



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PAGE	DESCRIPTION
1	Schematic Block Diagram
2	Front Page
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18-24	M92-S2
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26	CRT Conn
27	BLANK PAGE
28	Express Card
29	SIO (ITE8512)
30	FLASH/RTC
31	Mini Card / BT
32	USB
33	SATA Conn
34	TP / KEYBOARD
35	SWITCH /LED
36	FAN & Thermal
37	Audio CODEC(CX20583-10z)/Phone Jack
38	Module Board
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42	1.05VCCP / 1.5VRUJN
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45	MAX17020 (+5.5V,+3.3V)
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48	PAD& SCREW
49	VGA GFX CORE
50	EMI CAP
51	SMBUS BLOCK
52	Power Block Dianram

Power States

POWER PLANE	VOLTAGE	PAGE	DESCRIPTION	CONTROL SIGNAL	ACTIVE IN
+PWR_SRC	10V~+19V	4,25,30,39,41,42,43,44,45,49,50	MAIN POWER		S0~S5
+RTC_CELL	+3.0V~+3.3V	11,14,29,30	RTC		S0~S5
+3.3V_ALW	+3.3V	3,13,29,30,35,39,40,41,43,45,46,47	8051 POWER	ALWON	S0~S5
+5V_ALW2	+5V	42,43,45,46,47,49	LCD/CHARGE POWER	ALWON	S0~S5
+15V_ALW	+15V	25,45,46	LARGE POWER	+5V_ALW	S0~S5
+3.3V_LAN	+3.3V	39	LAN POWER	AUX_ON	
+5V_SUS	+5V	14,32,35,44,45,46,49,50	SLP_S5# CTRLD POWER	SUS_ON	
+3.3V_SUS	+3.3V	3,11,12,13,14,19,25,28,35,42,44,46,49	SLP_S5# CTRLD POWER	3.3V_SUS_ON	
+1.8V_SUS	+1.8V	6,8,9,15,42,43,46,49	SODIMM POWER	DDR_ON	
+0.9V_DDR_VTT	+0.9V	16,43,46	SODIMM POWER	0.9V_DDR_VTT_ON	
+5V_RUN	+5V	14,20,25,26,33,34,35,36,37,46,50	SLP_S3# CTRLD POWER	RUN_ON	
+3.3V_RUN	+3.3V	3,6,8,9,11,12,13,14,15,17,19,25,26,27,28,29,31,33,35,36,37,39,46,50	SLP_S3# CTRLD POWER	3.3V_RUN_ON	
+1.5V_RUN	+1.5V	4,9,14,28,31,42,46,50	CALISTOGA/ICH8 POWER	1.5V_RUN_ON	
+1.05V_VCCP	+1.05V	3,4,5,6,8,9,11,14,42,50	CPU/CALISTOGA/ICH8 POWER	1.05V_RUN_ON	
+VCC_CORE	+0.7V~+1.77V	4,44	CPU CORE POWER	IMVP_VR_ON	
+LCDVCC	+3.3V	25	LCD Power	LCDVCC_TST_EN & ENVDD	
+5V_MOD	+5V	33	Module Power	MODC_EN#	
+5V_HDD	+5V	33	HDD Power	HDDC_EN#	
+PBATT	+10V~+17V		MAIN BATTERY	CHG_PBATT	
+SBATT	+10V~+17V		SECOND BATTERY	CHG_SBATT	
+1.1V_GFX_PCIE	+1.1V	20	GFX PCIE POWER	GFX_RUN_ON	
+VCC_GFX_CORE	+0.9~+1.1	20,23,49	GFX CORE POWER	GFX_RUN_ON	

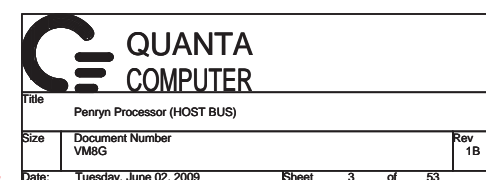
GND PLANE	PAGE	DESCRIPTION
 GND	ALL	

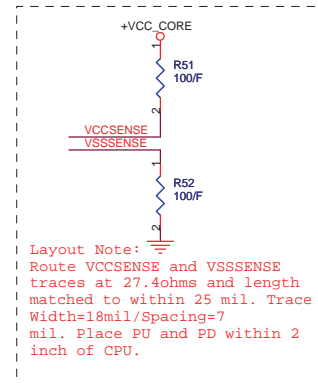
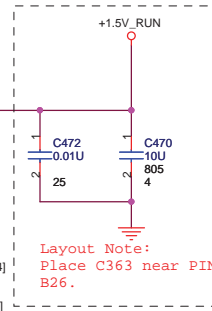
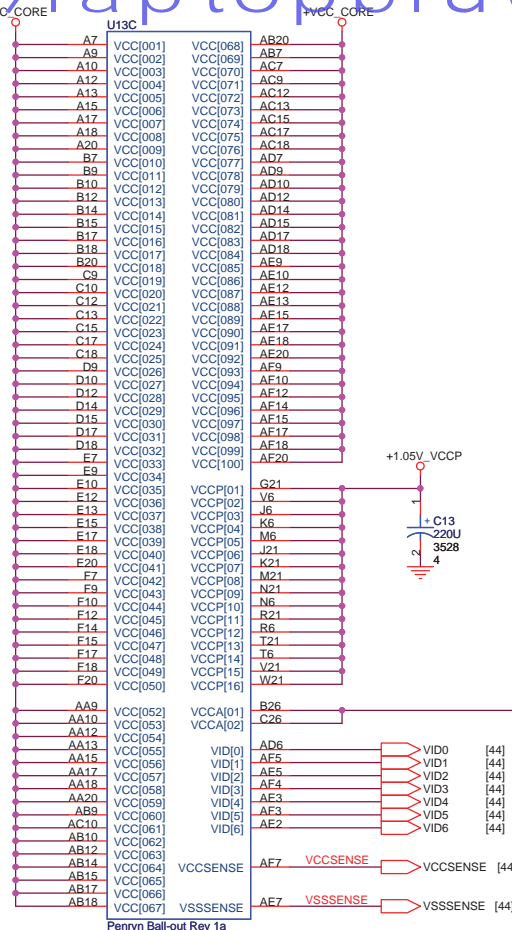
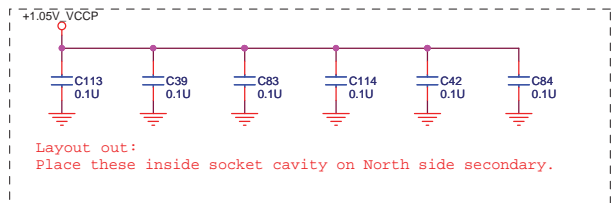
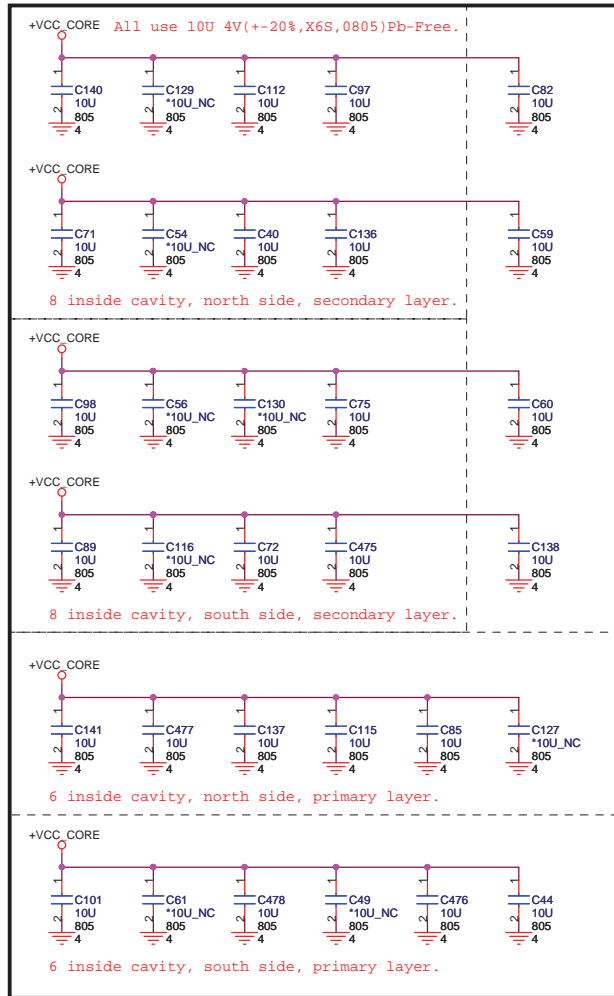

**QUANTA
COMPUTER**

Title: Index & Power Status

Size: Document Number VM8G Rev 1B

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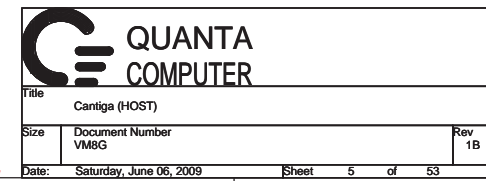


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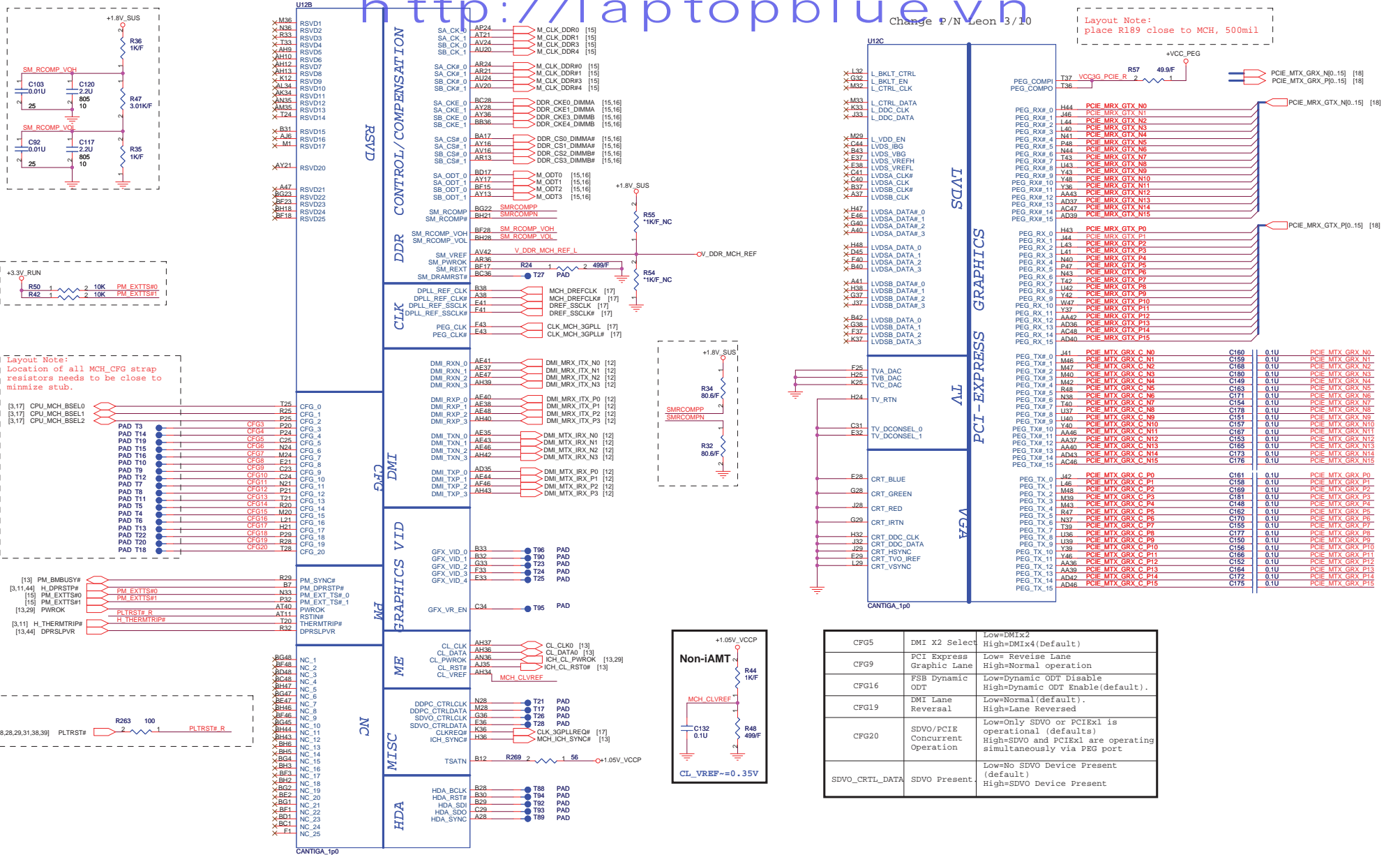
Penryn Processor (POWER)

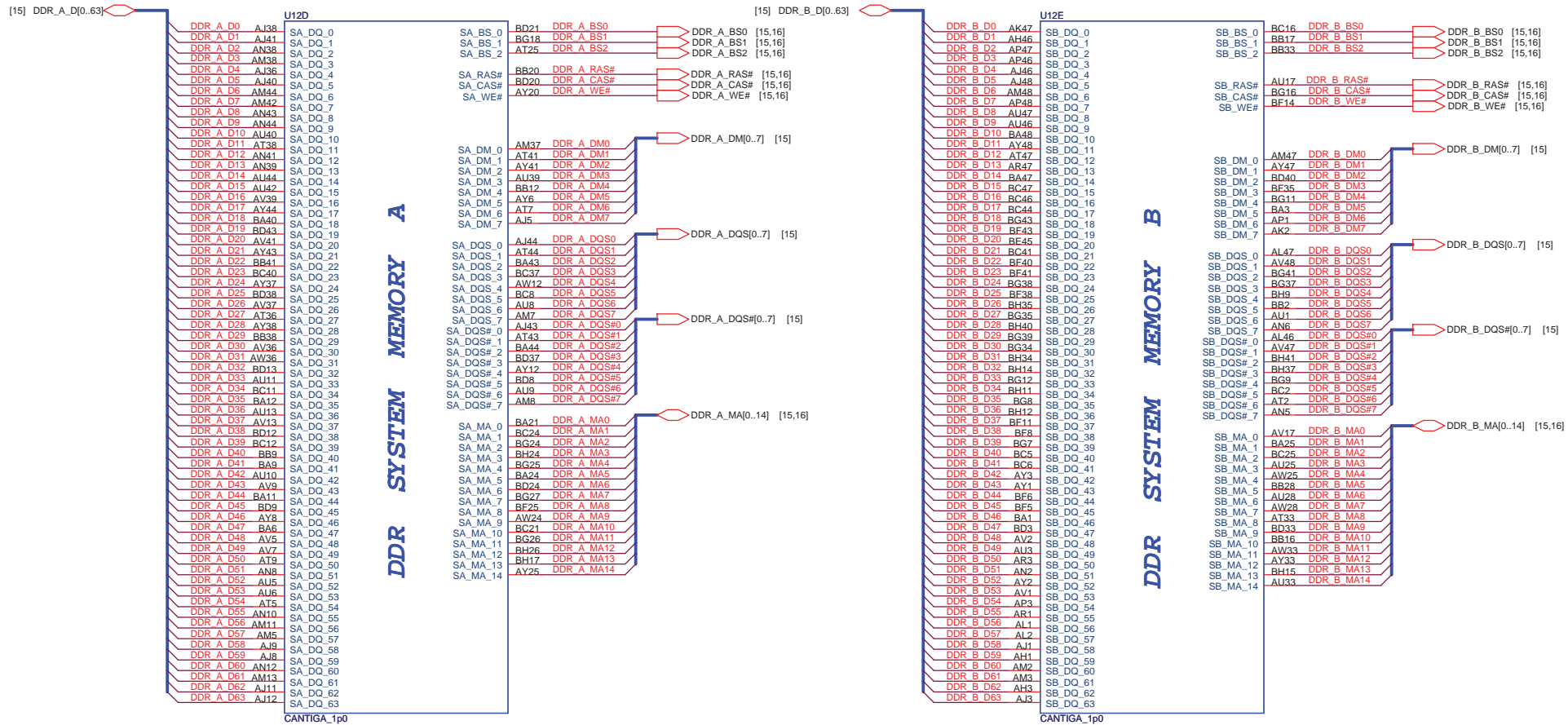
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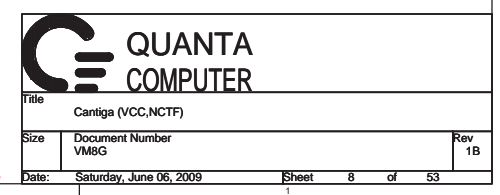
Date: Tuesday, June 02, 2009 Sheet 4 of 53

