GM5(B) Pacino Intel Discrete & UMA Block Diagram

VER : B2A

Screw Hole PG 45

blank Page PG 47

POWER

AC/BATT CONNECTOR PG 54

SYSTEM RESET CIRCUIT PG 44

BATT CHARGER PG 46

RUN POWER SW
+3.3V_SUS/+5V_SUS
+5V/+3.3V/+1.8V PG 53

Penryn
(478 Micro-FCPGA)
PG 3,4

667 / 800 / 1066 MHz FSB

FAN & THERMAL
SMSC1423 PG 39

CLOCK
SLG8SP513V
(QFN-64) PG 17

POWER

REGULATOR
+1.5V_RUN/+1.05V_VCCP PG 48

REGULATOR
+1.8V_SUS/+1.25V_RUN
/+0.9V_DDR_VTT PG 49

CPU VR PG 51

DC/DC
+3.3V_ALW/+5V_ALW/
+15V_ALW PG 52

VGA Core PG 50

Cantiga
1299 uFCBGA
PG 5,6,7,8,9,10

DDR2-SODIMM1 PG 15,16

667 / 800 MHZ DDR II

DDR2-SODIMM2 PG 15,16

667 / 800 MHZ DDR II

PCIEx16

GDDR2 x 8 (256M) PG 23, 24

ATI M86-ME-LP
PCI EXPRESS GFX
PG 18,19,20,21,22

LVDS

VGA

HDMI

Panel Connector PG 26

CRT CONN. PG 27

HDMI CONN. PG 25

DP BUS

PI3VDP411LSZDE PG 18

SATA-ODD PG 36

SATA

SATA-HDD PG 36

SATA

DMI interface

ICH9-M
676 BGA
PG 11,12,13,14

USB2.0 x 3

USB conn x 3 PG 35

PCIEx1

LAN
BCM5784M PG 42

RJ45/Magnetics PG 43

PCIEx1
USB2.0
USB2.0
PCIEx2
USB2.0
PCIEx1
USB2.0
USB2.0

EXPRESS-CARD PG 30

MINI-CARD
WLAN PG 34

MINI-CARD
WWAN PG 33

MINI-CARD
WPAN PG 33

IHDA
USB2.0

AUDIO/AMP
STAC9228/92HD73C PG 40

Camera + D-MIC PG 41

Biometric PG 38

LPC

Audio SPK conn PG 40

Audio Jacks x3 PG 41

KBC
ITE8512 PG 31

CIR
TSOP36136TR PG 37

18X8

Keyboard PG 37

33MHz PCI

8-in-1 Card Reader
R5C833 PG 28

1394 CONN. PG 29

Card Reader CONN. PG 30

SPI

PS/2

USER INTERFACE PG 38

FLASH 2Mbyts PG 32

Touchpad PG 37

QUANTA COMPUTER

Title	Schematic Block Diagram1	
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Table of Contents

Power State

POWER PLANE	VOLTAGE	PAGE	DESCRIPTION	CONTROL SIGNAL	ACTIVE IN
+PWR_SRC	10V~+19V	4,26,32,34,48,49,50,51,52,55	MAIN POWER		S0~S5
+RTC_CELL	+3.0V~+3.3V	11,14,31,32	RTC		S0~S5
+3.3V_ALW	+3.3V	3,13,26,31,32,34,36,37,38,44,46,49,52,53,54	8051 POWER	ALWON	S0~S5
+5V_ALW	+5V	35,36,46,48,49,52,53,54	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	14,38,50,51,53	SLP_S5# CTRLD POWER	SUS_ON	
+3.3V_SUS	+3.3V	3,11,12,13,14,20,30,37,38,43,48,49,50,51,53	SLP_S5# CTRLD POWER	3.3V_SUS_ON	
+1.8V_SUS	+1.8V	6,8,9,15,48,49,50,53,55	SODIMM POWER	DDR_ON	
+0.9V_DDR_VTT	+0.9V	16,49,53	SODIMM POWER	0.9V_DDR_VTT_ON	
+5V_RUN	+5V	14,20,25,27,36,37,38,39,40,41,53	SLP_S3# CTRLD POWER	RUN_ON	
+3.3V_RUN	+3.3V	6,8,9,11,12,13,14,15,17,19,20,22,25,26,27,28,30,33,34,36,38,39,40,41,42,53,55	SLP_S3# CTRLD POWER	3.3V_RUN_ON	
+1.8V_RUN	+1.8V	19,20,21,22,23,24,25,38,53	SDVO POWER	RUN_ON	
+1.5V_RUN	+1.5V	4,9,14,30,33,34,48,,53,55	CANTIGA/ICH8 POWER	1.5V_RUN_ON	
+1.05V_VCCP	+1.05V	3,4,5,6,8,9,11,14,37,48,55	CPU/CANTIGA/ICH8 POWER	1.05V_RUN_ON	
+VCC_CORE	+0.7V~+1.5V	4,51	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	HDDC_EN#	
+5V_ALW2	+5V	37,38.52,53	LED power source	LDO output	

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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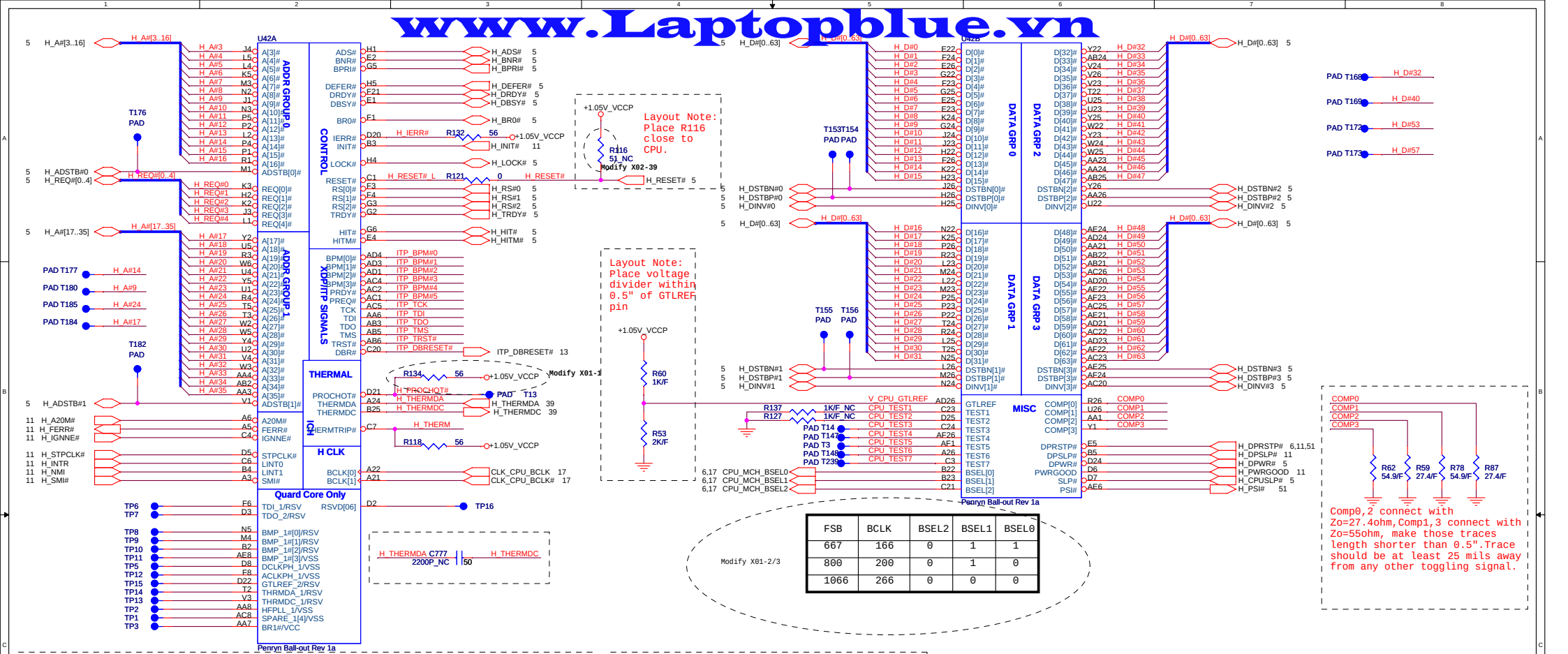
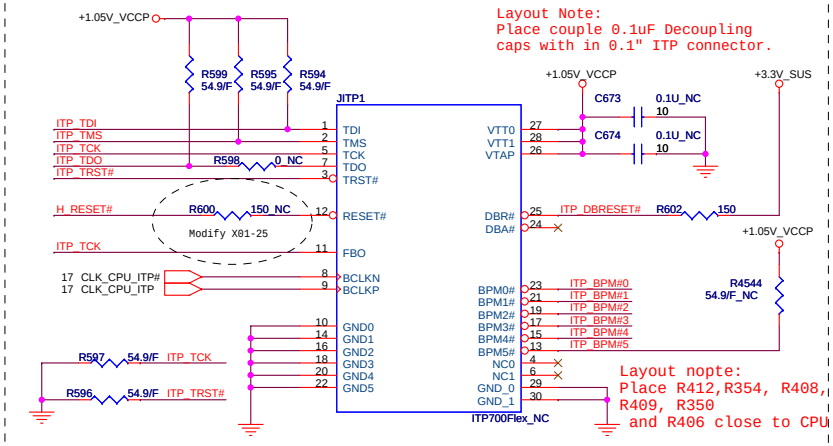
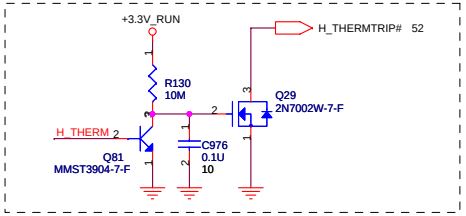


FSB	BCLK	BSEL2	BSEL1	BSEL0
667	166	0	1	1
800	200	0	1	0
1066	266	0	0	0

Populate ITP700Flex for bringup





ITP disable guidelines			
Signal	Resistor Value	Connect To	Resistor Placement
TDI	150 ohm +/- 5%	VTT	Within 2.0" of the ITP
TMS	39 ohm +/- 5%	VTT	Within 2.0" of the ITP
TRST#	680 ohm +/- 5%	GND	Within 2.0" of the ITP
TCK	27 ohm +/- 5%	GND	Within 2.0" of the ITP
TDO	Open	VTT	Within 2.0" of the ITP
ITP_EN	R268 Depop	+3VRUN	Close to CK410M Pin8

QUANTA COMPUTER

Title	Penryn Processor (HOST BUS)	
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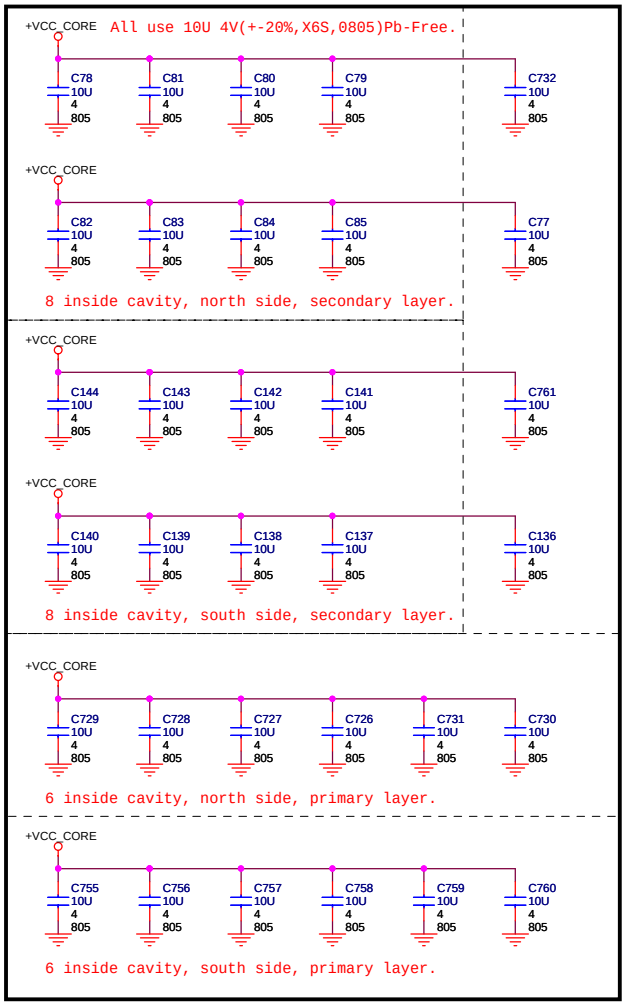

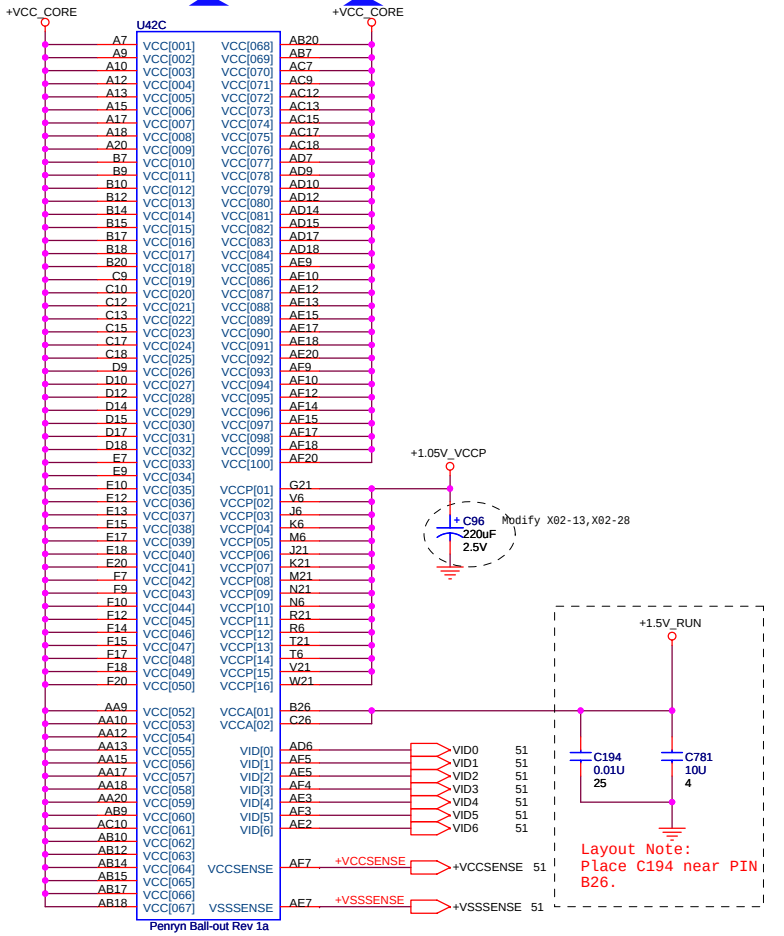

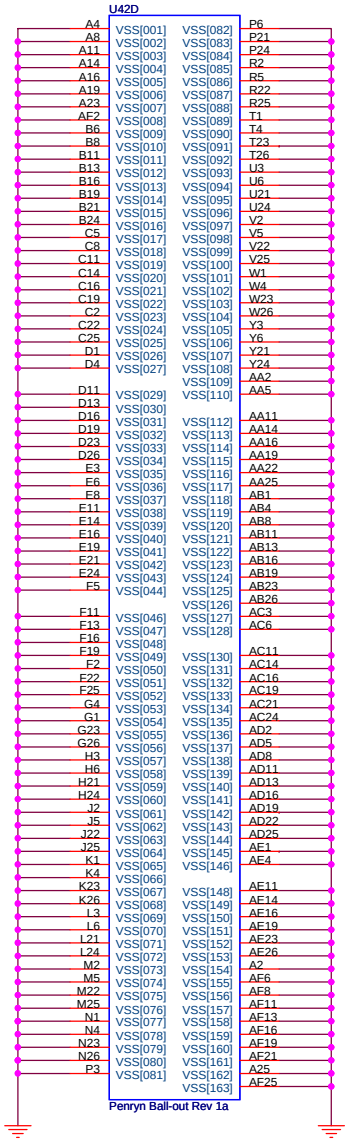

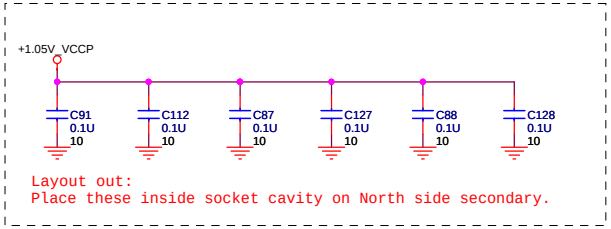

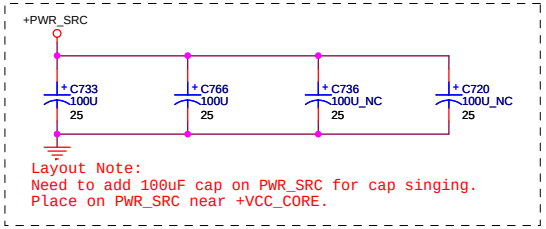

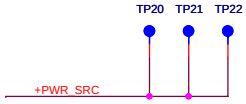

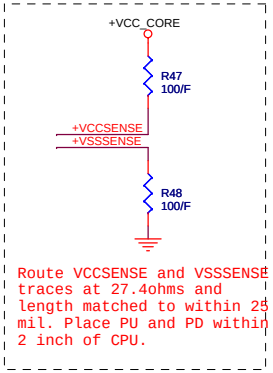

QUANTA COMPUTER

Title	Penryn Processor (HOST BUS)	
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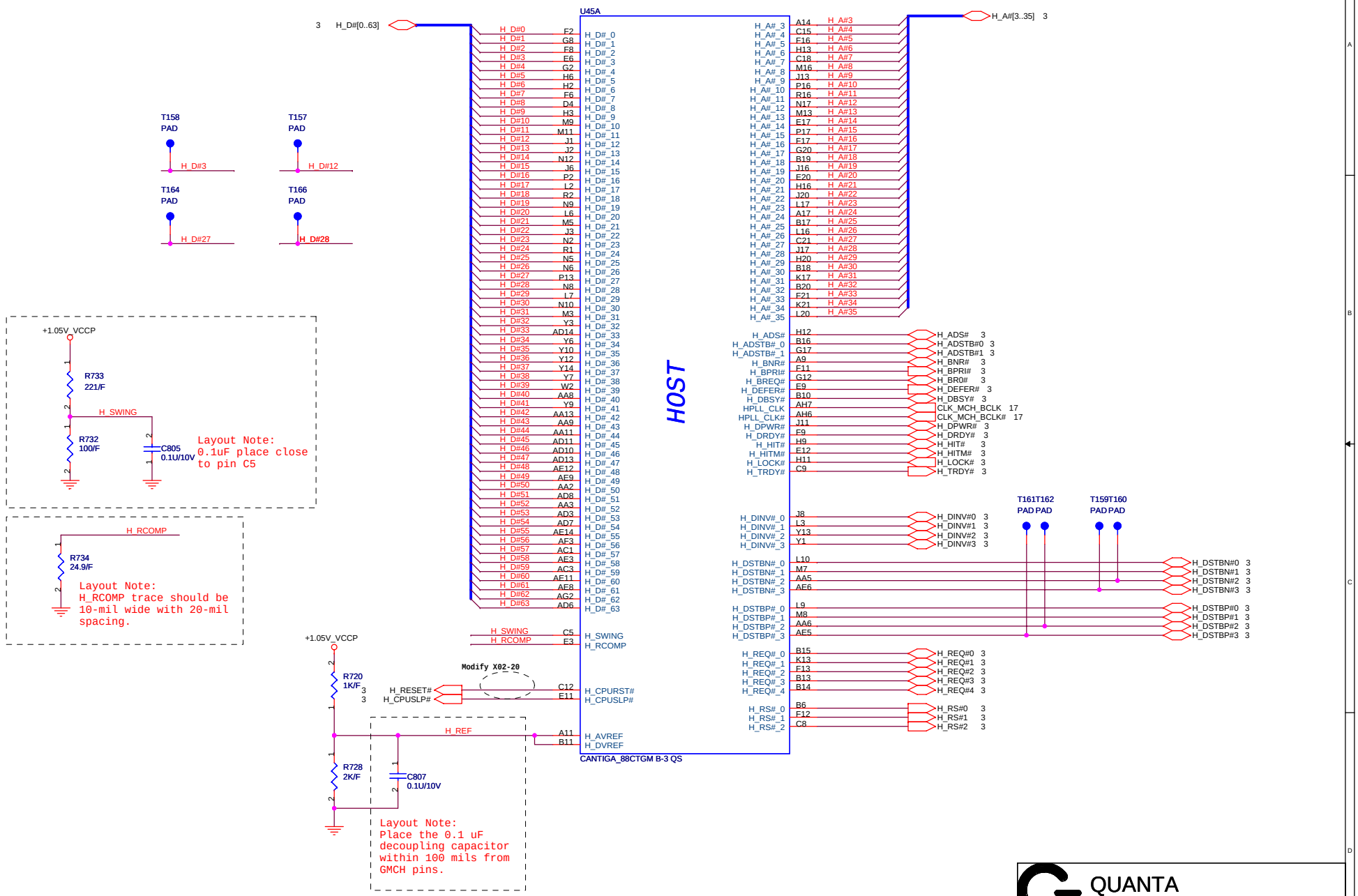

QUANTA COMPUTER		
Title	Cantiga (HOST)	
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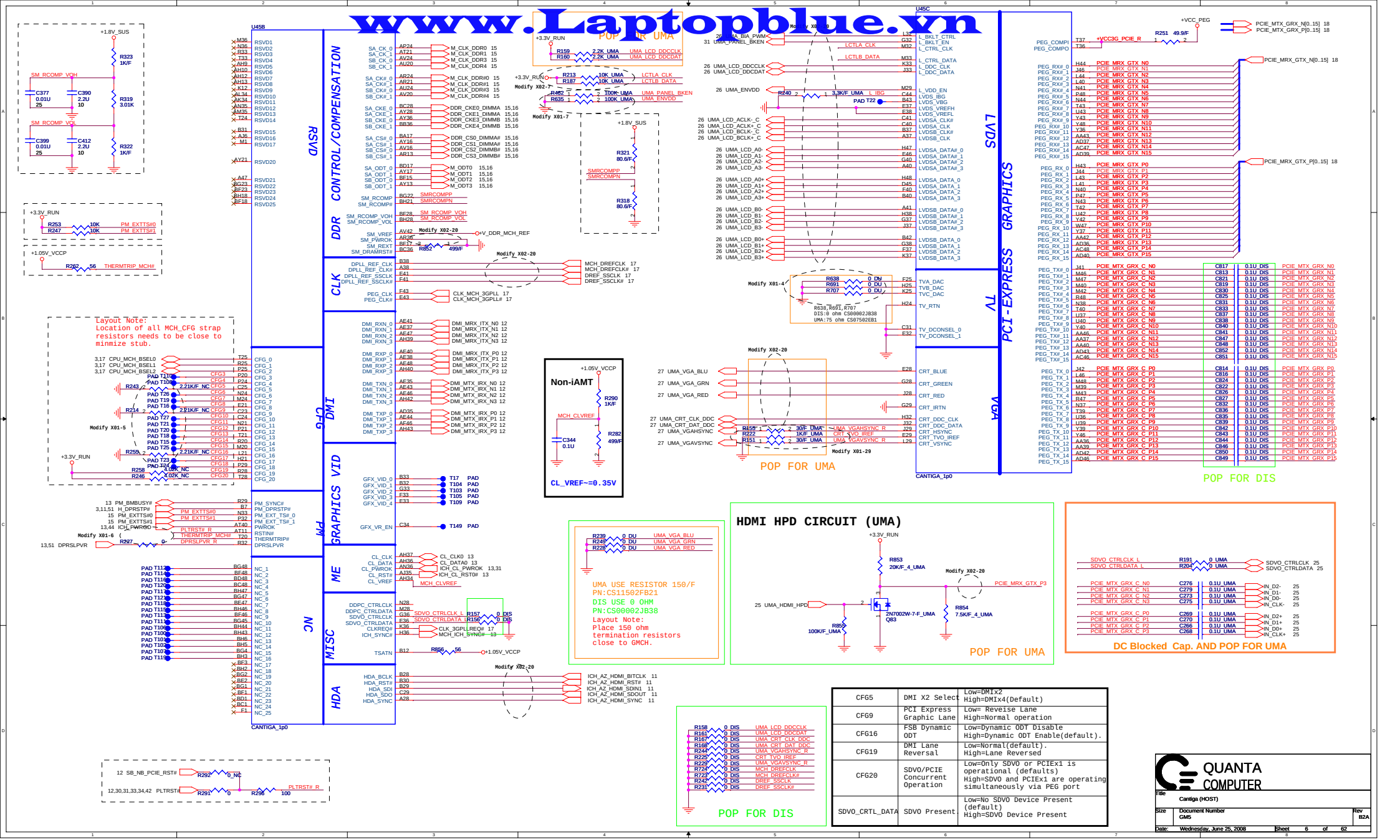

CFG5	DMI X2 Select	Low=DMIx2 High=DMIx4(Default)
CFG9	PCI Express Graphic Lane	Low= Reveise Lane High=Normal operation
CFG16	FSB Dynamic ODT	Low=Dynamic ODT Disable High=Dynamic ODT Enable(default).
CFG19	DMI Lane Reversal	Low=Normal(default). High=Lane Reversed
CFG20	SDVO/PCIE Concurrent Operation	Low=Only SDVO or PCIEx1 is operational (defaults) High=SDVO and PCIEx1 are operating simultaneously via PEG port
SDVO_CRTL_DATA	SDVO Present	Low=No SDVO Device Present (default) High=SDVO Device Present

QUANTA COMPUTER

Title	Cantiga (HOST)		
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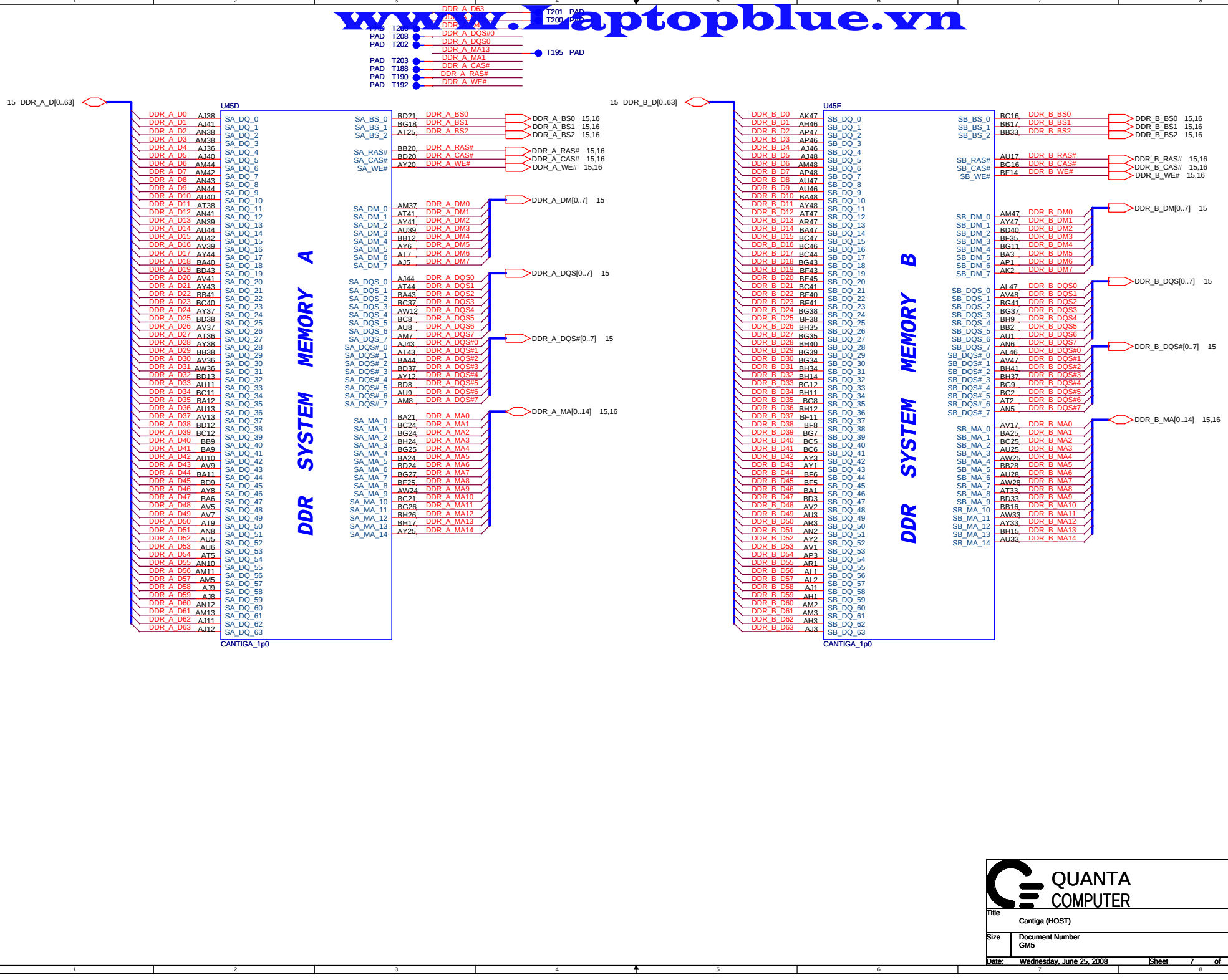

QUANTA COMPUTER

Title	Cantiga (HOST)	
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2-22 JM

Added for SI recommend.

