RM3 (Paltrow MLK) Block Diagram

PWA : Y503R/Y504R(TV)
PWB : Y505R
SCH : Y506R

VER : 3A

SYSTEM POWER

REGULATOR +1.5V_RUN/+1.05V_VCCP PG 48	SYS VR +5V_ALW2/+3.3V_ALW +5V_ALW/+15V_ALW PG 50	VGA Core +VCC_GFX_CORE +1.1V_GFX_PCIE PG 52
DDR3 VR +1.5V_DDR/+0.75V_DDR_VTT +V_DDR_MCH_REF PG 49	CPU VR +VCC_CORE PG 51	REGULATOR +1.8V_SUS PG 53
Load Switch +5V_SUS/+3.3V_SUS/+5V_RUN/+3.3V_RUN/+1.8V_RUN PG 55		

POWER PG 54

- AC/BATT CONNECTOR PG 47
- BATT CHARGER

CLOCK SLG8SP513V (QFN-64) PG 17

FAN & THERMAL EMC1423 (10P TSSOP) PG 39

Penryn (478 Micro-FCPGA) PG 3,4

667 / 800 / 1066 MHz FSB

DDR3-SODIMM1 PG 15 — 800 / 1066 MHZ DDR III

DDR3-SODIMM2 PG 16 — 800 / 1066 MHZ DDR III

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

PCIEx16

PCI EXPRESS GFX
AMD M96-M2 XT (128 bit)
(962 FCBGA)
PG 18,19,20,21,22,26

- HDMI → HDMI CONN. PG 25
- DP → DISPLAYPORT PG 25
- LVDS → Panel Connector PG 26
- VGA → CRT CONN. PG 27

M96-M2 : DDR3 x 8(1G) (96P FBGA) PG 23,24

GPU THERMAL
ANALOG DEVICES ADM1032
(8 MSOP) 3 x 3 mm PG 22

DMI interface

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

IHDA

AUDIO
IDT 92HD73C
(56 LQFP) 9 x 9 mm PG 40

- Subwoofer CONN PG 42
- MIC PG 42 & IB
- Internal Speaker PG 37 & DB
- HP2 PG 42 & IB
- HP1 PG 42 & IB

Subwoofer AMP
MAXIM MAX9759
(16 Pin TQFN) PG 42

Amplifier
TI TPA6040A4
(32 Pin QFN) PG 41

Amplifier
TI TPA4411MRTJR
(20 Pin QFN) PG 41

- Camera + D-MIC PG 37 — USB2.0 [11]
- TV CONN PG 35 — USB2.0 [9]
- USB CONN PG 42 & IB — USB2.0 x 2 [0:1]
- USB/eSATA Combo PG 35 & eSATA board — USB2.0 [8] / SATA2 [A5]
- SATA-ODD PG 36 — SATA2 [A1]
- SATA-HDD PG 36 — SATA2 [A0]
- 1394 CONN PG 29 & 1394 board — 33MHz PCI
- CardReader CONN PG 29

PC Card/1394
RICOH R5C833T
(128 Pin TQFP) 14 x 14 mm
PG 28,29

Debug Port (Mini PCI) PG 56

PCIE [1] / USB2.0 [5] → WWAN MINI-CARD PG 34

PCIE [2] / USB2.0 [4] → WLAN Half MINI-CARD PG 33

PCIE [3] / USB2.0 [6] → UWB/BT MINI-CARD PG 34

PCIE [4] / USB2.0 [7] → Express Card PG 30 → Express Switch RICOH R5538D001 (20 QFN) 4 x 4 mm PG 30

PCIE [6] → LAN Broadcom BCM5784M (68P QFN) PG 43 → Magnetic PG 44 → RJ45 PG 44

LPC

SIO
ITE ITE8512E
(128 Pin LQFP) 16 x 16 mm
PG 31

SPI

SMBus [2]

PS/2

- SPI ROM 2MB (8 Pin SO8W) PG 32
- Keyboard PG 37
- CIR PG 32
- Touchpad PG 37 & DB
- Media Button PG 37 & DB
- LED PG 38
- RTC PG 32

PAD & SCREW & SPRING PG 46

System Reset Circuit PG 45

To IO Board (USB*2/ MIC/ HP2/ HP1/ LED) PG 42

To Daughter Board (Power Button/Speaker/ KB LED/Touch PAD/ Media Button) PG 37

RM3 MB PCB (rev D)

QUANTA COMPUTER

Title	BLOCK DIAGRAM	
Size	Document Number RM3	Rev 3A
Date: Wednesday, May 06, 2009	Sheet 1 of 60	

Table of Contents

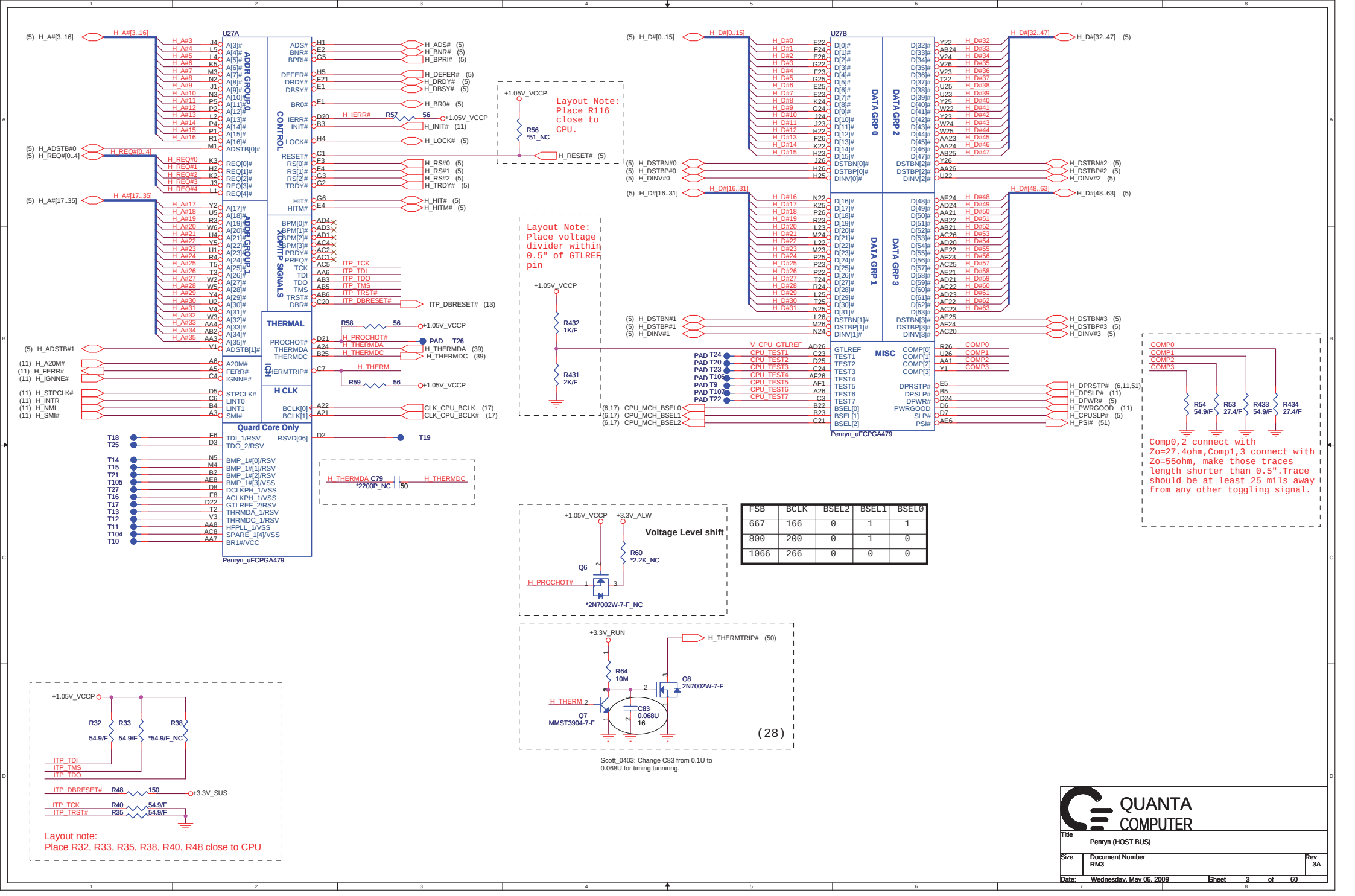
Power States

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	CALISTOGA/ICH8 POWER	1.5V_RUN_ON	
+1.25V_RUN	+1.25V	6,9,14,49,53	CALISTOGA/ICH8 POWER	1.25V_RUN_ON	
+1.05V_VCCP	+1.05V	3,4,5,6,8,9,11,14,37,48,55	CPU/CALISTOGA/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

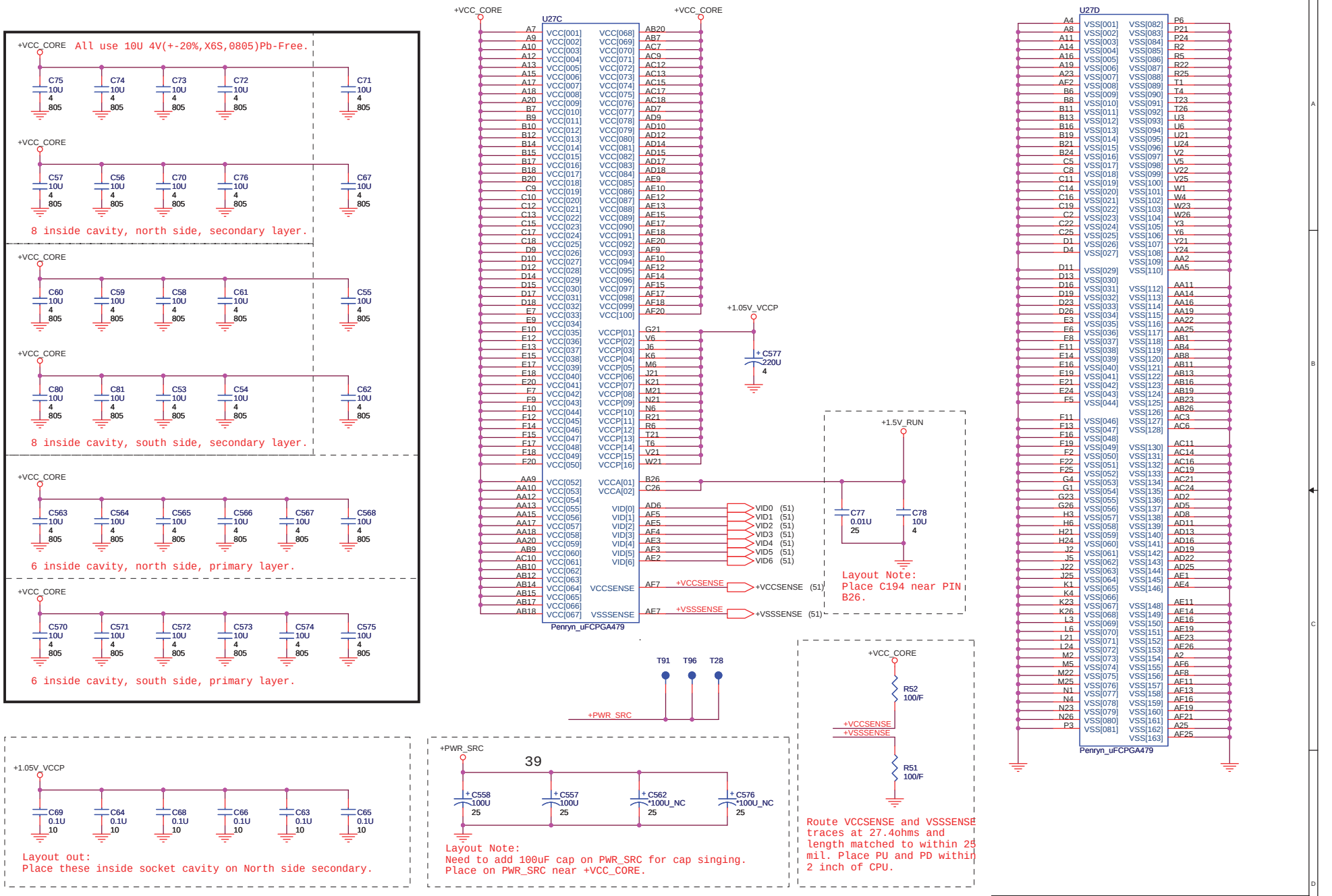
Title	FRONTPAGE	
Size	Document Number RM3	Rev 3A
Date: Wednesday, May 06, 2009	Sheet 2 of 60	



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

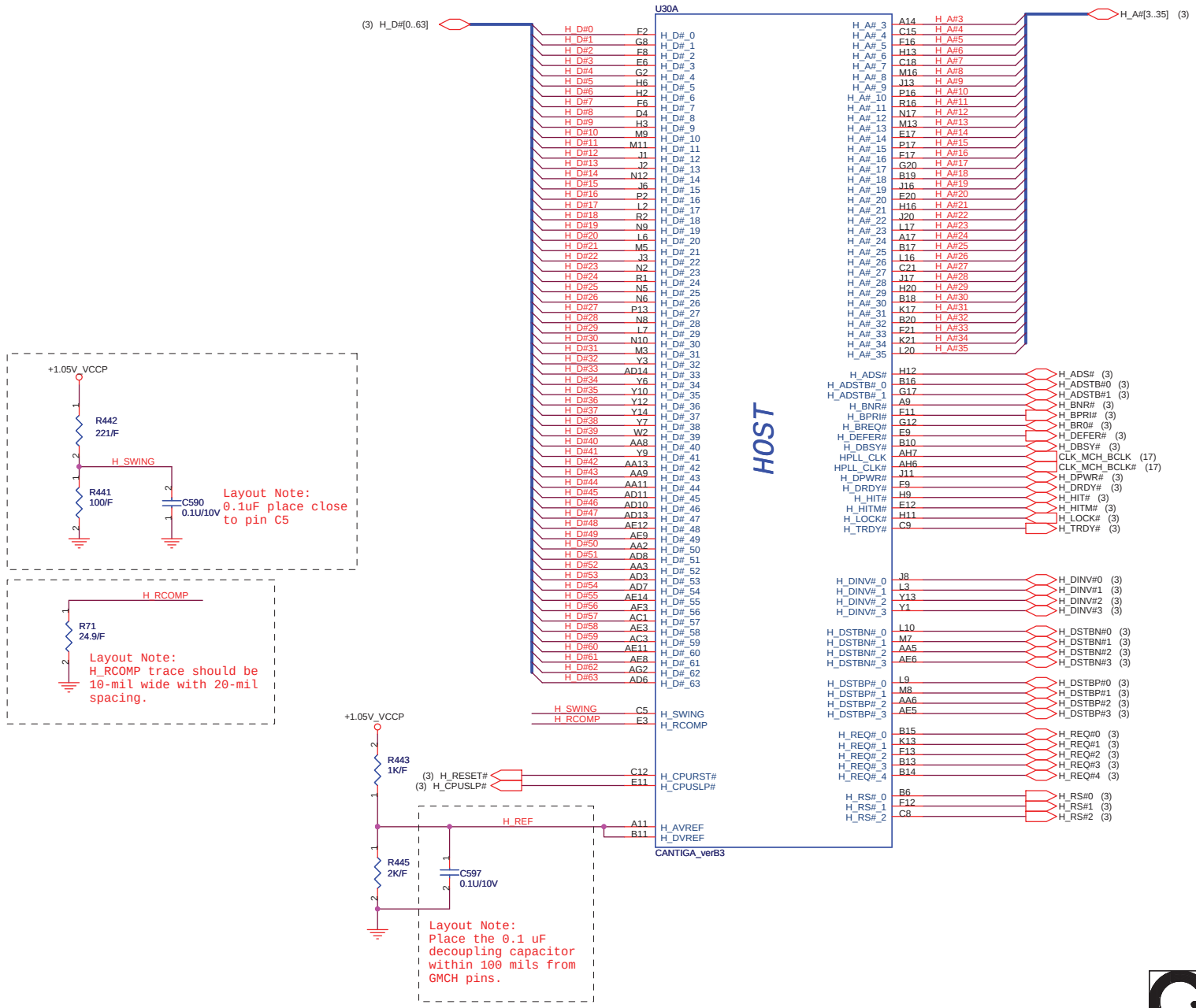
QUANTA COMPUTER

Title	Penryn (HOST BUS)	
Size	Document Number RM3	Rev 3A
Date: Wednesday, May 06, 2009	Sheet 3 of 60	

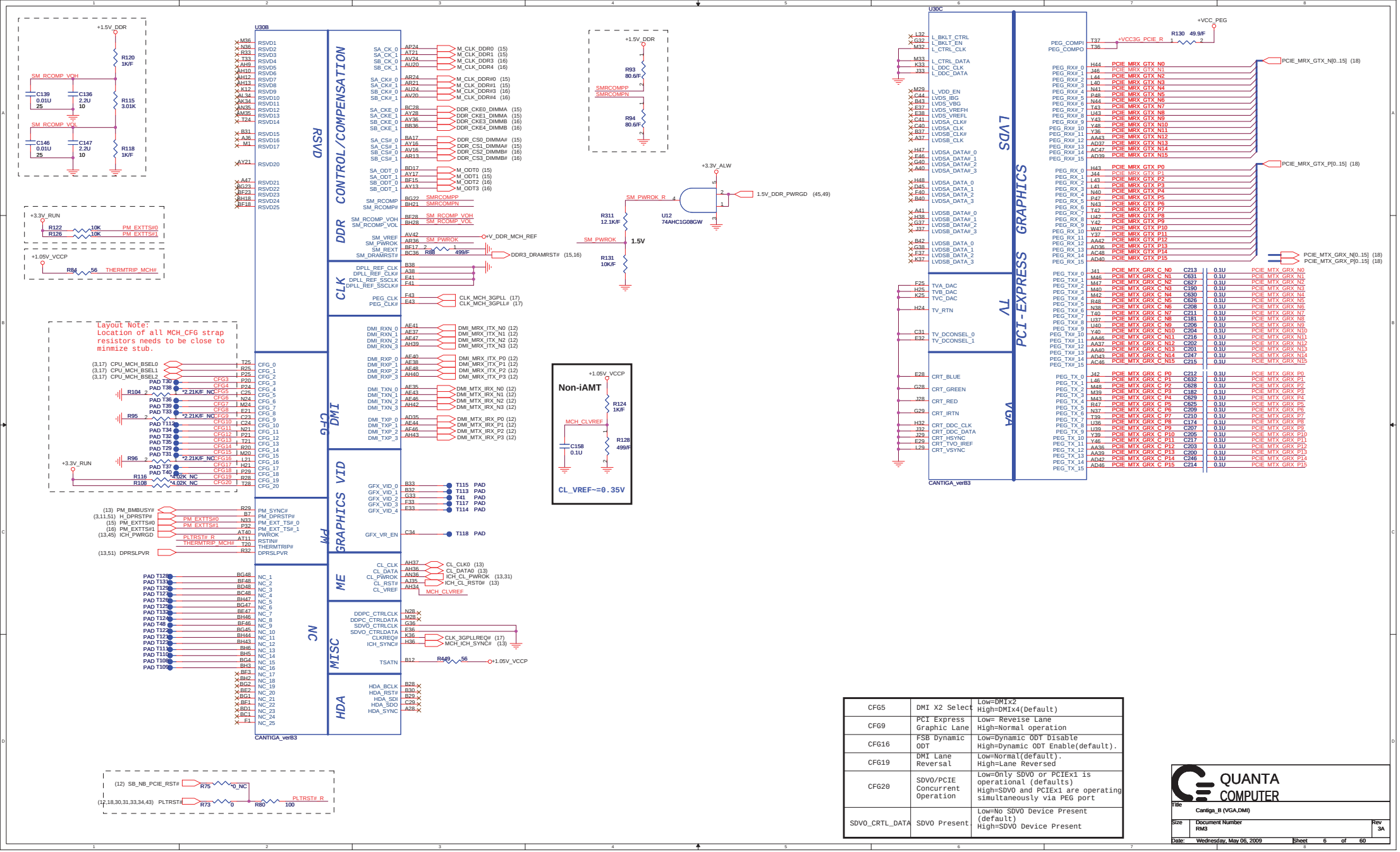


QUANTA COMPUTER

Title	Penryn (POWER/NC)	
Size	Document Number RM3	Rev 3A
Date	Wednesday, May 06, 2009	Sheet 4 of 60



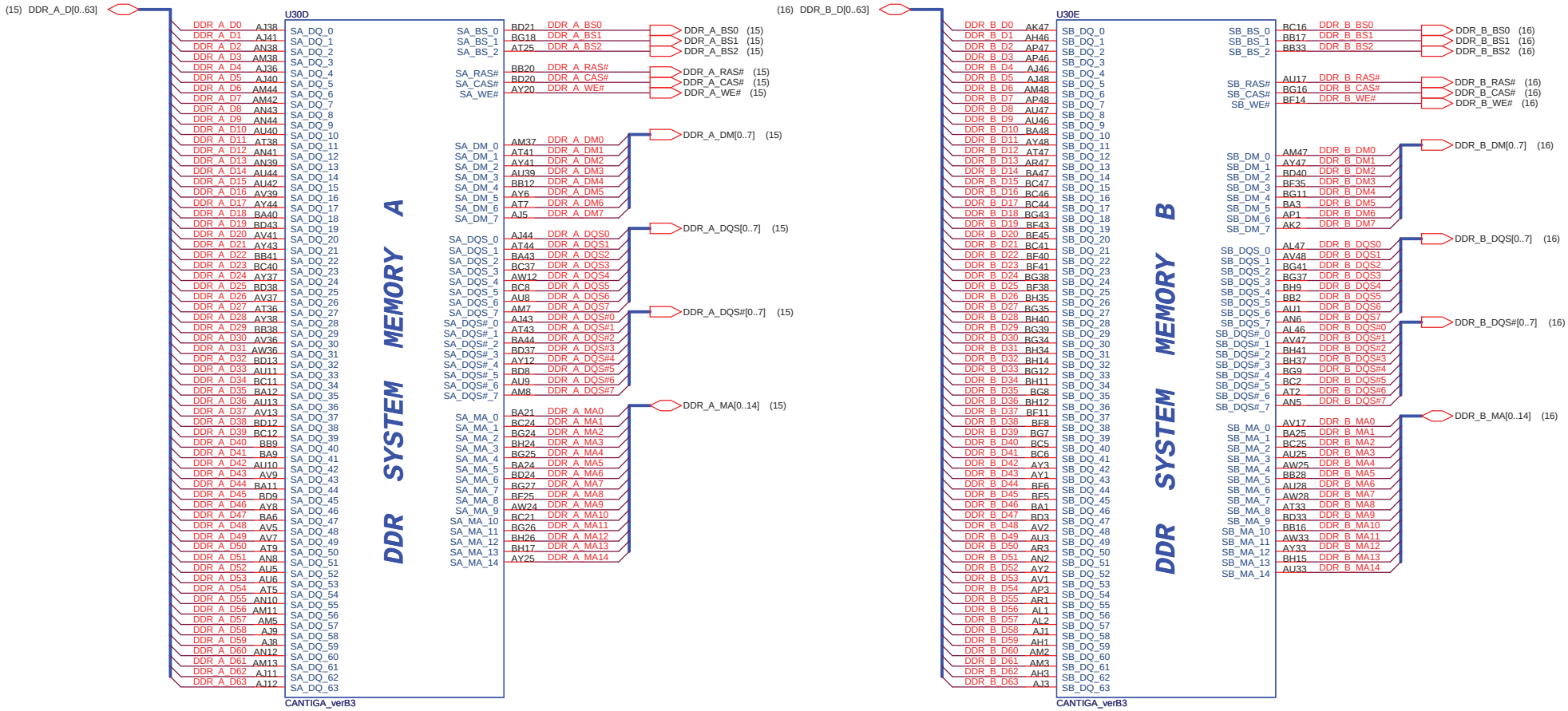
Title	Cantiga_A (HOST)		
Size	Document Number RM3		Rev 3A
Date	Wednesday, May 06, 2009	Sheet 5 of 60	



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

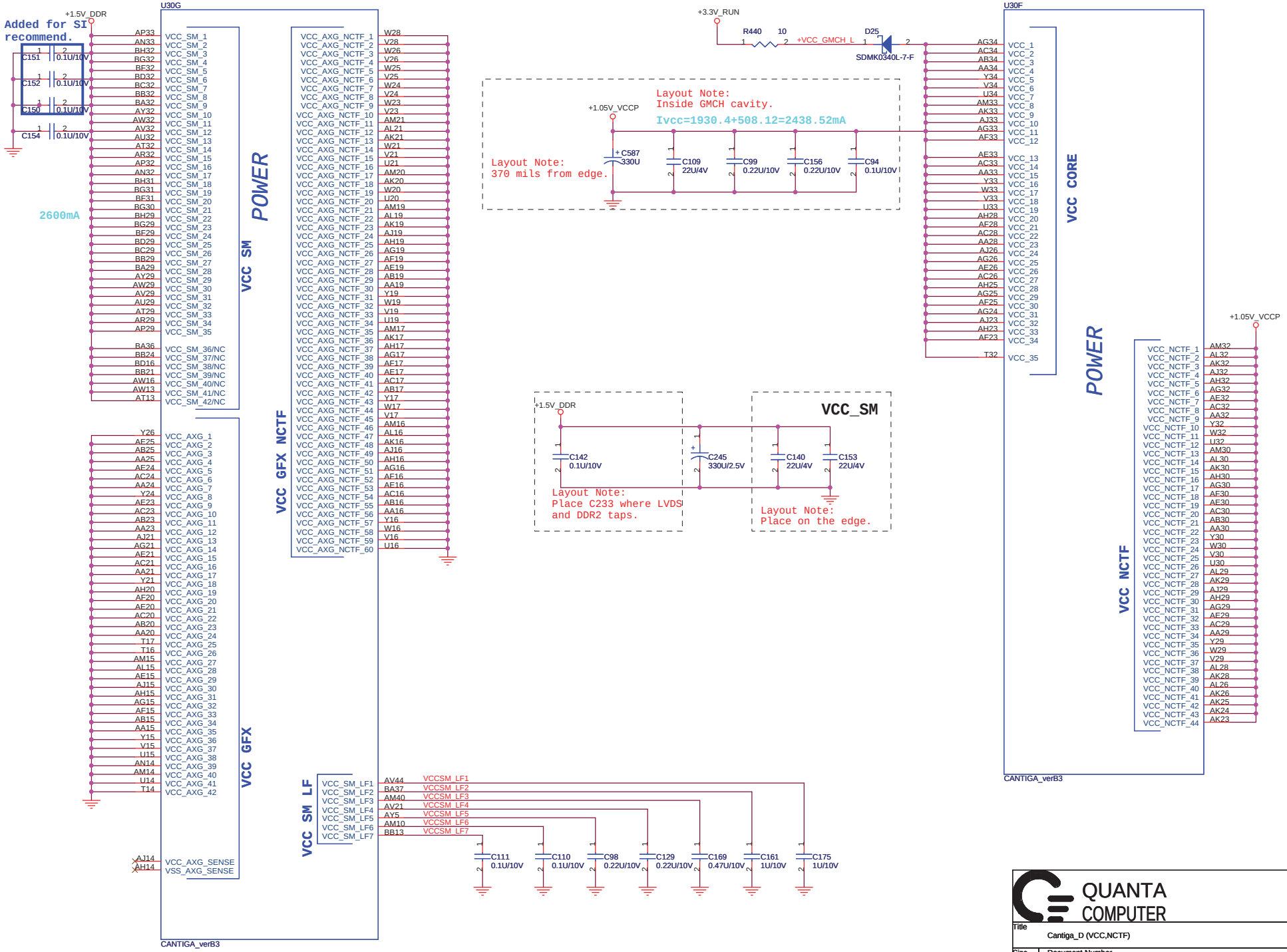
QUANTA COMPUTER

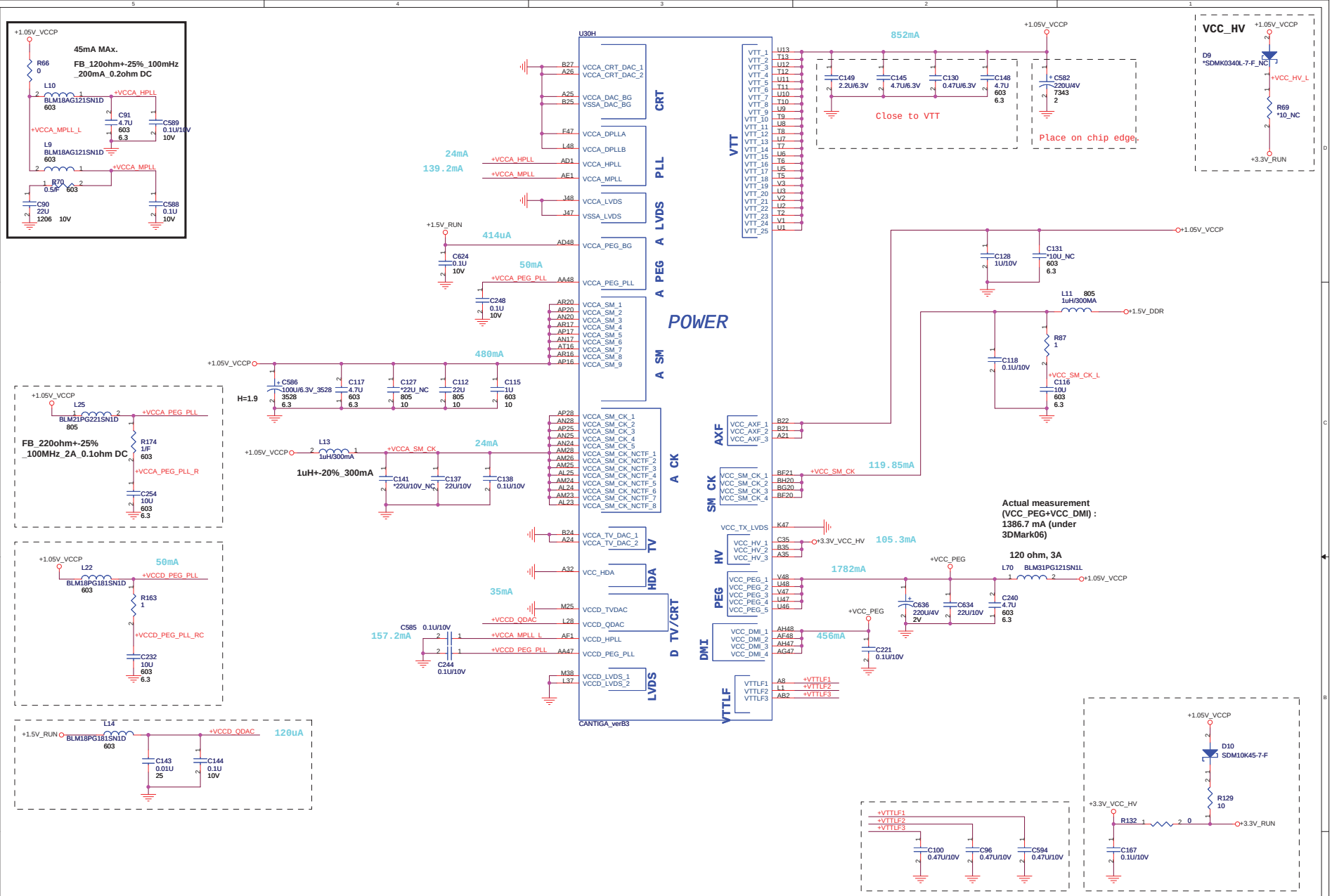
Title	Cantiga_B (VGA,DMI)	
Size	Document Number RM3	Rev 3A
Date: Wednesday, May 06, 2009	Sheet 6 of 60	



