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

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

800 / 1066 MHZ DDR III

DDR3-SODIMM1 PG 15

DDR3-SODIMM2 PG 16

DMI interface

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

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]
- **SATA-ODD** PG 36 — SATA2 [A5]
- **SATA-HDD** PG 36 — SATA2 [A1]
- **1394 CONN** PG 29 & 1394 board — SATA2 [A0]
- **CardReader CONN** PG 29 — 33MHz PCI

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	
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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	
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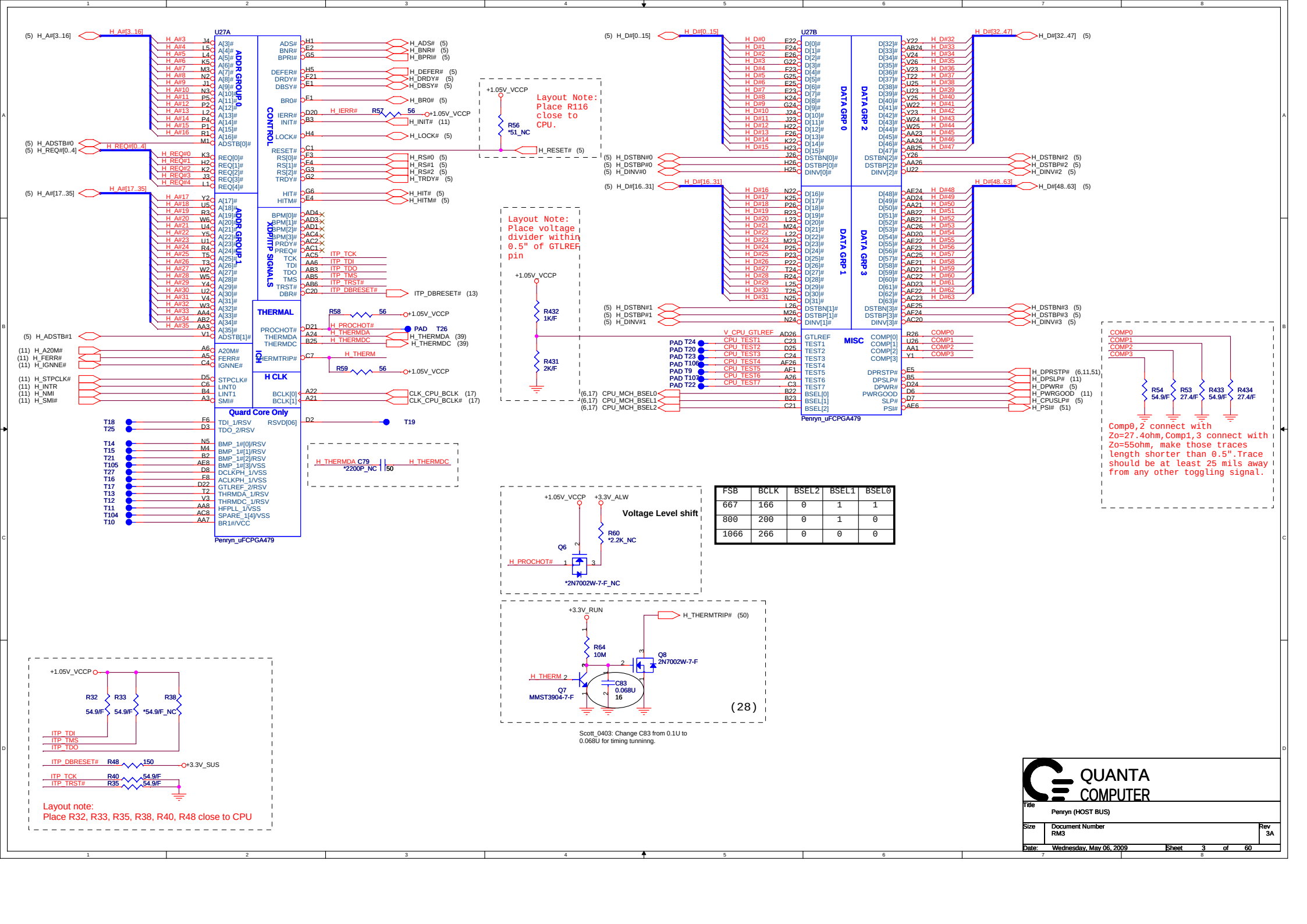

FSB	BCLK	BSEL2	BSEL1	BSEL0
667	166	0	1	1
800	200	0	1	0
1066	266	0	0	0

QUANTA COMPUTER

Title	Penryn (HOST BUS)	
Size	Document Number RM3	Rev 3A
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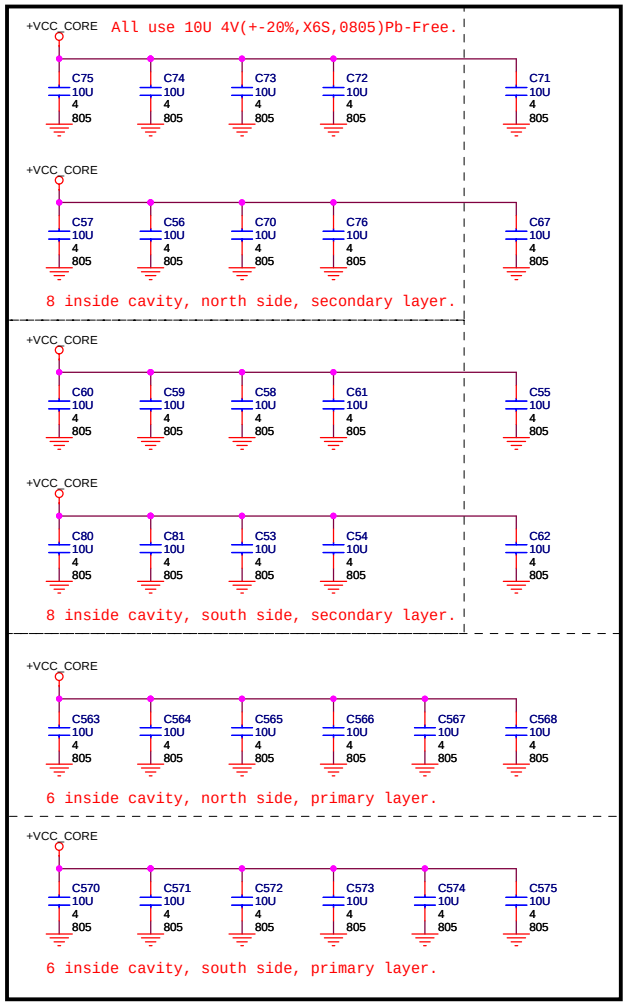

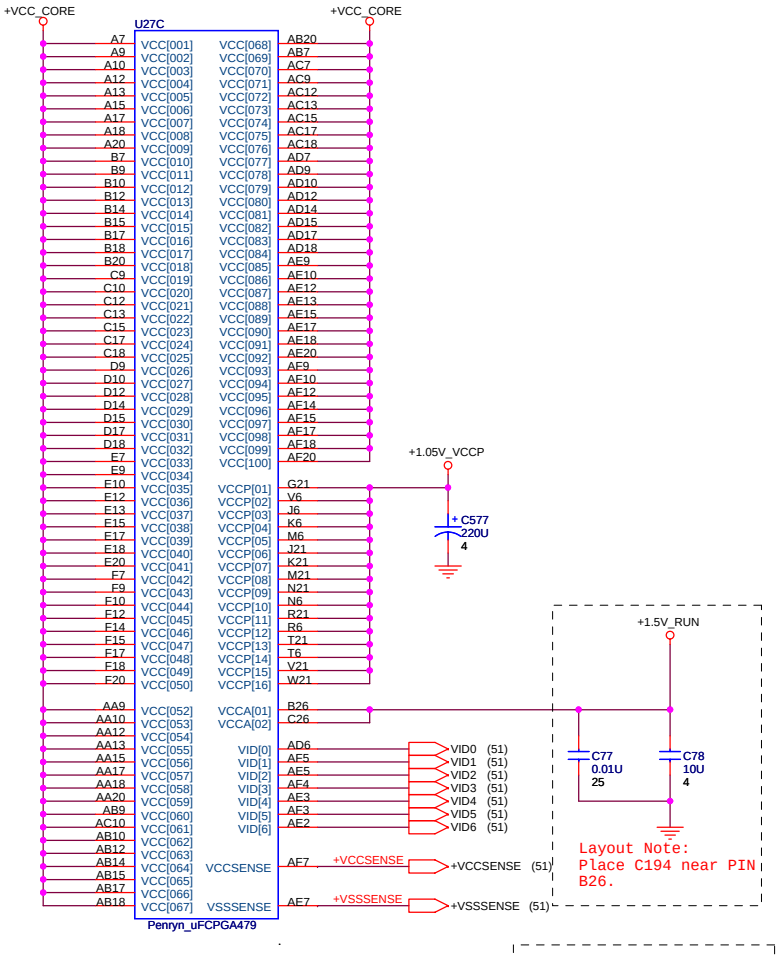

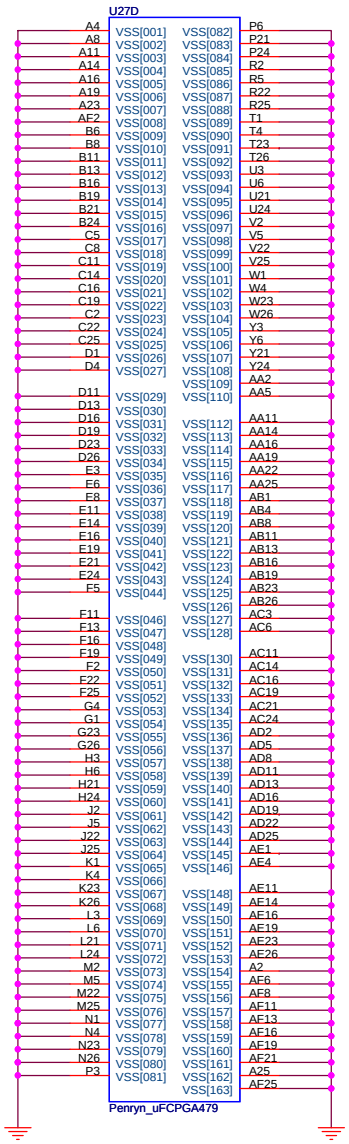

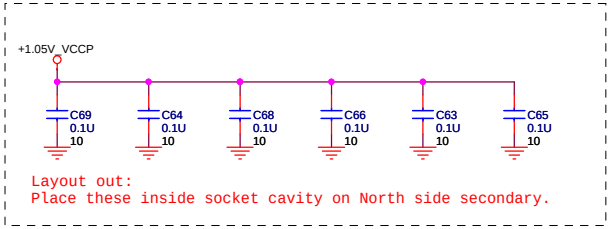

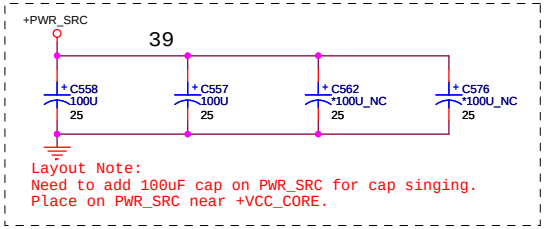

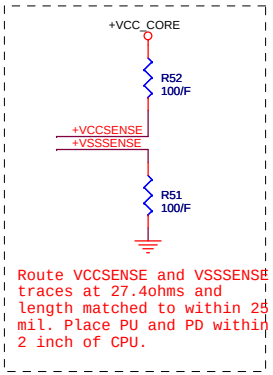

Title	Penryn (POWER/NC)	
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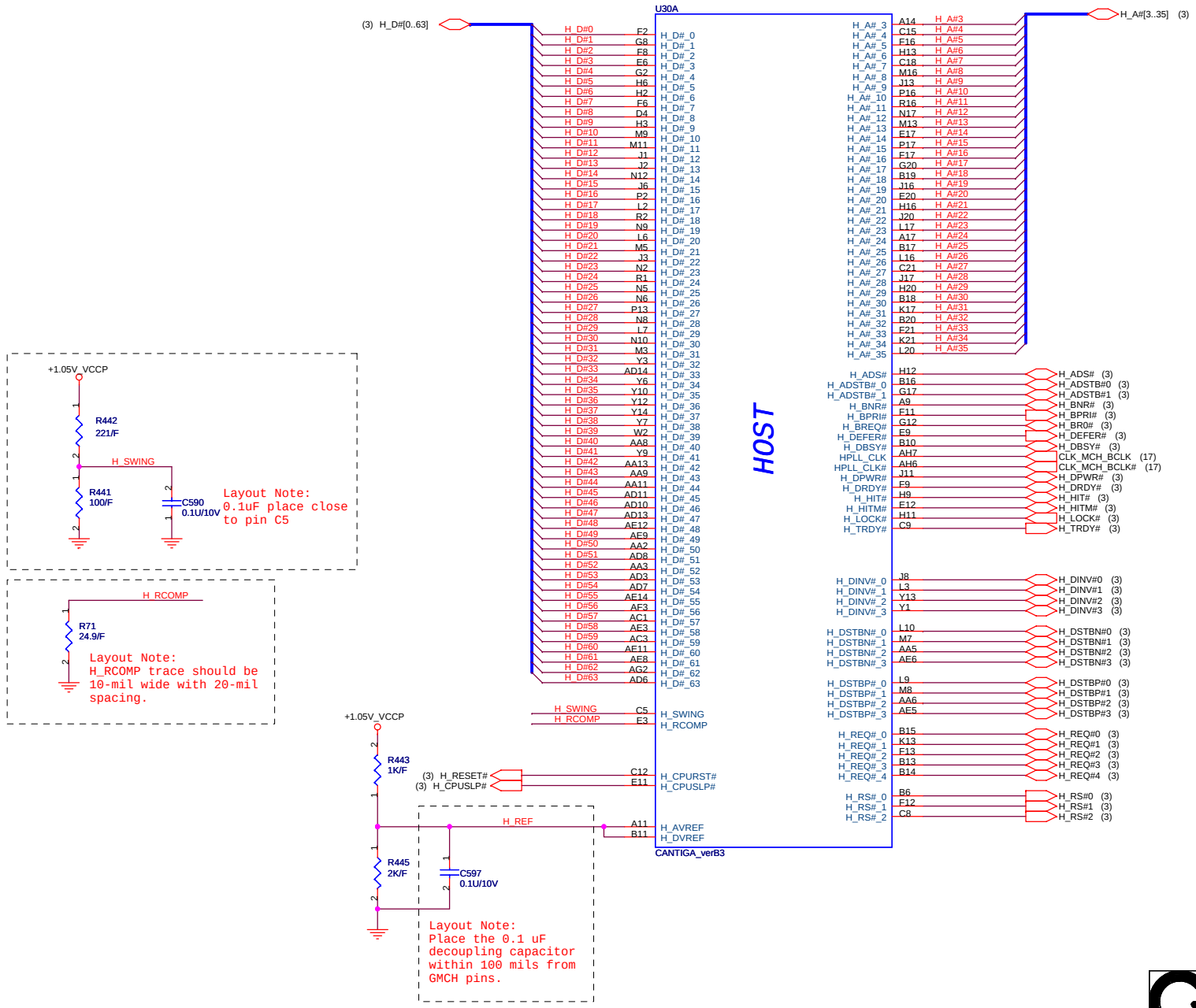

QUANTA COMPUTER		
Title: Cantiga_A (HOST)		
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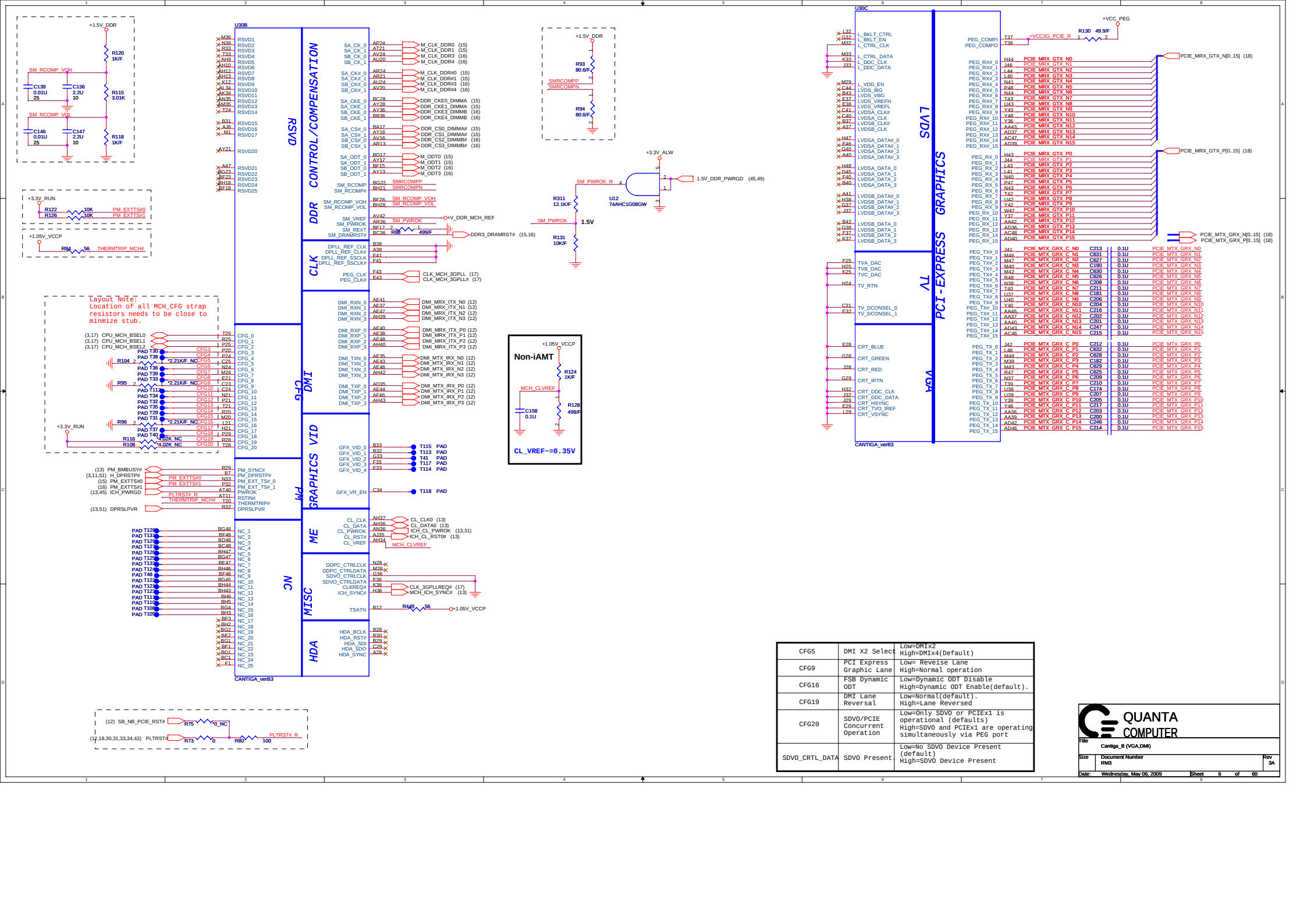
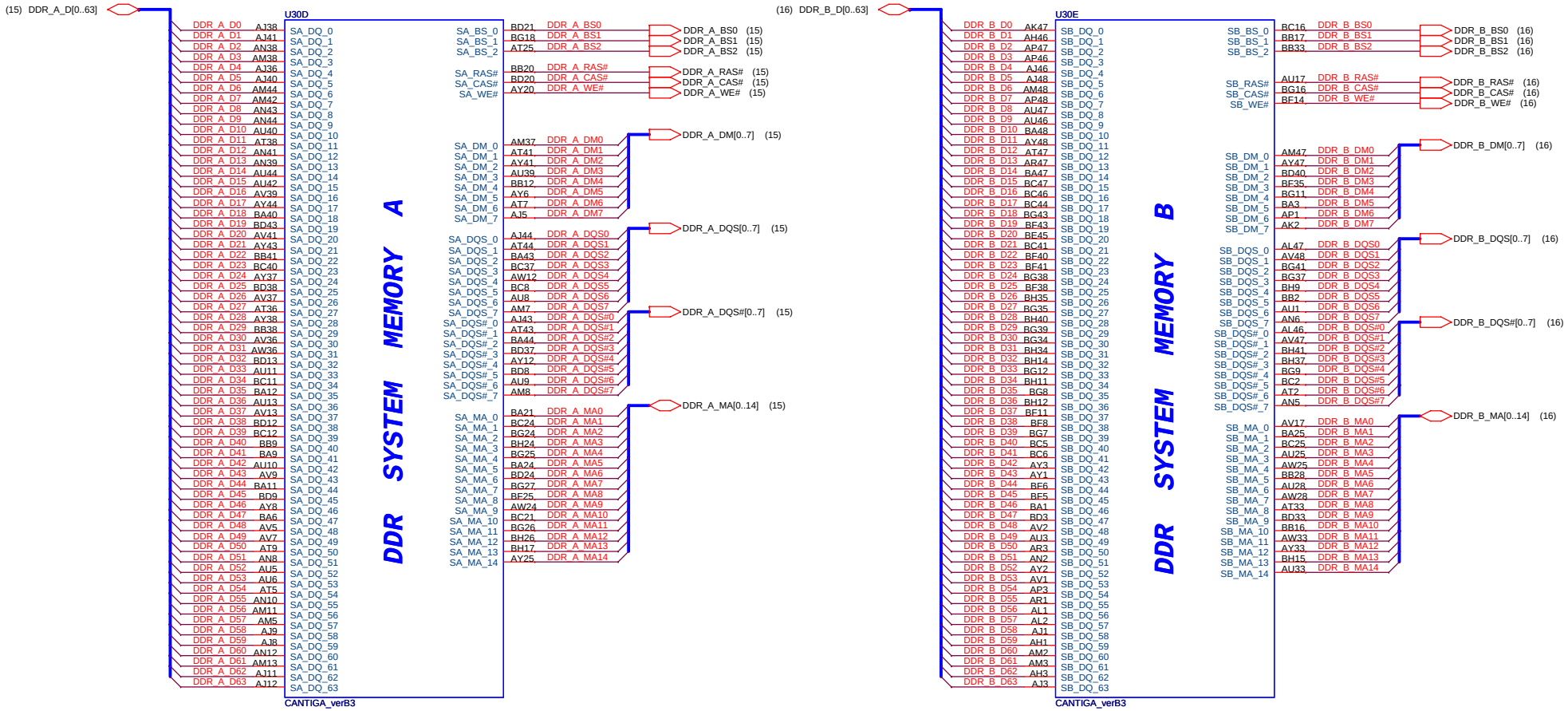


CFG5	DMI X2 Select	Low=DMIx2 High=DMIx4(Default)
CFG9	PCI Express Graphic Lane	Low= Reveise Lane High=Normal operation
CFG16	FSB Dynamic ODT	Low=Dynamic ODT Disable High=Dynamic ODT Enable(default).
CFG19	DMI Lane Reversal	Low=Normal(default). High=Lane Reversed
CFG20	SDVO/PCIE Concurrent Operation	Low=Only 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_C (DDR3)	
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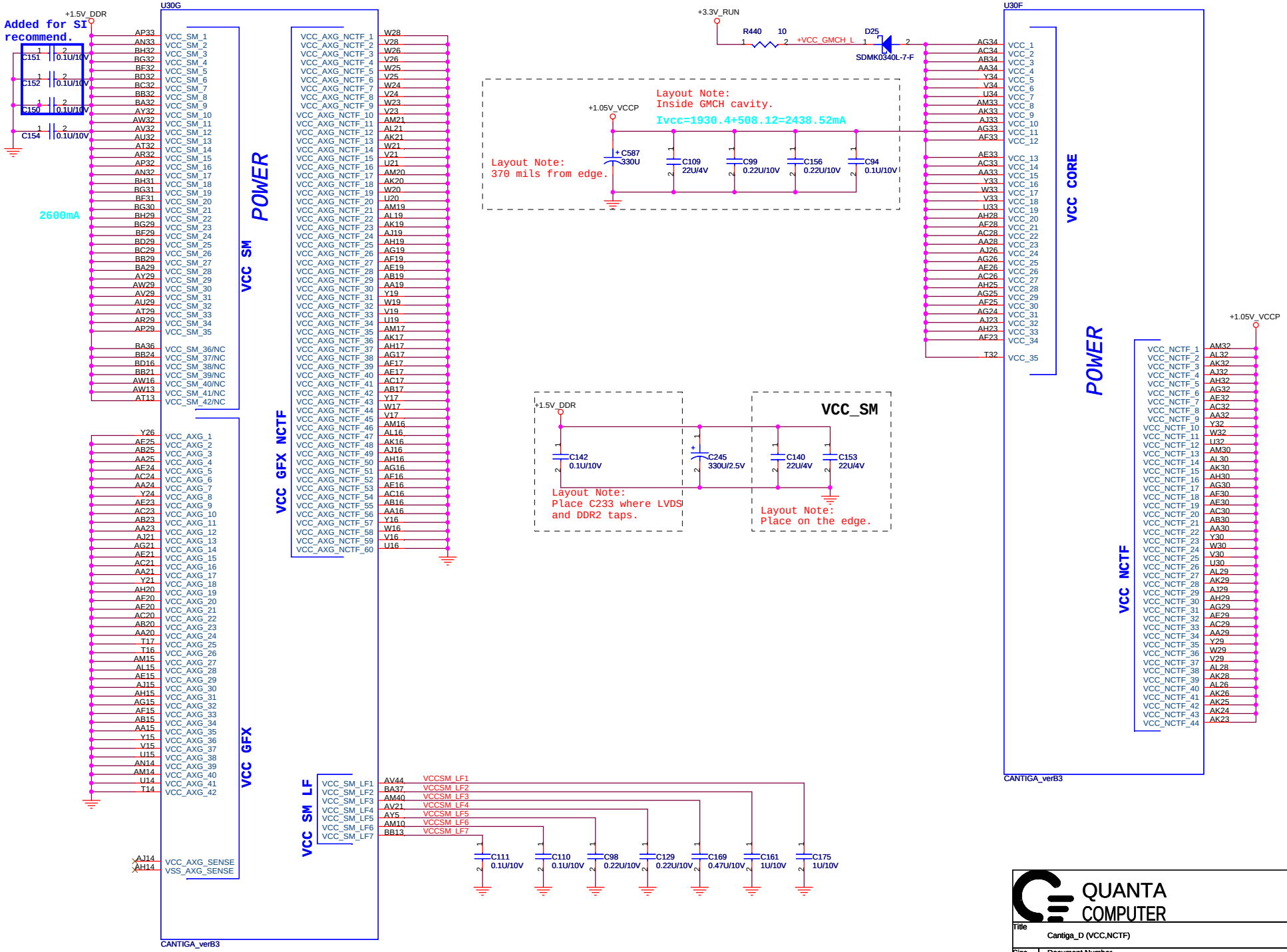
Added for SI recommend.
+1.5V_DDR
U30G
VCC_SM_1 VCC_SM_2 VCC_SM_3 VCC_SM_4 VCC_SM_5 VCC_SM_6 VCC_SM_7 VCC_SM_8 VCC_SM_9 VCC_SM_10 VCC_SM_11 VCC_SM_12 VCC_SM_13 VCC_SM_14 VCC_SM_15 VCC_SM_16 VCC_SM_17 VCC_SM_18 VCC_SM_19 VCC_SM_20 VCC_SM_21 VCC_SM_22 VCC_SM_23 VCC_SM_24 VCC_SM_25 VCC_SM_26 VCC_SM_27 VCC_SM_28 VCC_SM_29 VCC_SM_30 VCC_SM_31 VCC_SM_32 VCC_SM_33 VCC_SM_34 VCC_SM_35
VCC_SM_36/NC VCC_SM_37/NC VCC_SM_38/NC VCC_SM_39/NC VCC_SM_40/NC VCC_SM_41/NC VCC_SM_42/NC
VCC SM
POWER
C151 0.1U/10V
C152 0.1U/10V
C150 0.1U/10V
C154 0.1U/10V
2600mA
VCC_AXG_1 VCC_AXG_2 VCC_AXG_3 VCC_AXG_4 VCC_AXG_5 VCC_AXG_6 VCC_AXG_7 VCC_AXG_8 VCC_AXG_9 VCC_AXG_10 VCC_AXG_11 VCC_AXG_12 VCC_AXG_13 VCC_AXG_14 VCC_AXG_15 VCC_AXG_16 VCC_AXG_17 VCC_AXG_18 VCC_AXG_19 VCC_AXG_20 VCC_AXG_21 VCC_AXG_22 VCC_AXG_23 VCC_AXG_24 VCC_AXG_25 VCC_AXG_26 VCC_AXG_27 VCC_AXG_28 VCC_AXG_29 VCC_AXG_30 VCC_AXG_31 VCC_AXG_32 VCC_AXG_33 VCC_AXG_34 VCC_AXG_35 VCC_AXG_36 VCC_AXG_37 VCC_AXG_38 VCC_AXG_39 VCC_AXG_40 VCC_AXG_41 VCC_AXG_42
VCC GFX
VCC_AXG_SENSE
VSS_AXG_SENSE
VCC_AXG_NCTF_1 VCC_AXG_NCTF_2 VCC_AXG_NCTF_3 VCC_AXG_NCTF_4 VCC_AXG_NCTF_5 VCC_AXG_NCTF_6 VCC_AXG_NCTF_7 VCC_AXG_NCTF_8 VCC_AXG_NCTF_9 VCC_AXG_NCTF_10 VCC_AXG_NCTF_11 VCC_AXG_NCTF_12 VCC_AXG_NCTF_13 VCC_AXG_NCTF_14 VCC_AXG_NCTF_15 VCC_AXG_NCTF_16 VCC_AXG_NCTF_17 VCC_AXG_NCTF_18 VCC_AXG_NCTF_19 VCC_AXG_NCTF_20 VCC_AXG_NCTF_21 VCC_AXG_NCTF_22 VCC_AXG_NCTF_23 VCC_AXG_NCTF_24 VCC_AXG_NCTF_25 VCC_AXG_NCTF_26 VCC_AXG_NCTF_27 VCC_AXG_NCTF_28 VCC_AXG_NCTF_29 VCC_AXG_NCTF_30 VCC_AXG_NCTF_31 VCC_AXG_NCTF_32 VCC_AXG_NCTF_33 VCC_AXG_NCTF_34 VCC_AXG_NCTF_35 VCC_AXG_NCTF_36 VCC_AXG_NCTF_37 VCC_AXG_NCTF_38 VCC_AXG_NCTF_39 VCC_AXG_NCTF_40 VCC_AXG_NCTF_41 VCC_AXG_NCTF_42 VCC_AXG_NCTF_43 VCC_AXG_NCTF_44 VCC_AXG_NCTF_45 VCC_AXG_NCTF_46 VCC_AXG_NCTF_47 VCC_AXG_NCTF_48 VCC_AXG_NCTF_49 VCC_AXG_NCTF_50 VCC_AXG_NCTF_51 VCC_AXG_NCTF_52 VCC_AXG_NCTF_53 VCC_AXG_NCTF_54 VCC_AXG_NCTF_55 VCC_AXG_NCTF_56 VCC_AXG_NCTF_57 VCC_AXG_NCTF_58 VCC_AXG_NCTF_59 VCC_AXG_NCTF_60
VCC GFX NCTF
CANTIGA_verB3
VCC_SM_LF1 VCC_SM_LF2 VCC_SM_LF3 VCC_SM_LF4 VCC_SM_LF5 VCC_SM_LF6 VCC_SM_LF7
VCCSM_LF1 VCCSM_LF2 VCCSM_LF3 VCCSM_LF4 VCCSM_LF5 VCCSM_LF6 VCCSM_LF7
VCC SM LF
C111 0.1U/10V
C110 0.1U/10V
C98 0.22U/10V
C129 0.22U/10V
C169 0.47U/10V
C161 1U/10V
C175 1U/10V
+3.3V_RUN
R440 10
+VCC_GMCH_L
D25
SDMK0340L-7-F
U30F
VCC_1 VCC_2 VCC_3 VCC_4 VCC_5 VCC_6 VCC_7 VCC_8 VCC_9 VCC_10 VCC_11 VCC_12 VCC_13 VCC_14 VCC_15 VCC_16 VCC_17 VCC_18 VCC_19 VCC_20 VCC_21 VCC_22 VCC_23 VCC_24 VCC_25 VCC_26 VCC_27 VCC_28 VCC_29 VCC_30 VCC_31 VCC_32 VCC_33 VCC_34 VCC_35
VCC CORE
Layout Note:
Inside GMCH cavity.
Ivcc=1930.4+508.12=2438.52mA
+1.05V_VCCP
C587 330U
C109 22U/4V
C99 0.22U/10V
C156 0.22U/10V
C94 0.1U/10V
Layout Note:
370 mils from edge.
+1.5V_DDR
C142 0.1U/10V
C245 330U/2.5V
Layout Note:
Place C233 where LVDS and DDR2 taps.
VCC_SM
C140 22U/4V
C153 22U/4V
Layout Note:
Place on the edge.
+1.05V_VCCP
VCC_NCTF_1 VCC_NCTF_2 VCC_NCTF_3 VCC_NCTF_4 VCC_NCTF_5 VCC_NCTF_6 VCC_NCTF_7 VCC_NCTF_8 VCC_NCTF_9 VCC_NCTF_10 VCC_NCTF_11 VCC_NCTF_12 VCC_NCTF_13 VCC_NCTF_14 VCC_NCTF_15 VCC_NCTF_16 VCC_NCTF_17 VCC_NCTF_18 VCC_NCTF_19 VCC_NCTF_20 VCC_NCTF_21 VCC_NCTF_22 VCC_NCTF_23 VCC_NCTF_24 VCC_NCTF_25 VCC_NCTF_26 VCC_NCTF_27 VCC_NCTF_28 VCC_NCTF_29 VCC_NCTF_30 VCC_NCTF_31 VCC_NCTF_32 VCC_NCTF_33 VCC_NCTF_34 VCC_NCTF_35 VCC_NCTF_36 VCC_NCTF_37 VCC_NCTF_38 VCC_NCTF_39 VCC_NCTF_40 VCC_NCTF_41 VCC_NCTF_42 VCC_NCTF_43 VCC_NCTF_44
VCC NCTF
POWER
CANTIGA_verB3
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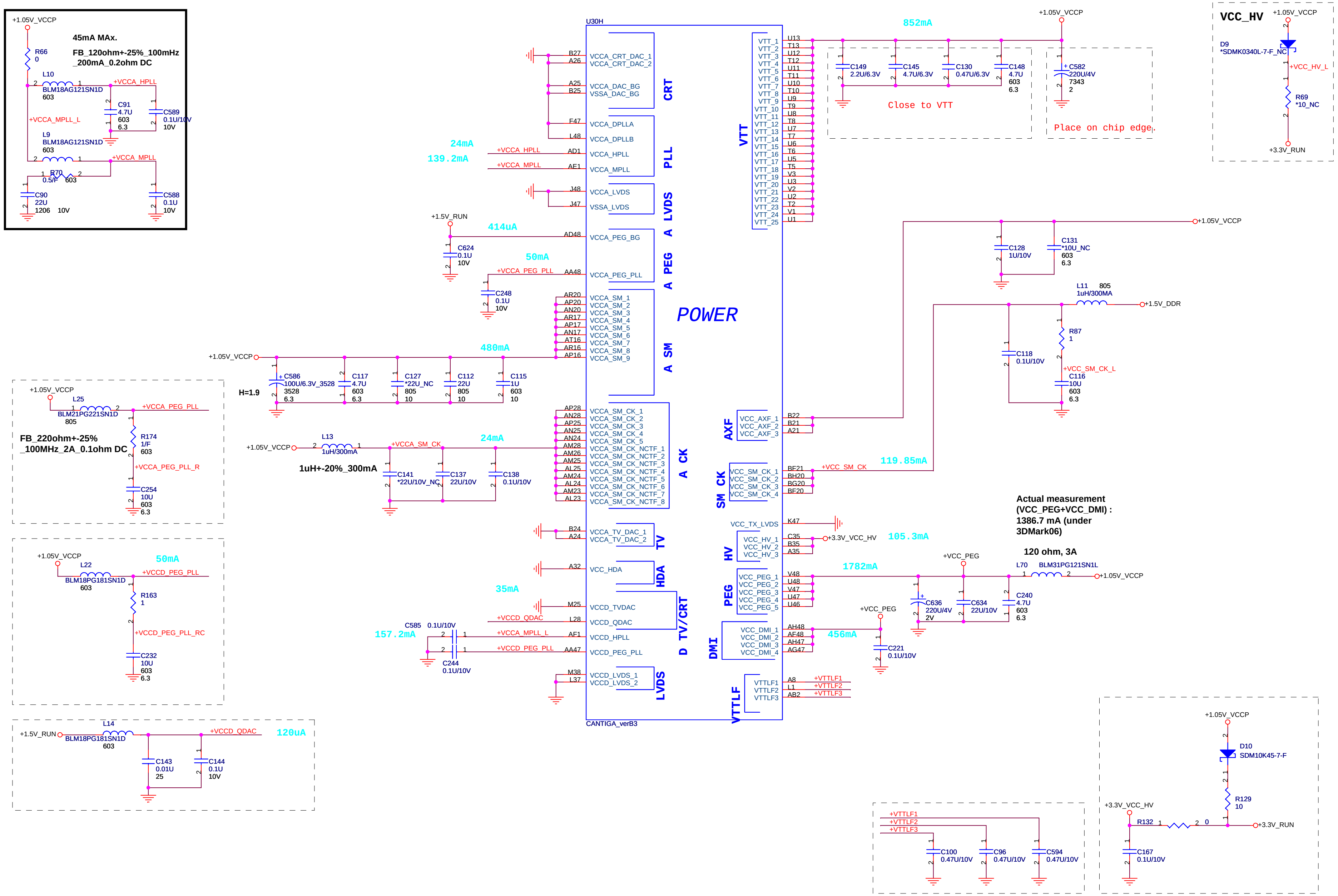

