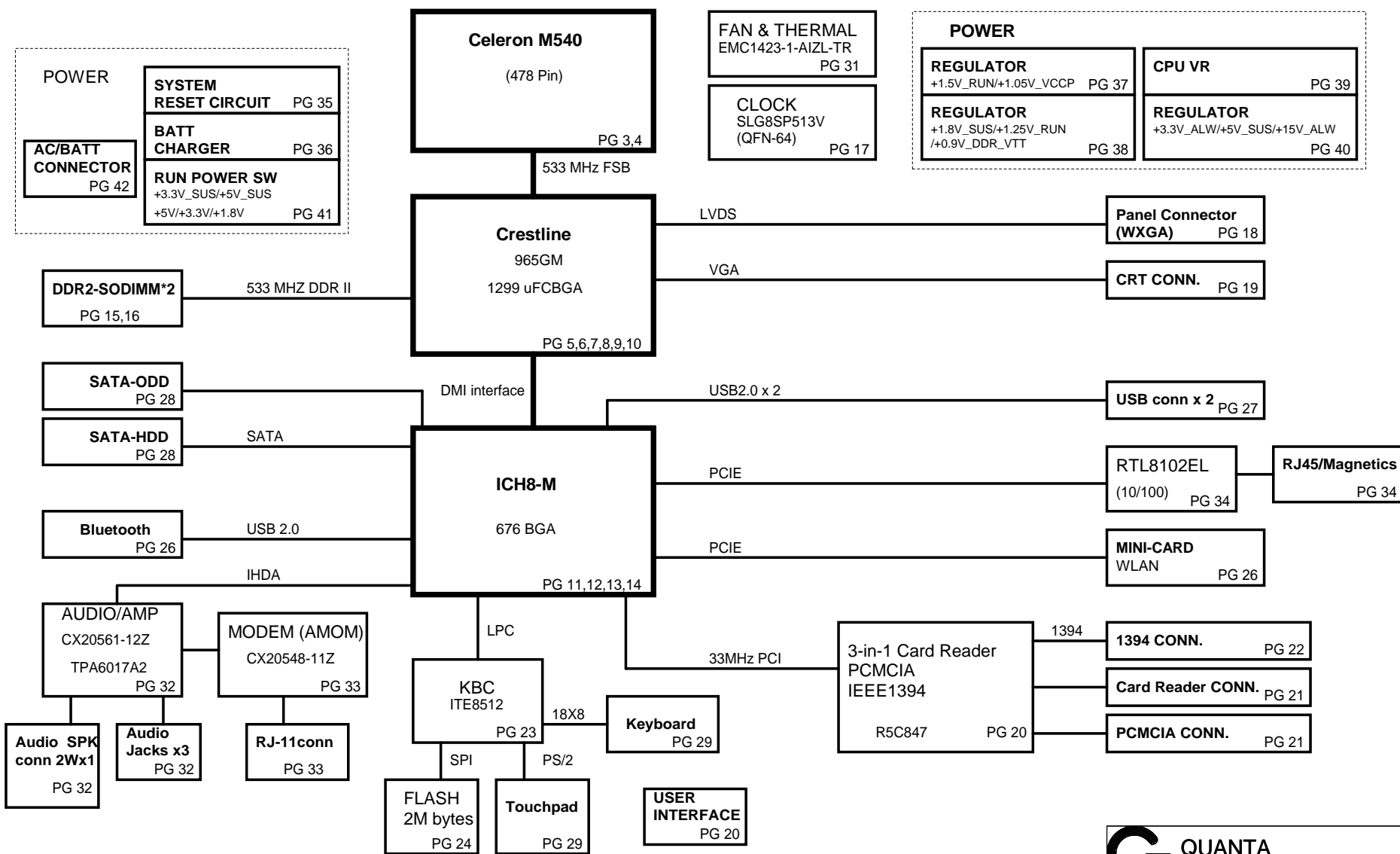


# VM9/VM8 Block Diagram



# Table of Contents

PAGE	DESCRIPTION
1	Schematic Block Diagram
2	Front Page
3-4	Merom
5-10	Crestline
11-14	ICH8M
15-16	DDRII SO-DIMM(200P)
17	Clock Generator
23	LCD Conn. & SSP
24	CRT Conn
25	SATA Conn
26-27	CARD READER/Conn & 1394
28	Express Card & Smart Card
29-30	Mini Card
31	SIO (ITE8512)
32	FLASH/RTC
33	USB
35	TP / KEYBOARD
36	SWITCH /LED
37	
38-39	
40-41	
44	System Reset Circuit
46	Battery Selector & Charger
48	
49	
51	CPU_ISL6266(2phase)
	RUN Power Switch
	DCIN,Batt
	PAD& SCREW
	EMI CAP
	SMBUS BLOCK

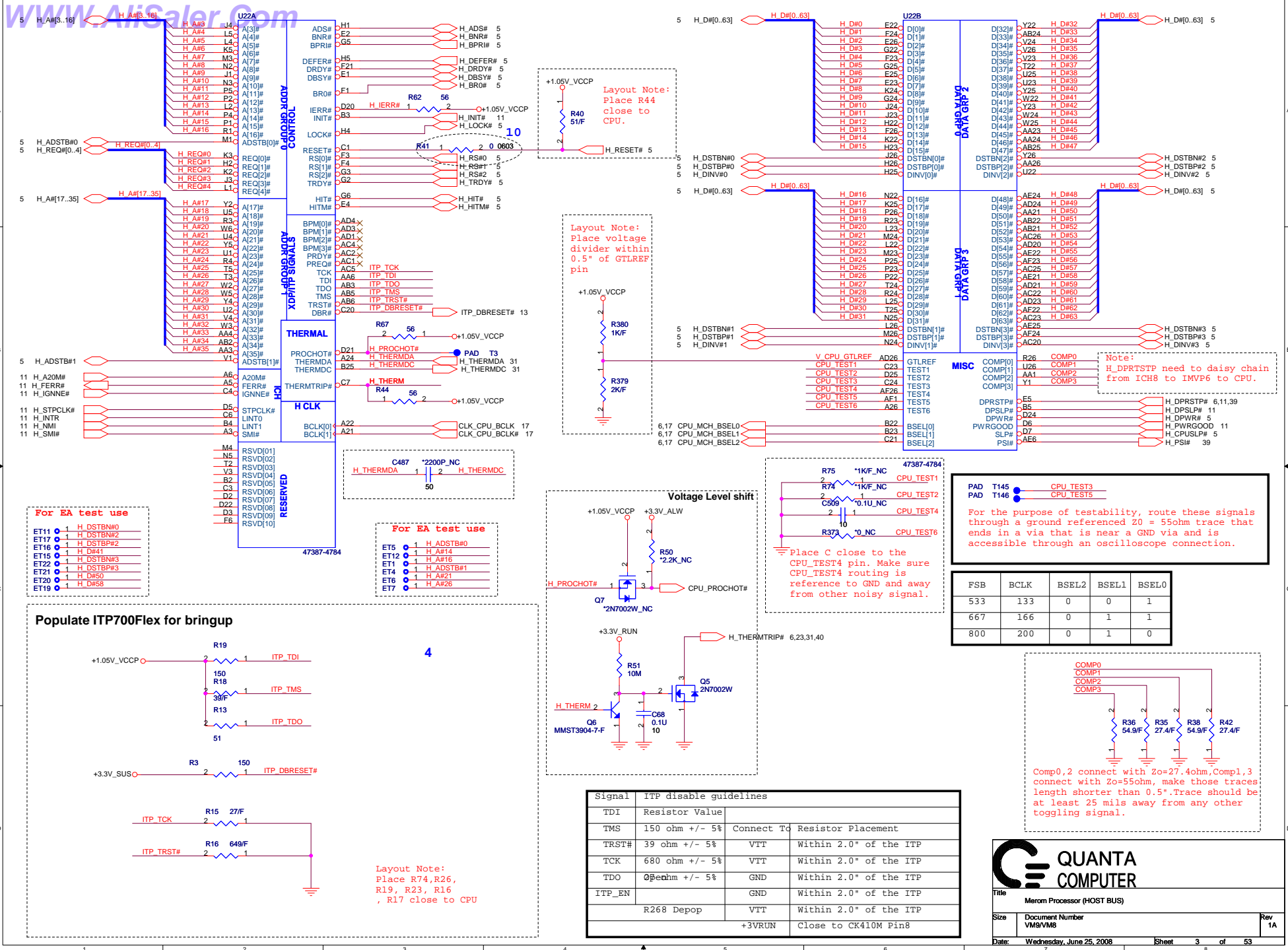
# Power States

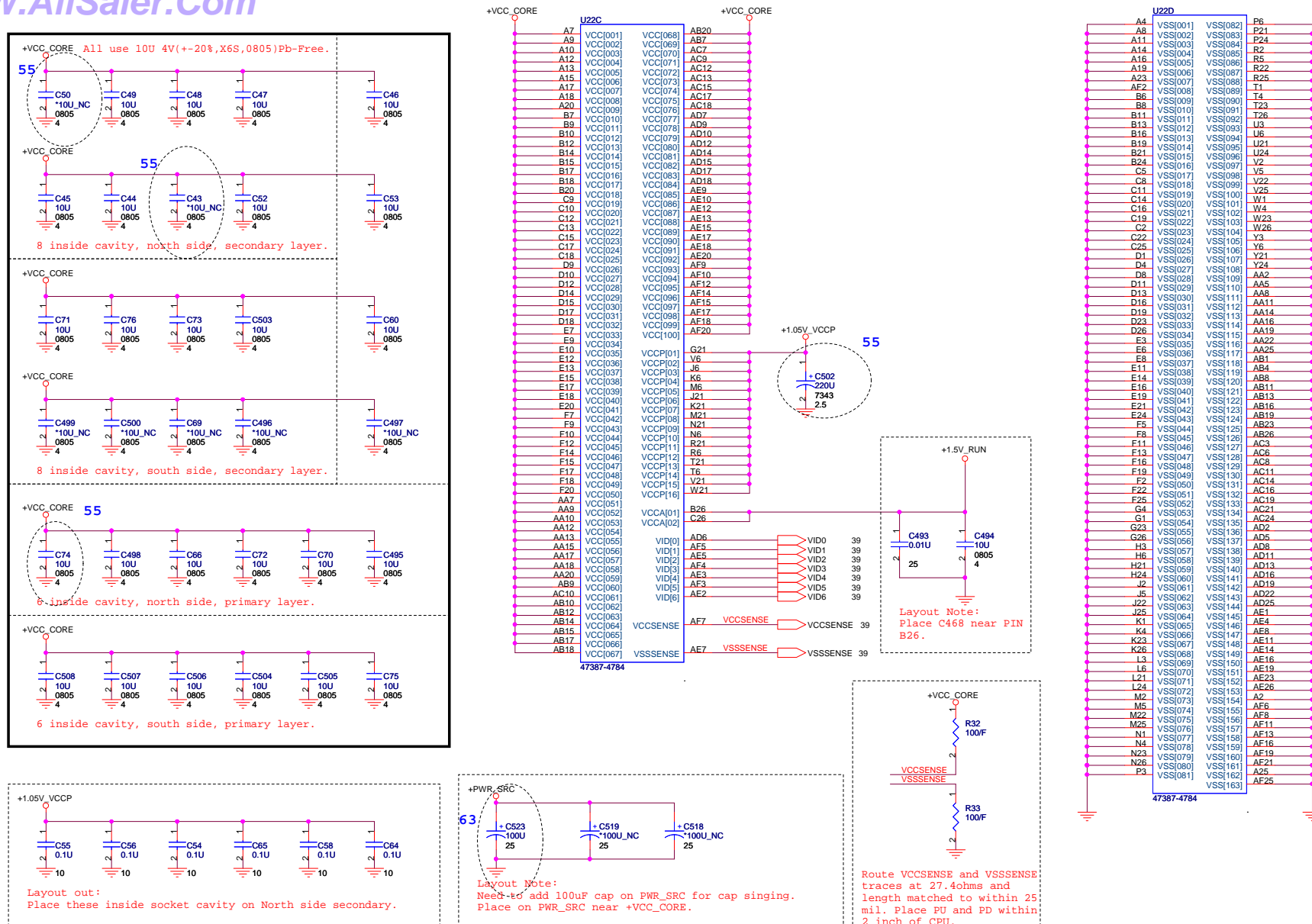
POWER PLANE	VOLTAGE	PAGE	DESCRIPTION	CONTROL SIGNAL	ACTIVE IN
+PWR_SRC	10V~+19V	4,26,32,34,46,48,49,51,52,56	MAIN POWER		S0~S5
+RTC_CELL	+3.0V~+3.3V	11,14,31,32	RTC		S0~S5
+3.3V_ALW	+3.3V	3,31,32,34,36,37,38,44,46,49,52,53,54	8051 POWER	ALWON	S0~S5
+5V_ALW	+5V	35,36,46,48,49,52,53,54,56	LCD/CHARGE POWER	ALWON	S0~S5
+15V_ALW	+15V	26,36,37,52,53	LARGE POWER	+5V_ALW	S0~S5
+3.3V_LAN	+3.3V	42,43	LAN POWER	AUX_ON	
+5V_SUS	+5V	14,38,51,53	SLP_S5# CTRLD POWER	SUS_ON	
+3.3V_SUS	+3.3V	3,11,12,13,14,26,30,37,38,43,48,49,51,53	SLP_S5# CTRLD POWER	3.3V_SUS_ON	
+1.8V_SUS	+1.8V	6,8,9,15,48,49,53	SODIMM POWER	DDR_ON	
+0.9V_DDR_VTT	+0.9V	16,49,53	SODIMM POWER	0.9V_DDR_VTT_ON	
+5V_RUN	+5V	14,18,27,36,37,38,39,40,41,53	SLP_S3# CTRLD POWER	RUN_ON	
+3.3V_RUN	+3.3V	14,18,27,36,37,38,39,40,41,53	SLP_S3# CTRLD POWER	3.3V_RUN_ON	
+1.8V_RUN	+1.8V		SDVO POWER	RUN_ON	
+1.5V_RUN	+1.5V	4,9,14,30,33,34,48,53,56	CALISTOGA/ICH8 POWER	1.5V_RUN_ON	
+1.25V_RUN	+1.25V	6,9,14,49,53	CALISTOGA/ICH8 POWER	1.25V_RUN_ON	
+1.05V_VCCP	+1.05V	3,4,5,6,8,9,11,14,48,56	CPU/CALISTOGA/ICH8 POWER	1.05V_RUN_ON	
+VCC_CORE	+0.7V~+1.77V	4,51,56	CPU CORE POWER	IMVP_VR_ON	
+LCDVCC	+3.3V	26	LCD Power	LCDVCC_TST_EN & ENVDD	
+5V_MOD	+5V	36	Module Power	MODC_EN#	
+5V_HDD	+5V		HDD Power	HDDC_EN#	
+PBATT	+10V~+17V		MAIN BATTERY	CHG_PBATT	
+SBATT	+10V~+17V		SECOND BATTERY	CHG_SBATT	

GND PLANE	PAGE	DESCRIPTION
8731AGND	46	
AGND_0.9V	49	
AGND_DC/DC	52	
AGND_DC2	48	
AGND_DDR	49	
AGND_ISL6260	51	
GND	ALL	



Title Index & Power Status		
Size	Document Number VM9/VM8	Rev 1A
Date:	Wednesday, June 25, 2008	Sheet 2 of 53





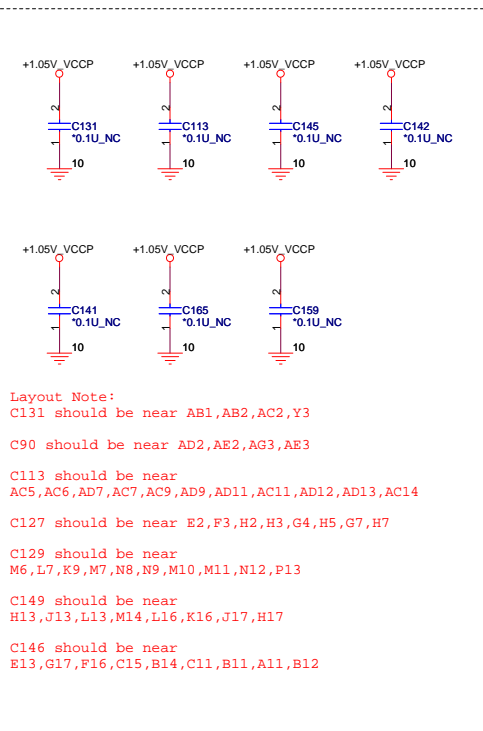
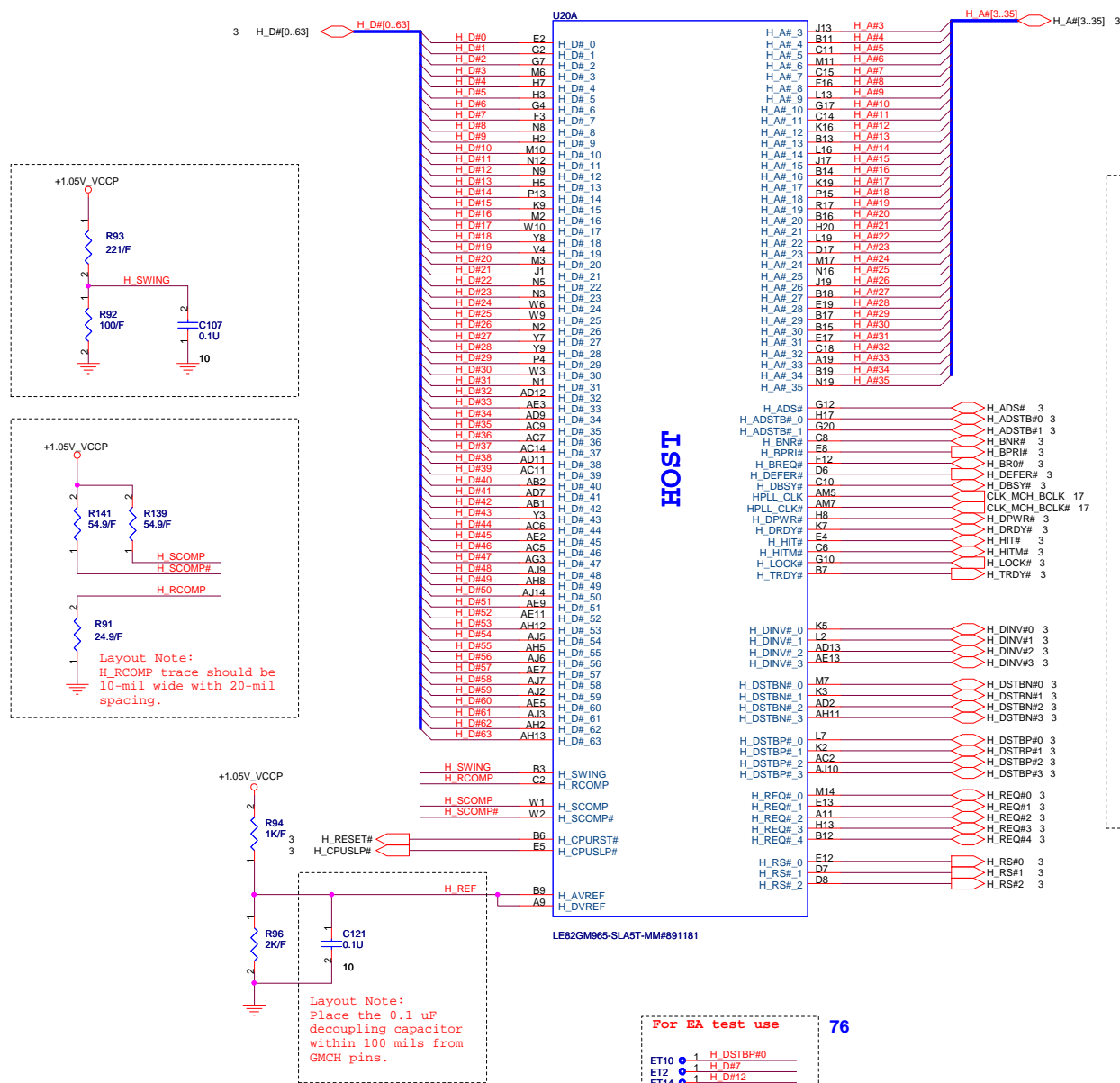
Title Merom Processor (POWER)

