

Page	Title of schematic page	Rev.	Date
01	Page List	3A	03/15
02	Block Diagram	3A	
03	CPU-Champlain HT/CONTROL (1/3)	3A	03/15
04	CPU-Champlain MEMORY (2/3)	3A	03/15
05	CPU-Champlain POWER/GND (3/3)	3A	
06	NB-RS880M HT/SP-MEM (1/4)	3A	03/15
07	NB-RS880M GFX/PCIE (2/4)	3A	
08	NB-RS880M SYSTEM (3/4)	3A	03/15
09	NB-RS880M POWER (4/4)	3A	03/15
10	SB-SB820M PCI/CLK/LPC (1/4)	3A	03/15
11	SB-SB820M AUDIO/USB (2/4)	3A	03/15
12	SB-SB820M SATA (3/4)	3A	
13	SB-SB820M POWER (4/4)	3A	03/15
14	DDR3 SODIMM* 2 (5.2mm+9.2mm)	3A	
15	ATI-M92 XTX PCIE/LVDS (1/5)	3A	
16	ATI-M92 XTX Main I/O (2/5)	3A	03/15
17	ATI-M92 XTX Power/GND (3/5)	3A	03/15
18	ATI-M92 XTX Display POWER (4/5)	3A	03/15
19	ATI-M92 XTX MEM I/F (5/5)	3A	03/15
20	ATI-M92 XTX VRAM-B DDR3	3A	
21	CRT/LVDS	3A	03/15
22	HDMI	3A	03/15

Page	Title of schematic page	Rev.	Date
23	WLAN/HDD/ODD	3A	03/15
24	Card Reader RTS5186	3a	03/15
25	Express Card/BT/LED	3A	03/15
26	Codec-ALC269Q VB5 GR	3A	03/15
27	LAN RTL8111E	3A	03/15
28	NPCE781	3A	03/15
29	KB/USB/FAN/PS	3A	
30	VCORE(ISL6265A)	3A	03/15
31	3VPCU&5VPCU(PM6686)	3A	03/15
32	1.5VSUS/VTT_MEM	3A	03/15
33	DYN_VCC1.1(OZ8116LN)	3A	03/15
34	VCC1.1(OZ8116LN)-7A	3A	03/15
35	VGA_CORE(OZ8116)-16A	3A	03/15
36	VCC1.8/0.9/2.5/1.0	3A	03/15
37	POWER(BAT IN / ADA IN/ UL)	3A	03/15
38	CHARGER (ISL6252A)	3A	03/15
39	Small board connector	3A	03/15
40	Decoupling(Cap)	3A	03/15
41	Power Sequence	3A	
42	CHANGE LIST	3A	03/15



Quanta Computer Inc.

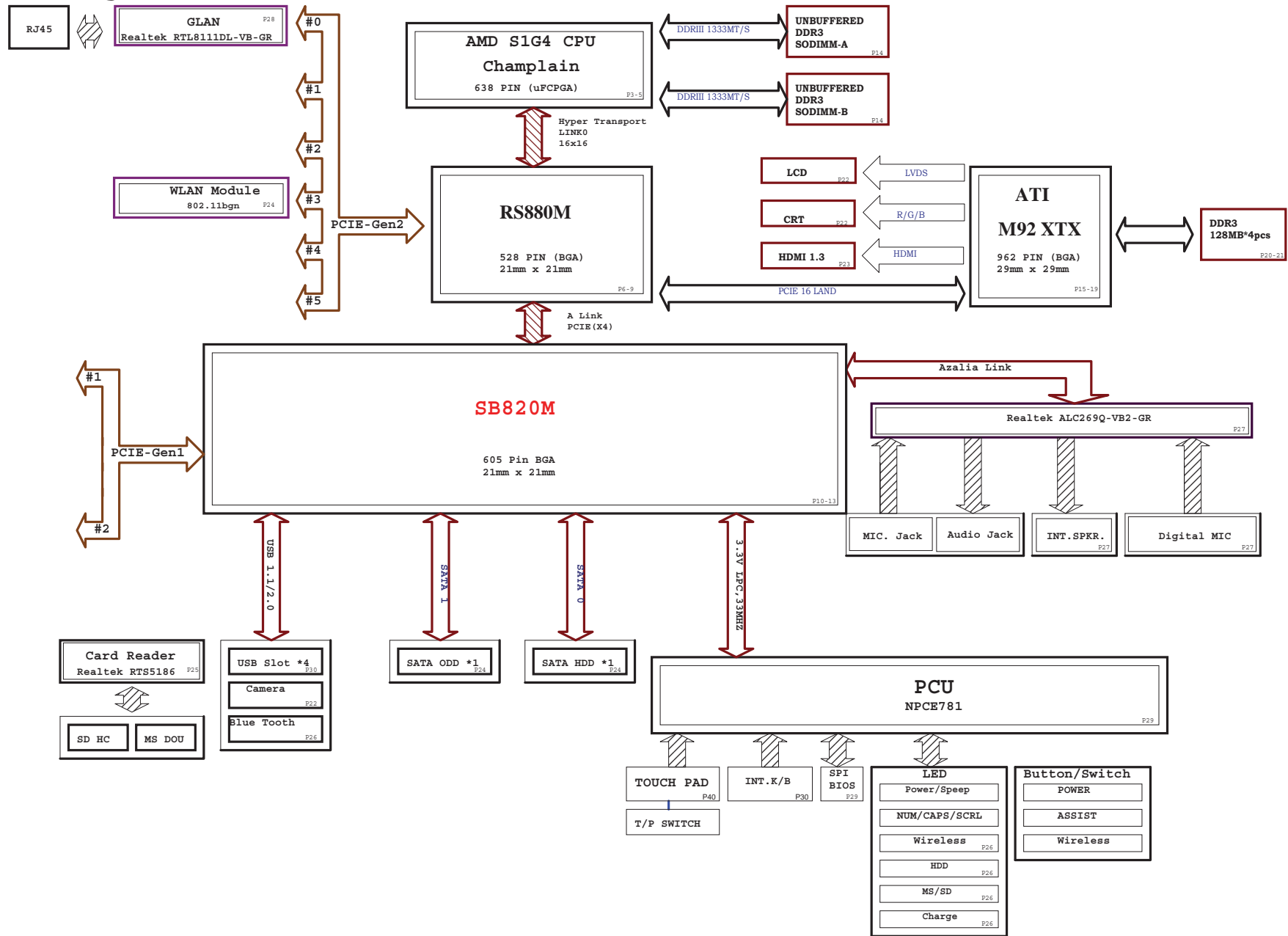
PROJECT : NE7

Size	Document Number	Rev
	AMD Danube	3A
Date:	Monday, March 22, 2010	Sheet 1 of 42

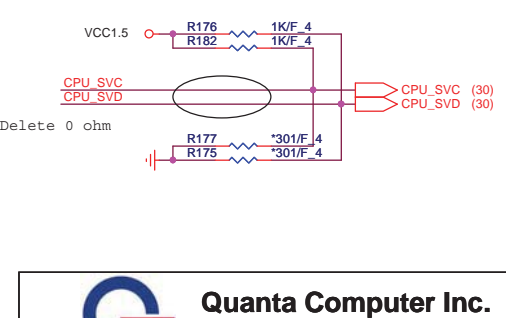
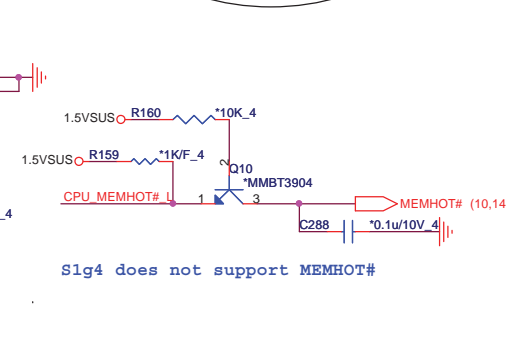
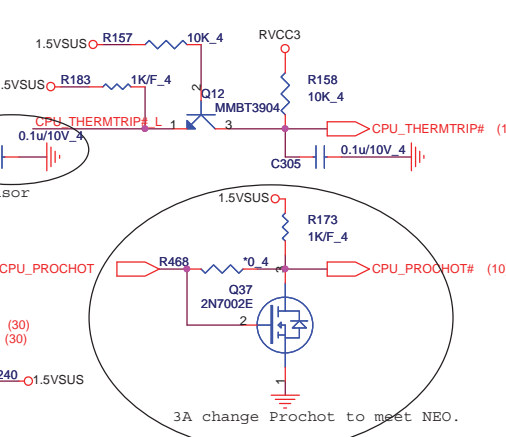
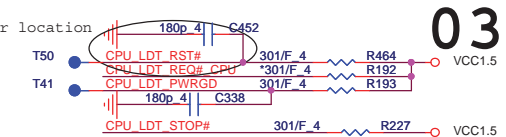
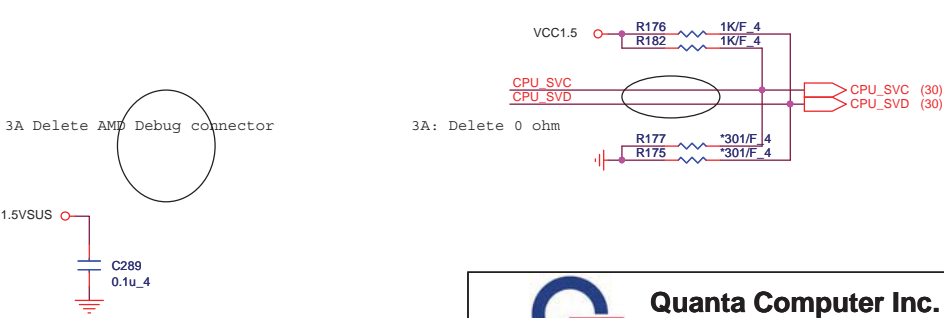
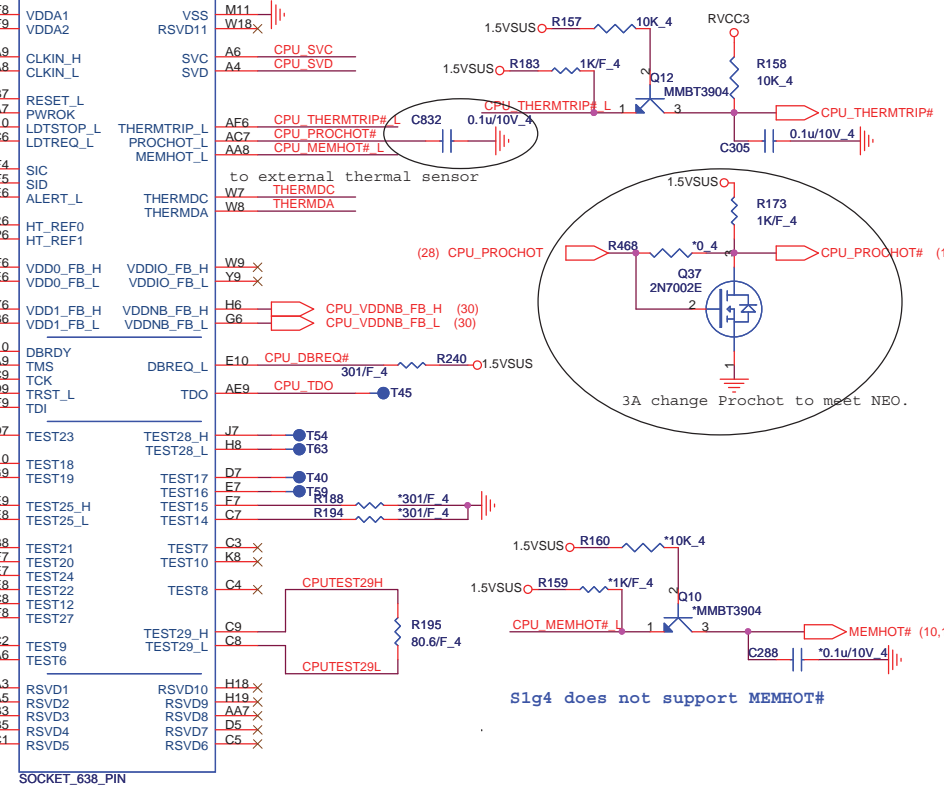
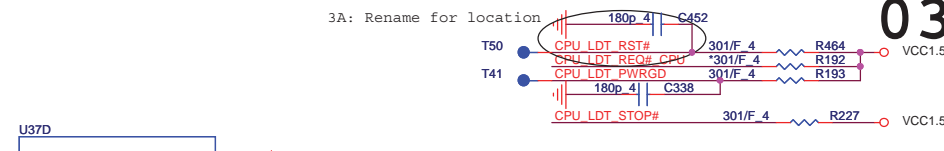
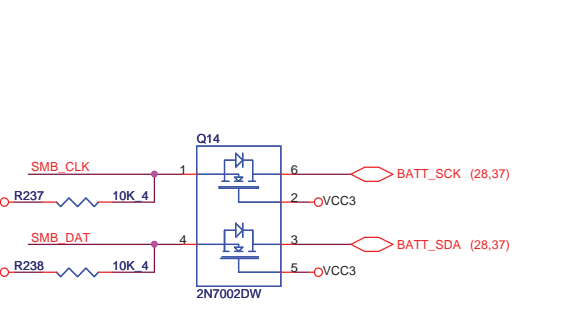
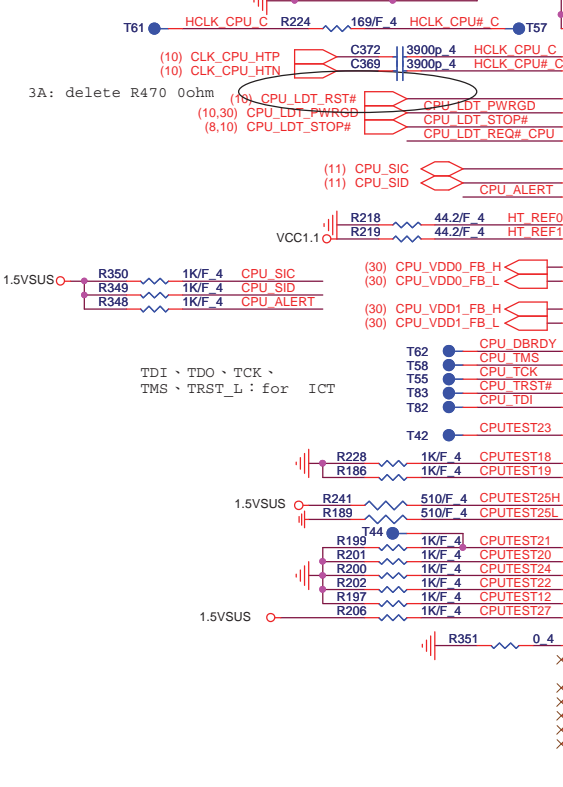
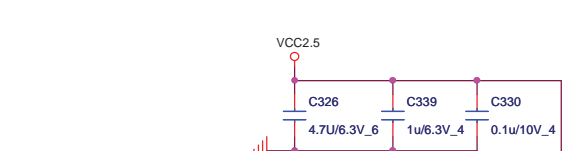
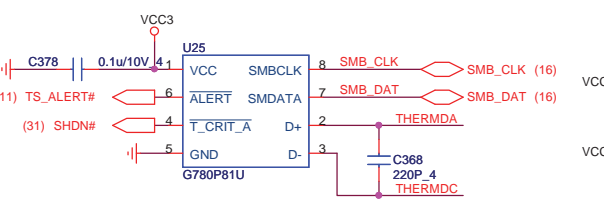
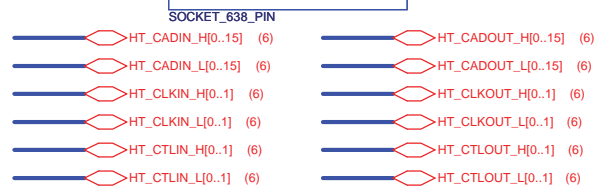
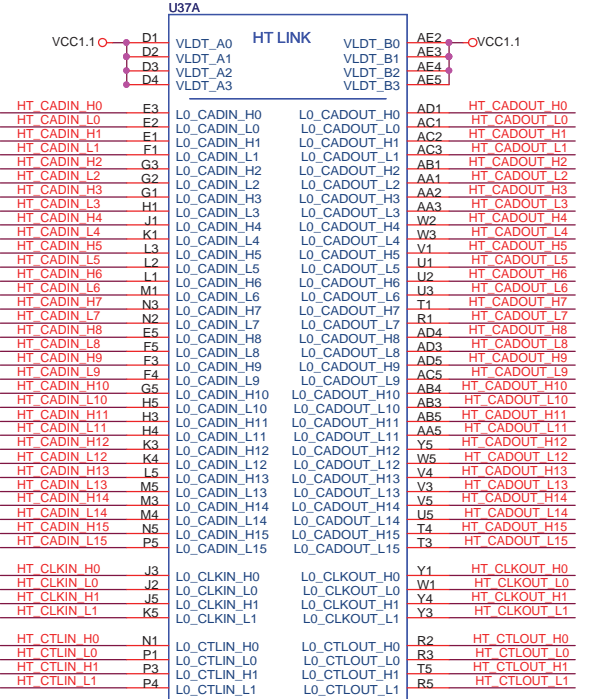
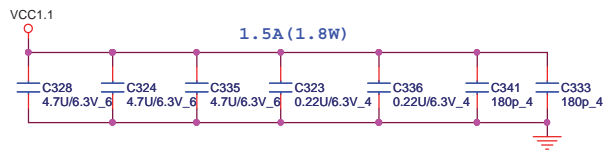
<http://laptop-motherboard-schematic.blogspot.com/>

1.Level 1 Environment-related Substances Should NEVER be Used.

2.Purchase only certified wire rods and Wafers from the business partners that Sony approves as Certified Partners.



<http://laptop-motherboard-schematic.blogspot.com/>



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.

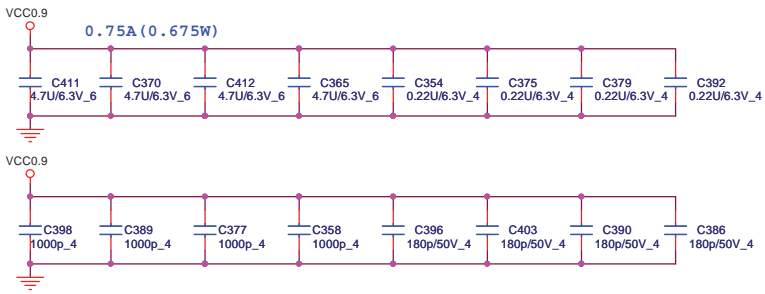
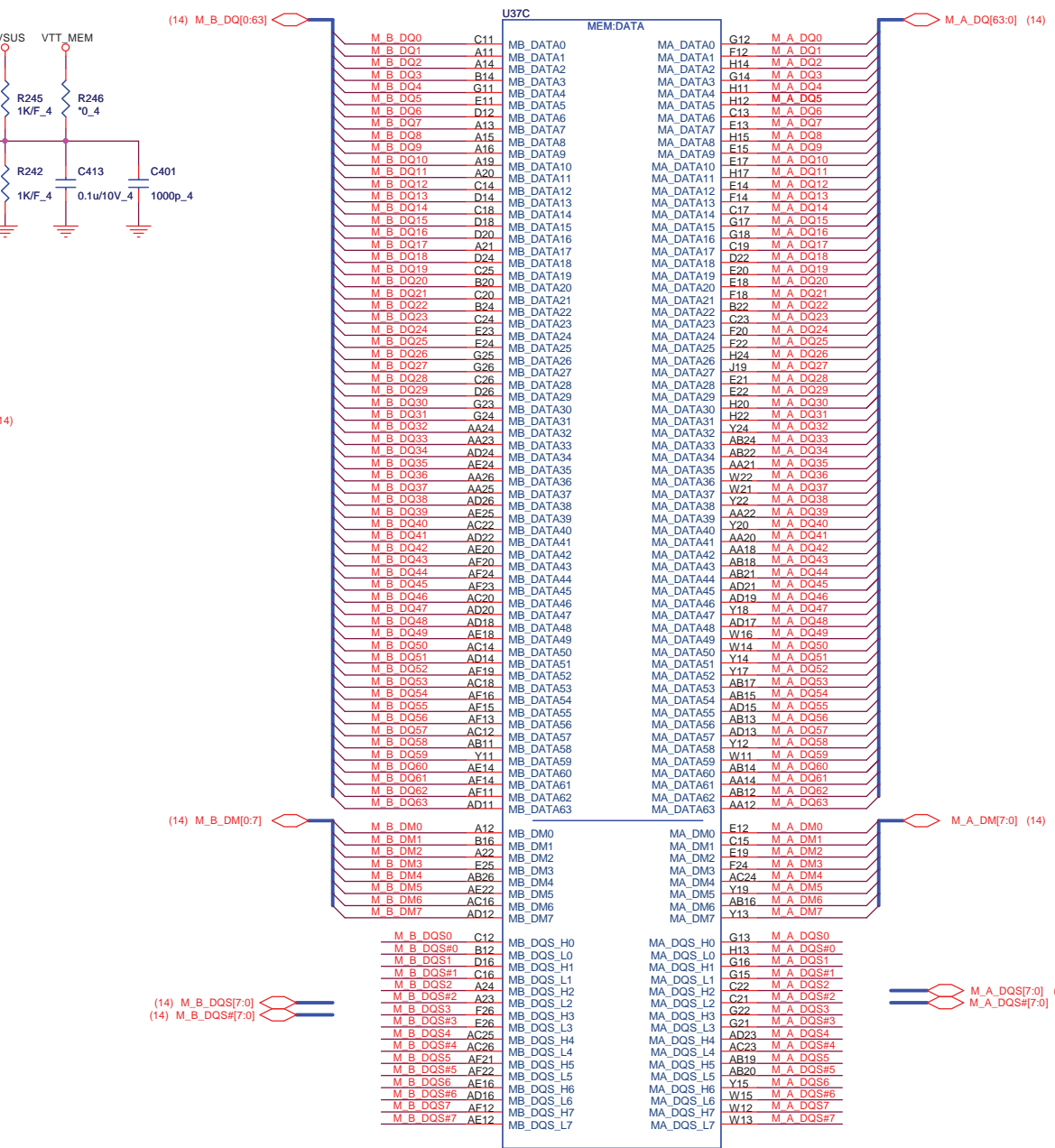
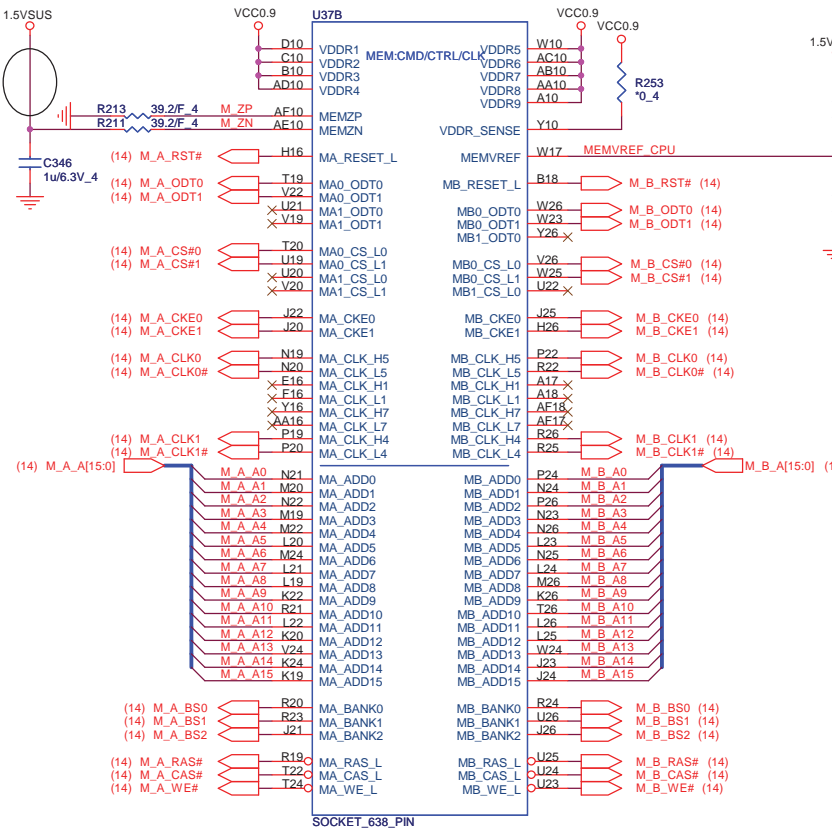
Quanta Computer Inc.
PROJECT : NE7

