

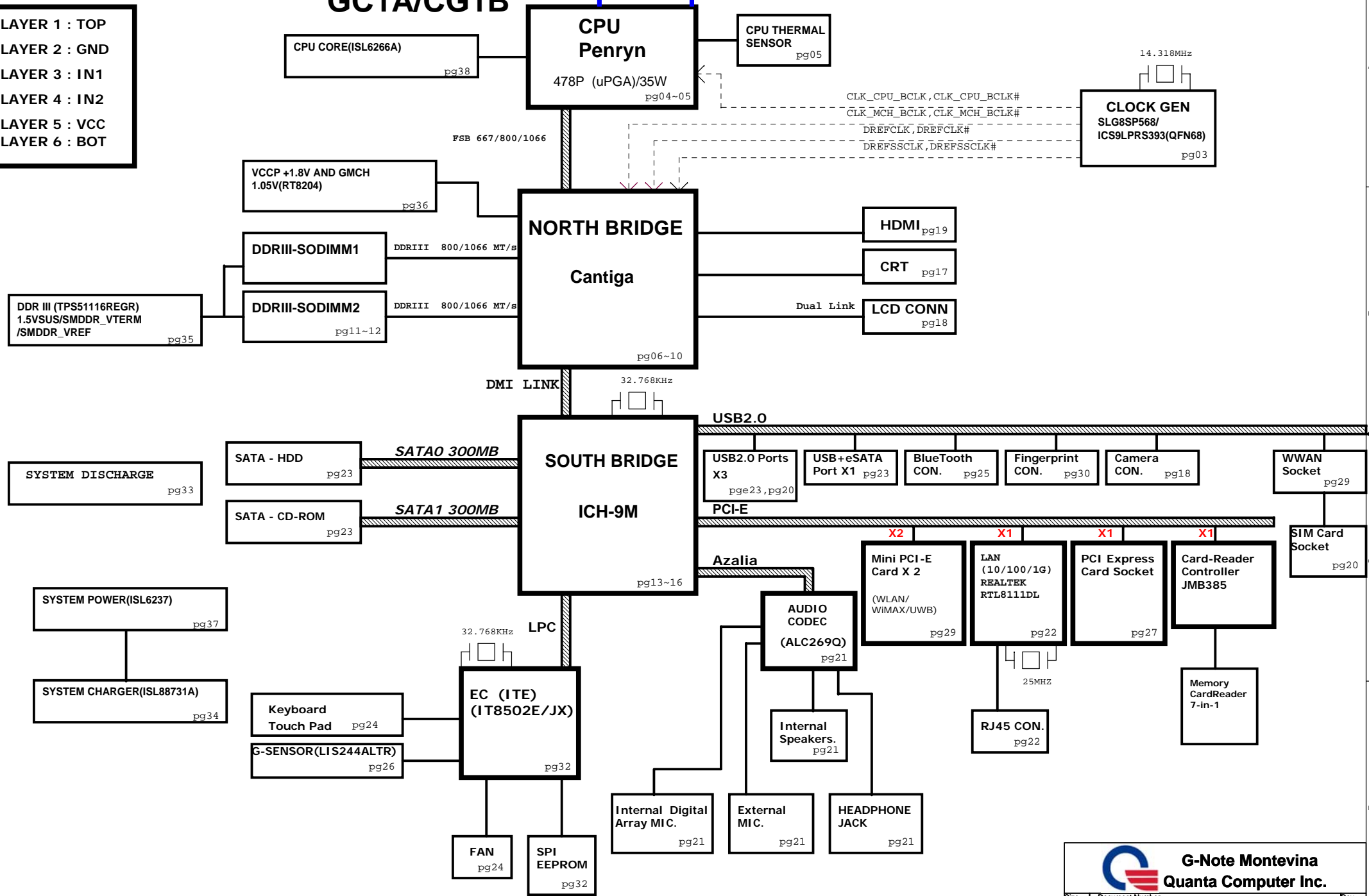
PCB STACK UP
6L

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

G-Note Montevina Block Diagram

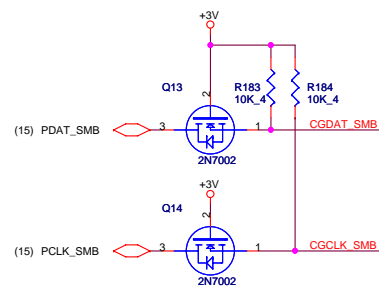
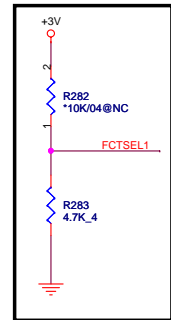
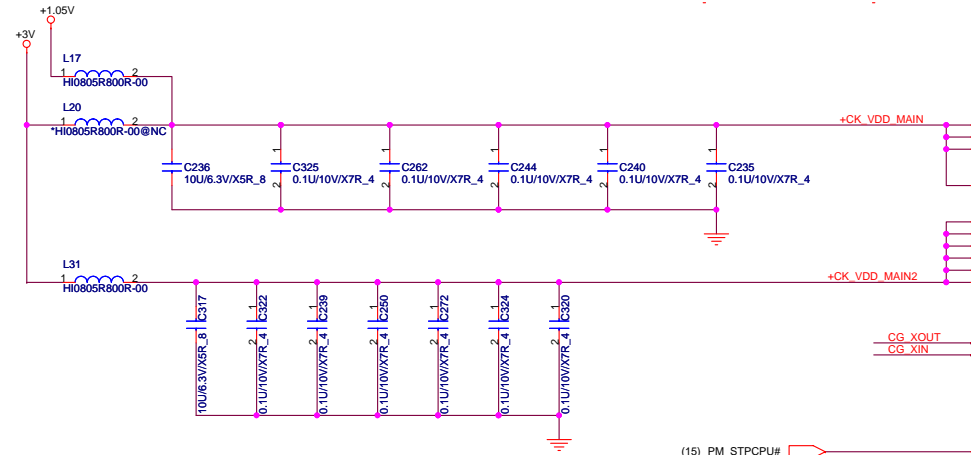
GC1A/CG1B

01



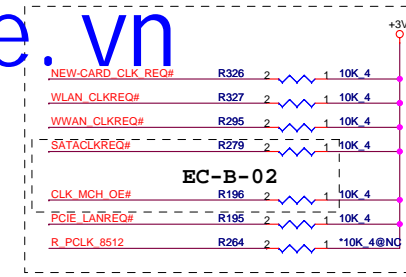
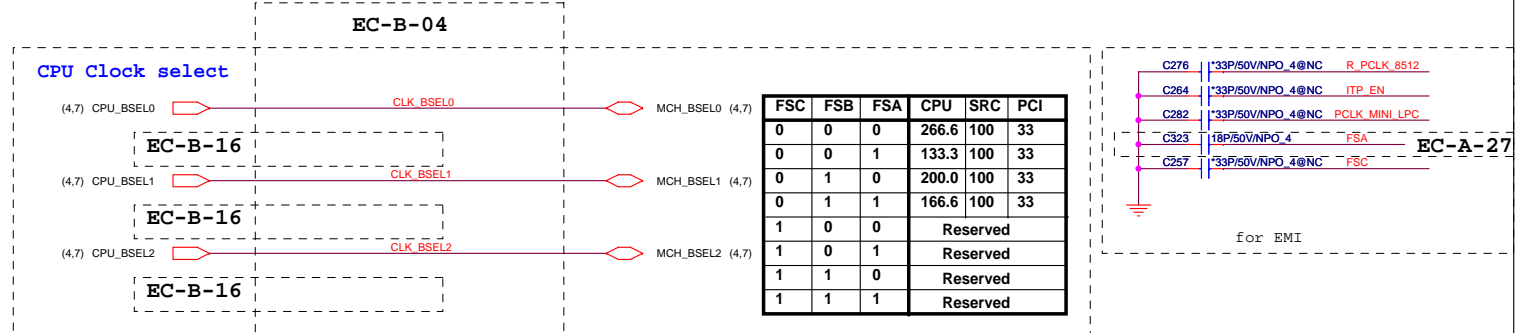
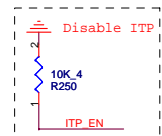
Power / Status

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	NT_DISP_ON	
+5VHDD	+5V	23	HDD Power	MAINON	
MBATV	+10V~+17V	32,34	MAIN BATTERY	D/C#	



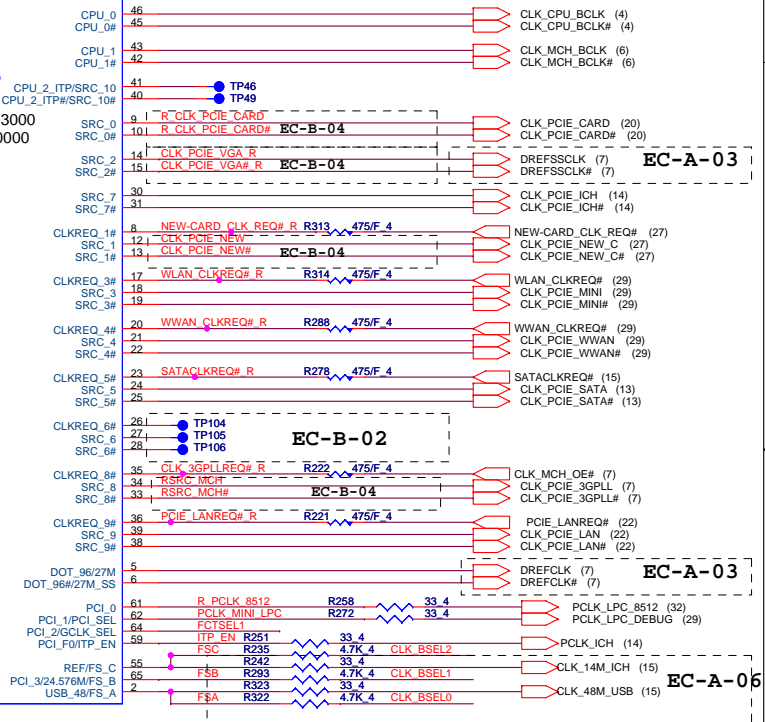
GCLK_SEL = FCTSEL1

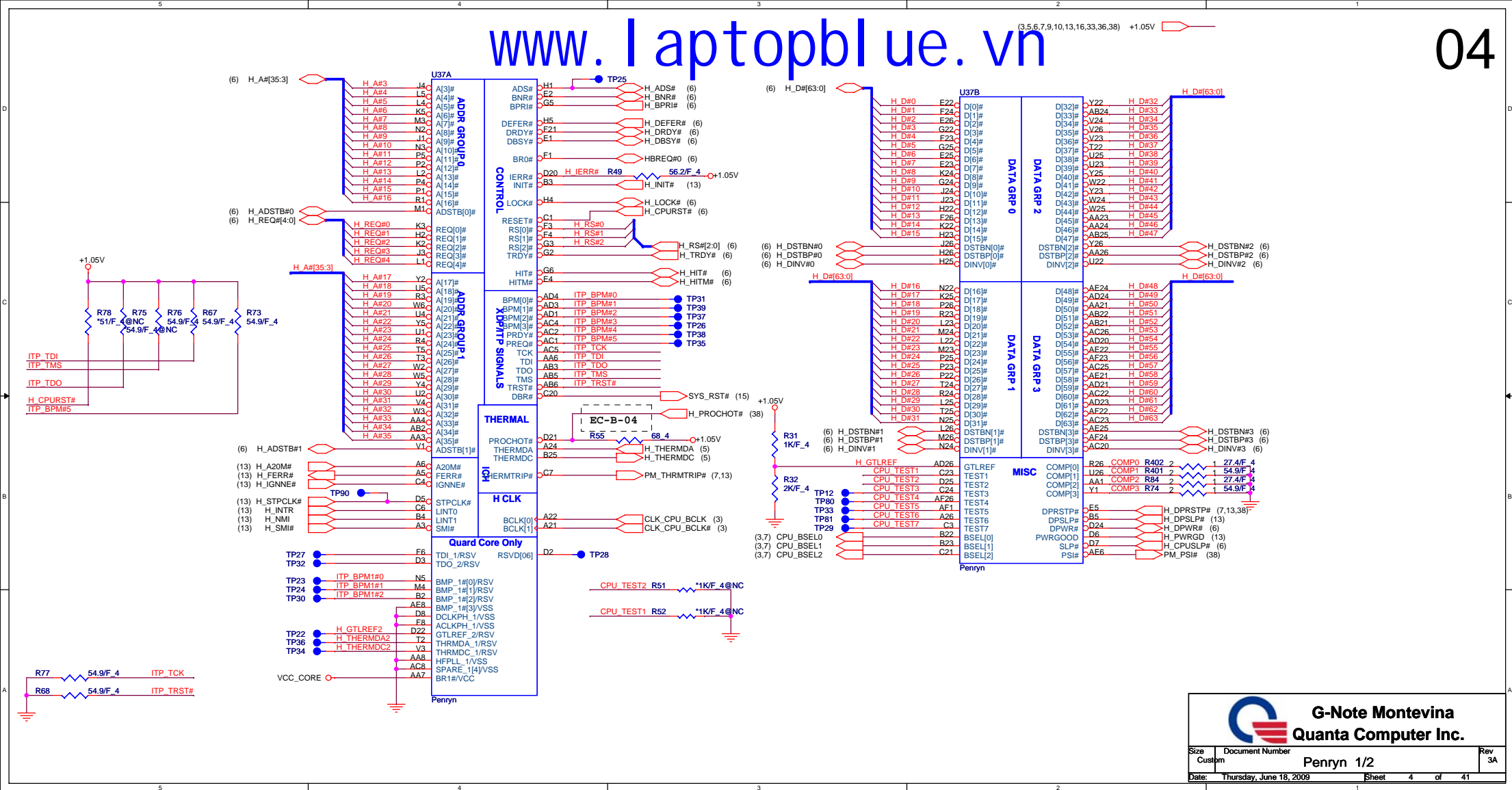
FCTSEL1 (PIN64)	PIN5	PIN6
0	DOT96	DOT96#
1	27Mout-NSS	27Mout-SS