Size Document Number VM9/VM8

Date: Wednesday, June 25, 2008

Rev 1A

Sheet 4 of 53



**QUANTA COMPUTER**

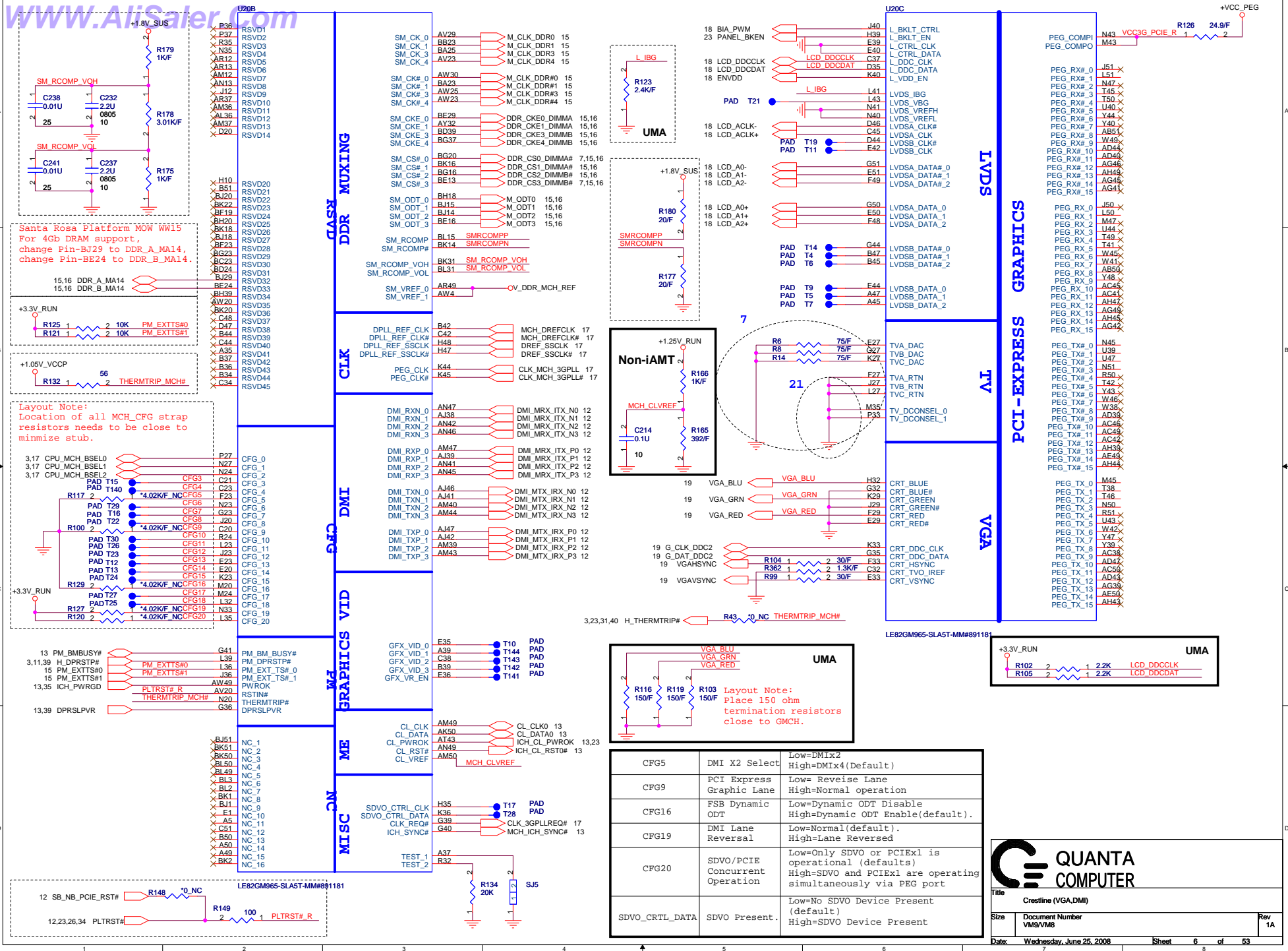
Title: Crestline (HOST)

Size: Document Number VM9/VM8

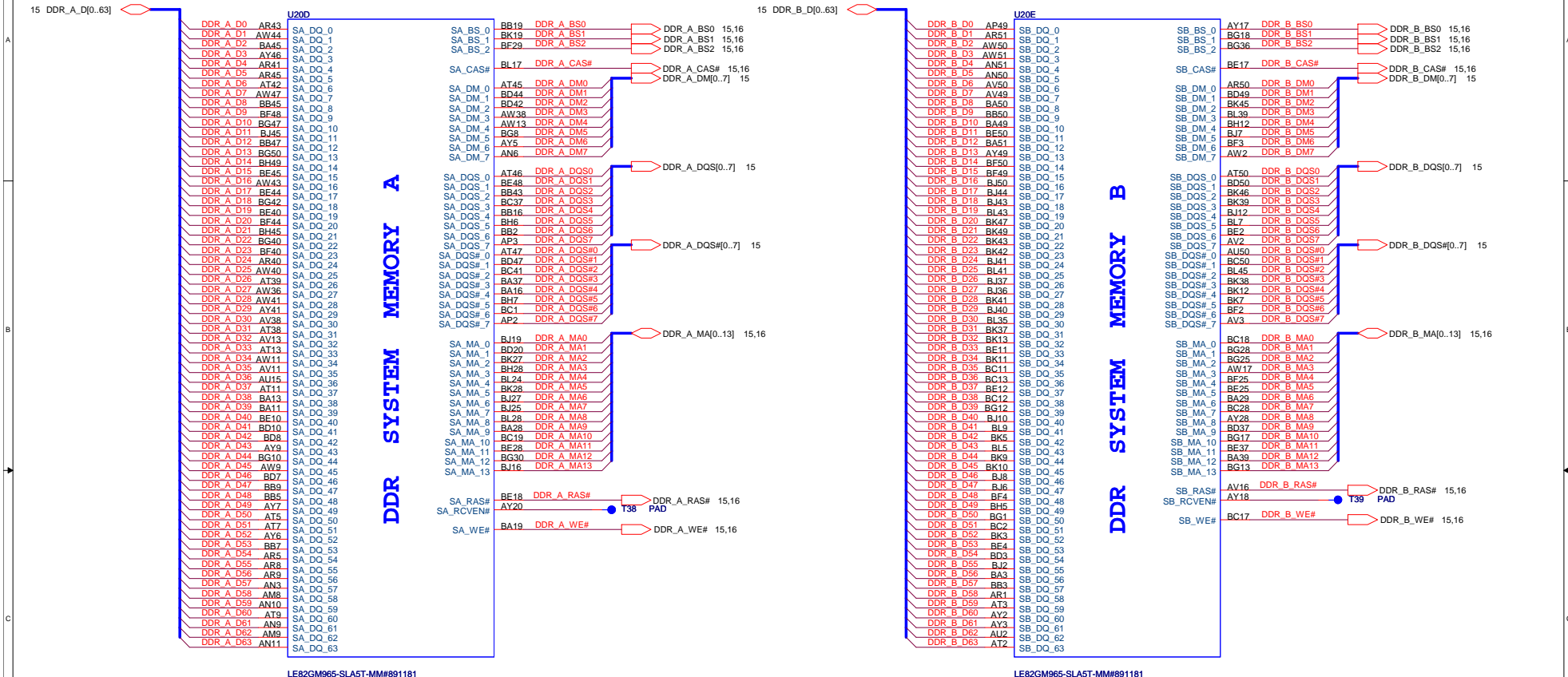
Date: Wednesday, June 25, 2008

Sheet: 5 of 53

Rev: 1A







76 For EA test use

ET42	DDR A CAS#
ET37	DDR A RAS#
ET31	DDR A WE#
ET39	DDR CS0 DIMMA#
ET32	DDR A MA0
ET44	DDR A MA13
ET28	DDR A DQS0
ET27	DDR A DQS#0
ET23	DDR A DQS
ET26	DDR A DSS
ET40	DDR A D22

DDR\_CS0\_DIMMA# 6,15,16

76 For EA test use

ET36	DDR B CAS#
ET32	DDR B RAS#
ET33	DDR B WE#
ET38	DDR CS3 DIMMB#
ET35	DDR B MA0
ET41	DDR B MA11
ET24	DDR B DQS0
ET25	DDR B DQS#0
ET30	DDR B DQ
ET34	DDR B D8
ET43	DDR B D41

DDR\_CS3\_DIMMB# 6,15,16

**QUANTA COMPUTER**

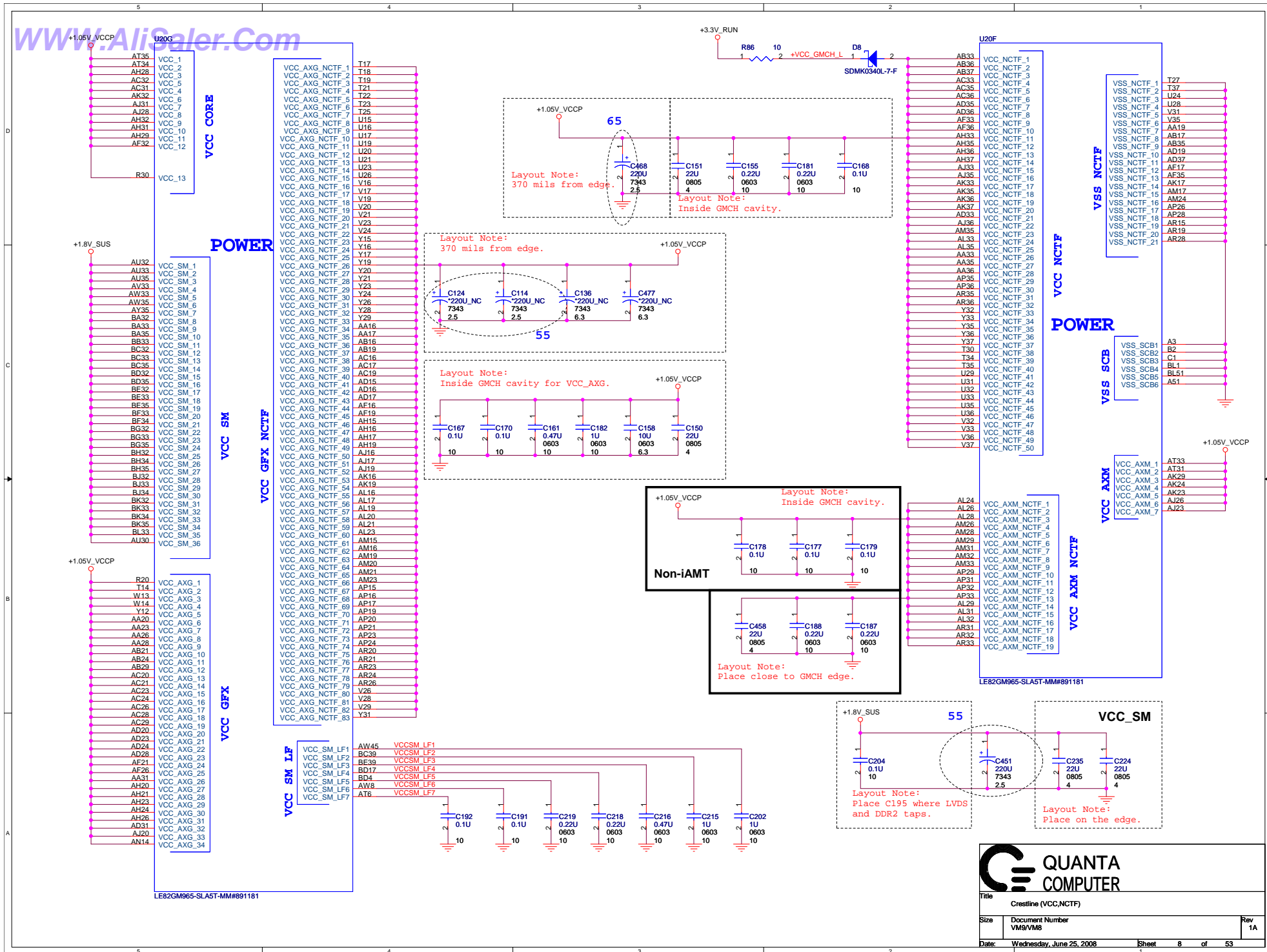
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Size: Document Number VM9/VM8

