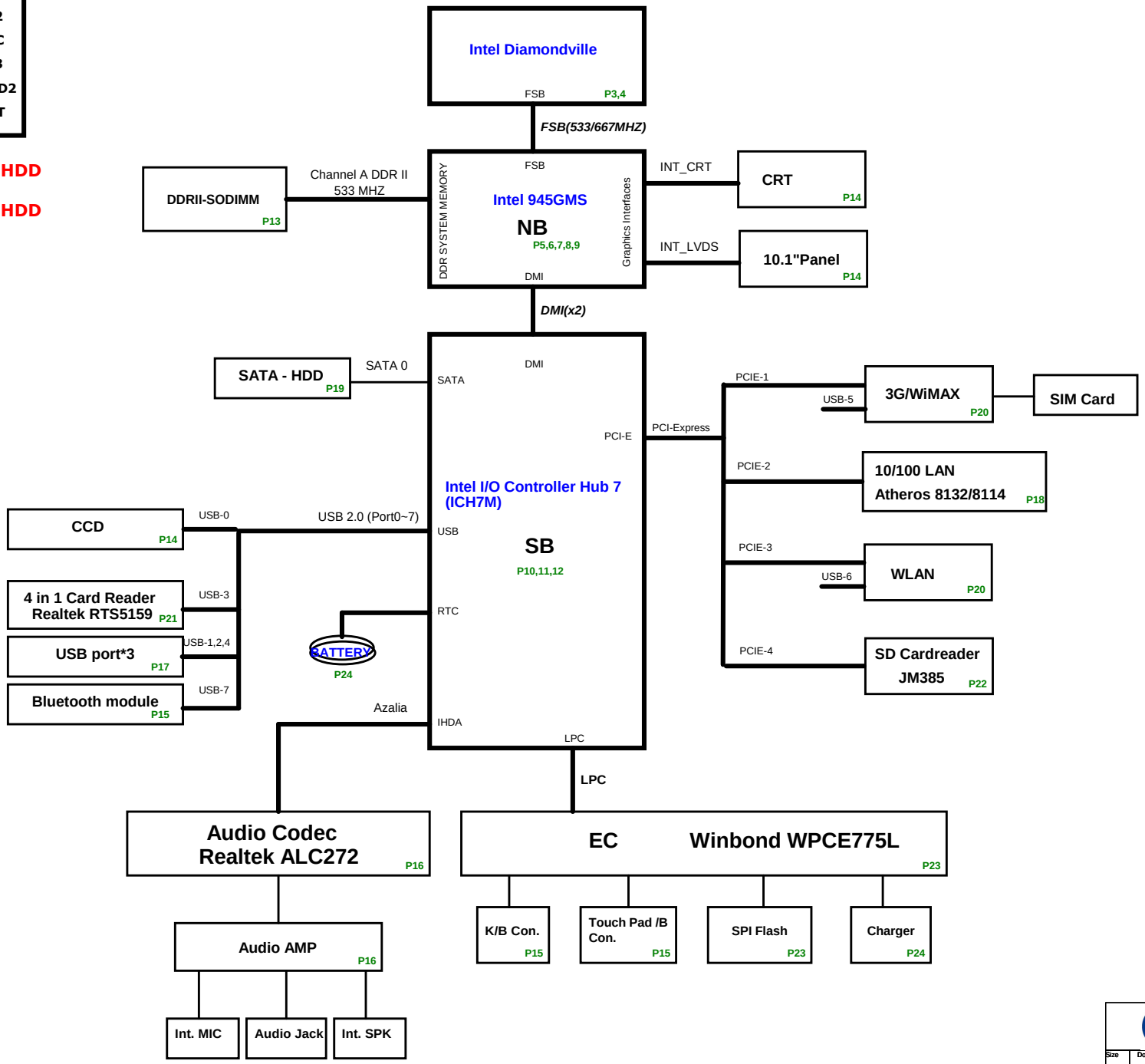
ZG8 Block Diagram

PCB STACK UP

- LAYER 1 : TOP
- LAYER 2 : GND1
- LAYER 3 : IN1
- LAYER 4 : IN2
- LAYER 5 : VCC
- LAYER 6 : IN3
- LAYER 7 : GND2
- LAYER 8 : BOT

1.8@ for 1.8HDD

2.5@ for 2.5HDD



CK505 P2

POWER SYSTEM

ISL88731	P24
ISL6237	P25
ISL6261A	P26
TPS51116	P27
G9338	P29
RT8202	P30

VCC_CORE

+1.5V

+1.05V

+1.8VSUS

+1.5VVSUS
+2.5V
3VPCU
+3.3V
+3.3VSUS
LCD_3.3V
LCD_5V
+5V
+SMDDR_VTERM
+SMDDR_VREF

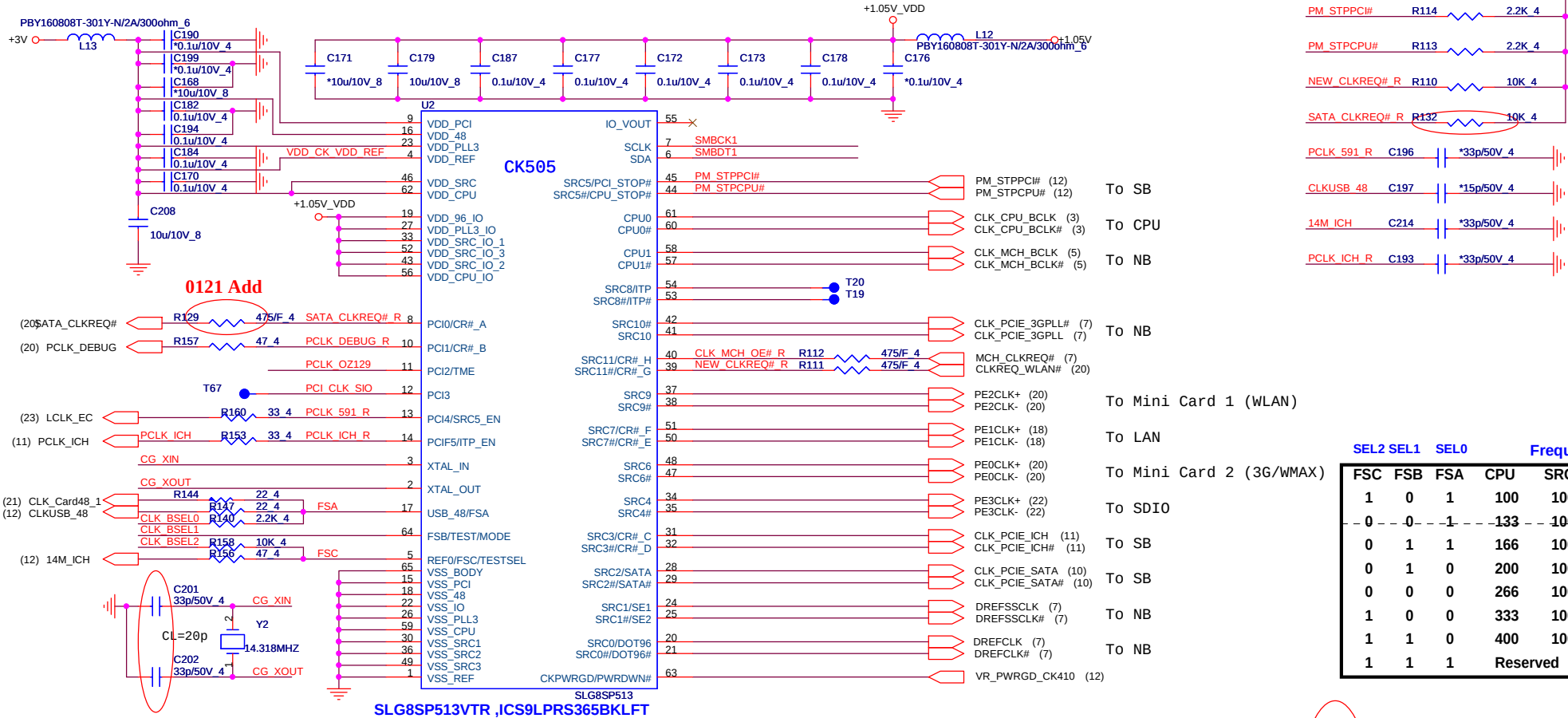
Quanta Computer Inc.
PROJECT : ZG8

Size	Document Number	Rev
	Block Diagram	1A

Date: Monday, January 19, 2009 Sheet 1 of 33

Clock Generator(CLK)

02

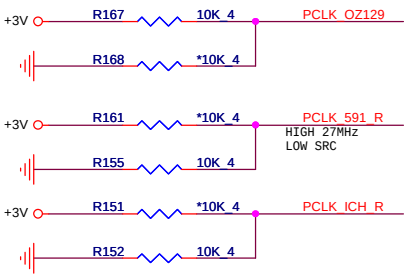


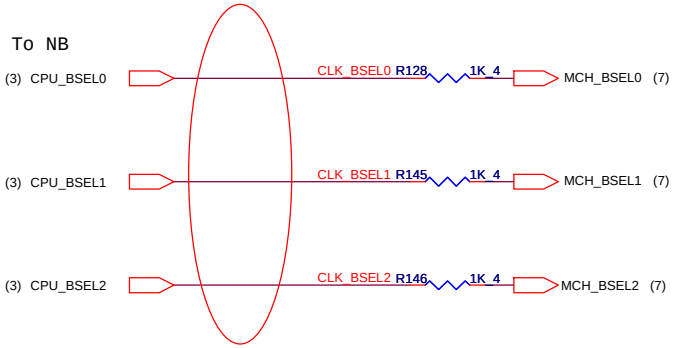
12/19 modify

	ICS9LPRS365 (ALPRS365K13)	RTM875T-606 (AL000875K06)	PULL HIGH	PULL DOWN
Pin 11	PCI2/TME	PCI2/TME internal PD	NO OVERCLOCKING (default)	NORMAL RUN
Pin 12	PCI-3	PCI-3/SRC5_EN internal PD	PIN37/38 IS SRC5	PIN37/38 IS PCI_STOP/CPU_STOP (default)
Pin 13	PCI-4/27M_SEL	PCI-4/27M_SEL internal PD	PIN 17/18 IS 27MHz	PIN 17/18 IS SRC/DOT (default)
Pin 14	PCIF-5/ITP_EN	PCIF-5/ITP_EN internal PD	PIN 46/47 IS CPUITP	PIN 46/47 IS SRC8 (default)

SEL2 SEL1 SEL0 — Frequence select

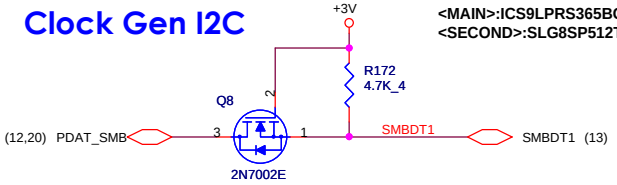
FSC	FSB	FSA	CPU	SRC	PCI	
1	0	1	100	100	33	
0	0	1	133	100	33	Default
0	1	1	166	100	33	
0	1	0	200	100	33	
0	0	0	266	100	33	
1	0	0	333	100	33	
1	1	0	400	100	33	
1	1	1	Reserved			

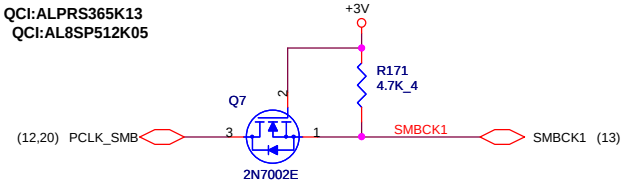




Clock Gen I2C

<MAIN>:ICS9LPRS365BGLFT QCI:ALPRS365K13
<SECOND>:SLG8SP512TTR: QCI:AL8SP512K05





Quanta Computer Inc.
PROJECT : ZG8

Size	Document Number	Rev
	CLOCK GENERATOR	1A

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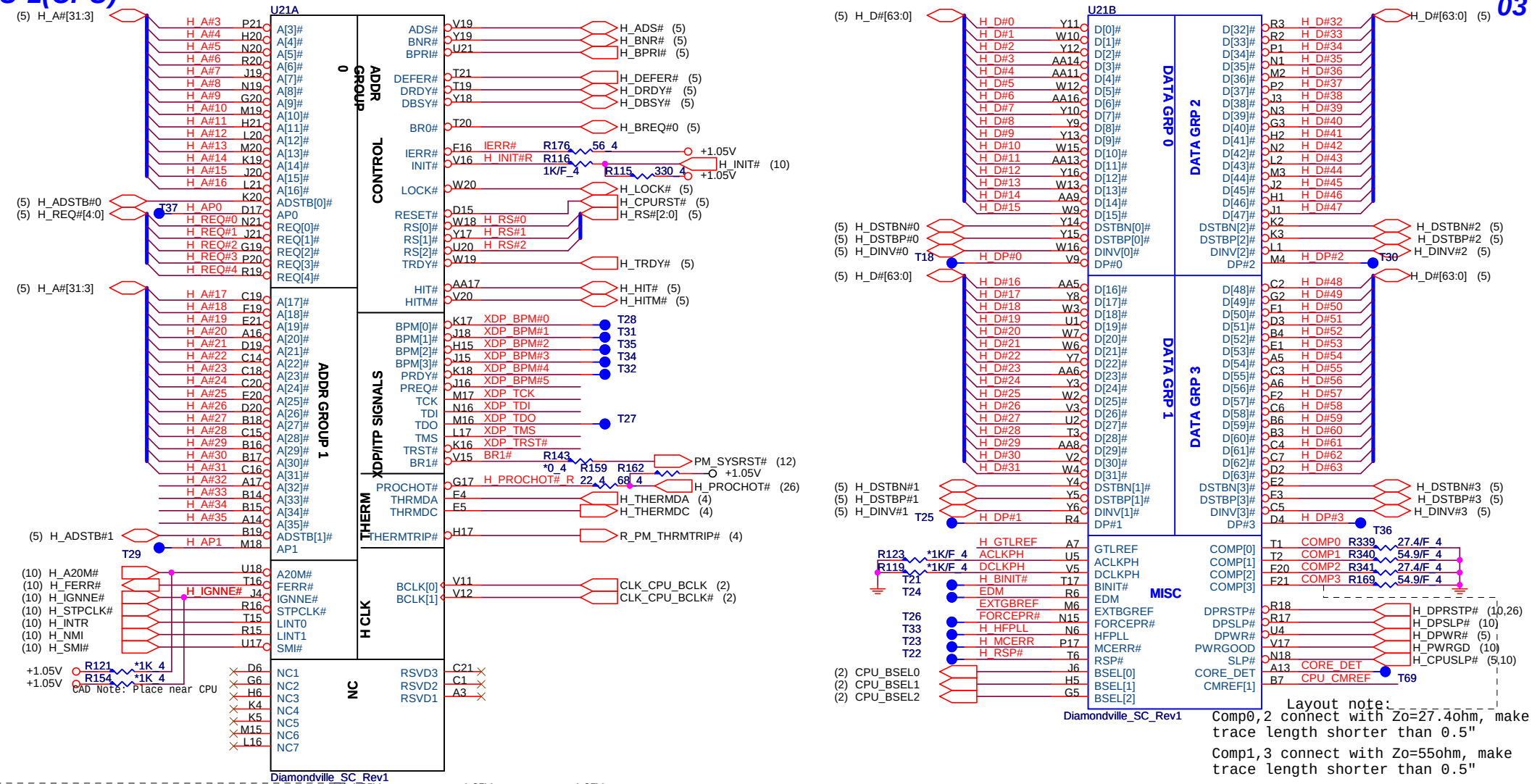
CPU-1(CPU)



Quanta Computer Inc.	
PROJECT : ZG8	
Size	Document Number: Diamondville(1/2) — Rev: 1A
Date: Monday, January 19, 2009	Sheet 3 of 33

CPU-2(CPU)

04

U21D

Diamondville_SC_Rev1

<NO_STUFF>

U21C

Diamondville_SC_Rev1

2.5A

+1.05V

C200 0.1u/10V_4
C210 0.1u/10V_4
C216 1u/10V_4
C180 1u/10V_4
C181 1u/10V_4
C205 1u/10V_4
C206 10u/6.3V_6
C195 10u/6.3V_6
C165 330u/2.5V_7343

VCC_CORE

PLACE IN CAVITY

PLACE IN CORRIDOR AND CLOSE TO CPU

C229 C219 C218 C224 C223 C226 C227 C228 C232 C233 C230 C231
10u/6.3V_6

C191 C186 C185 C192 C198 C203 C209 C207 C211 C217 C189 C183 C204 C215 C213 C220
1u/10V_4

PLACE IN CAVITY

3A

VCC_CORE

PWM FAN(THM)

+3V R180 10K_4
+3V R183 10K_4
+5V R179 10K_4
+3V R181 10K_4
+5V

(23) FANSIG

FAN_PWM_E

C454 *0.01u/16V_4

FAN_ON# 10K_4 R187 FAN_PWM_B

Q11 MMBT3904

Q10 MMBT3904

FAN_PWM_CN

CN14 FAN

(23) CPUFAN#

1217 EMI add

130mA

+1.5V

+V1.5S_VCCA

C212 0.1u/10V_4
C225 10u/10V_8

VCCA

TO PWR

VID[0] VID[1] VID[2] VID[3] VID[4] VID[5] VID[6]

VID0 (26) VID1 (26) VID2 (26) VID3 (26) VID4 (26) VID5 (26) VID6 (26)

R173 100/F_4 VCC_CORE

VCCSENSE C13 VCC_SENSE (26)

VSSSENSE D13 VSS_SENSE (26)

R170 100/F_4

125 Degree Protection(CPU)

+1.05V

(7,12,23,26) IMVP_PWRGD

Q9 2N7002E

+1.05V

R163 56_4

R175 1K_4

CPU

(3) R_PM_THRMTRIP#

R_THERMTRIP_PWR

Q6 MMBT3904

SYS_SHDN# (25,30)

R165 *0_4

PM_THRMTRIP# (7,10)

945GMS & ICH7M

CPU Thermal monitor(THM)

+3V R182 1_6 LM86VCC

C235 0.1u/10V_4

U3

(23) 2ND_MBCLK

(23) 2ND_MBDATA

(12) THERM_ALERT#

SCLK SDA ALERT# OVERT# VCC DXP DXN GND

H_THERMDA (3)

C236 2200p/50V_4

H_THERMDC (3)

+3V R186 10K_4

R185 *0_4 THERM_ALERT#_R

FAN_ON# +3V R184 10K_4

G780P81U

ADDRESS: 4C

<check list>
Layout Note:Routing 10:10 mils and away from noise source with ground gard

Quanta Computer Inc.

