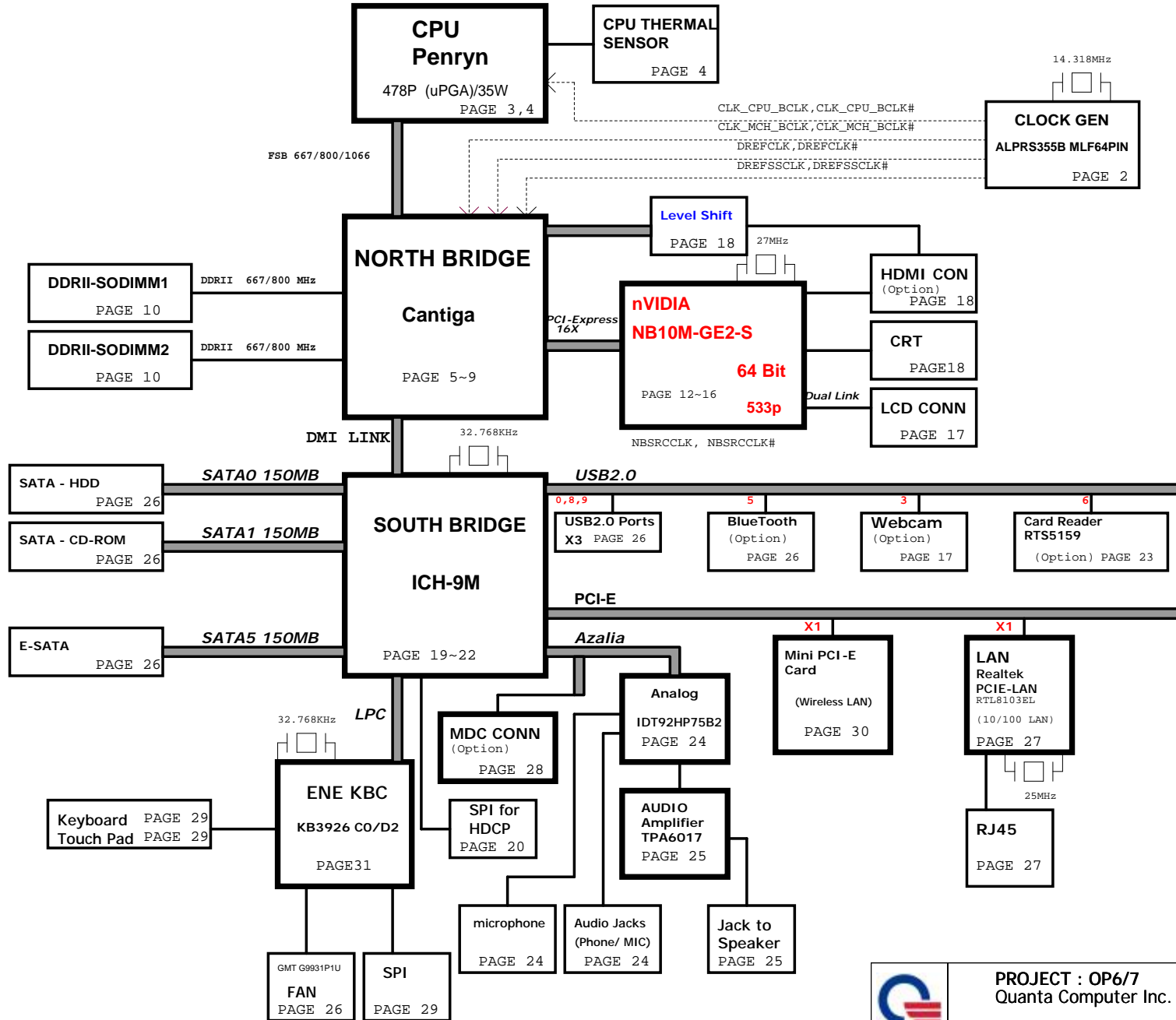



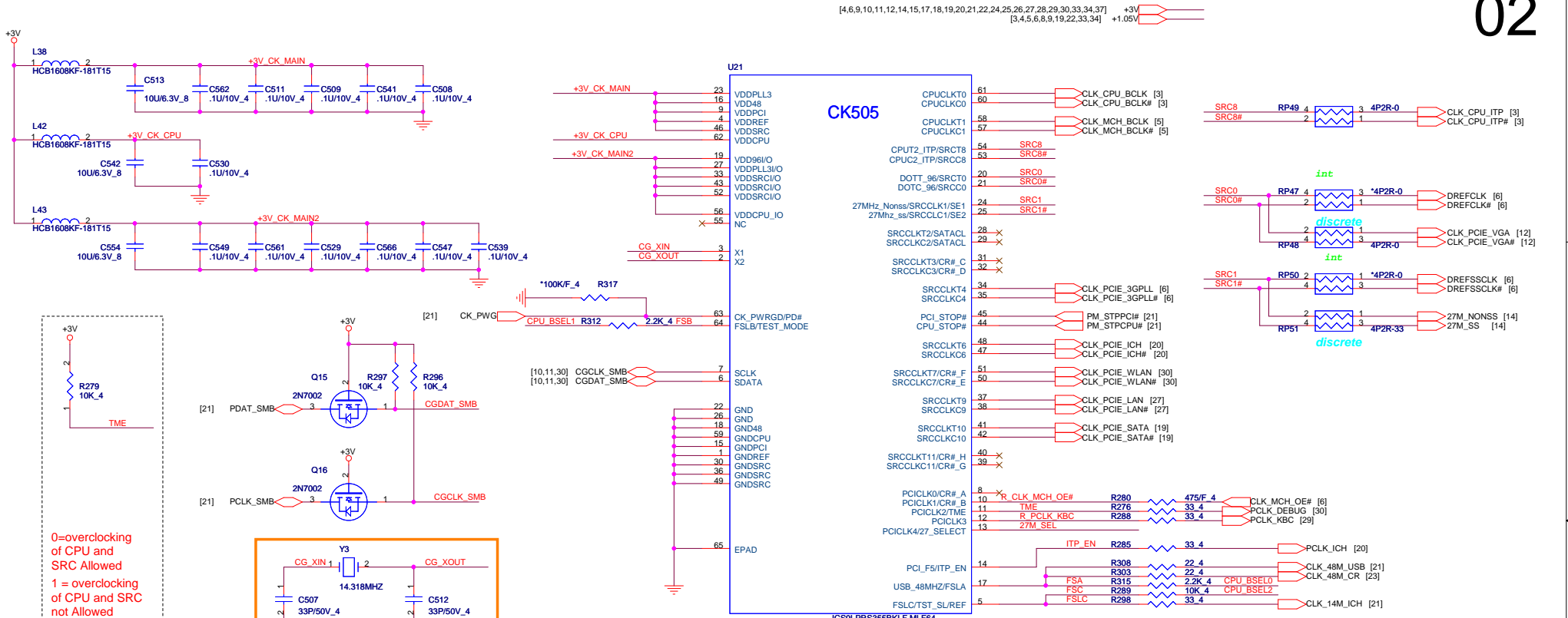
Tango/Ballet BLOCK DIAGRAM

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

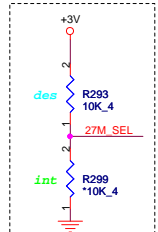
- SYSTEM CHARGER(ISL6251AHAZ-T)
PAGE 31
- SYSTEM POWER ISL6237IRZ-T
PAGE 32
- DDR II SMDDR_VTERM
1.8V/1.8VSUS(TPS51116REGR)
PAGE 36
- VCCP +1.5V AND GMCH
1.05V(RT8204)
PAGE 33
- CPU CORE ISL6266A
PAGE 34



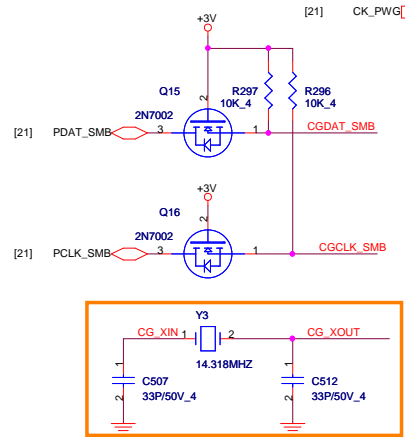
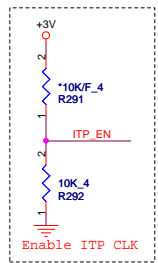
	PROJECT : OP6/7 Quanta Computer Inc.		Rev A
	Size Custom	Document Number Block Diagram	



0=overclocking of CPU and SRC Allowed
1 = overclocking of CPU and SRC Not Allowed



0=UMA
1 = External VGA

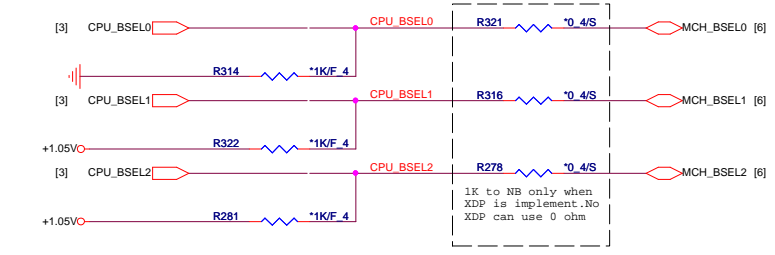


DB:Change from 27P to 33P(TXC suggestion)

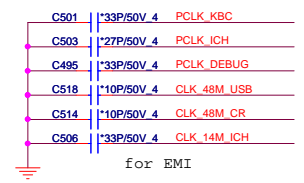
27M_SEL PIN13	PIN20	PIN21	PIN24	PIN25
0=UMA	DOT96T	DOT96C	SRCT1/LCDT_100	SRCT1/LCDT_100
1 = External VGA	SRCT0	SRCC0	27Mout-NSS	27Mout-SS

CK505 QFN64
 Siligo SLG8SP513VTR AL8SP513000
 Realtek RTM875N-606-VD-GR AL000875000

CPU Clock select



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

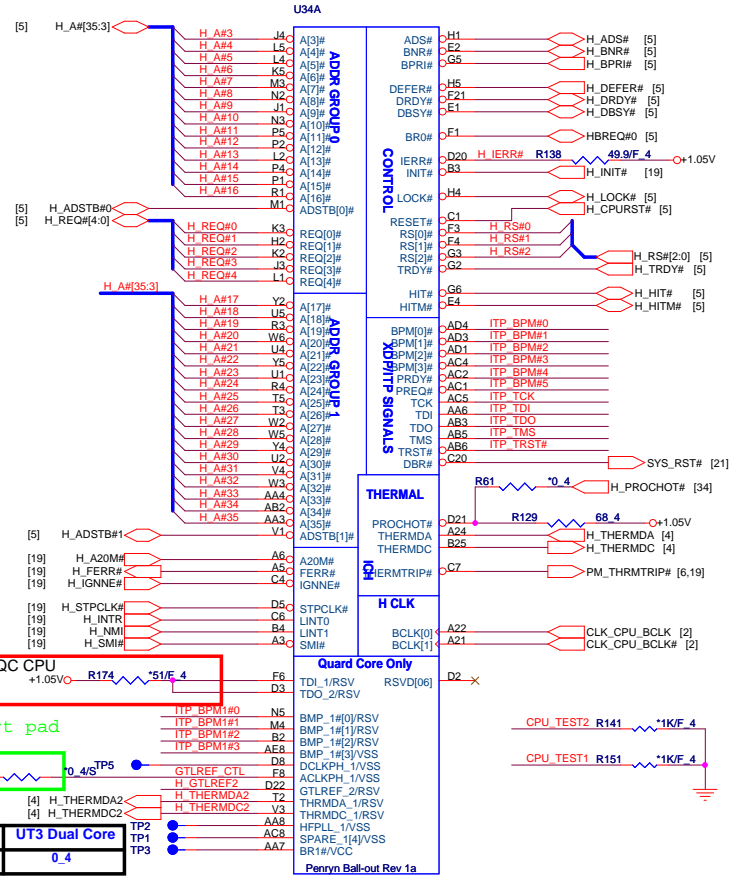


PROJECT : OP6/7
Quanta Computer Inc.

NBS

Size Custom Document Number **CK505 QFN64** Rev SI

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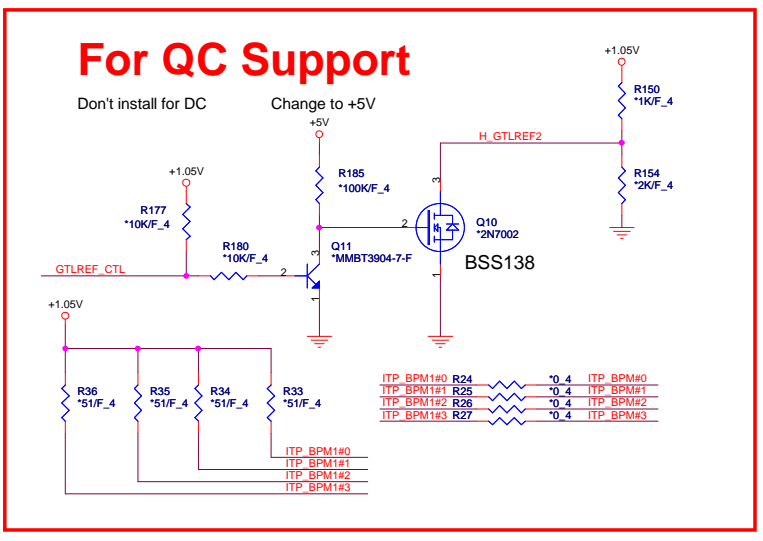
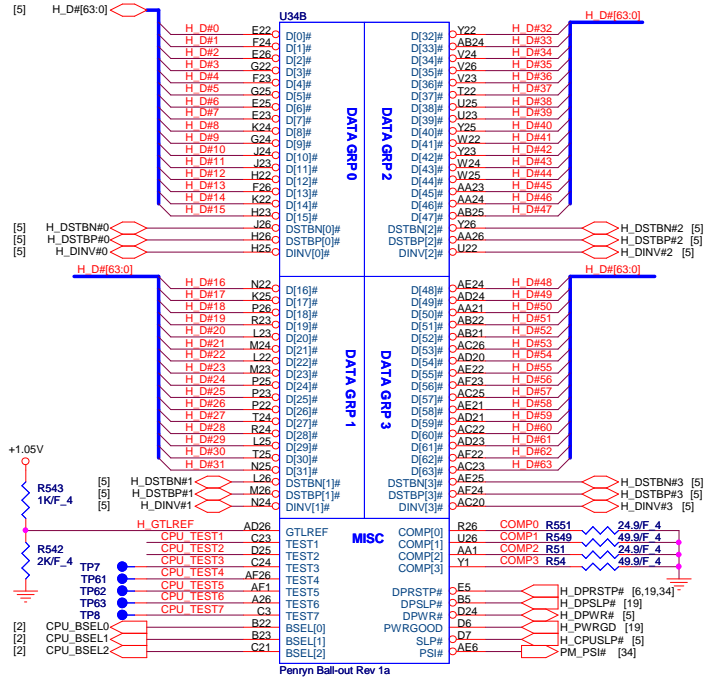
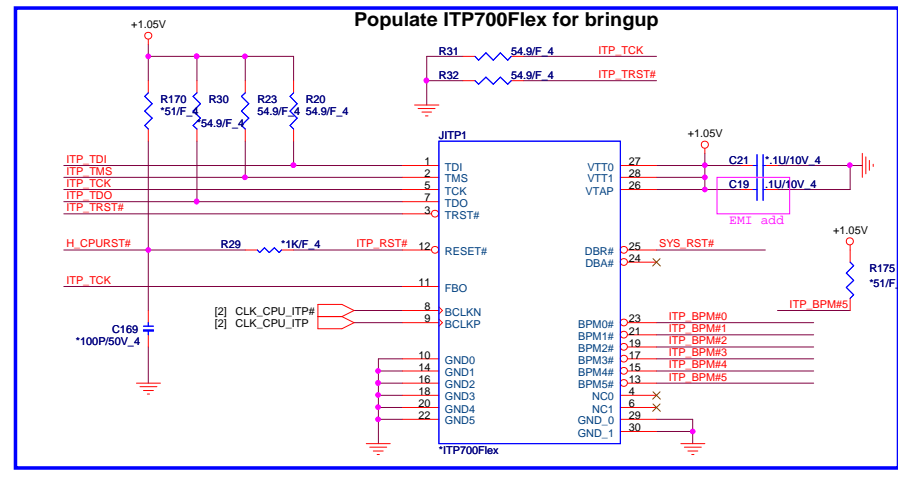
PV Stage: Change to short pad

For QC CPU +1.05V R174 *51/F_4

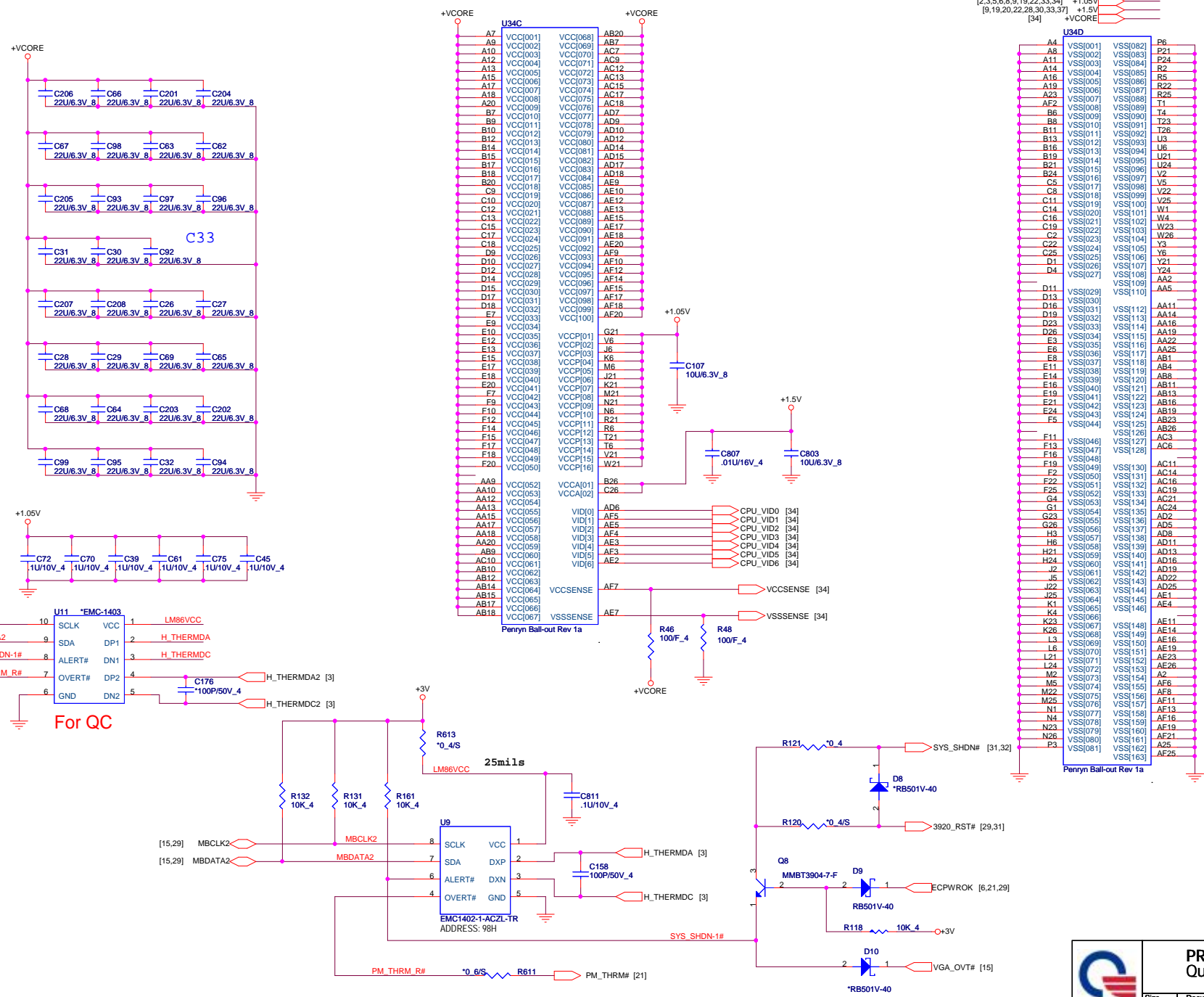
R28 *0.4/TP5

MODEL	UT5 Quad Core	UT3 Dual Core
R28	*0.4	0.4

Populate ITP700Flex for bringup



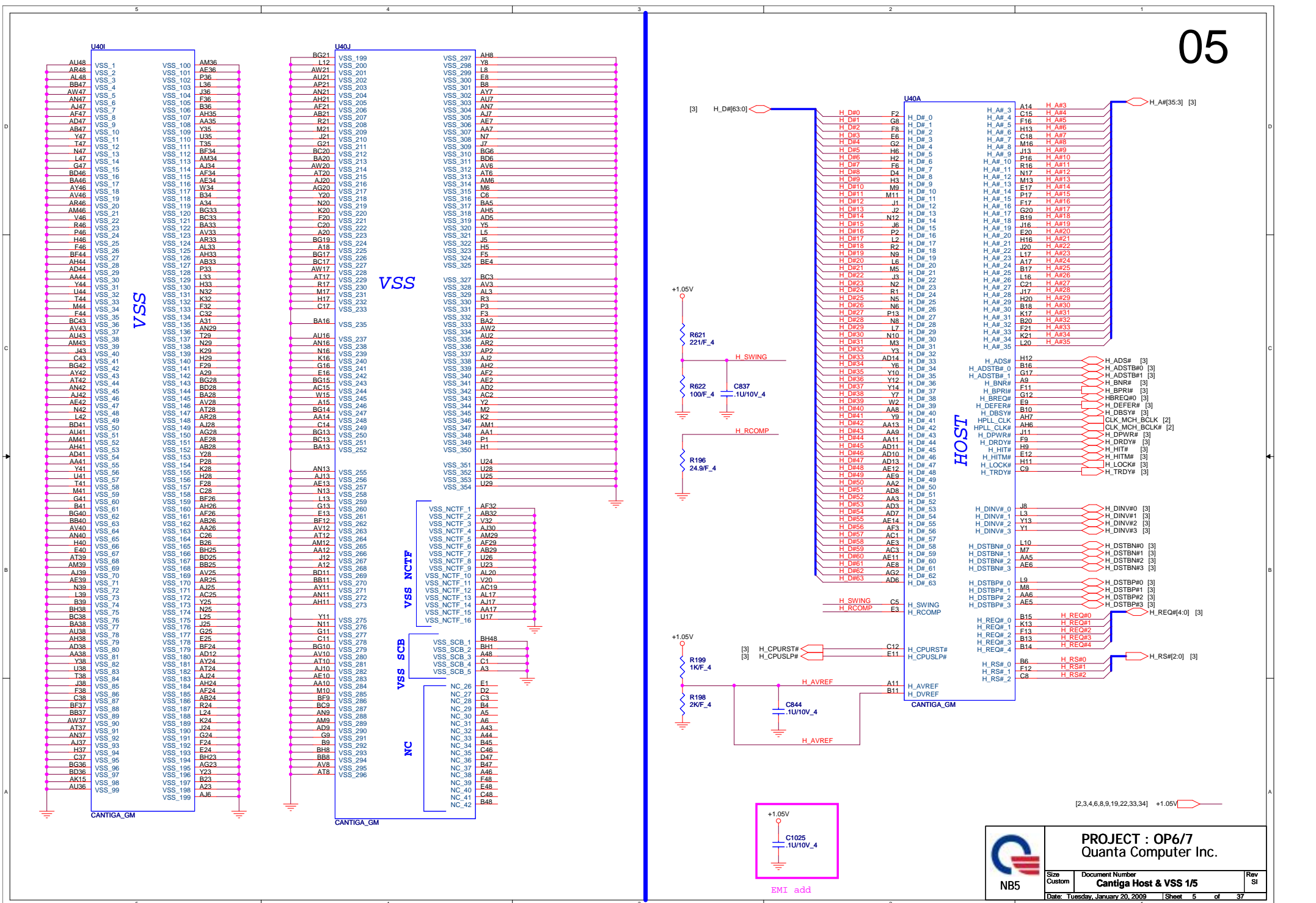
[2,6,9,10,11,12,14,15,17,18,19,20,21,22,24,25,26,27,28,29,30,33,34,37] +3V
[2,3,5,6,8,9,19,22,33,34] +1.05V
[9,19,20,22,28,30,33,37] +1.5V
[34] +VCCORE



