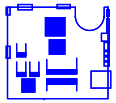
FM7B Hepburn Intel UMA VER : D3B



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

Penryn
(478 Micro-FCPGA)
PG 3,4

1066 MHz FSB

FAN & THERMAL
SMSC1423
PG 39

CLOCK
SLG8SP513V
(QFN-64)
PG 17

POWER

- REGULATOR +1.5V_RUN/+1.05V_VCCP PG 48
- REGULATOR +1.8V_SUS/+1.25V_RUN /+0.9V_DDR_VTT PG 49
- CPU VR PG 51
- DC/DC +3.3V_ALW/+5V_ALW/+15V_ALW PG 52

Cantiga
1329 uFCBGA
PG 5,6,7,8,9,10

- DDR2-SODIMM1 PG 15,16 — 667/800 MHZ DDR II
- DDR2-SODIMM2 PG 15,16 — 667/800 MHZ DDR II
- LVDS → Panel Connector PG 26
- SDVO → PI3VDP411LSZDE PG 18 → HDMI → HDMI CONN. PG 26
- VGA → CRT CONN. PG 27
- DMI interface

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

- SATA-ODD PG 36 — SATA
- SATA-HDD PG 36 — SATA
- E-SATA Combo with USB CONN PG 35 — PI2EQX3211BHE PG 35 — SATA
- 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
- USB2.0 → Biometric PG 38
- Cantiga ← IHDA / USB2.0
- LPC
- 33MHz PCI → 8-in-1 Card Reader R5C833 PG 28 → 1394 → 1394 CONN. PG 29; Card Reader CONN. PG 30

AUDIO/AMP
92HD73C
PG 40

- Audio SPK conn PG 40
- Audio Jacks x3 PG 41
- Camera + D-MIC PG 41

KBC
ITE8512
PG 31

- CIR TSOP36136TR PG 37
- 18X8 → Keyboard PG 37
- SPI → FLASH 2Mbyts PG 32
- PS/2 → Touchpad PG 37
- USER INTERFACE PG 38

QUANTA COMPUTER

Title	Schematic Block Diagram1	
Size	Document Number FM7B	Rev 1A
Date: Monday, July 21, 2008	Sheet 1 of 60	

Table of Contents

Power States

POWER PLANE	VOLTAGE	PAGE	DESCRIPTION	CONTROL SIGNAL	ACTIVE IN
+PWR_SRC	10V~+19V	4,26,32,34,46,48,49,51,52,56	MAIN POWER		S0~S5
+RTC_CELL	+3.0V~+3.3V	11,14,31,32	RTC		S0~S5
+3.3V_ALW	+3.3V	3,31,32,34,36,37,38,44,46,49,52,53,54	8051 POWER	ALWON	S0~S5
+5V_ALW	+5V	35,36,46,48,49,52,53,54,56	LCD/CHARGE POWER	ALWON	S0~S5
+15V_ALW	+15V	26,36,37,52,53	LARGE POWER	+5V_ALW	S0~S5
+3.3V_LAN	+3.3V	42,43	LAN POWER	AUX_ON	
+5V_SUS	+5V	14,38,51,53	SLP_S5# CTRLD POWER	SUS_ON	
+3.3V_SUS	+3.3V	3,11,12,13,14,26,30,37,38,43,48,49,51,53	SLP_S5# CTRLD POWER	3.3V_SUS_ON	
+1.8V_SUS	+1.8V	6,8,9,15,48,49,53	SODIMM POWER	DDR_ON	
+0.9V_DDR_VTT	+0.9V	16,49,53	SODIMM POWER	0.9V_DDR_VTT_ON	
+5V_RUN	+5V	14,18,27,36,37,38,39,40,41,53	SLP_S3# CTRLD POWER	RUN_ON	
+3.3V_RUN	+3.3V	14,18,27,36,37,38,39,40,41,53	SLP_S3# CTRLD POWER	3.3V_RUN_ON	
+1.8V_RUN	+1.8V	18,38,53	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	
+1.25V_RUN	+1.25V	6,9,14,49,53	CALISTOGA/ICH8 POWER	1.25V_RUN_ON	
+1.05V_VCCP	+1.05V	3,4,5,6,8,9,11,14,48,56	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#	
+PBATT	+10V~+17V		MAIN BATTERY	CHG_PBATT	
+SBATT	+10V~+17V		SECOND BATTERY	CHG_SBATT	

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	
Size	Document Number FM6B	Rev 1A
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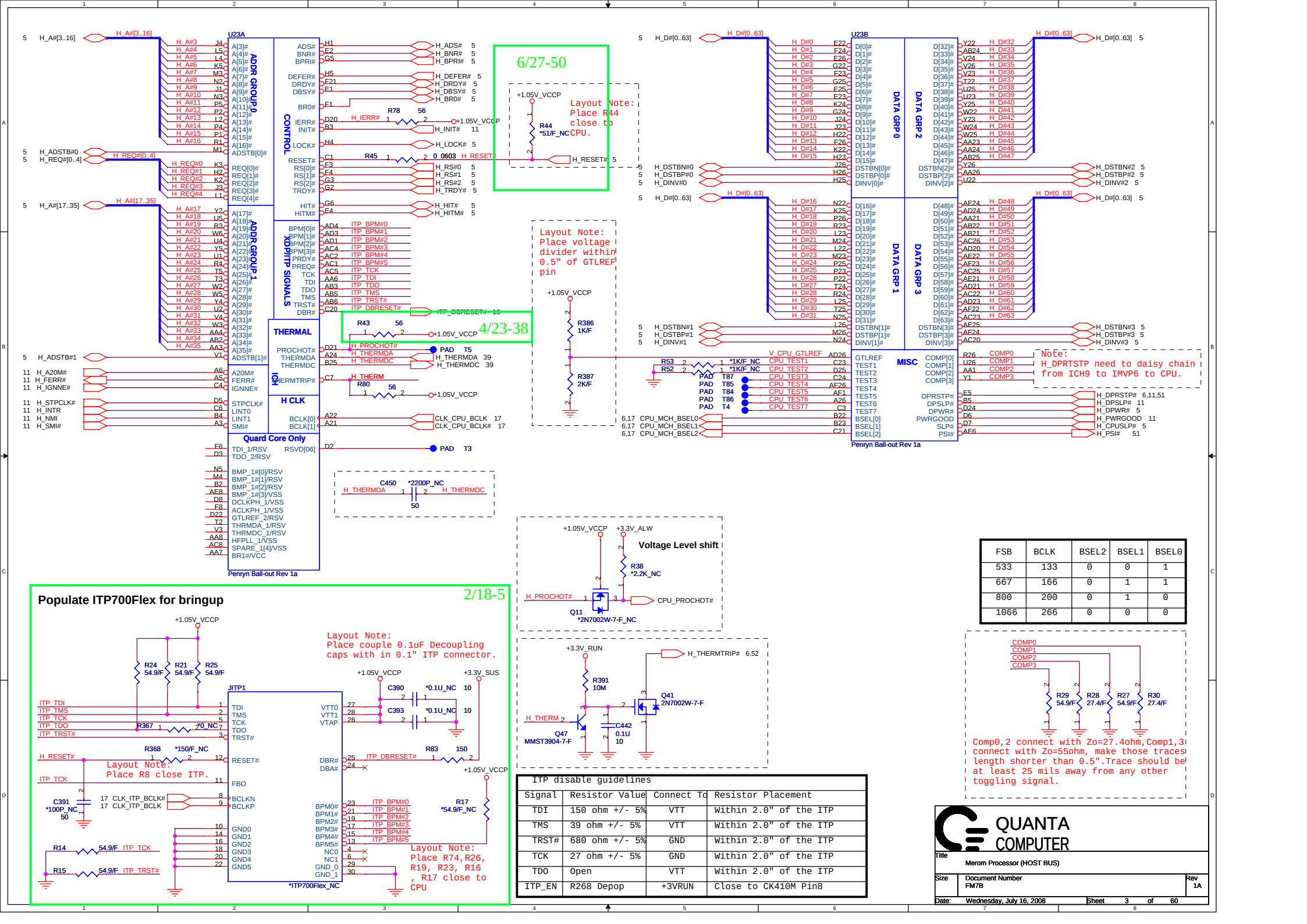

FSB	BCLK	BSEL2	BSEL1	BSEL0
533	133	0	0	1
667	166	0	1	1
800	200	0	1	0
1066	266	0	0	0

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	Merom Processor (HOST BUS)	
Size	Document Number FM7B	Rev 1A
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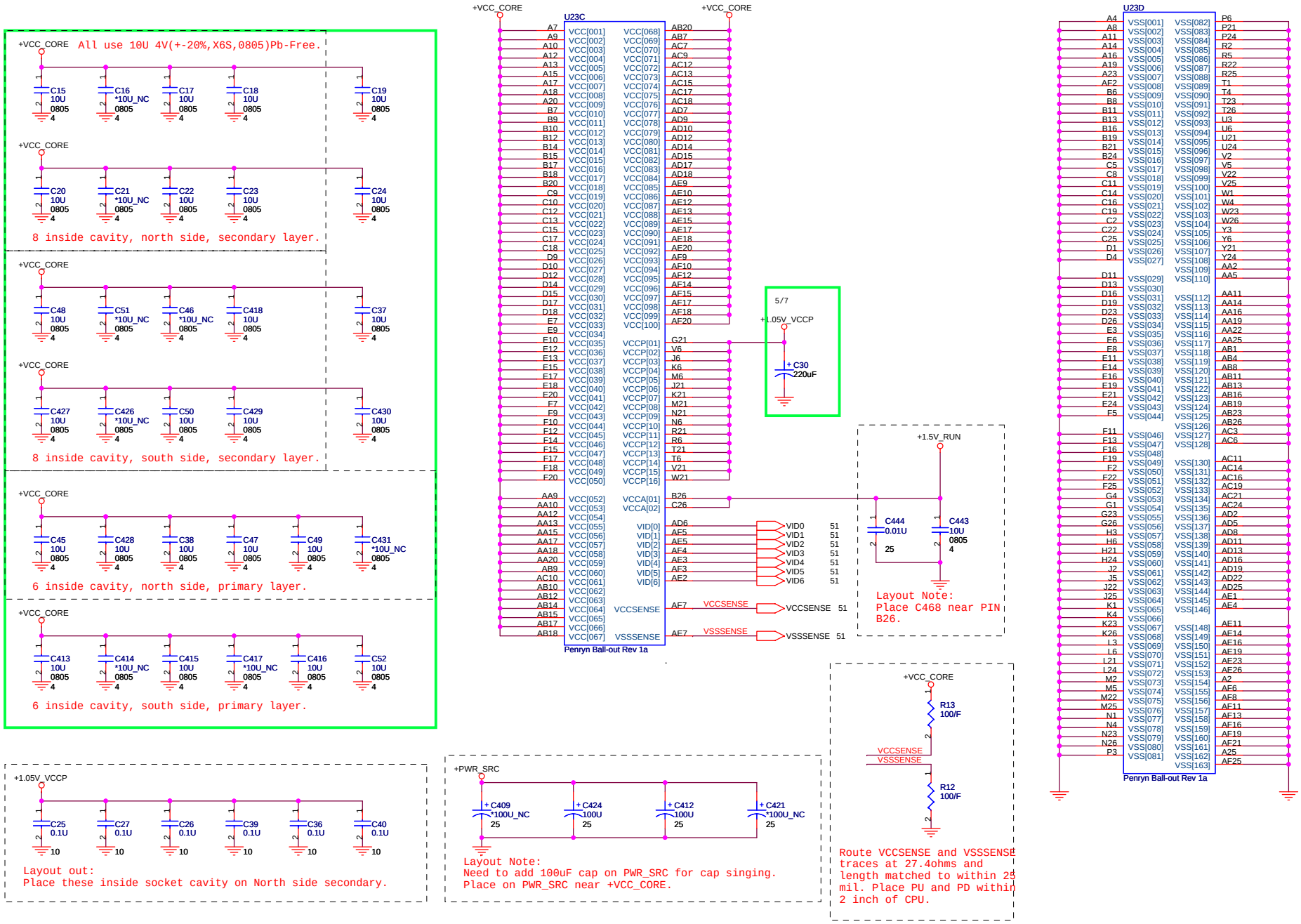
All use 10U 4V(+-20%,X6S,0805)Pb-Free.
8 inside cavity, north side, secondary layer.
8 inside cavity, south side, secondary layer.
6 inside cavity, north side, primary layer.
6 inside cavity, south side, primary layer.
U23C
Penryn Ball-out Rev 1a
U23D
Penryn Ball-out Rev 1a
5/7
+1.05V_VCCP
+ C30
220uF
+1.5V_RUN
C444
0.01U
C443
10U
0805
Layout Note:
Place C468 near PIN
B26.
+1.05V_VCCP
Layout out:
Place these inside socket cavity on North side secondary.
+PWR_SRC
Layout Note:
Need to add 100uF cap on PWR_SRC for cap singing.
Place on PWR_SRC near +VCC_CORE.
R13
100/F
R12
100/F
VCCSENSE
VSSSENSE
Route VCCSENSE and VSSSENSE
traces at 27.4ohms and
length matched to within 25
mil. Place PU and PD within
2 inch of CPU.
QUANTA
COMPUTER
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Merom Processor (POWER)
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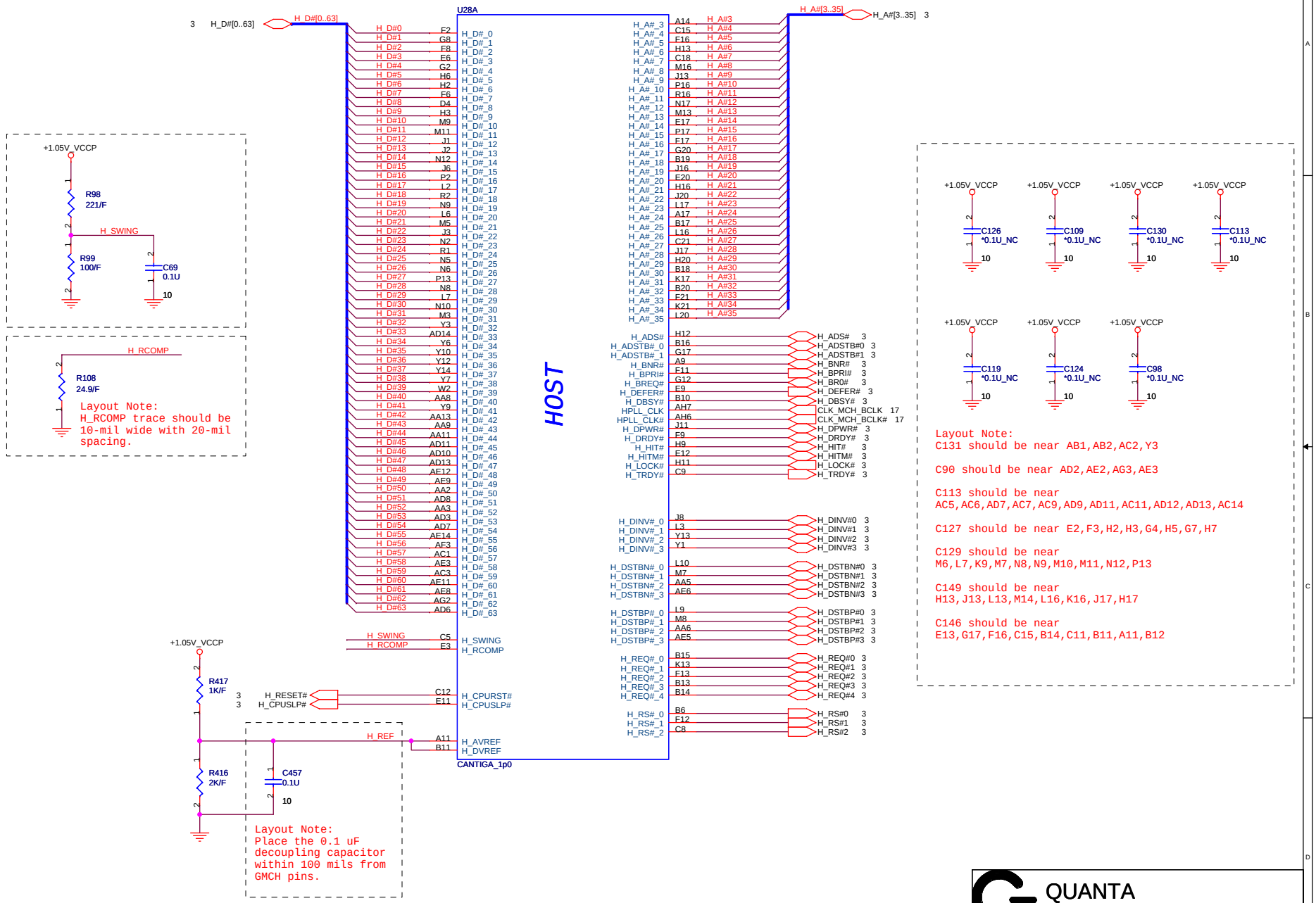

QUANTA COMPUTER		
Title	Crestline (HOST)	
Size	Document Number FM7B	Rev 1A
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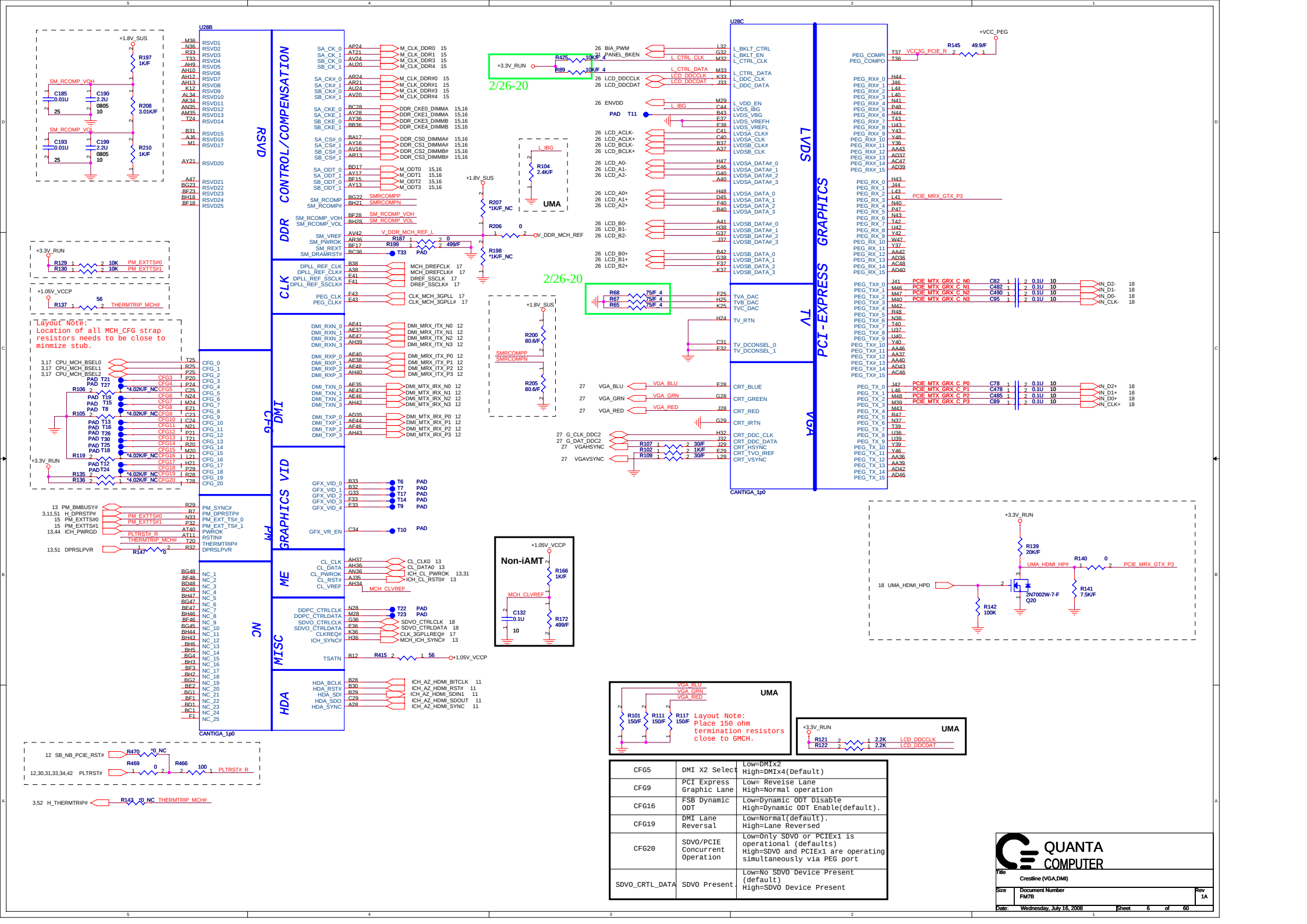
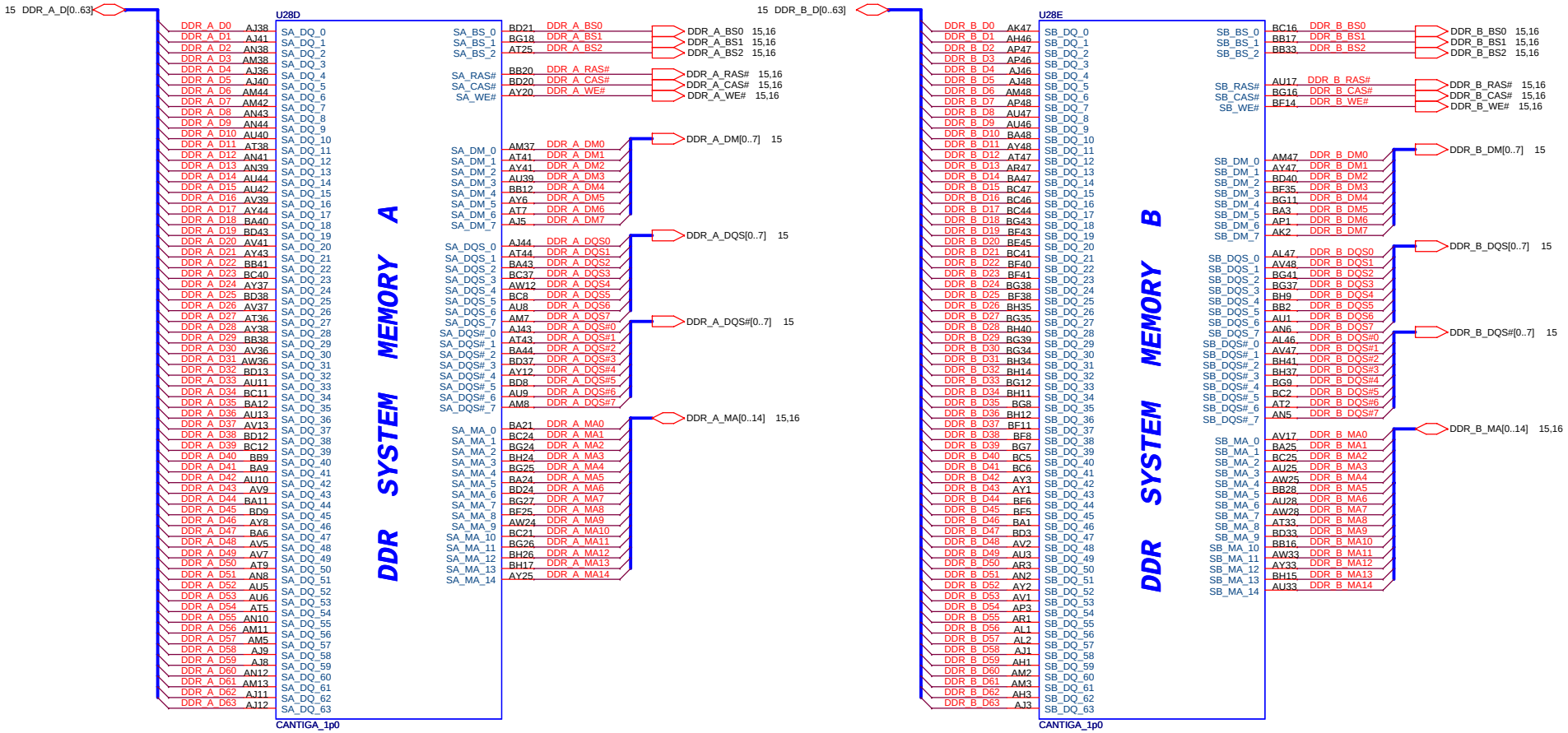


CFG5	DMI X2 Select	Low=DMIx2 High=DMIx4(Default)
CFG9	PCI Express Graphic Lane	Low= Reveise Lane High=Normal operation
CFG16	FSB Dynamic ODT	Low=Dynamic ODT Disable High=Dynamic ODT Enable(default).
CFG19	DMI Lane Reversal	Low=Normal(default). High=Lane Reversed
CFG20	SDVO/PCIE Concurrent Operation	Low=Only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



QUANTA COMPUTER

Title	Crestline (DDR2)	
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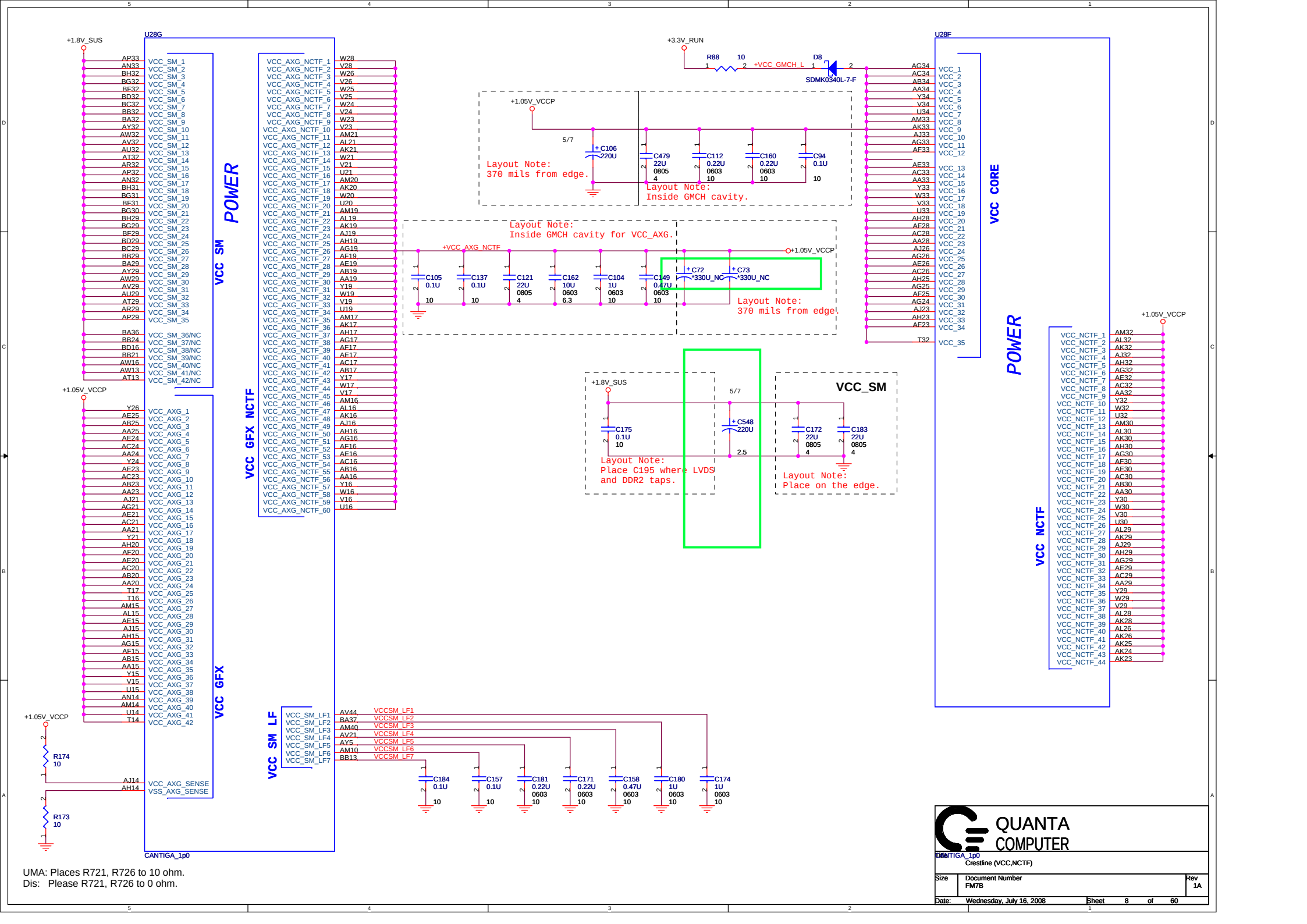
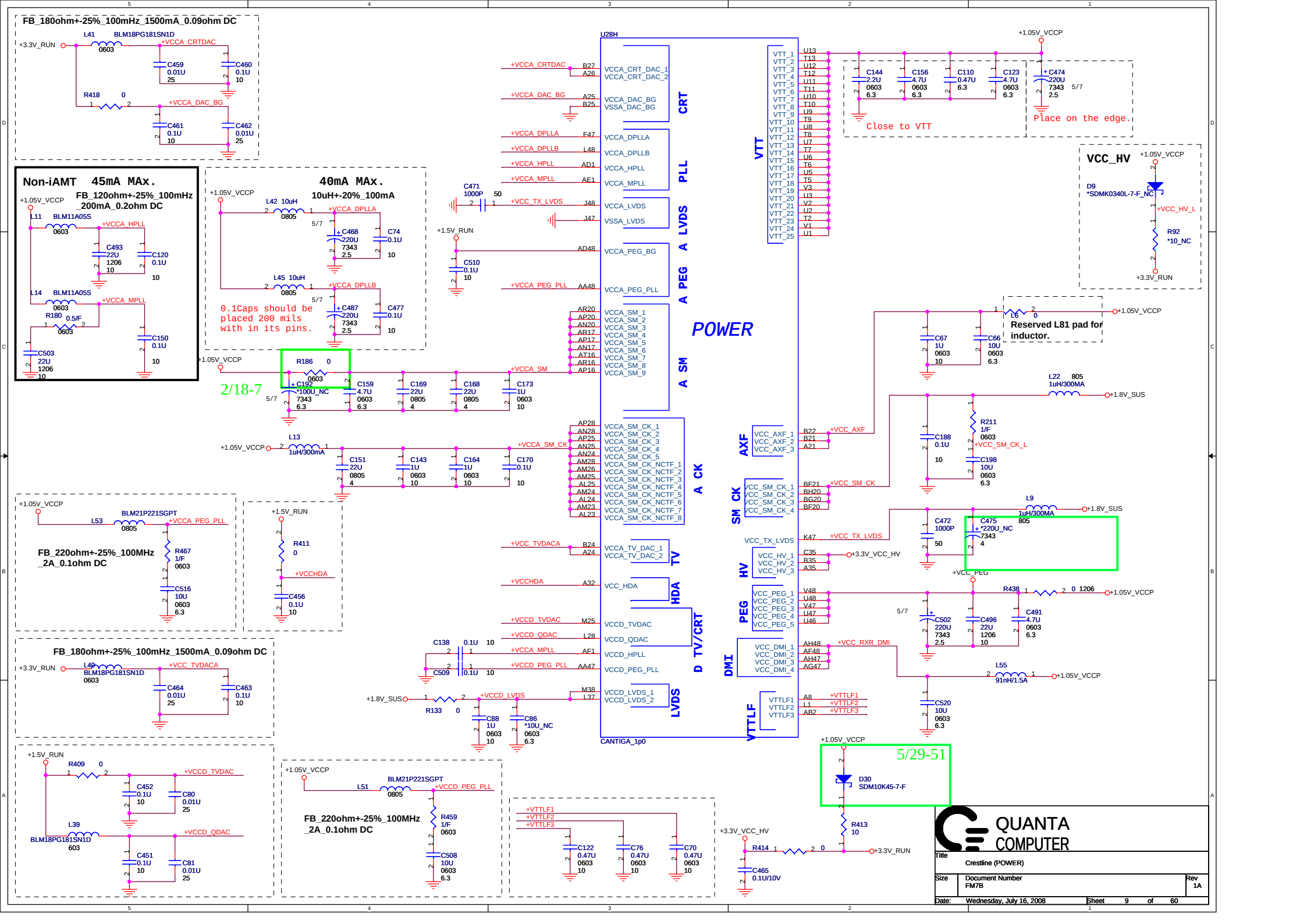


UMA: Places R721, R726 to 10 ohm.
Dis: Please R721, R726 to 0 ohm.