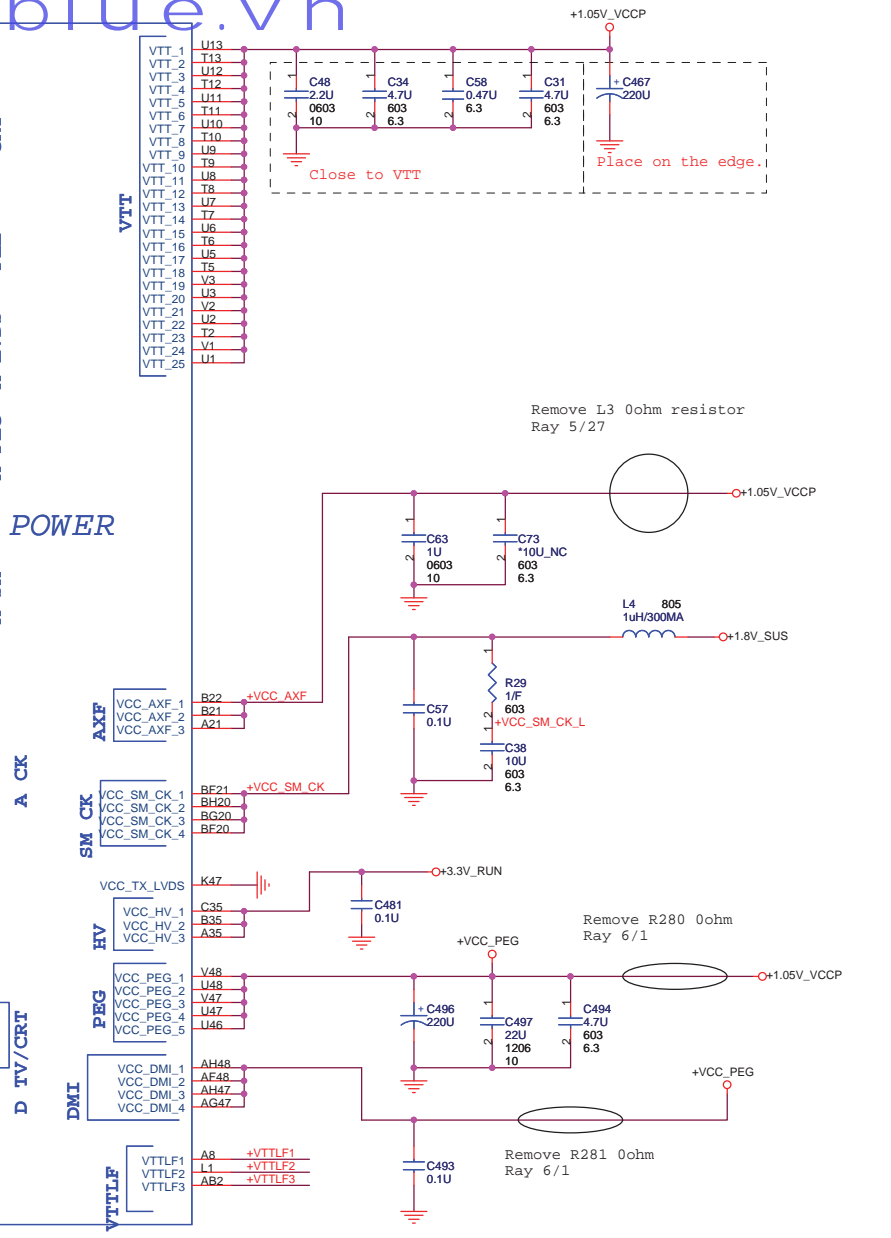
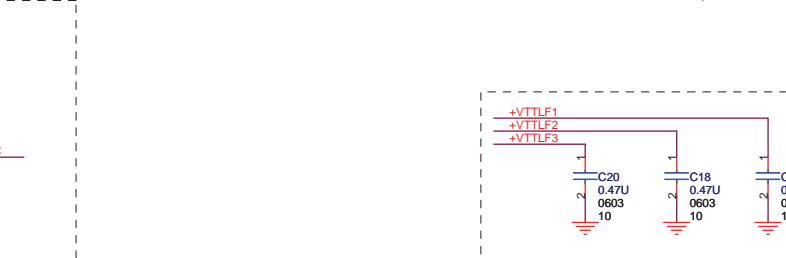
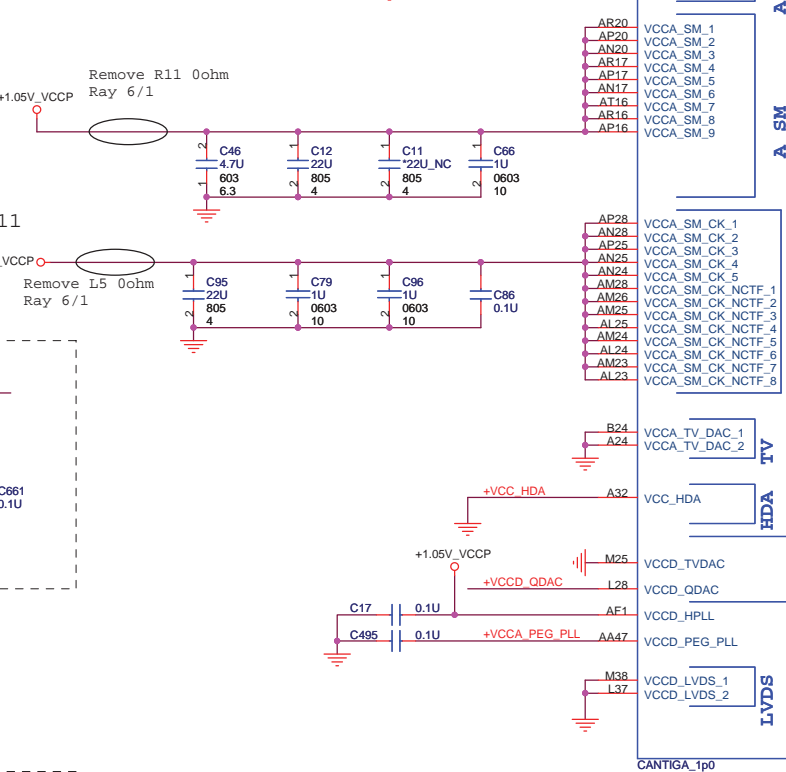
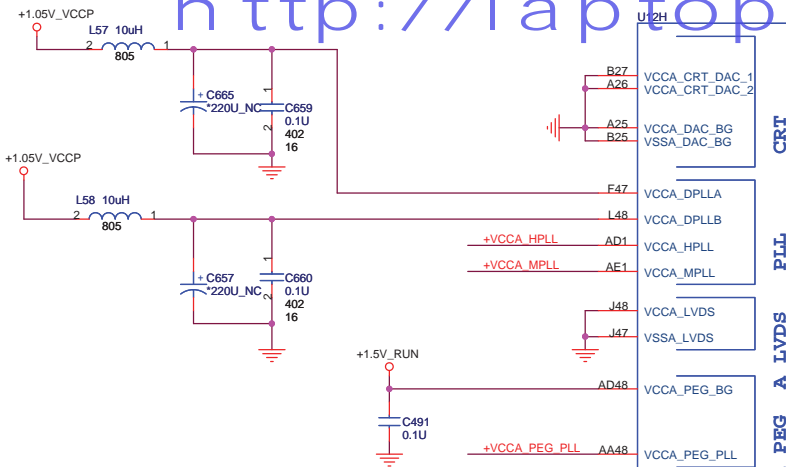
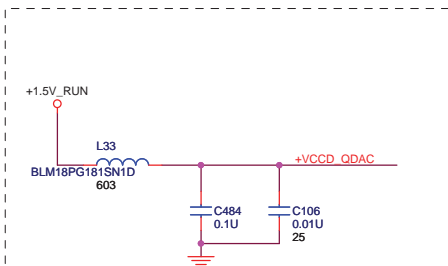
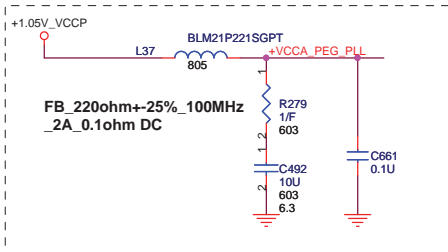
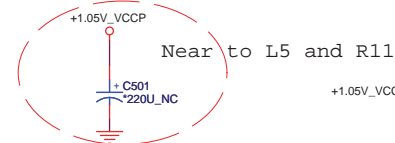
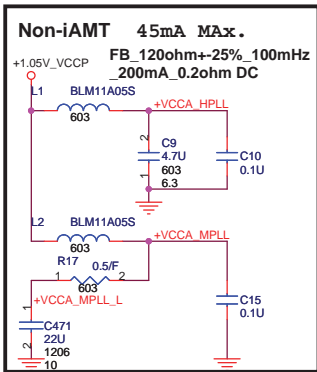


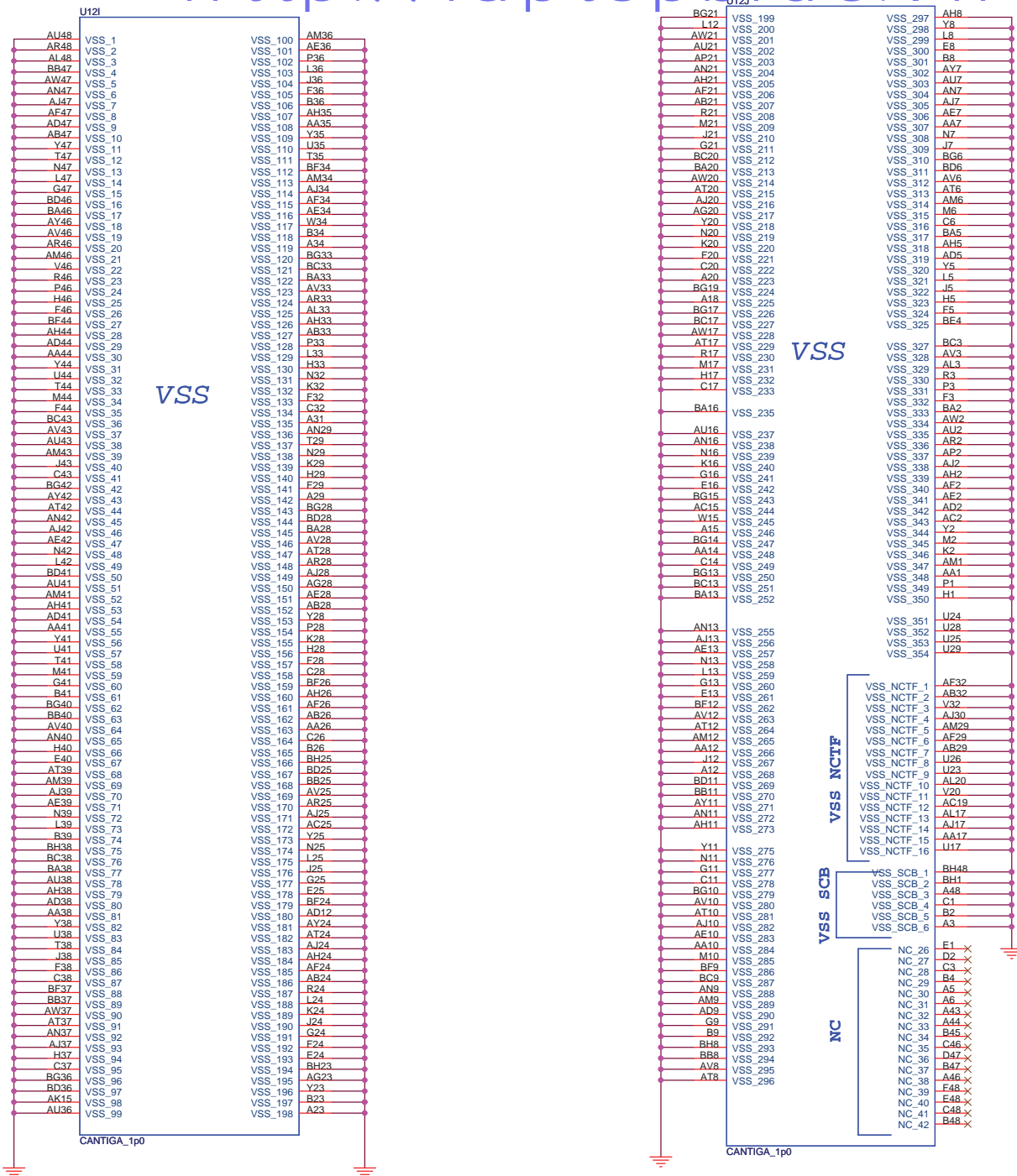
Layout Note:
place R189 close to MCH, 500mil



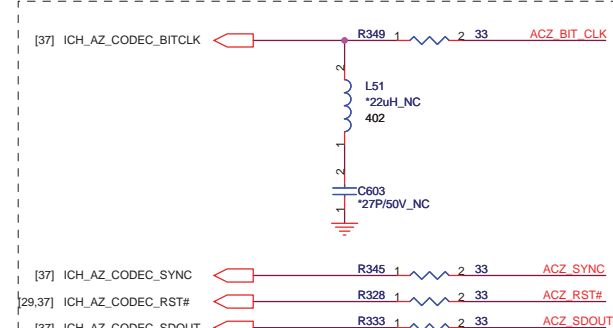
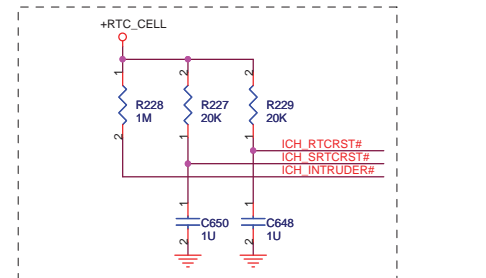
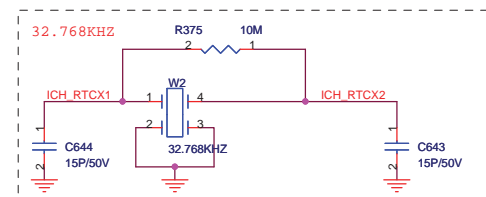




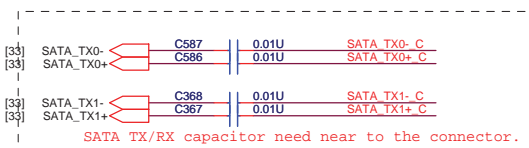




File: Cantiga (VSS)			
Size	Document Number	Rev	
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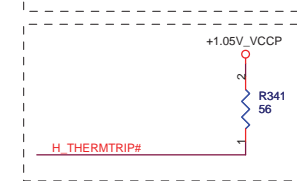
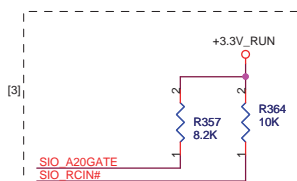
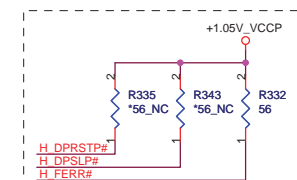
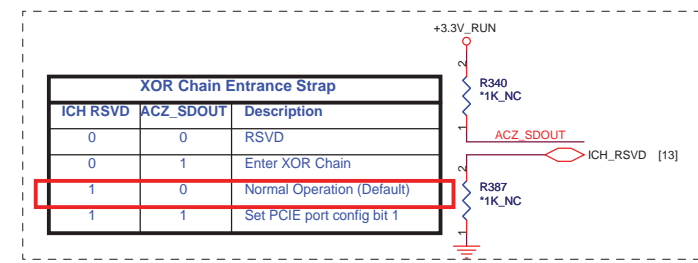
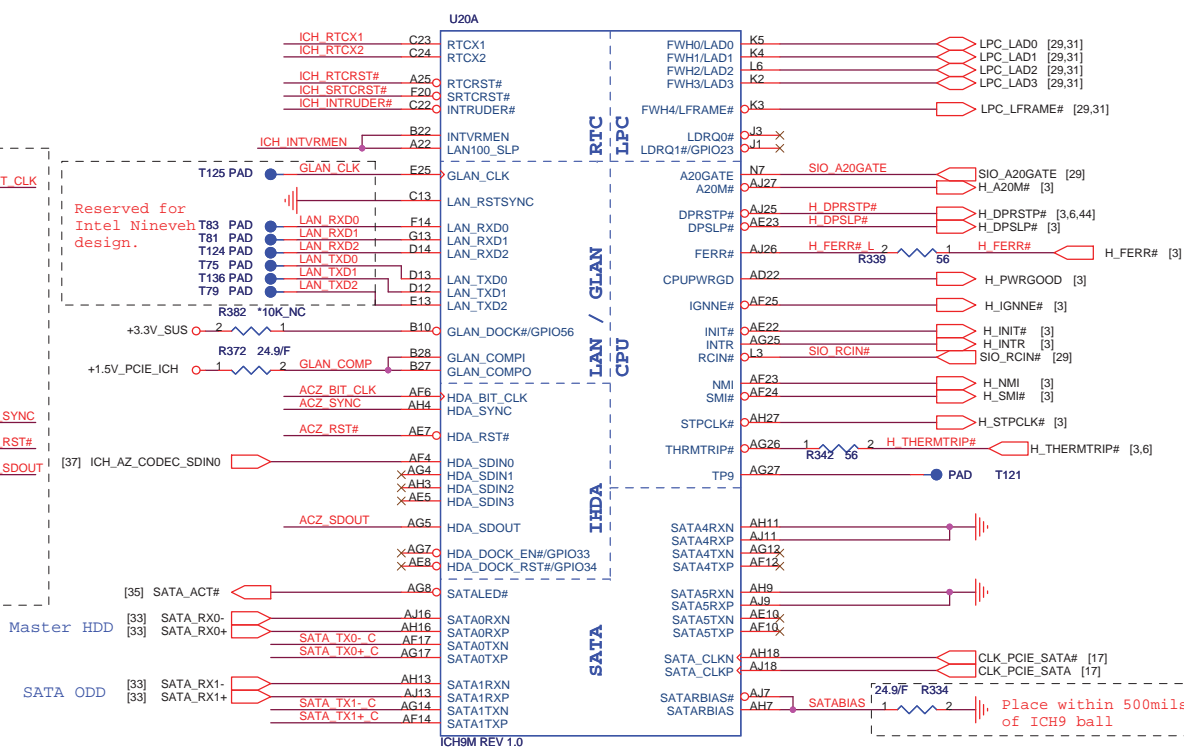
Place all series terms close to ICH9 except for SDIN input lines, which should be close to source.

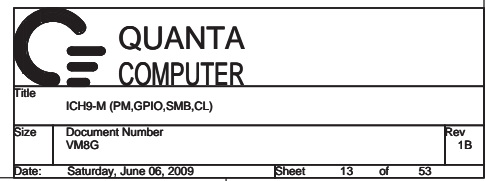


SATA TX/RX capacitor need near to the connector.