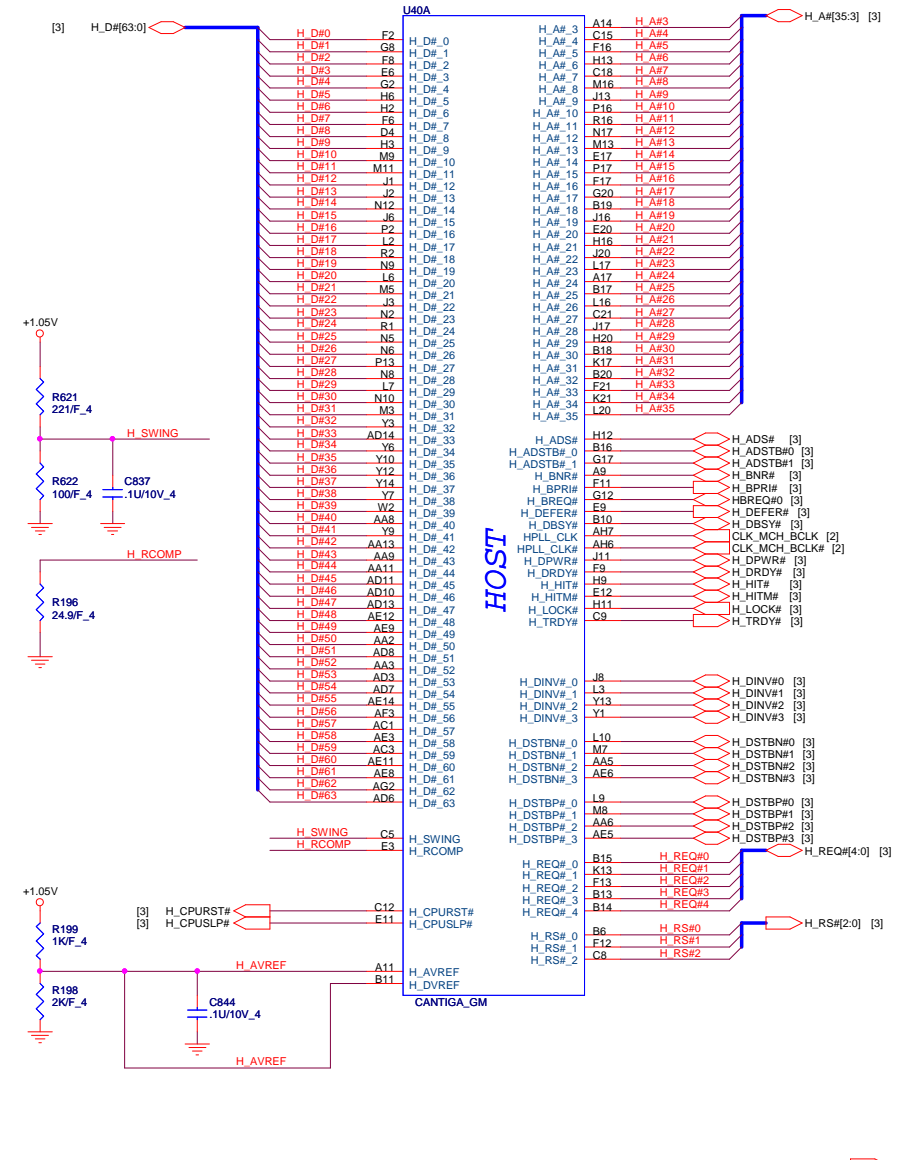
For QC

PROJECT : OP6/7
Quanta Computer Inc.

NB5	Size	Document Number	Rev
	Custom	Penryn & TH Monitor 2/2	SI
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U400	U40J	U40A	U40B
AL48 VSS_1	BC21 VSS_199	AH8 VSS_297	H_D#0 F2
AR48 VSS_2	AW21 VSS_200	Y8 VSS_298	H_D#1 G8
AL48 VSS_3	L12 VSS_201	AE36 VSS_299	H_D#2 F8
BB47 VSS_4	P36 VSS_202	L8 VSS_300	H_D#3 E6
AW47 VSS_5	AN21 VSS_203	E8 VSS_301	H_D#4 G2
AN47 VSS_6	AN21 VSS_203	B9 VSS_302	H_D#5 H6
AJ47 VSS_7	AH21 VSS_204	AT7 VSS_303	H_D#6 H2
AF47 VSS_8	FE21 VSS_206	AU7 VSS_304	H_D#7 F6
AD47 VSS_9	AB21 VSS_208	AE7 VSS_305	H_D#8 D4
AB47 VSS_10	Y35 VSS_208	AA7 VSS_306	H_D#9 M9
Y47 VSS_11	M21 VSS_208	AN7 VSS_307	H_D#10 M11
T47 VSS_12	J21 VSS_210	AE7 VSS_308	H_D#11 J1
N47 VSS_13	G21 VSS_211	AE7 VSS_309	H_D#12 J1
L47 VSS_14	BC20 VSS_212	BG6 VSS_310	H_D#13 J2
G47 VSS_15	BA20 VSS_212	BD6 VSS_311	H_D#14 N12
BD46 VSS_16	AJ34 VSS_213	AV6 VSS_312	H_D#15 J6
BA46 VSS_17	AW20 VSS_214	AT6 VSS_313	H_D#16 P2
AY46 VSS_18	AT20 VSS_215	AM6 VSS_314	H_D#17 L2
AV46 VSS_19	AJ20 VSS_216	M6 VSS_315	H_D#18 N9
AR46 VSS_20	Y20 VSS_217	C6 VSS_316	H_D#19 N2
AM46 VSS_21	B34 VSS_217	BA6 VSS_317	H_D#20 L6
R46 VSS_22	N20 VSS_219	AH5 VSS_318	H_D#21 M5
P46 VSS_23	K20 VSS_221	AD5 VSS_319	H_D#22 N2
H46 VSS_24	F20 VSS_220	Y5 VSS_320	H_D#23 N5
F46 VSS_25	BA33 VSS_222	L5 VSS_321	H_D#24 R1
BF44 VSS_26	AR33 VSS_223	J5 VSS_322	H_D#25 N5
AH44 VSS_28	AH33 VSS_225	F5 VSS_323	H_D#26 P13
AD44 VSS_29	AB33 VSS_225	BE4 VSS_325	H_D#27 N8
AM44 VSS_30	BC17 VSS_227	BC3 VSS_327	H_D#28 N6
Y44 VSS_31	AW17 VSS_228	AV3 VSS_328	H_D#29 L7
U44 VSS_32	AT17 VSS_229	AL3 VSS_329	H_D#30 N10
T44 VSS_33	H33 VSS_231	R3 VSS_330	H_D#31 M3
M44 VSS_34	M17 VSS_231	AL3 VSS_331	H_D#32 Y3
F44 VSS_35	H17 VSS_232	F3 VSS_332	H_D#33 Y6
BC43 VSS_36	C17 VSS_233	FA2 VSS_333	H_D#34 Y6
AV43 VSS_37	BA16 VSS_235	AW2 VSS_334	H_D#35 Y12
AJ43 VSS_38	AN16 VSS_237	T29 VSS_335	H_D#37 Y14
AM43 VSS_39	AN16 VSS_238	N29 VSS_336	H_D#38 W2
J43 VSS_40	N16 VSS_238	AR2 VSS_337	H_D#39 AA8
C43 VSS_41	K29 VSS_240	AP2 VSS_338	H_D#40 Y9
BG42 VSS_42	H29 VSS_240	AJ2 VSS_338	H_D#41 AA9
AY42 VSS_43	F29 VSS_241	AH2 VSS_339	H_D#42 AA9
AT42 VSS_44	E19 VSS_242	AE2 VSS_340	H_D#43 AA11
AN42 VSS_45	BG28 VSS_242	AE2 VSS_341	H_D#44 AD10
AJ42 VSS_46	BD28 VSS_244	AC2 VSS_342	H_D#45 AD13
AE42 VSS_47	W15 VSS_245	AD2 VSS_343	H_D#46 AE12
N42 VSS_48	AV28 VSS_245	Y2 VSS_344	H_D#47 AE9
L42 VSS_49	AT28 VSS_246	M2 VSS_345	H_D#48 AA2
BD41 VSS_50	AR28 VSS_248	AM1 VSS_346	H_D#49 AD8
AJ41 VSS_51	AJ28 VSS_249	AA1 VSS_347	H_D#50 AA3
AM41 VSS_52	AC14 VSS_249	AG28 VSS_348	H_D#51 AD3
AH41 VSS_53	BC13 VSS_250	AE28 VSS_349	H_D#52 AD7
AD41 VSS_54	BA13 VSS_252	AB28 VSS_350	H_D#53 AE3
M41 VSS_55	AN13 VSS_255	H1 VSS_351	H_D#54 AE3
U41 VSS_56	AJ13 VSS_256	U28 VSS_352	H_D#55 AC1
T41 VSS_57	AE13 VSS_257	U25 VSS_353	H_D#56 AC1
M41 VSS_58	N13 VSS_258	U29 VSS_354	H_D#57 AE3
G41 VSS_59	BF26 VSS_258	L13 VSS_258	H_D#58 AC3
B41 VSS_60	AH26 VSS_259	G13 VSS_259	H_D#59 AE11
BC40 VSS_61	AF26 VSS_261	E13 VSS_261	H_D#60 AE8
AV40 VSS_63	BF12 VSS_262	AB26 VSS_262	H_D#61 AG2
AN40 VSS_64	AV12 VSS_263	AA26 VSS_264	H_D#62 AD6
H40 VSS_65	AT12 VSS_263	C26 VSS_264	H_D#63
F40 VSS_66	B26 VSS_265	AM12 VSS_265	
AT39 VSS_67	BH25 VSS_266	AA12 VSS_266	
AM39 VSS_68	BD25 VSS_267	J12 VSS_267	
AJ39 VSS_69	BB25 VSS_268	A12 VSS_267	
AE39 VSS_71	AV25 VSS_269	BD11 VSS_269	
N39 VSS_72	AR25 VSS_270	BB11 VSS_270	
B39 VSS_73	Y17 VSS_271	AY11 VSS_271	
BH38 VSS_74	AC25 VSS_272	AN11 VSS_272	
BA38 VSS_75	Y25 VSS_273	AH11 VSS_273	
AU38 VSS_76	N25 VSS_274	Y11 VSS_274	
AH38 VSS_79	J25 VSS_275	N11 VSS_275	
AD30 VSS_81	G25 VSS_276	G11 VSS_276	
AA38 VSS_82	E25 VSS_277	G11 VSS_277	
Y38 VSS_83	E25 VSS_278	C11 VSS_278	
U38 VSS_84	AD12 VSS_279	BC10 VSS_279	
J38 VSS_85	AY24 VSS_280	AV10 VSS_279	
F38 VSS_86	AT10 VSS_280	AT10 VSS_280	
AT39 VSS_87	U38 VSS_82	VSS_SCB_3 VSS_281	
AM39 VSS_88	U38 VSS_83	VSS_SCB_4 VSS_282	
AJ39 VSS_89	T38 VSS_84	VSS_SCB_5 VSS_283	
AE39 VSS_91	J38 VSS_85	VSS_SCB_1 VSS_284	
N39 VSS_92	F38 VSS_86	VSS_SCB_2 VSS_285	
B39 VSS_93	T38 VSS_87	VSS_SCB_3 VSS_286	
BH38 VSS_94	C38 VSS_88	VSS_SCB_4 VSS_287	
BA38 VSS_95	BE37 VSS_87	VSS_SCB_5 VSS_288	
AU38 VSS_96	BB37 VSS_87	NC_26 VSS_289	
AH38 VSS_97	AW37 VSS_89	NC_27 VSS_290	
AD30 VSS_98	AT37 VSS_91	NC_28 VSS_291	
AA38 VSS_99	AN37 VSS_92	NC_29 VSS_292	
Y38 VSS_100	AJ37 VSS_93	NC_30 VSS_293	
U38 VSS_101	H37 VSS_94	NC_31 VSS_294	
J38 VSS_102	C37 VSS_95	NC_32 VSS_295	
F38 VSS_103	BC36 VSS_96	NC_33 VSS_296	
AT39 VSS_104	BD36 VSS_97	NC_34 VSS_297	
AM39 VSS_105	AK15 VSS_97	NC_35 VSS_298	
AJ39 VSS_106	AU36 VSS_98	NC_36 VSS_299	
AE39 VSS_107		NC_37 VSS_300	
AD30 VSS_108		NC_38 VSS_301	
AJ39 VSS_109		NC_39 VSS_302	
AE39 VSS_110		NC_40 VSS_303	
AD30 VSS_111		NC_41 VSS_304	
AJ39 VSS_112		NC_42 VSS_305	
AE39 VSS_113			
AD30 VSS_114			
AJ39 VSS_115			
AE39 VSS_116			
AD30 VSS_117			
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AJ39 VSS_196			
AE39 VSS_197			
AD30 VSS_198			
AJ39 VSS_199			



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Quanta Computer Inc.

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Cantiga Host & VSS 1/5

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Rev SI

MCH_CFG_5 DMix2 selection

Low: DMix2
High: DMix4 (Default)
MCH_CFG_16 FSB Dynamic ODT

Low: Dynamic ODT disabled
High: Dynamic ODT enabled (Default)
MCH_CFG_9 PCI Express Graphic Lane

Low: Reverse Lane
High: Normal operation(Default)
MCH_CFG_19 DMI Lane Reversal

Low: Normal (Default)
High: Lane Reserved
MCH_CFG_6 ITPM Host Interface

Low: ITPM Host Interface enabled
High: ITPM Host Interface disabled (Default)
MCH_CFG_7 Intel (R) Management Engine Crypto

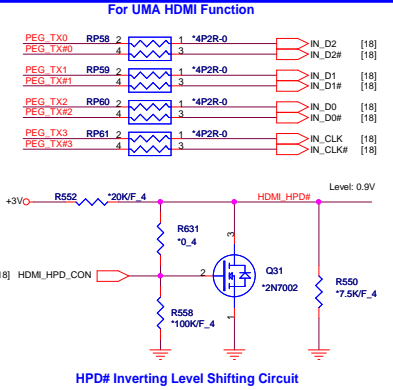
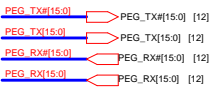
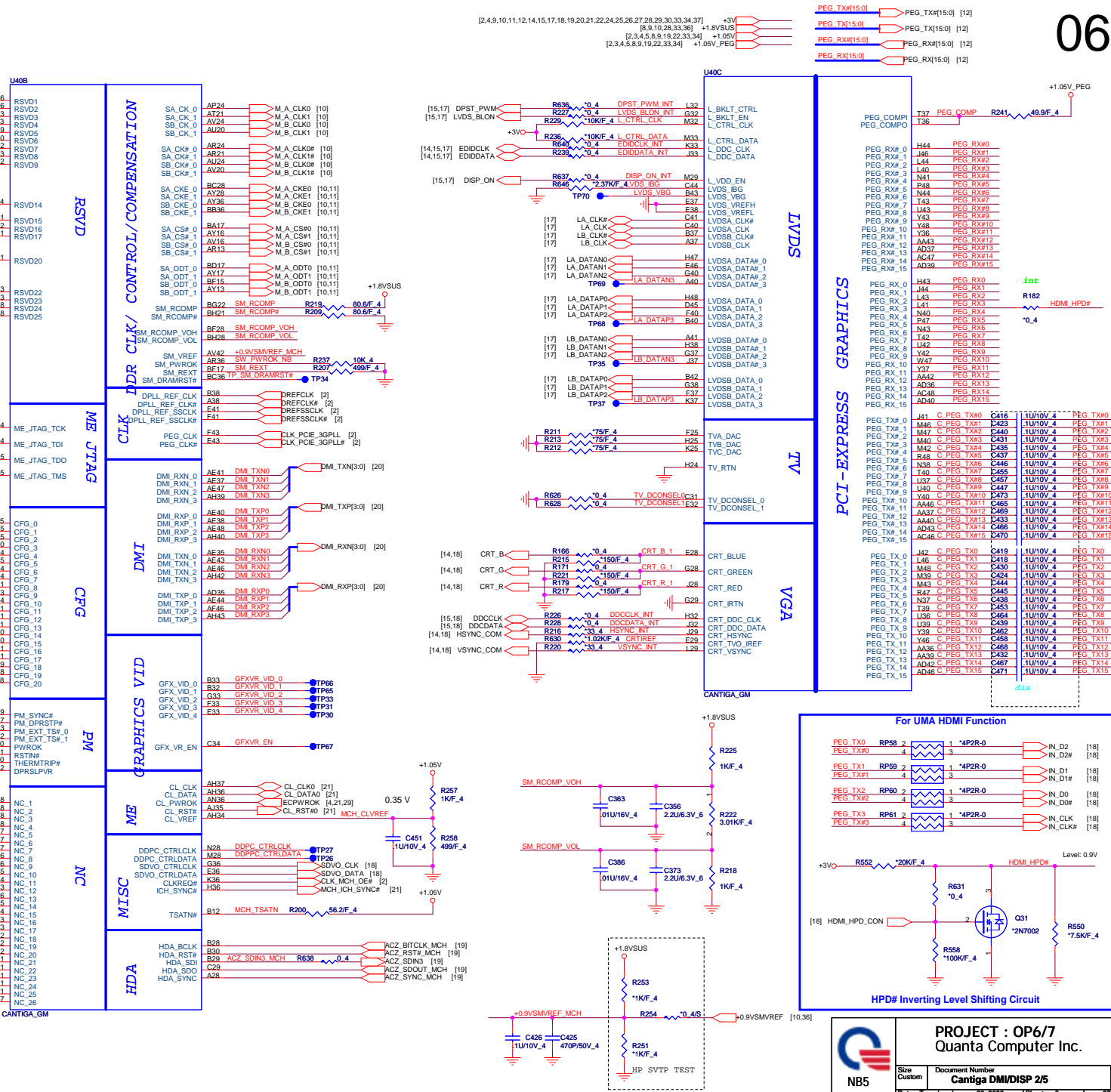
Low: Intel (R) Management Engine Crypto
TLS cipher suite with no confidentiality
High: Intel (R) Management Engine Crypto
TLS cipher suite with no confidentiality (Default)

MCH_CFG_10 PCIe Lookback Enable

Low: Enabled
High: Disabled (Default)
MCH_CFG_12/13 XOR/ALLZ/CLOCK Un-gating

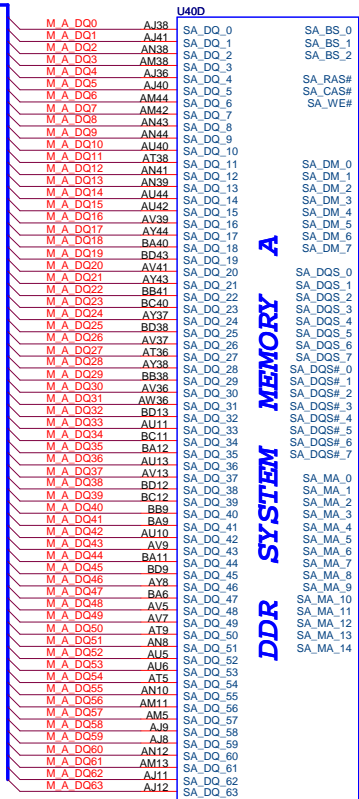
MCH_CFG_13 MCH_CFG_12 Configuration

Table with 2 columns: MCH_CFG_13, MCH_CFG_12 Configuration. Rows include Reserved, XOR Mode enabled, All-Z Mode enabled, Normal operation (Default).



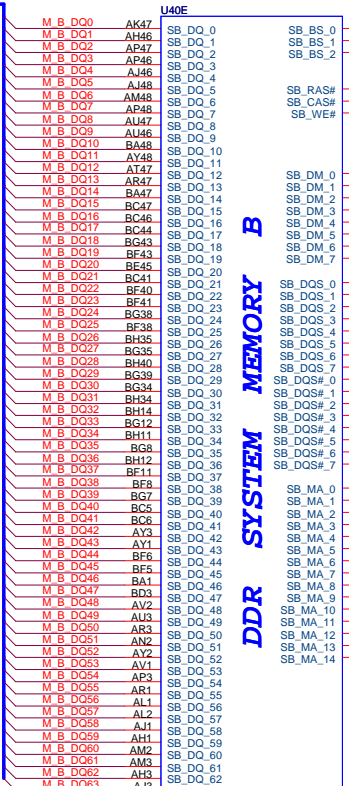
PROJECT : OP6/7
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[10] M_A_DQ[63:0]



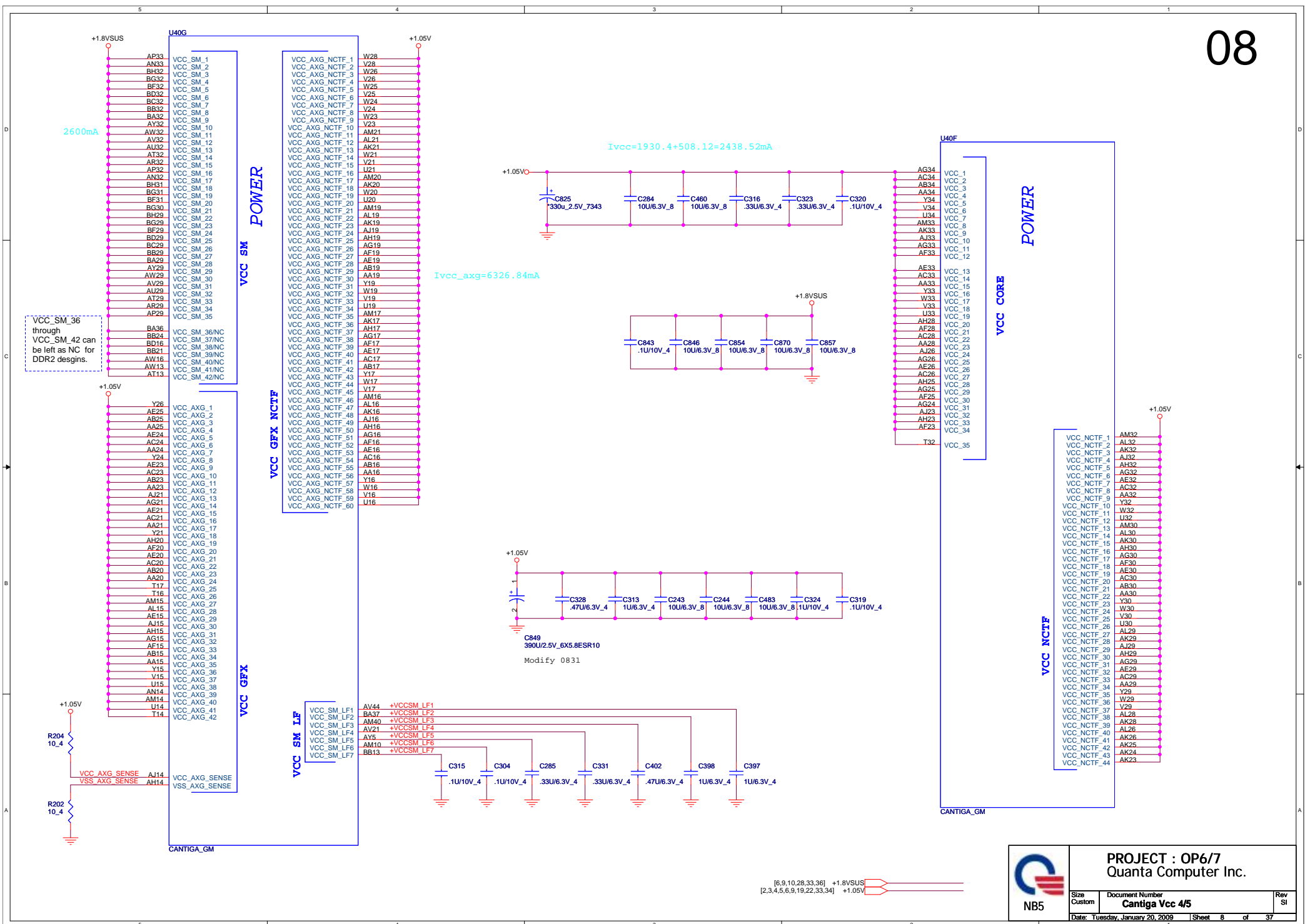
CANTIGA_GM

[10] M_B_DQ[63:0]



CANTIGA_GM

	PROJECT : OP6/7 Quanta Computer Inc.	
	Size Custom	Document Number Cantiga DDR2 3/5
	Date: Tuesday, January 20, 2009	Sheet 7 of 37

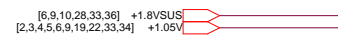


VCC_SM_36 through VCC_SM_42 can be left as NC for DDR2 desigs.