FB_180ohm+-25%_100mHz_1500mA_0.09ohm DC
Non-iAMT 45mA MAx.
FB_120ohm+-25%_100mHz_200mA_0.2ohm DC
40mA MAx.
10uH+-20%_100mA
0.1Caps should be placed 200 mils with in its pins.
2/18-7
POWER
U28H
CANTIGA_1p0
CRT
PLL
LVDS
PEG
SM CK
AXF
HV
DMI
TV
HDA
TV/CRT
VTTLF
VTT
Close to VTT
Place on the edge.
VCC_HV
D9 *SDMK0340L-7-F_NC
Reserved L81 pad for inductor.
FB_220ohm+-25%_100MHz_2A_0.1ohm DC
5/29-51
D30 SDM10K45-7-F
QUANTA COMPUTER
Title Crestline (POWER)
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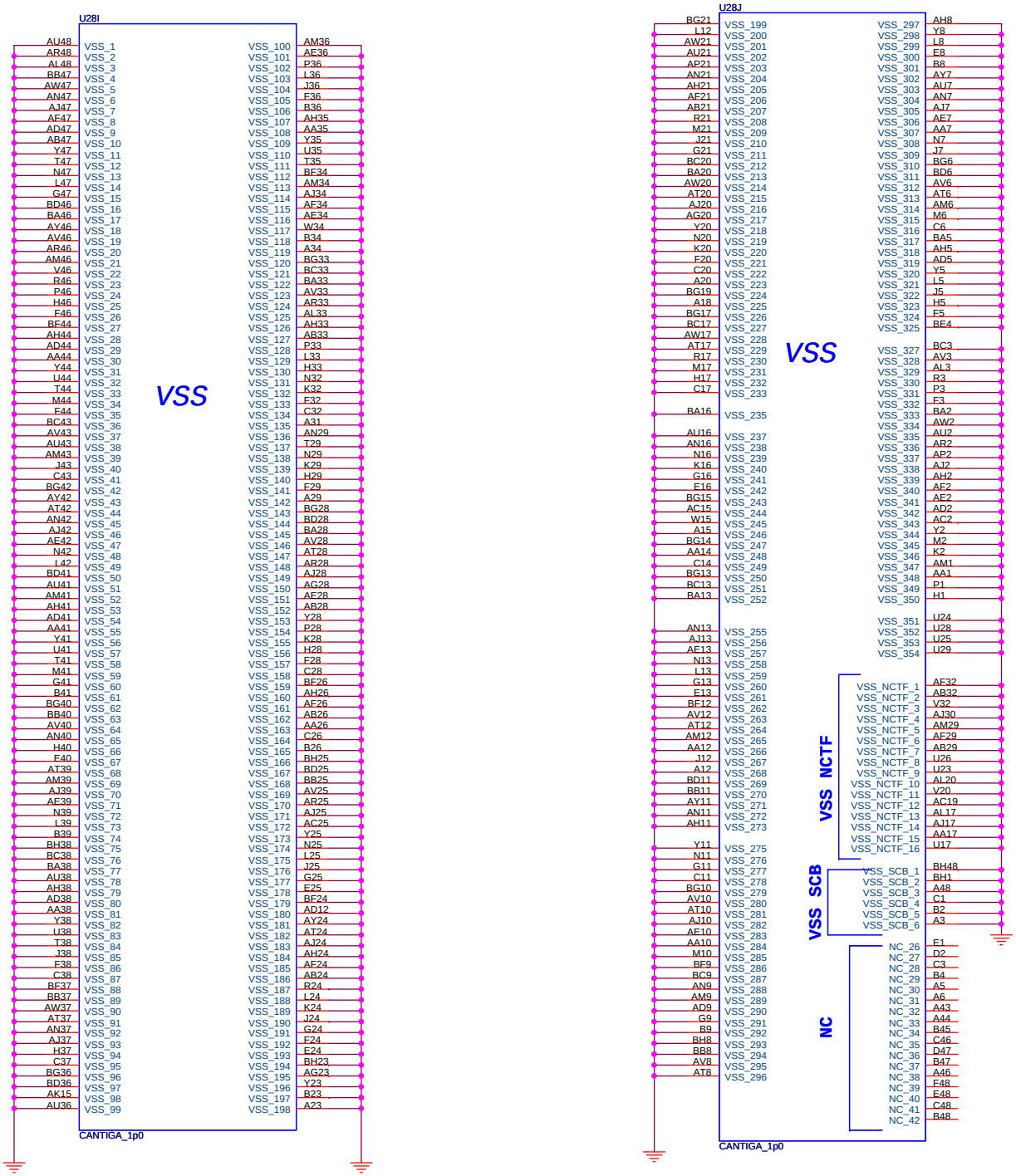

QUANTA COMPUTER		
Title	Crestline (VSS)	
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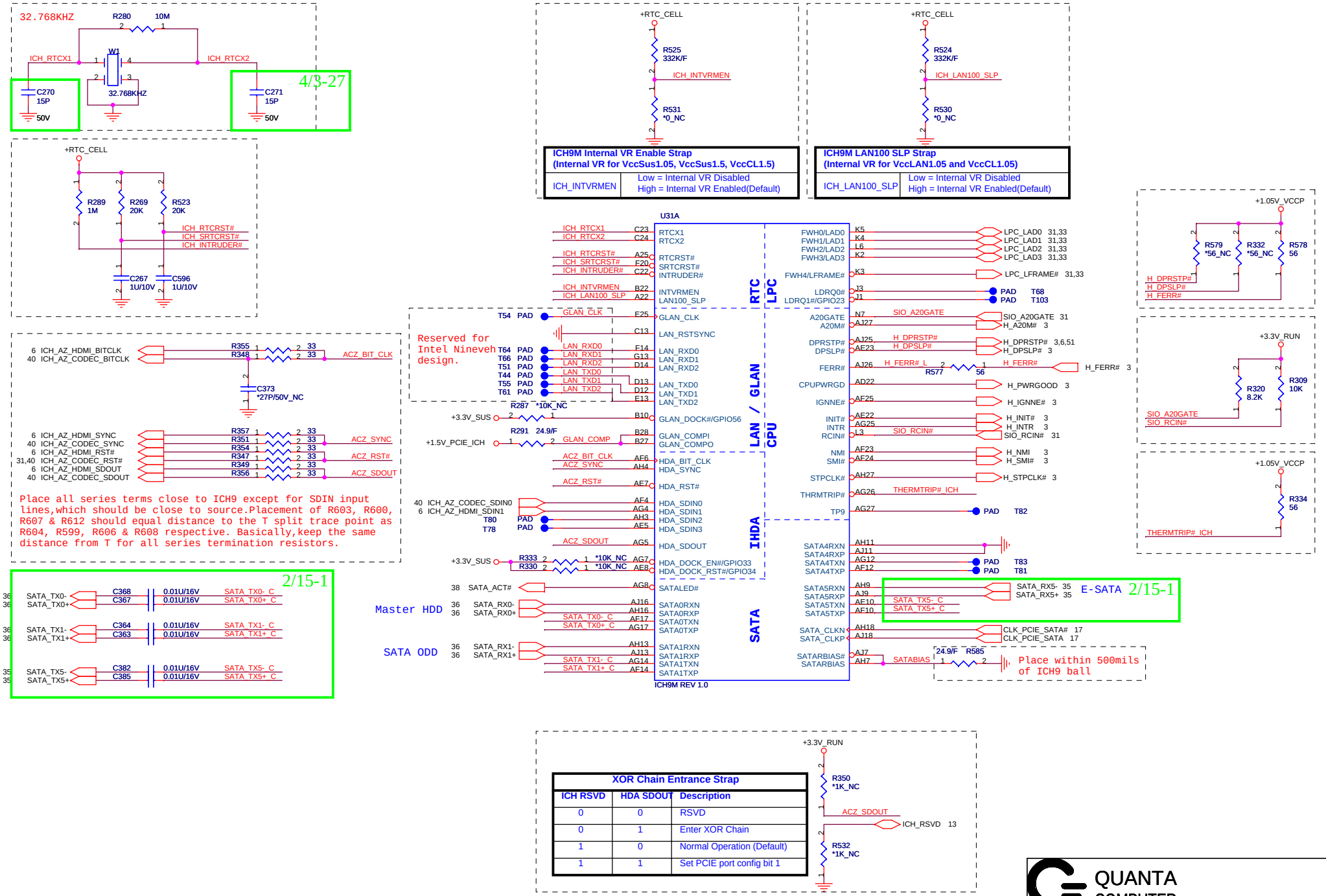
32.768KHZ
R280 10M
ICH_RTCX1
ICH_RTCX2
W1
C270 15P 50V
32.768KHZ
C271 15P 50V
4/3-27
+RTC_CELL
R289 1M
R269 20K
R523 20K
ICH_RTCRST#
ICH_SRTCRST#
ICH_INTRUDER#
C267 1U/10V
C596 1U/10V
+RTC_CELL
R525 332K/F
ICH_INTVRMEN
R531 *0_NC
ICH9M Internal VR Enable Strap
(Internal VR for VccSus1.05, VccSus1.5, VccCL1.5)
ICH_INTVRMEN
Low = Internal VR Disabled
High = Internal VR Enabled(Default)
+RTC_CELL
R524 332K/F
ICH_LAN100_SLP
R530 *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)
U31A
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
SATABIAS#
SATABIAS
ICH9M REV 1.0
Reserved for Intel Nineveh design.
T54 PAD
T64 PAD
T66 PAD
T51 PAD
T44 PAD
T55 PAD
T61 PAD
R287 *10K_NC
R291 24.9/F
+3.3V_SUS
+1.5V_PCIE_ICH
GLAN_COMP
Place all series terms close to ICH9 except for SDIN input lines,which should be close to source.Placement of R603, R600, R607 & R612 should equal distance to the T split trace point as R604, R599, R606 & R608 respective. Basically,keep the same distance from T for all series termination resistors.
R355 33
R348 33
ACZ_BIT_CLK
C373 *27P/50V_NC
R357 33
R351 33
R354 33
R347 33
R349 33
R356 33
ACZ_SYNC
ACZ_RST#
ACZ_SDOUT
R333 *10K_NC
R330 *10K_NC
T80 PAD
T78 PAD
SATA_ACT#
Master HDD
SATA ODD
SATA_RX0-
SATA_RX0+
SATA_RX1-
SATA_RX1+
2/15-1
SATA_TX0- C368 0.01U/16V SATA_TX0- C
SATA_TX0+ C367 0.01U/16V SATA_TX0+ C
SATA_TX1- C364 0.01U/16V SATA_TX1- C
SATA_TX1+ C363 0.01U/16V SATA_TX1+ C
SATA_TX5- C382 0.01U/16V SATA_TX5- C
SATA_TX5+ C385 0.01U/16V SATA_TX5+ C
LPC_LAD0 31,33
LPC_LAD1 31,33
LPC_LAD2 31,33
LPC_LAD3 31,33
LPC_LFRAME# 31,33
PAD T68
PAD T103
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 T82
PAD T83
PAD T81
E-SATA 2/15-1
SATA_RX5- 35
SATA_RX5+ 35
SATA_TX5- C
SATA_TX5+ C
CLK_PCIE_SATA# 17
CLK_PCIE_SATA 17
24.9/F R585
Place within 500mils of ICH9 ball
+1.05V_VCCP
R579 *56_NC
R332 *56_NC
R578 56
+3.3V_RUN
R320 8.2K
R309 10K
+1.05V_VCCP
R334 56
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
R350 *1K_NC
ACZ_SDOUT
ICH_RSVD 13
R532 *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 ICH8.

33	PCIE_TX1-	C315	0.1U	10	PCIE_TXN1_C
33	PCIE_TX1+	C323	0.1U	10	PCIE_TXP1_C
34	PCIE_TX2-	C307	0.1U	10	PCIE_TXN2_C
34	PCIE_TX2+	C305	0.1U	10	PCIE_TXP2_C
33	PCIE_TX3-	C298	0.1U	10	PCIE_TXN3_C
33	PCIE_TX3+	C289	0.1U	10	PCIE_TXP3_C
30	PCIE_TX4-	C287	0.1U	10	PCIE_TXN4_C
30	PCIE_TX4+	C284	0.1U	10	PCIE_TXP4_C
42	PCIE_TX6-/GLAN_TX-	C278	0.1U	10	GLAN_TXN_C
42	PCIE_TX6+/GLAN_TX+	C276	0.1U	10	GLAN_TXP_C

ICH_SPI_CS1# R
PCI_GNT0#
R302 *1K_NC
R305 *1K_NC

Boot BIOS Strap

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

2/20-12

+3.3V_RUN
C231 *0.1U_NC 10
R241 *10K/F_NC
U15 VDD CE# SCK SI SO HOLD# VSS WP#
SPI_HOLD#
SPI_CLK_R
C243 *0.1U_NC 10
+3.3V_RUN
R252 *10K/F_NC
R239 *22_NC SPI_CS#0_R
R253 *22_NC SPI_CLK_R
R256 *22_NC SPI_MOSI
R242 *22_NC SPI_MISO
SPI_WP#
*W25X40VSSIG_NC

R553 22.6/F
USBRBIAS
Places within 500 mils of the ICH9

WWAN Noise - ICH improvements

OC6#	C308	1	2	*0.1U_NC	10
OC4#	C620	1	2	*0.1U_NC	10
OC5#	C623	1	2	*0.1U_NC	10
OC7#	C618	1	2	*0.1U_NC	10
USB_OC8#	C622	1	2	*0.1U_NC	10
USB_OC2_3#	C292	1	2	*0.1U_NC	10
USB_OC0_1#	C321	1	2	*0.1U_NC	10
OC9#	C326	1	2	*0.1U_NC	10

RP33 10KX8
+3.3V_SUS
OC7# OC6# OC5# OC4# OC9# USB_OC2_3# USB_OC0_1# USB_OC8#
OC10# R321 10K
OC11# R323 10K

U31D

PCI-Express / Direct Media Interface

33	PCIE_RX1-	N29	PERN1	DMI0RXN	V27
33	PCIE_RX1+	N28	PERP1	DMI0RXP	V26
	MiniWWAN	PCIE_TXN1_C P27	PETN1	DMI0TXN	U29
		PCIE_TXP1_C P26	PETP1	DMI0TXP	U28
34	PCIE_RX2-	L29	PERN2	DMI1RXN	Y27
34	PCIE_RX2+	L28	PERP2	DMI1RXP	Y26
	MiniWLAN	PCIE_TXN2_C M27	PETN2	DMI1TXN	W29
		PCIE_TXP2_C M26	PETP2	DMI1TXP	W28
33	PCIE_RX3-	J29	PERN3	DMI2RXN	AB27
33	PCIE_RX3+	J28	PERP3	DMI2RXP	AB26
	MiniWPAN	PCIE_TXN3_C K27	PETN3	DMI2TXN	AA29
		PCIE_TXP3_C K26	PETP3	DMI2TXP	AA28
30	PCIE_RX4-	G29	PERN4	DMI3RXN	AD27
30	PCIE_RX4+	G28	PERP4	DMI3RXP	AD26
	Express Card	PCIE_TXN4_C H27	PETN4	DMI3TXN	AC29
		PCIE_TXP4_C H26	PETP4	DMI3TXP	AC28
	T102 PAD	E29	PERN5	DMI_CLKN	T26
	T101 PAD	E28	PERP5	DMI_CLKP	T25
	T60 PAD	F27	PETN5	DMI_ZCOMP	AE29
	T56 PAD	F26	PETP5	DMI_IRCOMP	AF28
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		

DMI_COMP R552 24.9/F +1.5V_PCIE_ICH
Place within 500mils of ICH8

DMI_MTX_IRX_N0 6 / DMI_MTX_IRX_P0 6 / DMI_MRX_ITX_N0 6 / DMI_MRX_ITX_P0 6
DMI_MTX_IRX_N1 6 / DMI_MTX_IRX_P1 6 / DMI_MRX_ITX_N1 6 / DMI_MRX_ITX_P1 6
DMI_MTX_IRX_N2 6 / DMI_MTX_IRX_P2 6 / DMI_MRX_ITX_N2 6 / DMI_MRX_ITX_P2 6
DMI_MTX_IRX_N3 6 / DMI_MTX_IRX_P3 6 / DMI_MRX_ITX_N3 6 / DMI_MRX_ITX_P3 6
CLK_PCIE_ICH# 17 / CLK_PCIE_ICH 17

SPI

T48	PAD	D23	SPI_CLK	SPI_CLK_R	
T49	PAD	D24	SPI_CS0#	SPI_CS#0_R	
		F23	SPI_CS1#/GPIO58/CLGPIO6	ICH_SPI_CS1#_R	
T53	PAD	D25	SPI_MOSI	SPI_MOSI	
T58	PAD	E23	SPI_MISO	SPI_MISO	

USB

35	USB_OC0_1#	N4	OC0#/GPIO59	USB_OC0_1#	
35	USB_OC2_3#	N5	OC1#/GPIO40	USB_OC2_3#	
		N6	OC2#/GPIO41		
		P6	OC3#/GPIO42		
		M1	OC4#/GPIO43	OC4#	
		N2	OC5#/GPIO29	OC5#	
		M4	OC6#/GPIO30	OC6#	
		M3	OC7#/GPIO31	OC7#	
	USB_OC8#	N3	OC8#/GPIO44	USB_OC8#	
		N1	OC9#/GPIO45	OC9#	
		P5	OC10#/GPIO46	OC10#	
		P3	OC11#/GPIO47	OC11#	
		AG2	USBRBIAS	USBRBIAS	
		AG1	USBRBIAS#		

USBP0N	AC5	ICH_USBP0-	35
USBP0P	AC4	ICH_USBP0+	35
USBP1N	AD3	ICH_USBP1-	35
USBP1P	AD2	ICH_USBP1+	35
USBP2N	AC1	ICH_USBP2-	35
USBP2P	AC2	ICH_USBP2+	35
USBP3N	AA5	ICH_USBP3-	35
USBP3P	AA4	ICH_USBP3+	35
USBP4N	AB2	ICH_USBP4-	34
USBP4P	AB3	ICH_USBP4+	34
USBP5N	AA1	ICH_USBP5-	33
USBP5P	AA2	ICH_USBP5+	33
USBP6N	W5	ICH_USBP6-	33
USBP6P	W4	ICH_USBP6+	33
USBP7N	Y3	ICH_USBP7-	30
USBP7P	Y2	ICH_USBP7+	30
USBP8N	W1	PAD T73	
USBP8P	W2	PAD T75	
USBP9N	V2	PAD T74	
USBP9P	V3	PAD T72	
USBP10N	U5	ICH_USBP10-	38
USBP10P	U4	ICH_USBP10+	38
USBP11N	U1	ICH_USBP11-	41
USBP11P	U2	ICH_USBP11+	41

ICH9M REV 1.0

Side pair Top / left
Side pair bottom / left
Side pair top/right(DB)
Side pair Bot right(DB)
Mini Card (WLAN)
Mini Card (WWAN)
Mini Card (WPAN)
Express Card
Biometric
Camera
2/25-18

PCI Pullups

RP21
PCI_FRAME# PCI_TRDY# PCI_DEVSEL# PCI_REQ1# +3.3V_RUN
PCI_PLOCK# PCI_STOP# PCI_PIRQD# PCI_IRDY#

RP27
PCI_PIRQA# PCI_REQ0# ICH_IRQH_GPIO5 PCI_SERR# +3.3V_RUN
PCI_PIRQB# PCI_PIRQC# PCI_PERR#

SB_WPAN_PCIE_RST#	R315	20K
SB_WWAN_PCIE_RST#	R307	20K
SB_WLAN_PCIE_RST#	R313	20K
SB_LOM_PCIE_RST#	R288	20K
SB_NB_PCIE_RST#	R294	20K

BIOS should not enable the internal GPIO pull up resistor.

28 PCI_AD[0..31]

U31B

PCI

PCI_AD0	D11	AD0	REQ0#	F1	PCI_REQ0#
PCI_AD1	C8	AD1	GNT0#	G4	PCI_GNT0#
PCI_AD2	D9	AD2	REQ1#/GPIO50	B6	PCI_REQ1#
PCI_AD3	E12	AD3	GNT1#/GPIO51	A7	PCI_GNT1#
PCI_AD4	E9	AD4	REQ2#/GPIO52	E13	SB_WWAN_PCIE_RST#
PCI_AD5	C9	AD5	GNT2#/GPIO53	E12	PCI_GNT2#
PCI_AD6	E10	AD6	REQ3#/GPIO54	E6	SB_LOM_PCIE_RST#
PCI_AD7	B7	AD7	GNT3#/GPIO55	F6	PCI_GNT3#
PCI_AD8	C7	AD8			
PCI_AD9	C5	AD9		D8	
PCI_AD10	G11	AD10	C/BE0#	B4	
PCI_AD11	F8	AD11	C/BE1#	D6	
PCI_AD12	F11	AD12	C/BE2#	A5	
PCI_AD13	E7	AD13	C/BE3#		
PCI_AD14	A3	AD14			
PCI_AD15	D2	AD15	IRDY#	D3	PCI_IRDY#
PCI_AD16	F10	AD16	PAR	E3	
PCI_AD17	D5	AD17	PCIRST#	R1	PCI_RST# G
PCI_AD18	D10	AD18	DEVSEL#	C6	PCI_DEVSEL#
PCI_AD19	B3	AD19	PERR#	E4	PCI_PERR#
PCI_AD20	F7	AD20	PLOCK#	C2	PCI_PLOCK#
PCI_AD21	C3	AD21	SERR#	J4	PCI_SERR#
PCI_AD22	F3	AD22	STOP#	A4	PCI_STOP#
PCI_AD23	F4	AD23	TRDY#	E5	PCI_TRDY#
PCI_AD24	C1	AD24	FRAME#	D7	PCI_FRAME#
PCI_AD25	G7	AD25			
PCI_AD26	H7	AD26	PLTRST#	C14	PCI_PLTRST#
PCI_AD27	D1	AD27	PCICLK	D4	CLK_PCI_ICH
PCI_AD28	G5	AD28	PME#	R2	
PCI_AD29	H6	AD29			
PCI_AD30	G1	AD30			
PCI_AD31	H3	AD31			

PCI_REQ0#	28	
PCI_GNT0#	28	
PAD T34		
PAD T99		
SB_WWAN_PCIE_RST#	33	
PAD T67		
SB_LOM_PCIE_RST#	42	
PAD T65		
PCI_C_BE0#	28	
PCI_C_BE1#	28	
PCI_C_BE2#	28	
PCI_C_BE3#	28	
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	
CLK_PCI_ICH	17	
ICH_PME#	28,31	

Interrupt I/F

T50	PAD	J5	PIRQA#	H4	SB_WPAN_PCIE_RST#
28 PCI_PIRQB#		E1	PIRQB#	K6	SB_WLAN_PCIE_RST#
28 PCI_PIRQC#		J6	PIRQC#	E2	SB_NB_PCIE_RST#
T38	PAD	C4	PIRQD#	G2	ICH_IRQH_GPIO5

SB_WPAN_PCIE_RST#	33	
SB_WLAN_PCIE_RST#	34	
SB_NB_PCIE_RST#	6	
PAD T52		

ICH9M REV 1.0

CLK_PCI_ICH
R292 *10_NC
C275 *8.2P_NC
Reserved for EMI.Place resister and cap close to ICH.

PCI_GNT3#
R304 *1K_NC

A16 away override strap.

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

Non-iAMT
Add Buffers as needed for Loading and fanout concerns.

