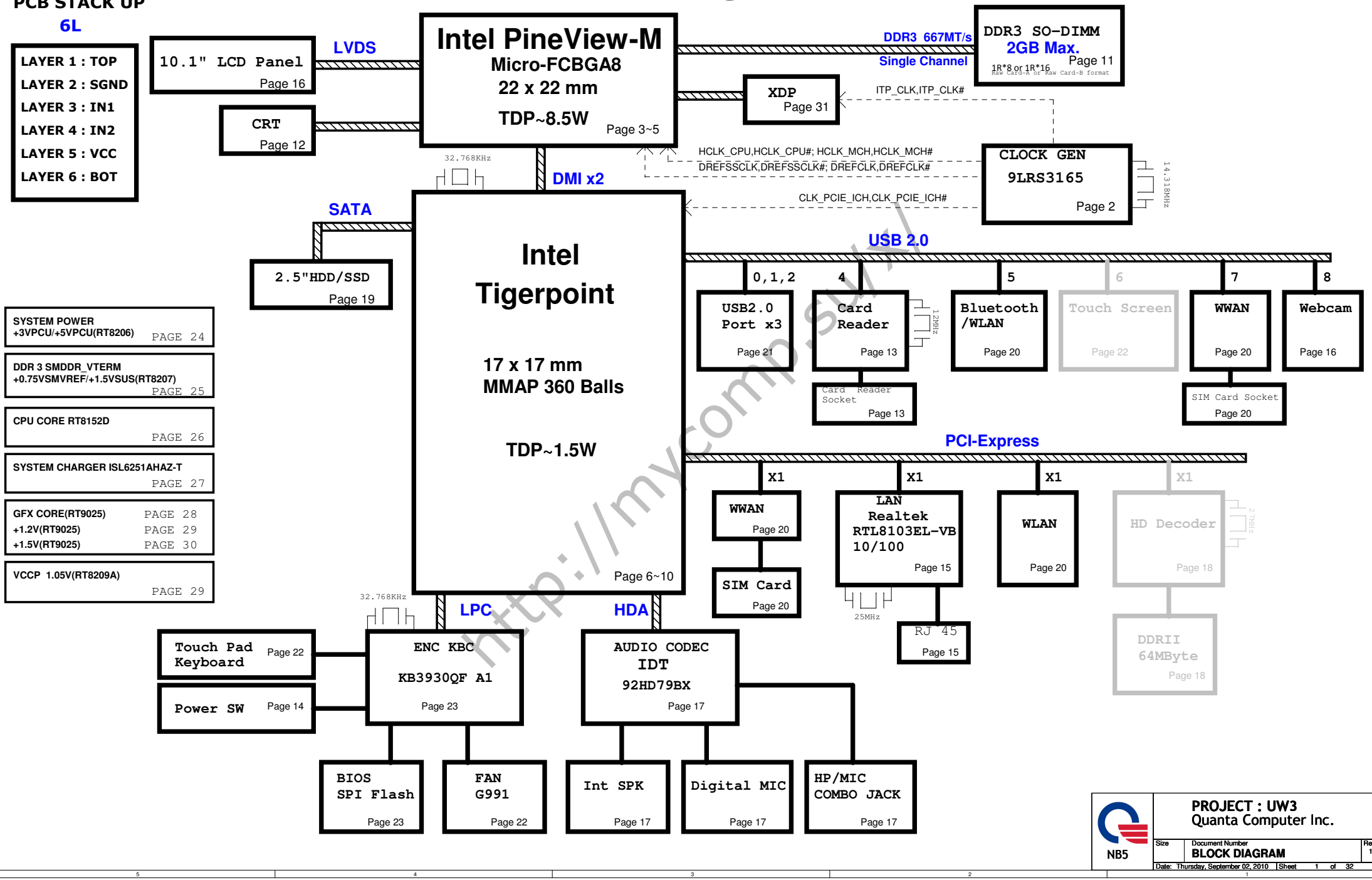
UW3 Block Diagram

01

PCB STACK UP

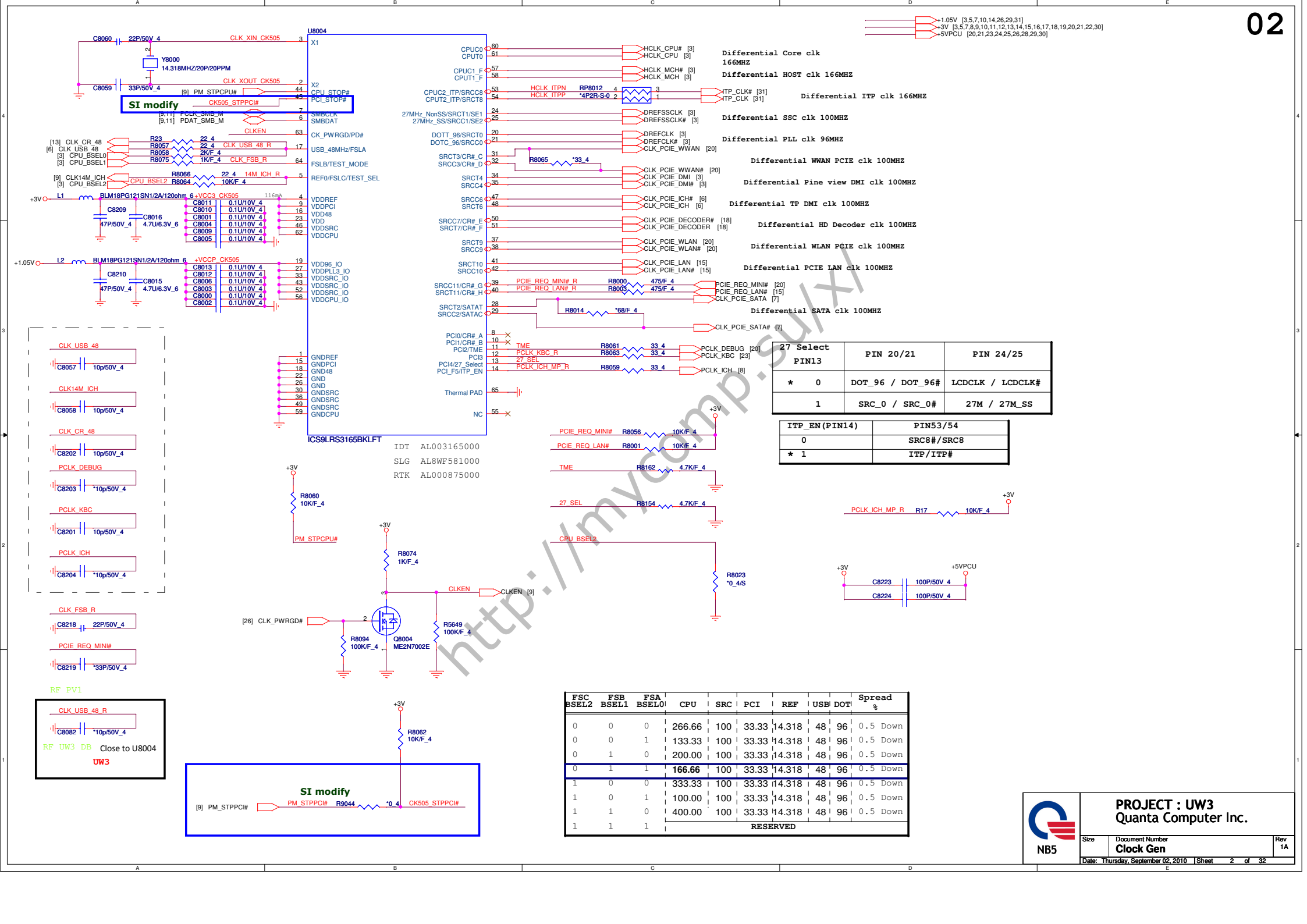
6L

LAYER 1 : TOP
LAYER 2 : SGND
LAYER 3 : IN1
LAYER 4 : IN2
LAYER 5 : VCC
LAYER 6 : BOT



SYSTEM POWER +3VPCU/+5VPCU(RT8206)	PAGE 24
DDR 3 SMDDR_VTERM +0.75VSMVREF/+1.5VSUS(RT8207)	PAGE 25
CPU CORE RT8152D	PAGE 26
SYSTEM CHARGER ISL6251AHAZ-T	PAGE 27
GFX CORE(RT9025)	PAGE 28
+1.2V(RT9025)	PAGE 29
+1.5V(RT9025)	PAGE 30
VCCP 1.05V(RT8209A)	PAGE 29

NB5	PROJECT : UW3 Quanta Computer Inc.	
	Size: — Document Number: BLOCK DIAGRAM	Rev: 1A
	Date: Thursday, September 02, 2010 Sheet 1 of 32	



27 Select PIN13	PIN 20/21	PIN 24/25
* 0	DOT_96 / DOT_96#	LCDCLK / LCDCLK#
1	SRC_0 / SRC_0#	27M / 27M_SS

ITP_EN(PIN14)	PIN53/54
0	SRC8#/SRC8
* 1	ITP/ITP#

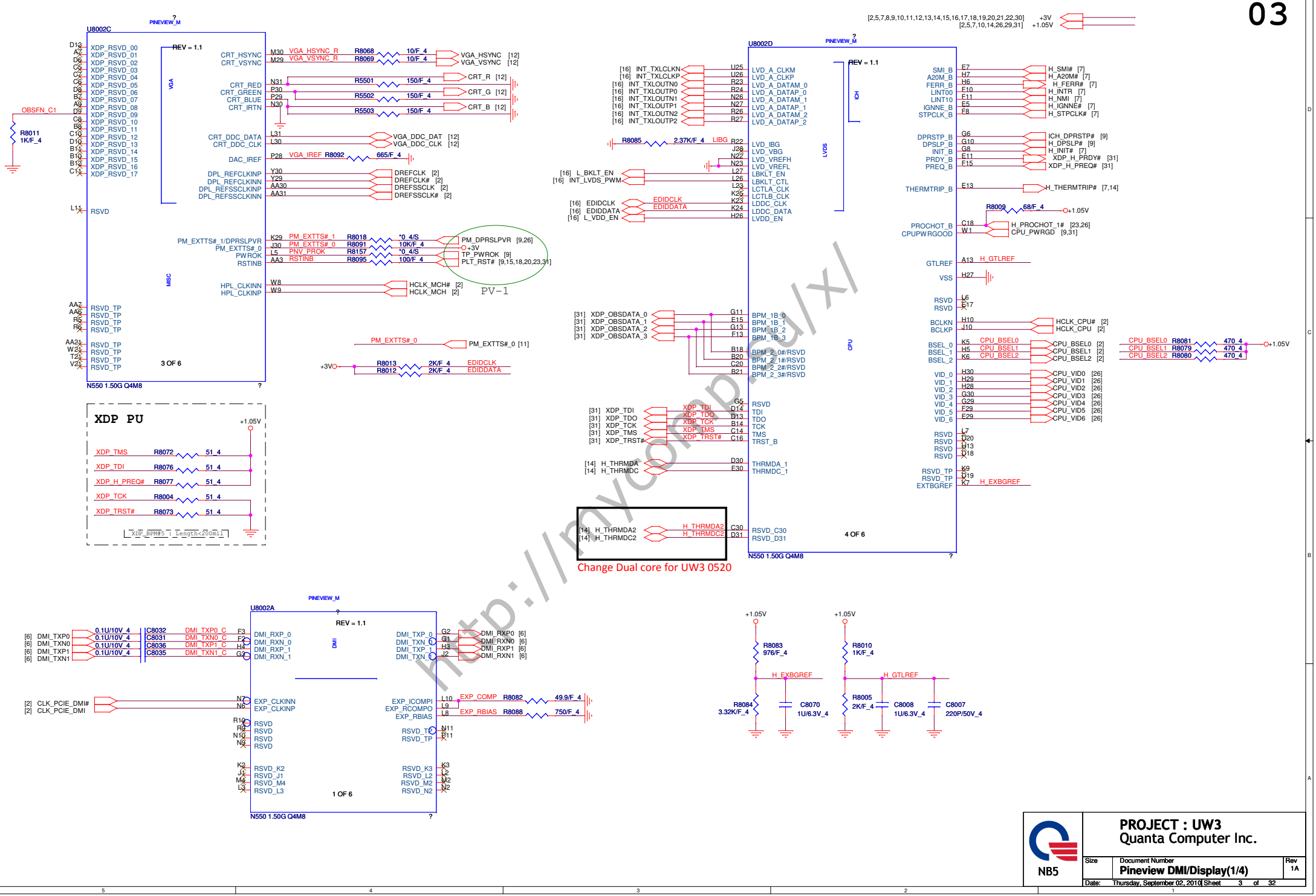
FSC BSEL2	FSB BSEL1	FSA BSEL0	CPU	SRC	PCI	REF	USB	DOT	Spread %
0	0	0	266.66	100	33.33	14.318	48	96	0.5 Down
0	0	1	133.33	100	33.33	14.318	48	96	0.5 Down
0	1	0	200.00	100	33.33	14.318	48	96	0.5 Down
0	1	1	166.66	100	33.33	14.318	48	96	0.5 Down
1	0	0	333.33	100	33.33	14.318	48	96	0.5 Down
1	0	1	100.00	100	33.33	14.318	48	96	0.5 Down
1	1	0	400.00	100	33.33	14.318	48	96	0.5 Down
1	1	1	RESERVED						

NB5

PROJECT : UW3
Quanta Computer Inc.

Size	Document Number	Rev
	Clock Gen	1A

Date: Thursday, September 02, 2010 | Sheet 2 of 32



NB5	PROJECT : UW3 Quanta Computer Inc.	
	Size: — Document Number: Pineview DMI/Display(1/4) — Rev: 1A	
	Date: Thursday, September 02, 2010 Sheet 3 of 32	

+1.5VSUS [5,11,25,28,29,30]
+0.75VSMVREF [11,25]

PINEVIEW_M
U8002B
REV = 1.1

[11] M_A_A[14..0]
M_A_A0 AH19 DDR_A_MA_0
M_A_A1 AJ18 DDR_A_MA_1
M_A_A2 AK18 DDR_A_MA_2
M_A_A3 AK16 DDR_A_MA_3
M_A_A4 AJ14 DDR_A_MA_4
M_A_A5 AH14 DDR_A_MA_5
M_A_A6 AK14 DDR_A_MA_6
M_A_A7 AJ12 DDR_A_MA_7
M_A_A8 AH13 DDR_A_MA_8
M_A_A9 AK12 DDR_A_MA_9
M_A_A10 AK20 DDR_A_MA_10
M_A_A11 AH12 DDR_A_MA_11
M_A_A12 AJ11 DDR_A_MA_12
M_A_A13 AJ24 DDR_A_MA_13
M_A_A14 AJ10 DDR_A_MA_14

[11] M_A_WE#
[11] M_A_CAS#
[11] M_A_RAS#
M_A_WE# AK22 DDR_A_WEB
M_A_CAS# AJ22 DDR_A_CASB
M_A_RAS# AK21 DDR_A_RASB

[11] M_A_BS0
[11] M_A_BS1
[11] M_A_BS2
M_A_BS0 AJ20 DDR_A_BS_0
M_A_BS1 AH20 DDR_A_BS_1
M_A_BS2 AK11 DDR_A_BS_2

[11] M_CS#0
[11] M_CS#1
M_CS#0 AH22 DDR_A_CSB_0
M_CS#1 AK25 DDR_A_CSB_1
AJ21 DDR_A_CSB_2
AJ25 DDR_A_CSB_3

[11] M_CKE0
[11] M_CKE1
M_CKE0 AH10 DDR_A_CKE_0
M_CKE1 AH9 DDR_A_CKE_1
AK10 DDR_A_CKE_2
AJ8 DDR_A_CKE_3

[11] M_ODT0
[11] M_ODT1
M_ODT0 AK24 DDR_A_ODT_0
M_ODT1 AH26 DDR_A_ODT_1
AH24 DDR_A_ODT_2
AK27 DDR_A_ODT_3

[11] M_CLK0
[11] M_CLK#0
[11] M_CLK1
[11] M_CLK#1
M_CLK0 AG15 DDR_A_CK_0
M_CLK#0 AF15 DDR_A_CKB_0
M_CLK1 AD13 DDR_A_CK_1
M_CLK#1 AC13 DDR_A_CKB_1
AC15 DDR_A_CK_3
AD15 DDR_A_CKB_3
AF13 DDR_A_CK_4
AG13 DDR_A_CKB_4