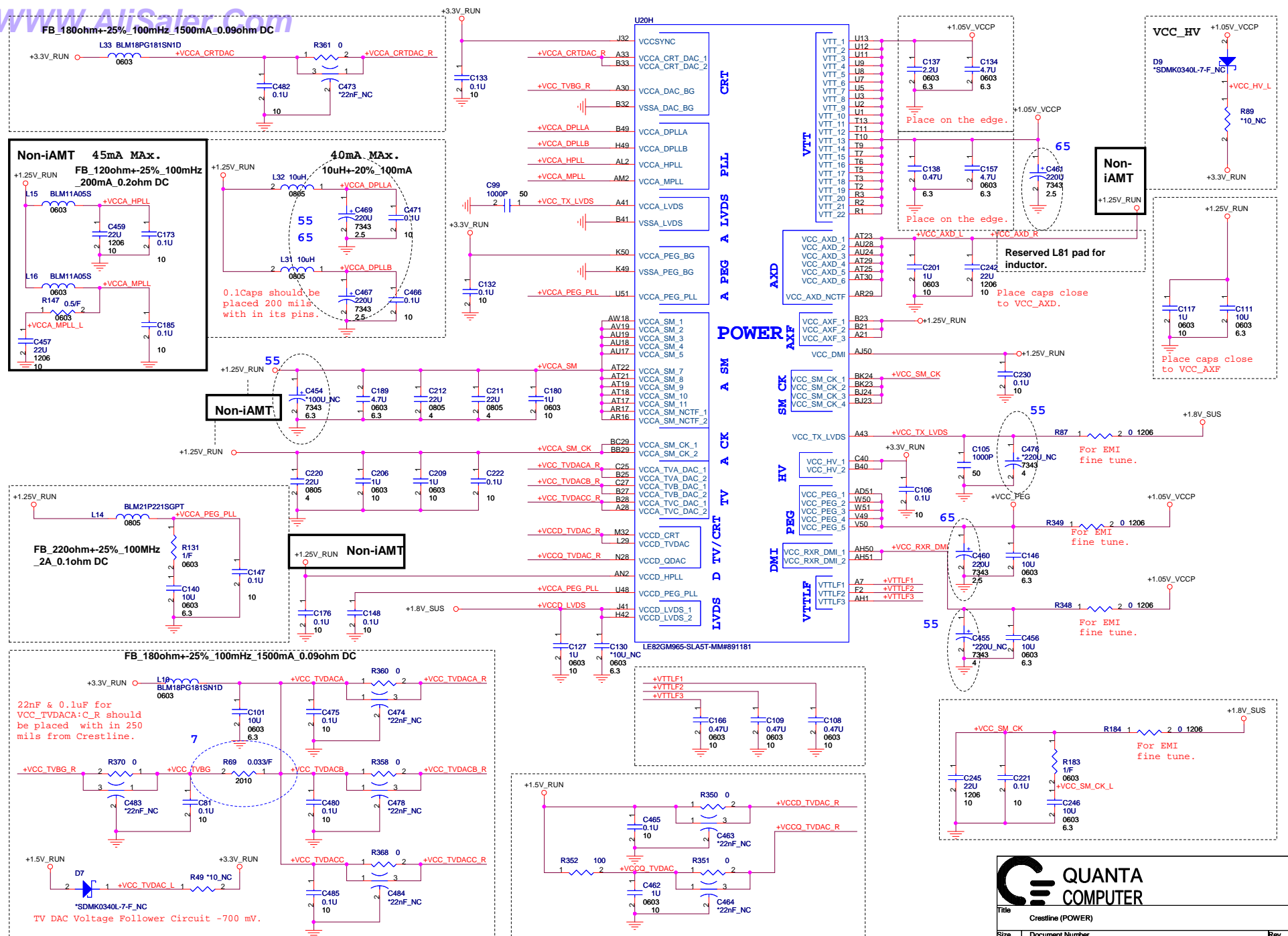
Date: Wednesday, June 25, 2008

Sheet: 7 of 53

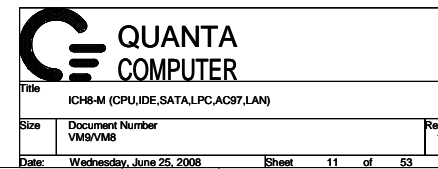
Rev: 1A



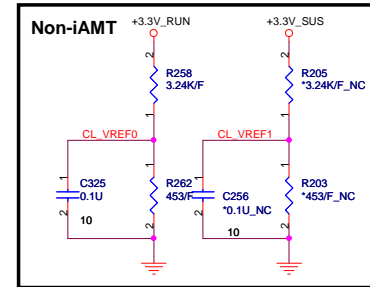
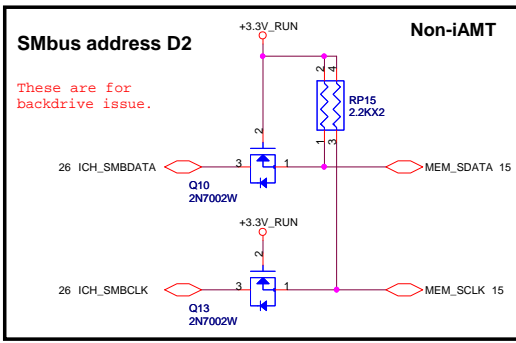
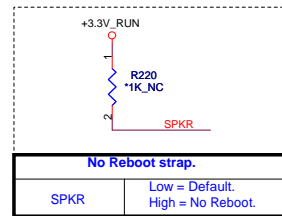
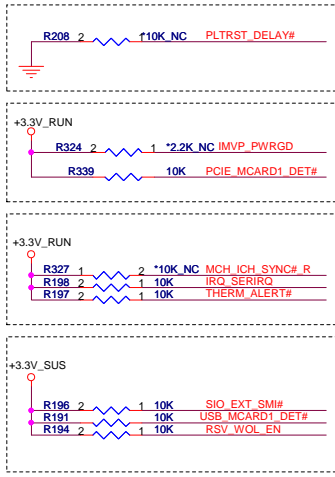
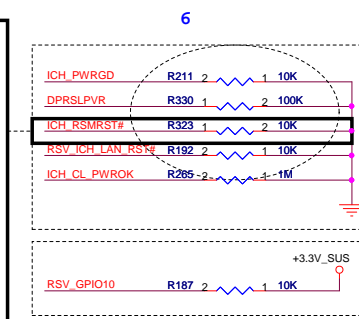
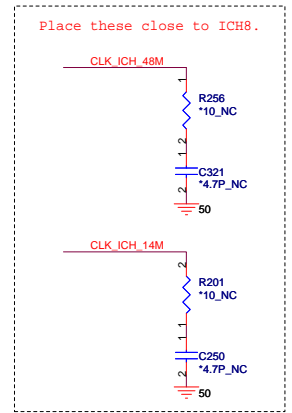
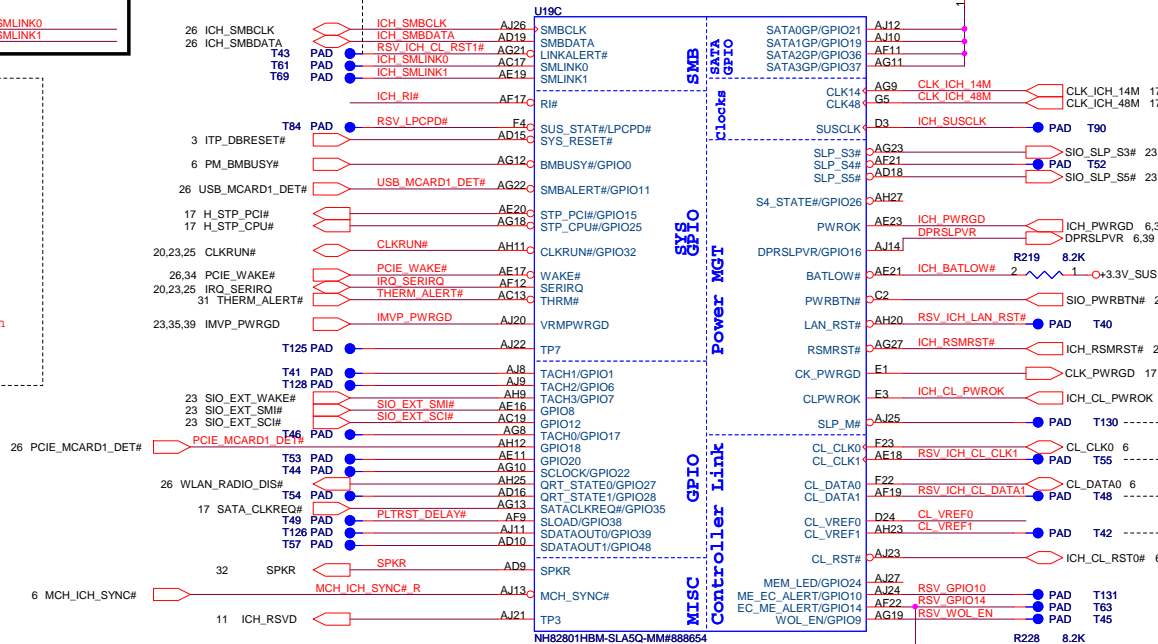
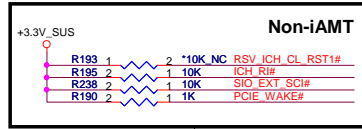
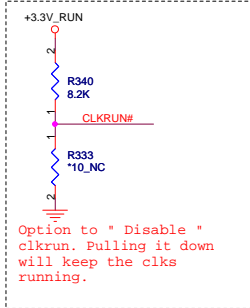
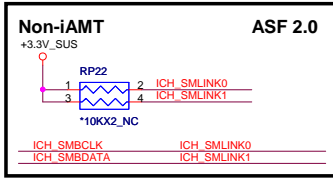
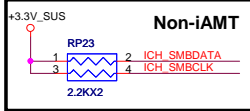












**QUANTA COMPUTER**

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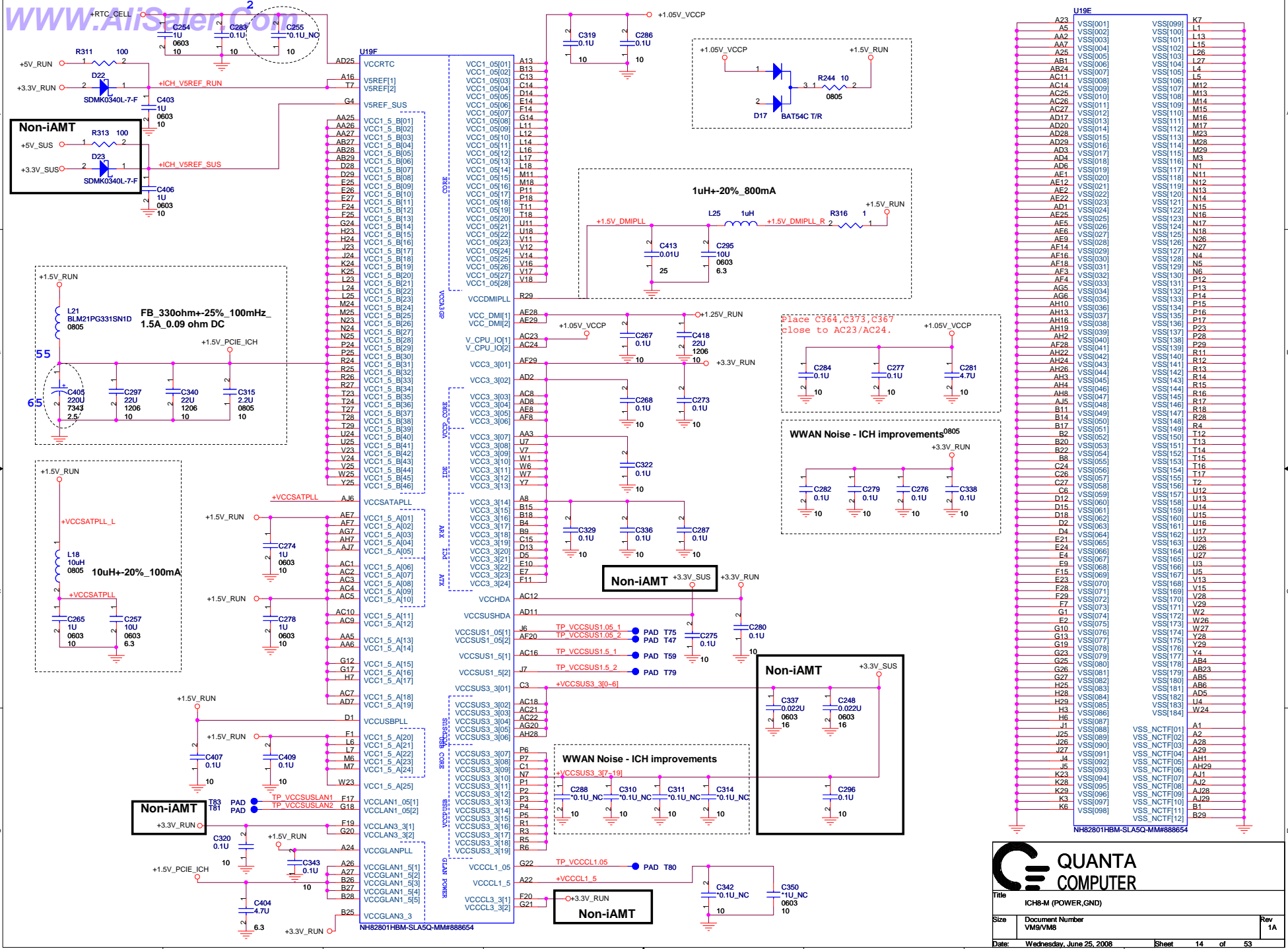
Size: Document Number VM9/VM8

Date: Wednesday, June 25, 2008

Sheet: 13 of 53

Rev: 1A







A is required to route to Top  
SoDIMM for AMT to function.  
Ch.A SoDIMM needs to be  
populated for Intel AMT support.

1.8V\_SUS  
V\_DDR\_MCH\_REF

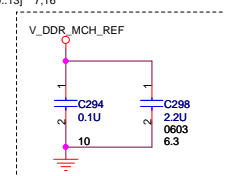
1.8V\_SUS  
V\_DDR\_MCH\_REF

DDR\_A\_DM[0..7] 7  
DDR\_A\_DQ[0..63] 7  
DDR\_A\_DQS[0..7] 7  
DDR\_A\_DQS#[0..7] 7  
DDR\_A\_MA[0..13] 7,16

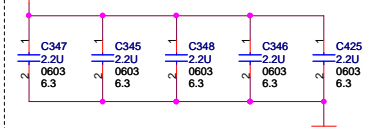
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V\_DDR\_MCH\_REF

1.8V\_SUS  
V\_DDR\_MCH\_REF

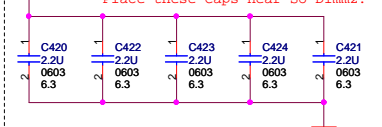
DDR\_B\_DM[0..7] 7  
DDR\_B\_DQ[0..63] 7  
DDR\_B\_DQS[0..7] 7  
DDR\_B\_DQS#[0..7] 7  
DDR\_B\_MA[0..13] 7,16



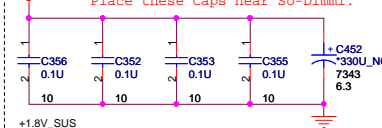
Place these Caps near So-Dimm1.



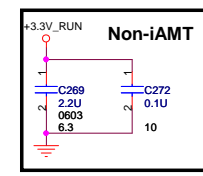
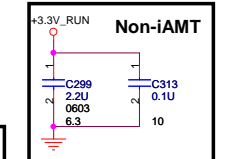
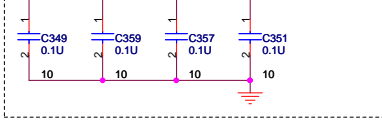
Place these Caps near So-Dimm2.



Place these Caps near So-Dimm1.



Place these Caps near So-Dimm2.



Non-iAMT

Non-iAMT

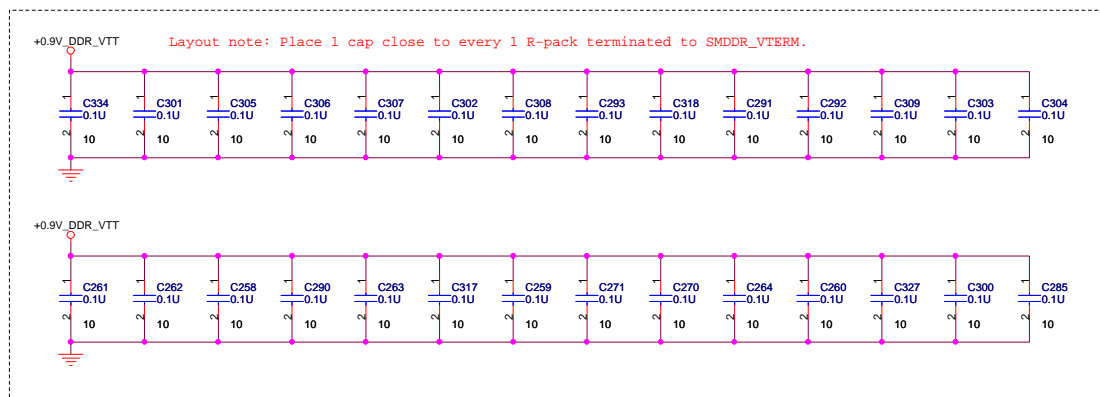
Non-iAMT

CLOCK 0,1  
CKE 0,1

CLOCK 2,3  
CKE 2,3

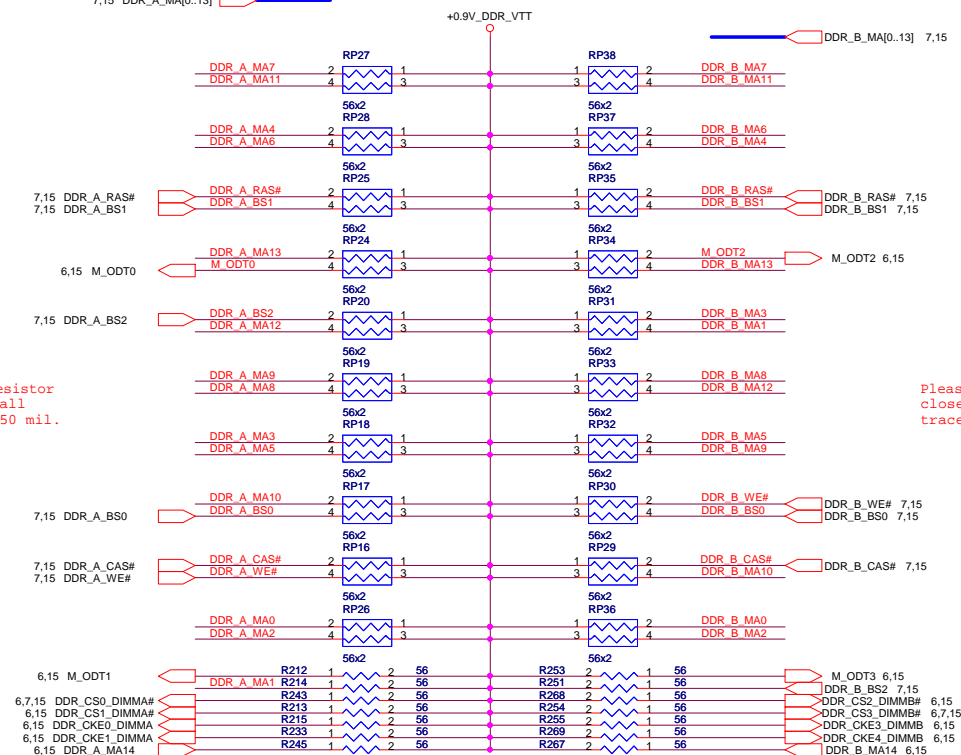


Title			DDR2 SO-DIMM (200P) X 2		
Size	Document Number				Rev
	VM9/VM8				1A
Date:	Wednesday, June 25, 2008		Sheet	15	of 53



