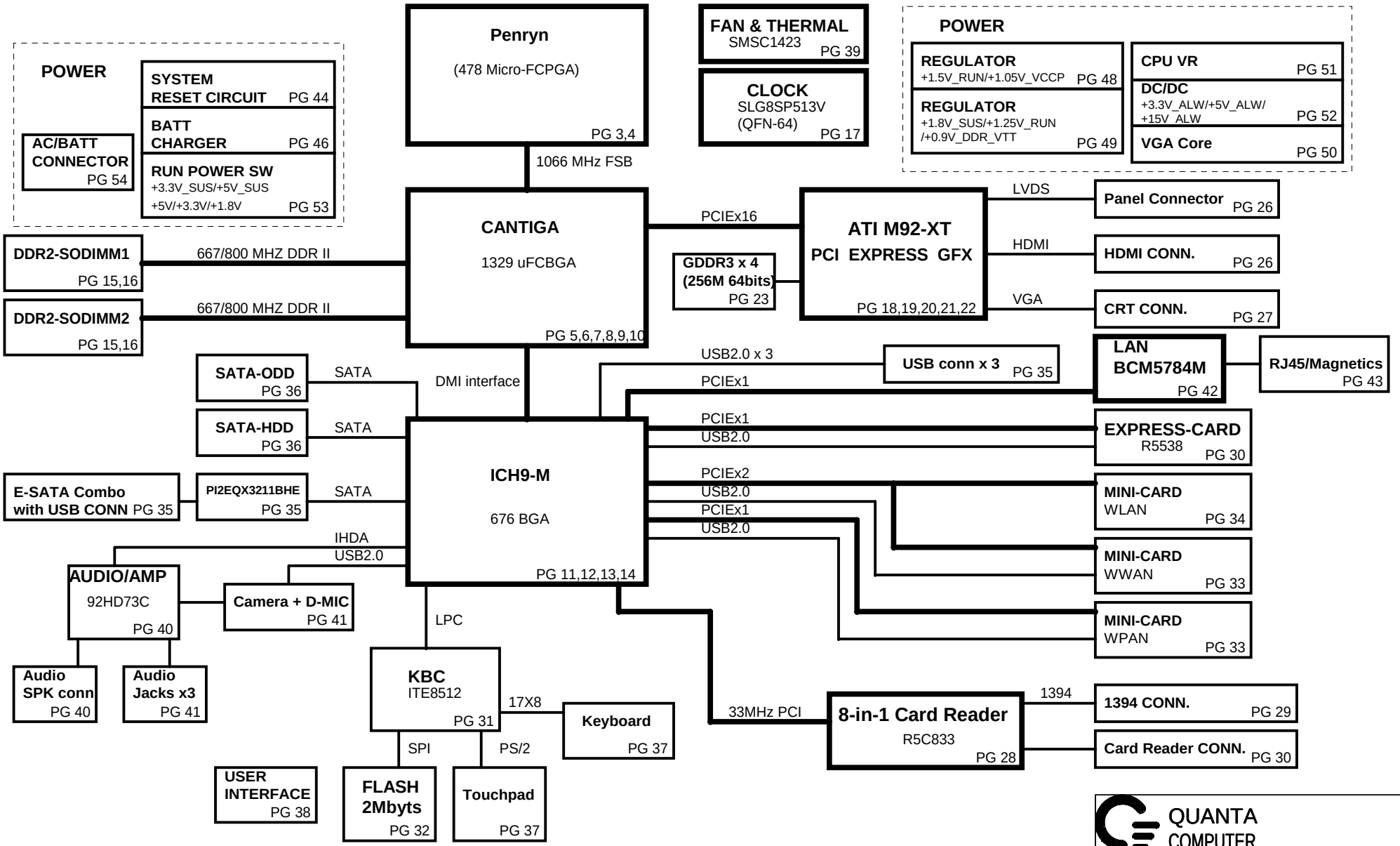
FM8 Hanks Intel Discrete GFX

VER : 3A
PWA:W021J
PWB:W018J



QUANTA COMPUTER

Title	Schematic Block Diagram1	
Size	Document Number FM8	Rev 2A
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Table of Contents

Power States

POWER PLANE	VOLTAGE	PAGE	DESCRIPTION	CONTROL SIGNAL	ACTIVE IN
+PWR_SRC	10V~+19V	4,26,32,34,46,48,49,50,51,52	MAIN POWER		S0~S5
+RTC_CELL	+3.0V~+3.3V	11,14,31,32	RTC		S0~S5
+3.3V_ALW	+3.3V	3,13,31,32,36,37,38,44,46,49,52,53,54	8051 POWER	ALWON	S0~S5
+5V_ALW2	+5V	38,48,49,52,53,54	LARGE POWER	RUN_ON	S0~S5
+3.3V_LAN	+3.3V	42,43	LAN POWER	AUX_ON	
+5V_SUS	+5V	14,35,36,38,50,51,52,53	SLP_S5# CTRLD POWER	SUS_ON	
+3.3V_SUS	+3.3V	3,11,12,13,14,20,26,30,38,43,48,50,51,53	SLP_S5# CTRLD POWER	SUS_ON	
+1.8V_SUS	+1.8V	6,8,9,15,48,49,50,53	SODIMM POWER	SUS_ON	
+0.9V_DDR_VTT	+0.9V	16,49,53	SODIMM POWER	RUN_ON	
+5V_RUN	+5V	14,20,26,27,36,37,39,40,41,53	SLP_S3# CTRLD POWER	RUN_ON	
+3.3V_RUN	+3.3V	3,6,8,9,11,12,13,14,15,17,20,22,26,27,28,30 ,31,33,34,36,39,40,41,42,51,53	SLP_S3# CTRLD POWER	RUN_ON	
+1.8V_RUN	+1.8V	19,20,21,22,23,38,53	SDVO POWER	RUN_ON	
+1.5V_RUN	+1.5V	4,9,14,30,31,33,34,48,53	CALISTOGA/ICH9 POWER	RUN_ON	
+1.2V_LOM	+1.25V	42	LOM POWER	+3.3V_LAN	
+1.1V_GFX_PCIE	+1.1V	21,50	VGA POWER	RUN_ON	
+1.05V_VCCP	+1.05V	3,4,5,6,8,9,11,14,48	CPU/CALISTOGA/ICH8 POWER	1.05V_RUN_ON	
+VCC_CORE	+0.7V~+1.77V	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	

GND PLANE	PAGE	DESCRIPTION
GND_CHG	46	
GND_1.05V	47	
GND_VGA	50	
GND_SIGNAL	51	
AGND_DC/DC	52	
GND	ALL	

QUANTA COMPUTER

Title	Index & Power Status	
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FSB	BCLK	BSEL2	BSEL1	BSEL0
533	133	0	0	1
667	166	0	1	1
800	200	0	1	0
1066	266	0	0	0

ITP disable guidelines

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

QUANTA COMPUTER

Title	Penryn Processor (HOST BUS)	
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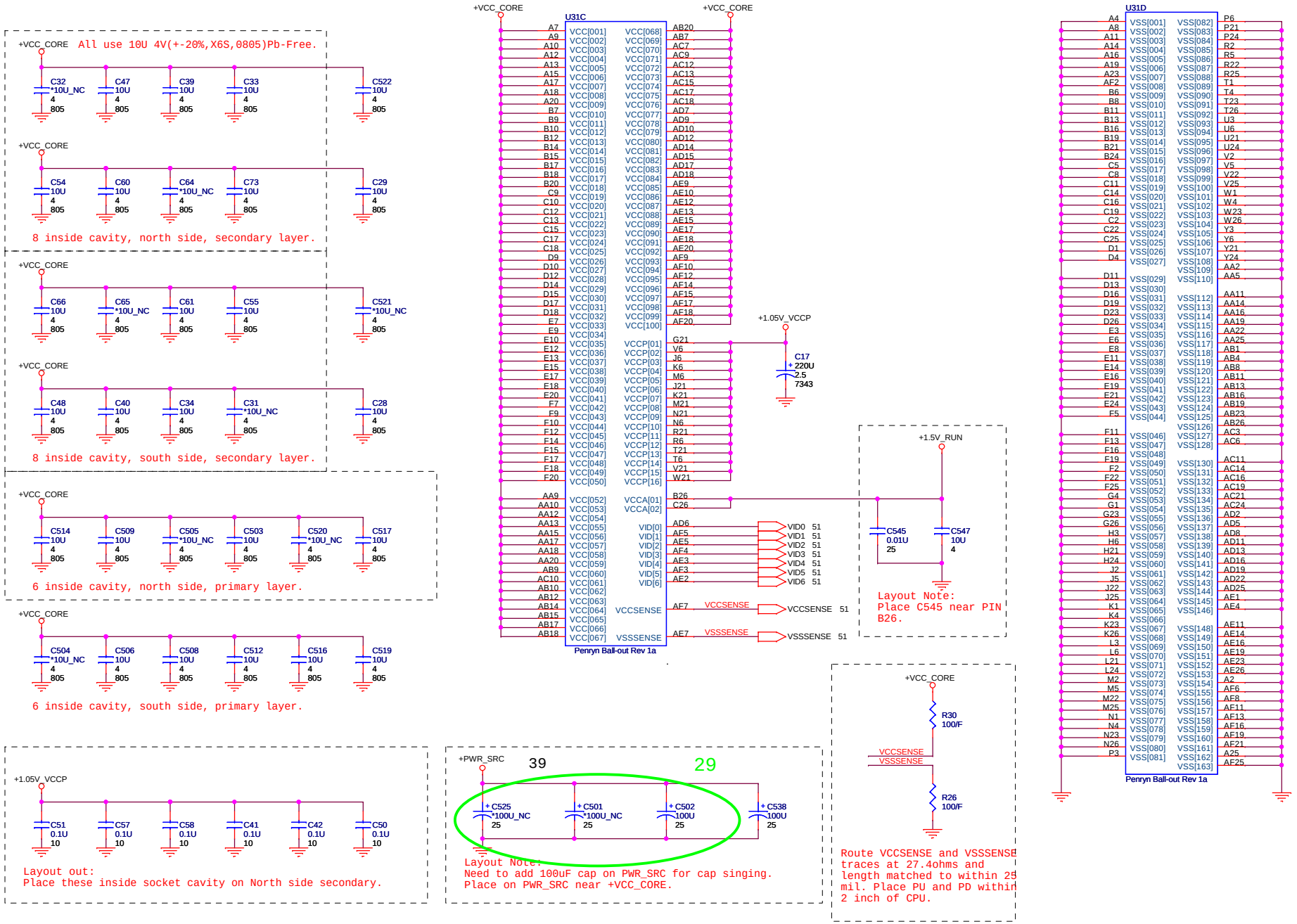
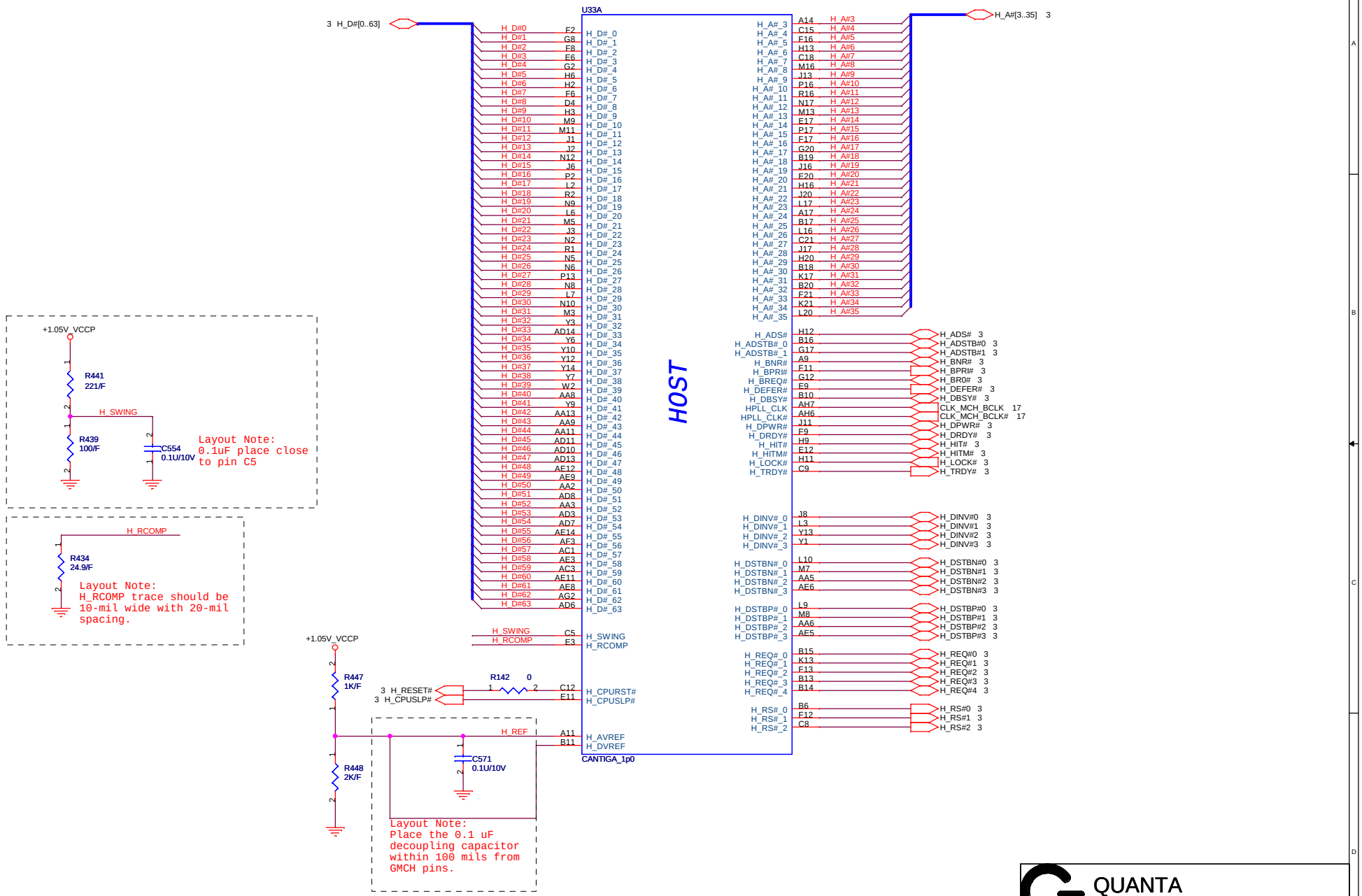


Title	Penryn Processor (HOST BUS)	
Size	Document Number FM8	Rev 2A
Date:	Tuesday, November 25, 2008	Sheet 4 of 58



QUANTA COMPUTER

Title	Cantiga (HOST)	
Size	Document Number FM8	Rev 2A
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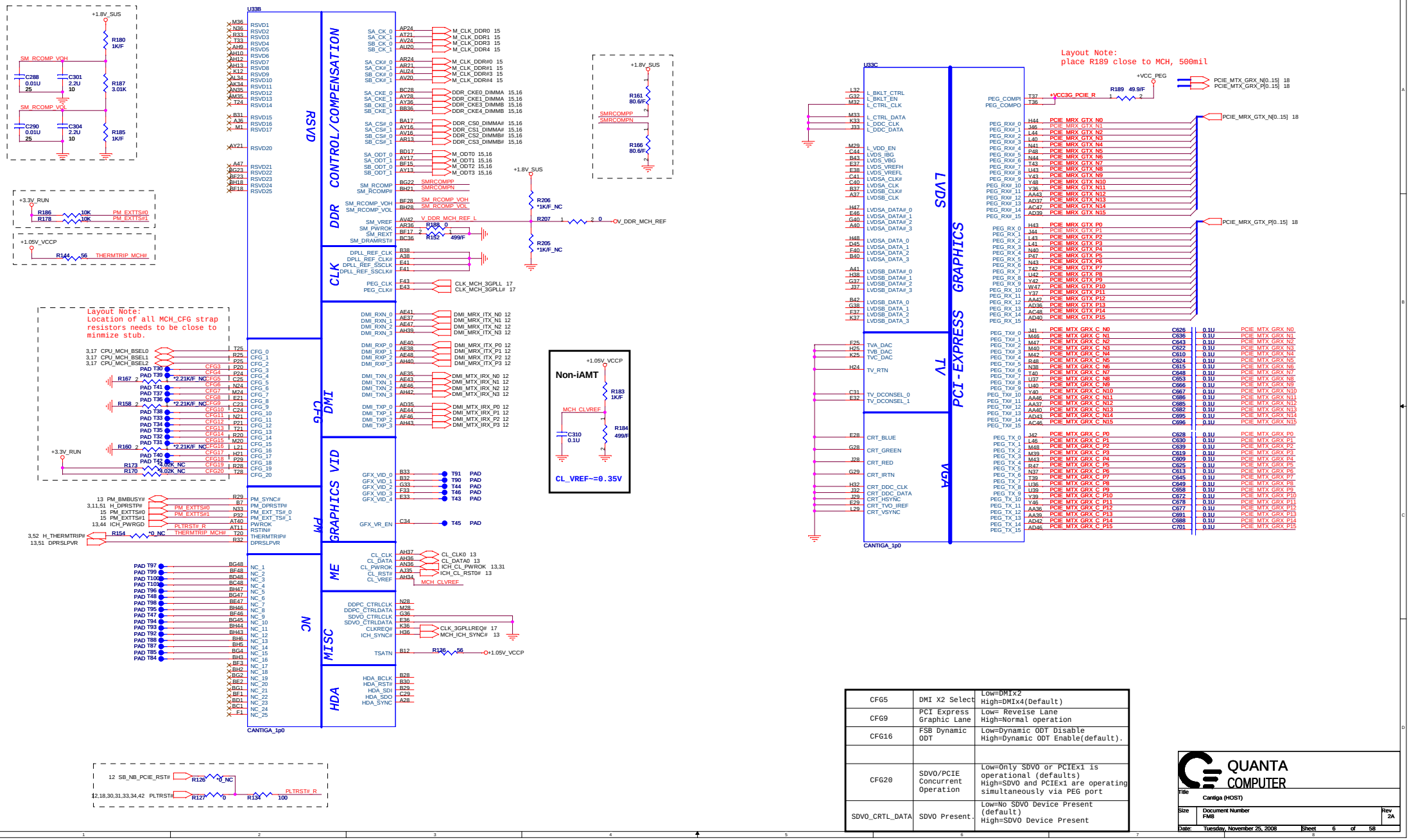

CFG5	DMI X2 Select	Low=DMIx2 High=DMIx4(Default)
CFG9	PCI Express Graphic Lane	Low= Reveise Lane High=Normal operation
CFG16	FSB Dynamic ODT	Low=Dynamic ODT Disable High=Dynamic ODT Enable(default).
CFG20	SDVO/PCIE Concurrent Operation	Low=Only SDVO or PCIEx1 is operational (defaults) High=SDVO and PCIEx1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

QUANTA COMPUTER

Title	Cantiga (HOST)	
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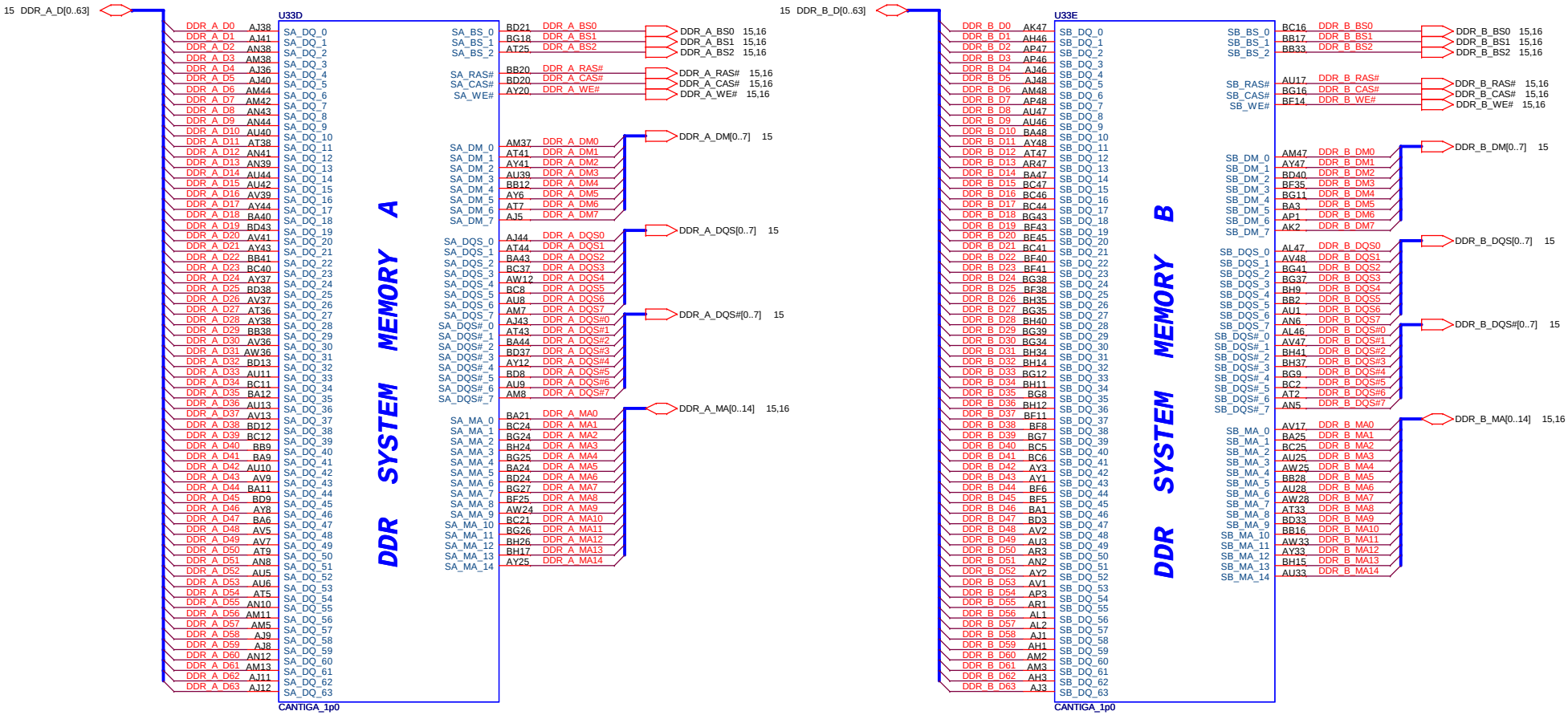

QUANTA COMPUTER		
Title: Cantiga (HOST)		
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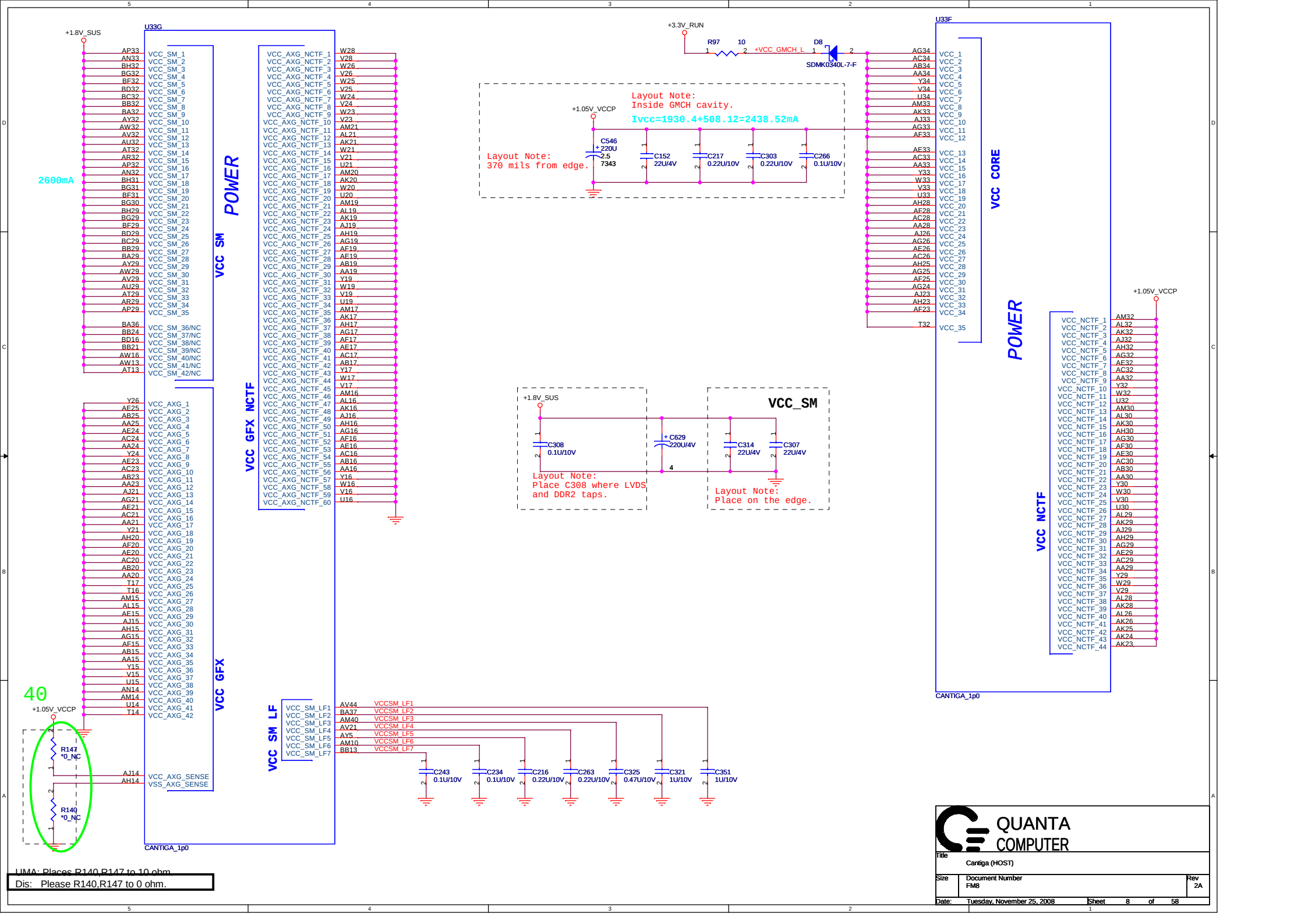
U33G
+1.8V_SUS
2600mA
VCC SM POWER
VCC GFX NCTF
VCC GFX
VCC SM LF
CANTIGA_1p0
+1.05V_VCCP
40
R147 *0_NC
R140 *0_NC
UMA: Places R140,R147 to 10 ohm.
Dis: Please R140,R147 to 0 ohm.
+3.3V_RUN
R97 10
+VCC_GMCH_L
D8
SDMK0340L-7-F
Layout Note:
Inside GMCH cavity.
Ivcc=1930.4+508.12=2438.52mA
Layout Note:
370 mils from edge.
C546 220U 2.5 7343
C152 22U/4V
C217 0.22U/10V
C303 0.22U/10V
C266 0.1U/10V
C308 0.1U/10V
C629 220U/4V
C314 22U/4V
C307 22U/4V
VCC_SM
Layout Note:
Place C308 where LVDS and DDR2 taps.
Layout Note:
Place on the edge.
C243 0.1U/10V
C234 0.1U/10V
C216 0.22U/10V
C263 0.22U/10V
C325 0.47U/10V
C321 1U/10V
C351 1U/10V
U33F
VCC CORE POWER
VCC NCTF
CANTIGA_1p0
QUANTA COMPUTER
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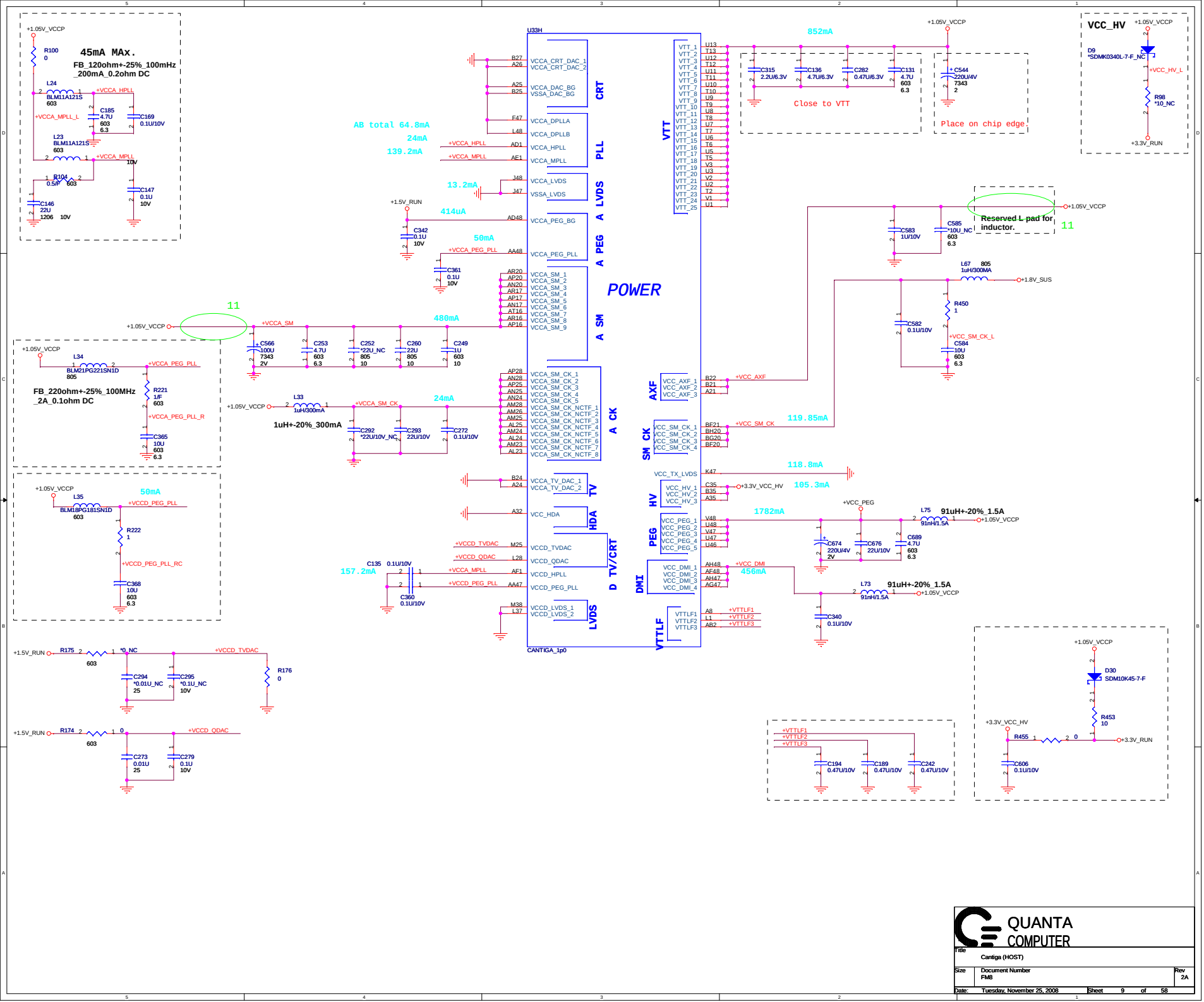
45mA MAx.
FB_120ohm+-25%_100mHz
_200mA_0.2ohm DC
AB total 64.8mA
24mA
139.2mA
13.2mA
414uA
50mA
480mA
24mA
119.85mA
118.8mA
105.3mA
1782mA
456mA
852mA
Close to VTT
Place on chip edge
Reserved L pad for inductor.
11
POWER
CRT
PLL
A LVDS
A PEG
A SM
A CK
TV
HDA
D TV/CRT
LVDS
VTT
AXF
SM CK
HV
PEG
DMI
VTTLF
FB_220ohm+-25%_100MHz
_2A_0.1ohm DC
1uH+-20%_300mA
91uH+-20%_1.5A
157.2mA
CANTIGA_1p0
VCC_HV
D9
*SDMK0340L-7-F_NC
D30
SDM10K45-7-F
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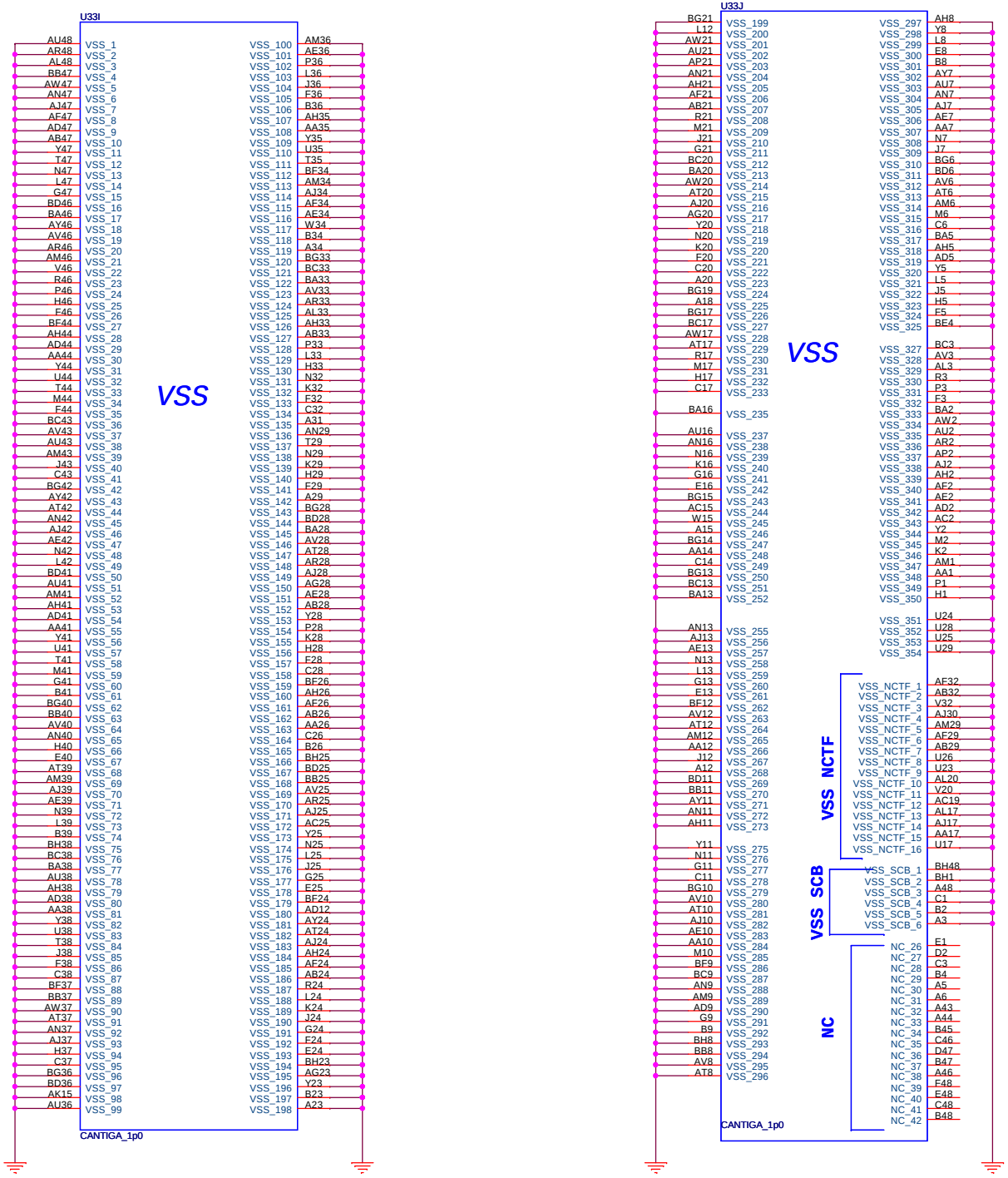

