

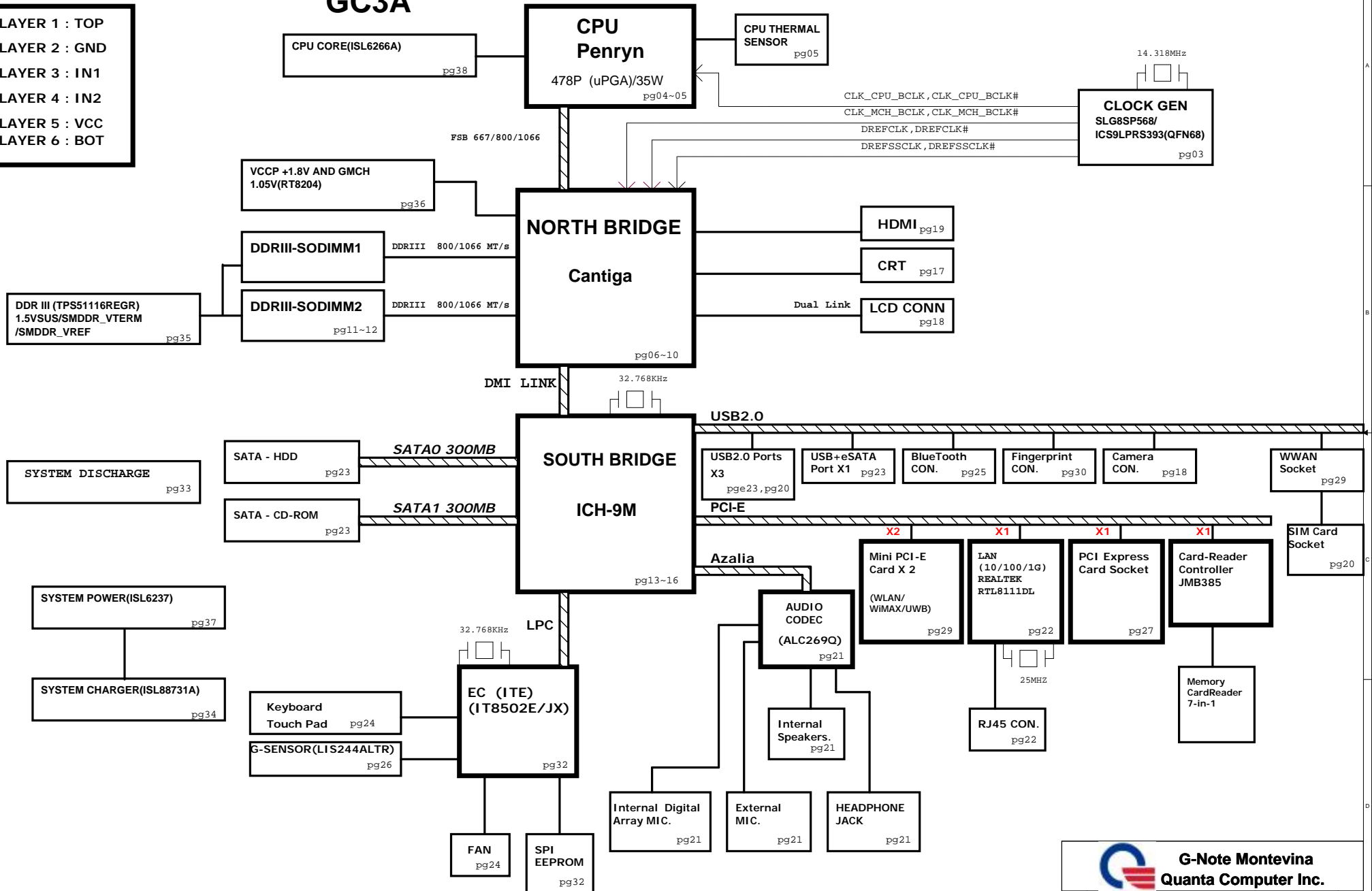
**PCB STACK UP**  
6L

LAYER 1 : TOP  
LAYER 2 : GND  
LAYER 3 : IN1  
LAYER 4 : IN2  
LAYER 5 : VCC  
LAYER 6 : BOT

# G-Note Montevina Block Diagram

## GC3A

01



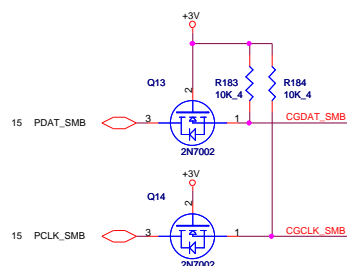
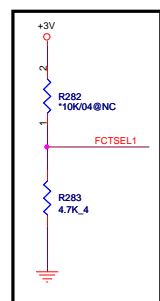
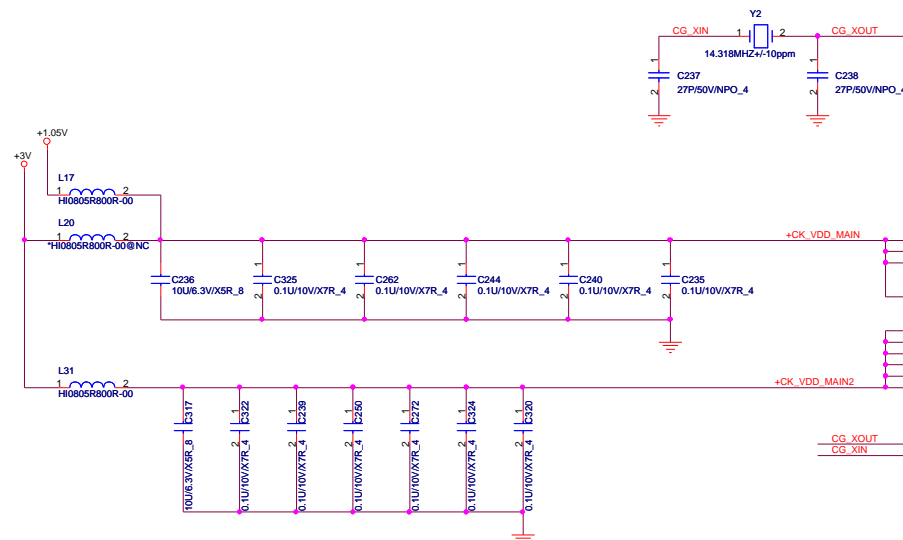
Power States

POWER PLANE	VOLTAGE	PAGE	DESCRIPTION	CONTROL SIGNAL	ACTIVE IN
VIN	10V~+19V	18, 33, 34, 35, 36, 37, 38, 39	MAIN POWER		S0~S5
+3VRTC	+3.0V~+3.3V	13, 16, 32	RTC		S0~S5
3VPCU	+3.3V	13, 18, 22, 24, 30, 32, 33, 34, 36, 37	8051 POWER		S0~S5
5VPCU	+5V	30, 33, 34, 35, 36, 37, 38	LCD/CHARGE POWER		S0~S5
+15V	+15V	18, 26, 33, 37	LARGE POWER	5VPCU	S0~S5
LANVCC	+3.3V	22, 33	LAN POWER	LAN_ON	
5VSUS	+5V	18, 30, 33, 38	SLP_S5# CTRLD POWER	SUSON	
3VSUS	+3.3V	14, 15, 27, 28, 29, 32, 33, 38	SLP_S5# CTRLD POWER	SUSON	
1.8VSUS	+1.8V	10, 33, 36		SUSON	
1.5VSUS	+1.5V	07, 09, 10, 11, 12, 33, 35	SODIMM POWER CALISTOGA/ICH8 POWER	SUSON	
SMDDR_VREF_DIMM	+0.75V	11, 12	SODIMM POWER		
+5V	+5V	16, 17, 18, 19, 21, 23, 24, 25, 32, 33, 34	SLP_S3# CTRLD POWER	MAINON	
+3V	+3.3V	03, 05, 07, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38	SLP_S3# CTRLD POWER	MAINON	
+1.5V	+1.5V	05, 10, 13, 14, 15, 16, 21, 27, 28, 29, 35	CALISTOGA/ICH8 POWER	MAINON	
+1.05V	+1.05V	03, 04, 05, 06, 07, 09, 10, 13, 16, 33, 36, 38	CPU/CALISTOGA/ICH8 POWER	MAINON	
VCC_CORE	+0.7V~+1.77V	04, 05, 33, 38	CPU CORE POWER	VRON	
LCDVCC	+3.3V	18	LCD Power	INT_DISP_ON	
+5VHDD	+5V	23	HDD Power	MAINON	
MBATV	+10V~+17V	32, 34	MAIN BATTERY	D/C#	

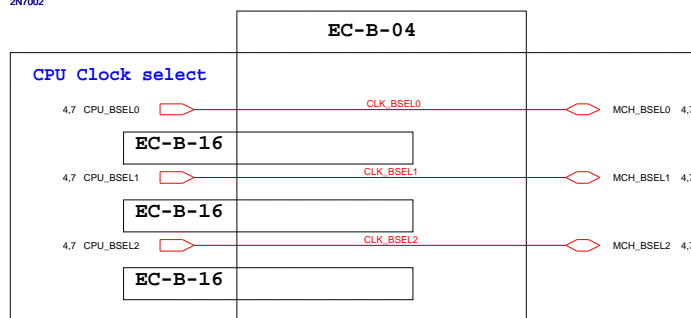
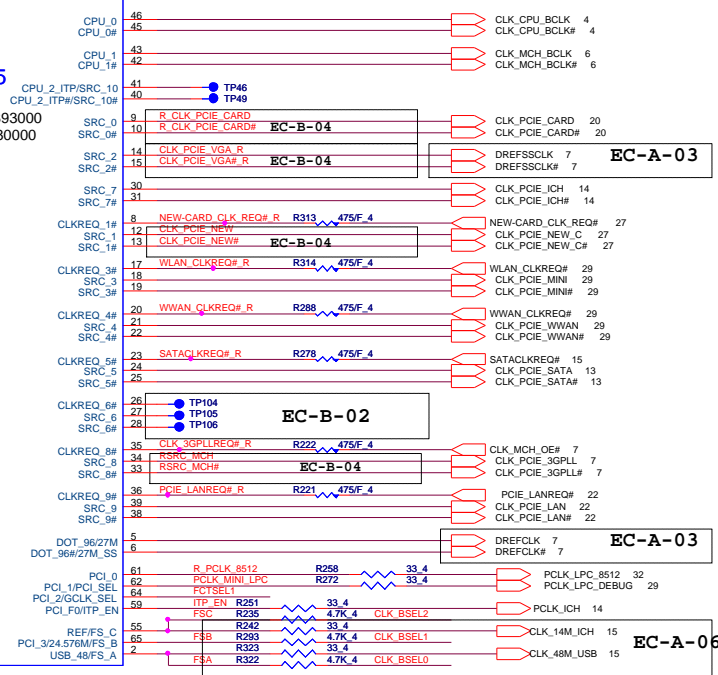
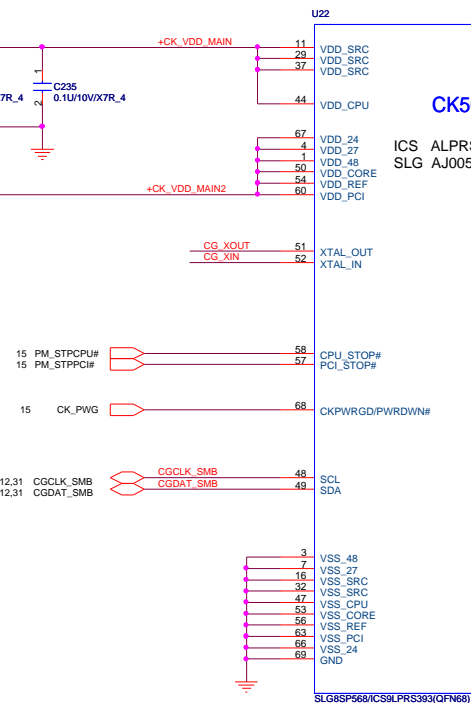
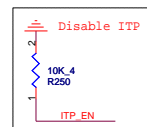


**G-Note Montevina**  
**Quanta Computer Inc.**

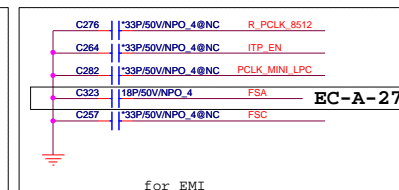
Size B	Document Number	Rev 2A
FRON TPAGE		
Date: Tuesday, April 14, 2009	Sheet 2 of 41	

