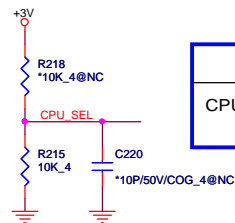
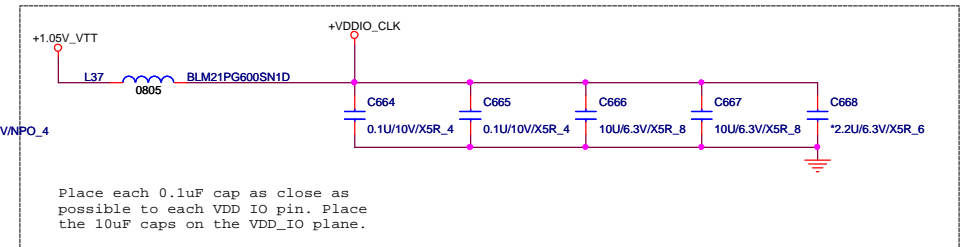
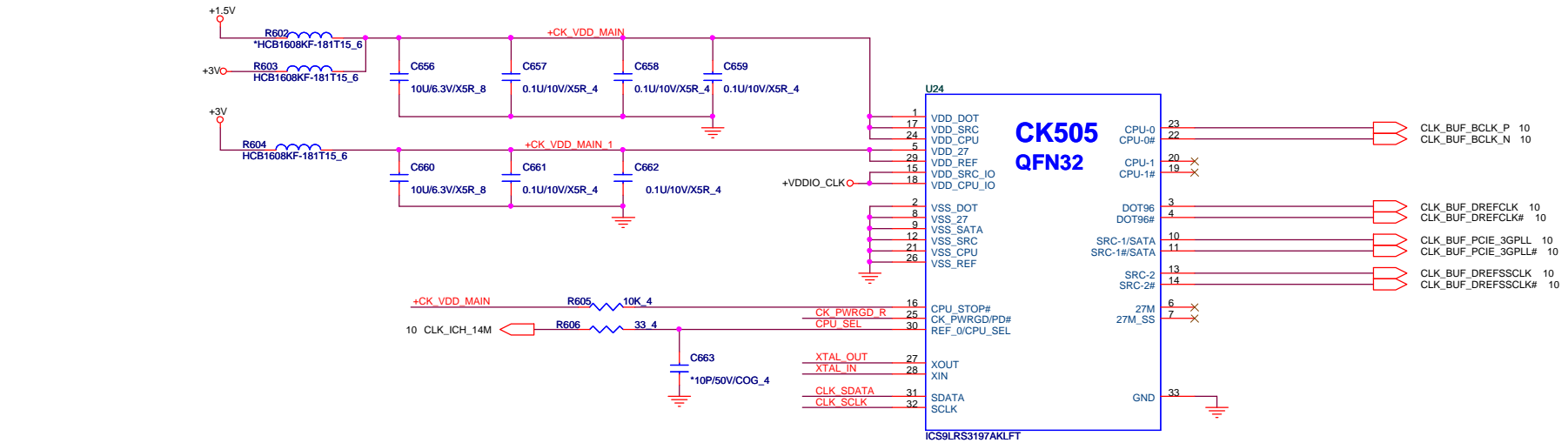


Table of Contents

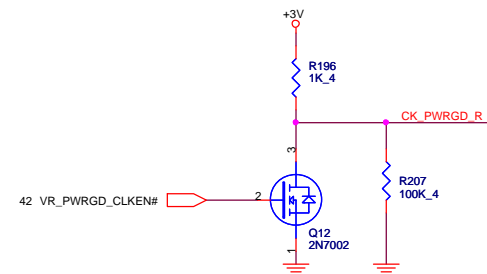
PAGE	DESCRIPTION
01	BLOCK DIAGRAM
02	FRONT PAGE
03	CLOCK GENERATOR
04-07	Auburndale PROCESSER
08-13	Ibex Peak-M
14-15	DDRIII SO-DIMM
16	LCD & LID CON
17	HDMI PORT(PS8101)
18	CRT CONN
19	AUDIO CODEC(ALC269Q)
20	LAN(8111DL)
21	SATA HDD/CD-ROM
22	USB X2/SIM_CARD/LEDs/RF
23	CARD READER/USB/SIM CONN
24	MINI-Card (WWAN)
25	MINI-Card (WLAN)
26	ONFI
27	Express Card
28	K/B, T/P
29	BlueTooth
30	FAN /THERMAL
31	G-SENSOR
32	B TO B CON
33	TPM & RFID EEPROM
34	KBC IT8502E
35	HOLD & SKEW
36	Discharge
37	Charger (ISL8731)
38	DDR3/0.75V(TPS51116REGR)
39	1.05V_VTT (RT8204)
40	3V/5V (ISL6237IRZ-T)
41	CPU (ISL62882)
42	GFX_VCC (MAX17028)
43	XDP & JTAG
44	Power Block Dianram
45	Schematic Value Descript
46	BOM Matrix Table

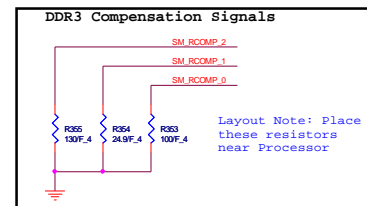
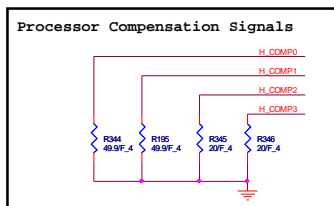
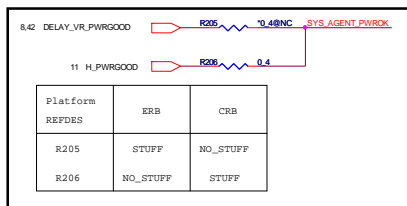
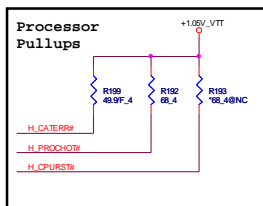
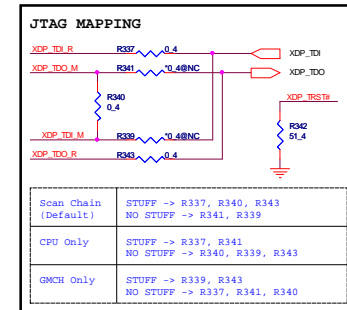
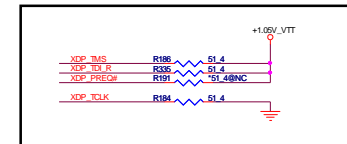
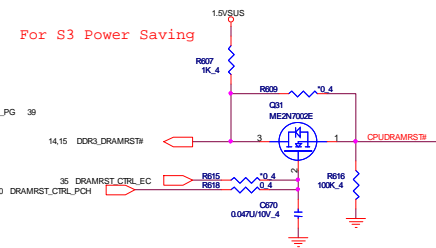
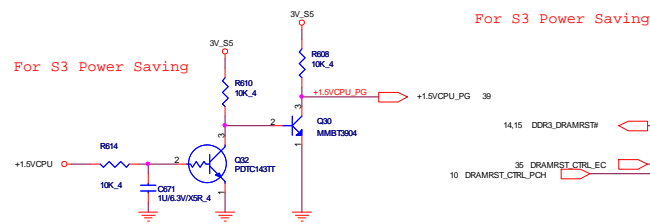
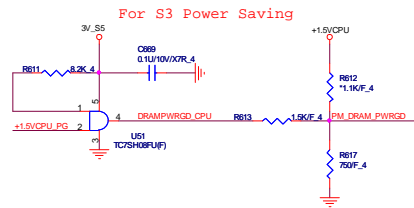
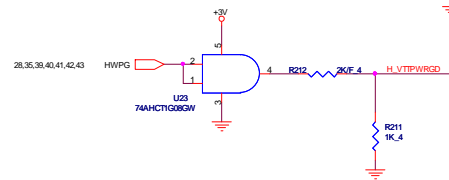
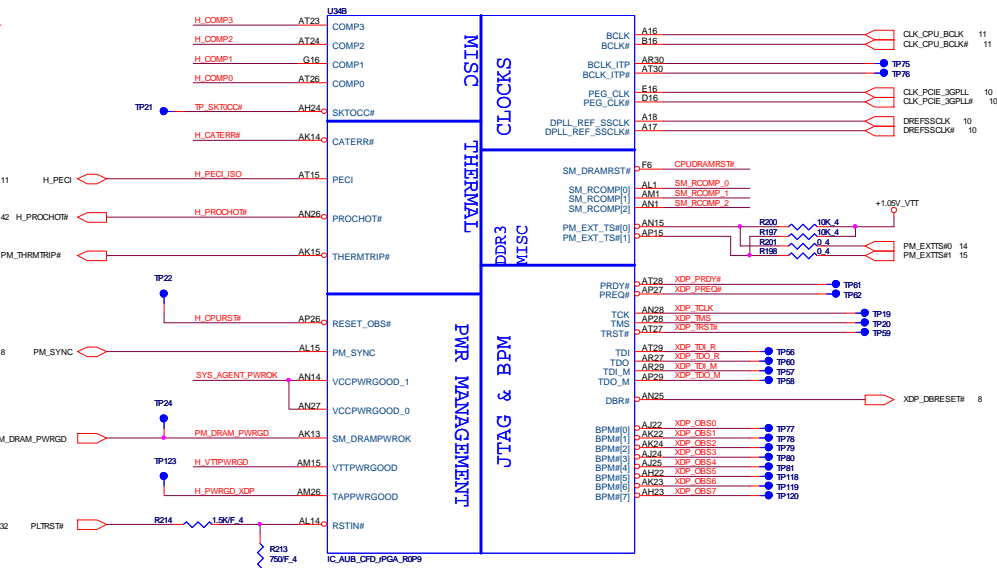
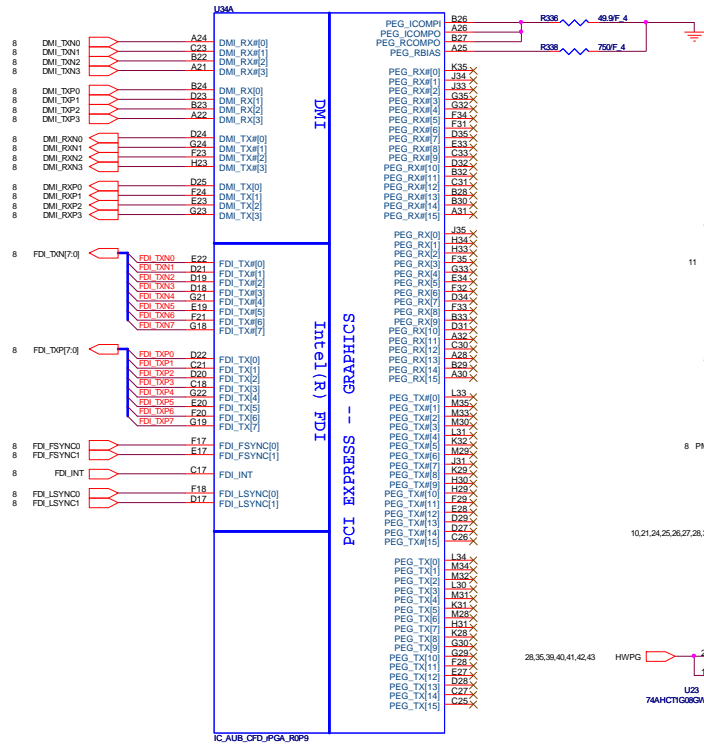
Power States

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

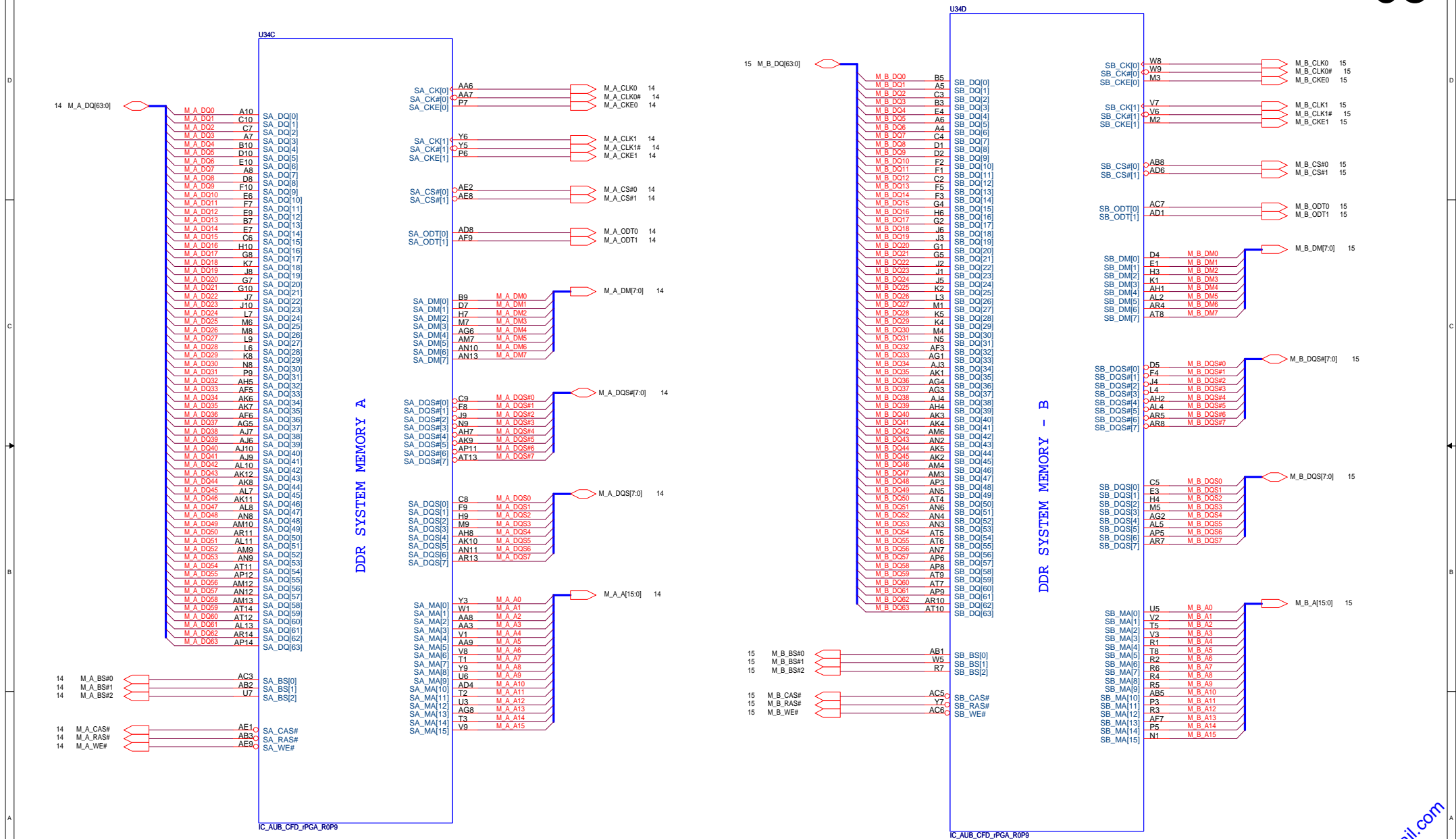


	0	1
CPU_SEL	CPU0/1=133MHz (default)	CPU0/1=100MHz





ARRANDALE PROCESSOR (DDR3)