Size	Document Number	Rev
	CPU HT/CONTROL(1/3)	3A
Date:	Monday, March 22, 2010	Sheet 3 of 42

Processor Memory Interface

CPU_VDDR : 35W->0.9V
45W->1.05V

3A delete R208 0ohm



<http://laptop-motherboard-schematic.blogspot.com/>

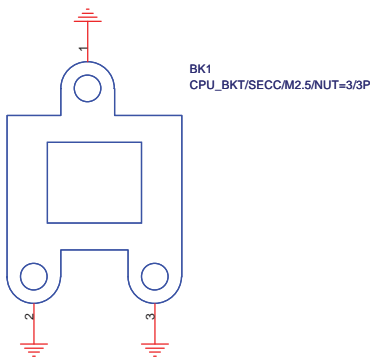
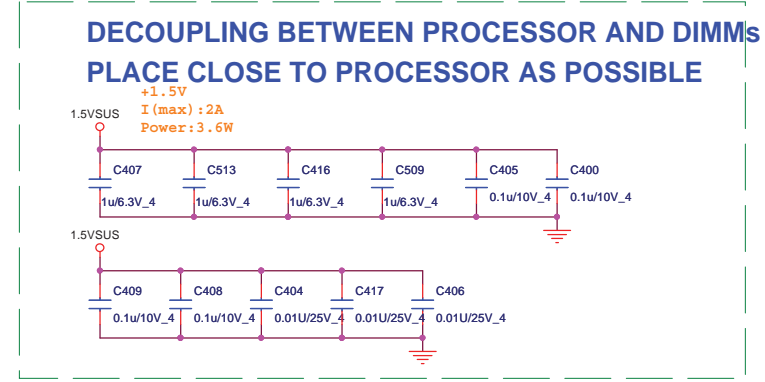
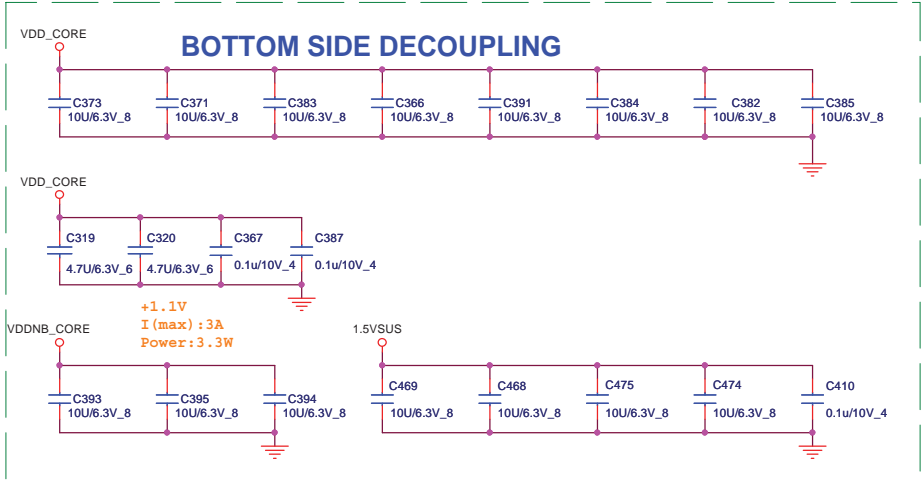
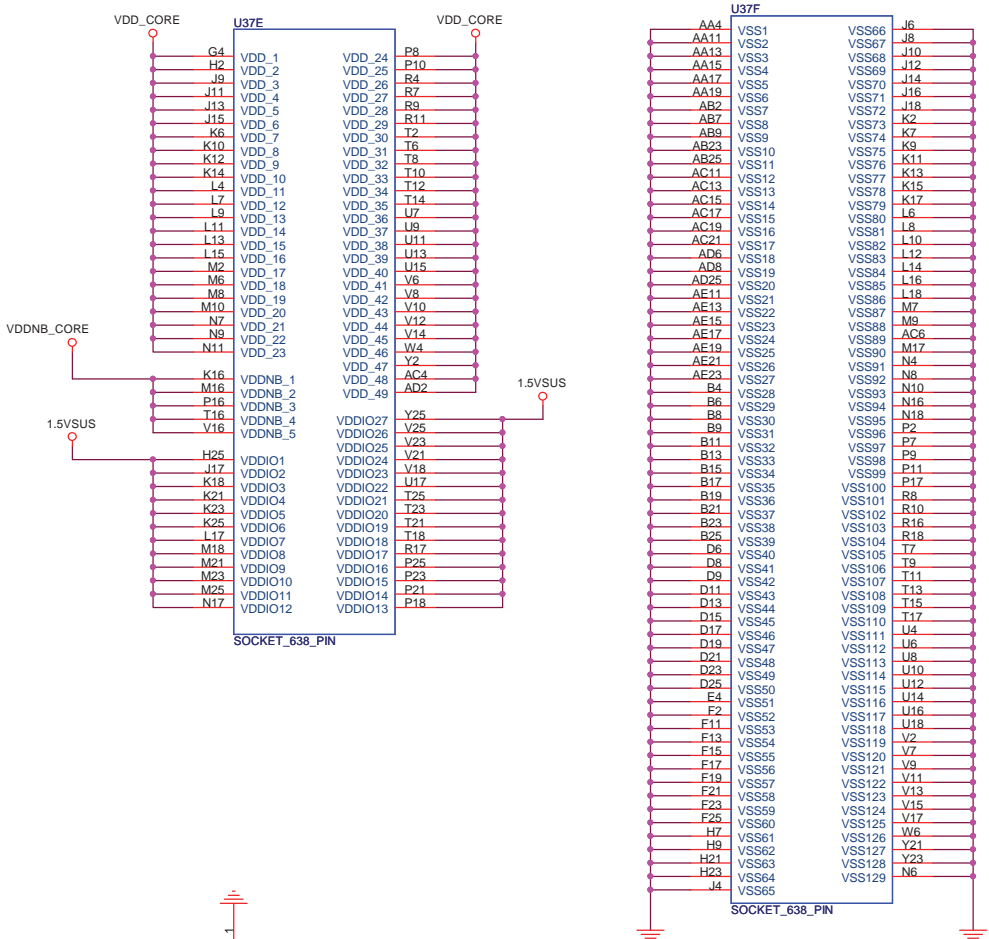
Quanta Computer Inc.
PROJECT : NE7

CPU MEMORY(2/3)

Size Document Number Rev 3A

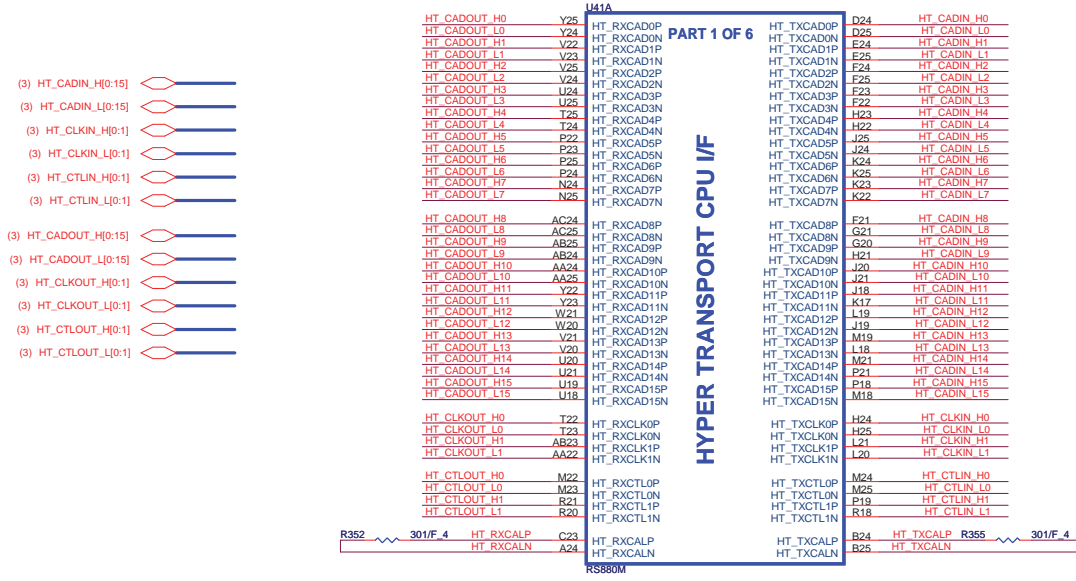
Date: Monday, March 22, 2010 Sheet 4 of 42

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.

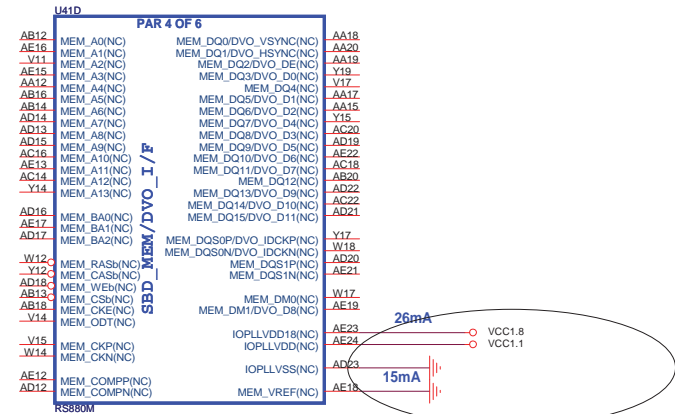


<http://laptop-motherboard-schematic.blogspot.com/>

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.



This block is for Side Port only, others can remove some components



3A change R422, R423 to short pad delete R424, R425 0ohm.

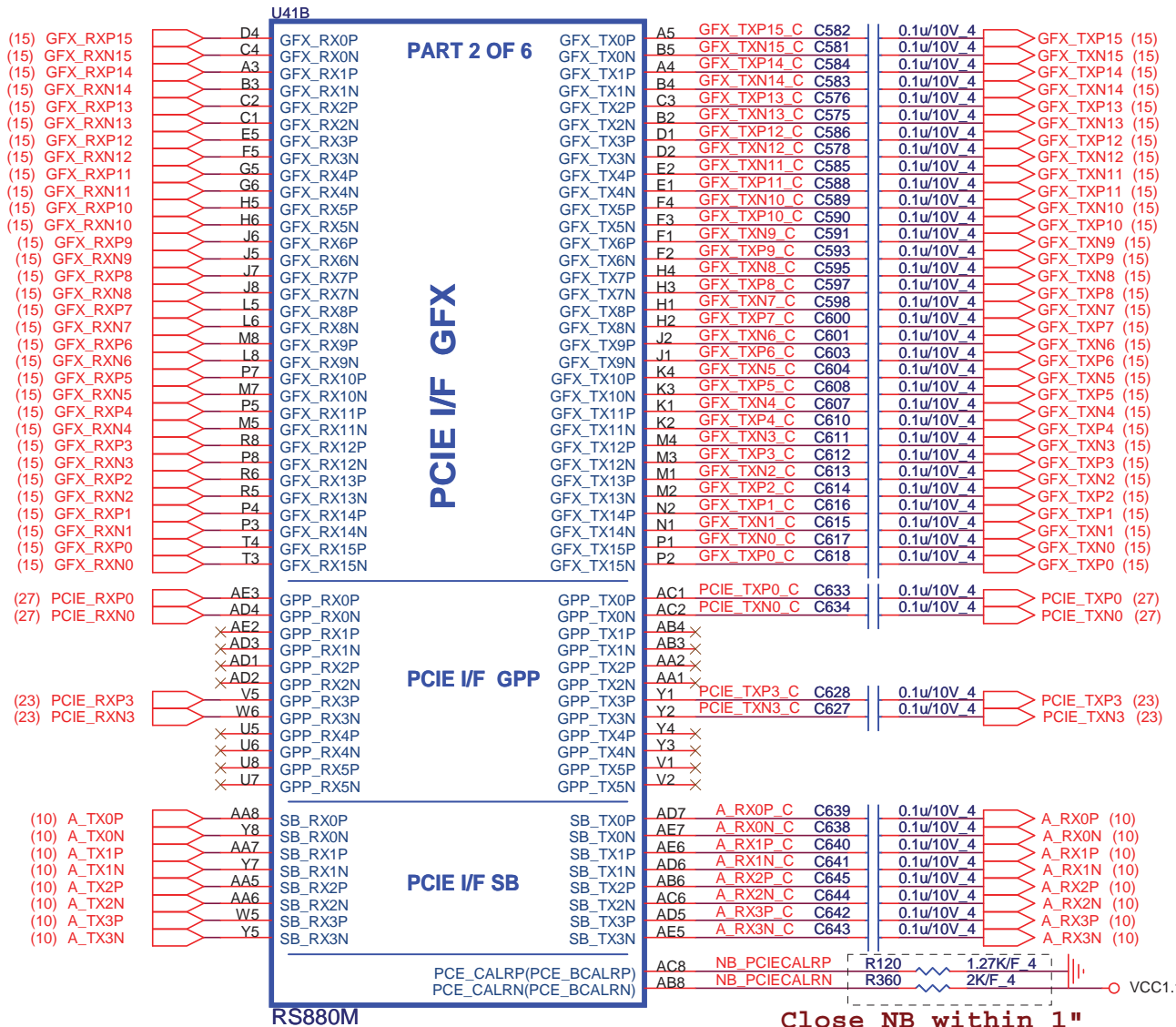
<http://laptop-motherboard-schematic.blogspot.com/>

Quanta Computer Inc.
PROJECT : NE7

Size Document Number **RS880M HT/SPMEM(1/4)** Rev 3A

Date: Monday, March 22, 2010 Sheet 6 of 42


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.



Layout Swap
TX11, TX10, TX9,
TX8, TX7, TX6, TX5,
TX4, TX3, TX2, TX0

GLAN

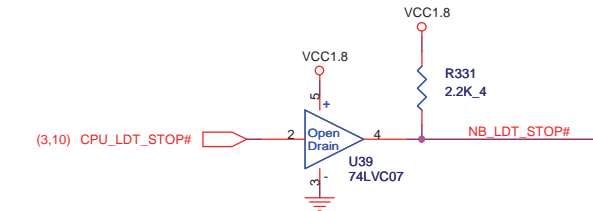
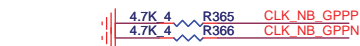
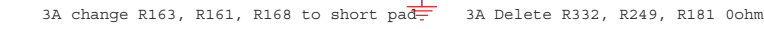
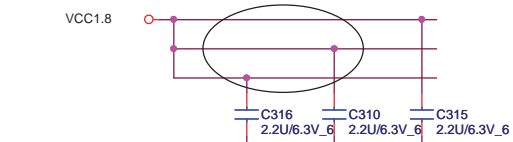
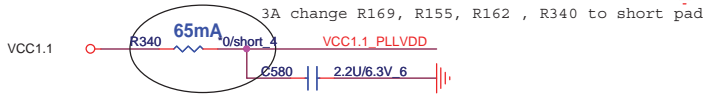
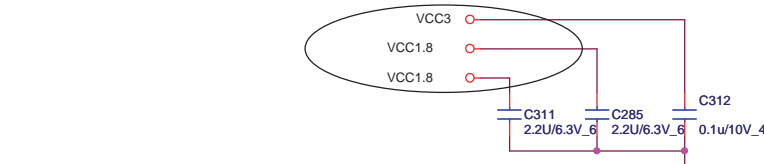
WLAN



Quanta Computer Inc.
PROJECT : NE7

Size	Document Number	Rev
	RS880M GFX/PCIE(2/4)	3A
Date:	Monday, March 22, 2010	Sheet 7 of 42

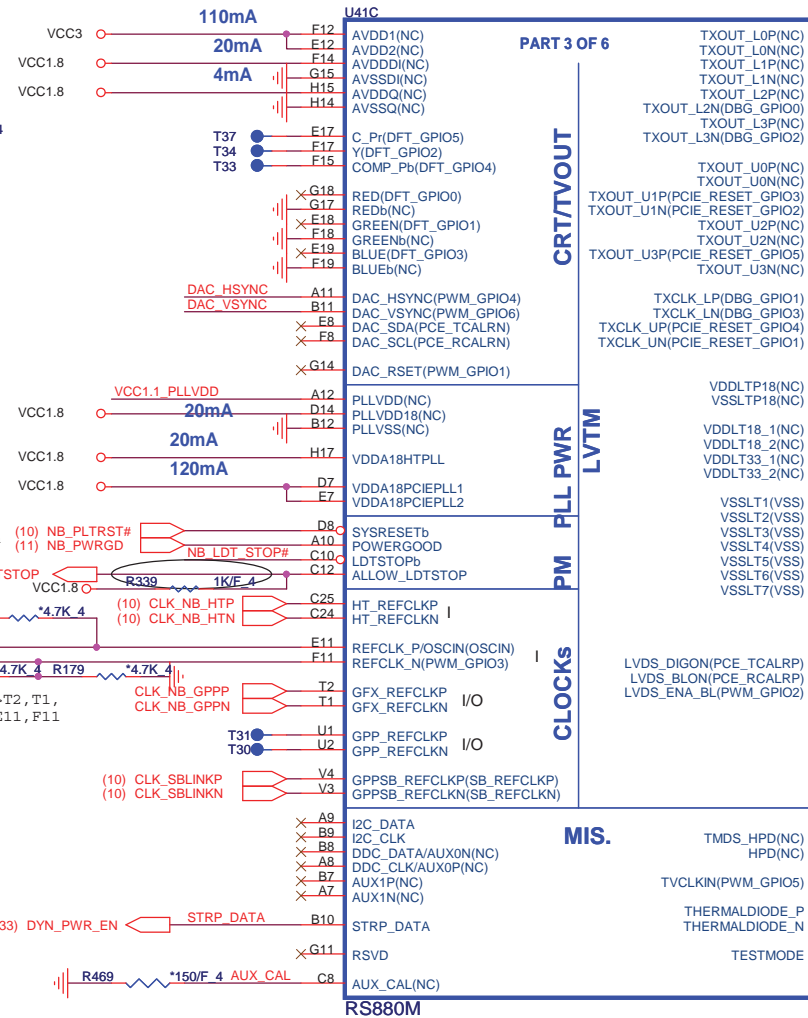
1.Level 1 Environment-related Substances Should NEVER be Used.
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.



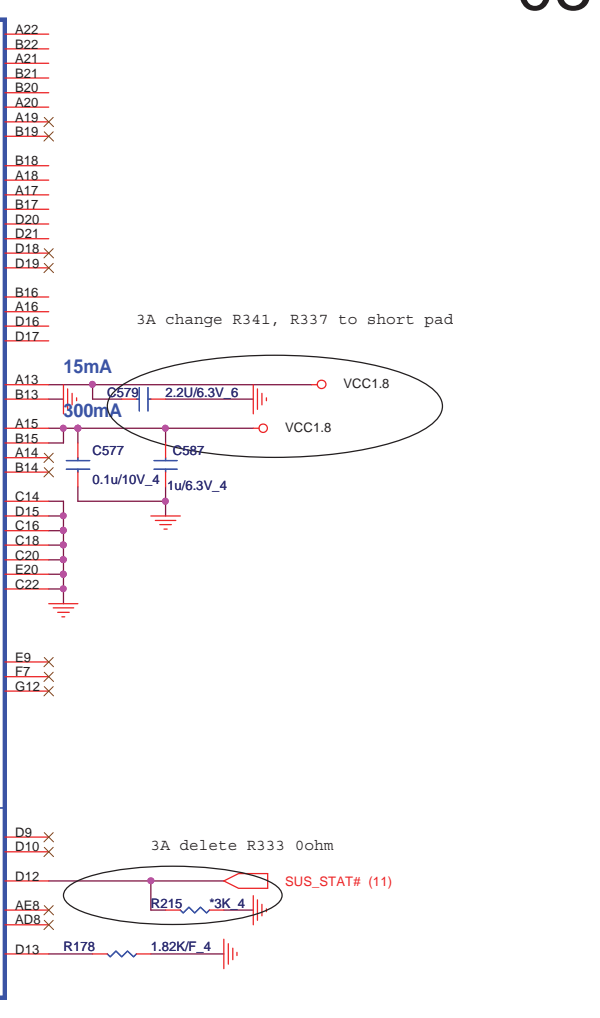
Enables Debug Bus access through memory I/O pads and GPIO.
 0 : Enable RS880M , Default
 1 : Disable RS880M

Discrete : Connect All, B11

Indicates if memory Side port is available or not
 1 : Disable side port memory
 0 : Enable side port memory



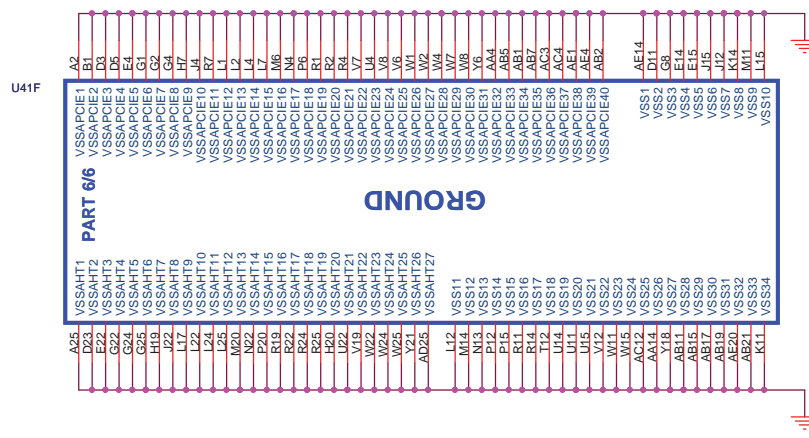
RS880M



RS880M

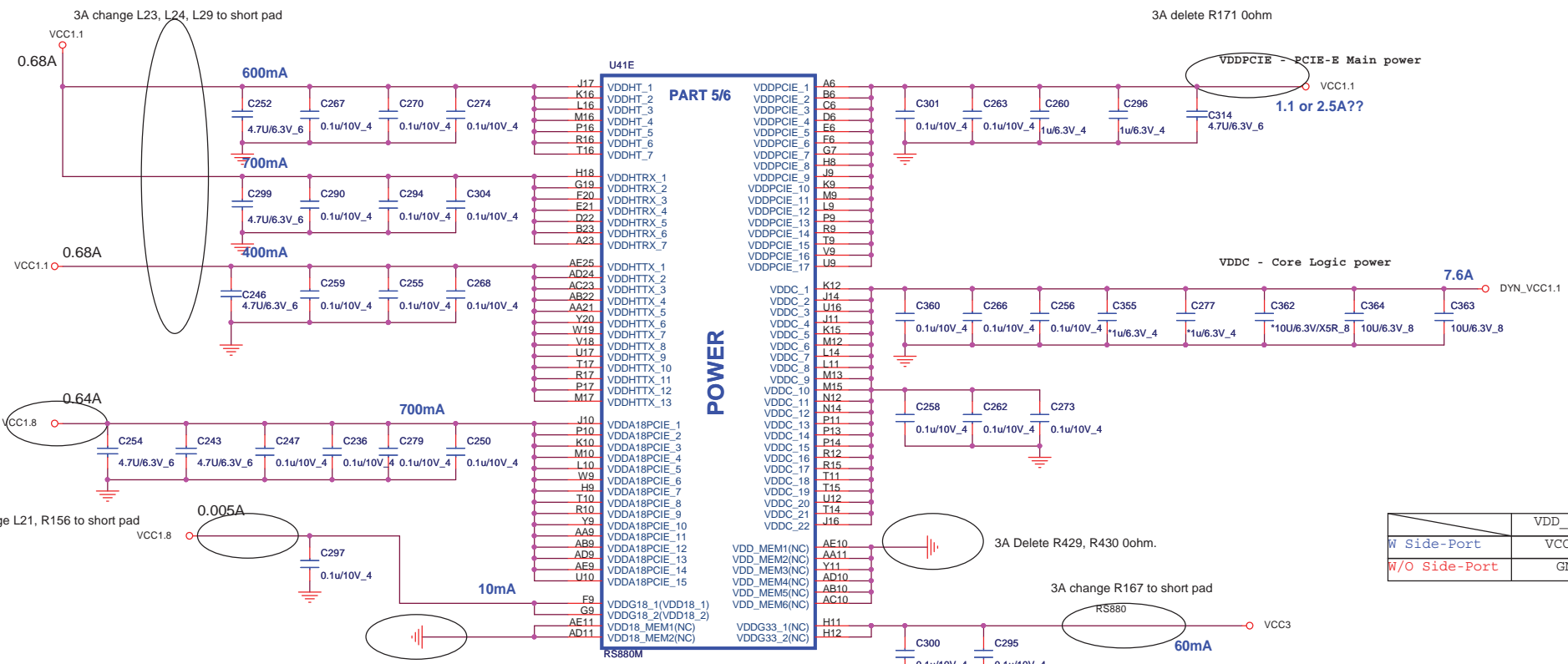
Quanta Computer Inc.
 PROJECT : NE7

Size	Document Number	Rev
	RS880M SYSTEM(3/4)	3A
Date:	Monday, March 22, 2010	Sheet 8 of 42