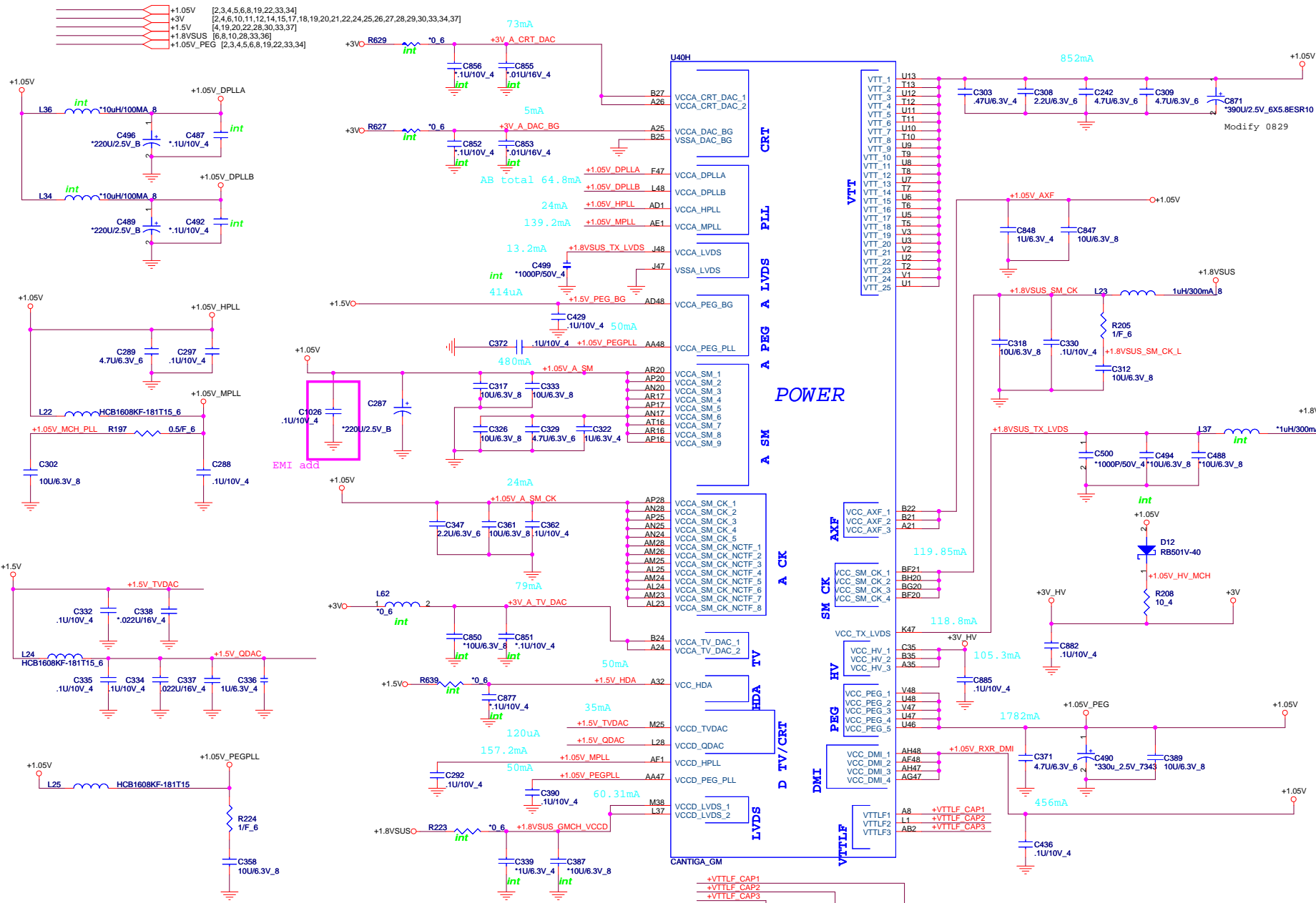
Ivcc=1930.4+508.12=2438.52mA

Ivcc_axg=6326.84mA


Modify 0831

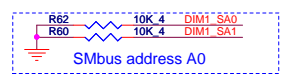
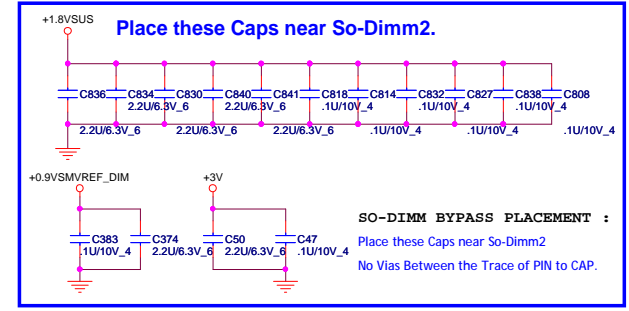
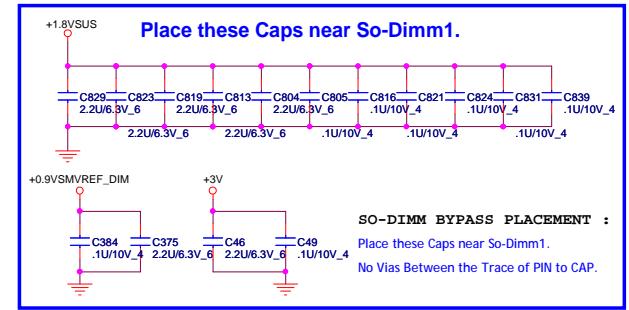
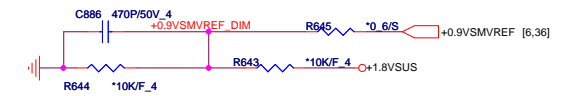
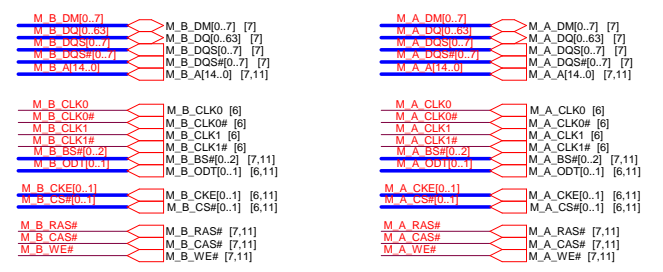
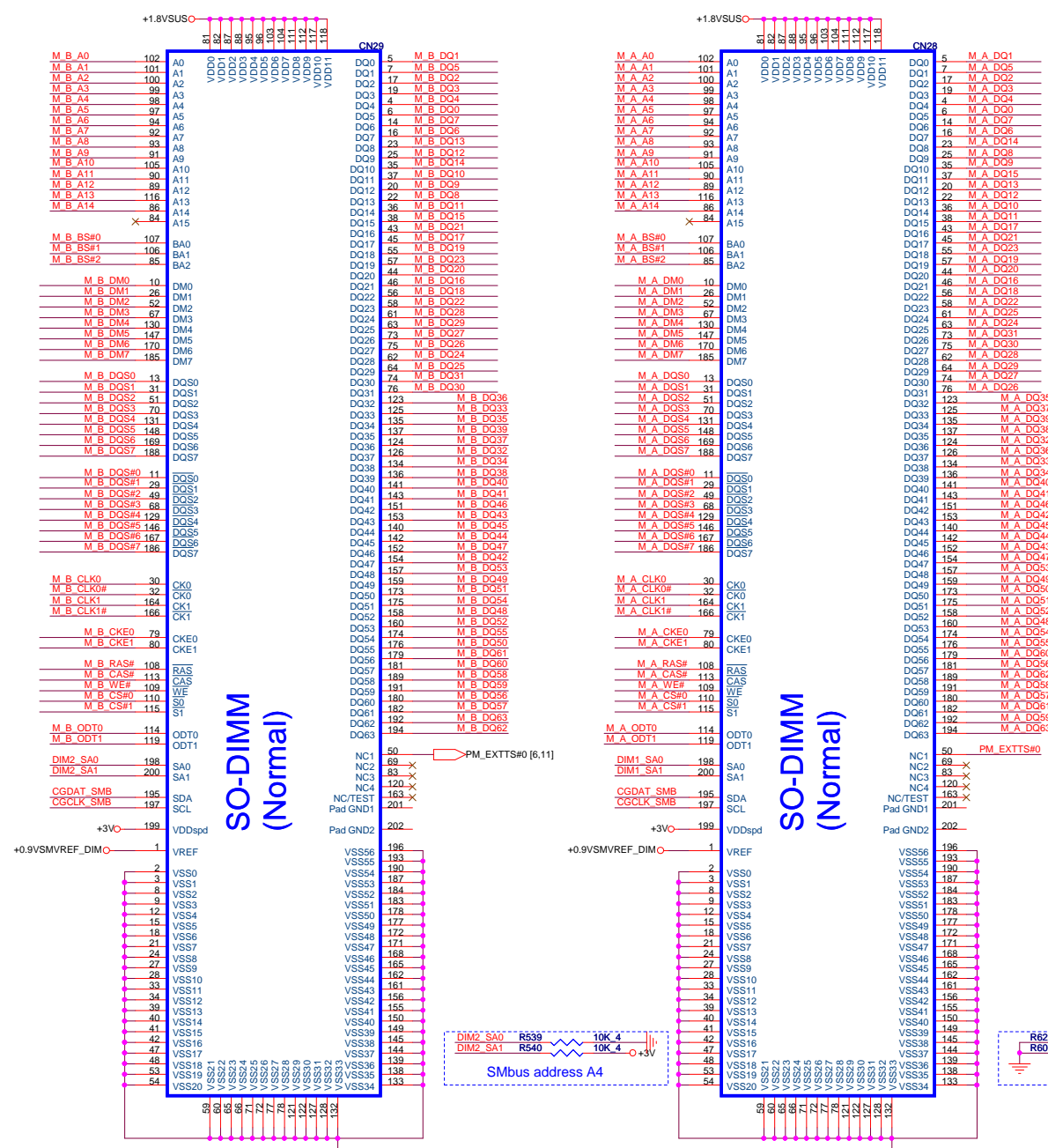


	PROJECT : OP6/7		Rev SI
	Quanta Computer Inc.		
	Size Custom Document Number Cantiga Vcc 4/5	Date: Tuesday, January 20, 2009 Sheet 8 of 37	



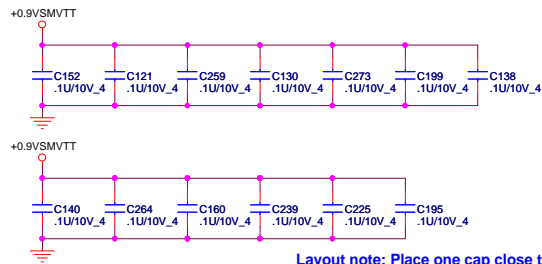
Modify to U40#AF1 power to +1.05V_MPLL as CRB change

	PROJECT : OP6/7		Rev SI
	Quanta Computer Inc.		
	Size Custom Document Number Cantiga Power 5/5	Date: Tuesday, January 20, 2009 Sheet 9 of 37	



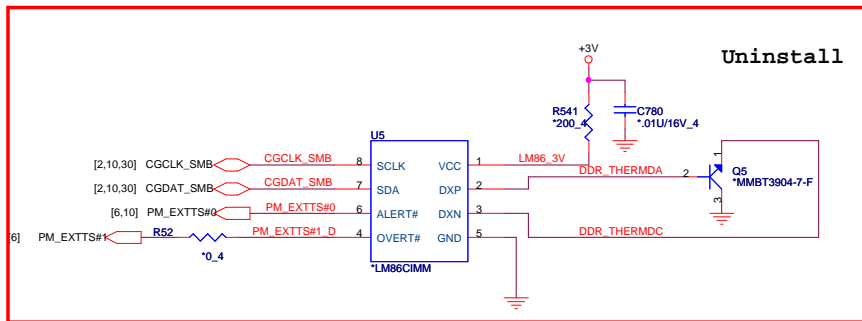
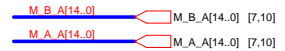
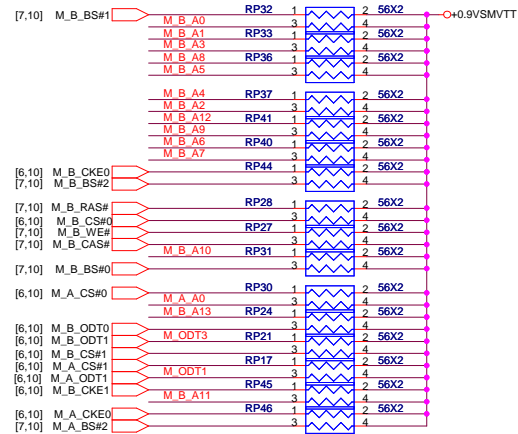
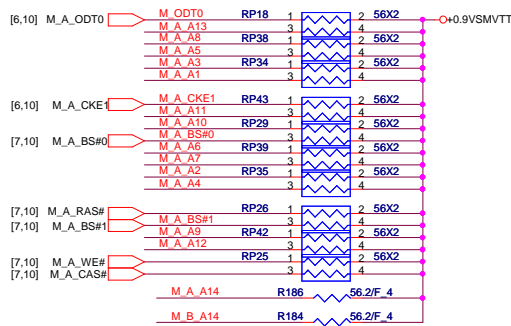
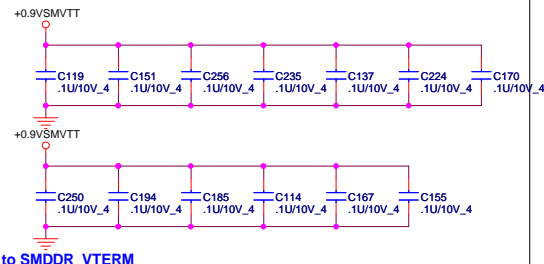
DDRII DUAL CHANNEL A,B.

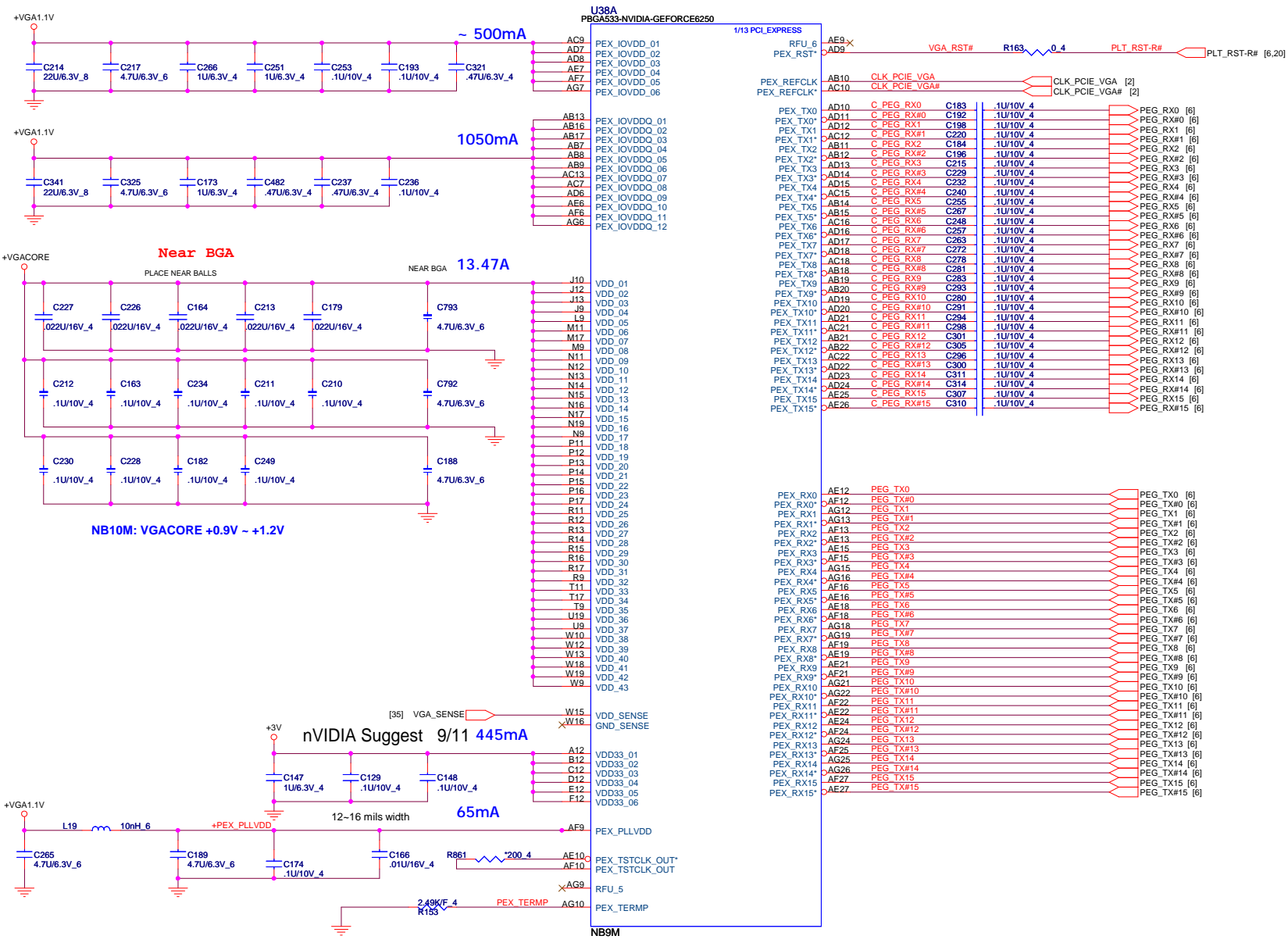
DDRII A CHANNEL



Layout note: Place one cap close to every 2 pullup resistors terminated to SMDDR_VTERM

DDRII B CHANNEL

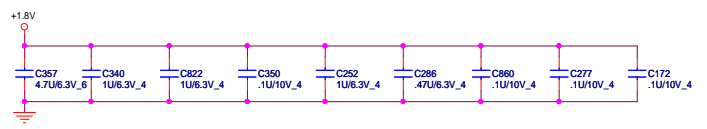
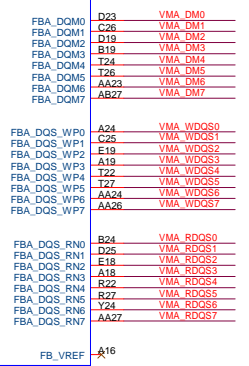
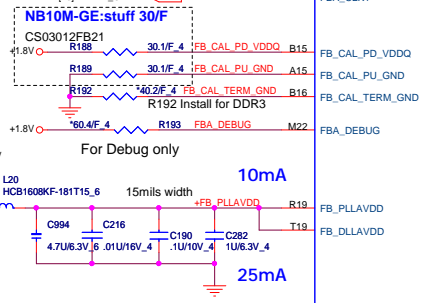
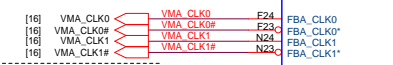
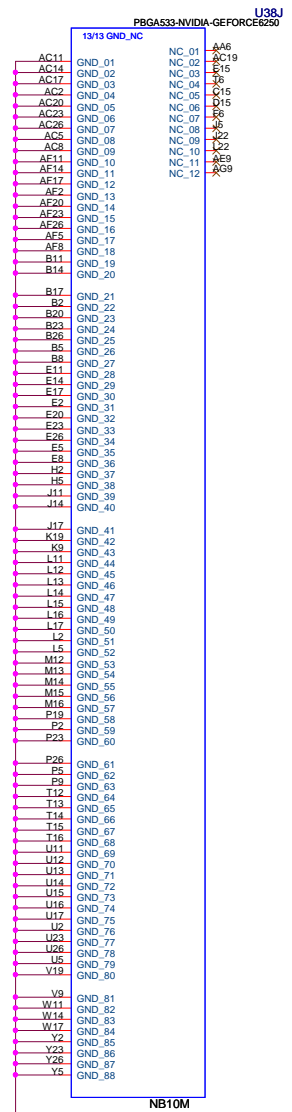
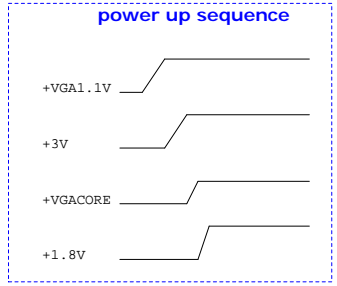
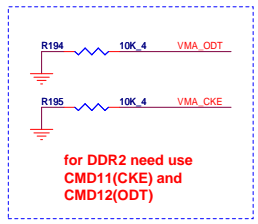
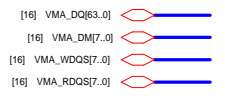
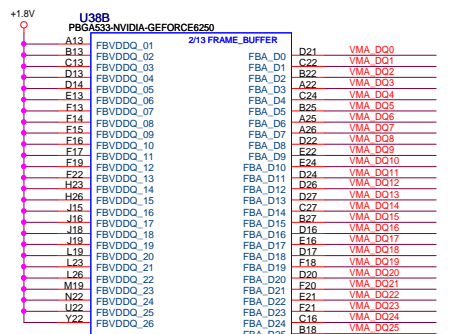




PROJECT : OP6/7
Quanta Computer Inc.

NB5

Size Custom	Document Number	Rev DB
	NV10M (PCIe I/F) 1/5	
Date: Tuesday, January 20, 2009		Sheet 12 of 37

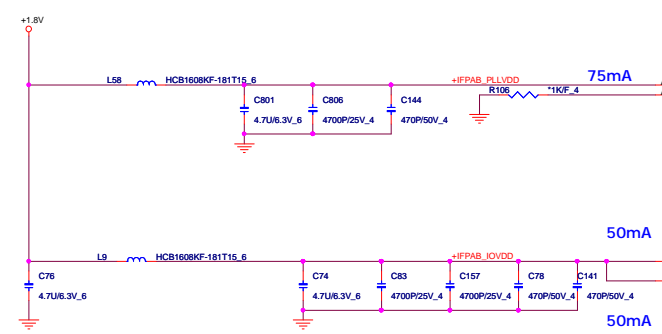


PROJECT : OP6/7
Quanta Computer Inc.