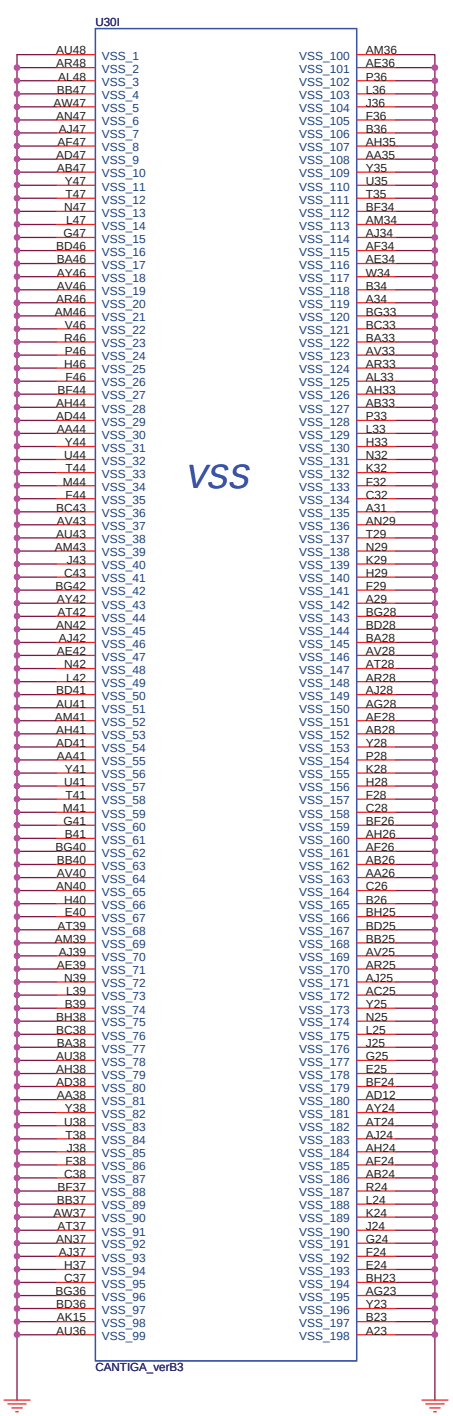
QUANTA COMPUTER

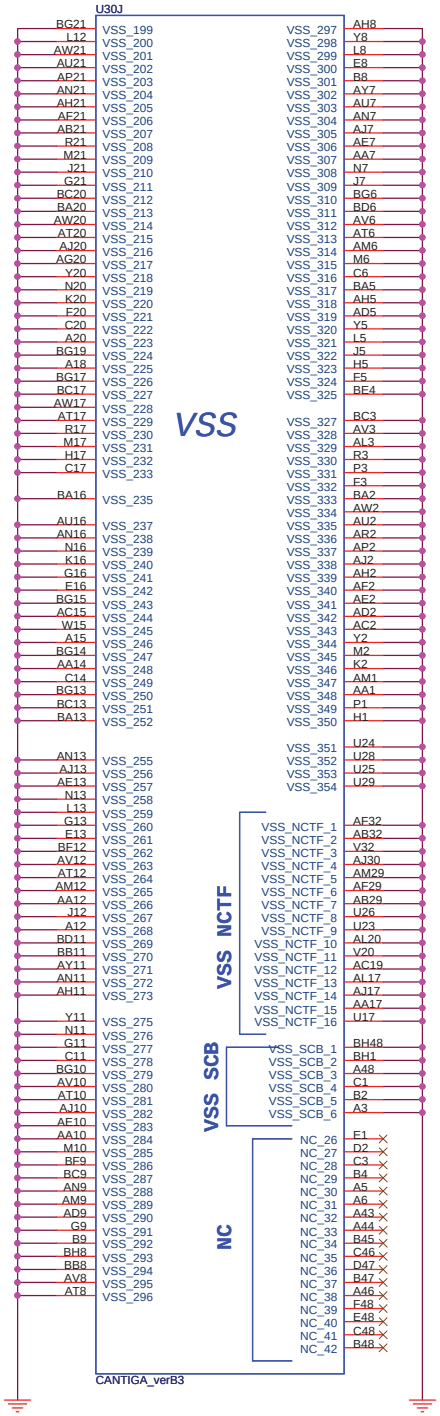
Title	Cantiga_C (DDR3)	
Size	Document Number RM3	Rev 3A
Date	Wednesday, May 06, 2009	Sheet 7 of 60



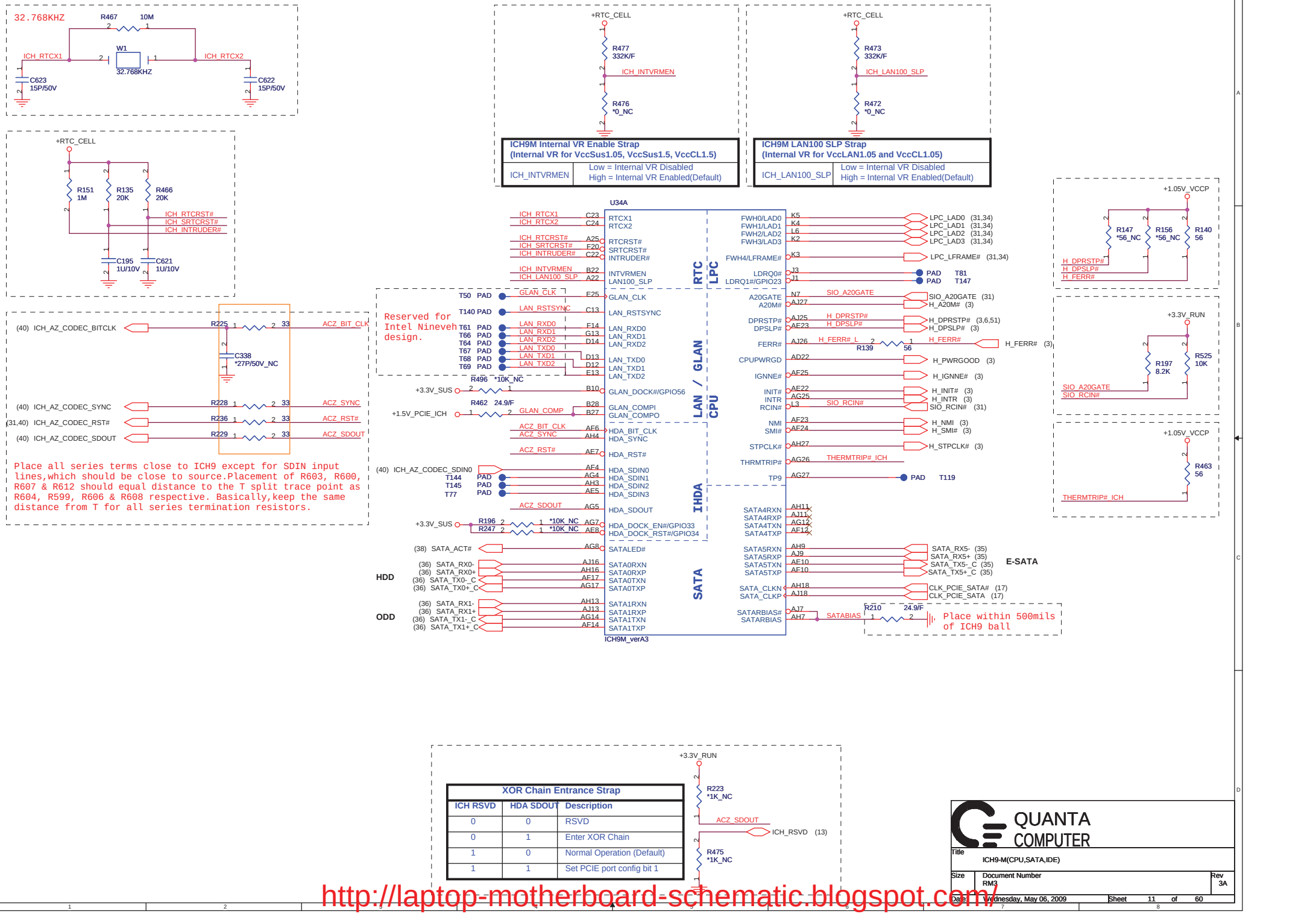


QUANTA COMPUTER			
Title: Cantiga_E (POWER)			
Size:	Document Number: RM3		Rev: 3A
Date: Wednesday, May 06, 2009		Sheet 9 of 60	





QUANTA COMPUTER		
Title: Cantiga_F (VSS)		
Size	Document Number: RM3	Rev: 3A
Date: Wednesday, May 06, 2009	Sheet 10 of 60	



Place TX DC blocking caps close ICH8.

(34) PCIE_TX1-
(34) PCIE_TX1+
C617 0.1U 10 PCIE_TXN1_C
C616 0.1U 10 PCIE_TXP1_C

(33) PCIE_TX2-
(33) PCIE_TX2+
C615 0.1U 10 PCIE_TXN2_C
C614 0.1U 10 PCIE_TXP2_C

(34) PCIE_TX3-
(34) PCIE_TX3+
C613 0.1U 10 PCIE_TXN3_C
C612 0.1U 10 PCIE_TXP3_C

(30) PCIE_TX4-
(30) PCIE_TX4+
C611 0.1U 10 PCIE_TXN4_C
C610 0.1U 10 PCIE_TXP4_C

(43) PCIE_TX6-/GLAN_TX-
(43) PCIE_TX6+/GLAN_TX+
C609 0.1U 10 GLAN_TXN_C
C608 0.1U 10 GLAN_TXP_C

U34D

(34) PCIE_RX1-
(34) PCIE_RX1+
MiniWWAN
PCIE_TXN1_C
PCIE_TXP1_C

(33) PCIE_RX2-
(33) PCIE_RX2+
MiniWLAN
PCIE_TXN2_C
PCIE_TXP2_C

(34) PCIE_RX3-
(34) PCIE_RX3+
MiniWPAN
PCIE_TXN3_C
PCIE_TXP3_C

(30) PCIE_RX4-
(30) PCIE_RX4+
Express Card
PCIE_TXN4_C
PCIE_TXP4_C

T44 PAD
T116 PAD
T47 PAD
T46 PAD

PCI-Express
Direct Media Interface

DMI0RXN DMI_MTX_IRX_N0 (6)
DMI0RXP DMI_MTX_IRX_P0 (6)
DMI0TXN DMI_MRX_ITX_N0 (6)
DMI0TXP DMI_MRX_ITX_P0 (6)
DMI1RXN DMI_MTX_IRX_N1 (6)
DMI1RXP DMI_MTX_IRX_P1 (6)
DMI1TXN DMI_MRX_ITX_N1 (6)
DMI1TXP DMI_MRX_ITX_P1 (6)
DMI2RXN DMI_MTX_IRX_N2 (6)
DMI2RXP DMI_MTX_IRX_P2 (6)
DMI2TXN DMI_MRX_ITX_N2 (6)
DMI2TXP DMI_MRX_ITX_P2 (6)
DMI3RXN DMI_MTX_IRX_N3 (6)
DMI3RXP DMI_MTX_IRX_P3 (6)
DMI3TXN DMI_MRX_ITX_N3 (6)
DMI3TXP DMI_MRX_ITX_P3 (6)
DMI_CLKN CLK_PCIE_ICH# (17)
DMI_CLKP CLK_PCIE_ICH (17)
DMI_ZCOMP
DMI_IRCOMP
DMI_COMP
R464 24.9/F
+1.5V_PCIE_ICH
Place within 500mils of ICH8

(43) PCIE_RX6-/GLAN_RX-
(43) PCIE_RX6+/GLAN_RX+
Giga Bit LOM
GLAN_TXN_C
GLAN_TXP_C
PERN6/GLAN_RXN
PERP6/GLAN_RXP
PETN6/GLAN_TXN
PETP6/GLAN_TXP

SPI

T51 PAD
T45 PAD
ICH_SPI_CS1#_R
SPI_CLK
SPI_CS0#
SPI_CS1#/GPIO58/CLGPIO6
SPI_MOSI
SPI_MISO
T49 PAD
T52 PAD

USB

(35) USB_OC0_1#
USB_OC0_1#
OC2_3#
OC4#
OC5#
OC6#
OC7#
(35) USB_OC8#
USB_OC8#
OC9#
OC10#
OC11#
OC0#/GPIO59
OC1#/GPIO40
OC2#/GPIO41
OC3#/GPIO42
OC4#/GPIO43
OC5#/GPIO29
OC6#/GPIO30
OC7#/GPIO31
OC8#/GPIO44
OC9#/GPIIO45
OC10#/GPIO46
OC11#/GPIO47

USBP0N USBP0P USBP1N USBP1P USBP2N USBP2P USBP3N USBP3P USBP4N USBP4P USBP5N USBP5P USBP6N USBP6P USBP7N USBP7P USBP8N USBP8P USBP9N USBP9P USBP10N USBP10P USBP11N USBP11P

ICH_USBP0- (42)
ICH_USBP0+ (42)
ICH_USBP1- (42)
ICH_USBP1+ (42)
PAD T151
PAD T152
PAD T78
PAD T80
ICH_USBP4- (33)
ICH_USBP4+ (33)
ICH_USBP5- (34)
ICH_USBP5+ (34)
ICH_USBP6- (34)
ICH_USBP6+ (34)
ICH_USBP7- (30)
ICH_USBP7+ (30)
ICH_USBP8- (35)
ICH_USBP8+ (35)
ICH_USBP9- (35)
ICH_USBP9+ (35)
PAD T76
PAD T79
ICH_USBP11- (37)
ICH_USBP11+ (37)

Side pair (Top / left, IB)
Side pair (Bottom / left, IB)
Mini Card (WLAN)
Mini Card (WWAN)
Mini Card (WPAN)
Express Card
USB W/ E-SATA port
TV
Camera

USBRBIAS
USBRBIAS#
ICH9M_verA3

Places within 500 mils of the ICH9
R527 22.6/F
USBRBIAS

ICH_SPI_CS1#_R
PCI_GNT0#
R227 *1K_NC
R150 *1K_NC

Boot BIOS Strap

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

PCI Pullups

RP5 8.2K_10P8R
PCI_FRAME# PCI_REQ1#
PCI_DEVSEL# PCI_IRDY#
PCI_TRDY# PCI_PIRQD#
PCI_STOP# PCI_PERR#
+3.3V_RUN

RP7 8.2K_10P8R
PCI_PIRQB# PCI_PLOCK#
PCI_PIRQC# ICH_IRQH_GPIO5
PCI_PIRQA# PCI_SERR#
PCI_REQ0#
+3.3V_RUN

WWAN Noise - ICH improvements

OC6# C339 *0.1U_NC
OC4# C690 *0.1U_NC
OC5# C692 *0.1U_NC
OC7# C325 *0.1U_NC
USB_OC8# C342 *0.1U_NC
OC2_3# C336 *0.1U_NC
USB_OC0_1# C310 *0.1U_NC
OC9# C691 *0.1U_NC

RP6 10KX8
+3.3V_SUS
OC9# OC7#
OC4# OC6#
USB_OC8# USB_OC0_1#
OC5# OC2_3#
OC10# R219 10K +3.3V_SUS
OC11# R224 10K

SB_WPAN_PCIE_RST# R203 20K
SB_WWAN_PCIE_RST# R182 20K
SB_WLAN_PCIE_RST# R205 20K
SB_LOM_PCIE_RST# R220 20K
SB_NB_PCIE_RST# R522 20K

BIOS should not enable the internal GPIO pull up resistor.

(28,56) PCI_AD[0..31]

U34B

PCI

PCI_AD0 D11
PCI_AD1 C8
PCI_AD2 D9
PCI_AD3 E12
PCI_AD4 E9
PCI_AD5 C9
PCI_AD6 E10
PCI_AD7 B7
PCI_AD8 C7
PCI_AD9 C5
PCI_AD10 G11
PCI_AD11 F8
PCI_AD12 F11
PCI_AD13 E7
PCI_AD14 A3
PCI_AD15 D2
PCI_AD16 F10
PCI_AD17 D5
PCI_AD18 D10
PCI_AD19 B3
PCI_AD20 F7
PCI_AD21 C3
PCI_AD22 F3
PCI_AD23 F4
PCI_AD24 C1
PCI_AD25 G7
PCI_AD26 H7
PCI_AD27 D1
PCI_AD28 G5
PCI_AD29 H6
PCI_AD30 G1
PCI_AD31 H3

REQ0# PCI_REQ0# (28) PCI_REQ0#
GNT0# PCI_GNT0# (28) PCI_GNT0#
REQ1#/GPIO50 PCI_REQ1# (56) PCI_REQ1#
GNT1#/GPIO51 PCI_GNT1# (56) PCI_GNT1#
REQ2#/GPIO52 SB_WWAN_PCIE_RST# SB_WWAN_PCIE_RST# (34)
GNT2#/GPIO53 PCI_GNT2# PAD T71
REQ3#/GPIO54 SB_LOM_PCIE_RST# SB_LOM_PCIE_RST# (43)
GNT3#/GPIO55 PCI_GNT3# PAD T75

Card Reader
Mini PCI debug

C/BE0# PCI_C_BE0# (28,56) PCI_C_BE0#
C/BE1# PCI_C_BE1# (28,56) PCI_C_BE1#
C/BE2# PCI_C_BE2# (28,56) PCI_C_BE2#
C/BE3# PCI_C_BE3# (28,56) PCI_C_BE3#

IRDY# PCI_IRDY# (28,56) PCI_IRDY#
PAR PCI_PAR (28,56) PCI_PAR
PCIRST# PCI_RST# G
DEVSEL# PCI_DEVSEL# (28,56) PCI_DEVSEL#
PERR# PCI_PERR# (28,56) PCI_PERR#
PLOCK# PCI_PLOCK#
SERR# PCI_SERR# (28,56) PCI_SERR#
STOP# PCI_STOP# (28,56) PCI_STOP#
TRDY# PCI_TRDY# (28,56) PCI_TRDY#
FRAME# PCI_FRAME# (28,56) PCI_FRAME#

PLTRST# PCI_PLTRST#
PCICLK CLK_PCI_ICH (17) CLK_PCI_ICH
PME# R2 ICH_PME# (28,56)

PCI_PIRQA & D :
Mini PCI debug
PCI_PIRQB & C :
Card Reader

Interrupt I/F

(56) PCI_PIRQA# PCI_PIRQA# J5
(28) PCI_PIRQB# PCI_PIRQB# E1
(28) PCI_PIRQC# PCI_PIRQC# J6
(56) PCI_PIRQD# PCI_PIRQD# C4

PIRQE#/GPIO2 SB_WPAN_PCIE_RST# SB_WPAN_PCIE_RST# (34)
PIRQF#/GPIO3 SB_WLAN_PCIE_RST# SB_WLAN_PCIE_RST# (33)
PIRQG#/GPIO4 SB_NB_PCIE_RST# SB_NB_PCIE_RST# (6)
PIRQH#/GPIO5 ICH_IRQH_GPIO5 ICH_IRQH_GPIO5 (36)
PAD T83

ICH9M_verA3

PCI_GNT3#
R209 *1K_NC

A16 away override strap.

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

CLK_PCI_ICH
R232 *10_NC
C340 *8.2P_NC
Reserved for EMI.Place resister and cap close to ICH.

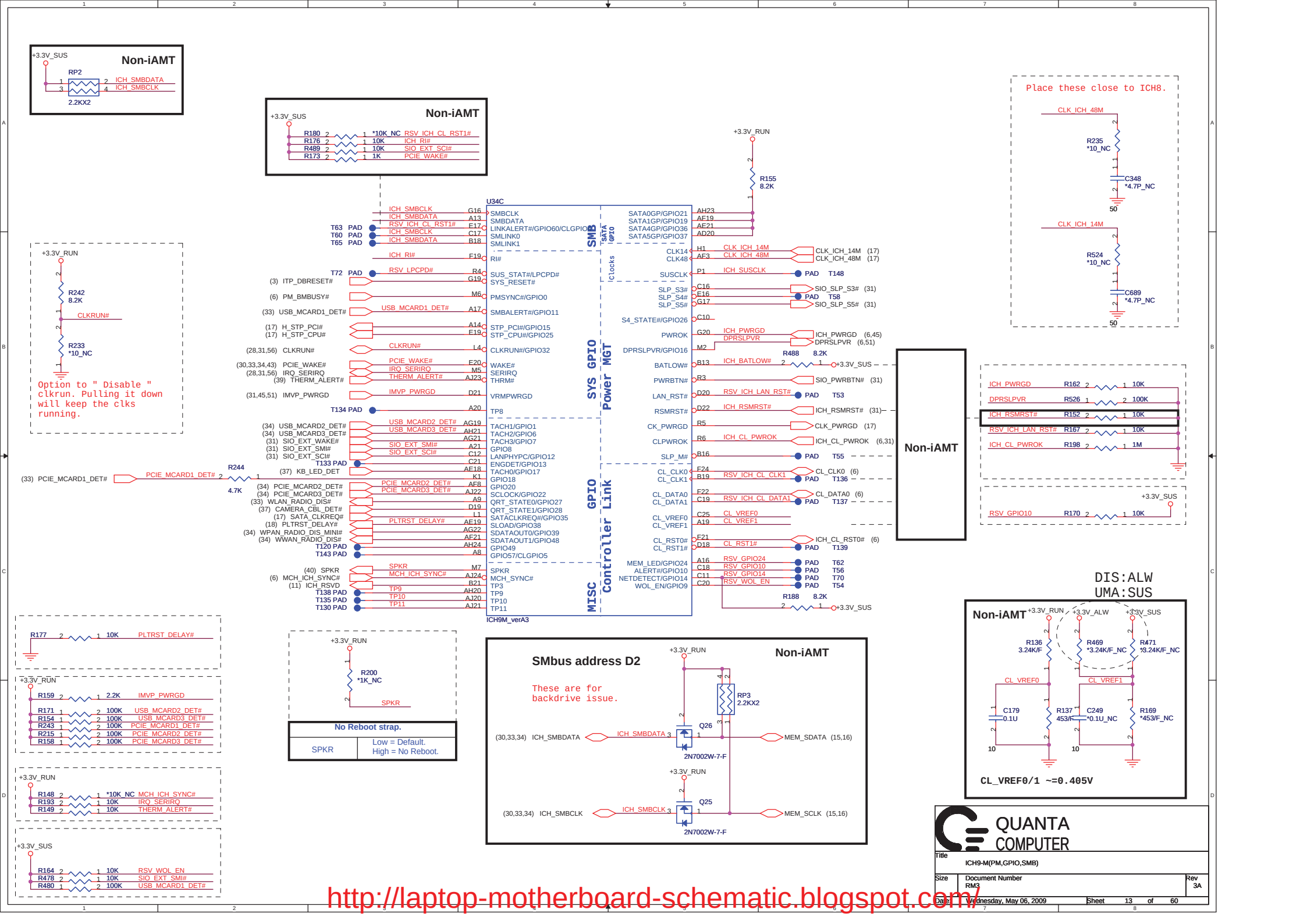
Non-iAMT

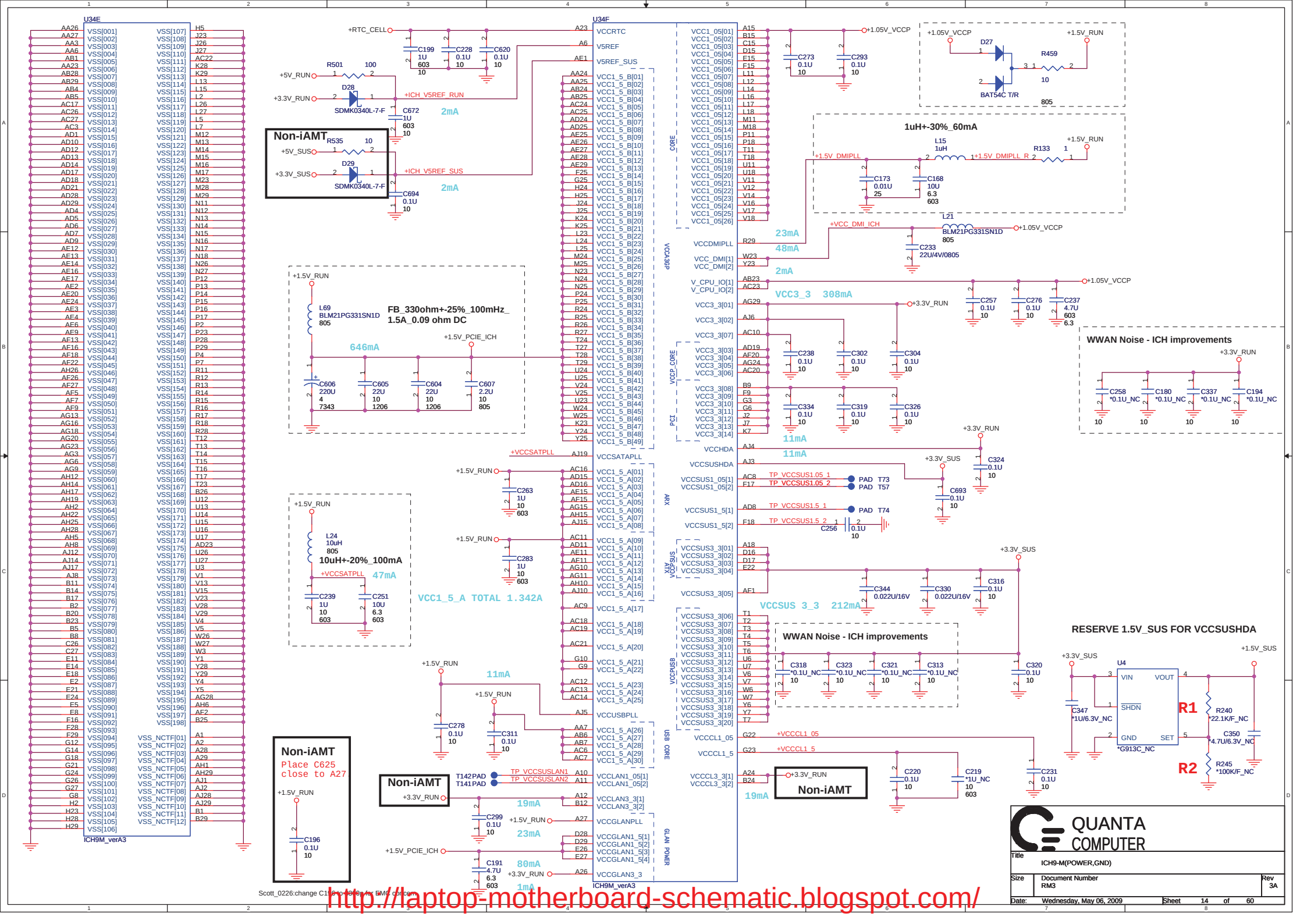
+3.3V_SUS
C349 0.047U
U5 TC7SZ32FU(T5L,F,T)
PCI_RST# G
PCI_RST# (28,56)
C647 0.047U
U35 TC7SZ32FU(T5L,F,T)
PCI_PLTRST#
PLTRST# (6,18,30,31,33,34,43)

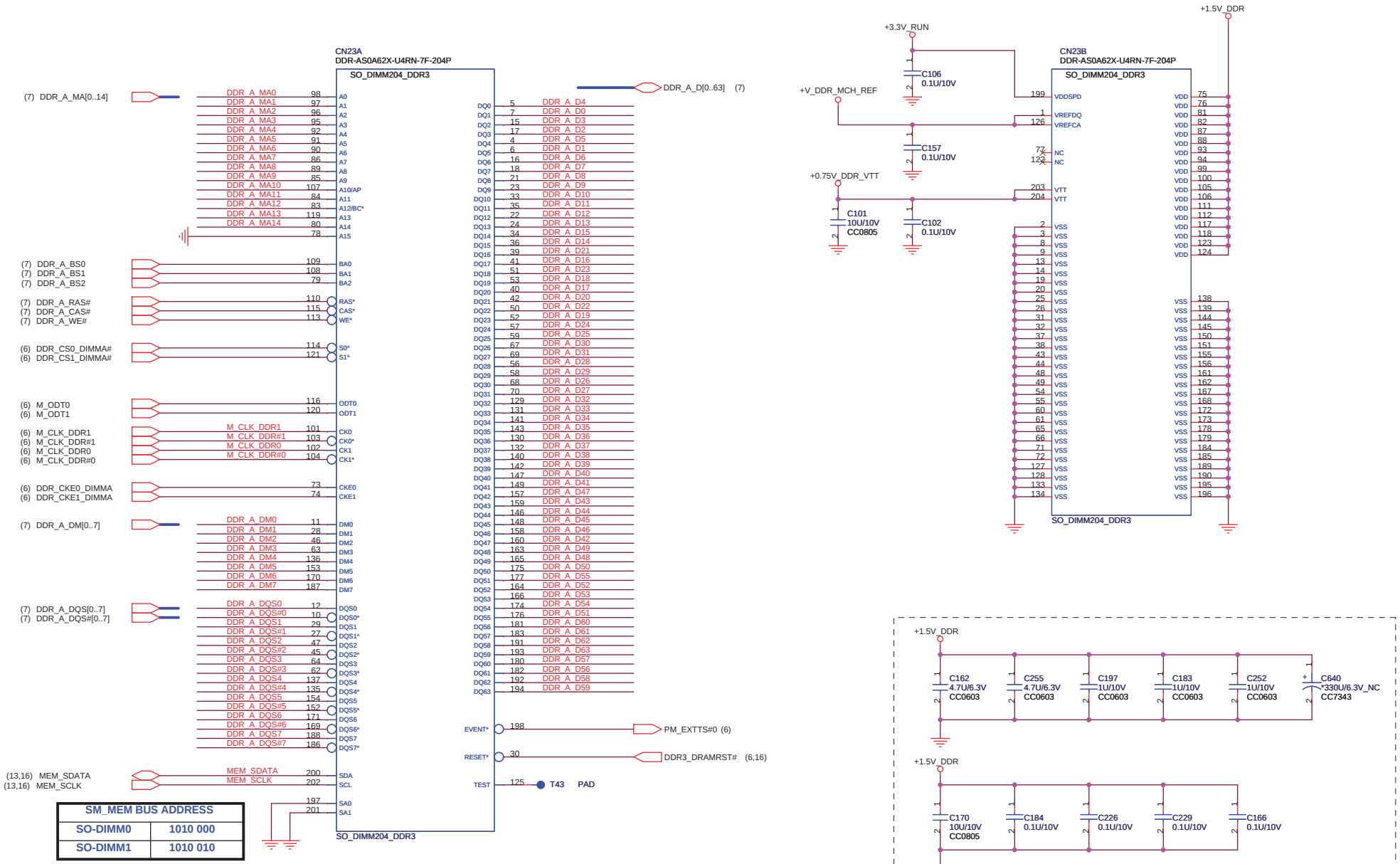
Add Buffers as needed for Loading and fanout concerns.