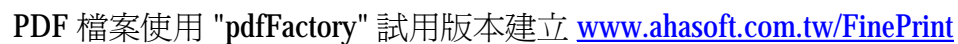


FCTSEL1 (PIN64)	PIN5	PIN6
0	DOT96	DOT96#
1	27Mout-NSS	27Mout-SS

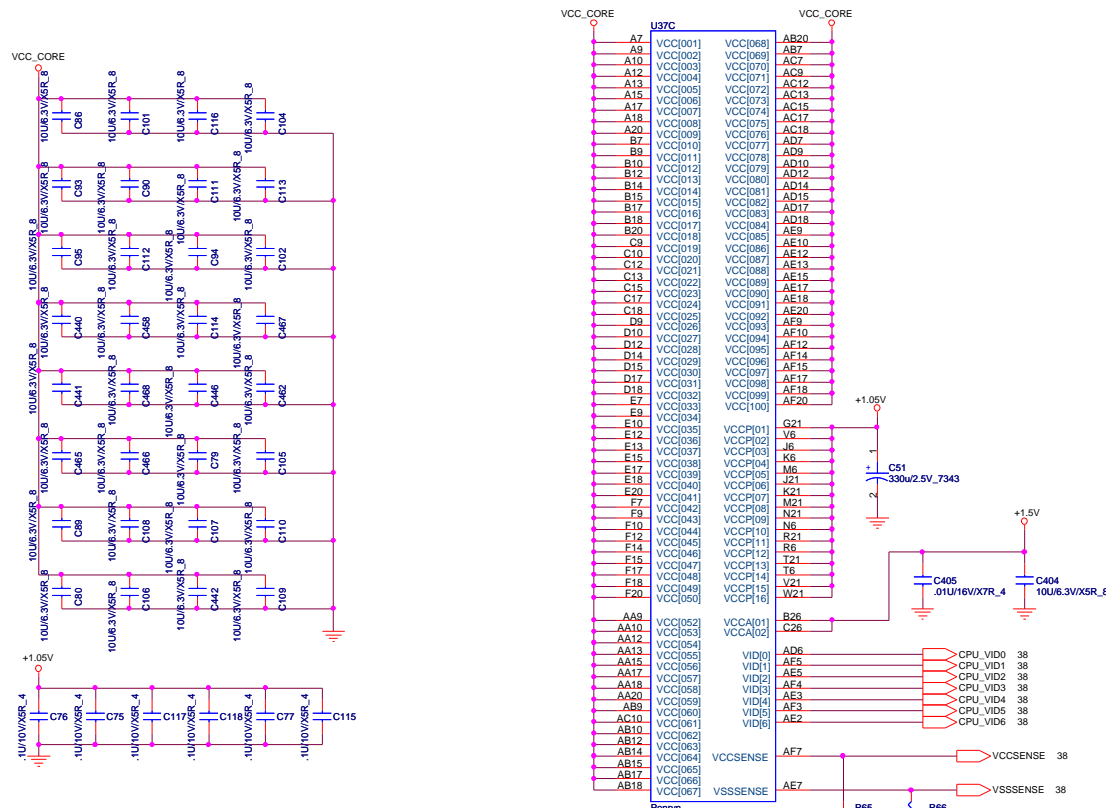


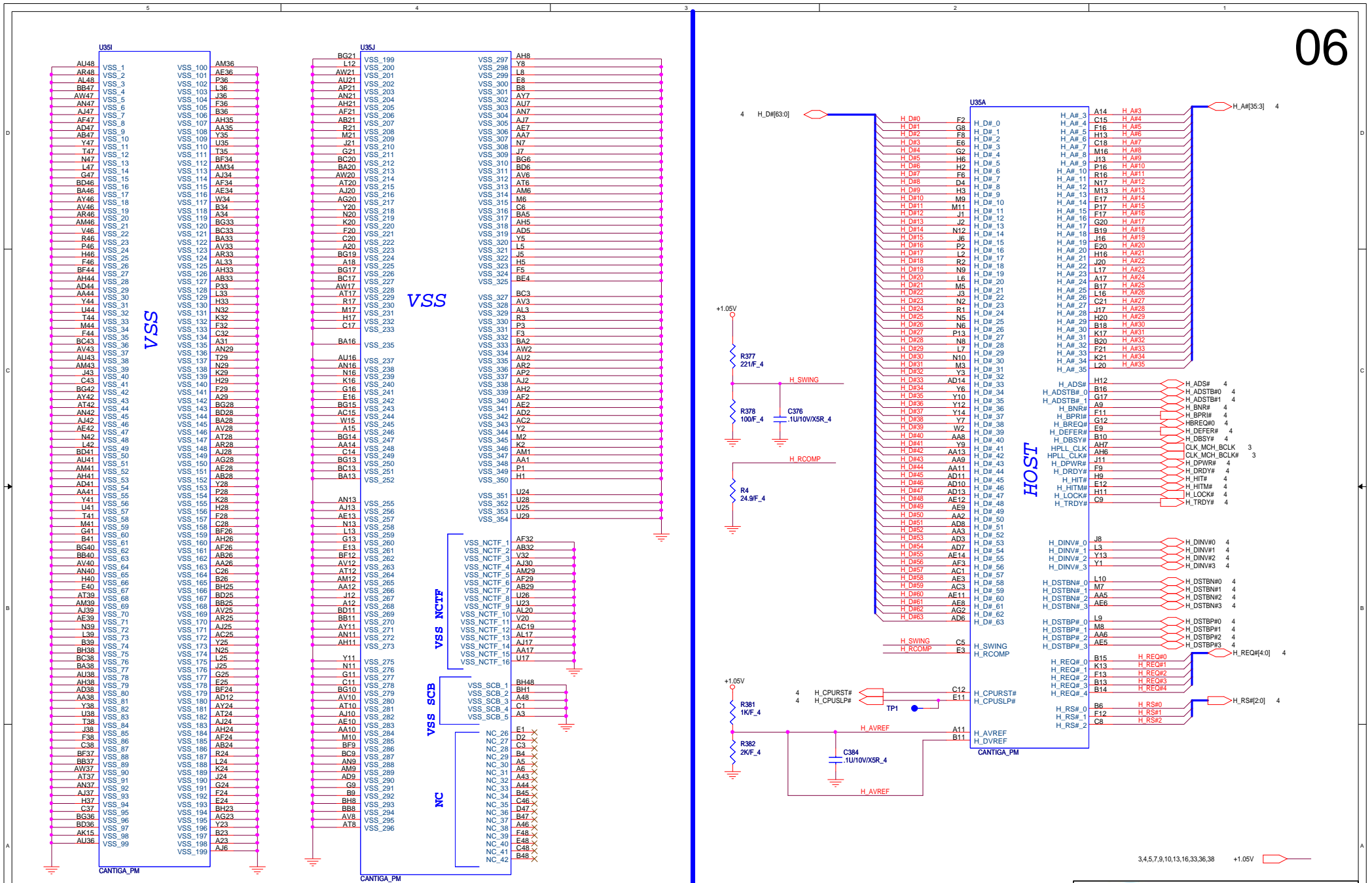
FSC	FSB	FSA	CPU	SRC	PCI
0	0	0	266.6	100	33
0	0	1	133.3	100	33
0	1	0	200.0	100	33
0	1	1	166.6	100	33
1	0	0	Reserved		
1	0	1	Reserved		
1	1	0	Reserved		
1	1	1	Reserved		





3,7,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,29,30,31,32,33,36,37,38 +3V  
 3,4,6,7,9,10,13,16,33,36,38 +1.05V  
 10,13,14,16,21,27,29,35 +1.5V  
 4,33,38 VCC\_CORE





3,4,5,7,9,10,13,16,33,36,38

+1.05V



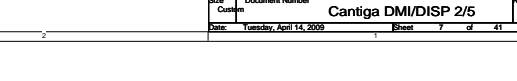
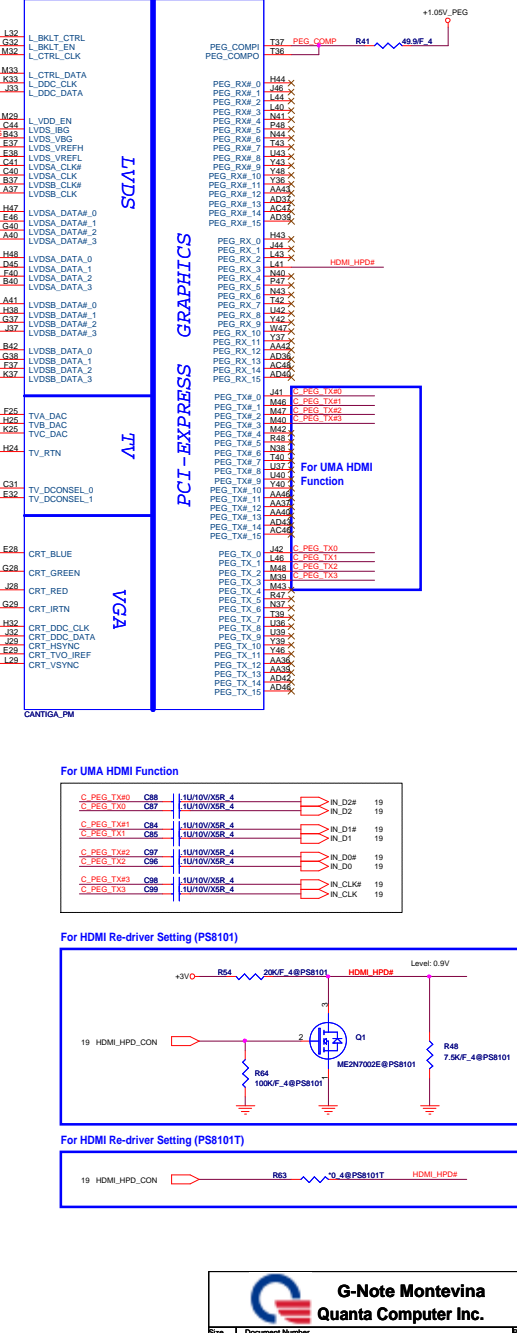
**G-Note Montevina**  
**Quanta Computer Inc.**

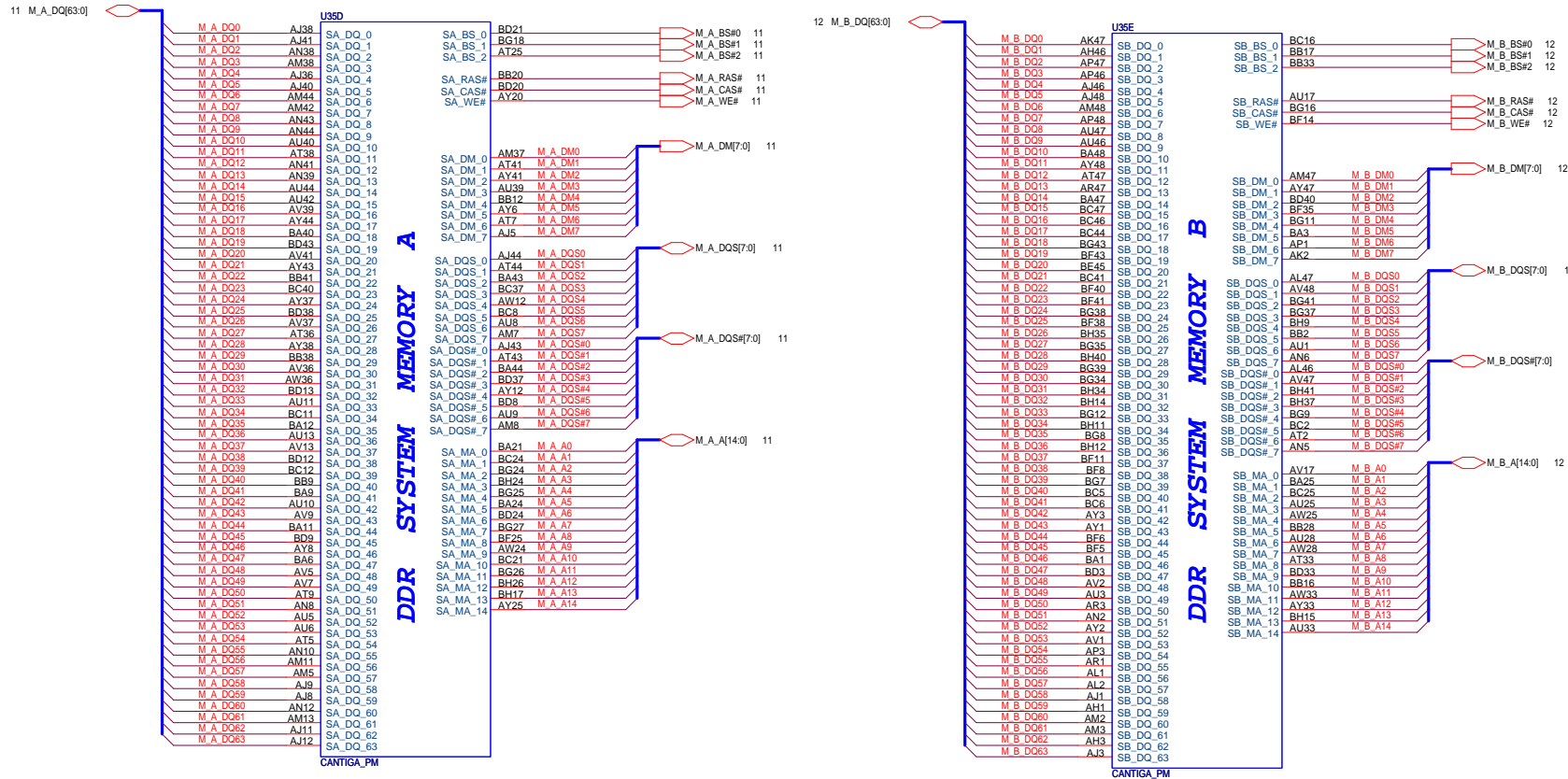
Size	Document Number	Rev
Custom	Cantiga Host & VSS 1/5	2A
Date:	Tuesday, April 14, 2009	Sheet 6 of 41



0	0	Reserved
1	0	XOR Mode enabled
0	1	All-Z Mode enabled

2.21u6.3  
0.01u16

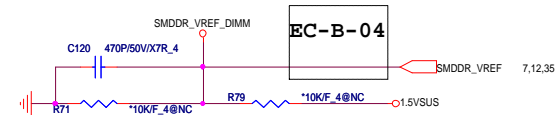
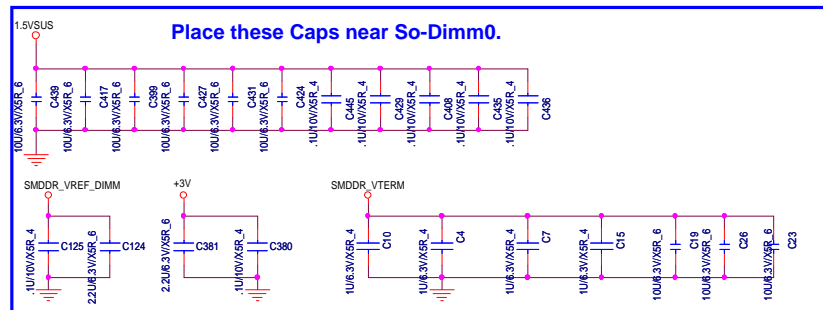
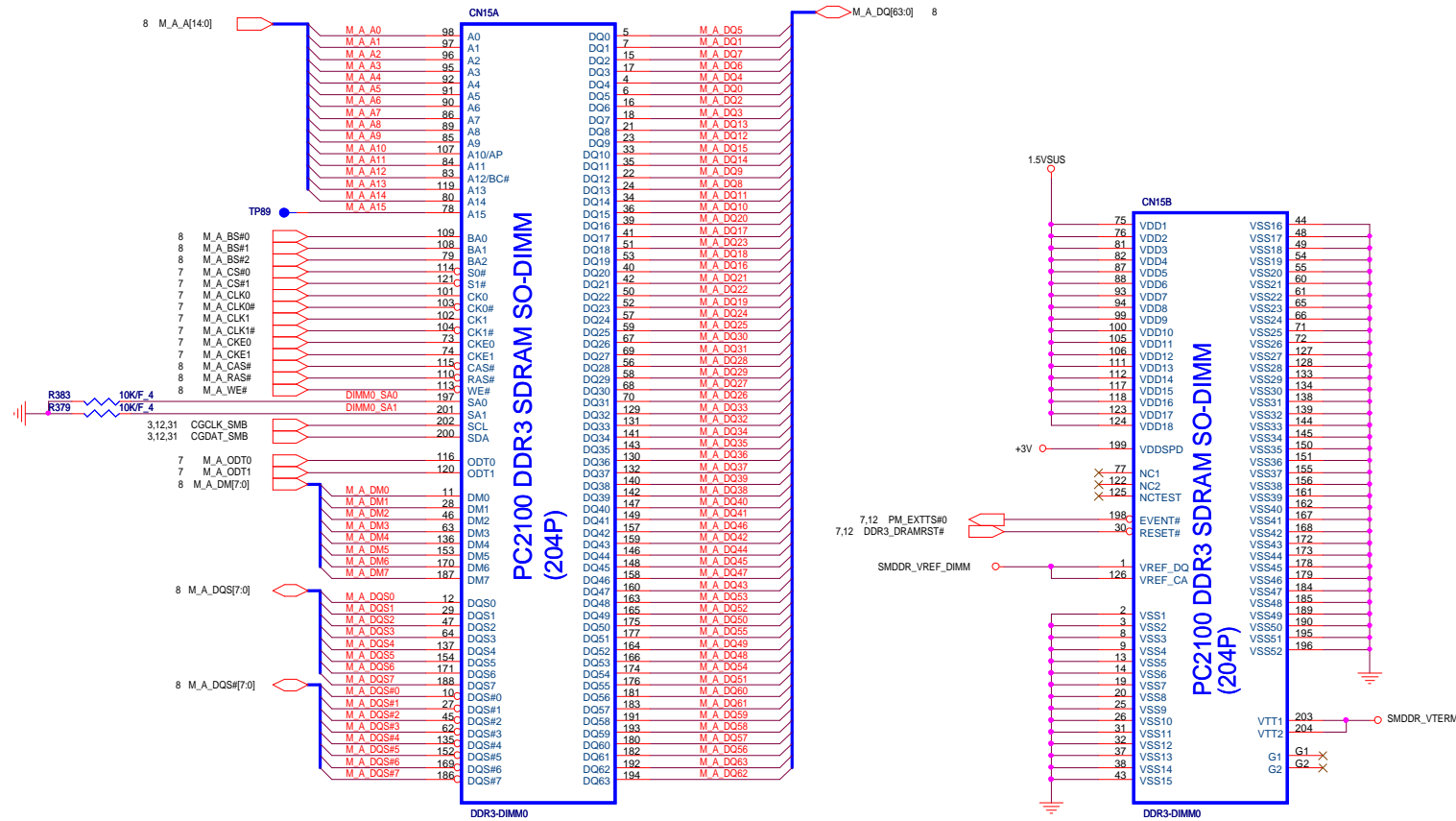