AD17 RSVD_AD17
AC17 RSVD_AC17
AB15 RSVD_AB15
AB17 RSVD_AB17

[11] DDR3_DRAM_RST_N
DDR3_DRAM_RST_N AK8 DDR3_DRAMRSTB
DDR3_DRAM_PWROK AB4 DDR3_DRAM_PWROK

AB11 RSVD_TP
AB13 RSVD_TP
AL28 DDR_VREF
AK28 DDR_RPD
AJ26 DDR_RPU
AK29 RSVD

DDR_A_DQS_0 AD3 M_A_DQS0
DDR_A_DQSB_0 AD2 M_A_DQS#0
DDR_A_DM_0 AD4 M_A_DM0
DDR_A_DQ_0 AC4 M_A_DQ0
DDR_A_DQ_1 AC1 M_A_DQ1
DDR_A_DQ_2 AF4 M_A_DQ2
DDR_A_DQ_3 AG2 M_A_DQ3
DDR_A_DQ_4 AB2 M_A_DQ4
DDR_A_DQ_5 AB3 M_A_DQ5
DDR_A_DQ_6 AE2 M_A_DQ6
DDR_A_DQ_7 AE3 M_A_DQ7
DDR_A_DQS_1 AB8 M_A_DQS1
DDR_A_DQSB_1 AD7 M_A_DQS#1
DDR_A_DM_1 AA9 M_A_DM1
DDR_A_DQ_8 AB6 M_A_DQ8
DDR_A_DQ_9 AB7 M_A_DQ9
DDR_A_DQ_10 AE5 M_A_DQ10
DDR_A_DQ_11 AG5 M_A_DQ11
DDR_A_DQ_12 AA5 M_A_DQ12
DDR_A_DQ_13 AB5 M_A_DQ13
DDR_A_DQ_14 AB9 M_A_DQ14
DDR_A_DQ_15 AD6 M_A_DQ15
DDR_A_DQS_2 AD8 M_A_DQS2
DDR_A_DQSB_2 AD10 M_A_DQS#2
DDR_A_DM_2 AE8 M_A_DM2
DDR_A_DQ_16 AG8 M_A_DQ16
DDR_A_DQ_17 AG7 M_A_DQ17
DDR_A_DQ_18 AF10 M_A_DQ18
DDR_A_DQ_19 AG11 M_A_DQ19
DDR_A_DQ_20 AF7 M_A_DQ20
DDR_A_DQ_21 AF8 M_A_DQ21
DDR_A_DQ_22 AD11 M_A_DQ22
DDR_A_DQ_23 AE10 M_A_DQ23
DDR_A_DQS_3 AK5 M_A_DQS3
DDR_A_DQSB_3 AK3 M_A_DQS#3
DDR_A_DM_3 AJ3 M_A_DM3
DDR_A_DQ_24 AH1 M_A_DQ24
DDR_A_DQ_25 AJ2 M_A_DQ25
DDR_A_DQ_26 AK6 M_A_DQ26
DDR_A_DQ_27 AJ7 M_A_DQ27
DDR_A_DQ_28 AF3 M_A_DQ28
DDR_A_DQ_29 AH2 M_A_DQ29
DDR_A_DQ_30 AL5 M_A_DQ30
DDR_A_DQ_31 AJ6 M_A_DQ31
DDR_A_DQS_4 AG22 M_A_DQS4
DDR_A_DQSB_4 AG21 M_A_DQS#4
DDR_A_DM_4 AD19 M_A_DM4
DDR_A_DQ_32 AE19 M_A_DQ32
DDR_A_DQ_33 AG19 M_A_DQ33
DDR_A_DQ_34 AF22 M_A_DQ34
DDR_A_DQ_35 AD22 M_A_DQ35
DDR_A_DQ_36 AG17 M_A_DQ36
DDR_A_DQ_37 AF19 M_A_DQ37
DDR_A_DQ_38 AE21 M_A_DQ38
DDR_A_DQ_39 AD21 M_A_DQ39
DDR_A_DQS_5 AE26 M_A_DQS5
DDR_A_DQSB_5 AG27 M_A_DQS#5
DDR_A_DM_5 AJ27 M_A_DM5
DDR_A_DQ_40 AE24 M_A_DQ40
DDR_A_DQ_41 AG25 M_A_DQ41
DDR_A_DQ_42 AD25 M_A_DQ42
DDR_A_DQ_43 AD24 M_A_DQ43
DDR_A_DQ_44 AC22 M_A_DQ44
DDR_A_DQ_45 AG24 M_A_DQ45
DDR_A_DQ_46 AD27 M_A_DQ46
DDR_A_DQ_47 AE27 M_A_DQ47
DDR_A_DQS_6 AE30 M_A_DQS6
DDR_A_DQSB_6 AF29 M_A_DQS#6
DDR_A_DM_6 AF30 M_A_DM6
DDR_A_DQ_48 AG31 M_A_DQ48
DDR_A_DQ_49 AG30 M_A_DQ49
DDR_A_DQ_50 AD30 M_A_DQ50
DDR_A_DQ_51 AD29 M_A_DQ51
DDR_A_DQ_52 AJ30 M_A_DQ52
DDR_A_DQ_53 AJ29 M_A_DQ53
DDR_A_DQ_54 AE29 M_A_DQ54
DDR_A_DQ_55 AD28 M_A_DQ55
DDR_A_DQS_7 AB27 M_A_DQS7
DDR_A_DQSB_7 AA27 M_A_DQS#7
DDR_A_DM_7 AB26 M_A_DM7
DDR_A_DQ_56 AA24 M_A_DQ56
DDR_A_DQ_57 AB25 M_A_DQ57
DDR_A_DQ_58 W24 M_A_DQ58
DDR_A_DQ_59 W22 M_A_DQ59
DDR_A_DQ_60 AB24 M_A_DQ60
DDR_A_DQ_61 AB23 M_A_DQ61
DDR_A_DQ_62 AA23 M_A_DQ62
DDR_A_DQ_63 W27 M_A_DQ63

DDR_A
2 OF 6
N550 1.50G Q4M8

M_A_DQ[63..0] [11]
M_A_DM[7..0] [11]
M_A_DQS[7..0] [11]
M_A_DQS#[7..0] [11]

+1.5VSUS
R8039 1K/F_4
+0.75VSMVREF R8100 *0_4 +DDR_VREF
R8037 1K/F_4

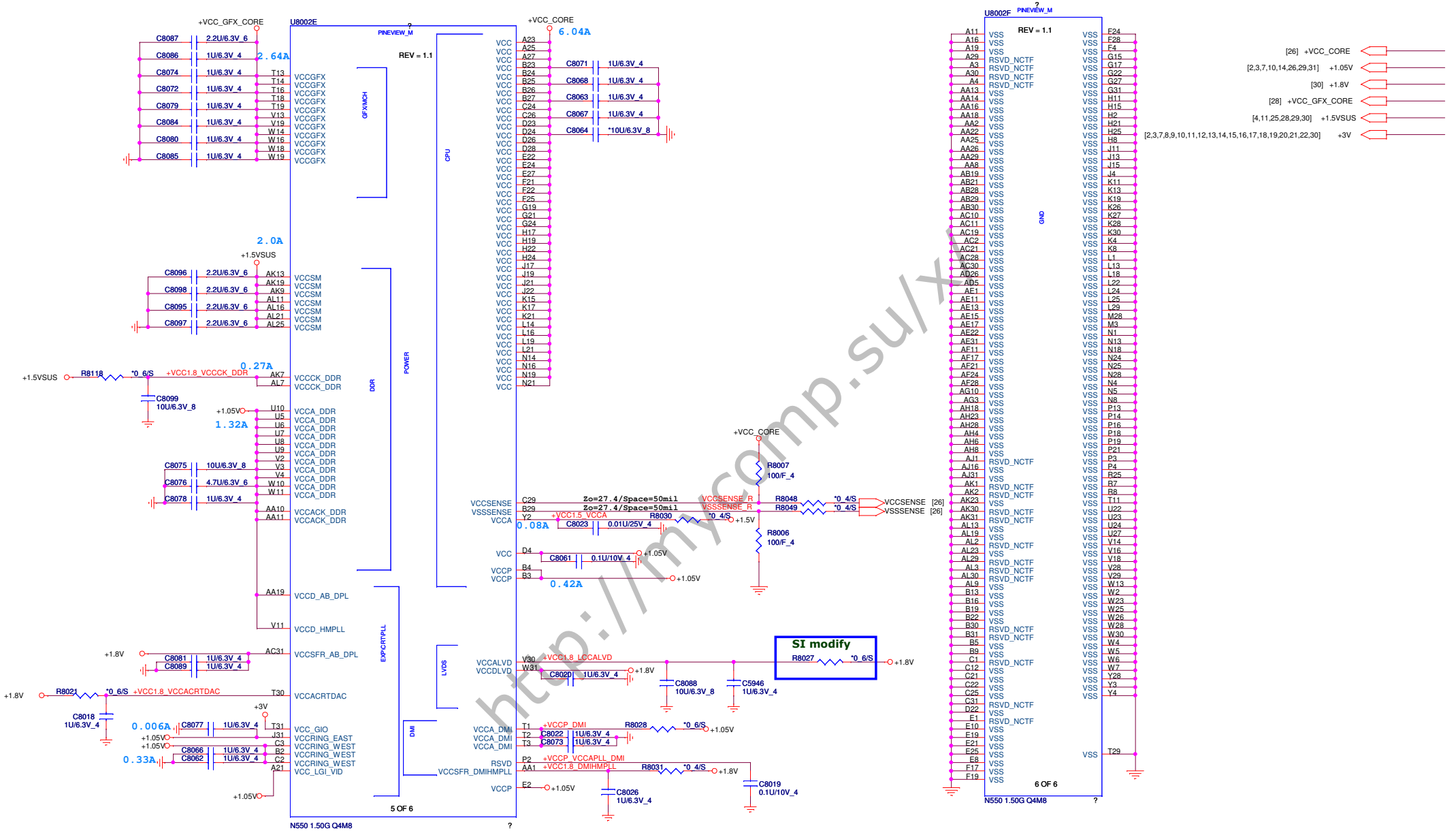
+1.5VSUS
R8110 10K/F_4

C8033 0.01U/25V_4
+DDR_VREF
R8036 80.6/F_4 SM_RCOMP
R8040 80.6/F_4 SM_RCOMP#
+1.5VSUS
C8034 0.01U/25V_4

+5V_S5
C8069 0.1U/10V_4
R8052 1K/F_4
+1.5VSUS
R8050 1K/F_4
DDR3_DRAM_PWROK
R8051 *0_4 DDR_PG
DDR_PG [25]
MMBT3904 Q8008
DDR3_DRAM_PWROK
R8038 *0_4
[9,23] SUSC#
SUSC# R8053 1K/F_4
MMBT3904 Q8009
C436 1U/6.3V_4

Intel CRB

NB5
PROJECT : UW3
Quanta Computer Inc.
Size | Document Number: Pineview DDR(2/4) | Rev: 1A
Date: Thursday, September 02, 2010 | Sheet 4 of 32



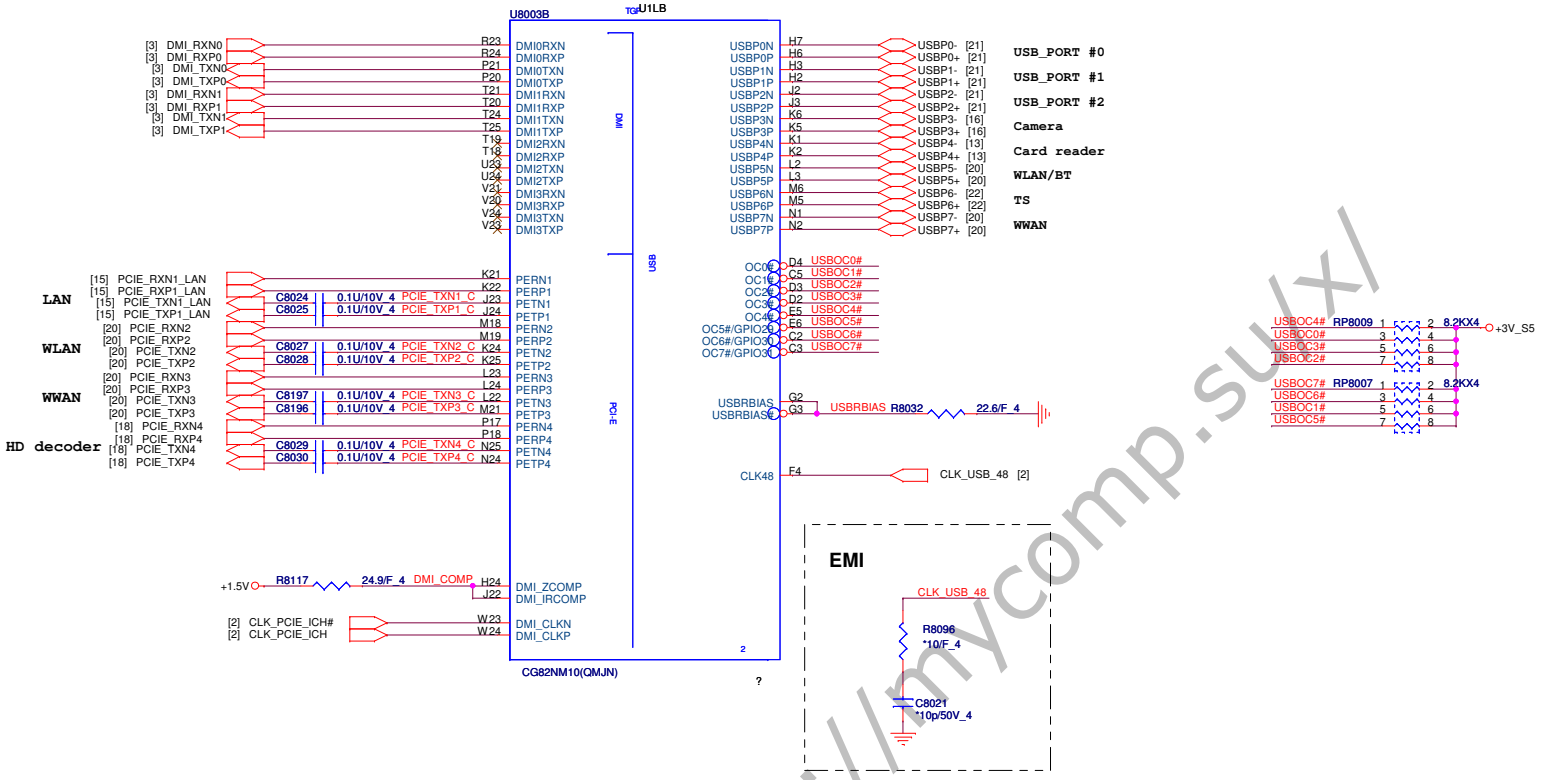
PROJECT : UW3
Quanta Computer Inc.

NB5

Size	Document Number	Rev
	Pineview Power(3/4)	1A

Date: Thursday, September 02, 2010 | Sheet 5 of 32

[5,10,18,20,30] +1.5V
[9,10,30] +3V_S5



NB5

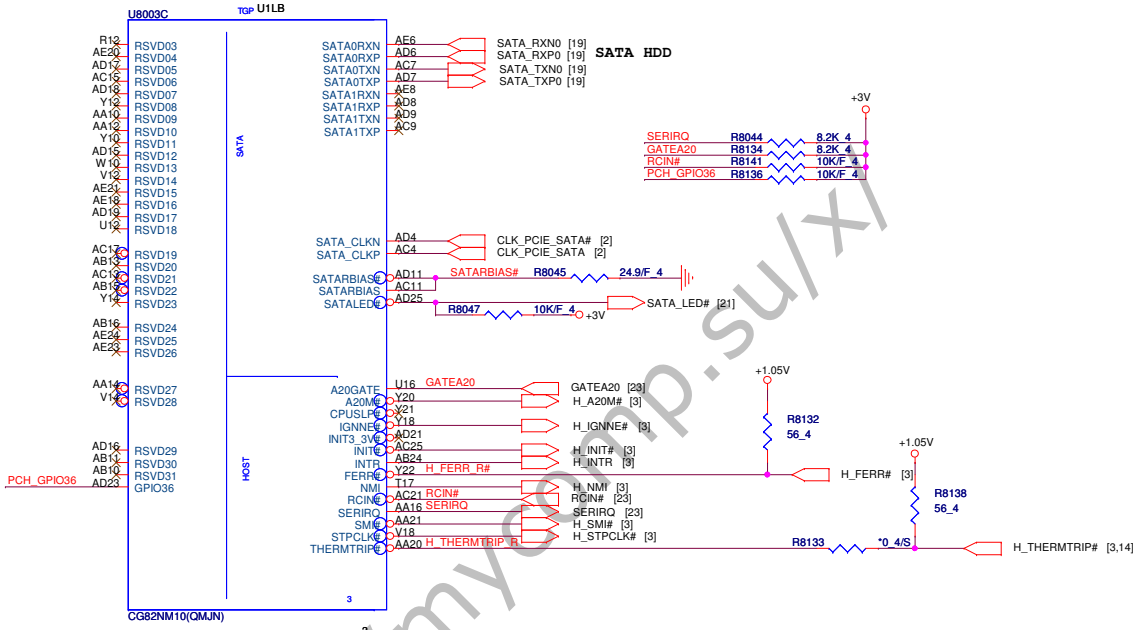
PROJECT : UW3
Quanta Computer Inc.

