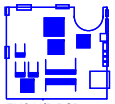
FM6 Hepburn Intel Discrete GFX

VER : 3A



POWER

SYSTEM RESET CIRCUIT PG 44

BATT CHARGER PG 46

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

AC/BATT CONNECTOR PG 54

Merom or Penryn
(478 Micro-FCPGA)
PG 3,4

800 MHz FSB

FAN & THERMAL
SMSC1423 PG 39

CLOCK
SLG8SP513V
(QFN-64) PG 17

POWER

REGULATOR
+1.5V_RUN/+1.05V_VCCP PG 48

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

CPU VR PG 51

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

VGA Core PG 50

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

DDR2-SODIMM1
PG 15,16

667 MHZ DDR II

DDR2-SODIMM2
PG 15,16

667 MHZ DDR II

PCIEx16

GDDR2 x 4
(256M 64bits)
PG 23

ATI M82S
PCI EXPRESS GFX
PG 18,19,20,21,22

LVDS

Panel Connector PG 26

HDMI

HDMI CONN. PG 26

VGA

CRT CONN. PG 27

SATA-ODD
PG 36

SATA

SATA-HDD
PG 36

SATA

DMI interface

ICH8-M
676 BGA
PG 11,12,13,14

USB2.0 x 4

USB conn x 4 PG 35

PCIEx1

LAN
BCM5784M
PG 42

RJ45/Magnetics
PG 43

PCIEx1
USB2.0

EXPRESS-CARD
R5538
PG 30

PCIEx2
USB2.0

MINI-CARD
WLAN
PG 34

PCIEx1
USB2.0

MINI-CARD
WWAN
PG 33

USB2.0

MINI-CARD
WPAN
PG 33

IHDA
USB2.0

AUDIO/AMP
STAC9228
/92HD73C
PG 40

Camera + D-MIC
PG 41

Biometric
PG 38

LPC

Audio
SPK conn
PG 40

Audio
Jacks x3
PG 41

KBC
ITE8512
PG 31

CIR
TSOP36136TR
PG 37

18X8

Keyboard
PG 37

33MHz PCI

8-in-1 Card Reader
R5C833
PG 28

1394

1394 CONN. PG 29

Card Reader CONN. PG 30

SPI

PS/2

USER INTERFACE
PG 38

FLASH
2Mbyts
PG 32

Touchpad
PG 37

QUANTA COMPUTER

Title	Schematic Block Diagram1	
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PAGE	DESCRIPTION
1	Schematic Block Diagram
2	Front Page
3-4	Merom
5-10	Crestline
11-14	ICH8M
15-16	DDRII SO-DIMM(200P)
17	Clock Generator
18-23	M82S
24	BLANK PAGE
25	BLANK PAGE
26	LCD CONN / HDMI CONN
27	CRT CONN
28	5C833/PCI
29	IEEE1394
30	Express/Card Reader
31	SIO (ITE8512)
32	FLASH / RTC
33	MINI-Card (WPAN, WWAN)
34	MINI-Card (WLAN)
35	USB
36	SATA (HDD & CD_ROM)
37	TP / KEYBOARD
38	SWITCH / /LED
39	FAN / THERMAL
40	Azelia CODEC
41	AUDIO CONN
42	LAN (RTL8111B/8111C)
43	LAN RJ-45 / TRANSFORM
44	System Reset Circuit
45	Blank Page
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48	1.05VCCP & 1.5VRUN
49	1.8VSUS & 0.9VTT
50	VGA_M82
51	CPU_ISL6266 (2PHASE)
52	MAX8744 (+5V,3.3V)
53	Run Power Switch
54	DCin & Batt
55	PAD & SCREW
56	EMI CAP
57	SMBUS BLOCK
58	Power Block Diagram

Power States

POWER PLANE	VOLTAGE	PAGE	DESCRIPTION	CONTROL SIGNAL	ACTIVE IN
+PWR_SRC	10V~+19V	4,26,32,34,46,48,49,50,51,52,56	MAIN POWER		S0~S5
+RTC_CELL	+3.0V~+3.3V	11,14,31,32	RTC		S0~S5
+3.3V_ALW	+3.3V	3,13,31,32,34,36,37,38,44,46,49,52,53,54	8051 POWER	ALWON	S0~S5
+5V_ALW	+5V	35,36,46,48,49,52,53,54	LCD/CHARGE POWER	ALWON	S0~S5
+5V_ALW2	+5V	37,38,52,53	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	3,11,12,13,14,20,26,30,37,38,43,48,49, 50,51,53	SLP_S5# CTRLD POWER	3.3V_SUS_ON	
+1.8V_SUS	+1.8V	6,8,9,15,48,49,50,53	SODIMM POWER	DDR_ON	
+0.9V_DDR_VTT	+0.9V	16,49,53	SODIMM POWER	0.9V_DDR_VTT_ON	
+5V_RUN	+5V	14,20,26,27,36,37,38,40,41,53	SLP_S3# CTRLD POWER	RUN_ON	
+3.3V_RUN	+3.3V	6,8,9,11,12,13,14,15,17,19,20,22,26,27,28,30, 31,33,34,36,38,39,40,41,42,53,56	SLP_S3# CTRLD POWER	3.3V_RUN_ON	
+1.8V_RUN	+1.8V	19,20,21,22,23,38,53	SDVO POWER	RUN_ON	
+1.5V_RUN	+1.5V	4,9,14,30,33,34,48,53,56	CALISTOGA/ICH8 POWER	1.5V_RUN_ON	
+1.2V_LOM	+1.25V	42	CALISTOGA/ICH8 POWER	1.25V_RUN_ON	
+1.1V_GFX_PCIE	+1.1V	21,50	VGA POWER	RUN_ON	
+1.05V_VCCP	+1.05V	3,4,5,6,8,9,11,14,48,56	CPU/CALISTOGA/ICH8 POWER	1.05V_RUN_ON	
+VCC_CORE	+0.7V~+1.77V	4,51,56	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
8731AGND	46	
AGND_0.9V	49	
AGND_DC/DC	52	
AGND_DC2	48	
AGND_DDR	49	
AGND_ISL6260	51	
GND	ALL	

QUANTA COMPUTER

Title	Index & Power Status	
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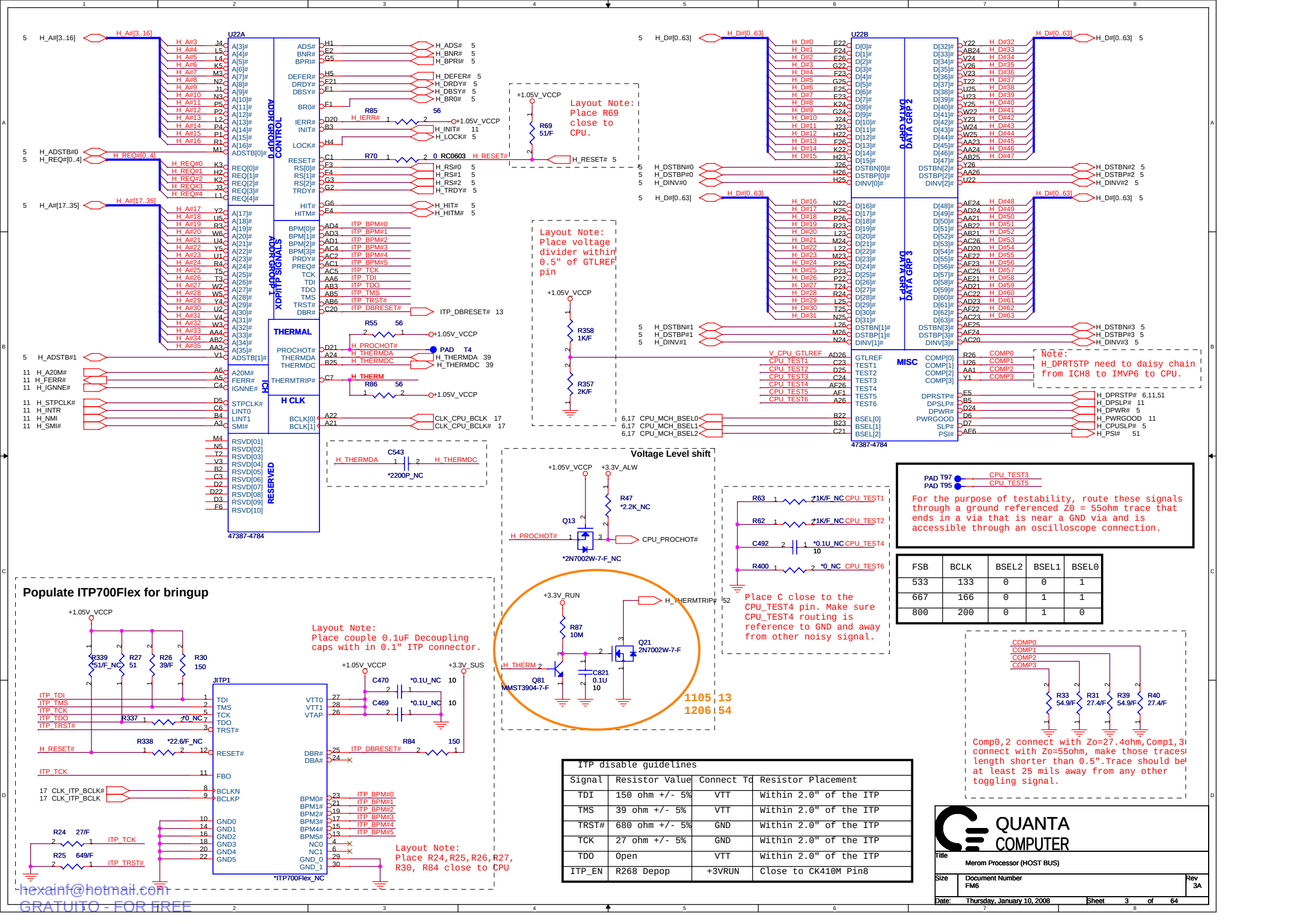
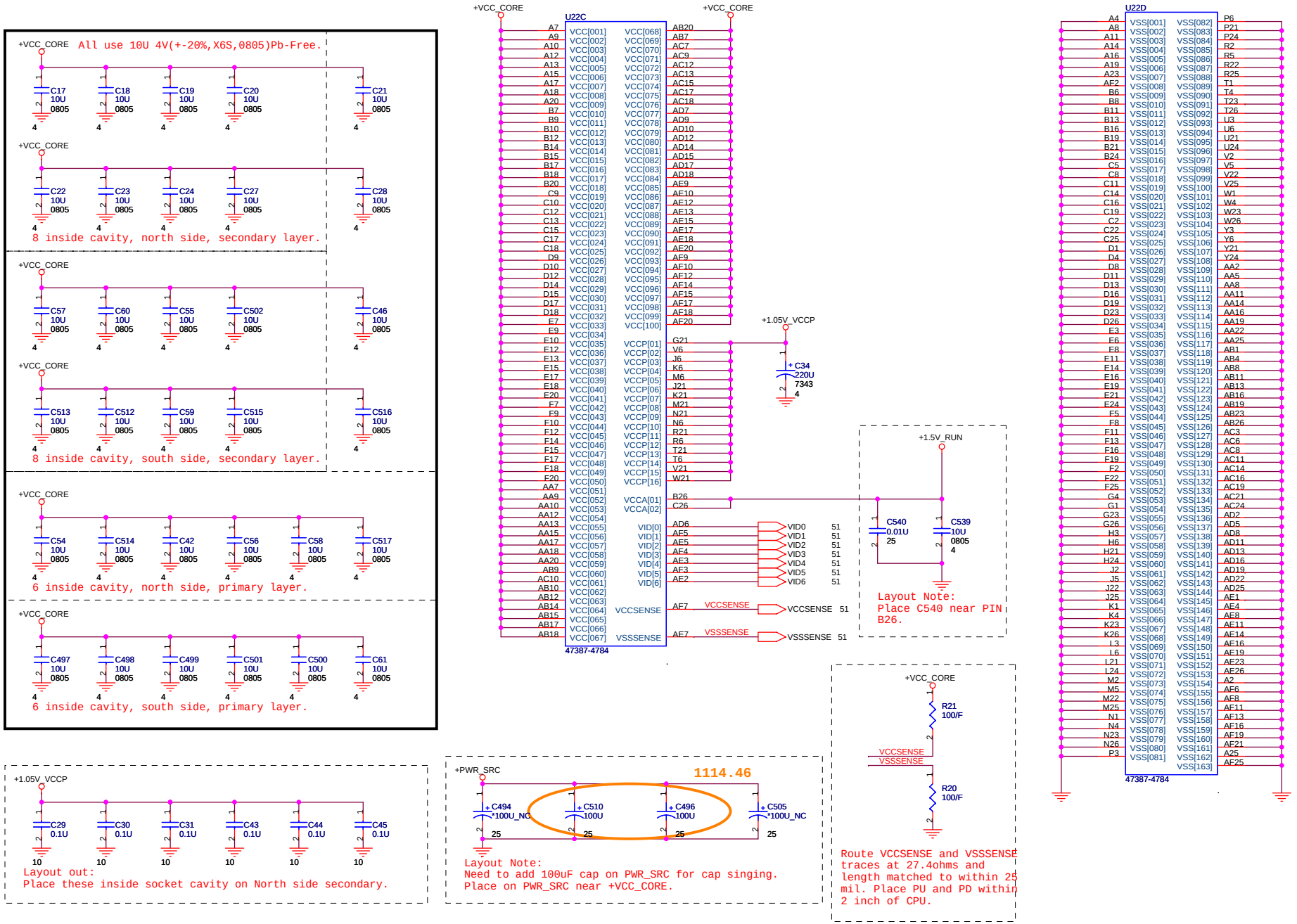
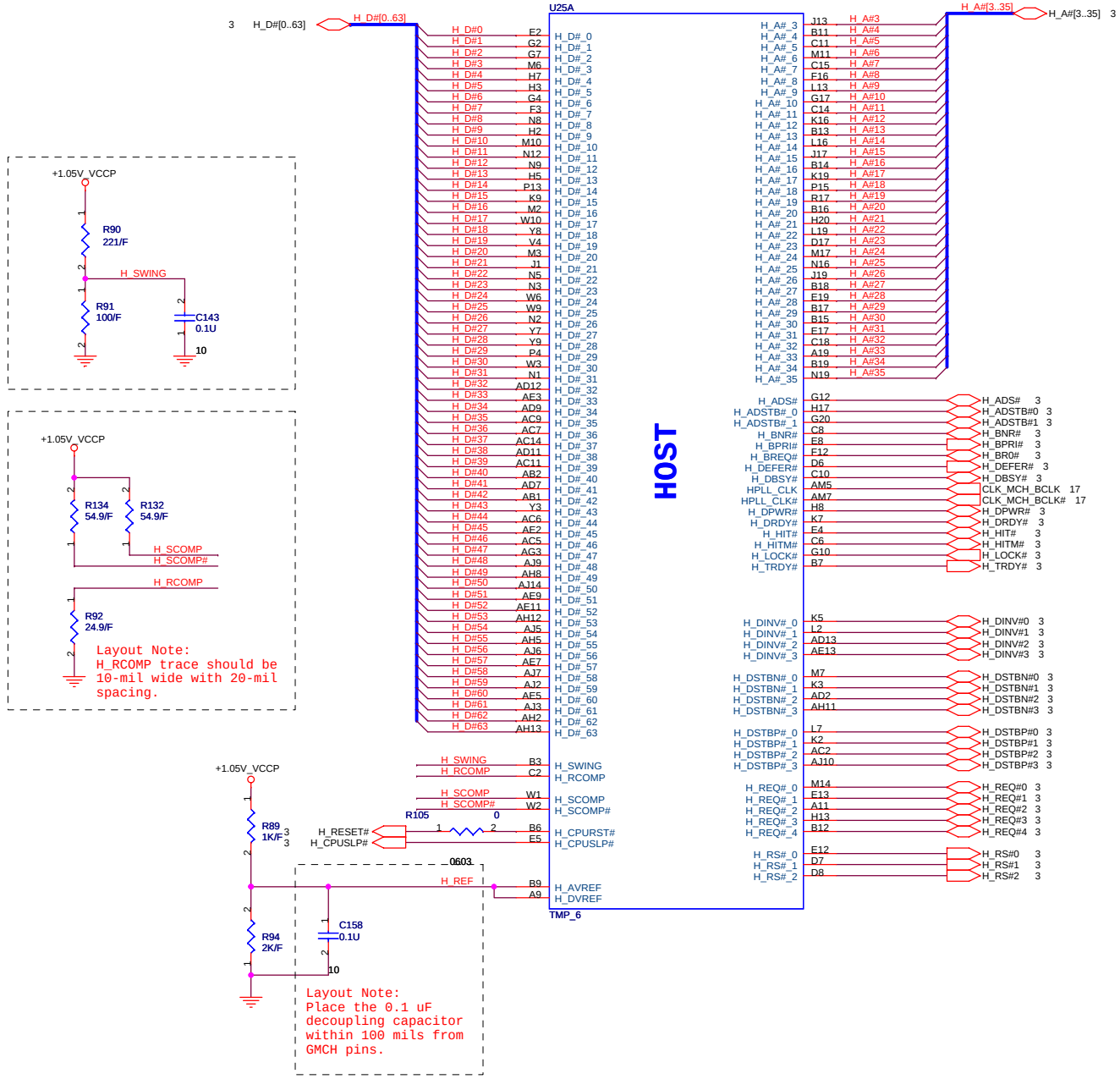


FSB	BCLK	BSEL2	BSEL1	BSEL0
533	133	0	0	1
667	166	0	1	1
800	200	0	1	0

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





Title	Crestline (HOST)
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QUANTA COMPUTER

Santa Rosa Platform MOW WW15
For 4Gb DRAM support,
change Pin-BJ29 to DDR_A_MA14,
change Pin-BE24 to DDR_B_MA14.

Layout Note:
Location of all MCH_CFG strap
resistors needs to be close to
minmize stub.

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	Crestline (VGA,DMI)	
Size	Document Number FM6	Rev 3B
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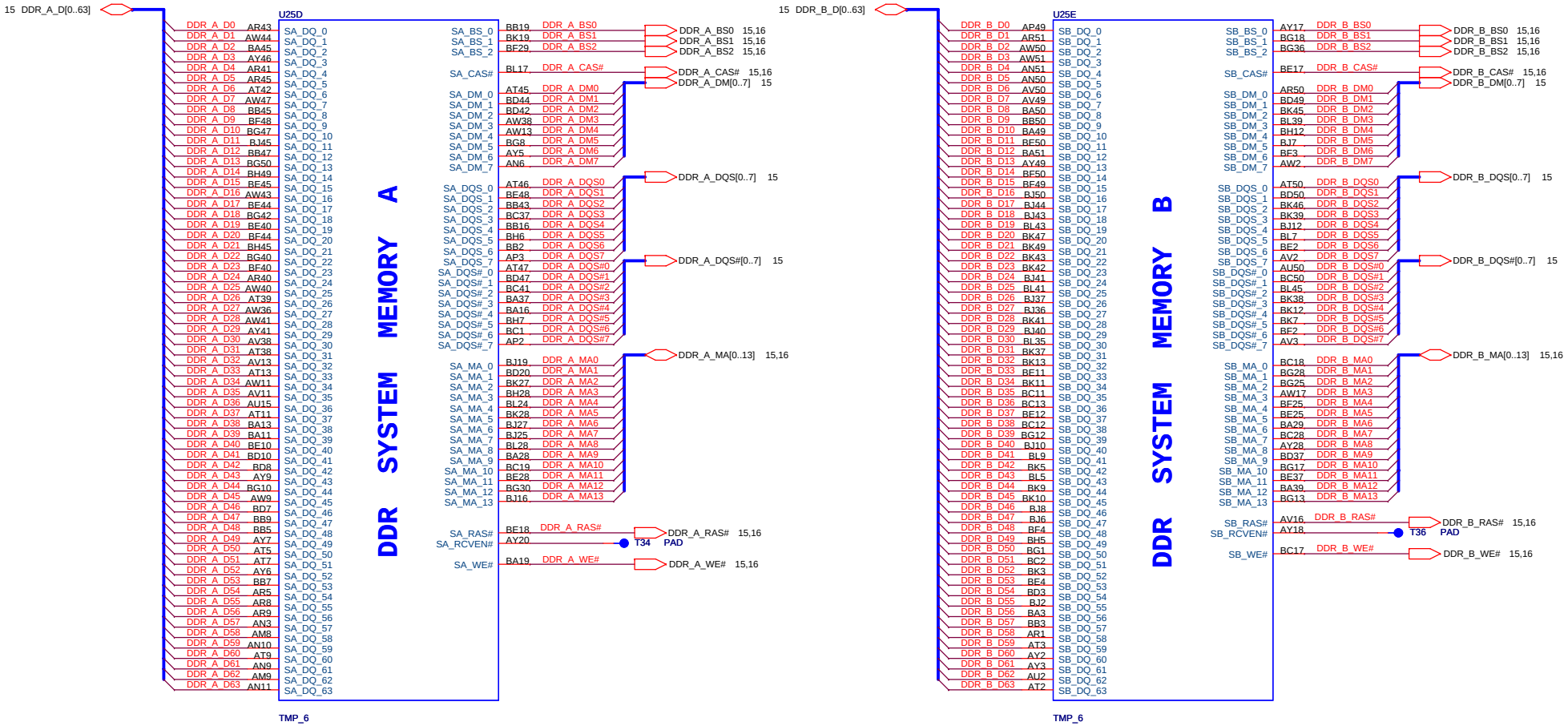

QUANTA COMPUTER

Title	Crestline (DDR2)	
Size	Document Number FM6	Rev 3B
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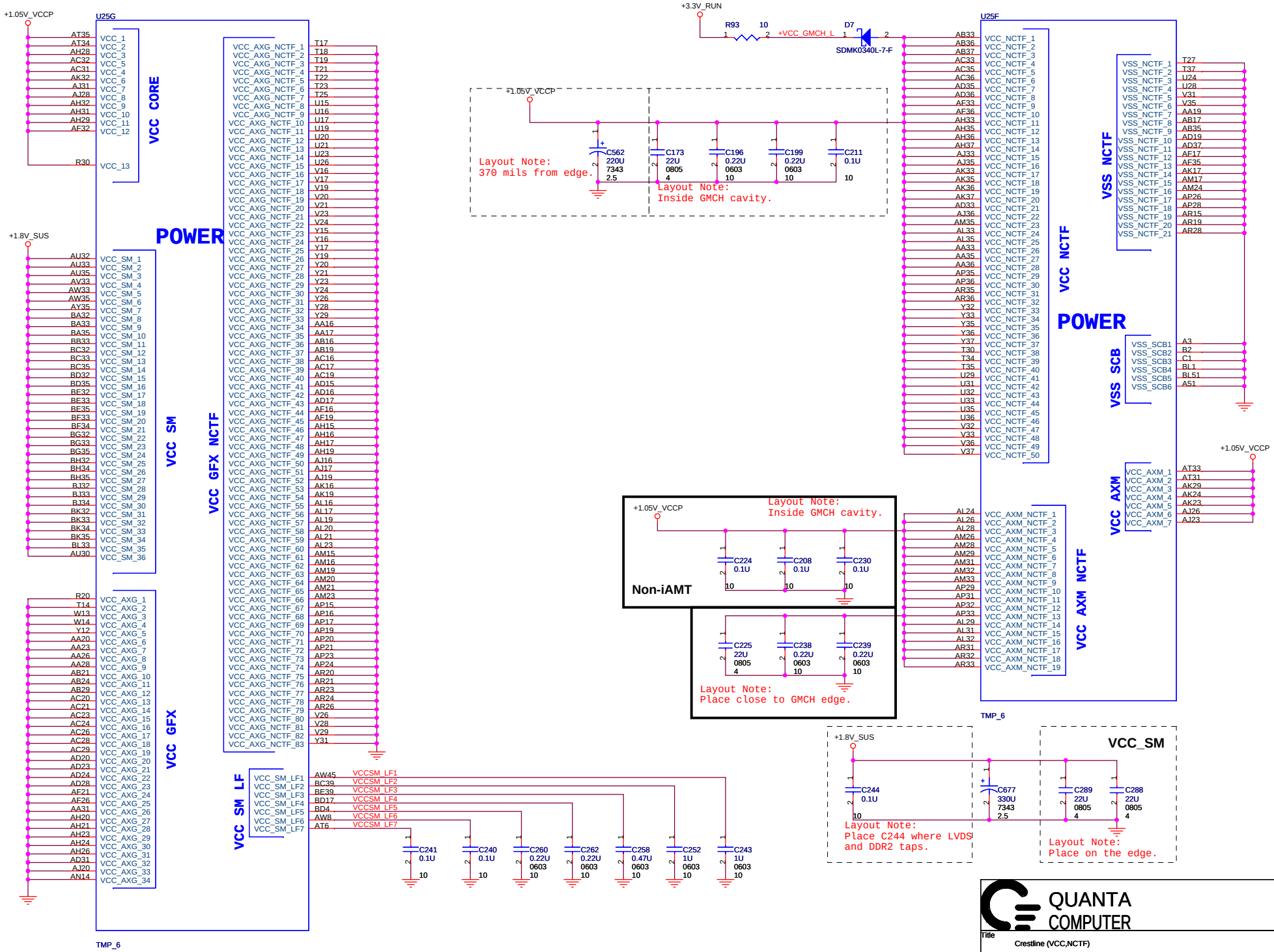

Title	Crestline (VCC,NCTF)	
Size	Document Number FM6	Rev 3B
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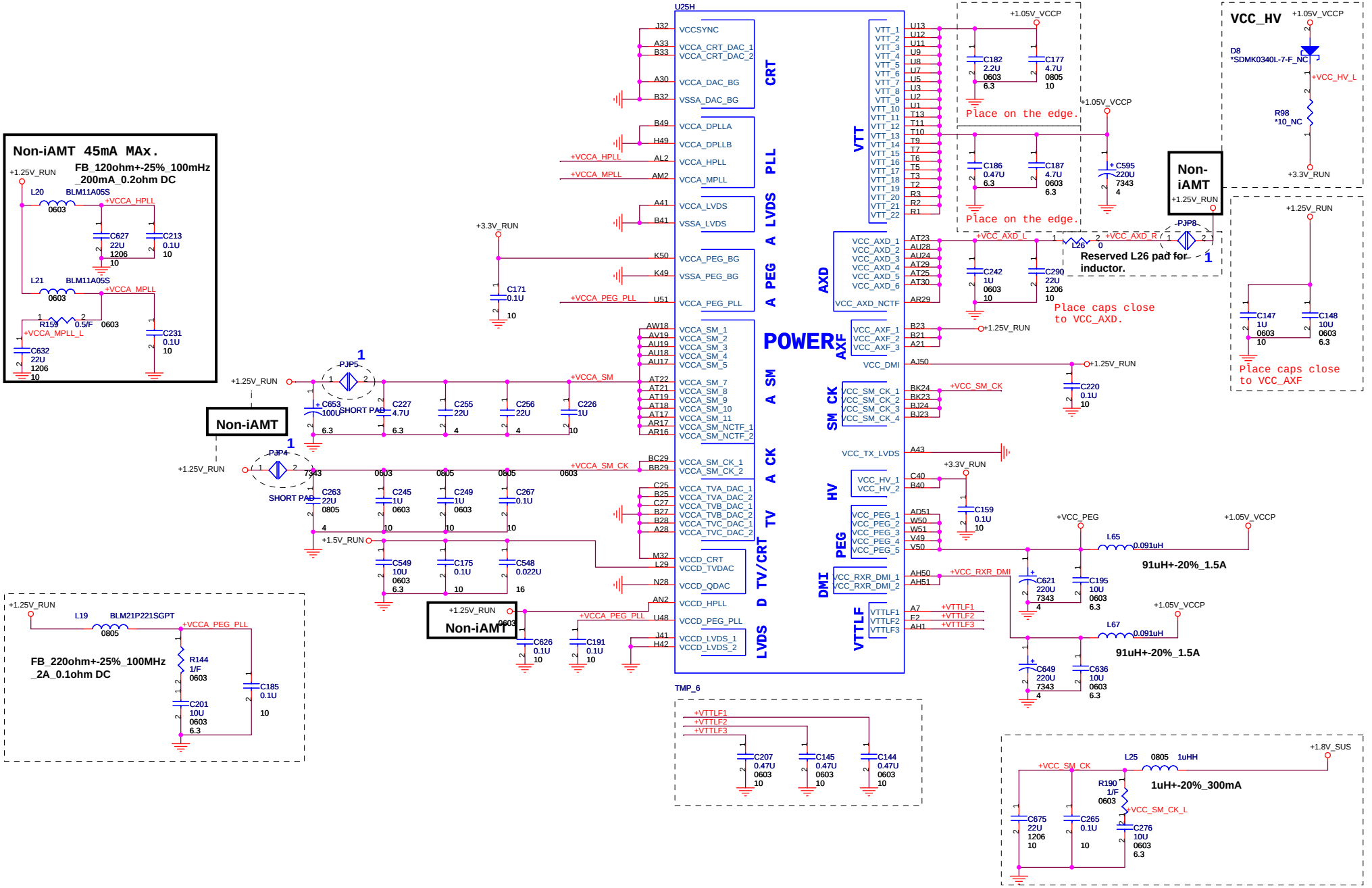
QUANTA COMPUTER