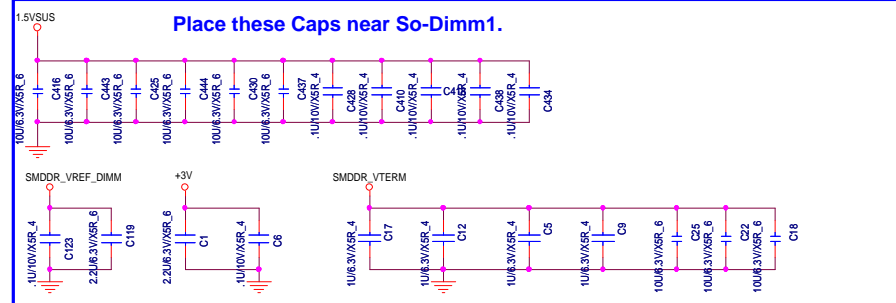


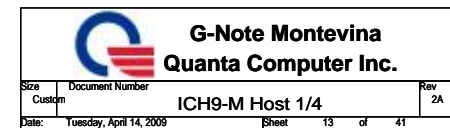












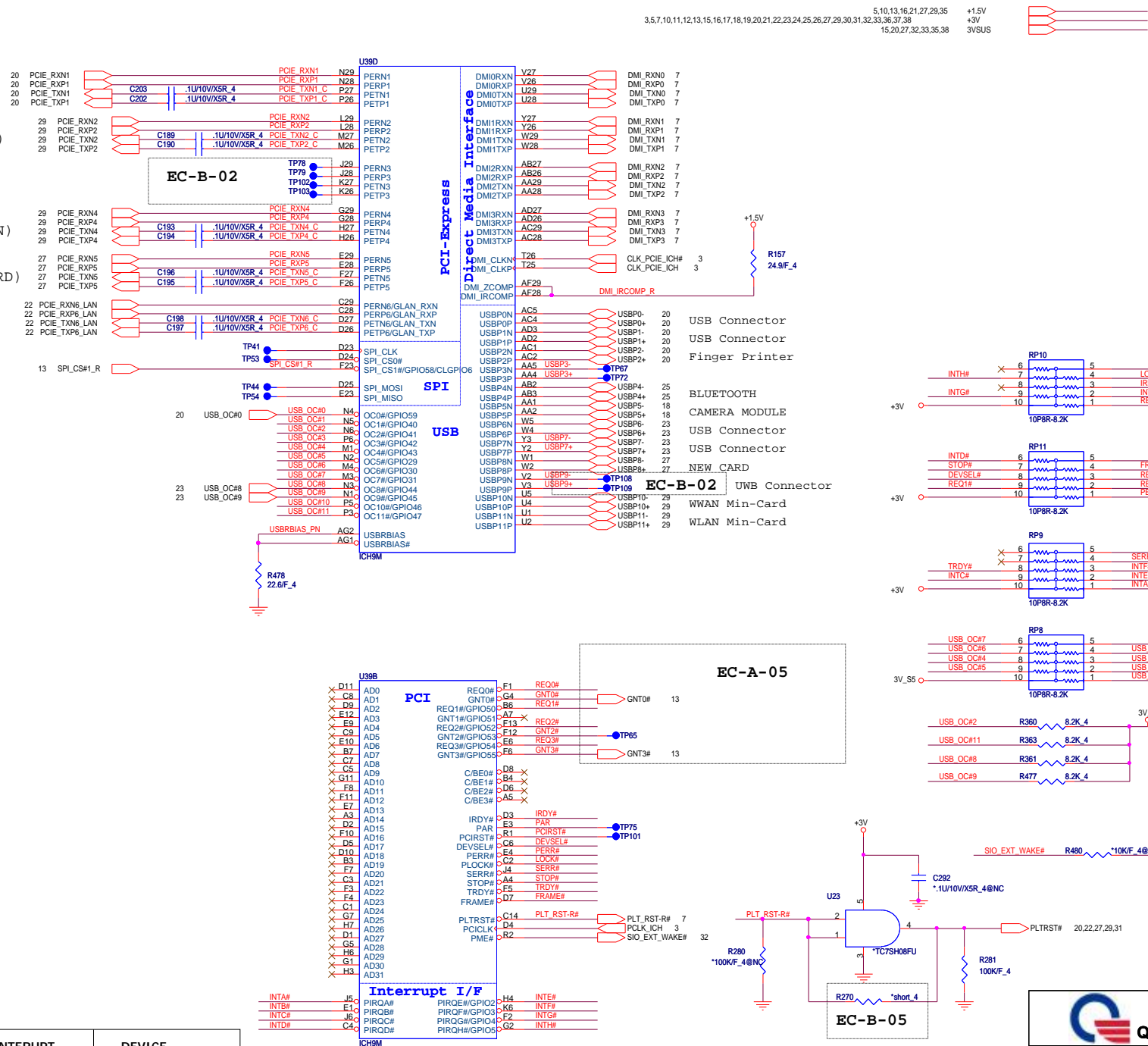
## CARD-READER

## EXPRESS CARD (WWAN)

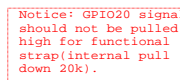
## MINI CARD PCI-E(WLAN)

## Express Card(NEW CARD)

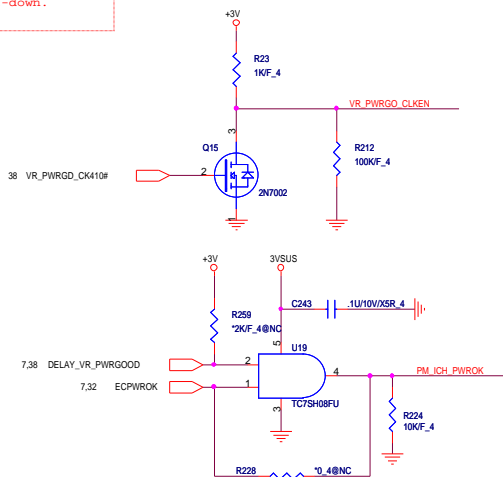
## PCIE-LAN



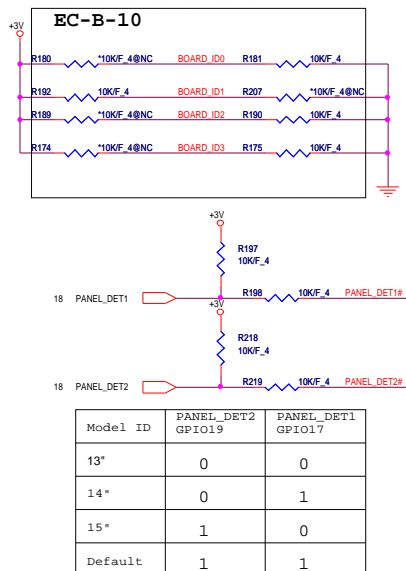




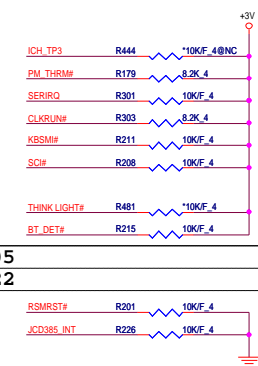
Notice: GPIO49 is also a strap pin(internal pull up 20k). Don't pull-down.



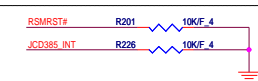
Board ID				
Board ID For Function	ID3 GPIO37	ID2 GPIO36	ID1 GPIO22	ID0 GPIO21
SDV	0	0	0	0
SIV	0	0	0	1
SIT	0	0	1	0
SVT	0	0	1	1
SOVP	0	1	0	0
	0	1	0	1
	0	1	1	0
	0	1	1	1
	1	0	0	0
	1	0	0	1
	1	0	1	0
	1	0	1	1
	1	1	0	0
	1	1	0	1
	1	1	1	0
	1	1	1	1

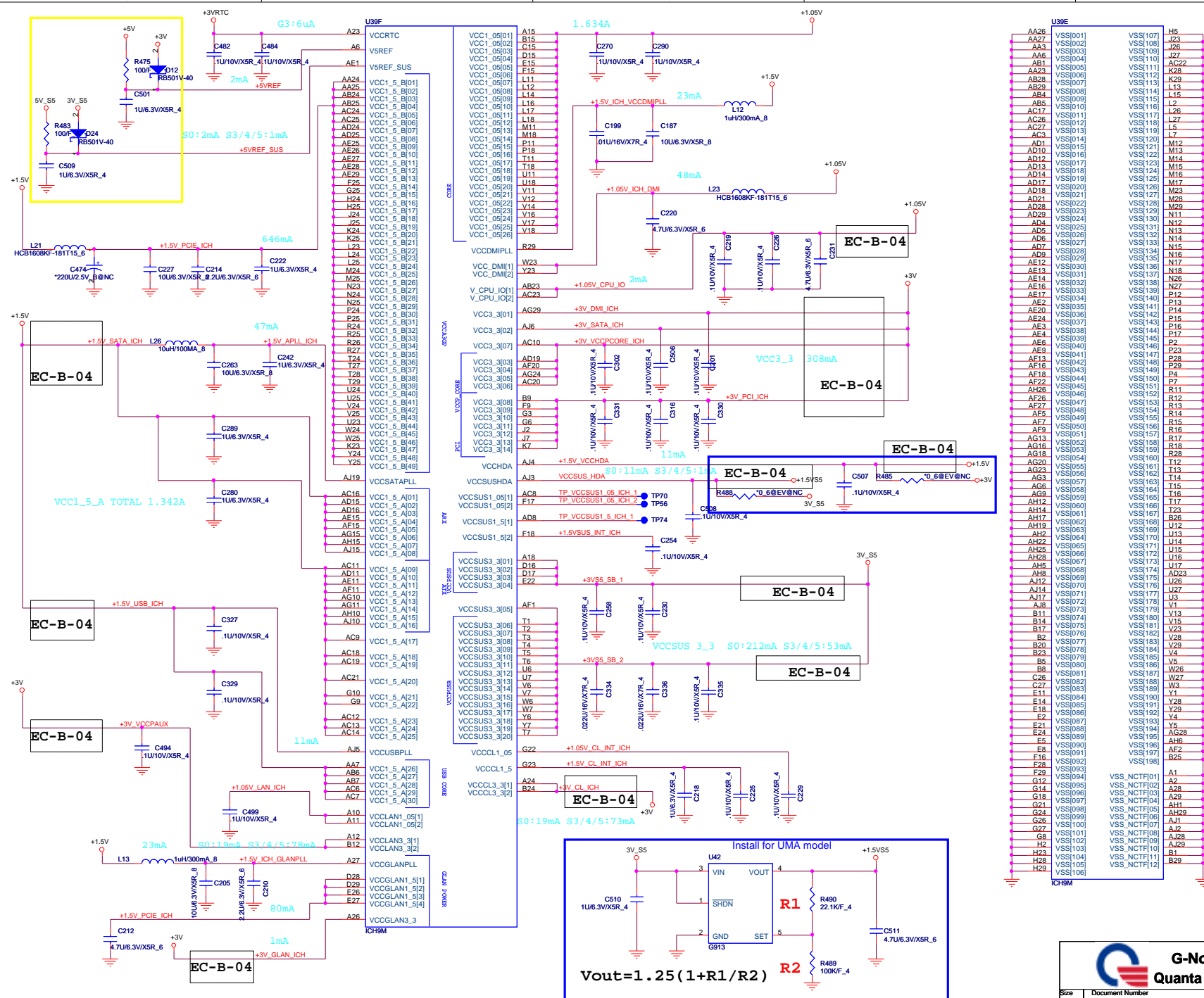


Model ID	PANEL_DET2 GPIO19	PANEL_DET1 GPIO17
13°	0	0
14°	0	1
15°	1	0
Default	1	1



EC-A-05
EC-B-22





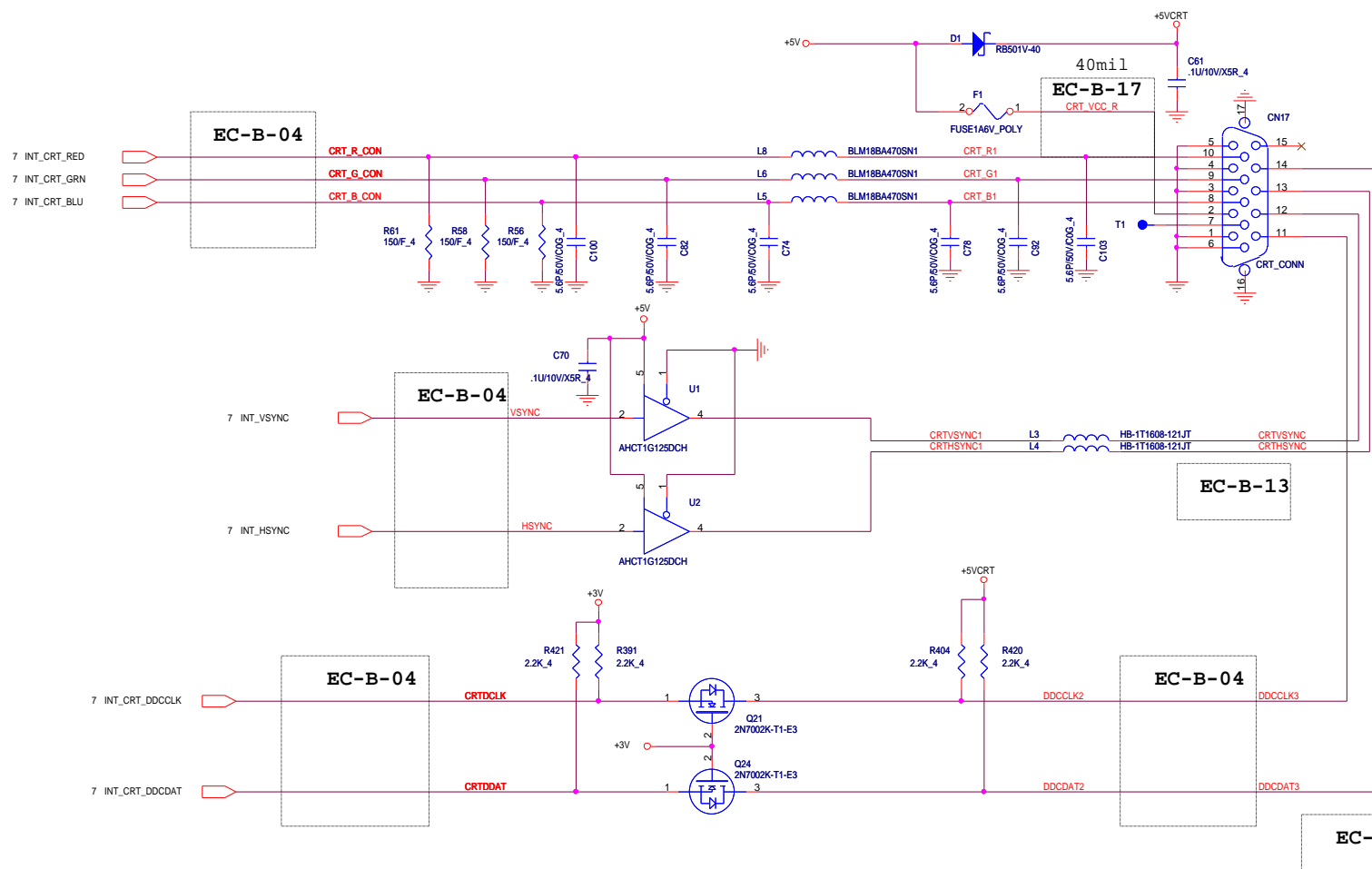
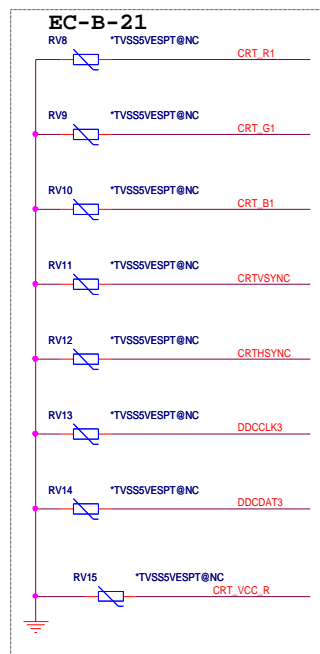
**G-Note Montevina**  
Quanta Computer Inc.

Size: Custom Document Number: ICH9-M Power 4/4  
Date: Tuesday, April 14, 2009 Sheet: 16 of 41

# CRT PORT

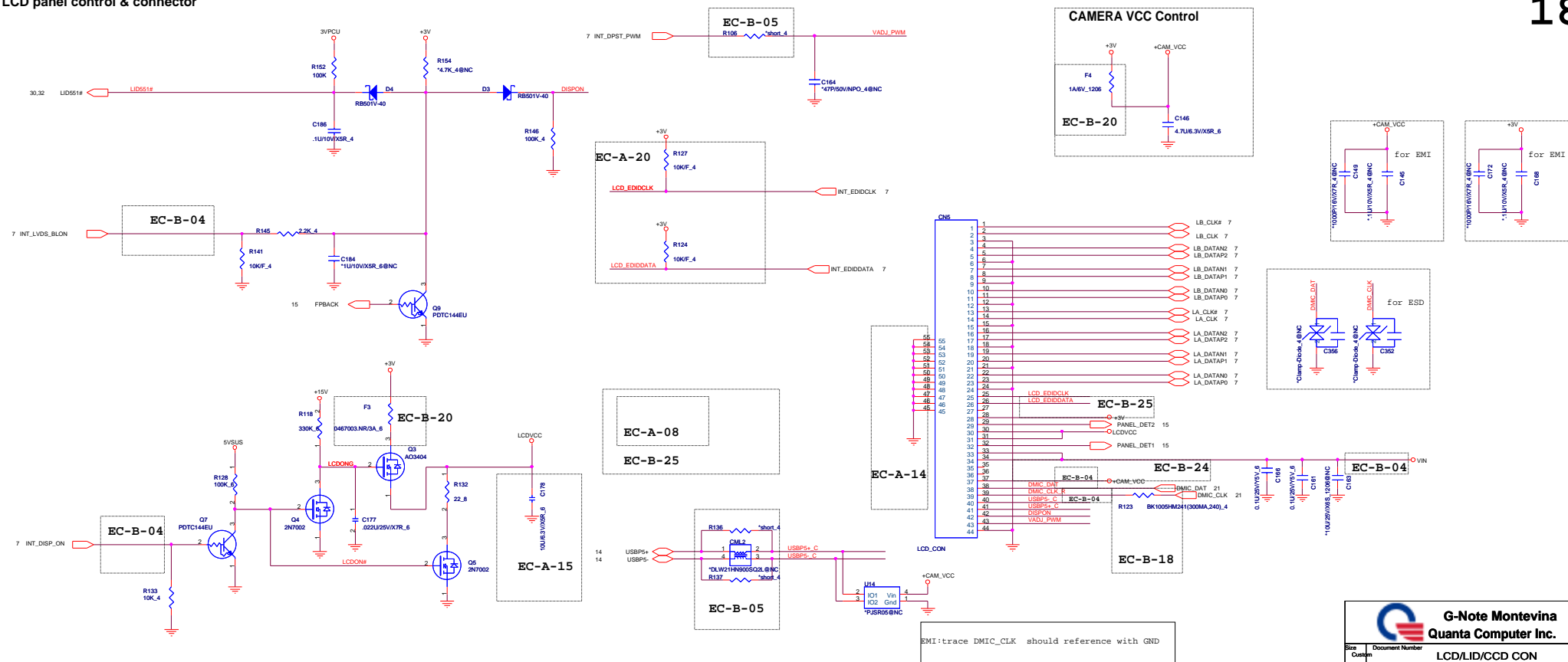
17

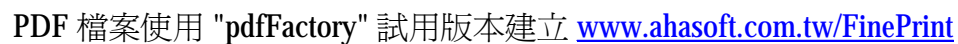
ESD PROTECTION  
close CRT connector



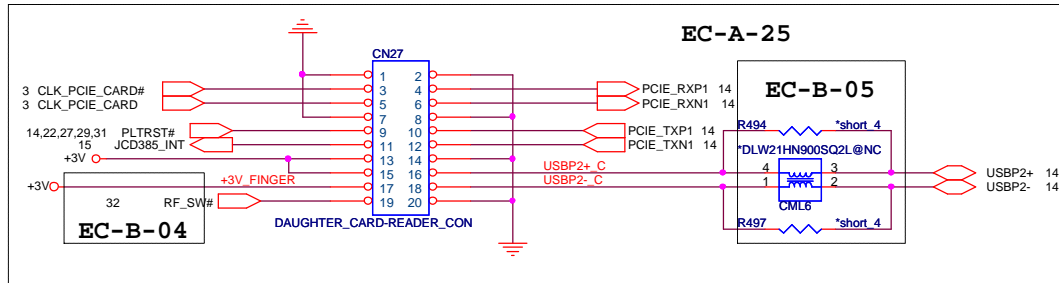
**G-Note Montevina**  
**Quanta Computer Inc.**