Size	Document Number	Rev
	TigerPoint DMI/PCIE(1/6)	1A

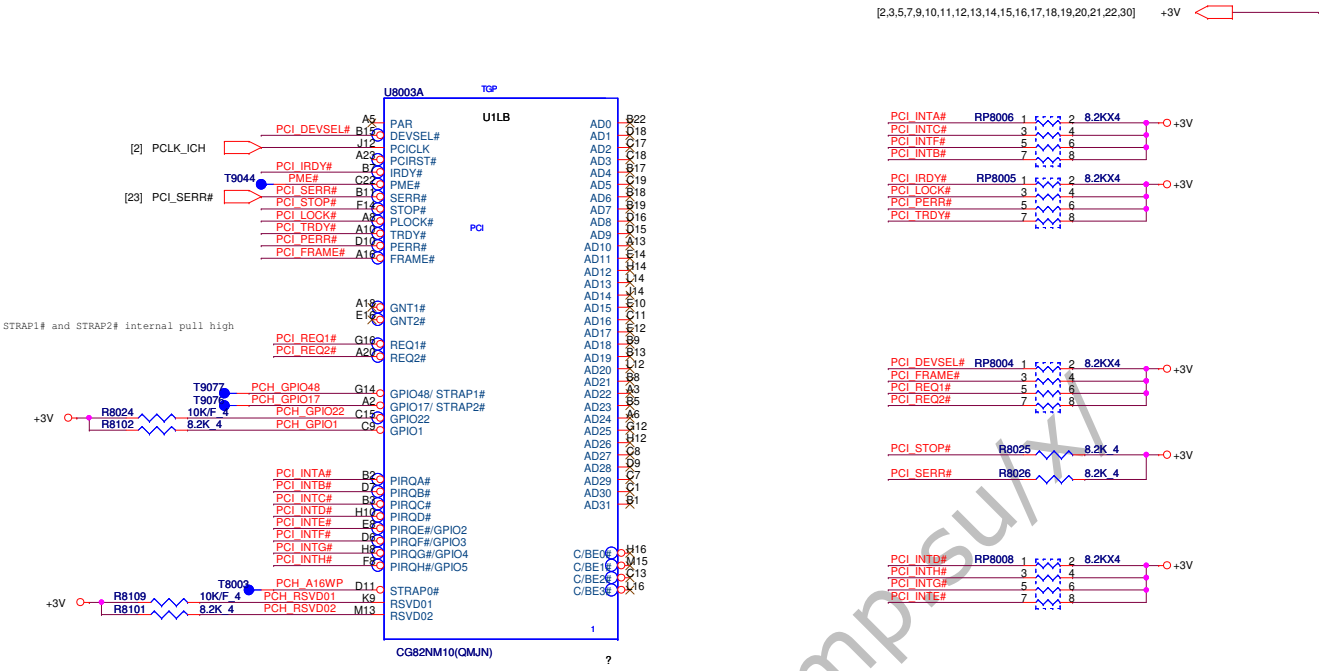
Date: Thursday, September 02, 2010 | Sheet 6 of 32

+3V [2,3,5,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,30]

+1.05V [2,3,5,10,14,26,29,31]



NB5	PROJECT : UW3 Quanta Computer Inc.	
Size	Document Number TigerPoint Sata/Host(2/6)	Rev 1A
Date: Thursday, September 02, 2010	Sheet 7 of 32	



ICH Boot BIOS select

PCH_GPIO17 (INT PU)	PCH_GPIO48 (INT PU)	Boot BIOS Location
0	1	SPI
1	0	PCI
1	1	LPC (Default)

A16 SWAP Override strap

PCH_A16WP (INT PU)	**Low = A16 swap override enabled** **High = Default**

IRQ	Description
PIRQA	USB UHCI Controller #1, #4
PIRQB	AC'97 Codec; option for SMBUS
PIRQC	USB UH Controller #3; SATA/IDE Native Mode
PIRQD	USB UHCI Controller #2
PIRQE	Internal LAN; Option for SCI, TCO, HPET#0,1,2
PIRQF	Option for SCI, TCO, HPET#0,1,2
PIRQG	Option for SCI, TCO, HPET#0,1,2
PIRQH	USB EHCI Controller; Option for SCI, TCO, HPET#0,1,2

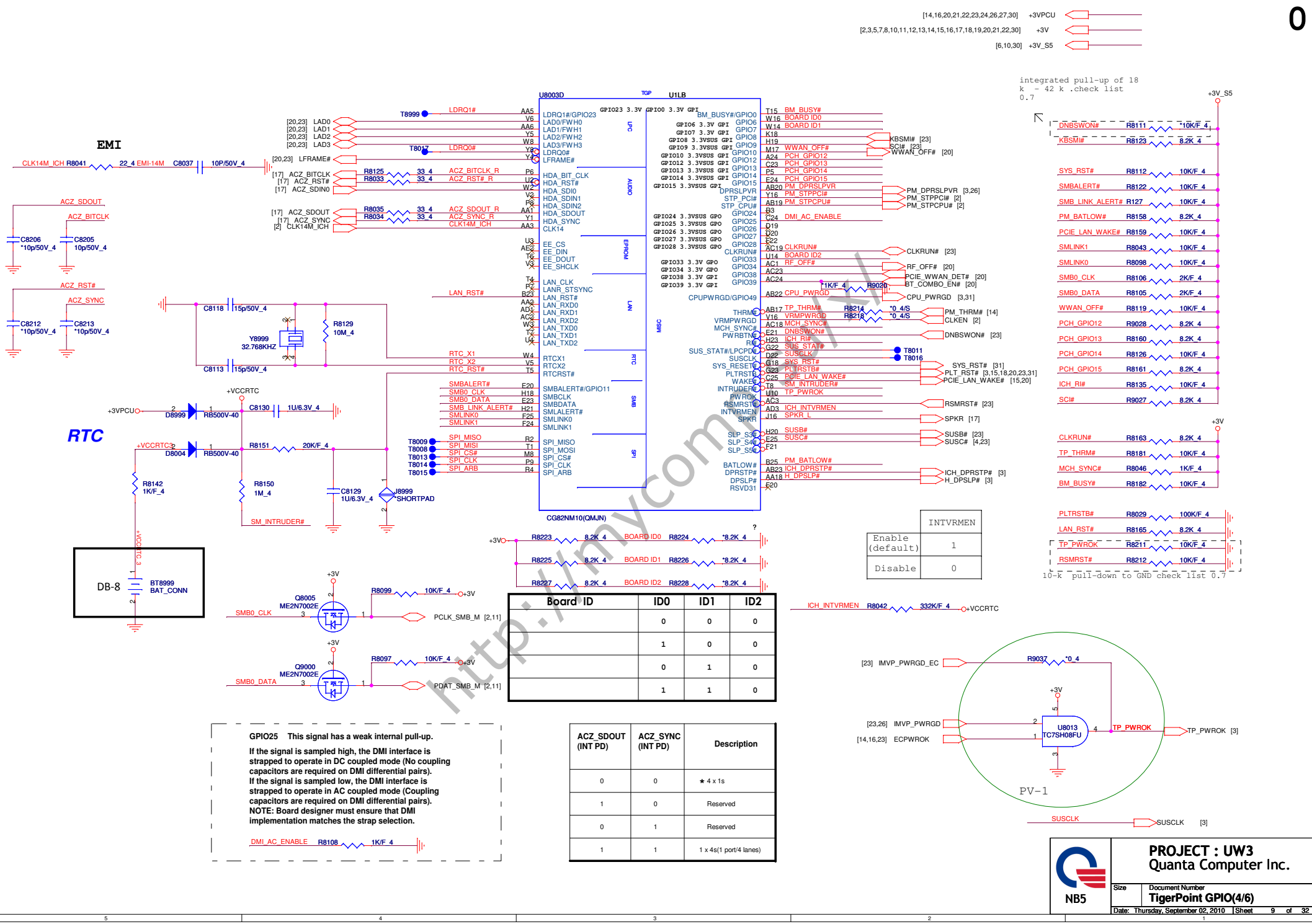
PCI_GNT#2	Internal PU Should not be PD

NB5

PROJECT : UW3
Quanta Computer Inc.

Size	Document Number	Rev
	TigerPoint PCI(3/6)	1A

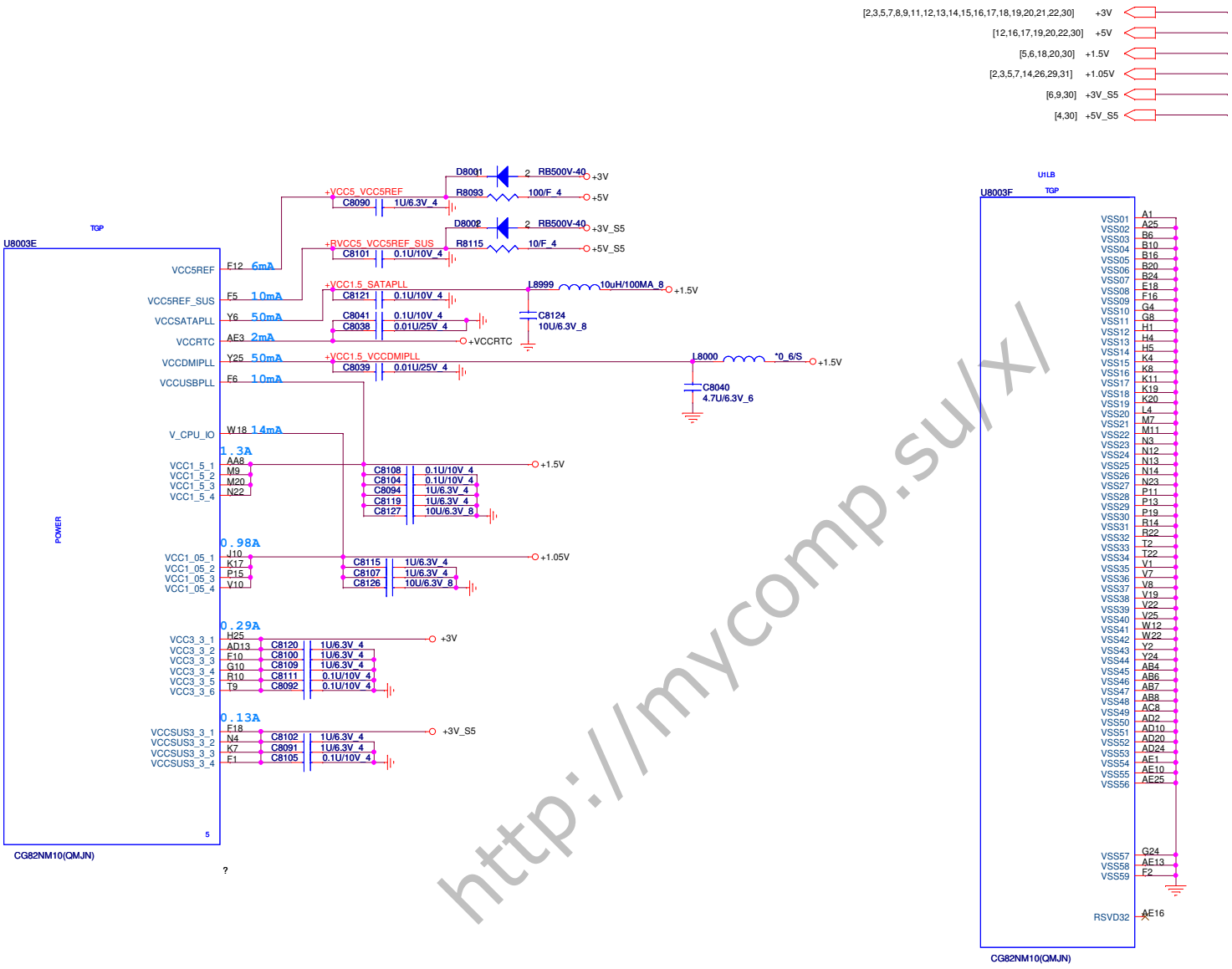
Date: Thursday, September 02, 2010 | Sheet 8 of 32



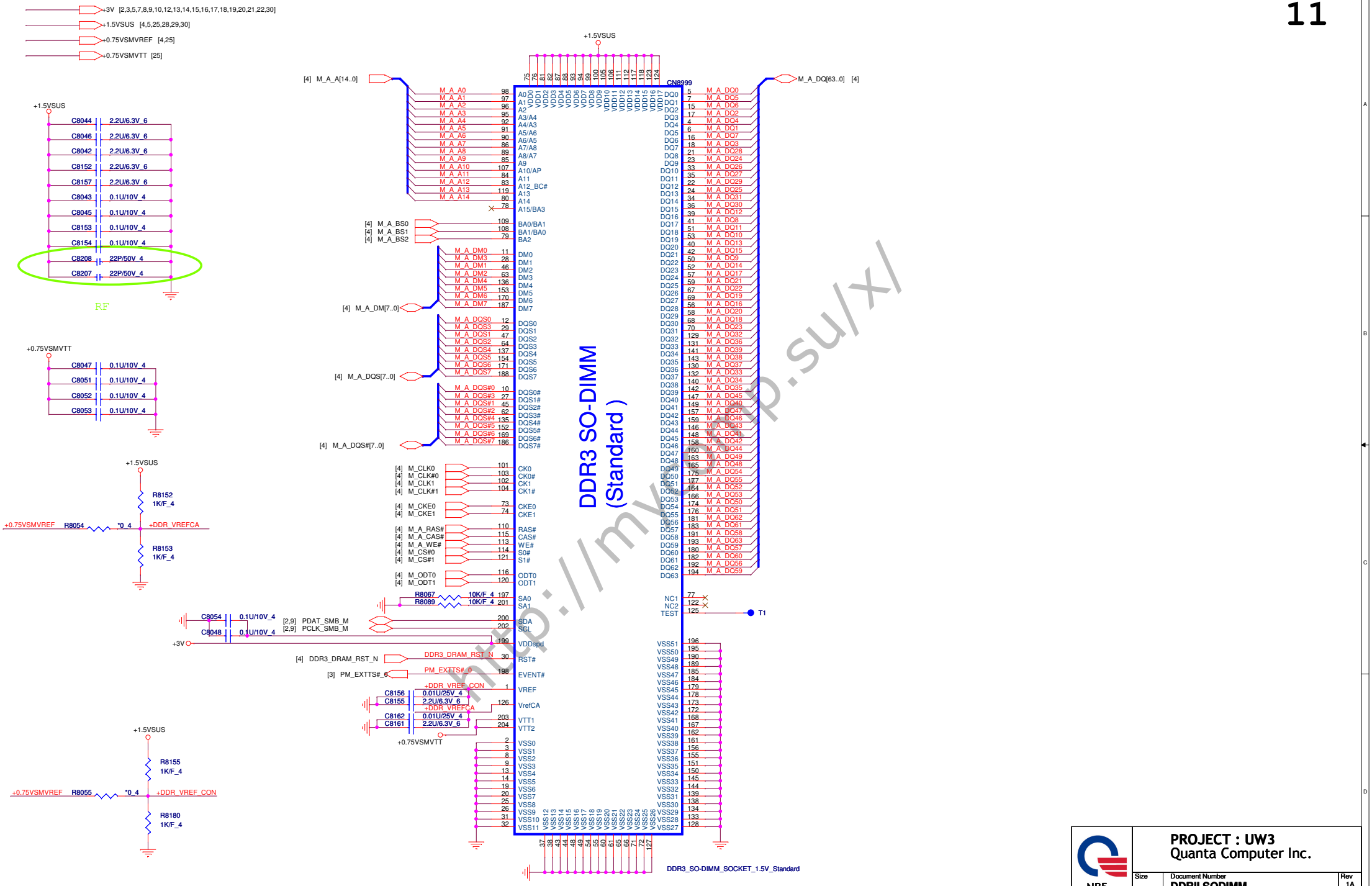
Board ID	ID0	ID1	ID2
	0	0	0
	1	0	0
	0	1	0
	1	1	0

