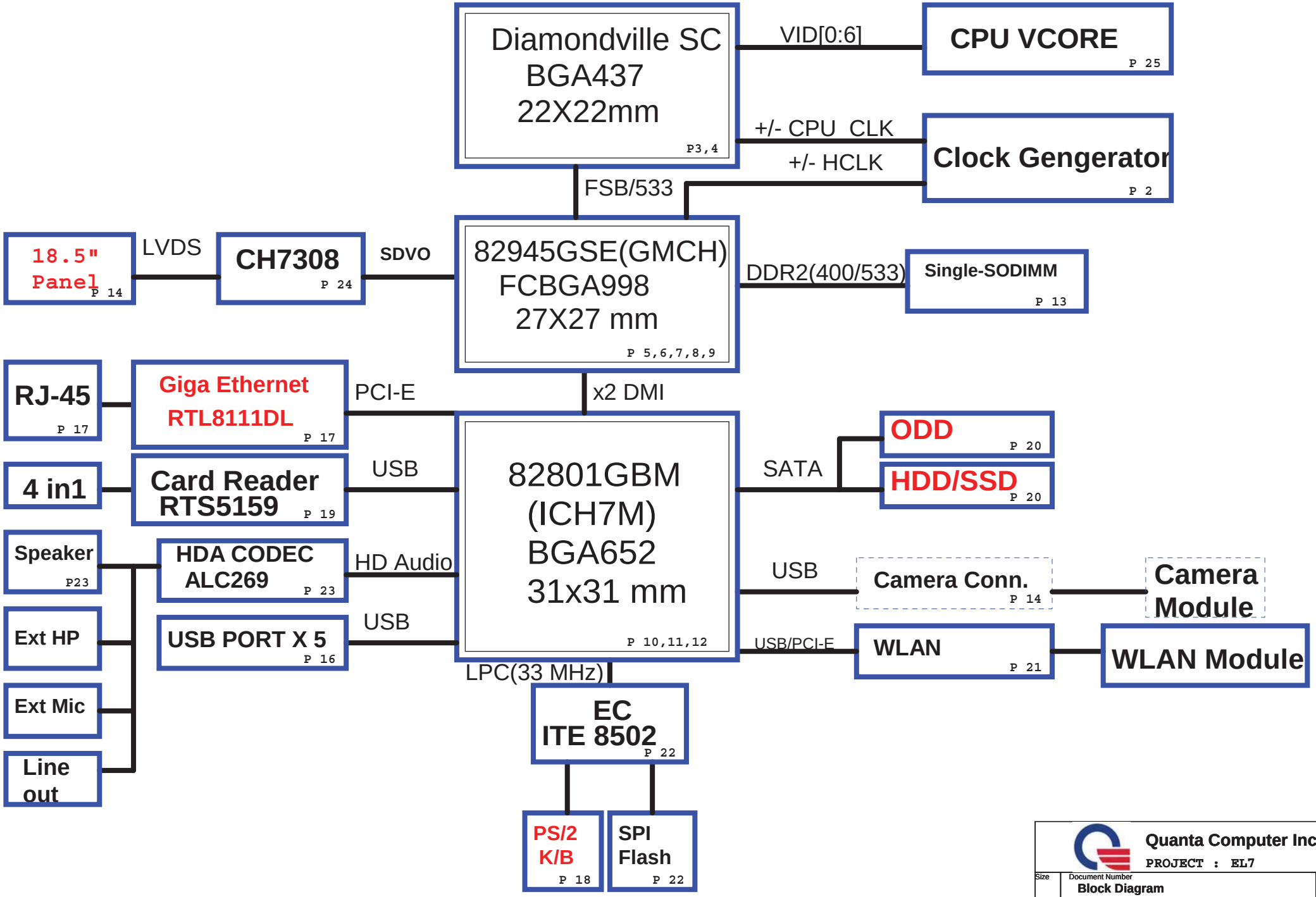
Clapton (EL7) AIO Block Diagram



Quanta Computer Inc.
PROJECT : EL7

Size	Document Number	Rev
	Block Diagram	1A

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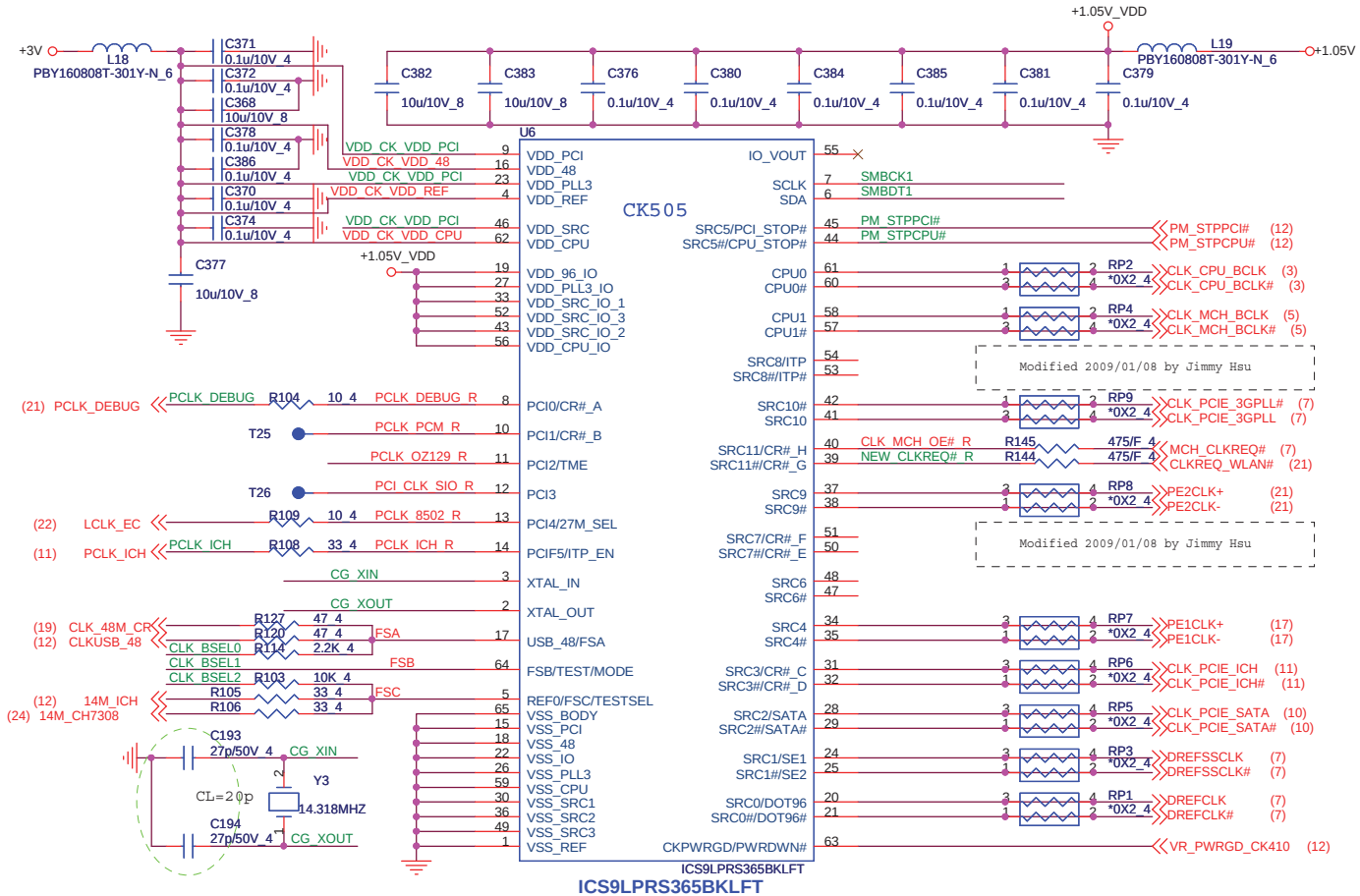
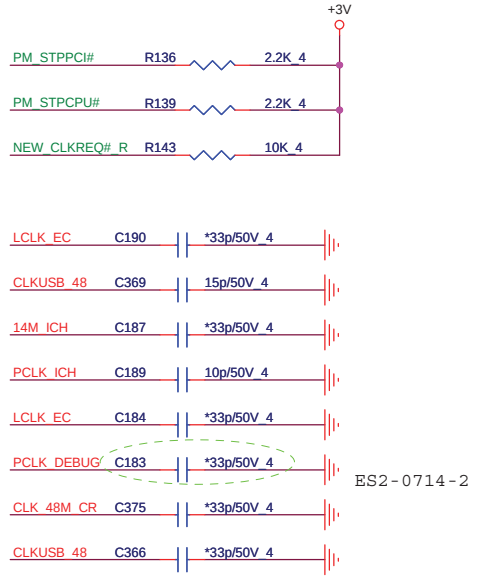
Clock Generator

02



To SB
To CPU
To NB
To 3G
To NB
To WLAN
CLK To 3G
To LAN
To SB
To SB
To NB
To NB



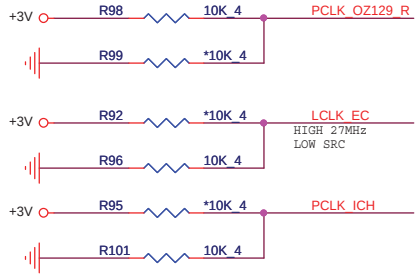
ES2-0714-2

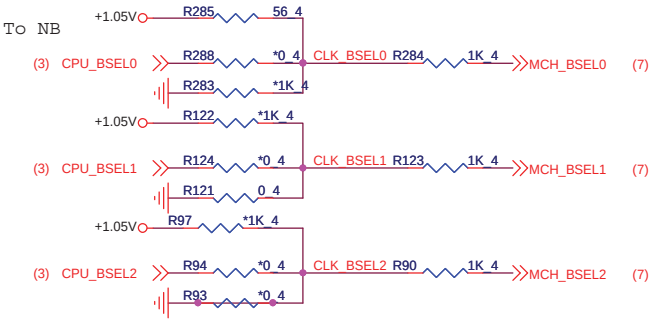
Frequence select

SEL2 SEL1 SEL0

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			

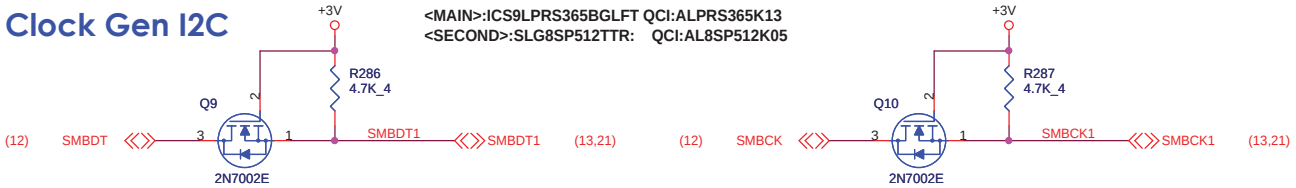
	ICS9LPRS365 (ALPRS365K13)	RTM875T-606 (AL000875K06)	PULL HIGH	PULL DOWN
Pin 11	PCI2/TME	PCI2/TME internal PD	NO OVERCLOCKING (default)	NORMAL RUN
Pin 13	PCI-4/27M_SEL	PCI-4/27M_SEL internal PD	PIN 24/25 IS 27MHz	PIN 20/21 IS SRC/DOT (default)
Pin 14	PCIF-5/ITP_EN	PCIF-5/ITP_EN internal PD	PIN 53/54 IS CPUITP	PIN 53/54 IS SRC8 (default)





Clock Gen I2C

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



Quanta Computer Inc.

PROJECT : EL7

Size	Document Number	Rev
	CLOCK GENERATOR	1A

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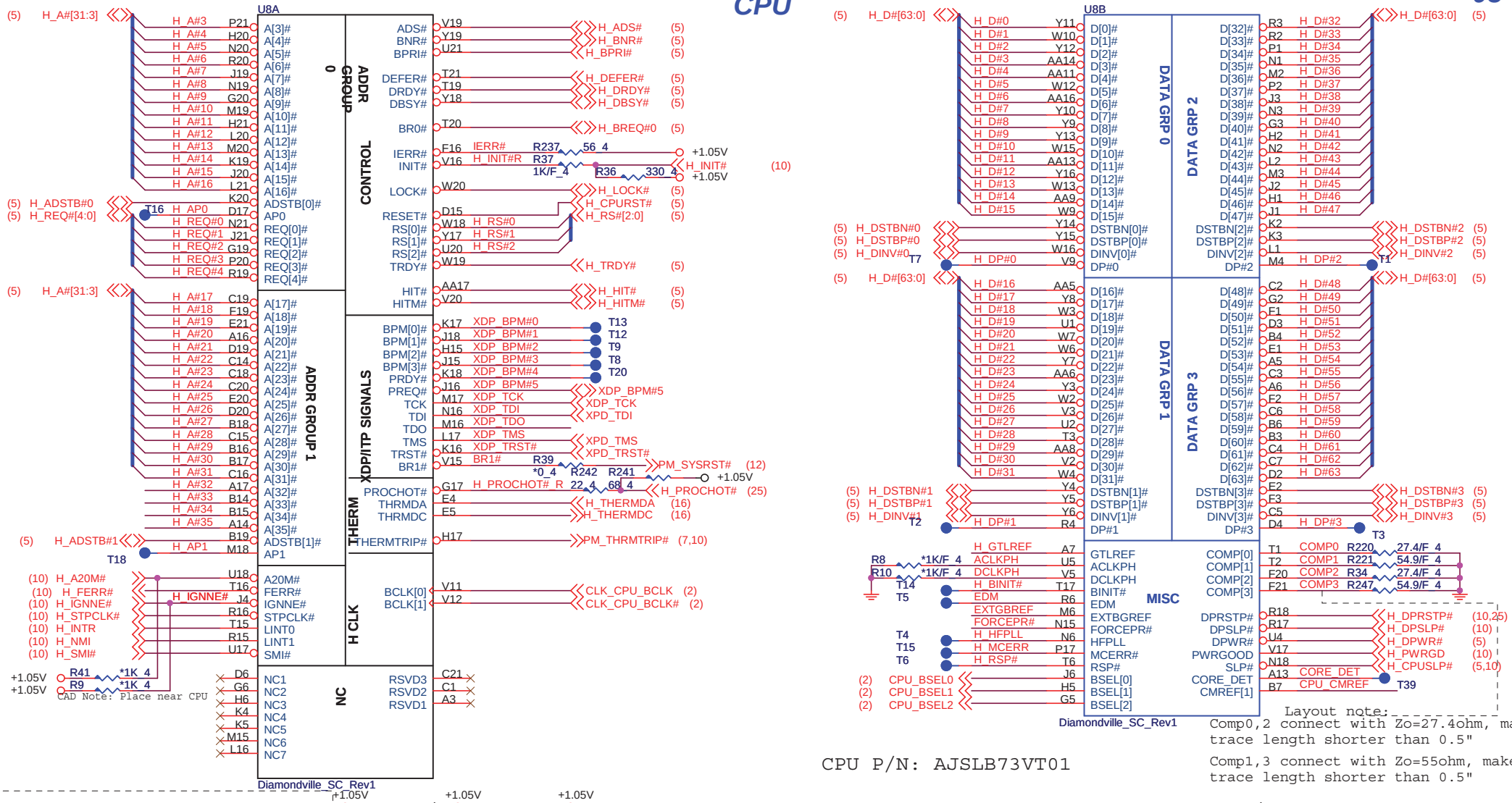
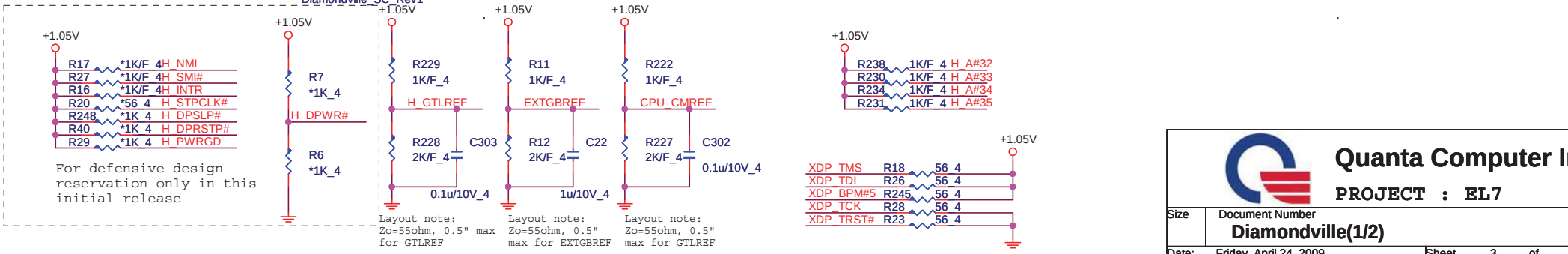
CPU

03





Quanta Computer Inc.