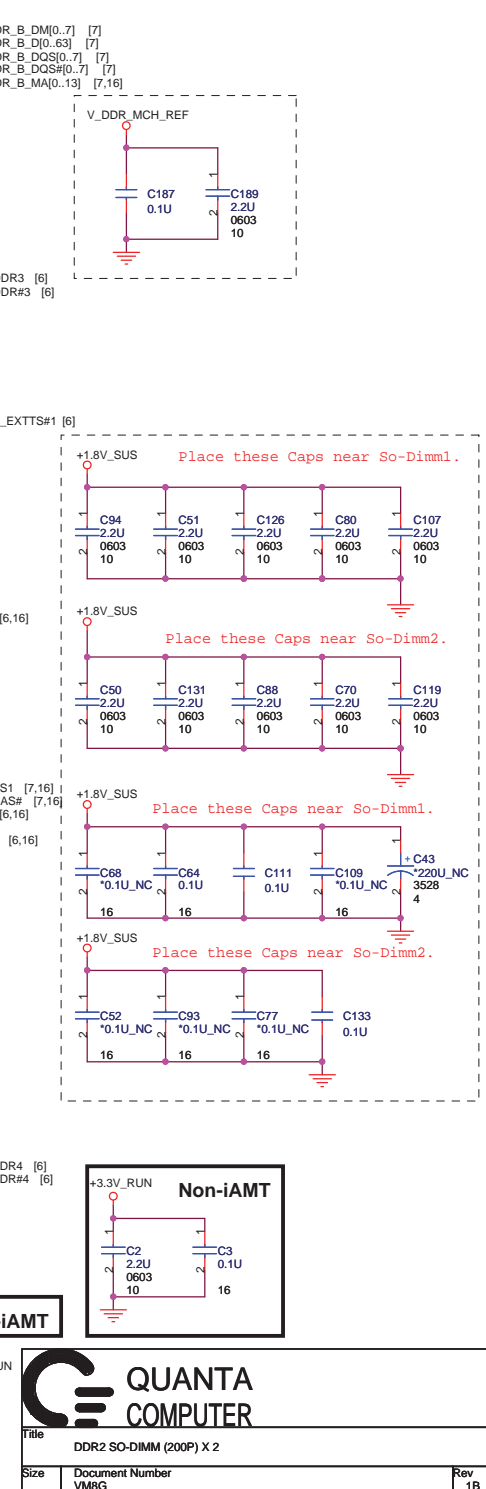
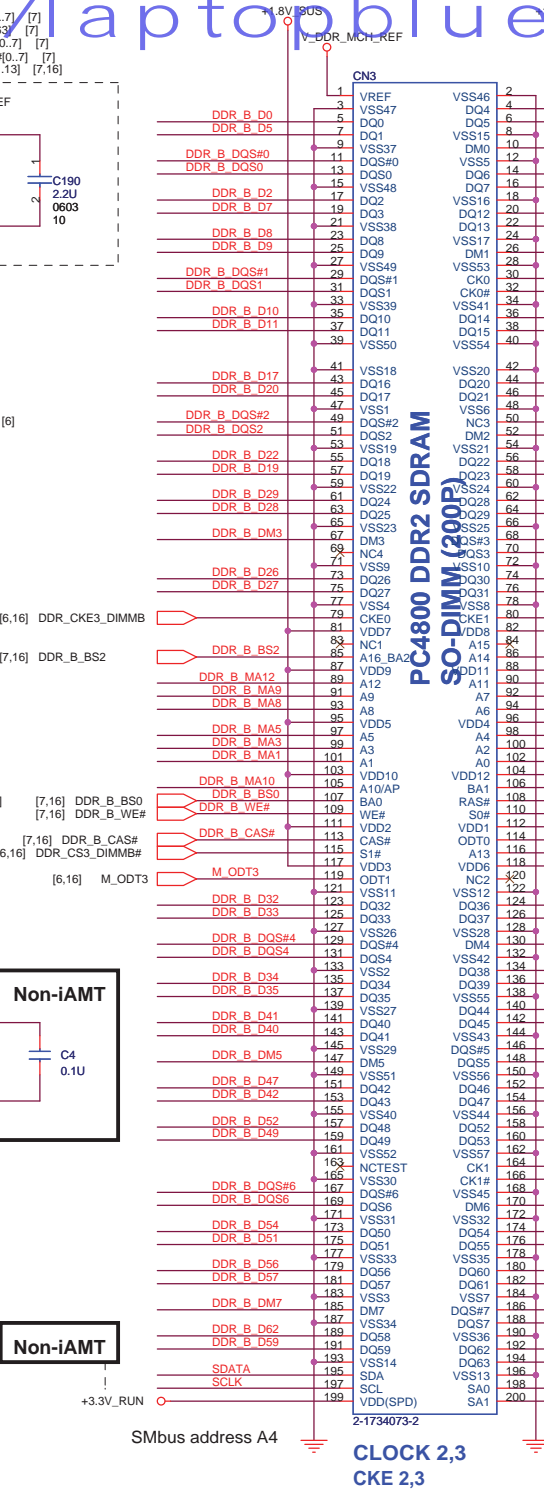
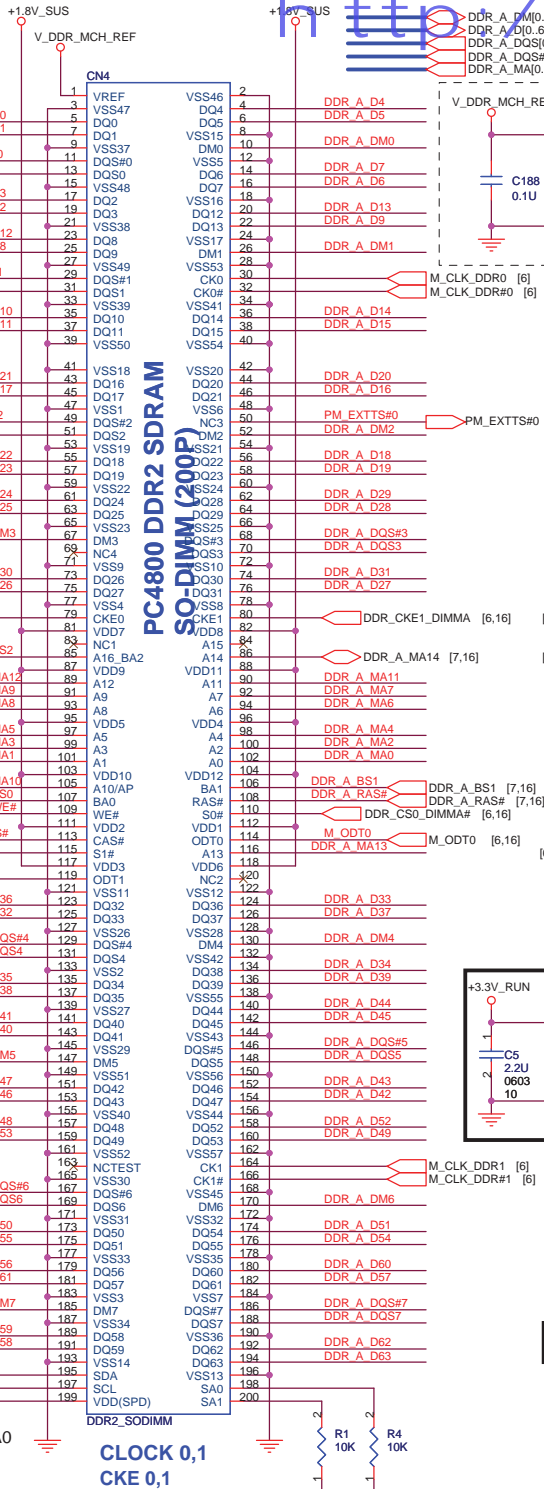
ICH9M Internal VR Enable Strap
(Internal VR for VccSus1.05, VccSus1.5, VccCL1.5)
Low = Internal VR Disabled
High = Internal VR Enabled (Default)

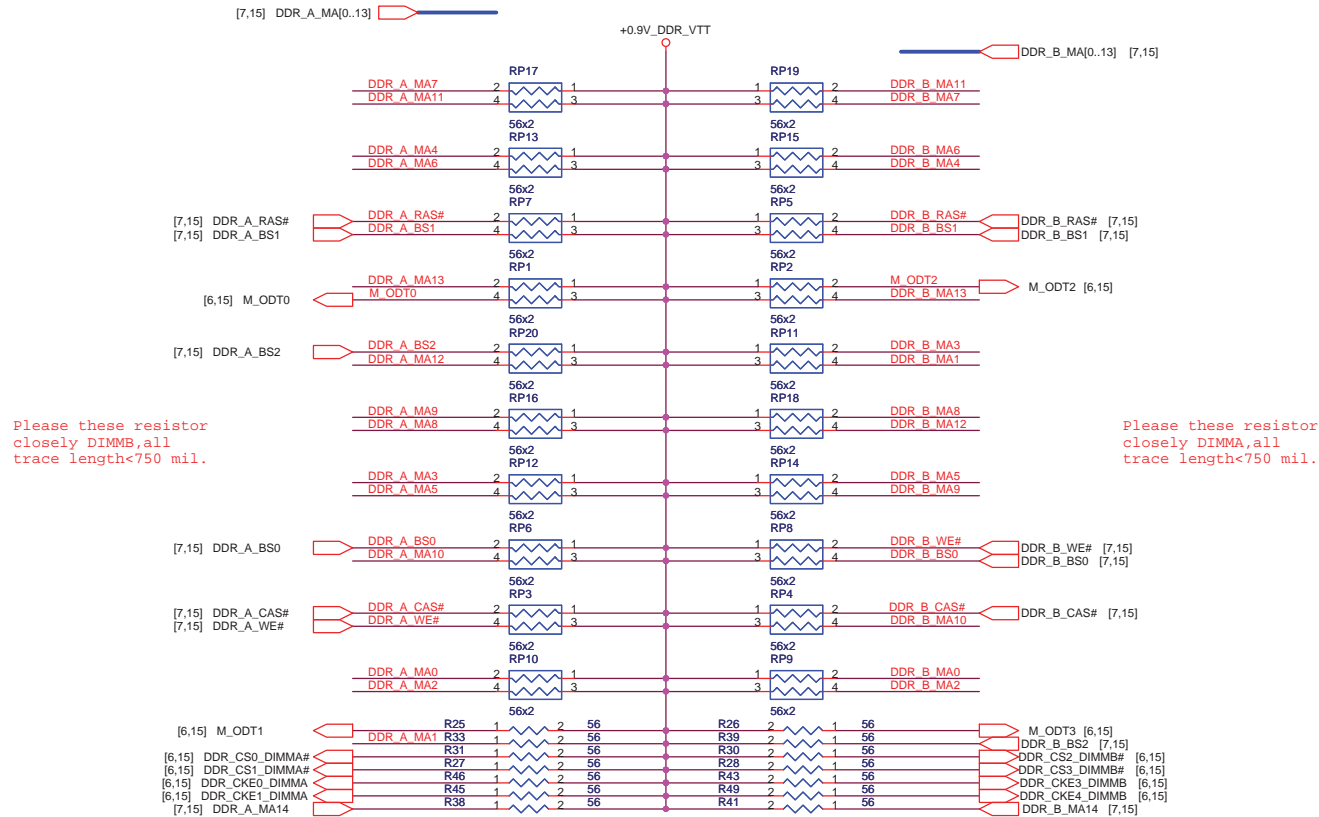
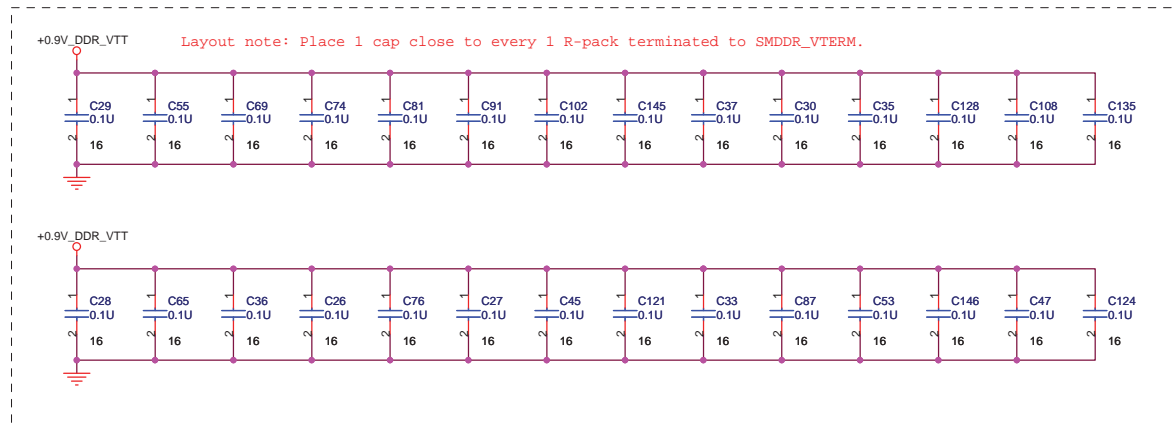
ICH9M LAN100 SLP Strap
(Internal VR for VccLAN1.05 and VccCL1.05)
Low = Internal VR Disabled
High = Internal VR Enabled (Default)





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





[6] PCIE_MTX_GRX_P[0..15]
[6] PCIE_MTX_GRX_N[0..15]

U17A
PART 1 OF 10

[6] PCIE_MRX_GTX_P[0..15]
[6] PCIE_MRX_GTX_N[0..15]

PCIE_MTX_GRX_P0 AF30
PCIE_MTX_GRX_N0 AE31

PCIE_MTX_GRX_P1 AE29
PCIE_MTX_GRX_N1 AD28

PCIE_MTX_GRX_P2 AD30
PCIE_MTX_GRX_N2 AC31

PCIE_MTX_GRX_P3 AC29
PCIE_MTX_GRX_N3 AB28

PCIE_MTX_GRX_P4 AB30
PCIE_MTX_GRX_N4 AA31

PCIE_MTX_GRX_P5 AA29
PCIE_MTX_GRX_N5 Y28

PCIE_MTX_GRX_P6 Y30
PCIE_MTX_GRX_N6 W31

PCIE_MTX_GRX_P7 W29
PCIE_MTX_GRX_N7 V28

PCIE_MTX_GRX_P8 V30
PCIE_MTX_GRX_N8 U31

PCIE_MTX_GRX_P9 U29
PCIE_MTX_GRX_N9 T28

PCIE_MTX_GRX_P10 T30
PCIE_MTX_GRX_N10 R31

PCIE_MTX_GRX_P11 R29
PCIE_MTX_GRX_N11 P28

PCIE_MTX_GRX_P12 P30
PCIE_MTX_GRX_N12 N31

PCIE_MTX_GRX_P13 N29
PCIE_MTX_GRX_N13 M28

PCIE_MTX_GRX_P14 M30
PCIE_MTX_GRX_N14 L31

PCIE_MTX_GRX_P15 L29
PCIE_MTX_GRX_N15 K30

PCIE_RX0P
PCIE_RX0N

PCIE_RX1P
PCIE_RX1N

PCIE_RX2P
PCIE_RX2N

PCIE_RX3P
PCIE_RX3N

PCIE_RX4P
PCIE_RX4N

PCIE_RX5P
PCIE_RX5N

PCIE_RX6P
PCIE_RX6N

PCIE_RX7P
PCIE_RX7N

PCIE_RX8P
PCIE_RX8N

PCIE_RX9P
PCIE_RX9N

PCIE_RX10P
PCIE_RX10N

PCIE_RX11P
PCIE_RX11N

PCIE_RX12P
PCIE_RX12N

PCIE_RX13P
PCIE_RX13N

PCIE_RX14P
PCIE_RX14N

PCIE_RX15P
PCIE_RX15N

PCIE_TX0P
PCIE_TX0N

PCIE_TX1P
PCIE_TX1N

PCIE_TX2P
PCIE_TX2N

PCIE_TX3P
PCIE_TX3N

PCIE_TX4P
PCIE_TX4N

PCIE_TX5P
PCIE_TX5N

PCIE_TX6P
PCIE_TX6N

PCIE_TX7P
PCIE_TX7N

PCIE_TX8P
PCIE_TX8N

PCIE_TX9P
PCIE_TX9N

PCIE_TX10P
PCIE_TX10N

PCIE_TX11P
PCIE_TX11N

PCIE_TX12P
PCIE_TX12N

PCIE_TX13P
PCIE_TX13N

PCIE_TX14P
PCIE_TX14N

PCIE_TX15P
PCIE_TX15N

PCIE_MRX_GTX_C_P0
PCIE_MRX_GTX_C_N0

PCIE_MRX_GTX_C_P1
PCIE_MRX_GTX_C_N1

PCIE_MRX_GTX_C_P2
PCIE_MRX_GTX_C_N2

PCIE_MRX_GTX_C_P3
PCIE_MRX_GTX_C_N3

PCIE_MRX_GTX_C_P4
PCIE_MRX_GTX_C_N4

PCIE_MRX_GTX_C_P5
PCIE_MRX_GTX_C_N5

PCIE_MRX_GTX_C_P6
PCIE_MRX_GTX_C_N6

PCIE_MRX_GTX_C_P7
PCIE_MRX_GTX_C_N7

PCIE_MRX_GTX_C_P8
PCIE_MRX_GTX_C_N8

PCIE_MRX_GTX_C_P9
PCIE_MRX_GTX_C_N9

PCIE_MRX_GTX_C_P10
PCIE_MRX_GTX_C_N10

PCIE_MRX_GTX_C_P11
PCIE_MRX_GTX_C_N11

PCIE_MRX_GTX_C_P12
PCIE_MRX_GTX_C_N12

PCIE_MRX_GTX_C_P13
PCIE_MRX_GTX_C_N13

PCIE_MRX_GTX_C_P14
PCIE_MRX_GTX_C_N14

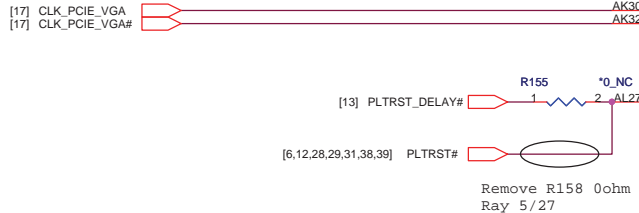
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PCIE_MRX_GTX_P0 0.1U 2 1 C350 16 PCIE_MRX_GTX_C_P0
PCIE_MRX_GTX_P1 0.1U 2 1 C345 16 PCIE_MRX_GTX_C_P1
PCIE_MRX_GTX_P2 0.1U 2 1 C342 16 PCIE_MRX_GTX_C_P2
PCIE_MRX_GTX_P3 0.1U 2 1 C347 16 PCIE_MRX_GTX_C_P3
PCIE_MRX_GTX_P4 0.1U 2 1 C349 16 PCIE_MRX_GTX_C_P4
PCIE_MRX_GTX_P5 0.1U 2 1 C376 16 PCIE_MRX_GTX_C_P5
PCIE_MRX_GTX_P6 0.1U 2 1 C357 16 PCIE_MRX_GTX_C_P6
PCIE_MRX_GTX_P7 0.1U 2 1 C373 16 PCIE_MRX_GTX_C_P7
PCIE_MRX_GTX_P8 0.1U 2 1 C355 16 PCIE_MRX_GTX_C_P8
PCIE_MRX_GTX_P9 0.1U 2 1 C353 16 PCIE_MRX_GTX_C_P9
PCIE_MRX_GTX_P10 0.1U 2 1 C340 16 PCIE_MRX_GTX_C_P10
PCIE_MRX_GTX_P11 0.1U 2 1 C372 16 PCIE_MRX_GTX_C_P11
PCIE_MRX_GTX_P12 0.1U 2 1 C338 16 PCIE_MRX_GTX_C_P12
PCIE_MRX_GTX_P13 0.1U 2 1 C370 16 PCIE_MRX_GTX_C_P13
PCIE_MRX_GTX_P14 0.1U 2 1 C364 16 PCIE_MRX_GTX_C_P14
PCIE_MRX_GTX_P15 0.1U 2 1 C560 16 PCIE_MRX_GTX_C_P15