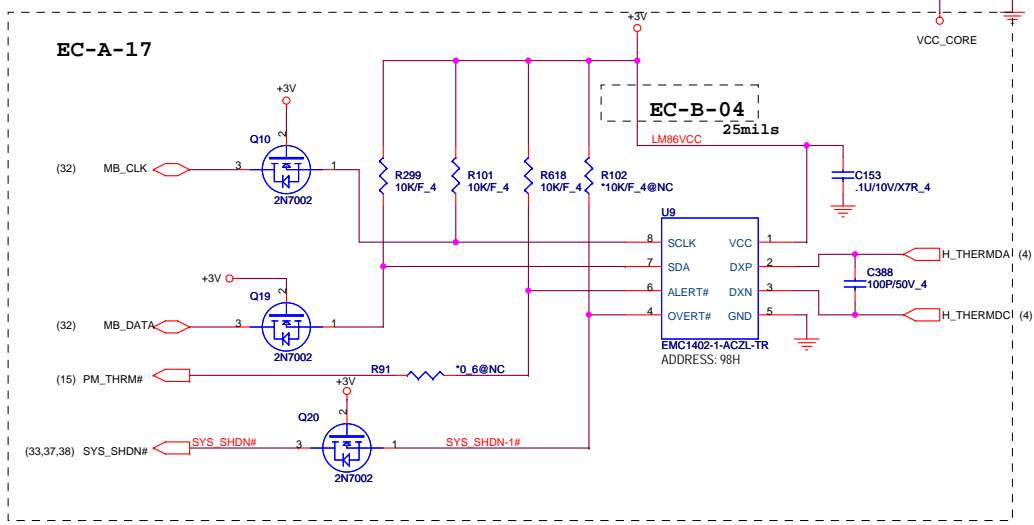
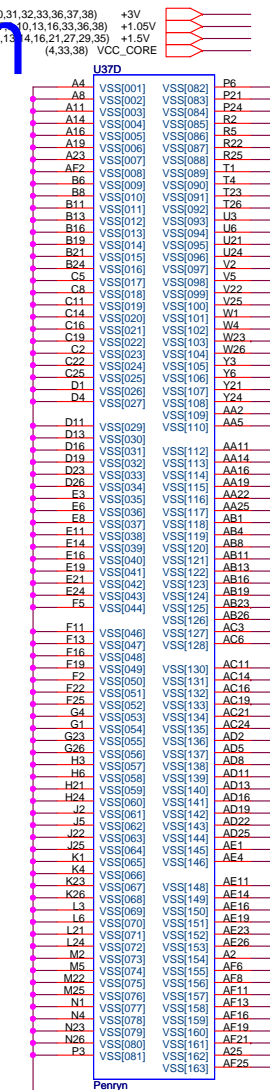
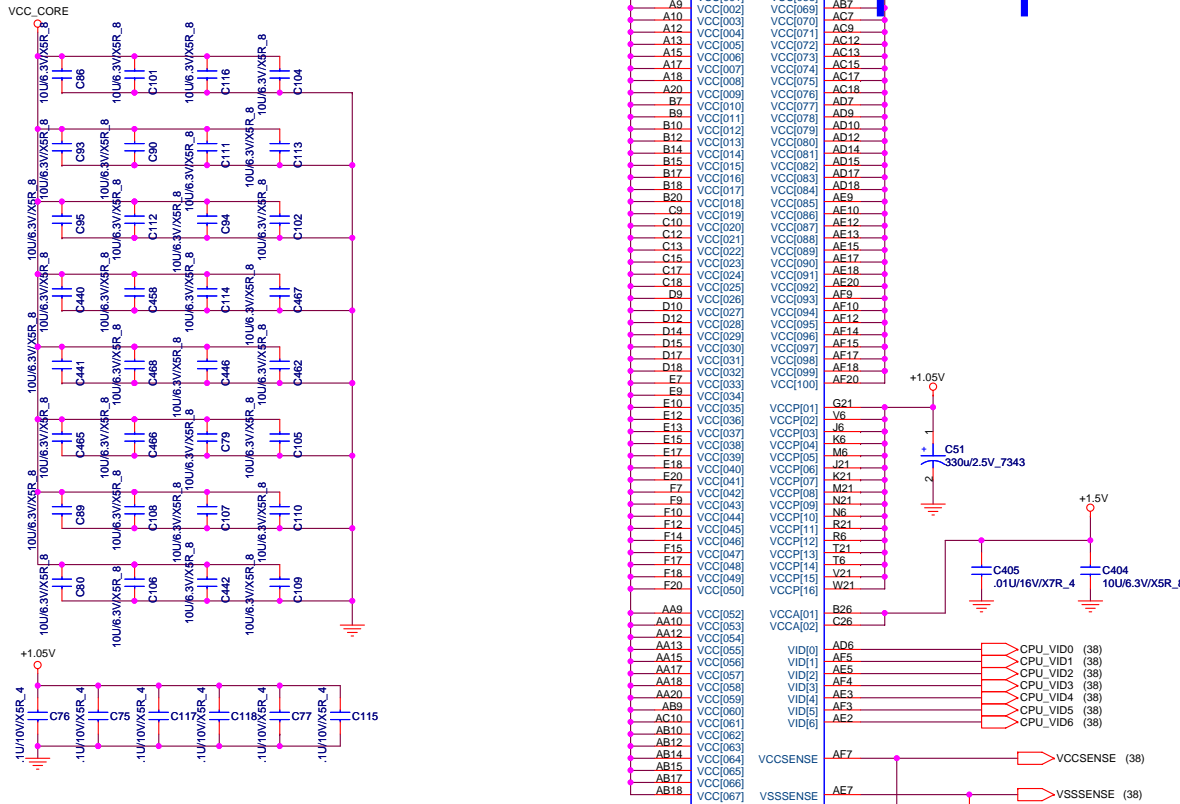


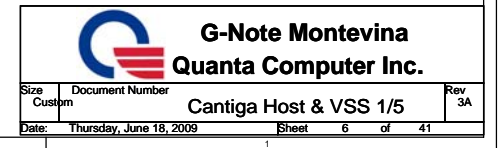
CK505

ICS ALPRS393000
SLG AJ005680000









MCH_CFG_5 DMIX2 selection

Low: DMIX2

High: DMIX4 (Default)

MCH_CFG_16 FSB Dynamic ODT

Low: Dynamic ODT disabled

High: Dynamic ODT enabled (Default)

MCH_CFG_9 PCI Express Graphic Lane

Low: Reverse Lane

High: Normal operation(Default)

MCH_CFG_19 DMI Lane Reversal

Low: Normal (Default)

High: Lane Reserved

MCH_CFG_6 TPM Host Interface

Low: TPM Host Interface enabled

High: TPM Host Interface disabled (Default)

MCH_CFG_7 Intel (R) Management Engine Crypto

Low = Intel Management Engine Crypto Transport

Layer Security (TLS) cipher suite with no

confidentiality

High = Intel Management Engine Crypto TLS cipher

suite with confidentiality (default)

MCH_CFG_10 PCIe Lookback Enable

Low: Enabled (Default)

High: Disabled (Default)

MCH_CFG_1213 XOR/ALLZ/CLOCK Un-gating

MCH_CFG_13 MCH_CFG_12 Configuration

0 0 Reserved

1 0 XOR Mode enabled

0 1 All-Z Mode enabled

1 1 Normal operation (Default)

