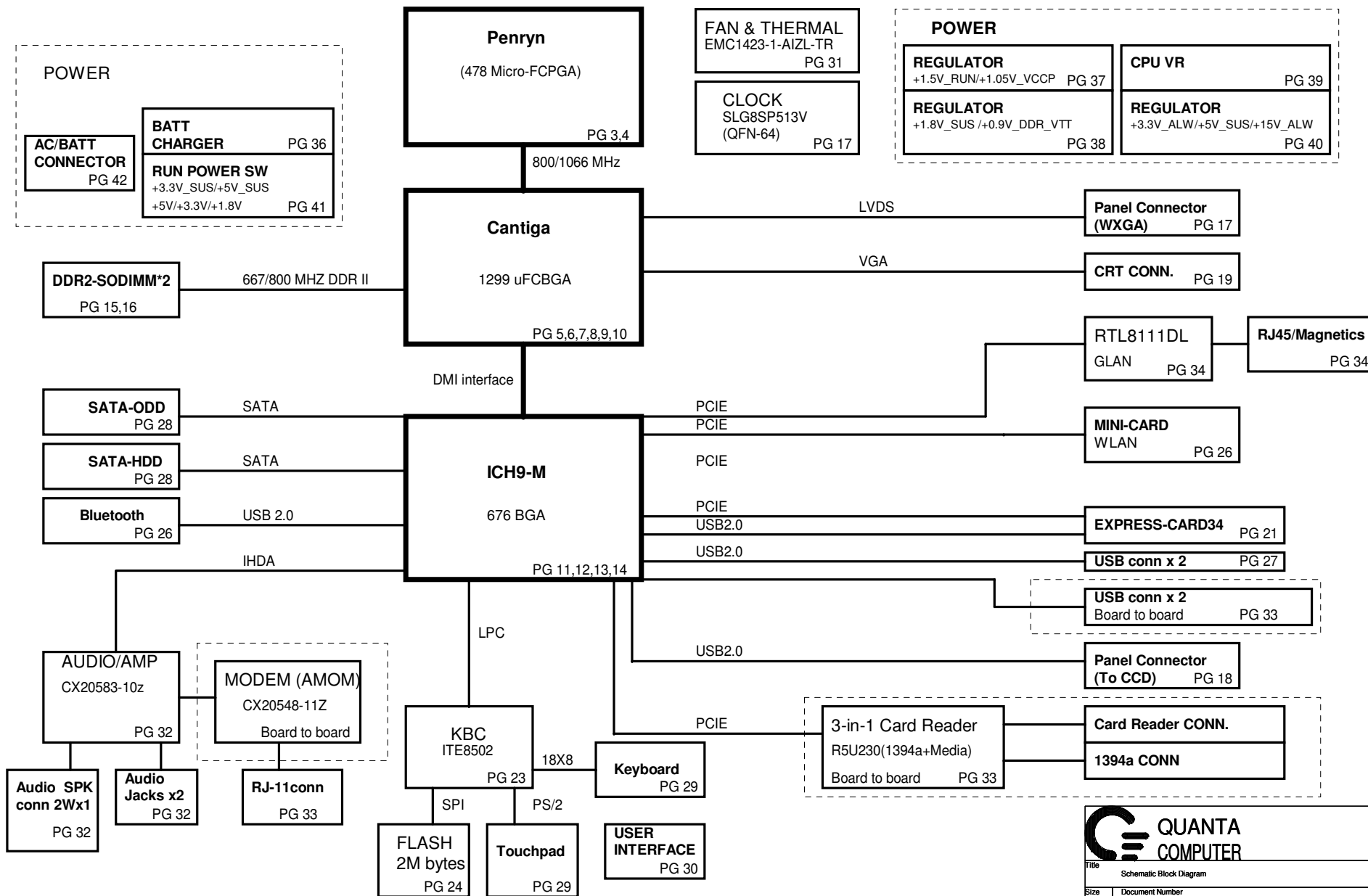


VM9M Block Diagram Intel UMA

VER : F3B




Title		
Schematic Block Diagram		
Size	Document Number	Rev
VM9M		1A
Date:	Monday, June 08, 2009	Sheet 1 of 46

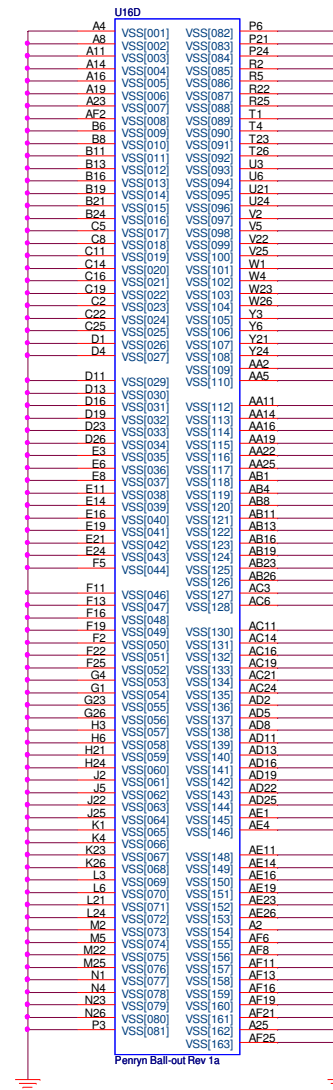
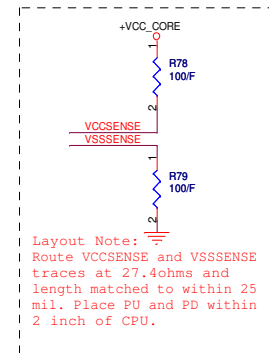
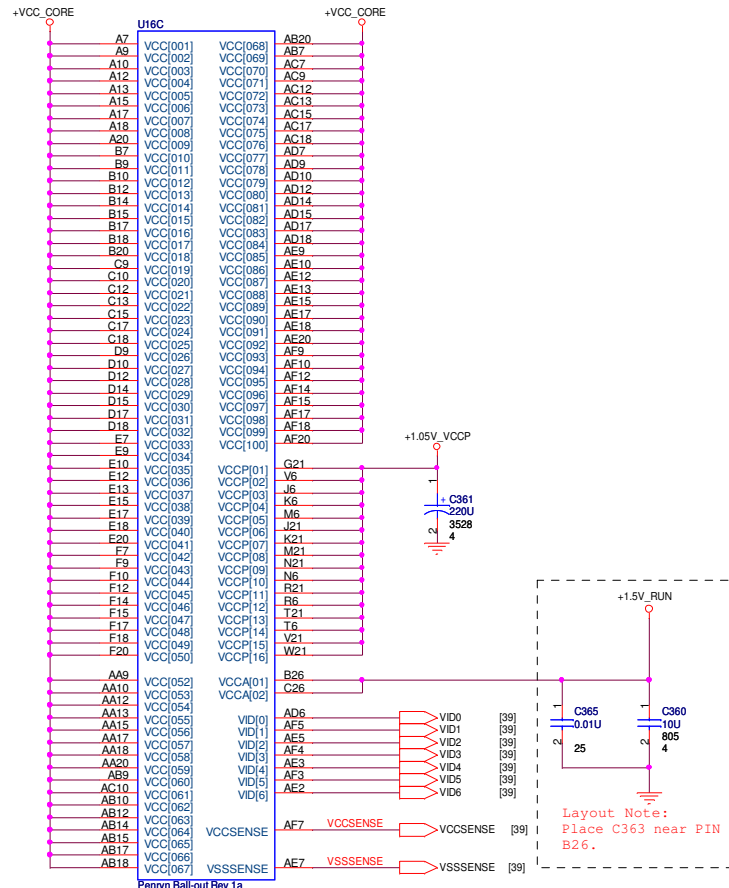
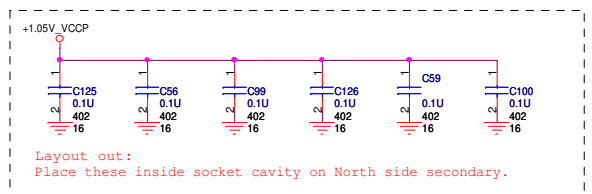
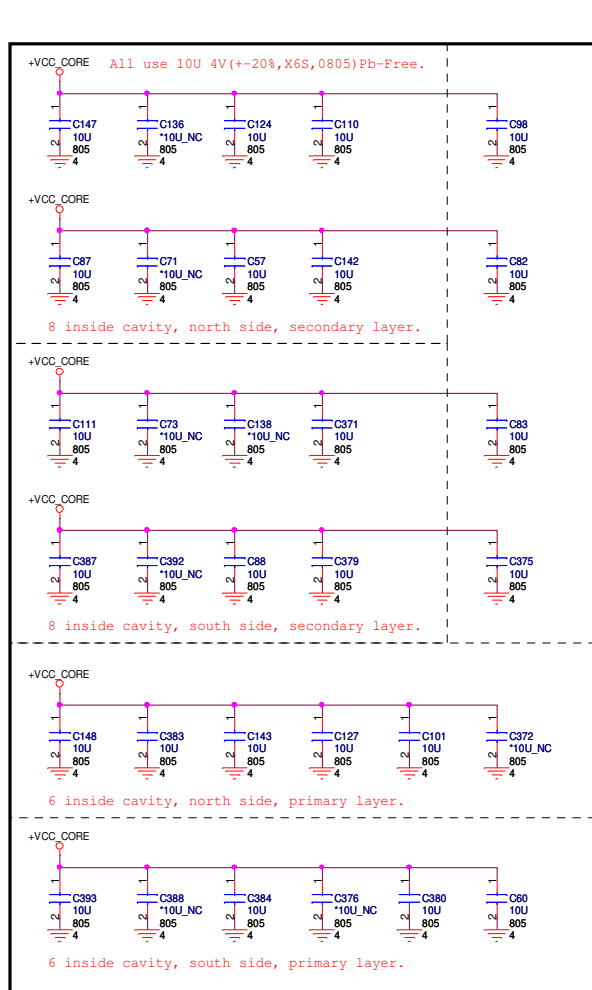
Table of Contents

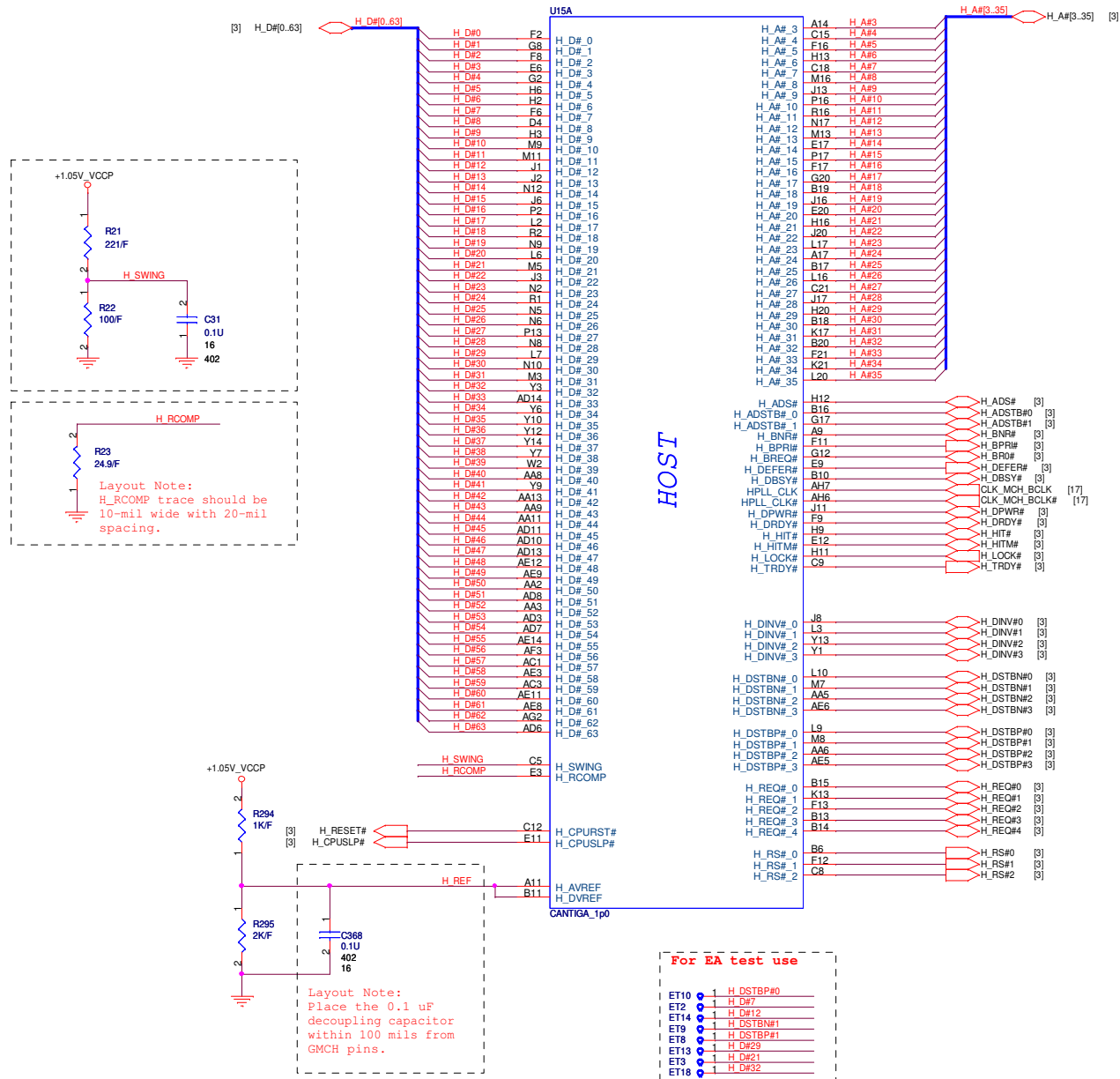
PAGE	DESCRIPTION
1	Schematic Block Diagram
2	Front Page
3-4	Penryn
5-10	Cantiga
11-14	ICH9M
15-16	DDRII SO-DIMM(200P)
17	Clock Generator
18	LCD Conn.
19	CRT Conn
21	Express card
23	SIO (ITE8512)
24	FLASH/RTC
25	BLANK PAGE
26	Mini Card / BT
27	USB
28	SATA Conn
29	TP / KEYBOARD
30	SWITCH /LED
31	FAN & Thermal
32	Audio CODEC/Phone Jack
33	Board To Board
34	LAN / TRANSFORM
35	BLANK PAGE
36	Battery Selector & Charger
37	1.05VCCP / 1.5VRUJN
38	DDR2_1.8VSUS, 0.9V
39	CPU_MAX17410(2phase)
40	MAX17020 (+5.5V,+3.3V)
41	RUN Power Switch
42	DCIN,Batt
43	PAD& SCREW
44	EMI CAP
45	SMBUS BLOCK
46	Power Block Dianram