+3.3V_SUS
C344 0.047U
U19
PCI_RST# G
PCI_RST# 28
TC7SZ32FU(T5L,F,T)

C250 0.047U
U17
PCI_PLTRST#
PLTRST# 6,30,31,33,34,42
TC7SZ32FU(T5L,F,T)

PCI_IRDY#

QUANTA COMPUTER

Title	ICH9-M (USB,DMI,PCIE,PCI)	
Size	Document Number FM7B	Rev 1A
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Non-iAMT

+3.3V_SUS
RP19
ICH_SMBDATA
ICH_SMBCLK
2.2KX2

Non-iAMT
ASF 2.0

+3.3V_SUS
RP20
ICH_SMLINK0
ICH_SMLINK1
*100KX2_NC

ICH_SMBCLK R271 0 ICH_SMLINK0
ICH_SMBDATA R272 0 ICH_SMLINK1

Non-iAMT

+3.3V_SUS
R273 *10K_NC RSV_ICH_CL_RST1#
R293 10K ICH_RI#
R275 10K SIO_EXT_SCI#
R299 1K PCIE_WAKE#

+3.3V_RUN
R300 8.2K
CLKRUN#
R303 *10_NC

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

U31C

30,33,34 ICH_SMBCLK
30,33,34 ICH_SMBDATA
T35 PAD
T41 PAD
T37 PAD
T70 PAD
3 ITP_DBRESET#
6 PM_BMBUSY#
34 USB_MCARD1_DET#
17 H_STP_PCI#
17 H_STP_CPU#
28,31 CLKRUN#
30,33,34,42 PCIE_WAKE#
28,31 IRQ_SERIRQ
39 THERM_ALERT#
31,44,51 IMVP_PWRGD
T36 PAD
33 USB_MCARD2_DET#
33 USB_MCARD3_DET#
31 SIO_EXT_WAKE#
31 SIO_EXT_SMI#
31 SIO_EXT_SCI#
T96 PAD
37 KB_LED_DET#
34 PCIE_MCARD1_DET#
33 PCIE_MCARD2_DET#
33 PCIE_MCARD3_DET#
34 WLAN_RADIO_DIS#
41 CAMERA_CBL_DET#
17 SATA_CLKREQ#
PLTRST_DELAY#
33 WPAN_RADIO_DIS_MINI#
33 WWAN_RADIO_DIS#
T106 PAD
T97 PAD
40 SPKR
6 MCH_ICH_SYNC#
11 ICH_RSVD
T105 PAD
T108 PAD
T107 PAD

SMBCLK G16
SMBDATA A13
LINKALERT#/GPIO60/CLGPIO3 C17
SMLINK0 B18
SMLINK1
RI# F19
SUS_STAT#/LPCPD# R4
SYS_RESET# G19
PMSYNC#/GPIO0 M6
SMBALERT#/GPIO11 A17
STP_PCI#/GPIO15 A14
STP_CPU#/GPIO25 E19
CLKRUN#/GPIO32 L4
WAKE# E20
SERIRQ M5
THRM# AJ23
VRMPWRGD D21
TP8 A20
TACH1/GPIO1 AG19
TACH2/GPIO6 AH21
TACH3/GPIO7 AG21
GPIO8 A21
LANPHYPC/GPIO12 C12
ENGDET/GPIO13 C21
TACH0/GPIO17 AE18
GPIO18 K1
GPIO20 AF8
SCLOCK/GPIO22 AJ22
QRT_STATE0/GPIO27 A9
QRT_STATE1/GPIO28 D19
SATACLKREQ#/GPIO35 L1
SLOAD/GPIO38 AE19
SDATAOUT0/GPIO39 AG22
SDATAOUT1/GPIO48 AF21
GPIO49 AH24
GPIO57/CLGPIO5 A8
SPKR M7
MCH_SYNC# AJ24
TP3 B21
TP9 AH20
TP10 AJ20
TP11 AJ21

SMB
SATA GPIO
Clocks
SYS GPIO
Power MGT
GPIO
Controller Link
MISC

SATA0GP/GPIO21 AH23
SATA1GP/GPIO19 AE19
SATA4GP/GPIO36 AE21
SATA5GP/GPIO37 AD20
CLK14 H1
CLK48 AF3
SUSCLK P1
SLP_S3# C16
SLP_S4# E16
SLP_S5# G17
S4_STATE#/GPIO26 C10
PWROK G20
DPRSLPVR/GPIO16 M2
BATLOW# B13
PWRBTN# R3
LAN_RST# D20
RSMRST# D22
CK_PWRGD R5
CLPWROK R6
SLP_M# B16
CL_CLK0 F24
CL_CLK1 B19
CL_DATA0 F22
CL_DATA1 C19
CL_VREF0 C25
CL_VREF1 A19
CL_RST0# F21
CL_RST1# D18
MEM_LED/GPIO24 A16
ALERT#/GPIO10 C18
NETDETECT/GPIO14 C11
WOL_EN/GPIO9 C20

ICH9M REV 1.0

+3.3V_RUN
R346 8.2K

CLK_ICH_14M 17
CLK_ICH_48M 17
ICH_SUSCLK PAD T104
SIO_SLP_S3# 31
PAD T59
SIO_SLP_S5# 31
ICH_PWRGD 6,44
DPRSLPVR 6,51
R529 8.2K
+3.3V_SUS
SIO_PWRBTN# 31
RSV_ICH_LAN_RST# PAD T46
ICH_RSMRST# ICH_RSMRST# 31
CLK_PWRGD 17
ICH_CL_PWROK ICH_CL_PWROK 6,31
PAD T40
CL_CLK0 6
RSV_ICH_CL_CLK1 PAD T57
CL_DATA0 6
RSV_ICH_CL_DATA1 PAD T42
CL_VREF0
CL_VREF1
ICH_CL_RST0# 6
CL_RST1# PAD T62
RSV_GPIO24 PAD T43
RSV_GPIO10 PAD T47
RSV_GPIO14 PAD T45
RSV_WOL_EN PAD T39
R286 8.2K
+3.3V_SUS

Non-iAMT

Place these close to ICH8.

CLK_ICH_48M
R337 *10_NC
C357 *4.7P_NC
50
CLK_ICH_14M
R539 *10_NC
C610 *4.7P_NC
50

ICH_PWRGD R310 10K
DPRSLPVR R542 100K
ICH_RSMRST# R298 10K
RSV_ICH_LAN_RST# R290 10K
ICH_CL_PWROK R322 1M
+3.3V_SUS
RSV_GPIO10 R270 10K

2/25-17 6/11-44

R155 0
R306 4.7K

R331 10K PLTRST_DELAY#
7/17-63

+3.3V_RUN
R268 1.91K/F IMVP_PWRGD
R344 100K USB_MCARD2_DET#
R583 100K USB_MCARD3_DET#
R257 100K PCIE_MCARD1_DET#
R339 100K PCIE_MCARD2_DET#
R255 100K PCIE_MCARD3_DET#

+3.3V_RUN
R581 *10K_NC MCH_ICH_SYNC# R
R316 10K IRQ_SERIRQ
R582 10K THERM_ALERT#

+3.3V_SUS
R278 10K RSV_WOL_EN
R526 10K SIO_EXT_SMI#
R528 100K USB_MCARD1_DET#

+3.3V_RUN
R314 *1K_NC
SPKR

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

SMbus address D2

These are for backdrive issue.

+3.3V_RUN
RP13 2.2KX2
Q29
30,33,34 ICH_SMBDATA
MEM_SDATA 15
2N7002W-7-F
+3.3V_RUN
Q28
30,33,34 ICH_SMBCLK
MEM_SCLK 15
2N7002W-7-F

Non-iAMT

DIS:ALW
UMA:SUS (19)

+3.3V_RUN
+3.3V_ALW +3.3V_SUS
R285 3.24K/F
R527 *3.24K/F_NC
R534 *3.24K/F_NC
CL_VREF0
CL_VREF1
C265 0.1U
R277 453/F
C598 *0.1U_NC
R533 *453/F_NC
10
10

CL_VREF0/1 ~=0.405V

QUANTA COMPUTER

Title	ICH9-M (PM,GPIO,SMB,CL)	
Size	Document Number FM7B	Rev 1A
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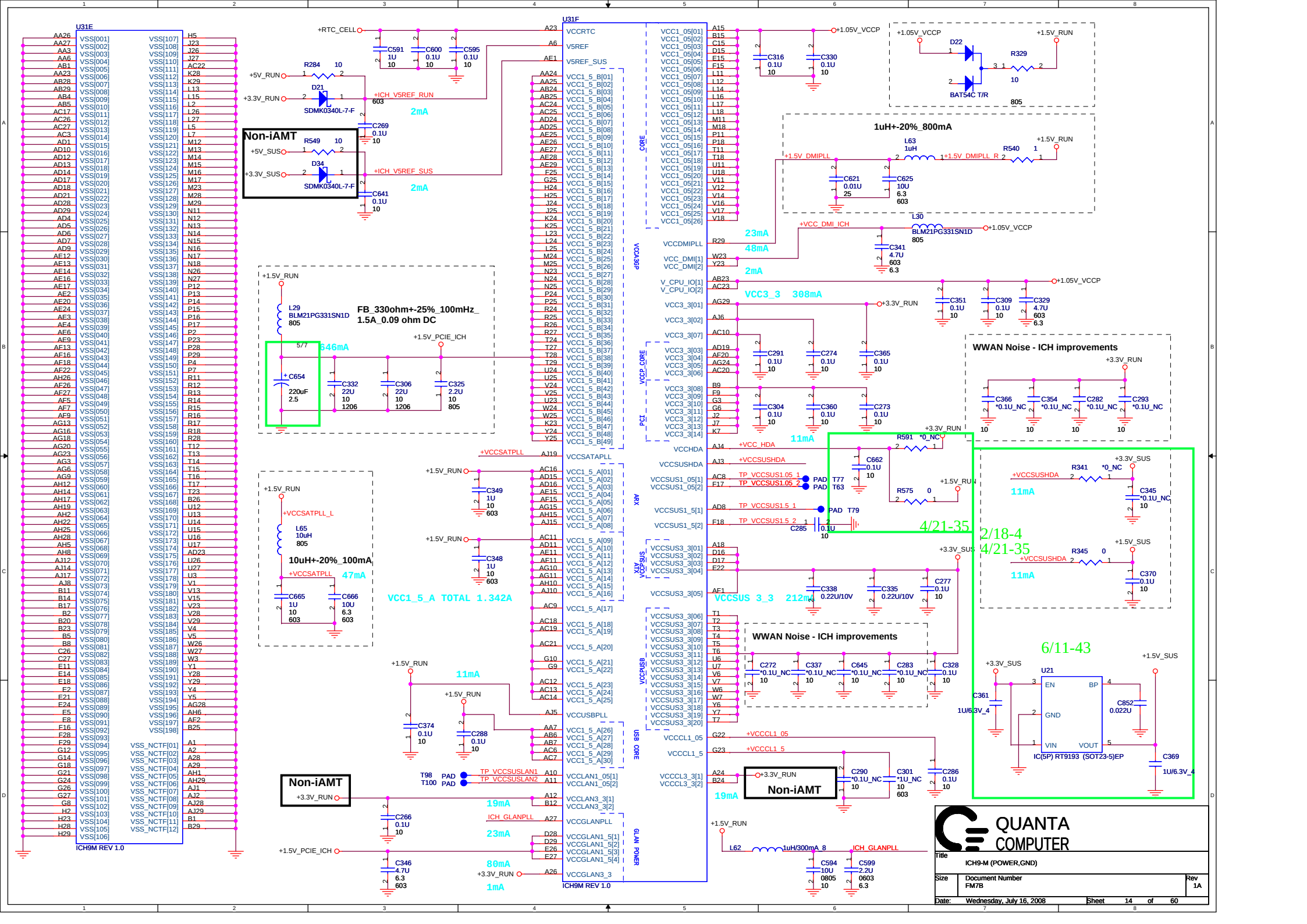
U31E
ICH9M REV 1.0
U31F
ICH9M REV 1.0
Non-iAMT
+5V_RUN
+3.3V_RUN
SDMK0340L-7-F
+ICH_V5REF_RUN
+ICH_V5REF_SUS
2mA
+1.5V_RUN
FB_330ohm+-25%_100mHz_
1.5A_0.09 ohm DC
646mA
+1.5V_PCIE_ICH
+VCCSATPLL
+VCCSATPLL_L
10uH+-20%_100mA
47mA
VCC1_5_A TOTAL 1.342A
11mA
19mA
23mA
80mA
1mA
+RTC_CELL
+5V_SUS
+3.3V_SUS
1uH+-20%_800mA
+1.05V_VCCP
23mA
48mA
2mA
VCC3_3 308mA
WWAN Noise - ICH improvements
+VCC_HDA
+VCCUSHDA
11mA
4/21-35
2/18-4
4/21-35
6/11-43
VCCUS 3_3 212mA
+VCC_DMI_ICH
+VCCCL1_05
+VCCCL1_5
+1.05V_DMIPLL
+1.5V_DMIPLL_R
ICH_GLANPLL
1uH/300mA_8
IC(5P) RT9193 (SOT23-5)EP
QUANTA COMPUTER
ICH9-M (POWER,GND)
Document Number FM7B
Rev 1A
Wednesday, July 16, 2008
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A is required to route to Top SoDIMM for AMTto function.
Ch.A SODIMM needs to be populated for Intel AMT support.

TOP

JDIM1

PC4800 DDR2 SDRAM SO-DIMM (200P)

+1.8V_SUS
V_DDR_MCH_REF
+3.3V_RUN

DDR_A_DM[0..7] 7
DDR_A_D[0..63] 7
DDR_A_DQS[0..7] 7
DDR_A_DQS#[0..7] 7
DDR_A_MA[0..14] 7,16

V_DDR_MCH_REF
C234 0.1U 10
C232 2.2U 0603 6.3

M_CLK_DDR0 6
M_CLK_DDR#0 6
PM_EXTTS#0 6
M_CLK_DDR1 6
M_CLK_DDR#1 6

6,16 DDR_CKE0_DIMMA
DDR_CKE1_DIMMA 6,16
7,16 DDR_A_BS2
7,16 DDR_A_BS0
7,16 DDR_A_WE#
DDR_A_CAS#
7,16 DDR_A_CAS#
6,16 DDR_CS1_DIMMA#
6,16 M_ODT1
DDR_A_BS1 7,16
DDR_A_RAS# 7,16
DDR_CS0_DIMMA# 6,16
M_ODT0 6,16

13 MEM_SDATA
13 MEM_SCLK
MEM_SDATA
MEM_SCLK

Non-iAMT
SMbus address A0

CLOCK 0,1
CKE 0,1

R261 10K
R266 10K

Non-iAMT
C236 2.2U 0603 6.3
C240 0.1U 10

BOT

JDIM2

PC4800 DDR2 SDRAM SO-DIMM (200P)

+1.8V_SUS
V_DDR_MCH_REF
+3.3V_RUN

DDR_B_DM[0..7] 7
DDR_B_D[0..63] 7
DDR_B_DQS[0..7] 7
DDR_B_DQS#[0..7] 7
DDR_B_MA[0..14] 7,16

V_DDR_MCH_REF
C592 0.1U 10
C590 2.2U 0603 6.3

M_CLK_DDR3 6
M_CLK_DDR#3 6
PM_EXTTS#1 6
M_CLK_DDR4 6
M_CLK_DDR#4 6
6,16 DDR_CKE3_DIMMB
DDR_CKE4_DIMMB 6,16
7,16 DDR_B_BS2
7,16 DDR_B_BS0
7,16 DDR_B_WE#
DDR_B_CAS#
7,16 DDR_B_CAS#
6,16 DDR_CS3_DIMMB#
6,16 M_ODT3
DDR_B_BS1 7,16
DDR_B_RAS# 7,16
DDR_CS2_DIMMB# 6,16
M_ODT2 6,16

Non-iAMT
+3.3V_RUN

SMbus address A4

CLOCK 2,3
CKE 2,3

PC4800 DDR2 0

R301 10K
R308 10K

Non-iAMT
C262 2.2U 0603 6.3
C268 0.1U 10

Place these Caps near So-Dimm1.
C295 2.2U 0603 6.3
C297 2.2U 0603 6.3
C294 2.2U 0603 6.3
C296 2.2U 0603 6.3
C576 2.2U 0603 6.3

Place these Caps near So-Dimm2.
C581 2.2U 0603 6.3
C579 2.2U 0603 6.3
C578 2.2U 0603 6.3
C577 2.2U 0603 6.3
C580 2.2U 0603 6.3

Place these Caps near So-Dimm1.
C300 0.1U 10
C303 0.1U 10
C302 0.1U 10
C575 0.1U 10
C216 *330U_NC 7343 6.3

Place these Caps near So-Dimm2.
C574 0.1U 10
C254 0.1U 10
C256 0.1U 10
C299 0.1U 10

QUANTA COMPUTER

Title	DDR2 SO-DIMM (200P) X 2	
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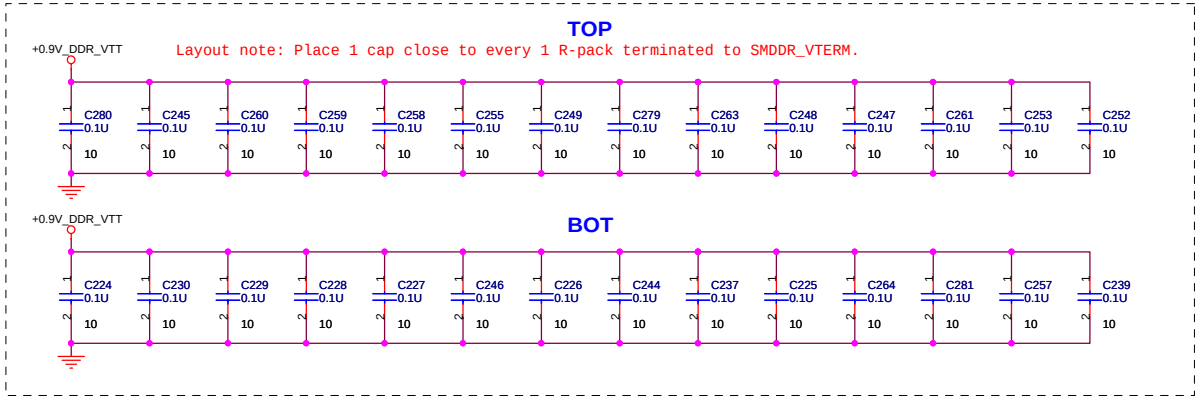

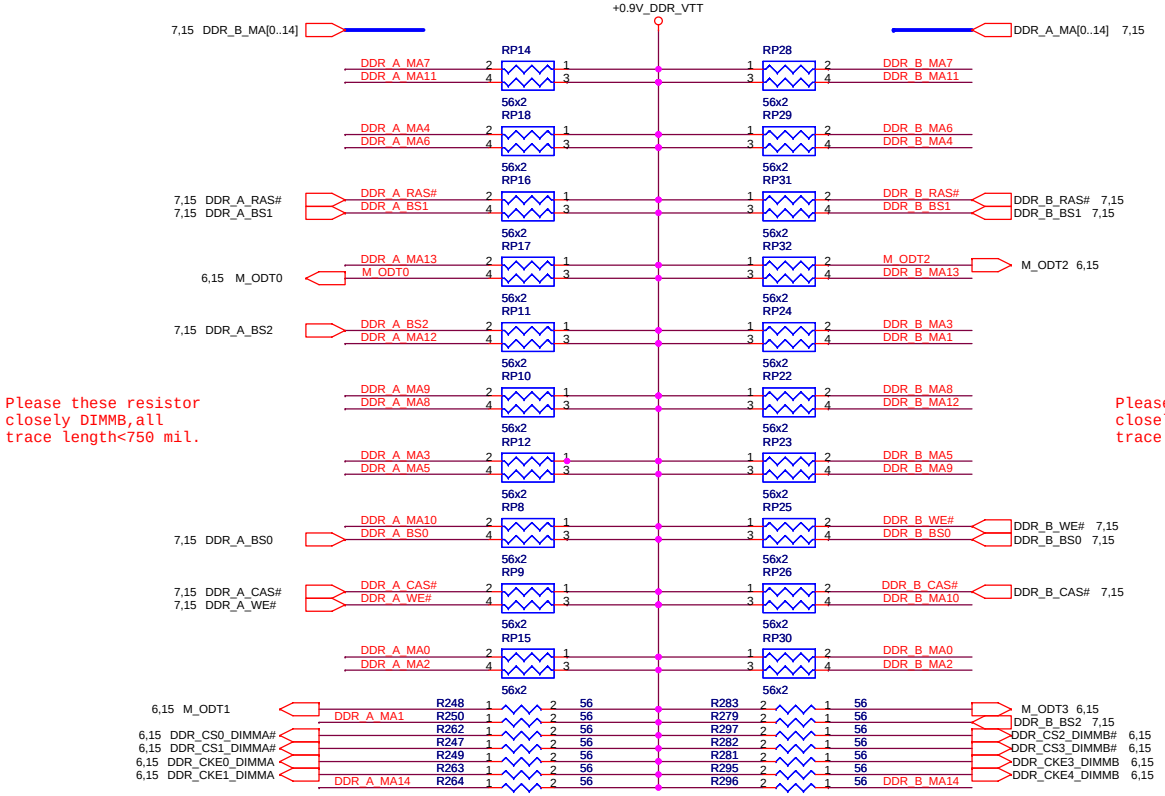

Please these resistor closely DIMMB,all trace length<750 mil.

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

QUANTA COMPUTER

Title	DDR2 RES ARRAY	
Size	Document Number FM7B	Rev 1A
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Add capacitor pads for improving WWAN.

C544 20P 50 CLK_ICH_48M
C530 *27P_NC 50 CLK_ICH_14M
C537 *27P_NC 50 CLK_PCI_8512
C182 *27P_NC 50 CLK_PCI_PCCARD
C540 *27P_NC 50 CLK_PCI_ICH

Y2
CLK_XTAL_IN — 14.318MHZ — CLK_XTAL_OUT
C512 33P 50
C511 33P 50
14.318MHz

U29
CK505
QFN64
SLG8SP513V

+CK_VDD_PCI 9
+CK_VDD_PLL3 23
+CK_VDD_48 16
+CK_VDD_SRC 46
62
+CK_VDD_MAIN 19
27
33
43
52
56
VDD_PCI VDD_REF VDD_PLL3 VDD_48 VDD_SRC VDD_CPU
VDD_IO VDD_IO VDD_IO VDD_IO VDD_IO VDD_IO

15 18 22 26 30 36 49 59 1
GND GND GND GND GND GND GND GND GND

CR#_A/PCI-0 8
CR_B/PCI-1 10
TME/PCI-2 11
SRC5_EN/PCI-3 12
27M_SEL/PCI-4 13
ITP_EN/PCIF-5# 14

FSA/USB48 17
FSB/TEST_MODE 64
FSC/TEST_SEL/REF 5

RESET# 55
CK_PWRGD/PD# 63

XOUT 2
XIN 3

SDATA 6
SCLK 7

CPU-0 61 CPU_BCLK
CPU-0# 60 CPU_BCLK#
CPU-1 58 MCH_BCLK
CPU-1# 57 MCH_BCLK#
SRC-8/CPU_ITP 54 PCIE_MINI1
SRC-8#/CPU_ITP# 53 PCIE_MINI1#
SRC-0/DOT96 20 DOT96_SSC
SRC-0#/DOT96# 21 DOT96_SSC#
SRC-1/SE1 24 27M_SS
SRC-1#/SE2 25 27M_NSS
SRC-2/SATA 28 PCIE_SATA
SRC-2#/SATA# 29 PCIE_SATA#
CR#_C/SRC-3 31 PCIE_MINI3
CR#_D/SRC-3# 32 PCIE_MINI3#
SRC-4 34 MCH_3GPLL
SRC-4# 35 MCH_3GPLL#
PCI_STOP#/SRC-5 45
CPU_STOP#/SRC5-5# 44
SRC-6 48 PCIE_EXPCARD
SRC-6# 47 PCIE_EXPCARD#
CR#_F/SRC-7 51 MINI1CLK_REQ#_C
CR#_E/SRC-7# 50 CARD_CLK_REQ#_C
SRC-9 37 PCIE_MINI2
SRC-9# 38 PCIE_MINI2#
SRC-10 41 PCIE_ICH
SRC-10# 42 PCIE_ICH#
CR#_H/SRC-11 40 PCIE_LOM
CR#_G/SRC-11# 39 PCIE_LOM#
GND 65

RP35 0x2: CLK_CPU_BCLK 3 / CLK_CPU_BCLK# 3
RP34 0x2: CLK_MCH_BCLK 5 / CLK_MCH_BCLK# 5
RP36 0x2: CLK_PCIE_MINI1 34 / CLK_PCIE_MINI1# 34
RP43 0x2: MCH_DREFCLK 6 / MCH_DREFCLK# 6
RP45 0x2: DREF_SSCLK 6 / DREF_SSCLK# 6
RP44 0x2: CLK_PCIE_SATA 11 / CLK_PCIE_SATA# 11
RP42 0x2: CLK_PCIE_MINI3 33 / CLK_PCIE_MINI3# 33
RP41 0x2: CLK_MCH_3GPLL 6 / CLK_MCH_3GPLL# 6
H_STP_PCI# 13
H_STP_CPU# 13
RP37 0x2: CLK_PCIE_EXPCARD 30 / CLK_PCIE_EXPCARD# 30
R456 475/F MINI1CLK_REQ# — MINI1CLK_REQ# 34
R455 475/F CARD_CLK_REQ# — CARD_CLK_REQ# 30
RP40 0x2: CLK_PCIE_MINI2 33 / CLK_PCIE_MINI2# 33
RP38 0x2: CLK_PCIE_ICH 12 / CLK_PCIE_ICH# 12
RP39 0x2: CLK_PCIE_LOM 42 / CLK_PCIE_LOM# 42

13 SATA_CLKREQ# — R476 475/F — SATA_CLKREQ#
6 CLK_3GPLLREQ# — R478 475/F — CLK_3GPLLREQ#
33 CLK_LPC_DEBUG — R193 22 — CLK_LPC_DEBUG
28 CLK_PCI_PCCARD — R194 33 — CLK_PCI_PCCARD
31 CLK_PCI_8512 — R481 33 — CLK_PCI_8512
12 CLK_PCI_ICH — R485 33 — CLK_PCI_ICH
13 CLK_ICH_48M — R489 33 — CLK_ICH_48M
3,6 CPU_MCH_BSEL0
3,6 CPU_MCH_BSEL1
3,6 CPU_MCH_BSEL2
L58 BLM18AG601SN1D
L15 BLM18AG601SN1D
R490 2.2K — FSA
R177 0 — FSB
R472 10K — FSC
2/18-6
13 CLK_ICH_14M
13 CLK_PWRGD
CLK_ICH_14M — R474 33

SATA_CLKREQ# C
CLK_3GPLLREQ# C
PCI_PCCARD
PCI_SIO
27M_SEL
PCI_ICH

CLK_XTAL_OUT
CLK_XTAL_IN
CLK_SDATA
CLK_SCLK

+3.3V_RUN
2/20-10
H_STP_PCI# R182 10K
H_STP_CPU# R184 10K

+3.3V_RUN
CLK_3GPLLREQ# R479 10K
SATA_CLKREQ# R477 10K
CARD_CLK_REQ# R458 10K
MINI1CLK_REQ# R449 10K
PCI_PCCARD R192 *10K_NC

PCI_SIO R482 *10K_NC

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

+3.3V_RUN
R201 *10K_NC
PCI_ICH
R486 *10K_NC

R185 POP: For Internal pull-low.
R439 POP: For internal pull-high.

+3.3V_RUN
R483 *10K_NC
27M_SEL
R484 10K

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

27M_SEL

27M_SEL (PIN13)	PIN20	PIN21	PIN24	PIN25
0=UMA	DOT96T	DOT96C	96/ 100M_T	96/ 100M_C
1 = Disc. GRFX down	SRCT0	SRCC0	27Mout	27MSSout

UMA without iAMT

+3.3V_RUN
L56 BLM21PG600SN1D 0805 120 ohms@100Mhz
+CK_VDD_MAIN
C547 0.1U
C545 0.1U
C538 0.1U
C522 0.1U
C504 0.1U
C505 0.1U
C189 *10U_NC 0603 6.3
L57 BLM21PG600SN1D 0805 120 ohms@100Mhz
R465 2.2 — +CK_VDD_PCI
2/19-8
C515 0.1U
C166 0.1U
R491 2.2 — +CK_VDD_PLL3
C546 0.1U
R488 2.2 — +CK_VDD_48
C539 0.1U
C542 4.7U 0603 6.3
R188 2.2 — +CK_VDD_SRC
2/19-8
C514 0.1U
C155 0.1U

Non-iAMT

SMbus address D2

These are for backdrive issue.