TP13 AL34

TP14 AK34

TP16 AN35

TP19 AM35

TP13 AL34

TP14 AK34

TP16 AN35

TP19 AM35

TP13 AL34

TP14 AK34

TP16 AN35

TP19 AM35

TP13 AL34

TP14 AK34

TP16 AN35

TP19 AM35

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TP19 AM35

TP13 AL34

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TP14 AK34

TP16 AN35

TP19 AM35

TP13 AL34

TP14 AK34

TP16 AN35

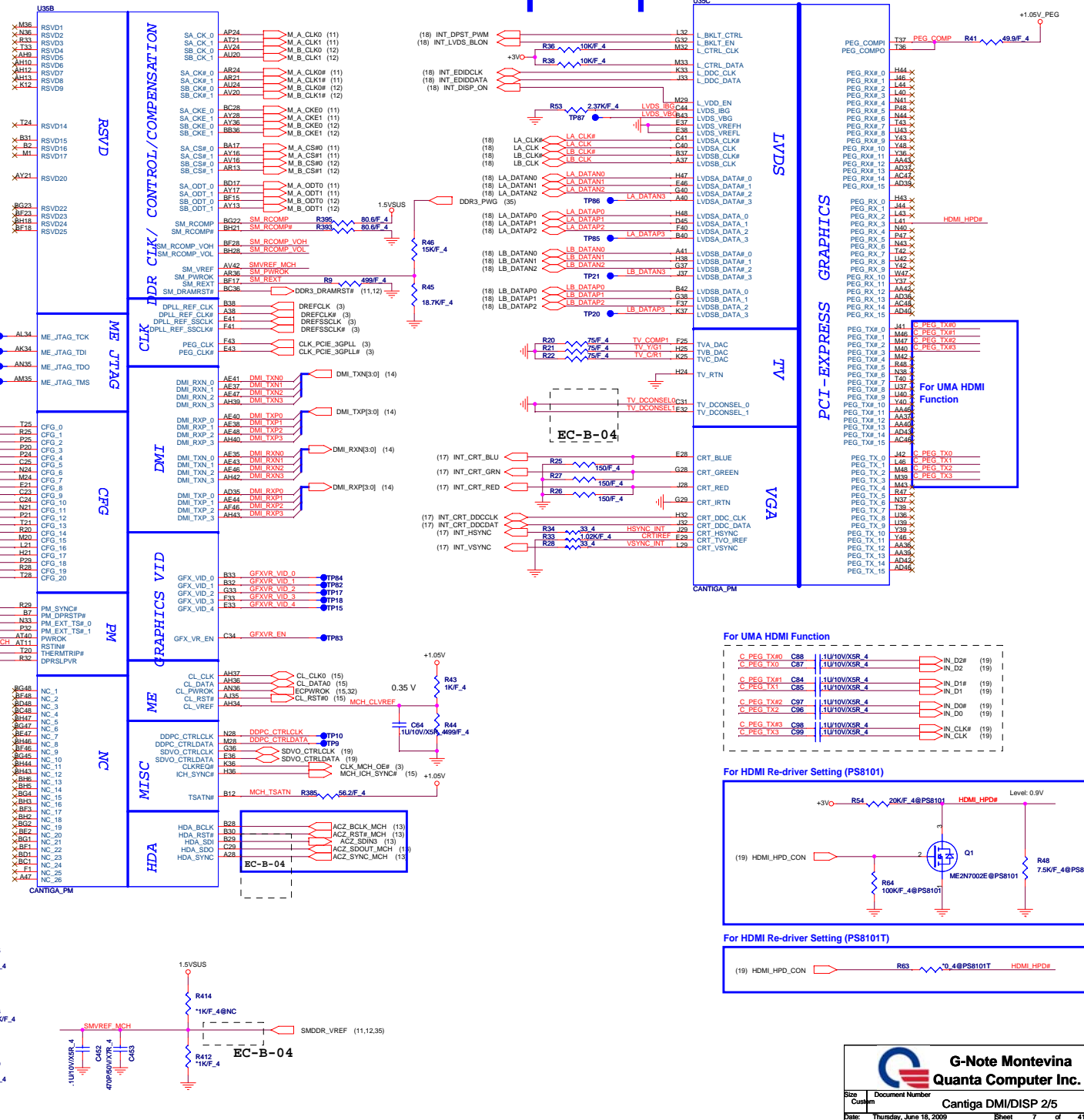
TP19 AM35

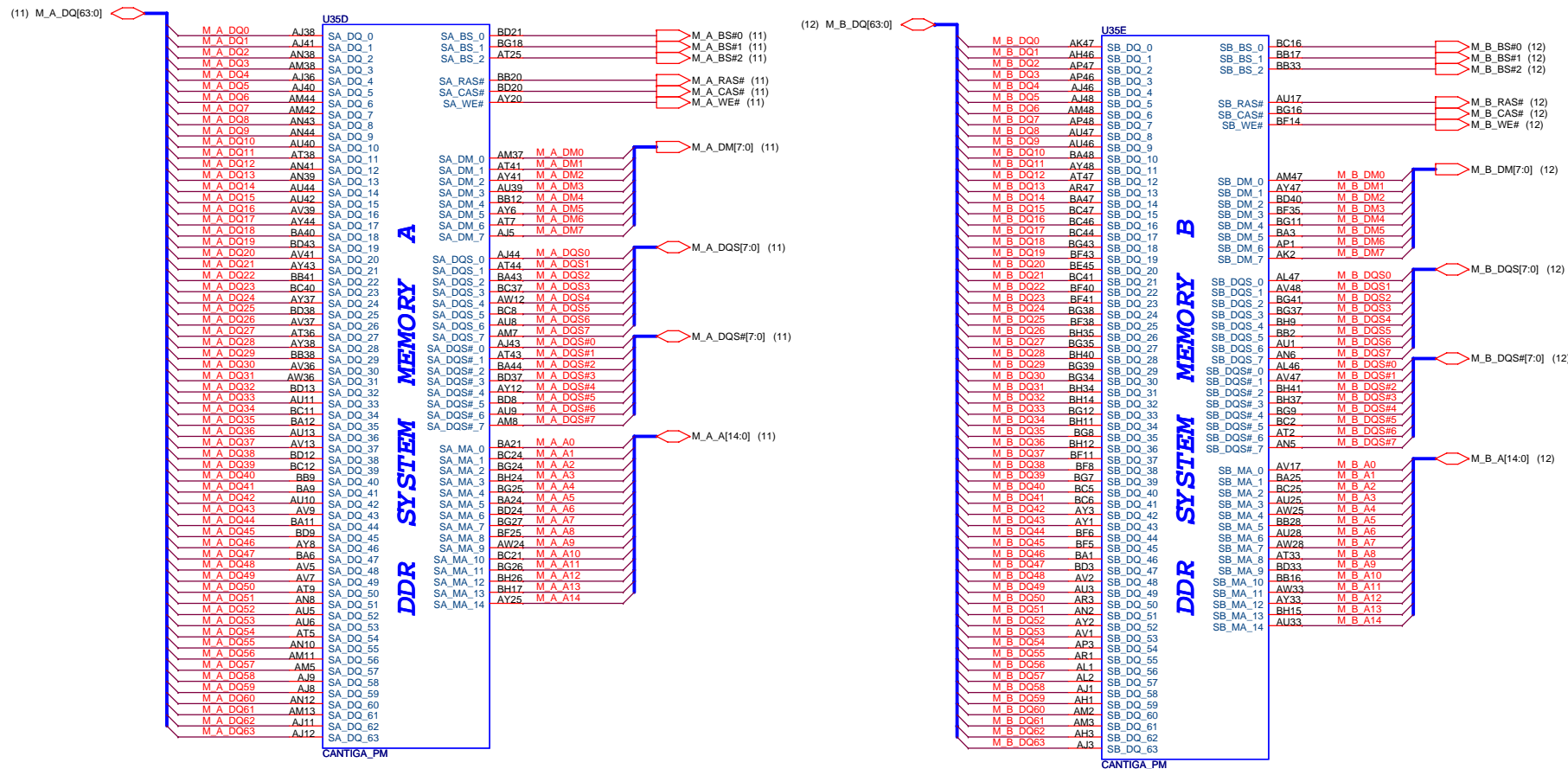
TP13 AL34

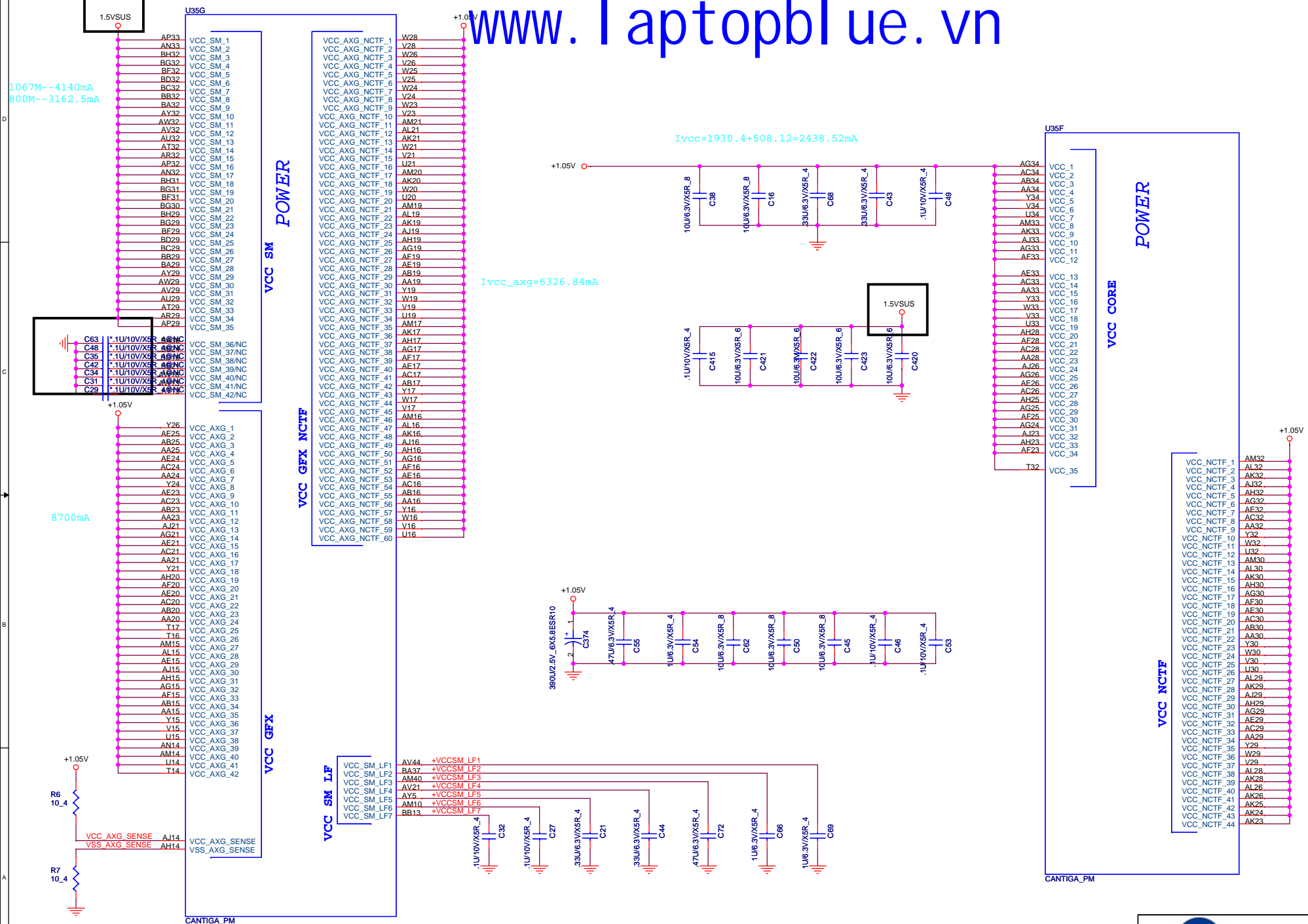
TP14 AK34

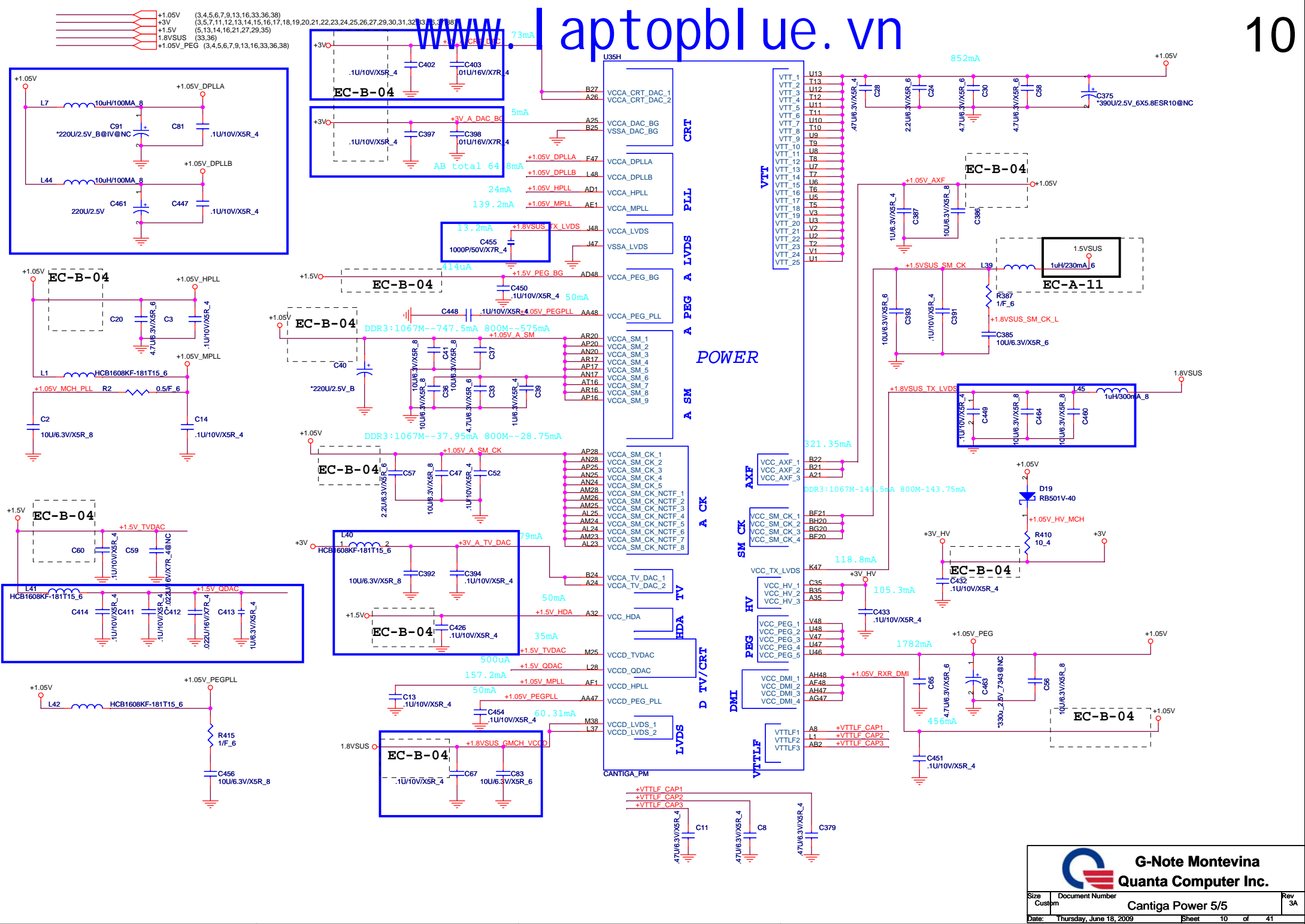
TP16 AN35

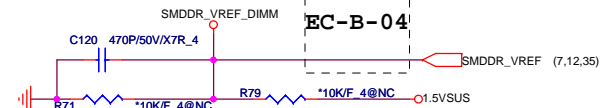
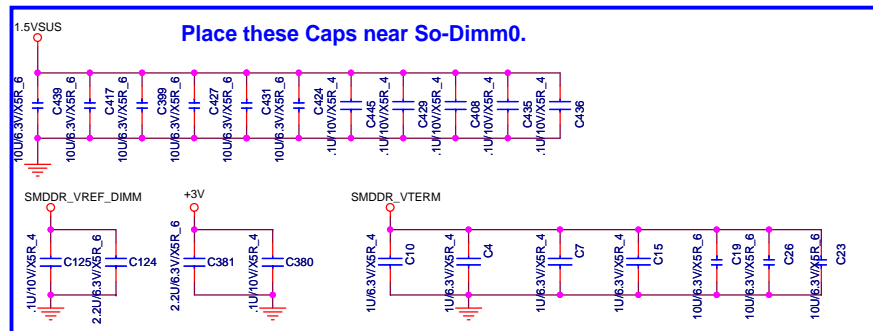
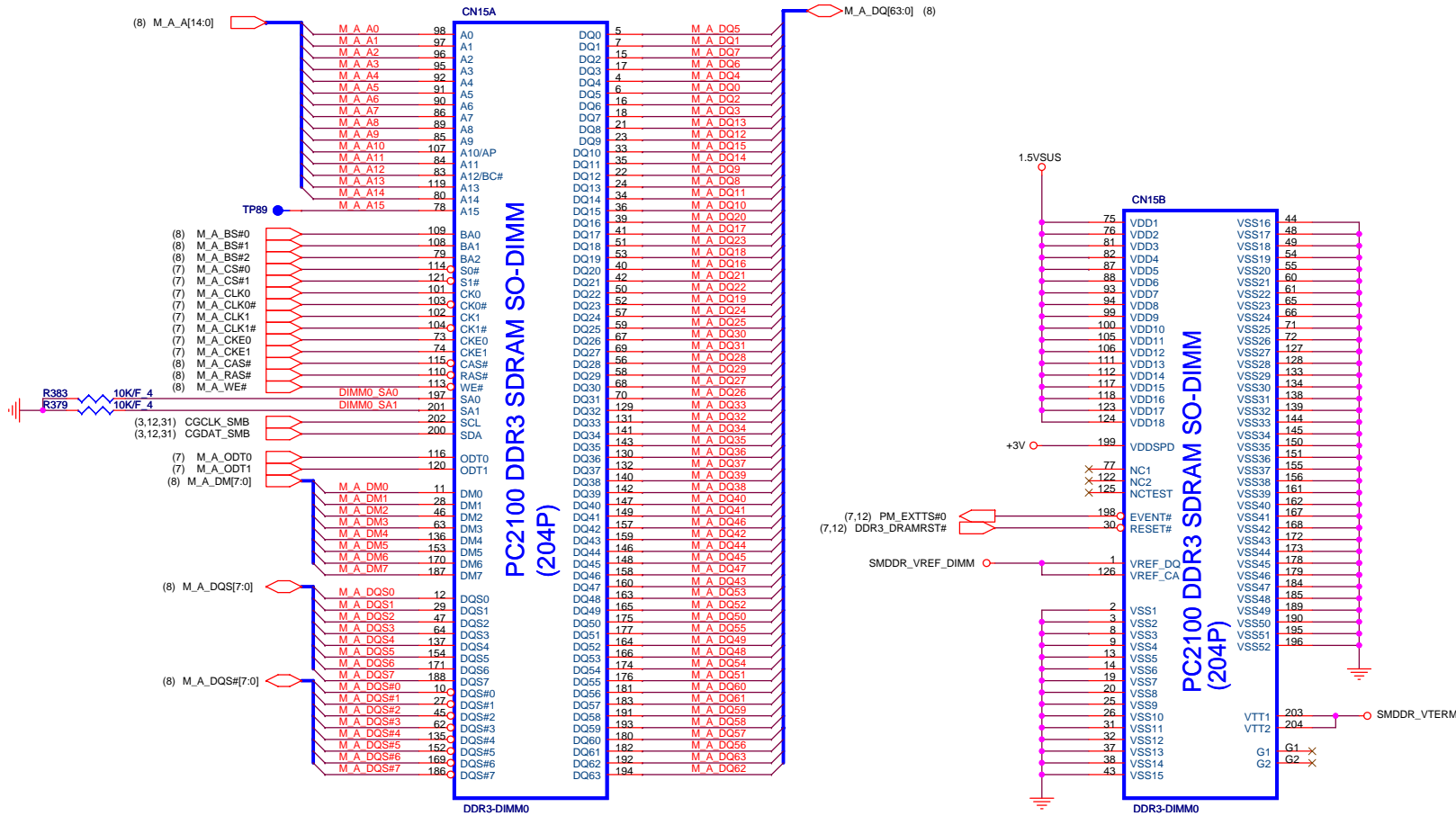
TP19 AM35

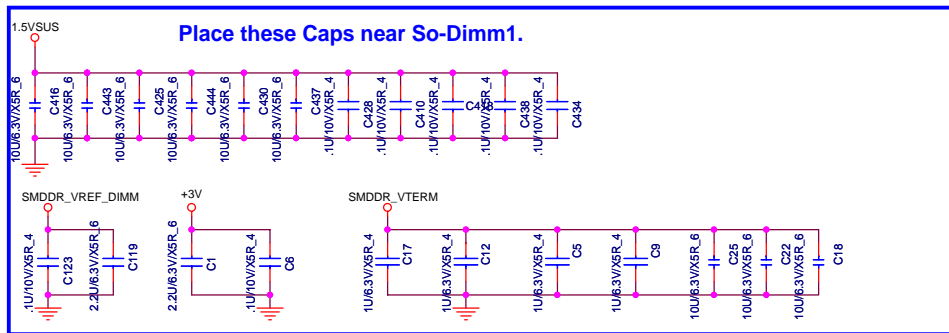
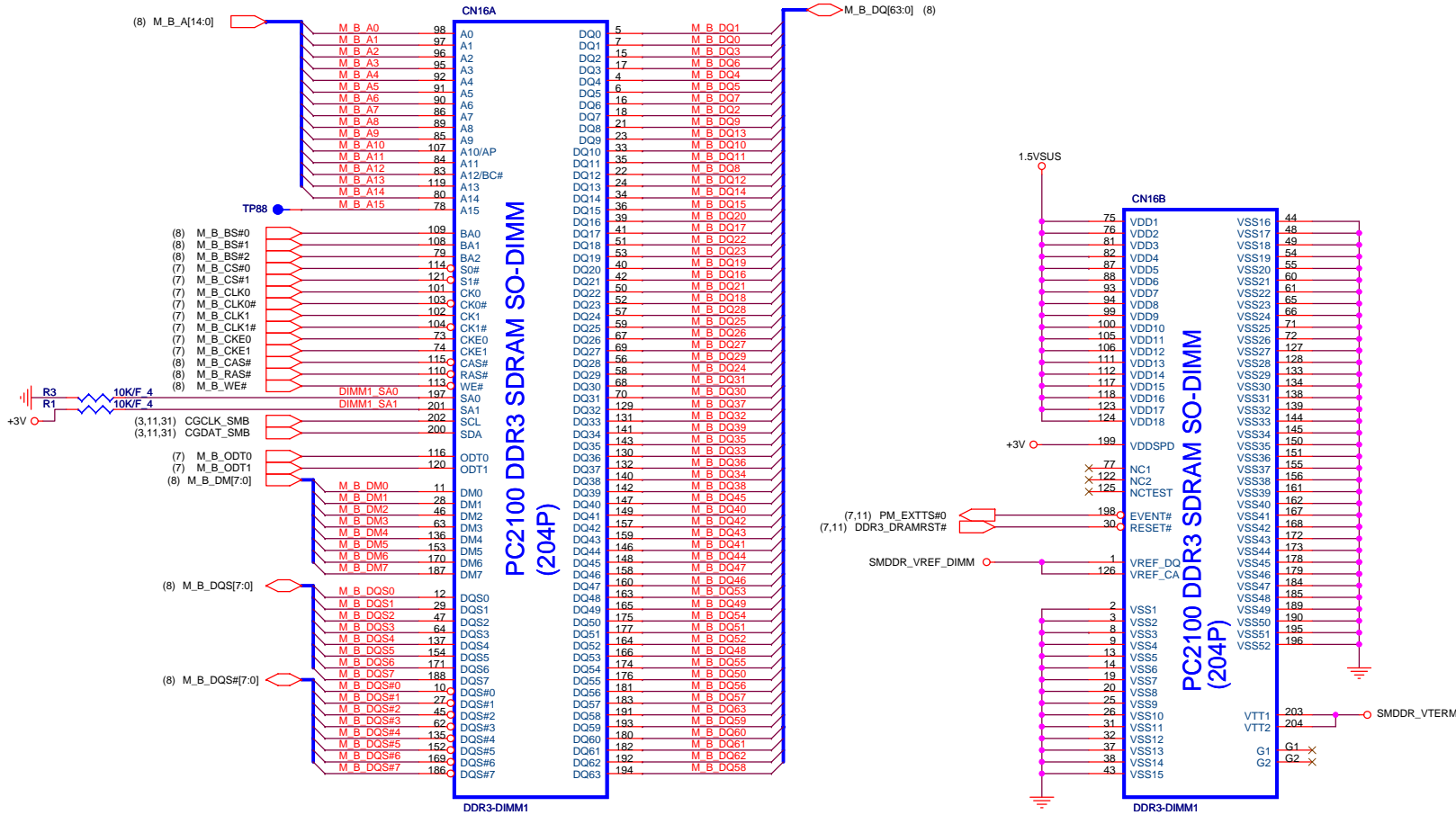