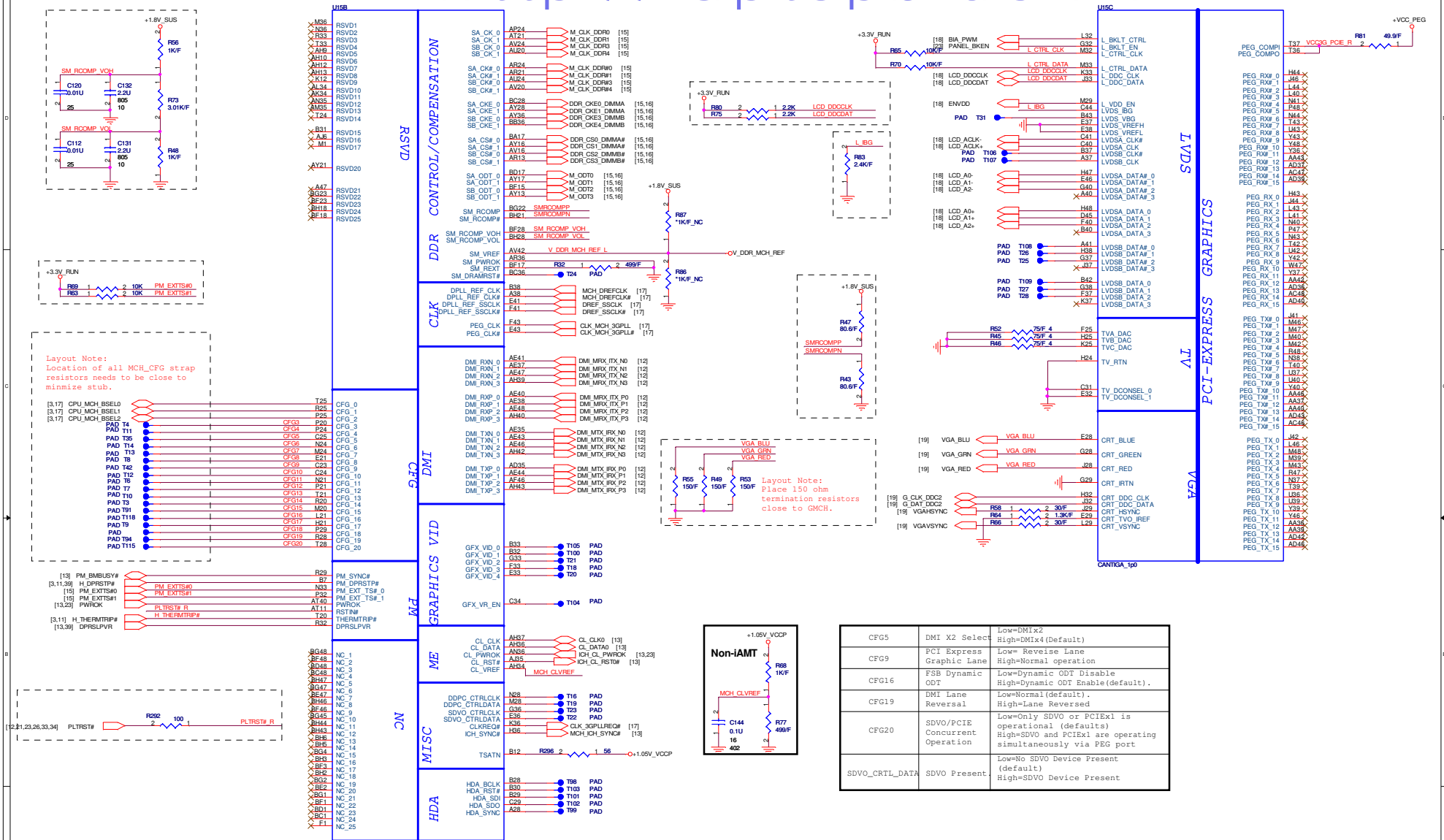
Power States

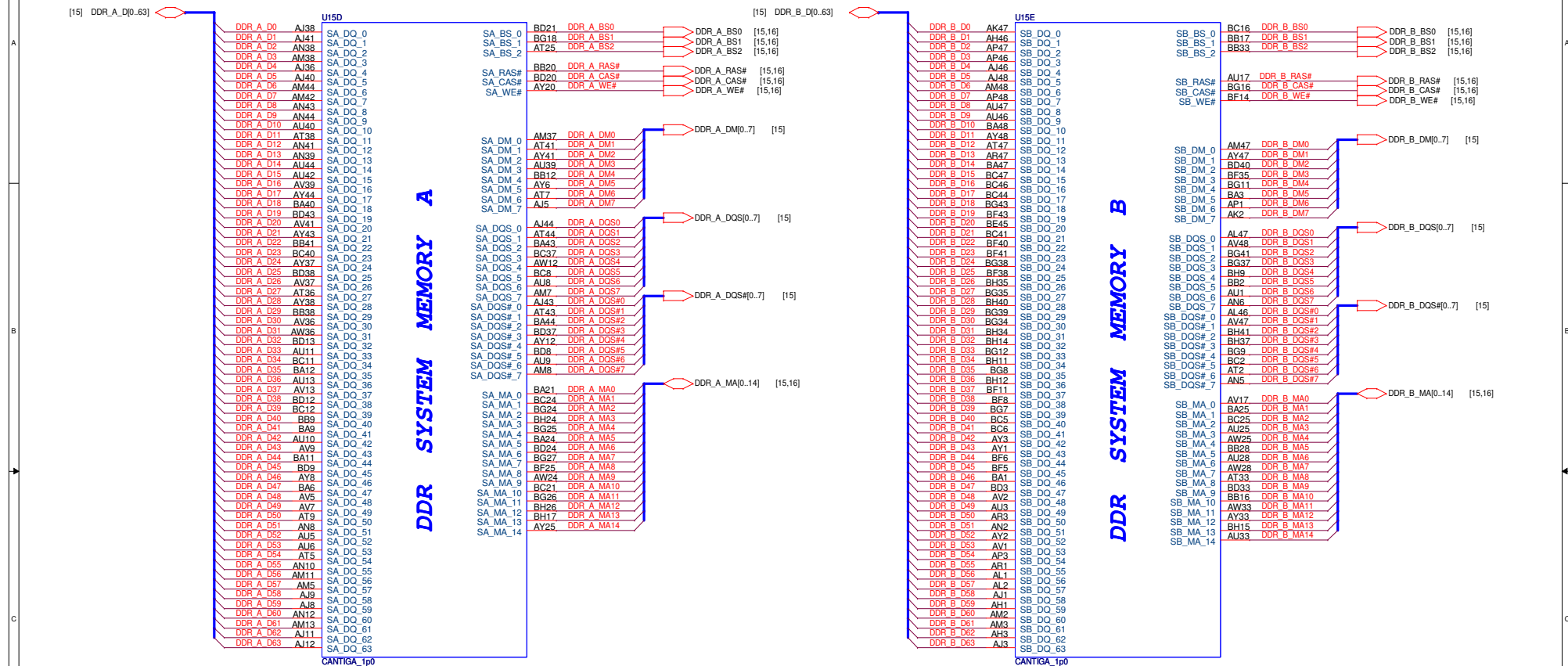
POWER PLANE	VOLTAGE	PAGE	DESCRIPTION	CONTROL SIGNAL	ACTIVE IN
+PWR_SRC	10V~+19V	4,18,24,36,37,3,8,39,40,44	MAIN POWER		S0~S5
+RTC_CELL	+3.0V~+3.3V	11,14,23,24	RTC		S0~S5
+3.3V_ALW	+3.3V	3,23,24,30,35,36,38,40,41,42,45	8051 POWER	ALWON	S0~S5
+5V_ALW2	+5V	37,38,40,41,42	LCD/CHARGE POWER	ALWON	S0~S5
+15V_ALW	+15V	11,18,40,41	LARGE POWER	+5V_ALW	S0~S5
+3.3V_LAN	+3.3V	34	LAN POWER		
+5V_SUS	+5V	14,27,30,39,40,41,44	SLP_S5# CTRLD POWER	SUS_ON	
+3.3V_SUS	+3.3V	3,11,12,13,14,18,25,30,37,39,41,45	SLP_S5# CTRLD POWER	3.3V_SUS_ON	
+1.8V_SUS	+1.8V	6,8,9,15,37,38,41	SODIMM POWER	DDR_ON	
+0.9V_DDR_VTT	+0.9V	16,38,41	SODIMM POWER	0.9V_DDR_VTT_ON	
+5V_RUN	+5V	14,18,19,21,25,28,29,30,31,32,41,44	SLP_S3# CTRLD POWER	RUN_ON	
+3.3V_RUN	+3.3V	3,6,8,9,11,12,13,14,15,17,30,31,32,34,18,19,20,21,23,25,26,28,41,44,45	SLP_S3# CTRLD POWER	3.3V_RUN_ON	
+1.5V_RUN	+1.5V	4,9,14,26,37,41,44	CALISTOGA/ICH8 POWER	1.5V_RUN_ON	
+1.05V_VCCP	+1.05V	3,4,6,8,9,11,14,37,44	CPU/CALISTOGA/ICH8 POWER	1.05V_RUN_ON	
+VCC_CORE	+0.7V~+1.77V	4,39	CPU CORE POWER	IMVP_VR_ON	
+LCDVCC	+3.3V	18	LCD Power	LCDVCC_TST_EN & ENVDD	
+5V_MOD	+5V	28	Module Power		
+5V_HDD	+5V	28	HDD Power		
+PBATT	+10V~+17V	42	MAIN BATTERY	CHG_PBATT	