+1.8V_SUS

U45G

C994 0.1U/10V
C995 0.1U/10V
C996 0.1U/10V

2600mA

VCC_SM_1 … VCC_SM_42/NC — VCC SM POWER

VCC_AXG_NCTF_1 … VCC_AXG_NCTF_60 — VCC GFX NCTF

VCC_AXG_1 … VCC_AXG_42 — VCC GFX

VCC_SM_LF1 … VCC_SM_LF7 — VCC SM LF

VCC_AXG_SENSE
VSS_AXG_SENSE

CANTIGA_1p0

+1.05V_VCCP

R117 0_0805_UMA
R256 0_0805_DIS
R721 10_UMA/0_DIS
R726 10_UMA/0_DIS

R66 0_0805_DIS
R113 0_0805_DIS

C355 0.1U/10V
C362 0.1U/10V
C371 0.22U/10V
C367 0.22U/10V
C372 0.47U/10V
C365 1U/10V
C363 1U/10V

R170 10
+VCC_GMCH_L
D6 SDMK0340L-7-F

Layout Note:
Inside GMCH cavity.
Ivcc=1930.4+508.12=2438.52mA

Modify X02-28

Layout Note:
370 mils from edge

C988 220uF 2.5V
C307 22U/4V
C294 0.22U/10V
C300 0.22U/10V
C333 0.1U/10V

Ivcc_axg=6326.84mA

VCC_AXG_NCTF

C297 0.1U_UMA
C308 0.1U_UMA
C857 22U_UMA 805 4
C291 10U_UMA 805 6.3
C330 1U_UMA 603 10
C314 0.47U_UMA 603 10

R101 0_0805_UMA
R63 0_0805_UMA
+1.05V_VCCP

C986 330U_NC
C987 220uF_NC 2.5V
Modify X02-28

Layout Note:
370 mils from edge.

+1.8V_SUS

Modify X02-13, X02-28

C430 0.1U/10V
C438 220uF 2.5V

Layout Note:
Place C233 where LVDS and DDR2 taps.

VCC_SM

C415 22U/4V
C422 22U/4V

Layout Note:
Place on the edge.

U45F

VCC_1 … VCC_35 — VCC CORE POWER

VCC_NCTF_1 … VCC_NCTF_44 — VCC NCTF

+1.05V_VCCP

UMA: Places R721, R726 to 10 ohm.
Dis: Please R721, R726 to 0 ohm.

QUANTA COMPUTER

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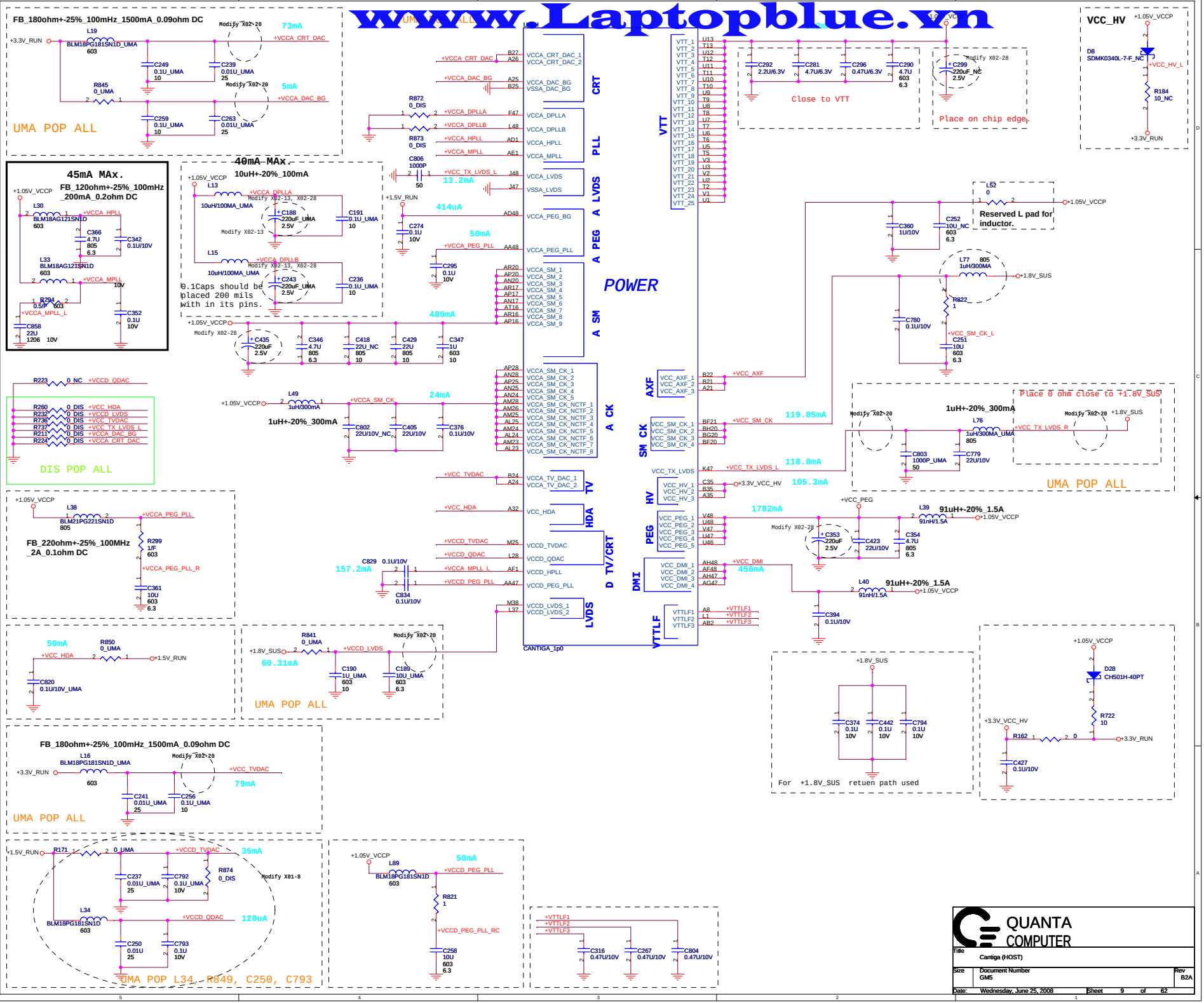

Title	Cantiga (HOST)		
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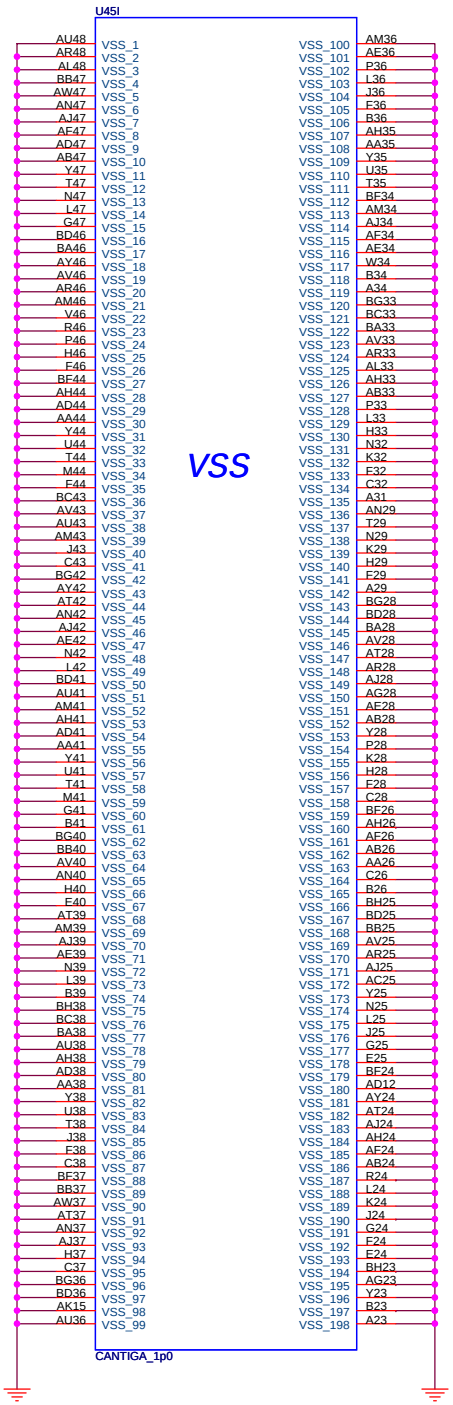

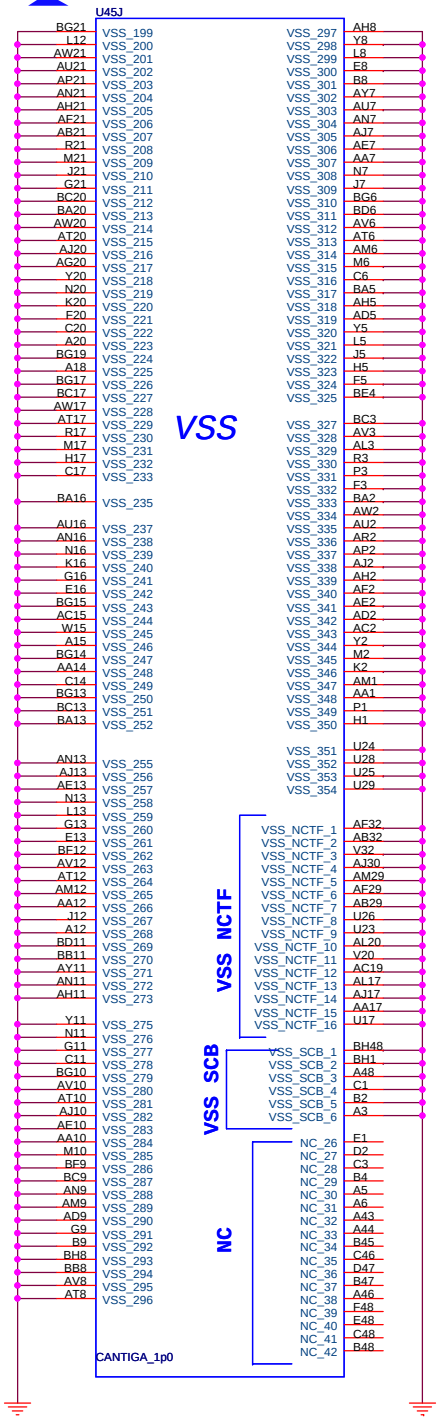

QUANTA COMPUTER		
Title: Cantiga (HOST)		
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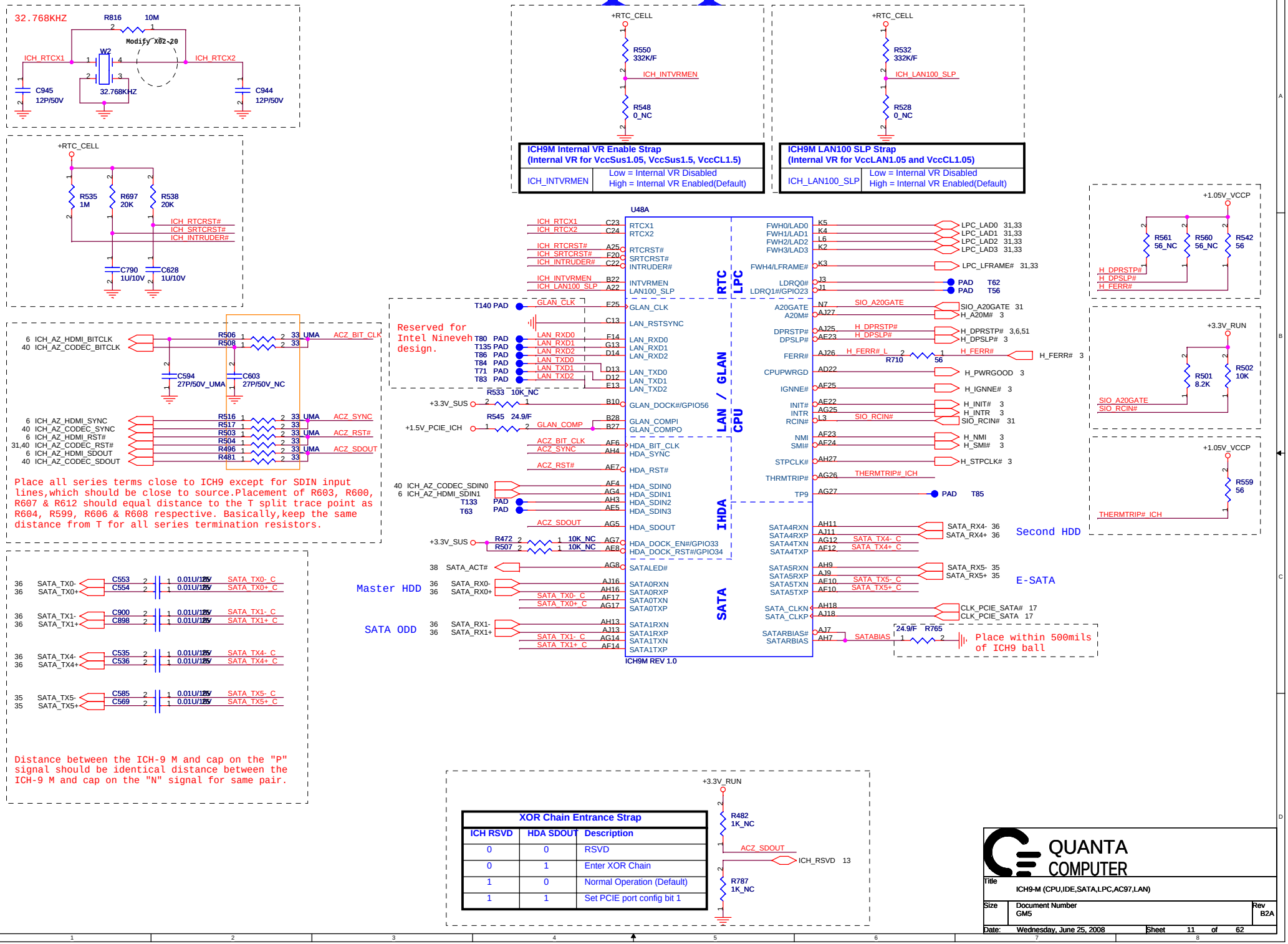

QUANTA COMPUTER

Title	ICH9-M (CPU,IDE,SATA,LPC,AC97,LAN)	
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Place TX DC blocking caps close ICH8.

33 PCIE_TX1- C953 0.1U PCIE_TXN1_C
33 PCIE_TX1+ C955 0.1U PCIE_TXP1_C
34 PCIE_TX2- C951 0.1U PCIE_TXN2_C
34 PCIE_TX2+ C952 0.1U PCIE_TXP2_C
33 PCIE_TX3- C949 0.1U PCIE_TXN3_C
33 PCIE_TX3+ C950 0.1U PCIE_TXP3_C
30 PCIE_TX4- C948 0.1U PCIE_TXN4_C
30 PCIE_TX4+ C947 0.1U PCIE_TXP4_C
42 PCIE_TX6-/GLAN_TX- C946 0.1U GLAN_TXN_C
42 PCIE_TX6+/GLAN_TX+ C954 0.1U GLAN_TXP_C

MiniWWAN
MiniWLAN
MiniWPAN
Express Card
Giga Bit LOM

PCI-Express
Direct Media Interface
SPI
USB

ICH9M REV 1.0

Place within 500mils

Side pair Top / left
Side pair bottom / left
Side pair top/right(DB)
Side pair Bot right(DB)
WLAN
Mini Card (WWAN)
Mini Card (WPAN)
Express Card
USB W/ E-SATA port
Biometric
Camera

ICH_SPI_CS1#_R
PCI_GNT0#
R451 1K_NC
R546 1K_NC

Boot BIOS Strap

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

Places within 500 mils of the ICH9
R763 22.6/F

PCI Pullups
RP42
RP40

WWAN Noise - ICH improvements

RP49 10KX8
R711 10K
R712 10K

SB_WPAN_PCIE_RST# R468 20K
SB_WWAN_PCIE_RST# R791 20K
SB_WLAN_PCIE_RST# R467 20K
SB_LOM_PCIE_RST# R477 20K
SB_NB_PCIE_RST# R495 20K

BIOS should not enable the internal GPIO pull up resistor.

U48B
PCI
Interrupt I/F

R474 1K_NC

A16 away override strap.

SB_NB_PCIE_RST#	Low = A16 swap override enabled. High = Default.

Non-iAMT
Add Buffers as needed for Loading and fanout concerns.
C887 0.047U
U47 TC7SZ32FU(T5L,F,T)
C958 0.047U
U50 TC7SZ32FU(T5L,F,T)

CLK_PCI_ICH
R772 10_NC
C907 8.2P_NC
Reserved for EMI.Place resister and cap close to ICH.

QUANTA COMPUTER

Title	ICH9-M (USB,DMI,PCIE,PCI)		
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Non-iAMT
+3.3V_SUS
RP50
SMBDATA_ICH
SMBCLK_ICH
2.2KX2
Modify X01-21

Non-iAMT
ASF 2.0
+3.3V_SUS
RP45
ICH_SMLINK0
ICH_SMLINK1
100KX2_NC
SMBCLK_ICH R798 0 ICH_SMLINK0
SMBDATA_ICH R524 0 ICH_SMLINK1
Modify X01-21

Non-iAMT
+3.3V_SUS
R789 10K_NC RSV_ICH_CL_RST1#
R519 10K ICH_RI#
R521 10K SIO_EXT_SCI#
R509 1K PCIE_WAKE#

+3.3V_RUN
R775 8.2K
CLKRUN#
R777 10_NC
Option to " Disable " clkrun. Pulling it down will keep the clks running.

Modify X01-21
30,34 SMBCLK_ICH
30,34 SMBDATA_ICH
T82 PAD
T139 PAD
T79 PAD
T48 PAD
3 ITP_DBRESET#
6 PM_BMBUSY#
34 USB_MCARD1_DET#
17 H_STP_PCI#
17 H_STP_CPU#
28,31 CLKRUN#
30,33,34,42 PCIE_WAKE#
28,31 IRQ_SERIRQ
39 THERM_ALERT#
31,44,51 IMVP_PWRGD
T134 PAD
33 USB_MCARD2_DET#
33 USB_MCARD3_DET#
31 SIO_EXT_WAKE#
31 SIO_EXT_SMI#
31 SIO_EXT_SCI#
T51 PAD
Modify X02-20
37 KB_LED_DET
34 PCIE_MCARD1_DET#
R820 4.7K
33 PCIE_MCARD2_DET#
33 PCIE_MCARD3_DET#
34 WLAN_RADIO_DIS#
41 CAMERA_CBL_DET#
17 SATA_CLKREQ#
18 PLTRST_DELAY#
33 WPAN_RADIO_DIS_MINI#
33 WWAN_RADIO_DIS#
T46 PAD
T47 PAD
Modify X02-20
6 MCH_ICH_SYNC#
40 SPKR
11 ICH_RSVD
T53 PAD
T59 PAD
T150 PAD

U48C
SMBCLK
SMBDATA
LINKALERT#/GPIO60/CLGPIO6
SMLINK0
SMLINK1
RI#
SUS_STAT#/LPCPD#
SYS_RESET#
PMSYNC#/GPIO0
SMBALERT#/GPIO11
STP_PCI#/GPIO15
STP_CPU#/GPIO25
CLKRUN#/GPIO32
WAKE#
SERIRQ
THRM#
VRMPWRGD
TP8
TACH1/GPIO1
TACH2/GPIO6
TACH3/GPIO7
GPIO8
LANPHYPC/GPIO12
ENGDET/GPIO13
TACH0/GPIO17
GPIO18
GPIO20
SCLOCK/GPIO22
QRT_STATE0/GPIO27
QRT_STATE1/GPIO28
SATACLKREQ#/GPIO35
SLOAD/GPIO38
SDATAOUT0/GPIO39
SDATAOUT1/GPIO48
GPIO49
GPIO57/CLGPIO5
SPKR
MCH_SYNC#
TP3
TP9
TP10
TP11
SMB
SATA GPIO
Clocks
SYS_GPIO
Power MGT
GPIO
Controller Link
MISC
ICH9M REV 1.0

SATA0GP/GPIO21
SATA1GP/GPIO19
SATA4GP/GPIO36
SATA5GP/GPIO37
CLK14
CLK48
SUSCLK
SLP_S3#
SLP_S4#
SLP_S5#
S4_STATE#/GPIO26
PWROK
DPRSLPVR/GPIO16
BATLOW#
PWRBTN#
LAN_RST#
RSMRST#
CK_PWRGD
CLPWROK
SLP_M#
CL_CLK0
CL_CLK1
CL_DATA0
CL_DATA1
CL_VREF0
CL_VREF1
CL_RST0#
CL_RST1#
MEM_LED/GPIO24
ALERT#/GPIO10
NETDETECT/GPIO14
WOL_EN/GPIO9

+3.3V_RUN
R773 8.2K
CLK_ICH_14M
CLK_ICH_48M
ICH_SUSCLK
SIO_SLP_S3# 31
SIO_SLP_S5# 31
ICH_PWRGD 6,44
DPRSLPVR 6,51
R537 8.2K
+3.3V_SUS
SIO_PWRBTN# 31
RSV_ICH_LAN_RST#
ICH_RSMRST# 31
CLK_PWRGD 17
ICH_CL_PWROK 6,31
RSV_ICH_CL_CLK1
RSV_ICH_CL_DATA1
CL_VREF0
CL_VREF1
ICH_CL_RST0# 6
CL_RST1#
RSV_GPIO24
RSV_GPIO10
RSV_GPIO14
RSV_WOL_EN
R543 8.2K
+3.3V_SUS

Place these close to ICH8.
CLK_ICH_48M
R444 10_NC
C564 4.7P_NC
50
CLK_ICH_14M
R473 10_NC
C577 4.7P_NC
50

Non-iAMT
ICH_PWRGD R540 10K
DPRSLPVR R784 100K
ICH_RSMRST# R564 10K
RSV_ICH_LAN_RST# R523 10K
ICH_CL_PWROK R762 1M
+3.3V_SUS
RSV_GPIO10 R795 10K

DIS:ALW
UMA:SUS
Non-iAMT
+3.3V_RUN
+3.3V_ALW +3.3V_SUS
R531 3.24K/F
R536 3.24K/F_NC
R796 3.24K/F_NC
CL_VREF0
CL_VREF1
C621 0.1U
R534 453/F
C926 0.1U_NC
R792 453/F_NC
10
10
CL_VREF0/1 ~=0.405V

R465 10K PLTRST_DELAY#

+3.3V_RUN
R786 2.2K_NC IMVP_PWRGD
R770 100K USB_MCARD2_DET#
R771 100K USB_MCARD3_DET#
R480 100K PCIE_MCARD1_DET#
R490 100K PCIE_MCARD2_DET#
R774 100K PCIE_MCARD3_DET#

+3.3V_RUN
R781 10K_NC MCH_ICH_SYNC#
R476 10K IRQ_SERIRQ
R500 10K THERM_ALERT#

+3.3V_SUS
R522 10K RSV_WOL_EN
R505 10K SIO_EXT_SMI#
R788 100K USB_MCARD1_DET#

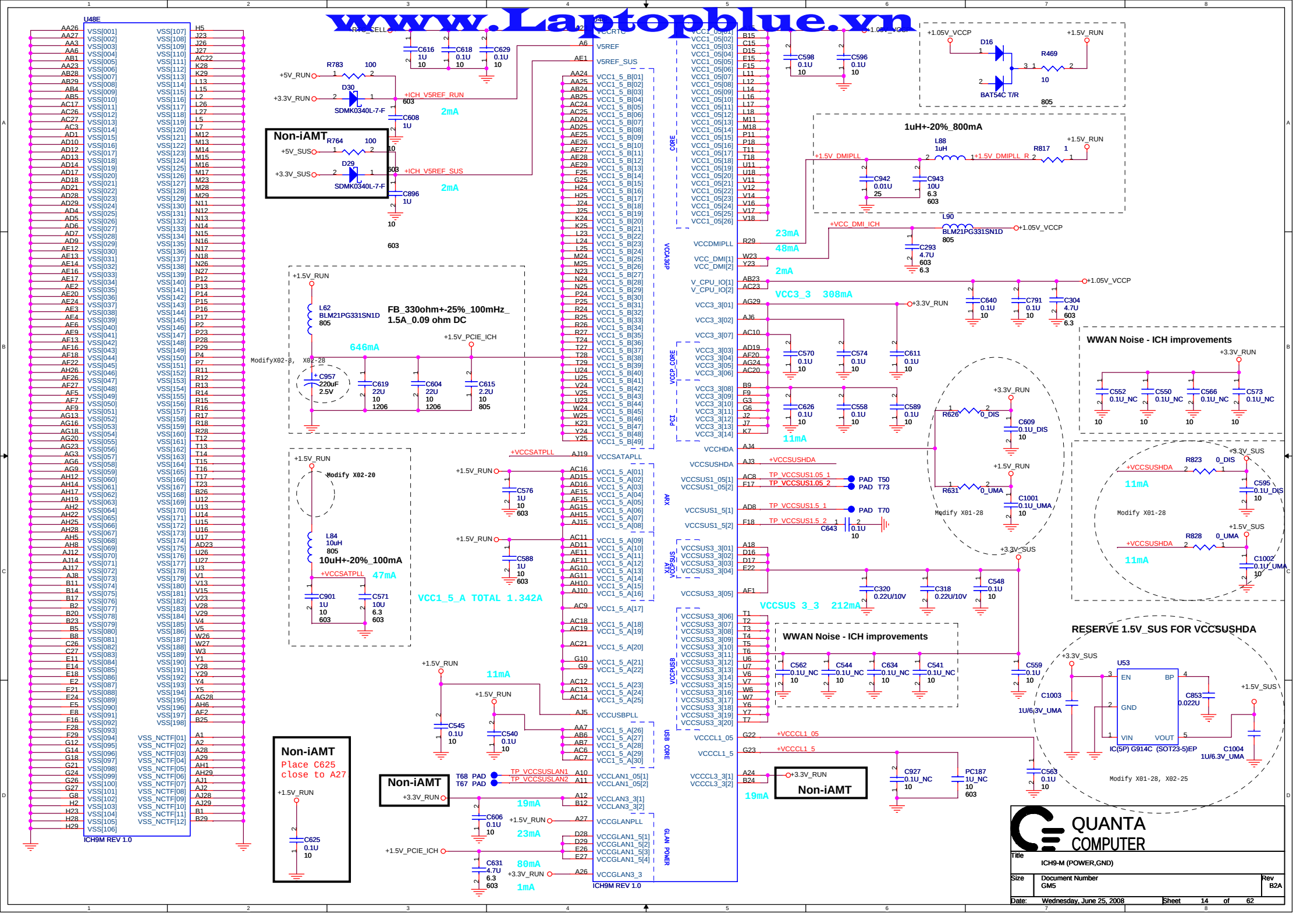
+3.3V_RUN
R478 1K_NC
SPKR

No Reboot strap.	
SPKR	Low = Default. High = No Reboot.