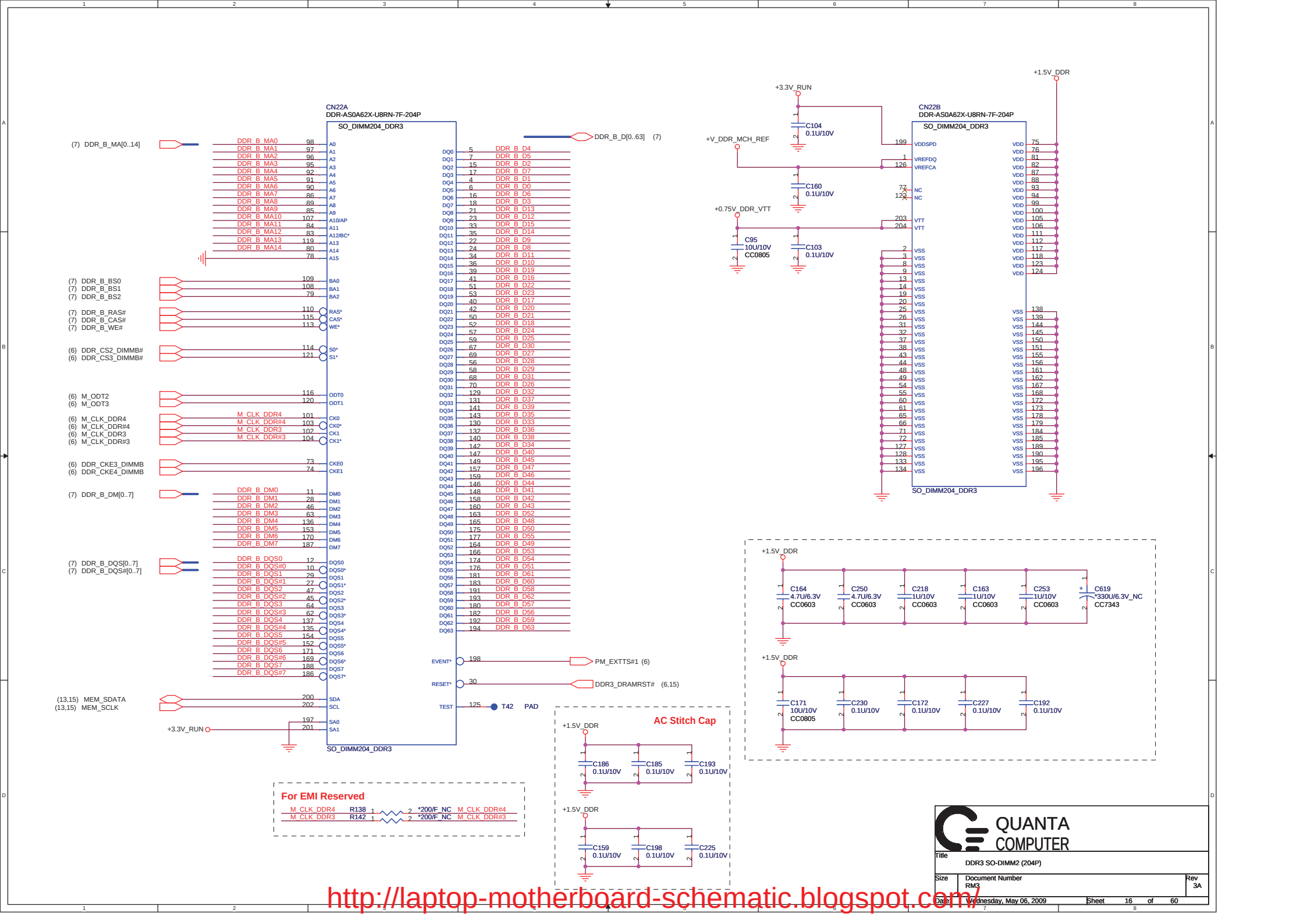
QUANTA COMPUTER

Title	ICH9-M(USB,PCIE,DMI)		
Size	Document Number RM3		Rev 3A
Date	Wednesday, May 06, 2009	Sheet 12 of 60	




U34E
ICH9M_verA3
U34F
ICH9M_verA3
Non-iAMT
Non-iAMT
Place C625
close to A27
Non-iAMT
Non-iAMT
WWAN Noise - ICH improvements
WWAN Noise - ICH improvements
RESERVE 1.5V_SUS FOR VCCSUSHDA
1uH+-30%_60mA
FB_330ohm+-25%_100mHz_
1.5A_0.09 ohm DC
10uH+-20%_100mA
VCC1_5_A TOTAL 1.342A
VCCSUS 3_3 212mA
VCC3_3 308mA
QUANTA
COMPUTER
ICH9-M(POWER,GND)
RM3
Wednesday, May 06, 2009
http://laptop-motherboard-schematic.blogspot.com/





Add capacitor pads for improving WWAN.

C657 1 2 27P 50 FSA
C662 1 2 *27P_NC 50 FSC
C332 1 2 *27P_NC 50 PCI_SIO
C331 1 2 *27P_NC 50 PCI_PCCARD
C666 1 2 *27P_NC 50 PCI_ICH
C322 1 2 *27P_NC 50 27M_SEL

Y3
CLK_XTAL_IN 1 2 CLK_XTAL_OUT
14.318MHZ
C673 33P 50
C661 33P 50
14.318MHz

U36
CK505
QFN64
SLG8SP513V

+CK_VDD_PCI 9 VDD_PCI
4 VDD_REF
+CK_VDD_PLL3 23 VDD_PLL3
+CK_VDD_48 16 VDD_48
+CK_VDD_SRC 46 VDD_SRC
62 VDD_CPU
+CK_VDD_MAIN 19 VDD_IO
27 VDD_IO
33 VDD_IO
43 VDD_IO
52 VDD_IO
56 VDD_IO
15 GND
18 GND
22 GND
26 GND
30 GND
36 GND
49 GND
59 GND
1 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# 55
CK_PWRGD/PD# 63
CLK_XTAL_OUT 2 XOUT
CLK_XTAL_IN 3 XIN
CLK_SDATA 6 SDATA
CLK_SCLK 7 SCLK
GND 65

(13) SATA_CLKREQ# SATA_CLKREQ# R490 475/F
(6) CLK_3GPLLREQ# CLK_3GPLLREQ# R491 475/F
CLK_LPC_DEBUG FOR DEBUG NEED POP RESISTOR
(34) CLK_LPC_DEBUG R492 22 SATA_CLKREQ# C 8
(28) CLK_PCI_PCCARD R493 22 CLK_3GPLLREQ# C 10
PCI_PCCARD 11
(31) CLK_PCI_8512 R494 33 PCI_SIO 12
(56) CLK_PCI_DEBUG R195 33 27M_SEL 13
(12) CLK_PCI_ICH R495 33 PCI_ICH 14
(13) CLK_ICH_48M R486 33
(3,6) CPU_MCH_BSEL0 R487 2.2K FSA 17 64
(3,6) CPU_MCH_BSEL1 R497 10K FSC 5
(3,6) CPU_MCH_BSEL2
(13) CLK_ICH_14M R498 33 55 63
(13) CLK_PWRGD

CPU-0 61 CPU_BCLK RP19 0 CLK_CPU_BCLK (3)
CPU-0# 60 CPU_BCLK# CLK_CPU_BCLK# (3)
CPU-1 58 MCH_BCLK RP18 0 CLK_MCH_BCLK (5)
CPU-1# 57 MCH_BCLK# CLK_MCH_BCLK# (5)
SRC-8/CPU_ITP 54 CPU_ITP RP16 0 CLK_PCIE_MINI1 (33)
SRC-8#/CPU_ITP# 53 CPU_ITP# CLK_PCIE_MINI1# (33) Mini Card (WLAN)
SRC-0/DOT96 20 DOT96_SSC RP20 0 CLK_PCIE_VGA (18)
SRC-0#/DOT96# 21 DOT96_SSC# CLK_PCIE_VGA# (18) to ATI VGA
SRC-1/SE1 24 27M_NSS RP17 33 CLK_VGA_27M_NSS (19)
SRC-1#/SE2 25 27M_SS CLK_VGA_27M_SS (19)
SRC-2/SATA 28 PCIE_SATA RP15 0 CLK_PCIE_SATA (11)
SRC-2#/SATA# 29 PCIE_SATA# CLK_PCIE_SATA# (11)
CR#_C/SRC-3 31 PCIE_MINI3 RP13 0 CLK_PCIE_MINI3 (34)
CR#_D/SRC-3# 32 PCIE_MINI3# CLK_PCIE_MINI3# (34) Mini Card (WPAN)
SRC-4 34 MCH_3GPLL RP12 0 CLK_MCH_3GPLL (6)
SRC-4# 35 MCH_3GPLL# CLK_MCH_3GPLL# (6)
PCI_STOP#/SRC-5 45 H_STP_PCI# H_STP_PCI# (13)
CPU_STOP#/SRC5-5# 44 H_STP_CPU# H_STP_CPU# (13)
SRC-6 48 PCIE_EXPCARD RP8 0 CLK_PCIE_EXPCARD (30)
SRC-6# 47 PCIE_EXPCARD# CLK_PCIE_EXPCARD# (30)
CR#_F/SRC-7 51 MINI1CLK_REQ# C R484 475/F MINI1CLK_REQ# MINI1CLK_REQ# (33)
CR#_E/SRC-7# 50 CARD_CLK_REQ# C R482 475/F CARD_CLK_REQ# CARD_CLK_REQ# (30)
SRC-9 37 PCIE_MINI2 RP11 0 CLK_PCIE_MINI2 (34)
SRC-9# 38 PCIE_MINI2# CLK_PCIE_MINI2# (34) Mini Card (WWAN)
SRC-10 41 PCIE_ICH RP9 0 CLK_PCIE_ICH (12)
SRC-10# 42 PCIE_ICH# CLK_PCIE_ICH# (12)
CR#_H/SRC-11 40 PCIE_LOM RP10 0 CLK_PCIE_LOM (43)
CR#_G/SRC-11# 39 PCIE_LOM# CLK_PCIE_LOM# (43)

+3.3V_RUN
H_STP_PCI# R474 10K
H_STP_CPU# R165 10K

+3.3V_RUN
CLK_3GPLLREQ# R500 10K
SATA_CLKREQ# R499 10K
CARD_CLK_REQ# R481 10K
MINI1CLK_REQ# R483 10K
PCI_PCCARD R212 *10K_NC

PCI_SIO R214 *10K_NC

UMA without iAMT

+3.3V_RUN
L36 BLM21PG600SN1D 805 120 ohms@100Mhz
+CK_VDD_MAIN
C267 0.1U 10
C280 0.1U 10
C242 0.1U 10
C243 0.1U 10
C274 0.1U 10
C294 0.1U 10
C259 *10U_NC 6.3

L35 BLM21PG600SN1D 805 120 ohms@100Mhz
R230 2.2 +CK_VDD_PCI
C308 0.1U 10
C309 0.1U 10
R185 2.2 +CK_VDD_PLL3
C281 0.1U 10
R192 2.2 +CK_VDD_48
C301 0.1U 10
C296 4.7U 6.3 603
R191 2.2 +CK_VDD_SRC
C241 0.1U 10
C295 0.1U 10

SMbus address D2
Non-iAMT
These are for backdrive issue.
+3.3V_RUN
RP4 2.2KX2
(26,31,39) SMBDAT1 Q28 2N7002W-7-F CLK_SDATA
(26,31,39) SMBCLK1 Q27 2N7002W-7-F CLK_SCLK

+3.3V_RUN
R202 10K
27M_SEL
R213 *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

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: RM3 Rev: 3A
Date: Wednesday, May 06, 2009 Sheet 17 of 60

ASIC	PN	100-CK	QCI P/N
M96-M2 XT A13	216-0729051	100-CK3186	AJ072900T08
M97-M2 LP A11	216-0731001	100-CG1806	AJ073100T01

Title	M97LP_PCIE		
Size	Document Number RM3		Rev 3A
Date	Wednesday, May 06, 2009	Sheet 18 of 60	

Memory Straps		RAM_ TYPE_CFG3	RAM_ TYPE_CFG2	RAM_ TYPE_CFG1	RAM_ TYPE_CFG0
800 MHz 512MB(32M*16) Hynix_Tiva die	H5TQ5163MFR-12	1	1	1	1
reserve for Qimonda		1	1	1	0
reserve for Samsung		1	1	0	1
800 MHz 1GB(64M*16) Hynix_Orion die	H5TQ1G63BFR-12C	1	0	1	1
800 MHz 1GB(64M*16) Qimonda_A1 die	IDGH1G-04A1F1C-16X	1	0	1	0
800 MHz 1GB(64M*16) Samsung_E die	K4W1G1646E-HC12	1	0	0	1

Note : Required Frequency = 800 MHz

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

VRAM TYPE

APERTURE SIZE

Scott_0323:depop R540 for adjust GPCIE output swing

Scott_0123:Change GPIO/Strap pin resistors value from 10K to 3K reduce M97/M96/M92 option changes.

Scott_0505:GFX_CORE_CNTRL0,GFX_CORE_CNTRL1 reserve 3K PU resistors to +3.3V_DELAY for S3 shut down solution.

CONFIGURATION STRAPS			
STRAPS	PIN	DESCRIPTION	SET
TX_PWRS_ENB	GPIO0	PCIE FULL TX OUTPUT SWING 0 = 50% Tx output swing 1 = Full Tx output swing	1
TX_DEEMPH_EN	GPIO1	PCIE TRANSMITTER DE-EMPHASIS ENABLED 0 = Disable ; 1 = Enable	1
BIF_GEN2_EN_A	GPIO2	0 = Advertises the PCIe device as 2.5 GT/s capable at power-on. 1 = Advertises the PCIe device as 5.0 GT/s capable at power-on.	0
GPIO_5_AC_BATT (M96-M2)	GPIO5	1 = AC (Performance mode) 0 = Battery saving mode	1
VGA_DIS	GPIO9	0: VGA Controller capacity enabled 1: The device will not be recognized as the system's VGA controller	0
BIOS_ROM_EN	GPIO22	Enable external BIOS ROM device 0 = Disable ; 1 = Enable	0
AUD[1] AUD[0]	VGAHSYNC VGAVSYNC	AUD[1:0]: 00 - No audio function; 01 - Audio for DisplayPort only; 10 - Audio for DisplayPort and HDMI if dongle is detected; 11 - Audio for both DisplayPort and HDMI.	11
VIP_DEVICE_STRAP_EN	BIOS_ROM_EN	VIP Device Strap Enable 0 = Disable ; 1 = Enable	0

!!! NC when M92-M2

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

PLACE VREFG DIVIDER AND CAP CLOSE TO ASIC

(1.8V @ 120mA DPLL_PVDD)

(1.1V @ 150mA DPLL_VDDC)
(1.0V @ 150mA DPLL_VDDC for M97)

(1.8V @ 20mA TSVDD)

(1.8V @ 70mA AVDD)

(1.8V @ 45mA VDD1DI)

(1.8V @ 40mA for VDD2DI)

(1.8V @ 20mA A2VDDQ)

Reserve 0 ohm for Dual mode DDC/AUX

!!! NC when M92-M2

DDC6CLK/DDC6DATA support internal HDCP(High-bandwidth Digital Content Protection) function.

216-0729051(M96-M2 XT)

QUANTA COMPUTER

Title	M97LP_IO & STRAP	
Size	Document Number RM3	Rev 3A
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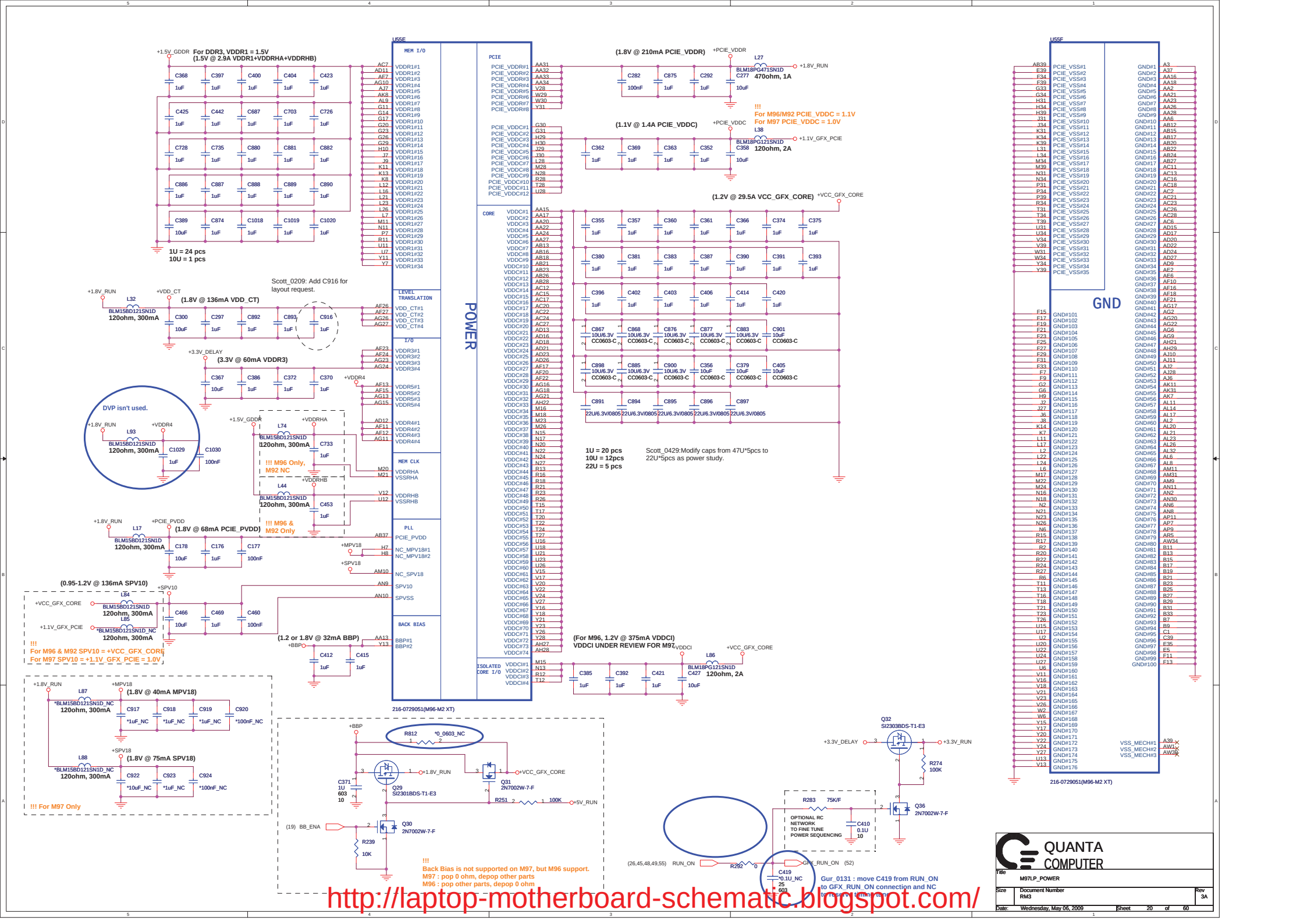
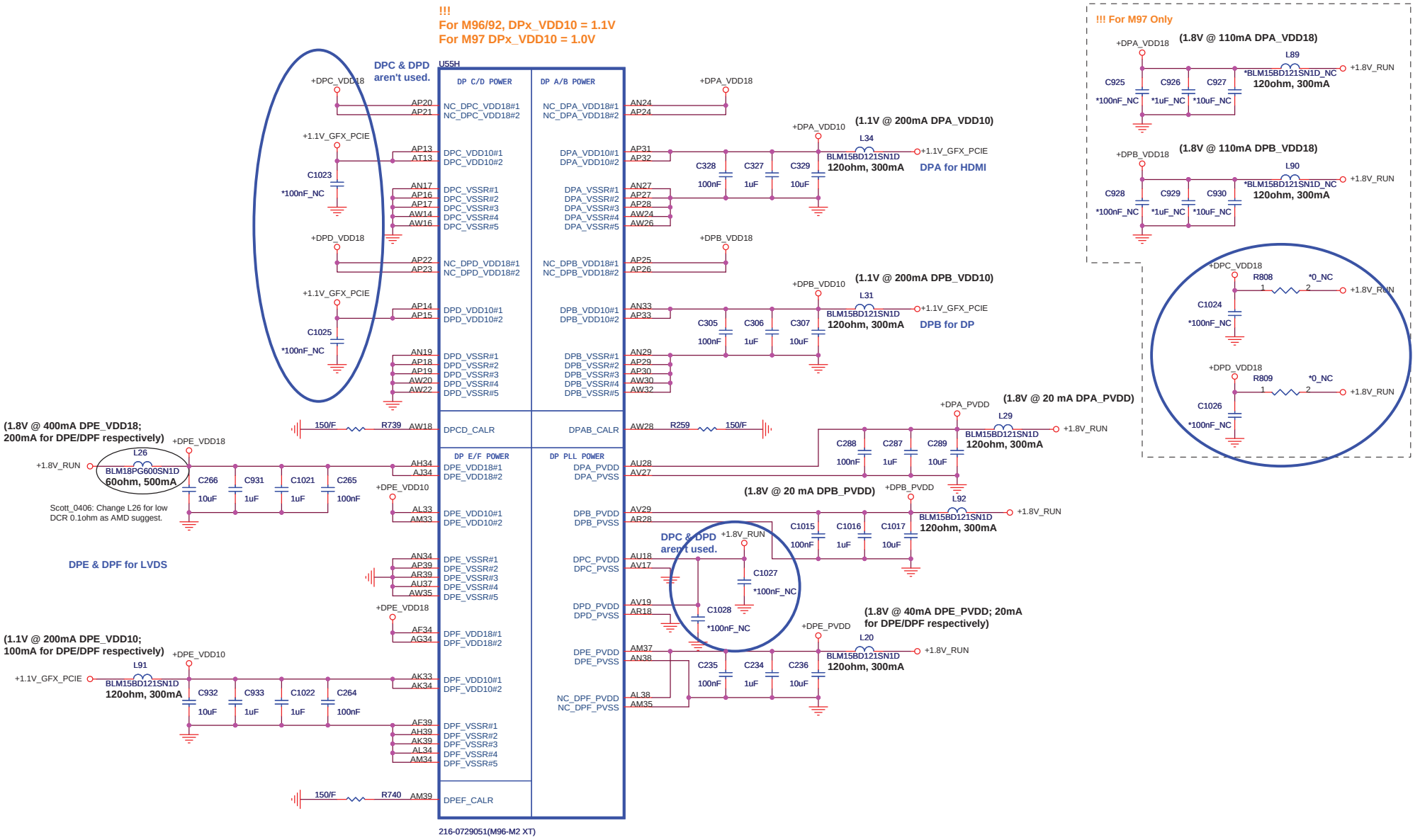
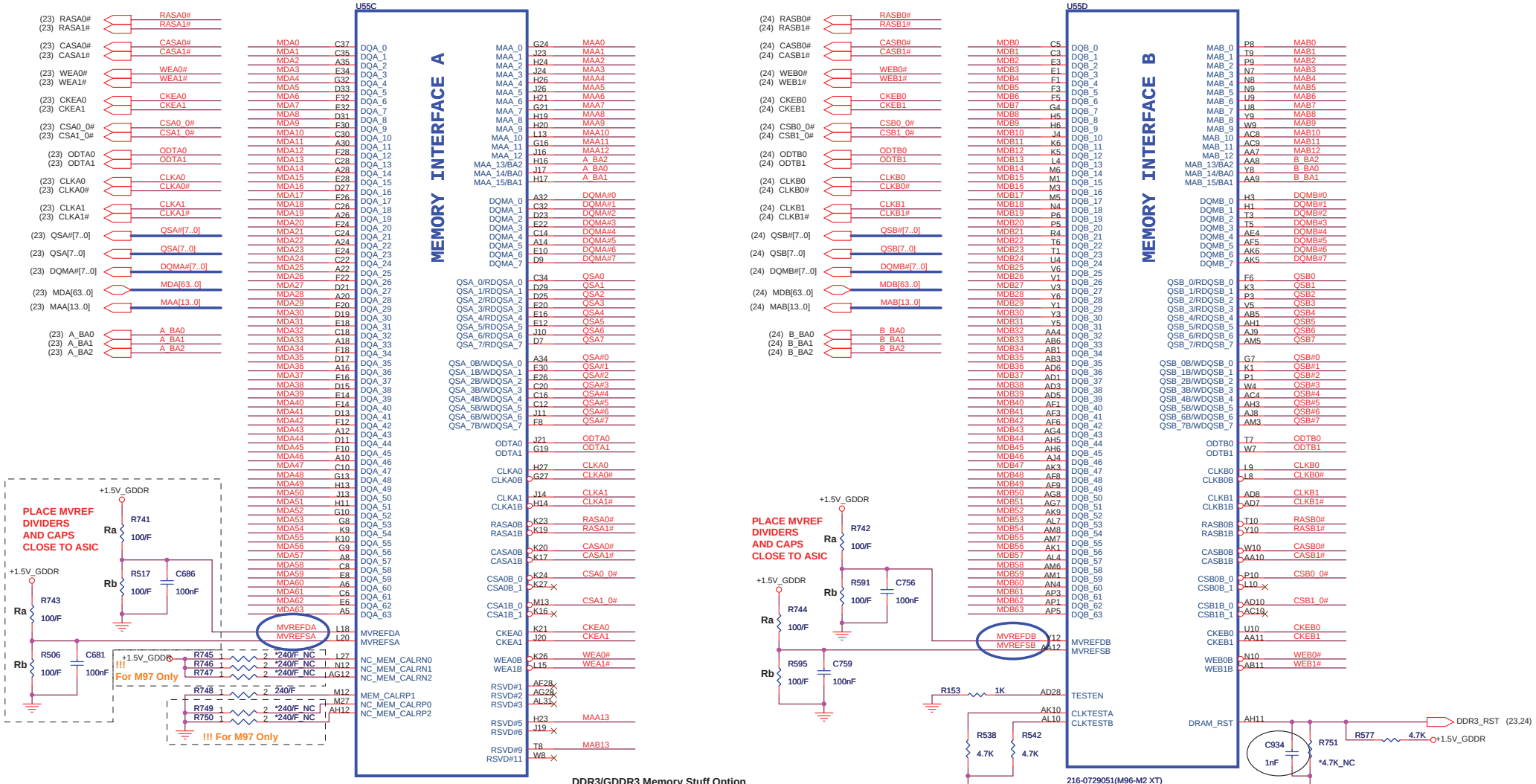


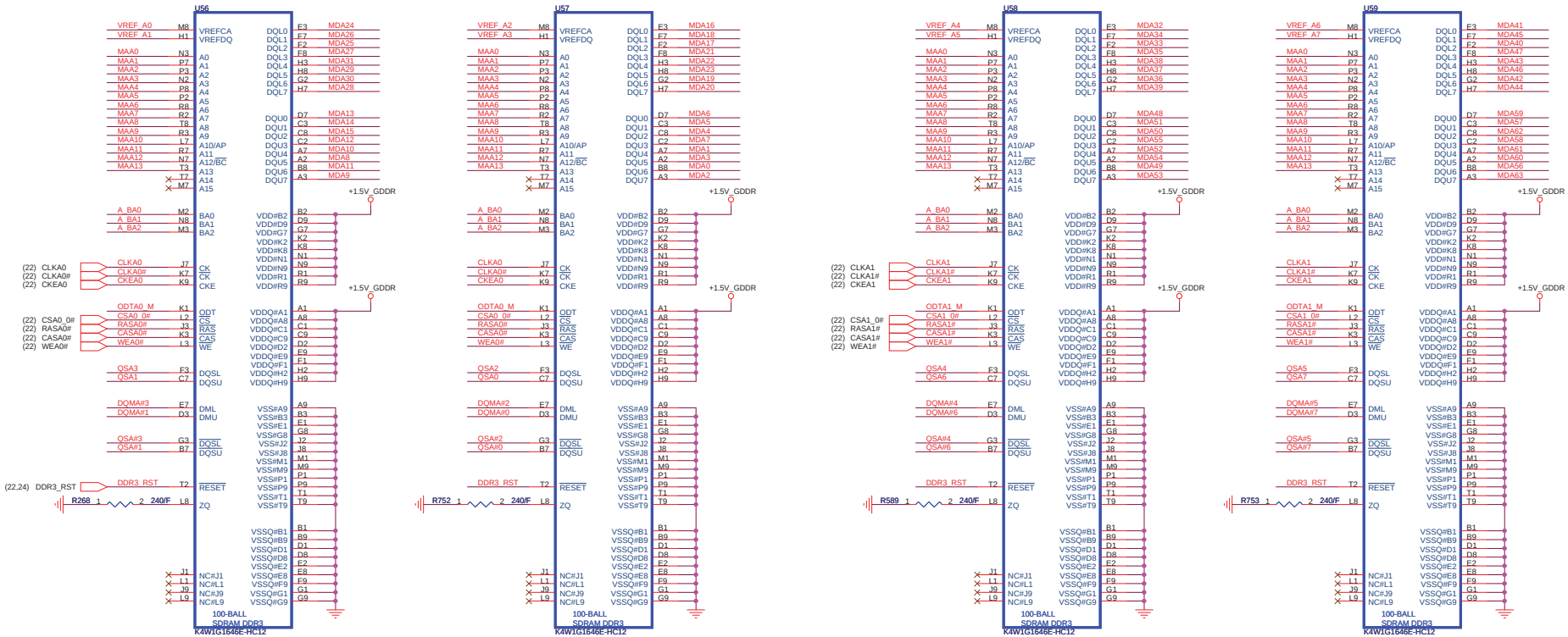


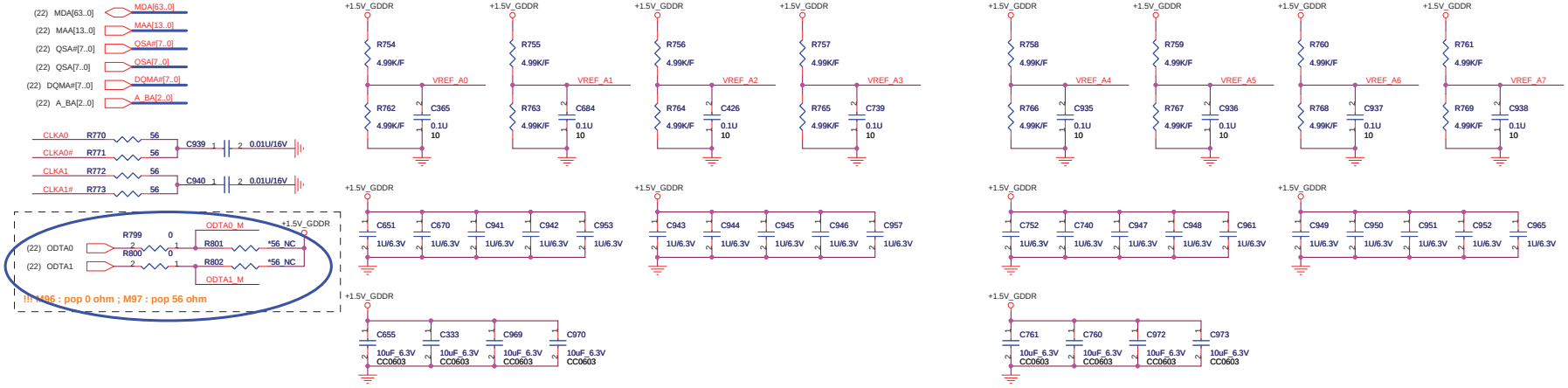
Title	M97LP_DP POWER		
Size	Document Number RM3		Rev 3A
Date	Wednesday, May 06, 2009	Sheet 21 of 60	



Scott_0406:Change C934 from 1uF to 1nF as AMD suggest.