ACZ_SDOUT (INT PD)	ACZ_SYNC (INT PD)	Description
0	0	★ 4 x 1s
1	0	Reserved
0	1	Reserved
1	1	1 x 4s(1 port/4 lanes)

	INTVRMEN
Enable (default)	1
Disable	0



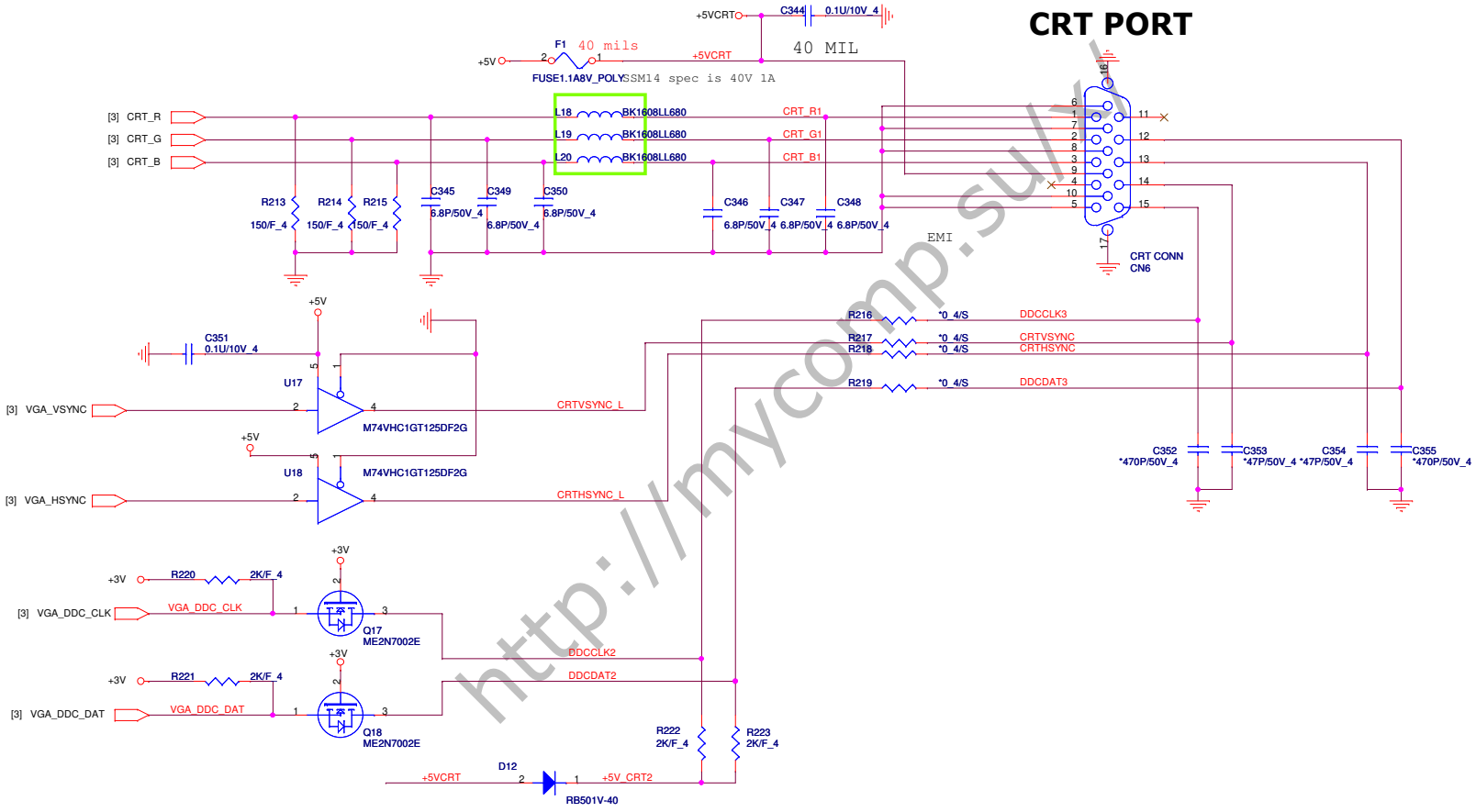
NB5	PROJECT : UW3 Quanta Computer Inc.	
Size	Document Number TigerPoint Power(5/6)	Rev 1A
Date: Thursday, September 02, 2010	Sheet 10 of 32	



NB5	PROJECT : UW3 Quanta Computer Inc.	
Size	Document Number DDRII SODIMM	Rev 1A
Date: Thursday, September 02, 2010	Sheet 11 of 32	

[2,3,5,7,8,9,10,11,13,14,15,16,17,18,19,20,21,22,30] +3V

CRT PORT



NB5	PROJECT : UW3 Quanta Computer Inc.	
Size	Document Number CRT	Rev 1A
Date: Thursday, September 02, 2010	Sheet 12 of 32	

+3V [2,3,5,7,8,9,10,11,12,14,15,16,17,18,19,20,21,22,30]

PU for internal CLK input
Unstuff for external XTAL(12MHZ)

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		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

U21

Realtek RTS5159

Close to Chipset

Without memory card 43mA
suspend current 350uA

Internal have pull Hi 200K

RTS5159 max output current for ..
XD card 250mA
SD/MMC 250mA
MS/MSPRO 250mA

G/F: DFHD39MR002

CN8001

CARD READER SOCKET

CLOSE to CONN

To Cardreader Connector

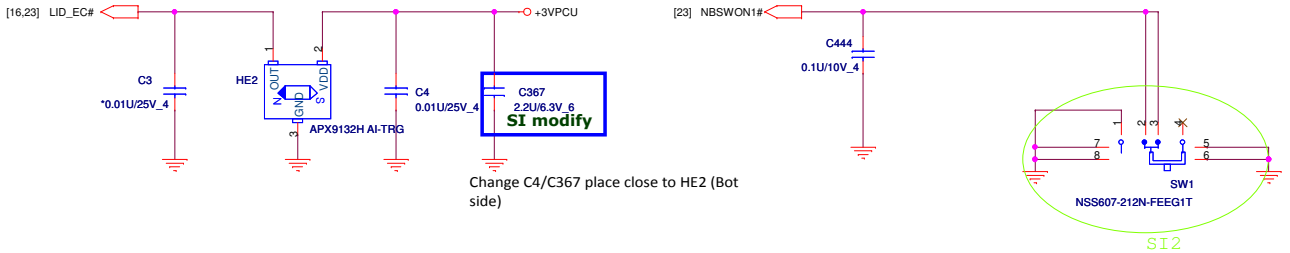
5 IN1 CARD-READER (PUSH-PUSH)

Support SD/SD PRO/MMC/MS/MS PRO/xD Cards

PROJECT : UW3	Quanta Computer Inc.
NB5	Size: — Document Number: Realtek RTS5159 & Card Reader — Rev: 1A
Date: Thursday, September 02, 2010	Sheet 13 of 32

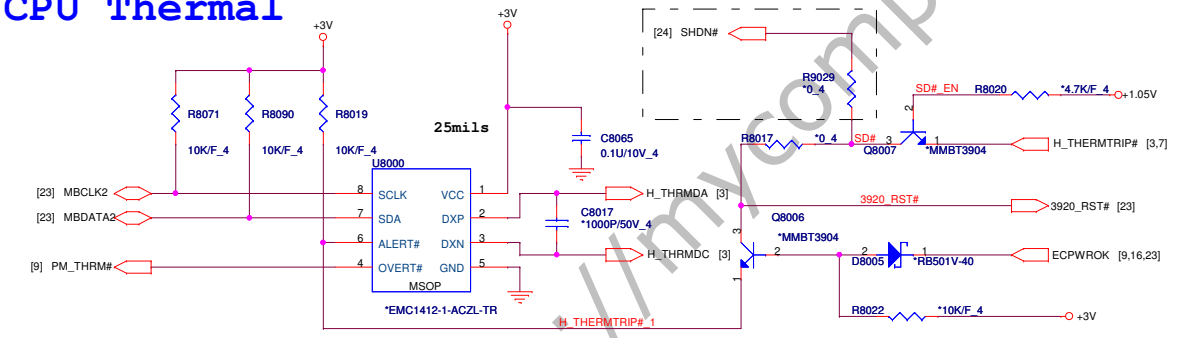
+3VPCU [9,16,20,21,22,23,24,26,27,30]
+3V [2,3,5,7,8,9,10,11,12,13,15,16,17,18,19,20,21,22,30]
+1.05V [2,3,5,7,10,26,29,31]

LID Switch



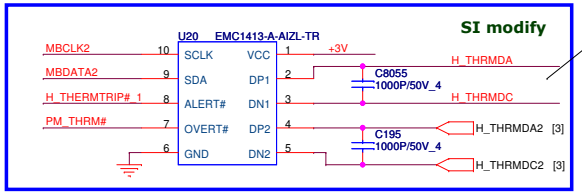
Change C4/C367 place close to HE2 (Bot side)

CPU Thermal



1.Level 1 Environment-related Substances Should NEVER be Used.
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

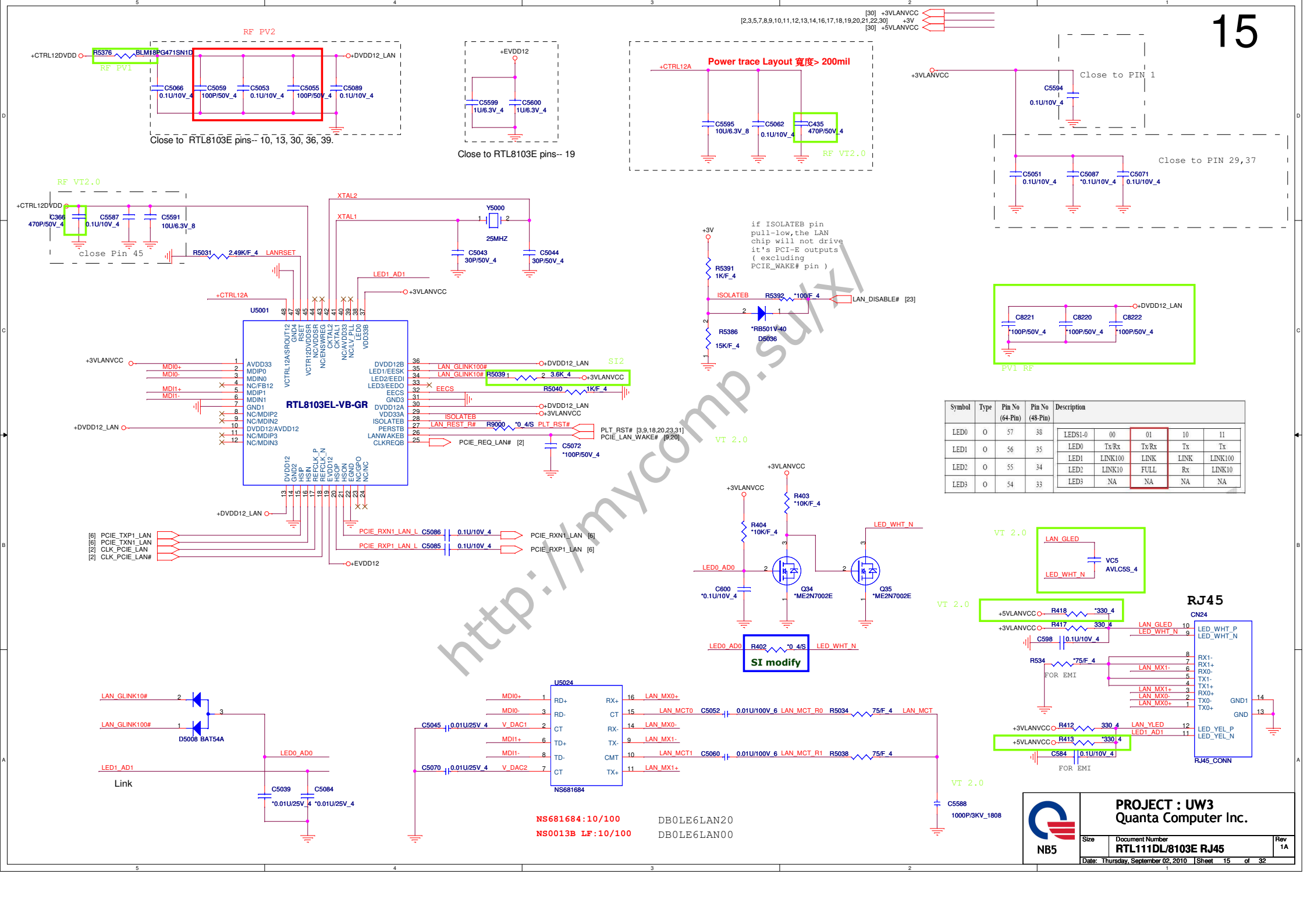
Dual core thermal sensor for UW3 0520



C8055 Place close to U20#2,3
SI modify

SMSC
C8055 non-Staff, C8017 Staff
Single Code: **AL001412003** **EMC1412-1-ACZL-TR**
Dual Code: **AL001413002** **EMC1413-A-AIZL-TR**
C8055 staff, C8017 non-Staff

NB5	PROJECT : UW3 Quanta Computer Inc.	
Size	Document Number **Power Botton**	Rev 1A
Date: Thursday, September 02, 2010	Sheet 14 of 32	

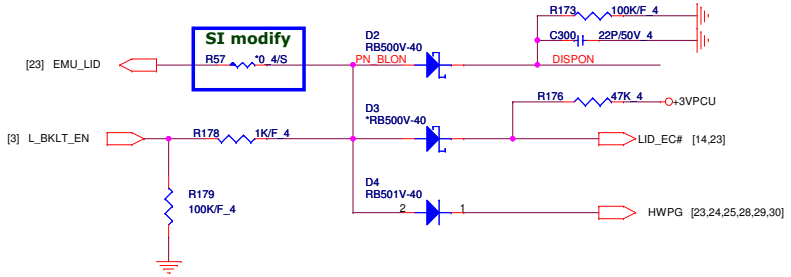


Symbol	Type	Pin No (64-Pin)	Pin No (48-Pin)	Description
LED0	O	57	38	
LED1	O	56	35	
LED2	O	55	34	
LED3	O	54	33	

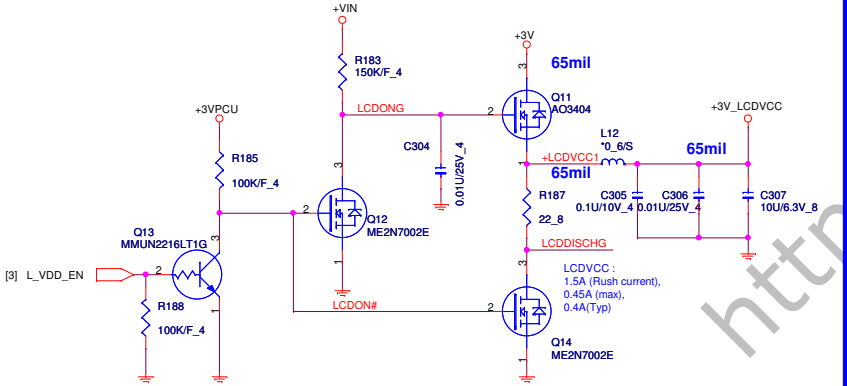
LEDS1-0	00	01	10	11
LED0	Tx/Rx	Tx/Rx	Tx	Tx
LED1	LINK100	LINK	LINK	LINK100
LED2	LINK10	FULL	Rx	LINK10
LED3	NA	NA	NA	NA

PROJECT :	UW3
Quanta Computer Inc.	
NB5	
Size	Document Number: RTL111DL/8103E RJ45
Rev	1A
Date: Thursday, September 02, 2010	Sheet 15 of 32

