

LD-Note Intel Calpella Platform with UMA GFX

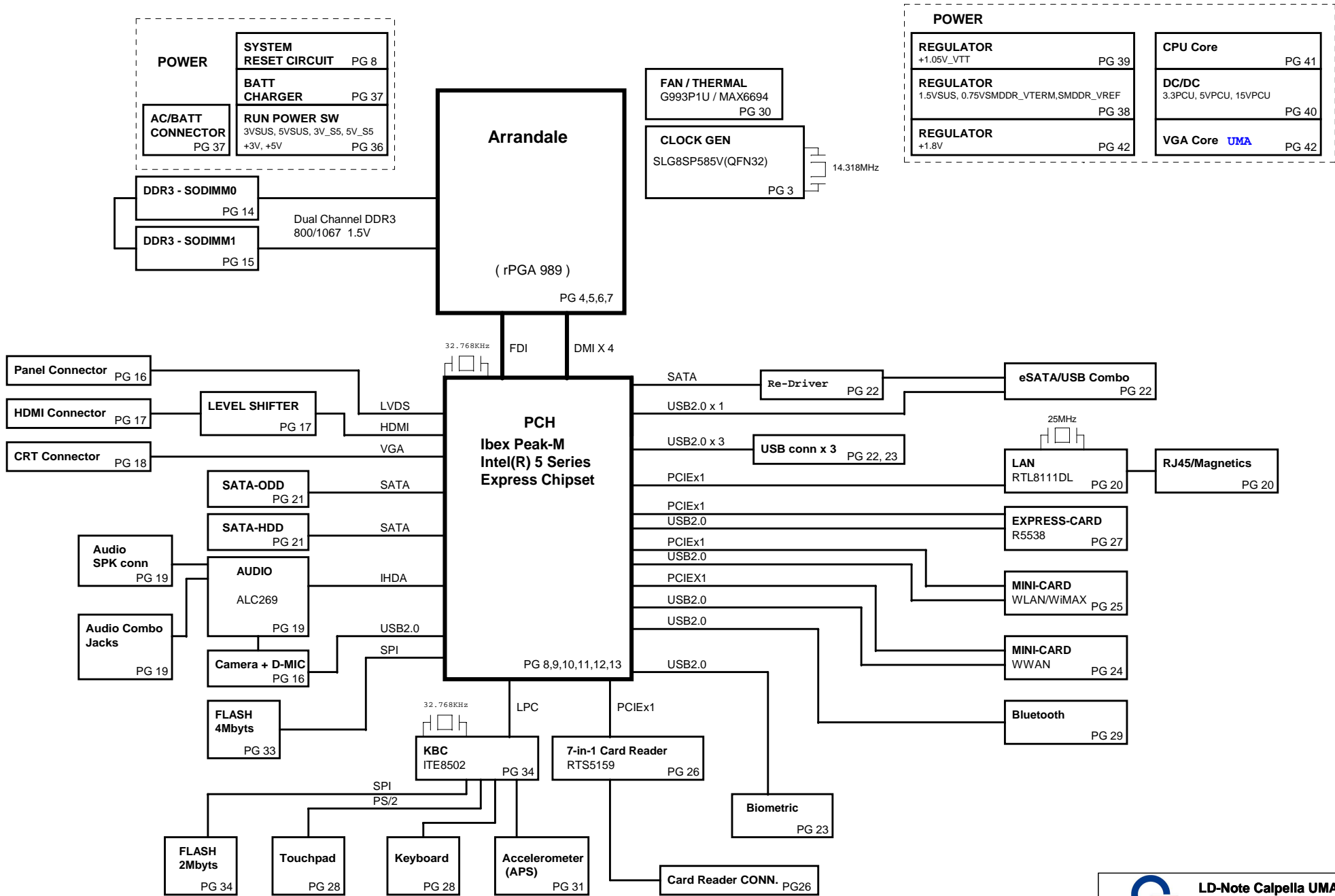


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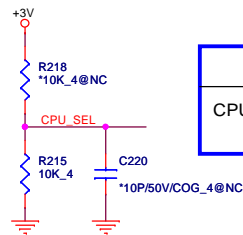
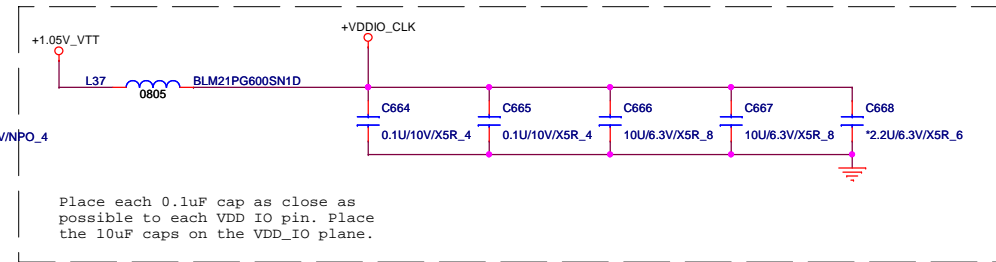
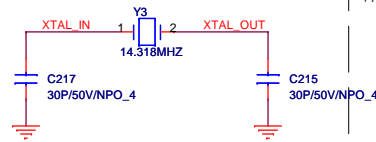
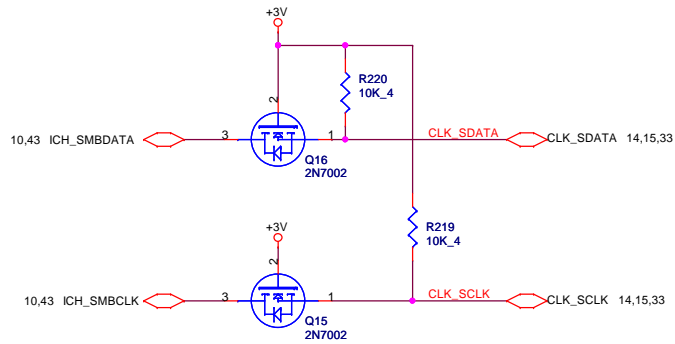
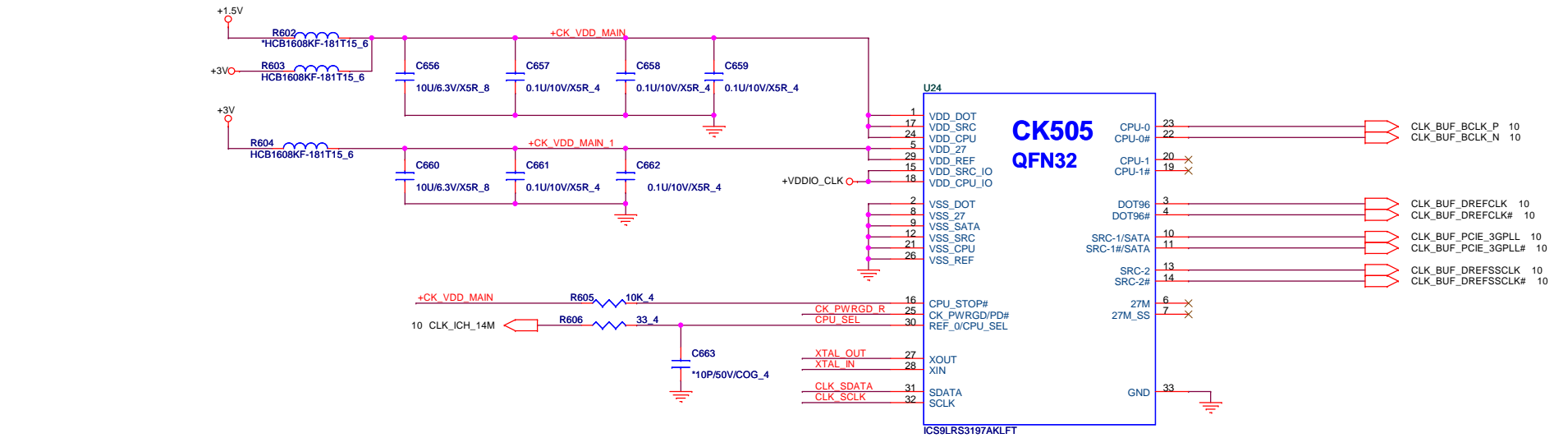
Power States

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

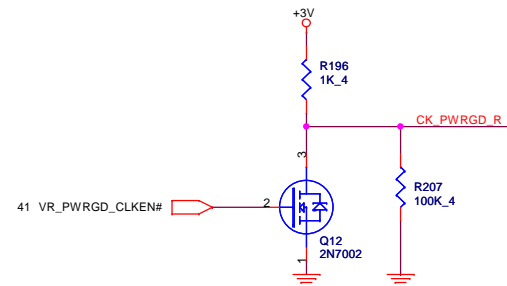


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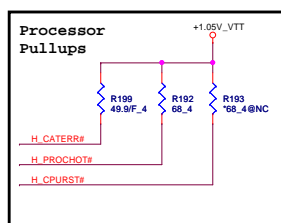
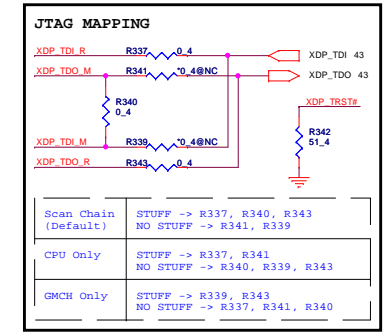
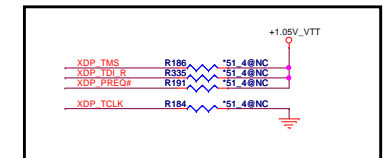
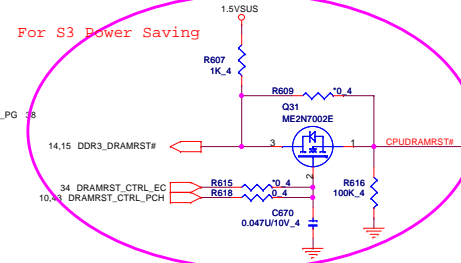
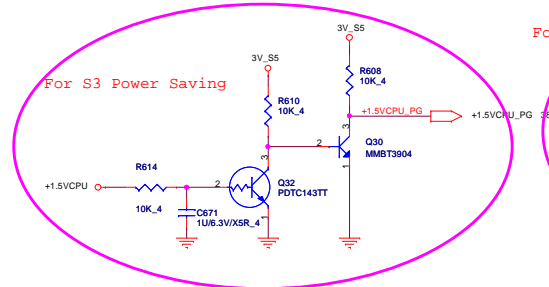
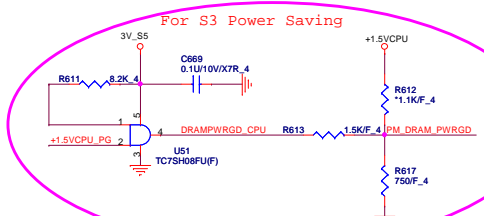
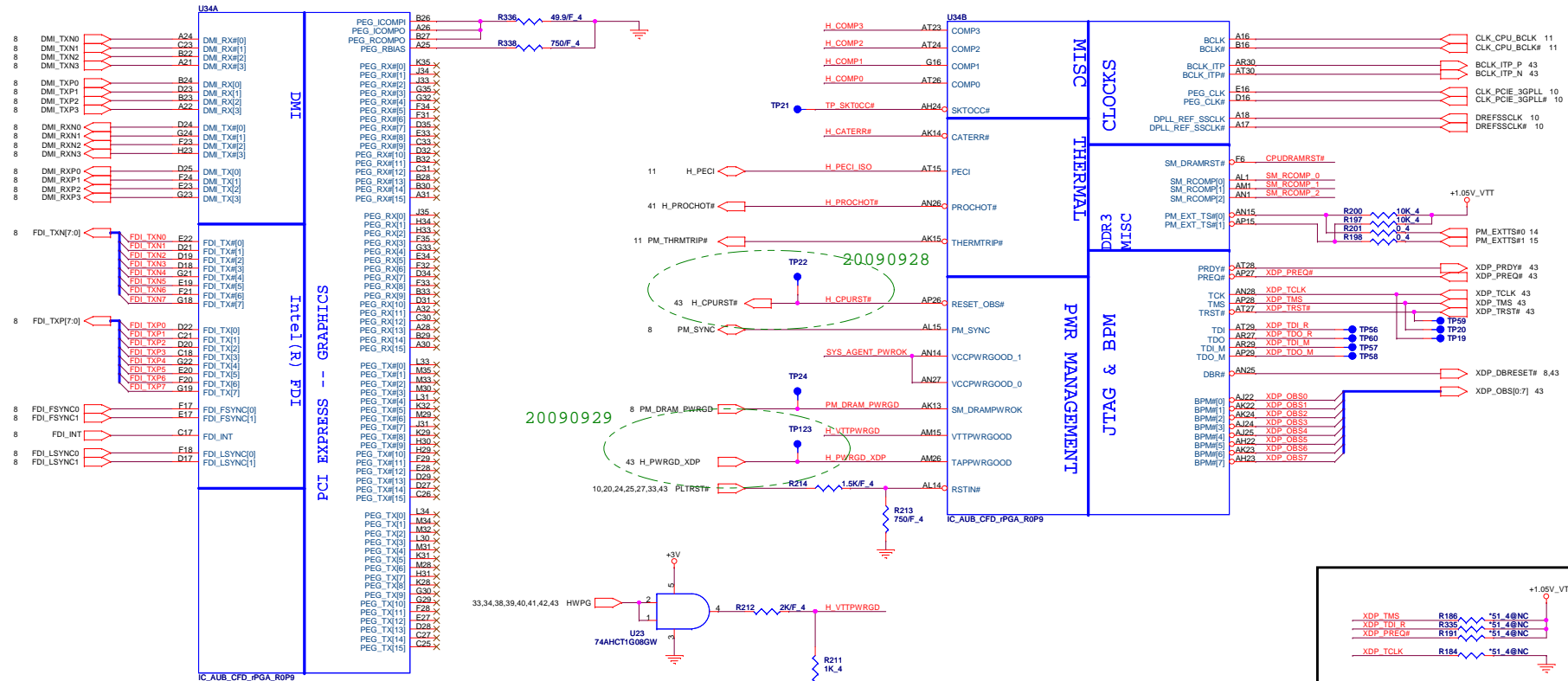
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	0	1
CPU_SEL	CPU0/1=133MHz (default)	CPU0/1=100MHz



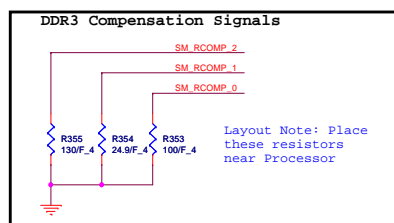
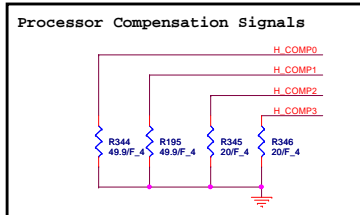
AUBURNDALE PROCESSOR (CLK,MISC,JTAG)



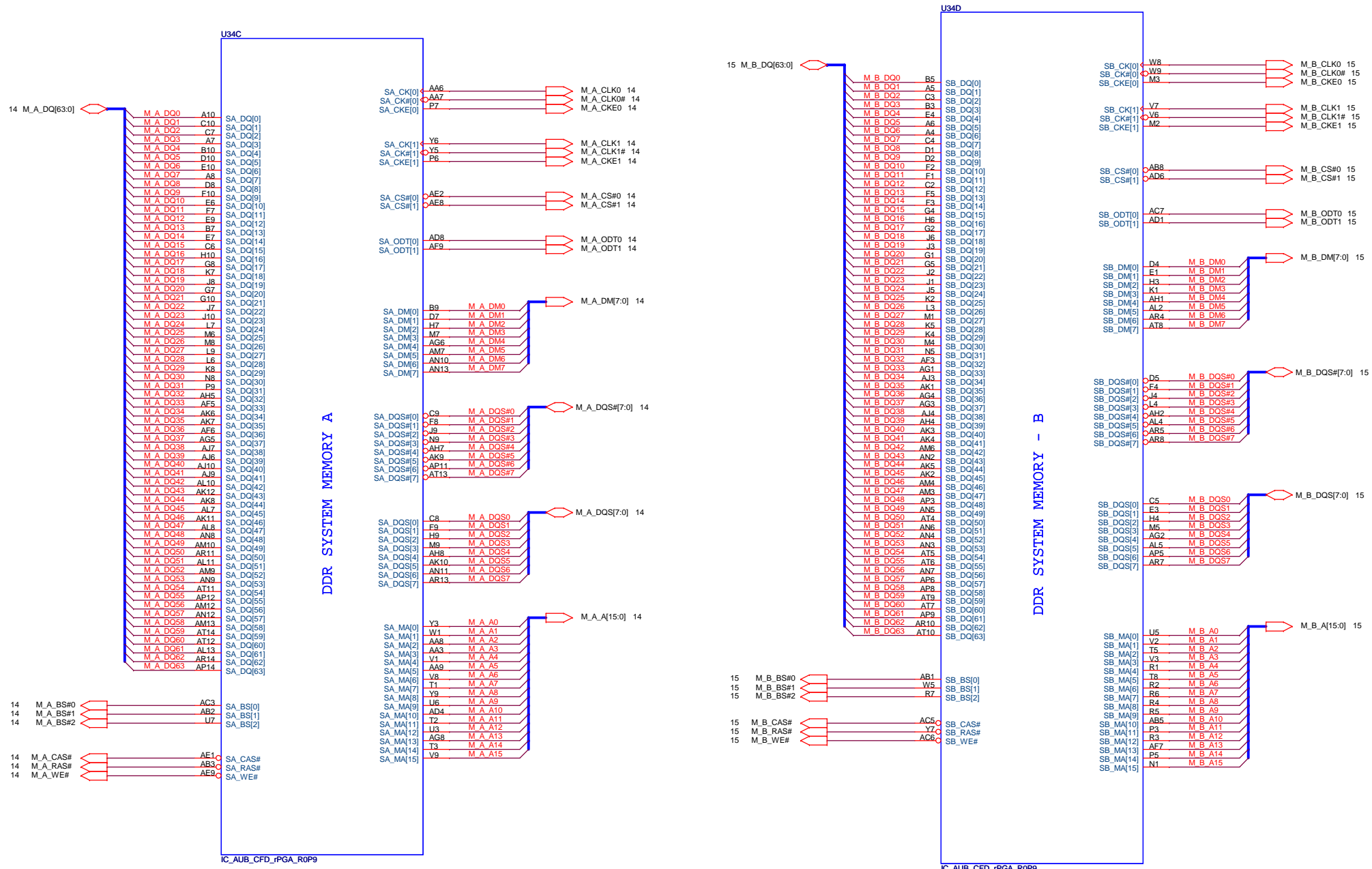
8,41 DELAY_VR_PWRGGOOD  R205  "0.4@NC"  SYS_AGENT_PWRKOK

11,43 H_PWRGOOD  R206  0.4

Platform	ERB	CRB
REFDES		
R205	STUFF	NO_STUFF
R206	NO_STUFF	STUFF



AUBURNDALE PROCESSOR (DDR3)