CPU Core Power



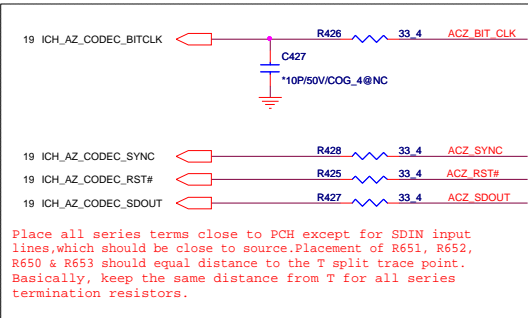
RTC Circuitry

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

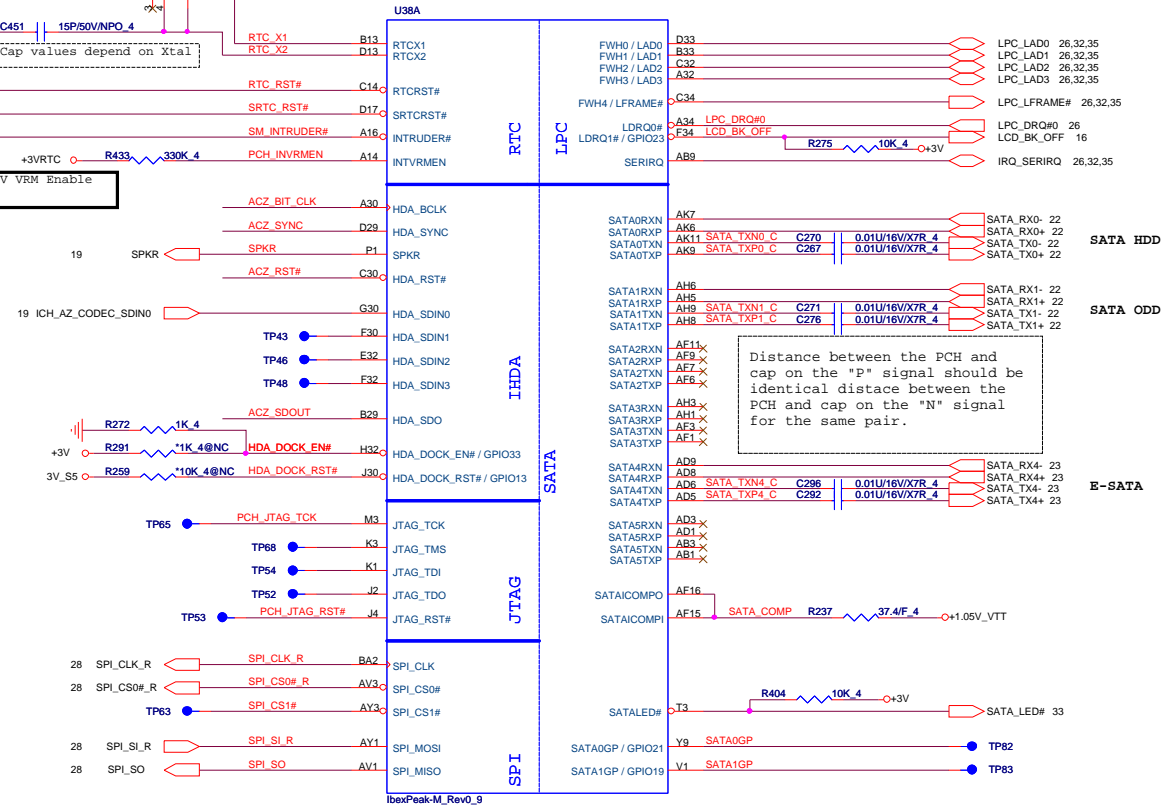
TPM Settings	J3
Clear ME RTC registers	1-2
Save ME RTC registers	1-X (Default)

IBEX PEAK-M (HDA,JTAG,SATA)

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



No Reboot Strap



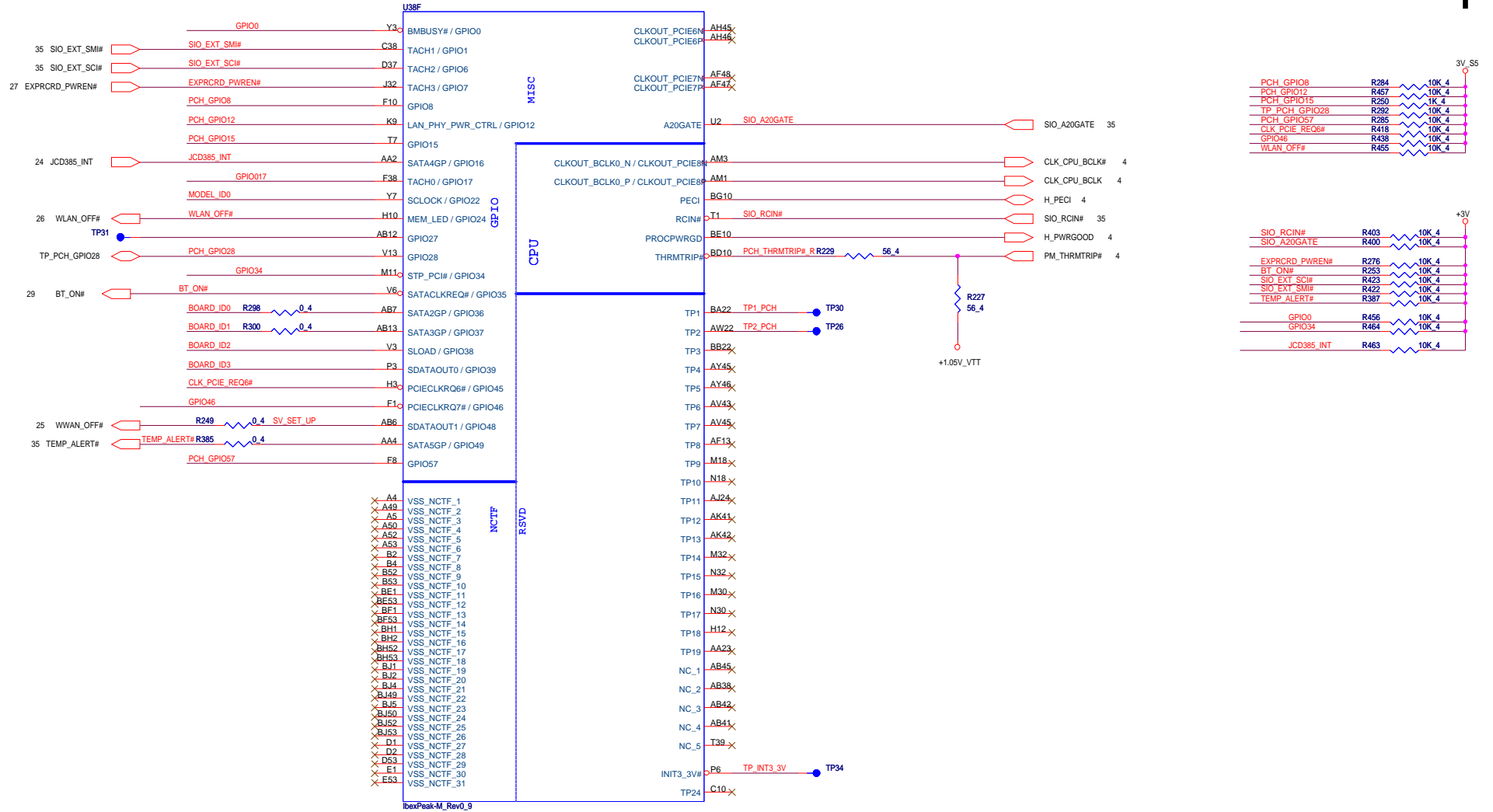
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IBEX PEAK-M (GPIO,VSS_NCTF,RSVD)

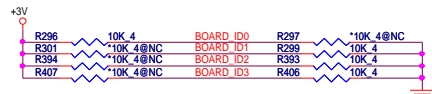
3,4,8,9,10,12,14,15,16,17,18,19,21,22,23,24,25,26,27,28,29,31,32,33,34,35,37,39,40,41,42
4,8,9,10,12,23,26,28,37
3,4,6,8,9,10,12,37,40,42,43

+3V
3V_SS
+1.05V_VTT

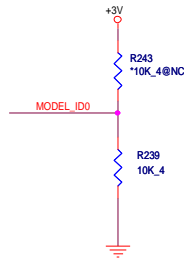
11



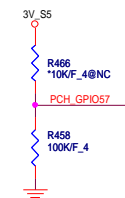
Board ID For Function	ID3 GPIO39	ID2 GPIO38	ID1 GPIO37	ID0 GPIO36
SDV	0	0	0	0
SIV	0	0	0	1
SIT	0	0	1	0
SVT	0	0	1	1
SOVP	0	1	0	0



Model ID	MODEL_ID0
14 "	0
15 "	1



TPM physical presence	
PCH_GPIO57	Low: Default



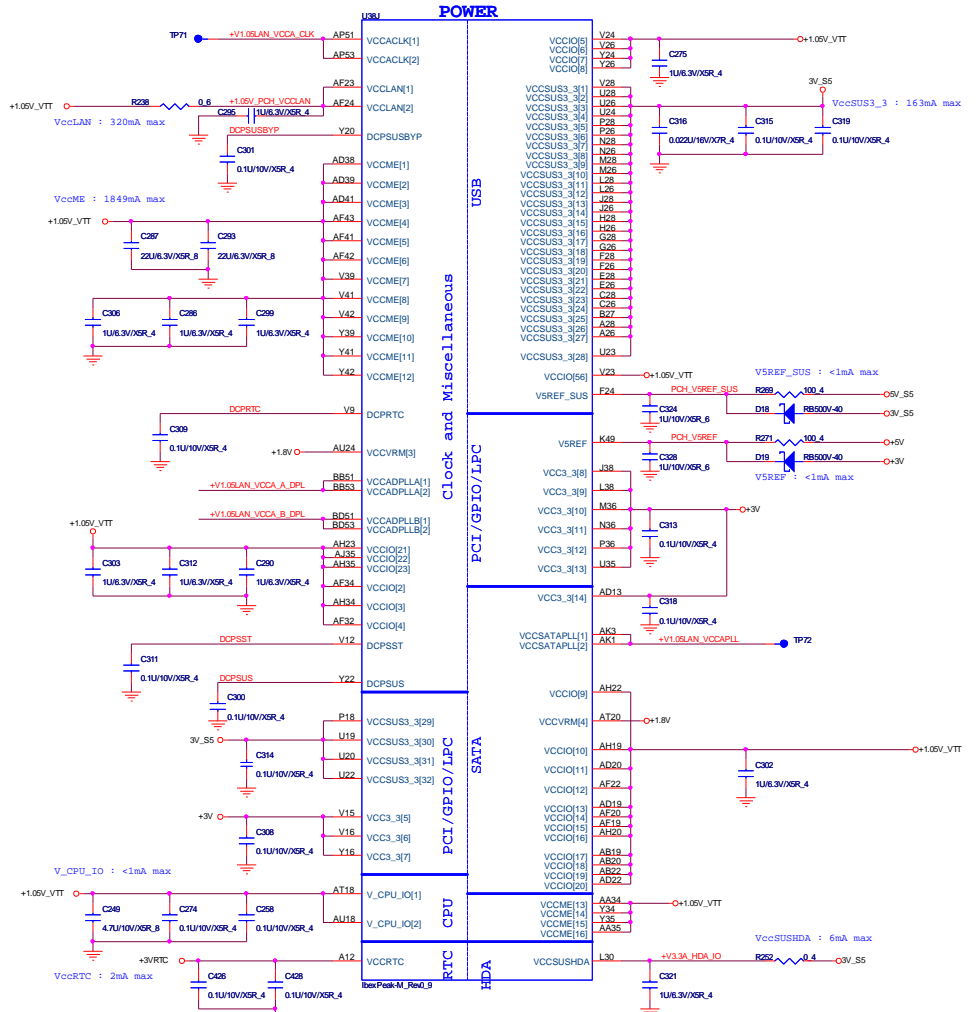
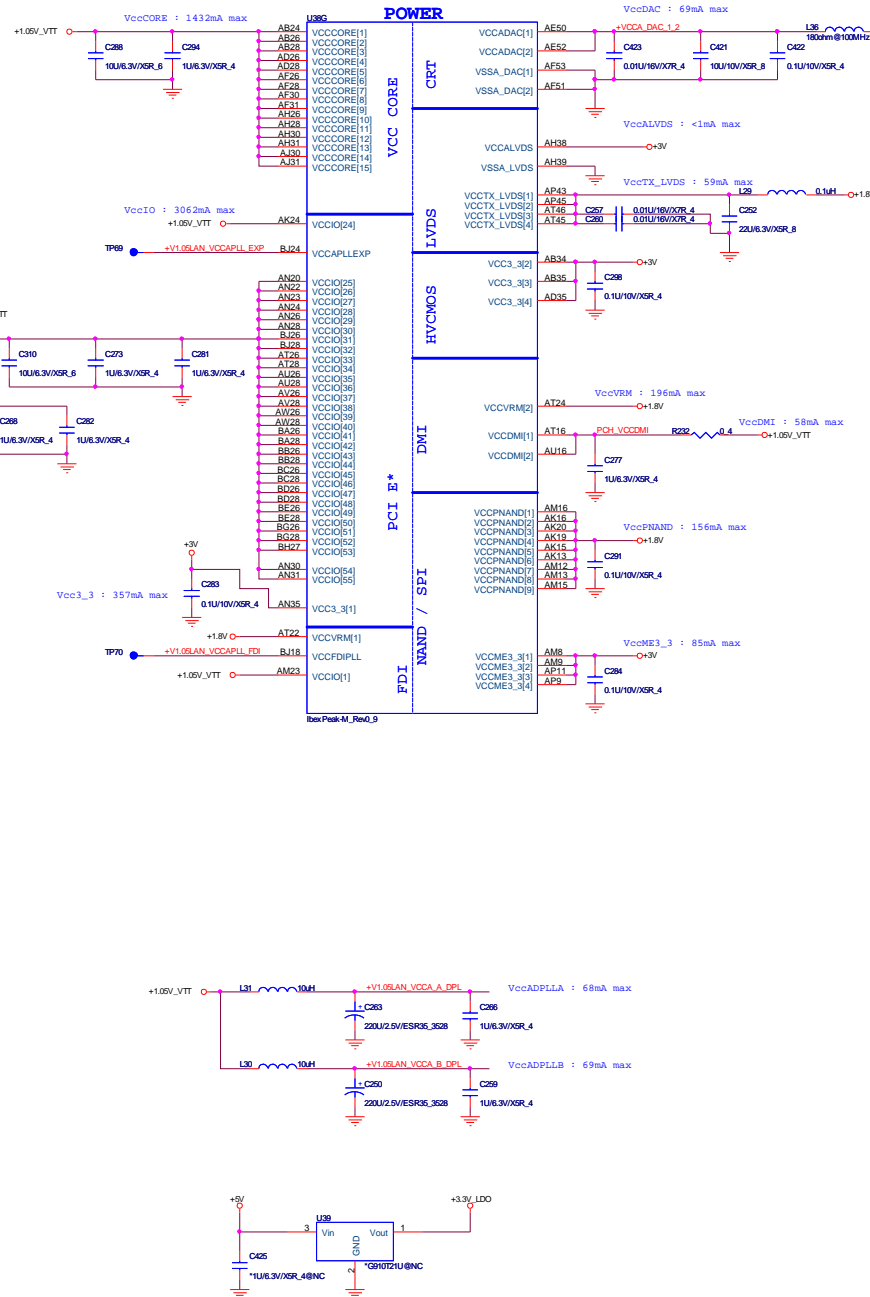
SV_SET_UP	1-X High = Strong (Default)
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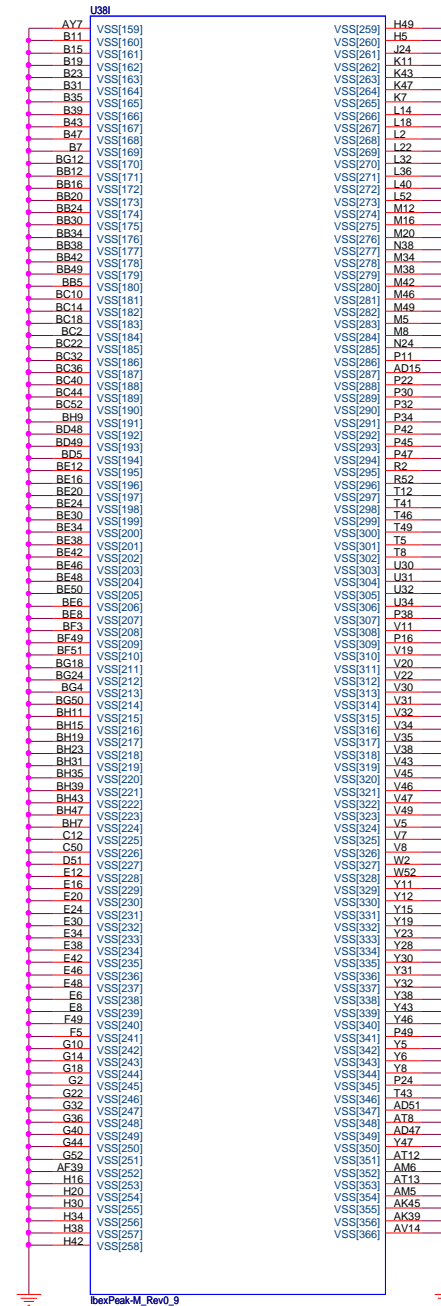
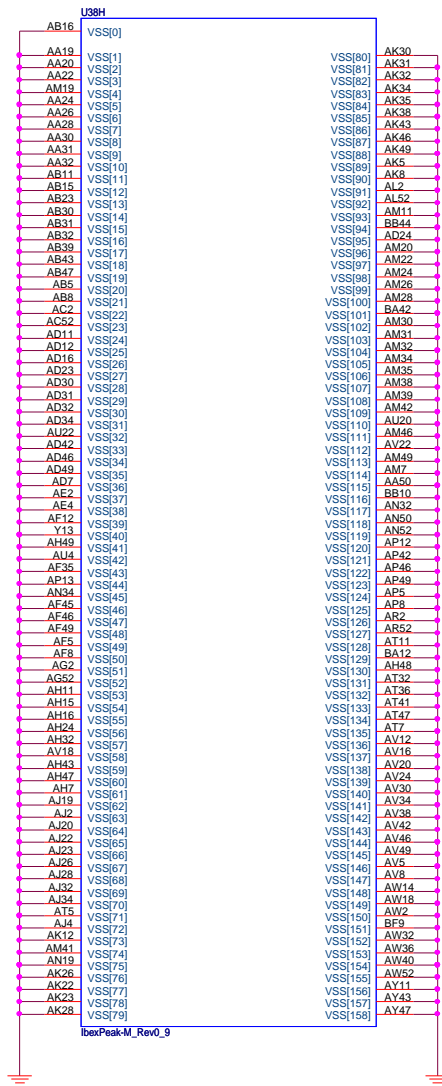
Size: Custom
Document Number: IBEX PEAK-M 4/6
Date: Tuesday, November 17, 2009
Sheet: 11 of 46

