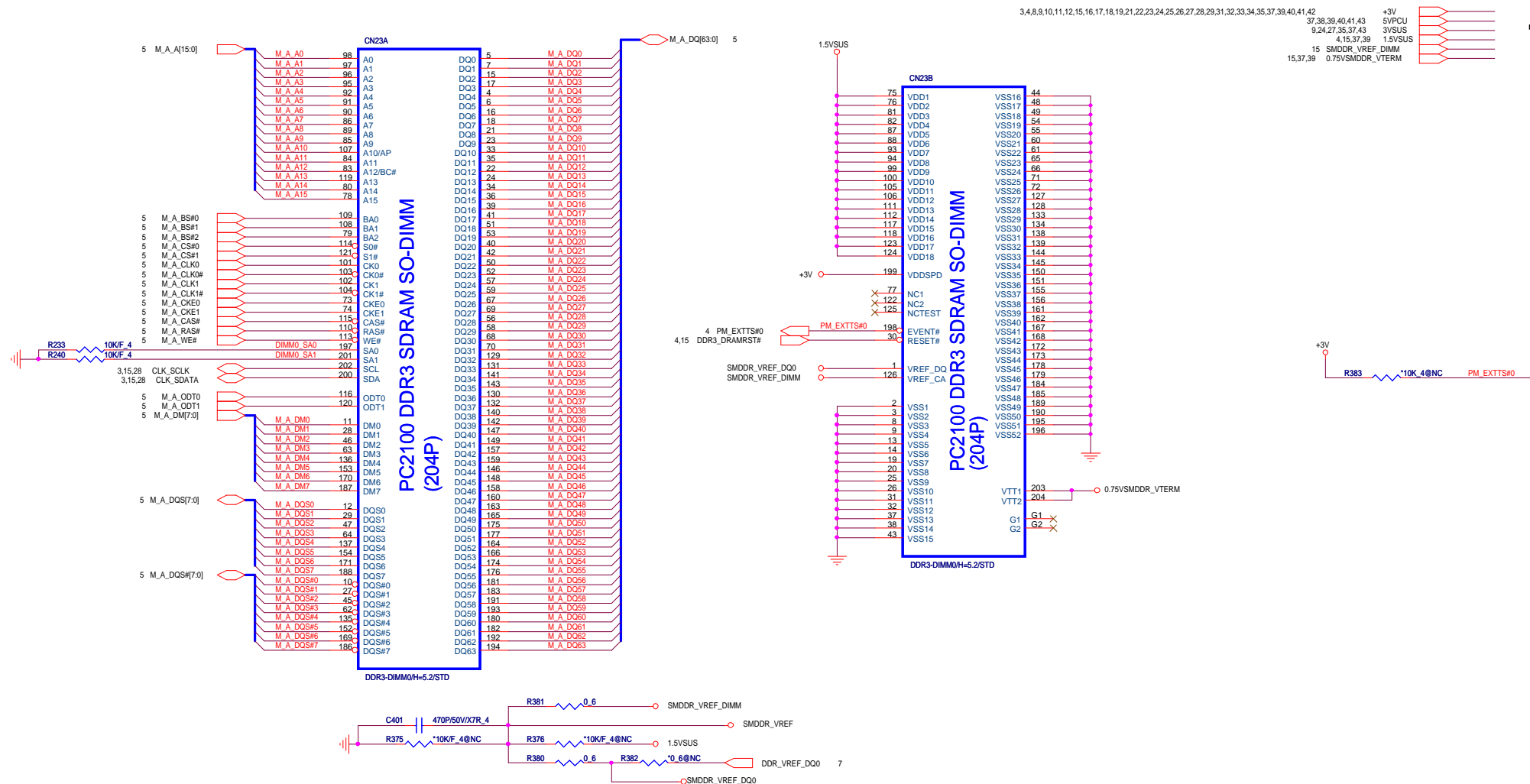




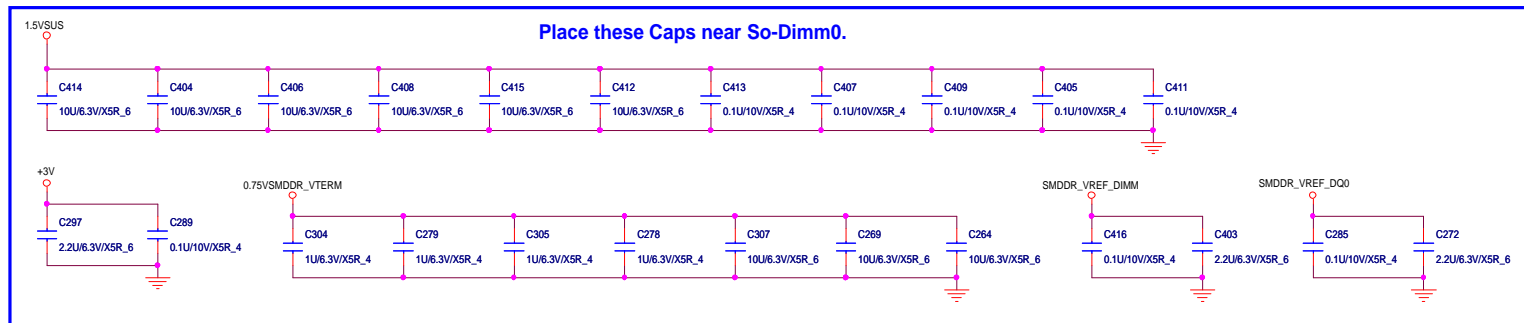
## IBEX PEAK-M (GND)



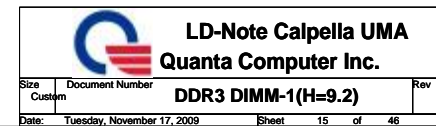




## Place these Caps near So-Dimm0.



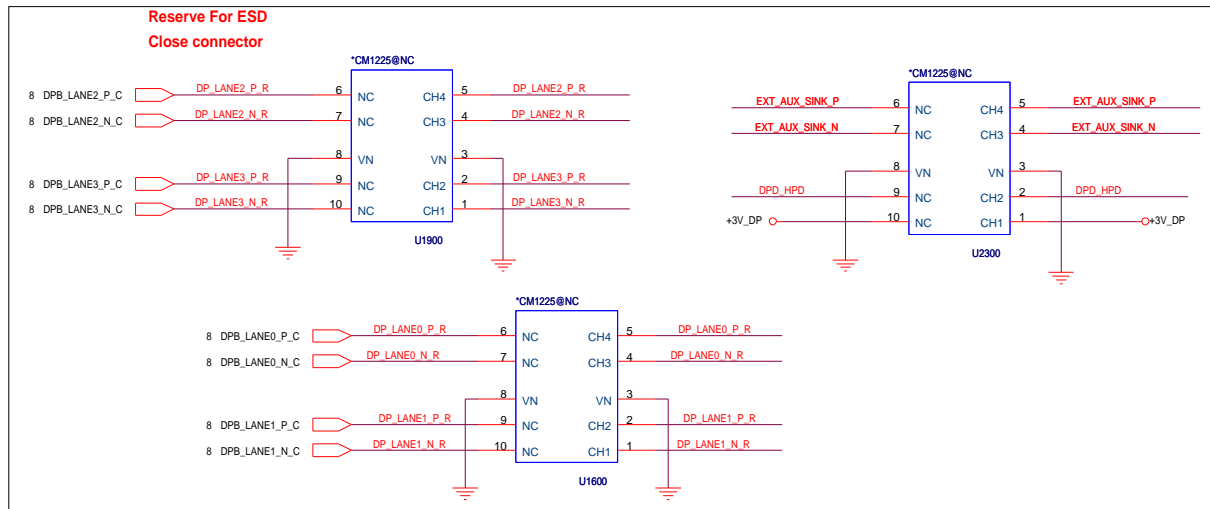
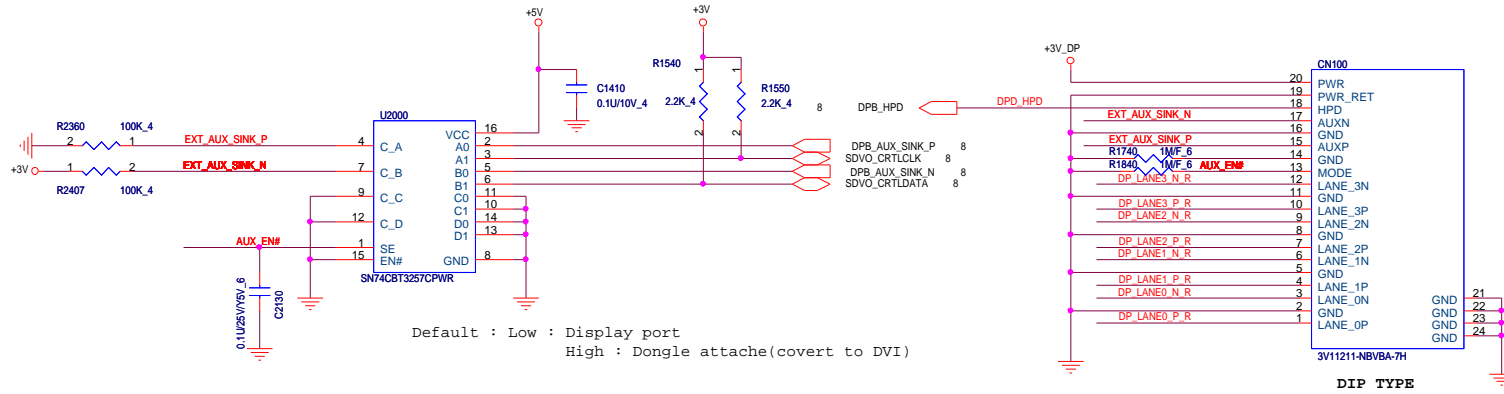




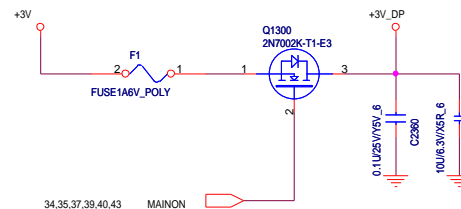
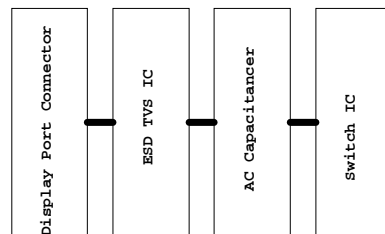