Size Custom	Document Number <b>CRT CON</b>	Rev 2A
Date: Tuesday, April 14, 2009	Sheet 17	of 41

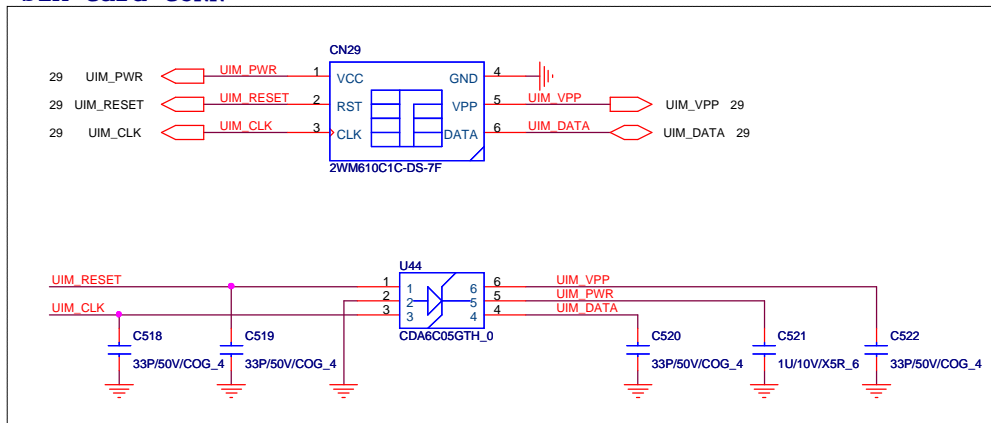




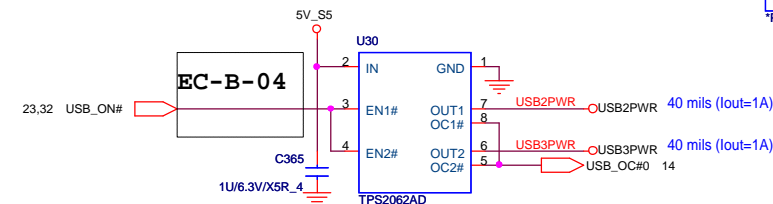
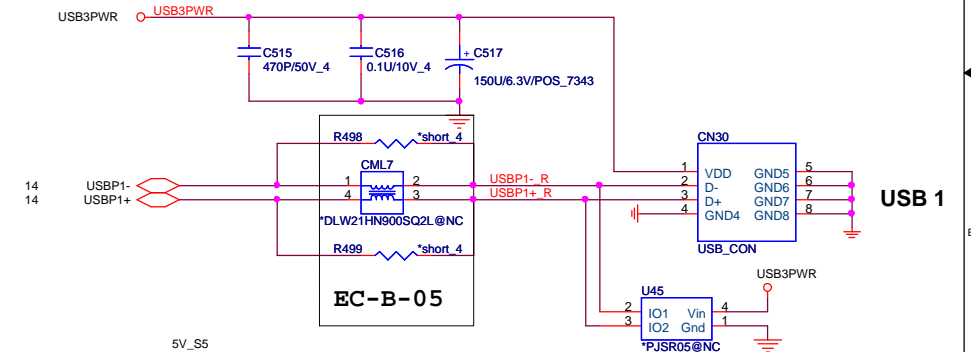
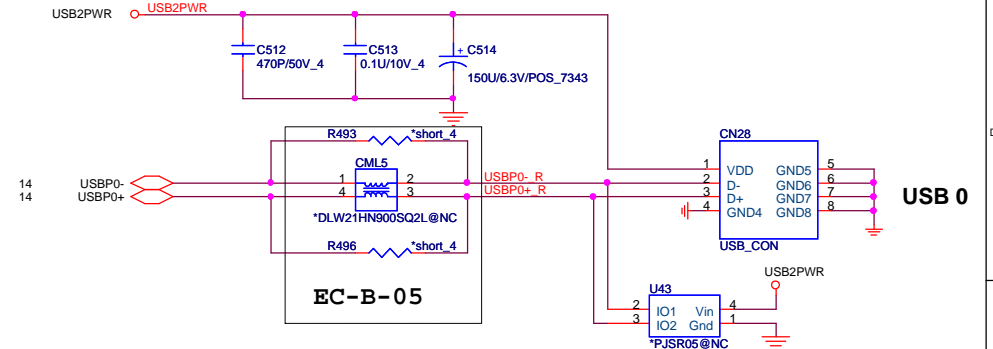
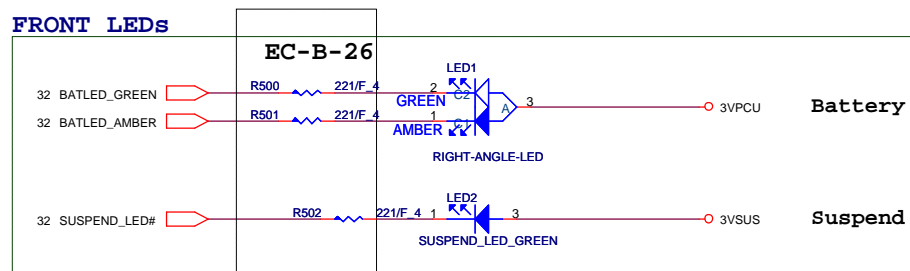
## WIRE TO BOARD CONN CARD READER & FINGERPRINT



## SIM Card CONN

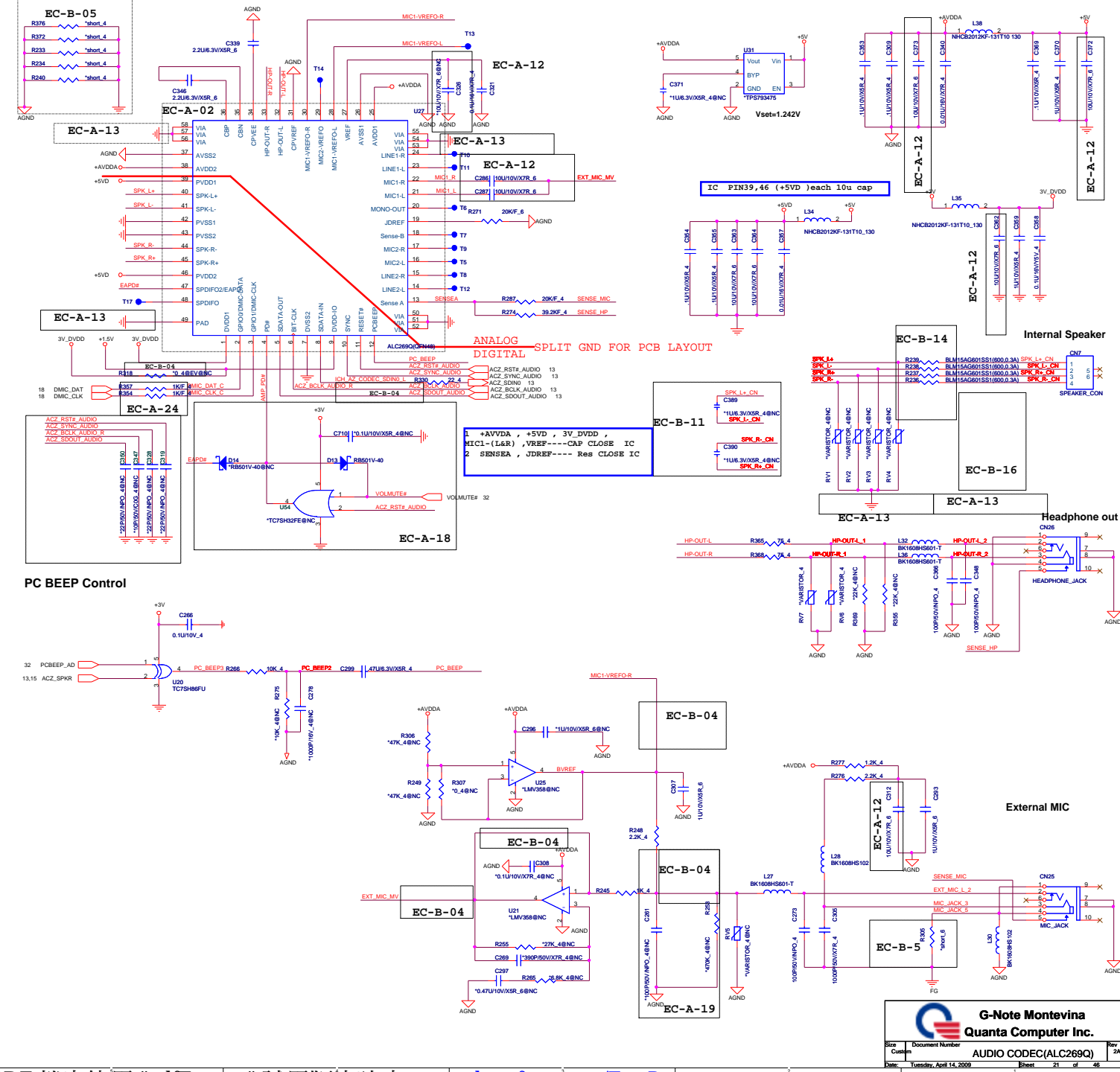


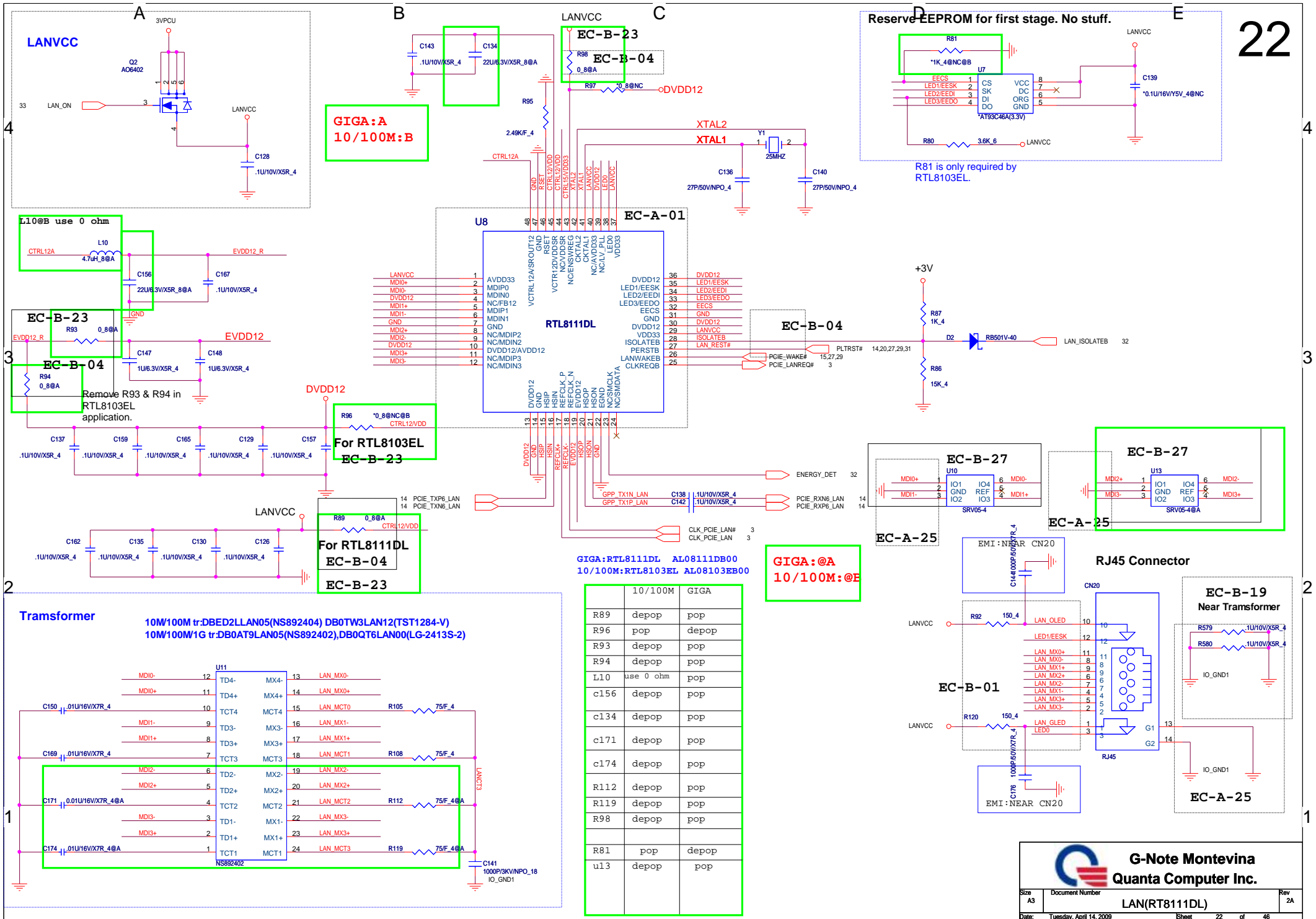
## FRONT LEDs



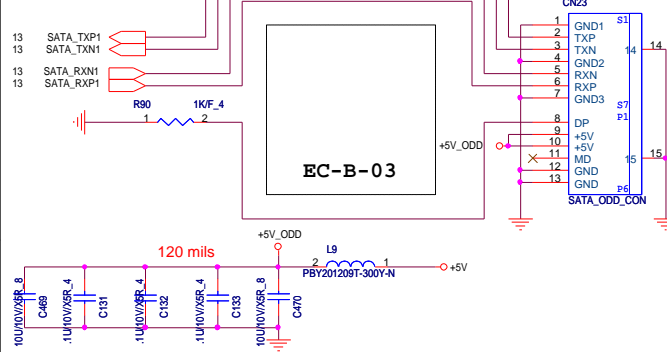
		<b>PROJECT :G NOTE</b>	
		<b>Quanta Computer Inc.</b>	
Size Custom	Document Number	<b>USB X2/SIM_CARD/LEDs/RF</b>	
Date:	Tuesday, April 14, 2009	Sheet	20 of 46
			Rev 2A