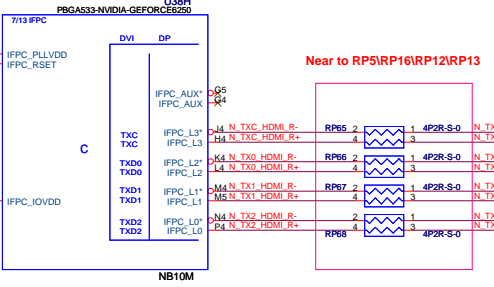
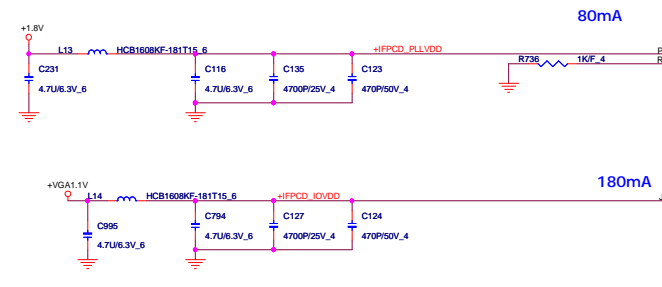
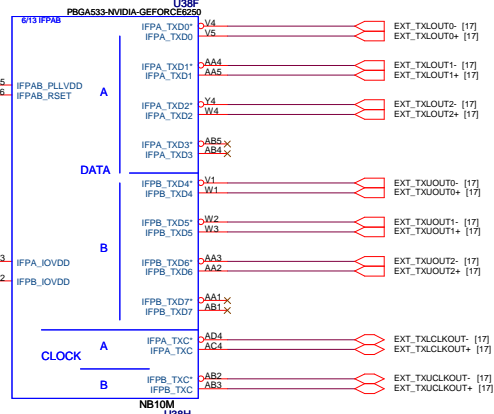
NB5

Size Custom Document Number NV10M (MEMORY I/F) 2/5 Rev DB

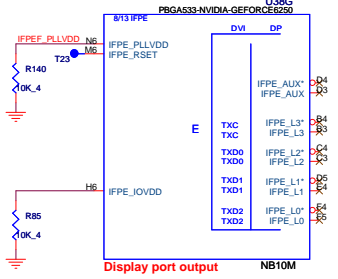
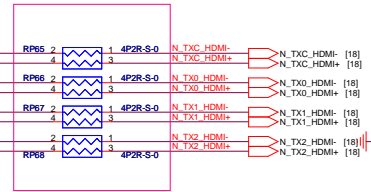
Date: Tuesday, January 20, 2009 | Sheet 13 of 37



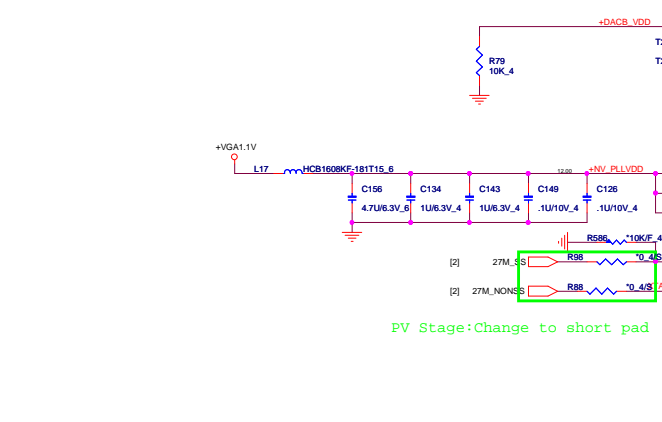
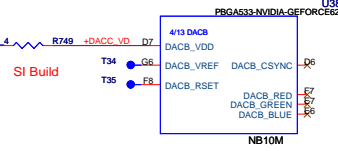
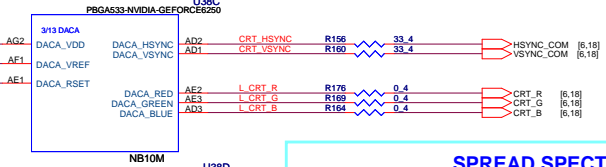
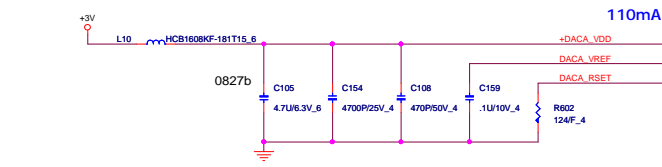
IFPB IOVDD
NB10M-GE +VG1.1V



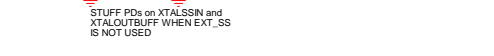
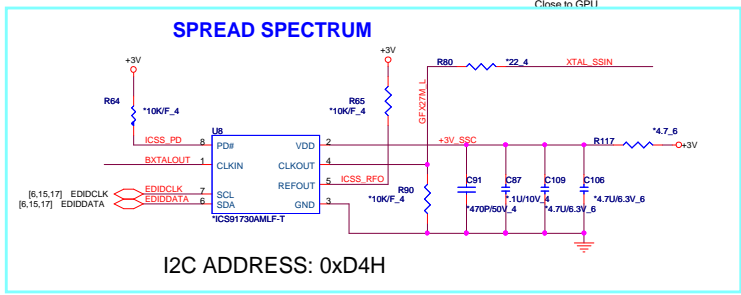
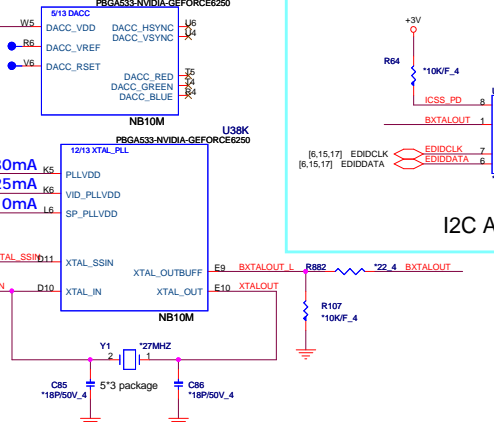
Near to RP5/RP16/RP12/RP13



Display port output NB10M



PV Stage: Change to short pad



STUFF PDs on XTALSSIN and XTALOUTBUFF WHEN EXT_SS IS NOT USED

Install it when not connected to Spread spectrum device

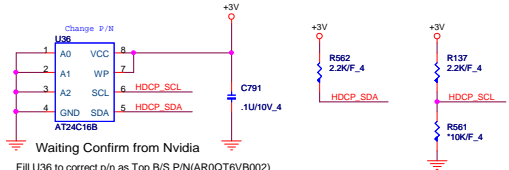
PROJECT : OP6/7
Quanta Computer Inc.

Size Custom	Document Number NV10M (DISPLAY) 3/5	Rev D6
Date: Tuesday, January 20, 2009 Sheet 14 of 37		



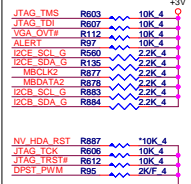
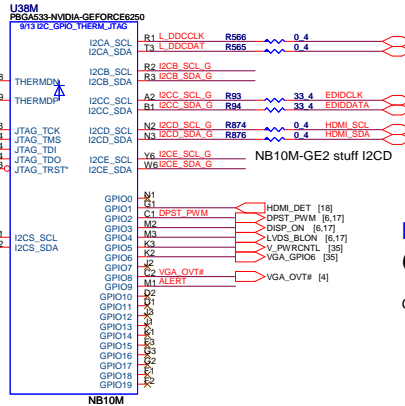
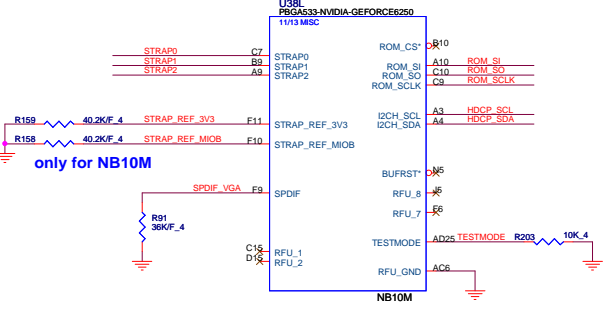
DB:Remove GPU thermal sensor footprint

HDCP ROM



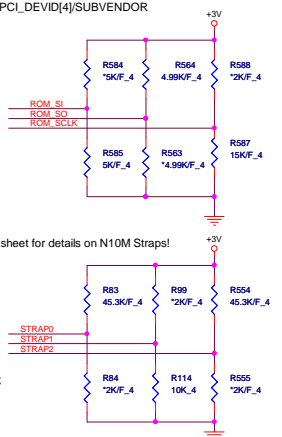
DHCP ROM
Low: Crypto ROM
Hi: I2C ROM

Waiting Confirm from Nvidia
Fill U36 to correct p/in as Top B/S P/N(AR0QT6VB002)



NB10M Straps GPIO ASSIGNMENTS

GPIO	I/O	ACTIVE	USAGE
0	IN	N/A	PRIMARY DVI HOTPLUG
1	IN	N/A	SECONDARY DVI HOTPLUG
2	OUT	HIGH	PANEL BACKLIGHT PWM
3	OUT	HIGH	PANEL POWER ENABLE
4	OUT	HIGH	PANEL BACKLIGHT ENABLE
5	OUT	N/A	NVVDD VID0
6	OUT	N/A	NVVDD VID1
7	OUT	N/A	FBVDD VID0
8	IN	LOW	THERMAL ALERT
9	OUT	LOW	FAN PWM
10	OUT	N/A	FBVREF SELECT
11	OUT	N/A	SLI SYNC0
12	IN	N/A	AC DETECT
13	OUT	LOW	PS CONTROL OR HDMI_CEC
14	OUT	HIGH	PS CONTROL



RAM ID: ROM_SI R585
64M*16 HYN 0000 PD 5K
SAM 0001 PD 10K
QIM 0010 PD 15K

PCI_DEVID: STRAP2 R554
NB10M-GE2 0x6EF 8 1111 PU 45K

	Logical	Logical Strapping Bit2	Logical Strapping Bit1	Logical Strapping Bit0
ROM_SO	XCLK_277	TVMODE[2]	TVMODE[1]	TVMODE[0]
ROM_SCLK	PCI_DEVID[4]	SUB_VENDOR	SLOT_CLK_CFG	PEX_PLL_EN_TERM100
ROM_SI	RAMCFG[3]	RAMCFG[2]	RAMCFG[1]	RAMCFG[0]
STRAP2	PCI_DEVID[3]	PCI_DEVID[2]	PCI_DEVID[1]	PCI_DEVID[0]
STRAP1	3GIO_PADCFG[3]	3GIO_PADCFG[2]	3GIO_PADCFG[1]	3GIO_PADCFG[0]
STRAP0	USER[3]	USER[2]	USER[1]	USER[0]

1000
0010
XXXX
XXXX
0001
1111

Logical Strap Bit Mapping

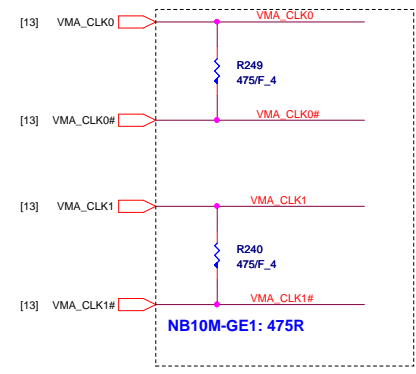
	PU-VDD	PD
5K	1000	0000
10K	1001	0001
15K	1010	0010
20K	1011	0011
25K	1100	0100
30K	1101	0101
35K	1110	0110
45K	1111	0111

NB10M VRAM Configuration Table

RAM_CFG[3:0]	DESCRIPTION	Vendor
0000	DDR2 64Mx16x4, 64bit, 512MB	Hynix H5PS1G63EFR-20L
0001	DDR2 64Mx16x4, 64bit, 512MB	Samsung K4NT1G164QG-HC20
0010	DDR2 64Mx16x4, 64bit, 512MB	Qimonda HY618T1G161C2P-20

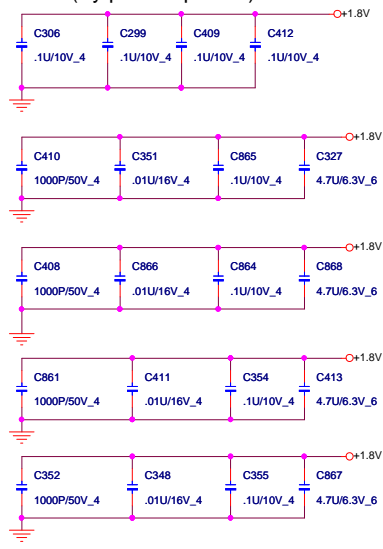
PROJECT : OP6/7
Quanta Computer Inc.

Size C	Document Number	Rev DB
NB5	NV10M (GPIO & STRAPS) 4/5	
Date: Tuesday, January 20, 2009	Sheet 15 of 37	



CS14752FB11 RES CHIP 475 1/16W +1% (0402)

(By pass capacitor)



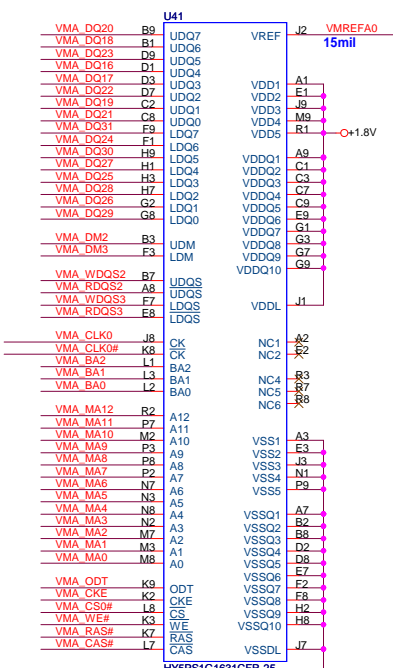
- [13] VMA_DQ[63..0]
- [13] VMA_DM[7..0]
- [13] VMA_WDQS[7..0]

256Mb : AKD5JGAT*05
512Mb : AKD59G-T*01

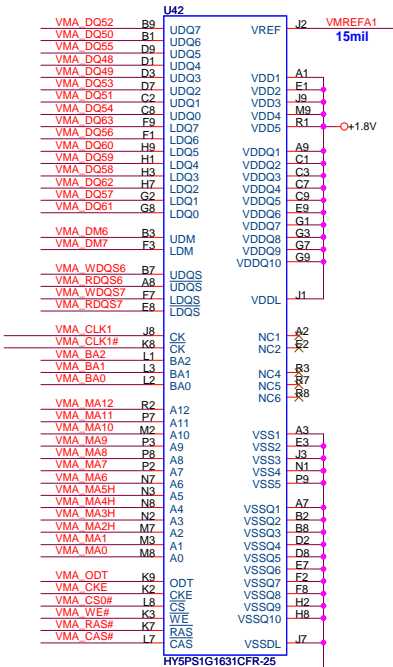


PROJECT : OP6/7
Quanta Computer Inc.

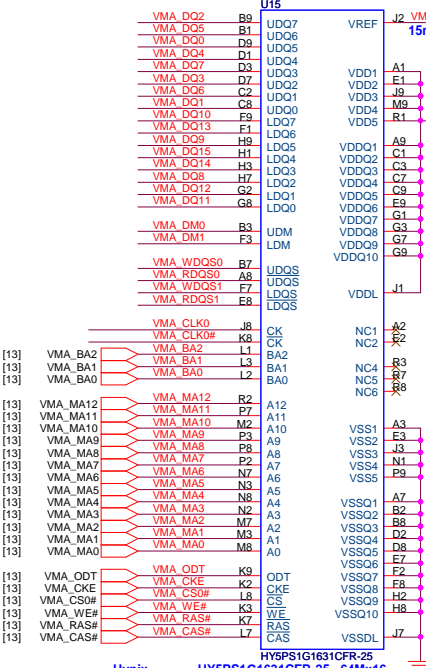
Size Custom	Document Number	Rev
	NV10M VRAM-1(GDDR2 BGA84)	SI
Date: Tuesday, January 20, 2009	Sheet 16	of 37



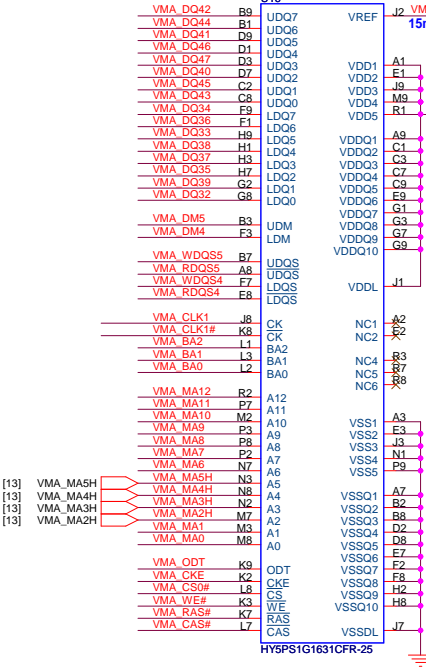
Hynix Samsung HY5PS1G1631CFR-25 64Mx16 K4N1G164QQ-HC25 64Mx16



Hynix Samsung HY5PS1G1631CFR-25 64Mx16 K4N1G164QQ-HC25 64Mx16



Hynix Samsung HY5PS1G1631CFR-25 64Mx16 K4N1G164QQ-HC25 64Mx16



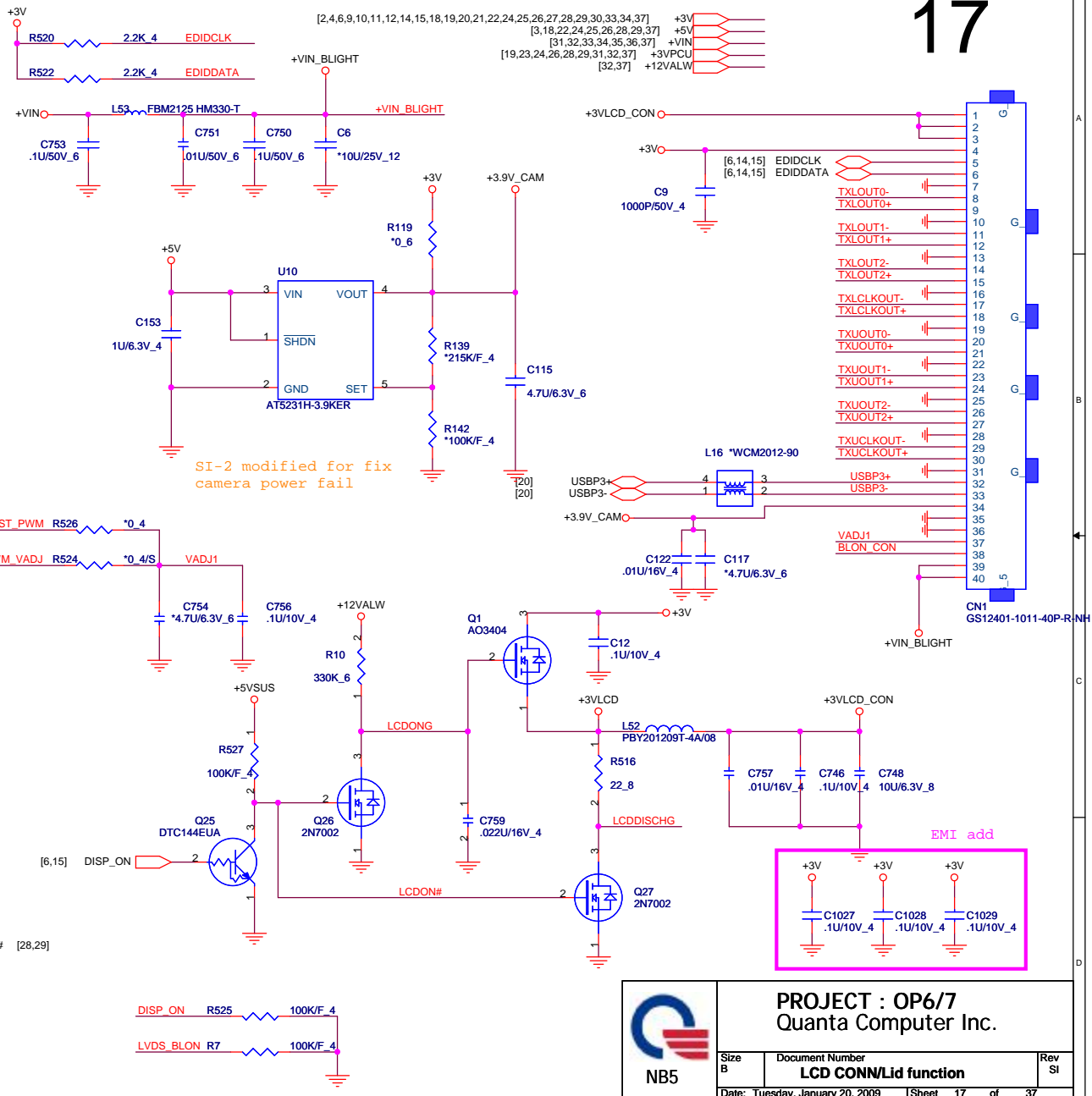
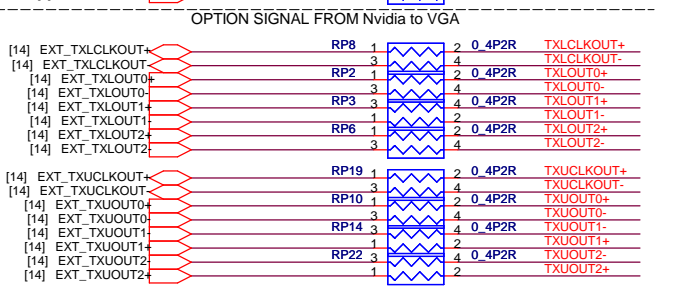
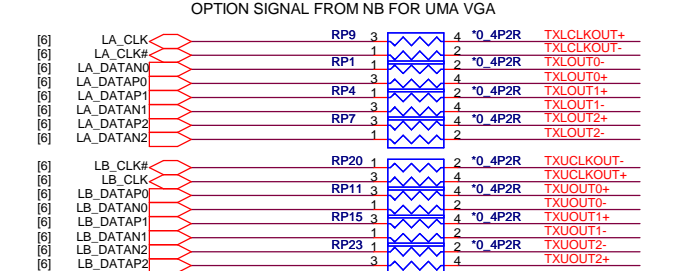
Hynix Samsung HY5PS1G1631CFR-25 64Mx16 K4N1G164QQ-HC25 64Mx16

NB10M: 50% FBVDD R232 (1K)

NB10M: 50% FBVDD R232 (1K)

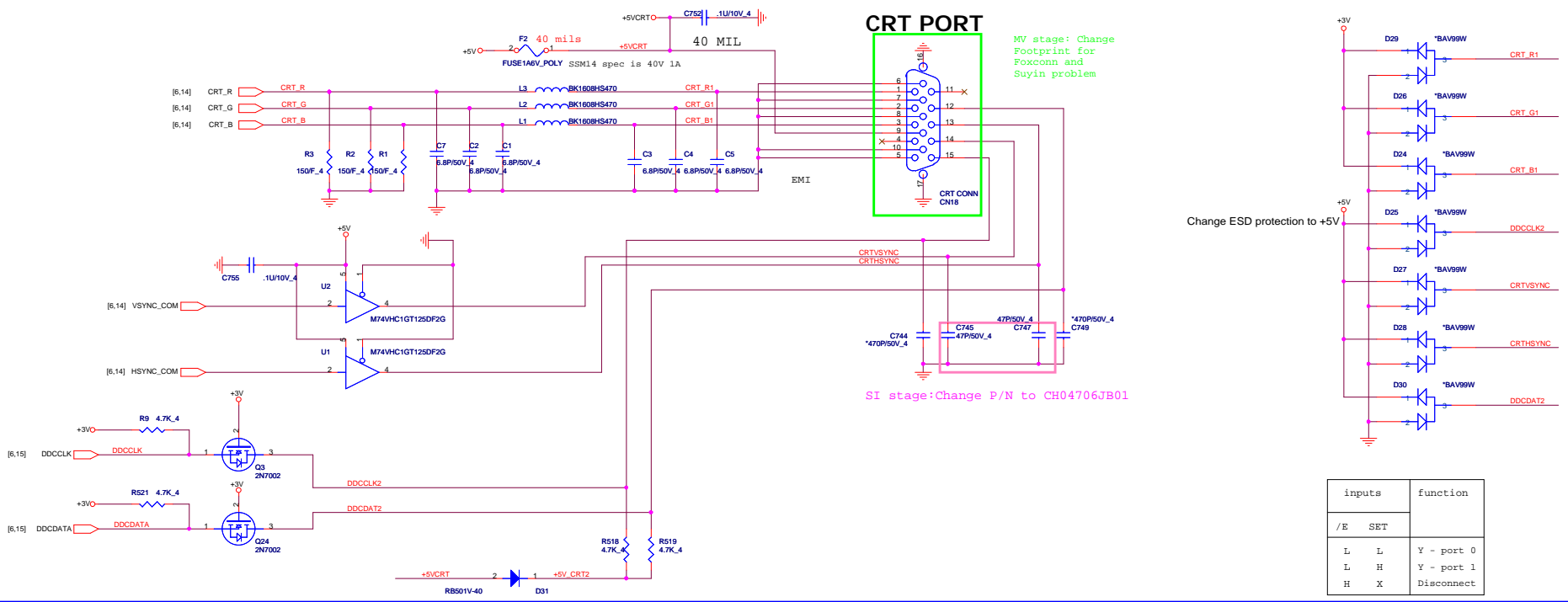
SI Build

1. If LCD connector near GPU, then place these series Resistors near GPU
 2. If LCD connector near N/B, then place these series Resistors near N/B

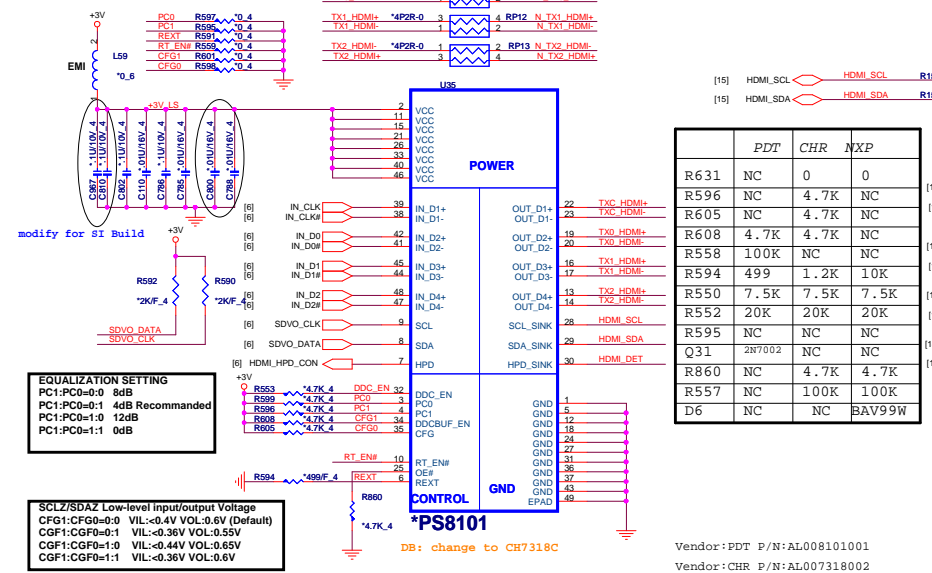


PROJECT : OP6/7
Quanta Computer Inc.