PROJECT : ZG8

Size	Document Number	Rev
	Diamondville(2/2)	1A

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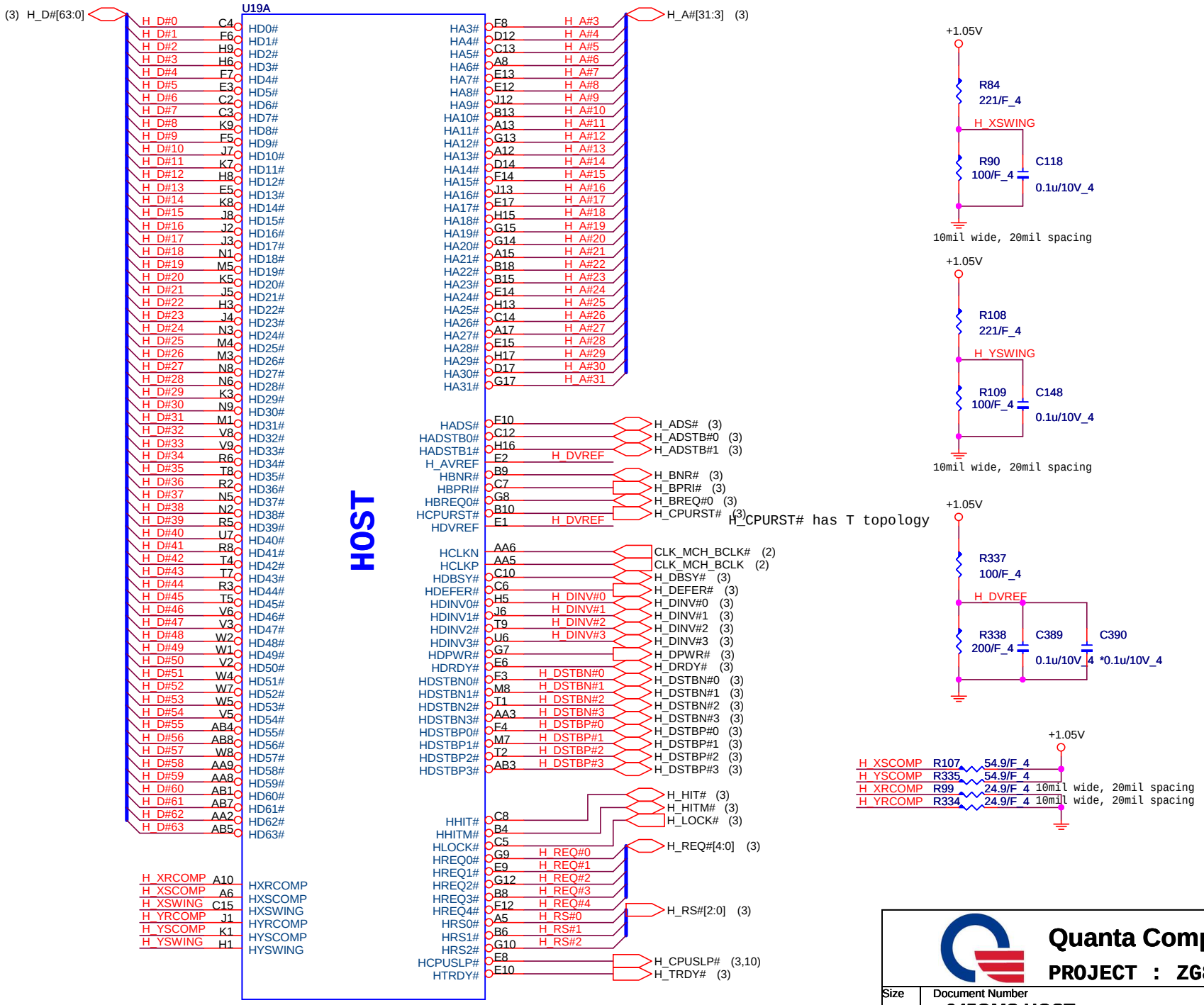

Quanta Computer Inc.	PROJECT : ZG8		
Size	Document Number: 945GMS HOST		Rev: 1A
Date: Monday, January 19, 2009		Sheet 5 of 33	

945GMS DDR(CLG)

06

U19C

DDR2 SYSTEM MEMORY

(13) MDA[63:0]

MDA0	AC31	SA_DQ0	
MDA1	AB28	SA_DQ1	
MDA2	AE33	SA_DQ2	
MDA3	AF32	SA_DQ3	
MDA4	AC33	SA_DQ4	
MDA5	AB32	SA_DQ5	
MDA6	AB31	SA_DQ6	
MDA7	AE31	SA_DQ7	
MDA8	AH31	SA_DQ8	
MDA9	AK31	SA_DQ9	
MDA10	AL28	SA_DQ10	
MDA11	AK27	SA_DQ11	
MDA12	AH30	SA_DQ12	
MDA13	AL32	SA_DQ13	
MDA14	AJ28	SA_DQ14	
MDA15	AJ27	SA_DQ15	
MDA16	AH32	SA_DQ16	
MDA17	AF31	SA_DQ17	
MDA18	AH27	SA_DQ18	
MDA19	AF28	SA_DQ19	
MDA20	AJ32	SA_DQ20	
MDA21	AG31	SA_DQ21	
MDA22	AG28	SA_DQ22	
MDA23	AG27	SA_DQ23	
MDA24	AN27	SA_DQ24	
MDA25	AM26	SA_DQ25	
MDA26	AJ26	SA_DQ26	
MDA27	AJ25	SA_DQ27	
MDA28	AL27	SA_DQ28	
MDA29	AN26	SA_DQ29	
MDA30	AH25	SA_DQ30	
MDA31	AG26	SA_DQ31	
MDA32	AM12	SA_DQ32	
MDA33	AL11	SA_DQ33	
MDA34	AH9	SA_DQ34	
MDA35	AK9	SA_DQ35	
MDA36	AM11	SA_DQ36	
MDA37	AK11	SA_DQ37	
MDA38	AM8	SA_DQ38	
MDA39	AK8	SA_DQ39	
MDA40	AG9	SA_DQ40	
MDA41	AF9	SA_DQ41	
MDA42	AF8	SA_DQ42	
MDA43	AK6	SA_DQ43	
MDA44	AF7	SA_DQ44	
MDA45	AG11	SA_DQ45	
MDA46	AJ6	SA_DQ46	
MDA47	AH6	SA_DQ47	
MDA48	AN6	SA_DQ48	
MDA49	AM6	SA_DQ49	
MDA50	AK3	SA_DQ50	
MDA51	AL2	SA_DQ51	
MDA52	AM5	SA_DQ52	
MDA53	AL5	SA_DQ53	
MDA54	AJ3	SA_DQ54	
MDA55	AJ2	SA_DQ55	
MDA56	AG2	SA_DQ56	
MDA57	AF3	SA_DQ57	
MDA58	AE7	SA_DQ58	
MDA59	AF6	SA_DQ59	
MDA60	AH5	SA_DQ60	
MDA61	AG3	SA_DQ61	
MDA62	AG5	SA_DQ62	
MDA63	AF5	SA_DQ63	

(13) SCASB#	SCASB#	AG19	SB_CAS#
(13) SRASB#	SRASB#	AG21	SB_RAS#
(13) SWEB#	SWEB#	AG20	SB_WE#

SA_BS_0	AK12		
SA_BS_1	AH11		
SA_BS_2	AG17		
SA_DM0	AB30	DQMA0	DQMA0 (13)
SA_DM1	AL31	DQMA1	DQMA1 (13)
SA_DM2	AE30	DQMA2	DQMA2 (13)
SA_DM3	AK26	DQMA3	DQMA3 (13)
SA_DM4	AL9	DQMA4	DQMA4 (13)
SA_DM5	AG7	DQMA5	DQMA5 (13)
SA_DM6	AK5	DQMA6	DQMA6 (13)
SA_DM7	AH3	DQMA7	DQMA7 (13)
SA_DQS0	AC28	DQSA0+	DQSA0+ (13)
SA_DQS1	AJ30	DQSA1+	DQSA1+ (13)
SA_DQS2	AK33	DQSA2+	DQSA2+ (13)
SA_DQS3	AL25	DQSA3+	DQSA3+ (13)
SA_DQS4	AN9	DQSA4+	DQSA4+ (13)
SA_DQS5	AH8	DQSA5+	DQSA5+ (13)
SA_DQS6	AM2	DQSA6+	DQSA6+ (13)
SA_DQS7	AE3	DQSA7+	DQSA7+ (13)
SA_DQS0#	AC29	DQSA0-	DQSA0- (13)
SA_DQS1#	AK30	DQSA1-	DQSA1- (13)
SA_DQS2#	AJ33	DQSA2-	DQSA2- (13)
SA_DQS3#	AM25	DQSA3-	DQSA3- (13)
SA_DQS4#	AN8	DQSA4-	DQSA4- (13)
SA_DQS5#	AJ8	DQSA5-	DQSA5- (13)
SA_DQS6#	AM3	DQSA6-	DQSA6- (13)
SA_DQS7#	AE2	DQSA7-	DQSA7- (13)
SA_MA0	AJ15		
SA_MA1	AM17		
SA_MA2	AM15		
SA_MA3	AH15		
SA_MA4	AK15		
SA_MA5	AN15		
SA_MA6	AJ18		
SA_MA7	AF19		
SA_MA8	AN17		
SA_MA9	AL17		
SA_MA10	AG16		
SA_MA11	AL18		
SA_MA12	AG18		
SA_MA13	AL14		
SA_CAS#	AJ17		
SA_RAS#	AK18		
SA_RCVENINB	AN28	TP_SA_RCVENIN#	T58
SA_RCVENOUTB	AM28	TP_SA_RCVENOUT#	T59
SA_WEB	AH17		
SB_BS_0	AH21	BSB0	
SB_BS_1	AJ20	BSB1	BSB[2:0] (13)
SB_BS_2	AE27	BSB2	
SB_MA0	AN20	MAB0	
SB_MA1	AL21	MAB1	
SB_MA2	AK21	MAB2	
SB_MA3	AK22	MAB3	
SB_MA4	AL22	MAB4	
SB_MA5	AH22	MAB5	
SB_MA6	AG22	MAB6	
SB_MA7	AF21	MAB7	
SB_MA8	AM21	MAB8	
SB_MA9	AE21	MAB9	
SB_MA10	AL20	MAB10	MAB[12:0] (13)
SB_MA11	AE22	MAB11	
SB_MA12	AE26	MAB12	
SB_MA13	AE20	MAB13	MAB13 (13)

945GMS

U19H

NCTF

+1.05V

T25	VCC_NCTF1	
R25	VCC_NCTF2	
P25	VCC_NCTF3	
N25	VCC_NCTF4	
M25	VCC_NCTF5	
P24	VCC_NCTF6	
N24	VCC_NCTF7	
M24	VCC_NCTF8	
Y22	VCC_NCTF9	
W22	VCC_NCTF10	
V22	VCC_NCTF11	
U22	VCC_NCTF12	
T22	VCC_NCTF13	
R22	VCC_NCTF14	
P22	VCC_NCTF15	
N22	VCC_NCTF16	
M22	VCC_NCTF17	
Y21	VCC_NCTF18	
W21	VCC_NCTF19	
V21	VCC_NCTF20	
U21	VCC_NCTF21	
T21	VCC_NCTF22	
R21	VCC_NCTF23	
P21	VCC_NCTF24	
N21	VCC_NCTF25	
M21	VCC_NCTF26	
Y20	VCC_NCTF27	
W20	VCC_NCTF28	
V20	VCC_NCTF29	
U20	VCC_NCTF30	
T20	VCC_NCTF31	
R20	VCC_NCTF32	
P20	VCC_NCTF33	
N20	VCC_NCTF34	
M20	VCC_NCTF35	
Y19	VCC_NCTF36	
P19	VCC_NCTF37	
N19	VCC_NCTF38	
M19	VCC_NCTF39	
Y18	VCC_NCTF40	
P18	VCC_NCTF41	
N18	VCC_NCTF42	
M18	VCC_NCTF43	
Y17	VCC_NCTF44	
P17	VCC_NCTF45	
N17	VCC_NCTF46	
M17	VCC_NCTF47	
Y16	VCC_NCTF48	
P16	VCC_NCTF49	
N16	VCC_NCTF50	
M16	VCC_NCTF51	
Y15	VCC_NCTF52	
P15	VCC_NCTF53	
N15	VCC_NCTF54	
M15	VCC_NCTF55	
Y14	VCC_NCTF56	
W14	VCC_NCTF57	
V14	VCC_NCTF58	
U14	VCC_NCTF59	
T14	VCC_NCTF60	
R14	VCC_NCTF61	
P14	VCC_NCTF62	
N14	VCC_NCTF63	
M14	VCC_NCTF64	

+1.05V

T10	VTT_NCTF1	
R10	VTT_NCTF2	
P10	VTT_NCTF3	
N10	VTT_NCTF4	
L10	VTT_NCTF5	
D1	VTT_NCTF6	
M10	MCH_RSVD3	
A18	MCH_RSVD4	
AB10	MCH_RSVD5	
AA10	MCH_RSVD6	

+1.5V

AD25	VCCAUX_NCTF1	
AC25	VCCAUX_NCTF2	
AB25	VCCAUX_NCTF3	
AD24	VCCAUX_NCTF4	
AC24	VCCAUX_NCTF5	
AD22	VCCAUX_NCTF6	
AD21	VCCAUX_NCTF7	
AD20	VCCAUX_NCTF8	
AD19	VCCAUX_NCTF9	
AD18	VCCAUX_NCTF10	
AD17	VCCAUX_NCTF11	
AD16	VCCAUX_NCTF12	
AD15	VCCAUX_NCTF13	
AD14	VCCAUX_NCTF14	
K14	VCCAUX_NCTF15	
AD13	VCCAUX_NCTF16	
Y13	VCCAUX_NCTF17	
W13	VCCAUX_NCTF18	
V13	VCCAUX_NCTF19	
U13	VCCAUX_NCTF20	
T13	VCCAUX_NCTF21	
R13	VCCAUX_NCTF22	
P13	VCCAUX_NCTF23	
N13	VCCAUX_NCTF24	
M13	VCCAUX_NCTF25	
AD12	VCCAUX_NCTF26	
Y12	VCCAUX_NCTF27	
W12	VCCAUX_NCTF28	
V12	VCCAUX_NCTF29	
U12	VCCAUX_NCTF30	
T12	VCCAUX_NCTF31	
R12	VCCAUX_NCTF32	
P12	VCCAUX_NCTF33	
N12	VCCAUX_NCTF34	
M12	VCCAUX_NCTF35	
AD11	VCCAUX_NCTF36	
AD10	VCCAUX_NCTF37	
K10	VCCAUX_NCTF38	
AN33	VSS_NCTF1	
AA25	VSS_NCTF2	
V25	VSS_NCTF3	
U25	VSS_NCTF4	
AA22	VSS_NCTF5	
AA21	VSS_NCTF6	
AA20	VSS_NCTF7	
AA19	VSS_NCTF8	
AA18	VSS_NCTF9	
AA17	VSS_NCTF10	
AA16	VSS_NCTF11	
AA15	VSS_NCTF12	
AA14	VSS_NCTF13	
AA13	VSS_NCTF14	
A4	VSS_NCTF15	
A33	VSS_NCTF16	
B2	VSS_NCTF17	
AN1	VSS_NCTF18	
C1	VSS_NCTF19	
K28	CFG19	
K25	MCH_RSVD10	
K26	MCH_RSVD11	
R24	MCH_RSVD12	
T24	MCH_RSVD13	
K21	MCH_RSVD14	
K19	MCH_RSVD15	
K20	MCH_RSVD16	
K24	MCH_RSVD17	
K22	MCH_RSVD18	
J17	MCH_RSVD19	
K23	MCH_RSVD20	
K17	MCH_RSVD21	
K12	MCH_RSVD22	
K13	MCH_RSVD23	
K16	MCH_RSVD24	
K15	MCH_RSVD25	

+3V

R58 *1K_4

GMS_CFG19

GMS CFG19: LOW=Normal
High=LANES
REVERSED(945GMS not
support)

945GMS

Quanta Computer Inc.

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	945GMS DDR	1A

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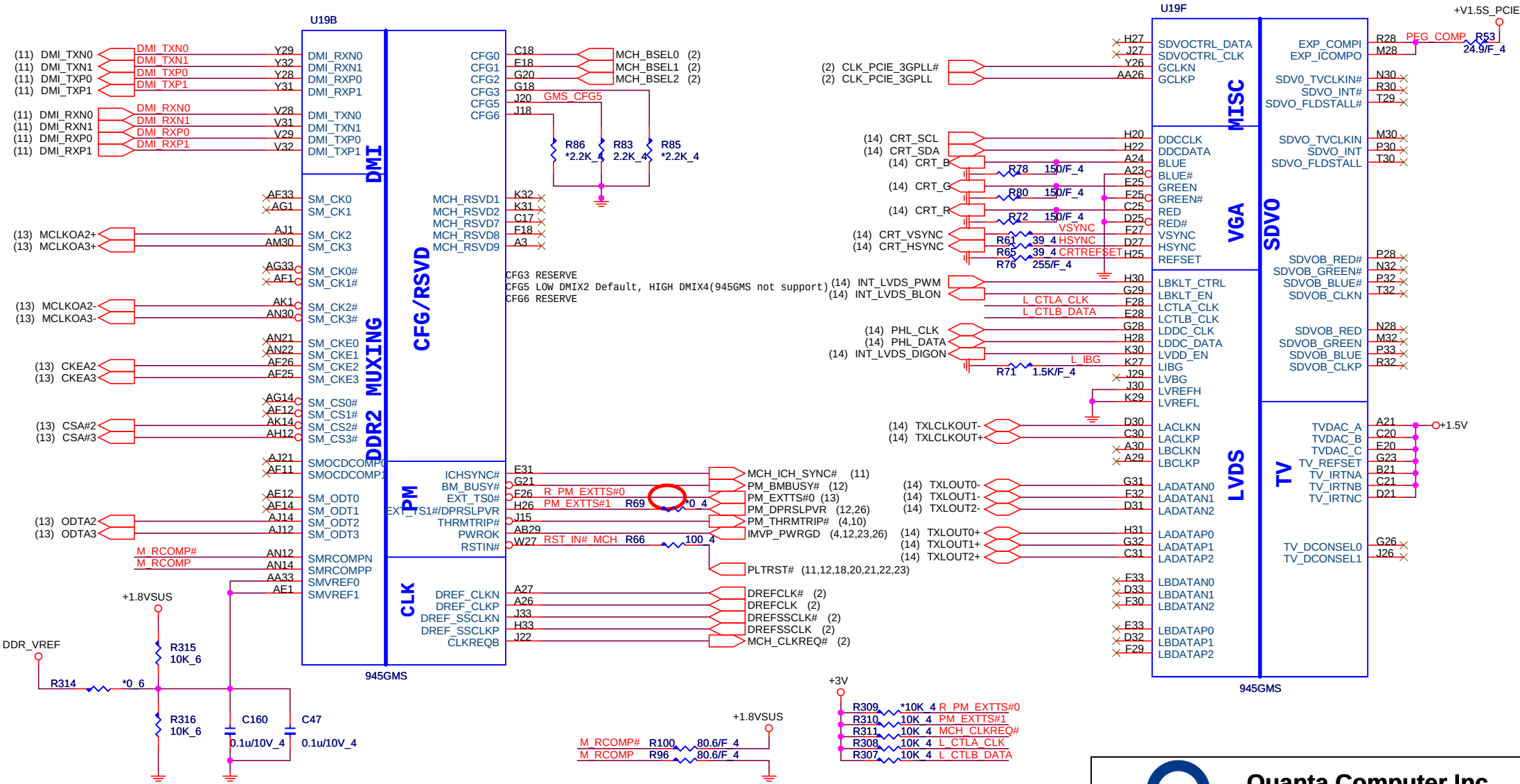
DMI, LVDS, DDR CLK(CLG)

07



Quanta Computer Inc.