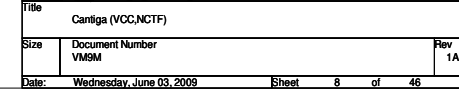
GND PLANE	PAGE	DESCRIPTION
 GND	ALL	

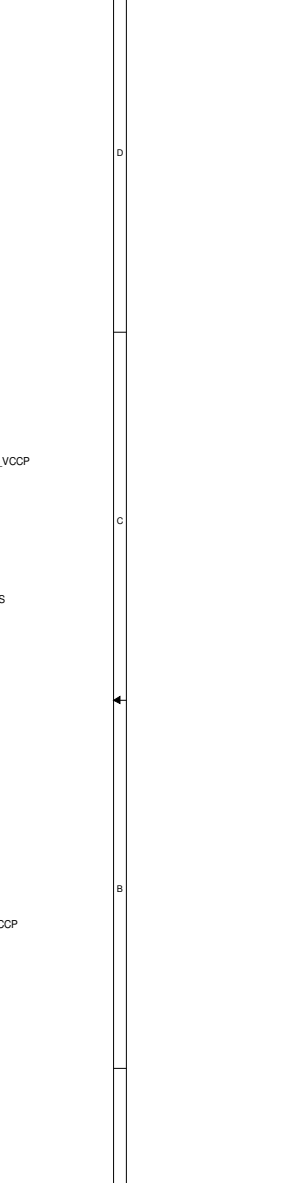
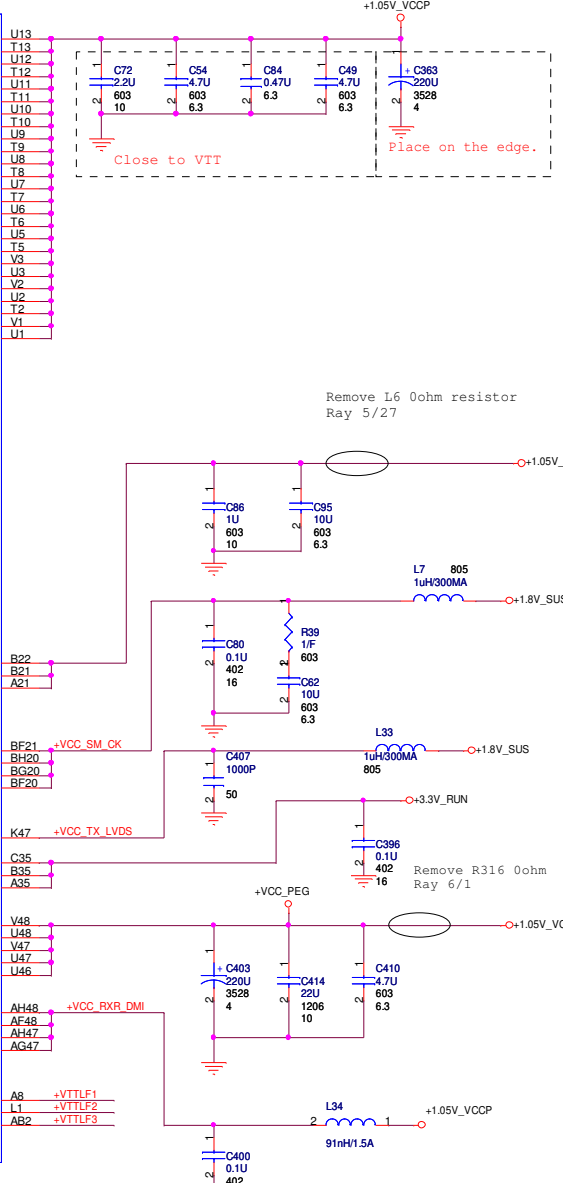
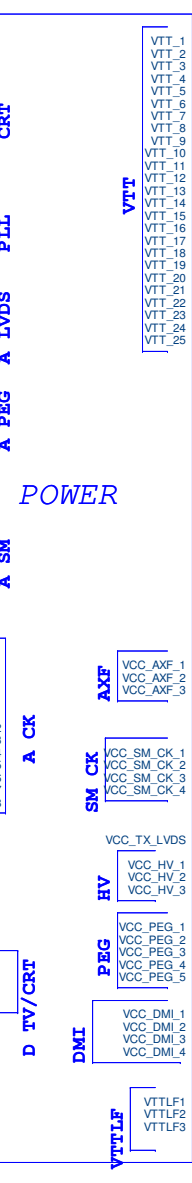
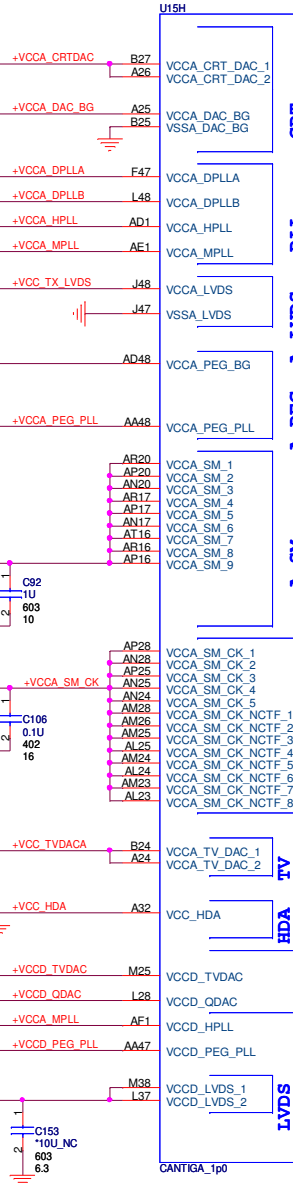
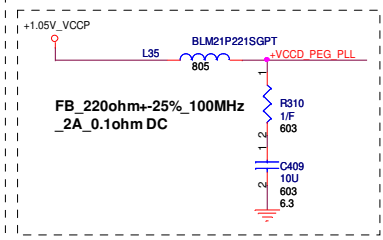
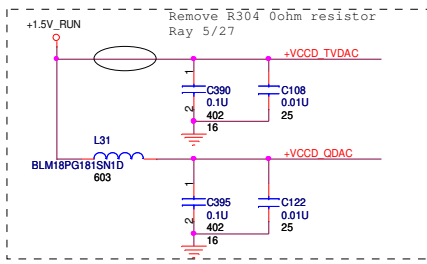
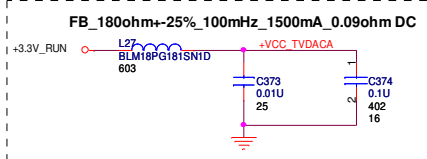
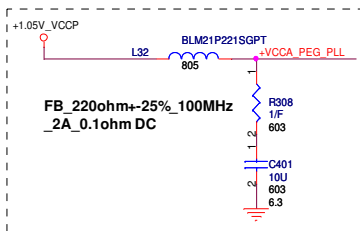
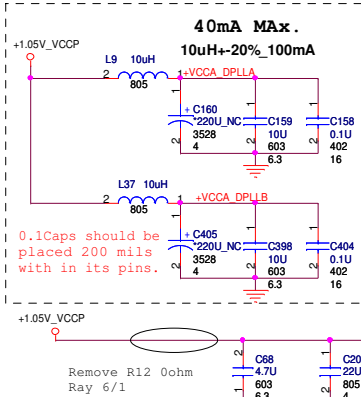
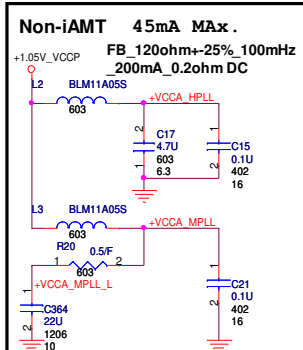
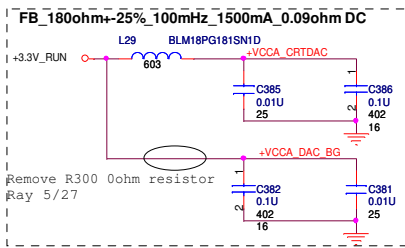




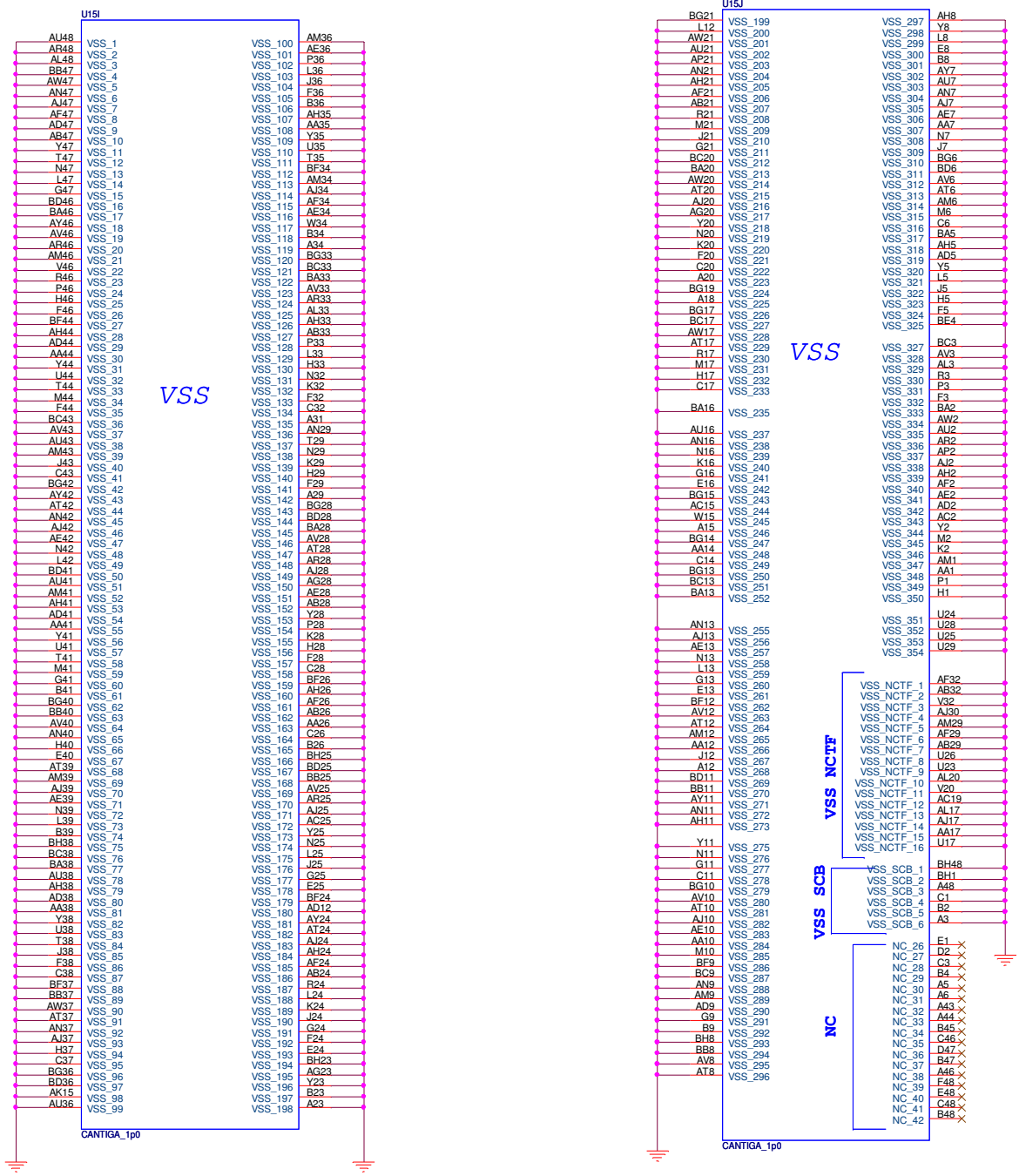




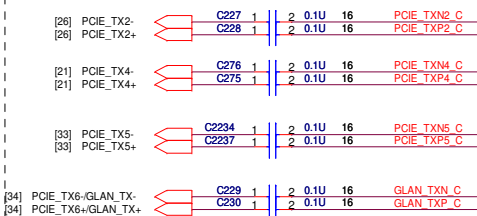




Title	Cantiga (POWER)
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	VMSM
Date:	Saturday June 06, 2009
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Place TX DC blocking caps close ICH9.



MiniWWAN

MiniWLAN

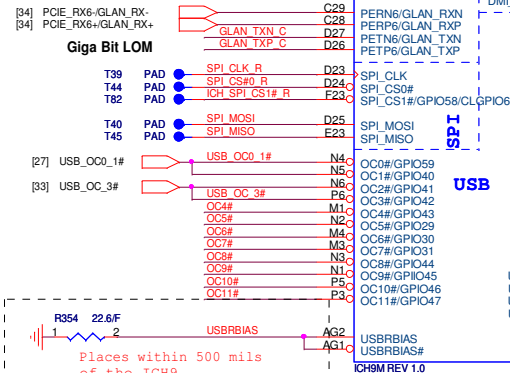
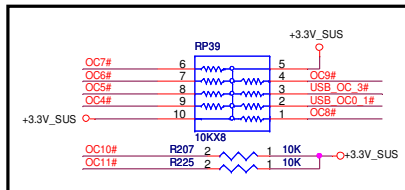
MiniWPAN

Express Card

1394+Cardreader

Giga Bit LOM

Boot BIOS Strap			
	GNT0#	SPI_CS1#	
LPC	11	No stuff	No stuff
PCI	10	No stuff	Stuff
SPI	01	Stuff	No stuff

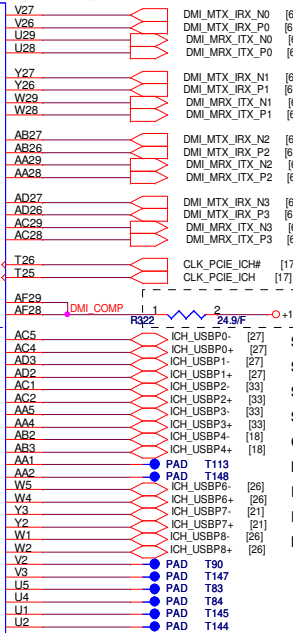


PCI-Express

Direct Media Interface

SPI

USB



Side Pair Left

Side Pair Left

Side Pair Right

Side Pair Right

Camera

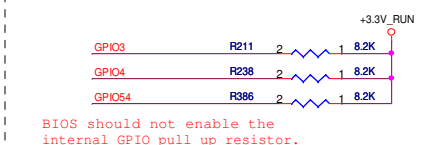
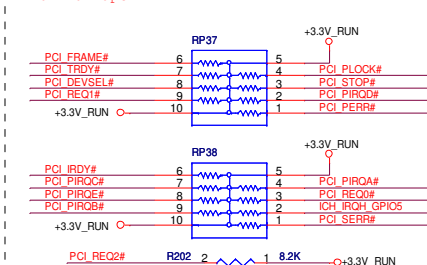
Mini Card (WWAN)

Bluetooth

Express Card

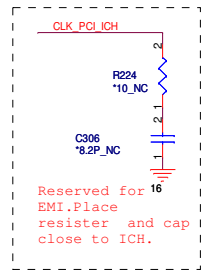
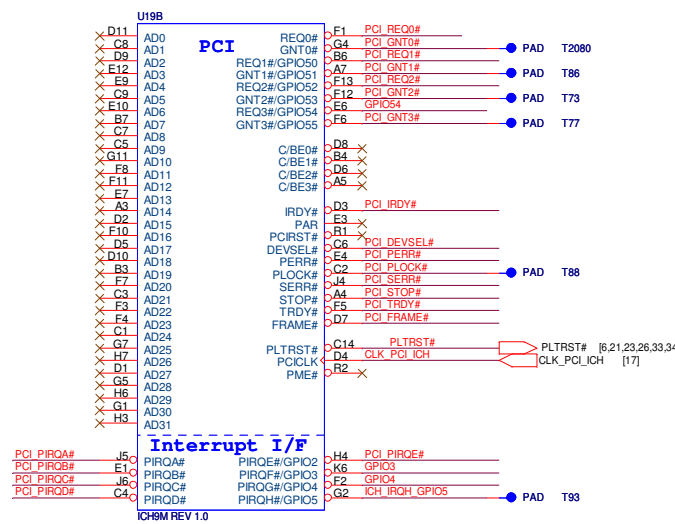
Mini Card (WLAN)

PCI Pullups



PCI

Interrupt I/F



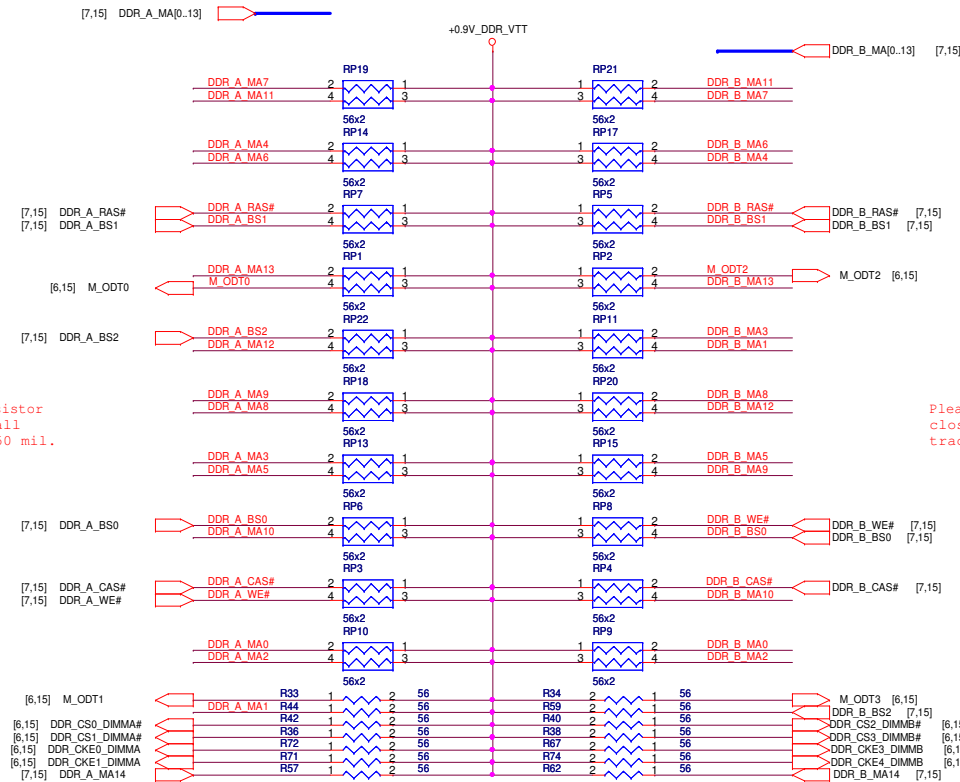
QUANTA
COMPUTER

Title: ICH9-M (USB, DMI, PCIE, PCI)