IBEX PEAK-M (POWER)

12



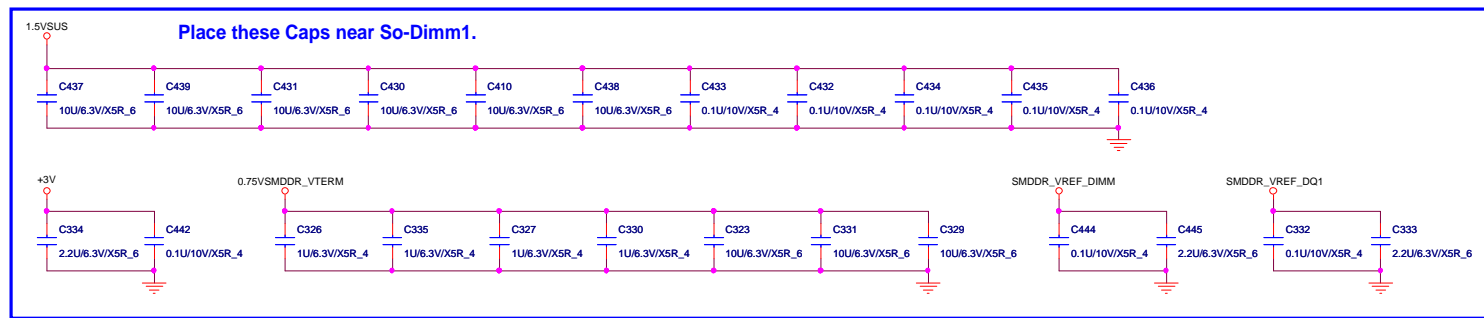
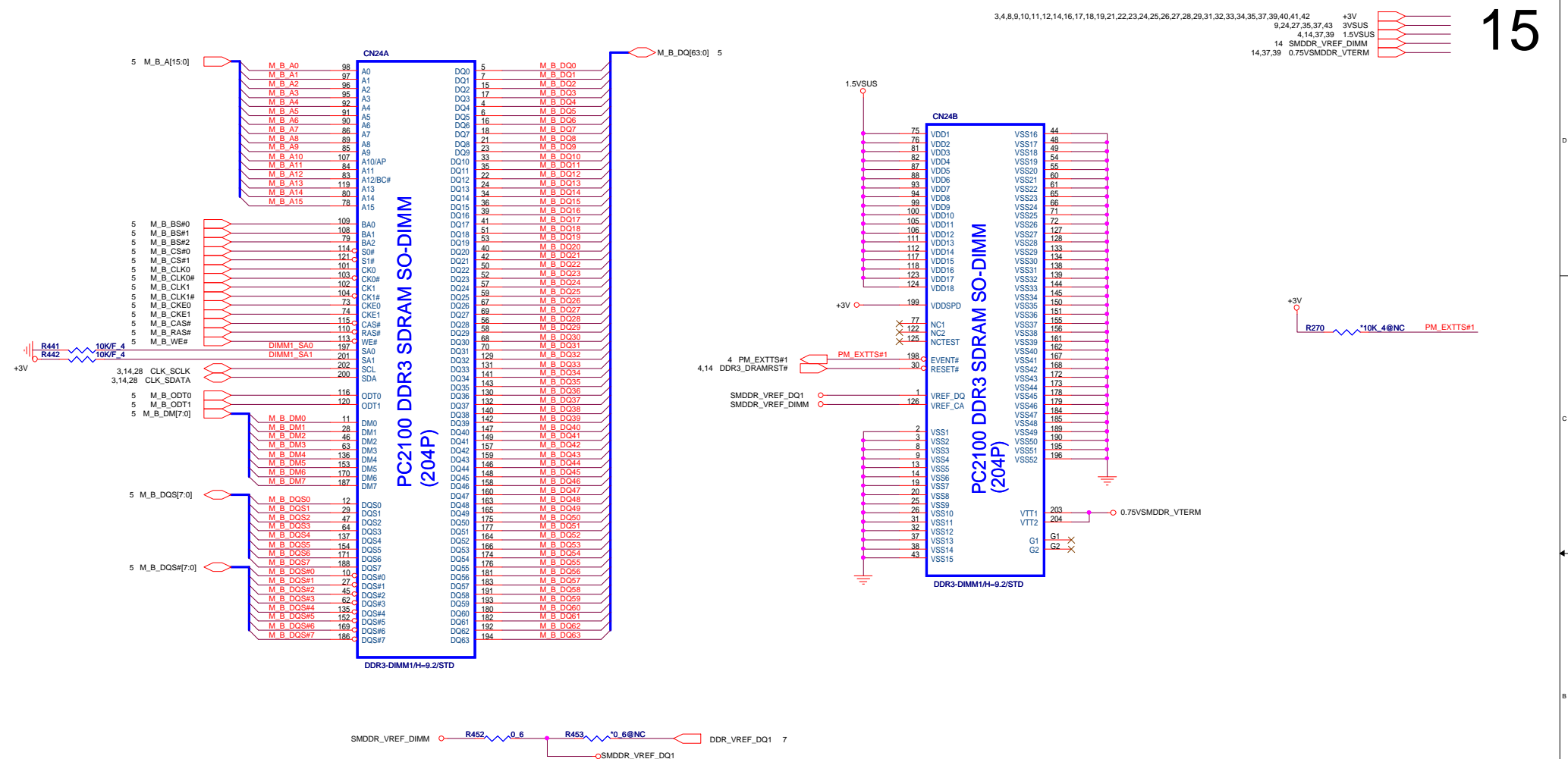
IBEX PEAK-M (GND)



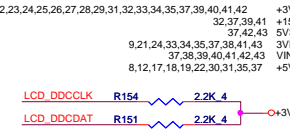
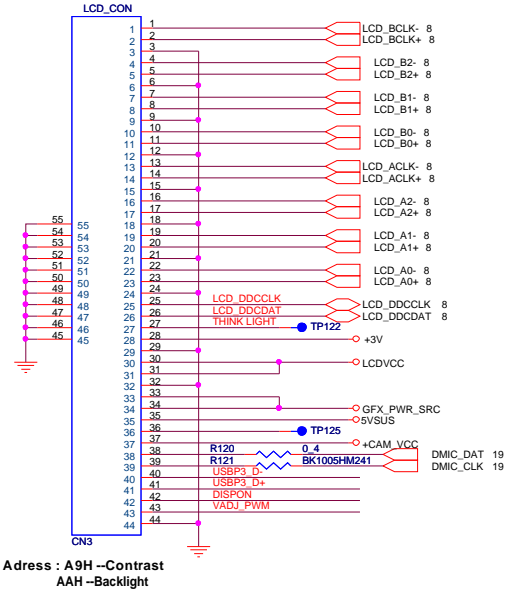
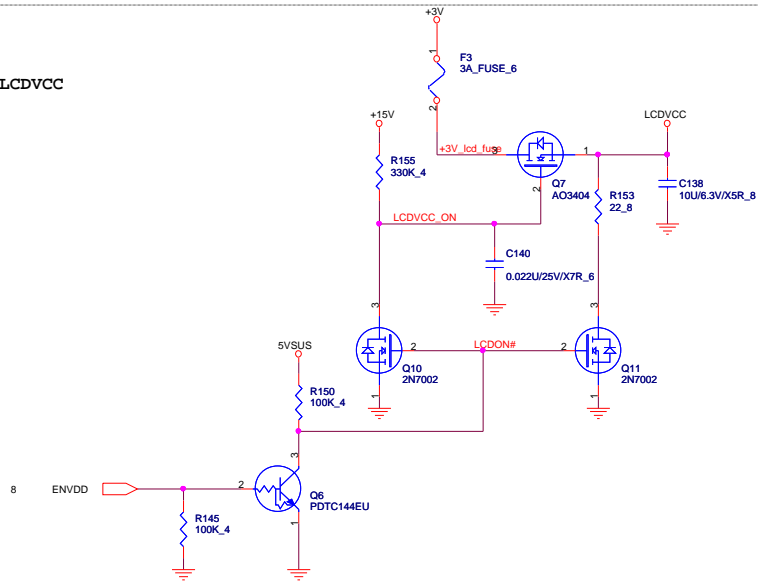
U38H

ibexPeak-M_Rev0_9

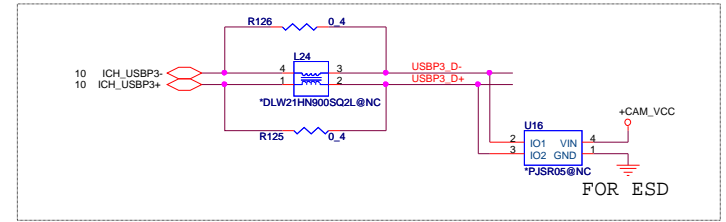
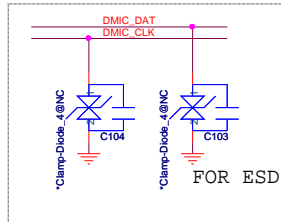
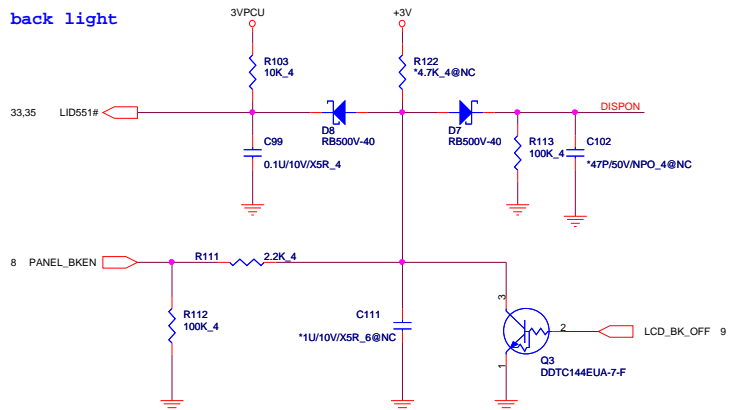
13



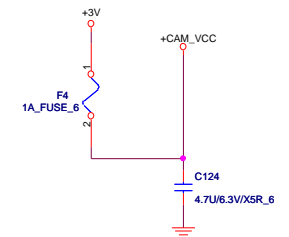
LCDVCC



back light

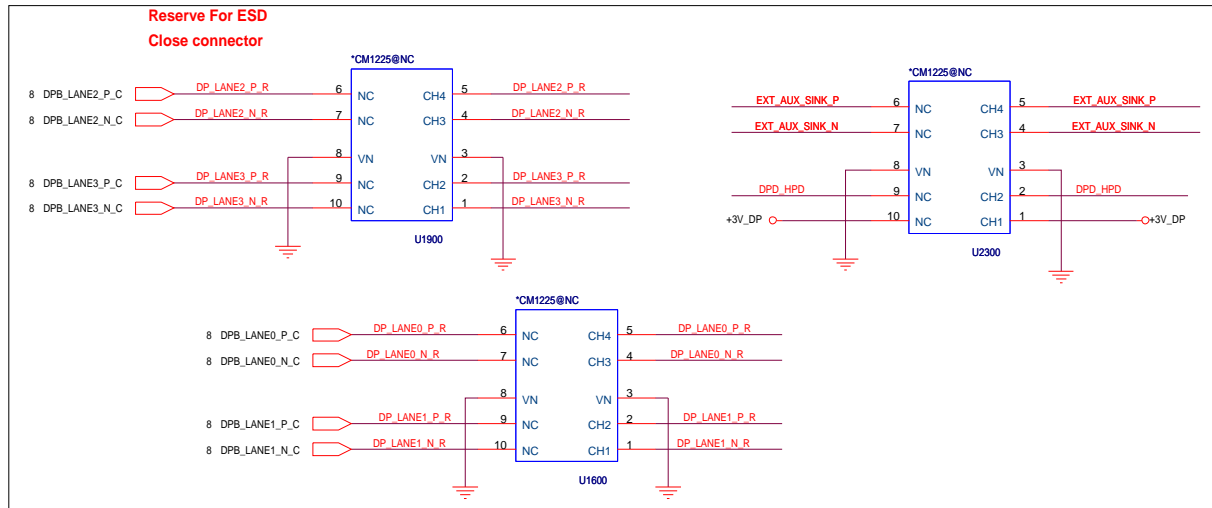
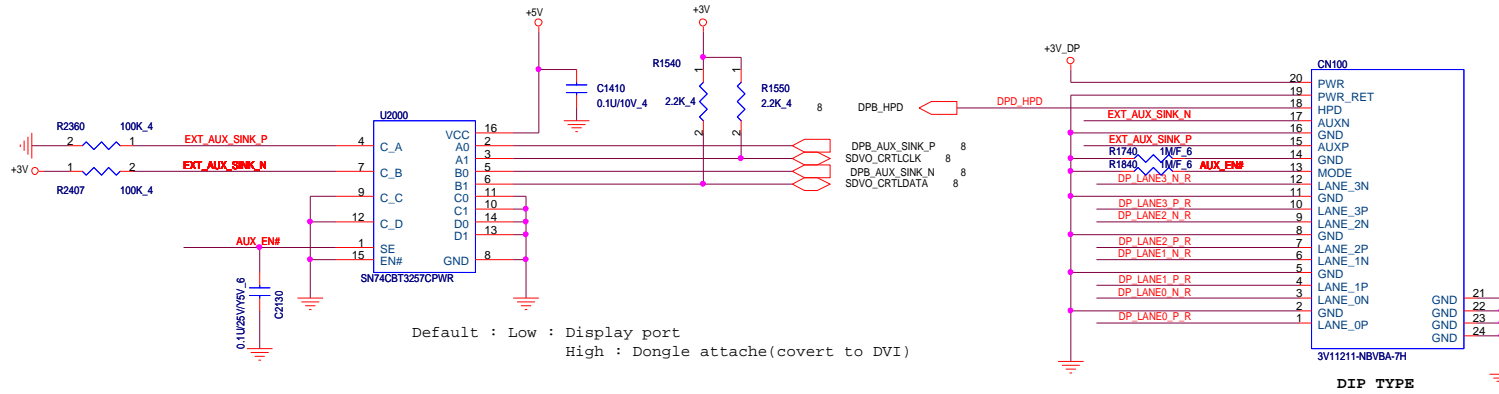


CAMERA VCC Control

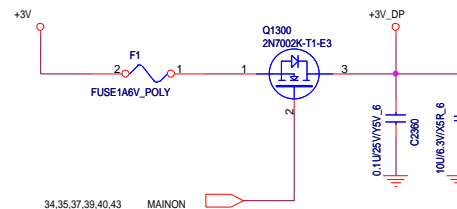
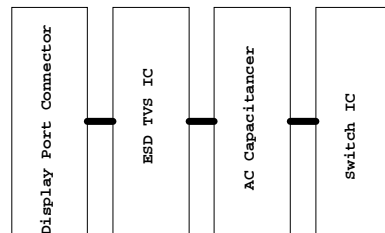