PROJECT : ZG8

Size	Document Number	Rev
	945GMS LVDS, DMI, DDR CLK	1A

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945GMS POWER(CLG)

08

U19D

+1.05V
C115 220u/2.5V_3528
C234 220u/2.5V_3528
C129 10u/10V_8
C89 4.7u/10V_6
C126 4.7u/10V_6
C139 0.1u/10V_4
C141 0.1u/10V_4
C156 0.1u/10V_4
2.94A

T26 R26 P26 N26 M26 V19 U19 T19 W18 V18 T18 R18 W17 U17 R17 W16 V16 T16 R16 V15 U15 T15 VCC0 VCC1 VCC2 VCC3 VCC4 VCC5 VCC6 VCC7 VCC8 VCC9 VCC10 VCC11 VCC12 VCC13 VCC14 VCC15 VCC16 VCC17 VCC18 VCC19 VCC20 VCC21

AD33 AD32 AD31 AD30 AD29 AD28 AD27 AC27 AD26 AC26 AB26 AE19 AE18 AF17 AE17 AF16 AE16 AE15 AE15 J14 J10 H10 AE9 AD9 U9 AD8 AD7 AD6 VCC_AUX1 VCC_AUX2 VCC_AUX3 VCC_AUX4 VCC_AUX5 VCC_AUX6 VCC_AUX7 VCC_AUX8 VCC_AUX9 VCC_AUX10 VCC_AUX11 VCC_AUX12 VCC_AUX13 VCC_AUX14 VCC_AUX15 VCC_AUX16 VCC_AUX17 VCC_AUX18 VCC_AUX19 VCC_AUX20 VCC_AUX21 VCC_AUX22 VCC_AUX23 VCC_AUX24 VCC_AUX25 VCC_AUX26 VCC_AUX27 VCC_AUX28

1.25A

+1.5V
C122 10u/10V_8
C120 0.1u/10V_4
C78 0.1u/10V_4
C98 0.1u/10V_4
place under BGA

+1.5V
L10 BLM18PG181SN1D_6
C72 4.7u/10V_6
C114 4.7u/10V_6
C73 0.1u/10V_4
+V1.5S_DPLLA

L2 BLM18PG181SN1D_6
C376 *330u/2.5V_7343
C49 0.1u/10V_4
C44 10u/6.3V_6
+V1.5S_DPLLB

L11 BLM18PG181SN1D_6
C154 22u/6.3V_8
C147 0.1u/10V_4
+V1.5S_HPLL

L32 BLM18PG181SN1D_6
C391 22u/6.3V_8
C392 0.1u/10V_4
+V1.5S_MPLL

PLACE CLOSE TO GMCH

+1.05V
PLACE IN CAVITY
800mA
C157 47U/6.3V_1206
C146 4.7u/10V_6
C88 4.7u/10V_6
C125 0.47u/6.3V_4

+1.5V
L31 91nH
C32 220u/2.5V_3528
C37 10u/10V_8
C38 10u/10V_8
+V1.5S_PCIE

L5 BLM18PG181SN1D_6
+V1.5S_3GPLL

C136 0.47u/6.3V_4

+2.5V
R313 10_4
20mils
D21 CH500H-40
+1.05V

L6 BLM18PG181SN1D_6
+V2.5_CRTDAC
C84 4.7u/10V_6
C95 10u/6.3V_6

C388 0.47u/6.3V_4
C394 0.47u/6.3V_4

A14 D10 P9 L9 D9 P8 L8 D8 P7 L7 D7 A7 P6 L6 G6 D6 U5 P5 L5 G5 D5 Y4 U4 P4 L4 G4 D4 Y3 U3 P3 L3 G3 D3 Y2 U2 P2 L2 G2 D2 AA1 F1 VTT0 VTT1 VTT2 VTT3 VTT4 VTT5 VTT6 VTT7 VTT8 VTT9 VTT10 VTT11 VTT12 VTT13 VTT14 VTT15 VTT16 VTT17 VTT18 VTT19 VTT20 VTT21 VTT22 VTT23 VTT24 VTT25 VTT26 VTT27 VTT28 VTT29 VTT30 VTT31 VTT32 VTT33 VTT34 VTT36 VTT35 VTT37 VTT38 VTT39 VTT40

945GMS

POWER

VCCA_TVDACA0 VCCA_TVDACA1 VCCA_TVDACB0 VCCA_TVDACB1 VCCA_TVDACC0 VCCA_TVDACC1 VCCA_TVBG VSSA_TVBG VCCD_TVDAC VCCDQ_TVDAC VCCD_LVDS0 VCCD_LVDS1 VCCD_LVDS2 VCCHV0 VCCHV1 VCCHV2 VCCSM0 VCCSM1 VCCSM2 VCCSM3 VCCSM4 VCCSM5 VCCSM6 VCCSM7 VCCSM8 VCCSM9 VCCSM10 VCCSM11 VCCSM12 VCCSM13 VCCSM14 VCCSM15 VCCSM16 VCCSM17 VCCSM18 VCCSM19 VCCSM20 VCCSM21 VCCSM22 VCCSM23 VCCSM24 VCCSM25 VCCSM26 VCCSM27 VCCSM28 VCCSM29 VCCSM30 VCCSM31 VCCSM32 VCCSM33 VCCSM34 VCCSM35 VCCSM36 VCCSM37 VCCSM38 VCCSM39 VCCSM40 VCCSM41 VCCSM42 VCCSM43 VCCSM44 VCCSM45 VCCSM46 VCCSM47 VCCSM48 VCCSM49 VCCSM50 VCCSM51 VCCA_MPLL VCCA_HPLL VCCA_DPLLA VCCA_DPLLB VCCD_HMPLL1 VCCD_HMPLL2 VCCTX_LVDS0 VCCTX_LVDS1 VCC3G0 VCC3G1 VCCA_3GPLL VCCA_3GBG VSSA_3GBG VCC_SYNC VCCA_CRTDAC0 VCCA_CRTDAC1 VSSA_CRTDAC VCCA_LVDS VSSALVDS VTT41 VTT42 VTT43 VTT44 VTT45

B20 A20 B22 A22 D22 C22 D23 E23 E20 F22 C28 B28 A28 E26 D26 C26 AB33 AM32 AN29 AM29 AL29 AK29 AJ29 AH29 AG29 AF29 AE29 AN24 AM24 AL24 AK24 AJ24 AH24 AG24 AF24 AE24 AN18 AN16 AM16 AL16 AK16 AJ16 AN13 AM13 AL13 AK13 AJ13 AH13 AG13 AF13 AE13 AN4 AM10 AL10 AK10 AH1 AH10 AG10 AF10 AE10 AN7 AM7 AL7 AK7 AJ7 AH7 AN10 AJ10 AD1 AD2 B26 J32 AE5 AD5 D29 C29 U33 T33 V26 N33 M33 J23 C24 B24 B25 B31 B32 P1 L1 G1 U1 Y1

120+24mA
+1.5V
DISABLE TV
20mA
40mA
+V3.3S_VCCHY
1.72A PLACE IN CAVITY
45mA +V1.5S_MPLL
45mA +V1.5S_HPLL
50mA +V1.5S_DPLLA
50mA +V1.5S_DPLLB
150mA +1.5V
60mA
0.4A
+V1.5S_PCIE
2mA
70mA
10mA
+1.05V

+1.5V
C130 0.1u/10V_4
C133 10u/10V_8

0117 change
+3V
S2
*Short_6

C50 1u/10V_4
C52 1u/10V_4
C378 0.1u/10V_4
C377 10u/10V_8

+1.8VSUS
C113 1u/10V_4
C61 4.7u/10V_6
C135 4.7u/10V_6
C164 330u/2.5V_7343
C131 0.1u/10V_4
C67 0.1u/10V_4
C137 0.1u/10V_4
C109 0.1u/10V_4

C99 1u/10V_4
C142 1u/10V_4
C151 1u/10V_4

+1.5V
C107 0.1u/10V_4
C162 10u/10V_8

+2.5V
C41 0.1u/10V_4
C34 4.7u/10V_6

+1.5V_3GPLL
C69 0.1u/10V_4
C39 10u/10V_8
C66 0.1u/10V_4

+2.5V
C51 0.1u/10V_4
C64 0.01u/16V_4
+V2.5_CRTDAC
C80 0.1u/10V_4
C91 0.022u/16V_4
+2.5V
C85 0.1u/10V_4
C53 10u/10V_8

Quanta Computer Inc.
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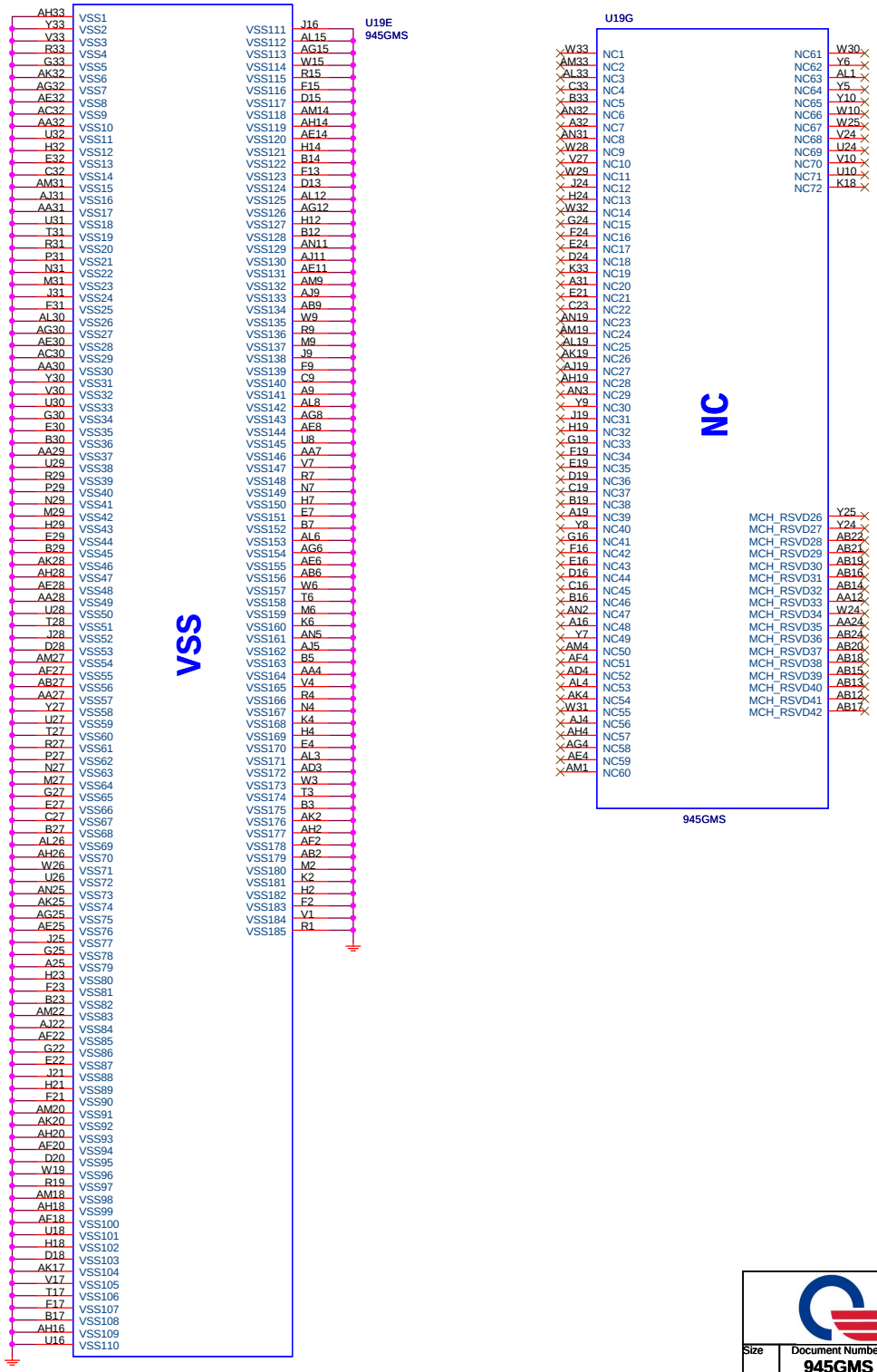
945GMS GND(CLG)

09



Quanta Computer Inc.		
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ICH7-M(CLG)

1/7 Change CAP to 15P for crystal precision

U18A

C369 15P/50V_4 — CLK_32KX1 — AB1 RTXC1
CLK_32KX2 — AB2 RTCX2
Y4 32.768KHZ — R304 10M_4
C370 15P/50V_4
RTCRST# — AA3 RTCRST#
SM_INTRUDER# — Y5 INTRUDER#
ICH_INTVRMEN — W4 INTVRMEN
VCCRTC — 332K/F_4 — R62 — ICH_INTVRMEN — R63 *0_4

RTC

INTVRMEN	
Enable (default)	1
Disable	0

ICH7 internal VR enable strap

W1 EE_CS
Y1 EE_SHCLK
Y2 EE_DOUT
W3 EE_DIN
V3 LAN_CLK
U3 LAN_RSTSYNC
U5 LAN_RXD0
V4 LAN_RXD1
T5 LAN_RXD2
U7 LAN_TXD0
V6 LAN_TXD1
V7 LAN_TXD2

LAN

SDIN0:CODEC
SDIN1:MODEM
ACZ_BCLK — U1 ACZ_BIT_CLK
ACZ_SYNC — R6 ACZ_SYNC
ACZ_RST# — R5 ACZ_RST#
(16) ACZ_SDIN0 — ACZ_SDIN0 — T2 ACZ_SDIN0
ACZ_SDIN1 — T3 ACZ_SDIN1
T52 ACZ_SDIN2 — T1 ACZ_SDIN2
T54
ACZ_SDOUT — T4 ACZ_SDOUT

AC-97/AZALIA

(17) SATALED# — AF18 SATALED#

(19) SATA_RXN0 — AF3 SATA0RXN
(19) SATA_RXP0 — AE3 SATA0RXP
HDD (19) SATA_TXN0 — C23 0.01u/16V_4 — SATA_TXN0_C — AG2 SATA0TXN
(19) SATA_TXP0 — C19 0.01u/16V_4 — SATA_TXP0_C — AH2 SATA0TXP

AE7 SATA2RXN
AE7 SATA2RXP
AG6 SATA2TXN
AH6 SATA2TXP

(2) CLK_PCIE_SATA# — AF1 SATA_CLKN
(2) CLK_PCIE_SATA — AE1 SATA_CLKP

R37 24.9/F_4 — SATA_BIAS — AH10 SATARBIASN — AG10 SATARBIASP
Place within 500 mils of ICH7 **25mils/15mils**

SATA

+3V — R369 8.2K_4 — R370 4.7K_4

AF15 DIOR#
AH15 DIOW#
AF16 DDACK#
AH16 IDEIRQ
AG16 IORDY
AE15 DDREQ

IDE

ICH7-M

LAD0 AA6 — LPCAD0 (20,23)
LAD1 AB5 — LPCAD1 (20,23)
LAD2 AC4 — LPCAD2 (20,23)
LAD3 Y6 — LPCAD3 (20,23)
LDRQ0# AC3 — LDRQ#0
LDRQ1#/GPIO23 AA5 — LDRQ#1
LFRAME# AB3 — LPCFRAME# (20,23)

LPC

A20GATE AE22 — GA20 — GA20 (23)
A20M# AH28 — H_A20M# (3)
CPUSLP# AG27 — TP_H_CPUSLP# — R38 *0_4 — H_CPUSLP# (3,5)
TP1/DPRSTP# AE24 — H_DPRSTP# — H_DPRSTP# (3,26)
TP2/DPSLP# AH25 — H_DPSLP# (3)
R33 56.2/F_4 +1.05V
FERR# AG26 — H_FERR# (3)
GPIO49/CPUPWRGD AG24 — H_PWRGD (3)
IGNNE# AG22 — H_IGNNE# (3)
INIT3_3V# AG21 — T51
INIT# AF22 — H_INIT# (3)
INTR AF25 — H_INTR (3)
RCIN# AG23 — KBRST# (23)
NMI AH24 — H_NMI (3)
SMI# AF23 — H_SMI# (3)
STPCLK# AH22 — H_STPCLK# (3)
R28 56.2/F_4 +1.05V
THERMTRIP# AF26 — H_THERMTRIP_R — R30 24.9/F_4 — PM_THRMTRIP# (4,7)

CPU

Should be 2" close ICH7

DD0 AB15
DD1 AE14
DD2 AG13
DD3 AE13
DD4 AD14
DD5 AC13
DD6 AD12
DD7 AC12
DD8 AE12
DD9 AE12
DD10 AB13
DD11 AC14
DD12 AE14
DD13 AH13
DD14 AH14
DD15 AC15

DA0 AH17
DA1 AE17
DA2 AF17

DCS1# AE16
DCS3# AD16

Add footprint in gerber C

ACZ_SDOUT — R70 39_4 — ACZ_SDOUT_AUDIO (16)
ACZ_SYNC — R75 39_4 — ACZ_SYNC_AUDIO (16)
ACZ_RST# — R67 39_4 — ACZ_RESET#_AUDIO (16)
ACZ_BCLK — R64 39_4 — ACZ_BITCLK_AUDIO (16)

C54 *10p/50V_4 C77 *10p/50V_4 C74 *10p/50V_4

COMPONENTS	P/N
945GMS	AJSLB2R0T00
ICH7-M	AJSL8YB0T21

Pull-UP

10

+3V
R40 10K_4 R54 10K_4 R43 *10K_4 R42 *10K_4
LDRQ#0
LDRQ#1
KBRST#
GA20

RTC(RTC)

VCCRTC
3VPCU — D17 CH500H-40 — C338 1u/10V_6
VCCRTC_3 — D18 CH500H-40 — R269 20K/F_6 — RTCRST#
R277 1K_4
R273 1M/F_6
C327 1u/10V_6
G1 *SHORT_PAD
CN12 RTC_CONN
SM_INTRUDER#
VCCRTC_4
5VPCU
20MIL 20MIL
R266 16K/F_4 — VCCRTC_1 — Q17 MMBT3904
R268 68.1K/F_4
R265 150K/F_4

Quanta Computer Inc.
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ICH7-M(CLG)

Exchange LAN & Wimax

caps within 250mils

LAN

Wimax

Mini card

SDIO

U18D

PCI-Express

Direct Media Interface

SPI

USB

ICH7-M

(18) PE1RX- / (18) PE1RX+ — 0.1u/10V_4 — C124 PCIE_TXN1_C — F26 PERn1 / F25 PERp1
(18) PE1TX- / (18) PE1TX+ — C121 PCIE_TXP1_C — E28 PETn1 / E27 PETp1 — 0.1u/10V_4
(20) PE0RX- / (20) PE0RX+ — 0.1u/10V_4 — C128 PCIE_TXN0_C — H26 PERn2 / H25 PERp2
(20) PE0TX- / (20) PE0TX+ — C132 PCIE_TXP0_C — G28 PETn2 / G27 PETp2 — 0.1u/10V_4
(20) PE2RX- / (20) PE2RX+ — 0.1u/10V_4 — C101 PCIE_TXN2_C — K26 PERn3 / K25 PERp3
(20) PE2TX- / (20) PE2TX+ — C116 PCIE_TXP2_C — J28 PETn3 / J27 PETp3 — 0.1u/10V_4
(22) PE3RX- / (22) PE3RX+ — 0.1u/10V_4 — C97 PCIE_TXN3_C — M26 PERn4 / M25 PERp4
(22) PE3TX- / (22) PE3TX+ — C96 PCIE_TXP3_C — L28 PETn4 / L27 PETp4 — 0.1u/10V_4

DMI0RXN V26 — DMI_RXN0 (7)
DMI0RXP V25 — DMI_RXP0 (7)
DMI0TXN U28 — DMI_TXN0 (7)
DMI0TXP U27 — DMI_TXP0 (7)
DMI1RXN Y26 — DMI_RXN1 (7)
DMI1RXP Y25 — DMI_RXP1 (7)
DMI1TXN W28 — DMI_TXN1 (7)
DMI1TXP W27 — DMI_TXP1 (7)
DMI2RXN AB26
DMI2RXP AB25
DMI2TXN AA28
DMI2TXP AA27
DMI3RXN AD25
DMI3RXP AD24
DMI3TXN AC28
DMI3TXP AC27
DMI_CLKN AE28 — CLK_PCIE_ICH# (2)
DMI_CLKP AE27 — CLK_PCIE_ICH (2)
DMI_ZCOMP C25
DMI_IRCOMP D25 — DRI_IRCOMP_R — R95 24.9/F_4 — +1.5V
15/15mils Place within 500 mils of ICH7

+3V
R81 10K_4 R82 10K_4 R74 10K_4

T55 T8 T57 — SPI_SCLK R2 — SPI_CE# P6 — SPI_ARB P1
T10 T9 — SPI_SI P5 — SPI_SO P2
SPI_CLK SPI_CS# SPI_ARB SPI_MOSI SPI_MISO

OC0# D3
OC1# C4
OC2# D5
OC3# D4
OC4# E5
OC5# C3
OC6# A2
OC7# B3
(17) USBOC#1_2 — OC2#
(17) USBOC#4 — OC4#
OC5#/GPIO29
OC6#/GPIO30
OC7#/GPIO31

USBP0N F1 — USBP0- (14) — CCD
USBP0P F2 — USBP0+ (14)
USBP1N G4 — USBP1- (17) — sub board
USBP1P G3 — USBP1+ (17)
USBP2N H1 — USBP2- (17) — sub board
USBP2P H2 — USBP2+ (17)
USBP3N J4 — USBP3- (21) — Card reader
USBP3P J3 — USBP3+ (21)
USBP4N K1 — USBP4- (17) — System
USBP4P K2 — USBP4+ (17)
USBP5N L4 — USBP5- (20) — 3G CARD
USBP5P L5 — USBP5+ (20)
USBP6N M1 — USBP6- (20) — WLAN
USBP6P M2 — USBP6+ (20)
USBP7N N4 — USBP7- (15) — Blue tooth
USBP7P N3 — USBP7+ (15)
USBRBIAS# D2 — USB_RBIAS_PN — R329 22.6/F_6
USBRBIAS D1
25mils/15mils Place within 500 mils of ICH7