Size: Document Number: VMSM Rev 1A

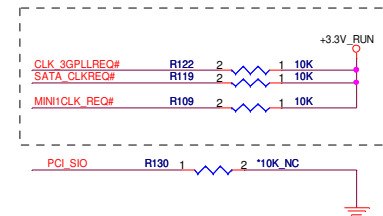
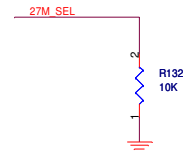
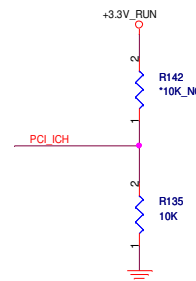
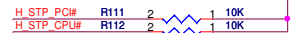
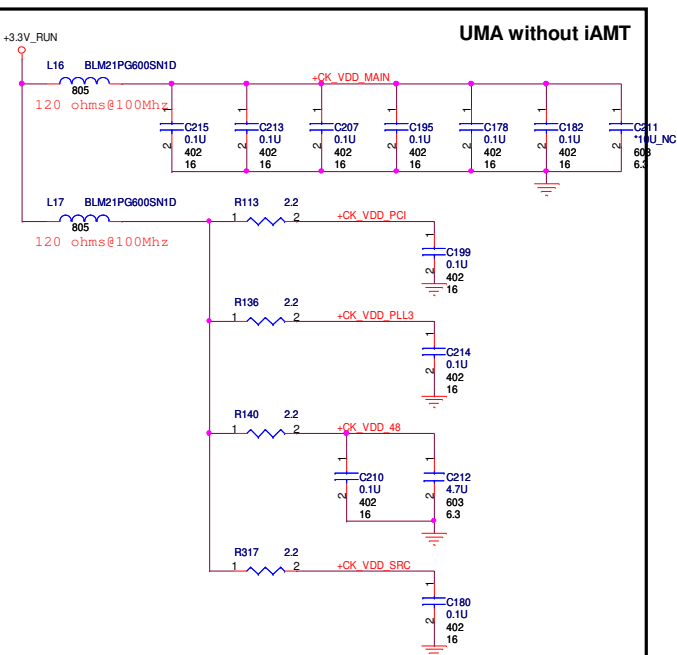
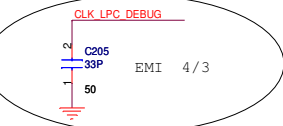
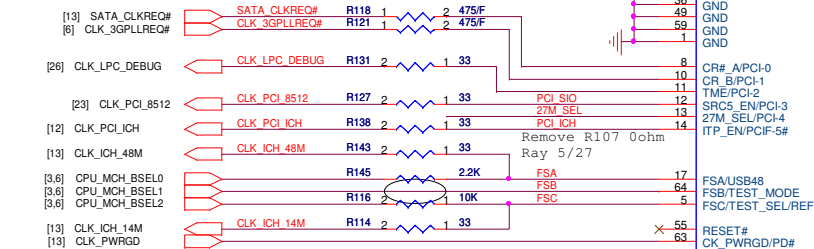
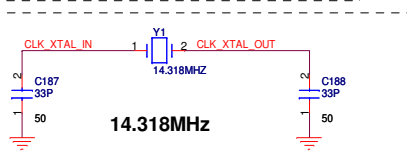
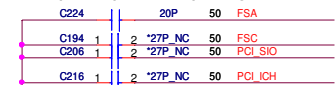
Date: Saturday, June 06, 2009 Sheet 12 of 46





Please these resistor
closely DIMMA,all
trace length<750 mil.

Add capacitor pads for improving WWAN.



FSC	FSB	FSA	CPU	SRC	PCI
1	0	1	100	100	33
0	0	1	133	100	33
0	1	1	166	100	33
0	1	0	200	100	33
0	0	0	266	100	33
1	0	0	333	100	33
1	1	0	400	100	33
1	1	1	RSVD	100	33

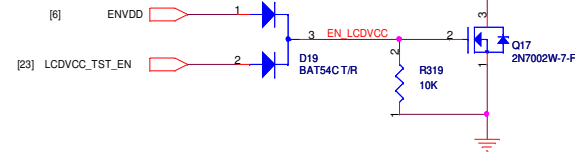
27M_SEL

27M_SEL (PIN13)	PIN20	PIN21	PIN24	PIN25
0=UMA	DOT96T	DOT96C	96/100M_T	96/100M_C
1 = Disc. GRFX down	SRCT0	SRCC0	27Mout	27MSSout

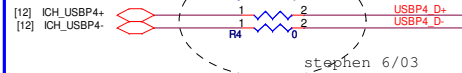


Title	CLOCK GENERATOR	Rev	1A
Size	Document Number		
	VMSM		
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Support the new imbedded diagnostics.



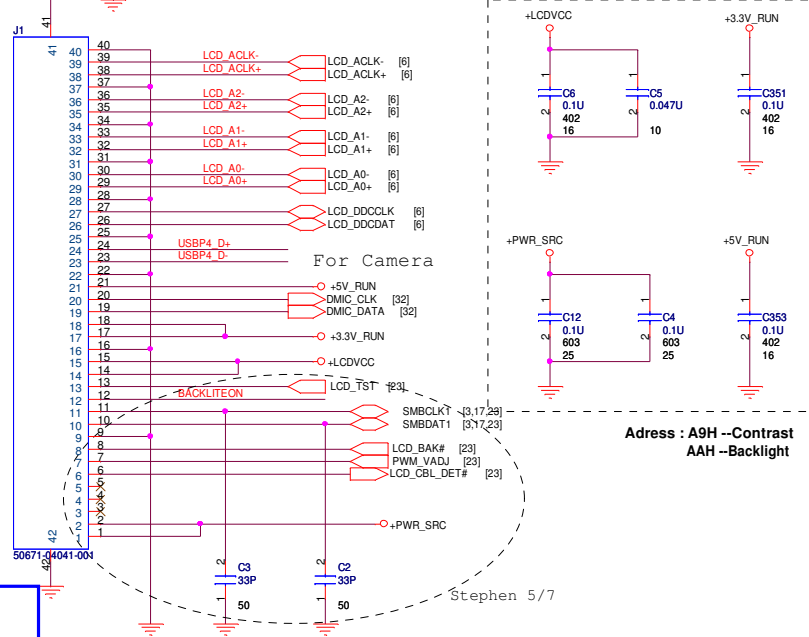
Camera



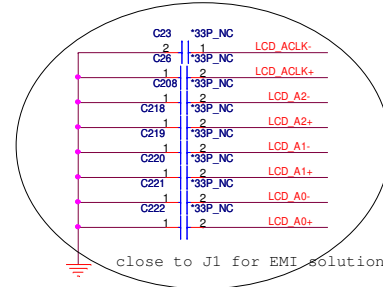
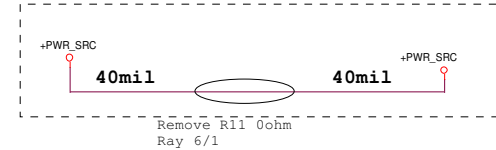
stephen 6/03

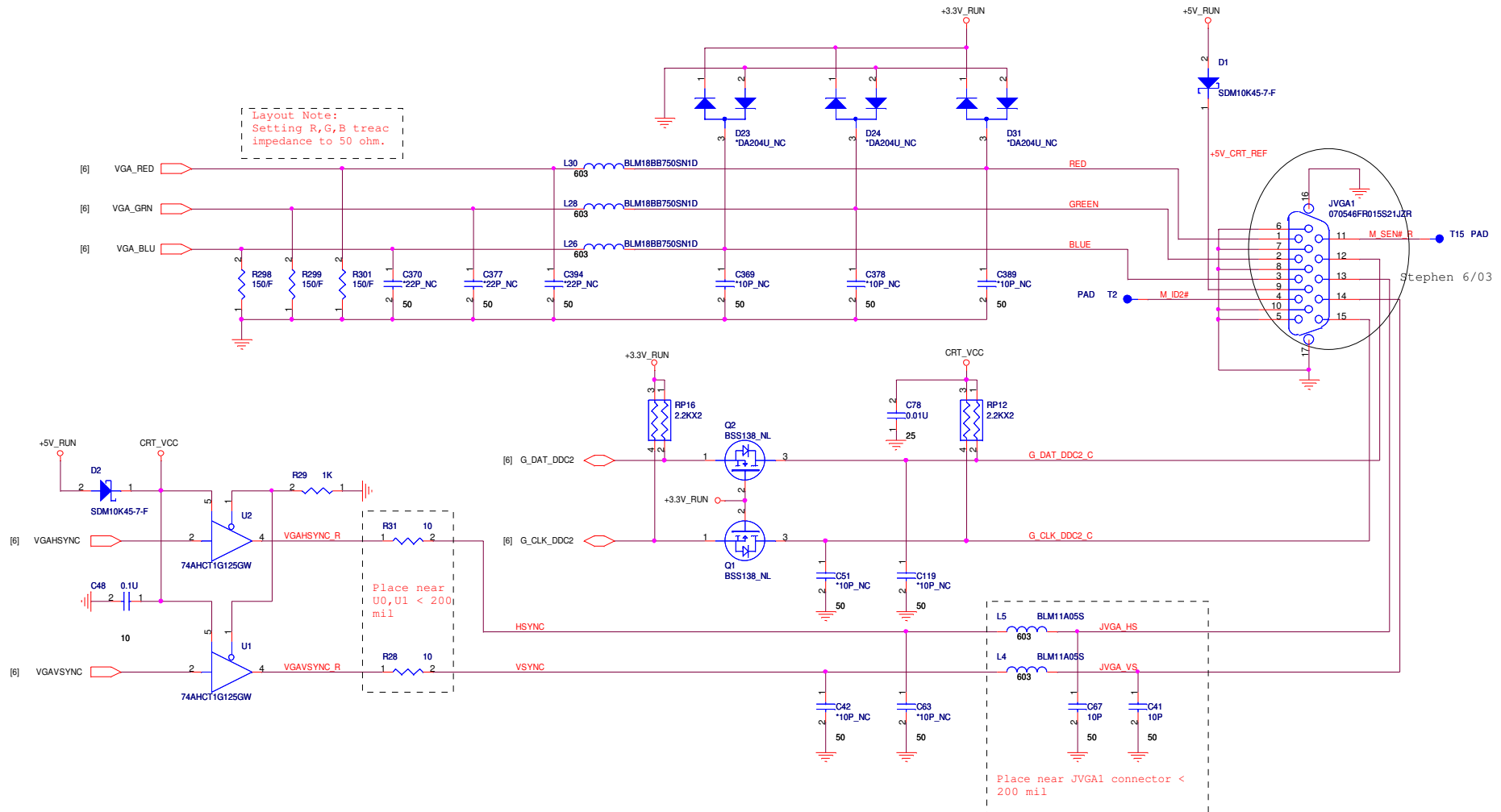


For DPST support




Address : A9H --Contrast
AAH --Backlight

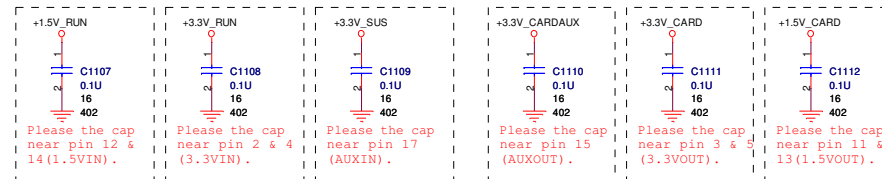
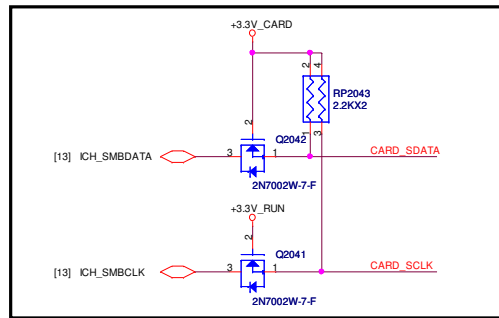
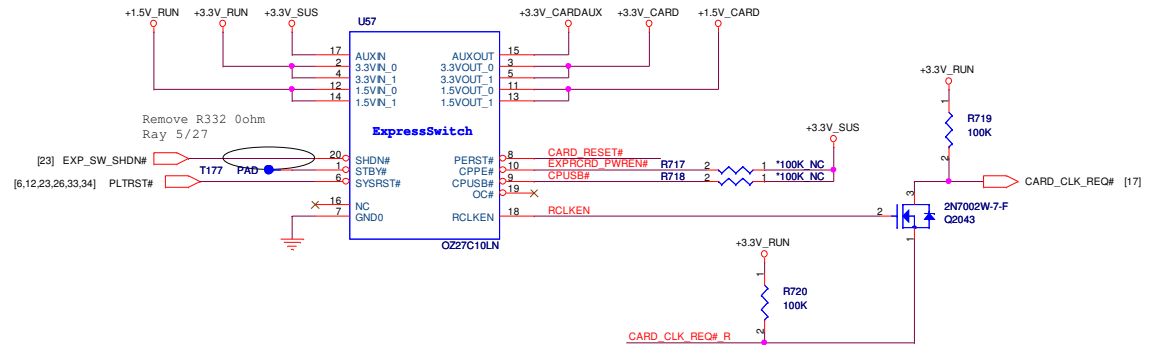
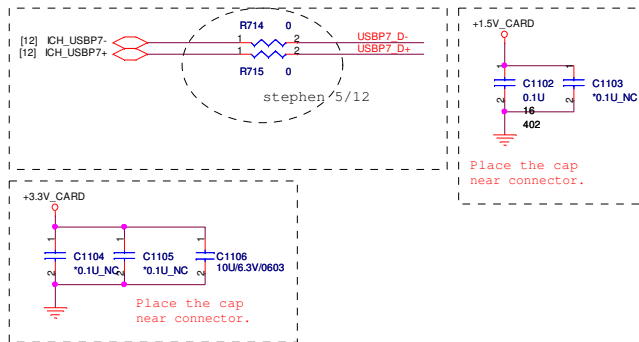