+3.3V_RUN
RP7 2.2KX2
26,31,39 SMBDAT1 — Q22 2N7002W-7-F — CLK_SDATA
+3.3V_RUN
26,31,39 SMBCLK1 — Q23 2N7002W-7-F — CLK_SCLK

QUANTA COMPUTER

Title	CLOCK GENERATOR	
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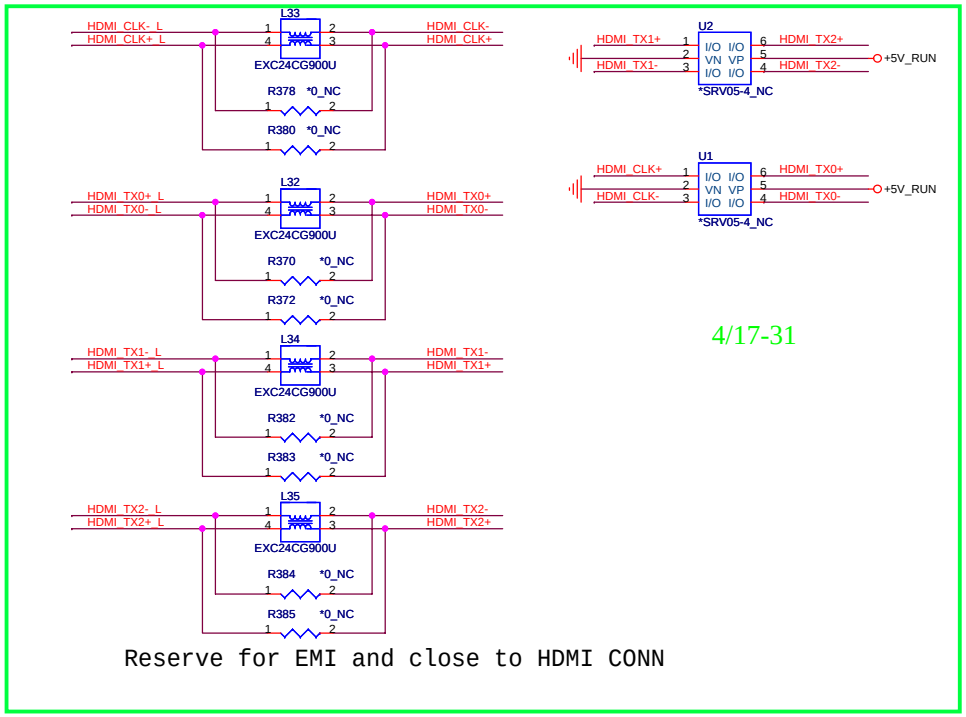
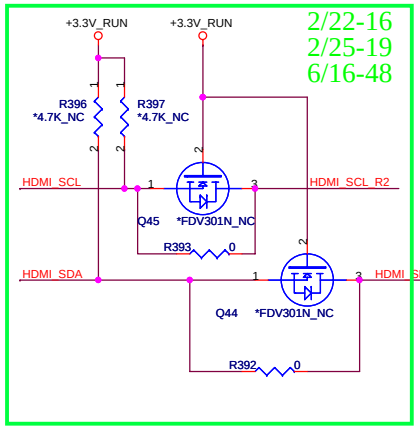
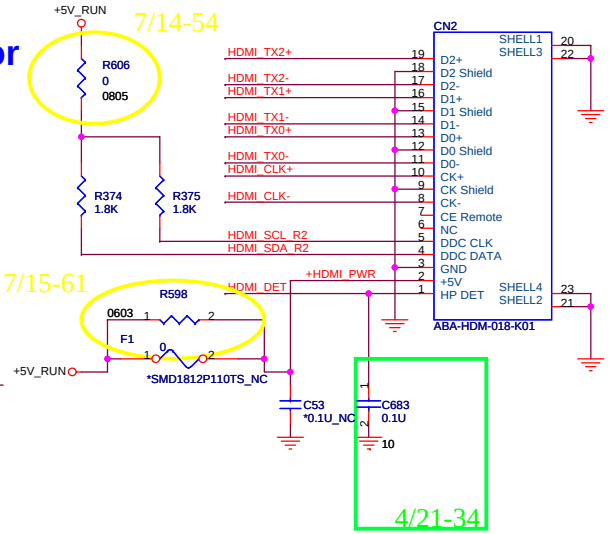
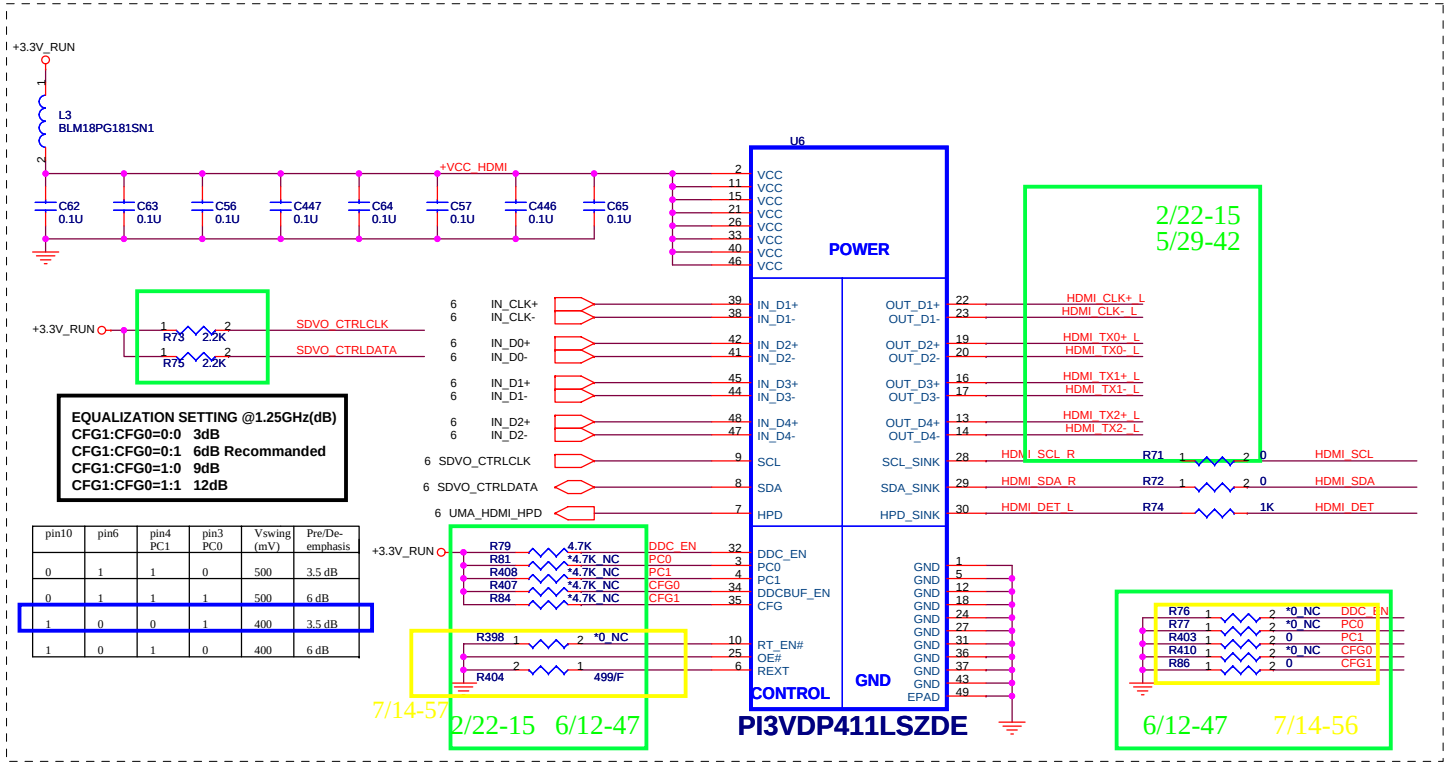
HDMI Connector









pin10	pin6	pin4 PC1	pin3 PC0	Vswing (mV)	Pre/De-emphasis
0	1	1	0	500	3.5 dB
0	1	1	1	500	6 dB
1	0	0	1	400	3.5 dB
1	0	1	0	400	6 dB

QUANTA COMPUTER

Title	Sil 1362	
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QUANTA COMPUTER

Title		
Size	Document Number FM6B	Rev 1A
Date: Monday, June 30, 2008	Sheet 19 of 60	

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QUANTA COMPUTER

Title		
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QUANTA COMPUTER

Title		
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Title		
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QUANTA COMPUTER

Title	FLASH, RTC & KC	
Size	Document Number FM6B	Rev 1A
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QUANTA COMPUTER

Title	Battery Selector	
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QUANTA COMPUTER

Title	Docking Station CONN.	
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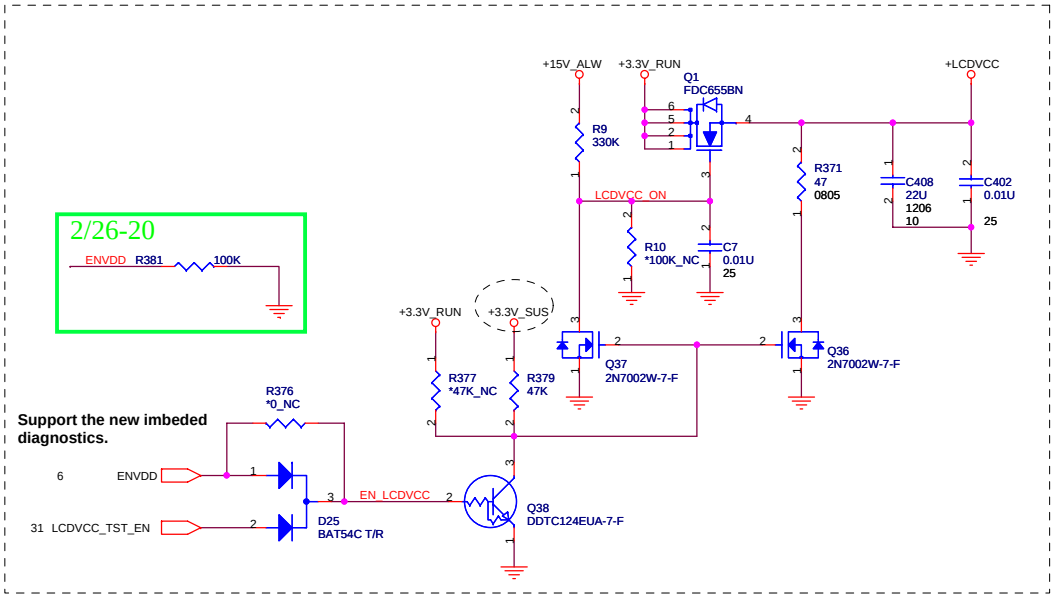
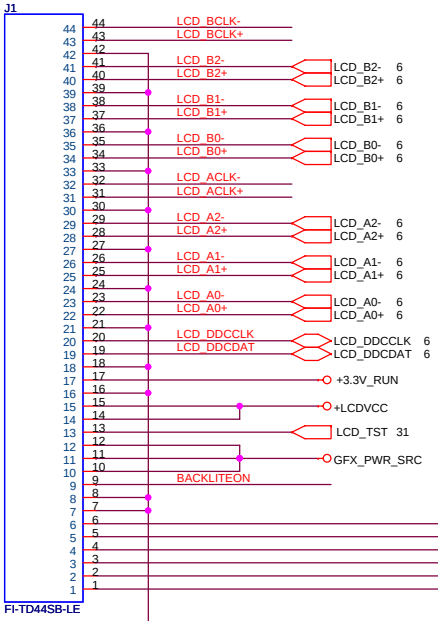
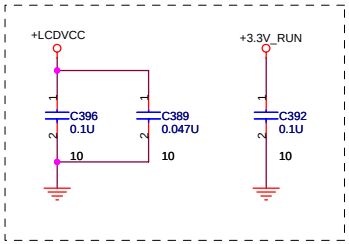






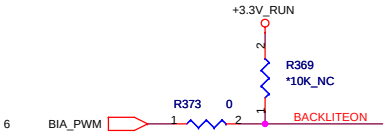
Adress : A9H --Contrast
AAH --Backlight

SMBCLK1 17,31,39
SMBDAT1 17,31,39
INVERTER_CBL_DET# 31
LCD_BAK# 31
PWM_VADJ 31
LCD_CBL_DET# 31

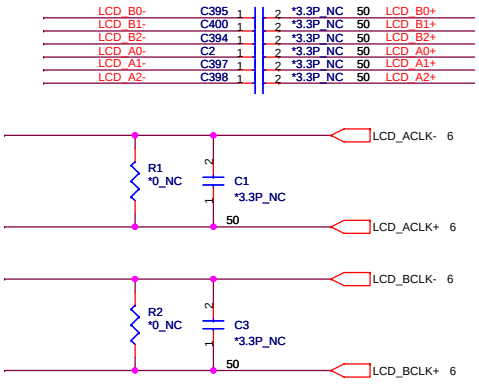
UMA

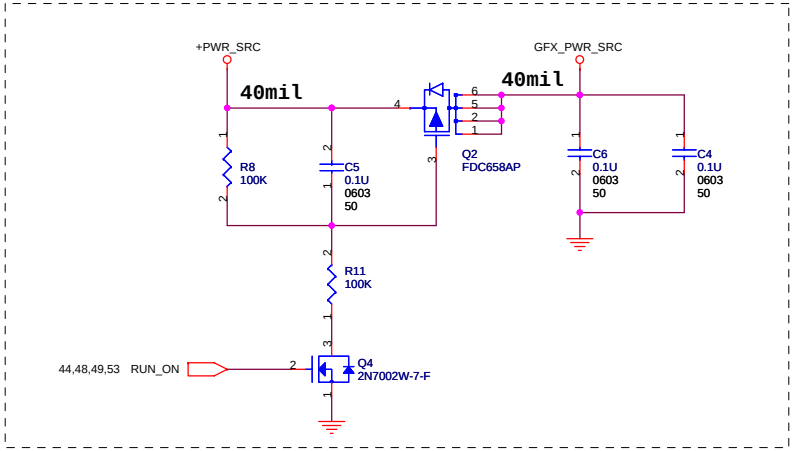
Populate R351 for DPST implementation only.

Populate R346 for platform without DPST support. No Stuff for Discrete DSPT support due to back up plan.



Shunt capacitors on LVDS for improving WWAN.





QUANTA COMPUTER

Title	LCD CONN & CK-SSCD	
Size	Document Number FM7B	Rev 1A
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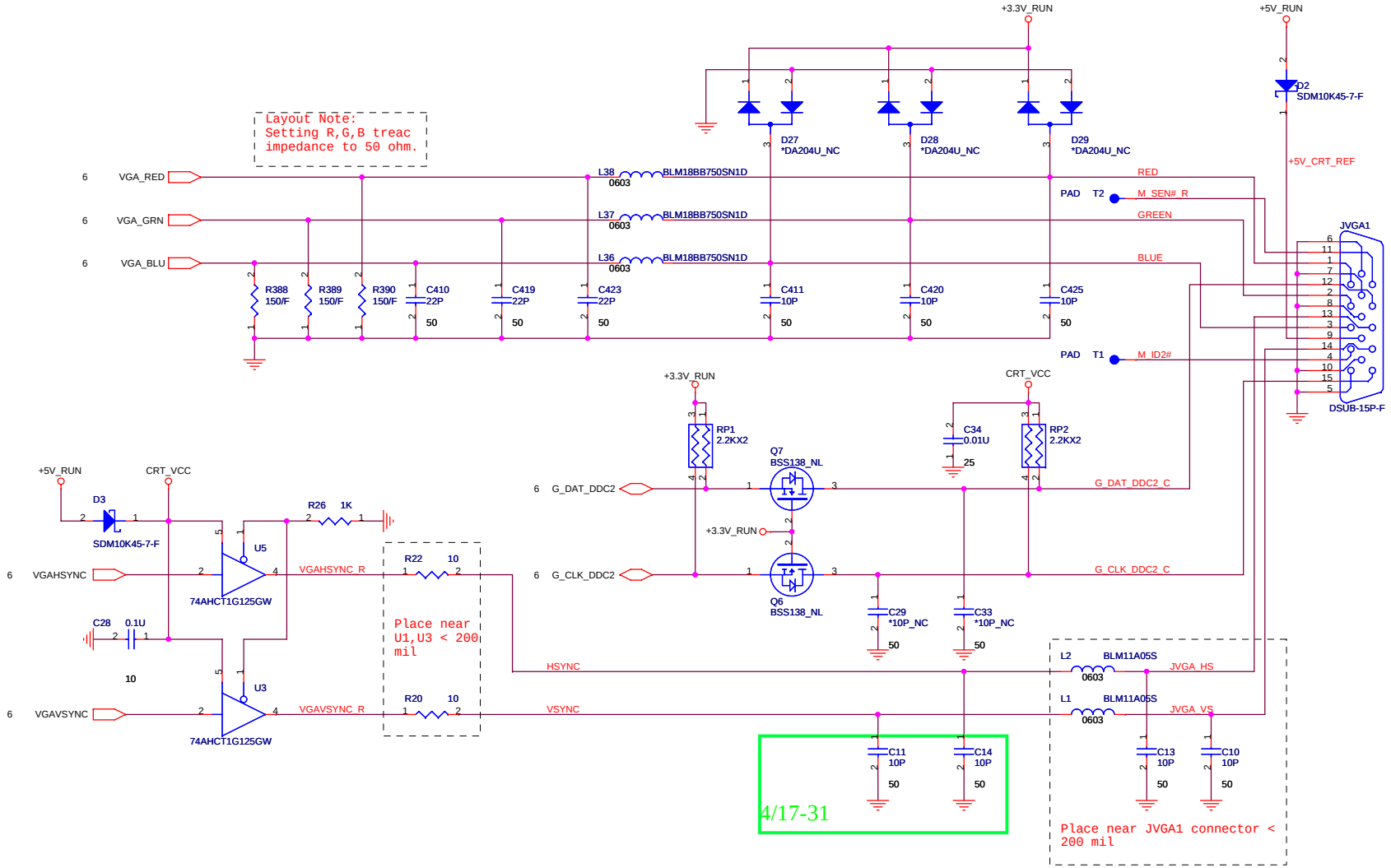

QUANTA COMPUTER

Title	CRT&TV CONN	
Size	Document Number FM7B	Rev 1A
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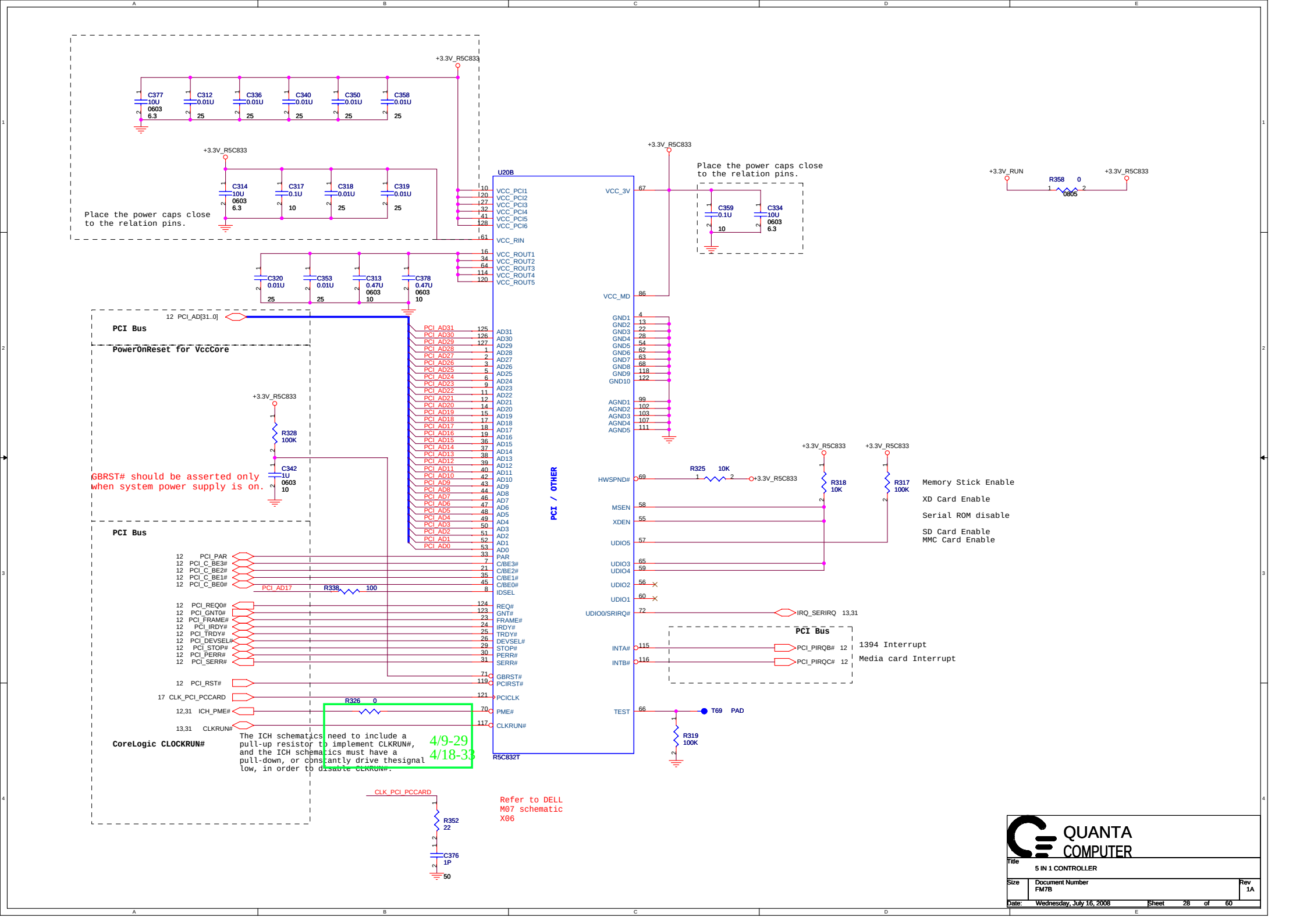
+3.3V_R5C833
C377 10U 0603 6.3
C312 0.01U 25
C336 0.01U 25
C340 0.01U 25
C350 0.01U 25
C358 0.01U 25
C314 10U 0603 6.3
C317 0.1U 10
C318 0.01U 25
C319 0.01U 25
Place the power caps close to the relation pins.
U20B
VCC_PCI1
VCC_PCI2
VCC_PCI3
VCC_PCI4
VCC_PCI5
VCC_PCI6
VCC_RIN
VCC_ROUT1
VCC_ROUT2
VCC_ROUT3
VCC_ROUT4
VCC_ROUT5
C320 0.01U 25
C353 0.01U 25
C313 0.47U 0603 10
C378 0.47U 0603 10
VCC_3V
VCC_MD
C359 0.1U 10
C334 10U 0603 6.3
Place the power caps close to the relation pins.
+3.3V_RUN
R358 0 0805
GND1
GND2
GND3
GND4
GND5
GND6
GND7
GND8
GND9
GND10
AGND1
AGND2
AGND3
AGND4
AGND5
12 PCI_AD[31..0]
PCI Bus
PowerOnReset for VccCore
R328 100K
C342 1U 0603 10
GBRST# should be asserted only when system power supply is on.
PCI_AD31
PCI_AD30
PCI_AD29
PCI_AD28
PCI_AD27
PCI_AD26
PCI_AD25
PCI_AD24
PCI_AD23
PCI_AD22
PCI_AD21
PCI_AD20
PCI_AD19
PCI_AD18
PCI_AD17
PCI_AD16
PCI_AD15
PCI_AD14
PCI_AD13
PCI_AD12
PCI_AD11
PCI_AD10
PCI_AD9
PCI_AD8
PCI_AD7
PCI_AD6
PCI_AD5
PCI_AD4
PCI_AD3
PCI_AD2
PCI_AD1
PCI_AD0
AD31
AD30
AD29
AD28
AD27
AD26
AD25
AD24
AD23
AD22
AD21
AD20
AD19
AD18
AD17
AD16
AD15
AD14
AD13
AD12
AD11
AD10
AD9
AD8
AD7
AD6
AD5
AD4
AD3
AD2
AD1
AD0
PCI / OTHER
HWSPND#
R325 10K
MSEN
XDEN
UDIO5
UDIO3
UDIO4
UDIO2
UDIO1
UDIO0/SRIRQ#
IRQ_SERIRQ 13,31
R318 10K
R317 100K
Memory Stick Enable
XD Card Enable
Serial ROM disable
SD Card Enable
MMC Card Enable
PCI Bus
INTA#
INTB#
PCI_PIRQB# 12
PCI_PIRQC# 12
1394 Interrupt
Media card Interrupt
12 PCI_PAR
12 PCI_C_BE3#
12 PCI_C_BE2#
12 PCI_C_BE1#
12 PCI_C_BE0#
PCI_AD17
R338 100
IDSEL
12 PCI_REQ0#
12 PCI_GNT0#
12 PCI_FRAME#
12 PCI_IRDY#
12 PCI_TRDY#
12 PCI_DEVSEL#
12 PCI_STOP#
12 PCI_PERR#
12 PCI_SERR#
REQ#
GNT#
FRAME#
IRDY#
TRDY#
DEVSEL#
STOP#
PERR#
SERR#
12 PCI_RST#
GBRST#
PCIRST#
17 CLK_PCI_PCCARD
PCICLK
R326 0
12,31 ICH_PME#
PME#
13,31 CLKRUN#
CLKRUN#
TEST
T69 PAD
R319 100K
CoreLogic CLOCKRUN#
The ICH schematics need to include a pull-up resistor to implement CLKRUN#, and the ICH schematics must have a pull-down, or constantly drive thesignal low, in order to disable CLKRUN#.
4/9-29
4/18-33
R5C832T
CLK_PCI_PCCARD
R352 22
C376 1P
Refer to DELL M07 schematic X06
QUANTA COMPUTER
Title
5 IN 1 CONTROLLER
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80 mils

+3.3V_RUN_PHY

L31 BLM18PG181SN1D 0603 modify

+3.3V_R5C833

C379 10U 0603 6.3

C381 0.1U 10

C383 0.01U 25

C384 1000P 50

Place these caps as close to the R5C833 as possible.

U20A

AVCC_PHY1 98
AVCC_PHY2 106
AVCC_PHY3 110
AVCC_PHY4 112

AS CLOSE AS POSSIBLE TO R5C833

TPBIAS0 113

C671 0.33U 0603 16

C659 0.01U 25

R568 56.2/F

R567 56.2/F

TPBN0 104 TPB0N

TPBP0 105 TPB0P

TPAN0 108 TPA0N

TPAP0 109 TPA0P

R566 56.2/F

R565 56.2/F

C669 270P 25

R590 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

1 TPB0N
2 TPB0P
3 TPA0N
4 TPA0P
5
6
7
8

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

GUARD GND

C362 22P 50

1394_XI 94 XI

Y1 24.576MHZ

C372 22P 50

1394_XO 95 XO

Populate C395 for R5C832 chipset.

C375 *0.01U_NC 25 RICOH_FIL0 96 FIL0

R353 10K/F 1 2 RICOH_REXT 101 REXT

C380 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

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# SD_CD# 30 D24 BAS316

MDIO01 79 MS_INS# MS_INS# 30 D23 BAS316

MDIO09 84 SD/XD/MS_CLK 30

MDIO04 76 MC_PWR_CTRL_0 30

MDIO06 74 T76 PAD

MDIO07 73

97 RSV

R5C833T

33

+3.3V_R5C833

R327 *10K_NC

close to the Chip

XD_CDSW# 30

Title	IEEE 1394		
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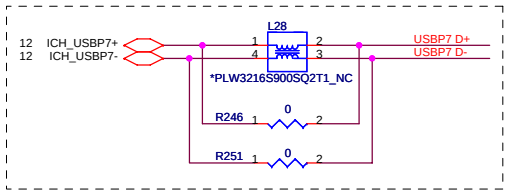
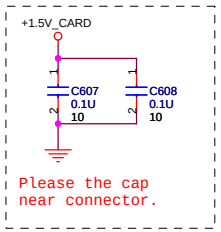
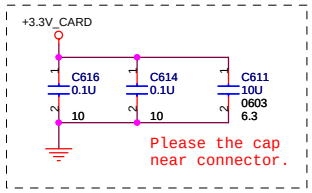
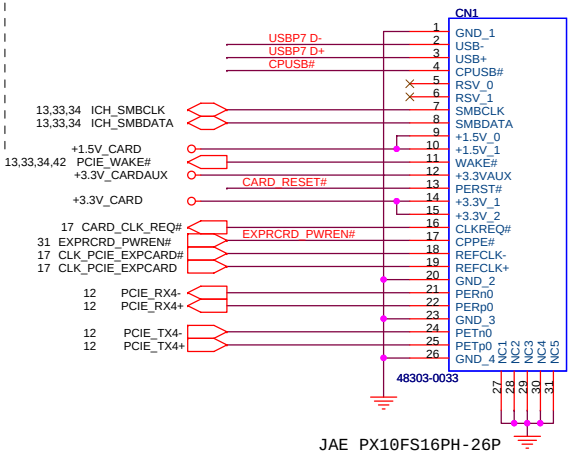
Express Card

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



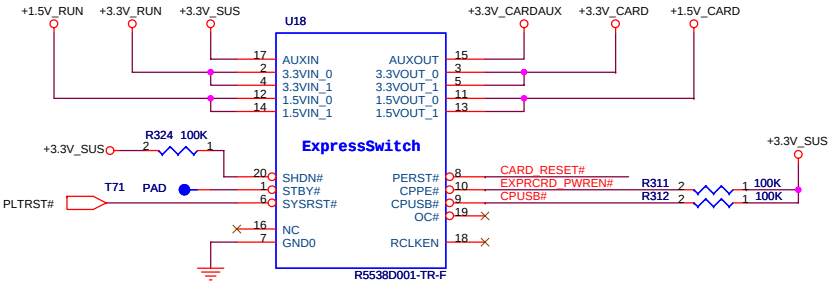


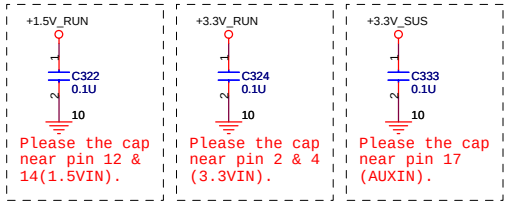


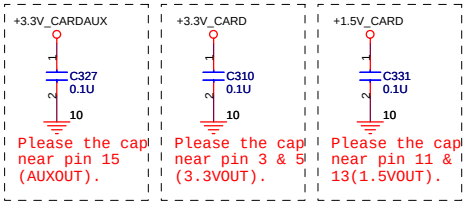


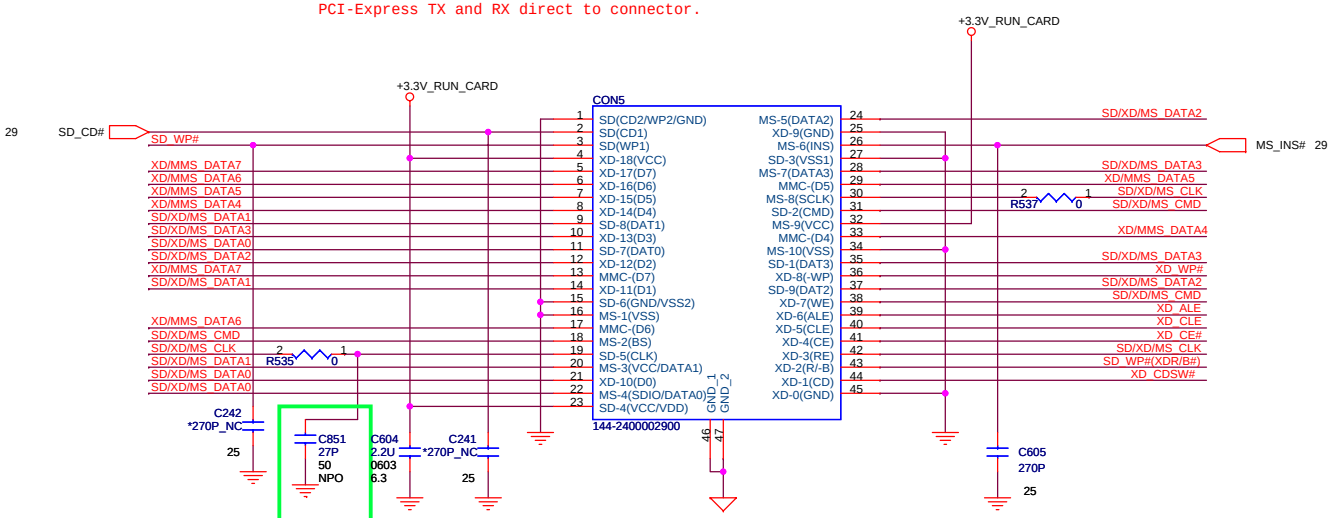
JAE PX10FS16PH-26P

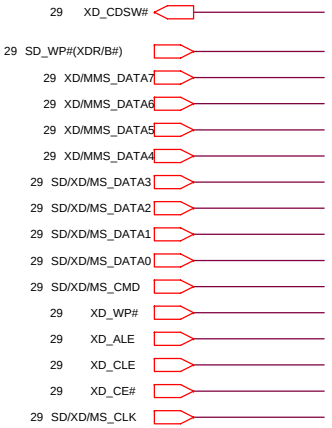
PCI-Express TX and RX direct to connector.