Display Port

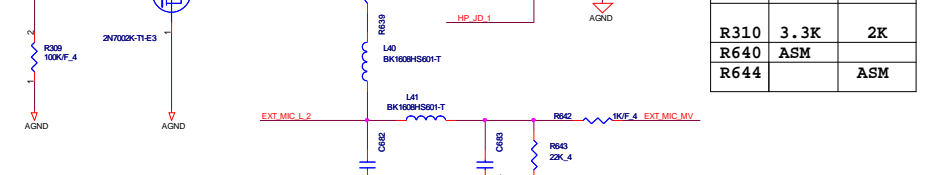
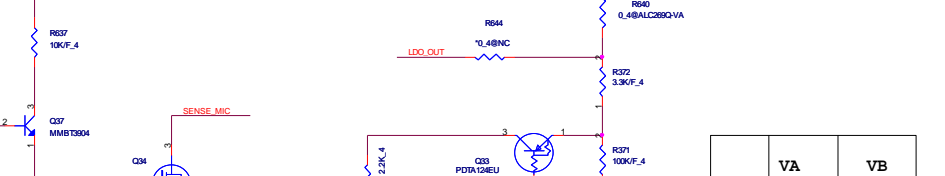
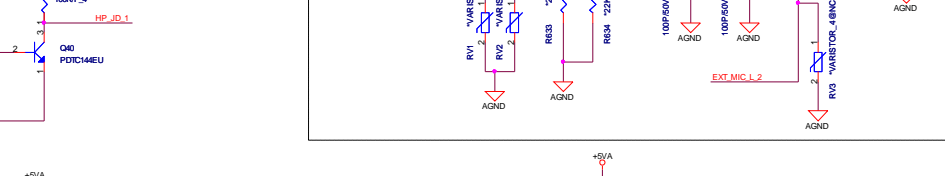
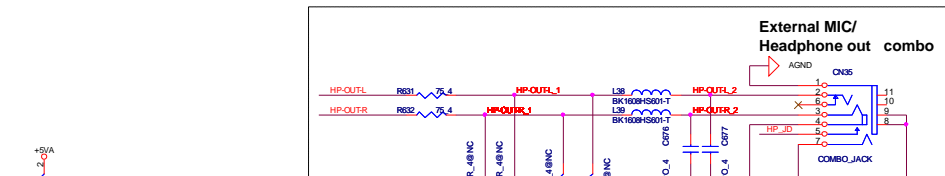
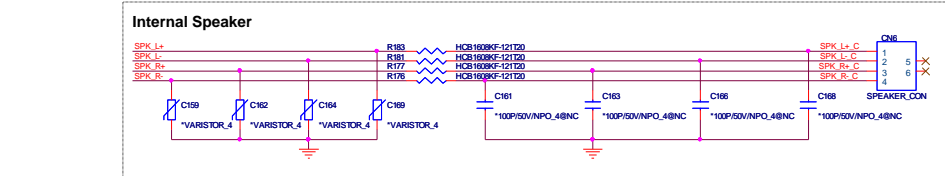
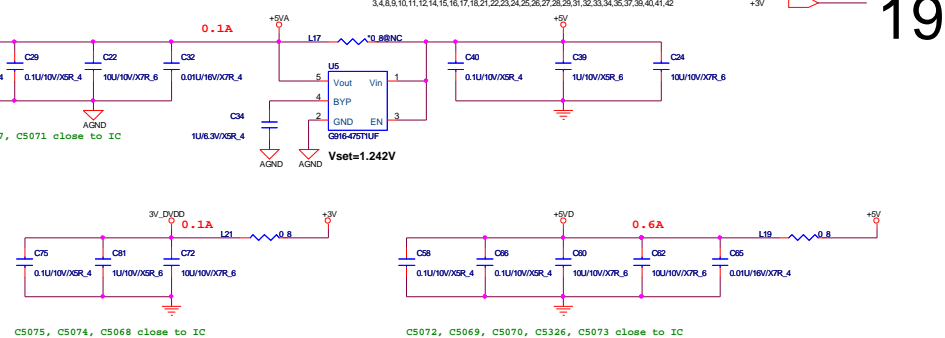
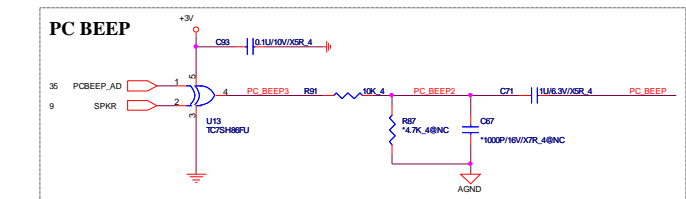
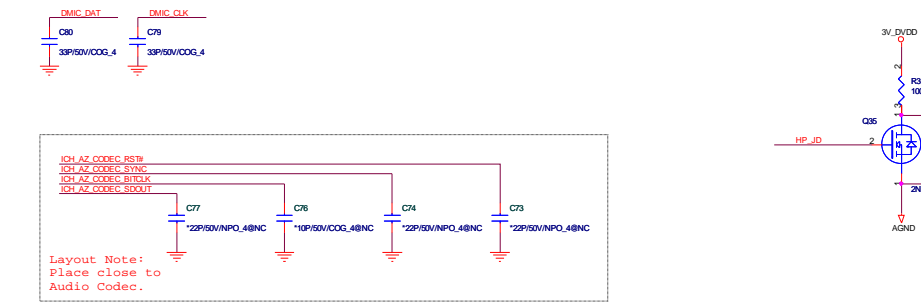
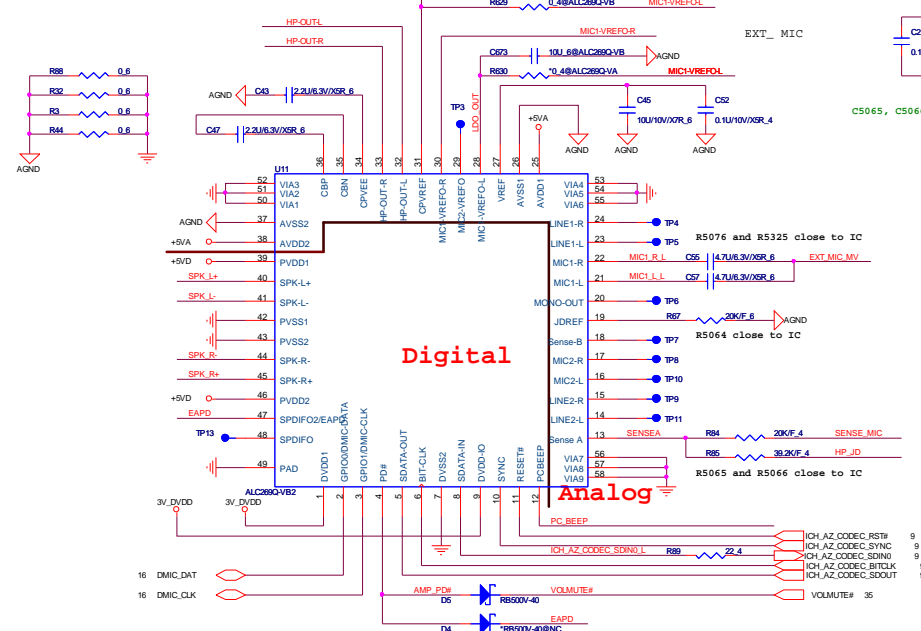
17



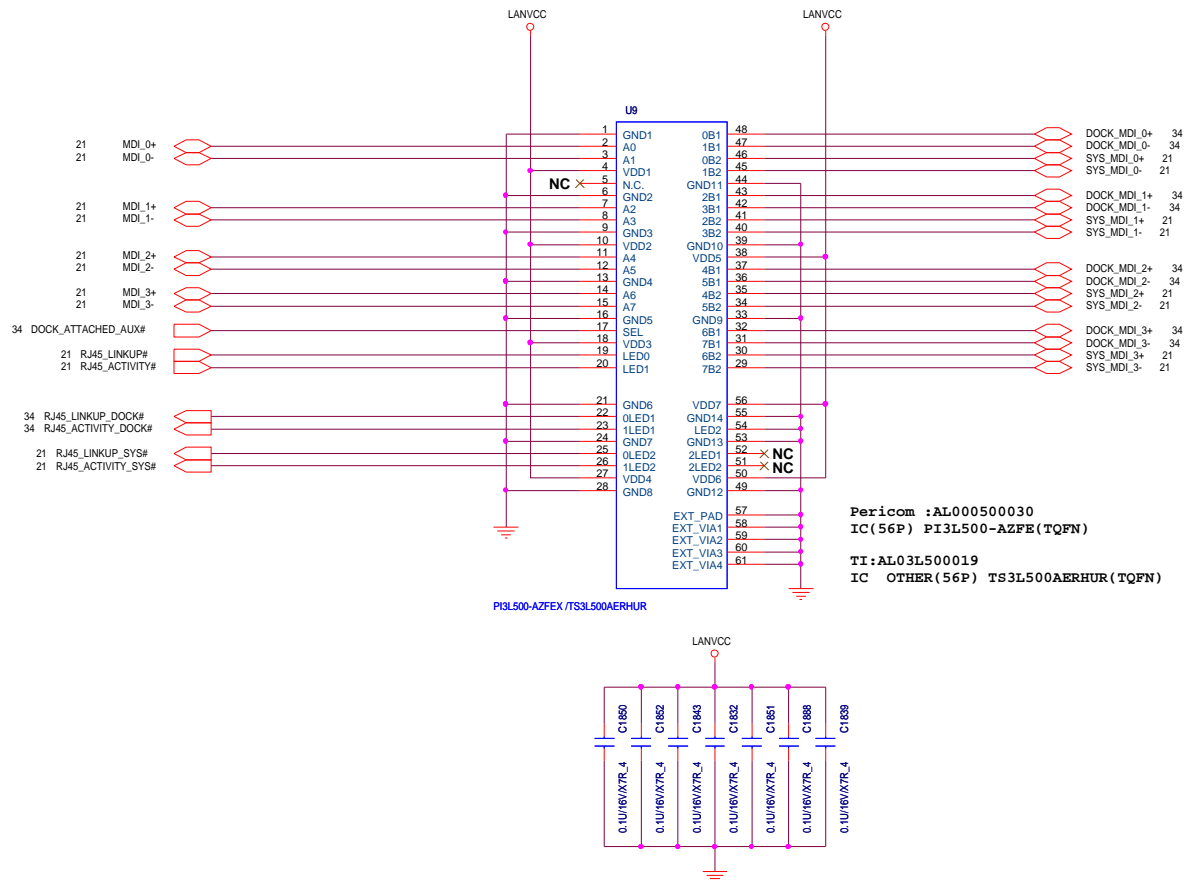
Layout Topology

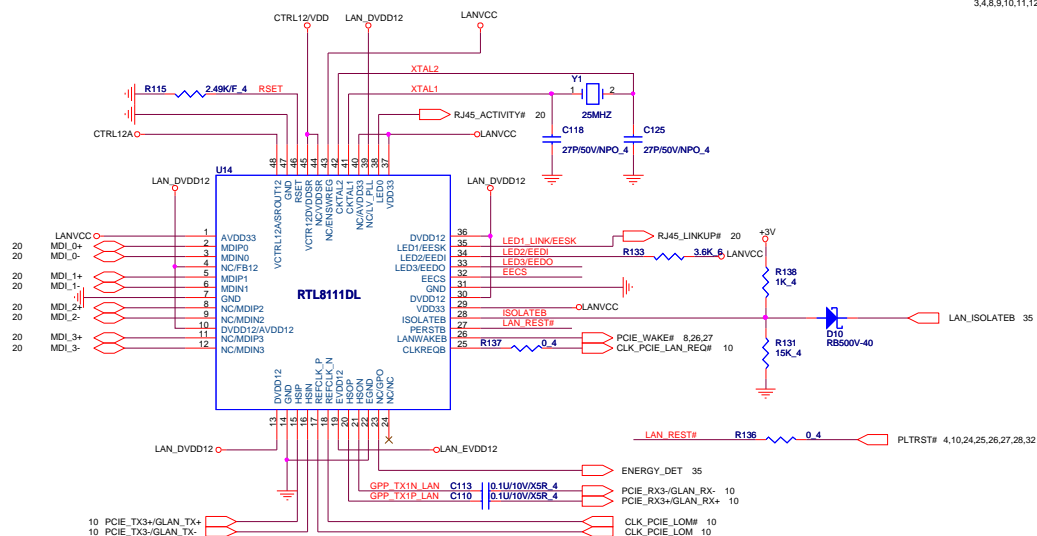
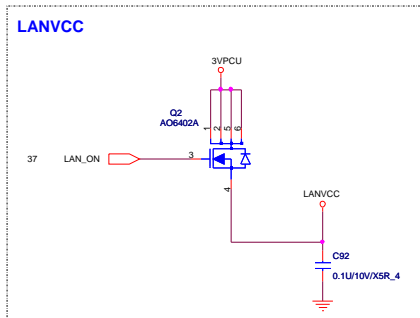


HDAudio Codec

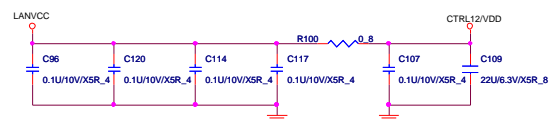


	VA	VB
R310	3.3K	2K
R640	ASM	
R644		ASM





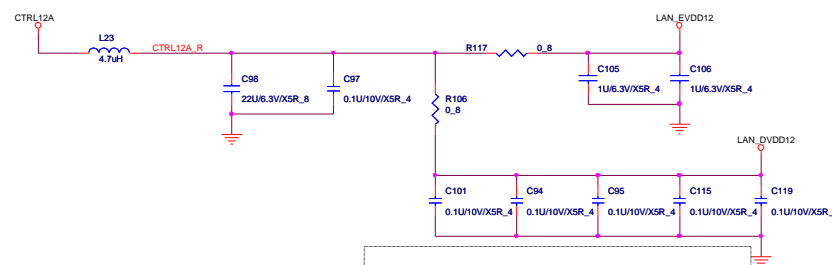
* C5116 and C5273 are for U5006 EVDD12 pin 19.



Note 1: The Trace length between L1 and 8111DL's Pin 1 must be within 0.5 cm. C5 and C8 to L1 must be within 0.5cm. Refer to Layout guide for more detail.

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

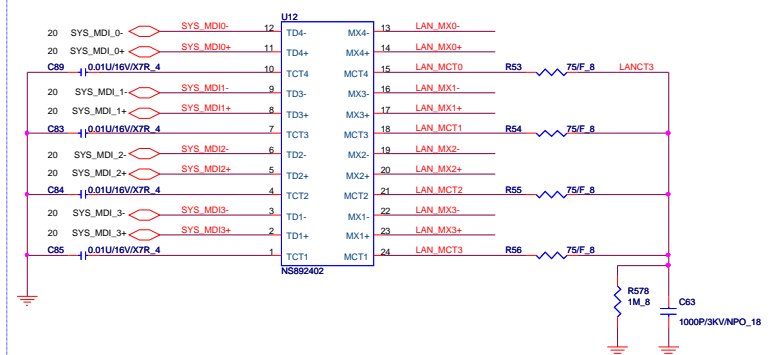
Place C5113, C5094 closed to U5006 pins44,45.



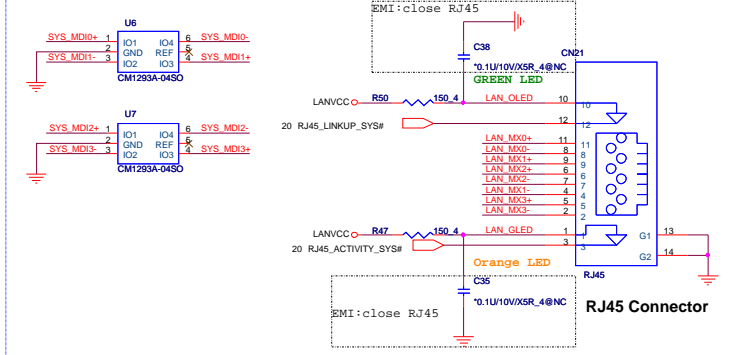
* C5119 to C5123 are for U5006 VDD12 pins-- 10, 13, 30, 36, 39.

