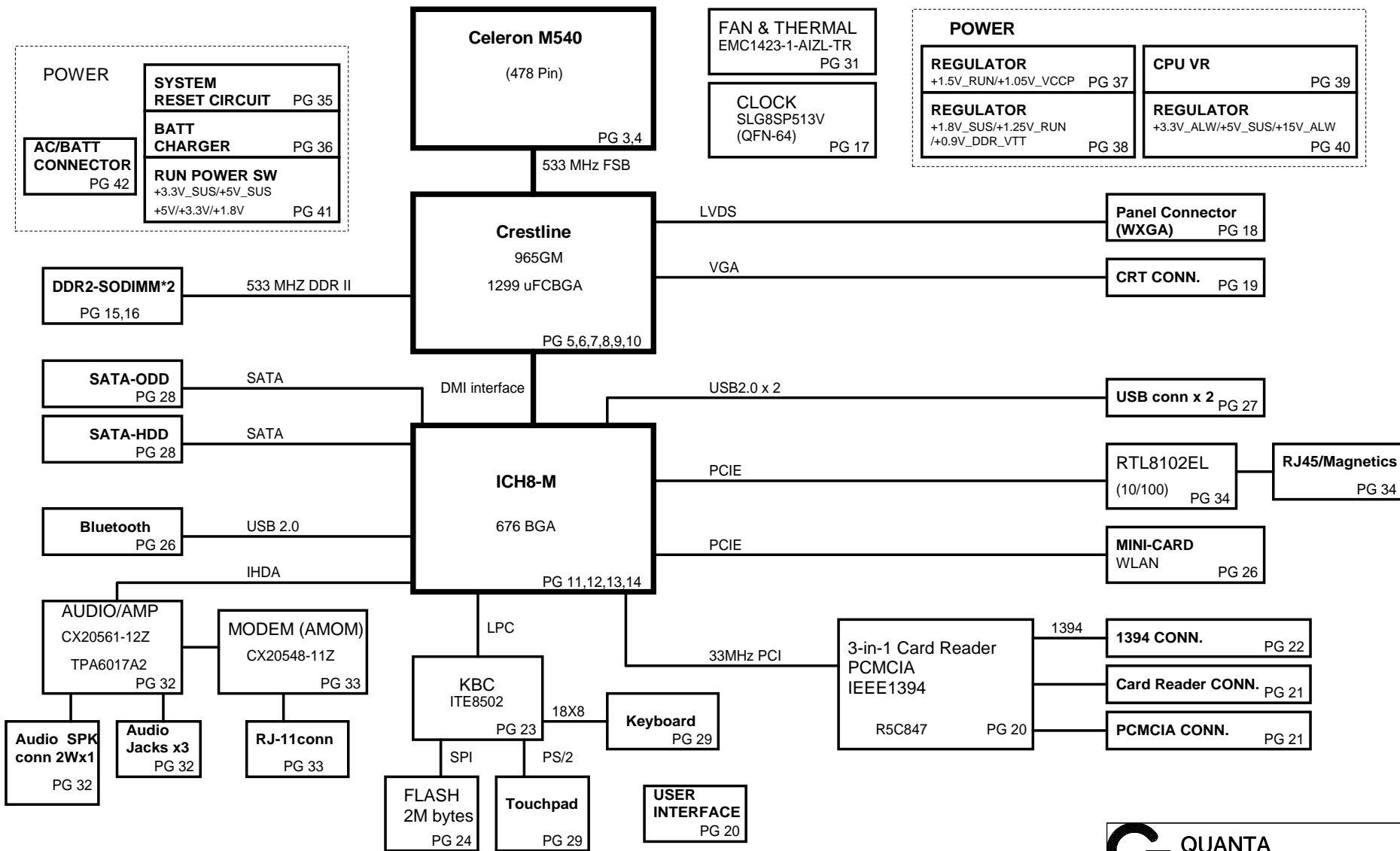


# VM9/VM8 Block Diagram

VER : 1A



Title			Schematic Block Diagram
Size	Document Number	Rev	
	VM9/VM8	1A	
Date:	Friday, July 18, 2008	Sheet	1 of 53


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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
18	HDMI
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	FAN & Thermal
38-39	Audio CODEC(ALC888)/Phone Jack
40-41	LOM / Switch
44	System Reset Circuit
46	Battery Selector & Charger
48	1.05VCCP / 1.5VRUJN
49	DDR2_1.8VSUS, 0.9V
51	CPU_ISL6266(2phase)
52	MAX8744 (+5.5V,+3.3V)
53	RUN Power Switch
54	DCIN,Batt
55	PAD& SCREW
56	EMI CAP
57	SMBUS BLOCK
58	Power Block Dianram

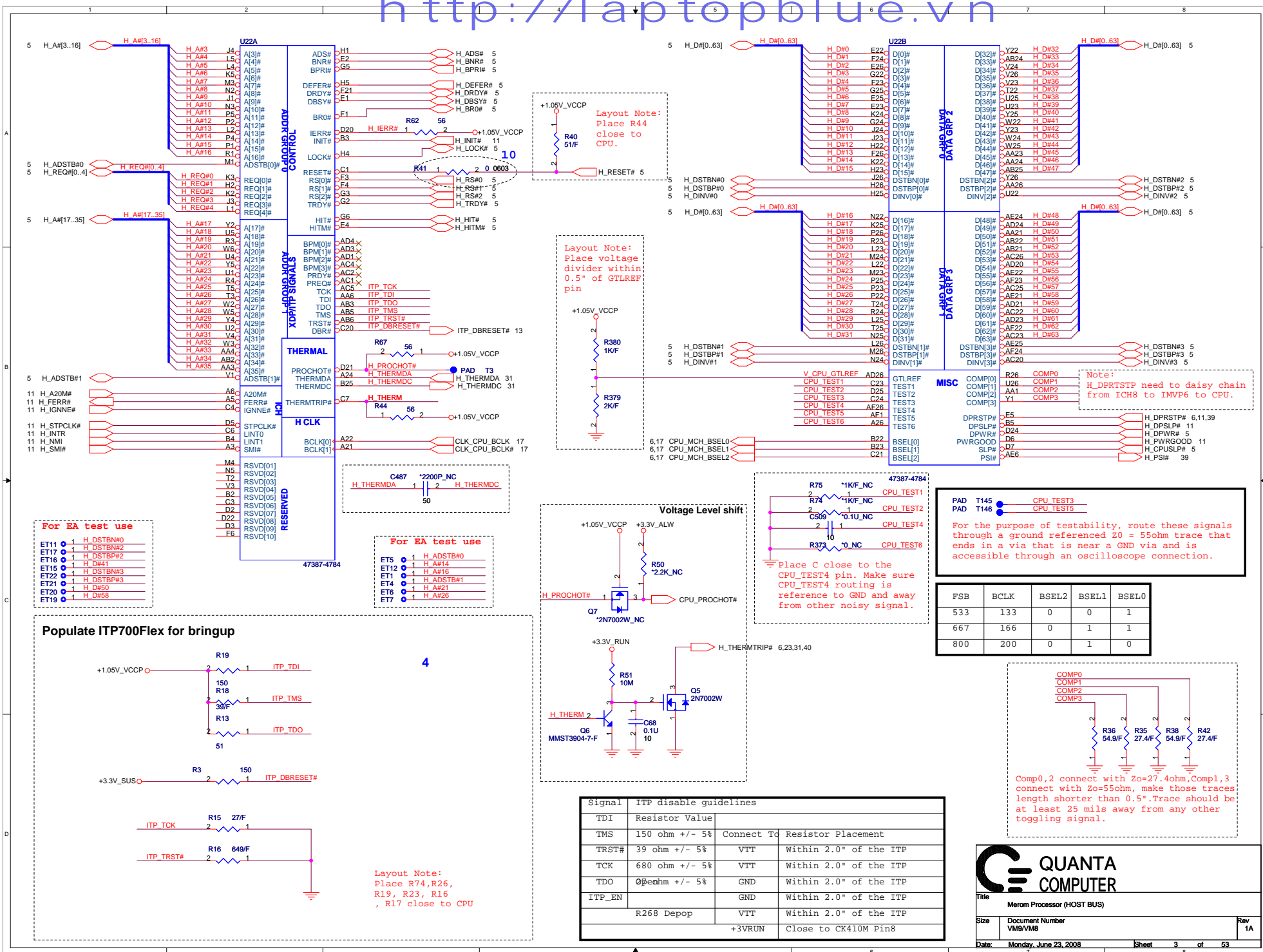
Power States

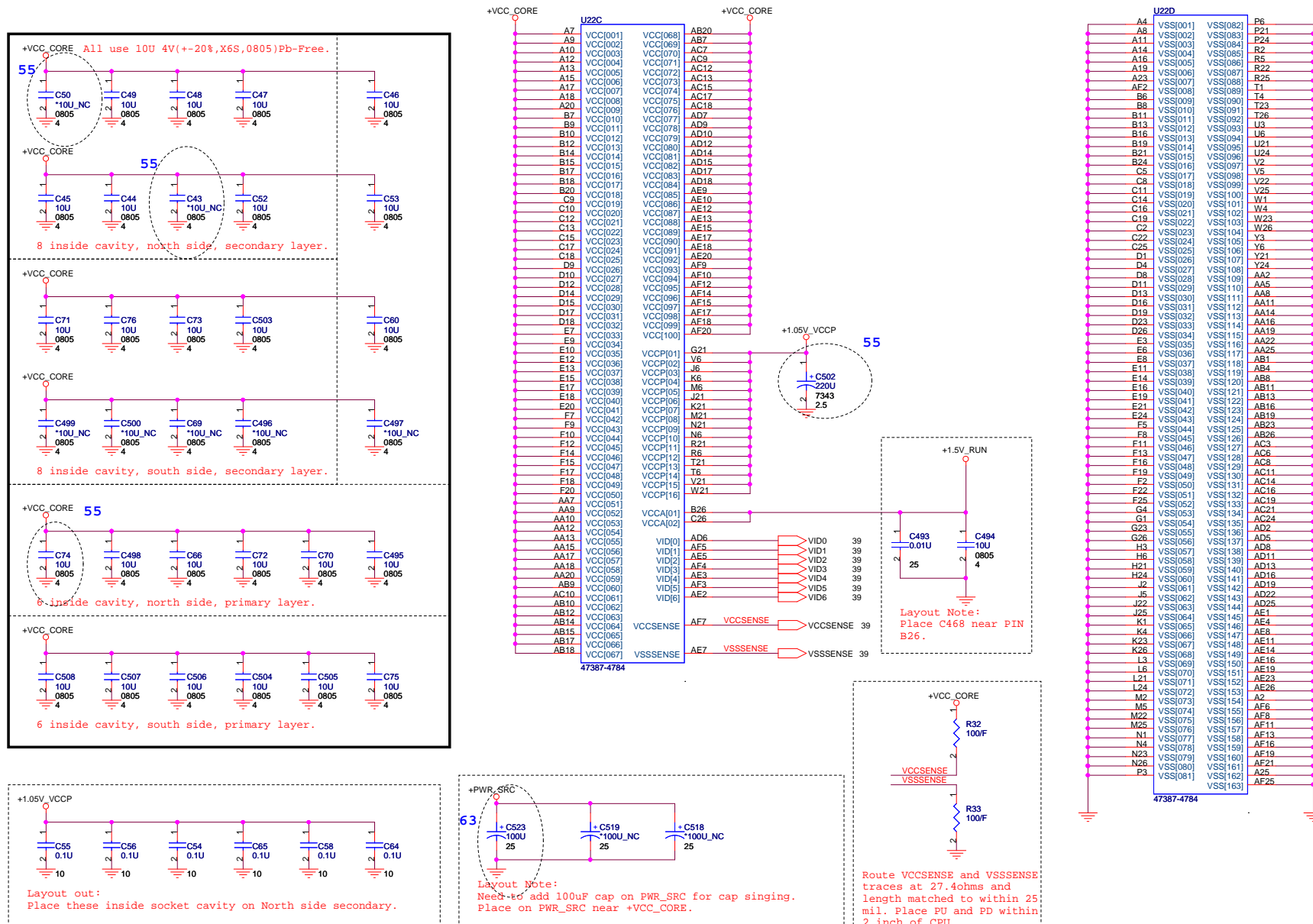
POWER PLANE	VOLTAGE	PAGE	DESCRIPTION	CONTROL SIGNAL	ACTIVE IN
+PWR_SRC	10V~+19V	4,26,32,34,46,48,49,51,52,56	MAIN POWER		S0~S5
+RTC_CELL	+3.0V~+3.3V	11,14,31,32	RTC		S0~S5
+3.3V_ALW	+3.3V	3,31,32,34,36,37,38,44,46,49,52,53,54	8051 POWER	ALWON	S0~S5
+5V_ALW	+5V	35,36,46,48,49,52,53,54,56	LCD/CHARGE POWER	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	18,38,53	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	36	HDD Power	HDCC_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	


**QUANTA  
COMPUTER**

Title Index & Power Status		
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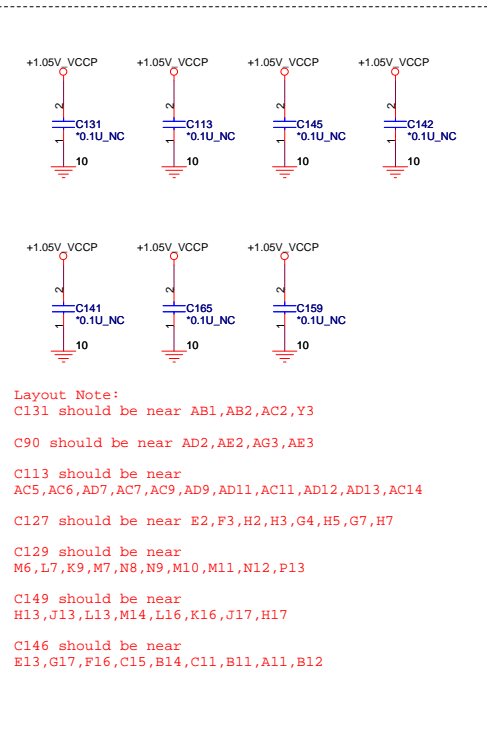
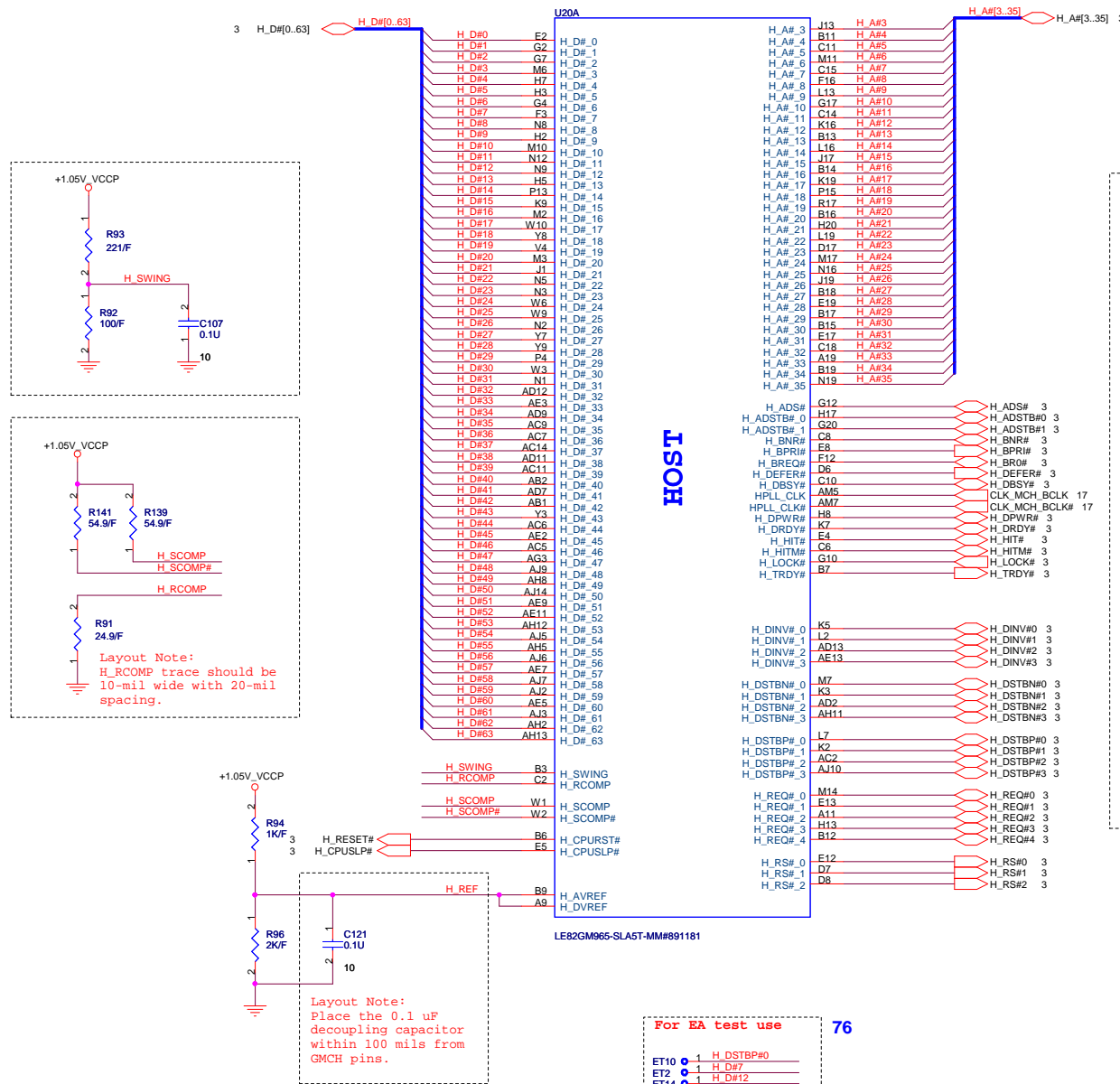