QUANTA COMPUTER

Title	Crestline (POWER)	
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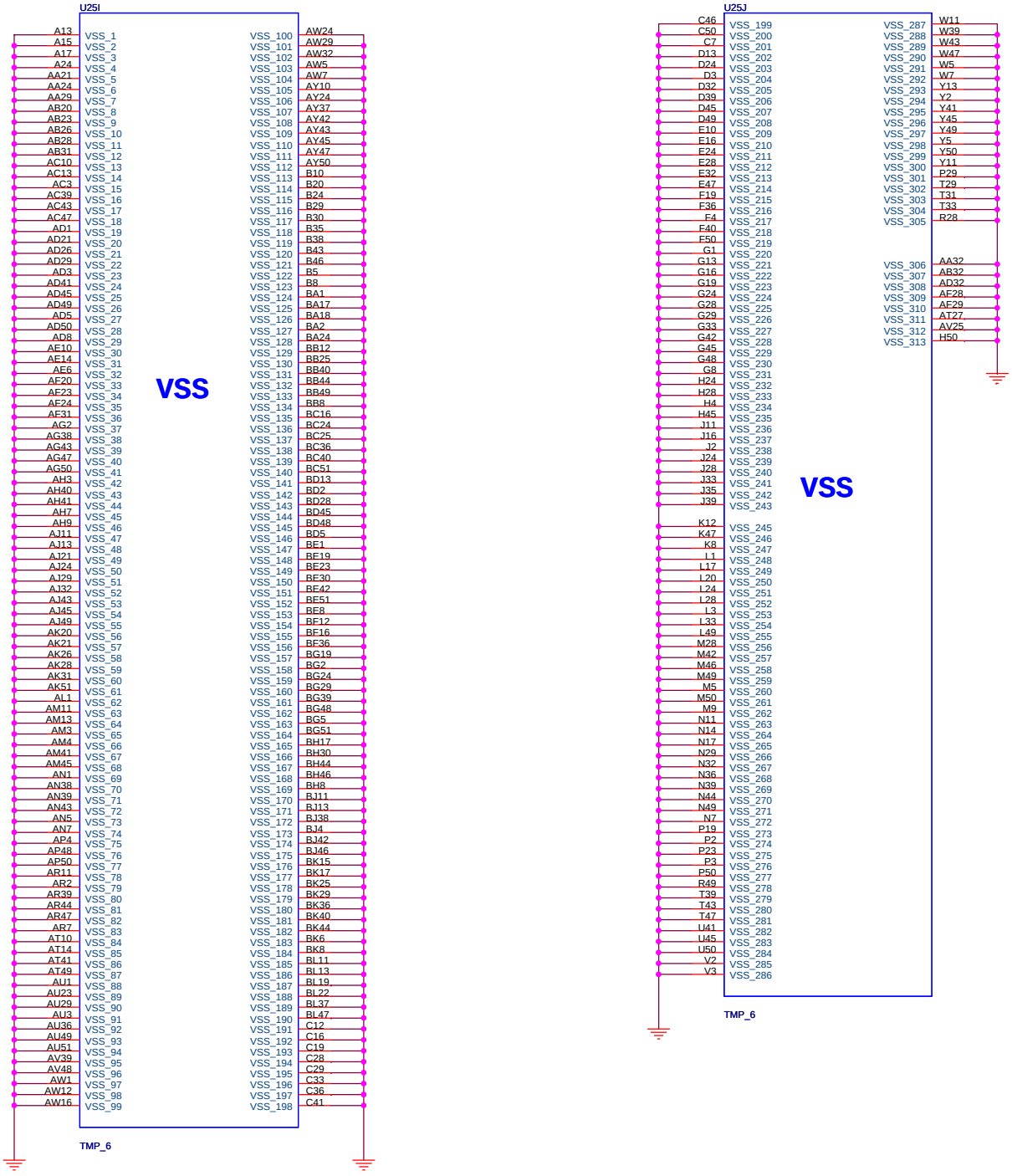

Title	Crestline (VSS)
Size	Document Number FM6
Rev	3B
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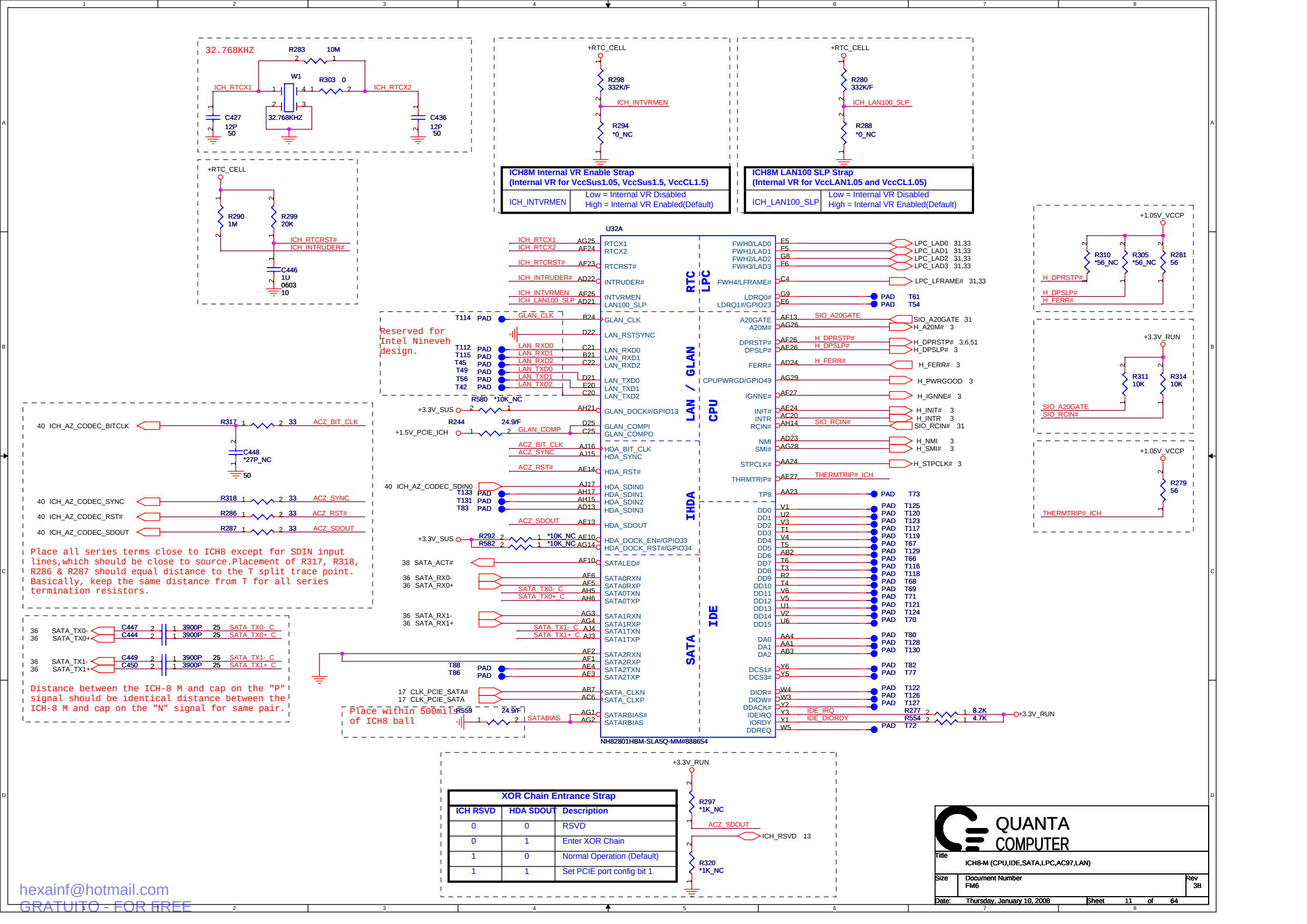

Place TX DC blocking caps close ICH8.

33 PCIE_TX1- C388 0.1U PCIE_TXN1_C
33 PCIE_TX1+ C399 0.1U PCIE_TXP1_C
34 PCIE_TX2- C386 0.1U PCIE_TXN2_C
34 PCIE_TX2+ C384 0.1U PCIE_TXP2_C
33 PCIE_TX3- C374 0.1U PCIE_TXN3_C
33 PCIE_TX3+ C371 0.1U PCIE_TXP3_C
30 PCIE_TX4- C370 0.1U PCIE_TXN4_C
30 PCIE_TX4+ C368 0.1U PCIE_TXP4_C
42 PCIE_TX6-/GLAN_TX- C361 0.1U GLAN_TXN_C
42 PCIE_TX6+/GLAN_TX+ C362 0.1U GLAN_TXP_C

ICH_SPI_CS1#_R
PCI_GNT0#
R251 *1K_NC
R260 *1K_NC

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

U32D

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

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

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

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

F27 PERN5
F26 PERP5
F29 PETN5
F28 PETP5

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

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 AB26 DMI_MTX_IRX_N2 6
DMI2RXP AB25 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 Y23
DMI_IRCOMP Y24 DMI_COMP R270 24.9/F +1.5V_PCIE_ICH
Place within 500mils of ICH8

T51 PAD
T113 PAD
ICH_SPI_CS1#_R
T55 PAD
T43 PAD
SPI

SPI_CLK C23
SPI_CS0# B23
SPI_CS1# E22
SPI_MOSI D23
SPI_MISO F21

USB

35 USB_OC0_1# USB_OC0_1# AJ19 OC0#
35 USB_OC2_3# USB_OC2_3# AG16 OC1#/GPIO40
AG15 OC2#/GPIO41
AE15 OC3#/GPIO42
OC4# AE15 OC4#/GPIO43
OC5# AG17 OC5#/GPIO29
OC6# AD12 OC6#/GPIO30
OC7# AJ18 OC7#/GPIO31
OC8# AD14 OC8#
OC9# AH18 OC9#

USBP0N G3 ICH_USBP0- 35 Side pair top / left
USBP0P G2 ICH_USBP0+ 35
USBP1N H5 ICH_USBP1- 35 Side pair bottom / right
USBP1P H4 ICH_USBP1+ 35
USBP2N H2 ICH_USBP2- 35 Pair 1 top / left
USBP2P H1 ICH_USBP2+ 35
USBP3N J3 ICH_USBP3- 35 Pair 1 bottom / right
USBP3P J2 ICH_USBP3+ 35
USBP4N K5 ICH_USBP4- 41 Camera
USBP4P K4 ICH_USBP4+ 41
USBP5N K2 ICH_USBP5- 33 Mini Card (WWAN)
USBP5P K1 ICH_USBP5+ 33
USBP6N L3 ICH_USBP6- 33 Mini Card (WPAN)
USBP6P L2 ICH_USBP6+ 33
USBP7N M5 ICH_USBP7- 30 Express Card
USBP7P M4 ICH_USBP7+ 30
USBP8N M2 ICH_USBP8- 34 Mini Card (WLAN)
USBP8P M1 ICH_USBP8+ 34
USBP9N N3 Biometric
USBP9P N2 ICH_USBP9+ 38

USBRBIAS# F2
USBRBIAS F3 USBRBIAS R253 22.6/F

NH82801HBM-SLA5Q-MM#888654

Short F2 and F3 at the package and keep length to less than 500mils. Trace Impedance should be 60ohms +/- 15%.

PCI Pullups

RP28 8.2KX8
PCI_DEVSEL# PCI_STOP#
PCI_FRAME# ICH_IRQH_GPIO5
PCI_REQ1# PCI_SERR#
PCI_PIRQB# PCI_TRDY#
+3.3V_RUN

RP29 8.2KX8
PCI_REQ0# PCI_PIRQC#
PCI_PLOCK# PCI_PIRQB#
PCI_PERR# PCI_PIRQA#
PCI_IRDY#

0905.3

WWAN Noise - ICH improvements

OC6# C799 *0.1U_NC10
OC4# C798 *0.1U_NC10
OC5# C796 *0.1U_NC10
OC7# C795 *0.1U_NC10
OC8# C797 *0.1U_NC10
USB_OC2_3# C456 *0.1U_NC10
USB_OC0_1# C794 *0.1U_NC10
OC9# C793 *0.1U_NC10

Non-iAMT

RP37 10KX8
OC6# OC8# OC4# USB_OC2_3# +3.3V_SUS
USB_OC0_1# OC9# OC7# OC5#

SB_WPAN_PCIE_RST# R255 20K
SB_WWAN_PCIE_RST# R243 20K
SB_WLAN_PCIE_RST# R258 20K
SB_LOM_PCIE_RST# R242 20K
SB_NB_PCIE_RST# R252 20K

BIOS should not enable the internal GPIO pull up resistor.

28 PCI_AD[0..31]

U32B

PCI_AD0 D20 AD0
PCI_AD1 E19 AD1
PCI_AD2 D19 AD2
PCI_AD3 A20 AD3
PCI_AD4 D17 AD4
PCI_AD5 A21 AD5
PCI_AD6 A19 AD6
PCI_AD7 C19 AD7
PCI_AD8 A18 AD8
PCI_AD9 B16 AD9
PCI_AD10 A12 AD10
PCI_AD11 E16 AD11
PCI_AD12 A14 AD12
PCI_AD13 G16 AD13
PCI_AD14 A15 AD14
PCI_AD15 B6 AD15
PCI_AD16 C11 AD16
PCI_AD17 A9 AD17
PCI_AD18 D11 AD18
PCI_AD19 B12 AD19
PCI_AD20 C12 AD20
PCI_AD21 D10 AD21
PCI_AD22 C7 AD22
PCI_AD23 F13 AD23
PCI_AD24 E11 AD24
PCI_AD25 E13 AD25
PCI_AD26 E12 AD26
PCI_AD27 D8 AD27
PCI_AD28 A6 AD28
PCI_AD29 E8 AD29
PCI_AD30 D6 AD30
PCI_AD31 A3 AD31

PCI

REQ0# A4 PCI_REQ0# PCI_REQ0# 28
GNT0# D7 PCI_GNT0# PCI_GNT0# 28
REQ1#/GPIO50 E18 PCI_REQ1# PAD T47
GNT1#/GPIO51 C18 PCI_GNT1# PAD T52
REQ2#/GPIO52 B19 SB_WWAN_PCIE_RST# SB_WWAN_PCIE_RST# 33
GNT2#/GPIO53 F18 PCI_GNT2# PAD T53
REQ3#/GPIO54 A11 SB_LOM_PCIE_RST# SB_LOM_PCIE_RST# 42
GNT3#/GPIO55 C10 PCI_GNT3# PAD T50

C/BE0# C17 PCI_C_BE0# 28
C/BE1# E15 PCI_C_BE1# 28
C/BE2# E16 PCI_C_BE2# 28
C/BE3# E17 PCI_C_BE3# 28

IRDY# C8 PCI_IRDY# PCI_IRDY# 28
PAR D9 PCI_PAR 28
PCIRST# G6 PCI_RST# G
DEVSEL# D16 PCI_DEVSEL# PCI_DEVSEL# 28
PERR# A7 PCI_PERR# PCI_PERR# 28
PLOCK# B7 PCI_PLOCK# PCI_PLOCK#
SERR# F10 PCI_SERR# PCI_SERR# 28
STOP# C16 PCI_STOP# PCI_STOP# 28
TRDY# C9 PCI_TRDY# PCI_TRDY# 28
FRAME# A17 PCI_FRAME# PCI_FRAME# 28

PLTRST# AG24 PCI_PLTRST#
PCICLK B10 CLK_PCI_ICH CLK_PCI_ICH 17
PME# G7 ICH_PME# 28,31

Interrupt I/F

T44 PAD
28 PCI_PIRQB# PCI_PIRQA# F9 PIRQA# PIRQE#/GPIO2 F8 SB_WPAN_PCIE_RST# SB_WPAN_PCIE_RST# 33
PCI_PIRQB# B5 PIRQB# PIRQF#/GPIO3 G11 SB_WLAN_PCIE_RST# SB_WLAN_PCIE_RST# 34
28 PCI_PIRQC# PCI_PIRQC# C5 PIRQC# PIRQG#/GPIO4 F12 SB_NB_PCIE_RST# SB_NB_PCIE_RST# 6
T46 PAD PCI_PIRQD# A10 PIRQD# PIRQH#/GPIO5 B3 ICH_IRQH_GPIO5 PAD T41

NH82801HBM-SLA5Q-MM#888654

PCI_GNT3# R245 *1K_NC

A16 away override strap.

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

CLK_PCI_ICH R542 *10_NC C743 *8.2P_NC

Reserved for EMI.Place resister and cap close to ICH.

Non-iAMT

Add Buffers as needed for Loading and fanout concerns.

C385 0.047U +3.3V_SUS U17 TC7SZ32FU(T5L,F,T)
PCI_RST# G PCI_RST# 28
C445 0.047U +3.3V_SUS U20 TC7SZ32FU(T5L,F,T)
PCI_PLTRST# PLTRST# 6,30,31,33,34,42

QUANTA COMPUTER

Title	ICH8-M (USB,DMI,PCIE,PCI)	
Size	Document Number FM6	Rev 3B
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Non-iAMT

+3.3V_SUS

RP35

ICH_SMBDATA

ICH_SMBCLK

2.2KX2

Non-iAMT

ASF 2.0

+3.3V_SUS

RP36

ICH_SMLINK0

ICH_SMLINK1

*10KX2_NC

ICH_SMBCLK R275 0 ICH_SMLINK0

ICH_SMBDATA R271 0 ICH_SMLINK1

Non-iAMT

+3.3V_SUS

R315 *10K_NC RSV_ICH_CL_RST1#

R300 10K ICH_RI#

R276 10K SIO_EXT_SCI#

R289 1K PCIE_WAKE#

+3.3V_RUN

R301 8.2K

U32C

30,33,34 ICH_SMBCLK

30,33,34 ICH_SMBDATA

T92 PAD

T81 PAD

T75 PAD

ICH_SMBCLK AJ26

ICH_SMBDATA AD19

RSV_ICH_CL_RST1# AG21

ICH_SMLINK0 AC17

ICH_SMLINK1 AE19

ICH_RI# AF17

T57 PAD

RSV_LPCPD# F4

3 ITP_DBRESET# AD15

6 PM_BMBUSY# AG12

34 USB_MCARD1_DET# USB_MCARD1_DET# AG22

17 H_STP_PCI# AE20

17 H_STP_CPU# AG18

28,31 CLKRUN# CLKRUN# AH11

30,33,34,42 PCIE_WAKE# PCIE_WAKE# AE17

28,31 IRQ_SERIRQ IRQ_SERIRQ AF12

39 THERM_ALERT# THERM_ALERT# AC13

31,44,51 IMVP_PWRGD IMVP_PWRGD AJ20

T132 PAD AJ22

33 USB_MCARD2_DET# USB_MCARD2_DET# AJ8

33 USB_MCARD3_DET# USB_MCARD3_DET# AJ9

31 SIO_EXT_WAKE# AH9

31 SIO_EXT_SMI# SIO_EXT_SMI# AE16

31 SIO_EXT_SCI# SIO_EXT_SCI# AC19

T89 PAD AG8

34 PCIE_MCARD1_DET# PCIE_MCARD1_DET# R629 0 AH12

33 PCIE_MCARD2_DET# PCIE_MCARD2_DET# AE11

33 PCIE_MCARD3_DET# PCIE_MCARD3_DET# AG10

34 WLAN_RADIO_DIS# AH25

41 CAMERA_CBL_DET# AD16

17 SATA_CLKREQ# AG13

18 PLTRST_DELAY# PLTRST_DELAY# AF9

33 WPAN_RADIO_DIS_MIN# AJ11

33 WWAN_RADIO_DIS# AD10

40 SPKR SPKR AD9

6 MCH_ICH_SYNC# R583 0 MCH_ICH_SYNC# AJ13

11 ICH_RSVD AJ21

SMB

SYS GPIO

GPIO

MISC

SMBCLK

SMBDATA

LINKALERT#

SMLINK0

SMLINK1

RI#

SUS_STAT#/LPCPD#

SYS_RESET#

BMBUSY#/GPIO0

SMBALERT#/GPIO11

STP_PCI#/GPIO15

STP_CPU#/GPIO25

CLKRUN#/GPIO32

WAKE#

SERIRQ

THRM#

VRMPWRGD

TP7

TACH1/GPIO1

TACH2/GPIO6

TACH3/GPIO7

GPIO8

GPIO12

TACH0/GPIO17

GPIO18

GPIO20

SCLOCK/GPIO22

QRT_STATE0/GPIO27

QRT_STATE1/GPIO28

SATACLKREQ#/GPIO35

SLOAD/GPIO38

SDATAOUT0/GPIO39

SDATAOUT1/GPIO48

SPKR

MCH_SYNC#

TP3

NH82801HBM-SLA5Q-MM#888654

SATA GPIO

Clocks

Power MGT

Controller Link

SATA0GP/GPIO21 AJ12

SATA1GP/GPIO19 AJ10

SATA2GP/GPIO36 AF11

SATA3GP/GPIO37 AG11

CLK14 AG9 CLK_ICH_14M

CLK48 G5 CLK_ICH_48M

SUSCLK D3 ICH_SUSCLK PAD T48

SLP_S3# AG23

SLP_S4# AF21 PAD T93

SLP_S5# AD18

S4_STATE#/GPIO26 AH27

PWROK AF23 ICH_PWRGD

DPRSLPVR/GPIO16 AJ14 DPRSLPVR

BATLOW# AF21 ICH_BATLOW#

PWRBTN# C2 SIO_PWRBTN# 31

LAN_RST# AH20 RSV_ICH_LAN_RST# PAD T74

RSMRST# AG27 ICH_RSMRST# ICH_RSMRST# 31

CK_PWRGD E1 CLK_PWRGD 17

CLPWROK E3 ICH_CL_PWROK ICH_CL_PWROK 6,31

SLP_M# AJ25 PAD T90

CL_CLK0 F23 CL_CLK0 6

CL_CLK1 AE18 RSV_ICH_CL_CLK1 PAD T85

CL_DATA0 F22 CL_DATA0 6

CL_DATA1 AF19 RSV_ICH_CL_DATA1 PAD T84

CL_VREF0 D24 CL_VREF0

CL_VREF1 AH23 CL_VREF1 PAD T94

CL_RST# AJ23 ICH_CL_RST0# 6

MEM_LED/GPIO24 AJ27

ME_EC_ALERT/GPIO10 AJ24 RSV_GPIO10 PAD T134

EC_ME_ALERT/GPIO14 AF22 RSV_GPIO14 PAD T78

WOL_EN/GPIO9 AG19 RSV_WOL_EN PAD T87

R306 8.2K +3.3V_SUS

R278 8.2K +3.3V_SUS

UMA Package:RC0402-C

Discrete Package: RC0402

Non-iAMT

Place these close to ICH8.

CLK_ICH_48M

R259 *10_NC

C375 *4.7P_NC

50

CLK_ICH_14M

R309 *10_NC

C443 *4.7P_NC

50

+3.3V_RUN

R321 8.2K

CLKRUN#

R324 *10_NC

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

1114.47

R302 10K PLTRST_DELAY#

Non-iAMT

ICH_PWRGD R295 10K

DPRSLPVR R323 100K

ICH_RSMRST# R313 *10K_NC

RSV_ICH_LAN_RST# R269 10K

ICH_CL_PWROK R246 1M

+3.3V_SUS

RSV_GPIO10 R579 10K

+3.3V_RUN

R581 *2.2K_NC IMVP_PWRGD

R588 100K USB_MCARD2_DET#

R587 100K USB_MCARD3_DET#

R585 100K PCIE_MCARD1_DET#

R296 100K PCIE_MCARD2_DET#

R586 100K PCIE_MCARD3_DET#

+3.3V_RUN

R584 *10K_NC MCH_ICH_SYNC# R

R312 10K IRQ_SERIRQ

R401 10K THERM_ALERT#

1112.28

+3.3V_SUS

R291 10K SIO_EXT_SMI#

R308 100K USB_MCARD1_DET#

R307 10K RSV_WOL_EN

1108.16

+3.3V_RUN

R282 *1K_NC

SPKR

No Reboot strap.

SPKR	Low = Default. High = No Reboot.

SMbus address D2

These are for backdrive issue.