PCIE_MRX_GTX_N0 0.1U 2 1 C351 16 PCIE_MRX_GTX_C_N0
PCIE_MRX_GTX_N1 0.1U 2 1 C344 16 PCIE_MRX_GTX_C_N1
PCIE_MRX_GTX_N2 0.1U 2 1 C343 16 PCIE_MRX_GTX_C_N2
PCIE_MRX_GTX_N3 0.1U 2 1 C346 16 PCIE_MRX_GTX_C_N3
PCIE_MRX_GTX_N4 0.1U 2 1 C348 16 PCIE_MRX_GTX_C_N4
PCIE_MRX_GTX_N5 0.1U 2 1 C375 16 PCIE_MRX_GTX_C_N5
PCIE_MRX_GTX_N6 0.1U 2 1 C356 16 PCIE_MRX_GTX_C_N6
PCIE_MRX_GTX_N7 0.1U 2 1 C374 16 PCIE_MRX_GTX_C_N7
PCIE_MRX_GTX_N8 0.1U 2 1 C354 16 PCIE_MRX_GTX_C_N8
PCIE_MRX_GTX_N9 0.1U 2 1 C352 16 PCIE_MRX_GTX_C_N9
PCIE_MRX_GTX_N10 0.1U 2 1 C339 16 PCIE_MRX_GTX_C_N10
PCIE_MRX_GTX_N11 0.1U 2 1 C371 16 PCIE_MRX_GTX_C_N11
PCIE_MRX_GTX_N12 0.1U 2 1 C337 16 PCIE_MRX_GTX_C_N12
PCIE_MRX_GTX_N13 0.1U 2 1 C369 16 PCIE_MRX_GTX_C_N13
PCIE_MRX_GTX_N14 0.1U 2 1 C363 16 PCIE_MRX_GTX_C_N14
PCIE_MRX_GTX_N15 0.1U 2 1 C561 16 PCIE_MRX_GTX_C_N15

PCI-EXPRESS INTERFACE

100 MHz (+/-300 ppm) input frequency, 0-0.7 V single-ended swing.
clock must be provided less than 400ns
after CLKREQ# is asserted



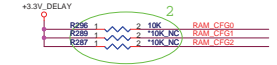
QUANTA COMPUTER

File: M92-S2_PCIE

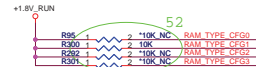
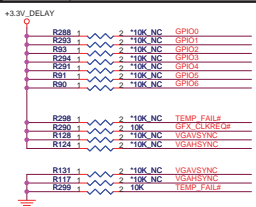
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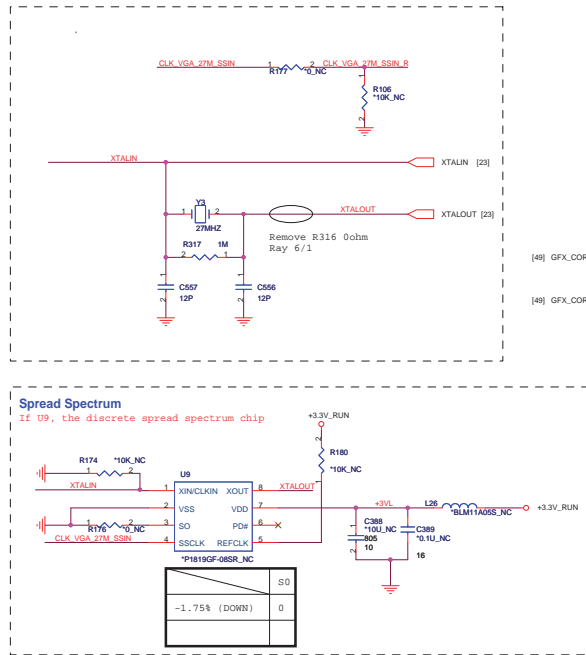
MEMORY APERTURE SIZE SELECT	CFG1 GP109	CFG2 GP1013	CFG3 GP1012	CFG0 GP1011
128MB	0	0	0	0
256MB	0	0	0	1
64MB	0	1	1	0
512MB	1	0	0	0



GPIO Straps table	DESCRIPTION OF DEFAULT SETTINGS	FBs setting
GPIO0	GPIO0 - TX_PWR5_ENB (Transmitter Power Savings Enable) 0: 50% Tx output swing for mobile mode 1: full Tx output swing (Default setting for Desktop)	0
GPIO1	GPIO1 - TX_DEEMPH_EN (Transmitter De-emphasis Enable) 0: Tx de-emphasis disabled for mobile mode 1: Tx de-emphasis enabled (Default setting for Desktop)	0
GPIO2	GPIO2 - RIF_GEN2_EN (5.0 GT/s Enable) 0: Default (Driver Controlled Gen2) 1: Strap Controlled Gen2	0
GPIO3	ATI reserved configuration straps.	0
GPIO4	ATI reserved configuration straps.	0
GPIO5	GPIO 5, AC, BATT 0: Battery saving mode = 0.0 V 1: AC (Performance mode) = 3.3 V	0
GPIO6	ATI Internal use only	0



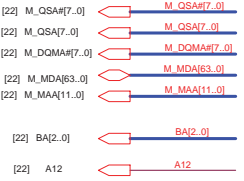
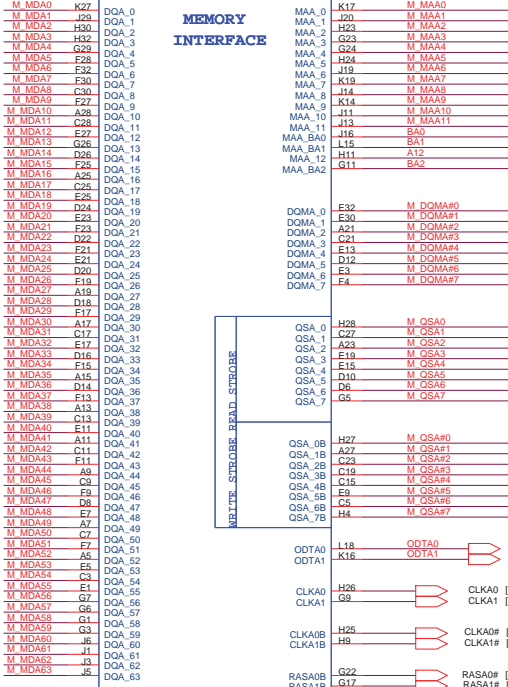
Memory Straps	RAM_TYPE	BEAM_TYPE	BEAM_TYPE	BEAM_TYPE	BEAM_TYPE	Quanta PN (QuantaBuy)	Vendor PN
500MHz	0	0	1	0			
512MB(64M*16) Hynix	0	0	1	0		AKD5LG-TW01(FR)	H5PS1G63EFR-20L
Remove Qionda Source							
500MHz	0	0	0	1			
512MB(64M*16) Samsung	0	0	0	1		AKD5LG-T507(IE)	K4N1G164QE-HC20
Remove							



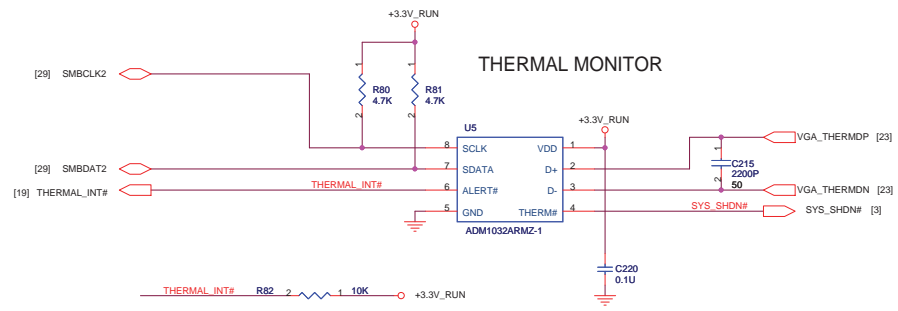
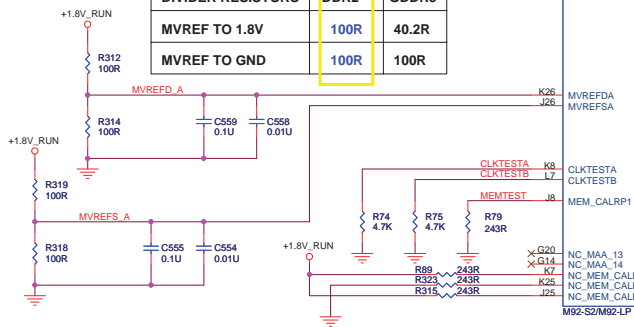
U17C

PAGE 3 OF 10

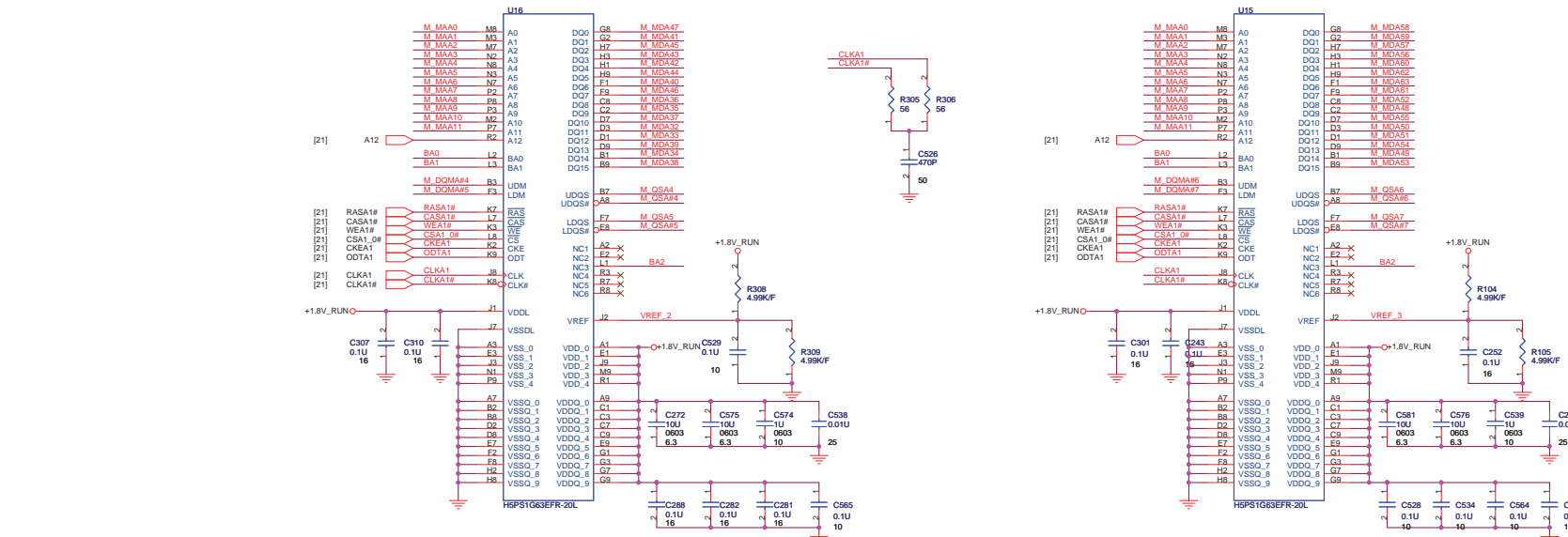
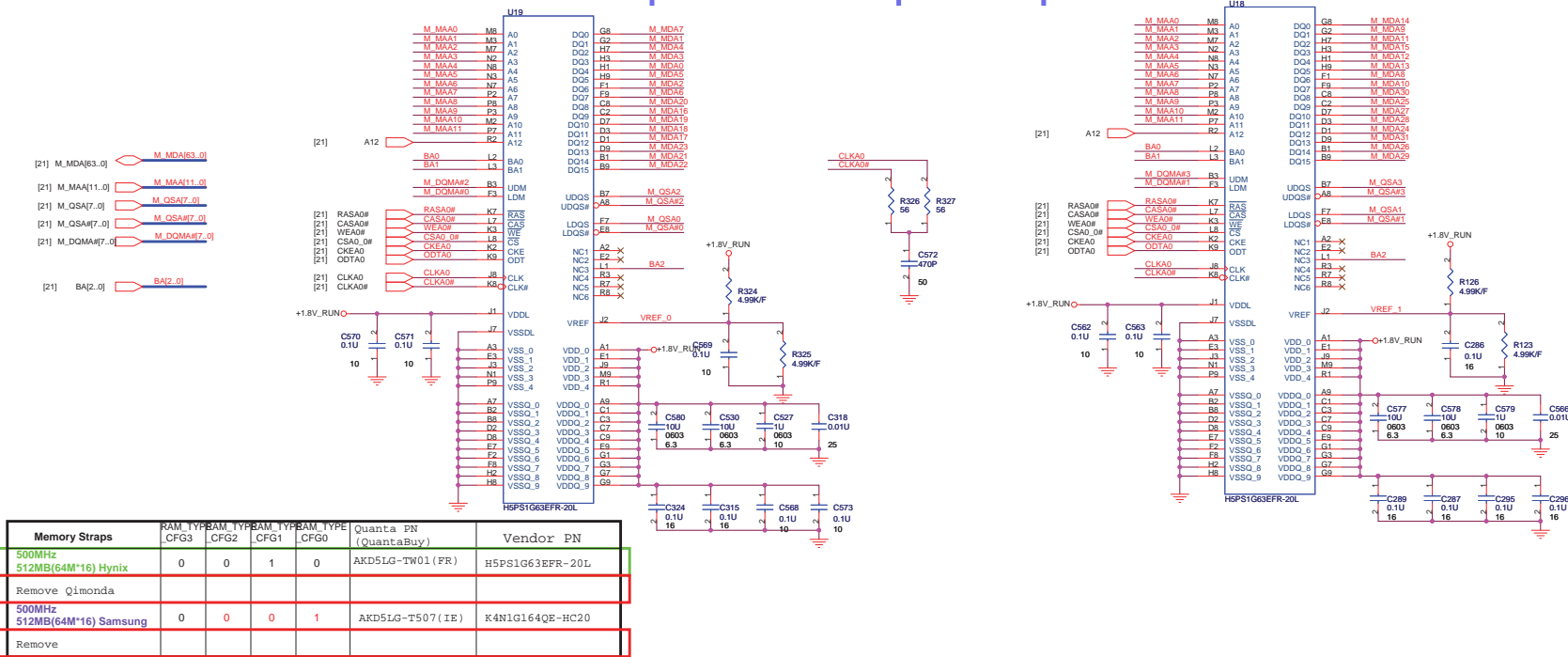
MEMORY
INTERFACE