RS880M/RX881 POWER DIFFERENCE TABLE

PIN NAME	RX881	RS880M	PIN NAME	RX881	RS880M
VDDHT	+1.1V	+1.1V	IOPLLVD	NC	+1.1V
VDDHTRX	+1.1V	+1.1V	AVDD	NC	+3.3V
VDDHTTX	+1.1V	+1.1V	AVDDDI	NC	+1.8V
VDDA18PCIE	+1.8V	+1.8V	AVDDQ	NC	+1.8V
VDDG18	+1.8V	+1.8V	PLLVD	NC	+1.1V
VDD18_MEM	NC	+1.8V	PLLVD18	NC	+1.8V
VDDPCIE	+1.1V	+1.1V	VDDA18PCIEPLL	+1.8V	+1.8V
VDDC	+1.1V	+1.1V	VDDA18HTPLL	+1.8V	+1.8V
VDD_MEM	NC	+1.5V	VDDLTP18	NC	+1.8V
VDDG33	NC	+3.3V	VDDL18	NC	+1.8V
IOPLLVD18	NC	+1.8V	VDDL33	NC	NC



VDD18_MEM For UMA RS880 only
Not applicable to RX881
memory I/O transform

<http://laptop-motherboard-schematic.blogspot.com/>

	VDD18_MEM
W Side-Port	VCC1.8
W/O Side-Port	GND

	VDD_MEM
W Side-Port	VCC1.5
W/O Side-Port	GND

Quanta Computer Inc.
PROJECT : NE7

Size Document Number Rev 3A
RS880M POWER(4/4)

Date: Monday, March 22, 2010 Sheet 9 of 42

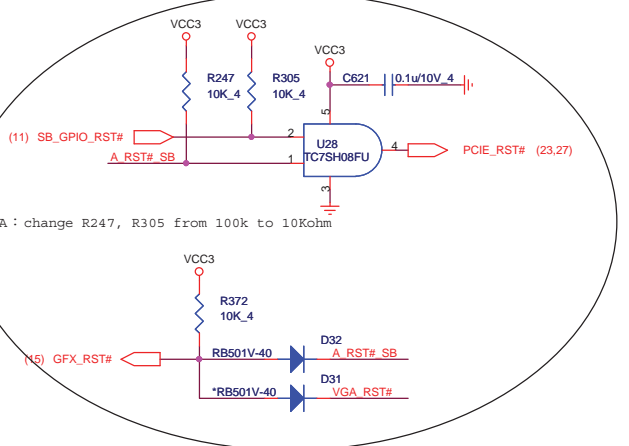
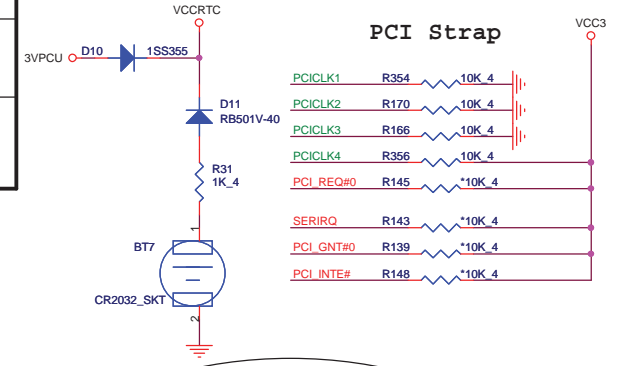
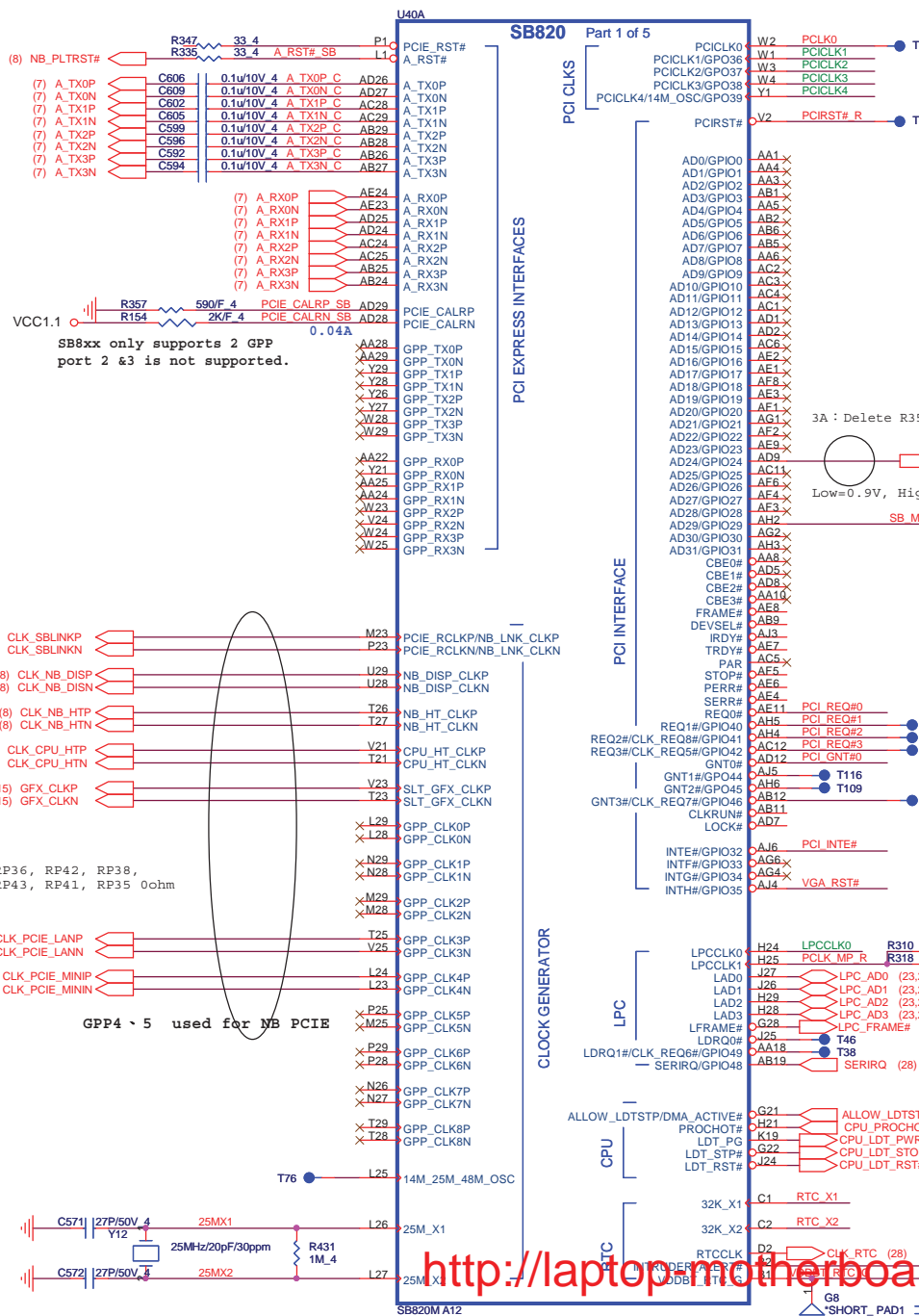
1. Level 1 Environment-related Substances should NEVER be used.
2. Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

Strap Table

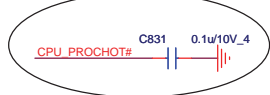
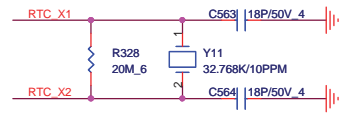
PCI_CLK1	PCI_CLK2	PCI_CLK3	PCI_CLK4
ALLOW PCIe Gen2	Watchdog Timer Enable	USE DEBUG STRAPS	non_Fusion CLOCK MODE DEFAULT
FORCE PCIe Gen1	Watchdog Timer Disable	IGNORE DEBUG STRAPS	Fusion CLOCK MODE
DEFAULT	DEFAULT	DEFAULT	

RTC

PCI Strap



LPCLK0	LPCLK1
H=Enable embedded EC	H=Enable Internal CLK Gen.
L=Disable embedded EC	L=Disable Internal CLK Gen.



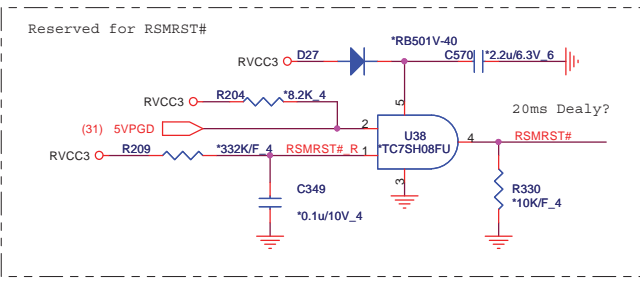
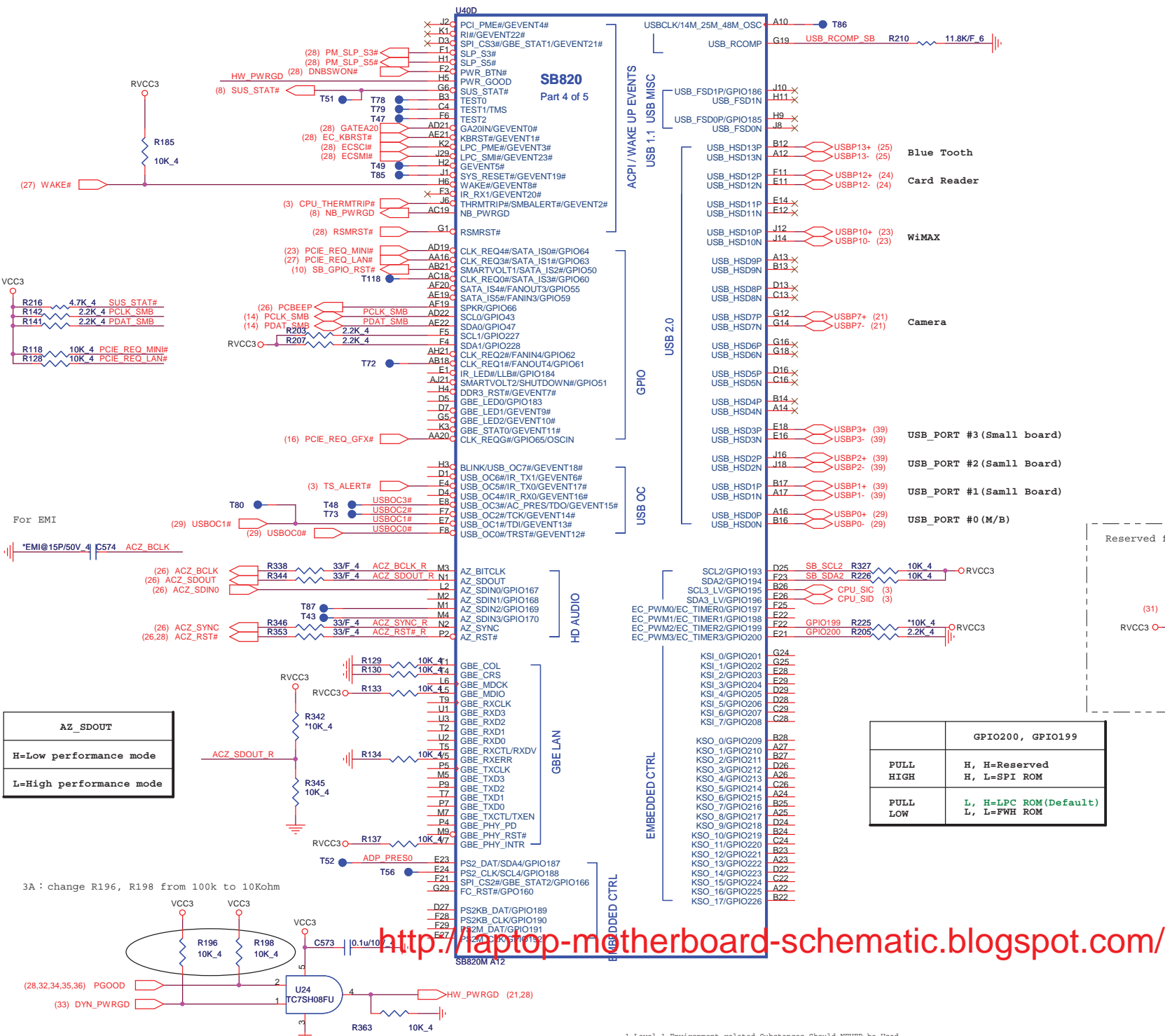
<http://laptopmotherboard-schematic.blogspot.com/>

INTRUDER_ALERT# Southbridge has 50-k ohm internal pull-up to VBAT

Quanta Computer Inc.
PROJECT : NE7

Size	Document Number	Rev
	SB820 PCI/CLK/LPC(1/4)	3A
Date:	Monday, March 22, 2010	Sheet 10 of 42

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.

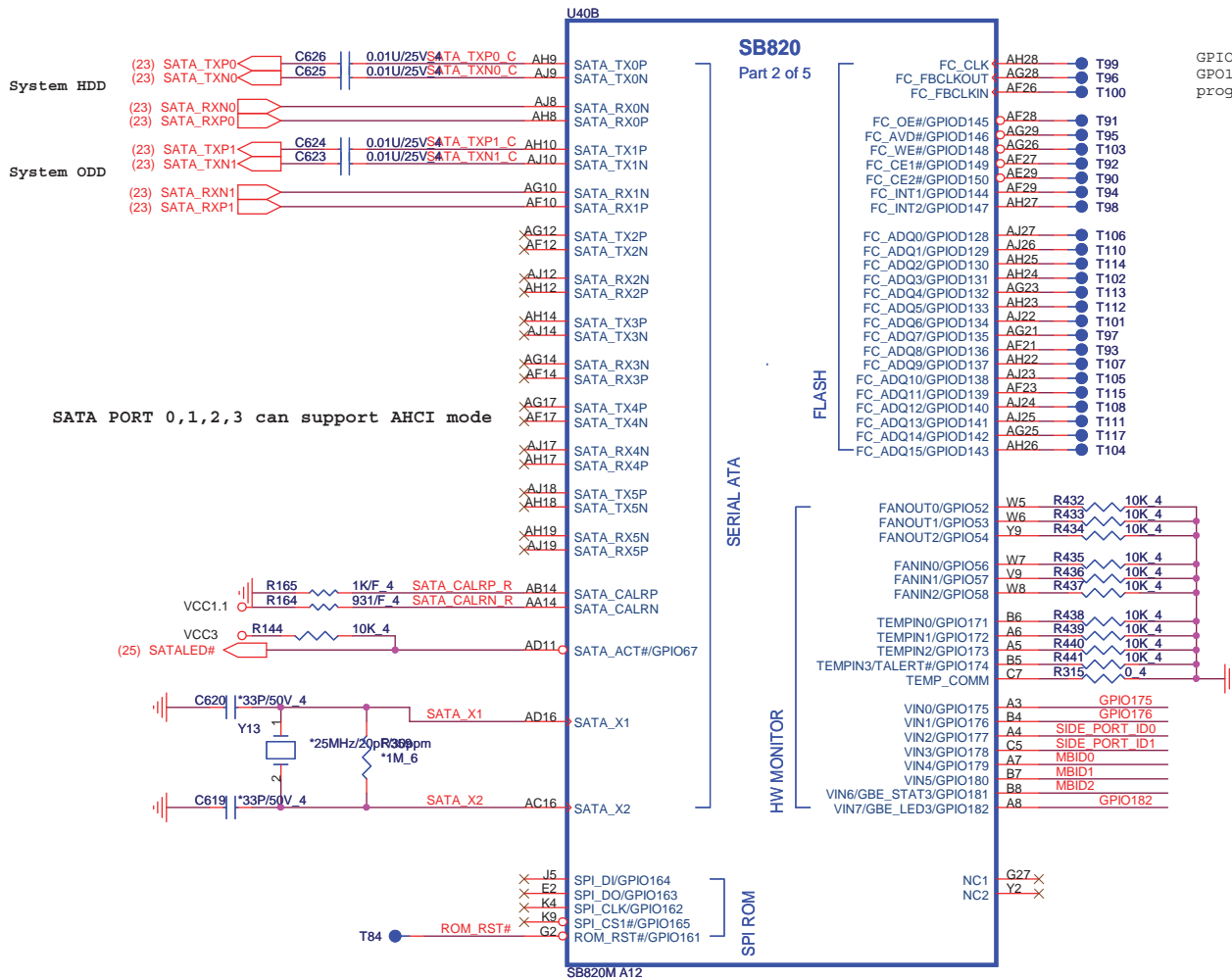


<http://laptop-motherboard-schematic.blogspot.com/>

Quanta Computer Inc.
PROJECT : NE7

Size	Document Number	Rev
	SB820 AUDIO/USB(3/4)	3A
Date:	Monday, March 22, 2010	Sheet 11 of 42

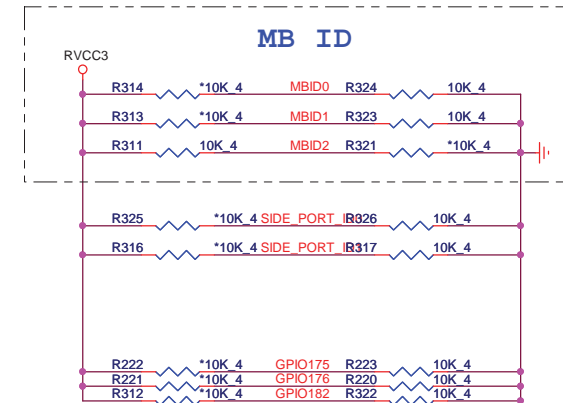
1.Level 1 Environment-related Substances should NEVER be Used.
2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.



GPIO[150:128] are open drain GPIO pins where as GPIO160 is an open drain GPO pin. These pins are not programmed to GPIO mode by default.

ID2	ID1	ID0	
0	0	0	Danube UMA
0	0	1	Danube UMA+Side port
0	1	0	Danube+Park XT
0	1	1	Danube+Madison LP
1	0	0	Danube+M92 XTX
1	0	1	
1	1	0	
1	1	1	

	NON	SAMSUNG	HYNIX	
SP ID0	0	1	0	1
SP ID1	0	0	1	1



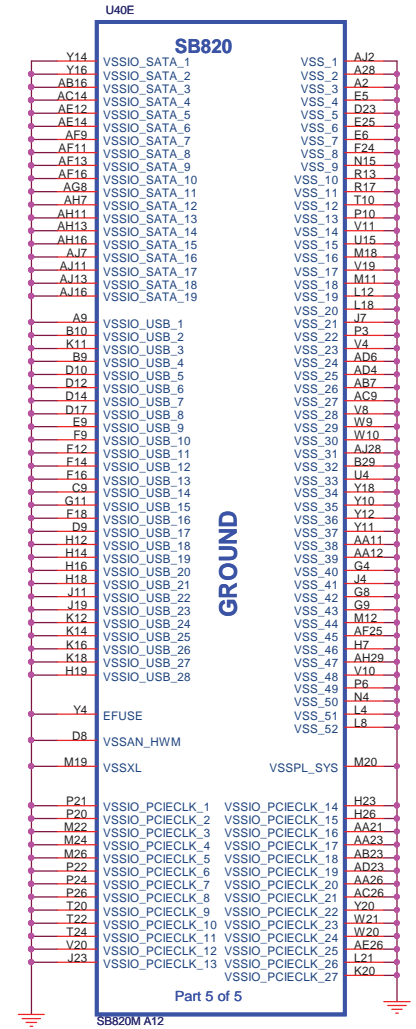
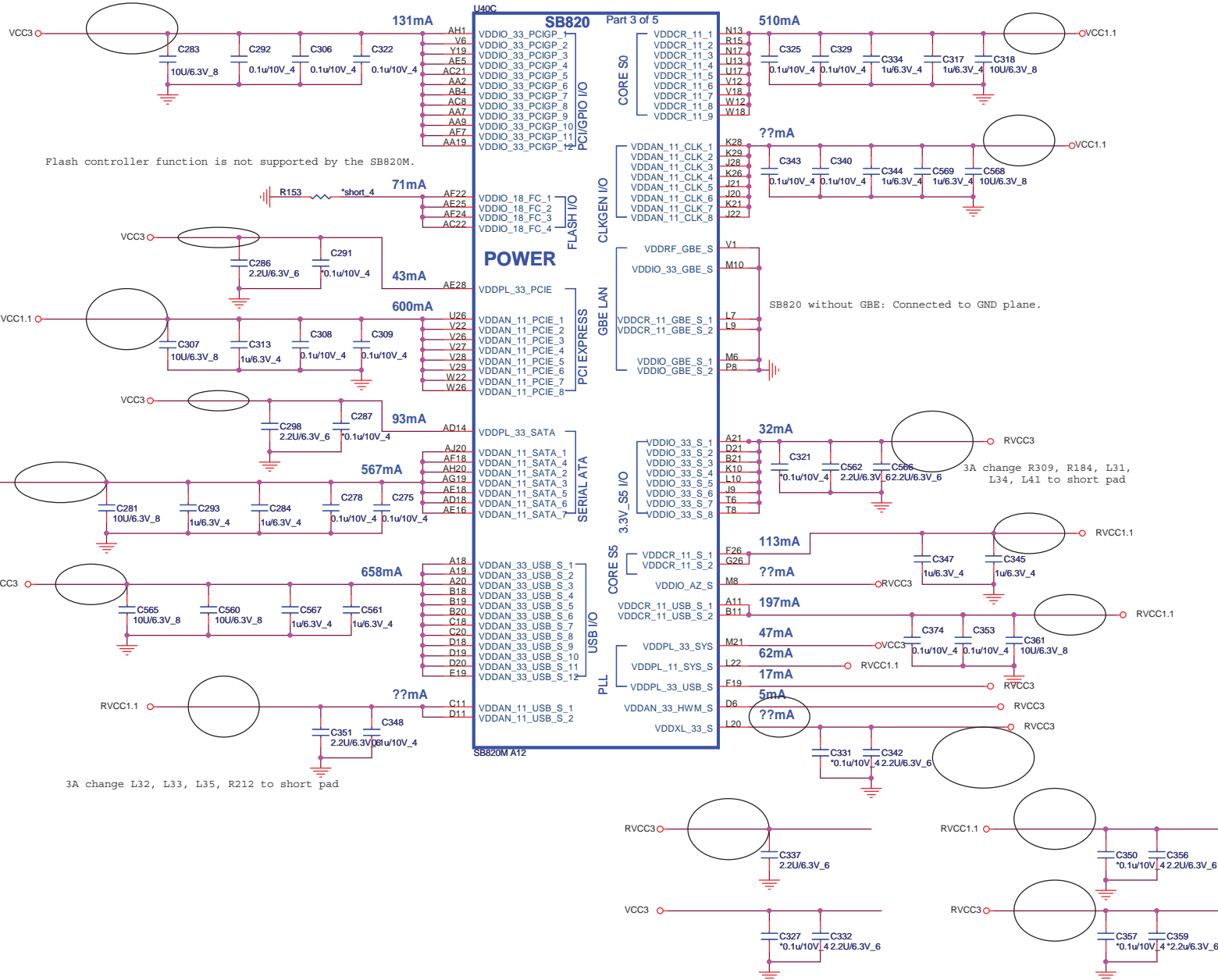
1.Level 1 Environment-related Substances Should NEVER be Used.
 2.Purchase ink, paint, and Molding resins only from the business Partners that Sony approves as Green Partners.