SMbus address D2
Non-iAMT
+3.3V_RUN
These are for backdrive issue.
RP51 2.2KX2
SMBDATA_ICH
Q47
2N7002W-7-F
ICH_SMBDATA 15,33
SMBCLK_ICH
Q76
2N7002W-7-F
ICH_SMBCLK 15,33

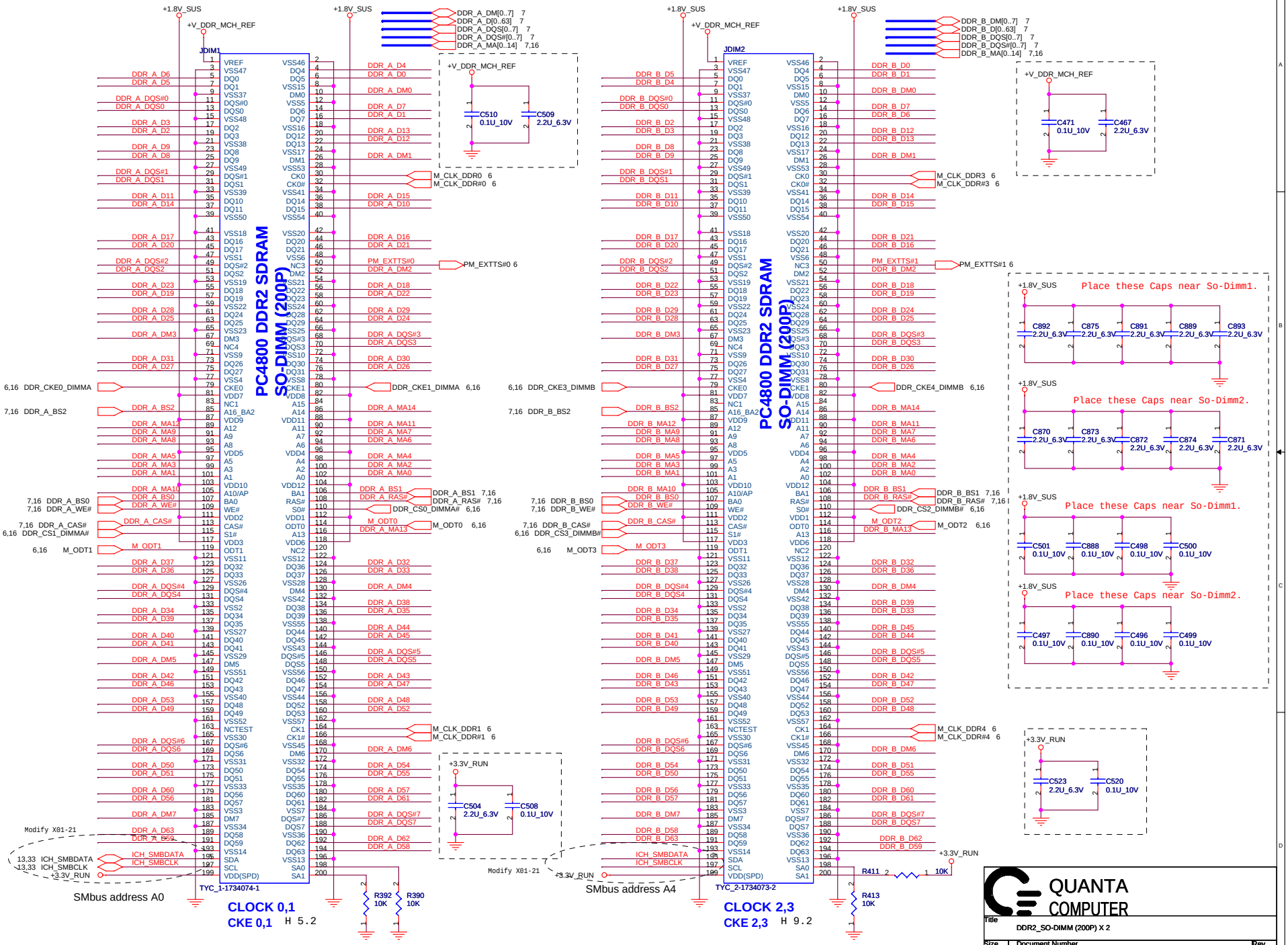
QUANTA COMPUTER

Title	ICH9-M (PM,GPIO,SMB,CL)	
Size	Document Number GM5	Rev B2A
Date: Wednesday, June 25, 2008	Sheet 13 of 62	



MASTER

SLAVE

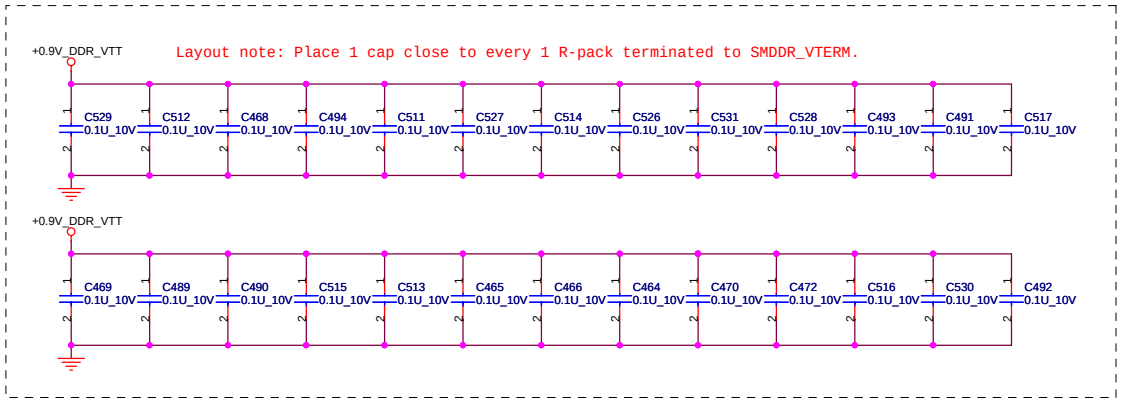


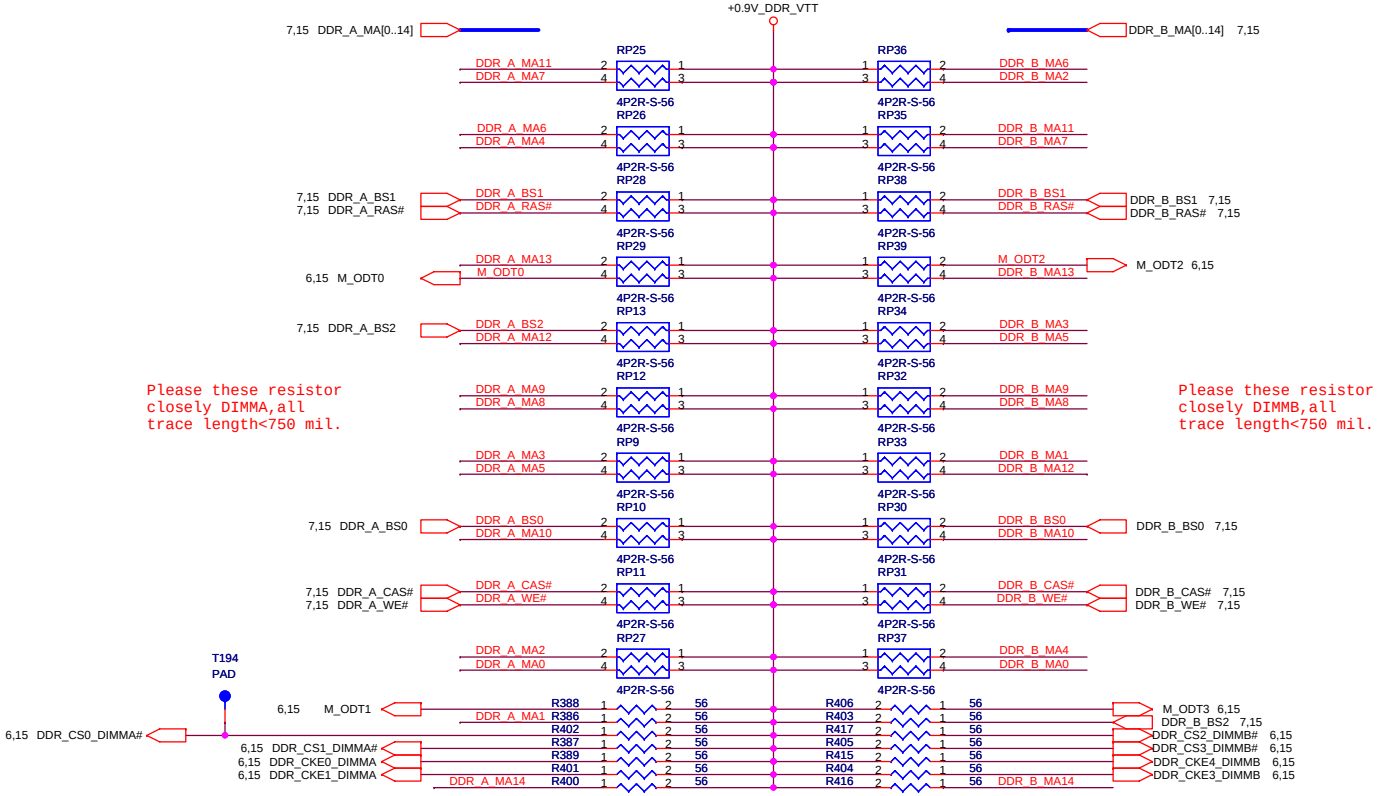
CLOCK 0,1
CKE 0,1 H 5.2

CLOCK 2,3
CKE 2,3 H 9.2

QUANTA COMPUTER

Title	DDR2_SO-DIMM (200P) X 2	
Size	Document Number GM5	Rev B2A
Date: Wednesday, June 25, 2008	Sheet 15 of 62	





QUANTA COMPUTER

Title	DDR2 RES. ARRAY	
Size	Document Number GM5	Rev B2A
Date: Wednesday, June 25, 2008	Sheet 16 of 62	

Add capacitor pads for improving WWAN.

C457 27P CLK_ICH_48M
C440 27P_NC CLK_ICH_14M
C431 27P_NC CLK_PCI_8512
C432 27P_NC CLK_PCI_PCCARD
C439 27P_NC CLK_PCI_ICH

Y2 14.318MHZ
CLK_XTAL_IN — CLK_XTAL_OUT
C437 33P
C443 33P
14.318MHz

U19
CK505
QFN64
SLG8SP513V

VDD_PCI, VDD_REF, VDD_PLL3, VDD_48, VDD_SRC, VDD_CPU, VDD_IO, GND, CR#_A/PCI-0, CR_B/PCI-1, TME/PCI-2, SRC5_EN/PCI-3, 27M_SEL/PCI-4, ITP_EN/PCIF-5#, FSA/USB48, FSB/TEST_MODE, FSC/TEST_SEL/REF, RESET#, CK_PWRGD/PD#, XOUT, XIN, SDATA, SCLK

+CK_VDD_PCI
+CK_VDD_PLL3
+CK_VDD_48
+CK_VDD_SRC
+CK_VDD_MAIN

CPU-0 / CPU-0# — CPU_BCLK / CPU_BCLK# — RP5 0 — CLK_CPU_BCLK 3 / CLK_CPU_BCLK# 3
CPU-1 / CPU-1# — MCH_BCLK / MCH_BCLK# — RP7 0 — CLK_MCH_BCLK 5 / CLK_MCH_BCLK# 5
SRC-8/CPU_ITP / SRC-8#/CPU_ITP# — CPU_ITP / CPU_ITP# — RP17 0 — CLK_PCIE_MINI1 34 / CLK_PCIE_MINI1# 34
SRC-0/DOT96 / SRC-0#/DOT96# — DOT96_SSC / DOT96_SSC# — RP4 0_DIS — CLK_PCIE_VGA 18 / CLK_PCIE_VGA# 18
SRC-1/SE1 / SRC-1#/SE2 — 27M_NSS / 27M_SS — RP8 0_DIS — CLK_VGA_27M_NSS 19 / CLK_VGA_27M_SS 19
SRC-2/SATA / SRC-2#/SATA# — PCIE_SATA / PCIE_SATA# — RP16 0 — CLK_PCIE_SATA 11 / CLK_PCIE_SATA# 11
CR#_C/SRC-3 / CR#_D/SRC-3# — PCIE_MINI3 / PCIE_MINI3# — RP18 0 — CLK_PCIE_MINI3 33 / CLK_PCIE_MINI3# 33
SRC-4 / SRC-4# — MCH_3GPLL / MCH_3GPLL# — RP20 0 — CLK_MCH_3GPLL 6 / CLK_MCH_3GPLL# 6
PCI_STOP#/SRC-5 / CPU_STOP#/SRC5-5# — H_STP_PCI# 13 / H_STP_CPU# 13
SRC-6 / SRC-6# — PCIE_EXPCARD / PCIE_EXPCARD# — RP24 0 — CLK_PCIE_EXPCARD 30 / CLK_PCIE_EXPCARD# 30
CR#_F/SRC-7 / CR#_E/SRC-7# — MINI1CLK_REQ#_C / CARD_CLK_REQ#_C — R394 475/F MINI1CLK_REQ# — R395 475/F CARD_CLK_REQ# — MINI1CLK_REQ# 34 / CARD_CLK_REQ# 30
SRC-9 / SRC-9# — PCIE_MINI2 / PCIE_MINI2# — RP21 0 — CLK_PCIE_MINI2 33 / CLK_PCIE_MINI2# 33
SRC-10 / SRC-10# — PCIE_ICH / PCIE_ICH# — RP23 0 — CLK_PCIE_ICH 12 / CLK_PCIE_ICH# 12
CR#_H/SRC-11 / CR#_G/SRC-11# — PCIE_LOM / PCIE_LOM# — RP22 0 — CLK_PCIE_LOM 42 / CLK_PCIE_LOM# 42

to ATI VGA

+3.3V_RUN
H_STP_PCI# R397 10K
H_STP_CPU# R396 10K

13 SATA_CLKREQ# — SATA_CLKREQ# R365 475
6 CLK_3GPLLREQ# — CLK_3GPLLREQ# R364 475/F
SATA_CLKREQ#_C
CLK_3GPLLREQ#_C
PCI_PCCARD
PCI_SIO
27M_SEL
PCI_ICH

33 CLK_LPC_DEBUG — CLK_LPC_DEBUG R363 22
28 CLK_PCI_PCCARD — CLK_PCI_PCCARD R354 33
31 CLK_PCI_8512 — CLK_PCI_8512 R353 33
12 CLK_PCI_ICH — CLK_PCI_ICH R350 33
13 CLK_ICH_48M — CLK_ICH_48M R375 33
3,6 CPU_MCH_BSEL0 — L55 BLM18SG260 — R372 8.2K — FSA
3,6 CPU_MCH_BSEL1 — R374 8.2K — FSB
3,6 CPU_MCH_BSEL2 — R367 8.2K — FSC
13 CLK_ICH_14M — CLK_ICH_14M R366 33
13 CLK_PWRGD

CLK_LPC_DEBUG FOR DEBUG
NEED POP RESISTOR

CLK_XTAL_OUT
CLK_XTAL_IN
CLK_SDATA
CLK_SCLK

POP RESISTOR FOR UMA

to MCH DPLL_REF_CLK
DOT96_SSC / DOT96_SSC# — RP6 0_UMA — MCH_DREFCLK 6 / MCH_DREFCLK# 6

Modify X01-9
to MCH DPLL_REF_SSCLK
27M_NSS / 27M_SS — RP14 0_UMA — DREF_SSCLK 6 / DREF_SSCLK# 6

CPU_ITP / CPU_ITP# — RP15 0_NC — CLK_CPU_ITP 3 / CLK_CPU_ITP# 3
POP for ITP use

+3.3V_RUN
CLK_3GPLLREQ# R355 10K
SATA_CLKREQ# R356 10K
CARD_CLK_REQ# R398 10K
MINI1CLK_REQ# R399 10K
PCI_PCCARD R343 10K_NC

PCI_SIO R352 10K_NC
PCI_ICH R341 10K_NC

UMA without iAMT

+3.3V_RUN
L58 BLM21PG600SN1D 805 120 ohms@100Mhz
+CK_VDD_MAIN
C459 0.1U, C476 0.1U, C486 0.1U, C462 0.1U, C473 0.1U, C485 0.1U, C487 10U_NC
L51 BLM21PG600SN1D 805 120 ohms@100Mhz
R359 2.2 — +CK_VDD_PCI — C446 0.1U, C1005 0.1U
R391 2.2 — +CK_VDD_PLL3 — C461 0.1U
R358 2.2 — +CK_VDD_48 — C448 0.1U, C447 4.7U
R377 2.2 — +CK_VDD_SRC 603 — C460 0.1U, C993 0.1U

Non-iAMT

SMbus address D2
These are for backdrive issue.

+3.3V_RUN
RP3 2.2KX2
26,31,39 SMBDAT1 — Q40 2N7002W-7-F — CLK_SDATA
26,31,39 SMBCLK1 — Q39 2N7002W-7-F — CLK_SCLK

+3.3V_RUN
R339 10K_NC
PCI_ICH
R340 10K_NC

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

+3.3V_RUN
R351 10K_DIS
27M_SEL
R342 10K_UMA

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

QUANTA COMPUTER

Title	CLOCK GENERATOR	
Size	Document Number GM5	Rev B2A
Date: Wednesday, June 25, 2008	Sheet 17 of 62	

QUANTA COMPUTER

Title	VGA-M82-S (PCIe)	
Size	Document Number GM5	Rev B2A
Date: Wednesday, June 25, 2008	Sheet 18 of 62	

MEMORY APERTURE SIZE SELECT				
MEMORY SIZE	CFG3 GPIO9	CFG2 GPIO13	CFG1 GPIO12	CFG0 GPIO11
128MB	X	0	0	0
256MB	X	0	0	1
64MB	X	0	1	0
512MB	X	1	0	0

Memory Straps	RAM_ TYPE_CFG3	RAM_ TYPE_CFG2	RAM_ TYPE_CFG1	RAM_ TYPE_CFG0
400 MHz 256MB(16M*16) Hynix	1	1	1	1
400 MHz 256MB(16M*16) Qimonda	1	1	1	0
500 MHz 256MB(16M*16) Hynix	1	1	0	1
500 MHz 256MB(16M*16) Qimonda	1	1	0	0
500 MHz 256MB(16M*16) Samsung	1	0	1	1

VRAM SIZE

VRAM TYPE

HDMI CONN

GFX_CORE_CNTRL_TABLE		
GFX_CORE_CNTRL0	GFX_CORE_CNTRL1	+VCC_GFX_CORE
LOW	LOW	0.9V
HIGH	LOW	0.95V
HIGH	HIGH	1.1V

DIS only

Layout Note: Place 150 ohm termination resistors close to ATI CHIP.

LVDS

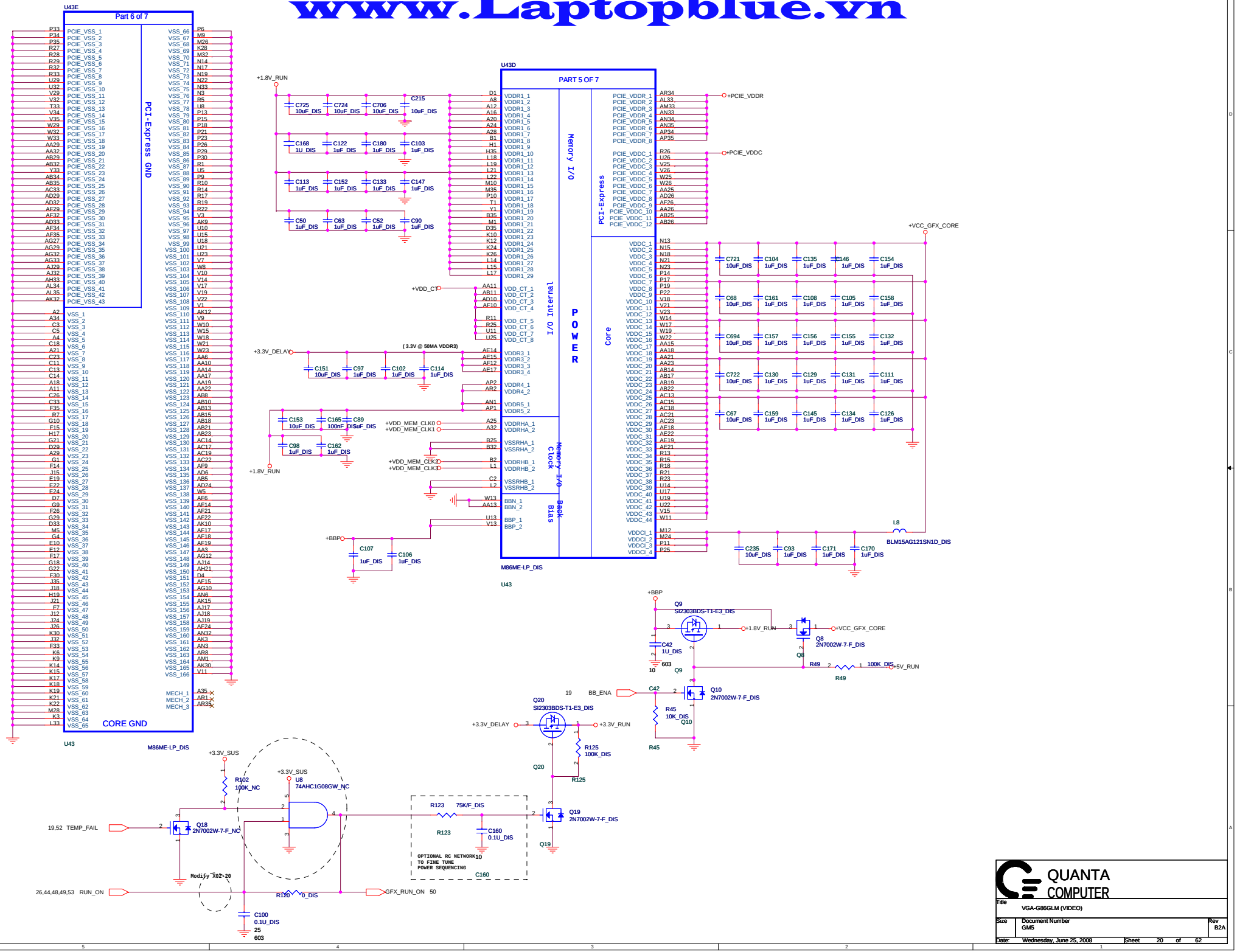
HDMI

CRT

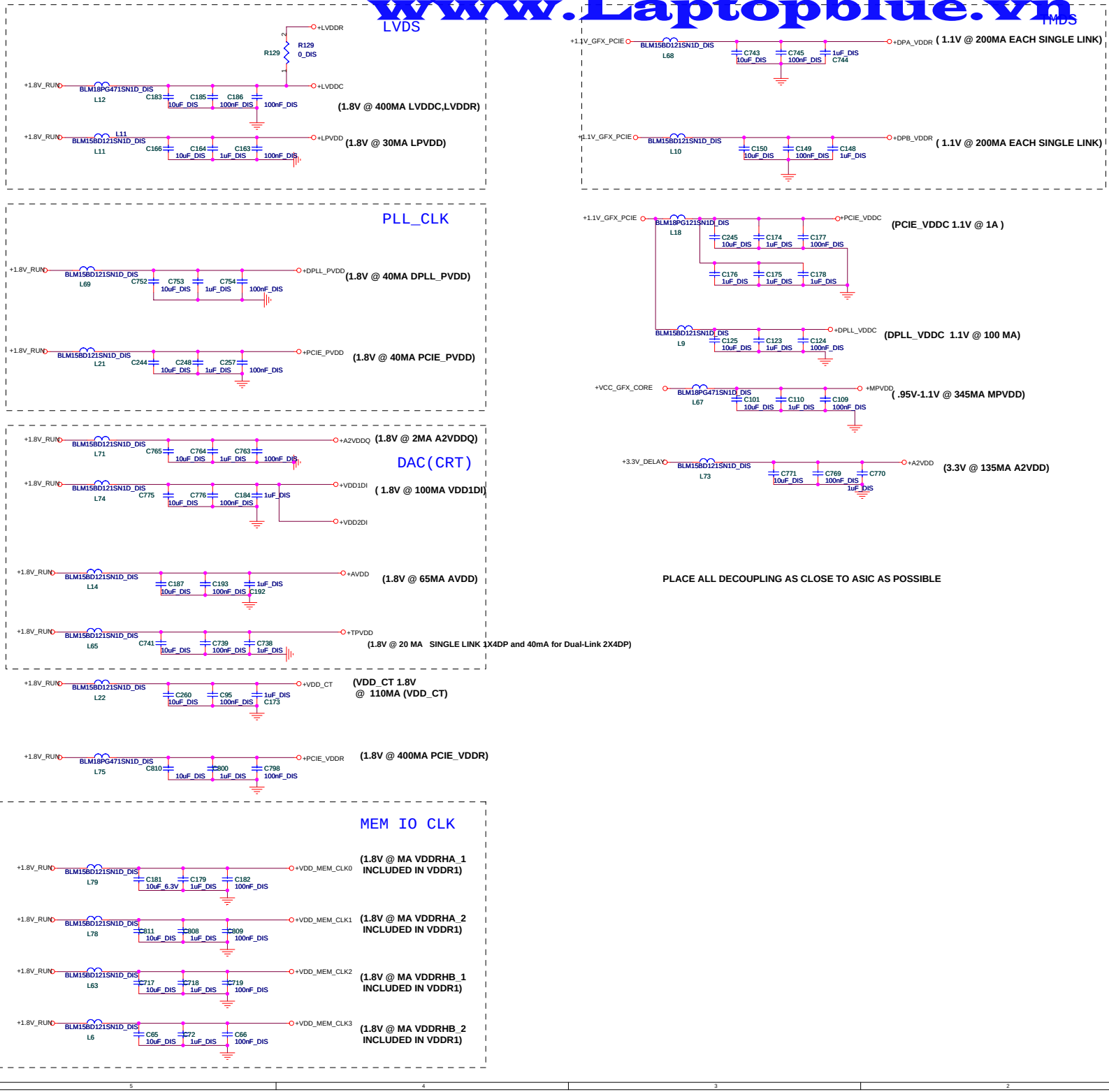
M86ME-LP_DIS

QUANTA COMPUTER

Title	VGA-G86GLM (VIDEO)	
Size	Document Number GM5	Rev B2A
Date: Wednesday, June 25, 2008	Sheet 19 of 62	

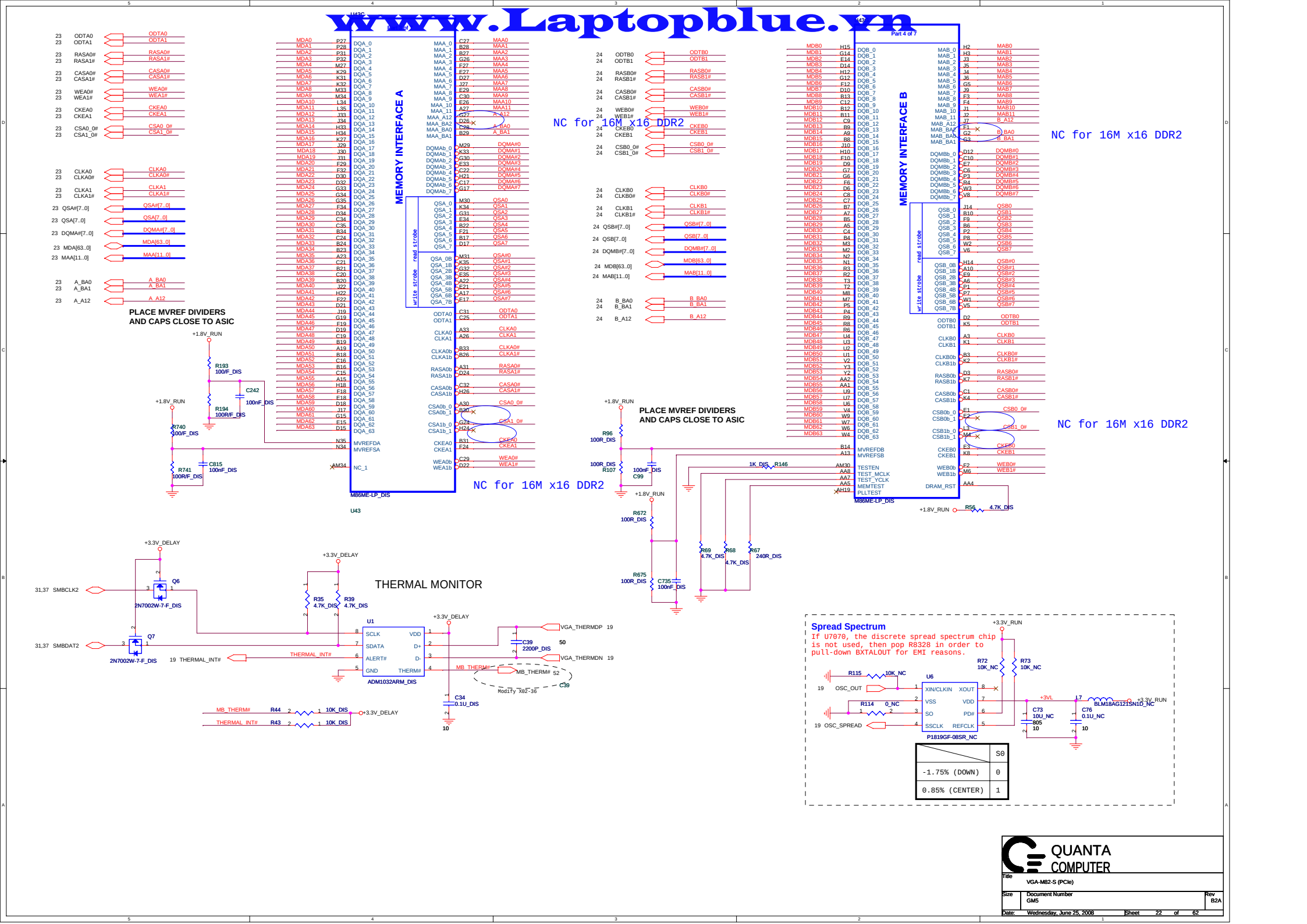


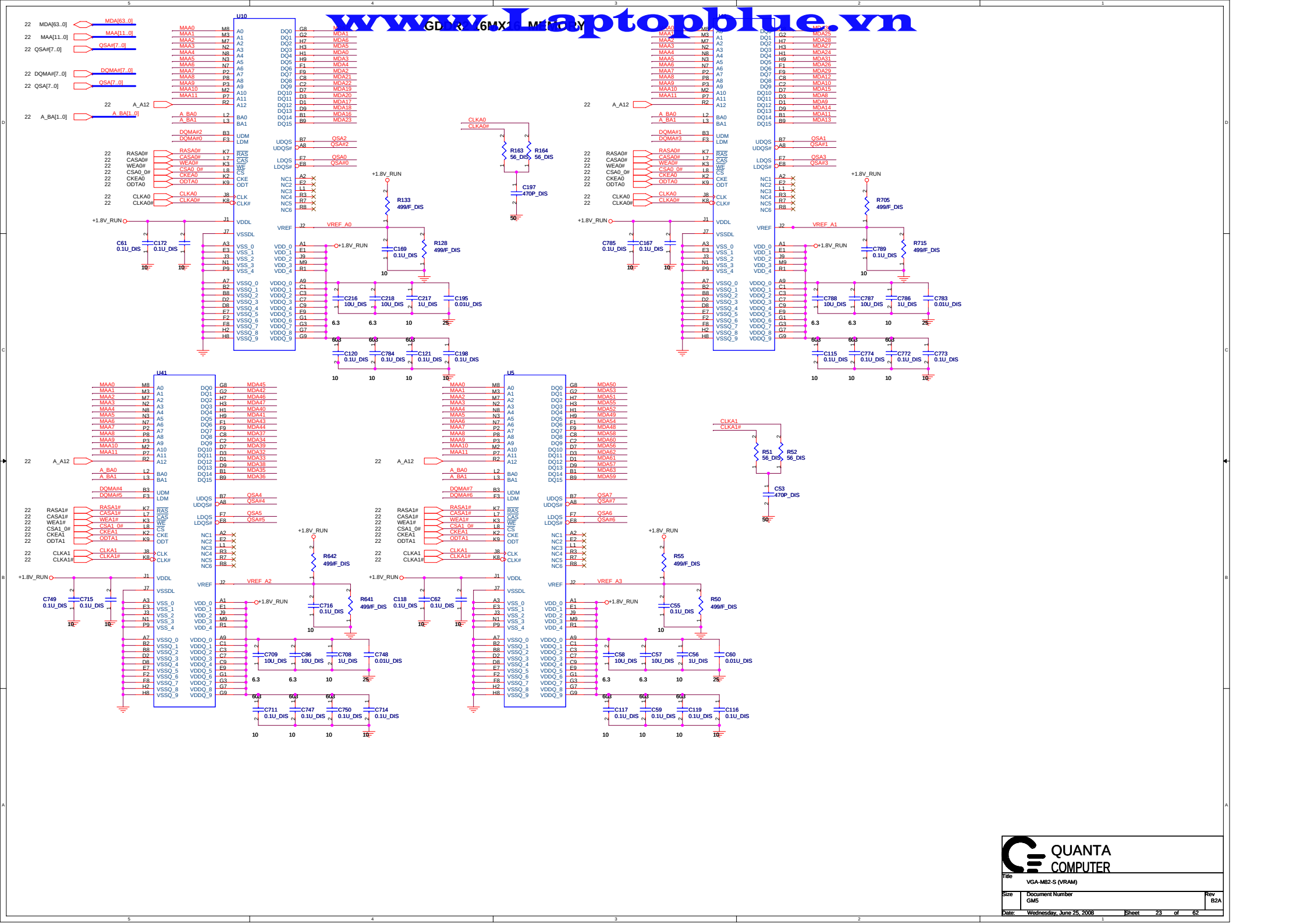
QUANTA COMPUTER			
Title	VGA-G86GLM (VIDEO)		
Size	Document Number GM5		Rev B2A
Date: Wednesday, June 25, 2008		Sheet 20 of 62	