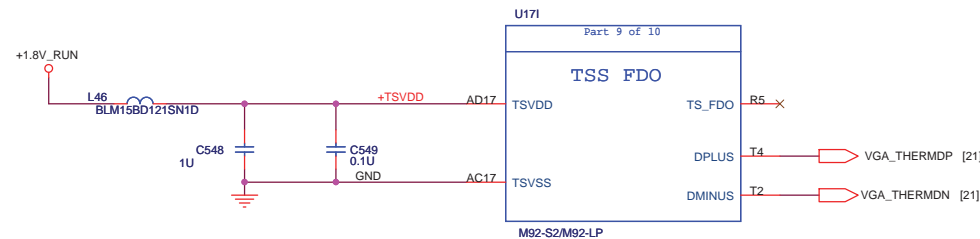
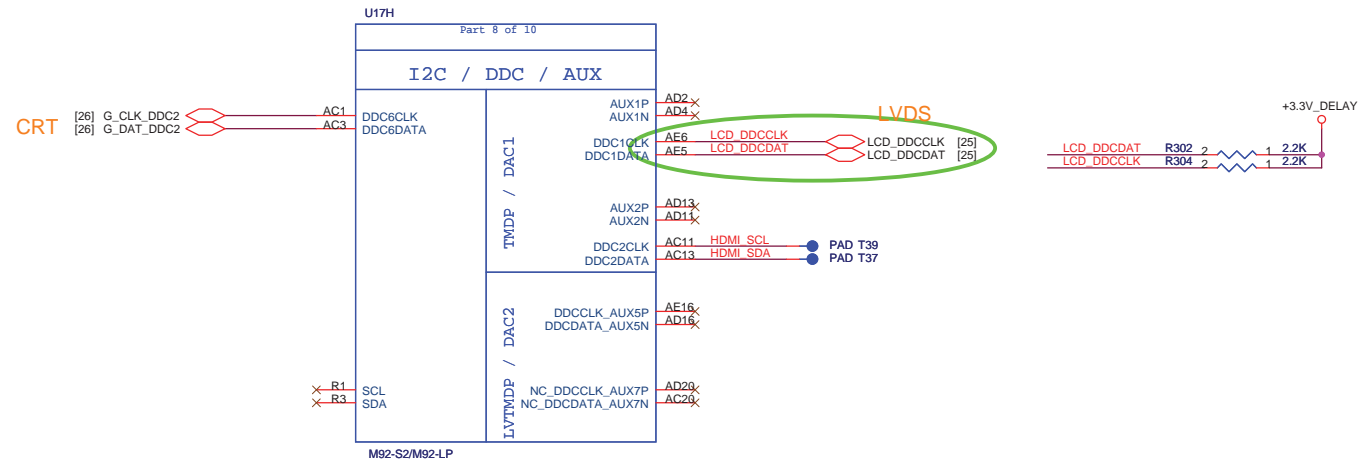
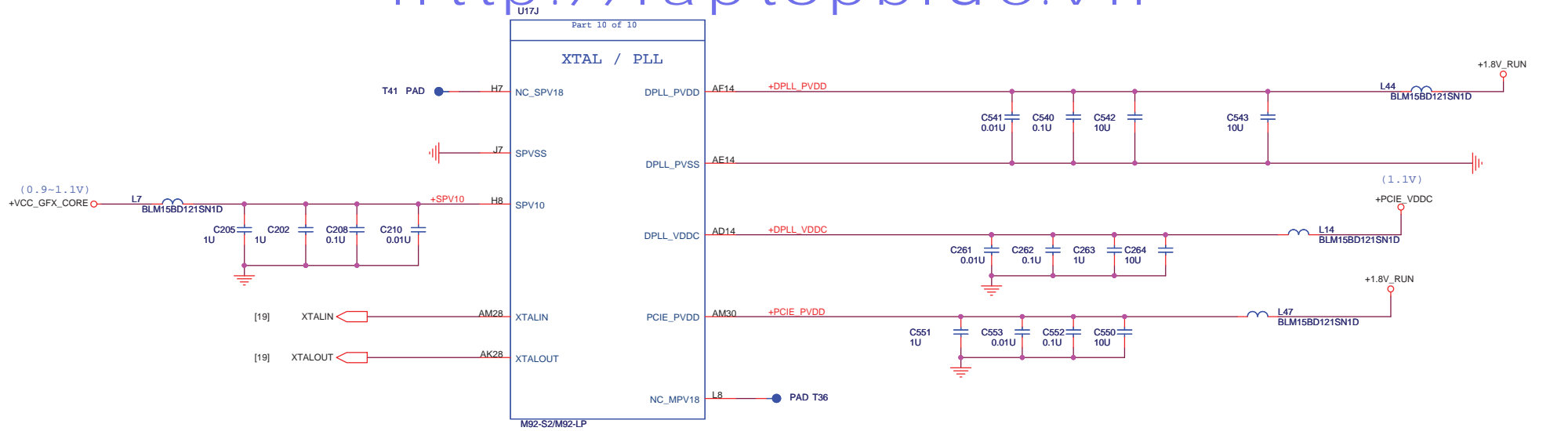
DIVIDER RESISTORS	DDR2	GDDR3
MVREF TO 1.8V	100R	40.2R
MVREF TO GND	100R	100R



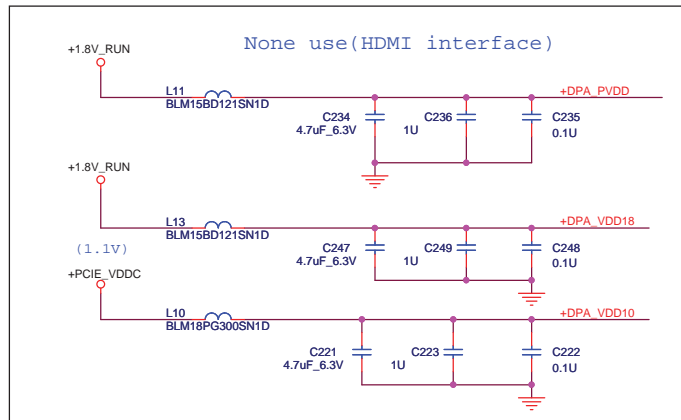
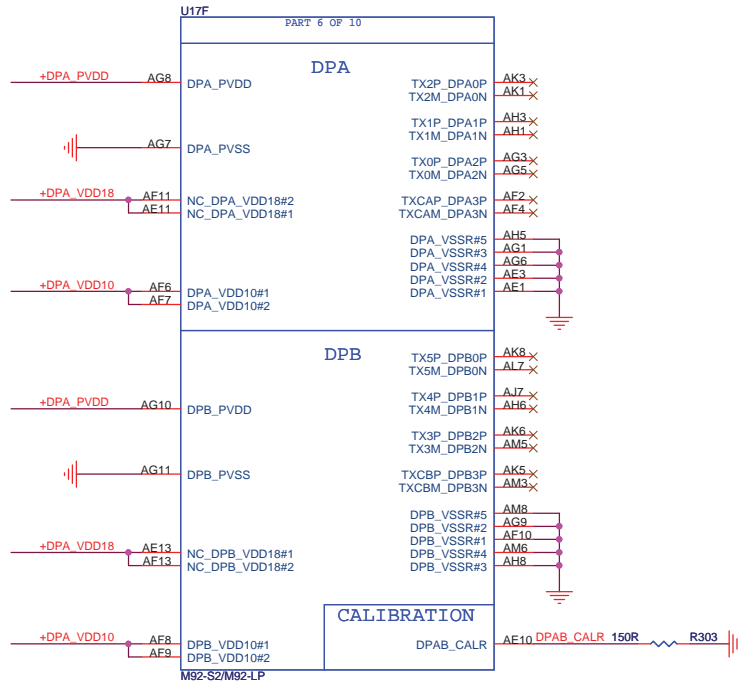
Title	MEMORY/THERM
Size	Document Number
Date	Tuesday, June 02, 2009
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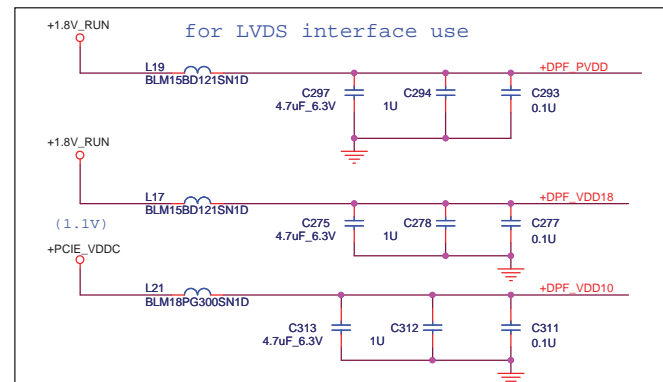
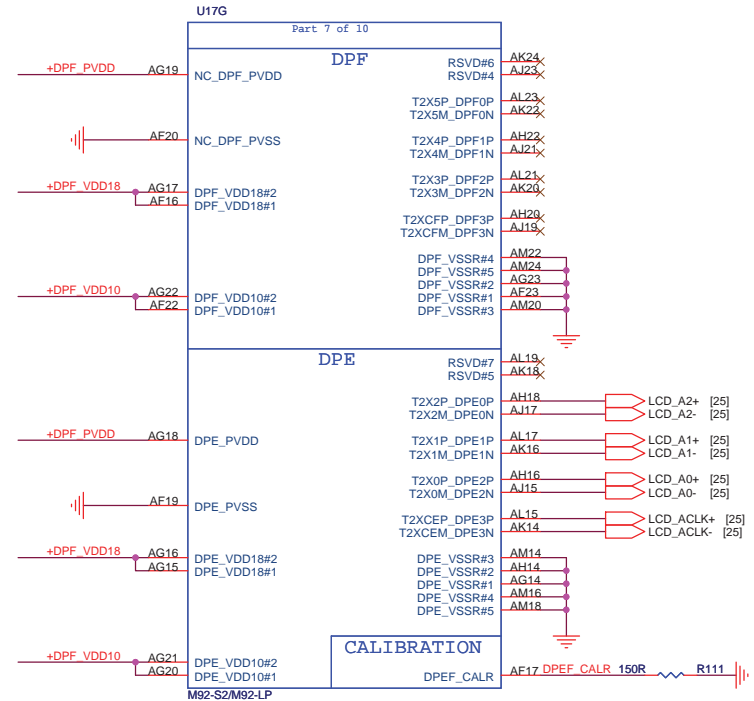
MS2-S2_DDR2_512M		
Size	Document Number	Rev
	VMBIC	1B
Date: Saturday, June 06, 2009 Sheet 22 of 33		



TMDP(HDMI) INTERFACE

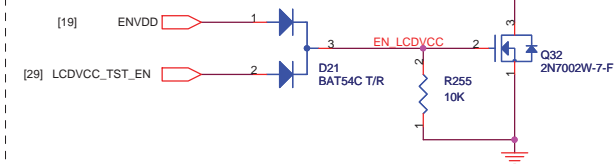


LVDS INTERFACE

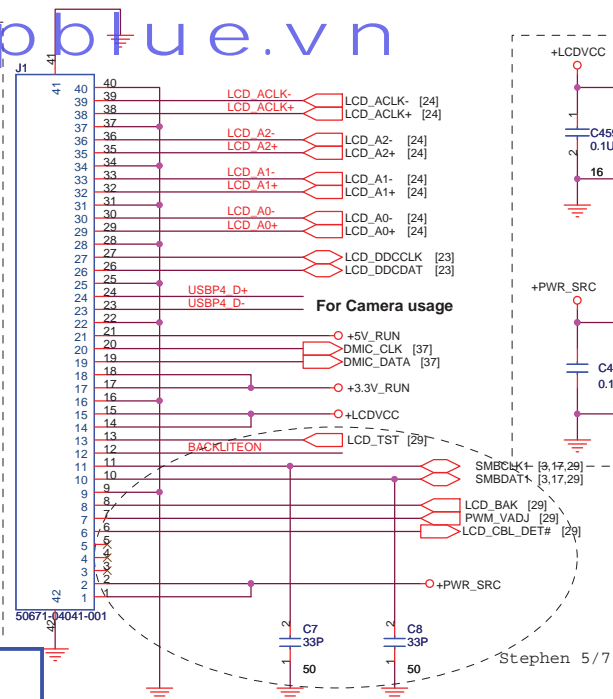
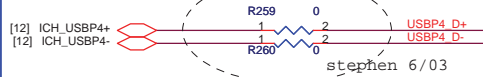


File			
M92-S2_TMDP I/F			
Size	Document Number		Rev
	VM8G		1B
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Support the new imbedded diagnostics.

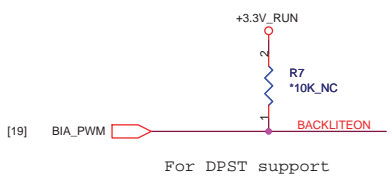
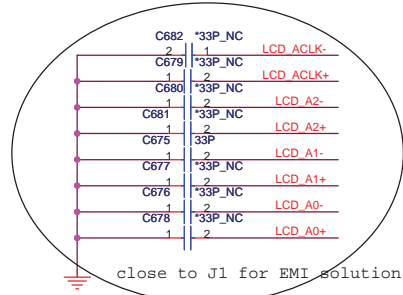
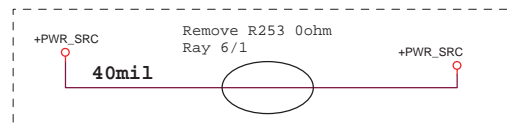


Camera support



Address : A9H --Contrast
AAH --Backlight

Stephen 5/7



**QUANTA
COMPUTER**

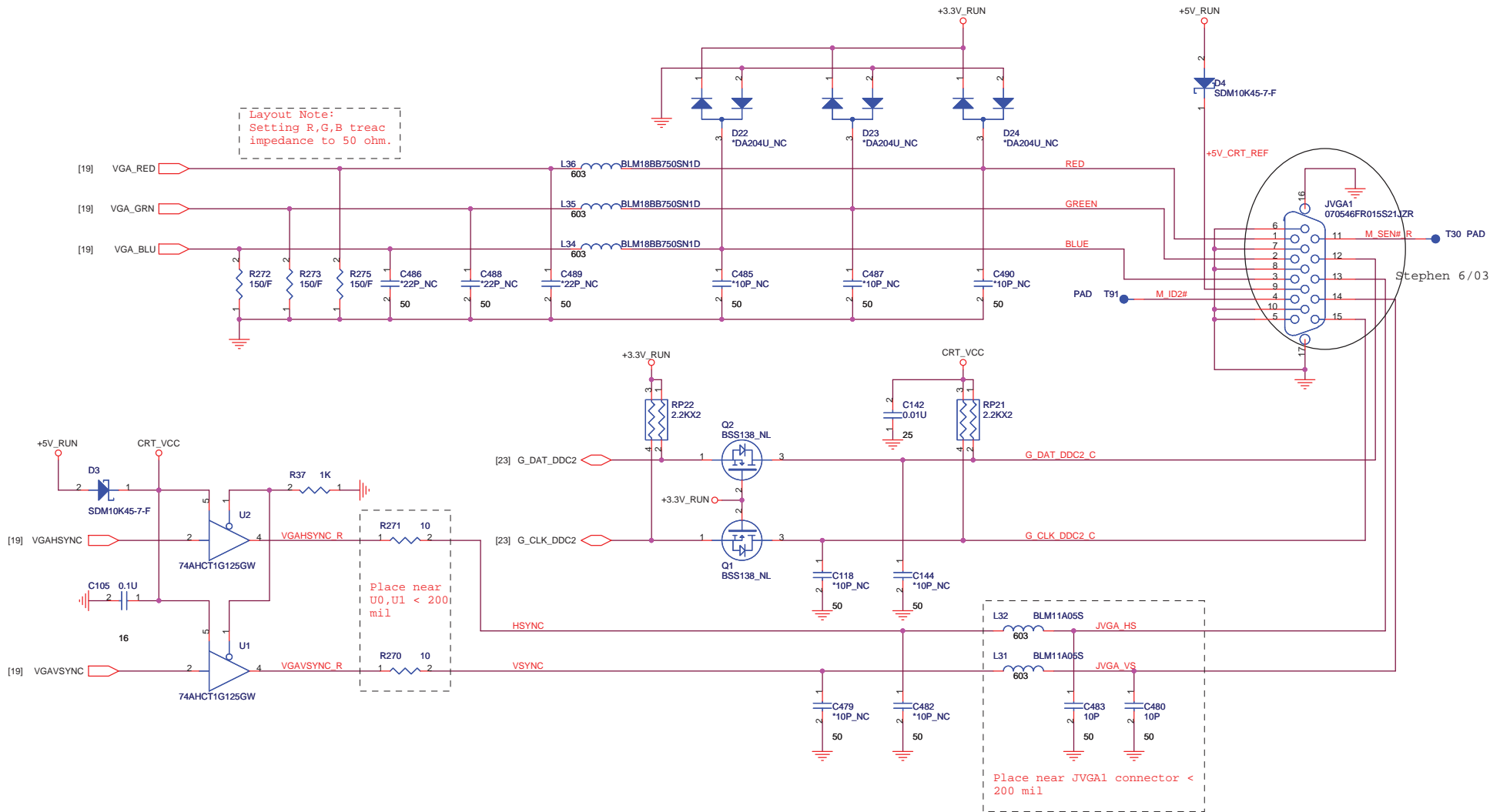
File: LCD CONN & CK-SSCD

Size: Document Number VM8G


Date: Wednesday, June 03, 2009

Rev 1B

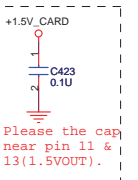
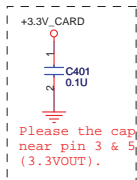
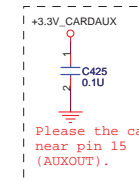
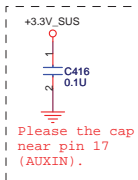
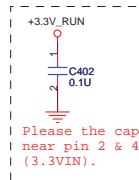
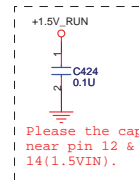
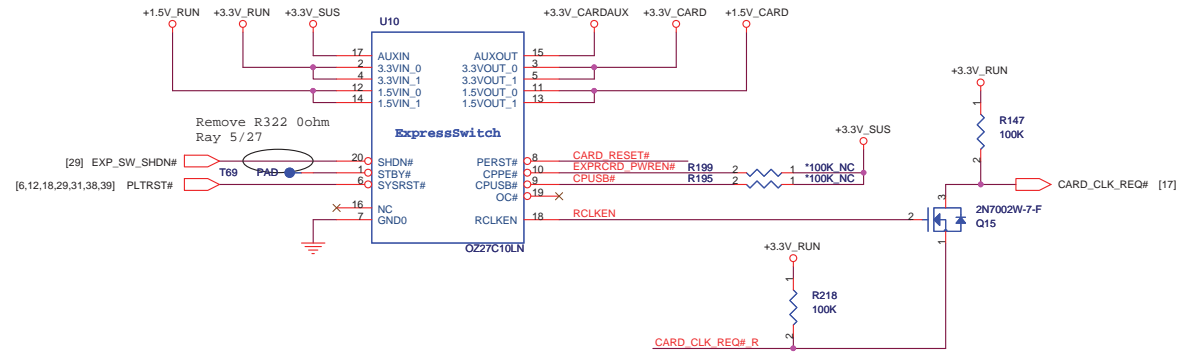
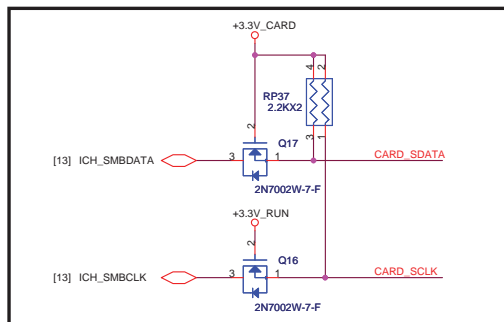
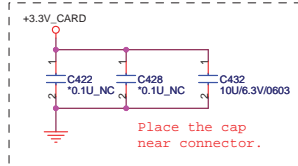
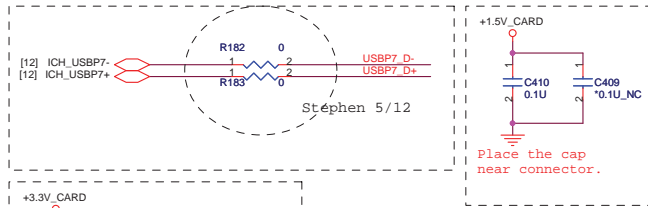
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<http://laptopblue.vn>