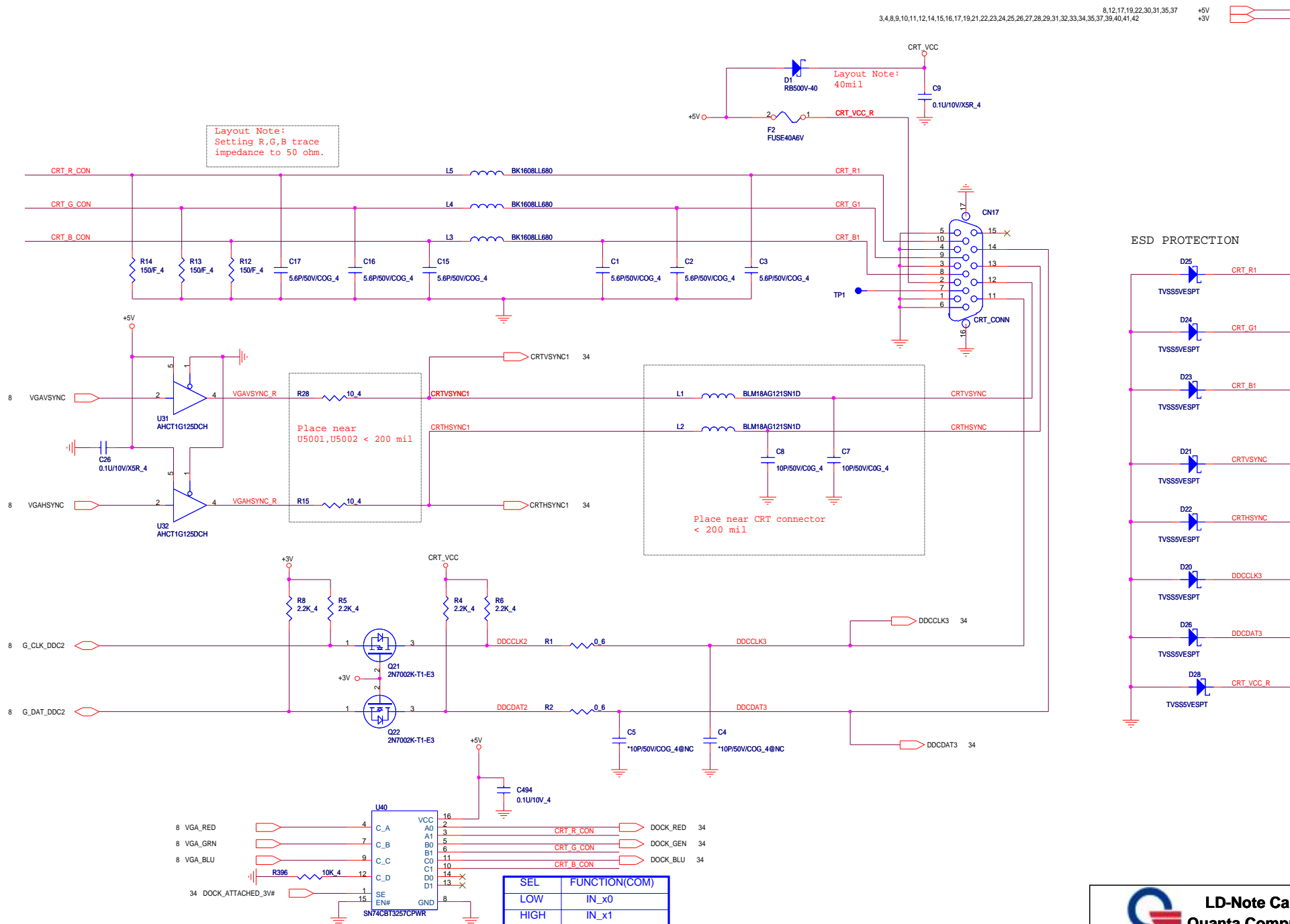




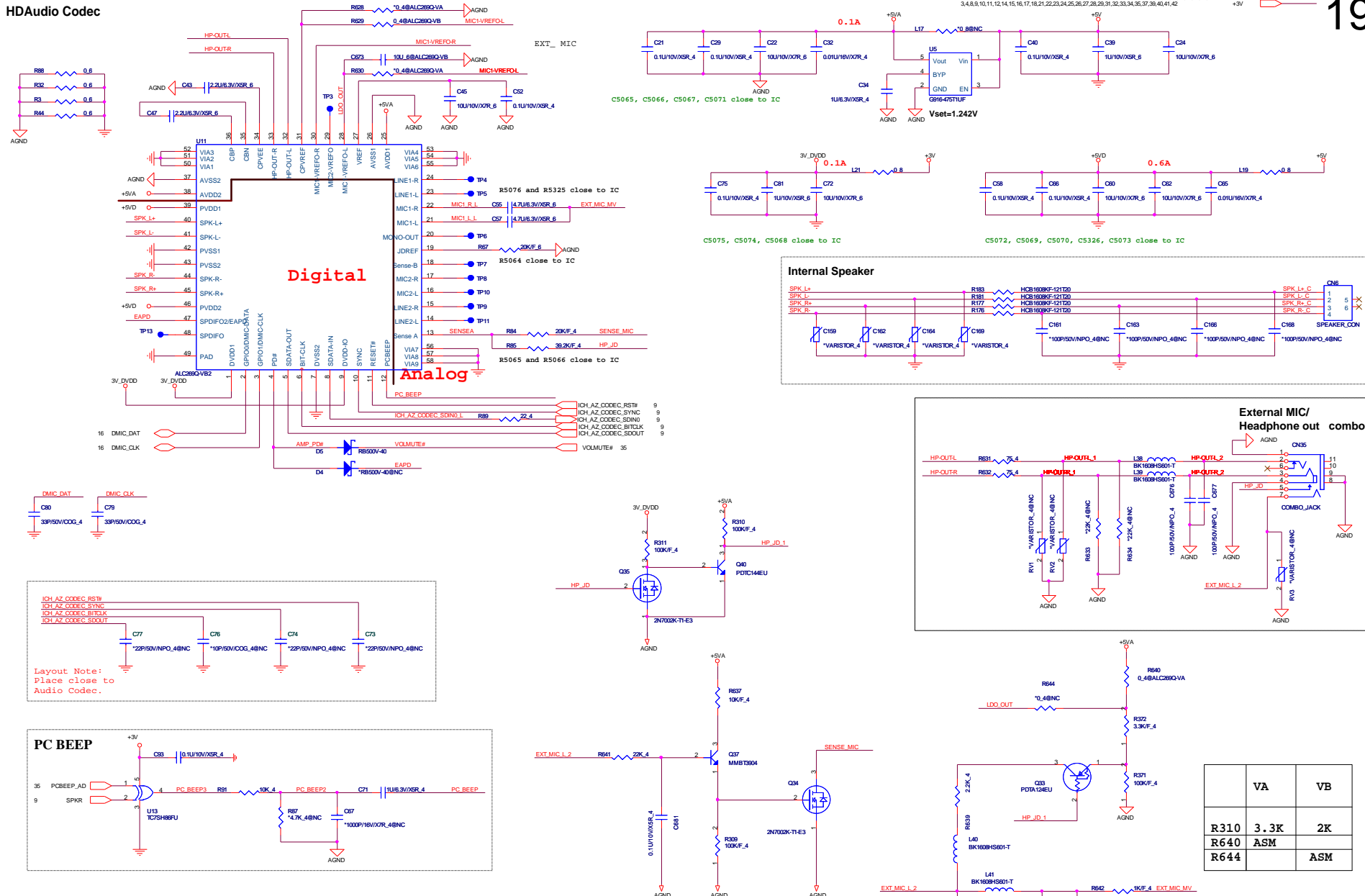
Layout Topology





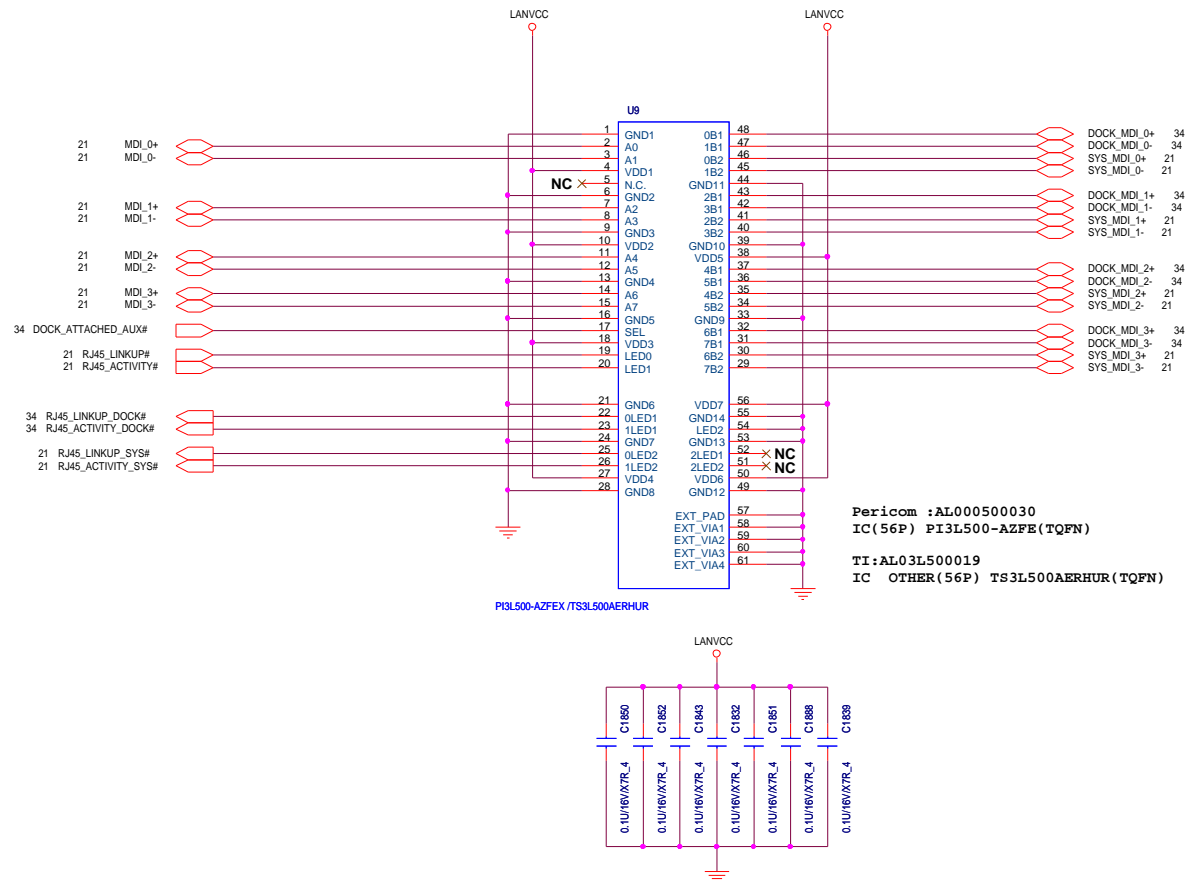




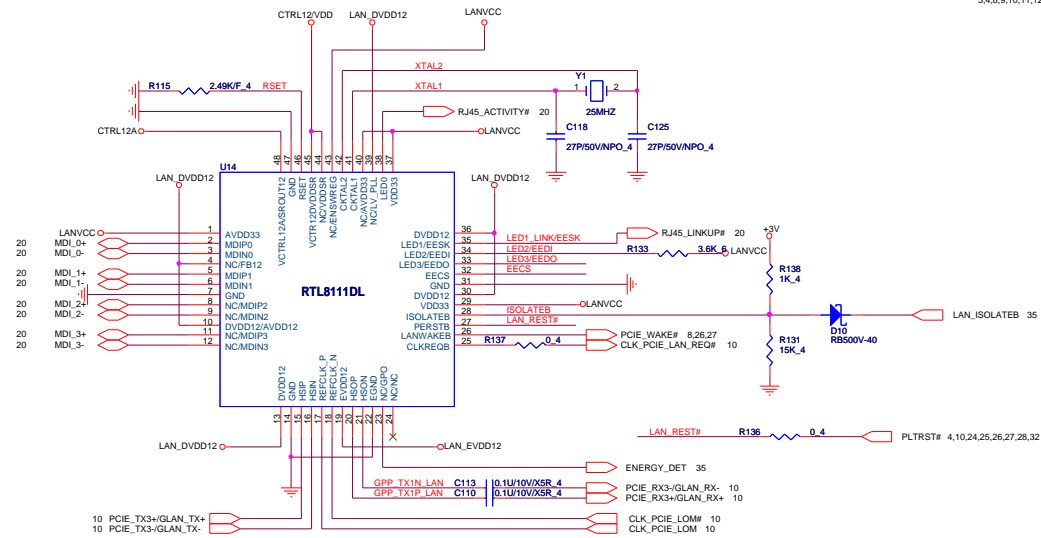


	VA	VB
R310	3.3K	2K
R640	ASM	
R644		ASM

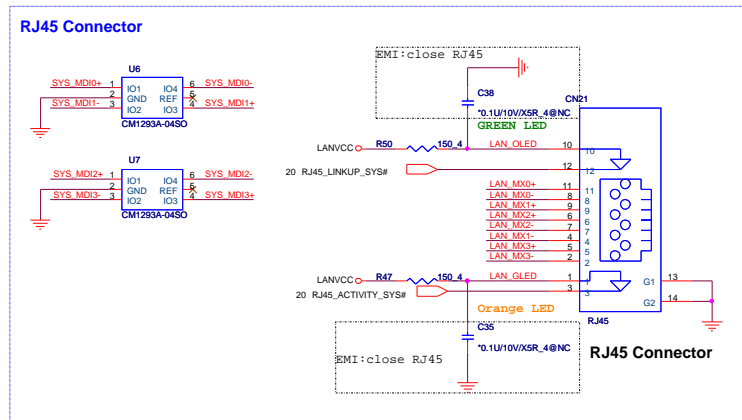








\* C5110 to C5113 are for U5006 VDD33 pins-- 1, 29, 37 and 40.

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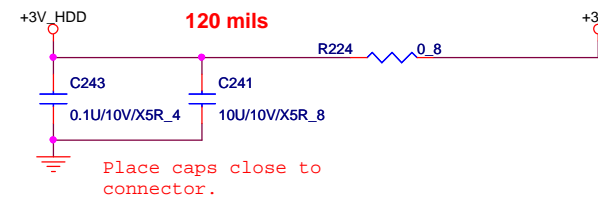
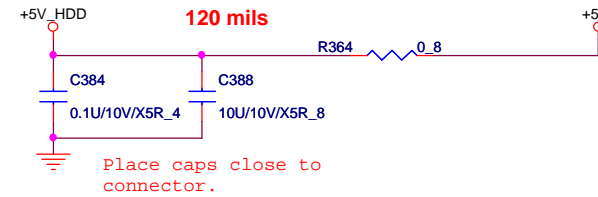
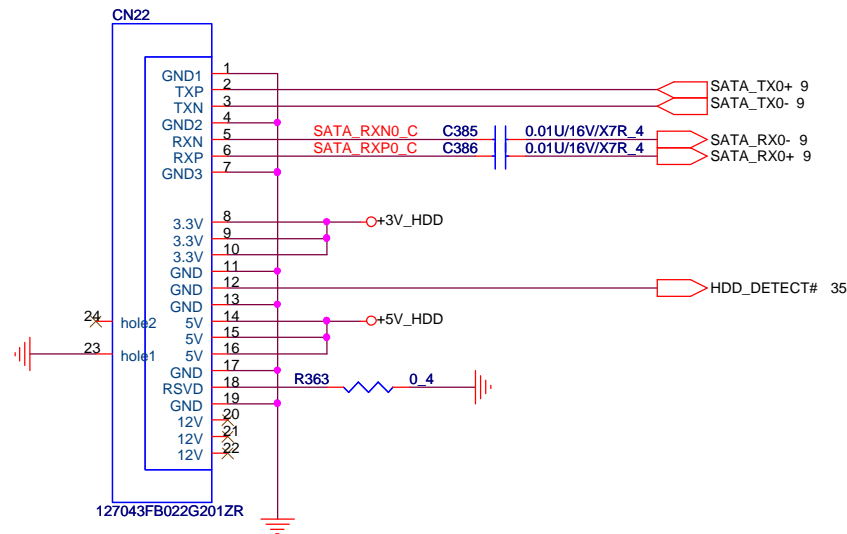