QUANTA COMPUTER

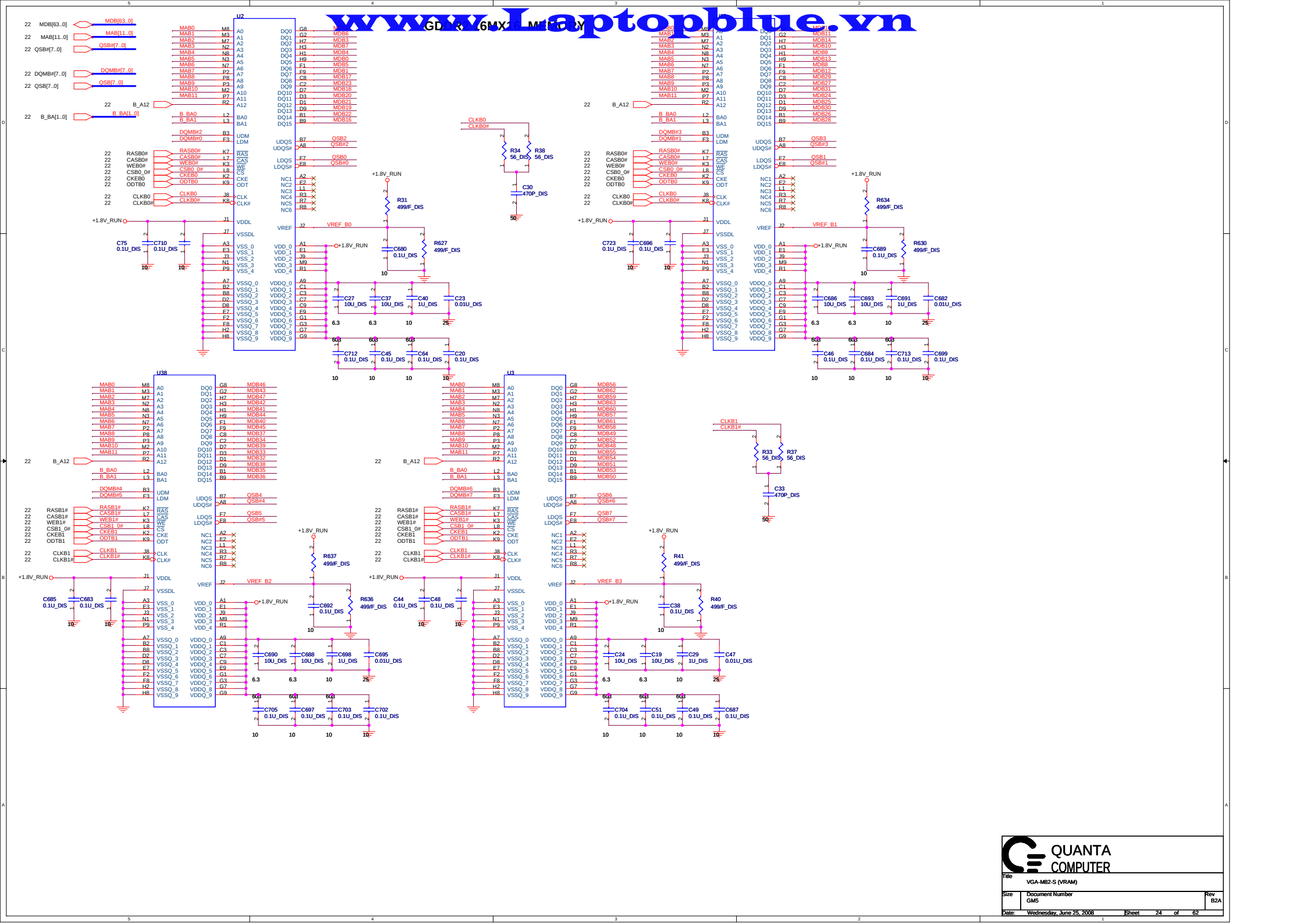
Title	VGA-G86GLM (VIDEO)	
Size	Document Number GM5	Rev B2A
Date: Wednesday, June 25, 2008	Sheet 21 of 62	



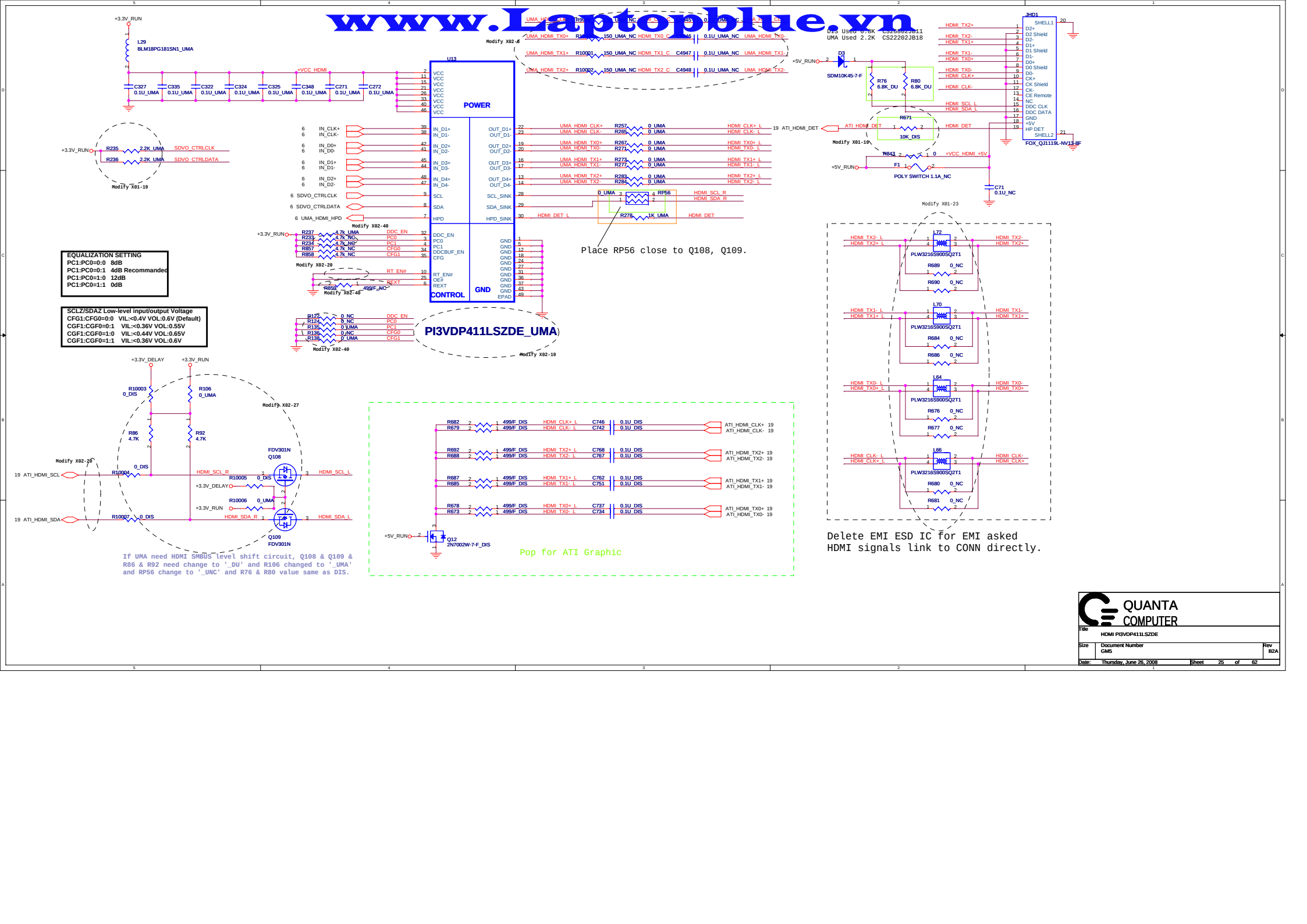


QUANTA COMPUTER

Title	VGA-M82-S (VRAM)	
Size	Document Number GM5	Rev B2A
Date: Wednesday, June 25, 2008	Sheet 23 of 62	

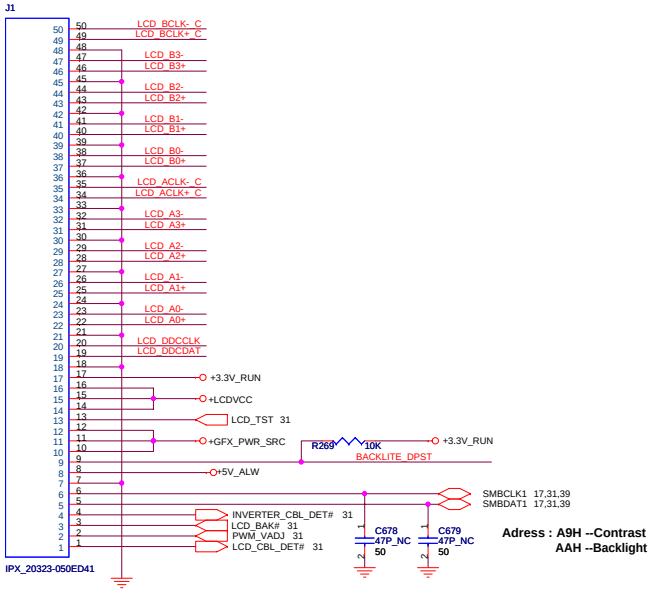


Title	VGA-M82-S (VRAM)		
Size	Document Number GM5		Rev B2A
Date:	Wednesday, June 25, 2008	Sheet 24 of 62	

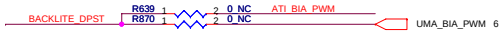


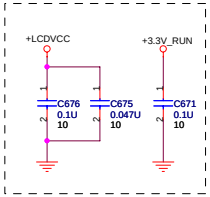
Title	HDMI PI3VDP411LSZDE
Size	Document Number GM5
Rev	B2A
Date	Thursday, June 26, 2008
Sheet	25 of 62

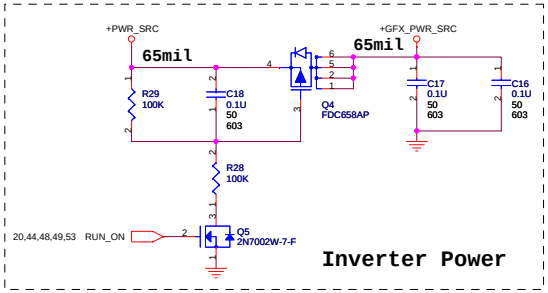
FOR ATI&UMA DIFFERENT LVDS PATH

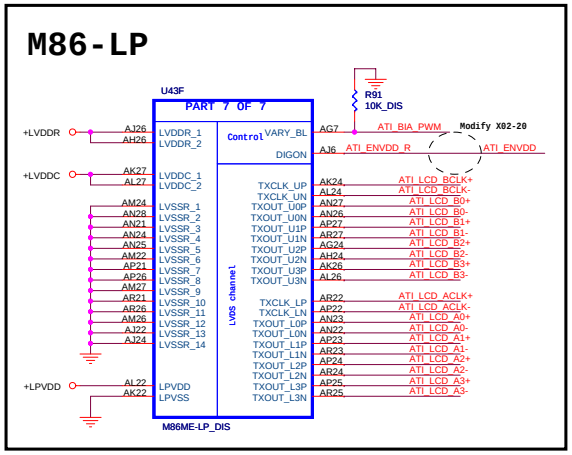


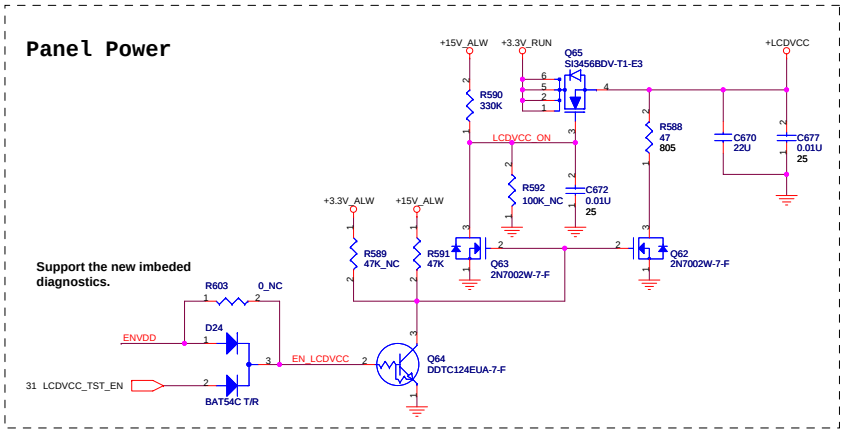
GFX_PWR_SRC layout note:
40 mil trace for tube type
45 mil for white LED type
65 mil for RGB LED type

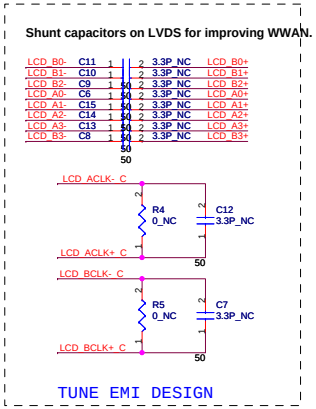






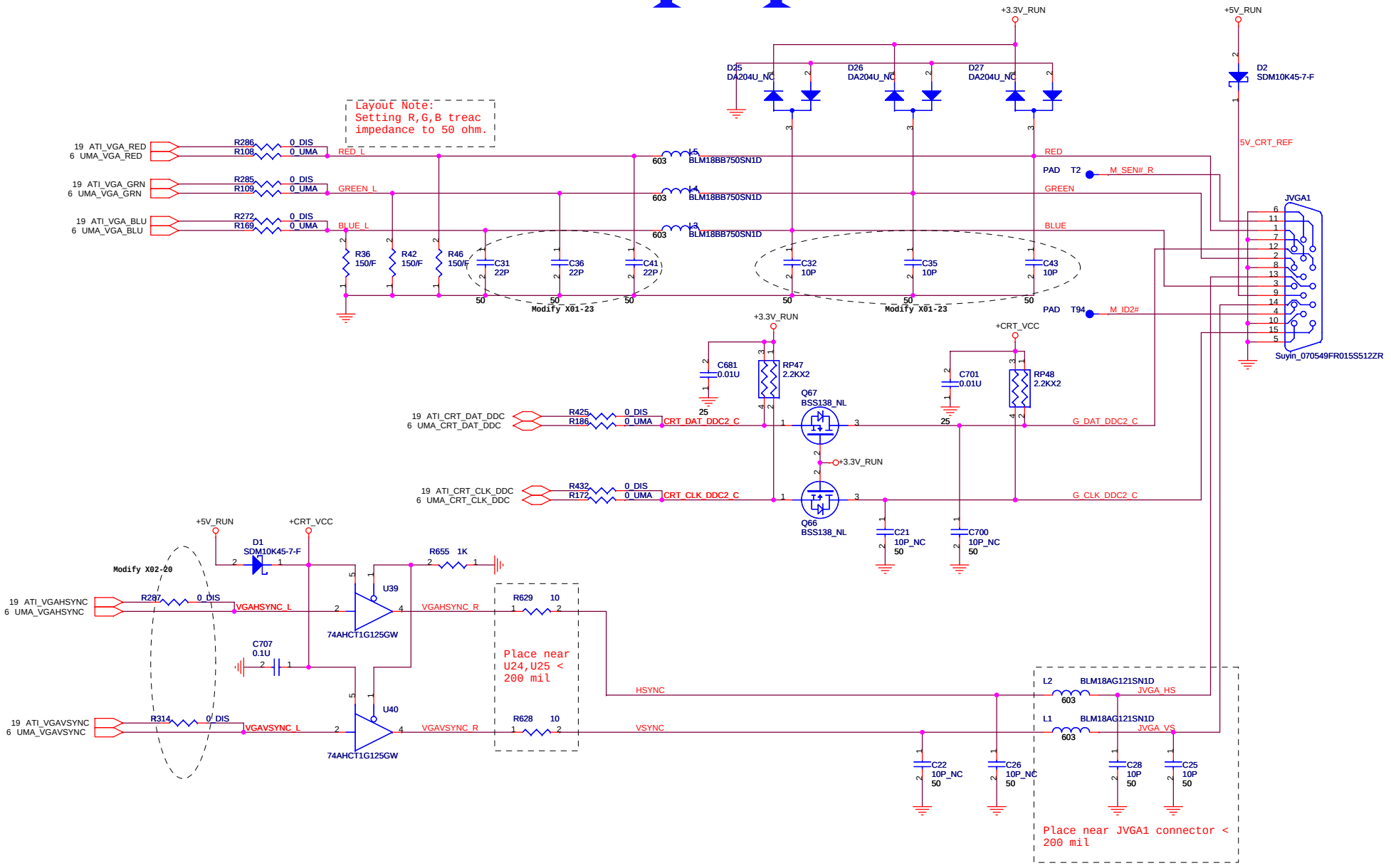






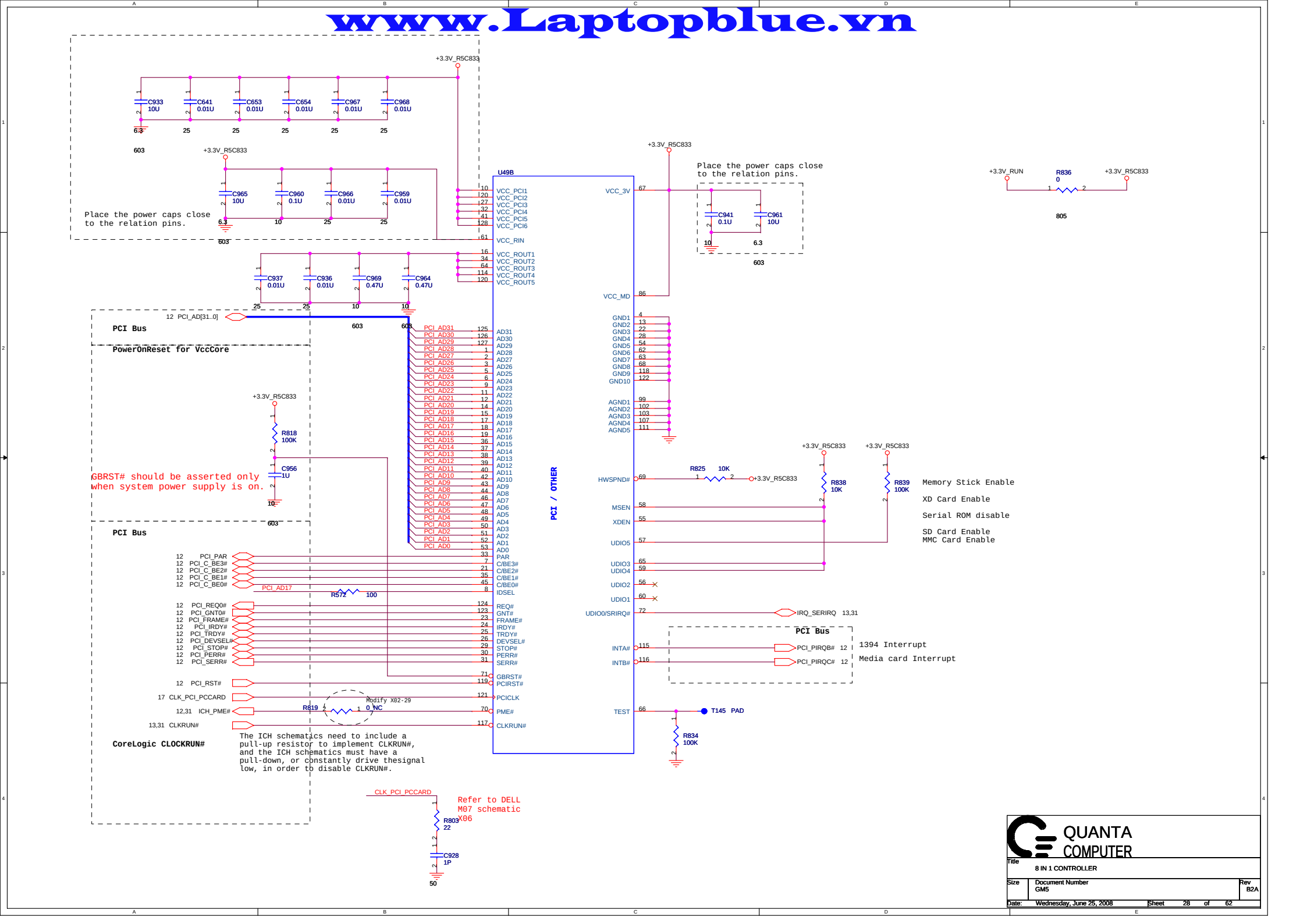
QUANTA COMPUTER

Title	LCD CONN & CK-SSCD	
Size	Document Number GM5	Rev B2A
Date: Wednesday, June 25, 2008	Sheet 26 of 62	

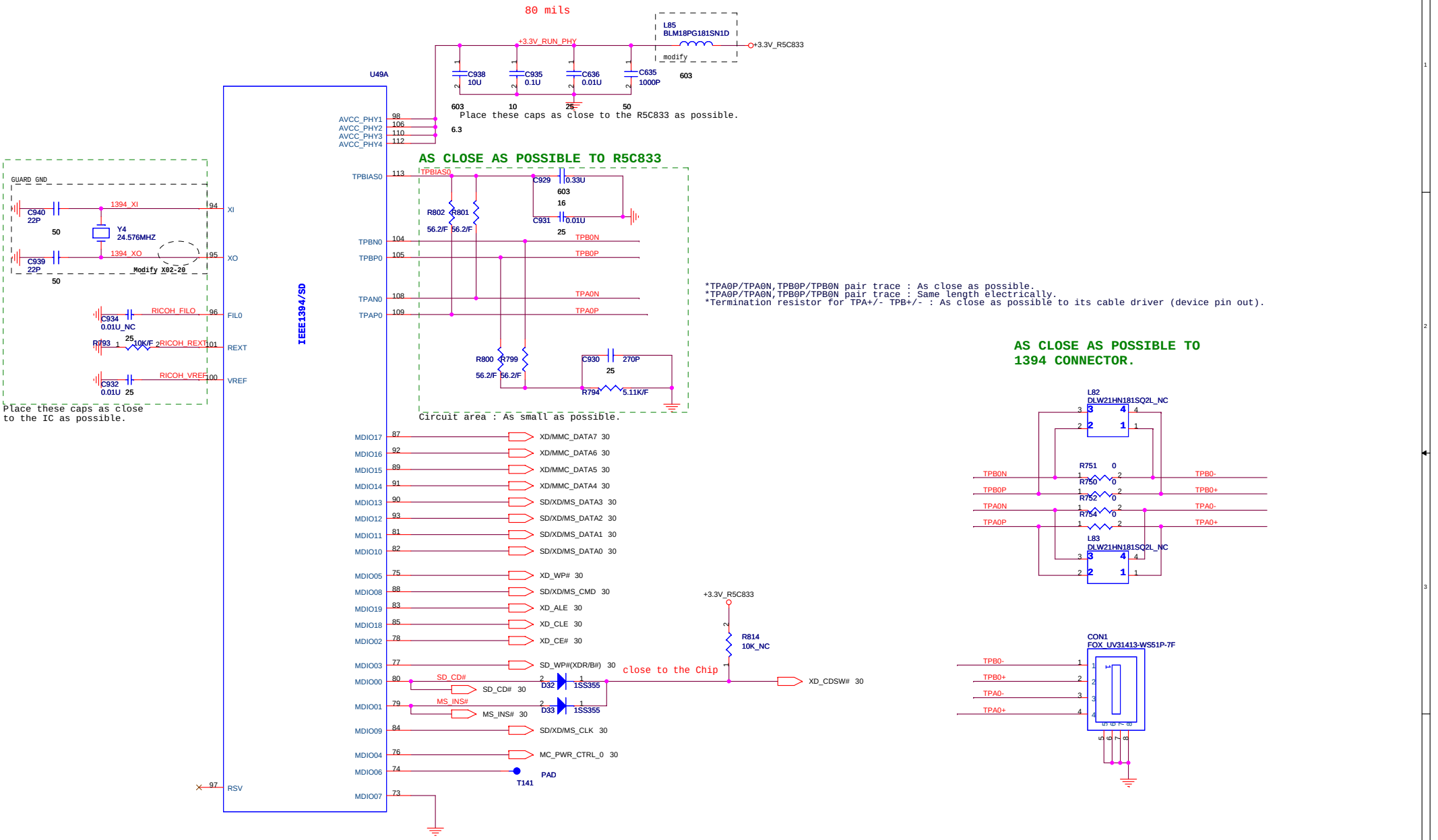


QUANTA COMPUTER

Title	CRT&TV CONN	
Size	Document Number GM5	Rev B2A
Date: Wednesday, June 25, 2008	Sheet 27 of 62	



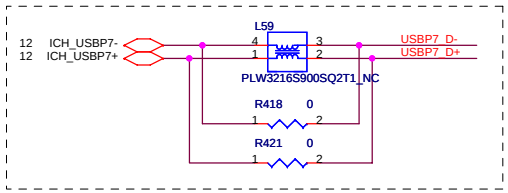
Title	8 IN 1 CONTROLLER	
Size	Document Number GM5	Rev B2A
Date: Wednesday, June 25, 2008	Sheet 28 of 62	

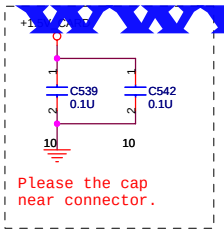


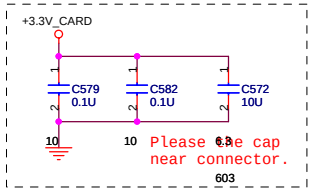
QUANTA COMPUTER			
Title	IEEE 1394		
Size	Document Number GM5		Rev B2A
Date: Wednesday, June 25, 2008	Sheet 29 of 62		

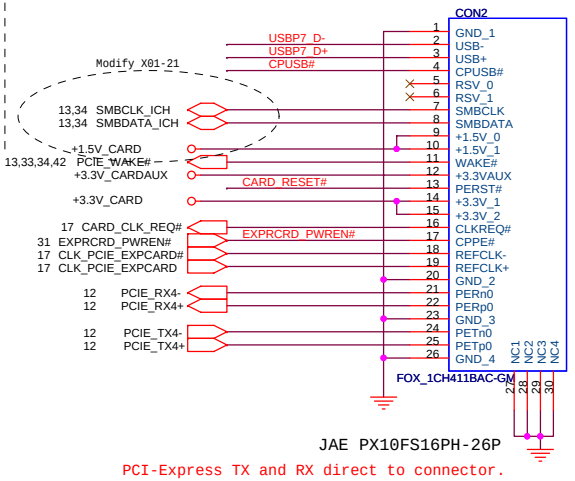
Express Card

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



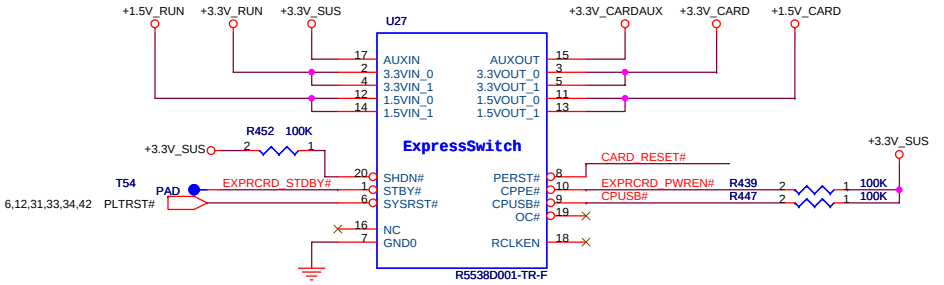


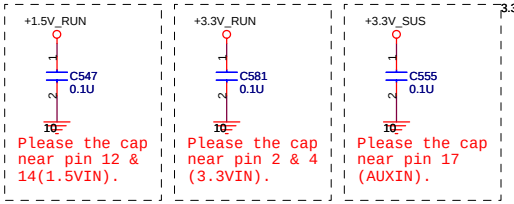


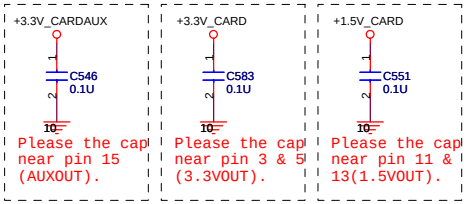


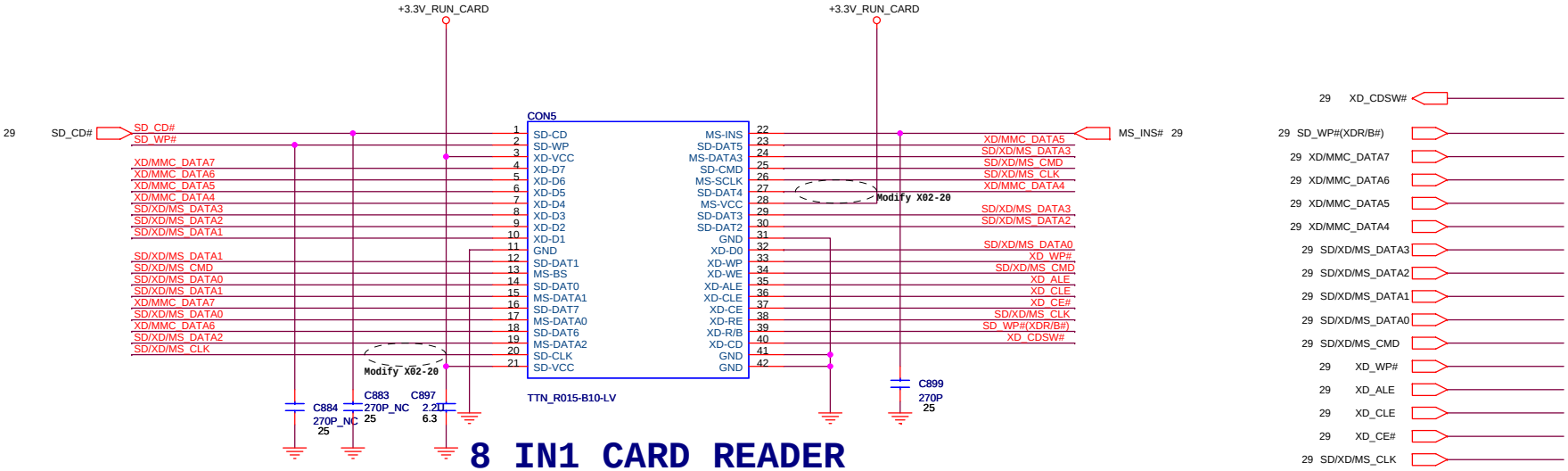
JAE PX10FS16PH-26P

PCI-Express TX and RX direct to connector.