		QUANTA COMPUTER	
Title Card Reader-RTS5158E			
Size	Document Number VM8G		Rev 1B
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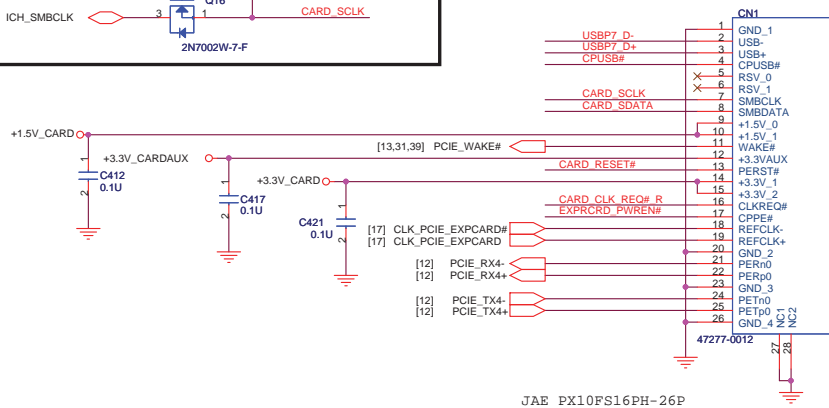
<http://laptop-motherboard-schematic.blogspot.com/>



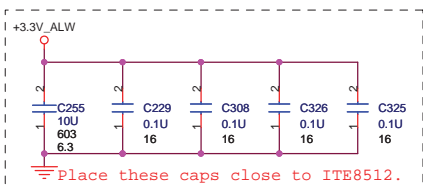
Express Card



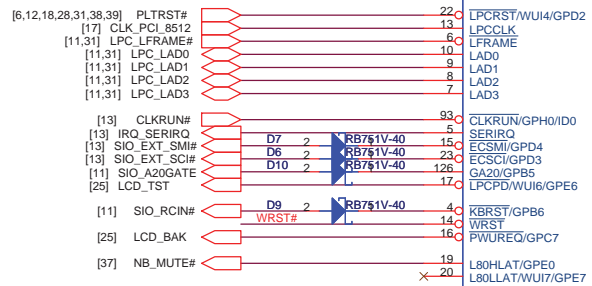
*Express Card cage



+RTC_C



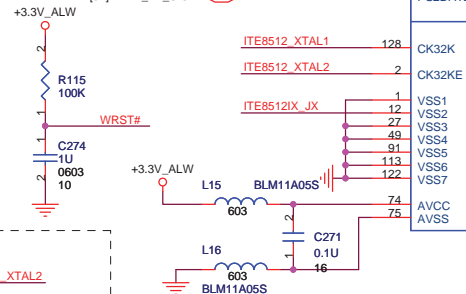
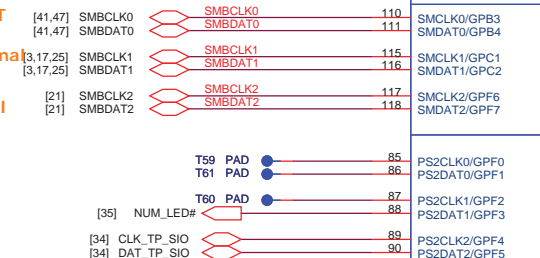
Place these caps close to ITE8512.



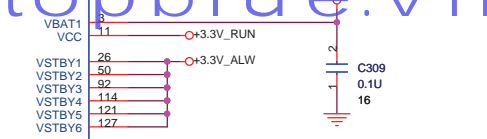
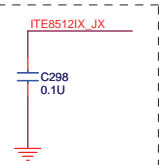
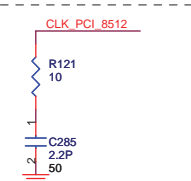
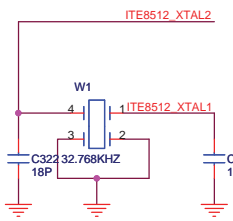
Charge and BAT

CLK, LCD and CPU Thermal

GPU Thermal



32KHz Clock.



ADC/DAC

PWM

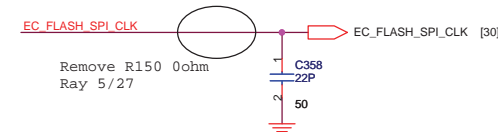
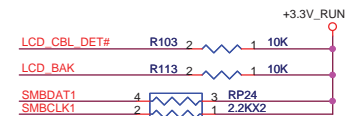
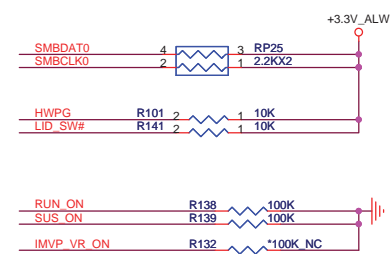
IR/UART

LPC/FWH

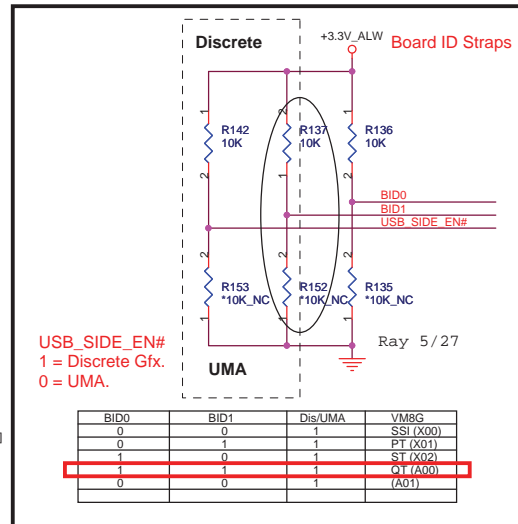
EGPC

1111

ITE8502E
LOEP128-16X16-4-FX2



Place these RC close to ITE8502

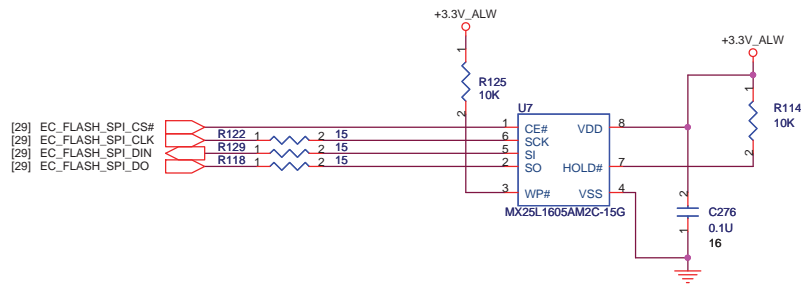


BID0	BID1	Dis/UMA	VM8G
0	0	1	SSI (X00)
0	1	1	PT (X01)
1	0	1	ST (X02)
1	1	1	QT (A00)
0	0	1	(A01)

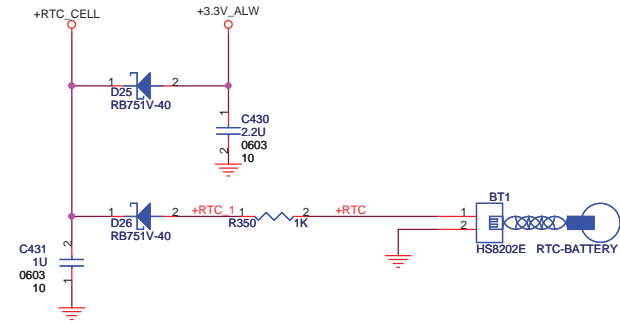


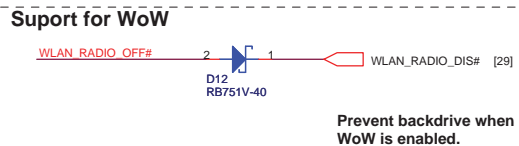
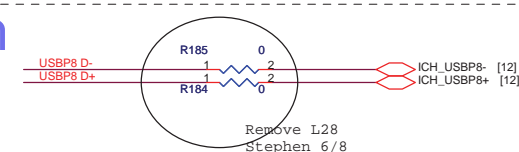
Title		ITE8512	
Size	Document Number	Rev	
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16Mbit (2M Byte), SPI

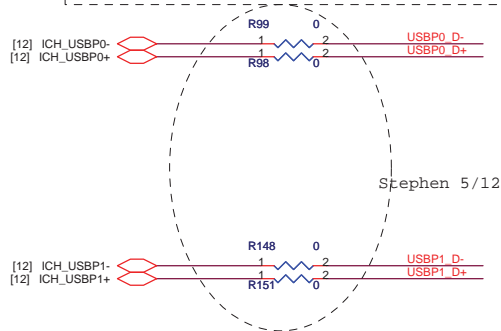


RTC BATTERY

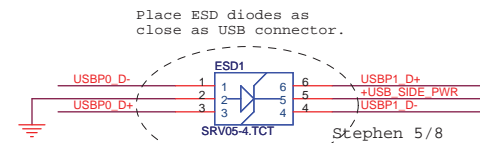
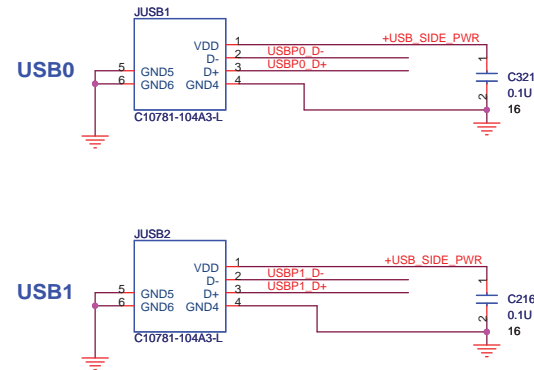
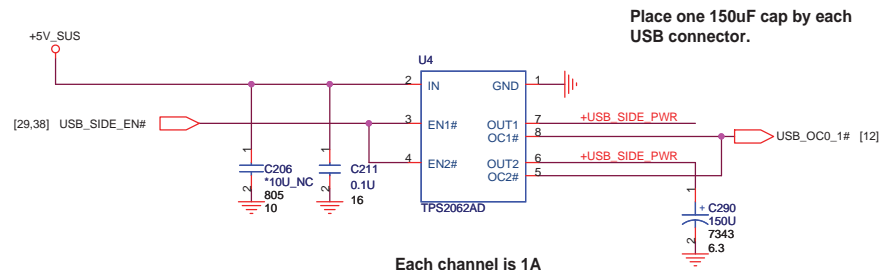


[illegible]

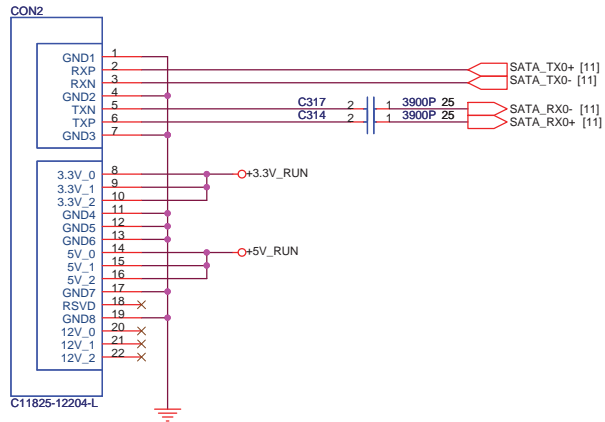
External USB PORT hookup reference. Your design may need more or less external ports and may be mapped differently



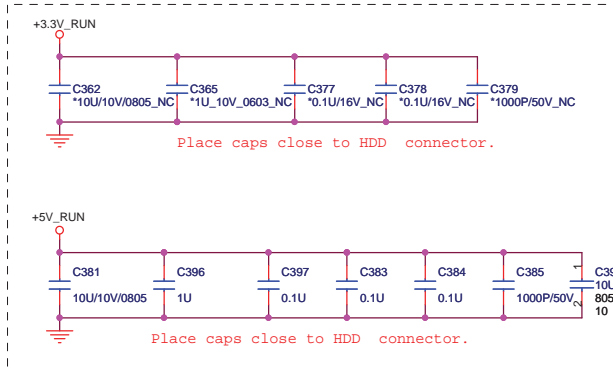
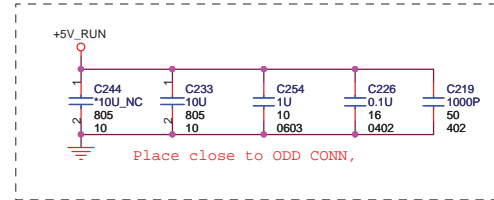
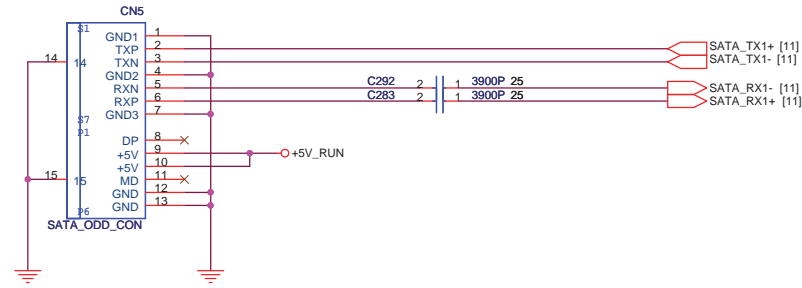
Platforms should put in PADS for the USB chokes if they have the room. Chokes should be NOPOP.

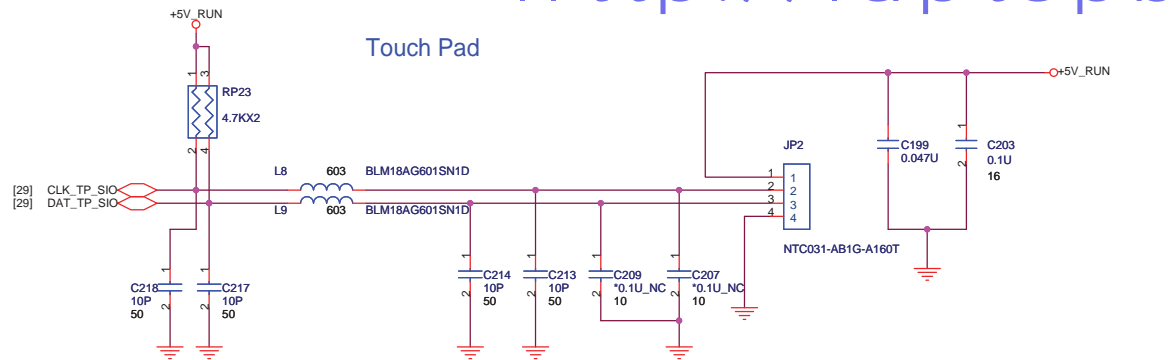


SATA HDD Connector.

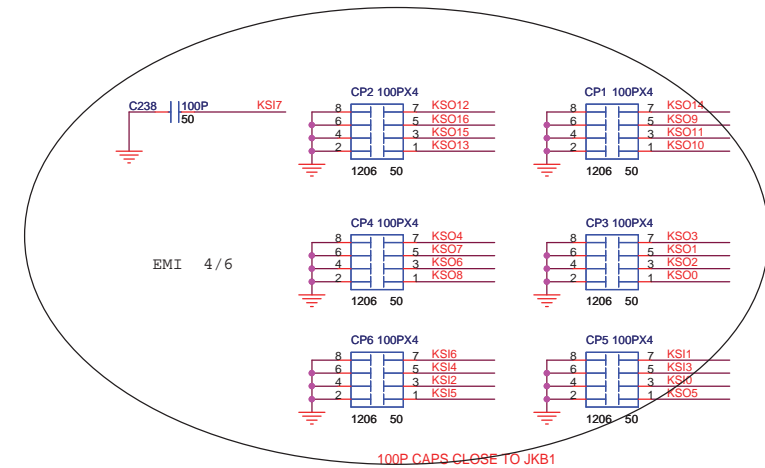
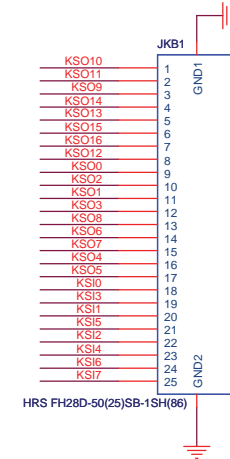


SATA ODD Connector.





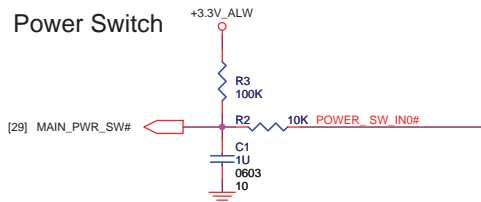
[29] KSO[0..16]
[29] KSI[0..7]



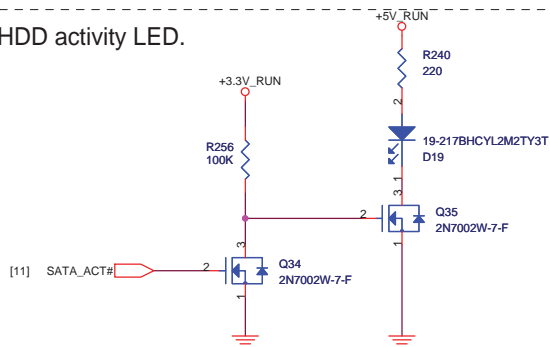
Keyboard LED



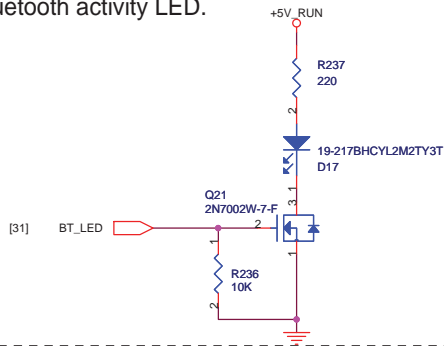
Power Switch



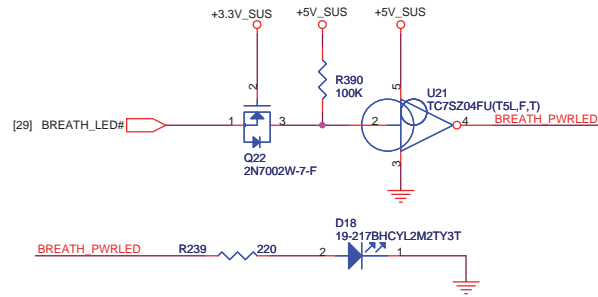
HDD activity LED.