PROJECT : EL7

Size	Document Number	Rev
	Diamondville(1/2)	1A
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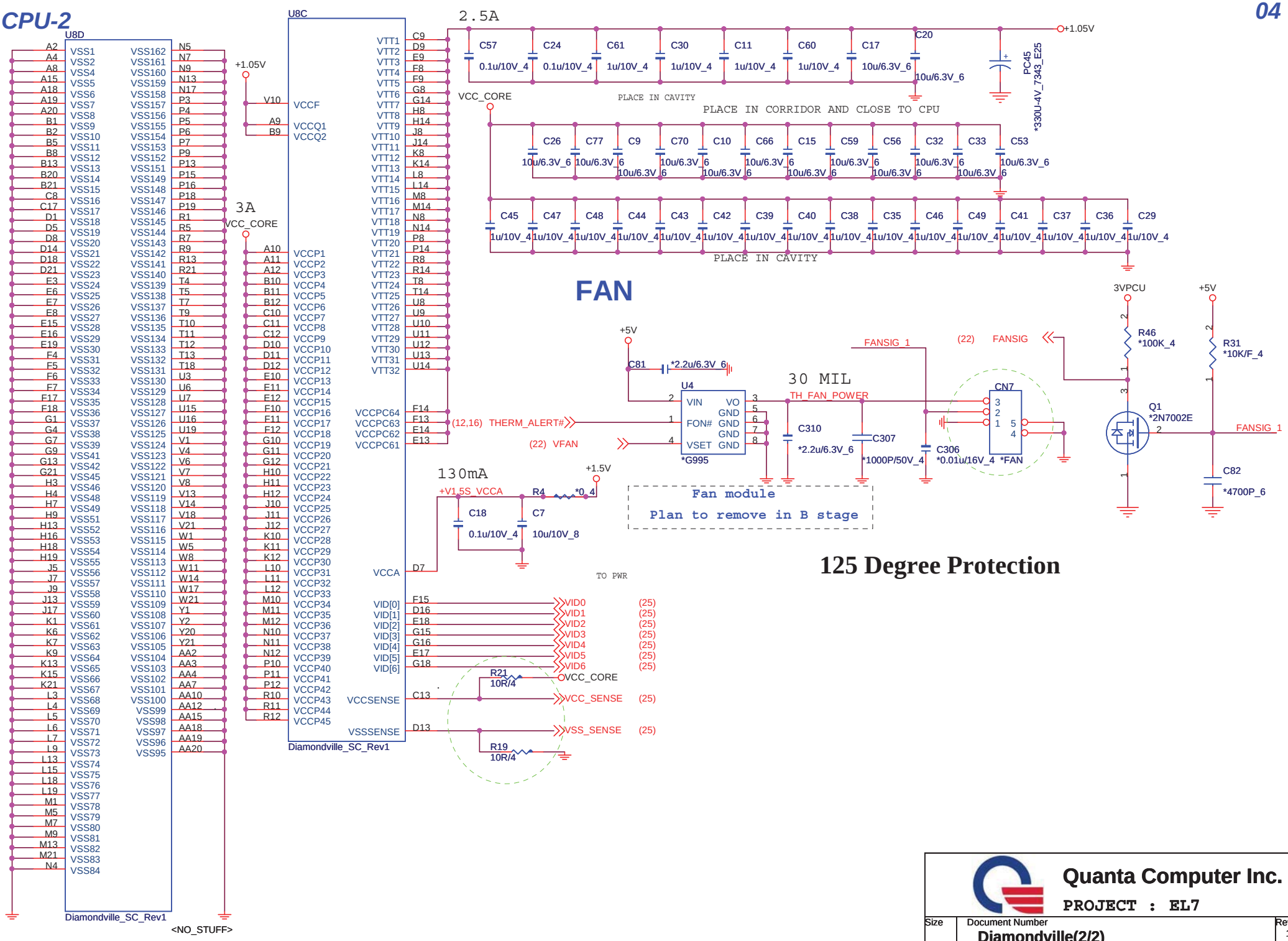
CPU-2
04
U8D
U8C
2.5A
3A
VCC_CORE
+1.05V
PLACE IN CORRIDOR AND CLOSE TO CPU
PLACE IN CAVITY
FAN
+5V
3VPCU
30 MIL
TH_FAN_POWER
FANSIG_1
FANSIG
(22) VFAN
(12,16) THERM_ALERT#
130mA
+1.5V
+V1.5S_VCCA
Fan module
Plan to remove in B stage
TO PWR
125 Degree Protection
Diamondville_SC_Rev1
<NO_STUFF>
Quanta Computer Inc.
PROJECT : EL7
Diamondville(2/2)
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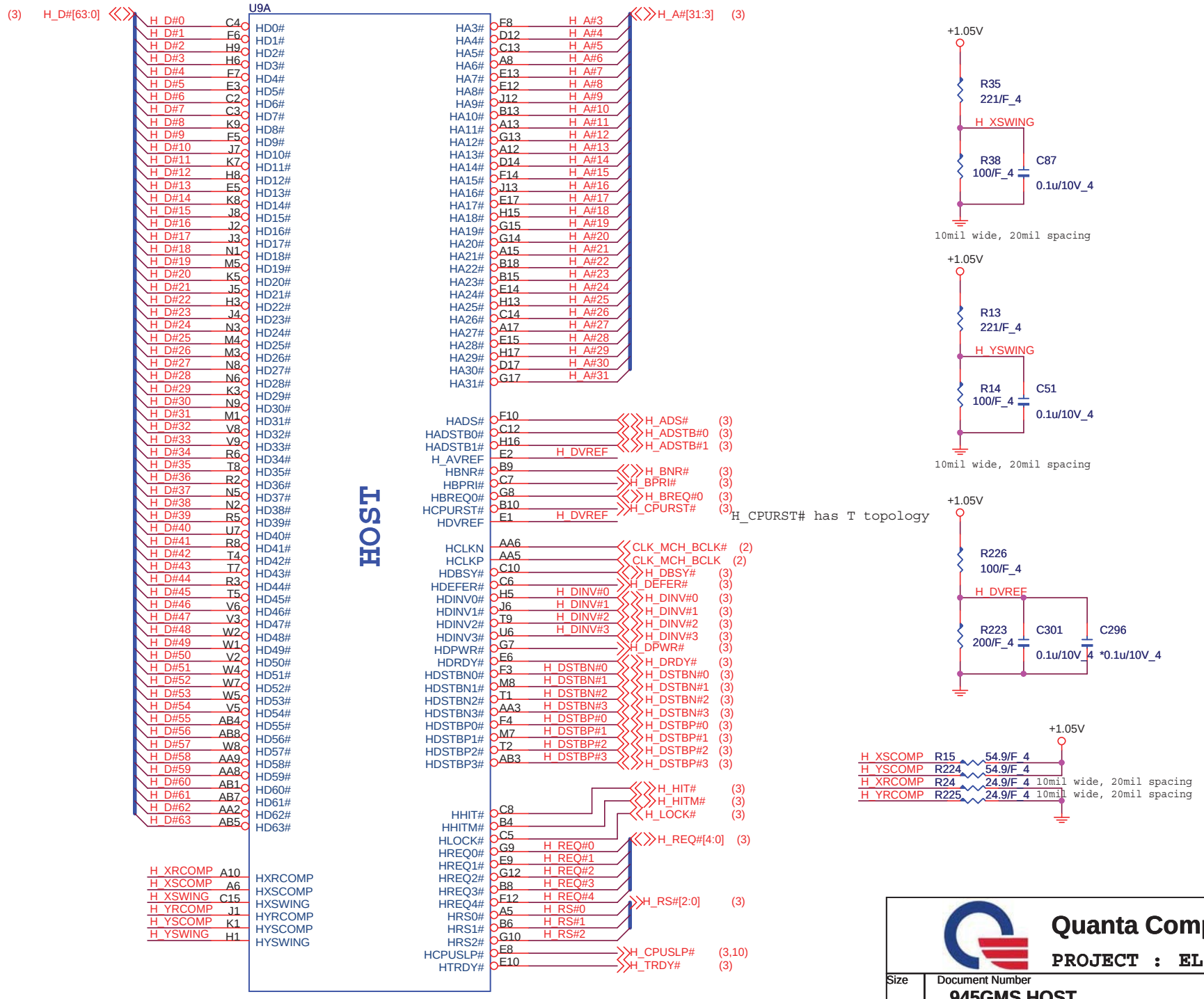

Quanta Computer Inc.

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Size	Document Number	Rev
	945GMS HOST	1A
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945GMS DDR

06

U9C

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	AF30	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	MAA13	T40
SA_CAS#	AJ17		
SA_RAS#	AK18		
SA_RCVENINB	AN28	TP_SA_RCVENIN#	T42
SA_RCVENOUTB	AM28	TP_SA_RCVENOUT#	T43
SA_WEB	AH17		
SB_BS_0	AH21	BSB0	BSB[2:0] (13)
SB_BS_1	AJ20	BSB1	
SB_BS_2	AE27	BSB2	
SB_MA0	AN20	MAB0	MAB[12:0] (13)
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	
SB_MA11	AE22	MAB11	
SB_MA12	AE26	MAB12	
SB_MA13	AE20	MAB13	MAB13 (13)

945GMS

U9H

NCTF

+1.05V

T25	VCC_NCTF1	VCCAUX_NCTF1 AD25
R25	VCC_NCTF2	VCCAUX_NCTF2 AC25
P25	VCC_NCTF3	VCCAUX_NCTF3 AB25
N25	VCC_NCTF4	VCCAUX_NCTF4 AD24
M25	VCC_NCTF5	VCCAUX_NCTF5 AC24
P24	VCC_NCTF6	VCCAUX_NCTF6 AD22
N24	VCC_NCTF7	VCCAUX_NCTF7 AD21
M24	VCC_NCTF8	VCCAUX_NCTF8 AD20
Y22	VCC_NCTF9	VCCAUX_NCTF9 AD19
W22	VCC_NCTF10	VCCAUX_NCTF10 AD18
V22	VCC_NCTF11	VCCAUX_NCTF11 AD17
U22	VCC_NCTF12	VCCAUX_NCTF12 AD16
T22	VCC_NCTF13	VCCAUX_NCTF13 AD15
R22	VCC_NCTF14	VCCAUX_NCTF14 AD14
P22	VCC_NCTF15	VCCAUX_NCTF15 K14
N22	VCC_NCTF16	VCCAUX_NCTF16 AD13
M22	VCC_NCTF17	VCCAUX_NCTF17 Y13
Y21	VCC_NCTF18	VCCAUX_NCTF18 W13
W21	VCC_NCTF19	VCCAUX_NCTF19 V13
V21	VCC_NCTF20	VCCAUX_NCTF20 U13
U21	VCC_NCTF21	VCCAUX_NCTF21 T13
T21	VCC_NCTF22	VCCAUX_NCTF22 R13
R21	VCC_NCTF23	VCCAUX_NCTF23 P13
P21	VCC_NCTF24	VCCAUX_NCTF24 N13
N21	VCC_NCTF25	VCCAUX_NCTF25 M13
M21	VCC_NCTF26	VCCAUX_NCTF26 AD12
Y20	VCC_NCTF27	VCCAUX_NCTF27 Y12
W20	VCC_NCTF28	VCCAUX_NCTF28 W12
V20	VCC_NCTF29	VCCAUX_NCTF29 V12
U20	VCC_NCTF30	VCCAUX_NCTF30 U12
T20	VCC_NCTF31	VCCAUX_NCTF31 T12
R20	VCC_NCTF32	VCCAUX_NCTF32 R12
P20	VCC_NCTF33	VCCAUX_NCTF33 P12
N20	VCC_NCTF34	VCCAUX_NCTF34 N12
M20	VCC_NCTF35	VCCAUX_NCTF35 M12
Y19	VCC_NCTF36	VCCAUX_NCTF36 AD11
P19	VCC_NCTF37	VCCAUX_NCTF37 AD10
N19	VCC_NCTF38	VCCAUX_NCTF38 K10
M19	VCC_NCTF39	VSS_NCTF1 AN33
Y18	VCC_NCTF40	VSS_NCTF2 AA25
P18	VCC_NCTF41	VSS_NCTF3 V25
N18	VCC_NCTF42	VSS_NCTF4 U25
M18	VCC_NCTF43	VSS_NCTF5 AA22
Y17	VCC_NCTF44	VSS_NCTF6 AA21
P17	VCC_NCTF45	VSS_NCTF7 AA20
N17	VCC_NCTF46	VSS_NCTF8 AA19
M17	VCC_NCTF47	VSS_NCTF9 AA18
Y16	VCC_NCTF48	VSS_NCTF10 AA17
P16	VCC_NCTF49	VSS_NCTF11 AA16
N16	VCC_NCTF50	VSS_NCTF12 AA15
M16	VCC_NCTF51	VSS_NCTF13 AA14
Y15	VCC_NCTF52	VSS_NCTF14 AA13
P15	VCC_NCTF53	VSS_NCTF15 A4
N15	VCC_NCTF54	VSS_NCTF16 A33
M15	VCC_NCTF55	VSS_NCTF17 B2
Y14	VCC_NCTF56	VSS_NCTF18 AN1
W14	VCC_NCTF57	VSS_NCTF19 C1
V14	VCC_NCTF58	
U14	VCC_NCTF59	CFG19 K28 GMS_CFG19
T14	VCC_NCTF60	
R14	VCC_NCTF61	MCH_RSVD10 K25
P14	VCC_NCTF62	MCH_RSVD11 K26
N14	VCC_NCTF63	MCH_RSVD12 R24
M14	VCC_NCTF64	MCH_RSVD13 T24
		MCH_RSVD14 K21
T10	VTT_NCTF1	MCH_RSVD15 K19
R10	VTT_NCTF2	MCH_RSVD16 K20
P10	VTT_NCTF3	MCH_RSVD17 K24
N10	VTT_NCTF4	MCH_RSVD18 K22
L10	VTT_NCTF5	MCH_RSVD19 J17
D1	VTT_NCTF6	MCH_RSVD20 K23
		MCH_RSVD21 K17
M10	MCH_RSVD3	MCH_RSVD22 K12
A18	MCH_RSVD4	MCH_RSVD23 K13
AB10	MCH_RSVD5	MCH_RSVD24 K16
AA10	MCH_RSVD6	MCH_RSVD25 K15

+1.05V

+1.5V

+3V

R75 *1K_4

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

945GMS

NB P/N: AJSLB2R0T00

Quanta Computer Inc.

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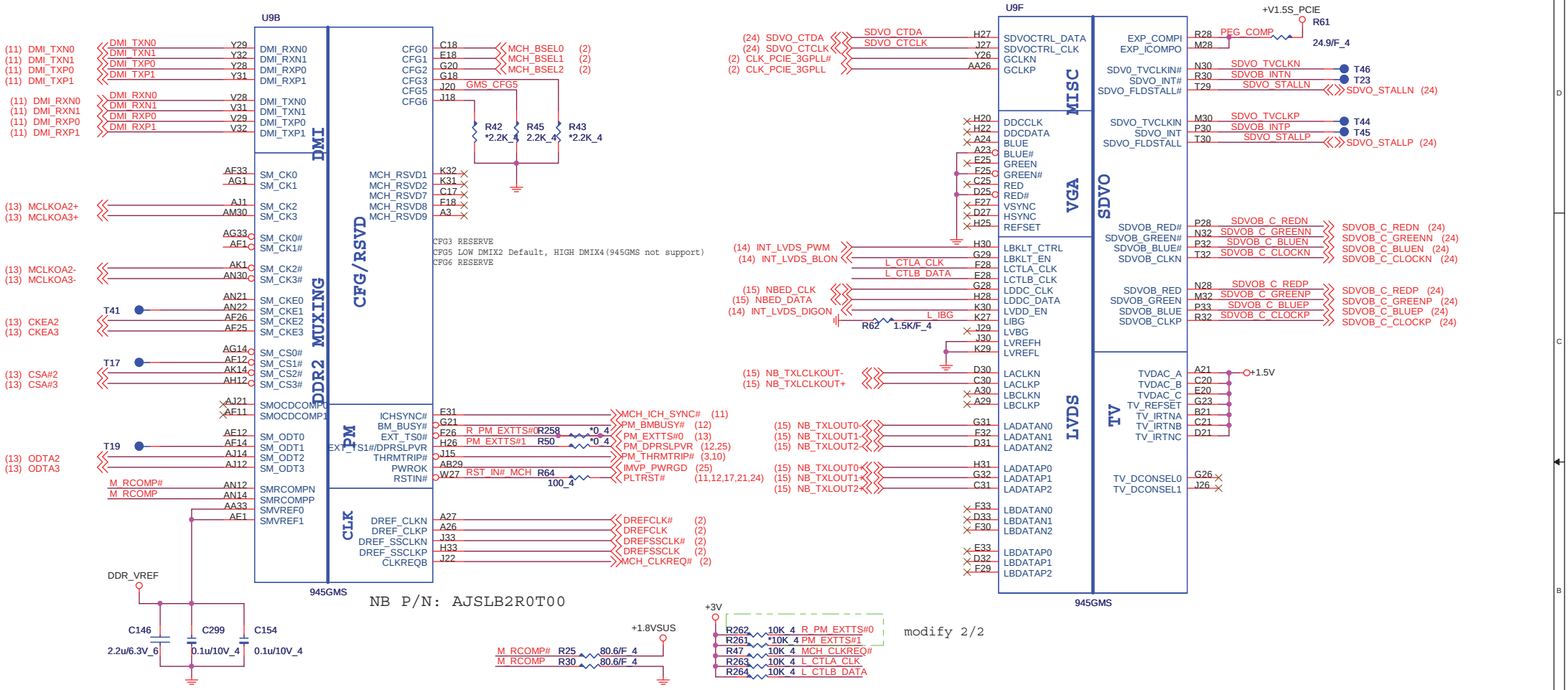
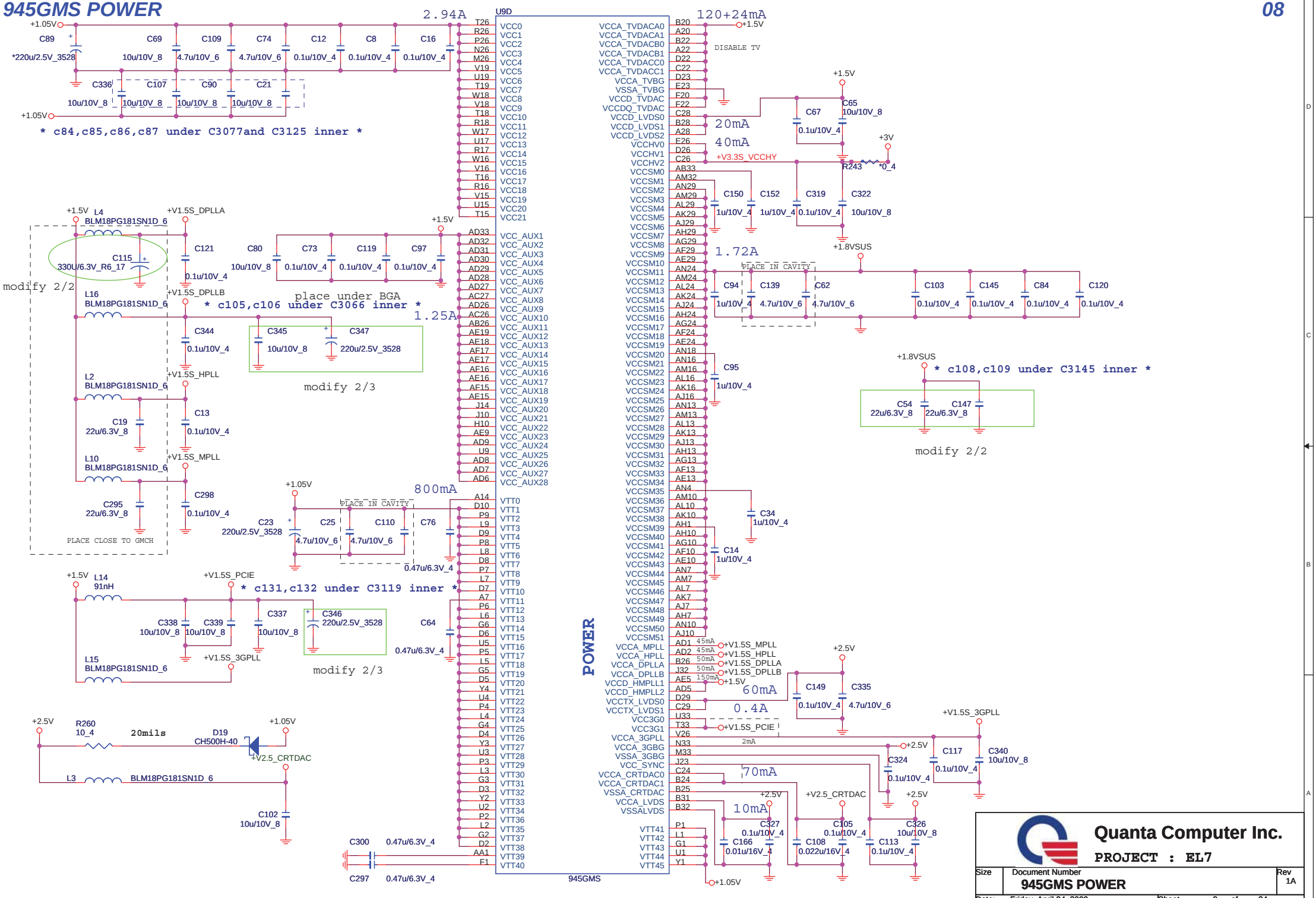
DMI, LVDS, DDR CLK