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

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



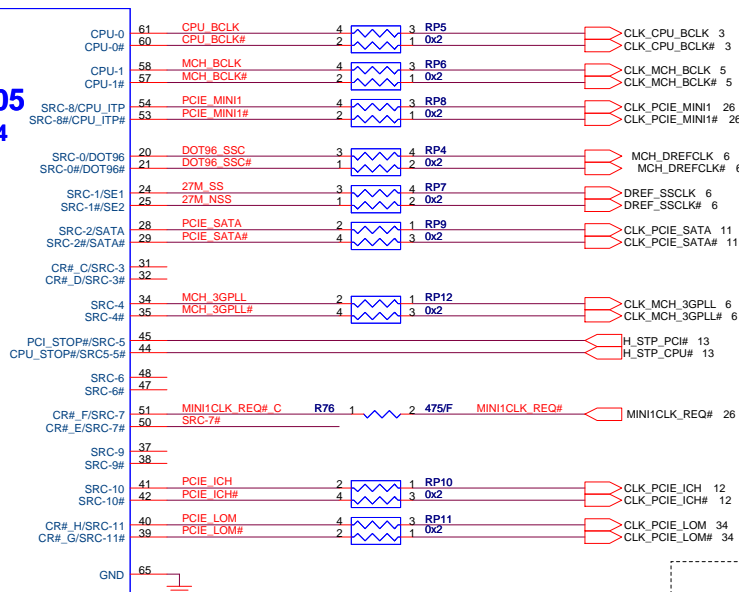
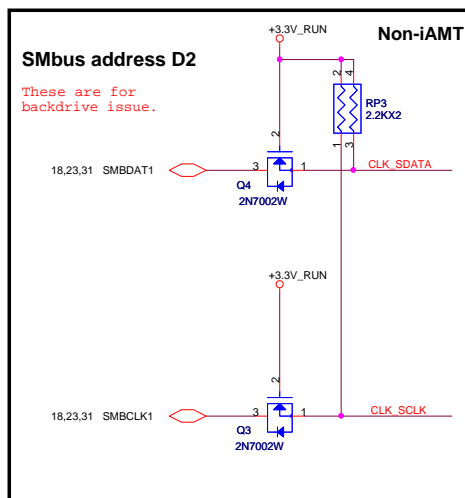
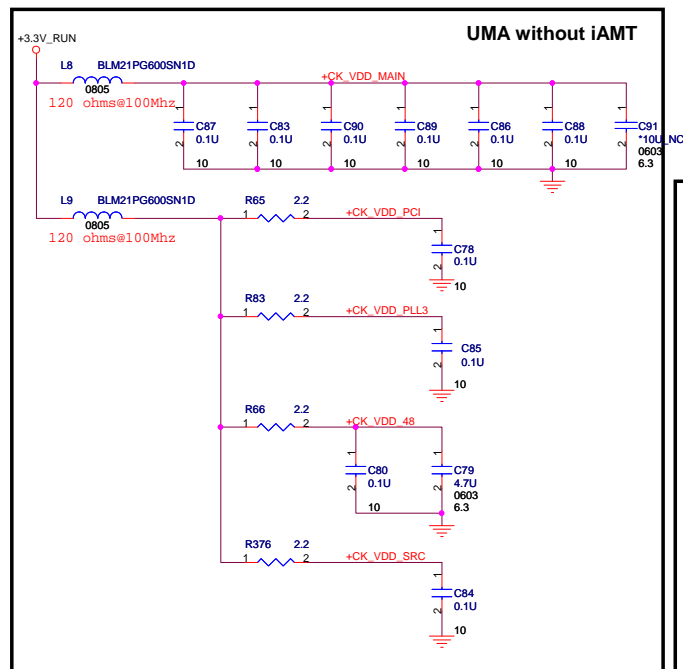
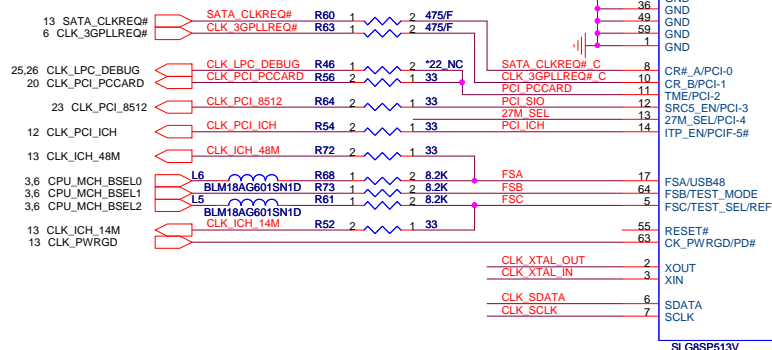
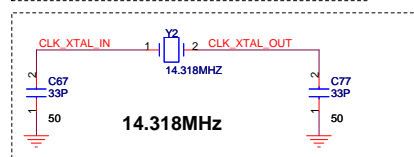
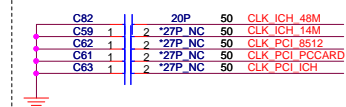
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DDR2 RES ARRAY

Size  
Document Number  
VM9/VM8

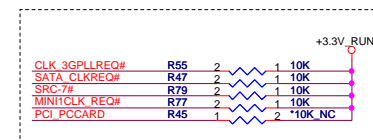
Date: Wednesday, June 25, 2008

Sheet 16 of 53

Rev  
1A



Silego need pull up  
but other?



FSC	FSB	FSA	CPU	SRC	PC
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

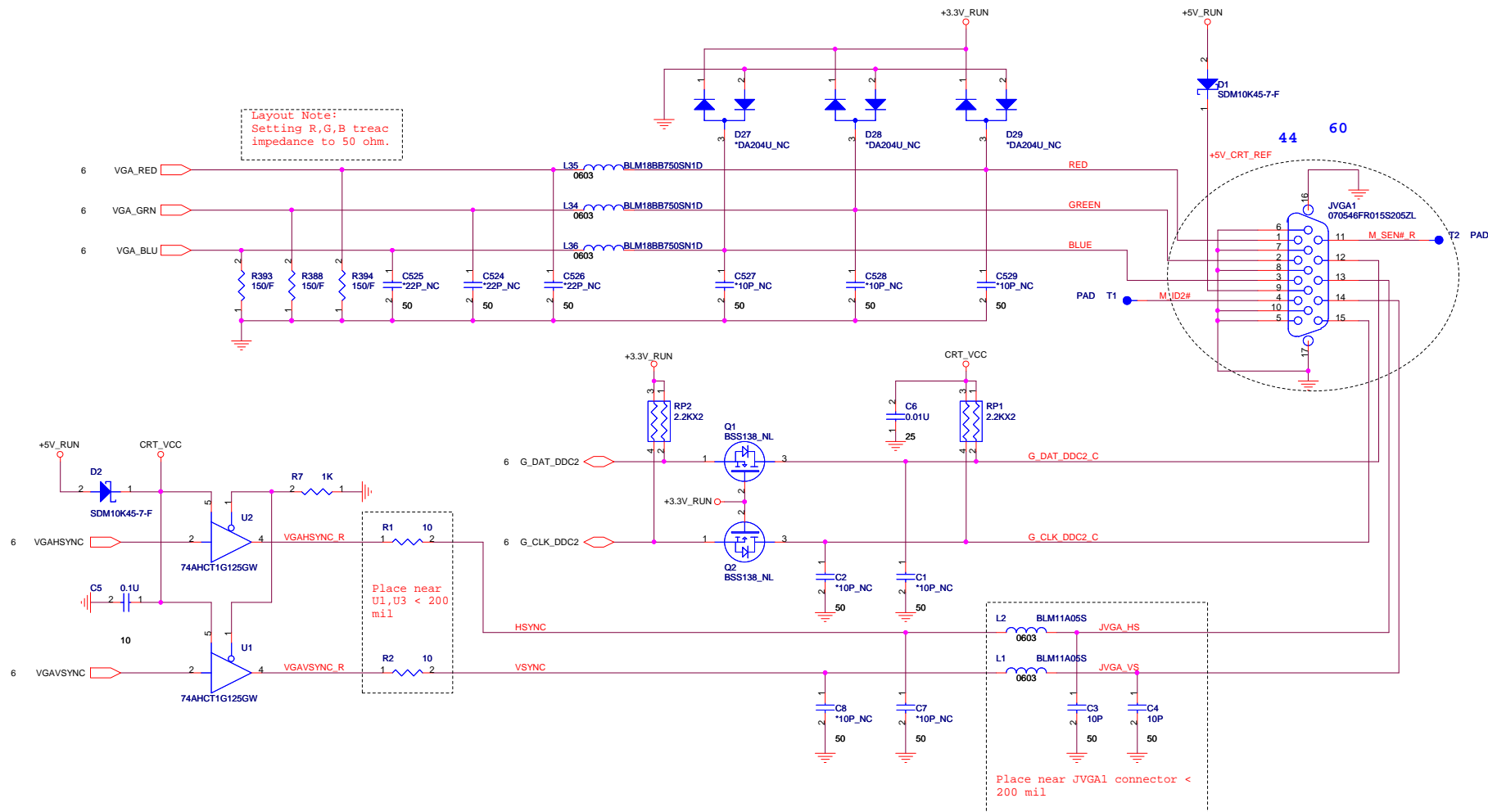


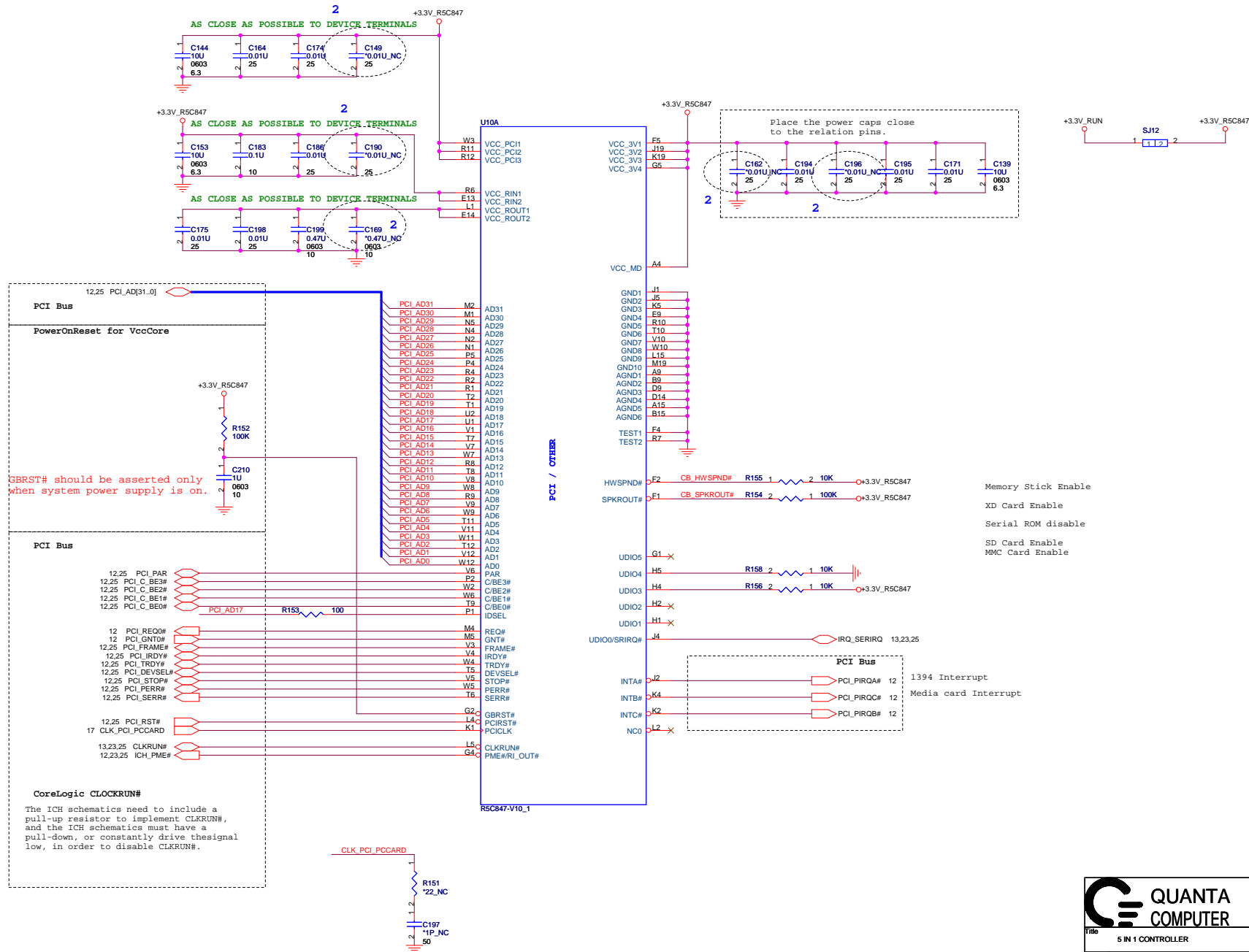
Title  
CLOCK GENERATOR

Size	Document Number VM9/VM8
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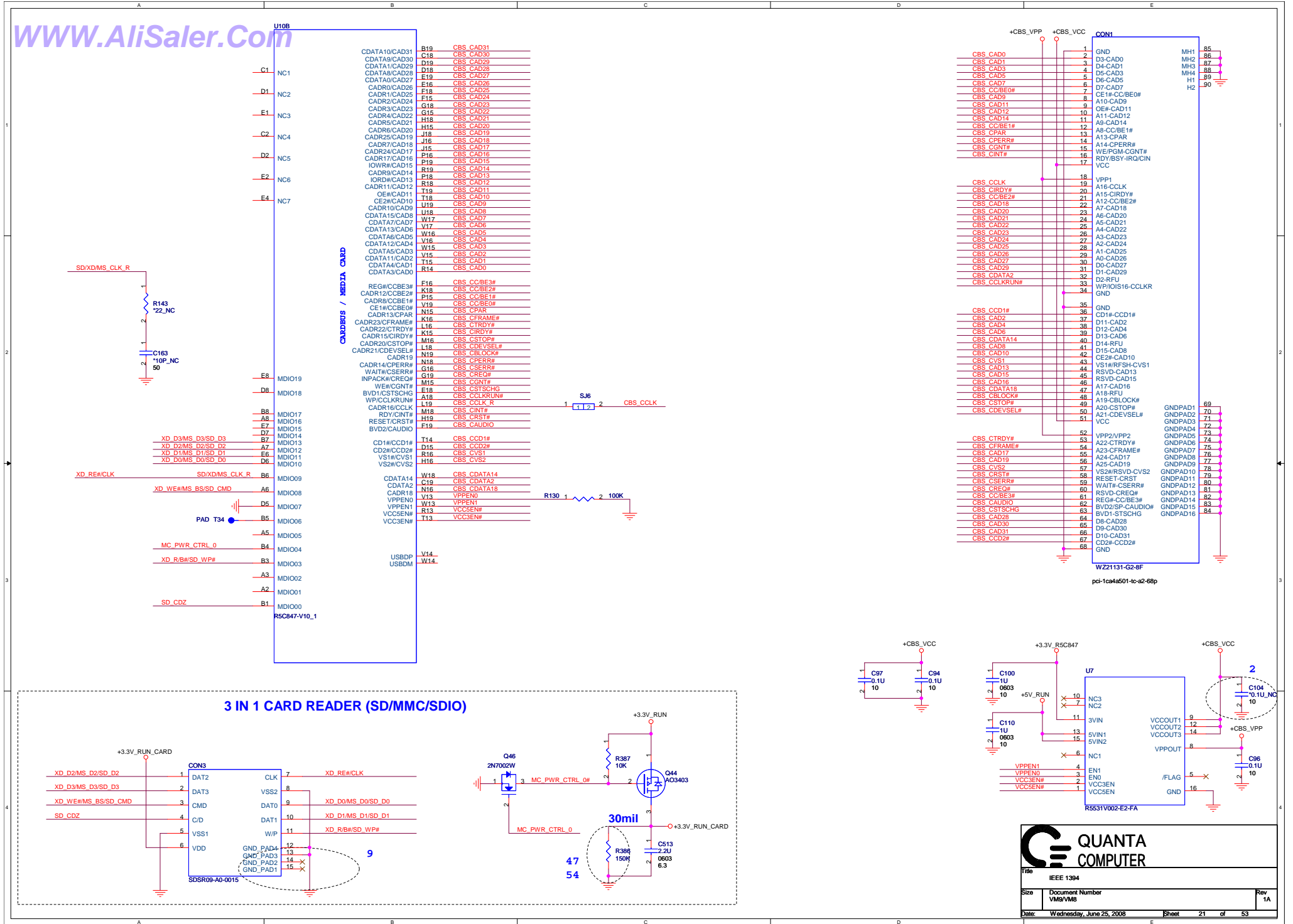
Rev  
1A

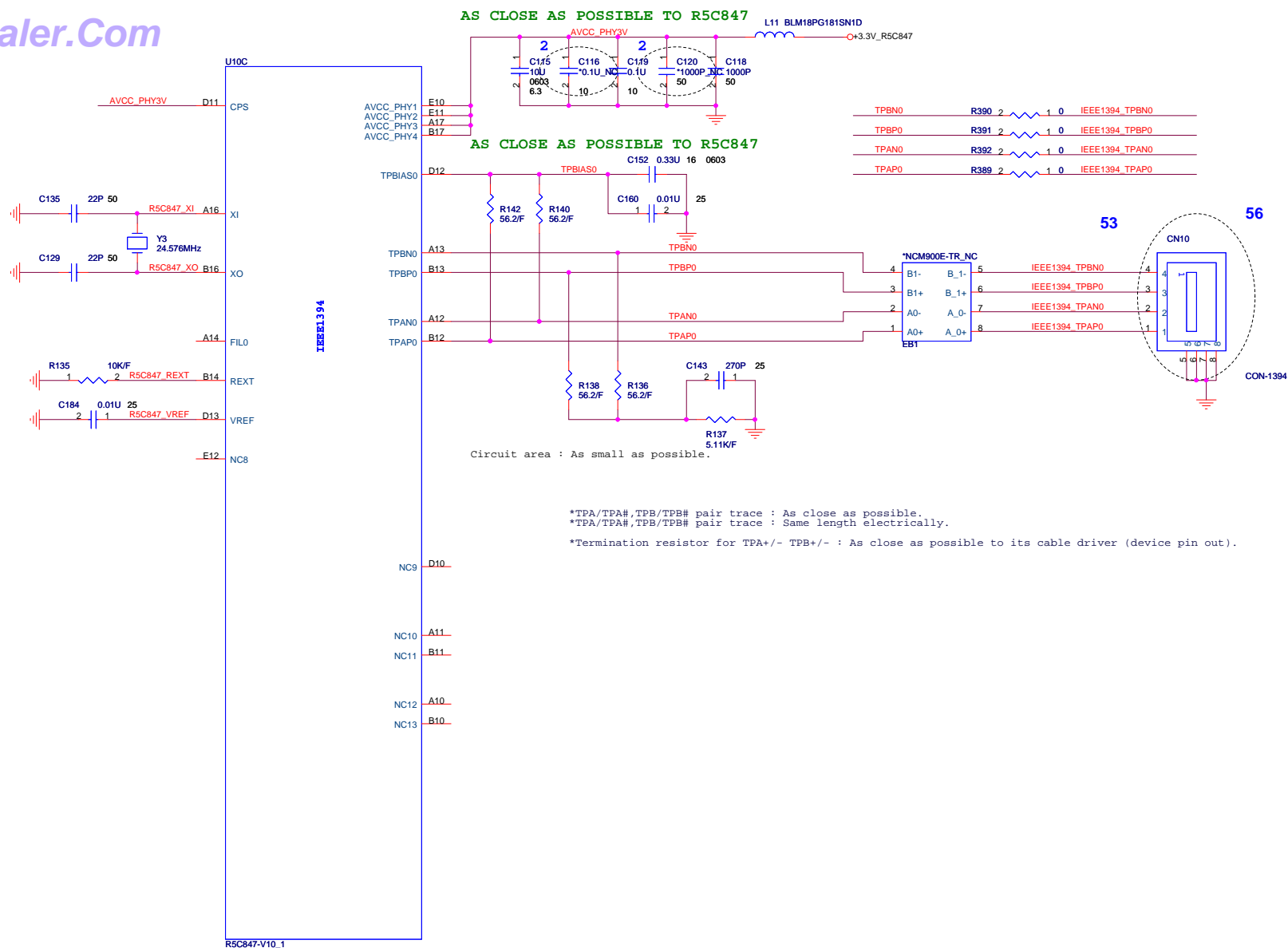


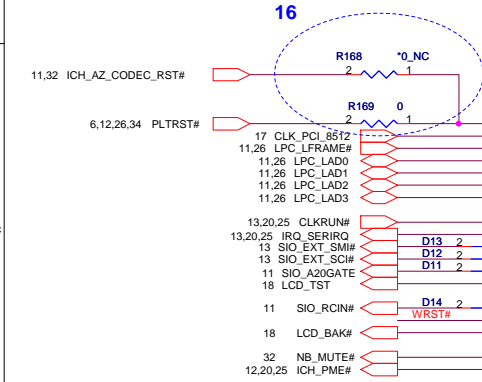
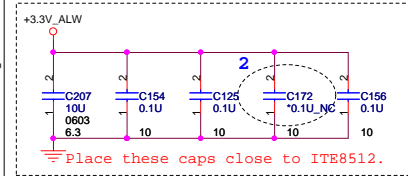