Quanta Computer Inc.
PROJECT : NE7

Size	Document Number	Rev
	SB820 SATA(2/4)	3A
Date:	Monday, March 22, 2010	Sheet 12 of 42

3A change R150, L27, L26, L30 to short pad

3A change R172, L42, L28, L25 to short pad

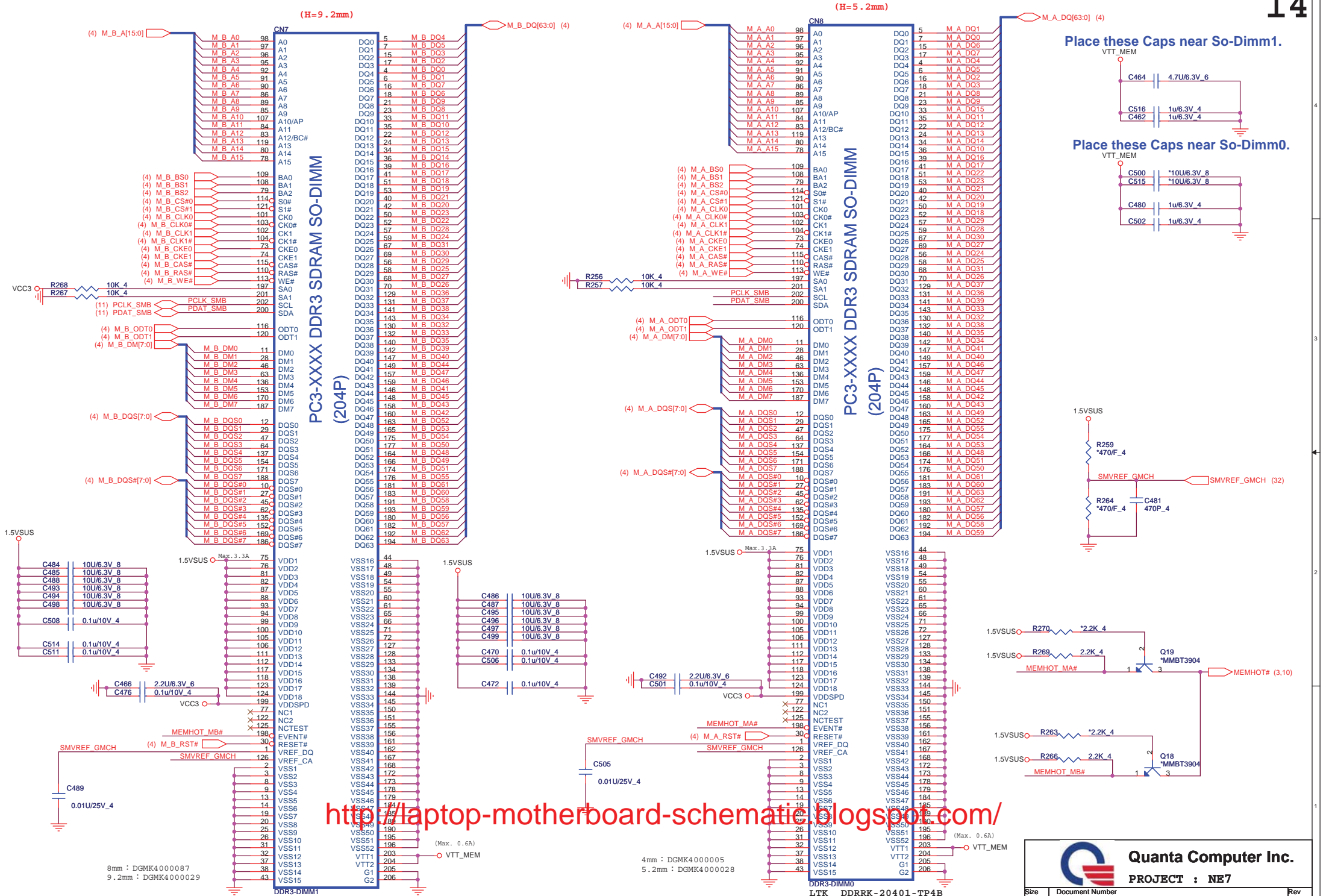


<http://laptop-motherboard-schematic.blogspot.com/>

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.

Quanta Computer Inc.
 PROJECT : NE7

Size	Document Number	Rev
	SB820 POWER(4/4)	3A
Date:	Monday, March 22, 2010	Sheet 13 of 42

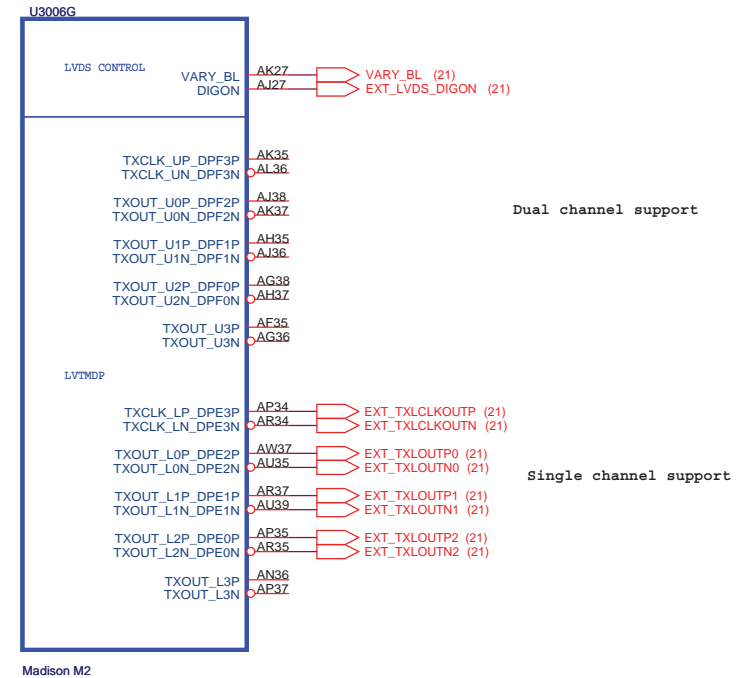
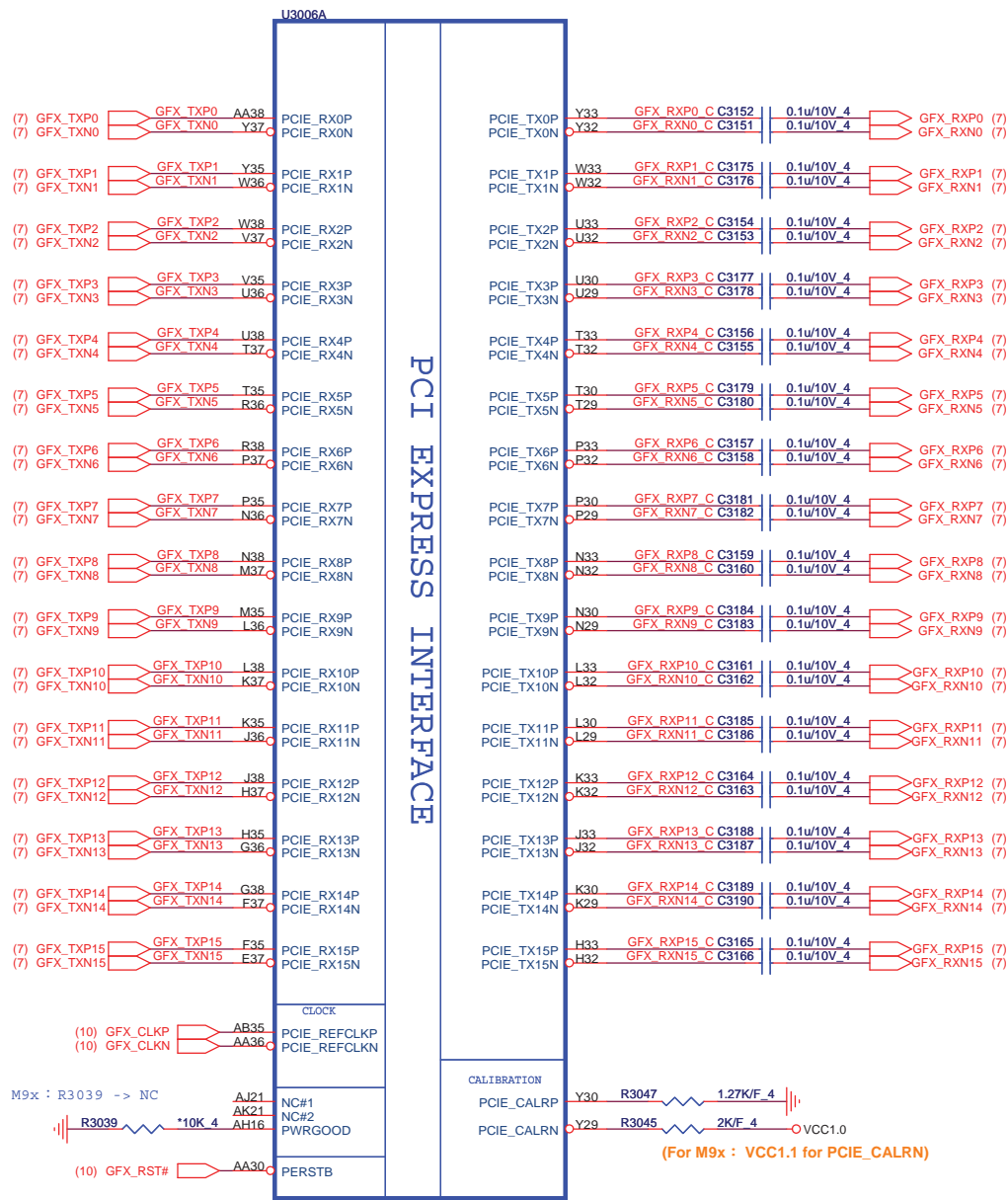


<http://laptop-motherboard-schematic.blogspot.com/>

Quanta Computer Inc.
PROJECT : NE7
DDR3 SODIMMX2

Size	Document Number	Rev
Date	Monday, March 22, 2010	3A
Sheet 14 of 42		

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.



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.

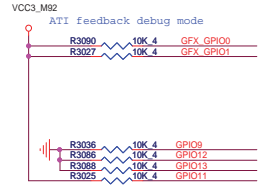
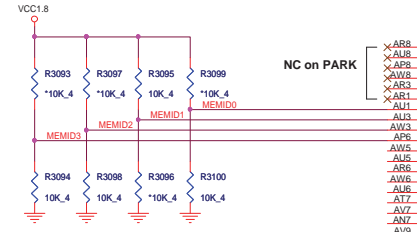
		Quanta Computer Inc. PROJECT : NE7	
		Size Document Number ATI PCIE/LVDS	Rev 3A
Date:	Monday, March 22, 2010	Sheet	15 of 42

MEMID[3:0]	Vendor	Type	Vendor P/N
0000			
0001	Hynix	64*16-800MHZ	H5TQ1G63BFR-12C
0010	Samsung	64*16-800MHZ	K4W1G1646E-HC12
0011	Ati	64*16-800MHZ	23EY2387MA-12
0100		Reserved	
0101		Reserved	
0110		Reserved	
0111		Reserved	
1000		Reserved	
1001		Reserved	
1010		Reserved	
1011		Reserved	
1100		Reserved	
1101		Reserved	
1110		Reserved	
1111		Reserved	

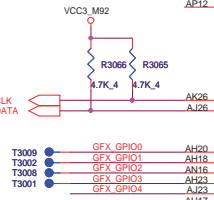
AKD5LZGTW00
AKD5LGGT502
AKD5LGGT701

Samsung 64*16-900MHZ K4W1G1646E-HC11

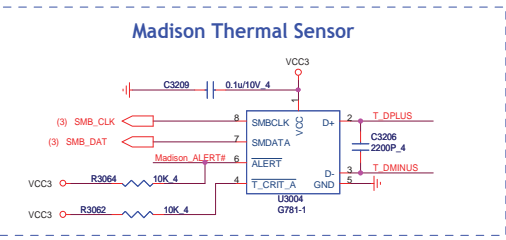
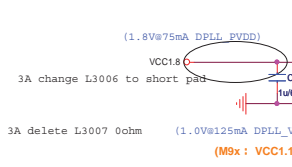
GPI00 : PCIE FULL TX OUTPUT SWING
GPI01 : PCIE TRANSMITTER DE-EMPHASIS ENABLED
GPI02 : BIF GEN2_EN_A
GPI08 : RESERVED
GPI09 : VGA ENABLED
GPI013;11 : SERIAL ROM TYPE OR MEMORY APERTURE SIZE SELECT
V2SYNC : IGNORE VIP DEVICE STRAPS
H2SYNC : 0
GENERICC : 0
HSYNC : 1 (AUDIO FOR BOTH DP AND HDMI)
VSYNC : 1 (AUDIO FOR BOTH DP AND HDMI)



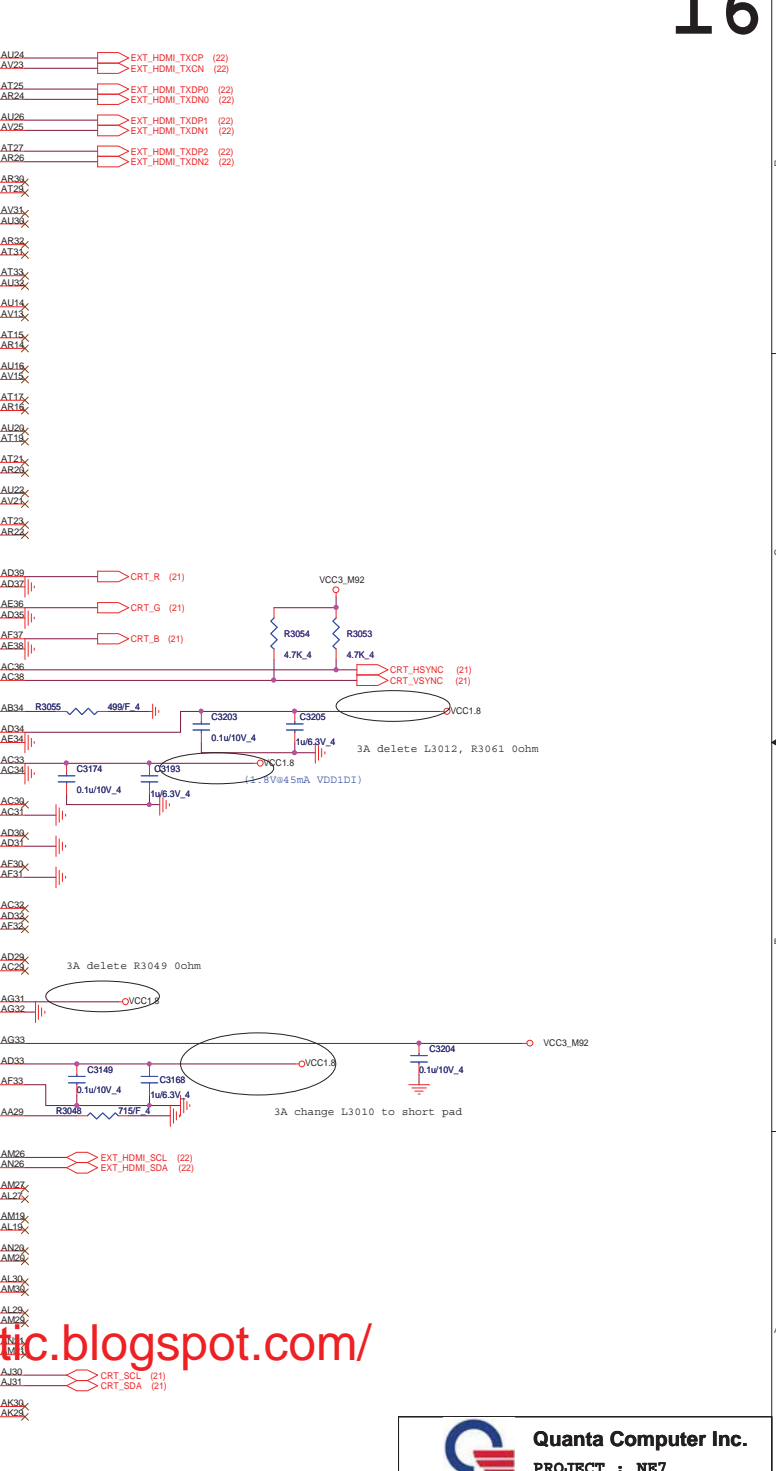
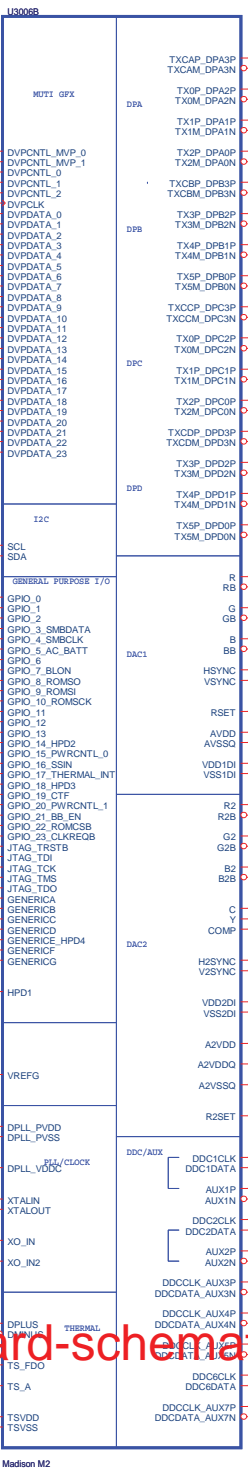
3A Adding GPIO3 - 4 for VGA thermal sensor
(3) SMB_DAT
(8) SMB_CLK

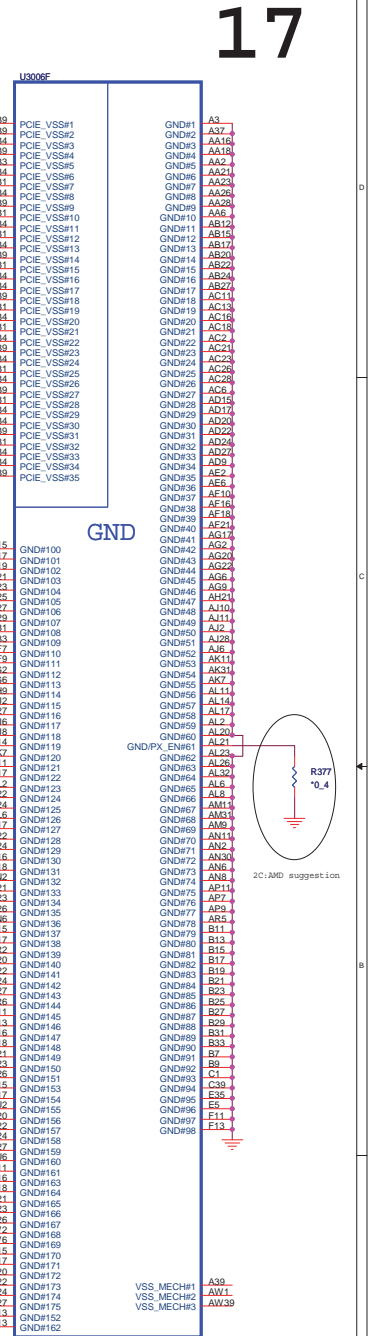
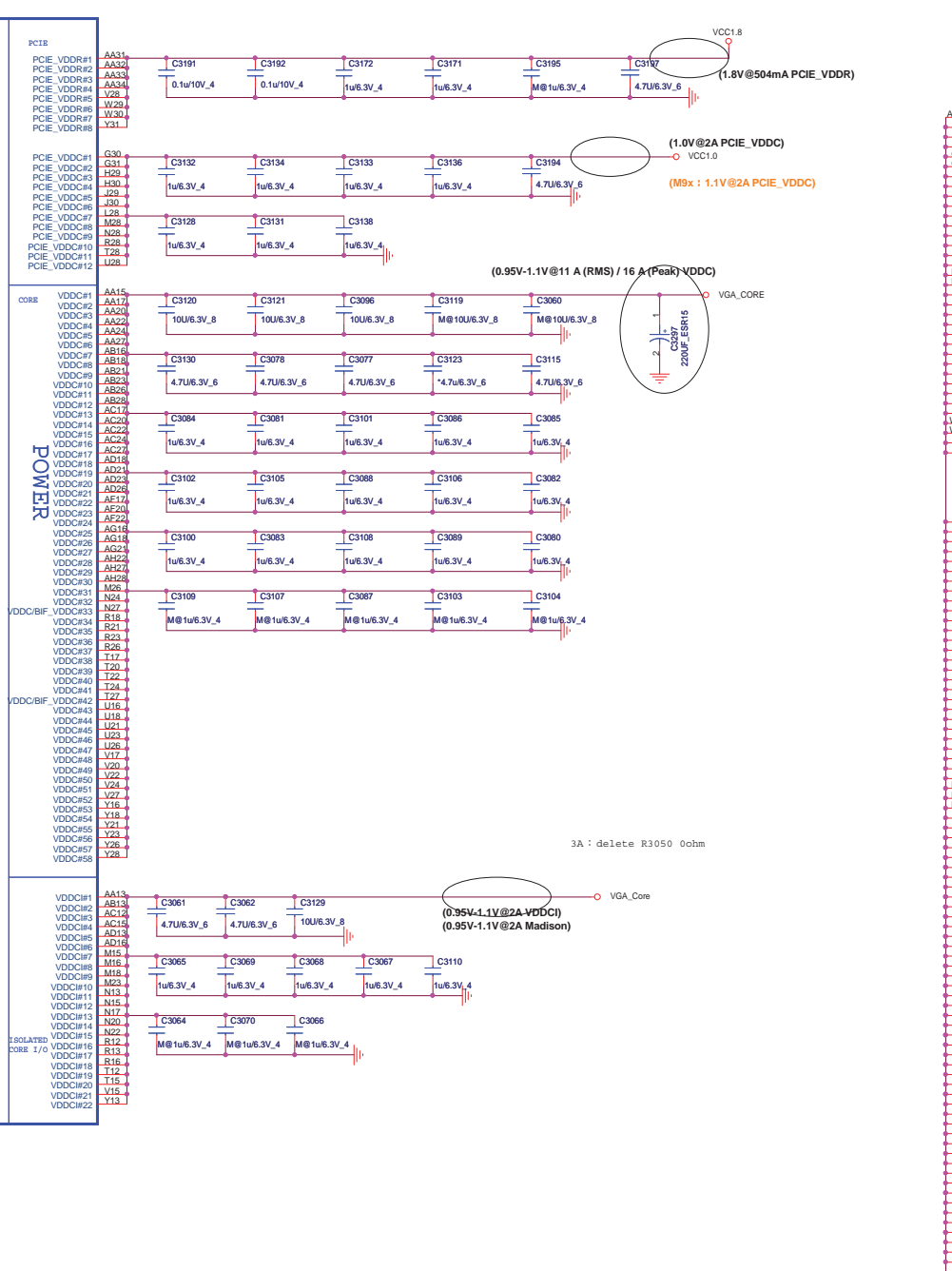
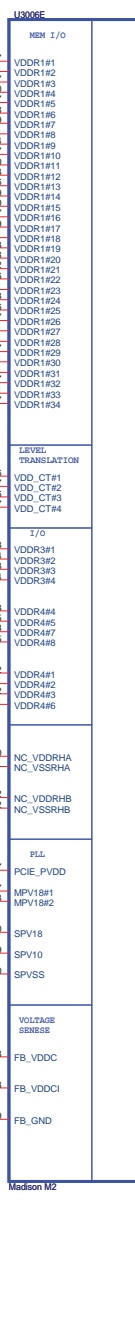
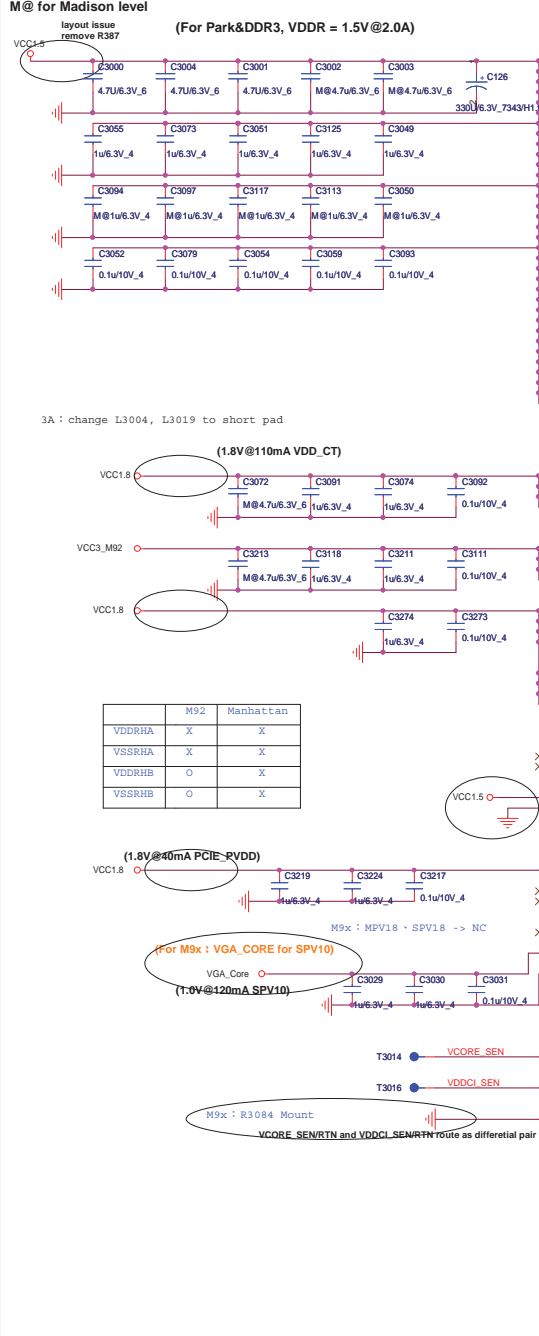