DDR3 64MX16, CH A : 512MB

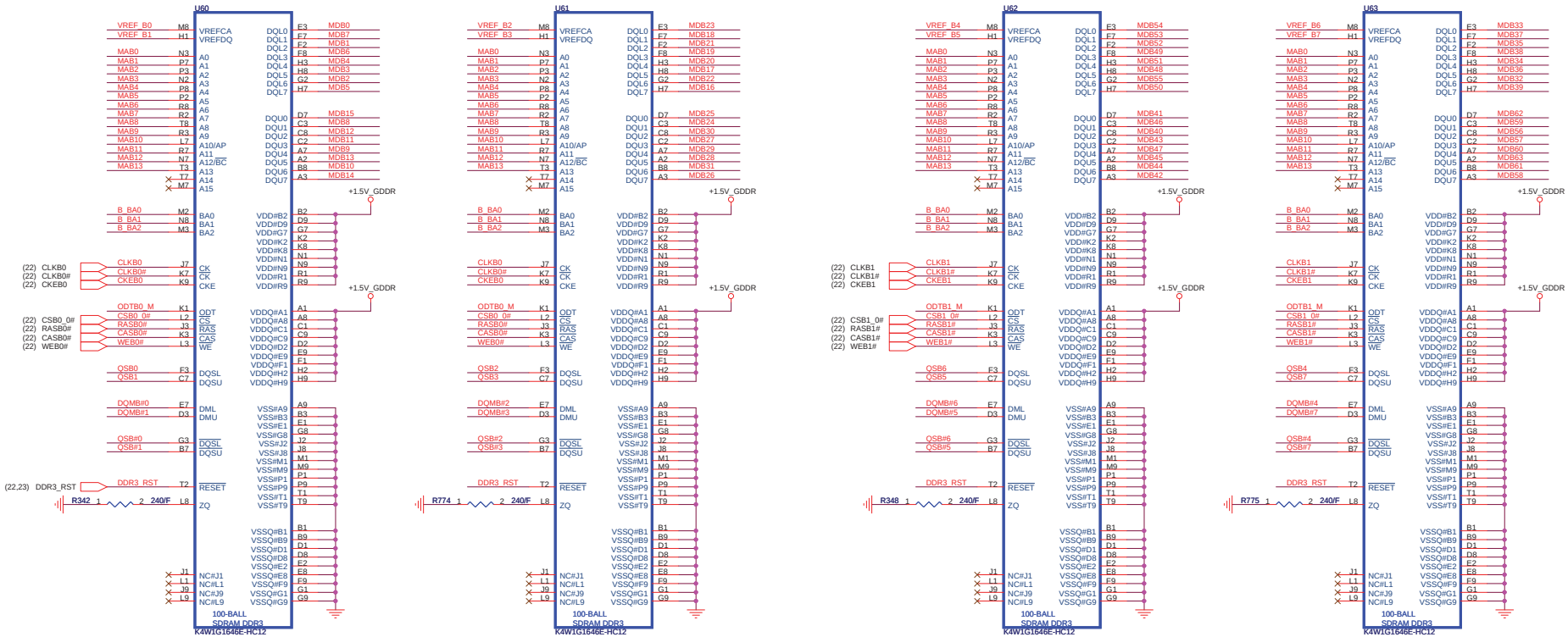


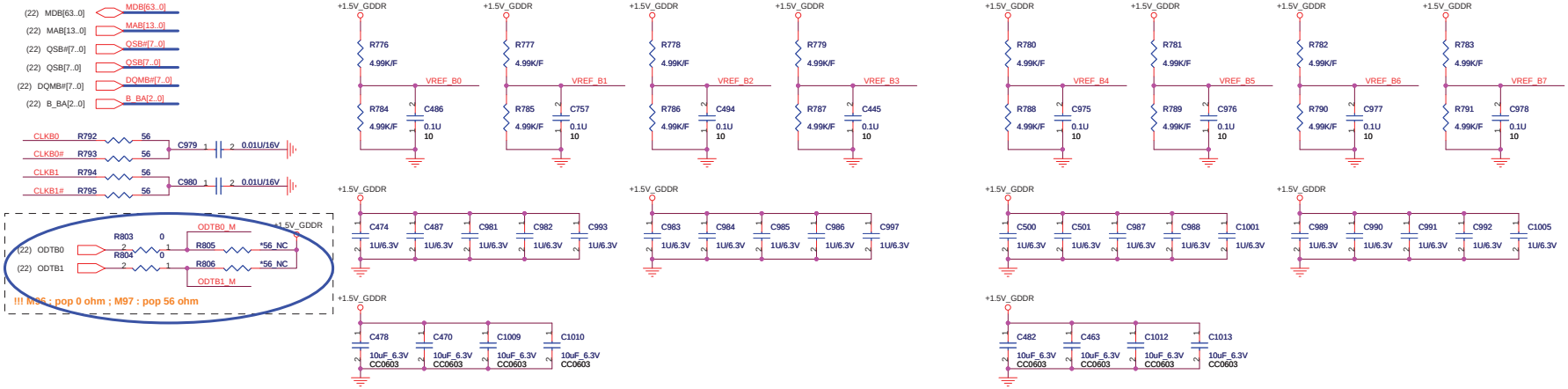


QUANTA COMPUTER

Title	M97LP_DDR3_A_512M	
Size	Document Number RM3	Rev 3A
Date: Wednesday, May 06, 2009	Sheet 23 of 60	

DDR3 64MX16, CH B : 512MB





QUANTA COMPUTER

Title	M97LP_DDR3_B_512M	
Size	Document Number RM3	Rev 3A
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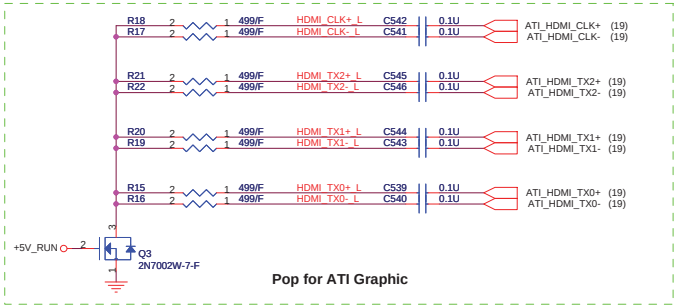
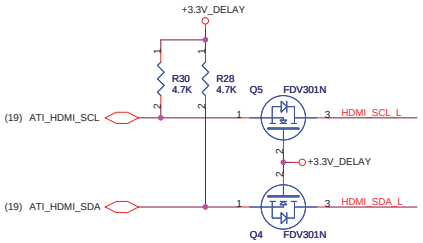
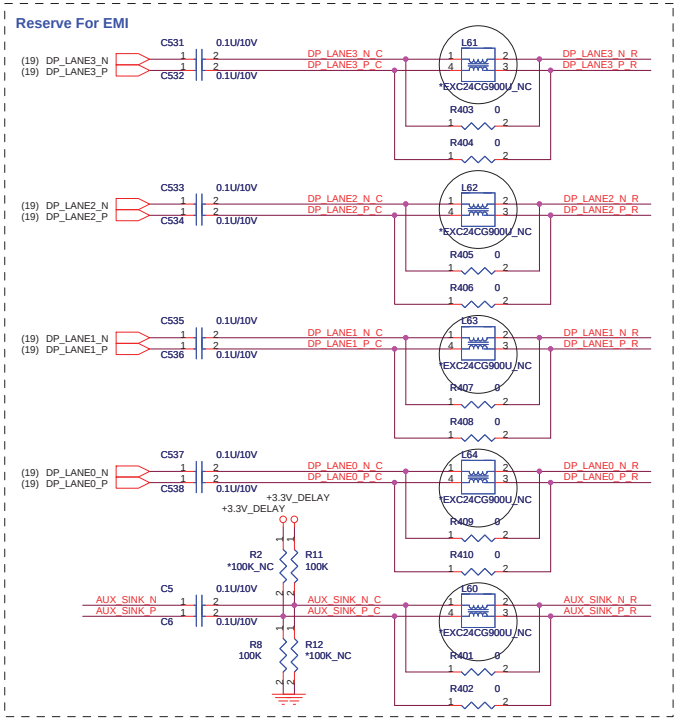
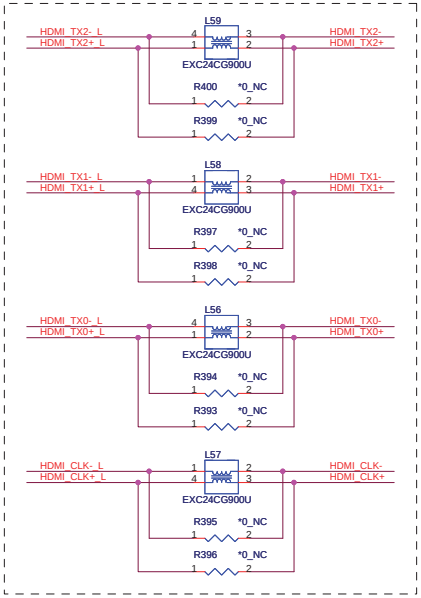
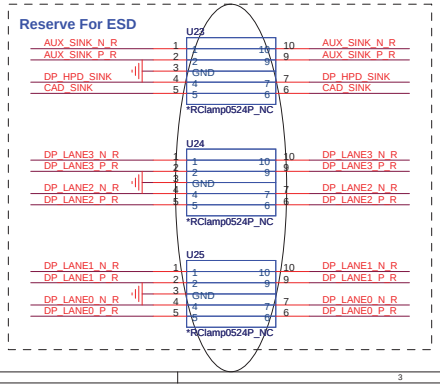


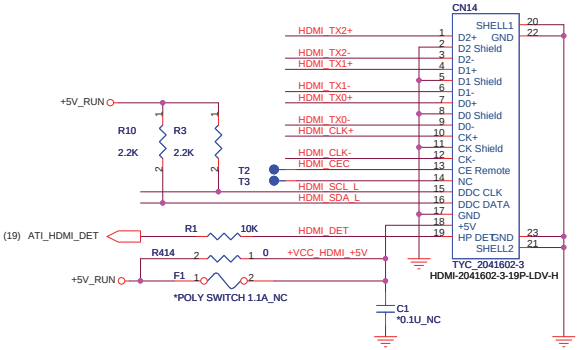


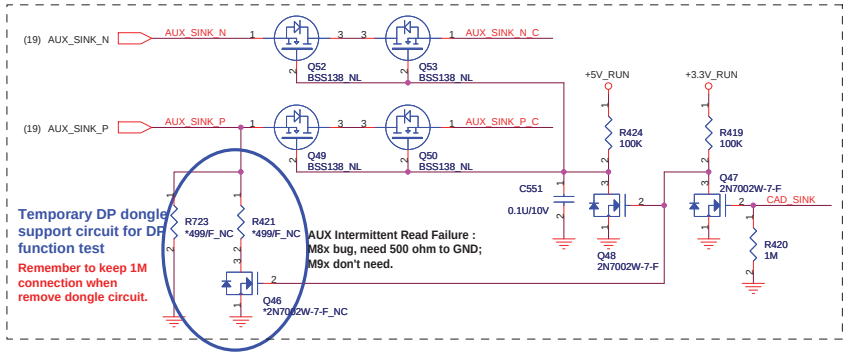


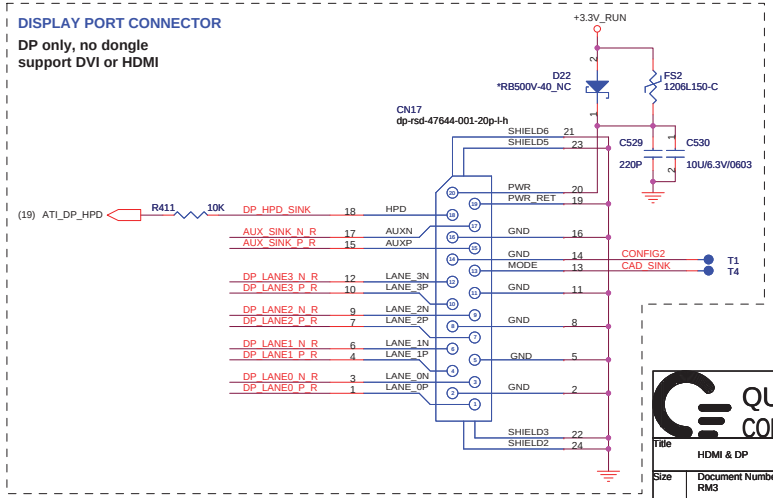


Delete EMI ESD IC for EMI asked HDMI signals link to CONN directly.









Title	HDMI & DP		
Size	Document Number RM3		Rev 3A
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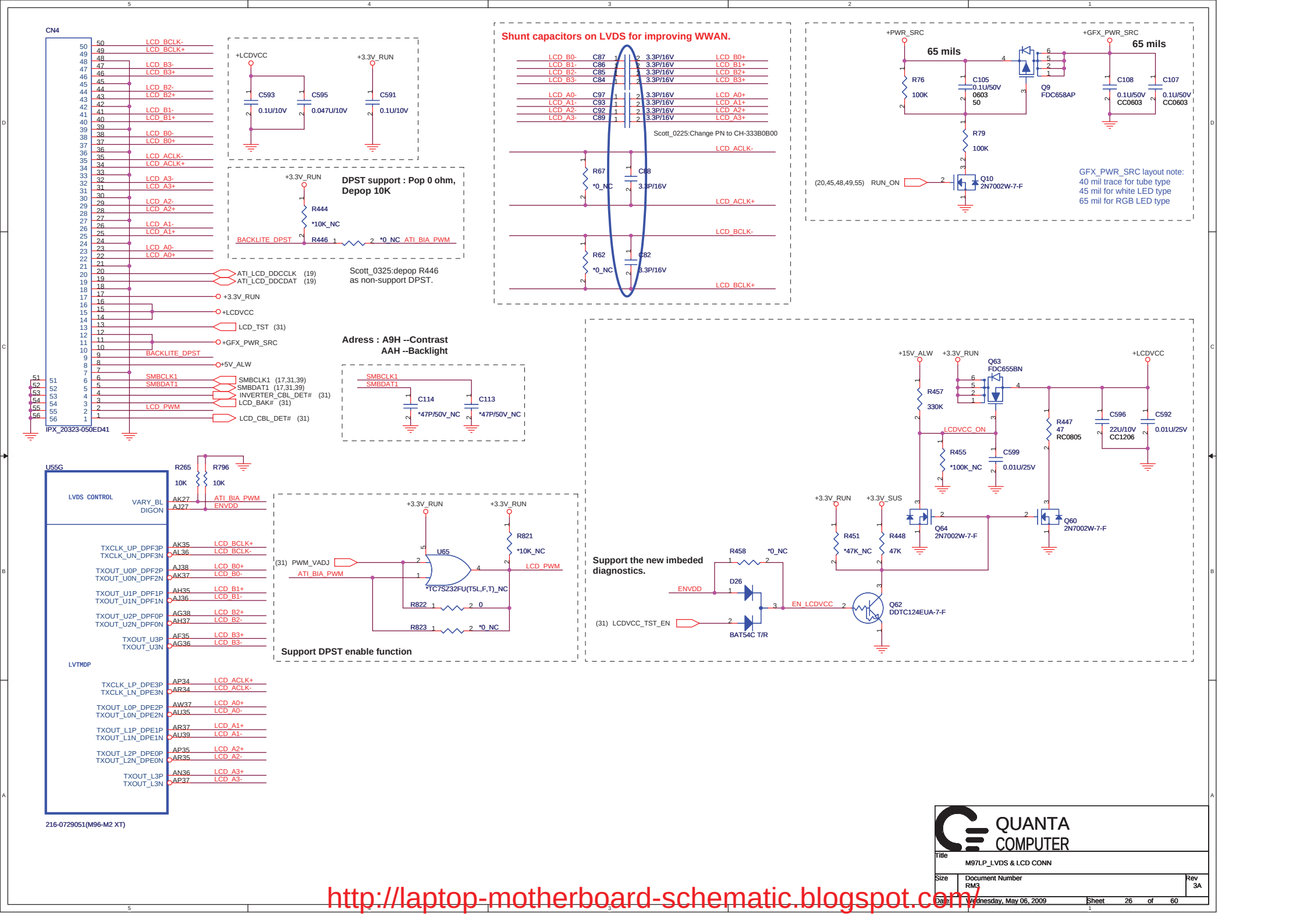
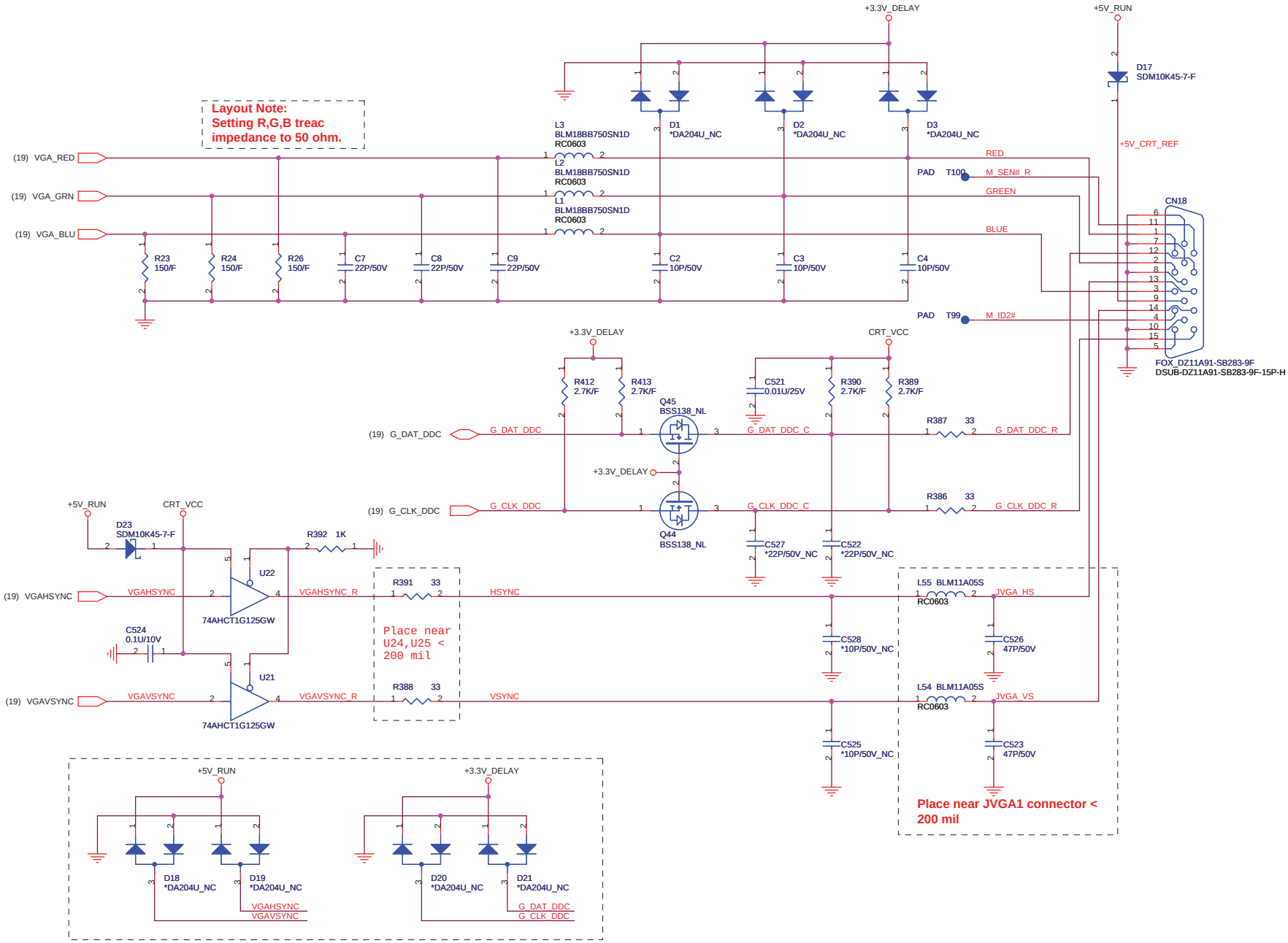
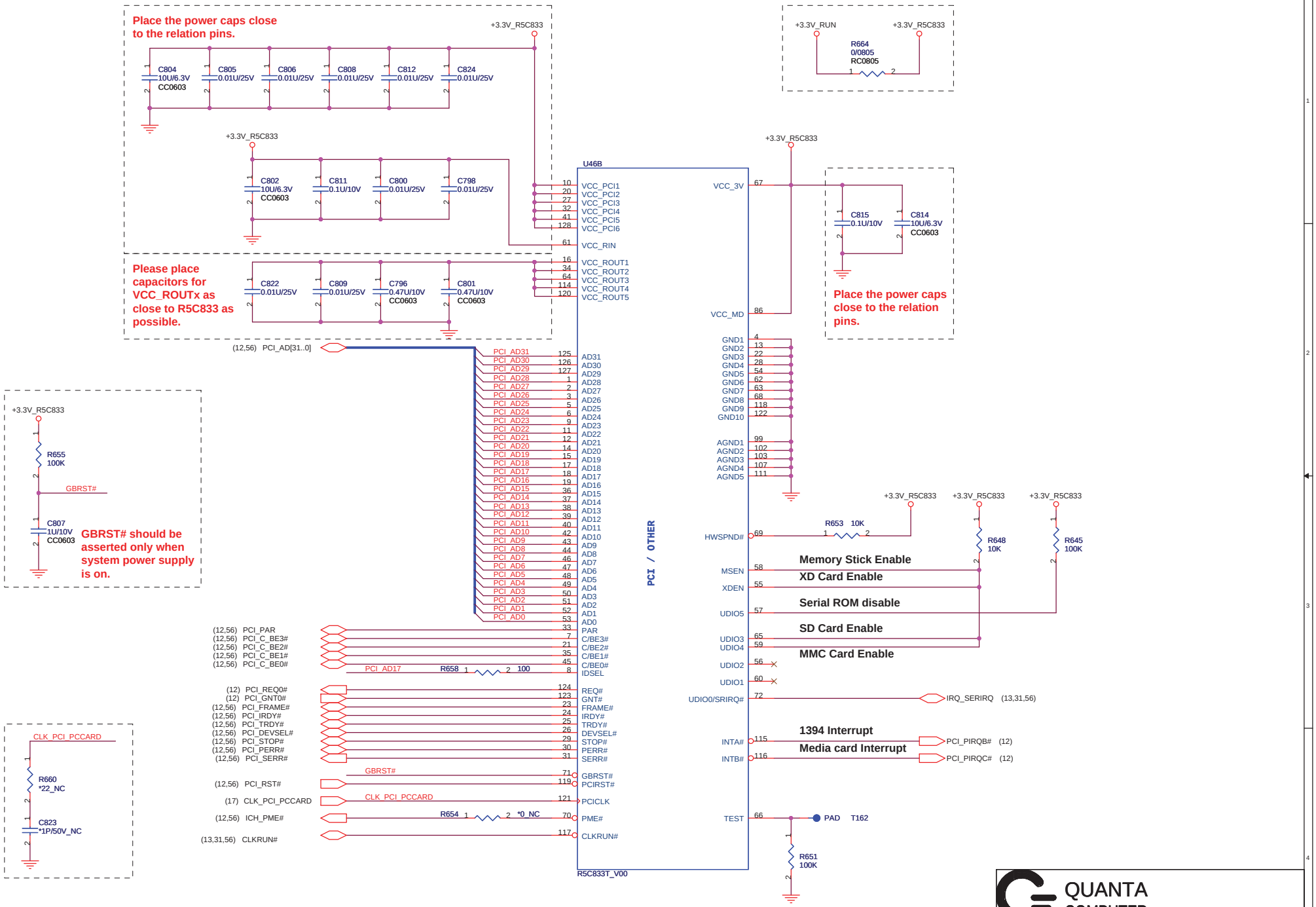




QUANTA COMPUTER

Title	CRT CONN	
Size	Document Number RM3	Rev 3A
Date	Wednesday, May 06, 2009	Sheet 27 of 60



QUANTA COMPUTER

Title	CardReader (5C833)	
Size	Document Number RM3	Rev 3A
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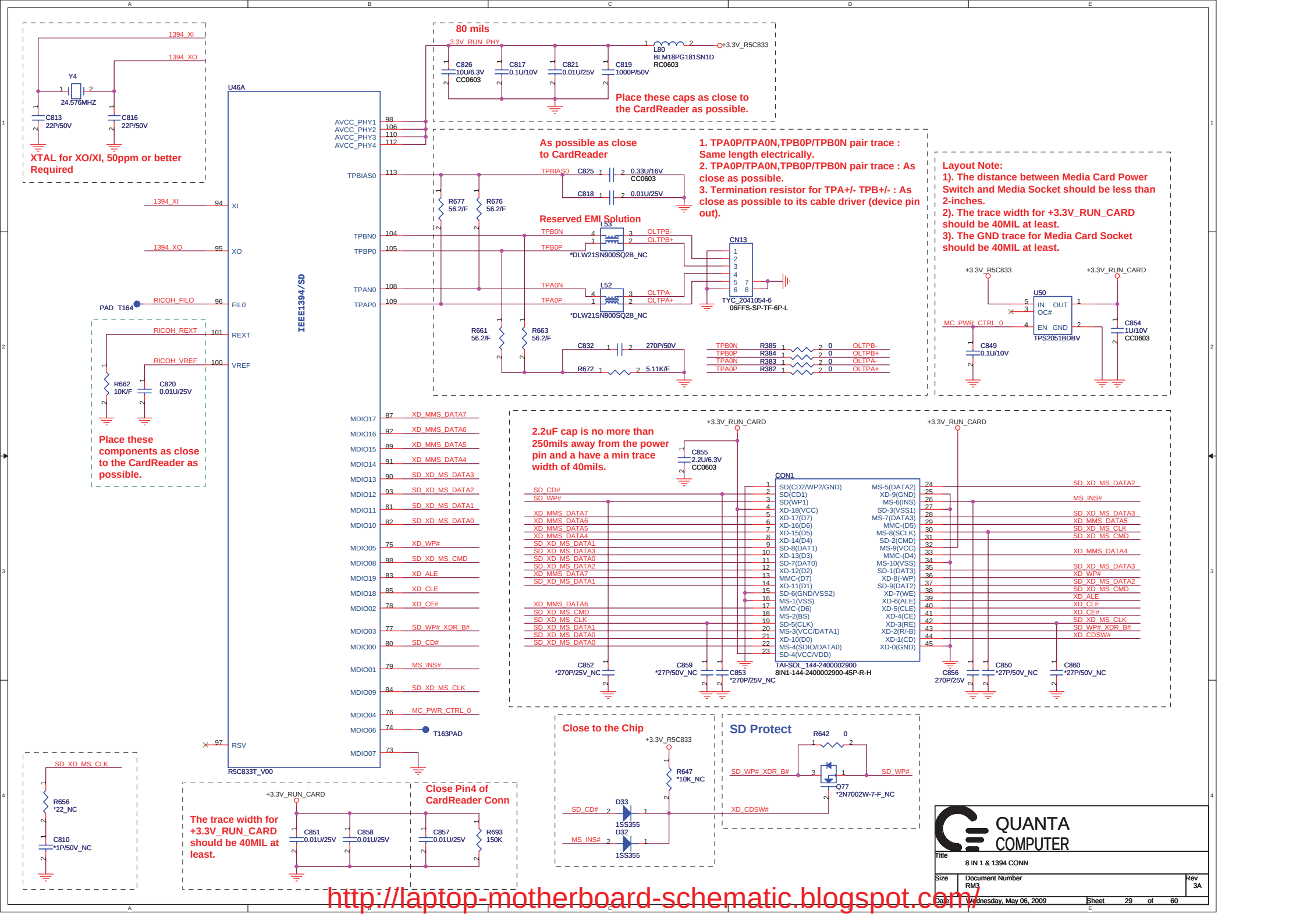
80 mils
Place these caps as close to the CardReader as possible.
XTAL for XO/XI, 50ppm or better Required
As possible as close to CardReader
Reserved EMI Solution
1. TPA0P/TPA0N,TPB0P/TPB0N pair trace : Same length electrically.
2. TPA0P/TPA0N,TPB0P/TPB0N pair trace : As close as possible.
3. Termination resistor for TPA+/- TPB+/- : As close as possible to its cable driver (device pin out).
Layout Note:
1). The distance between Media Card Power Switch and Media Socket should be less than 2-inches.
2). The trace width for +3.3V_RUN_CARD should be 40MIL at least.
3). The GND trace for Media Card Socket should be 40MIL at least.
Place these components as close to the CardReader as possible.
2.2uF cap is no more than 250mils away from the power pin and a have a min trace width of 40mils.
Close to the Chip
SD Protect
The trace width for +3.3V_RUN_CARD should be 40MIL at least.
Close Pin4 of CardReader Conn
U46A
IEEE1394/SD
R5C833T_V00
CON1
TAI-SOL_144-2400002900
8IN1-144-2400002900-45P-R-H
TYC_2041054-6
06FFS-SP-TF-6P-L
TPS2051BDBV
*DLW21SN900SQ2B_NC
QUANTA COMPUTER
Title
8 IN 1 & 1394 CONN
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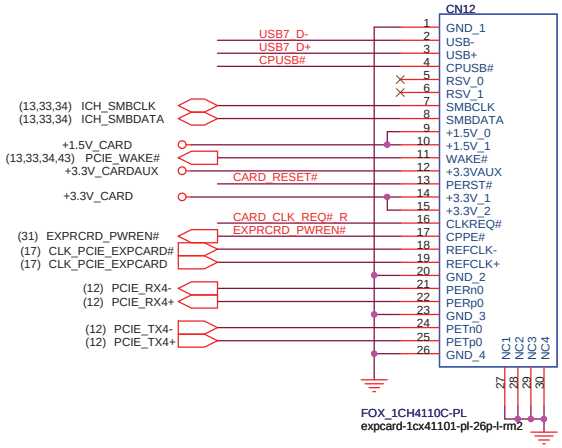
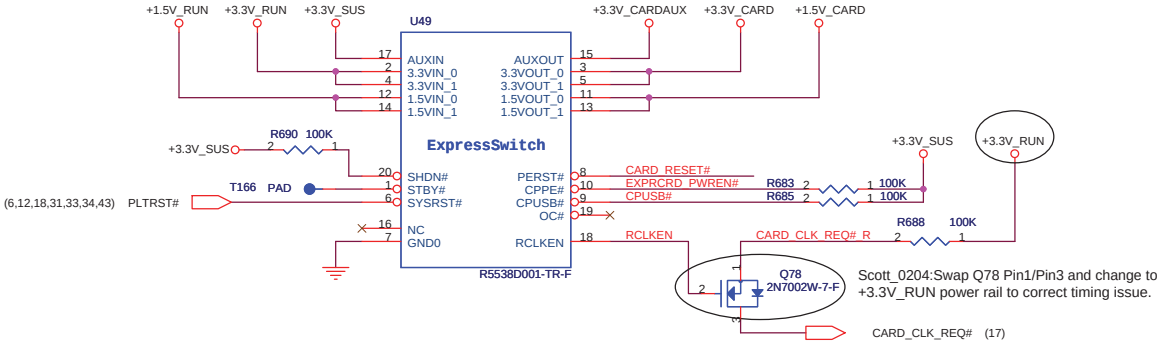
Express Card

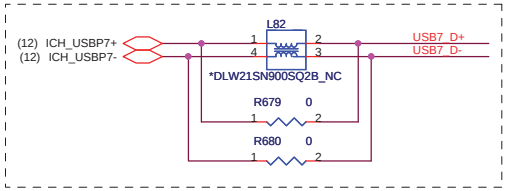
+1.5V_CARD Max. 650mA, Average 500mA.
+3V_CARD Max. 1300mA, Average 1000mA.