Title	Cantiga (HOST)
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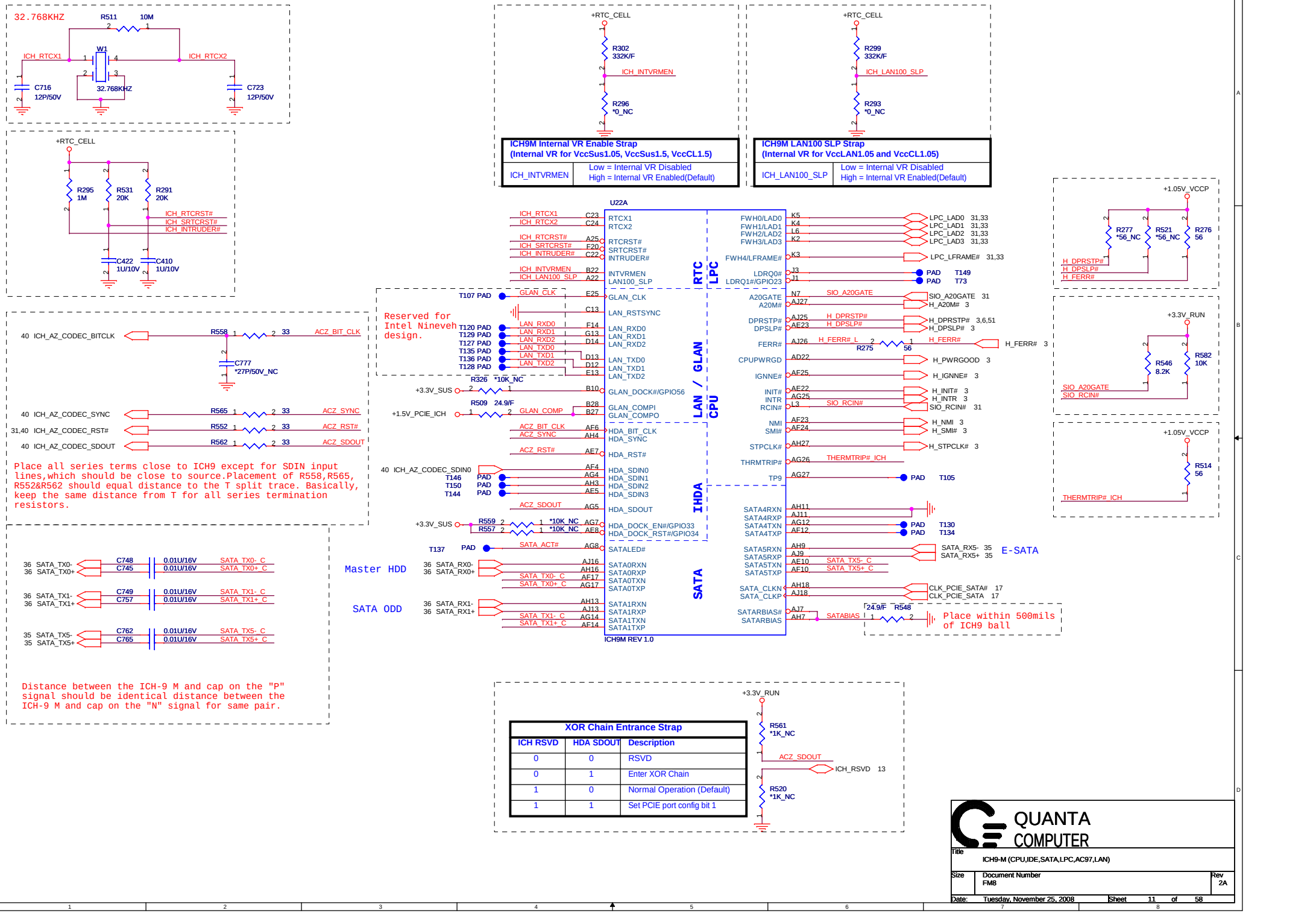
32.768KHZ
R511 10M
W1
ICH_RTCX1
ICH_RTCX2
C716 12P/50V
32.768KHZ
C723 12P/50V
+RTC_CELL
R295 1M
R531 20K
R291 20K
ICH_RTCRST#
ICH_SRTCRST#
ICH_INTRUDER#
C422 1U/10V
C410 1U/10V
+RTC_CELL
R302 332K/F
ICH_INTVRMEN
R296 *0_NC
ICH9M Internal VR Enable Strap
(Internal VR for VccSus1.05, VccSus1.5, VccCL1.5)
ICH_INTVRMEN
Low = Internal VR Disabled
High = Internal VR Enabled(Default)
+RTC_CELL
R299 332K/F
ICH_LAN100_SLP
R293 *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)
U22A
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
IHDA
SATALED#
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
ICH9M REV 1.0
Reserved for Intel Nineveh design.
T107 PAD
T120 PAD
T129 PAD
T127 PAD
T135 PAD
T136 PAD
T128 PAD
R326 *10K_NC
+3.3V_SUS
R509 24.9/F
+1.5V_PCIE_ICH
GLAN_COMP
40 ICH_AZ_CODEC_BITCLK
R558 33
ACZ_BIT_CLK
C777 *27P/50V_NC
40 ICH_AZ_CODEC_SYNC
R565 33
ACZ_SYNC
31,40 ICH_AZ_CODEC_RST#
R552 33
ACZ_RST#
40 ICH_AZ_CODEC_SDOUT
R562 33
ACZ_SDOUT
Place all series terms close to ICH9 except for SDIN input lines,which should be close to source.Placement of R558,R565, R552&R562 should equal distance to the T split trace. Basically, keep the same distance from T for all series termination resistors.
40 ICH_AZ_CODEC_SDIN0
T146 PAD
T150 PAD
T144 PAD
+3.3V_SUS
R559 *10K_NC
R557 *10K_NC
T137 PAD
SATA_ACT#
Master HDD
36 SATA_RX0-
36 SATA_RX0+
SATA_TX0- C
SATA_TX0+ C
SATA ODD
36 SATA_RX1-
36 SATA_RX1+
SATA_TX1- C
SATA_TX1+ C
36 SATA_TX0-
36 SATA_TX0+
C748 0.01U/16V
C745 0.01U/16V
SATA_TX0- C
SATA_TX0+ C
36 SATA_TX1-
36 SATA_TX1+
C749 0.01U/16V
C757 0.01U/16V
SATA_TX1- C
SATA_TX1+ C
35 SATA_TX5-
35 SATA_TX5+
C762 0.01U/16V
C765 0.01U/16V
SATA_TX5- C
SATA_TX5+ C
Distance between the ICH-9 M and cap on the "P" signal should be identical distance between the ICH-9 M and cap on the "N" signal for same pair.
LPC_LAD0 31,33
LPC_LAD1 31,33
LPC_LAD2 31,33
LPC_LAD3 31,33
LPC_LFRAME# 31,33
PAD T149
PAD T73
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 T105
PAD T130
PAD T134
E-SATA
SATA_RX5- 35
SATA_RX5+ 35
SATA_TX5- C
SATA_TX5+ C
CLK_PCIE_SATA# 17
CLK_PCIE_SATA 17
24.9/F R548
SATABIAS
Place within 500mils of ICH9 ball
+1.05V_VCCP
R277 *56_NC
R521 *56_NC
R276 56
H_DPRSTP#
H_DPSLP#
H_FERR#
+3.3V_RUN
R546 8.2K
R582 10K
SIO_A20GATE
SIO_RCIN#
+1.05V_VCCP
R514 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
R561 *1K_NC
ACZ_SDOUT
ICH_RSVD 13
R520 *1K_NC
QUANTA COMPUTER
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ICH9-M (CPU,IDE,SATA,LPC,AC97,LAN)
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Place TX DC blocking caps close ICH9.

33 PCIE_TX1- C717 1 2 0.1U 10 PCIE_TXN1_C
33 PCIE_TX1+ C718 1 2 0.1U 10 PCIE_TXP1_C

34 PCIE_TX2- C714 1 2 0.1U 10 PCIE_TXN2_C
34 PCIE_TX2+ C715 1 2 0.1U 10 PCIE_TXP2_C

33 PCIE_TX3- C712 1 2 0.1U 10 PCIE_TXN3_C
33 PCIE_TX3+ C713 1 2 0.1U 10 PCIE_TXP3_C

30 PCIE_TX4- C711 1 2 0.1U 10 PCIE_TXN4_C
30 PCIE_TX4+ C710 1 2 0.1U 10 PCIE_TXP4_C

42 PCIE_TX6-/GLAN_TX- C721 1 2 0.1U 10 GLAN_TXN_C
42 PCIE_TX6+/GLAN_TX+ C722 1 2 0.1U 10 GLAN_TXP_C

ICH_SPI_CS1#_R
PCI_GNT0#
R560 *1K_NC
R519 *1K_NC

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

U22D

33 PCIE_RX1- N29 PERN1
33 PCIE_RX1+ N28 PERP1
MiniWWAN
PCIE_TXN1_C P27 PETN1
PCIE_TXP1_C P26 PETP1

34 PCIE_RX2- L29 PERN2
34 PCIE_RX2+ L28 PERP2
MiniWLAN
PCIE_TXN2_C M27 PETN2
PCIE_TXP2_C M26 PETP2

33 PCIE_RX3- J29 PERN3
33 PCIE_RX3+ J28 PERP3
MiniWPAN
PCIE_TXN3_C K27 PETN3
PCIE_TXP3_C K26 PETP3

30 PCIE_RX4- G29 PERN4
30 PCIE_RX4+ G28 PERP4
Express Card
PCIE_TXN4_C H27 PETN4
PCIE_TXP4_C H26 PETP4

T55 PAD E29 PERN5
T104 PAD E28 PERP5
T106 PAD E27 PETN5
T108 PAD F26 PETP5

PCI-Express

42 PCIE_RX6-/GLAN_RX- C29 PERN6/GLAN_RXN
42 PCIE_RX6+/GLAN_RX+ C28 PERP6/GLAN_RXP
Giga Bit LOM
GLAN_TXN_C D27 PETN6/GLAN_TXN
GLAN_TXP_C D26 PETP6/GLAN_TXP

T112 PAD D23 SPI_CLK
T111 PAD D24 SPI_CS0#
ICH_SPI_CS1#_R F23 SPI_CS1#/GPIO58/CLGPIO6
T110 PAD D25 SPI_MOSI
T109 PAD E23 SPI_MISO

SPI

35 USB_OC0_1# USB_OC0_1# N4 OC0#/GPIO59
OC1#/GPIO40 N5
35 USB_OC2# USB_OC2# N6 OC2#/GPIO41
OC3# P6 OC3#/GPIO42
OC4# M1 OC4#/GPIO43
OC5# N2 OC5#/GPIO29
OC6# M4 OC6#/GPIO30
OC7# M3 OC7#/GPIO31
OC8# N3 OC8#/GPIO44
OC9# N1 OC9#/GPIIO45
OC10# P5 OC10#/GPIO46
OC11# P3 OC11#/GPIO47

USB

USBRBIAS AG2 USBRBIAS
USBRBIAS# AG1 USBRBIAS#

ICH9M REV 1.0

Direct Media Interface

DMI0RXN V27
DMI0RXP V26
DMI0TXN U29
DMI0TXP U28
DMI_MTX_IRX_N0 6
DMI_MTX_IRX_P0 6
DMI_MRX_ITX_N0 6
DMI_MRX_ITX_P0 6

DMI1RXN Y27
DMI1RXP Y26
DMI1TXN W29
DMI1TXP W28
DMI_MTX_IRX_N1 6
DMI_MTX_IRX_P1 6
DMI_MRX_ITX_N1 6
DMI_MRX_ITX_P1 6

DMI2RXN AB27
DMI2RXP AB26
DMI2TXN AA29
DMI2TXP AA28
DMI_MTX_IRX_N2 6
DMI_MTX_IRX_P2 6
DMI_MRX_ITX_N2 6
DMI_MRX_ITX_P2 6

DMI3RXN AD27
DMI3RXP AD26
DMI3TXN AC29
DMI3TXP AC28
DMI_MTX_IRX_N3 6
DMI_MTX_IRX_P3 6
DMI_MRX_ITX_N3 6
DMI_MRX_ITX_P3 6

DMI_CLKN T26
DMI_CLKP T25
CLK_PCIE_ICH# 17
CLK_PCIE_ICH 17

DMI_ZCOMP AE29
DMI_IRCOMP AF28
DMI_COMP
R265 24.9/F
+1.5V_PCIE_ICH

Place within 500mils of ICH9

USBP0N AC5
USBP0P AC4
USBP1N AD3
USBP1P AD2
USBP2N AC1
USBP2P AC2
USBP3N AA5
USBP3P AA4
USBP4N AB2
USBP4P AB3
USBP5N AA1
USBP5P AA2
USBP6N W5
USBP6P W4
USBP7N Y3
USBP7P Y2
USBP8N W1
USBP8P W2
USBP9N V2
USBP9P V3
USBP10N U5
USBP10P U4
USBP11N U1
USBP11P U2

ICH_USBP0- 35
ICH_USBP0+ 35
ICH_USBP1- 35
ICH_USBP1+ 35
ICH_USBP2- 35
ICH_USBP2+ 35
Side pair Top / left
Side pair bottom / left
Side pair top/right(DB)

ICH_USBP4- 34
ICH_USBP4+ 34
ICH_USBP5- 33
ICH_USBP5+ 33
ICH_USBP6- 33
ICH_USBP6+ 33
ICH_USBP7- 30
ICH_USBP7+ 30
Mini Card (WLAN)
Mini Card (WWAN)
Mini Card (WPAN)
Express Card

PAD T71
PAD T72
PAD T151
PAD T148
PAD T142
PAD T145

ICH_USBP11- 41
ICH_USBP11+ 41
Camera

Places within 500 mils of the ICH9
R338 22.6/F
USBRBIAS

PCI Pullups

RP43
PCI_FRAME# PCI_PLOCK#
PCI_TRDY# PCI_STOP#
PCI_DEVSEL# PCI_PIRQD#
PCI_REQ1# PCI_IRDY#
+3.3V_RUN

RP44
PCI_PIRQA# PCI_PIRQB#
PCI_SERR# PCI_PIRQC#
PCI_REQ0# PCI_PERR#
ICH_IRQH_GPIO5
+3.3V_RUN

WWAN Noise - ICH improvements

OC6# C788 *0.1U_NC
OC4# C462 *0.1U_NC
OC5# C464 *0.1U_NC
OC7# C465 *0.1U_NC
OC8# C463 *0.1U_NC
USB_OC2# C807 *0.1U_NC
USB_OC0_1# C786 *0.1U_NC
OC9# C789 *0.1U_NC

RP45 10KX8
+3.3V_SUS
OC7# OC9#
OC6# USB_OC2#
OC5# USB_OC0_1#
OC4# OC8#
OC10# R543 10K
OC11# R563 10K
OC3# R556 10K

SB_WPAN_PCIE_RST# R555 20K
SB_WWAN_PCIE_RST# R540 20K
SB_WLAN_PCIE_RST# R549 20K
SB_LOM_PCIE_RST# R554 20K
SB_NB_PCIE_RST# R352 20K

BIOS should not enable the internal GPIO pull up resistor.

28 PCI_AD[0..31]

U22B

PCI_AD0 D11 AD0
PCI_AD1 C8 AD1
PCI_AD2 D9 AD2
PCI_AD3 E12 AD3
PCI_AD4 E9 AD4
PCI_AD5 C9 AD5
PCI_AD6 E10 AD6
PCI_AD7 B7 AD7
PCI_AD8 C7 AD8
PCI_AD9 C5 AD9
PCI_AD10 G11 AD10
PCI_AD11 F8 AD11
PCI_AD12 F11 AD12
PCI_AD13 E7 AD13
PCI_AD14 A3 AD14
PCI_AD15 D2 AD15
PCI_AD16 F10 AD16
PCI_AD17 D5 AD17
PCI_AD18 D10 AD18
PCI_AD19 B3 AD19
PCI_AD20 F7 AD20
PCI_AD21 C3 AD21
PCI_AD22 F3 AD22
PCI_AD23 F4 AD23
PCI_AD24 C1 AD24
PCI_AD25 G7 AD25
PCI_AD26 H7 AD26
PCI_AD27 D1 AD27
PCI_AD28 G5 AD28
PCI_AD29 H6 AD29
PCI_AD30 G1 AD30
PCI_AD31 H3 AD31

PCI

REQ0# F1 PCI_REQ0#
GNT0# G4 PCI_GNT0#
REQ1#/GPIO50 B6 PCI_REQ1#
GNT1#/GPIO51 A7 PCI_GNT1#
REQ2#/GPIO52 E13 SB_WWAN_PCIE_RST#
GNT2#/GPIO53 E12 PCI_GNT2#
REQ3#/GPIO54 E6 SB_LOM_PCIE_RST#
GNT3#/GPIO55 F6 PCI_GNT3#

PCI_REQ0# 28
PCI_GNT0# 28
PAD T143
PAD T67
SB_WWAN_PCIE_RST# 33
PAD T133
SB_LOM_PCIE_RST# 42
PAD T139

C/BE0# D8 PCI_C_BE0# 28
C/BE1# B4 PCI_C_BE1# 28
C/BE2# D6 PCI_C_BE2# 28
C/BE3# A5 PCI_C_BE3# 28

IRDY# D3 PCI_IRDY#
PAR E3 PCI_PAR
PCIRST# R1 PCI_RST#_G
DEVSEL# C6 PCI_DEVSEL#
PERR# E4 PCI_PERR#
PLOCK# C2 PCI_PLOCK#
SERR# J4 PCI_SERR#
STOP# A4 PCI_STOP#
TRDY# E5 PCI_TRDY#
FRAME# D7 PCI_FRAME#

PCI_IRDY# 28
PCI_PAR 28
PCI_DEVSEL# 28
PCI_PERR# 28
PCI_PLOCK#
PCI_SERR# 28
PCI_STOP# 28
PCI_TRDY# 28
PCI_FRAME# 28

PCI_PLTRST# C14
CLK_PCI_ICH D4
PCICLK
PME# R2

CLK_PCI_ICH 17
ICH_PME# 28

Interrupt I/F

T152 PAD PCI_PIRQA# J5 PIRQA#
28 PCI_PIRQB# PCI_PIRQB# E1 PIRQB#
28 PCI_PIRQC# PCI_PIRQC# J6 PIRQC#
T147 PAD PCI_PIRQD# C4 PIRQD#

PIRQE#/GPIO2 H4 SB_WPAN_PCIE_RST#
PIRQF#/GPIO3 K6 SB_WLAN_PCIE_RST#
PIRQG#/GPIO4 F2 SB_NB_PCIE_RST#
PIRQH#/GPIO5 G2 ICH_IRQH_GPIO5

SB_WPAN_PCIE_RST# 33
SB_WLAN_PCIE_RST# 34
SB_NB_PCIE_RST# 6
PAD T154

ICH9M REV 1.0

CLK_PCI_ICH
R564 *10_NC
C783 *8.2P_NC
Reserved for EMI.Place resister and cap close to ICH.
16

PCI_GNT3#
R553 *1K_NC

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

Non-iAMT

+3.3V_SUS
C453 0.047U 10
U28 TC7SZ32FU(T5L,F,T)
PCI_RST# G
PCI_RST# 28

Add Buffers as needed for Loading and fanout concerns.

+3.3V_SUS
C775 0.047U 10
U23 TC7SZ32FU(T5L,F,T)
PCI_PLTRST#
PLTRST# 6,18,30,31,33,34,42

QUANTA COMPUTER

Title	ICH9-M (USB,DMI,PCIE,PCI)	
Size	Document Number FM8	Rev 2A
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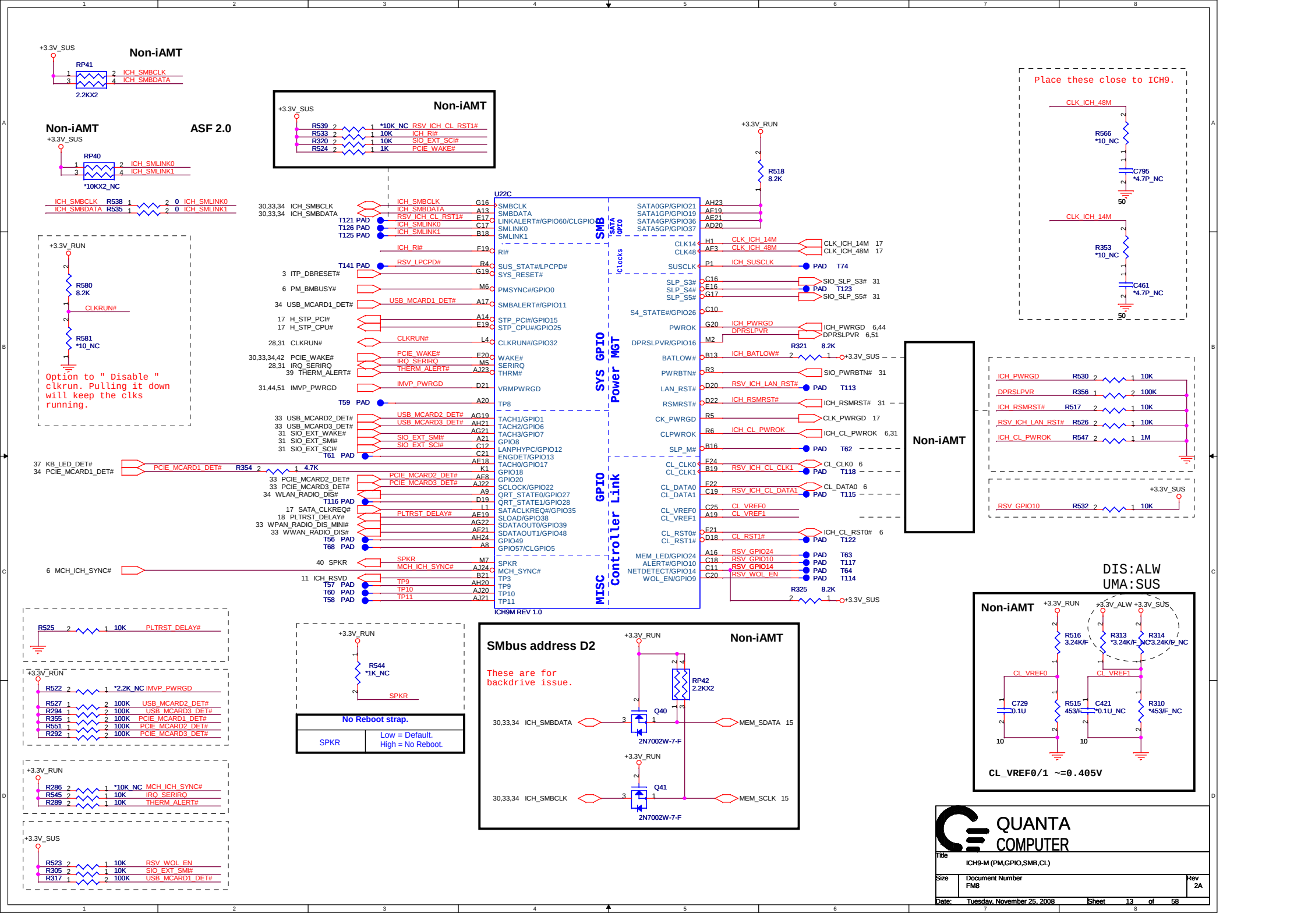
Non-iAMT
+3.3V_SUS
RP41
2.2KX2
ICH_SMBCLK
ICH_SMBDATA
Non-iAMT
ASF 2.0
RP40
*10KX2_NC
ICH_SMLINK0
ICH_SMLINK1
R538
R535
Non-iAMT
R539 *10K_NC RSV_ICH_CL_RST1#
R533 10K ICH_RI#
R320 10K SIO_EXT_SCI#
R524 1K PCIE_WAKE#
+3.3V_RUN
R518 8.2K
U22C
SMBCLK
SMBDATA
LINKALERT#/GPIO60/CLGPIO6
SMLINK0
SMLINK1
RI#
SUS_STAT#/LPCPD#
SYS_RESET#
PMSYNC#/GPIO0
SMBALERT#/GPIO11
STP_PCI#/GPIO15
STP_CPU#/GPIO25
CLKRUN#/GPIO32
WAKE#
SERIRQ
THRM#
VRMPWRGD
TP8
TACH1/GPIO1
TACH2/GPIO6
TACH3/GPIO7
GPIO8
LANPHYPC/GPIO12
ENGDET/GPIO13
TACH0/GPIO17
GPIO18
GPIO20
SCLOCK/GPIO22
QRT_STATE0/GPIO27
QRT_STATE1/GPIO28
SATACLKREQ#/GPIO35
SLOAD/GPIO38
SDATAOUT0/GPIO39
SDATAOUT1/GPIO48
GPIO49
GPIO57/CLGPIO5
SPKR
MCH_SYNC#
TP3
TP9
TP10
TP11
SMB
SATA GPIO
iClocks
SYS GPIO
Power MGT
GPIO
Controller Link
MISC
SATA0GP/GPIO21
SATA1GP/GPIO19
SATA4GP/GPIO36
SATA5GP/GPIO37
CLK14
CLK48
SUSCLK
SLP_S3#
SLP_S4#
SLP_S5#
S4_STATE#/GPIO26
PWROK
DPRSLPVR/GPIO16
BATLOW#
PWRBTN#
LAN_RST#
RSMRST#
CK_PWRGD
CLPWROK
SLP_M#
CL_CLK0
CL_CLK1
CL_DATA0
CL_DATA1
CL_VREF0
CL_VREF1
CL_RST0#
CL_RST1#
MEM_LED/GPIO24
ALERT#/GPIO10
NETDETECT/GPIO14
WOL_EN/GPIO9
ICH9M REV 1.0
Place these close to ICH9.
CLK_ICH_48M
R566 *10_NC
C795 *4.7P_NC
CLK_ICH_14M
R353 *10_NC
C461 *4.7P_NC
50
+3.3V_RUN
R580 8.2K
CLKRUN#
R581 *10_NC
Option to " Disable " clkrun. Pulling it down will keep the clks running.
R354 4.7K
PCIE_MCARD1_DET#
R321 8.2K
+3.3V_SUS
Non-iAMT
ICH_PWRGD R530 10K
DPRSLPVR R356 100K
ICH_RSMRST# R517 10K
RSV_ICH_LAN_RST# R526 10K
ICH_CL_PWROK R547 1M
RSV_GPIO10 R532 10K
DIS:ALW
UMA:SUS
Non-iAMT
R516 3.24K/F
R313 *3.24K/F_NC
R314 *3.24K/F_NC
CL_VREF0
CL_VREF1
C729 0.1U
R515 453/F
C421 *0.1U_NC
R310 *453/F_NC
CL_VREF0/1 ~=0.405V
R525 10K PLTRST_DELAY#
R544 *1K_NC
SPKR
No Reboot strap.
SPKR
Low = Default.
High = No Reboot.
SMbus address D2
These are for backdrive issue.
RP42 2.2KX2
Q40
2N7002W-7-F
Q41
2N7002W-7-F
ICH_SMBDATA
MEM_SDATA
ICH_SMBCLK
MEM_SCLK
R522 *2.2K_NC IMVP_PWRGD
R527 100K USB_MCARD2_DET#
R294 100K USB_MCARD3_DET#
R355 100K PCIE_MCARD1_DET#
R551 100K PCIE_MCARD2_DET#
R292 100K PCIE_MCARD3_DET#
R286 *10K_NC MCH_ICH_SYNC#
R545 10K IRQ_SERIRQ
R289 10K THERM_ALERT#
R523 10K RSV_WOL_EN
R305 10K SIO_EXT_SMI#
R317 100K USB_MCARD1_DET#
QUANTA COMPUTER
Title
ICH9-M (PM,GPIO,SMB,CL)
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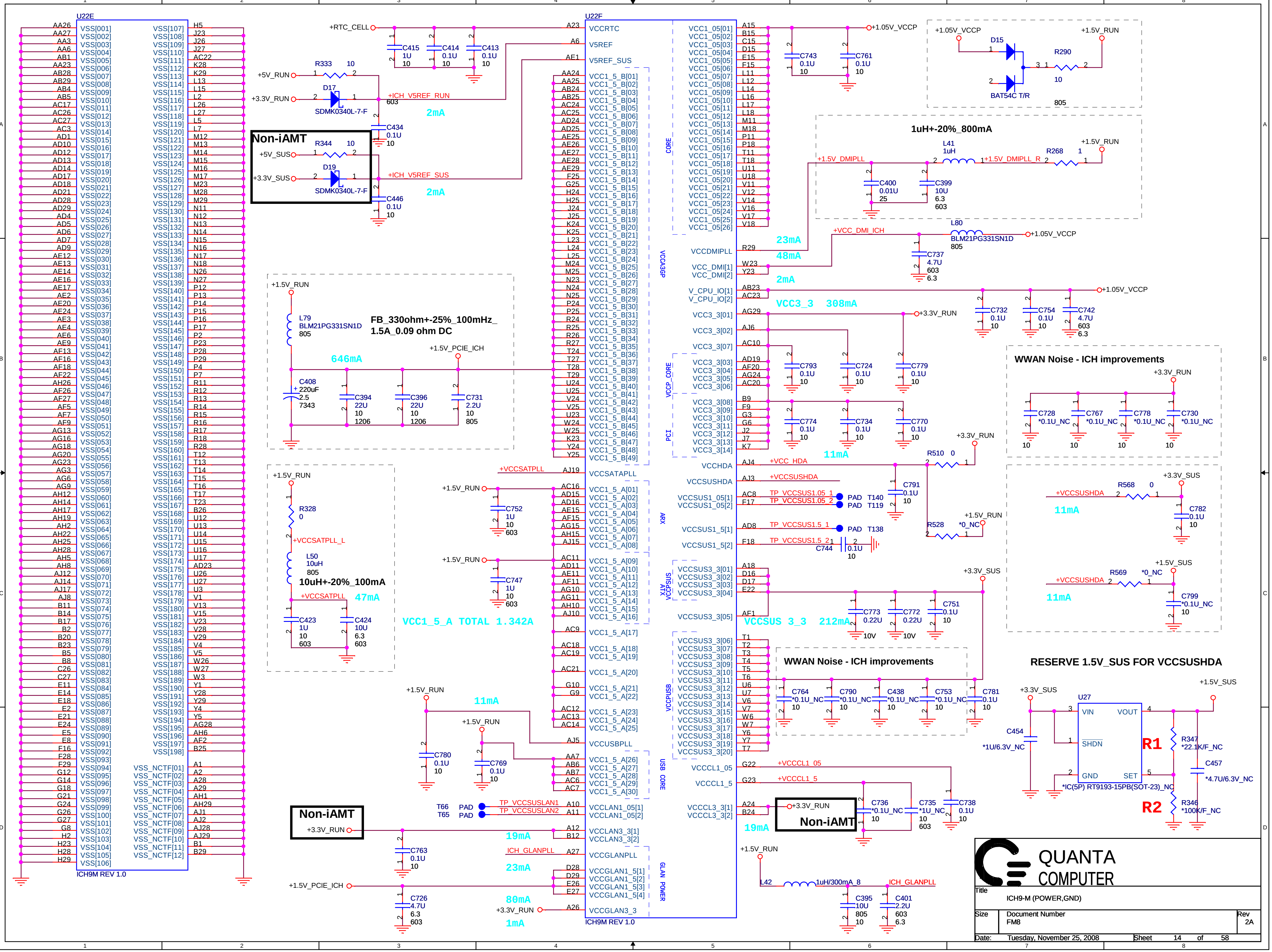