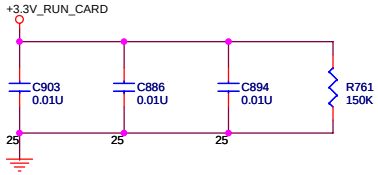


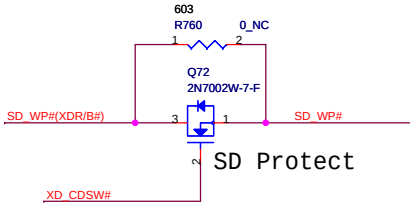


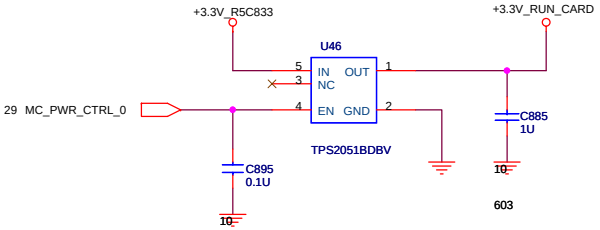




8 IN1 CARD READER







QUANTA COMPUTER

Title	ExpressCard/SmartCard	
Size	Document Number GM5	Rev B2A
Date: Wednesday, June 25, 2008	Sheet 30 of 62	

ITE8512E
LQFP-128L

Place these caps close to ITE8512.

CHARGE & BAT

CLK&LCD$thermal

G_thermal & LAN &media button

32KHz Clock.

ITE8512IX Populate R985 0 ohms.
ITE8512JX Populate R985 to 0.1uF, & C54 to 0.1uF.

IT8512E/IX-L
LQFP128-16X16-4-FX2

Discrete

Board ID Straps

UMA

USB_R_SIDE_EN#/BID0

BID1

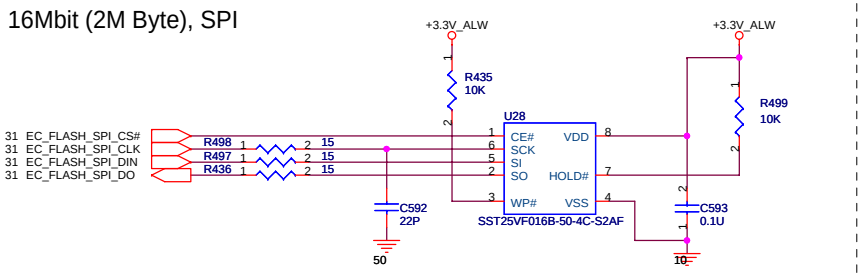
VGA_IDENTIFY
(USB_L_SIDE_EN#)
1 = Discrete Gfx.
0 = UMA.

CHIPSET_ID1 (KSO18)	BID1	BID0	GM3B (UMA)	GM3 (Dis)
0	0	0	SSI (X00)	SSI (X00)
0	0	1	PT (X01)	PT (X01)
0	1	0	ST (X02)	ST (X02)
0	1	1	QT (A00)	QT (A00)
0	0	0	(A01)	(A01)
0	0	1		

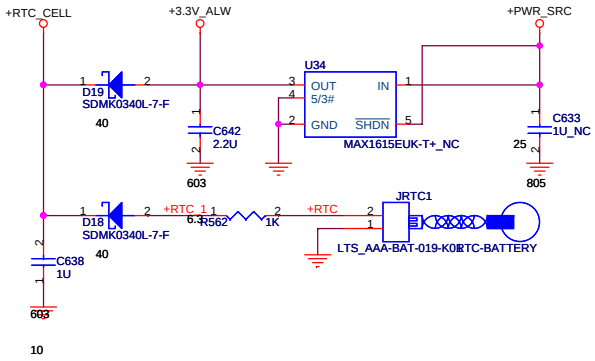
QUANTA COMPUTER

Title	Ultra I/O Controller ITE 8512	
Size	Document Number GM3	Rev B2A
Date: Thursday, June 26, 2008	Sheet 31 of 62	

16Mbit (2M Byte), SPI



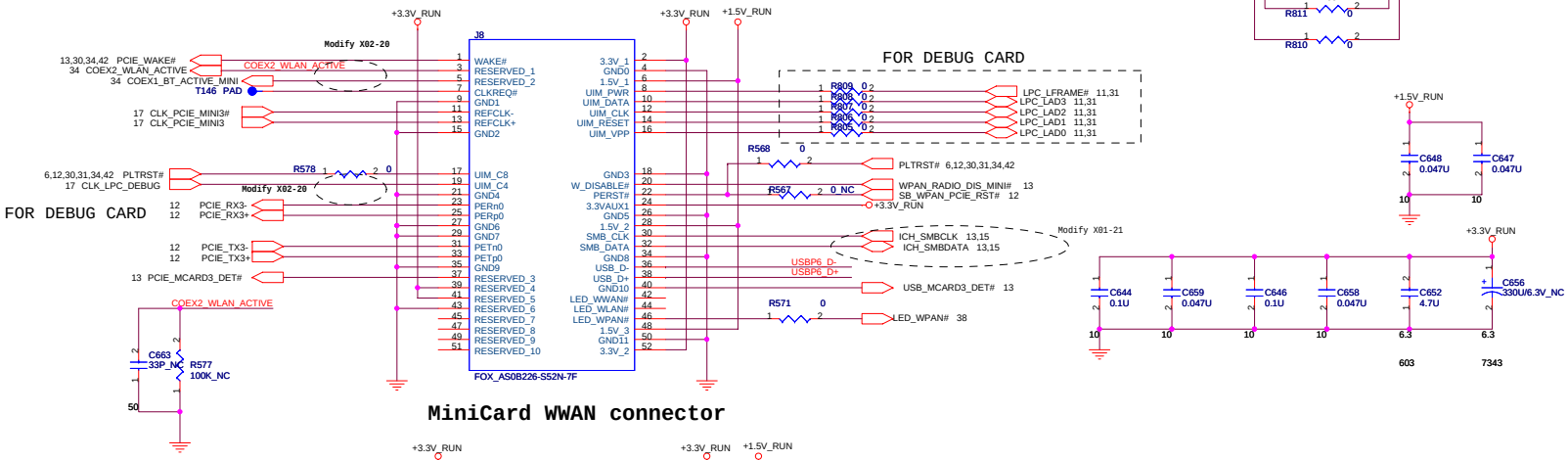
RTC BATTERY



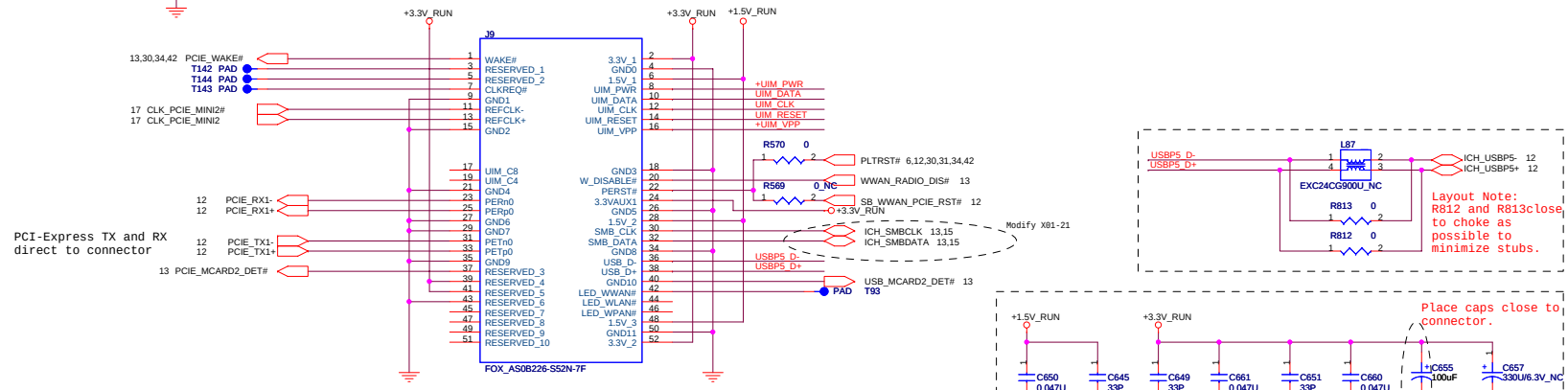
Title	Ultra I/O Controller ECE5028	
Size	Document Number GM5	Rev B2A
Date: Wednesday, June 25, 2008	Sheet 32 of 62	

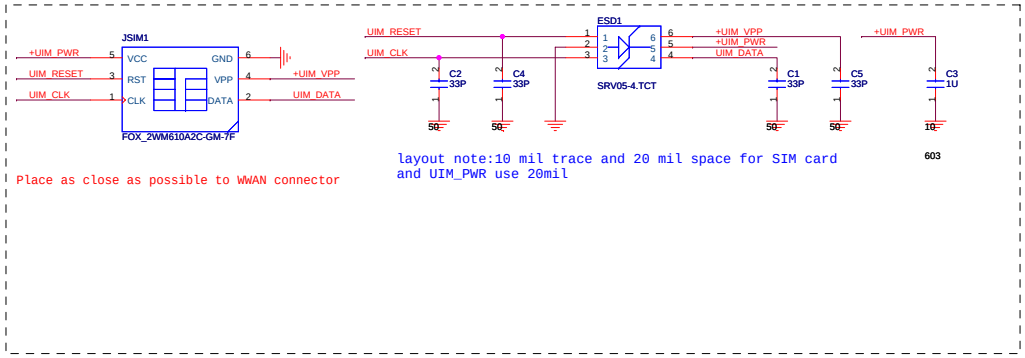
QUANTA COMPUTER

MiniCard Robson, UWB connector



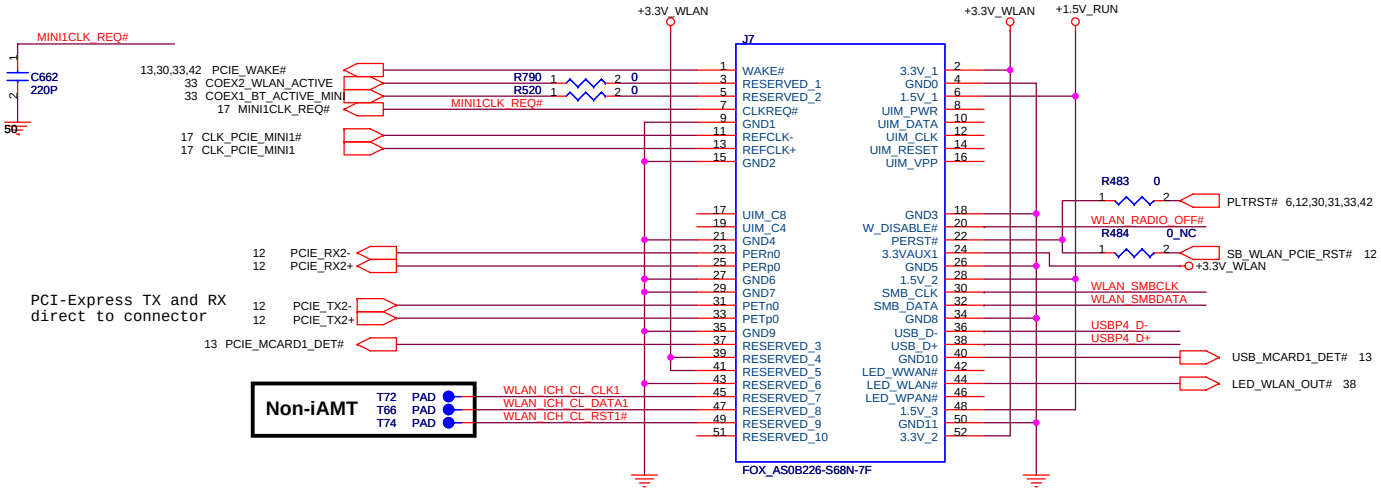
MiniCard WWAN connector

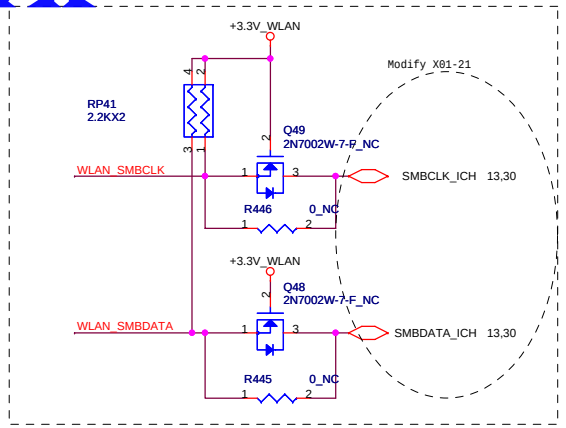


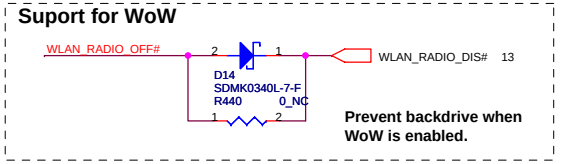


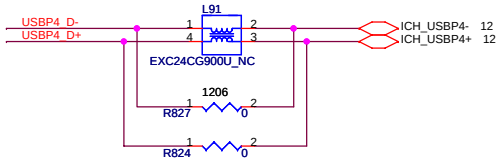
QUANTA COMPUTER		
Title: WWAN, WPAN		
Size	Document Number: GM5	Rev: B2A
Date: Wednesday, June 25, 2008	Sheet 33 of 62	

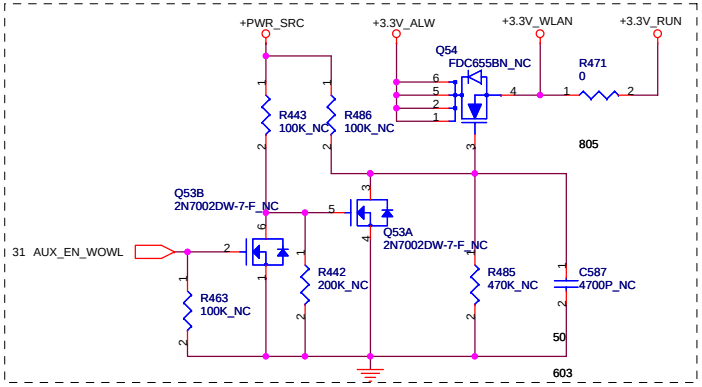
MiniCard WLAN connector

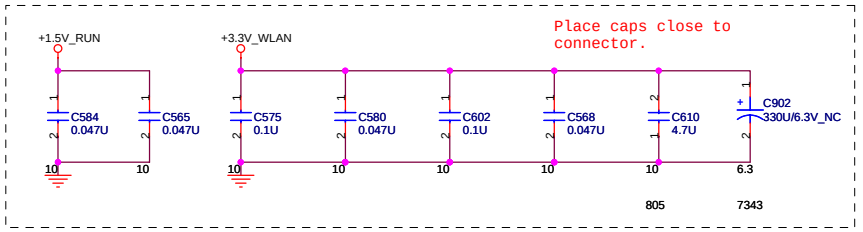




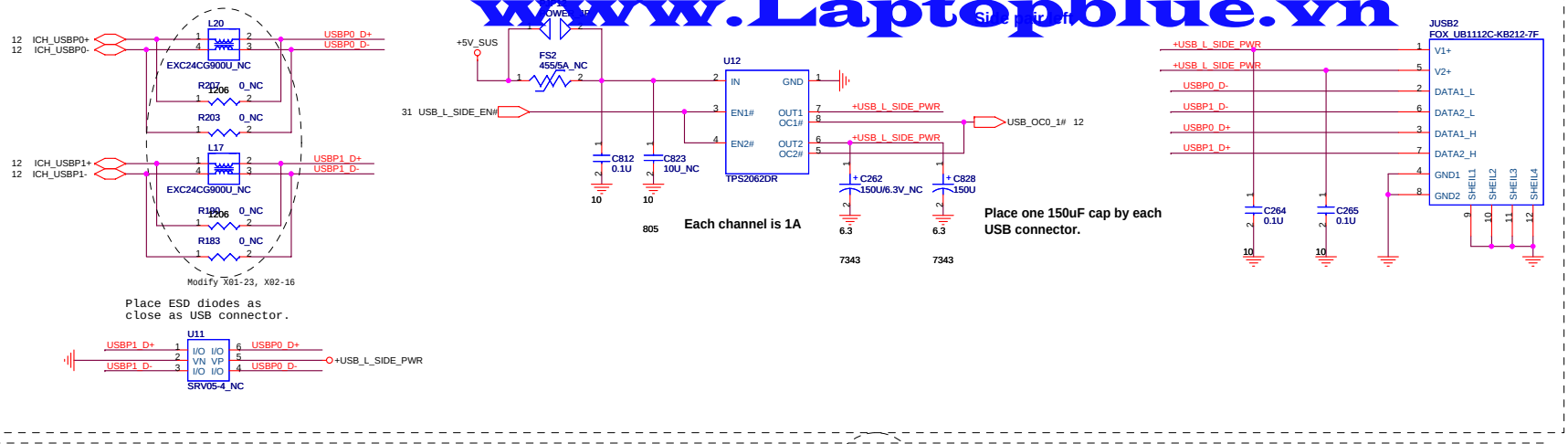




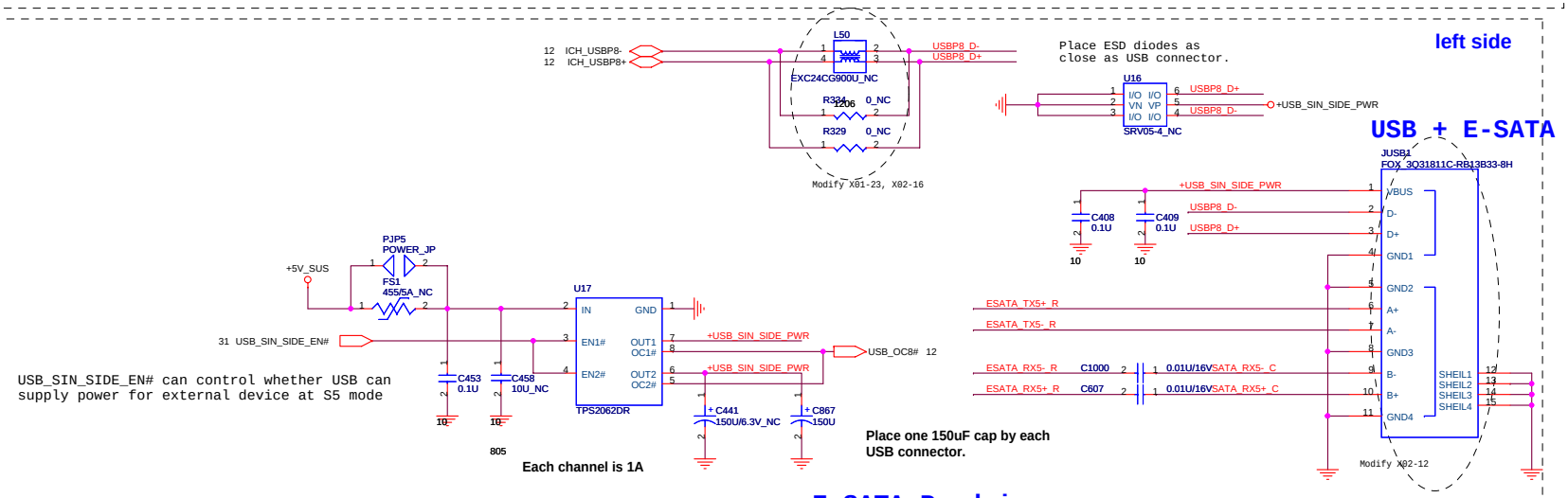




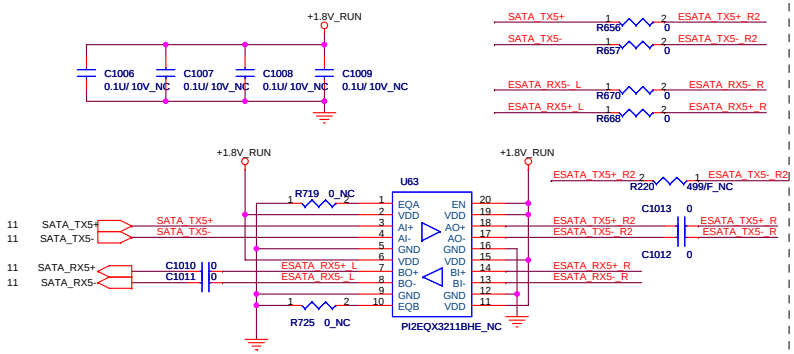
QUANTA COMPUTER		
Title: WLAN		
Size	Document Number: GM5	Rev: B2A
Date: Wednesday, June 25, 2008	Sheet 34 of 62	



left side



E-SATA Re-driver



QUANTA COMPUTER			
Title: External USB			
Size	Document Number GM5		Rev B2A
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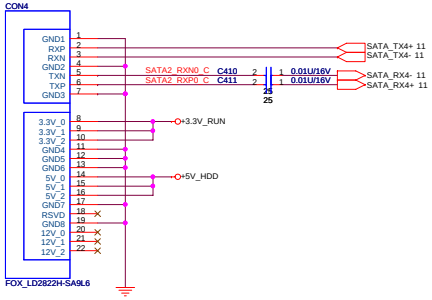
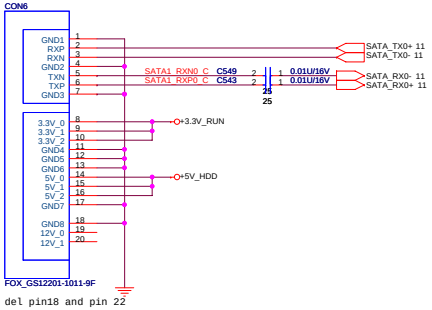
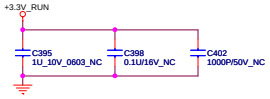
Second HDD

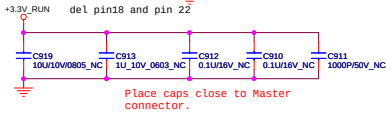
SATA Connector.

Master

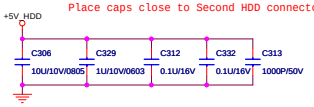


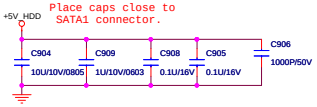


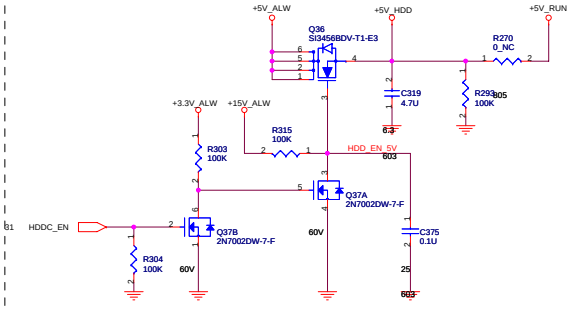




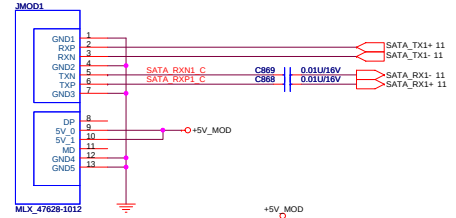
Place caps close to Second HDD connector.