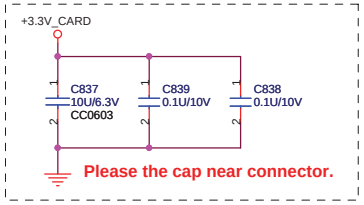




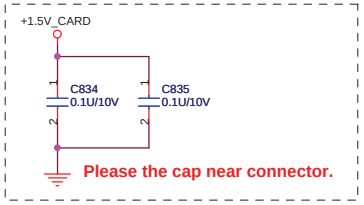
Scott_0204:Swap Q78 Pin1/Pin3 and change to +3.3V_RUN power rail to correct timing issue.

PCI-Express TX and RX direct to connector.

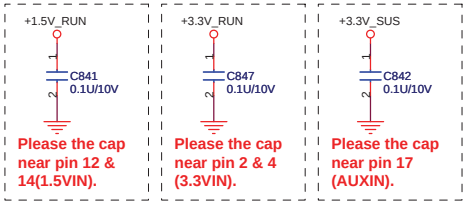




Please the cap near connector.



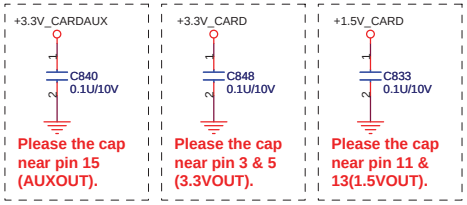
Please the cap near connector.



Please the cap near pin 12 & 14(1.5VIN).

Please the cap near pin 2 & 4 (3.3VIN).

Please the cap near pin 17 (AUXIN).



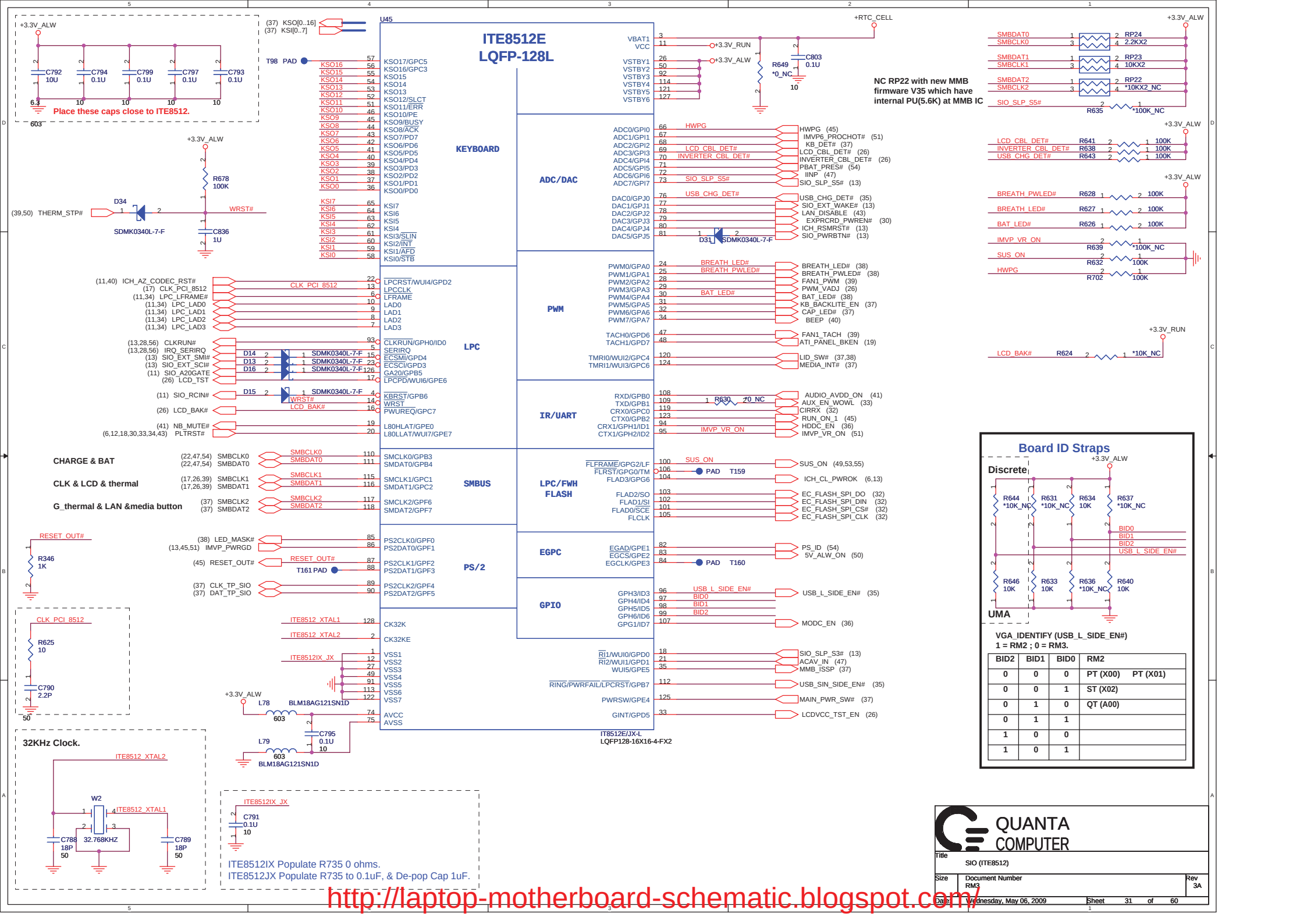
Please the cap near pin 15 (AUXOUT).

Please the cap near pin 3 & 5 (3.3VOUT).

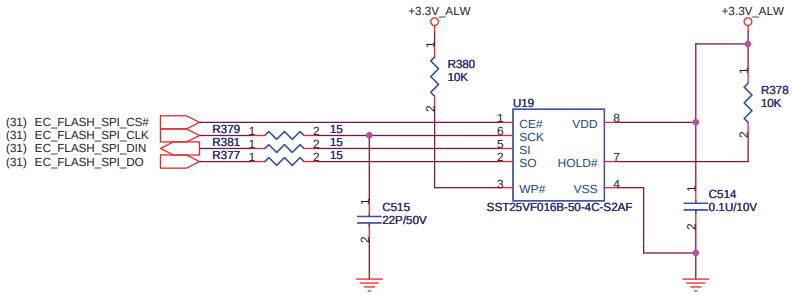
Please the cap near pin 11 & 13(1.5VOUT).

QUANTA COMPUTER

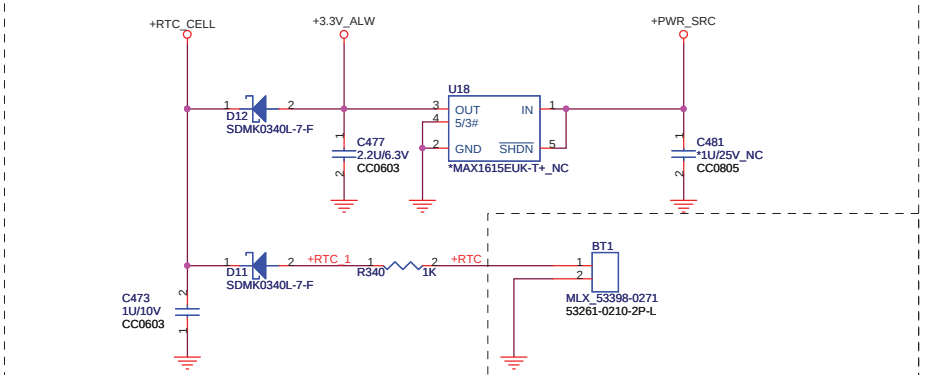
Title	EXPRESS CARD	
Size	Document Number RM3	Rev 3A
Date: Wednesday, May 06, 2009	Sheet 30 of 60	



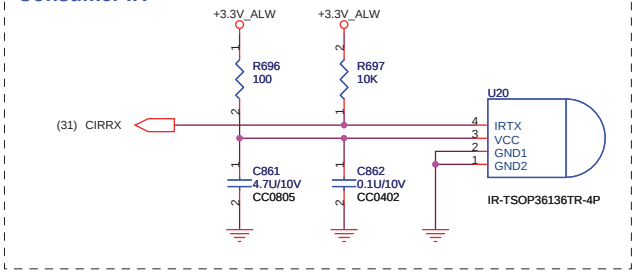
16Mbit (2M Byte), SPI



RTC BATTERY



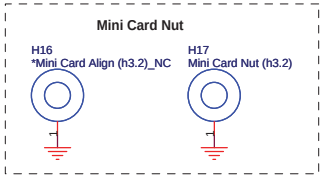
Consumer IR



QUANTA COMPUTER

Title	FLASH/ RTC/ CIR	
Size	Document Number RM3	Rev 3A
Date: Wednesday, May 06, 2009	Sheet 32 of 60	

MiniCard WLAN Connector



Scott_0123:Change CN28 PN with DFHS52FR015.

CN28

FOX_AS0B226-S56N-7F
MIPCIEXP-1775838-1-52P

PCI-Express TX and RX direct to connector

Suport for WoW

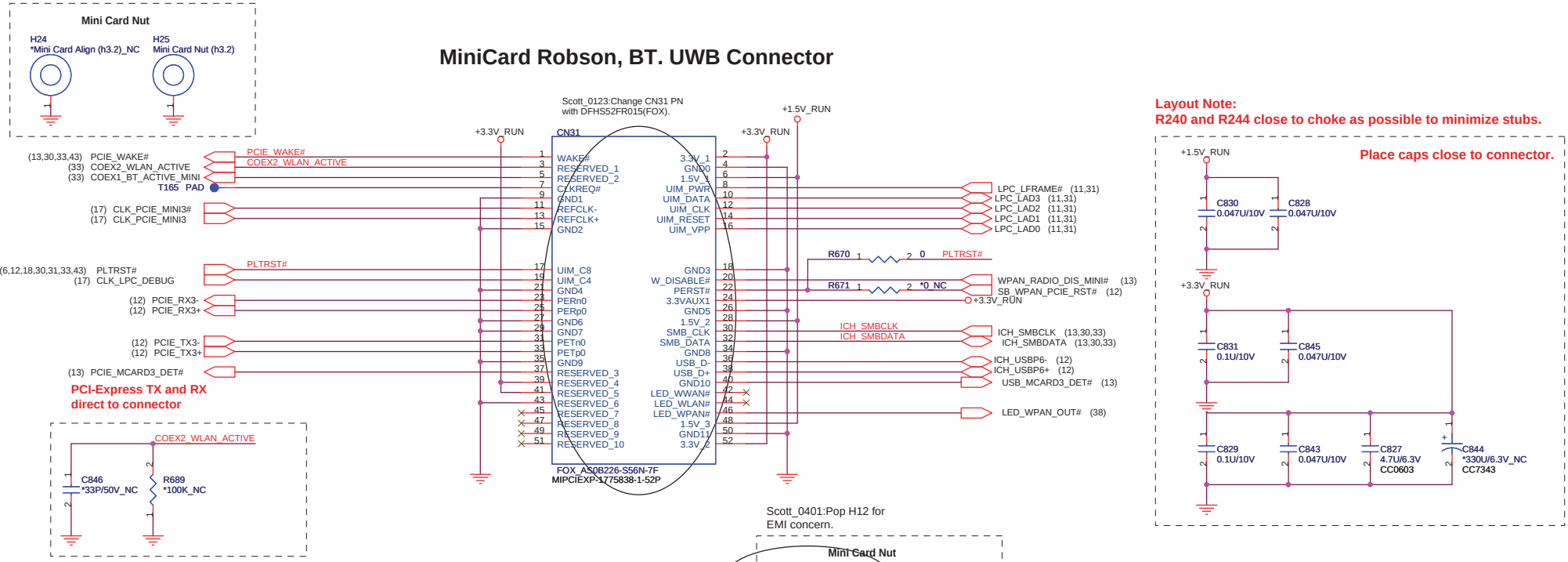
Prevent backdrive when WoW is enabled.

Place caps close to connector.

QUANTA COMPUTER

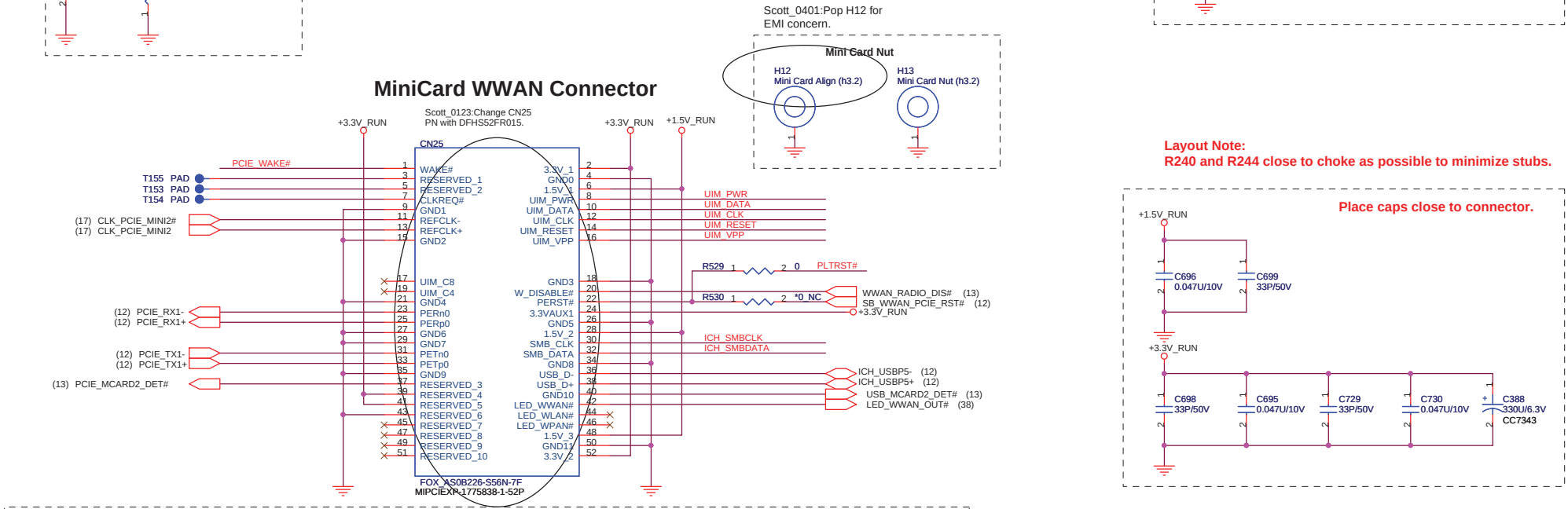
Title	MINI-CARD (WLAN)	
Size	Document Number RM3	Rev 3A
Date	Wednesday, May 06, 2009	Sheet 33 of 60

MiniCard Robson, BT. UWB Connector

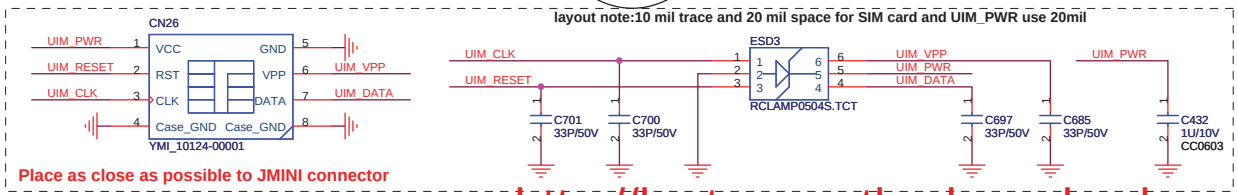


Layout Note:
R240 and R244 close to choke as possible to minimize stubs.

MiniCard WWAN Connector



Layout Note:
R240 and R244 close to choke as possible to minimize stubs.



QUANTA COMPUTER

Title	MINI-CARD (WPAN,WWAN)	
Size	Document Number RM3	Rev 3A
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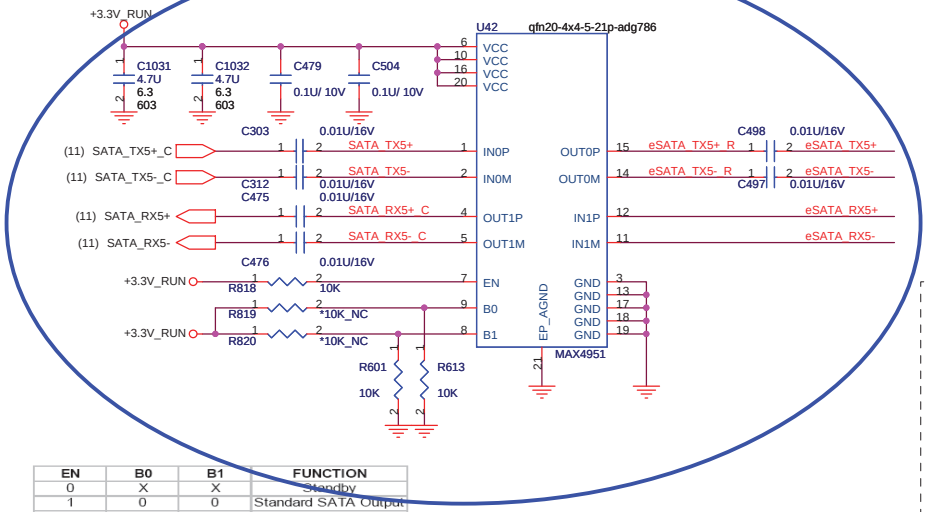
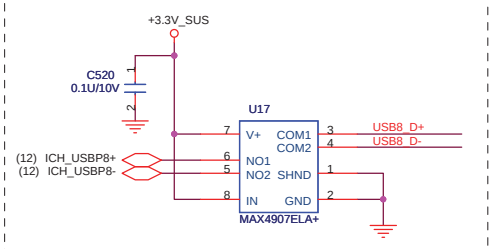
eSATA Re-driver IC

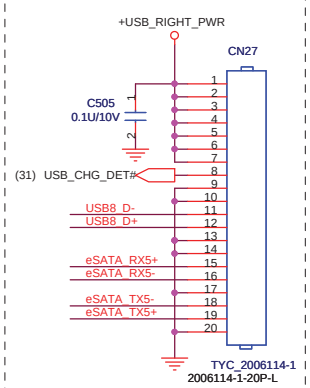


EN	B0	B1	FUNCTION
0	X	X	Standby
1	0	0	Standard SATA Output
1	1	0	Ch 0 Boost Output
1	0	1	Ch 1 Boost Output
1	1	1	Ch 0,1 Boost Output

USB BUS SW

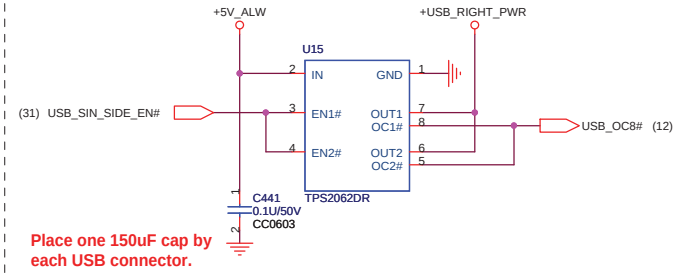


eSATA CONN



USB POWER SW

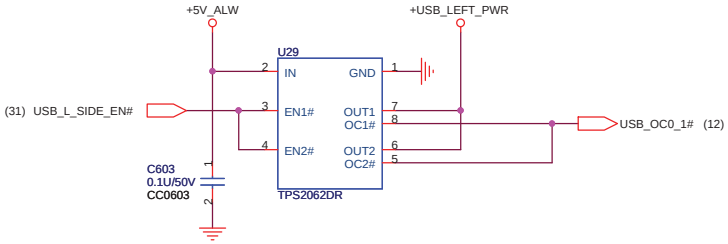
Each channel is 1A



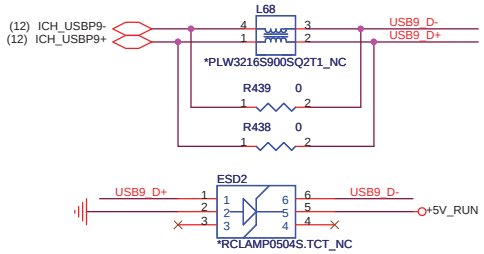
Place one 150uF cap by each USB connector.

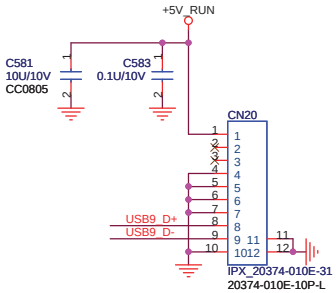
USB POWER SW

Each channel is 1A

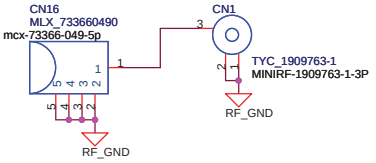


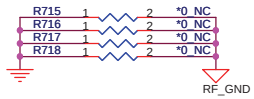
TV module

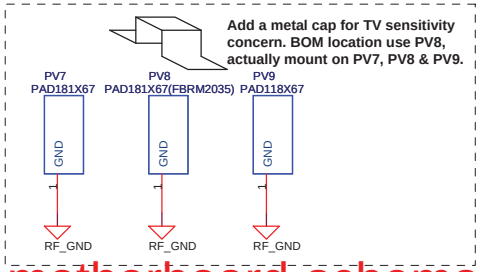




TV RF Jack & Microwave connector







QUANTA COMPUTER

Title	USB & eSATA & TV	
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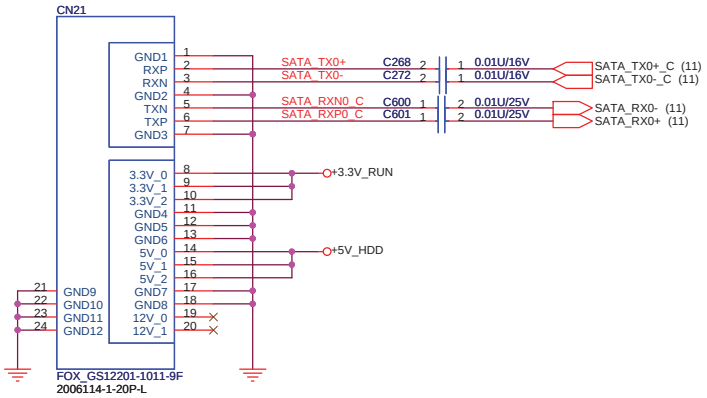
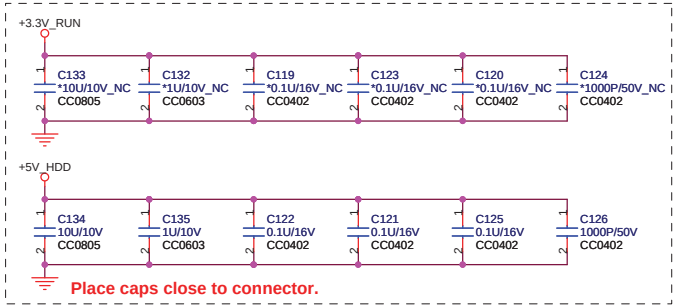
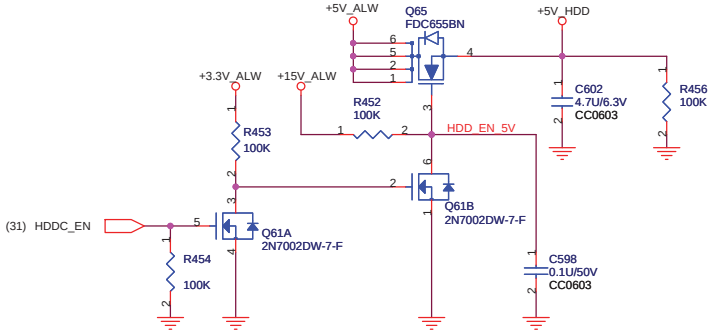
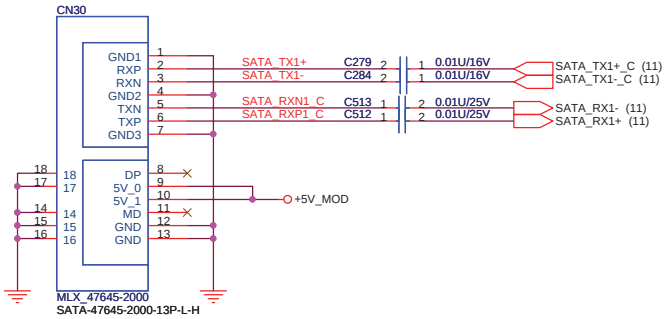
SATA Connector

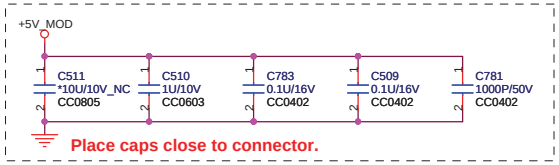


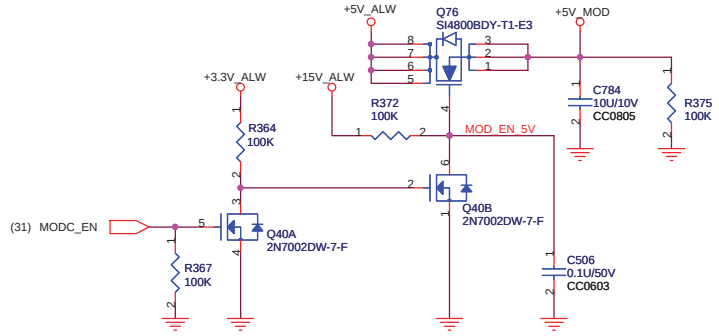




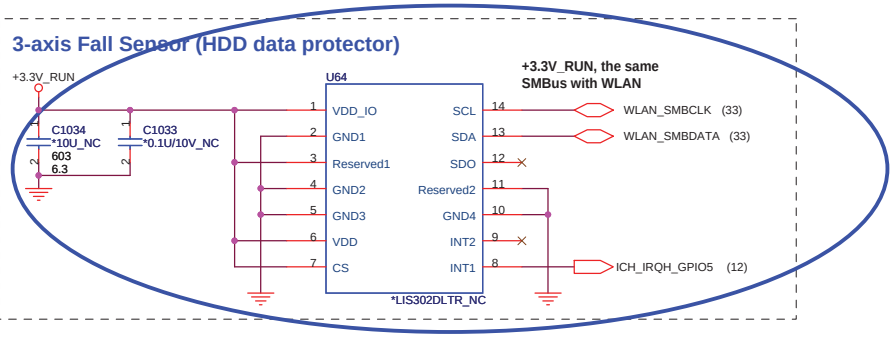
ODD Connector







3-axis Fall Sensor (HDD data protector)