QUANTA COMPUTER

Title	ICH9-M (POWER,GND)	
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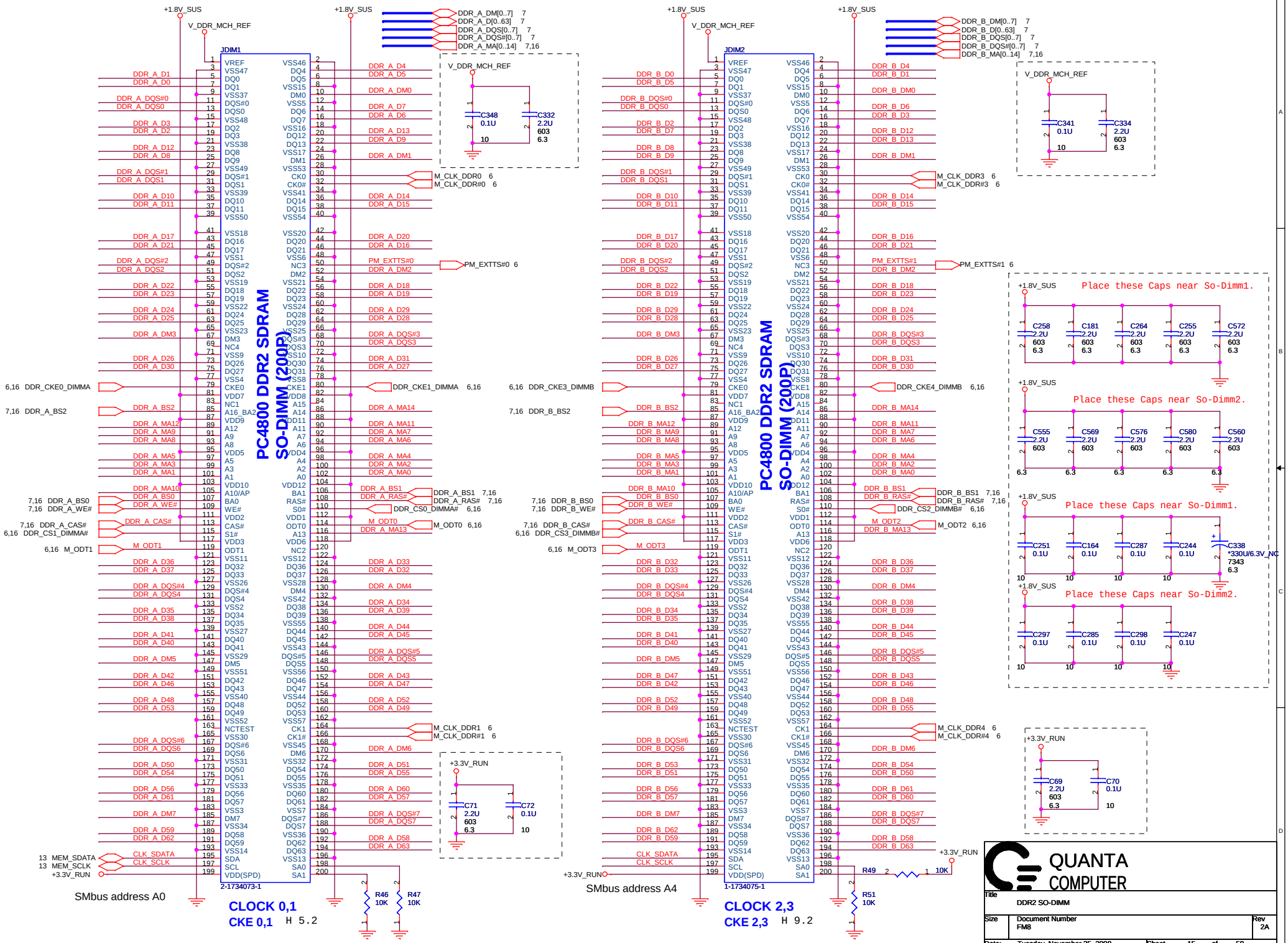
JDIM1
PC4800 DDR2 SDRAM
SO-DIMM (200P)
2-1734073-1
SMbus address A0
CLOCK 0,1
CKE 0,1 H 5.2
JDIM2
PC4800 DDR2 SDRAM
SO-DIMM (200P)
1-1734075-1
SMbus address A4
CLOCK 2,3
CKE 2,3 H 9.2
Place these Caps near So-Dimm1.
Place these Caps near So-Dimm2.
Place these Caps near So-Dimm1.
Place these Caps near So-Dimm2.
QUANTA COMPUTER
DDR2 SO-DIMM
FM8
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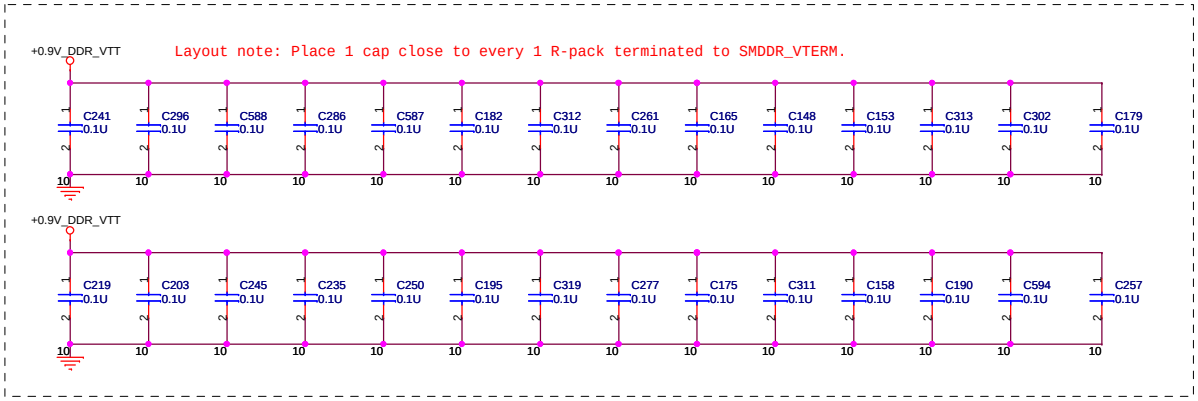

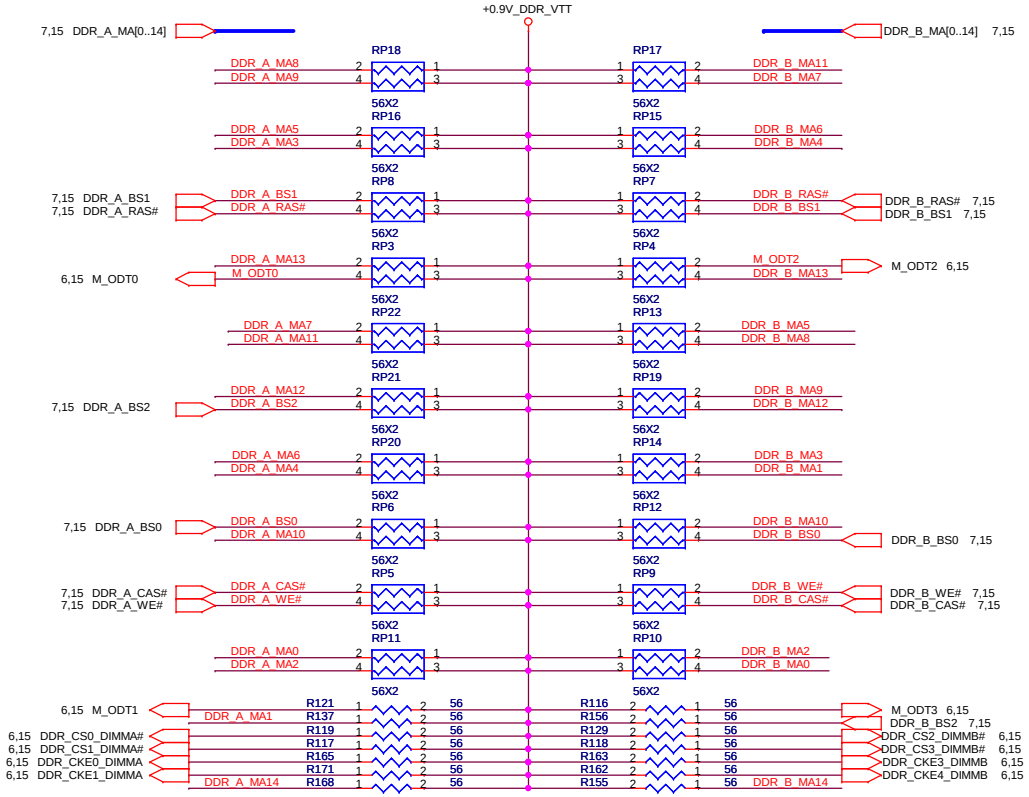

Layout notice:
Please these resistor
closely DIMMA,all
trace length<750 mil.

Layout notice:
Please these resistor
closely DIMMB,all
trace length<750 mil.

QUANTA COMPUTER

Title	DDR2 RES. ARRAY	
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Add capacitor pads for improving WWAN.

C402 20P 50 CLK_ICH_48M
C392 *27P_NC 50 CLK_ICH_14M
C389 *27P_NC 50 CLK_PCI_8512
C709 *27P_NC 50 CLK_PCI_PCCARD
C398 *27P_NC 50 CLK_PCI_ICH

Y2 14.318MHZ
CLK_XTAL_IN — CLK_XTAL_OUT
C405 33P 50
C406 33P 50
14.318MHz

U21
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
8 CR#_A/PCI-0
10 CR_B/PCI-1
11 TME/PCI-2
12 SRC5_EN/PCI-3
13 27M_SEL/PCI-4
14 ITP_EN/PCIF-5#
17 FSA/USB48
64 FSB/TEST_MODE
5 FSC/TEST_SEL/REF
55 RESET#
63 CK_PWRGD/PD#
2 XOUT
3 XIN
6 SDATA
7 SCLK

CPU-0 61 — CPU-0# 60 — CLK_CPU_BCLK 3 / CLK_CPU_BCLK# 3
CPU-1 58 — CPU-1# 57 — CLK_MCH_BCLK 5 / CLK_MCH_BCLK# 5
SRC-8/CPU_ITP 54 — SRC-8#/CPU_ITP# 53 — CLK_PCIE_MINI1 34 / CLK_PCIE_MINI1# 34
SRC-0/DOT96 20 — SRC-0#/DOT96# 21 — CLK_PCIE_VGA 18 / CLK_PCIE_VGA# 18
SRC-1/SE1 24 — SRC-1#/SE2 25 — 27M_NSS R280 2 1 33 / 27M_SS R281 2 1 *33_NC — CLK_VGA_27M_NSS 19 / CLK_VGA_27M_SS 19
SRC-2/SATA 28 — SRC-2#/SATA# 29 — CLK_PCIE_SATA 11 / CLK_PCIE_SATA# 11
CR#_C/SRC-3 31 — CR#_D/SRC-3# 32 — CLK_PCIE_MINI3 33 / CLK_PCIE_MINI3# 33
SRC-4 34 — SRC-4# 35 — CLK_MCH_3GPLL 6 / CLK_MCH_3GPLL# 6
PCI_STOP#/SRC-5 45 — CPU_STOP#/SRC5-5# 44 — H_STP_PCI# 13 / H_STP_CPU# 13
SRC-6 48 — SRC-6# 47 — CLK_PCIE_EXPCARD 30 / CLK_PCIE_EXPCARD# 30
CR#_F/SRC-7 51 — CR#_E/SRC-7# 50 — MINI1CLK_REQ# C R298 1 2 475/F MINI1CLK_REQ# — CARD_CLK_REQ# C R297 1 2 475/F CARD_CLK_REQ# — MINI1CLK_REQ# 34 / CARD_CLK_REQ# 30
SRC-9 37 — SRC-9# 38 — CLK_PCIE_MINI2 33 / CLK_PCIE_MINI2# 33
SRC-10 41 — SRC-10# 42 — CLK_PCIE_ICH 12 / CLK_PCIE_ICH# 12
CR#_H/SRC-11 40 — CR#_G/SRC-11# 39 — CLK_PCIE_LOM 42 / CLK_PCIE_LOM# 42
GND 65

13 SATA_CLKREQ# — SATA_CLKREQ# R261 1 2 475/F
6 CLK_3GPLLREQ# — CLK_3GPLLREQ# R260 1 2 475/F
33 CLK_LPC_DEBUG — CLK_LPC_DEBUG R508 1 2 22
28 CLK_PCI_PCCARD — CLK_PCI_PCCARD R507 2 1 33
31 CLK_PCI_8512 — CLK_PCI_8512 R257 2 1 33
12 CLK_PCI_ICH — CLK_PCI_ICH R258 2 1 33
13 CLK_ICH_48M — CLK_ICH_48M R269 2 1 33
3,6 CPU_MCH_BSEL0
3,6 CPU_MCH_BSEL1
3,6 CPU_MCH_BSEL2
L44 BLM18AG601SN1D
L39 BLM18AG601SN1D
CLK_ICH_48M R274 2.2K — R272 1 2 0 — R263 2 1 10K
13 CLK_ICH_14M — CLK_ICH_14M R262 2 1 33
13 CLK_PWRGD

SATA_CLKREQ# C
CLK_3GPLLREQ# C
PCI_PCCARD
PCI_SIO
27M_SEL
PCI_ICH
FSA
FSB
FSC

CLK_XTAL_OUT
CLK_XTAL_IN
CLK_SDATA
CLK_SCLK

+3.3V_RUN
H_STP_PCI# R312 2 1 10K
H_STP_CPU# R311 2 1 10K

+3.3V_RUN
CLK_3GPLLREQ# R251 2 1 10K
SATA_CLKREQ# R252 2 1 10K
CARD_CLK_REQ# R300 2 1 10K
MINI1CLK_REQ# R301 2 1 10K
PCI_PCCARD R505 1 2 *10K_NC

PCI_SIO R266 1 2 *10K_NC

UMA without iAMT

+3.3V_RUN
L48 BLM21PG600SN1D 805 120 ohms@100Mhz
+CK_VDD_MAIN
C407 0.1U 10
C727 0.1U 10
C418 0.1U 10
C733 0.1U 10
C417 0.1U 10
C409 0.1U 10
C420 *10U_NC 603 6.3
L47 BLM21PG600SN1D 805 120 ohms@100Mhz
R271 2.2 +CK_VDD_PCI
C720 0.1U 10
C719 0.1U 10
R512 2.2 +CK_VDD_PLL3
C725 0.1U 10
R270 2.2 +CK_VDD_48
C403 0.1U 10
C404 4.7U 603 6.3
R529 2.2 +CK_VDD_SRC
C740 0.1U 10
C739 0.1U 10

Non-iAMT

SMbus address D2
These are for backdrive issue.

+3.3V_RUN
RP39 2.2KX2
Q65 2N7002W-7-F
31,39 SMBDAT1 — CLK_SDATA
+3.3V_RUN
Q64 2N7002W-7-F
31,39 SMBCLK1 — CLK_SCLK

+3.3V_RUN
R506 *10K_NC
PCI_ICH
R503 *10K_NC

R506 POP: For Internal pull-low.
R503 POP: For internal pull-high.

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

+3.3V_RUN
R253 10K
27M_SEL
R256 *10K_NC

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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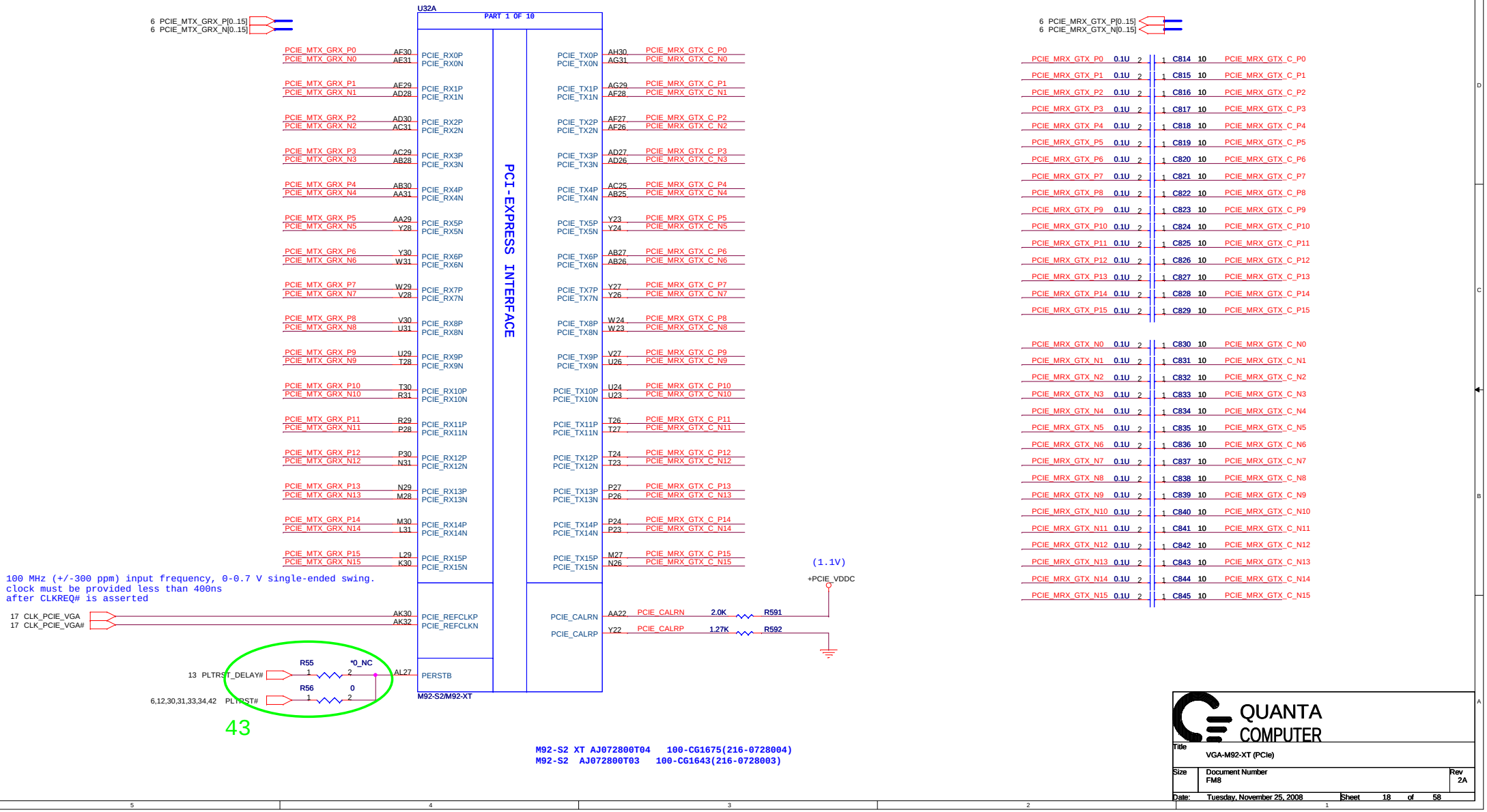
U32A
PART 1 OF 10
PCI-EXPRESS INTERFACE
M92-S2/M92-XT
6 PCIE_MTX_GRX_P[0..15]
6 PCIE_MTX_GRX_N[0..15]
6 PCIE_MRX_GTX_P[0..15]
6 PCIE_MRX_GTX_N[0..15]
PCIE_MTX_GRX_P0 AF30 PCIE_RX0P
PCIE_MTX_GRX_N0 AE31 PCIE_RX0N
PCIE_MTX_GRX_P1 AE29 PCIE_RX1P
PCIE_MTX_GRX_N1 AD28 PCIE_RX1N
PCIE_MTX_GRX_P2 AD30 PCIE_RX2P
PCIE_MTX_GRX_N2 AC31 PCIE_RX2N
PCIE_MTX_GRX_P3 AC29 PCIE_RX3P
PCIE_MTX_GRX_N3 AB28 PCIE_RX3N
PCIE_MTX_GRX_P4 AB30 PCIE_RX4P
PCIE_MTX_GRX_N4 AA31 PCIE_RX4N
PCIE_MTX_GRX_P5 AA29 PCIE_RX5P
PCIE_MTX_GRX_N5 Y28 PCIE_RX5N
PCIE_MTX_GRX_P6 Y30 PCIE_RX6P
PCIE_MTX_GRX_N6 W31 PCIE_RX6N
PCIE_MTX_GRX_P7 W29 PCIE_RX7P
PCIE_MTX_GRX_N7 V28 PCIE_RX7N
PCIE_MTX_GRX_P8 V30 PCIE_RX8P
PCIE_MTX_GRX_N8 U31 PCIE_RX8N
PCIE_MTX_GRX_P9 U29 PCIE_RX9P
PCIE_MTX_GRX_N9 T28 PCIE_RX9N
PCIE_MTX_GRX_P10 T30 PCIE_RX10P
PCIE_MTX_GRX_N10 R31 PCIE_RX10N
PCIE_MTX_GRX_P11 R29 PCIE_RX11P
PCIE_MTX_GRX_N11 P28 PCIE_RX11N
PCIE_MTX_GRX_P12 P30 PCIE_RX12P
PCIE_MTX_GRX_N12 N31 PCIE_RX12N
PCIE_MTX_GRX_P13 N29 PCIE_RX13P
PCIE_MTX_GRX_N13 M28 PCIE_RX13N
PCIE_MTX_GRX_P14 M30 PCIE_RX14P
PCIE_MTX_GRX_N14 L31 PCIE_RX14N
PCIE_MTX_GRX_P15 L29 PCIE_RX15P
PCIE_MTX_GRX_N15 K30 PCIE_RX15N
PCIE_TX0P AH30 PCIE_MRX_GTX_C_P0
PCIE_TX0N AG31 PCIE_MRX_GTX_C_N0
PCIE_TX1P AG29 PCIE_MRX_GTX_C_P1
PCIE_TX1N AF28 PCIE_MRX_GTX_C_N1
PCIE_TX2P AF27 PCIE_MRX_GTX_C_P2
PCIE_TX2N AF26 PCIE_MRX_GTX_C_N2
PCIE_TX3P AD27 PCIE_MRX_GTX_C_P3
PCIE_TX3N AD26 PCIE_MRX_GTX_C_N3
PCIE_TX4P AC25 PCIE_MRX_GTX_C_P4
PCIE_TX4N AB25 PCIE_MRX_GTX_C_N4
PCIE_TX5P Y23 PCIE_MRX_GTX_C_P5
PCIE_TX5N Y24 PCIE_MRX_GTX_C_N5
PCIE_TX6P AB27 PCIE_MRX_GTX_C_P6
PCIE_TX6N AB26 PCIE_MRX_GTX_C_N6
PCIE_TX7P Y27 PCIE_MRX_GTX_C_P7
PCIE_TX7N Y26 PCIE_MRX_GTX_C_N7
PCIE_TX8P W24 PCIE_MRX_GTX_C_P8
PCIE_TX8N W23 PCIE_MRX_GTX_C_N8
PCIE_TX9P V27 PCIE_MRX_GTX_C_P9
PCIE_TX9N U26 PCIE_MRX_GTX_C_N9
PCIE_TX10P U24 PCIE_MRX_GTX_C_P10
PCIE_TX10N U23 PCIE_MRX_GTX_C_N10
PCIE_TX11P T26 PCIE_MRX_GTX_C_P11
PCIE_TX11N T27 PCIE_MRX_GTX_C_N11
PCIE_TX12P T24 PCIE_MRX_GTX_C_P12
PCIE_TX12N T23 PCIE_MRX_GTX_C_N12
PCIE_TX13P P27 PCIE_MRX_GTX_C_P13
PCIE_TX13N P26 PCIE_MRX_GTX_C_N13
PCIE_TX14P P24 PCIE_MRX_GTX_C_P14
PCIE_TX14N P23 PCIE_MRX_GTX_C_N14
PCIE_TX15P M27 PCIE_MRX_GTX_C_P15
PCIE_TX15N N26 PCIE_MRX_GTX_C_N15
PCIE_MRX_GTX_P0 0.1U 2 1 C814 10 PCIE_MRX_GTX_C_P0
PCIE_MRX_GTX_P1 0.1U 2 1 C815 10 PCIE_MRX_GTX_C_P1
PCIE_MRX_GTX_P2 0.1U 2 1 C816 10 PCIE_MRX_GTX_C_P2
PCIE_MRX_GTX_P3 0.1U 2 1 C817 10 PCIE_MRX_GTX_C_P3
PCIE_MRX_GTX_P4 0.1U 2 1 C818 10 PCIE_MRX_GTX_C_P4
PCIE_MRX_GTX_P5 0.1U 2 1 C819 10 PCIE_MRX_GTX_C_P5
PCIE_MRX_GTX_P6 0.1U 2 1 C820 10 PCIE_MRX_GTX_C_P6
PCIE_MRX_GTX_P7 0.1U 2 1 C821 10 PCIE_MRX_GTX_C_P7
PCIE_MRX_GTX_P8 0.1U 2 1 C822 10 PCIE_MRX_GTX_C_P8
PCIE_MRX_GTX_P9 0.1U 2 1 C823 10 PCIE_MRX_GTX_C_P9
PCIE_MRX_GTX_P10 0.1U 2 1 C824 10 PCIE_MRX_GTX_C_P10
PCIE_MRX_GTX_P11 0.1U 2 1 C825 10 PCIE_MRX_GTX_C_P11
PCIE_MRX_GTX_P12 0.1U 2 1 C826 10 PCIE_MRX_GTX_C_P12
PCIE_MRX_GTX_P13 0.1U 2 1 C827 10 PCIE_MRX_GTX_C_P13
PCIE_MRX_GTX_P14 0.1U 2 1 C828 10 PCIE_MRX_GTX_C_P14
PCIE_MRX_GTX_P15 0.1U 2 1 C829 10 PCIE_MRX_GTX_C_P15
PCIE_MRX_GTX_N0 0.1U 2 1 C830 10 PCIE_MRX_GTX_C_N0
PCIE_MRX_GTX_N1 0.1U 2 1 C831 10 PCIE_MRX_GTX_C_N1
PCIE_MRX_GTX_N2 0.1U 2 1 C832 10 PCIE_MRX_GTX_C_N2
PCIE_MRX_GTX_N3 0.1U 2 1 C833 10 PCIE_MRX_GTX_C_N3
PCIE_MRX_GTX_N4 0.1U 2 1 C834 10 PCIE_MRX_GTX_C_N4
PCIE_MRX_GTX_N5 0.1U 2 1 C835 10 PCIE_MRX_GTX_C_N5
PCIE_MRX_GTX_N6 0.1U 2 1 C836 10 PCIE_MRX_GTX_C_N6
PCIE_MRX_GTX_N7 0.1U 2 1 C837 10 PCIE_MRX_GTX_C_N7
PCIE_MRX_GTX_N8 0.1U 2 1 C838 10 PCIE_MRX_GTX_C_N8
PCIE_MRX_GTX_N9 0.1U 2 1 C839 10 PCIE_MRX_GTX_C_N9
PCIE_MRX_GTX_N10 0.1U 2 1 C840 10 PCIE_MRX_GTX_C_N10
PCIE_MRX_GTX_N11 0.1U 2 1 C841 10 PCIE_MRX_GTX_C_N11
PCIE_MRX_GTX_N12 0.1U 2 1 C842 10 PCIE_MRX_GTX_C_N12
PCIE_MRX_GTX_N13 0.1U 2 1 C843 10 PCIE_MRX_GTX_C_N13
PCIE_MRX_GTX_N14 0.1U 2 1 C844 10 PCIE_MRX_GTX_C_N14
PCIE_MRX_GTX_N15 0.1U 2 1 C845 10 PCIE_MRX_GTX_C_N15
100 MHz (+/-300 ppm) input frequency, 0-0.7 V single-ended swing.
clock must be provided less than 400ns
after CLKREQ# is asserted
17 CLK_PCIE_VGA AK30 PCIE_REFCLKP
17 CLK_PCIE_VGA# AK32 PCIE_REFCLKN
PCIE_CALRN AA22 PCIE_CALRN 2.0K R591
PCIE_CALRP Y22 PCIE_CALRP 1.27K R592
(1.1V)
+PCIE_VDDC
13 PLTRST_DELAY# R55 1 *0_NC 2 AL27 PERSTB
6,12,30,31,33,34,42 PLTRST# R56 1 0 2
43
M92-S2 XT AJ072800T04 100-CG1675(216-0728004)
M92-S2 AJ072800T03 100-CG1643(216-0728003)
QUANTA COMPUTER
Title
VGA-M92-XT (PCIe)
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FM8
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MEMORY APERTURE SIZE SELECT				
MEMORY SIZE	CFG3 GPIO9	CFG2 GPIO13	CFG1 GPIO12	CFG0 GPIO11
128MB		0	0	0
256MB		0	0	1
64MB		0	1	0
512MB		1	0	0

8

+3.3V_DELAY

8

R895 2 10K RAM_CFG0
R597 2 *10K_NC RAM_CFG1
R599 2 *10K_NC RAM_CFG2

GPIO Straps table	DESCRIPTION OF DEFAULT SETTINGS	FM8 setting
GPIO0	GPIO(0) - TX_PWRS_ENB (Transmitter Power Savings Enable) 0: 50% Tx output swing for mobile mode 1: full Tx output swing (Default setting for Desktop)	0
GPIO1	GPIO(1) - TX_DEEMPH_EN (Transmitter De-emphasis Enable) 0: Tx de-emphasis disabled for mobile mode 1: Tx de-emphasis enabled (Default setting for Desktop)	0
GPIO2	GPIO(2) - BIF_GEN2_EN (5.0 GT/s Enable) 0 : Default. (Driver Controlled Gen2) 1 : Strap Controlled Gen2	0
GPIO3	ATI reserved configuration straps.	0
GPIO4	ATI reserved configuration straps.	0
GPIO5	GPIO_5_AC_BATT 0 : Battery saving mode = 0.0 V 1 : AC (Performance mode) = 3.3 V	0
GPIO6	ATI Internal use only	0