07



945GMS POWER

08



Quanta Computer Inc.		
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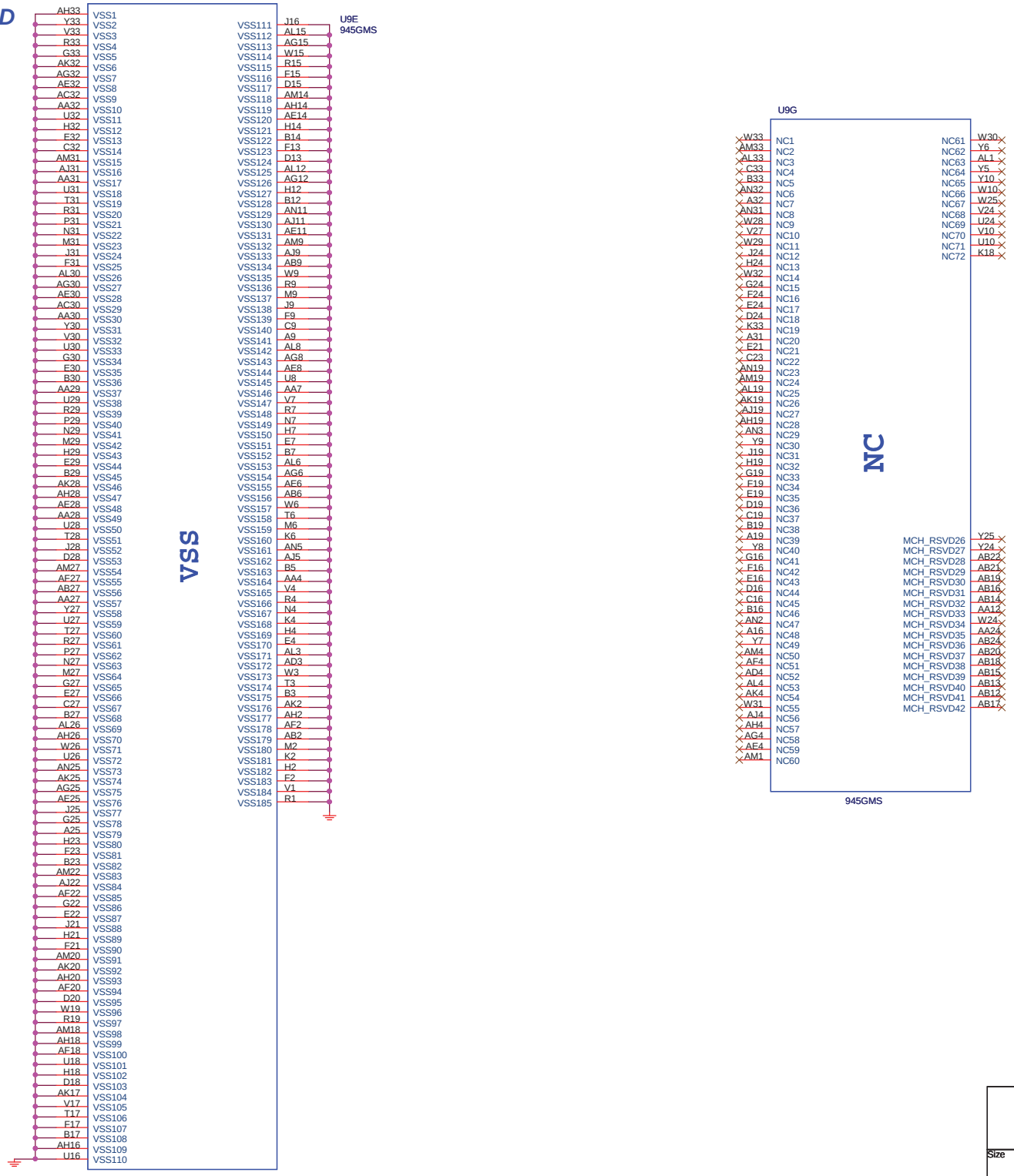
945GMS GND

09



Quanta Computer Inc.

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	945GMS GND	1A
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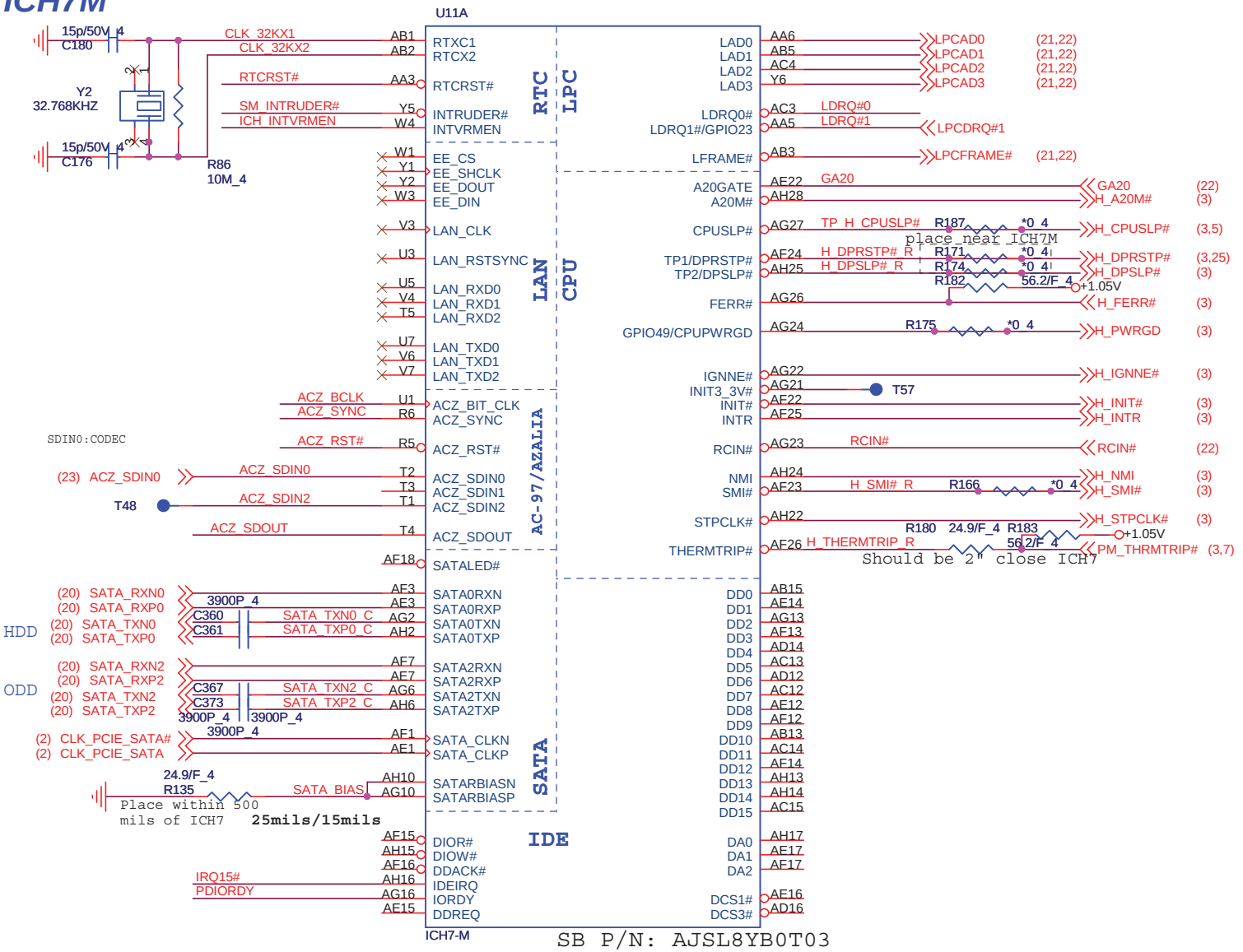
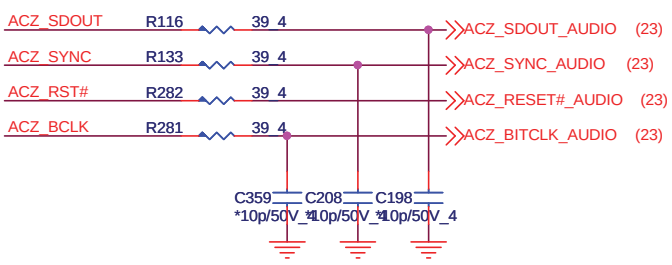
ICH7M

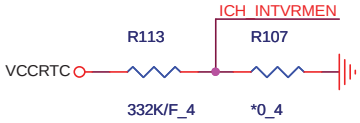


SB P/N: AJSL8YB0T03



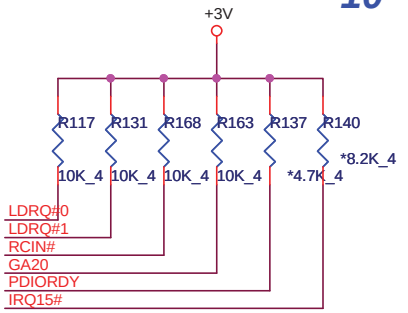
	INTVRMEN
Enable (default)	1
Disable	0

ICH7 internal VR enable strap

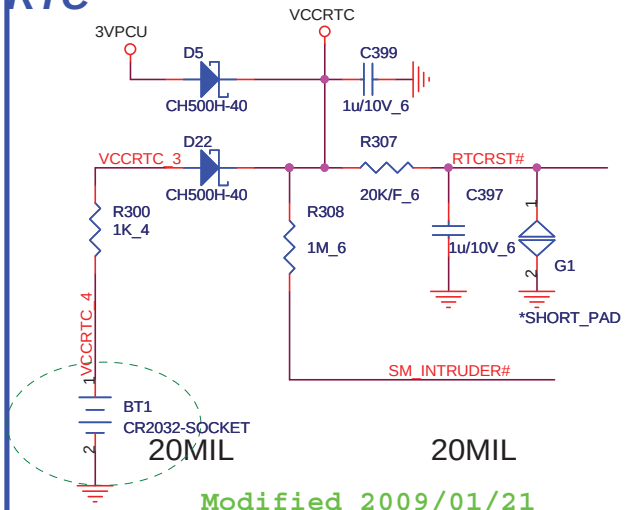


Pull-UP

10



RTC



Modified 2009/01/21

RTC Battery P/N: AHL03003002

COMPONENTS	P/N
N270	AJSLB73VT01
945GSE	AJSLB2R0T00
ICH7-M	AJSL8YB0T03

Quanta Computer Inc.

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	ICH7-M (CPU, SATA, IDE,LPC)	1A

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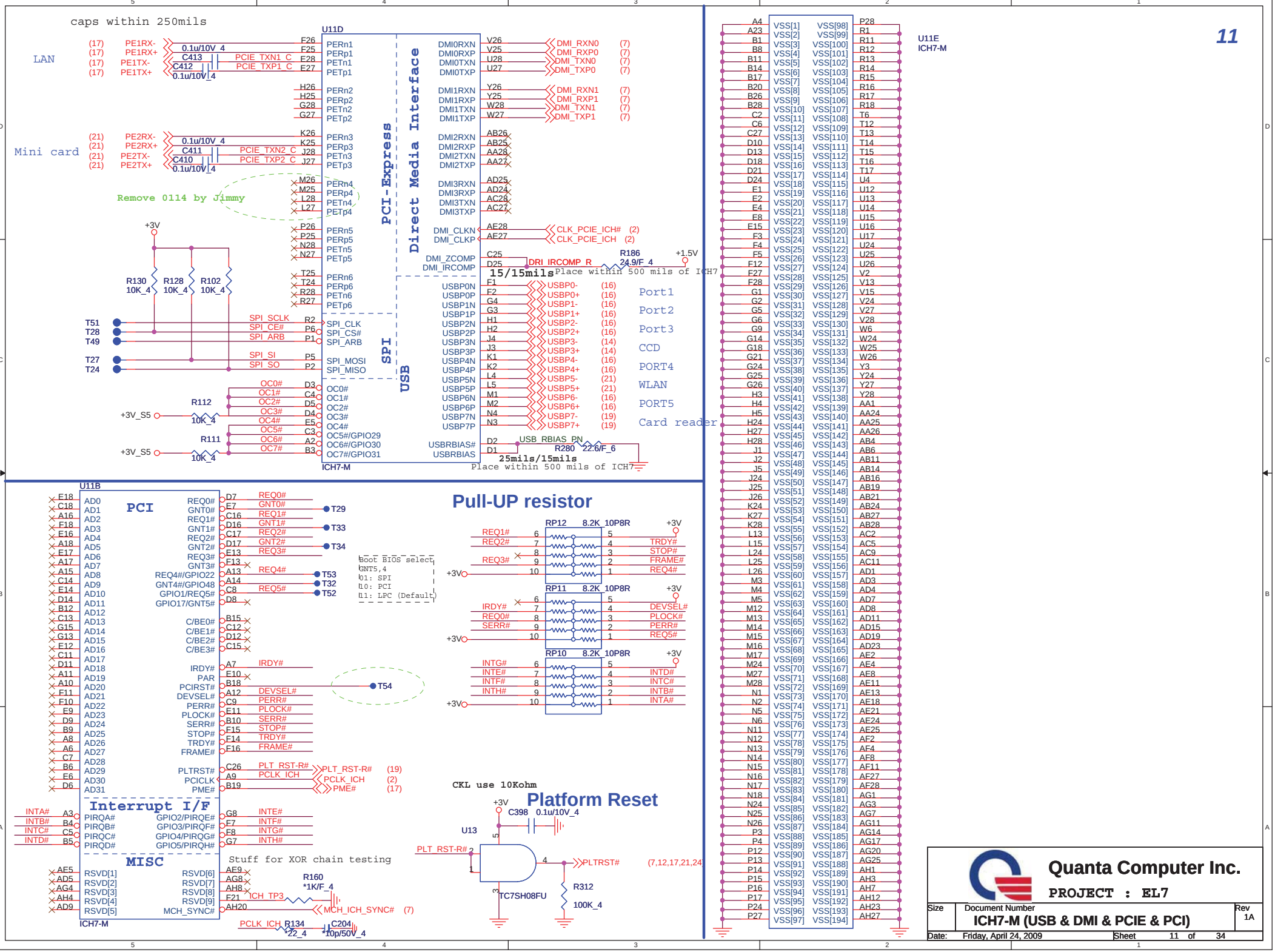
caps within 250mils
LAN
Mini card
Remove 0114 by Jimmy
PCI-Express
Direct Media Interface
SPI
USB
ICH7-M
Port1
Port2
Port3
CCD
PORT4
WLAN
PORT5
Card reader
Pull-UP resistor
Platform Reset
CKL use 10Kohm
PCI
Interrupt I/F
MISC
Stuff for XOR chain testing
Boot BIOS select
GNT5,4
01: SPI
10: PCI
11: LPC (Default)
U11E
ICH7-M
11
Quanta Computer Inc.
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ICH7-M (USB & DMI & PCIE & PCI)
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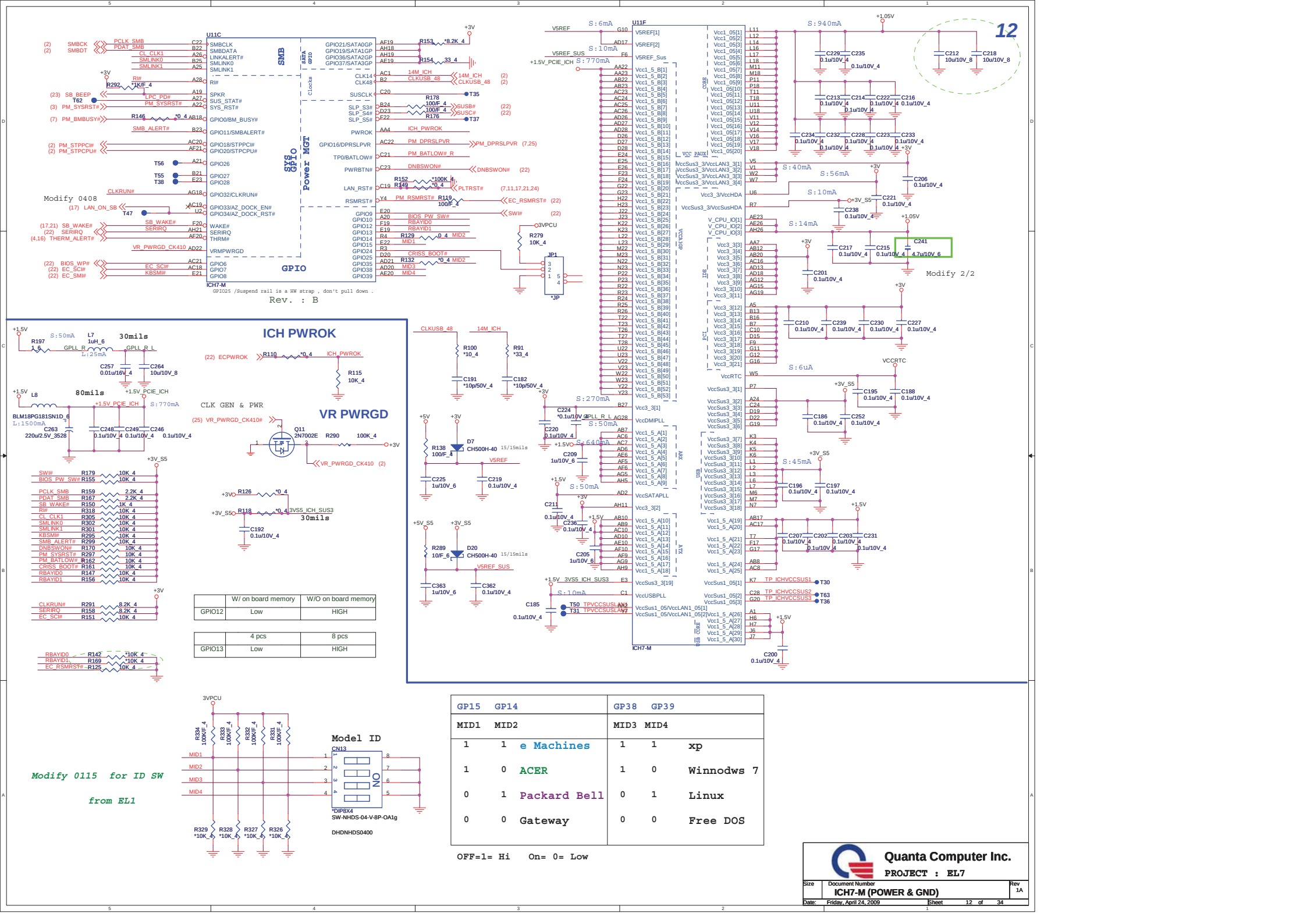
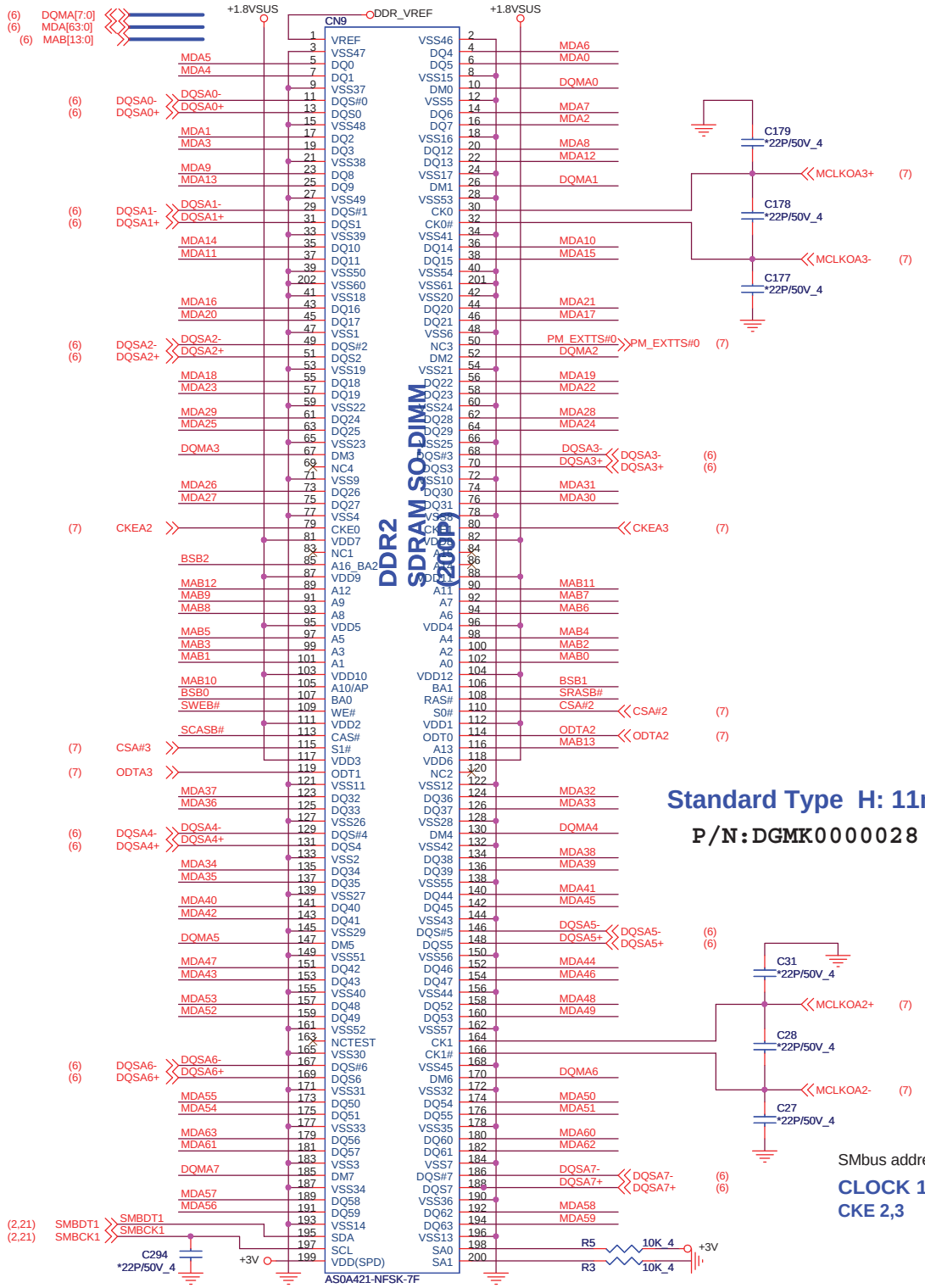