Non-iAMT

+3.3V_RUN

RP22 2.2KX2

30,33,34 ICH_SMBDATA

Q63 2N7002W-7-F

MEM_SDATA 15

+3.3V_RUN

30,33,34 ICH_SMBCLK

Q64 2N7002W-7-F

MEM_SCLK 15

Non-iAMT

+3.3V_RUN

+3.3V_ALW

R256 3.24K/F

R316 *3.24K/F_NC

CL_VREF0

CL_VREF1

C366 0.1U 10

R254 453/F

C440 *0.1U_NC 10

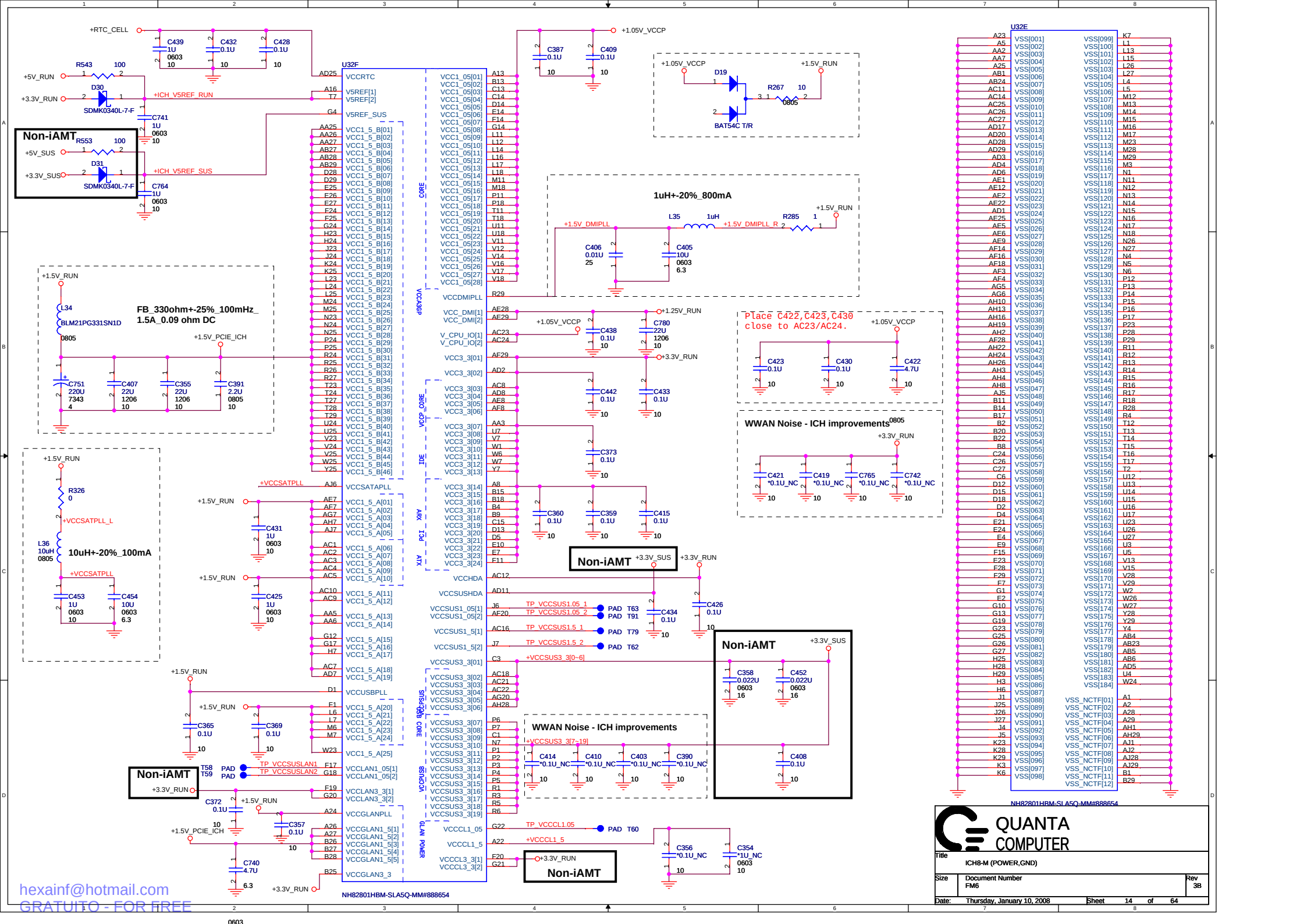
R322 *453/F_NC

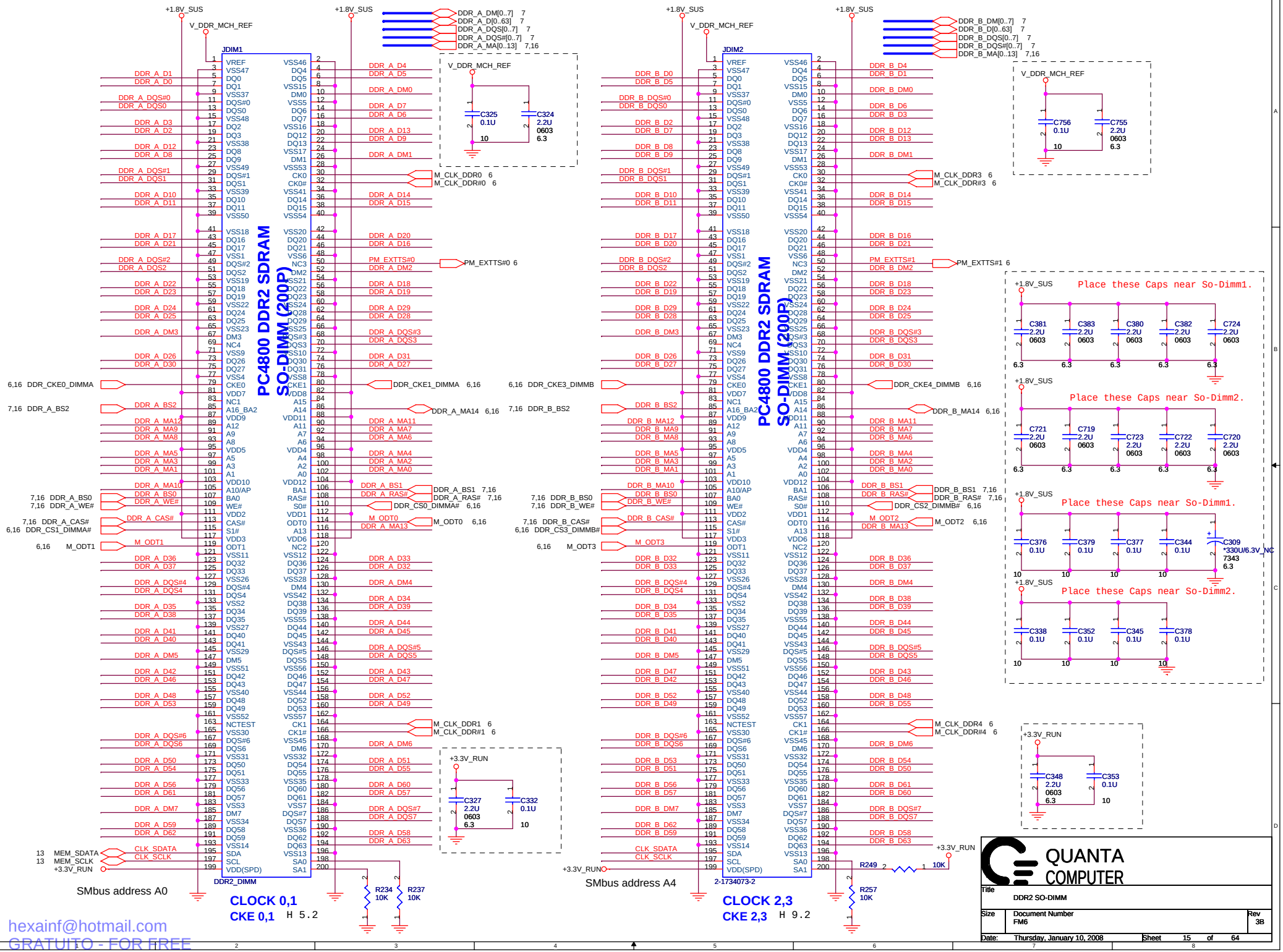
QUANTA COMPUTER

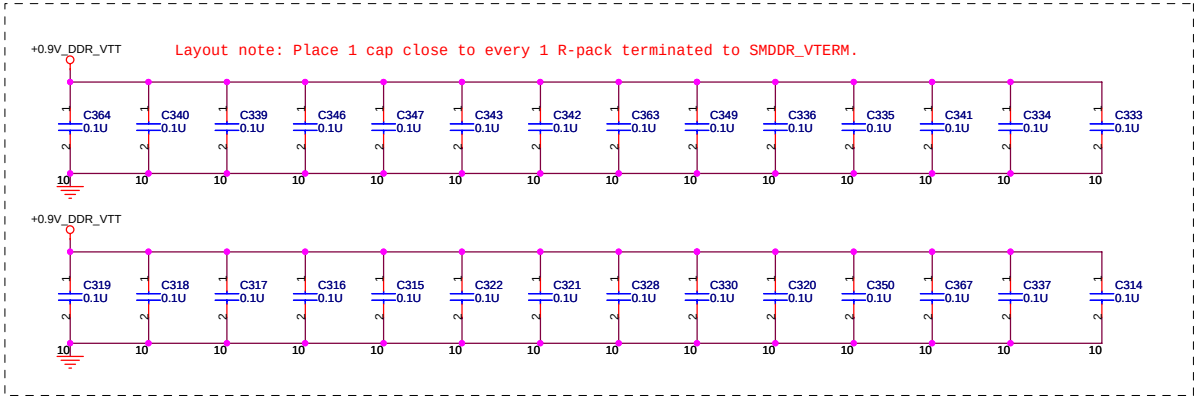
Title: ICH8-M (PM,GPIO,SMB,CL)

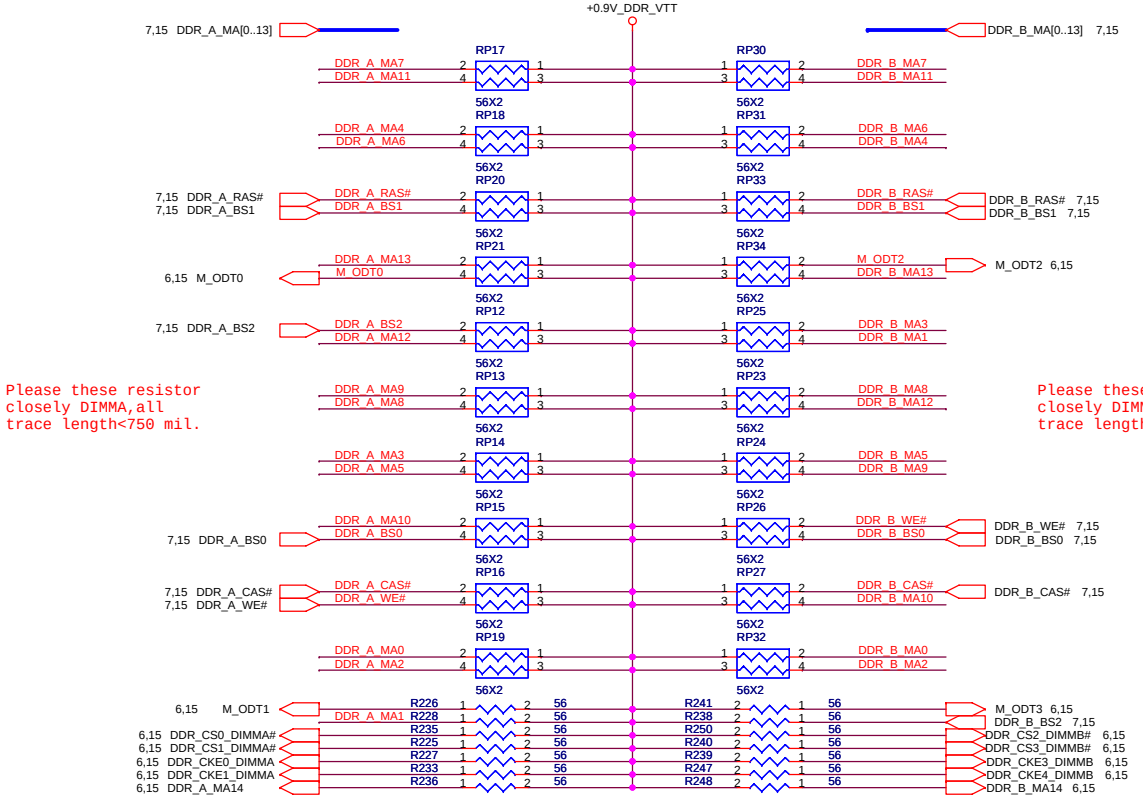
Size: Document Number FM6 Rev 3B

Date: Thursday, January 10, 2008 Sheet 13 of 64


U32F
U32E
Non-iAMT
1uH+-20%_800mA
FB_330ohm+-25%_100mHz_
1.5A_0.09 ohm DC
10uH+-20%_100mA
WWAN Noise - ICH improvements
Place C422,C423,C430
close to AC23/AC24.
NH82801HBM-SLA5Q-MM#888654
QUANTA
COMPUTER
ICH8-M (POWER,GND)
Document Number
FM6
Rev
3B
Thursday, January 10, 2008
Sheet 14 of 64
hexainf@hotmail.com
GRATUITO - FOR FREE







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

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

QUANTA COMPUTER

Title	DDR2 RES. ARRAY	
Size	Document Number FM6	Rev 3B
Date: Thursday, January 10, 2008	Sheet 16 of 64	

Add capacitor pads for improving WWAN.

1108.17

C666 20P 50 CLK_ICH_48M
C640 1 2 *27P_NC 50 CLK_ICH_14M
C652 1 2 *27P_NC 50 CLK_PCI_8512
C259 1 2 *27P_NC 50 CLK_PCI_PCCARD
C663 1 2 *27P_NC 50 CLK_PCI_ICH

Y1
CLK_XTAL_IN 1 2 CLK_XTAL_OUT
14.318MHZ
C233 33P 50
C232 33P 50
14.318MHz

U28

CK505
QFN64

VDD_PCI
VDD_REF
VDD_PLL3
VDD_48
VDD_SRC
VDD_CPU
VDD_IO
VDD_IO
VDD_IO
VDD_IO
VDD_IO
VDD_IO
VDD_IO
GND
GND
GND
GND
GND
GND
GND
GND
GND
CR#_A/PCI-0
CR_B/PCI-1
TME/PCI-2
SRC5_EN/PCI-3
27M_SEL/PCI-4
ITP_EN/PCIF-5#
FSA/USB48
FSB/TEST_MODE
FSC/TEST_SEL/REF
RESET#
CK_PWRGD/PD#
XOUT
XIN
SDATA
SCLK
GND
SLG8SP513V

+CK_VDD_PCI
+CK_VDD_PLL3
+CK_VDD_48
+CK_VDD_SRC
+CK_VDD_MAIN

CPU-0 CPU-0# — CPU_BCLK CPU_BCLK# — RP40 0x2 — CLK_CPU_BCLK 3 / CLK_CPU_BCLK# 3
CPU-1 CPU-1# — MCH_BCLK MCH_BCLK# — RP39 0x2 — CLK_MCH_BCLK 5 / CLK_MCH_BCLK# 5
SRC-8/CPU_ITP SRC-8#/CPU_ITP# — PCIE_MINI1 PCIE_MINI1# — RP38 0x2 — CLK_PCIE_MINI1 34 / CLK_PCIE_MINI1# 34
SRC-0/DOT96 SRC-0#/DOT96# — DOT96_SSC DOT96_SSC# — RP9 0x2 — CLK_PCIE_VGA 18 / CLK_PCIE_VGA# 18
SRC-1/SE1 SRC-1#/SE2 — 27M_SS 27M_NSS — RP46 0x2 — CLK_VGA_27M_SS 19 / CLK_VGA_27M_NSS 19
SRC-2/SATA SRC-2#/SATA# — PCIE_SATA PCIE_SATA# — RP10 0x2 — CLK_PCIE_SATA 11 / CLK_PCIE_SATA# 11
CR#_C/SRC-3 CR#_D/SRC-3# — PCIE_MINI3 PCIE_MINI3# — RP45 0x2 — CLK_PCIE_MINI3 33 / CLK_PCIE_MINI3# 33
SRC-4 SRC-4# — MCH_3GPLL MCH_3GPLL# — RP44 0x2 — CLK_MCH_3GPLL 6 / CLK_MCH_3GPLL# 6
PCI_STOP#/SRC-5 CPU_STOP#/SRC-5# — H_STP_PCI# 13 / H_STP_CPU# 13
SRC-6 SRC-6# — PCIE_EXPCARD PCIE_EXPCARD# — RP41 0x2 — CLK_PCIE_EXPCARD 30 / CLK_PCIE_EXPCARD# 30
CR#_F/SRC-7 CR#_E/SRC-7# — MINI1CLK_REQ# C R439 475/F — MINI1CLK_REQ# / CARD_CLK_REQ# C R441 475/F — CARD_CLK_REQ# — MINI1CLK_REQ# 34 / CARD_CLK_REQ# 30
SRC-9 SRC-9# — PCIE_MINI2 PCIE_MINI2# — RP43 0x2 — CLK_PCIE_MINI2 33 / CLK_PCIE_MINI2# 33
SRC-10 SRC-10# — PCIE_ICH PCIE_ICH# — RP42 0x2 — CLK_PCIE_ICH 12 / CLK_PCIE_ICH# 12
CR#_H/SRC-11 CR#_G/SRC-11# — PCIE_LOM PCIE_LOM# — RP8 0x2 — CLK_PCIE_LOM 42 / CLK_PCIE_LOM# 42

+3.3V_RUN
H_STP_PCI# R160 2 1 *10K_NC
H_STP_CPU# R164 2 1 *10K_NC

Silego need pull up but other?

Only for debug

13 SATA_CLKREQ# — SATA_CLKREQ# R462 475/F — SATA_CLKREQ# C
6 CLK_3GPLLREQ# — CLK_3GPLLREQ# R464 475/F — CLK_3GPLLREQ# C
33 CLK_LPC_DEBUG — CLK_LPC_DEBUG R180 *22_NC
28 CLK_PCI_PCCARD — CLK_PCI_PCCARD R181 33 — PCI_PCCARD
31 CLK_PCI_8512 — CLK_PCI_8512 R467 33 — PCI_SIO
12 CLK_PCI_ICH — CLK_PCI_ICH R474 33 — PCI_ICH
13 CLK_ICH_48M — CLK_ICH_48M R483 33
3,6 CPU_MCH_BSEL0 — L74 BLM18AG601SN1D R482 8.2K — FSA
3,6 CPU_MCH_BSEL1 — BLM18AG601SN1D R446 8.2K — FSB
3,6 CPU_MCH_BSEL2 — L66 BLM18AG601SN1D R452 8.2K — FSC
13 CLK_ICH_14M — CLK_ICH_14M R456 33
13 CLK_PWRGD

CLK_XTAL_OUT — 2
CLK_XTAL_IN — 3
CLK_SDATA — 6
CLK_SCLK — 7

+3.3V_RUN
CLK_3GPLLREQ# R465 10K
SATA_CLKREQ# R463 10K
CARD_CLK_REQ# R444 10K
MINI1CLK_REQ# R438 10K
PCI_PCCARD R179 *10K_NC

PCI_SIO R468 *10K_NC
PCI_ICH R476 *10K_NC

3 CLK_ITP_BCLK — PCIE_MINI1
3 CLK_ITP_BCLK# — PCIE_MINI1#
RP6 *0x2_NC

+3.3V_RUN
R188 *10K_NC
PCI_ICH
R191 *10K_NC

R188 POP: For Internal pull-low.
R191 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

27M_SEL

+3.3V_RUN
R470 10K
27M_SEL
R472 *10K_NC

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

UMA without iAMT

+3.3V_RUN
L72 BLM21PG600SN1D 0805 120 ohms@100Mhz
+CK_VDD_MAIN
C669 0.1U 10
C667 0.1U 10
C665 0.1U 10
C634 0.1U 10
C614 0.1U 10
C613 0.1U 10
C664 *10U_NC 0603 6.3
L73 BLM21PG600SN1D 0805 120 ohms@100Mhz
R449 2.2 — +CK_VDD_PCI — C635 0.1U 10
R481 2.2 — +CK_VDD_PLL3 — C668 0.1U 10
R479 2.2 — +CK_VDD_48 — C661 0.1U 10 / C662 4.7U 0603 6.3
R155 2.2 — +CK_VDD_SRC — C631 0.1U 10

Non-iAMT

SMbus address D2

These are for backdrive issue.

+3.3V_RUN
RP7 2.2KX2
26,31,39 SMBDAT1 — Q23 2N7002W-7-F — CLK_SDATA
+3.3V_RUN
26,31,39 SMBCLK1 — Q25 2N7002W-7-F — CLK_SCLK

QUANTA COMPUTER

Title: CLOCK GENERATOR
Size: Document Number FM6 Rev 1A
Date: Thursday, January 10, 2008 Sheet 17 of 64

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

Memory Straps	RAM_TYPE_CFG3	RAM_TYPE_CFG2	RAM_TYPE_CFG1	RAM_TYPE_CFG0
400MHz 256MB(32M*16) Samsung	0	0	1	0
400MHz 256MB(32M*16) Hynix	0	0	1	1
500MHz 256MB(32M*16) Samsung	0	1	1	0
500MHz 256MB(32M*16) Qimonda	0	1	0	0

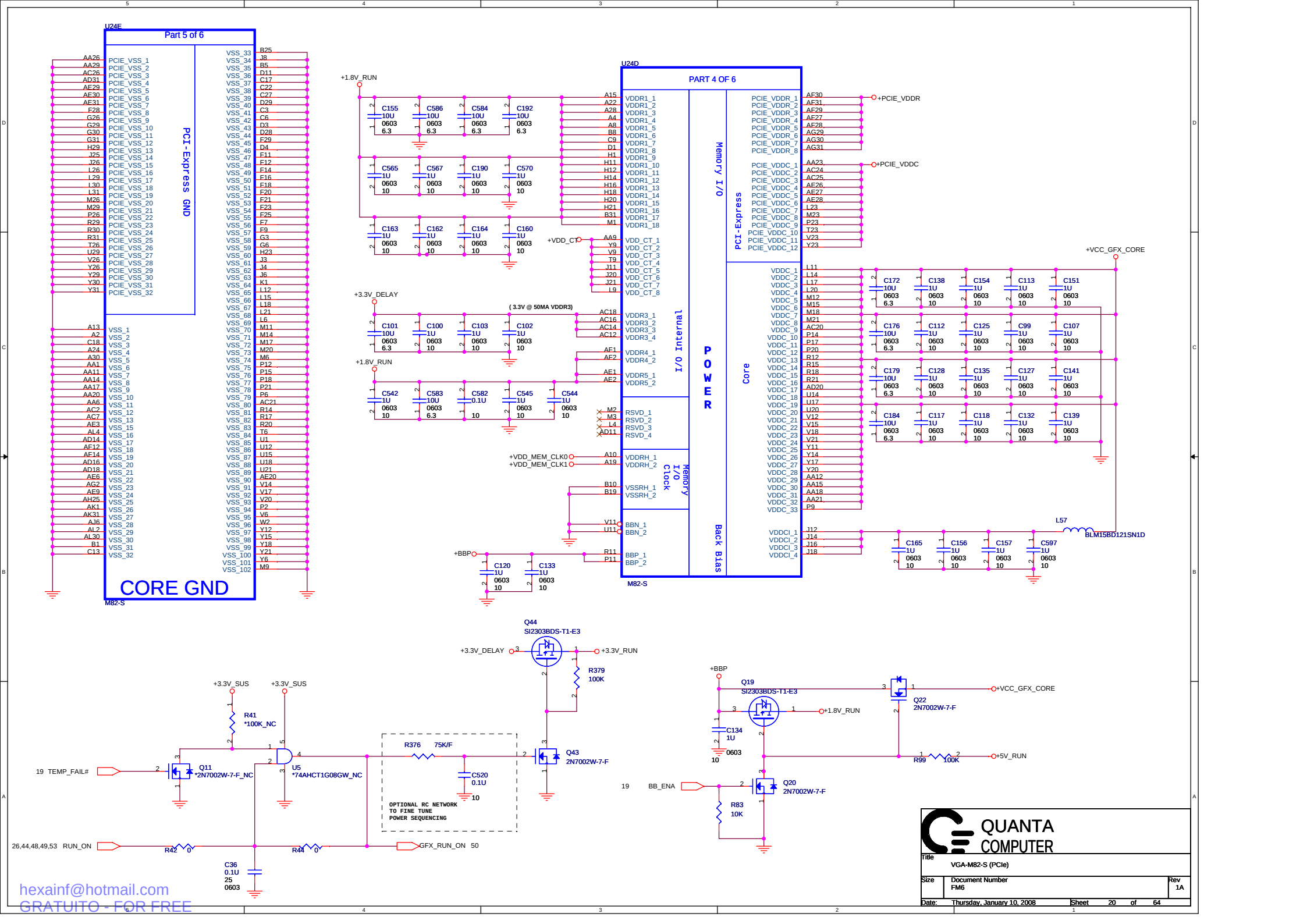
GPIO Straps table	DESCRIPTION OF DEFAULT SETTINGS	ATI Usage	FM6 Usage
GPIO0	PCIE FULL TX OUTPUT SWING	X	1
GPIO1	PCIE TRANSMITTER DE-EMPHASIS ENABLED	X	1
GPIO2	ATI reserved configuration straps.	RSVD	0
GPIO3	ATI reserved configuration straps.	RSVD	0
GPIO4	DEBUG SIGNALS MUXED OUT	0	0
GPIO5	Allows either PCIe 2.5GT/s or 5.0GT/s operation	X	0
GPIO6	ATI Internal use only	0	0
GPIO10	Serial ROM clock to ROM.		0
ATI Usage recommended settings	0= DO NOT INSTALL RESISTOR, X = DESIGN DEPENDANT, RSVD = ATI RESERVED (DO NOT INSTALL)		

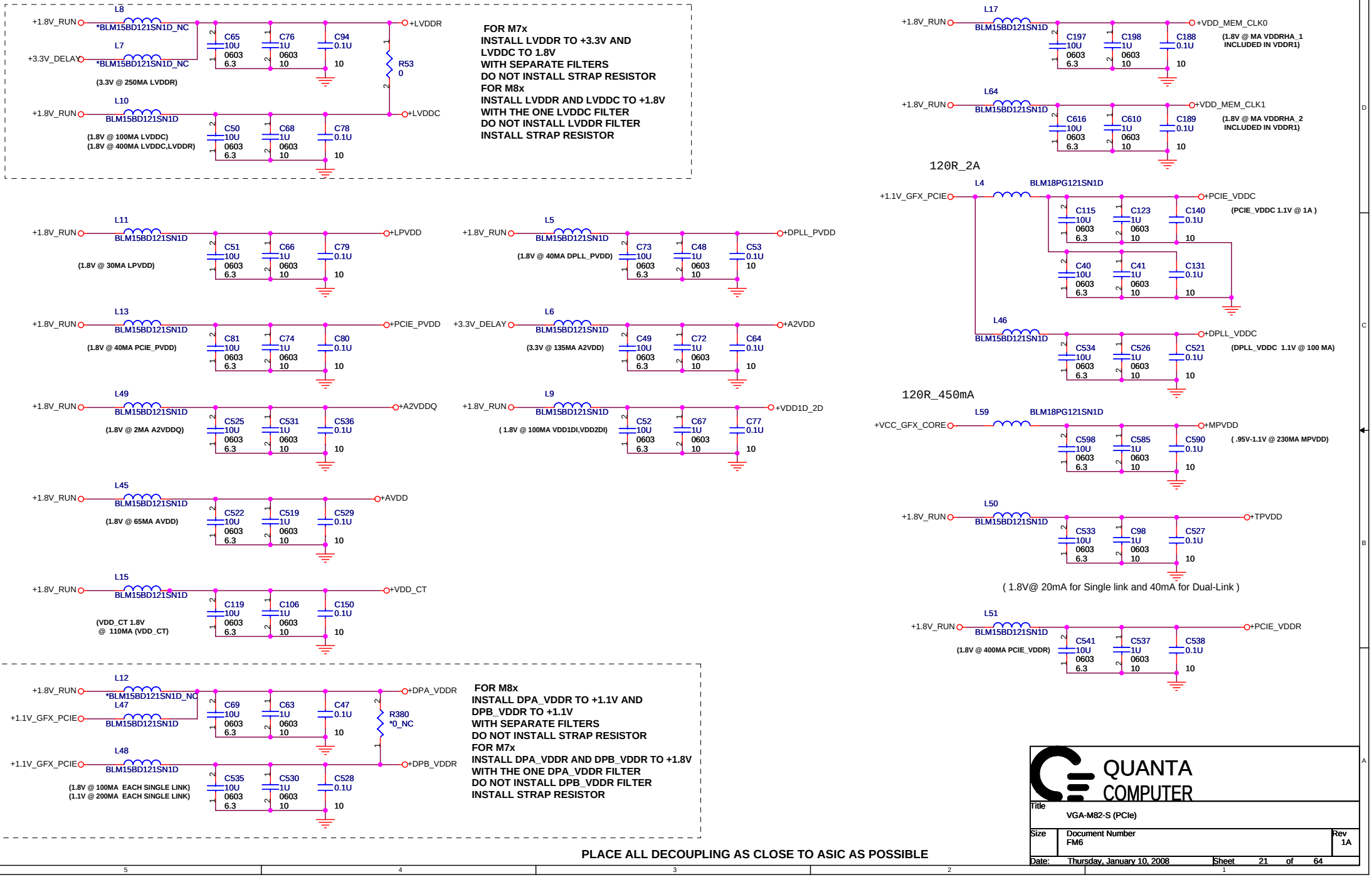
U24B
PART 2 OF 6
INTEGRATED TMDS/DP PORT
EXT TMDS DVO
DAC1 / CRT
DAC2 (TV/CRT2)
GENERAL PURPOSE I/O
SERIAL BUSES
PLL & XTAL
TEST
THERMAL
M82-S