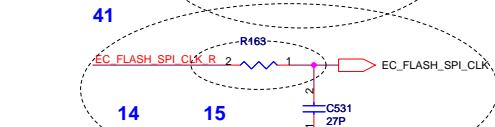
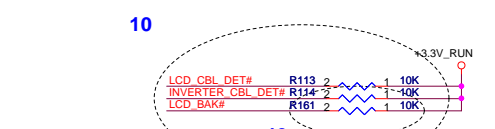
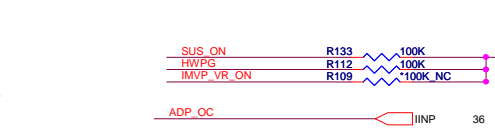
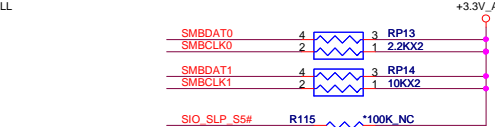
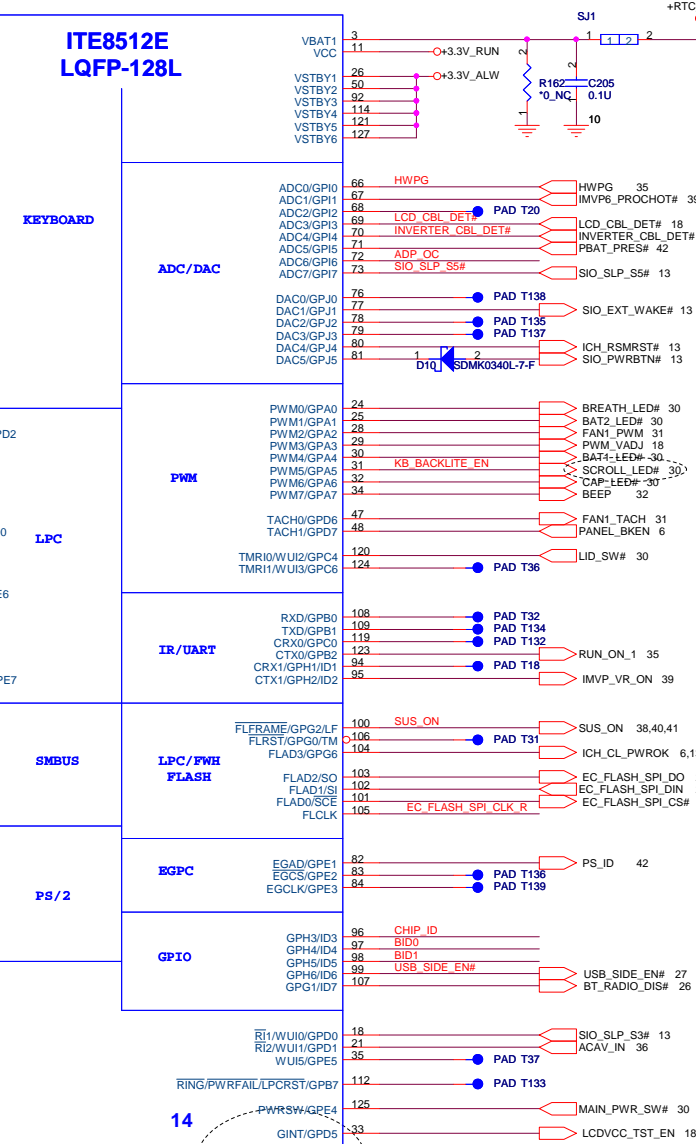
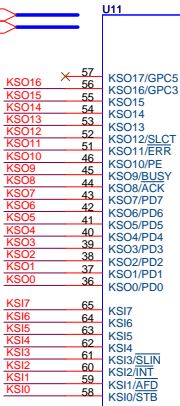
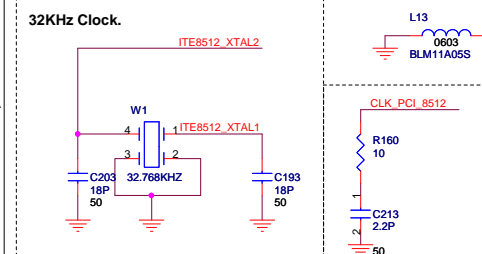
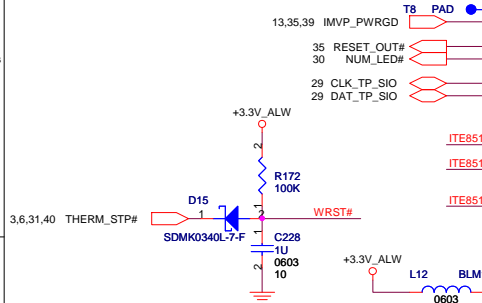




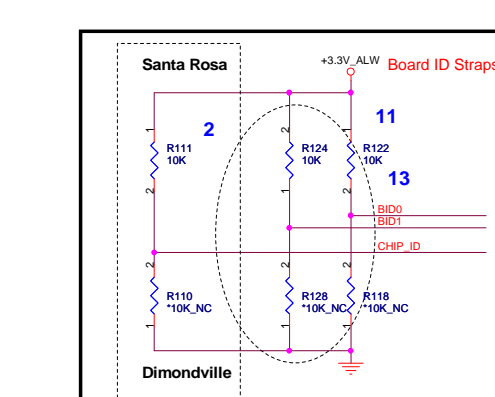




Charge and BAT  
CLK, LCD and Thermal  
G\_Thermal  
and Media button



Place R163, C531 close to U11



CHIP\_ID  
1: Santa Rosa  
0: Dimondville

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

**QUANTA COMPUTER**

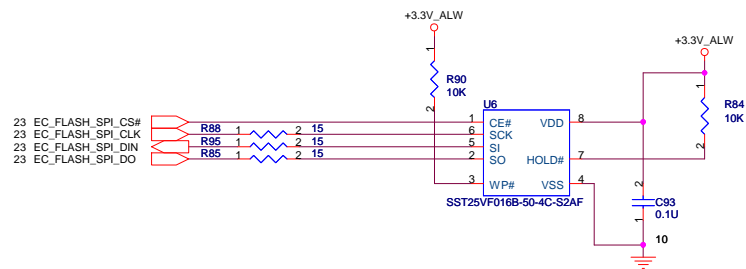
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Size: Document Number VM9/VM8

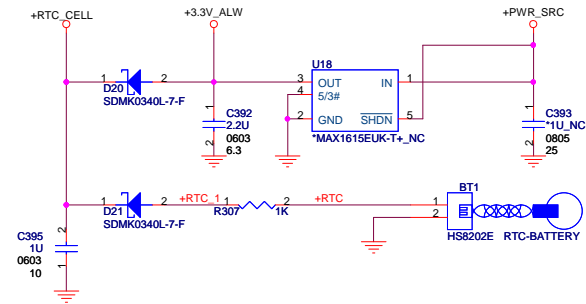
Date: Saturday, July 19, 2008

Sheet: 23 of 53

Rev: 1A



## RTC BATTERY



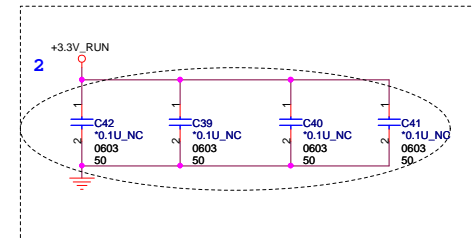
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Size Document Number VM9/VM8

Date: Wednesday, June 25, 2008

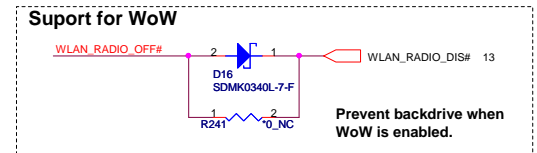
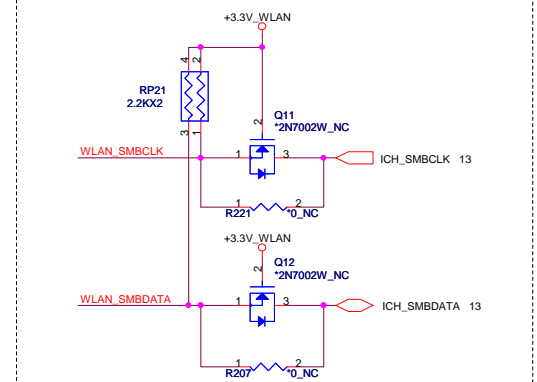
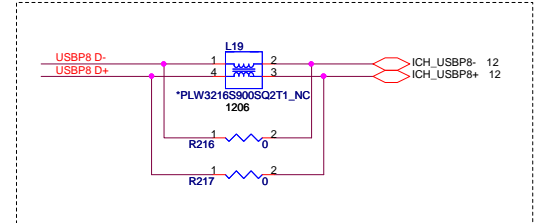
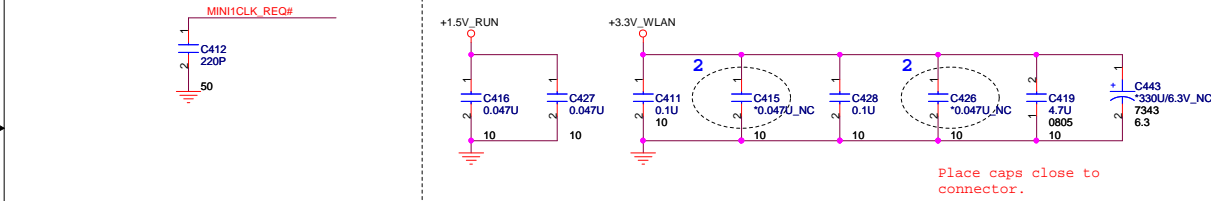
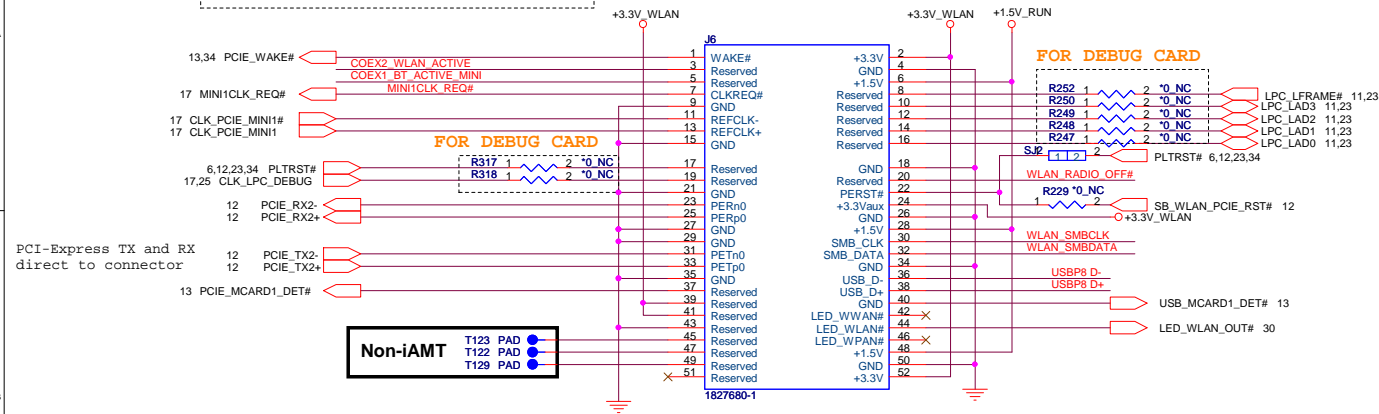
Sheet 24 of 53

Rev 1A

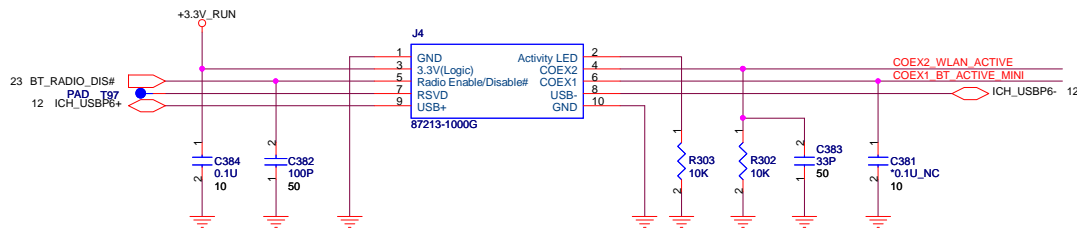


**Place the debug connector on HDD area**

# MiniCard WLAN connector



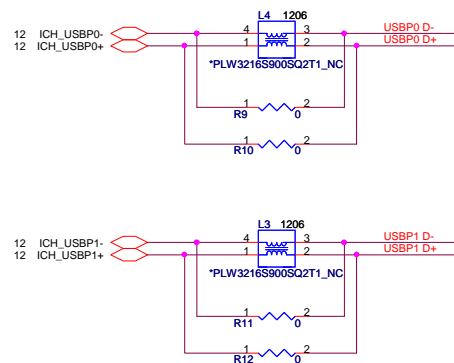
## Bluetooth



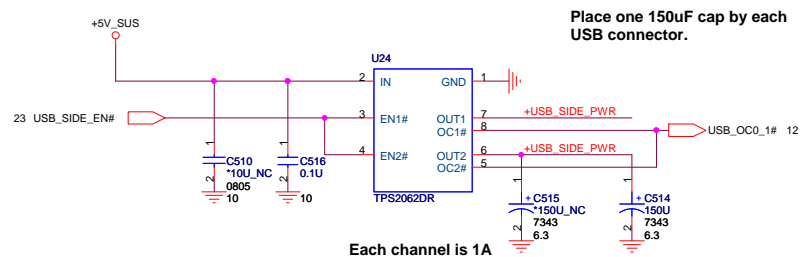
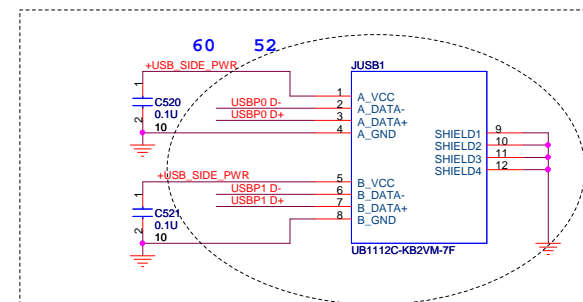
Title			MDC CONN.
Size	Document Number	Rev	
	VM9/VM8	1A	
Date:	Wednesday, June 25, 2008	Sheet	26 of 53



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

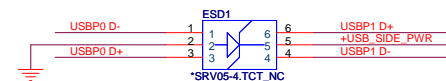


Platforms should put in PADS for the USB chokes if they have the room. Chokes should be NOPOP.



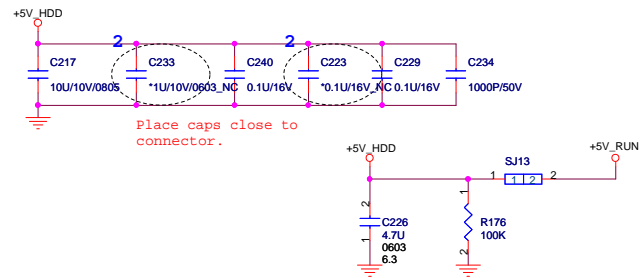
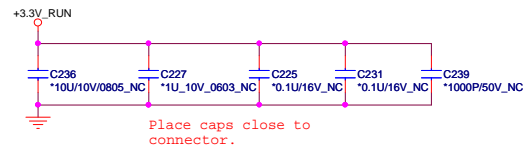
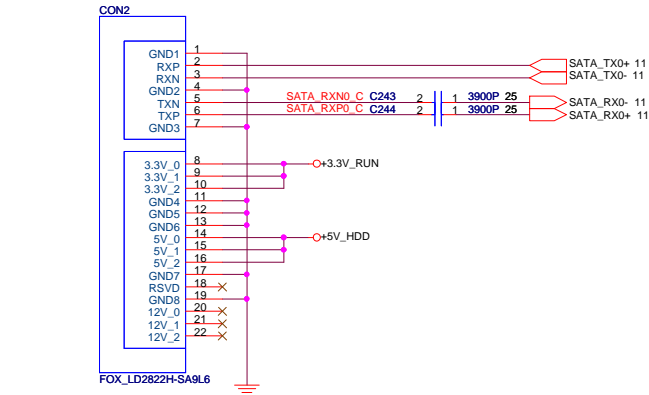
Each channel is 1A

Place ESD diodes as close as USB connector.