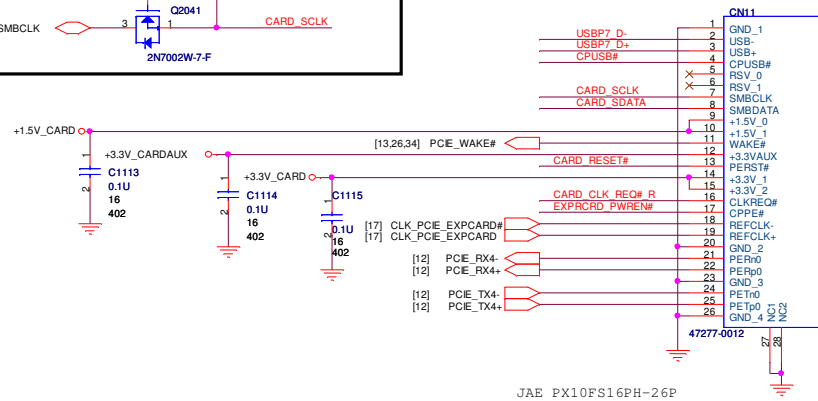
<http://laptopblue.vn>

		QUANTA COMPUTER	
Title		Card Reader-RTS5158E	
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	VM9M		1A
Date: Wednesday, June 03, 2009		Sheet	20 of 46


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

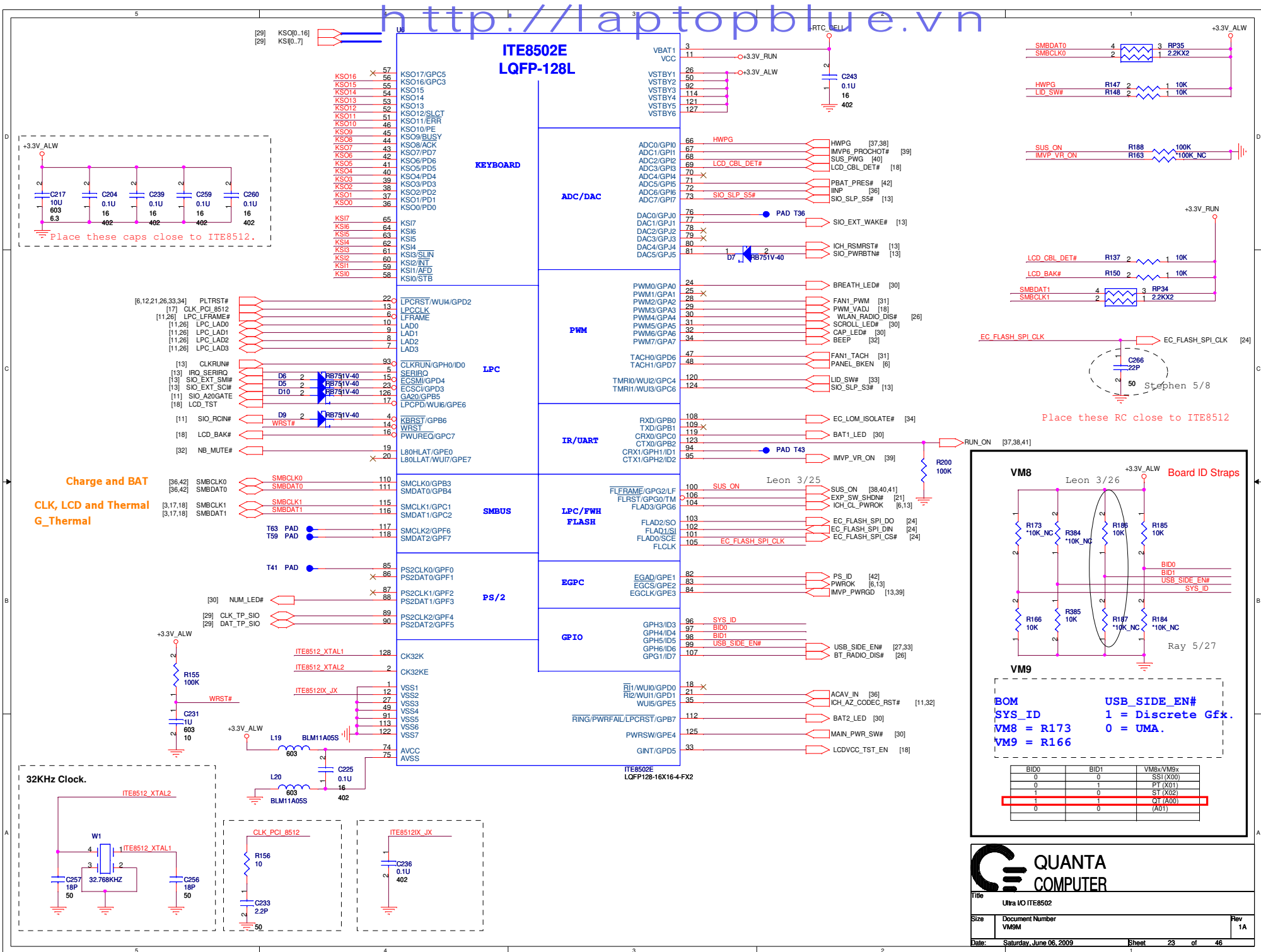


Express Card



<http://laptopblue.vn>

		QUANTA COMPUTER	
Title		black	
Size	Document Number		Rev
	VM9M		1A
Date:	Wednesday, June 03, 2009		Sheet 22 of 46



Board ID Straps

Leon 3/26

BOM

SYS_ID

VM8 = R173

VM9 = R166

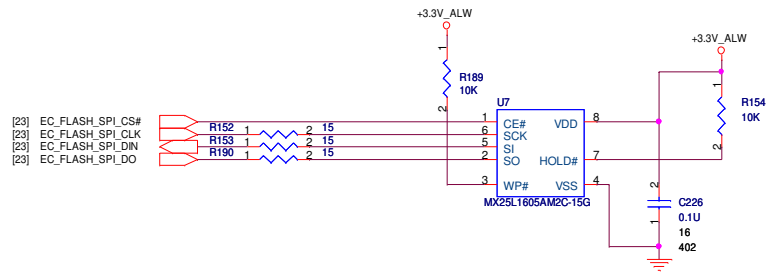
USB_SIDE_EN#

1 = Discrete Gfx.

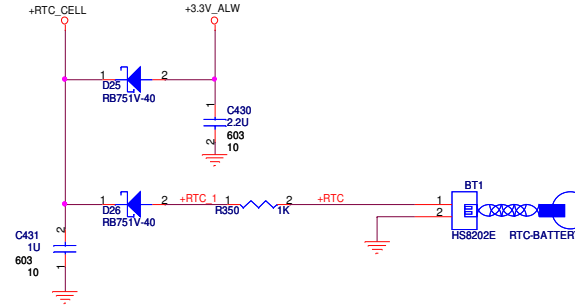
0 = UMA.

BID0	BID1	VM8x/VM9x
0	0	SSI (X00)
0	1	PT (X01)
1	0	ST (X02)
1	1	OT (A00)
0	0	(A01)


16Mbit (2M Byte), SPI



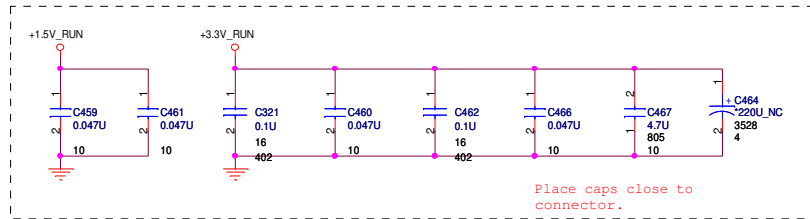
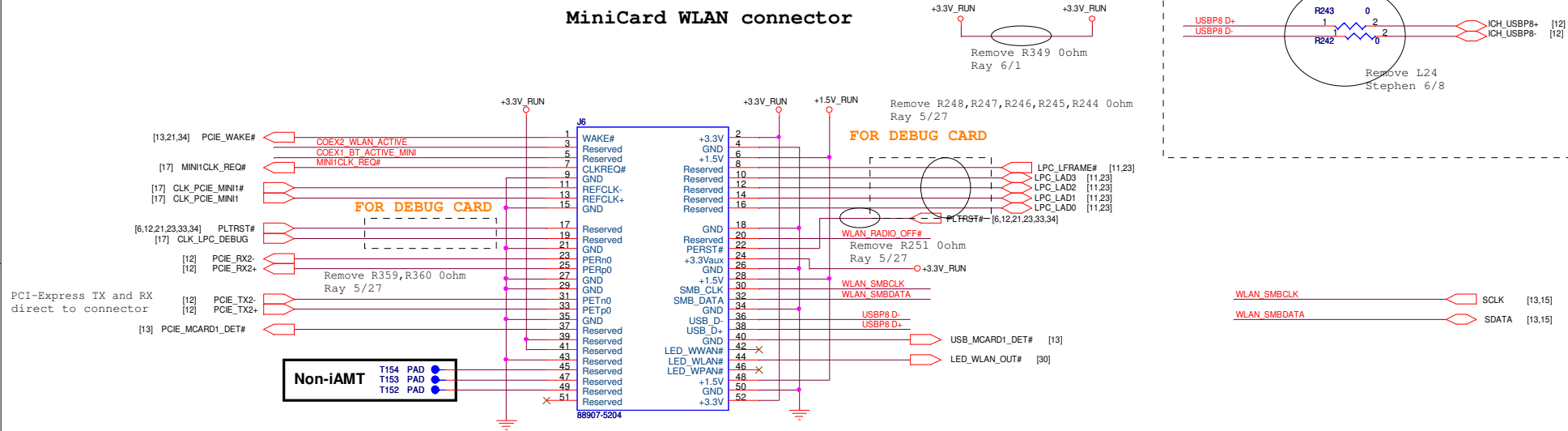
RTC BATTERY



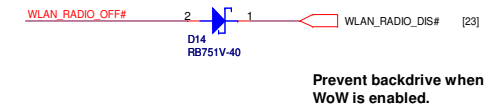
<http://laptopblue.vn>

			QUANTA COMPUTER		
Title			Black		
Size	Document Number				Rev
	VM9M				1A
Date:	Wednesday, June 03, 2009		Sheet	25	of 46

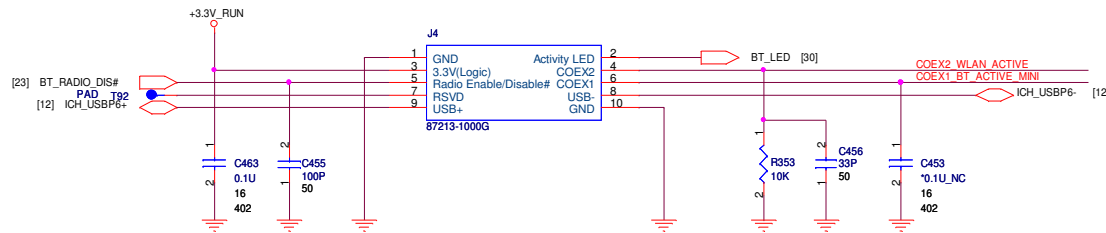
MiniCard WLAN connector



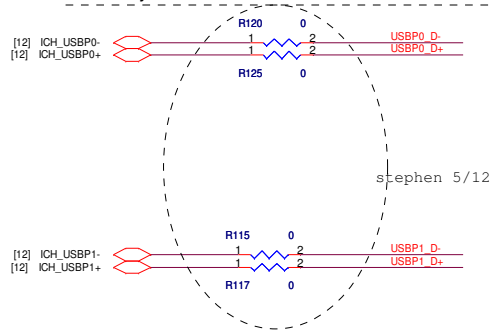
Support for WoW



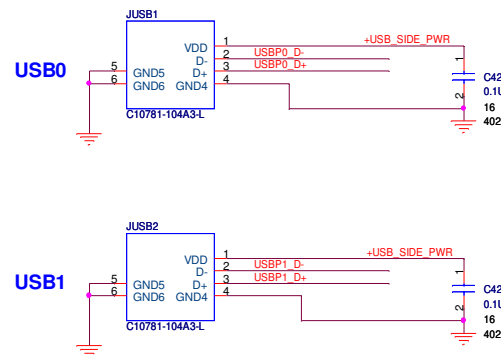
Bluetooth



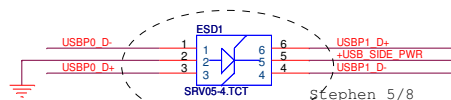
External USB PORT hookup reference. Your design may need more or less external ports and may be mapped differently



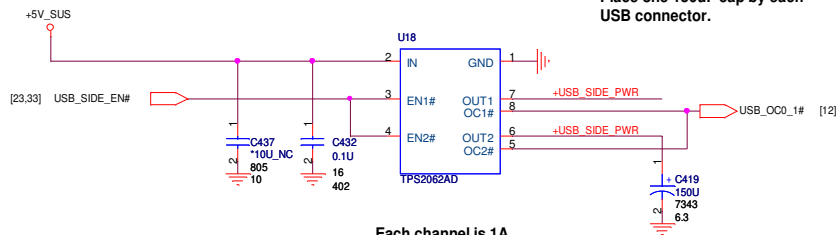
Platforms should put in PADS for the USB chokes if they have the room. Chokes should be NOPOP.