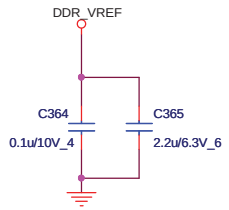
	W/ on board memory	W/O on board memory
GPIO12	Low	HIGH

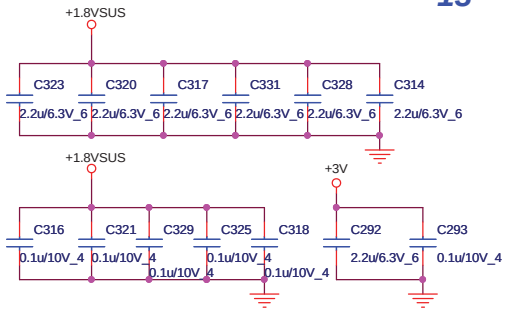
	4 pcs	8 pcs
GPIO13	Low	HIGH

GP15	GP14		GP38	GP39	
MID1	MID2		MID3	MID4	
1	1	e Machines	1	1	xp
1	0	ACER	1	0	Winnodws 7
0	1	Packard Bell	0	1	Linux
0	0	Gateway	0	0	Free DOS



Close to DIMM





Standard Type H: 11mm

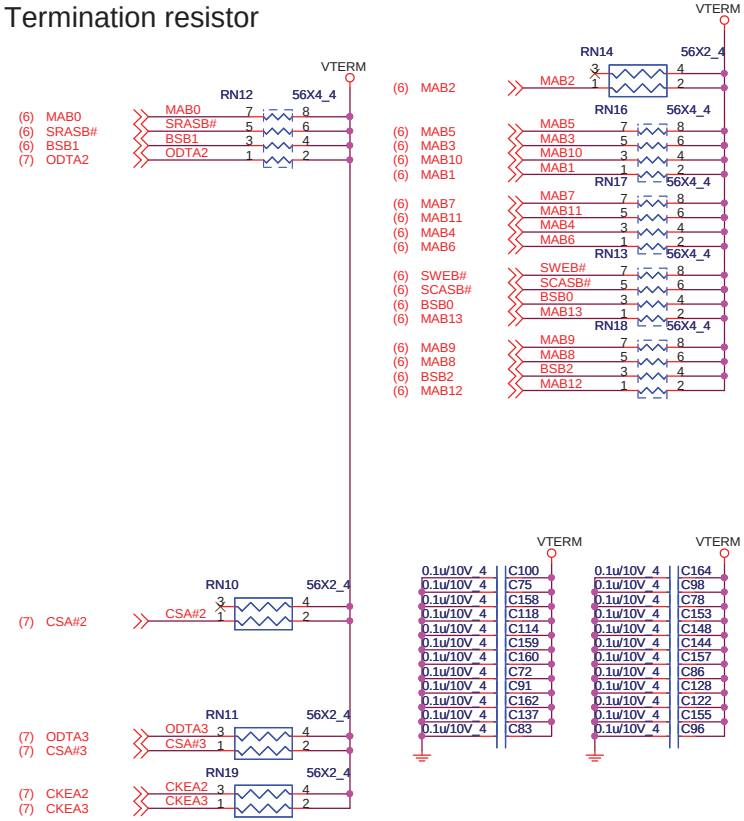
P/N:DGMK0000028

SMbus address A1

CLOCK 1,2

CKE 2,3

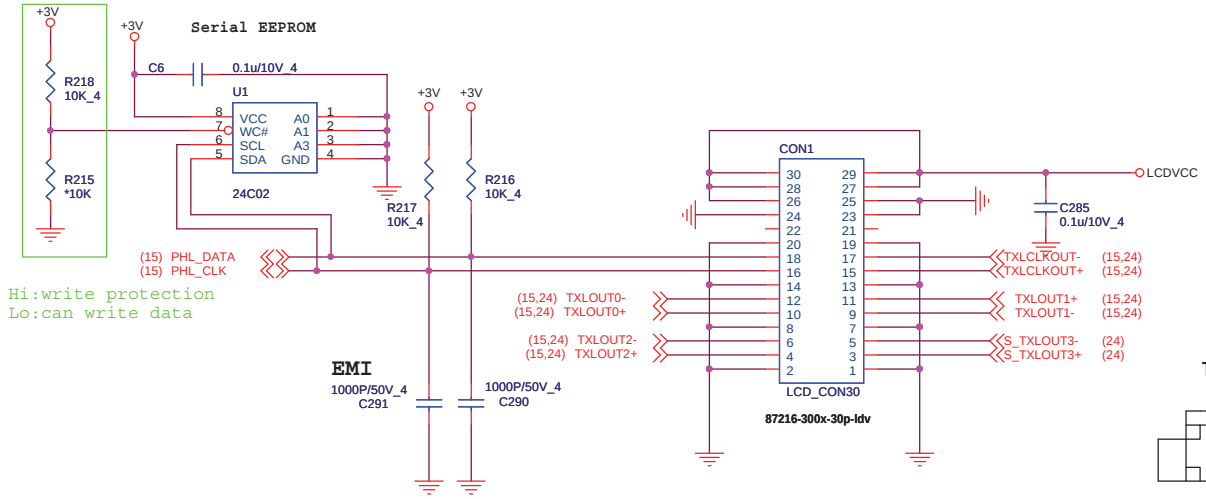
Termination resistor



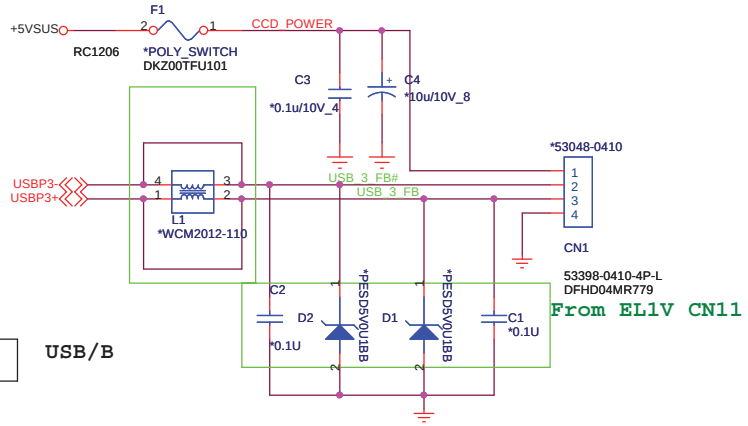
Quanta Computer Inc.		
PROJECT : EL7		
Size	Document Number: DDR2 SO-DIMM(200P)	Rev 1A
Date: Friday, April 24, 2009	Sheet 13 of 34	

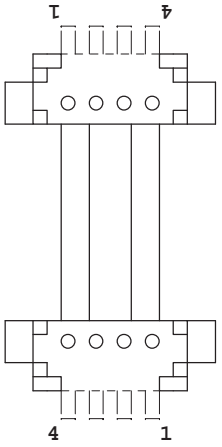
LCD CONNECTOR

LCD MODULE

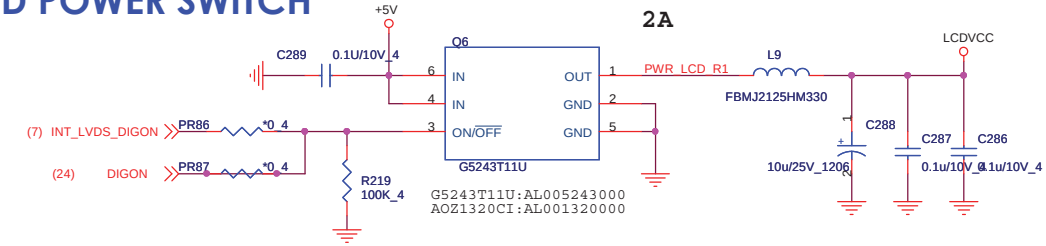


CAMERA POWER

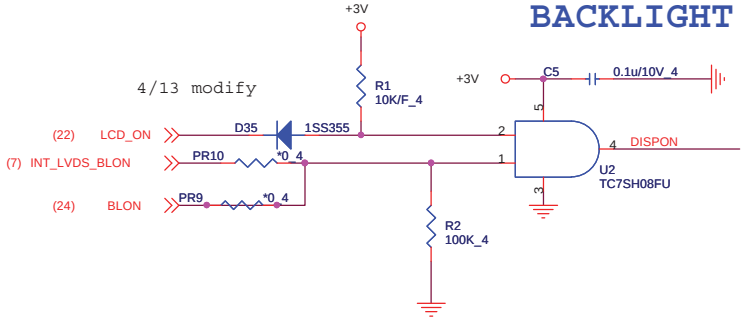




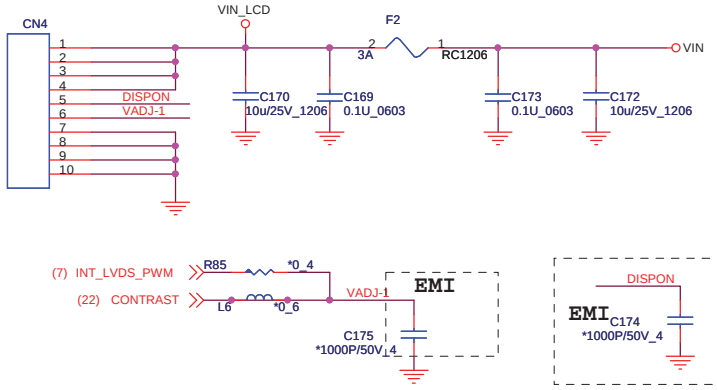
LCD POWER SWITCH



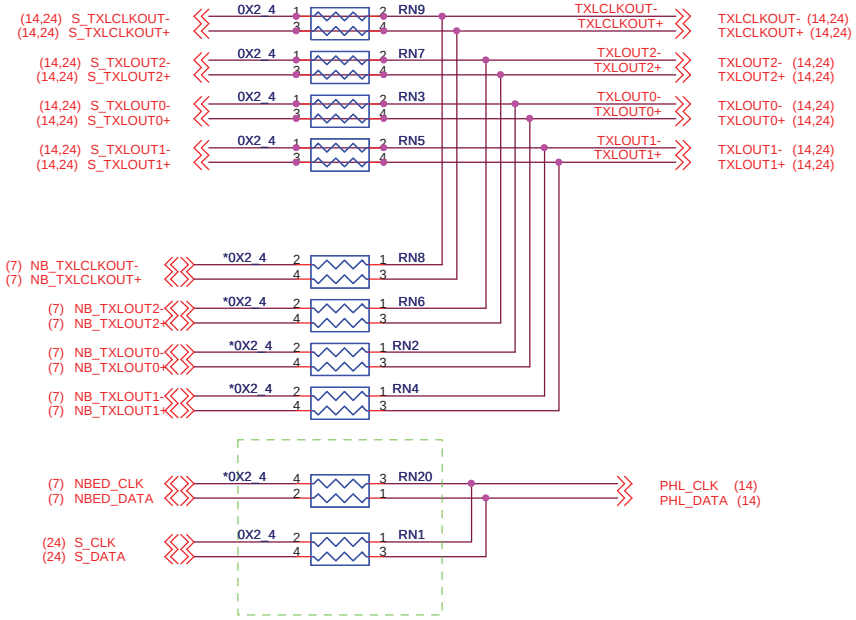
BACKLIGHT CONTROL



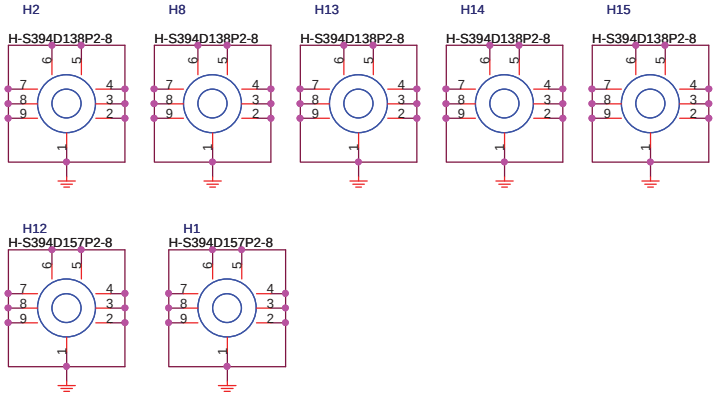
TO INVERTER POWER

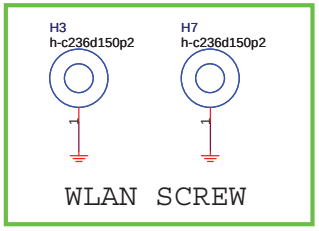


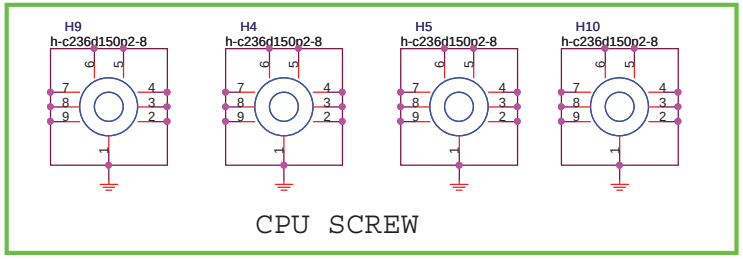
Quanta Computer Inc.		
PROJECT : EL7		
Size	Document Number	Rev
	LVDS/Bluetooth	1A
Date: Friday, April 24, 2009	Sheet 14 of 34	



Note:Close to LVDS CNN:CON1







Modify footprint 2009/03/05 by Jimmy:h-c236d150p2-8
NUT is the same as JR1:MBJR1003010

Quanta Computer Inc.
PROJECT : EL7

Size	Document Number	Rev
	LVDS Bridge/HOLES	1A
Date: Friday, April 24, 2009	Sheet 15 of 34	

REAR USBx2
BACK Side 2 Port
The same as EL3

PLACE NEAR CONN

Port1

Port2

REAR USBx1
BACK Side 1 Port
The same as PB2 Little board

Port3

4/2 modify

DFHD04MR090

usb-020167mr004s560zr-4p-l-v

*touch panel connector

FOR EMI

53398-0410-4P-L

REAR USBx1
Left Side 1 Port
The same as PF1 USB BOARD

Port4

4/2 modify

DFHS04FRB11

usb-c10781-x04xx-x-4p-r-v

REAR USBx1
Left Side 1 Port
The same as PF1 USB BOARD

Port5

4/2 modify

DFHS04FRB11

usb-c10781-x04xx-x-4p-r-v

CPU Thermal monitor

SMBUS SLAVE ADDRESS	
G781	98
G781-1	9A

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

P/N:AL000781039

Q3

Quanta Computer Inc.			
PROJECT : EL7			
Size	Document Number: USB on Board/CPU Thermal monitor		Rev 1A
Date: Friday, April 24, 2009		Sheet 16 of 34	

LANVCC

+3V_S5 R192 short0805 LANVCC

Remove R394 if external power 1.2v is used. Remove R395 if switching regulator is enable

LANVCC C391 0.1u/10V_4 C388 22u/6.3V_8 R148 short0805 R141 *0_8

R294 2.49K/F_4

CTRL12A

Reserve EEPROM for first stage. No stuff.