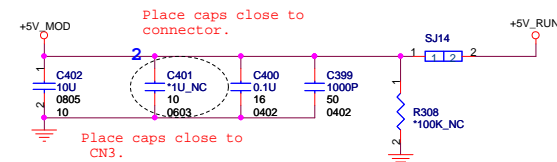
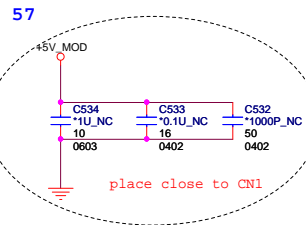
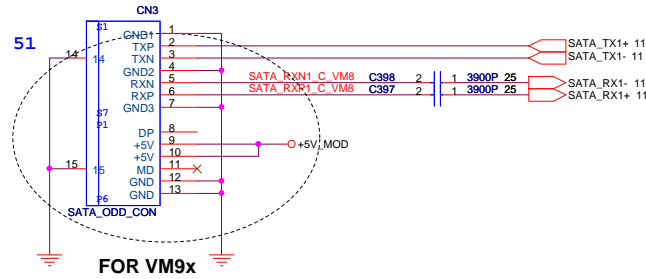


Title SERIAL PORT & USB		
Size	Document Number VM9/VM8	Rev 1A
Date: Wednesday, June 25, 2008	Sheet 27 of 53	

# SATA HDD Connector.

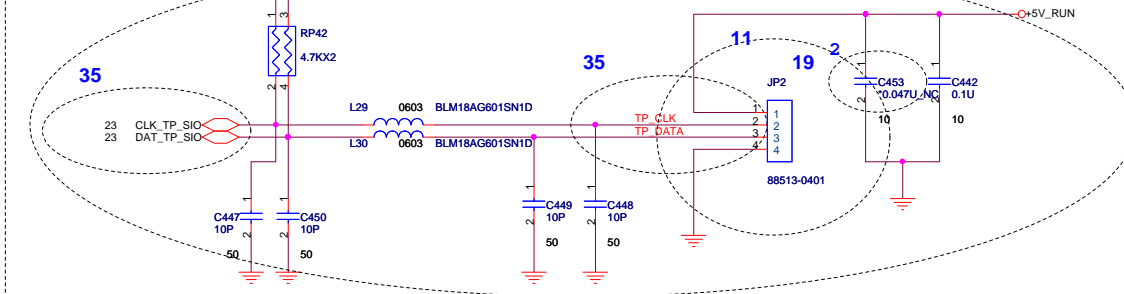


## FOR VM8x



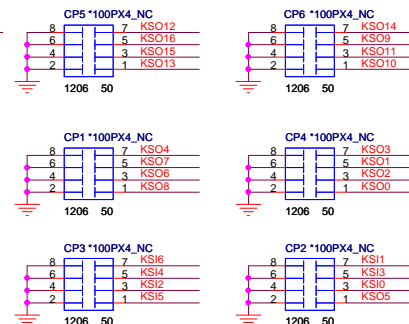
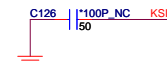
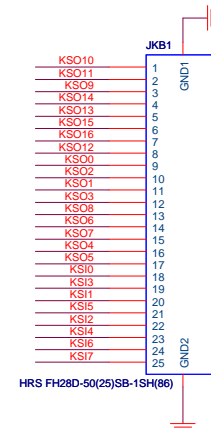
Title			SATA (HDD&CD_ROM)
Size	Document Number	Rev	
	VM9/VM8	1A	
Date:	Wednesday, June 25, 2008	Sheet	28 of 53

# Touch Pad



## KEYBOARD CONNECTOR

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



100P CAPS CLOSE TO JKB1



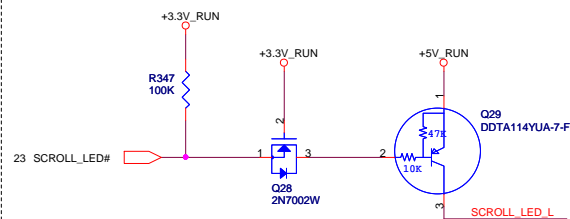
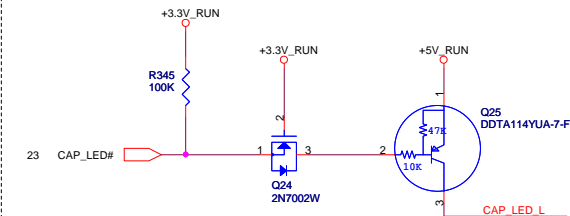
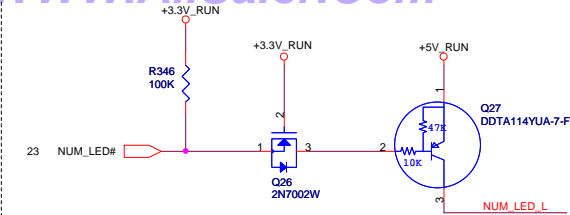
Title TOUCH PAD, BULE TOOTH & FIR

Size Document Number VM9/VM8

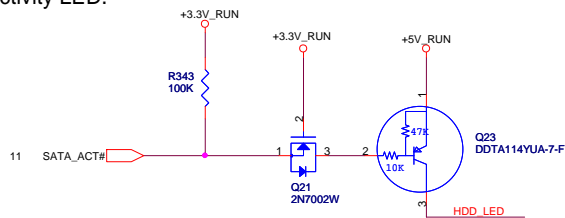
Date: Wednesday, June 25, 2008

Sheet 29 of 53

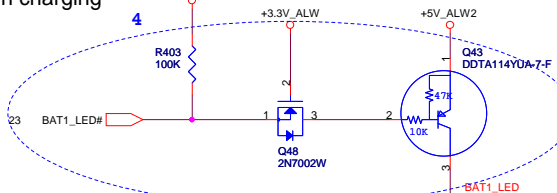
Rev 1A



## HDD activity LED.

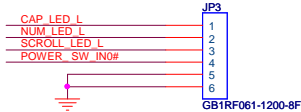


## Battery in charging

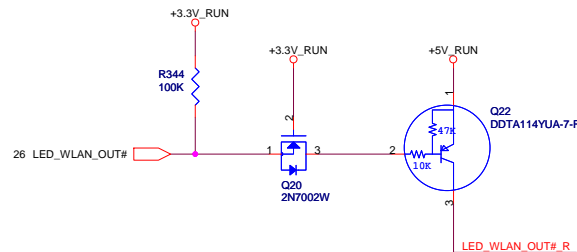


20

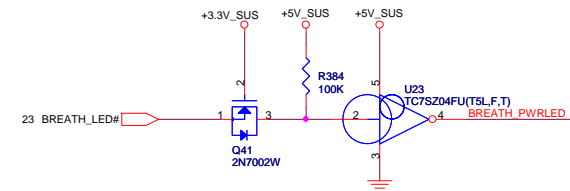
## Dash board connector



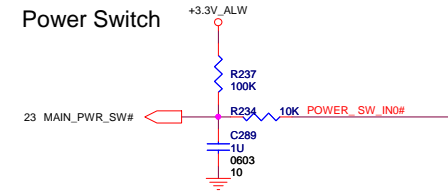
## WLAN



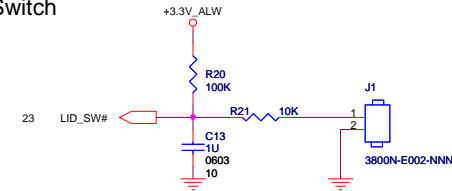
## Power & Suspend.



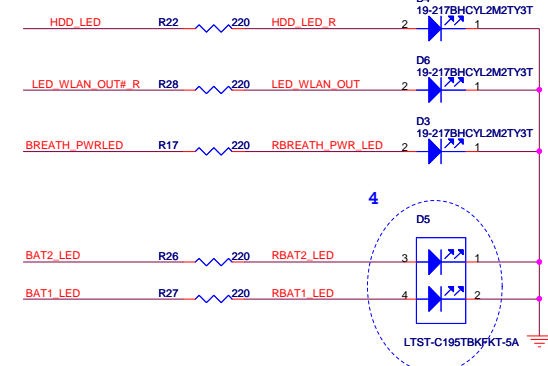
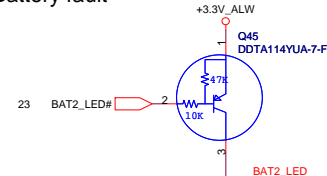
## Power Switch



## LID Switch



## Battery fault



**QUANTA COMPUTER**

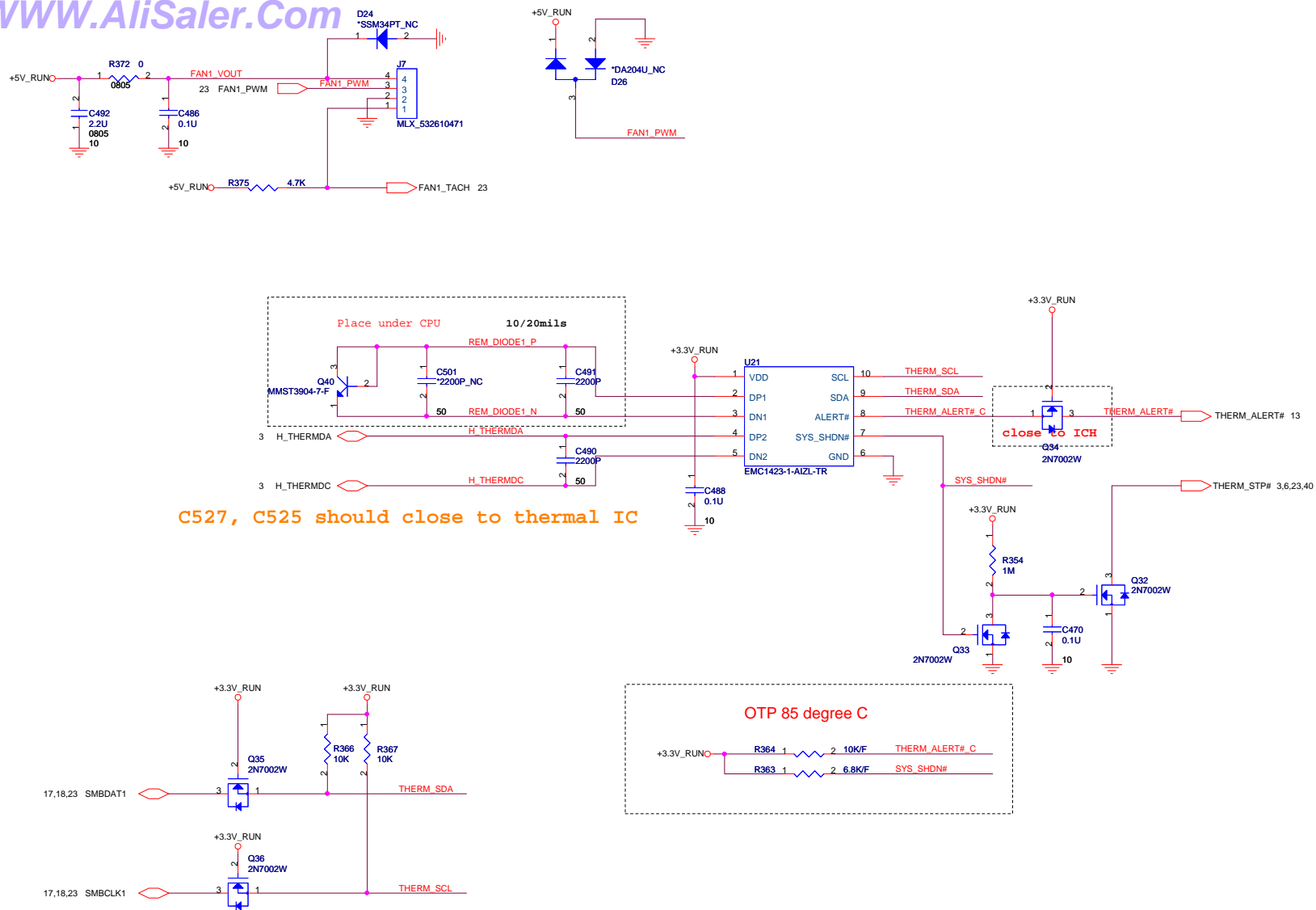
Title: SWITCH, KEYBOARD & LED

Size: Document Number VM9/VM8

Date: Wednesday, June 25, 2008

Sheet: 30 of 53

Rev: 1A



Title FAN & THERMAL

Size Document Number VM9/VM8

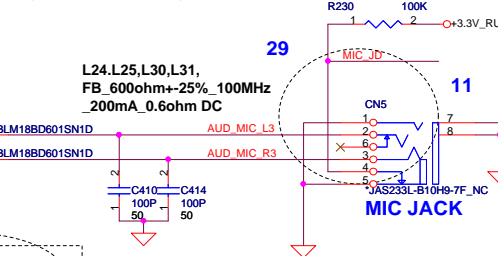
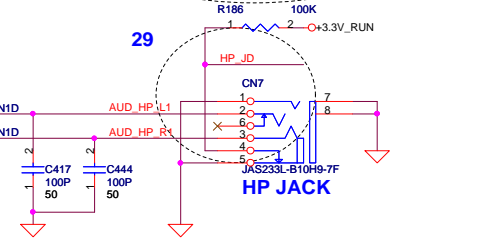
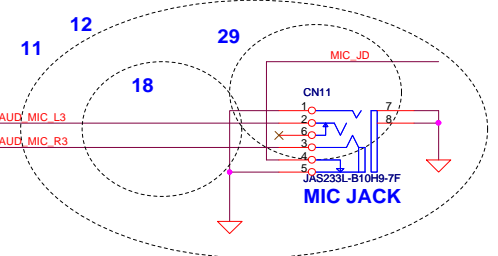
Date: Wednesday, June 25, 2008

Sheet 31 of 53

Rev 1A



**JACK SENSE**



EMI Request

R402	2		1	0	06
R401	2		1	0	06
R304	2		1	0	06
R261	2		1	0	06
R295	2		1	0	06
R334	2		1	0	06
R185	2		1	0	06



Title

5

Size



	<b>Document Number</b>
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Document Number  
VM9/VM8

	0.000000
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39

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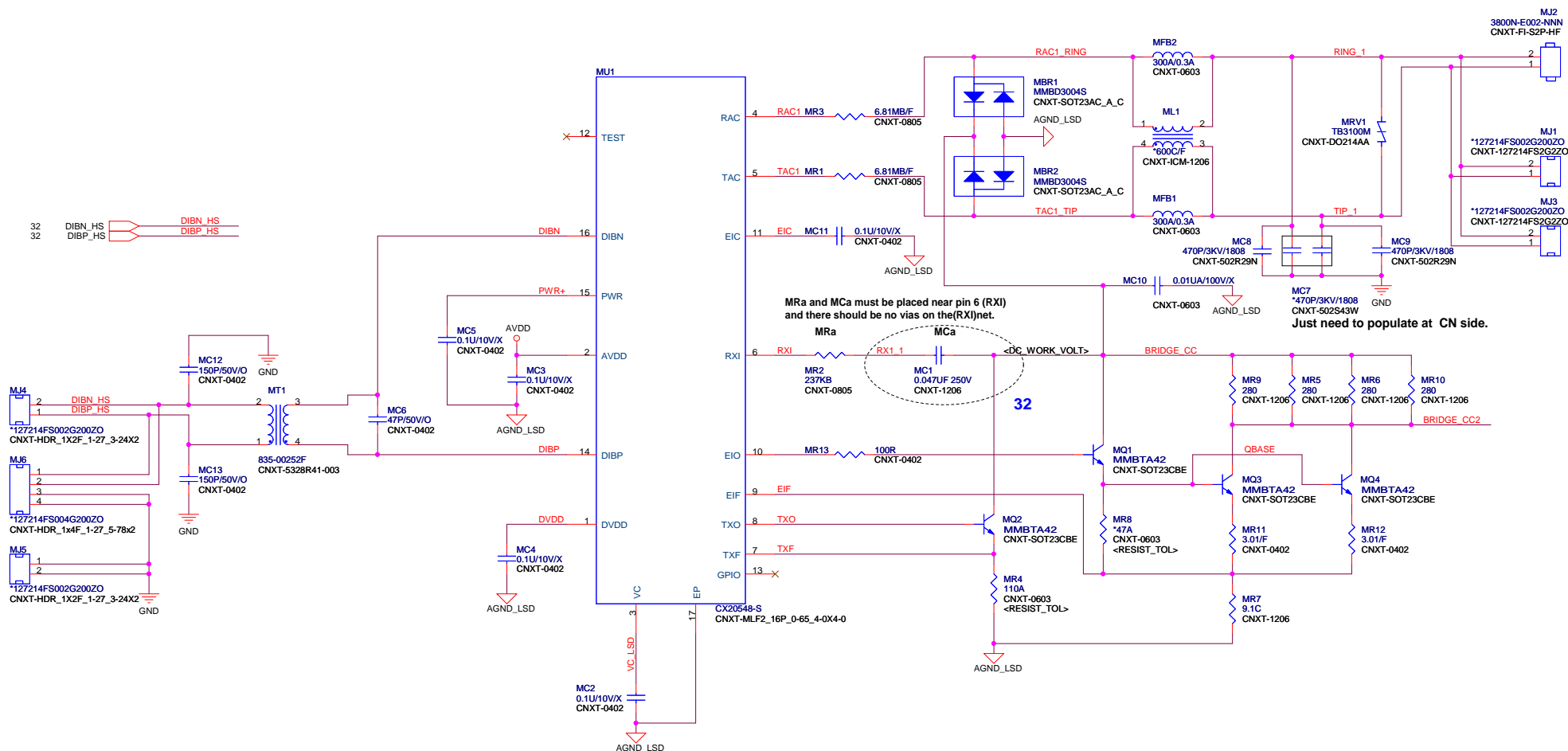
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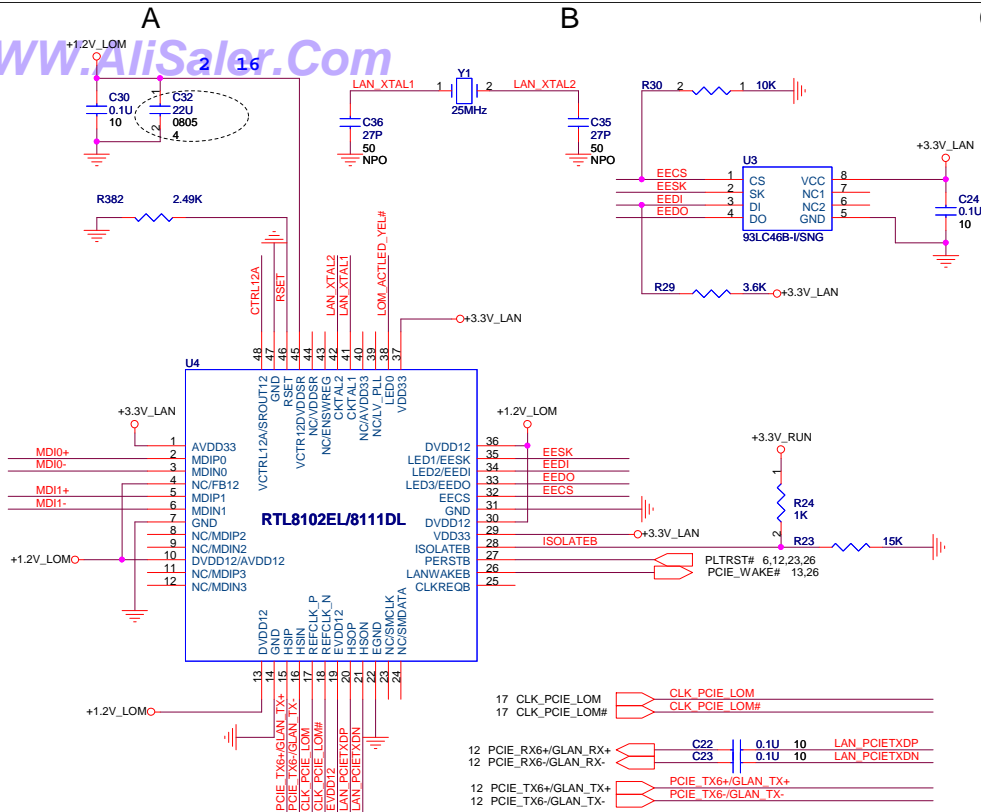
# Revision History