45mA MAx.
FB_120ohm+-25%_100mHz _200mA_0.2ohm DC
+1.05V_VCCP
R66 0
L10 BLM18AG121SN1D 603
+VCCA_HPLL
C91 4.7U 603 6.3
C589 0.1U/10V 10V
+VCCA_MPLL_L
L9 BLM18AG121SN1D 603
+VCCA_MPLL
R70 0.5/F 603
C90 22U 1206 10V
C588 0.1U 10V
U30H
CRT
PLL
LVDS
A PEG
A SM
A CK
TV
HDA
D TV/CRT
LVDS
VTT
AXF
SM CK
HV
PEG
DMI
VTTLF
POWER
VCCA_CRT_DAC_1
VCCA_CRT_DAC_2
VCCA_DAC_BG
VSSA_DAC_BG
VCCA_DPLLA
VCCA_DPLLB
VCCA_HPLL
VCCA_MPLL
VCCA_LVDS
VSSA_LVDS
VCCA_PEG_BG
VCCA_PEG_PLL
VCCA_SM_1 … VCCA_SM_9
VCCA_SM_CK_1 … VCCA_SM_CK_5
VCCA_SM_CK_NCTF_1 … VCCA_SM_CK_NCTF_8
VCCA_TV_DAC_1
VCCA_TV_DAC_2
VCC_HDA
VCCD_TVDAC
VCCD_QDAC
VCCD_HPLL
VCCD_PEG_PLL
VCCD_LVDS_1
VCCD_LVDS_2
VTT_1 … VTT_25
VCC_AXF_1 VCC_AXF_2 VCC_AXF_3
VCC_SM_CK_1 … VCC_SM_CK_4
VCC_TX_LVDS
VCC_HV_1 VCC_HV_2 VCC_HV_3
VCC_PEG_1 … VCC_PEG_5
VCC_DMI_1 … VCC_DMI_4
VTTLF1 VTTLF2 VTTLF3
CANTIGA_verB3
24mA
139.2mA
414uA
50mA
480mA
24mA
35mA
157.2mA
852mA
119.85mA
105.3mA
1782mA
456mA
+1.5V_RUN
C624 0.1U 10V
C248 0.1U 10V
H=1.9
C586 100U/6.3V_3528 3528 6.3
C117 4.7U 603 6.3
C127 *22U_NC 805 10
C112 22U 805 10
C115 1U 603 10
+1.05V_VCCP
L25 BLM21PG221SN1D 805
+VCCA_PEG_PLL
R174 1/F 603
+VCCA_PEG_PLL_R
C254 10U 603 6.3
FB_220ohm+-25% _100MHz_2A_0.1ohm DC
L13 1uH/300mA
+VCCA_SM_CK
1uH+-20%_300mA
C141 *22U/10V_NC
C137 22U/10V
C138 0.1U/10V
L22 BLM18PG181SN1D 603
+VCCD_PEG_PLL
R163 1
+VCCD_PEG_PLL_RC
C232 10U 603 6.3
+VCCD_QDAC
+VCCA_MPLL_L
C585 0.1U/10V
C244 0.1U/10V
L14 BLM18PG181SN1D 603
+VCCD_QDAC
120uA
C143 0.01U 25
C144 0.1U 10V
C149 2.2U/6.3V
C145 4.7U/6.3V
C130 0.47U/6.3V
C148 4.7U 603 6.3
Close to VTT
C582 220U/4V 7343 2
Place on chip edge
VCC_HV
D9 *SDMK0340L-7-F_NC
+VCC_HV_L
R69 *10_NC
+3.3V_RUN
C128 1U/10V
C131 *10U_NC 603 6.3
L11 805 1uH/300MA
+1.5V_DDR
R87 1
C118 0.1U/10V
+VCC_SM_CK_L
C116 10U 603 6.3
+VCC_SM_CK
+3.3V_VCC_HV
Actual measurement (VCC_PEG+VCC_DMI) : 1386.7 mA (under 3DMark06)
120 ohm, 3A
+VCC_PEG
L70 BLM31PG121SN1L
C636 220U/4V 2V
C634 22U/10V
C240 4.7U 603 6.3
C221 0.1U/10V
+VTTLF1
+VTTLF2
+VTTLF3
C100 0.47U/10V
C96 0.47U/10V
C594 0.47U/10V
D10 SDM10K45-7-F
R129 10
R132 0
C167 0.1U/10V

QUANTA COMPUTER

Title	Cantiga_E (POWER)	
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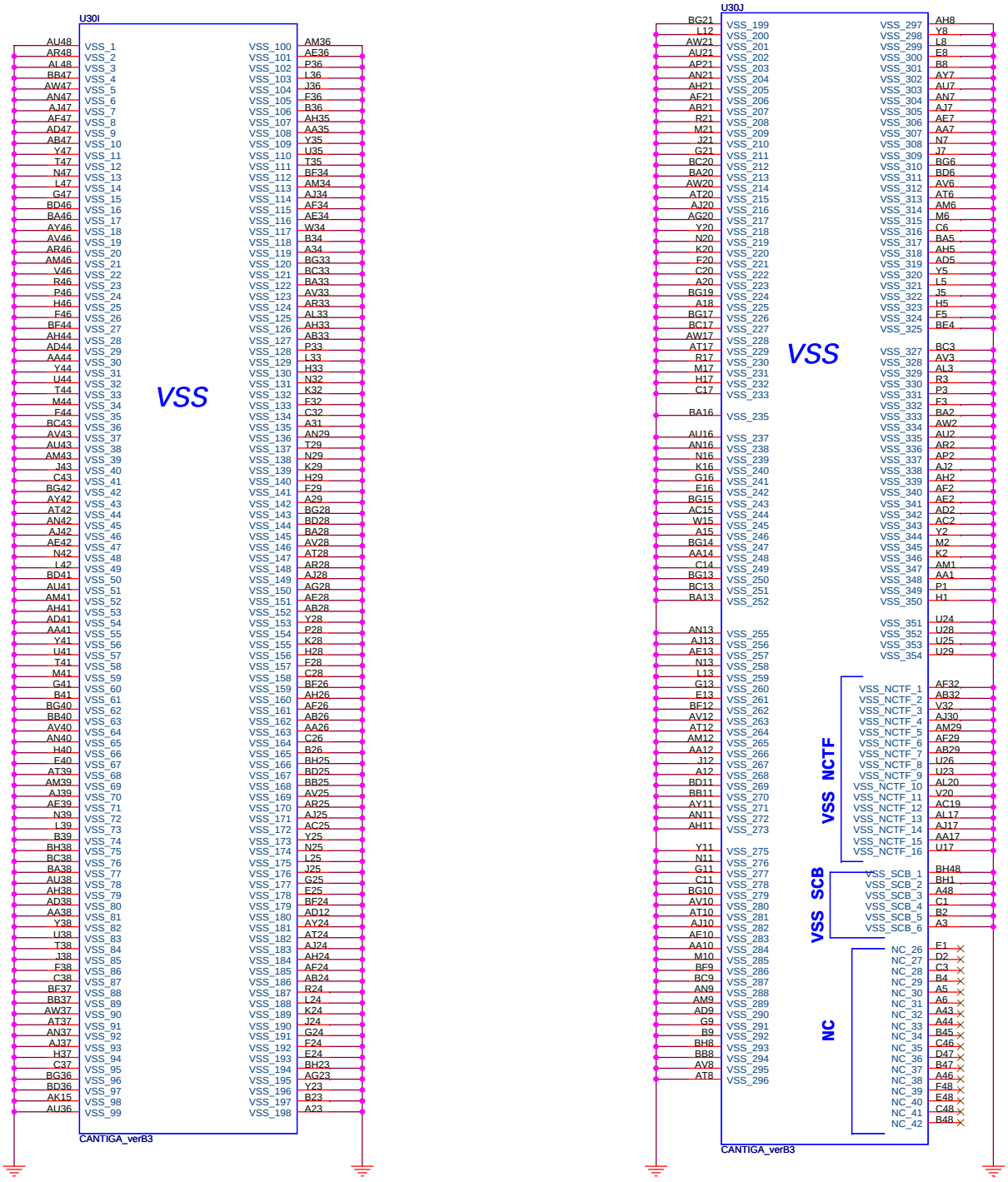

QUANTA COMPUTER			
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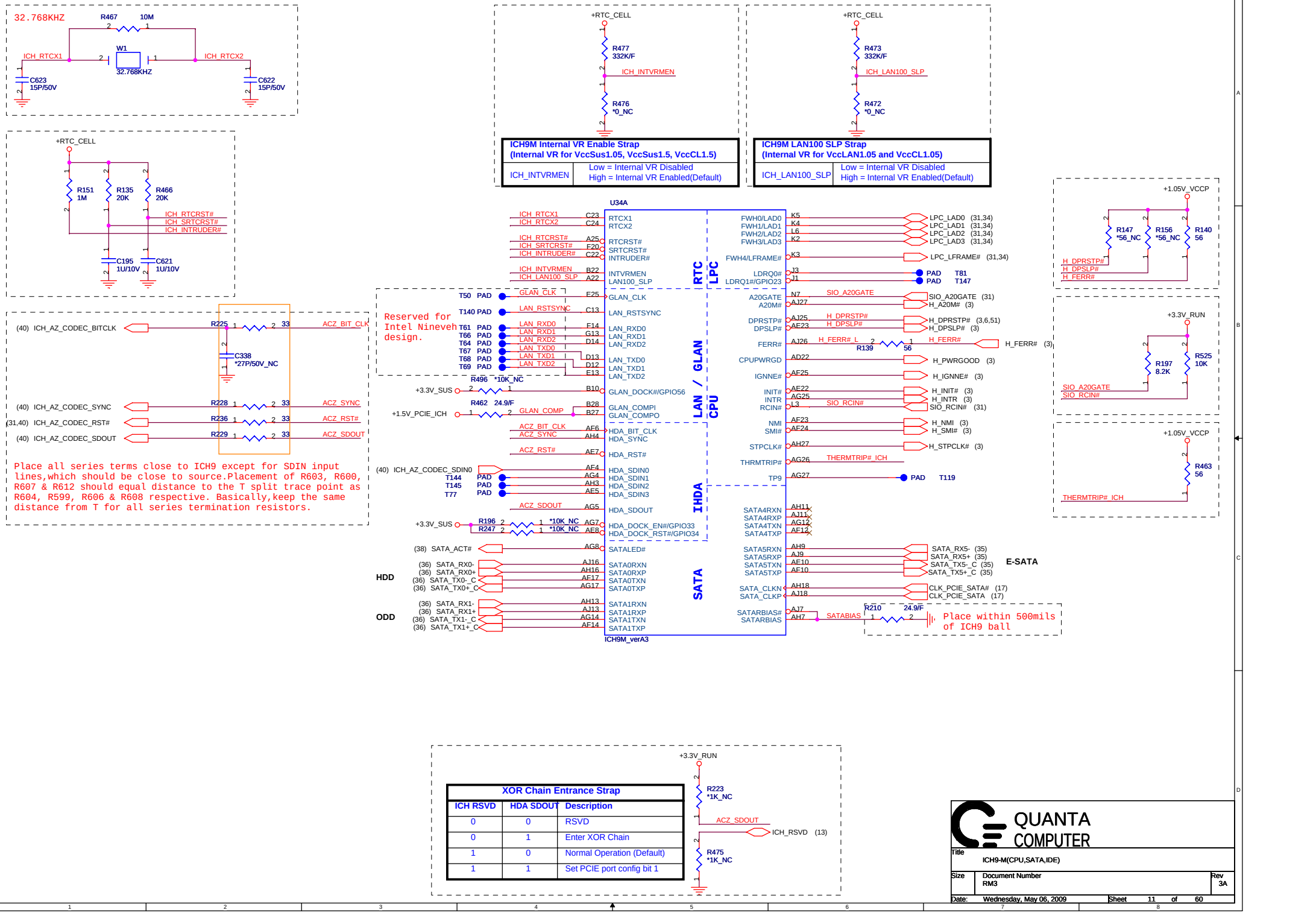
32.768KHZ
R467 10M
W1
32.768KHZ
ICH_RTCX1
ICH_RTCX2
C623 15P/50V
C622 15P/50V
+RTC_CELL
R151 1M
R135 20K
R466 20K
ICH_RTCRST#
ICH_SRTCRST#
ICH_INTRUDER#
C195 1U/10V
C621 1U/10V
+RTC_CELL
R477 332K/F
ICH_INTVRMEN
R476 *0_NC
ICH9M Internal VR Enable Strap
(Internal VR for VccSus1.05, VccSus1.5, VccCL1.5)
ICH_INTVRMEN
Low = Internal VR Disabled
High = Internal VR Enabled(Default)
+RTC_CELL
R473 332K/F
ICH_LAN100_SLP
R472 *0_NC
ICH9M LAN100 SLP Strap
(Internal VR for VccLAN1.05 and VccCL1.05)
ICH_LAN100_SLP
Low = Internal VR Disabled
High = Internal VR Enabled(Default)
U34A
RTCX1
RTCX2
RTCRST#
SRTCRST#
INTRUDER#
INTVRMEN
LAN100_SLP
RTC
LPC
GLAN_CLK
LAN_RSTSYNC
LAN_RXD0
LAN_RXD1
LAN_RXD2
LAN_TXD0
LAN_TXD1
LAN_TXD2
GLAN_DOCK#/GPIO56
GLAN_COMPI
GLAN_COMPO
LAN / GLAN
CPU
HDA_BIT_CLK
HDA_SYNC
HDA_RST#
HDA_SDIN0
HDA_SDIN1
HDA_SDIN2
HDA_SDIN3
HDA_SDOUT
HDA_DOCK_EN#/GPIO33
HDA_DOCK_RST#/GPIO34
SATALED#
IHDA
SATA0RXN
SATA0RXP
SATA0TXN
SATA0TXP
SATA1RXN
SATA1RXP
SATA1TXN
SATA1TXP
SATA
FWH0/LAD0
FWH1/LAD1
FWH2/LAD2
FWH3/LAD3
FWH4/LFRAME#
LDRQ0#
LDRQ1#/GPIO23
A20GATE
A20M#
DPRSTP#
DPSLP#
FERR#
CPUPWRGD
IGNNE#
INIT#
INTR
RCIN#
NMI
SMI#
STPCLK#
THRMTRIP#
TP9
SATA4RXN
SATA4RXP
SATA4TXN
SATA4TXP
SATA5RXN
SATA5RXP
SATA5TXN
SATA5TXP
SATA_CLKN
SATA_CLKP
SATARBIAS#
SATARBIAS
Reserved for Intel Nineveh design.
T50 PAD
T140 PAD
T61 PAD
T66 PAD
T64 PAD
T67 PAD
T68 PAD
T69 PAD
R496 *10K_NC
+3.3V_SUS
R462 24.9/F
+1.5V_PCIE_ICH
GLAN_COMP
ACZ_BIT_CLK
ACZ_SYNC
ACZ_RST#
ACZ_SDOUT
(40) ICH_AZ_CODEC_SDIN0
T144 PAD
T145 PAD
T77 PAD
R196 *10K_NC
R247 *10K_NC
(38) SATA_ACT#
HDD
(36) SATA_RX0-
(36) SATA_RX0+
(36) SATA_TX0-_C
(36) SATA_TX0+_C
ODD
(36) SATA_RX1-
(36) SATA_RX1+
(36) SATA_TX1-_C
(36) SATA_TX1+_C
ICH9M_verA3
LPC_LAD0 (31,34)
LPC_LAD1 (31,34)
LPC_LAD2 (31,34)
LPC_LAD3 (31,34)
LPC_LFRAME# (31,34)
PAD T81
PAD T147
SIO_A20GATE (31)
H_A20M# (3)
H_DPRSTP# (3,6,51)
H_DPSLP# (3)
H_FERR# (3)
H_PWRGOOD (3)
H_IGNNE# (3)
H_INIT# (3)
H_INTR (3)
SIO_RCIN# (31)
H_NMI (3)
H_SMI# (3)
H_STPCLK# (3)
THERMTRIP#_ICH
PAD T119
E-SATA
SATA_RX5- (35)
SATA_RX5+ (35)
SATA_TX5-_C (35)
SATA_TX5+_C (35)
CLK_PCIE_SATA# (17)
CLK_PCIE_SATA (17)
R210 24.9/F
SATABIAS
Place within 500mils of ICH9 ball
(40) ICH_AZ_CODEC_BITCLK
R225 33
C338 *27P/50V_NC
(40) ICH_AZ_CODEC_SYNC
R228 33
(31,40) ICH_AZ_CODEC_RST#
R236 33
(40) ICH_AZ_CODEC_SDOUT
R229 33
Place all series terms close to ICH9 except for SDIN input lines,which should be close to source.Placement of R603, R600, R607 & R612 should equal distance to the T split trace point as R604, R599, R606 & R608 respective. Basically,keep the same distance from T for all series termination resistors.
+1.05V_VCCP
R147 *56_NC
R156 *56_NC
R140 56
H_DPRSTP#
H_DPSLP#
H_FERR#
+3.3V_RUN
R197 8.2K
R525 10K
SIO_A20GATE
SIO_RCIN#
+1.05V_VCCP
R463 56
THERMTRIP#_ICH
XOR Chain Entrance Strap
ICH RSVD
HDA SDOUT
Description
0 0 RSVD
0 1 Enter XOR Chain
1 0 Normal Operation (Default)
1 1 Set PCIE port config bit 1
+3.3V_RUN
R223 *1K_NC
ACZ_SDOUT
ICH_RSVD (13)
R475 *1K_NC
QUANTA COMPUTER
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ICH9-M(CPU,SATA,IDE)
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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 V27 DMI_MTX_IRX_N0 (6)
DMI0RXP V26 DMI_MTX_IRX_P0 (6)
DMI0TXN U29 DMI_MRX_ITX_N0 (6)
DMI0TXP U28 DMI_MRX_ITX_P0 (6)
DMI1RXN Y27 DMI_MTX_IRX_N1 (6)
DMI1RXP Y26 DMI_MTX_IRX_P1 (6)
DMI1TXN W29 DMI_MRX_ITX_N1 (6)
DMI1TXP W28 DMI_MRX_ITX_P1 (6)
DMI2RXN AB27 DMI_MTX_IRX_N2 (6)
DMI2RXP AB26 DMI_MTX_IRX_P2 (6)
DMI2TXN AA29 DMI_MRX_ITX_N2 (6)
DMI2TXP AA28 DMI_MRX_ITX_P2 (6)
DMI3RXN AD27 DMI_MTX_IRX_N3 (6)
DMI3RXP AD26 DMI_MTX_IRX_P3 (6)
DMI3TXN AC29 DMI_MRX_ITX_N3 (6)
DMI3TXP AC28 DMI_MRX_ITX_P3 (6)
DMI_CLKN T26 CLK_PCIE_ICH# (17)
DMI_CLKP T25 CLK_PCIE_ICH (17)
DMI_ZCOMP AE29
DMI_IRCOMP AE28 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
SPI_CLK
SPI_CS0#
SPI_CS1#/GPIO58/CLGPIO6
SPI_MOSI
SPI_MISO
T51 PAD
T45 PAD
ICH_SPI_CS1# R
T49 PAD
T52 PAD

USB
USB_OC0_1#
OC2_3#
OC4#
OC5#
OC6#
OC7#
USB_OC8#
OC9#
OC10#
OC11#
(35) USB_OC0_1#
(35) USB_OC8#

USBP0N AC5 ICH_USBP0- (42)
USBP0P AC4 ICH_USBP0+ (42)
USBP1N AD3 ICH_USBP1- (42)
USBP1P AD2 ICH_USBP1+ (42)
USBP2N AC1 PAD T151
USBP2P AC2 PAD T152
USBP3N AA5 PAD T78
USBP3P AA4 PAD T80
USBP4N AB2 ICH_USBP4- (33)
USBP4P AB3 ICH_USBP4+ (33)
USBP5N AA1 ICH_USBP5- (34)
USBP5P AA2 ICH_USBP5+ (34)
USBP6N W5 ICH_USBP6- (34)
USBP6P W4 ICH_USBP6+ (34)
USBP7N Y3 ICH_USBP7- (30)
USBP7P Y2 ICH_USBP7+ (30)
USBP8N W1 ICH_USBP8- (35)
USBP8P W2 ICH_USBP8+ (35)
USBP9N V2 ICH_USBP9- (35)
USBP9P V3 ICH_USBP9+ (35)
USBP10N U5 PAD T76
USBP10P U4 PAD T79
USBP11N U1 ICH_USBP11- (37)
USBP11P U2 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

Places within 500 mils of the ICH9
R527 22.6/F
USBRBIAS
USBRBIAS
USBRBIAS#
ICH9M_verA3

Boot BIOS Strap

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

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

PCI Pullups
RP5 8.2K_10P8R
PCI_FRAME#
PCI_DEVSEL#
PCI_TRDY#
PCI_STOP#
PCI_REQ1#
PCI_IRDY#
PCI_PIRQD#
PCI_PERR#
RP7 8.2K_10P8R
PCI_PIRQB#
PCI_PIRQC#
PCI_PIRQA#
PCI_REQ0#
PCI_PLOCK#
ICH_IRQH_GPIO5
PCI_SERR#
+3.3V_RUN

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.

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# OC4# USB_OC8# OC5# OC7# OC6# USB_OC0_1# OC2_3#
OC10# R219 10K
OC11# R224 10K

(28,56) PCI_AD[0..31]
U34B
PCI
PCI_AD0 AD0
PCI_AD1 AD1
PCI_AD2 AD2
PCI_AD3 AD3
PCI_AD4 AD4
PCI_AD5 AD5
PCI_AD6 AD6
PCI_AD7 AD7
PCI_AD8 AD8
PCI_AD9 AD9
PCI_AD10 AD10
PCI_AD11 AD11
PCI_AD12 AD12
PCI_AD13 AD13
PCI_AD14 AD14
PCI_AD15 AD15
PCI_AD16 AD16
PCI_AD17 AD17
PCI_AD18 AD18
PCI_AD19 AD19
PCI_AD20 AD20
PCI_AD21 AD21
PCI_AD22 AD22
PCI_AD23 AD23
PCI_AD24 AD24
PCI_AD25 AD25
PCI_AD26 AD26
PCI_AD27 AD27
PCI_AD28 AD28
PCI_AD29 AD29
PCI_AD30 AD30
PCI_AD31 AD31

REQ0# PCI_REQ0# PCI_REQ0# (28)
GNT0# PCI_GNT0# PCI_GNT0# (28)
REQ1#/GPIO50 PCI_REQ1# PCI_REQ1# (56)
GNT1#/GPIO51 PCI_GNT1# PCI_GNT1# (56)
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)
C/BE1# PCI_C_BE1# (28,56)
C/BE2# PCI_C_BE2# (28,56)
C/BE3# PCI_C_BE3# (28,56)
IRDY# PCI_IRDY# PCI_IRDY# (28,56)
PAR PCI_PAR (28,56)
PCIRST# PCI_RST# G
DEVSEL# PCI_DEVSEL# PCI_DEVSEL# (28,56)
PERR# PCI_PERR# PCI_PERR# (28,56)
PLOCK# PCI_PLOCK#
SERR# PCI_SERR# PCI_SERR# (28,56)
STOP# PCI_STOP# PCI_STOP# (28,56)
TRDY# PCI_TRDY# PCI_TRDY# (28,56)
FRAME# PCI_FRAME# PCI_FRAME# (28,56)
PLTRST# PCI_PLTRST#
PCICLK CLK_PCI_ICH CLK_PCI_ICH (17)
PME# ICH_PME# (28,56)

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

Interrupt I/F
(56) PCI_PIRQA#
(28) PCI_PIRQB#
(28) PCI_PIRQC#
(56) PCI_PIRQD#
PCI_PIRQA# J5
PCI_PIRQB# E1
PCI_PIRQC# J6
PCI_PIRQD# C4
PIRQE#/GPIO2 H4 SB_WPAN_PCIE_RST# SB_WPAN_PCIE_RST# (34)
PIRQF#/GPIO3 K6 SB_WLAN_PCIE_RST# SB_WLAN_PCIE_RST# (33)
PIRQG#/GPIO4 E2 SB_NB_PCIE_RST# SB_NB_PCIE_RST# (6)
PIRQH#/GPIO5 G2 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)		
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Non-iAMT

+3.3V_SUS
RP2
ICH_SMBDATA
ICH_SMBCLK
2.2KX2

Non-iAMT

+3.3V_SUS
R180 *10K_NC RSV_ICH_CL_RST1#
R176 10K ICH_RI#
R489 10K SIO_EXT_SCI#
R173 1K PCIE_WAKE#

+3.3V_RUN
R155 8.2K

Place these close to ICH8.

CLK_ICH_48M
R235 *10_NC
C348 *4.7P_NC
50

CLK_ICH_14M
R524 *10_NC
C689 *4.7P_NC
50

+3.3V_RUN
R242 8.2K
CLKRUN#
R233 *10_NC

Option to " Disable " clkrun. Pulling it down will keep the clks running.

U34C

ICH_SMBCLK G16 SMBCLK
ICH_SMBDATA A13 SMBDATA
T63 PAD RSV_ICH_CL_RST1# E17 LINKALERT#/GPIO60/CLGPIO6
T60 PAD ICH_SMBCLK C17 SMLINK0
T65 PAD ICH_SMBDATA B18 SMLINK1
ICH_RI# F19 RI#
T72 PAD RSV_LPCPD# R4 SUS_STAT#/LPCPD#
(3) ITP_DBRESET# G19 SYS_RESET#
(6) PM_BMBUSY# M6 PMSYNC#/GPIO0
(33) USB_MCARD1_DET# USB_MCARD1_DET# A17 SMBALERT#/GPIO11
(17) H_STP_PCI# A14 STP_PCI#/GPIO15
(17) H_STP_CPU# E19 STP_CPU#/GPIO25
(28,31,56) CLKRUN# CLKRUN# L4 CLKRUN#/GPIO32
(30,33,34,43) PCIE_WAKE# PCIE_WAKE# E20 WAKE#
(28,31,56) IRQ_SERIRQ IRQ_SERIRQ M5 SERIRQ
(39) THERM_ALERT# THERM_ALERT# AJ23 THRM#
(31,45,51) IMVP_PWRGD IMVP_PWRGD D21 VRMPWRGD
T134 PAD A20 TP8

SMB

SATA GPIO

SATA0GP/GPIO21 AH23
SATA1GP/GPIO19 AE19
SATA4GP/GPIO36 AE21
SATA5GP/GPIO37 AD20

Clocks

CLK14 H1 CLK_ICH_14M → CLK_ICH_14M (17)
CLK48 AF3 CLK_ICH_48M → CLK_ICH_48M (17)
SUSCLK P1 ICH_SUSCLK → PAD T148

SYS GPIO

SLP_S3# C16 → SIO_SLP_S3# (31)
SLP_S4# E16 → PAD T58
SLP_S5# G17 → SIO_SLP_S5# (31)
S4_STATE#/GPIO26 C10
PWROK G20 ICH_PWRGD → ICH_PWRGD (6,45)
DPRSLPVR → DPRSLPVR (6,51)
DPRSLPVR/GPIO16 M2

Power MGT

R488 8.2K
BATLOW# B13 ICH_BATLOW# → +3.3V_SUS
PWRBTN# R3 → SIO_PWRBTN# (31)
LAN_RST# D20 RSV_ICH_LAN_RST# → PAD T53
RSMRST# D22 ICH_RSMRST# → ICH_RSMRST# (31)
CK_PWRGD R5 → CLK_PWRGD (17)
CLPWROK R6 ICH_CL_PWROK → ICH_CL_PWROK (6,31)
SLP_M# B16 → PAD T55

GPIO

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

Controller Link

CL_CLK0 F24 → CL_CLK0 (6)
CL_CLK1 B19 RSV_ICH_CL_CLK1 → PAD T136
CL_DATA0 F22 → CL_DATA0 (6)
CL_DATA1 C19 RSV_ICH_CL_DATA1 → PAD T137
CL_VREF0 C25 CL_VREF0
CL_VREF1 A19 CL_VREF1
CL_RST0# F21 → ICH_CL_RST0# (6)
CL_RST1# D18 CL_RST1# → PAD T139

MEM_LED/GPIO24 A16 RSV_GPIO24 → PAD T62
ALERT#/GPIO10 C18 RSV_GPIO10 → PAD T56
NETDETECT/GPIO14 C11 RSV_GPIO14 → PAD T70
WOL_EN/GPIO9 C20 RSV_WOL_EN → PAD T54

R188 8.2K
+3.3V_SUS

MISC

SPKR M7
MCH_ICH_SYNC# AJ24
TP3 B21
TP9 AH20
TP10 AJ20
TP11 AJ21

ICH9M_verA3

Non-iAMT

ICH_PWRGD R162 10K
DPRSLPVR R526 100K
ICH_RSMRST# R152 10K
RSV_ICH_LAN_RST# R167 10K
ICH_CL_PWROK R198 1M
+3.3V_SUS
RSV_GPIO10 R170 10K

(33) PCIE_MCARD1_DET# PCIE_MCARD1_DET# R244 4.7K
(34) USB_MCARD2_DET# USB_MCARD2_DET# AG19
(34) USB_MCARD3_DET# USB_MCARD3_DET# AH21
(31) SIO_EXT_WAKE# AG21
(31) SIO_EXT_SMI# SIO_EXT_SMI# A21
(31) SIO_EXT_SCI# SIO_EXT_SCI# C12
T133 PAD C21
(37) KB_LED_DET AE18
(34) PCIE_MCARD2_DET# PCIE_MCARD2_DET# K1
(34) PCIE_MCARD3_DET# PCIE_MCARD3_DET# AF8
(33) WLAN_RADIO_DIS# AJ22
(37) CAMERA_CBL_DET# A9
(17) SATA_CLKREQ# D19
(18) PLTRST_DELAY# PLTRST_DELAY# L1
(34) WPAN_RADIO_DIS_MINI# AE19
(34) WWAN_RADIO_DIS# AG22
T120 PAD AF21
T143 PAD AH24
A8

(40) SPKR SPKR M7
(6) MCH_ICH_SYNC# MCH_ICH_SYNC# AJ24
(11) ICH_RSVD TP9 B21
T138 PAD TP10 AH20
T135 PAD TP11 AJ20
T130 PAD AJ21

DIS:ALW
UMA:SUS

Non-iAMT
+3.3V_RUN +3.3V_ALW +3.3V_SUS
R136 3.24K/F
R469 *3.24K/F_NC
R471 *3.24K/F_NC
CL_VREF0
CL_VREF1
C179 0.1U
R137 453/F
C249 *0.1U_NC
R169 *453/F_NC
10
10

CL_VREF0/1 ~=0.405V

R177 10K PLTRST_DELAY#

+3.3V_RUN
R159 2.2K IMVP_PWRGD
R171 100K USB_MCARD2_DET#
R154 100K USB_MCARD3_DET#
R243 100K PCIE_MCARD1_DET#
R215 100K PCIE_MCARD2_DET#
R158 100K PCIE_MCARD3_DET#

+3.3V_RUN
R148 *10K_NC MCH_ICH_SYNC#
R193 10K IRQ_SERIRQ
R149 10K THERM_ALERT#

+3.3V_SUS
R164 10K RSV_WOL_EN
R478 10K SIO_EXT_SMI#
R480 100K USB_MCARD1_DET#

+3.3V_RUN
R200 *1K_NC
SPKR

No Reboot strap.

SPKR	Low = Default. High = No Reboot.

SMbus address D2

These are for backdrive issue.