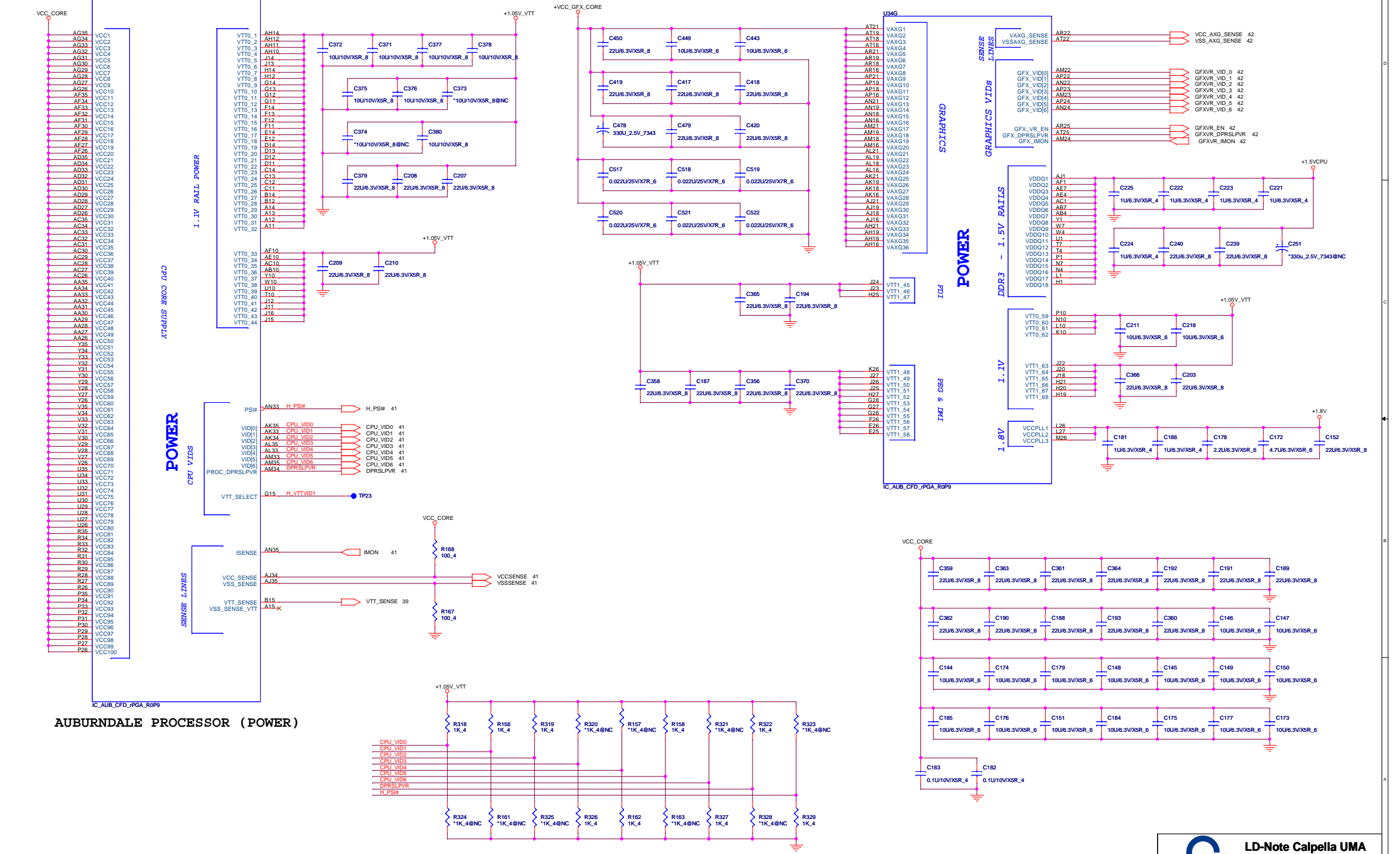


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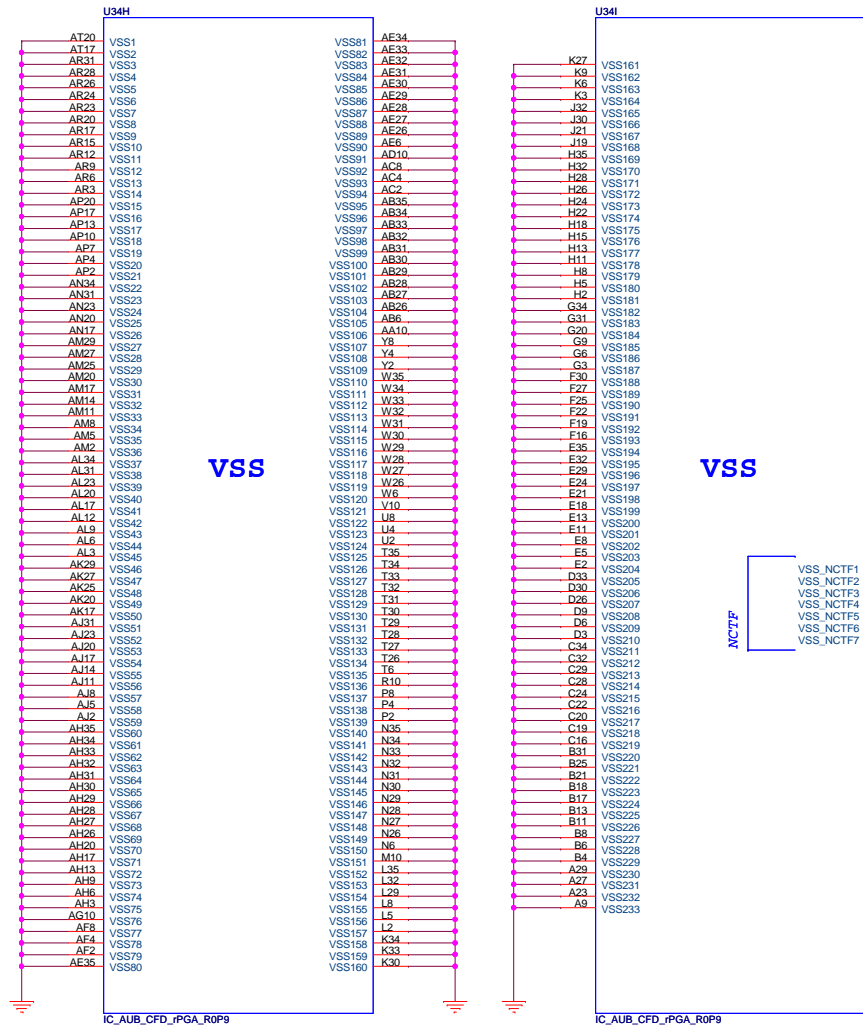
AUBURNDALE PROCESSOR (GRAPHICS POWER)

CPU Core Power

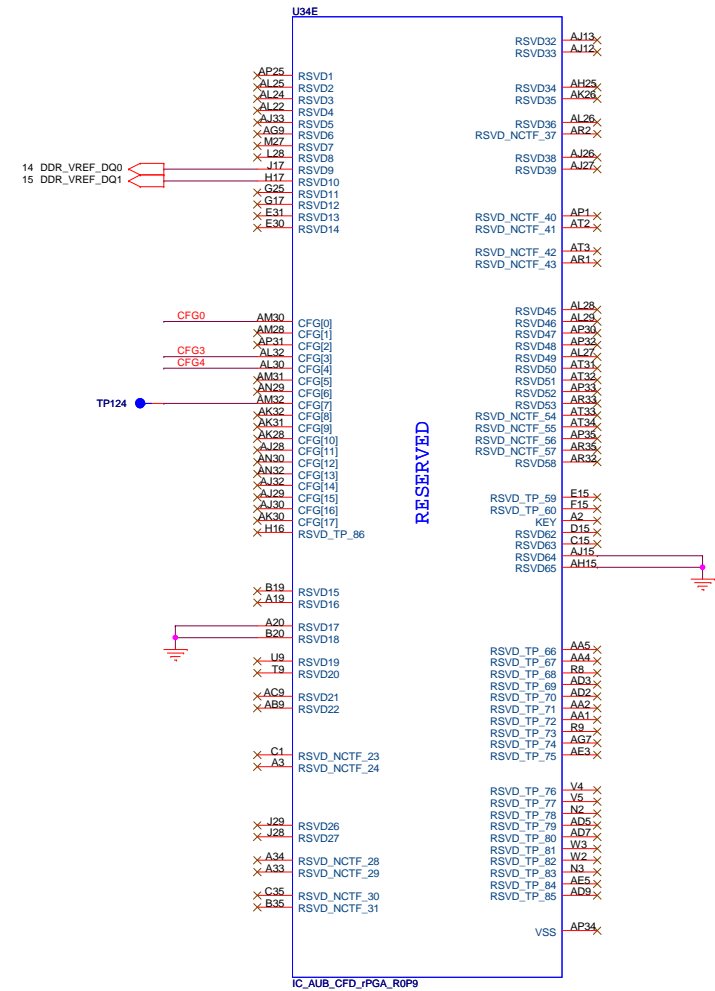


AUBURNDALE PROCESSOR (POWER)

AUBURNDALE PROCESSOR (GND)



AUBURNDALE PROCESSOR(RESERVED, CFG)



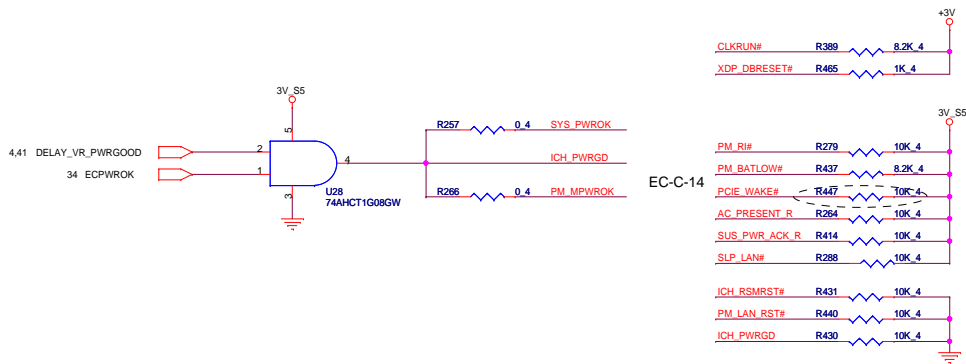
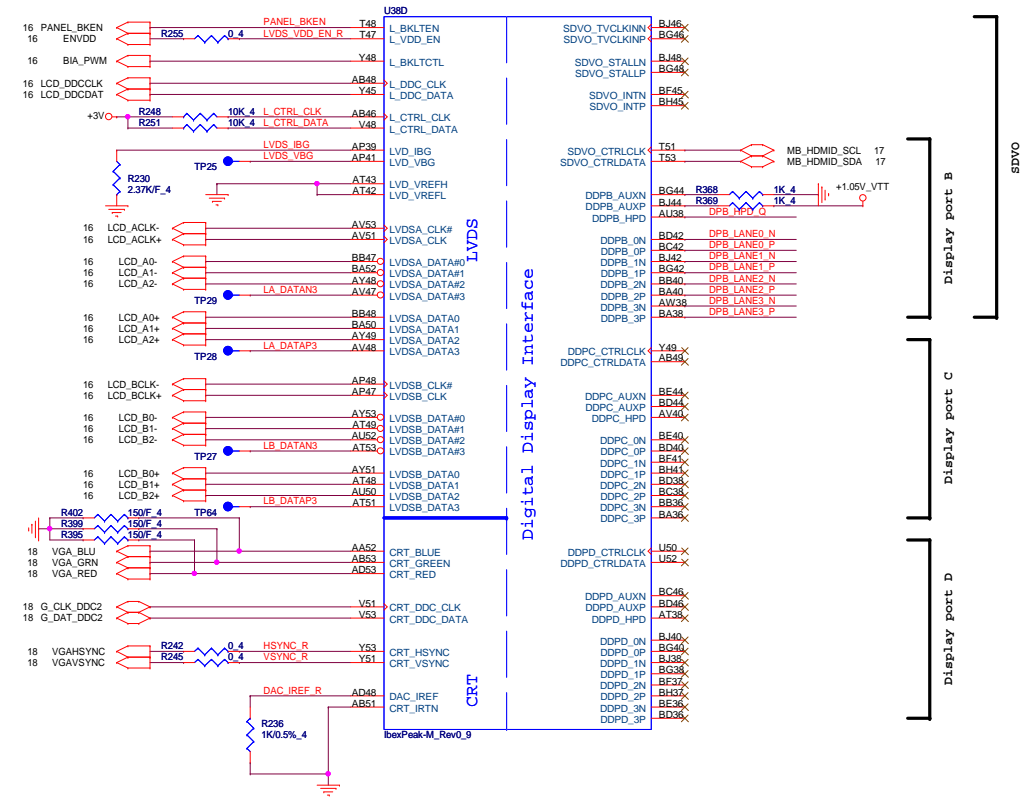
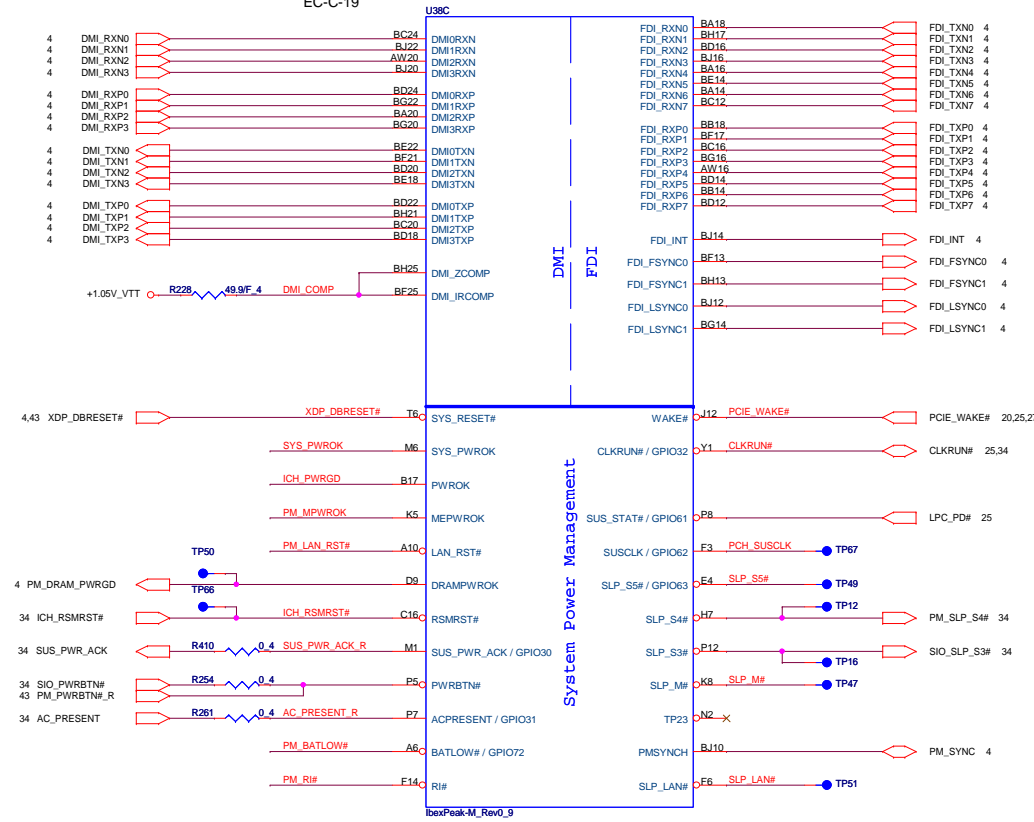
	1	0
CFG4 (Display Port Presence)	Disabled; No Physical Display Port attached to Embedded Display Port	Enabled; An external Display port device is connected to the Embedded Display port
CFG0 (PCI-Epress Configuration Select)	Single PEG	Bifurcation enabled
CFG3 (PCI-Epress Static Lane Reversal)	Normal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

IBEX PEAK-M (DMI, FDI, GPIO)

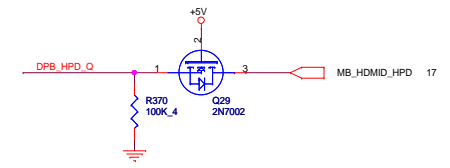
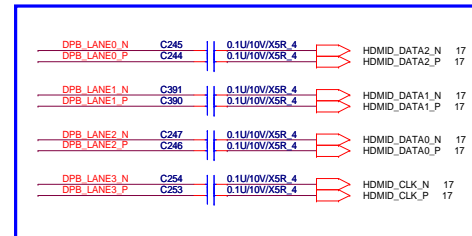
IBEX PEAK-M (LVDS, DDI)

EC-C-19

EC-C-19



For UMA HDMI Function



RTC Circuitry

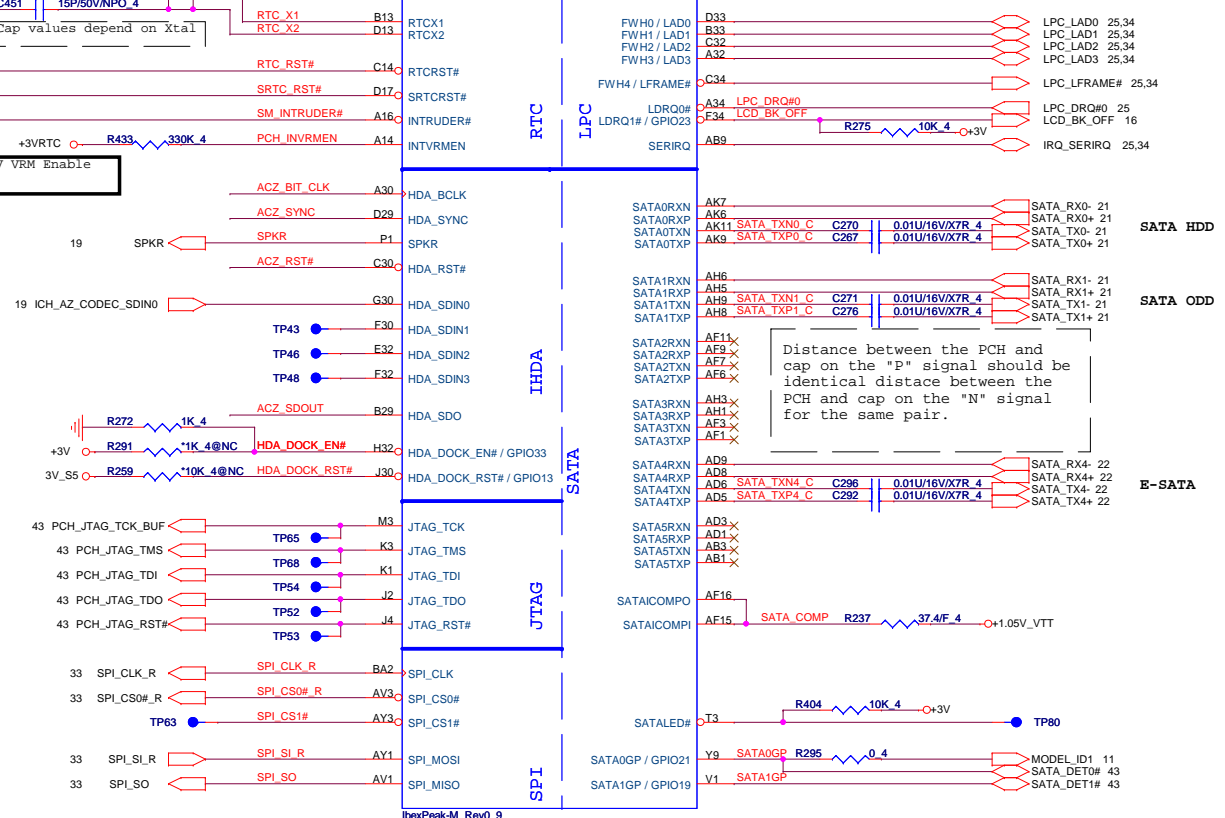
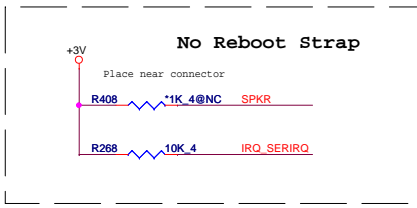
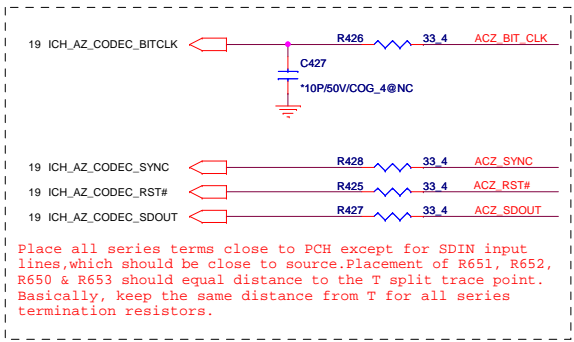
CMOS Settings	J5
Clear CMOS	1-2
Save CMOS	1-X (Default)

TPM Settings	J4
Clear ME RTC registers	1-2
Save ME RTC registers	1-X (Default)

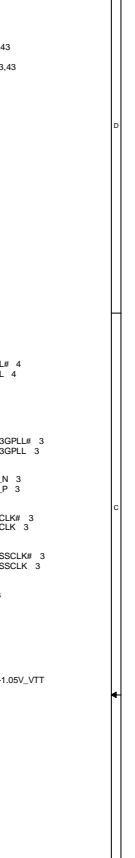
IBEX PEAK-M (HDA,JTAG,SATA)

EC-C-19

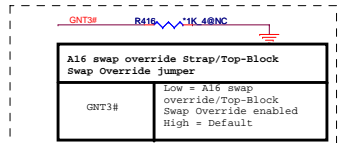
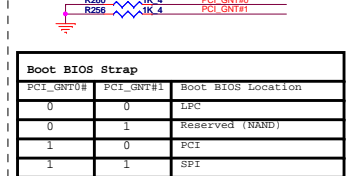
INIVRMEN - Integrated SUS 1.1V VRM Enable
High - Enable Internal VRs




IBEX PEAK-M (PCI-E, SMBUS, CLK)



*1: USB ports 6 and 7 are disabled
*2: PCIE ports 7 and 8 are disabled



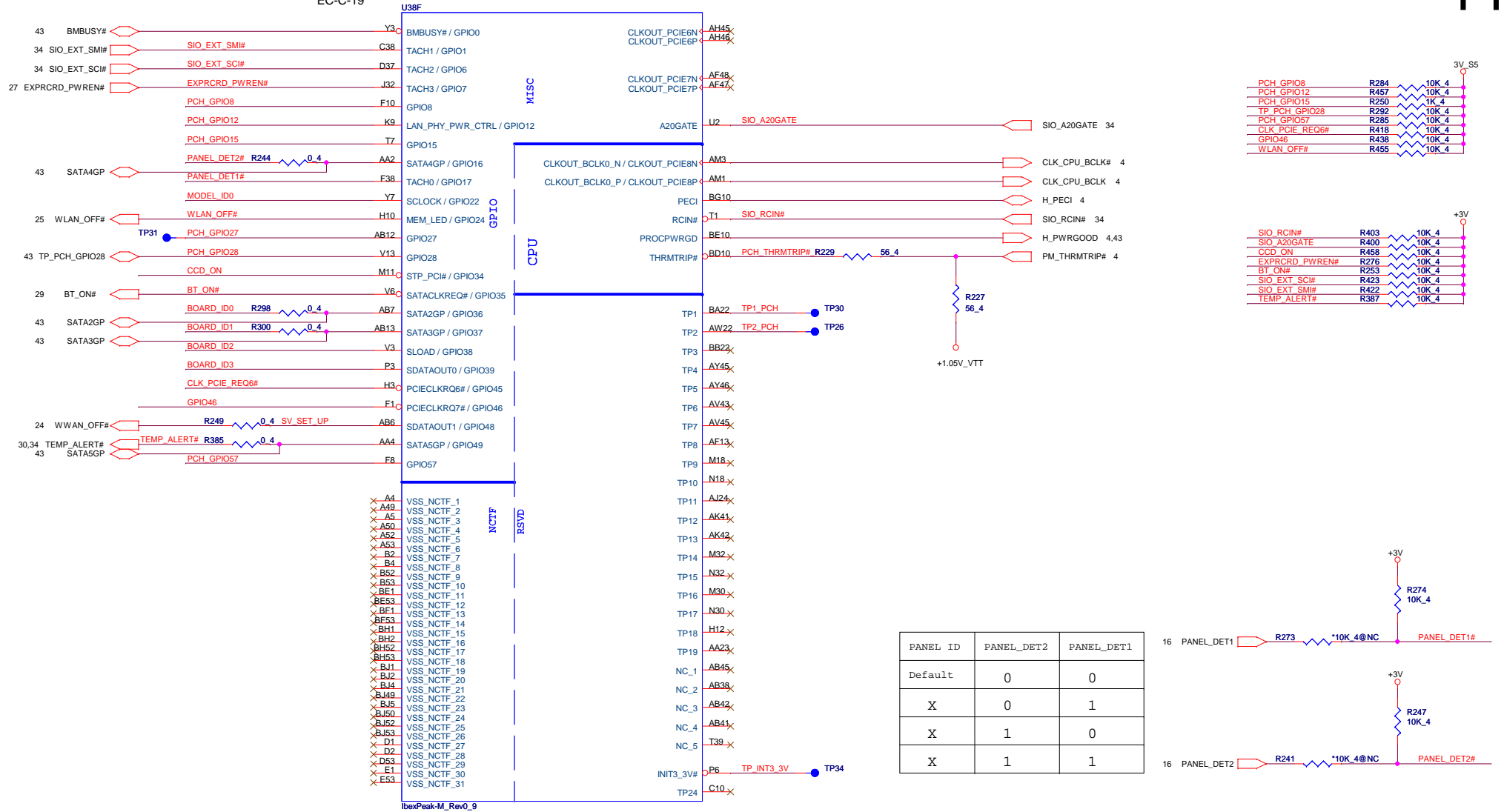
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IBEX PEAK-M (GPIO,VSS_NCTF,RSVD)