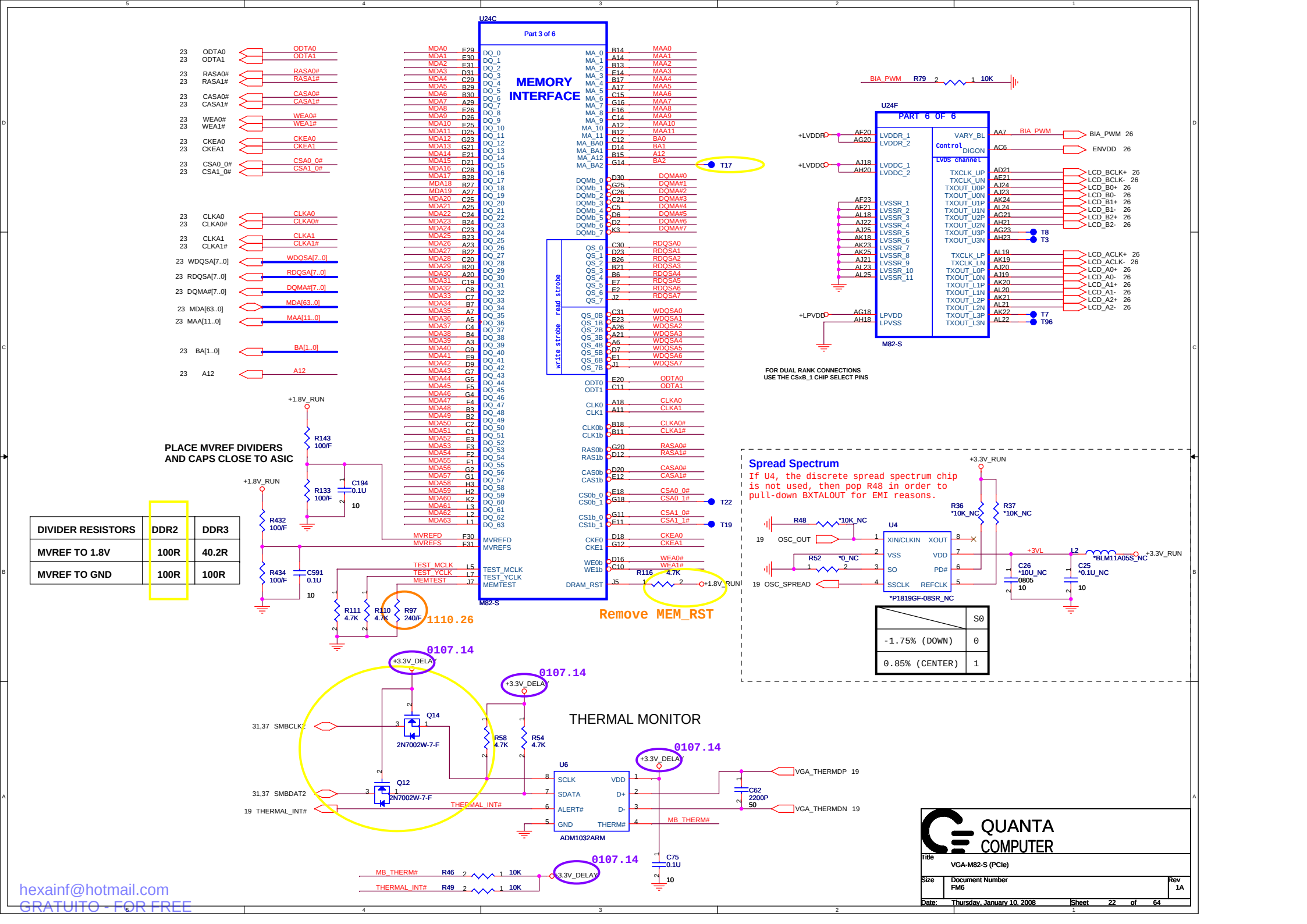
LVDS
HDMI
CRT

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

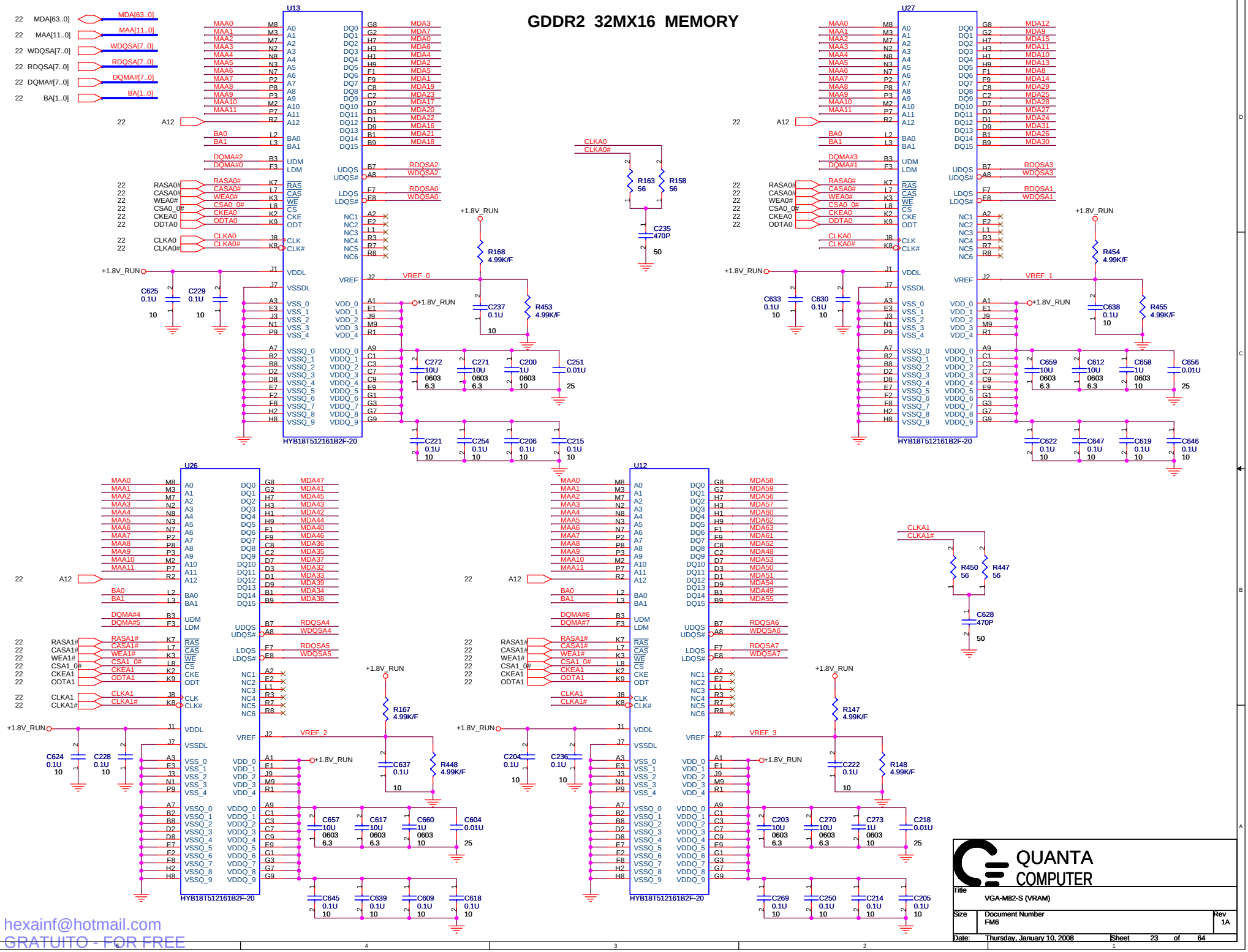
QUANTA COMPUTER
Title: VGA-G86GLM (VIDEO)
Size: Document Number FM6 Rev 1A
Date: Thursday, January 10, 2008 Sheet 19 of 64







GDDR2 32MX16 MEMORY



Title	VGA-M82-S (VRAM)		
Size	Document Number FM6		Rev 1A
Date:	Thursday, January 10, 2008	Sheet 23 of 64	

QUANTA COMPUTER

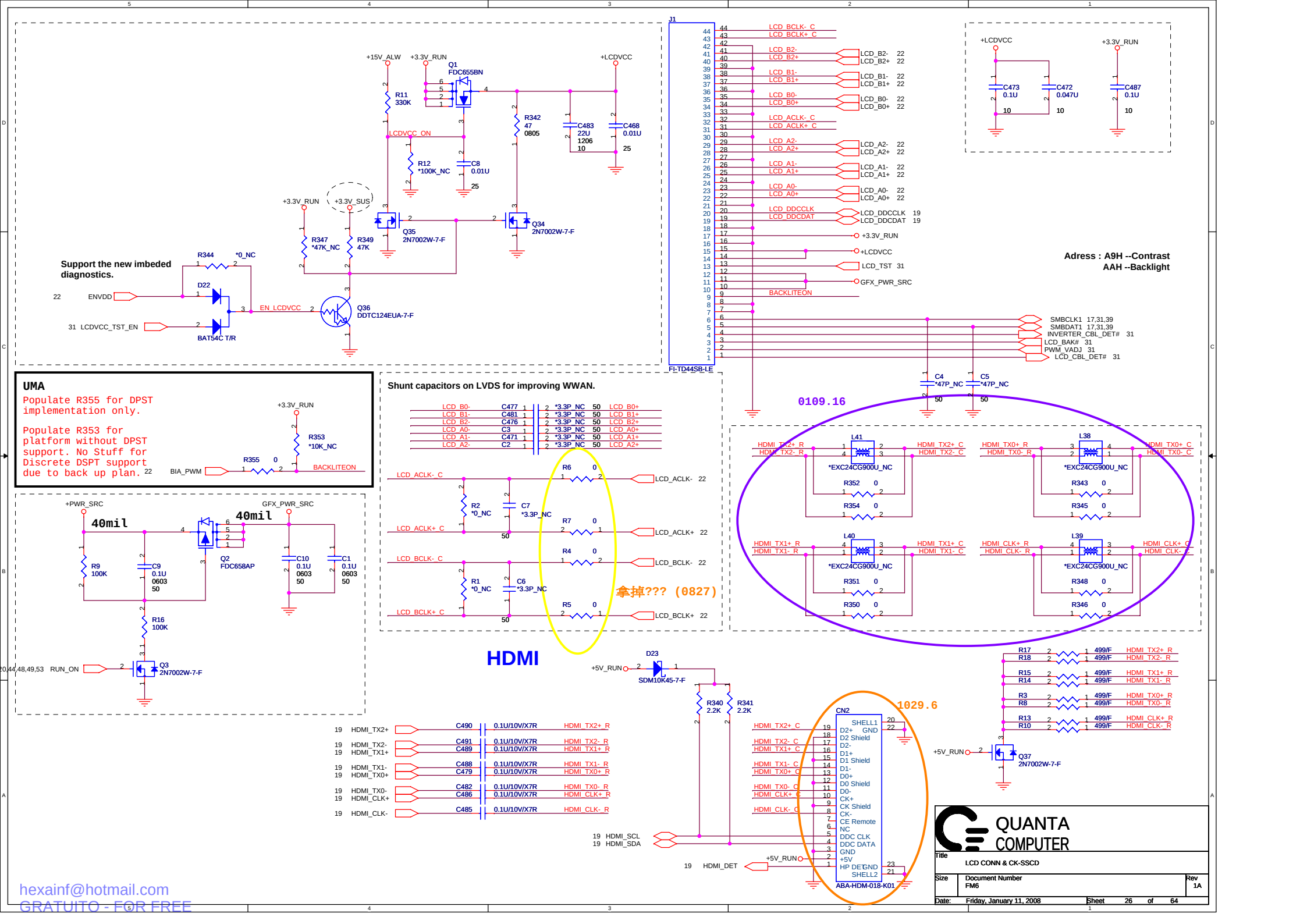
GPIO Straps table	DESCRIPTION OF DEFAULT SETTINGS	ATI Usage	FM6 Usage
GPIO0	PCIE FULL TX OUTPUT SWING	X	1
GPIO1	PCIE TRANSMITTER DE-EMPHASIS ENABLED	X	1
GPIO2	ATI reserved configuration straps.	RSVD	0
GPIO3	ATI reserved configuration straps.	RSVD	0
GPIO4	DEBUG SIGNALS MUXED OUT	0	0
GPIO5	Allows either PCIe 2.5GT/s or 5.0GT/s operation	X	0
GPIO6	ATI Internal use only	0	0
GPIO10	Serial ROM clock to ROM.		0
ATI Usage recommended settings	0= DO NOT INSTALL RESISTOR, X = DESIGN DEPENDANT, RSVD = ATI RESERVED (DO NOT INSTALL)		

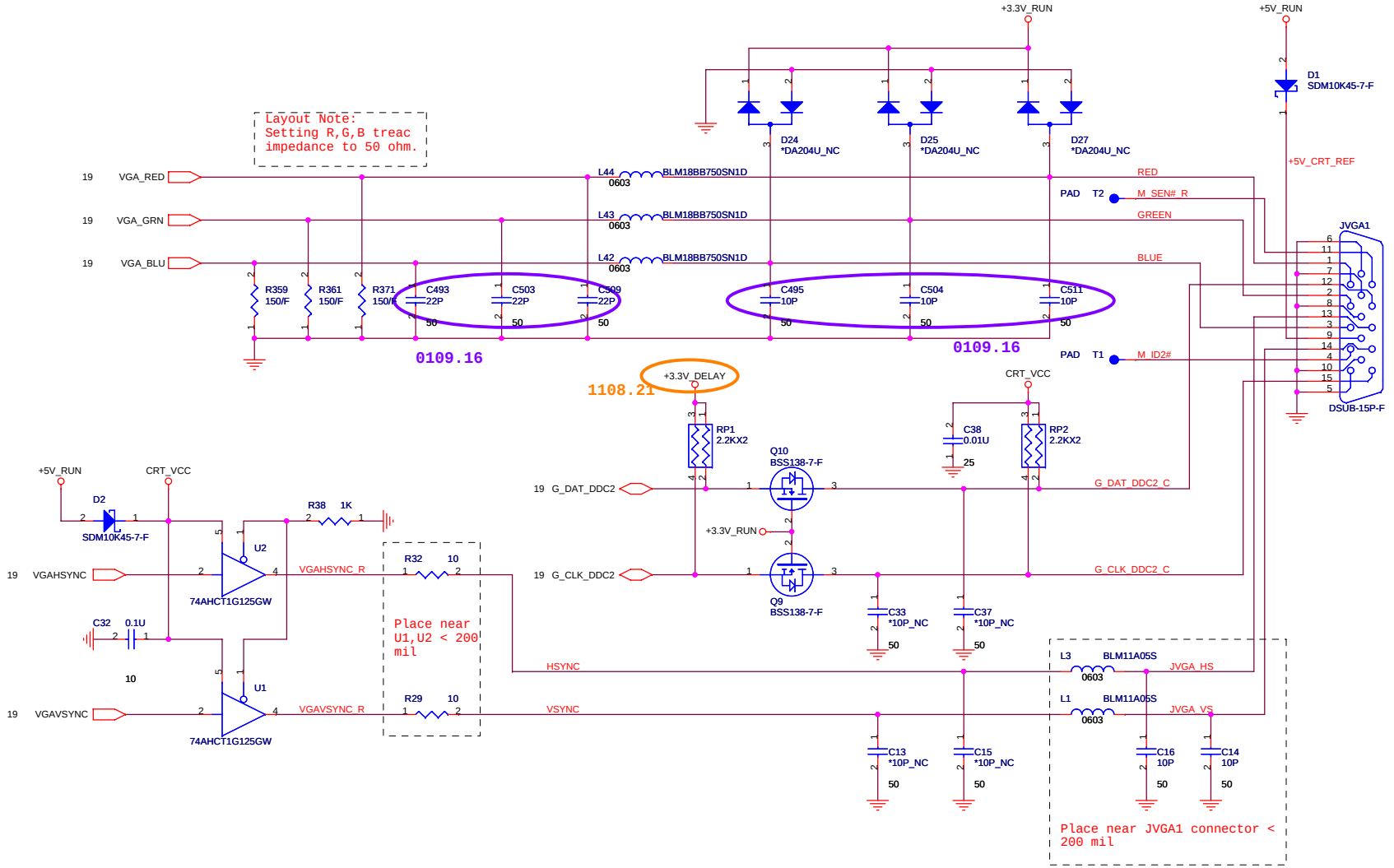
QUANTA COMPUTER

Title	VGA-M82-S (PCIe)	
Size	Document Number FM6	Rev 1A
Date: Monday, December 31, 2007	Sheet 24 of 64	

QUANTA COMPUTER

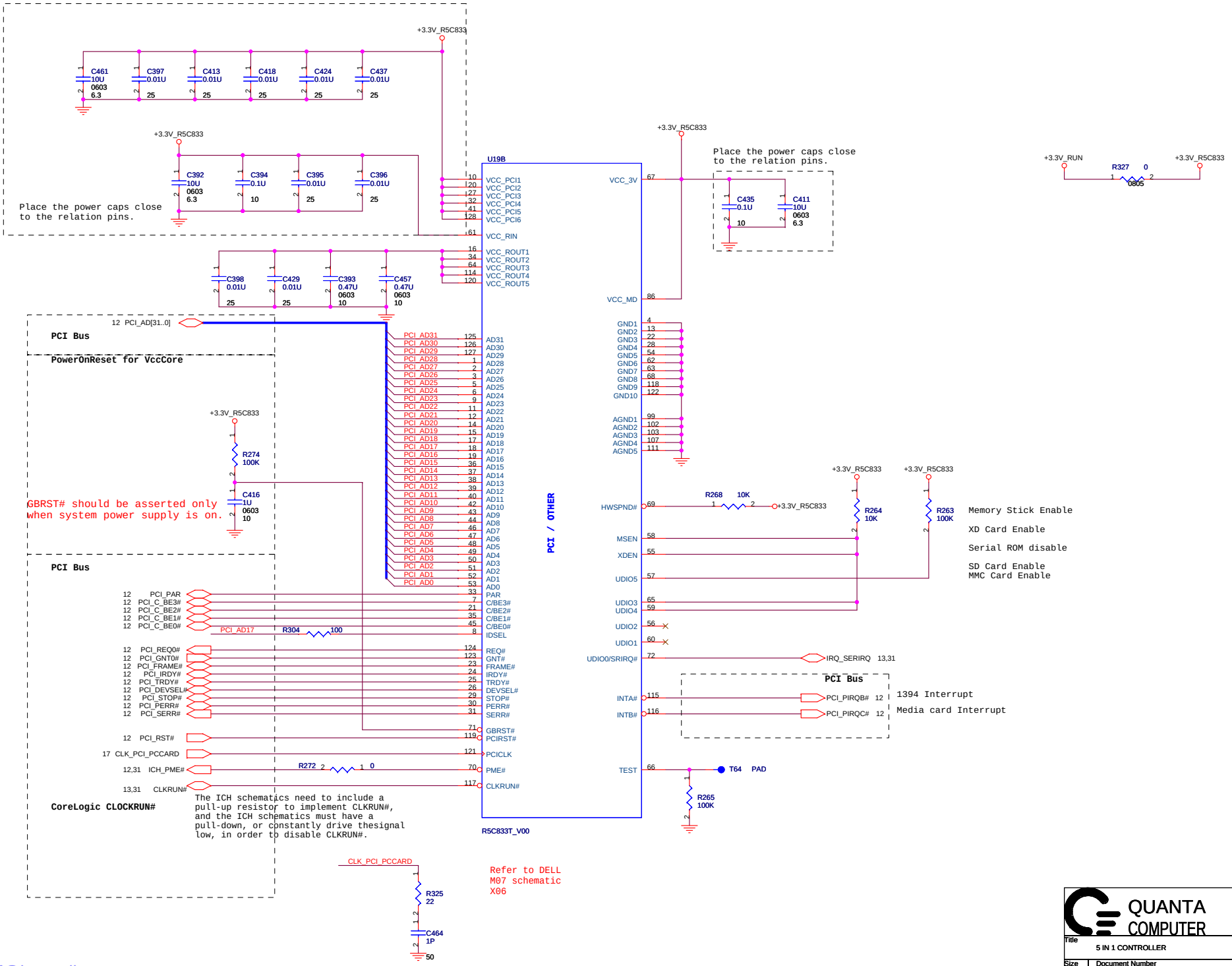
Title	VGA-M82-S (PCIe)	
Size	Document Number FM6	Rev 1A
Date: Monday, December 31, 2007	Sheet 25 of 64	





QUANTA COMPUTER

Title	CRT&TV CONN	
Size	Document Number FM6	Rev 1A
Date: Thursday, January 10, 2008	Sheet 27 of 64	



80 mils

+3.3V_RUN_PHY

L37 BLM18PG181SN1D 0603 modify

+3.3V_R5C833

C462 10U 0603 6.3

C458 0.1U 10

C459 0.01U 25

C460 1000P 50

Place these caps as close to the R5C833 as possible.

U19A

AVCC_PHY1 98
AVCC_PHY2 106
AVCC_PHY3 110
AVCC_PHY4 112

AS CLOSE AS POSSIBLE TO R5C833

TPBIAS0 113

C807 0.33U 0603 16

C791 0.01U 25

R569 56.2/F

R570 56.2/F

TPBN0 104 TPB0N

TPBP0 105 TPB0P

TPAN0 108 TPA0N

TPAP0 109 TPA0P

R568 56.2/F

R567 56.2/F

C806 270P 25

R594 5.11K/F

Circuit area : As small as possible.

*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).

J6

TPB0N
TPB0P
TPA0N
TPA0P

06FFS-SP-TF(LF)(SN)

1029.2

GUARD_GND

C441 22P 50 1394_XI 94 XI

Y2 24.576MHZ

C451 22P 50 1394_XO R319 0 95 XO

Populate C455 for R5C832 chipset.

C455 *0.01U_NC 25 RICOH_FIL0 96 FIL0

R328 10K/F 1 2 RICOH_REXT 101 REXT

C463 0.01U 25 RICOH_VREF 100 VREF

Place these caps as close to the U26 as possible.

IEEE1394/SD

MDIO17 87 XD/MMS_DATA7 30
MDIO16 92 XD/MMS_DATA6 30
MDIO15 89 XD/MMS_DATA5 30
MDIO14 91 XD/MMS_DATA4 30
MDIO13 90 SD/XD/MS_DATA3 30
MDIO12 93 SD/XD/MS_DATA2 30
MDIO11 81 SD/XD/MS_DATA1 30
MDIO10 82 SD/XD/MS_DATA0 30

0906.3

MDIO05 75 XD_WP# 30
MDIO08 88 SD/XD/MS_CMD 30
MDIO19 83 XD_ALE 30
MDIO18 85 XD_CLE 30
MDIO02 78 XD_CE# 30

MDIO03 77 SD_WP#(XDR/B#) 30

MDIO00 80 SD_CD# D21 BAS316 SD_CD# 30

MDIO01 79 MS_INS# D20 BAS316 MS_INS# 30

MDIO09 84 SD/XD/MS_CLK 30

MDIO04 76 MC_PWR_CTRL_0 30

MDIO06 74 T76 PAD

MDIO07 73

97 RSV

R5C833T_V00

33

+3.3V_R5C833

R273 *10K_NC

close to the Chip

XD_CDSW# 30

Move to IO board.(0808)

QUANTA COMPUTER

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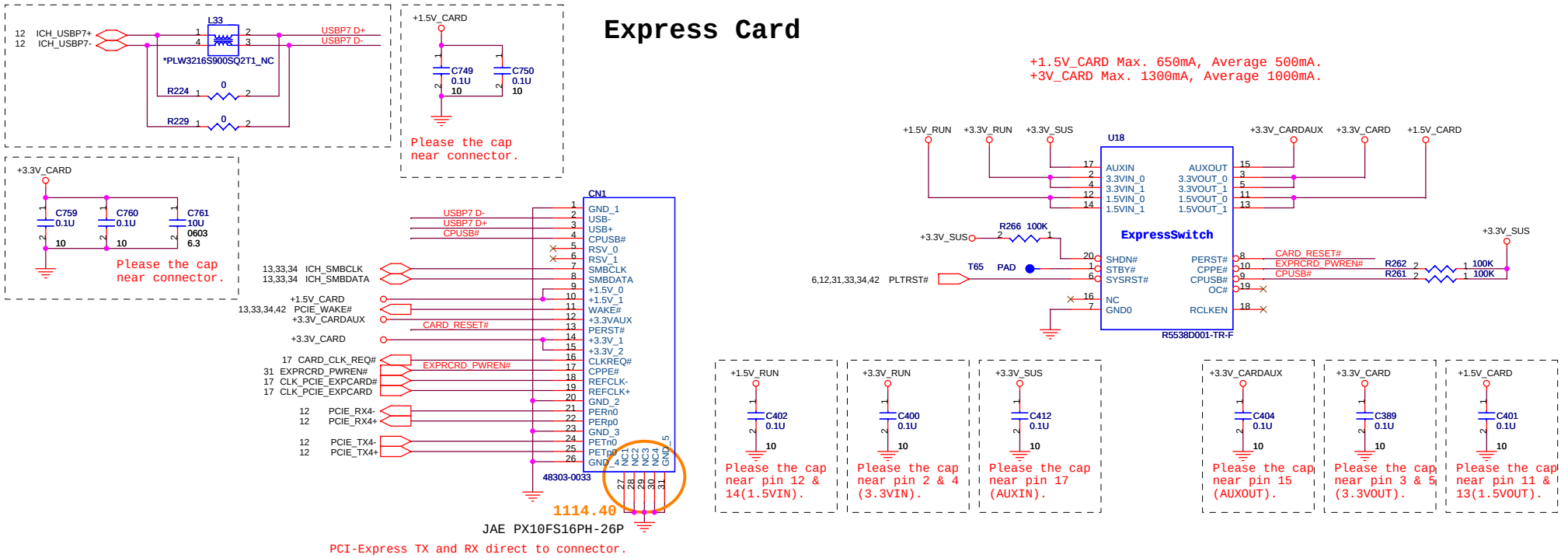
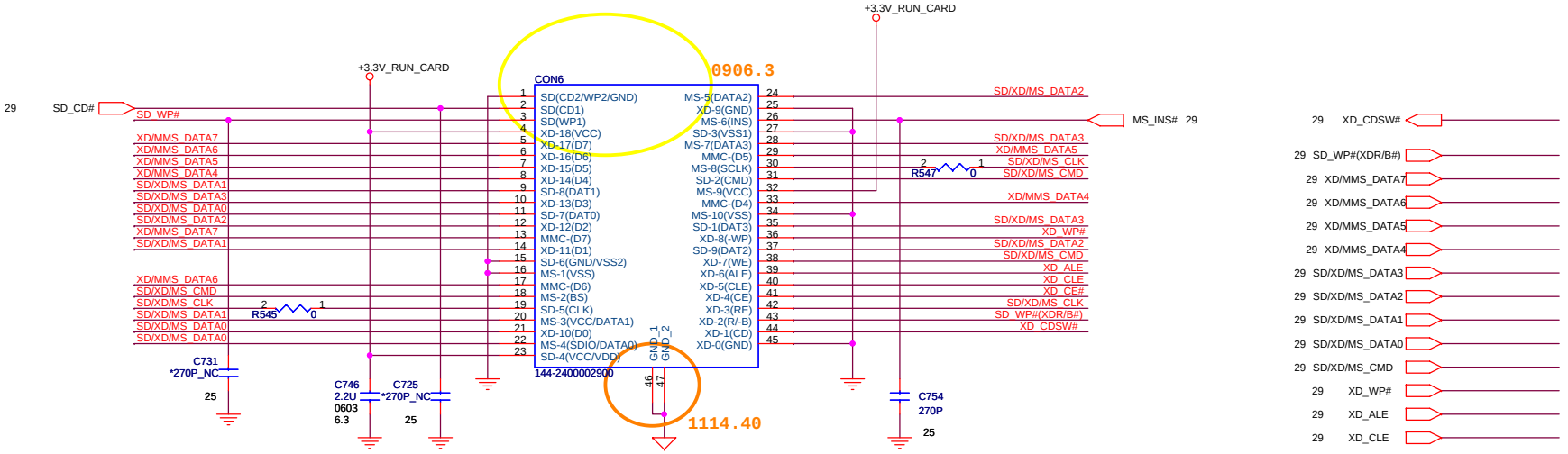
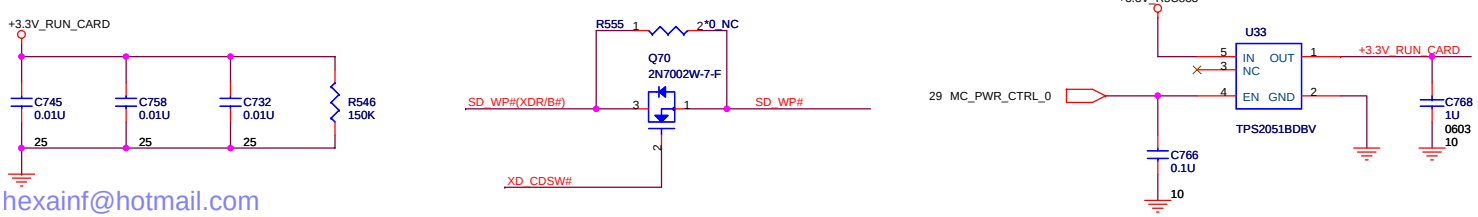
Express Card