+3.3V_RUN
RP3 2.2KX2
(30,33,34) ICH_SMBDATA ICH_SMBDATA Q26 MEM_SDATA (15,16)
2N7002W-7-F

+3.3V_RUN
(30,33,34) ICH_SMBCLK ICH_SMBCLK Q25 MEM_SCLK (15,16)
2N7002W-7-F

QUANTA COMPUTER

Title	ICH9-M(PM,GPIO,SMB)	
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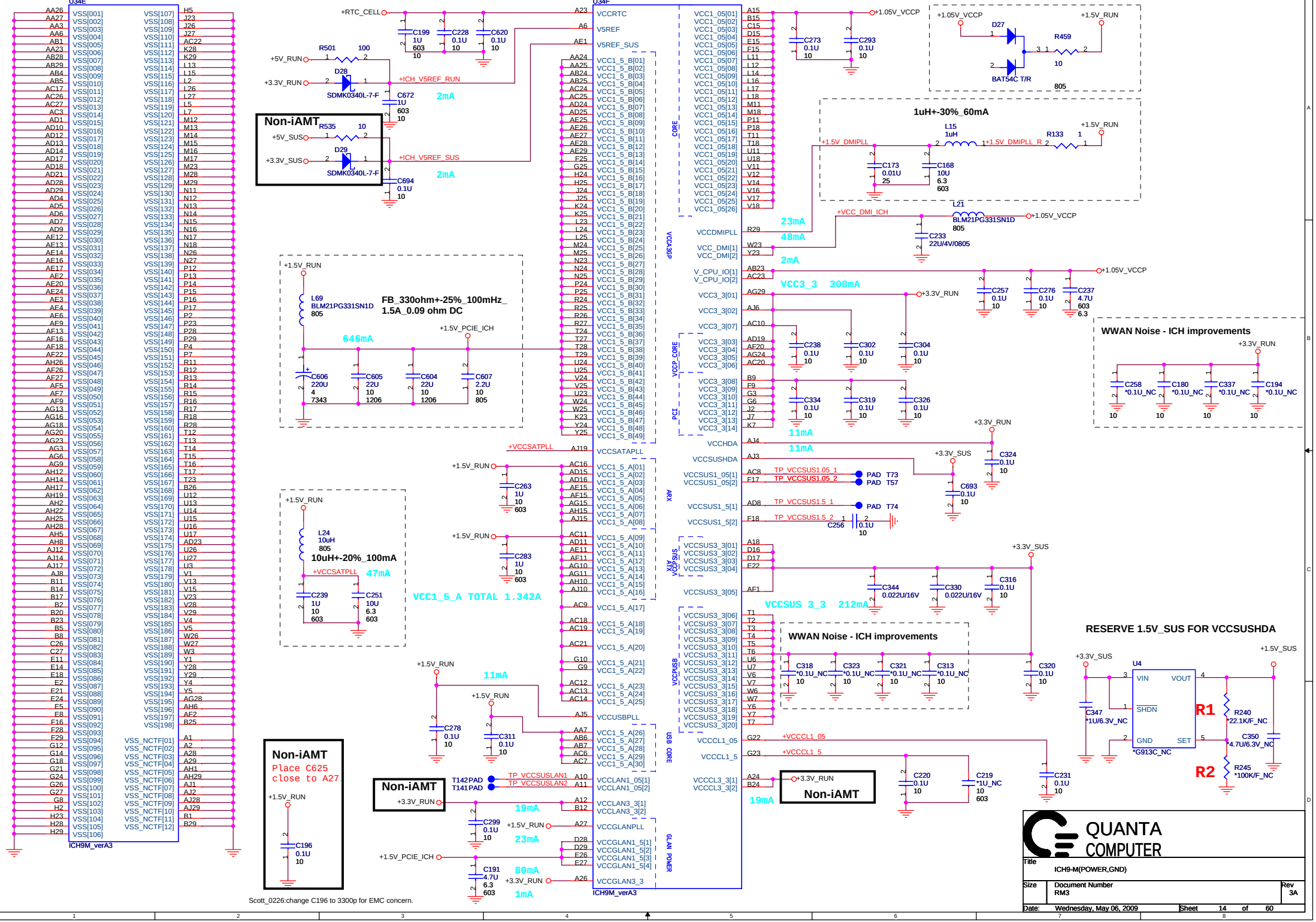
U34E
ICH9M_verA3
U34F
ICH9M_verA3
Non-iAMT
Non-iAMT
Place C625
close to A27
Non-iAMT
Non-iAMT
Non-iAMT
FB_330ohm+-25%_100mHz_
1.5A_0.09 ohm DC
10uH+-20%_100mA
1uH+-30%_60mA
WWAN Noise - ICH improvements
WWAN Noise - ICH improvements
RESERVE 1.5V_SUS FOR VCCSUSHDA
VCC1_5_A TOTAL 1.342A
VCC3_3 308mA
VCCSUS 3_3 212mA
Scott_0226:change C196 to 3300p for EMC concern.
QUANTA COMPUTER
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ICH9-M(POWER,GND)
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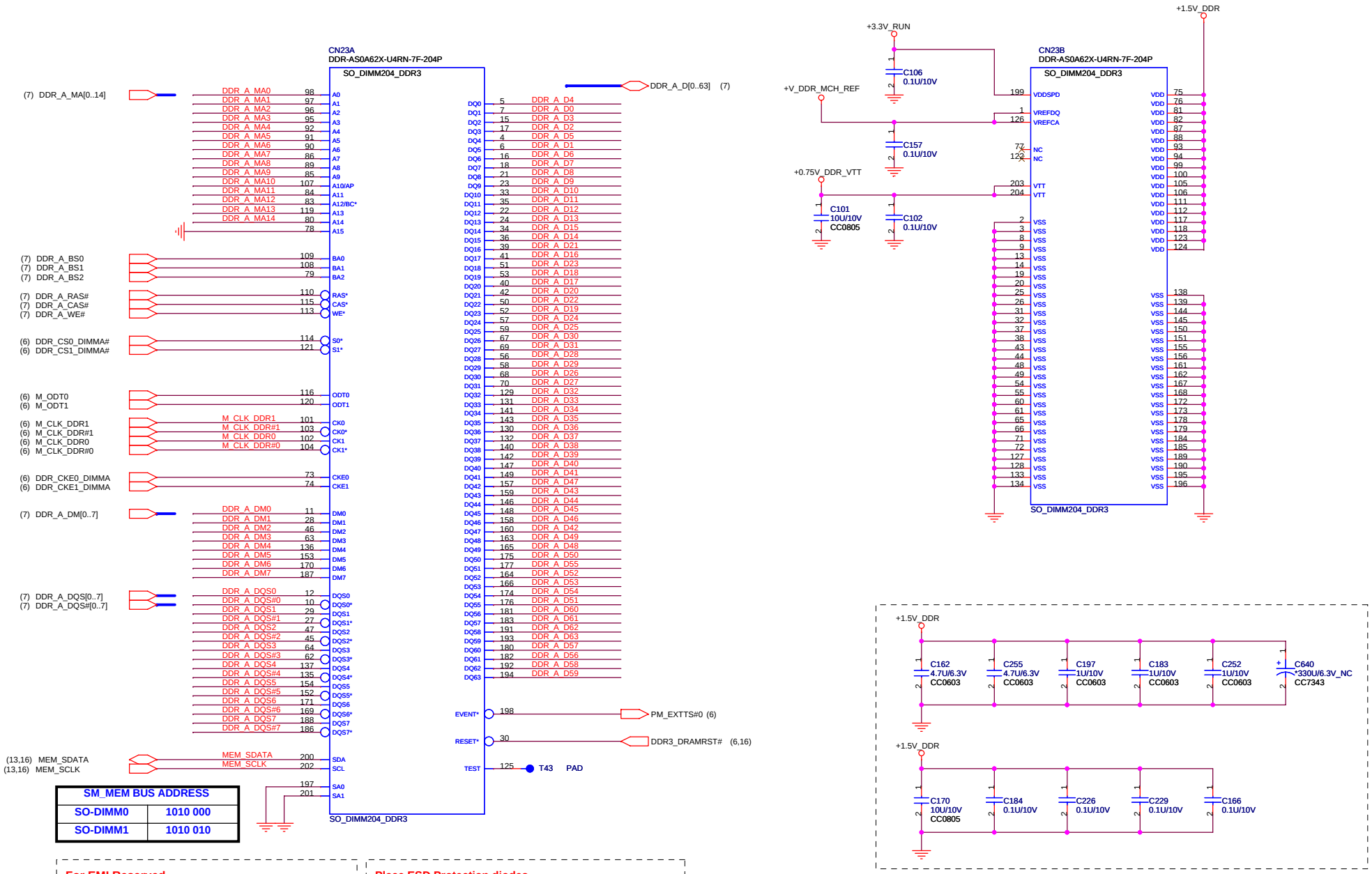
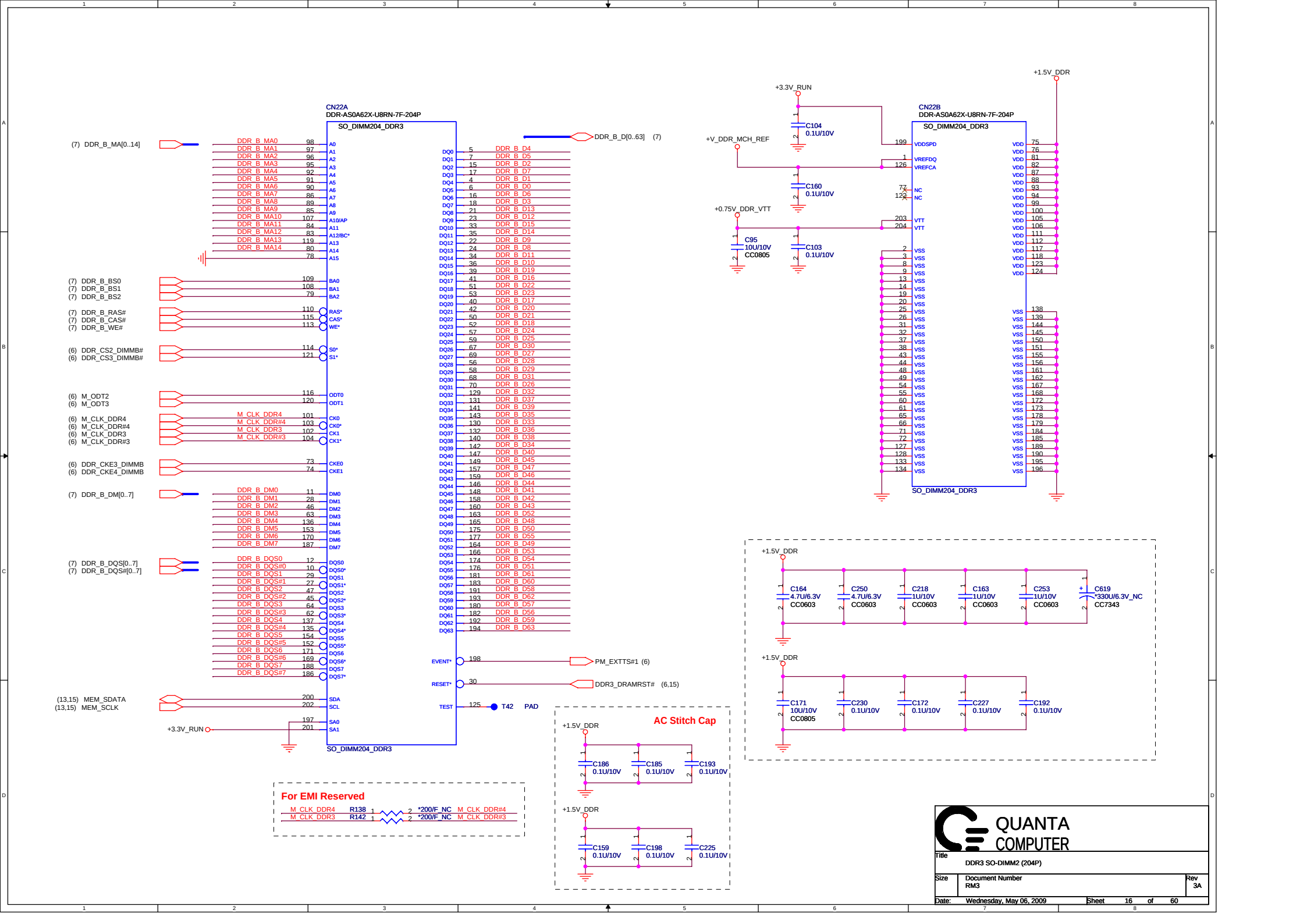


QUANTA COMPUTER

Title	DDR3 SO-DIMM1 (204P)	
Size	Document Number RM3	Rev 3A
Date: Wednesday, May 06, 2009	Sheet 15 of 60	


CN22A
DDR-AS0A62X-U8RN-7F-204P
SO_DIMM204_DDR3
(7) DDR_B_MA[0..14]
DDR_B_MA0
DDR_B_MA1
DDR_B_MA2
DDR_B_MA3
DDR_B_MA4
DDR_B_MA5
DDR_B_MA6
DDR_B_MA7
DDR_B_MA8
DDR_B_MA9
DDR_B_MA10
DDR_B_MA11
DDR_B_MA12
DDR_B_MA13
DDR_B_MA14
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10/AP
A11
A12/BC*
A13
A14
A15
(7) DDR_B_BS0
(7) DDR_B_BS1
(7) DDR_B_BS2
BA0
BA1
BA2
(7) DDR_B_RAS#
(7) DDR_B_CAS#
(7) DDR_B_WE#
RAS*
CAS*
WE*
(6) DDR_CS2_DIMMB#
(6) DDR_CS3_DIMMB#
S0*
S1*
(6) M_ODT2
(6) M_ODT3
ODT0
ODT1
(6) M_CLK_DDR4
(6) M_CLK_DDR#4
(6) M_CLK_DDR3
(6) M_CLK_DDR#3
M_CLK_DDR4
M_CLK_DDR#4
M_CLK_DDR3
M_CLK_DDR#3
CK0
CK0*
CK1
CK1*
(6) DDR_CKE3_DIMMB
(6) DDR_CKE4_DIMMB
CKE0
CKE1
(7) DDR_B_DM[0..7]
DDR_B_DM0
DDR_B_DM1
DDR_B_DM2
DDR_B_DM3
DDR_B_DM4
DDR_B_DM5
DDR_B_DM6
DDR_B_DM7
DM0
DM1
DM2
DM3
DM4
DM5
DM6
DM7
(7) DDR_B_DQS[0..7]
(7) DDR_B_DQS#[0..7]
DDR_B_DQS0
DDR_B_DQS#0
DDR_B_DQS1
DDR_B_DQS#1
DDR_B_DQS2
DDR_B_DQS#2
DDR_B_DQS3
DDR_B_DQS#3
DDR_B_DQS4
DDR_B_DQS#4
DDR_B_DQS5
DDR_B_DQS#5
DDR_B_DQS6
DDR_B_DQS#6
DDR_B_DQS7
DDR_B_DQS#7
DQS0
DQS0*
DQS1
DQS1*
DQS2
DQS2*
DQS3
DQS3*
DQS4
DQS4*
DQS5
DQS5*
DQS6
DQS6*
DQS7
DQS7*
(13,15) MEM_SDATA
(13,15) MEM_SCLK
SDA
SCL
+3.3V_RUN
SA0
SA1
DDR_B_D[0..63] (7)
DQ0 DDR_B_D4
DQ1 DDR_B_D5
DQ2 DDR_B_D2
DQ3 DDR_B_D7
DQ4 DDR_B_D1
DQ5 DDR_B_D0
DQ6 DDR_B_D6
DQ7 DDR_B_D3
DQ8 DDR_B_D13
DQ9 DDR_B_D12
DQ10 DDR_B_D15
DQ11 DDR_B_D14
DQ12 DDR_B_D9
DQ13 DDR_B_D8
DQ14 DDR_B_D11
DQ15 DDR_B_D10
DQ16 DDR_B_D19
DQ17 DDR_B_D16
DQ18 DDR_B_D22
DQ19 DDR_B_D23
DQ20 DDR_B_D17
DQ21 DDR_B_D20
DQ22 DDR_B_D21
DQ23 DDR_B_D18
DQ24 DDR_B_D24
DQ25 DDR_B_D25
DQ26 DDR_B_D30
DQ27 DDR_B_D27
DQ28 DDR_B_D28
DQ29 DDR_B_D29
DQ30 DDR_B_D31
DQ31 DDR_B_D26
DQ32 DDR_B_D32
DQ33 DDR_B_D37
DQ34 DDR_B_D39
DQ35 DDR_B_D35
DQ36 DDR_B_D33
DQ37 DDR_B_D36
DQ38 DDR_B_D38
DQ39 DDR_B_D34
DQ40 DDR_B_D40
DQ41 DDR_B_D45
DQ42 DDR_B_D47
DQ43 DDR_B_D46
DQ44 DDR_B_D44
DQ45 DDR_B_D41
DQ46 DDR_B_D42
DQ47 DDR_B_D43
DQ48 DDR_B_D52
DQ49 DDR_B_D48
DQ50 DDR_B_D50
DQ51 DDR_B_D55
DQ52 DDR_B_D49
DQ53 DDR_B_D53
DQ54 DDR_B_D54
DQ55 DDR_B_D51
DQ56 DDR_B_D61
DQ57 DDR_B_D60
DQ58 DDR_B_D58
DQ59 DDR_B_D62
DQ60 DDR_B_D57
DQ61 DDR_B_D56
DQ62 DDR_B_D59
DQ63 DDR_B_D63
EVENT*
PM_EXTTS#1 (6)
RESET*
DDR3_DRAMRST# (6,15)
TEST
T42 PAD
SO_DIMM204_DDR3
For EMI Reserved
M_CLK_DDR4 R138 *200/F_NC M_CLK_DDR#4
M_CLK_DDR3 R142 *200/F_NC M_CLK_DDR#3
AC Stitch Cap
+1.5V_DDR
C186 0.1U/10V
C185 0.1U/10V
C193 0.1U/10V
C159 0.1U/10V
C198 0.1U/10V
C225 0.1U/10V
CN22B
DDR-AS0A62X-U8RN-7F-204P
SO_DIMM204_DDR3
+3.3V_RUN
+V_DDR_MCH_REF
+0.75V_DDR_VTT
C104 0.1U/10V
C160 0.1U/10V
C95 10U/10V CC0805
C103 0.1U/10V
VDDSPD
VREFDQ
VREFCA
NC
VTT
VSS
VDD
C164 4.7U/6.3V CC0603
C250 4.7U/6.3V CC0603
C218 1U/10V CC0603
C163 1U/10V CC0603
C253 1U/10V CC0603
C619 *330U/6.3V_NC CC7343
C171 10U/10V CC0805
C230 0.1U/10V
C172 0.1U/10V
C227 0.1U/10V
C192 0.1U/10V
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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

(13) SATA_CLKREQ# R490 475/F SATA_CLKREQ# C 8 CR#_A/PCI-0
(6) CLK_3GPLLREQ# R491 475/F CLK_3GPLLREQ# C 10 CR_B/PCI-1
CLK_LPC_DEBUG FOR DEBUG NEED POP RESISTOR
PCI_PCCARD 11 TME/PCI-2
(34) CLK_LPC_DEBUG R492 22 PCI_SIO 12 SRC5_EN/PCI-3
(28) CLK_PCI_PCCARD R493 22 27M_SEL 13 27M_SEL/PCI-4
(31) CLK_PCI_8512 R494 33 PCI_ICH 14 ITP_EN/PCIF-5#
(56) CLK_PCI_DEBUG R195 33
(12) CLK_PCI_ICH R495 33
(13) CLK_ICH_48M R486 33
(3,6) CPU_MCH_BSEL0 R487 2.2K FSA 17 FSA/USB48
(3,6) CPU_MCH_BSEL1 64 FSB/TEST_MODE
(3,6) CPU_MCH_BSEL2 R497 10K FSC 5 FSC/TEST_SEL/REF
(13) CLK_ICH_14M R498 33 55 RESET#
(13) CLK_PWRGD 63 CK_PWRGD/PD#
CLK_XTAL_OUT 2 XOUT
CLK_XTAL_IN 3 XIN
CLK_SDATA 6 SDATA
CLK_SCLK 7 SCLK
65 GND

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#/SRC-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# R484 475/F MINI1CLK_REQ# MINI1CLK_REQ# (33)
CR#_E/SRC-7# 50 CARD_CLK_REQ# 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 CLK_SDATA
2N7002W-7-F
+3.3V_RUN
(26,31,39) SMBCLK1 Q27 CLK_SCLK
2N7002W-7-F

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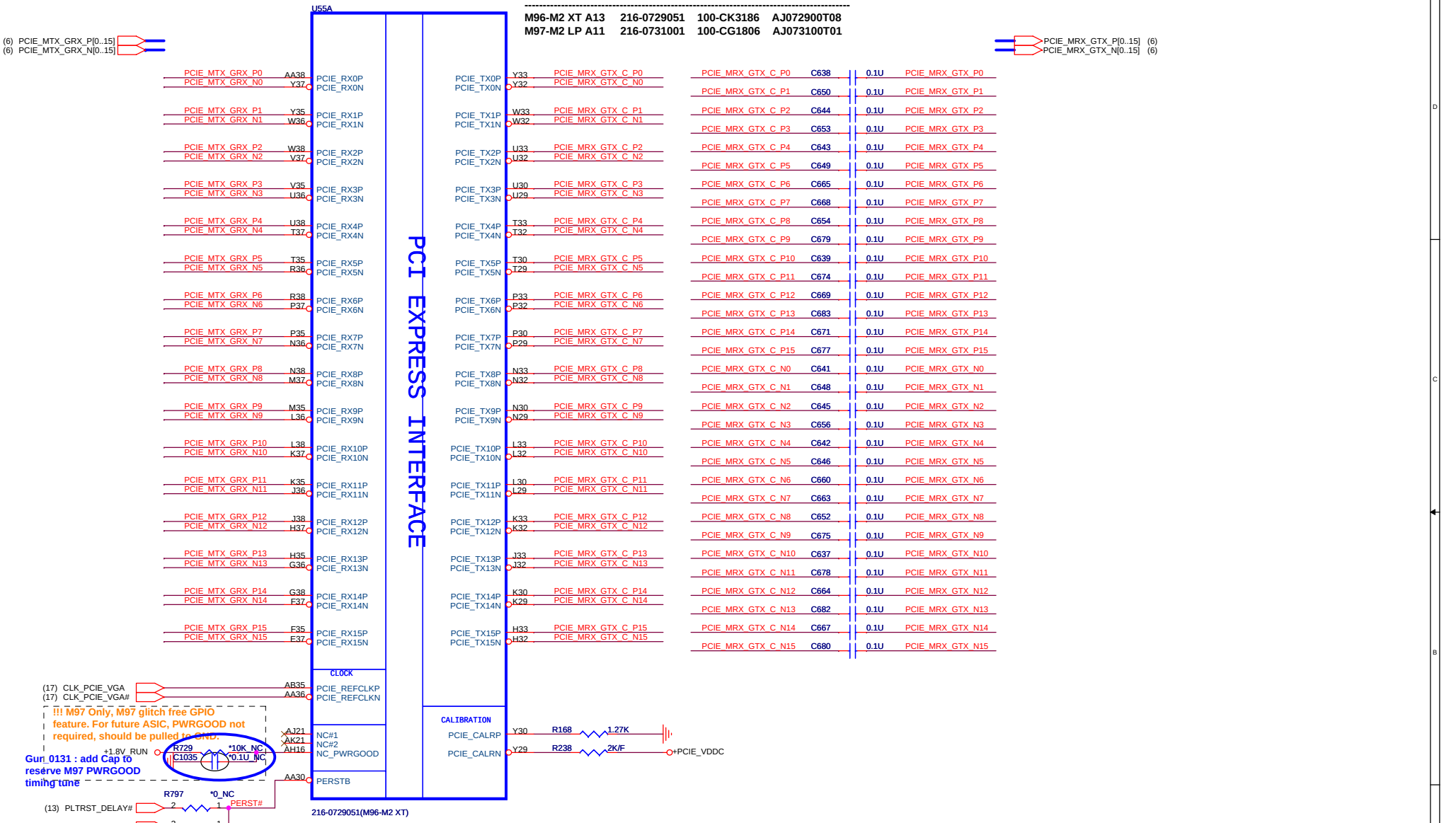
ASIC	PN	100-CK	QCI P/N
M96-M2 XT A13	216-0729051	100-CK3186	AJ072900T08
M97-M2 LP A11	216-0731001	100-CG1806	AJ073100T01



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Title	M97LP_PCIE	
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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

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

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.

!!! NC when M92-M2

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

PLACE VREFG DIVIDER AND CAP CLOSE TO ASIC

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)

Title	M97LP_IO & STRAP
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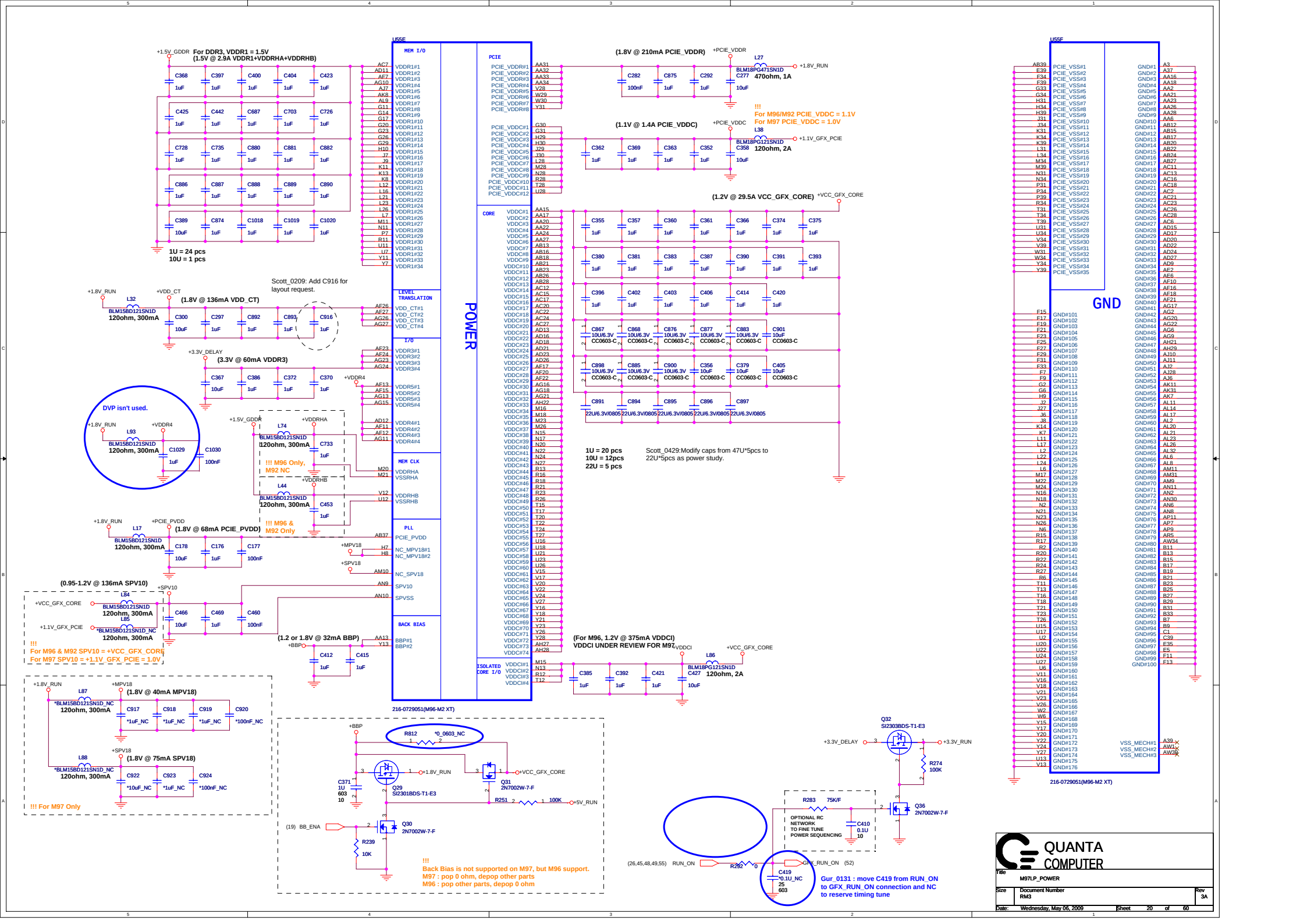
U55E
POWER
MEM I/O
VDDR1#1
VDDR1#2
VDDR1#3
VDDR1#4
VDDR1#5
VDDR1#6
VDDR1#7
VDDR1#8
VDDR1#9
VDDR1#10
VDDR1#11
VDDR1#12
VDDR1#13
VDDR1#14
VDDR1#15
VDDR1#16
VDDR1#17
VDDR1#18
VDDR1#19
VDDR1#20
VDDR1#21
VDDR1#22
VDDR1#23
VDDR1#24
VDDR1#25
VDDR1#26
VDDR1#27
VDDR1#28
VDDR1#29
VDDR1#30
VDDR1#31
VDDR1#32
VDDR1#33
VDDR1#34
LEVEL TRANSLATION
VDD_CT#1
VDD_CT#2
VDD_CT#3
VDD_CT#4
I/O
VDDR3#1
VDDR3#2
VDDR3#3
VDDR3#4
VDDR5#1
VDDR5#2
VDDR5#3
VDDR5#4
VDDR4#1
VDDR4#2
VDDR4#3
VDDR4#4
MEM CLK
VDDRHA
VSSRHA
VDDRHB
VSSRHB
PLL
PCIE_PVDD
NC_MPV18#1
NC_MPV18#2
NC_SPV18
SPV10
SPVSS
BACK BIAS
BBP#1
BBP#2
PCIE
PCIE_VDDR#1
PCIE_VDDR#2
PCIE_VDDR#3
PCIE_VDDR#4
PCIE_VDDR#5
PCIE_VDDR#6
PCIE_VDDR#7
PCIE_VDDR#8
PCIE_VDDC#1
PCIE_VDDC#2
PCIE_VDDC#3
PCIE_VDDC#4
PCIE_VDDC#5
PCIE_VDDC#6
PCIE_VDDC#7
PCIE_VDDC#8
PCIE_VDDC#9
PCIE_VDDC#10
PCIE_VDDC#11
PCIE_VDDC#12
CORE
VDDC#1
VDDC#2
VDDC#3
VDDC#4
VDDC#5
VDDC#6
VDDC#7
VDDC#8
VDDC#9
VDDC#10
VDDC#11
VDDC#12
VDDC#13
VDDC#14
VDDC#15
VDDC#16
VDDC#17
VDDC#18
VDDC#19
VDDC#20
VDDC#21
VDDC#22
VDDC#23
VDDC#24
VDDC#25
VDDC#26
VDDC#27
VDDC#28
VDDC#29
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VDDC#32
VDDC#33
VDDC#34
VDDC#35
VDDC#36
VDDC#37
VDDC#38
VDDC#39
VDDC#40
VDDC#41
VDDC#42
VDDC#43
VDDC#44
VDDC#45
VDDC#46
VDDC#47
VDDC#48
VDDC#49
VDDC#50
VDDC#51
VDDC#52
VDDC#53
VDDC#54
VDDC#55
VDDC#56
VDDC#57
VDDC#58
VDDC#59
VDDC#60
VDDC#61
VDDC#62
VDDC#63
VDDC#64
VDDC#65
VDDC#66
VDDC#67
VDDC#68
VDDC#69
VDDC#70
VDDC#71
VDDC#72
VDDC#73
VDDC#74
ISOLATED CORE I/O
VDDCI#1
VDDCI#2
VDDCI#3
VDDCI#4
216-0729051(M96-M2 XT)
+1.5V_GDDR
For DDR3, VDDR1 = 1.5V
(1.5V @ 2.9A VDDR1+VDDRHA+VDDRHB)
C368 C397 C400 C404 C423
C425 C442 C687 C703 C726
C728 C735 C880 C881 C882
C886 C887 C888 C889 C890
C389 C874 C1018 C1019 C1020
1U = 24 pcs
10U = 1 pcs
Scott_0209: Add C916 for layout request.
+1.8V_RUN
+VDD_CT
(1.8V @ 136mA VDD_CT)
L32
BLM15BD121SN1D
120ohm, 300mA
C300 C297 C892 C893 C916
+3.3V_DELAY
(3.3V @ 60mA VDDR3)
C367 C386 C372 C370
+VDDR4
DVP isn't used.
+1.8V_RUN
+VDDR4
L93
BLM15BD121SN1D
120ohm, 300mA
C1029 C1030
+1.5V_GDDR
+VDDRHA
L74
BLM15BD121SN1D
120ohm, 300mA
C733
!!! M96 Only, M92 NC
+VDDRHB
L44
BLM15BD121SN1D
120ohm, 300mA
C453
!!! M96 & M92 Only
+1.8V_RUN
+PCIE_PVDD
(1.8V @ 68mA PCIE_PVDD)
L17
BLM15BD121SN1D
120ohm, 300mA
C178 C176 C177
+MPV18
+SPV18
(0.95-1.2V @ 136mA SPV10)
+SPV10
+VCC_GFX_CORE
+1.1V_GFX_PCIE
L84
L85
BLM15BD121SN1D
120ohm, 300mA
*BLM15BD121SN1D_NC
C466 C469 C460
!!!
For M96 & M92 SPV10 = +VCC_GFX_CORE
For M97 SPV10 = +1.1V_GFX_PCIE = 1.0V
(1.2 or 1.8V @ 32mA BBP)
+BBP
C412 C415
+1.8V_RUN
+MPV18
(1.8V @ 40mA MPV18)
L87
*BLM15BD121SN1D_NC
120ohm, 300mA
C917 C918 C919 C920
*1uF_NC
*100nF_NC
+SPV18
(1.8V @ 75mA SPV18)
L88
*BLM15BD121SN1D_NC
120ohm, 300mA
C922 C923 C924
*10uF_NC
*100nF_NC
!!! For M97 Only
+PCIE_VDDR
(1.8V @ 210mA PCIE_VDDR)
L27
BLM18PG471SN1D
C277 470ohm, 1A
C282 C875 C292
+1.8V_RUN
!!!
For M96/M92 PCIE_VDDC = 1.1V
For M97 PCIE_VDDC = 1.0V
+PCIE_VDDC
(1.1V @ 1.4A PCIE_VDDC)
L38
BLM18PG121SN1D
C358 120ohm, 2A
C362 C369 C363 C352
+1.1V_GFX_PCIE
+VCC_GFX_CORE
(1.2V @ 29.5A VCC_GFX_CORE)
C355 C357 C360 C361 C366 C374 C375
C380 C381 C383 C387 C390 C391 C393
C396 C402 C403 C406 C414 C420
C867 C868 C876 C877 C883 C901
C898 C885 C900 C856 C379 C405
C891 C894 C895 C896 C897
22U/6.3V/0805
CC0603-C
1U = 20 pcs
10U = 12pcs
22U = 5 pcs
Scott_0429:Modify caps from 47U*5pcs to 22U*5pcs as power study.
(For M96, 1.2V @ 375mA VDDCI)
VDDCI UNDER REVIEW FOR M97
+VDDCI
+VCC_GFX_CORE
L86
BLM18PG121SN1D
C427 120ohm, 2A
C385 C392 C421
U55F
GND
PCIE_VSS#1
PCIE_VSS#2
PCIE_VSS#3
PCIE_VSS#4
PCIE_VSS#5
PCIE_VSS#6
PCIE_VSS#7
PCIE_VSS#8
PCIE_VSS#9
PCIE_VSS#10
PCIE_VSS#11
PCIE_VSS#12
PCIE_VSS#13
PCIE_VSS#14
PCIE_VSS#15
PCIE_VSS#16
PCIE_VSS#17
PCIE_VSS#18
PCIE_VSS#19
PCIE_VSS#20
PCIE_VSS#21
PCIE_VSS#22
PCIE_VSS#23
PCIE_VSS#24
PCIE_VSS#25
PCIE_VSS#26
PCIE_VSS#27
PCIE_VSS#28
PCIE_VSS#29
PCIE_VSS#30
PCIE_VSS#31
PCIE_VSS#32
PCIE_VSS#33
PCIE_VSS#34
PCIE_VSS#35
GND101
GND102
GND103
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GND106
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GND111
GND112
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GND#91
GND#92
GND#93
GND#94
GND#95
GND#96
GND#97
GND#98
GND#99
GND#100
VSS_MECH#1
VSS_MECH#2
VSS_MECH#3
216-0729051(M96-M2 XT)
+BBP
R812 *0_0603_NC
C371 1U 603 10
Q29 SI2301BDS-T1-E3
+1.8V_RUN
+VCC_GFX_CORE
Q31 2N7002W-7-F
R251 100K
+5V_RUN
(19) BB_ENA
Q30 2N7002W-7-F
R239 10K
!!!
Back Bias is not supported on M97, but M96 support.
M97 : pop 0 ohm, depop other parts
M96 : pop other parts, depop 0 ohm
Q32 SI2303BDS-T1-E3
+3.3V_DELAY
+3.3V_RUN
R274 100K
R283 75K/F
Q36 2N7002W-7-F
OPTIONAL RC NETWORK TO FINE TUNE POWER SEQUENCING
C410 0.1U 10
(26,45,48,49,55) RUN_ON
R292 0
GFX_RUN_ON (52)
C419 *0.1U_NC 25 603
Gur_0131 : move C419 from RUN_ON to GFX_RUN_ON connection and NC to reserve timing tune
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!!!
For M96/92, DPx_VDD10 = 1.1V
For M97 DPx_VDD10 = 1.0V

DPC & DPD aren't used.