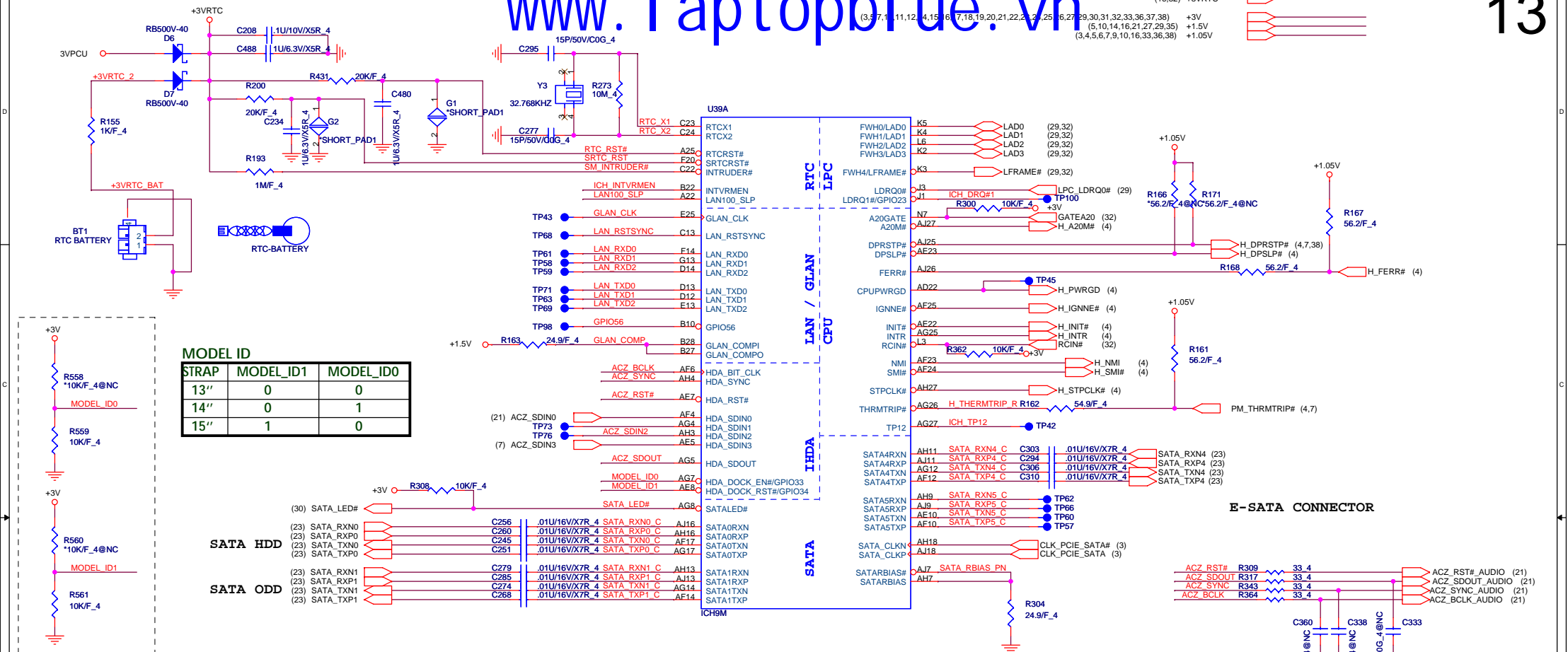












SB Strap

ICH9-M Internal VR
Enable strap
(Internal VR for
Vccsus1_05,VccSus1_5
and VccCL1_5)

ICH9-M LAN100_SLP Strap
(Internal VR for
VccLAN1_05 and
VccCL1.05)

INTVRMEN	Low = Internal VR disable High = Internal VR enable(Default)
----------	---

LAN100_SLP	Low = Internal VR disable High = Internal VR enable(Default)
------------	---

XOR Chain Entrance Strap

ICH_TP3	HDA_SDOUT	Description
0	0	RSVD
0	1	Enter XOR Chain
1	0	Normal operation(Default)
1	1	Set PCIe port config bit 1

ICH9 Boot BIOS select

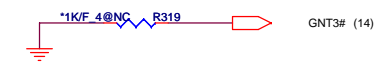
STRAP	PCI_GNT0#	SPI_CS#1
SPI	0	1
PCI	1	0
LPC	1	1

(default)



A16 swap override strap

PCI_GNT#3	Low = A16 swap override enabled Hi = Default
-----------	---



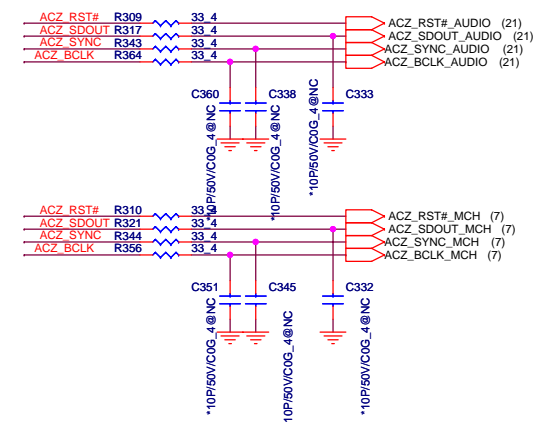
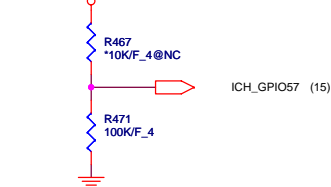
No Reboot Strap

ACZ_SPKR	Low: Default Hi: No reboot
----------	-------------------------------

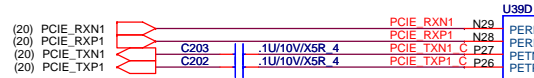


TPM physical presence

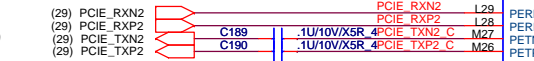
ICH_GPIO57	Low: Default
------------	--------------



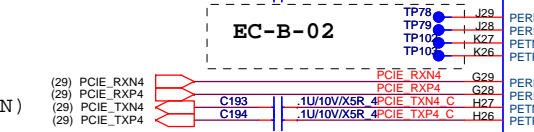
CARD-READER



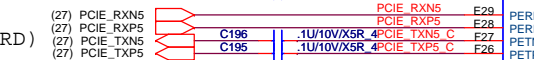
EXPRESS CARD (WWAN)



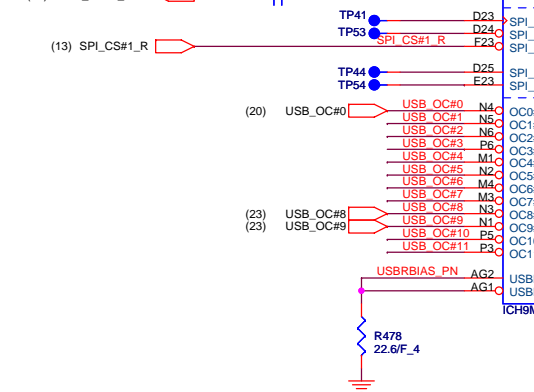
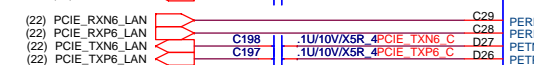
MINI CARD PCI-E (WLAN)



Express Card (NEW CARD)



PCIE-LAN

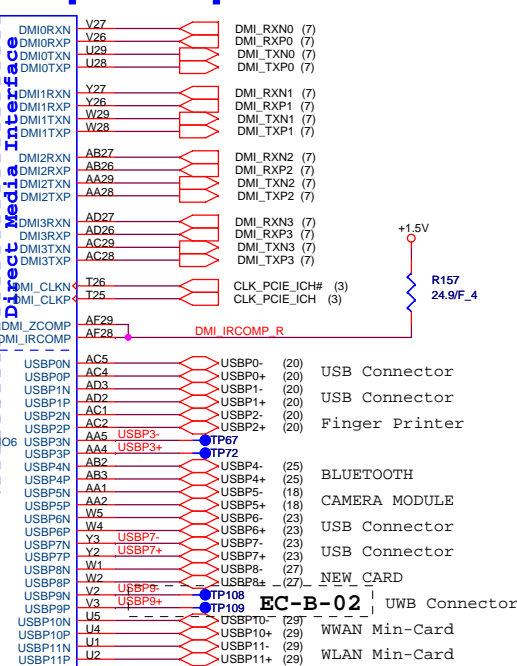


PCI-Express

USB

PCI

Interrupt I/F



EC-B-02

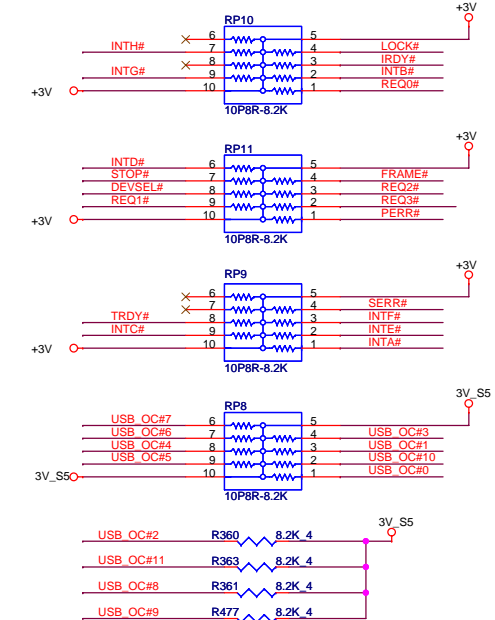
EC-A-05

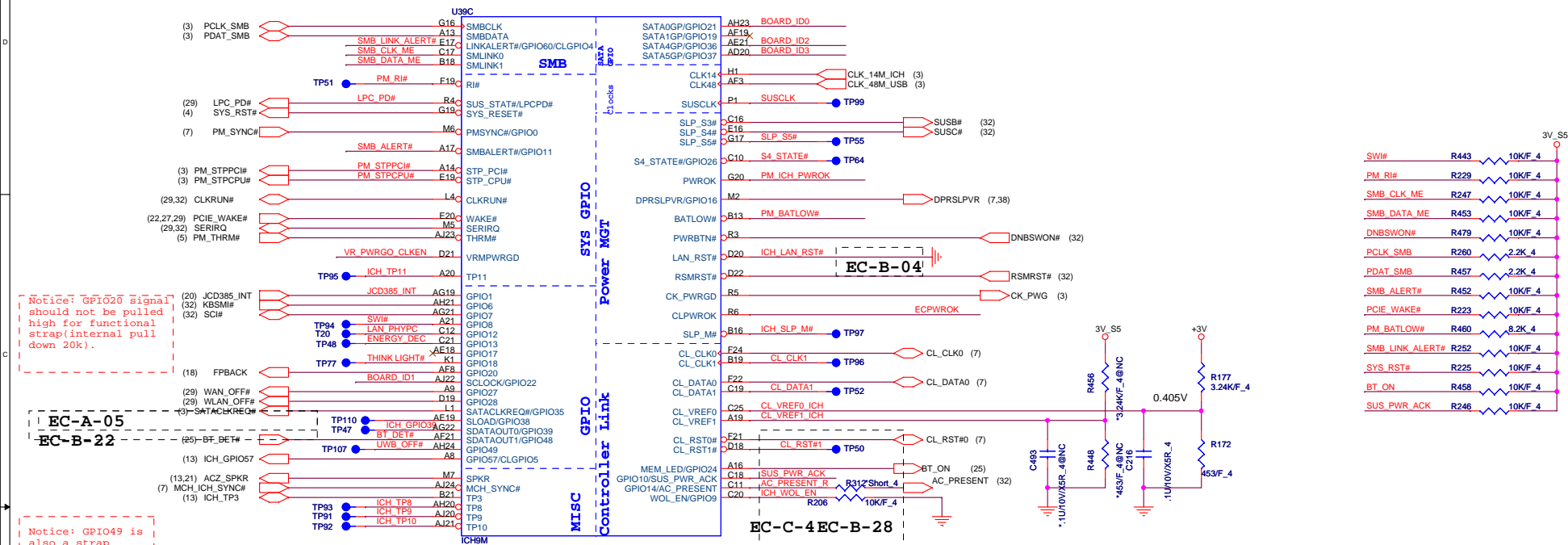
EC-B-05

PCI ROUTING TABLE	IDSEL	INTERUPT	DEVICE
REQ0# / GNT0#	AD21	INTE#, F#, G#	RICOH R5C847



10,13,16,21,27,29,35) +1.5V
31,32,33,36,37,38) +3V
15,20,27,32,33,35,38) 3VSUS





Notice: GPIO20 signal should not be pulled high for functional strap(internal pull down 20k).

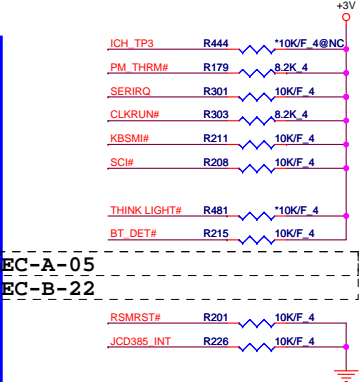
Notice: GPIO49 is also a strap pin(internal pull up 20k). Don't pull-down.

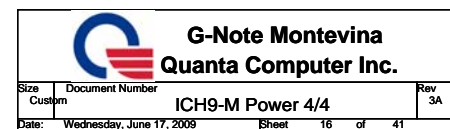
Board ID

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
	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

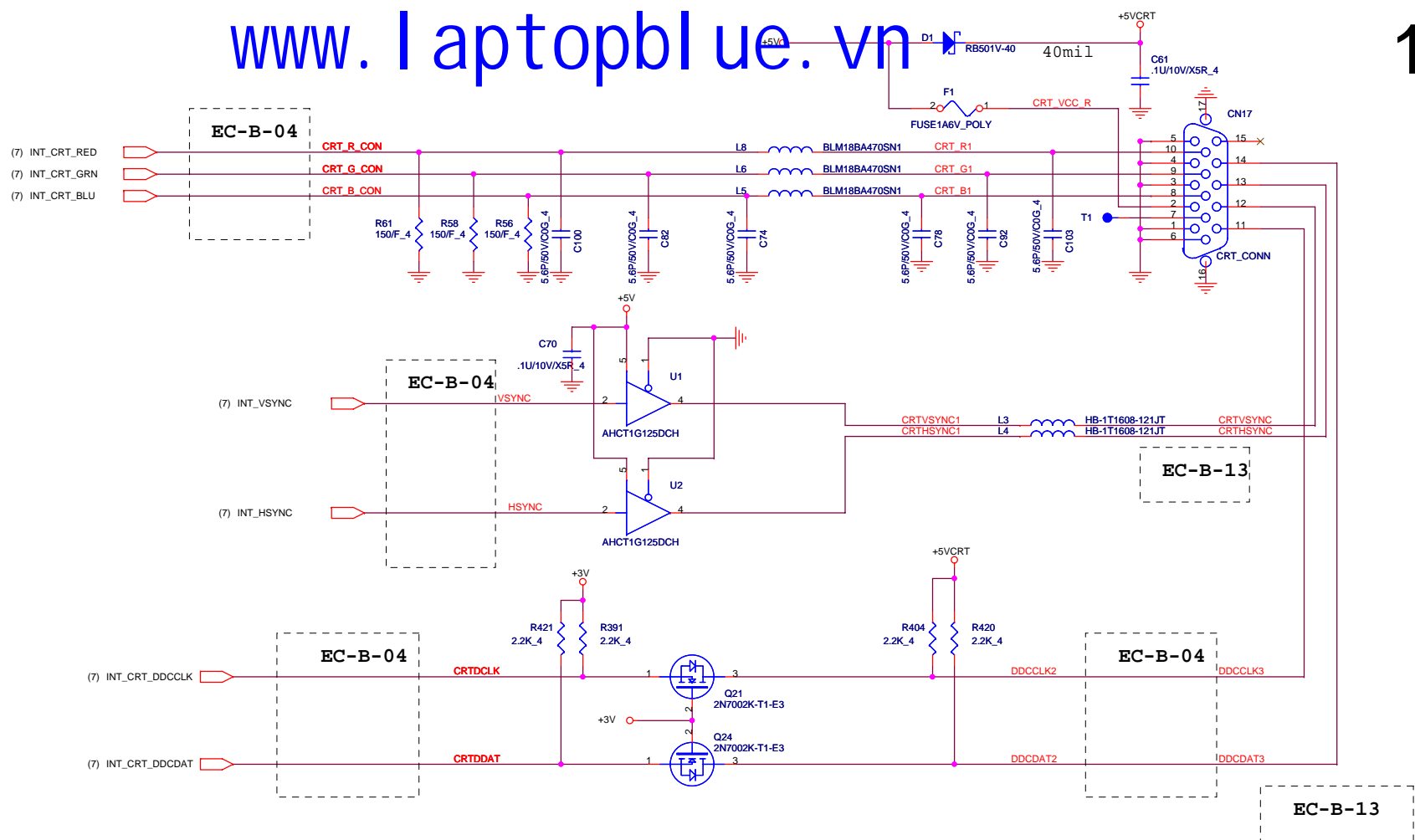
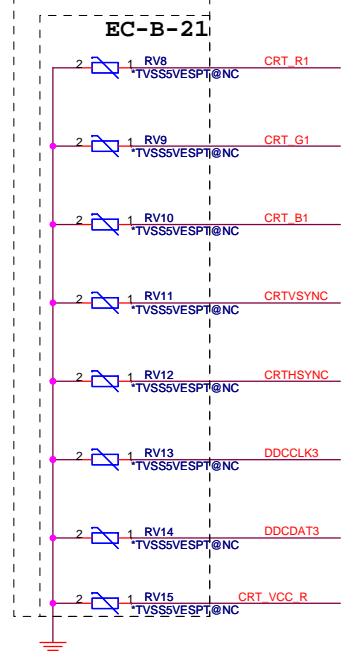
EC-B-10