## SATA Connector.

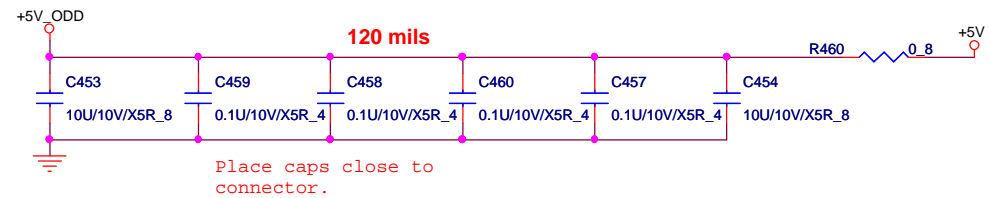
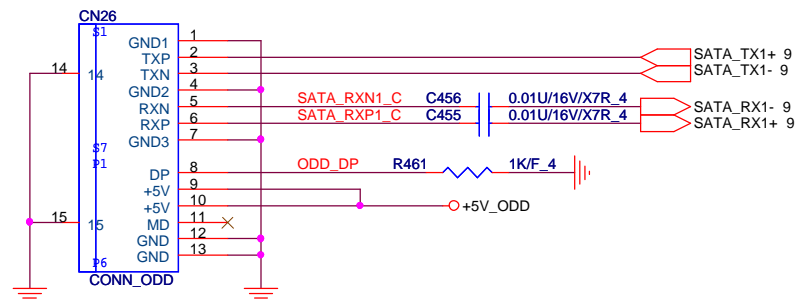
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8,12,17,18,19,30,31,35,37  
+5V  
+3V

22



## ODD Connector

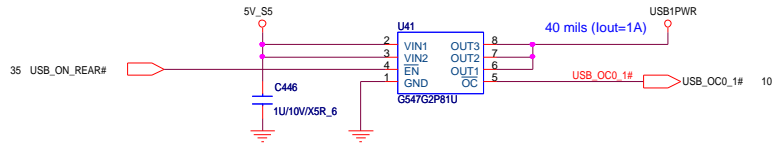


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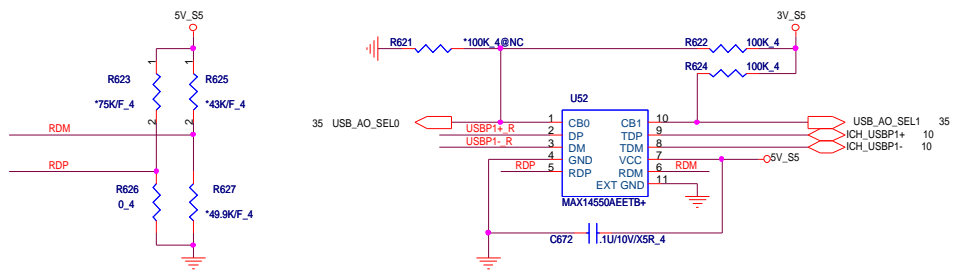
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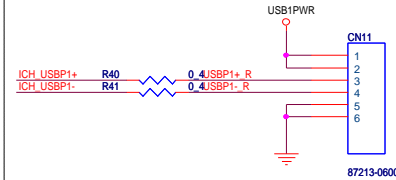
## USBX1



### Support Black-berry function



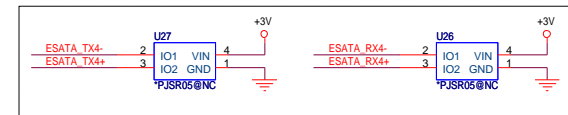
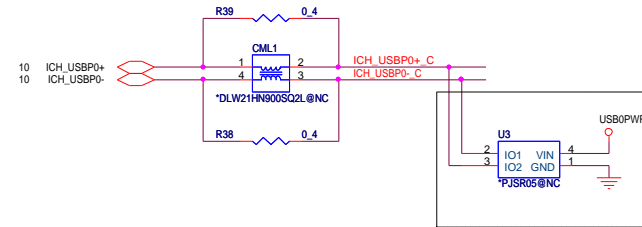
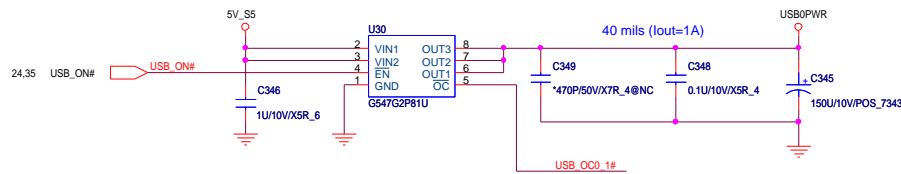
### USB X1---- Wire to board conn



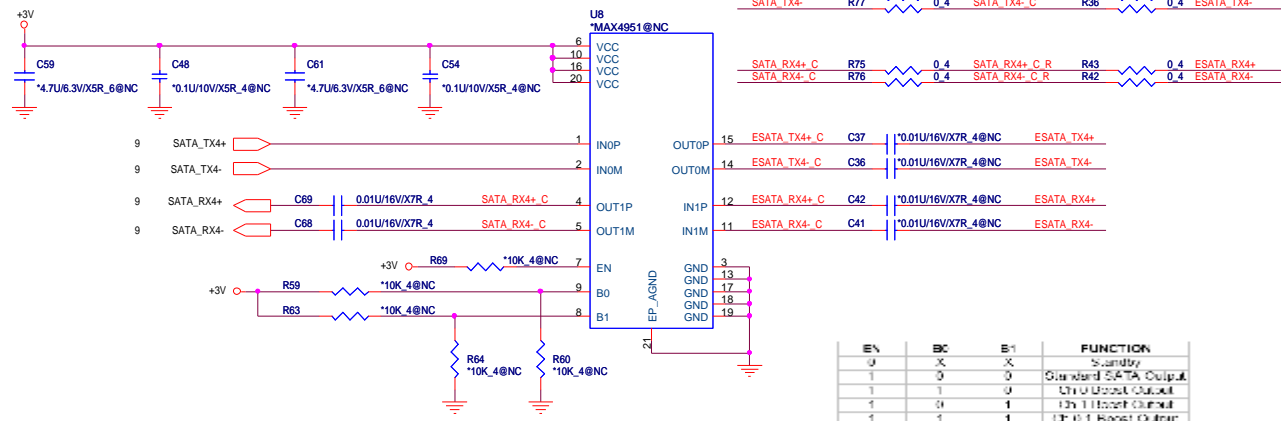
### USB 1

	w/ AOU3	w/o AOU3
R40	NO ASM	ASM
R41	NO ASM	ASM
U52	ASM	NO ASM
R622	ASM	NO ASM
R624	ASM	NO ASM
R626	ASM	NO ASM
C676	ASM	NO ASM

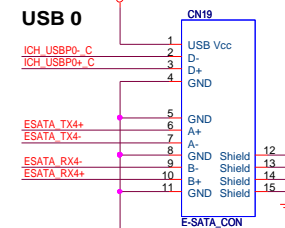
## USB + E-SATA



## E-SATA RE-DRIVER



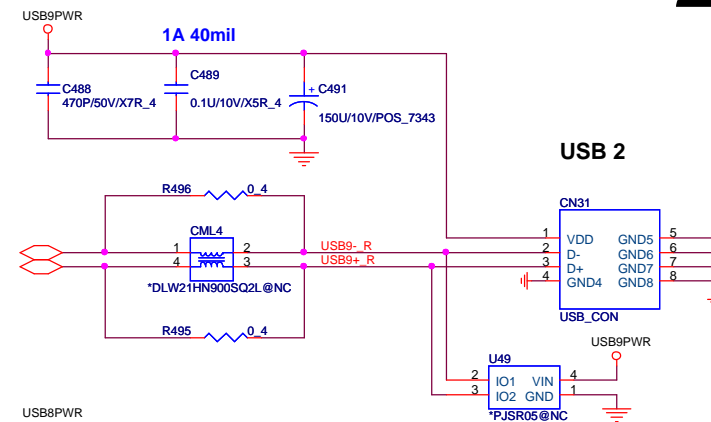
EN	BC	B1	FUNCTION
0	X	X	Standby
1	0	0	Standard SATA Output
1	1	0	On-Chip SATA Output
1	0	1	On-Chip SATA Output
1	1	1	On-Chip SATA Output



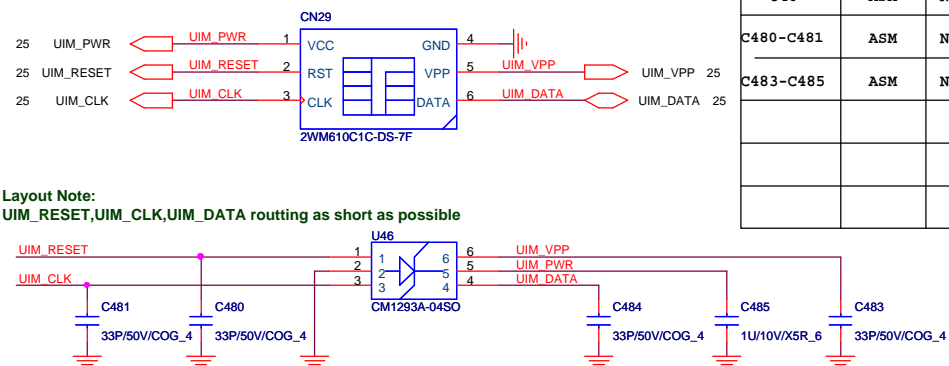
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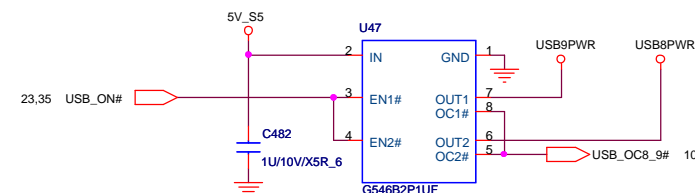
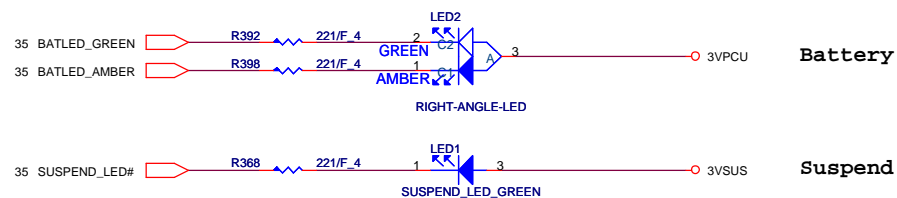
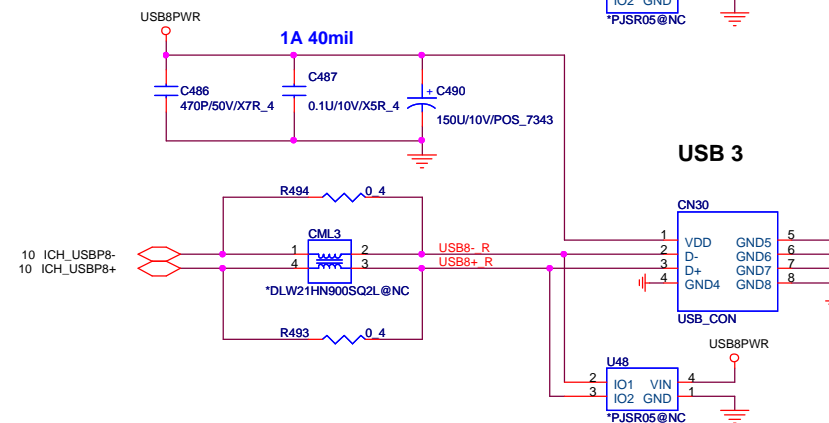