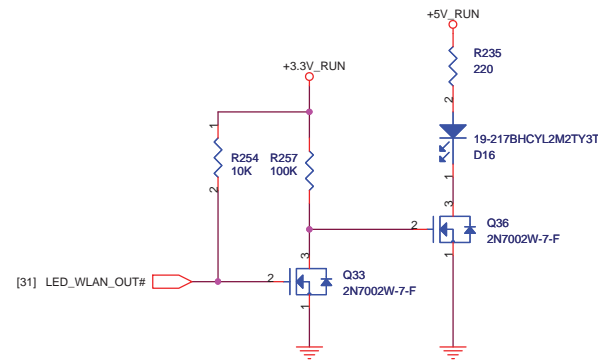
Bluetooth activity LED.



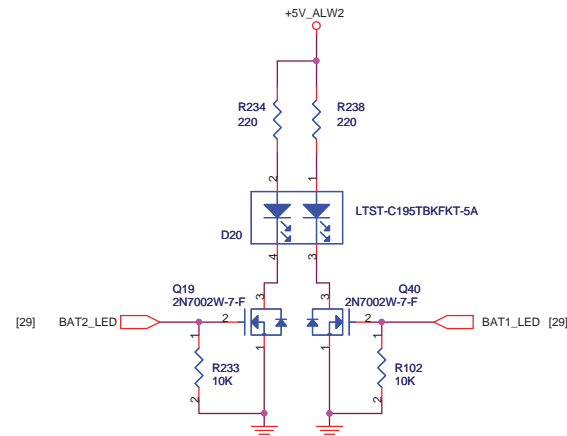
Power & Suspend.



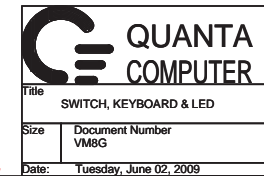
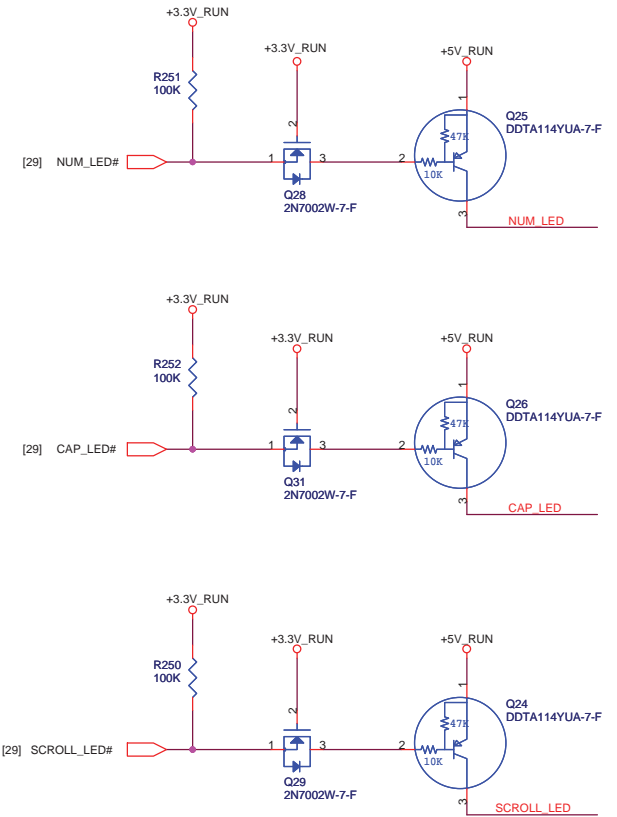
WLAN

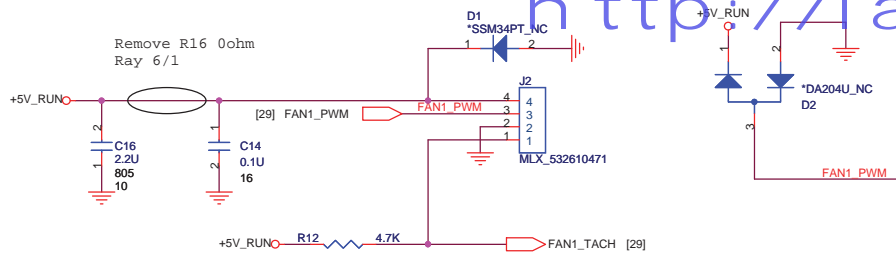


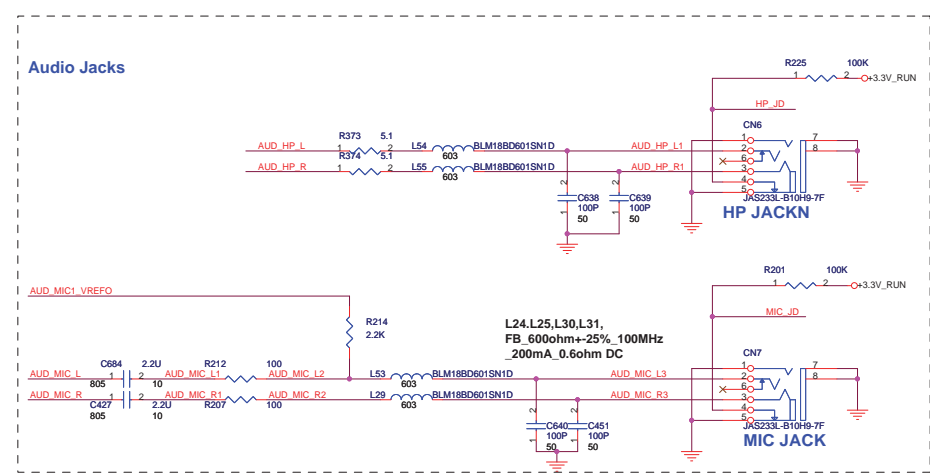
Battery status.



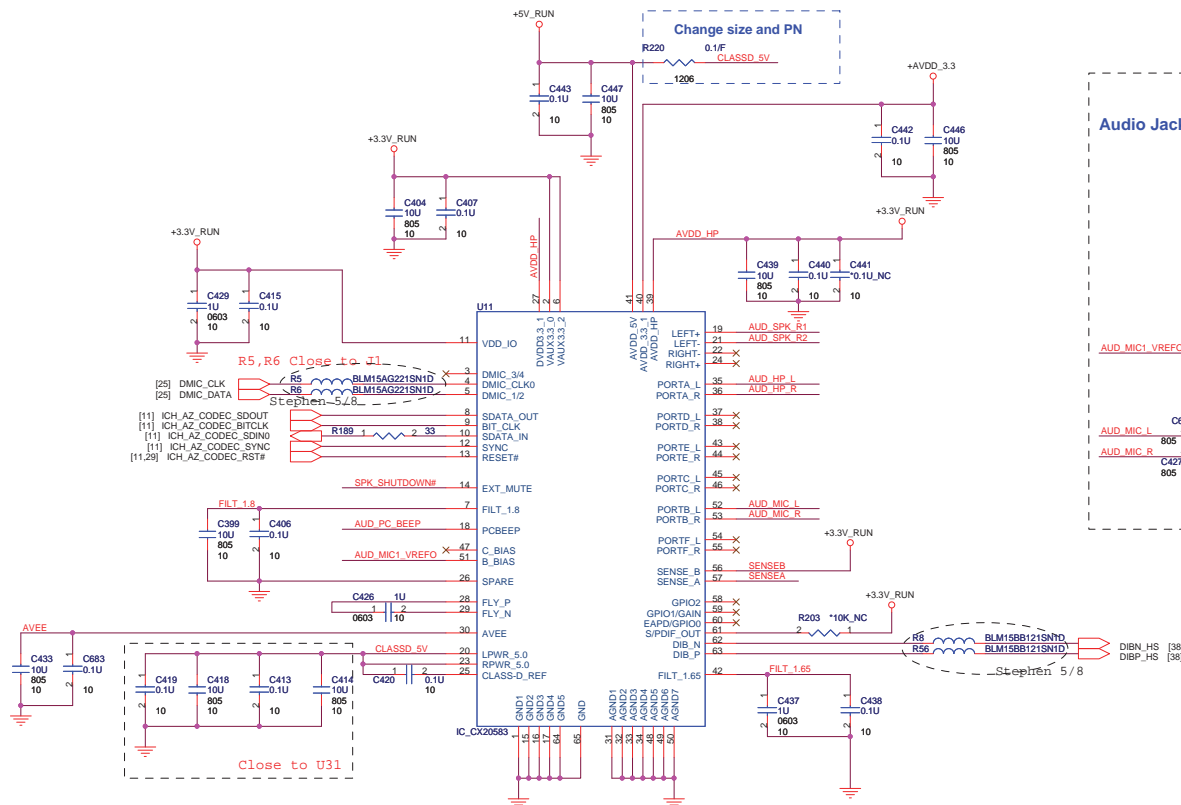
Keyboard LED

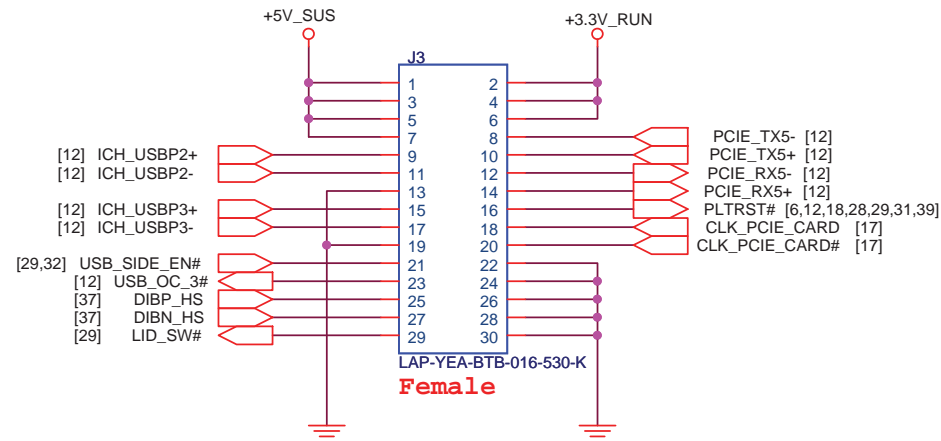
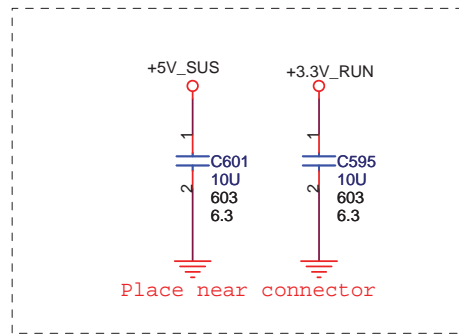




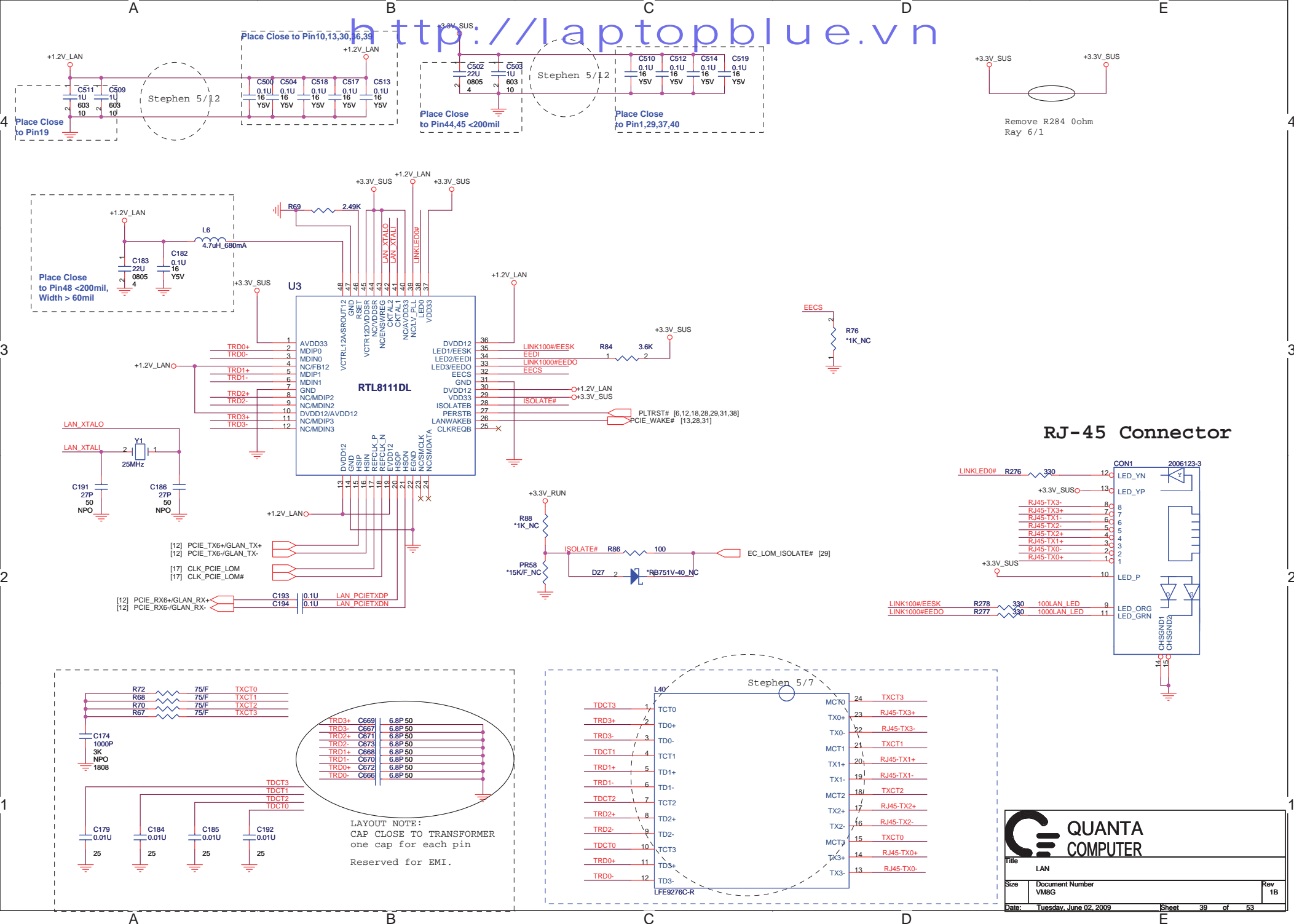


Audio Jacks






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



<http://laptopblue.vn>

		QUANTA COMPUTER	
Title: System Reset Circuit			
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<http://laptop-motherboard-schematic.blogspot.com/>

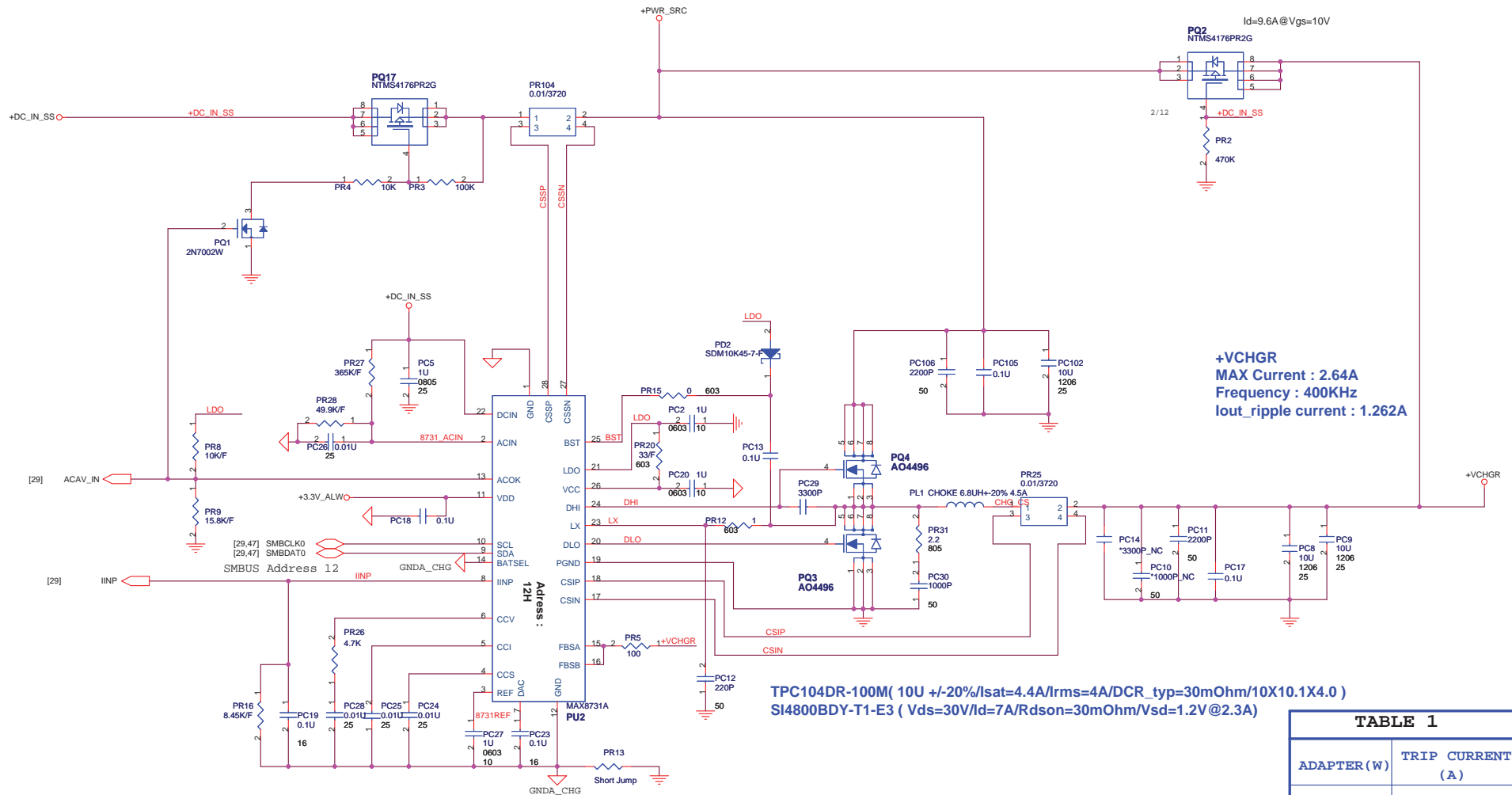


TABLE 1

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



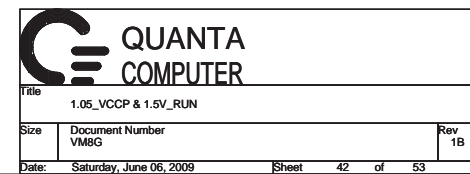
Charger (MAX8731A)