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





8 IN1 CARD READER



QUANTA COMPUTER

Title	ExpressCard/SmartCard	
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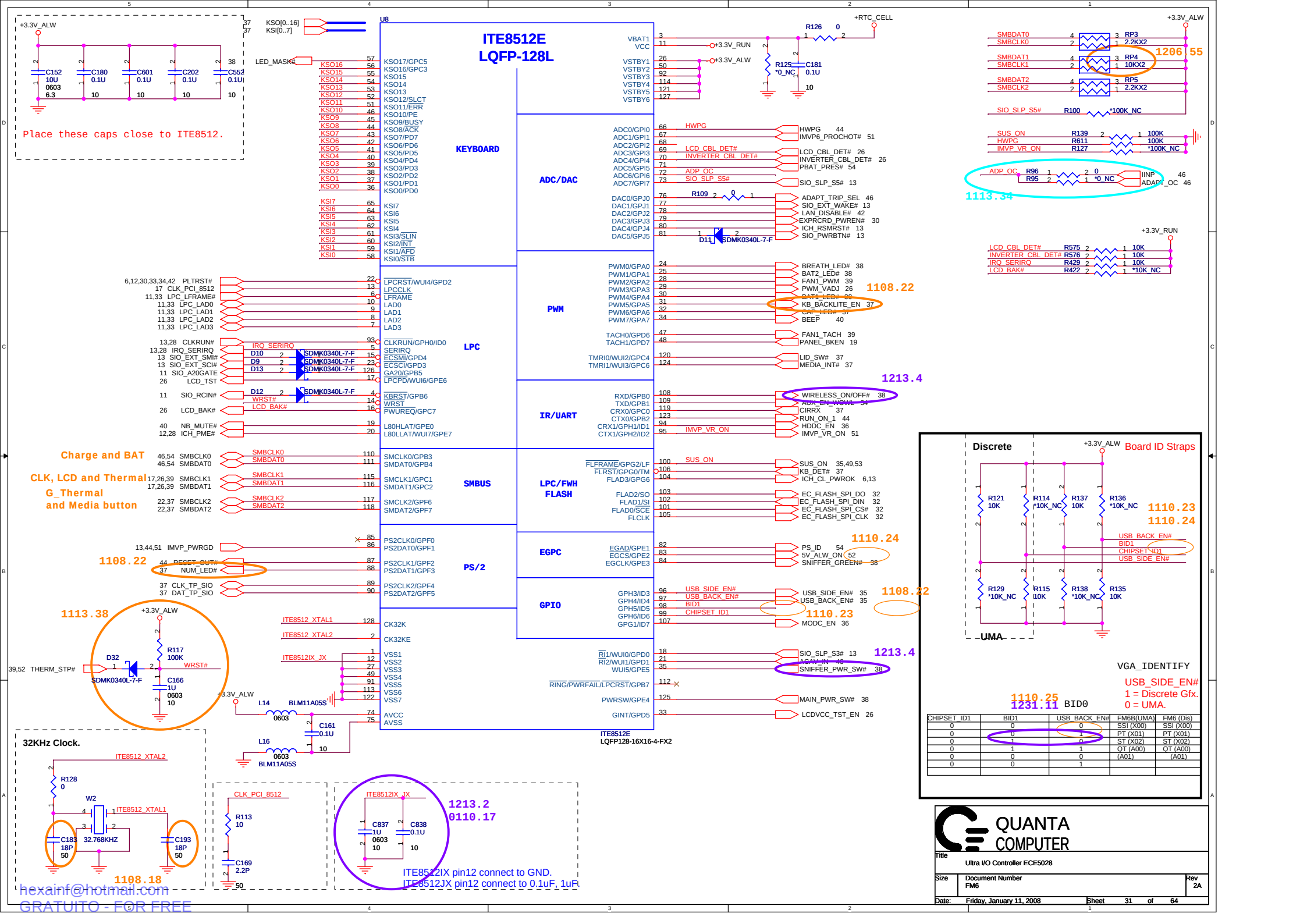
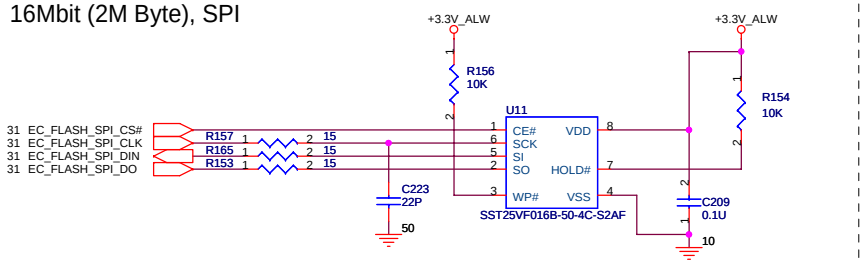
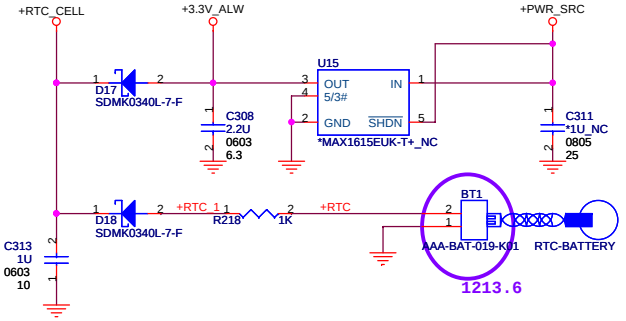

ITE8512E
LQFP-128L
KEYBOARD
ADC/DAC
PWM
LPC
IR/UART
SMBUS
LPC/FWH
FLASH
EGPC
PS/2
GPIO
Place these caps close to ITE8512.
Charge and BAT
CLK, LCD and Thermal
G_Thermal
and Media button
Discrete
UMA
Board ID Straps
VGA_IDENTIFY
USB_SIDE_EN#
1 = Discrete Gfx.
0 = UMA.
32KHz Clock.
ITE8512E
LQFP128-16X16-4-FX2
ITE8512IX pin12 connect to GND.
ITE8512JX pin12 connect to 0.1uF, 1uF
QUANTA
COMPUTER
Ultra I/O Controller ECE5028
FM6
Friday, January 11, 2008
hexainf@hotmail.com
GRATUITO - FOR FREE

16Mbit (2M Byte), SPI



RTC BATTERY



QUANTA COMPUTER		
Title: Ultra I/O Controller ECE5028		
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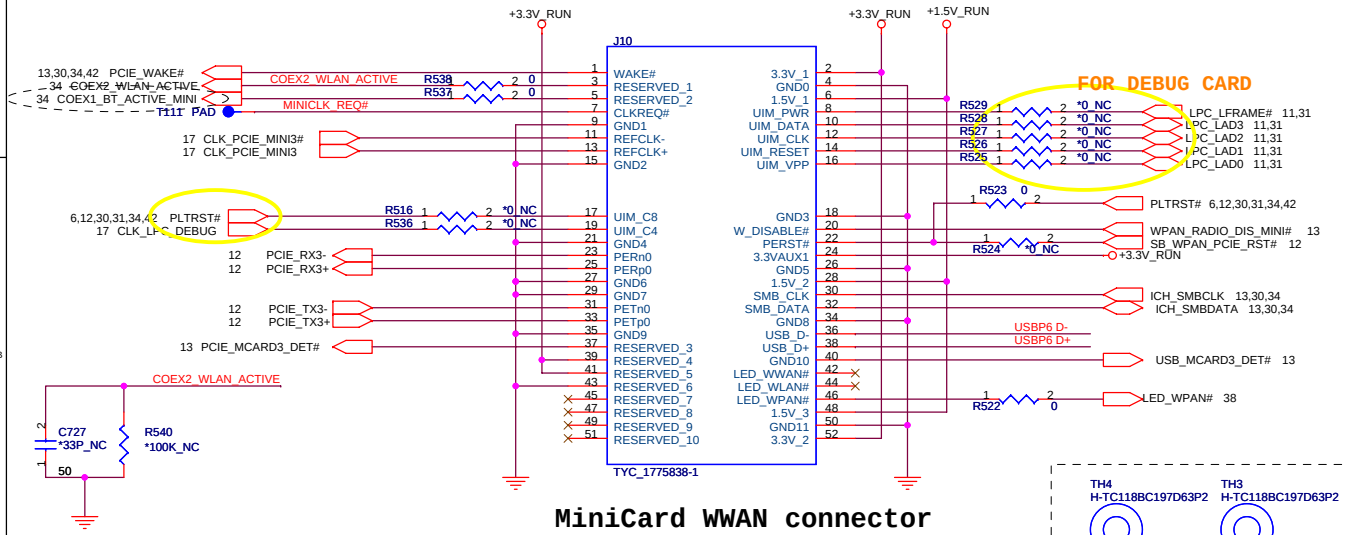
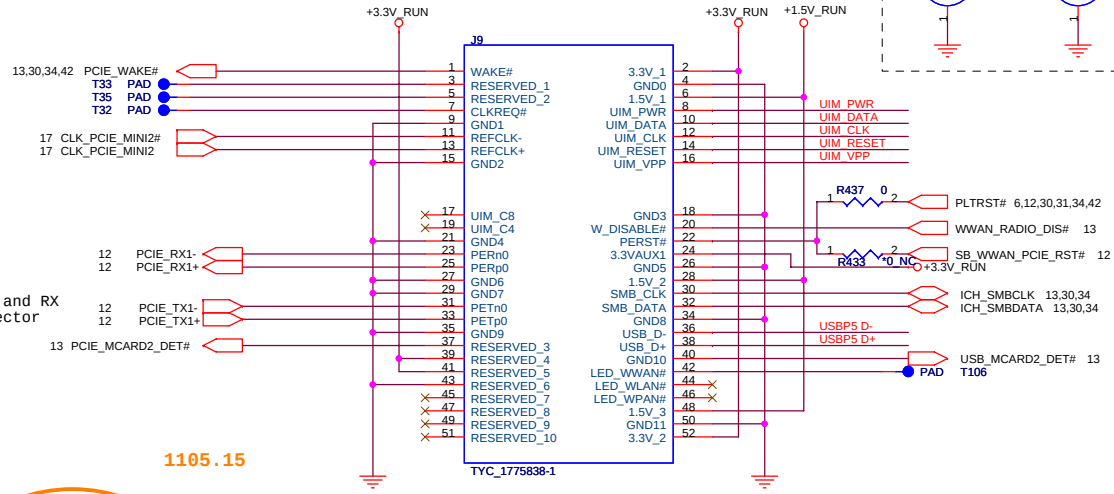
MiniCard Robson, BT. UWB connector

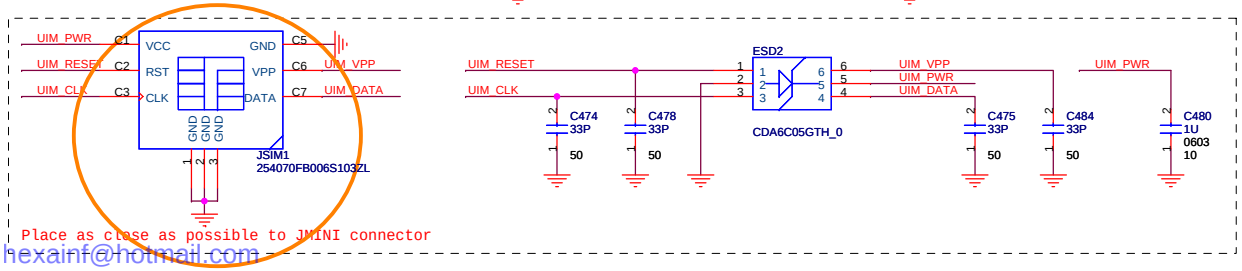


MiniCard WWAN connector



PCI-Express TX and RX direct to connector

1105.15



Place as close as possible to JMINI connector

TH6 H-TC118BC197D63P2
TH5 H-TC118BC197D63P2
For MiniCard nut use.

TH4 H-TC118BC197D63P2
TH3 H-TC118BC197D63P2
For MiniCard nut use.

L77 *PLW3216S900SQ2T1_NC 1206
R521 0
R520 0

L60 *PLW3216S900SQ2T1_NC
R436 0
R435 0

Layout Note: R435 and R436 close to choke as possible to minimize stubs.

C710 0.047U 10
C708 0.047U 10
C707 0.1U 10
C709 0.047U 10
C711 0.1U 10
C729 0.047U 10
C730 4.7U 0603 6.3
C312 *330U/6.3V_NC 7343 6.3

C602 0.047U 10
C603 33P 50
C606 33P 50
C605 0.047U 10
C600 33P 50
C651 0.047U 10
C219 330U 7343 6.3
C253 *330U_NC 7343 6.3

Place caps close to connector.

C727 *33P_NC 50
R540 *100K_NC

Title	MINI-PCI	
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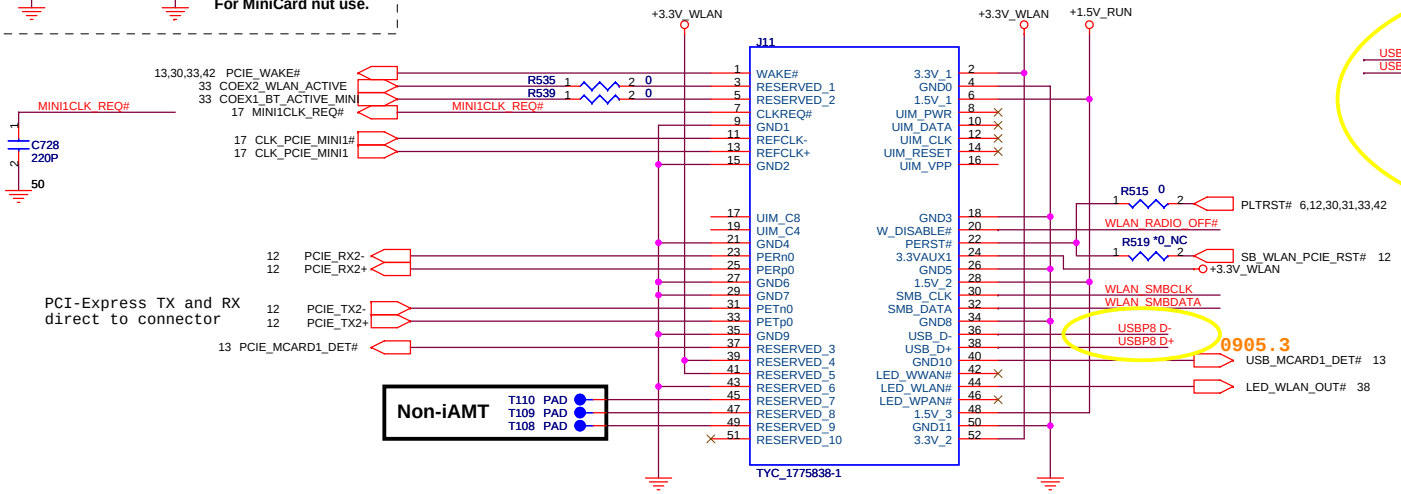
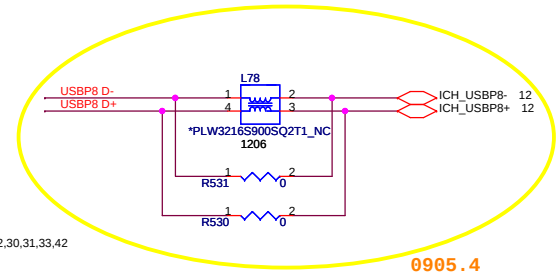
MiniCard WLAN connector

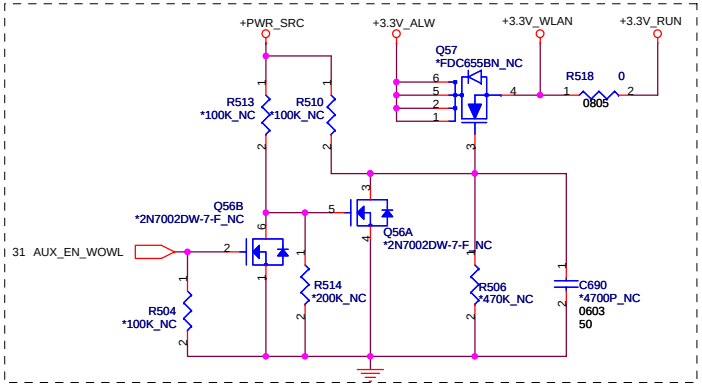
TH2 H-TC177BC197D83P2

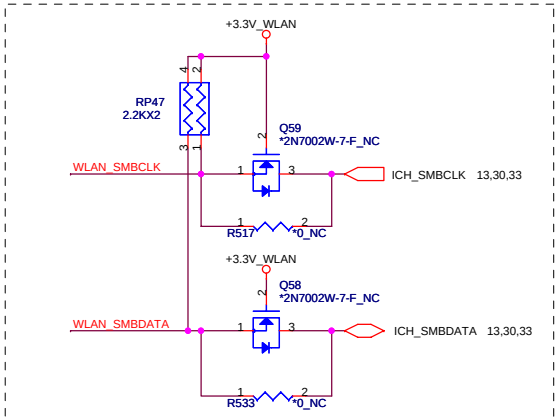
TH1 H-TC177BC197D83P2

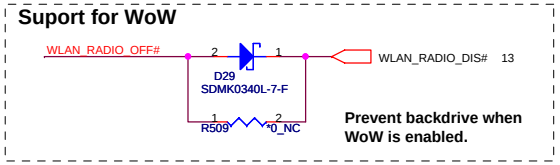
For MiniCard nut use.

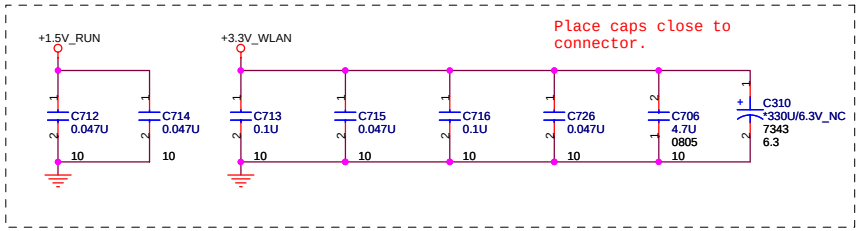












QUANTA COMPUTER

Title	MDC CONN.	
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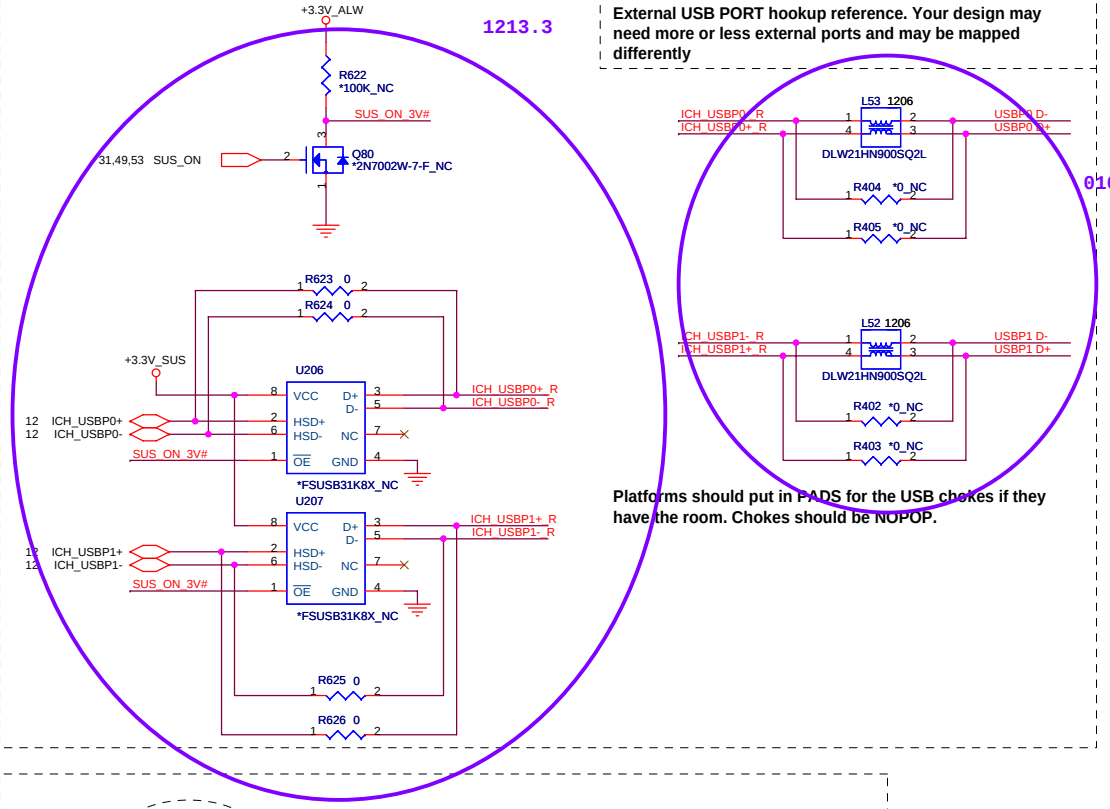

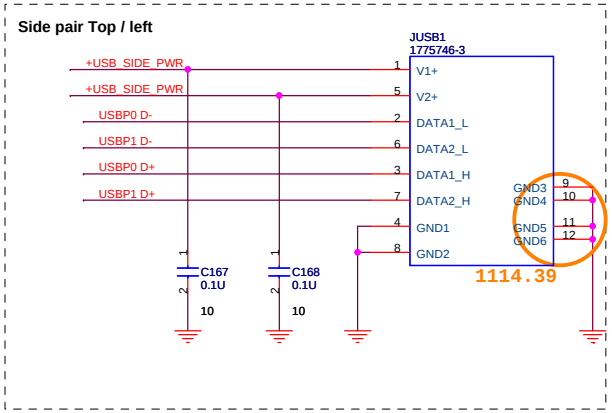

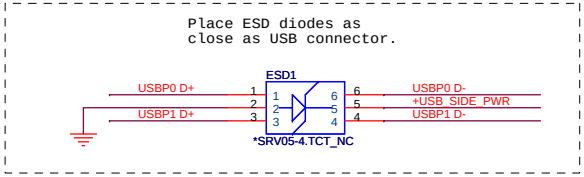

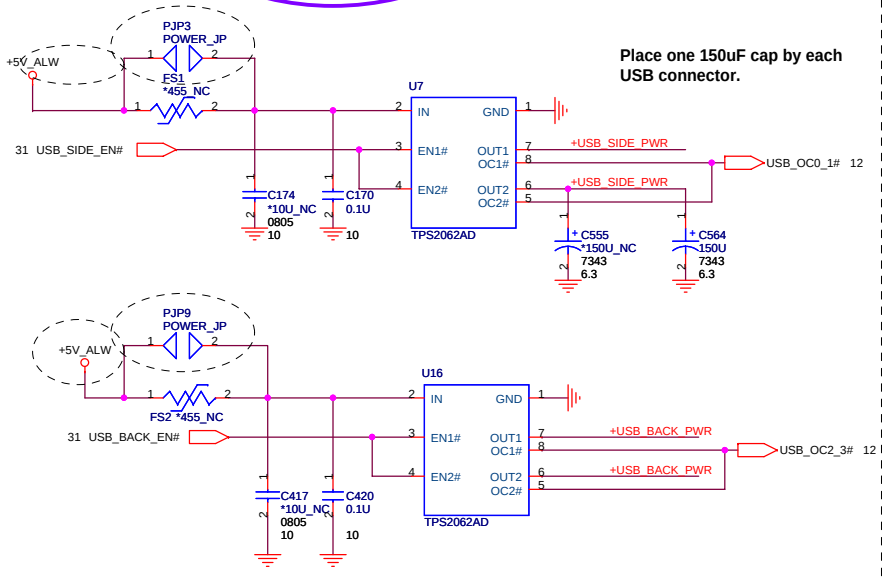

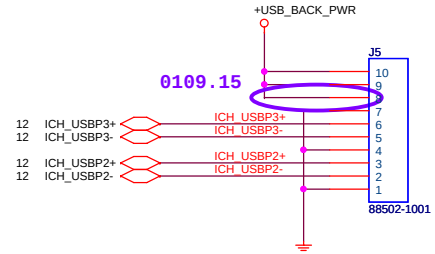

QUANTA COMPUTER

Title	SERIAL PORT & USB	
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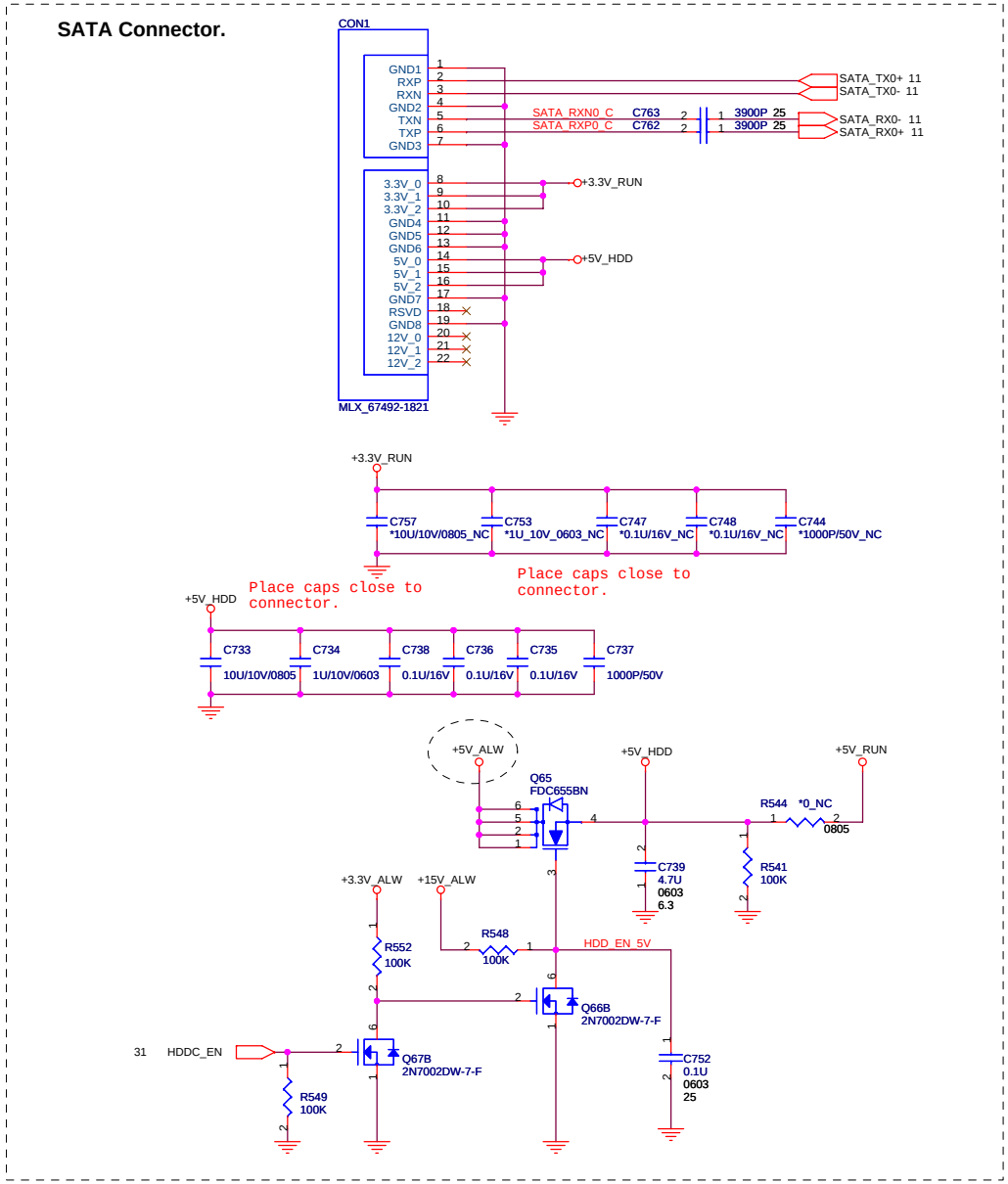
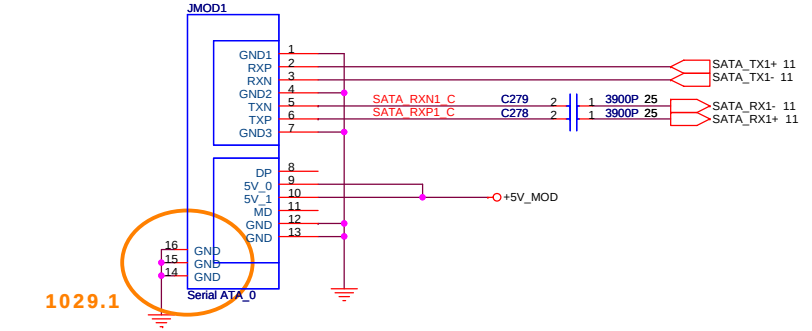
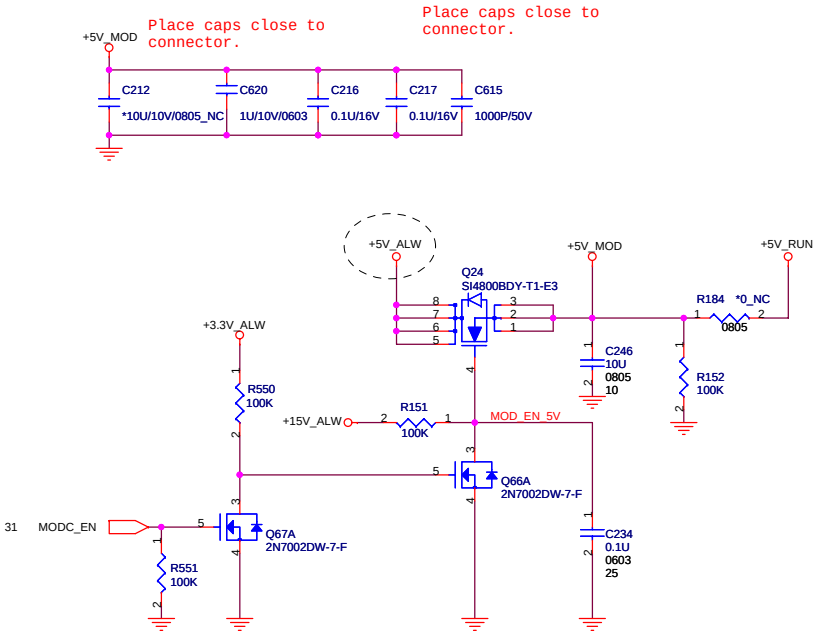
SATA Connector.