- T3009 : GFX_GPIO0 AH20
- T3002 : GFX_GPIO1 AN18
- T3008 : GFX_GPIO2 AN16
- T3001 : GFX_GPIO3 AH23
- T3004 : GFX_GPIO4 AN17
- GPIO9 : AH17
- GPIO10 : AH13
- GPIO11 : AH16
- GPIO12 : AL18
- GPIO13 : AH15
- GPIO14 : AM14
- GPIO15 : AM13
- GPIO16 : SSIN
- GPIO17 : THERMAL_INT
- GPIO18 : HPD3
- GPIO20 : PWRCNTL1
- GPIO21 : BB_EN
- GPIO22 : ROMCSB
- GPIO23 : CLKREOB
- GPIO24 : TRSTB
- GPIO25 : TD1
- GPIO26 : TCK
- GPIO27 : TMS
- GPIO28 : TDD



<http://laptop-motherboard-schematic.blogspot.com/>





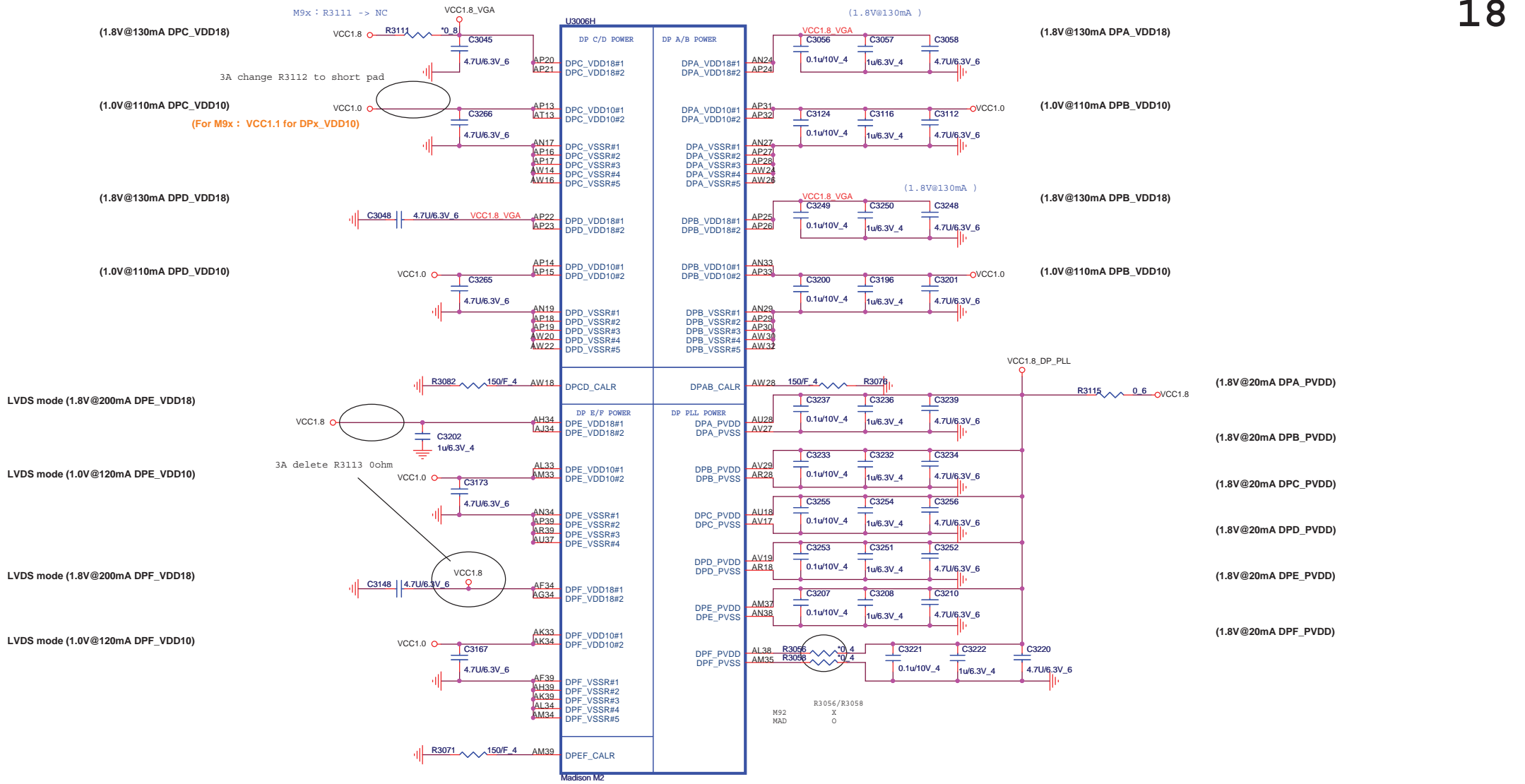
<http://laptop-motherboard-schematic.blogspot.com/>

Quanta Computer Inc.
PROJECT : NE7

ATI POWER/GND

Size Document Number
Date: Monday, March 22, 2010 Sheet 17 of 42

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.

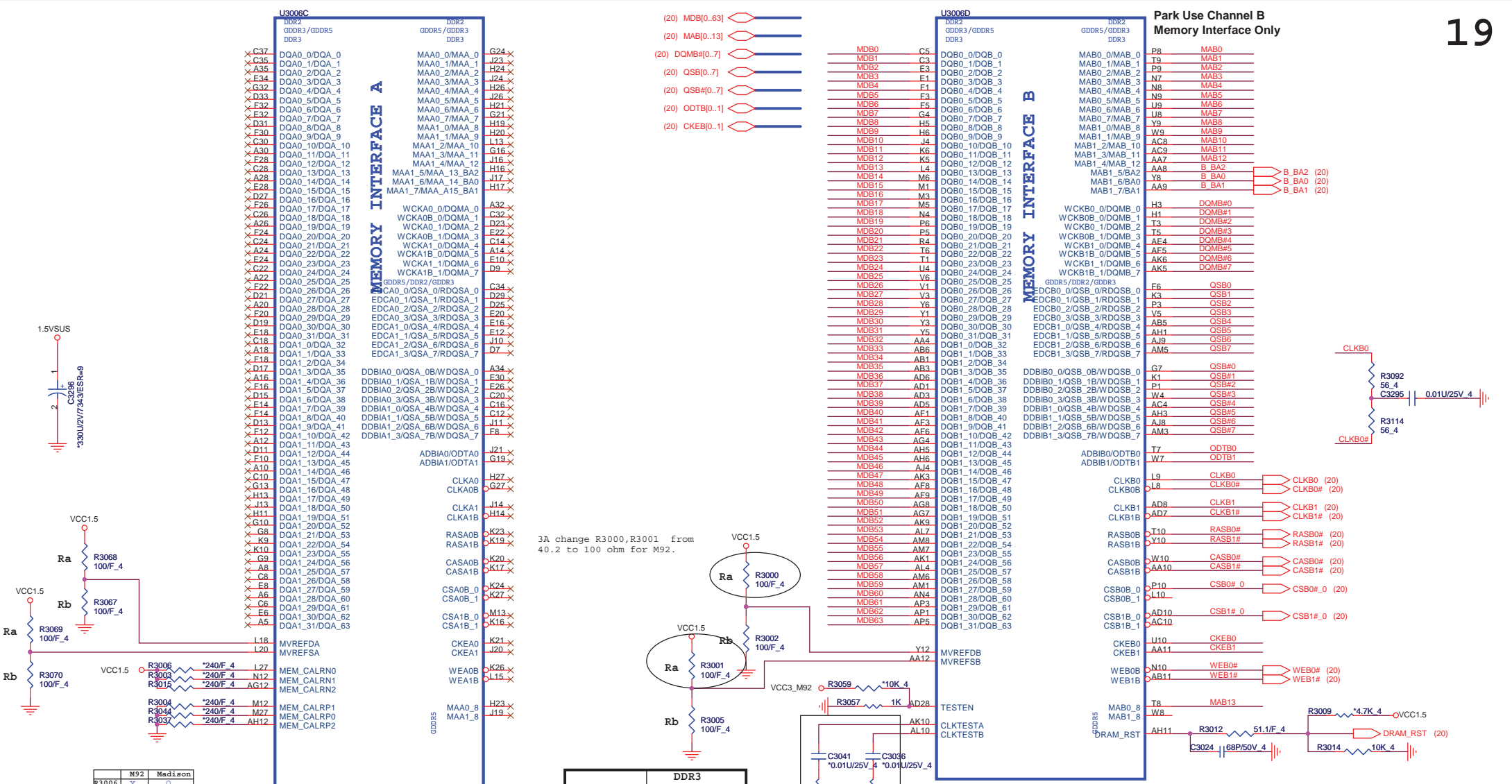


Quanta Computer Inc.
PROJECT : NE7

Size	Document Number	Rev
	ATI MEM/F/DP	3A
Date:	Monday, March 22, 2010	Sheet 18 of 42

Use this option ONLY
for Park-S3

<http://laptop-motherboard-schematic.blogspot.com/>



3A change R3000,R3001 from 40.2 to 100 ohm for M92.

DDR3	
MEM_CALR	1.5V (M92)
Ra	40.2R
Rb	100R

Madison M2
route 50ohms single-ended/100ohms diff and keep short Debug only, for clock observation, if not needed, DNI

Quanta Computer Inc.
PROJECT : NE7

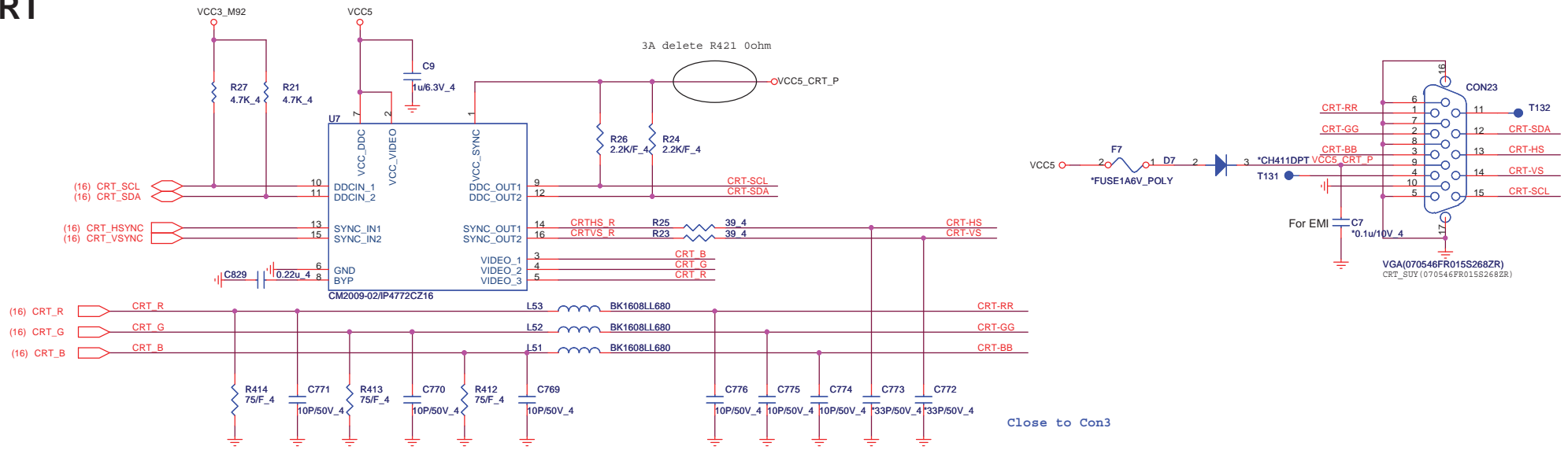
Size	Document Number	Rev
	ATI MEM IF	3A
Date:	Monday, March 22, 2010	Sheet 19 of 42

	M92	Madison
R3006	X	o
R3003	X	X
R3015	X	o
R3004	X	X
R3044	o	o
R3037	X	o

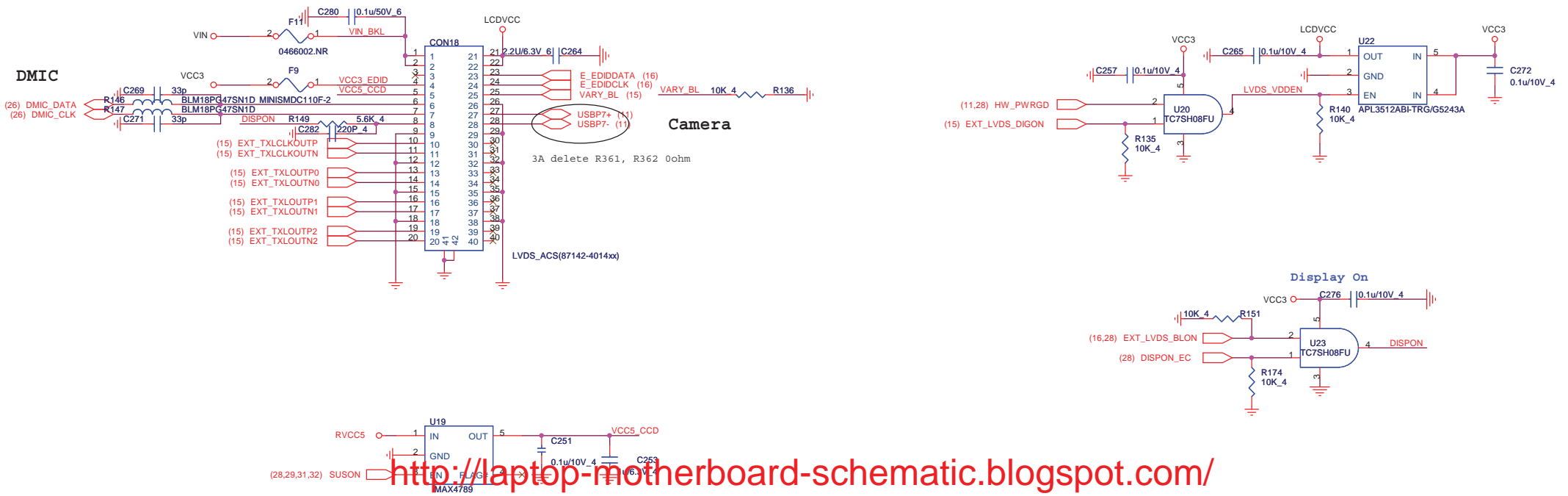
1. Level 1 Environment-related Substances Should NEVER be Used.
2. Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

Use this option ONLY for Park-S3

<http://laptop-motherboard-schematic.blogspot.com/>



LVDS

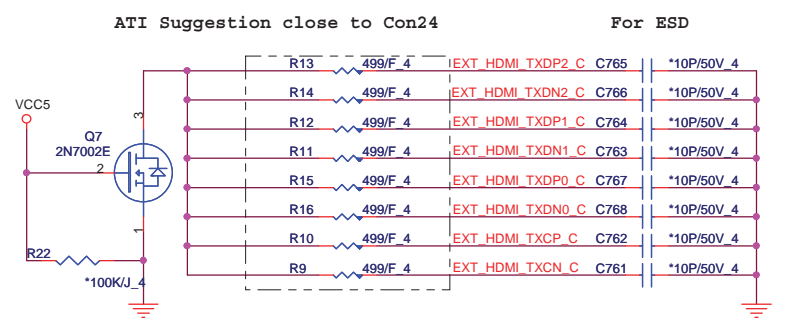
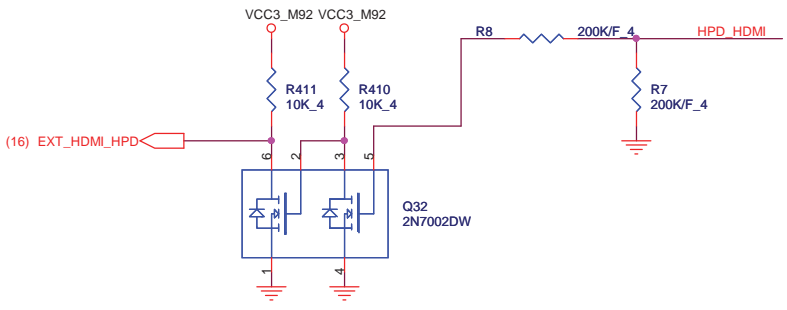
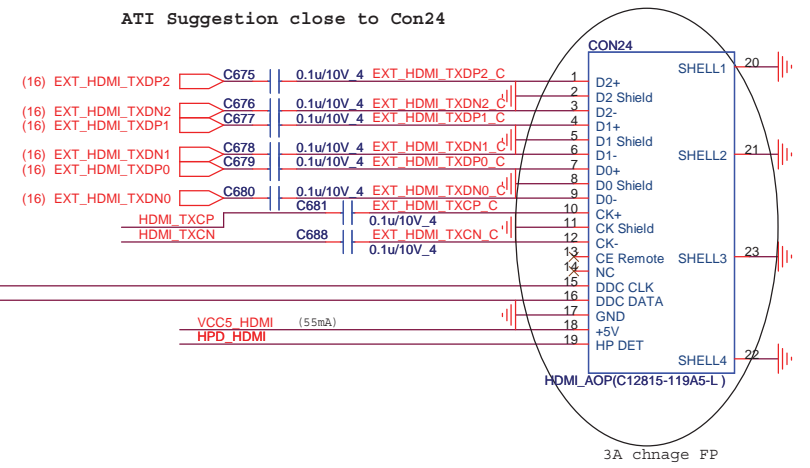
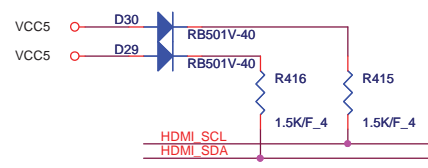
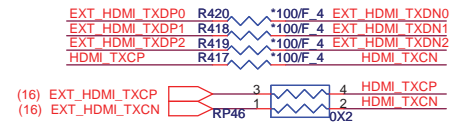
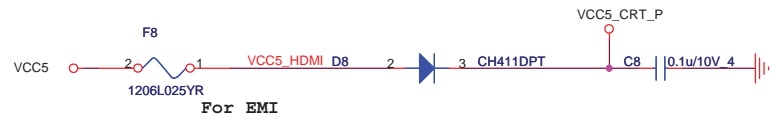
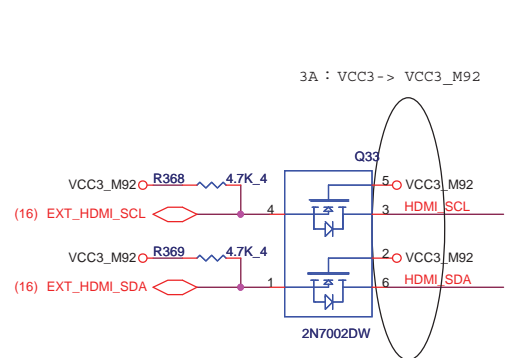



<http://laptop-motherboard-schematic.blogspot.com/>

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.

Quanta Computer Inc.
 PROJECT : NE7

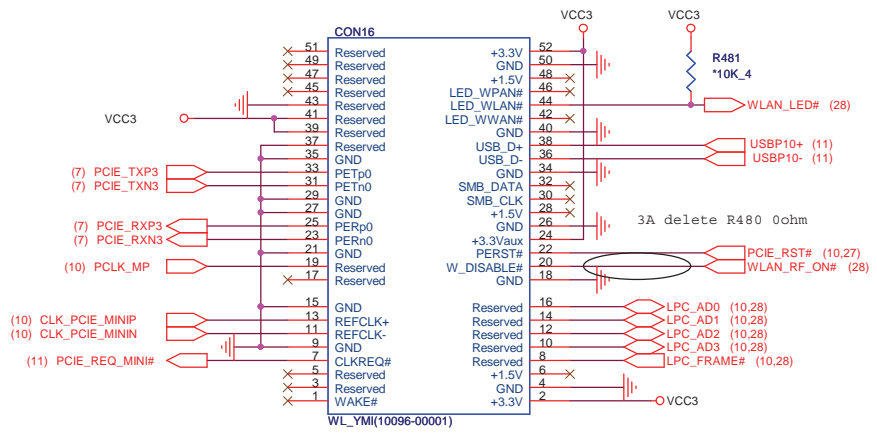
Size	Document Number	Rev
	CRT/LVDS	3A
Date:	Monday, March 22, 2010	Sheet 21 of 42



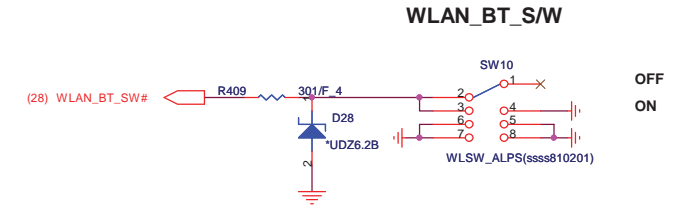
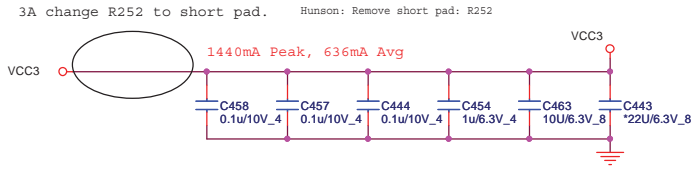


Quanta Computer Inc.
PROJECT : NE7

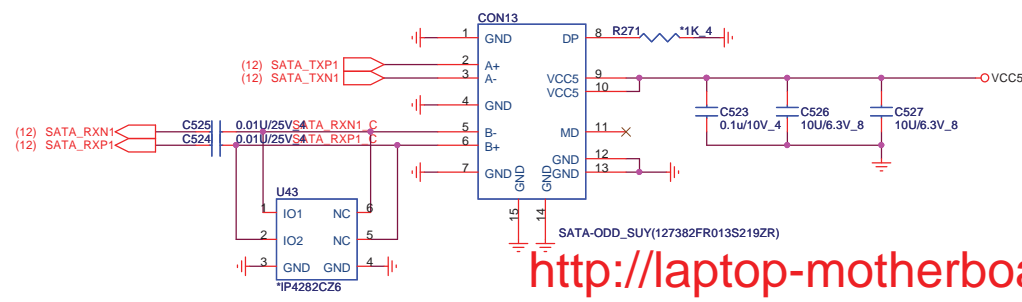
Size	Document Number	Rev
	HDML	3A
Date:	Monday, March 22, 2010	Sheet 22 of 42