## USB 2



**Layout Note:**  
UIM\_RESET,UIM\_CLK,UIM\_DATA routing as short as possible

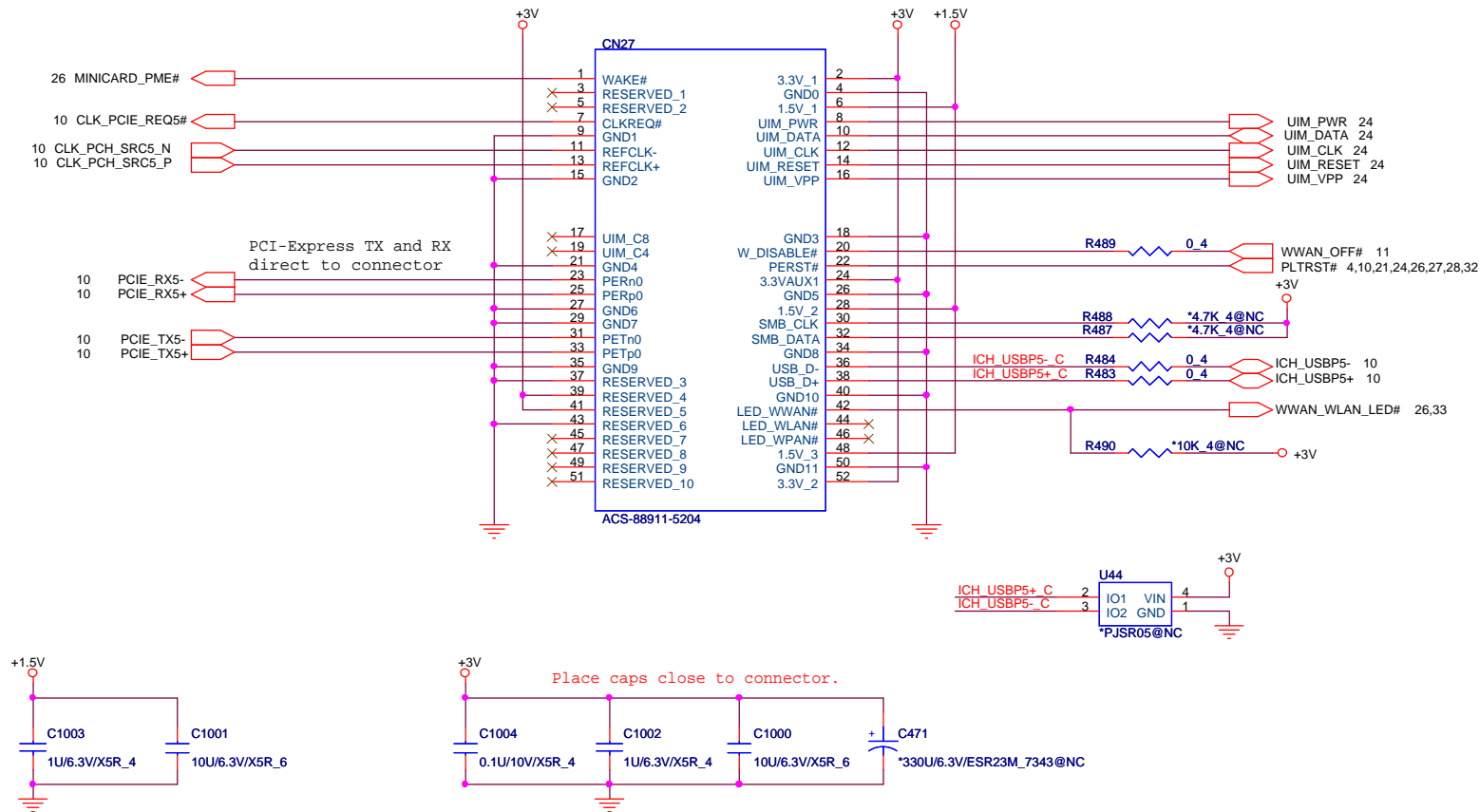
## USB 3





# MiniCard WWAN connector

# 25



	w/ WWAN	w/o WWAN
CN27	ASM	NO ASM
R489	ASM	NO ASM
R484	ASM	NO ASM
R483	ASM	NO ASM
C1000~C1004	ASM	NO ASM

**LD-Note Calpella UMA**  
**Quanta Computer Inc.**

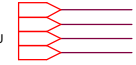
Size	Document Number	Rev
Custom		
<b>MINI-Card (UWB, WWAN)</b>		
Date:	Tuesday, November 17, 2009	Sheet 25 of 46



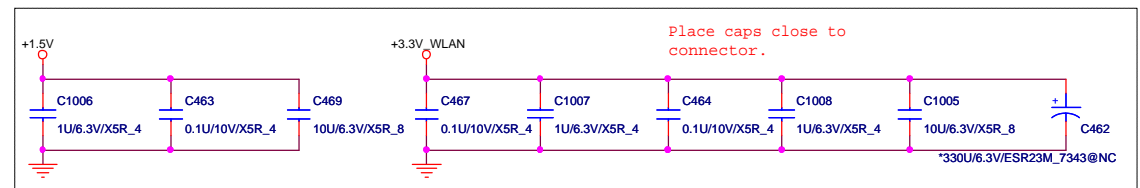
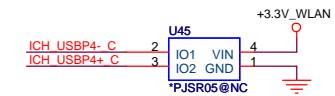
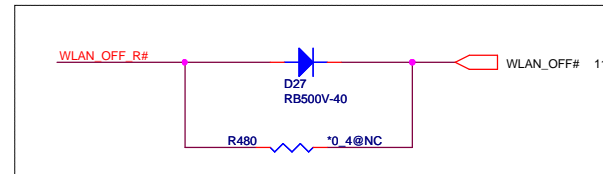
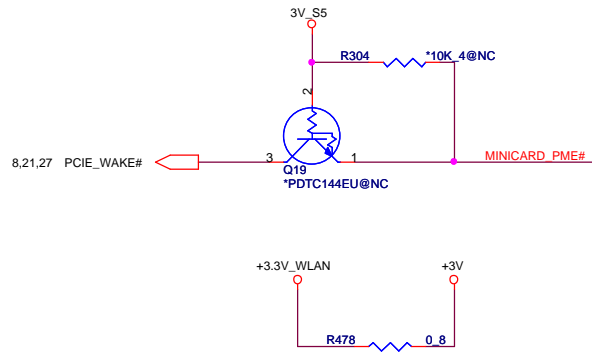
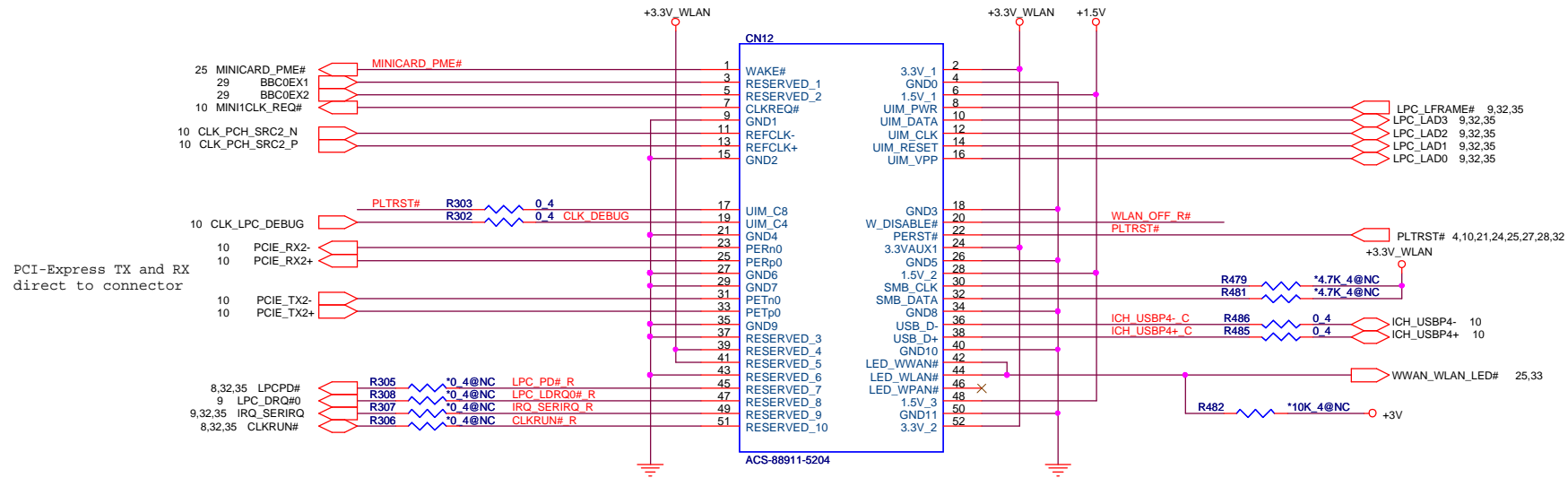
# MiniCard WLAN/WiMAX connector

3,4,8,9,10,11,12,14,15,16,17,18,19,21,22,23,24,25,27,28,29,31,32,33,34,35,37,39,40,41,42  
 9,16,21,24,33,34,35,37,38,41,43  
 16,37,38,39,40,41,42,43

+3V  
 +1.5V  
 3VPCU  
 VIN



# 26

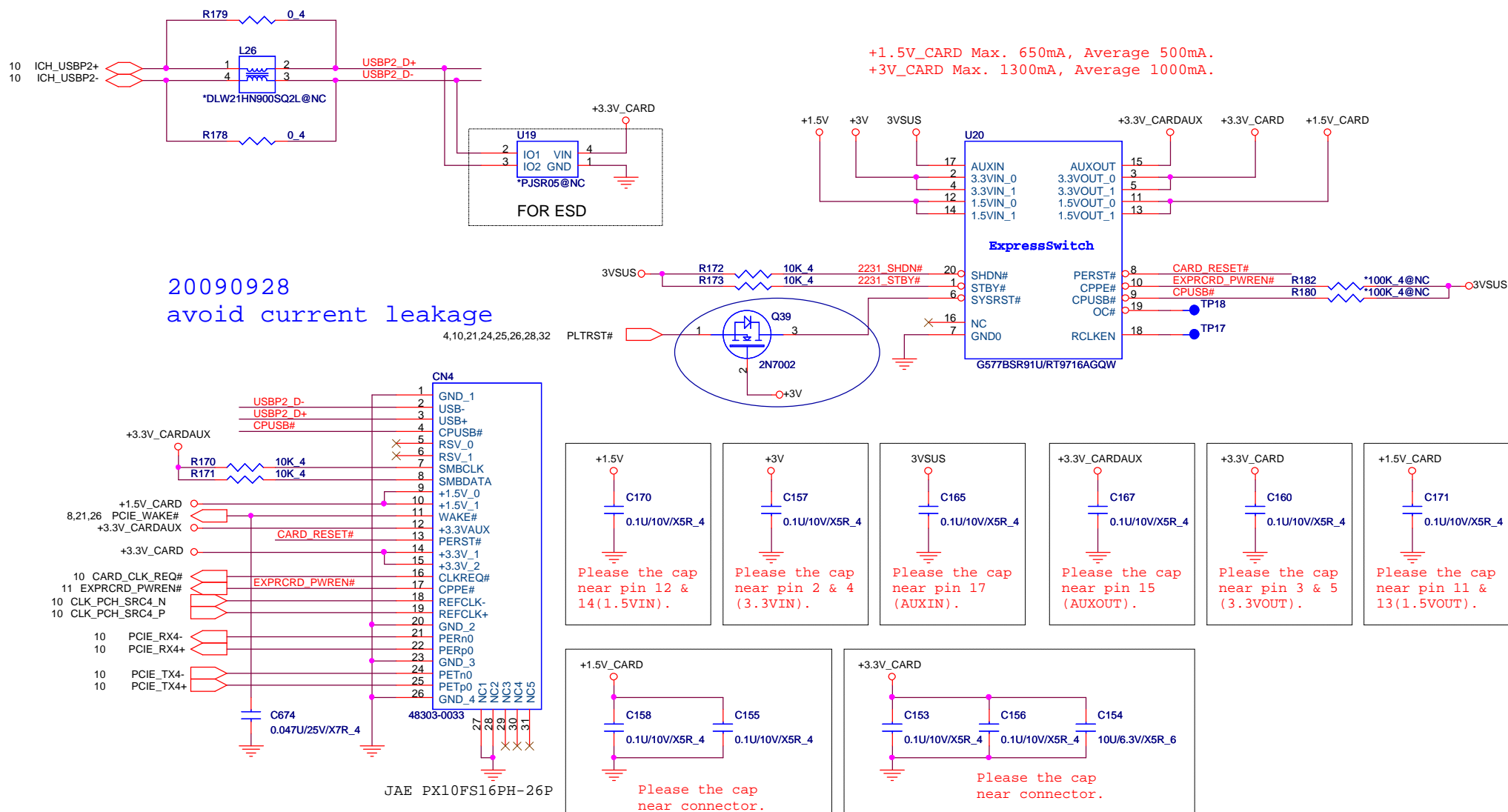




## Express Card

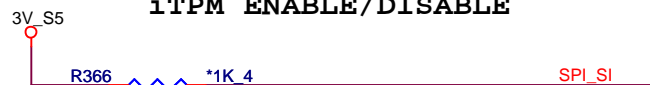
3,4,8,9,10,11,12,14,15,16,17,18,19,21,22,23,24,25,26,28,29,31,32,33,34,35,37,39,40,41,42	+3V
	3,25,26,39 +1.5V
	9,24,35,37,43 3VSUS