EC-C-19

3,4,8,9,10,12,14,15,16,17,18,19,20,21,22,23,24,25,27,29,30,31,33,34,36,38,39,40,41,43
+3V
4,8,9,10,12,22,25,36,43
3V_S5
3,4,6,8,9,10,12,35,36,39,41,42,43 +1.05V_VTT

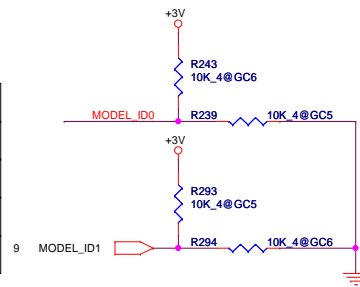
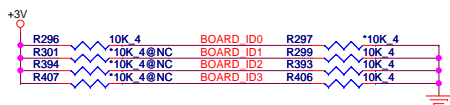
11



PANEL ID	PANEL_DET2	PANEL_DET1
Default	0	0
X	0	1
X	1	0
X	1	1

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	MODEL_ID1
13"	0	0
14"	0	1
15"	1	0
Default	1	1



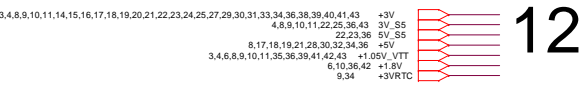
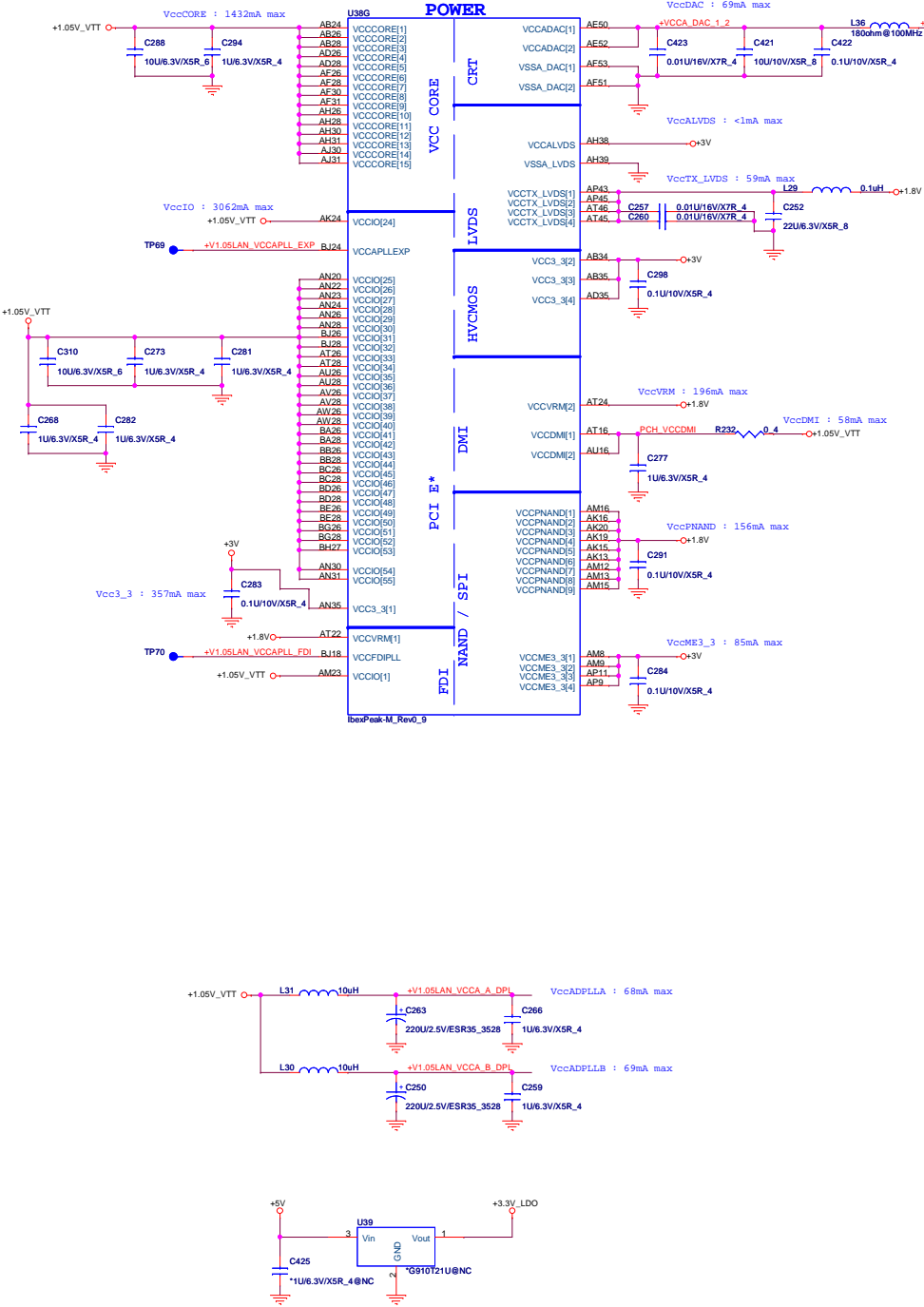
SV_SET_UP	1-X High = Strong (Default)
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Quanta Computer Inc.

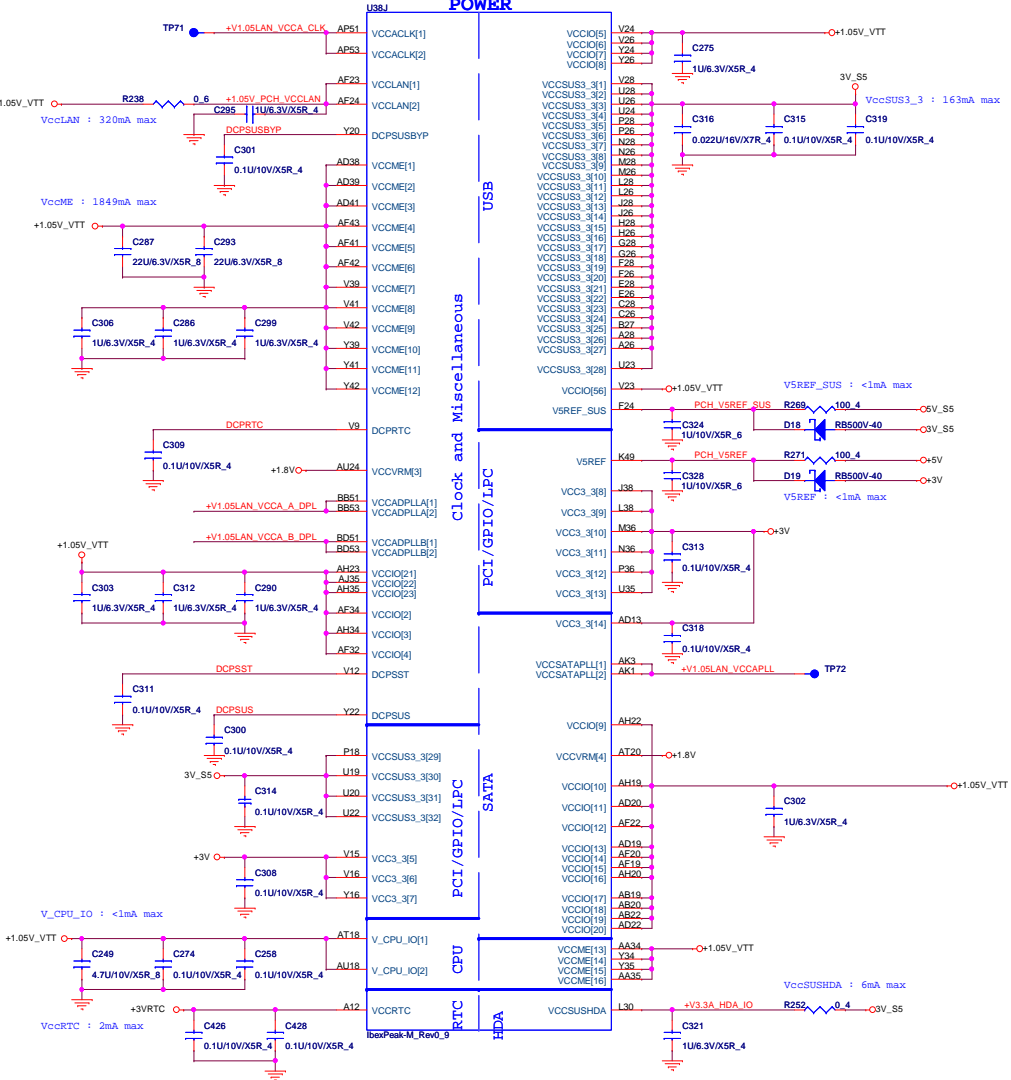
Size Custom Document Number **IBEX PEAK-M 4/6** Rev

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POWER

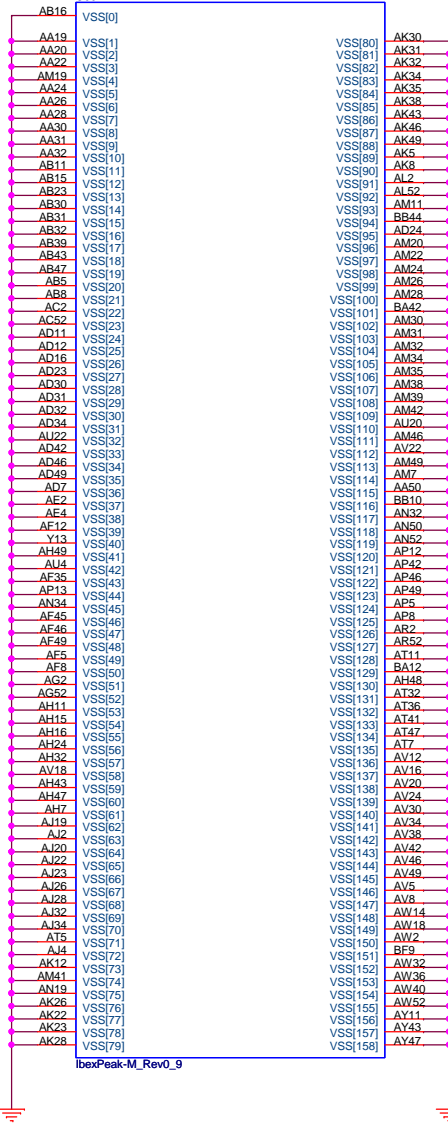


POWER



EC-C-19

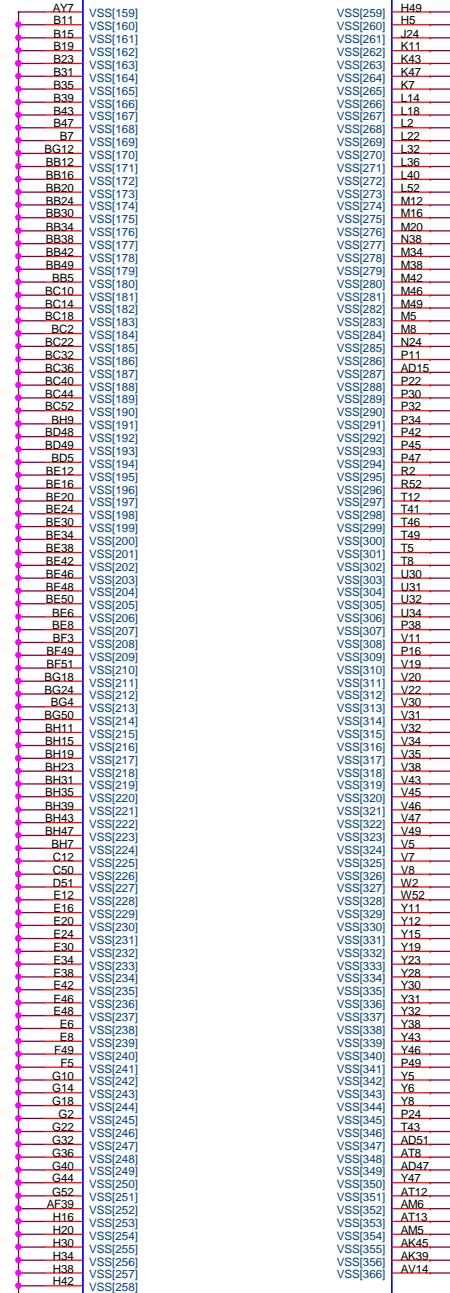
U38H



IbexPeak-M_Rev0.9

EC-C-19

U38H

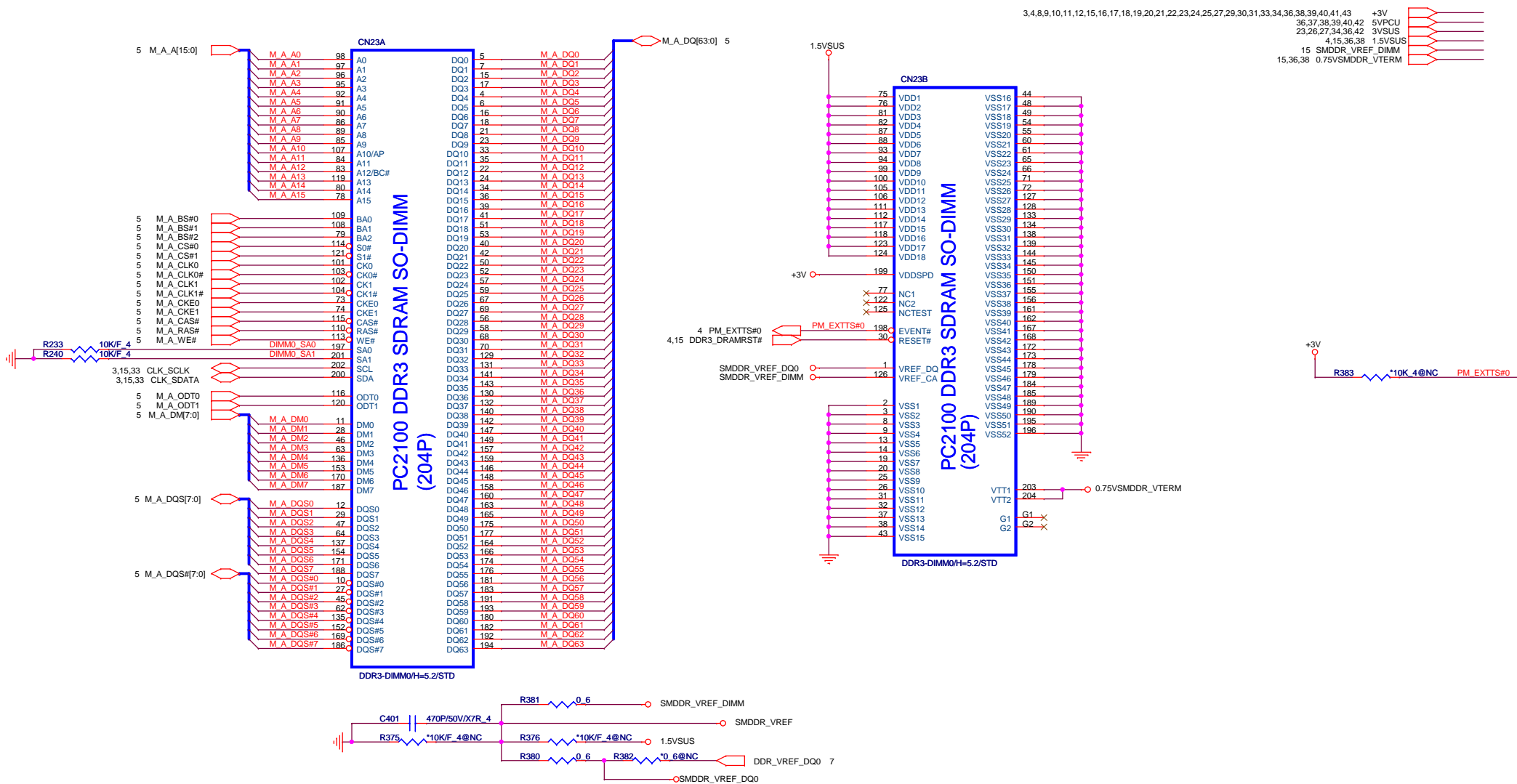


IbexPeak-M_Rev0.9

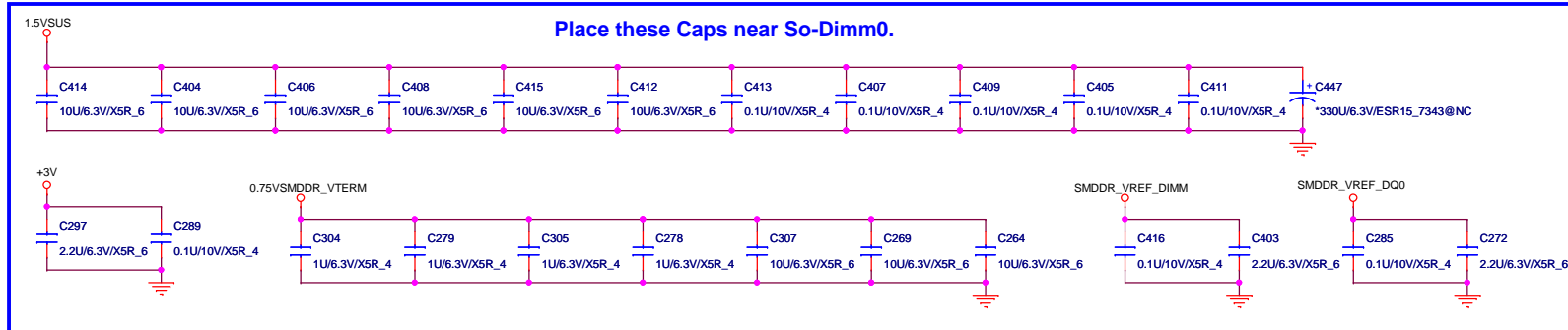


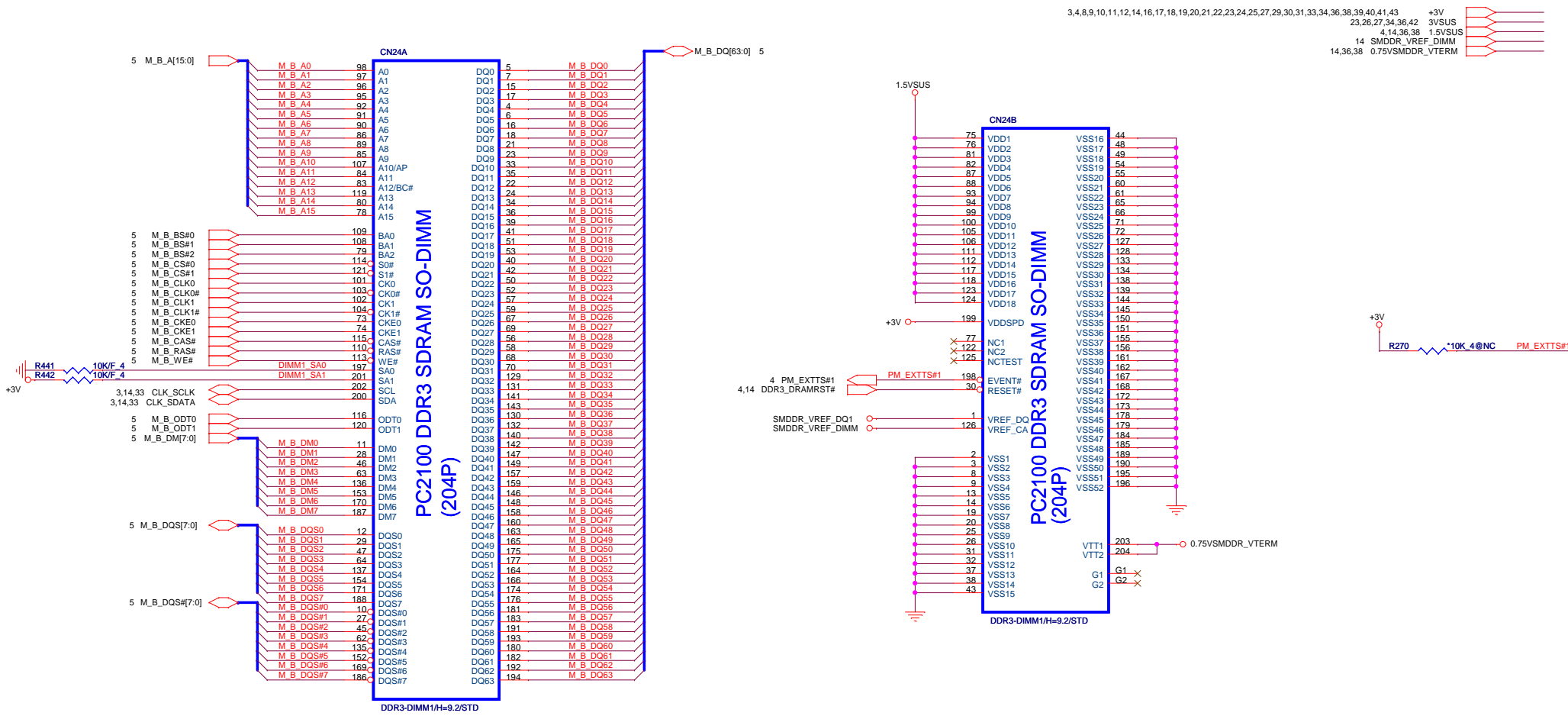
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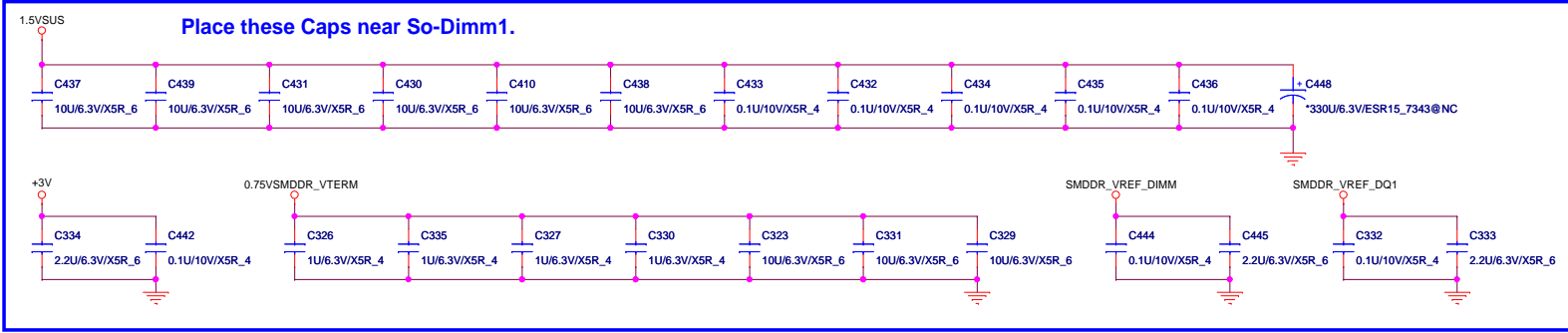


Place these Caps near So-Dimm0.