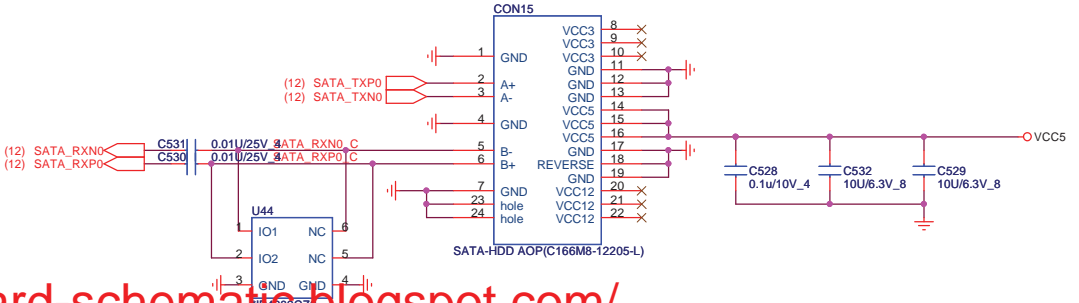
Win7 didn't support wake WLAN



SATA ODD



2.5 inch SATA HDD



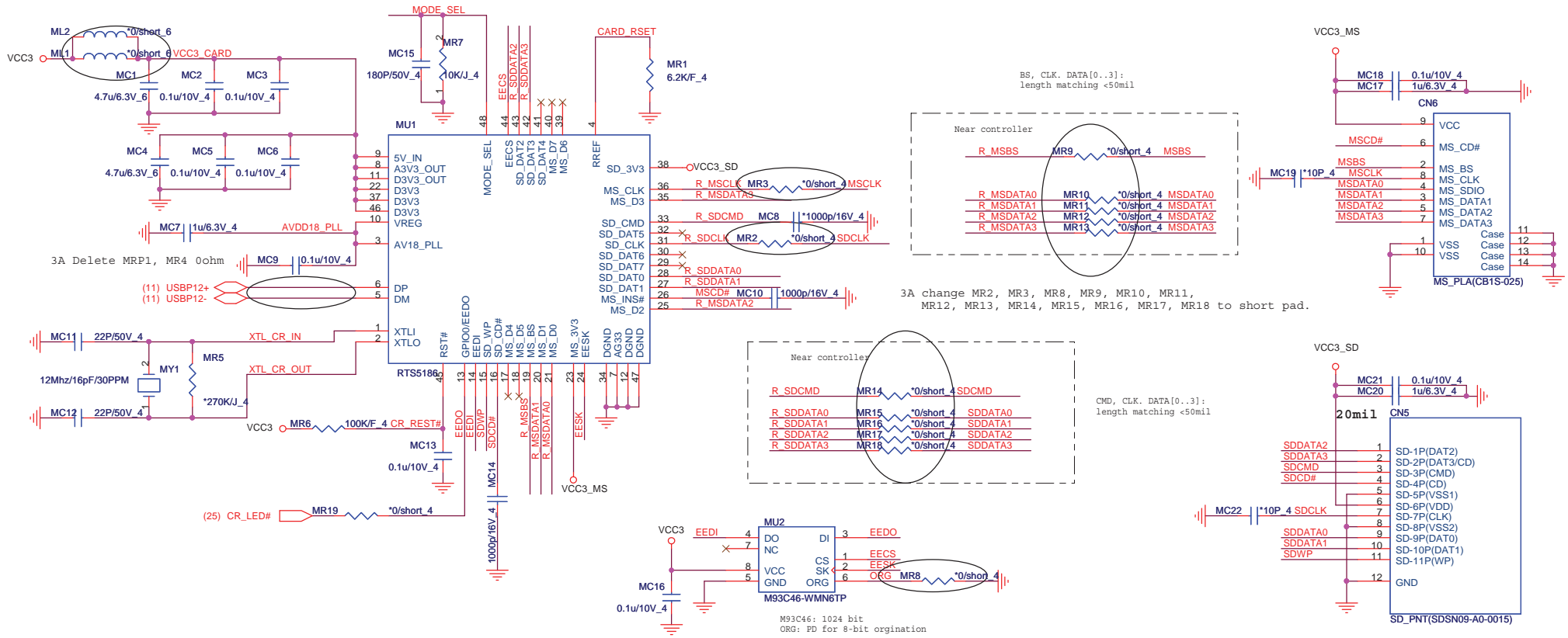
<http://laptop-motherboard-schematic.blogspot.com/>

Quanta Computer Inc.
PROJECT : NE7
WLAN/HDD/ODD


Size	Document Number	Rev
		3A
Date:	Monday, March 22, 2010	Sheet 23 of 42

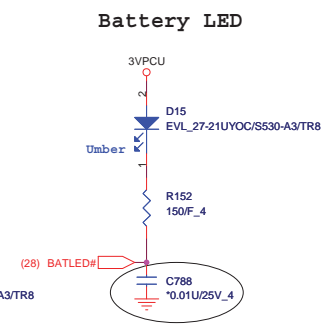
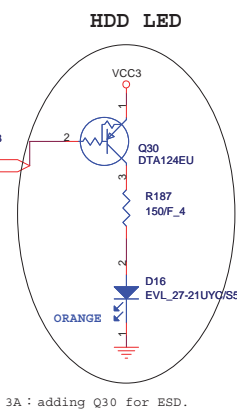
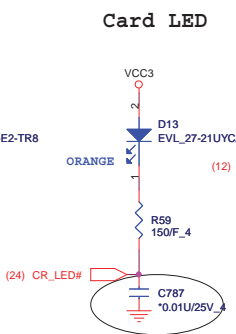
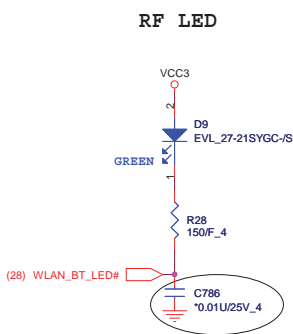
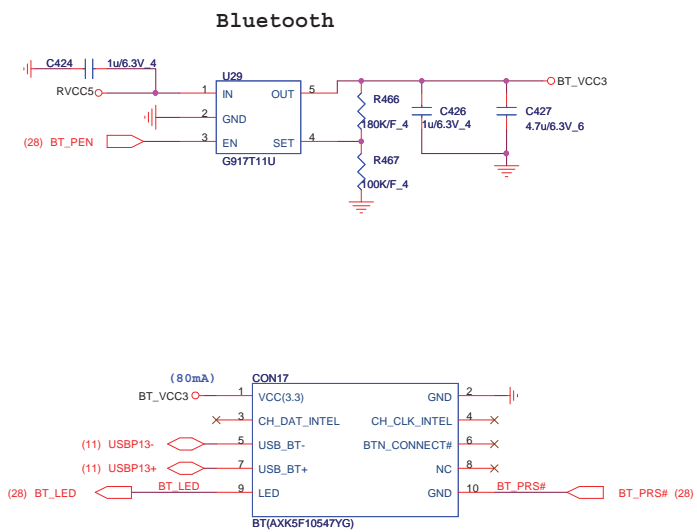
1. Level 1 Environment-related Substances Should NEVER be Used.
 2. Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

3A change ML1 to short pad



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.

 Quanta Computer Inc. PROJECT : NE7		Size	Document Number	Rev
		Date: Monday, March 22, 2010	Sheet 24 of 42	3A



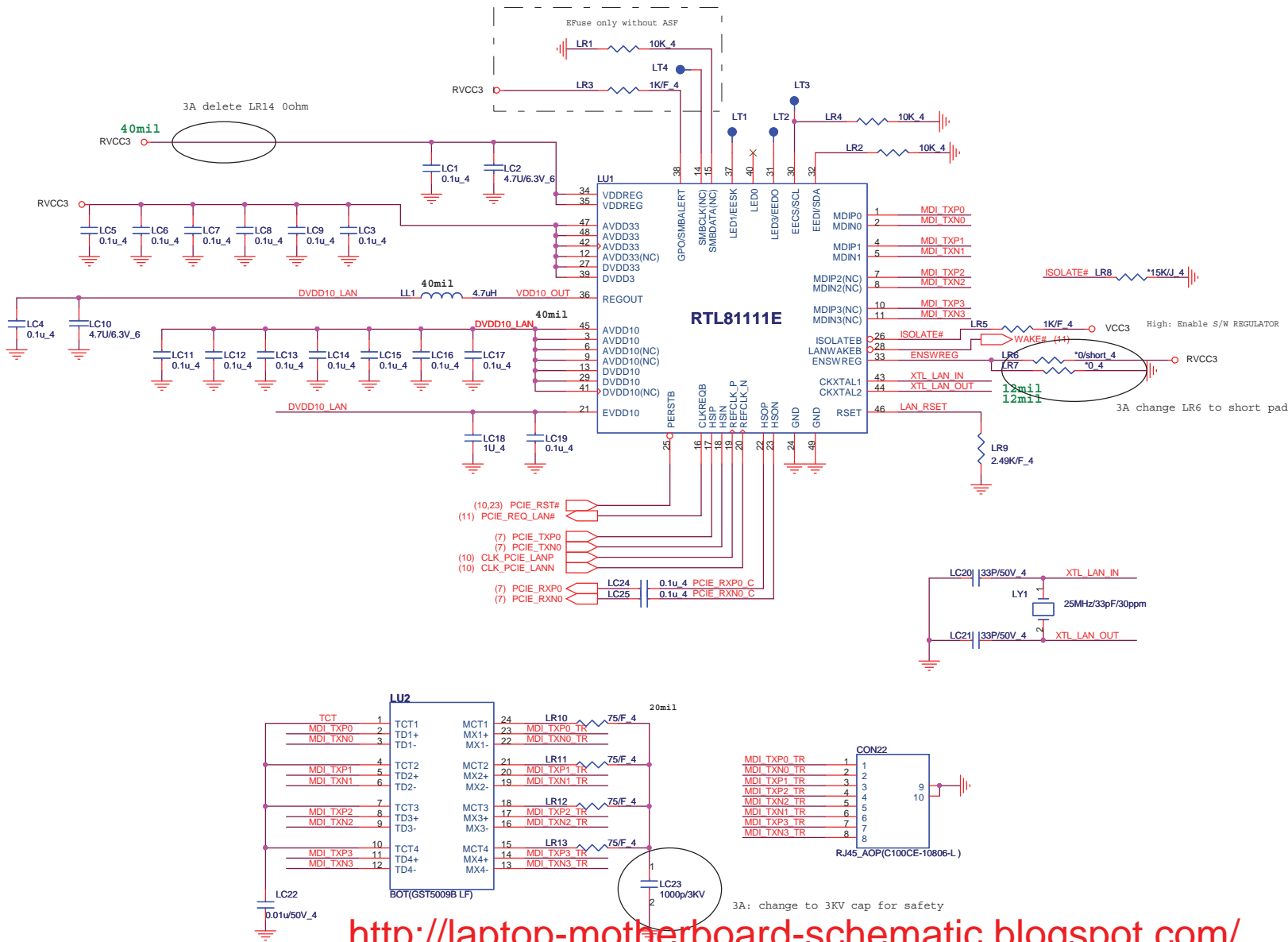
3A : Reverse C786, C787, C788 FP for ESD

<http://laptop-motherboard-schematic.blogspot.com/>

Quanta Computer Inc.
PROJECT : NE7

Size	Document Number	Rev
	Express Card/LED/TP	3A
Date:	Monday, March 22, 2010	Sheet 25 of 42

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.



<http://laptop-motherboard-schematic.blogspot.com/>

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.

Quanta Computer Inc.
PROJECT : NE7

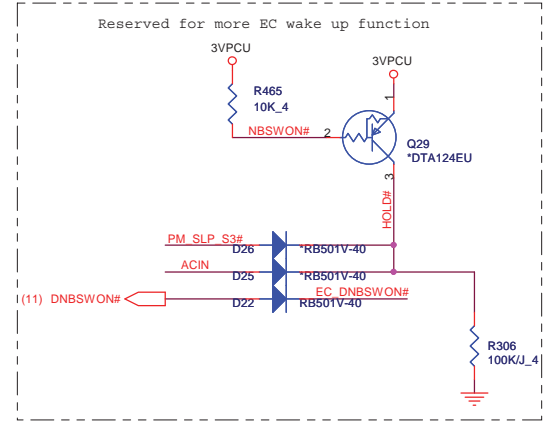
Size Document Number
LAN RTL8111E

Date: Monday, March 22, 2010 Sheet 27 of 42

BADDR1-0	Index	Data
* 1 0	2E	2F
1 1	4E	4F
0 0	{HCFGBAH, HCFGBAL} {HCFGBAH, HCFGBAL}+1	
0 1	XOR-TREE TEST	

SHMB: SHMB(If = 0 Enable share host BIOS memory)

DOCK_RST# : BADDR0
T7: BADDR1

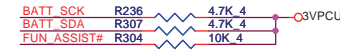


Issue after RVCCON 20-25ms

Power step3
Power step1

3A add R489 10 k PD

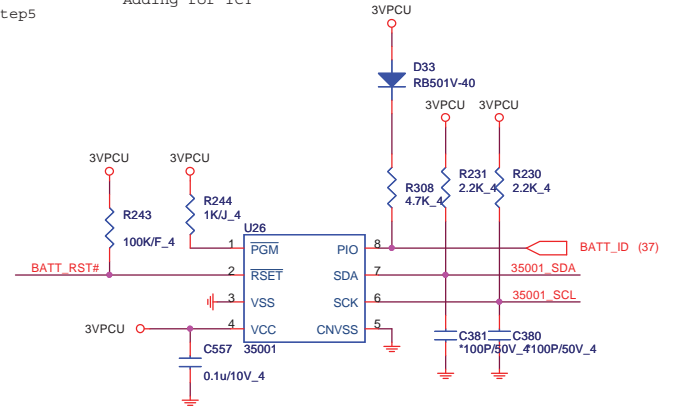
3A change TP to cpu_prochot# in EC.



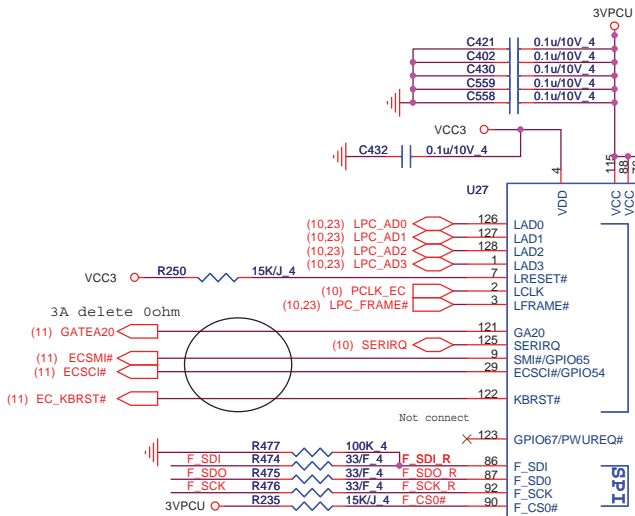
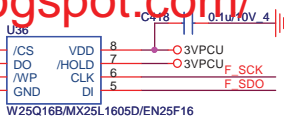
Power step4

Adding for ICT

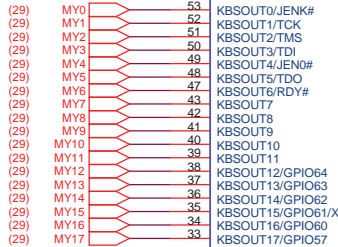
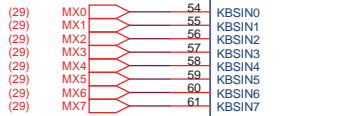
Power step5



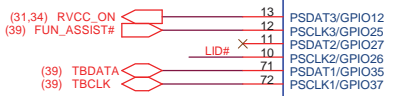
EC SDI-> EEprom DO
EC SDO-> EEprom DI



KBSIN[0...7] SET internal PU

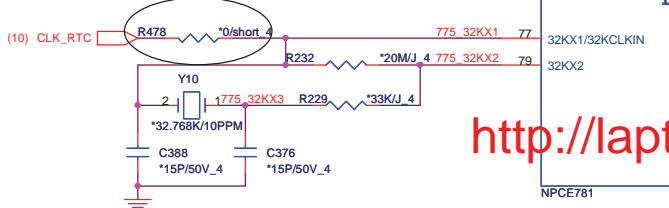


Power step2

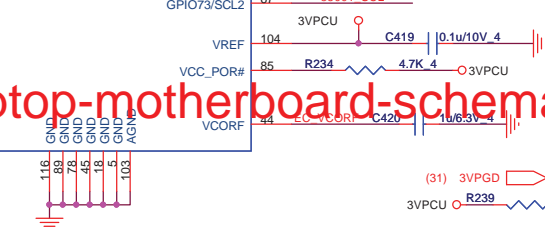
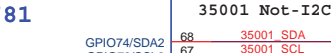


EC must implement Wake function for ACIN & HOLD#

3A change R478 to short pad



NPCE781



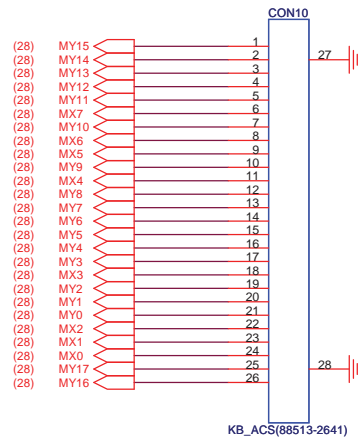
<http://laptop-motherboard-schematic.blogspot.com/>

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.

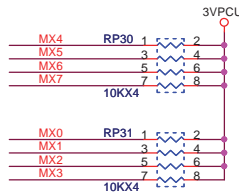
Quanta Computer Inc.
PROJECT : NE7
NPCE781 & FLASH

Size	Document Number	Rev
		3A
Date:	Monday, March 22, 2010	Sheet 28 of 42

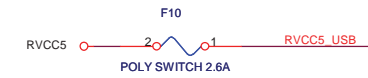
KEYBOARD



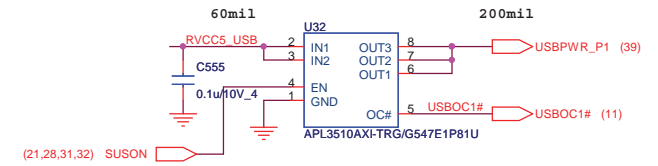
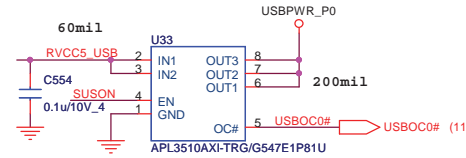
C459	220P	4	MX0
C460	220P	4	MX1
C455	220P	4	MX2
C448	220P	4	MX3
C439	220P	4	MX4
C437	220P	4	MX5
C436	220P	4	MX6
C441	220P	4	MX7
C451	220P	4	MY0
C450	220P	4	MY1
C449	220P	4	MY2
C447	220P	4	MY3
C446	220P	4	MY4
C445	220P	4	MY5
C442	220P	4	MY6
C434	220P	4	MY7
C440	220P	4	MY8
C438	220P	4	MY9
C435	220P	4	MY10
C433	220P	4	MY11
C431	220P	4	MY12
C429	220P	4	MY13
C428	220P	4	MY14
C425	220P	4	MY15
C422	220P	4	MY16
C423	220P	4	MY17



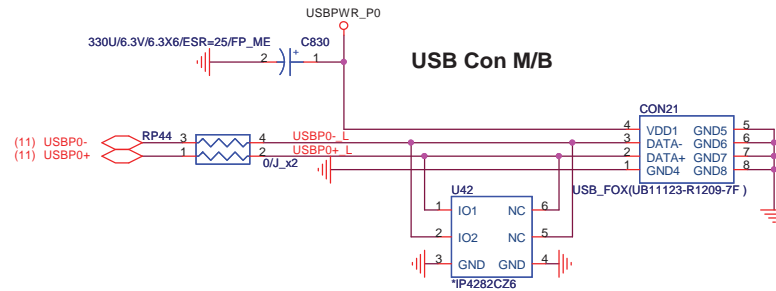
USB Port + e-SATA (USB)



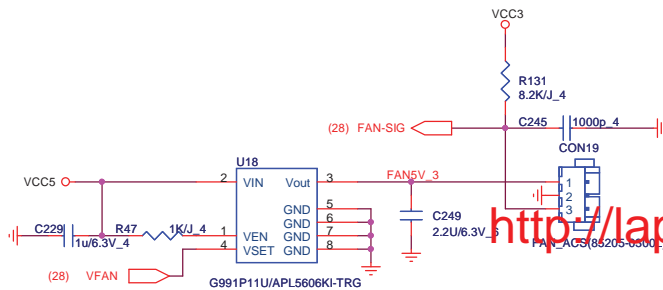
Current limit need to check



USB Con M/B



FAN



<http://laptop-motherboard-schematic.blogspot.com/>

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.