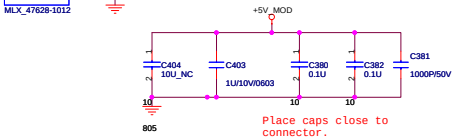


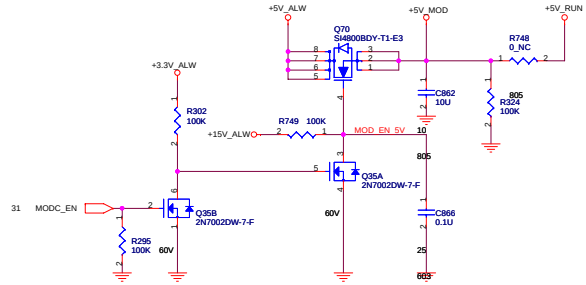


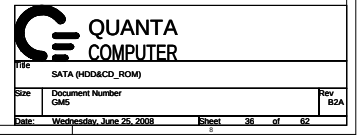


ODD Connector

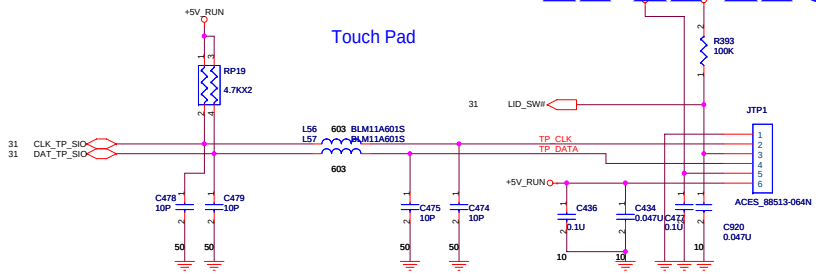




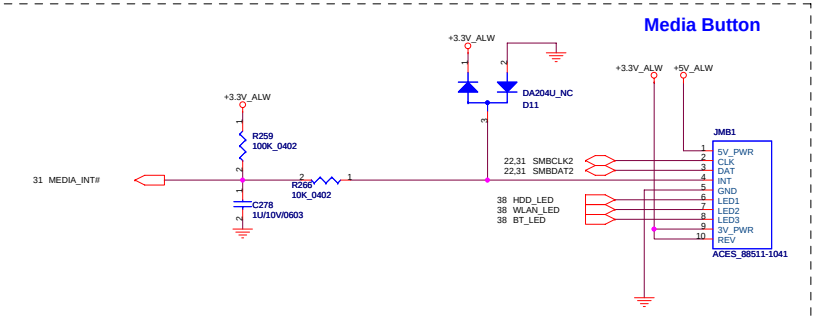




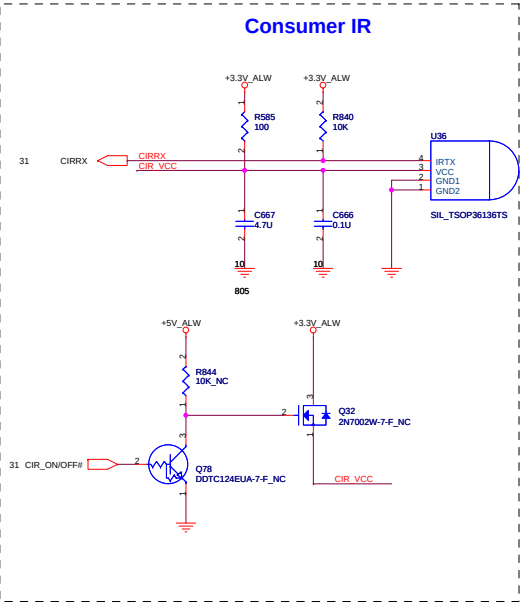
Touch Pad

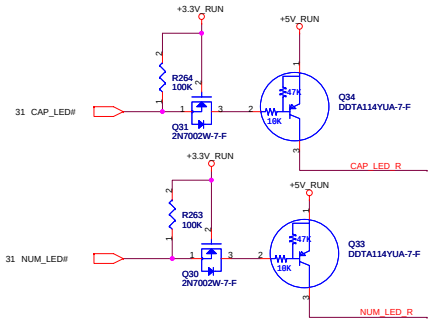


Media Button

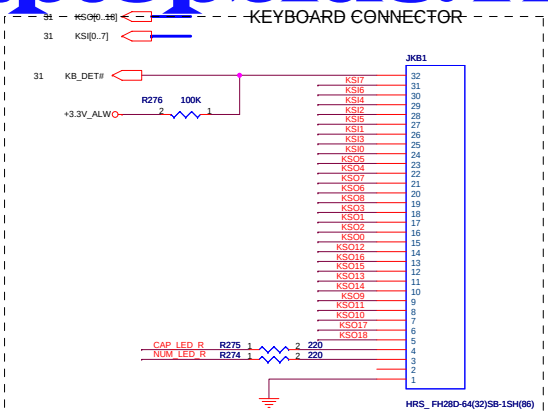


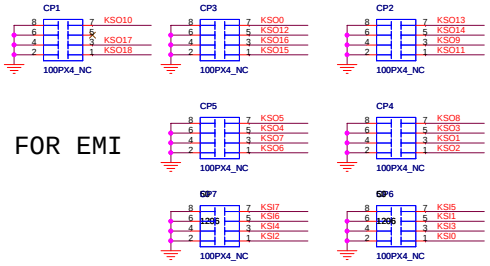
Consumer IR





KEYBOARD CONNECTOR

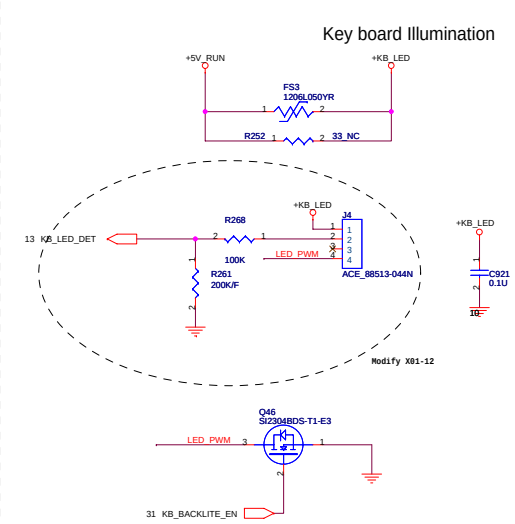




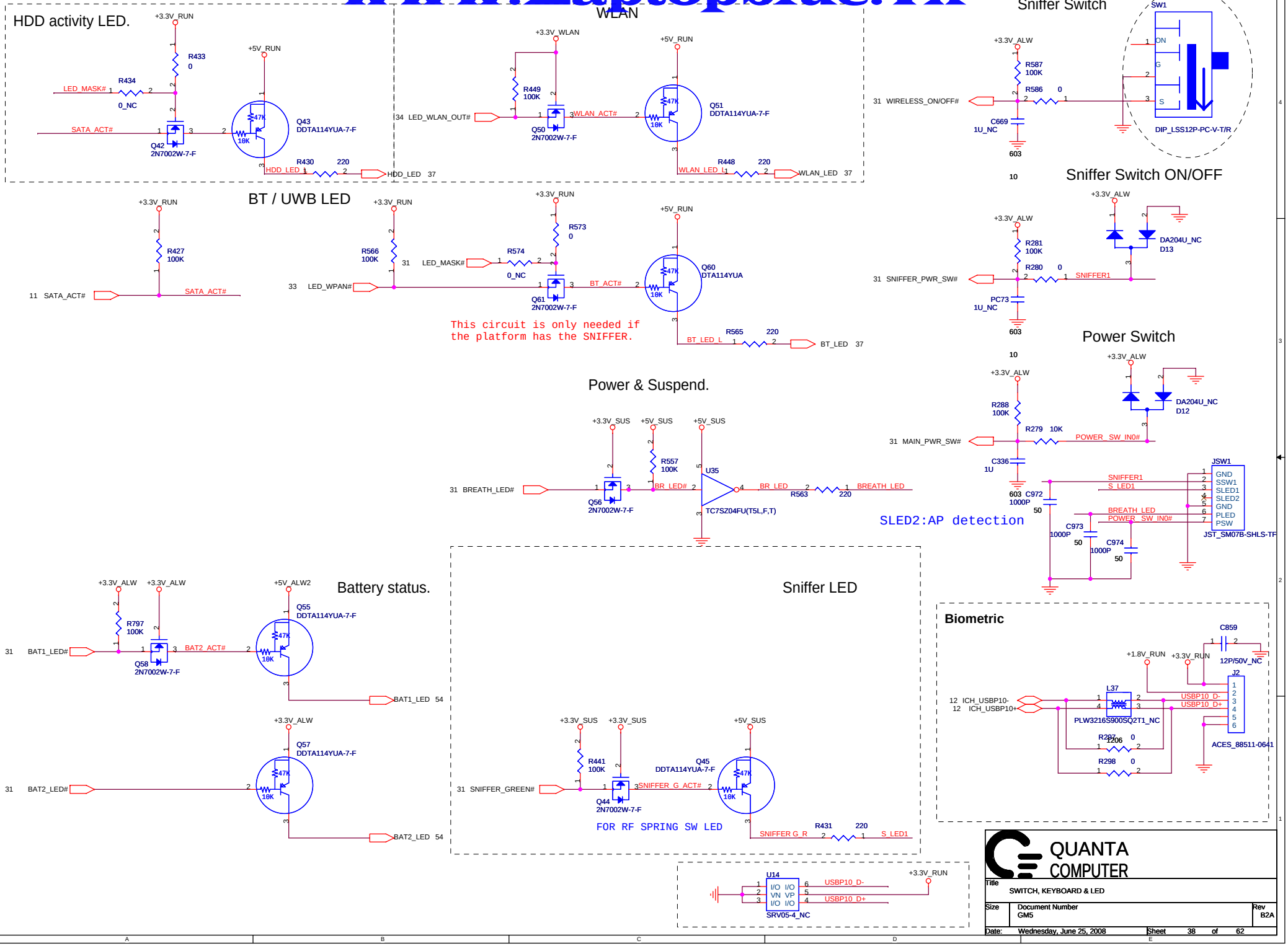
FOR EMI

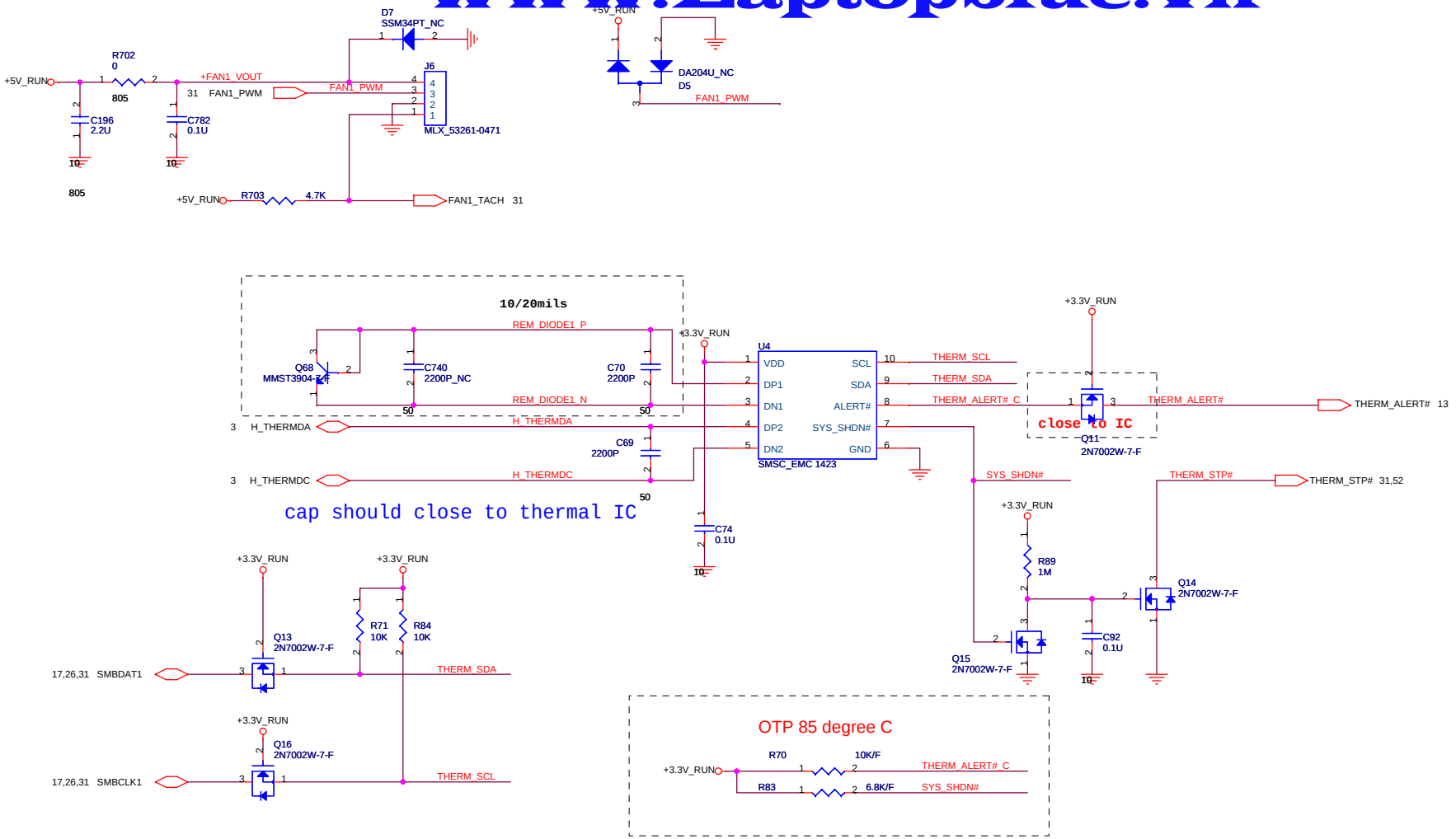
100P CAPS CLOSE TO JKB1

Key board Illumination



QUANTA COMPUTER		
Title: TOUCH PAD, BULE TOOTH & FIR		
Size	Document Number GM5	Rev B2A
Date: Wednesday, June 25, 2008	Sheet 37 of 62	





QUANTA COMPUTER		
Title: FAN & THERMAL		
Size	Document Number: GM5	Rev: B2A
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GAIN1	GAIN2	GAIN
0	0	6dB
0	1	10dB
1	0	15.6dB
1	1	21.6dB

INTERNAL SPEAKER AMP

AZALIA (HD) CODEC

TPA6040A4 QFN 32PIN

IDT_92HD73C1X5PRGXC1X

Layout Note: Place close U23 pin 23.

Layout Note: Close to U1 Pin 34

Layout Note: Close to U1 Pin 13

Layout Note: Place close to pin 18.

Layout Note: Place close U23

Layout Note: Place close to pin 8.

R71,R69 close to U1, Let DVDD width be 10-mils

FB_60ohm+-25%_100MHz _3A_0.05ohm DC

Title	Azelia CODEC		
Size	Document Number GM5		Rev B2A
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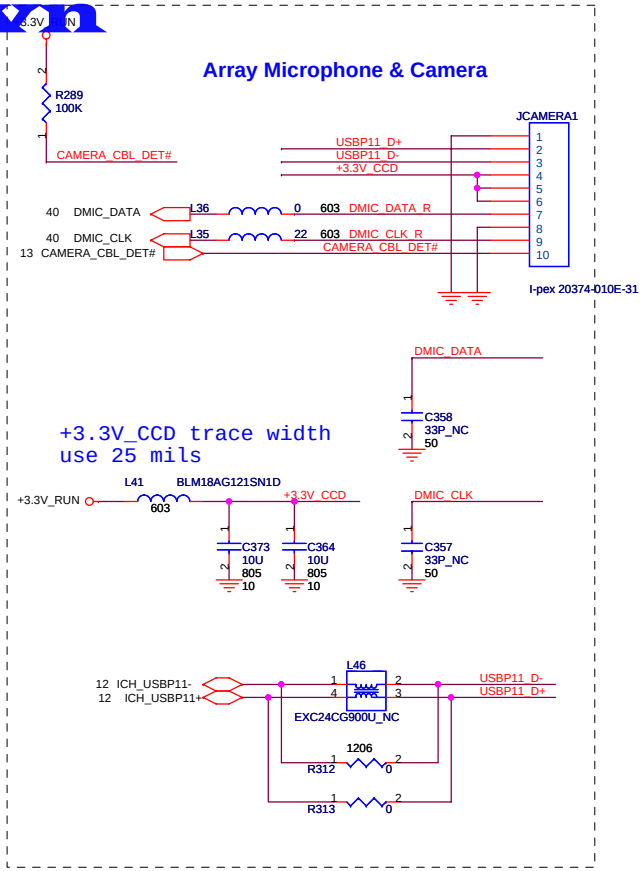
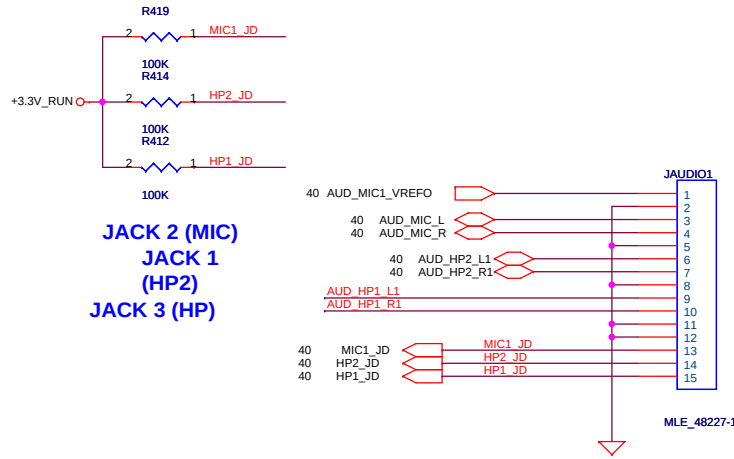
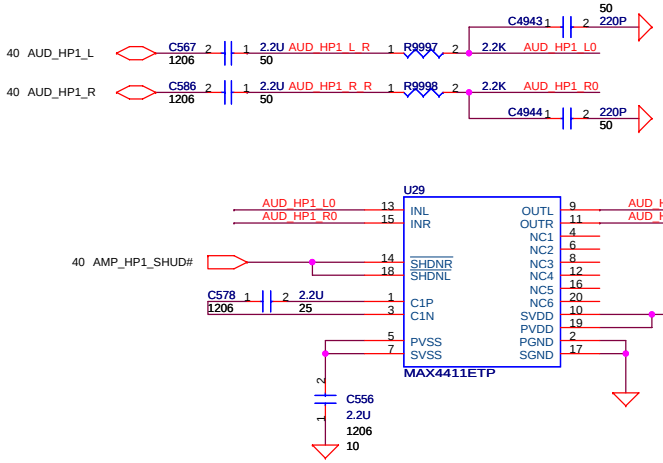
QUANTA COMPUTER

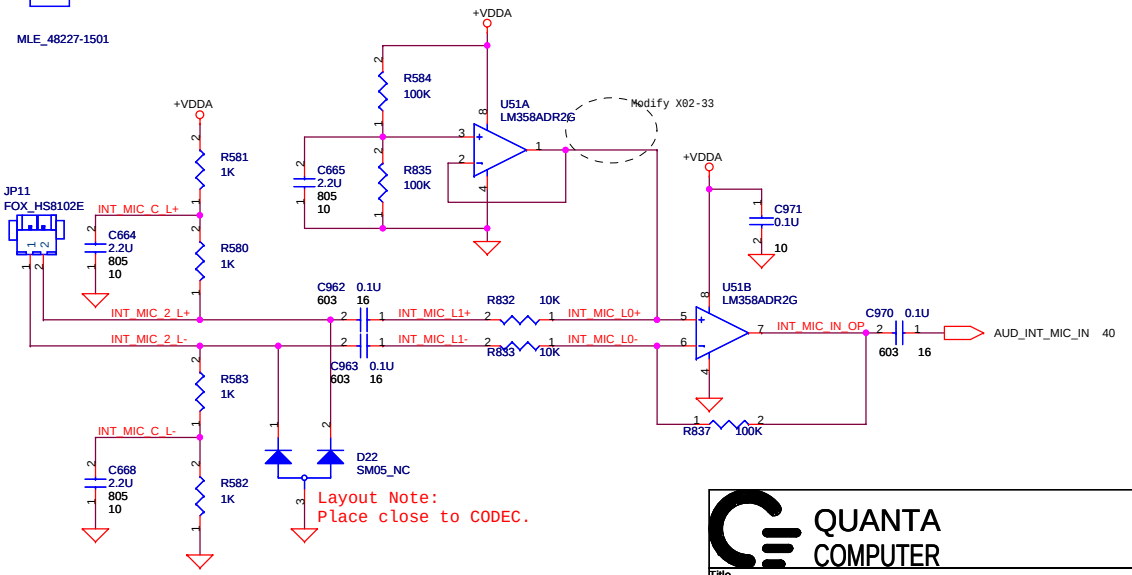
Headphone Jack
Stereo MIC Jack

Array Microphone & Camera









QUANTA COMPUTER		
Title: AUDIO CONN		
Size	Document Number: GM5	Rev: B2A
Date: Wednesday, June 25, 2008	Sheet 41 of 62	

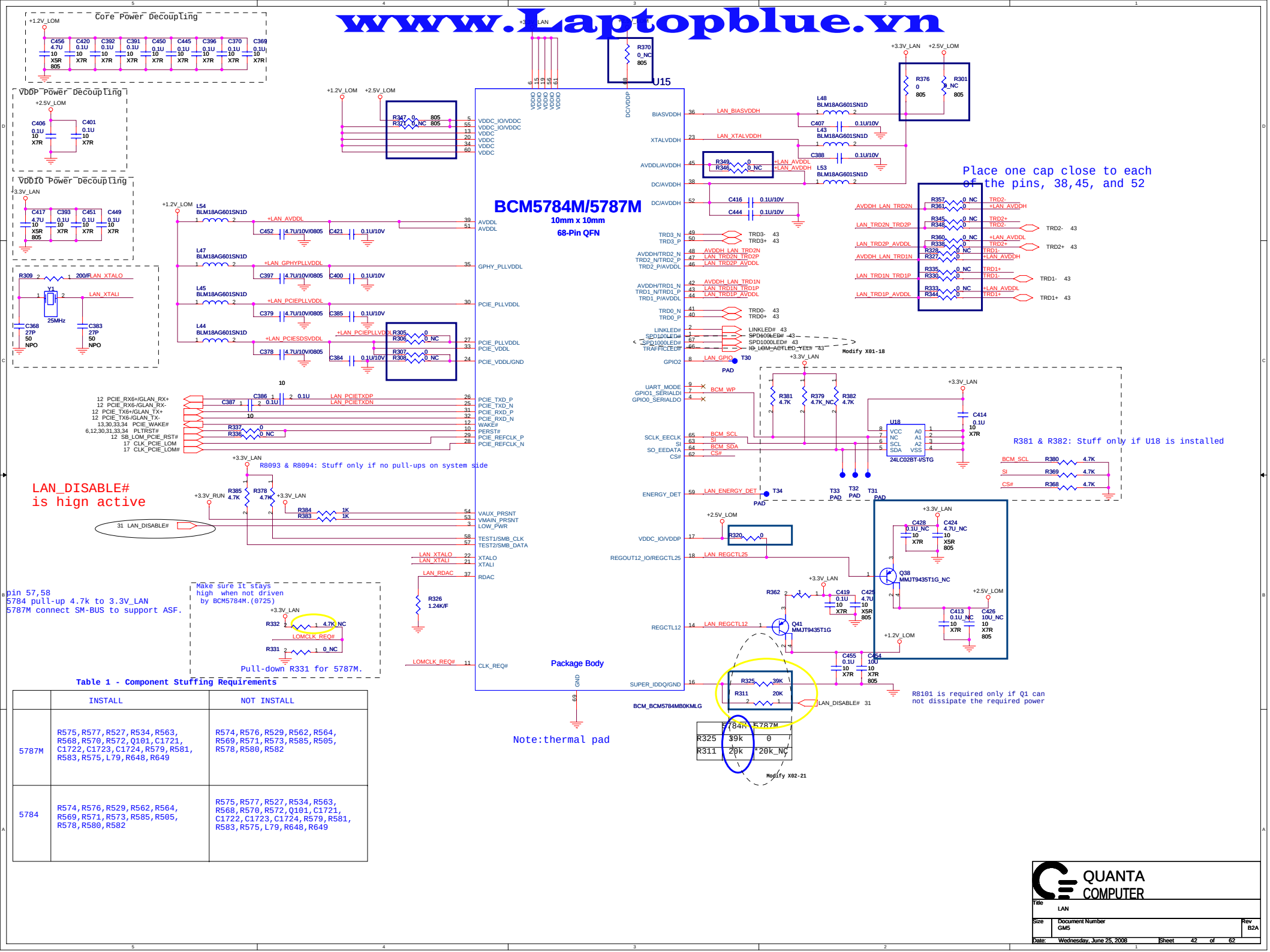


Table 1 - Component Stuffing Requirements

	INSTALL	NOT INSTALL
5787M	R575,R577,R527,R534,R563, R568,R570,R572,Q101,C1721, C1722,C1723,C1724,R579,R581, R583,R575,L79,R648,R649	R574,R576,R529,R562,R564, R569,R571,R573,R585,R505, R578,R580,R582
5784	R574,R576,R529,R562,R564, R569,R571,R573,R585,R505, R578,R580,R582	R575,R577,R527,R534,R563, R568,R570,R572,Q101,C1721, C1722,C1723,C1724,R579,R581, R583,R575,L79,R648,R649

	5784M	5787M
R325	39k	0
R311	20k	*20k_NC

QUANTA COMPUTER

Title	LAN	
Size	Document Number GM5	Rev B2A
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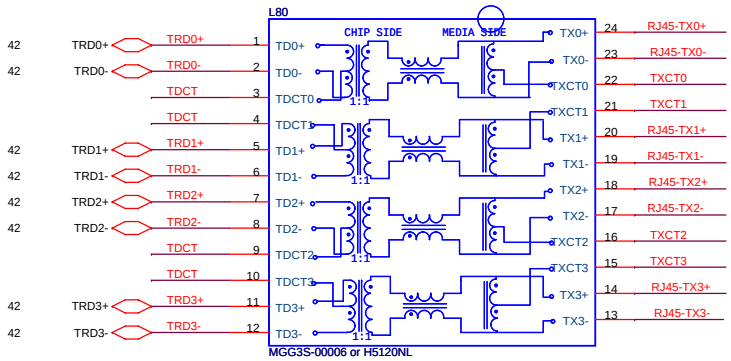
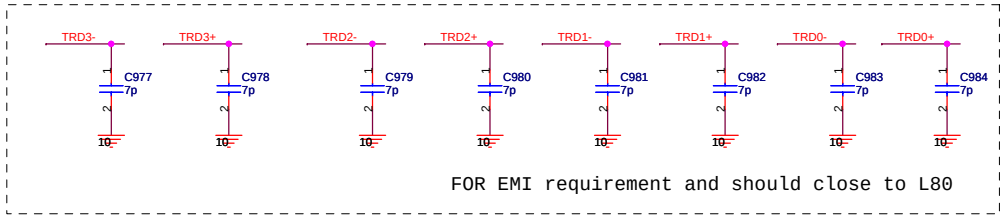
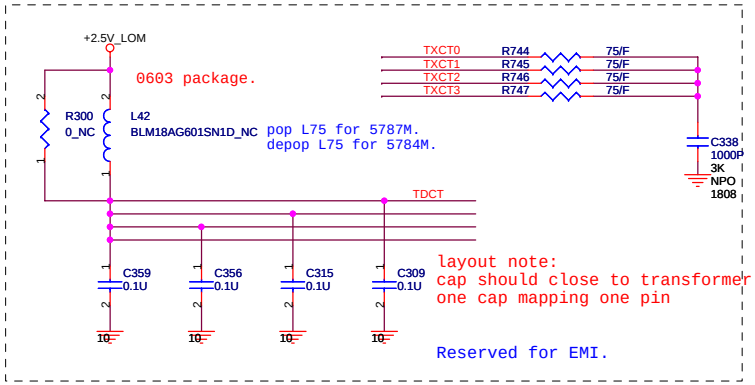
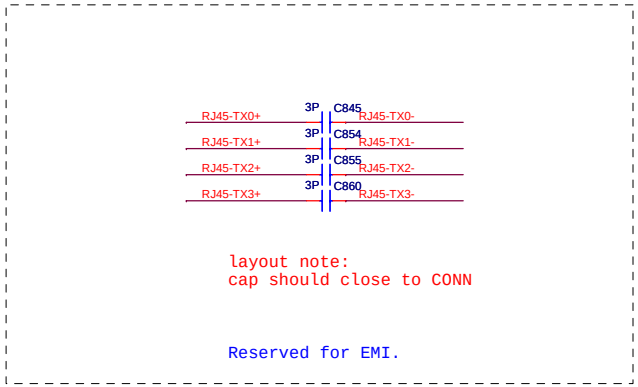
RJ-45 Connector

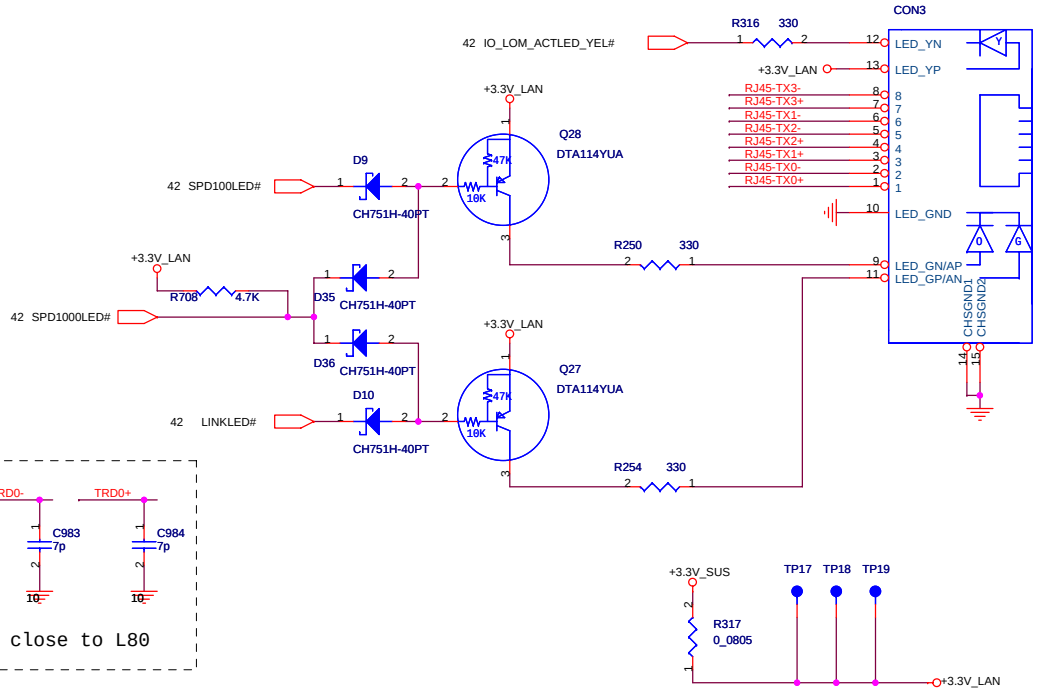
TRANSFORM



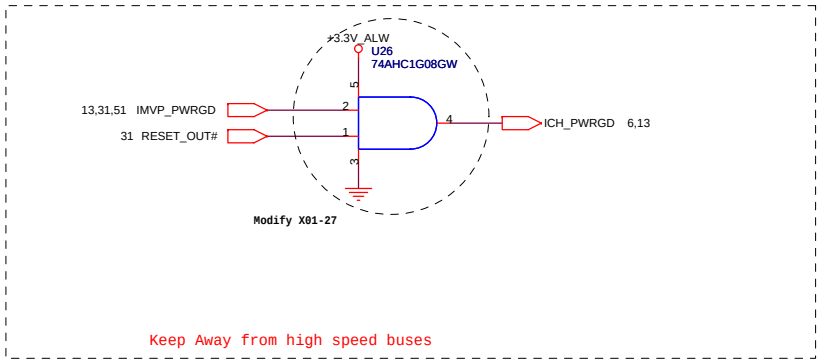


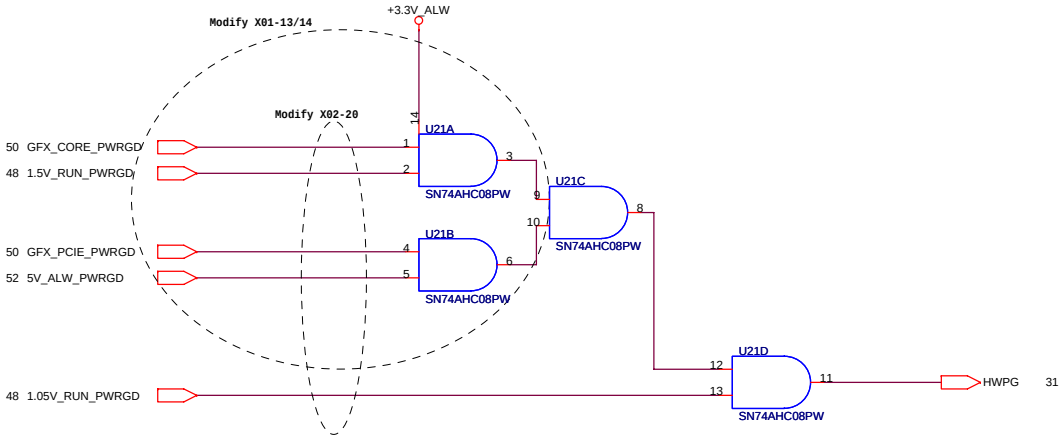


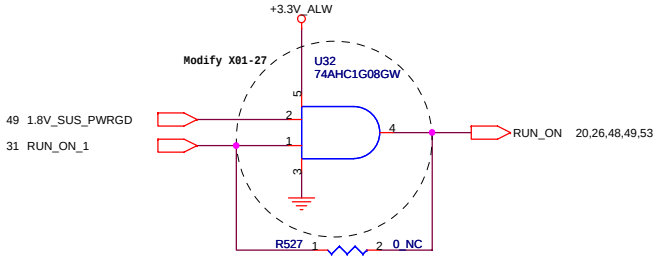


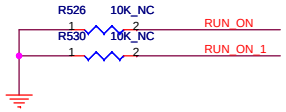


QUANTA COMPUTER			
Title	LAN SWITCH		
Size	Document Number GM5		Rev B2A
Date:	Wednesday, June 25, 2008	Sheet 43 of 62	









QUANTA COMPUTER

Title	System Reset Circuit	
Size	Document Number GM5	Rev B2A
Date: Wednesday, June 25, 2008	Sheet 44 of 62	