Layout: All termination signal should have 20 mil trace

Transformer



RJ45 Connector

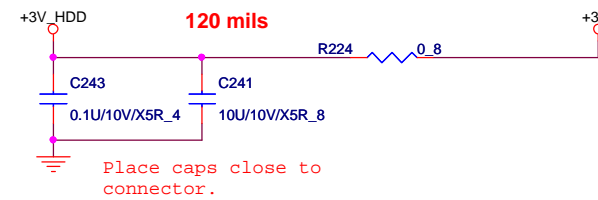
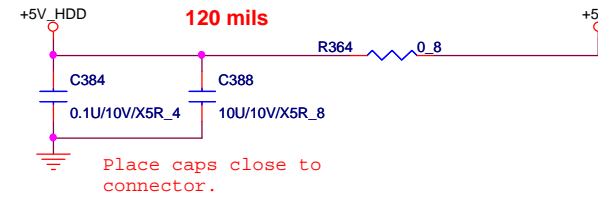
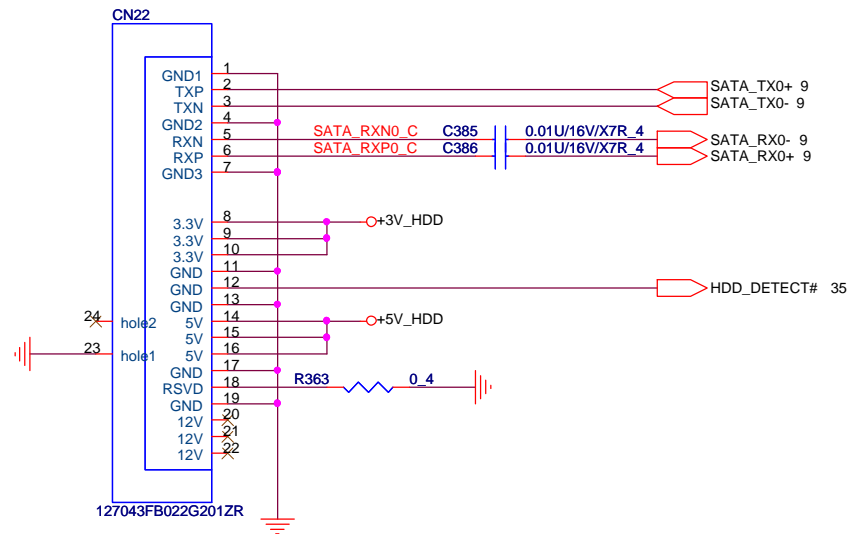


SATA Connector.

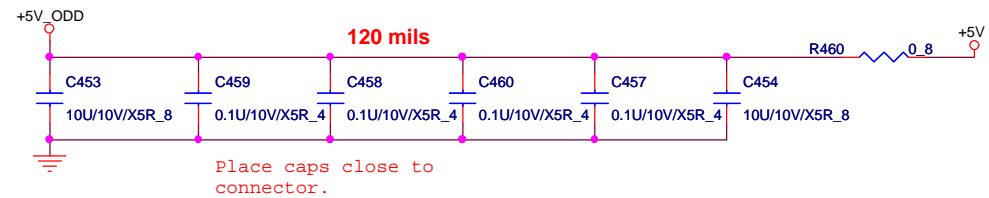
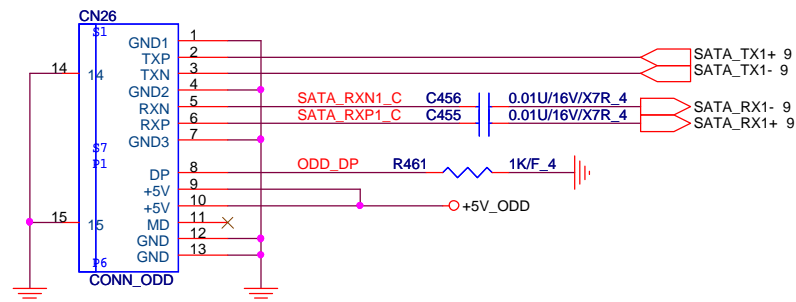
3,4,8,9,10,11,12,14,15,16,17,18,19,21,23,24,25,26,27,28,29,31,32,33,34,35,37,39,40,41,42

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

22



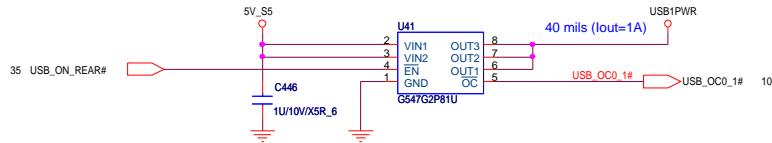
ODD Connector



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Quanta Computer Inc.

Size	Document Number	Rev
Custom	SATA (HDD&CD_ROM)	
Date:	Tuesday, November 17, 2009	Sheet 22 of 46

USBX1



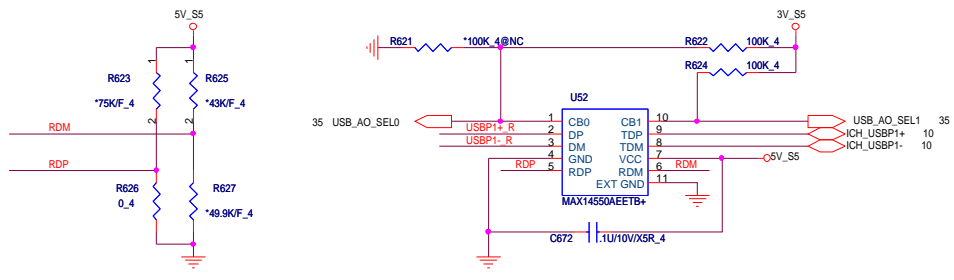
3,4,8,9,10,11,12,14,15,16,17,18,19,21,22,24,25,26,27,28,29,31,32,33,34,35,37,39,40,41,42

12,24,37 5V_S5 +3V

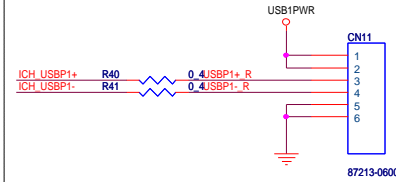


23

Support Black-berry function



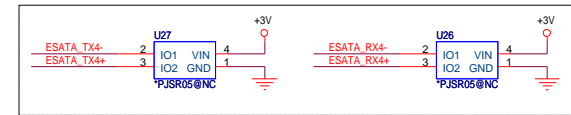
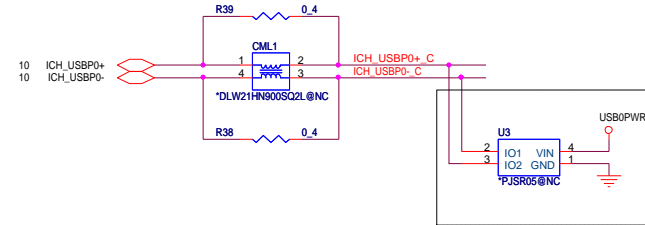
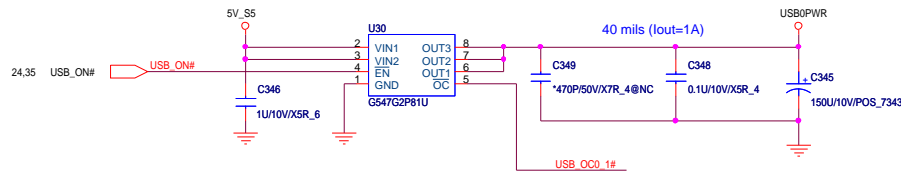
USB X1---- Wire to board conn



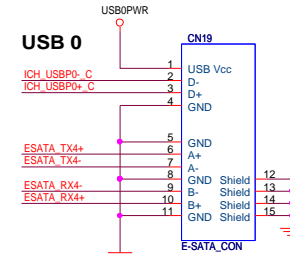
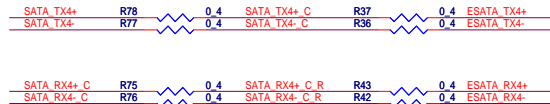
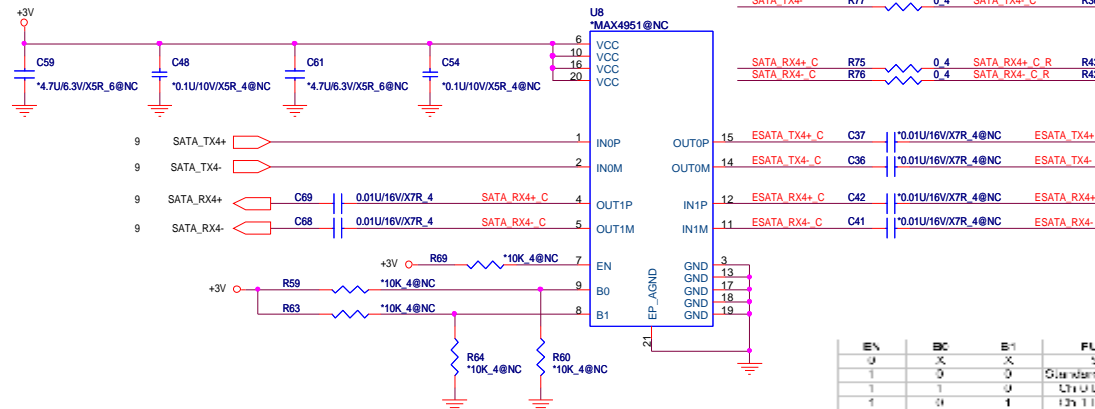
USB 1

	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

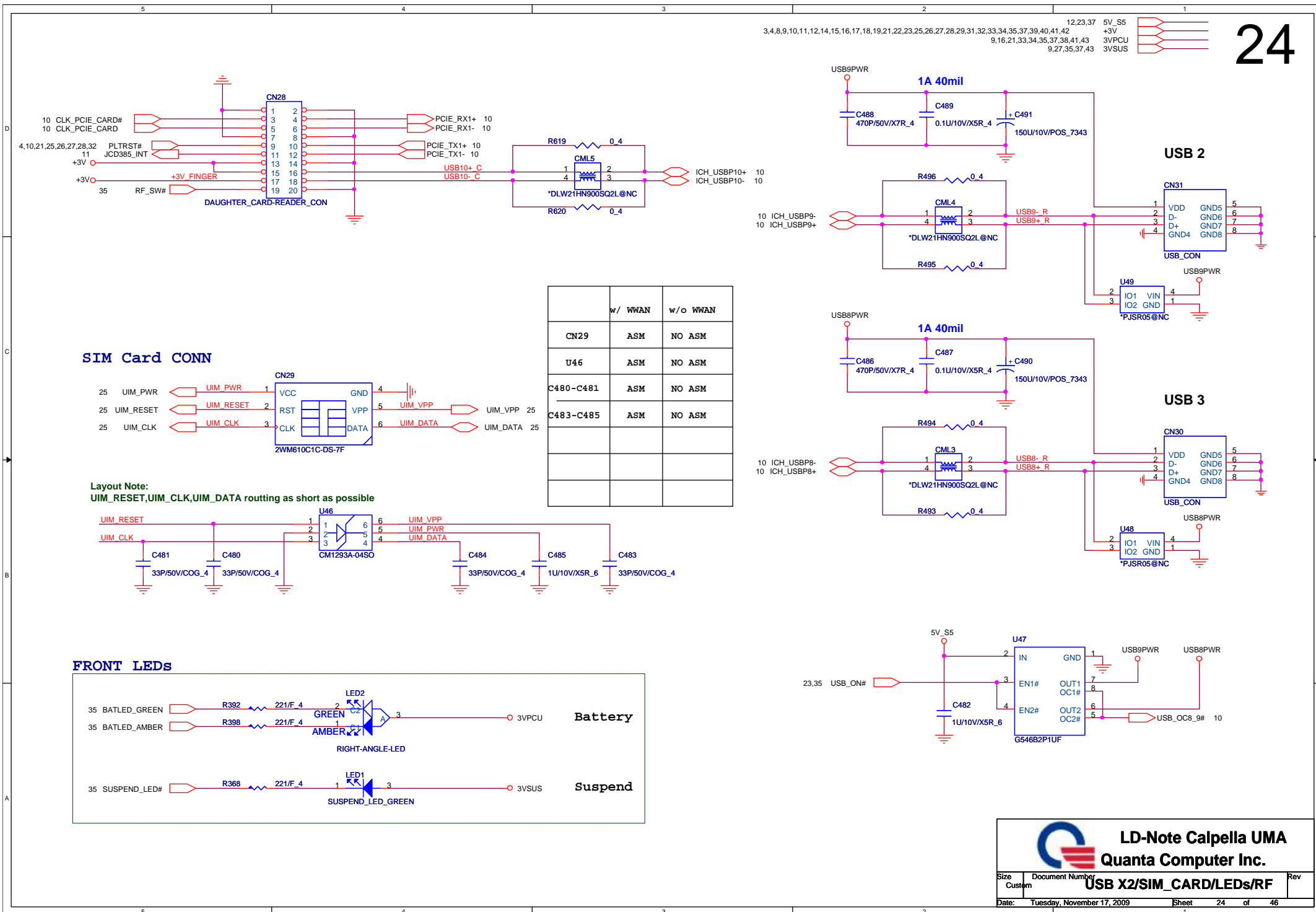


EN	BC	B1	FUNCTION
0	X	X	Standby
1	0	0	Standard SATA Output
1	1	0	Ch 0 Boost Output
1	0	1	Ch 1 Boost Output
1	1	1	Ch 0,1 Boost Output



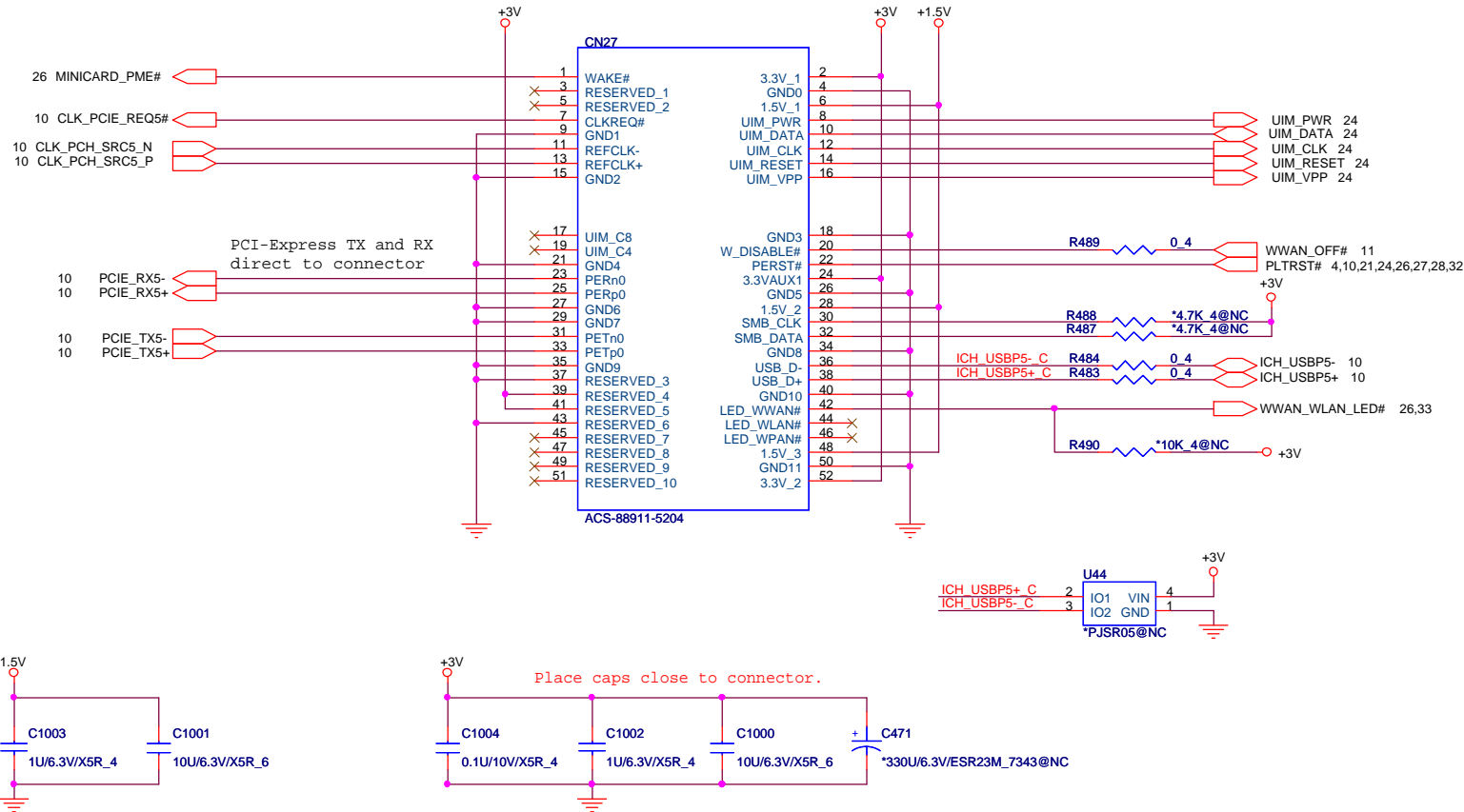
LD-Note Calpella UMA
Quanta Computer Inc.