Size B	Document Number LCD CONN/Lid function	Rev SI
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For UMA HDMI function

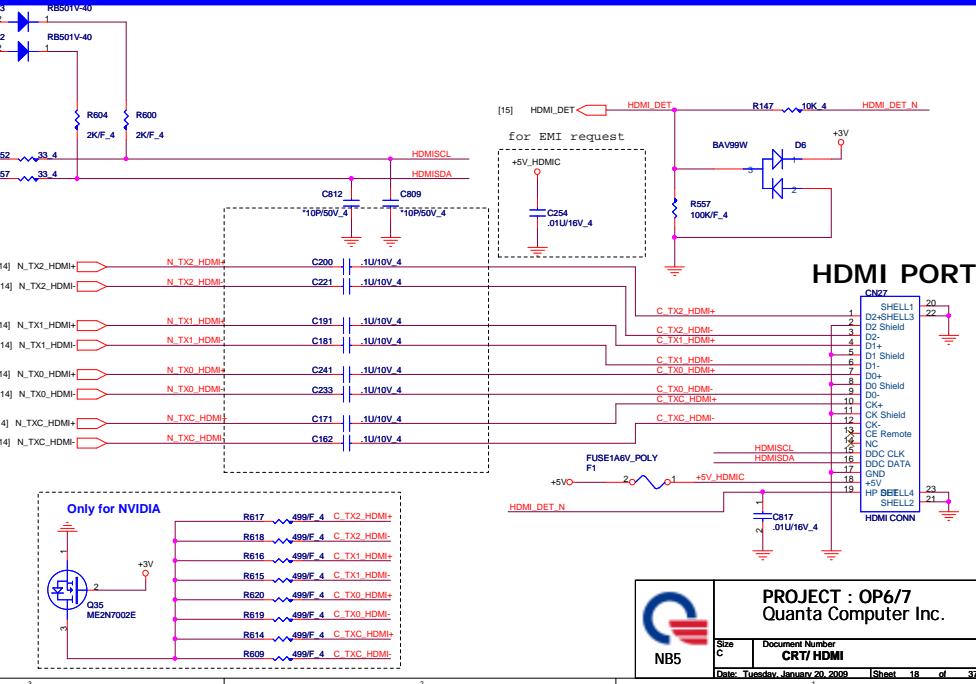


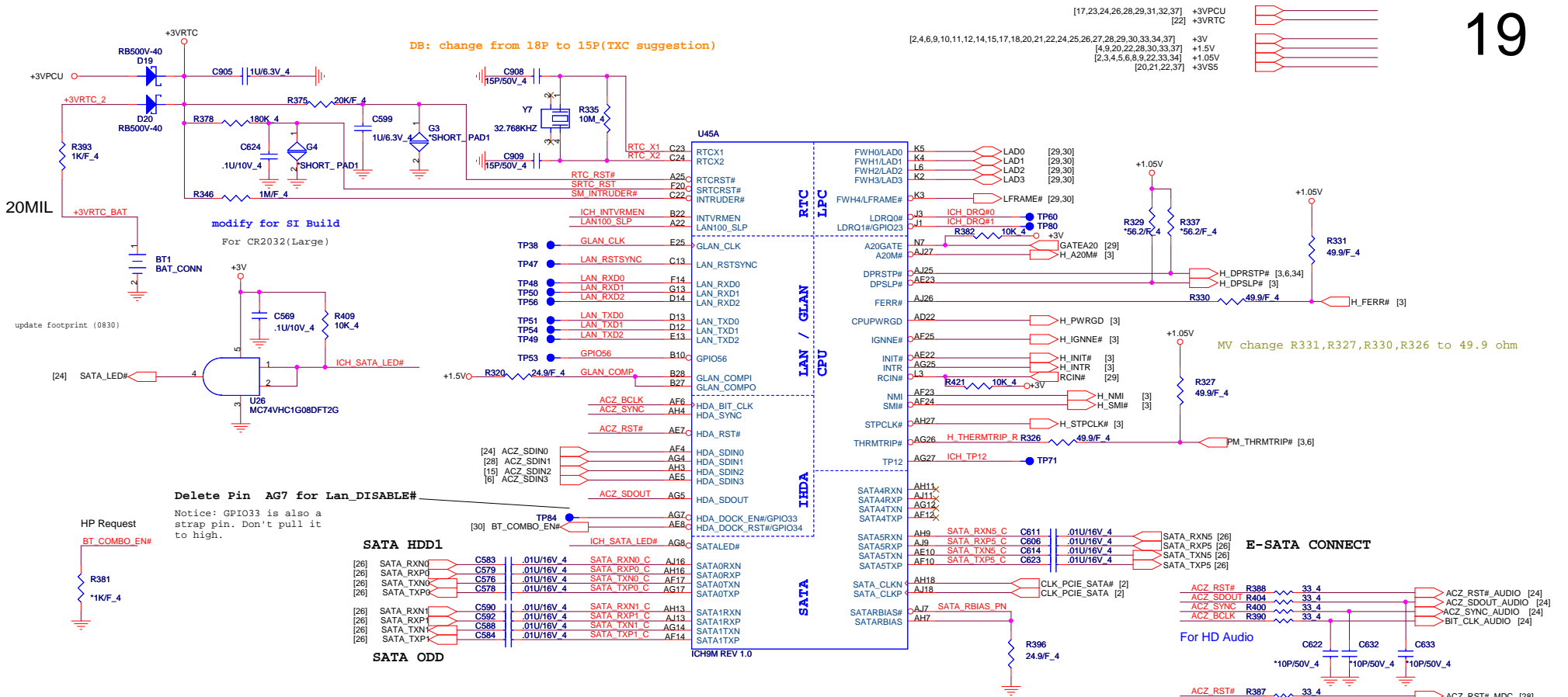
EQUALIZATION SETTING

PC1:PC0=0:0 8dB
PC1:PC0=0:1 4dB Recommended
PC1:PC0=1:0 12dB
PC1:PC0=1:1 0dB

SCL2/SDA2 Low-level input/output Voltage

CFG1:CFG0=0:0 VIL:-0.4V VOL:0.6V (Default)
CGF1:CGF0=0:1 VIL:-0.36V VOL:0.55V
CGF1:CGF0=1:0 VIL:-0.44V VOL:0.65V
CGF1:CGF0=1:1 VIL:-0.36V VOL:0.6V





SB Strap

ICH9-M Internal VR Enable strap
(Internal VR for Vccsus1_05, Vccsus1_5 and VccCL1_5)

NTVRMEN	Low = Internal VR disable High = Internal VR enable(Default)
LAN100_SLP	Low = Internal VR disable High = Internal VR enable(Default)

XOR Chain Entrance Strap

ICH_TP3	HDA_SDOUT	Description
0	0	RSVD
0	1	Enter XOR Chain
1	0	Normal operation(Default)
1	1	Set PCIe port config bit 1

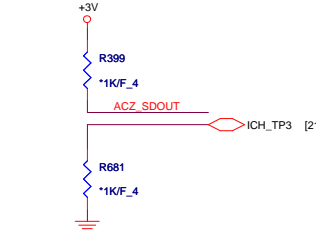
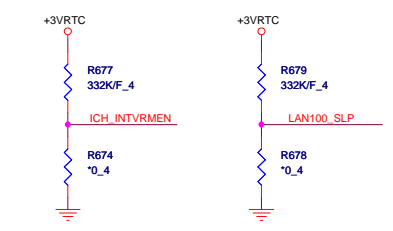
ICH9 Boot BIOS

SPI	PCI	LPC	PCI_GNT0#	SPI_CS#1
0	1	1		
1	0	0		
1	1	1		

(default)

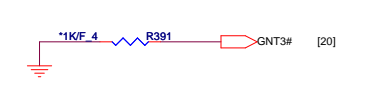
No Reboot Strap

ACZ_SPKR	Low: Default Hi: No reboot
----------	-------------------------------



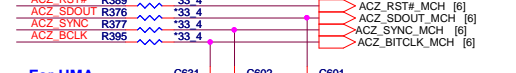
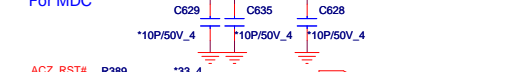
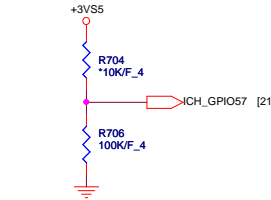
A16 swap override strap

PCI_GNT#3	Low = A16 swap override enabled Hi = Default
-----------	---



TPM physical presence

ICH_GPIO57	Low: Default
------------	--------------



PROJECT : OP6/7
Quanta Computer Inc.

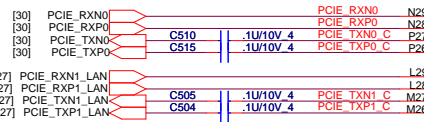
Size Custom Document Number
ICH9-M Host 1/4

Date: Tuesday, January 20, 2009 Sheet 19 of 37

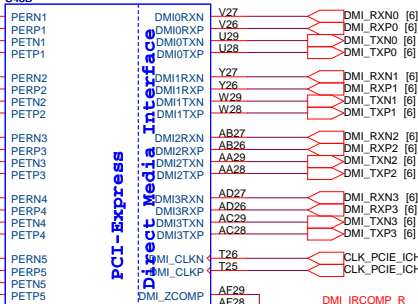
[4,9,19,22,28,30,33,37] +1.5V
[2,4,6,9,10,11,12,14,15,17,18,19,21,22,24,25,26,27,28,29,30,33,34,37] +3V
[21,23,26,30,33,34,35,37] +3VSUS

MINI CARD PCI-E(WLAN)

PCI-E-LAN



U45D



PCI-Express
PCIe Media Interface



PERN6/GLAN_RXN, PERP6/GLAN_RXP, PETN6/GLAN_TXN, PETP6/GLAN_TXP

SPI_CLK_R, SPI_CS#0_R, SPI_CLK, SPI_CS#0, SPI_CS1#/GPIO58/CLGPIO6, SPI_MOSI, SPI_MISO

USB_OC#0, USB_OC#1, USB_OC#2, USB_OC#3, USB_OC#4, USB_OC#5, USB_OC#6, USB_OC#7, USB_OC#8, USB_OC#9, USB_OC#10, USB_OC#11, USBRBIAS_PN, USBRBIAS#

OC0#/GPIO69, OC1#/GPIO40, OC2#/GPIO41, OC3#/GPIO42, OC4#/GPIO43, OC5#/GPIO29, OC6#/GPIO30, OC7#/GPIO31, OC8#/GPIO44, OC9#/GPIO45, OC10#/GPIO46, OC11#/GPIO47

AG2, AG1, ICH9M REV 1.0

USBP0, USBP0+, USBP1N, USBP1P, USBP2N, USBP2P, USBP3N, USBP3P, USBP4N, USBP4P, USBP5N, USBP5P, USBP6N, USBP6P, USBP7N, USBP7P, USBP8N, USBP8P, USBP9N, USBP9P, USBP10N, USBP10P, USBP11N, USBP11P

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

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AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

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AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

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AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

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AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

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AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

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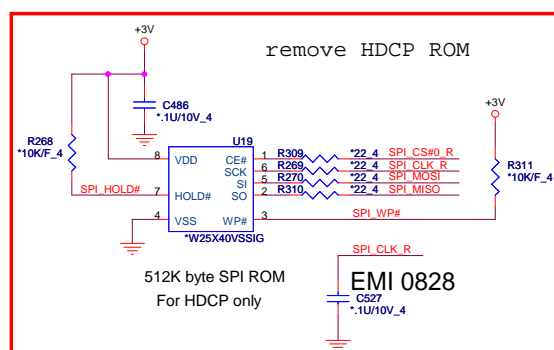
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AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

AC5, AC4, AD3, AD2, AC1, AC2, AA5, AA4, AB3, AA1, AA2, W5, W4, Y3, Y2, W1, W2, V2, V3, U5, U4, U1, U2

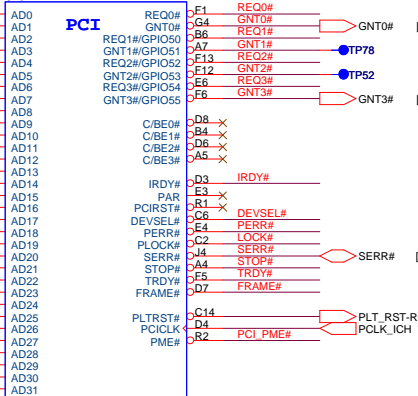
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remove HDCP ROM

512K byte SPI ROM For HDCP only

U45B



Interrupt I/F

INTA#, INTB#, INTC#, INTD#, PIRQA#, PIRQB#, PIRC#, PIRD#, PIRQE#/GPIO2, PIRQF#/GPIO3, PIRQG#/GPIO4, PIRQH#/GPIO5

ICH9M REV 1.0

E-SATA and USB Connector

USB Connector

FINGERPRINT

Carama USB

Docking

BLUETOOTH

Cardread

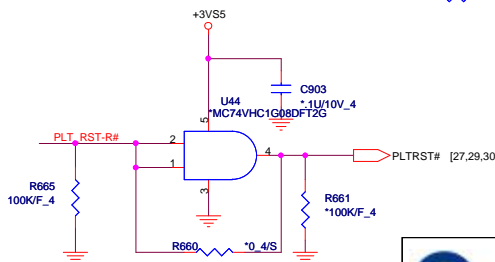
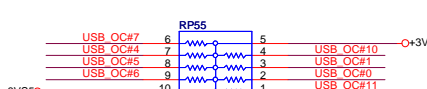
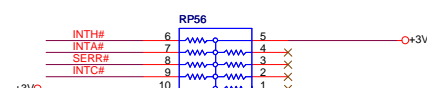
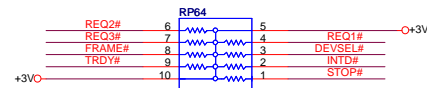
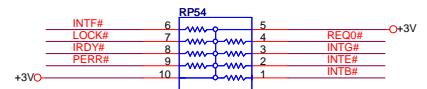
NEW CARD

USB Connector

USB Connector

Robson Min-Card

TV Min-Card



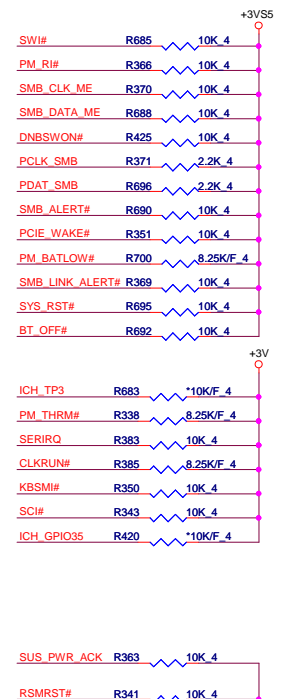
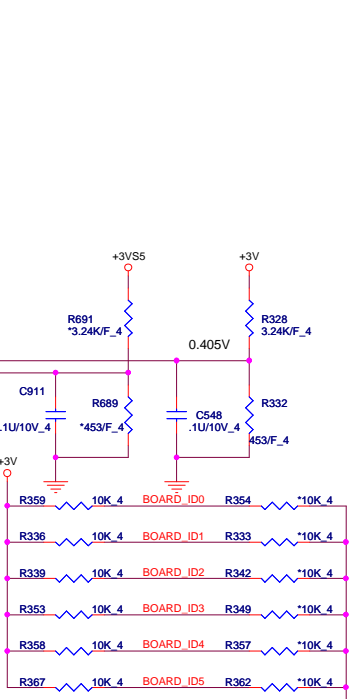
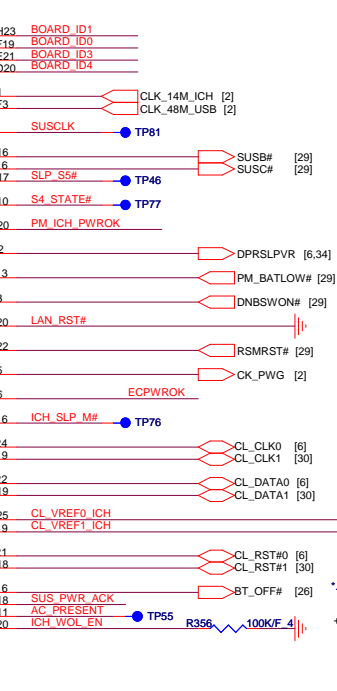
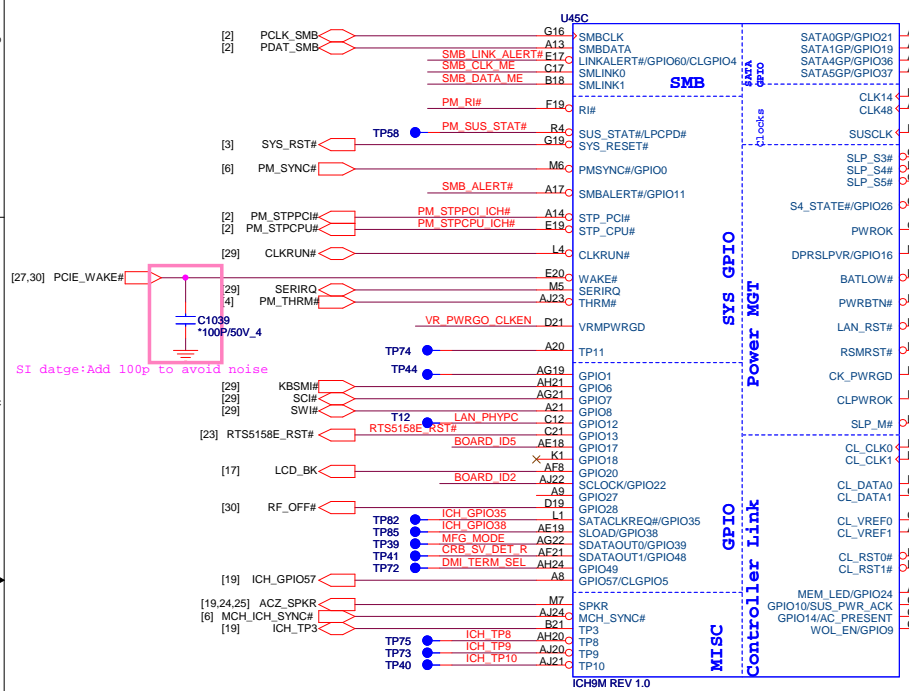
PROJECT : OP6/7
Quanta Computer Inc.

NB5

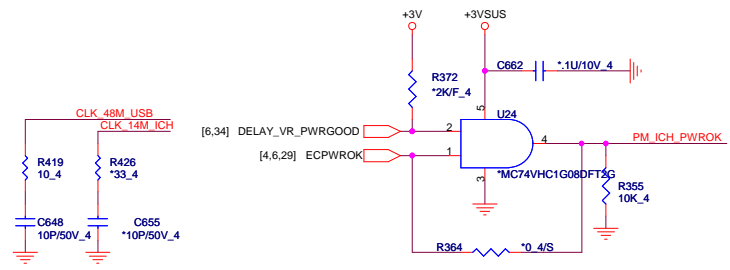
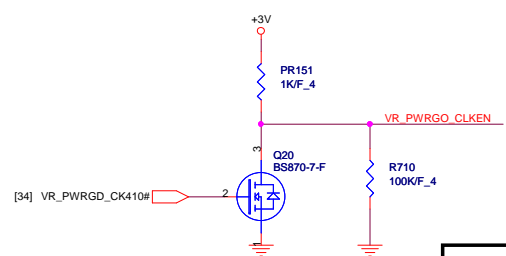
Size Custom Document Number ICH9-M PCI-E 2/4 Rev SI

Date: Tuesday, January 20, 2009 Sheet 20 of 37

[2,4,6,9,10,11,12,14,15,17,18,19,20,22,24,25,26,27,28,29,30,33,34,37] +1.5V
 [19,20,22,37] +3V
 [23,26,30,33,34,35,37] +3VSUS



Delete R361.G2 as Bios_Rec can be cover by Bios

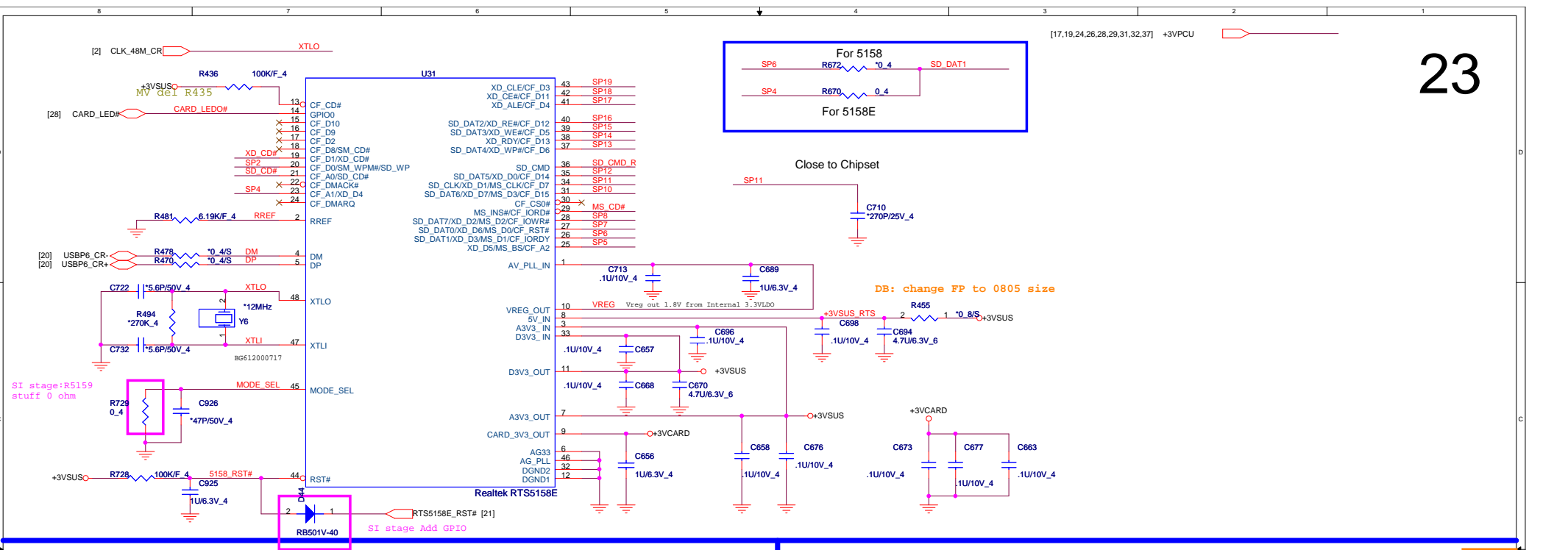


	Board ID	ID0 GPIO19	ID1 GPIO21	ID2 GPIO22	ID3 GPIO36	ID4 GPIO37	ID5 GPIO17
	UMA/DIS	0=UMA 1=Dis.					
	CardReader		0=No Sup 1=Support				
	HDMI			0=No Sup 1=Support			
	Bluetooth						
	Camera						
	Modem						