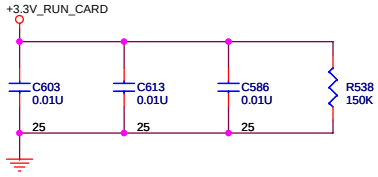


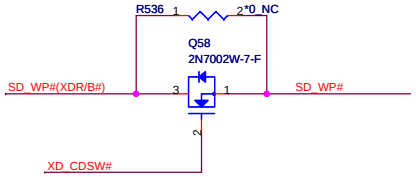


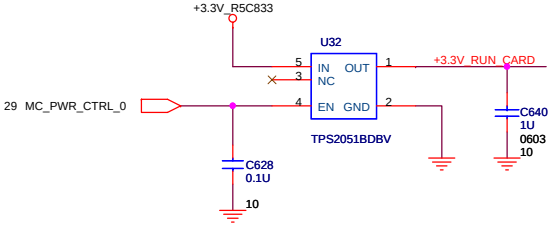


4/17-31

8 IN1 CARD READER







QUANTA COMPUTER

Title	ExpressCard/SmartCard	
Size	Document Number FM7B	Rev 1A
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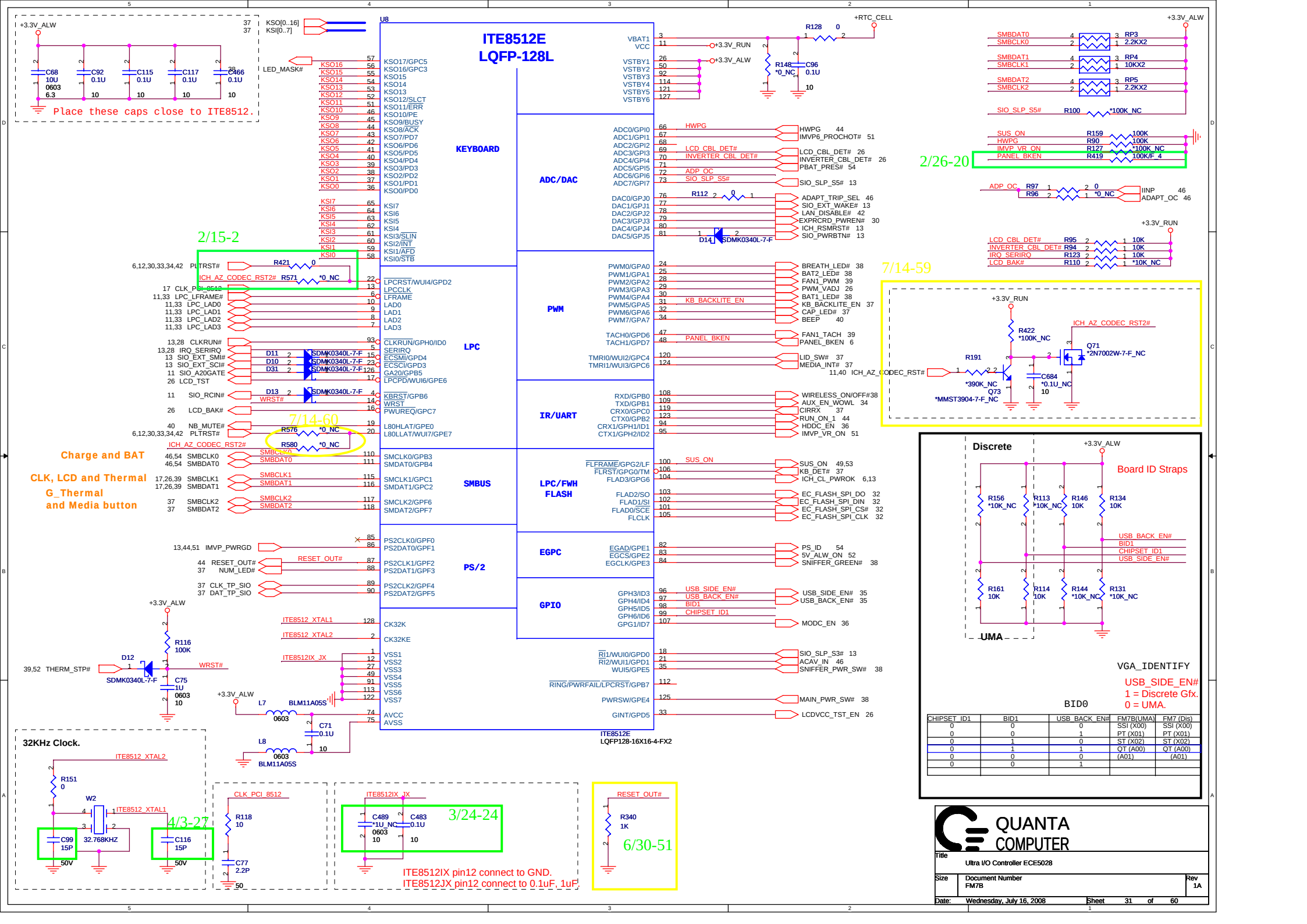
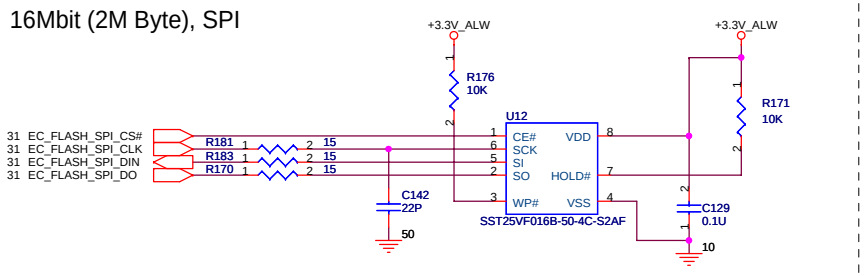
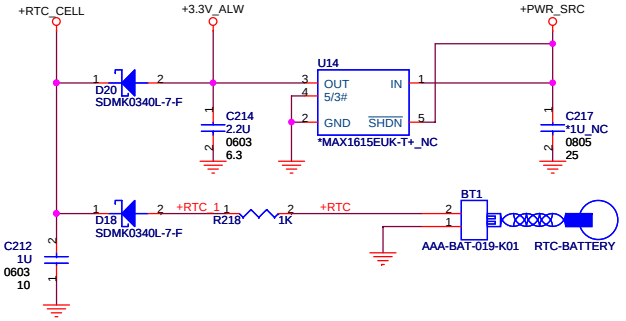


CHIPSET_ID1	BID1	USB_BACK_EN#	FM7B(UMA)	FM7 (Dis)
0	0	0	SSI (X00)	SSI (X00)
0	0	1	PT (X01)	PT (X01)
0	1	0	ST (X02)	ST (X02)
0	1	1	QT (A00)	QT (A00)
0	0	0	(A01)	(A01)
0	0	1		

16Mbit (2M Byte), SPI



RTC BATTERY



QUANTA COMPUTER		
Title	Ultra I/O Controller ECE5028	
Size	Document Number FM7B	Rev 1A
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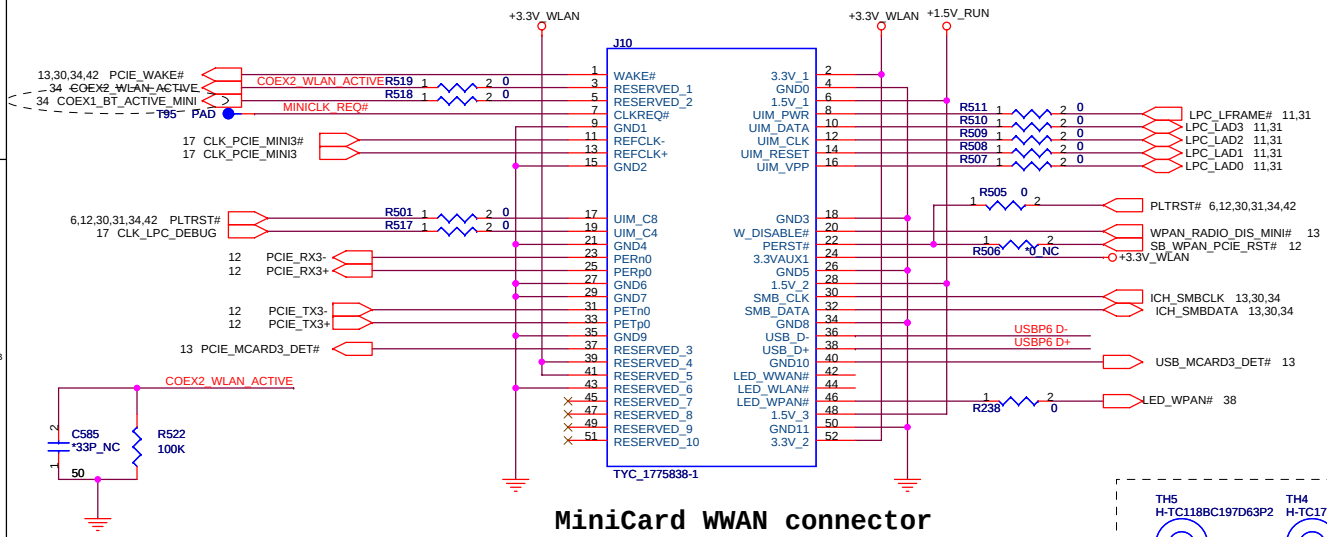
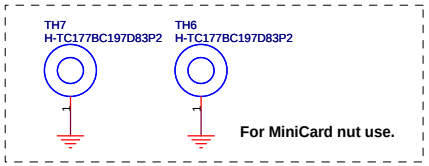
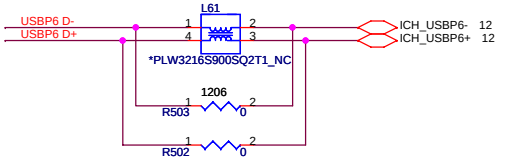
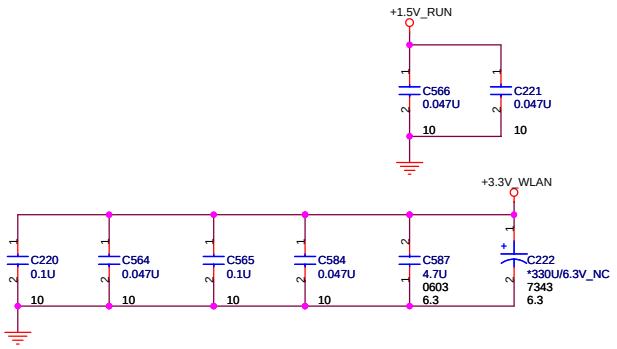
MiniCard Robson, BT. UWB connector

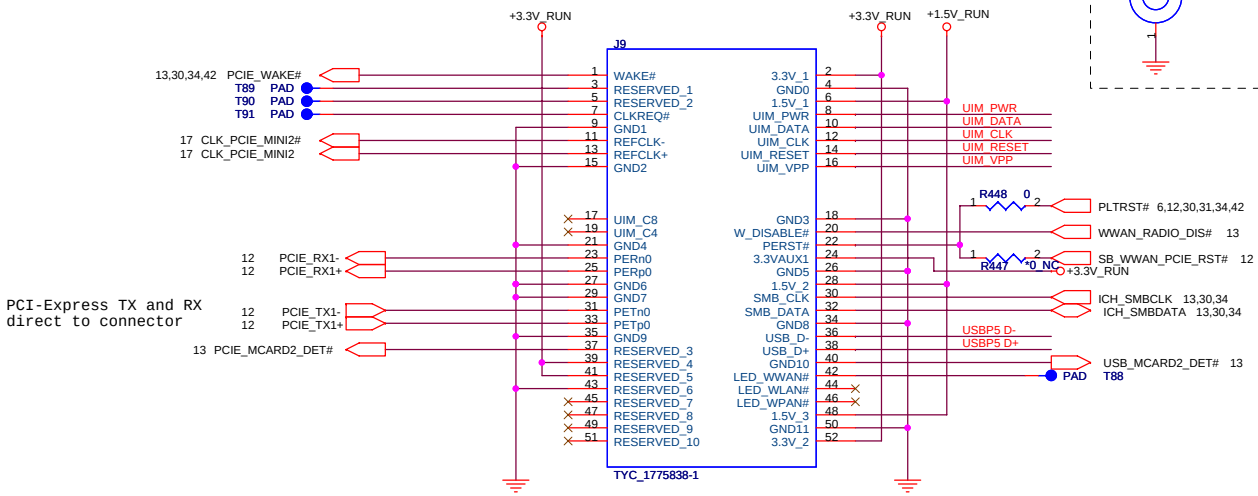


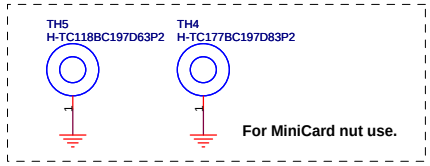


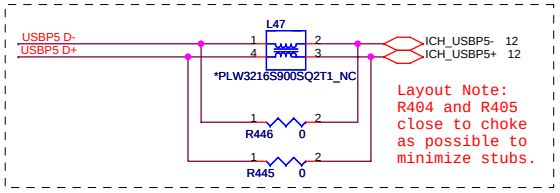


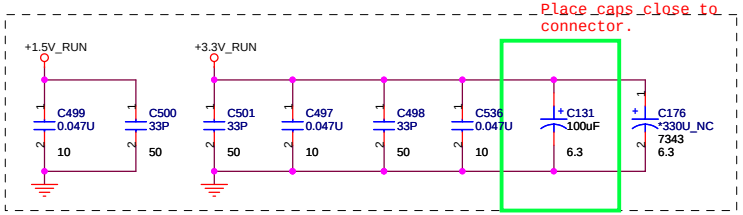


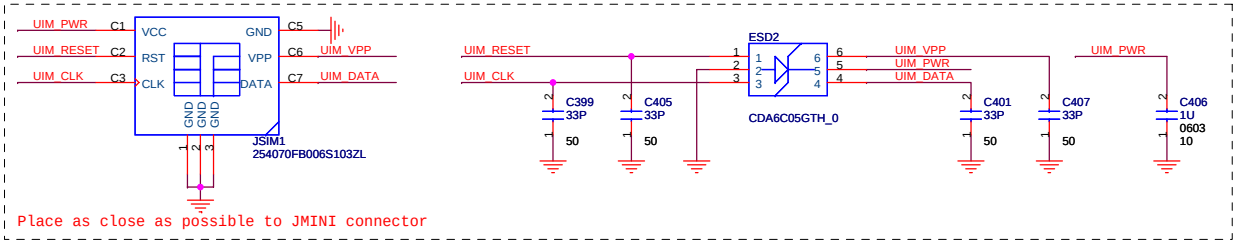
MiniCard WWAN connector











QUANTA COMPUTER

Title	MINI-PCI	
Size	Document Number FM7B	Rev 1A
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MiniCard WLAN connector

TH3 H-TC177BC197D83P2
TH2 H-TC177BC197D83P2
For MiniCard nut use.

J11
TYC_1775838-1

13,30,33,42 PCIE_WAKE#	1	WAKE#	3.3V_1	2	+3.3V_WLAN
33 COEX2_WLAN_ACTIVE	3	RESERVED_1	GND0	4	
33 COEX1_BT_ACTIVE_MIN	5	RESERVED_2	1.5V_1	6	+1.5V_RUN
17 MINI1CLK_REQ#	7	CLKREQ#	UIM_PWR	8	
	9	GND1	UIM_DATA	10	
17 CLK_PCIE_MINI1#	11	REFCLK-	UIM_CLK	12	
17 CLK_PCIE_MINI1	13	REFCLK+	UIM_RESET	14	
	15	GND2	UIM_VPP	16	
	17	UIM_C8	GND3	18	
	19	UIM_C4	W_DISABLE#	20	WLAN_RADIO_OFF#
	21	GND4	PERST#	22	
12 PCIE_RX2-	23	PERn0	3.3VAUX1	24	
12 PCIE_RX2+	25	PERp0	GND5	26	+3.3V_WLAN
	27	GND6	1.5V_2	28	
	29	GND7	SMB_CLK	30	WLAN_SMBCLK
12 PCIE_TX2-	31	PETn0	SMB_DATA	32	WLAN_SMBDATA
12 PCIE_TX2+	33	PETp0	GND8	34	
	35	GND9	USB_D-	36	USBP4 D-
13 PCIE_MCARD1_DET#	37	RESERVED_3	USB_D+	38	USBP4 D+
	39	RESERVED_4	GND10	40	USB_MCARD1_DET# 13
	41	RESERVED_5	LED_WWAN#	42	
	43	RESERVED_6	LED_WLAN#	44	LED_WLAN_OUT# 38
	45	RESERVED_7	LED_WPAN#	46	
	47	RESERVED_8	1.5V_3	48	
	49	RESERVED_9	GND11	50	
	51	RESERVED_10	3.3V_2	52	

MINI1CLK_REQ#
C583 220P 50
R521 0
R520 0
R504 0 PLTRST# 6,12,30,31,33,42
R514 *0_NC SB_WLAN_PCIE_RST# 12

PCI-Express TX and RX direct to connector

Non-iAMT
T92 PAD
T94 PAD
T93 PAD

USBP4 D-
USBP4 D+
L27 *PLW3216S900SQ2T1_NC 1206
ICH_USBP4- 12
ICH_USBP4+ 12
R244 0
R243 0

+3.3V_WLAN
RP47 2.2KX2
Q55 *2N7002W-7-F_NC
WLAN_SMBCLK
ICH_SMBCLK 13,30,33
R500 *0_NC
Q56 *2N7002W-7-F_NC
WLAN_SMBDATA
ICH_SMBDATA 13,30,33
R512 *0_NC

+PWR_SRC
+3.3V_ALW
+3.3V_WLAN
+3.3V_RUN
Q31 *FDC655BN_NC
R260 0 0805
R258 *100K_NC
R265 *100K_NC
Q30B *2N7002DW-7-F_NC
Q30A *2N7002DW-7-F_NC
31 AUX_EN_WOWL
R259 *200K_NC
R267 *470K_NC
C251 *4700P_NC 0603 50
R274 *100K_NC

Suport for WoW

WLAN_RADIO_OFF#
D32 SDMK0340L-7-F
WLAN_RADIO_DIS# 13
R515 *0_NC
Prevent backdrive when WoW is enabled.

+1.5V_RUN
+3.3V_WLAN
Place caps close to connector.
C570 0.047U 10
C561 0.047U 10
C571 0.1U 10
C562 0.047U 10
C569 0.1U 10
C588 0.047U 10
C567 4.7U 0805 10
C560 *330U/6.3V_NC 7343 6.3

QUANTA COMPUTER

Title	MDC CONN.		
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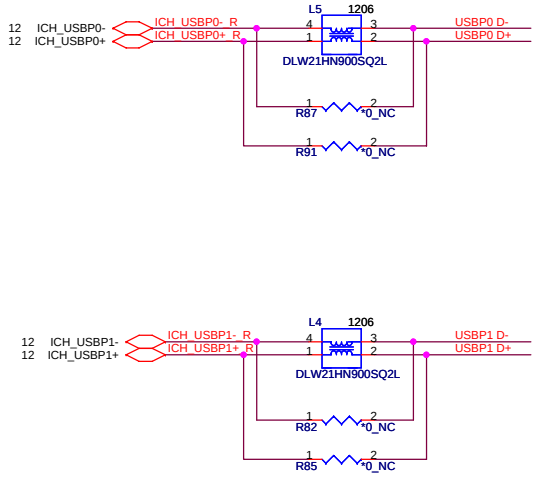
Date:	Monday, July 14, 2008	Sheet 34 of 60	

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

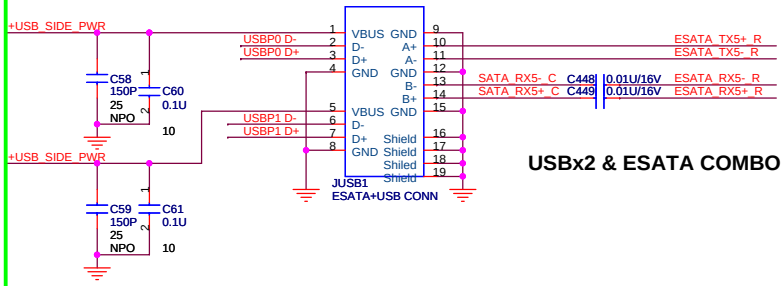
2/22-14
4/17-31



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

Side External USBX2

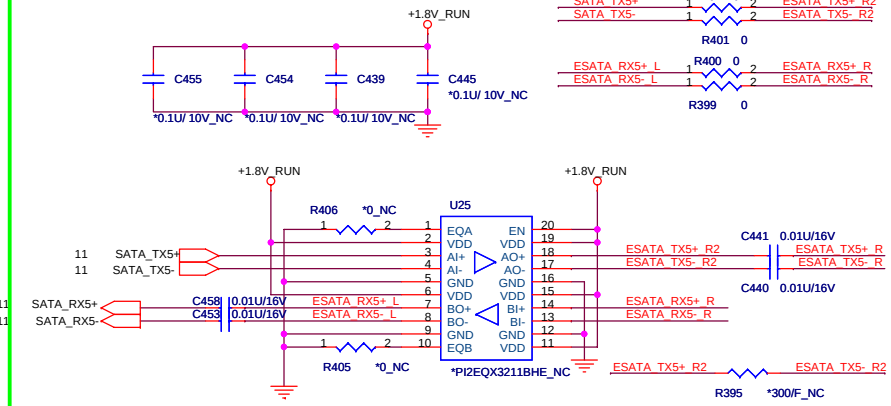
2/15-1



USBx2 & ESATA COMBO

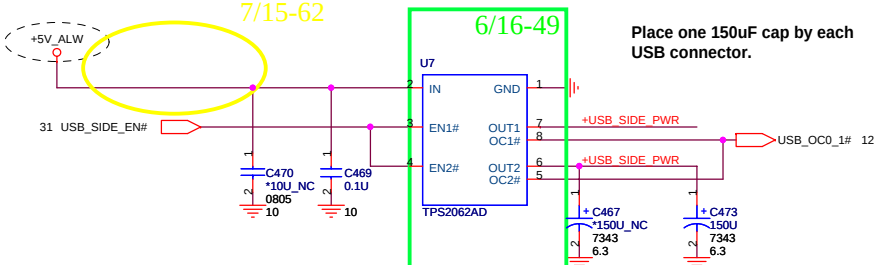
2/20-11
5/29-41

E-SATA Re-driver

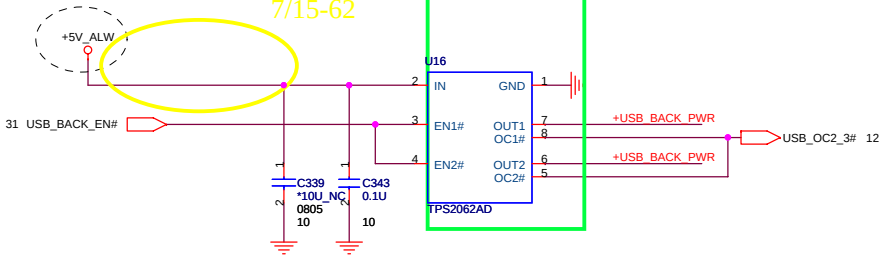


7/15-62
6/16-49

Place one 150uF cap by each USB connector.

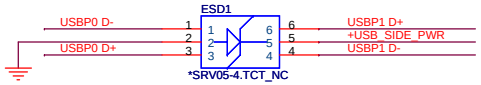


7/15-62

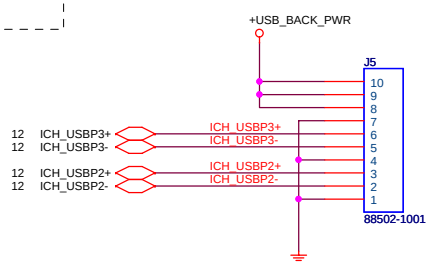


Each channel is 1A

Place ESD diodes as close as USB connector.



MB side



QUANTA COMPUTER

Title	SERIAL PORT & USB	
Size	Document Number FM7B	Rev 1A
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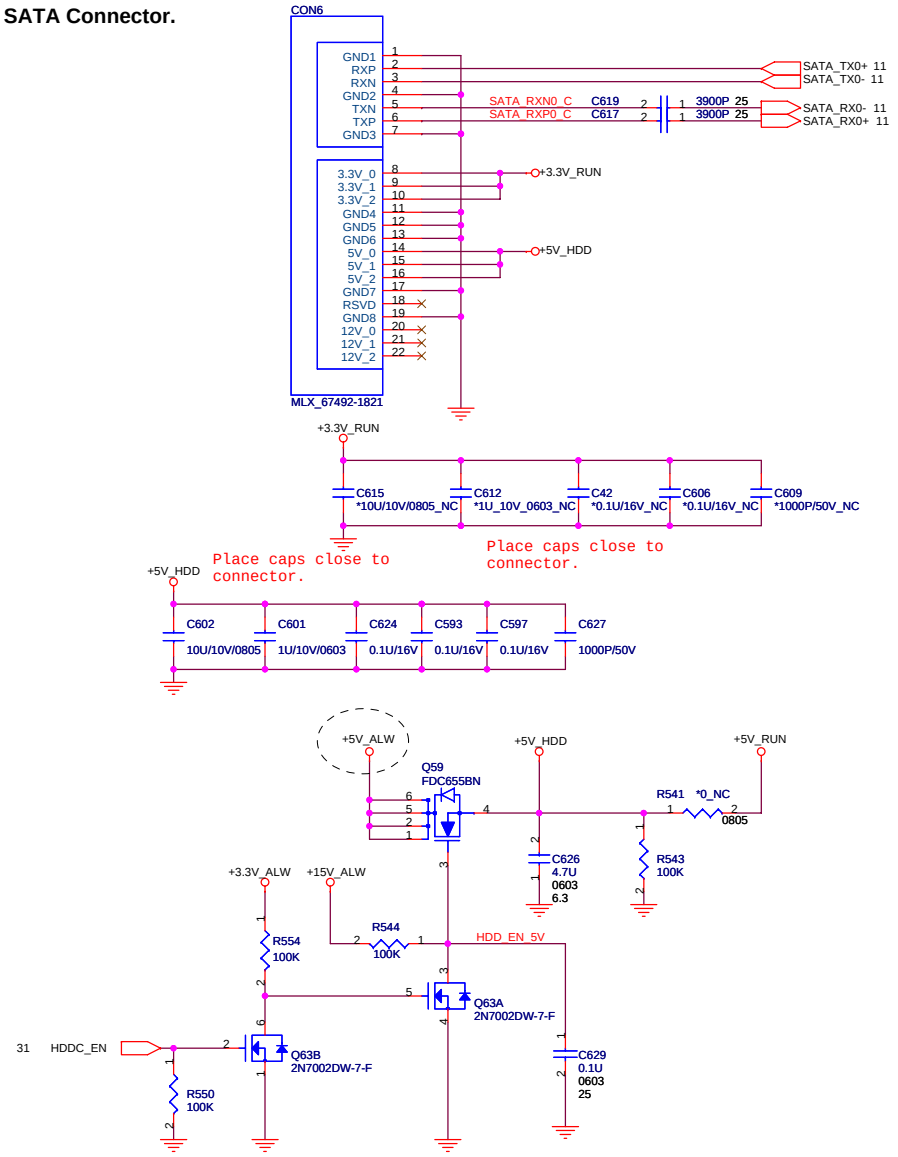
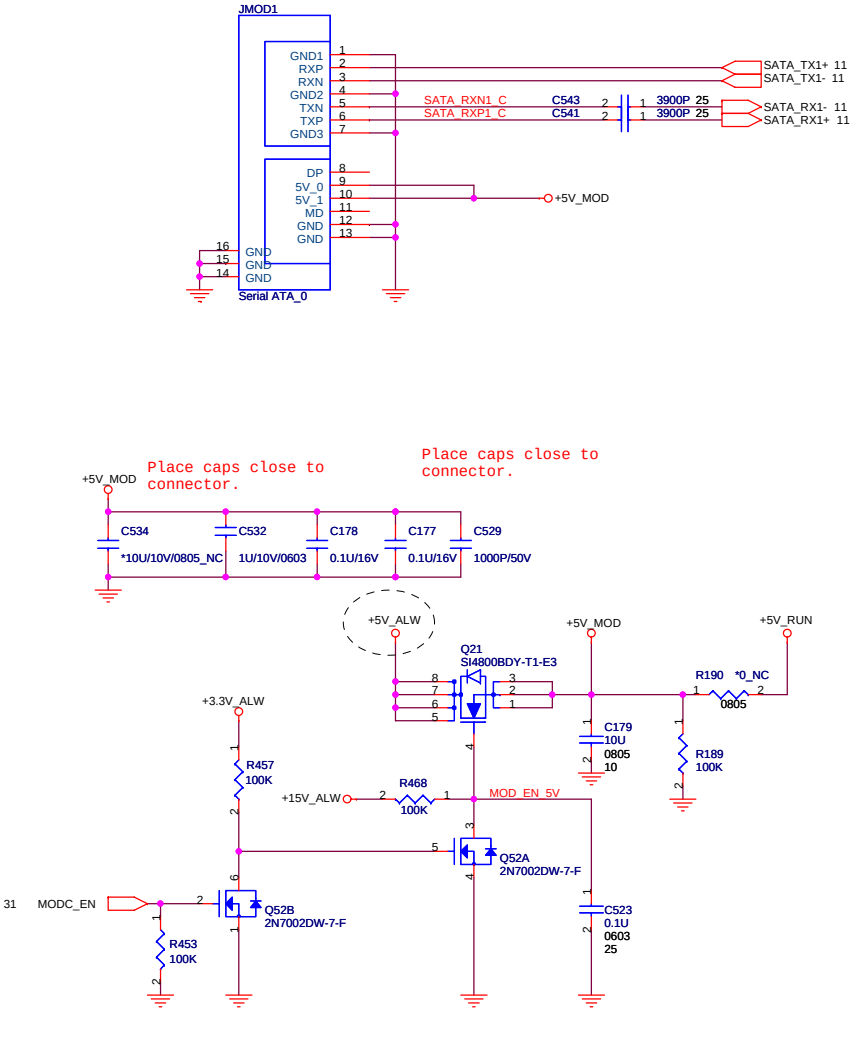
SATA Connector.