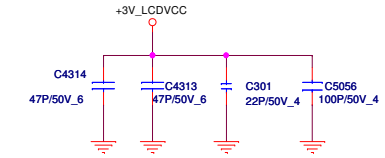
Backlight Control(LDS)

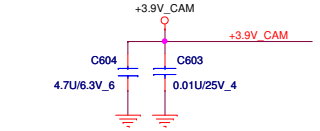


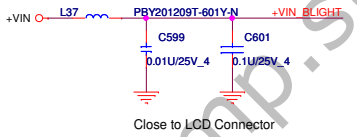
LCD POWER SWITCH



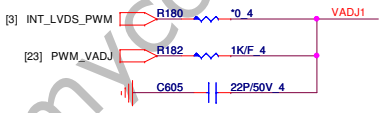
Request by HP RF(47Px2)





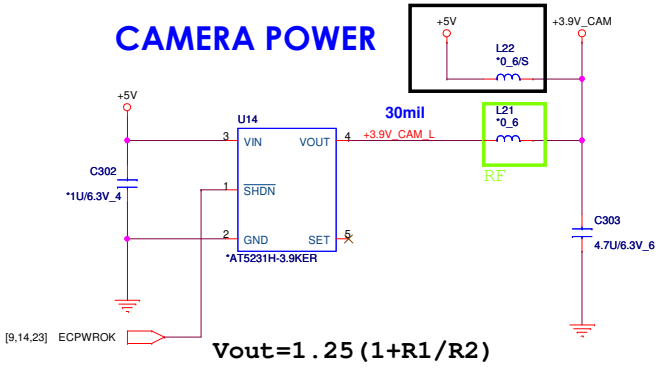


Close to LCD Connector



CAMERA POWER

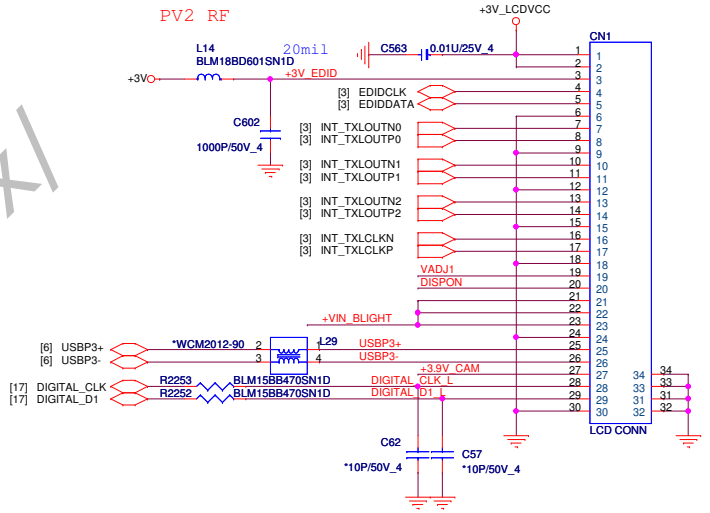
change for CB 0520



Vout=1.25(1+R1/R2)

[2,3,5,7,8,9,10,11,12,13,14,15,17,18,19,20,21,22,30] +3V
[9,14,20,21,22,23,24,26,27,30] +3VPCU
[10,12,17,19,20,22,30] +5V
[24,25,26,27,29,30] +VIN

LED Panel(LDS)



PROJECT : UW3
Quanta Computer Inc.

NB5

Size	Document Number	Rev
	LCD PANEL/CCD MODULE	1A

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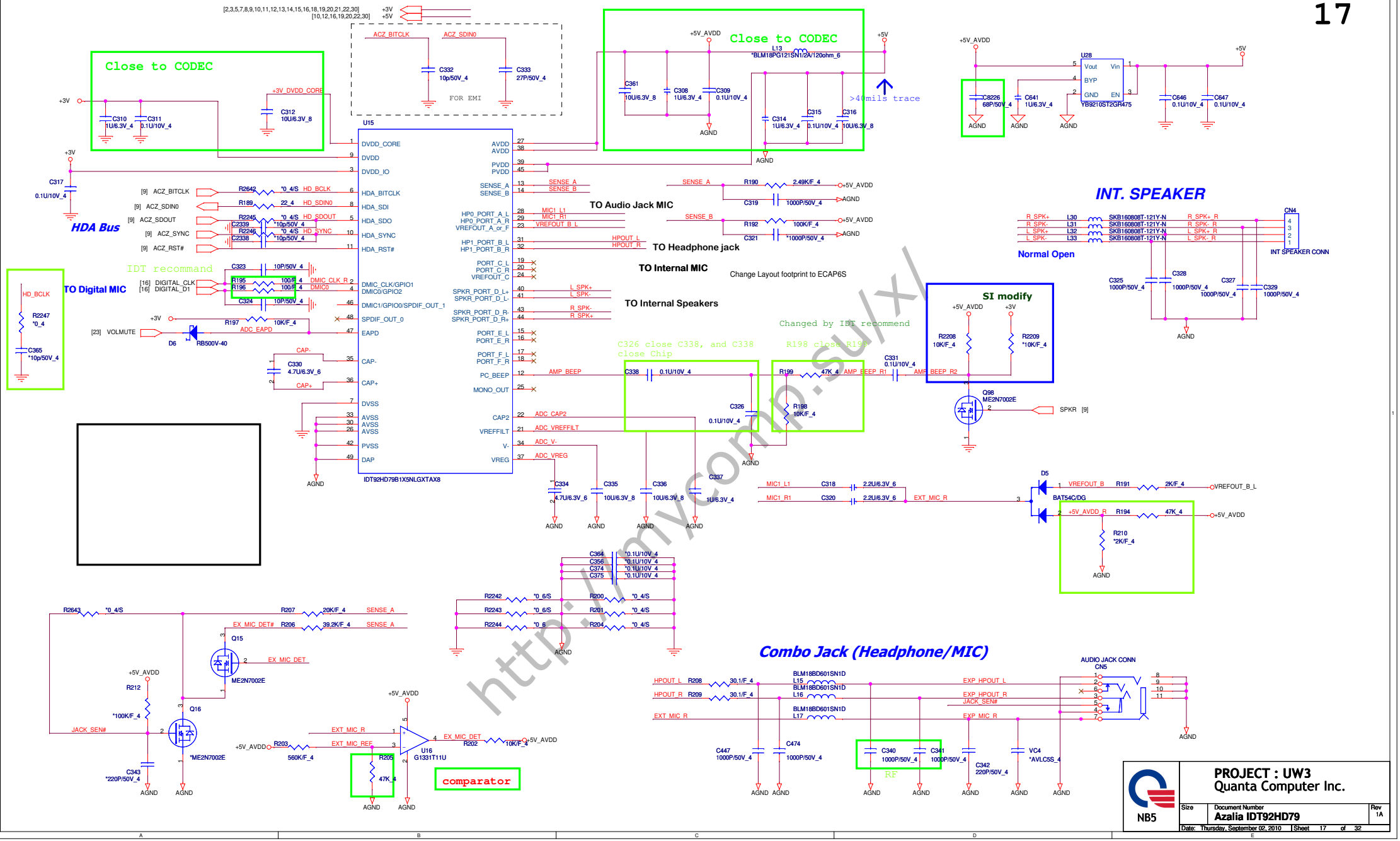
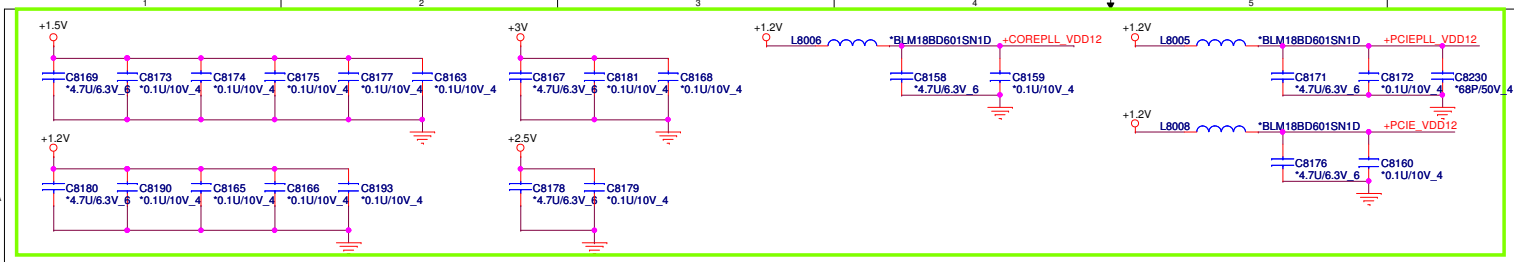


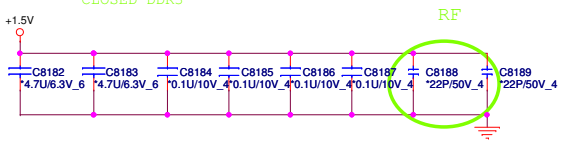


CLOSED BCM70015

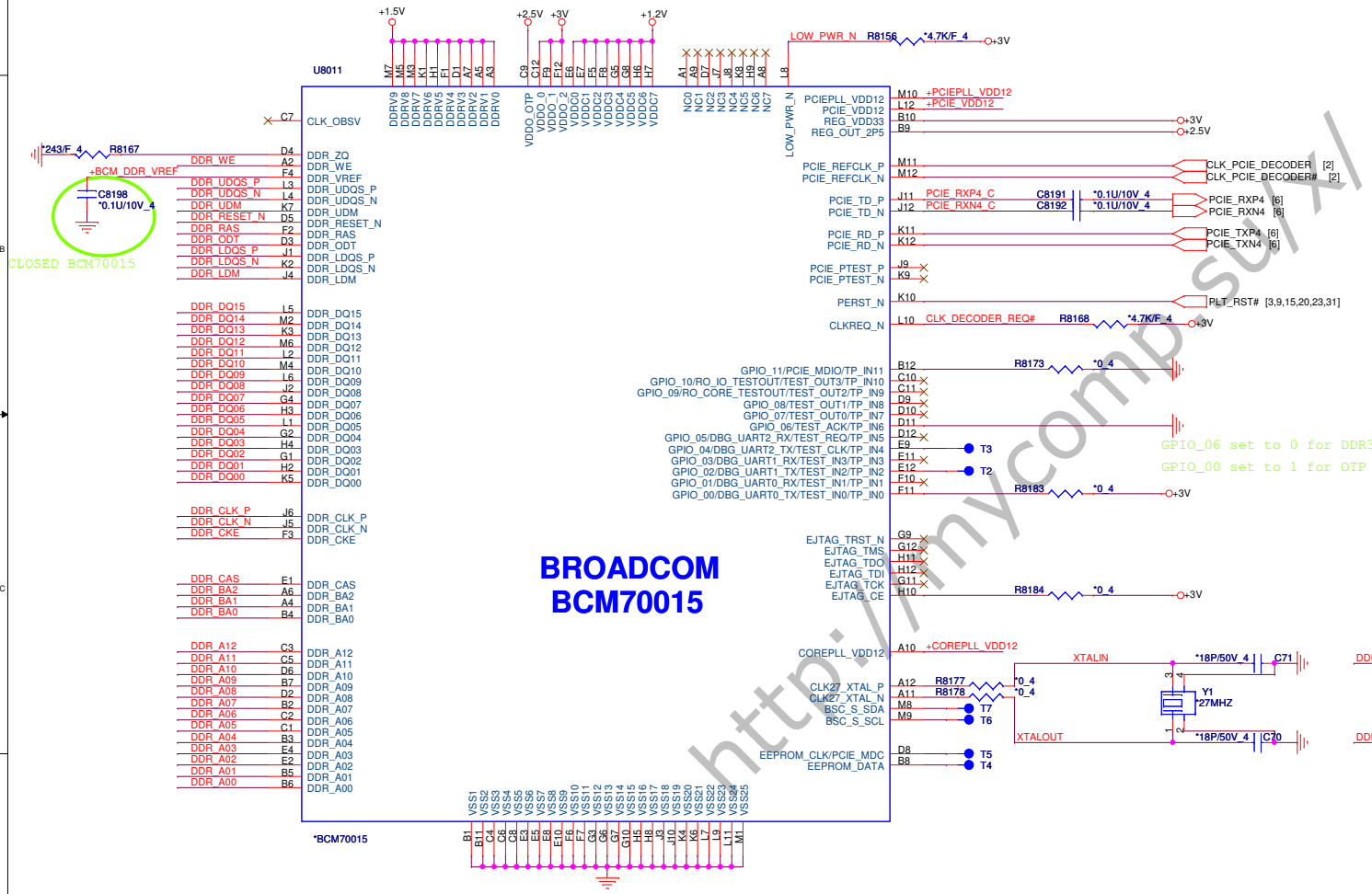
+1.2V [29]
+3V [2,3,5,7,8,9,10,11,12,13,14,15,16,17,19,20,21,22,30]
+1.5V [5,6,10,20,30]

CLOSED DDR3

RF



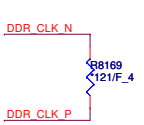
CLOSED BCM70015

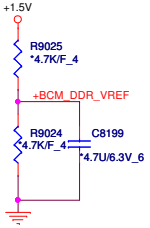


BROADCOM
BCM70015

GPIO_06 set to 0 for DDR3 SW detection

GPIO_00 set to 1 for OTP boot strap





DDR3 RAM Configuration Table

DESCRIPTION		Vendor	Vendor P/N	QCI P/N
DDR3 64Mx16, 128bit	800MHZ	HYNIX	H5TQ1G63BFR-12C	AKD5LZGTW00
DDR3 64Mx16, 128bit	800MHZ	SAMSUNG	K4W1G1646E-HC12	AKD5LGGT502

NB5

PROJECT : UW3
Quanta Computer Inc.

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	BROADCOM BCM70015	1A

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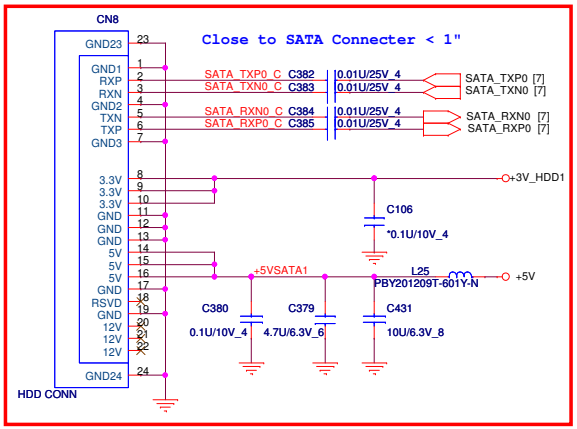
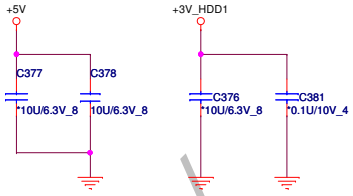
+5V [10,12,16,17,20,22,30]
+3V [2,3,5,7,8,9,10,11,12,13,14,15,16,17,18,20,21,22,30]

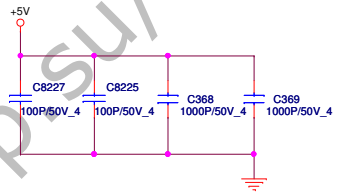
2.5" SATA HDD OR SSD(TOSHIBA)

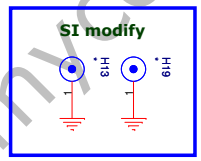
DC Current rating: 0.5 A

change for UW3 0520

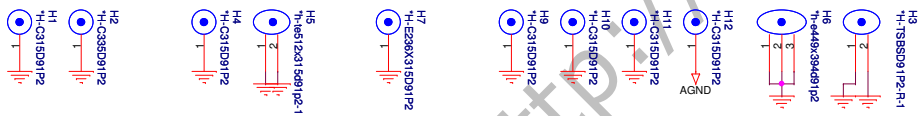


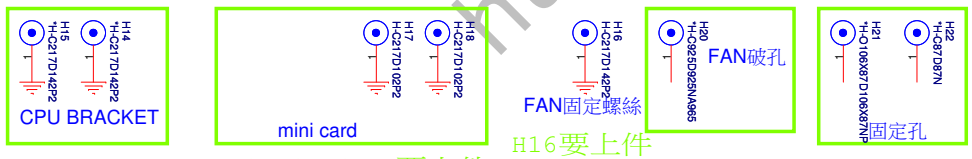


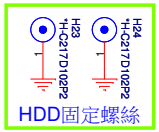




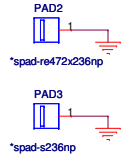
M/B Screw Hole







EMI spring



NB5	PROJECT : UW3 Quanta Computer Inc.	
Size	Document Number SATA HDD/SCREW HOLE	Rev 1A
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+3VPCU [9,14,16,21,22,23,24,26,27,30]
+1.5V [5,6,10,18,30]
+3V [2,3,5,7,8,9,10,11,12,13,14,15,16,17,18,19,21,22,30]
+5V [10,12,16,17,19,22,30]

+1.5V_WLAN C4319 *47P/50V_6
+3V_WLAN C4320 *47P/50V_6
Request by HP RF

+1.5V_WLAN C415 0.01U/25V_4 C416 0.1U/10V_4 C417 *4.7U/6.3V_6
+3V_WLAN C418 *0.1U/10V_4 C419 *0.1U/10V_4 C420 0.1U/10V_4 C421 *4.7U/6.3V_6

+5VPCU C425 0.1U/10V_4

SI modify +3V_WLAN R9034 *0 6/S R9035 *0 6/S +3V

SI modify +1.5V R407 *0 8/S +1.5V_WLAN
Q32 *AO3413
R408 *47K_4 PCIE_REQ_MINI#

Mini PCI-E Card 1
Half Mini PCI-E WLAN

The value of the capacitor is suggest by Siemens HQ expert.
For against 900MHz RF interference. The value of capacitor is 27pF.
For against 1800MHz RF interference. The value of capacitor is 10pF.
1nF/10nF value capacitor use for against ESD purpose.