+3.3V_DELAY

R603 1 2 *10K_NC GPIO0
R604 1 2 *10K_NC GPIO1
R605 1 2 *10K_NC GPIO2
R606 1 2 *10K_NC GPIO3
R607 1 2 *10K_NC GPIO4
R608 1 2 *10K_NC GPIO5

R611 1 2 10K HDMI_HD_EN
R613 1 2 *10K_NC TEMP_FAIL
R614 1 2 10K GFX_CLKREQ#
R615 1 2 10K VGAVSYNC
R620 1 2 10K VGAHSYNC

R628 1 2 *10K_NC VGAVSYNC
R627 1 2 *10K_NC VGAHSYNC
R624 1 2 10K TEMP_FAIL

19 48

+1.8V_RUN

R596 1 2 10K RAM_TYPE_CFG0
R598 1 2 10K RAM_TYPE_CFG1
R600 1 2 *10K_NC RAM_TYPE_CFG2
R601 1 2 *10K_NC RAM_TYPE_CFG3

38

Memory Straps	RAM_TYPE_CFG3	RAM_TYPE_CFG2	RAM_TYPE_CFG1	RAM_TYPE_CFG0	Quanta PN (QuantaBuy)	Quanta PN (WinBuy)	Vendor PN	31 level PN
800MHz 512MB(32M*32) Samsung	0	0	1	0	AKD5LWGT501	AKD5LWGT504	K4J10324QD-HC12	31FM8MB0030
900MHz 512MB(32M*32) Qimonda	0	0	1	1	AKD5LWFT^03	AKD5LWFT^00	HYB18H1G321AF-11	31FM8MB0000
800MHz 256MB(16M*32) Samsung	0	0	0	1	AKD5FWGT500	AKD5FWGT503	K4J52324QH-HC12	31FM8MB0040
900MHz 256MB(16M*32) Hynix	0	0	0	0	AKD5FWHTW03	AKD5FWHTW06	H5RS5223CFR-11C	31FM8MB0020

36 48

26,44,48,49,53 RUN_ON
31
21,31 GFX_ON
R654 *0_NC
R655 0
C868 *0.1U_NC 25 603

51

GFX_RUN_ON 50

Q69 SI2303BDS-T1-E3
+3.3V_DELAY
+3.3V_RUN
R649 100K

R651 75K/F
C867 0.1U 10
Q72 2N7002W-7-F
OPTIONAL RC NETWORK TO FINE TUNE POWER SEQUENCING

As M82 design, for GPIO use

RAM_TYPE_CFG0 AB2
RAM_TYPE_CFG1 AC10
RAM_TYPE_CFG2 AC9
RAM_TYPE_CFG3 AC5

OSC_SPREAD
R631 *0_reserve
17 CLK_VGA_27M_SS
R633 *0_reserve
CLK_VGA_27M_SSIN_R
R636 *10K_reserve
17 CLK_VGA_27M_NSS
R634 100/F
R637 120/F
R635 0
OSC_OUT
R643 182R_reserve
XTALIN 23
R644 *1M_reserve
R638 *221/F_reserve
Y4 *27MHZ_reserve
R640 *0_reserve
XTALOUT 23
R642 1M_reserve
C860 *12P_reserve 50
C861 *12P_reserve 50

50 GFX_CORE_CNTRL2
R619 0
31 PANEL_BKEN
HDMI_HD_EN
50 GFX_CORE_CNTRL0
R618 0
21 THERMAL_INT#
CLK_VGA_27M_SSIN_R
R141 *0_NC
35
48 52
50 GFX_CORE_CNTRL1
R622 0
20 BB_ENA
TEMP_FAIL
GFX_CLKREQ#
R449 1K

GPIO0 U6
GPIO1 U10
GPIO2 T10
GPIO3 U8
GPIO4 U7
GPIO5 T9
T158 PAD P4
T159 PAD P2
RAM_CFG0 N6
RAM_CFG1 N5
RAM_CFG2 N3
T86 PAD Y3
T23 PAD W10
M2
P8
P7
T89 PAD N8
N7
L6
T13 PAD L5
T28 PAD L3
T24 PAD L1
T25 PAD K4

35
T21 PAD AB13
T20 PAD W8
T30 PAD W9
T10 PAD W7
T12 PAD AD10

HPD1 AC14
VREFG AC16
R639 499/F
R641 249/F
C859 0.1U

T29 PAD N10
T27 PAD AB22
T26 PAD AC22
T77 PAD L9
T49 PAD N9
T161 PAD AB16
AB12
AB11
26 ENVDD
26 BIA_PWM
R648 0
R621 10K
R57 1K
AF24

Spread Spectrum
If U4, the discrete spread spectrum chip is not used, then pop R48 in order to pull-down BXTALOUT for EMI reasons.

+3.3V_RUN
R659 *10K_reserve
R660 *10K_reserve
R664 *10K_reserve
OSC_OUT
R669 *0_reserve
OSC_SPREAD
U45
XIN/CLKIN XOUT
VSS VDD
SO PD#
SSCLK REFCLK
*P1819GF-08SR_reserve
+3VL
L81 *BLM11A05S_reserve
+3.3V_RUN
C955 *10U_reserve 805 10
C956 *0.1U_reserve 10

	S0
-1.75% (DOWN)	0

U32B
PART 2 OF 18

DVP PORT
DVPCLK U1
DVPCNTL_0 AC7
DVPCNTL_1 Y2
DVPCNTL_2 U5
DVPCNTL_MVP_0 AA1
DVPCNTL_MVP_1 Y4
DVPDATA_0 Y7
DVPDATA_1 V2
DVPDATA_2 Y8
DVPDATA_3 V4
DVPDATA_4 AB7
DVPDATA_5 W1
DVPDATA_6 AB8
DVPDATA_7 W3
DVPDATA_8 AB9
DVPDATA_9 W5
DVPDATA_10 AC6
DVPDATA_11 W6
DVPDATA_12 AD7
DVPDATA_13 AA3
DVPDATA_14 AC8
DVPDATA_15 AA5
DVPDATA_16 AE8
DVPDATA_17 AA6
DVPDATA_18 AE9
DVPDATA_19 AB4
DVPDATA_20 AD9
DVPDATA_21 AB2
DVPDATA_22 AC10
DVPDATA_23 AC5

I/O
GPIO_0
GPIO_1
GPIO_2
GPIO_3_SMBDATA
GPIO_4_SMBCLK
GPIO_5_AC_BATT
GPIO_6_TACH
GPIO_7_BLON
GPIO_8_ROMSO
GPIO_9_ROMSI
GPIO_10_ROMSCK
GPIO_11
GPIO_12
GPIO_13
GPIO_14_HPD2
GPIO_15_PWRCNTL_0
GPIO_16_SSIN
GPIO_17_THERMAL_INT
GPIO_18_HPD3
GPIO_19_CTF
GPIO_20_PWRCNTL_1
GPIO_21_BB_EN
GPIO_22_ROMCSB
GPIO_23_CLKREQB
JTAG_TRSTB
JTAG_TDI
JTAG_TCK
JTAG_TMS
JTAG_TDO
GENERICA
GENERICB
GENERICC
GENERICD
GENERICE_HPD4
HPD1
VREFG

RESERVED
NC_PWRGOOD
RSVD#8
RSVD#9
NC#1
NC#2
RSVD#3
RSVD#2
RSVD#1
TESTEN

DAC1
R AM26 AK26
G AL25 AJ25
B AH24 AG25
HSYNC AH26
VSYNC AJ27
AVDD AG24
AVSSQ AE22
VDD1DI AE23
VSS1DI AD23
RSET AD22
DAC2
R2 AM12 AK12
G2 AL11 AJ11
B2 AK10 AL9
H2SYNC AL13
V2SYNC AJ13
C AH12
Y AM10
COMP AJ9
A2VDD AE20
A2VDDQ AE17
A2VSSQ AE19
VDD2DI AD19
VSS2DI AC19
R2SET AG13
M92-S2/M92-XT

VGA_BLU
VGA_GRN
VGA_RED
R413 150/F
R414 150/F
R415 150/F

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

VGA_RED 27
VGA_GRN 27
VGA_BLU 27
VGAHSYNC 27
VGAVSYNC 27

+1.8V_RUN
+AVDD
L82 BLM15BD121SN1D
C846 10nF
C847 0.1U
C848 1uF
C849 4.7uF

+1.8V_RUN
+VDD1DI
L83 BLM15BD121SN1D
C850 10nF
C851 0.1U
C852 1uF
Place very close to ASIC balls

RSET R612 499R

+3.3V_DELAY
R616 10K
R617 10K
HPD1
Q67 MMST3904-7-F
Q68 DTC114TUAT106
HDMI_DET 26
R625 100K

+3.3V_DELAY
C856 *0.1U_NC
+1.8V_RUN
+A2VDDQ
L85 BLM15BD121SN1D
C857 0.1U
C858 1uF

+1.8V_RUN
C863 *0.1U_NC
R2SET R646 715

QUANTA COMPUTER

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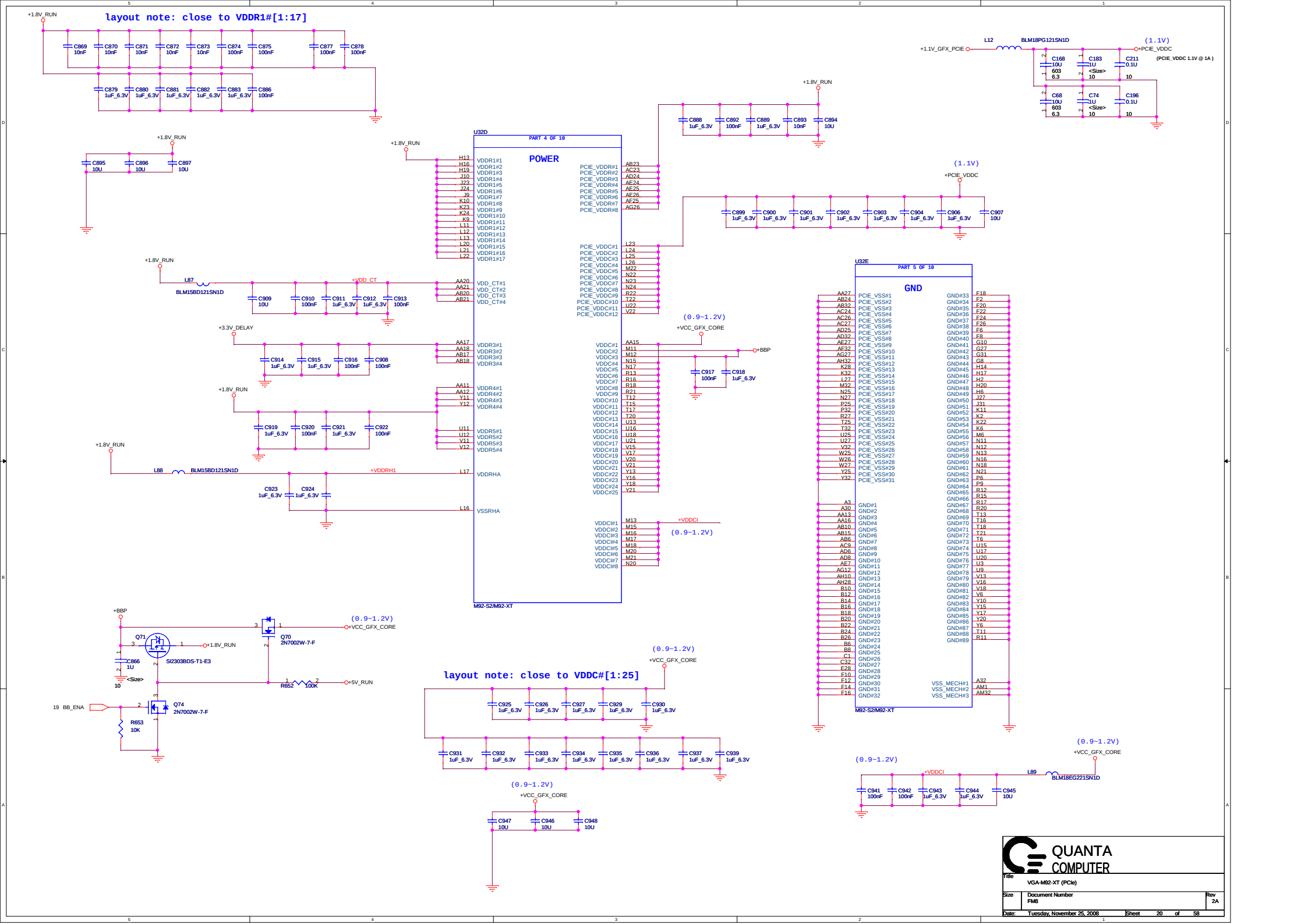
layout note: close to VDDR1#[1:17]
+1.8V_RUN
C869 10nF
C870 10nF
C871 10nF
C872 10nF
C873 10nF
C874 100nF
C875 100nF
C877 100nF
C878 100nF
C879 1uF_6.3V
C880 1uF_6.3V
C881 1uF_6.3V
C882 1uF_6.3V
C883 1uF_6.3V
C886 100nF
C895 10U
C896 10U
C897 10U
U32D
PART 4 OF 10
POWER
VDDR1#1
VDDR1#2
VDDR1#3
VDDR1#4
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
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
C888 1uF_6.3V
C892 100nF
C889 1uF_6.3V
C893 10nF
C894 10U
C899 1uF_6.3V
C900 1uF_6.3V
C901 1uF_6.3V
C902 1uF_6.3V
C903 1uF_6.3V
C904 1uF_6.3V
C906 1uF_6.3V
C907 10U
(1.1V)
+PCIE_VDDC
L87
BLM15BD121SN1D
+VDD_CT
C909 10U
C910 100nF
C911 1uF_6.3V
C912 1uF_6.3V
C913 100nF
VDD_CT#1
VDD_CT#2
VDD_CT#3
VDD_CT#4
+3.3V_DELAY
C914 1uF_6.3V
C915 1uF_6.3V
C916 100nF
C908 100nF
VDDR3#1
VDDR3#2
VDDR3#3
VDDR3#4
C919 1uF_6.3V
C920 100nF
C921 1uF_6.3V
C922 100nF
VDDR4#1
VDDR4#2
VDDR4#3
VDDR4#4
VDDR5#1
VDDR5#2
VDDR5#3
VDDR5#4
L88
BLM15BD121SN1D
+VDDRH1
C923 1uF_6.3V
C924 1uF_6.3V
VDDRHA
VSSRHA
(0.9~1.2V)
+VCC_GFX_CORE
+BBP
C917 100nF
C918 1uF_6.3V
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
+VDDCI
VDDCI#1
VDDCI#2
VDDCI#3
VDDCI#4
VDDCI#5
VDDCI#6
VDDCI#7
VDDCI#8
U32E
PART 5 OF 10
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
GND#1
GND#2
GND#3
GND#4
GND#5
GND#6
GND#7
GND#8
GND#9
GND#10
GND#11
GND#12
GND#13
GND#14
GND#15
GND#16
GND#17
GND#18
GND#19
GND#20
GND#21
GND#22
GND#23
GND#24
GND#25
GND#26
GND#27
GND#28
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GND#30
GND#31
GND#32
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GND#50
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GND#54
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GND#62
GND#63
GND#64
GND#65
GND#66
GND#67
GND#68
GND#69
GND#70
GND#71
GND#72
GND#73
GND#74
GND#75
GND#76
GND#77
GND#78
GND#79
GND#80
GND#81
GND#82
GND#83
GND#84
GND#85
GND#86
GND#87
GND#88
GND#89
VSS_MECH#1
VSS_MECH#2
VSS_MECH#3
M92-S2/M92-XT
+1.1V_GFX_PCIE
L12
BLM18PG121SN1D
C168 10U 603 6.3
C183 1U <Size> 10
C211 0.1U 10
(PCIE_VDDC 1.1V @ 1A)
C68 10U 603 6.3
C74 1U <Size> 10
C196 0.1U 10
+BBP
Q71
SI2303BDS-T1-E3
Q70
2N7002W-7-F
C866 1U <Size> 10
R652 100K
+5V_RUN
19 BB_ENA
Q74
2N7002W-7-F
R653 10K
layout note: close to VDDC#[1:25]
C925 1uF_6.3V
C926 1uF_6.3V
C927 1uF_6.3V
C929 1uF_6.3V
C930 1uF_6.3V
C931 1uF_6.3V
C932 1uF_6.3V
C933 1uF_6.3V
C934 1uF_6.3V
C935 1uF_6.3V
C936 1uF_6.3V
C937 1uF_6.3V
C939 1uF_6.3V
C947 10U
C946 10U
C948 10U
C941 100nF
C942 100nF
C943 1uF_6.3V
C944 1uF_6.3V
C945 10U
L89
BLM18EG221SN1D
QUANTA COMPUTER
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VGA-M92-XT (PCIe)
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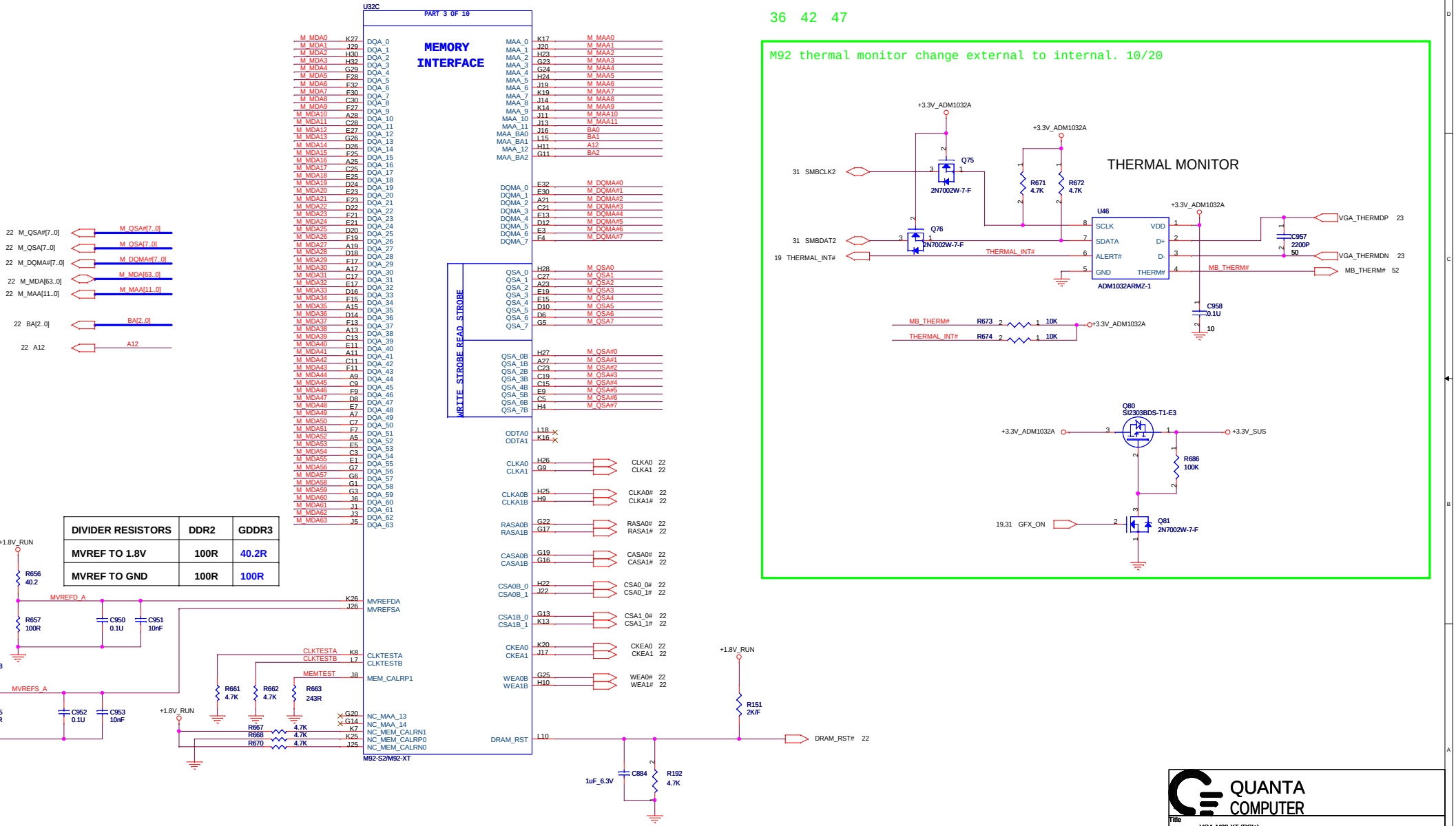
MEMORY INTERFACE



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

36 42 47

M92 thermal monitor change external to internal. 10/20

QUANTA COMPUTER

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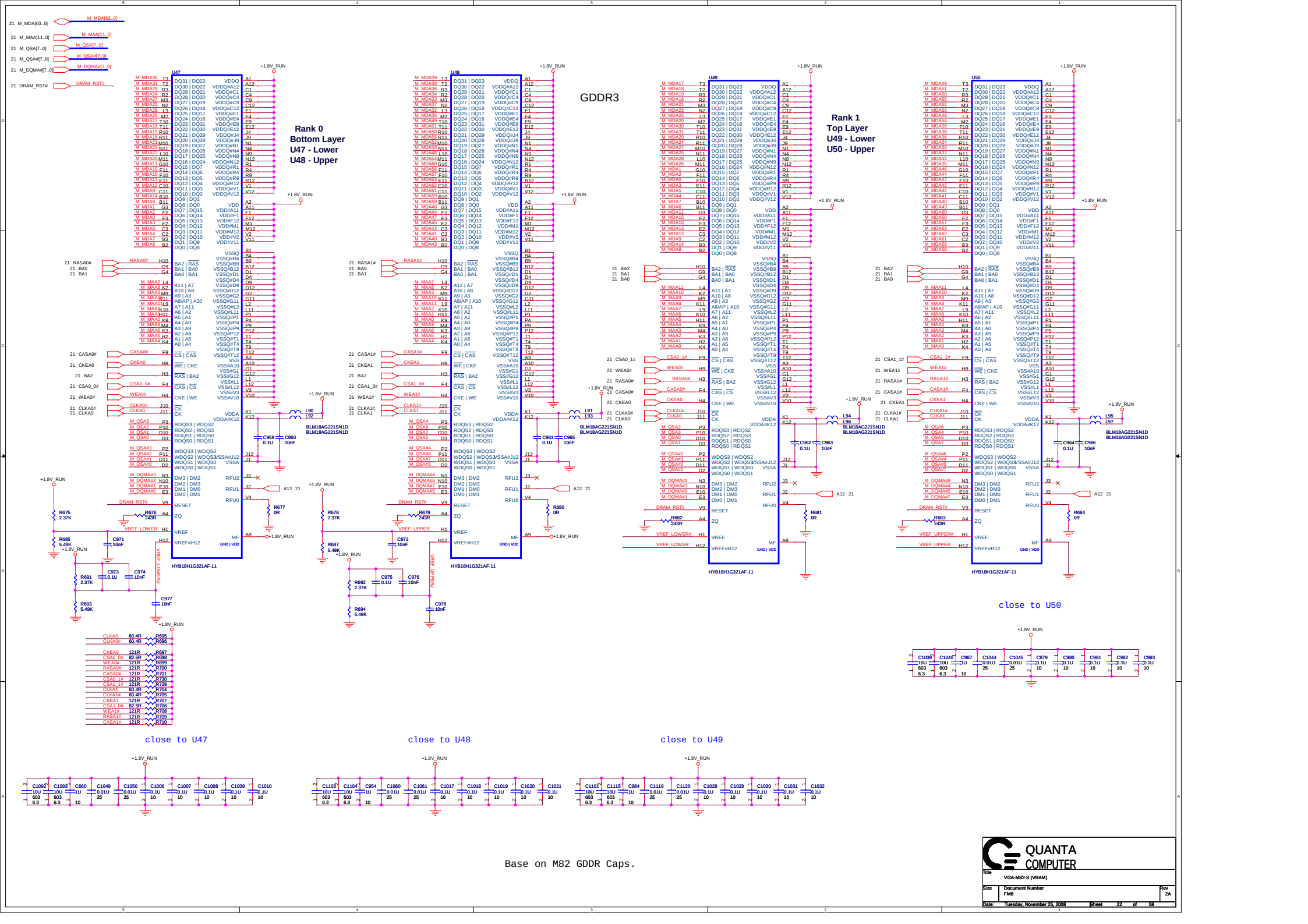
GDDR3
Rank 0
Bottom Layer
U47 - Lower
U48 - Upper
Rank 1
Top Layer
U49 - Lower
U50 - Upper
U47
U48
U49
U50
HYB18H1G321AF-11
BLM18AG221SN1D
BLM18AG221SN1D
close to U50
close to U47
close to U48
close to U49
Base on M82 GDDR Caps.
QUANTA COMPUTER
VGA-M82-S (VRAM)
Document Number FM8
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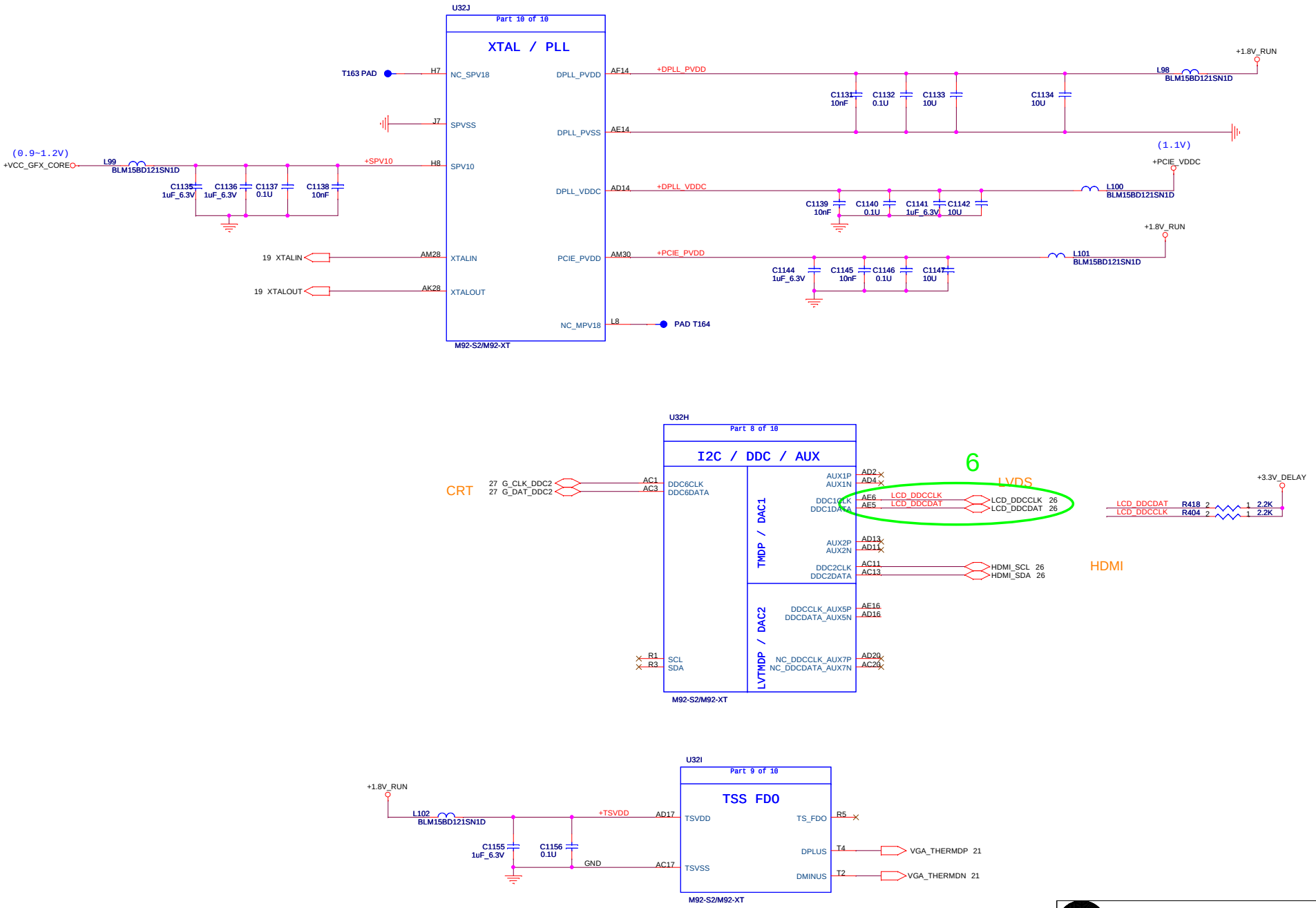