REV	Description	Date
0	Initial Release	April 26, 2005
4		

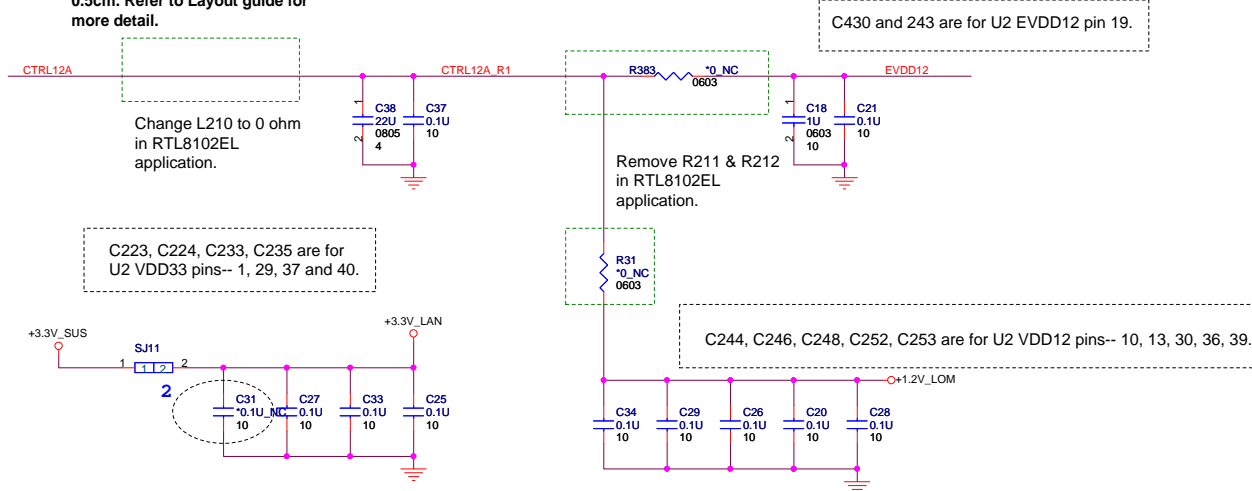


QUANTA  
COMPUTER

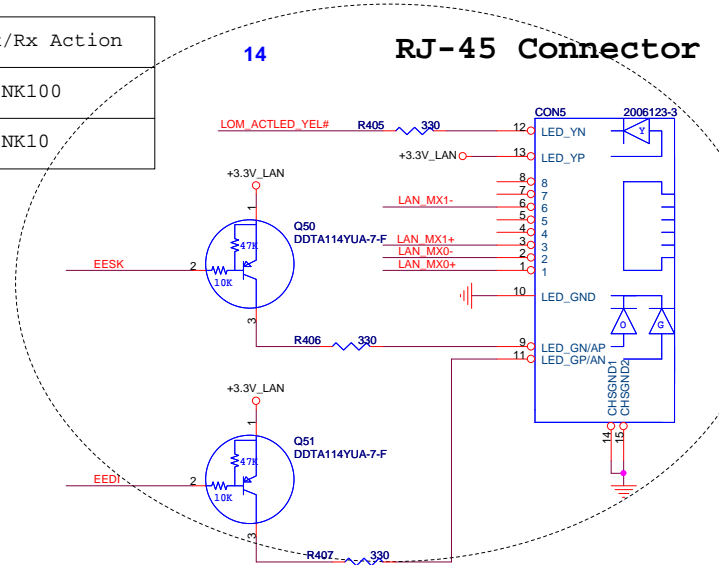
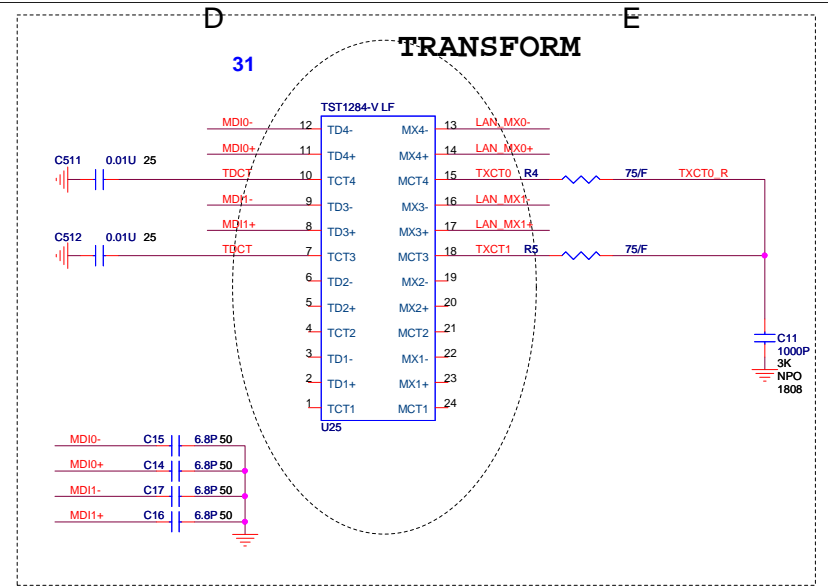
Title		Rev
Size	Document Number	1A
Date: Wednesday, June 25, 2008		Sheet 33 of 53

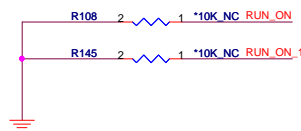
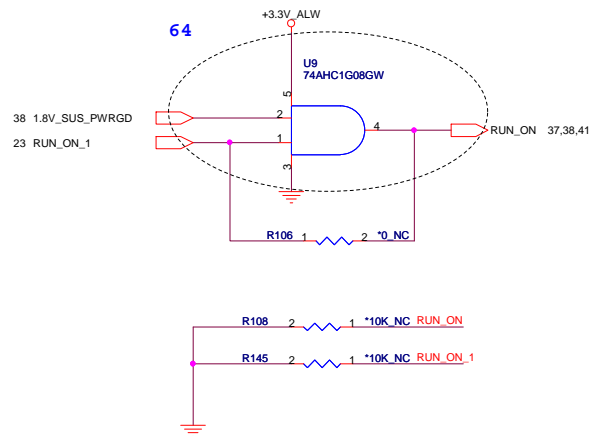
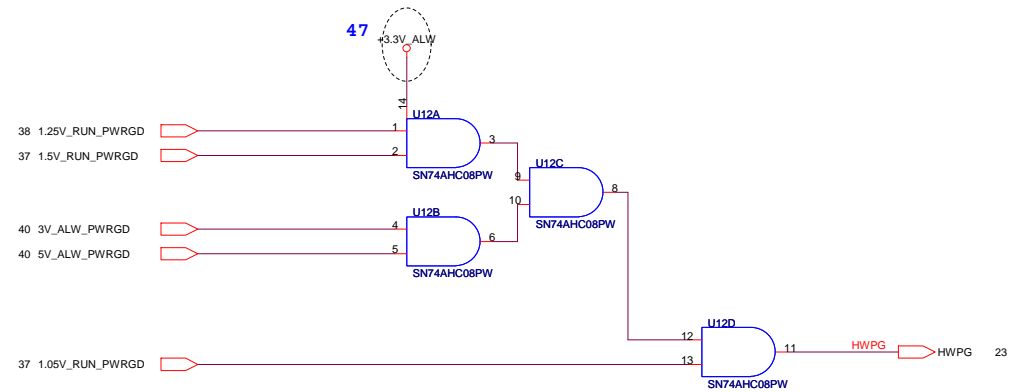
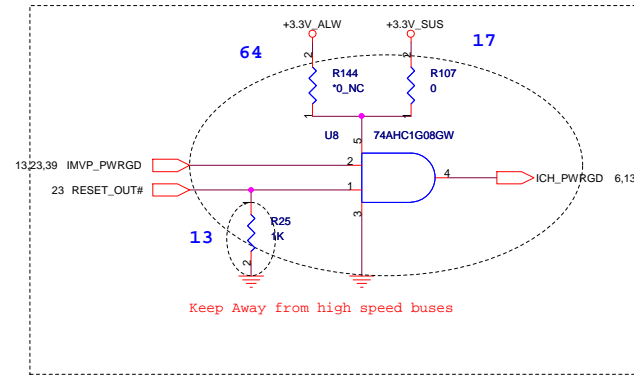


Note 1: The Trace length between L210 and 8111DL's Pin 1 must be within 0.5 cm. C5 and C8 to L210 must be within 0.5cm. Refer to Layout guide for more detail.

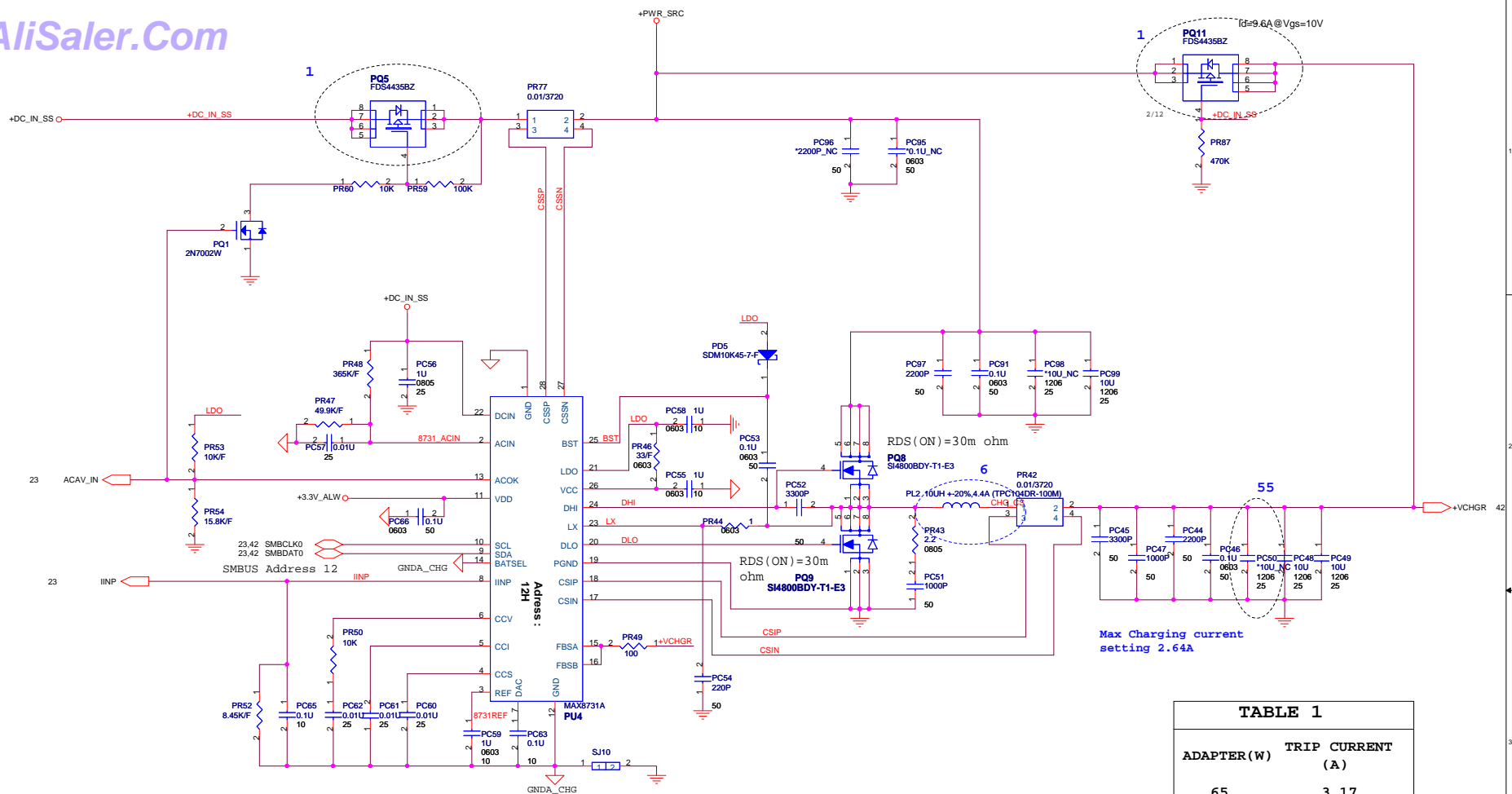


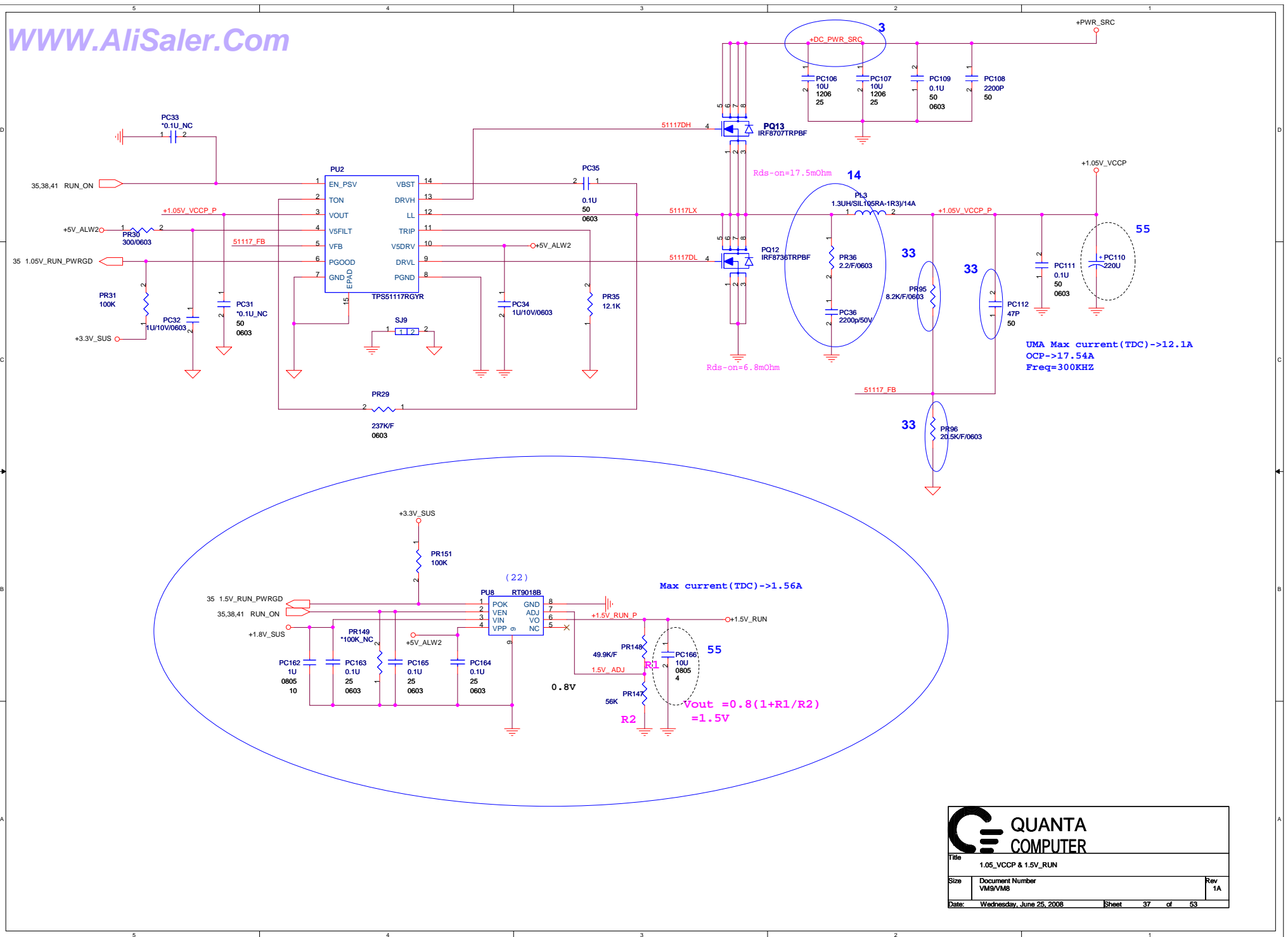
LED0	Tx/Rx Action
LED1/EESK	LINK100
LED2/EEDI	LINK10