ODD Connector





QUANTA COMPUTER

Title	SATA (HDD&CD_ROM)	
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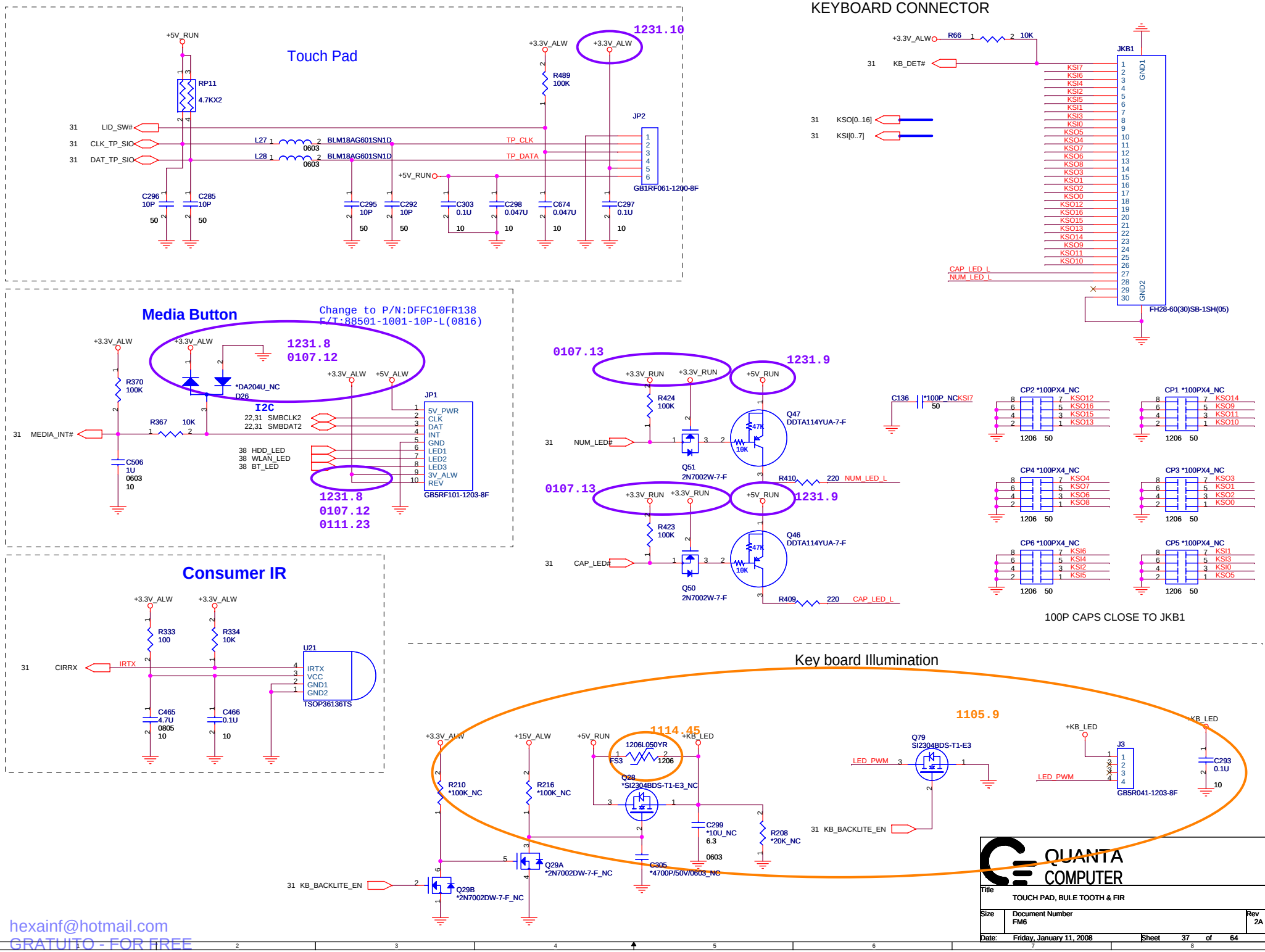
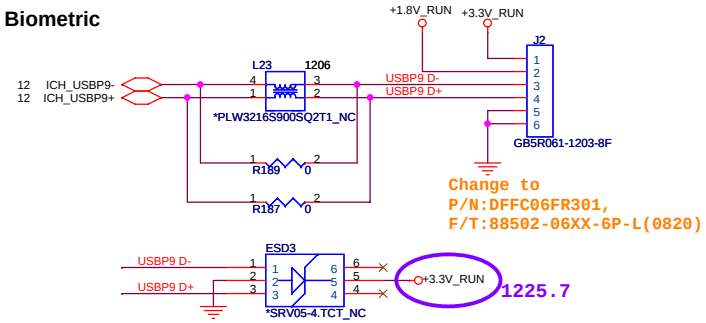
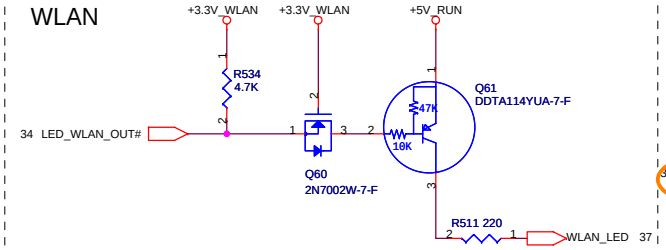


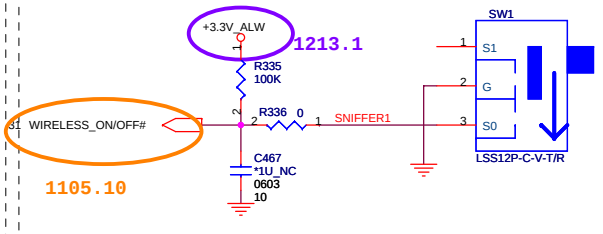
Biometric



WLAN

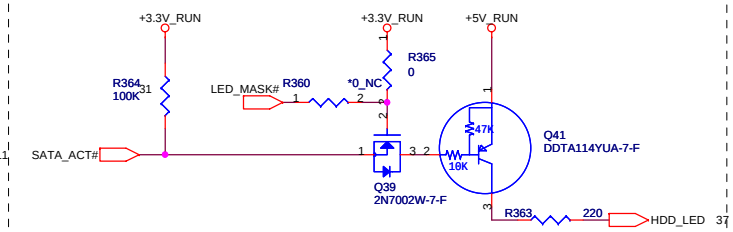


Sniffer Switch ON/OFF Sniffer Switch

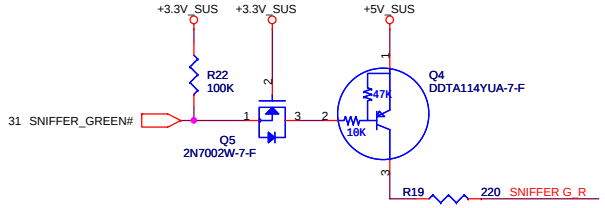


1110.23

HDD activity LED.

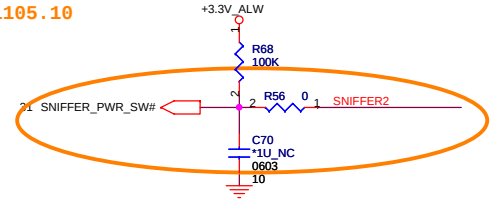


Sniffer Buttom

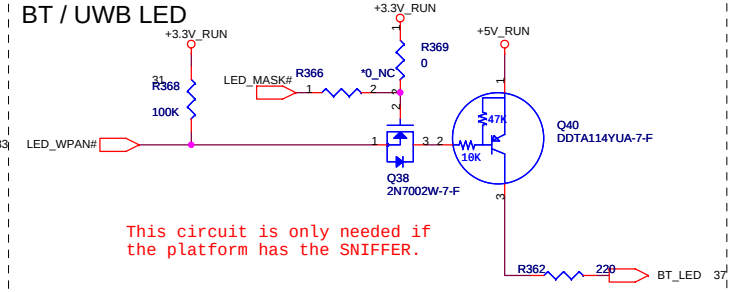


1105.10

1105.10

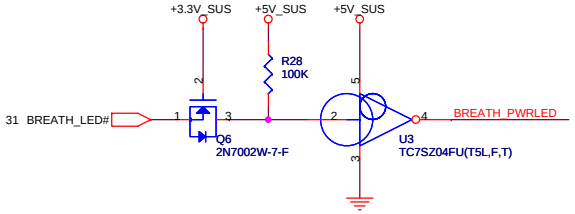


BT / UWB LED

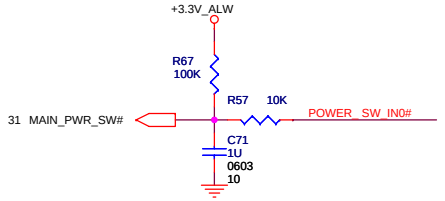


This circuit is only needed if
the platform has the SNIFFER.

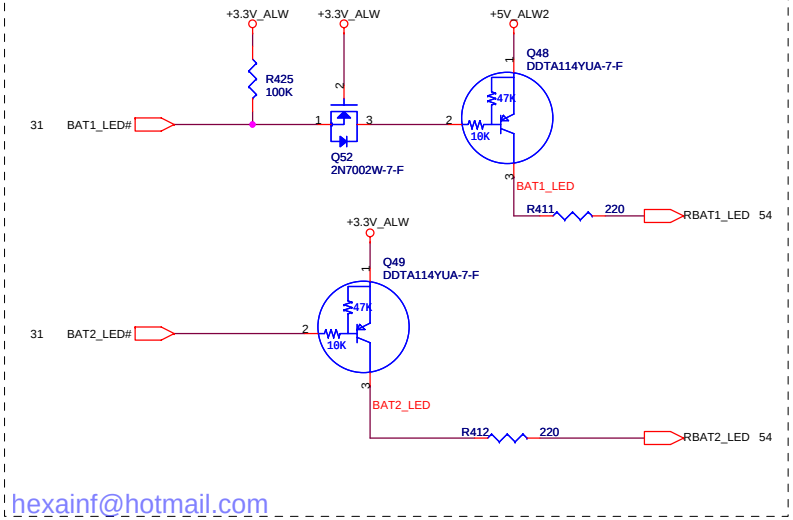
Power & Suspend.

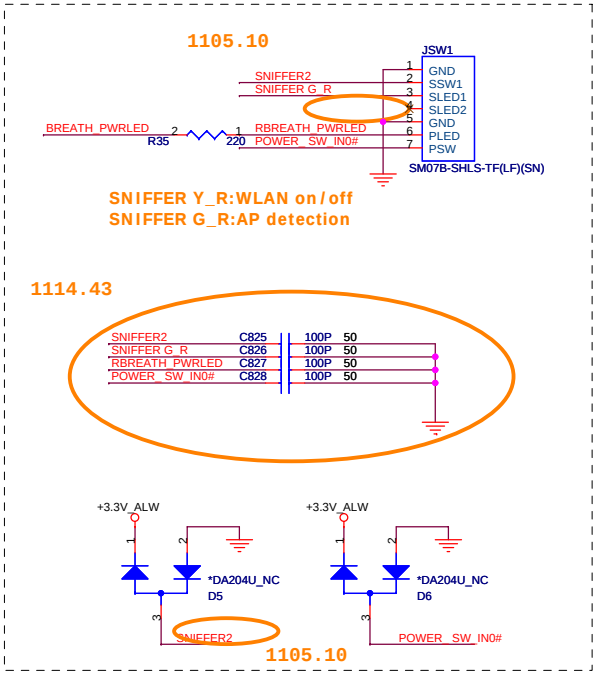


Power Switch



Battery status.





QUANTA COMPUTER

Title	SWITCH, KEYBOARD & LED	
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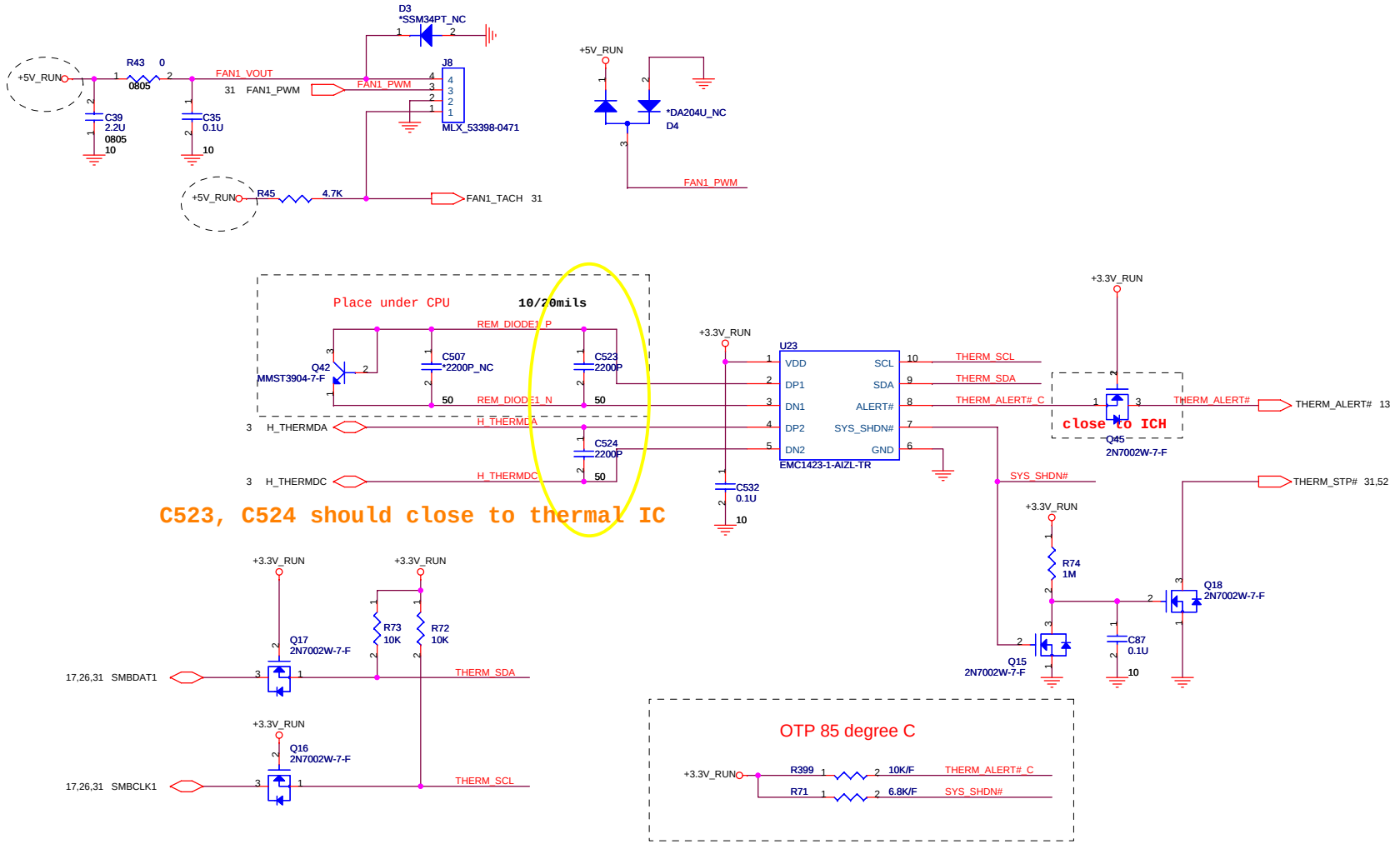

QUANTA COMPUTER		
Title	FAN & THERMAL	
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GAIN1	GAIN2	GAIN
0	0	6dB
0	1	10dB
1	0	15.6dB
1	1	21.6dB

INTERNAL SPEAKER AMP

TPA6040A4
QFN 32PIN

1105.12
1115.48

Layout Note:
Place close U34 pin 23.

Layout Note:
Close to U35 Pin 34

Layout Note:
Place close to pin 18.

Layout Note:
Place close U34.

EMI Request

AZALIA (HD) CODEC

0110.19

92HD73C/STAC9228

FB_60ohm+-25%_100MHz
_3A_0.05ohm DC

Depop R561,C786
for using 92HD73C

Layout Note:
Close to U35 Pin 13

1113.39

Depop R603, R617, R578,R616
Pop R602, R619, R562 ,R601,
for using 92HD73C
R602,R617 close to U35, Let DVDD width be 10-mils

Close to U35

Layout Note:
Place close to pin 8.

QUANTA COMPUTER

Title	Azelia CODEC	
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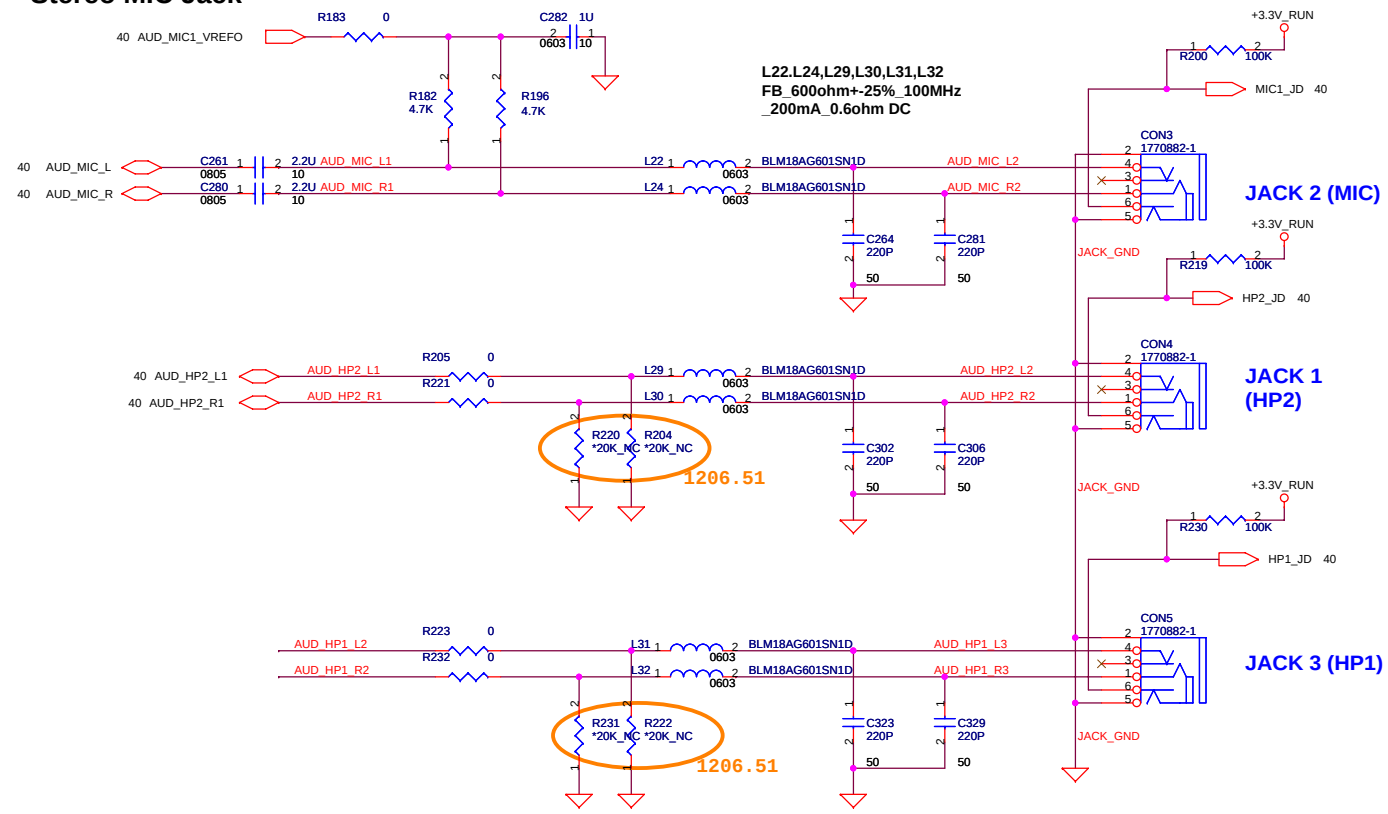
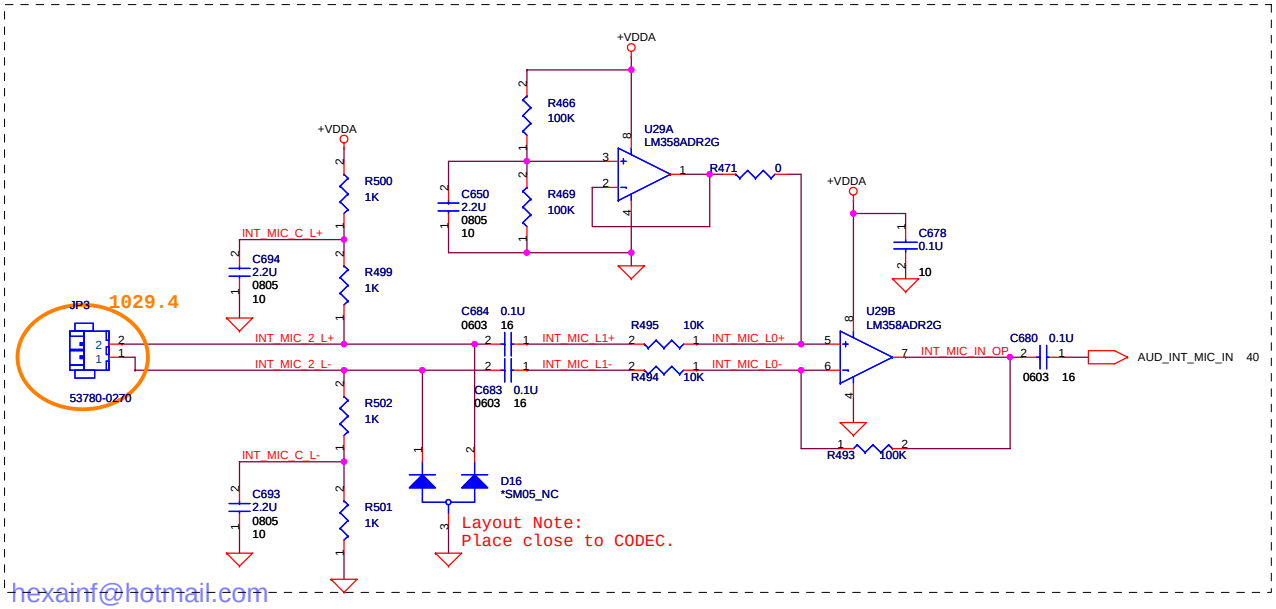
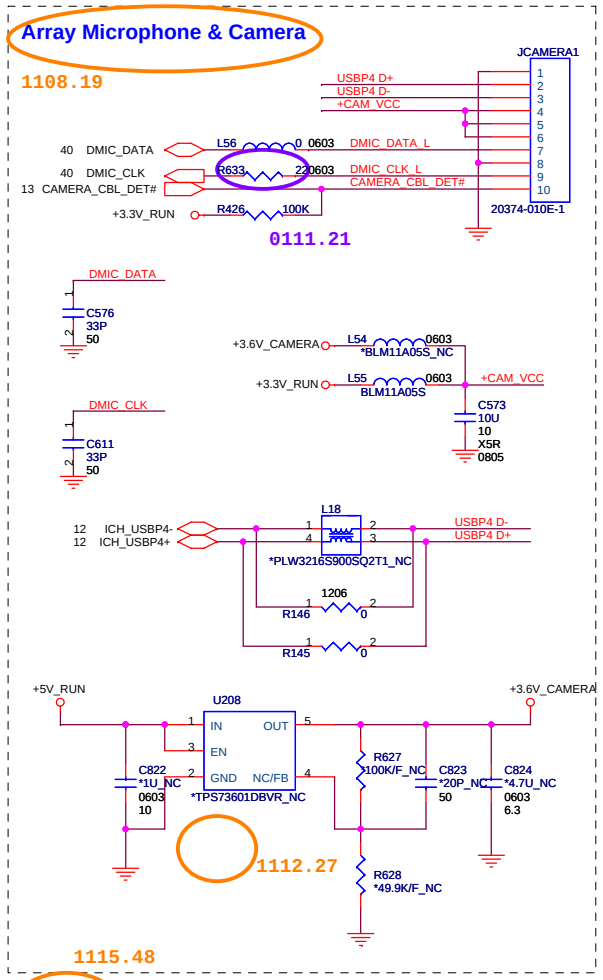
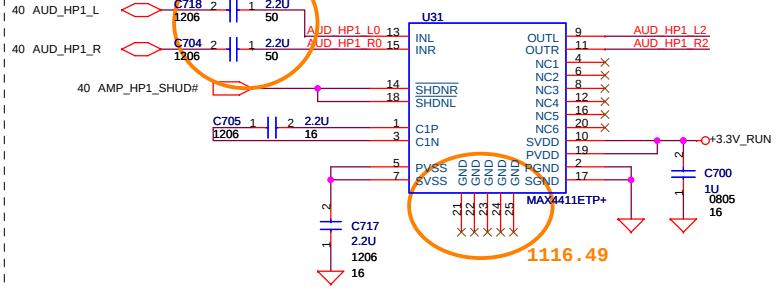
Headphone Jack
Stereo MIC Jack









Title	AUDIO CONN	
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QUANTA COMPUTER

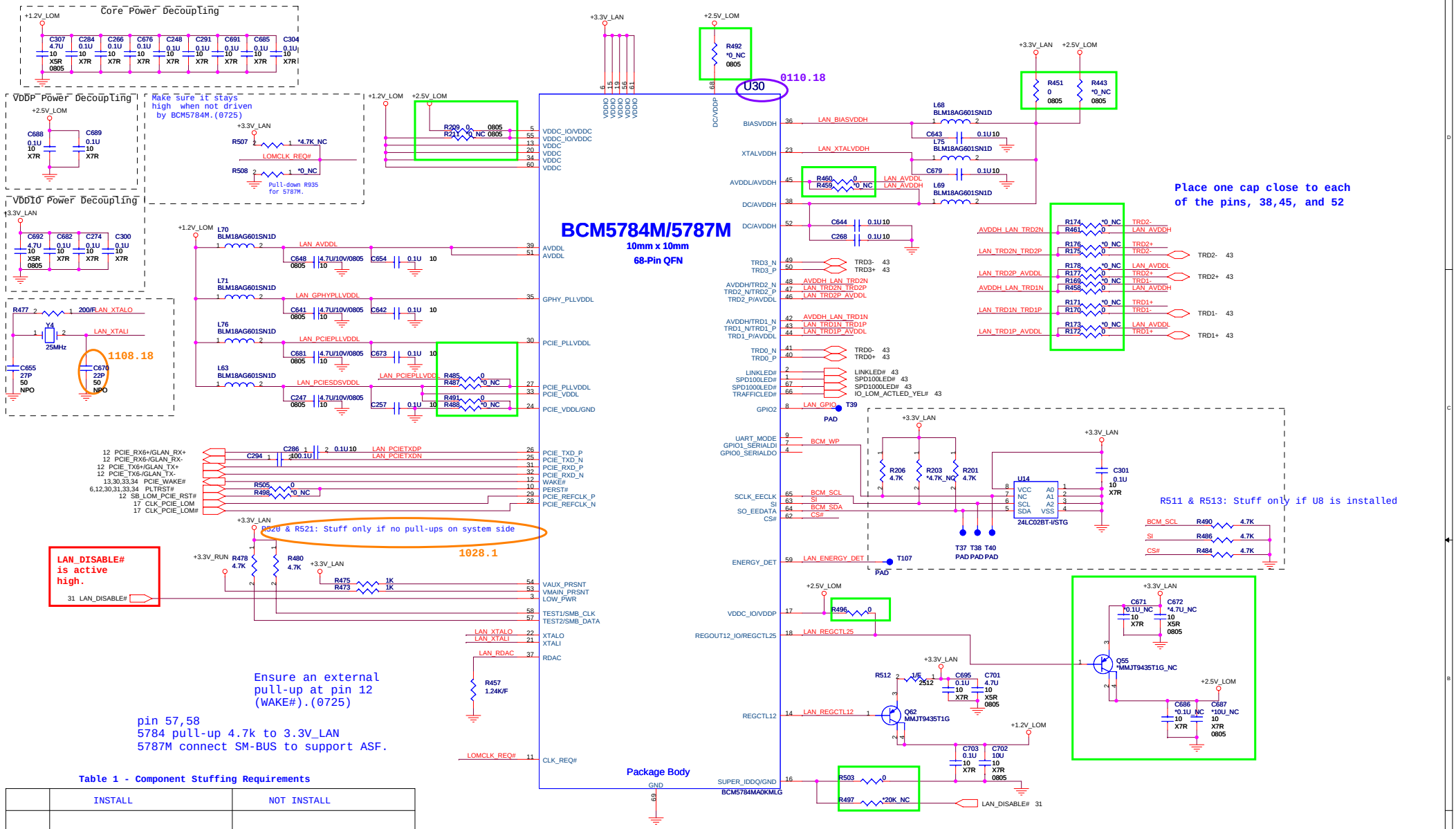

Table 1 - Component Stuffing Requirements

	INSTALL	NOT INSTALL
5787M	R221,R487,R488,Q55,C671,C672, C686,C687,R174,R176,R178,R169, R171,R173,R459,R443,R492	R209,R485,R491,R496,R461,R175, R177,R458,R170,R172,R460,R451
5784	R209,R485,R491,R496,R461,R175, R177,R458,R170,R172,R460,R451	R221,R487,R488,Q55,C671,C672, C686,C687,R174,R176,R178,R169, R171,R173,R459,R443,R492