27

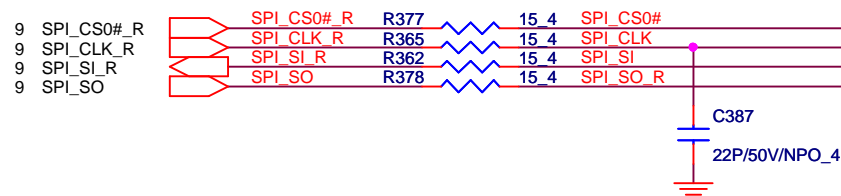




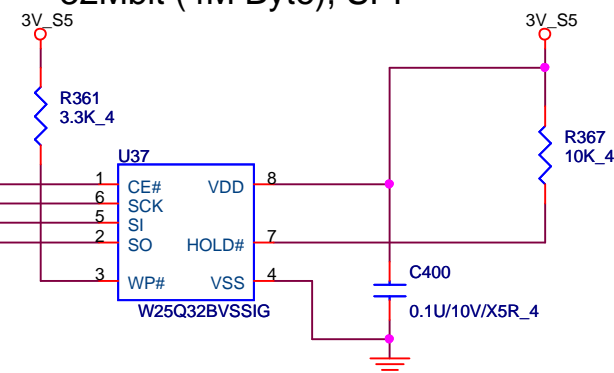
## iTPM ENABLE/DISABLE



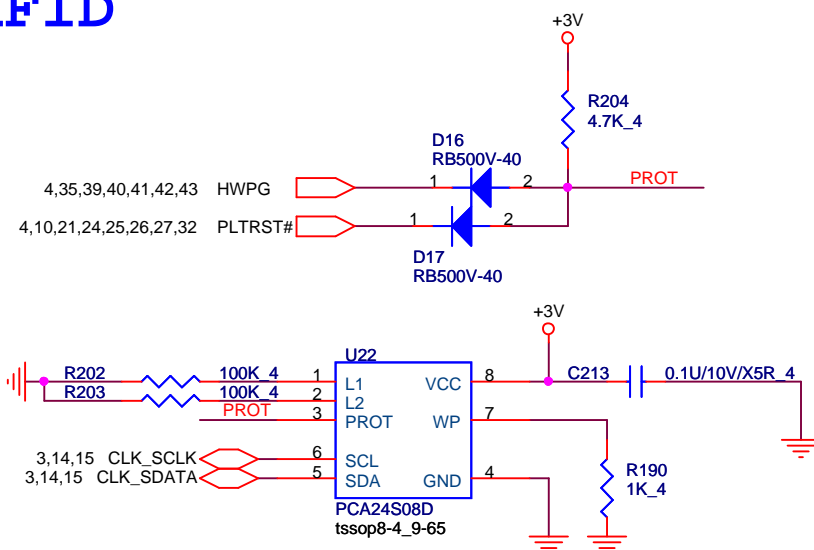
iTPM Function	R366
Enable	1K
Disable	NC



For PCH  
32Mbit (4M Byte), SPI



## RFID



**LD-Note Calpella UMA**  
**Quanta Computer Inc.**

Size	Document Number	Rev
Custom	<b>iTPM &amp; RFID EEPROM</b>	

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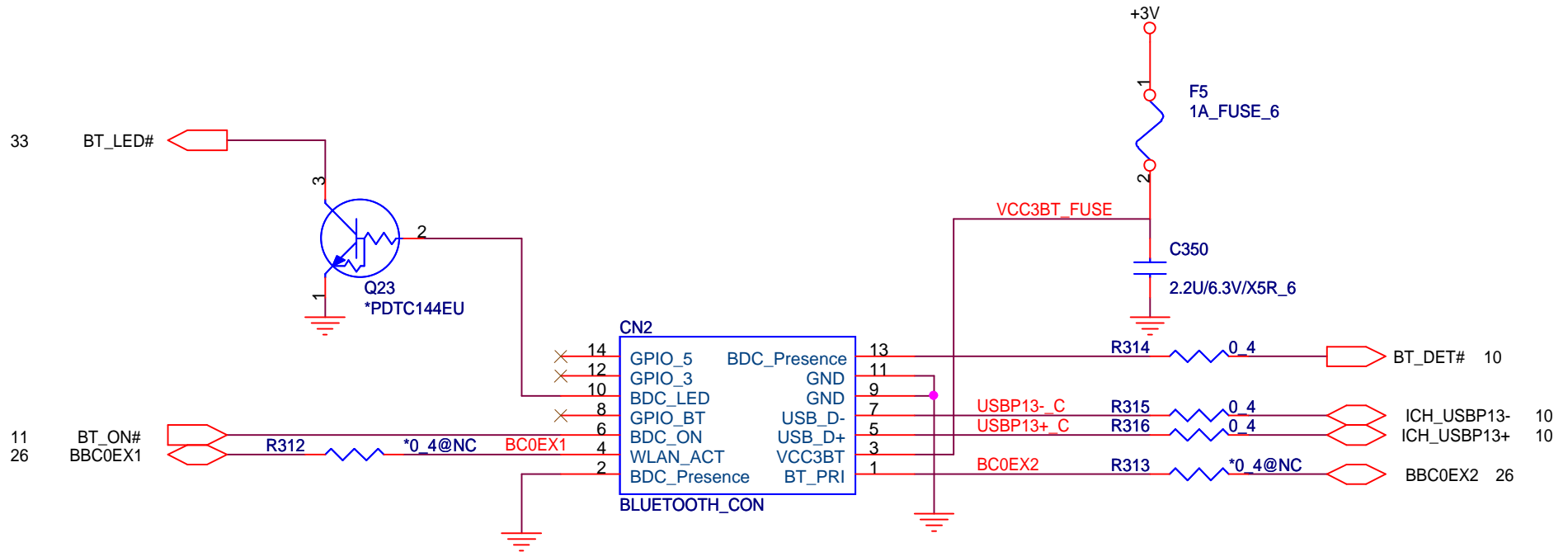


# BLUETOOTH

3,4,8,9,10,11,12,14,15,16,17,18,19,21,22,23,24,25,26,27,28,31,32,33,34,35,37,39,40,41,42

+3V

29



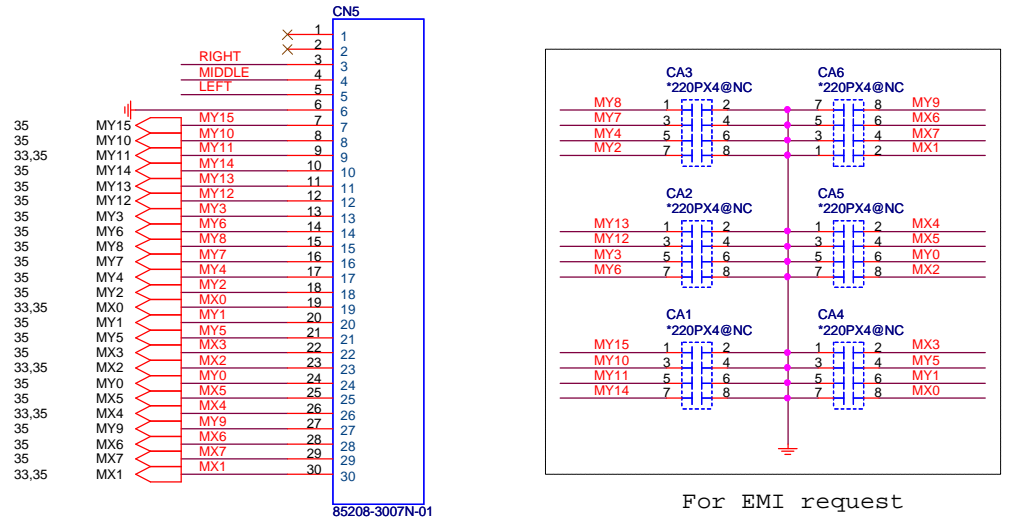
**LD-Note Calpella UMA**  
**Quanta Computer Inc.**

Size Custom	Document Number <b>B/T</b>	Rev
Date: Tuesday, November 17, 2009	Sheet 29 of 46	



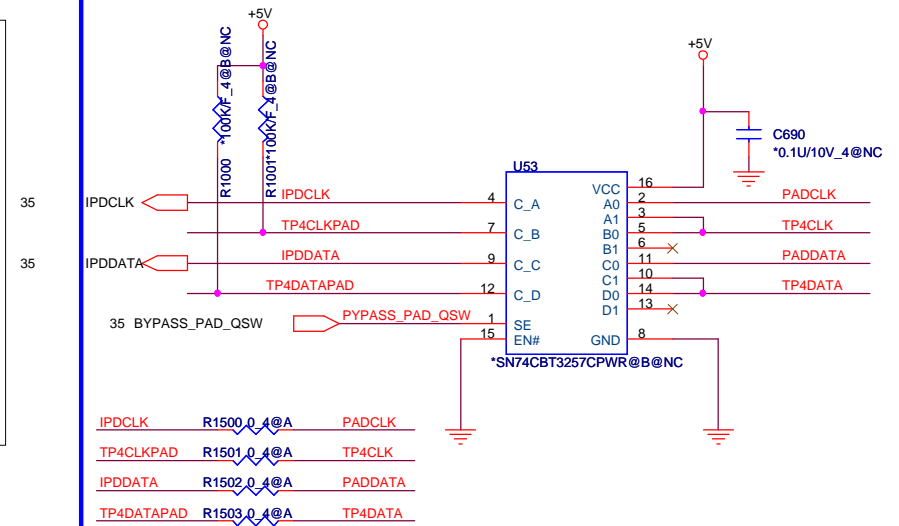
## KEYBOARD

### KEYBOARD connector

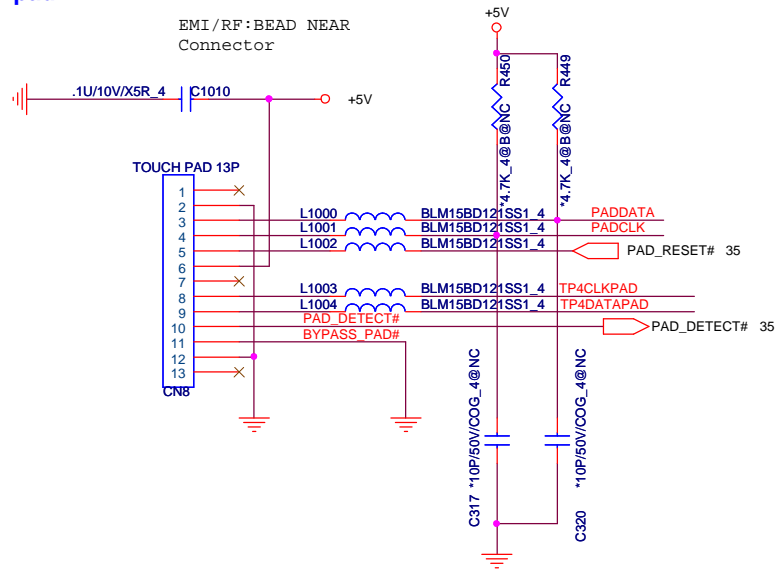


### Touch pad/Track point Switch

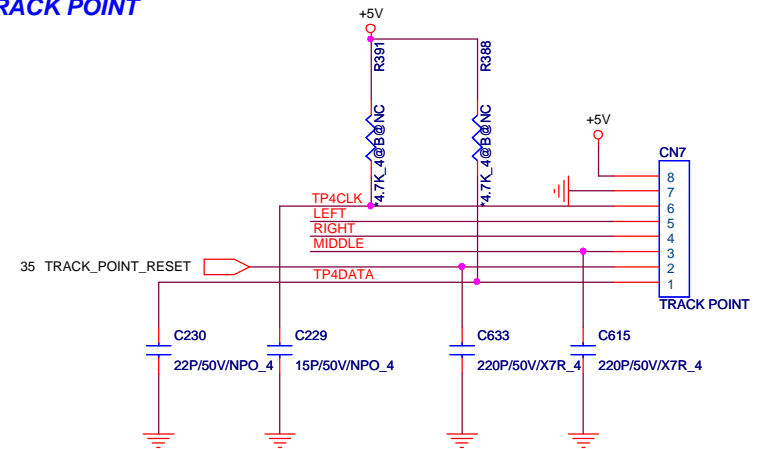
30



### Touch pad



### TRACK POINT



**LD-Note Calpella UMA**  
**Quanta Computer Inc.**

Size: Custom Document Number: K/B, T/P Rev: \_\_\_\_\_

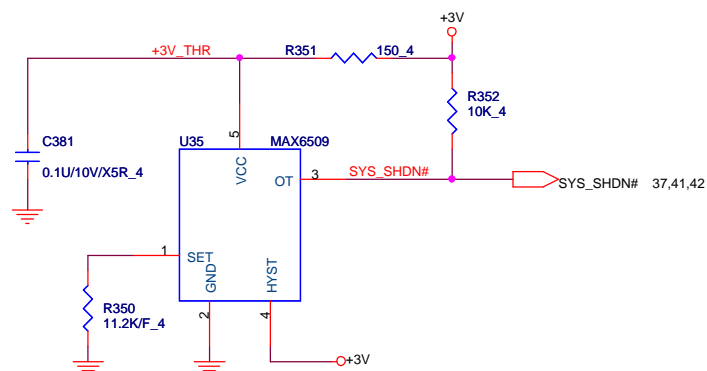
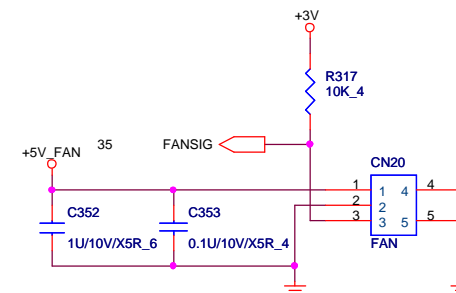
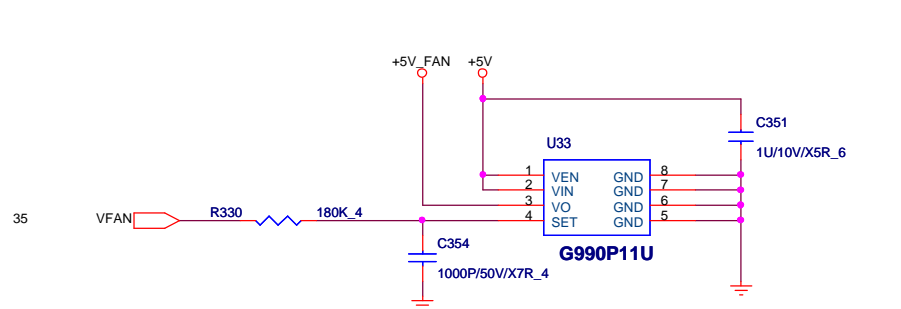
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## FAN CONTROL