U18E ICH7-M

VSS[1] A4 — VSS[98] P28
VSS[2] A23 — VSS[99] R1
VSS[3] B1 — VSS[100] R11
VSS[4] B8 — VSS[101] R12
VSS[5] B11 — VSS[102] R13
VSS[6] B14 — VSS[103] R14
VSS[7] B17 — VSS[104] R15
VSS[8] B20 — VSS[105] R16
VSS[9] B26 — VSS[106] R17
VSS[10] B28 — VSS[107] R18
VSS[11] C2 — VSS[108] T6
VSS[12] C6 — VSS[109] T12
VSS[13] C27 — VSS[110] T13
VSS[14] D10 — VSS[111] T14
VSS[15] D13 — VSS[112] T15
VSS[16] D18 — VSS[113] T16
VSS[17] D21 — VSS[114] T17
VSS[18] D24 — VSS[115] U4
VSS[19] E1 — VSS[116] U12
VSS[20] E2 — VSS[117] U13
VSS[21] E4 — VSS[118] U14
VSS[22] E8 — VSS[119] U15
VSS[23] E15 — VSS[120] U16
VSS[24] F3 — VSS[121] U17
VSS[25] F4 — VSS[122] U24
VSS[26] F5 — VSS[123] U25
VSS[27] F12 — VSS[124] U26
VSS[28] F27 — VSS[125] V2
VSS[29] F28 — VSS[126] V13
VSS[30] G1 — VSS[127] V15
VSS[31] G2 — VSS[128] V24
VSS[32] G5 — VSS[129] V27
VSS[33] G6 — VSS[130] V28
VSS[34] G9 — VSS[131] W6
VSS[35] G14 — VSS[132] W24
VSS[36] G18 — VSS[133] W25
VSS[37] G21 — VSS[134] W26
VSS[38] G24 — VSS[135] Y3
VSS[39] G25 — VSS[136] Y24
VSS[40] G26 — VSS[137] Y27
VSS[41] H3 — VSS[138] Y28
VSS[42] H4 — VSS[139] AA1
VSS[43] H5 — VSS[140] AA24
VSS[44] H24 — VSS[141] AA25
VSS[45] H27 — VSS[142] AA26
VSS[46] H28 — VSS[143] AB4
VSS[47] J1 — VSS[144] AB6
VSS[48] J2 — VSS[145] AB11
VSS[49] J5 — VSS[146] AB14
VSS[50] J24 — VSS[147] AB16
VSS[51] J25 — VSS[148] AB19
VSS[52] J26 — VSS[149] AB21
VSS[53] K24 — VSS[150] AB24
VSS[54] K27 — VSS[151] AB27
VSS[55] K28 — VSS[152] AB28
VSS[56] L13 — VSS[153] AC2
VSS[57] L15 — VSS[154] AC5
VSS[58] L24 — VSS[155] AC9
VSS[59] L25 — VSS[156] AC11
VSS[60] L26 — VSS[157] AD1
VSS[61] M3 — VSS[158] AD3
VSS[62] M4 — VSS[159] AD4
VSS[63] M5 — VSS[160] AD7
VSS[64] M12 — VSS[161] AD8
VSS[65] M13 — VSS[162] AD11
VSS[66] M14 — VSS[163] AD15
VSS[67] M15 — VSS[164] AD19
VSS[68] M16 — VSS[165] AD23
VSS[69] M17 — VSS[166] AE2
VSS[70] M24 — VSS[167] AE4
VSS[71] M27 — VSS[168] AE8
VSS[72] M28 — VSS[169] AE11
VSS[73] N1 — VSS[170] AE13
VSS[74] N2 — VSS[171] AE18
VSS[75] N5 — VSS[172] AE21
VSS[76] N6 — VSS[173] AE24
VSS[77] N11 — VSS[174] AE25
VSS[78] N12 — VSS[175] AF2
VSS[79] N13 — VSS[176] AF4
VSS[80] N14 — VSS[177] AF8
VSS[81] N15 — VSS[178] AF11
VSS[82] N16 — VSS[179] AF27
VSS[83] N17 — VSS[180] AF28
VSS[84] N18 — VSS[181] AG1
VSS[85] N24 — VSS[182] AG3
VSS[86] N25 — VSS[183] AG7
VSS[87] N26 — VSS[184] AG11
VSS[88] P3 — VSS[185] AG14
VSS[89] P4 — VSS[186] AG17
VSS[90] P12 — VSS[187] AG20
VSS[91] P13 — VSS[188] AG25
VSS[92] P14 — VSS[189] AH1
VSS[93] P15 — VSS[190] AH3
VSS[94] P16 — VSS[191] AH7
VSS[95] P17 — VSS[192] AH12
VSS[96] P24 — VSS[193] AH23
VSS[97] P27 — VSS[194] AH27

11

U18B

PCI

AD0 E18
AD1 C18
AD2 A16
AD3 F18
AD4 E16
AD5 A18
AD6 E17
AD7 A17
AD8 A15
AD9 C14
AD10 E14
AD11 D14
AD12 B12
AD13 C13
AD14 G15
AD15 G13
AD16 E12
AD17 C11
AD18 D11
AD19 A11
AD20 A10
AD21 F11
AD22 F10
AD23 E9
AD24 D9
AD25 B9
AD26 A8
AD27 A6
AD28 C7
AD29 B6
AD30 E6
AD31 D6

REQ0# D7 — REQ0#
GNT0# E7
REQ1# C16 — REQ1#
GNT1# D16
REQ2# C17 — REQ2#
GNT2# D17
REQ3# E13 — REQ3#
GNT3# F13
REQ4#/GPIO22 A13 — REQ4# — T61
GNT4#/GPIO48 A14 — T60
GPIO1/REQ5# C8 — REQ5# — T64
GPIO17/GNT5# D8

C/BE0# B15
C/BE1# C12
C/BE2# D12
C/BE3# C15

IRDY# A7 — IRDY#
PAR E10
PCIRST# B18 — PCIRST# (20)
DEVSEL# A12 — DEVSEL#
PERR# C9 — PERR#
PLOCK# E11 — PLOCK#
SERR# B10 — SERR#
STOP# E15 — STOP#
TRDY# E14 — TRDY#
FRAME# E16 — FRAME#

PLTRST# C26 — PLT_RST-R#
PCICLK A9 — PCLK_ICH — PCLK_ICH (2)
PME# B19 — T16

Boot BIOS Select
GNT5,4
01: SPI
10: PCI
11: LPC (Default)

Interrupt I/F

INTA# A3
INTB# B4
INTC# C5
INTD# B5
PIRQA# — GPIO2/PIRQE# G8 — INTE#
PIRQB# — GPIO3/PIRQF# F7 — INTF#
PIRQC# — GPIO4/PIRQG# F8 — INTG#
PIRQD# — GPIO5/PIRQH# G7 — INTH#

MISC

RSVD[1] AE5
RSVD[2] AD5
RSVD[3] AG4
RSVD[4] AH4
RSVD[5] AD9
RSVD[6] AE9
RSVD[7] AG8
RSVD[8] AH8
RSVD[9] F21
MCH_SYNC# AH20 — MCH_ICH_SYNC# (7)

Stuff for XOR chain testing
R94 *1K/F_4
ICH_TP3

ICH7-M

Pull-UP resistor

RP2 8.2K 10P8R +3V
REQ1# 6
REQ2# 7
REQ3# 8
+3V 9
10
5 TRDY#
4 STOP#
3 FRAME#
2 REQ4#
1

RP3 8.2K 10P8R +3V
IRDY# 6
REQ0# 7
SERR# 8
+3V 9
10
5 DEVSEL#
4 PLOCK#
3 PERR#
2 REQ5#
1

RP4 8.2K 10P8R +3V
INTG# 6
INTE# 7
INTF# 8
INTH# 9
+3V 10
5 INTD#
4 INTC#
3 INTB#
2 INTA#
1

RP5 8.2K 10P8R +3V_S5
OC4# 6
OC3# 7
OC2# 8
+3V_S5 9
10
5 OC0#
4 OC7#
3 OC6#
2 OC5#
1

CKL use 10Kohm

PCLK_ICH R327 *22_4 C382 *10p/50V_4

Platform Reset

+3V
C385 *0.1u/10V_4
U20
PLT_RST-R# 2
1
3
5
4
*TC7SH08FU
PLTRST# (7,12,18,20,21,22,23)
R333 100K_4
R336 0_4

Quanta Computer Inc.
PROJECT : ZG8

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ICH7-M(CLG)

U18C

SMB: SMBCLK, SMBDATA, LINKALERT#, SMLINK0, SMLINK1

SATA GPIO: GPIO21/SATA0GP, GPIO19/SATA1GP, GPIO36/SATA2GP, GPIO37/SATA3GP

Clocks: RI#, CLK14, CLK48, SUSCLK

SYS Power MGT: SPKR, SUS_STAT#, SYS_RST#, GPIO0/BM_BUSY#, GPIO11/SMBALERT#, GPIO18/STPPCI#, GPIO20/STPCPU#, GPIO26, GPIO27, GPIO28, GPIO32/CLKRUN#, GPIO33/AZ_DOCK_EN#, GPIO34/AZ_DOCK_RST#, WAKE#, SERIRQ, THRM#, VRMPWRGD, SLP_S3#, SLP_S4#, SLP_S5#, PWROK, GPIO16/DPRSLPVR, TP0/BATLOW#, PWRBTN#, LAN_RST#, RSMRST#

GPIO: GPIO6, GPIO7, GPIO8, GPIO9, GPIO10, GPIO12, GPIO13, GPIO14, GPIO15, GPIO24, GPIO25, GPIO35, GPIO38, GPIO39

ICH7-M

GPIO25 /Suspend rail is a HW strap , don't pull down .

U18F

ICH7-M

ICH PWROK

U12 TC7SH08FU

CLK GEN & PWR

VR PWRGD

Q4 2N7002E

M/B ID Select

MB ID: 001

12/17 ver0C
Remove R92

0117 change

0202 M/B ID change

1/7 Change footprint for SMT

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Size	Document Number: ICH7-M (POWER & GND) — Rev 1A
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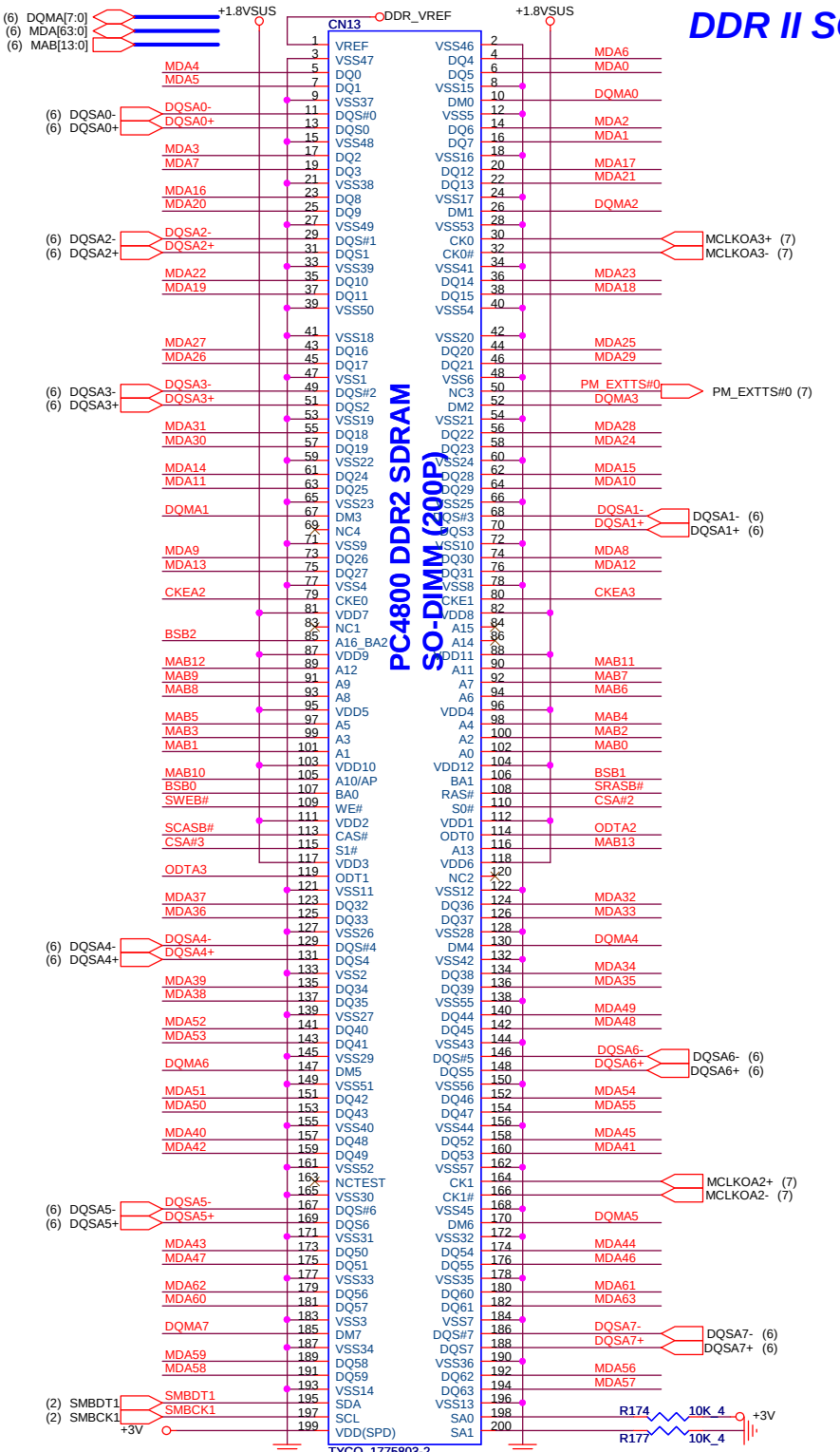
DDR II SOCKET(DDR)



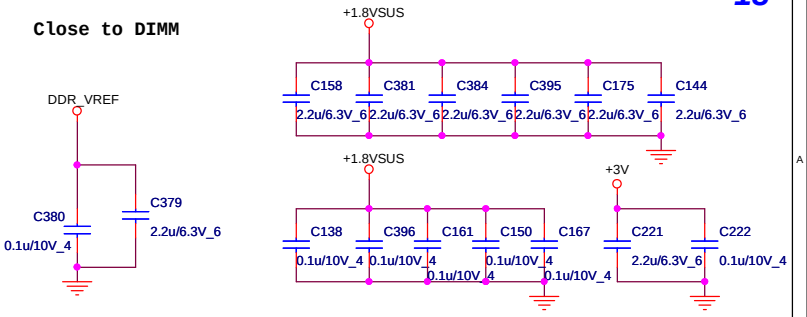
STD H: 4.0mm

SMbus address A1

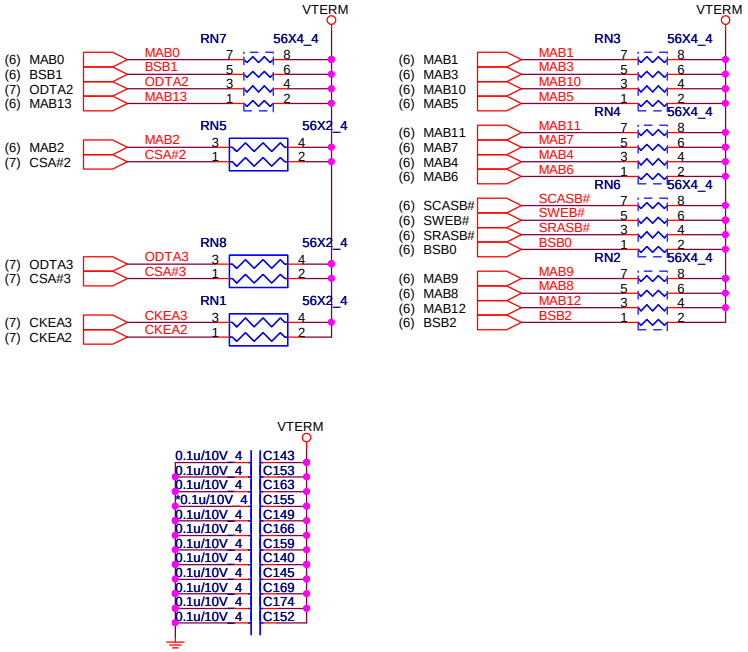
CLOCK 1,2

CKE 2,3

Close to DIMM



Termination resistor



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Size	Document Number	Rev
	DDR2 SO-DIMM(200P)	1A
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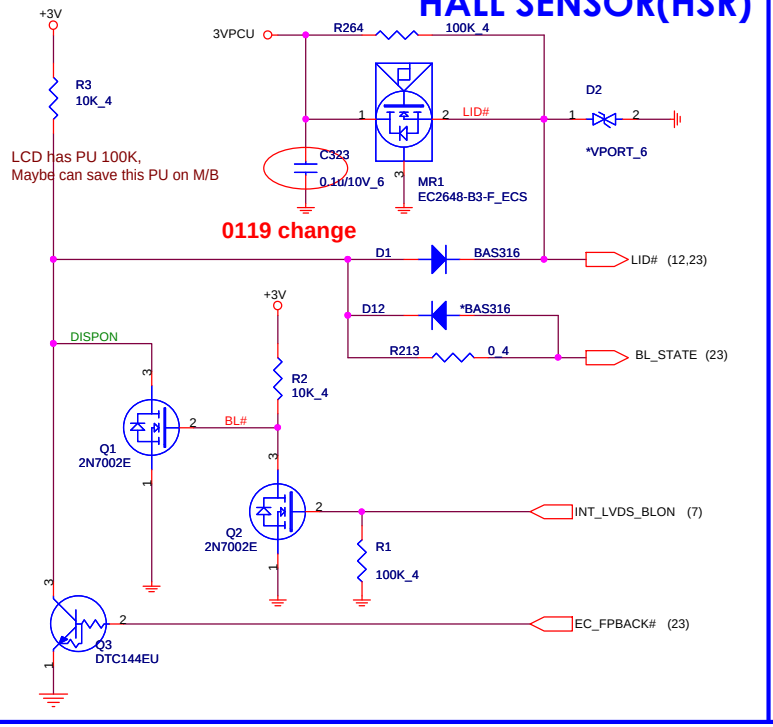
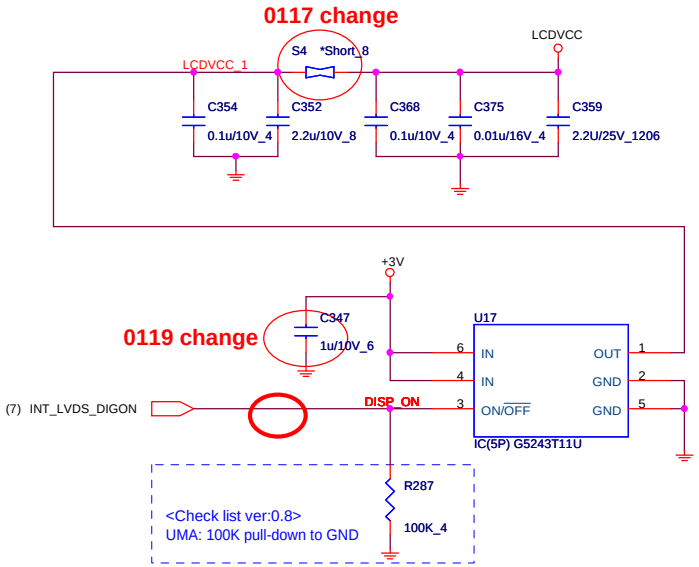
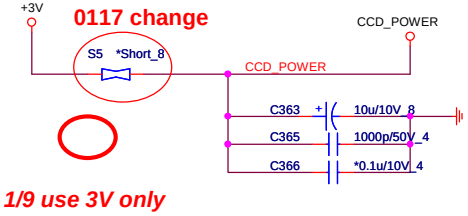
HALL SENSOR(HSR)



LCD POWER SWITCH(LDS)

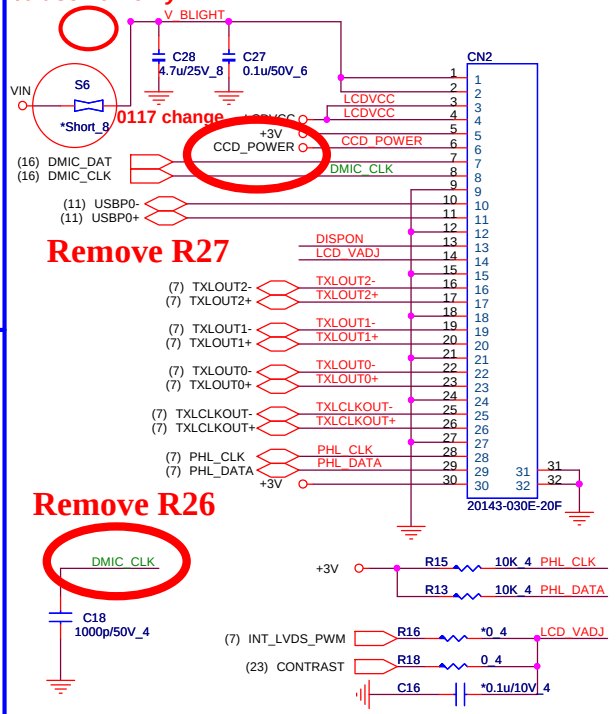


CAMERA POWER(CCD)

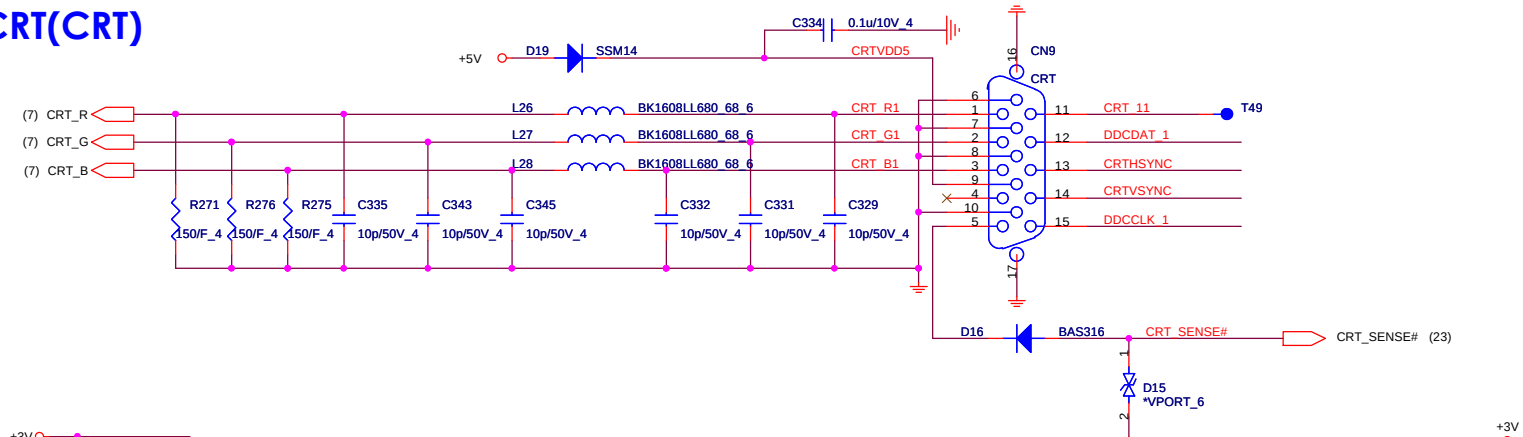


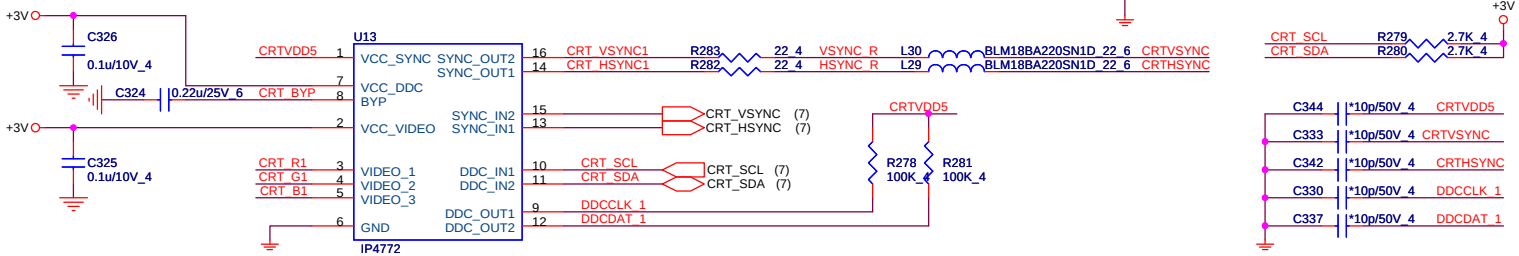
LCD MODULE(LDS)

V_BLIGHT
8.9"(5.5V):supply 5V 10.1":supply 19V
1/9 use 19V only



CRT(CRT)





Quanta Computer Inc.