	5784M	5787M
R503	39k	0
R497	20k	*20k_NC

QUANTA COMPUTER

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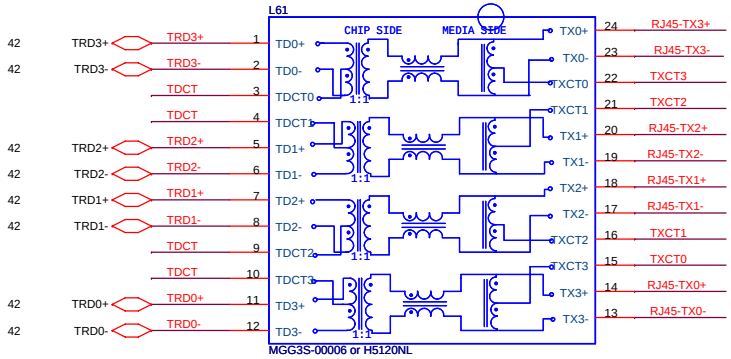
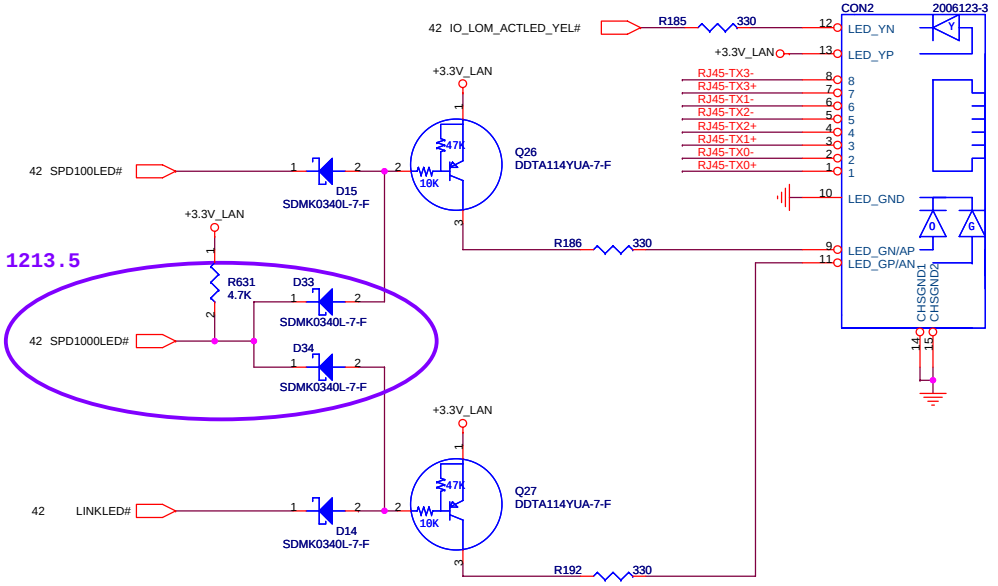
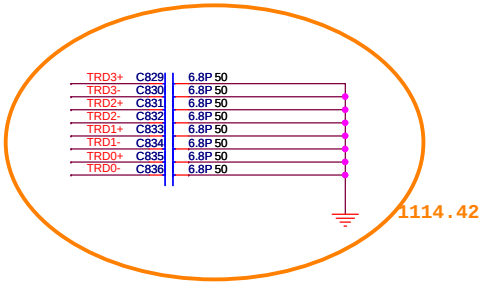
RJ-45 Connector

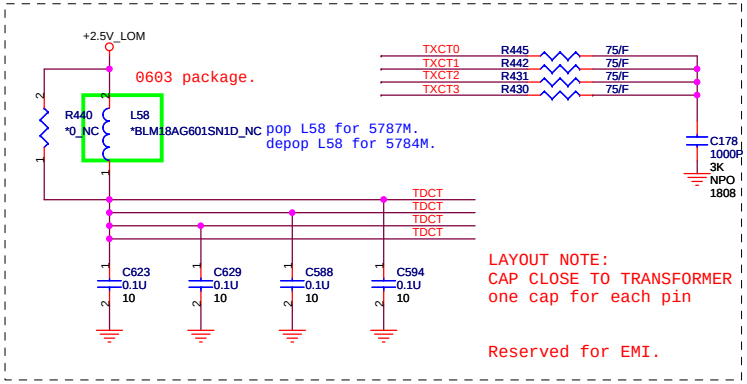
TRANSFORM

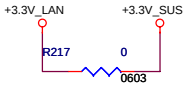
TRANSFORM











QUANTA COMPUTER

Title	LAN SWITCH	
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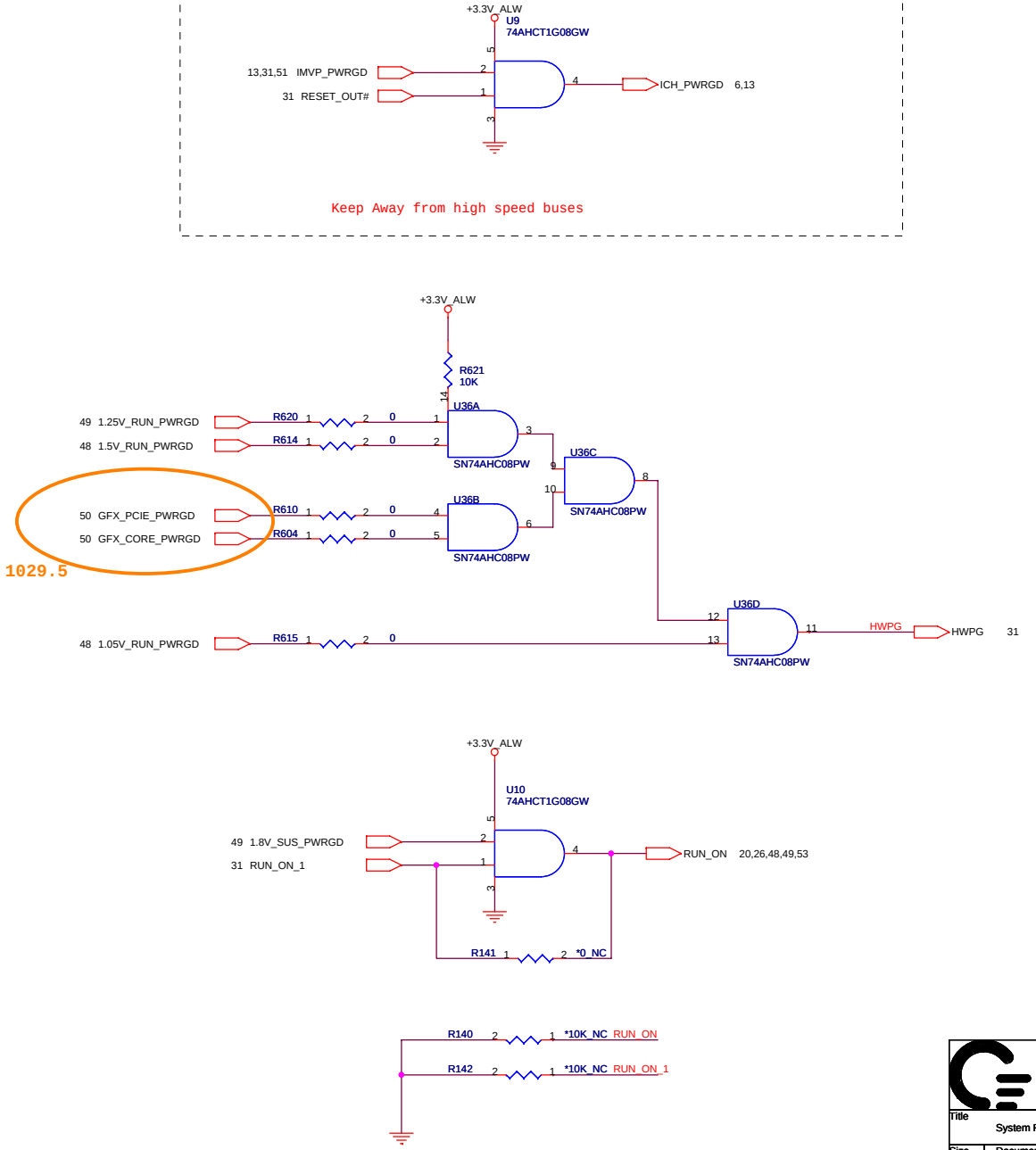

QUANTA COMPUTER		
Title: System Reset Circuit		
Size	Document Number FM6	Rev 1A
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QUANTA COMPUTER

Title	Battery Selector	
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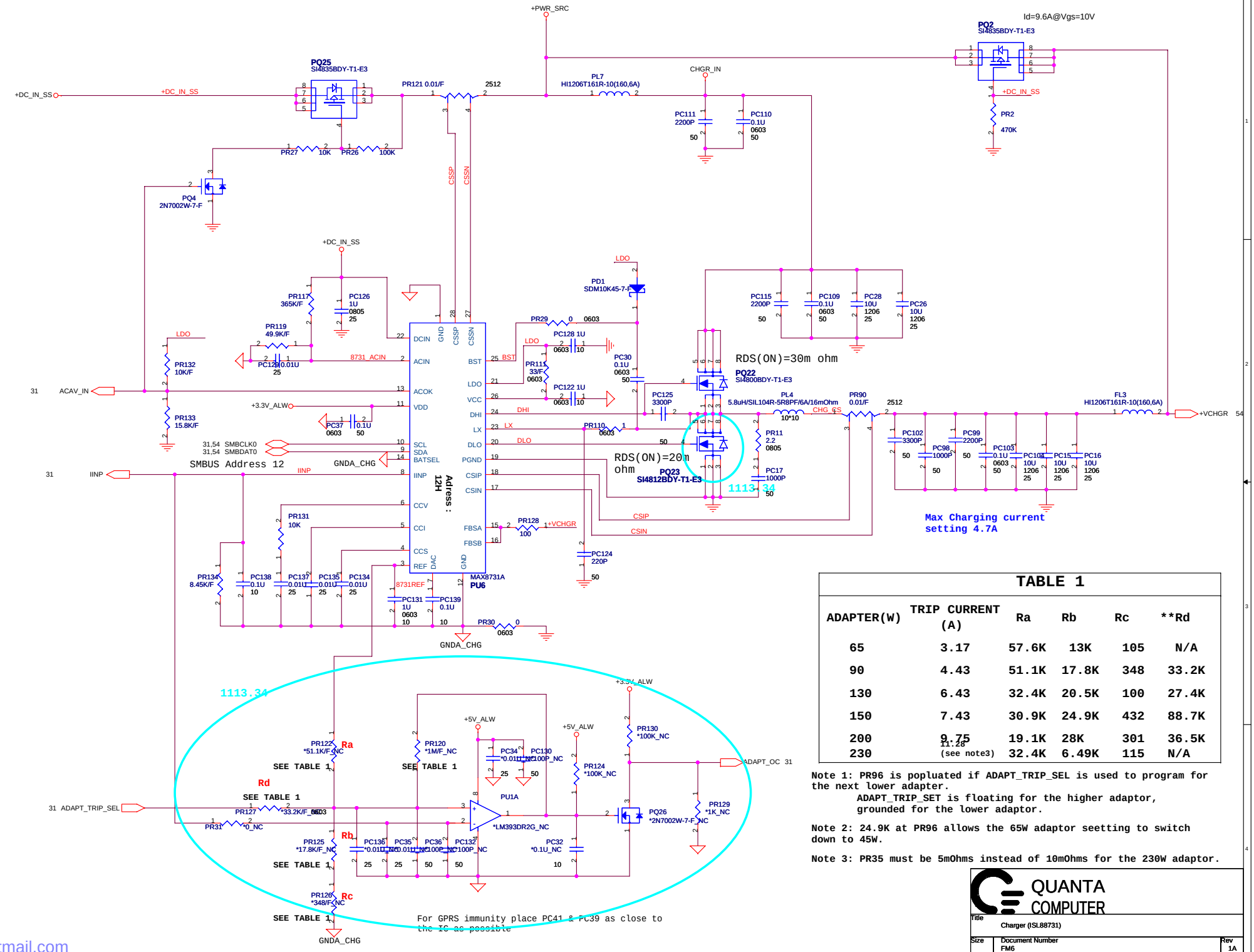

ADAPTER(W)	TRIP CURRENT (A)	Ra	Rb	Rc	**Rd
65	3.17	57.6K	13K	105	N/A
90	4.43	51.1K	17.8K	348	33.2K
130	6.43	32.4K	20.5K	100	27.4K
150	7.43	30.9K	24.9K	432	88.7K
200	9.75	19.1K	28K	301	36.5K
230	11.28 (see note3)	32.4K	6.49K	115	N/A

TABLE 1

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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Title		
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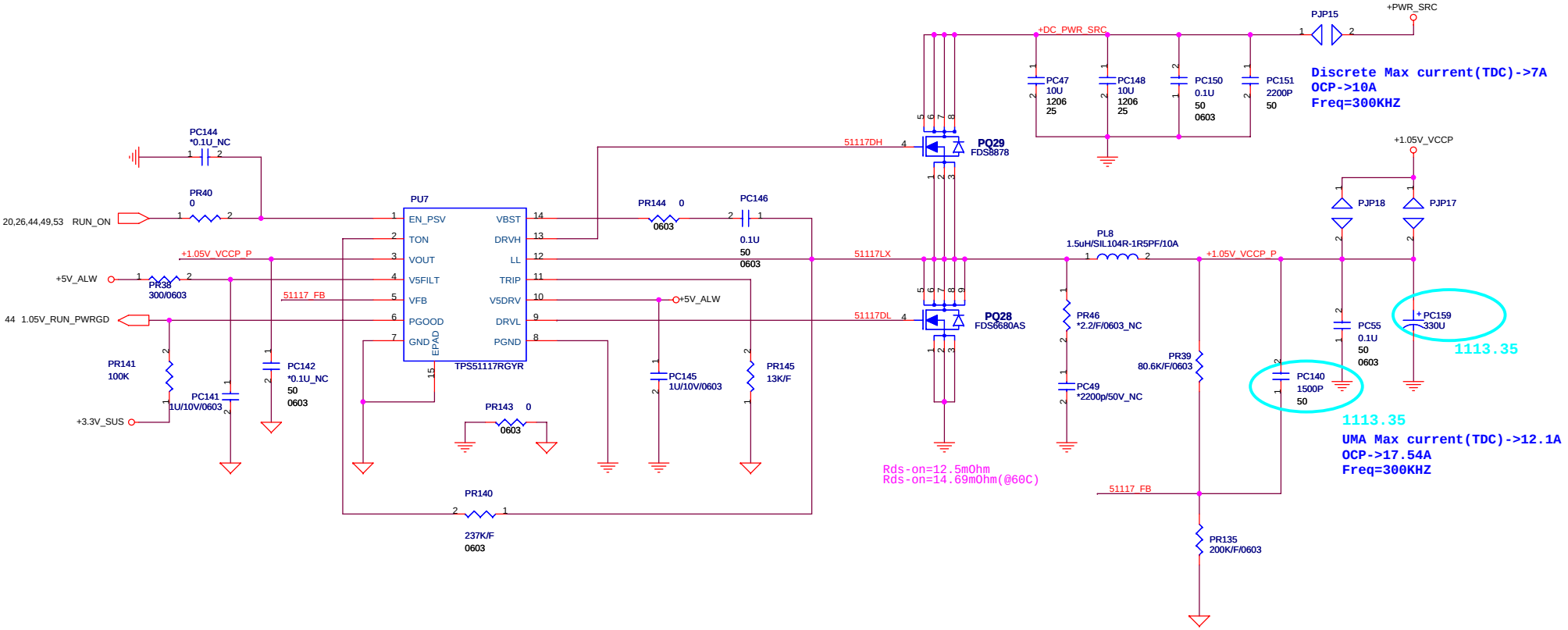

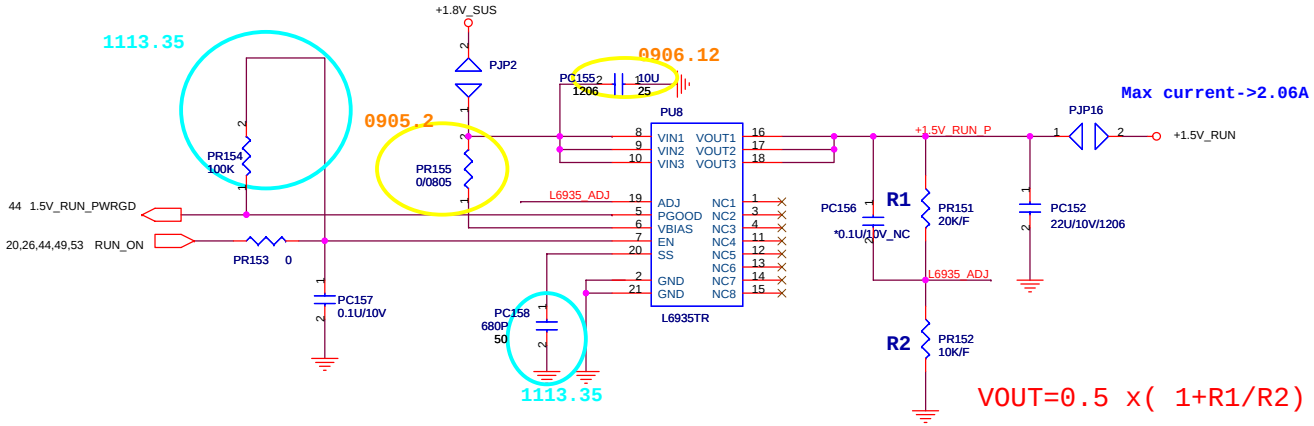

	UMA(12.1A)	Discrete(7A)
PQ22	FDS8880_NL (BAM88800012)	FDS8878 (BAM88780020)
PQ25	FDS6676AS_NL (BAM66760026)	FDS6680AS (BAM66800061)
PL25	SIL105RA-1R5-R (CV-15F0MZ08)	SIL104R-1R5PF (DC-15A00010)
PR452	9.09K/F (CS29092FB27)	10K/F (CS31002FB26)

QUANTA COMPUTER

Title	1.05_VCCP & 1.5V_RUN	
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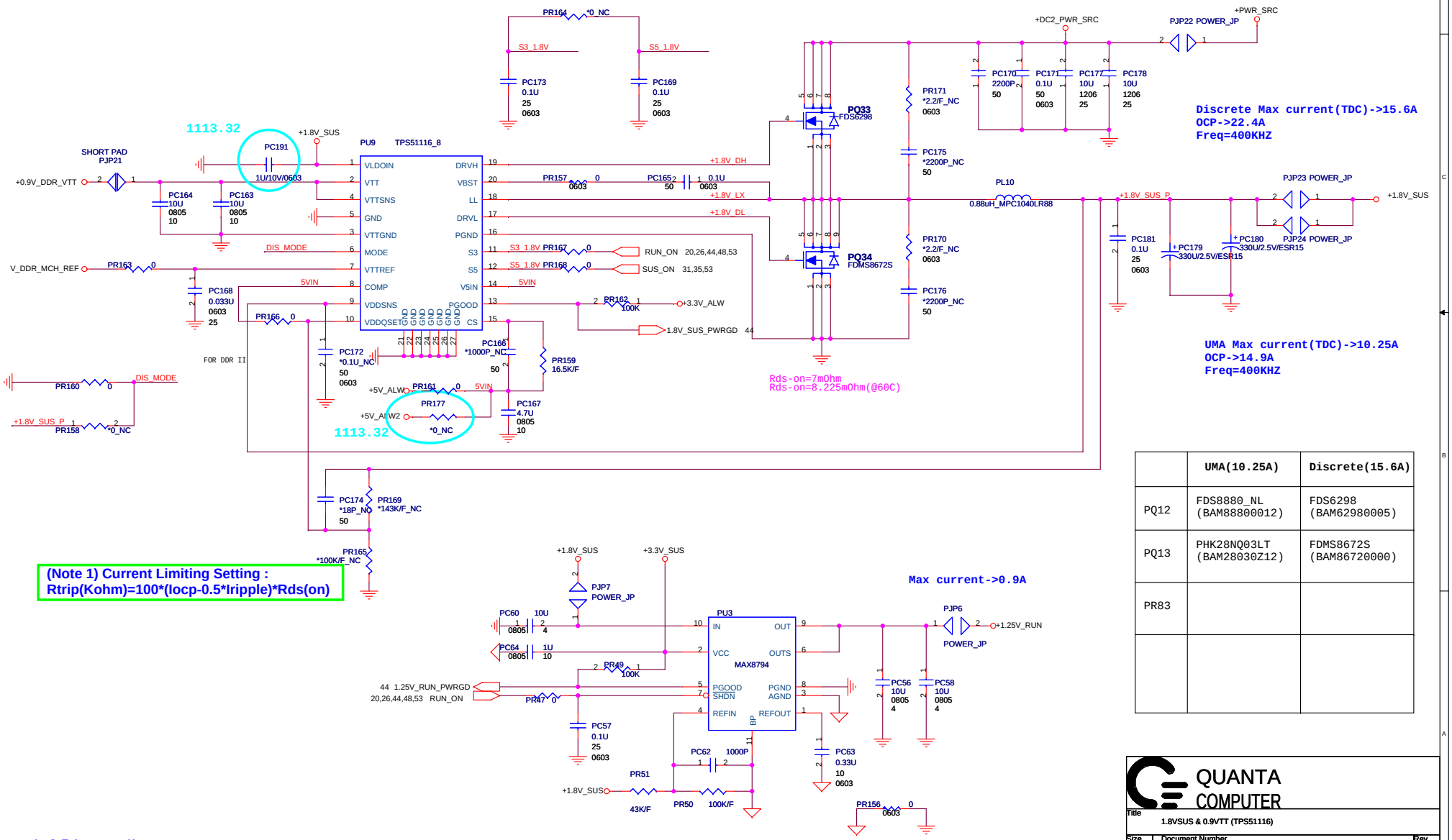

	UMA(10.25A)	Discrete(15.6A)
PQ12	FDS8880_NL (BAM88800012)	FDS6298 (BAM62980005)
PQ13	PHK28NQ03LT (BAM28030Z12)	FDMS8672S (BAM86720000)
PR83		

QUANTA COMPUTER

Title	1.8VSUS & 0.9VTT (TPS51116)
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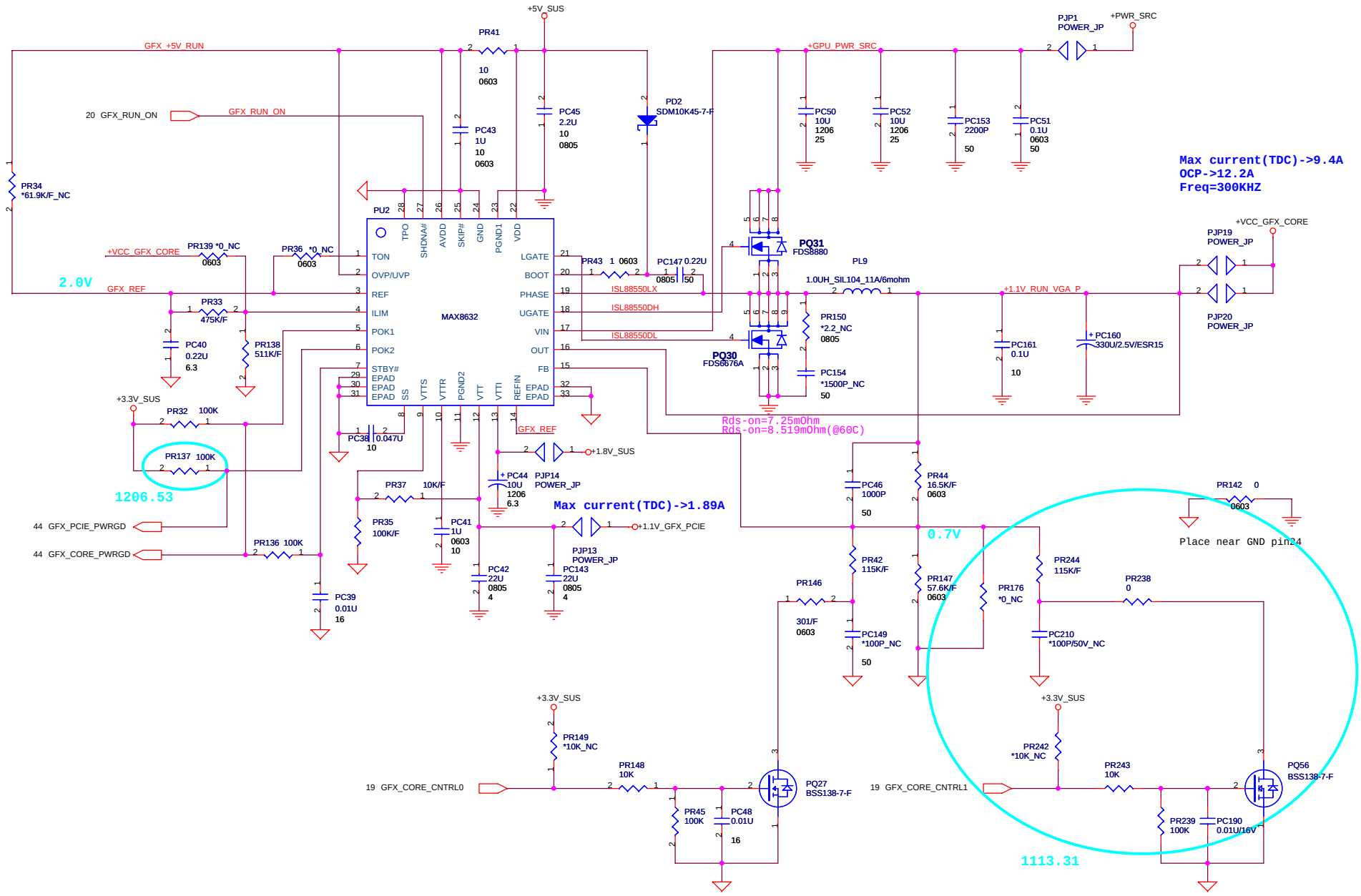