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Custom	USB X1/USB+ESATA	
Date:	Tuesday, November 17, 2009	Sheet 23 of 46



MiniCard WWAN connector

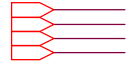
25



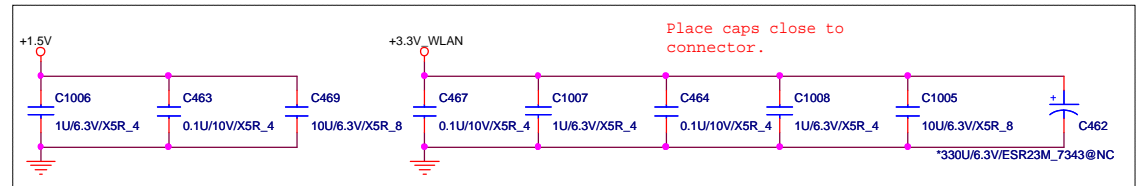
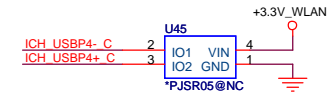
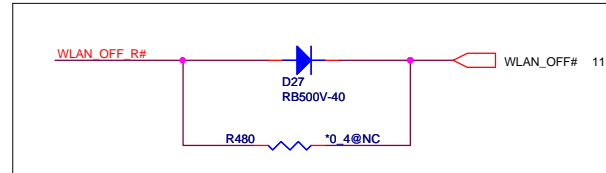
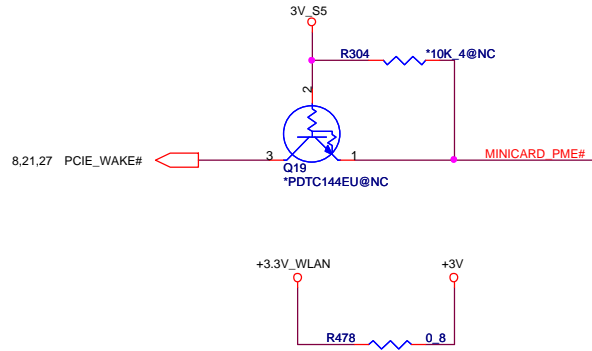
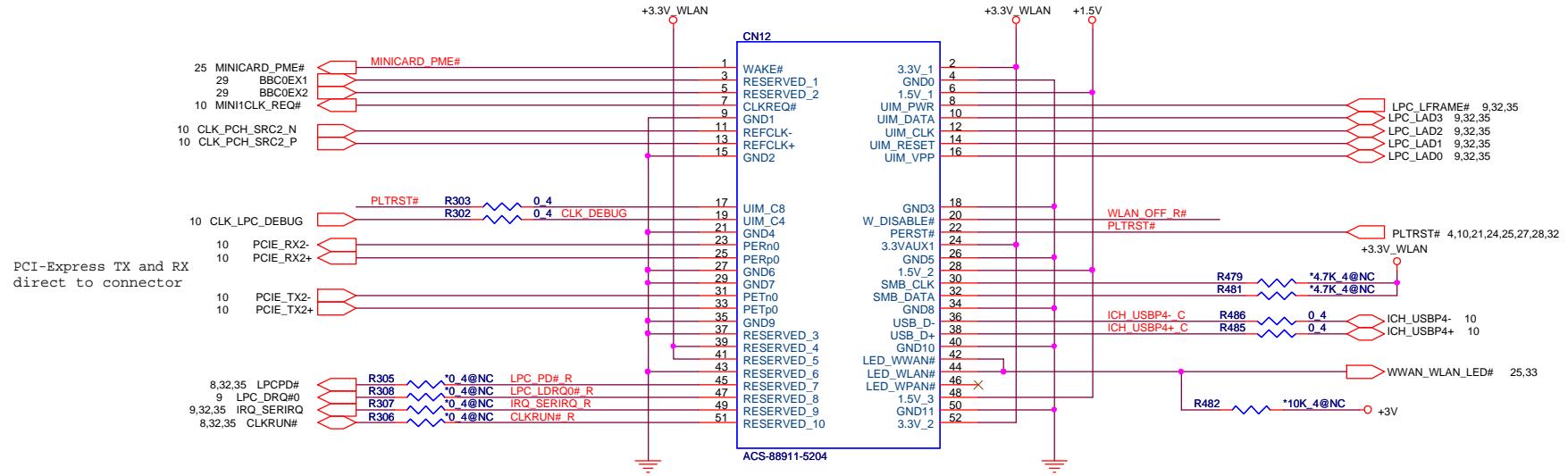
	w/ WWAN	w/o WWAN
CN27	ASM	NO ASM
R489	ASM	NO ASM
R484	ASM	NO ASM
R483	ASM	NO ASM
C1000~C1004	ASM	NO ASM

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
 +3V
 3,25,27,39 +1.5V
 9,16,21,24,33,34,35,37,38,41,43 3VPCU
 16,37,38,39,40,41,42,43 VIN



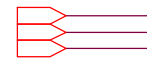
26



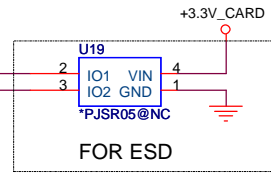
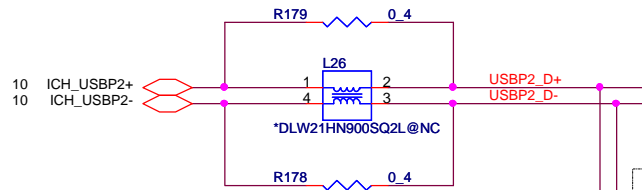
Express Card

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
3,25,26,39
9,24,35,37,43

+3V
+1.5V
3VSUS

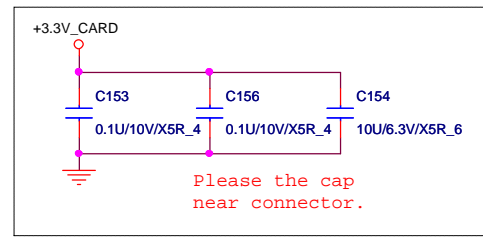
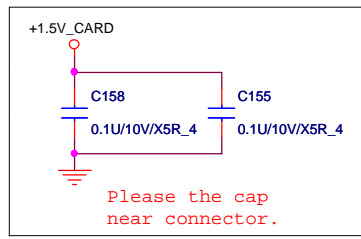
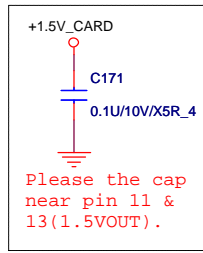
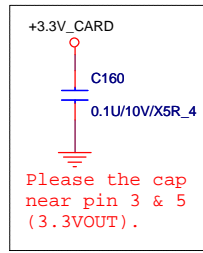
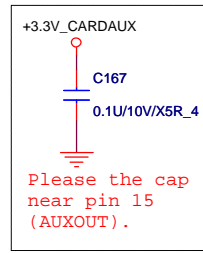
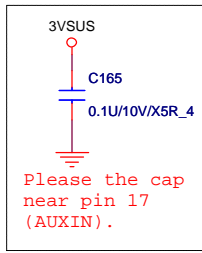
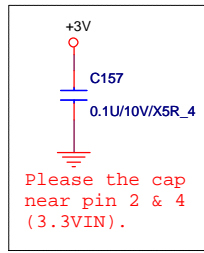
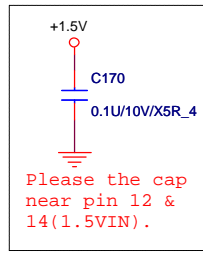
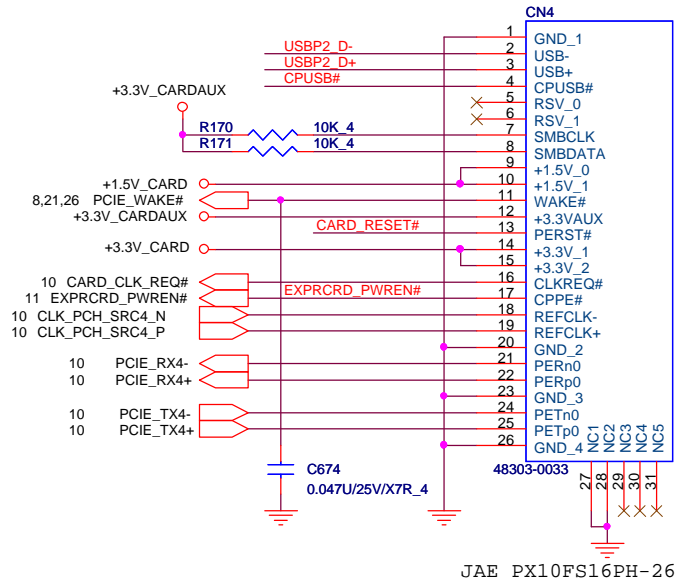
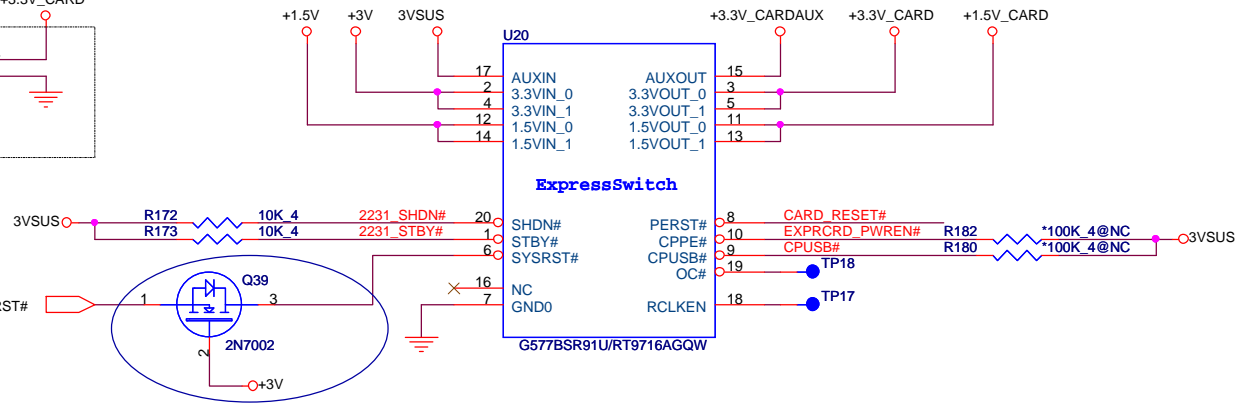


27

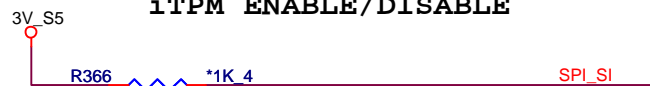


+1.5V_CARD Max. 650mA, Average 500mA.
+3V_CARD Max. 1300mA, Average 1000mA.

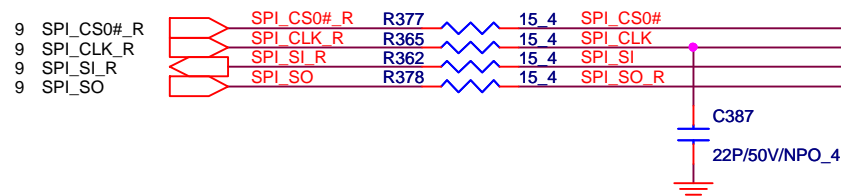
20090928
avoid current leakage



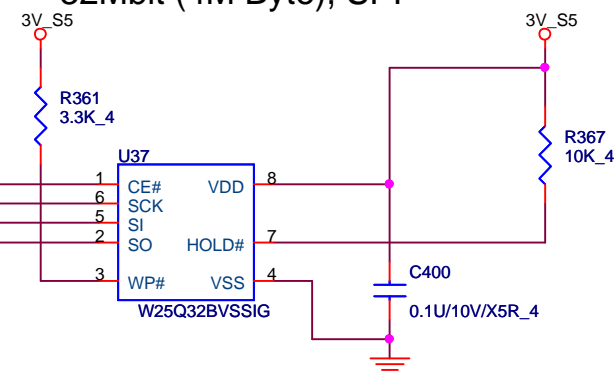
iTPM ENABLE/DISABLE



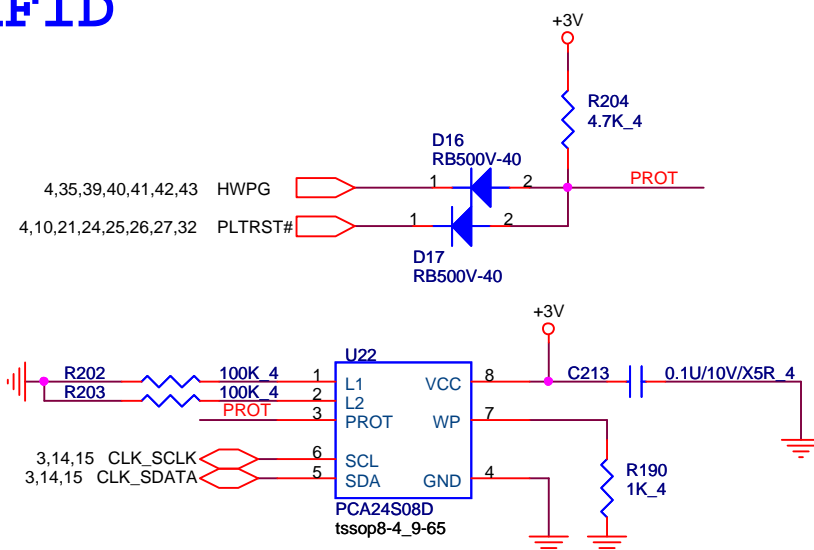
iTPM Function	R366
Enable	1K
Disable	NC



For PCH
32Mbit (4M Byte), SPI



RFID



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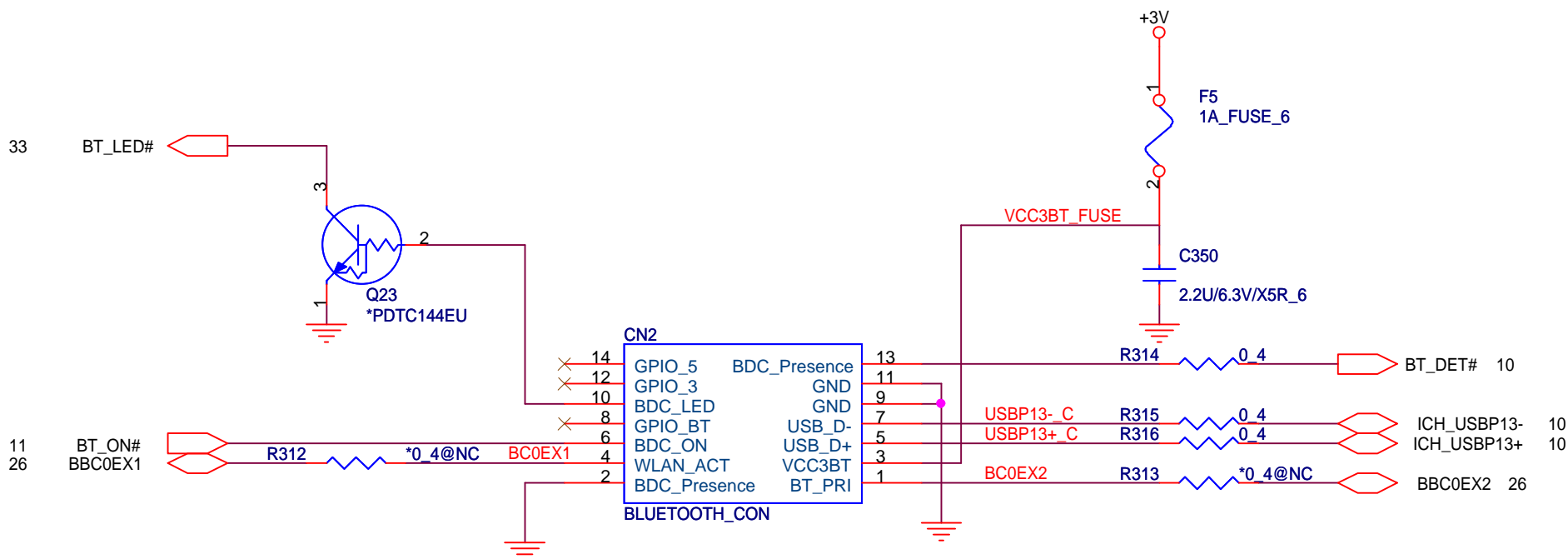
Size Custom	Document Number iTPM & RFID EEPROM	Rev
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BLUETOOTH

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

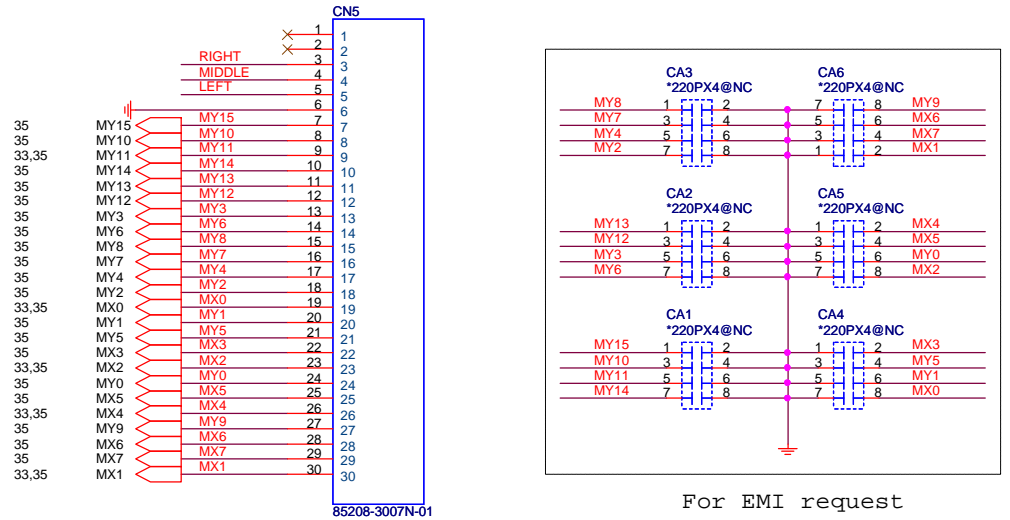


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Quanta Computer Inc.