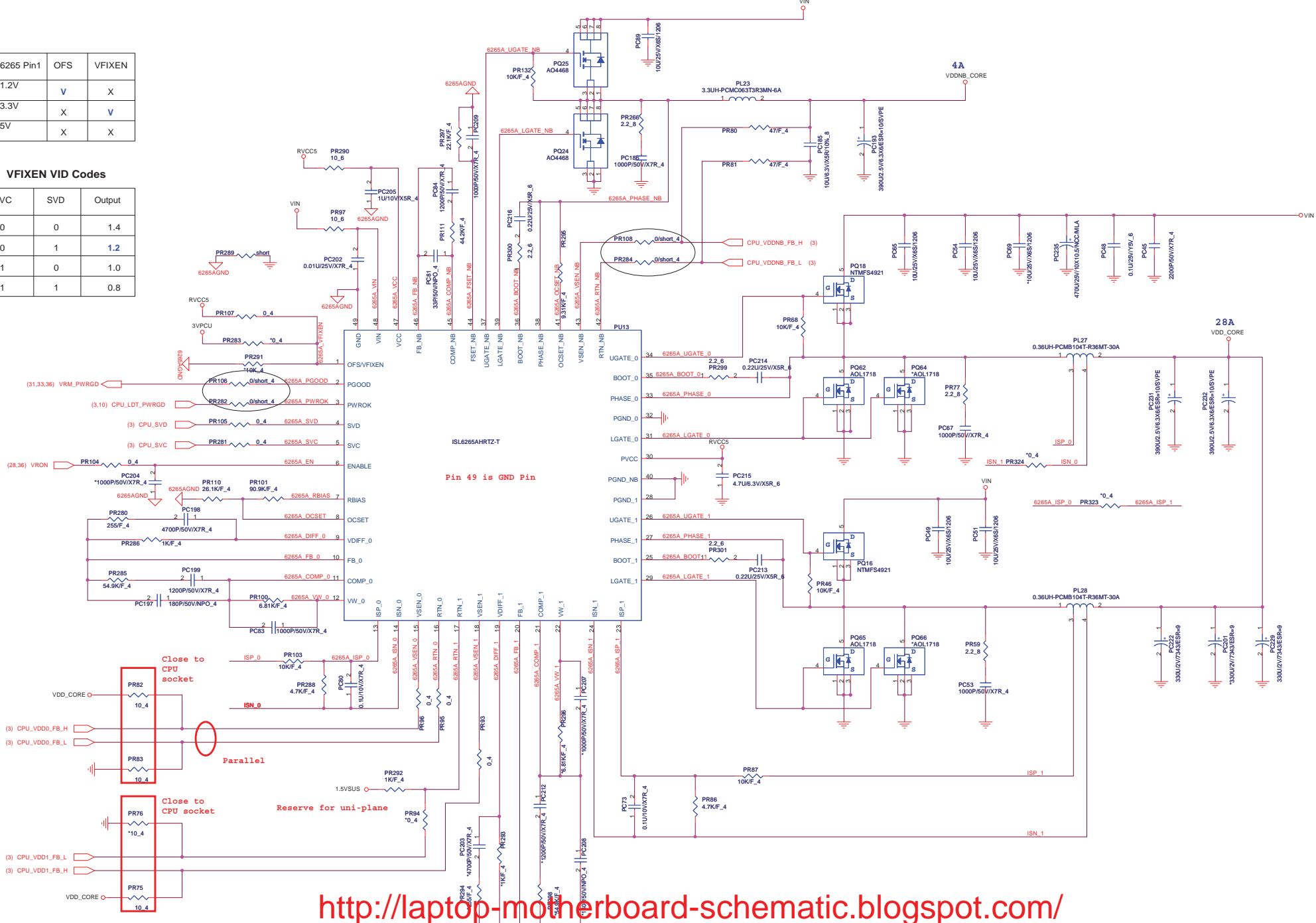
Quanta Computer Inc.
PROJECT : NE7

Size	Document Number	Rev
Date: Monday, March 22, 2010	Sheet 29 of 42	3A

ISL6265 Pin1	OFS	VFIXEN
1.2V	V	X
3.3V	X	V
5V	X	X

VFIXEN VID Codes

SVC	SVD	Output
0	0	1.4
0	1	1.2
1	0	1.0
1	1	0.8



Pin 49 is GND Pin

Parallel

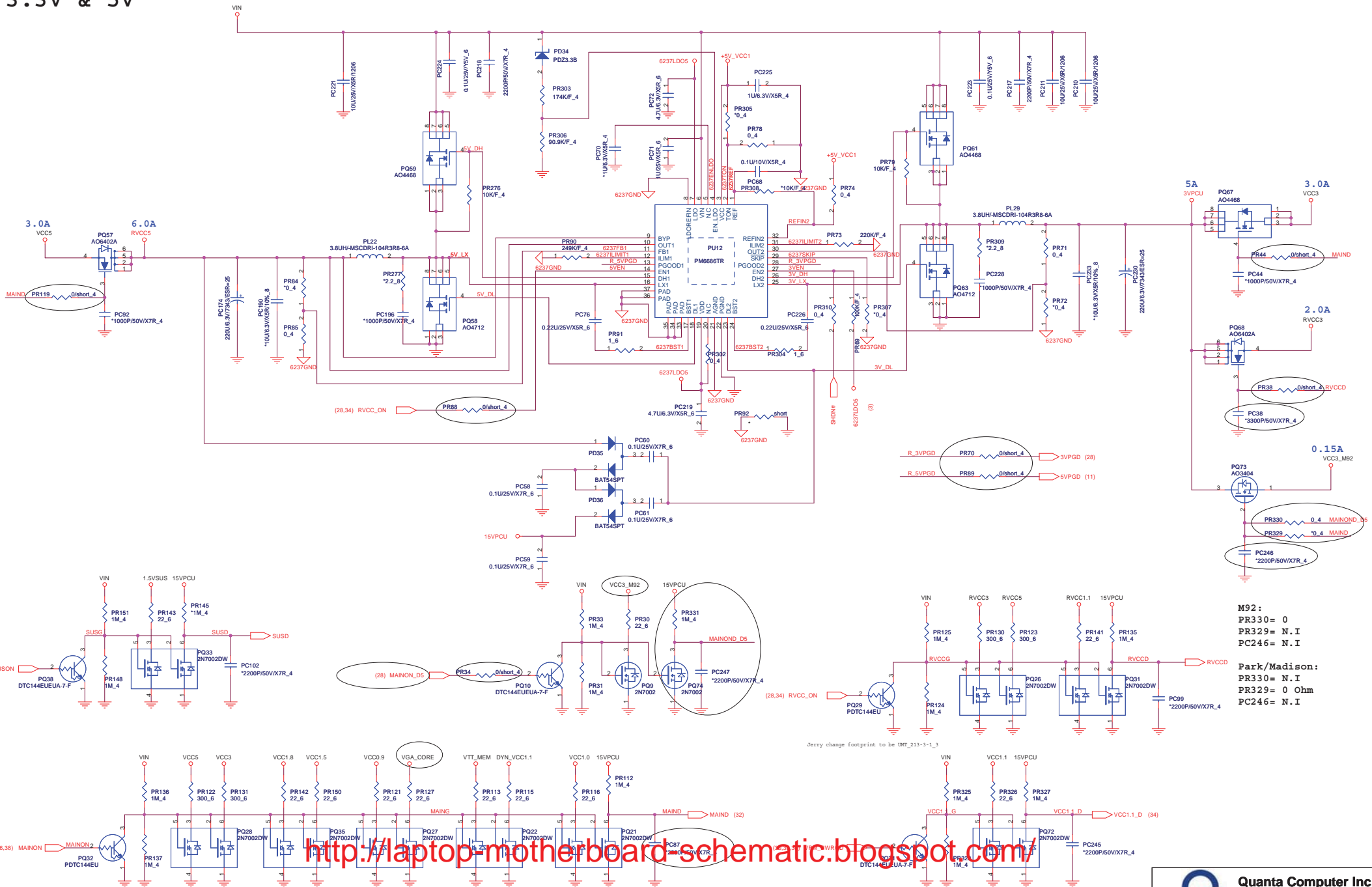
Reserve for uni-plane

<http://laptop-motherboard-schematic.blogspot.com/>

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.

Quanta Computer Inc.
 PROJECT : NE7
 Size Document Number VCORE(ISL6265A) Rev 3A
 Date: Monday, March 22, 2010 Sheet 30 of 42

3.3V & 5V



- M92:
 PR330 = 0
 PR329 = N.I
 PC246 = N.I
- Park/Madison:
 PR330 = N.I
 PR329 = 0 Ohm
 PC246 = N.I

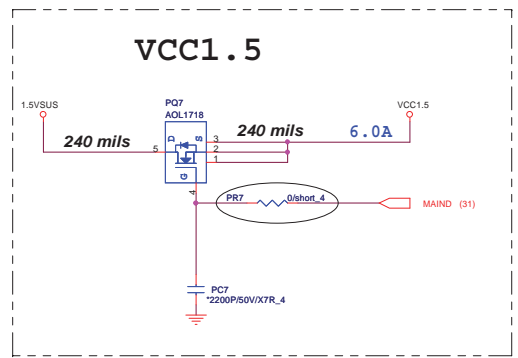
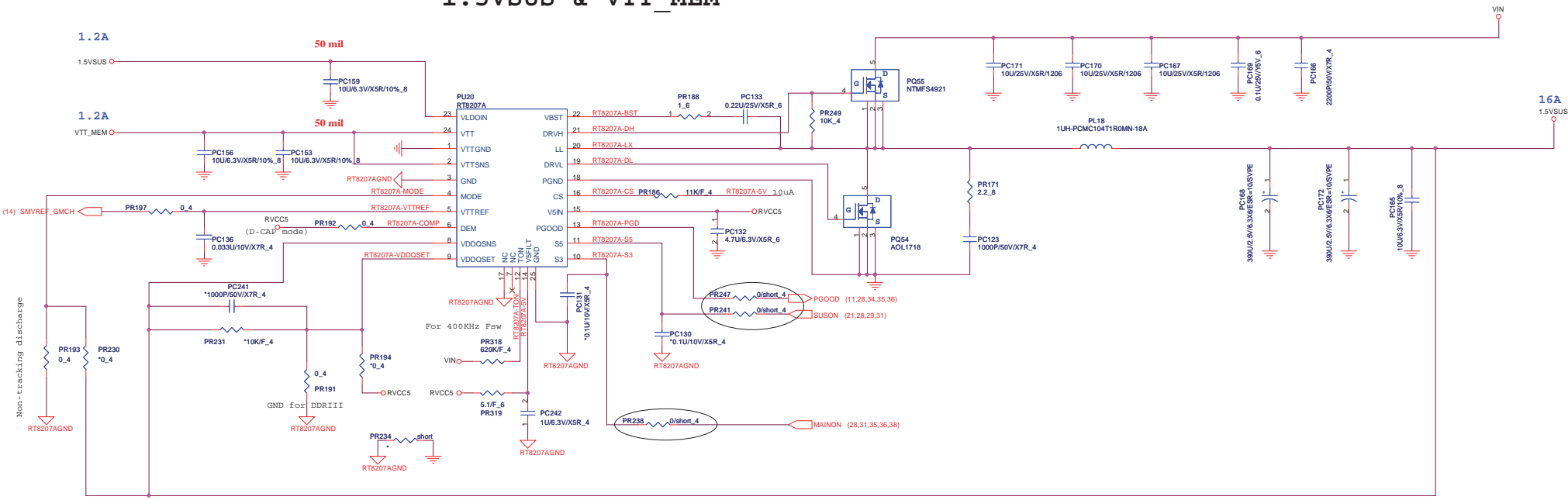
<http://laptop-motherboard-schematic.blogspot.com/>

Quanta Computer Inc.
 PROJECT : NE7

Size	Document Number	Rev
	3VP5CU&5VPCU(PM6686)	3A
Date:	Monday, March 22, 2010	Sheet 31 of 42

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.

1.5VSUS & VTT_MEM



MODE	DISCHARGE MODE
+5V	No discharge
+1.8V	Tracking discharge
GND	Non-tracking discharge

VDDQSET	VDDQ(V)	VITREF & VIT	NOTE
GND	1.5 fixed	VDDQNS/2	DDR3
5V	1.8 fixed	VDDQNS/2	DDR2
FB-Resistor	Adjustable	VDDQNS/2	1.5V<VDDQ<3V

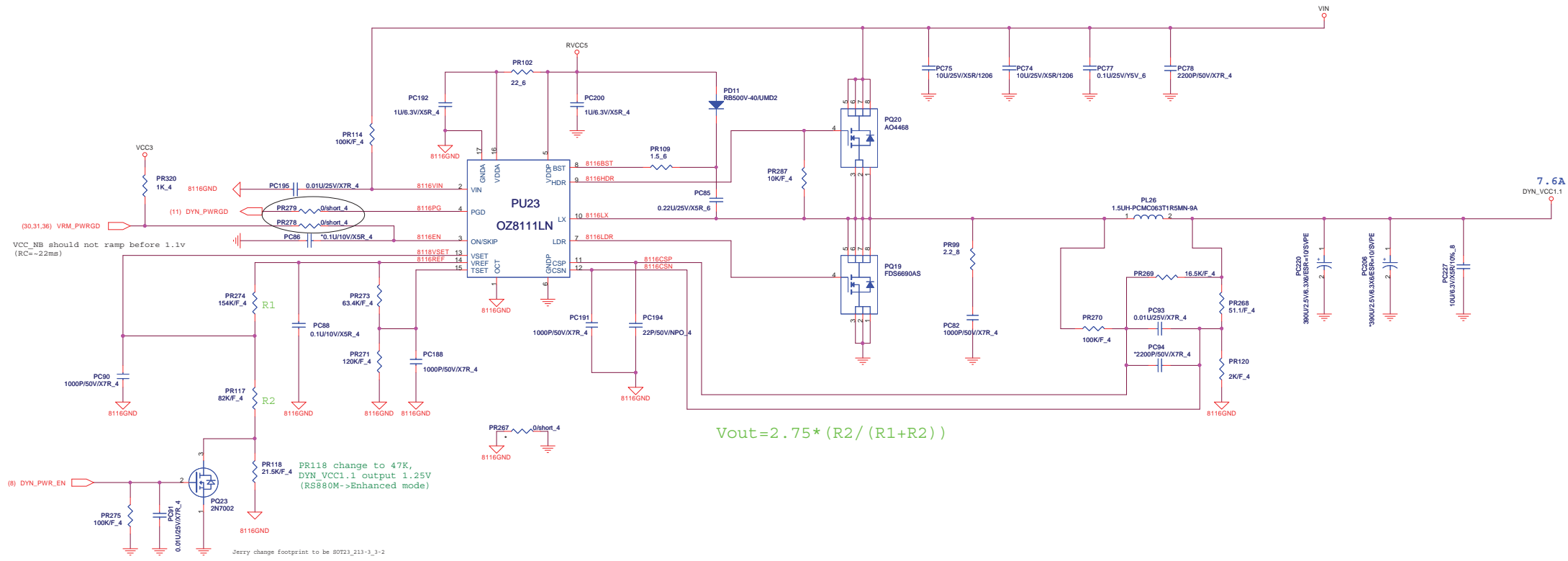
VIT = VITREF = VDDQNS/2 = 0.75V

STATE	S3	S5	1.5VSUS	VITREF	VIT
S0	1	1	on	on	on
S3	0	1	on	on	off
S4/S5	0	0	off	off	off

<http://laptop-motherboard-schematic.blogspot.com/>

Quanta Computer Inc.
 PROJECT : NE7
1.5VSUS/VTT_MEM
 Date: Monday, March 22, 2010 Sheet 32 of 42

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.

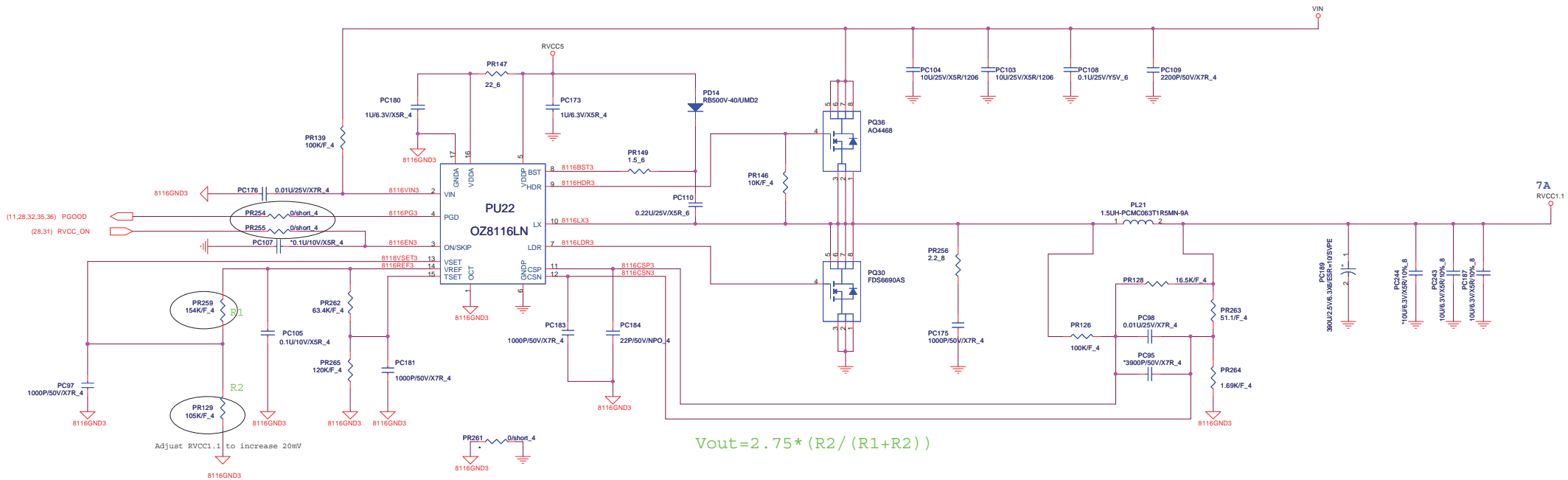


DYN_PWR_EN	High	Low
DYN_VCC1.1	0.95V	1.1V

<http://laptop-motherboard-schematic.blogspot.com/>

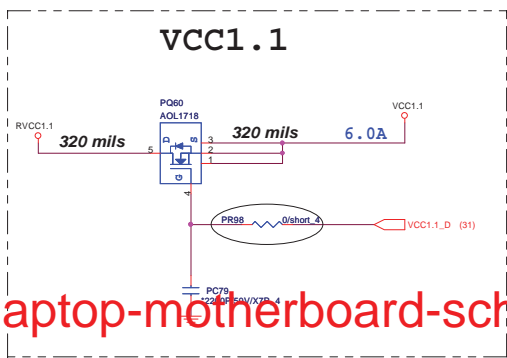
Quanta Computer Inc.
 PROJECT : NE7
 DYN_VCC1.1(OZ8116LN)
 Date: Monday, March 22, 2010 Sheet 33 of 42

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.



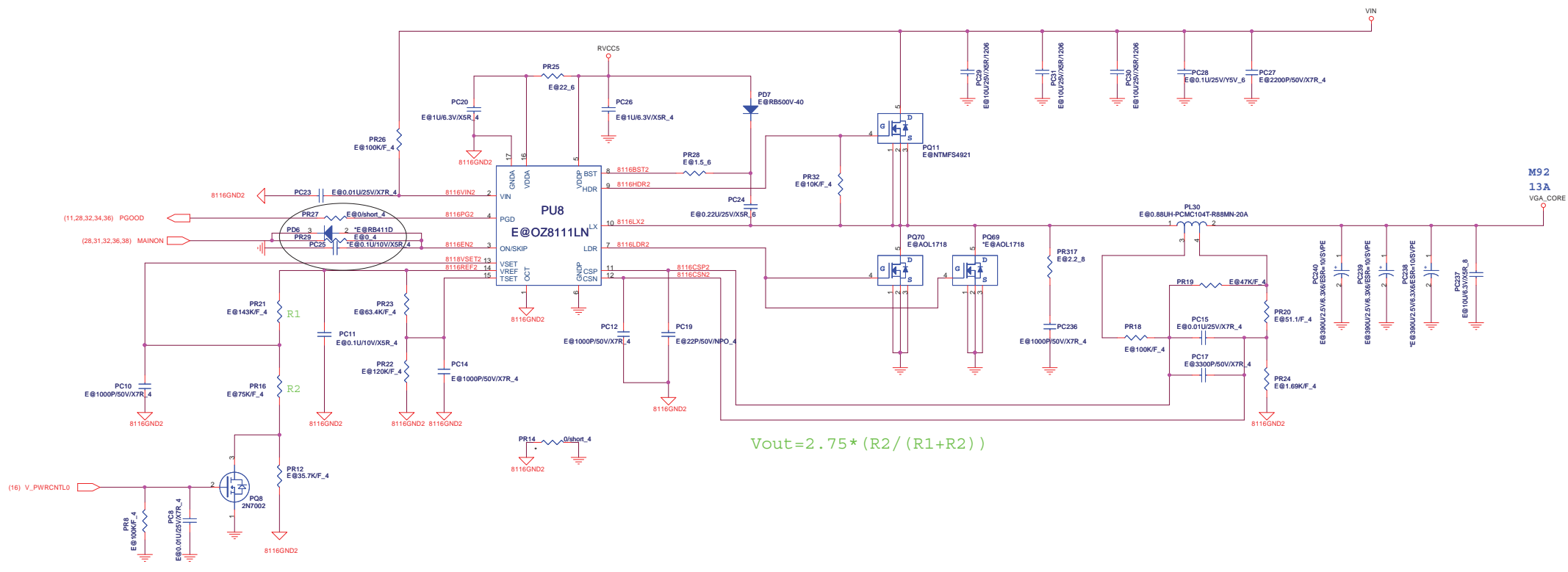
$$V_{out} = 2.75 * (R2 / (R1 + R2))$$

Adjust RVCC1.1 to increase 20mV



<http://laptop-motherboard-schematic.blogspot.com/>

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.



$V_{out} = 2.75 * (R2 / (R1 + R2))$

M92
External VGA_CORE Voltage Setting:

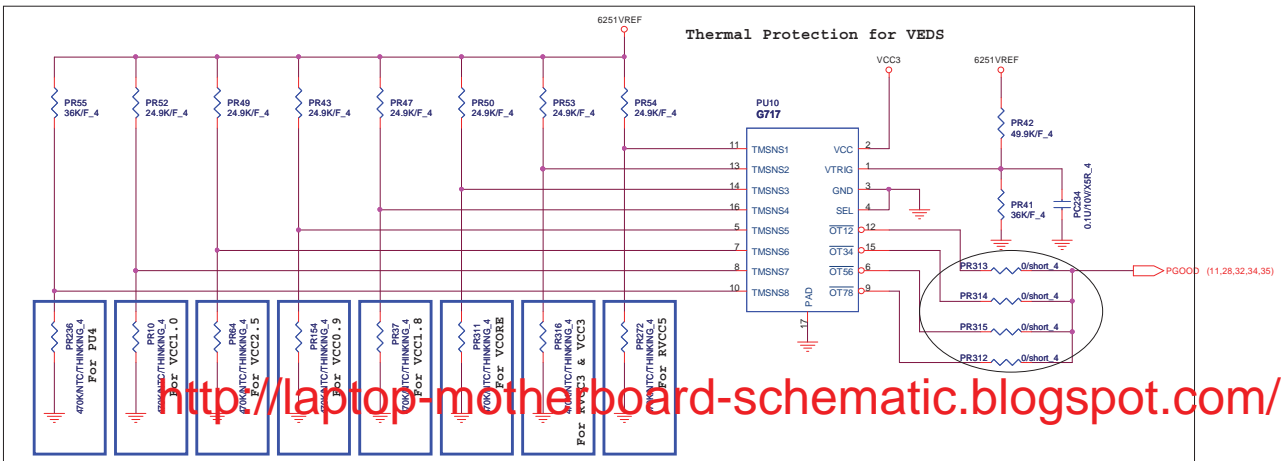
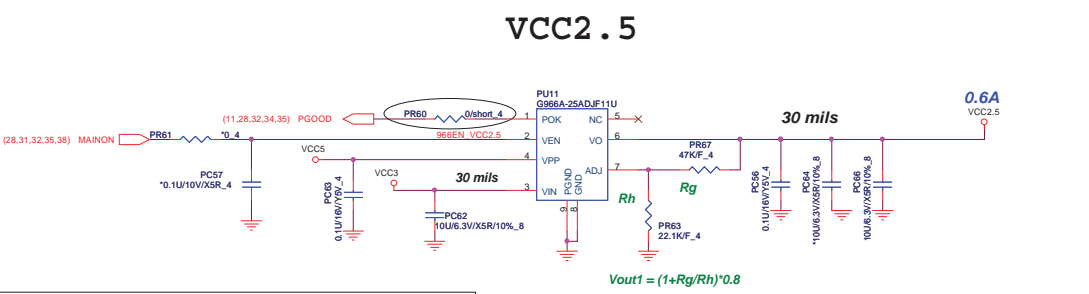
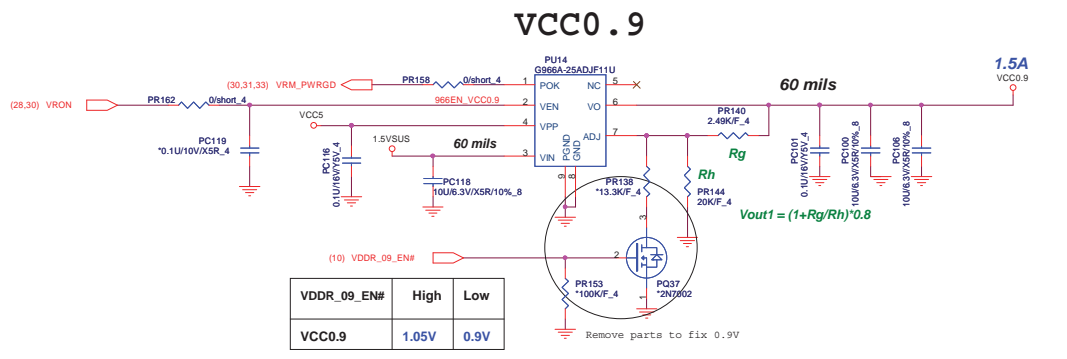
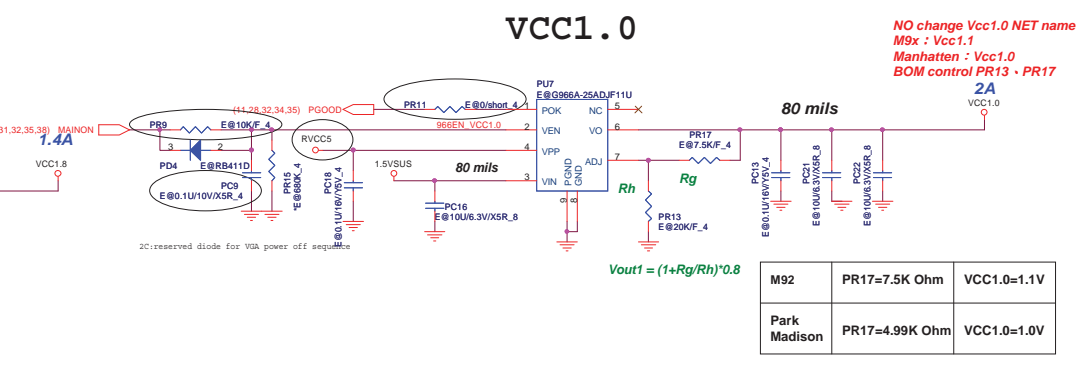
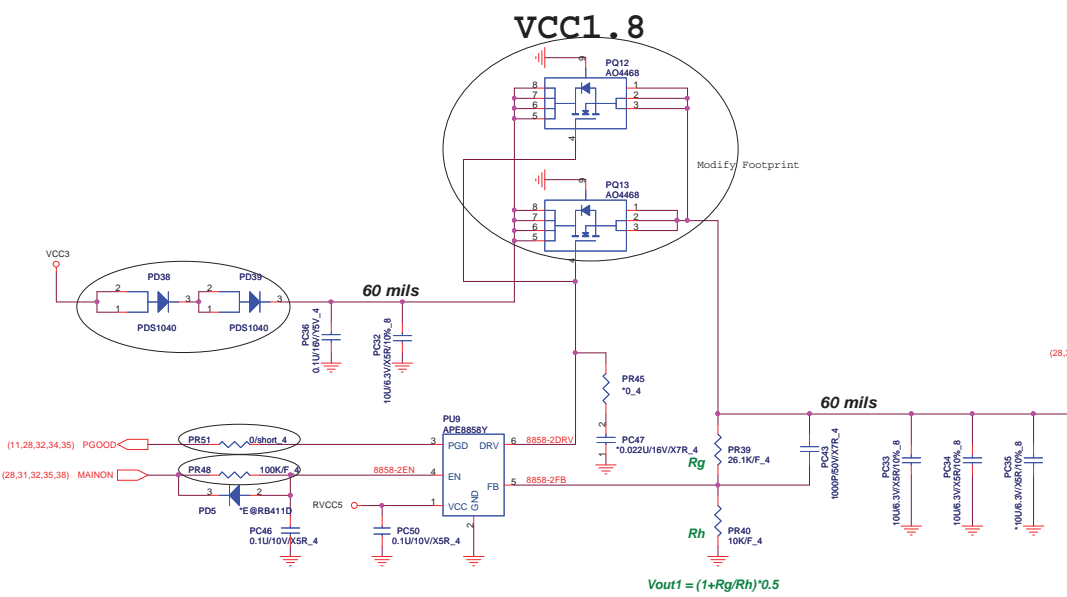
V_PWRCNTL0	VGA_CORE
0	1.20V
1	0.95V