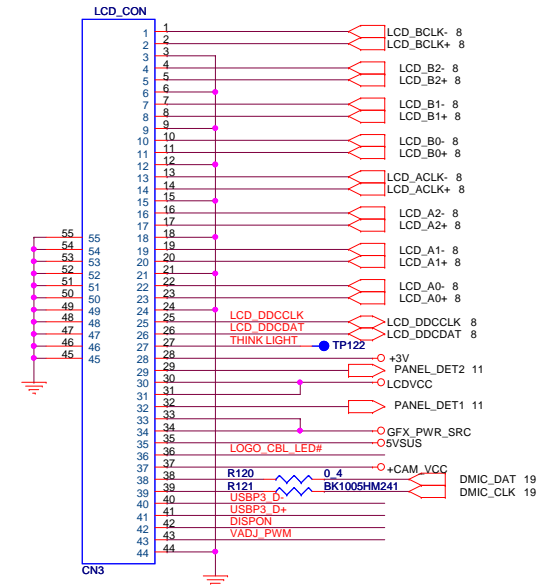
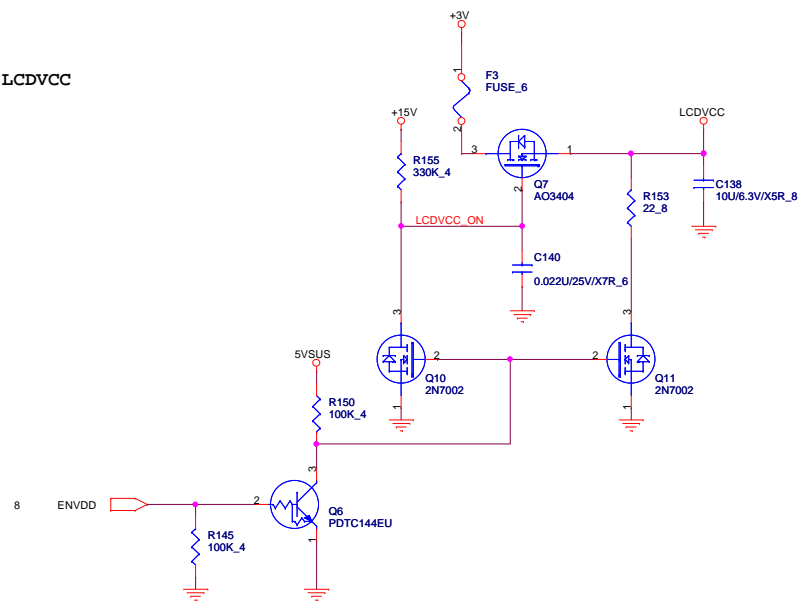




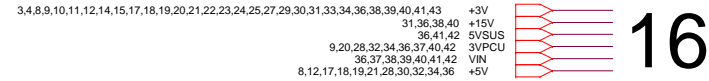
3,4,8,9,10,11,12,14,16,17,18,19,20,21,22,23,24,25,27,29,30,31,33,34,36,38,39,40,41,43	+3V
23,26,27,34,36,42	3VSUS
4,14,36,38	1.5VSUS
14	SMDDR_VREF_DIMM
14,36,38	0.75VSMDDR_VTERM



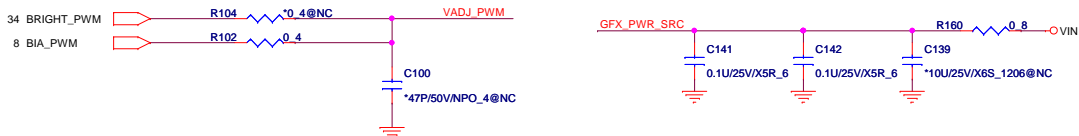
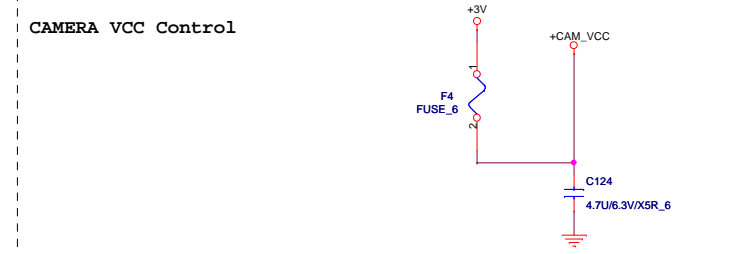
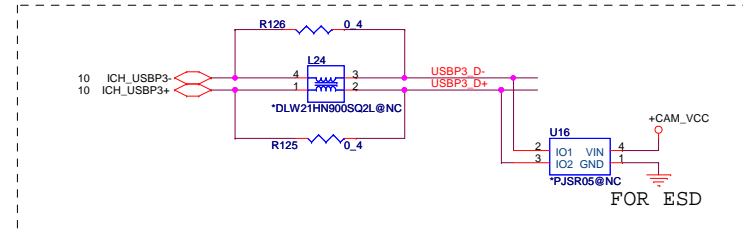
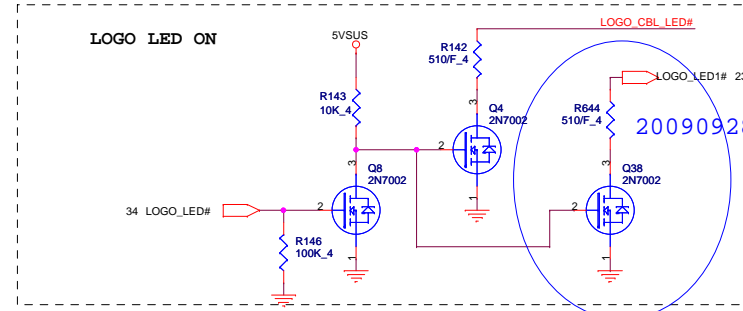
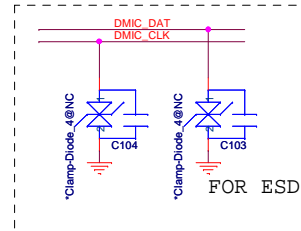
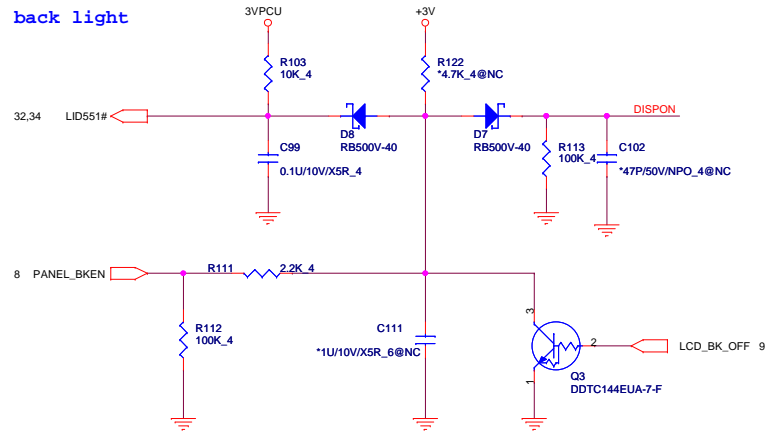
LCDVCC

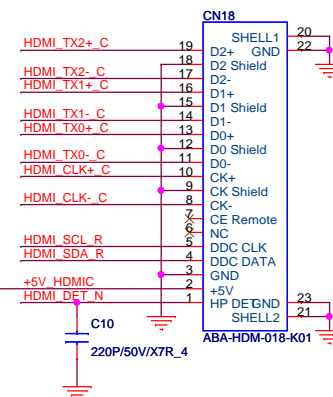


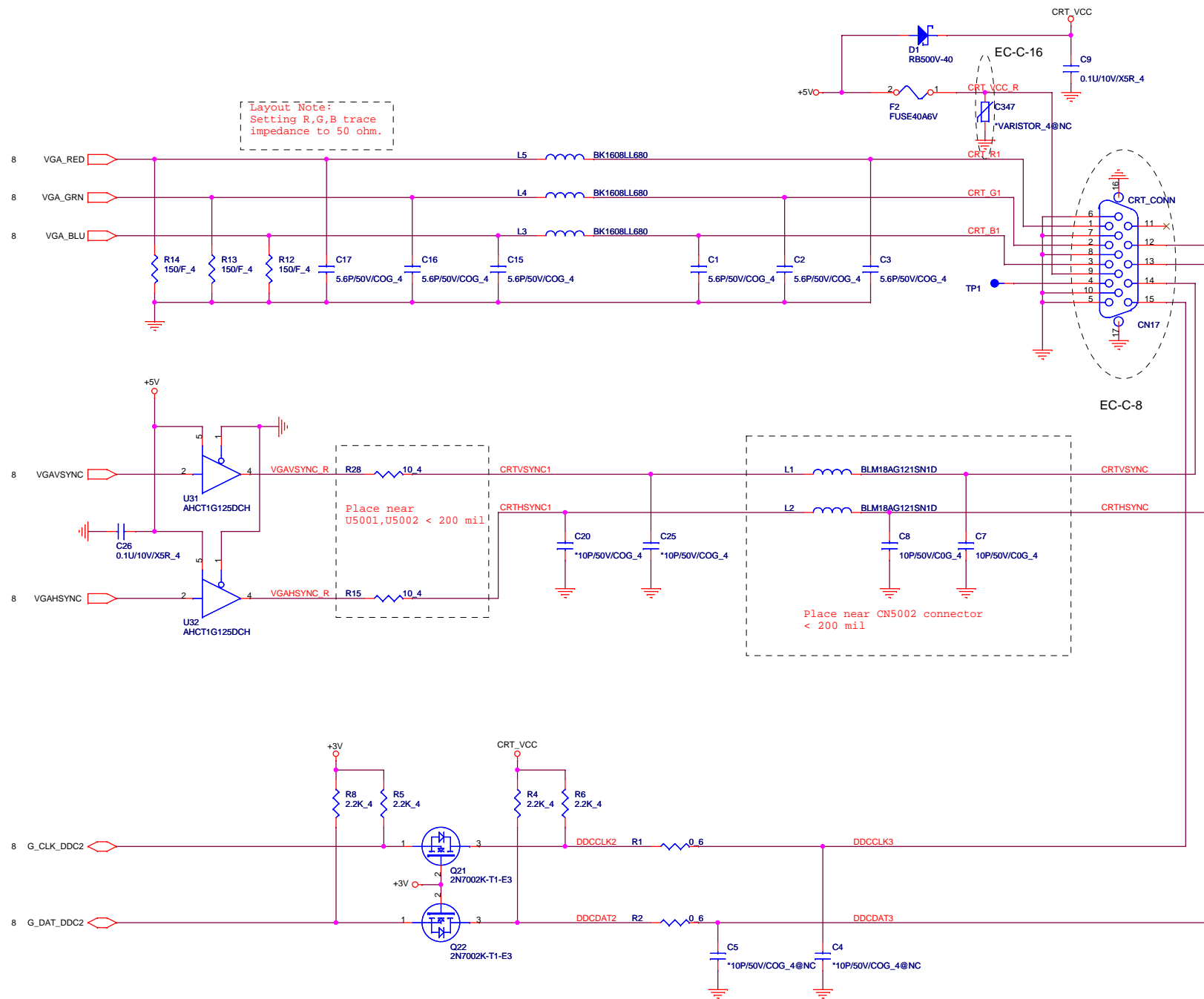
Address : A9H --Contrast
AAH --Backlight



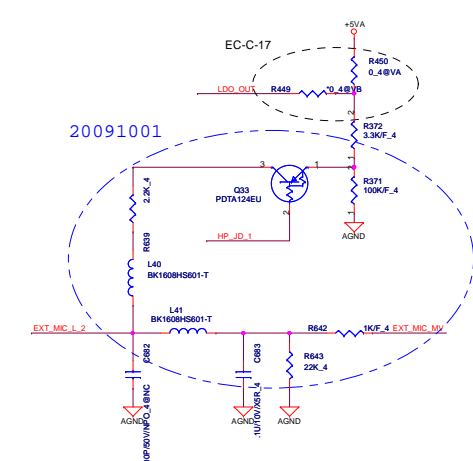
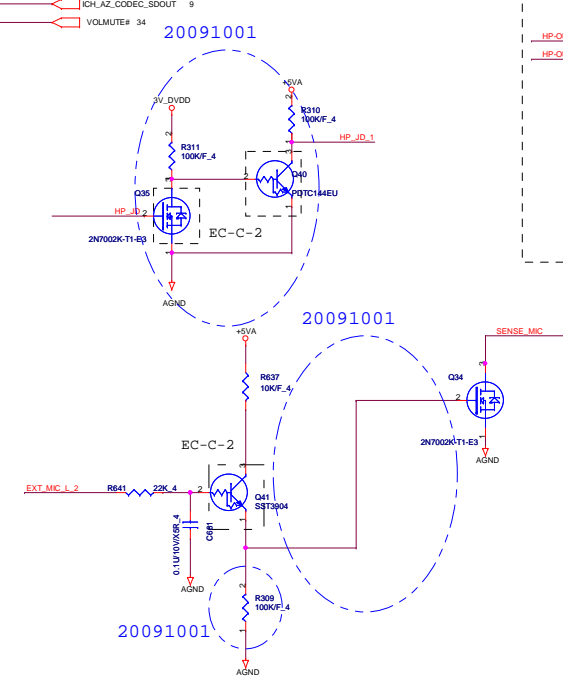
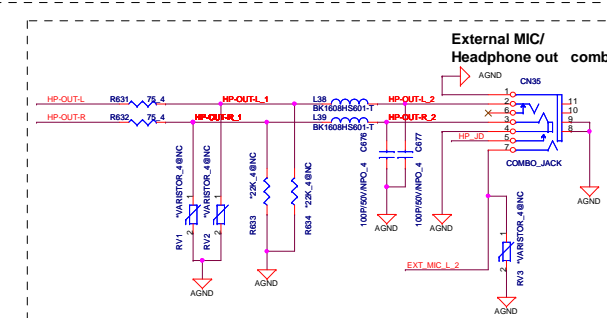
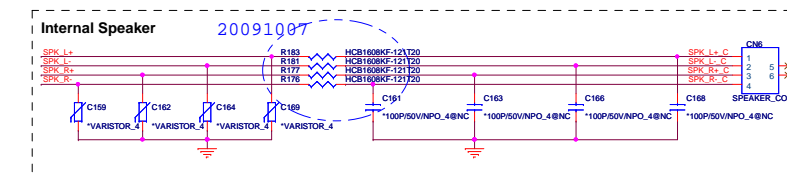
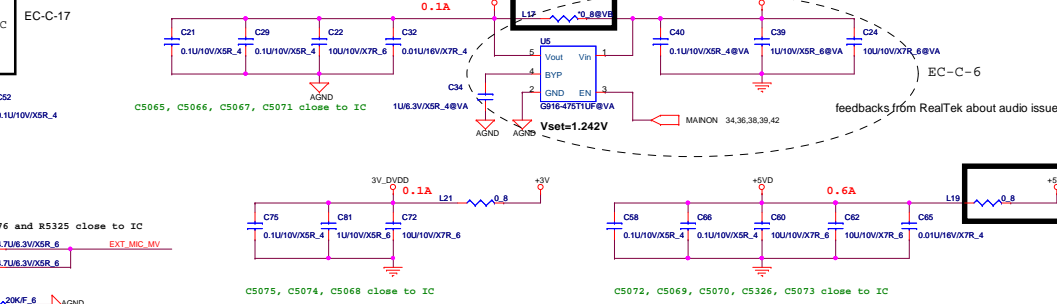
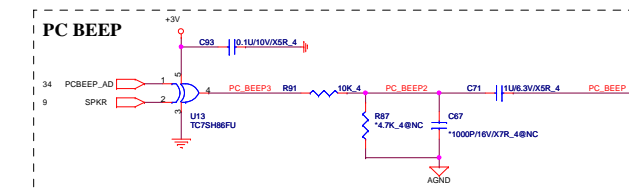
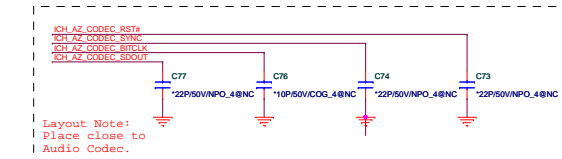
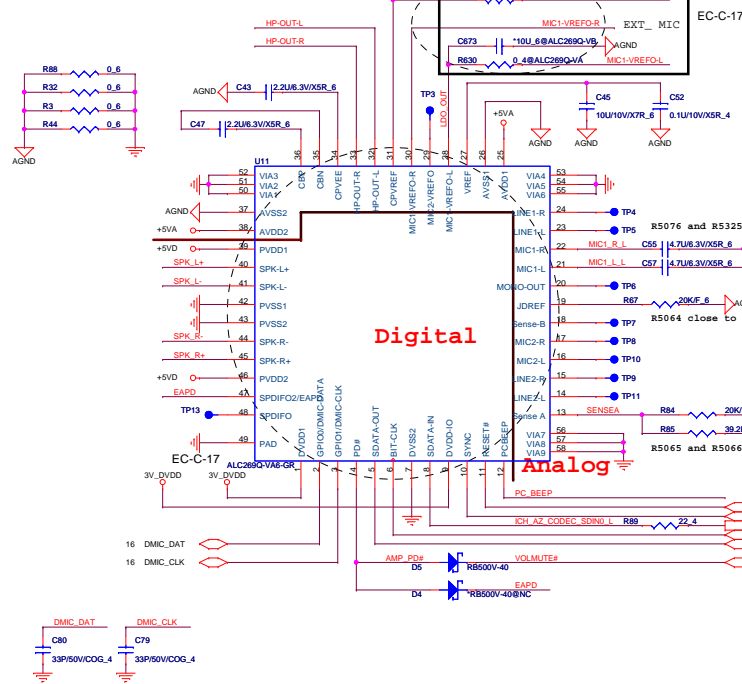
back light