TH1
H-C394D126P2

TH2
H-TC276BC236D126P2

TH3
H-TC276BC236D126P2

TH4
H-TC394BC315D126P2

TH5
H-TC394BC315D126P2

TH6
H-C256D130P2

TH7
H-TC276BC354D126P2

TH8
H-TC394BC276D126P2

TH9
h-c315d189p2

TH10
H-C315D157I197P2

TH11
H-C315D157I197P2

TH12
H-C315D126P2

TH13
H-C256D126P2

TH14
H-C433D433N

TH15
H-C276D126P2

TH16
H-TC394BC236D126P2

TH17
H-C315D157I197P2

TH18
H-C315D157I197P2

TH19
H-TC276BC236D110P2

TH20
H-C315D157I197P2

TH23
H-TC197BC236D65P2

TH24
H-TC197BC236D65P2

TH25
H-TC197BC236D104P2

TH26
H-TC197BC236D65P2

TH27
H-TC197BC236D104P2

TH28
H-TC197BC236D65P2

TH29
H-TC275BC492D110P2

TH30
H-TC394BC315D126P2

TH31
h-tr8x9bc276d126p2

TH33
H-C118D118N

TH34
h-c236d110p2

TH35
h-c236d110p2

TH32
h-o71x118d31x78p2

TH36
h-o71x118d31x78p2

QUANTA COMPUTER

Title	Battery Selector	
Size	Document Number GM3	Rev B2A
Date: Wednesday, June 25, 2008	Sheet 45 of 62	

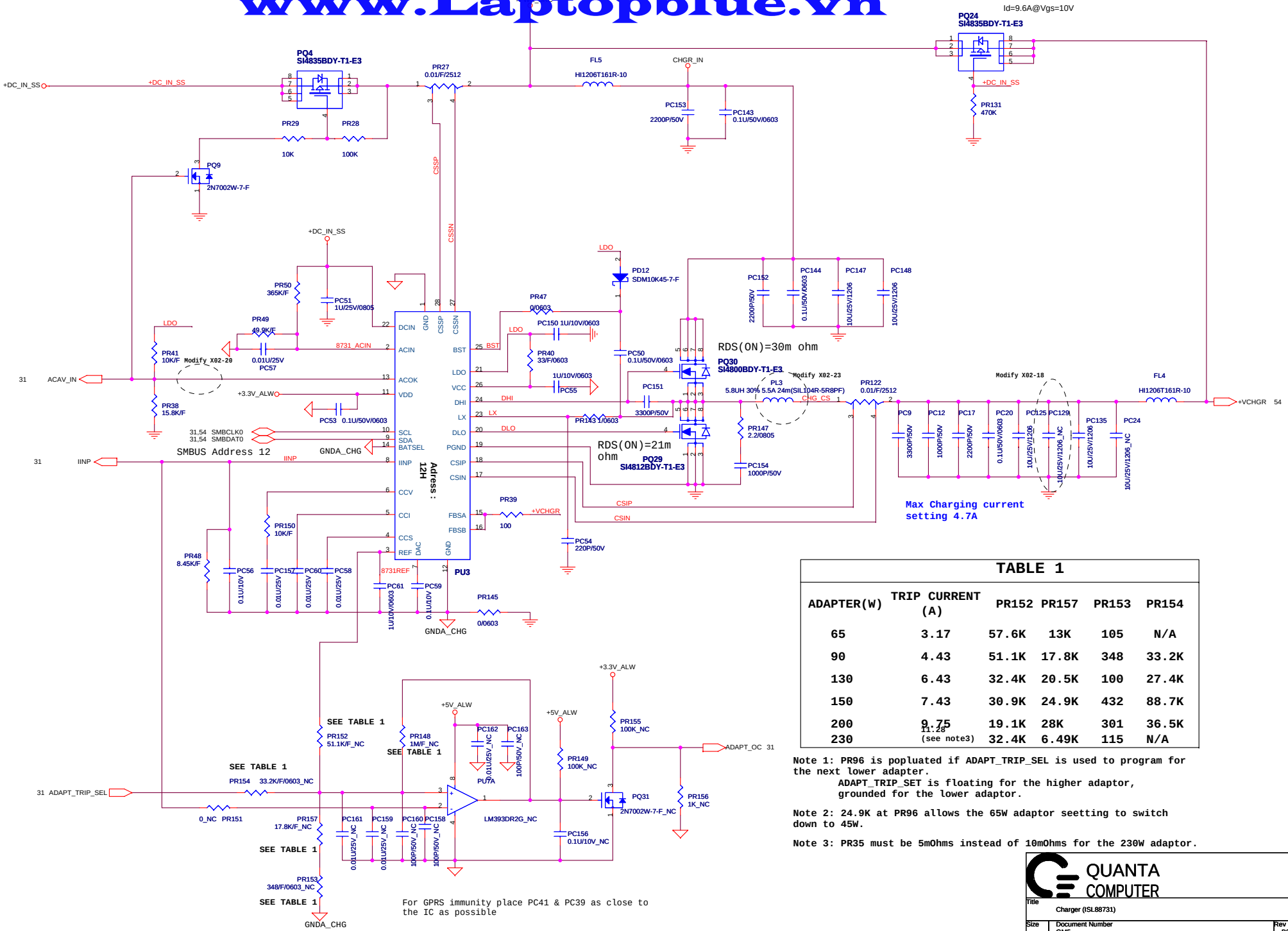


TABLE 1					
ADAPTER(W)	TRIP CURRENT (A)	PR152	PR157	PR153	PR154
65	3.17	57.6K	13K	105	N/A
90	4.43	51.1K	17.8K	348	33.2K
130	6.43	32.4K	20.5K	100	27.4K
150	7.43	30.9K	24.9K	432	88.7K
200	9.75	19.1K	28K	301	36.5K
230	11.28 (see note3)	32.4K	6.49K	115	N/A

Note 1: PR96 is popluated if ADAPT_TRIP_SEL is used to program for the next lower adapter.
ADAPT_TRIP_SET is floating for the higher adaptor, grounded for the lower adaptor.

Note 2: 24.9K at PR96 allows the 65W adaptor seetting to switch down to 45W.

Note 3: PR35 must be 5mOhms instead of 10mOhms for the 230W adaptor.

QUANTA COMPUTER

Title	Charger (ISL88731)	
Size	Document Number GM5	Rev B2A
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QUANTA COMPUTER

Title		
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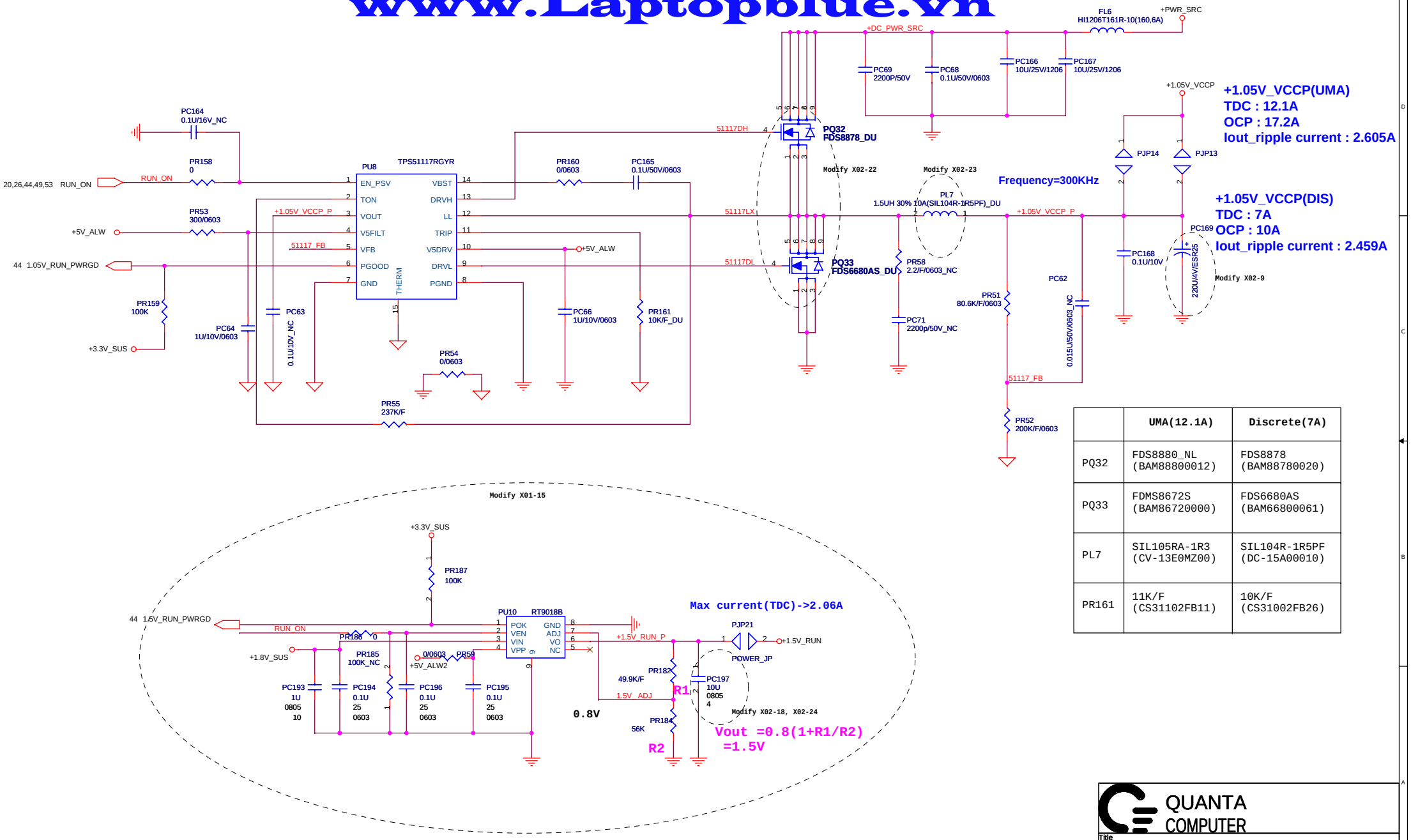
Date: Wednesday, June 25, 2008	Sheet 47 of 62	



	UMA(12.1A)	Discrete(7A)
PQ32	FDS8880_NL (BAM88800012)	FDS8878 (BAM88780020)
PQ33	FDMS8672S (BAM86720000)	FDS6680AS (BAM66800061)
PL7	SIL105RA-1R3 (CV-13E0MZ00)	SIL104R-1R5PF (DC-15A00010)
PR161	11K/F (CS31102FB11)	10K/F (CS31002FB26)

QUANTA COMPUTER

Title		
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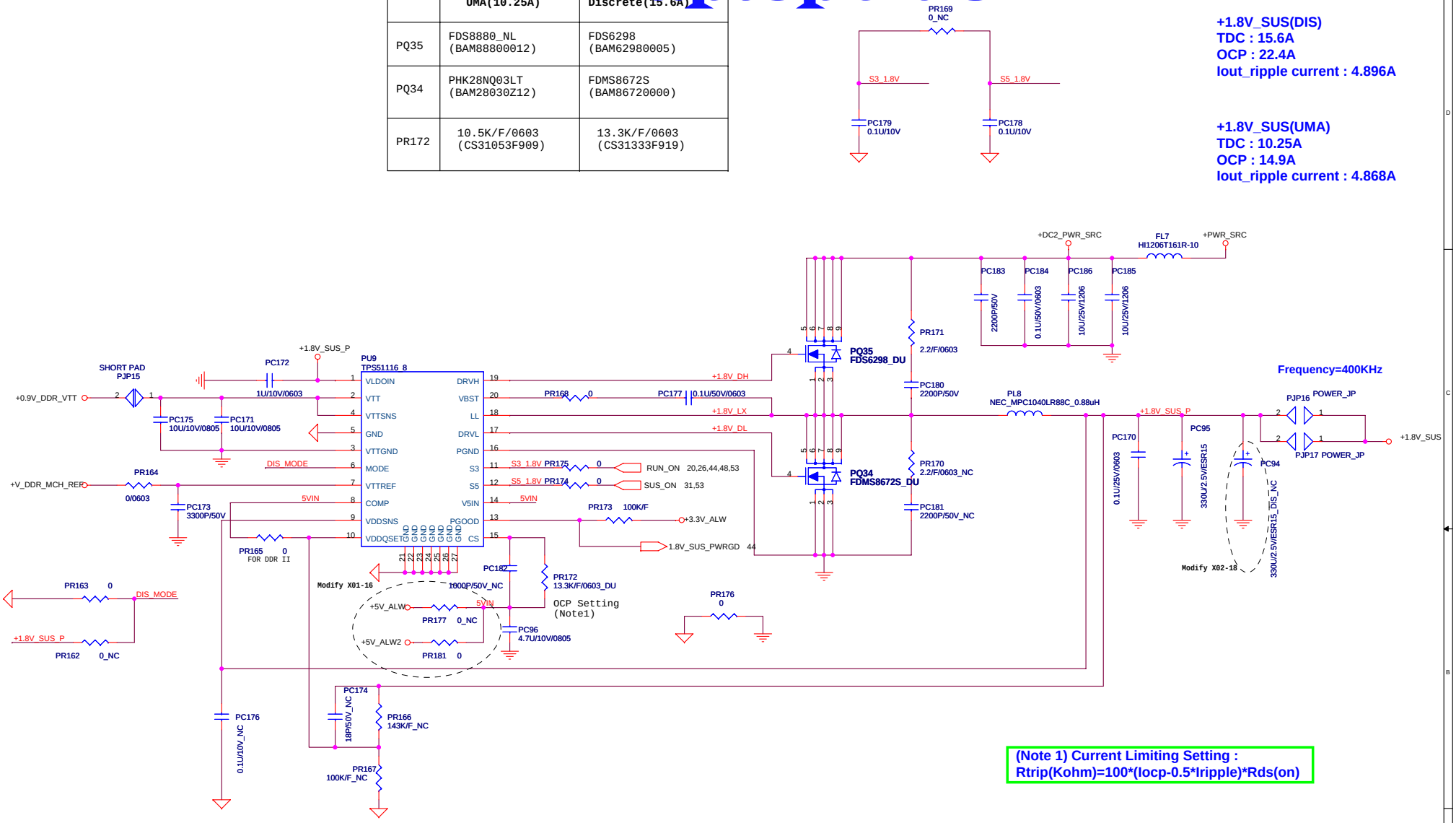
	UMA(10.25A)	Discrete(15.6A)
PQ35	FDS8880_NL (BAM88800012)	FDS6298 (BAM62980005)
PQ34	PHK28NQ03LT (BAM28030Z12)	FDMS8672S (BAM86720000)
PR172	10.5K/F/0603 (CS31053F909)	13.3K/F/0603 (CS31333F919)

+1.8V_SUS(DIS)
TDC : 15.6A
OCP : 22.4A
Iout_ripple current : 4.896A

+1.8V_SUS(UMA)
TDC : 10.25A
OCP : 14.9A
Iout_ripple current : 4.868A



(Note 1) Current Limiting Setting :
Rtrip(Kohm)=100*(Iocp-0.5*Iripple)*Rds(on)

QUANTA COMPUTER

Title	1.8VSUS & 0.9VTT (TPS51116)	
Size	Document Number GM5	Rev B2A
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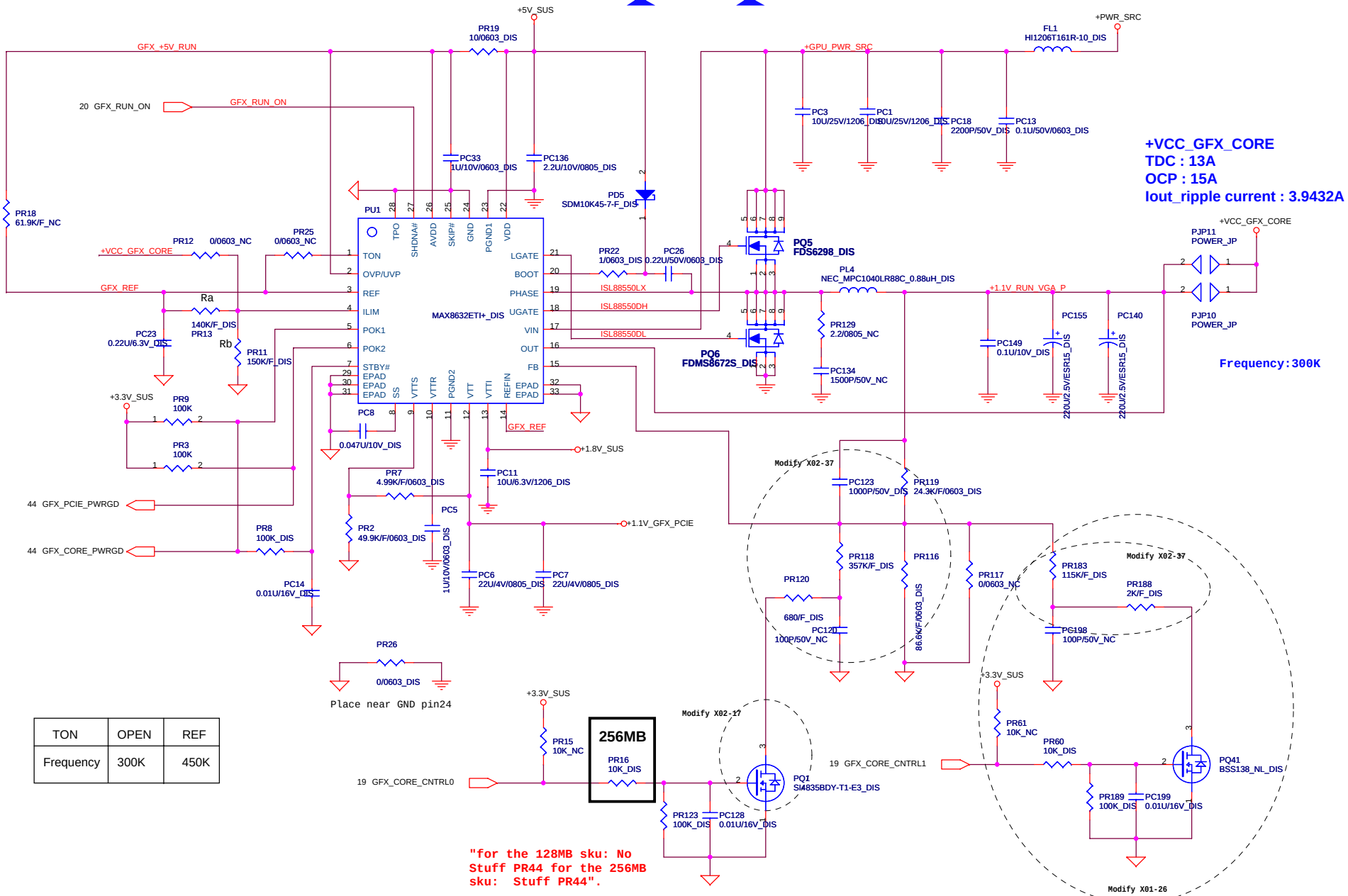

TON	OPEN	REF
Frequency	300K	450K

ILIM	Iovp=(2*(Rb/(Ra+Rb))*0.1*(1/RDSON)+(I_DELTA/2)
SKIP#	AVDD = Low-noise, forced-PWM mode. GND = Pulse-skipping operation.
OVP/UVP	The overvoltage limit is 116% of Vout. The undervoltage limit is 70% of Vout.

GFX_CORE_CNTRL0	GFX_CORE_CNTRL1	+VCC_GFX_CORE
LOW	LOW	0.9V
HIGH	LOW	0.95V
HIGH	HIGH	1.1V

QUANTA COMPUTER

Title	VGA DC/DC	
Size	Document Number GM5	Rev B2A
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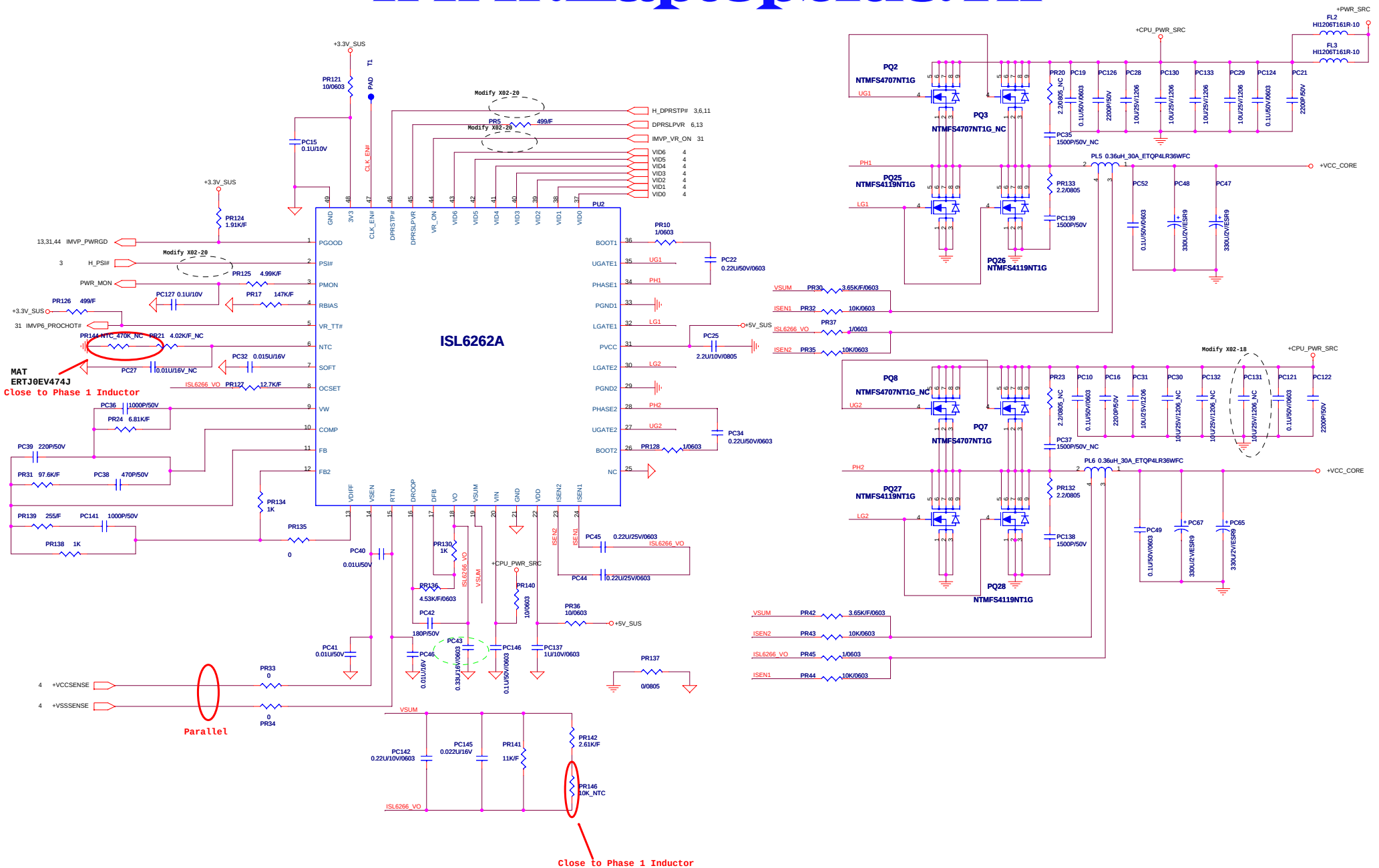

Title	CPU_Core_2Phase (ISL6266)	
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DC/DC +3V_ALW / +5V_SUS / +5V_ALW / +15V_ALW

+5V_ALW
TDC : 7.25A
OCP : 9.8A
Iout_ripple current : 2.84A

Frequency=400KHz

+3.3V_ALW
TDC : 6.2A
OCP : 8.6A
Iout_ripple current : 2.78A

Frequency=300KHz

Place these CAPs close to FETs

Place these CAPs close to FETs

No Install for ISL6236
Install 10 ohm for MAX8778

Modify X01-17

Modify X01-30

Modify X02-33

Modify X02-20

Modify X01-20 , X02-36

PU6 MAX17020ETJ+

PQ23 SI4800BDY-T1-E3

PQ22 SI4812BDY-T1-E3

PQ36 FDS8884

PQ37 FDS6680AS_NL

PQ38 DDTA114YUA-7-F

PQ39 2N7002W-7-F

PQ40 2N7002W-7-F_NC

PD9 1SS355

PD10 BAT54S-7-F

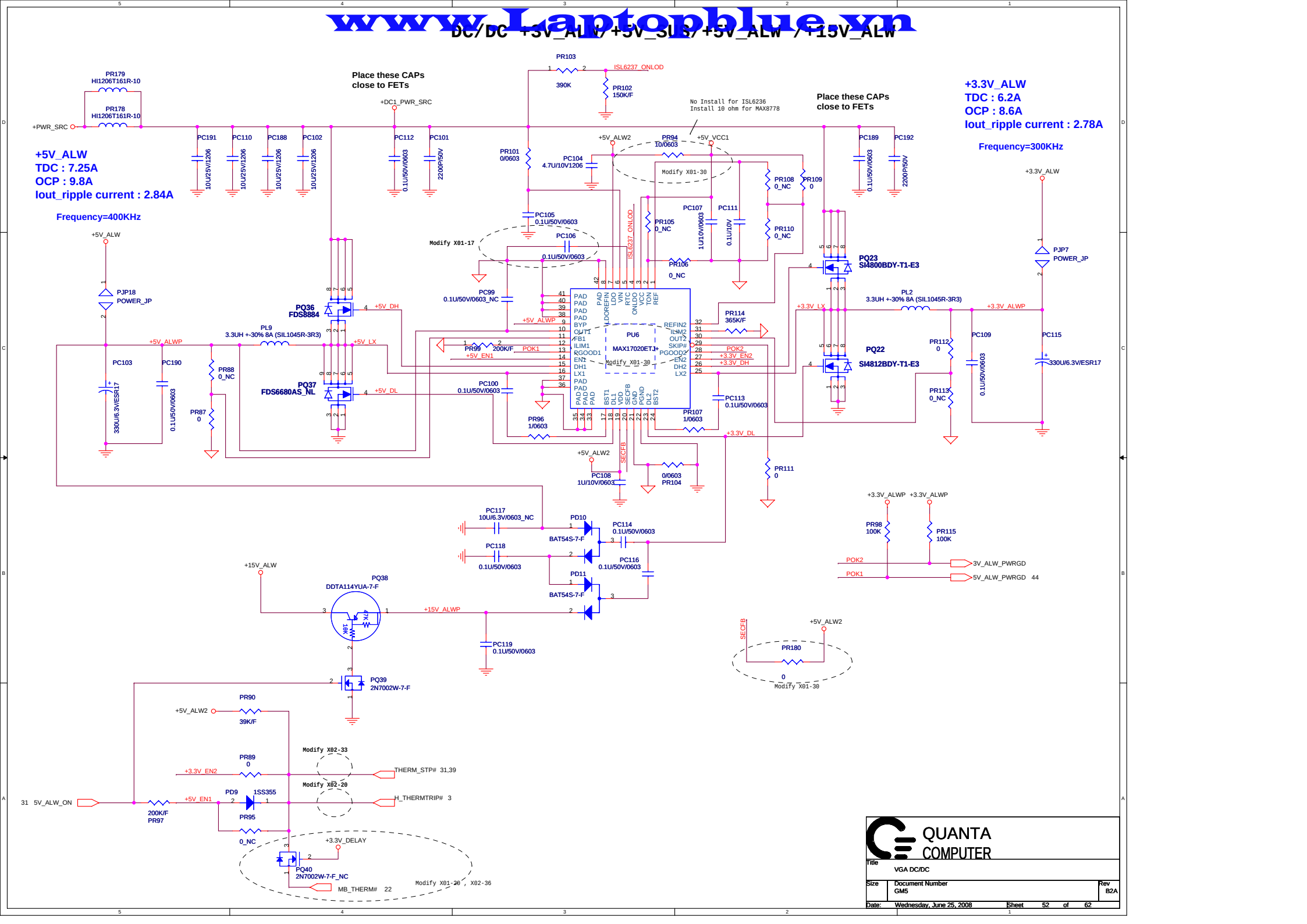
PD11 BAT54S-7-F

PJP18 POWER_JP

PJP7 POWER_JP

PL9 3.3UH +-30% 8A (SIL1045R-3R3)

PL2 3.3UH +-30% 8A (SIL1045R-3R3)