QUANTA COMPUTER

Title	HDD & ODD (SATA)	
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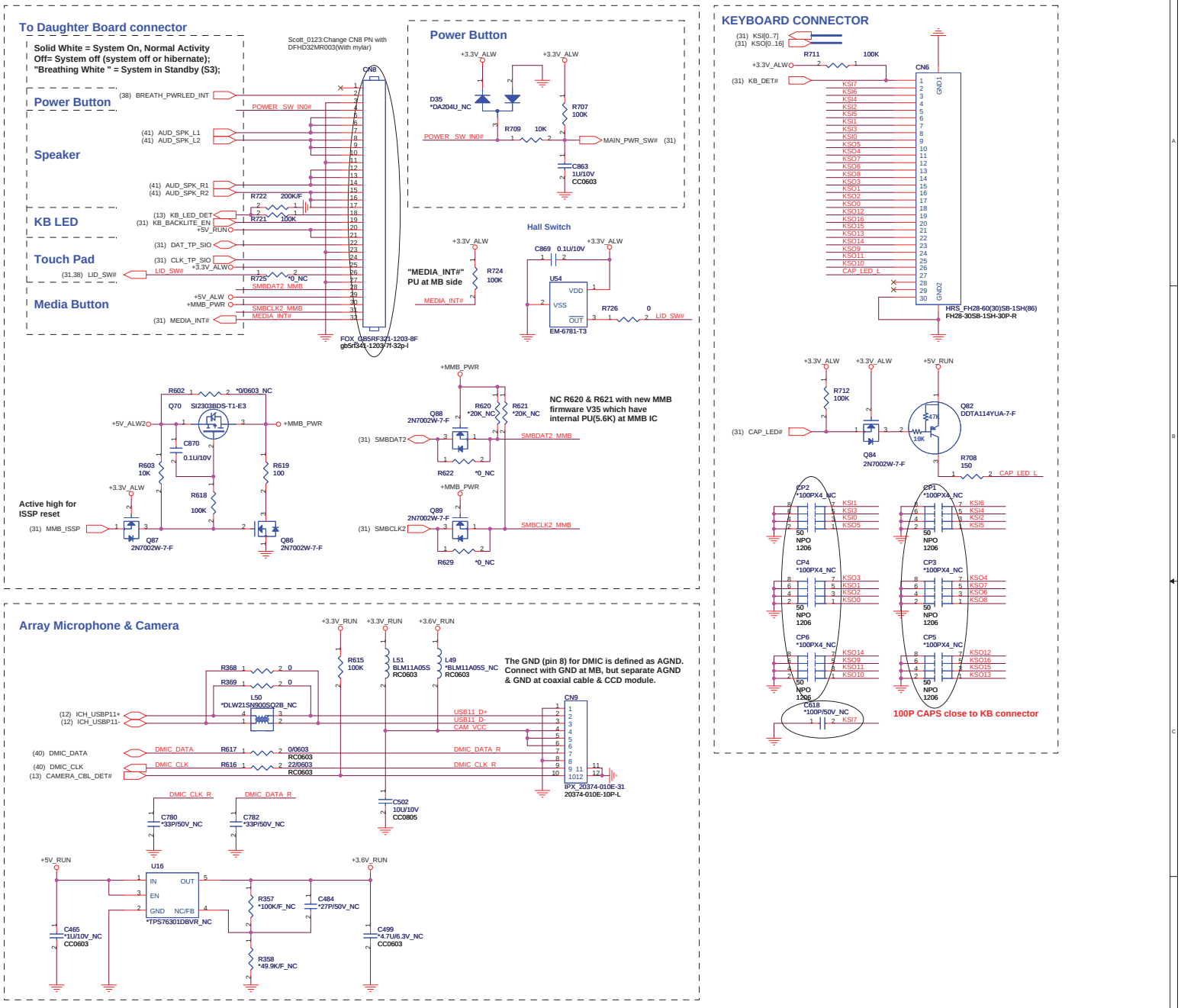
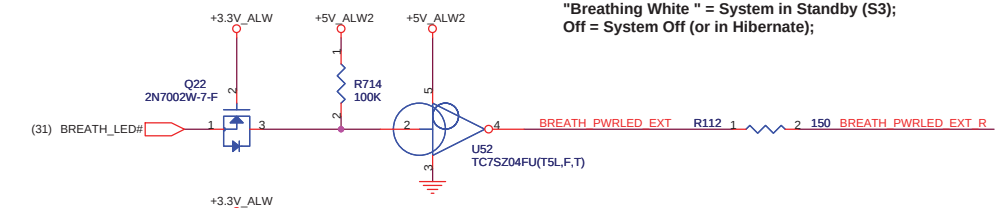


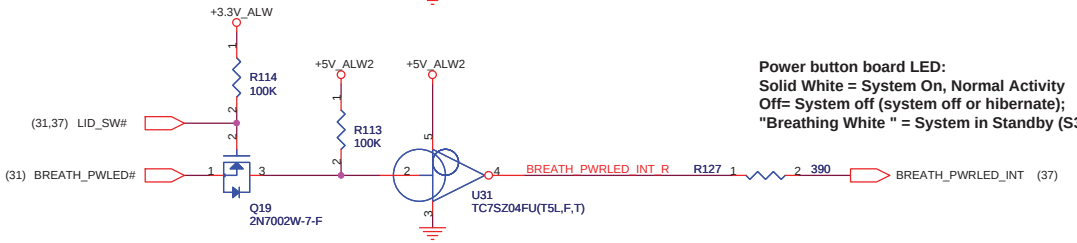
Title	KB/ CCD/ UI		
Size	Document Number		Rev
			3A
Date: Wednesday, May 06, 2009		Sheet 37 of 40	

Hinge & Power Button board LED (PWR/Battery indictor)

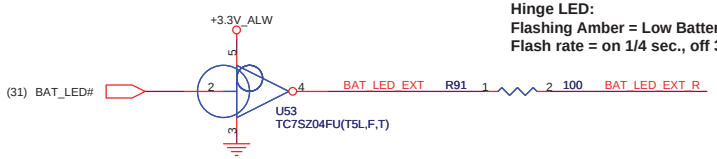
Hinge LED
Solid White= System On, Normal Activity
Solid White= Charging (system on);
Solid White= Charging (system off or hibernate and battery charge <90%);
Off= Charging (system off or hibernate and battery charge > 90%) ;
"Breathing White " = System in Standby (S3);
Off = System Off (or in Hibernate);



Power button board LED:
Solid White = System On, Normal Activity
Off= System off (system off or hibernate);
"Breathing White " = System in Standby (S3)

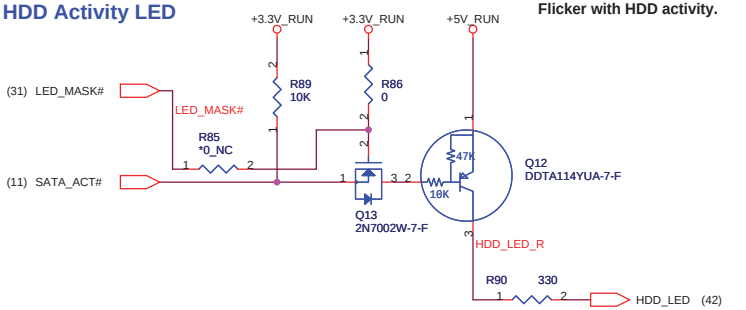


Hinge LED:
Flashing Amber = Low Battery (S0 and S3 and no AC) when battery charge <10%
Flash rate = on 1/4 sec., off 3/4 sec.



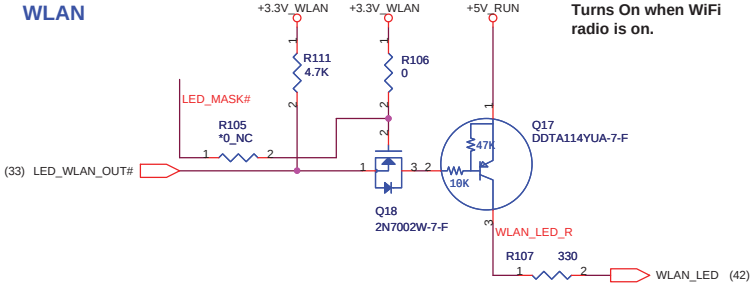
HDD Activity LED

Flicker with HDD activity.



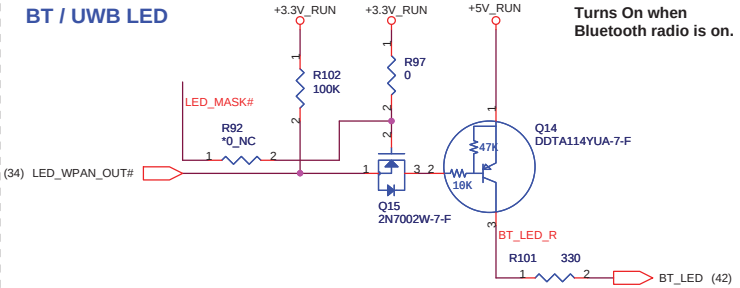
WLAN

Turns On when WiFi radio is on.



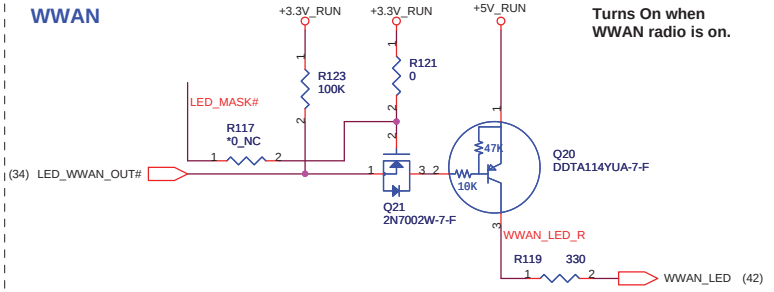
BT / UWB LED

Turns On when Bluetooth radio is on.



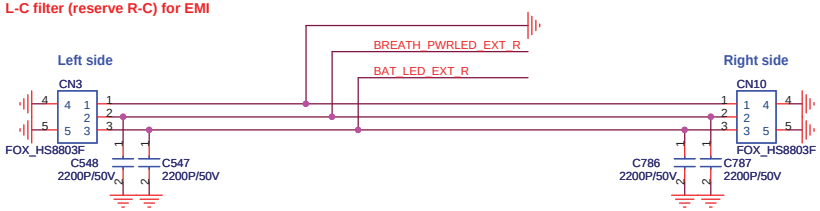
WWAN

Turns On when WWAN radio is on.



Hinge LED (PWR/Battery indictor)

L-C filter (reserve R-C) for EMI



Solid White= System On, Normal Activity
Solid White= Charging (system on);
Solid White= Charging (system off or hibernate and battery charge <90%);
Off= Charging (system off or hibernate and battery charge > 90%);
"Breathing White " = System in Standby (S3);
Off = System Off (or in Hibernate);

Flashing Amber = Low Battery (S0 and S3 and no AC) when battery charge <10%
Flash rate = on 1/4 sec., off 3/4 sec.

QUANTA COMPUTER

Title	LED	
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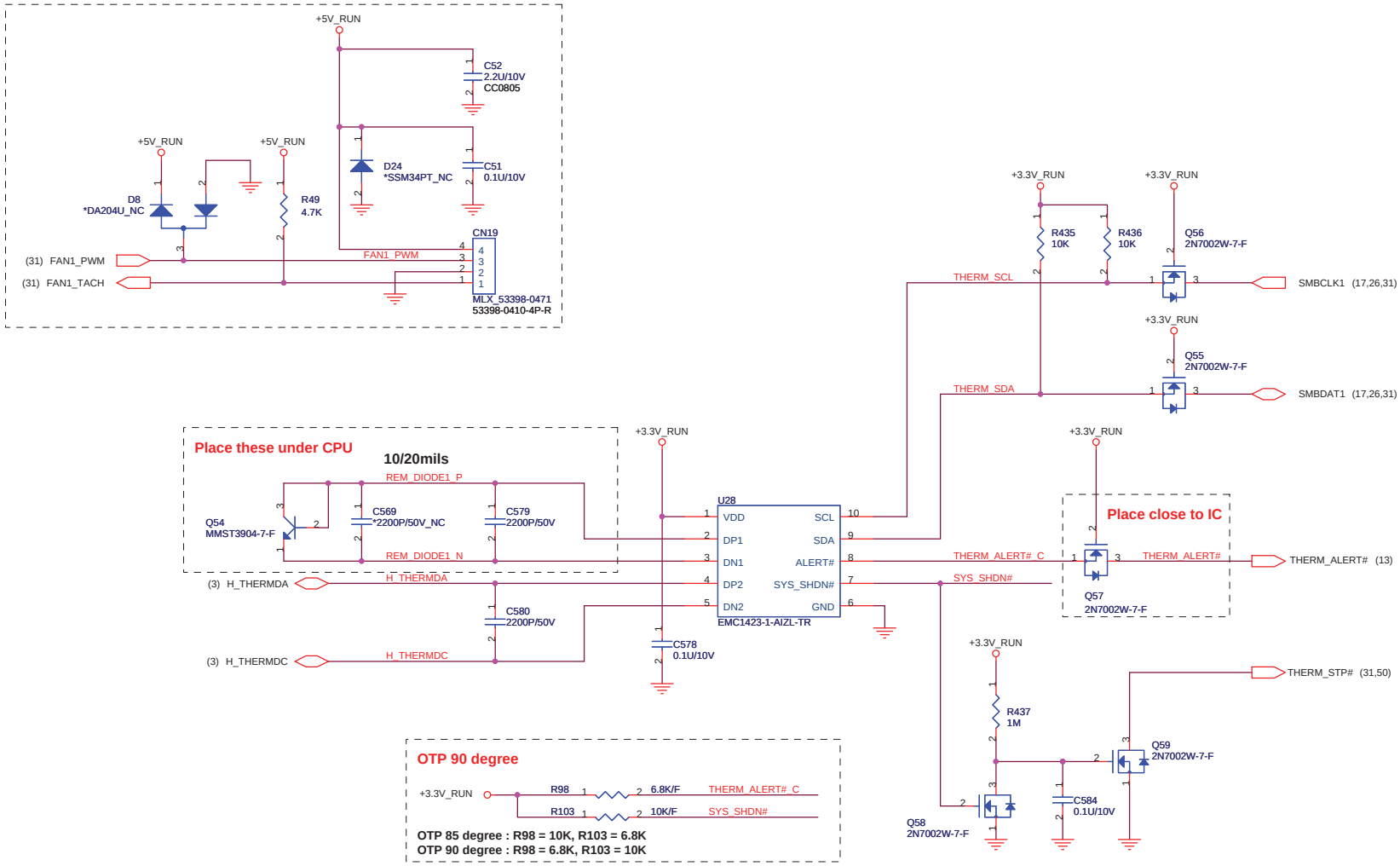

QUANTA COMPUTER

Title	FAN /THERMAL	
Size	Document Number RM3	Rev 3A
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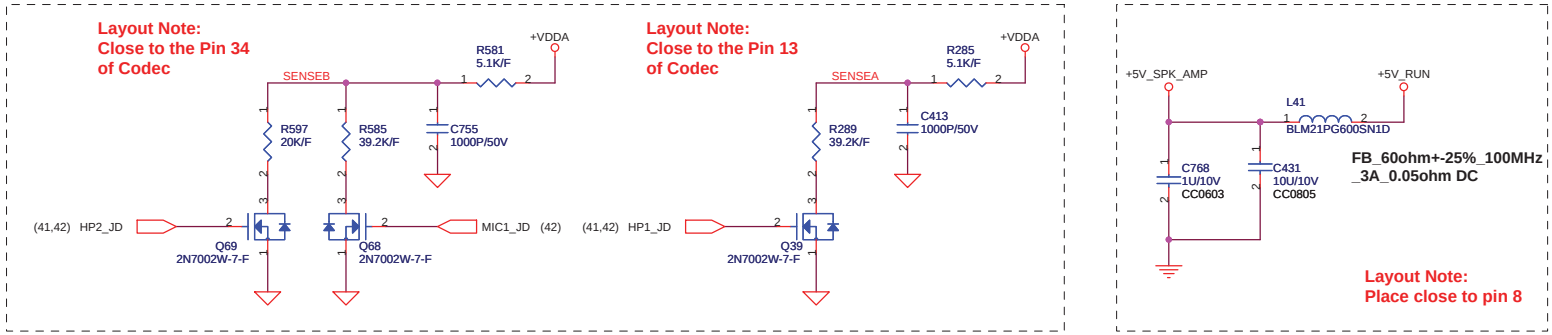
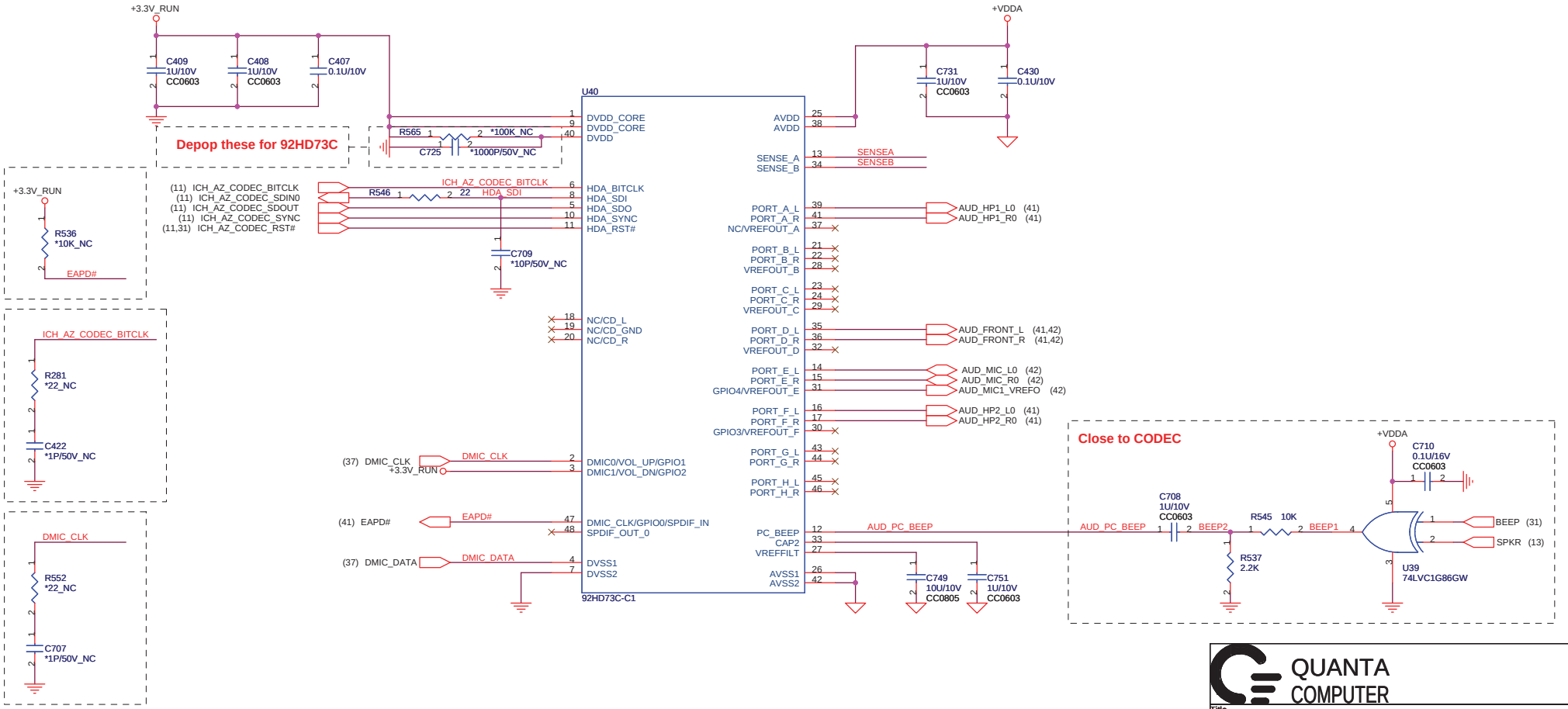


AZALIA (HD) CODEC



QUANTA COMPUTER

Title	AZELIA CODEC (92HD73C)	
Size	Document Number RM3	Rev 3A
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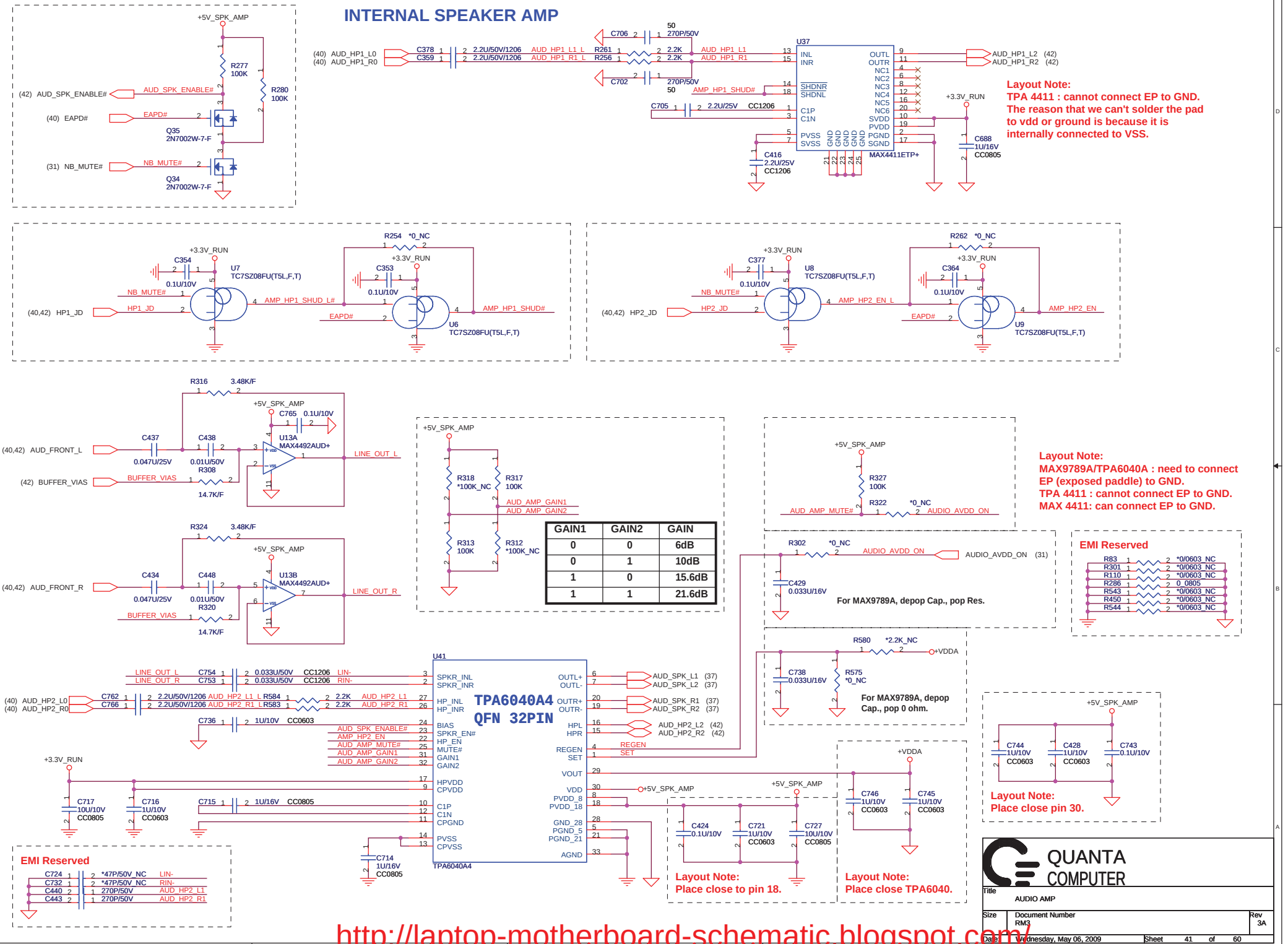
INTERNAL SPEAKER AMP



QUANTA COMPUTER

Title	AUDIO AMP	
Size	Document Number RM3	Rev 3A
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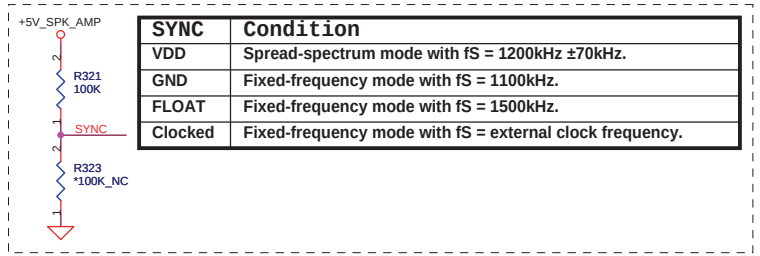
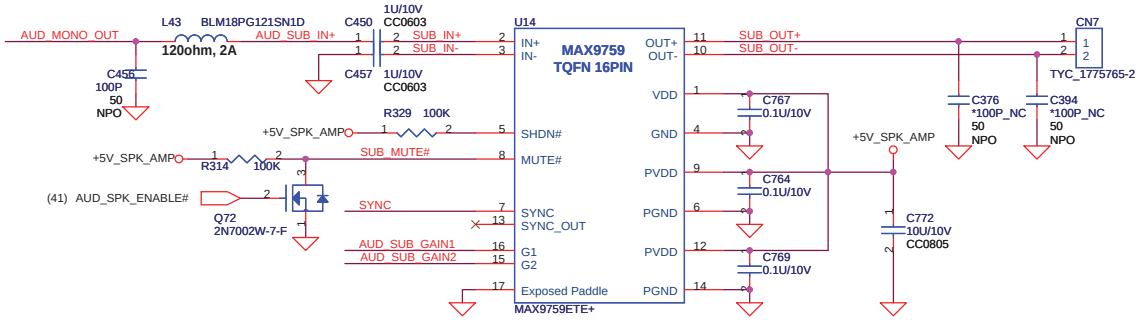
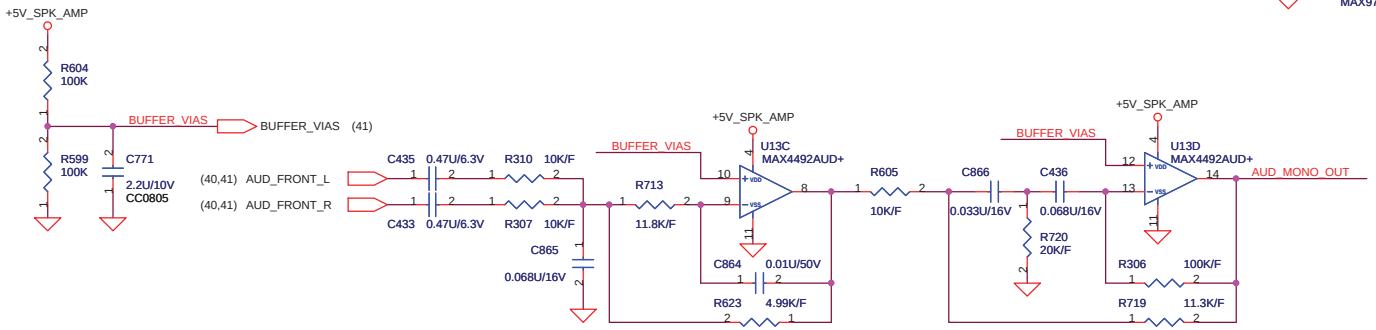
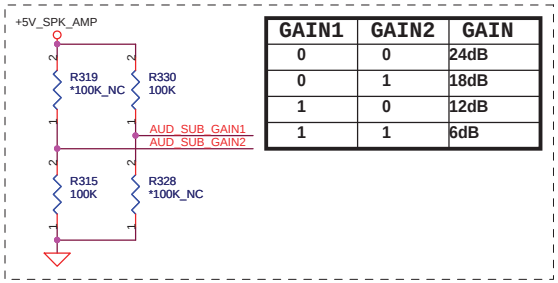
INTERNAL SUBWOOFER AMP



SYNC	Condition
VDD	Spread-spectrum mode with fS = 1200kHz ±70kHz.
GND	Fixed-frequency mode with fS = 1100kHz.
FLOAT	Fixed-frequency mode with fS = 1500kHz.
Clocked	Fixed-frequency mode with fS = external clock frequency.

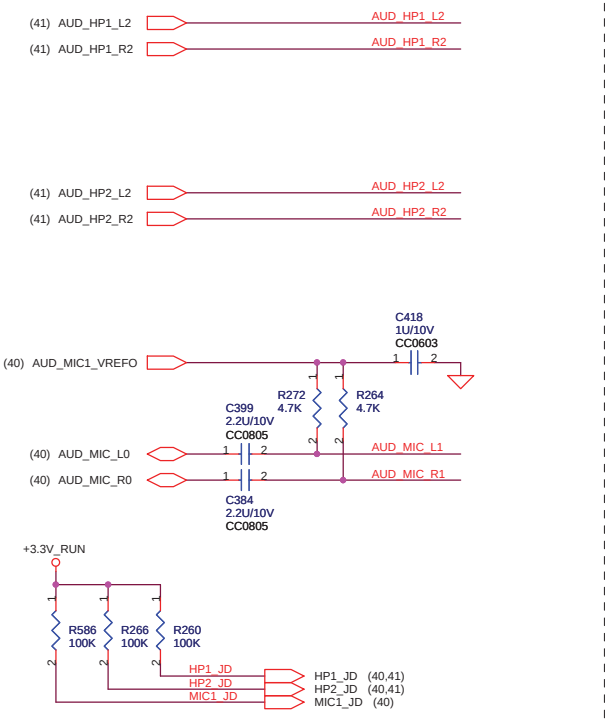




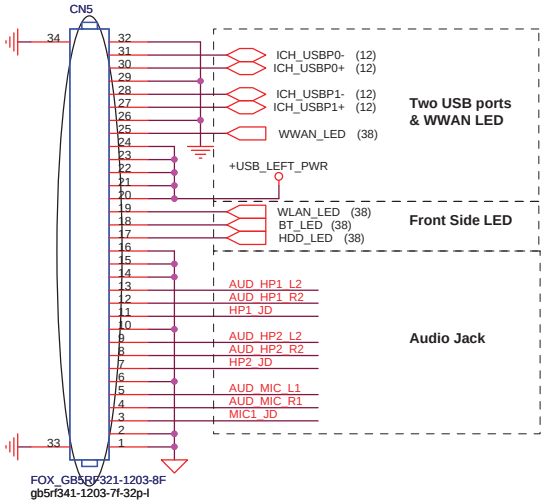


GAIN1	GAIN2	GAIN
0	0	24dB
0	1	18dB
1	0	12dB
1	1	6dB

Ambient Parts of Headphone & MIC Jack

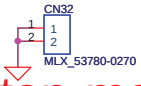


To IB(IO Board) connector



Scott_0123:Change CN5 PN with DFHD32MR003 (FOX).