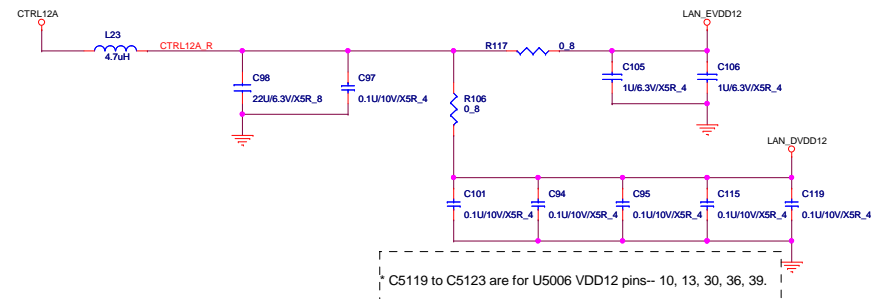
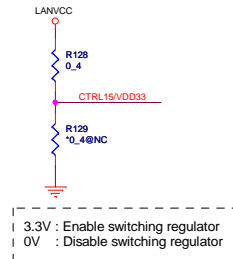
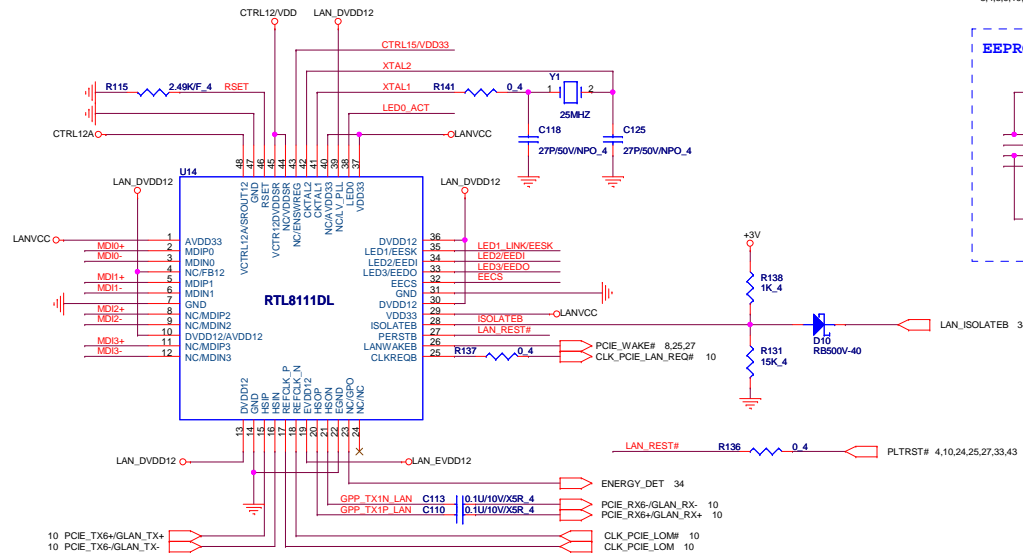




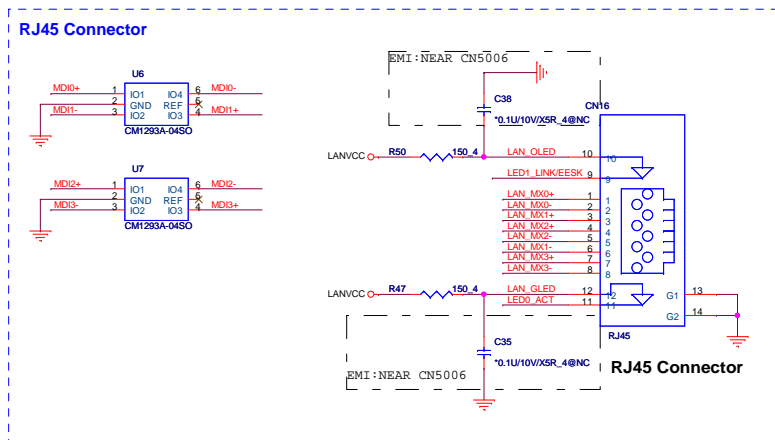


HDAudio Codec

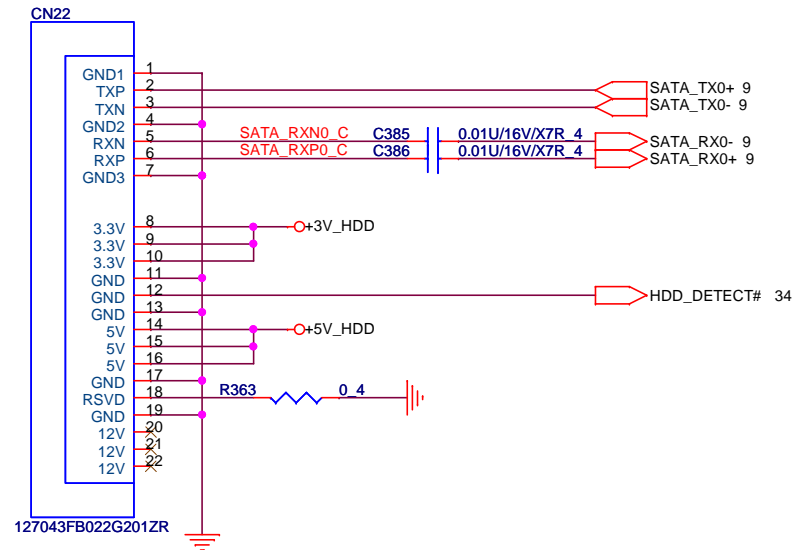




* C5110 to C5113 are for U5006 VDD33 pins-- 1, 29, 37 and 40. | Place C5113 ,C5094 closed to U5006 pins44,45.



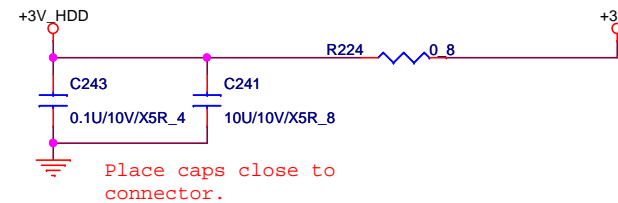
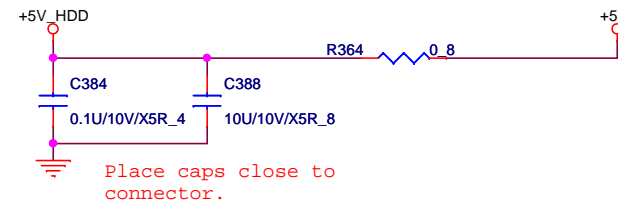
SATA Connector.



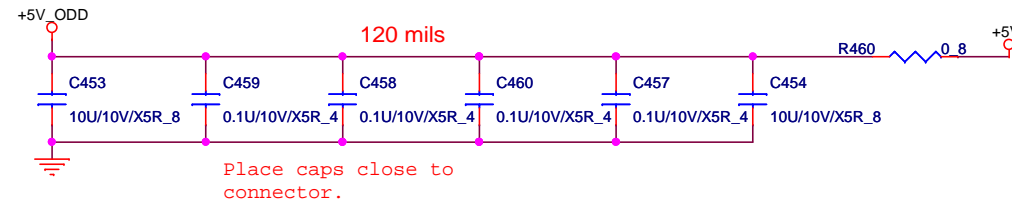
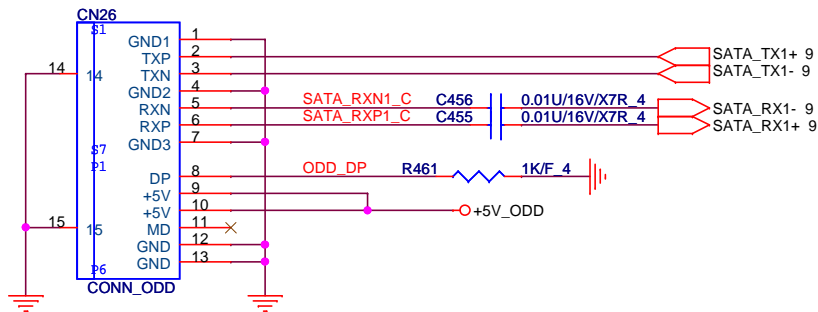
3,4,8,9,10,11,12,14,15,16,17,18,19,20,22,23,24,25,27,29,30,31,33,34,36,38,39,40,41,43

8,12,17,18,19,28,30,32,34,36
+5V
+3V

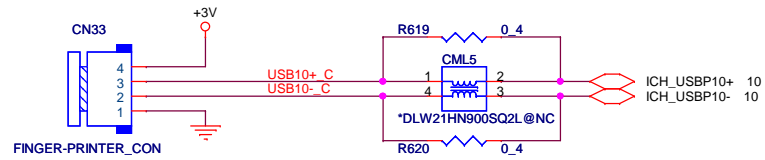
21



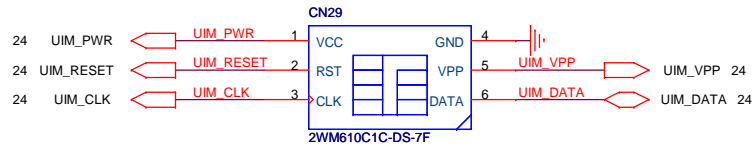
ODD Connector



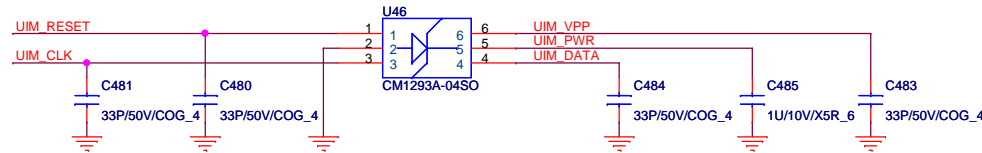
Finger Print



SIM Card CONN

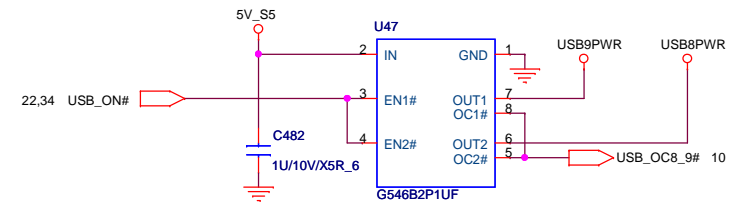
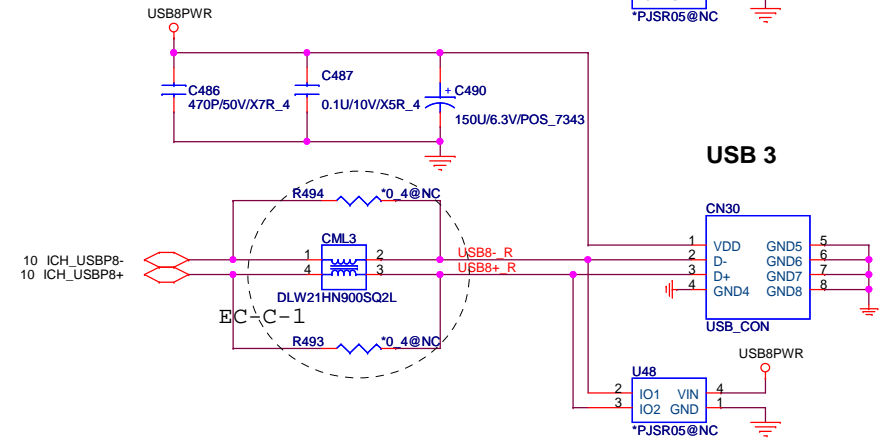
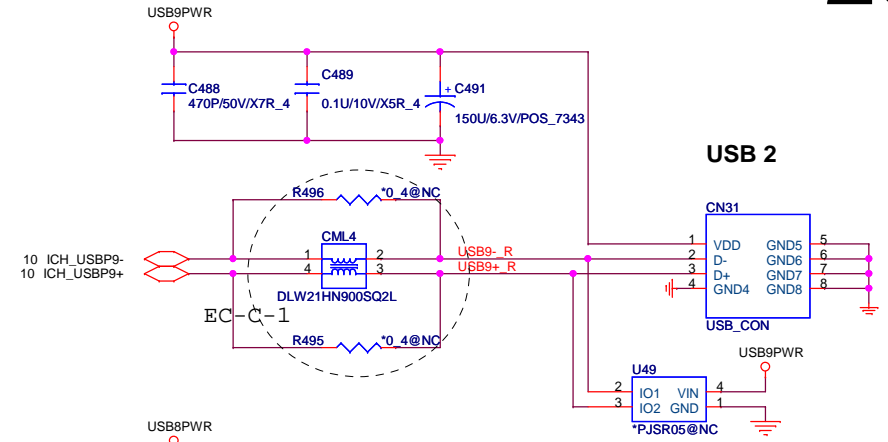


Layout Note:
UIM_RESET, UIM_CLK, UIM_DATA routing as short as possible



20090928

LOGO LED

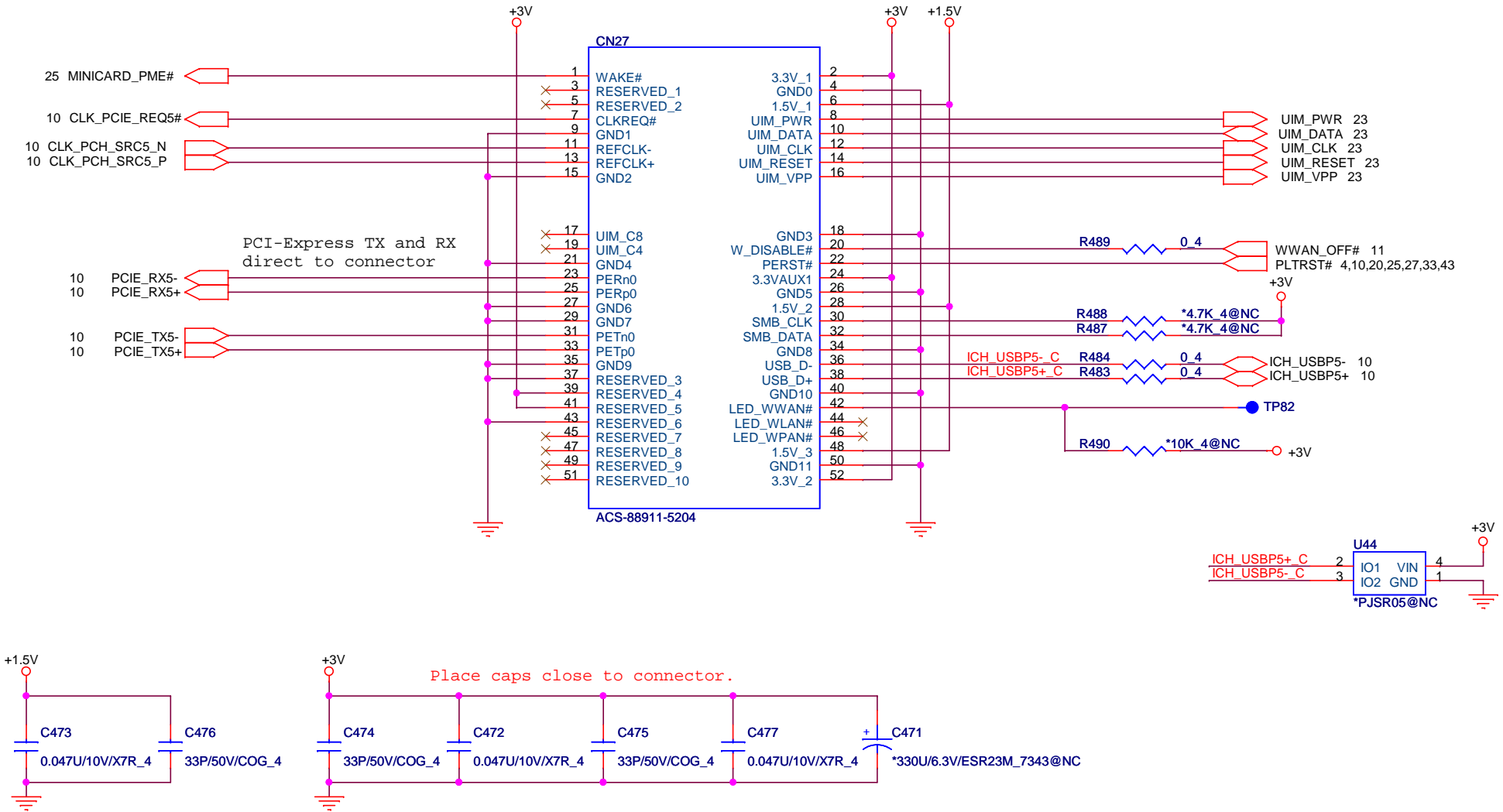


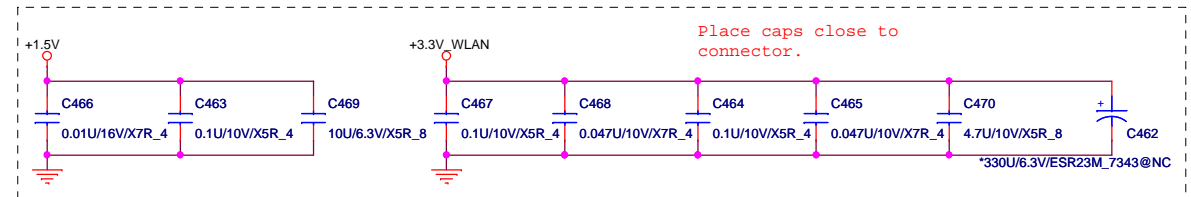
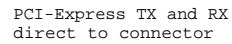
LD-Note Calpella UMA
Quanta Computer Inc.

Size	Document Number	Rev
Custom	USB X2/SIM_CARD/LEDs/RF	
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MiniCard WWAN connector

24





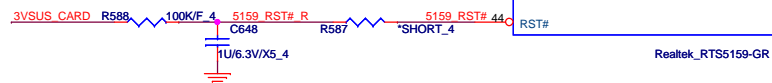
Left NC if Pin23
connected to XD-D4

CARD READER

For external 12Mhz clock input
pin13 floating
For external 48Mhz clock input
pin13 pull high

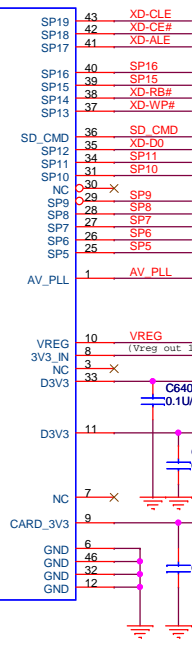
Card Reader Model Select

Pin 45	R20
RTS5159-GR	0 ohm (default)
RTS5158-GR	N.C



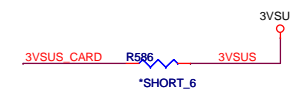
Realtek_RTS5159-GR

0515 EMI Changes

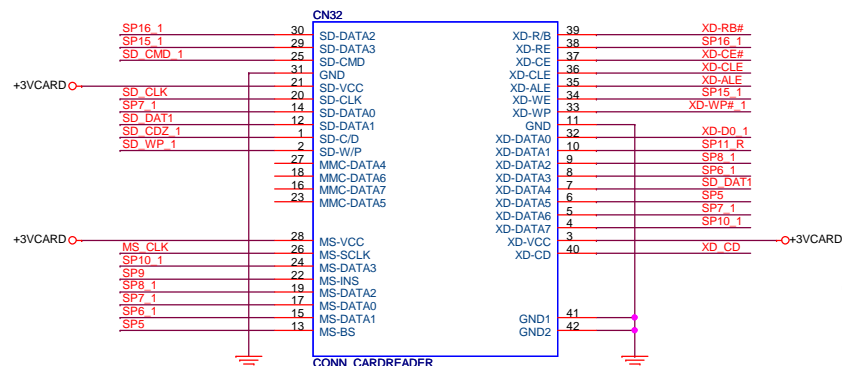


Note:

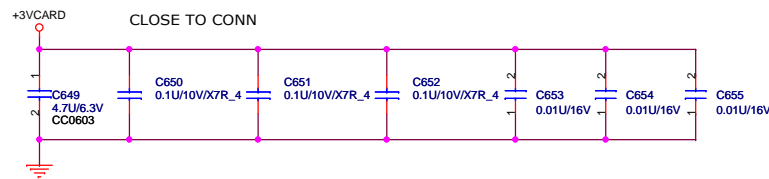
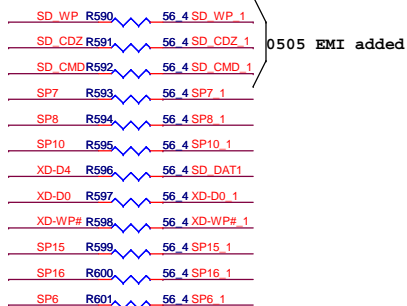
SD/MMC	MS	XD
SP0		XD_CD#
SP1	SD_WP	
SP2	SD_CD#	
SP3		XD_D4
SP4	MS_BS	XD_D5
SP5	MS_D1	XD_D3
SP6	SD_DAT0	XD_D6
SP7	SD_DAT1	XD_D2
SP8	MS_INS#	
SP9	SD_DAT6	XD_D7
SP10	SD_CLK	MS_SCLK
SP11	SD_CLK	MS_SCLK
SP12	SD_DAT5	XD_D0
SP13	SD_DAT4	XD_WP#
SP14	XD_RB#	
SP15	SD_DAT3	XD_WE#
SP16	SD_DAT2	XD_RE#
SP17	XD_ALE	
SP18	XD_CE#	
SP19	XD_CLE	



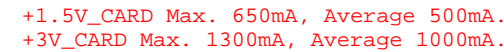
7 in 1 Socket (MS, MS PRO, SD, MMC, xD...)