PROJECT : ZG8

Size	Document Number	Rev
	CRT/LVDS	1A
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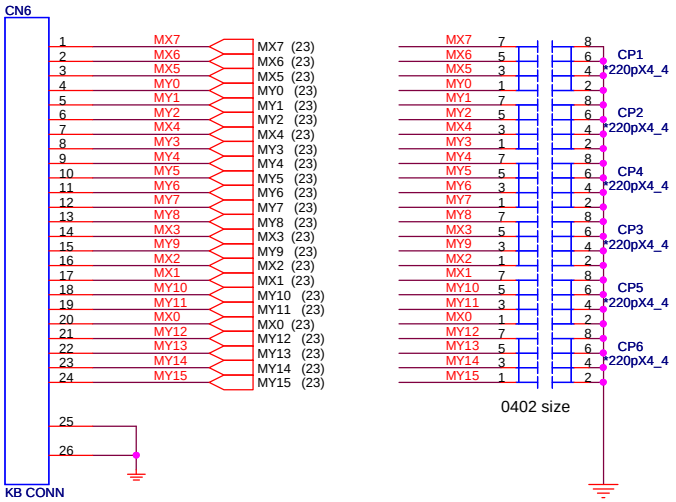
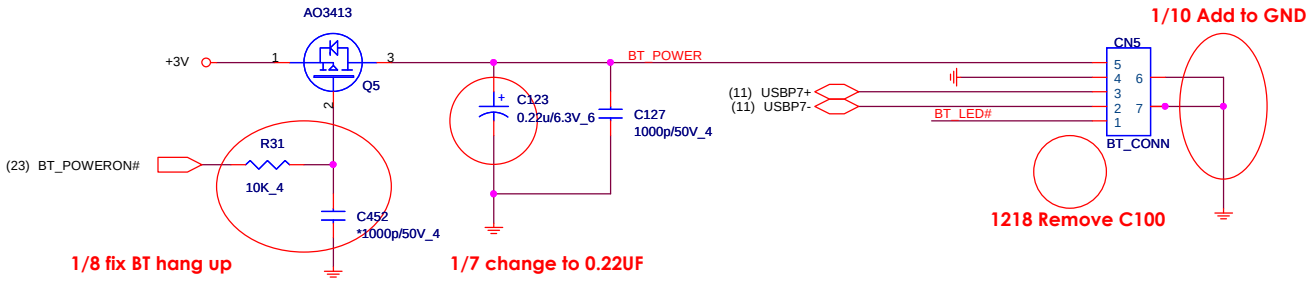
KEYBOARD(KBC)

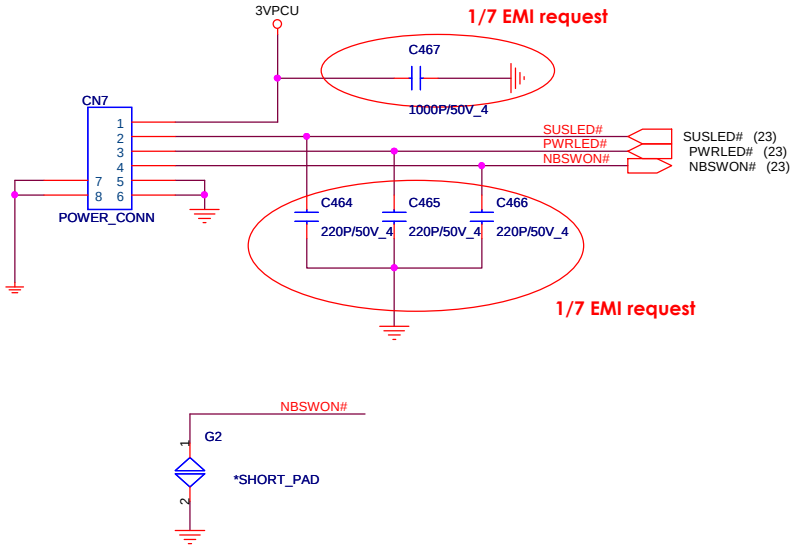


BLUETOOTH(BTM)

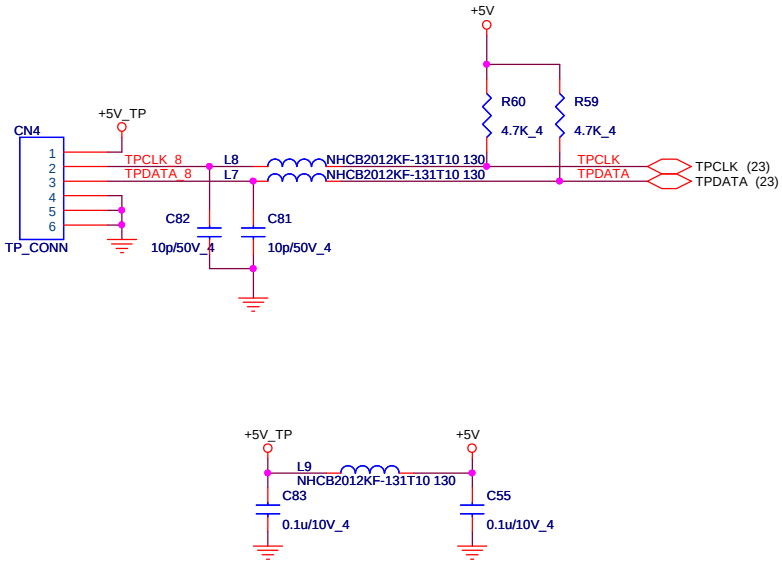
15



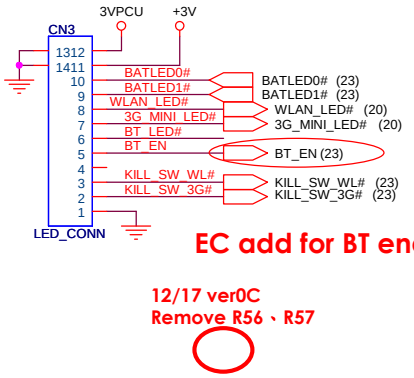
Power On Connector(UIF)



TOUCH PAD(TPD)



LED CONNECTOR(KBC)



Quanta Computer Inc.

PROJECT : ZG8

Size	Document Number	Rev
	KB/BT/TP/LED/Power Connector	1A
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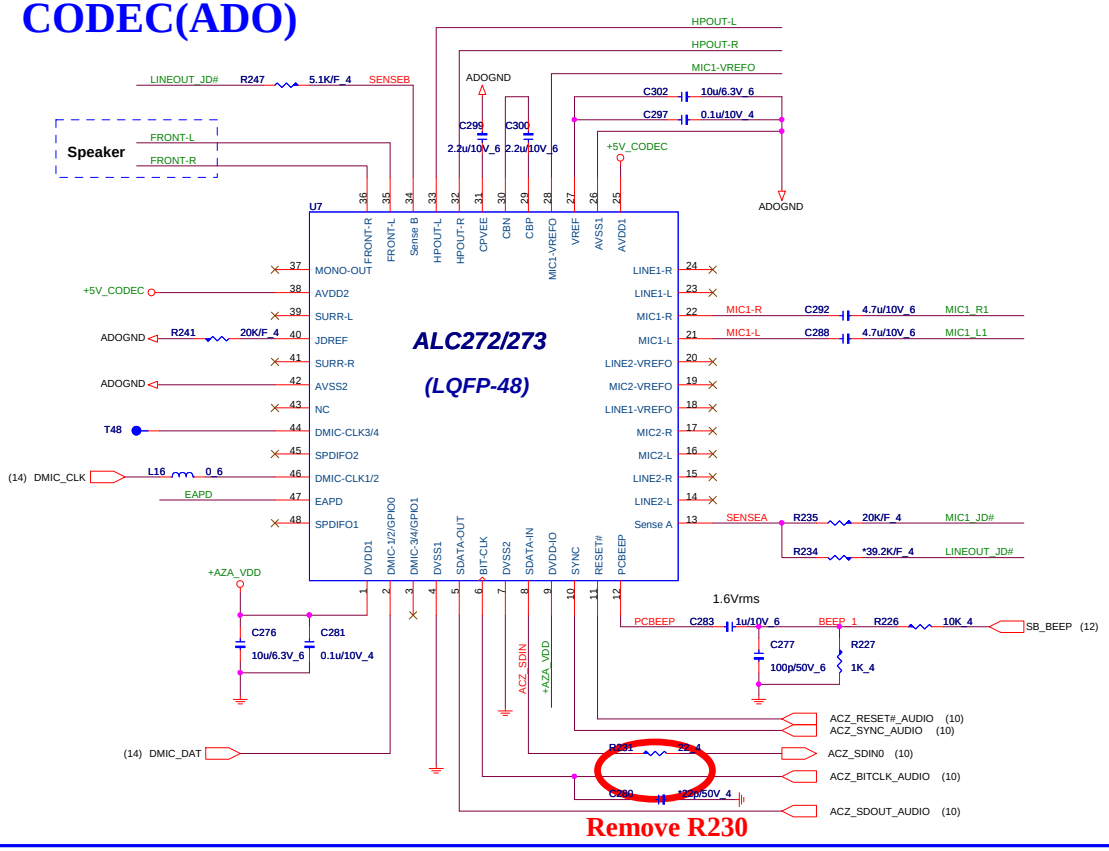
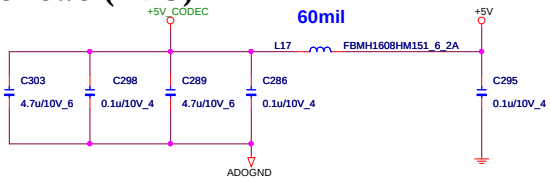
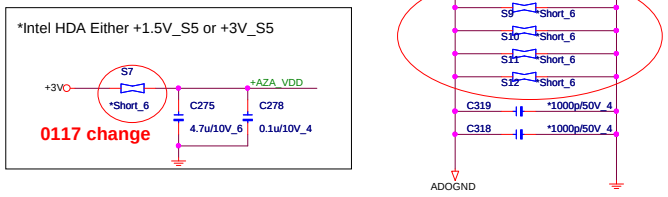
CODEC(ADO)



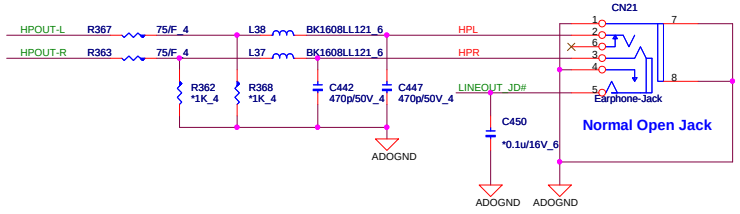
Codec Power(ADO)



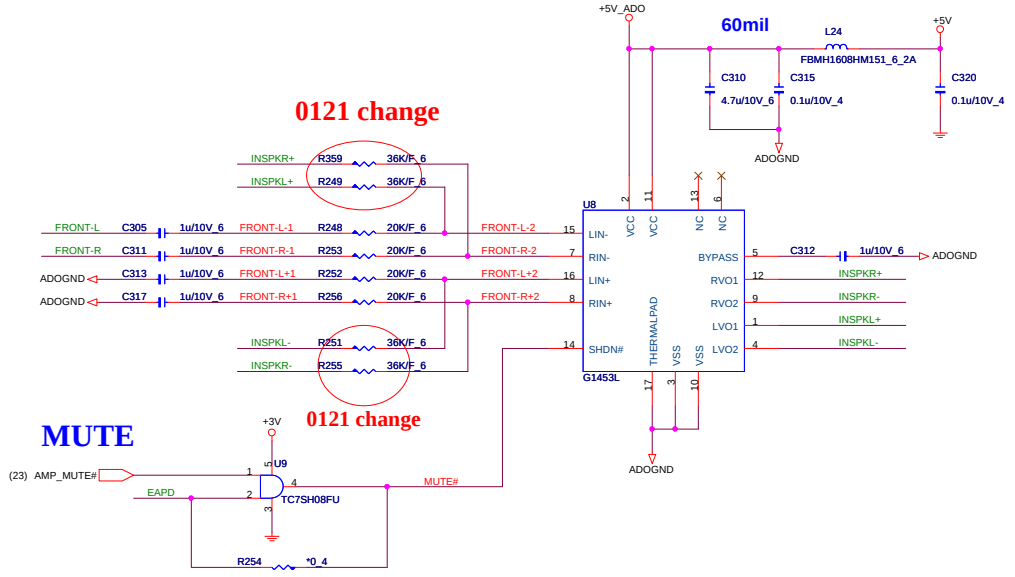
HDA Power(ADO)



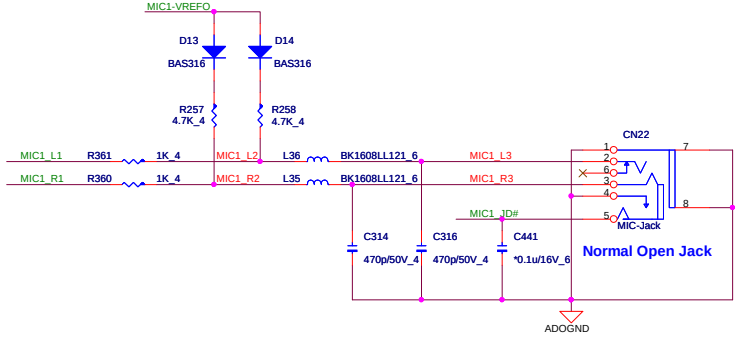
Earphone(AMP)



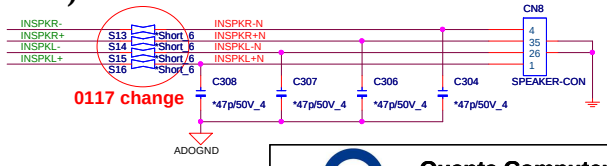
Speaker Amplifier(AMP)



System MIC(AMP)



Speaker(AMP)



Quanta Computer Inc.

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Size	Document Number	Rev
	Audio Codec/Audio AMP	1A
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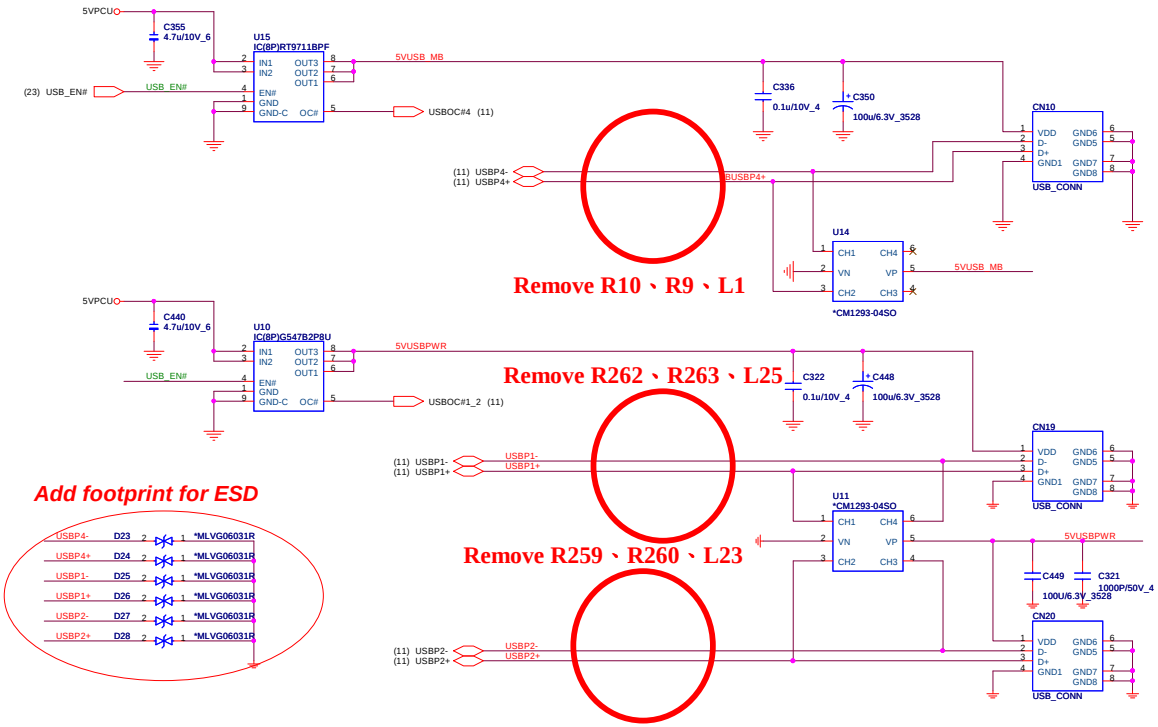
USB(USB)

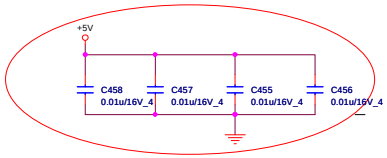


Add footprint for ESD

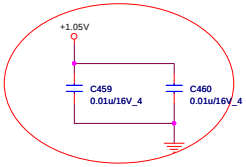
EMI reserve

17

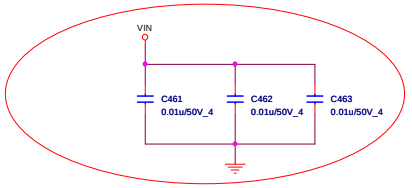
1217 EMI add



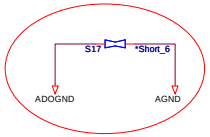
1217 EMI add



1217 EMI add

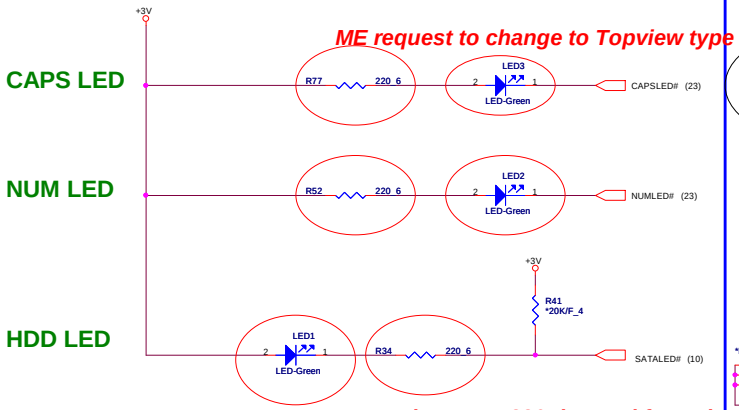


1217 add for ESD



0117 change

LED on M/B(UIF)