Size Custom	Document Number B/T	Rev
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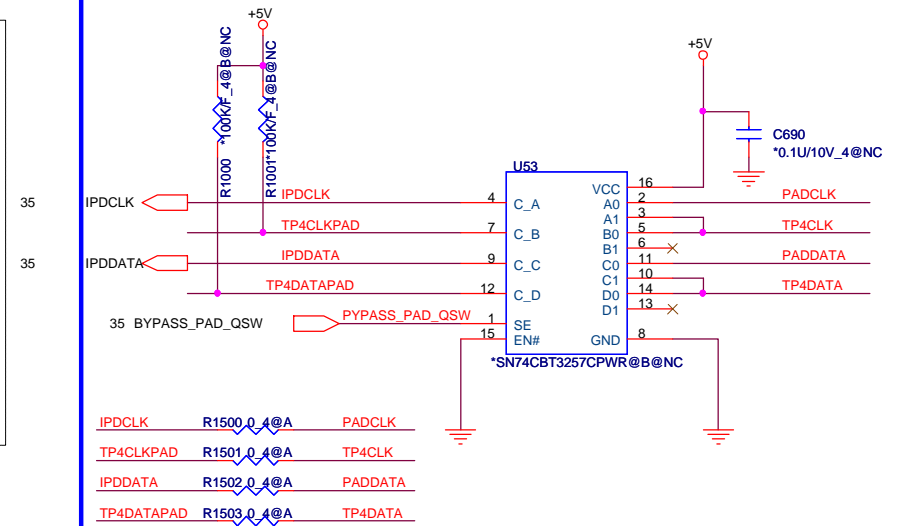
KEYBOARD

KEYBOARD connector

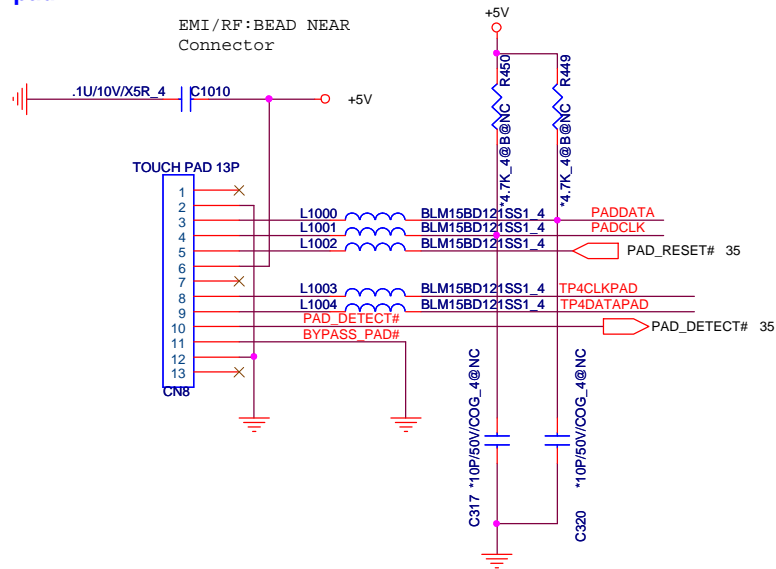


Touch pad/Track point Switch

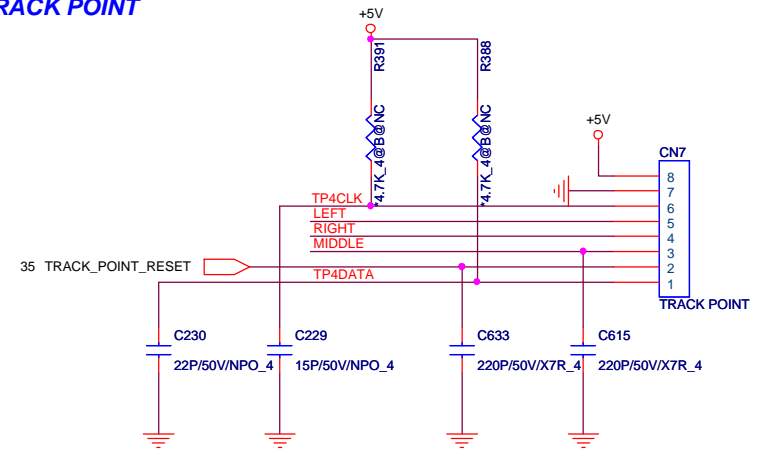
30



Touch pad



TRACK POINT

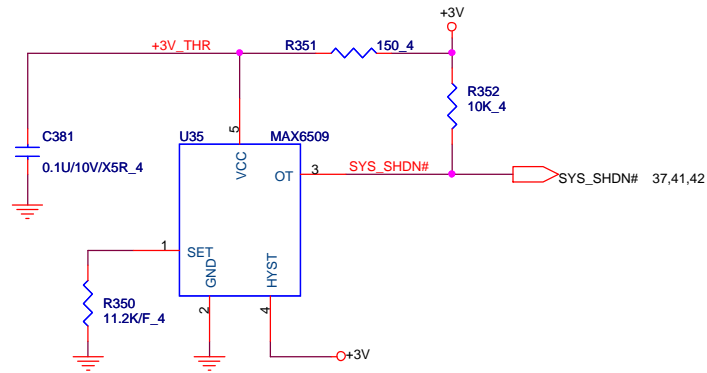
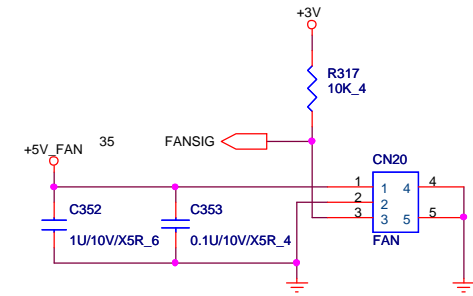
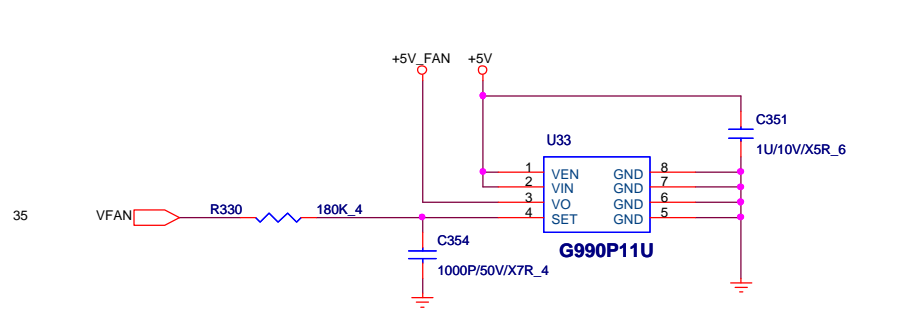


FAN CONTROL

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
8,12,17,18,19,22,30,35,37

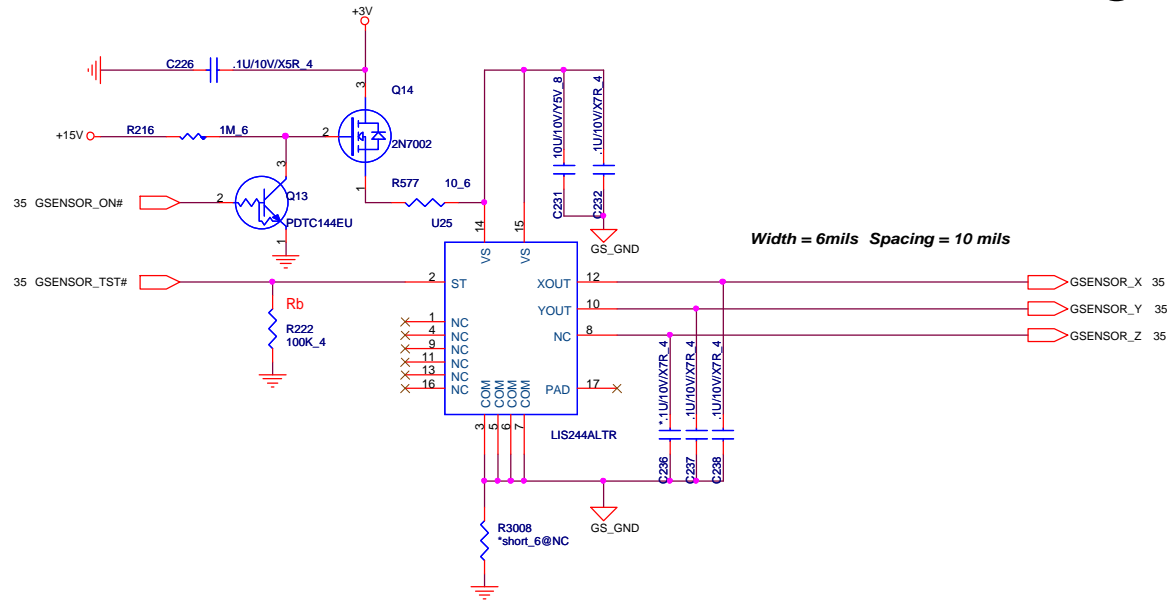
+3V
+5V

31

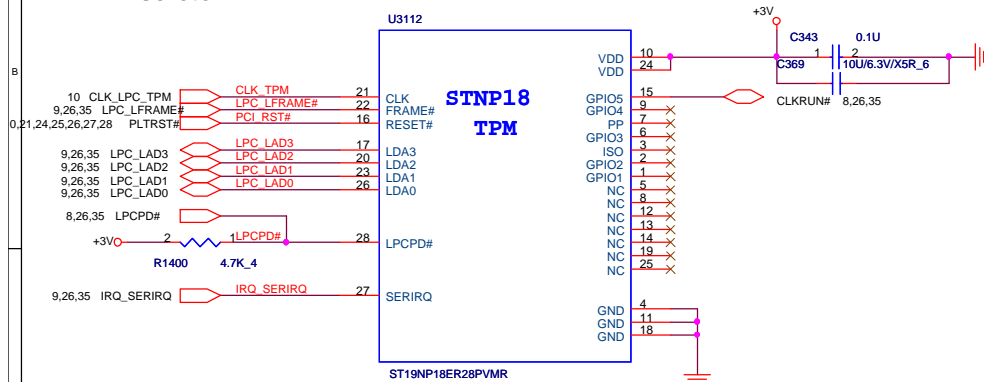


G-SENSOR (2-Axial)

32



Discrete TPM



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

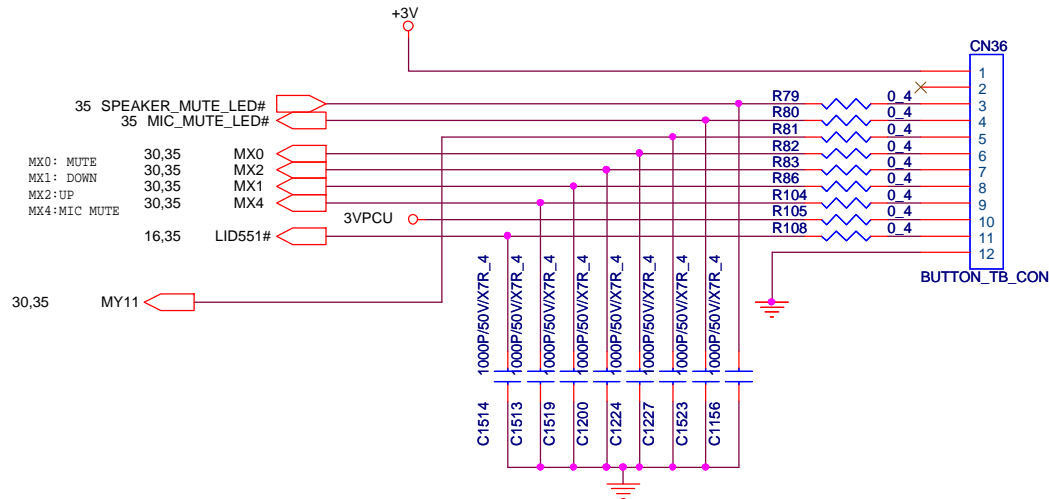


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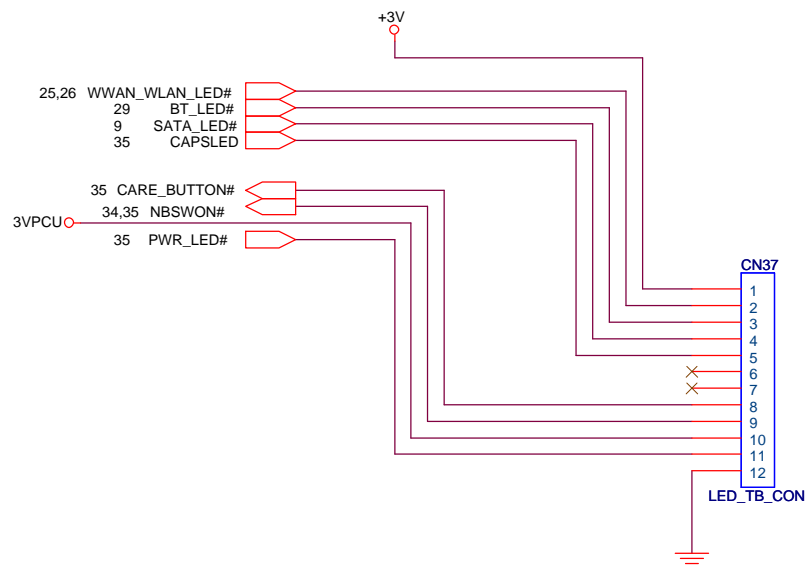
Daughter Boards for LEDs & Ports