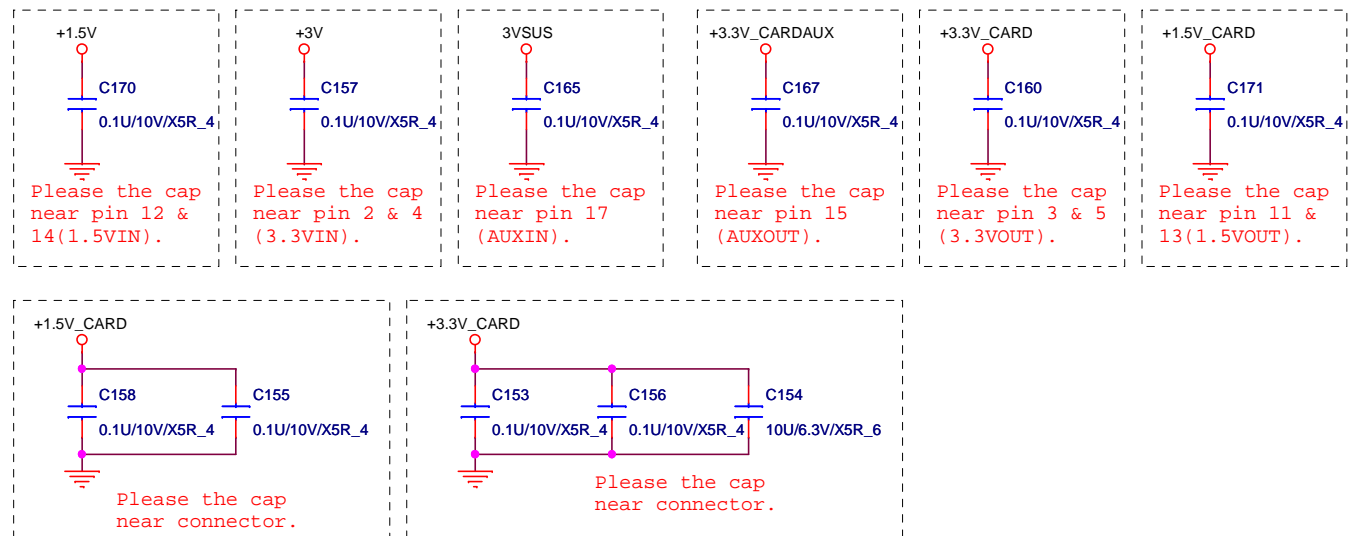
0616 Add 10K to GND for +3VCARD discharge in Ver.B



27



4,10,20,24,25,33,43 PLTRST#

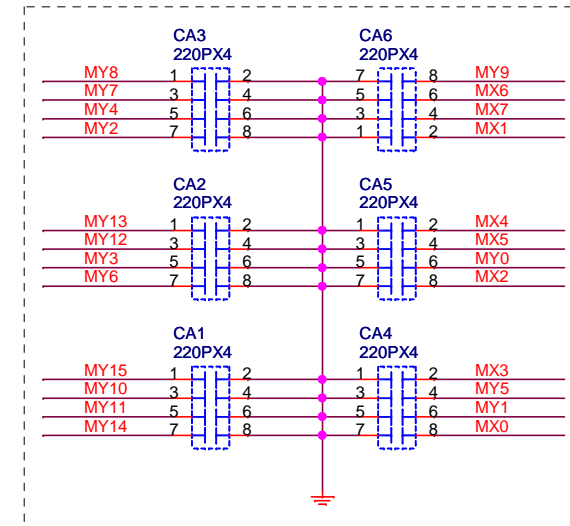
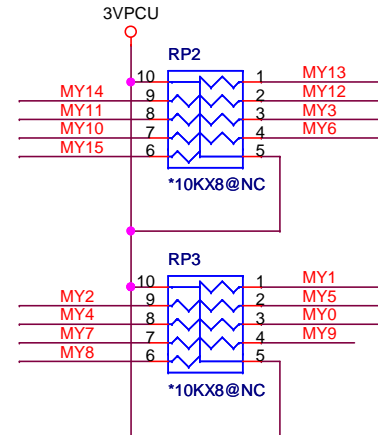
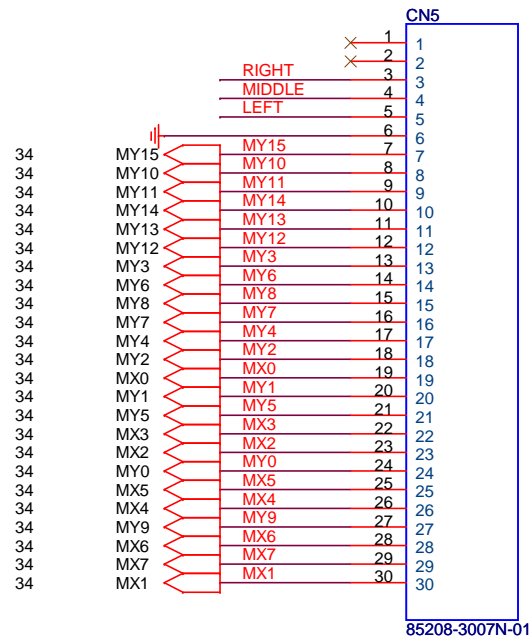


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Quanta Computer Inc.

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Date:	Saturday, November 07, 2009	Sheet	27	of	50

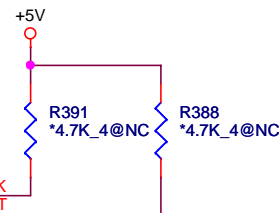
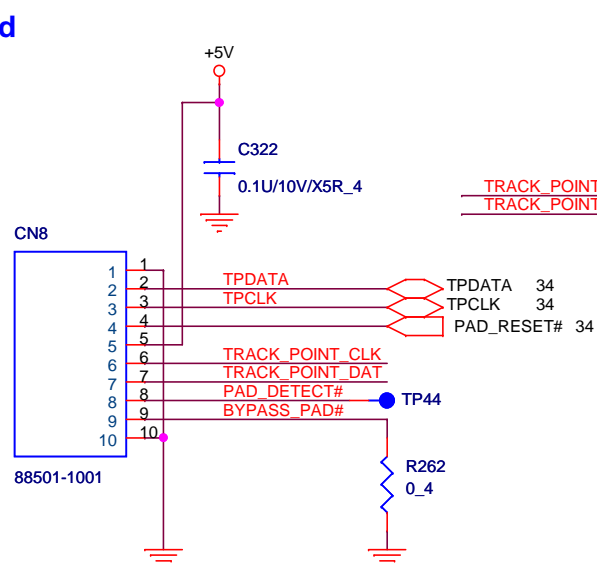
KEYBOARD

KEYBOARD connector

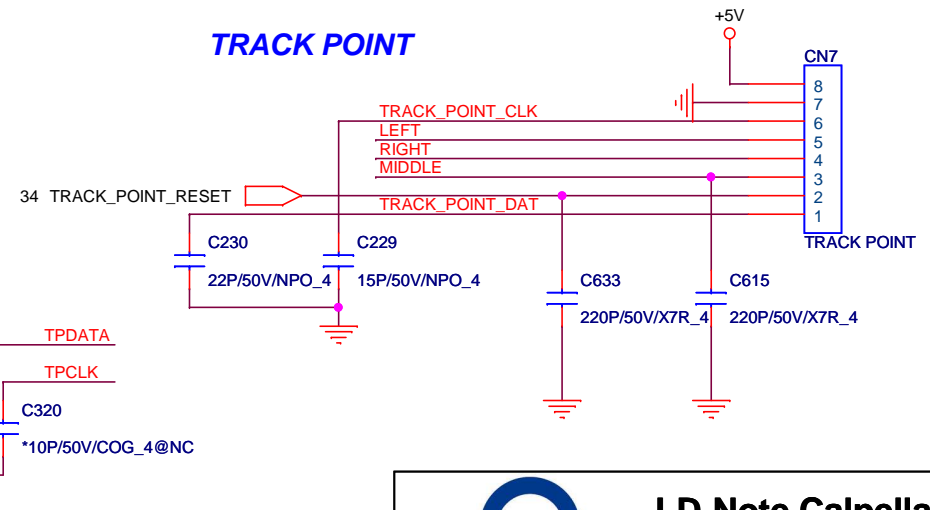



For EMI request

Touch pad



TRACK POINT





LD-Note Calpella UMA

Quanta Computer Inc.

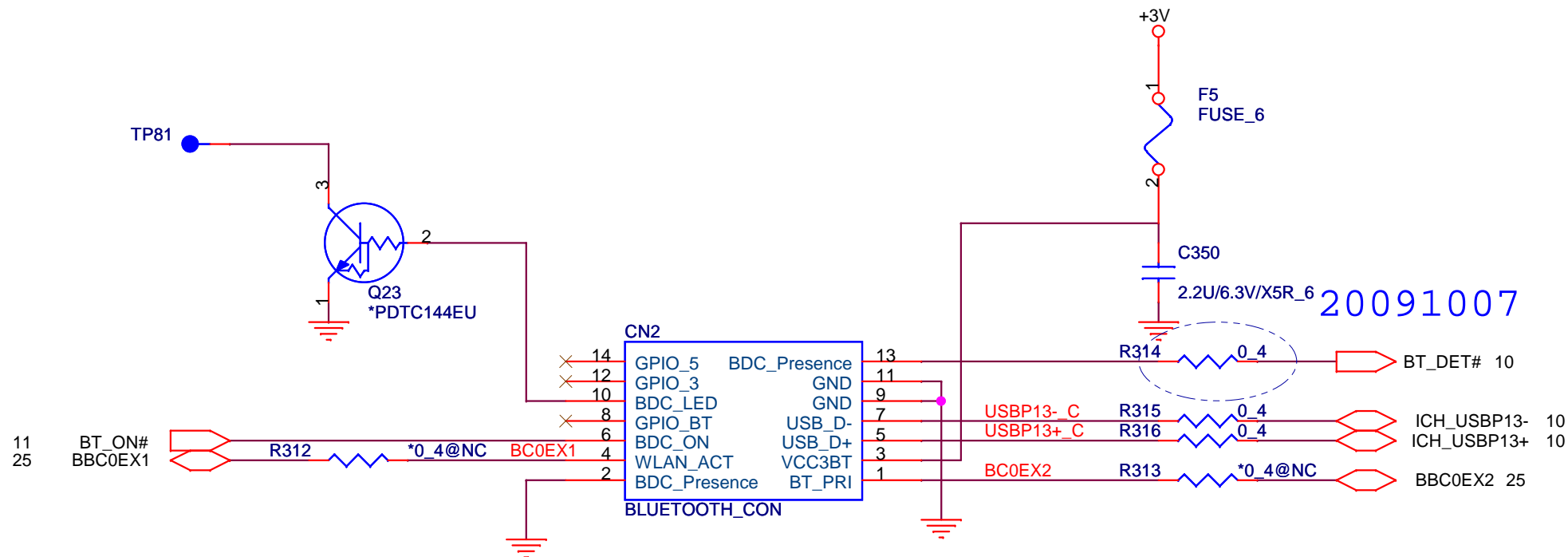
Size	Document Number	Rev
Custom	K/B, T/P	
Date:	Saturday, November 07, 2009	Sheet 28 of 50

BLUETOOTH

3,4,8,9,10,11,12,14,15,16,17,18,19,20,21,22,23,24,25,27,30,31,33,34,36,38,39,40,41,43

+3V

29



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Quanta Computer Inc.

Size Custom	Document Number B/T	Rev
Date: Saturday, November 07, 2009	Sheet 29 of 50	

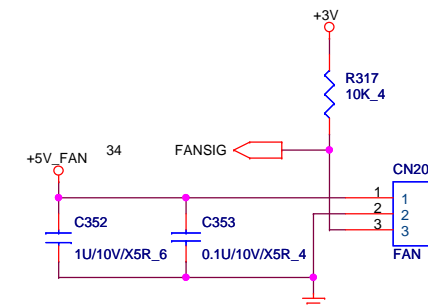
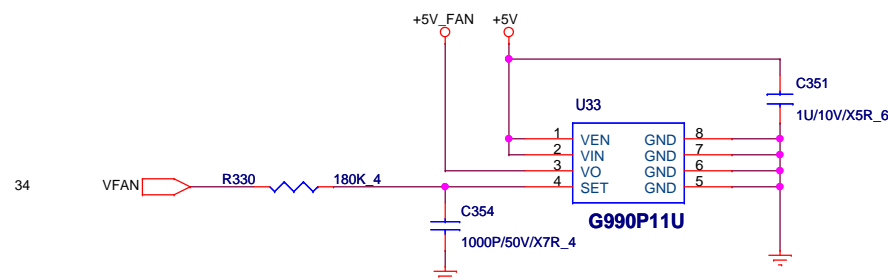
FAN CONTROL

3,4,8,9,10,11,12,14,15,16,17,18,19,20,21,22,23,24,25,27,29,31,33,34,36,38,39,40,41,43
8,12,17,18,19,21,28,32,34,36

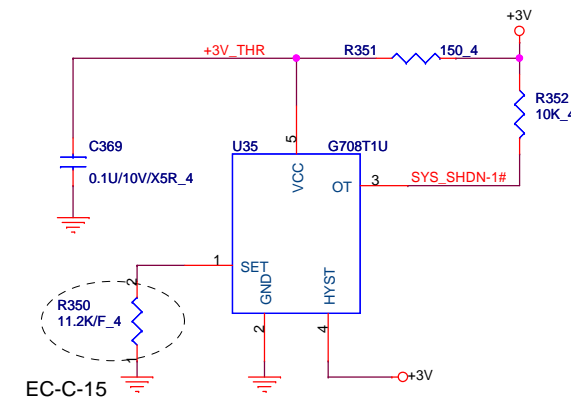
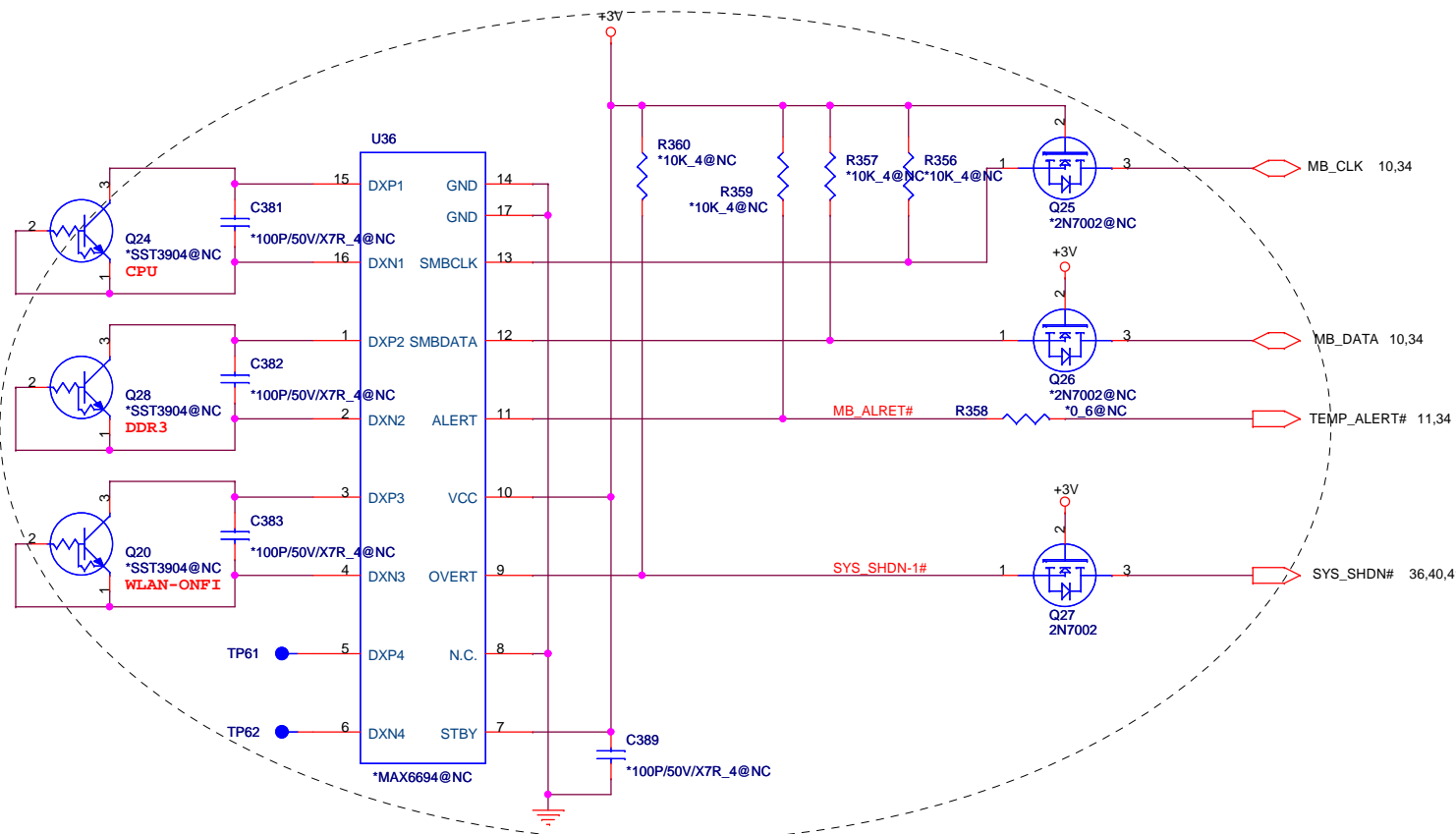
+3V
+5V



30



EC-C-9



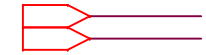
LD-Note Calpella UMA
Quanta Computer Inc.

Size	Document Number	Rev
Custom	FAN & THERMAL	

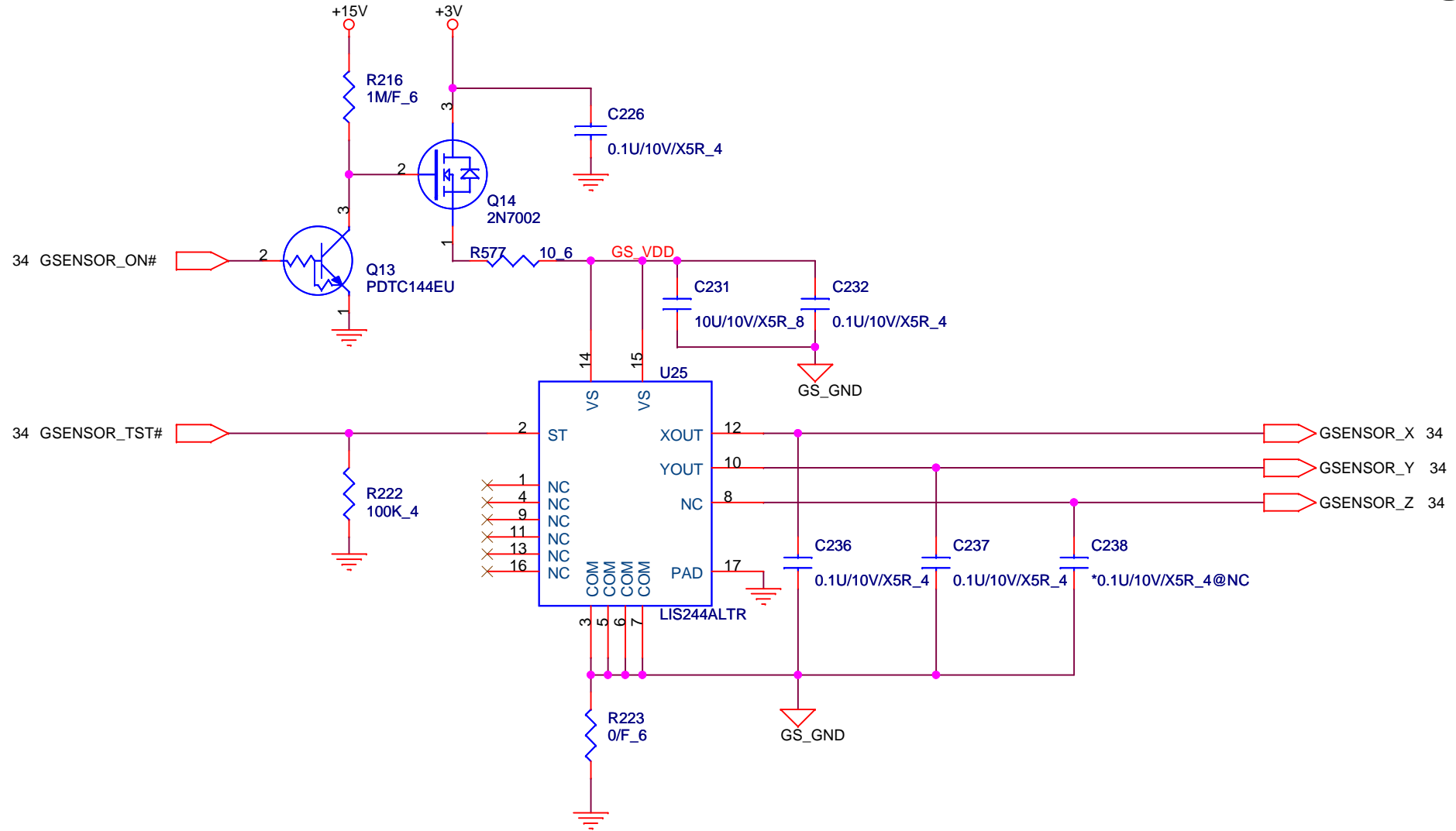
Date: Saturday, November 07, 2009 Sheet 30 of 50

G-SENSOR (2-Axial)

3,4,8,9,10,11,12,14,15,16,17,18,19,20,21,22,23,24,25,27,29,30,33,34,36,38,39,40,41,43
+3V
+15V



31

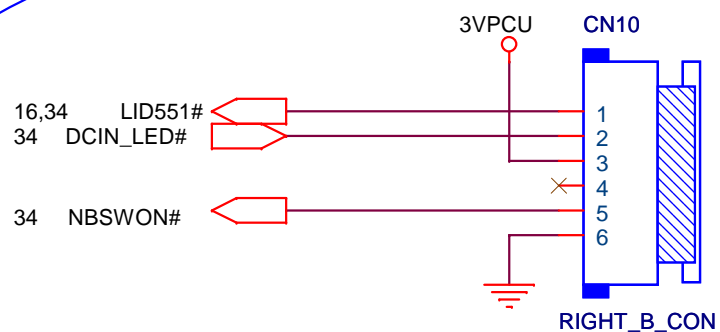


LD-Note Calpella UMA
Quanta Computer Inc.