EC-C-3



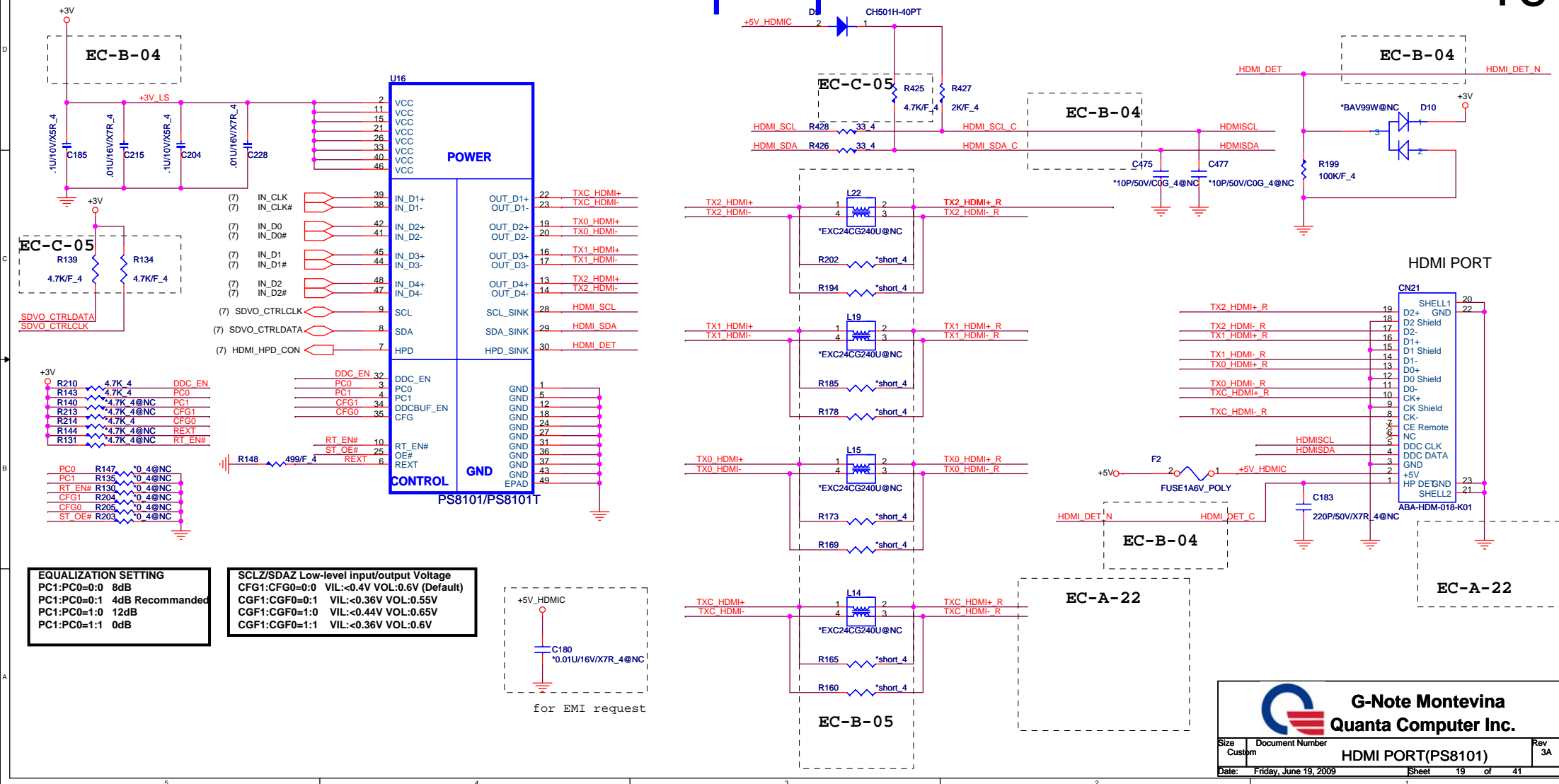


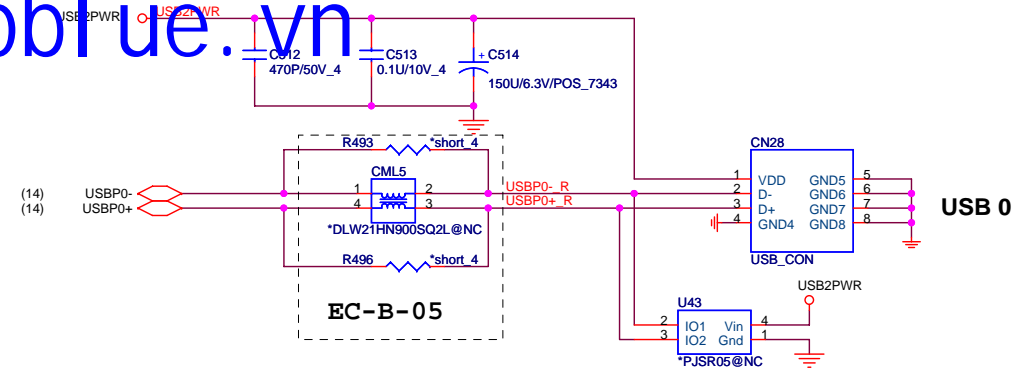
ESD PROTECTION
close CRT connector
EC-C-1



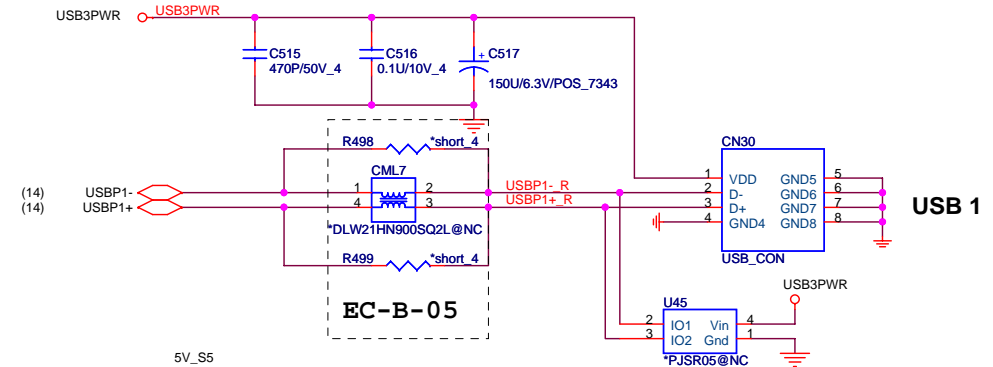
CAMERA VCC Control







The schematic diagram illustrates the electrical connections for the UIM module. On the left, three input signals are shown: (29) UIM_PWR, (29) UIM_RESET, and (29) UIM_CLK. These signals are connected to the CN29 component (2WM610C1C-DS-7F). The CN29 component has pins 1 (VCC), 2 (RST), and 3 (CLK) connected to the input signals. Pin 4 is connected to GND, pin 5 is connected to UIM_VPP, and pin 6 is connected to UIM_DATA. The UIM_VPP and UIM_DATA signals are also connected to the U44 component (CDA6C05GTH_0). The U44 component has pins 1 (UIM_RESET), 2 (UIM_CLK), 3 (GND), 4 (UIM_DATA), 5 (UIM_PWR), and 6 (UIM_VPP). The U44 component is connected to the UIM module through a series of capacitors: C518 (33P/50V/COG_4) connected to UIM_RESET, C519 (33P/50V/COG_4) connected to UIM_CLK, C520 (33P/50V/COG_4) connected to UIM_DATA, C521 (1U/10V/X5R_6) connected to UIM_PWR, and C522 (33P/50V/COG_4) connected to UIM_VPP.



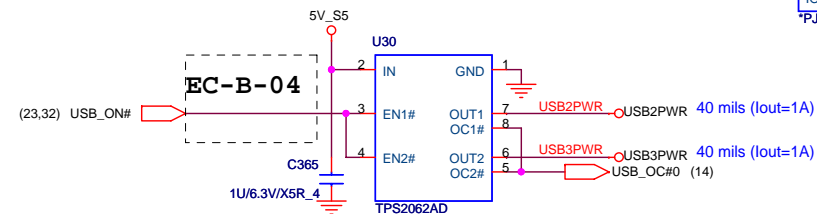
EC-B-26

(32) BATLED_GREEN R500 221F/4 4 2 LED1 GREEN 2 3 3VPCU **Battery**

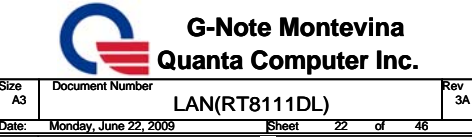
(32) BATLED_AMBER R501 221F/4 4 1 LED1 AMBER 1 3 3VPCU

RIGHT-ANGLE-LED

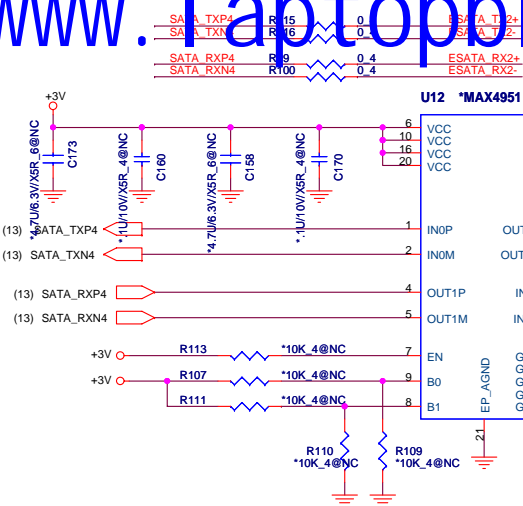
(32) SUSPEND_LED# R502 221F/4 4 1 LED2 SUSPEND_LED_GREEN 1 3 3VSUS **Suspend**





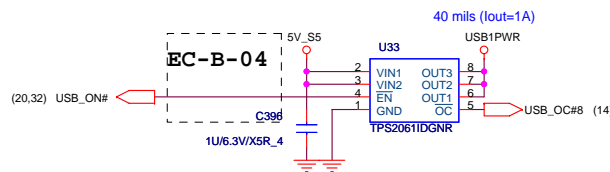


E-SATA RE-DRIVER

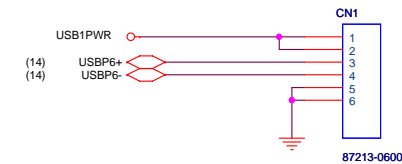


EN	B0	B1	FUNCTION
0	X	X	Standby
1	0	0	Standard SATA Output
1	1	0	Ch 0 Boost Output
1	0	1	Ch 1 Boost Output
1	1	1	Ch 0,1 Boost Output

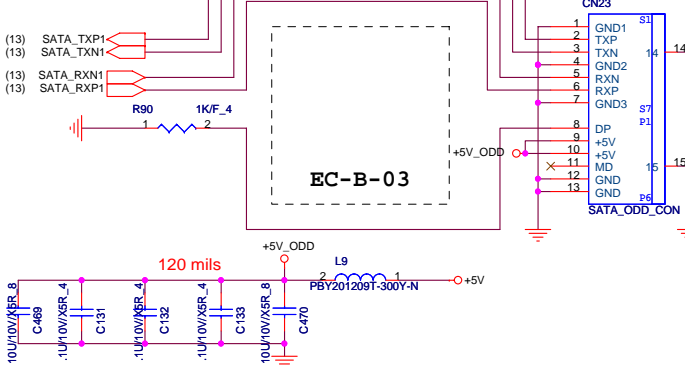
USB x1



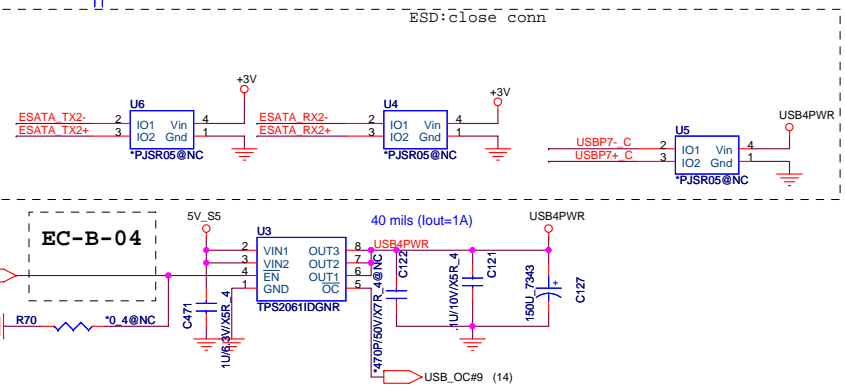
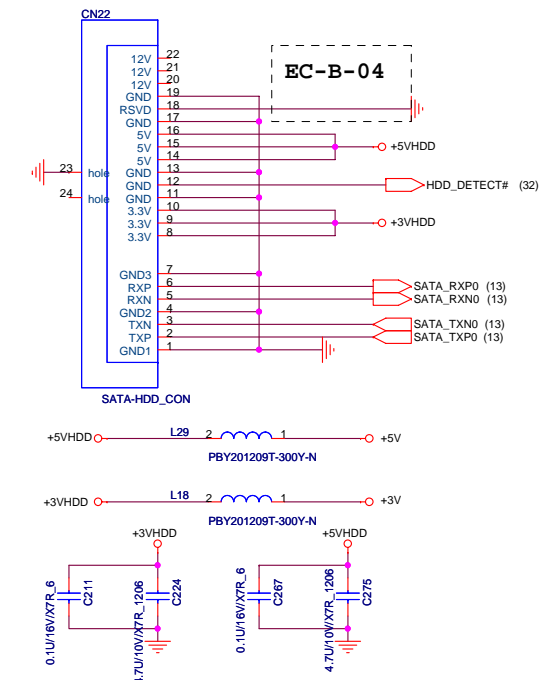
REAR_USB/B connector