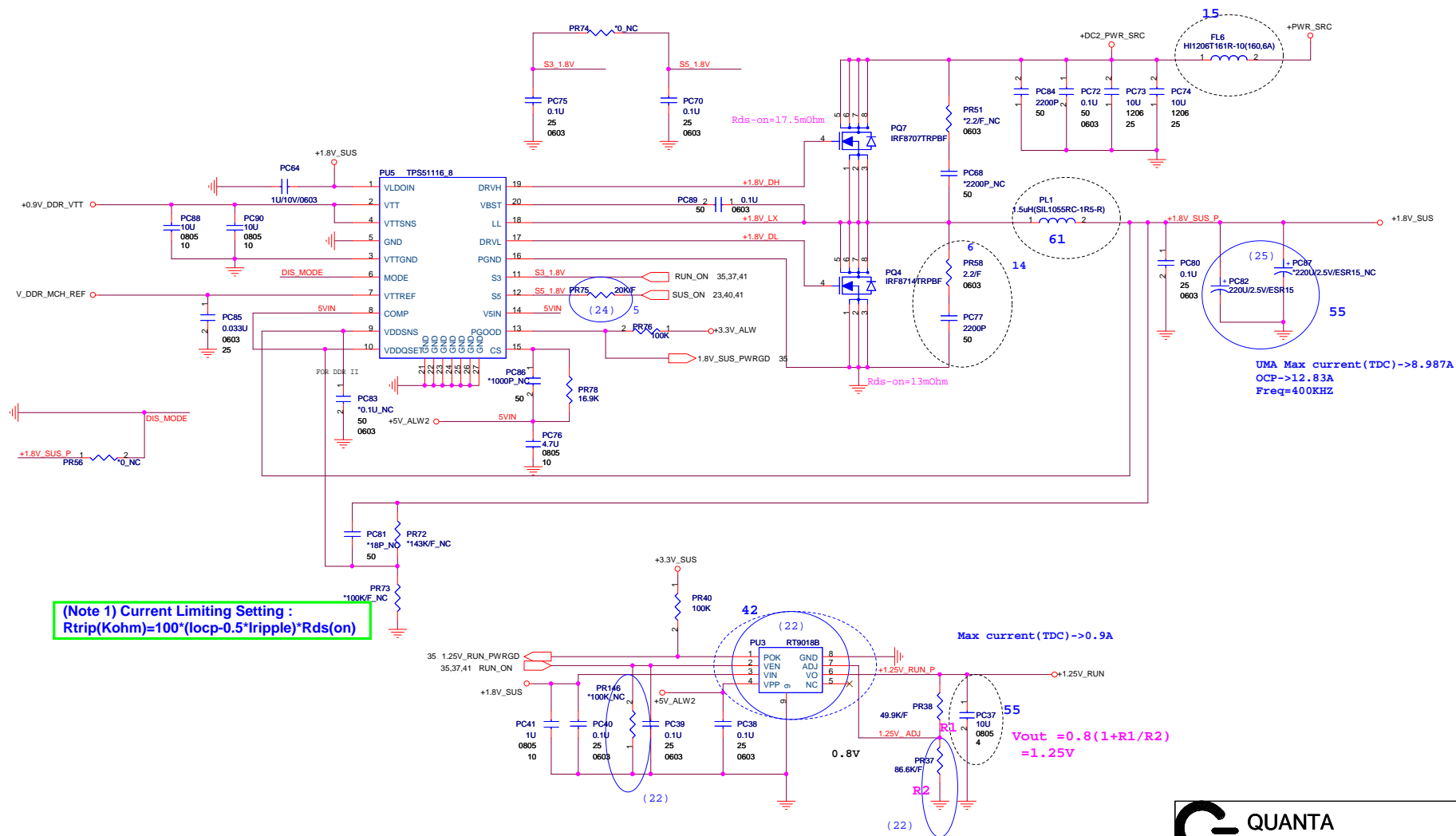




Title System Reset Circuit		
Size	Document Number VM9/VM8	Rev 1A
Date: Friday, July 25, 2008	Sheet 35 of 53	

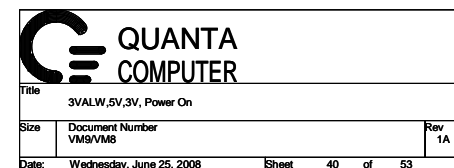


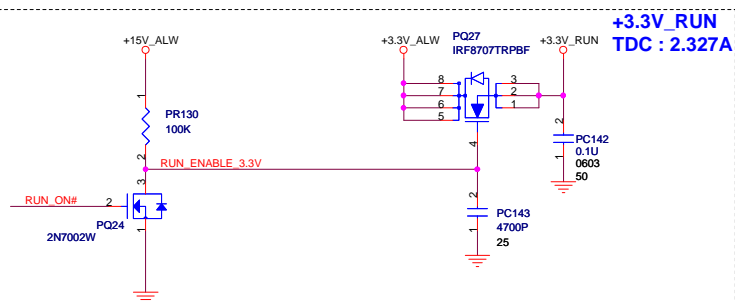
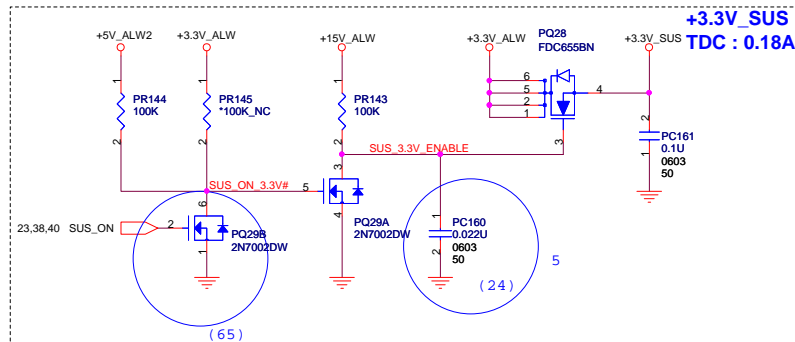
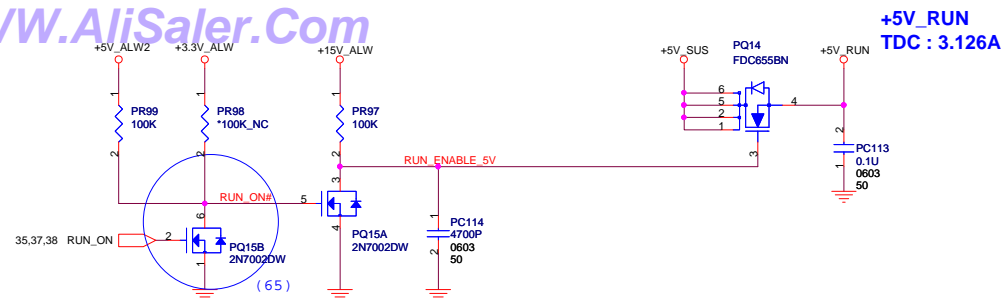




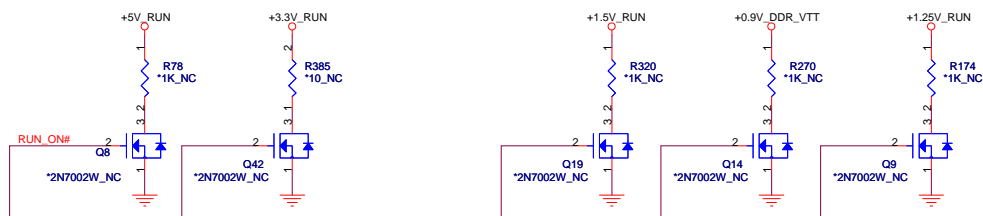




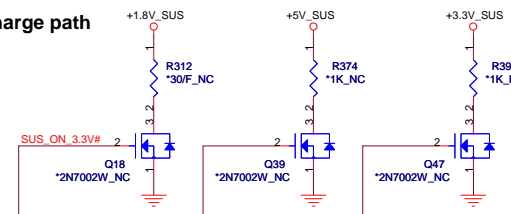




#### Reserve discharge path



#### Reserve discharge path



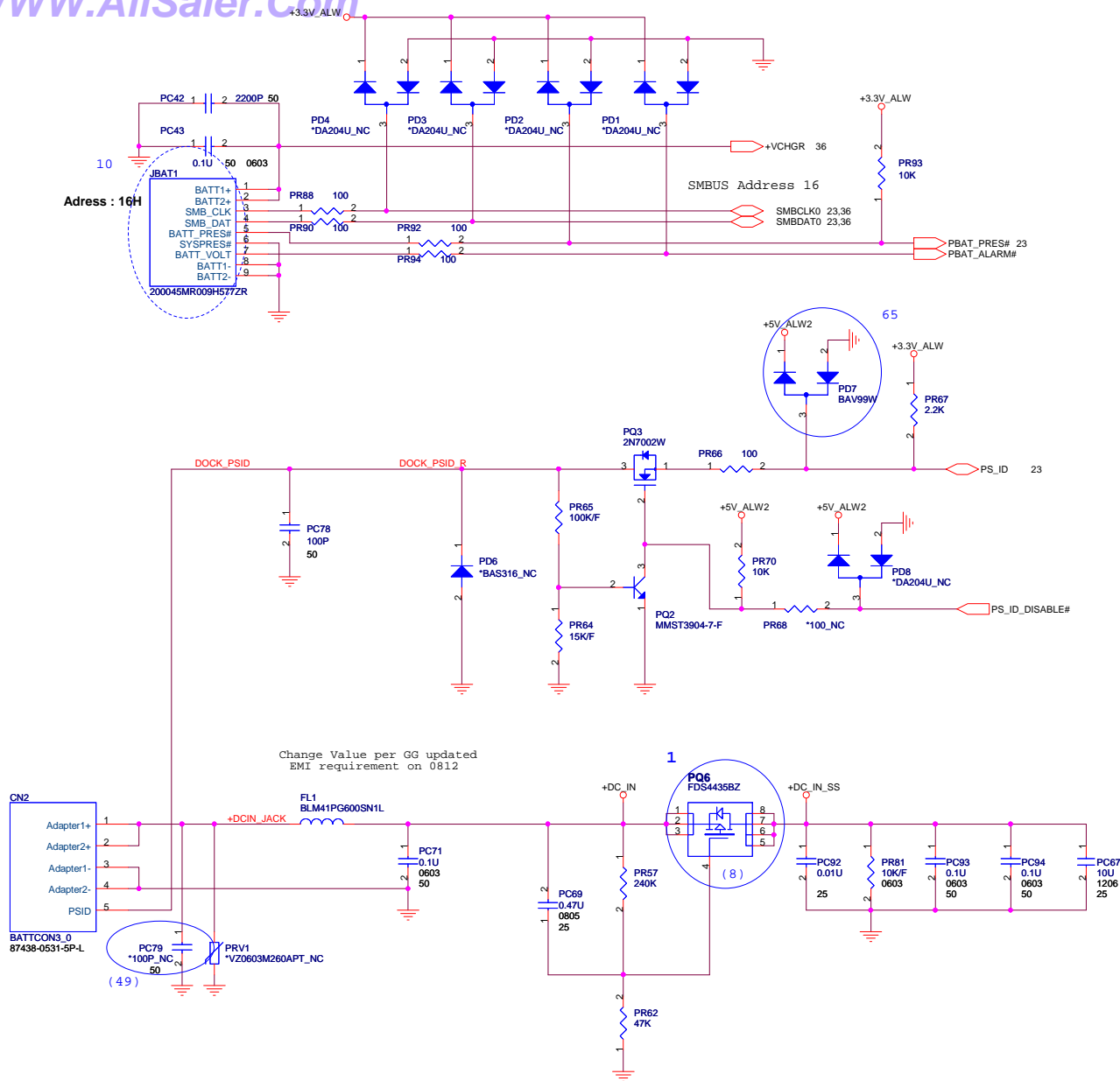
Title RUN POWER SW

Size Document Number VM9/VM8

Date: Wednesday, June 25, 2008

Sheet 41 of 53

Rev 1A

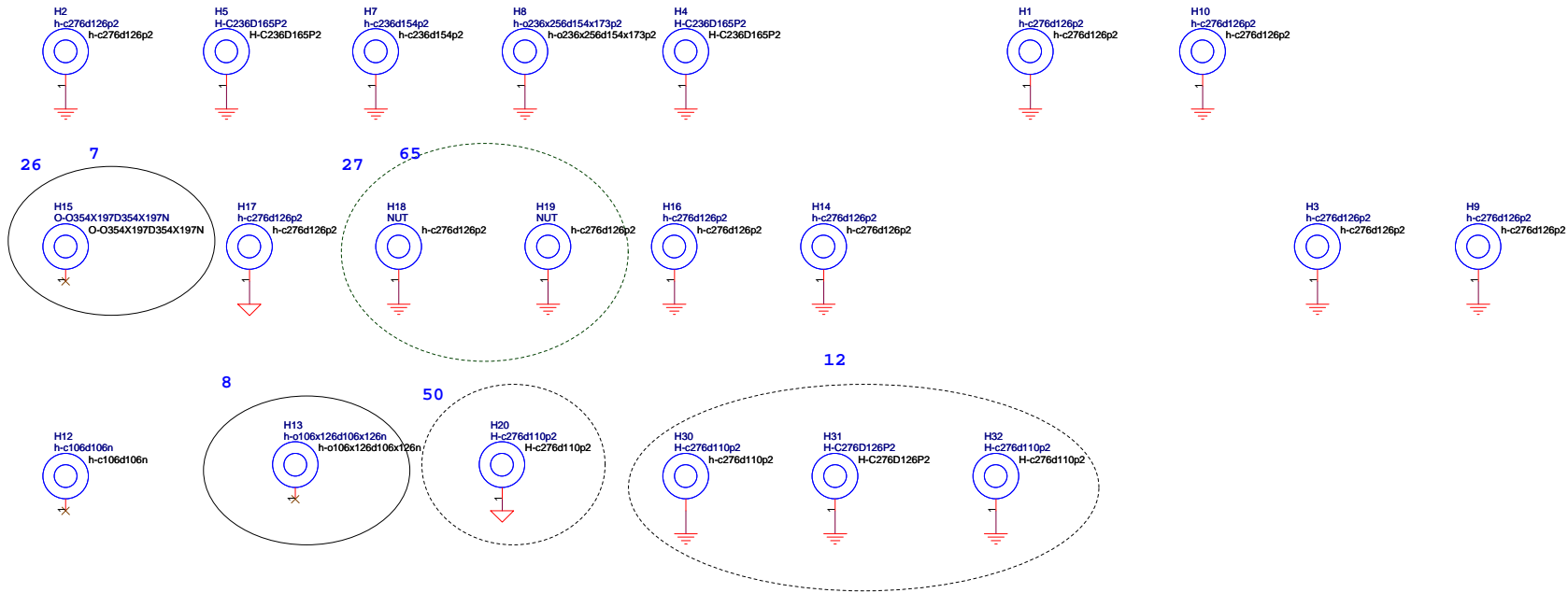



Title DCIN,BATT CONNECTOR

Size Document Number VM9/VM8

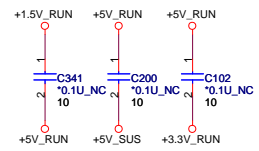
Rev 1A

Date: Wednesday, June 25, 2008 Sheet 42 of 53

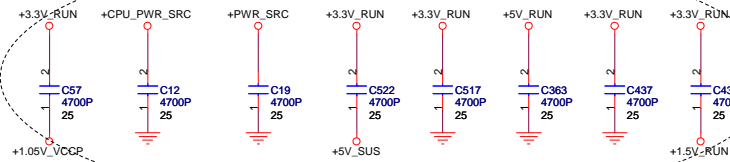


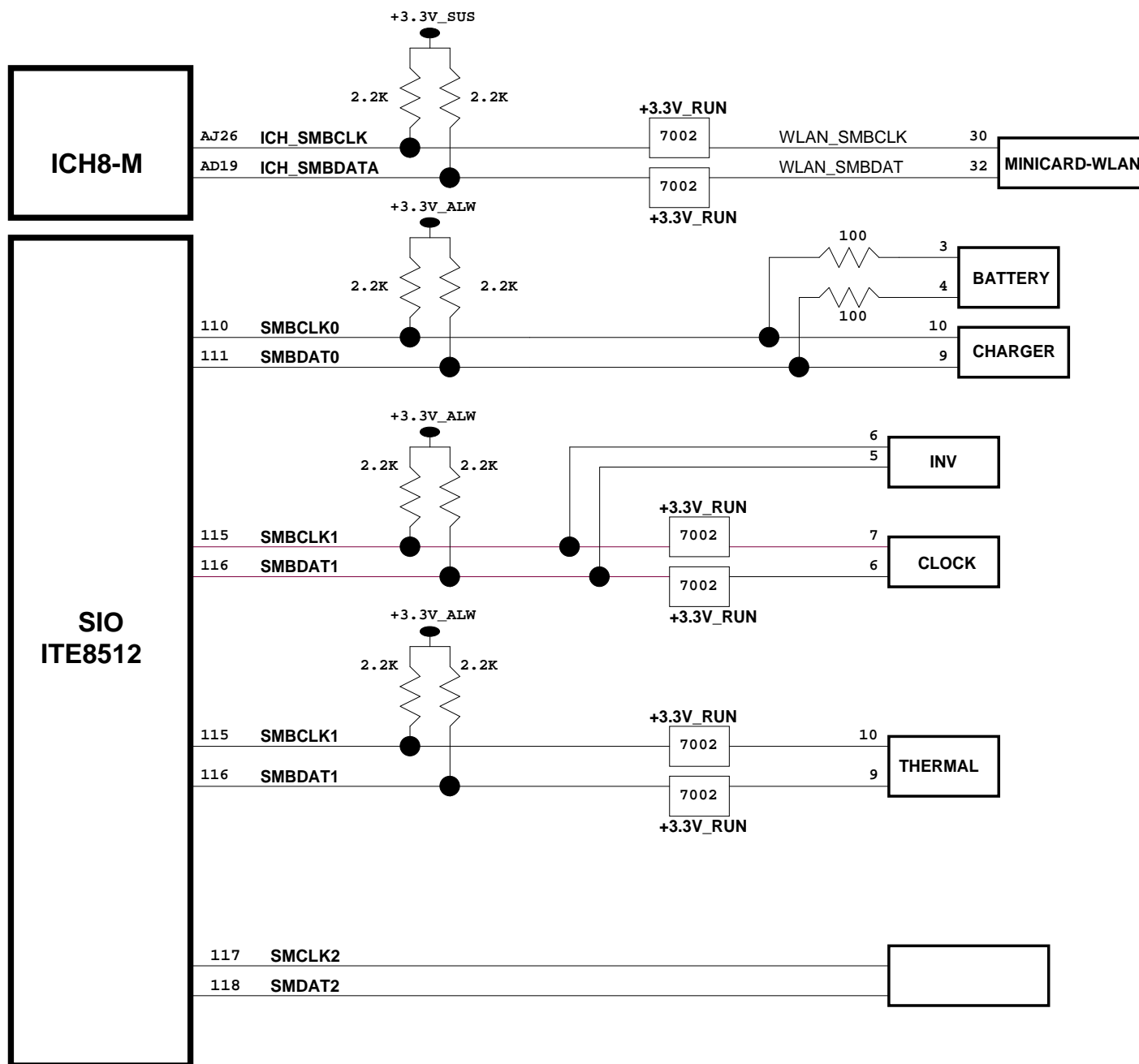
		<b>QUANTA COMPUTER</b>	
Title: SCREW PAD			
Size:	Document Number: VM9/VM8		Rev: 1A
Date:	Wednesday, June 25, 2008		Sheet: 43 of 53

### Stitching caps for PCI bus.



### 40 Stitching caps for PCI EMC.





Title			SMBUS BLOCK
Size	Document Number	Rev	
	VM9/VM8	1A	
Date:	Wednesday, June 25, 2008	Sheet	45 of 53