CN12 MINI PCIE H4
SI modify R9043 *0 4/S
[23] EC_DEBUG1
FOR KBC DEBUG
+3V_WLAN
[6] PCIE_TXP2
[6] PCIE_TXN2
[6] PCIE_RXP2
[6] PCIE_RXN2
[2] PCLK_DEBUG
[3,9,15,18,23,31] PLT_RST#
[2] CLK_PCIE_WLAN
[2] CLK_PCIE_WLAN#
[2] PCIE_REQ_MINI#
[9] BT_COMBO_EN#
[9,15] PCIE_LAN_WAKE#
SI modify R9040 *0 4/S R9021 *0 4/S BT_COMBO_EN_R#
short0402
R9019 *0 4/S short0402

+1.5V_WLAN +3V_WLAN +3V_WLAN
R275 *10K/F_4
R276 *10K/F_4
SI modify R9033 *0 4 R9030 *0 4/S R9039 *0 4/S
WLANED# BLUELED# RF_LINK_1#
MINI_BLED# WLANED#
USBP5+ [6] USBP5- [6]
WLAN_RST#
R278 *0 4/S RF_OFF# [9]
PLT_RST# [3,9,15,18,23,31]
R277 *10K/F_4 +3V
S12
LAD0 [9,23] LAD1 [9,23] LAD2 [9,23] LAD3 [9,23] LFRAME# [9,23]

+3V_WLAN Q26 *AO6401 +5V
R399 *47K_4 R398 *10K/F_4
R400 *4.7K_4 PCIE_REQ_MINI# D28 *RB500V-40
R401 *100K/F_4 C559 *0.022U/16V_4
WLAN_RST# Q27 *ME2N7002E Q28 *ME2N7002E WLAN_MOS Q29 *ME2N7002E
WLAN_PWON# [23] R397 *1.2K/F_4
No-Stuff

Combo LED
WLAN_MOS +3V
MINI_BLED# Q30 *ME2N7002E R279 10K/F_4 BLUELED# [23]
WLANED# Q31 *ME2N7002E D29 RB500V-40 R280 10K/F_4 RF_LINK# [23]
RF_LINK_1#

Full mini PCIE for WWAN
Mini PCI-E Card 2

WWAN LED
+3V_WWAN R9018 *10K/F_4 +3V_WWAN R9026 *10K/F_4
WW_LINK# Q33 *ME2N7002E
RF_LINK_2# D30 *RB500V-40 R9032 *0 4 RF_LINK#
R9045 *0 4 WW_LINK_R#

SIM CARD SIGNALS
ROUTE PARALLEL
U13 ESD *CM1213_04ST
CH1 CH3 VN VP CH2 CH4
D9000 *BAV99W
CN2 SIM CARD SOCKET
GND VCC VPP RST I_O CLK N/A GND N/A GND CT GND DET GND
+UIM_PWR UIM_RST UIM_CLK
C8231 *18P/50V_4 C360 0.1U/10V_4 C362 0.1U/10V_4
C513 close to CN3
RF
UIM_CLK C8211 *10p/50V_4
UIM_DATA C359 *10p/50V_4
UIM_RST C357 27P/50V_4
C358 *0.001u/50V_4
Closed CN2

+3V_WWAN R9042 *47K/F_4
+UIM_VPP
UIM_DATA_R

CN13 MINI PCIE H4
+3V_WWAN +1.5V_WWAN
SI modify +3V R281 10K/F_4
WW_LINK# R9041 0_4 WW_LINK_R# [23]
USBP7+ USBP7- [6]
10K/F_4 R9006 *0 4/S R9002 *0 4 R9007 +3V PCIE_WWAN_DET# [9]
PLT_RST# +3V_WWAN
WWAN_OFF#_R
[6] PCIE_TXP3
[6] PCIE_TXN3
[6] PCIE_RXP3
[6] PCIE_RXN3
+5VPCU C426 0.1U/10V_4
[2] CLK_PCIE_WWAN
[2] CLK_PCIE_WWAN#
CLK_PCIE_WWAN
CLK_PCIE_WWAN#
+UIM_VPP UIM_RST UIM_CLK UIM_DATA +UIM_PWR
R9036 *0 4/S UIM_DATA_R
C422 0.1U/10V_4 C423 4.7U/6.3V_6
C5912 0.1U/10V_4 C5913 0.1U/10V_4
C5913 close to CN3
C5912 close to CN17

SIM CARD

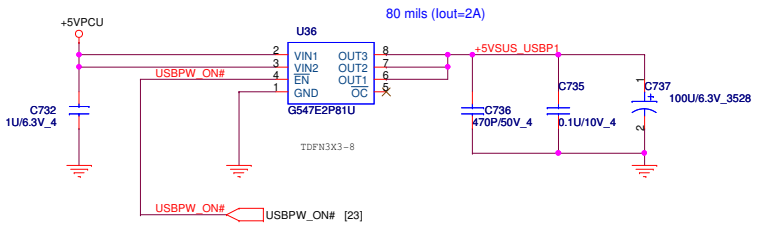
SI modify +3VPCU R9013 *10K/F_4
[23] WWAN_PWON#
R9003 *10K/F_4
No Staff
DB-6 +3VPCU *220K/F_4 R9015
*0.1U/10V_4 C363 *AO6401 Q9001
+3V_WWAN

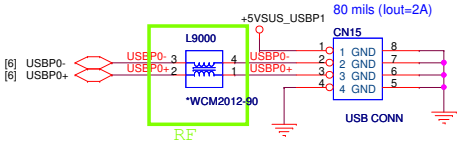
+1.5V_WWAN C5903 0.01U/25V_4 C5905 0.1U/10V_4 C5906 10U/6.3V_6/S
C5917 47P/50V_4 C5916 47P/50V_4 C5907 0.1U/10V_4 C5908 0.1U/10V_4 C5909 0.1U/10V_4 C5910 10U/6.3V_6/S
+3V_WWAN
+1.5V_WWAN R9009 *0 6/S C5904 47P/50V_4 C5911 47P/50V_4
+1.5V C5914 47P/50V_4 +3V_WWAN C5915 47P/50V_4
SI modify R9004 0 8 +3V
R9012 *10K/F_4
WWAN_OFF#_R D7 RB500V-40 WWAN_OFF# [9]
C424 0.1U/10V_4

NB5
PROJECT : UW3
Quanta Computer Inc.
Size
Document Number MINI PCIE(WLAN/WWAN)
Rev 1A
Date: Thursday, September 02, 2010 Sheet 20 of 32

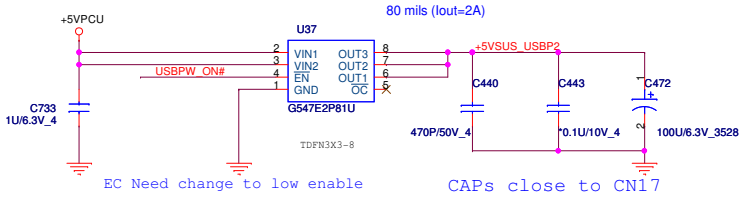
[2,20,23,24,25,26,28,29,30] +5VPCU
[9,14,16,20,22,23,24,26,27,30] +3VPCU
[2,3,5,7,8,9,10,11,12,13,14,15,16,17,18,19,20,22,30] +3V

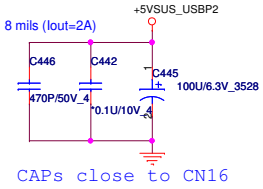
1x Left side USB port supports Keyed USB.

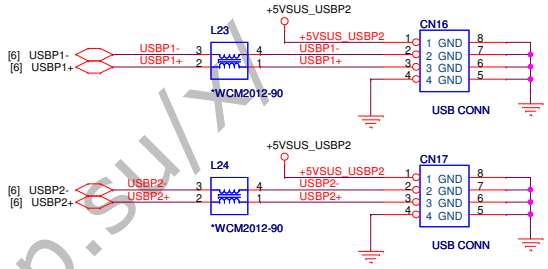




For Right 2xUSB Ports PWR



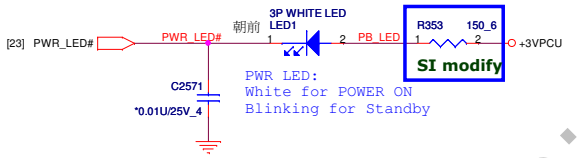




PWR Button/LED

Footprint

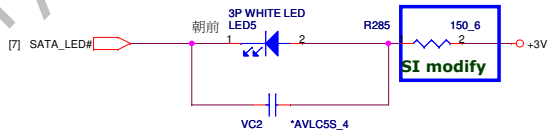
White Single



Change R285,R353 to 150 ohm

SATA/LED

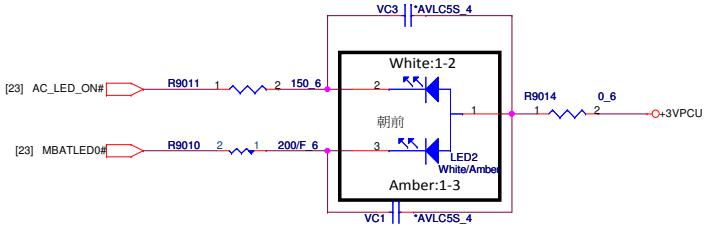
White Single



Charging & Discharging/LED

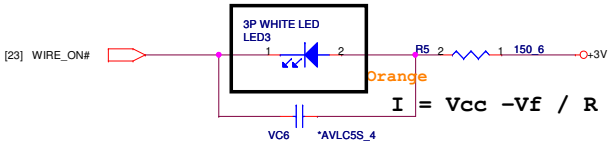
Footprint

White /Orange



WLAN/BLUETOOTH & WWAN LED

White Single



NB5

PROJECT : UW3
Quanta Computer Inc.

Size	Document Number	Rev
	USB Conn/LED/PWR BT	1A

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Keyboard (KBC)

+3VPCU [9,14,16,20,21,23,24,26,27,30]
+5V [10,12,16,17,19,20,30]
+3V [2,3,5,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,30]

MY5 C448 220P/50V_4
MY6 C451 220P/50V_4
MY3 C454 220P/50V_4
MY7 C457 220P/50V_4
MY8 C460 220P/50V_4
MY9 C463 220P/50V_4
MY10 C466 220P/50V_4
MY11 C469 220P/50V_4

MY1 C449 220P/50V_4
MY2 C452 220P/50V_4
MY4 C455 220P/50V_4
MY0 C458 220P/50V_4
MX4 C461 220P/50V_4
MX6 C464 220P/50V_4
MX3 C467 220P/50V_4
MX2 C470 220P/50V_4

MX7 C450 220P/50V_4
MX0 C453 220P/50V_4
MX5 C456 220P/50V_4
MX1 C459 220P/50V_4
MY12 C462 220P/50V_4
MY13 C465 220P/50V_4
MY14 C468 220P/50V_4
MY15 C471 220P/50V_4

KEYBOARD PULL-UP

[23] MY[0..15] → MY[0..15]
[23] MX[0..7] → MX[0..7]

RP3: MY4 MY5 MY6 MY7 MY3 MY2 MY1 MY0, +3VPCU, *10P8R-8.2K
RP4: MY12 MY13 MY14 MY15 MY11 MY10 MY9 MY8, *10P8R-8.2K

SI modify

CN20 (KB CONN)

1	MX7	MX7 [23]
2	MX6	MX6 [23]
3	MX5	MX5 [23]
4	MY0	MY0 [23]
5	MY1	MY1 [23]
6	MY2	MY2 [23]
7	MX4	MX4 [23]
8	MY3	MY3 [23]
9	MY4	MY4 [23]
10	MY5	MY5 [23]
11	MY6	MY6 [23]
12	MY7	MY7 [23]
13	MY8	MY8 [23]
14	MX3	MX3 [23]
15	MY9	MY9 [23]
16	MX2	MX2 [23]
17	MX1	MX1 [23]
18	MY10	MY10 [23]
19	MY11	MY11 [23]
20	MX0	MX0 [23]
21	MY12	MY12 [23]
22	MY13	MY13 [23]
23	MY14	MY14 [23]
24	MY15	MY15 [23]
25		
26		

Change fro UW3 0520

UW2/UW3 KB Matrix

TOUCH PAD CONNECTOR

Change CN25 Pin-define and footprint

[23] TPCLK → TPCLK L35 BLM18BD601SN1D TPCLK-1
[23] TPDATA → TPDATA L36 BLM18BD601SN1D TPDATA-1

TP_CONN: 4 6 / 3 5 / 2 / 1 — CN25

C574 10p/50V_4, C575 10p/50V_4

close conn

+5V → R288 4.7K/F_4 TPCLK
+5V → R289 4.7K/F_4 TPDATA

By EMI request,

+5V → 25 mils → C572 0.1U/10V_4

Pin Number	Pin Name	Description
1	GND	Ground Power
2	SWL	Left Button
3	VDD	Power Supply Voltage
4	DATA	Data
5	CLK	Clock
6	SWR	Right Button

TOUCH SCREEN

CN23: 1 2 3 4 — *Touch screen Conn
USBP6- 3, USBP6+ 2, *WCM2012-90 L9001 4 1
USBP6- [6]
USBP6+ [6]
+3V

CPU FAN

+3V → R292 4.7K/F_4
[23] FAN1SIG
+5V_FAN
CN22: 1 2 3 4 — FAN CONN
C478 2.2U/6.3V_6, C1479 *0.1U/10V_4

DFHD03MR008

FANPWR = 1.6*VSET

30 MIL

U25 G991PV11
+5V → 2 VIN
3 VO → +5V_FAN
5 GND
6 GND
+5V → R293 10K/F_4 → 1 /FON
FAN_FON#
7 GND
8 GND
[23] VFAN → R2667 *0_4/S → 4 VSET
FAN_VSET
C2482 *0.1U/10V_4

Request RC by HP RF

8 7 6 5
Gnd shape

Charge LED 3 pins

Pin 32 Pin 1

PROJECT : UW3
Quanta Computer Inc.