Place ESD diodes as close as USB connector.



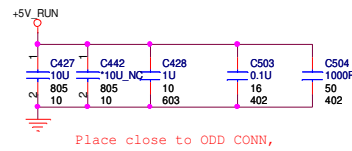
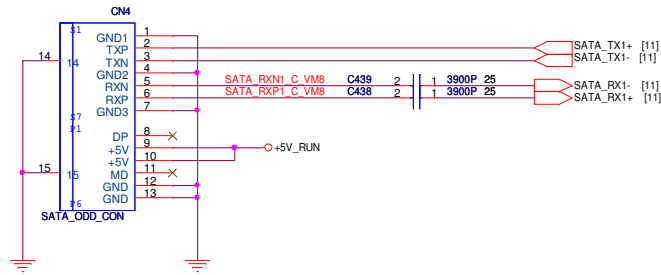
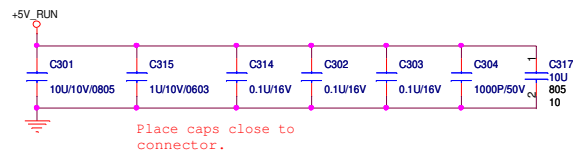
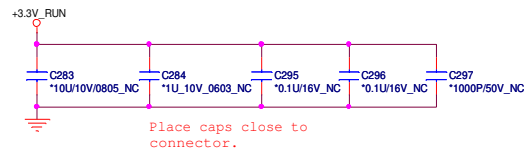
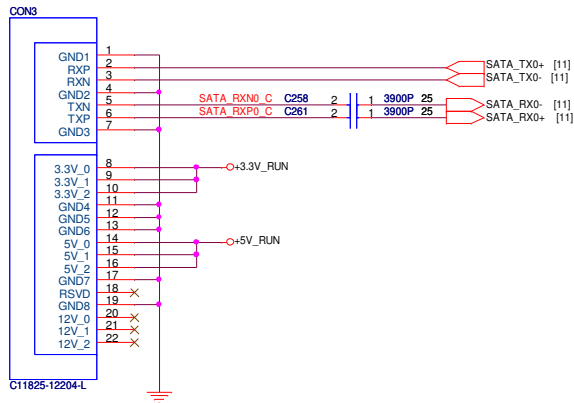
Place one 150uF cap by each USB connector.



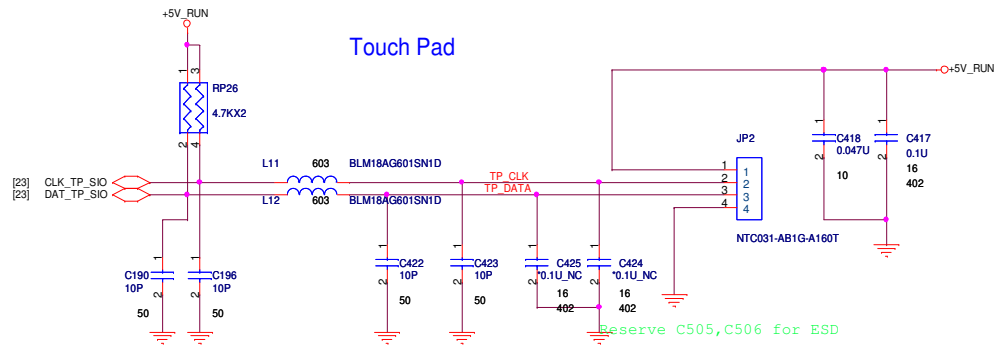
Each channel is 1A

SATA HDD Connector.

SATA ODD Connector.

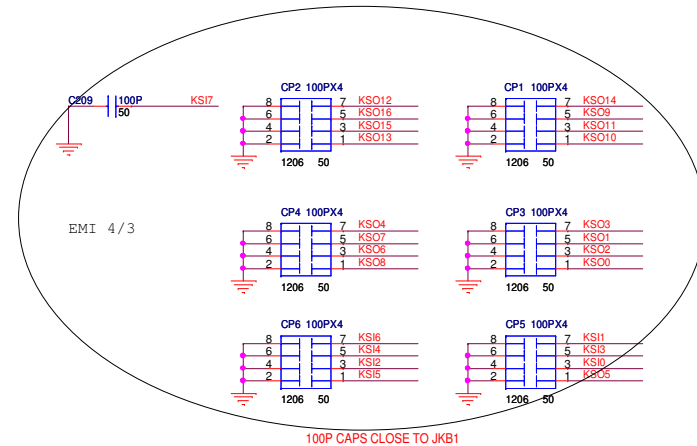
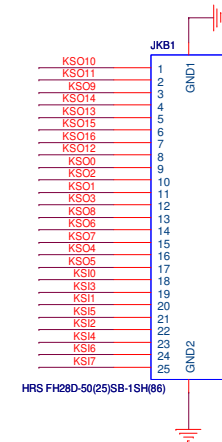


Touch Pad

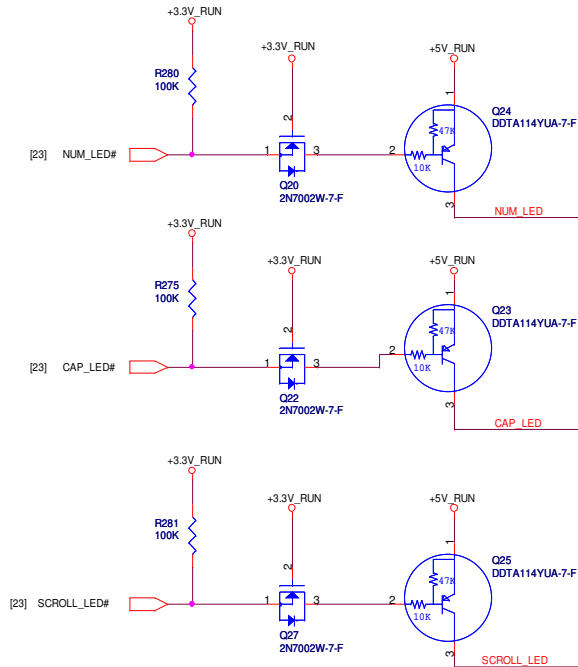


KEYBOARD CONNECTOR

[23] KSO[0..16]
[23] KS[0..7]

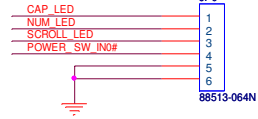


Keyboard LED

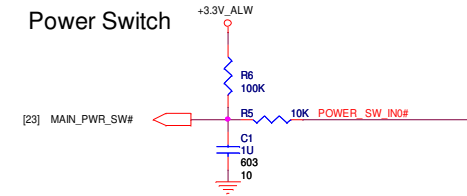


Dash board connector

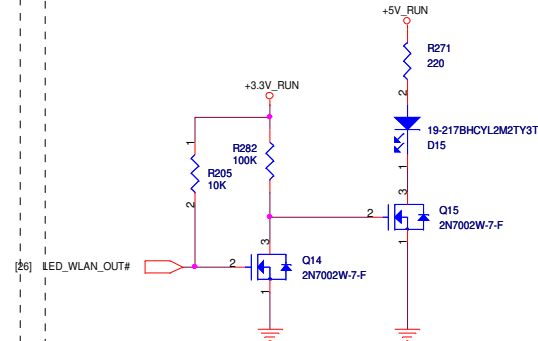
Keyboard LED



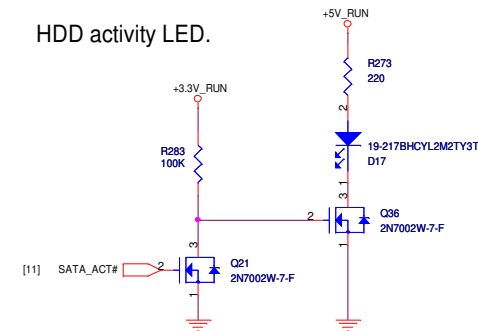
Power Switch



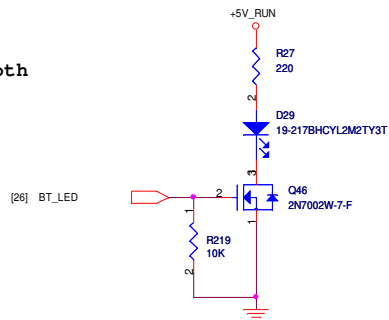
WLAN



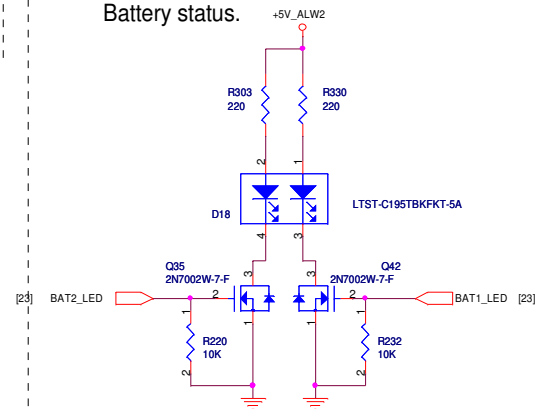
HDD activity LED.



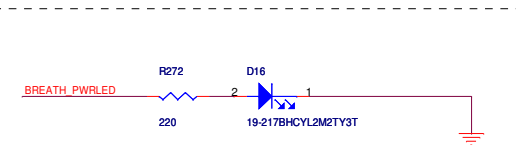
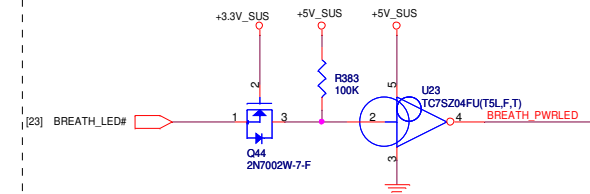
Bluetooth

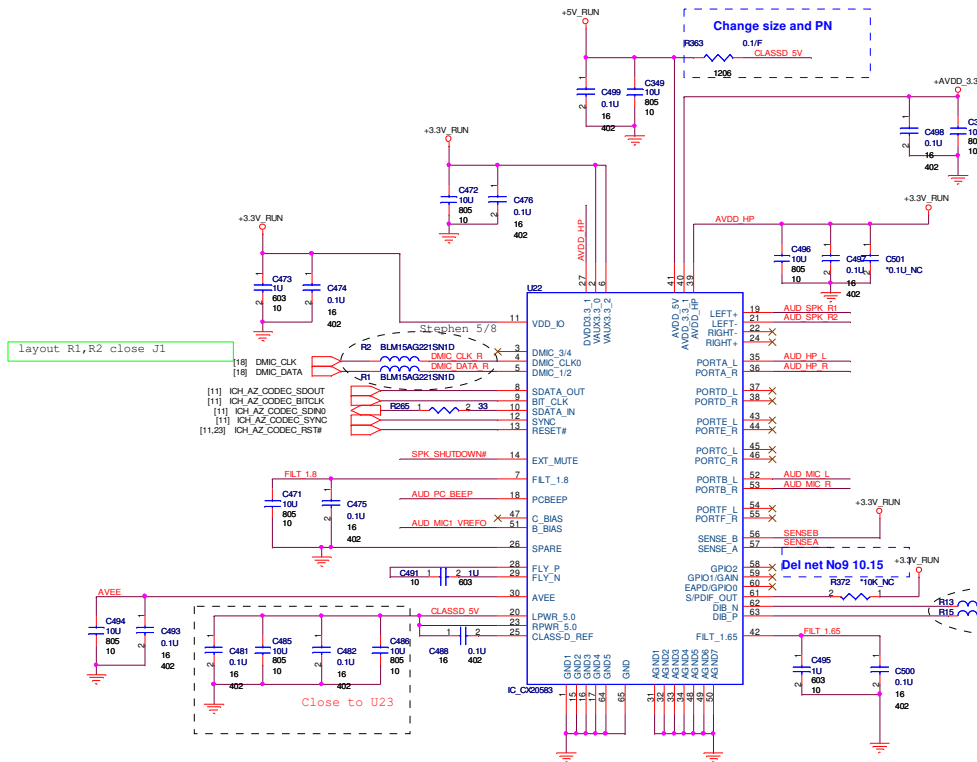
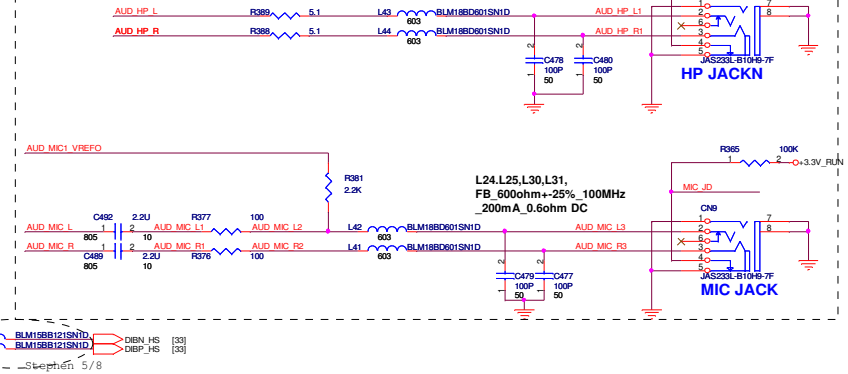
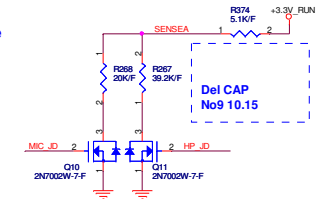


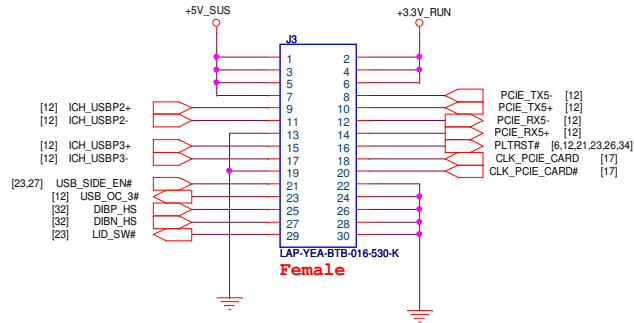
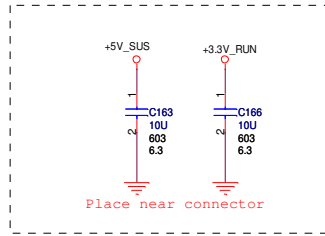
Battery status.