3,4,8,9,10,11,12,14,15,16,17,18,19,21,22,23,24,25,26,27,28,29,32,33,34,35,37,39,40,41,42 +3V  
8,12,17,18,19,22,30,35,37 +5V

31



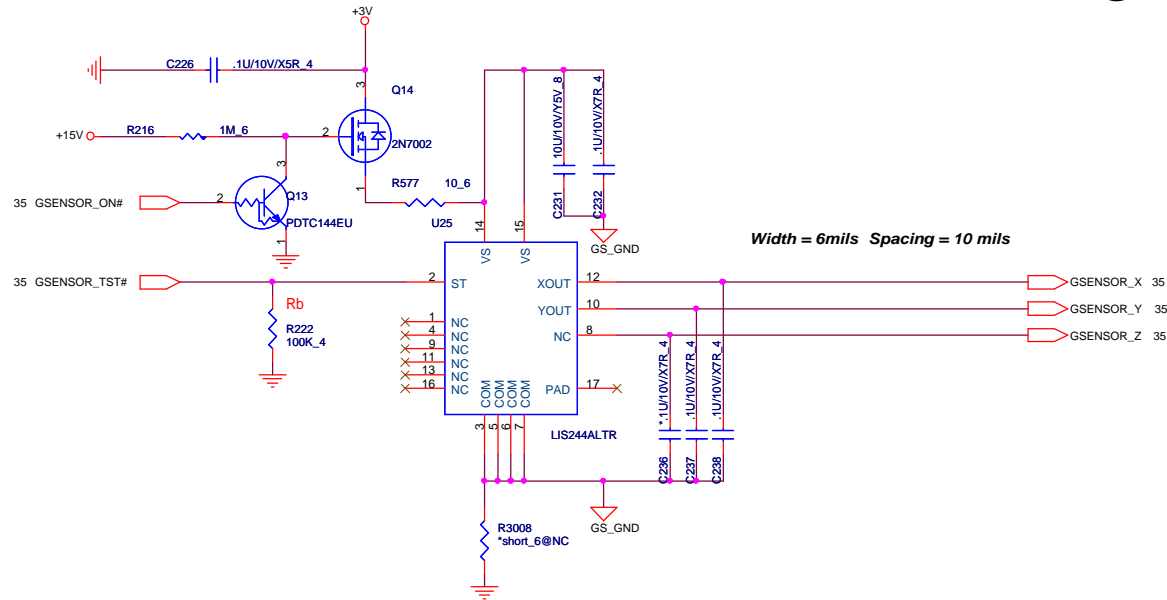
**LD-Note Calpella UMA**  
**Quanta Computer Inc.**

Size Custom	Document Number <b>FAN &amp; THERMAL</b>	Rev
Date: Tuesday, November 17, 2009	Sheet 31 of 46	

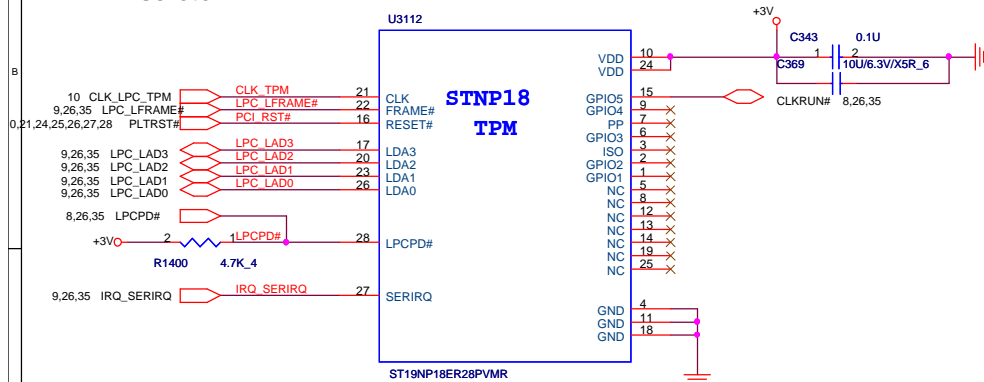


# G-SENSOR (2-Axial)

32



## Discrete TPM



supplier P/N:ST19NP18ER28PVMR  
Quanta P/N:AL19NP18K13  
F/P:tssop28-6\_4-65-1\_2h



**G-Note Montevina**  
**Quanta Computer Inc.**

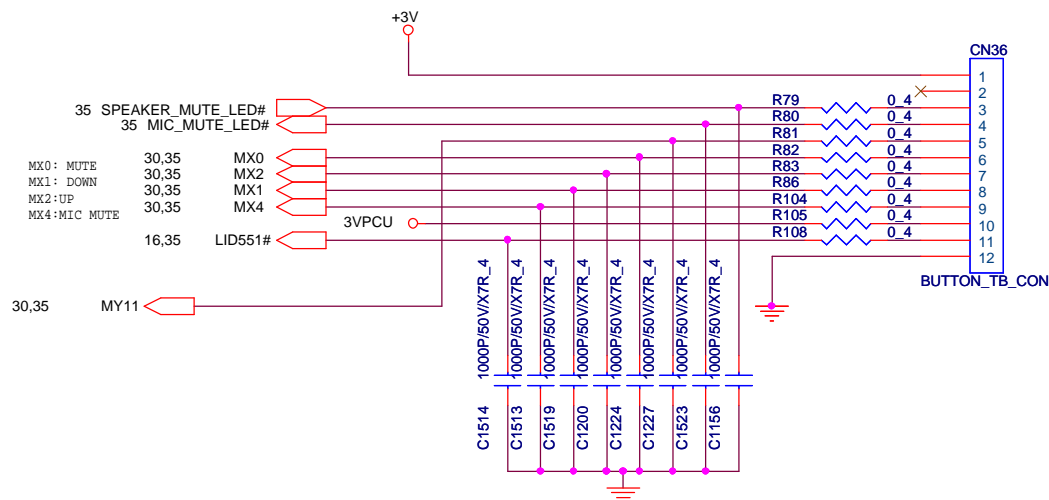
Size	Document Number	Rev
Custom	G-SENSOR/Discrete TPM	<RevCode>
Date:	Tuesday, November 17, 2009	Sheet 32 of 46