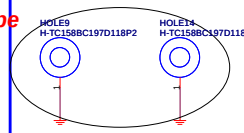
ME request to change to Topview type

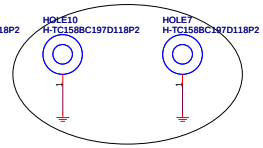
ME request change to 220ohm and footprint

LED on Main Side:
- *Charger (Green/ Abler)*
- *Storage HDD/ SSD/ Media (Gereen)*
- *Caps (Green)*
- *Num (Green)*

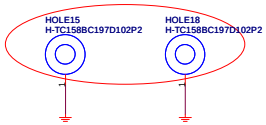
SCREW HOLE

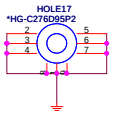
1218 change



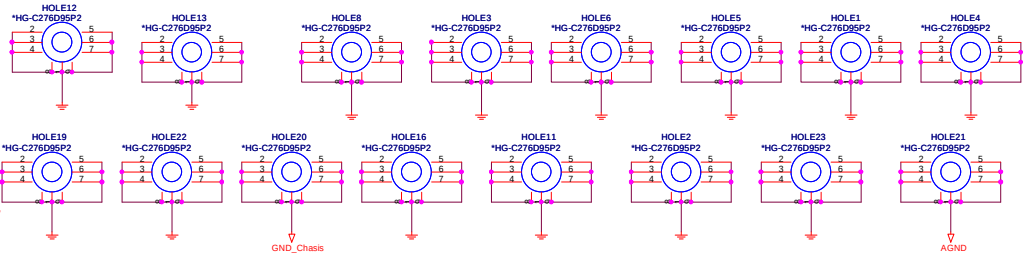


1218 change





SCREW HOLE



Quanta Computer Inc.
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Size	Document Number	Rev
	USB on Board/LED/SW/HOLE	1A

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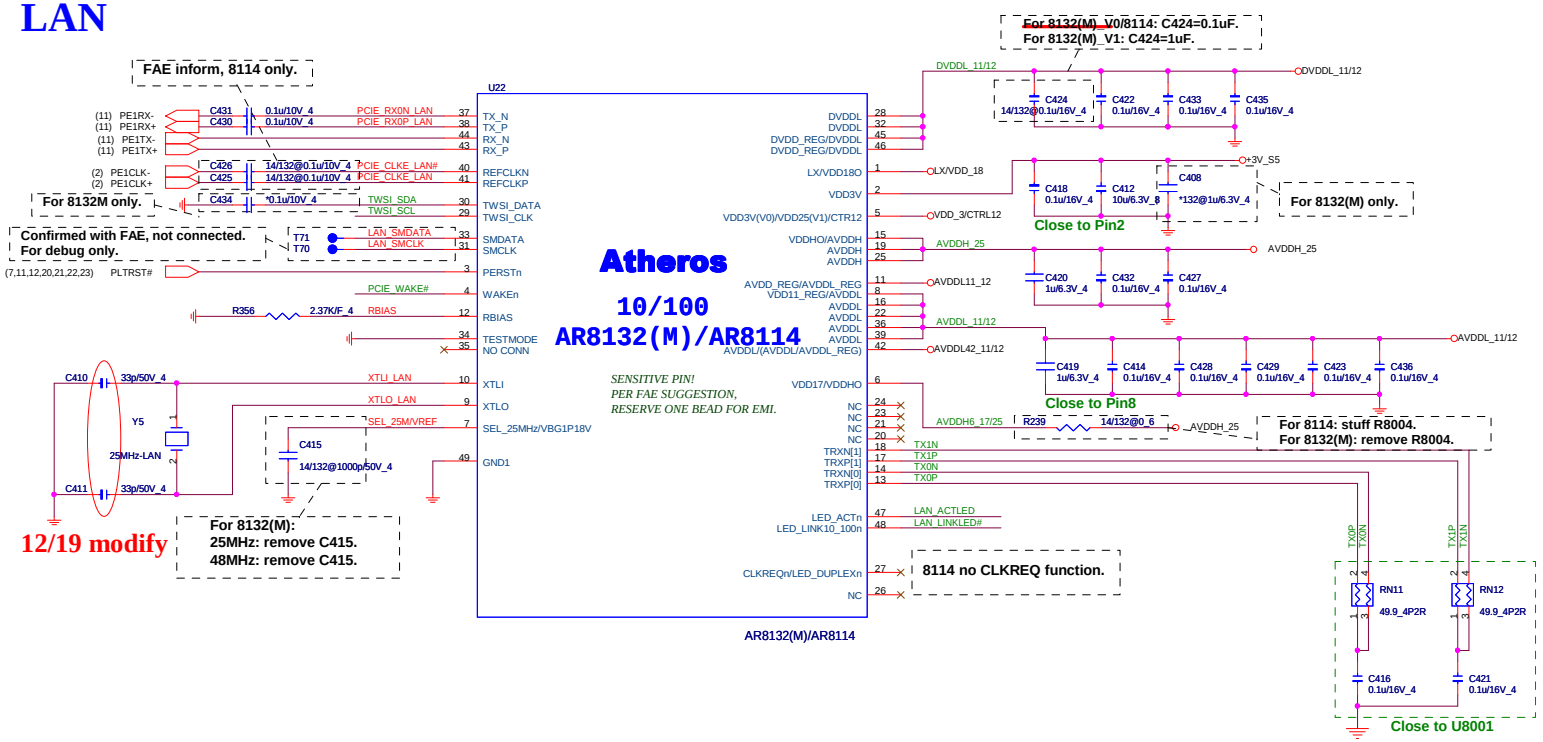
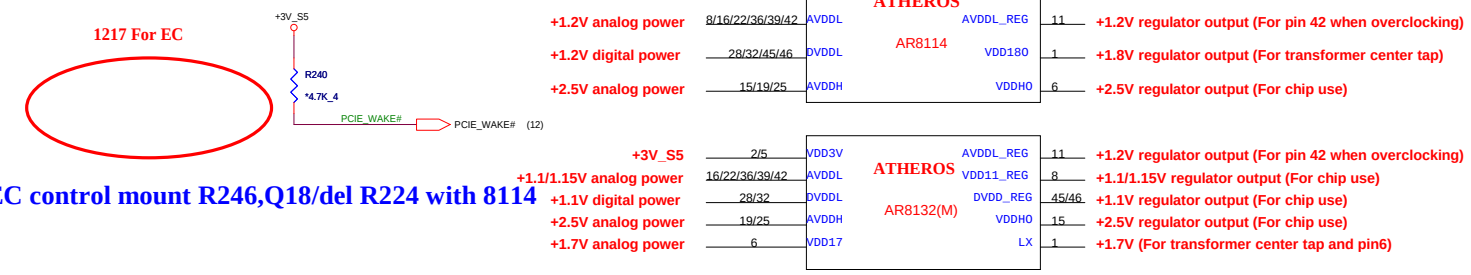
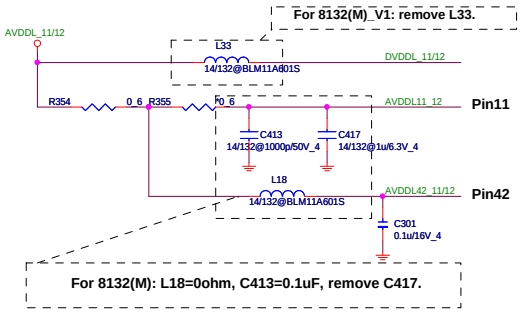
LAN

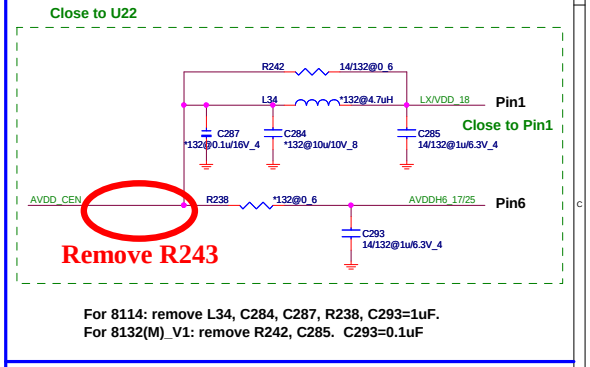




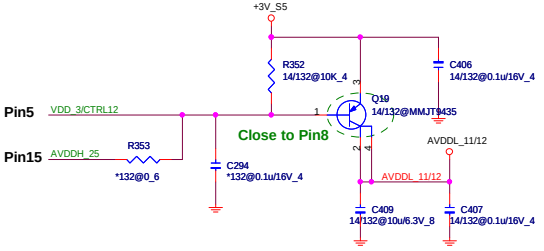
For EC control mount R246,Q18/del R224 with 8114

If overclocking: remove R354.
If not overclocking: remove R355.



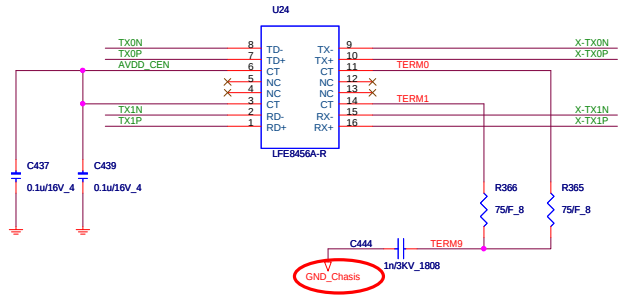


For 8114: remove L34, C284, C287, R238, C293=1uF.
For 8132(M)_V1: remove R242, C285. C293=0.1uF

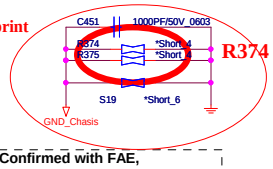


For 8114: remove R353, C294.
For 8132(M)_V1: remove R352, C406, C409, C407, Q19.

TRANSFORMER



Change C451 footprint



R374、R375 use short pad

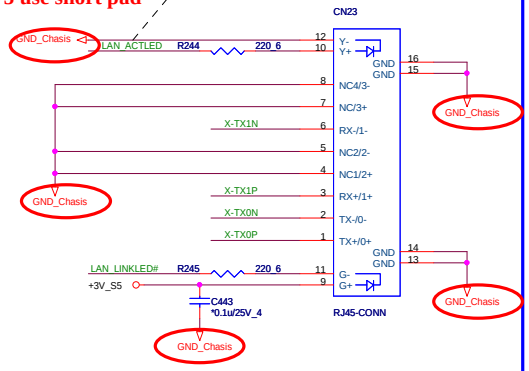
Confirmed with FAE,
For 8132(M)/8114: stuff R364

0120 ver 0D modify

12/17 ver 0C modify

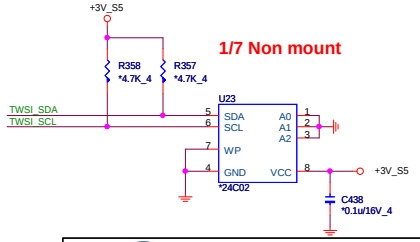
RJ45

Confirmed with FAE,
For 8132(M)/8114: LED_ACT= active high



EEPROM

For 8132/8114:
If EEPROM not applied, remove all.
If EEPROM applied, stuff all.
For 8132M: del U23, R357, R358=0 ohm.



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Size	Document Number	Rev
	LAN_Atheros_AR8132(M)/AR8114	1A
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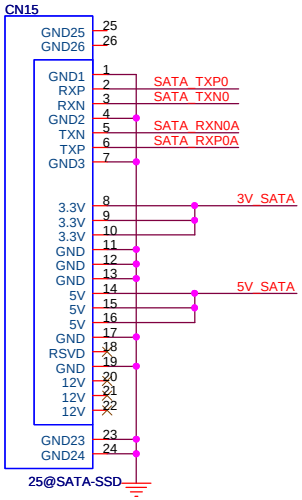
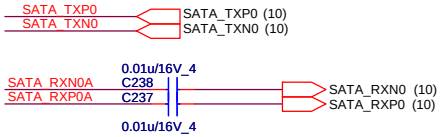
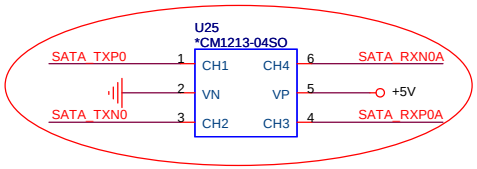
2.5" SATA HDD(HDD)



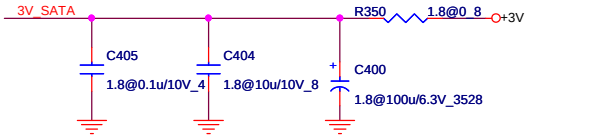


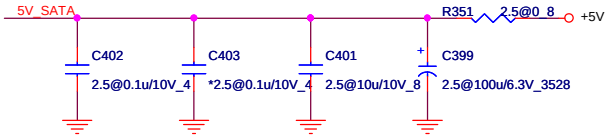


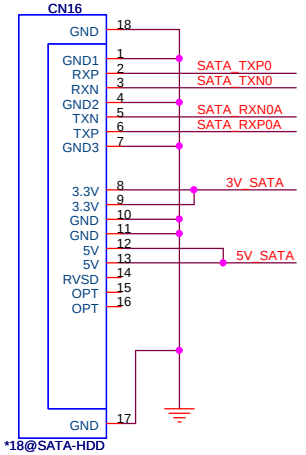
0119 add for ESD and place near SATA conn

0120 : CN15 PIN25 & 26 IS NP, NO contact to GND.

1.8" SATA HDD(TOSHIBA)







ZT4 card connector

Quanta Computer Inc.
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	SATA-HDD/SSD	1A
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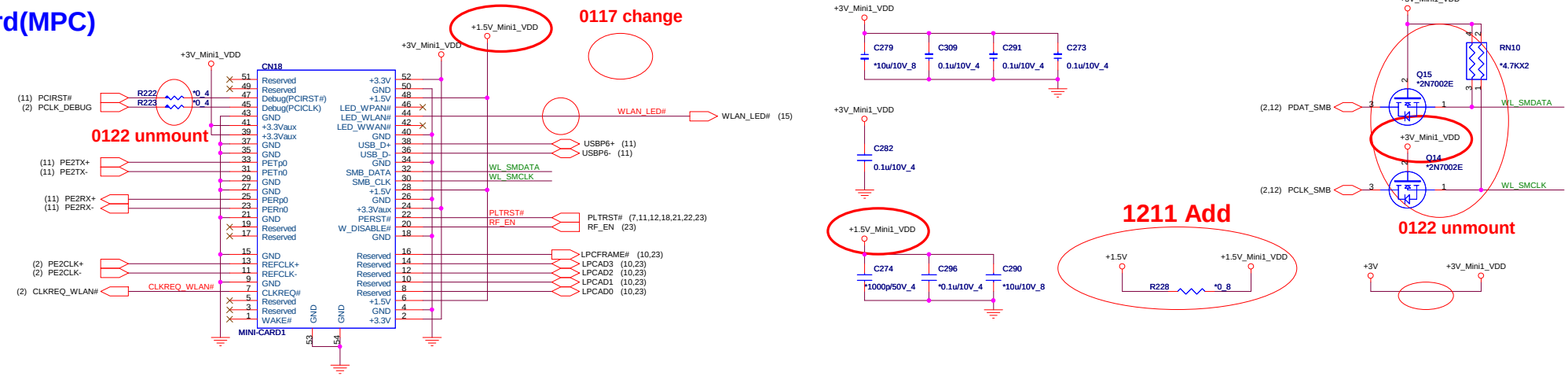
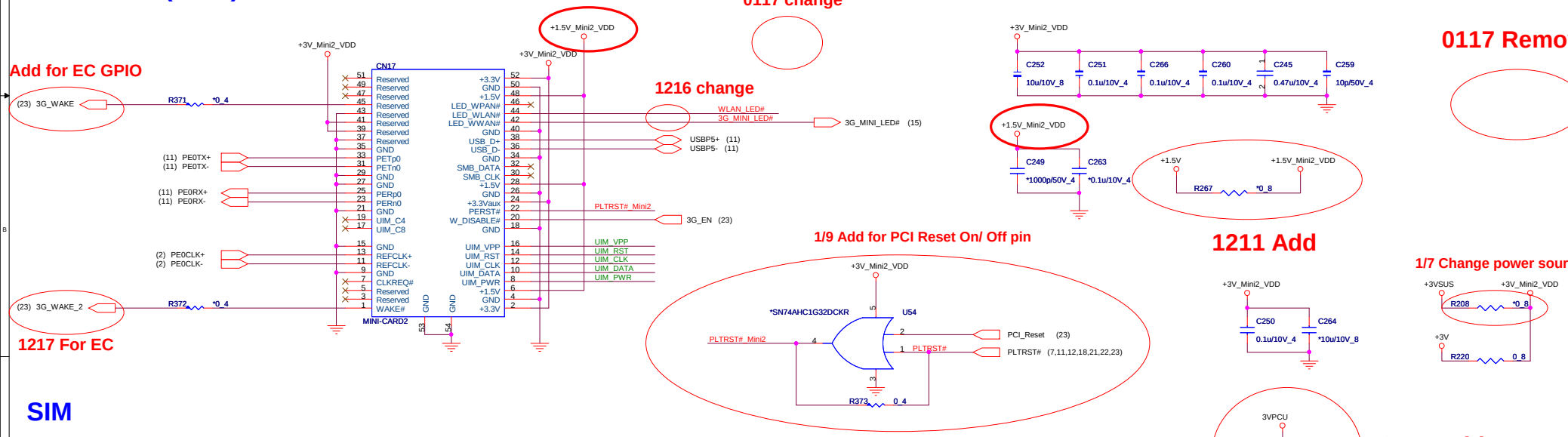
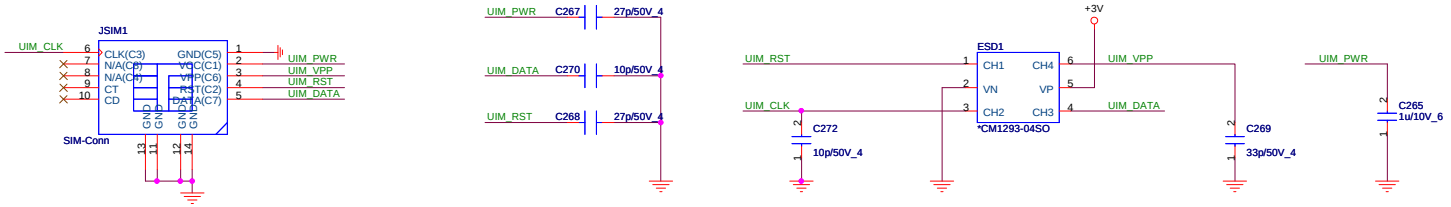
Mini Card(MPC)



Mini Card 2(MNC)



SIM



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Size	Document Number		Rev
	Mini-Card/WL/3G/SIM		0A
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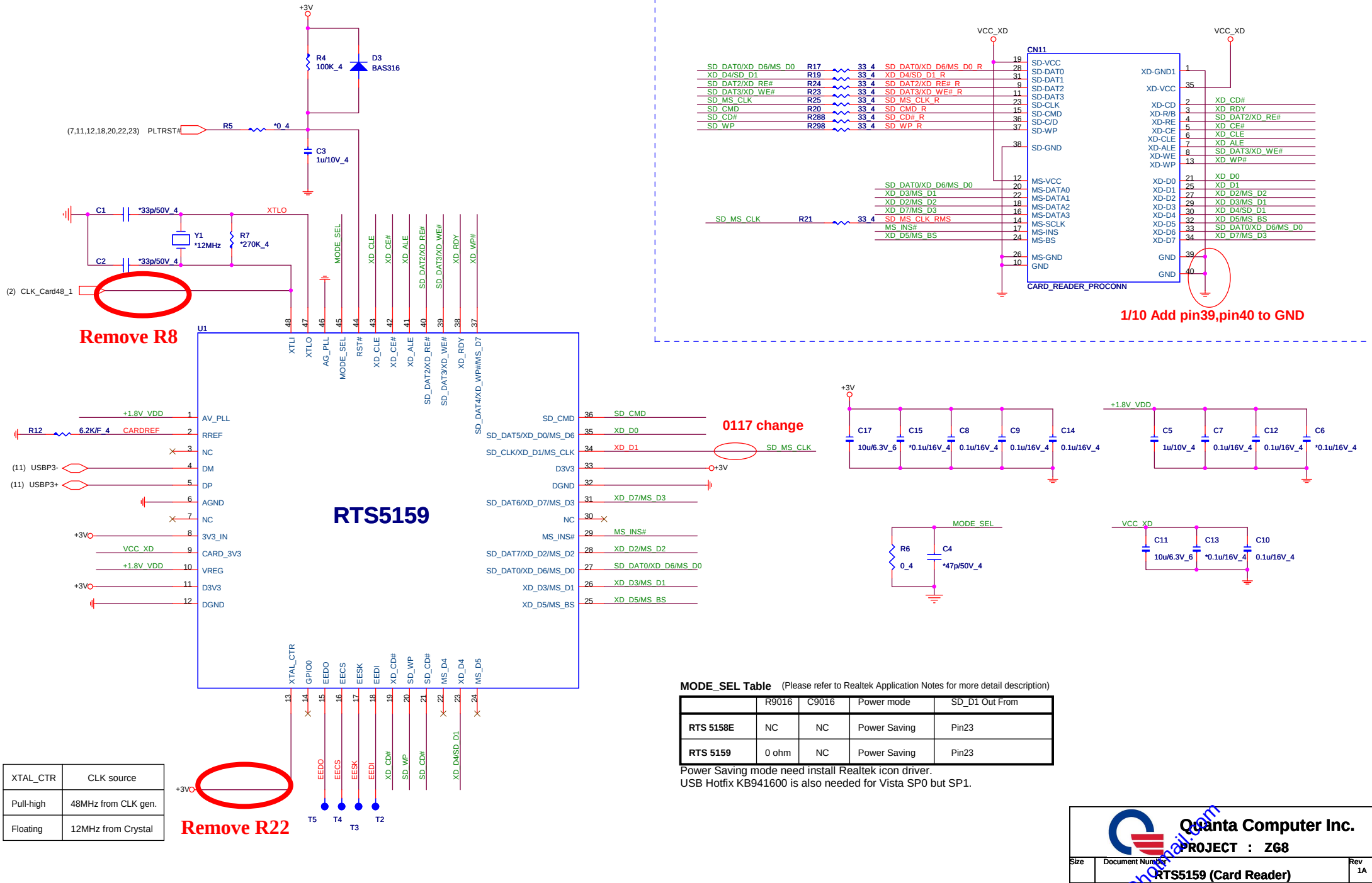
RTS5159(MMC)

4 IN 1 CARD READER



XTAL_CTR	CLK source
Pull-high	48MHz from CLK gen.
Floating	12MHz from Crystal

MODE_SEL Table (Please refer to Realtek Application Notes for more detail description)

	R9016	C9016	Power mode	SD_D1 Out From
RTS 5158E	NC	NC	Power Saving	Pin23
RTS 5159	0 ohm	NC	Power Saving	Pin23

Power Saving mode need install Realtek icon driver.
USB Hotfix KB941600 is also needed for Vista SP0 but SP1.