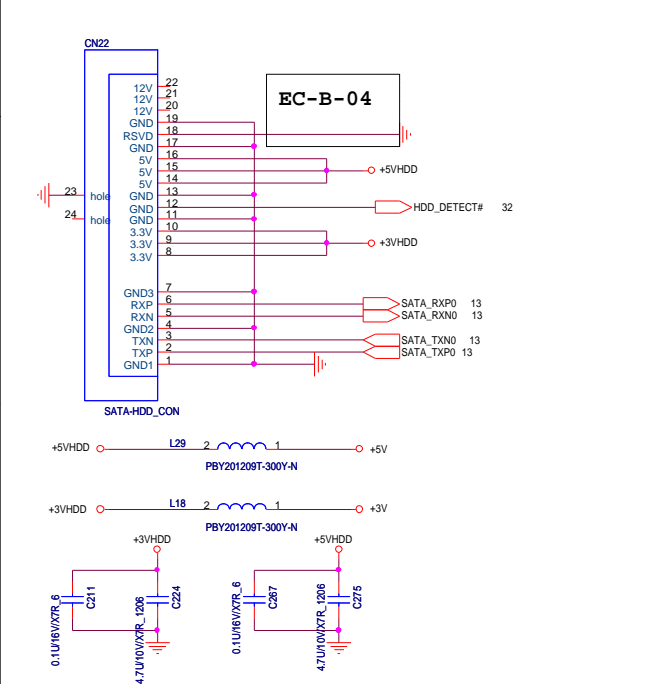




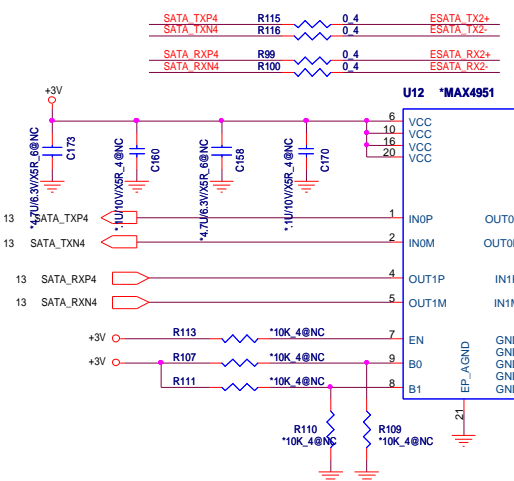
## SATA CD-ROM



## SATA-HDD

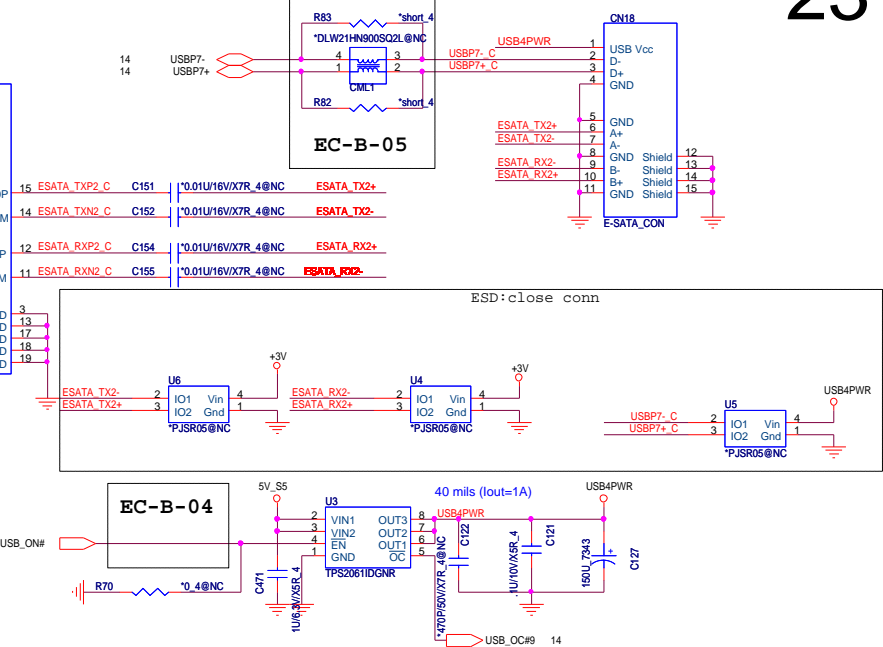


## E-SATA RE-DRIVER

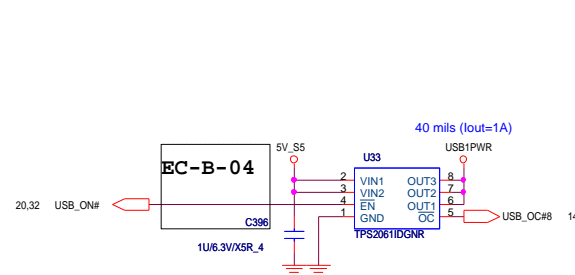


EN	B0	B1	FUNCTION
0	x	x	Standby
1	0	0	Standard SATA Output
1	1	0	Ch 0 Boost Output
1	0	1	Ch 1 Boost Output
1	1	1	Ch 0,1 Boost Output

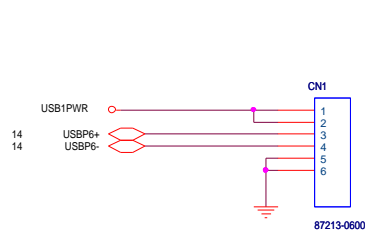
## eSATA PORT



## USB x1

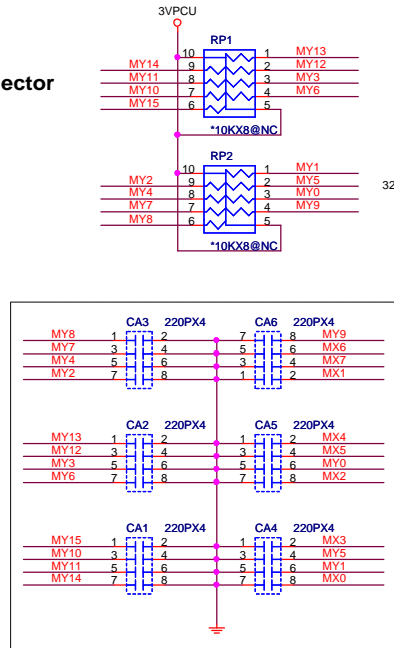
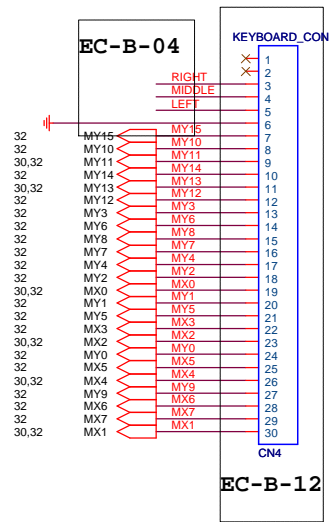


## REAR\_USB/B connector



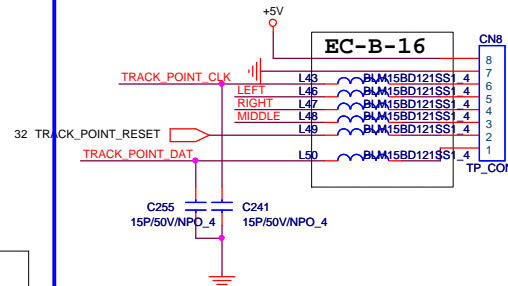
# FAN, K/B, T/P & Track Point

## KEYBOARD connector

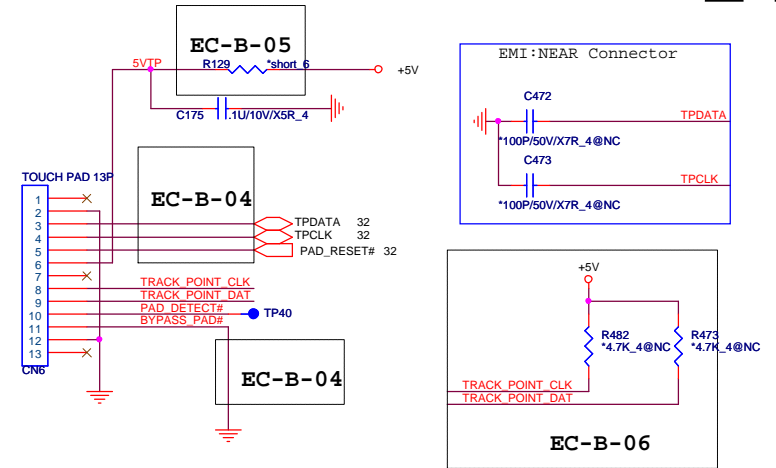


For EMI request

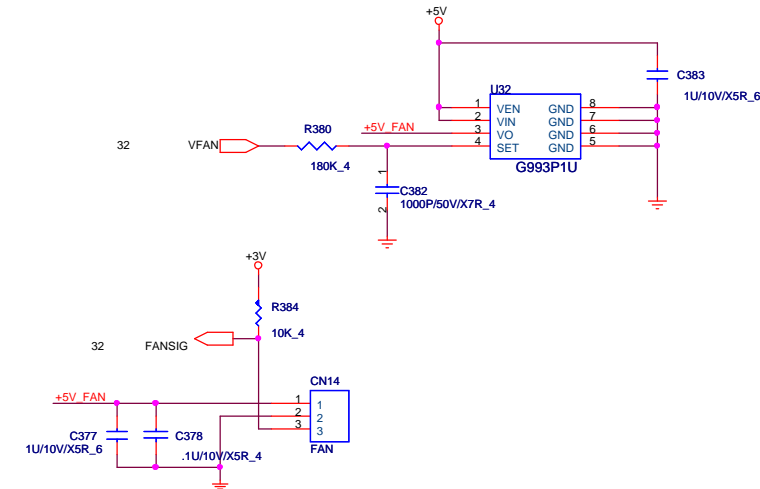
## TRACK POINT



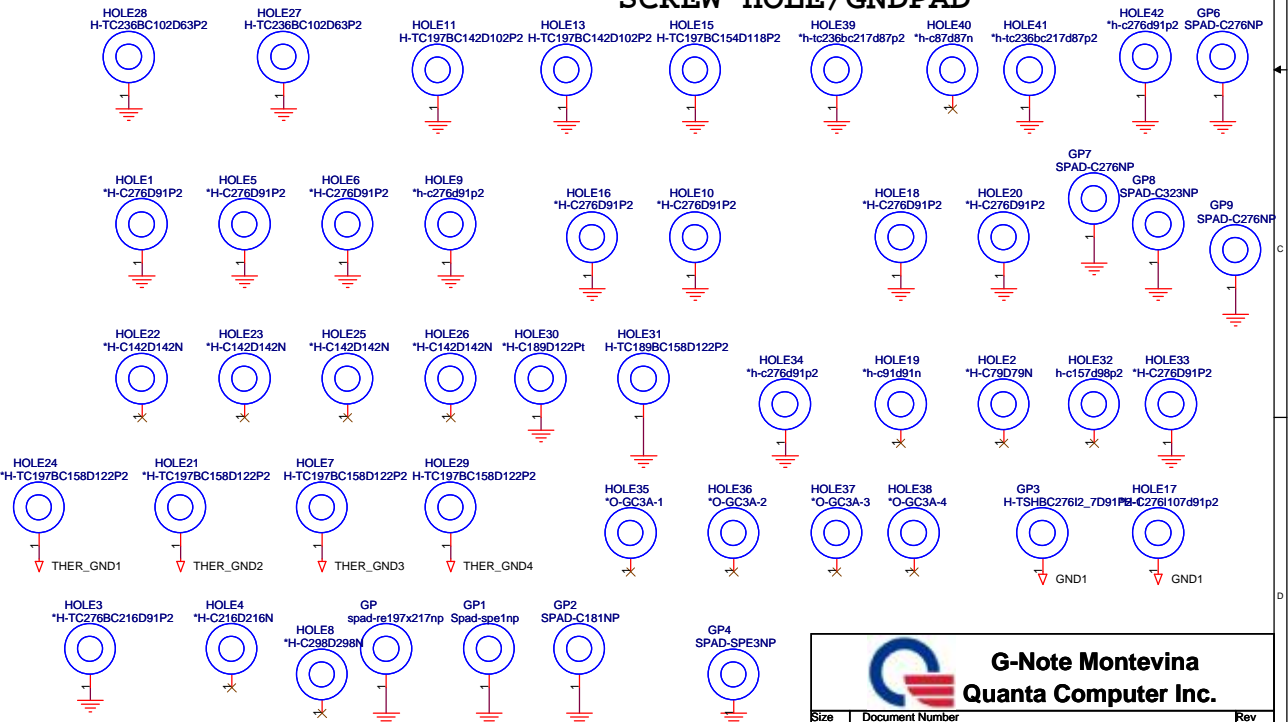
## TOUCH PAD



## FAN Controller



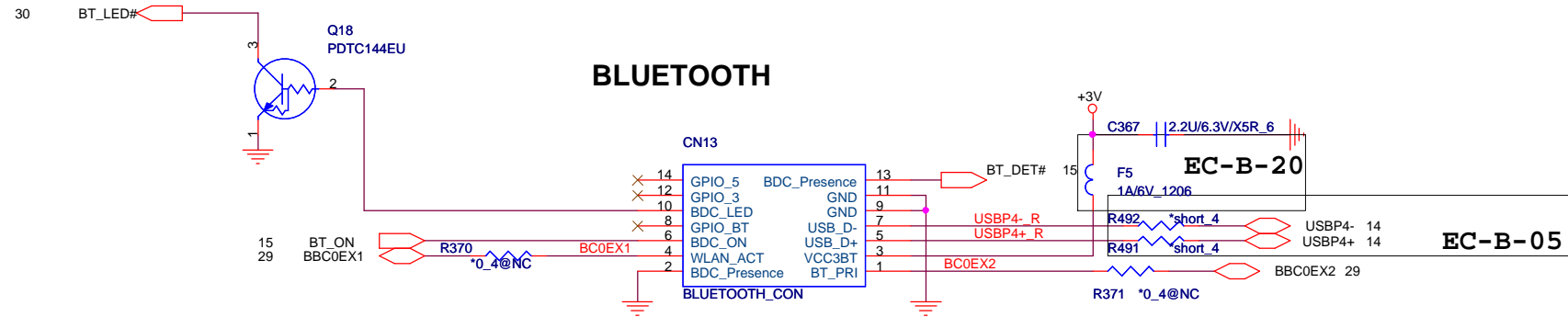
## SCREW HOLE/GNDPAD



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

Size: Custom Document Number: KB/TP/FAN/SCREW HOLE Rev: 2A

Date: Tuesday, April 14, 2009 Sheet: 24 of 46

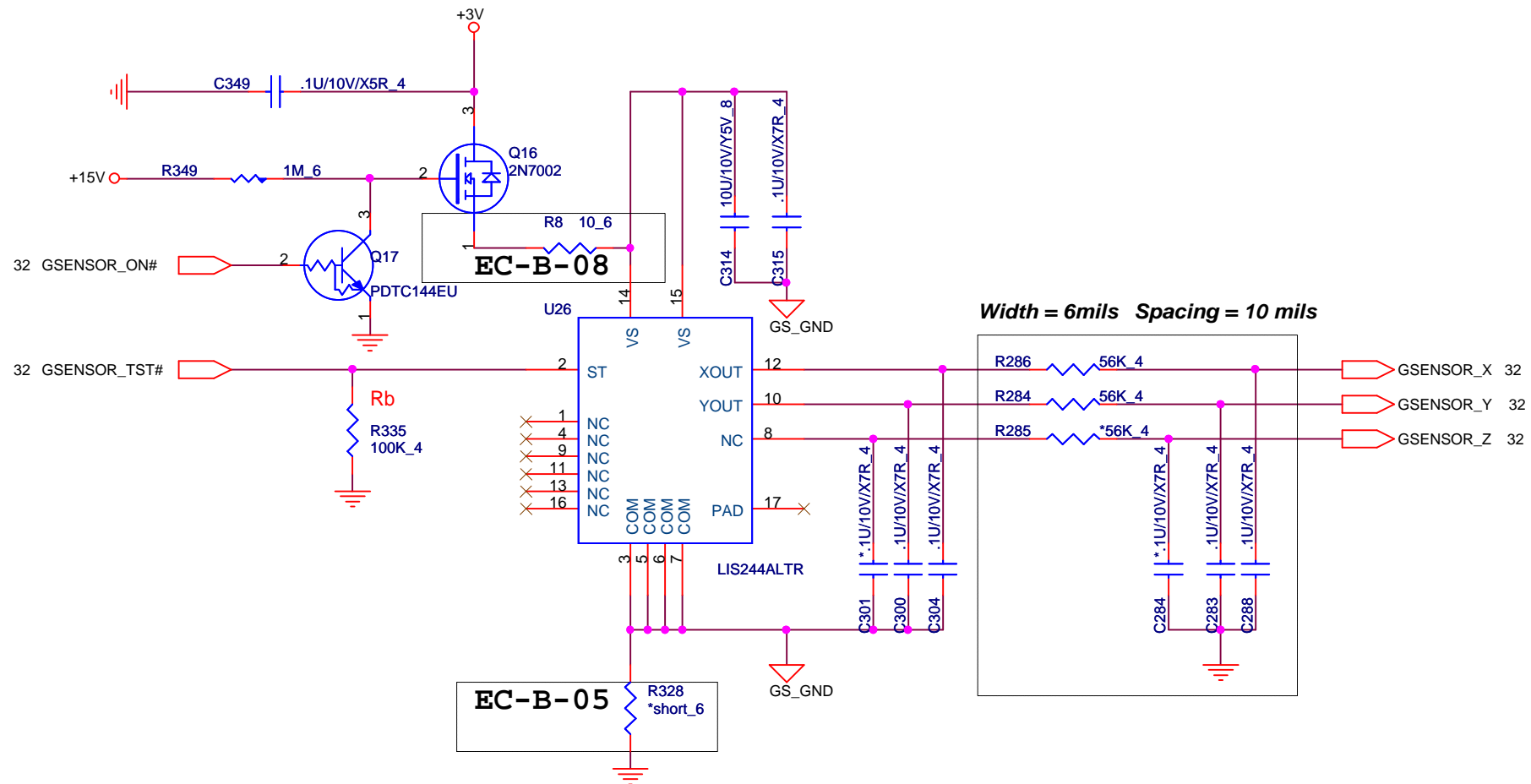


**G-Note Montevina**  
**Quanta Computer Inc.**

Size Custom	Document Number Buletooth Conn	Rev 2A
Date: Tuesday, April 14, 2009	Sheet 25 of 41	