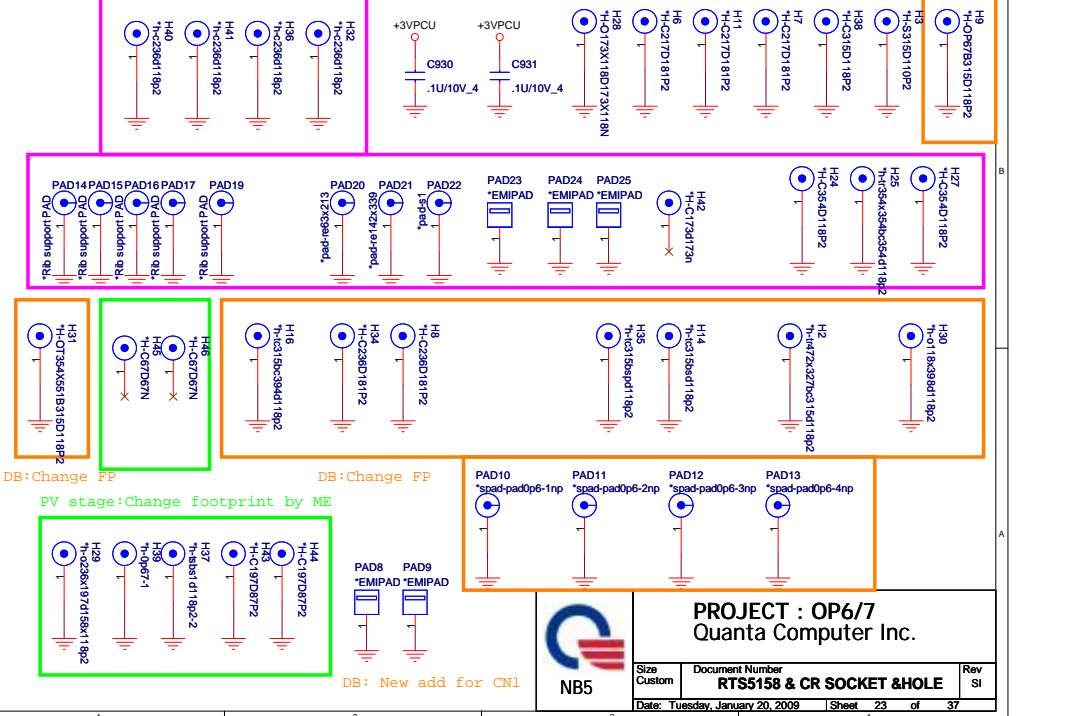
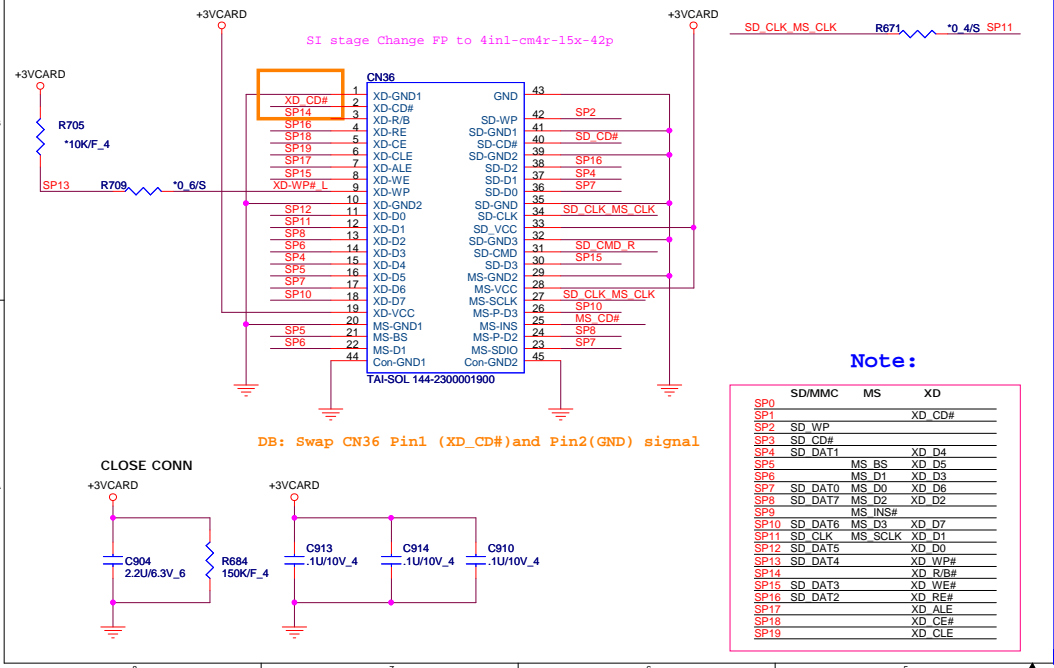
PROJECT : OP6/7
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Document Number
ICH9-M GPIO 3/4

Size Custom Date: Tuesday, January 20, 2009 Sheet 21 of 37



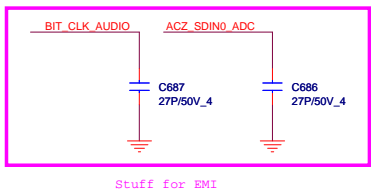
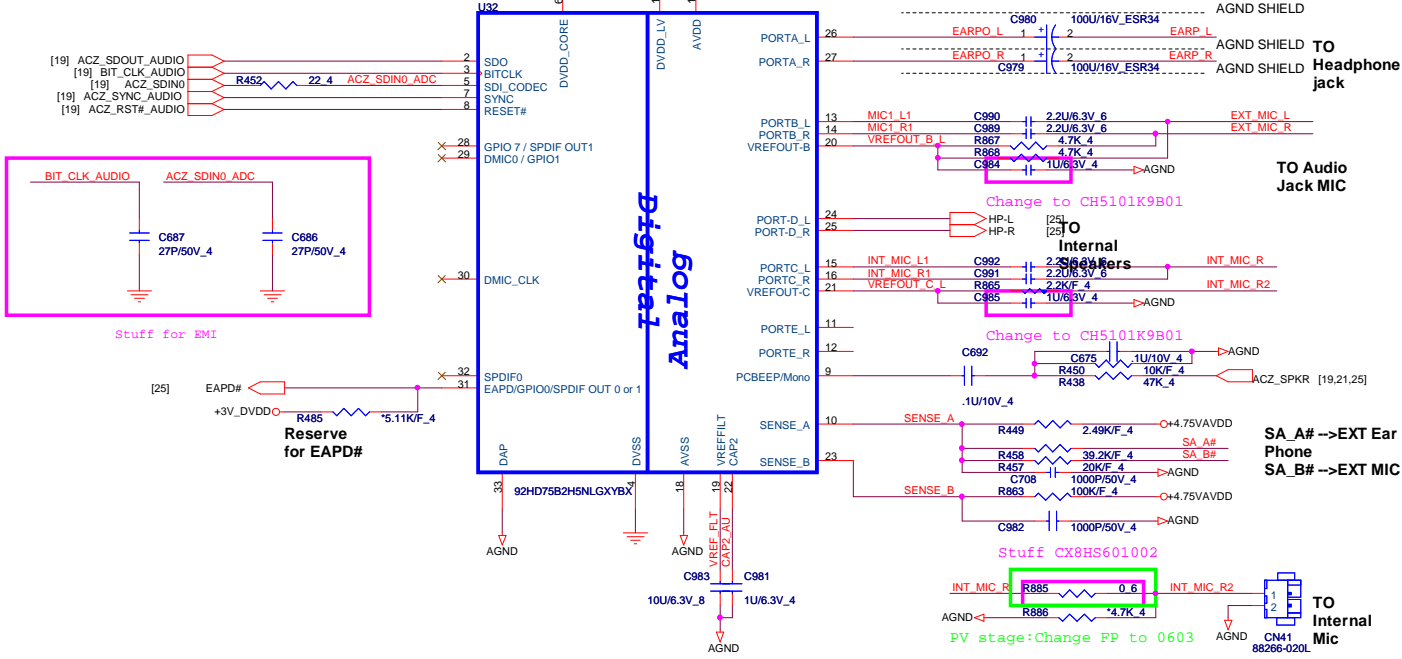
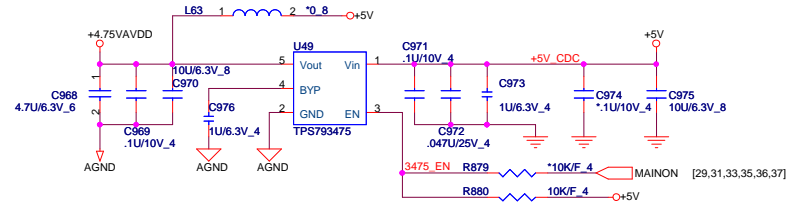
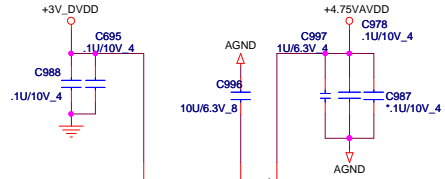
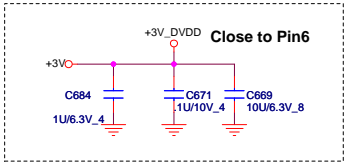
4 IN1 CARD READER XD, /SD, MS/MSP



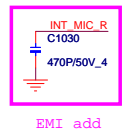
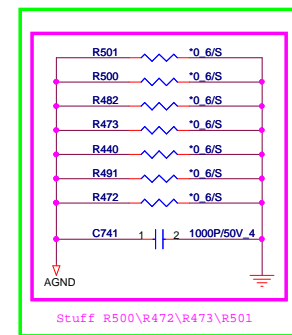
PROJECT : OP6/7
Quanta Computer Inc.

Size Custom Document Number
RTS5158 & CR SOCKET & HOLE Rev SI

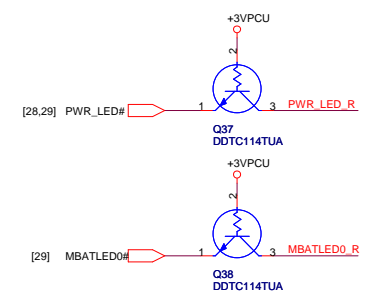
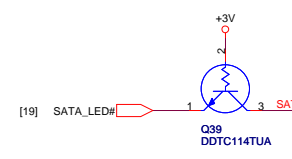
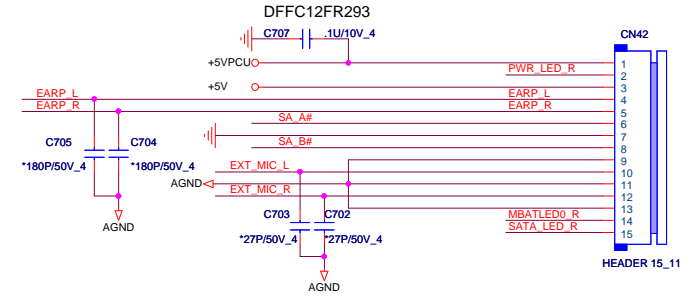
Date: Tuesday, January 20, 2009 Sheet 23 of 37



PV Stage:Change to short pad



AUDIO/B CON.



PROJECT : OP6/7
Quanta Computer Inc.

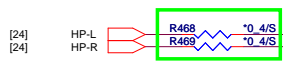
Size: Custom, Document Number: Azalia IDT92HD75B3, Rev: SI

Date: Tuesday, January 20, 2009, Sheet: 24 of 37

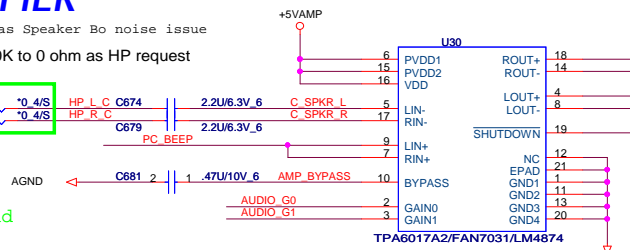
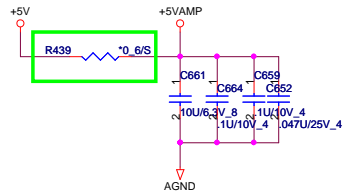
AUDIO AMPLIFIER

Swap Audio input source as Speaker Bo noise issue

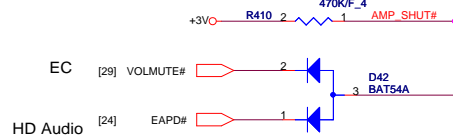
Change R468,R469 from 20K to 0 ohm as HP request



EV Stage: Change to short pad



Change R410 from 100K to 470K(CS44702FB13)

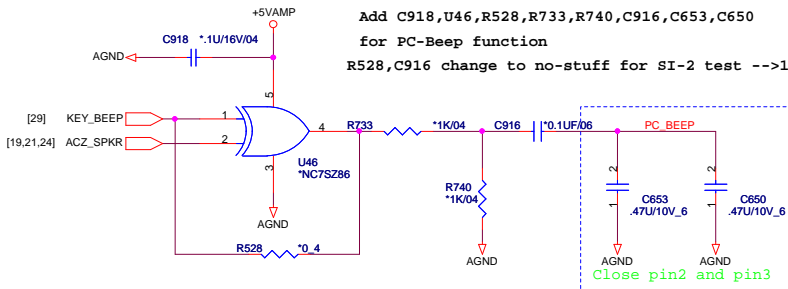


- AL001431K04
- AL6017A2K12
- APA2031 ,AL002031K00

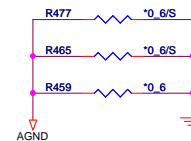
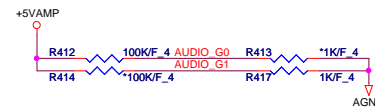
6017A2 Gain Table

GAIN0	GAIN1	AV	RIN
0	0	6dB	90K
0	1	10dB	70K
1	0	15.6dB	45K
1	1	21.6dB	25K

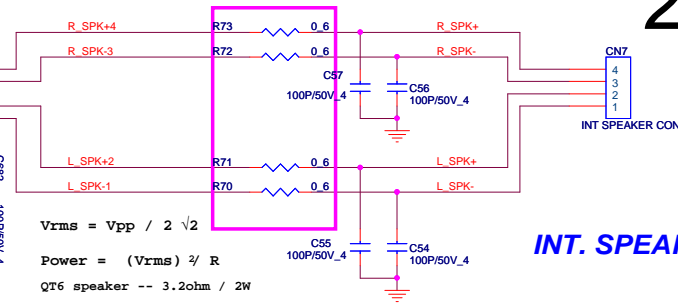
Add C918,U46,R528,R733,R740,C916,C653,C650 for PC-BEEP function
R528,C916 change to no-stuff for SI-2 test -->12/6



close pin2 and pin3



Change P/N to CX8HS601002 for EMI



$$V_{rms} = V_{pp} / 2 \sqrt{2}$$

$$Power = (V_{rms})^2 / R$$

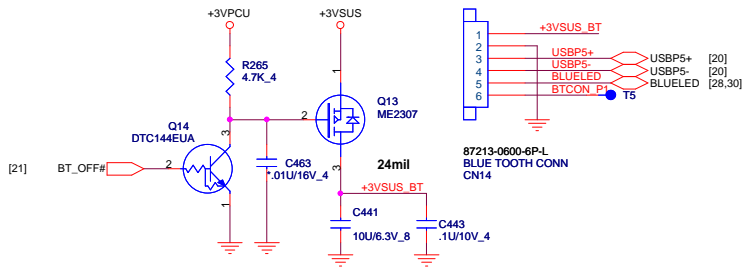
QT6 speaker -- 3.2ohm / 2W

INT. SPEAKER



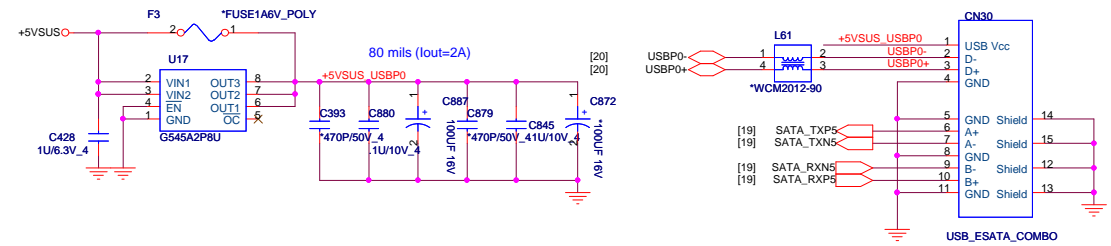
PROJECT : OP6/7
Quanta Computer Inc.

BLUETOOTH

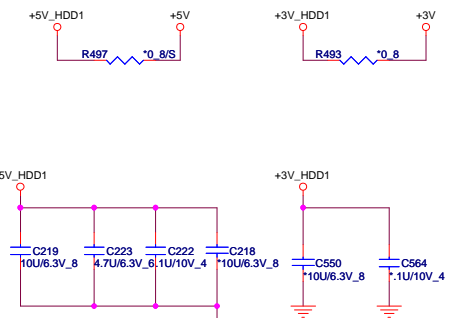
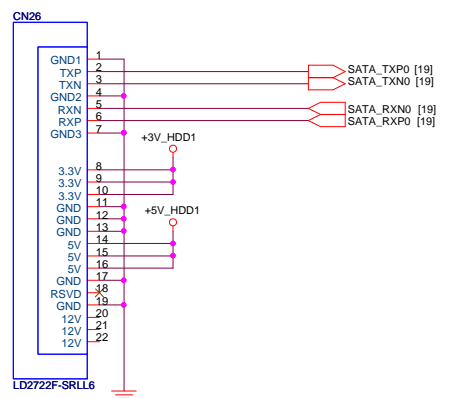


LEFT SIDE USBX1 and E-SATA/USB COMBO

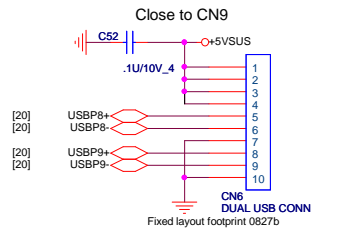
26



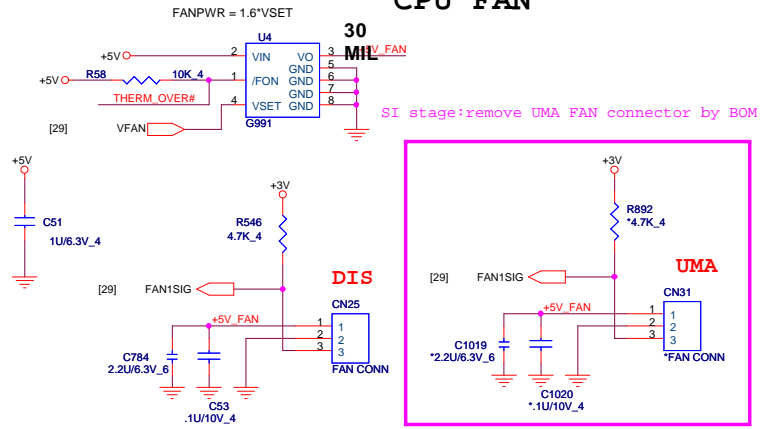
SATA_1 CONNECTOR



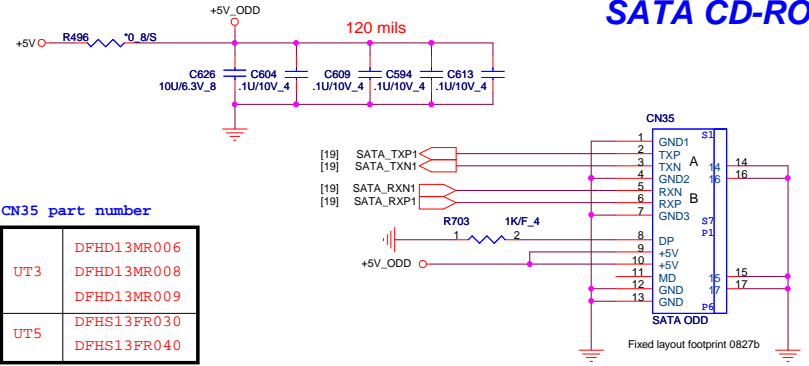
RIGHT SIDE USBX2



CPU FAN



SATA CD-ROM

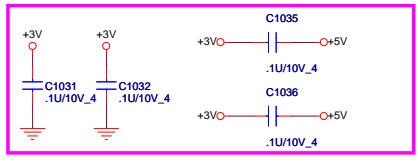
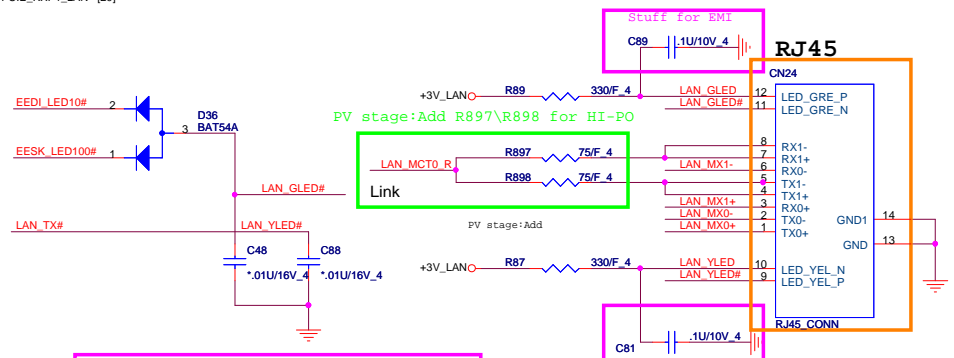
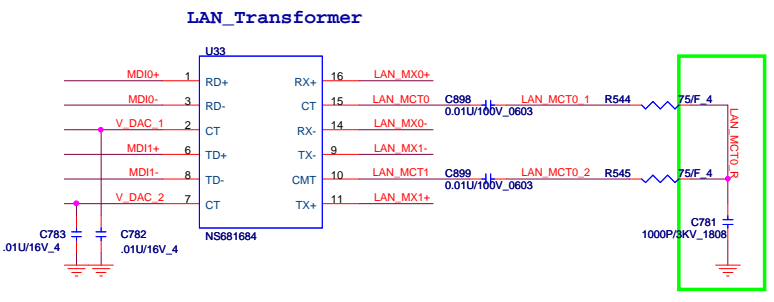
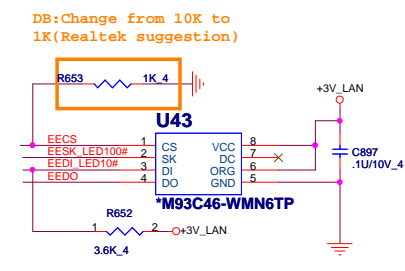
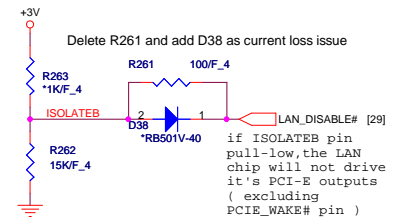
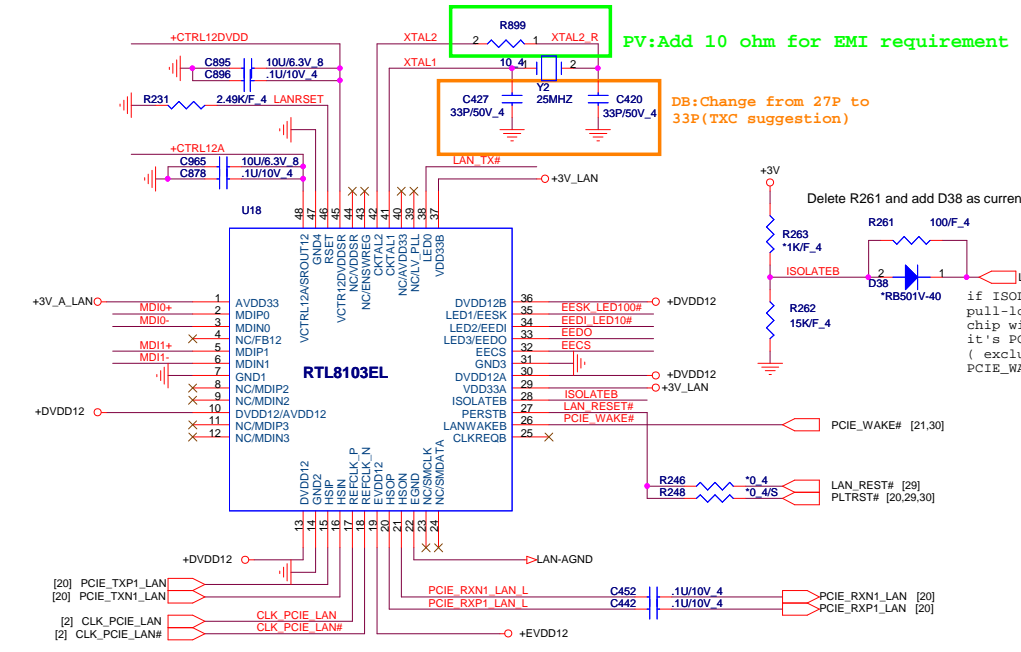
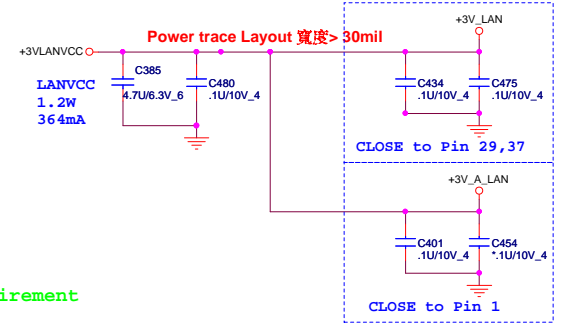
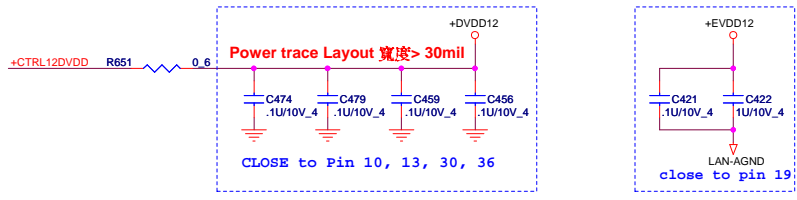


CN35 part number

UT3	DFPHD13MR006
	DFPHD13MR008
	DFPHD13MR009
UT5	DFPHS13FR030
	DFPHS13FR040

PROJECT : OP6/7
Quanta Computer Inc.