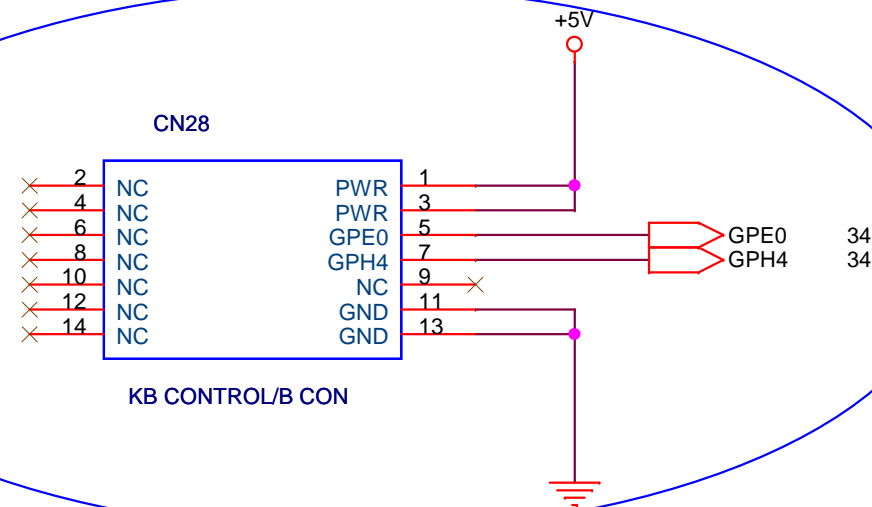
Size Custom	Document Number G-SENSOR	Rev
Date: Saturday, November 07, 2009	Sheet 31 of 50	

20080928

FFC TO B LED RIGHT SIDE CONNECTOR

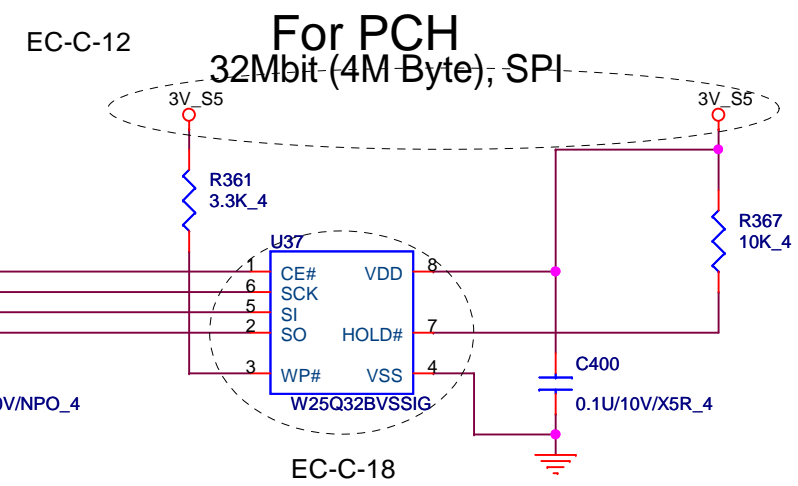
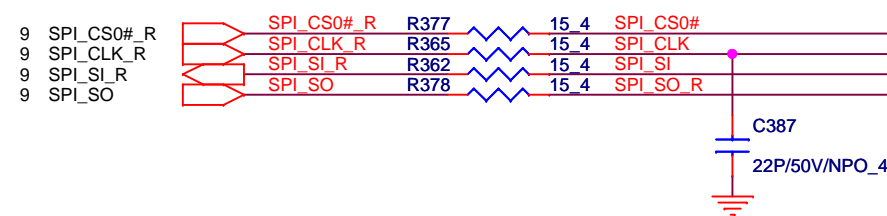
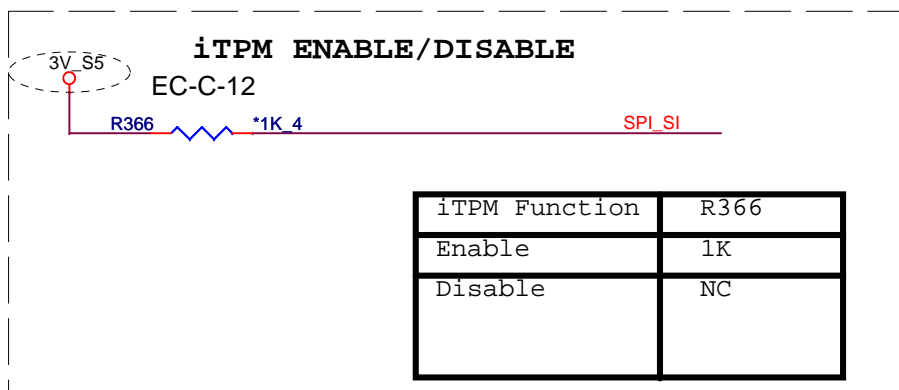


20081002

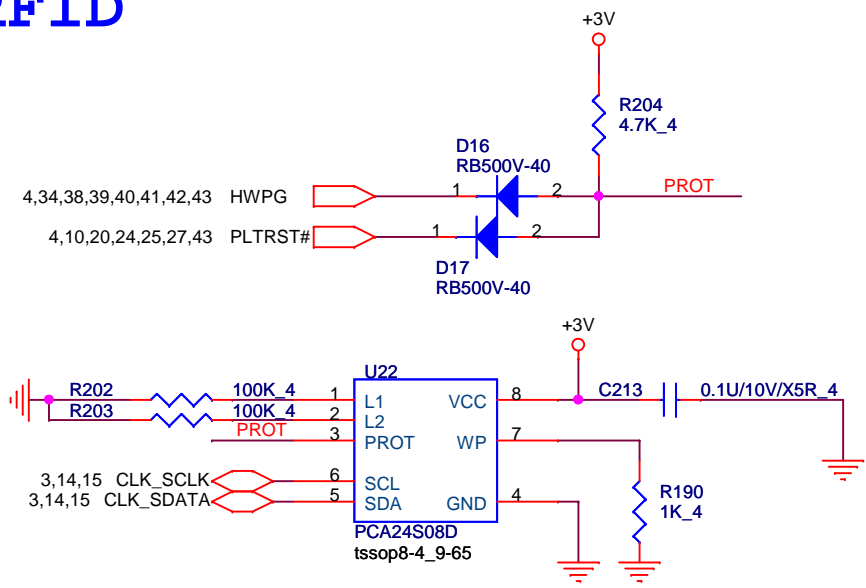



LD-Note Calpella UMA
Quanta Computer Inc.

Size Custom	Document Number B TO B CON	Rev
Date: Saturday, November 07, 2009	Sheet 32 of 50	



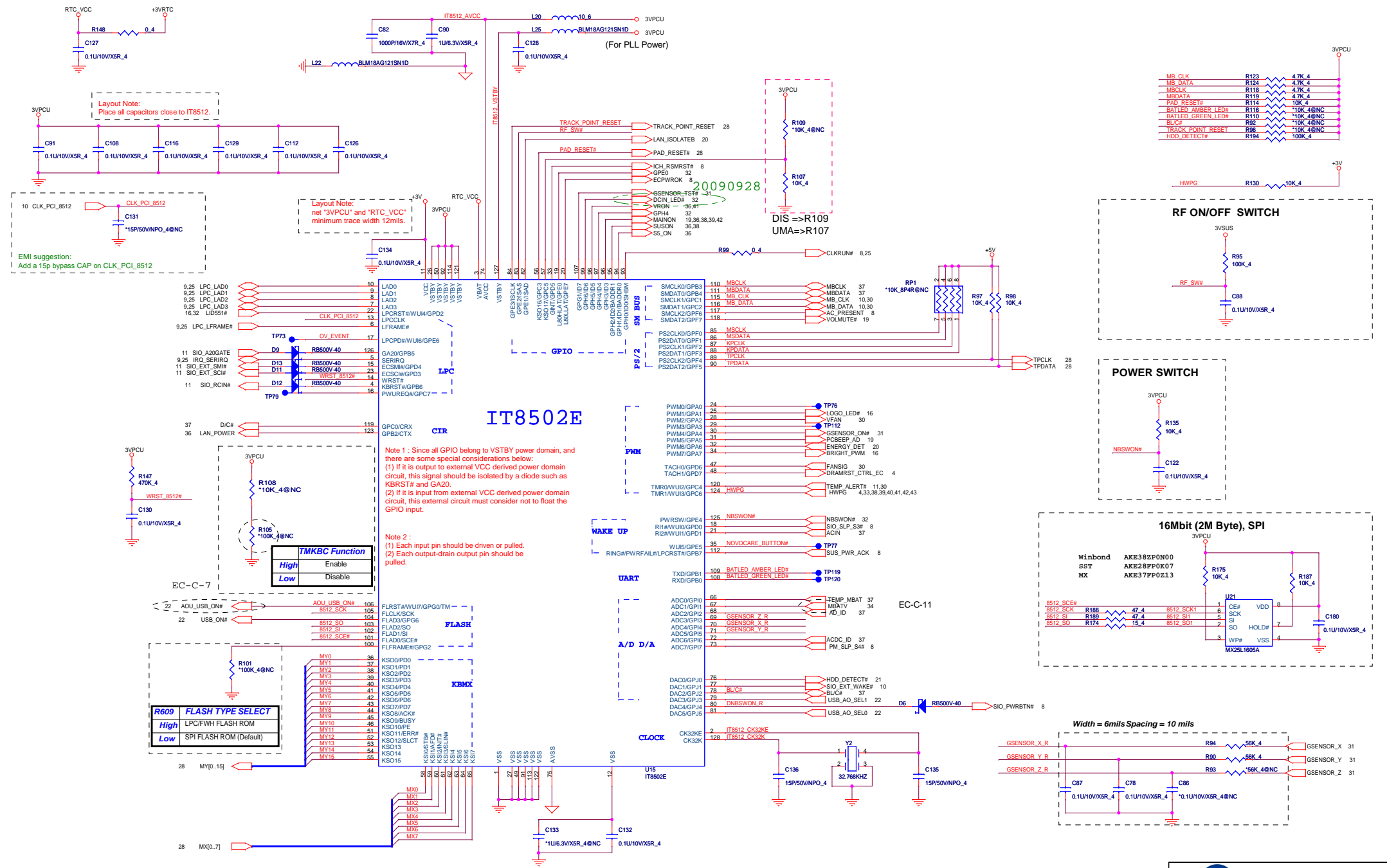
RFID





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Quanta Computer Inc.

Size Custom	Document Number iTPM & RFID EEPROM	Rev
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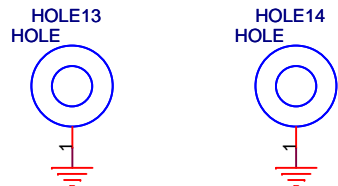
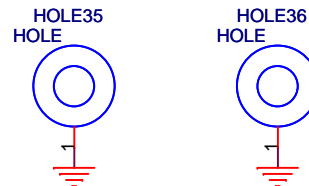
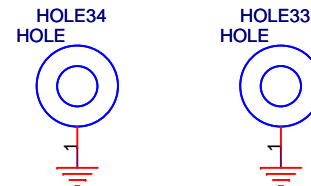
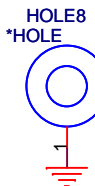
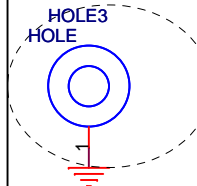
5

4

3

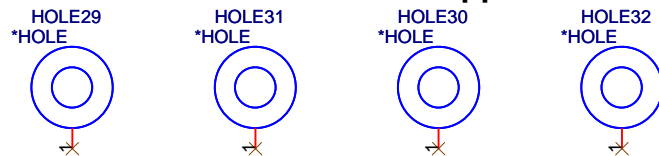
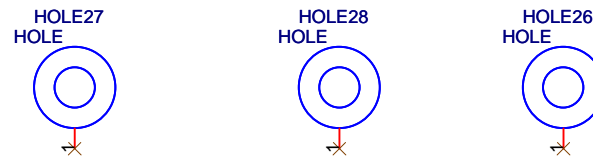
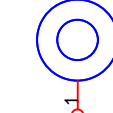
2

1

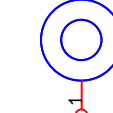
MiniCard WLAN**MiniCard WWAN****Hole for PCH support****Drink Hole****Bluetooth nut**

EC-C-4

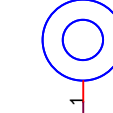
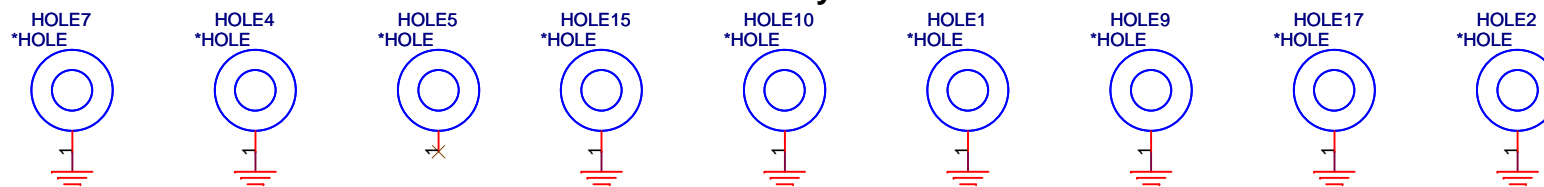
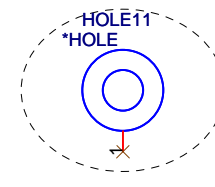
35

Hole for CPU support**VGA nut**GP5
*RE270X220NP

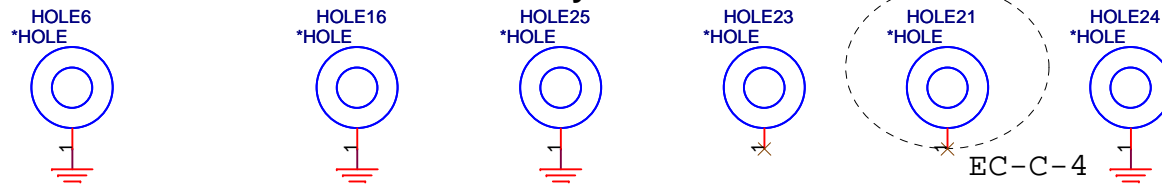
+1.05V VTT

GP6
*RE270X220NP

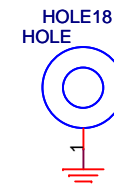
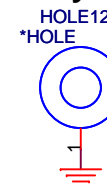
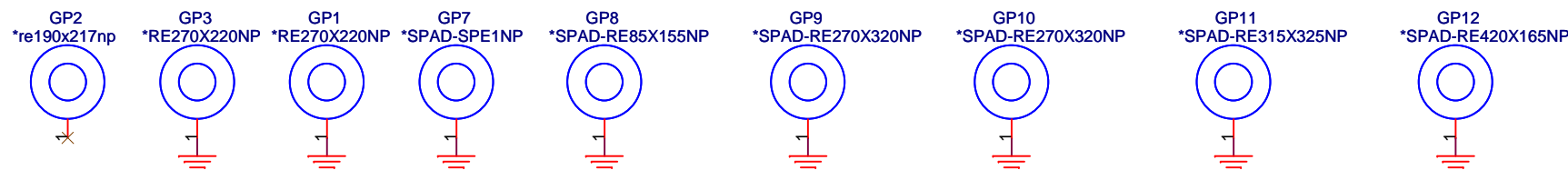
+1.05V VTT

GP4
*RE236X494NP**Boundary Hole****Break Hole**

EC-C-4

Boundary Hole

EC-C-4

K/B Control/B Nut**Boundary Hole (ODD)****PAD**

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Quanta Computer Inc.

Size
Custom

Document Number

HOLD & SKEW

Rev

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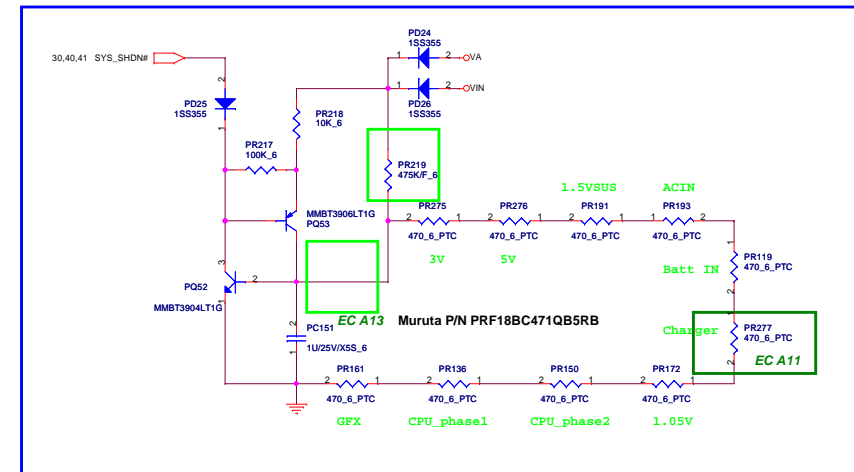
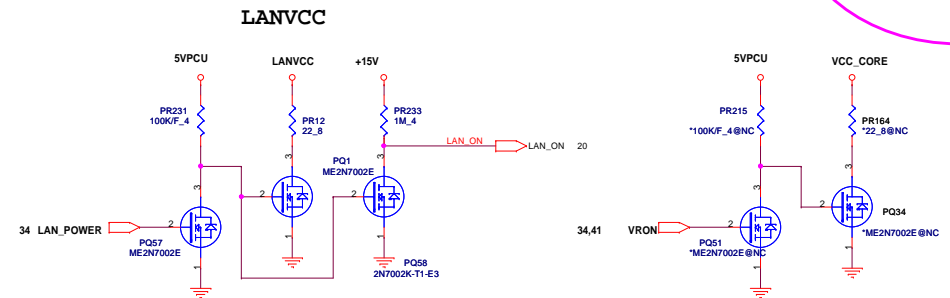
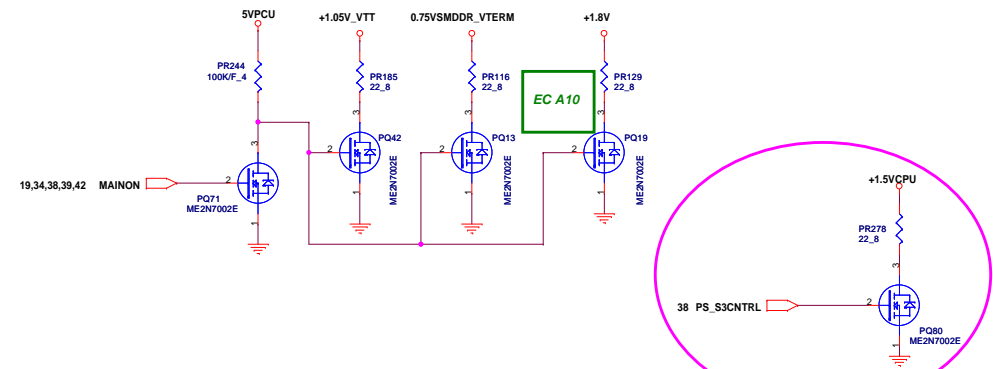
2