# G-SENSOR (2-Axial)

26



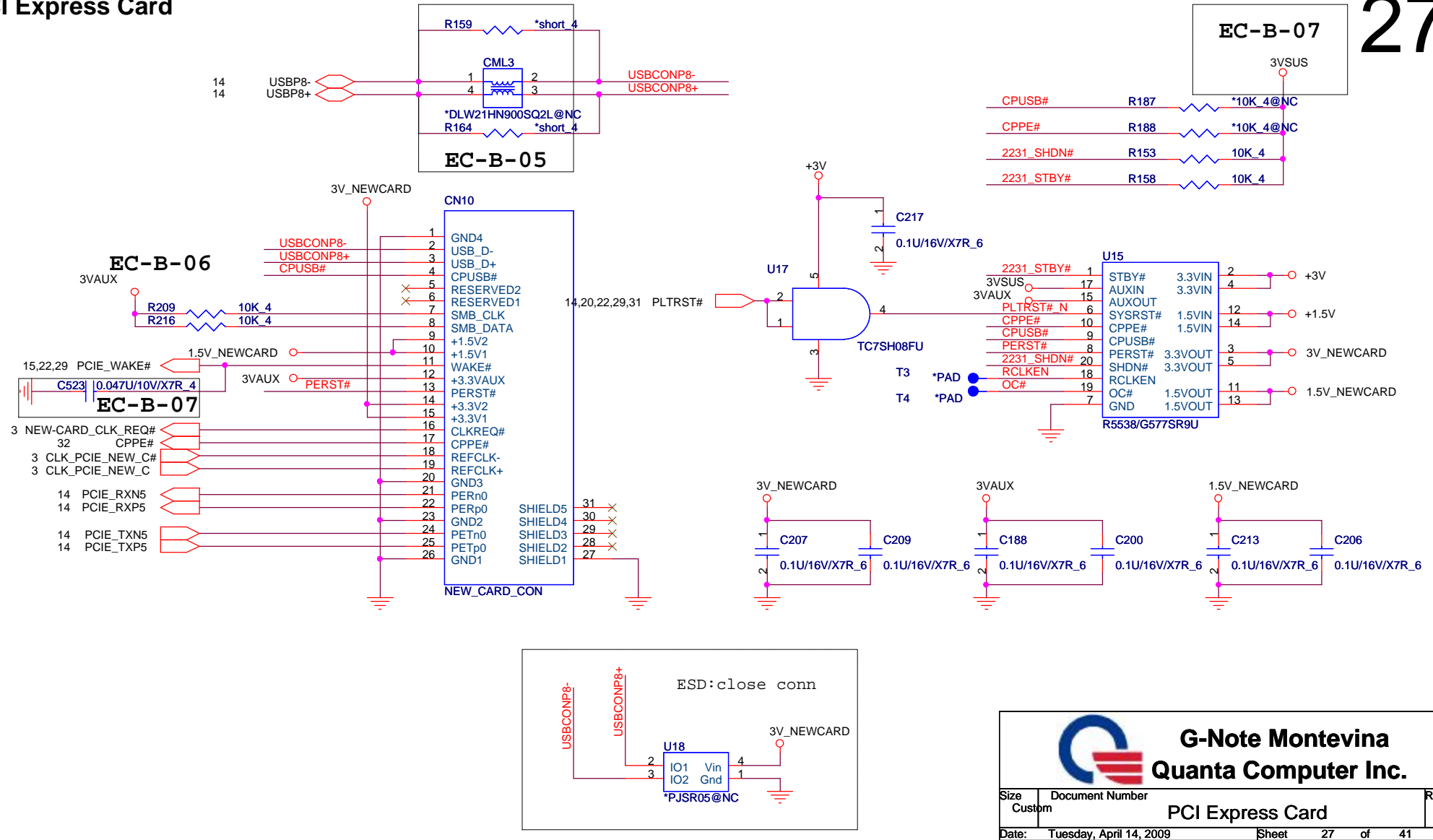
**G-Note Montevina**  
**Quanta Computer Inc.**


Size A	Document Number <b>G-SENSOR</b>	Rev 2A
Date: Tuesday, April 14, 2009	Sheet 26 of 41	



# PCI Express Card

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

Size Custom	Document Number <b>PCI Express Card</b>	Rev 2A
Date: Tuesday, April 14, 2009		Sheet 27 of 41

**EC-B-02**

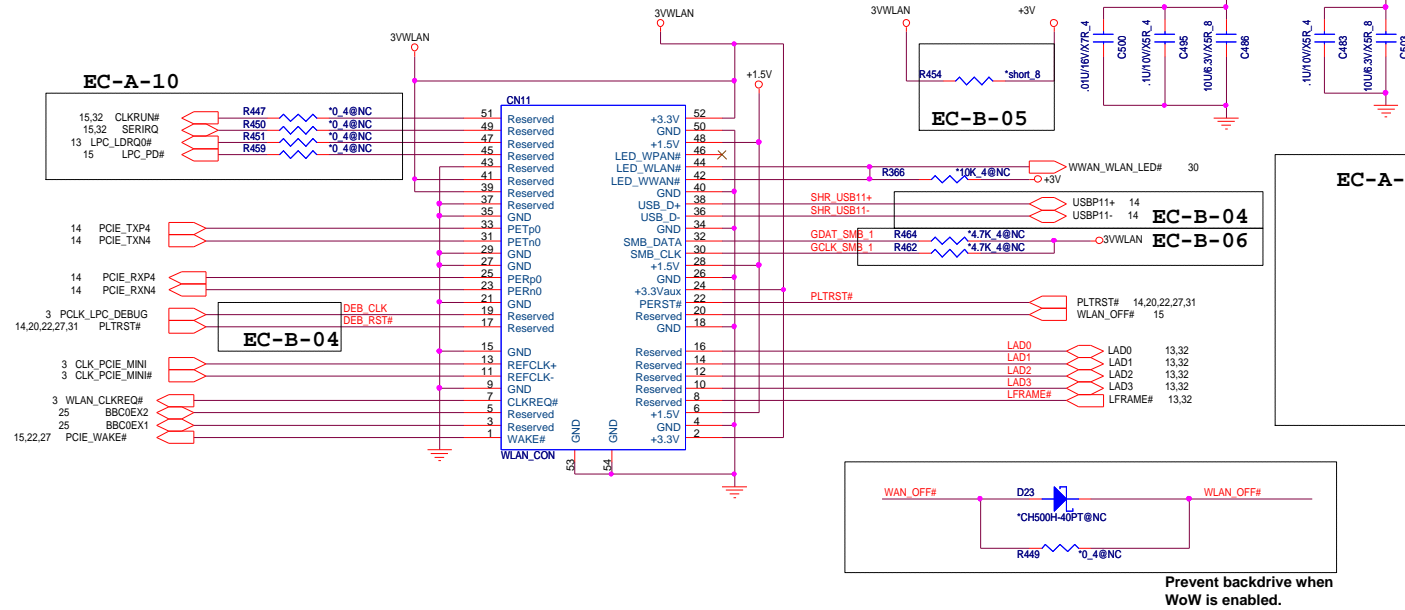


**G-Note Montevina**  
**Quanta Computer Inc.**

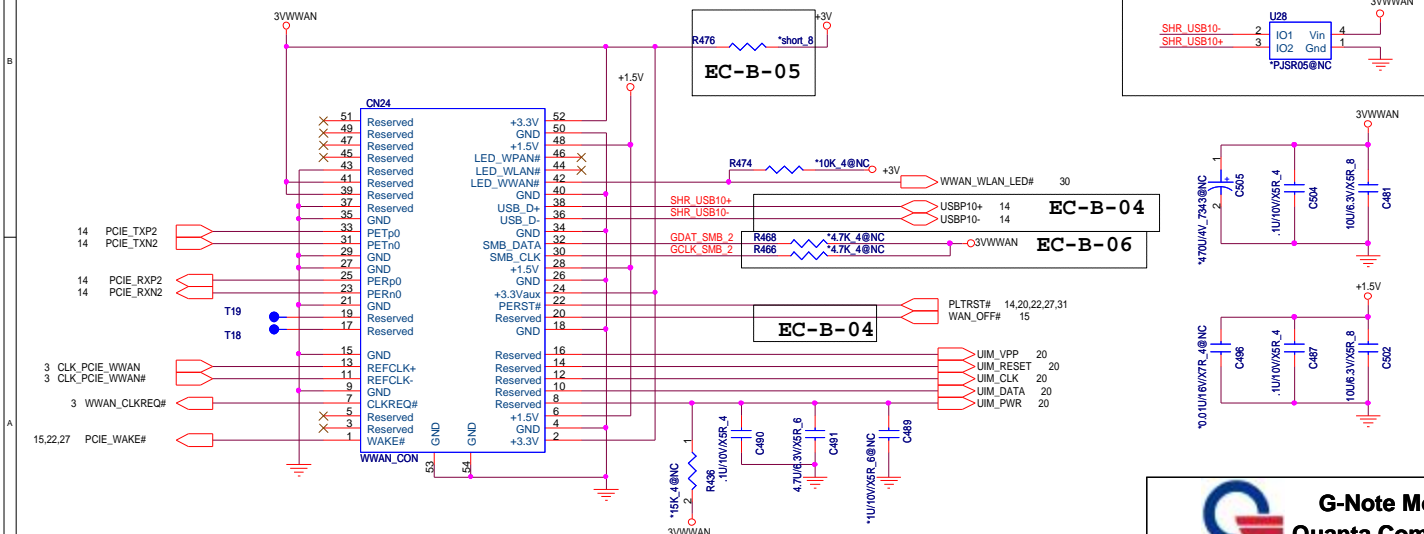
Size A	Document Number <b>UWB Slot</b>	Rev 2A
Date: Tuesday, April 14, 2009	Sheet 28 of 43	

# Mini PCI-E Card (F2) (WLAN/ WiMAX)

29



# Mini PCI-E Card (F1) WWAN(W/SIM/Robson)

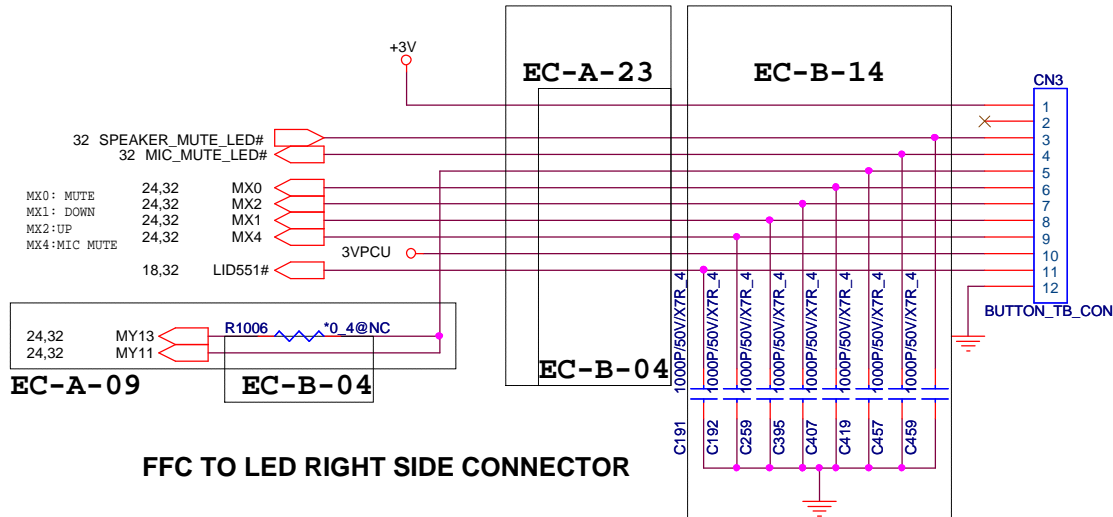


**G-Note Montevina**  
**Quanta Computer Inc.**

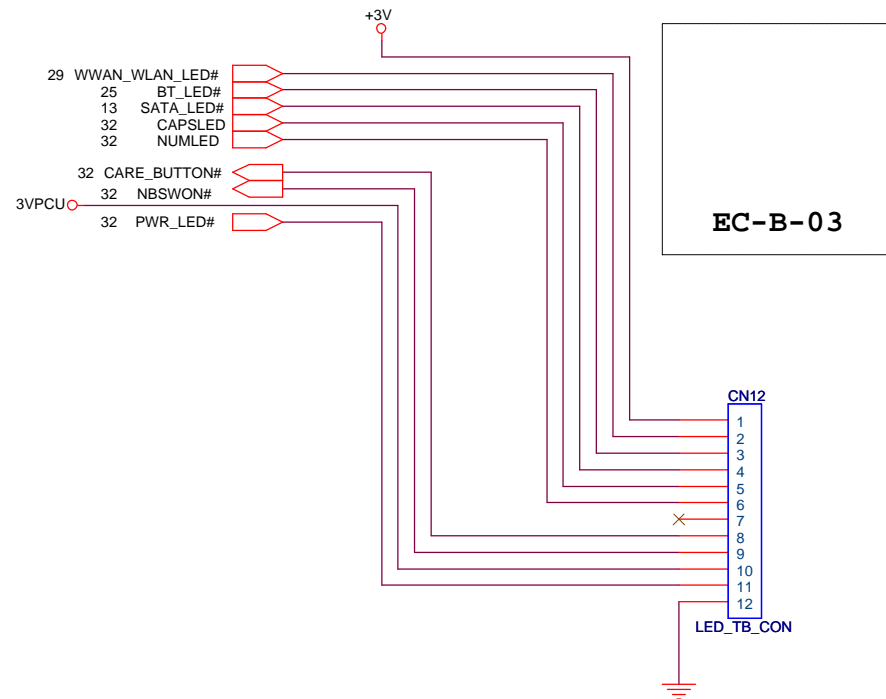
Size: Custom  
Document Number: WLAN & WWAN Slot  
Date: Tuesday, April 14, 2009  
Sheet: 29 of 41  
Rev: 2A

## Daughter Boards for LEDs & Ports

### FFC TO KBD LEFT SIDE CONNECTOR



### FFC TO LED RIGHT SIDE CONNECTOR



LOGO LED

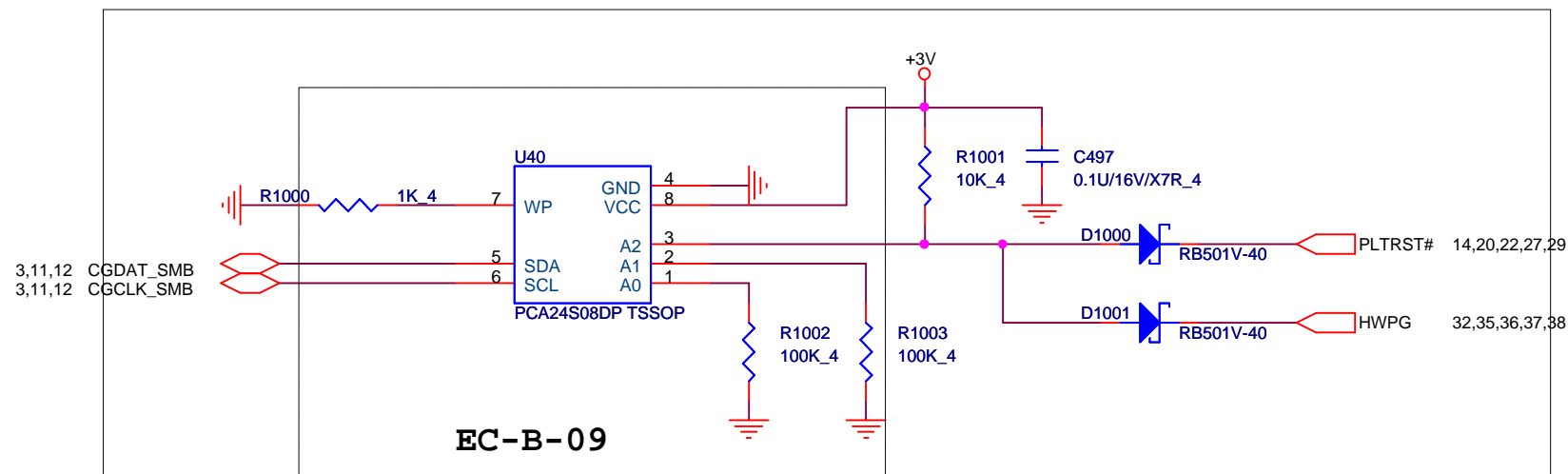
EC-B-24



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

Size Custom	Document Number	Rev 2A
Date: Tuesday, April 14, 2009	Sheet 30 of 46	

EC-A-04

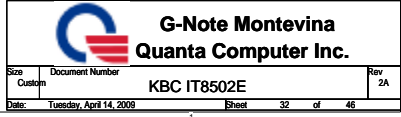


EC-B-09



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

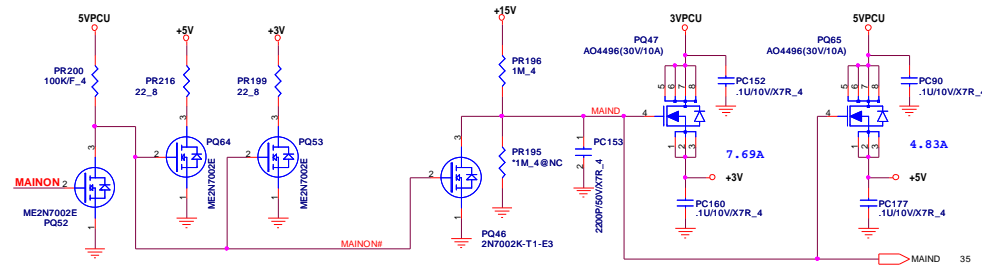
Size A	Document Number RFID EEPROM	Rev 2A
Date: Tuesday, April 14, 2009	Sheet 31 of 41	