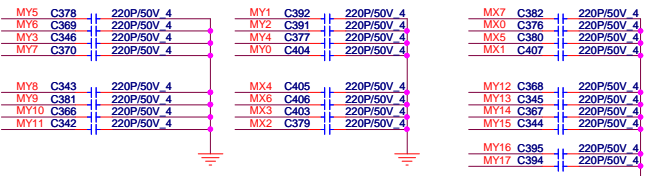
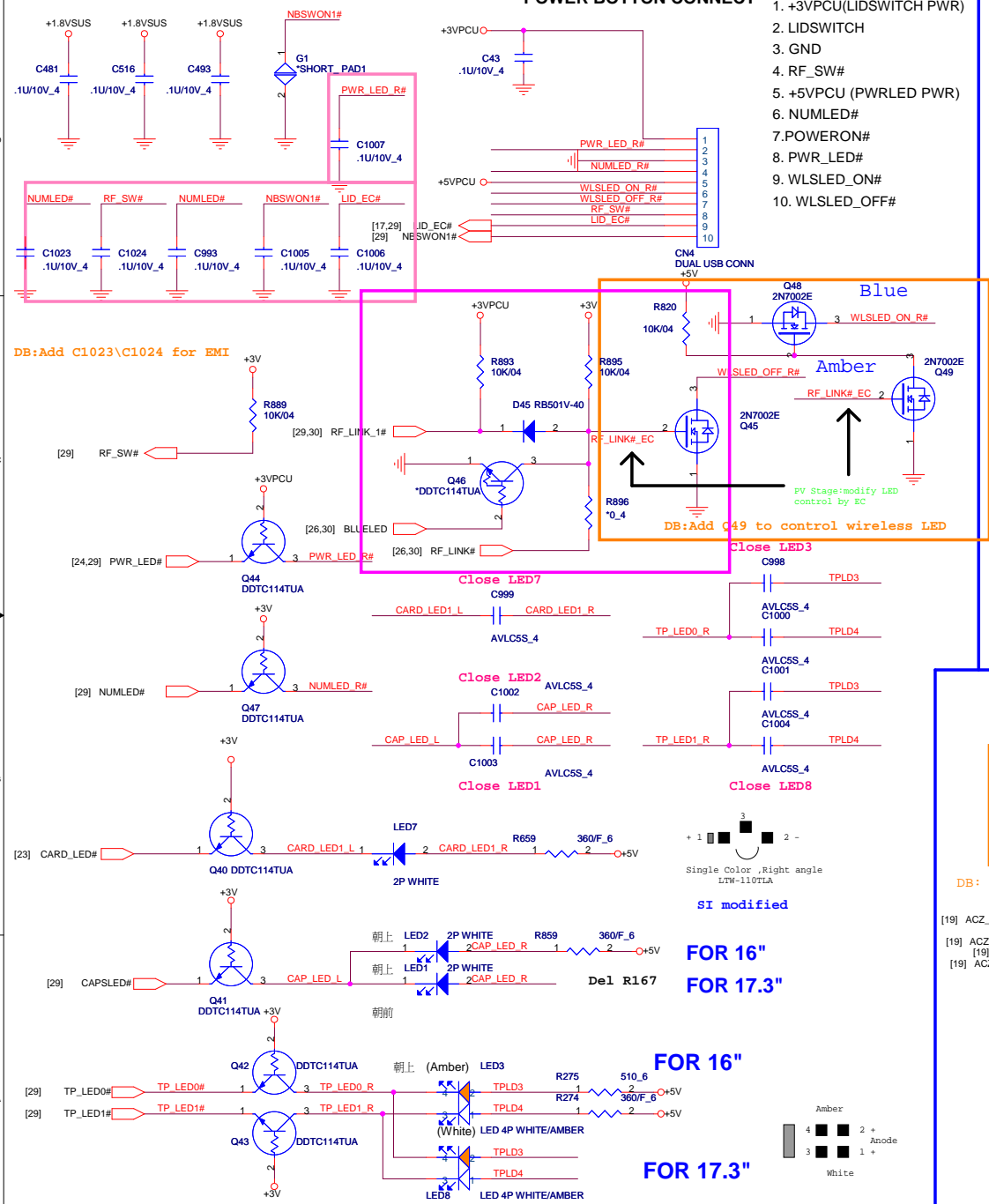
Size Custom	Document Number BT/ESATA/USB/ODD/HDD	Rev SI
Date: Tuesday, January 20, 2009 Sheet 26 of 37		



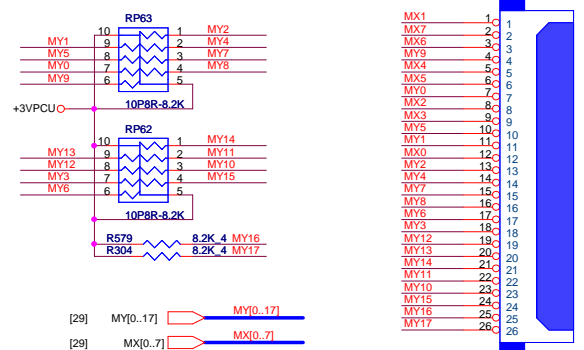
		PROJECT : OP6/7	
		Quanta Computer Inc.	
Size Custom	Document Number	RTL8102EL/RJ45	
Date: Wednesday, February 04, 2009	Sheet	27	of 37

POWER BOTTON CONNECT

1. +3VPCU(LIDSWITCH PWR)
2. LIDSWITCH
3. GND
4. RF_SW#
5. +5VPCU (PWRLD PWR)
6. NUMLED#
7. POWERON#
8. PWR_LED#
9. WLSLED_ON#
10. WLSLED_OFF#

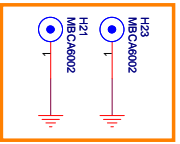


KEYBOARD PULL-UP



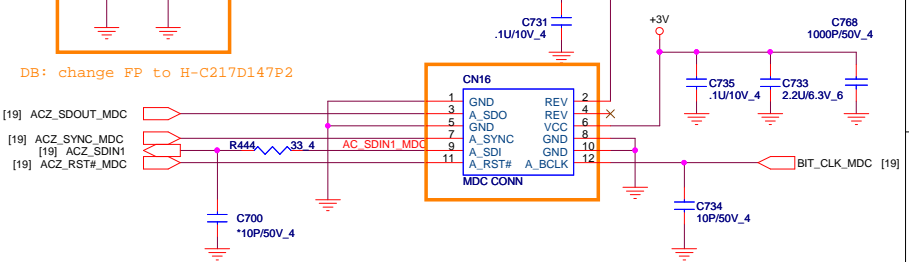
GB1RF260-1253-8F
Footprint: "gblrf260-1253-7f-26p-1"

R430 Change to 100k ohm ,pull low

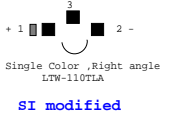


DB: change FP to H-C217D147P2

MDC



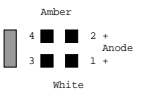
DB: change FP to MDC-1-179373-2-12P-RUV



FOR 16"
FOR 17.3"

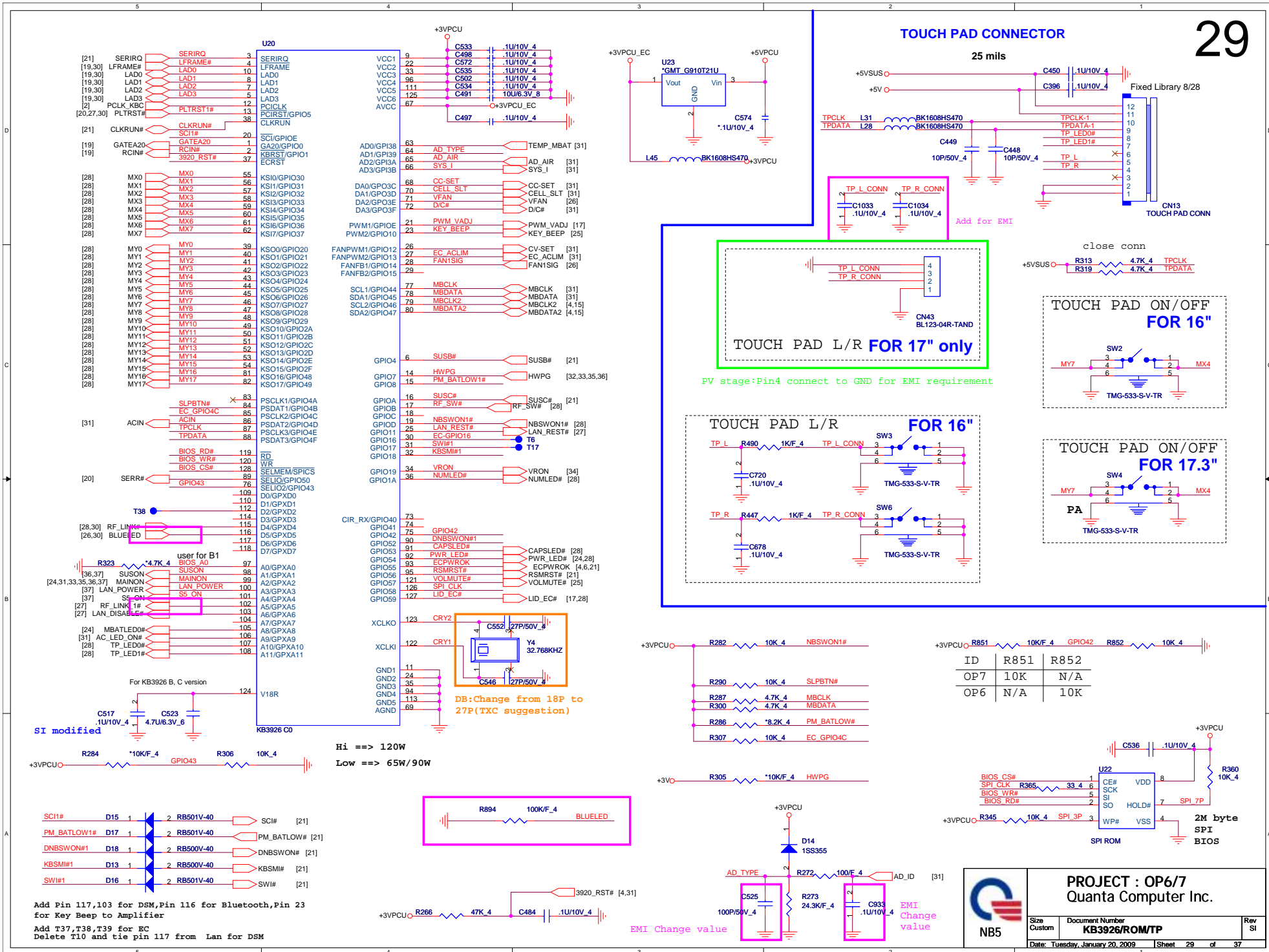
FOR 16"

FOR 17.3"



PROJECT : OP6/7
Quanta Computer Inc.

Size Custom	Document Number KB/LED/POWER CONN/MDC	Rev SI
Date: Tuesday, January 20, 2009	Sheet 28 of 37	



SCI#	D15	1	2	RB501V-40	SCI#	[21]
PM_BATLOW1#	D17	1	2	RB501V-40	PM_BATLOW#	[21]
DNBSWON#1	D18	1	2	RB500V-40	DNBSWON#	[21]
KBSM#1	D13	1	2	RB500V-40	KBSM#	[21]
SW#1	D16	1	2	RB501V-40	SW#	[21]

Add Pin 117,103 for DSM,Pin 116 for Bluetooth,Pin 23 for Key BEEP to Amplifier
 Add T37,T38,T39 for EC
 Delete T10 and tie pin 117 from Lan for DSM

ID	R851	R852
OP7	10K	N/A
OP6	N/A	10K

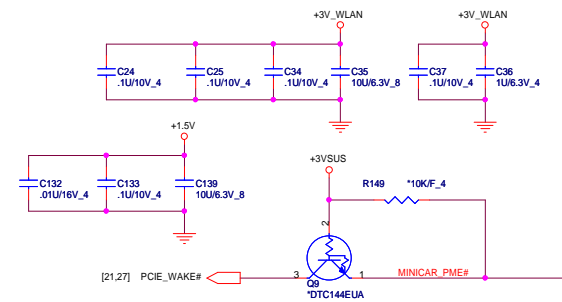
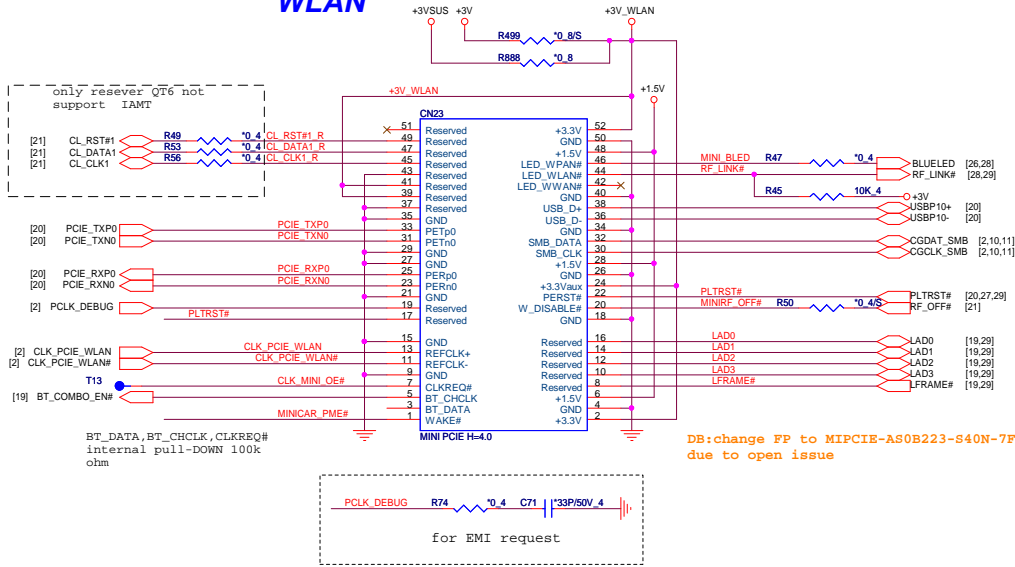
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Size Custom	Document Number	Rev SI
	KB3926/ROM/TP	

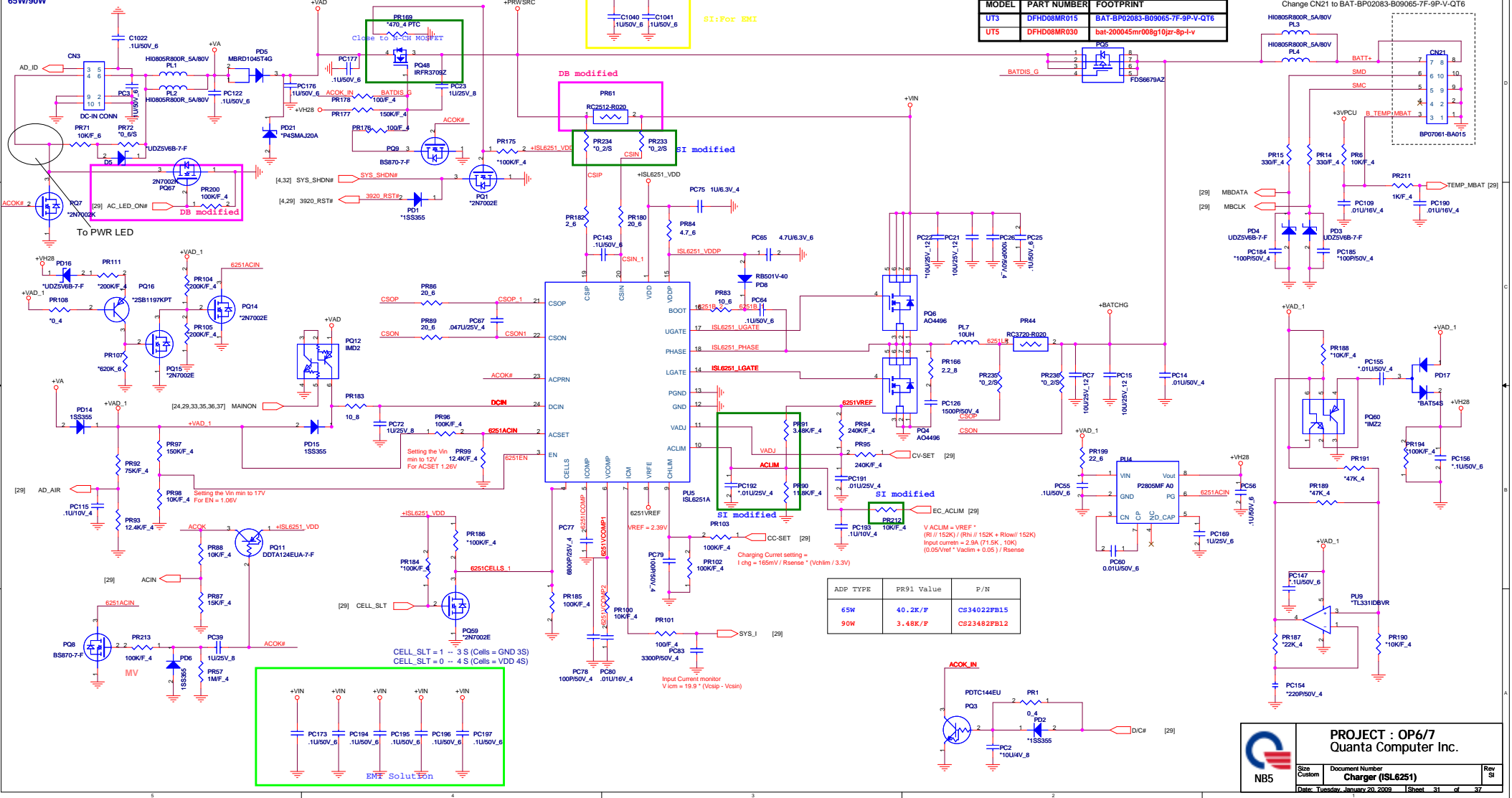
Date: Tuesday, January 20, 2009 | Sheet 29 of 37



Mini PCI-E Card 1 WLAN



TOP DC JACK
65W/90W



BATTERY CONNECTOR TYPE		
MODEL	PART NUMBER	FOOTPRINT
UT3	DFHD08MR015	BAT-BP02083-B09065-7F-9P-V-QT6
UT5	DFHD08MR030	bat-200045mr068g10jr-8p-1-v

ADP TYPE	PR91 Value	P/N
65W	40.2K/F	CS34022PB15
90W	3.48K/F	CS23482PB12

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Size Custom Document Number **Charger (ISL6251)** Rev SI

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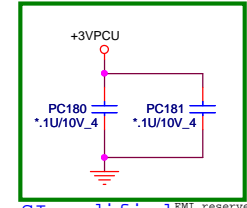
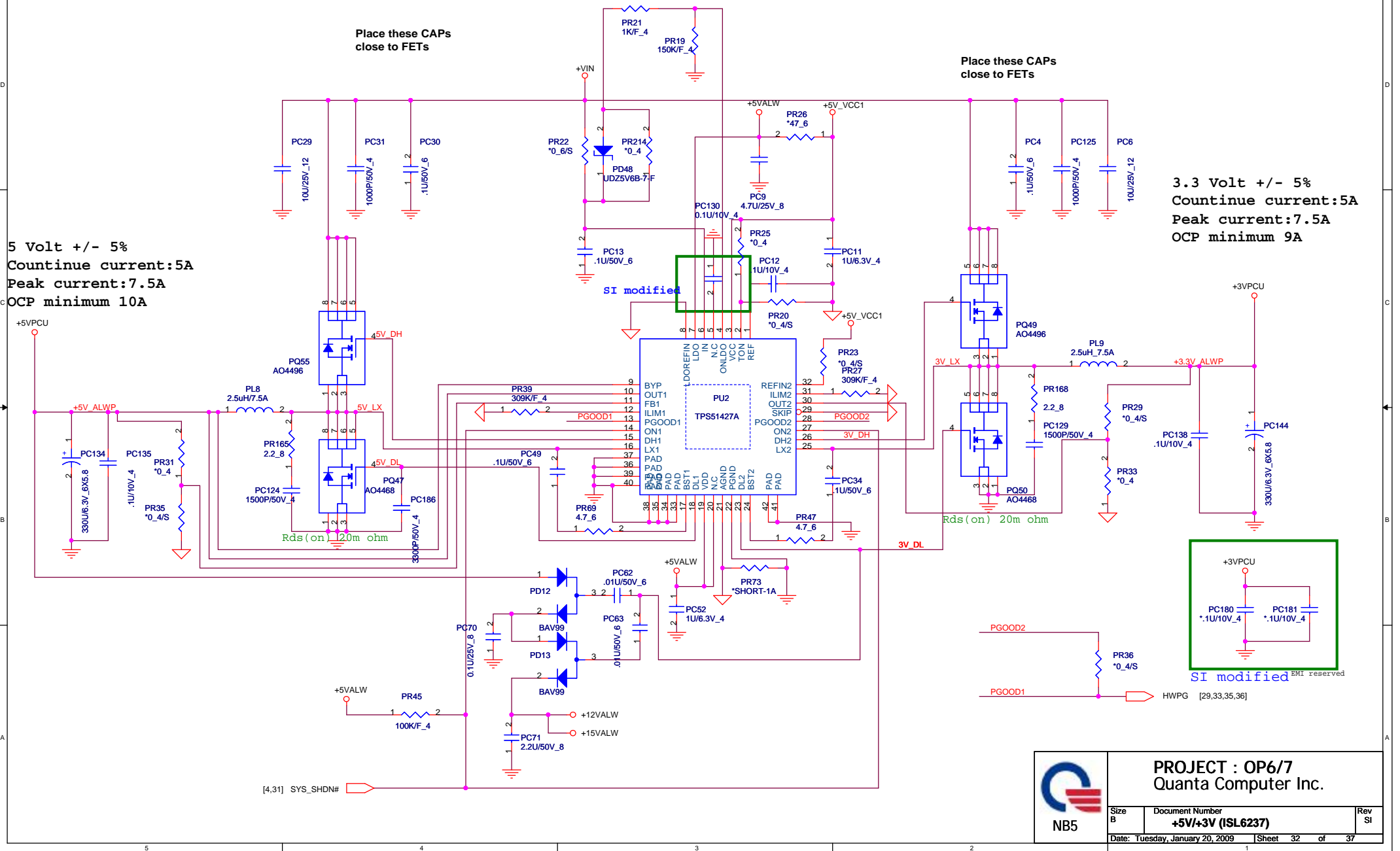
DC/DC +3V_ALW/+5V_ALW/+5V_ALW2 /+12V_ALW