U55H

DP C/D POWER | DP A/B POWER

+DPC_VDD18
AP20 NC_DPC_VDD18#1
AP21 NC_DPC_VDD18#2

+1.1V_GFX_PCIE
C1023 *100nF_NC
AP13 DPC_VDD10#1
AT13 DPC_VDD10#2

AN17 DPC_VSSR#1
AP16 DPC_VSSR#2
AP17 DPC_VSSR#3
AW14 DPC_VSSR#4
AW16 DPC_VSSR#5

+DPD_VDD18
AP22 NC_DPD_VDD18#1
AP23 NC_DPD_VDD18#2

+1.1V_GFX_PCIE
C1025 *100nF_NC
AP14 DPD_VDD10#1
AP15 DPD_VDD10#2

AN19 DPD_VSSR#1
AP18 DPD_VSSR#2
AP19 DPD_VSSR#3
AW20 DPD_VSSR#4
AW22 DPD_VSSR#5

150/F R739 AW18 DPCD_CALR

DP E/F POWER | DP PLL POWER

(1.8V @ 400mA DPE_VDD18;
200mA for DPE/DPF respectively)

+1.8V_RUN — L26 BLM18PG600SN1D 60ohm, 500mA — +DPE_VDD18
C266 10uF, C931 1uF, C1021 1uF, C265 100nF

Scott_0406: Change L26 for low DCR 0.1ohm as AMD suggest.

AH34 DPE_VDD18#1
AJ34 DPE_VDD18#2

+DPE_VDD10
AL33 DPE_VDD10#1
AM33 DPE_VDD10#2

DPE & DPF for LVDS

AN34 DPE_VSSR#1
AP39 DPE_VSSR#2
AR39 DPE_VSSR#3
AU37 DPE_VSSR#4
AW35 DPE_VSSR#5

+DPE_VDD18
AE34 DPF_VDD18#1
AG34 DPF_VDD18#2

(1.1V @ 200mA DPE_VDD10;
100mA for DPE/DPF respectively)

+1.1V_GFX_PCIE — L91 BLM15BD121SN1D 120ohm, 300mA — +DPE_VDD10
C932 10uF, C933 1uF, C1022 1uF, C264 100nF

AK33 DPF_VDD10#1
AK34 DPF_VDD10#2

AF39 DPF_VSSR#1
AH39 DPF_VSSR#2
AK39 DPF_VSSR#3
AL34 DPF_VSSR#4
AM34 DPF_VSSR#5

150/F R740 AM39 DPEF_CALR

216-0729051(M96-M2 XT)

DP A/B POWER

+DPA_VDD18
AN24 NC_DPA_VDD18#1
AP24 NC_DPA_VDD18#2

+DPA_VDD10
(1.1V @ 200mA DPA_VDD10)
AP31 DPA_VDD10#1
AP32 DPA_VDD10#2
L34 BLM15BD121SN1D 120ohm, 300mA — +1.1V_GFX_PCIE
C328 100nF, C327 1uF, C329 10uF
DPA for HDMI

AN27 DPA_VSSR#1
AP27 DPA_VSSR#2
AP28 DPA_VSSR#3
AW24 DPA_VSSR#4
AW26 DPA_VSSR#5

+DPB_VDD18
AP25 NC_DPB_VDD18#1
AP26 NC_DPB_VDD18#2

+DPB_VDD10
(1.1V @ 200mA DPB_VDD10)
AN33 DPB_VDD10#1
AP33 DPB_VDD10#2
L31 BLM15BD121SN1D 120ohm, 300mA — +1.1V_GFX_PCIE
C305 100nF, C306 1uF, C307 10uF
DPB for DP

AN29 DPB_VSSR#1
AP29 DPB_VSSR#2
AP30 DPB_VSSR#3
AW30 DPB_VSSR#4
AW32 DPB_VSSR#5

AW28 R259 150/F

+DPA_PVDD
(1.8V @ 20 mA DPA_PVDD)
L29 BLM15BD121SN1D 120ohm, 300mA — +1.8V_RUN
C288 100nF, C287 1uF, C289 10uF
AU28 DPA_PVDD
AV27 DPA_PVSS

+DPB_PVDD
(1.8V @ 20 mA DPB_PVDD)
L92 BLM15BD121SN1D 120ohm, 300mA — +1.8V_RUN
C1015 100nF, C1016 1uF, C1017 10uF
AV29 DPB_PVDD
AR28 DPB_PVSS

DPC & DPD aren't used.
+1.8V_RUN
C1027 *100nF_NC
C1028 *100nF_NC
AU18 DPC_PVDD
AV17 DPC_PVSS
AV19 DPD_PVDD
AR18 DPD_PVSS

+DPE_PVDD
(1.8V @ 40mA DPE_PVDD; 20mA
for DPE/DPF respectively)
L20 BLM15BD121SN1D 120ohm, 300mA — +1.8V_RUN
C235 100nF, C234 1uF, C236 10uF
AM37 DPE_PVDD
AN38 DPE_PVSS

AL38 NC_DPF_PVDD
AM35 NC_DPF_PVSS

!!! For M97 Only

+DPA_VDD18
(1.8V @ 110mA DPA_VDD18)
L89 *BLM15BD121SN1D_NC 120ohm, 300mA — +1.8V_RUN
C925 *100nF_NC, C926 *1uF_NC, C927 *10uF_NC

+DPB_VDD18
(1.8V @ 110mA DPB_VDD18)
L90 *BLM15BD121SN1D_NC 120ohm, 300mA — +1.8V_RUN
C928 *100nF_NC, C929 *1uF_NC, C930 *10uF_NC

+DPC_VDD18
R808 *0_NC — +1.8V_RUN
C1024 *100nF_NC

+DPD_VDD18
R809 *0_NC — +1.8V_RUN
C1026 *100nF_NC

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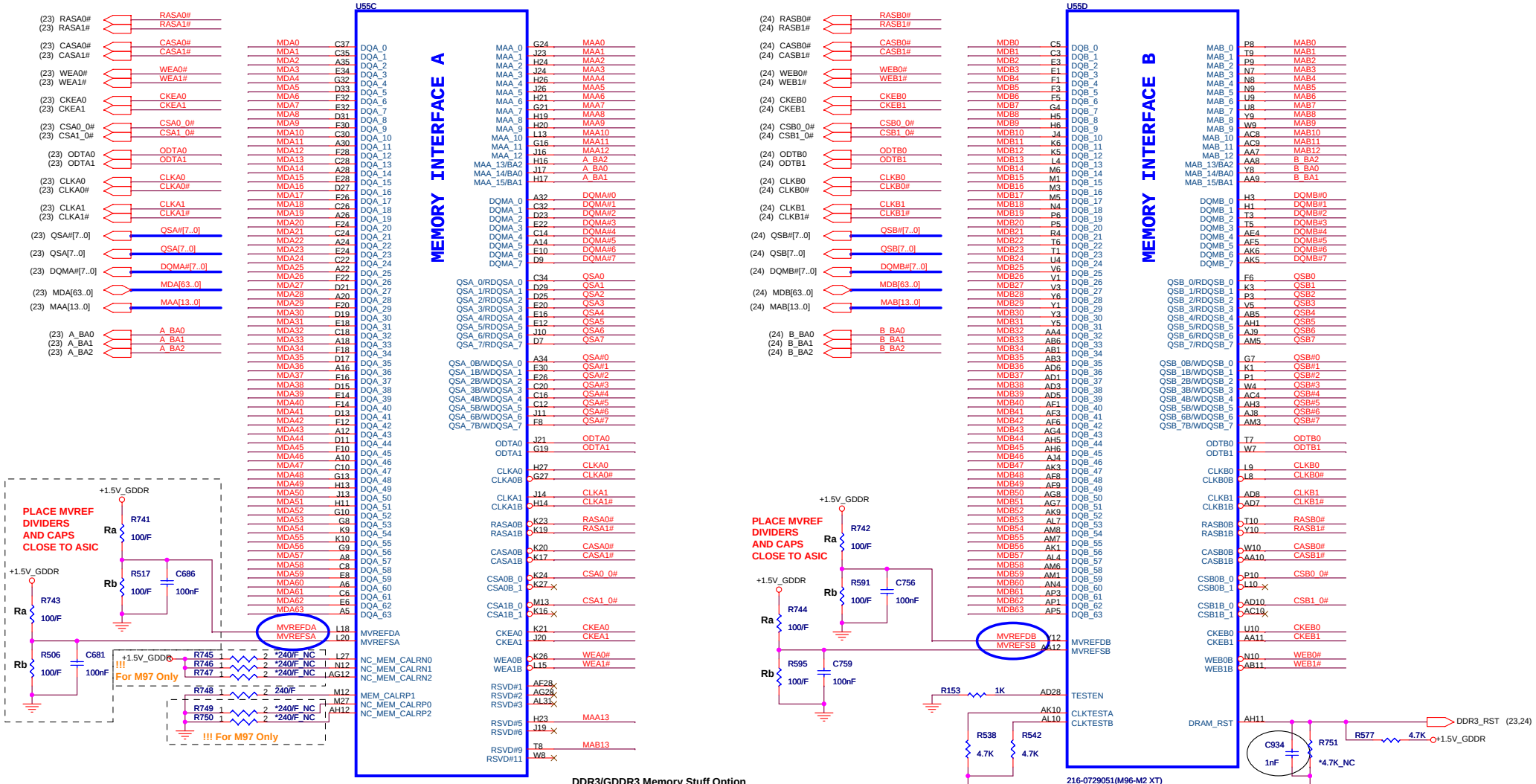
U55C
MEMORY INTERFACE A
216-0729051(M96-M2 XT)
U55D
MEMORY INTERFACE B
216-0729051(M96-M2 XT)
PLACE MVREF DIVIDERS AND CAPS CLOSE TO ASIC
+1.5V_GDDR
For M97 Only
!!! For M97 Only
DDR3/GDDR3 Memory Stuff Option
GDDR3
DDR3
MVDDQ 1.8V 1.5V
Ra 40.2R 100R
Rb 100R 100R
THERMAL MONITOR
ADM1032ARMZ-1RL
Spread Spectrum
If U7070, the discrete spread spectrum chip is not used, then pop R8328 in order to pull-down BXTALOUT for EMI reasons.
S0
-1.75% (DOWN) 0
0.85% (CENTER) 1
QUANTA COMPUTER
Title M97LP_MEMORY/THERM
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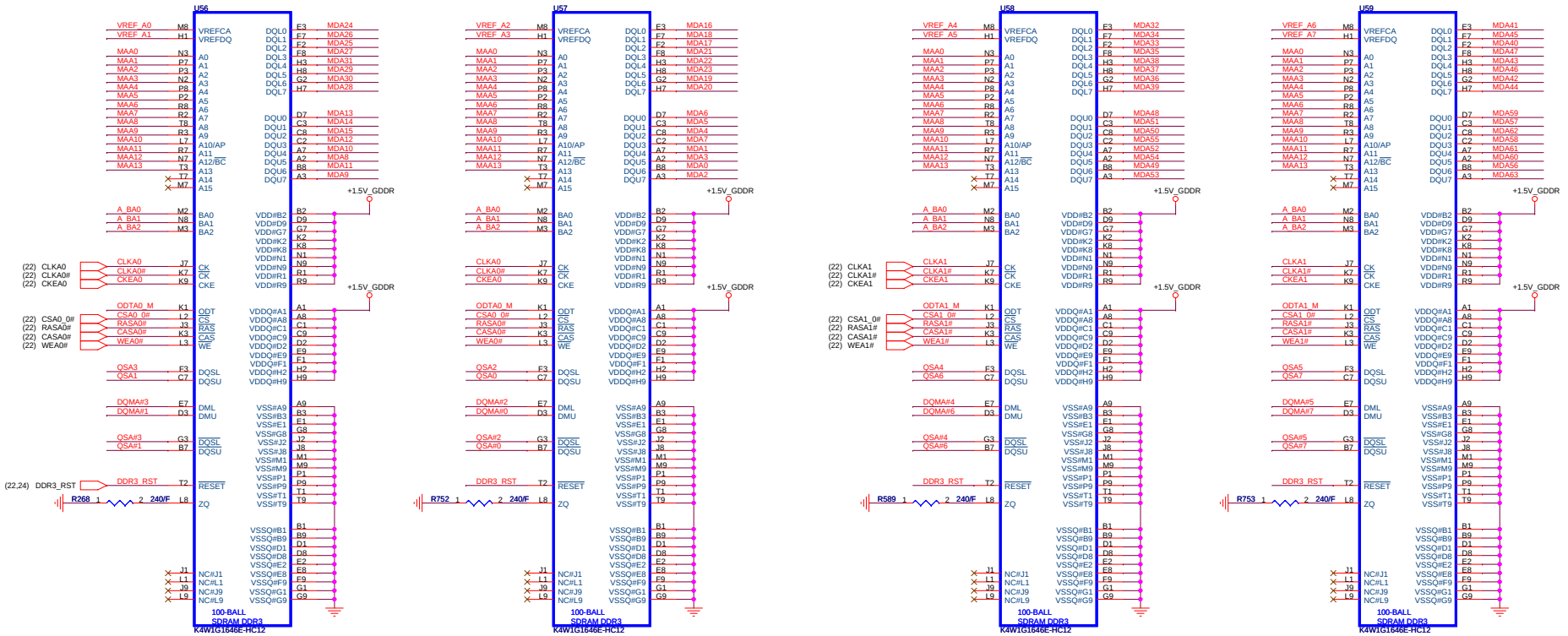
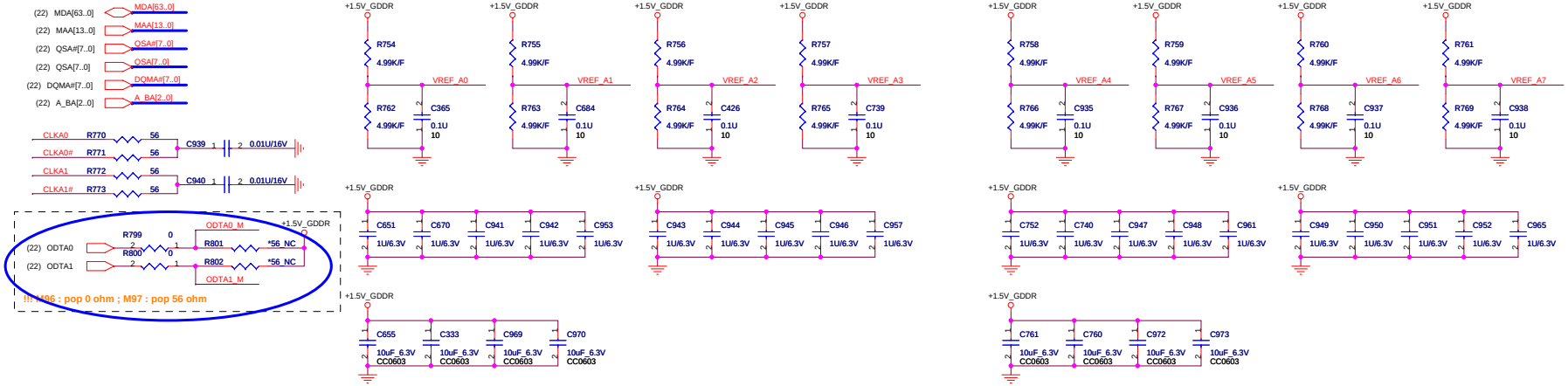
Scott_0406:Change C934 from 1uF to 1nF as AMD suggest.

DDR3 64MX16, CH A : 512MB





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Title	M97LP_DDR3_A_512M	
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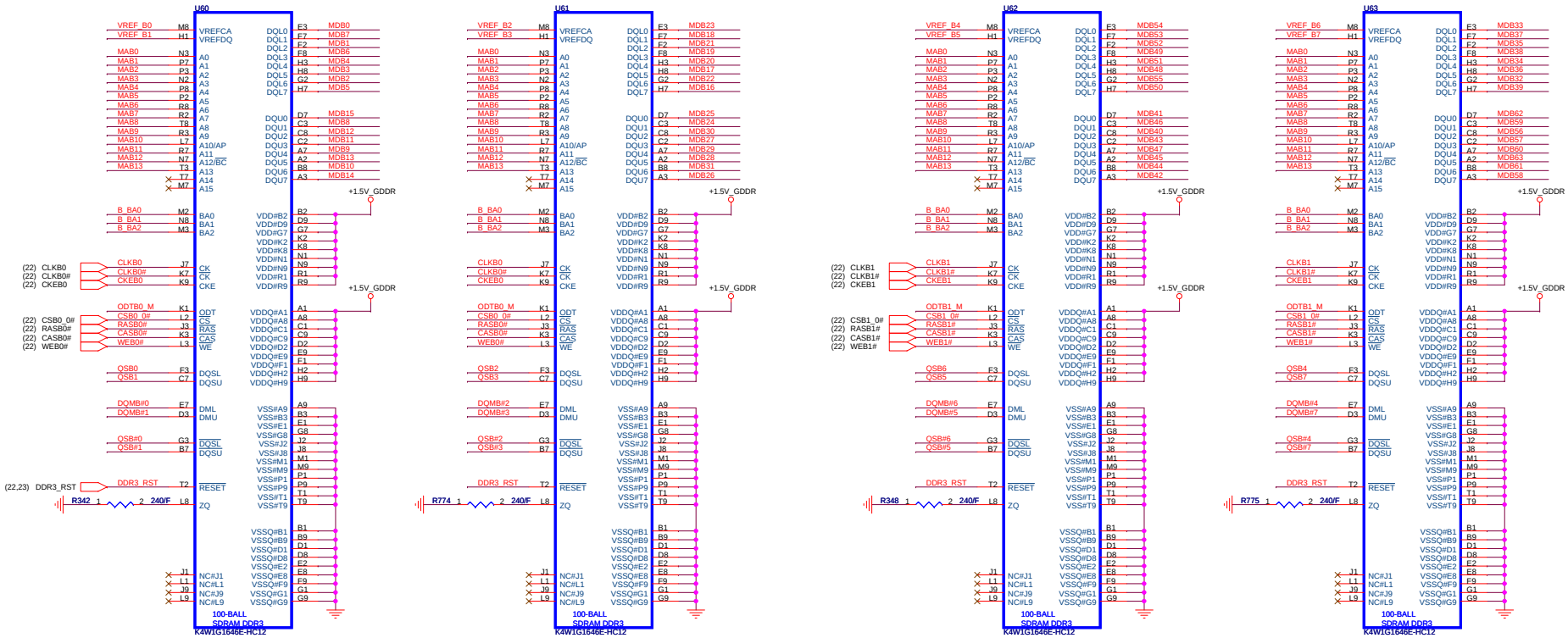
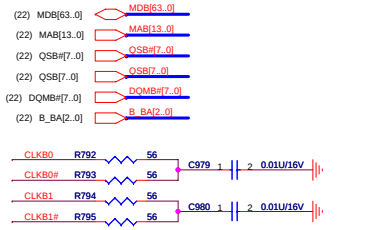
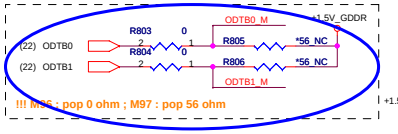
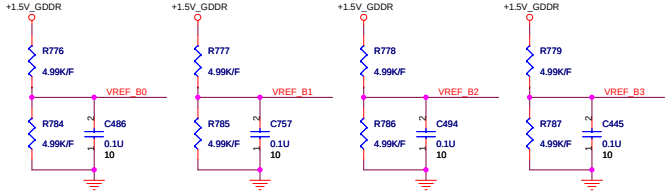
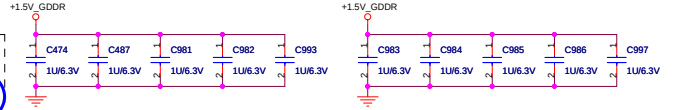
DDR3 64MX16, CH B : 512MB

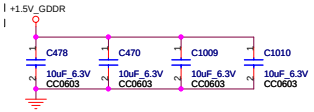


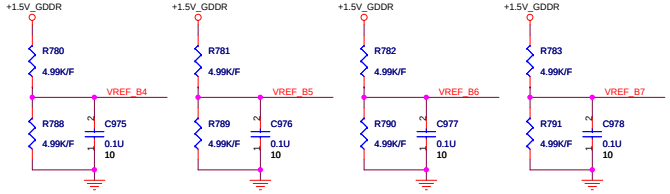


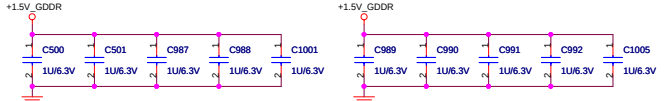


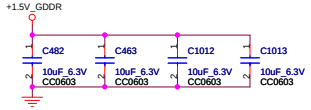












QUANTA COMPUTER

Title	M97LP_DDR3_B_512M	
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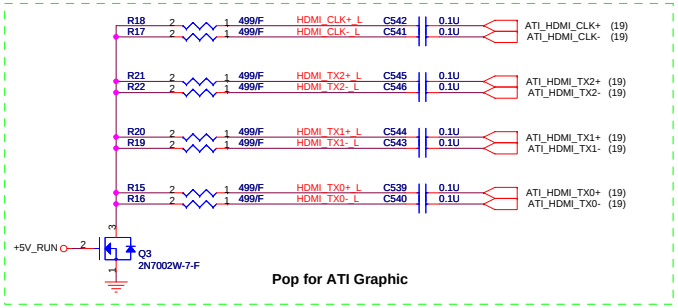
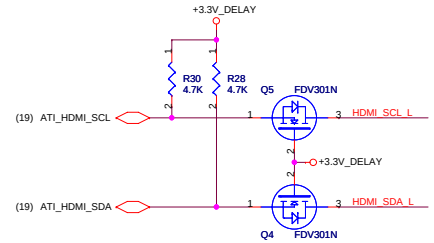
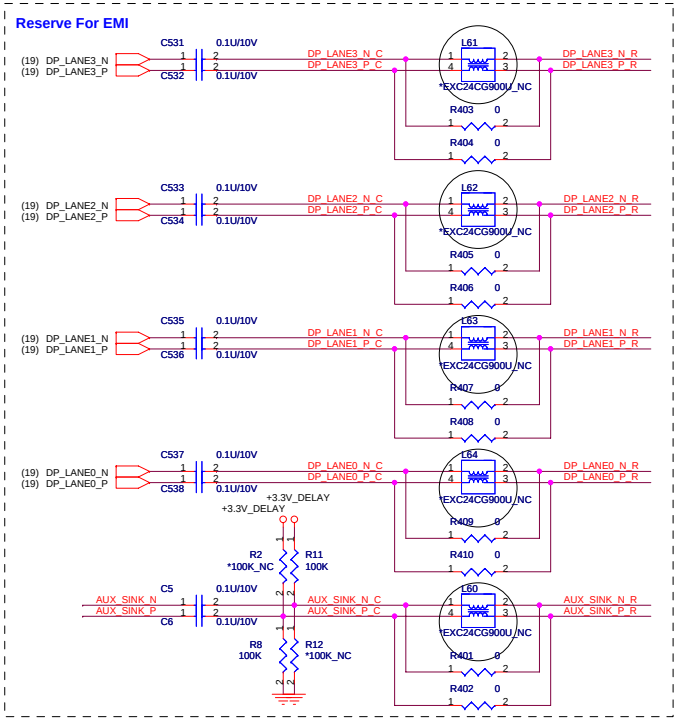
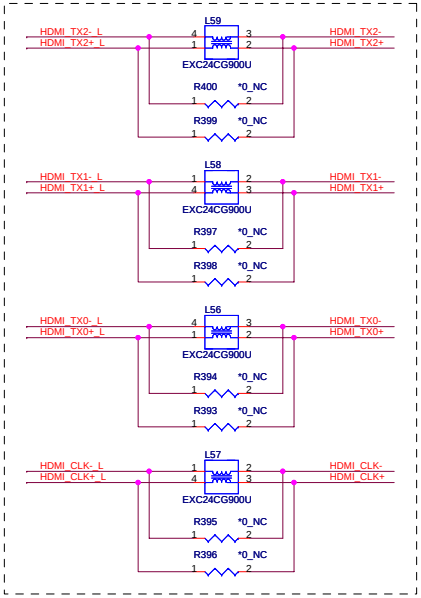
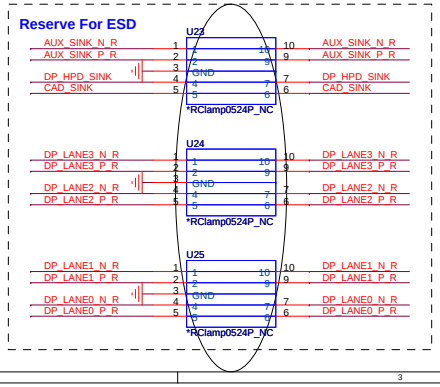


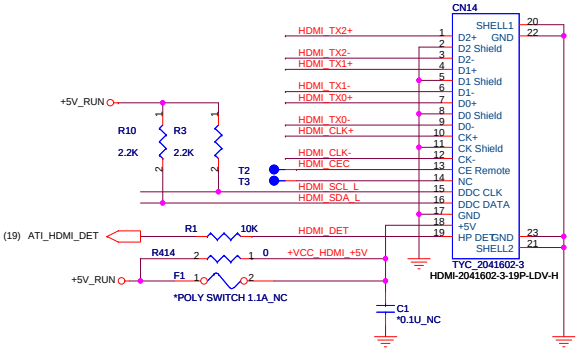


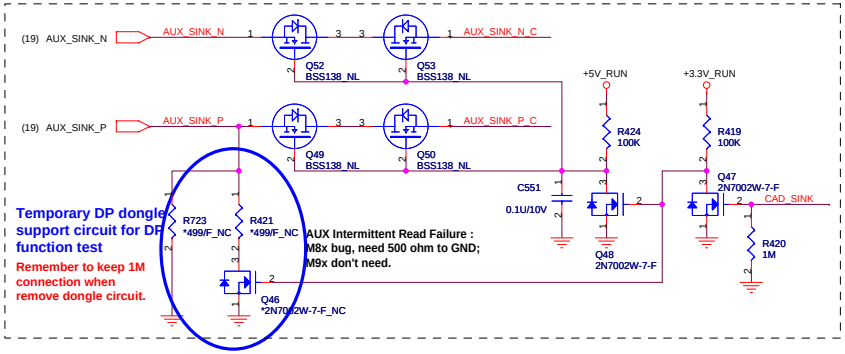


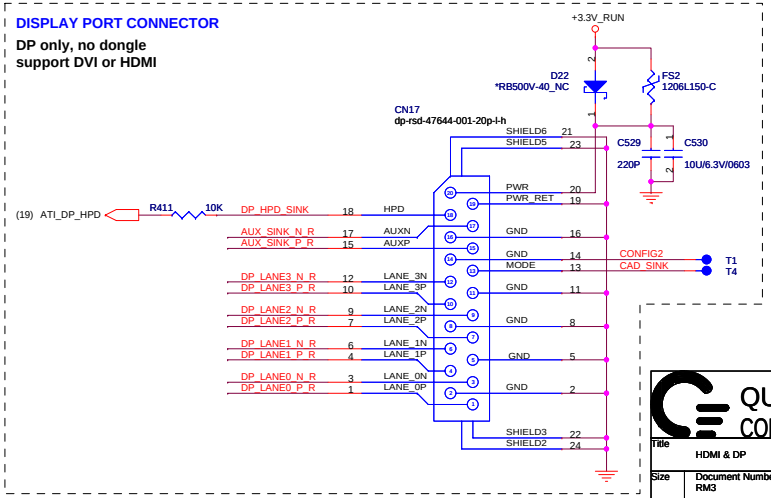


Delete EMI ESD IC for EMI asked HDMI signals link to CONN directly.









Title	HDMI & DP		
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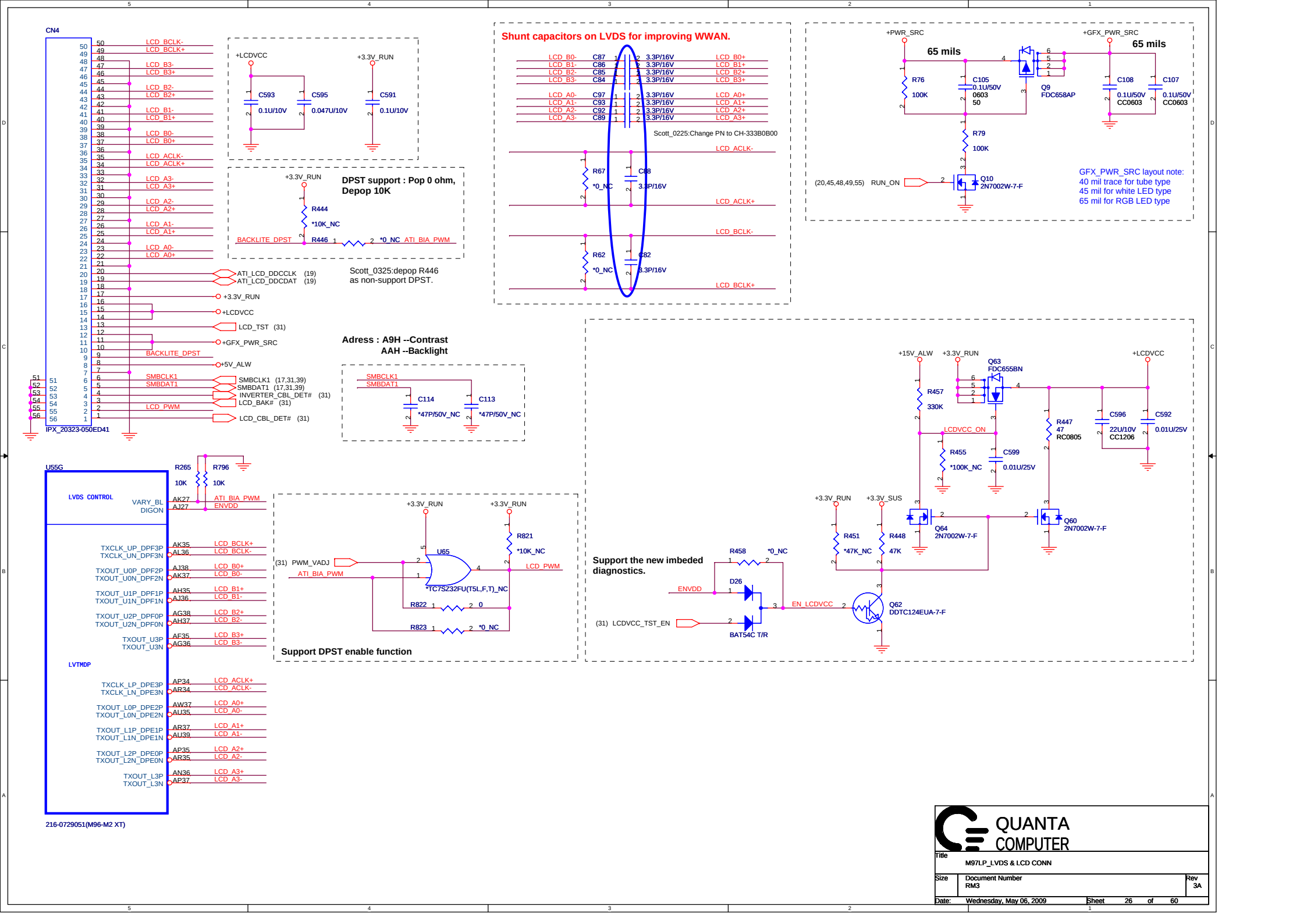
CN4
IPX_20323-050ED41
LCD_BCLK-
LCD_BCLK+
LCD_B3-
LCD_B3+
LCD_B2-
LCD_B2+
LCD_B1-
LCD_B1+
LCD_B0-
LCD_B0+
LCD_ACLK-
LCD_ACLK+
LCD_A3-
LCD_A3+
LCD_A2-
LCD_A2+
LCD_A1-
LCD_A1+
LCD_A0-
LCD_A0+
ATI_LCD_DDCCLK (19)
ATI_LCD_DDCDAT (19)
+3.3V_RUN
+LCDVCC
LCD_TST (31)
+GFX_PWR_SRC
BACKLITE_DPST
+5V_ALW
SMBCLK1
SMBDAT1
SMBCLK1 (17,31,39)
SMBDAT1 (17,31,39)
INVERTER_CBL_DET# (31)
LCD_BAK# (31)
LCD_PWM
LCD_CBL_DET# (31)
+LCDVCC
C593
0.1U/10V
C595
0.047U/10V
+3.3V_RUN
C591
0.1U/10V
+3.3V_RUN
DPST support : Pop 0 ohm, Depop 10K
R444
*10K_NC
BACKLITE_DPST
R446
*0_NC
ATI_BIA_PWM
Scott_0325:depop R446 as non-support DPST.
Adress : A9H --Contrast
AAH --Backlight
SMBCLK1
SMBDAT1
C114
*47P/50V_NC
C113
*47P/50V_NC
Shunt capacitors on LVDS for improving WWAN.
LCD_B0- C87 3.3P/16V LCD_B0+
LCD_B1- C86 3.3P/16V LCD_B1+
LCD_B2- C85 3.3P/16V LCD_B2+
LCD_B3- C84 3.3P/16V LCD_B3+
LCD_A0- C97 3.3P/16V LCD_A0+
LCD_A1- C93 3.3P/16V LCD_A1+
LCD_A2- C92 3.3P/16V LCD_A2+
LCD_A3- C89 3.3P/16V LCD_A3+
Scott_0225:Change PN to CH-333B0B00
LCD_ACLK-
R67
*0_NC
C88
3.3P/16V
LCD_ACLK+
LCD_BCLK-
R62
*0_NC
C82
3.3P/16V
LCD_BCLK+
+PWR_SRC
65 mils
R76
100K
C105
0.1U/50V
0603
50
Q9
FDC658AP
+GFX_PWR_SRC
65 mils
C108
0.1U/50V
CC0603
C107
0.1U/50V
CC0603
R79
100K
(20,45,48,49,55) RUN_ON
Q10
2N7002W-7-F
GFX_PWR_SRC layout note:
40 mil trace for tube type
45 mil for white LED type
65 mil for RGB LED type
U55G
LVDS CONTROL
VARY_BL
DIGON
R265
10K
R796
10K
ATI_BIA_PWM
ENVDD
TXCLK_UP_DPF3P
TXCLK_UN_DPF3N
TXOUT_U0P_DPF2P
TXOUT_U0N_DPF2N
TXOUT_U1P_DPF1P
TXOUT_U1N_DPF1N
TXOUT_U2P_DPF0P
TXOUT_U2N_DPF0N
TXOUT_U3P
TXOUT_U3N
LVTMDP
TXCLK_LP_DPE3P
TXCLK_LN_DPE3N
TXOUT_L0P_DPE2P
TXOUT_L0N_DPE2N
TXOUT_L1P_DPE1P
TXOUT_L1N_DPE1N
TXOUT_L2P_DPE0P
TXOUT_L2N_DPE0N
TXOUT_L3P
TXOUT_L3N
AK35 LCD_BCLK+
AL36 LCD_BCLK-
AJ38 LCD_B0+
AK37 LCD_B0-
AH35 LCD_B1+
AJ36 LCD_B1-
AG38 LCD_B2+
AH37 LCD_B2-
AF35 LCD_B3+
AG36 LCD_B3-
AP34 LCD_ACLK+
AR34 LCD_ACLK-
AW37 LCD_A0+
AU35 LCD_A0-
AR37 LCD_A1+
AU39 LCD_A1-
AP35 LCD_A2+
AR35 LCD_A2-
AN36 LCD_A3+
AP37 LCD_A3-
216-0729051(M96-M2 XT)
+3.3V_RUN
+3.3V_RUN
R821
*10K_NC
(31) PWM_VADJ
ATI_BIA_PWM
U65
*TC7SZ32FU(T5L,F,T)_NC
LCD_PWM
R822
0
R823
*0_NC
Support DPST enable function
Support the new imbeded diagnostics.
+15V_ALW
+3.3V_RUN
Q63
FDC655BN
+LCDVCC
R457
330K
LCDVCC_ON
R455
*100K_NC
C599
0.01U/25V
R447
47
RC0805
C596
22U/10V
CC1206
C592
0.01U/25V
+3.3V_RUN
+3.3V_SUS
R451
*47K_NC
R448
47K
Q64
2N7002W-7-F
Q60
2N7002W-7-F
R458
*0_NC
D26
ENVDD
EN_LCDVCC
Q62
DDTC124EUA-7-F
(31) LCDVCC_TST_EN
BAT54C T/R
QUANTA COMPUTER
Title
M97LP_LVDS & LCD CONN
Size
Document Number
RM3
Rev
3A
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26
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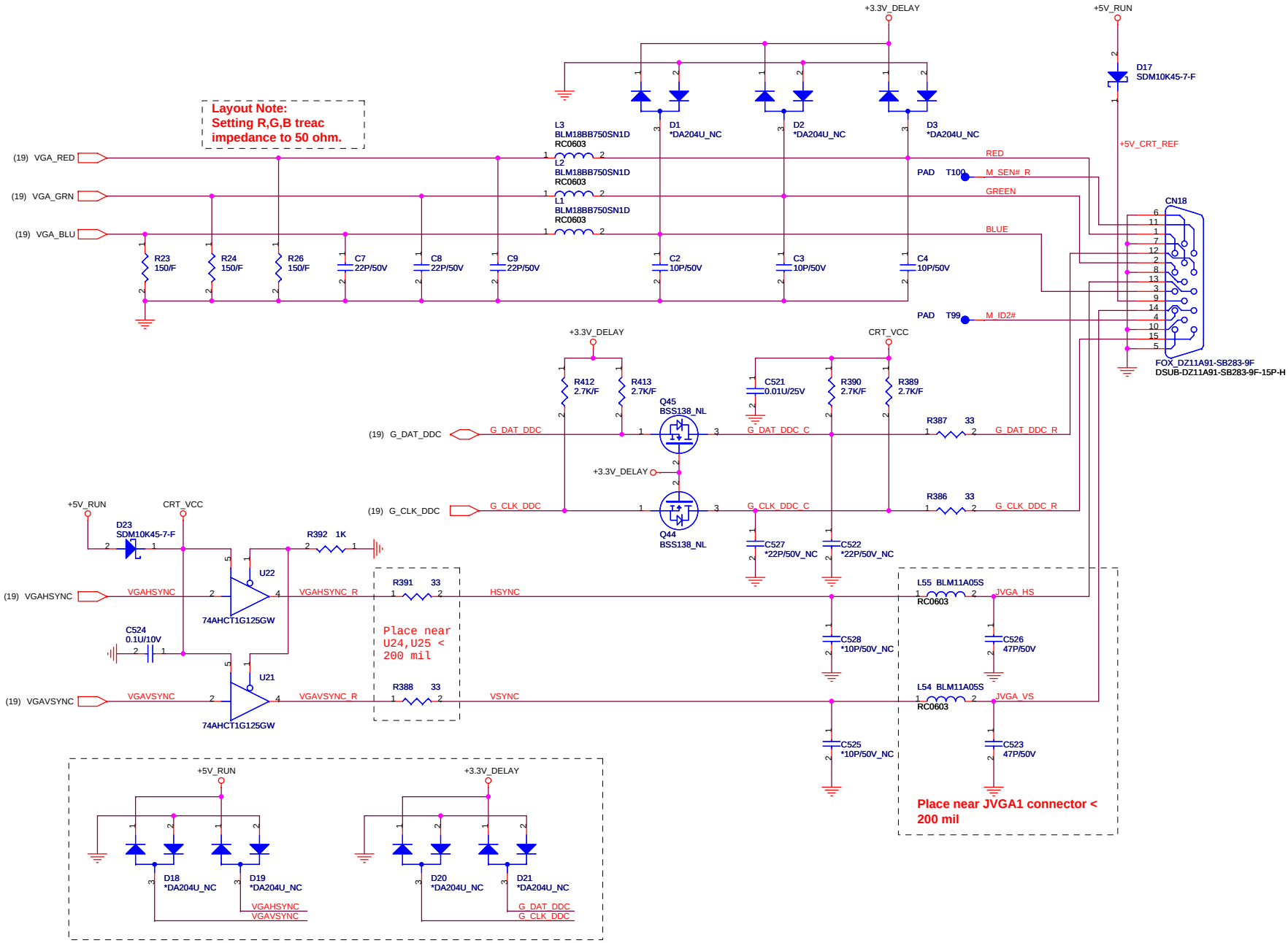
60



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

Place the power caps close to the relation pins.