Size Document Number VM8G

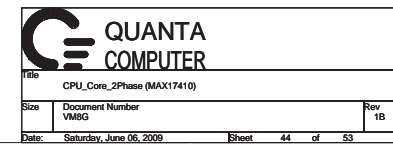
Date: Tuesday, June 02, 2009

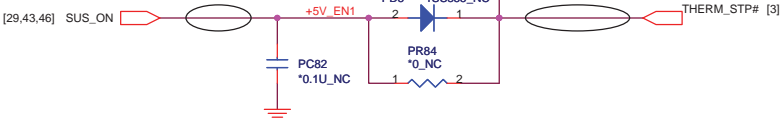
Rev 1B

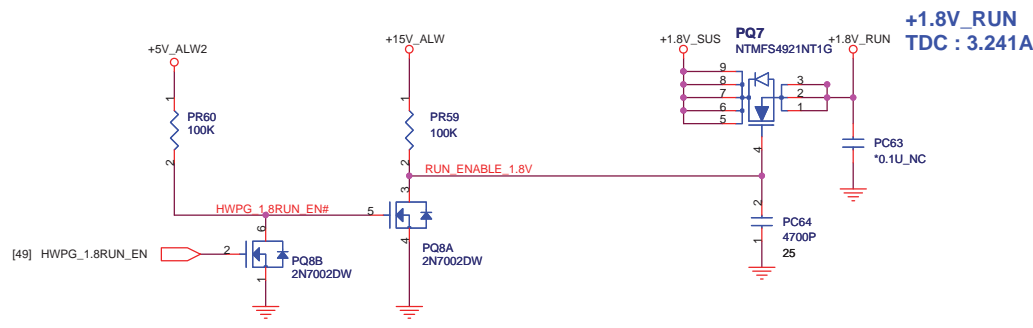
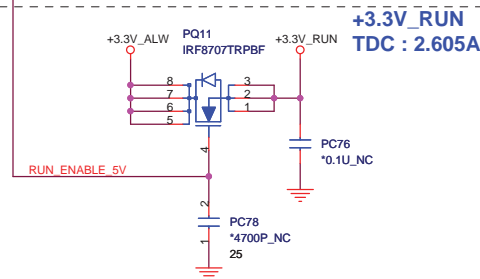
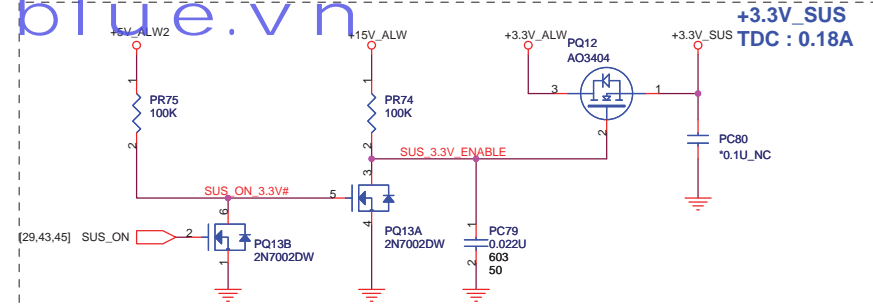
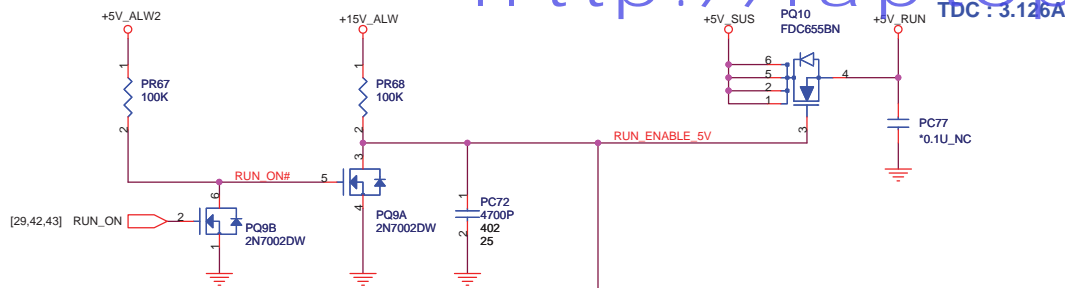
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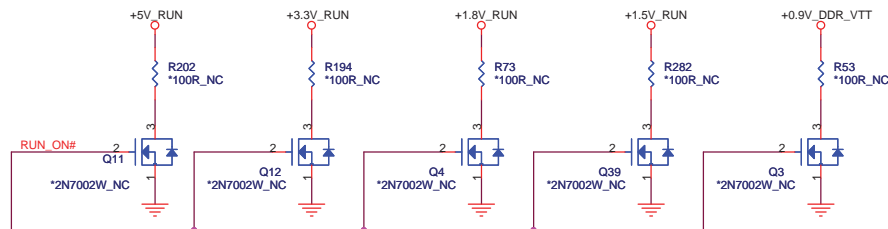




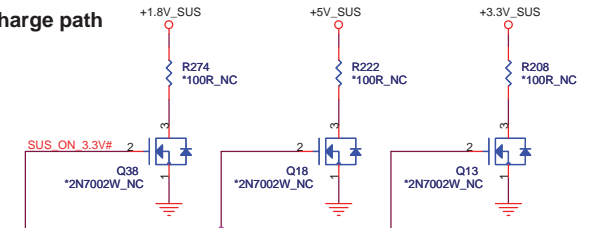




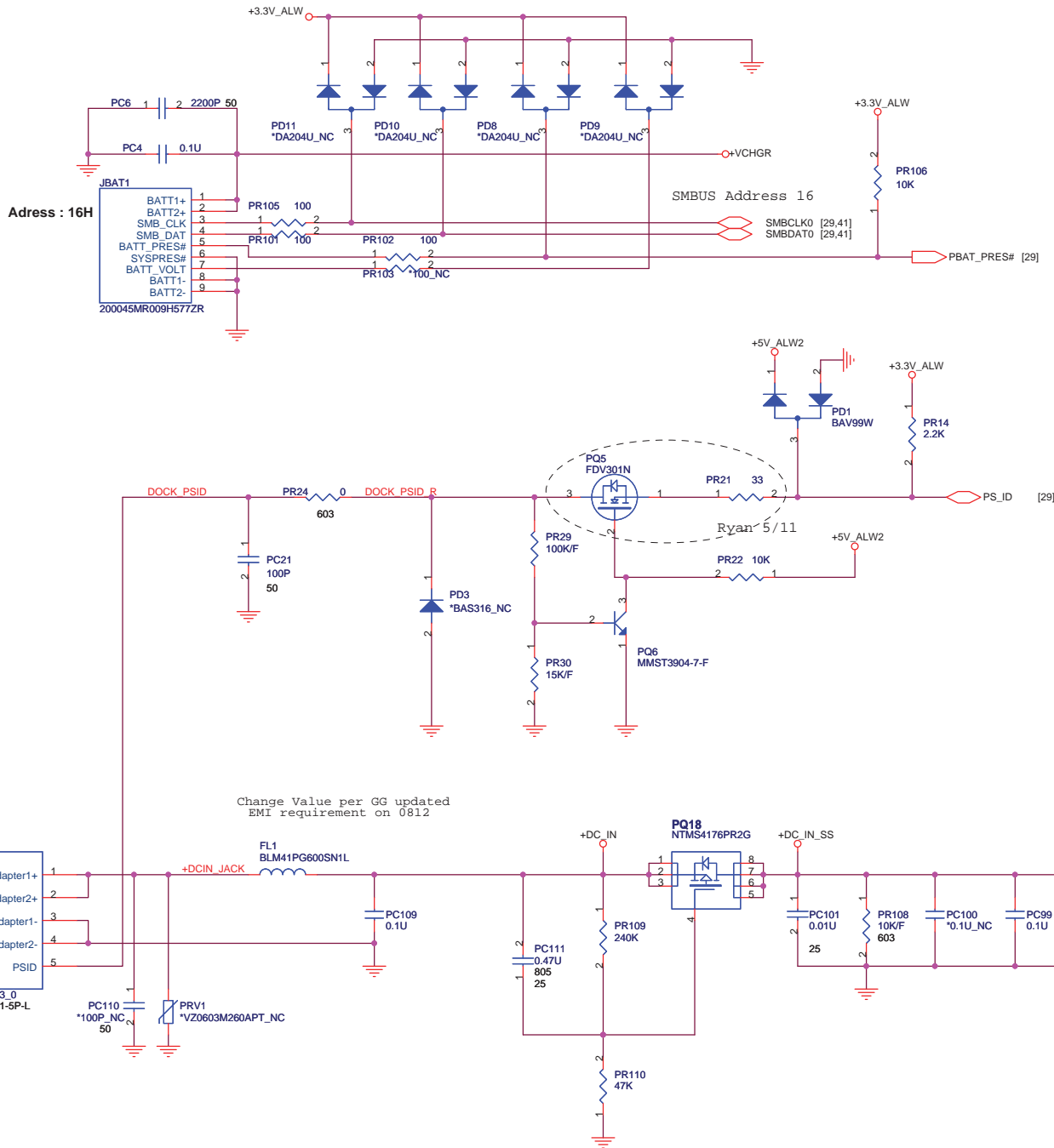
Reserve discharge path

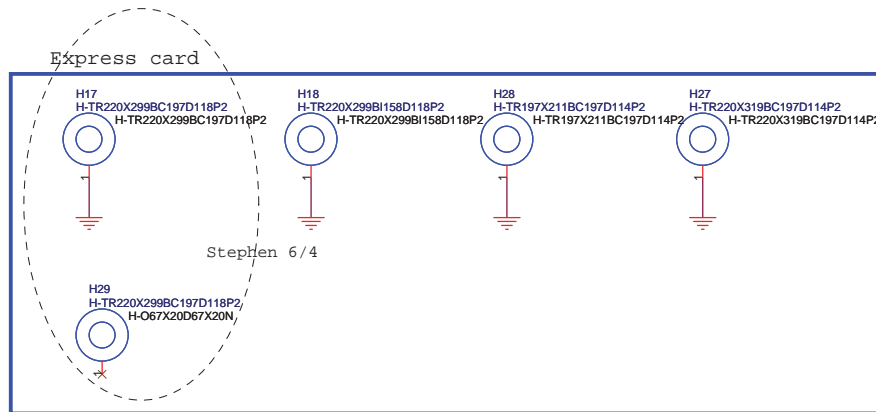
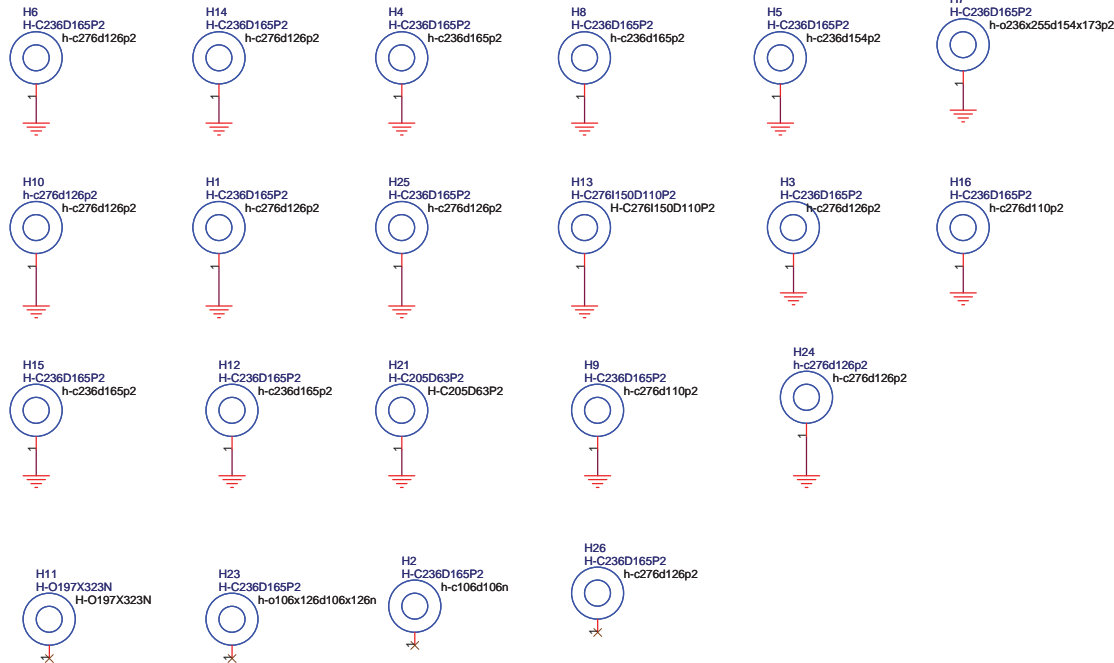


Reserve discharge path

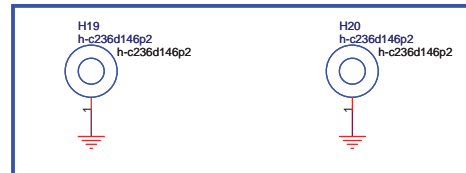


File	RUN POWER SW		
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	VM8G	1B	
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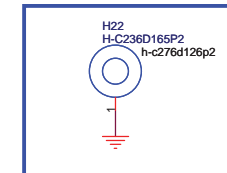


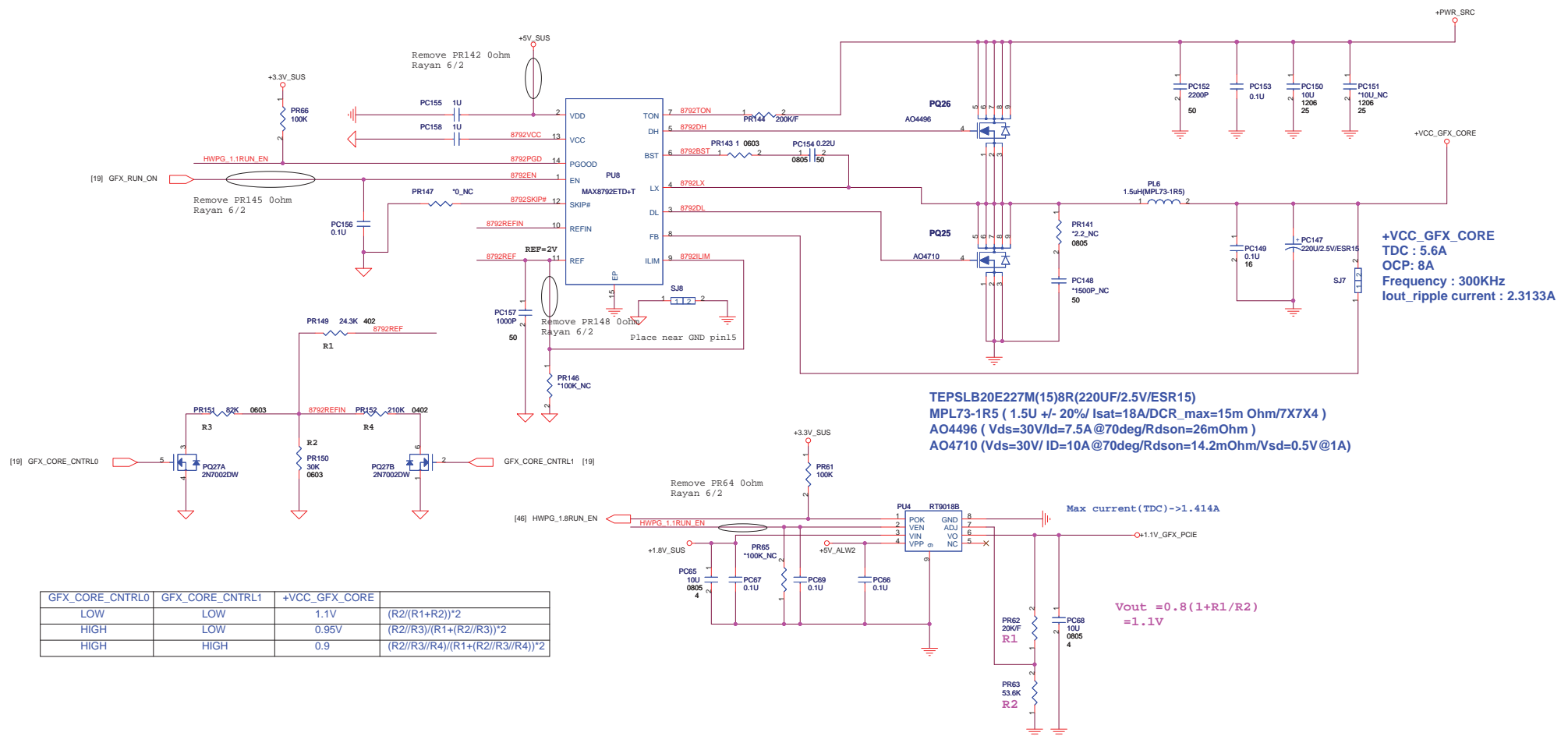


DB board




Mini card





Reserved for EMI.

<http://laptopblue.vn>



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