+3V, +5V

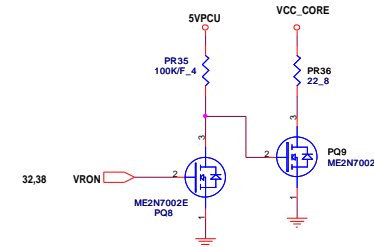
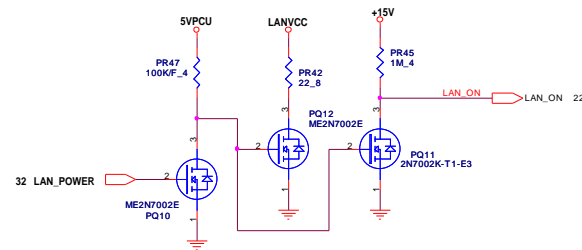
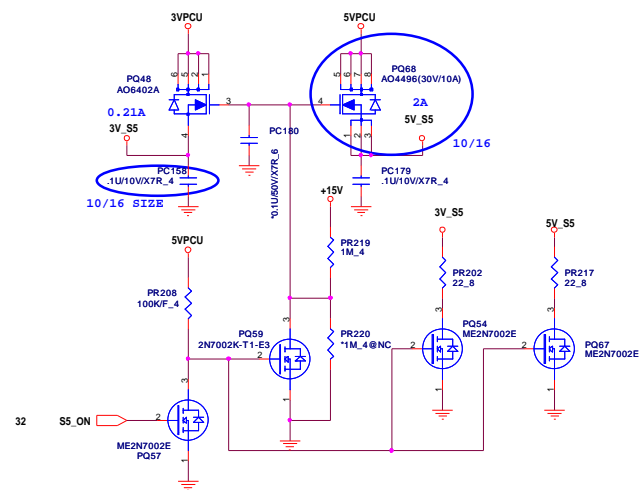
+1.05V, SMDDR\_VTERM



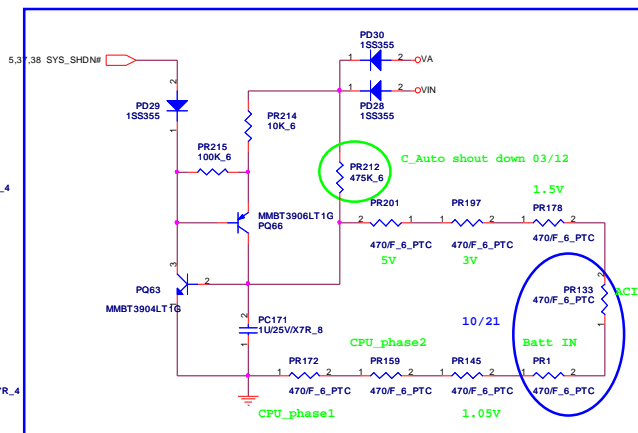
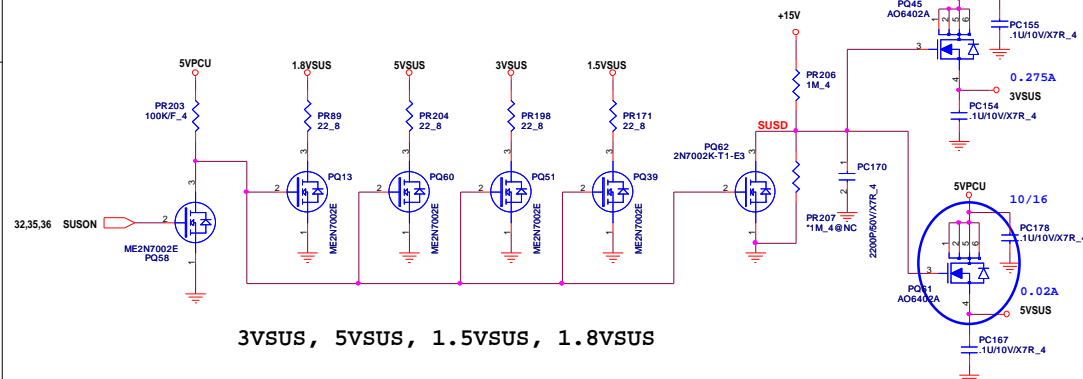
3V\_S5, 5V\_S5