Place these CAPs close to FETs

Place these CAPs close to FETs

5 Volt +/- 5%
 Countinue current:5A
 Peak current:7.5A
 OCP minimum 10A

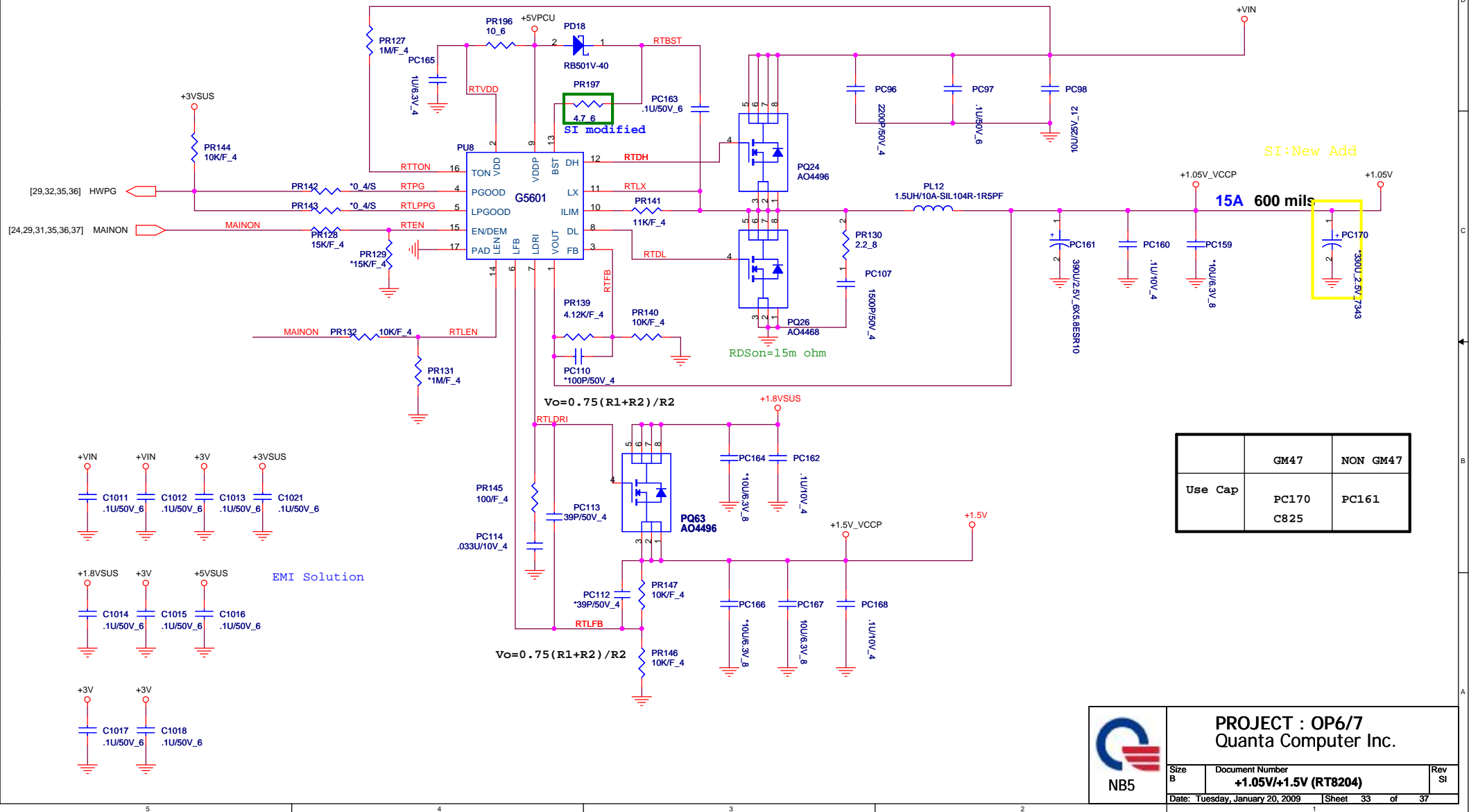
3.3 Volt +/- 5%
 Countinue current:5A
 Peak current:7.5A
 OCP minimum 9A



 NB5	PROJECT : OP6/7 Quanta Computer Inc.		
	Size B	Document Number +5V/+3V (ISL6237)	Rev SI
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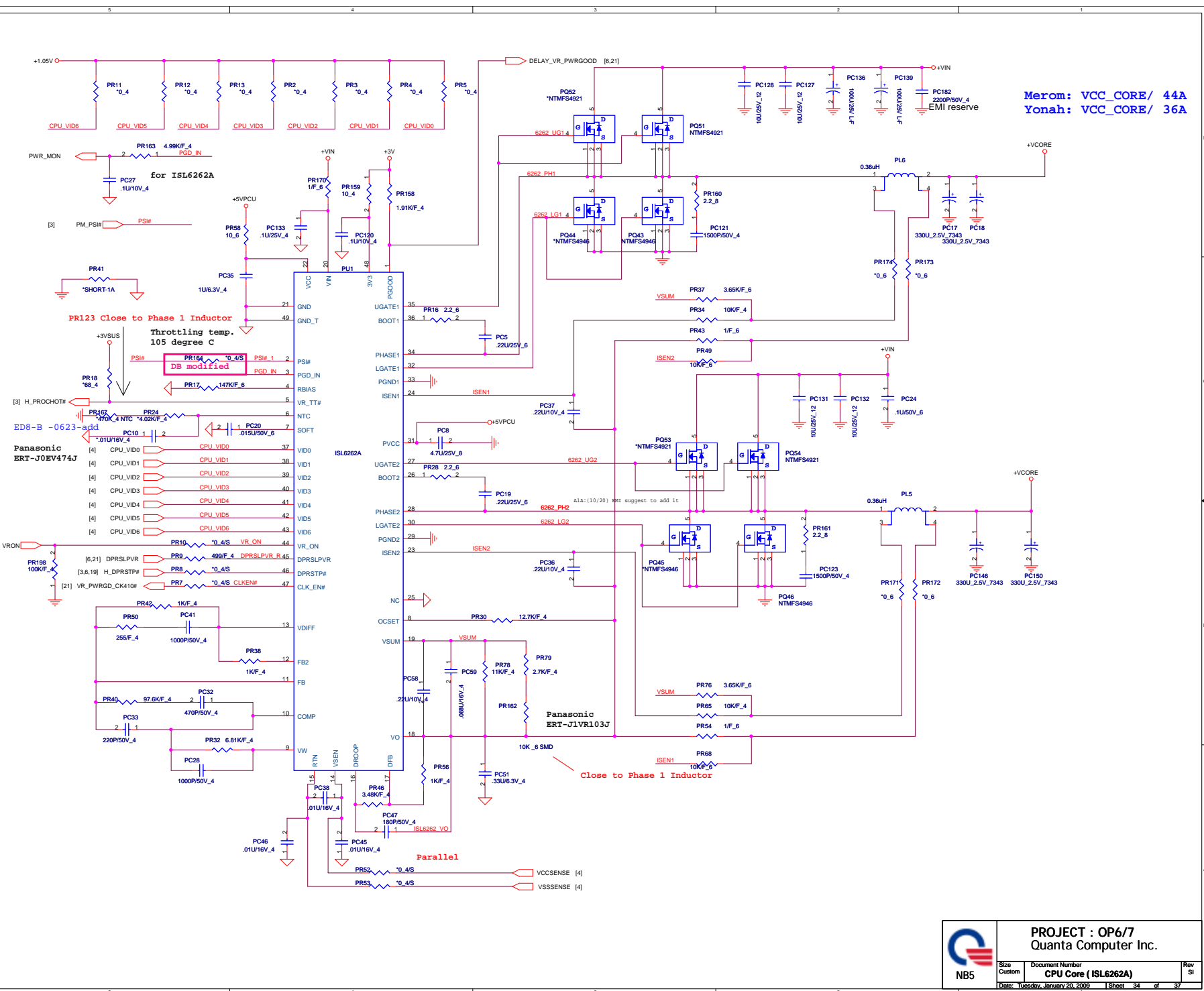
VCCP1.05V & +1.5V

+1.05Volt +/- 5%
 Countinue current:7.5A
 Peak current:10A
 OCP minimum 15A



$$V_o = 0.75 (R1 + R2) / R2$$

$$V_o = 0.75 (R1 + R2) / R2$$



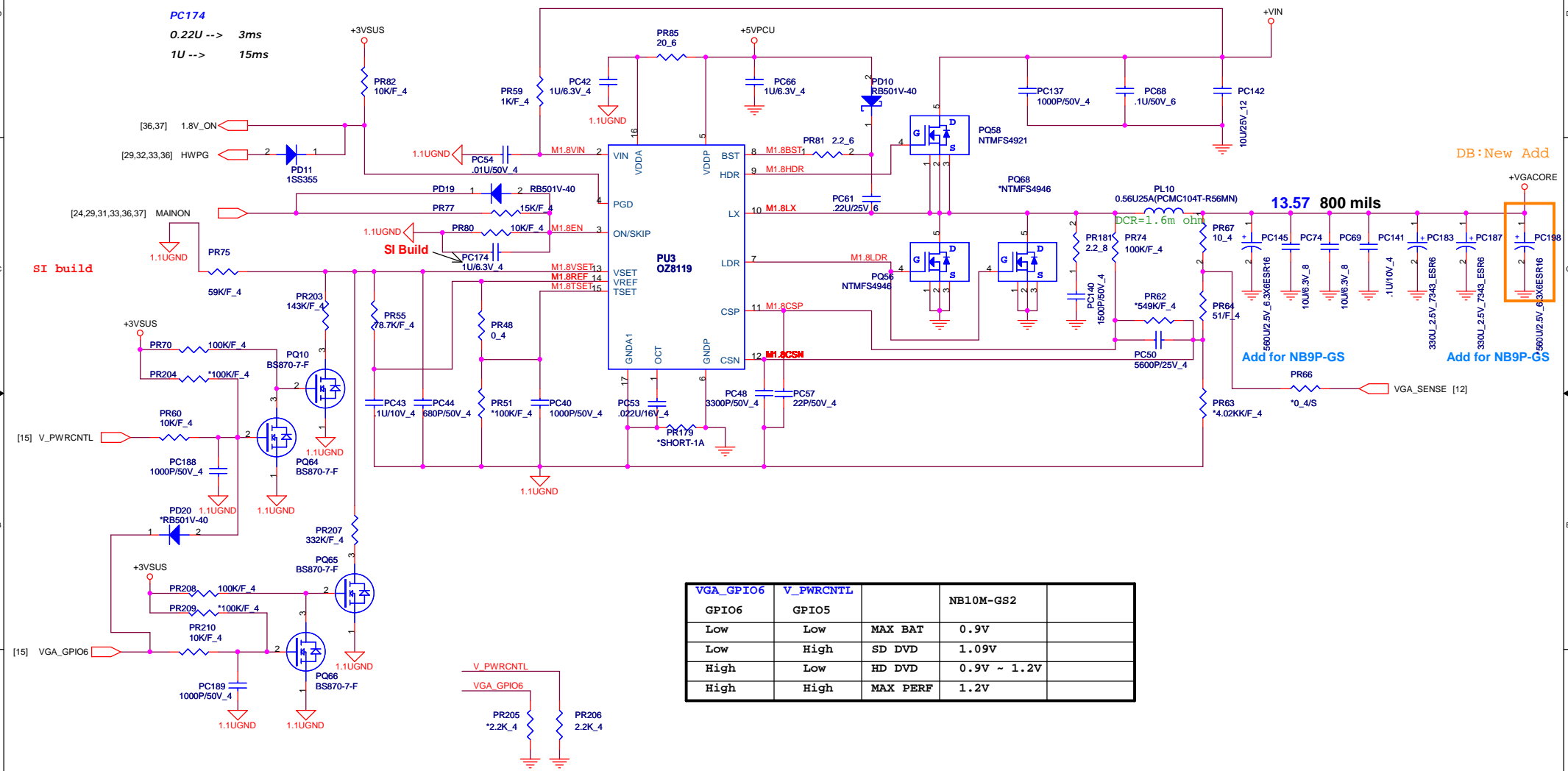
Merom: VCC_CORE/ 44A
 Yonah: VCC_CORE/ 36A

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	Quanta Computer Inc.	
	Size Custom	Document Number CPU Core (ISL6262A)
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VGA Core & VCC1.1

+1.1Volt +/- 5%
 Countinue current:17.54A
 Peak current:22.8A
 OCP minimum 23A

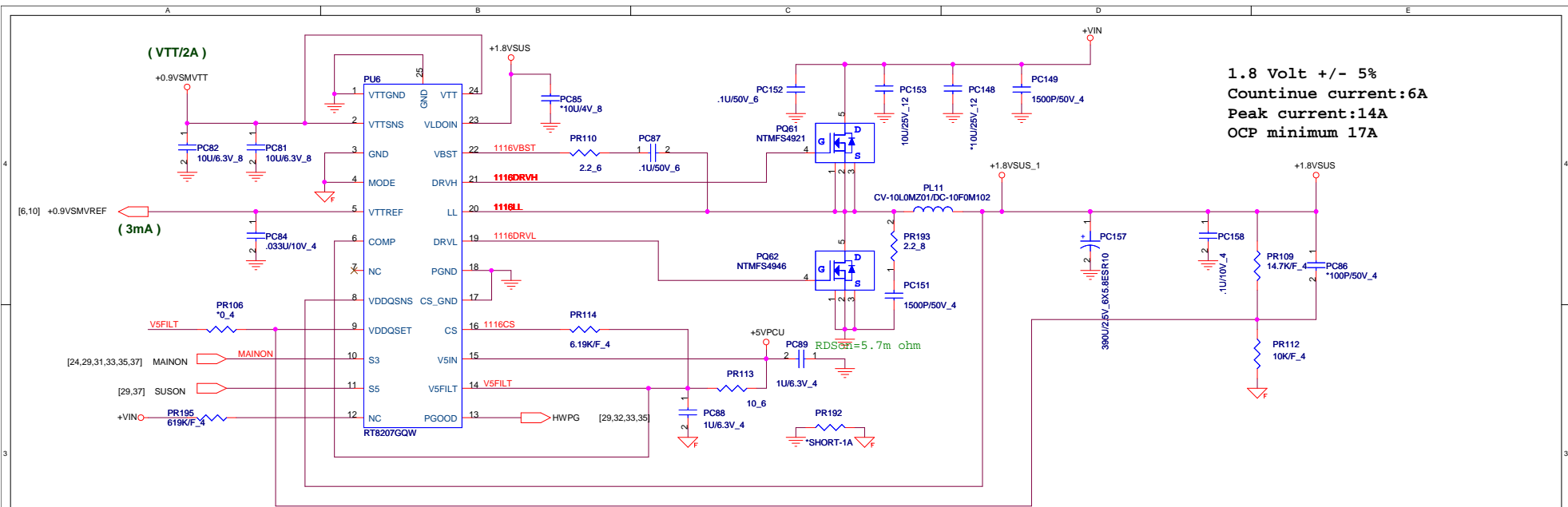
PC174
 0.22U --> 3ms
 1U --> 15ms



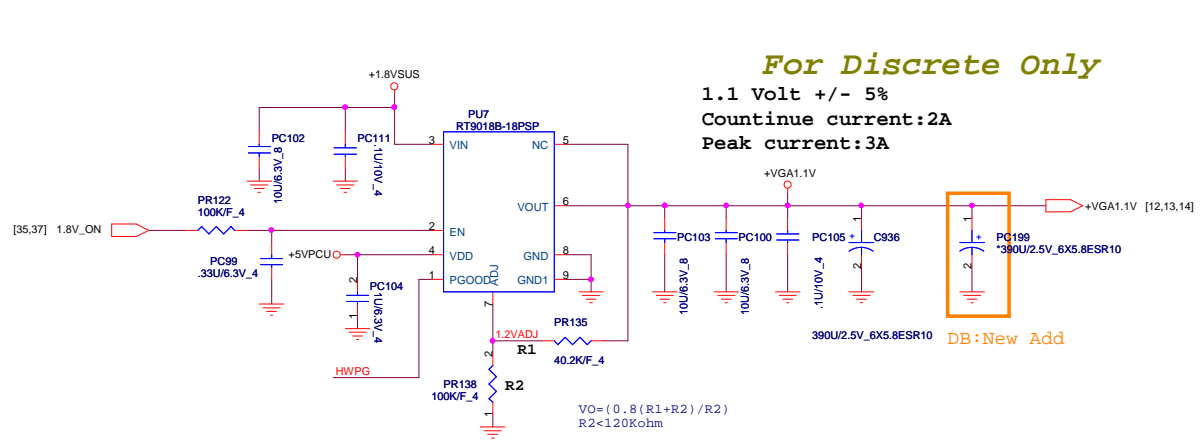
VGA_GPIO6	V_PWRCNTL		NB10M-GS2	
Low	Low	MAX BAT	0.9V	
Low	High	SD DVD	1.09V	
High	Low	HD DVD	0.9V ~ 1.2V	
High	High	MAX PERF	1.2V	

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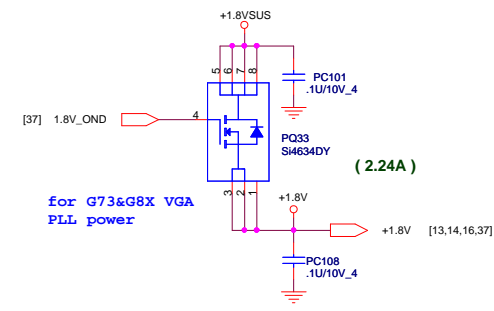
Size Custom	Document Number VGA Core OZ8119	Rev SI
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Change PR122 tied to 1.8V_ON as power sequence request



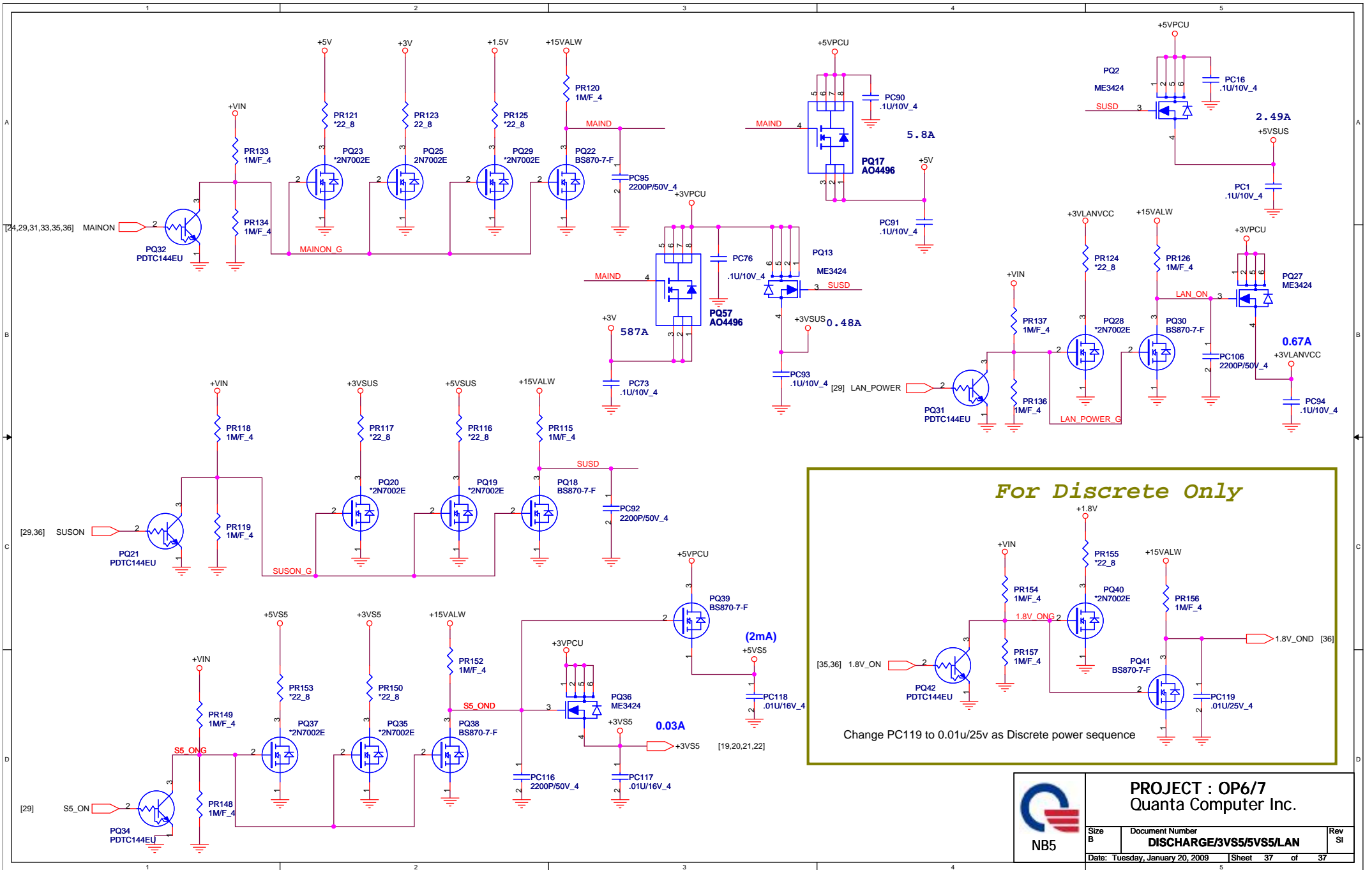
For Discrete Only
 1.1 Volt +/- 5%
 Continune current:2A
 Peak current:3A



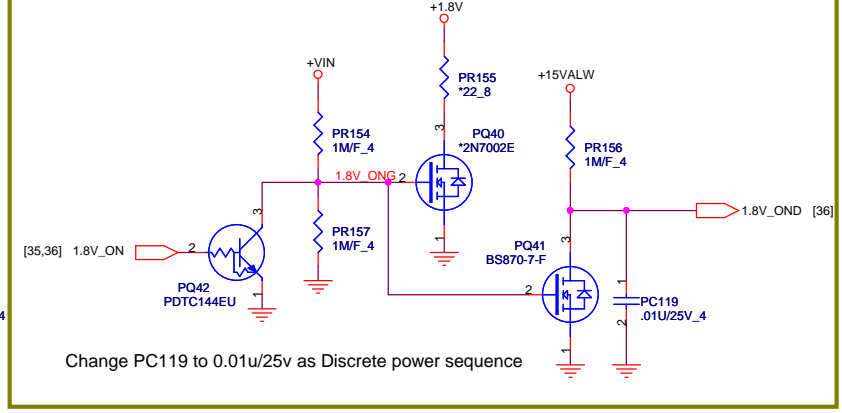
for G73&G8X VGA PLL power



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Size Custom	Document Number 1.8V/DDR_VTER/+1.8v/+1.1V	Rev SI	
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For Discrete Only



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Size B	Document Number DISCHARGE/3VSS/5VSS/LAN	Rev SI
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