+3.3V_R5C833

C804 10U/6.3V CC0603
C805 0.01U/25V
C806 0.01U/25V
C808 0.01U/25V
C812 0.01U/25V
C824 0.01U/25V

+3.3V_R5C833

C802 10U/6.3V CC0603
C811 0.1U/10V
C800 0.01U/25V
C798 0.01U/25V

Please place capacitors for VCC_ROUTx as close to R5C833 as possible.

C822 0.01U/25V
C809 0.01U/25V
C796 0.47U/10V CC0603
C801 0.47U/10V CC0603

+3.3V_RUN

R664 0/0805 RC0805

+3.3V_R5C833

U46B

VCC_PCI1	10	
VCC_PCI2	20	
VCC_PCI3	27	
VCC_PCI4	32	
VCC_PCI5	41	
VCC_PCI6	128	
VCC_RIN	61	
VCC_ROUT1	16	
VCC_ROUT2	34	
VCC_ROUT3	64	
VCC_ROUT4	114	
VCC_ROUT5	120	
VCC_3V	67	
VCC_MD	86	
GND1	4	
GND2	13	
GND3	22	
GND4	28	
GND5	54	
GND6	62	
GND7	63	
GND8	68	
GND9	118	
GND10	122	
AGND1	99	
AGND2	102	
AGND3	103	
AGND4	107	
AGND5	111	

C815 0.1U/10V
C814 10U/6.3V CC0603

Place the power caps close to the relation pins.

(12,56) PCI_AD[31..0]

PCI_AD31	125	AD31
PCI_AD30	126	AD30
PCI_AD29	127	AD29
PCI_AD28	1	AD28
PCI_AD27	2	AD27
PCI_AD26	3	AD26
PCI_AD25	5	AD25
PCI_AD24	6	AD24
PCI_AD23	9	AD23
PCI_AD22	11	AD22
PCI_AD21	12	AD21
PCI_AD20	14	AD20
PCI_AD19	15	AD19
PCI_AD18	17	AD18
PCI_AD17	18	AD17
PCI_AD16	19	AD16
PCI_AD15	36	AD15
PCI_AD14	37	AD14
PCI_AD13	38	AD13
PCI_AD12	39	AD12
PCI_AD11	40	AD11
PCI_AD10	42	AD10
PCI_AD9	43	AD9
PCI_AD8	44	AD8
PCI_AD7	46	AD7
PCI_AD6	47	AD6
PCI_AD5	48	AD5
PCI_AD4	49	AD4
PCI_AD3	50	AD3
PCI_AD2	51	AD2
PCI_AD1	52	AD1
PCI_AD0	53	AD0

PCI / OTHER

+3.3V_R5C833

R655 100K

GBRST#

C807 1U/10V CC0603

GBRST# should be asserted only when system power supply is on.

+3.3V_R5C833 +3.3V_R5C833 +3.3V_R5C833

R653 10K

R648 10K

R645 100K

(12,56) PCI_PAR		PAR
(12,56) PCI_C_BE3#	7	C/BE3#
(12,56) PCI_C_BE2#	21	C/BE2#
(12,56) PCI_C_BE1#	35	C/BE1#
(12,56) PCI_C_BE0#	45	C/BE0#
PCI_AD17 R658 100	8	IDSEL
(12) PCI_REQ0#	124	REQ#
(12) PCI_GNT0#	123	GNT#
(12,56) PCI_FRAME#	23	FRAME#
(12,56) PCI_IRDY#	24	IRDY#
(12,56) PCI_TRDY#	25	TRDY#
(12,56) PCI_DEVSEL#	26	DEVSEL#
(12,56) PCI_STOP#	29	STOP#
(12,56) PCI_PERR#	30	PERR#
(12,56) PCI_SERR#	31	SERR#
GBRST#	71	GBRST#
(12,56) PCI_RST#	119	PCIRST#
(17) CLK_PCI_PCCARD	121	PCICLK
(12,56) ICH_PME# R654 *0_NC	70	PME#
(13,31,56) CLKRUN#	117	CLKRUN#
HWSPND#	69	
MSEN	58	
XDEN	55	
UDIO5	57	
UDIO3	65	
UDIO4	59	
UDIO2	56	
UDIO1	60	
UDIO0/SRIRQ#	72	
INTA#	115	
INTB#	116	
TEST	66	

Memory Stick Enable
XD Card Enable
Serial ROM disable
SD Card Enable
MMC Card Enable

IRQ_SERIRQ (13,31,56)

1394 Interrupt
Media card Interrupt

PCI_PIRQB# (12)
PCI_PIRQC# (12)

PAD T162

R651 100K

R5C833T_V00

CLK_PCI_PCCARD

R660 *22_NC

C823 *1P/50V_NC

QUANTA COMPUTER			
Title	CardReader (5C833)		
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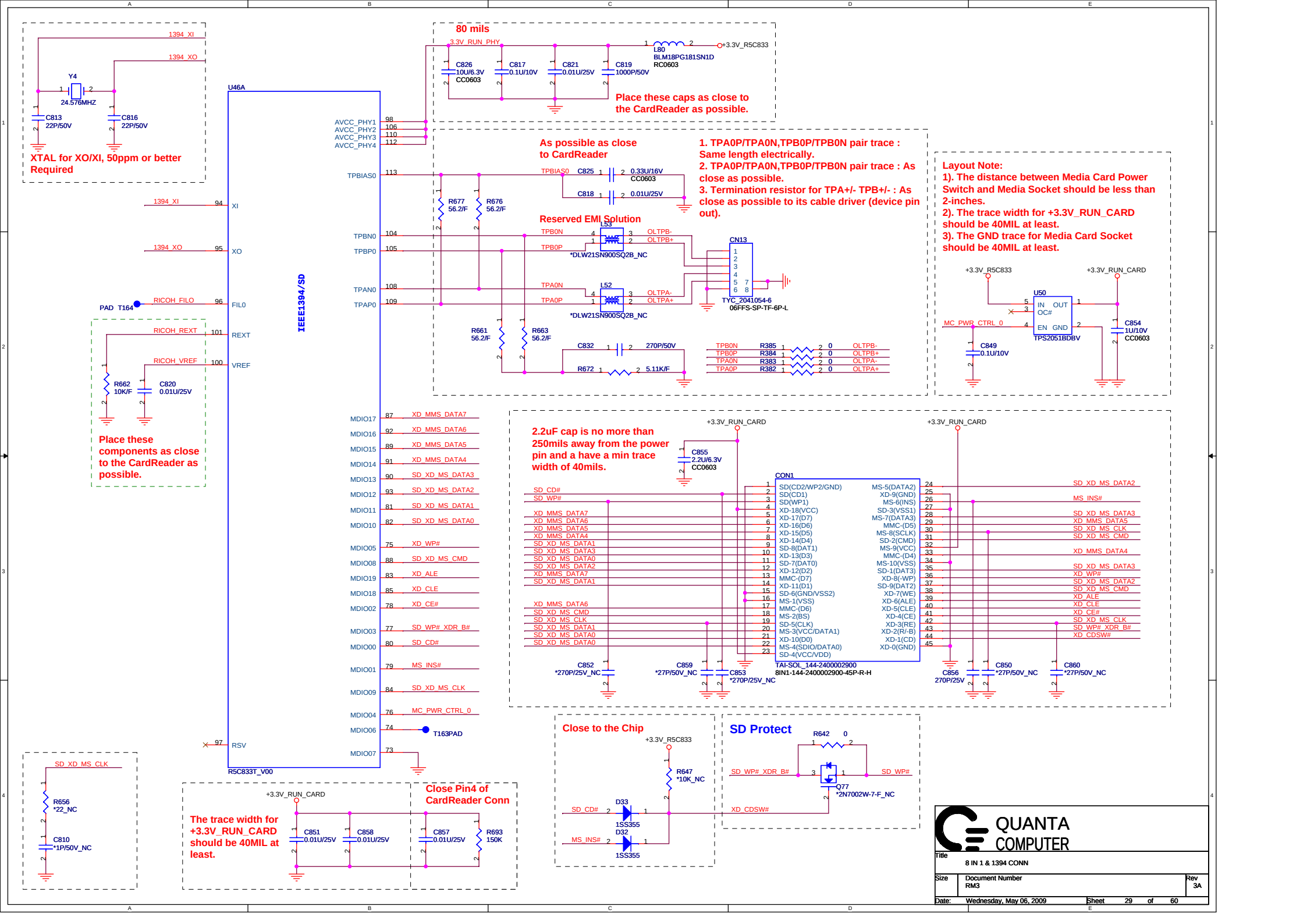
80 mils
3.3V_RUN_PHY
C826 10U/6.3V CC0603
C817 0.1U/10V
C821 0.01U/25V
C819 1000P/50V
L80 BLM18PG181SN1D RC0603
+3.3V_R5C833
Place these caps as close to the CardReader as possible.
Y4
24.576MHZ
C813 22P/50V
C816 22P/50V
XTAL for XO/XI, 50ppm or better Required
U46A
IEEE1394/SD
AVCC_PHY1
AVCC_PHY2
AVCC_PHY3
AVCC_PHY4
TPBIAS0
TPBN0
TPBP0
TPAN0
TPAP0
1394_XI
1394_XO
XI
XO
FIL0
REXT
VREF
RSV
R5C833T_V00
PAD T164
RICOH_FILO
RICOH_REXT
RICOH_VREF
R662 10K/F
C820 0.01U/25V
Place these components as close to the CardReader as possible.
As possible as close to CardReader
C825 0.33U/16V CC0603
C818 0.01U/25V
R677 56.2/F
R676 56.2/F
Reserved EMI Solution
L53
L52
*DLW21SN900SQ2B_NC
R661 56.2/F
R663 56.2/F
C832 270P/50V
R672 5.11K/F
CN13
TYC_2041054-6
06FFS-SP-TF-6P-L
R385 0
R384 0
R383 0
R382 0
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.
U50
TPS2051BDBV
MC_PWR_CTRL_0
C849 0.1U/10V
C854 1U/10V CC0603
2.2uF cap is no more than 250mils away from the power pin and a have a min trace width of 40mils.
C855 2.2U/6.3V CC0603
CON1
TAI-SOL_144-2400002900
8IN1-144-2400002900-45P-R-H
C852 *270P/25V_NC
C859 *27P/50V_NC
C853 *270P/25V_NC
C856 270P/25V
C850 *27P/50V_NC
C860 *27P/50V_NC
MDIO17 XD_MMS_DATA7
MDIO16 XD_MMS_DATA6
MDIO15 XD_MMS_DATA5
MDIO14 XD_MMS_DATA4
MDIO13 SD_XD_MS_DATA3
MDIO12 SD_XD_MS_DATA2
MDIO11 SD_XD_MS_DATA1
MDIO10 SD_XD_MS_DATA0
MDIO05 XD_WP#
MDIO08 SD_XD_MS_CMD
MDIO19 XD_ALE
MDIO18 XD_CLE
MDIO02 XD_CE#
MDIO03 SD_WP#_XDR_B#
MDIO00 SD_CD#
MDIO01 MS_INS#
MDIO09 SD_XD_MS_CLK
MDIO04 MC_PWR_CTRL_0
MDIO06 T163PAD
MDIO07
SD_XD_MS_CLK
R656 *22_NC
C810 *1P/50V_NC
The trace width for +3.3V_RUN_CARD should be 40MIL at least.
C851 0.01U/25V
C858 0.01U/25V
C857 0.01U/25V
R693 150K
Close Pin4 of CardReader Conn
Close to the Chip
R647 *10K_NC
D33 1SS355
D32 1SS355
SD Protect
R642 0
Q77 *2N7002W-7-F_NC
QUANTA COMPUTER
Title
8 IN 1 & 1394 CONN
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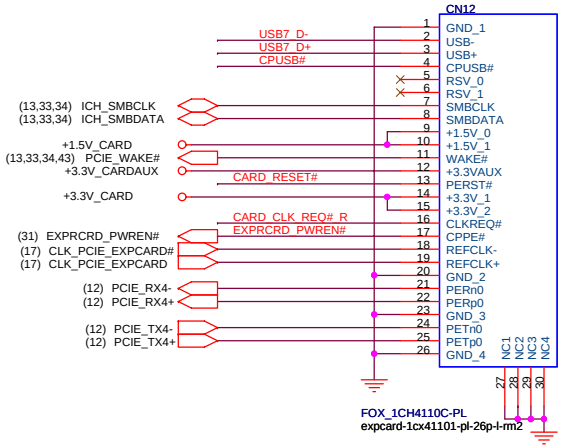
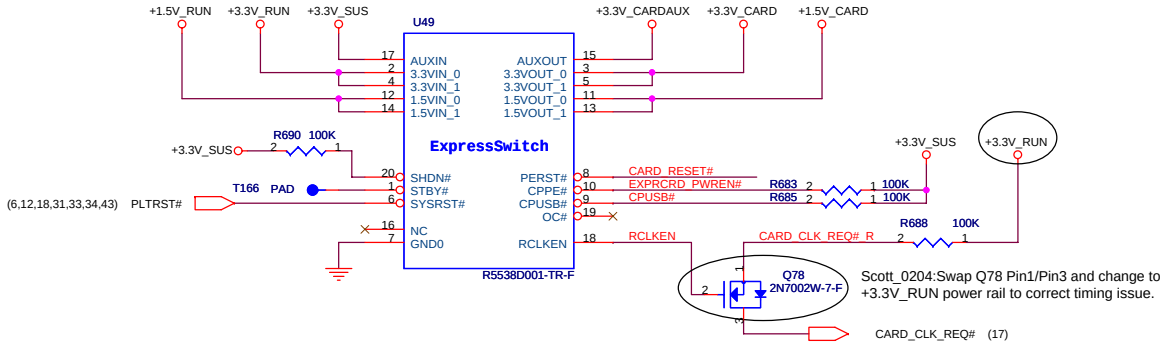
Express Card

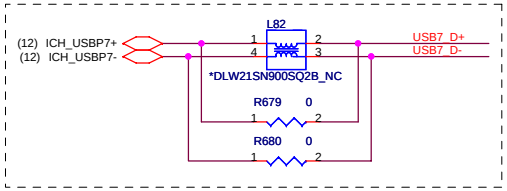
+1.5V_CARD Max. 650mA, Average 500mA.
+3V_CARD Max. 1300mA, Average 1000mA.

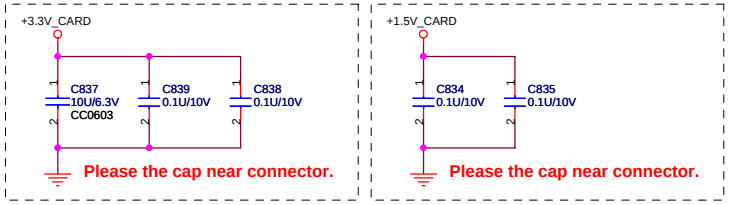


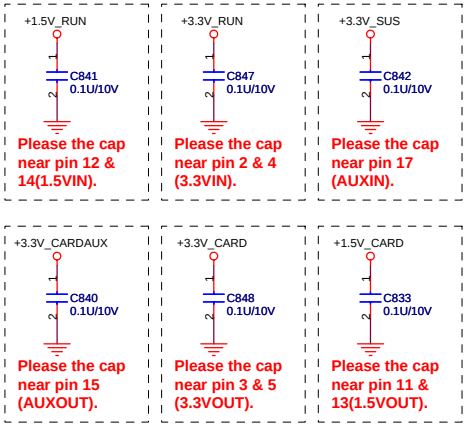


Scott_0204:Swap Q78 Pin1/Pin3 and change to +3.3V_RUN power rail to correct timing issue.

PCI-Express TX and RX direct to connector.







QUANTA COMPUTER

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

ITE8512E LQFP-128L

U45

Place these caps close to ITE8512.

NC RP22 with new MMB firmware V35 which have internal PU(5.6K) at MMB IC

Board ID Straps

Discrete

UMA

VGA_IDENTIFY (USB_L_SIDE_EN#)
1 = RM2 ; 0 = RM3.

BID2	BID1	BID0	RM2
0	0	0	PT (X00) PT (X01)
0	0	1	ST (X02)
0	1	0	QT (A00)
0	1	1	
1	0	0	
1	0	1	

32KHz Clock.

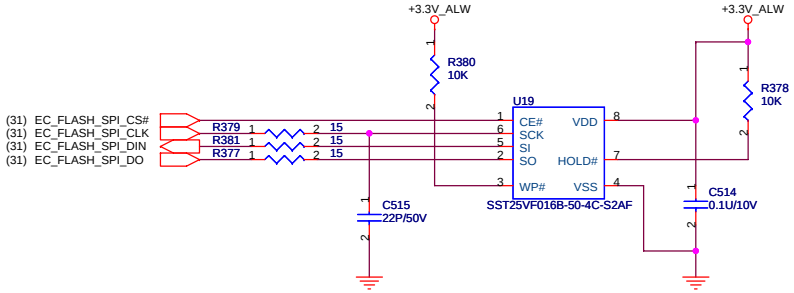
ITE8512IX Populate R735 0 ohms.
ITE8512JX Populate R735 to 0.1uF, & De-pop Cap 1uF.

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

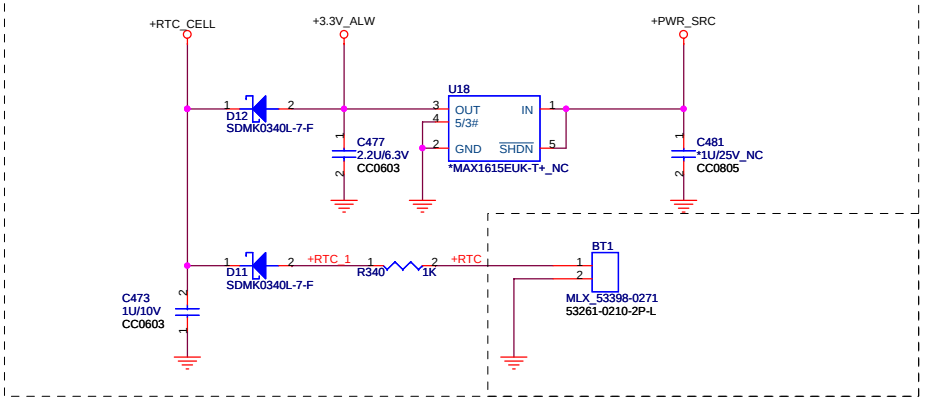
QUANTA COMPUTER

Title	SIO (ITE8512)	
Size	Document Number RM3	Rev 3A
Date:	Wednesday, May 06, 2009	Sheet 31 of 60

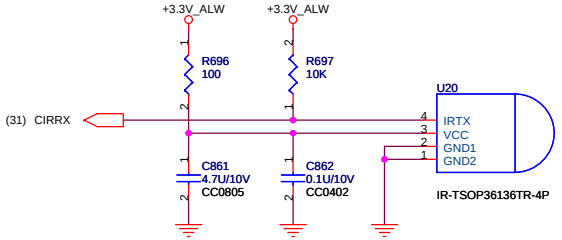
16Mbit (2M Byte), SPI



RTC BATTERY



Consumer IR



QUANTA COMPUTER

Title	FLASH/ RTC/ CIR	
Size	Document Number RM3	Rev 3A
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MiniCard WLAN Connector

Mini Card Nut

H16 *Mini Card Align (h3.2)_NC

H17 Mini Card Nut (h3.2)

MINI1CLK_REQ#

C785 220P/50V

Scott_0123:Change CN28 PN with DFHS52FR015.

CN28

(13,30,34,43) PCIE_WAKE#
(34) COEX2_WLAN_ACTIVE
(34) COEX1_BT_ACTIVE_MINI
(17) MINI1CLK_REQ#
(17) CLK_PCIE_MINI1#
(17) CLK_PCIE_MINI1

PCI-Express TX and RX direct to connector

(12) PCIE_RX2-
(12) PCIE_RX2+
(12) PCIE_TX2-
(12) PCIE_TX2+
(13) PCIE_MCARD1_DET#

1	WAKE#	3.3V_1	2
3	RESERVED_1	GND0	4
5	RESERVED_2	1.5V_1	6
7	CLKREQ#	UIM_PWR	8
9	GND1	UIM_DATA	10
11	REFCLK-	UIM_CLK	12
13	REFCLK+	UIM_RESET	14
15	GND2	UIM_VPP	16
17	UIM_C8	GND3	18
19	UIM_C4	W_DISABLE#	20
21	GND4	PERST#	22
23	PERn0	3.3VAUX1	24
25	PERp0	GND5	26
27	GND6	1.5V_2	28
29	GND7	SMB_CLK	30
31	PETn0	SMB_DATA	32
33	PETp0	GND8	34
35	GND9	USB_D-	36
37	RESERVED_3	USB_D+	38
39	RESERVED_4	GND10	40
41	RESERVED_5	LED_WWAN#	42
43	RESERVED_6	LED_WLAN#	44
45	RESERVED_7	LED_WPAN#	46
47	RESERVED_8	1.5V_3	48
49	RESERVED_9	GND11	50
51	RESERVED_10	3.3V_2	52

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

+3.3V_WLAN
+1.5V_RUN

R610 0
PLTRST# (6,12,18,30,31,34,43)

WLAN_RADIO_OFF#
R609 *0_NC
SB_WLAN_PCIE_RST# (12)
+3.3V_WLAN

WLAN_SMBCLK
WLAN_SMBDATA
WLAN_SMBCLK (36)
WLAN_SMBDATA (36)

ICH_USBP4- (12)
ICH_USBP4+ (12)
USB_MCARD1_DET# (13)
PAD T156
LED_WLAN_OUT# (38)
PAD T157

RP21 2.2KX2

Q75 *2N7002W-7-F_NC
WLAN_SMBCLK
ICH_SMBCLK (13,30,34)
R608 *0_NC

Q73 *2N7002W-7-F_NC
WLAN_SMBDATA
ICH_SMBDATA (13,30,34)
R606 *0_NC

Suport for WoW

D30 SDMK0340L-7-F
WLAN_RADIO_OFF#
WLAN_RADIO_DIS# (13)
R614 *0_NC

Prevent backdrive when WoW is enabled.

+PWR_SRC
+3.3V_ALW
+3.3V_WLAN
+3.3V_RUN

Q74 *FDC655BN_NC
R607 0/0805 RC0805

R587 *100K_NC
R596 *100K_NC
Q71B *2N7002DW-7-F_NC
Q71A *2N7002DW-7-F_NC
(31) AUX_EN_WOWL
R598 *100K_NC
R588 *200K_NC
R600 *470K_NC
C770 *4700P/50V_NC

Place caps close to connector.

+1.5V_RUN
C777 0.047U/10V
C773 0.047U/10V

+3.3V_WLAN
C507 0.1U/10V
C508 0.047U/10V
C775 0.1U/10V
C776 0.047U/10V
C774 4.7U/10V CC0805

QUANTA COMPUTER

Title	MINI-CARD (WLAN)	
Size	Document Number RM3	Rev 3A
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MiniCard Robson, BT. UWB Connector

Mini Card Nut
H24 *Mini Card Align (h3.2)_NC
H25 Mini Card Nut (h3.2)

Scott_0123:Change CN31 PN with DFHS52FR015(FOX).

CN31
FOX_AS0B226-S56N-7F
MIPCIEXP-1775838-1-52P

(13,30,33,43) PCIE_WAKE# → PCIE_WAKE#
(33) COEX2_WLAN_ACTIVE → COEX2_WLAN_ACTIVE
(33) COEX1_BT_ACTIVE_MINI
T165 PAD
(17) CLK_PCIE_MINI3# / (17) CLK_PCIE_MINI3
(6,12,18,30,31,33,43) PLTRST# / (17) CLK_LPC_DEBUG → PLTRST#
(12) PCIE_RX3- / (12) PCIE_RX3+
(12) PCIE_TX3- / (12) PCIE_TX3+
(13) PCIE_MCARD3_DET#

PCI-Express TX and RX direct to connector

LPC_LFRAME# (11,31)
LPC_LAD3 (11,31)
LPC_LAD2 (11,31)
LPC_LAD1 (11,31)
LPC_LAD0 (11,31)
R670 0 PLTRST#
R671 *0_NC → WPAN_RADIO_DIS_MINI# (13), SB_WPAN_PCIE_RST# (12)
ICH_SMBCLK / ICH_SMBDATA → ICH_SMBCLK (13,30,33), ICH_SMBDATA (13,30,33)
ICH_USBP6- (12), ICH_USBP6+ (12)
USB_MCARD3_DET# (13)
LED_WPAN_OUT# (38)

COEX2_WLAN_ACTIVE
C846 *33P/50V_NC
R689 *100K_NC

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

Place caps close to connector.

+1.5V_RUN: C830 0.047U/10V, C828 0.047U/10V
+3.3V_RUN: C831 0.1U/10V, C845 0.047U/10V, C829 0.1U/10V, C843 0.047U/10V, C827 4.7U/6.3V CC0603, C844 *330U/6.3V_NC CC7343

MiniCard WWAN Connector

Scott_0401:Pop H12 for EMI concern.

Mini Card Nut
H12 Mini Card Align (h3.2)
H13 Mini Card Nut (h3.2)

Scott_0123:Change CN25 PN with DFHS52FR015.

CN25
FOX_AS0B226-S56N-7F
MIPCIEXP-1775838-1-52P

T155 PAD
T153 PAD
T154 PAD
PCIE_WAKE#
(17) CLK_PCIE_MINI2# / (17) CLK_PCIE_MINI2
(12) PCIE_RX1- / (12) PCIE_RX1+
(12) PCIE_TX1- / (12) PCIE_TX1+
(13) PCIE_MCARD2_DET#

UIM_PWR, UIM_DATA, UIM_CLK, UIM_RESET, UIM_VPP
R529 0 PLTRST#
R530 *0_NC → WWAN_RADIO_DIS# (13), SB_WWAN_PCIE_RST# (12)
ICH_SMBCLK / ICH_SMBDATA
ICH_USBP5- (12), ICH_USBP5+ (12)
USB_MCARD2_DET# (13)
LED_WWAN_OUT# (38)

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

Place caps close to connector.

+1.5V_RUN: C696 0.047U/10V, C699 33P/50V
+3.3V_RUN: C698 33P/50V, C695 0.047U/10V, C729 33P/50V, C730 0.047U/10V, C388 330U/6.3V CC7343

layout note:10 mil trace and 20 mil space for SIM card and UIM_PWR use 20mil

CN26
YMI_10124-00001
UIM_PWR, UIM_RESET, UIM_CLK, UIM_VPP, UIM_DATA
VCC, RST, CLK, GND, VPP, DATA, Case_GND, Case_GND

ESD3
RCLAMP0504S.TCT
C701 33P/50V, C700 33P/50V, C697 33P/50V, C685 33P/50V, C432 1U/10V CC0603

Place as close as possible to JMINI connector

QUANTA COMPUTER

Title	MINI-CARD (WPAN,WWAN)	
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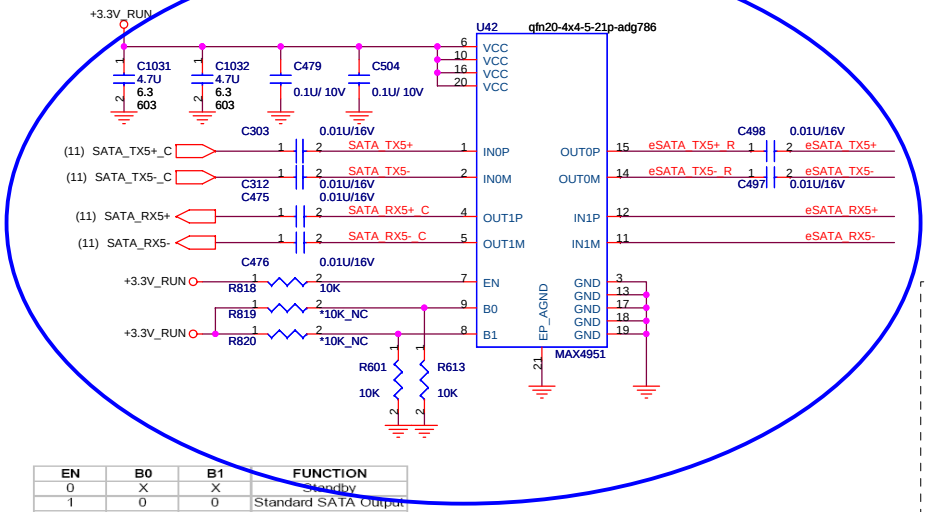
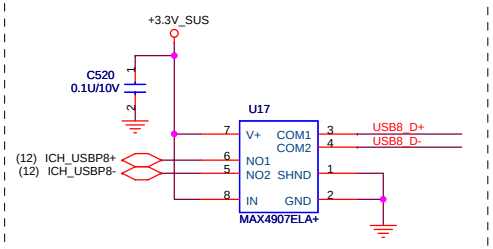
eSATA Re-driver IC

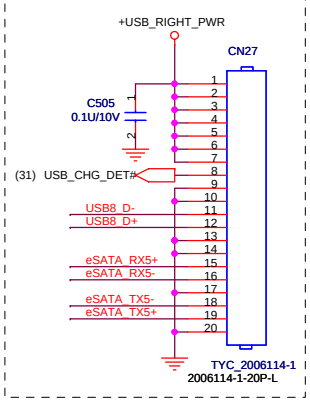


EN	B0	B1	FUNCTION
0	X	X	Standby
1	0	0	Standard SATA Output
1	1	0	Ch 0 Boost Output
1	0	1	Ch 1 Boost Output
1	1	1	Ch 0,1 Boost Output

USB BUS SW

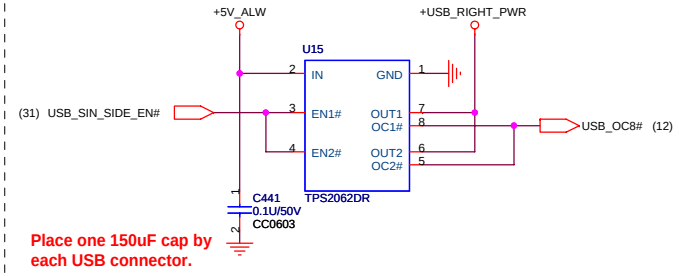


eSATA CONN



USB POWER SW

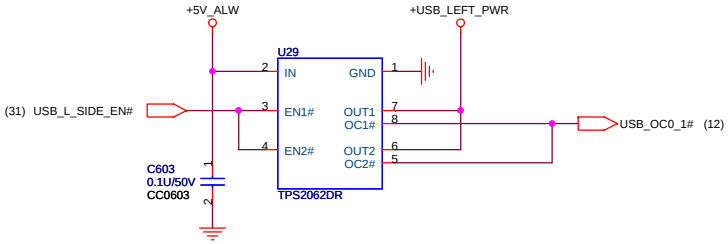
Each channel is 1A



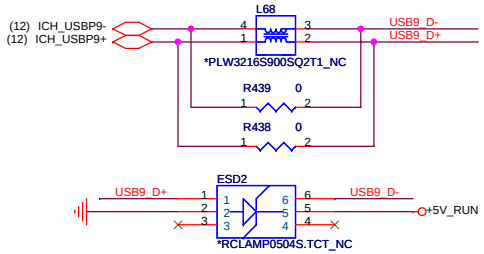
Place one 150uF cap by each USB connector.