R173 1K/F_4 LANVCC

U7 CS SK DI DO VCC DC ORG GND

EECS LED1/EESK LED2/EEDI LED3/EEDO

C226 *0.1U/16V/Y5V_4@NC

AKE5IZZ0A00 *AT93C46A(3.3V)

R177 3.6K_6 LANVCC

Rich Power comment:No matter U28 mounted or not ,R397 always shall be mounted!

X'tal 25MHz

C389 33P R293 *0_6 XTAL1

Y4 25MHz/20pF/25ppm

C392 33P XTAL2

BG625000486

XTL-5_3X3_2-3_8-1_2H

U12 EC-A-01 RTL8111DL

AVDD33 MDIP0 MDIN0 NC/FB12 MDIP1 MDIN1 GND NC/MDIP2 NC/MDIN2 DVDD12/AVDD12 NC/MDIP3 NC/MDIN3

VCTR12A/SROUT12 GND RSET CTRL12VDD VCTR12DVDDSR NCA/VDDSR NC/ENSWREG CKTAL2 CKTAL1 NC/AVDD33 NC/LV_PLL LED0 VDD33

DVDD12 LED1/EESK LED2/EEDI LED3/EEDO EECS GND DVDD12 VDD33 ISOLATEB PERSTB LANWAKEB CLKREQB

LANVCC MDI0+ MDI0- DVDD12 MDI1+ MDI1- GND MDI2+ MDI2- DVDD12 MDI3+ MDI3-

DVDD12 LED1/EESK LED2/EEDI LED3/EEDO EECS GND DVDD12 LANVCC ISOLATEB

DVDD12 GND HSIP HSIN REFCLK_P REFCLK_N EVDD12 HSOP HSON EGND VCC3MCLK NC/SMDATA

CTRL12A L20 4.7uH EVDD12_R

C387 22u/6.3V_8 C390 0.1u/10V_4

EVDD12_R R319 short0805 EVDD12

C414 1U/6.3V_4 C406 1U/6.3V_4

modified 2009/01/13 by Rich Power comment

R296 short0805 DVDD12

C407 C253 C250 C393 C396 0.1u/10V_4

LANVCC short0805 CTRL12/VDD R157

C243 C242 C400 C245 0.1u/10V_4

LAN_REST# R309 *0_4 PLTRST# (7,11,12,21,24)

R314 *0_4 PME# (11)

R311 *0_4 SB_WAKE# (12,21)

CLKREQB R317 *10K_4 +3V

CLK G have't CLKREQB function

+3V R189 1K/F_4 R184 15K_4

Modify 0413

D33 *1SS355 LAN_ON_SB (12)

D34 1SS355 LAN_ON_EC (22)

(11) PE1TX+ (11) PE1TX-

GPP_TX1N_LAN C409 0.1u/10V_4

GPP_TX1P_LAN C408 0.1u/10V_4

PE1RX- (11) PE1RX+ (11)

PE1CLK- (2) PE1CLK+ (2)

U17 LAN_MX0- LAN_MX1+ IO1 IO2 GND IO3 IO4 REF LAN_MX0+ LAN_MX1- *SRV05-4

U18 LAN_MX2- LAN_MX3+ IO1 IO2 GND IO3 IO4 REF LAN_MX2+ LAN_MX3- *SRV05-4

Tramsformer

U15 NS892402

MDI0- MDI0+ MDI1- MDI1+ MDI2- MDI2+ MDI3- MDI3+

TD4- TD4+ TCT4 TD3- TD3+ TCT3 TD2- TD2+ TCT2 TD1- TD1+ TCT1

MX4- MX4+ MCT4 MX3- MX3+ MCT3 MX2- MX2+ MCT2 MX1- MX1+ MCT1

LAN_MX0- LAN_MX0+ LAN_MCT0 LAN_MX1- LAN_MX1+ LAN_MCT1 LAN_MX2- LAN_MX2+ LAN_MCT2 LAN_MX3- LAN_MX3+ LAN_MCT3

C259 C266 C265 C267 0.01U/16V/X7R_4

R204 R203 R202 R201 75/F_4

LANCT3

C273 1000P/3KV/NPO_18

EMI:NEAR CN27

C427 *0.1U/10V/X5R_4

CN15 AMP Active:Yellow

LED0 R341 330

LED_YN LED_YP LED_GND LED_GN/AP LED_GP/AN CHSGND1 CHSGND2

LAN_MX3- LAN_MX3+ LAN_MX1- LAN_MX2- LAN_MX2+ LAN_MX1+ LAN_MX0- LAN_MX0+

100:Green Q4 DTA124EU D11 1SS355 LED1/EESK

1000:Amber Q5 DTA124EU D12 1SS355 LED3/EEDO

R210 330 R211 330

C279 C278 0.1u/10V_4

P/N:DB0AT9LAN05

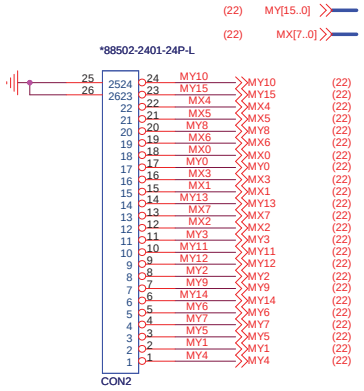
Quanta Computer Inc.

PROJECT : EL7

Size	Document Number	Rev
	LAN(RT8111DL)	1A

Date: Friday, April 24, 2009 Sheet 17 of 34

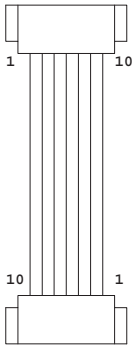
KEYBOARD For debug



From EL1V

TOP Side

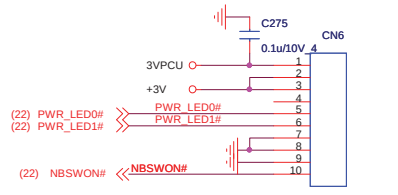
MB Side



SWITCH/B Side

TOP Side

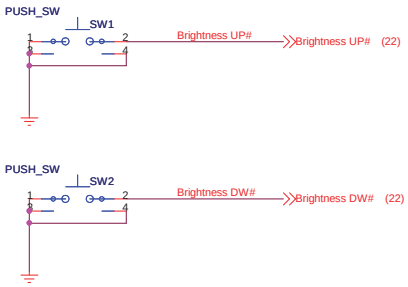
Power SW



87212-1000L-10P-R

Modify 2209/03/02 :the same as CN4

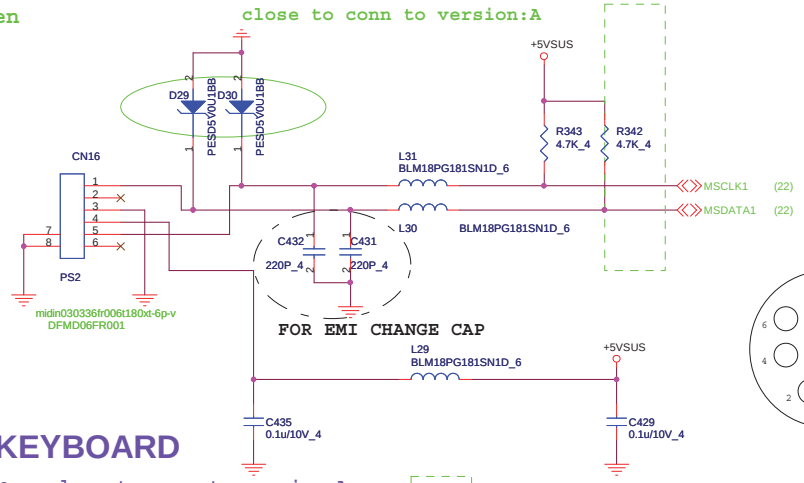
Brightness Control

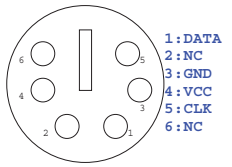


PS2 MOUSE

Green

close to conn to version:A

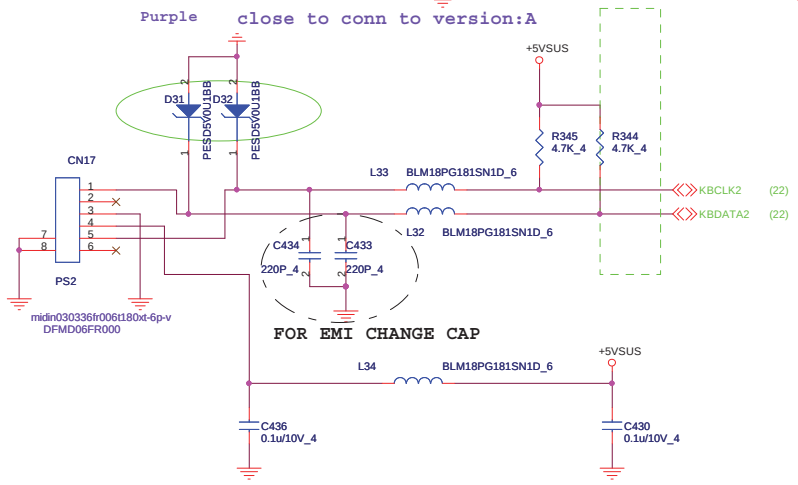


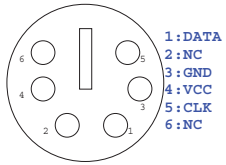


PS2 KEYBOARD

Purple

close to conn to version:A

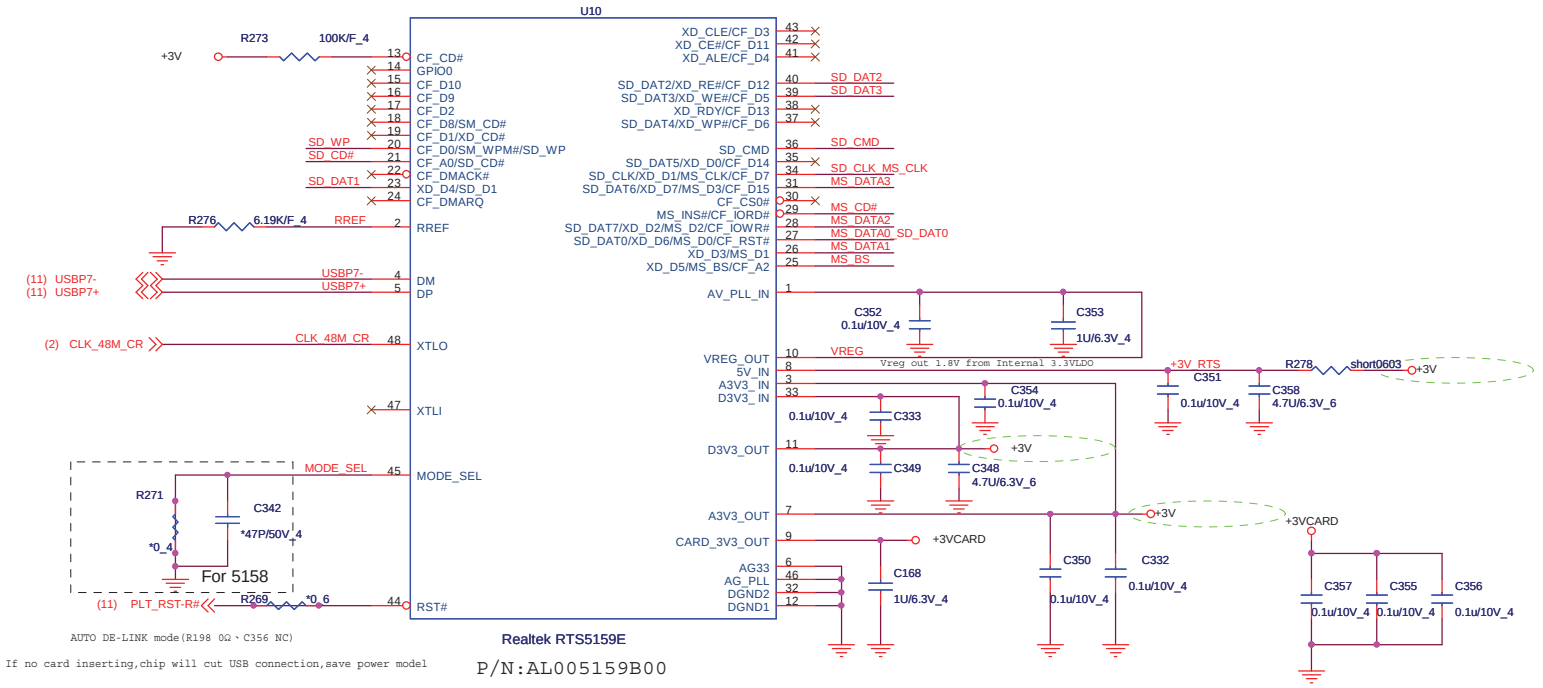




Quanta Computer Inc.		
PROJECT : EL7		
Size	Document Number KB/TP	Rev 1A
Date: Friday, April 24, 2009	Sheet 18 of 34	

Note:

	SD/MMC	MS	XD
SP0			
SP1			XD_CD#
SP2	SD_WP		
SP3	SD_CD#		
SP4	SD_DAT1		XD_D4
SP5		MS_BS	XD_D5
SP6	SD_DAT1	MS_D1	XD_D3
SP7	SD_DAT0	MS_D0	XD_D6
SP8	SD_DAT7	MS_D2	XD_D2
SP9		MS_INS#	
SP10	SD_DAT6	MS_D3	XD_D7
SP11	SD_CLK	MS_SCLK	XD_D1
SP12	SD_DAT5		XD_D0
SP13	SD_DAT4		XD_WP#
SP14			XD_R/B#
SP15	SD_DAT3		XD_WE#
SP16	SD_DAT2		XD_RE#
SP17			XD_ALE
SP18			XD_CE#
SP19			XD_CLE



AUTO DE-LINK mode(R198 0Ω、C356 NC)

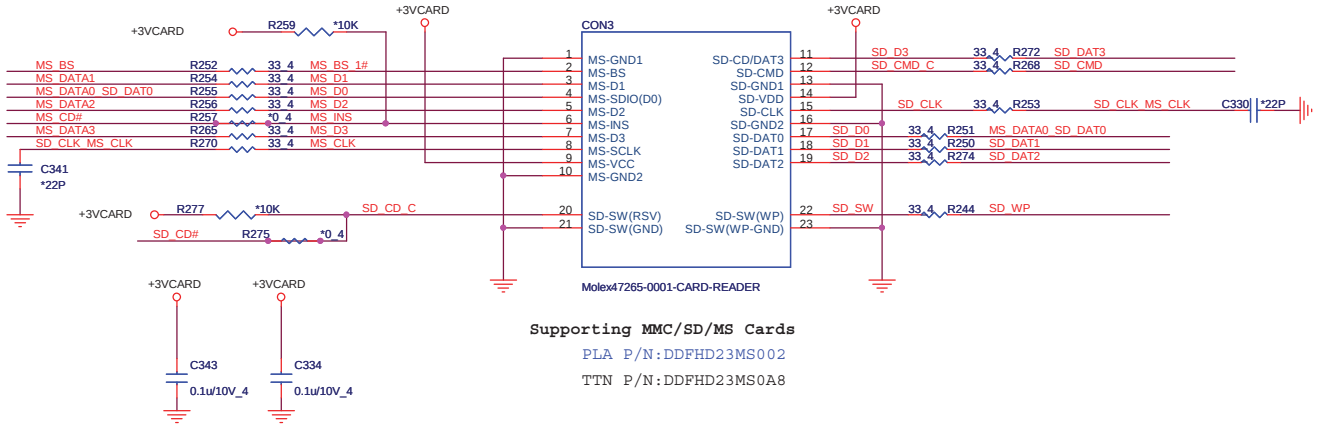
If no card inserting,chip will cut USB connection,save power model

Realtek RTS5159E

P/N:AL005159B00

4 IN 1 CONN

From PB2



Supporting MMC/SD/MS Cards

PLA P/N:DDFHD23MS002

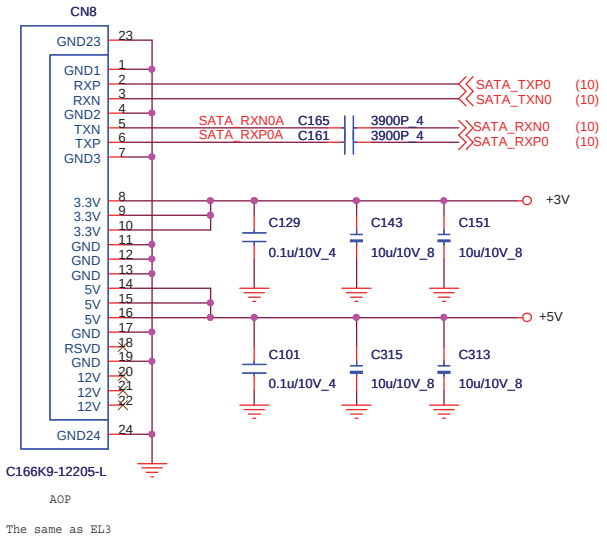
TTN P/N:DDFHD23MS0A8

Quanta Computer Inc.