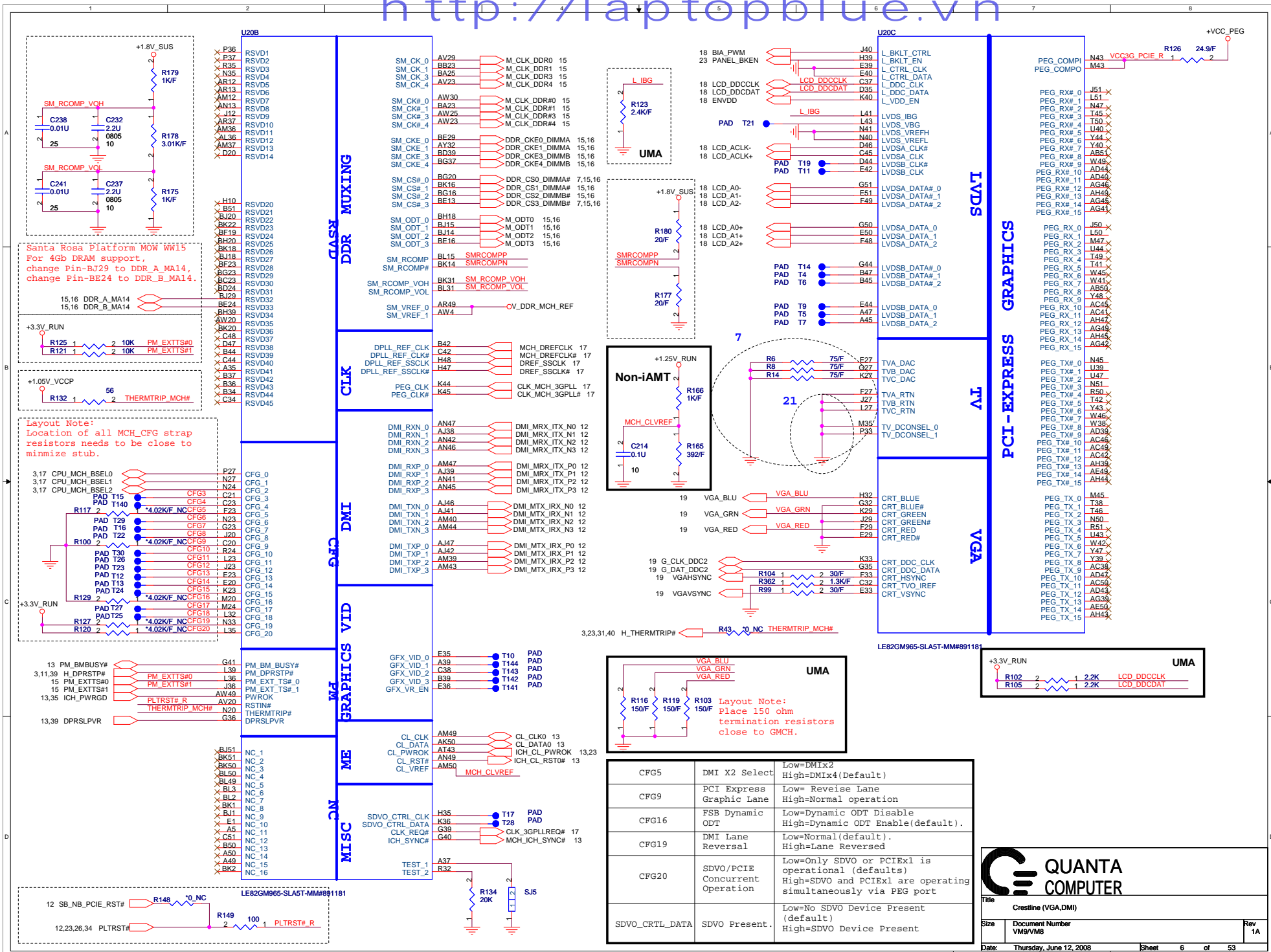
Merom Processor (POWER)

Size	Document Number	Rev
VM9/VM8		1A

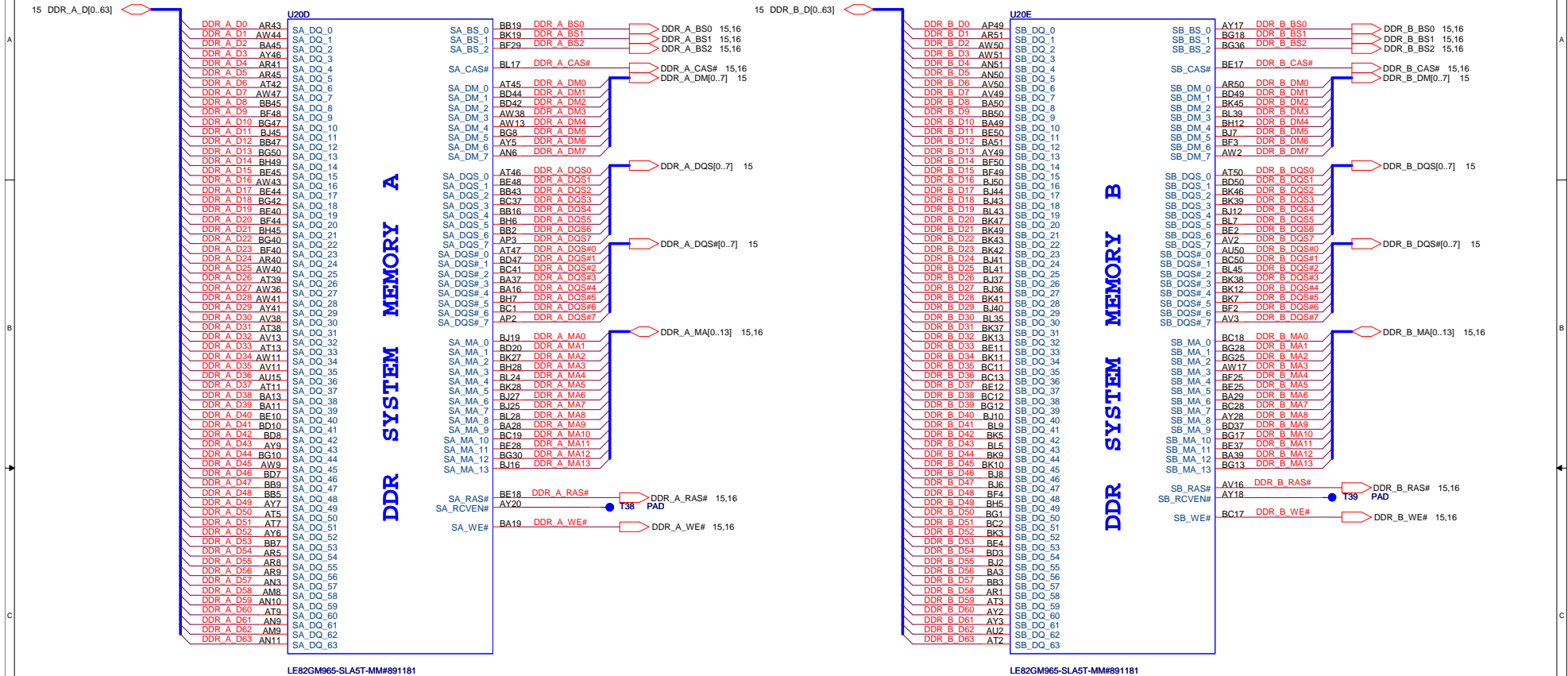
Date: Friday, May 30, 2008 Sheet 4 of 53



Title			Crestline (HOST)
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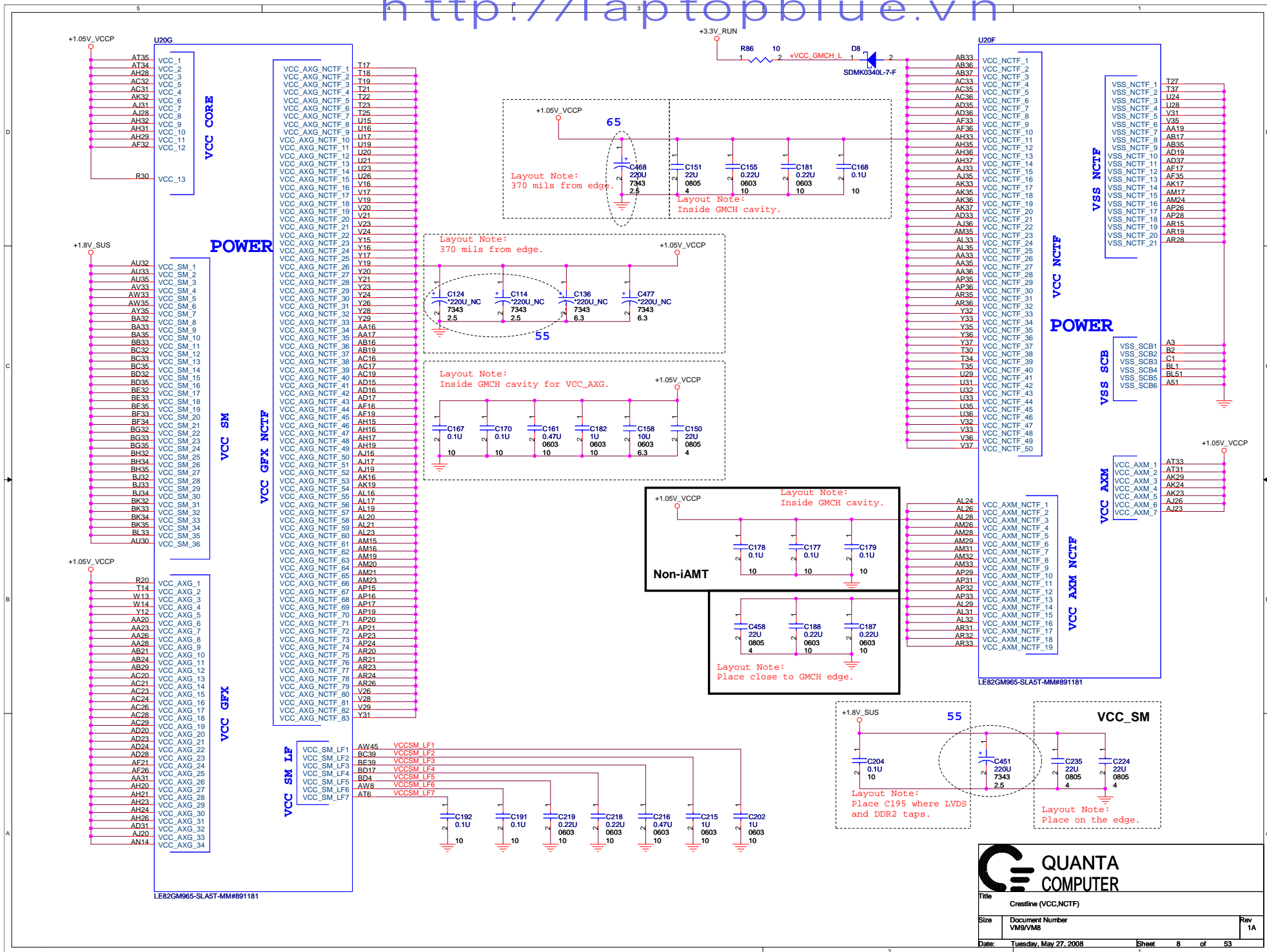


76: For EA test use

ET42	DDR A CAS#
ET37	DDR A RAS#
ET31	DDR A WE#
ET39	DDR CS0 DIMMA#
ET32	DDR A MA0
ET44	DDR A MA1
ET28	DDR A DQS0
ET27	DDR A DQS#0
ET23	DDR A DQS
ET26	DDR A DQS#
ET40	DDR A DQS

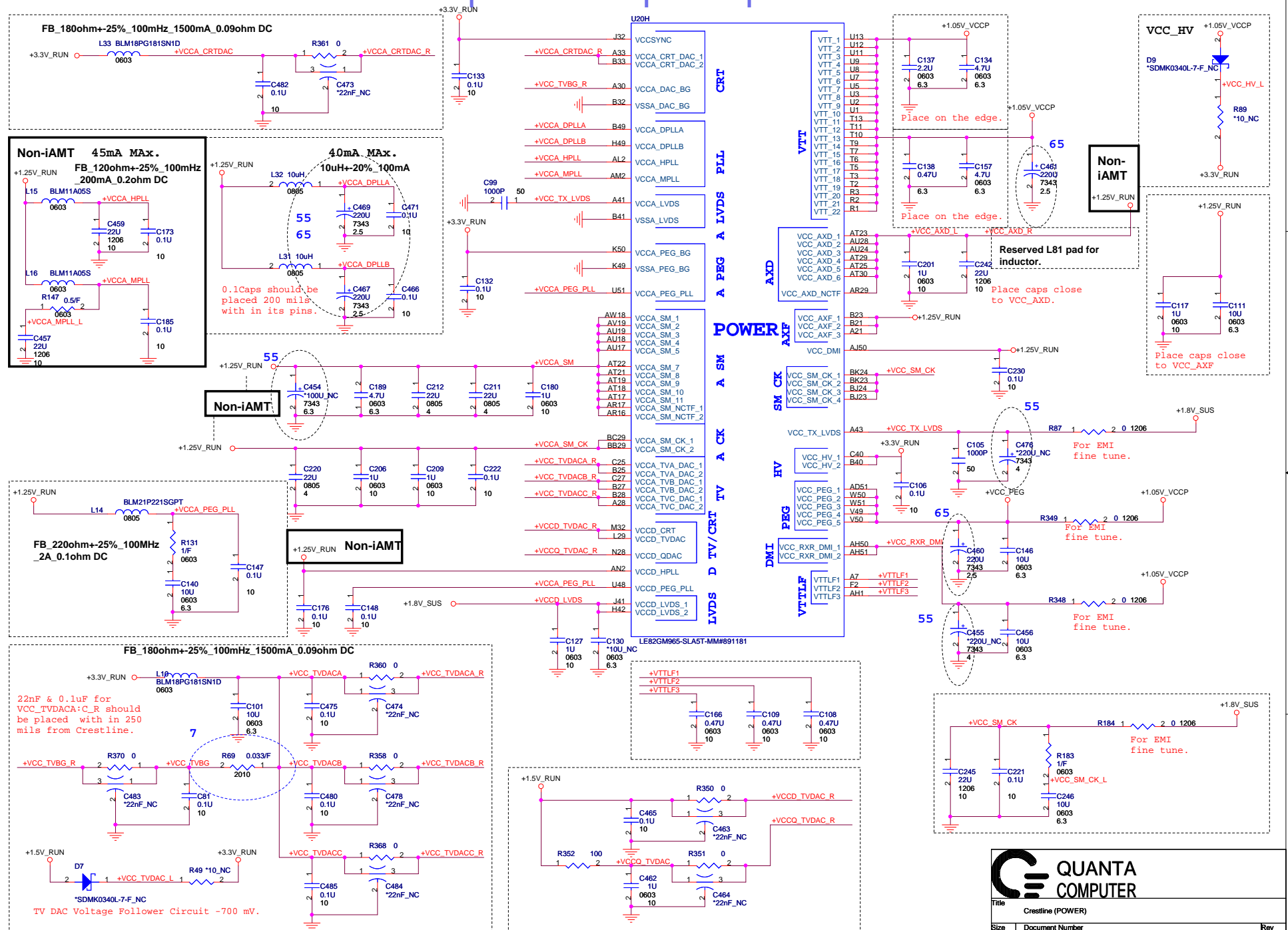
76: For EA test use

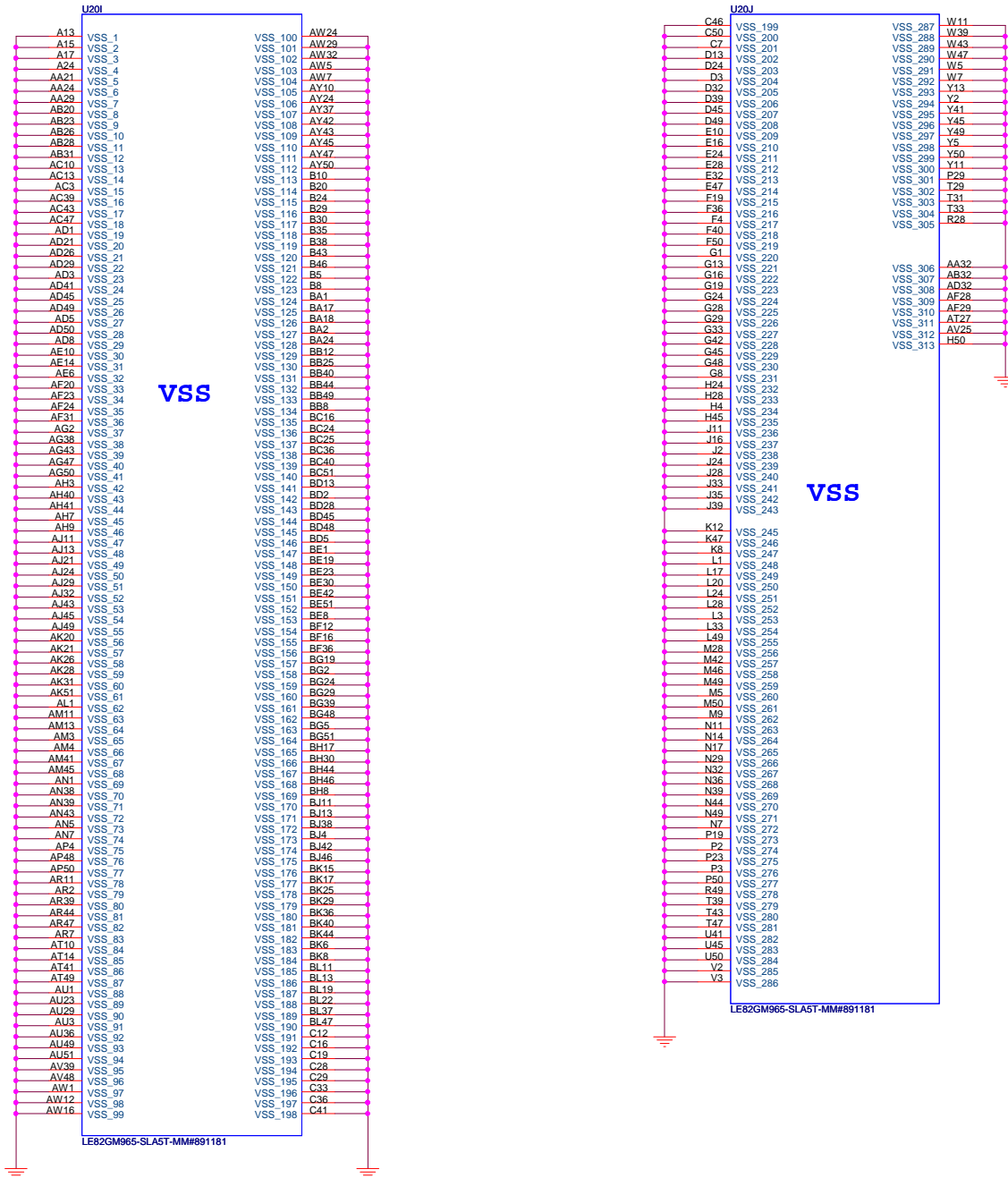
ET36	DDR B CAS#
ET29	DDR B RAS#
ET33	DDR B WE#
ET38	DDR CS3 DIMMB#
ET41	DDR B MA0
ET24	DDR B DQS0
ET25	DDR B DQS#0
ET30	DDR B DQS
ET43	DDR B DQS#