Adding additional AGND



Title	IB CONN & SUBWOOFER	
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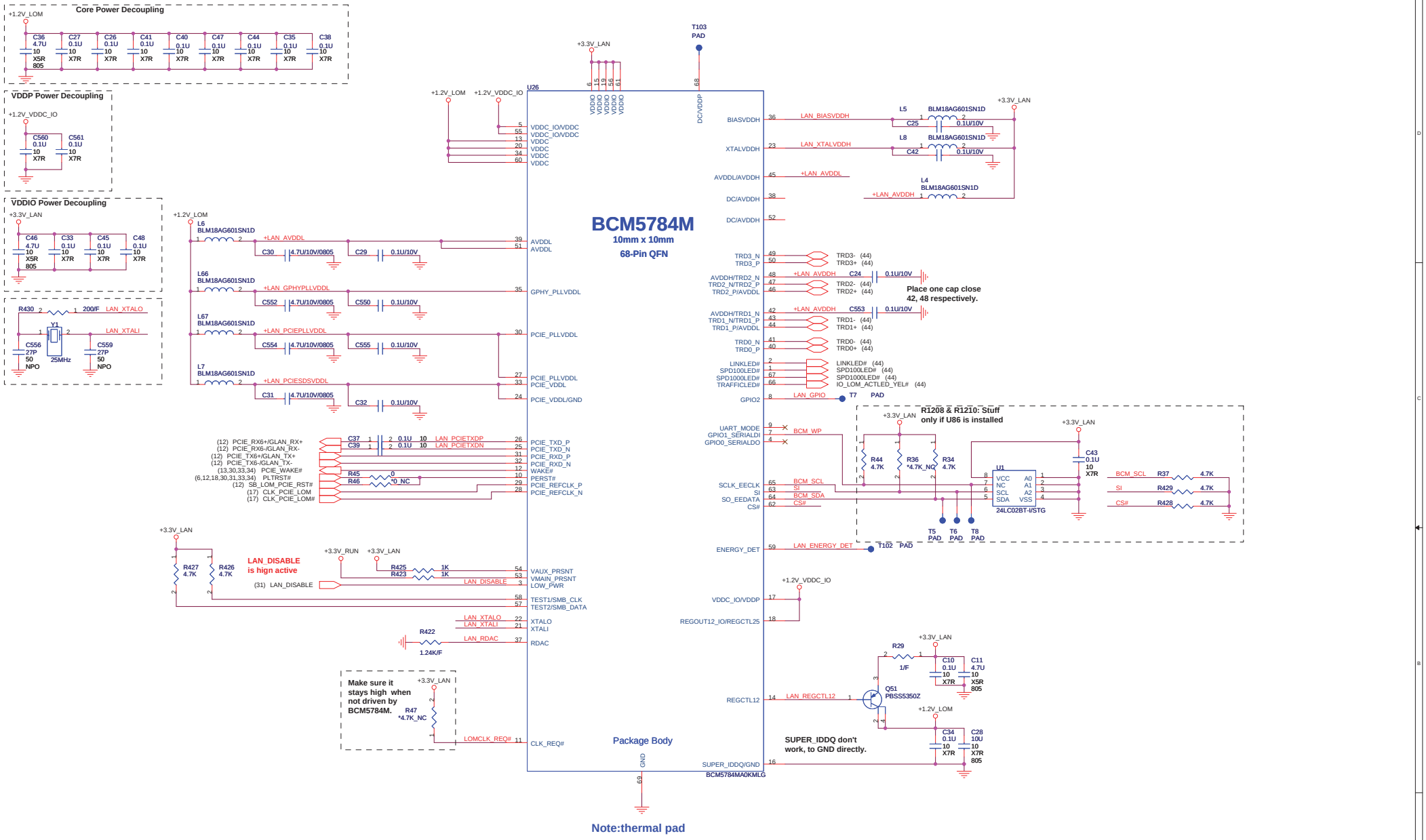
QUANTA COMPUTER



Title	LAN (BCM5784M)	
Size	Document Number RM3	Rev 3A
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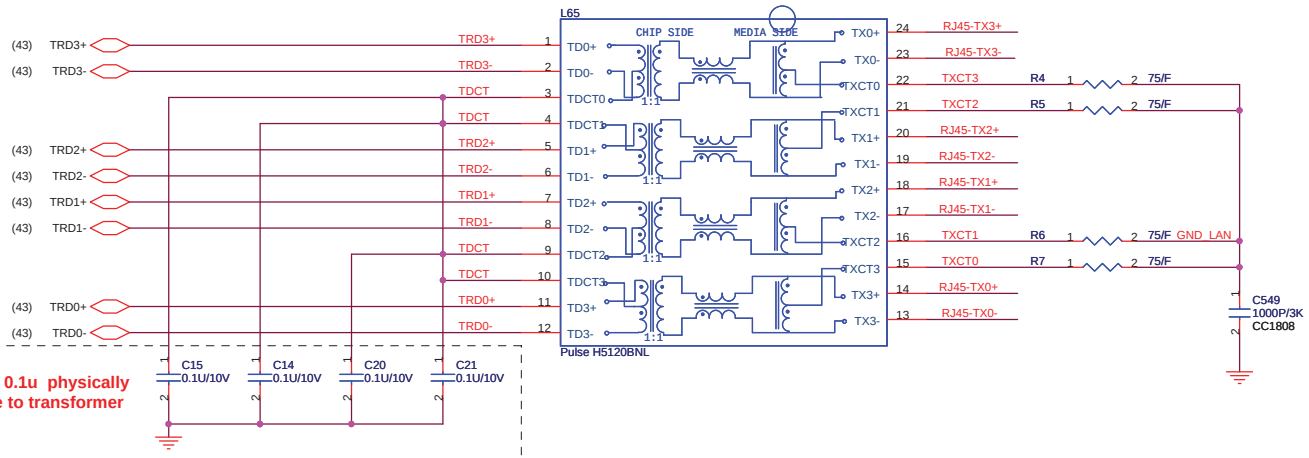
TRANSFORMER

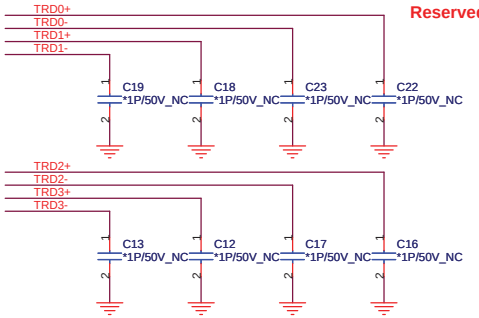
Layout Note:
Route TRD+/- pairs with 100 ohm differential trace immpedance.



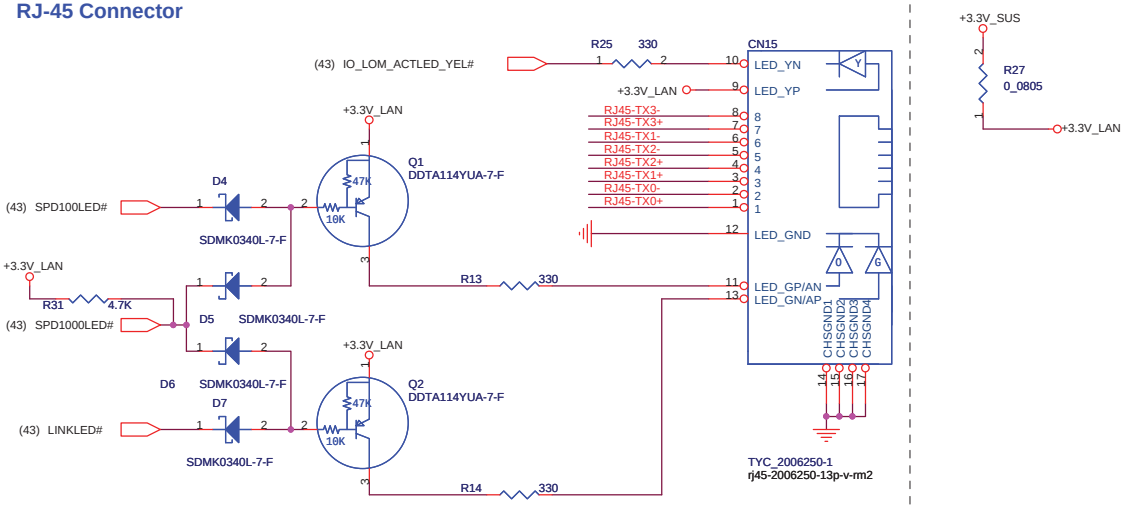
Pace 0.1u physically close to transformer

C15 0.1U/10V
C14 0.1U/10V
C20 0.1U/10V
C21 0.1U/10V

Reserved EMI



RJ-45 Connector



QUANTA COMPUTER		
Title: LAN SWITCH		
Size	Document Number: RM3	Rev: 3A
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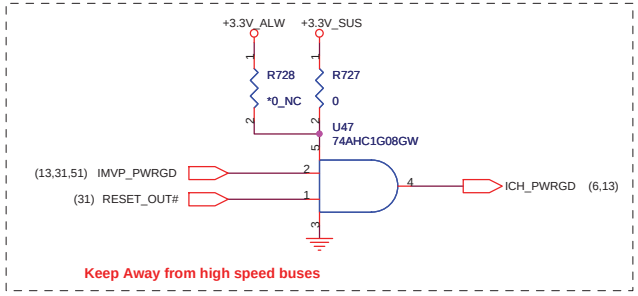

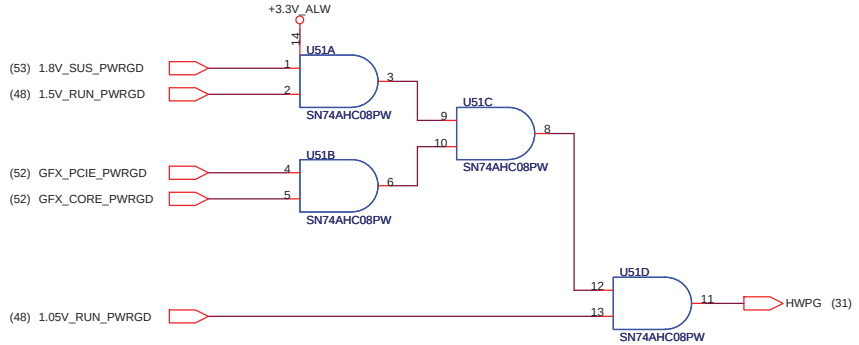

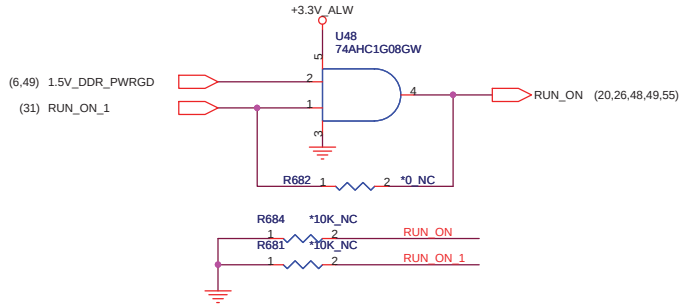

QUANTA COMPUTER

Title	System Reset Circuit	
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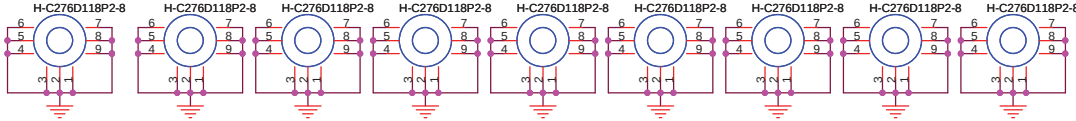
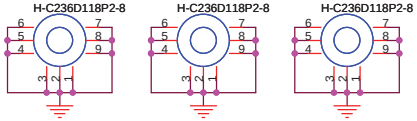
H-C276D118P2-8 * 9

H26 H-C276D118P2-8
H33 H-C276D118P2-8
H23 H-C276D118P2-8
H32 H-C276D118P2-8
H21 H-C276D118P2-8
H10 H-C276D118P2-8
H7 H-C276D118P2-8
H2 H-C276D118P2-8
H1 H-C276D118P2-8



H-C236D118P2-8 * 3

H9 H-C236D118P2-8
H11 H-C236D118P2-8
H22 H-C236D118P2-8

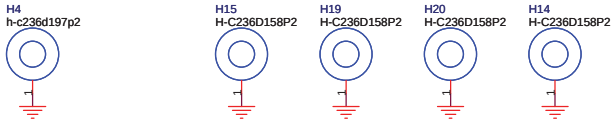


h-c236d197p2 * 1

H4 h-c236d197p2

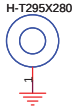
H-C236D158P2 * 4

H15 H-C236D158P2
H19 H-C236D158P2
H20 H-C236D158P2
H14 H-C236D158P2



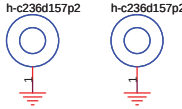
H-T295X280B236D118P2 * 1

H28 H-T295X280B236D118P2



h-c236d157p2 * 2

H6 h-c236d157p2
H3 h-c236d157p2

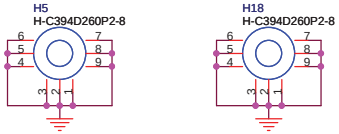


h-c394d260p2 * 1

H5 H-C394D260P2-8

H-C394D260P2-8 * 1

H18 H-C394D260P2-8

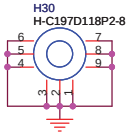


h-c236d236n * 2

H31 h-c236d236n

H-C197D118P2-8 * 1

H30 H-C197D118P2-8

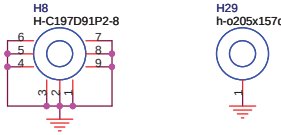


H-C197D91P2-8 * 1

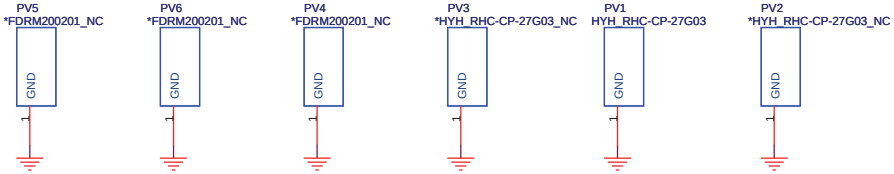
H8 H-C197D91P2-8

h-o205x157d138x91p2 * 1

H29 h-o205x157d138x91p2



PV5 *FDRM200201_NC
PV6 *FDRM200201_NC
PV4 *FDRM200201_NC
PV3 *HYH_RHC-CP-27G03_NC
PV1 HYH_RHC-CP-27G03
PV2 *HYH_RHC-CP-27G03_NC



H34 o-rm2-1

QUANTA COMPUTER

Title	PAD & SCREW & SPRING	
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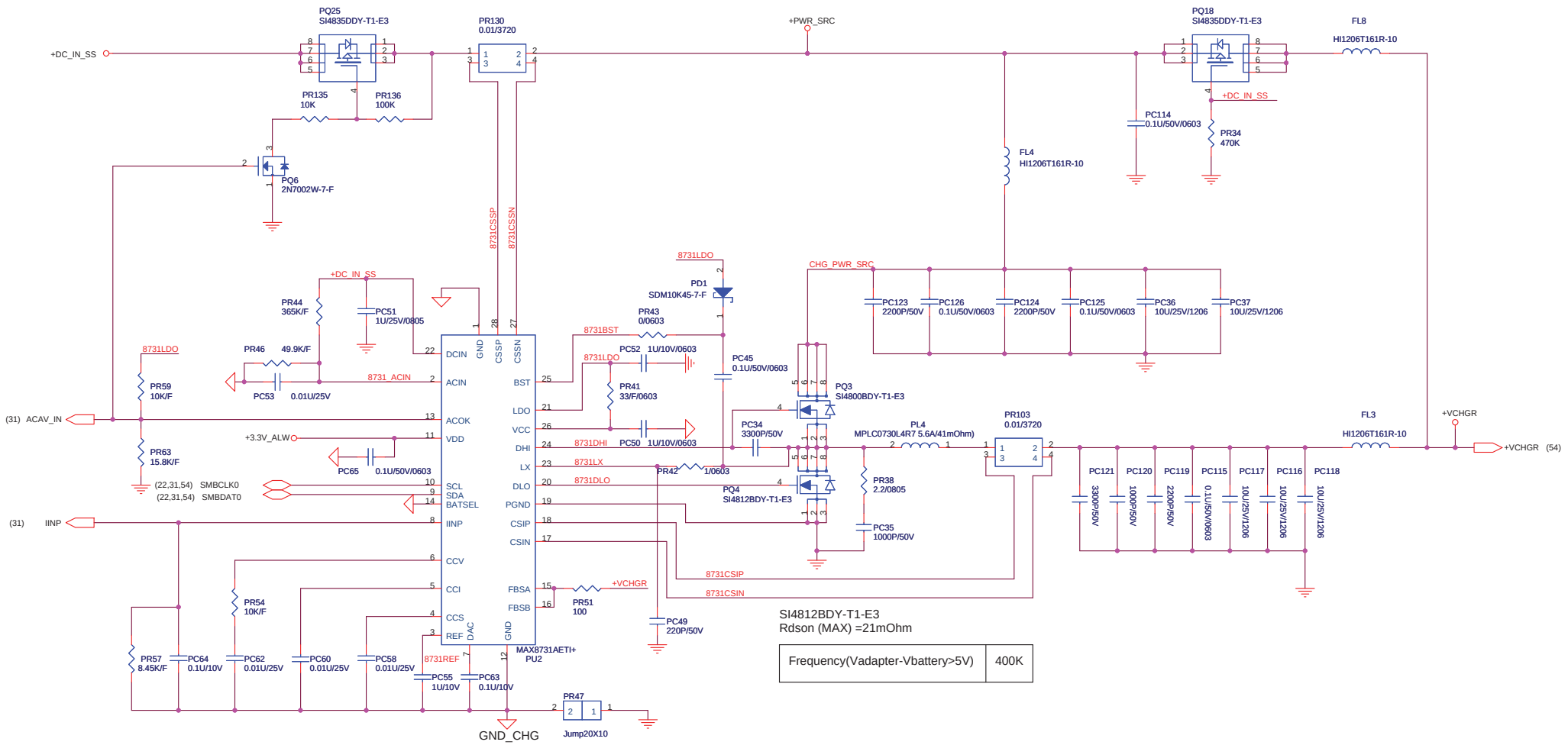
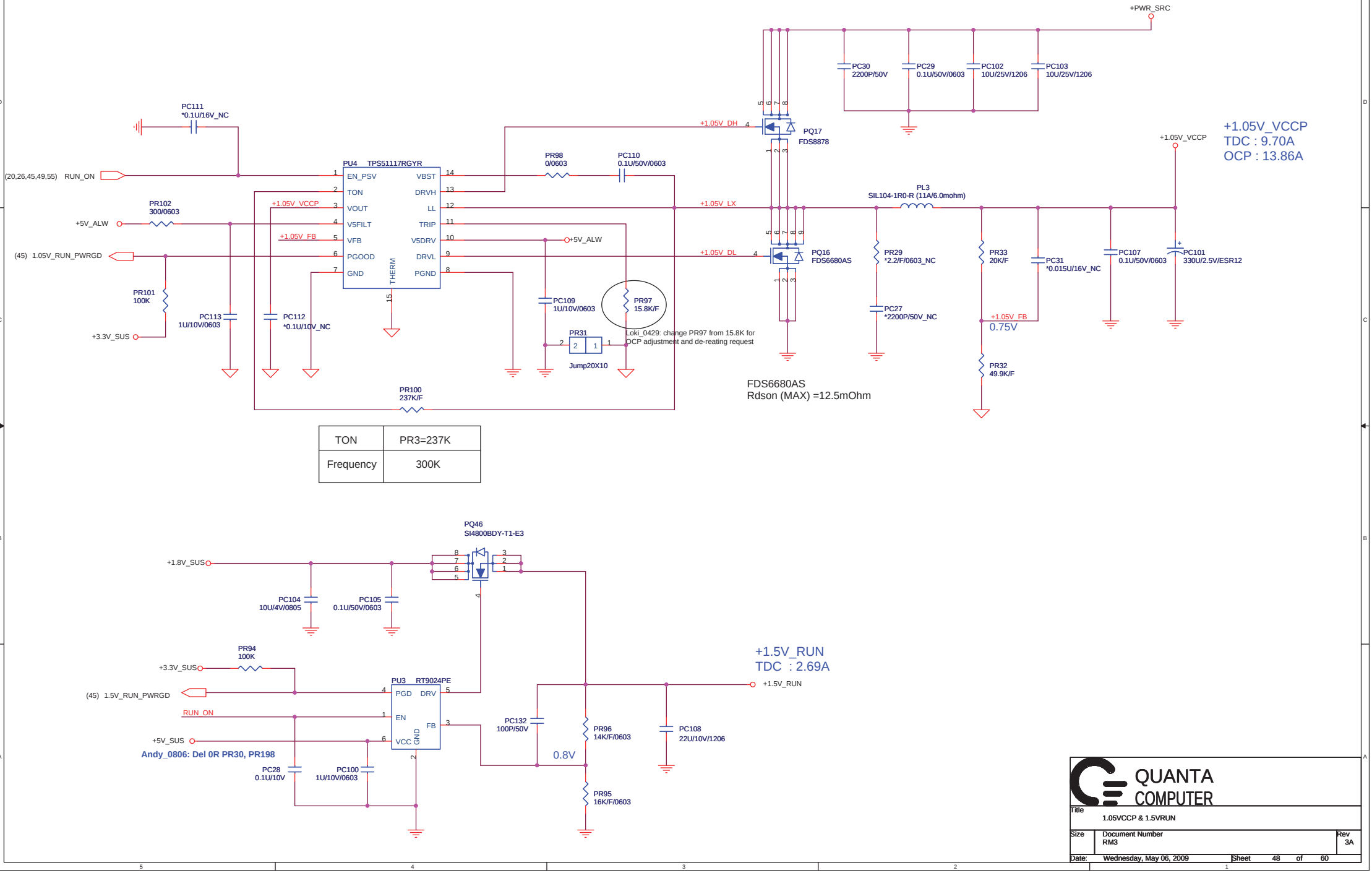
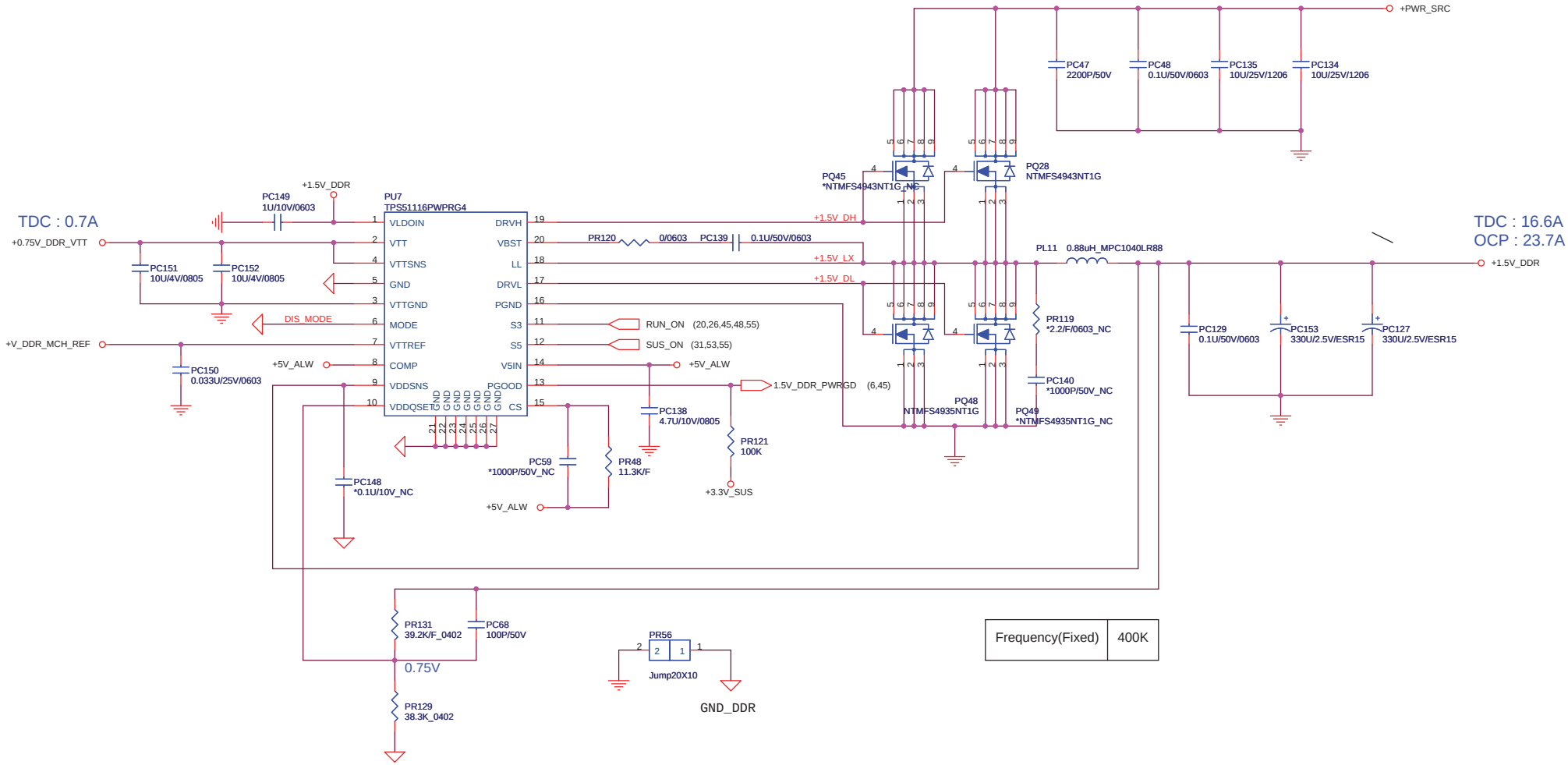


2005/4/21





QUANTA COMPUTER

Title	1.5_DDR/0.75(TPS51116)	
Size	Document Number RM3	Rev 3A
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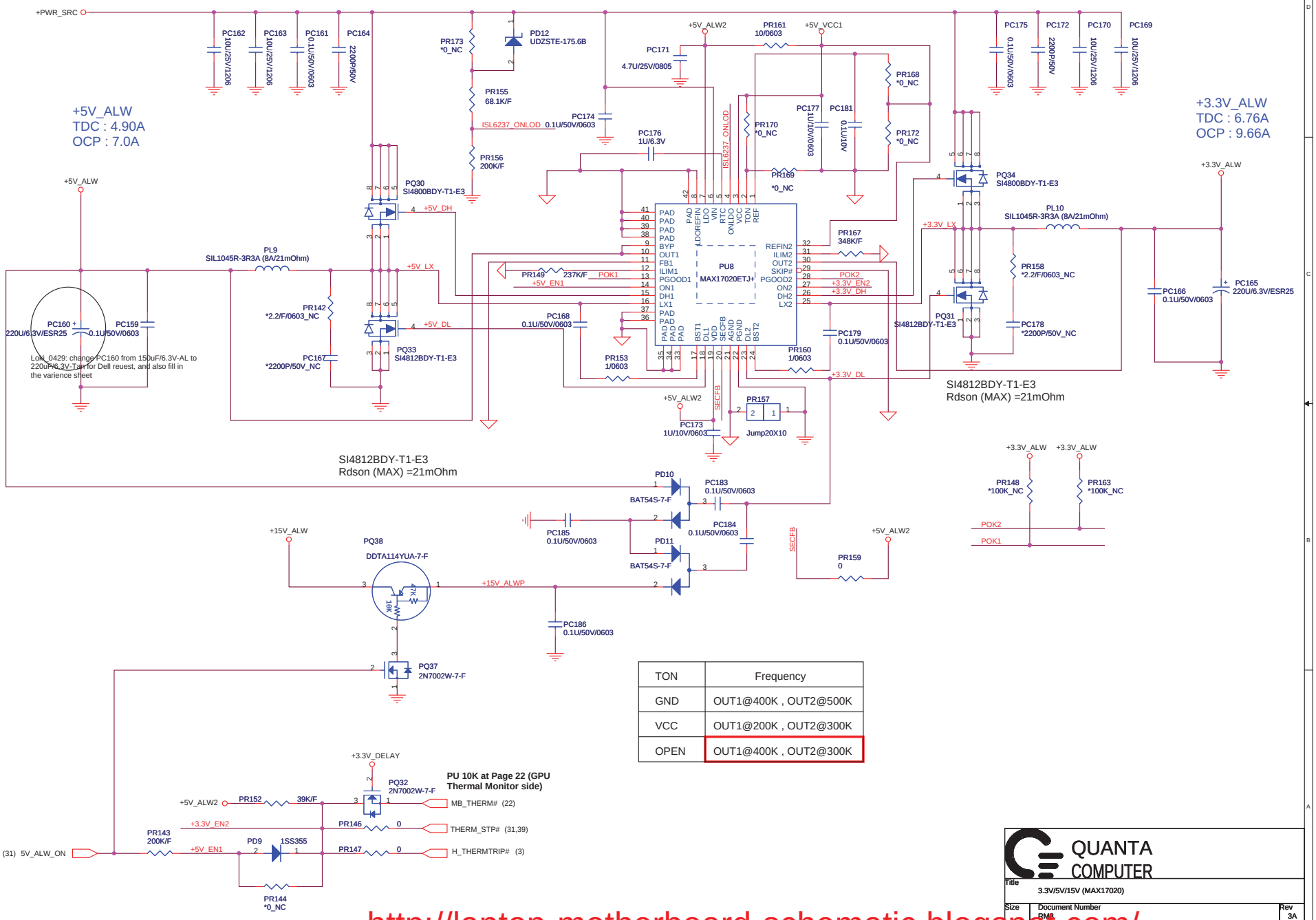