NB5

Size	Document Number	Rev
	KB/TP/BT/CPU FAN/TP SCREEN	1A

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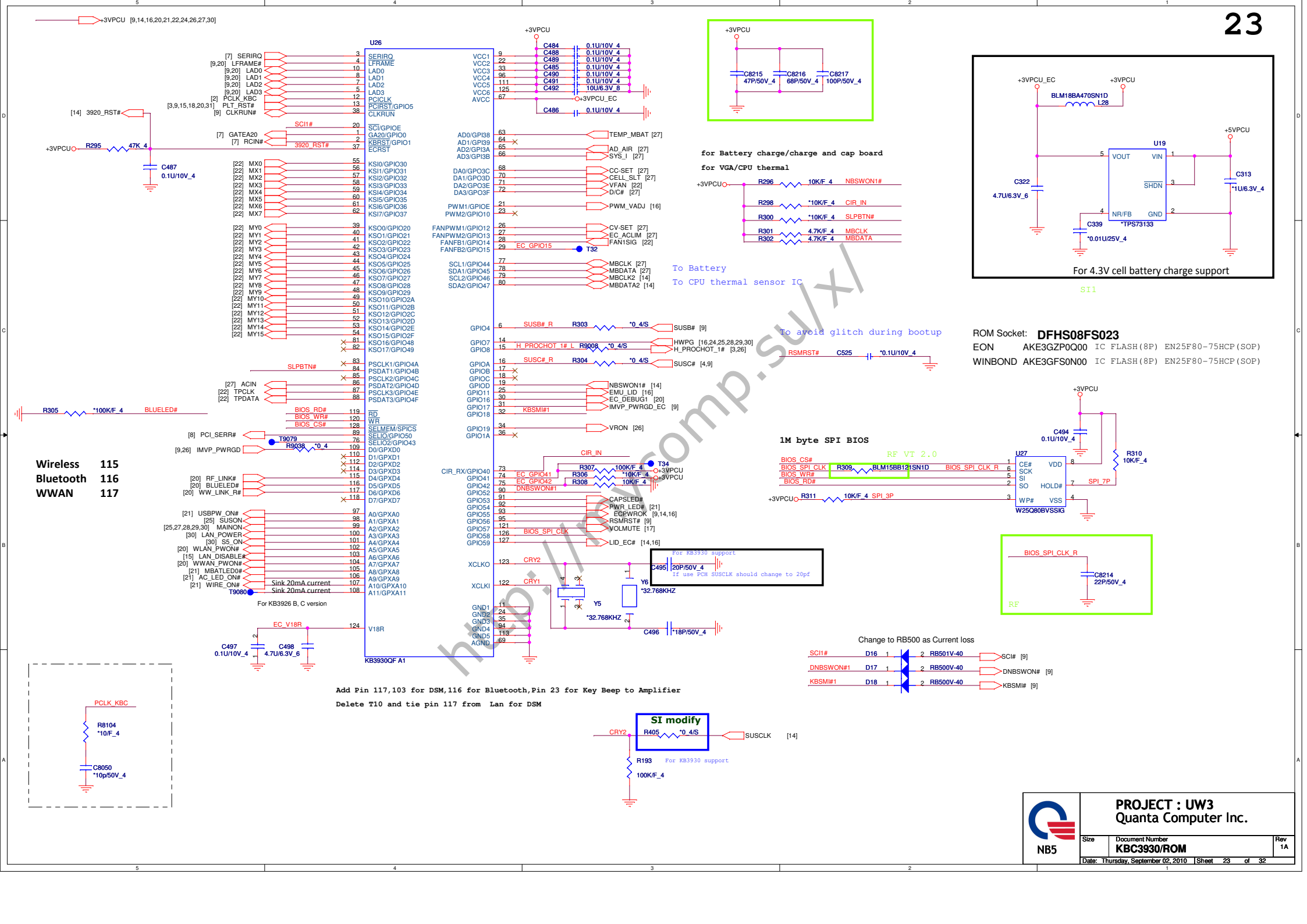

NB5	PROJECT : UW3 Quanta Computer Inc.		
	Size	Document Number KBC3930/ROM	Rev 1A
	Date: Thursday, September 02, 2010	Sheet 23 of 32	

DC/DC +3V_ALW/+5V_ALW/+5V_ALW2 /+15V_ALW

SI2_RF

PC1032 47P/50V_4
PC1033 47P/50V_4
PC1034 47P/50V_4

PV1_RF

C370 1000P/50V_4
C371 1000P/50V_4
C372 1000P/50V_4

+5VPCU Volt +/- 5%
Countinue current:4A
Peak current:5.5A
OCP minimum 6A

SI2_RF

PC1027 47P/50V_4
PC1029 47P/50V_4
PC1030 47P/50V_4

PV1_RF

C387 1000P/50V_4
C373 1000P/50V_4
C386 1000P/50V_4

+3VPCU Volt +/- 5%
Countinue current:4A
Peak current:5.5A
OCP minimum 6A

Place these CAPs close to FETs

PU1001 RT8206B

PQ1002 AO4496
PQ1005 AO4712
PQ1003 AO4496
PQ1004 AO4712

PL1003 2.5uH/7.5A
PL1002 2.5uH_7.5A

PD1002 UDZ5V6B-7-F
PD1003 BAV99
PD1004 BAV99
PD1009 1SS355

PR1006 182K/F_4
PR1008 *0_4/S
PR1009 205K/F_4
PR1010 2.2_8
PR1011 2.2_8
PR1012 *0_4/S
PR1014 *0_4
PR1015 2_6
PR1016 2_6
PR1017 *0_4/S
PR1018 *0_4
PR1019 *0_4/S
PR1020 *0_4/S
PR1021 100K/F_4
PR3256 10K/F_4

PC1015 1500P/50V_4
PC1018 1500P/50V_4

Rds(on) 20m ohm

SI1 RF

R8070 *0_4
R8078 *0_4
R8086 *0_4

NM6 1.1 RF suggestion

PC38 68P/50V_4
PC39 68P/50V_4
PC40 68P/50V_4

PGOOD2
PGOOD1
HWPG [16,23,25,28,29,30]

[14] SHDN#

NB5

PROJECT : UW3
Quanta Computer Inc.

Size	Document Number	Rev
	3VPCU/5VPCU(RT8206)	1A

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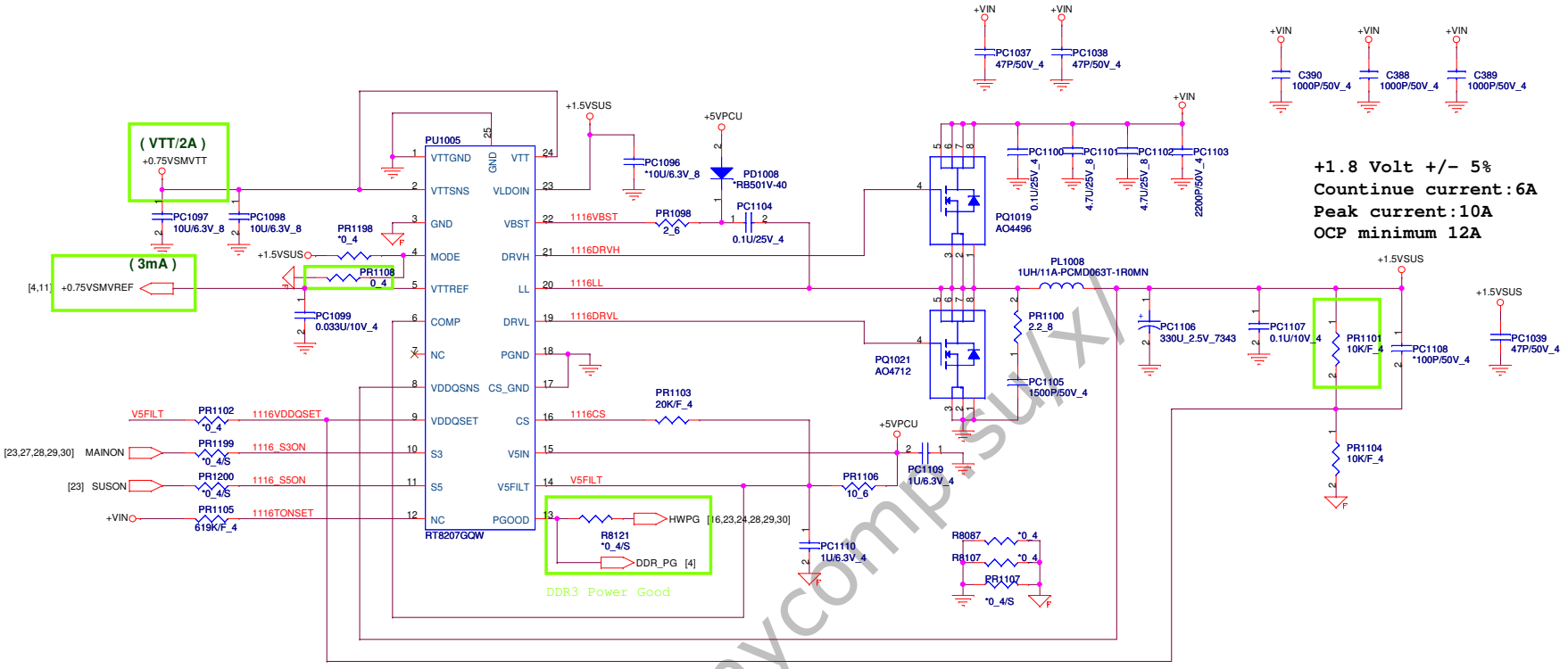
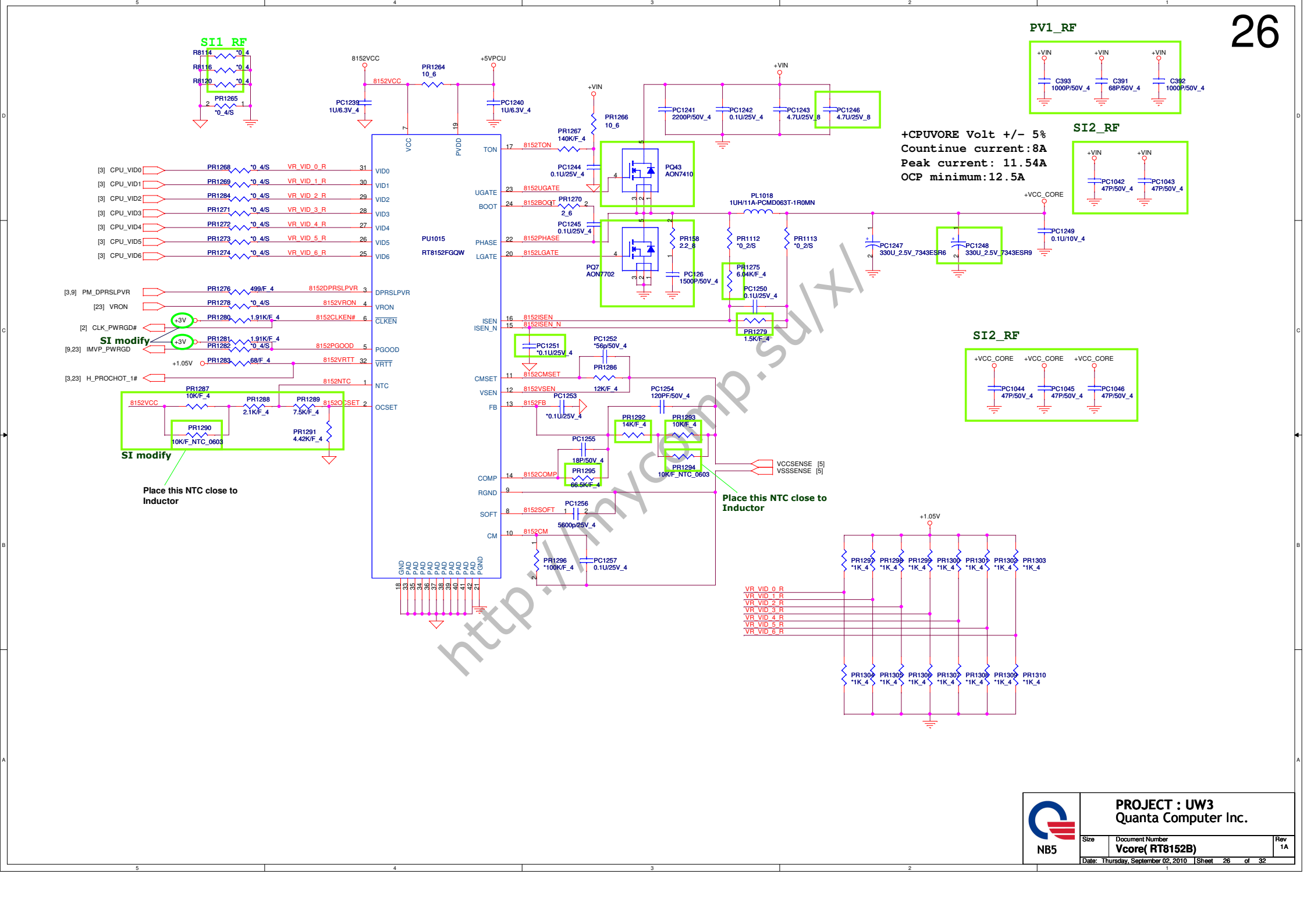
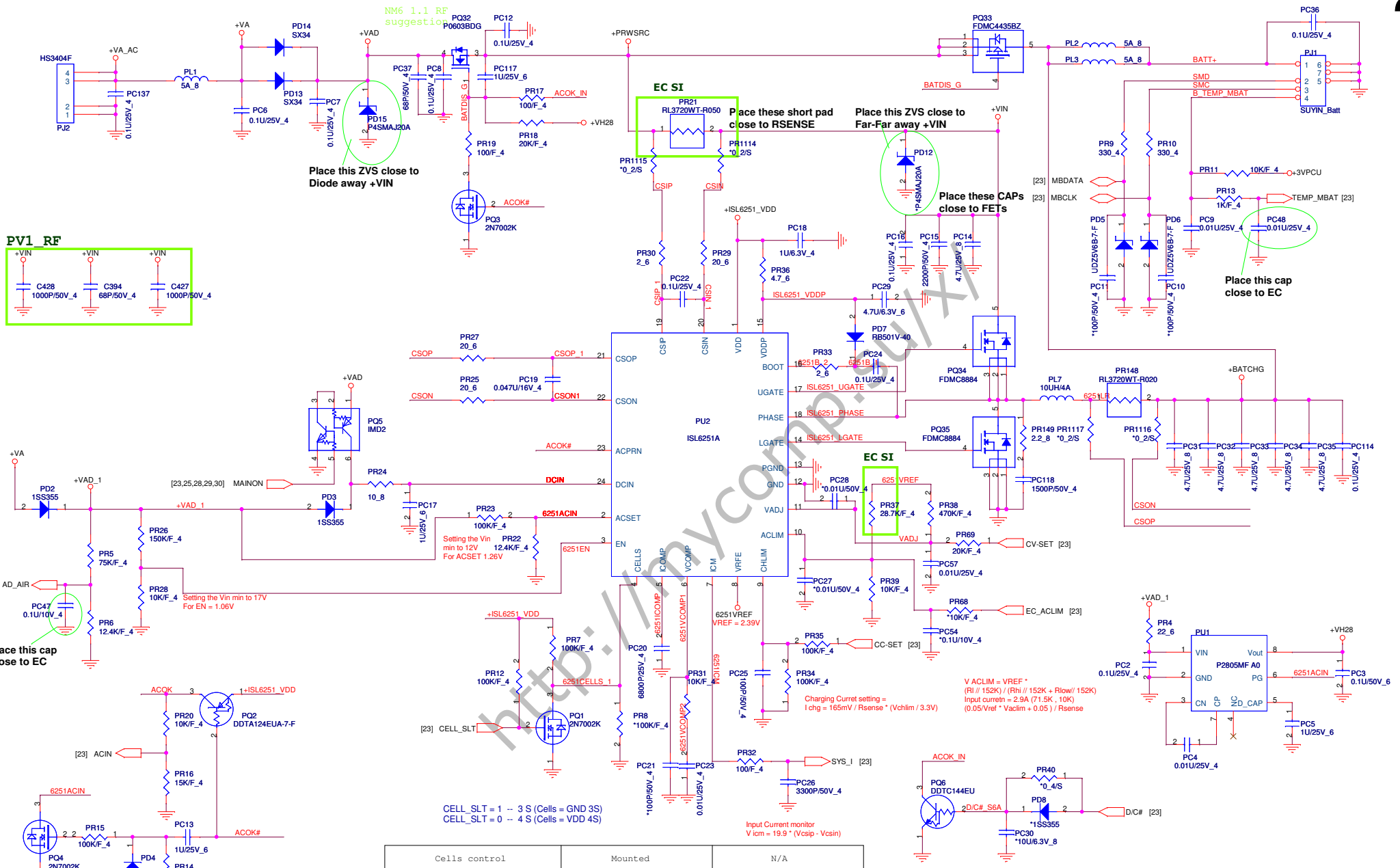


NB5	PROJECT : UW3 Quanta Computer Inc.	
Size	Document Number DDR2 +1.8VSUS/+0.89V	Rev 1A
Date: Thursday, September 02, 2010	Sheet 25 of 32	



NB5	PROJECT : UW3 Quanta Computer Inc.	
	Size Document Number Vcore(RT8152B)	Rev 1A
	Date: Thursday, September 02, 2010	Sheet 26 of 32



Cells control	Mounted	N/A
3cells only	PR8	PR7, PR12, PQ1
option for 3cells/4cells	PR7, PR12, PQ1	PR8

NB5

PROJECT : UW3
Quanta Computer Inc.