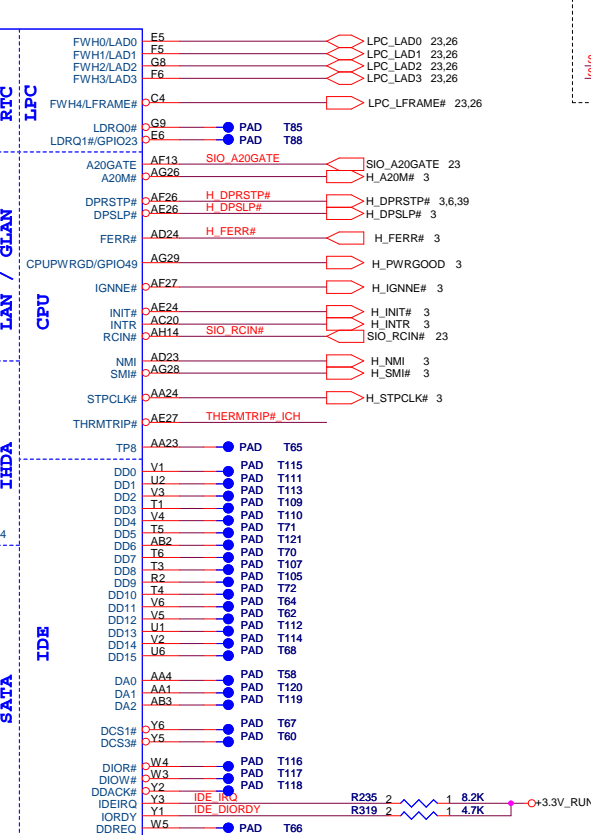
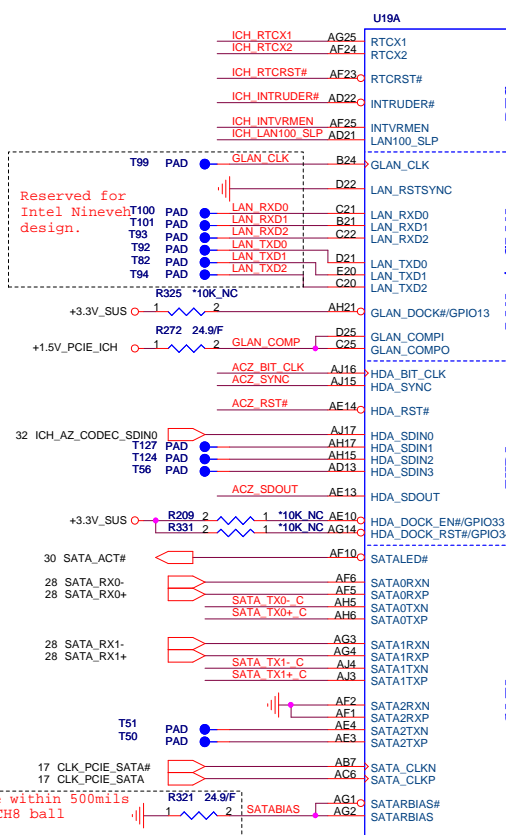
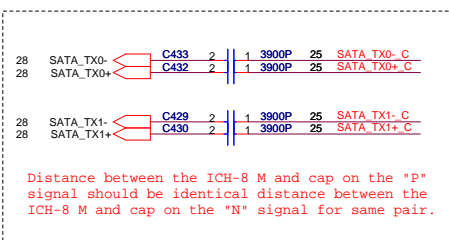
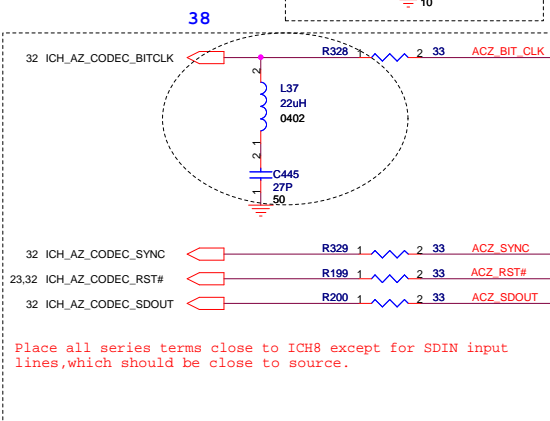
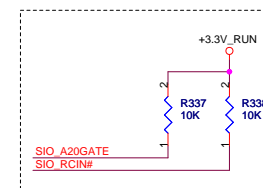
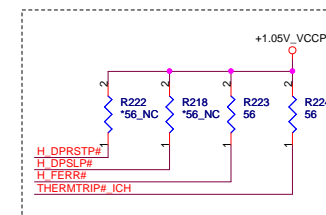
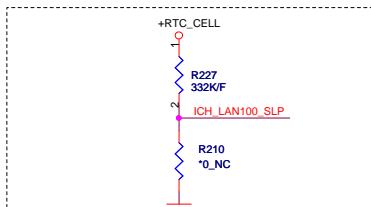
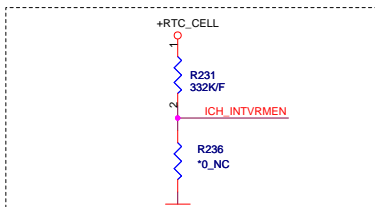
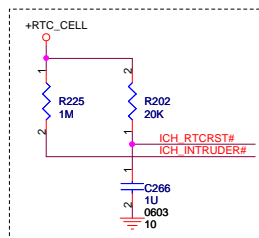
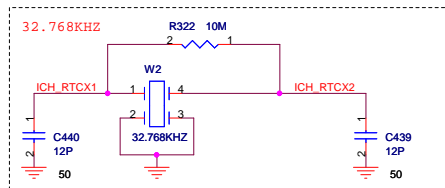
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Size	Document Number	Rev	
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Title			Crestline (VSS)
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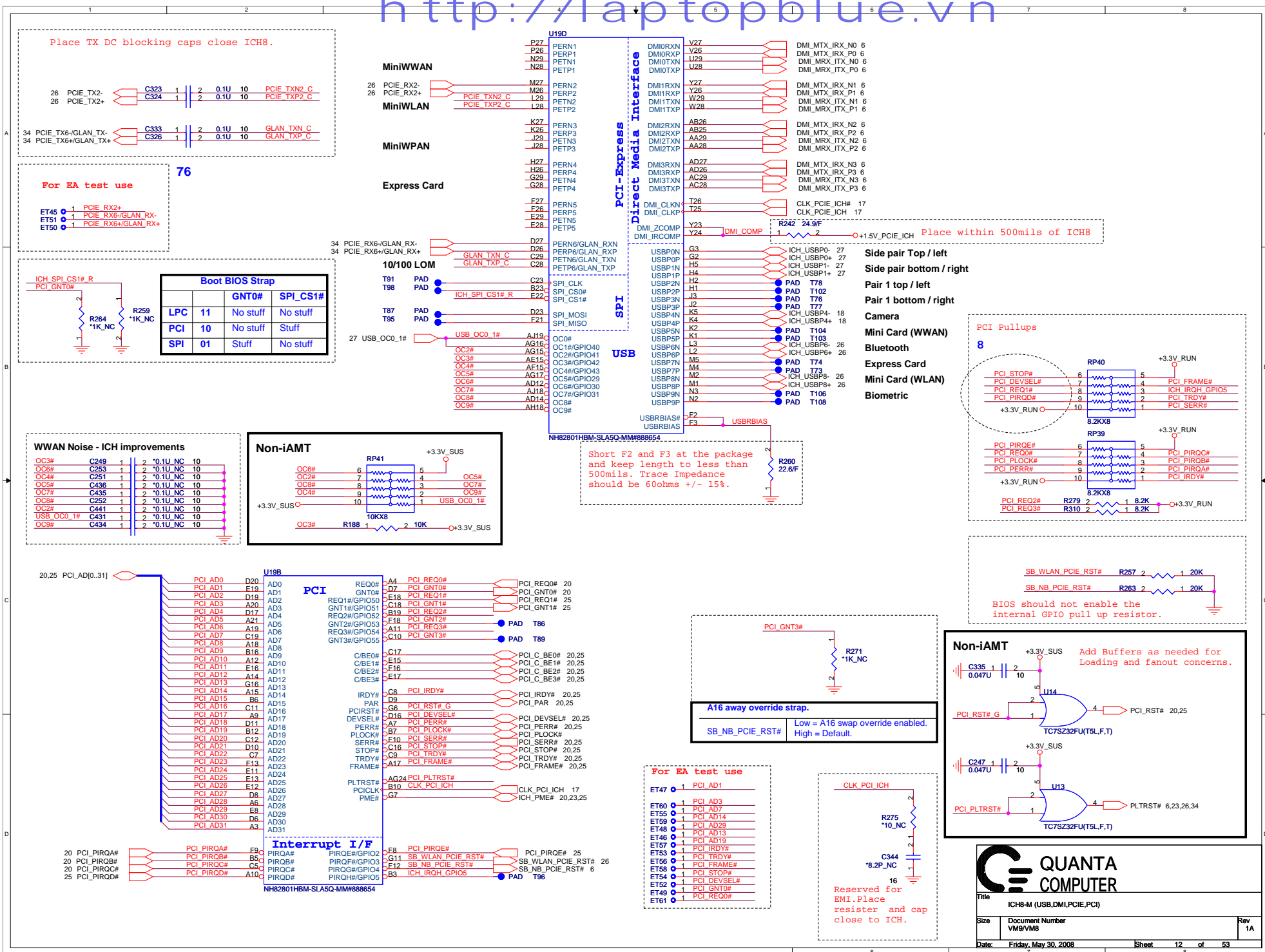
XOR Chain Entrance Strap		
ICH RSVD	HDA SDOUT	Description
0	0	RSVD
0	1	Enter XOR Chain
1	0	Normal Operation (Default)
1	1	Set PCIe port config bit 1

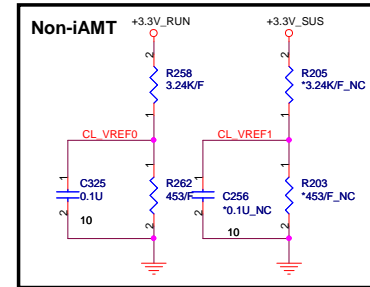
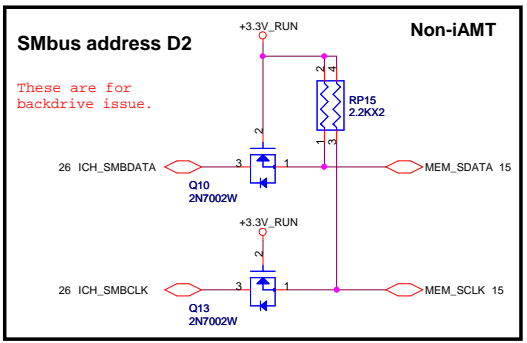
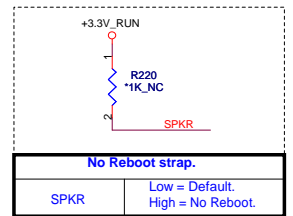
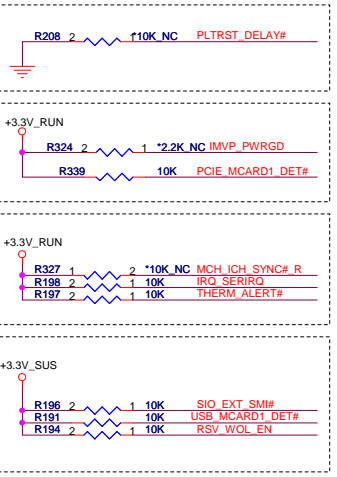
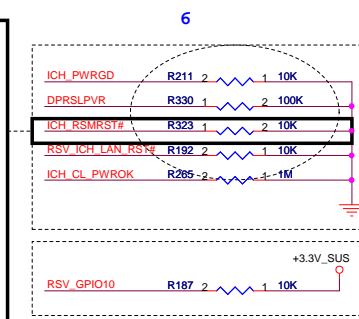
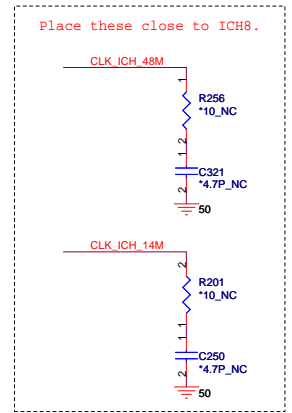
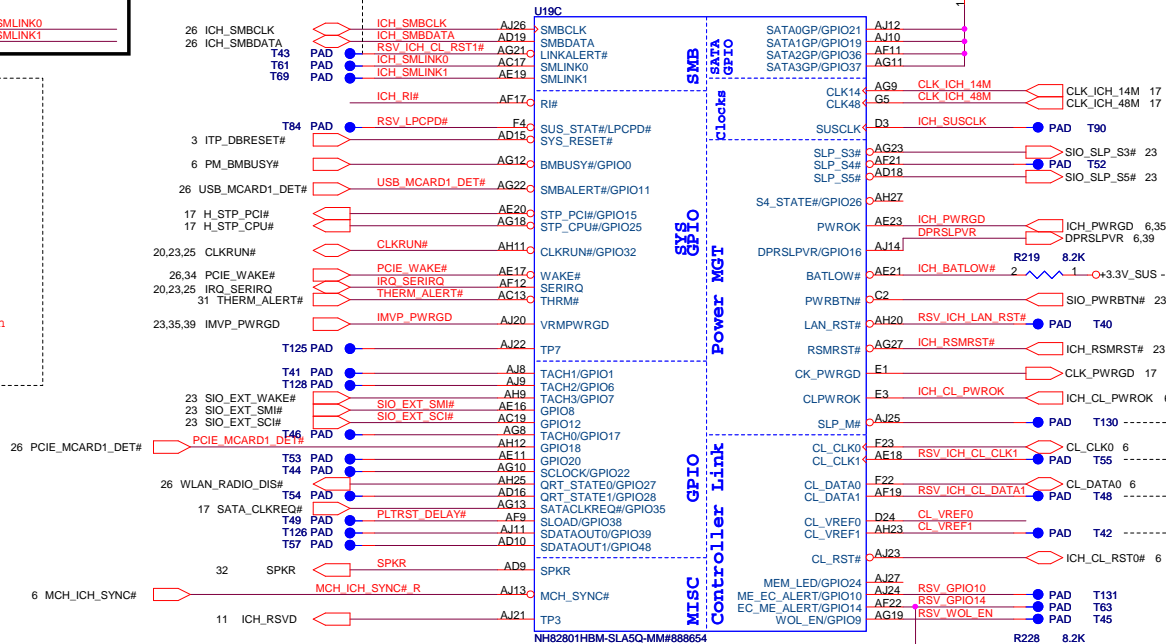
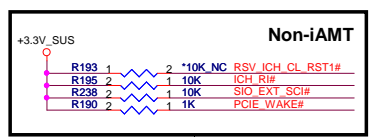
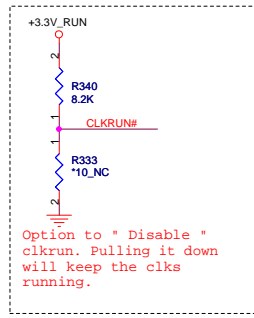
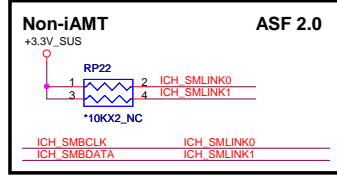
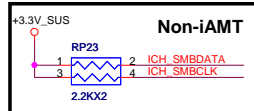


Title ICH8-M (CPU,IDE,SATA,LPC,AC97,LAN)