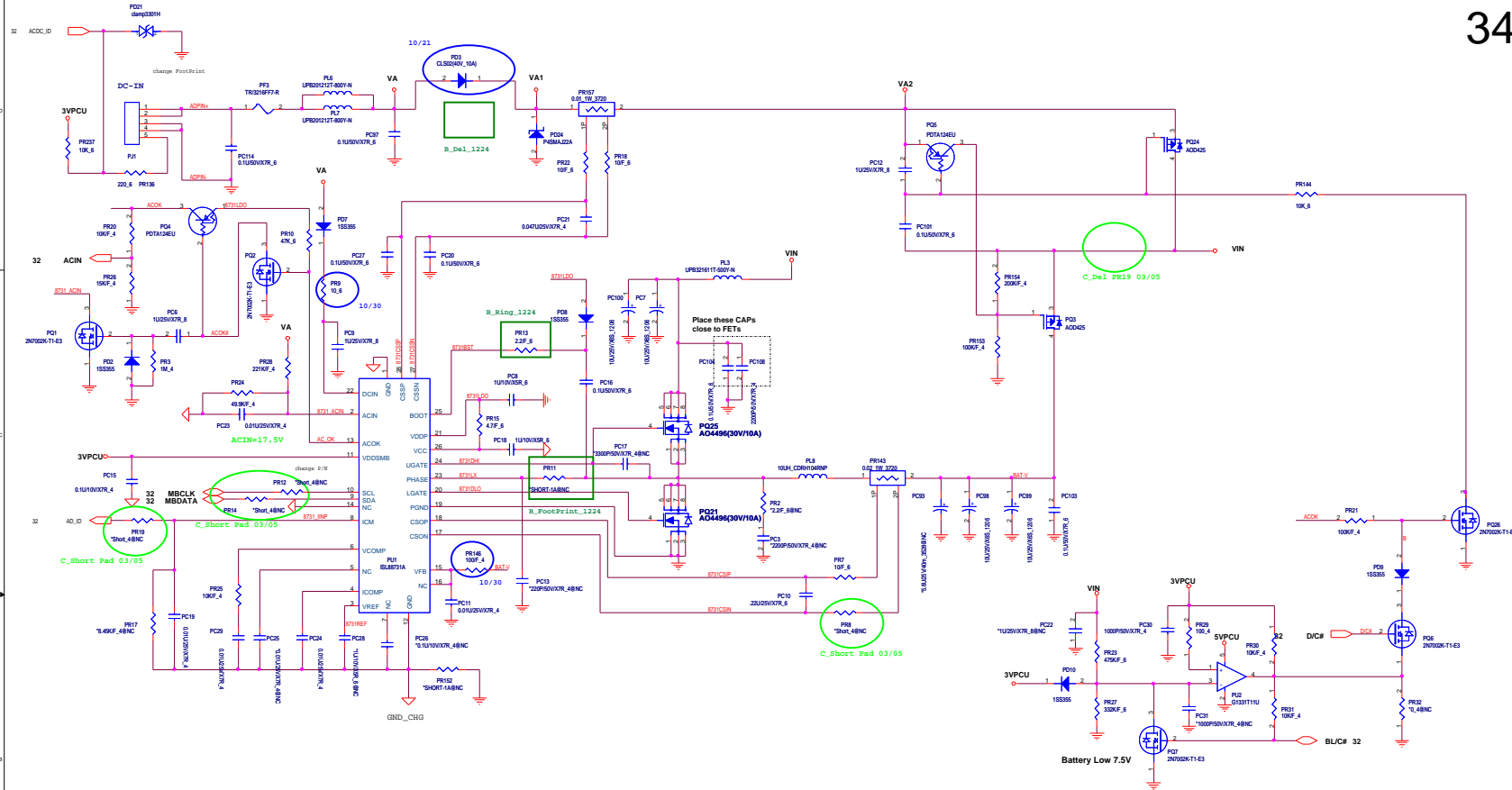
LANVCC

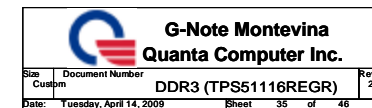
VCC\_CORE

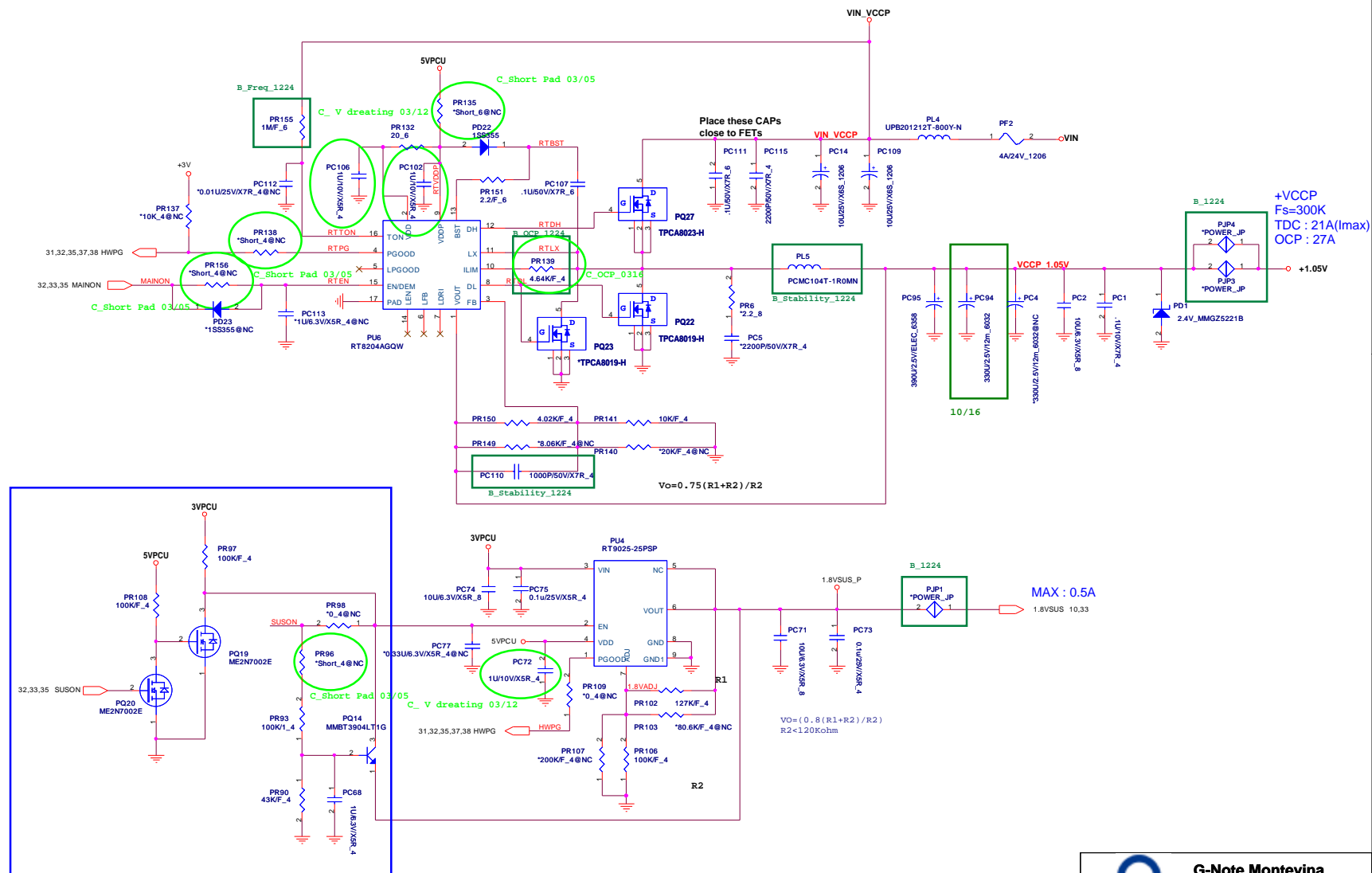


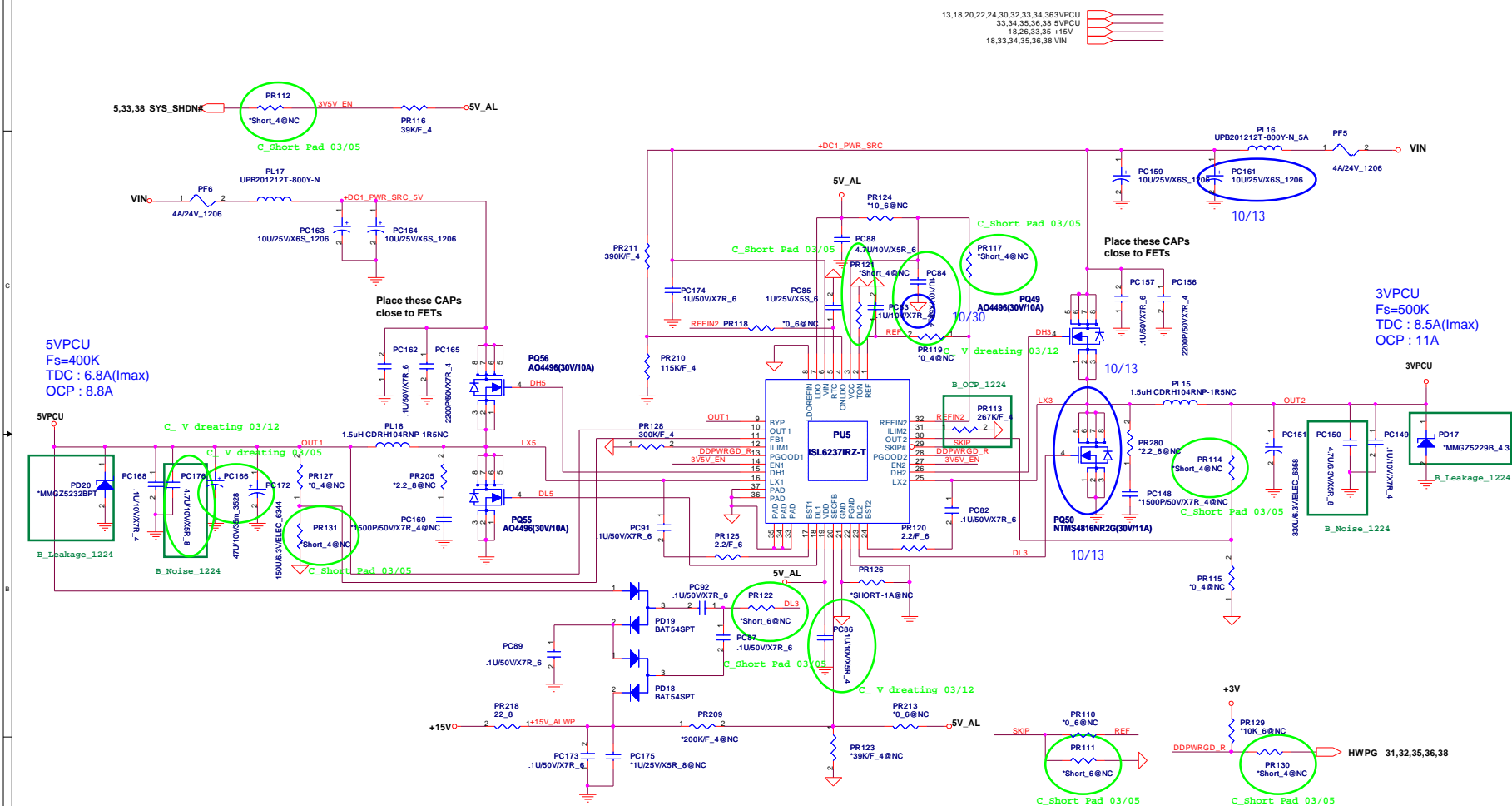
3VSUS, 5VSUS, 1.5VSUS, 1.8VSUS

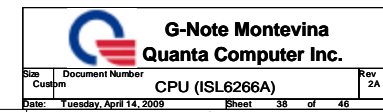


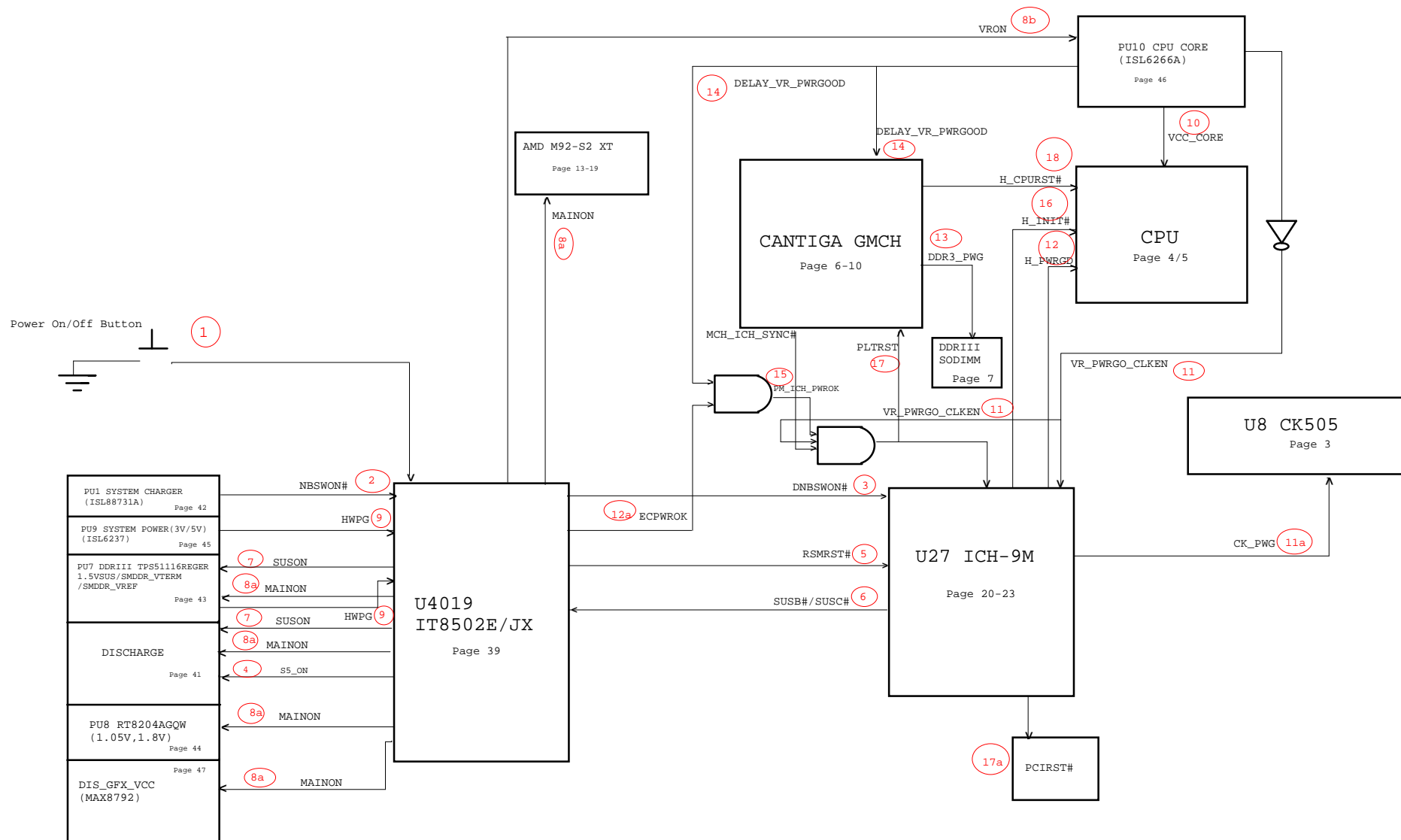












## Revision History

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

## Schematic Value Explanation Description :

### RESISTOR

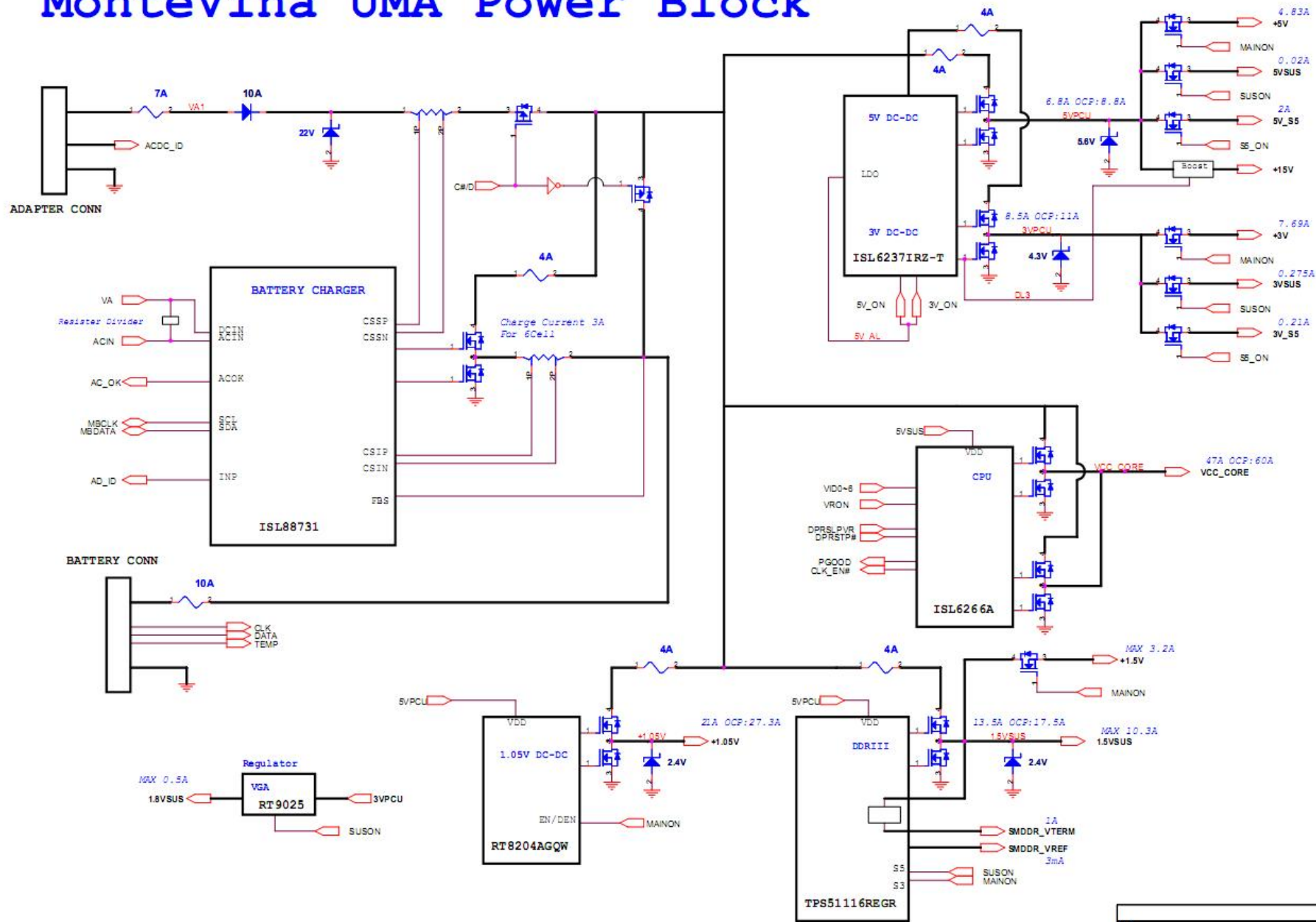
Value	F	4	6	8	12	1210	*	Description
*1K/F_4@NC	1%	0402 (1005 )					DE POP	1K ohm 1% SMD 0402 package and DE POP
1K_6	5%		0603 (1608 )				POP	1K ohm 5% SMD 0603 package and POP
1K_8	5%			0805 (2125 )			POP	1K ohm 5% SMD 0805 package and POP
1K_12	5%				1206 (3216 )		POP	1K ohm 5% SMD 1206 package and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




# MonteVina UMA Power Block




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stage	EC NO.	Page	date	Location	description
EC-A-01	22	12/02	U8		LAN IC change footprint from 0.4 to 0.5 pich
EC-A-02	21	12/02	U27		audio IC edit parts add 9 agnd via
EC-A-03	03	12/02	U22		DREFSSCLK/#,DREFCLK/# update correct SRC and dot 96
EC-A-04	31	12/02	U40,R367		add r367 pull up 10kohm for debug code:F4
EC-A-05	14,15	12/02	R472,R243		CCD_ON net change to HDD_DETECT#(pull 100Kohm at R243) ,del R472 Re-assign HDD_Detect# to GPIO38 of ICH9M in order to solve the issue unable to boot from HDD.
EC-A-06	03	12/02	R293		change to 4.7Kohm To solve N.B. cannot get correct FSB frequency selection (error coed 02)
EC-A-07	32	12/09	U24.57,R1004,R1005		adaptor 90W(pull high), 65W(pull low)
EC-A-08	18	12/09	Q8		THINK LIGHT#
EC-A-09	30	12/09	R1006,R1007		MY13,MY11
EC-A-10	29	12/09	CN11		CLKRUN# SERIRQ LPC_LDRQ0# LPC_PD#
EC-A-11	10	12/19	L39		NB IND 0805 to 0603 for height limilt at DDR place
EC-A-12	21	12/09	c286,c287,c312,c326,c362,c372,c373		audio cap 0805 to 0603 for height limilt at new card place
EC-A-13	21	12/19	U27		audio vendor ask AGND to DGND
EC-A-14	18	12/19	CN5		LCD connector add GND for sheld (EMI request)
EC-A-15	18	12/19	C178		cap 0805 to 0603 for new card height interfere
EC-A-16	29	12/23			Del aux_en_wowl reserved circuit
EC-A-17	5	12/23	del u34,c407,q10,q23,q28,e388,r390,r396,r398,q22,q20,r394(NC), q19,c389,r411,c457,u36,r417(NC),r418 add q10,q19,q20,r91(NC),r299,r101,r618,r102,r94,c153,u9,c388		change thermal sensor
EC-A-18	21	12/30	del R347(NC) add C710(NC),U54(NC)		Add new schematic to prevent "POP" sound.
EC-A-19	21	12/30	C261 R253 C259		remove C261 for THD+N remove R253 and put 0 ohm in C259 for Magantiude response
EC-A-20	18	12/30	R127 R126 R124 R125		Del R126, R125 /R127,R124 change to 10Kohm for PM common design
EC-A-21	15	12/30	R180 R181		R180 POP , R181 DEPOP for SIV stage
EC-A-22	19	1/6	del R149 R227		cancel IO_GND(EMI)

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stage	EC NO.	Page	date	Location	description
EC-A-23	30	1/6		add R125 R126 R227 R367 R375 del D14	EMI RESERVED
EC-A-24	21	1/6		R357 R354 change to 1k ohm	vendor's suggest . change 1k ohm for ESD
EC-A-24	22	1/6		add R579 R580	add moat for EMI, reserved bridge
EC-A-25	20	1/6		CN27	CN27 pin definid for EMI
EC-A-26	23	1/6			C469 C470 change to 10u/ 10v/X5R/0805 for derating(6.3v to 10v)
EC-A-27	03	1/19		C323 (18p cap pop)	clock generator for USB 48MHz slew rate
EC-B-01	22	3/3			LAN LED indicator definition wrong (LED0 & LED1 Reversed)
EC-B-02	28,14,3	3/3		CN9,R430,R429,R432,R433,R437,R435,U38(nc), C498,C485,C476,C479,C478,C191,C192,RP4,R267,R263	deleted uwb circuit
EC-B-03	23,30	3/3		deleted CN2(POWER/B),CN19(ODD) / (CN12 pop)	cancel GC1 connector
EC-B-04		3/3		P3:R316,R320,R290,R291,R230,R231,RP3,RP5,RP6,RP7 P4:R50 P5:R94 P7:R407,R413,R35,R39 P10:R399,R397,R416,R8,L2,R24,R59,L43,R409,R386,R16,R408 P11:R72 P15:R216, R312(NC) P16:R268,R298,R461,R176,R434,R241,R482,R487,R486,R156,R484,R297,R296,R209 P17:R62,R60,R57,R42,R47,R392,R422,R406,R419 P18:R142,R138,R103,R123,R121 P19:L16,L47,L46,L11,R220 P20:R495,R374 P21:R324,R332,R311,C259,R254,R261 P22:R98,R85,R96,R104,R88 P23:R269,R389,R69 P24:R89,R423,R424,R114 P29:R445,R446,R465,R469,R455,R473,R470 P30:R125,R126,R227,R367,R375,R1007 P32:R351,R336	deleted 0ohm
EC-B-05		3/3		P14:R270 P18:R106 P21:R376,R372,R233,R234,R240,R305 P25:R492,R491 P26:R328 P29:R454,R476 P32:R315 P18:R136,R137,R93 P19:R165,R160,R173,R169,R185,R178,R202,R194 P20:R494,R497,R498,R499,R493,R496 P23:R82,R83 P24:R129 P27:R159,R164	0ohm change to short pad
EC-B-06	24,27,29	3/3		R464,R462,R466,R468 0-->4.7K(NC) Add R209,R216 10K	smb change to pull up
EC-B-07	27	3/3		add C523(0.047u cap)	new card power switch change to 3vsus PCIE_WAKE# add C523(0.047u cap)
EC-B-08	26	3/3		Add R8(10ohm)	for sensitivity of G sensor
EC-B-09	31	3/3			RFID u40 change to TSSOP R1000 change to 1K R1002,R1003 change to 100k
EC-B-10	15	3/3		R180,R207 depop,R192,R181 pop	Change board ID to SIT
EC-B-11	21	3/4		Add C389(NC),C390(NC)	Audio speaker ,EMI
EC-B-12	24	3/5		CN4	K/B CN pin 1 need to rotate 180 degree and footprint
EC-B-13	17	3/5		Delete C419(NC),C459(NC),C71(NC),C73(NC) Add C191,C192,C259,C395,C407,C419,C459	SMT open issue. crt R,C too much and close that hard to rework
EC-B-14	21,22,30	3/6		R236~R239 0ohm-->bead	EMI solution

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EC-B-15	21	3/9	Delete C246~C249(NC)		delete audio reserve parts
EC-B-16	3	3/9	Delete R325,R292,R232 add L43,L46~L50		for RF request
EC-B-17	23	3/11	Delete U4,U6 Add R57		for ESD request
EC-B-18	18	3/12	Delete C181(NC),C182(NC) Add R123		for EMI request
EC-B-19	22	3/12	change R579,R580--> 0.1u		for LAN realtek design guide

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EC NO.	PG.	DATE	PART REFERENCE	DESCRIPTION
EC-A-01	34	12/24	PR10	Change Footprint
EC-A-02	34	12/24	PR12	Change to 2.2 ohm reduce phase ring
EC-A-03	34	12/24	PD6	Delete Footprint
EC-A-04	35	12/24	PJP7,PJP5,PJP6	Change Footprint
EC-A-05	35	12/24	PR94	Change to 5.36K for OCP
EC-A-06	35	12/24	PC145	Add 1000p for stability
EC-A-07	36	12/24	PJP3,PJP4,PJP1	Change Footprint
EC-A-08	36	12/24	PR139	Change to 3.4K for OCP
EC-A-09	36	12/24	PC110	Add 1000p for stability
EC-A-10	36	12/24	PL5,PR155	Reduce ripple voltage
EC-A-11	37	12/24	PR113	Change to 267K for OCP
EC-A-12	37	12/24	PC150,PC176	Change to 4.7u reduce H.F. noise reduce
EC-A-13	37	12/24	PD20,PD17	NA to reduce leakage current
EC-A-14	38	12/24	PR72	Change to 12.1K for OCP
EC-A-15	38	12/24	PR88	Change to 11.3K for frequency 300KHz
EC-A-16	38	12/24	PJP5,PJP6,PJP7	Modify schematic PQ30,PQ35 for NA

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