<http://laptop-motherboard-schematic.blogspot.com/>

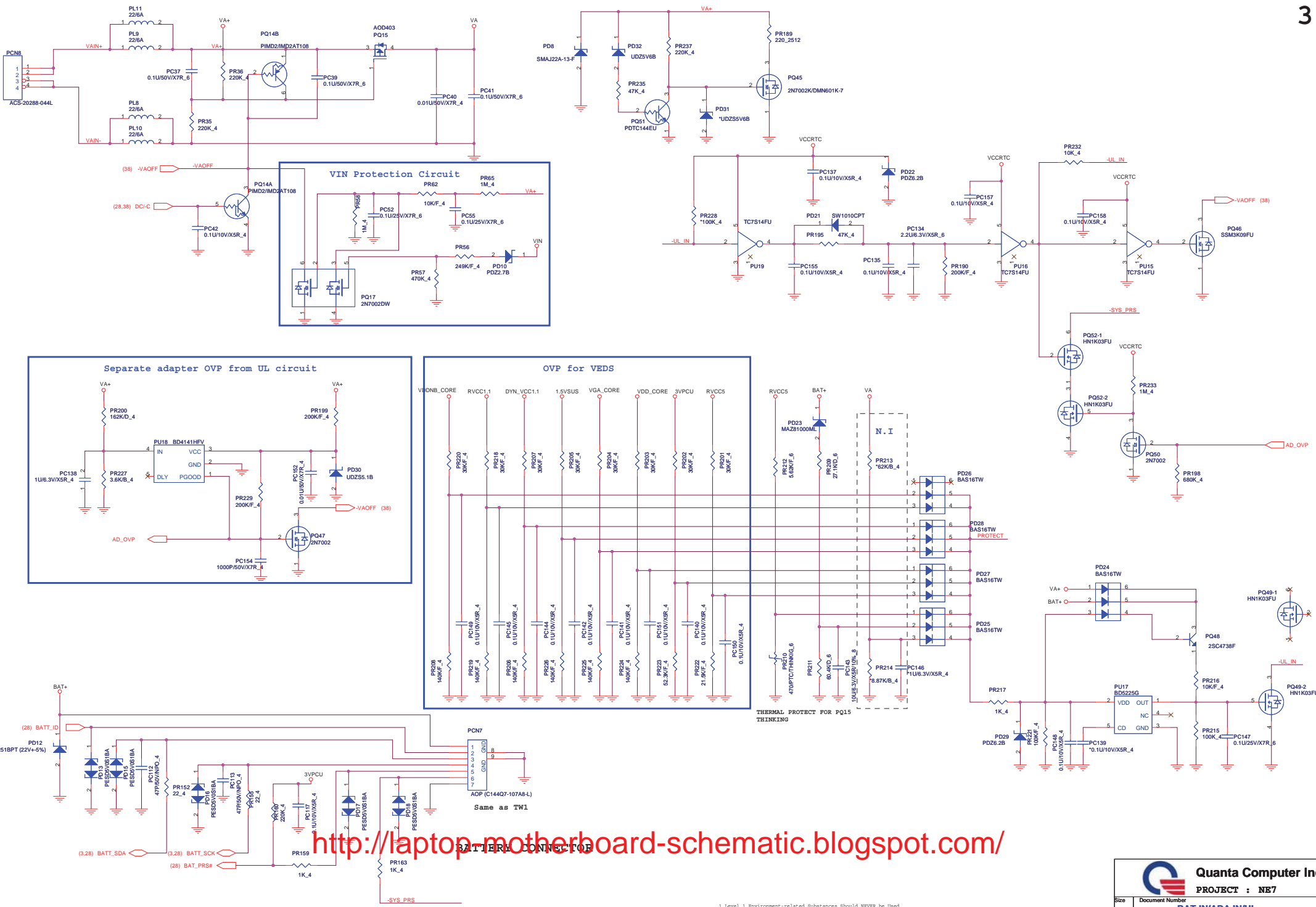
1. Level 1 Environment-related Substances Should NEVER be Used.
2. Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.

Quanta Computer Inc.
PROJECT : NE7

Size	Document Number	Rev
	VGA_CORE(OZ8116)-16A	3A
Date:	Monday, March 22, 2010	Sheet 35 of 42



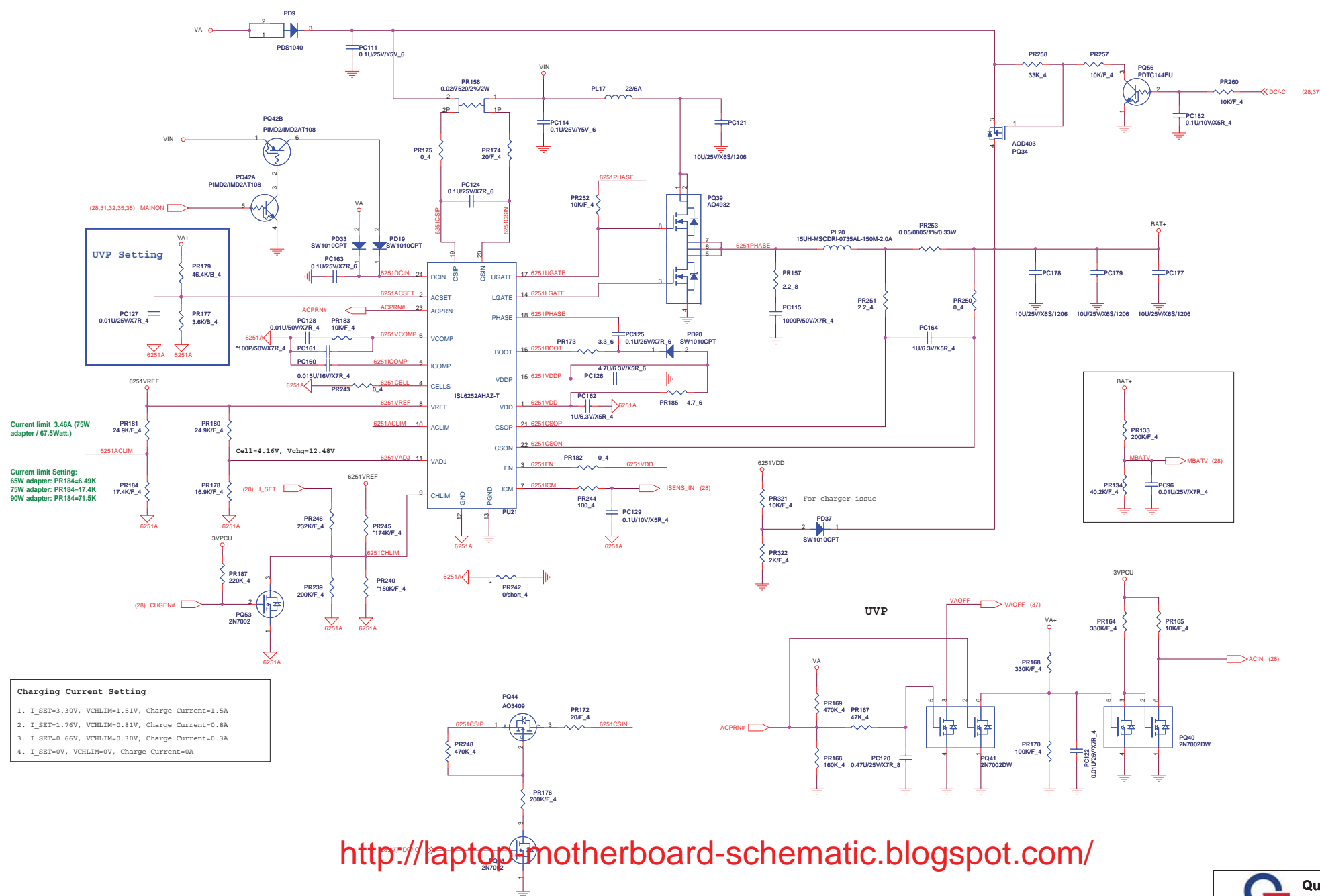
1. Level 1 Environment-related Substances should NEVER be used.
2. Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.



<http://laptop-motherboard-schematic.blogspot.com/>

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.

Quanta Computer Inc.		
PROJECT : NE7		
Size	Document Number	Rev
	BAT IN/VA IN/UL	3A
Date:	Monday, March 22, 2010	Sheet 37 of 42



UVP Setting

VA+
 PR179 46.4K/B_4
 PR177 3.6K/B_4
 PC127 0.01U/25V/X7R_4
 6251A
 6251A

Current limit 3.46A (75W adapter / 67.5Watt.)

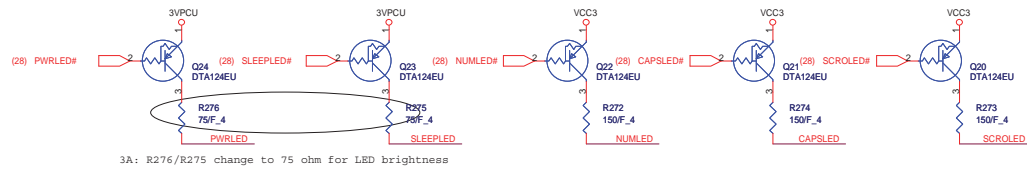
Current limit Setting:
 65W adapter: PR184=6.49K
 75W adapter: PR184=17.4K
 90W adapter: PR184=71.5K

Charging Current Setting

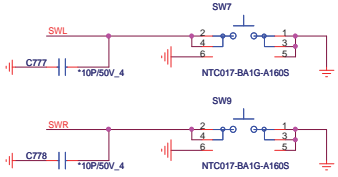
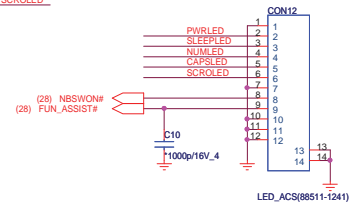
1. I_SET=3.30V, VCHLIM=1.51V, Charge Current=1.5A
2. I_SET=1.76V, VCHLIM=0.81V, Charge Current=0.8A
3. I_SET=0.66V, VCHLIM=0.30V, Charge Current=0.3A
4. I_SET=0V, VCHLIM=0V, Charge Current=0A

<http://laptop-motherboard-schematic.blogspot.com/>

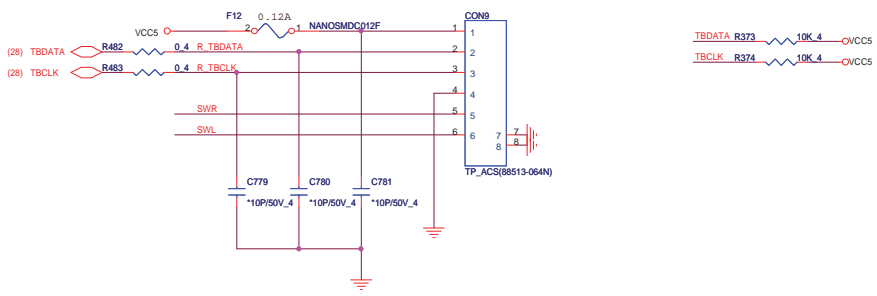
1.Level 1 Environment-related Substances should NEVER be Used.
 2.Purchase ink, paint, wire rods, and Molding resins only from the business Partners that Sony approves as Green Partners.



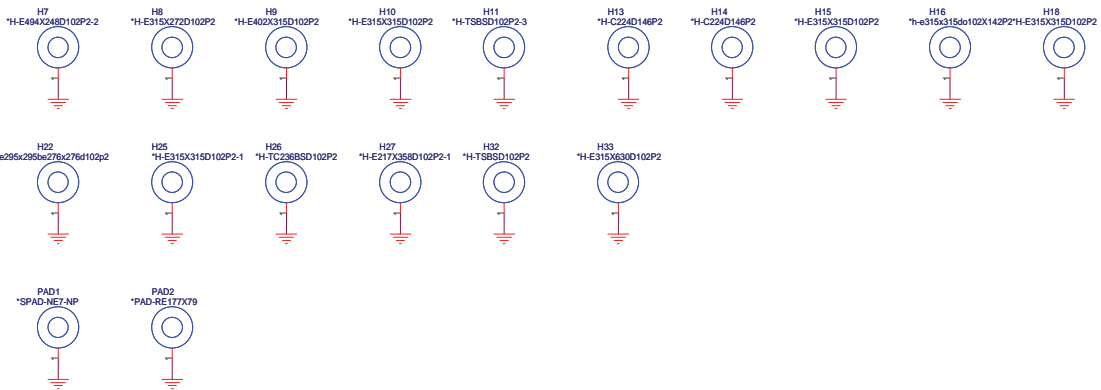
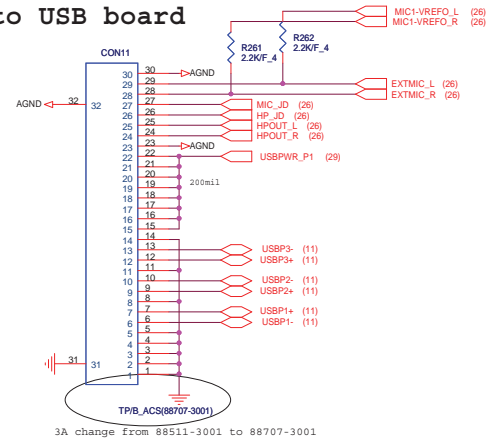
MB to LED board



MB to TP connector



MB to USB board



WLAN

BT

1.8V MOS



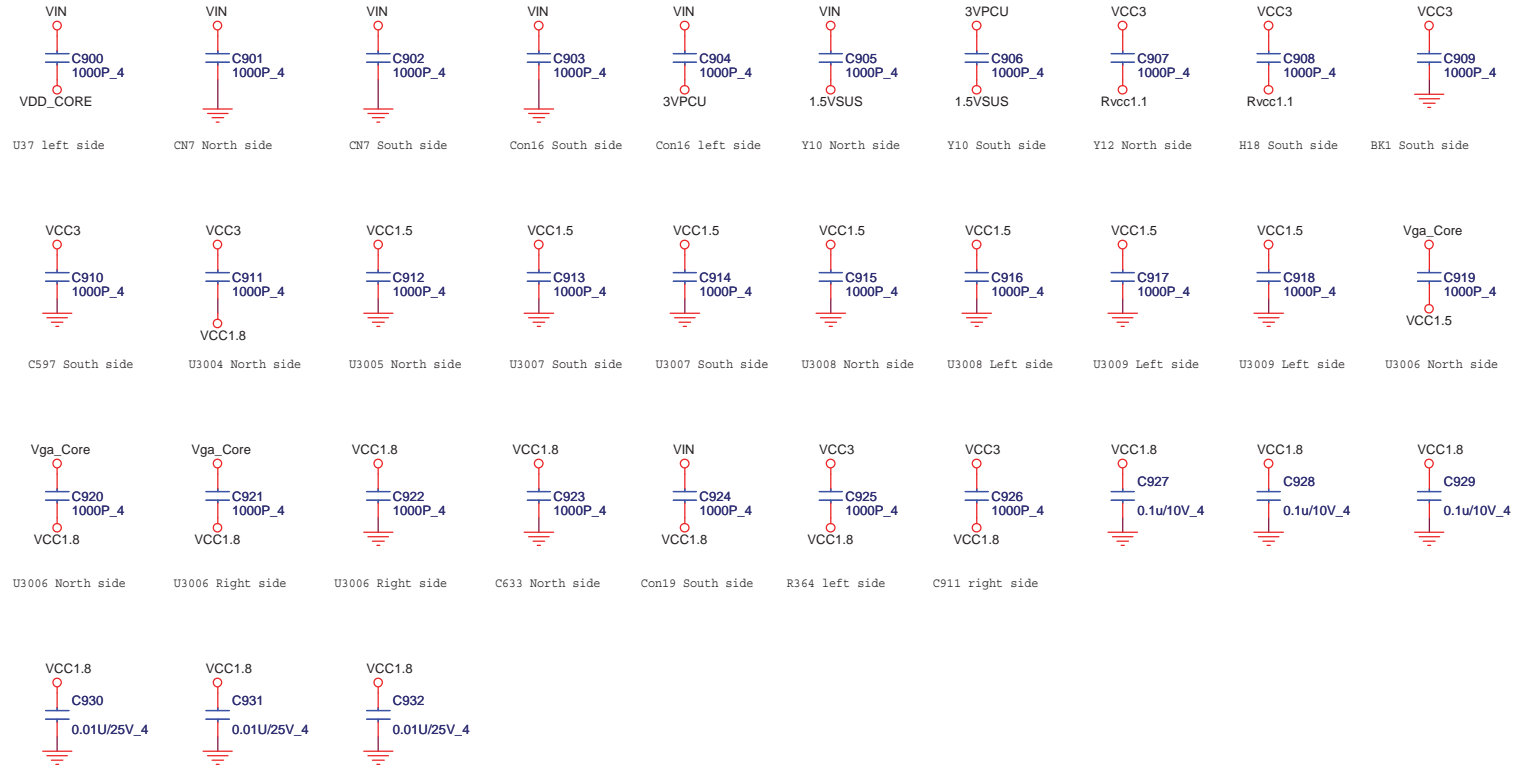
<http://laptop-motherboard-schematic.blogspot.com/>

Quanta Computer Inc.
PROJECT : NE7

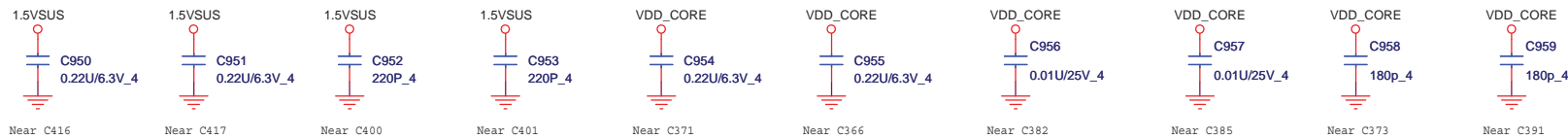
Size	Document Number	Rev
	Small board	3A
Date:	Monday, March 22, 2010	Sheet 39 of 42

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.


Decoupling Cap



Power ripple



<http://laptop-motherboard-schematic.blogspot.com/>

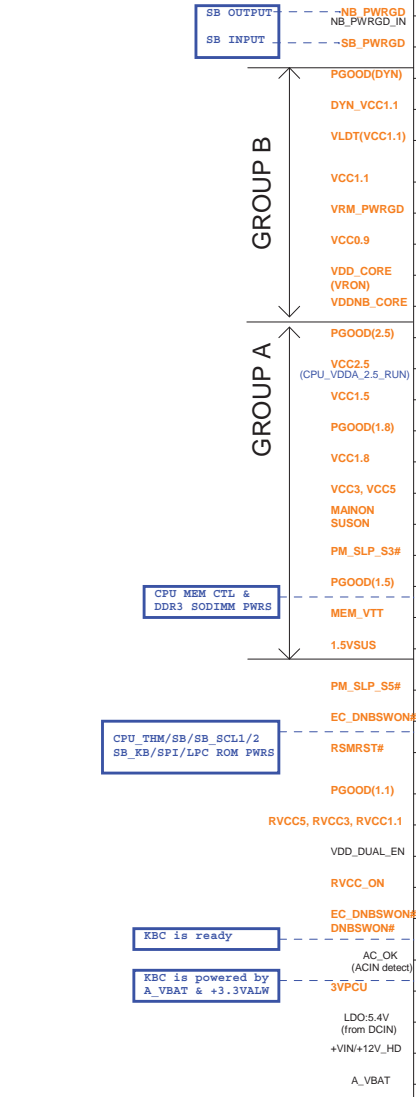
 Quanta Computer Inc. PROJECT : NE7		Rev 3A
Decoupling Cap		
Date:	Monday, March 22, 2010	Sheet E
		40 of 42

1. Level 1 Environment-related Substances Should NEVER be Used.
 2. Purchase ink, paint, glue, solder, and welding leads only from the business partners that Sony approved as Green Partners.

Power on Sequence required:

- SB800:**
 1, +3.3VDUAL ramp before +1.1VDUAL
 2, +3.3V ramp before +1.8V
 3, +1.8V ramp before +1.1V
 4, +3.3V ramp before +1.1V
 5, +3.3VALW_R ramping down time > 300us
 6, 50uS <= All power rails except +3.3VALW_R <= 40mS
 7, 100uS <= +3.3VALW_R <= 40mS

- RS880:**
 1, 0 <(+3.3V) - (+1.8V) < 2.1
 2, +1.8V ramp before +1.1V
 3, +1.1V ramp before VCC_NB



<http://laptop-motherboard-schematic.blogspot.com/>

Quanta Computer Inc.
 PROJECT : NE7

Size	Document Number	Rev
	Power Sequence	3A
Date: Monday, March 22, 2010	Sheet	41 of 42

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.

2A Adding R159 (10K) for shut down issue.

3A Rename for location(R464, C452)

3A Delete AMD debug connector

3A change R169, R155, R162, R340,
R163, R161, R168, R341, R337 to short pad

3A Delete R332, R249, R181, R333 0ohm

3A change L23, L24, L29, L21, R156,
R171, R167 to short pad

3A Delete R427, R428, R429, R430 0ohm.

3A delete RP36, RP42, RP38,
RP26, RP43, RP41, RP35 0ohm

3A : Delete R358 0ohm

3A : change R247, R305 from 100k to 10Kohm

3A : change R196, R198 from 100k to 10Kohm

3A change R150, L27, L26, L30 to short pad

3A change R172, L42, L28, L25 to short pad

3A change R309, R184, L31, L34, L41 to short pad

3A change L32, L33, L35, R212 to short pad

3A Adding GPIO3 `4 for VGA thermal sensor

3A : change L3004, L3019 to short pad

3A change L3006, L3010 to short pad

3A delete L3007, L3012, L3013, R3061 0ohm

3A delete R3049 0ohm

3A change R3112 to short pad

3A delete R3113 0ohm

3A change R252 to short pad.

3A change MR2, MR3, MR8, MR9, MR10, MR11,
MR12, MR13, MR14, MR15, MR16, MR17,
MR18, ML1 to short pad.

3A : adding Q30 for ESD.

3A Change R214 to short pad

3A: delete R277, R294 0ohm

3A: Change L36, L37, L38, L39 to short pad

3A delete R290, R295(colayout) 0ohm, T74(EC side)

3A C541, C542, C543 change from AGND to GND

3A R375 no mount

3A delete LR14 0ohm


3A change LR6 to short pad

3A change R478 to short pad

3A adding R485 PD for mute

Remove short pad: R422,R423

<http://laptop-motherboard-schematic.blogspot.com/>

 Quanta Computer Inc. PROJECT : NE7		Rev
		3A
Size	Document Number	Change History
Date:	Monday, March 22, 2010	
Sheet		42 of 42