Size	Document Number VM9/VM8
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Rev  
1A





**QUANTA COMPUTER**

Title: ICH8-M (PM,GPIO,SMB,CL)

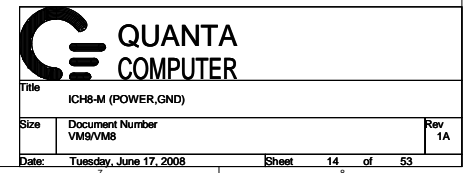
Size: Document Number VM9/VM8

Date: Saturday, June 21, 2008

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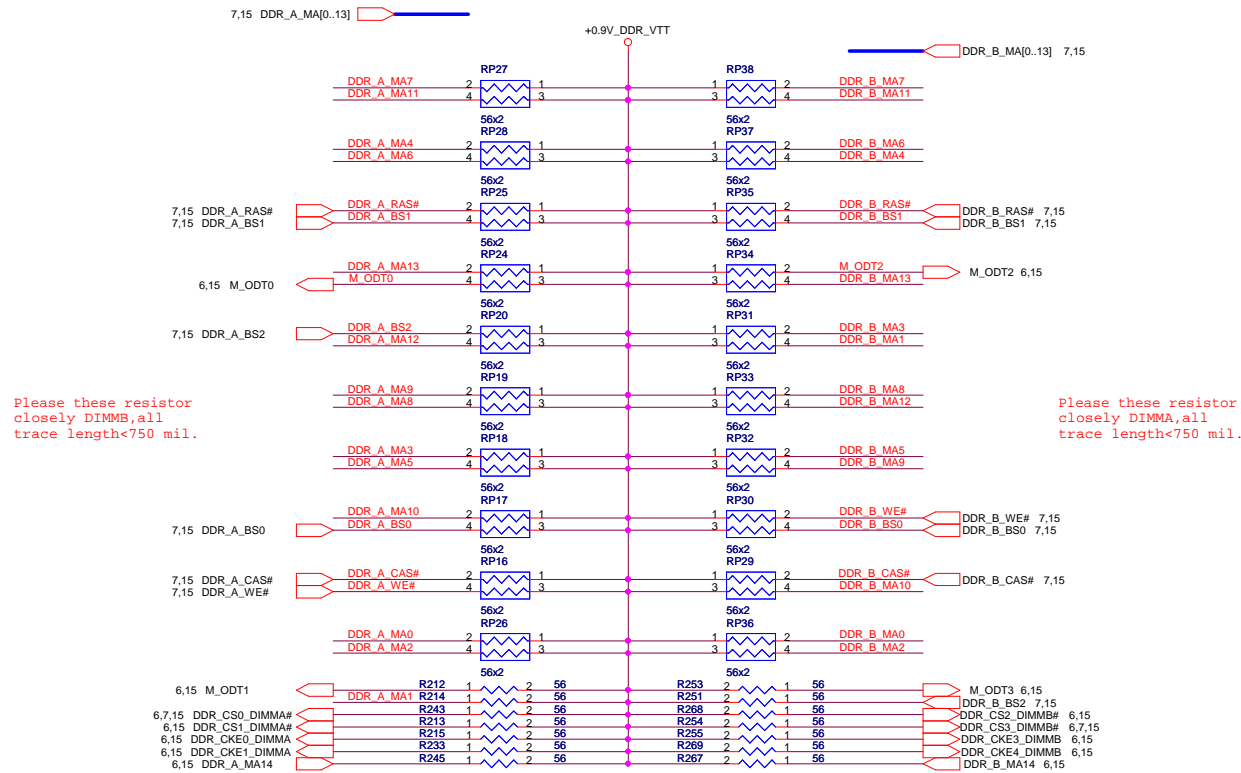
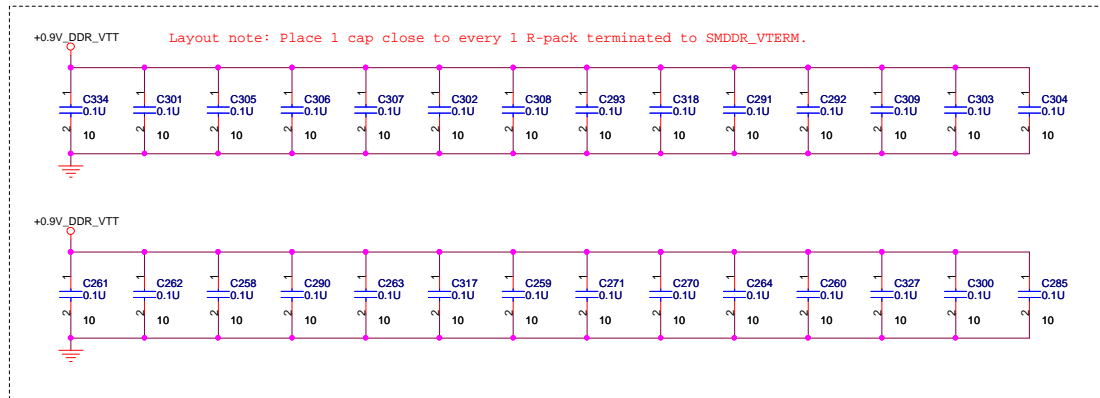
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Title DDR2 RES ARRAY

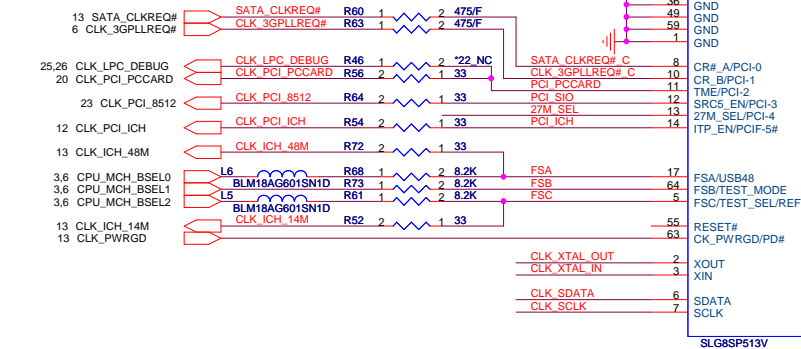
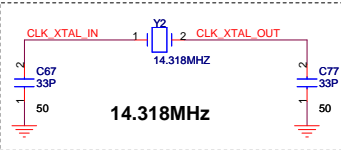
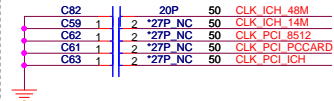
Size Document Number VM9/VM8

Date: Friday, May 30, 2008

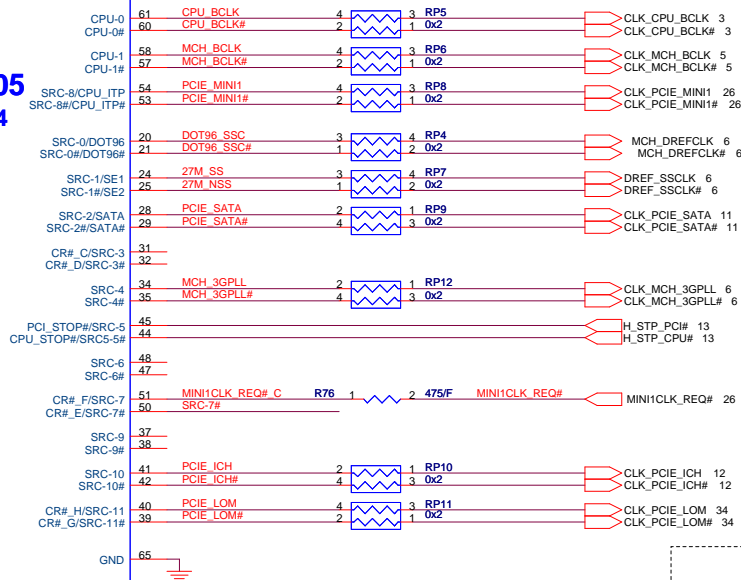
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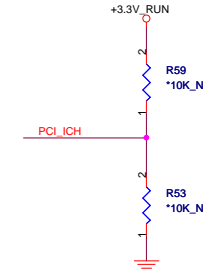
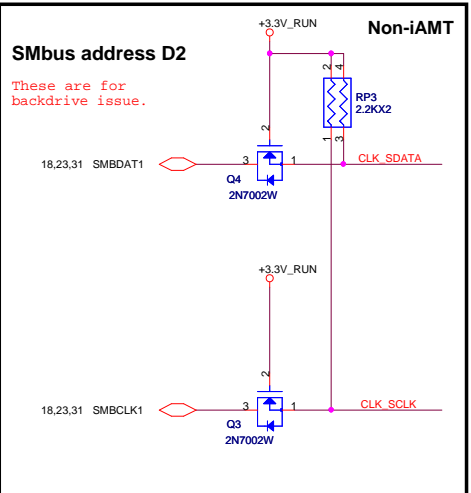
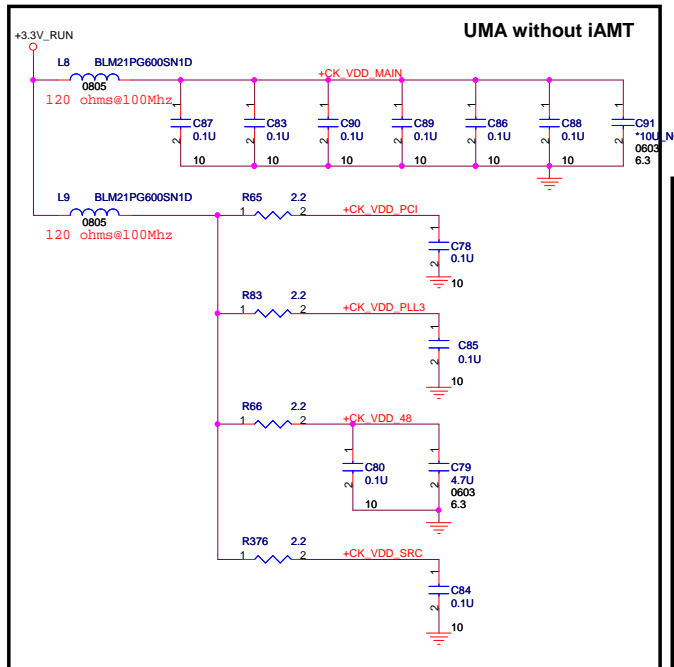
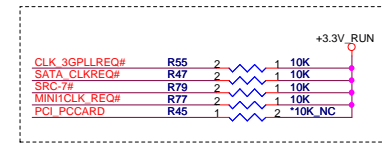
Add capacitor pads for improving WWAN.



CK505  
QFN64



Silego need pull up  
but other?



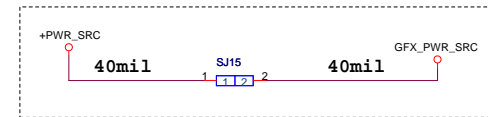
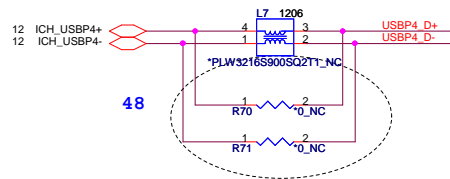
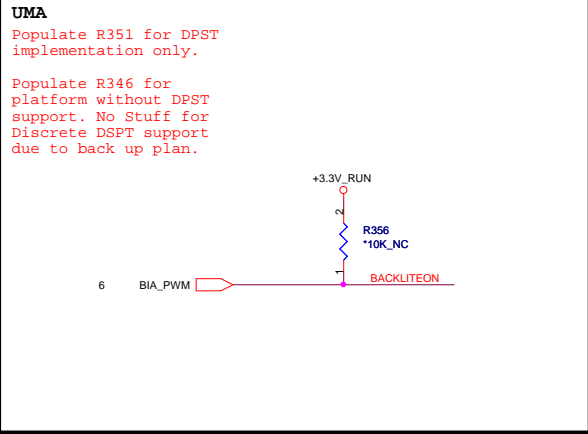
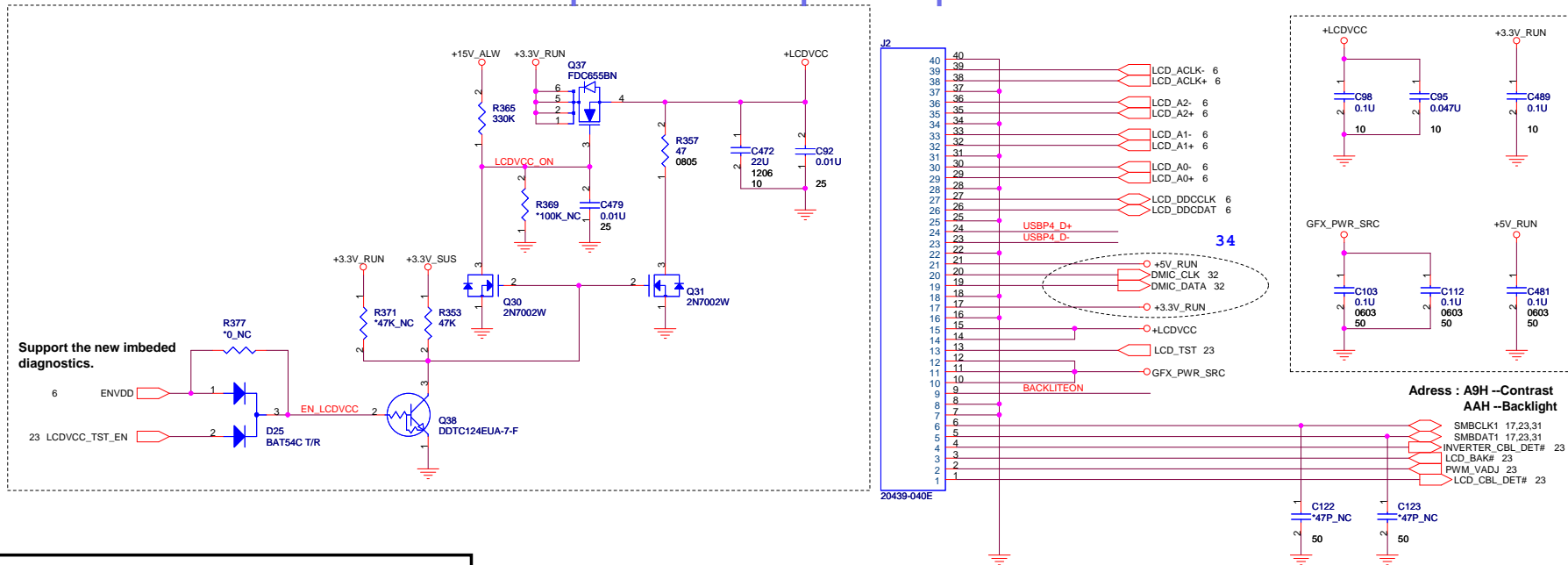
R185 POP: For Internal pull-low.  
R439 POP: For internal pull-high.