Power & Suspend.







Board to board connector (Modem Card + Cardreader+1394a+ 2 USB Port)

A

B

C

D

E

4

4

3

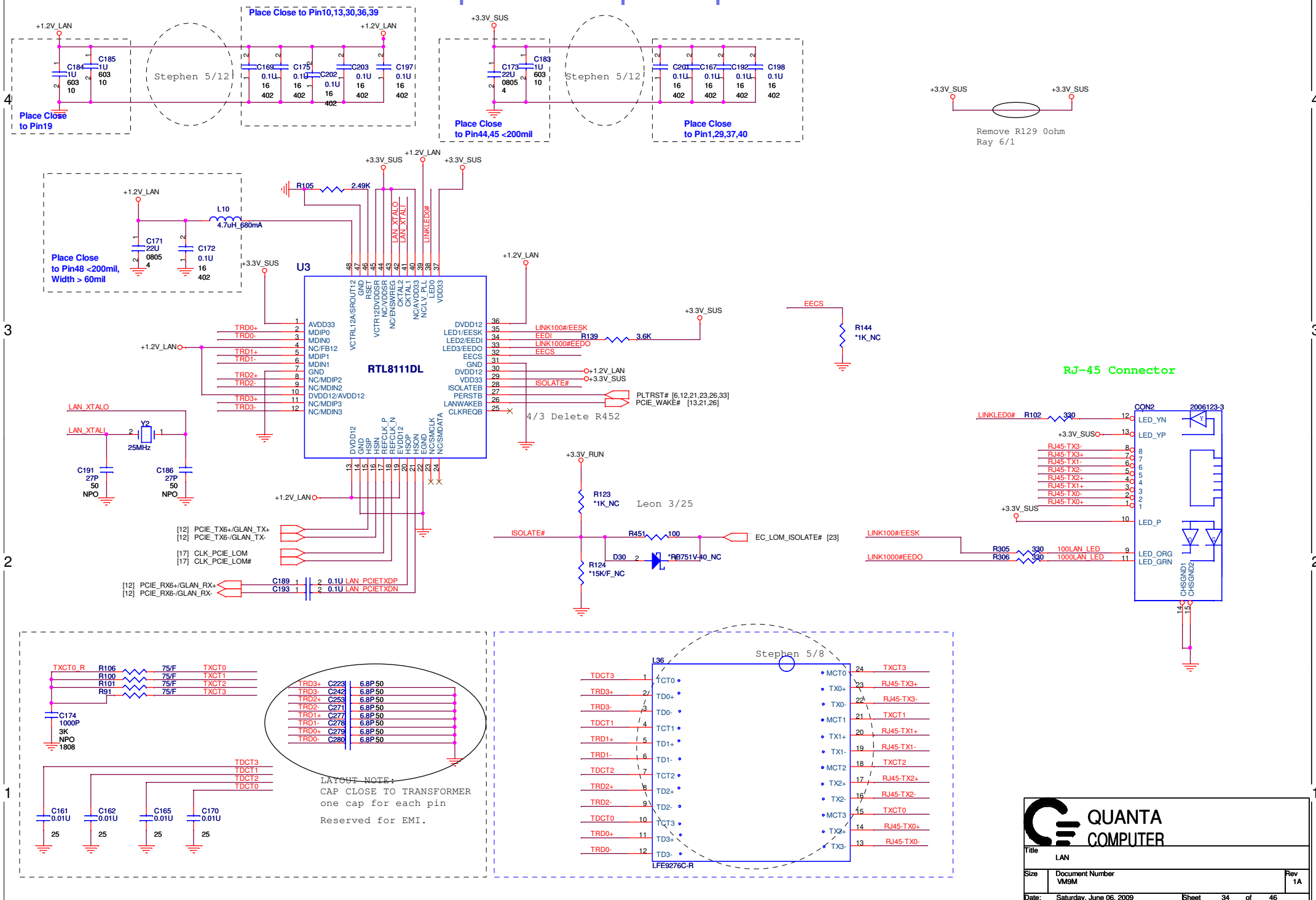
3

2


2

1

1



<http://laptopblue.vn>

 QUANTA COMPUTER		
Title System Reset Circuit		
Size	Document Number VM9M	Rev 1A
Date:	Wednesday, June 03, 2009	Sheet 35 of 46

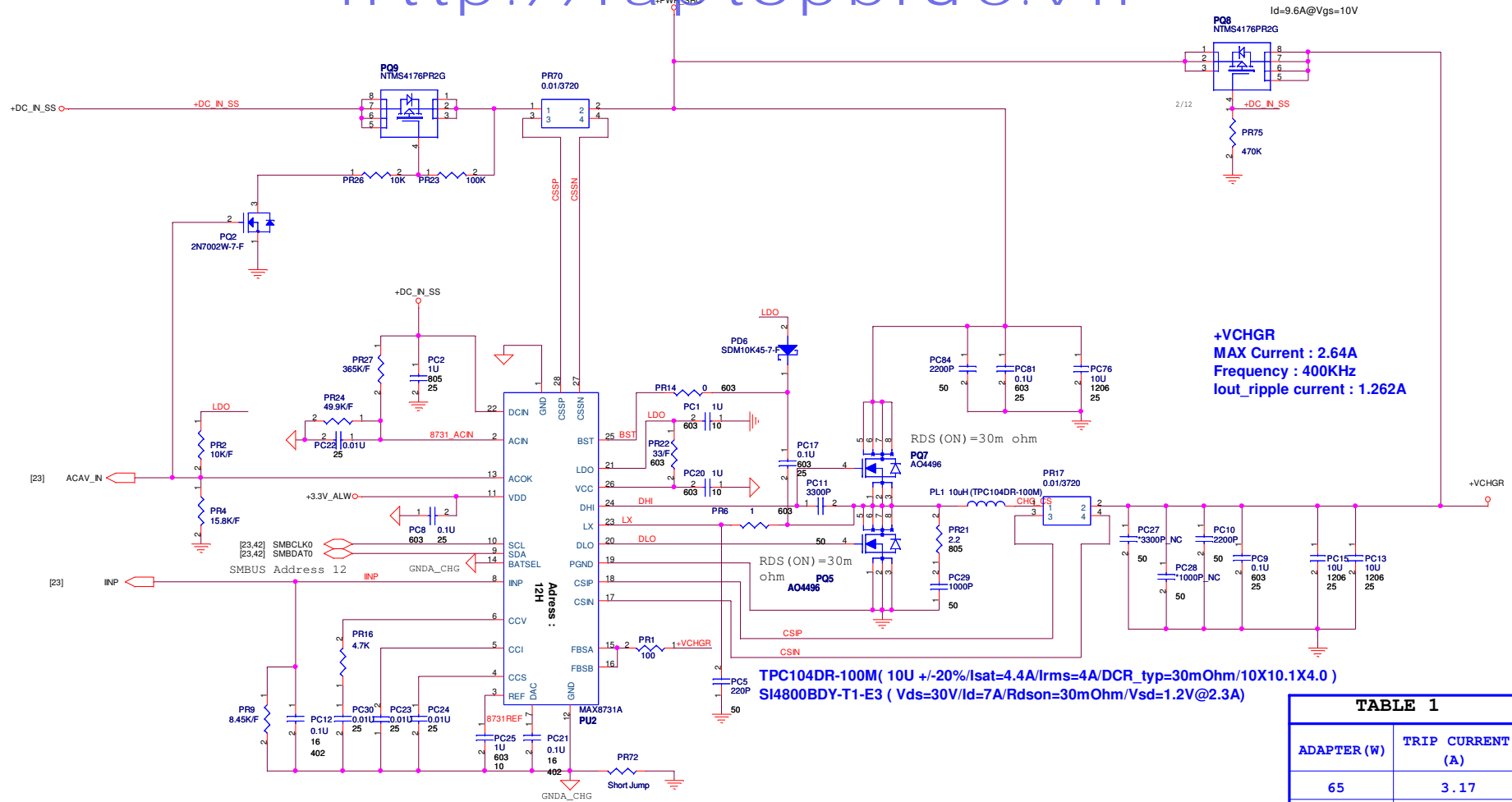
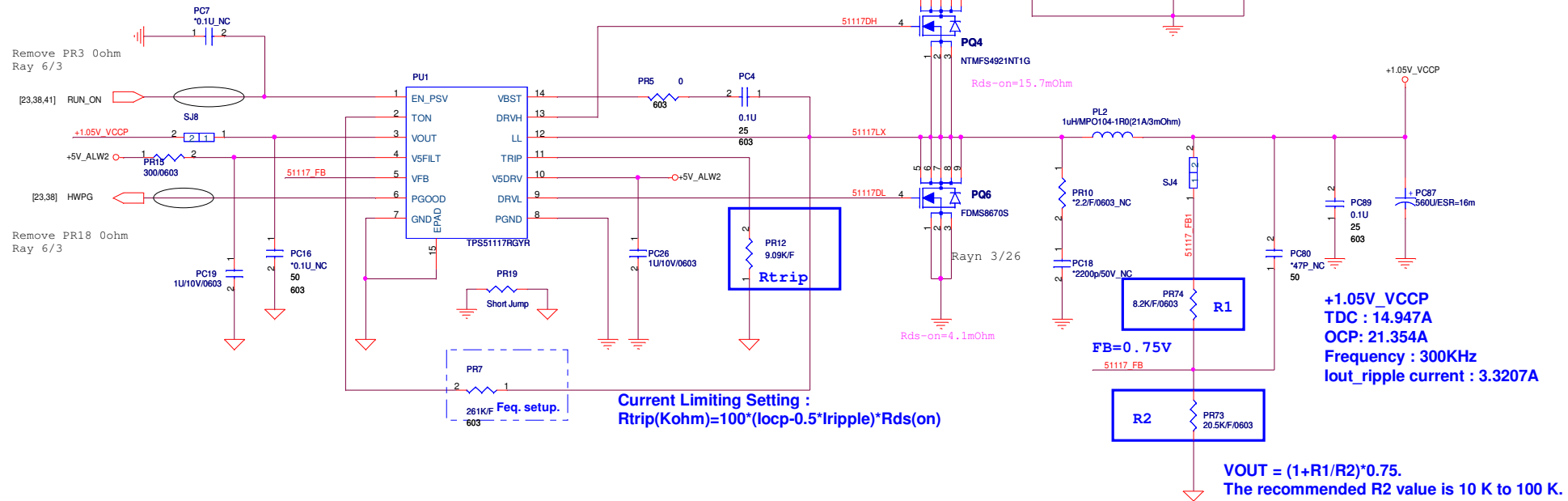


TABLE 1

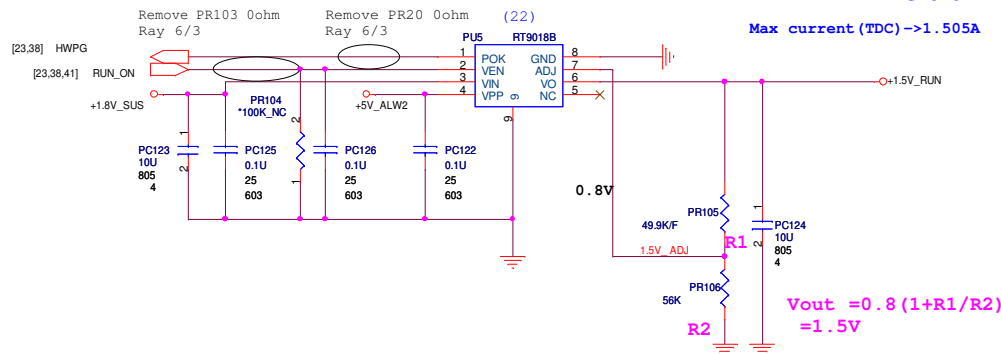
ADAPTER (W)	TRIP CURRENT (A)
65	3.17
90	4.43
130	6.43
150	7.43
200	9.75
230	11.28