GFX_CORE_CNTRL0	GFX_CORE_CNTRL1	+VCC_GFX_CORE
LOW	LOW	0.9
HIGH	LOW	1.0V
HIGH	HIGH	1.1V

QUANTA COMPUTER

Title	VGA DC/DC	
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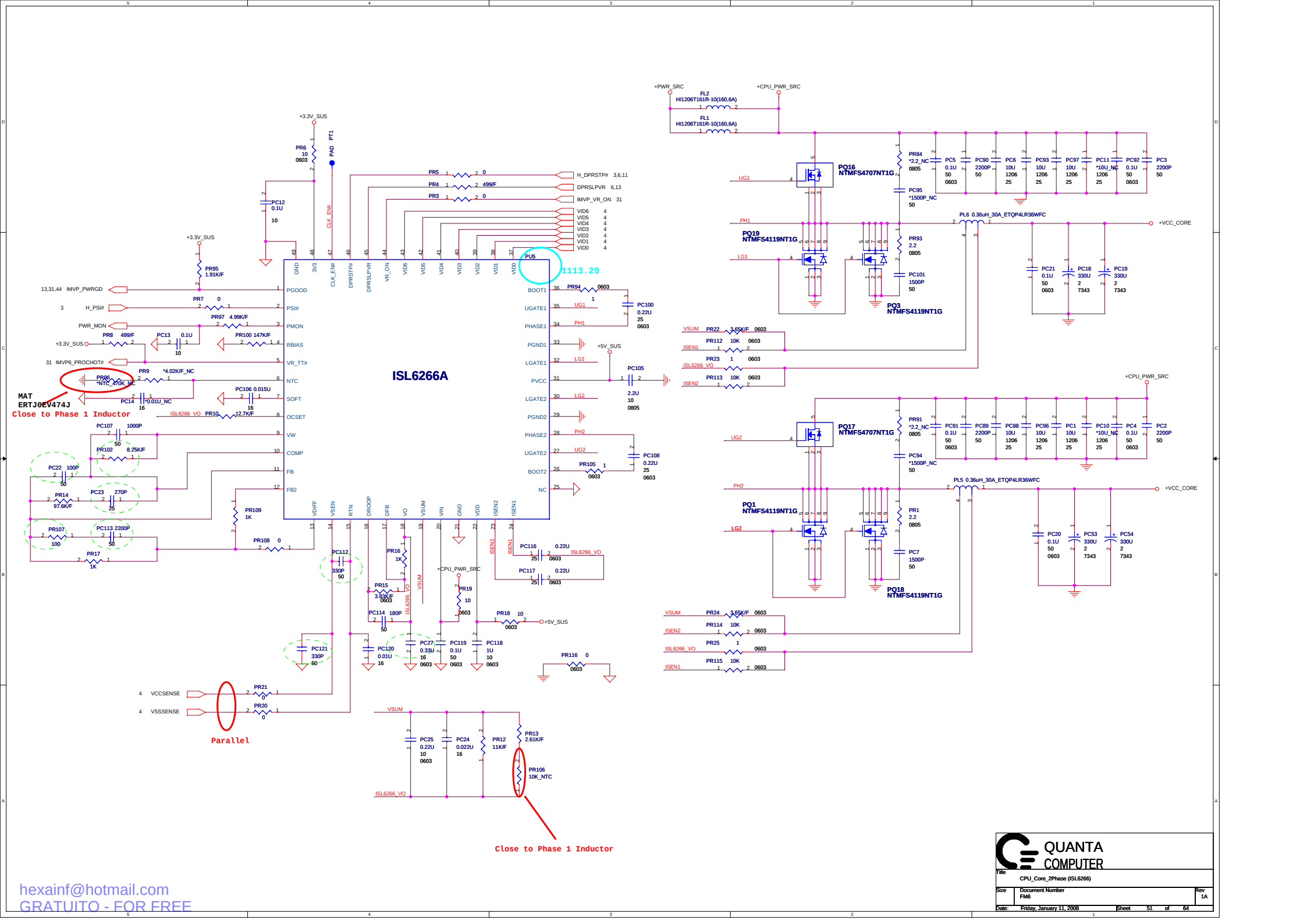
ISL6266A
MAT
ERTJ0EV474J
Close to Phase 1 Inductor
Parallel
Close to Phase 1 Inductor
PU5
1113.29
PQ16
NTMFS4707NT1G
PQ19
NTMFS4119NT1G
PQ3
NTMFS4119NT1G
PQ17
NTMFS4707NT1G
PQ1
NTMFS4119NT1G
PQ18
NTMFS4119NT1G
PL6 0.36uH_30A_ETQP4LR36WFC
PL5 0.36uH_30A_ETQP4LR36WFC
+VCC_CORE
+PWR_SRC
+CPU_PWR_SRC
+3.3V_SUS
+5V_SUS
H_DPRSTP# 3,6,11
DPRSLPVR 6,13
IMVP_VR_ON 31
13,31,44 IMVP_PWRGD
H_PSI#
PWR_MON
31 IMVP6_PROCHOT#
VCCSENSE
VSSSENSE
hexainf@hotmail.com
GRATUITO - FOR FREE
QUANTA COMPUTER
Title CPU_Core_2Phase (ISL6266)
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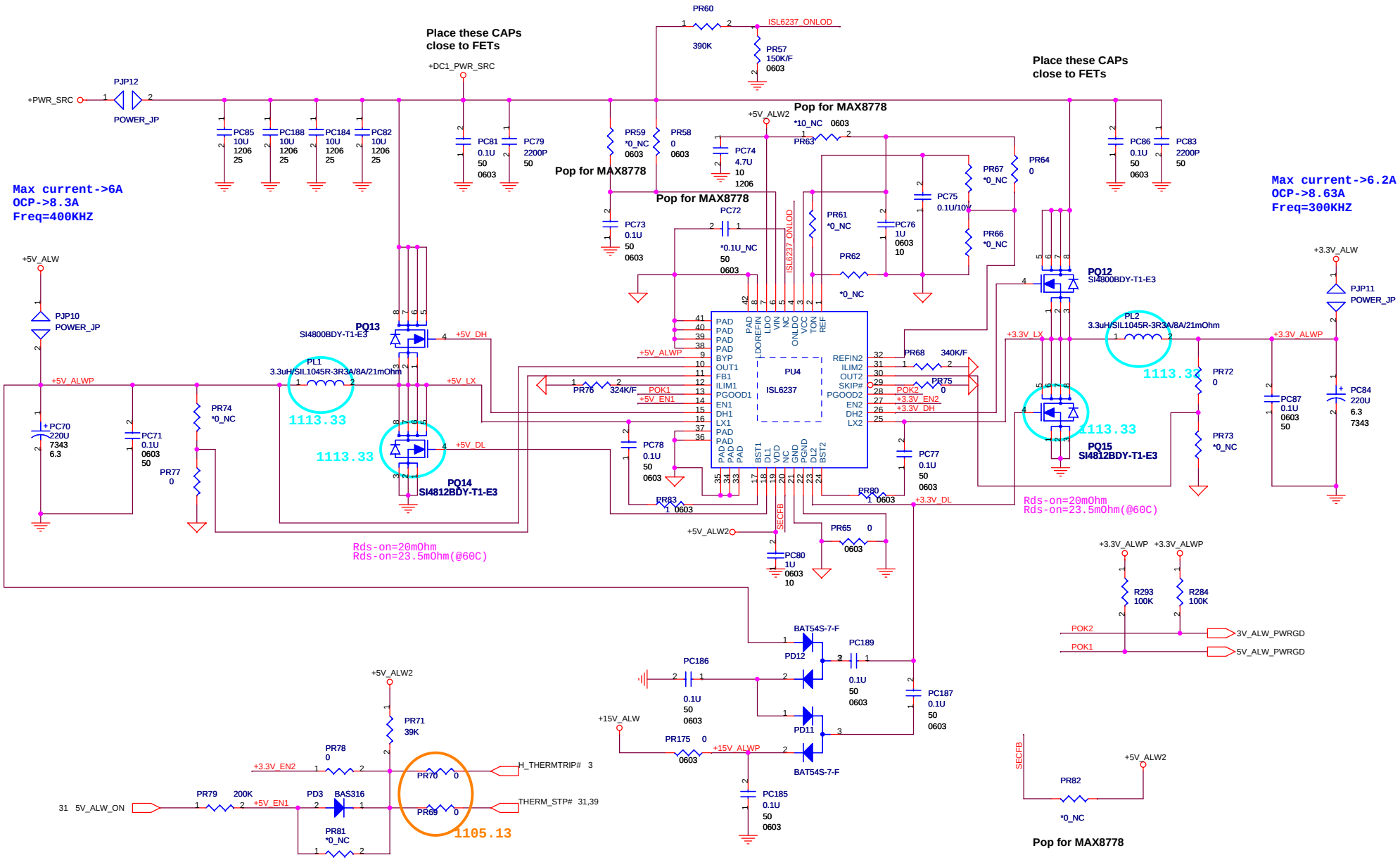
DC/DC +3V_ALW/+5V_SUS/+5V_ALW /+15V_ALW



Title	3VALW,5V,3V, Power On	
Size	Document Number FM6	Rev 3B
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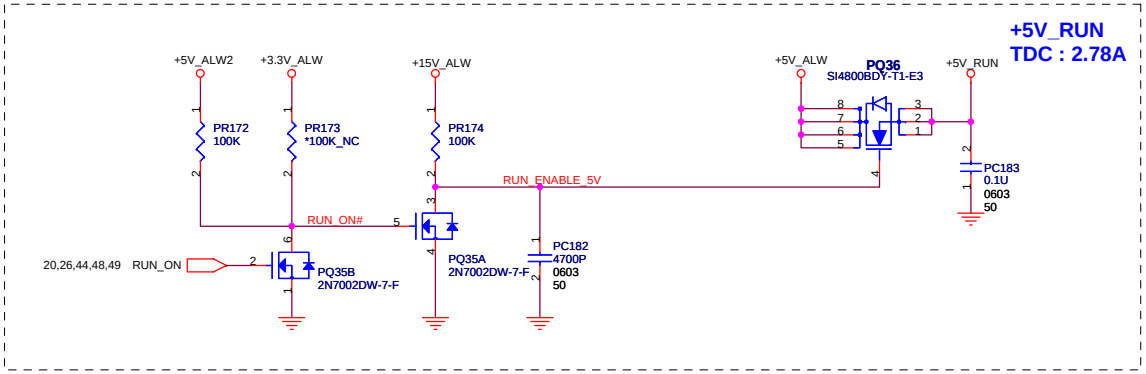
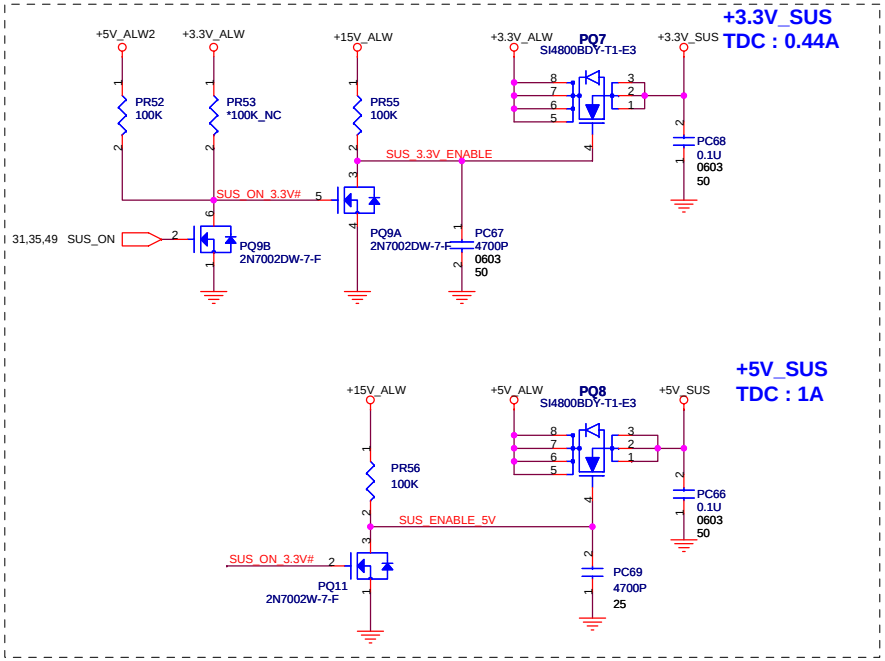
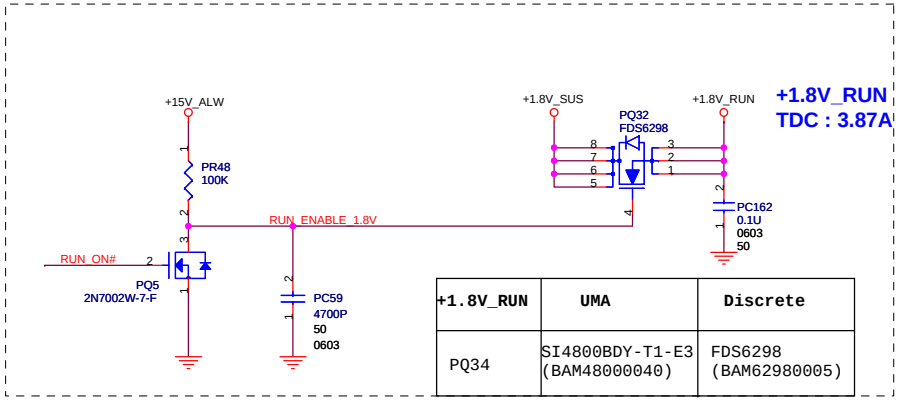
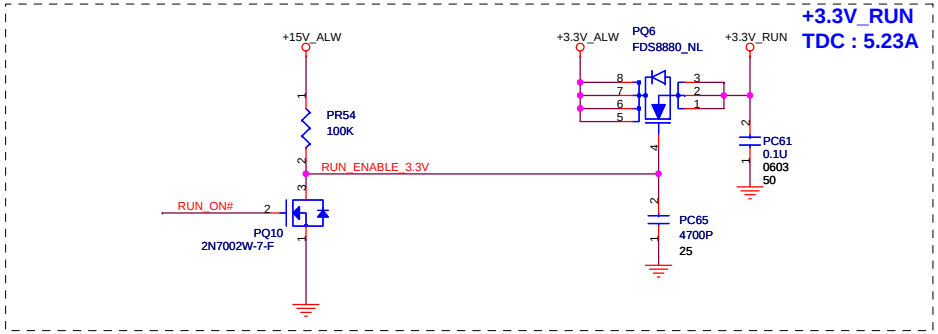
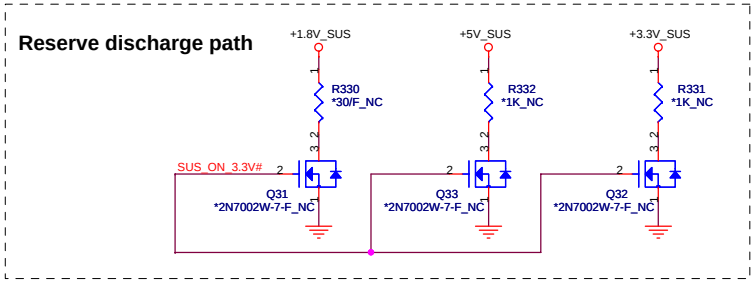


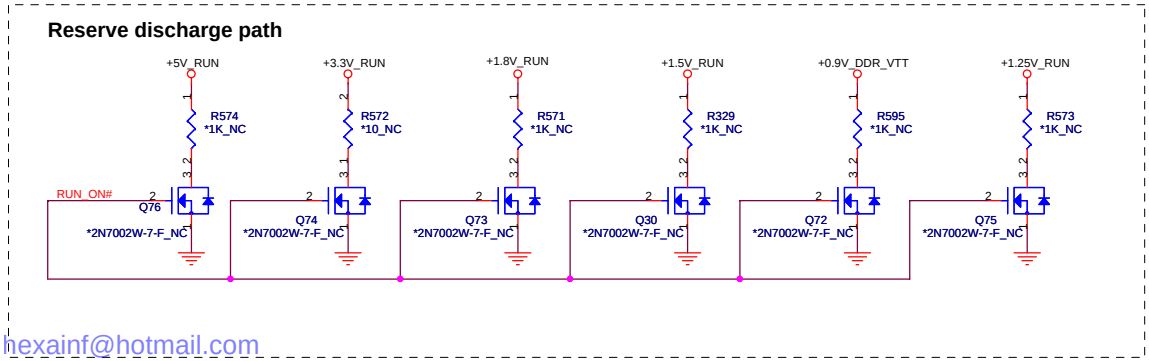




+1.8V_RUN	UMA	Discrete
PQ34	SI4800BDY-T1-E3 (BAM48000040)	FDS6298 (BAM62980005)







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Title	RUN POWER SW	
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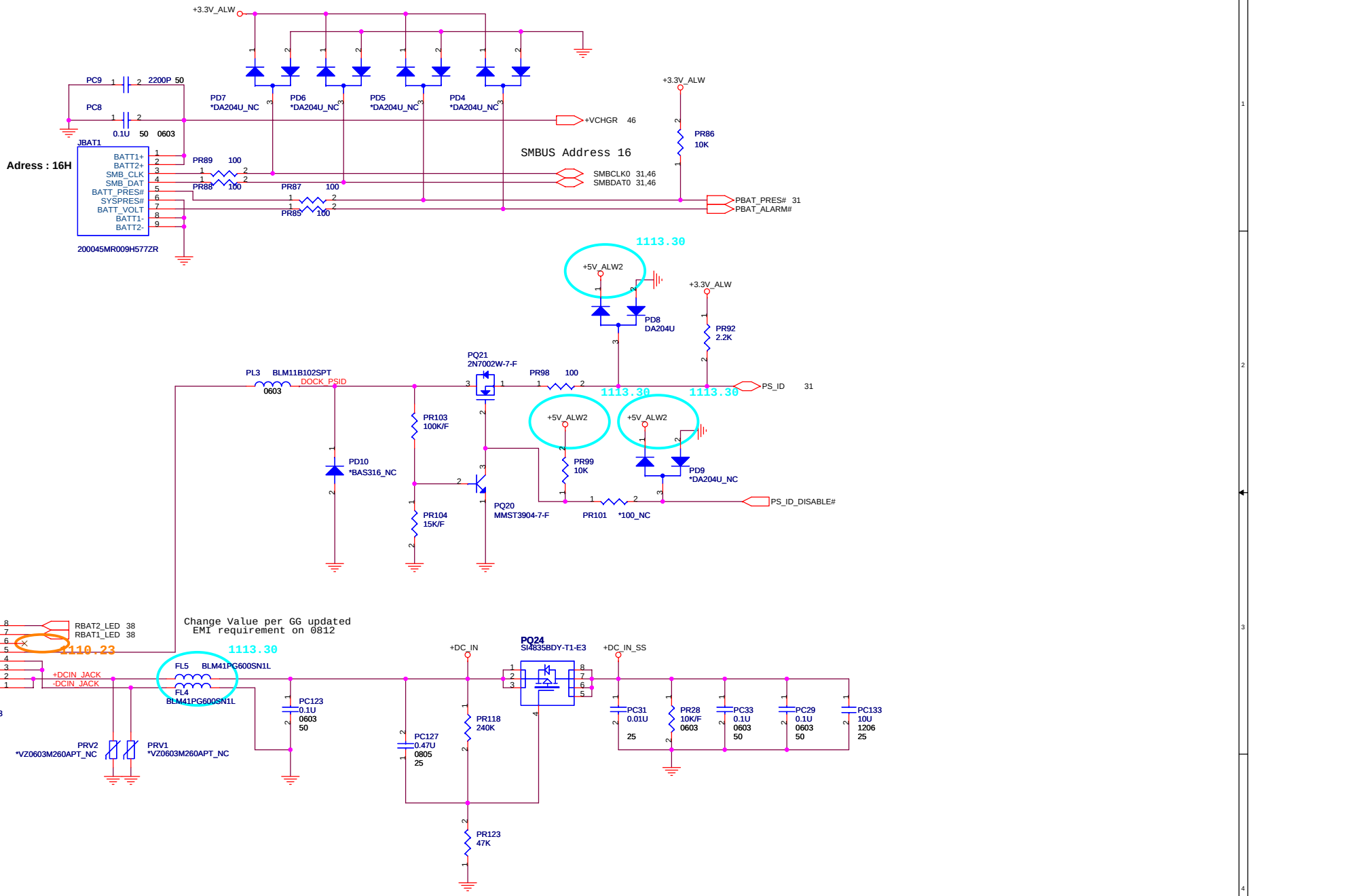

QUANTA COMPUTER

Title	DCIN,BATT CONNECTOR	
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H1
H-C256D110P2-V4
H-TC197BC236D110P2-V4

H22
H-TC197BC236D110P2-V4
H-TC197BC236D110P2-V4

H23
H-C126D126N
H-C126D126N

H24
H-C236D110P2-V4
H-C236D110P2-V4

H25
H-O126X157D126X157N
H-O126X157D126X157N

H2
H-C315D110P2-V4
H-TC197BC236D110P2-V4

H6
H-TC197BC216D110P2-V4
H-TC197BC216D110P2-V4

H13
H-C315D110P2-V4
H-C315D110P2-V4

H15
H-TC354BS335D110P2-V4
H-TC354BS335D110P2-V4

H16
H-C315D110P2-V4
H-TC197BC236D110P2-V4

H17
H-TSBC315D110P2-V4
H-TSBC315D110P2-V4

H5
H-TC276BC315D110P2-V4
H-TC276BC315D110P2-V4

H11
H-TC216BC236D110P2-V4
H-TC216BC236D110P2-V4

H14
H-C236D110P2-V4
H-C236D110P2-V4

H19
H-TC335BS335D110P2-V4
H-TC335BS335D110P2-V4

H18
H-TSBC315D126P2-V4
H-TSBC315D126P2-V4

FOR GPU use

H8
*FBJM5030_NC
H-C256D154P2

H12
*H-C256D154P2_NC
H-C256D154P2

FOR CPU use

H10
*H-C276D157P2_NC
H-C276D157P2

H4
*H-C276D177P2_NC
H-C276D177P2

H9
*H-C276D157P2_NC
H-C276D157P2

H3
*H-C276D157P2_NC
H-C276D157P2

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Title	SCREW PAD	
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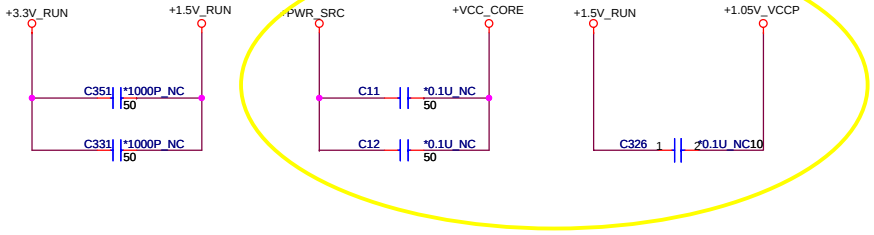
Reserved for EMI.

0906.1



QUANTA COMPUTER

Title	EMI CAP	
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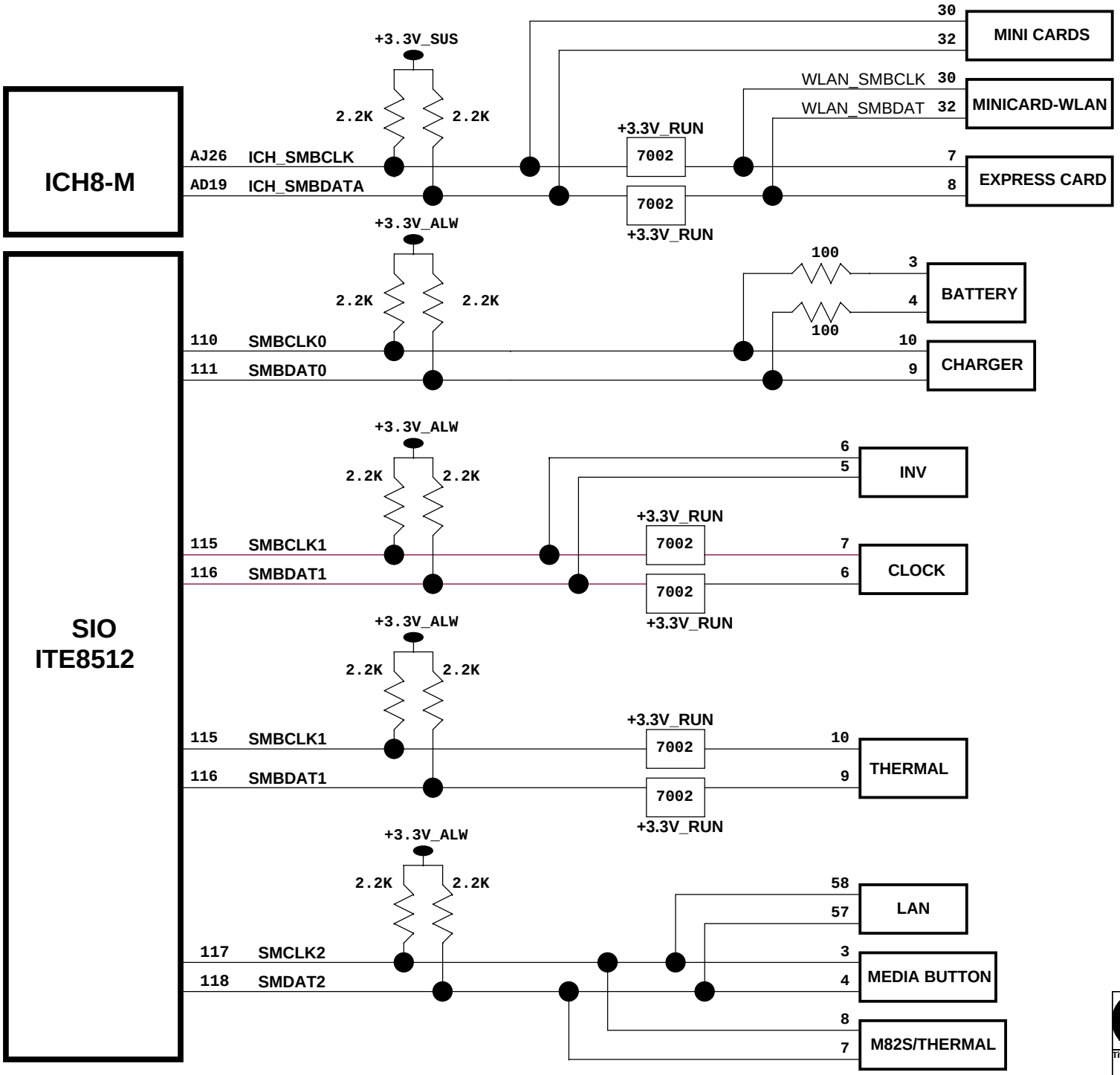

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Title	SMBUS BLOCK	
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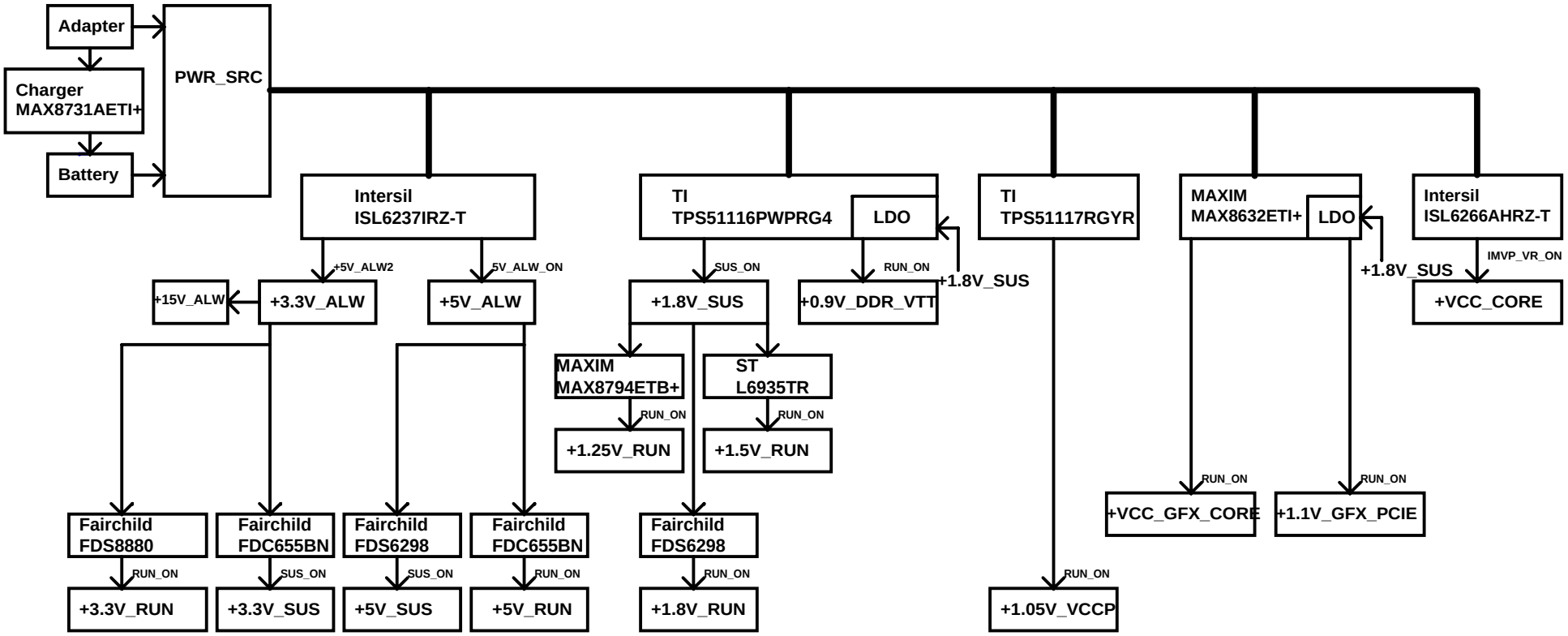

QUANTA COMPUTER

Title	Schematic Block Diagram1	
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