PROJECT : EL7

Size	Document Number	Rev
	RTS5159E 4IN1 CARD	1A
Date: Friday, April 24, 2009	Sheet 19 of 34	

SATA HDD

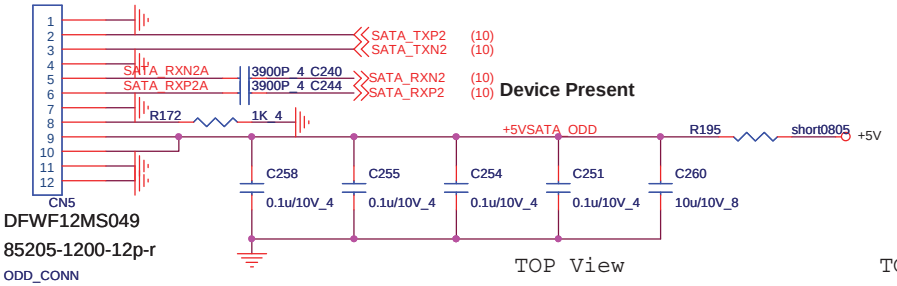


The same as EL3

SATA ODD

20

Check New ODD CONN Pin Define.

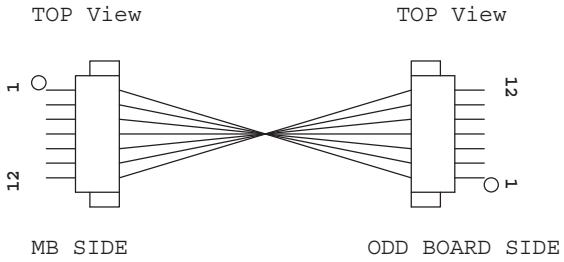


DFWF12MS049

85205-1200-12p-r

ODD_CONN

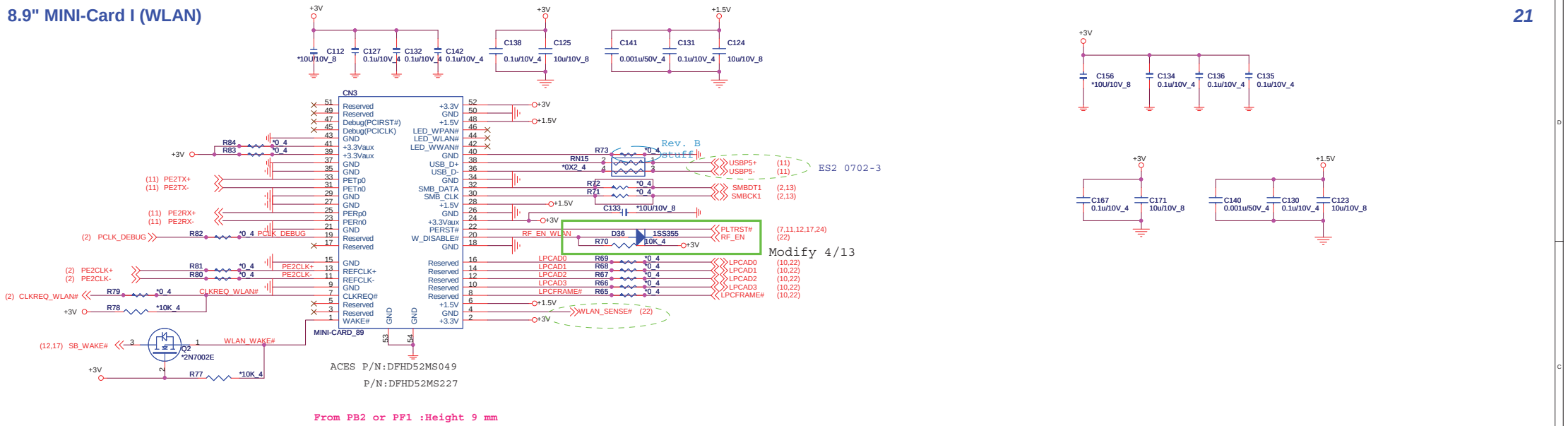
4/2 modify



ZT4 card connector

Quanta Computer Inc.		
PROJECT : EL7		
Size	Document Number: SATA-HDD/CF/SSD	Rev 1A
Date: Friday, April 24, 2009	Sheet 20 of 34	

8.9" MINI-Card I (WLAN)



ACES P/N:DFHD52MS049

P/N:DFHD52MS227

From PB2 or PF1 :Height 9 mm

Quanta Computer Inc.

PROJECT : EL7

Size	Document Number	Rev
	Mini-Card/WL	1A

Date: Friday, April 24, 2009 Sheet 21 of 34

IT8502

Layout Note:
Place all capacitors close to IT8512.

(For PLL Power)

Layout Note:
net "3VPCU" and "RTC_VCC"
minimum trace width 12mils.

Note 1 : Since all GPIO belong to VSTBY power domain, and there are some special considerations below:
(1) If it is output to external VCC derived power domain circuit, this signal should be isolated by a diode such as KBRST# and GA20.
(2) If it is input from external VCC derived power domain circuit, this external circuit must consider not to float the GPIO input.

Note 2 :
(1) Each input pin should be driven or pulled.
(2) Each output-drain output pin should be pulled.

Note: Pin 86 To 3G originally
2009/01/08 Jimmy Hsu

3/31 modify

AJ085020F04
LQFP128-16X16-4 3/31 modify

Layout Note:
32.768kHz clock lines:
a. If possible, please avoid using any through-hole.
b. Please make the trace length short, and the trace width wide enough.
c. The spacing to the closest neighbor should be wide enough.

Layout Note:
Place R471,R498,R534 within 500 mils from SPI Flash.Place R567 within 500mils from R534; R520 within 500mils from R498 and R570 within 500mils from R471.

Please reserve this connector for serial debug port & KBS download usage.

ACER ID Modify 4/9

3VPCU=EAD3*(1.619)
VCCRTC=RTC3.3*(1.619)
5VPCU=EAD5*(2.5)
EADVCORE=VCC_CORE
EAD105=+1.05V
EAD1.5=+1.5V
EAD1.8=+1.8VSUS

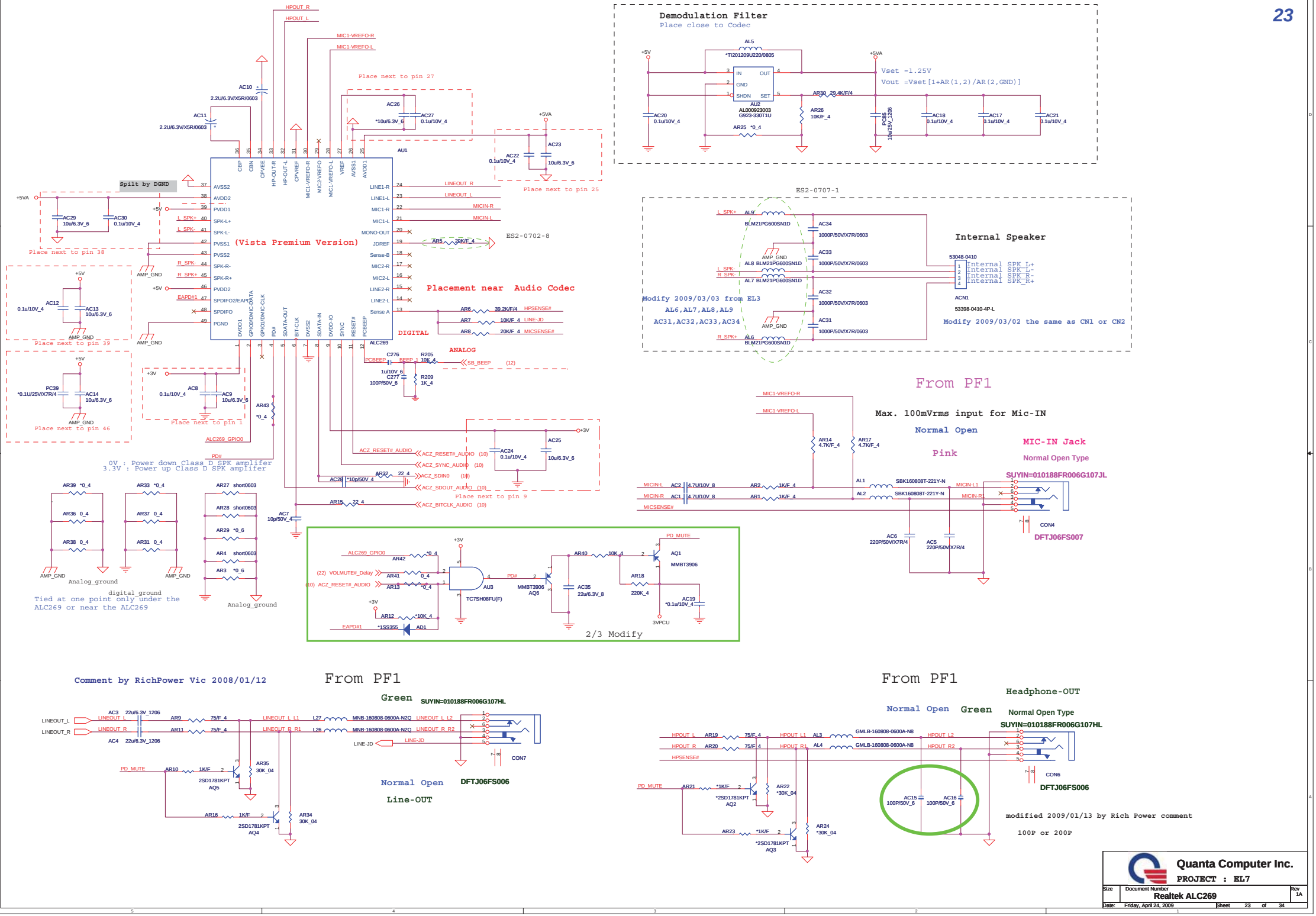
8Mbit , SPI
8M Winbond P/N:AKE3GFP0N08

Use 8Mbit in A-test

SOCKET: DG008000031

2009/03/03 modified for C stage

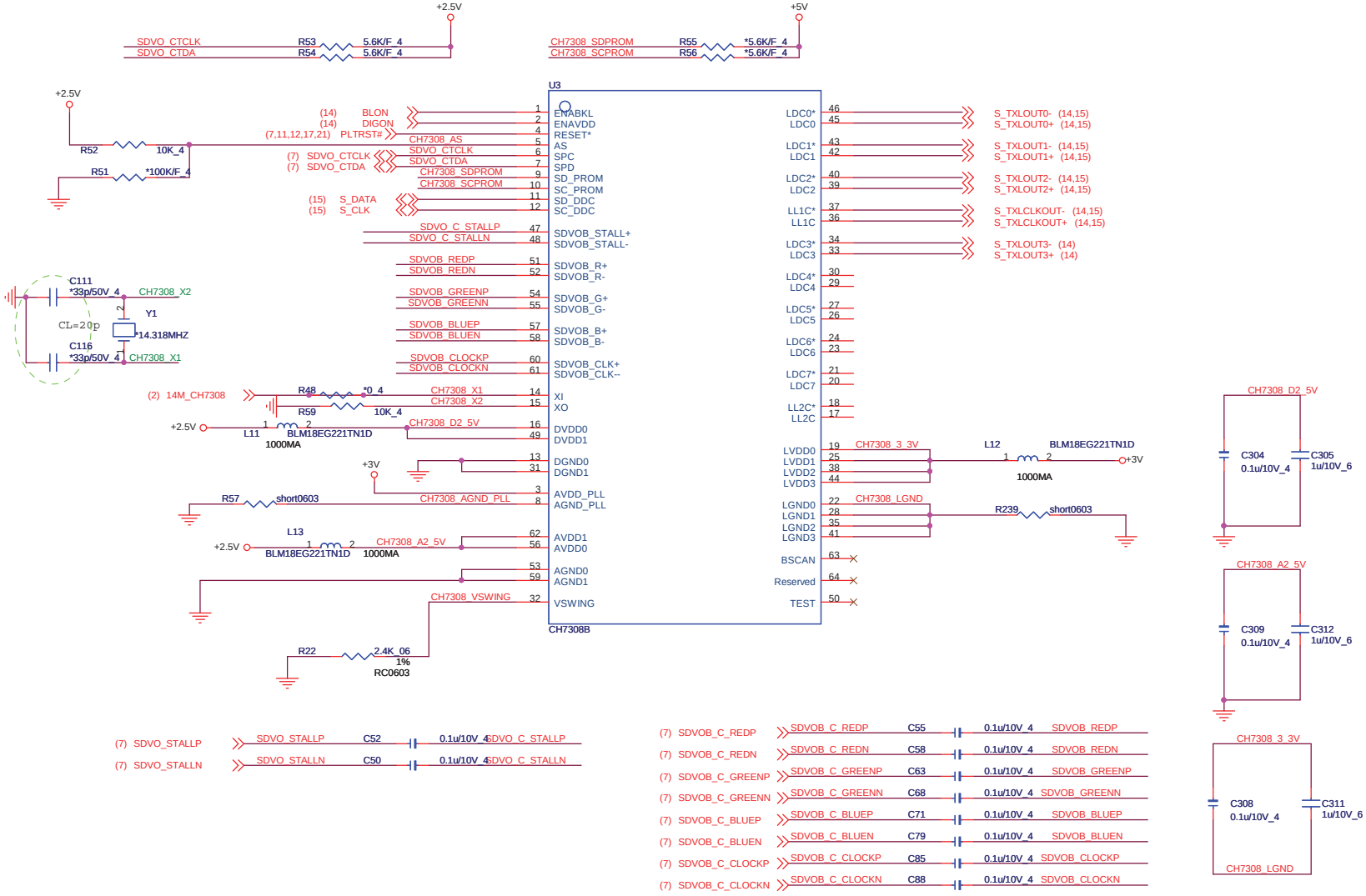
Quanta Computer Inc.	PROJECT : EL7	
Size	Document Number: ITE 8502E	Rev: 1A
Date: Friday, April 24, 2009	Sheet 22 of 34	



Quanta Computer Inc.
PROJECT : EL7

Size	Document Number	Rev
	Realtek ALC269	1A

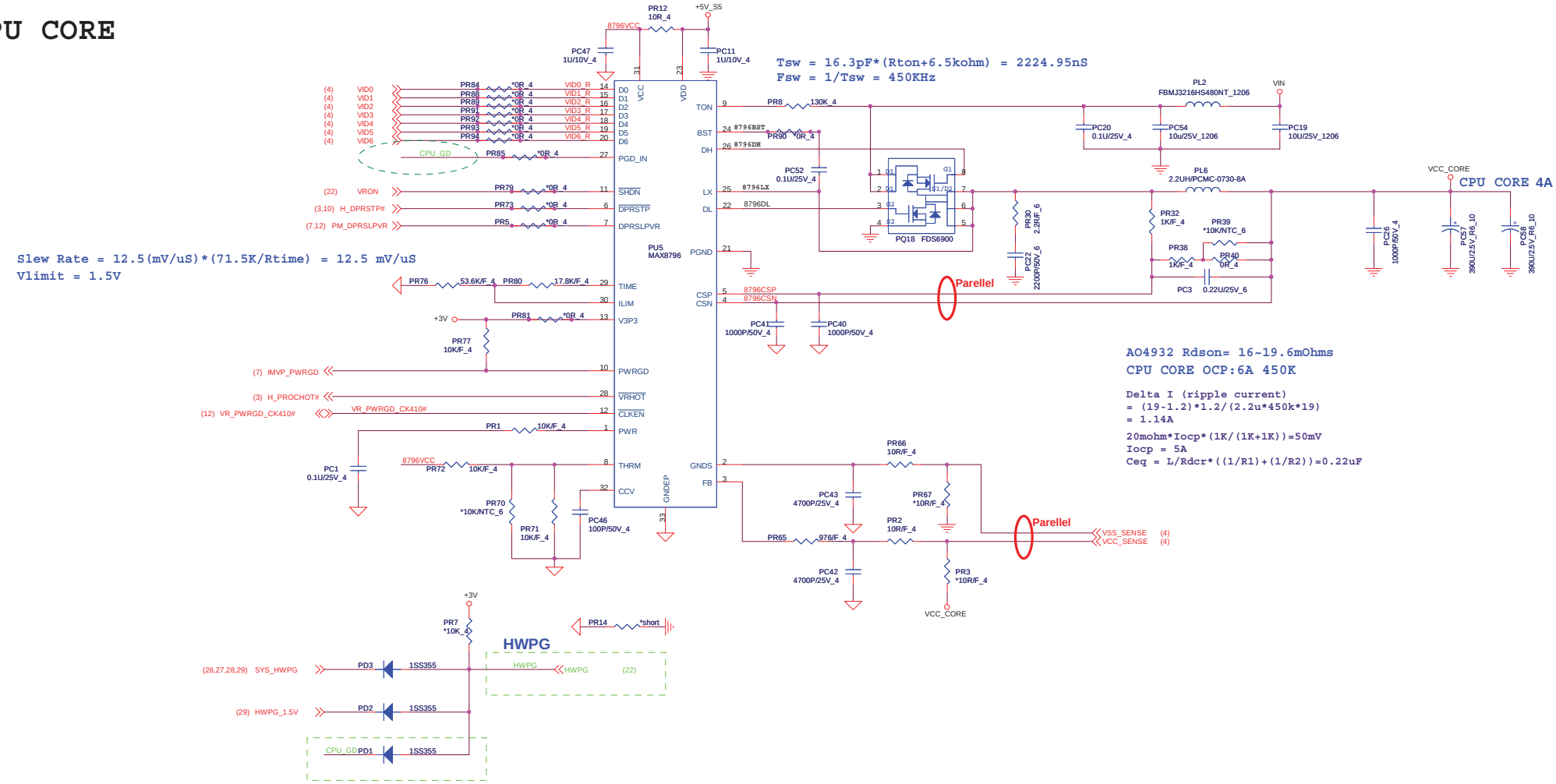
Date: Friday, April 24, 2009 Sheet 23 of 34