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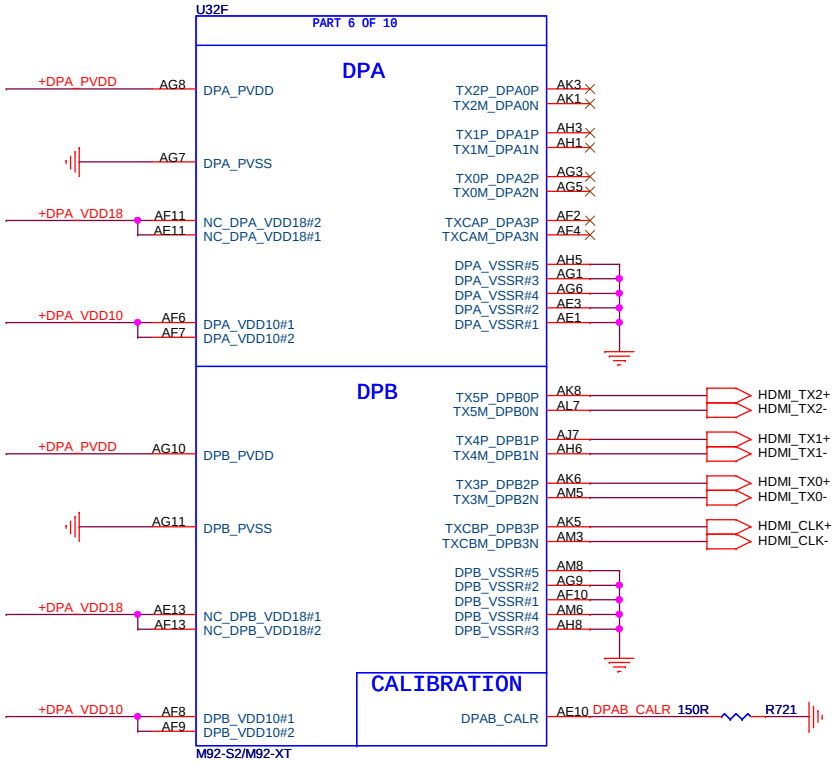
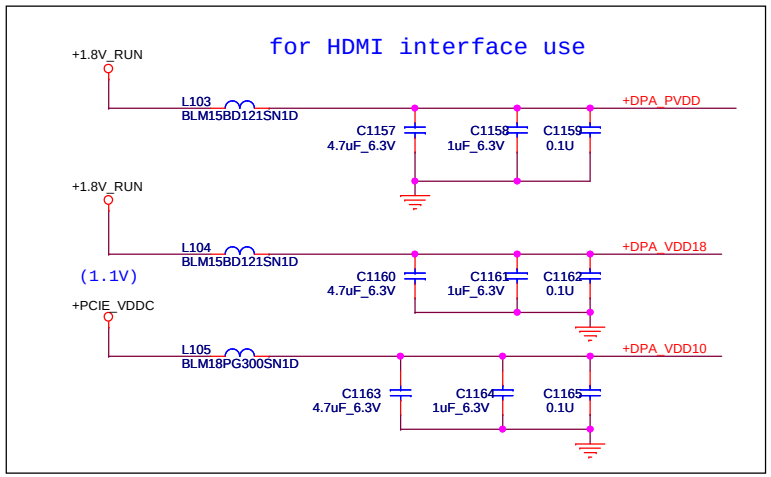
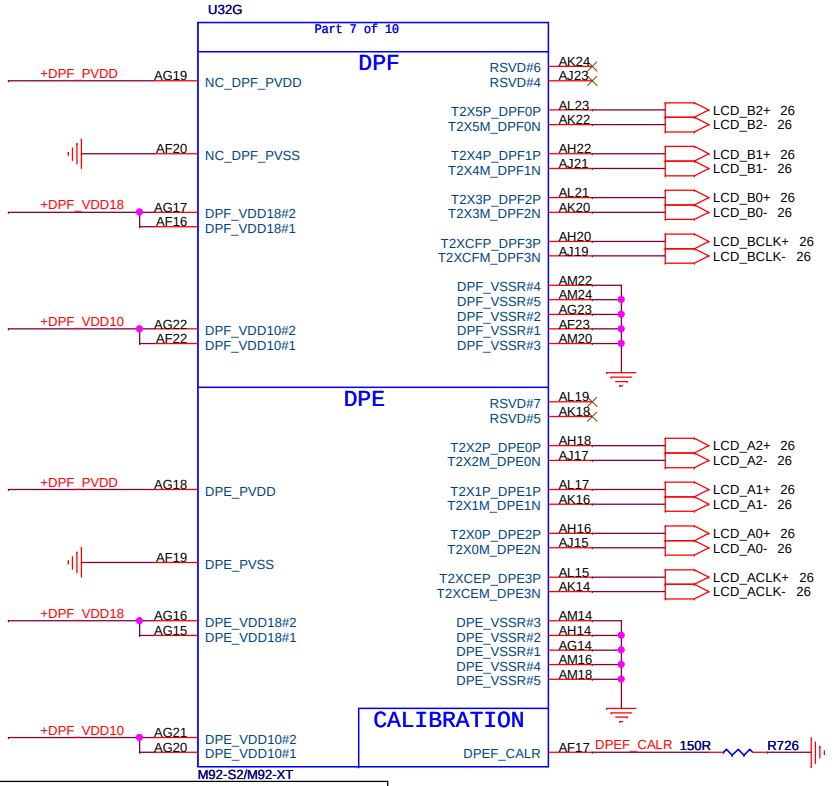
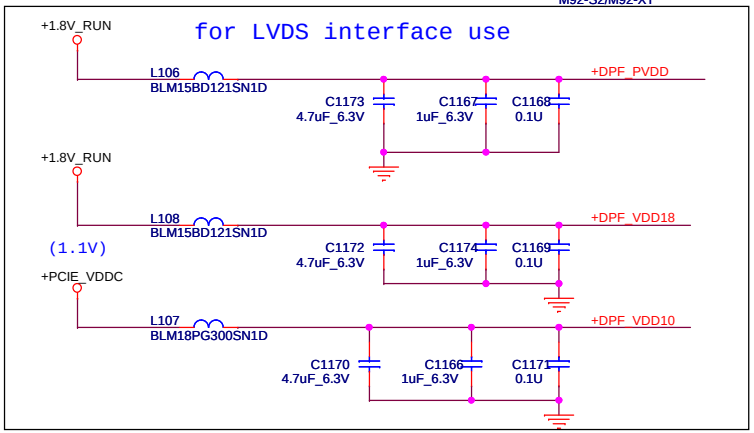
TMDP(HDMI) INTERFACE





LVDS INTERFACE



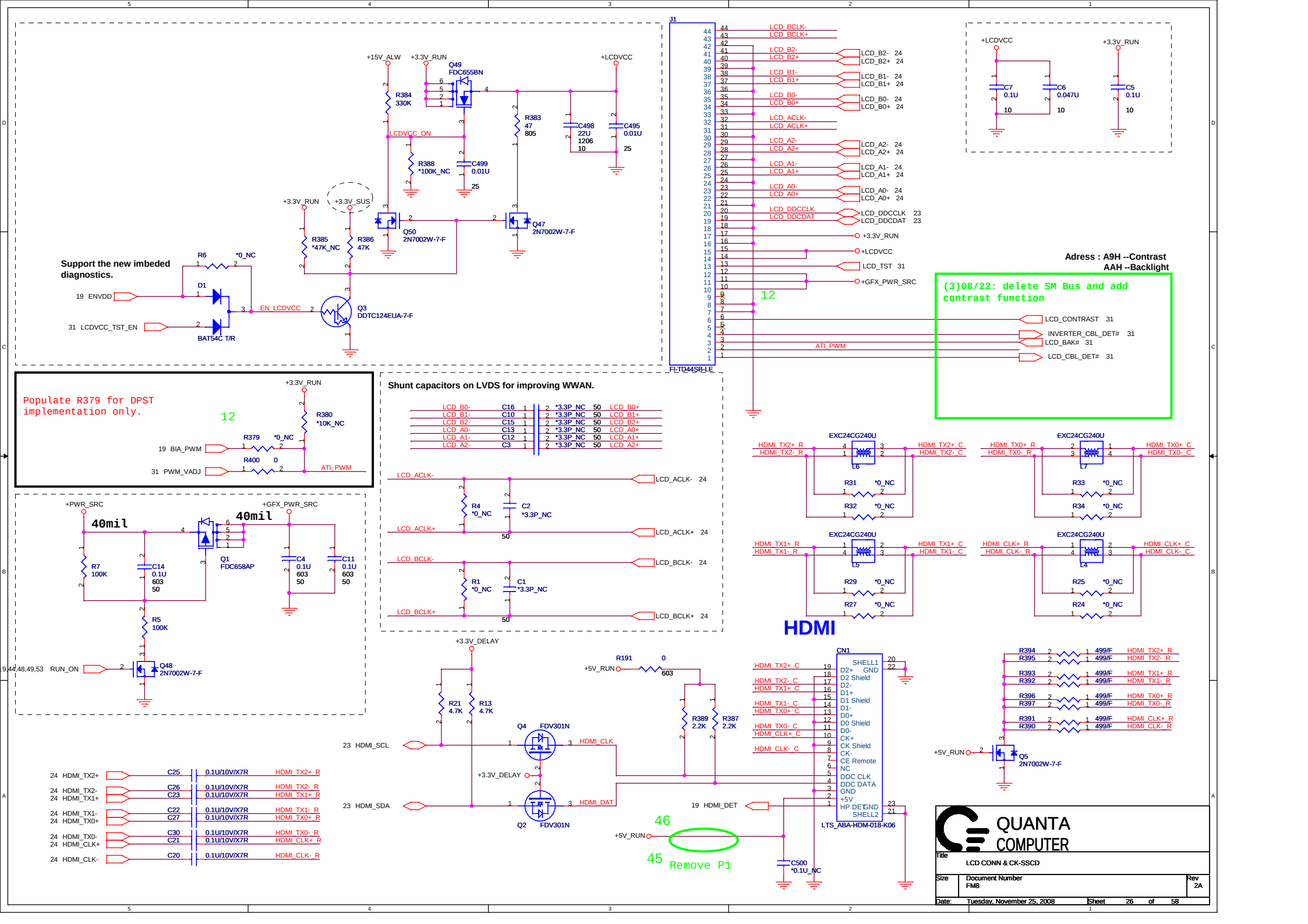


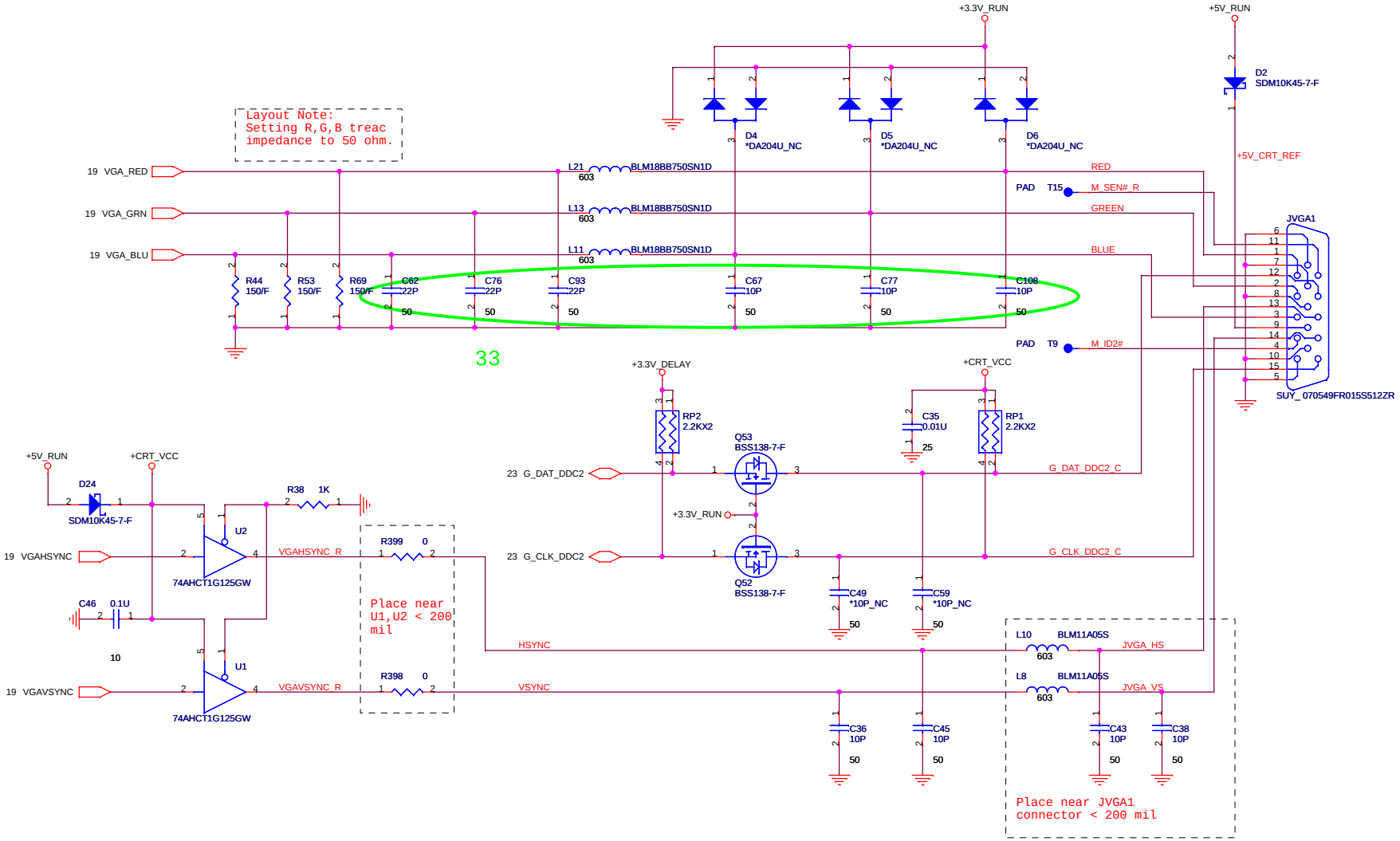
QUANTA COMPUTER

Title	VGA-M92-XT (PCIe)	
Size	Document Number FM8	Rev 2A
Date: Tuesday, November 25, 2008	Sheet 24 of 58	

QUANTA COMPUTER

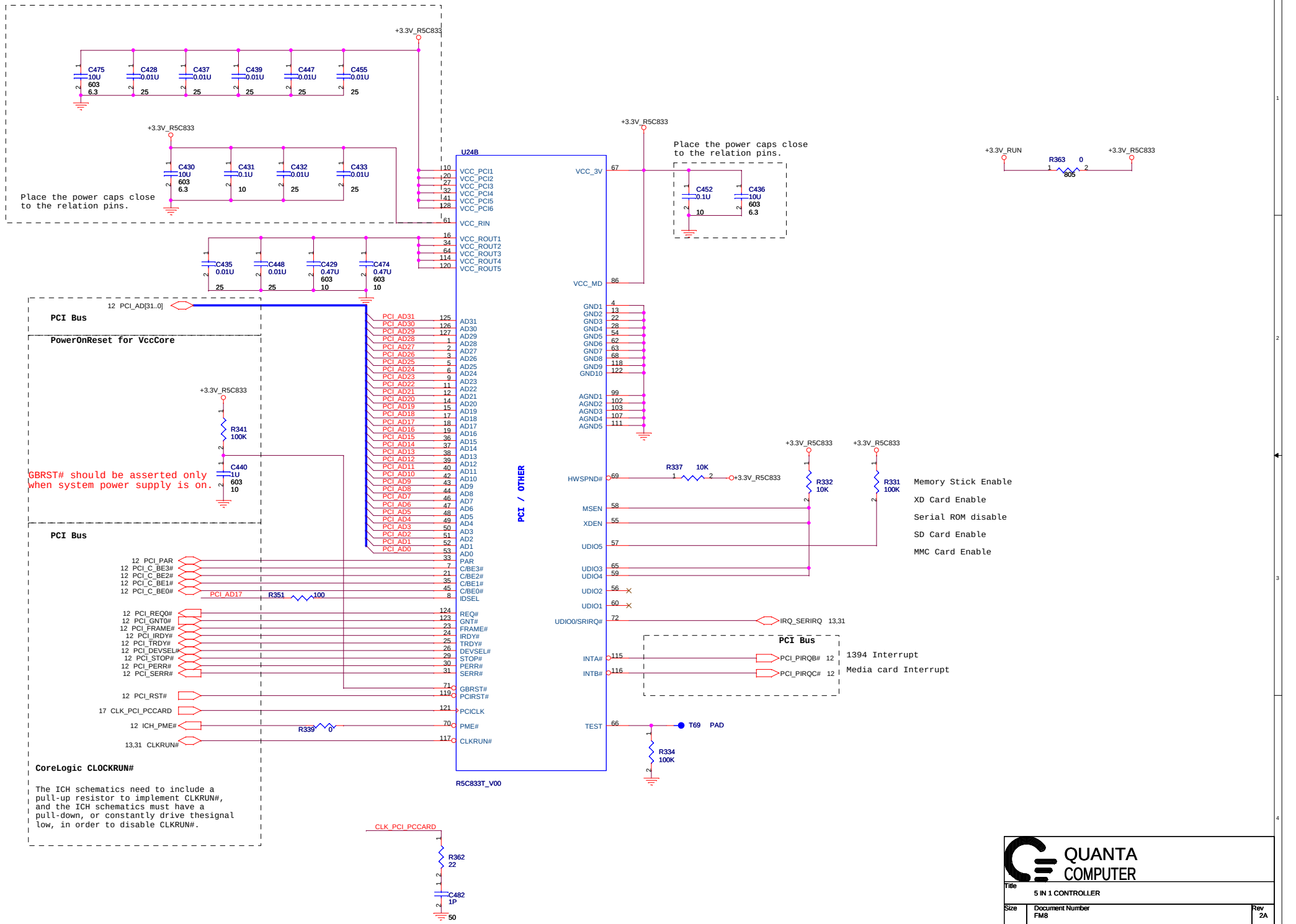
Title	VGA-M82-S (PCIe)	
Size	Document Number FM8	Rev 2A
Date: Tuesday, November 25, 2008	Sheet 25 of 58	


Support the new imbeded diagnostics.
Populate R379 for DPST implementation only.
Shunt capacitors on LVDS for improving WWAN.
Adress : A9H --Contrast
AAH --Backlight
(3)08/22: delete SM Bus and add contrast function
HDMI
46
45
Remove P1
FI-TD44SB-LE
LTS_ABA-HDM-018-K06
QUANTA COMPUTER
LCD CONN & CK-SSCD
FM8
Tuesday, November 25, 2008



QUANTA COMPUTER

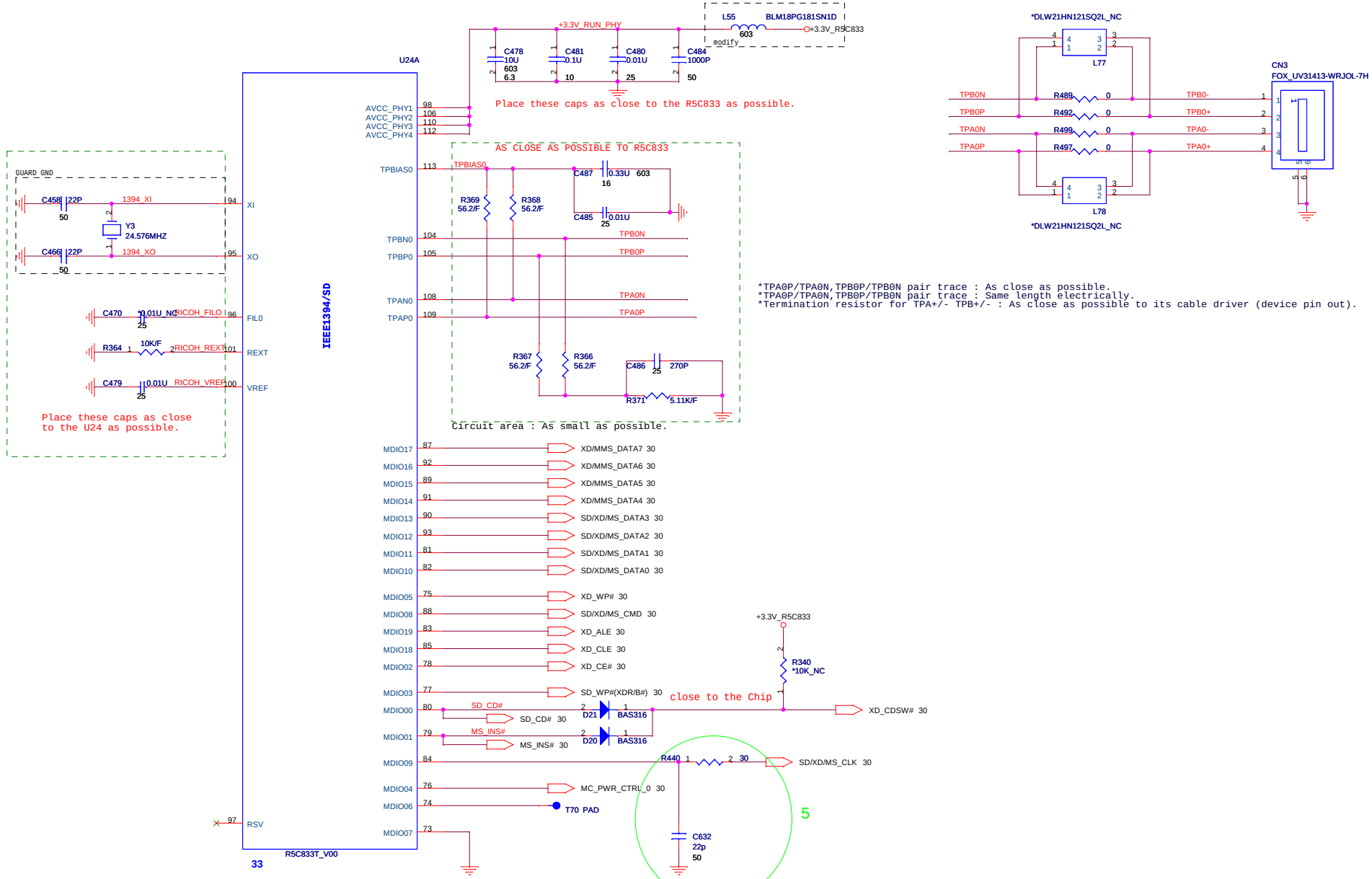
Title	CRT&TV CONN	
Size	Document Number FM8	Rev 2A
Date: Tuesday, November 25, 2008	Sheet 27 of 58	



QUANTA COMPUTER			
Title	5 IN 1 CONTROLLER		
Size	Document Number FM8		Rev 2A
Date: Tuesday, November 25, 2008		Sheet 28 of 58	

80 mils

AS CLOSE AS POSSIBLE TO 1394 CONNECTOR.

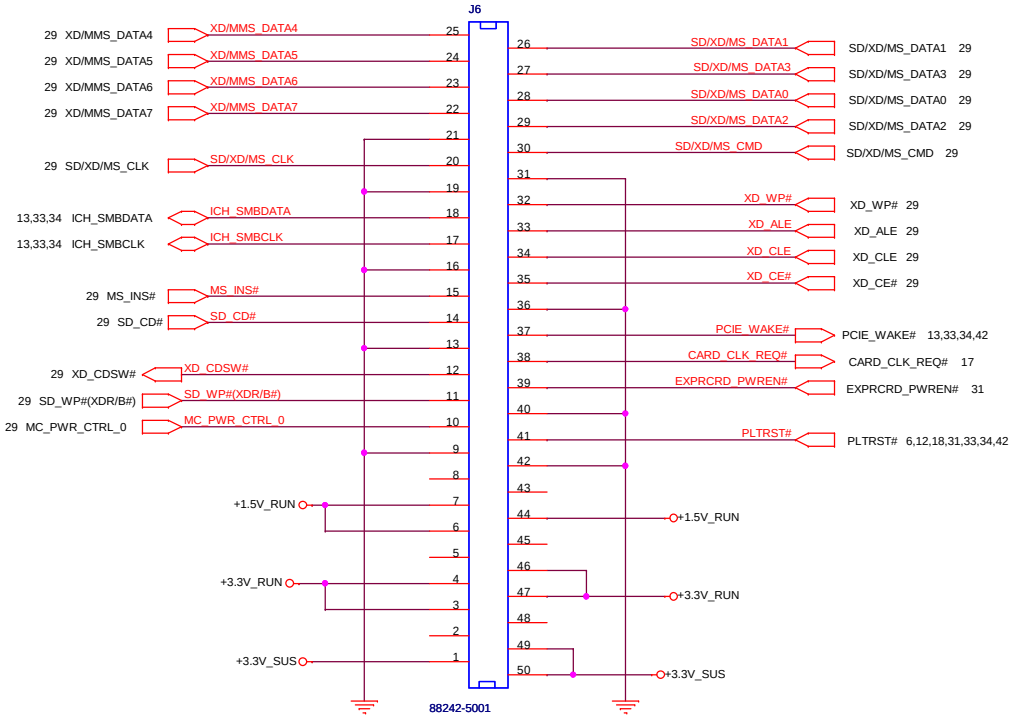


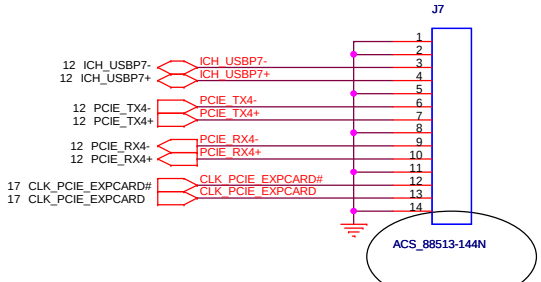
*TPA0P/TPA0N,TPB0P/TPB0N pair trace : As close as possible.
*TPA0P/TPA0N,TPB0P/TPB0N pair trace : Same length electrically.
*Termination resistor for TPA+/- TPB+/- : As close as possible to its cable driver (device pin out).

QUANTA COMPUTER

Title	IEEE 1394	
Size	Document Number FM8	Rev 2A
Date: Tuesday, November 25, 2008	Sheet 29 of 58	

Express Card/CARD READER

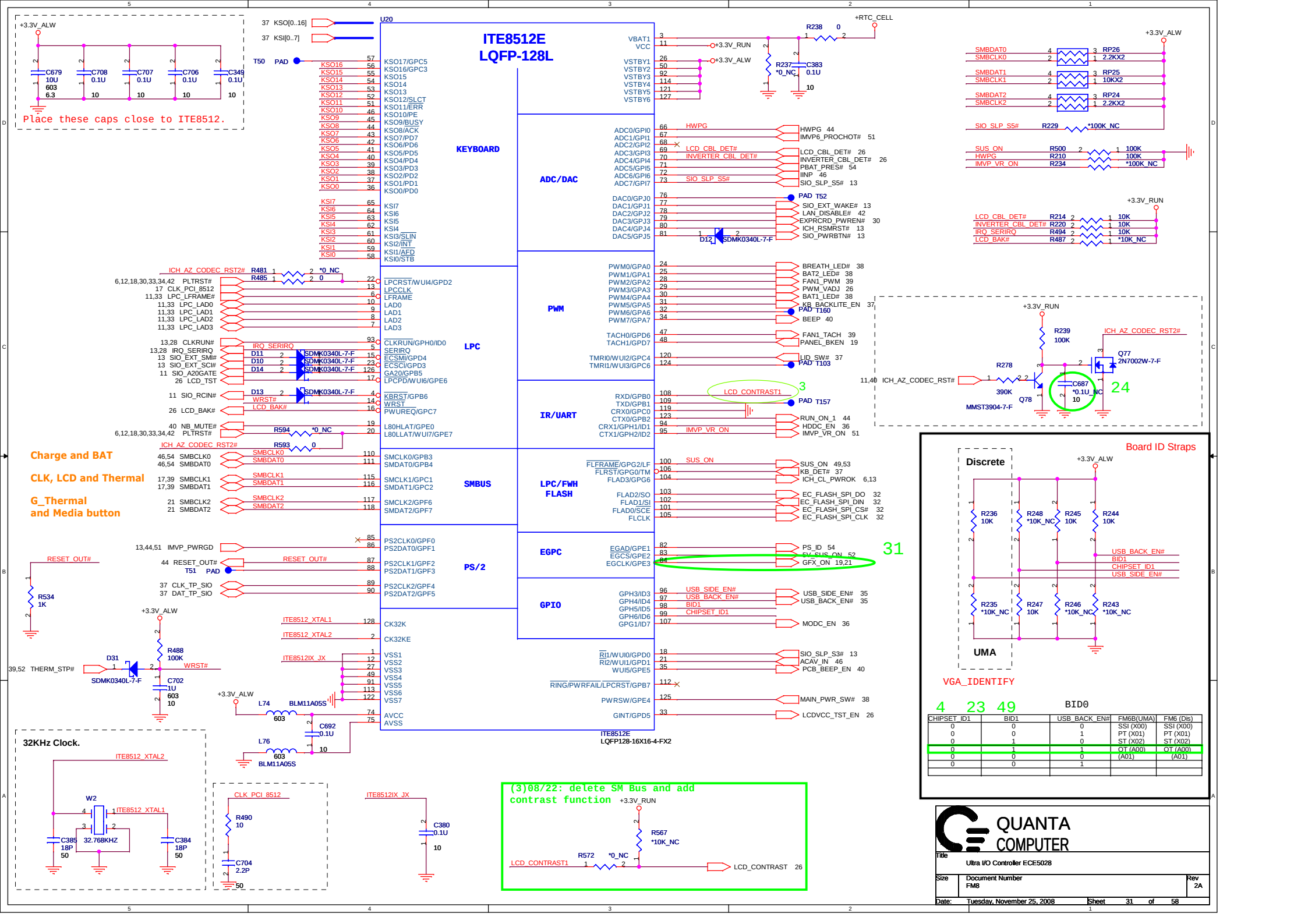




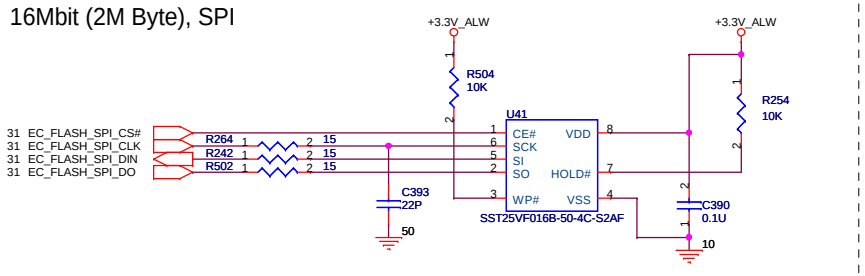
8/28:change PN to 88513-144N

QUANTA COMPUTER

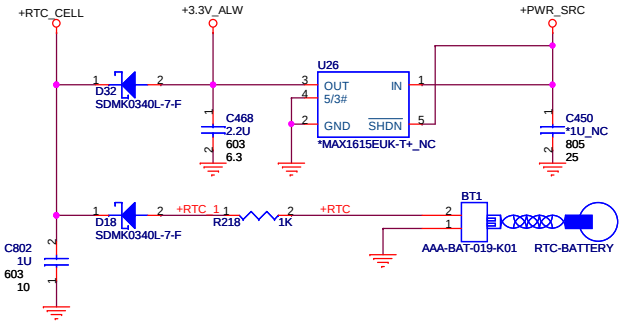
Title	ExpressCard/SmartCard	
Size	Document Number FM8	Rev 2A
Date: Tuesday, November 25, 2008	Sheet 30 of 58	


ITE8512E
LQFP-128L
U20
KEYBOARD
ADC/DAC
PWM
LPC
IR/UART
SMBUS
LPC/FWH
FLASH
EGPC
PS/2
GPIO
Place these caps close to ITE8512.
Charge and BAT
CLK, LCD and Thermal
G_Thermal
and Media button
32KHz Clock.
(3)08/22: delete SM Bus and add
contrast function
Board ID Straps
Discrete
UMA
VGA_IDENTIFY
BID0
QUANTA
COMPUTER
Ultra I/O Controller ECE5028
FM8
Tuesday, November 25, 2008

16Mbit (2M Byte), SPI

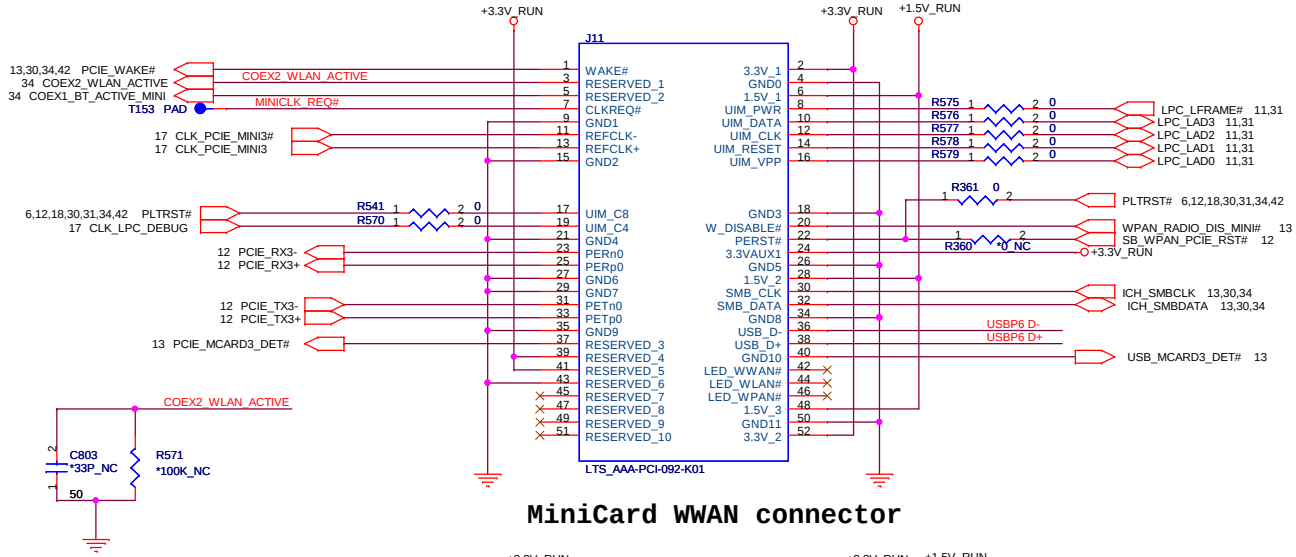


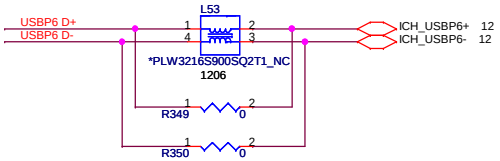
RTC BATTERY

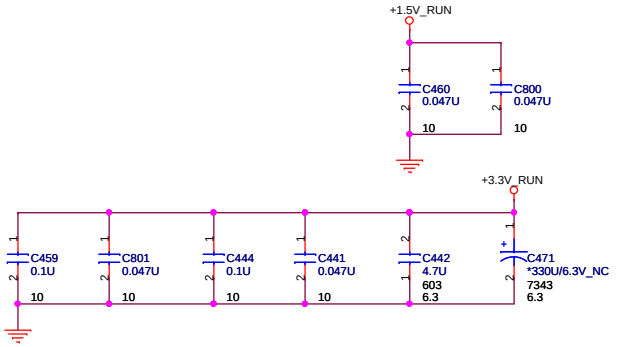


QUANTA COMPUTER		
Title: Ultra I/O Controller ECE5028		
Size	Document Number: FM8	Rev: 2A
Date: Tuesday, November 25, 2008	Sheet 32 of 58	