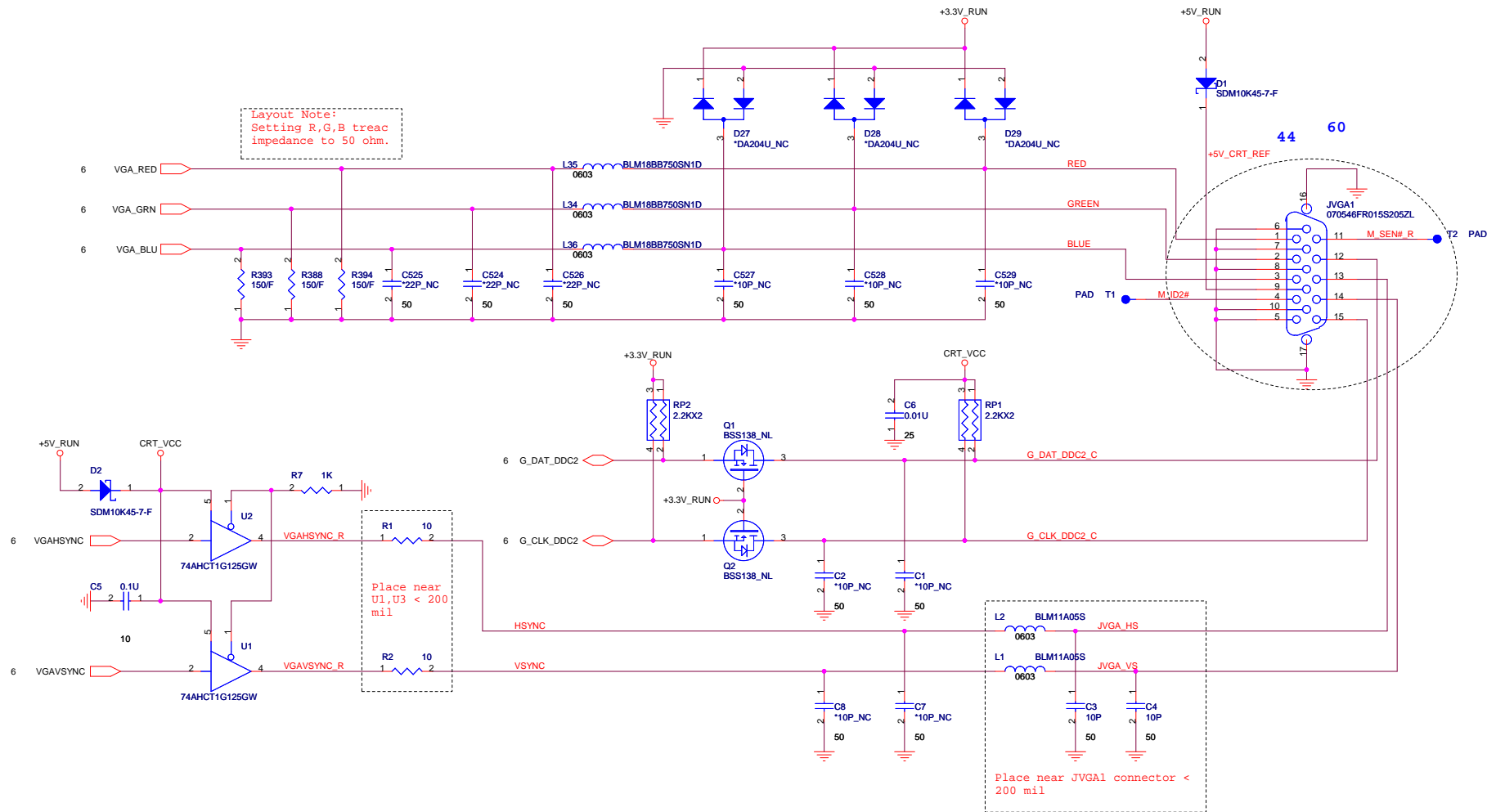
27M\_SEL

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	
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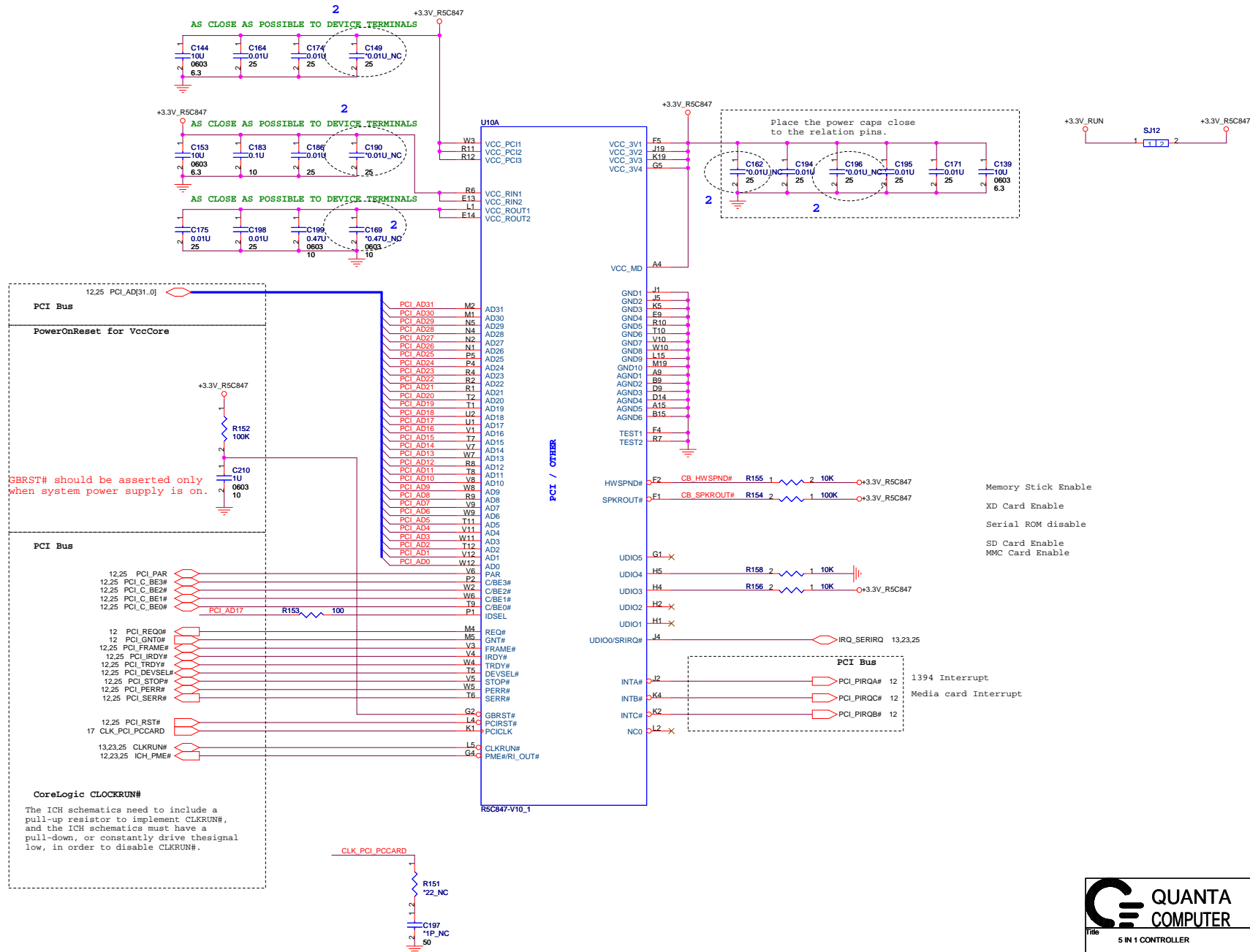
Title CRT&TV CONN

Size Document Number VM9/VM8

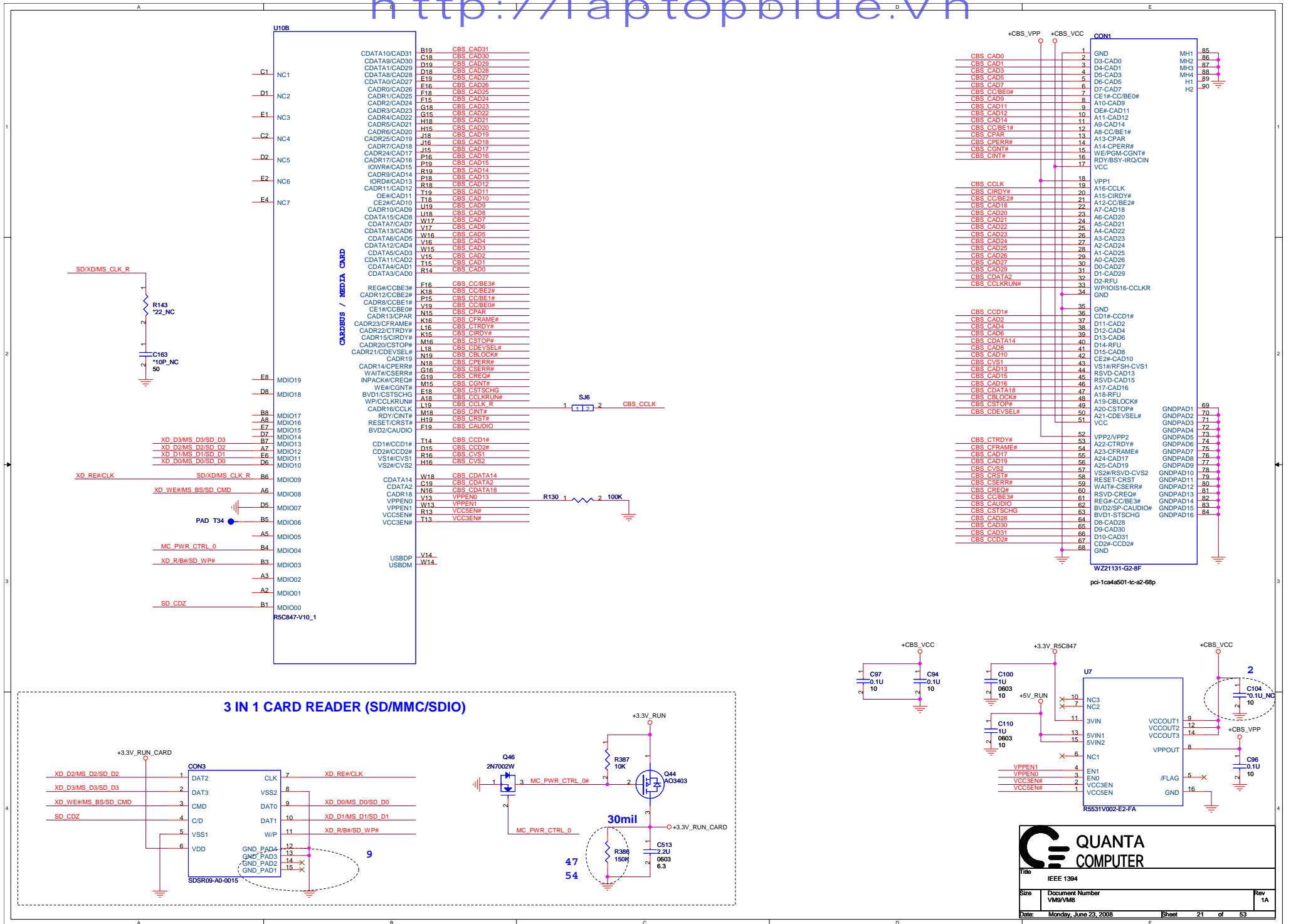
Date: Friday, May 30, 2008

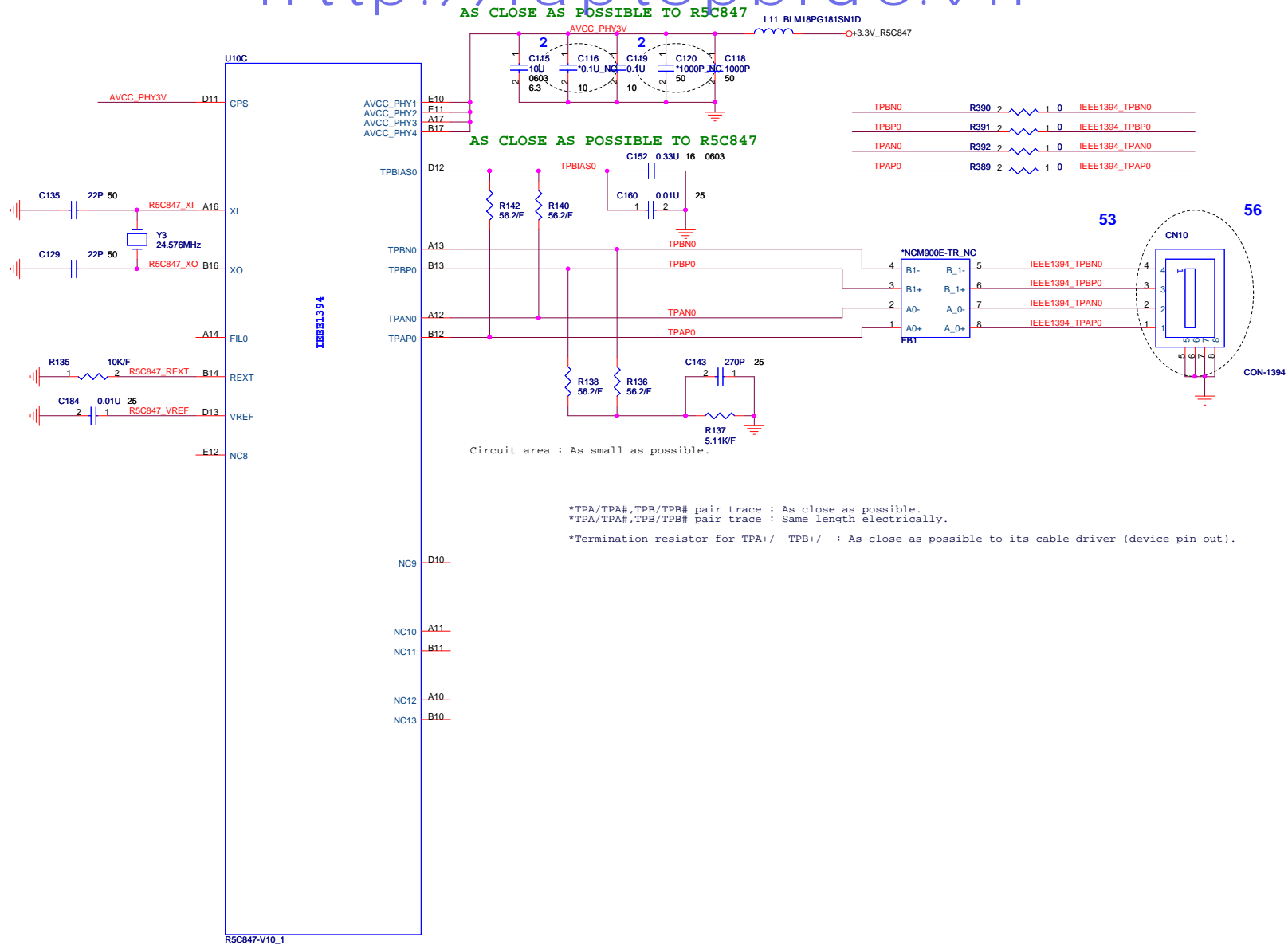
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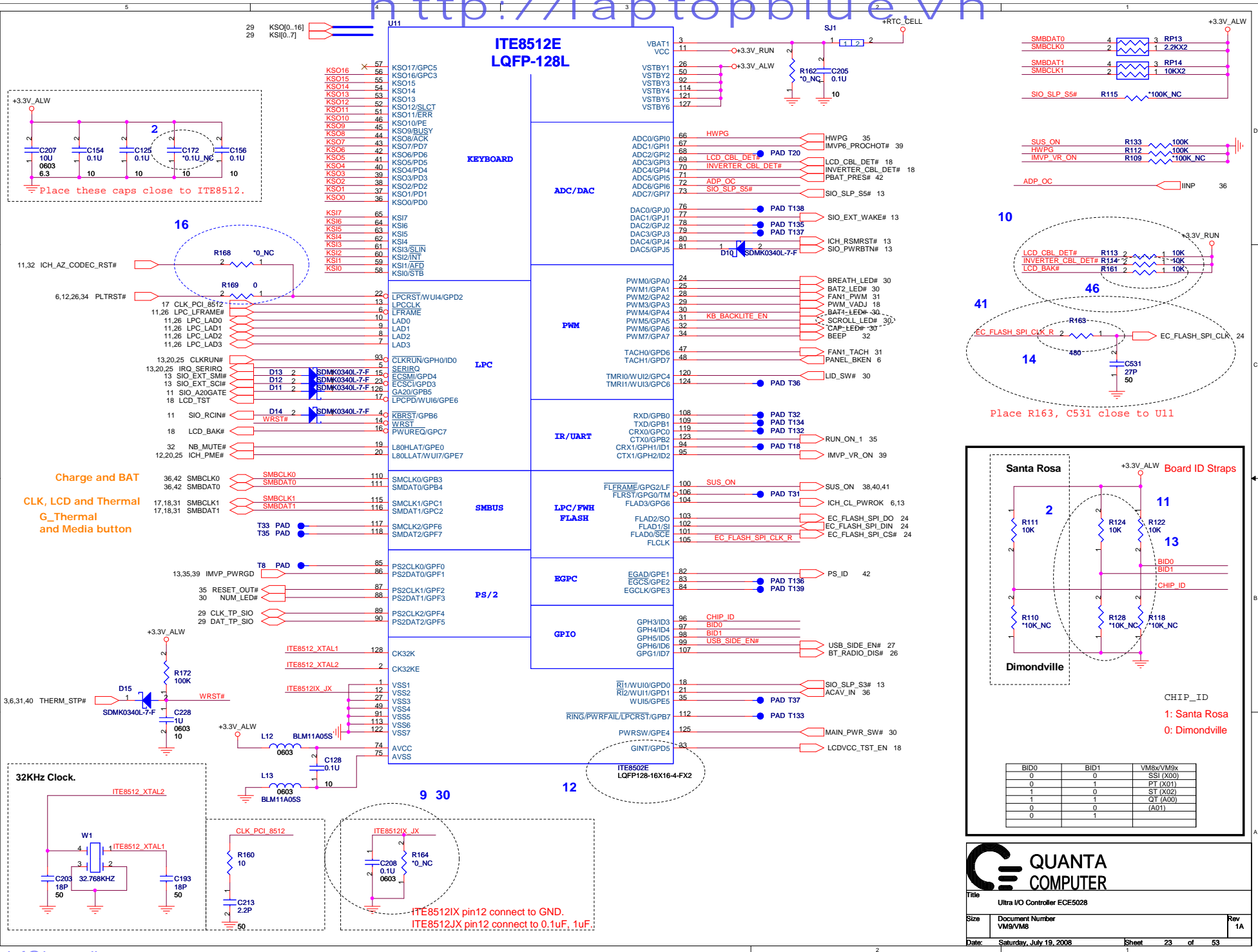
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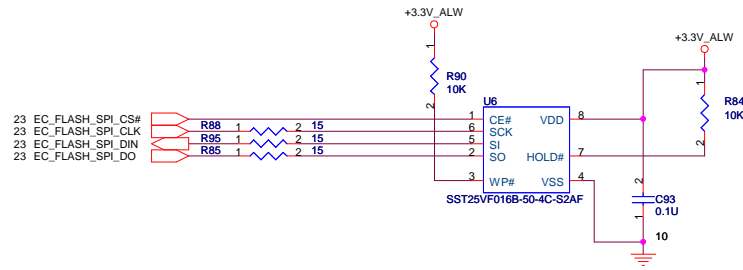