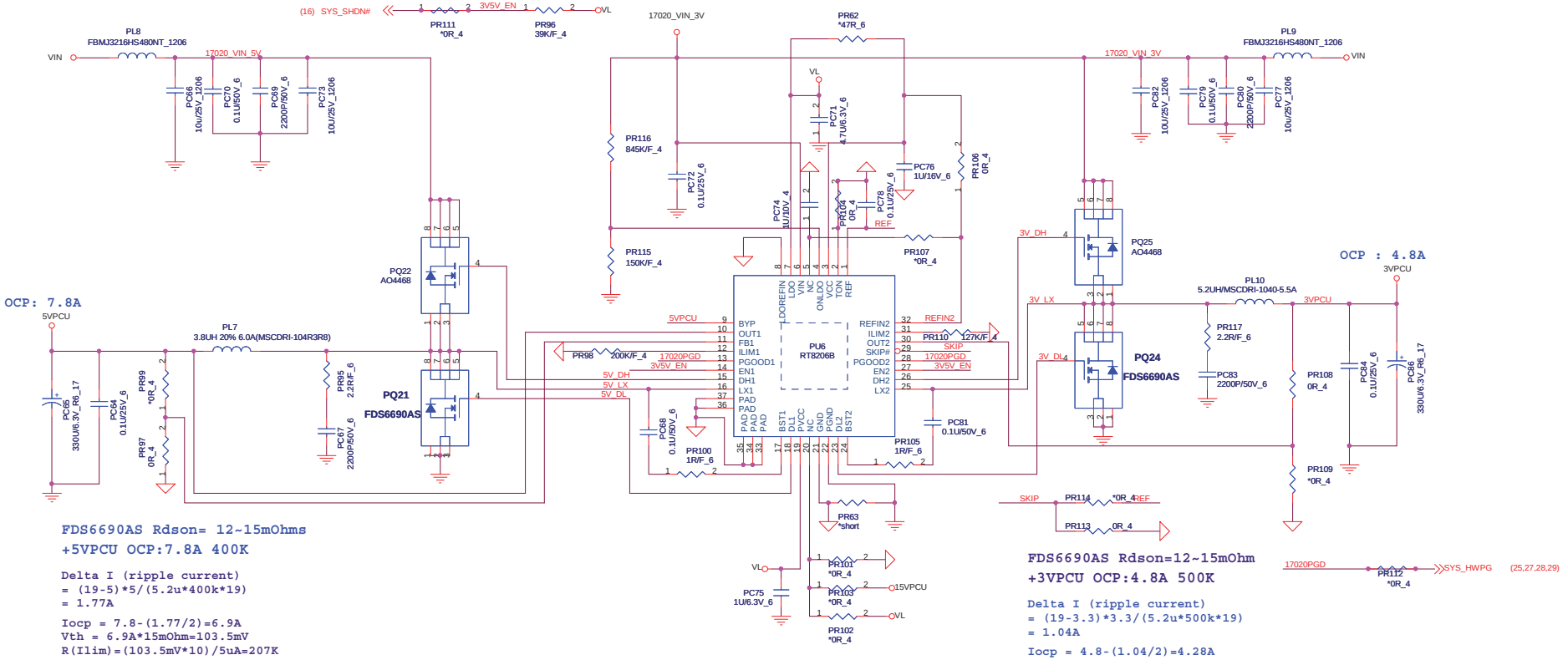
Close to GMCH

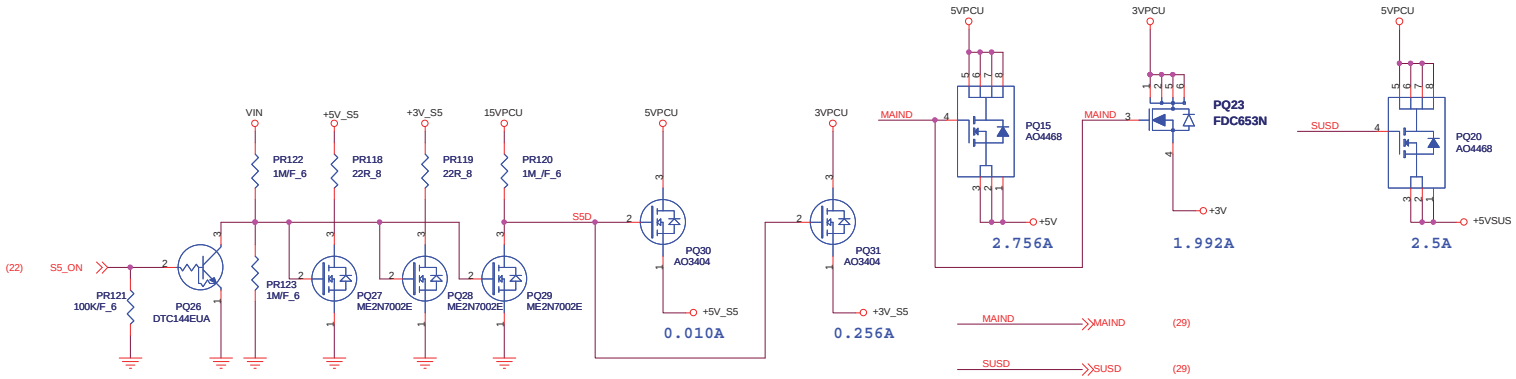
Quanta Computer Inc.		
PROJECT : EL7		
Size	Document Number: DDR2_MODULE_RANK1	Rev: 1A
Date: Friday, April 24, 2009	Sheet 24 of 34	

CPU CORE



Quanta Computer Inc.			
PROJECT : EL7			
Size	Document Number		Rev
	CPU VCORE MAX8796		1A
Date: Friday, April 24, 2009	Sheet 25	of 34	

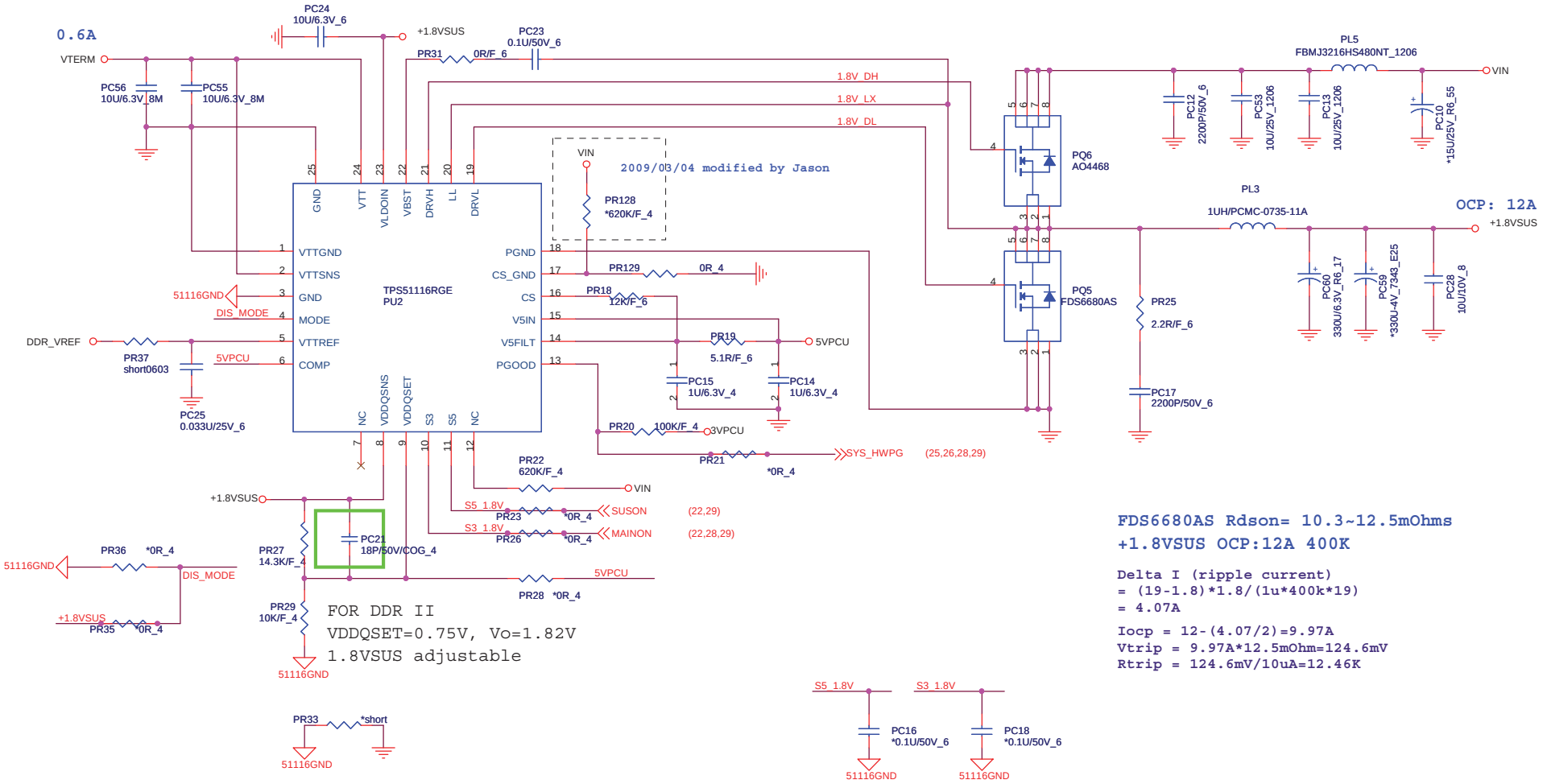




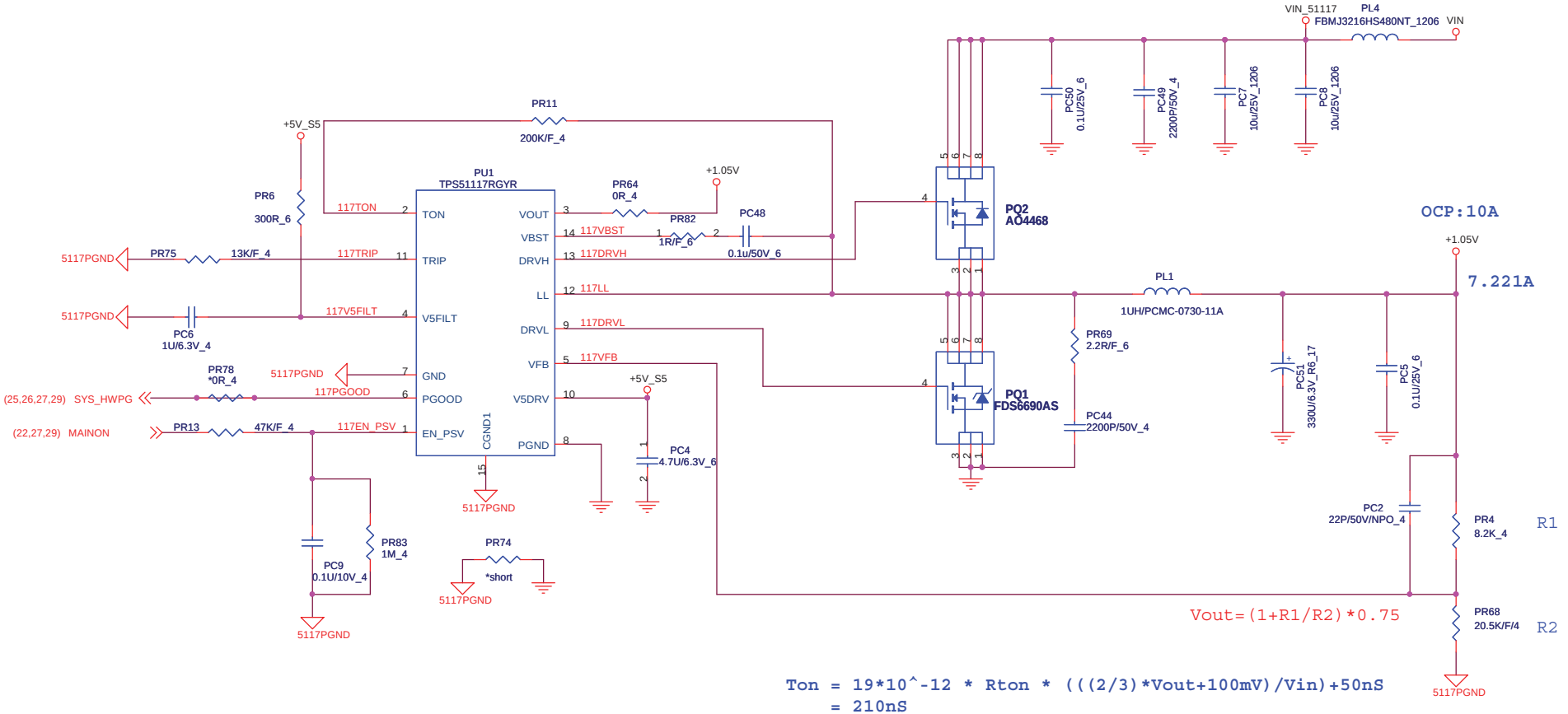
Quanta Computer Inc.

PROJECT : EL7

Size	Document Number	Rev
	5V / 3V (ISL6237)	1A
Date: Friday, April 24, 2009	Sheet 26 of 34	



Quanta Computer Inc.		
PROJECT : EL7		
Size	Document Number: TPS51116REGR/1.8VSUS	Rev: 1A
Date: Friday, April 24, 2009	Sheet 27 of 34	



Ton = 19*10^-12 * Rton * (((2/3)*Vout+100mV)/Vin)+50nS
= 210nS
f = (1/Ton)*(Vout/Vin)
~=263Hz

FDS6690AS Rdson= 12~15mOhms
+1.05V OCP:10A 263K

Delta I (ripple current)
= (19-1.05)*1.05/(1u*263k*19)
= 3.77A

Iocp = 10-(3.77/2)=8.16A
Vtrip = 8.16A*15mOhm=122.4mV
Rtrip = 122.4mV/10uA=12.24K

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PROJECT : EL7		
Size	Document Number: VCCP 1.05V(TPS51117)	Rev: 1A
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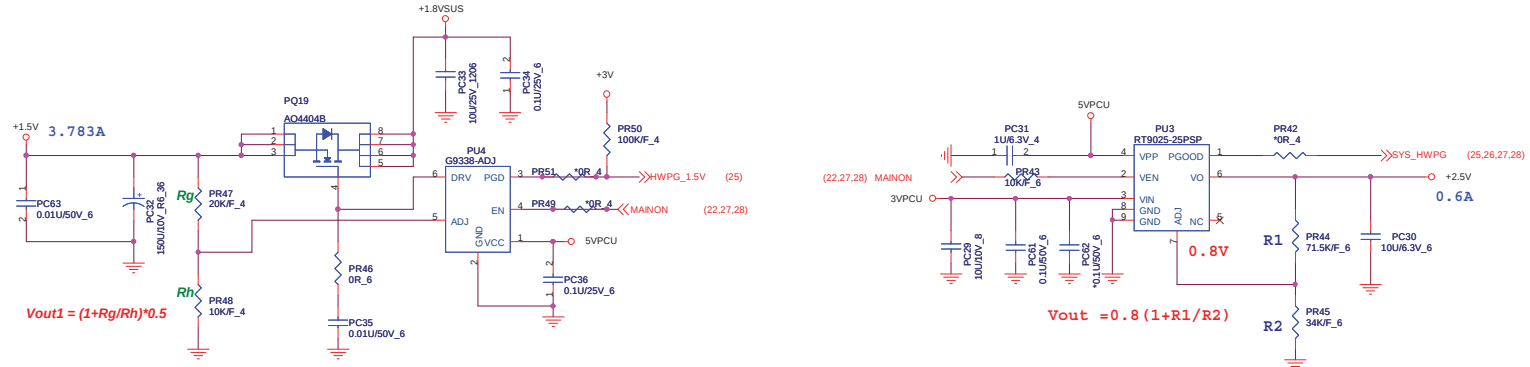
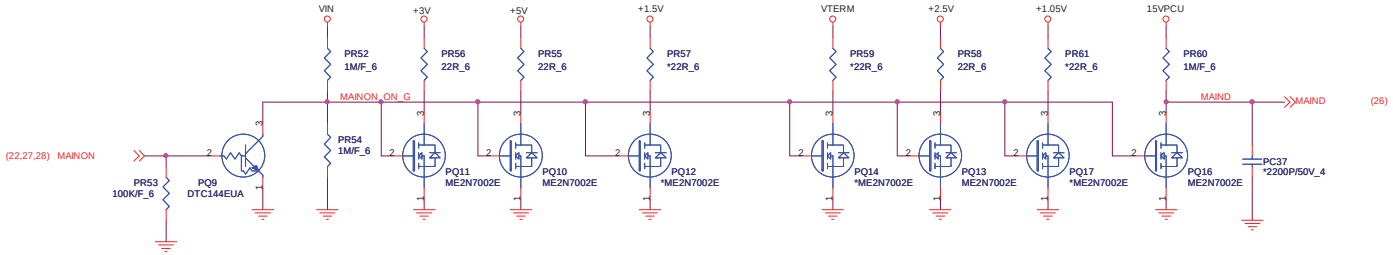
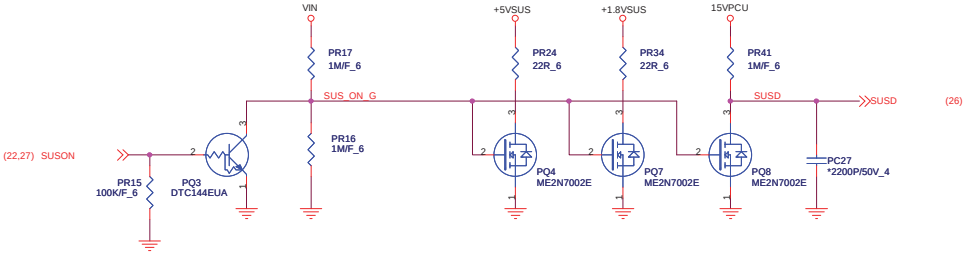
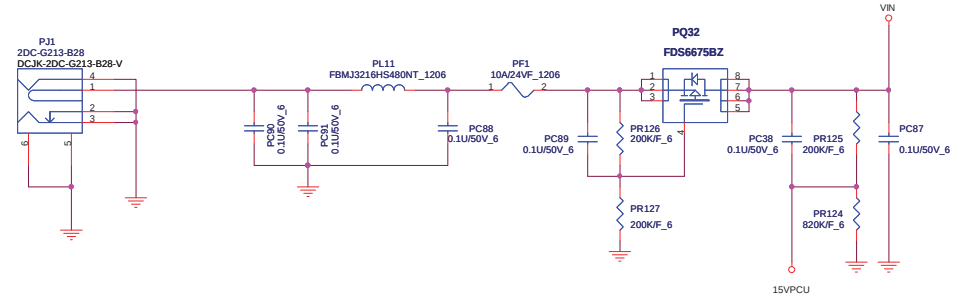






DC IN JACK



Quanta Computer Inc.