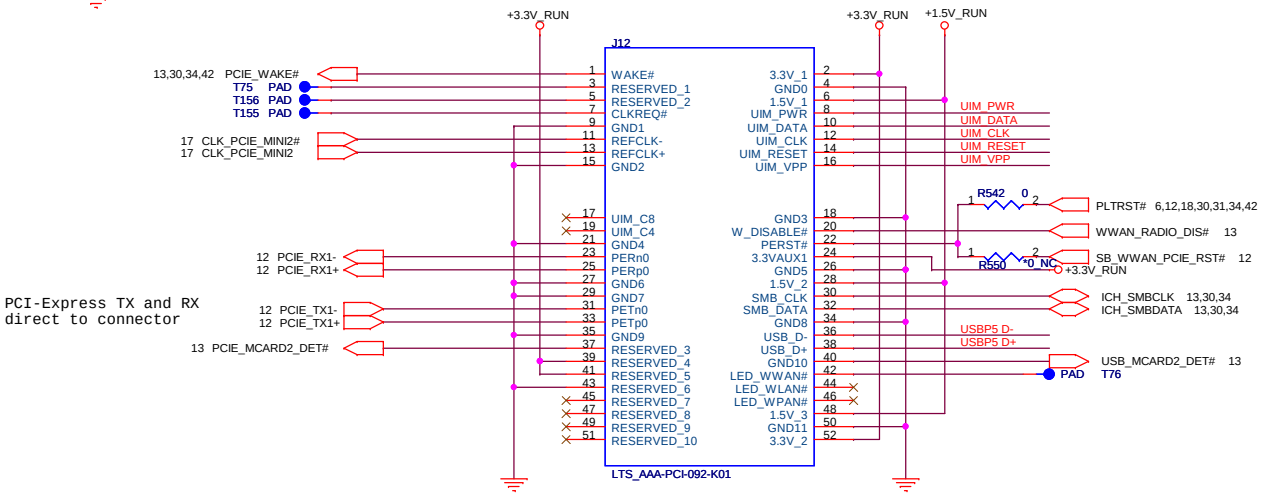
MiniCard Robson, BT. UWB connector



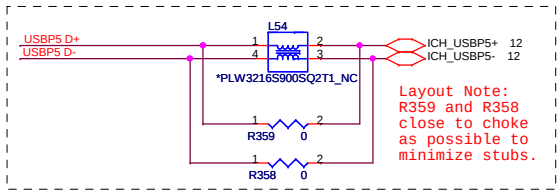


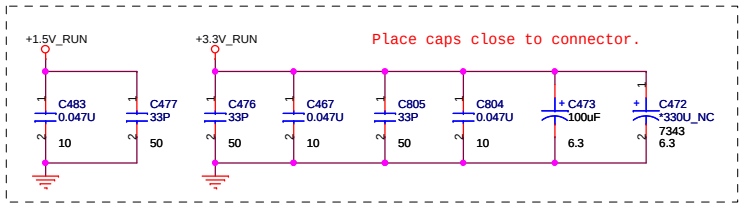


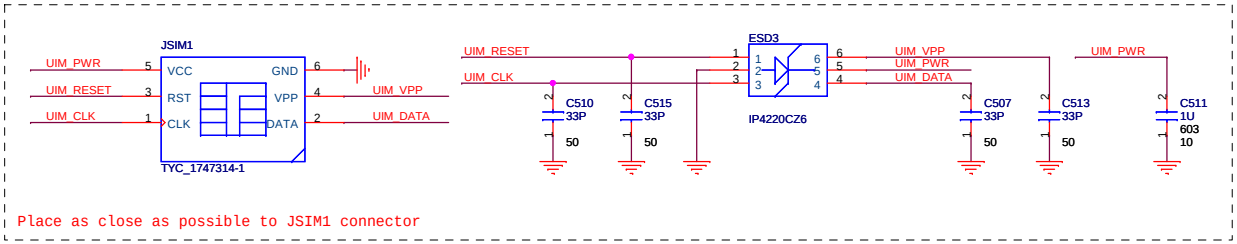
MiniCard WWAN connector



PCI-Express TX and RX direct to connector







QUANTA COMPUTER		
Title: MINI-PCI		
Size	Document Number: FM8	Rev: 2A
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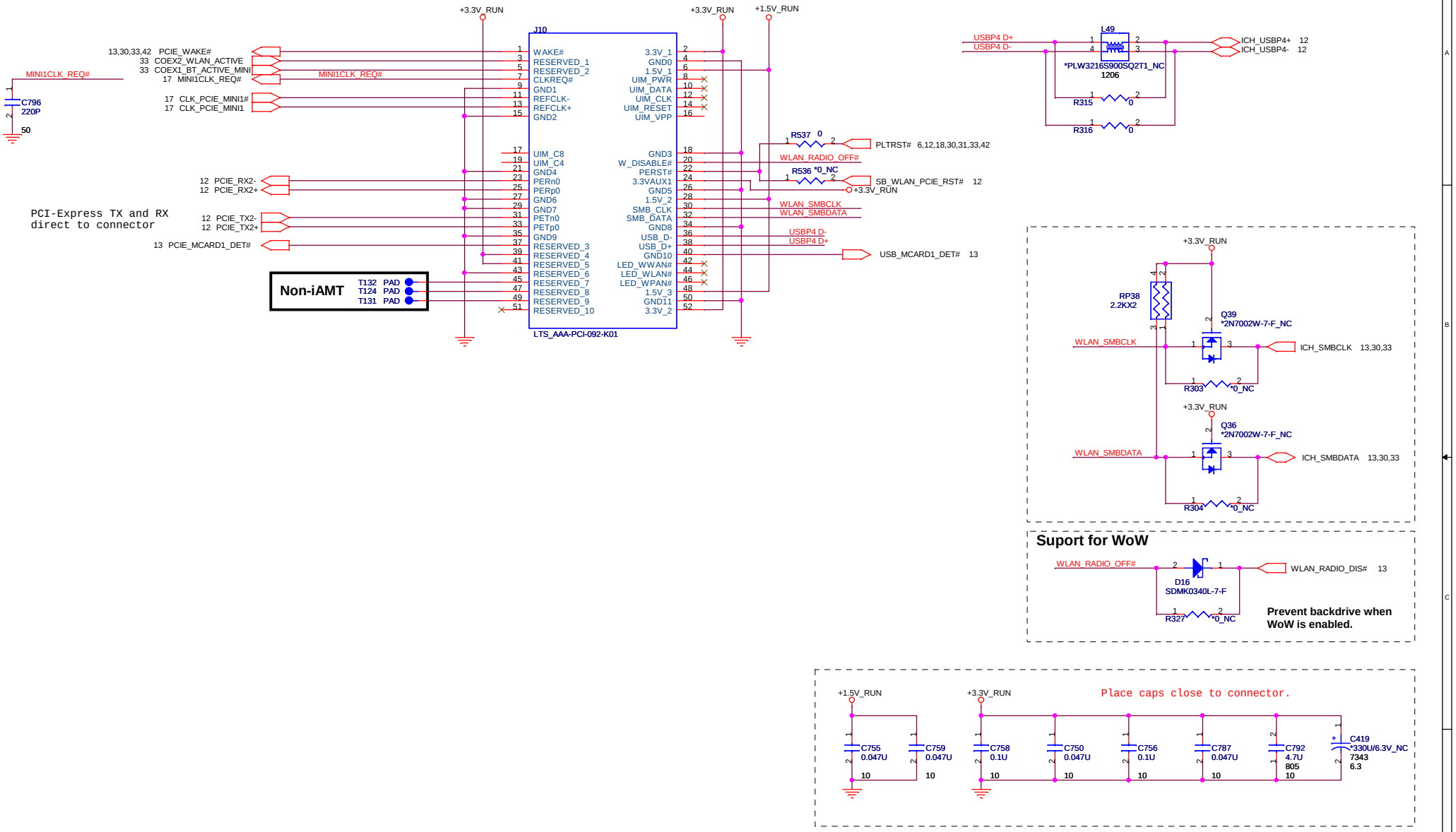
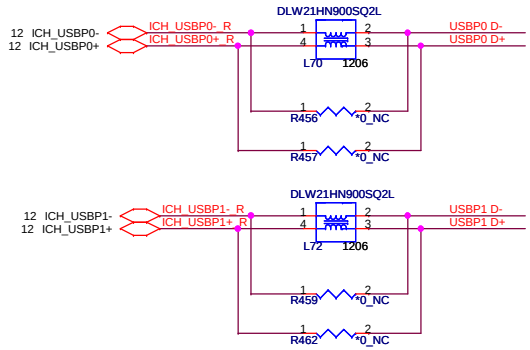
MiniCard WLAN connector



QUANTA COMPUTER

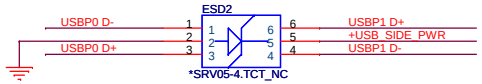
Title	MDC CONN.	
Size	Document Number FM8	Rev 2A
Date: Tuesday, November 25, 2008	Sheet 34 of 58	

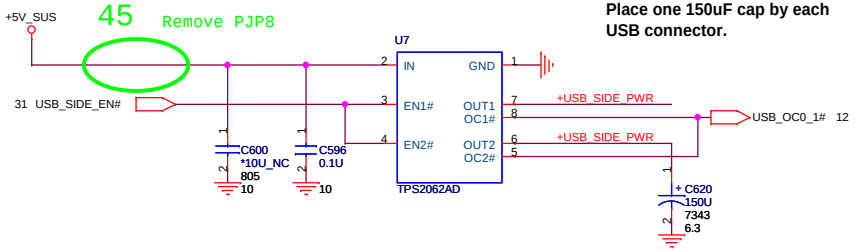
External USB PORT hookup reference. Your design may need more or less external ports and may be mapped differently



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

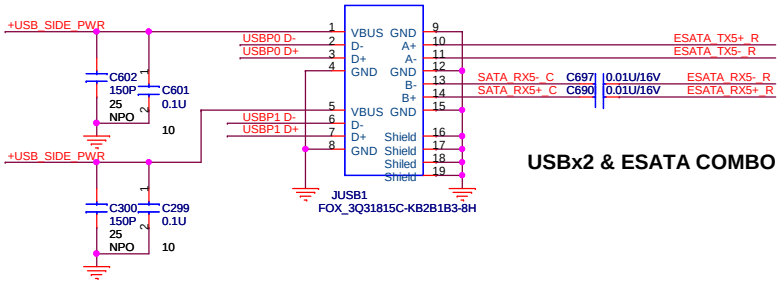
Place ESD diodes as close as USB connector.





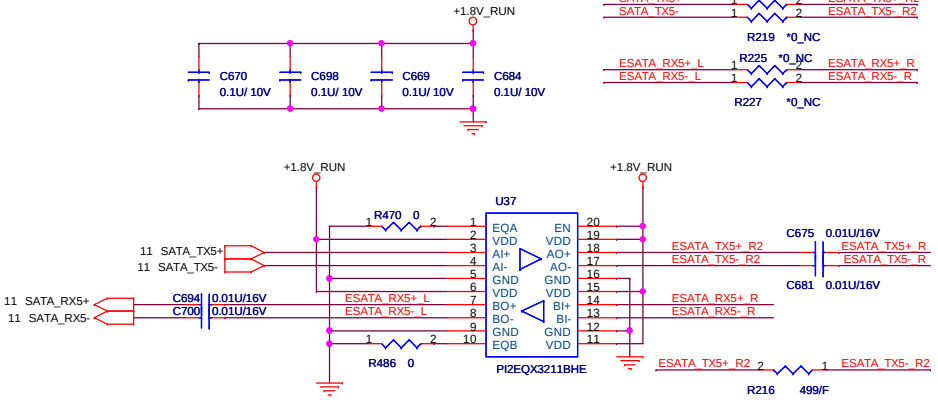
Place one 150uF cap by each USB connector.

Side External USBX2

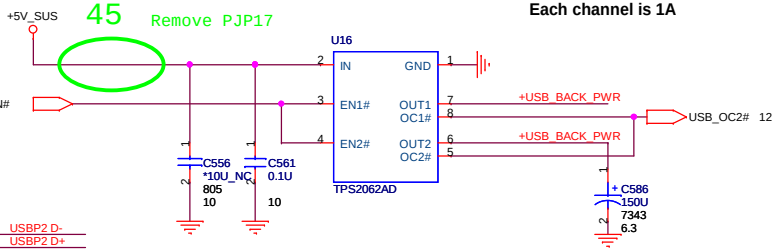


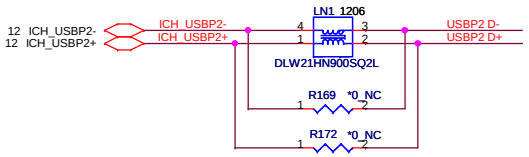
USBx2 & ESATA COMBO

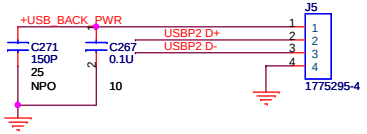
E-SATA Re-driver



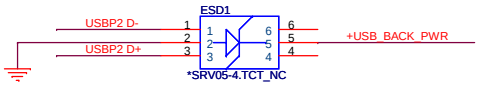
Each channel is 1A







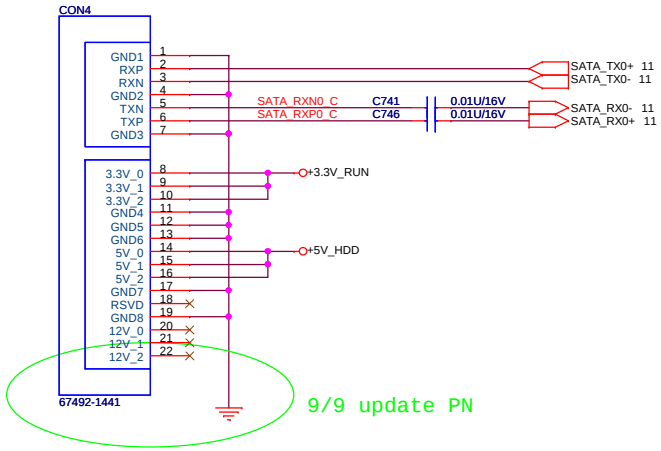
Place ESD diodes as close as USB connector.

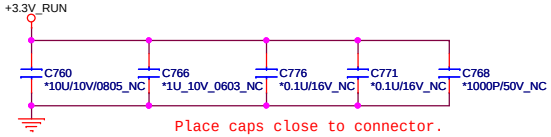


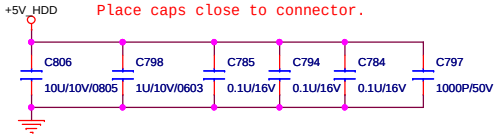
QUANTA COMPUTER

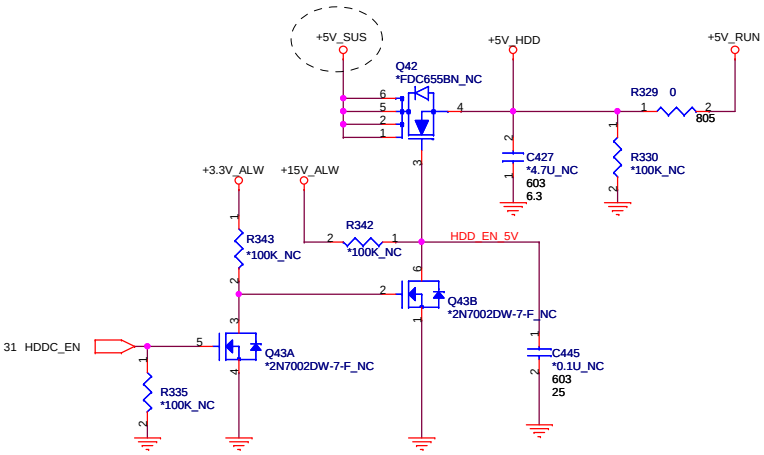
Title	SERIAL PORT & USB	
Size	Document Number FM8	Rev 2A
Date: Tuesday, November 25, 2008	Sheet 35 of 58	

SATA Connector.

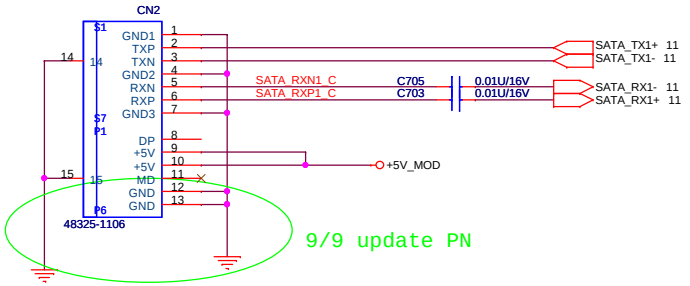


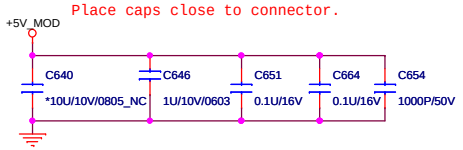


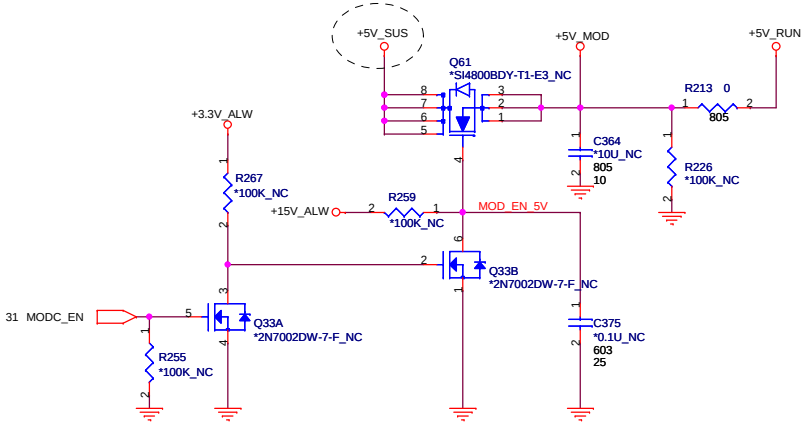




ODD Connector

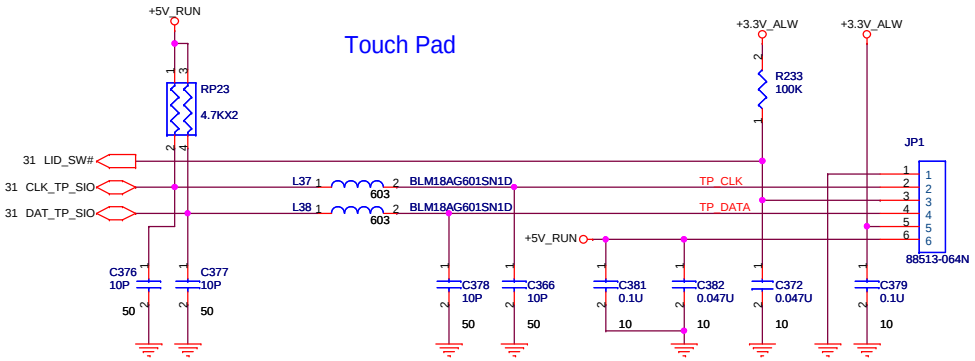




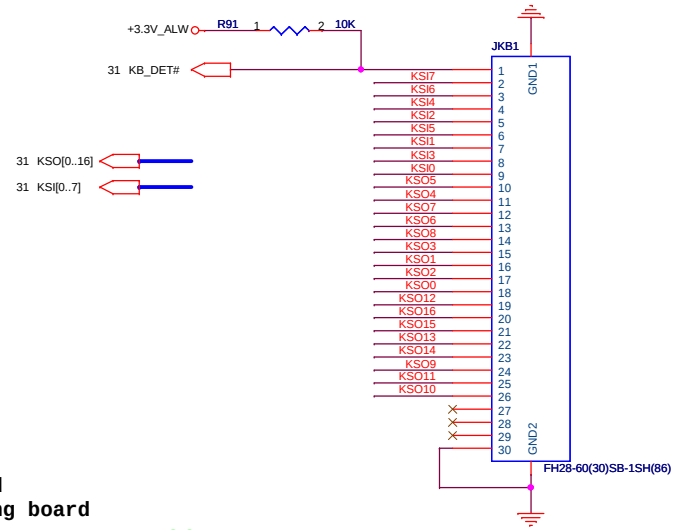


QUANTA COMPUTER		
Title: SATA (HDD&CD_ROM)		
Size	Document Number: FM8	Rev: 2A
Date: Tuesday, November 25, 2008	Sheet 36 of 58	

Touch Pad

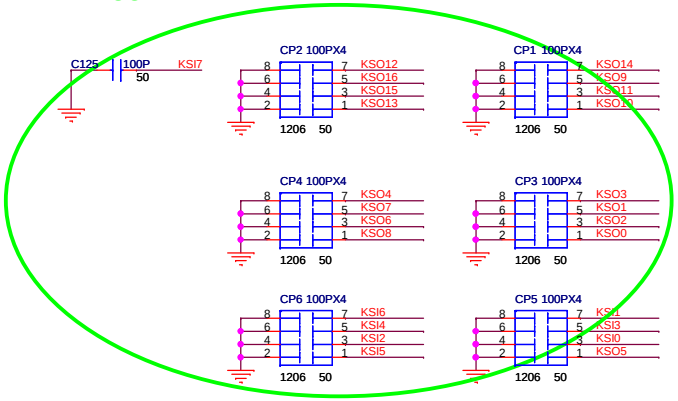


KEYBOARD CONNECTOR



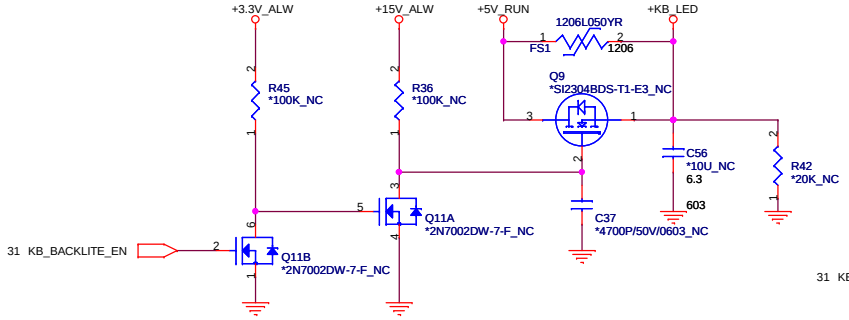
08-05 add
For running board

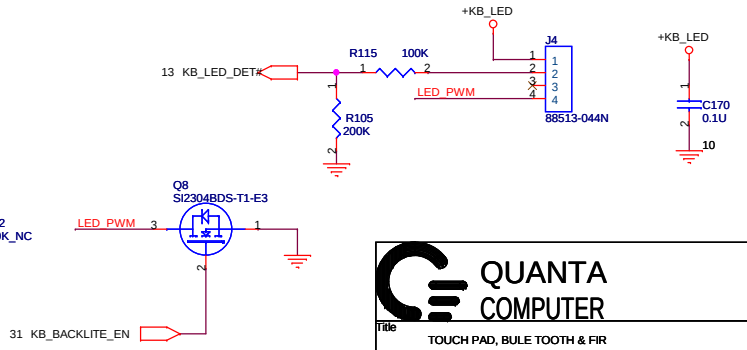
33



100P CAPS CLOSE TO JKB1

Key board Illumination

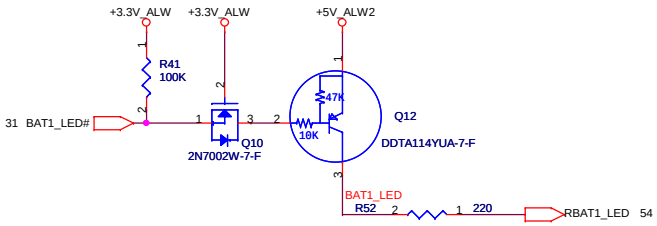


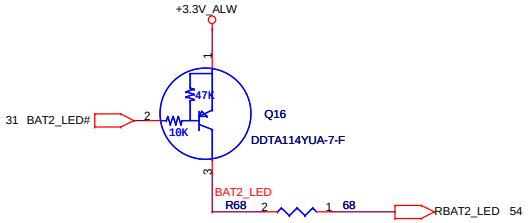


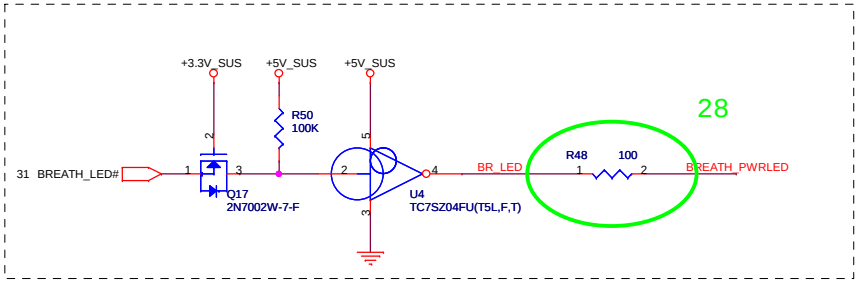
QUANTA COMPUTER

Title	TOUCH PAD, BULE TOOTH & FIR	
Size	Document Number FM8	Rev 2A
Date: Tuesday, November 25, 2008	Sheet 37 of 58	

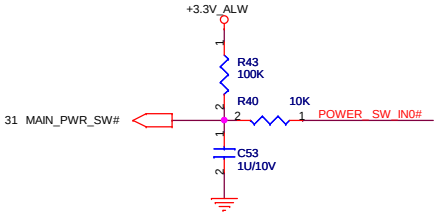
Battery status.

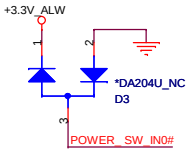




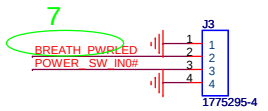


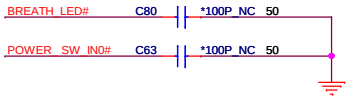
Power Switch





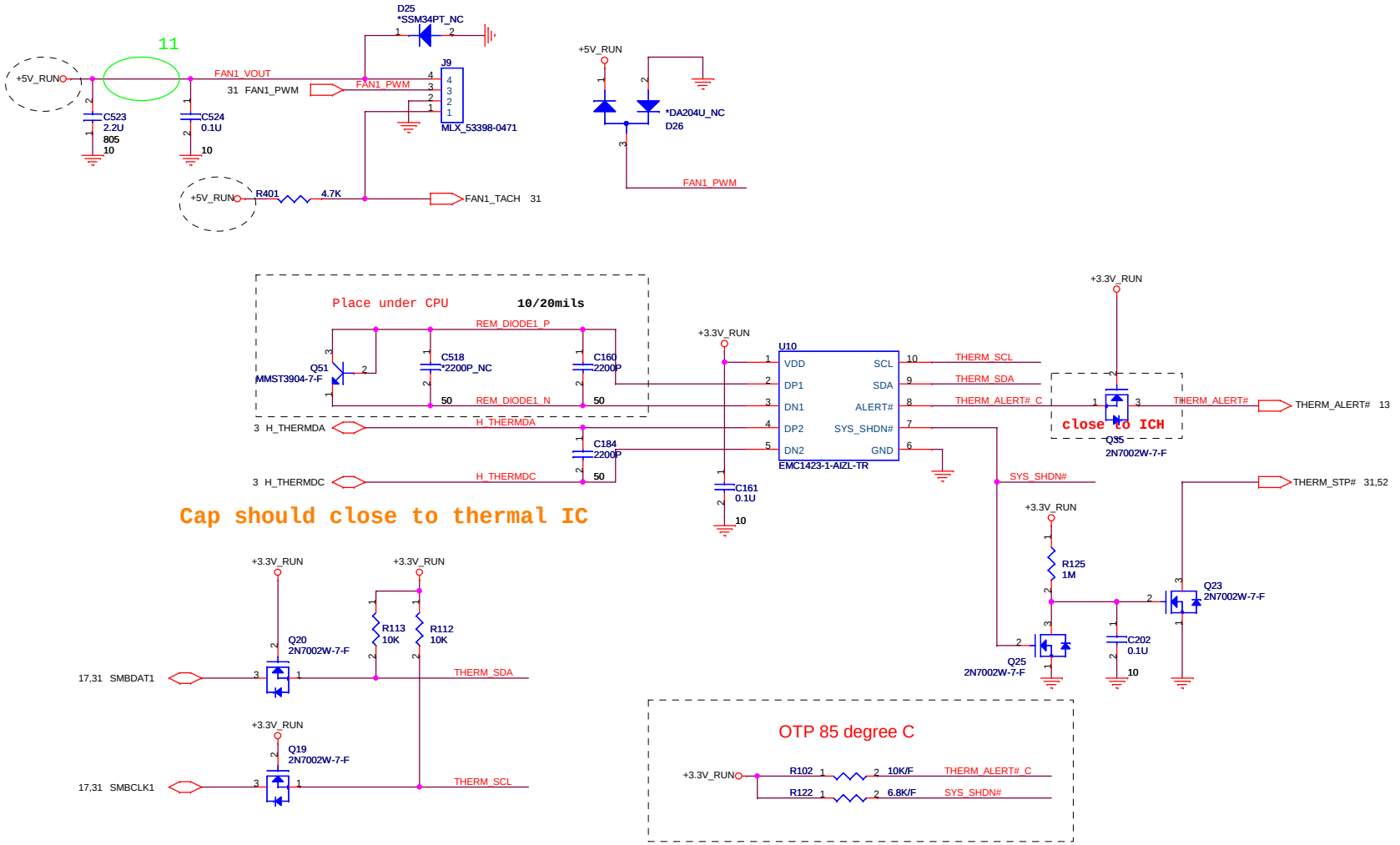
Power button cable





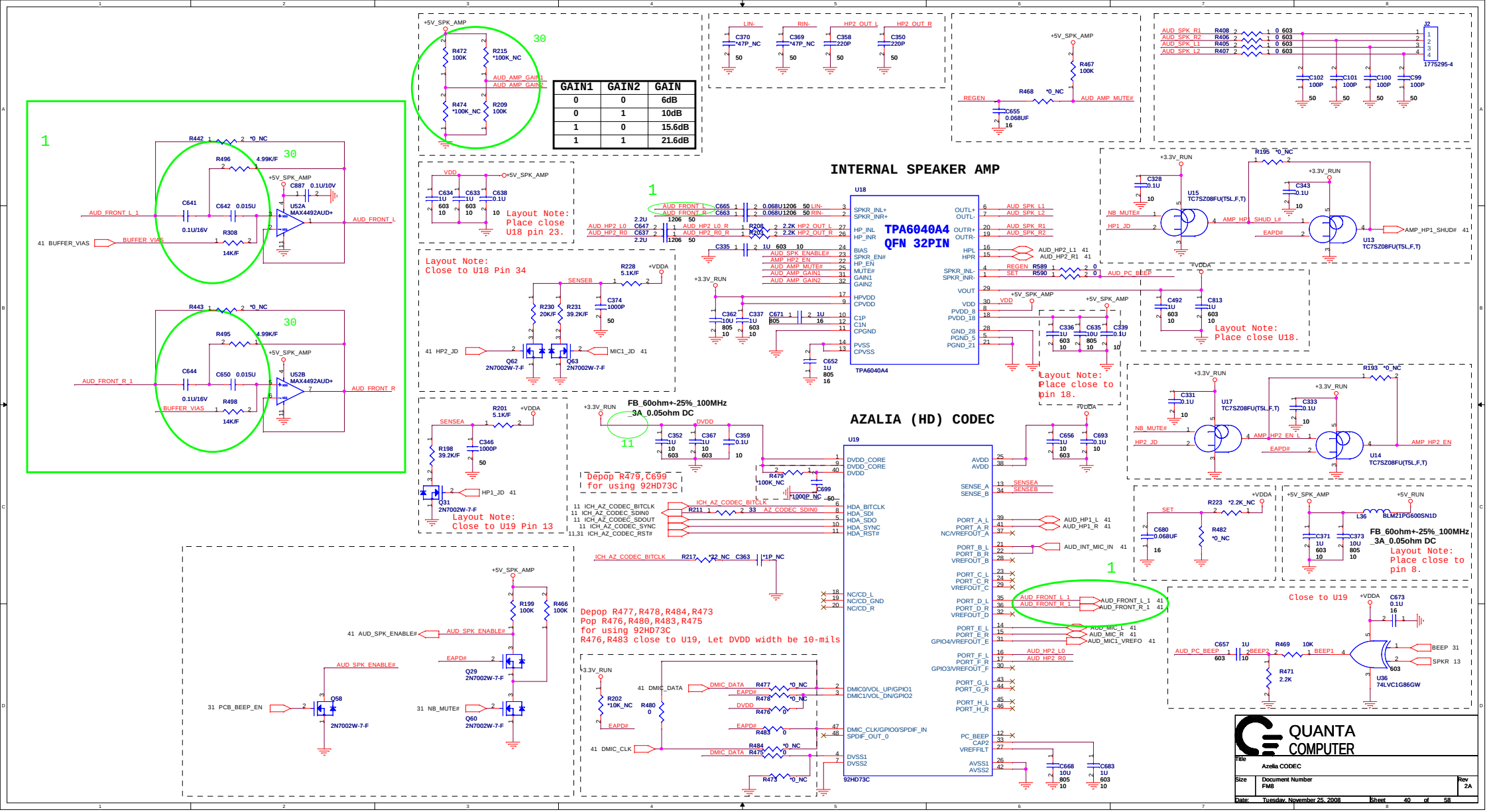
QUANTA COMPUTER

Title	SWITCH, KEYBOARD & LED	
Size	Document Number FM8	Rev 2A
Date: Tuesday, November 25, 2008	Sheet 38 of 58	