Quanta Computer Inc.
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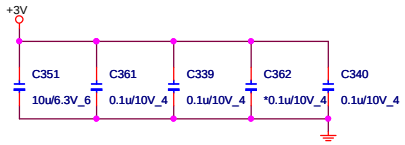
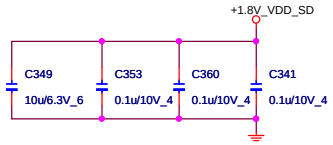
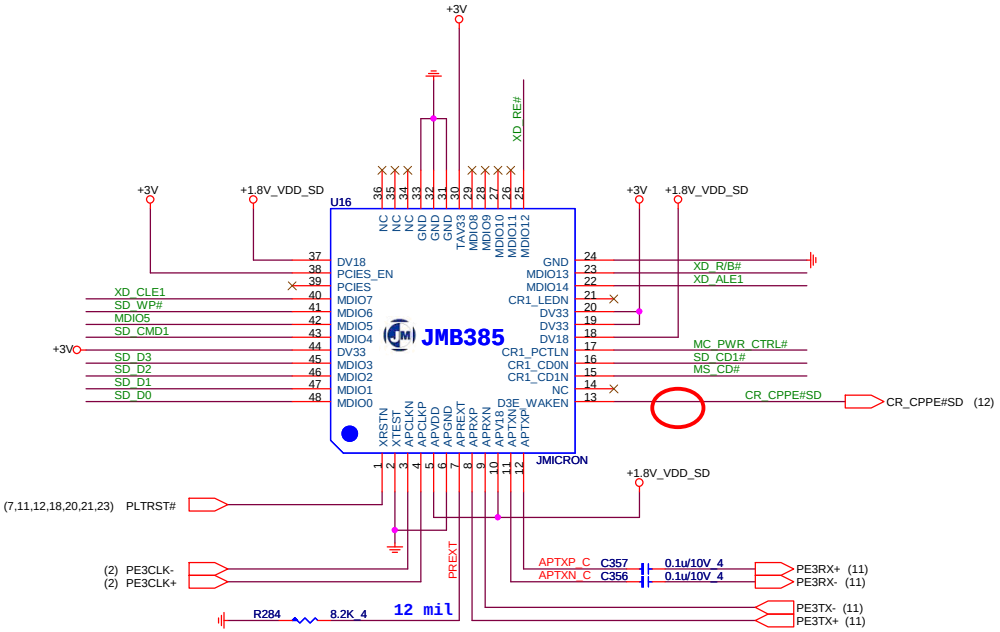
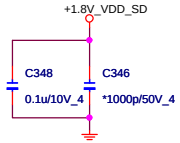
JMB385 SIDO(MMC)







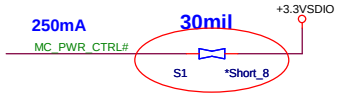
For APVDD(pin5)



APVDD(pin5) must put C346/1000pF close to APVDD(pin5) (length must under 120mil) and trace width = 20mil, after C346, pls put one more 0.1uF for it.

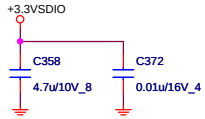
SD CONNDETOR

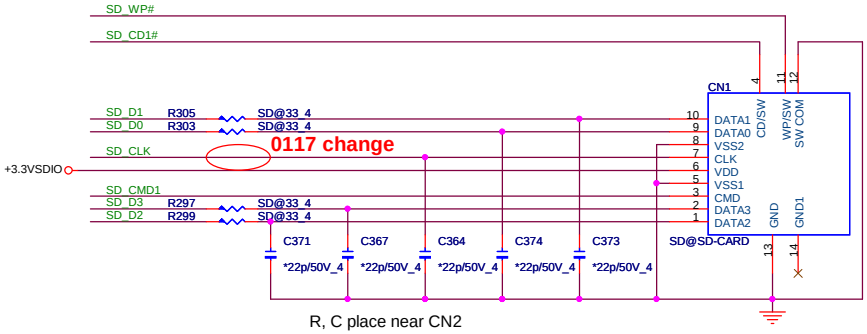
Use 0805 type and over 20 mils trace width on both side



0117 change

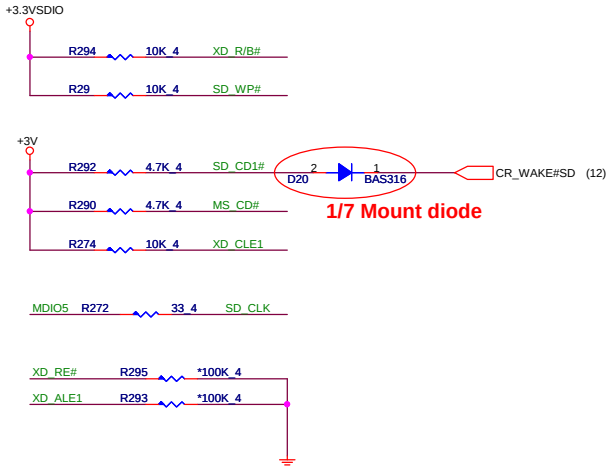
Memory Card Power Supply





0117 change

R, C place near CN2



1/7 Mount diode

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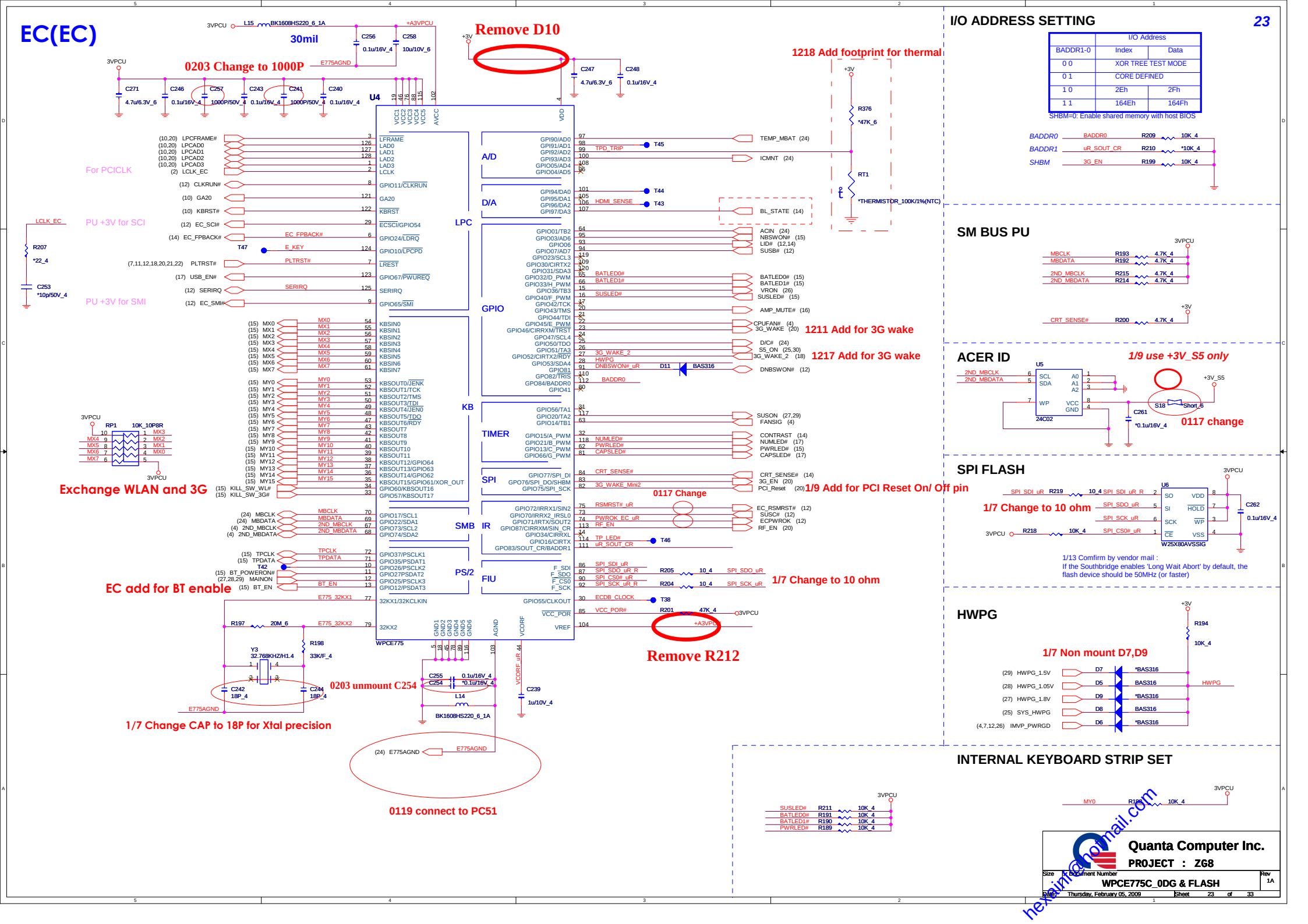
EC(EC)



I/O ADDRESS SETTING

23

BADDR1-0	I/O Address	
0 0	XOR TREE TEST MODE	
0 1	CORE DEFINED	
1 0	2Eh	2Fh
1 1	164Eh	164Fh

SHBM=0: Enable shared memory with host BIOS

BADDR0 — BADDR0 — R209 — 10K_4
BADDR1 — uR_SOUT_CR — R210 — *10K_4
SHBM — 3G_EN — R199 — 10K_4

SM BUS PU

MBCLK — R193 — 4.7K_4
MBDATA — R192 — 4.7K_4
2ND_MBCLK — R215 — 4.7K_4
2ND_MBDATA — R214 — 4.7K_4
CRT_SENSE# — R200 — 4.7K_4

ACER ID

1/9 use +3V_S5 only

2ND_MBCLK
2ND_MBDATA
U5 24C02
S18 *Short_6
C261 *0.1u/16V_4
0117 change

SPI FLASH

SPI_SDI_uR — R219 — 10_4 — SPI_SDI_uR_R
SPI_SDO_uR
SPI_SCK_uR
SPI_CS0#_uR — R218 — 10K_4
U6 W25X80AVSSIG
C262 0.1u/16V_4
1/7 Change to 10 ohm

1/13 Comfirm by vendor mail :
If the Southbridge enables 'Long Wait Abort' by default, the flash device should be 50MHz (or faster)

HWPG

R194 10K_4
1/7 Non mount D7,D9

(29) HWPG_1.5V	D7	*BAS316
(28) HWPG_1.05V	D5	BAS316
(27) HWPG_1.8V	D9	*BAS316
(25) SYS_HWPG	D8	BAS316
(4,7,12,26) IMVP_PWRGD	D6	*BAS316

HWPG

INTERNAL KEYBOARD STRIP SET

SUSLED#	R211	10K_4
BATLED0#	R191	10K_4
BATLED1#	R190	10K_4
PWRLED#	R189	10K_4

MY0 — R188 — 10K_4

Quanta Computer Inc.
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Charger(DCD)

DC-IN JACK

PJ2 POWER_JACK dcjk-2dc3003-001211-5p-zg8
PA1
PL9 HI0805R800R-10/5A/80ohm_8
PC124 2200p/50V_6
PC125 0.1u/50V_6
PC126 *0.1u/50V_6 C-test
VA
PD5 1N4148WS
PC122 *0.1u/50V_6
PC123 0.1u/50V_6
PD12 SX34
PD11 P4SMAJ20A C-test
0.01_3720 PR65 R1
VA2
PC60 0.1u/50V_6
PR64 220K/F_6
PR63 220K/F_6
PQ18 AO4427
PQ19 IMD2AT108
VIN
PC59 *0.1u/50V_6 C-test
PC58 2200p/50V_6
PQ17 AO4427
BAT-V
PR60 33K_6
PR61 10K_6
(23) D/C#
PQ20 2N7002K
3VPCU
PR70 100K/F_6
(23) ACIN
ACIN
CSIP_1
PR74 10/F_6
PR73 10/F_6
PR72 4.7_6
PC69 1u/16V_6
PC71 0.1u/50V_6
CSIP
CSIN
PC65 1u/16V_6
PD4 RB500V-40
PC68 0.1u/50V_6
(23) MBDATA
(23) MBCLK
PC66 0.1u/50V_6
DCIN
PR78 49.9/F_6
PR77 82.5K/F_6
PR76 22K/F_6
PR71 2.7_6
PC67 0.1u/50V_8
PU6 ISL88731
NC GND GND GND GND CSSP CSSN VCC VDDP
VDDSMB SDA SCL ACOK DCIN ACIN VREF ICOMP NC VCOMP
BOOT UGATE PHASE LGATE PGND CSOP CSON NC VBF GND
NC ICM NC GND
PR67 10/F_6
PC64 0.1u/50V_6
PR68 *Short_4 C-test
PR66 10/F_6
PR69 100_4
CSOP
CSON
BAT-V
AO4932
PQ21
PL8 6.8uH/4.5A_7X7X3
PR62 *2.2/F_6
PC61 *2200p/50V_6
PL2 HI0805R800R-10/5A/80ohm_8
VA3
PC62 *0.1u/50V_6 C-test
PC63 2200p/50V_6
PC121 10u/25V_1206
0.01_3720 PR59
PC52 0.01u/50V_6
PC54 2200p/50V_6
PC53 10u/25V_1206
PC57 10u/25V_1206
PR58 *Short_6 C-test
PC56 100p/50V_6
SUYIN_Batt
PJ1
MBAT+
TEMP_MBAT
PR57 *0_6
PD3 RB500V-40
HI0805R800R-10/5A/80ohm_8
PL1
TEMP_MBAT (23)
PC55 0.1u/50V_6
PR55 100K/F_6
PC49 47p/50V_6
PC50 47p/50V_6
PR53 100_4
PR54 100_4
MBCLK (23)
MBDATA (23)
PD1 *ZD3.6V
PD2 *ZD3.6V
PR56 *100K/F_6
PC51 0.01u/16V_4 C-test
E775AGND (23)
PC74 *1u/16V_6
PC73 0.01u/50V_6
PC72 *0.01u/50V_6
PR75 2.21K/F_6
PC75 0.01u/50V_6
ICMNT (23)
PC70 3300p/50V_4
PU5 *CM1293A-04SO
CH1 CH4 VN VP CH2 CH3
MBCLK
3VPCU
MBDATA
TEMP_MBAT_C
Add ESD diode base on EC FAE suggestion

Quanta Computer Inc.
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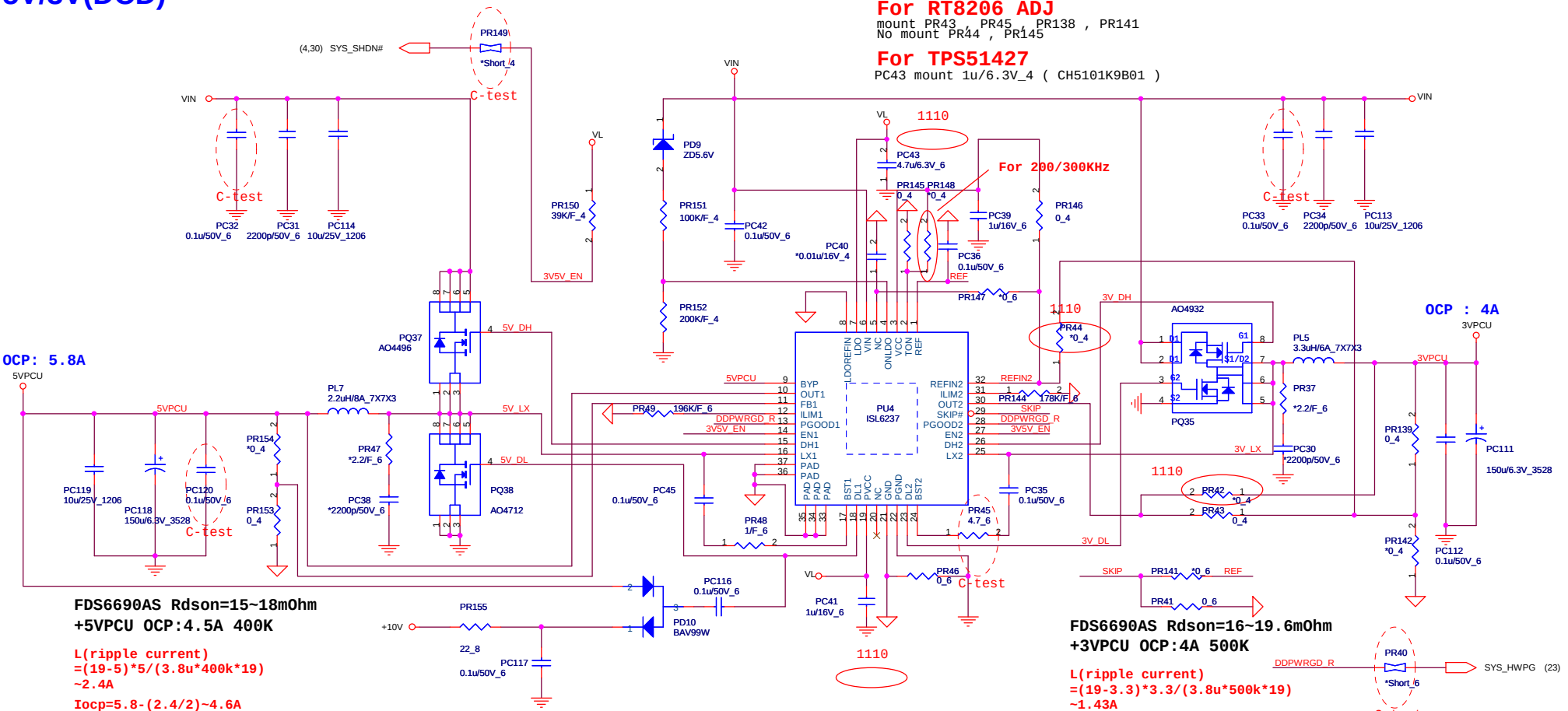
5V/3V(DCD)