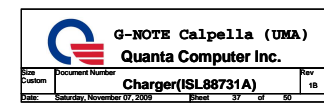
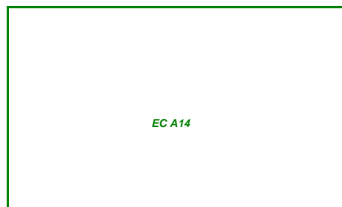
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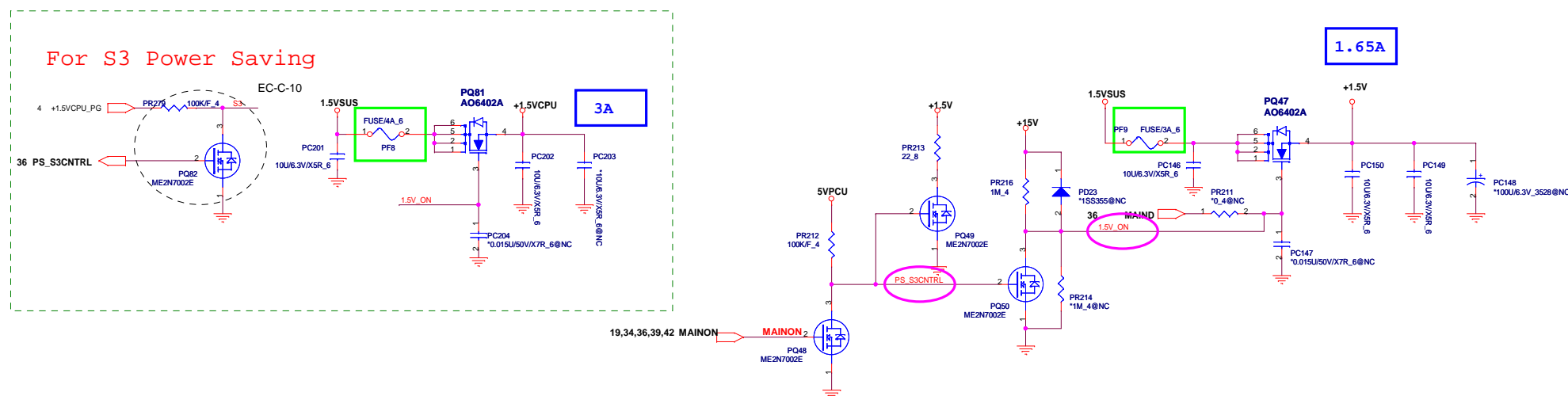
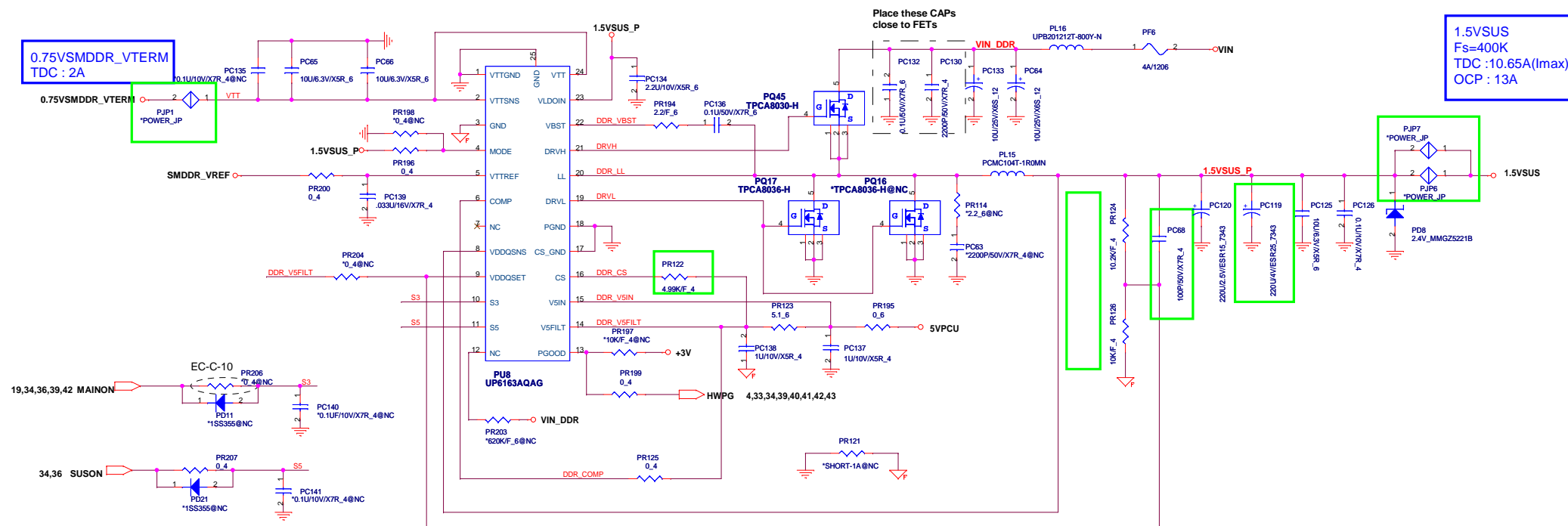
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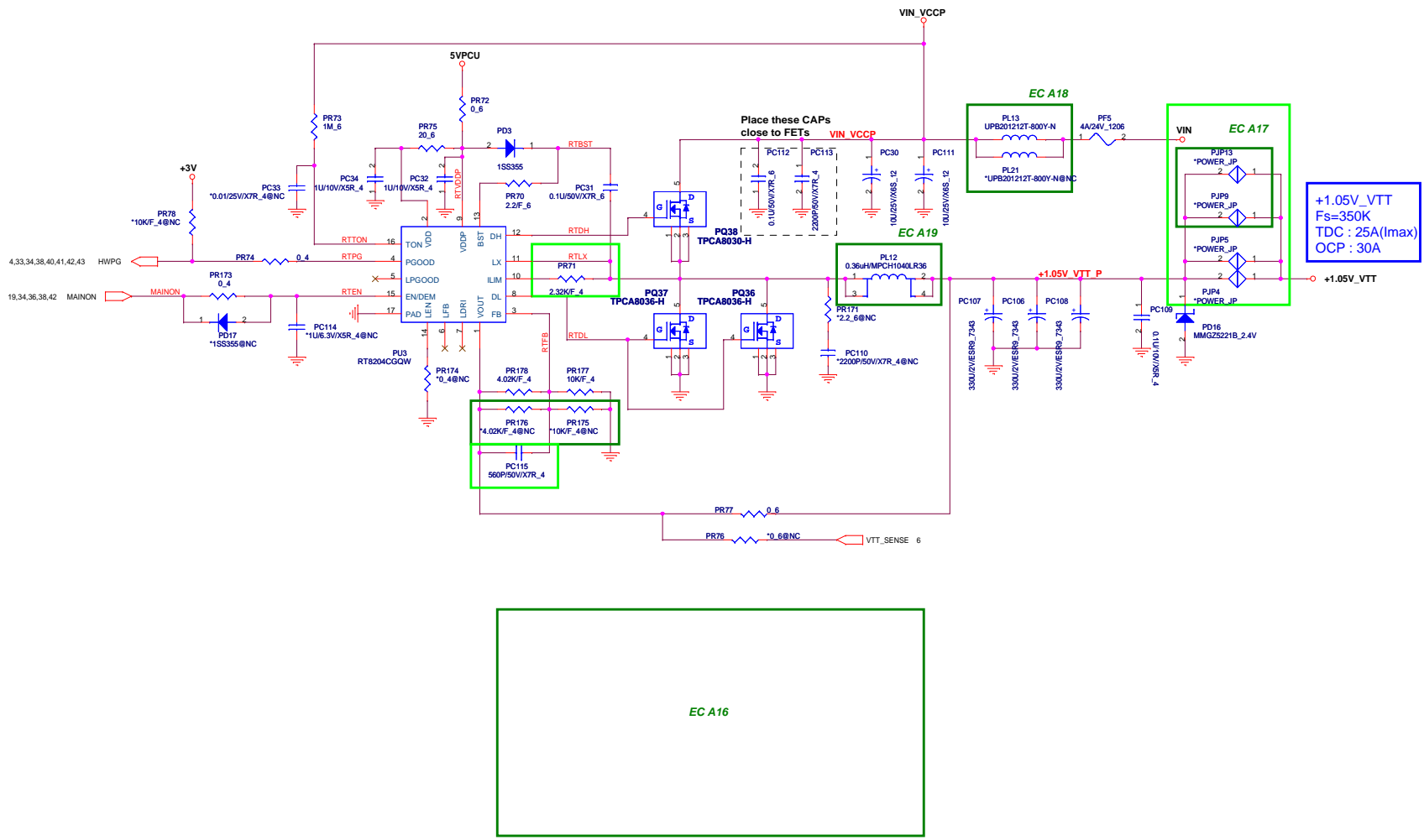
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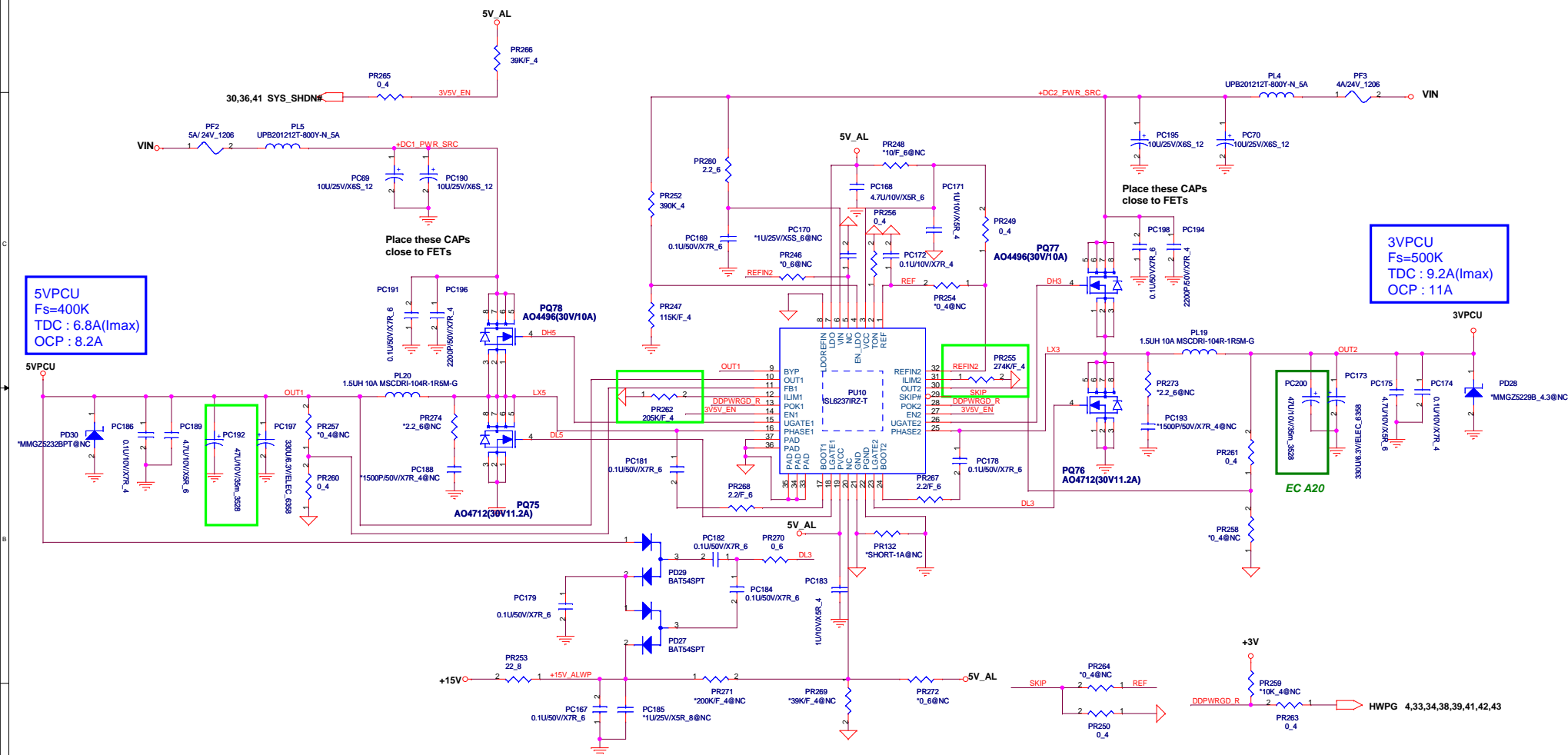
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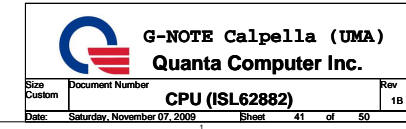


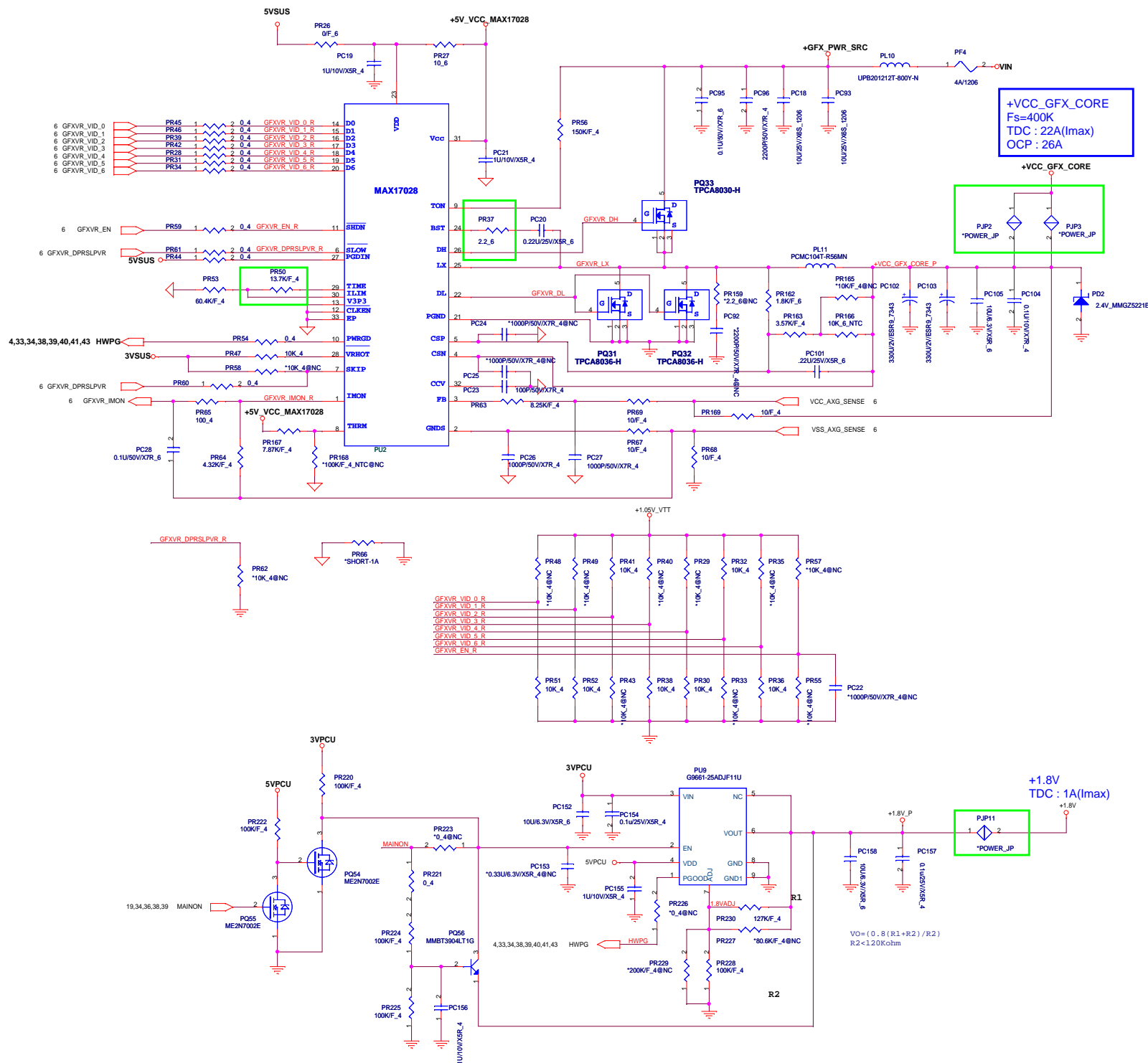


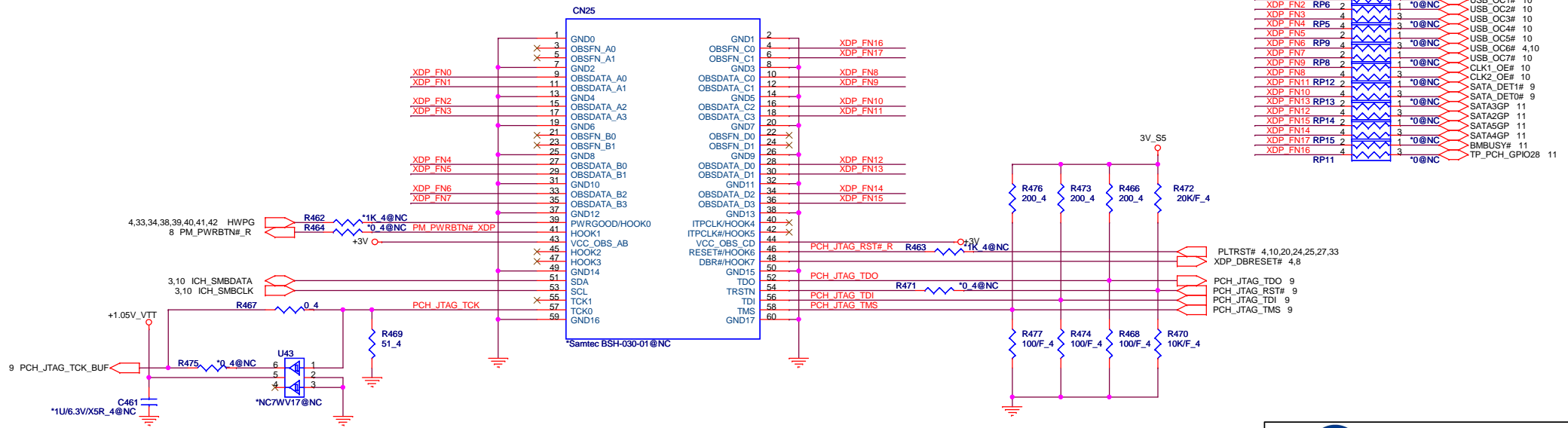
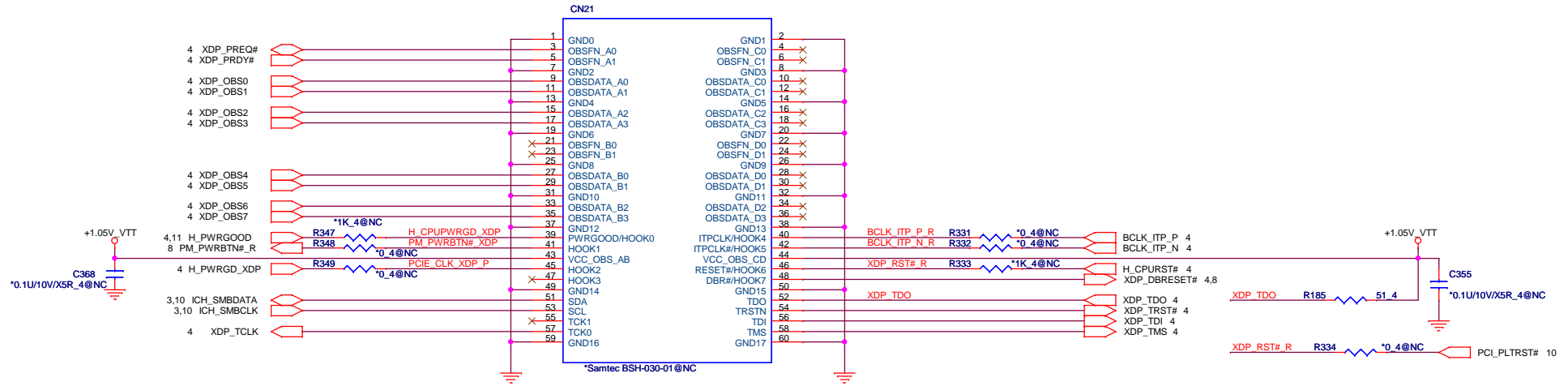












Revision History

44

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

EC NO.	Page	Date	Part reference	Description
EC-C-1	23	10/30	CML3,CML4,R493/R494/R495/R496	
	22		CML1,R38,R39	POP CML1/CML3/CML4 for EMI Suggestion
	27		L26,R178,R179	U12 Only use DBBL5MLAN01
	20		U12	
EC-C-2	19	10/30	Q35,Q40,Q41	Q40 change to BA001440Z87 Q35 change to BAM70020058 Q41 change to BA039040ZA9
EC-C-3	10	10/30	U38	Modify Card Reader PORT
EC-C-4	35	10/30	HOLE11,HOLE3,HOLE21	Change footprint
EC-C-5	41	10/30	PR134,PR135,PC74,PC75	POP and PC74,PC75 change to 1000PF
EC-C-6	19	11/02	L17,C34,U15,C24,C39,C40	L17:DEPOP;C34,U15,C24,C39,C40:POP feedbacks from RealTek about audio issue
EC-C-7	22	11/02	U41	Modify Enable Pin connect to AOU_USB_ON# for AOU3 functon and delete cell select function
EC-C-8	18	11/02	CN17	Modify CRTVSYNC,CRTHSYNC,DDCCLK3,DDCDAT3
EC-C-9	30	11/02	Q24,Q28,Q20,C381,C382,C383, U36,C389,R356,R357,Q25,Q26,Q27	DEPOP
EC-C-10	38	11/02	PR206,PR279,PQ82	PR206:DEPOP PR279,PQ82:POP



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EC NO.	Page	Date	Part reference	Description
EC-C-11	37	11/02		From a field issue, Lenovo system needs to have battery sense function. MBATV shall be connected to ADC1/GPI1@KBC.
EC-C-12	33	11/02	U37	Change iTPM Power to 3V_S5
EC-C-13	22	11/02	U52	Change to MAX14550AEETB+
EC-C-14	8	11/02	R447	PCIE_WAKE# Pull high Resistor change to 10K
EC-C-15	30	11/03	R350	R350 change to 11.2K
EC-C-16	18	11/04	C347	Modify to CRT_VCC_R
EC-C-17	19	11/05	U11,R628,R629,C673,R630,R450	Chip Change version to ALC269Q-VA6 POP:R628,R630,R450 DEPOP:R629,C673
EC-C-18	33	11/05	U37	Change Part to 4M bytes Material
EC-C-19	08-13	11/06	U38	Change footprint
EC-C-20	10	11/06	R444	Add part

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Date

Part reference

Description

EC-C-21	11/06	TP49、TP44、TP73、TP16、TP6、TP93 & TP98 TP112、TP99、TP32、TP47、TP34、TP101、TP103	Change footprint to TP3050
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USB Port	Device	PM55 Support	HM55 Support	DV-Stage(UMA)	DV-Stage(Discrete)
Port0	USB Port	V	V	HM55	HM55
Port1	USB Port	V	V	HM55	HM55
Port2	New Card	V	V	HM55	HM55
Port3	Camera	V	V	HM55	HM55
Port4	WLAN	V	V	HM55	HM55
Port5	WWAN	V	V	HM55	HM55
Port6	Card Reader	V	X	HM55	HM55
Port7	NC	V	X	HM55	HM55
Port8	USB Port	V	V	HM55	HM55
Port9	USB Port	V	V	HM55	HM55
Port10	Fingerprint	V	V	HM55	HM55
Port11	NC	V	V	HM55	HM55
Port12	NC	V	V	HM55	HM55
Port13	Bluetooth	V	V	HM55	HM55