33

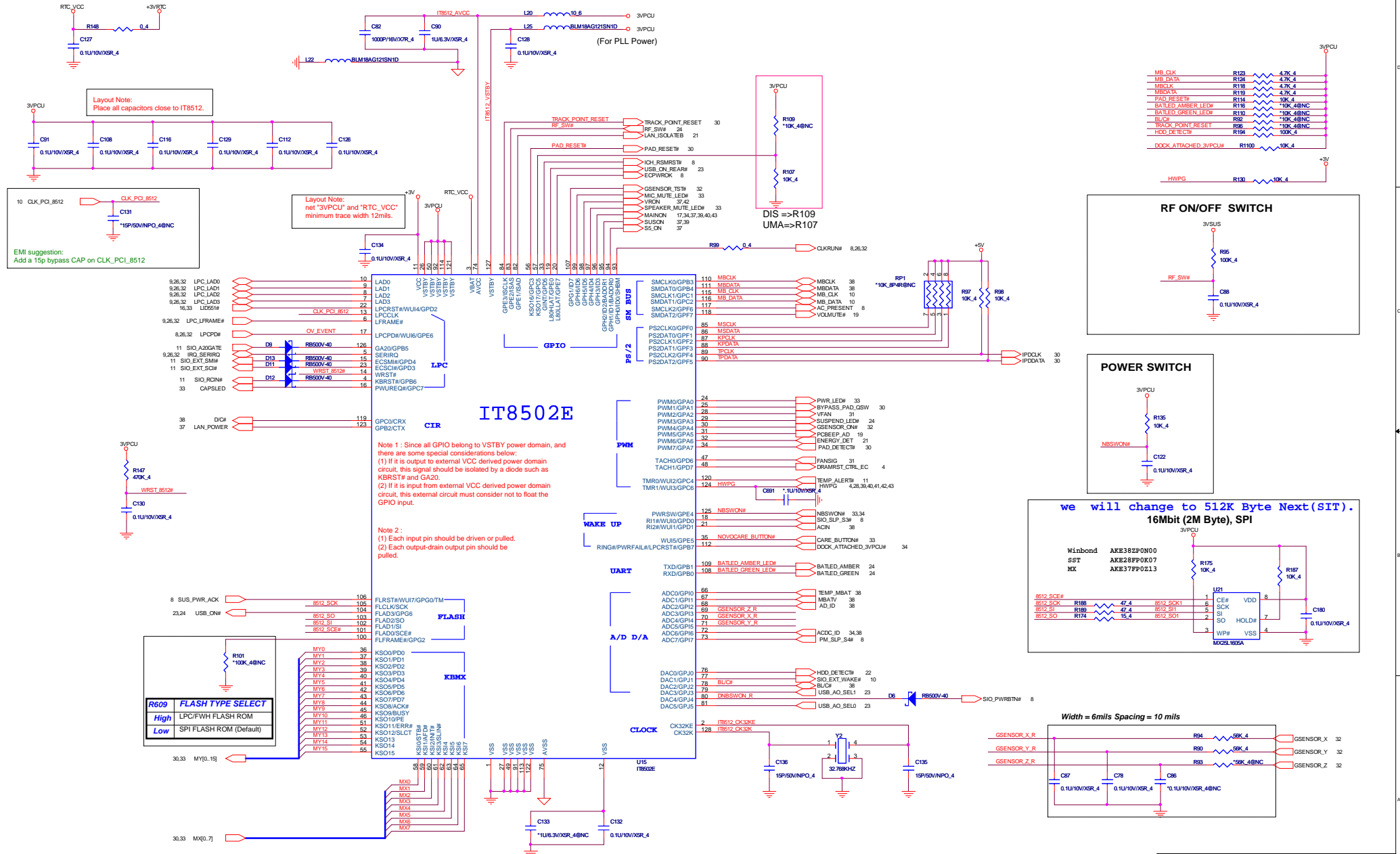
FFC TO KBD LEFT SIDE CONNECTOR

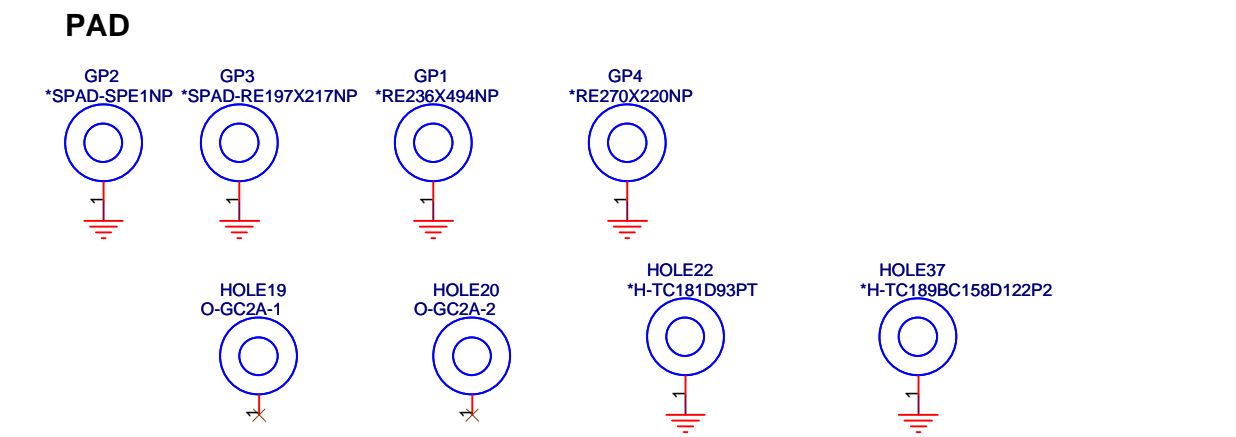
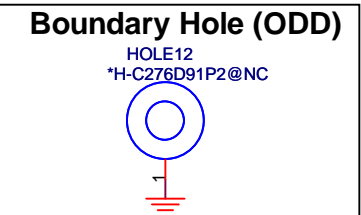
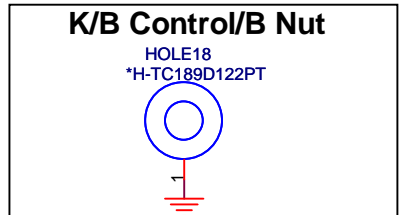
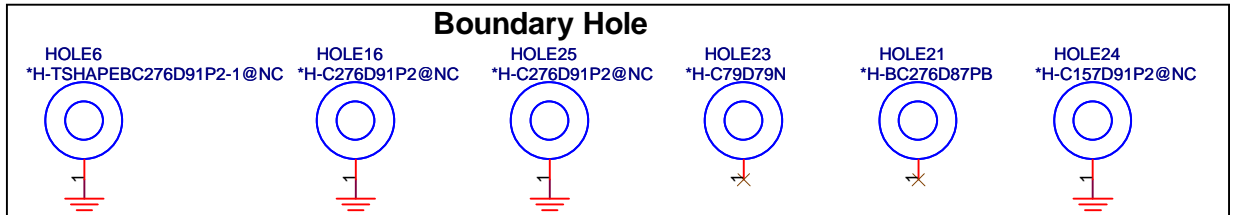
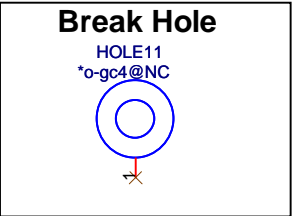
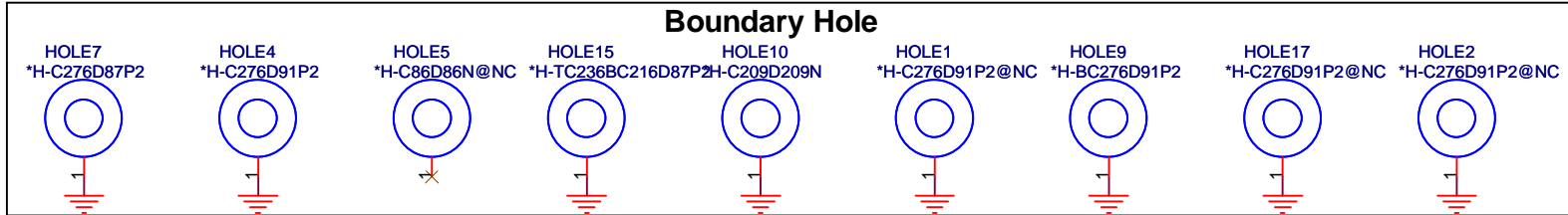
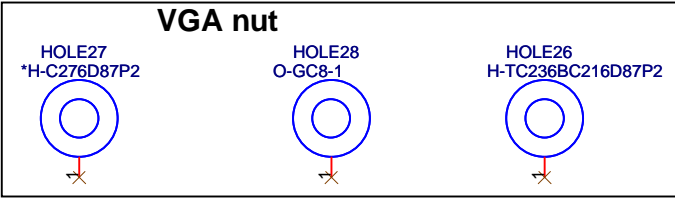
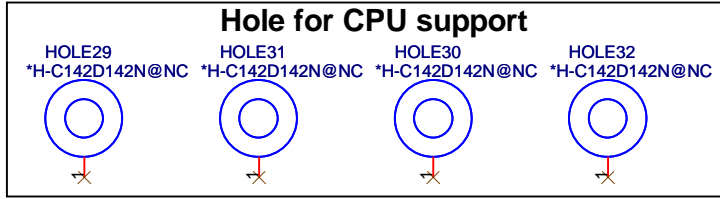
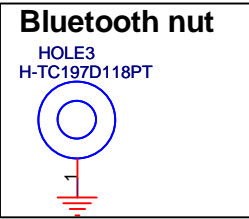
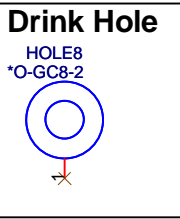
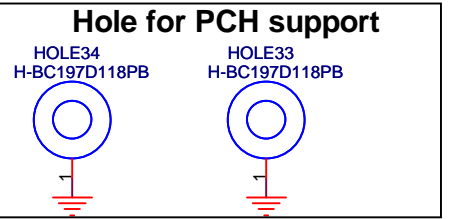
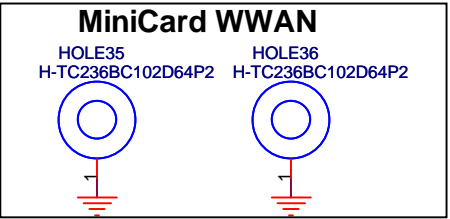
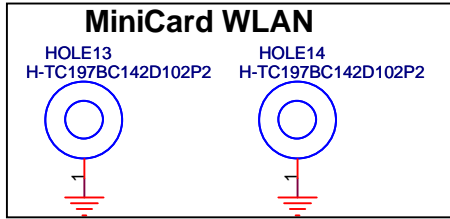


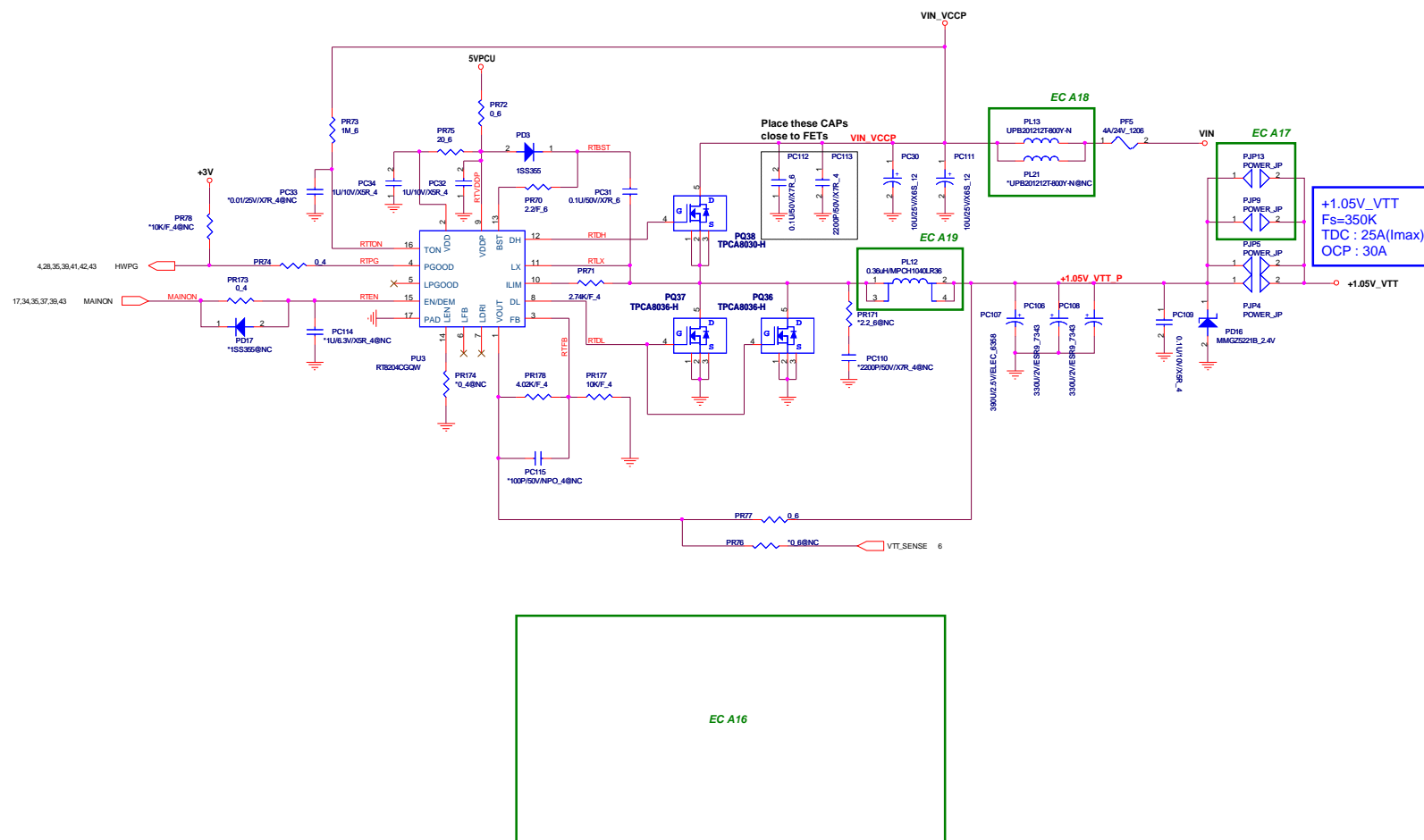
FFC TO LED RIGHT SIDE CONNECTOR



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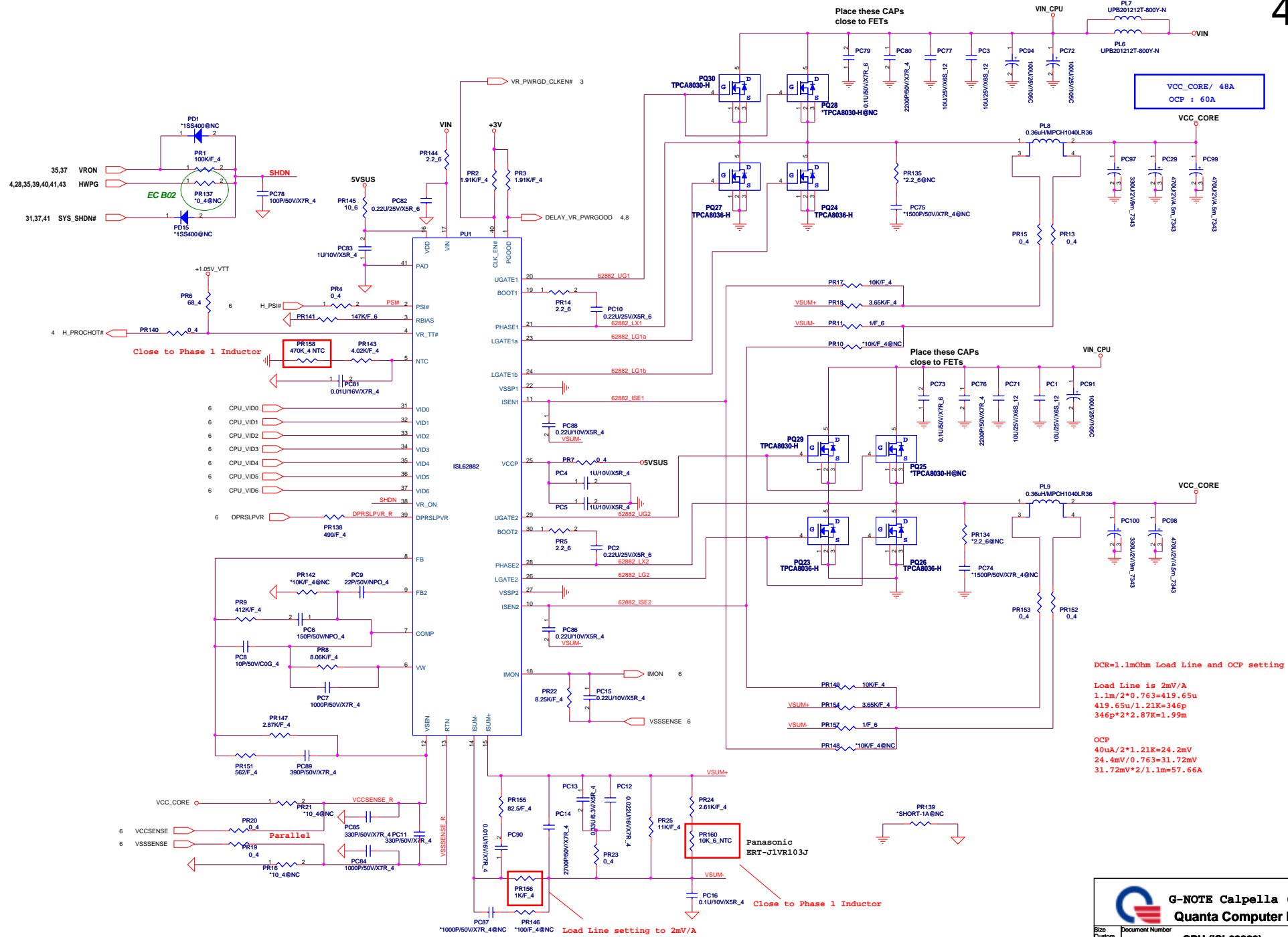






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C	1.05V_VTT/1.05_PCH (RT8204)	1B
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Revision History

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