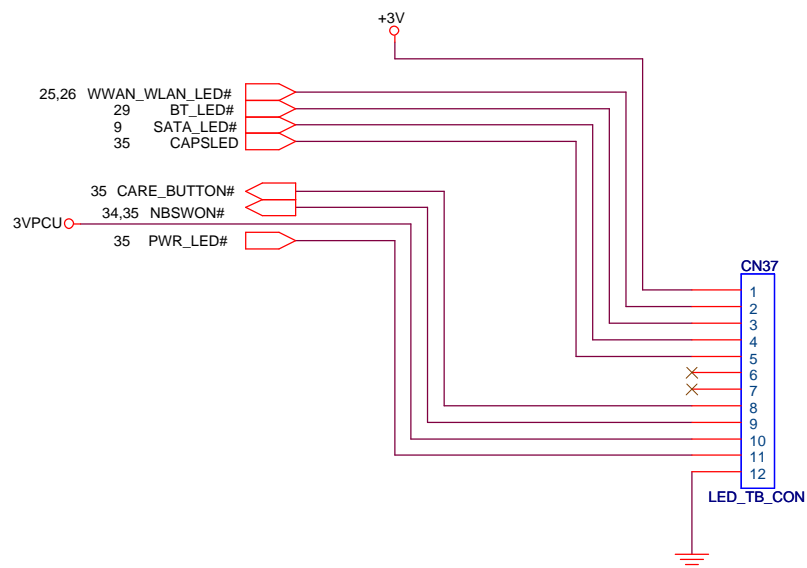
# Daughter Boards for LEDs & Ports

33

## FFC TO KBD LEFT SIDE CONNECTOR



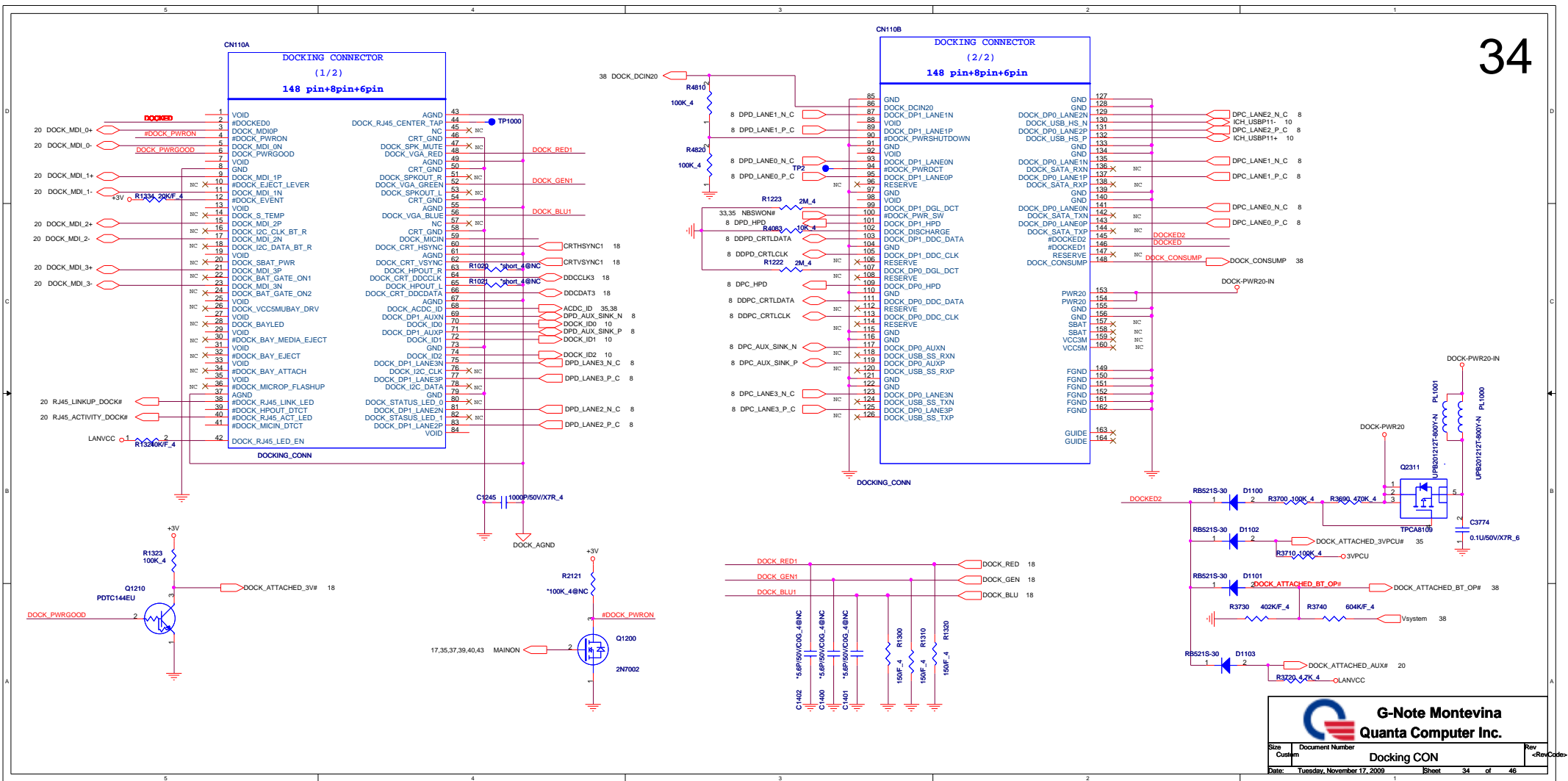
## FFC TO LED RIGHT SIDE CONNECTOR




**G-Note Montevina**  
**Quanta Computer Inc.**

Size	Document Number	Rev
Custom		<RevCo
Daughter Boards		
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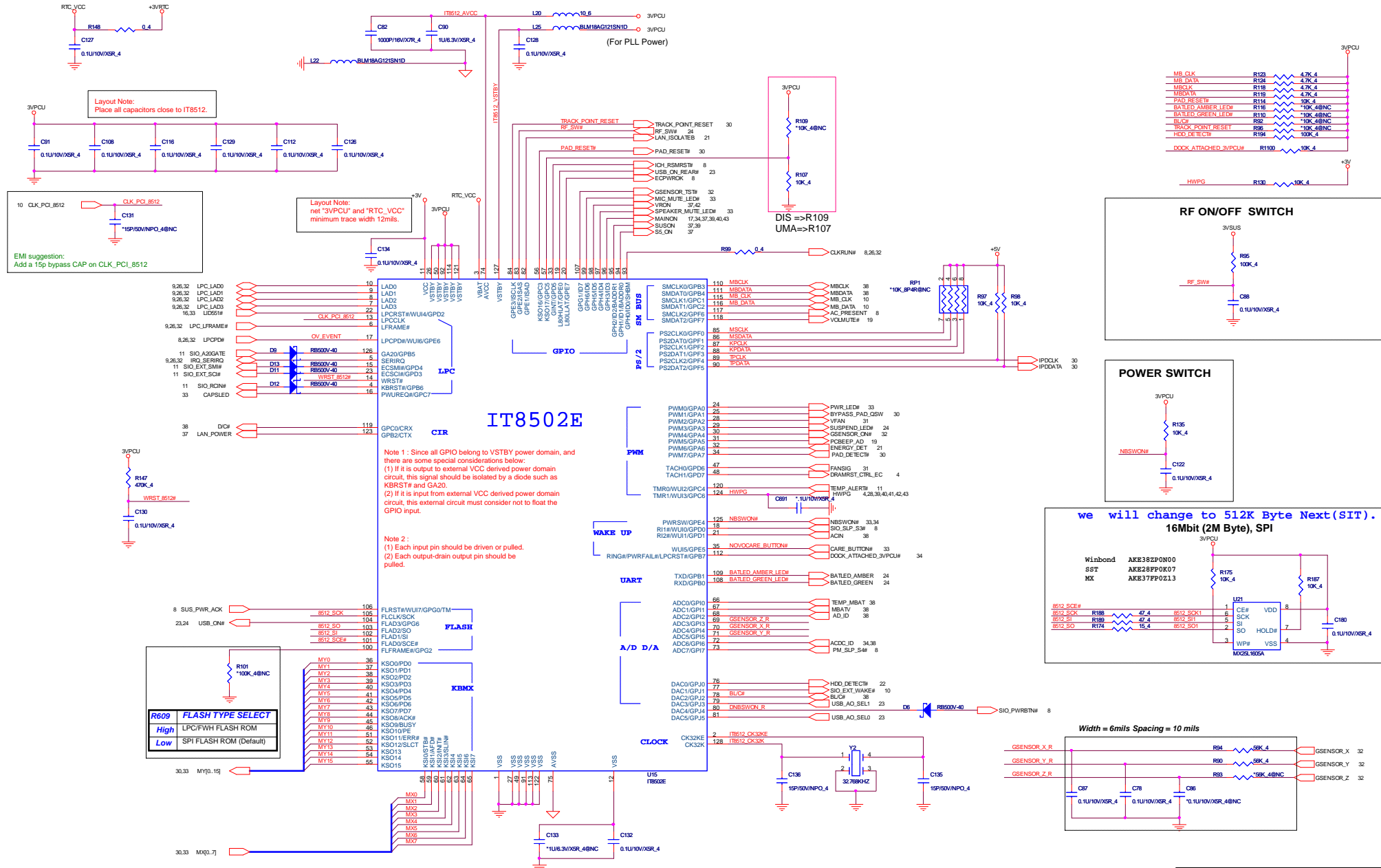




**G-Note Montevina**  
**Quanta Computer Inc.**

Size	Document Number	Rev	<RevCode>
Cust	Docking CON		
Date:	Tuesday, November 17, 2009	Sheet	34 of 46







# 36

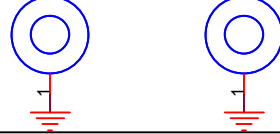
## MiniCard WLAN

HOLE13 H-TC197BC142D102P2  
HOLE14 H-TC197BC142D102P2



## MiniCard WWAN

HOLE35 H-TC236BC102D64P2  
HOLE36 H-TC236BC102D64P2



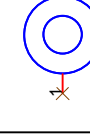
## Hole for PCH support

HOLE34 H-BC197D118PB  
HOLE33 H-BC197D118PB



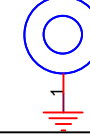
## Drink Hole

HOLE8  
\*O-GC8-2



## Bluetooth nut

HOLE3  
H-TC197D118PT



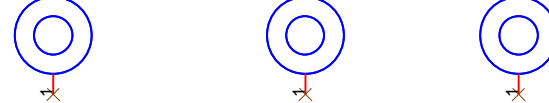
## Hole for CPU support

HOLE29 \*H-C142D142N@NC  
HOLE31 \*H-C142D142N@NC  
HOLE30 \*H-C142D142N@NC  
HOLE32 \*H-C142D142N@NC



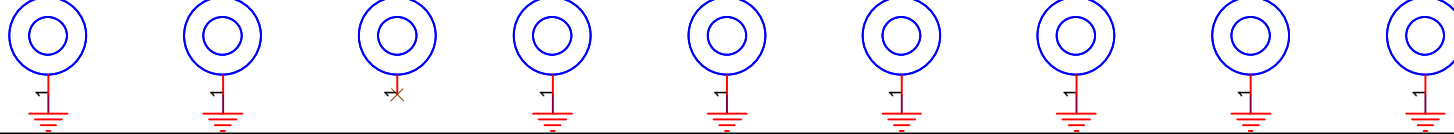
## VGA nut

HOLE27 \*H-C276D87P2  
HOLE28 O-GC8-1  
HOLE26 H-TC236BC216D87P2



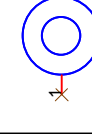
## Boundary Hole

HOLE7 \*H-C276D87P2  
HOLE4 \*H-C276D91P2  
HOLE5 \*H-C86D86N@NC  
HOLE15 \*H-TC236BC216D87P2H-C209D209N  
HOLE10 \*H-C276D91P2@NC  
HOLE9 \*H-BC276D91P2  
HOLE17 \*H-C276D91P2@NC  
HOLE2 \*H-C276D91P2@NC



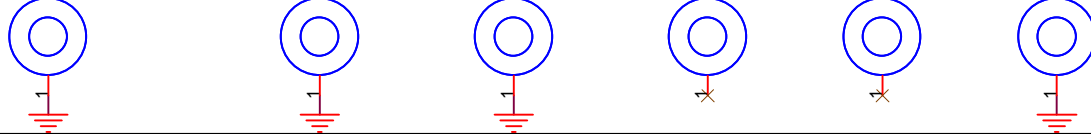
## Break Hole

HOLE11  
\*o-gc4@NC



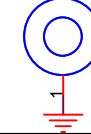
## Boundary Hole

HOLE6 \*H-TSHAPEBC276D91P2-1@NC  
HOLE16 \*H-C276D91P2@NC  
HOLE25 \*H-C276D91P2@NC  
HOLE23 \*H-C79D79N  
HOLE21 \*H-BC276D87PB  
HOLE24 \*H-C157D91P2@NC



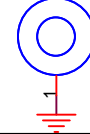
## K/B Control/B Nut

HOLE18  
\*H-TC189D122PT



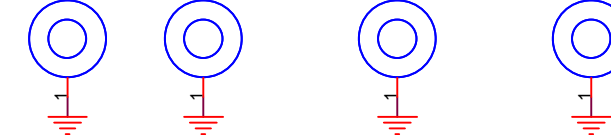
## Boundary Hole (ODD)

HOLE12  
\*H-C276D91P2@NC

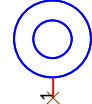


## PAD

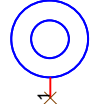
GP2 \*SPAD-SPE1NP  
GP3 \*SPAD-RE197X217NP  
GP1 \*RE236X494NP  
GP4 \*RE270X220NP



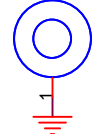
HOLE19  
O-GC2A-1



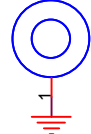
HOLE20  
O-GC2A-2



HOLE22  
\*H-TC181D93PT



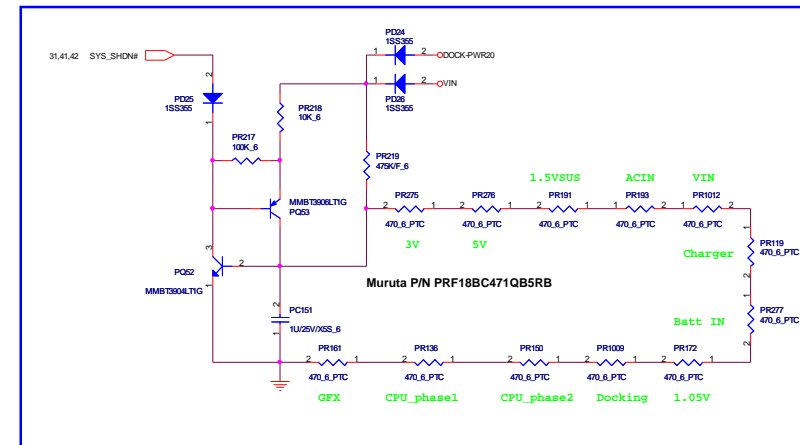
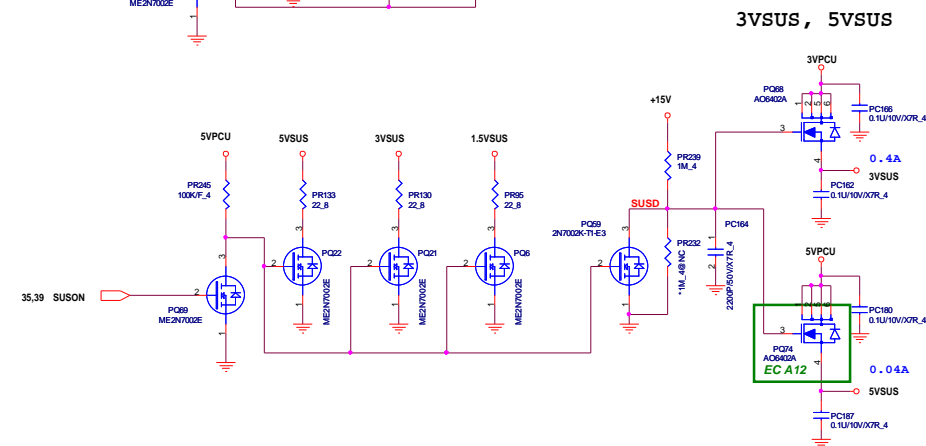
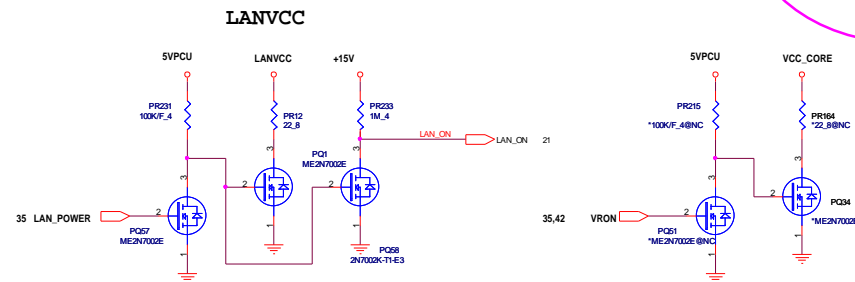
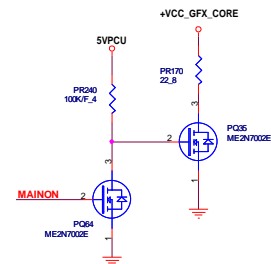
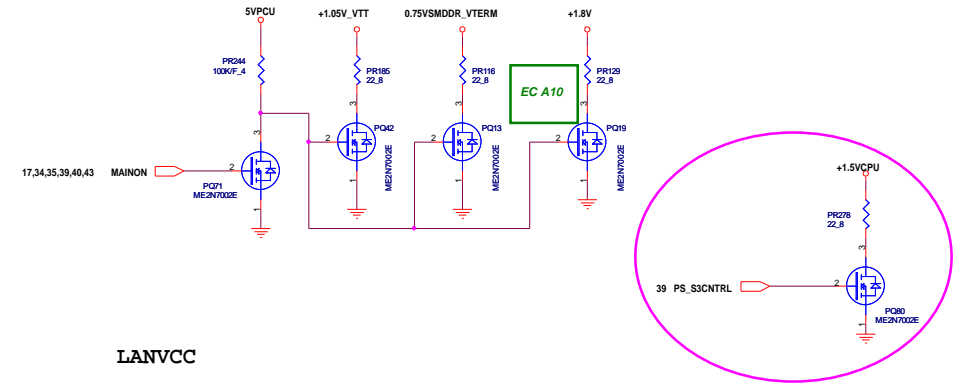
HOLE37  
\*H-TC189BC158D122P2