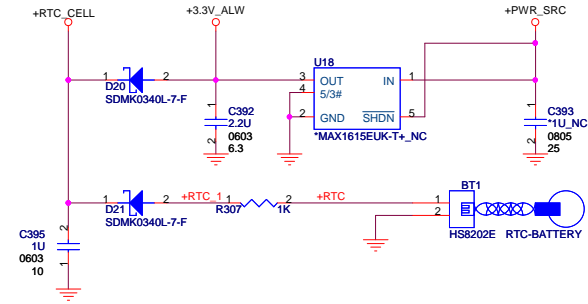


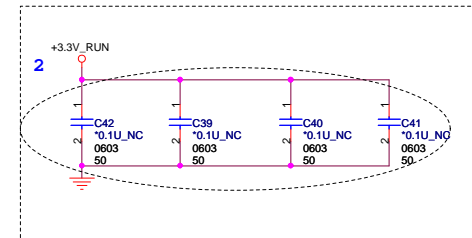


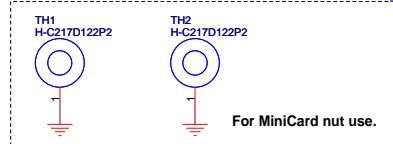
# 16Mbit (2M Byte), SPI



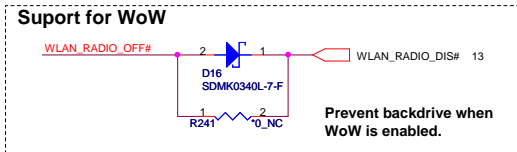
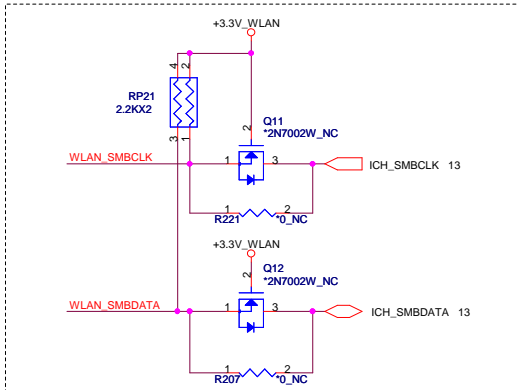
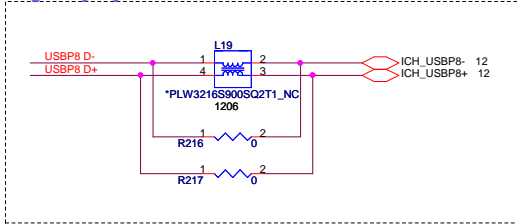
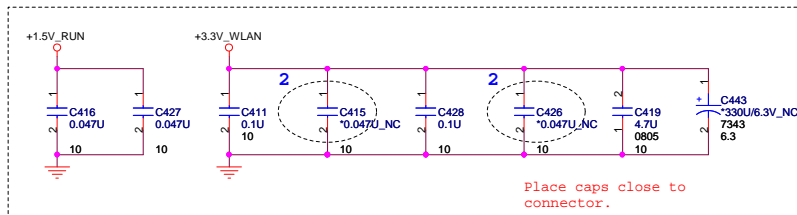
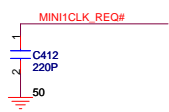
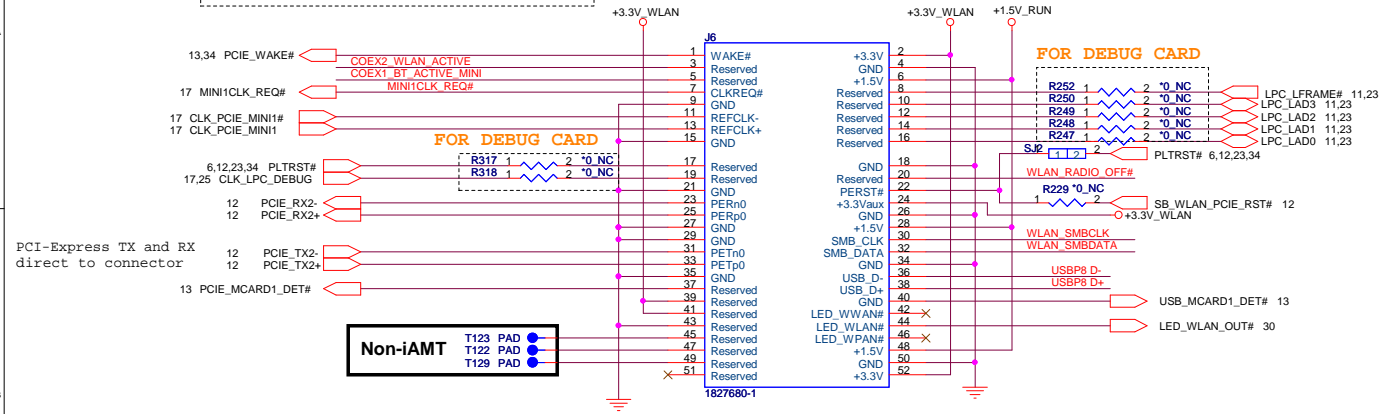
# RTC BATTERY



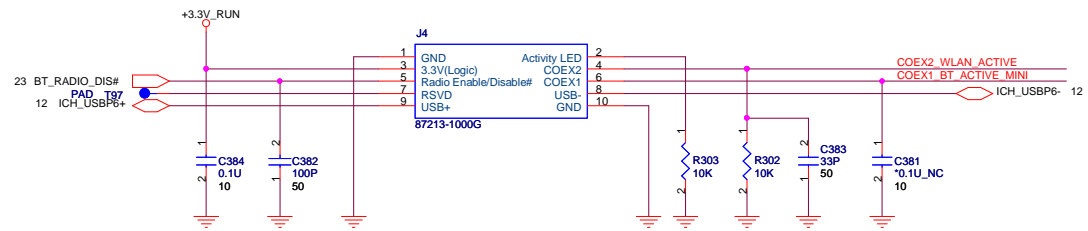




### MiniCard WLAN connector



### Bluetooth

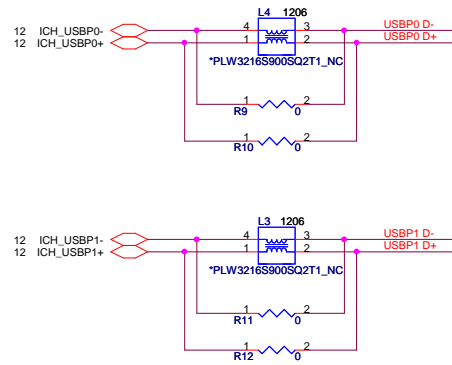


**QUANTA  
COMPUTER**

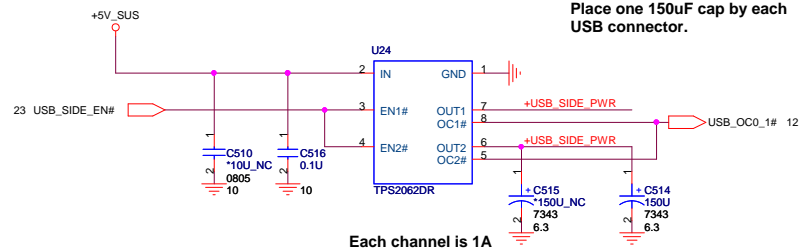
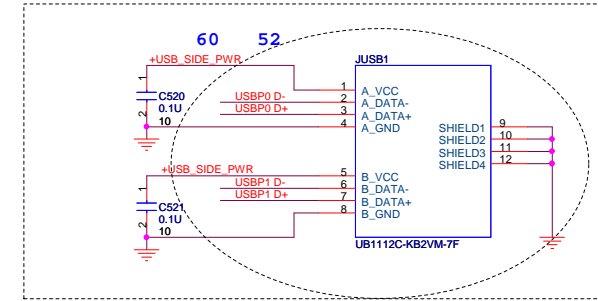
Title: MDC CONN.		
Size: VM9/VM8	Document Number: VM9/VM8	Rev: 1A
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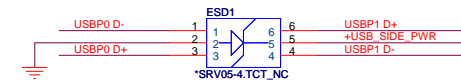
External USB PORT hookup reference. Your design may need more or less external ports and may be mapped differently



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.



Serial Port & USB

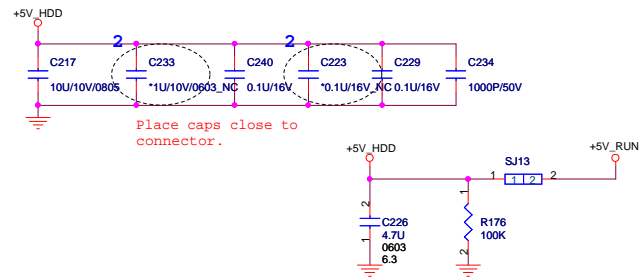
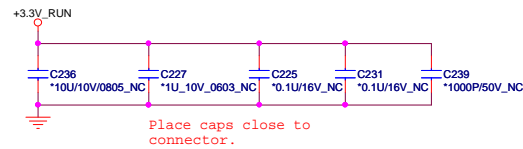
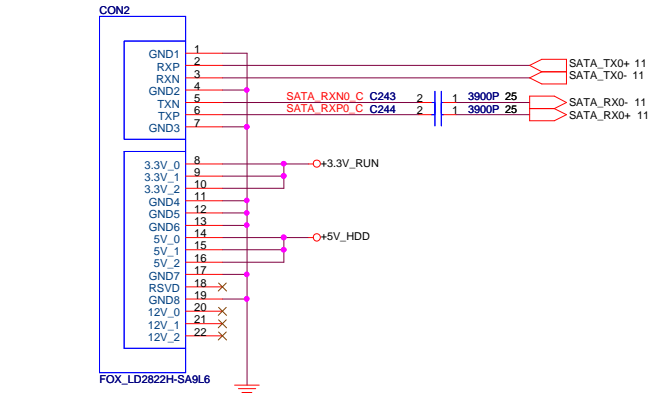
Document Number VM9/VM8

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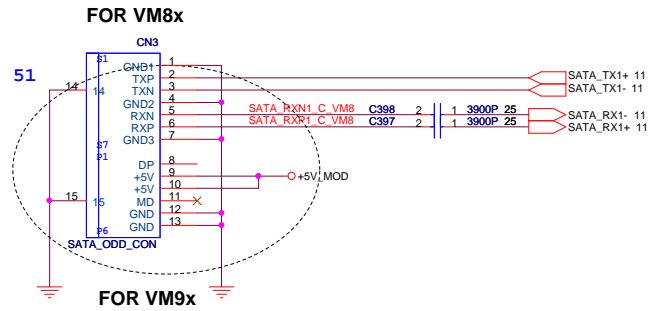
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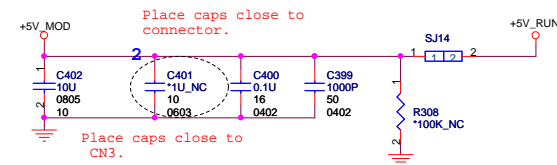
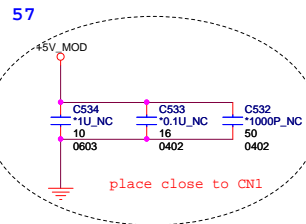
## SATA HDD Connector.



## SATA ODD Connector.



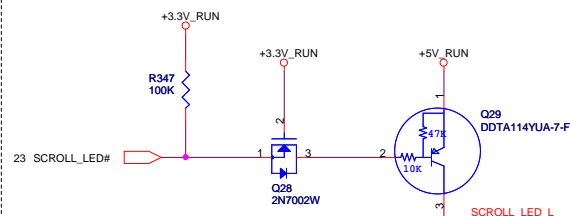
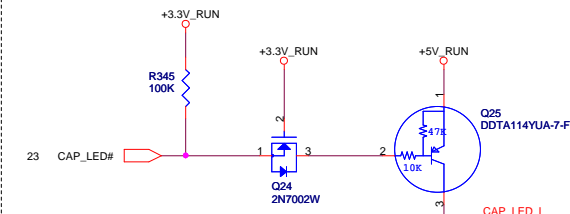
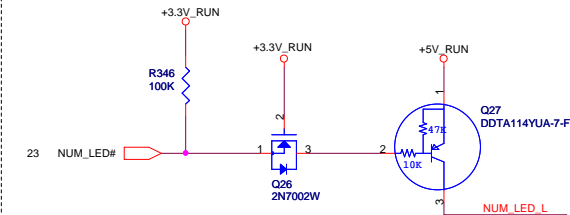
FOR VM9x



Title			SATA (HDD&CD_ROM)
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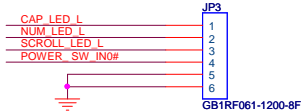


## Keyboard LED

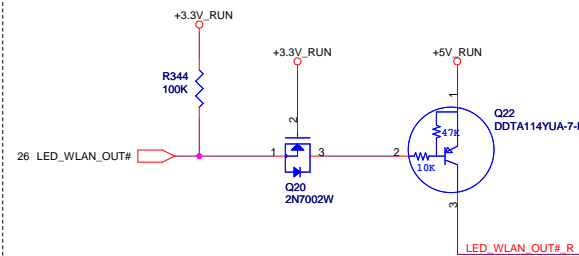


## Dash board connector

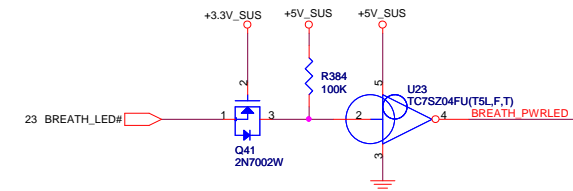
20



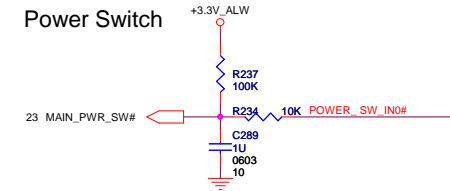
## WLAN



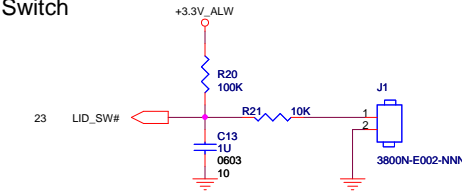
## Power & Suspend.



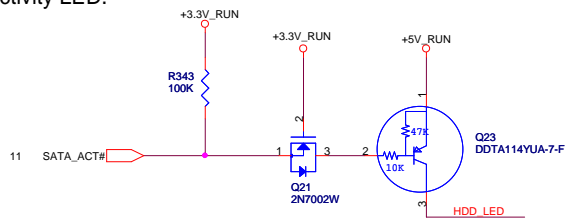
## Power Switch



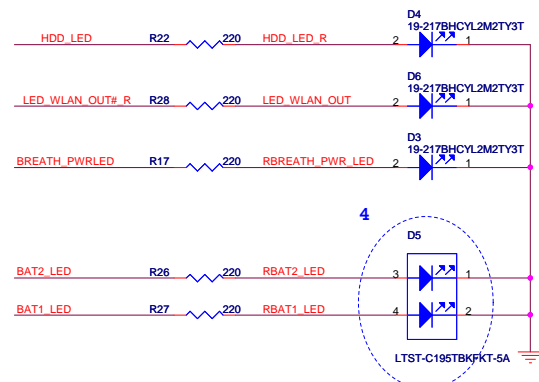
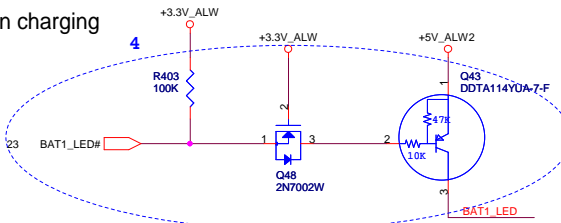
## LID Switch



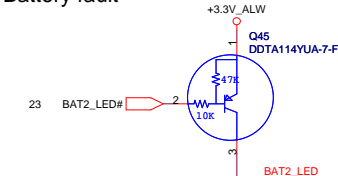
## HDD activity LED.