PROJECT : EL7

Size	Document Number	Rev
	Discharge/1.5V	1A

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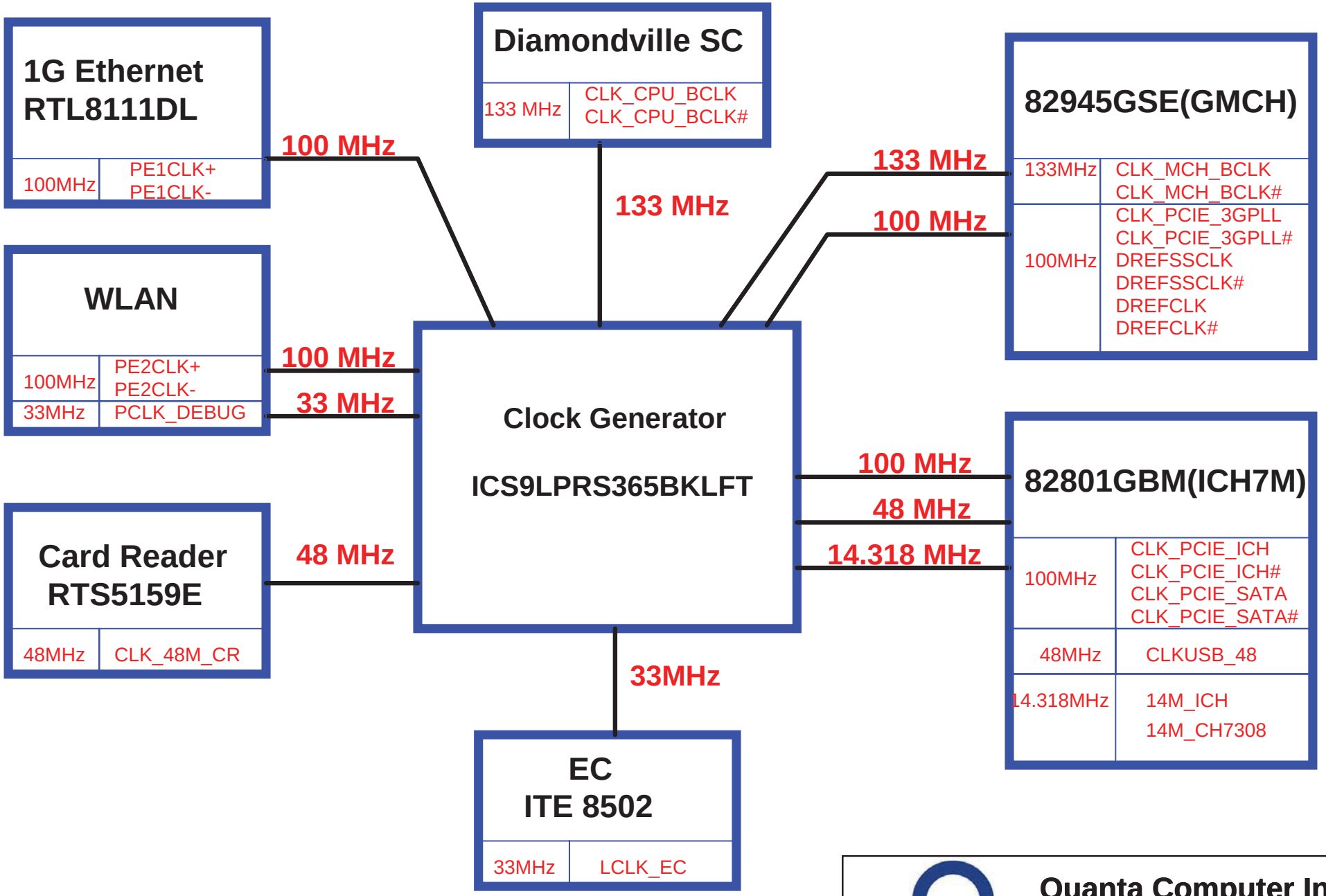

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PROJECT : EL7

Size	Document Number	Rev
	Clock Block Diagram	1A
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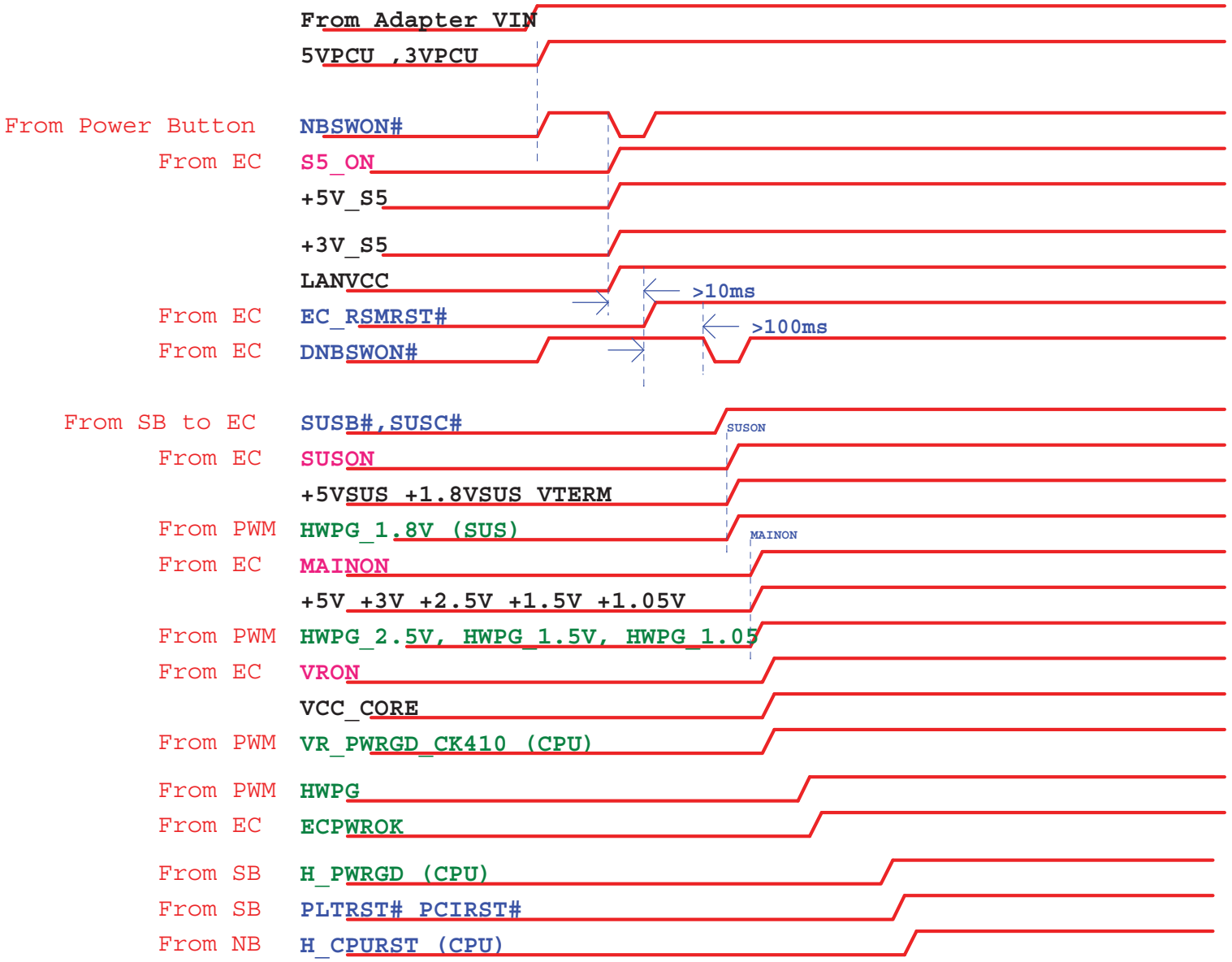
Power On Sequence



Quanta Computer Inc.

PROJECT : EL7

Size	Document Number	Rev
	EL7 Power On Sequence	1A

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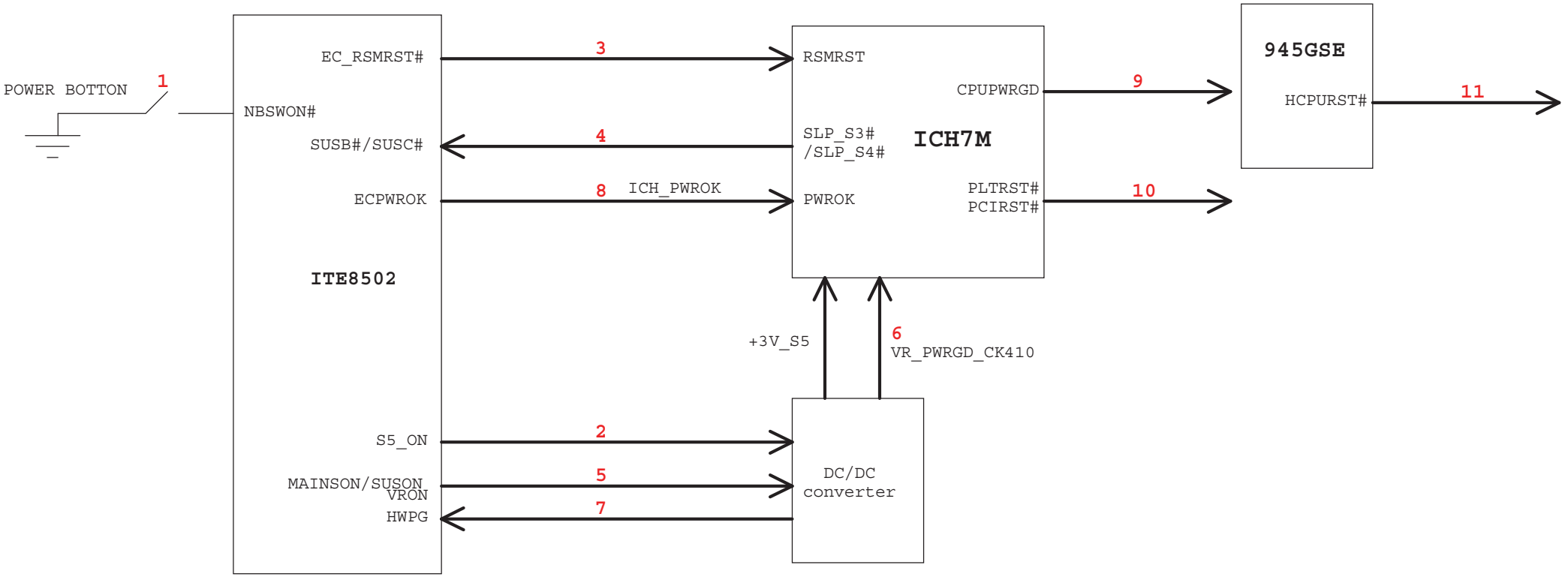

S5_ON → EC_RSMRST# → SUSB# SUSC# → SUSON MAINON VRON / SUSD MAIND VRON → HWPG VR_PWRGD_CK410 → EC Pin107 ECPWROK → H_PWRGD → PLTRST# PCIRST# → H_CPURST#

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PROJECT : EL7		
Size	Document Number: Power On Diagram	Rev 1A
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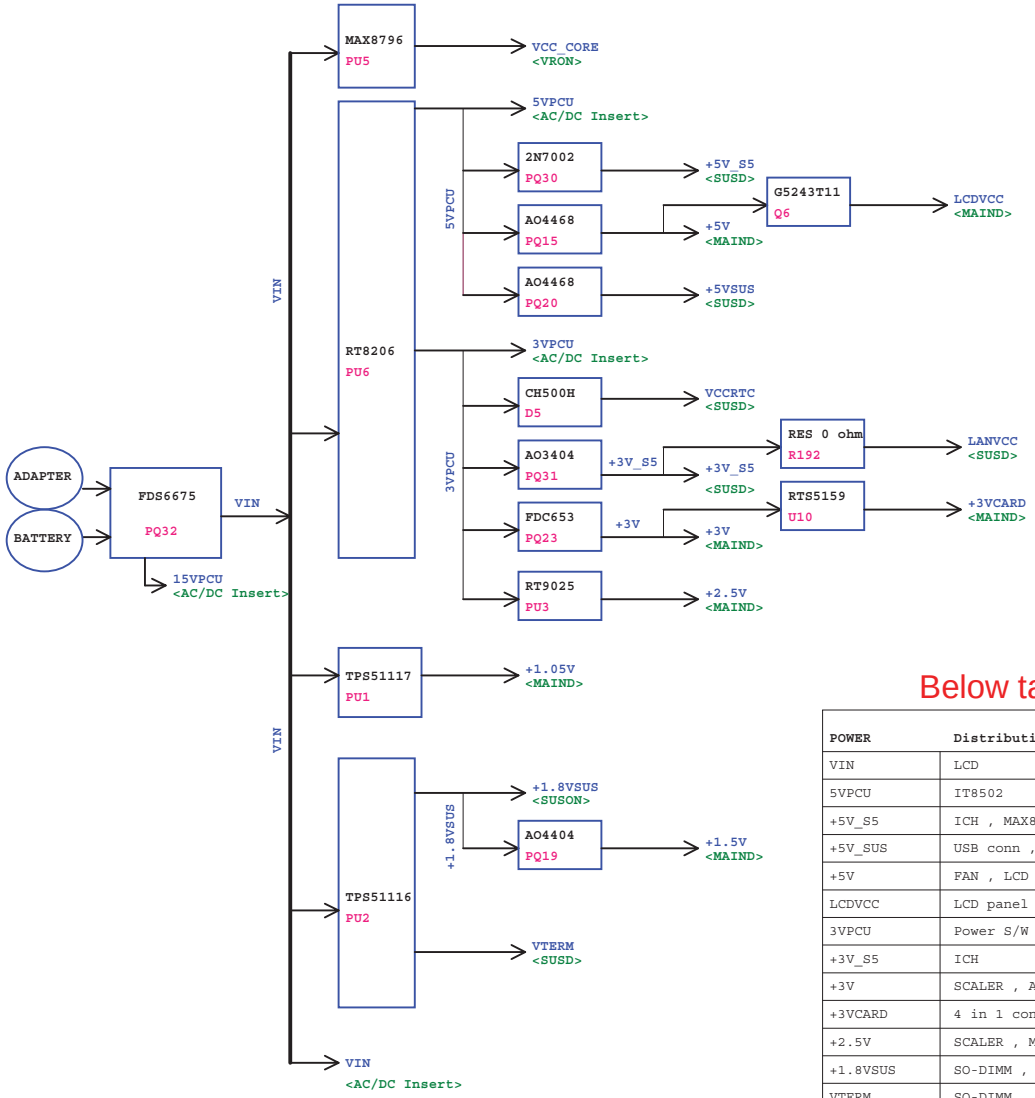
Powr Tree



Below table need be modify (waiting other schematic ready)

POWER	Distribution
VIN	LCD
5VPCU	IT8502
+5V_S5	ICH , MAX8796 , TPS51117
+5V_SUS	USB conn , PS/2 mouse K/B conn , CAMERA
+5V	FAN , LCD , SATA HDD , SATA ODD , ALC269 , ICH
LCDVCC	LCD panel
3VPCU	Power S/W , IT8502 , ICH
+3V_S5	ICH
+3V	SCALER , ALC269 , IT8502 , CLK gen , MCH , ICH , SO-DIMM , EDID EEPROM , SATA HDD , SSD , WLAN , Power S/W , G781 , RTL8111 , RTS5159
+3VCARD	4 in 1 conn
+2.5V	SCALER , MCH
+1.8VSUS	SO-DIMM , MCH , TPS51116
VTERM	SO-DIMM
+1.5V	CPU , MCH , ICH , WLAN
+1.05V	CLK gen , CPU , MCH , ICH
VCC_CORE	CPU
LANVCC	RTL8111

DATE	Modify Description List	Note
2009 0302 VER:B	1.PAG23 SPK Change ACN1 :the same as CN1 or CN2 (53398-0410-4P-L) 2.PAG18 SW Change CN6:the same as CN4 (87212-1000L-10P-R) 3.PAG20&PG18 Remove SSD module ,H6 and H11 4.PAG12 Signal MID2 change form GPIO35 to GPIO14 5.Change caps or resistors footprints with "-C" to non "-C" 6.PAG16 Chage C274,C281 and C284 to CC3528	
2009 0303 VER:B	1.PAG16 delete R129,R132,R181,R185 of USB 2.PAG25 Short 0 Ohm resistor:PR84,PR88,PR89,PR91,PR92,PR93,PR94,PR85,PR79,PR73,PR5,PR81,PR90 3.PAG26 Short 0 Ohm resistor:PR104,PR111,PR112 4.PAG29 Short 0 Ohm resistor:PR49,PR51 5.PAG22 Modify EC Pin3 to VCCRTC 6.PAG29 Solve +1.5 discharge circuit short problem 7.PAG23 Modify AL6,AL7,AL8,AL9,AC31,AC32,AC33,AC34 8.PAG12 Change GPIO6 to BIOS_WP#,delete R164,R165 9.PAG22 ADD BIOS PROTECT Circuit	
2009 0305 VER:B	1.PAG18 Change L29,L30,L31,L32,L33,L34 to BLM18PG181SN1D_6(The same as L10) 2.PAG27 Add PR129	
2009 0413 VER:C	1.PAG16 Chage C237,C181 to CC3528 2.PAG20 Chage CN5 footprint to 85205-1200-12p-r (DFWF12MS049) 3.PAG14 Add D35 U2 pin connector to EC U14_124 LCD_ON 4.PAG17 Add D33,D34 GPIO34 LAN_ON_SB and LAN_ON_EC U12 pin28 5.PAG21 Add D36,R70 6.PAG22 Add U20,C437	