QUANTA COMPUTER

Title	FAN & THERMAL	
Size	Document Number FM8	Rev 2A
Date: Tuesday, November 25, 2008	Sheet 39 of 58	


INTERNAL SPEAKER AMP
TPA6040A4
QFN 32PIN
AZALIA (HD) CODEC
92HD73C
GAIN1 GAIN2 GAIN
0 0 6dB
0 1 10dB
1 0 15.6dB
1 1 21.6dB
Layout Note: Place close U18 pin 23.
Layout Note: Close to U18 Pin 34
Layout Note: Close to U19 Pin 13
Layout Note: Place close to pin 18.
Layout Note: Place close U18.
Depop R479,C699 for using 92HD73C
Depop R477,R478,R484,R473 Pop R476,R480,R483,R475 for using 92HD73C R476,R483 close to U19, Let DVDD width be 10-mils
FB_60ohm+-25%_100MHz 3A_0.05ohm DC
Close to U19
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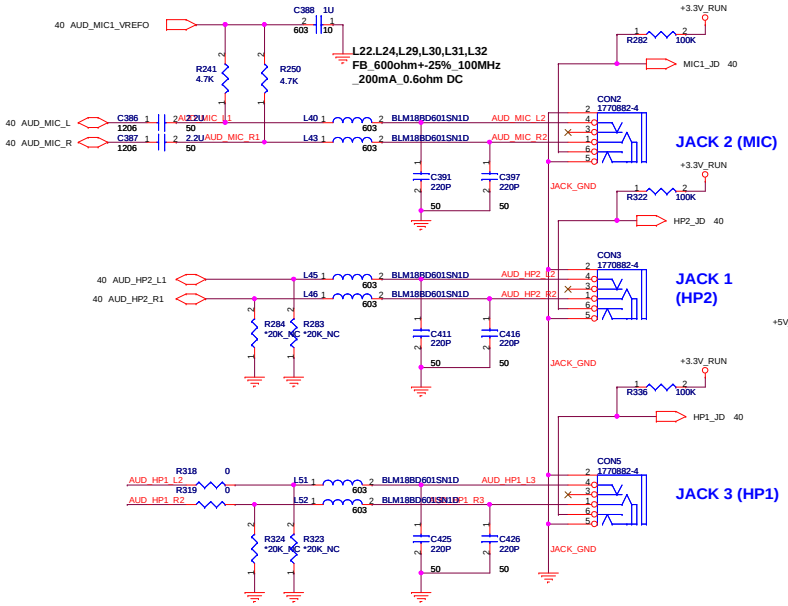
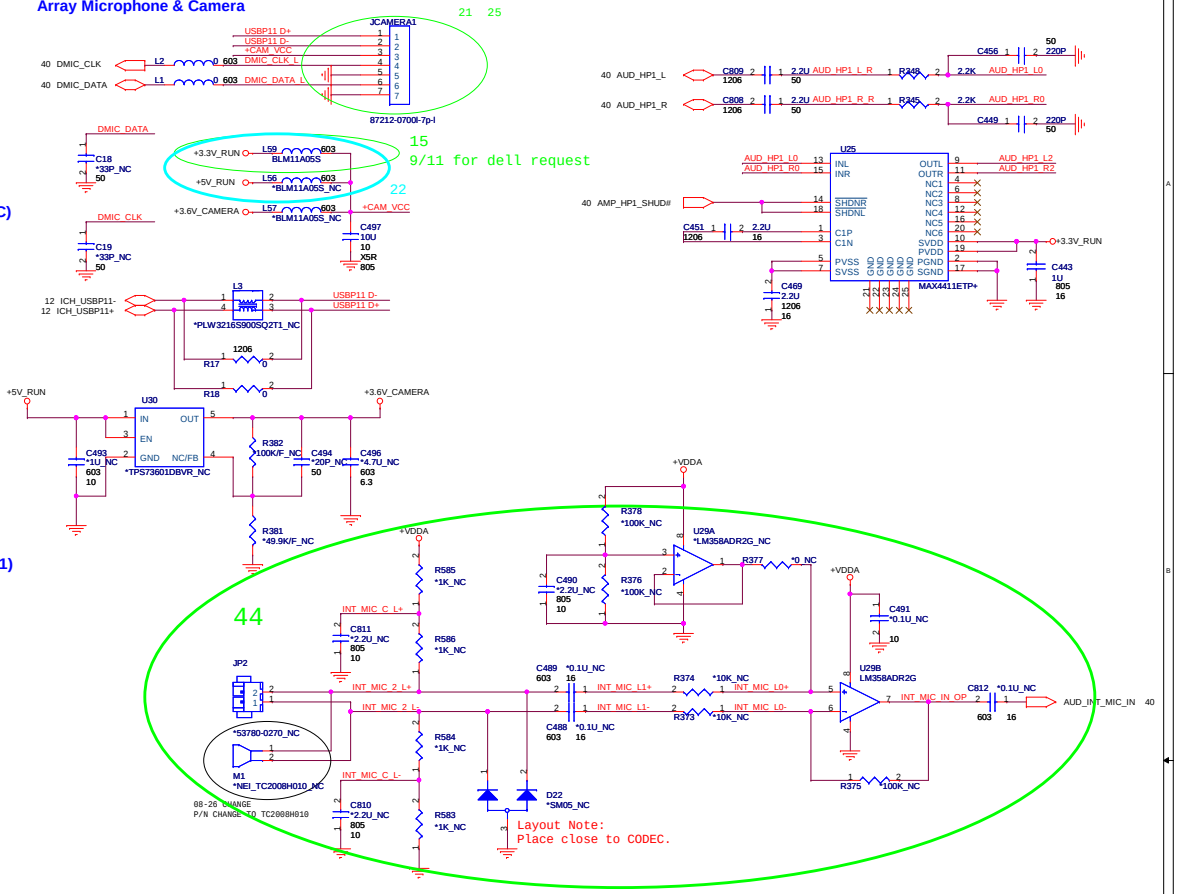
Headphone Jack
Stereo MIC Jack



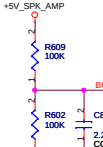
Array Microphone & Camera

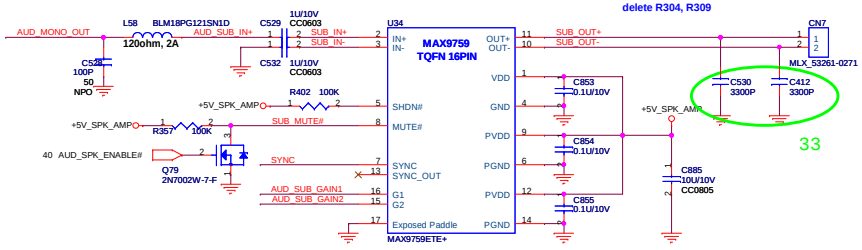


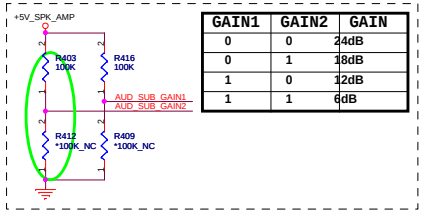
1

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

QUANTA COMPUTER

Title	AUDIO CONN	
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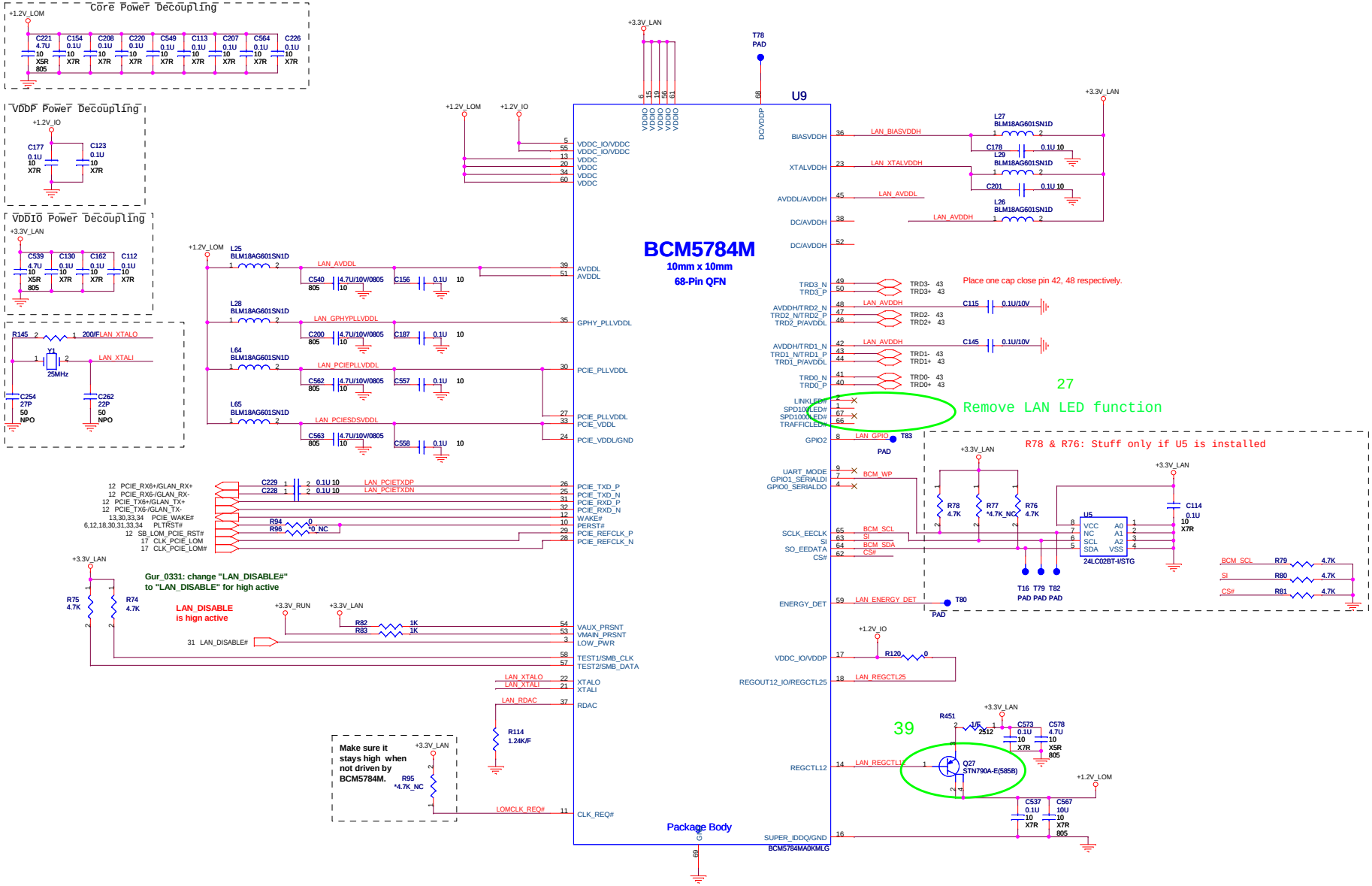
Core Power Decoupling
VDDP Power Decoupling
VDDIO Power Decoupling
BCM5784M
10mm x 10mm
68-Pin QFN
U9
Package Body
BCM5784MA0KMLG
Place one cap close pin 42, 48 respectively.
Remove LAN LED function
R78 & R76: Stuff only if U5 is installed
Gur_0331: change "LAN_DISABLE#" to "LAN_DISABLE" for high active
LAN_DISABLE is hign active
Make sure it stays high when not driven by BCM5784M.
Note:thermal pad
24LC02BT-I/STG
Q27 STN790A-E(585B)
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RJ-45 Connector

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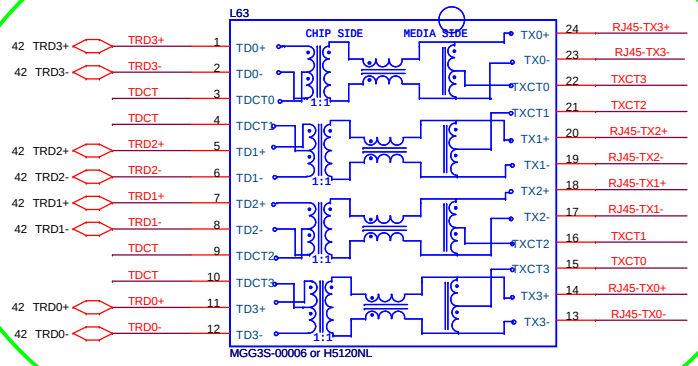
TRANSFORM



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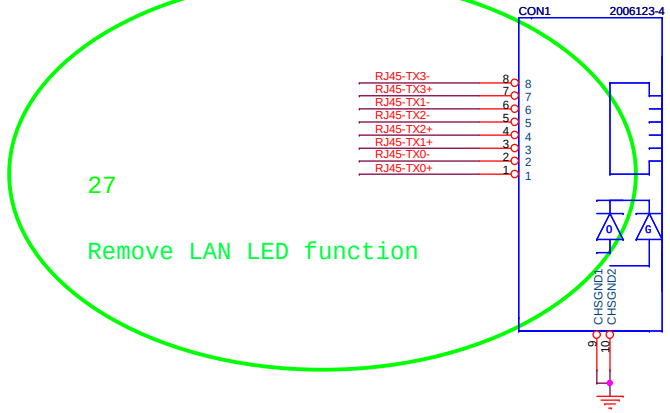
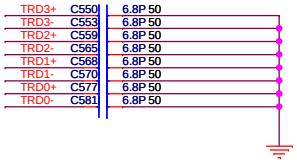
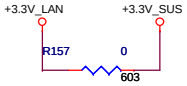
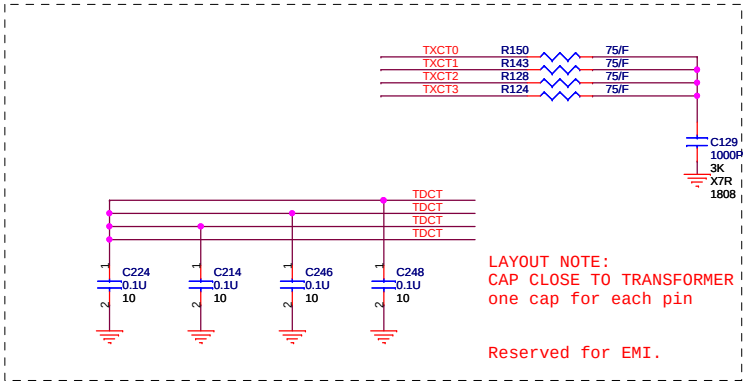
Remove LAN LED function









QUANTA COMPUTER

Title	LAN SWITCH		
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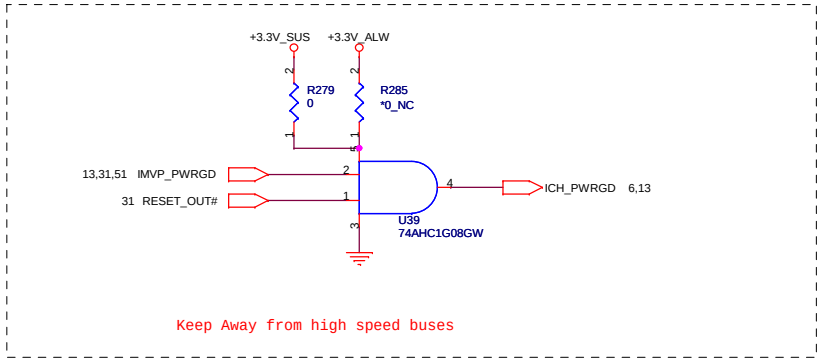

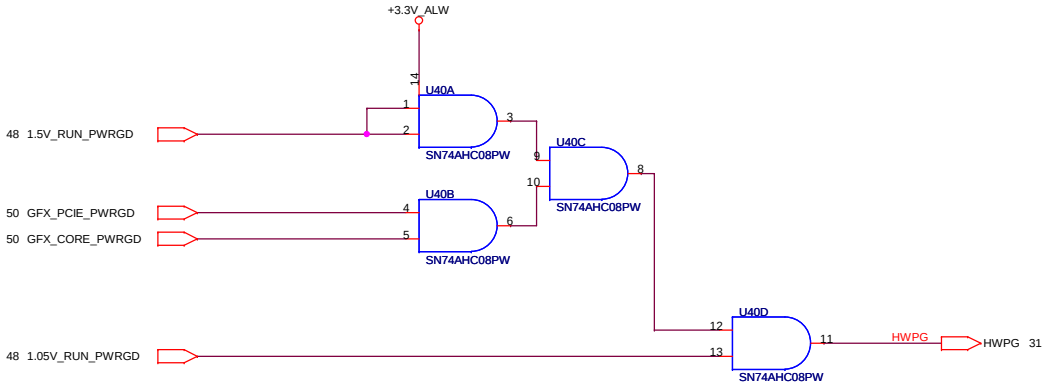

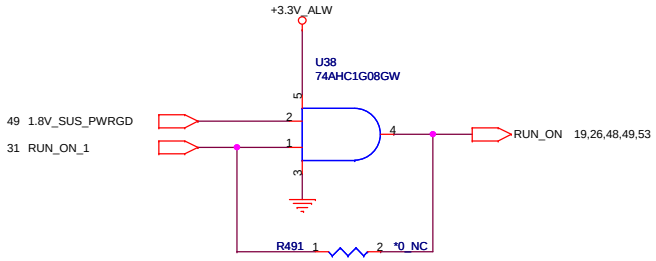

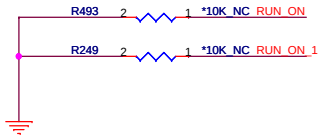

QUANTA COMPUTER

Title	System Reset Circuit	
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QUANTA COMPUTER

Title	Battery Selector	
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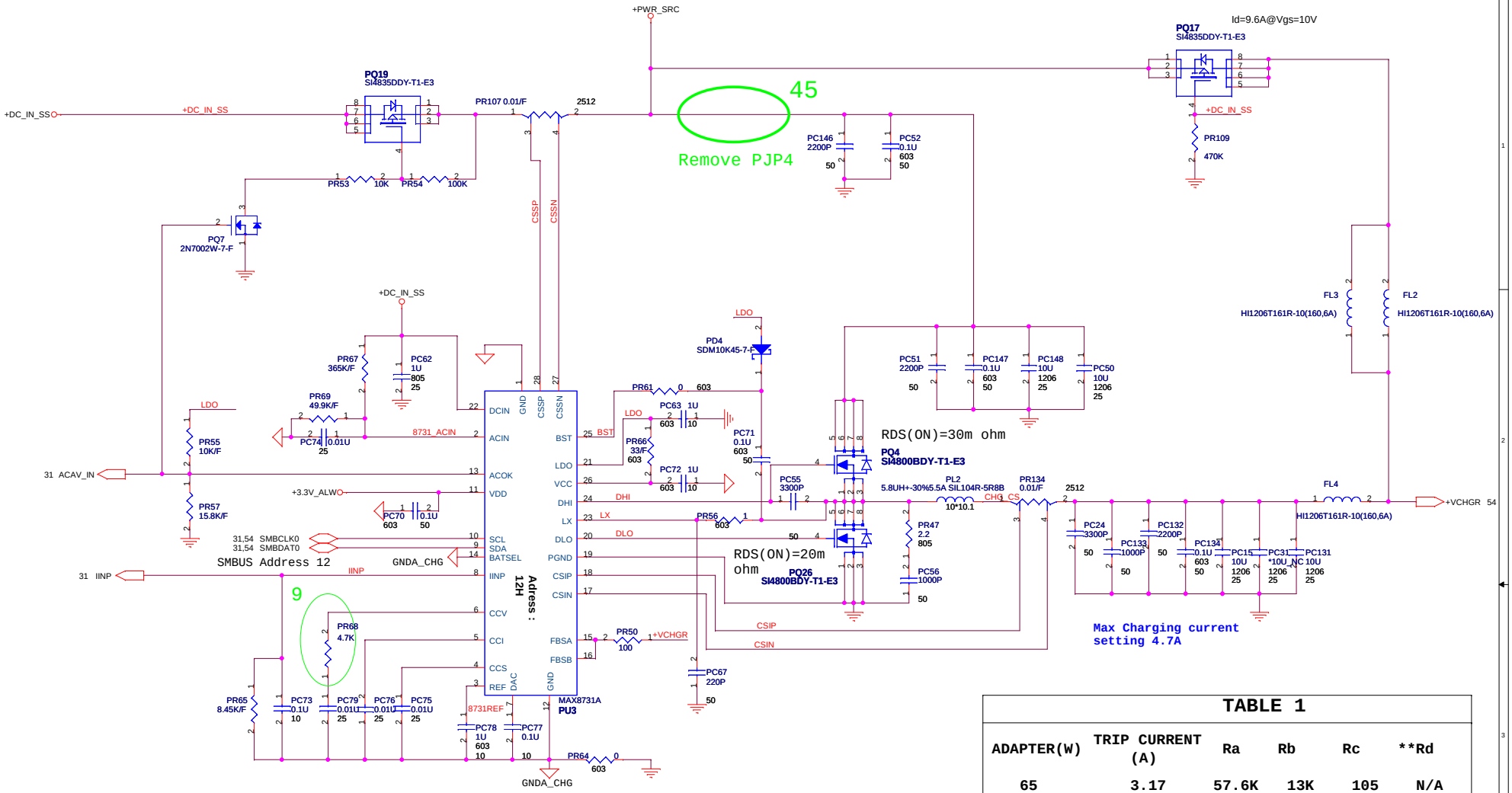

TABLE 1

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

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

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

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

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Title	Charger (ISL88731)	
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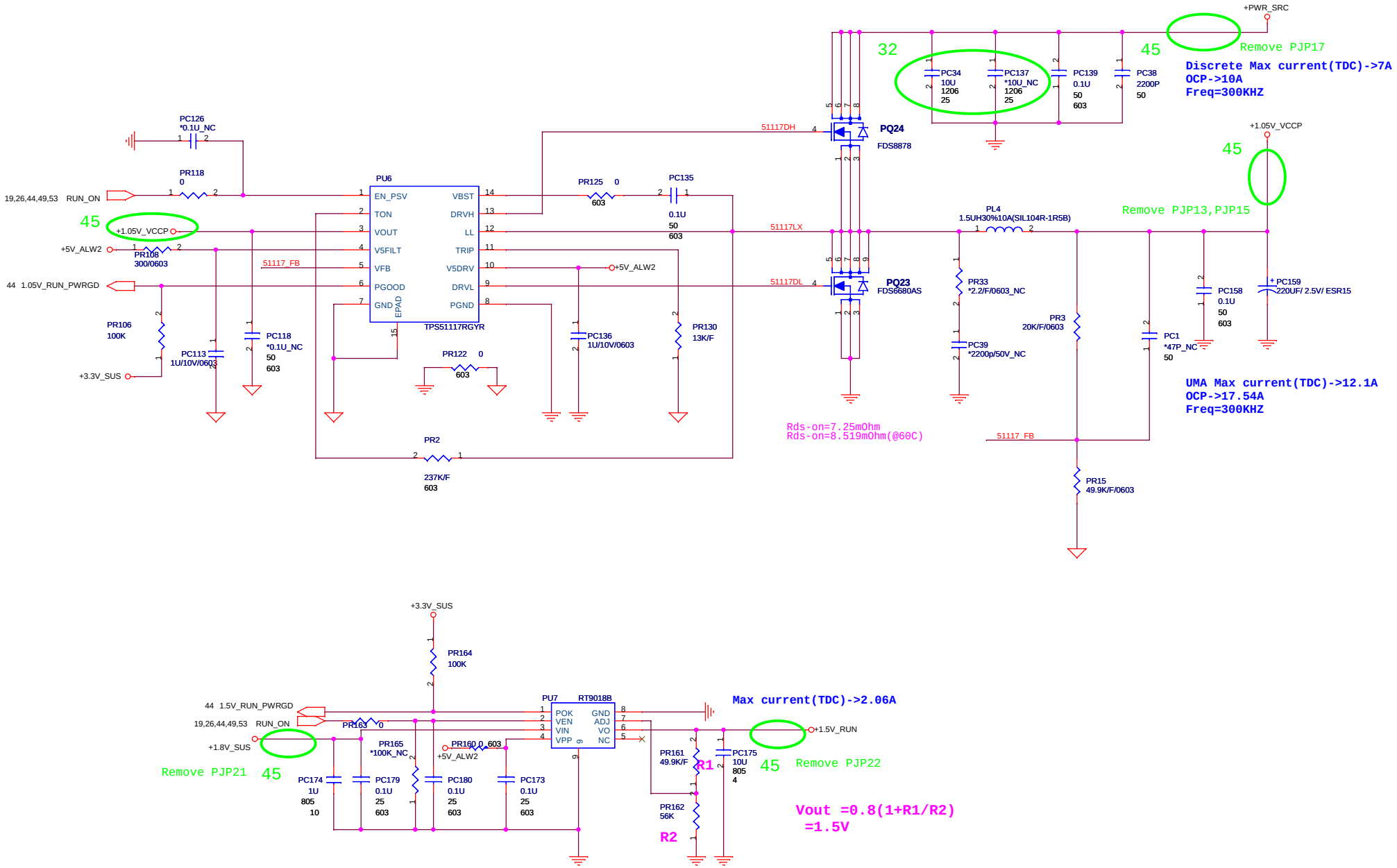

QUANTA COMPUTER		
Title	1.05_VCCP & 1.5V_RUN	
Size	Document Number FM8	Rev 2A
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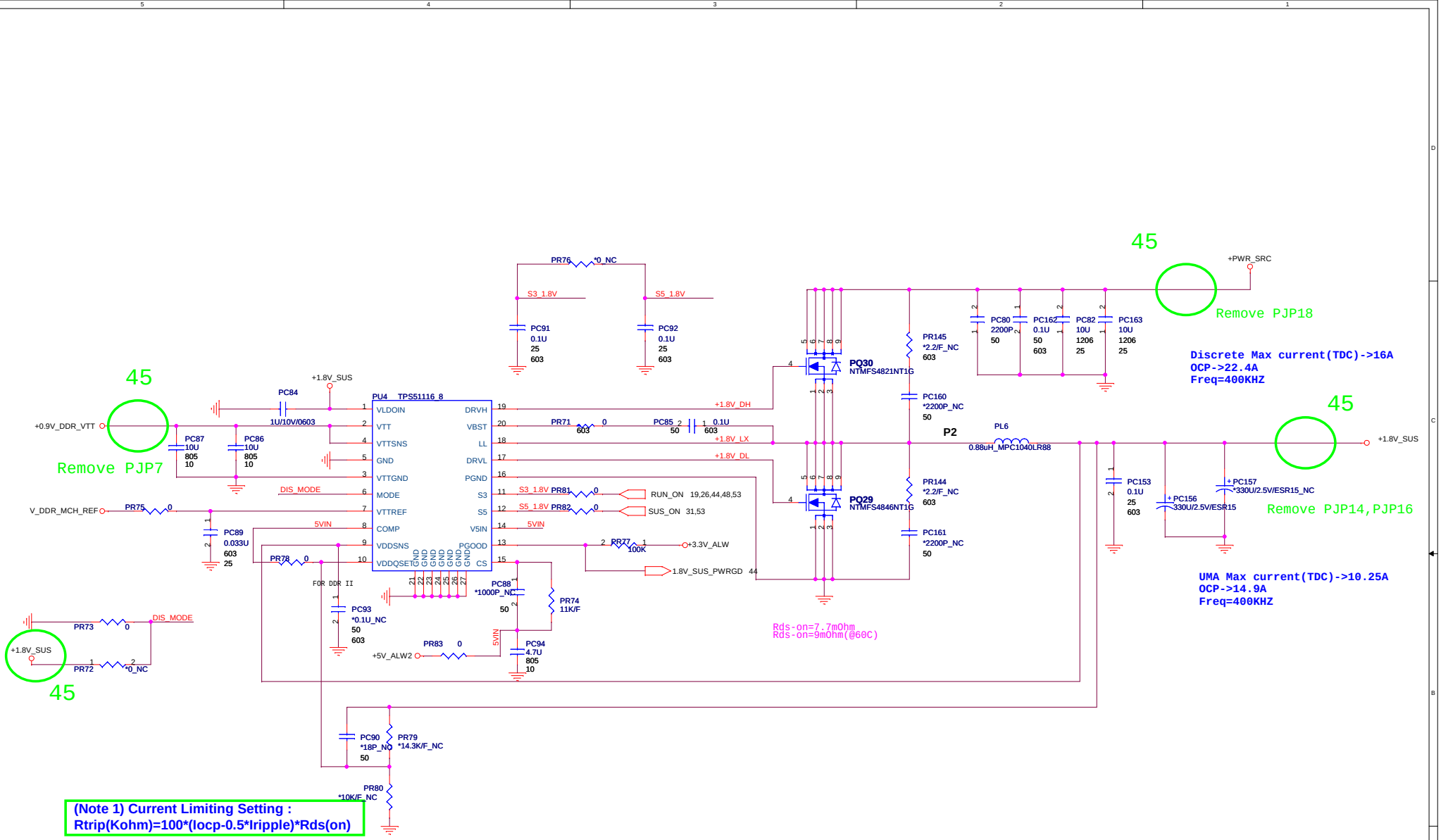