ODD Connector



QUANTA COMPUTER

Title	SATA (HDD&CD_ROM)	
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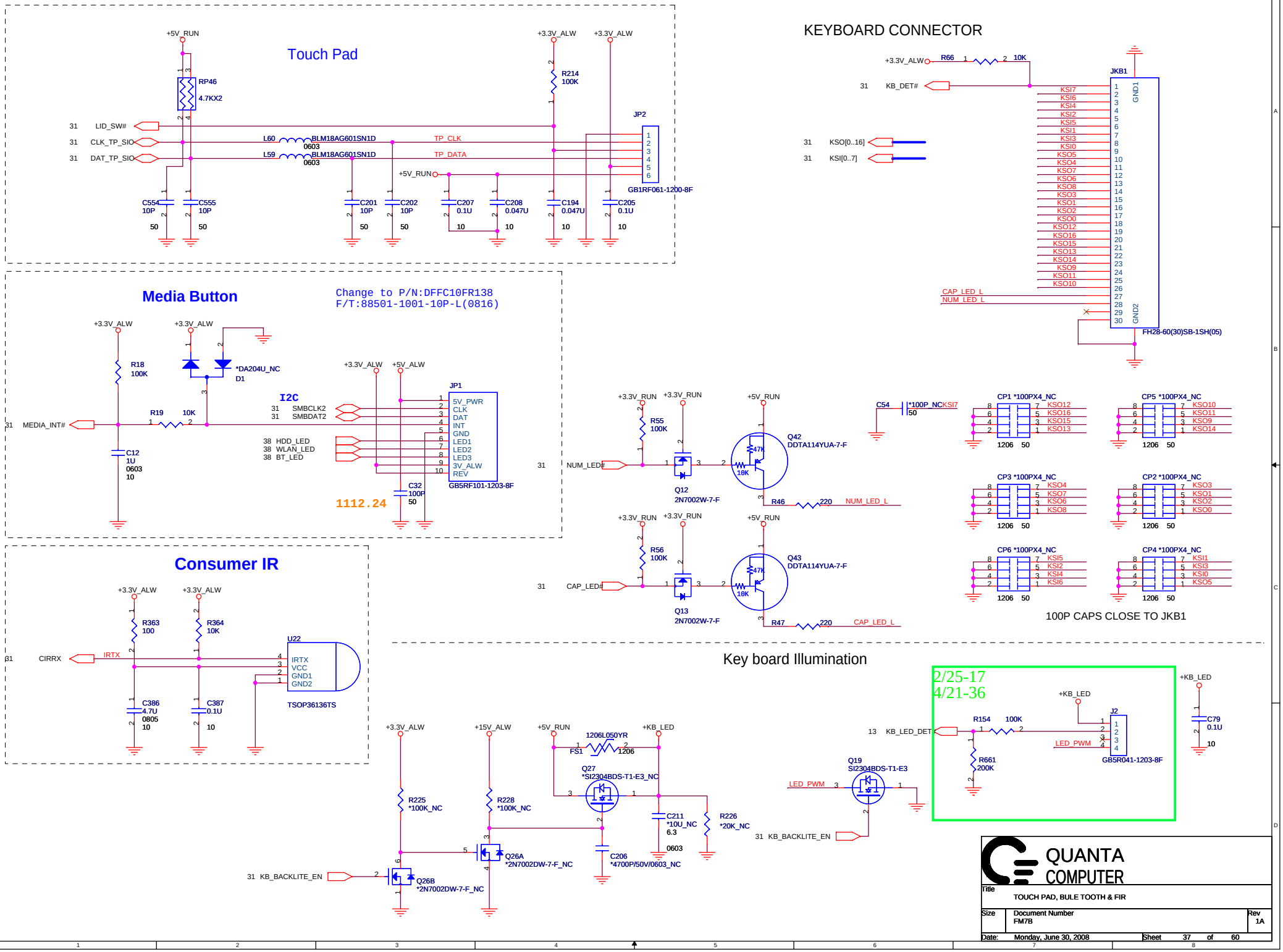
Date: Monday, July 14, 2008	Sheet 36 of 60	


Touch Pad
+5V_RUN
RP46
4.7KX2
+3.3V_ALW
R214
100K
JP2
31 LID_SW#
31 CLK_TP_SIO
31 DAT_TP_SIO
L60 BLM18AG601SN1D 0603
L59 BLM18AG601SN1D 0603
TP_CLK
TP_DATA
GB1RF061-1200-8F
C554 10P 50
C555 10P 50
C201 10P 50
C202 10P 50
C207 0.1U 10
C208 0.047U 10
C194 0.047U 10
C205 0.1U 10
KEYBOARD CONNECTOR
R66 10K
31 KB_DET#
31 KSO[0..16]
31 KSI[0..7]
JKB1
KSI7 KSI6 KSI4 KSI2 KSI5 KSI1 KSI3 KSI0
KSO5 KSO4 KSO7 KSO6 KSO8 KSO3 KSO1 KSO2 KSO0 KSO12 KSO16 KSO15 KSO13 KSO14 KSO9 KSO11 KSO10
GND1
GND2
CAP_LED_L
NUM_LED_L
FH28-60(30)SB-1SH(05)
Media Button
Change to P/N:DFFC10FR138
F/T:88501-1001-10P-L(0816)
R18 100K
*DA204U_NC
D1
R19 10K
31 MEDIA_INT#
I2C
31 SMBCLK2
31 SMBDAT2
38 HDD_LED
38 WLAN_LED
38 BT_LED
JP1
5V_PWR
CLK
DAT
INT
GND
LED1
LED2
LED3
3V_ALW
REV
GB5RF101-1203-8F
C12 1U 0603 10
C32 100P 50
1112.24
R55 100K
Q12 2N7002W-7-F
Q42 DDTA114YUA-7-F
47K
10K
R46 220 NUM_LED_L
NUM_LED#
C54 *100P_NCKSI7 50
R56 100K
Q13 2N7002W-7-F
Q43 DDTA114YUA-7-F
R47 220 CAP_LED_L
CAP_LED#
CP1 *100PX4_NC KSO12 KSO16 KSO15 KSO13
CP5 *100PX4_NC KSO10 KSO11 KSO9 KSO14
CP3 *100PX4_NC KSO4 KSO7 KSO6 KSO8
CP2 *100PX4_NC KSO3 KSO1 KSO2 KSO0
CP6 *100PX4_NC KSI5 KSI2 KSI4 KSI6
CP4 *100PX4_NC KSI1 KSI3 KSI0 KSO5
1206 50
100P CAPS CLOSE TO JKB1
Consumer IR
R363 100
R364 10K
31 CIRRX
IRTX
U22
IRTX
VCC
GND1
GND2
TSOP36136TS
C386 4.7U 0805 10
C387 0.1U 10
Key board Illumination
2/25-17
4/21-36
13 KB_LED_DET
R154 100K
R661 200K
+KB_LED
J2
LED_PWM
GB5R041-1203-8F
C79 0.1U 10
Q19 SI2304BDS-T1-E3
31 KB_BACKLITE_EN
+15V_ALW
1206L050YR
FS1 1206
Q27 *SI2304BDS-T1-E3_NC
R225 *100K_NC
R228 *100K_NC
R226 *20K_NC
C211 *10U_NC 6.3 0603
C206 *4700P/50V/0603_NC
Q26A *2N7002DW-7-F_NC
Q26B *2N7002DW-7-F_NC
QUANTA COMPUTER
Title TOUCH PAD, BULE TOOTH & FIR
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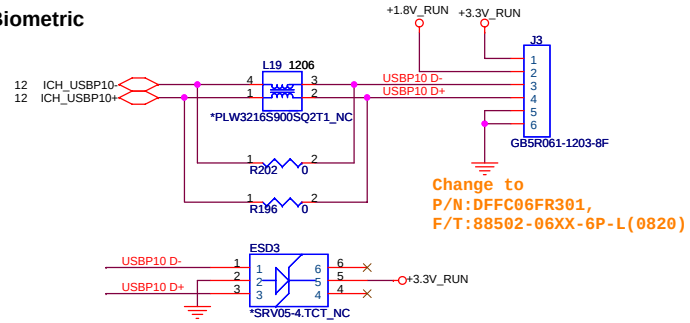
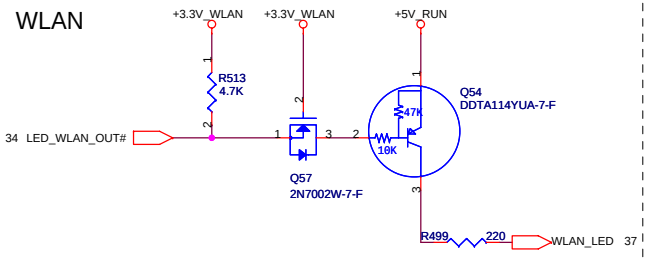
Date: Monday, June 30, 2008 Sheet 37 of 60

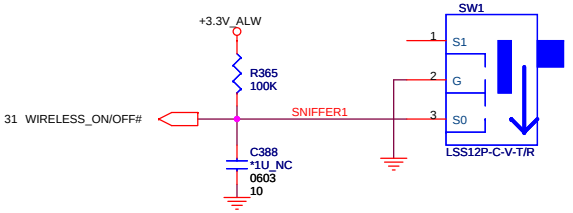
Biometric



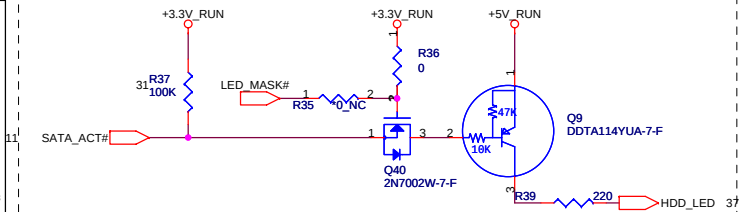
WLAN



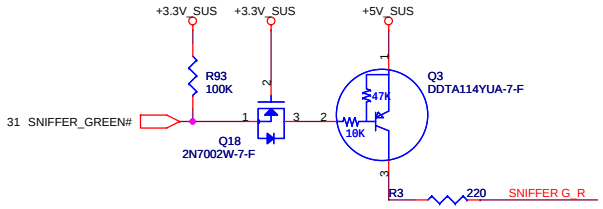
Sniffer Switch ON/OFF Sniffer Switch



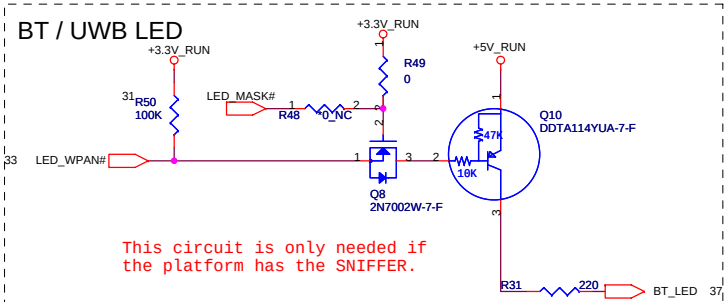
HDD activity LED.

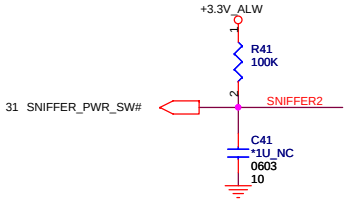


Sniffer Buttom

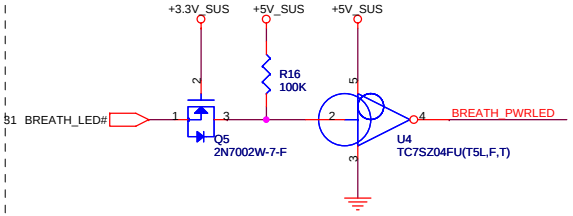


BT / UWB LED

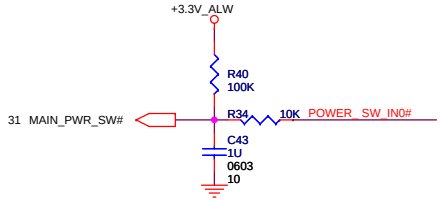




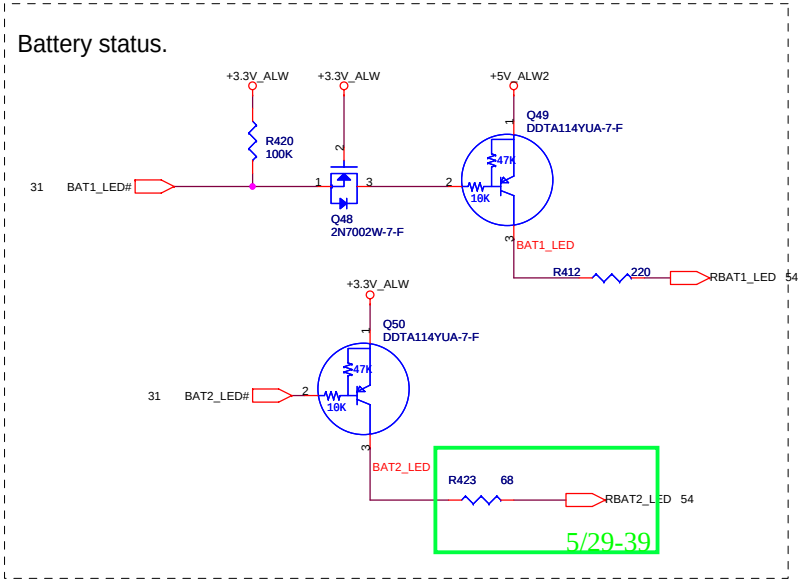
Power & Suspend.

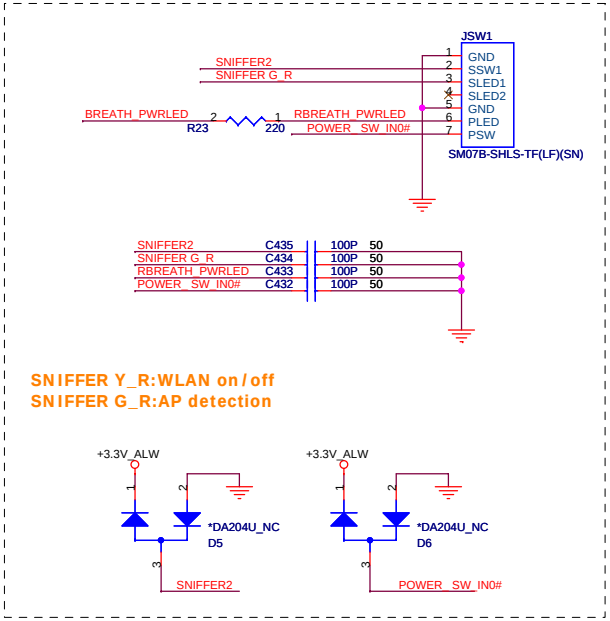


Power Switch



Battery status.





QUANTA COMPUTER

Title	SWITCH, KEYBOARD & LED	
Size	Document Number FM7B	Rev 1A
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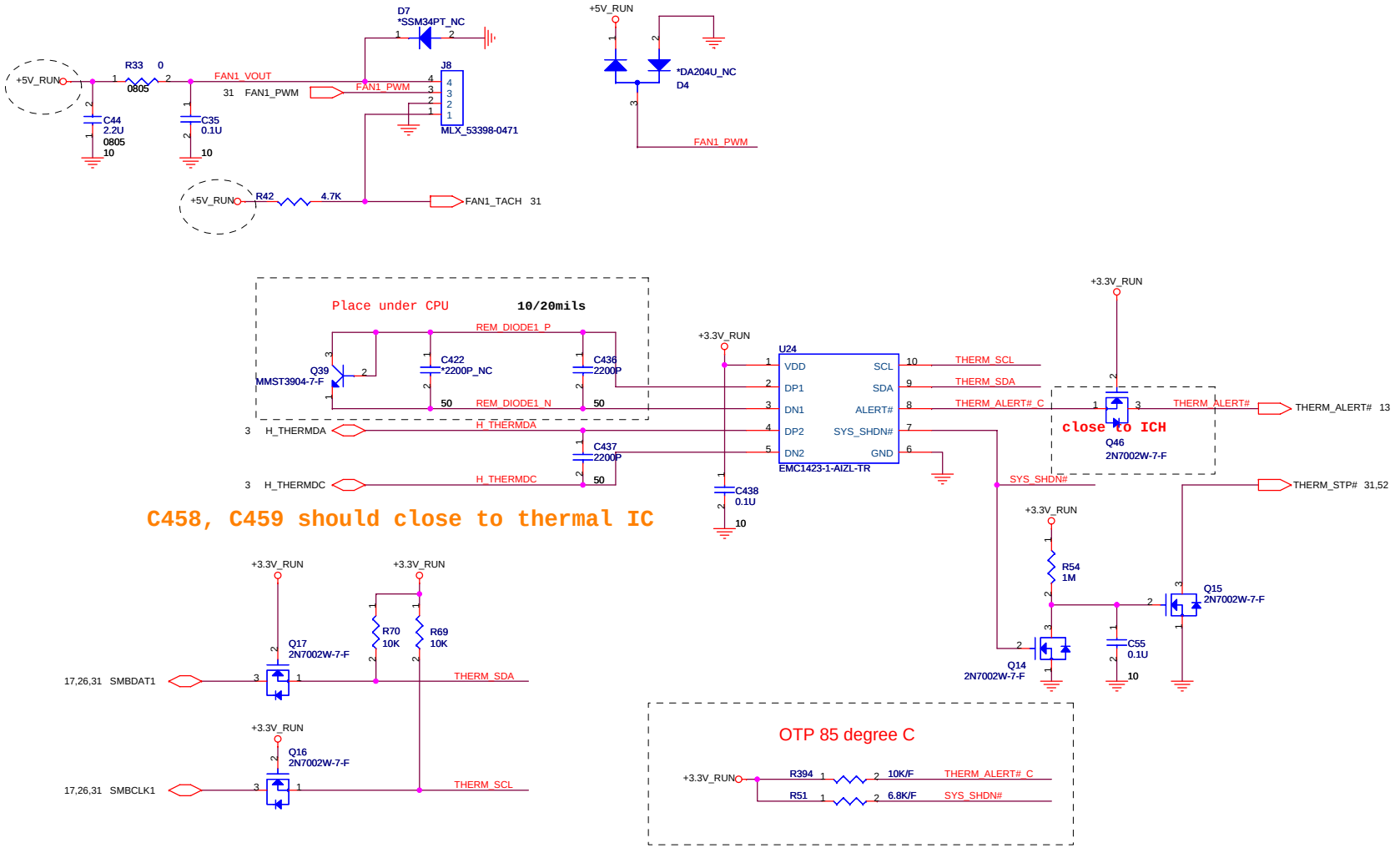
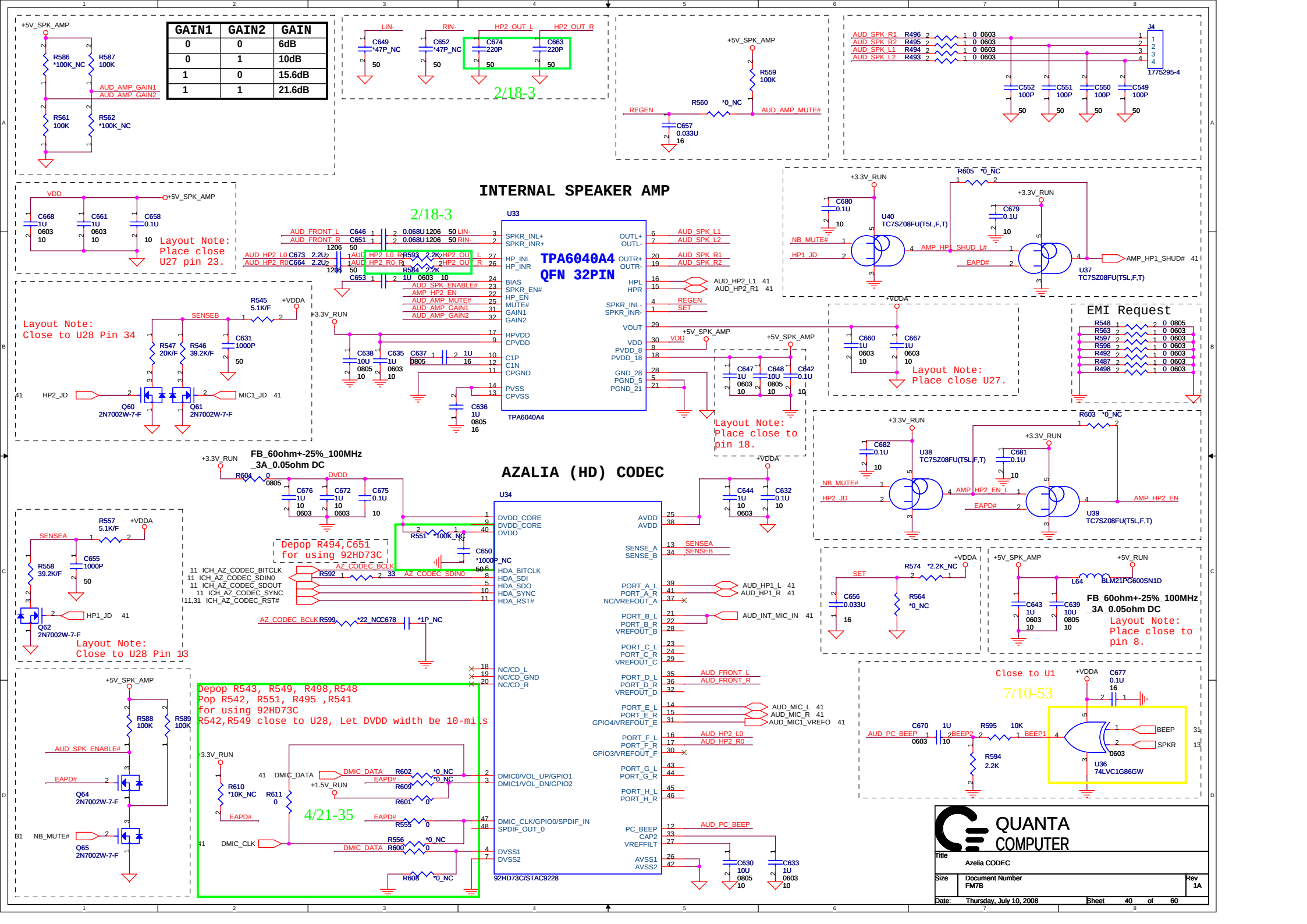
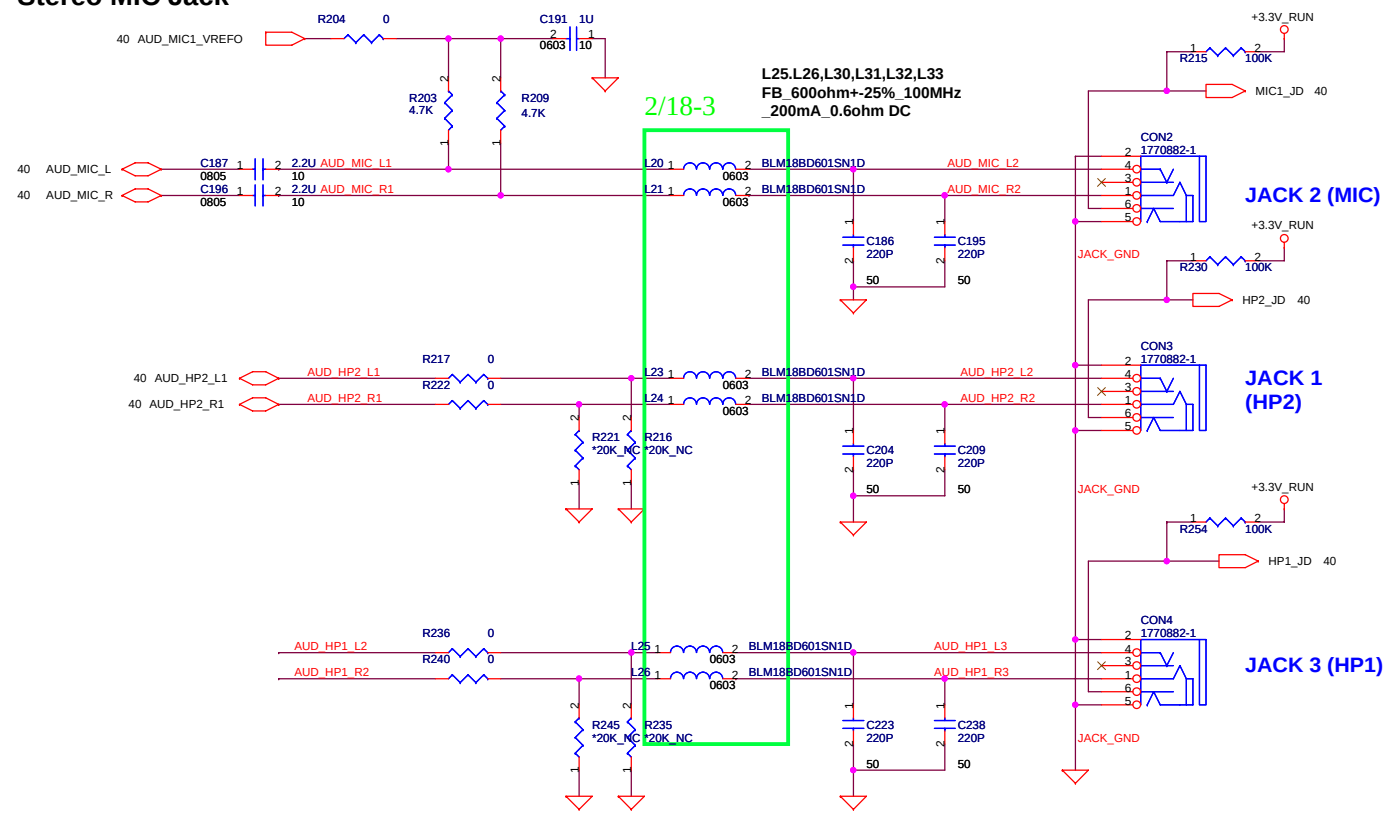