TON	Frequency
GND	OUT1@400K , OUT2@500K
VCC	OUT1@200K , OUT2@300K
OPEN	OUT1@400K , OUT2@300K

QUANTA COMPUTER

Title	3.3V/5V/15V (MAX17020)	
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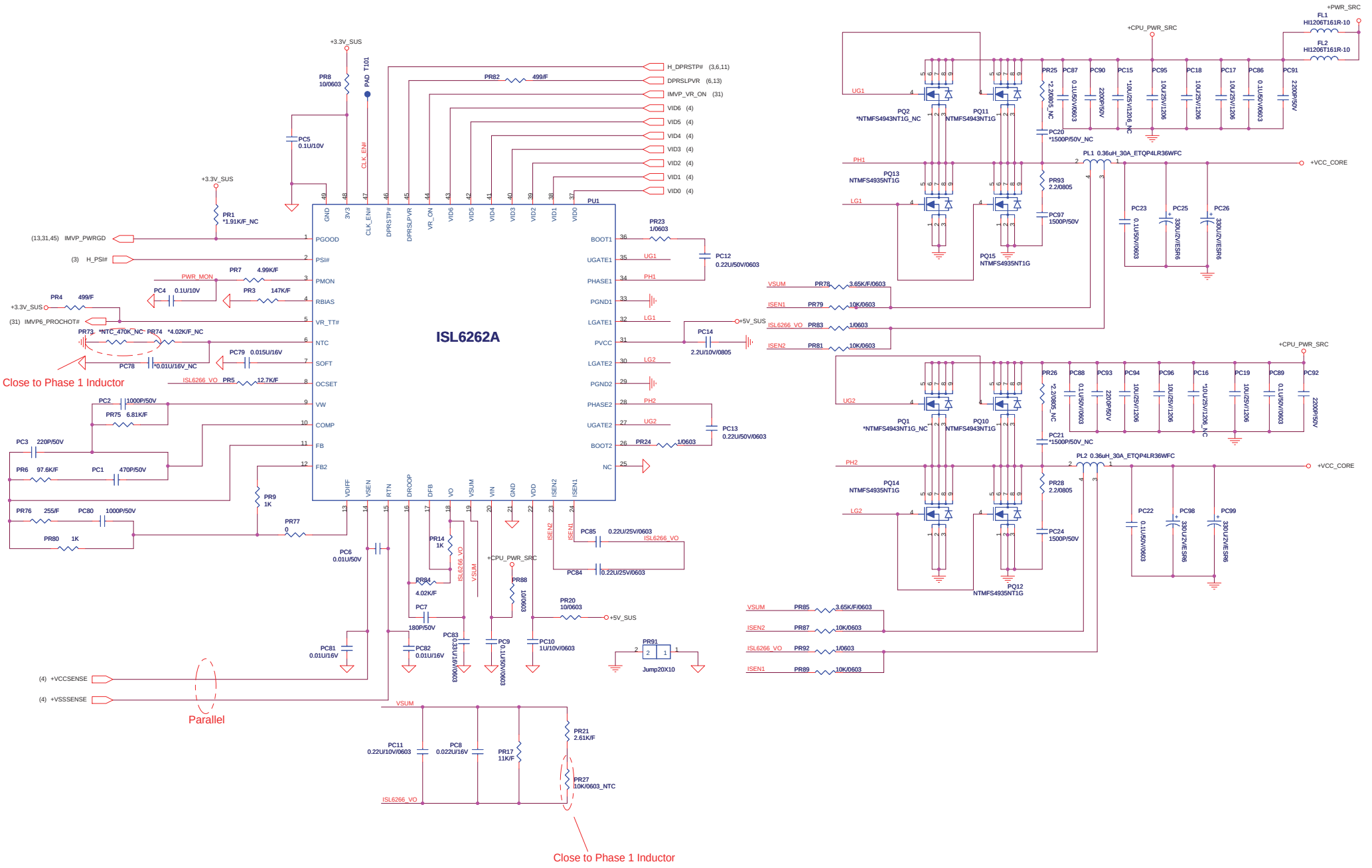

QUANTA COMPUTER

Title	CPU_POWER (ISL6262A)	
Size	Document Number RM3	Rev 3A
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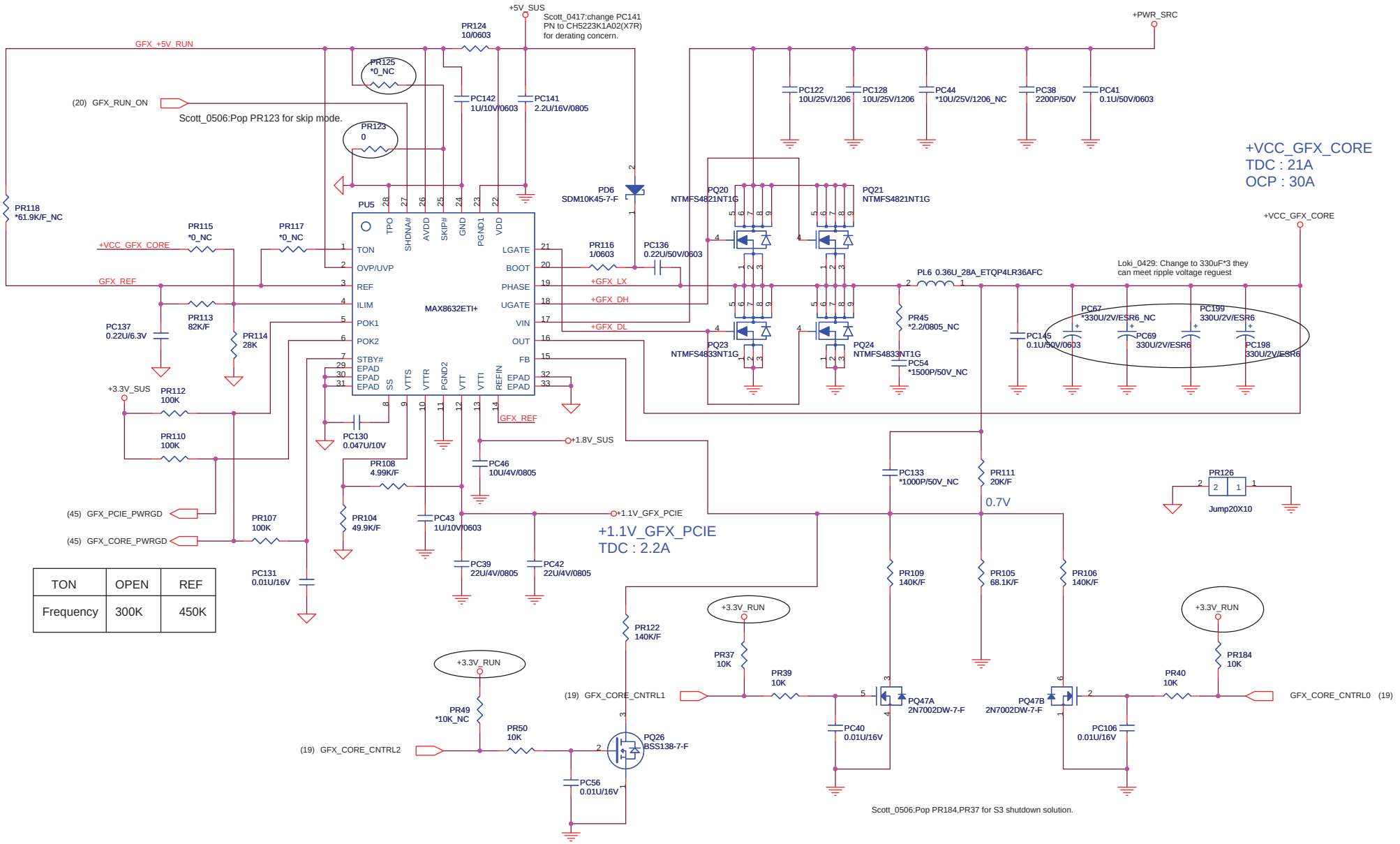

TON	OPEN	REF
Frequency	300K	450K

GFX_CORE_CNTRL0	GFX_CORE_CNTRL1	GFX_CORE_CNTRL2	+VCC_GFX_CORE
LOW	LOW	LOW	0.9V
HIGH	LOW	LOW	1.0V
HIGH	HIGH	LOW	1.1V
HIGH	HIGH	HIGH	1.2V

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.

QUANTA COMPUTER

Title	VGA_M86 (MAX8632)	
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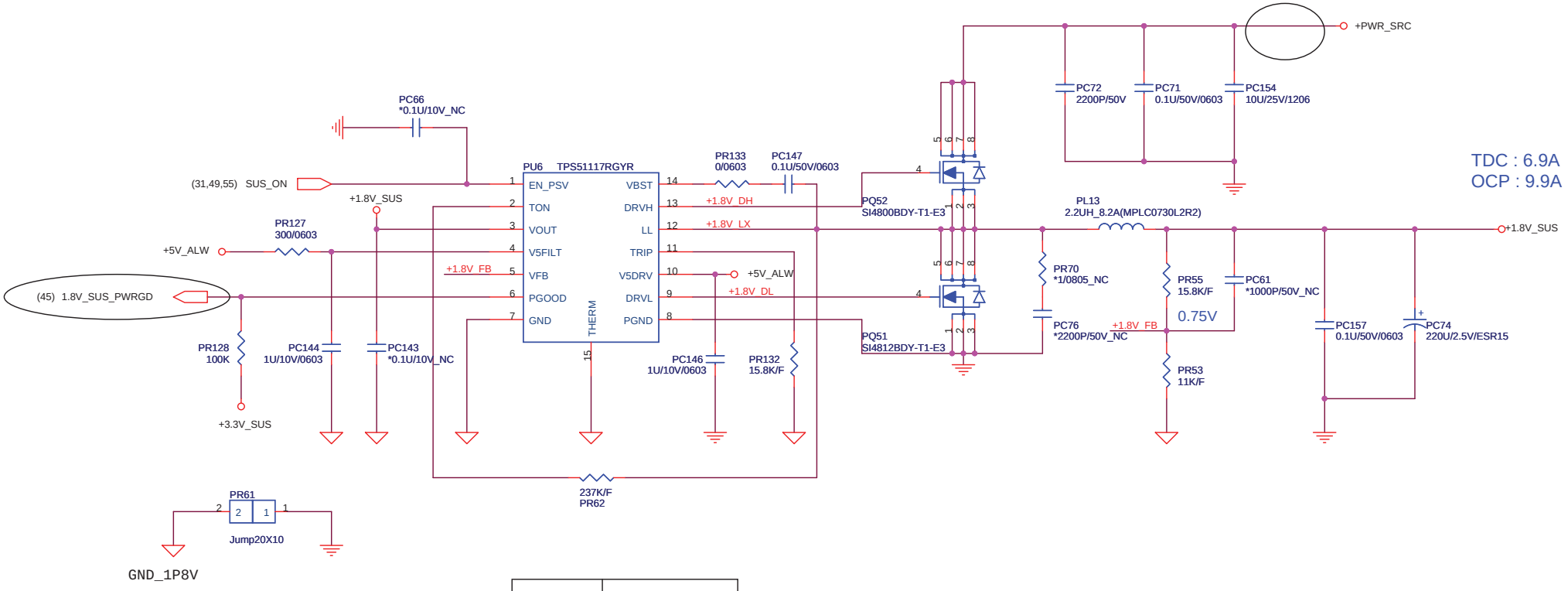

TON	PR62=237K
Frequency	300K

QUANTA COMPUTER

Title	1.8V_SUS (TPS51117)	
Size	Document Number RM3	Rev 3A
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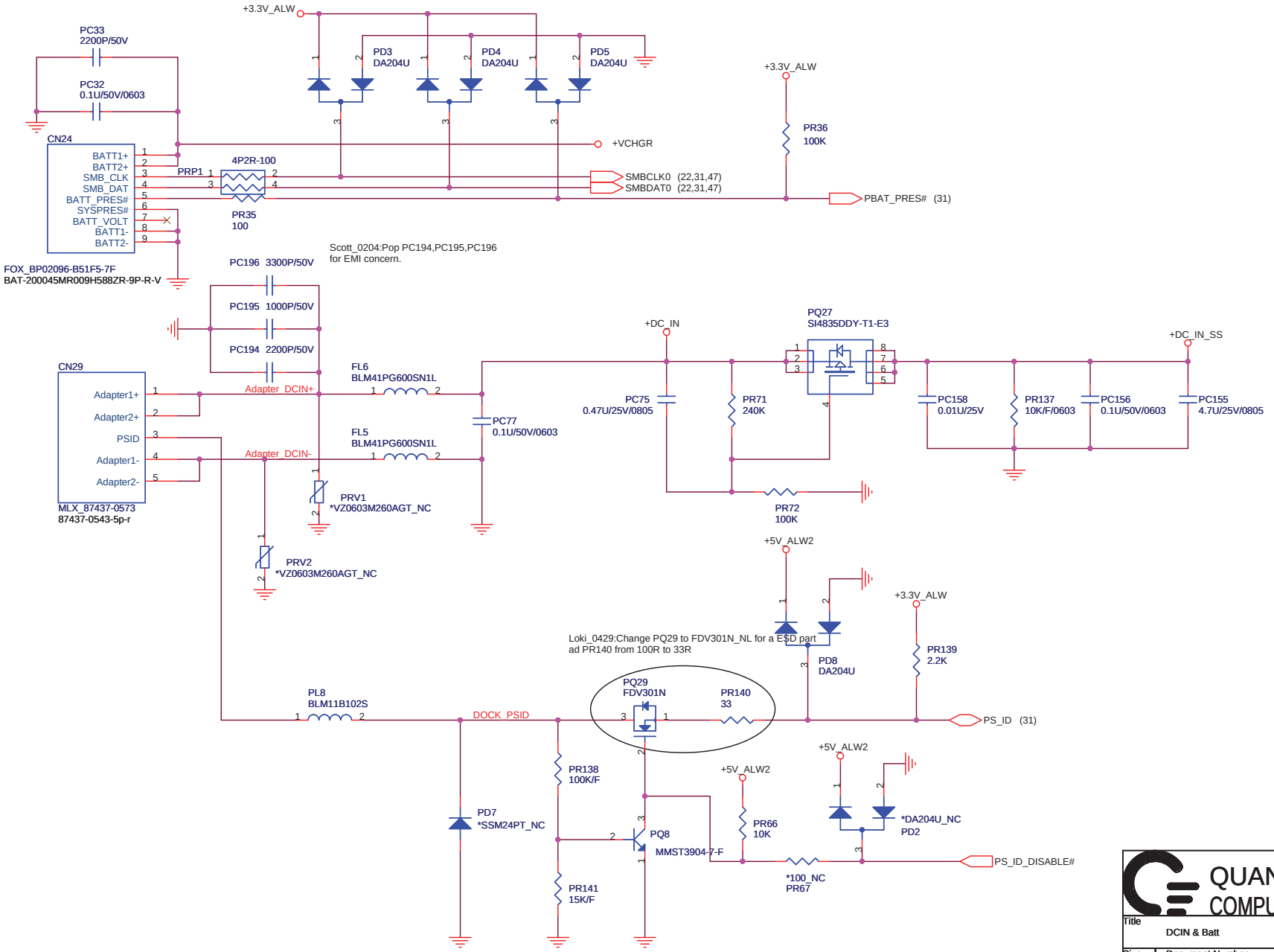
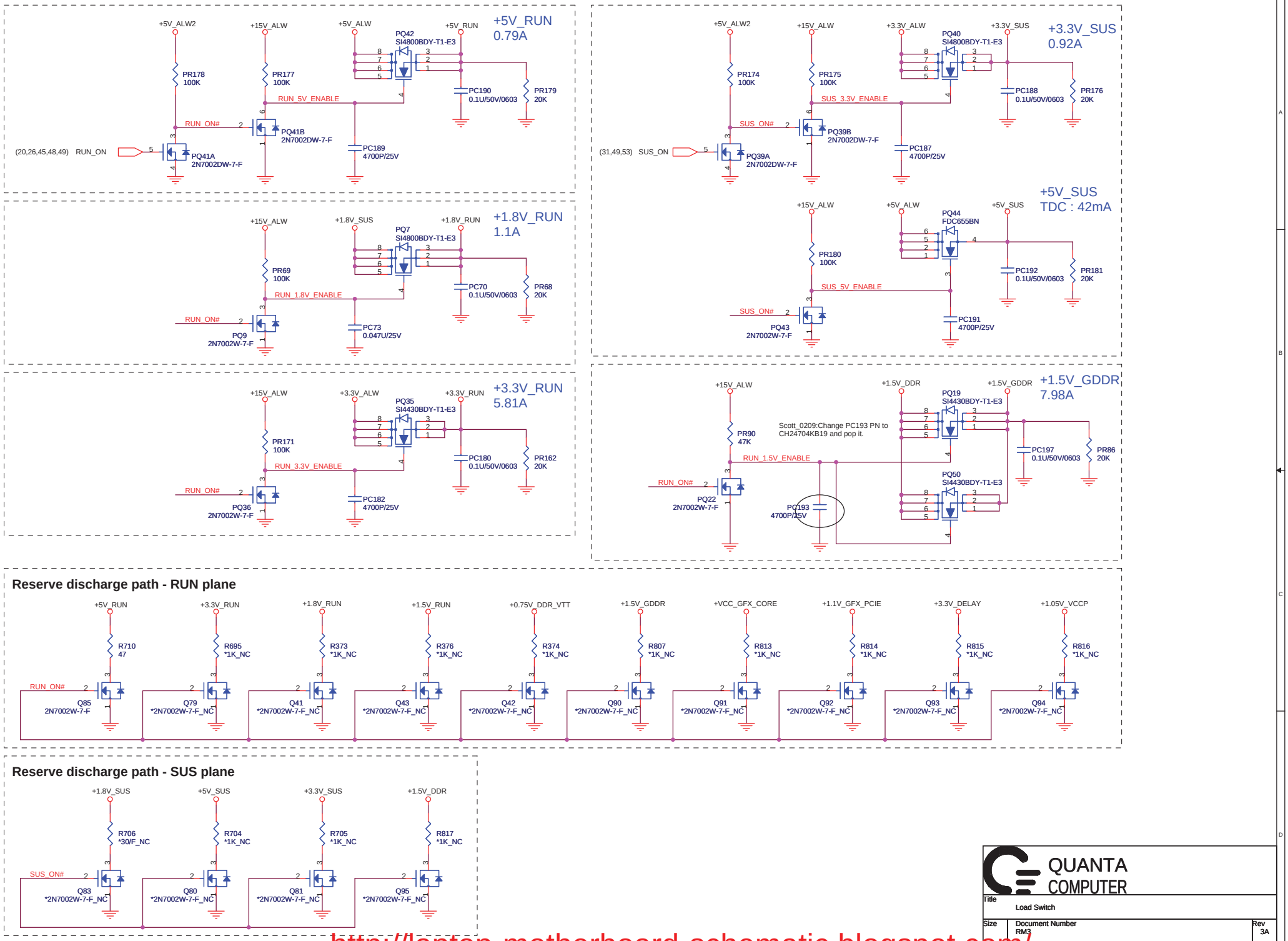
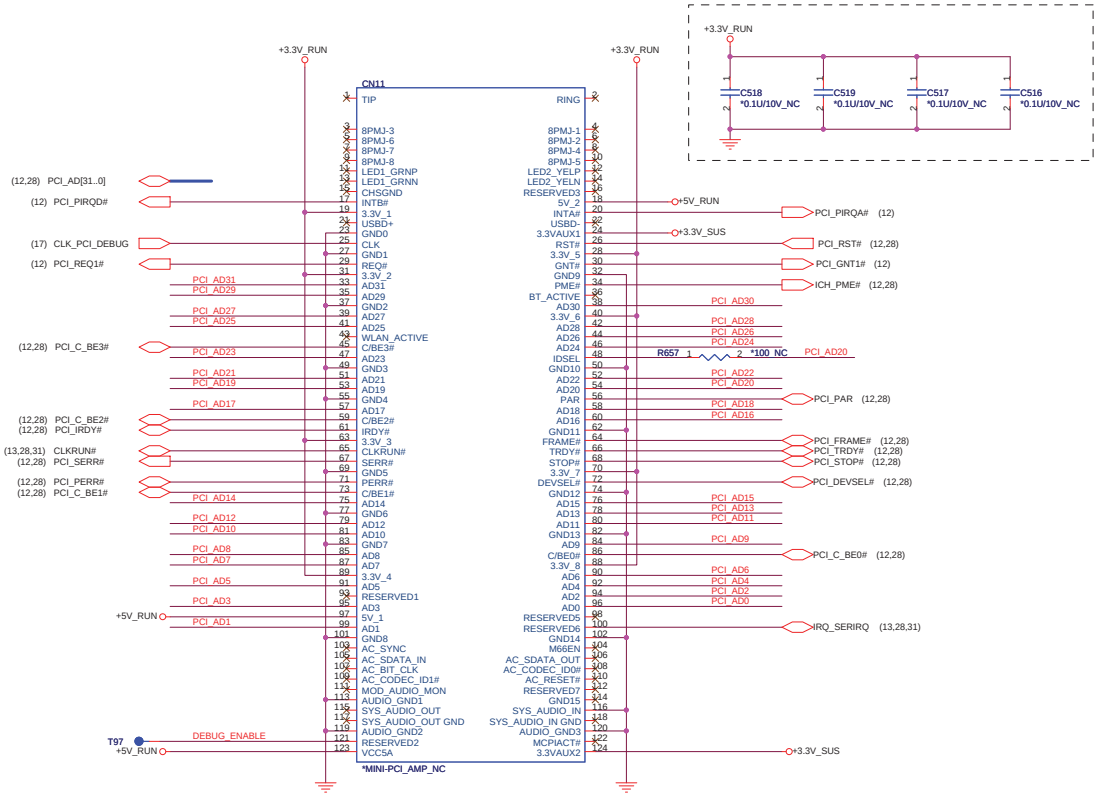


QUANTA COMPUTER

Title	DCIN & Batt	
Size	Document Number RM3	Rev 3A
Date: Wednesday, May 06, 2009	Sheet 54 of 60	





QUANTA COMPUTER

Title	Debug Port (Mini PCI)	
Size	Document Number RM3	Rev 3A
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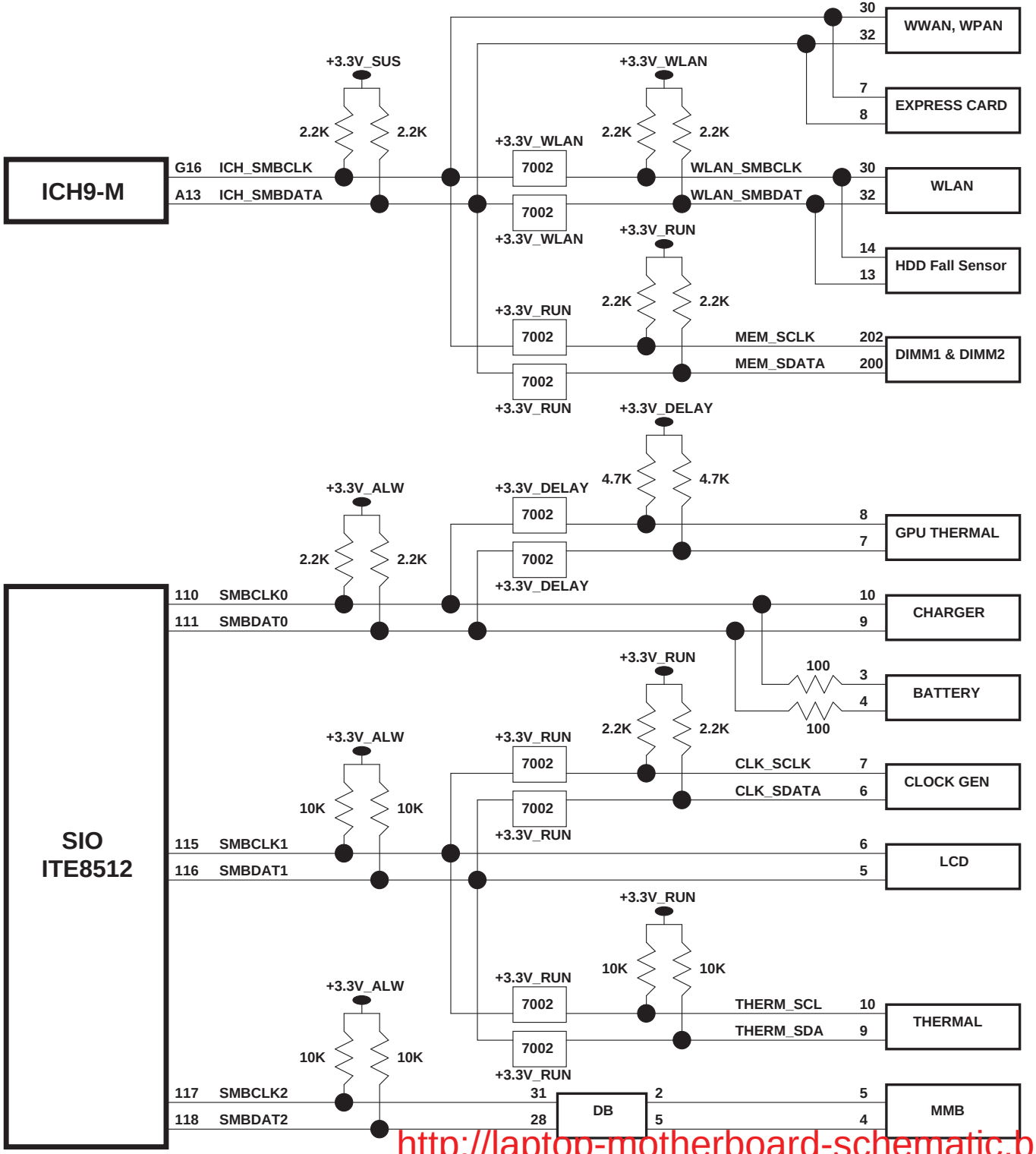

QUANTA COMPUTER

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	N/A	HIGH	N/A	ON	ON	ON	ON
S3 (Suspend to RAM) / M-OFF	LOW	N/A	HIGH	N/A	ON	ON	OFF	OFF
S4 (Suspend to DISK) / M-OFF	LOW	N/A	HIGH	N/A	ON	OFF	OFF	OFF
S5 (SOFT OFF) / M-OFF	LOW	N/A	LOW	N/A	ON	OFF	OFF	OFF

PM TABLE

power plane / State	+RTC_CELL	+DC_IN +DC_IN_SS +PWR_SRC +CPU_PWR_SRC +5V_ALW2 +MMB_PWR +3.3V_ALW	+5V_ALW +15V_ALW +5V_SUS +3.3V_SUS +3.3V_LAN +3.3V_CARDAUX +1.8V_SUS +1.5V_DDR	+VCC_CORE +0.75V_DDR_VTT +1.05V_VCCP +1.1V_GFX_PCIE +1.2V_LOM +1.5V_RUN +1.5V_CARD +1.8V_RUN +3.3V_RUN +3.3V_DELAY +3.3V_R5C833	+3.3V_RUN_CARD +3.3V_CARD +3.3V_WLAN +5V_RUN +LCDVCC +5V_HDD +5V_MOD +5V_SPK_AMP +VDDA +GFX_PWR_SRC
S0	ON	ON	ON	ON	
S3	ON	ON	ON	OFF	
S5 & S4 with AC or BAT	ON	ON	OFF	OFF	
no AC/Battery	ON	OFF	OFF	OFF	

PCI TABLE

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

	USB PORT#	DESTINATION
ICH9-M	0	Side pair Top / left
	1	Side pair Bottom / left
	2	Reserved
	3	Reserved
	4	Mini Card (WLAN)
	5	Mini Card (WWAN)
	6	Mini Card (WPAN)
	7	Express Card
	8	USB W/ E-SATA port
	9	TV
	10	Reserved
	11	Camera

	PCI EXPRESS	DESTINATION
ICH9-M	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	LOM

QUANTA COMPUTER

Title	Power statu	
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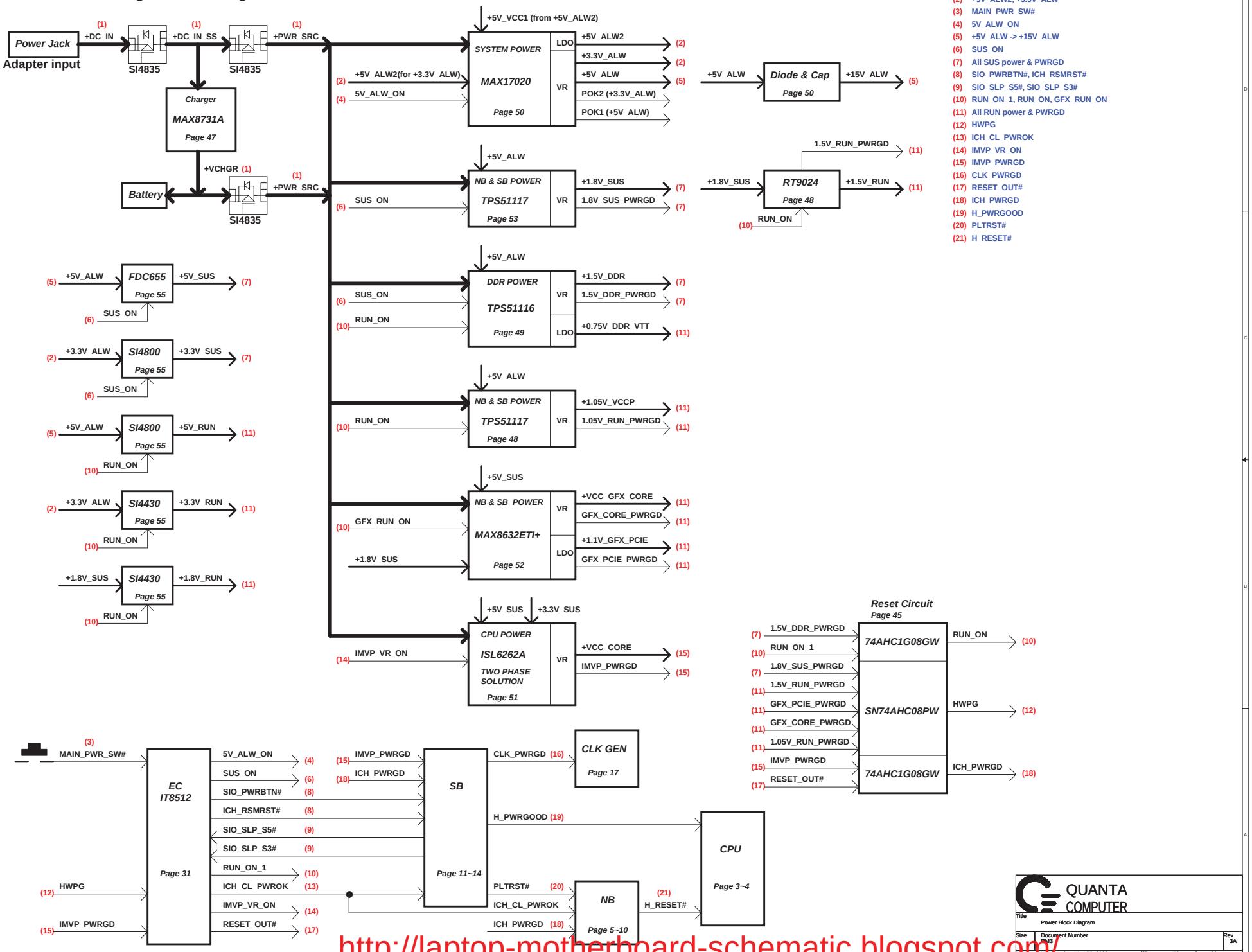
RM2 Power Design Block Diagram 2008/10/03



QUANTA COMPUTER

Title	Power Block Diagram	
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