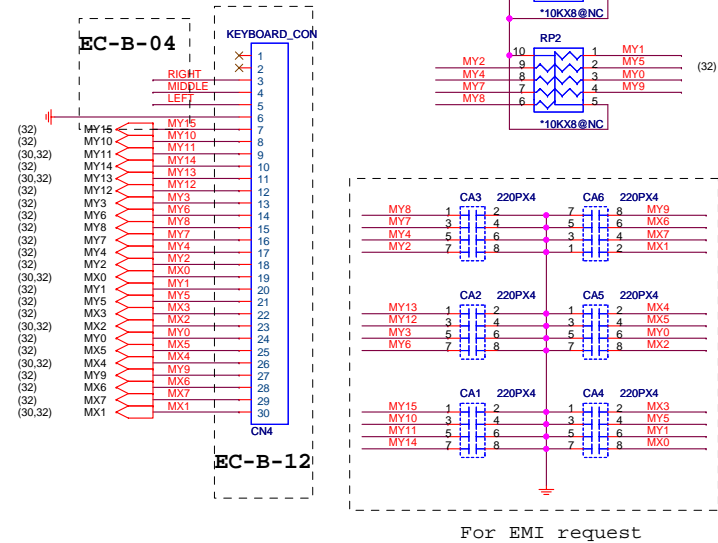
SATA CD-ROM



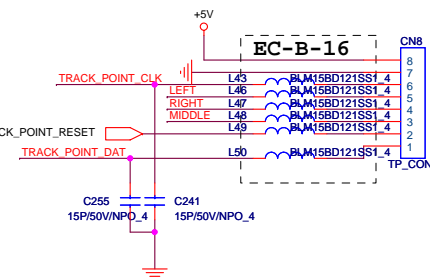
SATA-HDD



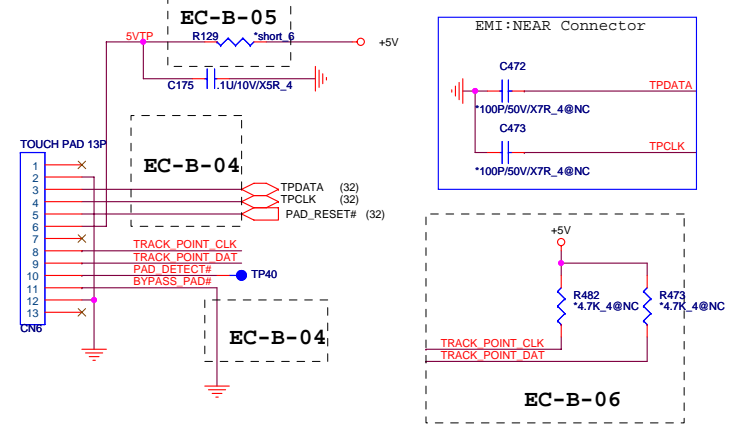
KEYBOARD connector



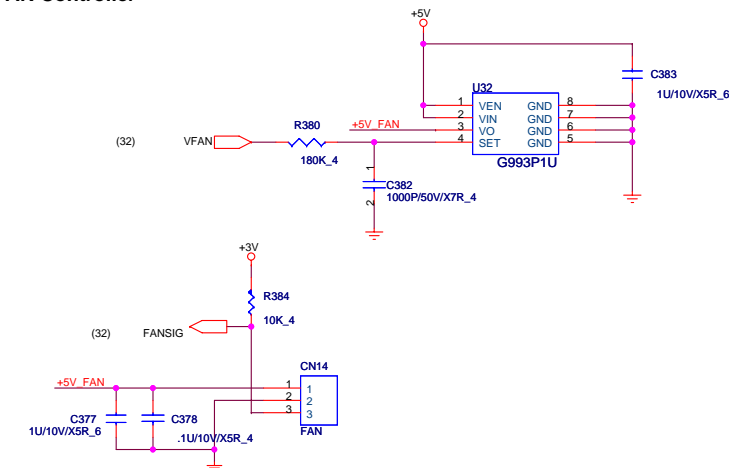
TRACK POINT



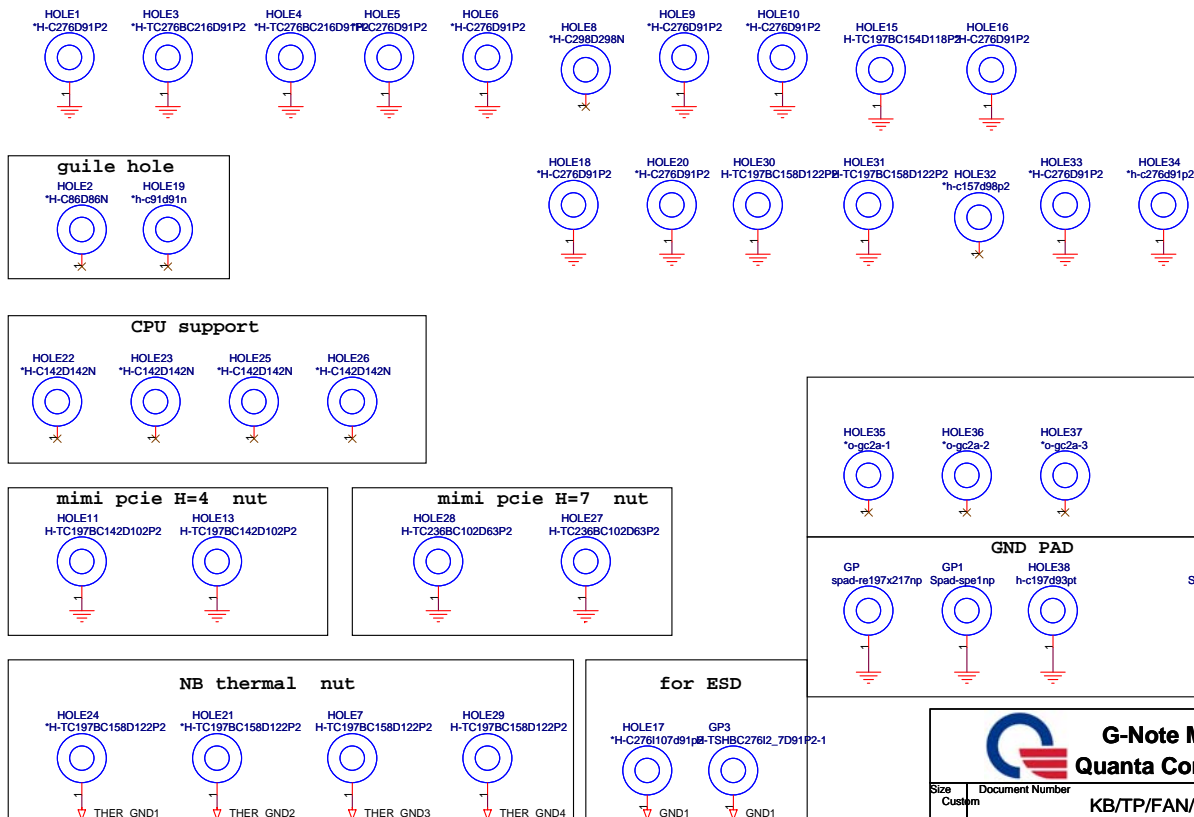
TOUCH PAD



FAN Controller

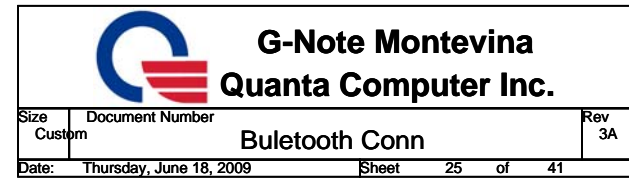


SCREW HOLE/GNDPAD



G-Note Montevina
Quanta Computer Inc.

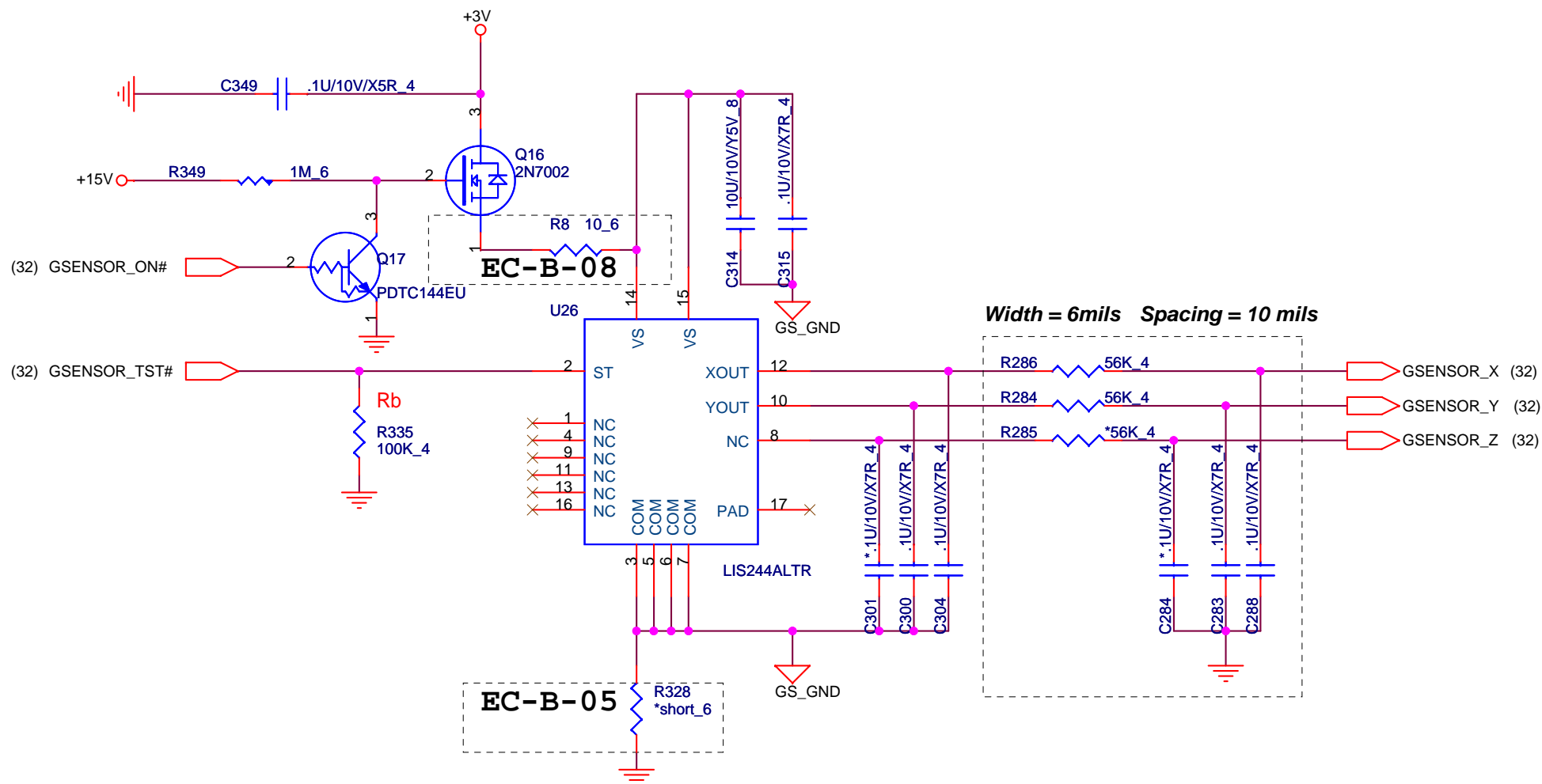
Size Custom Document Number KB/TP/FAN/SCREW HOLE Rev 3A
 Date: Thursday, June 18, 2009 Sheet 24 of 41



G-SENSOR (2-Axial)

www.laptopbl ue.vn

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G-Note Montevina
Quanta Computer Inc.

Size
A

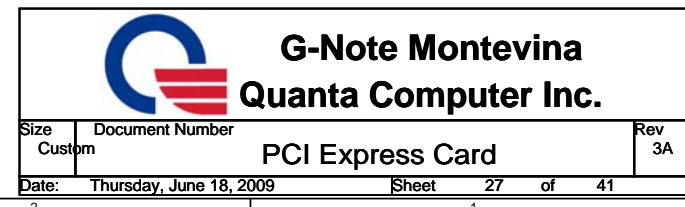
Document Number

G-SENSOR

Rev
3A

Date: Thursday, June 18, 2009

Sheet 26 of 41



EC-B-02

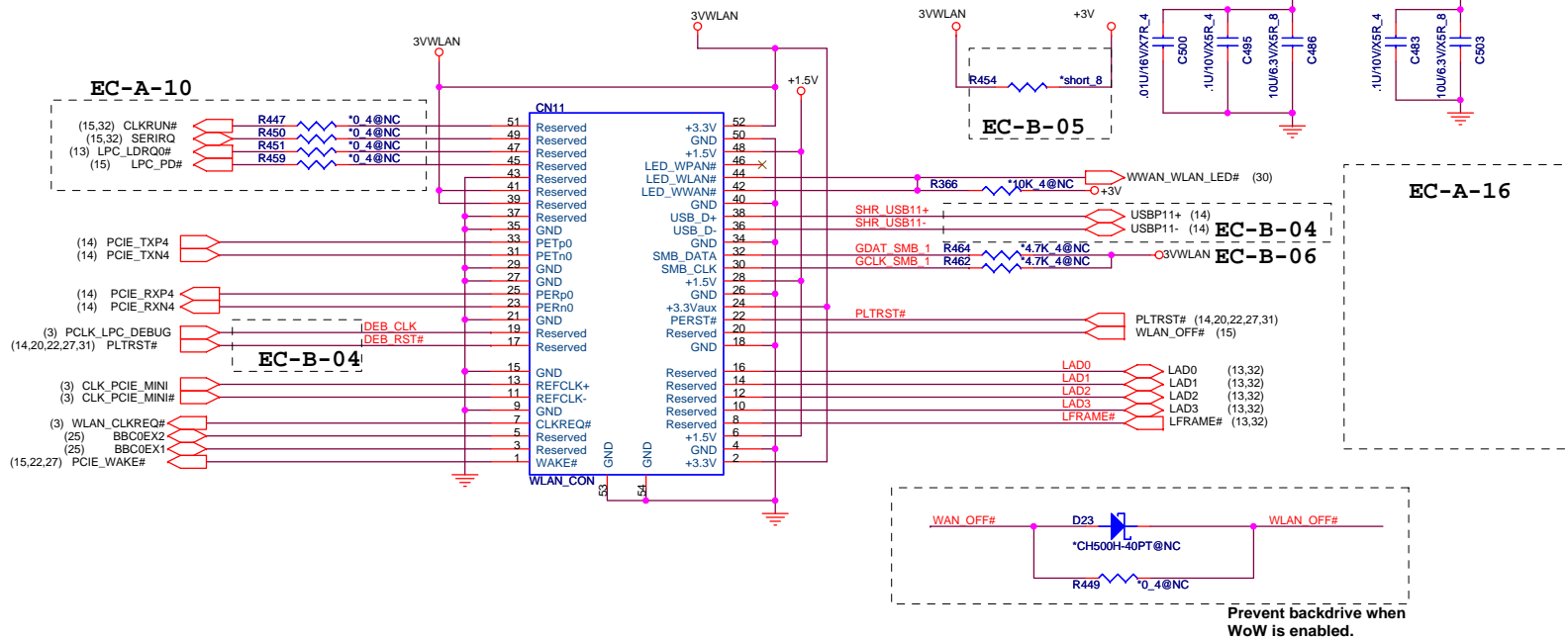


G-Note Montevina
Quanta Computer Inc.