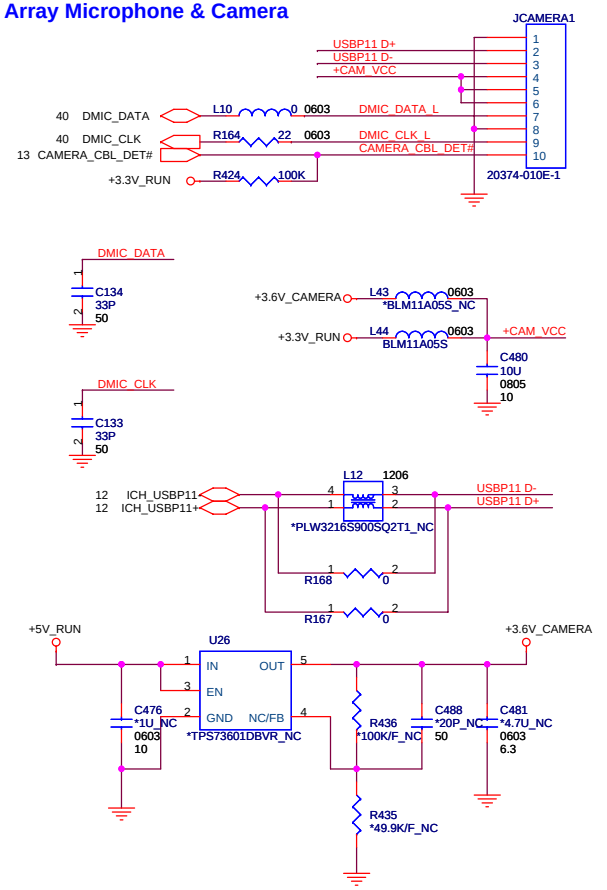
QUANTA COMPUTER		
Title	FAN & THERMAL	
Size	Document Number FM7B	Rev 1A
Date: Monday, July 14, 2008	Sheet 39 of 60	

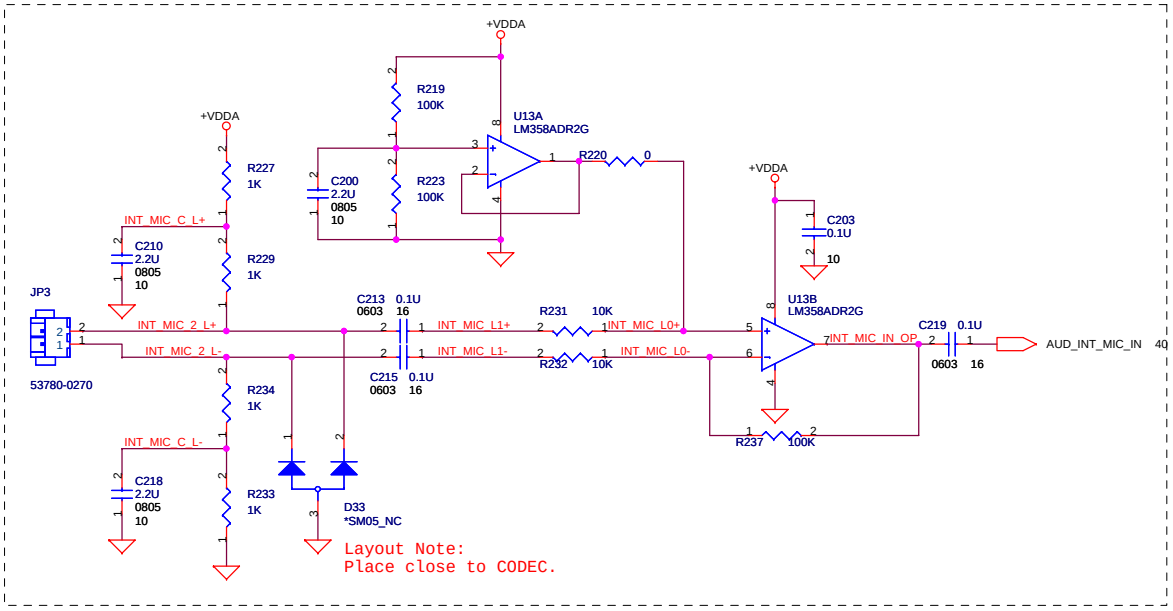

INTERNAL SPEAKER AMP
AZALIA (HD) CODEC
TPA6040A4
QFN 32PIN
92HD73C/STAC9228
GAIN1 GAIN2 GAIN
0 0 6dB
0 1 10dB
1 0 15.6dB
1 1 21.6dB
2/18-3
4/21-35
7/10-53
Layout Note: Close to U28 Pin 34
Layout Note: Close to U28 Pin 13
Layout Note: Place close U27 pin 23.
Layout Note: Place close to pin 18.
Layout Note: Place close U27.
Layout Note: Place close to pin 8.
EMI Request
Depop R494,C651 for using 92HD73C
Depop R543, R549, R498,R548
Pop R542, R551, R495 ,R541
for using 92HD73C
R542,R549 close to U28, Let DVDD width be 10-mils
FB_60ohm+-25%_100MHz _3A_0.05ohm DC
Close to U1
QUANTA COMPUTER
Azelia CODEC
FM7B
Rev 1A
Thursday, July 10, 2008
Sheet 40 of 60

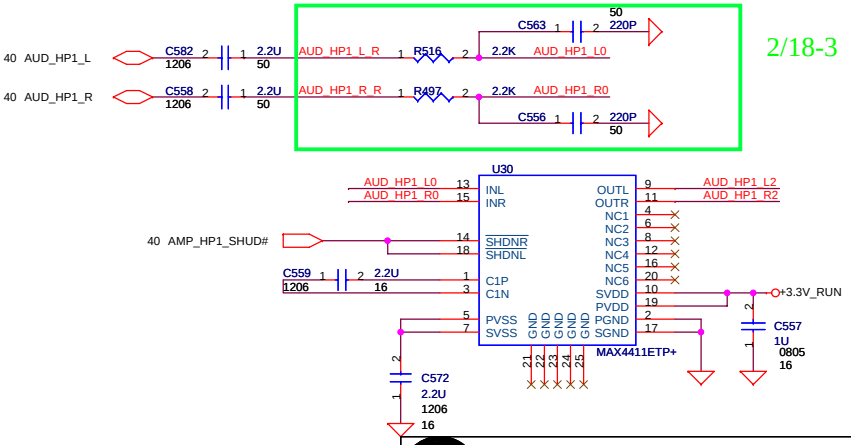
Headphone Jack
Stereo MIC Jack



Array Microphone & Camera







QUANTA COMPUTER		
Title: AUDIO CONN		
Size	Document Number FM7B	Rev 1A
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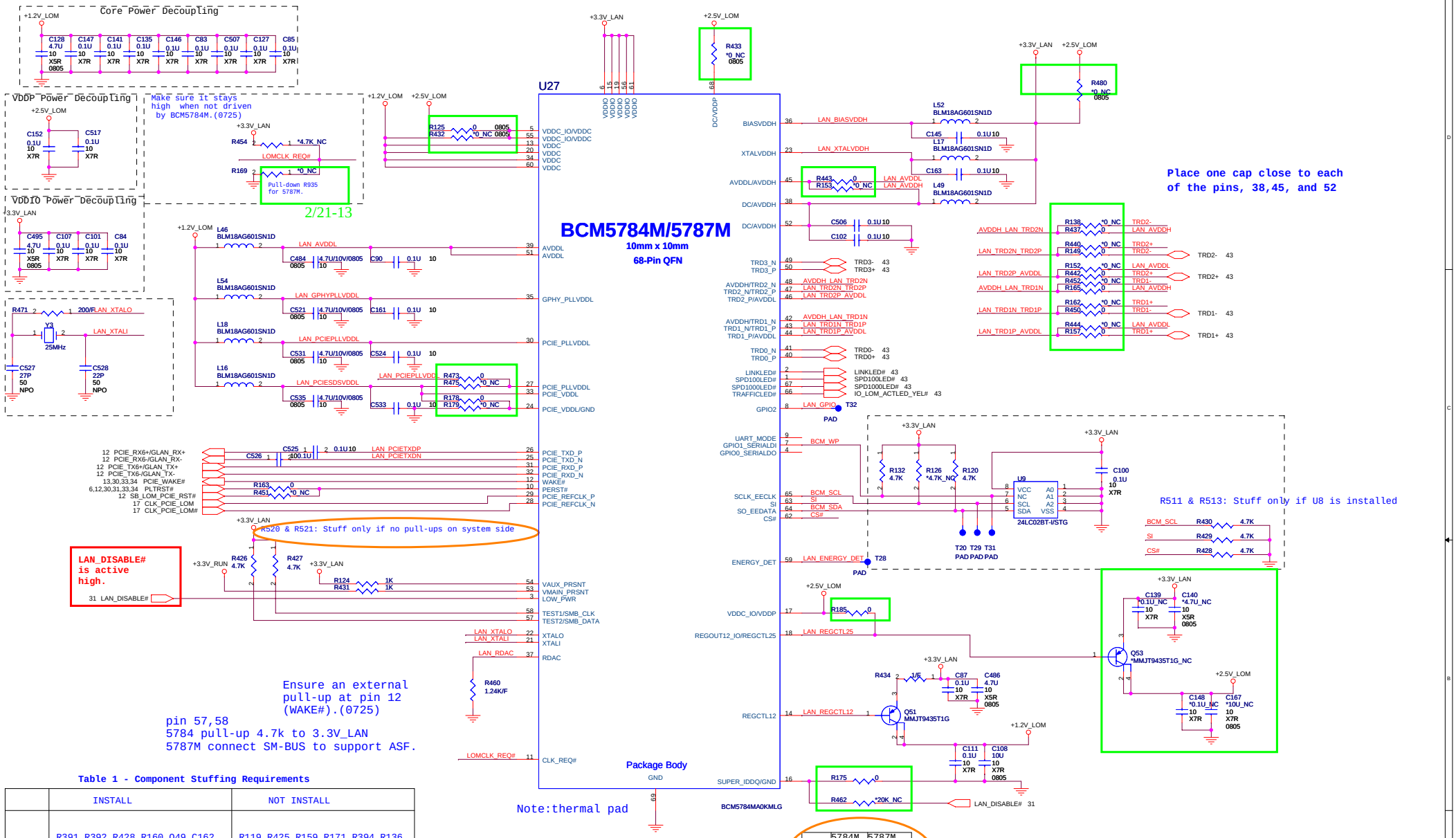

Table 1 - Component Stuffing Requirements

	INSTALL	NOT INSTALL
5787M	R391,R392,R428,R160,Q49,C162, C163,C179,C191,R132,R397,R139, R411,R149,R403,R141,R433	R119,R425,R159,R171,R394,R136, R401,R151,R409,R143,R402,R177
5784	R119,R425,R159,R171,R394,R136, R401,R151,R409,R143,R402,R177	R391,R392,R428,R160,Q49,C162, C163,C179,C191,R132,R397,R139, R411,R149,R403,R141,R433

	5784M	5787M
R157	39k	0
R418	20k	*20k_NC

QUANTA COMPUTER

Title	LAN	
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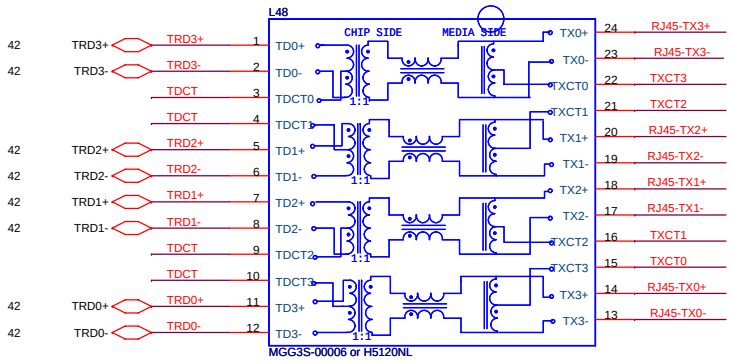
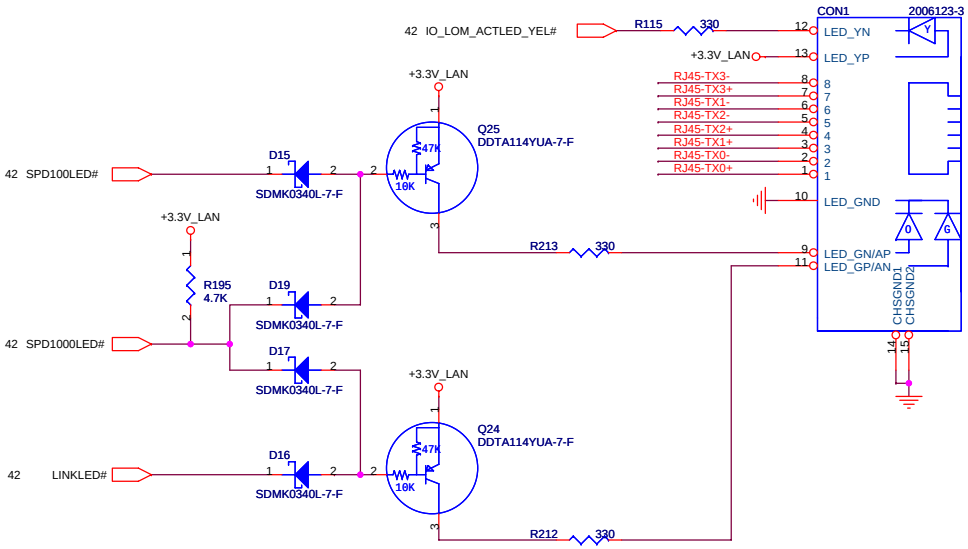
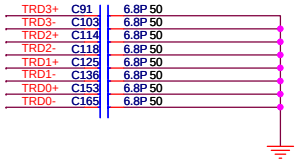
TRANSFORM

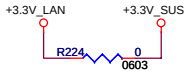
TRANSFORM

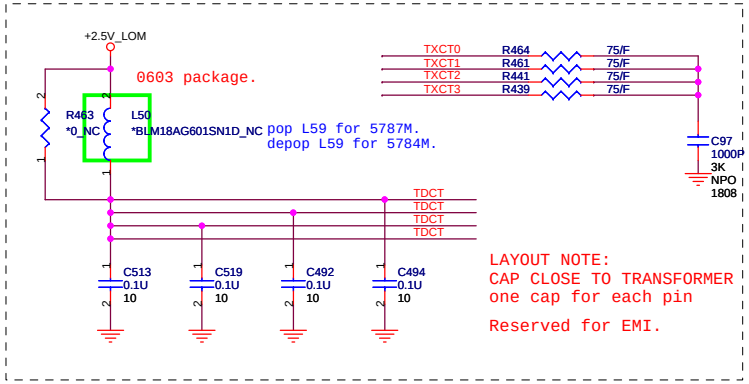


RJ-45 Connector









QUANTA COMPUTER

Title	LAN SWITCH	
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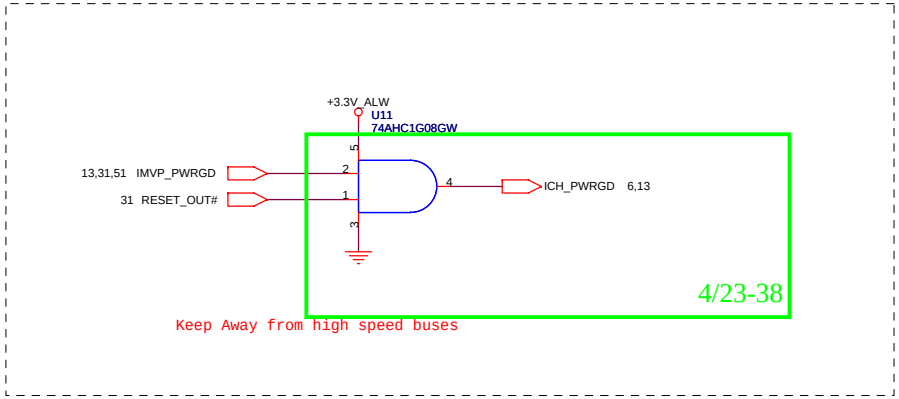

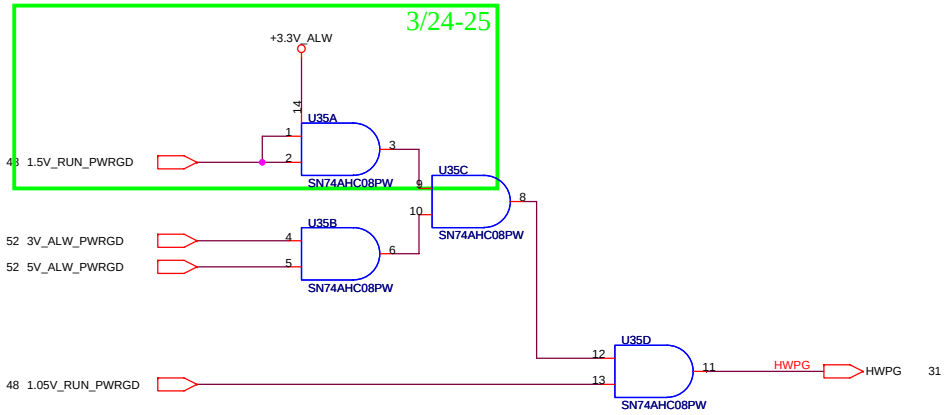

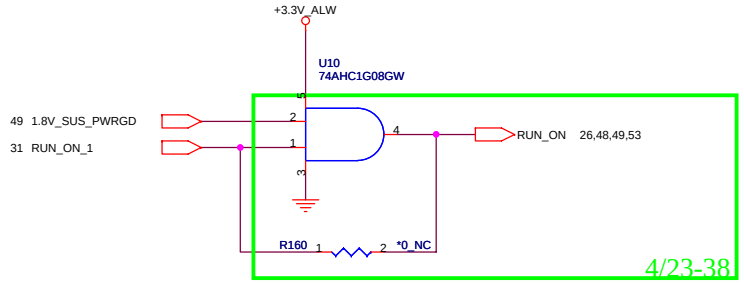

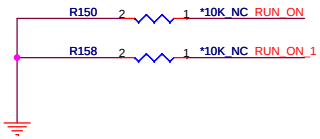

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Title	System Reset Circuit	
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QUANTA COMPUTER

Title	Docking Q-SWITCH	
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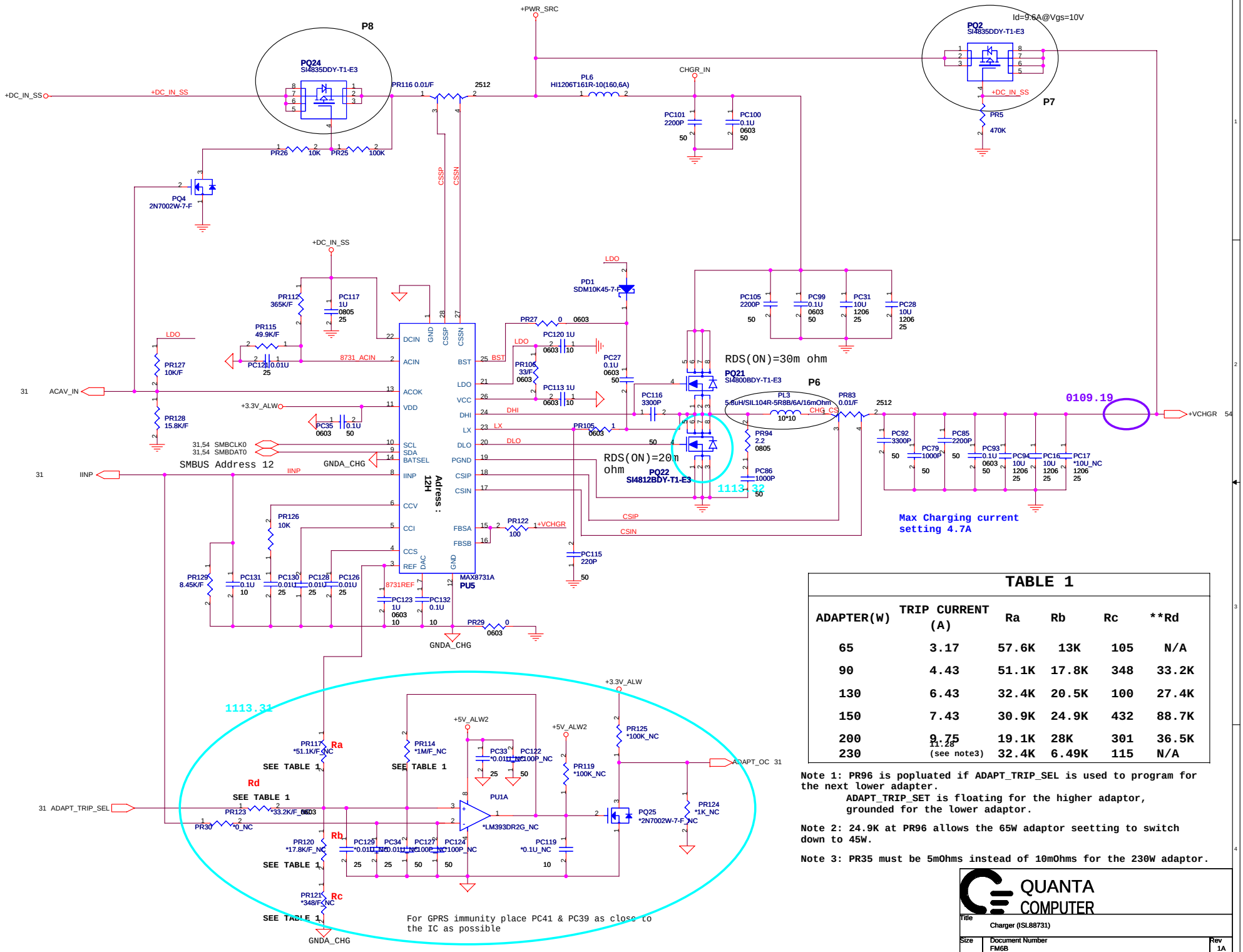

TABLE 1

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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Title		
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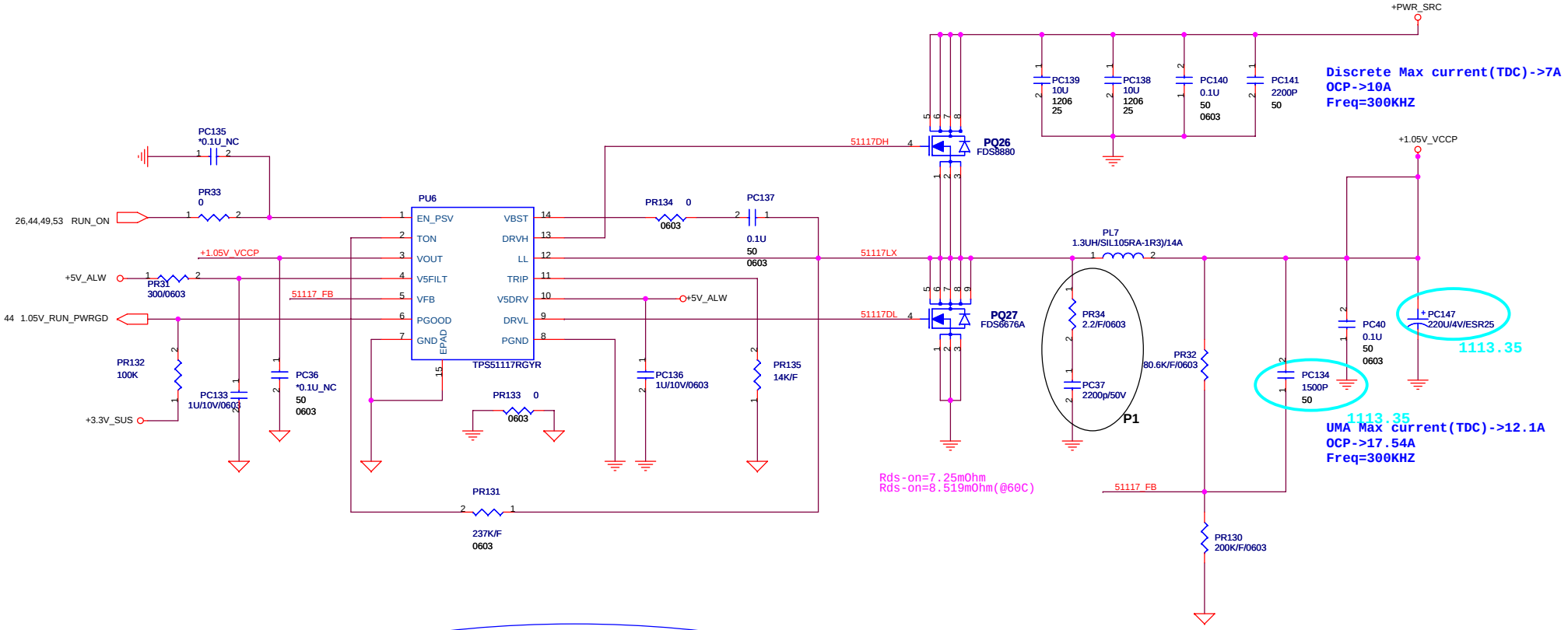

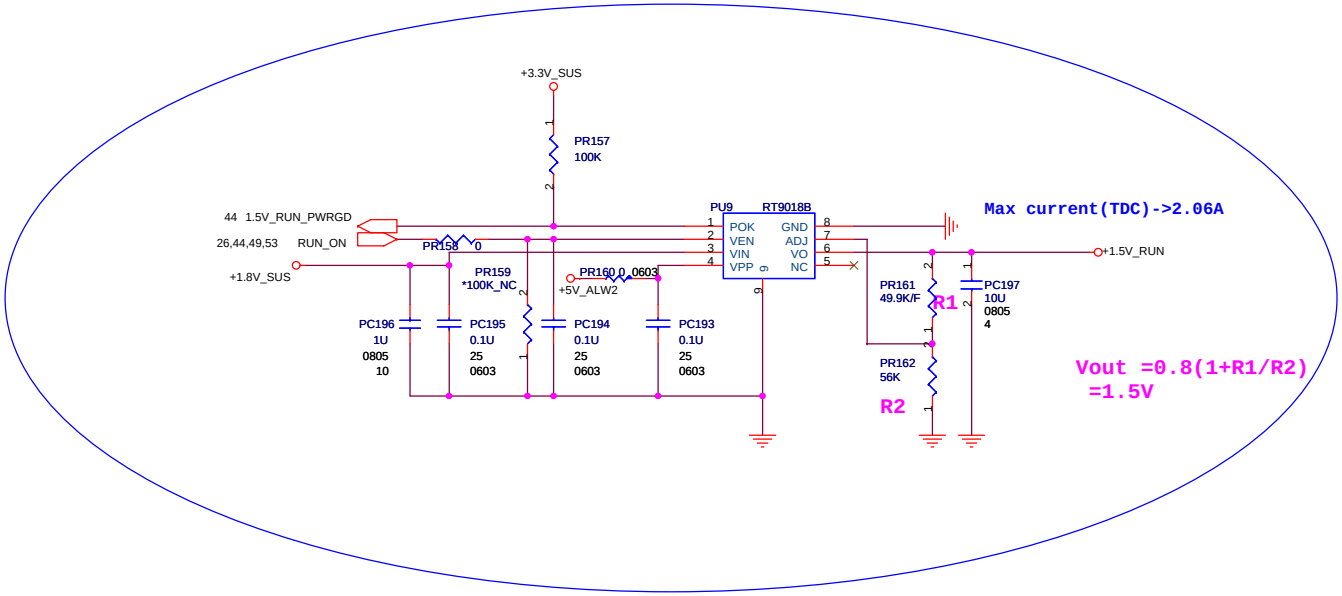

	UMA(12.1A)	Discrete(7A)
PQ22	FDS8880_NL (BAM88800012)	FDS8878 (BAM88780020)
PQ25	FDS6676AS_NL (BAM66760026)	FDS6680AS (BAM66800061)
PL25	SIL105RA-1R5-R (CV-15F0MZ08)	SIL104R-1R5PF (DC-15A00010)
PR452		

QUANTA COMPUTER

Title	1.05_VCCP & 1.5V_RUN	
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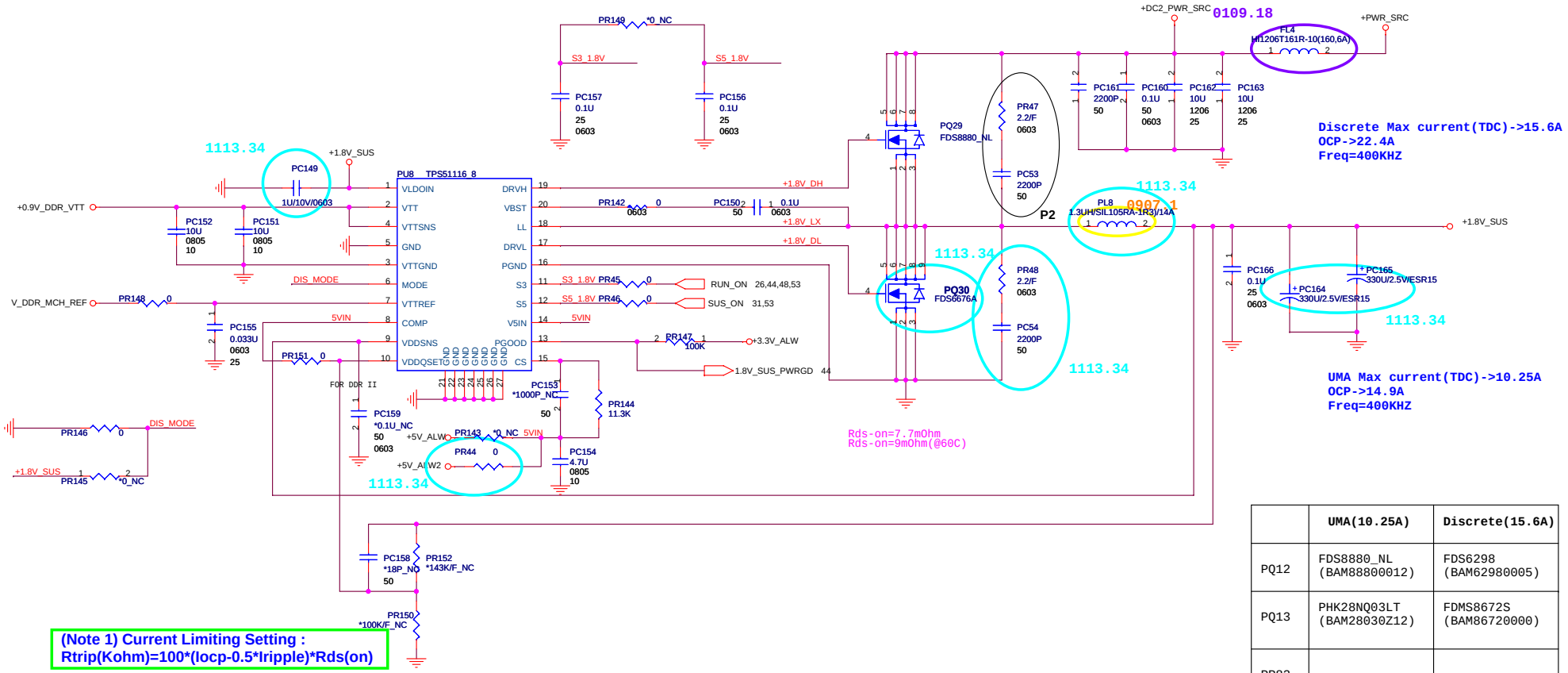