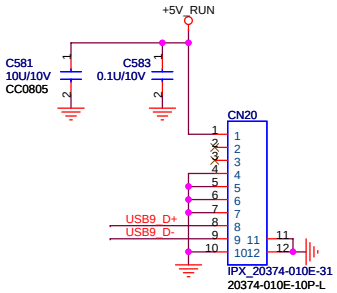
USB POWER SW

Each channel is 1A

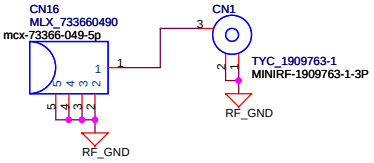


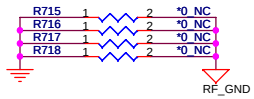
TV module

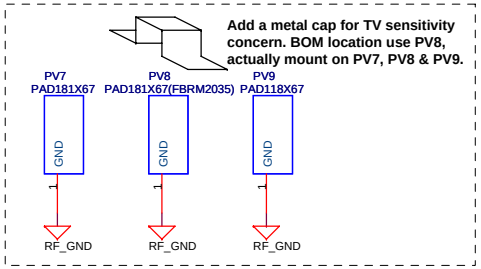




TV RF Jack & Microwave connector







QUANTA COMPUTER

Title	USB & eSATA & TV	
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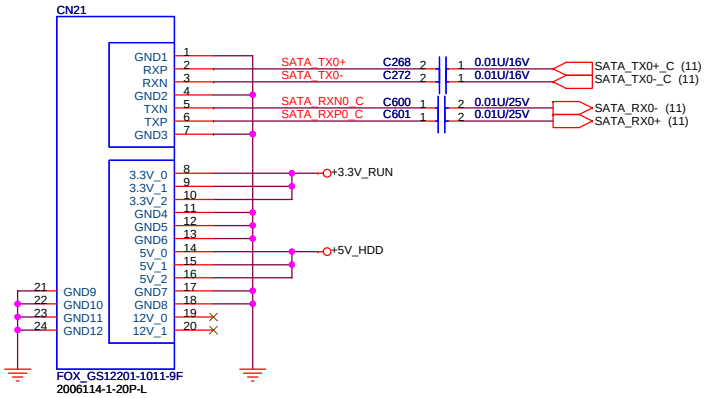
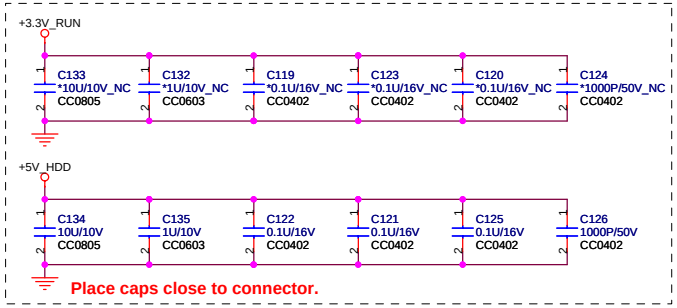
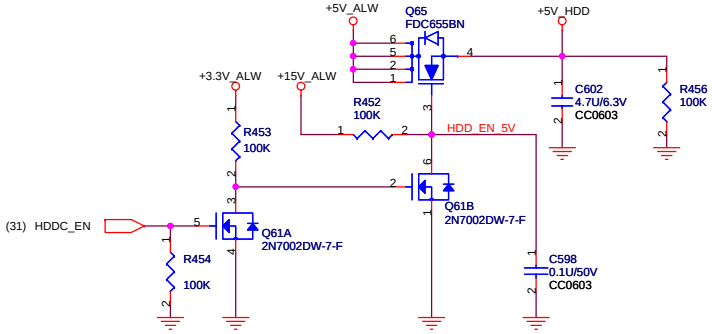
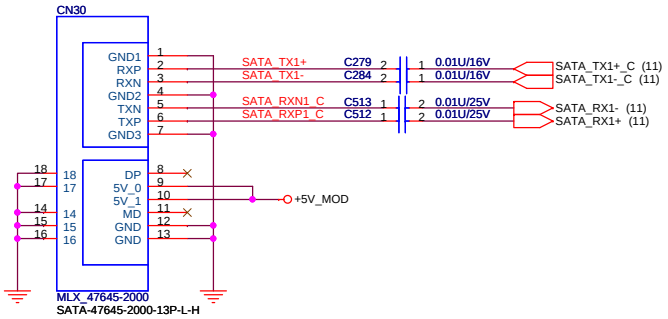
SATA Connector

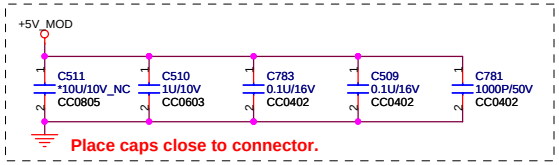


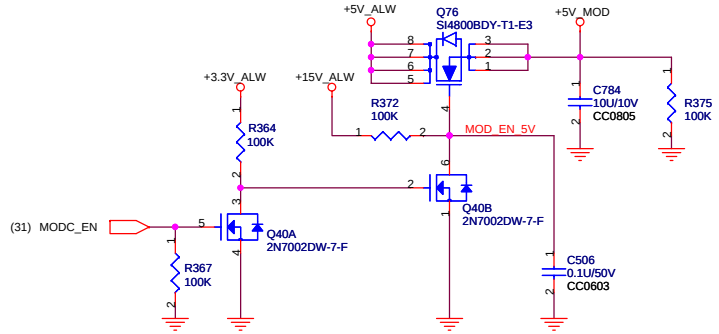




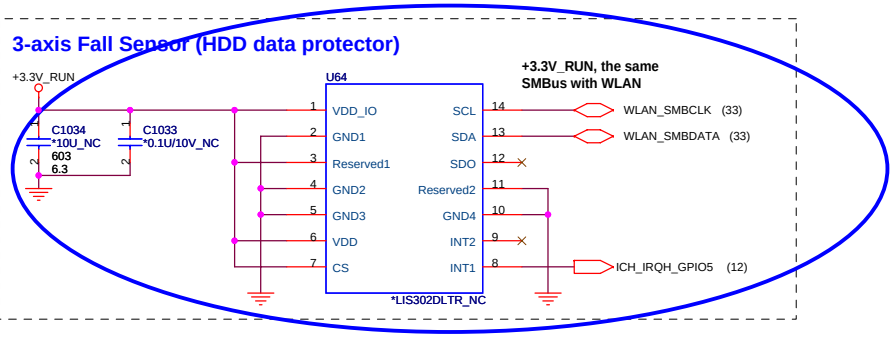
ODD Connector







3-axis Fall Sensor (HDD data protector)



QUANTA COMPUTER

Title	HDD & ODD (SATA)	
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To Daughter Board connector

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

Scott_0123:Change CN8 PN with DFHD32MR003(With mylar)

Power Button

Speaker

KB LED

Touch Pad

Media Button

CN8
FOX_QB5RF321-1203-8F
gb5rf341-12037f-32p-l

(38) BREATH_PWRLED_INT
POWER_SW_IN0#
(41) AUD_SPK_L1
(41) AUD_SPK_L2
(41) AUD_SPK_R1
(41) AUD_SPK_R2
R722 200K/F
(13) KB_LED_DET
(31) KB_BACKLITE_EN
R721 100K
+5V_RUN
(31) DAT_TP_SIO
(31) CLK_TP_SIO
(31,38) LID_SW#
LID_SW#
+3.3V_ALW
R725 *0_NC
SMBDAT2_MMB
+5V_ALW
+MMB_PWR
SMBCLK2_MMB
MEDIA_INT#
(31) MEDIA_INT#

Power Button

+3.3V_ALW
D35 *DA204U_NC
R707 100K
POWER_SW_IN0#
R709 10K
MAIN_PWR_SW# (31)
C863 1U/10V CC0603

Hall Switch

"MEDIA_INT#" PU at MB side
R724 100K
MEDIA_INT#
C869 0.1U/10V
U54
VDD
VSS
OUT
EM-6781-T3
R726 0
LID_SW#

Active high for ISSP reset

R602 *0/0603_NC
Q70 SI2303BDS-T1-E3
+5V_ALW2
+MMB_PWR
C870 0.1U/10V
R603 10K
R619 100
R618 100K
+3.3V_ALW
(31) MMB_ISSP
Q87 2N7002W-7-F
Q86 2N7002W-7-F

NC R620 & R621 with new MMB firmware V35 which have internal PU(5.6K) at MMB IC

Q88 2N7002W-7-F
R620 *20K_NC
R621 *20K_NC
(31) SMBDAT2
SMBDAT2_MMB
R622 *0_NC
Q89 2N7002W-7-F
(31) SMBCLK2
SMBCLK2_MMB
R629 *0_NC

Array Microphone & Camera

+3.3V_RUN +3.3V_RUN +3.6V_RUN
R615 100K
L51 BLM11A05S RC0603
L49 *BLM11A05S_NC RC0603

The GND (pin 8) for DMIC is defined as AGND. Connect with GND at MB, but separate AGND & GND at coaxial cable & CCD module.

R368 0
R369 0
L50 *DLW21SN900SQ2B_NC
(12) ICH_USBP11+
(12) ICH_USBP11-
USB11_D+
USB11_D-
CAM_VCC
CN9
IPX_20374-010E-31
20374-010E-10P-L
(40) DMIC_DATA
DMIC_DATA
R617 0/0603 RC0603
(40) DMIC_CLK
(13) CAMERA_CBL_DET#
DMIC_CLK
R616 22/0603 RC0603
DMIC_DATA_R
DMIC_CLK_R
C502 10U/10V CC0805
C780 *33P/50V_NC
C782 *33P/50V_NC

+5V_RUN
U16
IN
OUT
EN
GND
NC/FB
*TPS76301DBVR_NC
+3.6V_RUN
C465 *1U/10V_NC CC0603
R357 *100K/F_NC
C484 *27P/50V_NC
C499 *4.7U/6.3V_NC CC0603
R358 *49.9K/F_NC

KEYBOARD CONNECTOR

(31) KSI[0..7]
(31) KSO[0..16]
+3.3V_ALW
R711 100K
(31) KB_DET#
CN6
GND1
GND2
KSI7 KSI6 KSI4 KSI2 KSI5 KSI1 KSI3 KSI0
KSO5 KSO4 KSO7 KSO6 KSO8 KSO3 KSO1 KSO2 KSO0 KSO12 KSO16 KSO15 KSO14 KSO13 KSO9 KSO11 KSO10
CAP_LED_L
HRS_FH28-60(30)SB-1SH(86)
FH28-30SB-1SH-30P-R

+3.3V_ALW +3.3V_ALW +5V_RUN
R712 100K
(31) CAP_LED#
Q82 DDTA114YUA-7-F
47K
10K
Q84 2N7002W-7-F
R708 150
CAP_LED_L

CP2 *100PX4_NC
CP1 *100PX4_NC
CP4 *100PX4_NC
CP3 *100PX4_NC
CP6 *100PX4_NC
CP5 *100PX4_NC
50 NPO 1206
C618 *100P/50V_NC
KSI7

100P CAPS close to KB connector

QUANTA COMPUTER			
Title	KB/ CCD/ UI		
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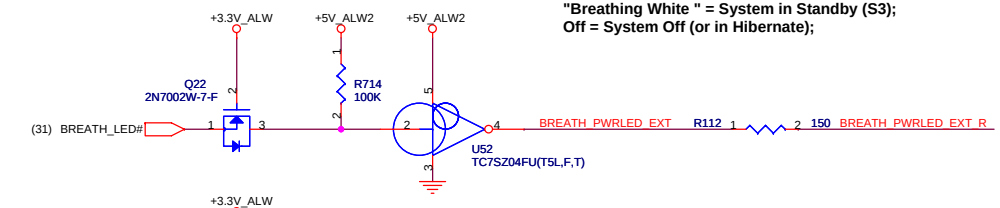
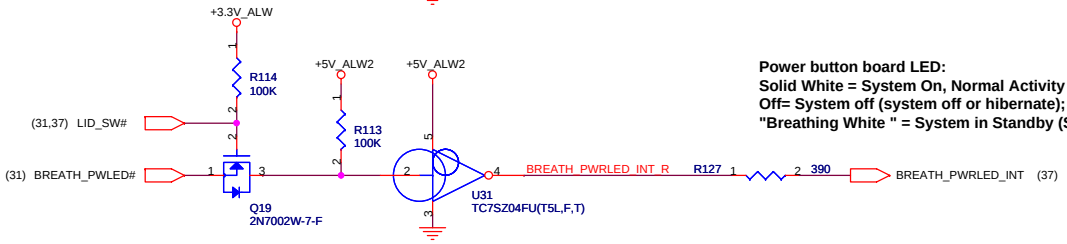
Hinge & Power Button board LED (PWR/Battery indictor)

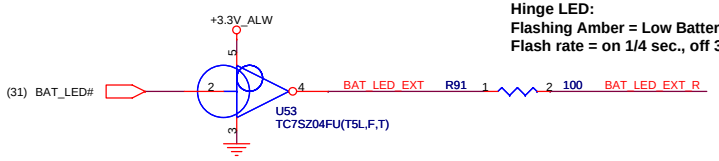
Hinge LED
Solid White= System On, Normal Activity
Solid White= Charging (system on);
Solid White= Charging (system off or hibernate and battery charge <90%);
Off= Charging (system off or hibernate and battery charge > 90%) ;
"Breathing White " = System in Standby (S3);
Off = System Off (or in Hibernate);



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

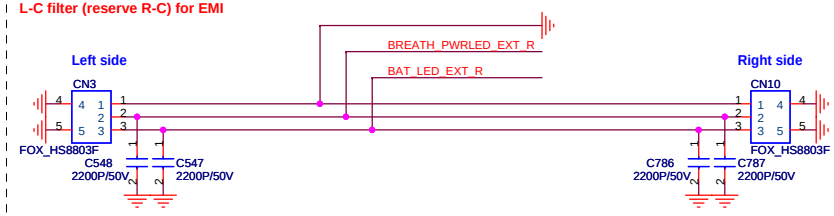


Hinge LED:
Flashing Amber = Low Battery (S0 and S3 and no AC) when battery charge <10%
Flash rate = on 1/4 sec., off 3/4 sec.



Hinge LED (PWR/Battery indictor)

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

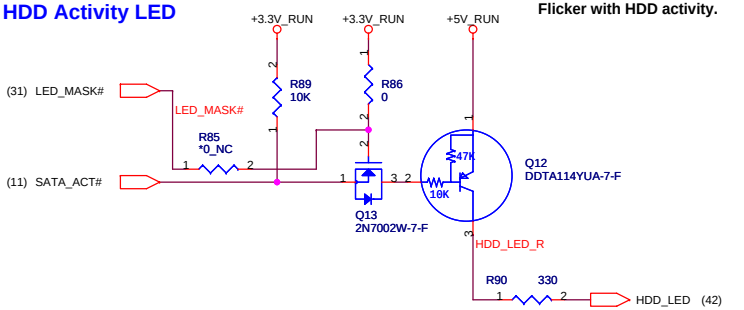


Solid White= System On, Normal Activity
Solid White= Charging (system on);
Solid White= Charging (system off or hibernate and battery charge <90%);
Off= Charging (system off or hibernate and battery charge > 90%);
"Breathing White " = System in Standby (S3);
Off = System Off (or in Hibernate);

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

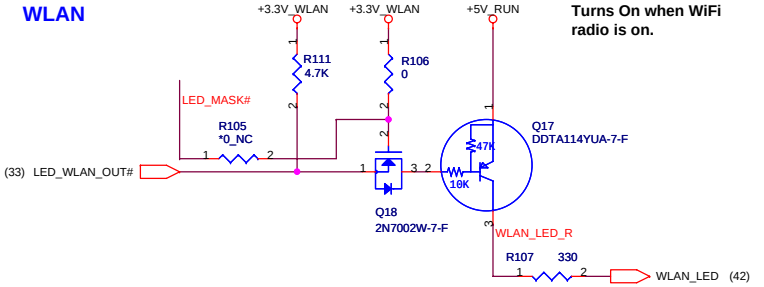
HDD Activity LED

Flicker with HDD activity.



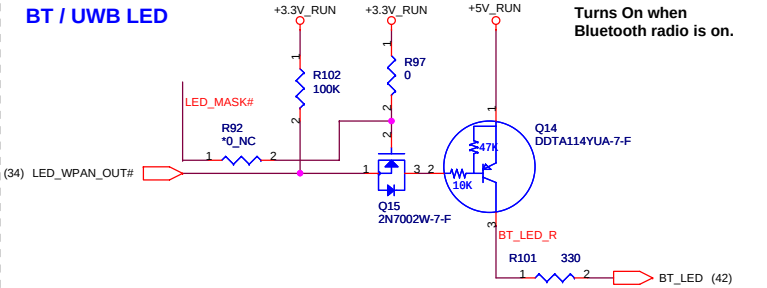
WLAN

Turns On when WiFi radio is on.



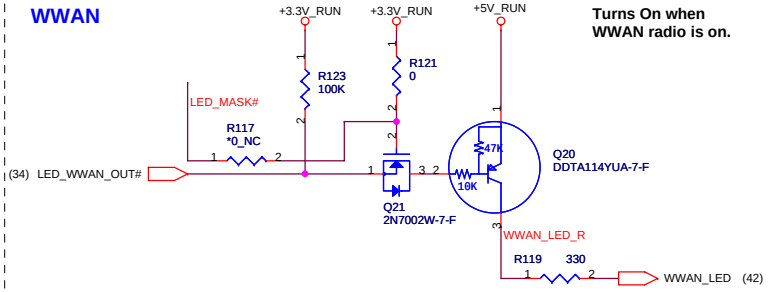
BT / UWB LED

Turns On when Bluetooth radio is on.



WWAN

Turns On when WWAN radio is on.



QUANTA COMPUTER

Title	LED	
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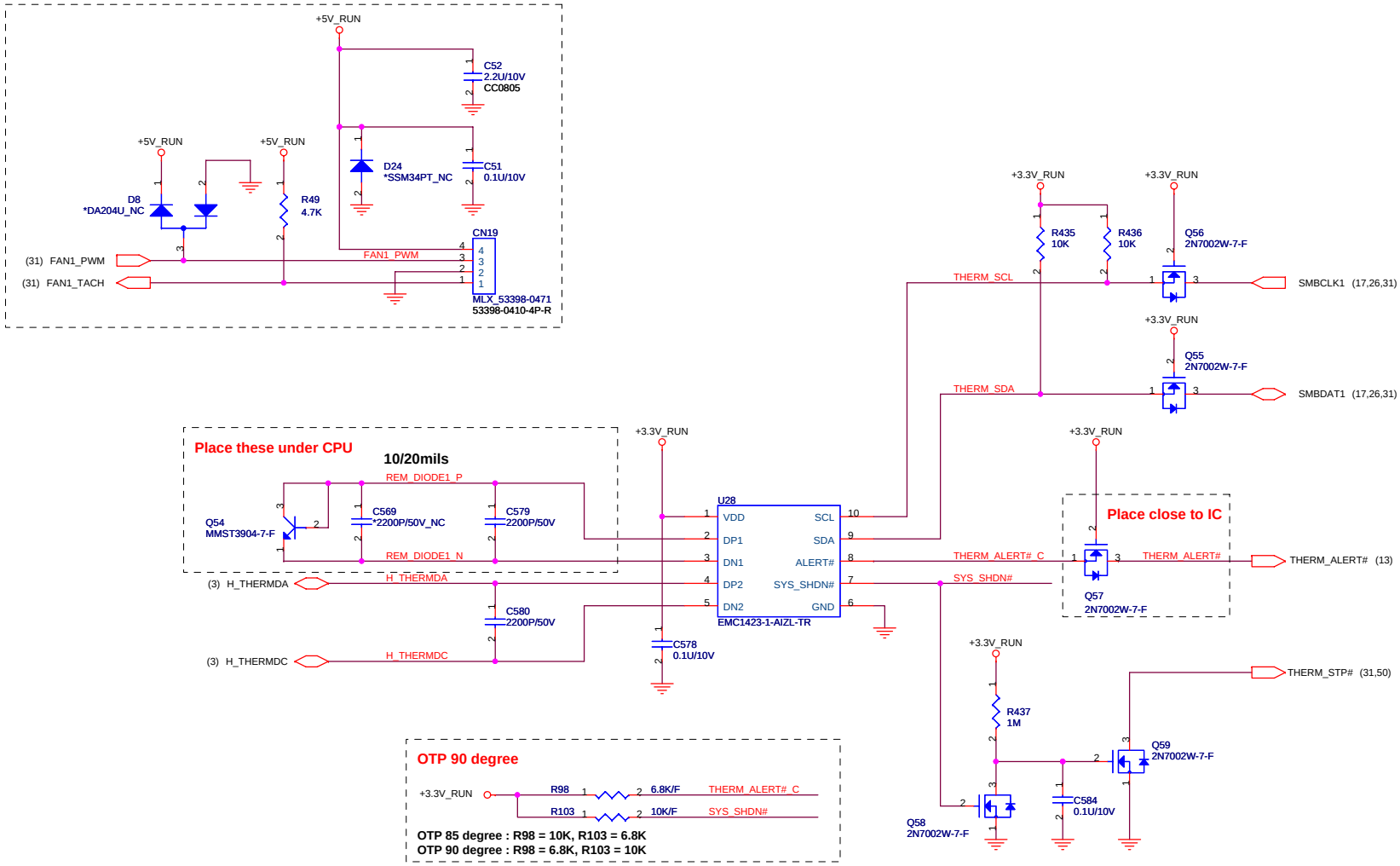

QUANTA COMPUTER

Title	FAN /THERMAL	
Size	Document Number RM3	Rev 3A
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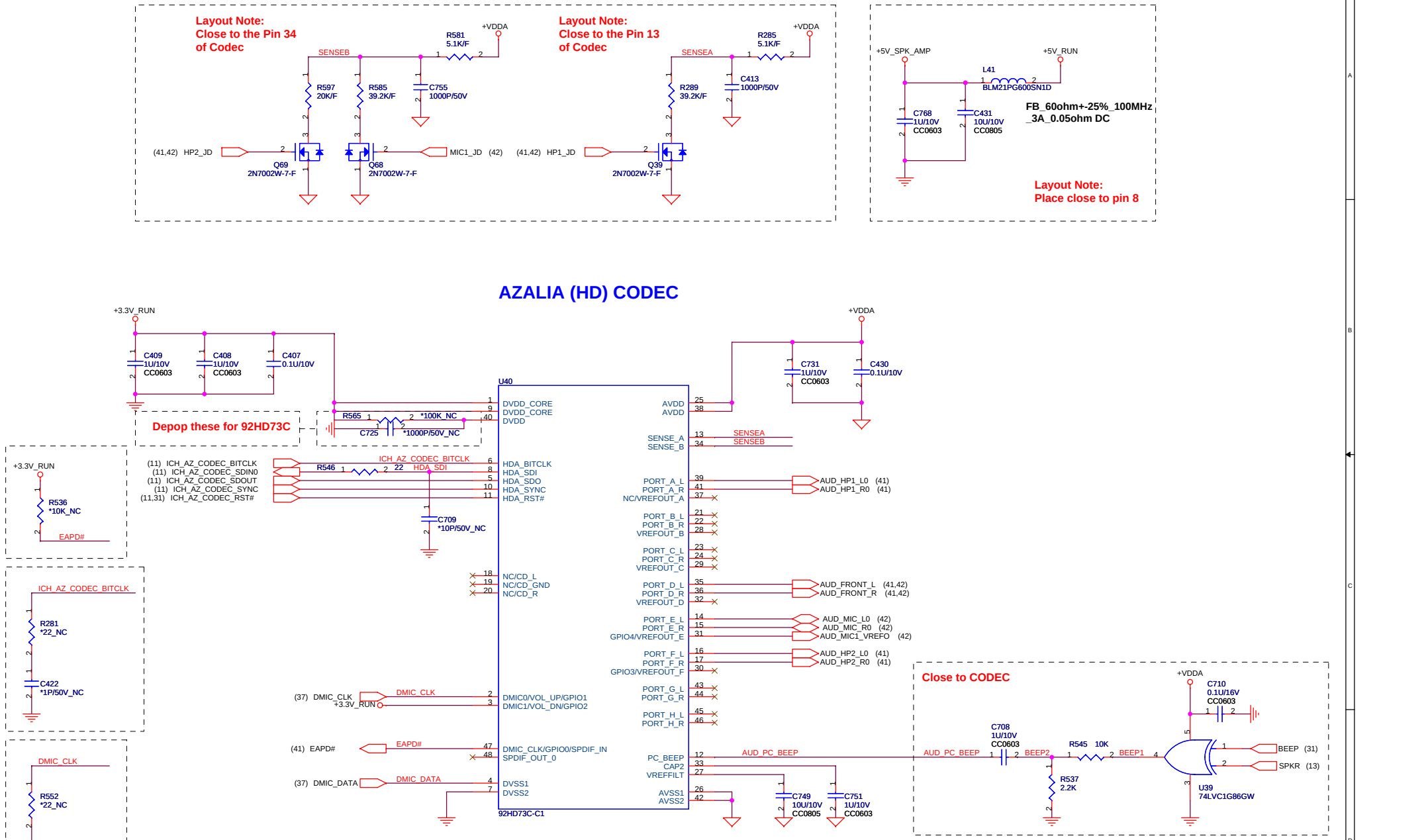

Title	AZELIA CODEC (92HD73C)	
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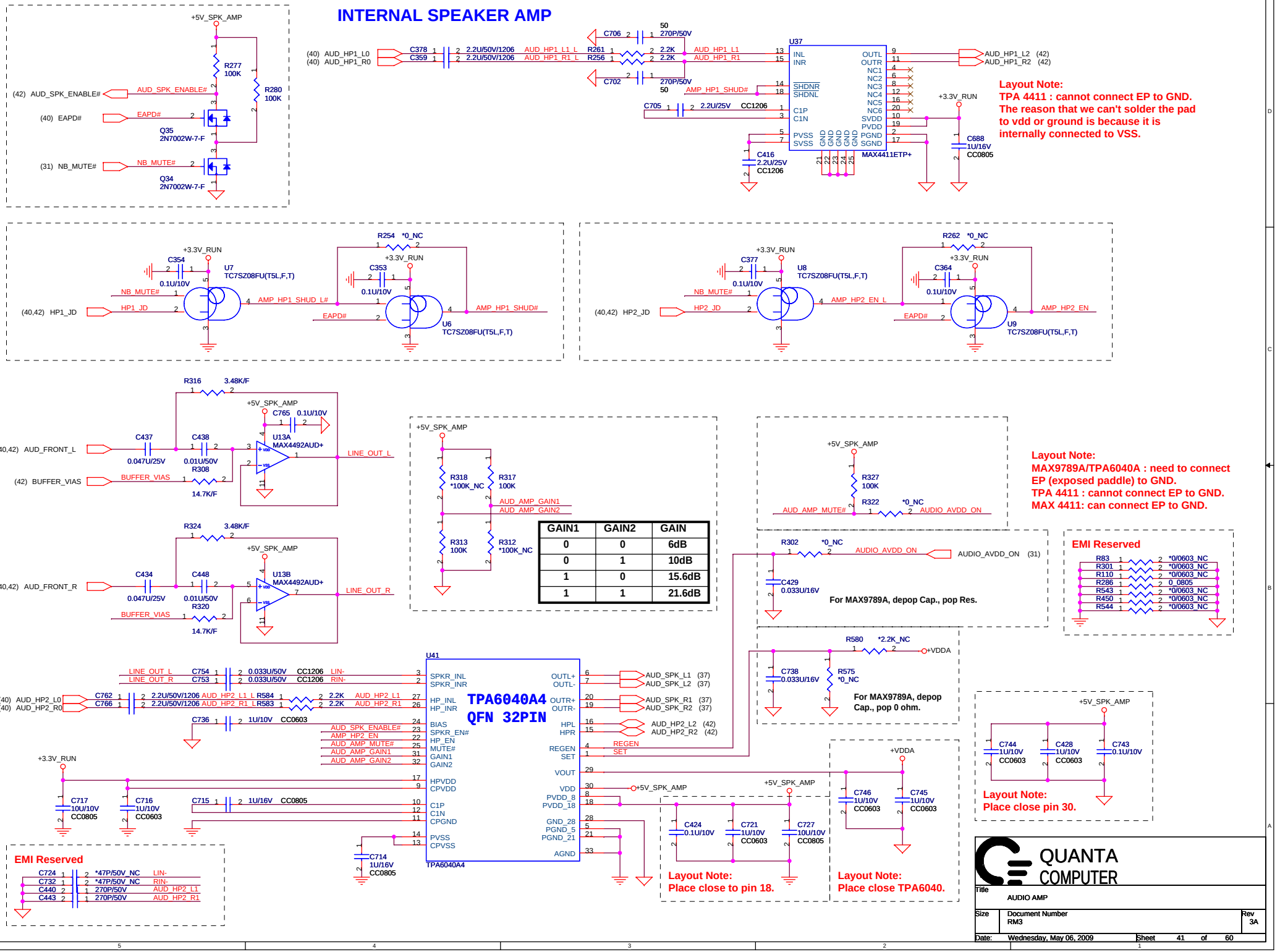
QUANTA COMPUTER

INTERNAL SPEAKER AMP



Title	AUDIO AMP		
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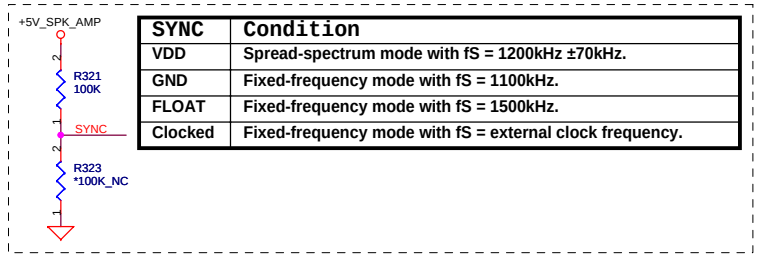
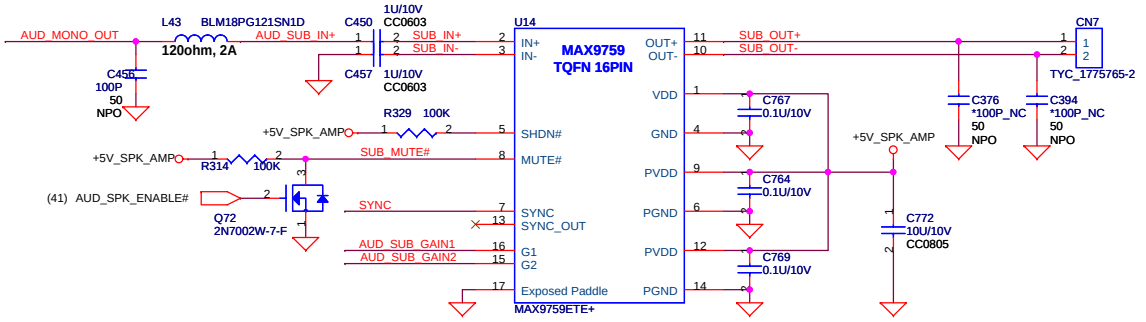
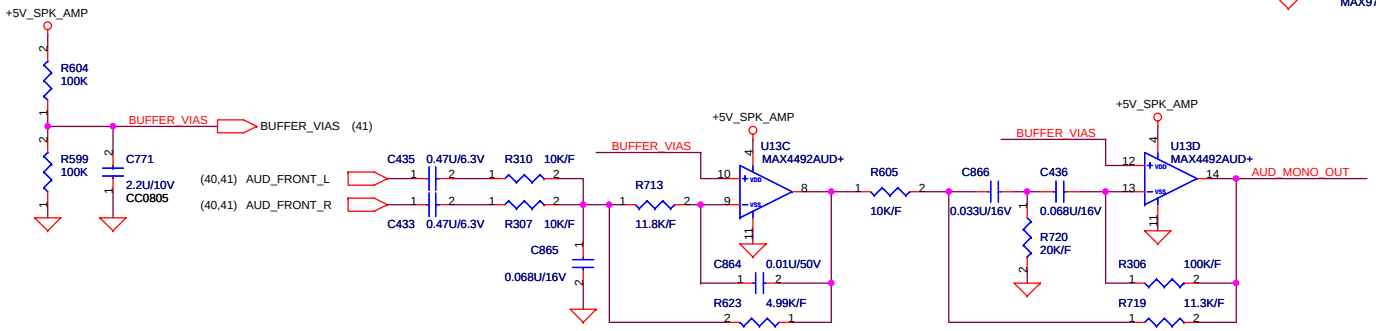
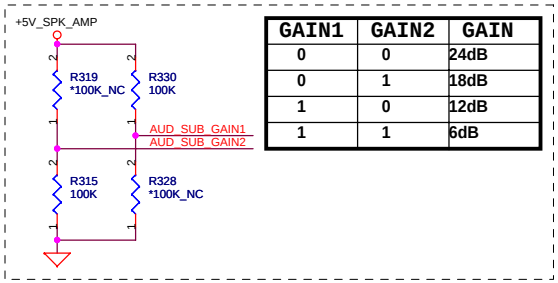
INTERNAL SUBWOOFER AMP



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.

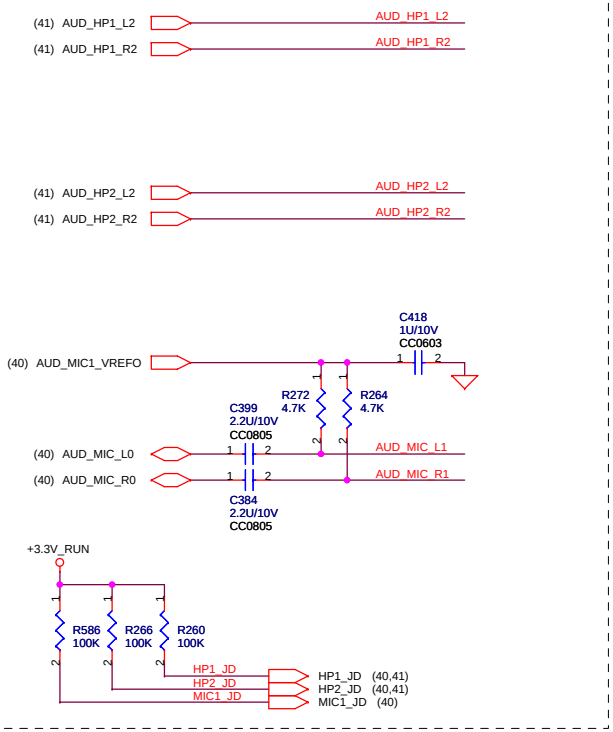




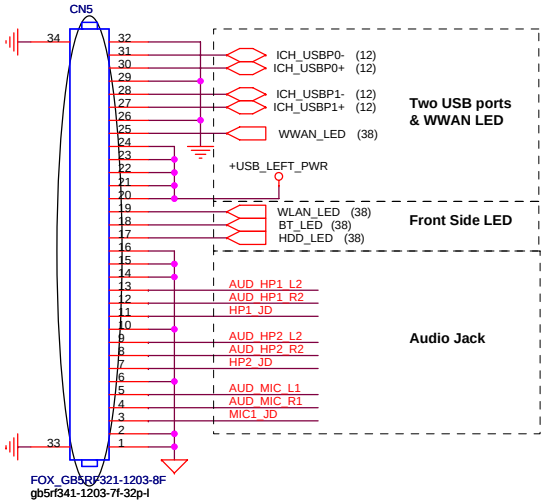


GAIN1	GAIN2	GAIN
0	0	24dB
0	1	18dB
1	0	12dB
1	1	6dB

Ambient Parts of Headphone & MIC Jack

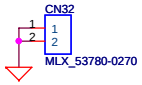


To IB(IO Board) connector



Scott_0123:Change CN5 PN with DFHD32MR003 (FOX).