QUANTA COMPUTER

Title	1.8VSUS & 0.9VTT (TPS51116)	
Size	Document Number FM8	Rev 2A
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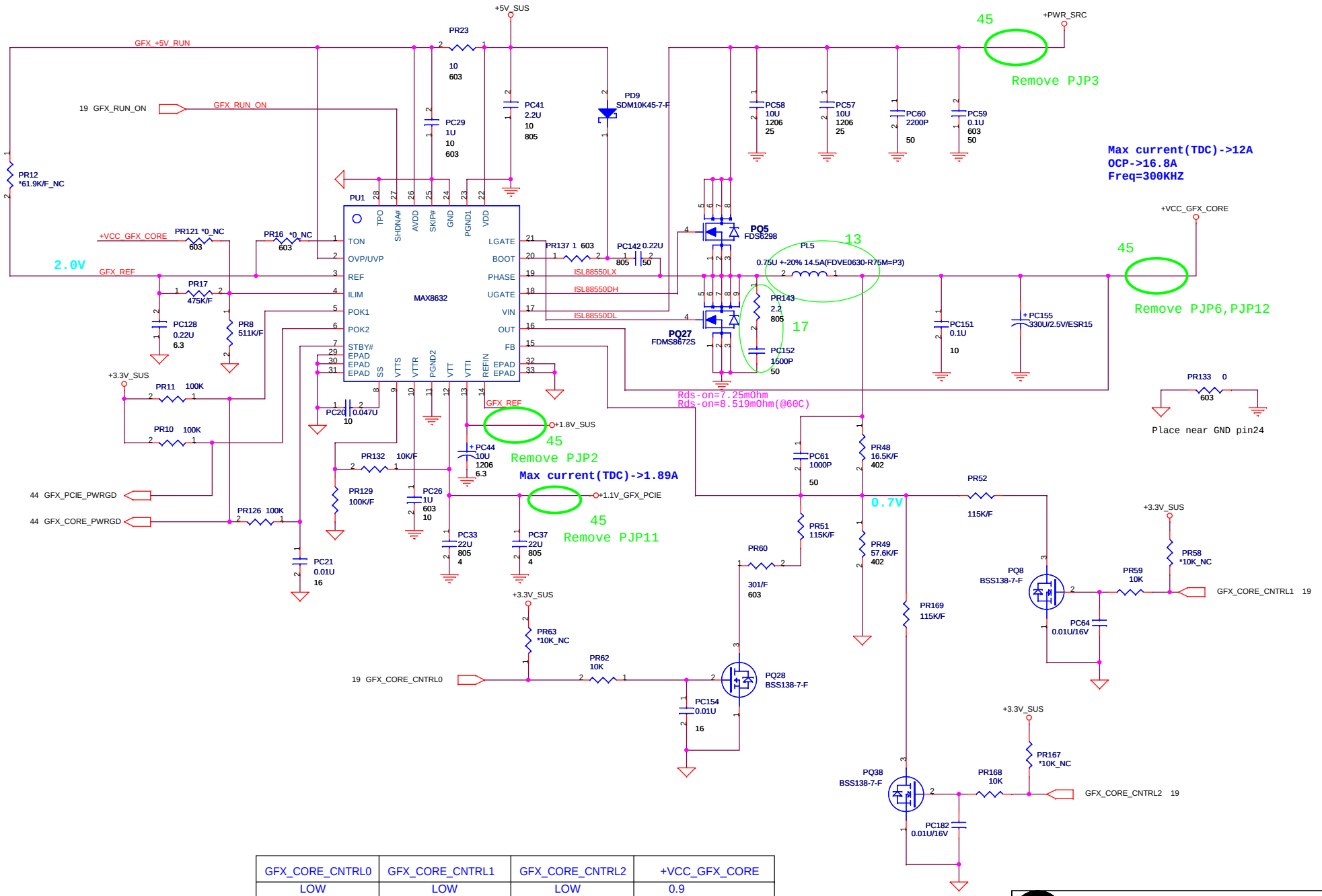

GFX_CORE_CNTRL0	GFX_CORE_CNTRL1	GFX_CORE_CNTRL2	+VCC_GFX_CORE
LOW	LOW	LOW	0.9
HIGH	LOW	LOW	1.0V
HIGH	HIGH	LOW	1.1V
HIGH	HIGH	HIGH	1.2V

QUANTA COMPUTER

Title	VGA DC/DC	
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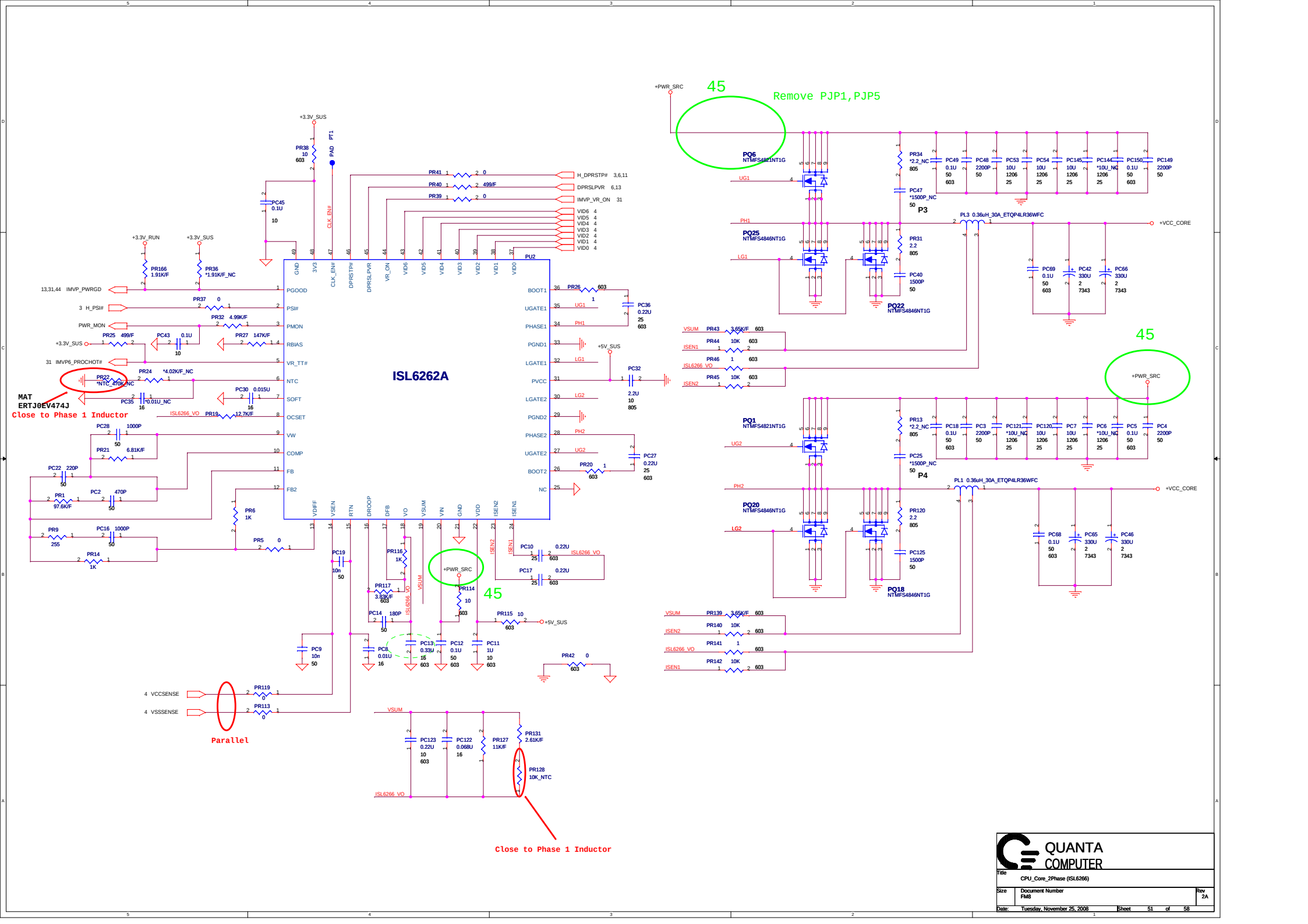
ISL6262A
Remove PJP1,PJP5
MAT
ERTJ0EV474J
Close to Phase 1 Inductor
Parallel
Close to Phase 1 Inductor
+PWR_SRC
45
+3.3V_SUS
+3.3V_RUN
+5V_SUS
+VCC_CORE
PQ6
NTMFS4821NT1G
PQ25
NTMFS4846NT1G
PQ22
NTMFS4846NT1G
PQ1
NTMFS4821NT1G
PQ20
NTMFS4846NT1G
PQ18
NTMFS4846NT1G
P3
P4
PL3 0.36uH_30A_ETQP4LR36WFC
PL1 0.36uH_30A_ETQP4LR36WFC
PU2
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
13,31,44 IMVP_PWRGD
3 H_PSI#
PWR_MON
31 IMVP6_PROCHOT#
4 VCCSENSE
4 VSSENSE
ISL6266_VO
VSUM
ISEN1
ISEN2
UG1
UG2
LG1
LG2
PH1
PH2
QUANTA COMPUTER
Title
CPU_Core_2Phase (ISL6266)
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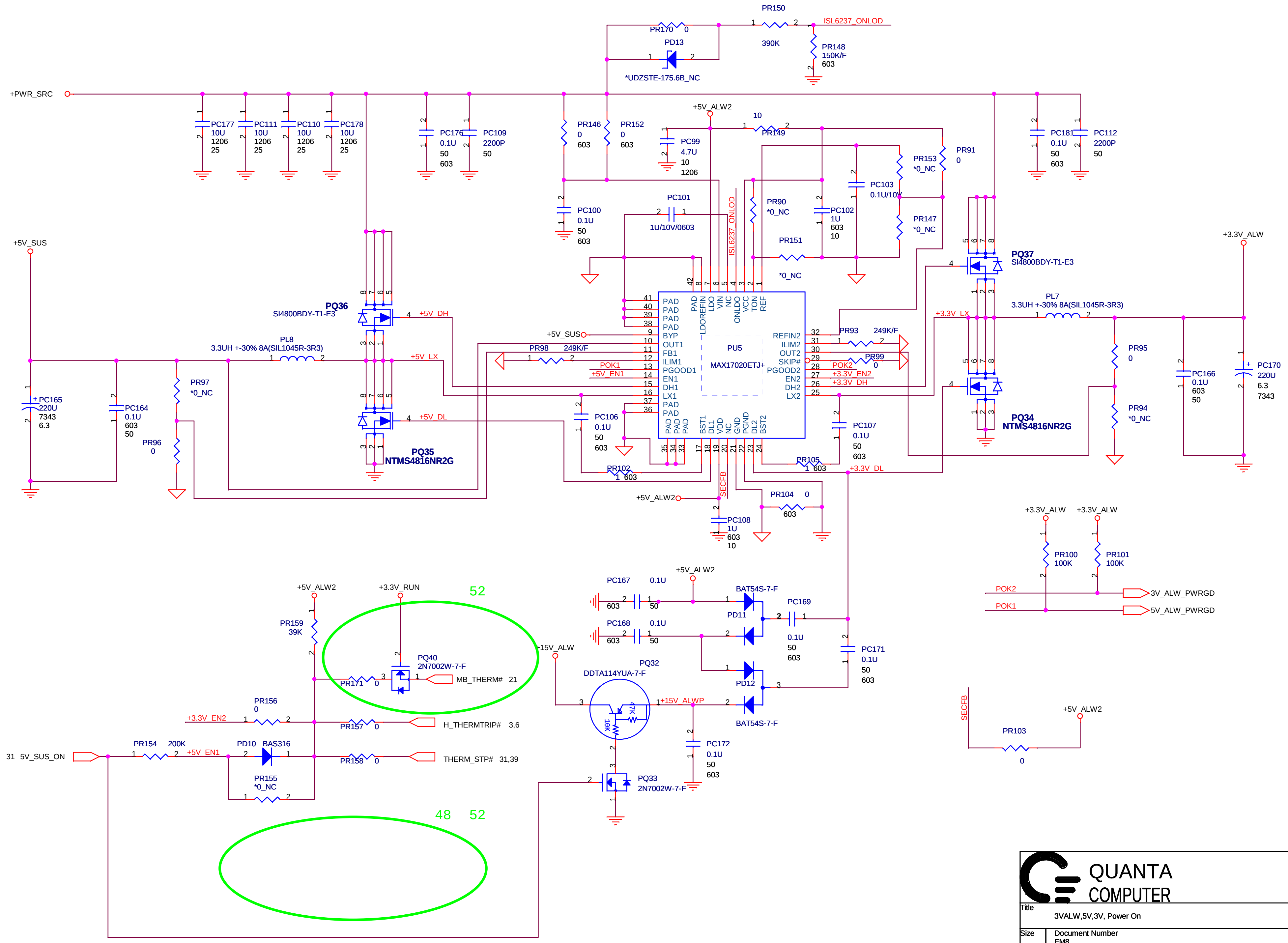

QUANTA COMPUTER

Title	3VALW,5V,3V, Power On	
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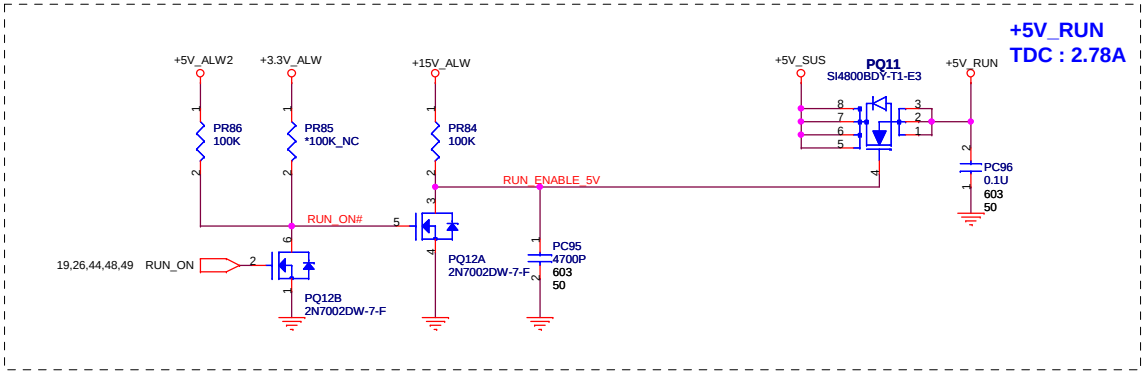

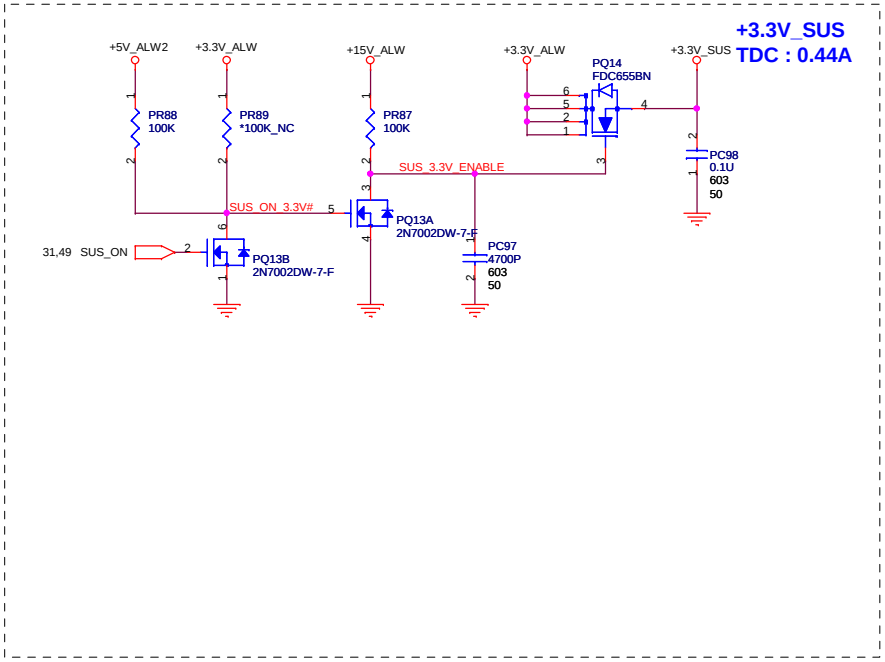

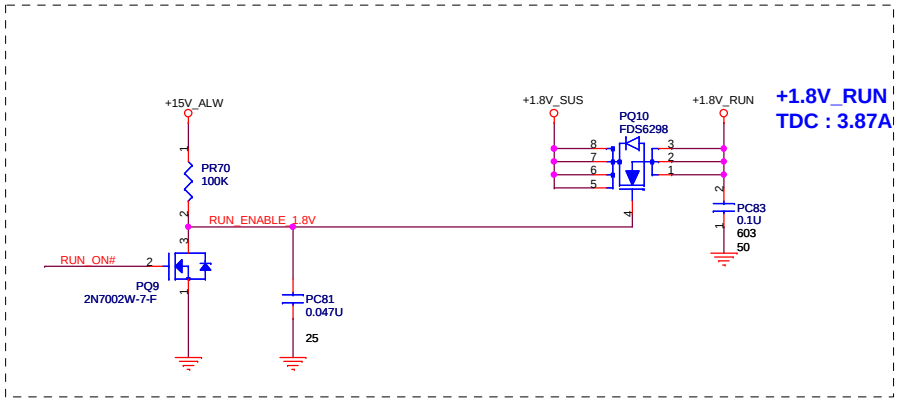

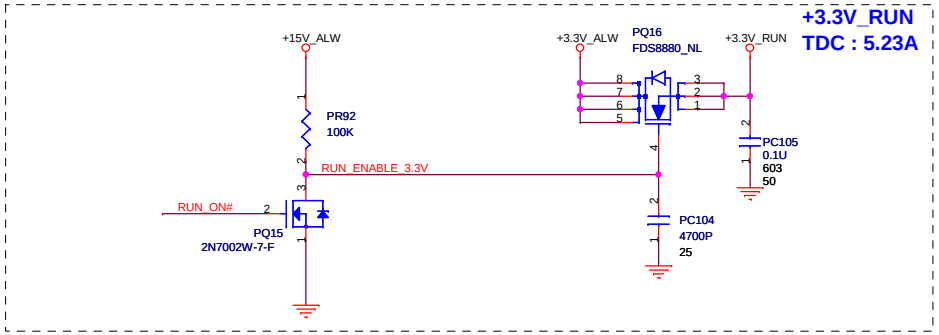

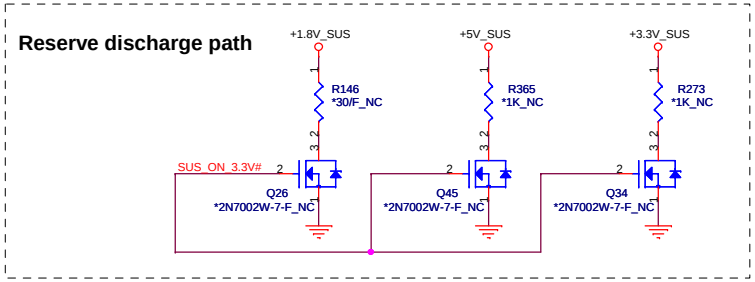

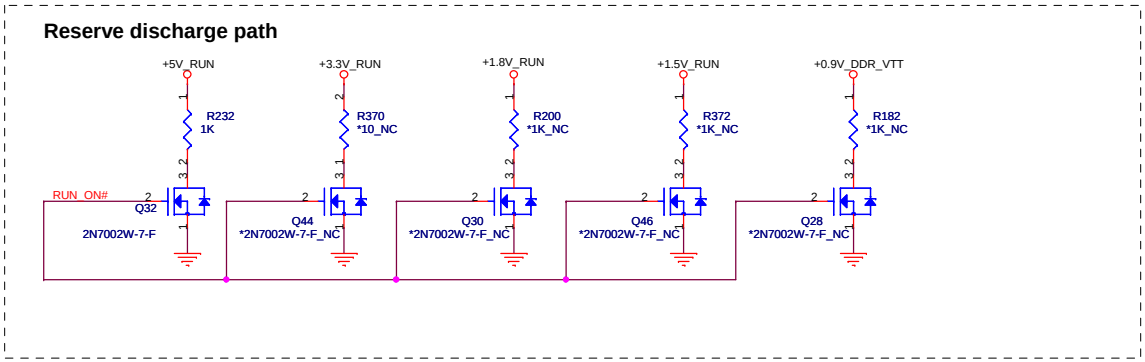

QUANTA COMPUTER

Title	RUN POWER SW	
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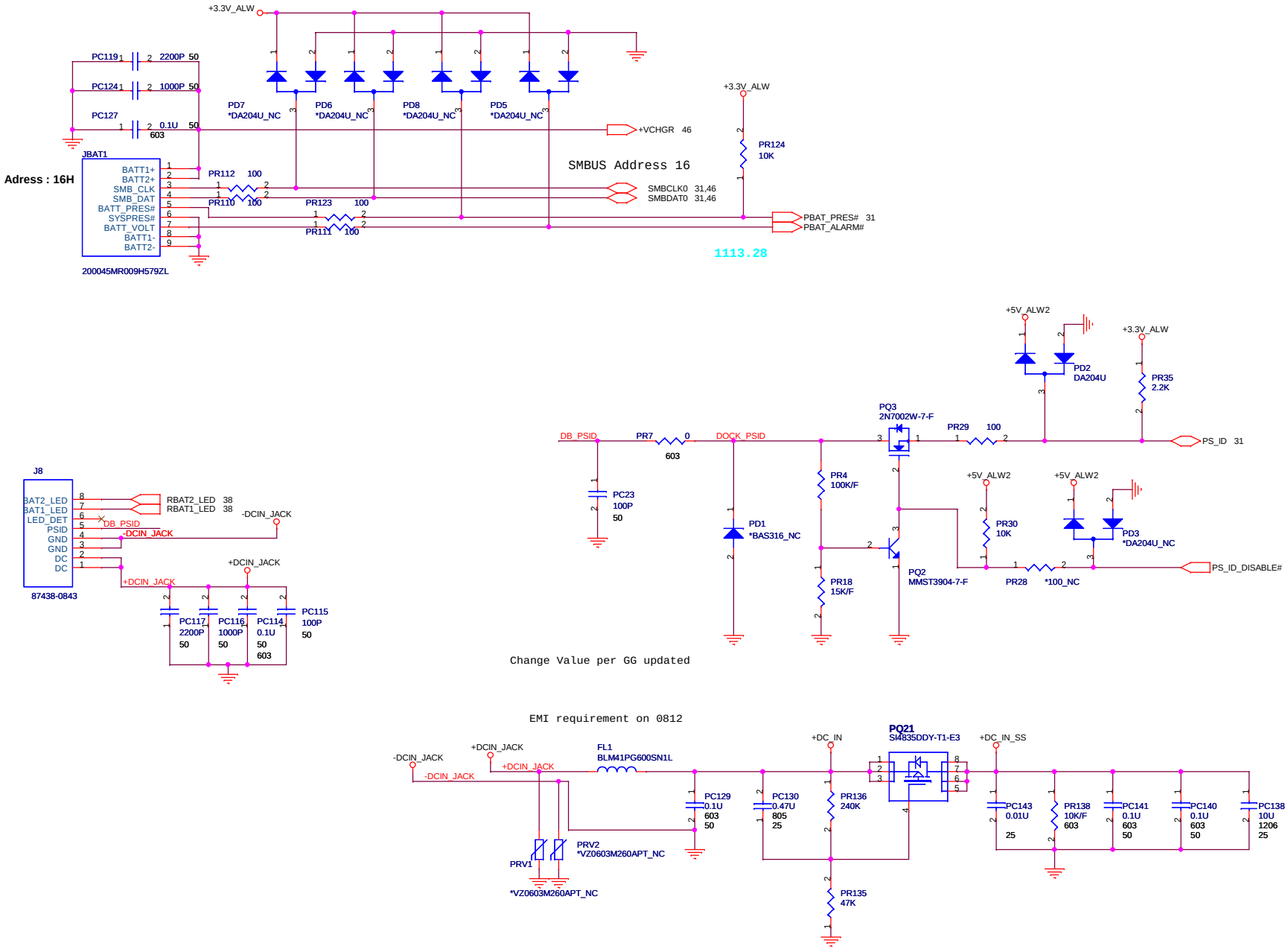

QUANTA COMPUTER

Title	DCIN,BATT CONNECTOR	
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FOR CPU use

H4 *H-C276D177P2_NC H-C276D157P2
H12 *H-C276D177P2_NC H-C276D157P2
H11 *H-C276D177P2_NC H-C276D157P2
H5 *H-C276D177P2_NC H-C276D177P2

TH2 H-TC118BC197D63P2
TH1 H-TC118BC197D63P2
TH3 H-TC118BC197D63P2

For MiniCard nut use. on 31' header

H3 *H-TC315BC394D79P2_NC H-TC315BC394D79P2
H1 *H-TC315BC394D126P2_NC H-TC315BC394D126P2
H20 *H-TC315BC394D126P2_NC H-TC315BC394D126P2
H15 *H-TC315BC335D126P2_NC H-TC315BC335D126P2

H14 *H-C256D154P2_NC H-C256D154P2
H10 *H-C256D154P2_NC H-C256D154P2

For GPU nut use.

H2 *o-o177x472d177x472n_NC o-o177x472d177x472n
H23 *H-TC315BC394D126P2_NC H-TC315BC394D126P2
H22 *H-TC315BC394D126P2_NC H-TC315BC394D126P2
H18 *h-fm8b-1_NC h-fm8b-1

PV1 *PAD138X98XH_NC GND
PV2 *PAD138X98XH_NC GND

H19 *H-TC315BC394D126P2_NC H-TC315BC394D126P2
H16 *H-TC315BC394D126P2_NC H-TC315BC394D126P2
H9 *H-TC315BC394D126P2_NC H-TC315BC394D126P2
H24 *h-TC256BC315D110P2_NC h-TC256BC315D110P2

H7 *h-tc256bc315d126p2_NC h-tc256bc315d126p2

H8 *H-C228D228N_NC H-C228D228N
H6 *H-C228D228N_NC H-C228D228N
H13 *H-C197D197N_NC H-C197D197N
H21 *H-C394D394N_NC H-C394D394N
H17 *H-TC256BC315D126P2_NC H-TC256BC315D126P2

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Title	SCREW PAD	
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Reserved for EMI.

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Title	EMI CAP	
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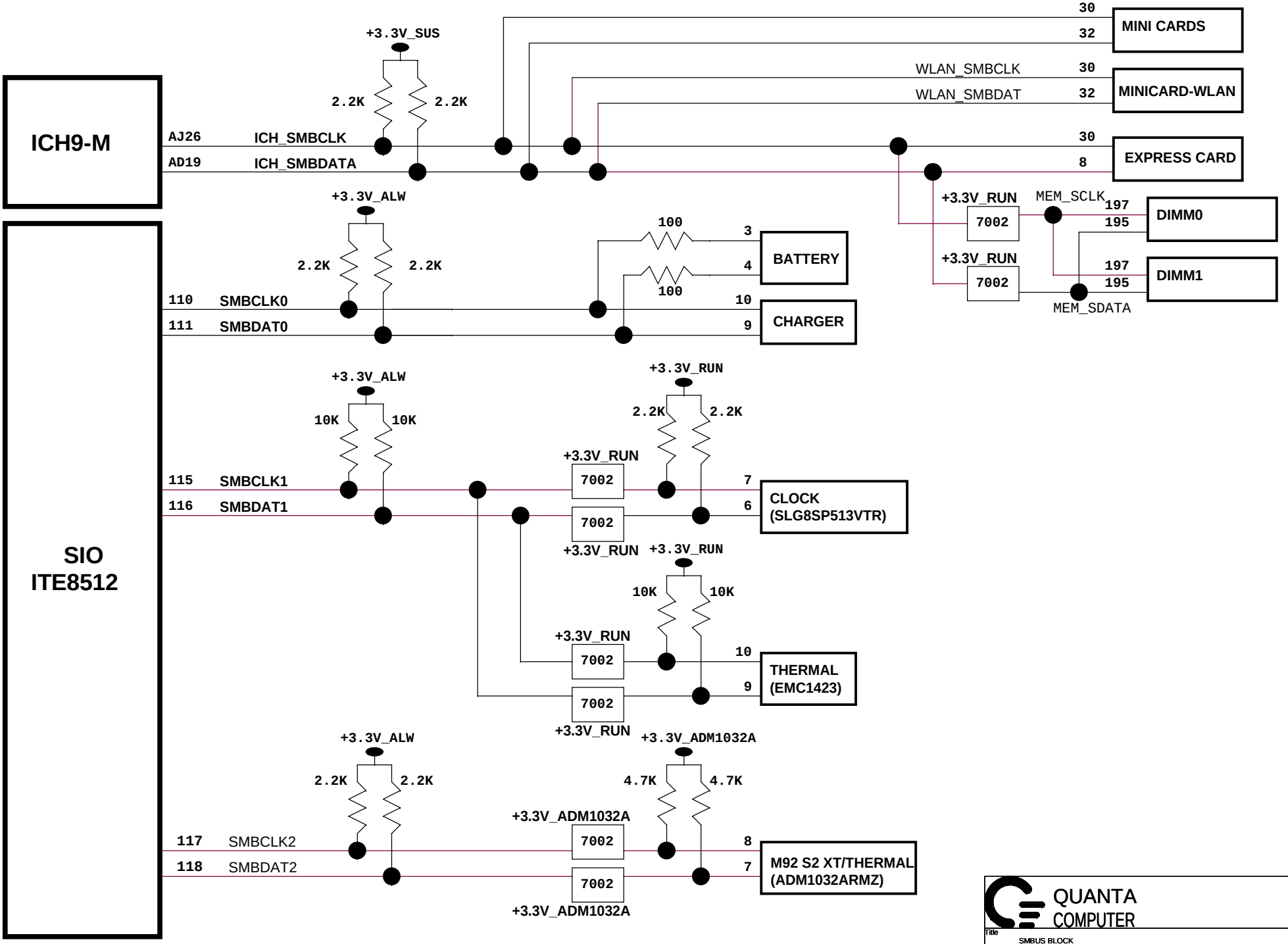

QUANTA COMPUTER

Title	SMBUS BLOCK	
Size	Document Number FM8	Rev 2A
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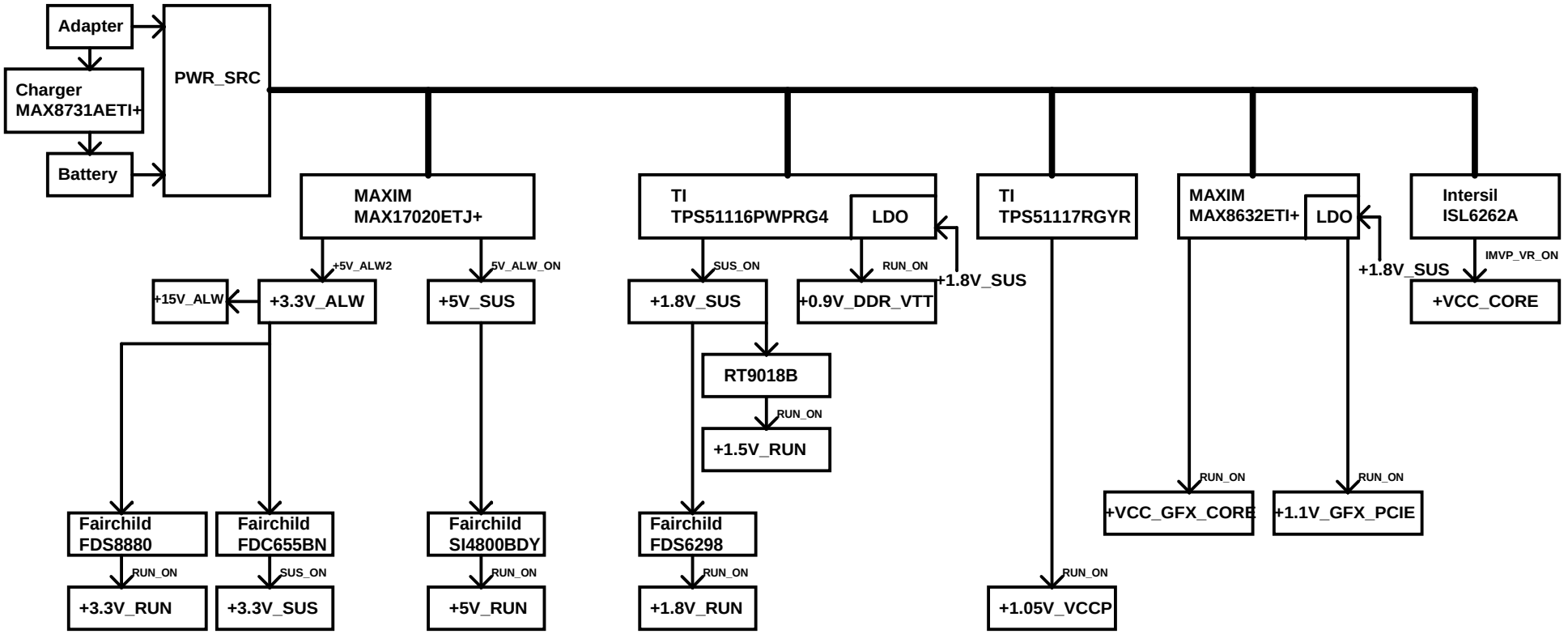
VER : 1A



QUANTA COMPUTER

Title	Schematic Block Diagram1	
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