	UMA(10.25A)	Discrete(15.6A)
PQ12	FDS8880_NL (BAM88800012)	FDS6298 (BAM62980005)
PQ13	PHK28NQ03LT (BAM28030Z12)	FDMS8672S (BAM86720000)
PR83		

QUANTA COMPUTER

Title	1.8VSUS & 0.9VTT (TPS51116)	
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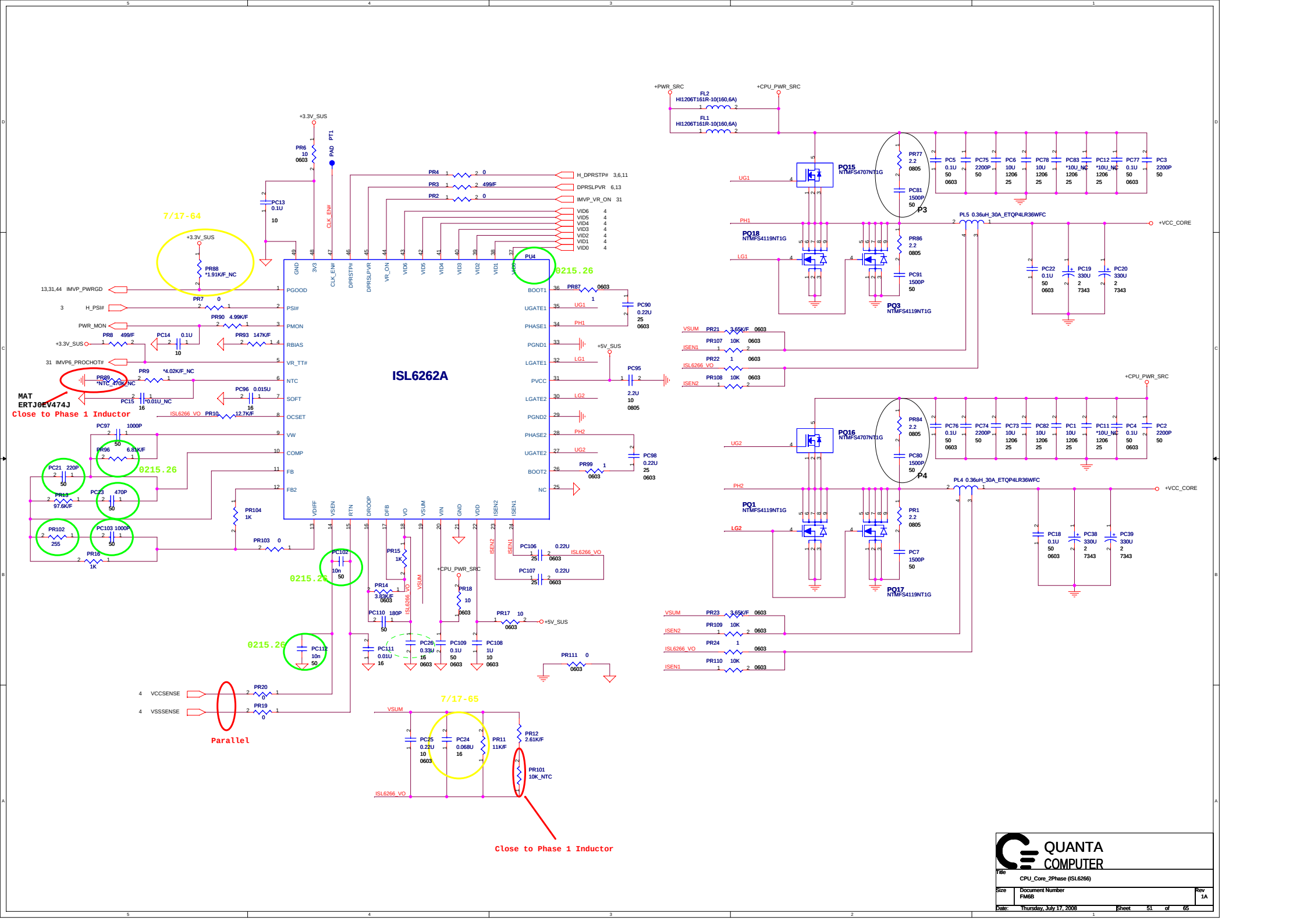
ISL6262A
+3.3V_SUS
+PWR_SRC
+CPU_PWR_SRC
+VCC_CORE
+5V_SUS
7/17-64
7/17-65
0215.26
MAT
ERTJ0EV474J
Close to Phase 1 Inductor
Parallel
Close to Phase 1 Inductor
PQ15 NTMFS4707NT1G
PQ18 NTMFS4119NT1G
PQ3 NTMFS4119NT1G
PQ16 NTMFS4707NT1G
PQ1 NTMFS4119NT1G
PQ17 NTMFS4119NT1G
P3
P4
PU4
QUANTA COMPUTER
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CPU_Core_2Phase (ISL6266)
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65

DC/DC +3V_ALW/+5V_SUS/+5V_ALW /+15V_ALW

Place these CAPs close to FETs

Place these CAPs close to FETs

Max current(TDC)->6A
OCP->8.3A
Freq=400KHZ

Max current(TDC)->6.2A
OCP->8.63A
Freq=300KHZ

Rds-on=20mOhm
Rds-on=23.5mOhm(@60C)

Rds-on=20mOhm
Rds-on=23.5mOhm(@60C)

1105.12

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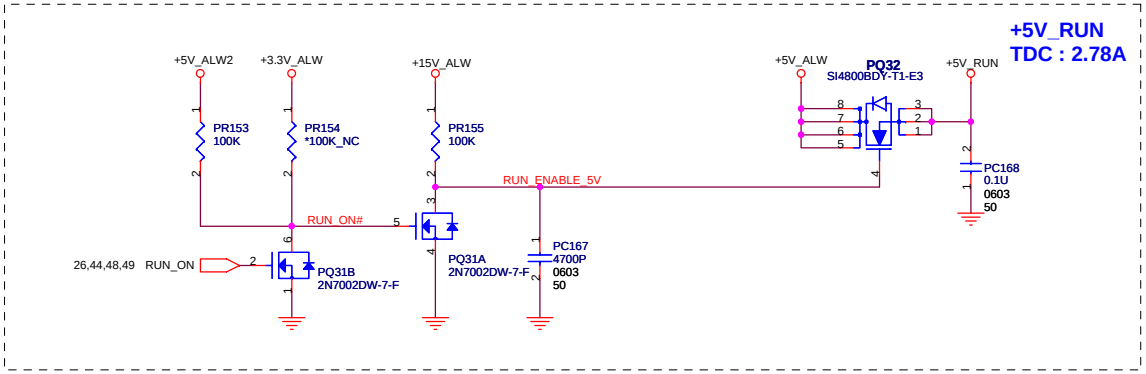
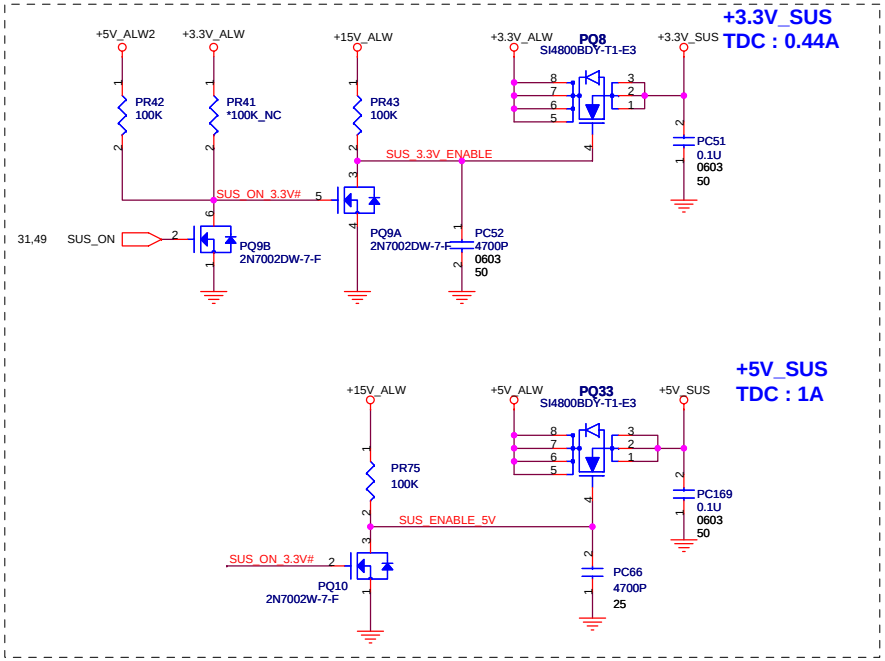
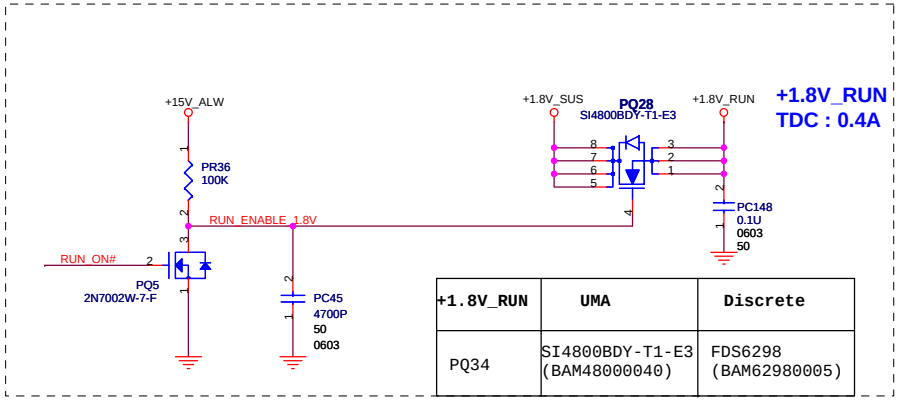
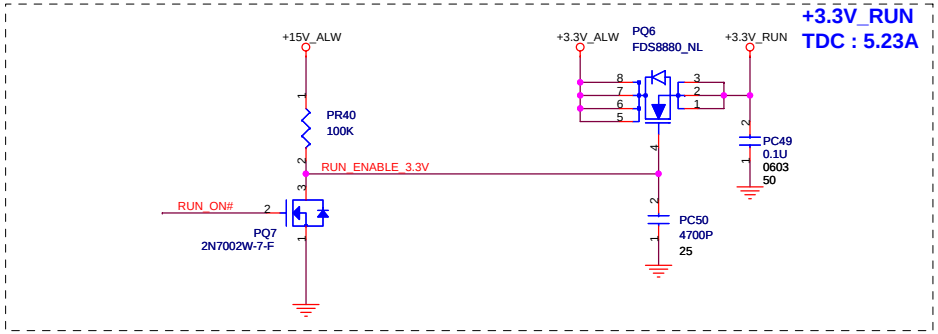
QUANTA COMPUTER

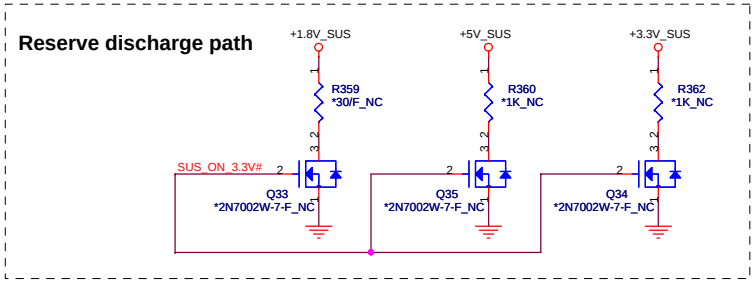


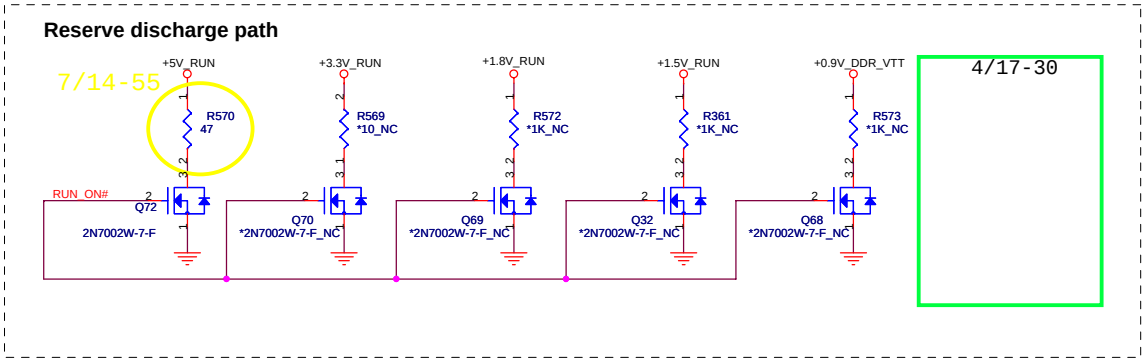




+1.8V_RUN	UMA	Discrete
PQ34	SI4800BDY-T1-E3 (BAM48000040)	FDS6298 (BAM62980005)







QUANTA COMPUTER

Title	RUN POWER SW	
Size	Document Number FM6B	Rev 1A
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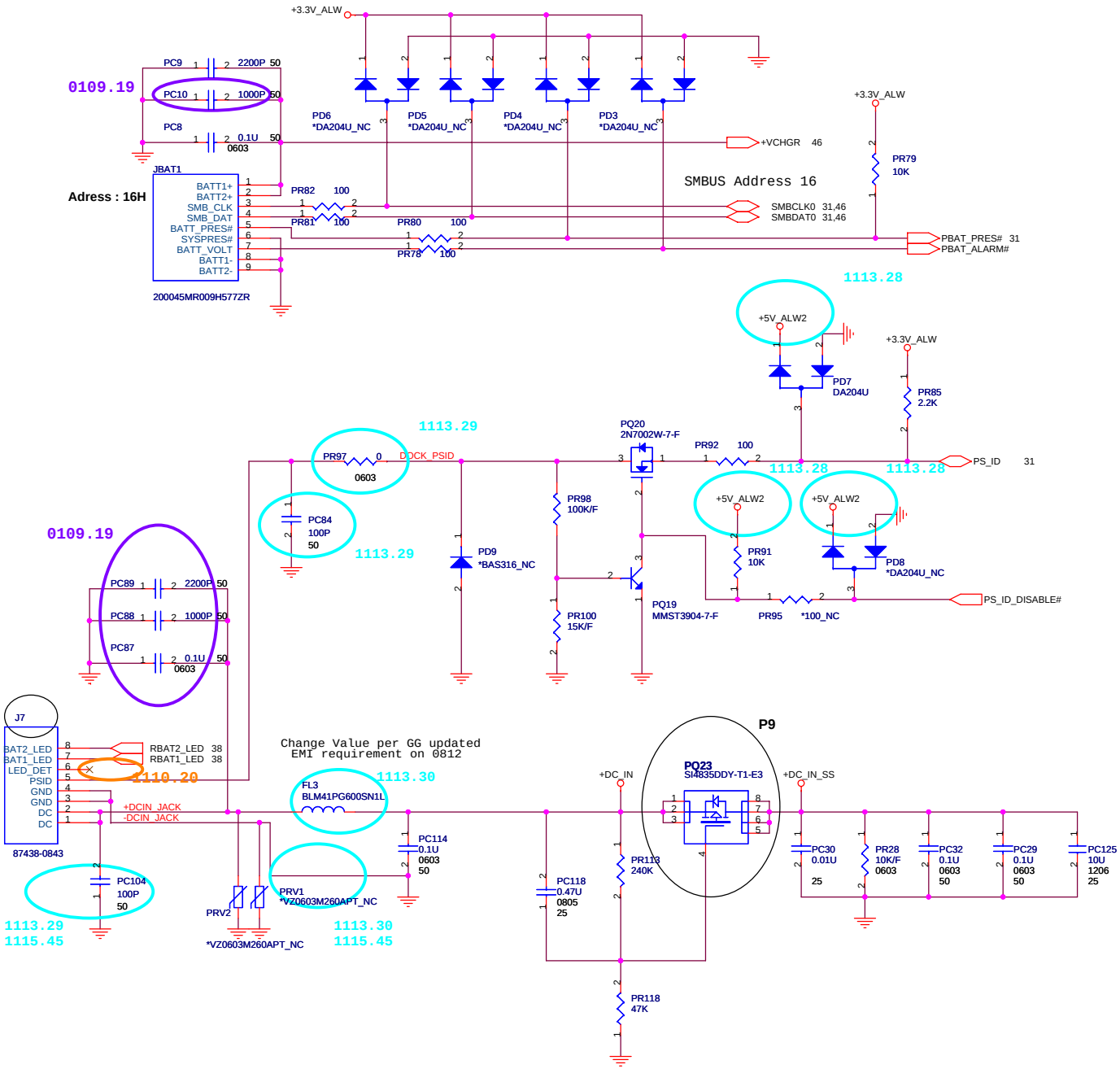

QUANTA COMPUTER		
Title: DCIN,BATT CONNECTOR		
Size	Document Number FM6B	Rev 1A
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H8
H-C126D126N
H-C126D126N

H16
H-O126X157D126X157N
H-O126X157D126X157N

H2
H-TC197BC236D110P2
H-TC197BC236D110P2

H21
H-O126X157D126X157N
h-o165x87d165x87n

H24
H-O126X157D126X157N
H-C118D118N

PV1
PAD138X98XH
GND

PV2
PAD158X98XH
GND

3/3-21

6/12-45

TH34
h-o71x118d32x79p2

TH35
h-o71x118d32x79p2

6/12-46

H20
H-TC354BS335D110P2-V4
H-TC354BS335D110P2-V4

H6
H-TC276BC315D110P2-V4
H-TC276BC315D110P2-V4

H3
H-TC197BC236D110P2-V4
H-TC197BC236D110P2-V4

H18
H-TSBC315D110P2-V4
H-TSBC315D110P2-V4

H7
H-TC197BC217D110P2-V4
H-TC197BC217D110P2-V4

H11
H-TC216BC236D110P2-V4
H-TC216BC236D110P2-V4

H17
H-TSBC315D126P2-V4
H-TSBC315D126P2-V4

H15
H-TC197BC236D110P2-V4
H-TC197BC236D110P2-V4

H13
H-C315D110P2-V4
H-C315D110P2-V4

H19
H-TC335BS335D110P2-V4
H-TC335BS335D110P2-V4

FOR CPU use

H10
H-C276D157P2
H-C276D157P2

H5
H-C276D177P2
H-C276D177P2

H9
H-C276D157P2
H-C276D157P2

H4
H-C276D157P2
H-C276D157P2

For FAN nut use.

TH1
H-TC138BC205D83P2

H1
H-TC197BC236D110P2-V4
H-TC197BC236D110P2-V4

H14
H-C236D110P2-V4
H-C236D110P2-V4

H12
H-C236D110P2-V4
H-C236D110P2-V4

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Title	SCREW PAD	
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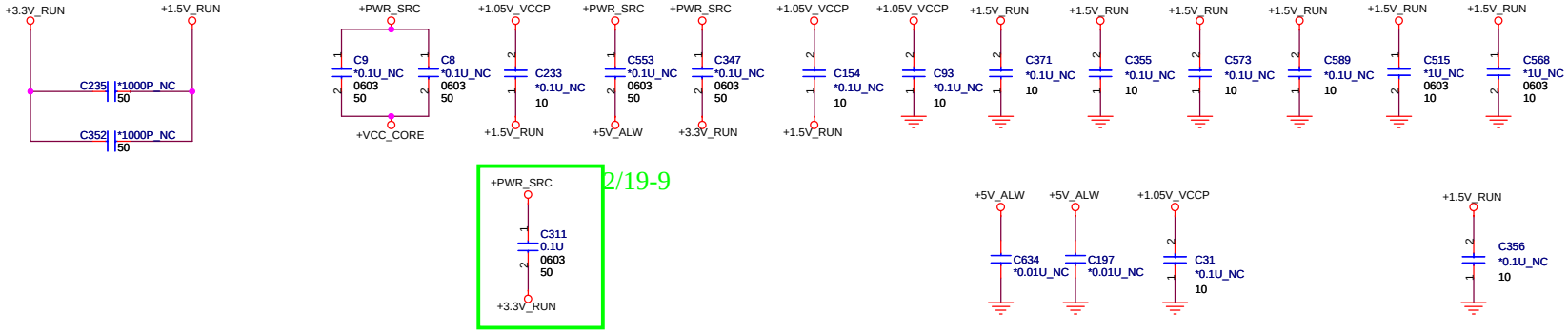
Reserved for EMI.

Stitching caps.



2/19-9

QUANTA COMPUTER

Title	EMI CAP	
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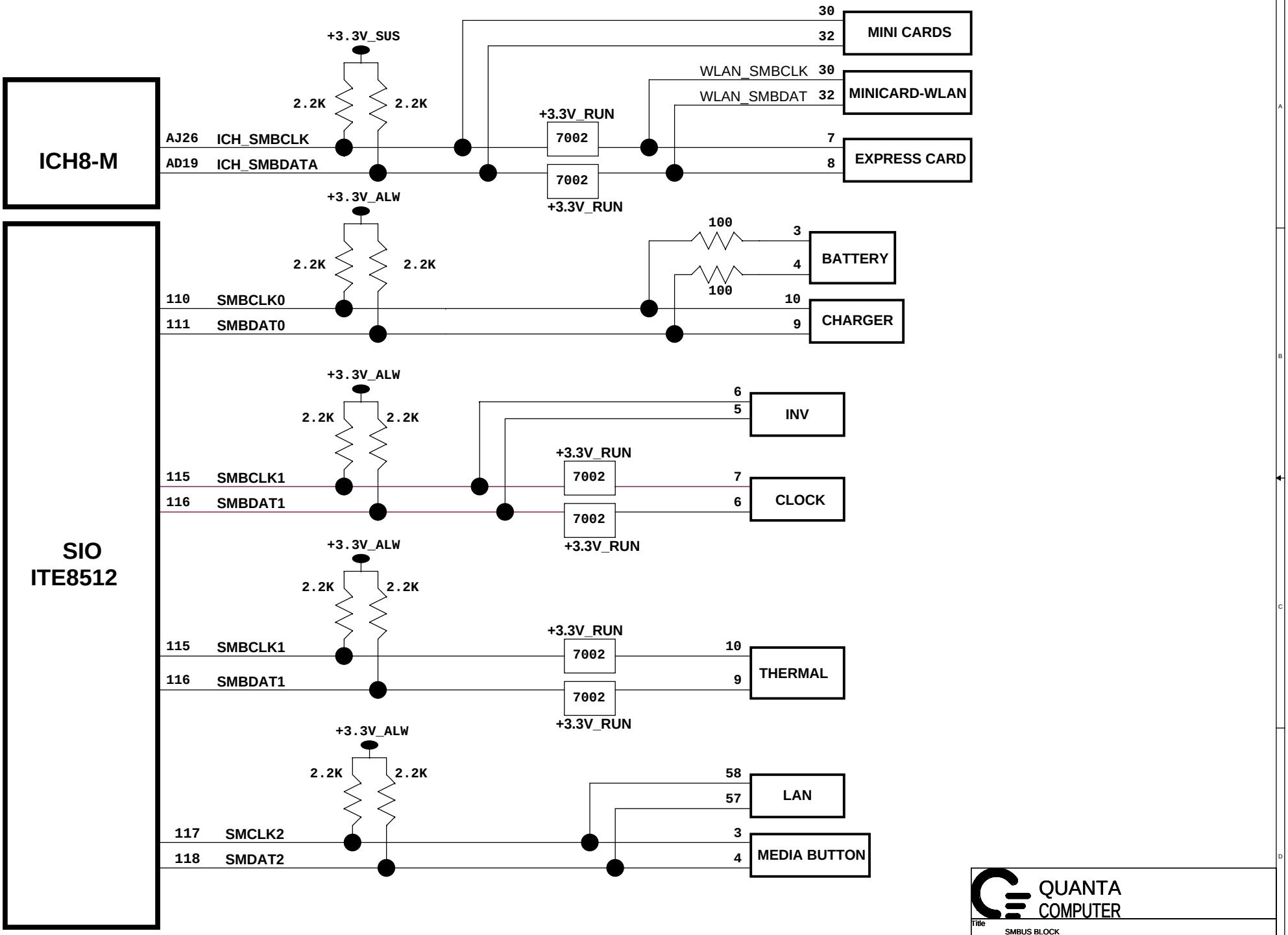

QUANTA COMPUTER

Title	SMBUS BLOCK	
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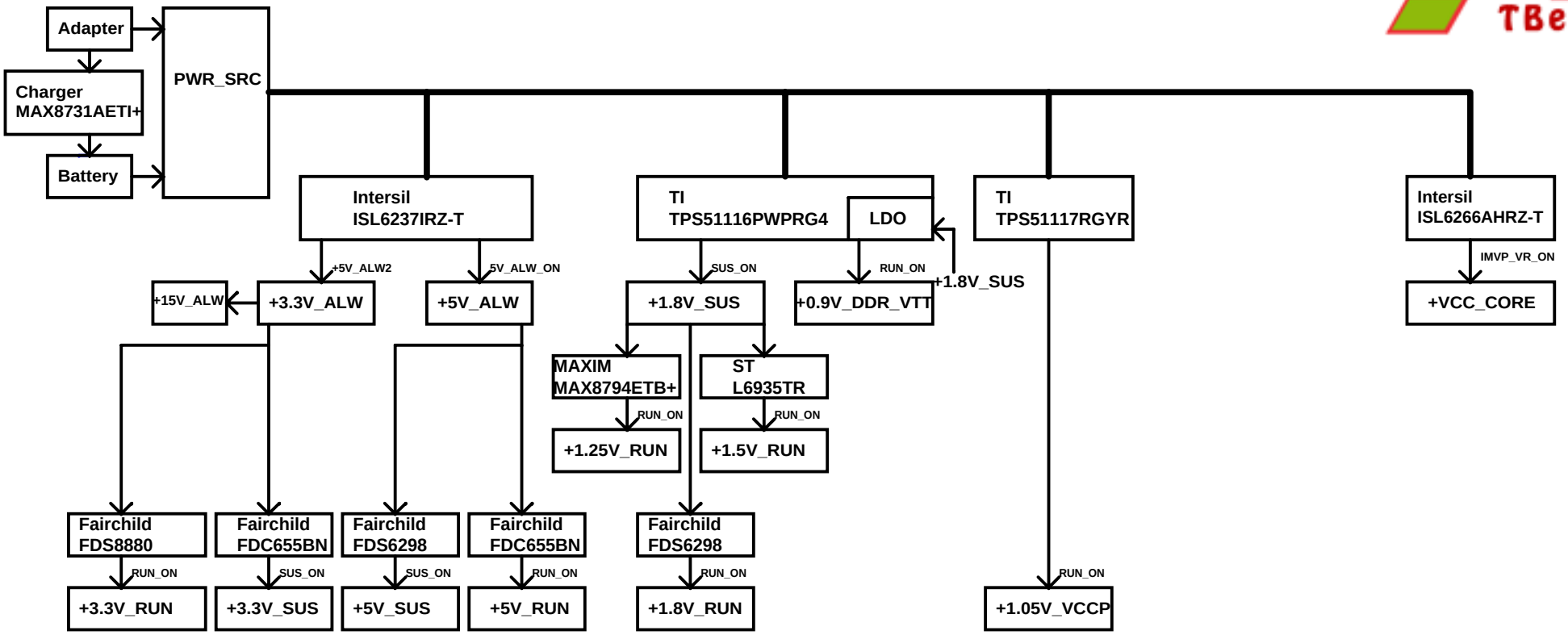

QUANTA COMPUTER

Title	Schematic Block Diagram1	
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