Adding additional AGND



QUANTA COMPUTER

Title	IB CONN & SUBWOOFER	
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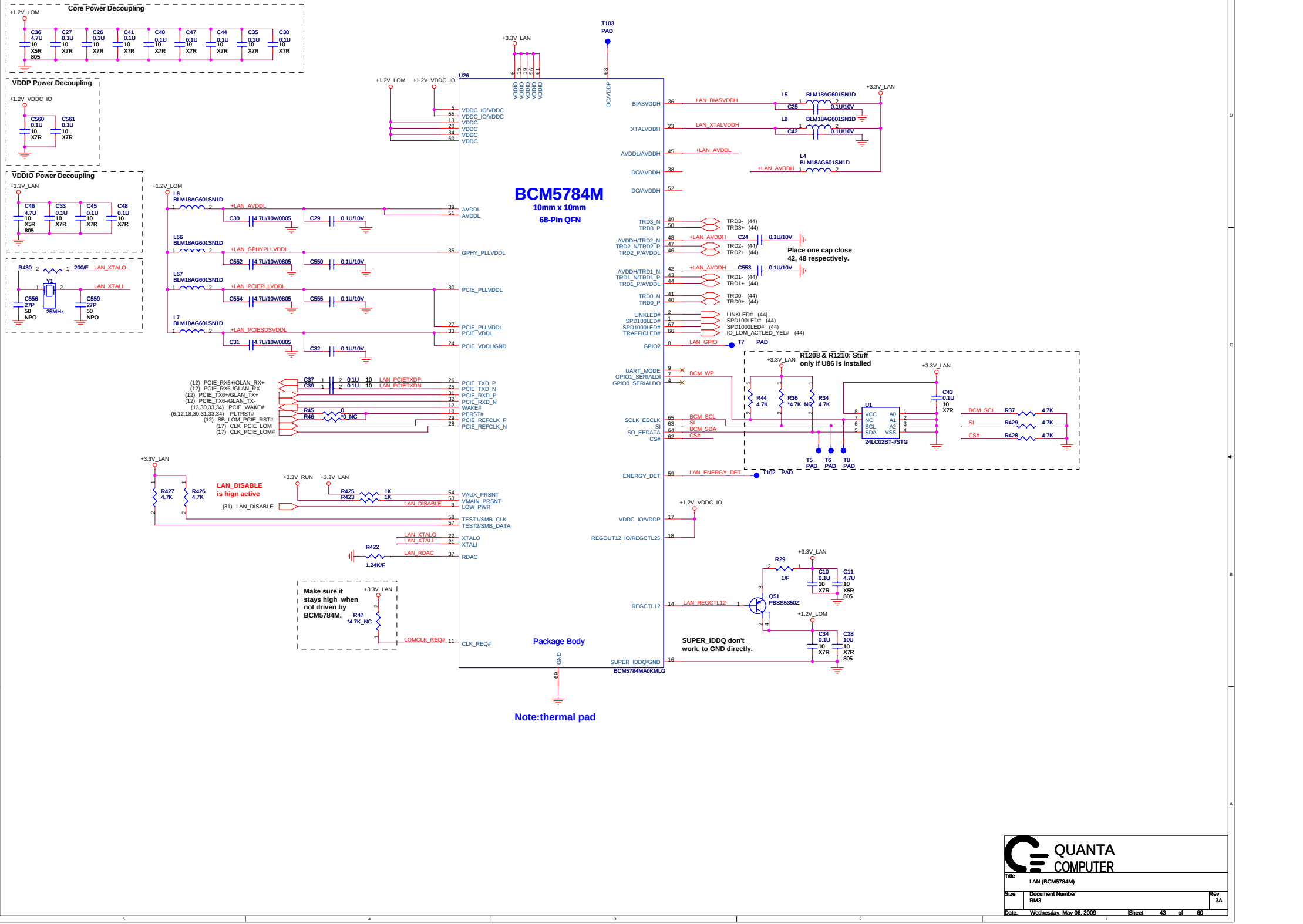
Core Power Decoupling
VDDP Power Decoupling
VDDIO Power Decoupling
BCM5784M
10mm x 10mm
68-Pin QFN
Package Body
BCM5784MA0KMLG
Note:thermal pad
Place one cap close
42, 48 respectively.
R1208 & R1210: Stuff
only if U86 is installed
LAN_DISABLE
is hign active
Make sure it
stays high when
not driven by
BCM5784M.
SUPER_IDDQ don't
work, to GND directly.
24LC02BT-I/STG
QUANTA
COMPUTER
LAN (BCM5784M)
Document Number
RM3
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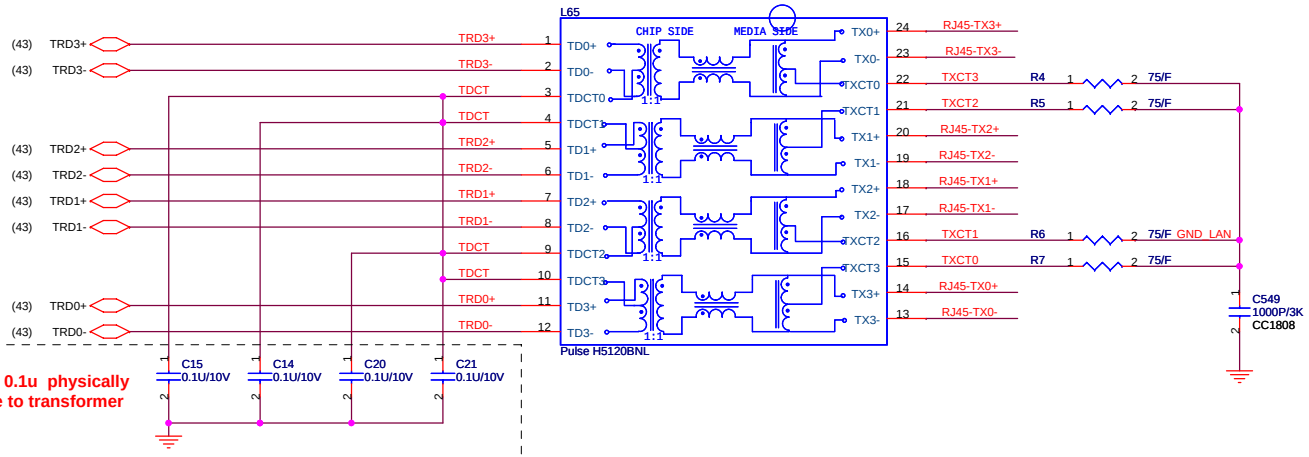
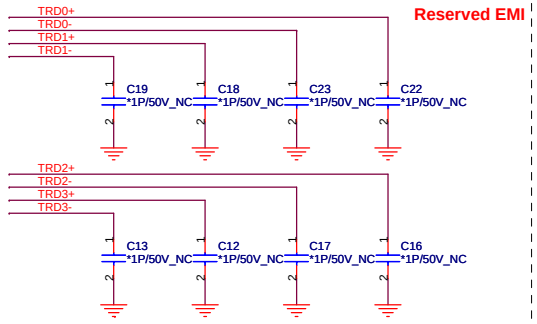
TRANSFORMER

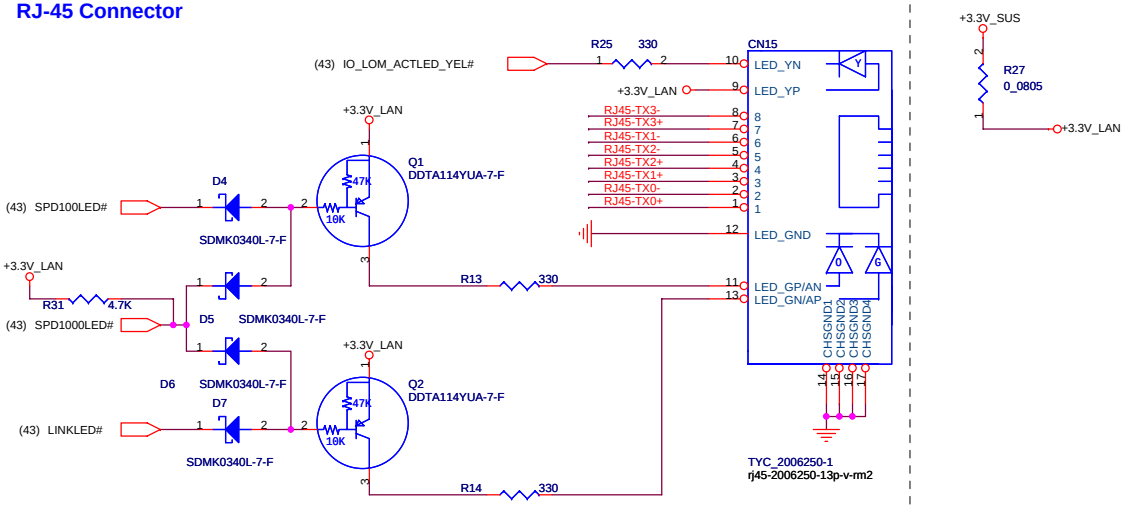
Layout Note:
Route TRD+/- pairs with 100 ohm differential trace immpedance.



Reserved EMI



RJ-45 Connector



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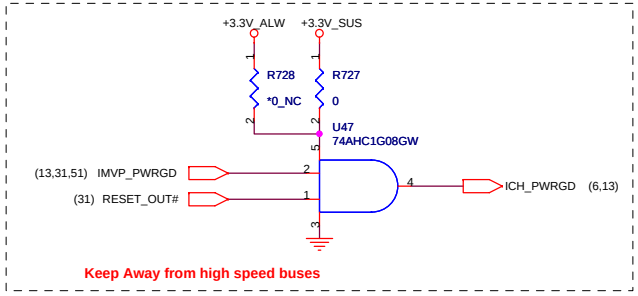

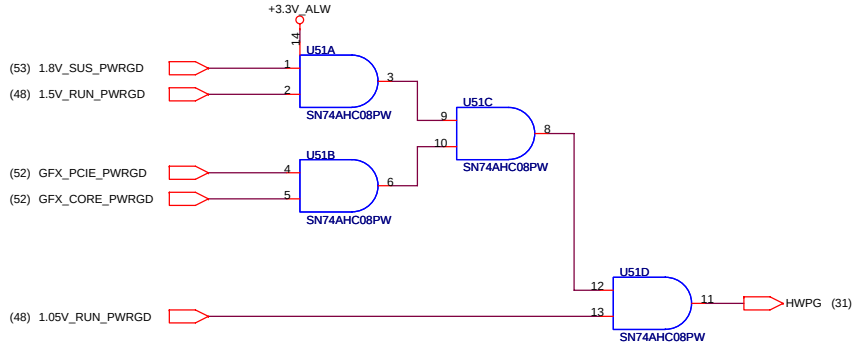

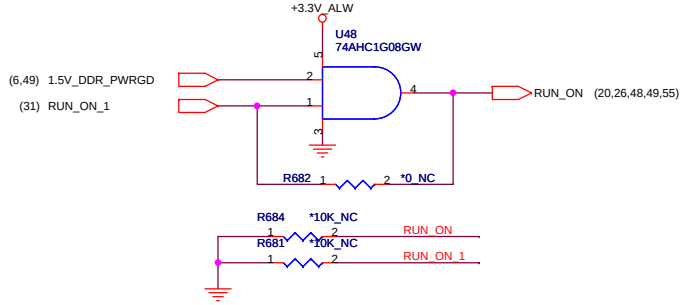

QUANTA COMPUTER

Title	System Reset Circuit	
Size	Document Number RM3	Rev 3A
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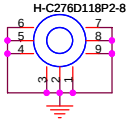
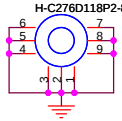
H-C276D118P2-8 * 9

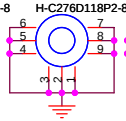
H26
H-C276D118P2-8



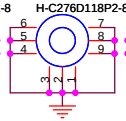
H33
H-C276D118P2-8



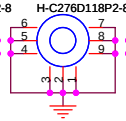
H23
H-C276D118P2-8



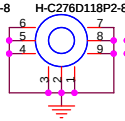
H32
H-C276D118P2-8



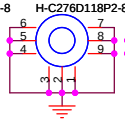
H21
H-C276D118P2-8



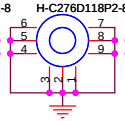
H10
H-C276D118P2-8



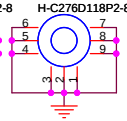
H7
H-C276D118P2-8



H2
H-C276D118P2-8

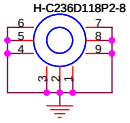


H1
H-C276D118P2-8

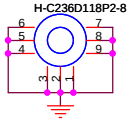


H-C236D118P2-8 * 3

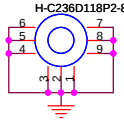
H9
H-C236D118P2-8



H11
H-C236D118P2-8

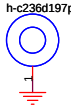


H22
H-C236D118P2-8



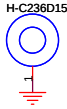
h-c236d197p2 * 1

H4
h-c236d197p2

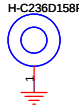


H-C236D158P2 * 4

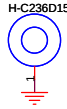
H15
H-C236D158P2



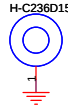
H19
H-C236D158P2



H20
H-C236D158P2

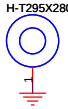


H14
H-C236D158P2



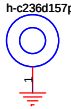
H-T295X280B236D118P2 * 1

H28
H-T295X280B236D118P2

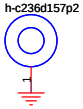


h-c236d157p2 * 2

H6
h-c236d157p2

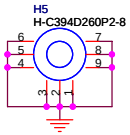


H3
h-c236d157p2



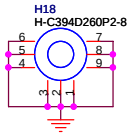
h-c394d260p2 * 1

H5
H-C394D260P2-8



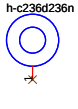
H-C394D260P2-8 * 1

H18
H-C394D260P2-8



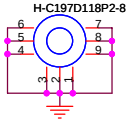
h-c236d236n * 2

H31
h-c236d236n



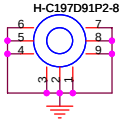
H-C197D118P2-8 * 1

H30
H-C197D118P2-8



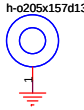
H-C197D91P2-8 * 1

H8
H-C197D91P2-8

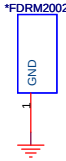


h-o205x157d138x91p2 * 1

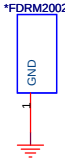
H29
h-o205x157d138x91p2



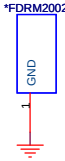
PV5
*FDRM200201_NC



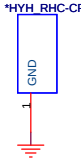
PV6
*FDRM200201_NC



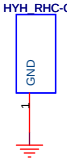
PV4
*FDRM200201_NC



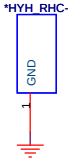
PV3
*HYH_RHC-CP-27G03_NC



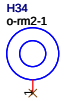
PV1
HYH_RHC-CP-27G03



PV2
*HYH_RHC-CP-27G03_NC



H34
o-rm2-1



QUANTA COMPUTER

Title	PAD & SCREW & SPRING	
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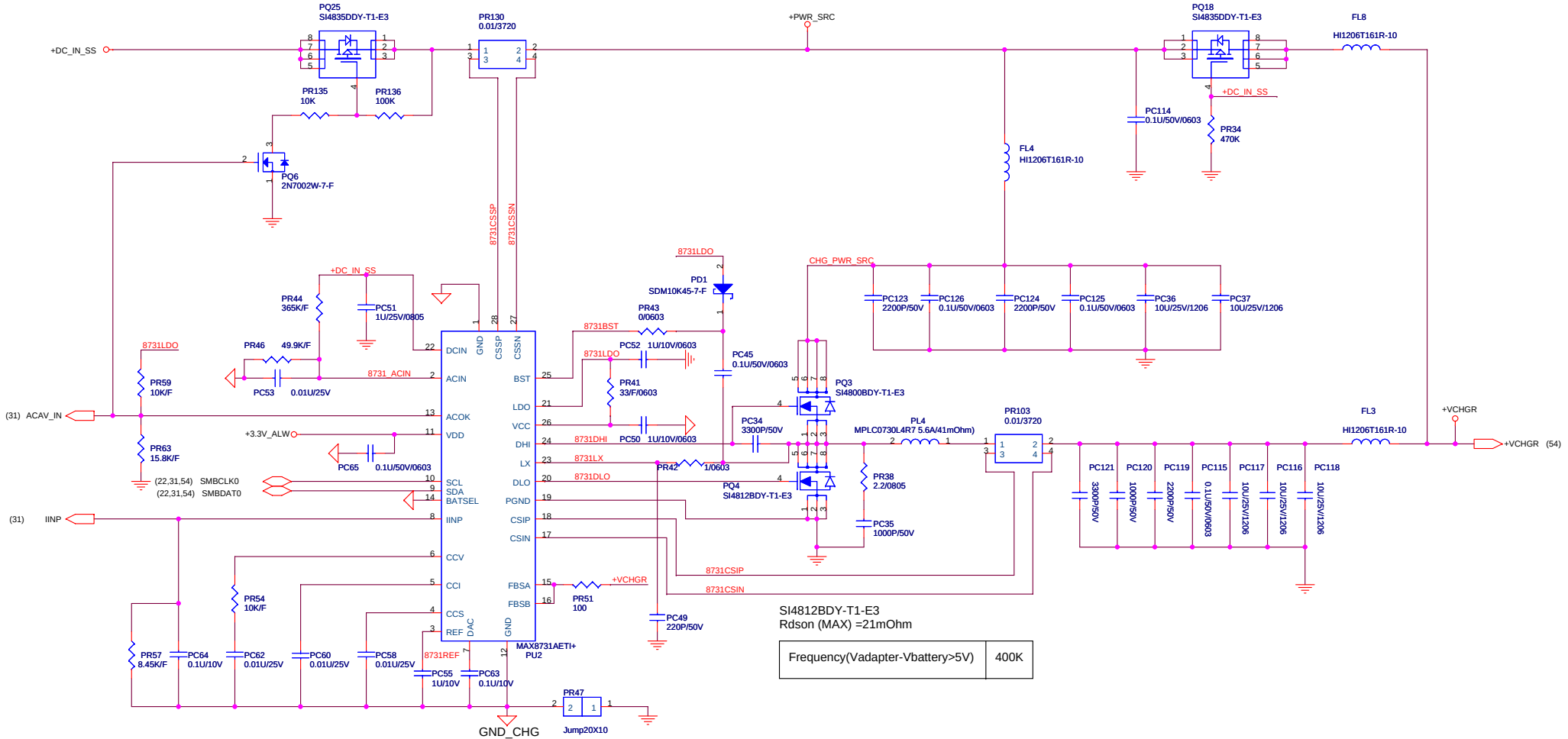
PQ25
SI4835DDY-T1-E3
PR130
0.01/3720
+PWR_SRC
PQ18
SI4835DDY-T1-E3
FL8
HI1206T161R-10
+DC_IN_SS
PR135
10K
PR136
100K
PQ6
2N7002W-7-F
PC114
0.1U/50V/0603
PR34
470K
FL4
HI1206T161R-10
8731CSSP
8731CSSN
8731LDO
PD1
SDM10K45-7-F
CHG_PWR_SRC
PC123
2200P/50V
PC126
0.1U/50V/0603
PC124
2200P/50V
PC125
0.1U/50V/0603
PC36
10U/25V/1206
PC37
10U/25V/1206
PR44
365K/F
PC51
1U/25V/0805
PR43
0/0603
8731BST
PC52
1U/10V/0603
PC45
0.1U/50V/0603
PR46
49.9K/F
PR59
10K/F
8731_ACIN
PR53
0.01U/25V
PR41
33/F/0603
PQ3
SI4800BDY-T1-E3
PC34
3300P/50V
PL4
MPLC0730L4R7 5.6A/41mOhm)
PR103
0.01/3720
FL3
HI1206T161R-10
+VCHGR
(54)
(31) ACAV_IN
+3.3V_ALW
PR63
15.8K/F
PC65
0.1U/50V/0603
8731DHI
PC50
1U/10V/0603
8731LX
PR42
1/0603
8731DLO
PQ4
SI4812BDY-T1-E3
PR38
2.2/0805
PC35
1000P/50V
PC121
3300P/50V
PC120
1000P/50V
PC119
2200P/50V
PC115
0.1U/50V/0603
PC117
10U/25V/1206
PC116
10U/25V/1206
PC118
10U/25V/1206
(22,31,54) SMBCLK0
(22,31,54) SMBDAT0
(31) IINP
DCIN
ACIN
ACOK
VDD
SCL
SDA
BATSEL
IINP
CCV
CCI
CCS
REF
GND
CSSP
CSSN
BST
LDO
VCC
DHI
LX
DLO
PGND
CSIP
CSIN
FBSA
FBSB
DAC
8731CSIP
8731CSIN
PR51
100
PC49
220P/50V
PR54
10K/F
PR57
8.45K/F
PC64
0.1U/10V
PC62
0.01U/25V
PC60
0.01U/25V
PC58
0.01U/25V
8731REF
PC55
1U/10V
PC63
0.1U/10V
MAX8731AETI+
PU2
PR47
Jump20X10
GND_CHG
SI4812BDY-T1-E3
Rdson (MAX) =21mOhm
Frequency(Vadapter-Vbattery>5V)
400K
QUANTA
COMPUTER
Title
CHARGER (MAX8731A)
Size
Document Number
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Date:
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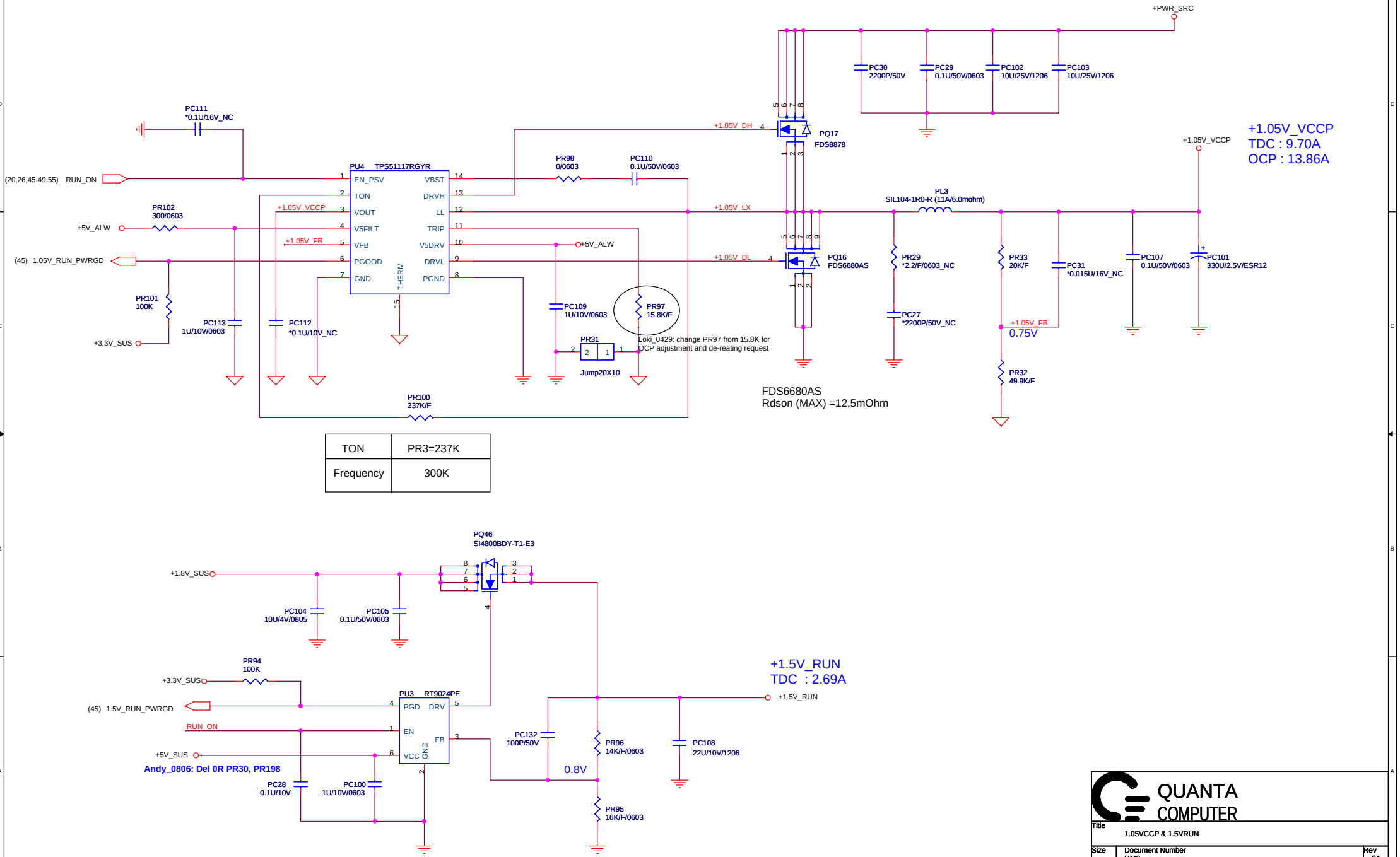

TON	PR3=237K
Frequency	300K

QUANTA COMPUTER

Title	1.05VCCP & 1.5VRUN	
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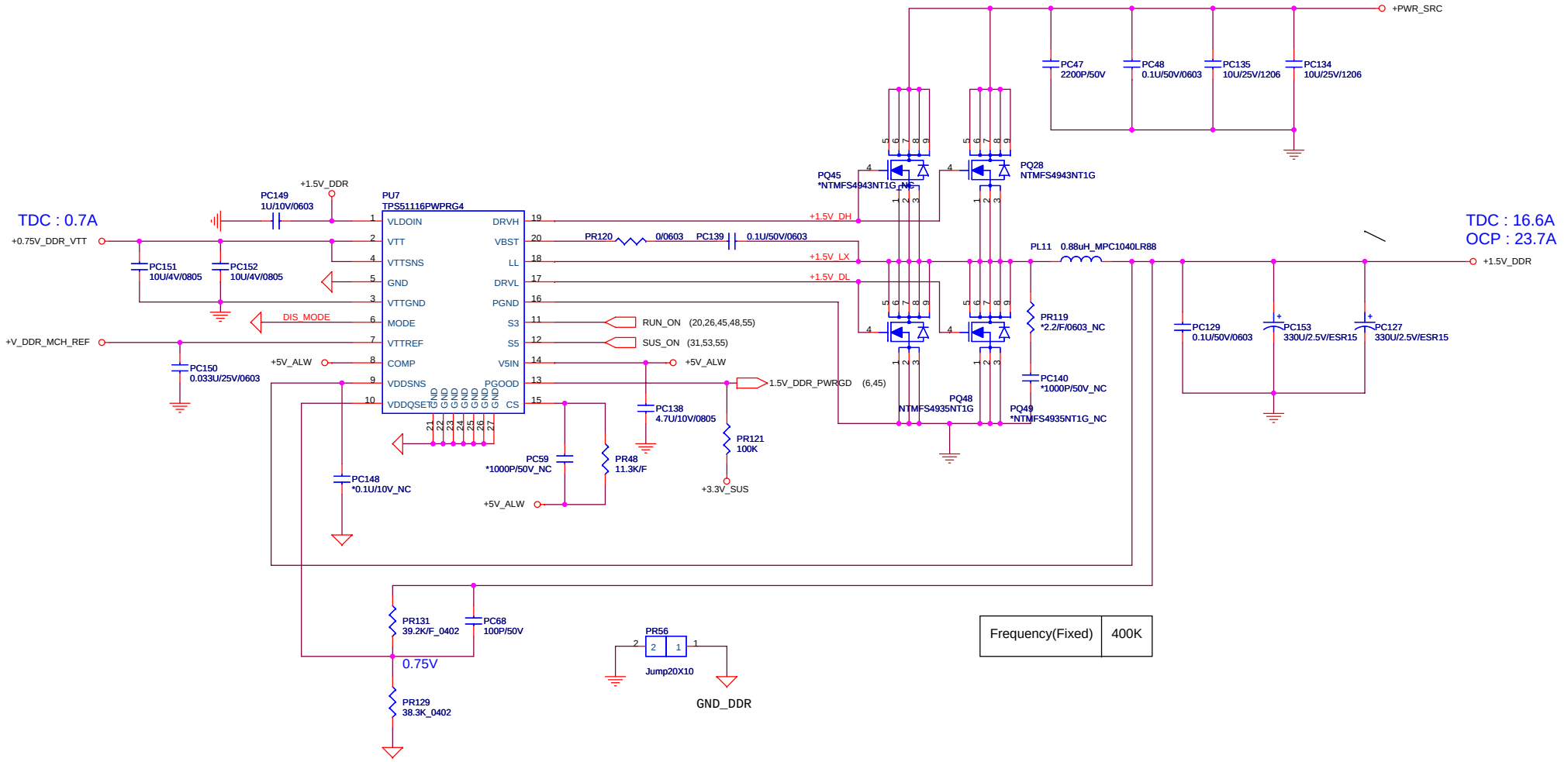

QUANTA COMPUTER			
Title	1.5_DDR/0.75(TPS51116)		
Size	Document Number RM3		Rev 3A
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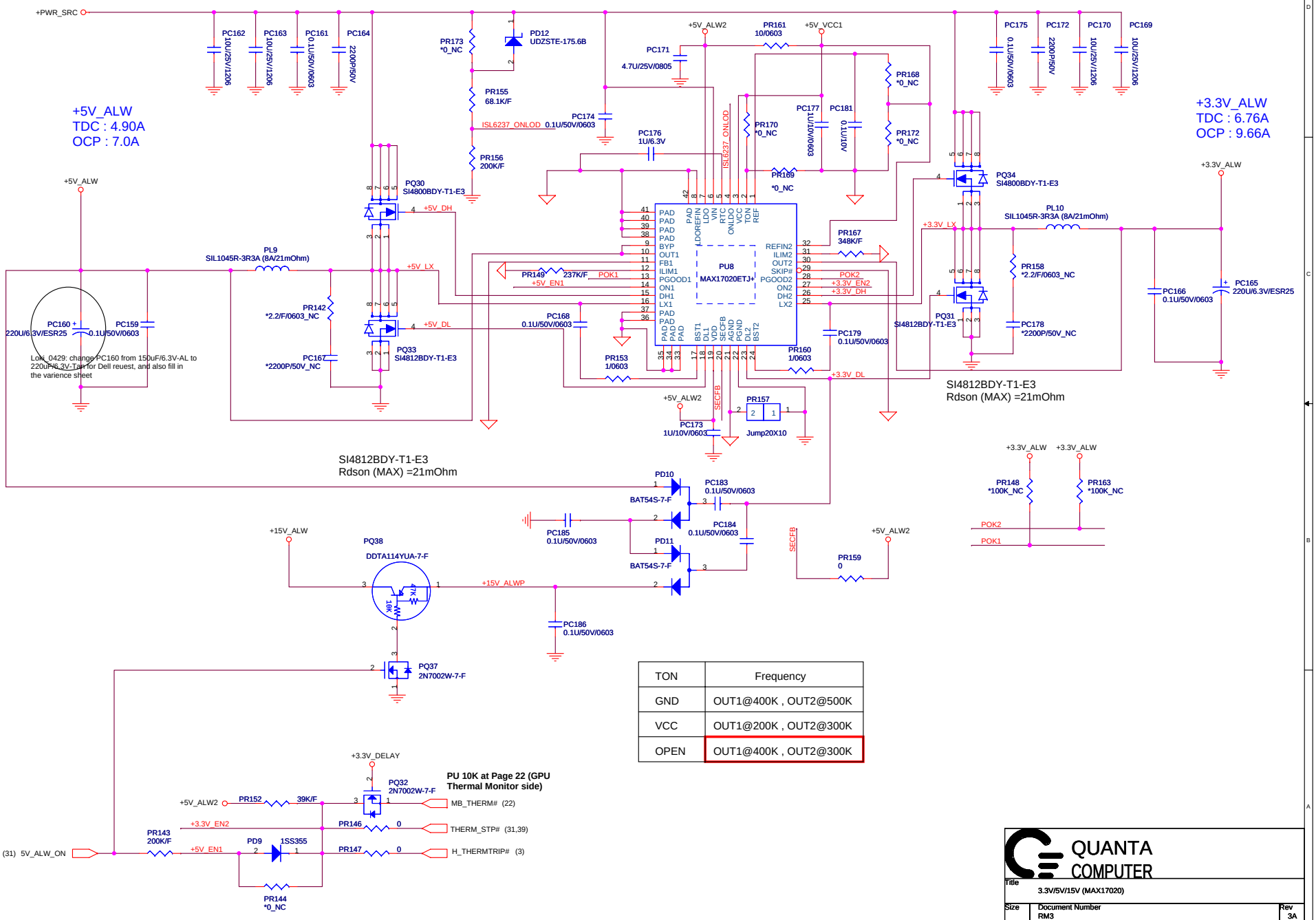
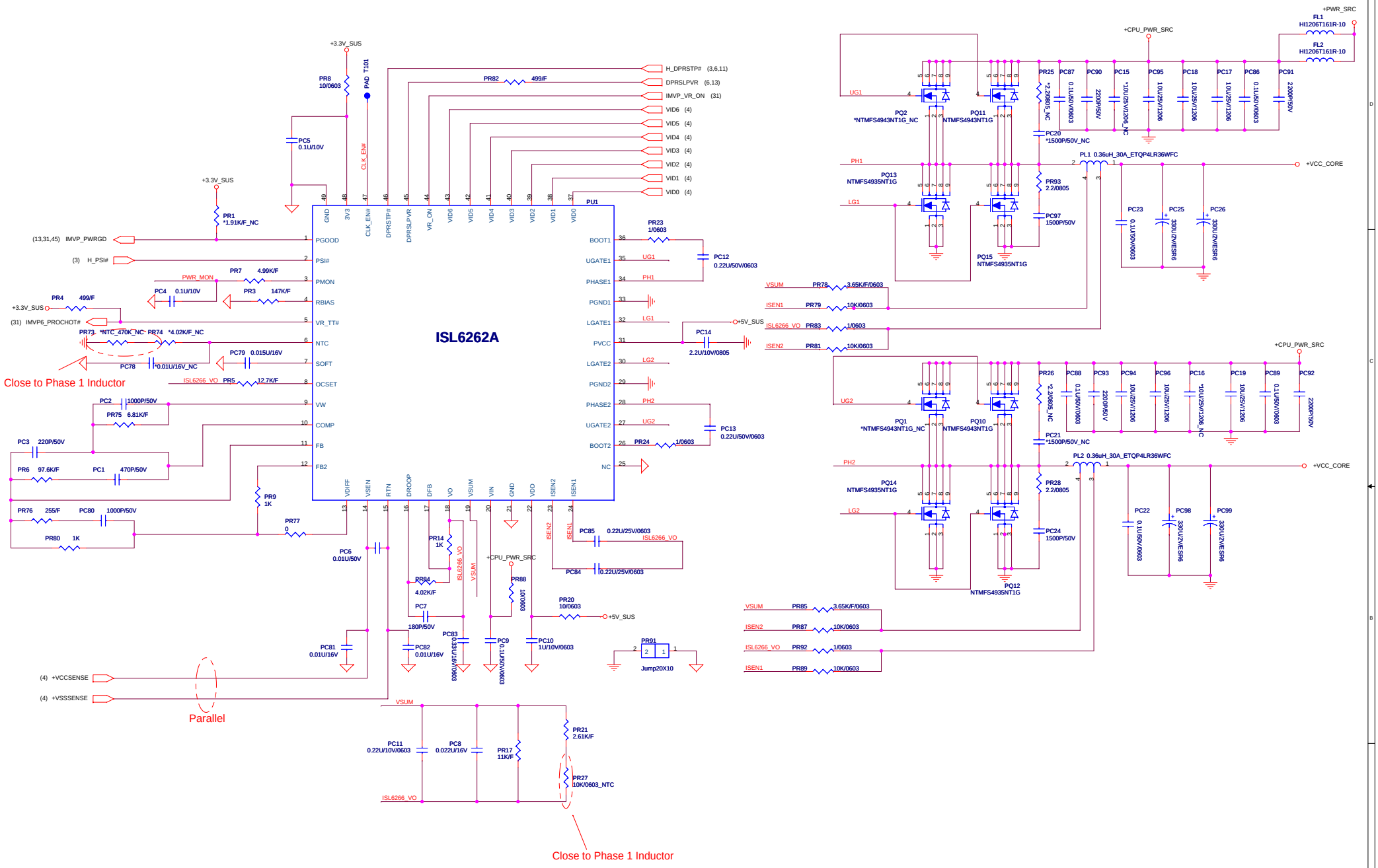
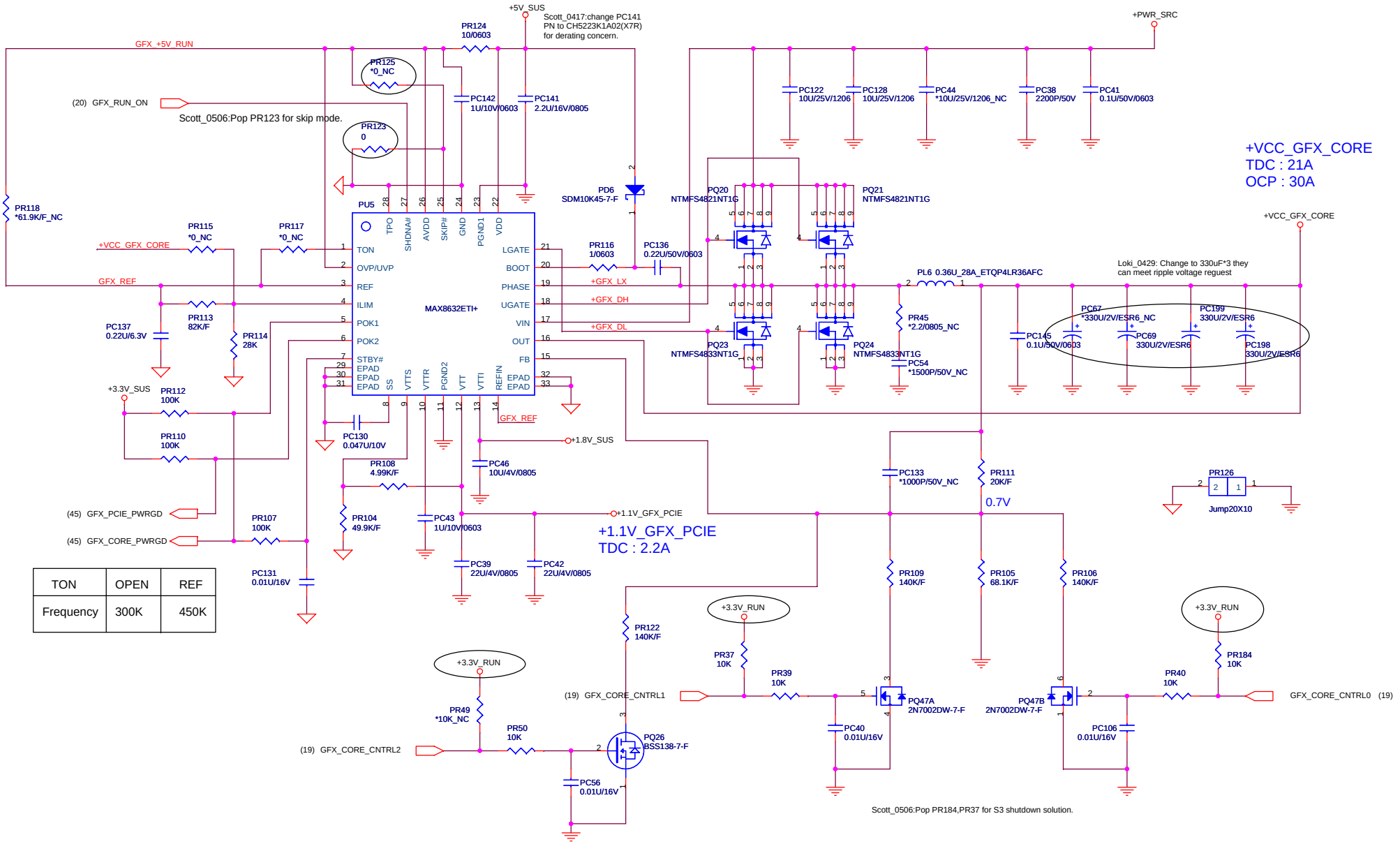