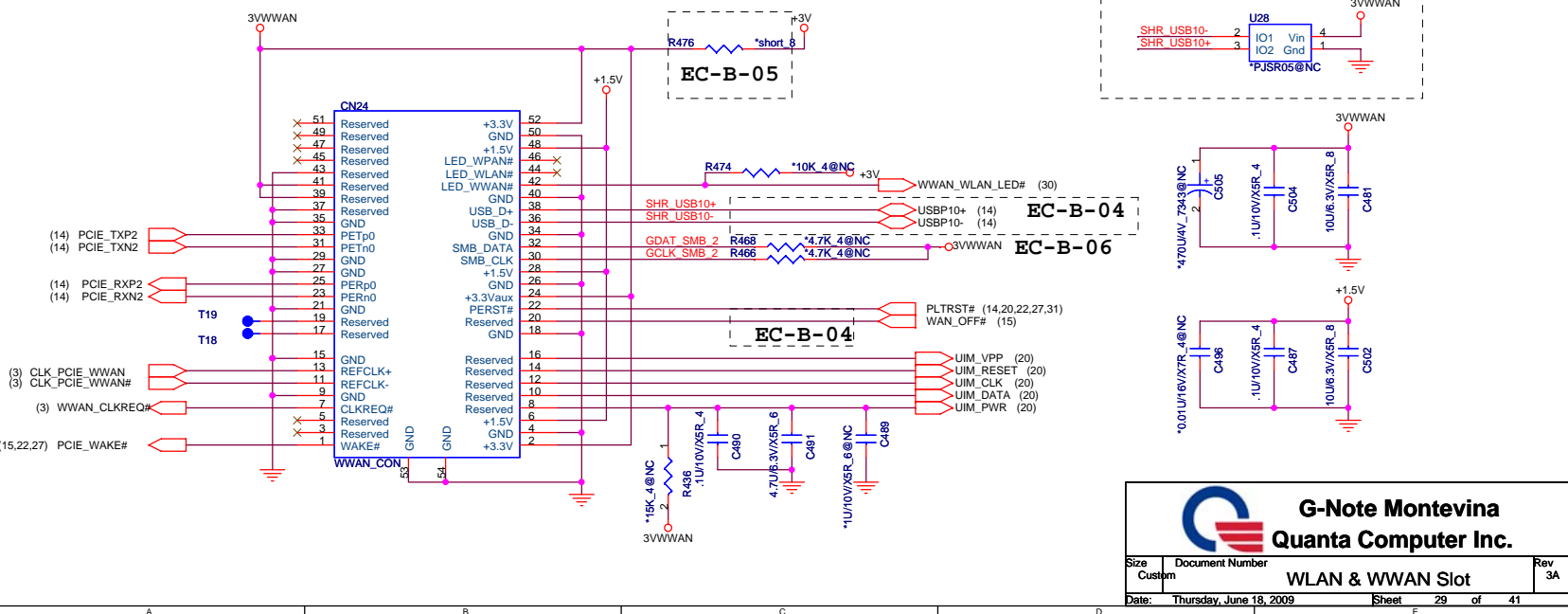
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Date: Monday, June 01, 2009		
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Mini PCI-E Card (F2) (WLAN/ WiMAX)

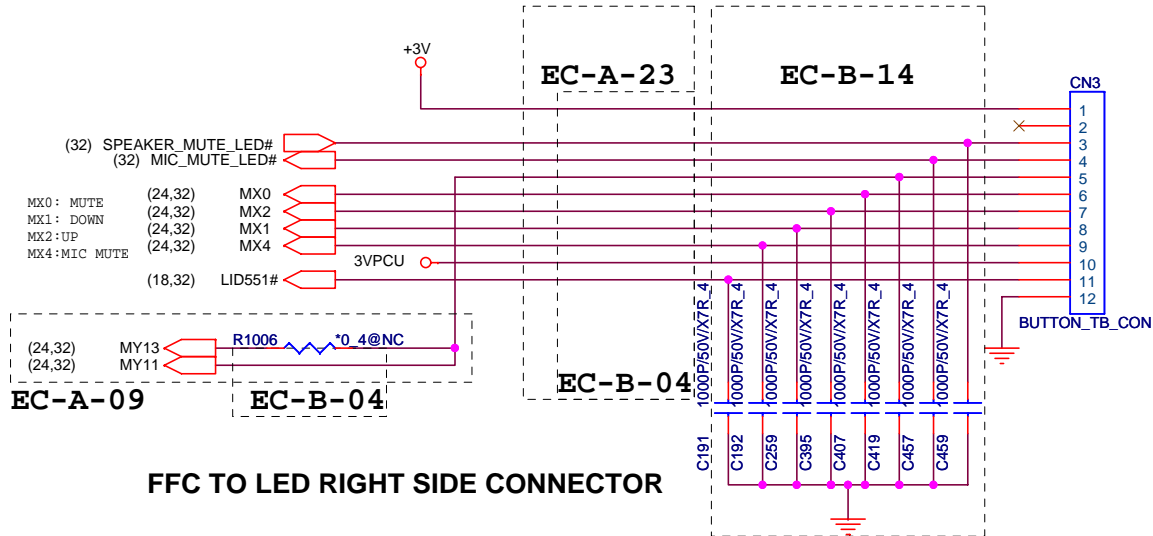
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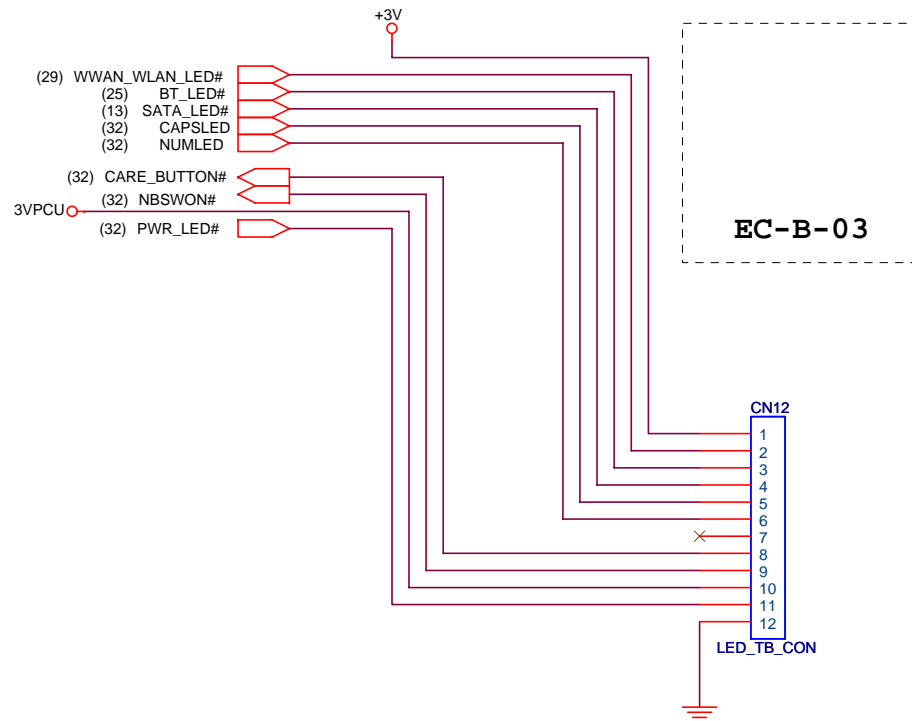
Mini PCI-E Card (F1) WWAN(W/SIM/Robson)



FFC TO KBD LEFT SIDE CONNECTOR



FFC TO LED RIGHT SIDE CONNECTOR



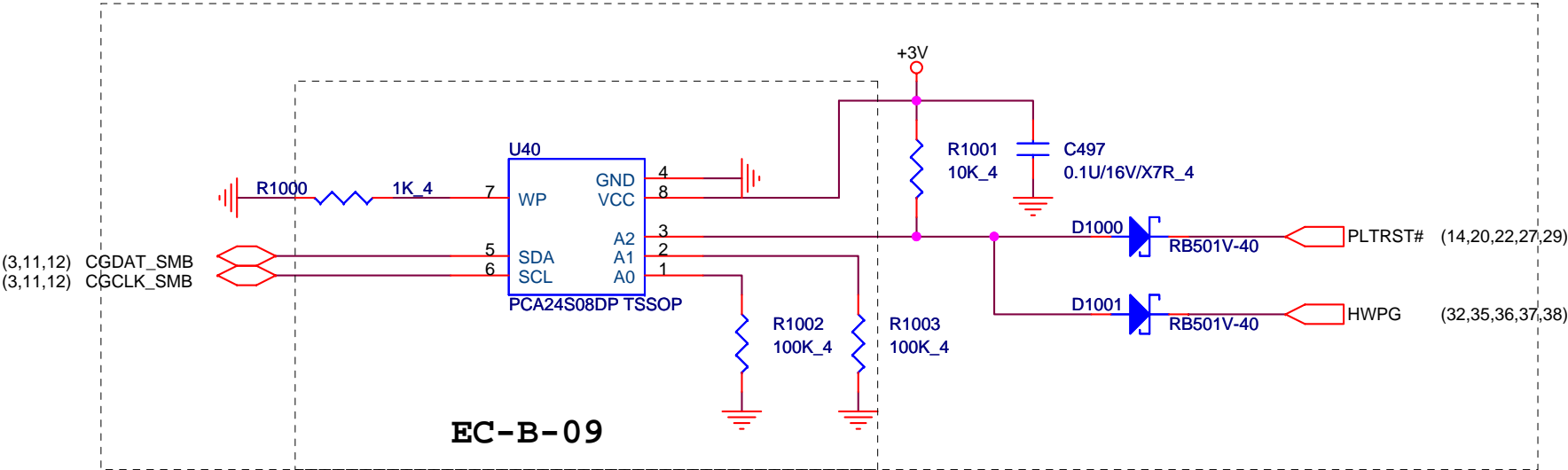
LOGO LED

EC-B-24



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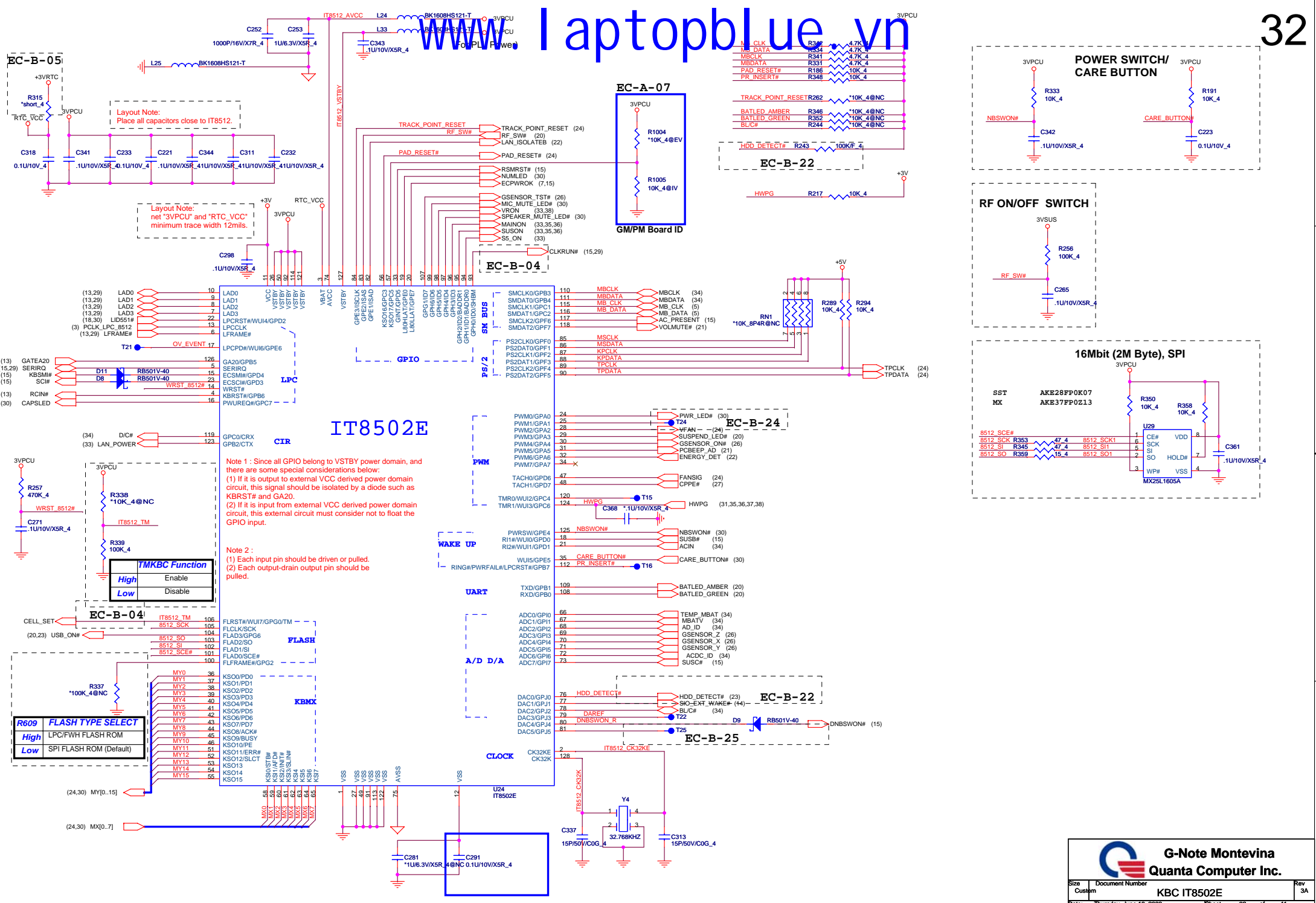
EC-A-04



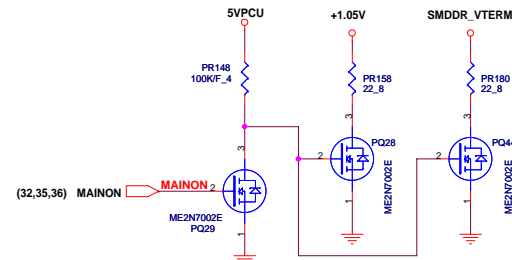
EC-B-09



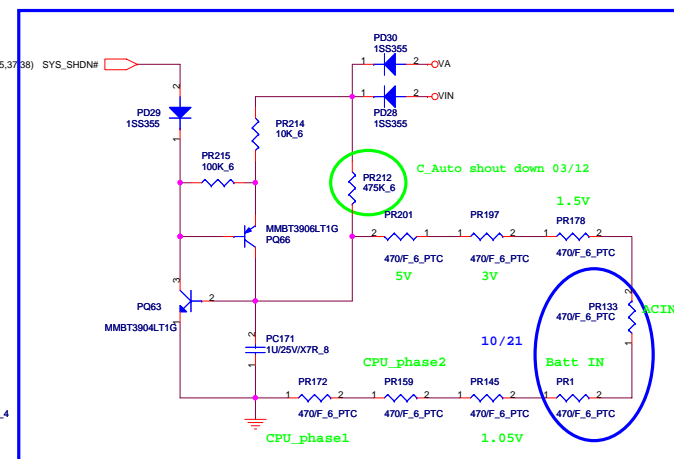
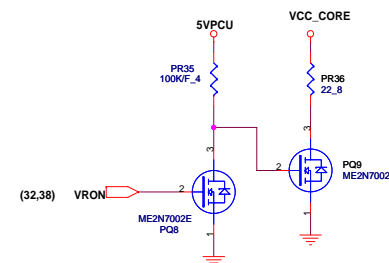
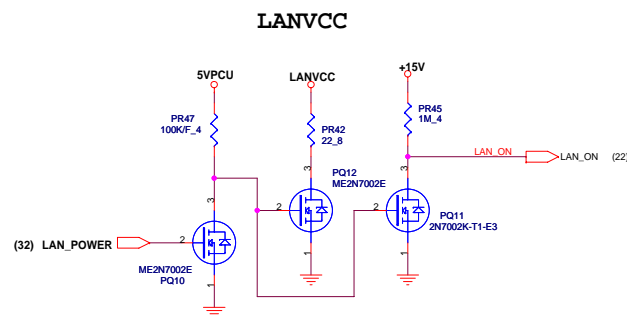
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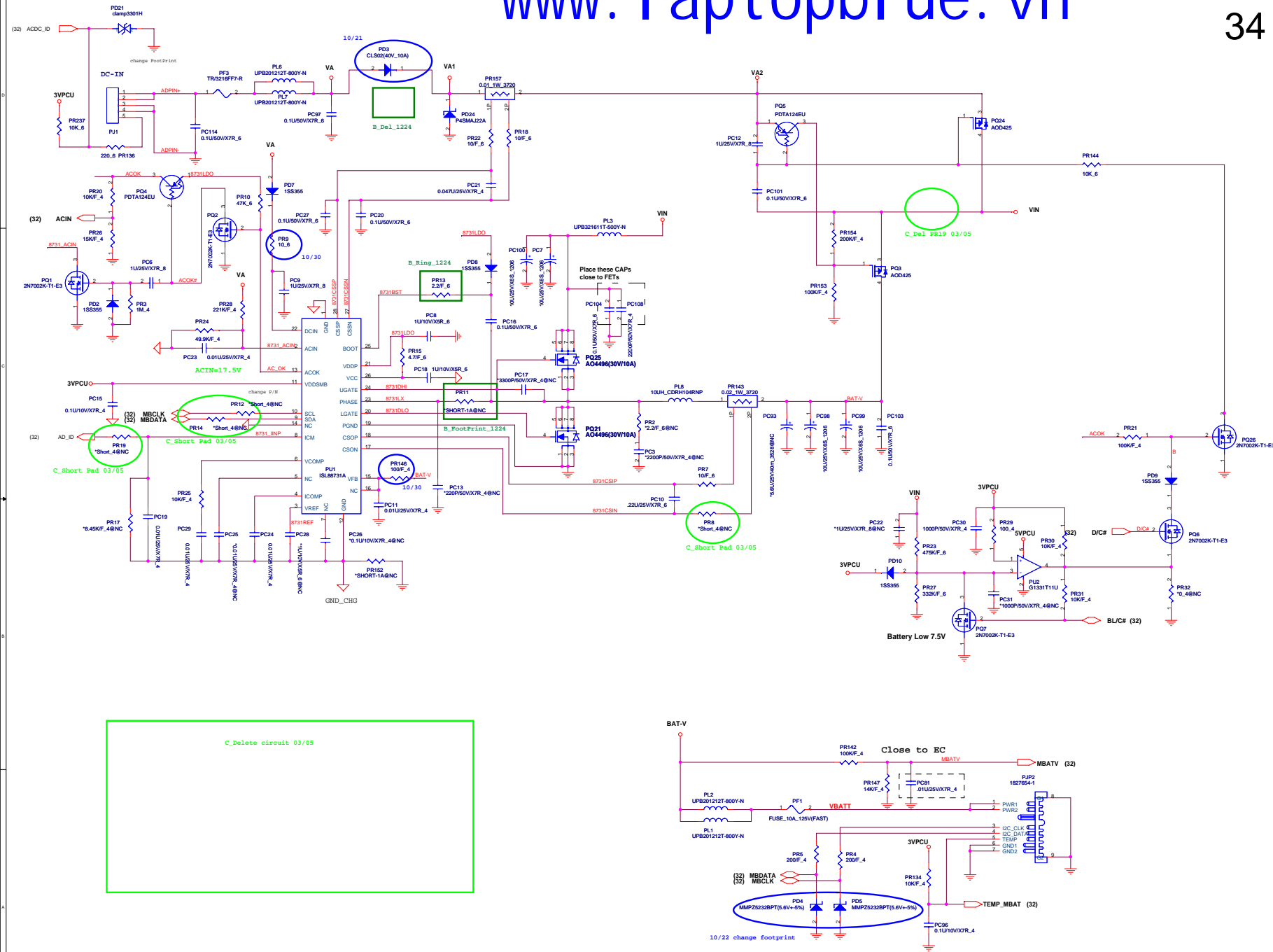