Size	Document Number	Rev
	CHARGER (ISL6251A)	1A

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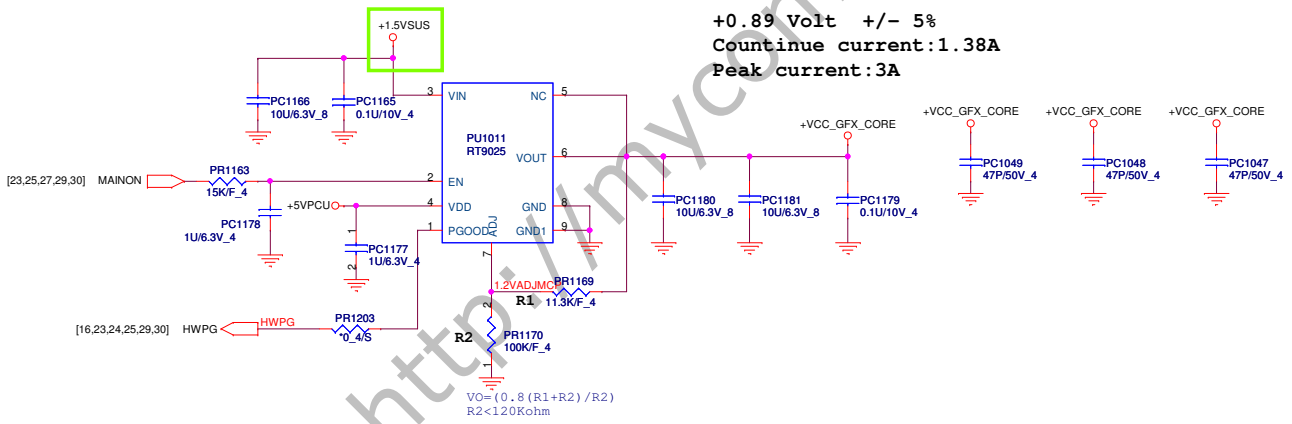
+VCC_GFX_CORE



+0.89 Volt +/- 5%
Countinue current:1.38A
Peak current:3A

NB5

PROJECT : UW3
Quanta Computer Inc.

Size	Document Number	Rev
	+1.05V/+1.5V (RT8204)	1A

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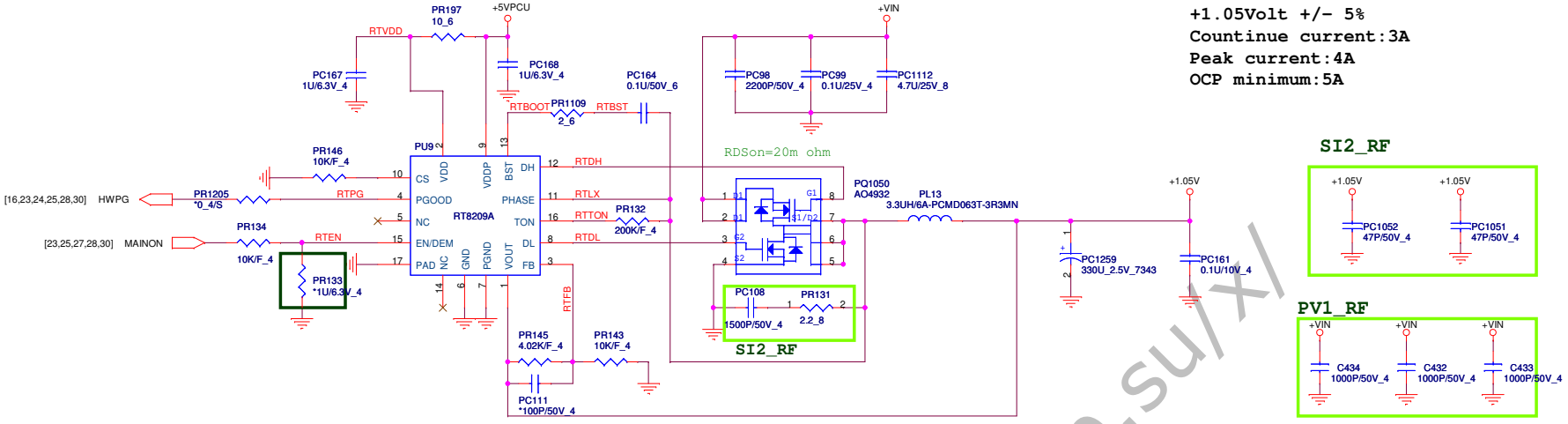
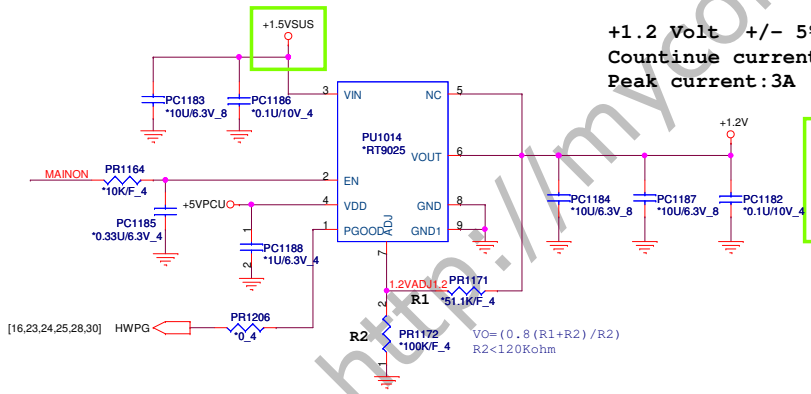
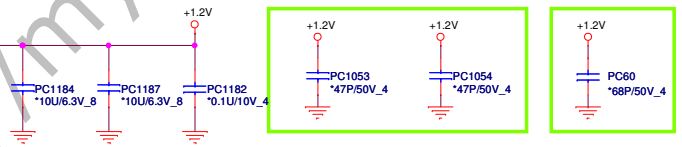
VCCP1.05V



+1.05Volt +/- 5%
Countinue current:3A
Peak current:4A
OCP minimum:5A



+1.2 Volt +/- 5%
Countinue current:0.8A
Peak current:3A



NB5

PROJECT : UW3
Quanta Computer Inc.

Size	Document Number	Rev
	+1.05V (RT8209A)	1A

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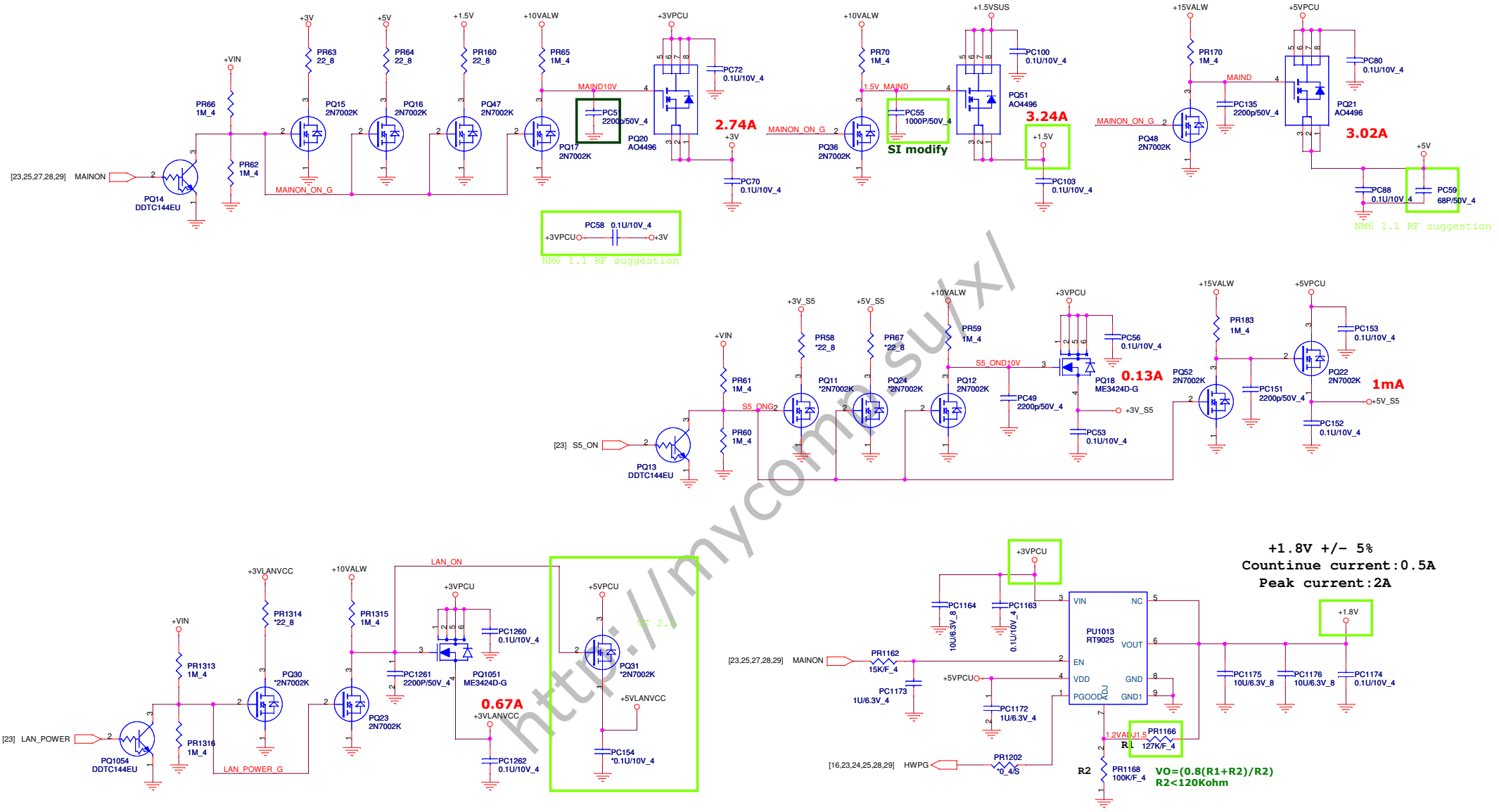

NB5

PROJECT : UW3
Quanta Computer Inc.

Size	Document Number	Rev
	Discharge/LANVCC/+1.5V	1A

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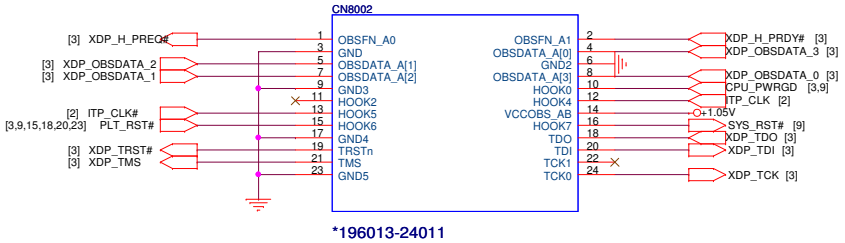
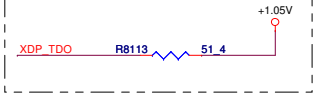
CPU XDP

[2,3,5,7,10,14,26,29] +1.05V



*196013-24011

CLOSE CN8002



NB5

PROJECT : UW3
Quanta Computer Inc.

Size	Document Number	Rev
	XDP	1A

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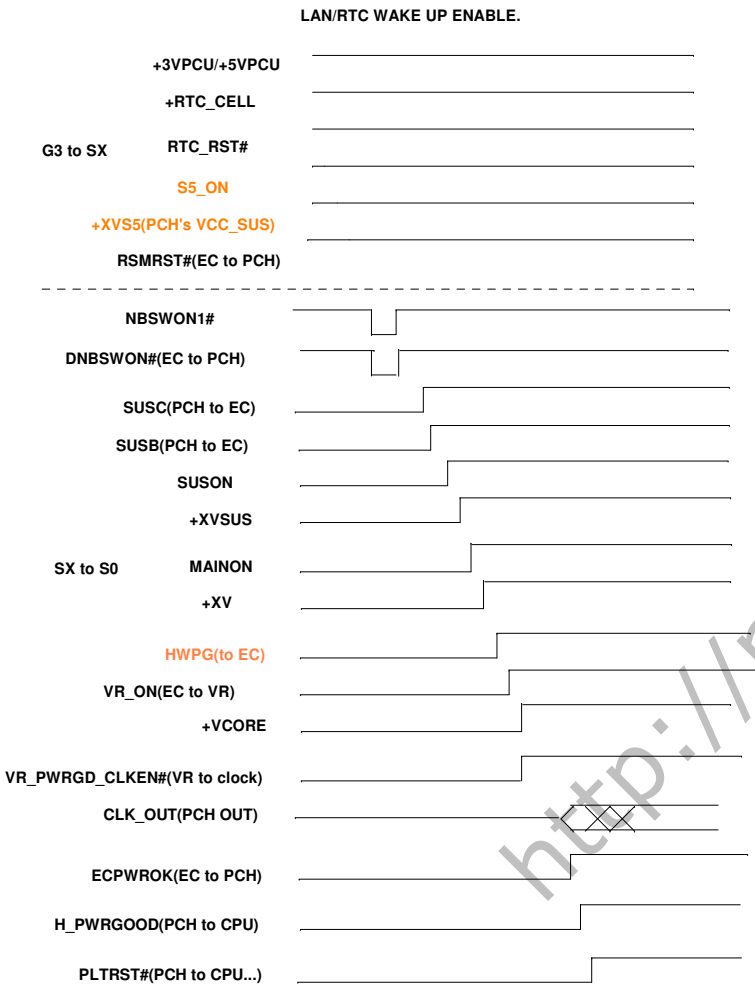
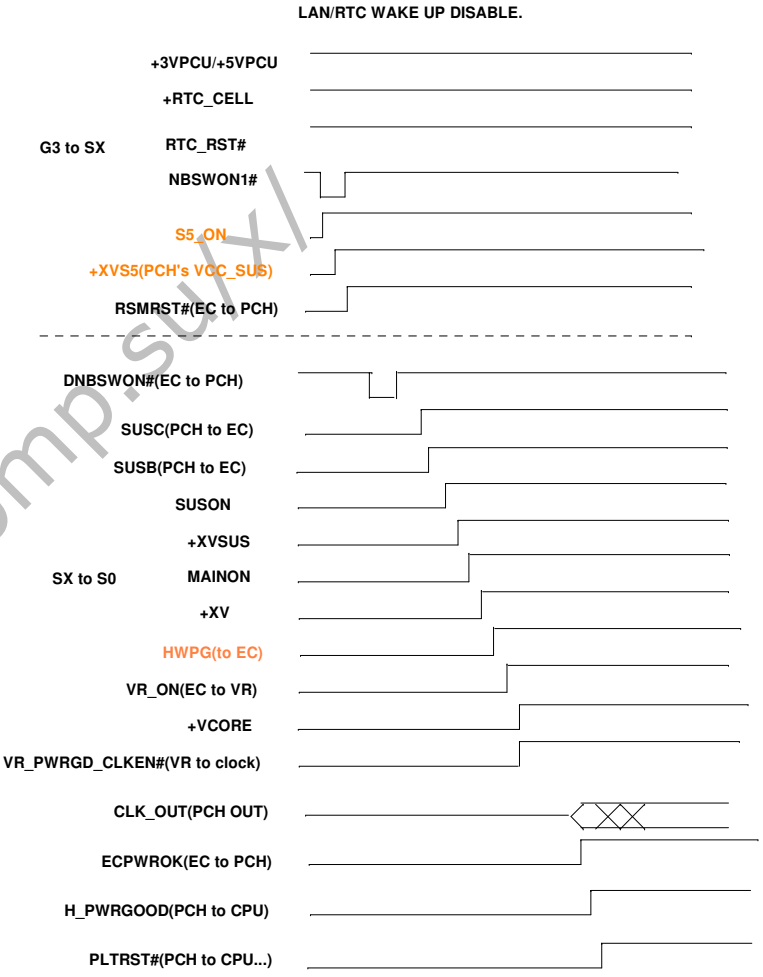
Power up sequence





NB5

PROJECT : UW3
Quanta Computer Inc.

Size	Document Number	Rev
	Power Sequence	1A

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