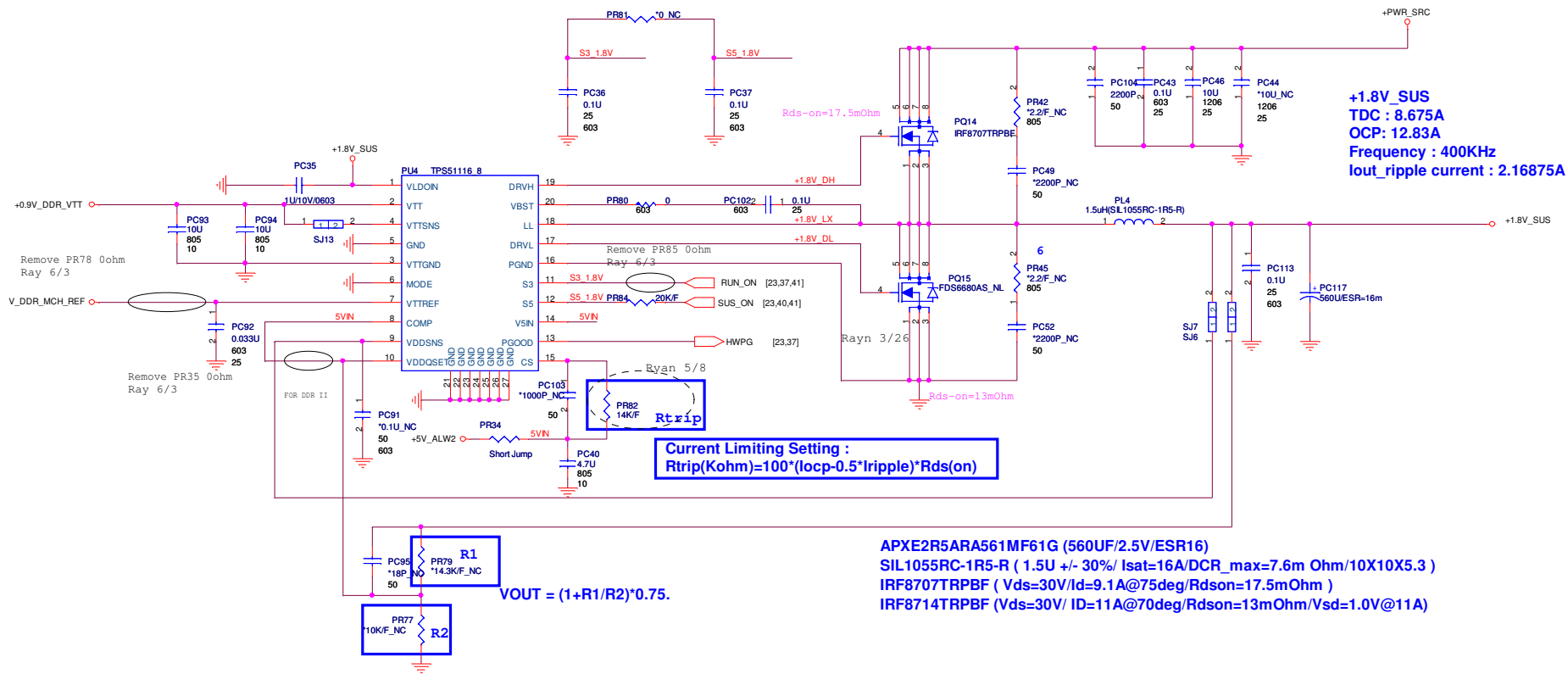


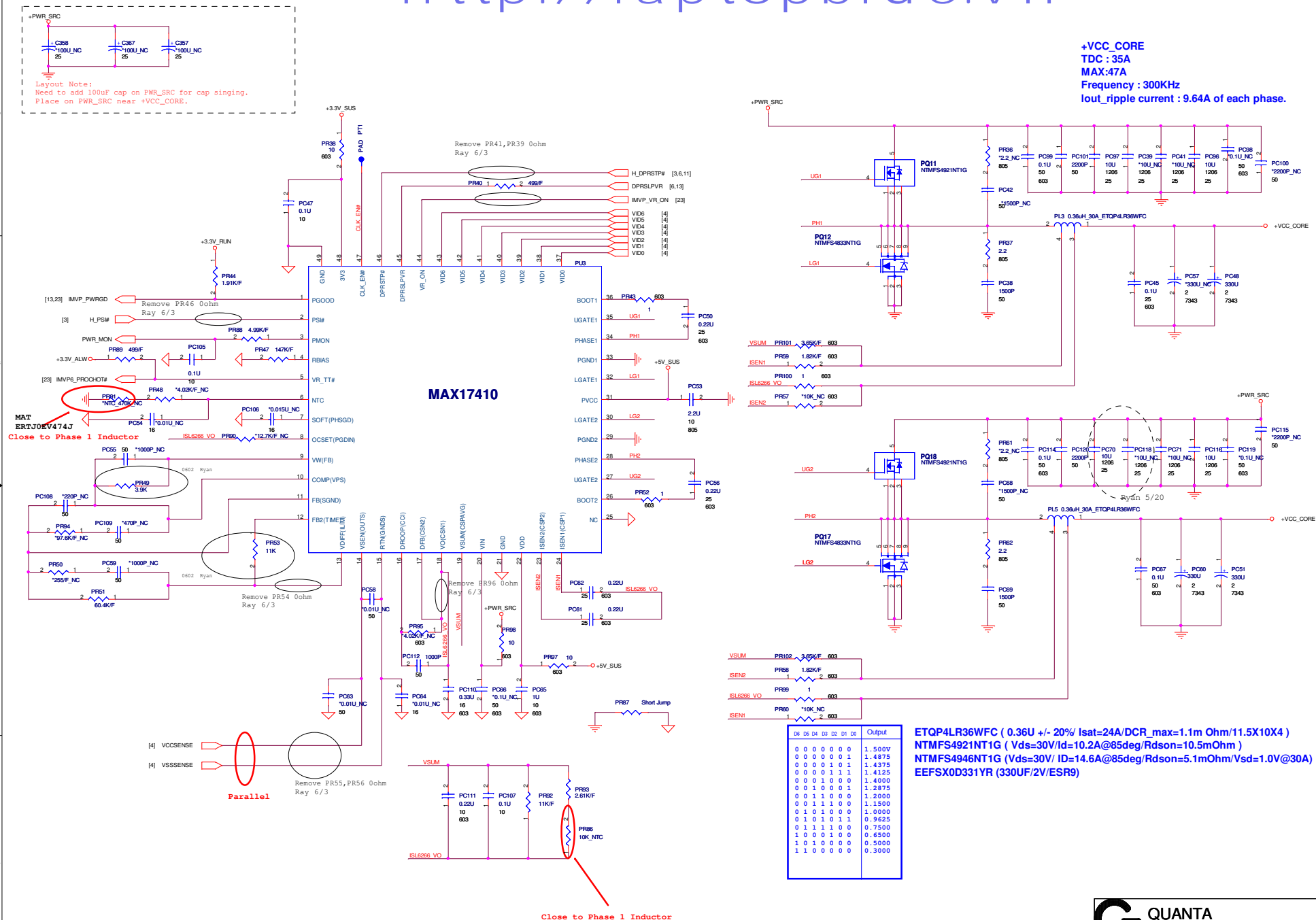
APXE2R5ARA561ME61G (560UF/2.5V/ESR16)
MPO104-1R0 (1.00 +/- 20% Isat=30A/DCR_max=3m Ohm/11.5X10X4)

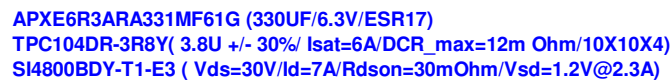
NTMFS4921NT1G (Vds=30V/Id=10.2A@85deg/Rdson=10.5mOhm)
NTMFS4946NT1G (Vds=30V/ ID=14.6A@85deg/Rdson=5.1mOhm/Vsd=1.0V@30A)

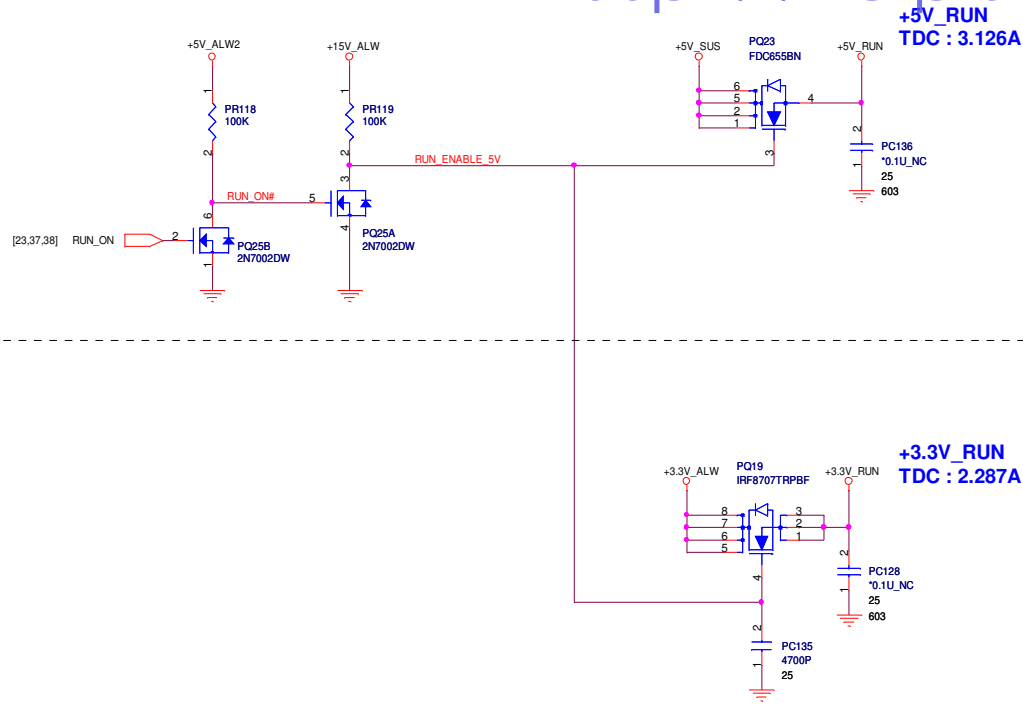
Max current (TDC) -> 1.505A



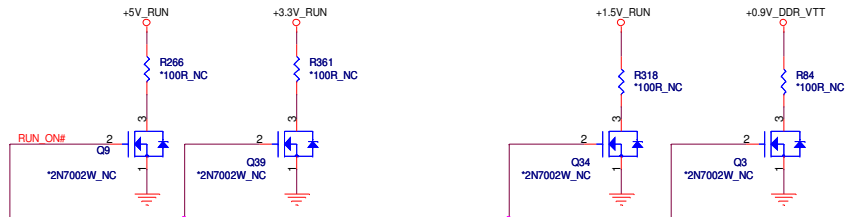




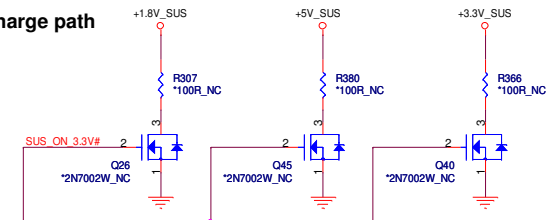





Reserve discharge path

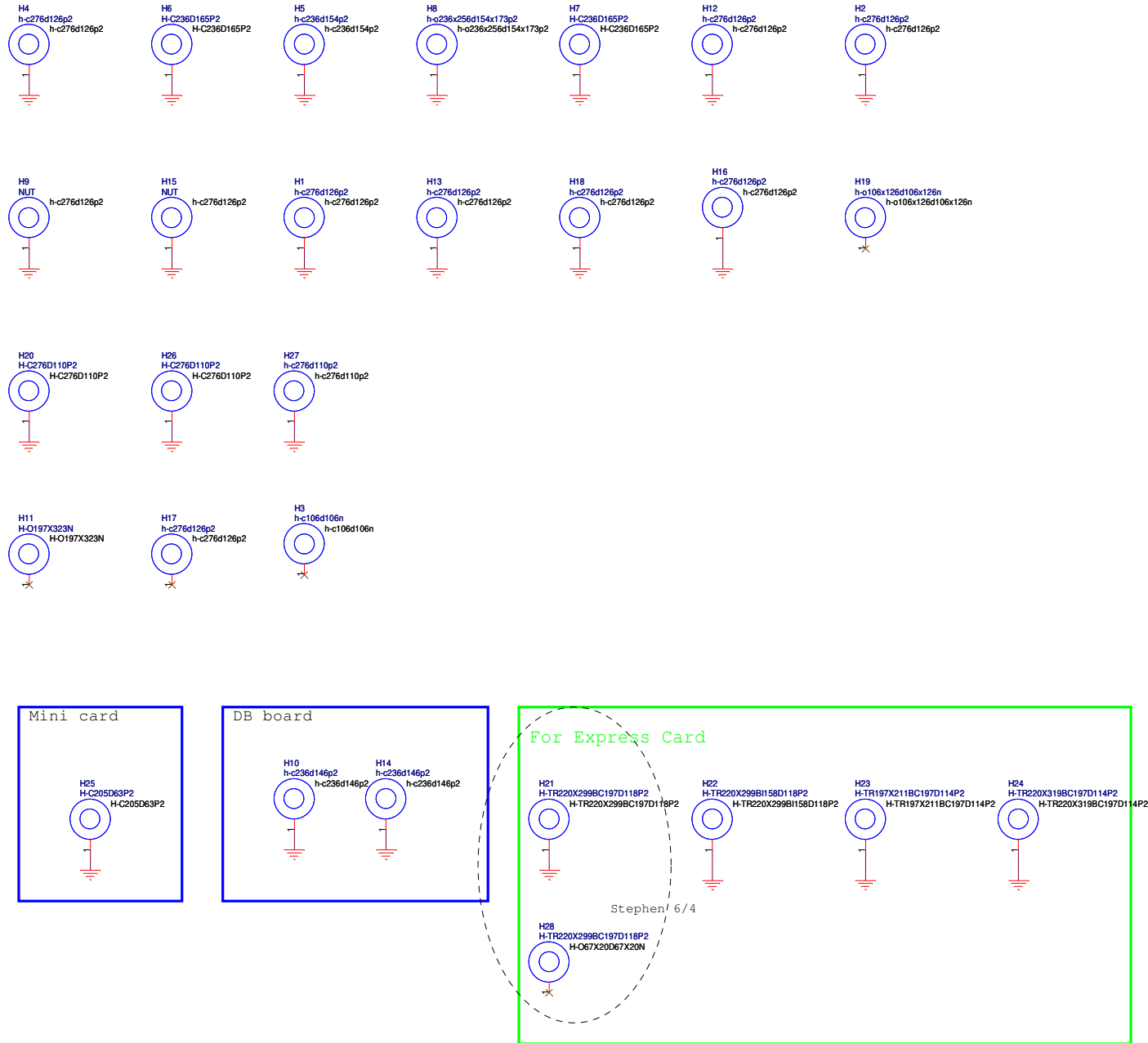


Reserve discharge path

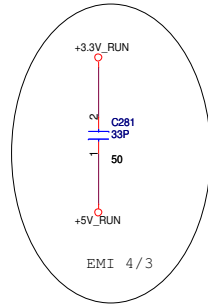


Title		
RUN POWER SW		
Size	Document Number	Rev
VM9M		1A
Date:	Saturday, June 06, 2009	Sheet 41 of 46

 <div> <div>QUANTA</div> <div>COMPUTER</div> </div>			
Title DCIN,BATT CONNECTOR			
Size	Document Number VM9M		Rev 1A
Date:	Saturday, June 06, 2009	Sheet 42 of 46	



Reserved for EMI.



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