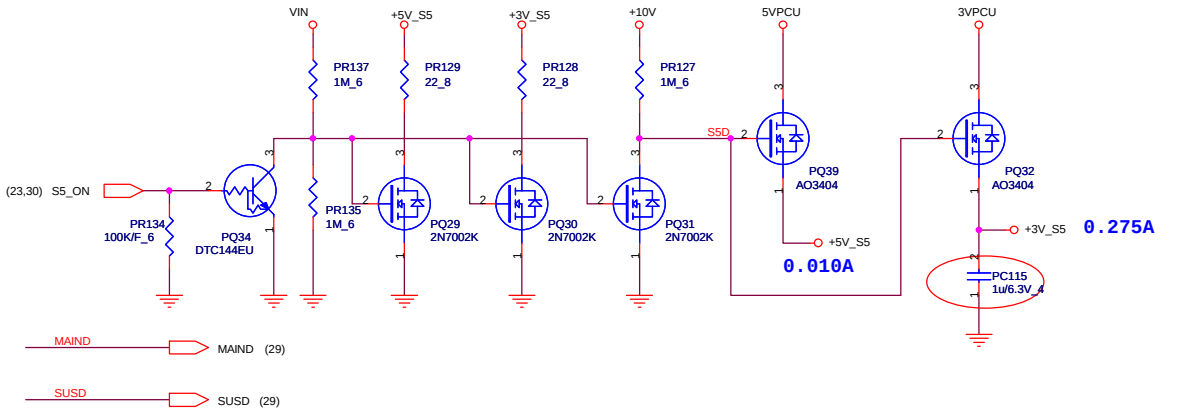
For ISL6237 ADJ
mount PR44 , PR145 , PR138 , PR141
No mount PR43 , PR45

For ISL6237 & RT8206 Fix
mount PR44 , PR138 , PR145
No mount PR43 , PR45

For RT8206 ADJ
mount PR43 , PR45 , PR138 , PR141
No mount PR44 , PR145

For TPS51427
PC43 mount 1u/6.3V_4 (CH5101K9B01)





Quanta Computer Inc.
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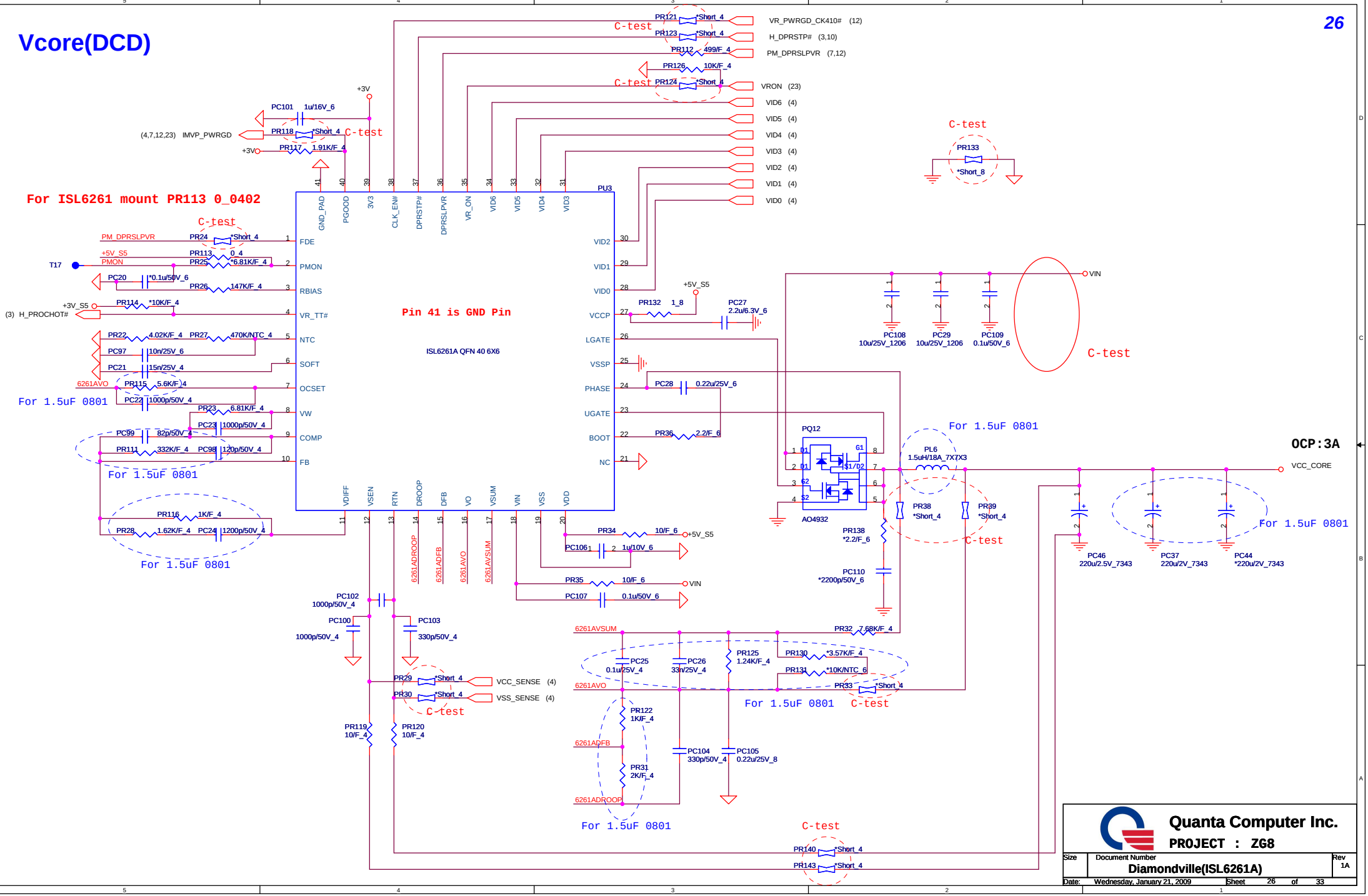
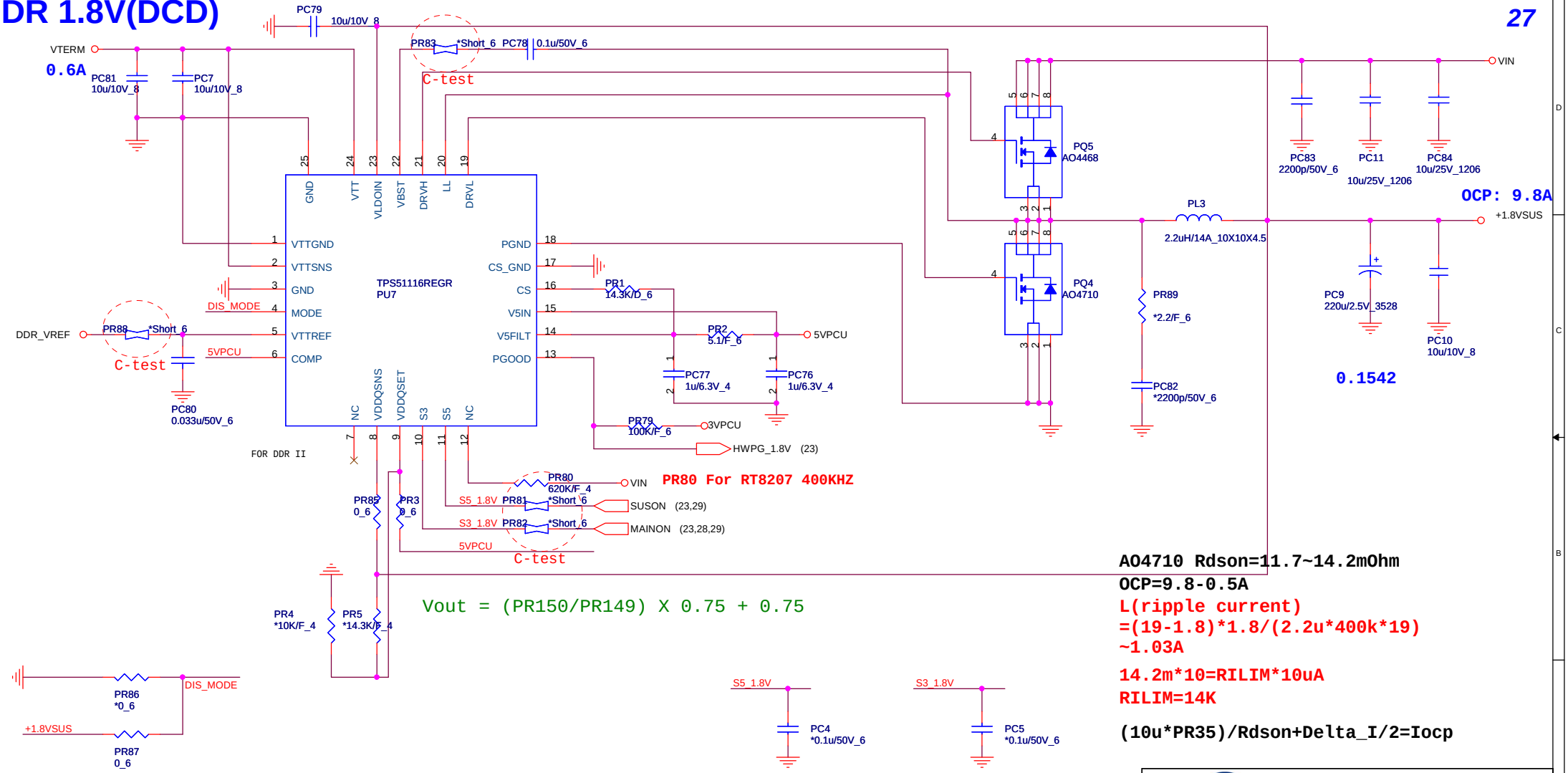
Vcore(DCD)


For ISL6261 mount PR113 0_0402
Pin 41 is GND Pin
ISL6261A QFN 40 6X6
PU3
GND_PAD
PGOOD
3V3
CLK_EN#
DPRSTP#
DPRSLPVR
VR_ON
VID6
VID5
VID4
VID3
VID2
VID1
VID0
VCCP
LGATE
VSSP
PHASE
UGATE
BOOT
NC
FDE
PMON
RBIAS
VR_TT#
NTC
SOFT
OCSET
VW
COMP
FB
VDIFF
VSEN
RTN
DROOP
DFB
VO
VSUM
VIN
VSS
VDD
C-test
For 1.5uF 0801
For 1.5uF 0801
For 1.5uF 0801
For 1.5uF 0801
For 1.5uF 0801
For 1.5uF 0801
For 1.5uF 0801
OCP:3A
VCC_CORE
VIN
AO4932
PQ12
PL6
1.5uH/18A_7X7X3
VCC_SENSE (4)
VSS_SENSE (4)
VRON (23)
VID6 (4)
VID5 (4)
VID4 (4)
VID3 (4)
VID2 (4)
VID1 (4)
VID0 (4)
VR_PWRGD_CK410# (12)
H_DPRSTP# (3,10)
PM_DPRSLPVR (7,12)
IMVP_PWRGD (4,7,12,23)
H_PROCHOT# (3)
Quanta Computer Inc.
PROJECT : ZG8
Diamondville(ISL6261A)
Wednesday, January 21, 2009

DDR 1.8V(DCD)



AO4710 Rdson=11.7~14.2mOhm
OCP=9.8-0.5A
L(ripple current)
=(19-1.8)*1.8/(2.2u*400k*19)
~1.03A

14.2m*10=RILIM*10uA
RILIM=14K

(10u*PR35)/Rdson+Delta_I/2=Iocp

Quanta Computer Inc.		
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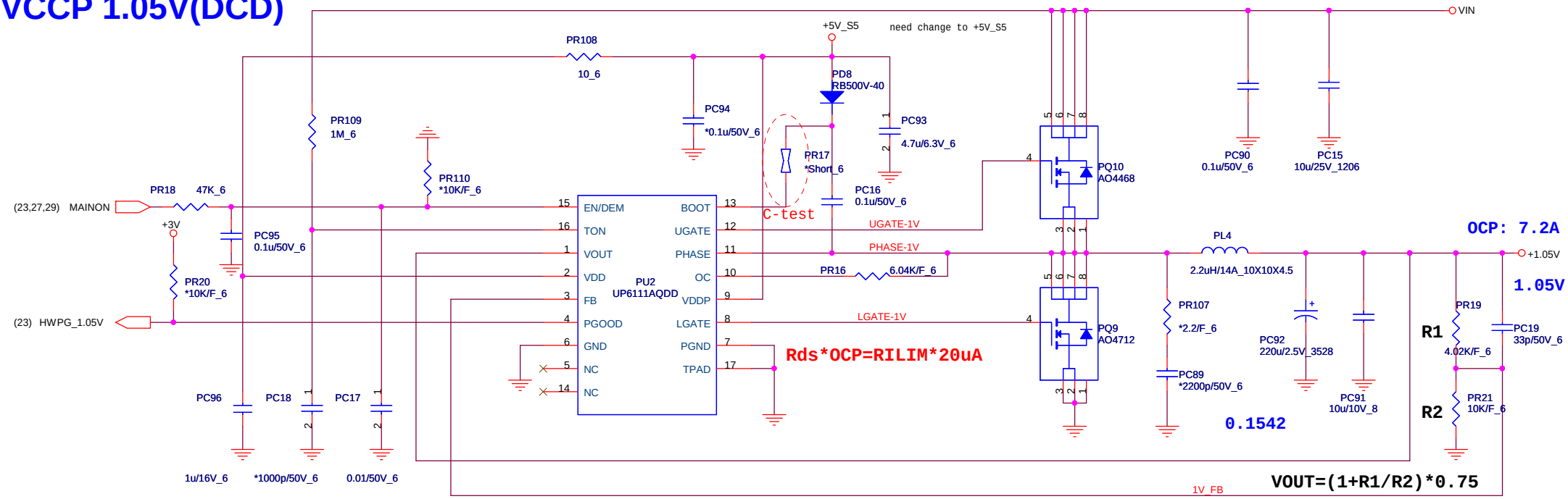
VCCP 1.05V(DCD)



TON=3.85p*RTON*Vout/(Vin-0.5)

Frequency=Vout/(Vin*TON)

TON=3.85p*1M*1/(Vin-0.5)

Frequency=1/(0.0036767)=272K

AO4712 Rdson=15~18mOhm

OCP=7.2-0.8A

L(ripple current)
=(19-1.05)*1.05/(2.2u*272k*19)
~1.63A

18m*7=RILIM*20uA

RILIM=6K(2.5~8K)

Quanta Computer Inc.		
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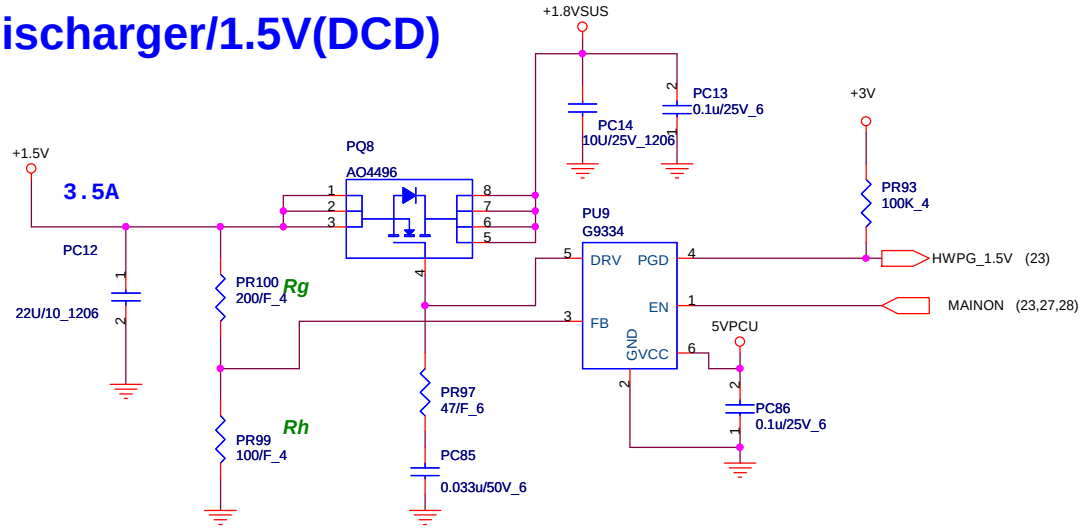
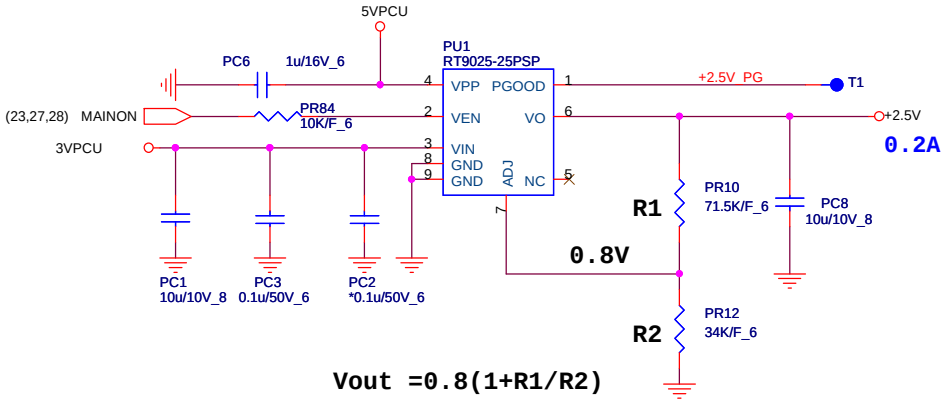
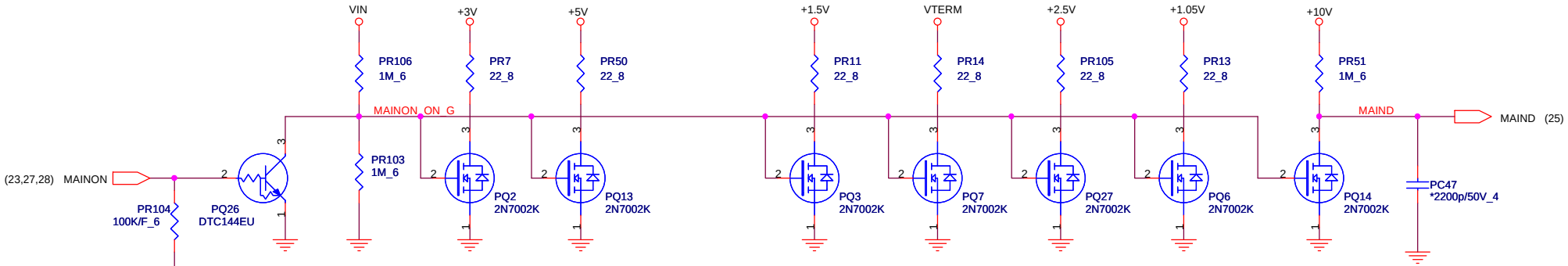
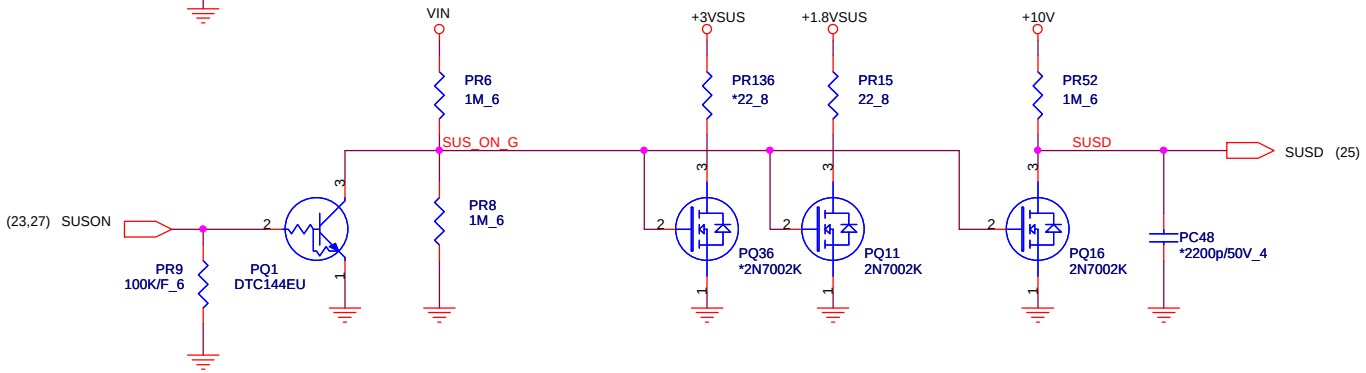
Discharger/1.5V(DCD)









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	Discharde (1.5V)	1A
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