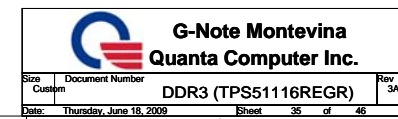
+1.05V, SMDDR_VTERM

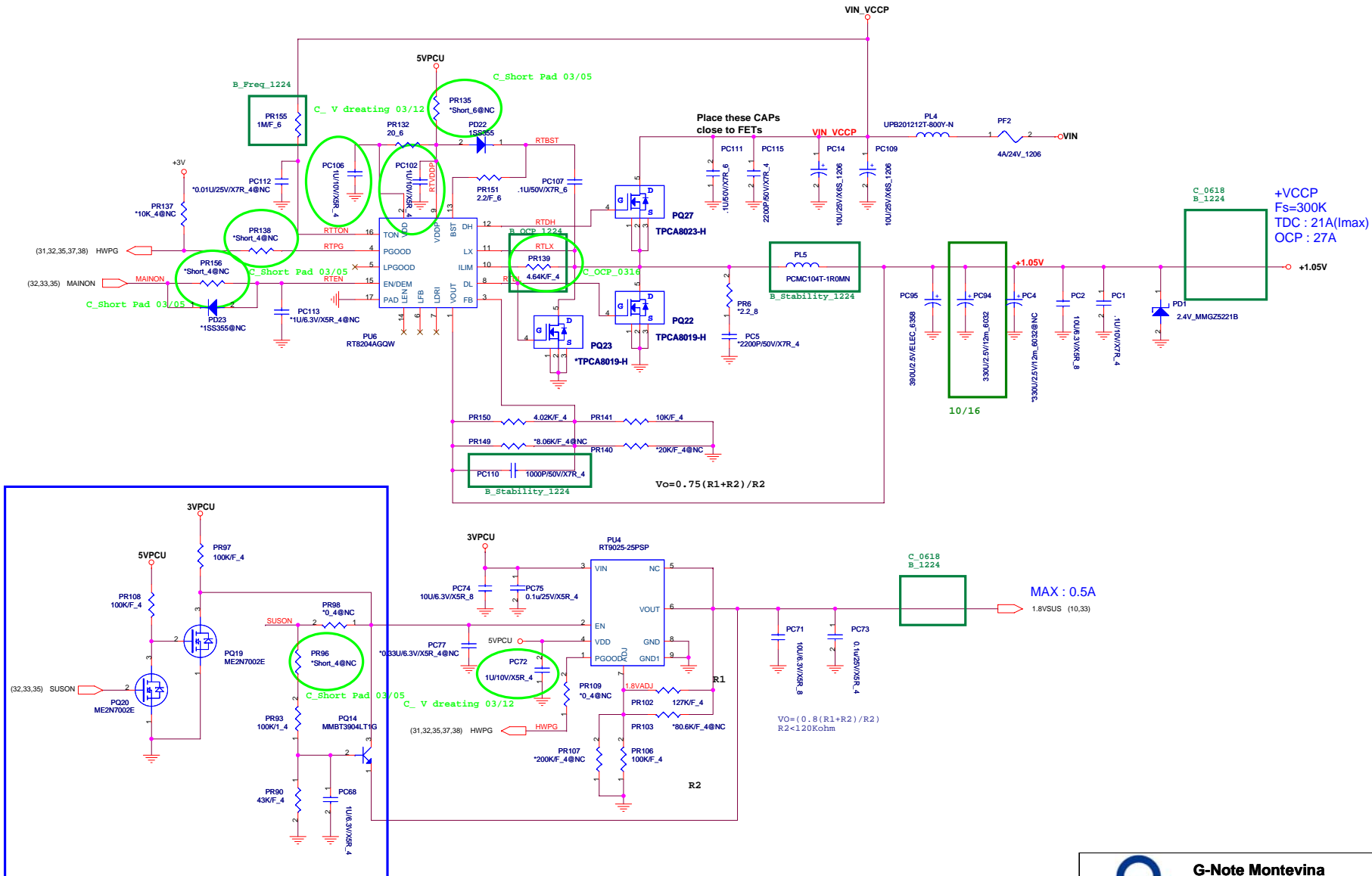


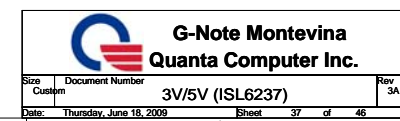
VCC CORE

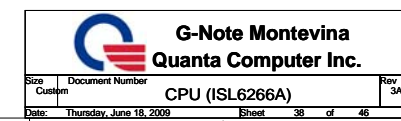


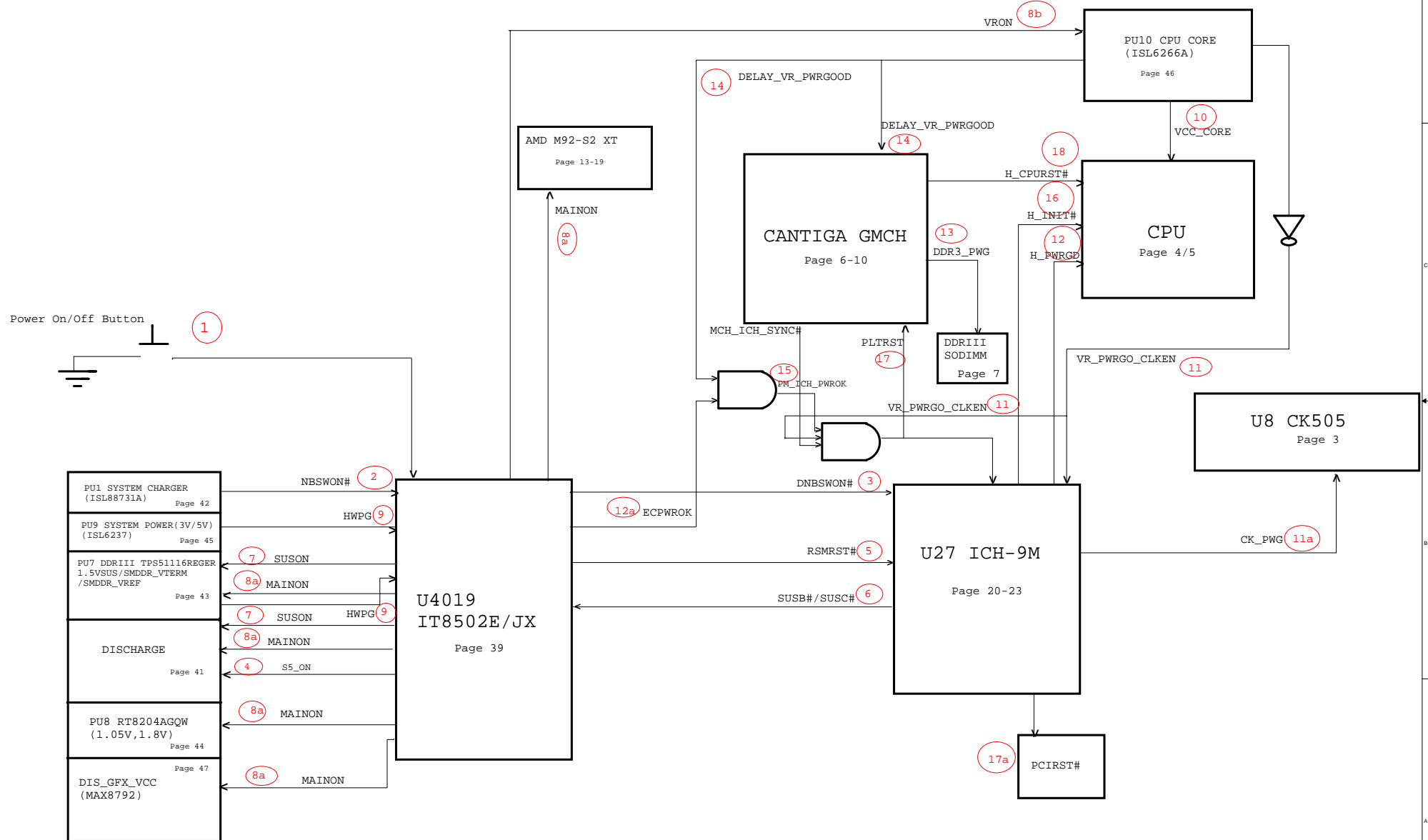












Revision	Date	Phase	Change List	Release Schematic Date	Release Gerber File Date
1A		DV	Initial release		

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

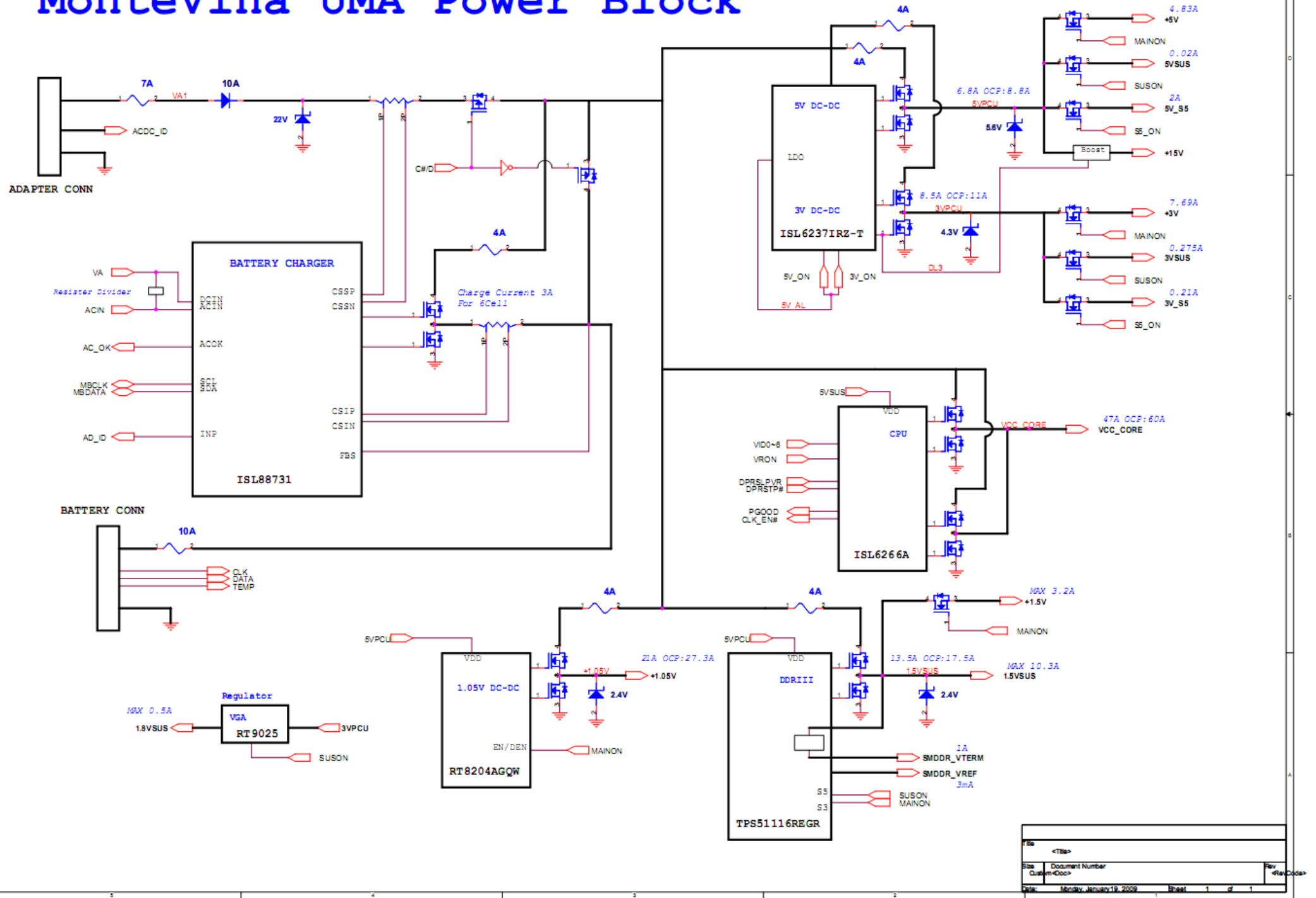
CAPACITOR

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



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MonteVina UMA Power Block



[illegible][illegible]

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)

EC NO.	Page	date	Location	description
EC-A-23	30	1/6	add R125 R126 R227 R367 R375 del D14	EMI EMI EMI
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

stage	EC NO.	Page	date	Location	Description
EC-B-15	21	3/9	Delete C246~C249(NC)		
EC-B-16	3	3/9	Delete R325,R292,R232 add L43,L46~L50		delete audio reserve parts for RF request
EC-B-18	18	3/12	Delete C181(NC),C182(NC) Add R123 C176,C144 POP		for EMI request
EC-B-19	22	3/12	change R579,R580--> 0.1u		for LAN realtek design guide
EC-B-20	17,25	3/13	Add F3(LCD),F4(CAMERA),F5(BULETOOTH)		for Combustion test
EC-B-21	17	3/17	Delete D15-D22 Add RV8-RV15(change type)		for ESD request(CRT CDE TEST)
EC-B-22		3/30			change hdd_dectet form SB control to EC(76pin)
EC-B-23	22	4/6	Add r89,r93,r94,r96		for LAN 10/100M
EC-B-24	18,30,32	4/6	del R170(100K),R150(10k),R151(510) Q11,Q12		remove logo LED
EC-B-25	18,32	4/6	del R122(150),R117(1M),C179(.1u), Q6,Q8		remove think_light
EC-B-26	20	4/8	change R500,R501,R502 from 330 to 221ohm		for LED luminance
EC-B-27	22	4/9	SWAP U13,U10 & u11		
EC-B-28	15	4/14	R312 pop		lenovo POP/Depop comment :AC_present should be connect
EC-C-1	17	4/29	RV8-RV15 rotate 180		ESD parts correct PIN1
EC-C-2	22	6/9	Add R1007		Add 1M resistor to improve EOS(Electrical Overstress) ability
EC-C-3	18	6/9	CN5,Delete R197,R198,R218,R219		Connect pin 29 and 32 to GND and remove relate parts due to panel detect no function.
EC-C-4	15	6/9	R312		Change R312 to short pad
EC-C-5	19	6/16	R139, R134, R425 change to 4.7K and Assembly C183		To solve BenQ G2400W HDMI Display detection failure problem

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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