TON	Frequency
GND	OUT1@400K , OUT2@500K
VCC	OUT1@200K , OUT2@300K
OPEN	OUT1@400K , OUT2@300K

QUANTA COMPUTER

Title	3.3V/5V/15V (MAX17020)	
Size	Document Number RM3	Rev 3A
Date: Wednesday, May 06, 2009	Sheet 50 of 60	


ISL6262A
+3.3V_SUS
+PWR_SRC
+CPU_PWR_SRC
+VCC_CORE
+5V_SUS
Close to Phase 1 Inductor
Parallel
Close to Phase 1 Inductor
(13,31,45) IMVP_PWRGD
(3) H_PSI#
(31) IMVP6_PROCHOT#
H_DPRSTP# (3,6,11)
DPRSLPVR (6,13)
IMVP_VR_ON (31)
VID6 (4)
VID5 (4)
VID4 (4)
VID3 (4)
VID2 (4)
VID1 (4)
VID0 (4)
(4) +VCCSENSE
(4) +VSSSENSE
PU1
PR1 *1.91K/F_NC
PR8 10/0603
PAD T101
PC5 0.1U/10V
PR82 499/F
PR23 1/0603
PC12 0.22U/50V/0603
PR4 499/F
PR7 4.99K/F
PR3 147K/F
PC4 0.1U/10V
PR73 *NTC_470K_NC
PR74 *4.02K/F_NC
PC78 *0.01U/16V_NC
PC79 0.015U/16V
PR5 12.7K/F
PC14 2.2U/10V/0805
PC2 1000P/50V
PR75 6.81K/F
PC3 220P/50V
PR6 97.6K/F
PC1 470P/50V
PR9 1K
PR76 255/F
PC80 1000P/50V
PR80 1K
PR77 0
PC13 0.22U/50V/0603
PR24 1/0603
PC6 0.01U/50V
PR14 1K
PR84 4.02K/F
PC7 180P/50V
PC83 0.33U/16V/0603
PC81 0.01U/16V
PC82 0.01U/16V
PC9 0.1U/50V/0603
PR88 10/0603
PC10 1U/10V/0603
PR20 10/0603
PC85 0.22U/25V/0603
PC84 0.22U/25V/0603
PR91 Jumper20X10
PC11 0.22U/10V/0603
PC8 0.022U/16V
PR17 11K/F
PR21 2.61K/F
PR27 10K/0603_NTC
PR78 3.65K/F/0603
PR79 10K/0603
PR83 1/0603
PR81 10K/0603
PR85 3.65K/F/0603
PR87 10K/0603
PR92 1/0603
PR89 10K/0603
FL1 HI1206T161R-10
FL2 HI1206T161R-10
PQ2 *NTMFS4943NT1G_NC
PQ11 NTMFS4943NT1G
PQ13 NTMFS4935NT1G
PQ15 NTMFS4935NT1G
PQ1 *NTMFS4943NT1G_NC
PQ10 NTMFS4943NT1G
PQ14 NTMFS4935NT1G
PQ12 NTMFS4935NT1G
PR25 *2.2/0805_NC
PR93 2.2/0805
PR26 *2.2/0805_NC
PR28 2.2/0805
PC20 *1500P/50V_NC
PC97 1500P/50V
PC21 *1500P/50V_NC
PC24 1500P/50V
PL1 0.36uH_30A_ETQP4LR36WFC
PL2 0.36uH_30A_ETQP4LR36WFC
PC23 0.1U/50V/0603
PC25 330U/2V/ESR6
PC26 330U/2V/ESR6
PC22 0.1U/50V/0603
PC98 330U/2V/ESR6
PC99 330U/2V/ESR6
PC87 0.1U/50V/0603
PC90 2200P/50V
PC15 *10U/25V/1206_NC
PC95 10U/25V/1206
PC18 10U/25V/1206
PC17 10U/25V/1206
PC86 0.1U/50V/0603
PC91 2200P/50V
PC88 0.1U/50V/0603
PC93 2200P/50V
PC94 10U/25V/1206
PC96 10U/25V/1206
PC16 *10U/25V/1206_NC
PC19 10U/25V/1206
PC89 0.1U/50V/0603
PC92 2200P/50V
QUANTA COMPUTER
Title CPU_POWER (ISL6262A)
Size Document Number RM3 Rev 3A
Date: Wednesday, May 06, 2009 Sheet 51 of 60



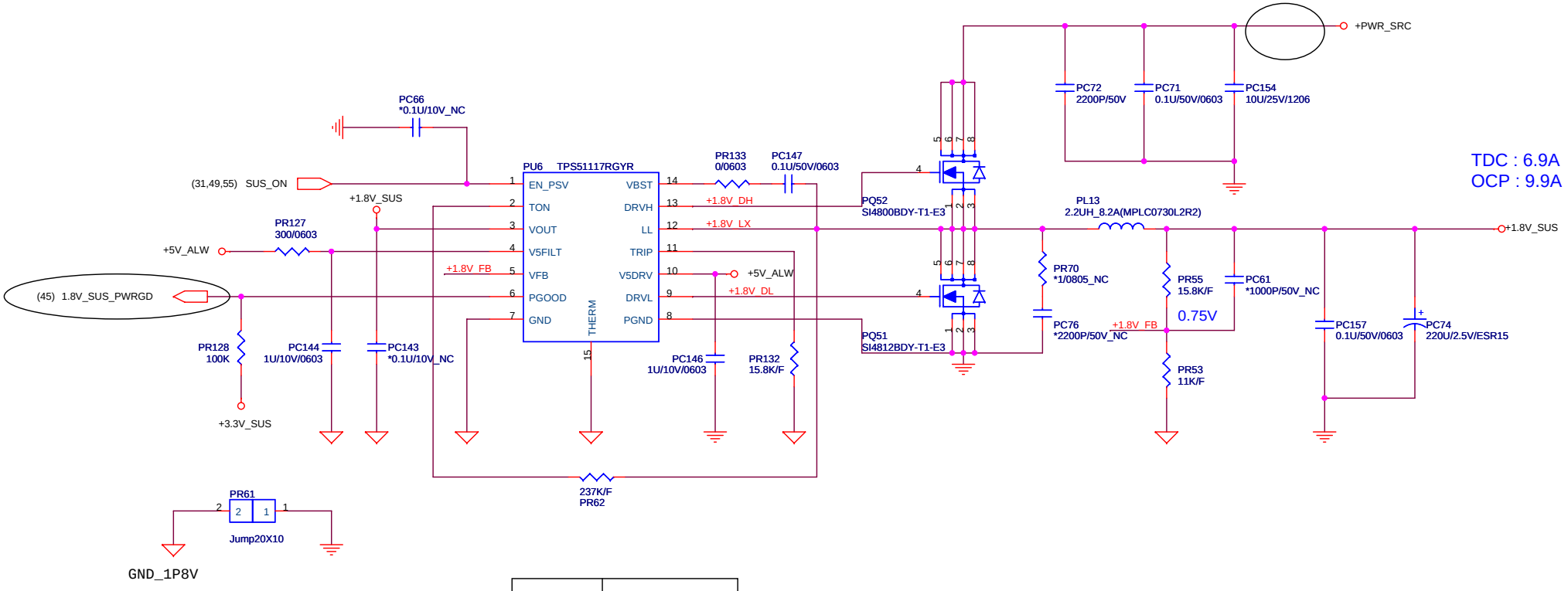
TON	OPEN	REF
Frequency	300K	450K

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

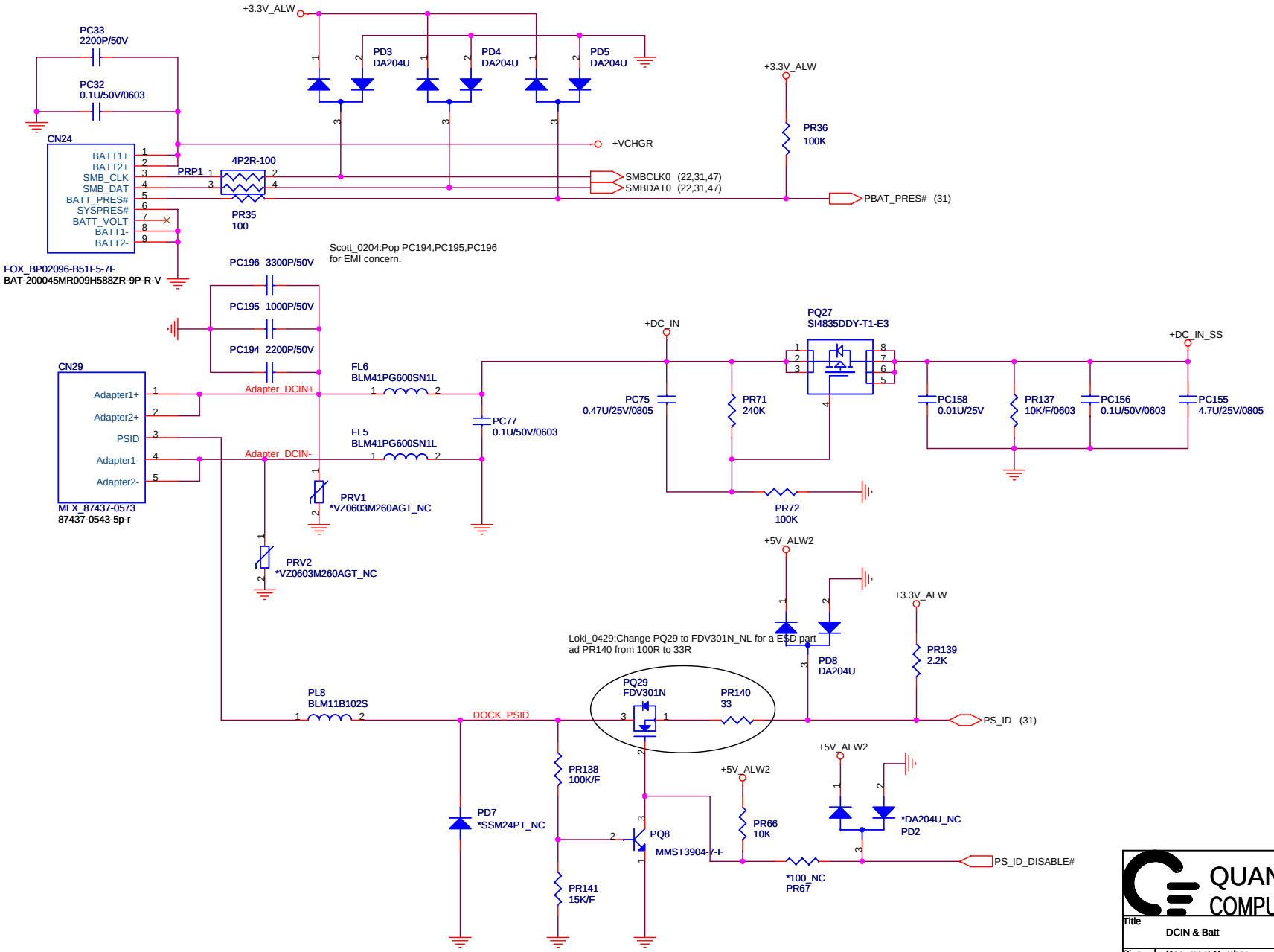
Title	VGA_M86 (MAX8632)	
Size	Document Number RM3	Rev 3A
Date: Wednesday, May 06, 2009	Sheet 52 of 60	



TON	PR62=237K
Frequency	300K

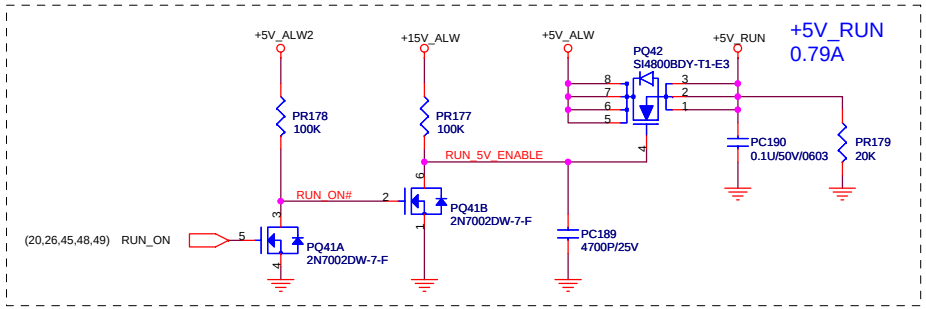
QUANTA COMPUTER

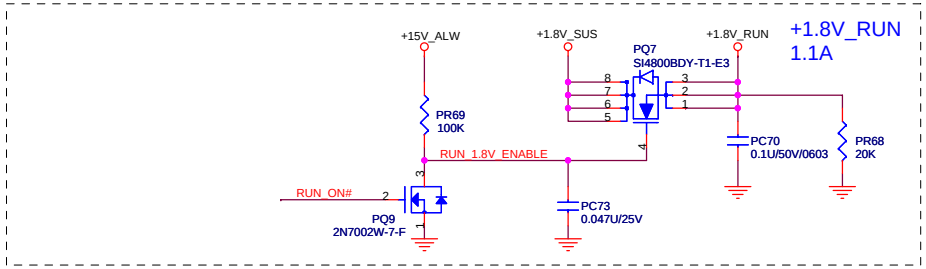
Title	1.8V_SUS (TPS51117)	
Size	Document Number RM3	Rev 3A
Date: Wednesday, May 06, 2009	Sheet 53 of 60	

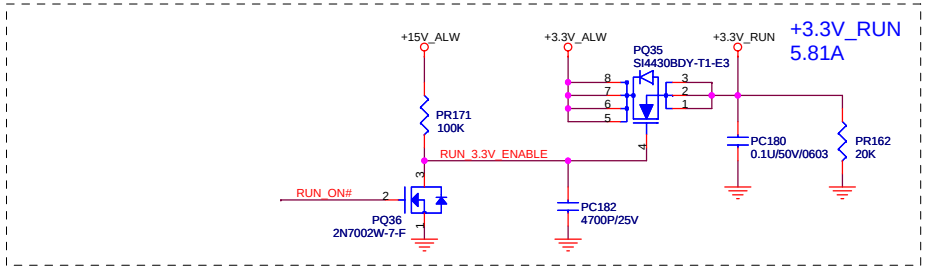


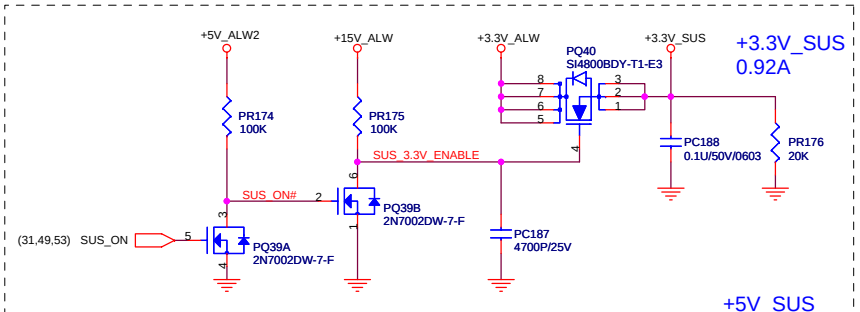
QUANTA COMPUTER

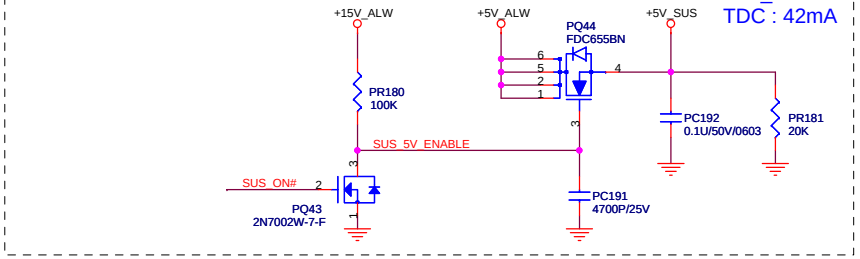
Title	DCIN & Batt	
Size	Document Number RM3	Rev 3A
Date: Wednesday, May 06, 2009	Sheet 54 of 60	

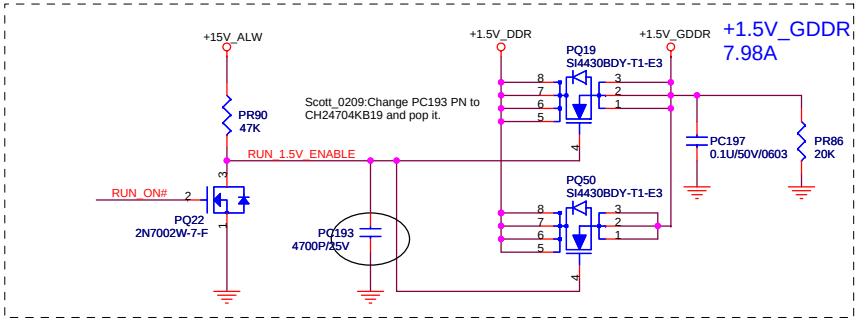




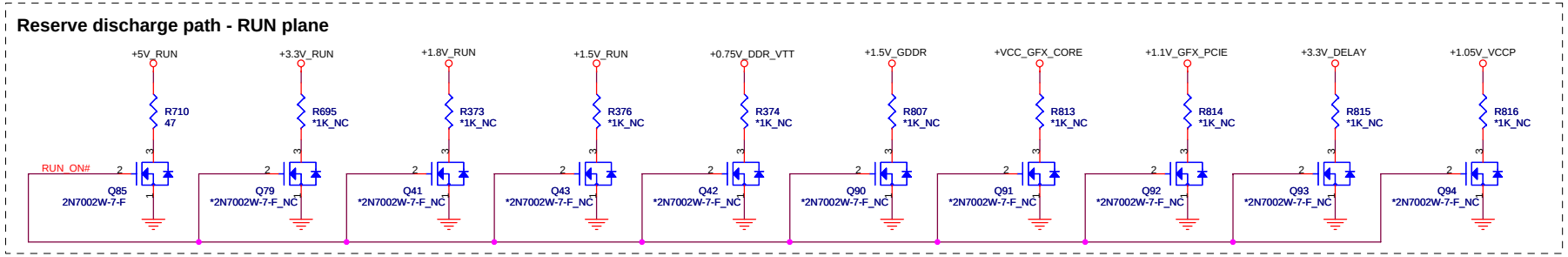




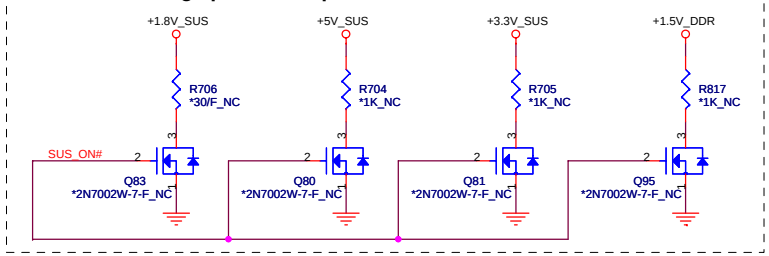




Reserve discharge path - RUN plane

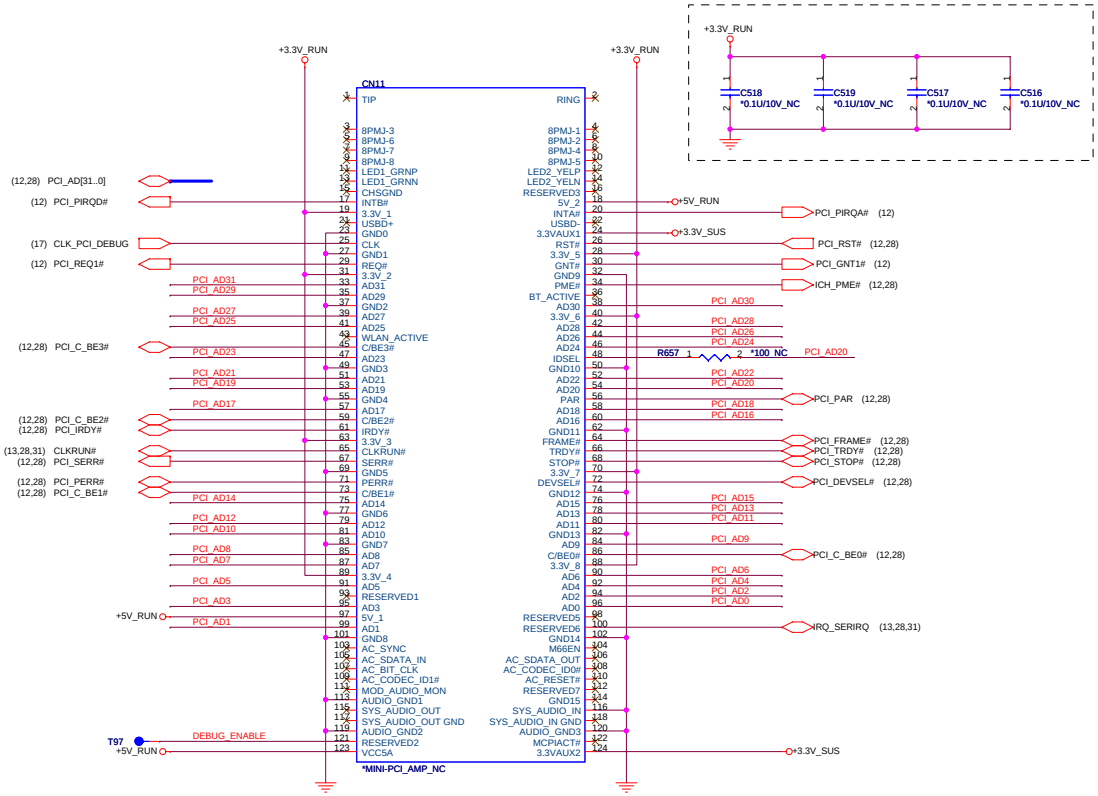


Reserve discharge path - SUS plane



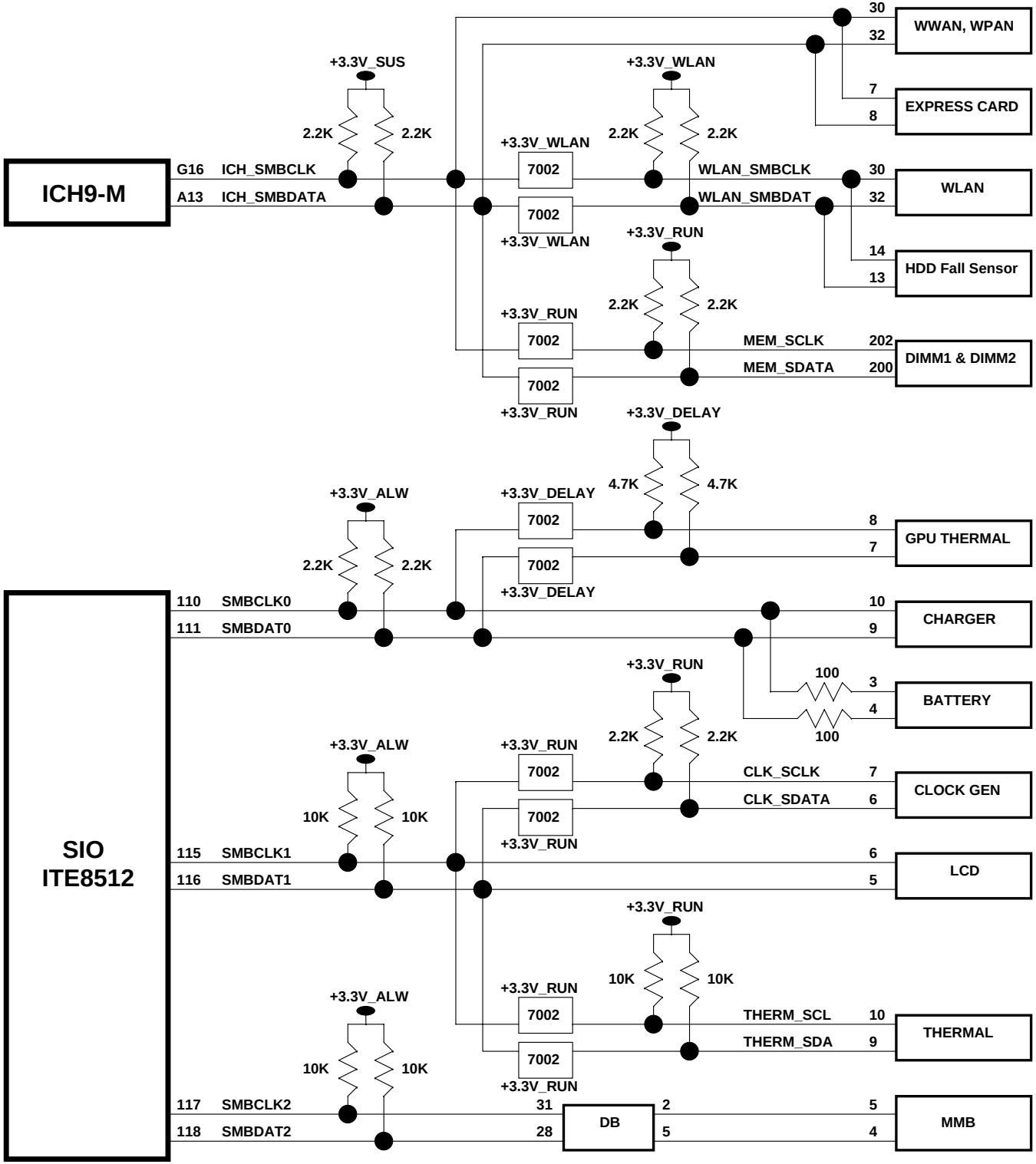
QUANTA COMPUTER

Title	Load Switch	
Size	Document Number RM3	Rev 3A
Date: Wednesday, May 06, 2009	Sheet 55 of 60	



QUANTA COMPUTER

Title	Debug Port (Mini PCI)	
Size	Document Number RM3	Rev 3A
Date: Wednesday, May 06, 2009	Sheet 56 of 60	



QUANTA COMPUTER

Title	SMBUS BLOCK	
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Date: Wednesday, May 06, 2009	Sheet 57 of 60	

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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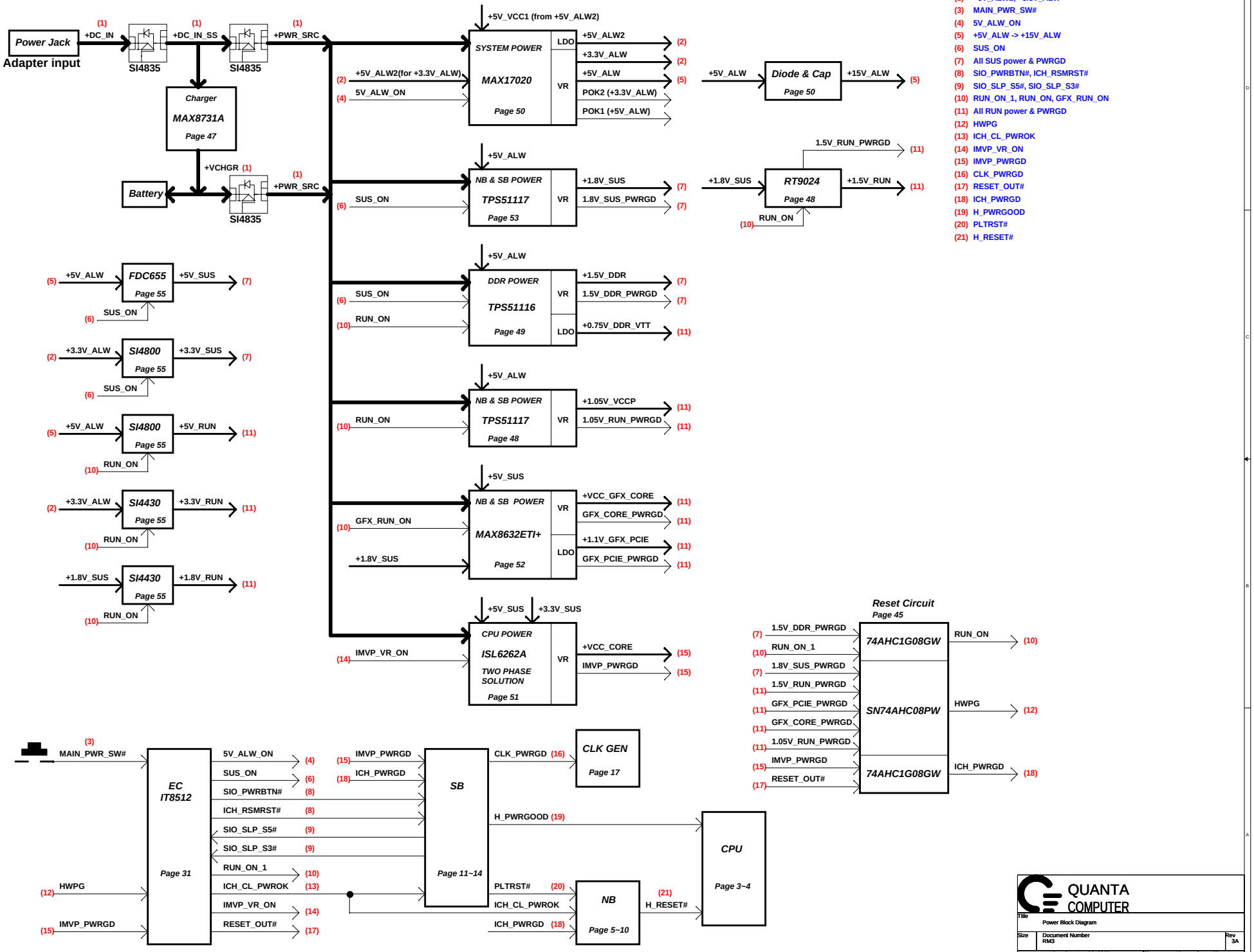
RM2 Power Design Block Diagram 2008/10/03



QUANTA COMPUTER

Title	Power Block Diagram	
Size	Document Number RM3	Rev 3A
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