## Battery in charging



## Battery fault



**QUANTA COMPUTER**

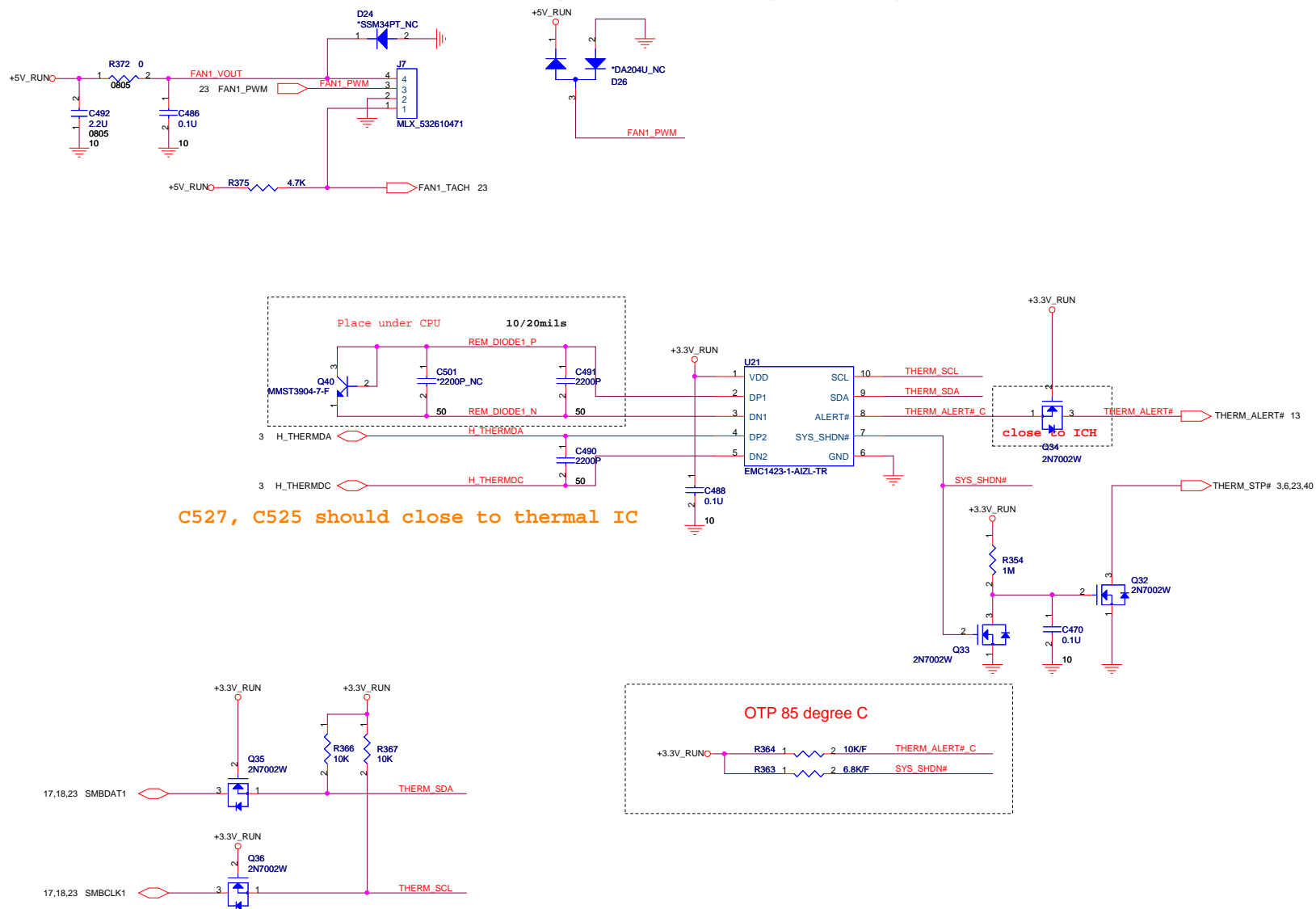
Title: SWITCH, KEYBOARD & LED

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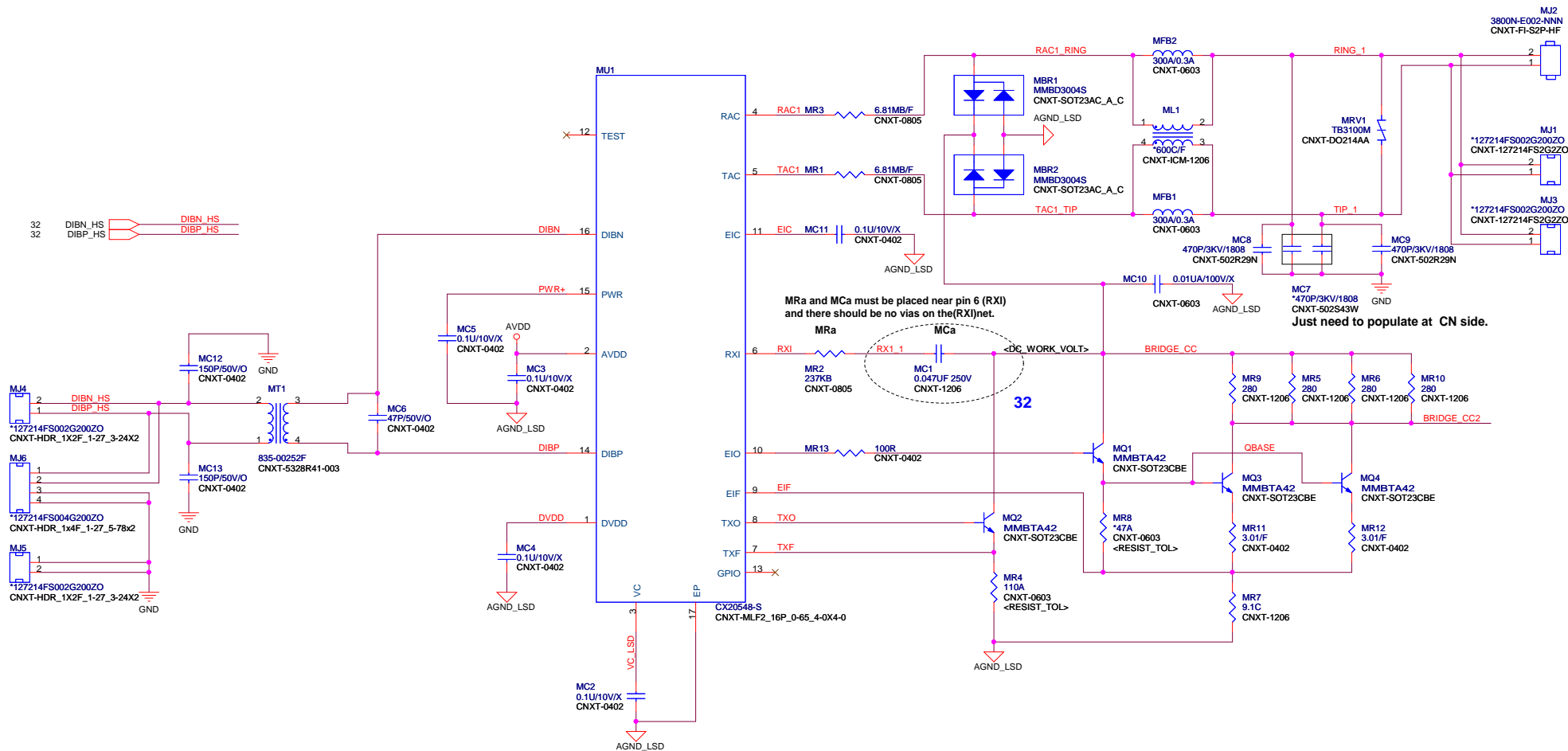
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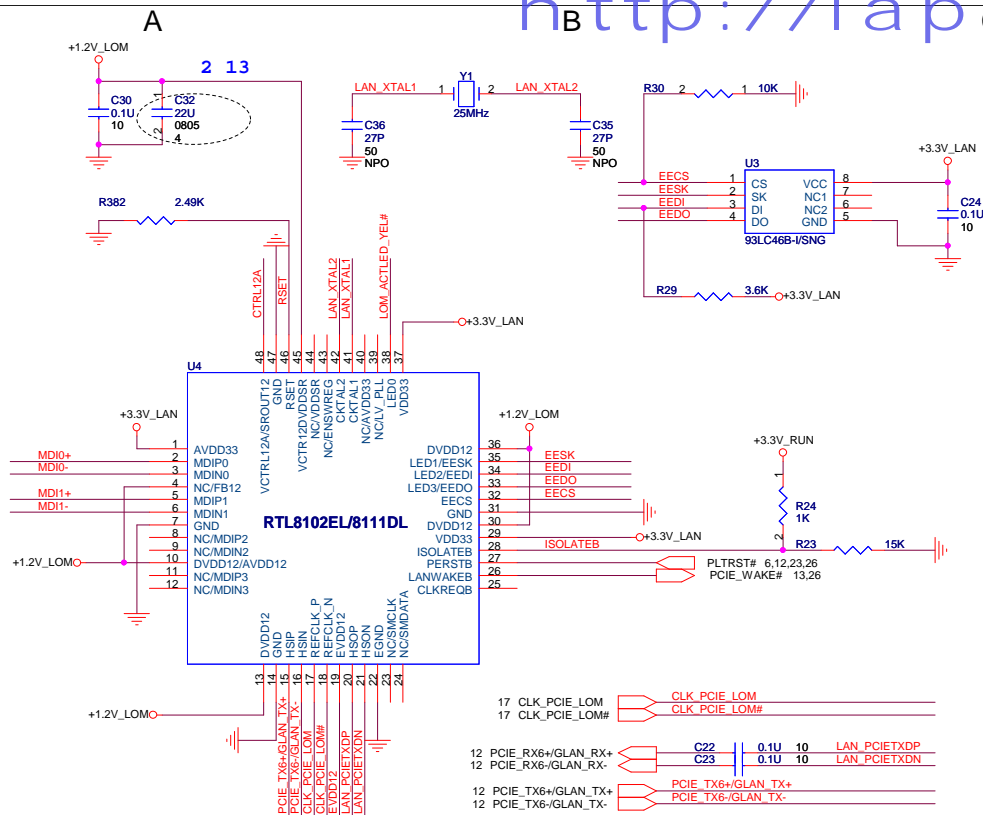




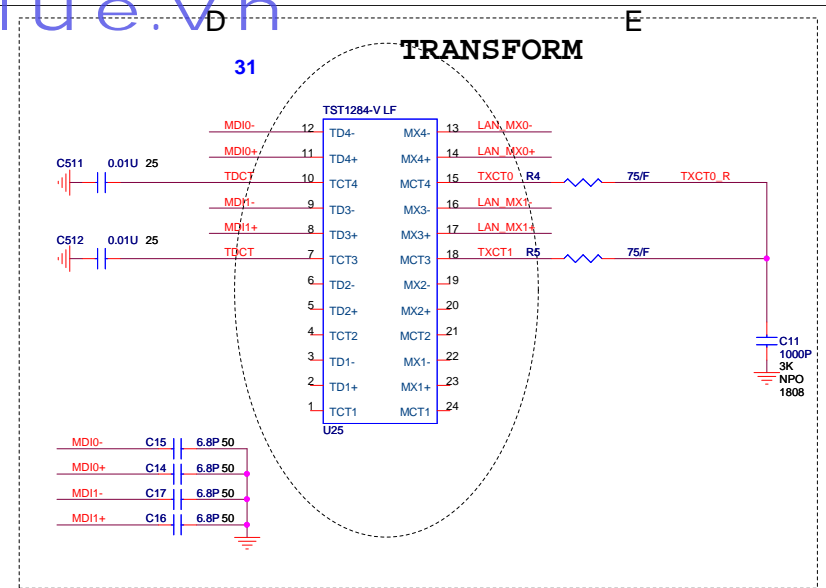
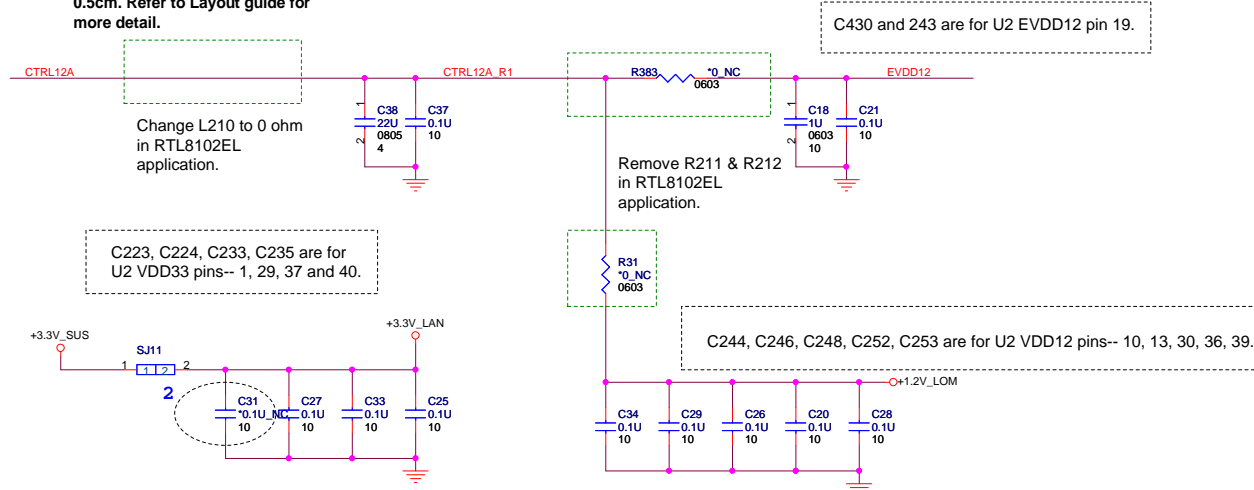


Revision History		
REV	Description	Date
0	Initial Release	April 26, 2005
4		

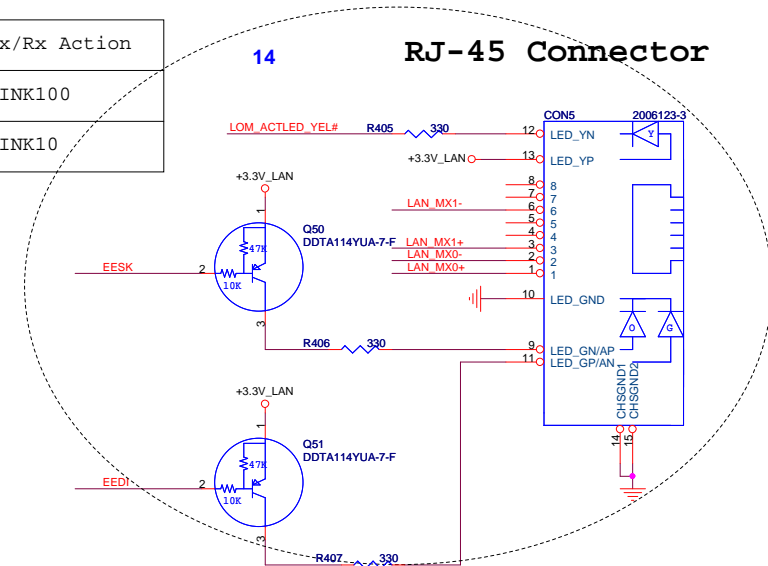


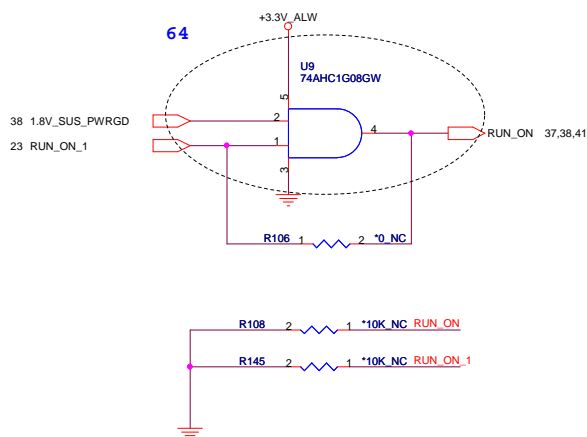
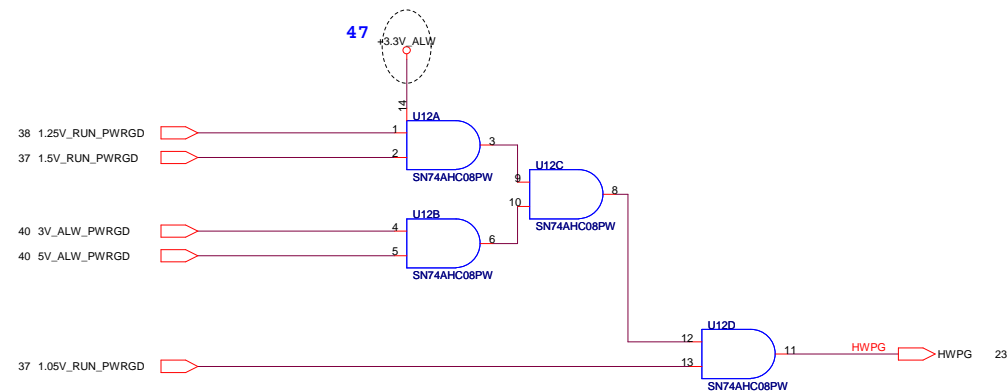
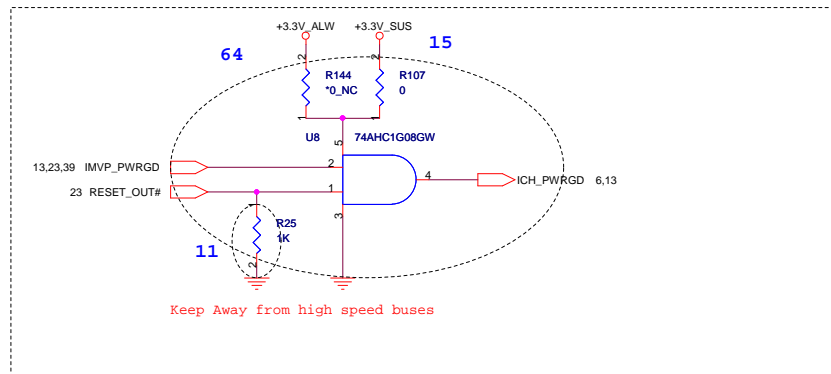


**Note 1: The Trace length between L210 and 8111DL's Pin 1 must be within 0.5 cm. C5 and C8 to L210 must be within 0.5cm. Refer to Layout guide for more detail.**