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**Quanta Computer Inc.**

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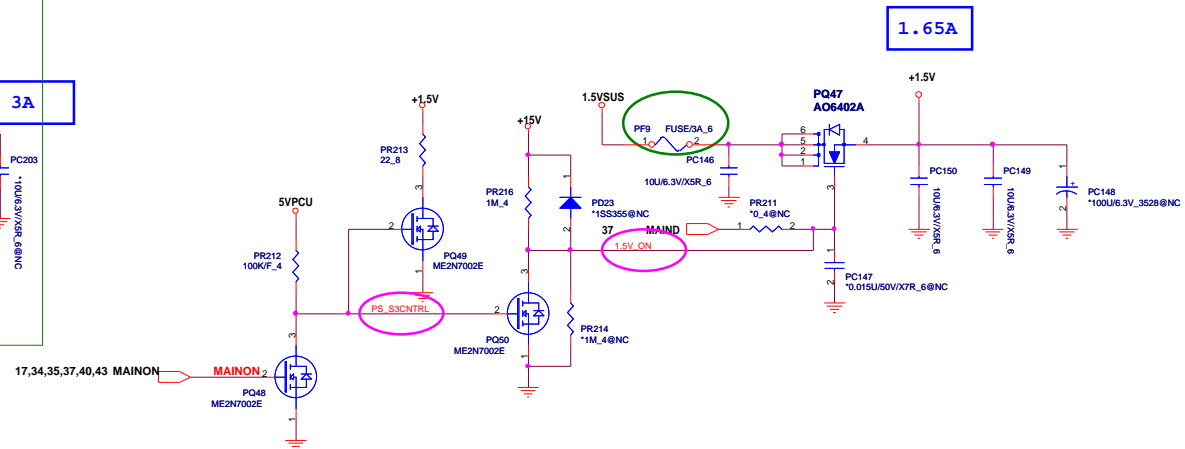
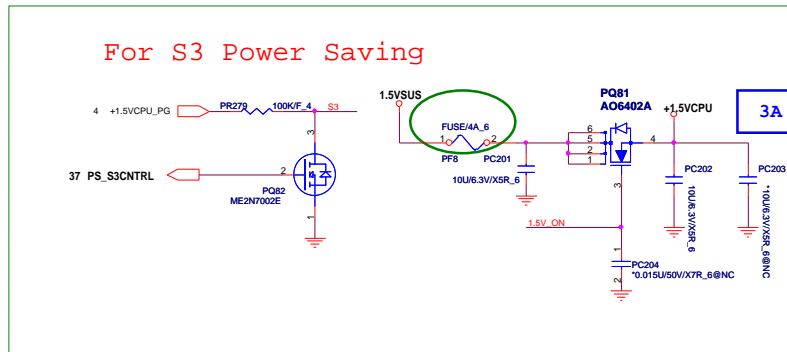
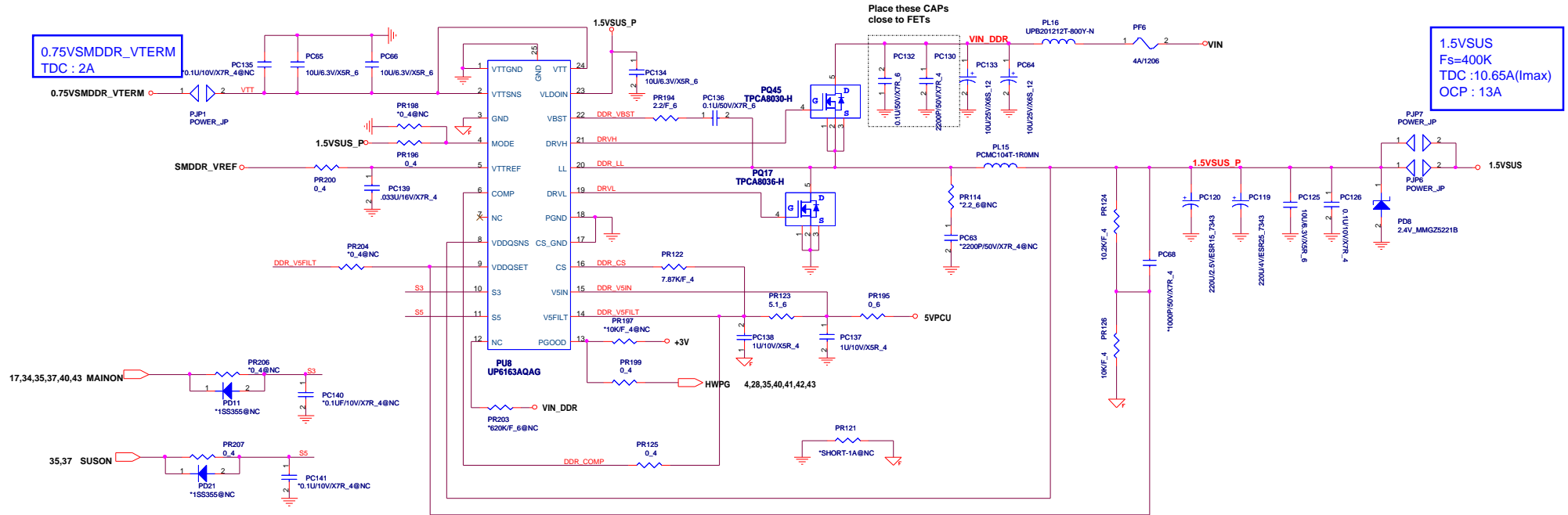








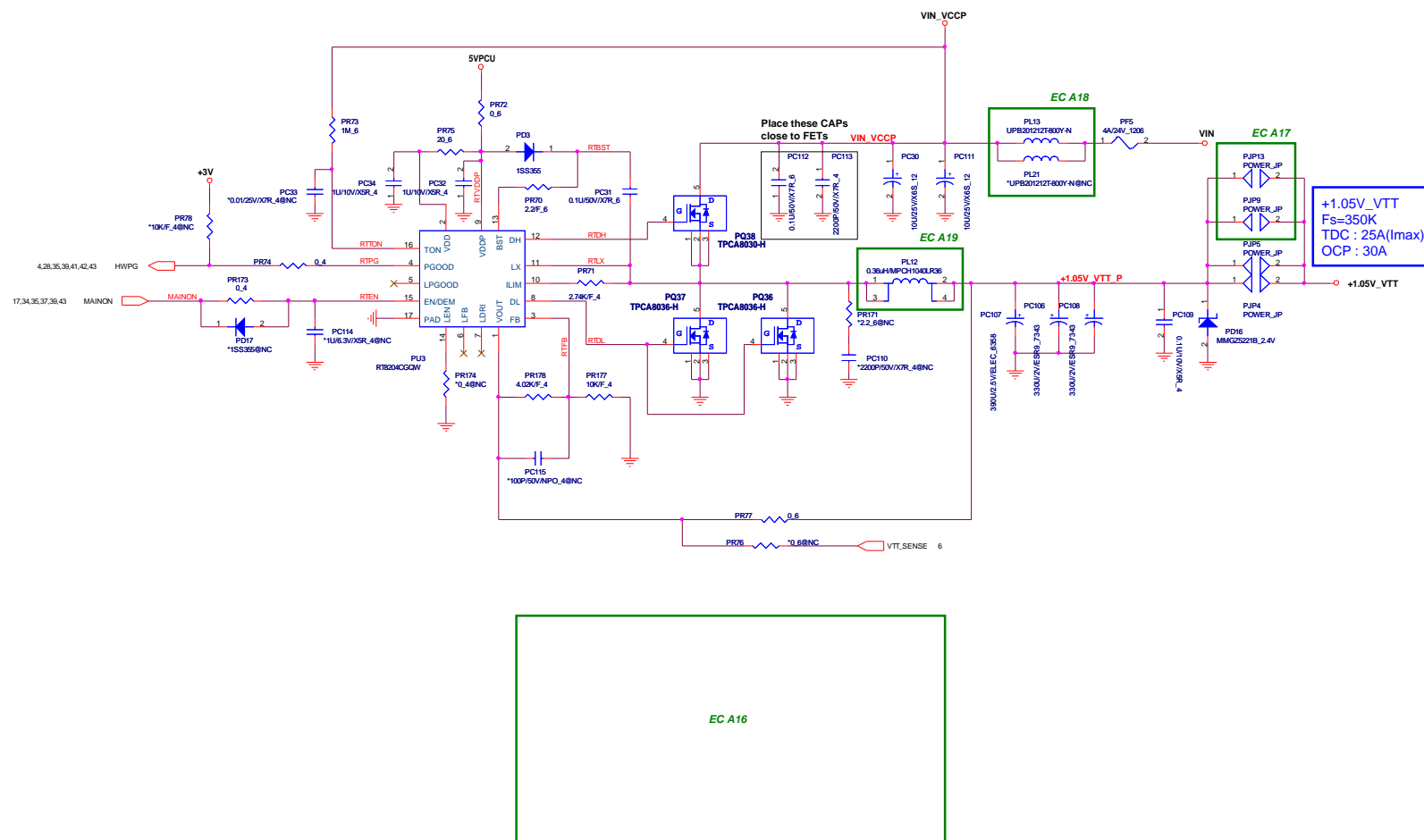




G-NOTE Calpella (UMA)  
Quanta Computer Inc.

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Custom  
Date: Tuesday, November 17, 2009  
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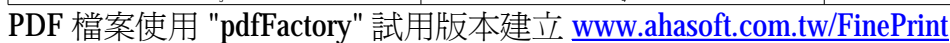




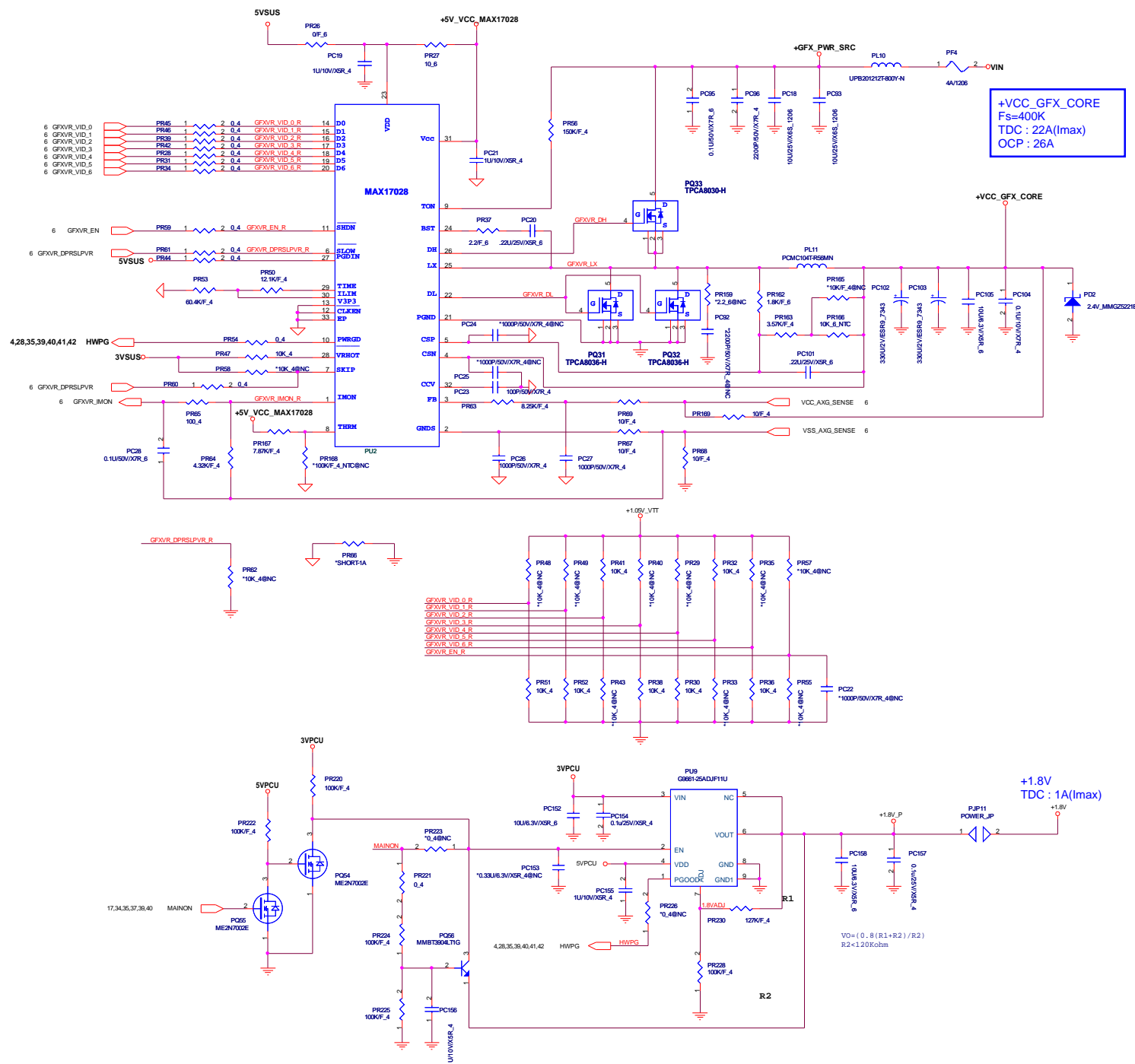














## Revision History

Revision	Date	Phase	Change List	Release Schematic Date	Release Gerber File Date
1A		DV	Initial release		

## Schematic Value Explanation Description :

### RESISTOR

Value	F	4	6	8	12	1210	*	Description
*1K/F_4	1%	0402 (1005 )					DE POP	1K ohm 1% SMD 0402 package and DE POP
1K_6	5%		0603 (1608 )				POP	1K ohm 5% SMD 0603 package and POP
1K_8	5%			0805 (2125 )			POP	1K ohm 5% SMD 0805 package and POP
1K_12	5%				1206 (3216 )		POP	1K ohm 5% SMD 1206 package and POP
1K_1210	5%					1210 (3225 )	POP	1K ohm 5% SMD 1210 package and POP

### CAPACITOR

Value	Voltage	Material	6				*	Description
*0.1U/10V/X5R_4	10V	X5R	0402 (1005 )				DE POP	0.1UF 10V X5R SMD 0402 package DE POP
1U/25V/X7R_6	25V	X7R	0603 (1608 )				POP	0.1UF 25V X7R SMD 0603 package POP