Title	VGA DC/DC		
Size	Document Number GM5		Rev B2A
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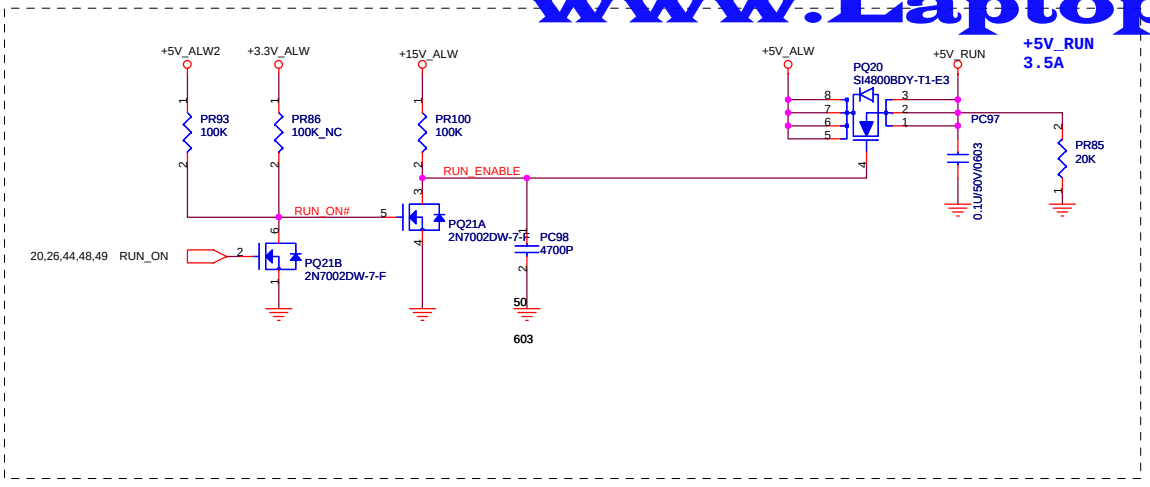
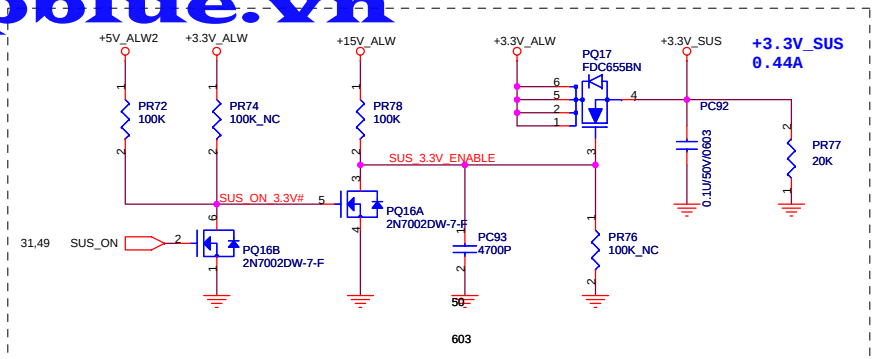
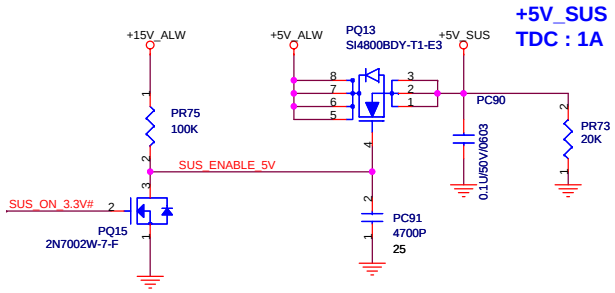
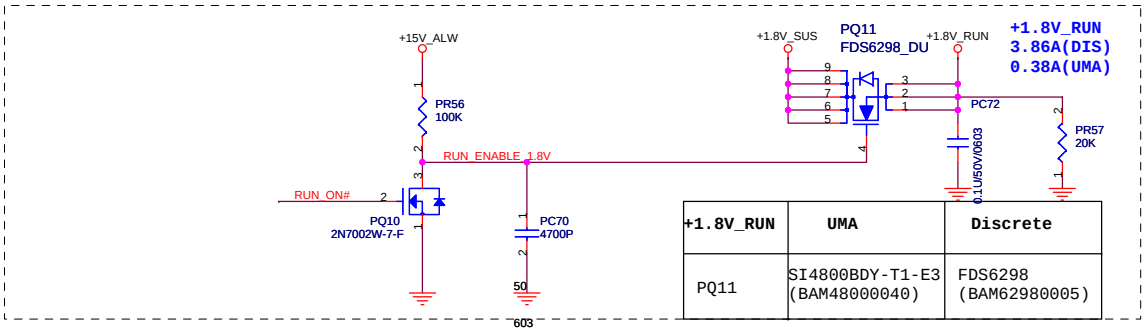
QUANTA COMPUTER

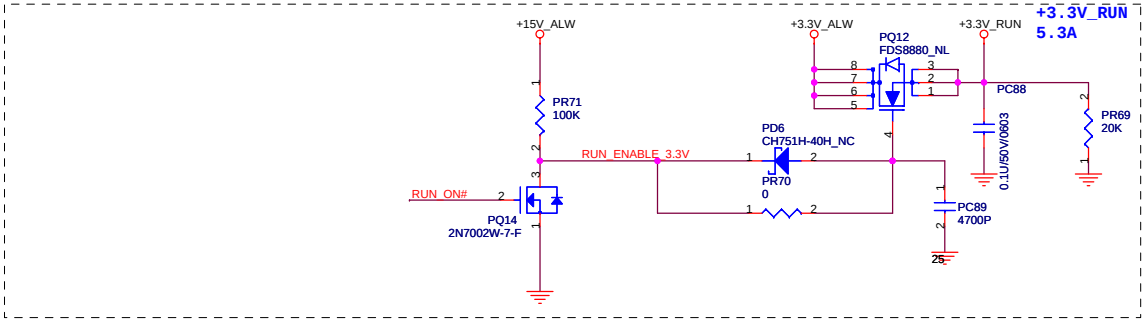


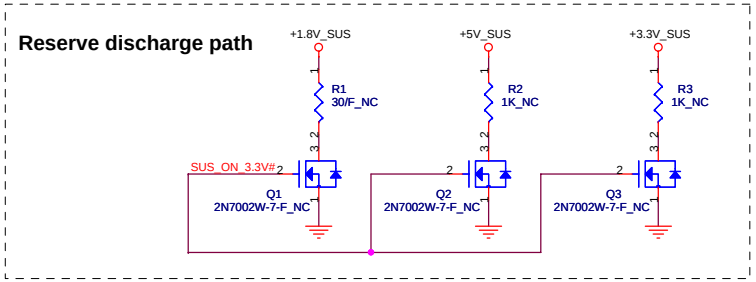


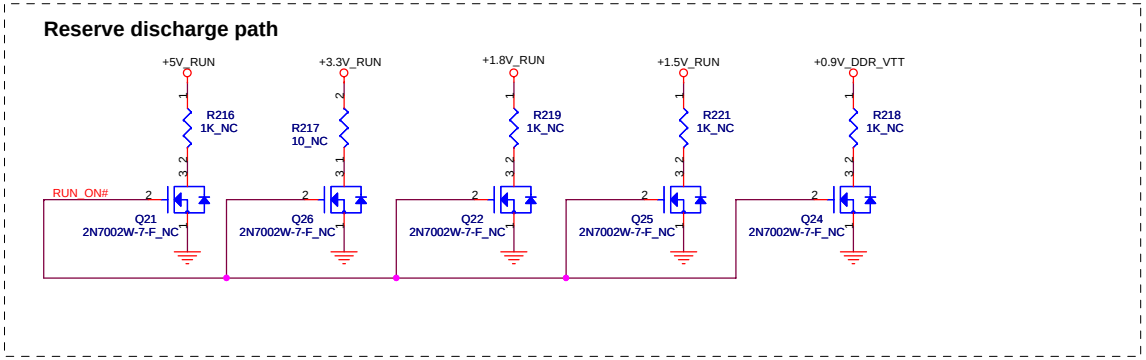




+1.8V_RUN	UMA	Discrete
PQ11	SI4800BDY-T1-E3 (BAM48000040)	FDS6298 (BAM62980005)







QUANTA COMPUTER

Title	RUN POWER SW	
Size	Document Number GM5	Rev B2A
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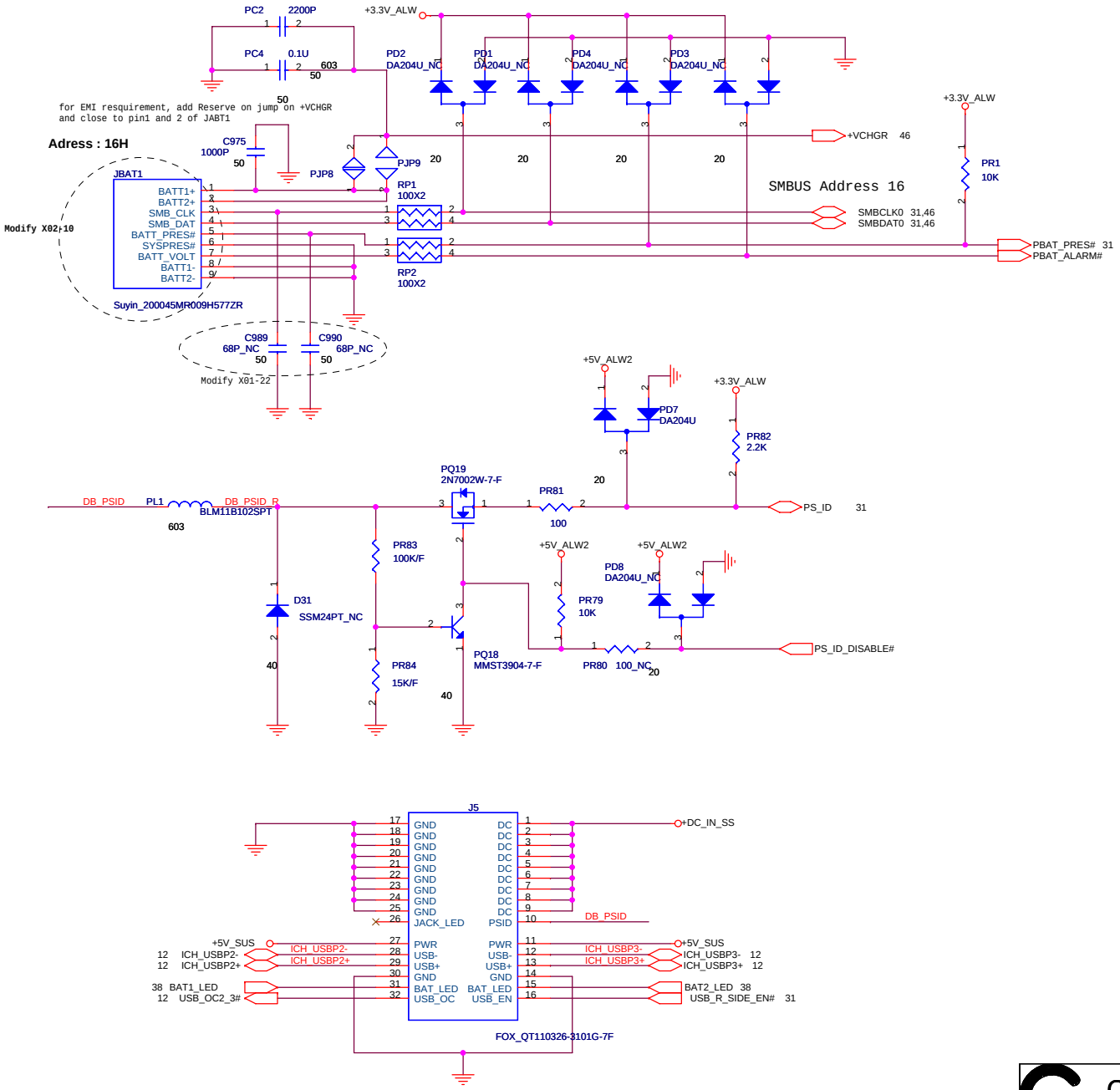

QUANTA COMPUTER

Title	DCIN,BATT CONNECTOR	
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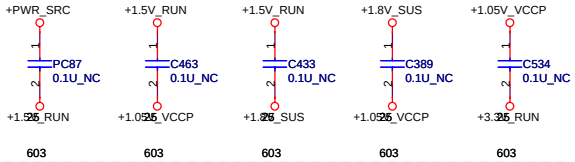
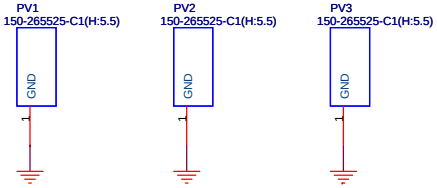
Reserved for EMI.

Stitching caps





Page 26
SATA (HDD&CD_ROM)

Page 27
PCCARD /CONN

Page 31
SIO(MEC5025)

Page 38
Azelia CODEC

Page 40
LAN(BCM5755M)

Page 48
1.5VRUN,1.05V(VTT)

Page 49
1.25V,1.8V,0.9V

Page 51
CPU_MAX8786(3phase)

Page 52
D/D Power

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Title	EMI CAP	
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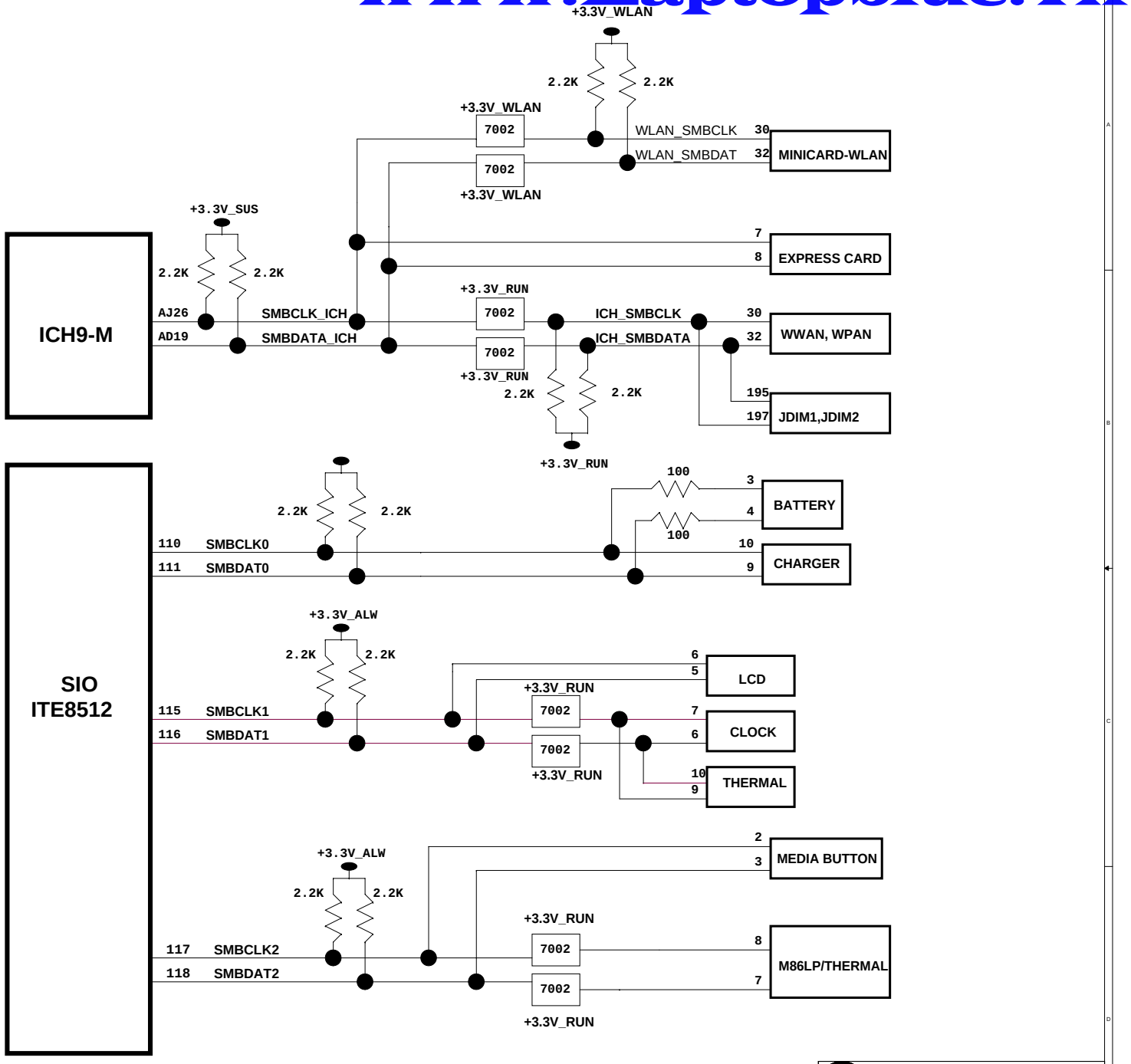

QUANTA COMPUTER

Title	SMBUS BLOCK	
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POWER STATES

State \ Signal	SLP S3#	SLP S4#	SLP S5#	S4 STATE#	ALWAYS PLANE	SUS PLANE	RUN PLANE	CLOCKS
S0 (Full ON) / M0	HIGH	HIGH	HIGH					
S3 (Suspend to RAM) / M1	LOW	HIGH	HIGH					
S4 (Suspend to DISK) / M1	LOW	HIGH	HIGH					
S5 (SOFT OFF) / M1	LOW	HIGH	LOW					
S3 (Suspend to RAM) / M-OFF	LOW	HIGH	HIGH					
S4 (Suspend to DISK) / M-OFF	LOW	LOW	HIGH					
S5 (SOFT OFF) / M-OFF	LOW	LOW	LOW					

PM TABLE

State \ power plane	+3.3V_ALW +3.3V_RTC_LDO +3.3V_WLAN +5V_ALW +15V_ALW	+1.8V_SUS +1.8V_LOM +3.3V_LAN +3.3V_SUS +5V_SUS	+0.9V_DDR_VTT +1.05V_VCCP +1.25V_RUN +1.5V_CARD +1.5V_RUN +3.3V_CARD +3.3V_CARDAUX +3.3V_R5C832 +3.3V_RUN	+3.3V_RUN_CARD +2.5V_RUN +5V_MOD +5V_RUN +5V_SPK_AMP +CPU_PWR_SRC +VCC_CORE +VDDA	+DC_IN +DC_IN_SS +PWR_SRC +RTC_CELL
S0	ON	ON	ON		ON
S3	ON	ON	OFF		ON
S5 S4/AC	ON	OFF	OFF		ON
S5 S4/AC don't exist	OFF	OFF	OFF		ON

PCI TABLE

PCI DEVICE	IDSEL	REQ#/GNT#	PIRQ
R5C833	AD17	REQ#0 / GNT#0	PIRQB: 1394 PIEQD: Card reader

	USB PORT#	DESTINATION
ICH9-M	0	Side pair Top / left
	1	Side pair bottom / left
	2	Side pair top/right(DB)
	3	Side pair Bot right(DB)
	4	WLAN
	5	Mini Card (WWAN)
	6	Mini Card (WPAN)
	7	Express Card
	8	USB W/ E-SATA port
	9	Reserved
	10	Biometric
	11	Camera
ECE 5011	1	None
	2	None
	3	None
	4	None

PCI EXPRESS	DESTINATION
Lane 1	MINI CARD-1 WWAN
Lane 2	MINI CARD-2 WLAN
Lane 3	MINI CARD-3 WPAN
Lane 4	Express Card
Lane 5	None
Lane 6	None

QUANTA COMPUTER

Title	Schematic Block Diagram1	
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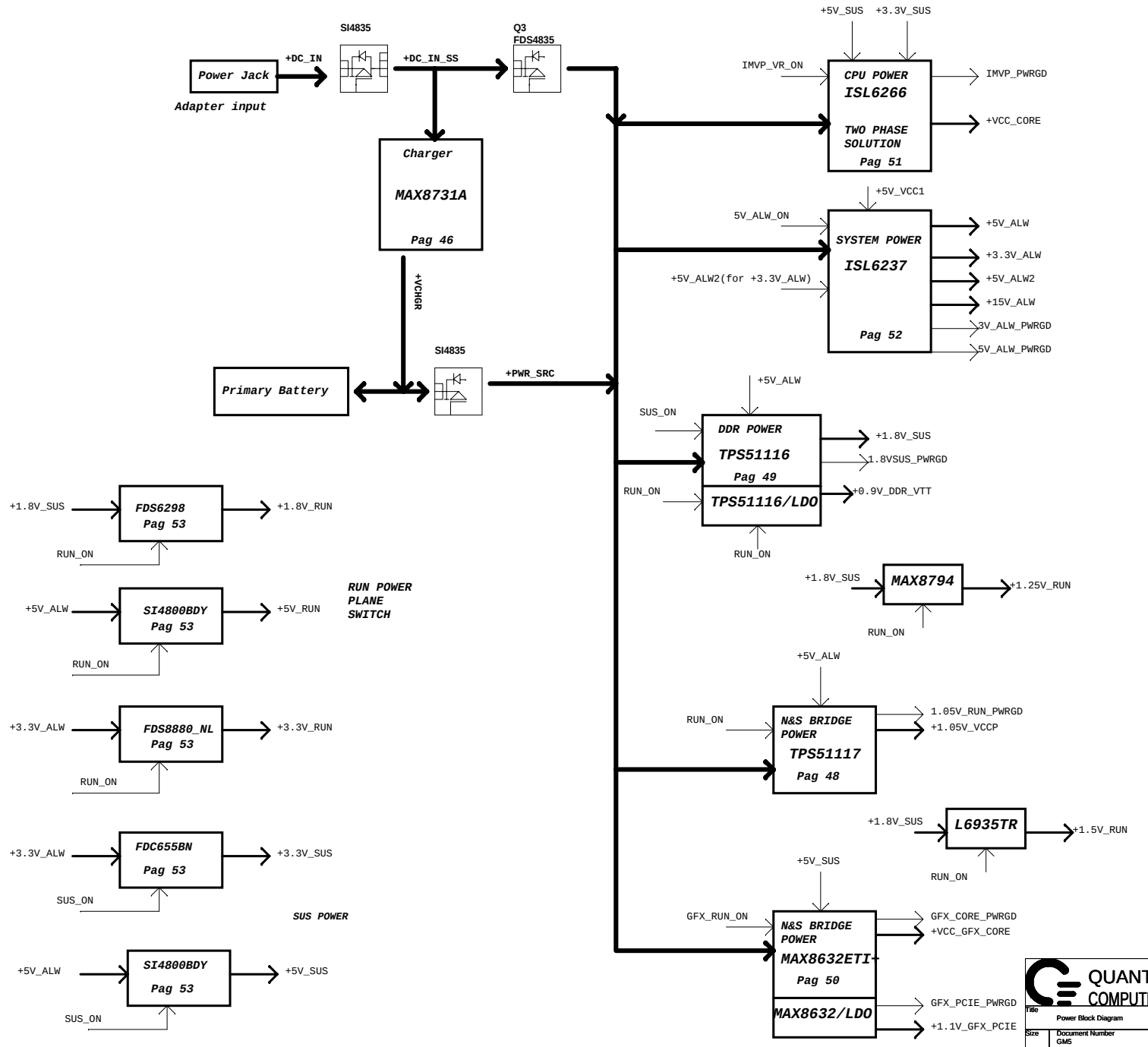
GM3 Power Design Block Diagram
2007/09/06



QUANTA COMPUTER

Title	Power Block Diagram	
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Model	Item	Page	Date	Rev.	Description
Pacino MV of Intel					

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Model	Item	Page	Date	Rev.	Description
Pacino MV of Intel	1	03	4/8 2008	B2A	Change R134 value 56 Ohm met intel design guide line
	2	03	4/8 2008	B2A	Del Q69,R693 this CKT is unnecessary
	3	03	4/8 2008	B2A	Modify BSEL table
	4	06	4/8 2008	B2A	Reserved R638,R691,R707 footprint for disable TV-out function on UMA board
	5	06	4/8 2008	B2A	NC R243,R214,R255 to met NB configuration setting
	6	06	4/8 2008	B2A	Del R261 prevent back driver(from +5V_ALW2 to +1.05_VCCP when R261 stuffed)
	7	06	4/8 2008	B2A	Changed R635,R462 BOM setting for DIS board boot fail
	8	09	4/8 2008	B2A	Changed L34,L77,C250,C793,C191,C236,C792,R223,R171,L13,L15,C188,C243,C237 BOM setting for DIS board boot fail
	9	17	4/8 2008	B2A	Exchange NET 27M_SS and 27M_NSS fixed UMA DREF_SSCLK/DREF_SSCLK# reversed
	10	25	4/8 2008	B2A	Change R671 value from 0 Ohm to 10K Ohm fixed HDMI detect function unstable
	11	31	4/8 2008	B2A	NC CS4 fixed ITE8512 ver:J GPIO backdriver during the ITE8512 initial
	12	37	4/8 2008	B2A	Modify J4 pin define prevent FCC burned
	13	44	4/8 2008	B2A	Del R426 .It's unnecessary
	14	44	4/8 2008	B2A	Change net 1.25V_RUN_PWRGD to GFX_CORE_PWRGD, 3V_ALW_PWRGD TO GFX_PCIE_PWRGD
	15	48	4/8 2008	B2A	Change 1.5V_RUN CKT for cost down
	16	49	4/8 2008	B2A	Changed PU9 power source to +5V_ALW2 for 1.8V_SUS_PWRGD assert when PU9 power down
	17	52	4/8 2008	B2A	Change PC106 value from 0.1U/50V TO 1U/10V for power engineer request
	18	42	4/12 2008	B2A	Connect U15 Pin67 to D35&D36 cathode.Fixed 1G LED can't blink issue
	19	25	4/16 2008	B2A	Change R235,R236 value to met design gildeline
	20	52	4/17 2008	B2A	Add PQ40 for GPU over temp. protection
	21	21,28,29,32,34	4/17 2008	B2A	Change ICH SMBus topology to provent back drive
	22	54	4/17 2008	B2A	ADD C989,C990 for EMI request
	23	27,35	4/21 2008	B2A	POP C32,C35,C43 with 10p,C31,C36,C41 with 22p POP L17,L20,L50 Depop R207,R203,R190,R183,R334,R329
	24	28	4/21 2008	B2A	Change R819 to diode prevent back driver from ICH to cardbus
	25	3	4/22 2008	B2A	Change R600 value to met spec
	26	19,50	4/22 2008	B2A	ADD GFX POWER voltage control to 3 level
	27	44	4/22 2008	B2A	Change U26,U32 to 74AHC1G08GW to met design
	28	14,40	4/22 2008	B2A	Separate DIS/UMA HDA power for codec/ICH9 to met Design guideline
	29	6	4/24 2008	B2A	Change R222 to 1K to met Design guideline

QUANTA COMPUTER

Model	Item	Page	Date	Rev.	Description
Pacino MV of Intel	1	25	6/6 2008		Change L64, L66, L70, L72 to CXCG900U000.
	2	43	6/6 2008		Change L80 to DB0FX6LAN01.
	3	09	6/6 2008		Change D28 to BC010K45004.
	4	46	6/6 2008		Change PQ4, PQ24 to BAM48350001.
	5	53	6/6 2008		Change PQ17 to BAM34560102.
	6	25	6/11 2008		Reserve R9999, R10000, R10001, R10002, C4945, C4946, C4947, C4948 for EMI solution.
	7	6	6/11 2008		Change R187,R213 pull high to +3.3V_RUN to solve backdrive in S3.
	8	14	6/11 2008		Change C957 from CH0220KMJ81 to CH71001M8B2
	9	48	6/11 2008		Change PC169 from CH733KM8826 to CH722KMT800
	10	54	6/11 2008		Change JBAT1 from DFHD09MR013 to DFHD09MR019
	11	11-14	6/11 2008		Change U48 from AJ0QP220T05 to AJ0QT100T01
	12	35	6/11 2008		Change JUSB1 from DFHS04FR126 to DFHS11FR018
	13	4,8,9	6/11 2008		Change C96, C188, C243, C438 to CH71001M8B2
	14	40	6/11 2008		Change J3 from DFHD04MR040 to DFWF04FR001
	15	38	6/11 2008		Change SW1 from DHLLSS12P03 to DHLLSS12P01
	16	35	6/11 2008		Change L17, L20, L50 from CX0SQ2T1001 to DC09004A014
	17	50	6/11 2008		Change PQ1 from BAM00350000 to BAM48350024
	18	51,46, 48,49	6/11 2008		NC PC131, PC129, PC197, PC94 depended on internal notice.
	19	25	6/11 2008		Change U13 to UMA part.
	20		6/11 2008		Delete reserved 0-ohm resisters: R192, R139, R226, R144, R145, R181, R248, R197, R198, R188, R189, R173, R195, R177, R208, R174, R196, R178, R215, R201, R176, R200, R179, R202, R175, R199, R180, R153, R152, R154, R149, R150, R238, R851, R717, R716, R241, R230, R206, R209, R210, R212, R245, R846, R847, R140, R848, R730, R842, R815, R871, R778, R769, R718, R664, R647, R665, R663, R709, R701, R700, R694, R105, R143, R77, R81, R75, R182, R185, R804, R767, R768, R683, R437, R547, R576, R575, R579, R428, R424, R422, R420, R423, PR46, RPR14, PR4, PR6, PR91
	21	42	6/12 2008		Change R325 to 39K-ohm and R311 to 20K-ohm for LAN chip, BCM5784M.
	22	48	6/12 2009		Change PQ32 & PQ33 subsystem ID to PWR.Plane.Regulator_1p05v1p5v.
	23	46, 48	6/12 2009		Change PL3 to CV-5855TZ04 & PL7 to DC-15A00002.
	24	48	6/12 2009		Populate PC197 by power's request.
	25	14	6/12 2009		Change U53 to DELL PSL LDO part and schematic
	26	40	6/13 2009		Change Audio codec U31 to revision C1, AL73C1XSB03 for ST build.
	27	25	6/13 2009		For HDMI pre-test item, DDC/CEC Capacitanoea, add low-Capacitance MOSs on SM-BUS between HDMI connector and PI3VDP411LSZDE.
	28		6/13 2009		Change C96, C988, C987, C438, C188, C243, C435, C299, C353, C957 to 220uF CAP/2.5V, CH7221M8816.
	29	28	6/13 2009		Depopulate R819, because R5C833 don't need PME#.
	30	31	6/13 2009		Change the BID to ST stage.
	31		6/13 2009		Change L87, L86, L91, L20, L17, L50, L46 to CXCG900U000.
	32	38	6/13 2009		Change SW1 to DHLLSS12P03
	33	41, 52	6/13 2009		Delete reserved 0-ohm resisters R826 and PR92.
	34	52	6/13 2009		Reserve a CAP PC200 for glith reducing of TEMP_FAIL.
	35	33	6/17 2009		Change C655 to 100uF CAP, CH7101M8800.
	36	19, 52	6/18 2010		DELL's request on thermal detect pin
	37	50	6/19 2010		Change PR119 to CS32433F915(0603), PR116 to CS38663F904(0603), PR118 to CS43572FB07(0402), R120 to CS16803F913(0603), PR183 to CS41152FB08(0402), PR188 to CS22002FB01(0402) to meet GPU core voltage step: 0.9V, 0.95V and 1.1V.
	38	3,4	6/23 2009		Change CPU socket(U42) P/N to DGT*8000001(Foxconn)
	39	3	6/23 2009		NC R116 for H_RESET# glitch.
	40	25	6/24 2009		Fine-tune the emphasis and the equalization of HDMI. 1. Pull OC0, OC2 to high and Pull OC1, OC3 to low. 2. Pull EQ_1 to low and pull EQ_0 to high.
	41	15	6/24 2009		Change JDIM1 to H=5.6mm connector, DGMK0000015 and JDIM2 to H=10.1mm connector, DGMK0000016.
	42	31	6/26 2009		NC R601, R704 and populate R593 for avitivating platform reset signal.

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