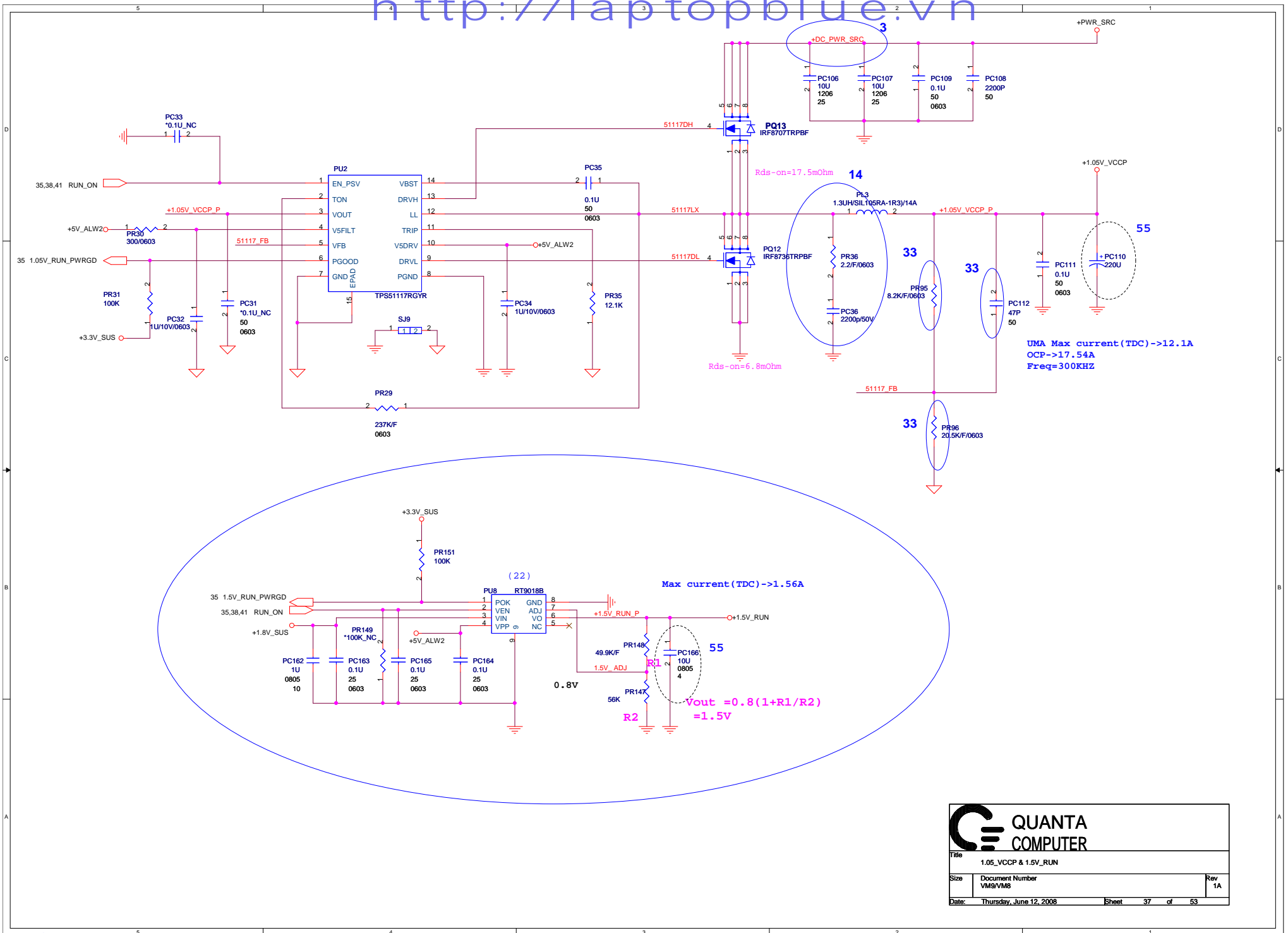
LED0	Tx/Rx Action
LED1/EESK	LINK100
LED2/EEDI	LINK10



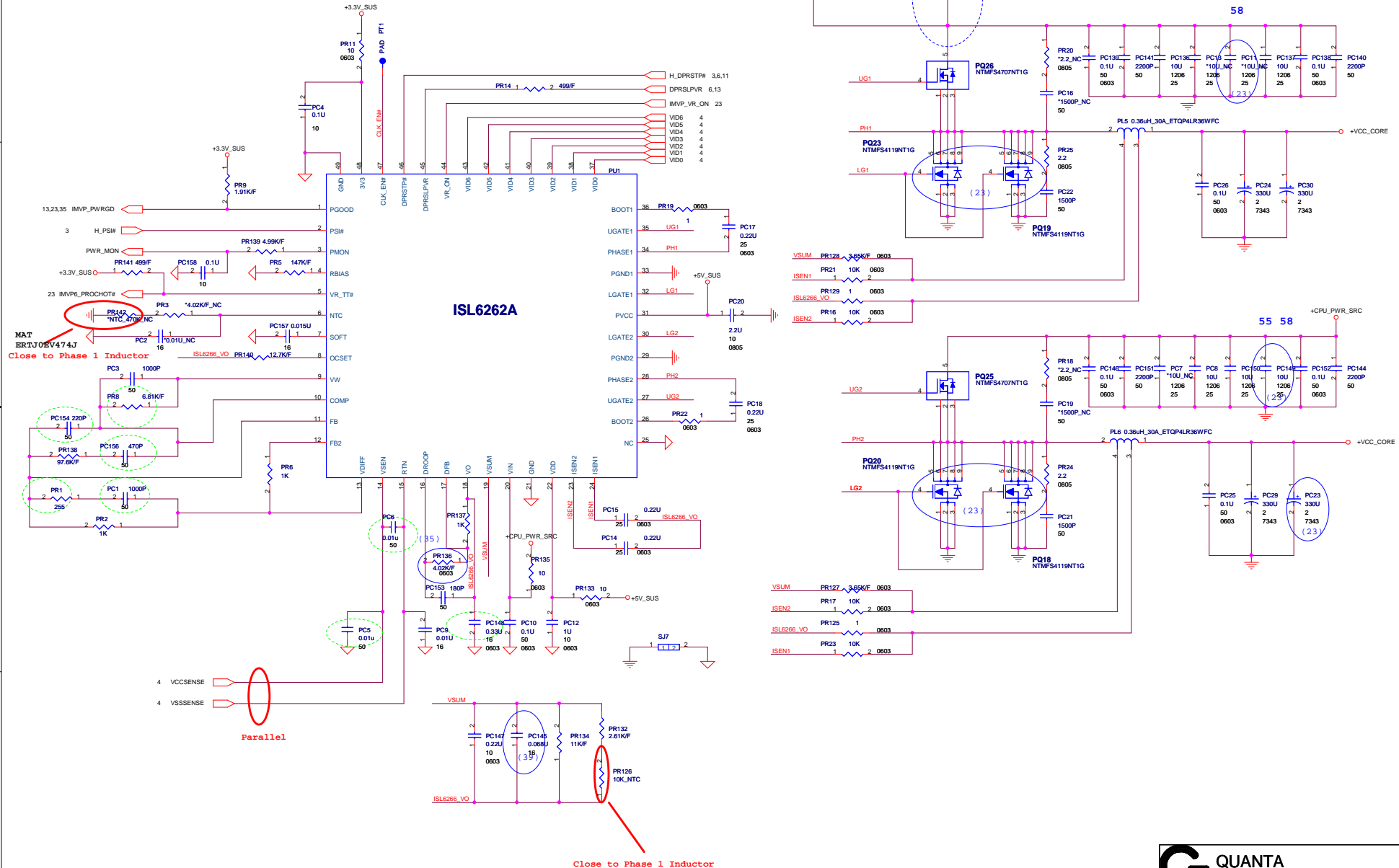


Title System Reset Circuit		
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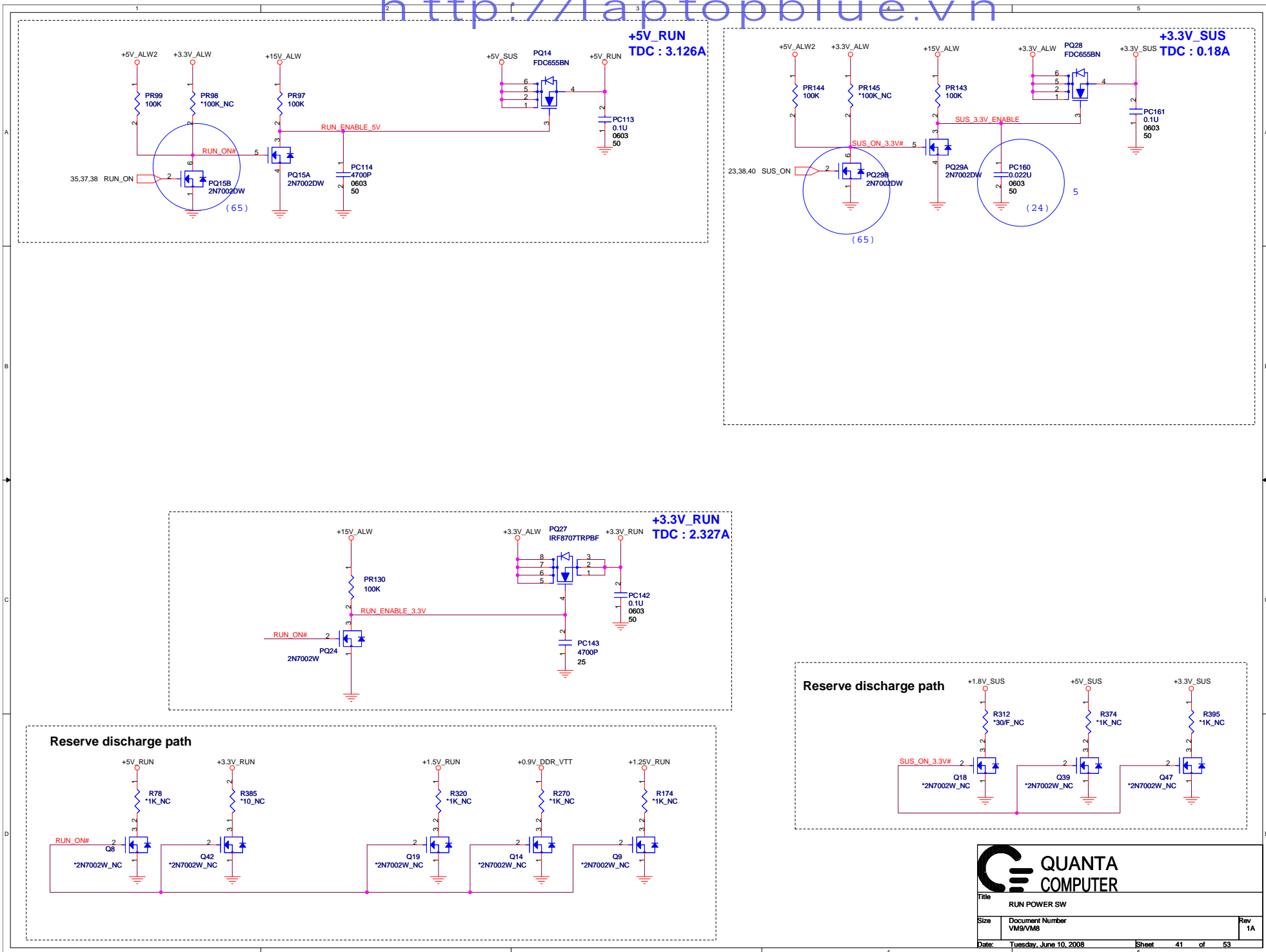






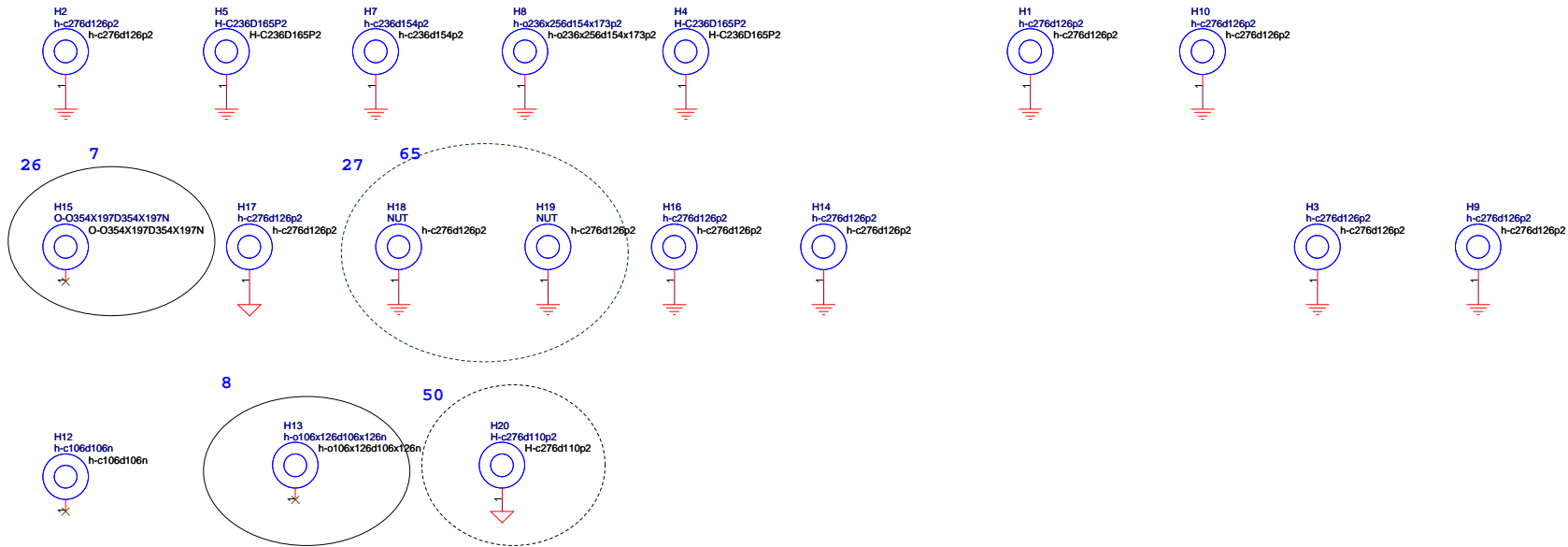



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Title			RUN POWER SW
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	VM9/VM8	1A	
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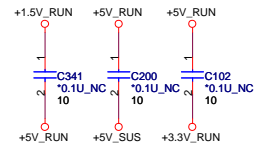




		<b>QUANTA COMPUTER</b>	
Title: SCREW PAD			
Size:	Document Number: VM9/VM8		Rev: 1A
Date:	Monday, June 23, 2008		Sheet: 43 of 53

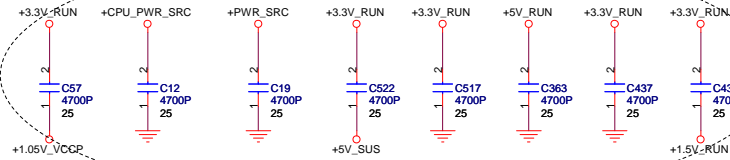
Reserved for EMI.

Stitching caps for PCI bus.



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Stitching caps for PCI EMC.



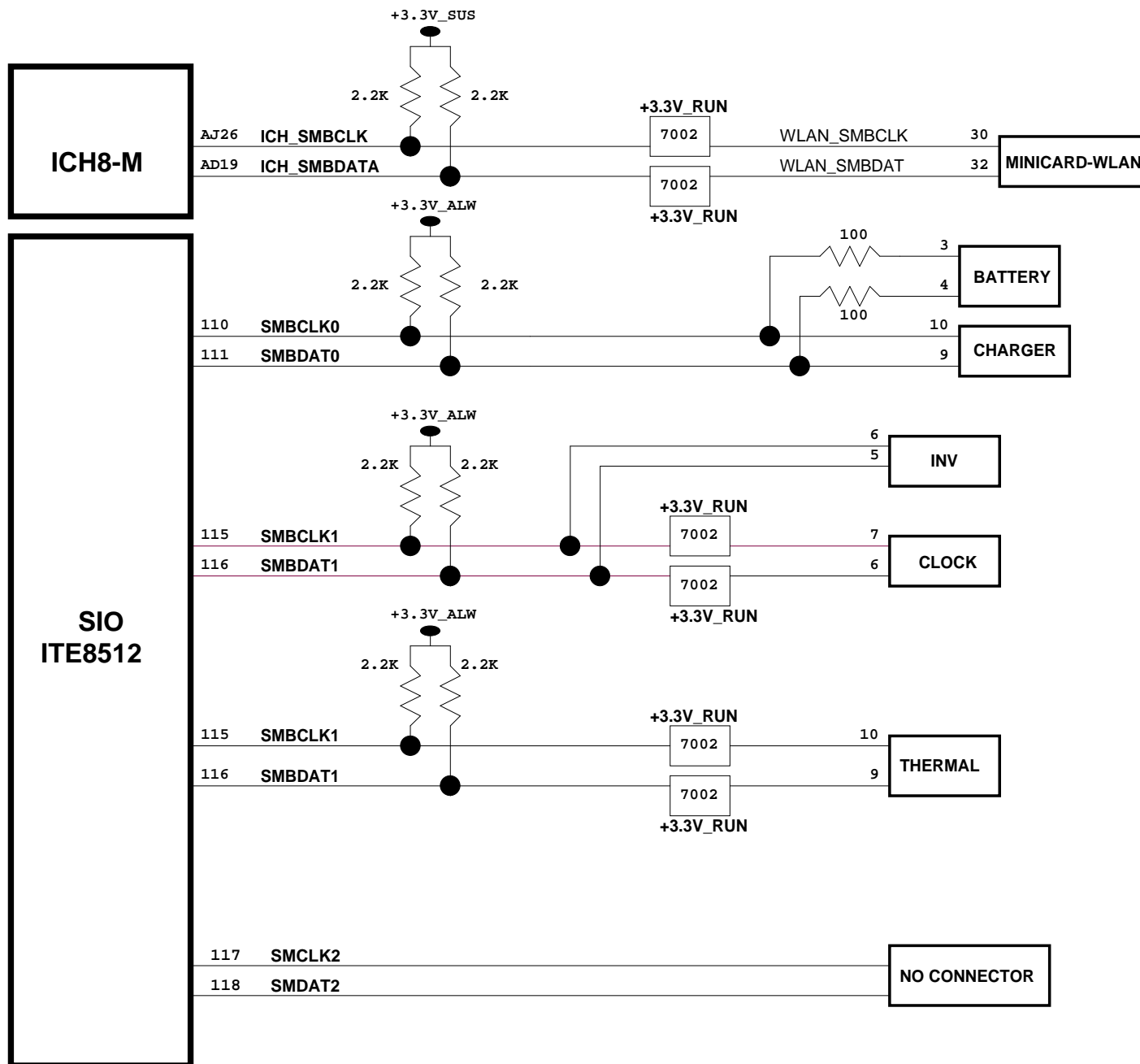
Title  
EMI CAP

Size  
Document Number  
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Title			SMBUS BLOCK
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