

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

**Cable Docking**

- VGA
- RJ-45
- CIR/Pwr btn
- SPDIF Out
- Stereo MIC
- Headphone Jack
- USB Port
- VOL Cntr

PAGE 29

SYSTEM CHARGER(ISL6251AHAZ-T)  
PAGE 30

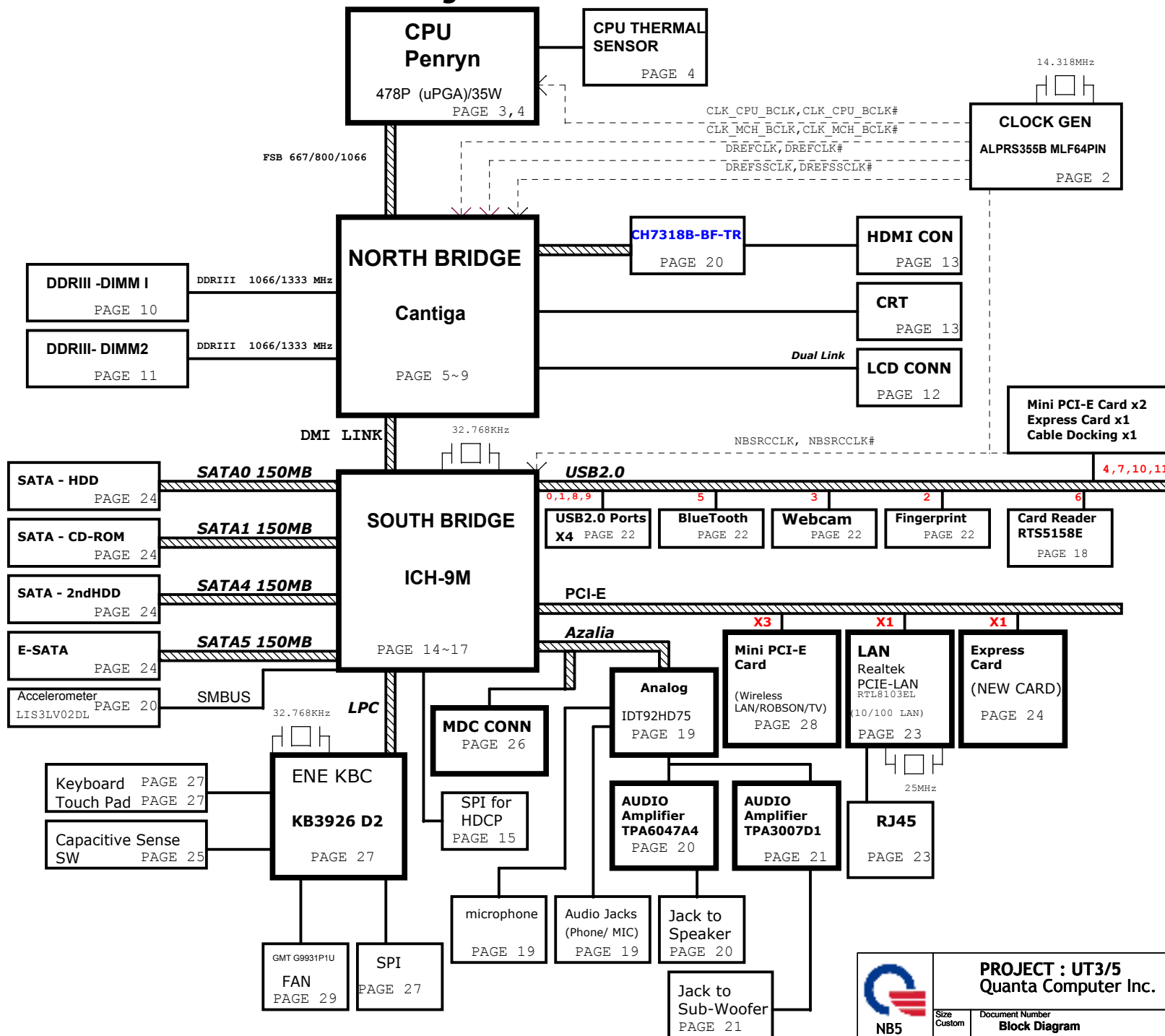
SYSTEM POWER (RT8206BGQW)  
PAGE 31

VCCP +1.5V AND GMCH  
1.05V(RT8204)  
PAGE 32

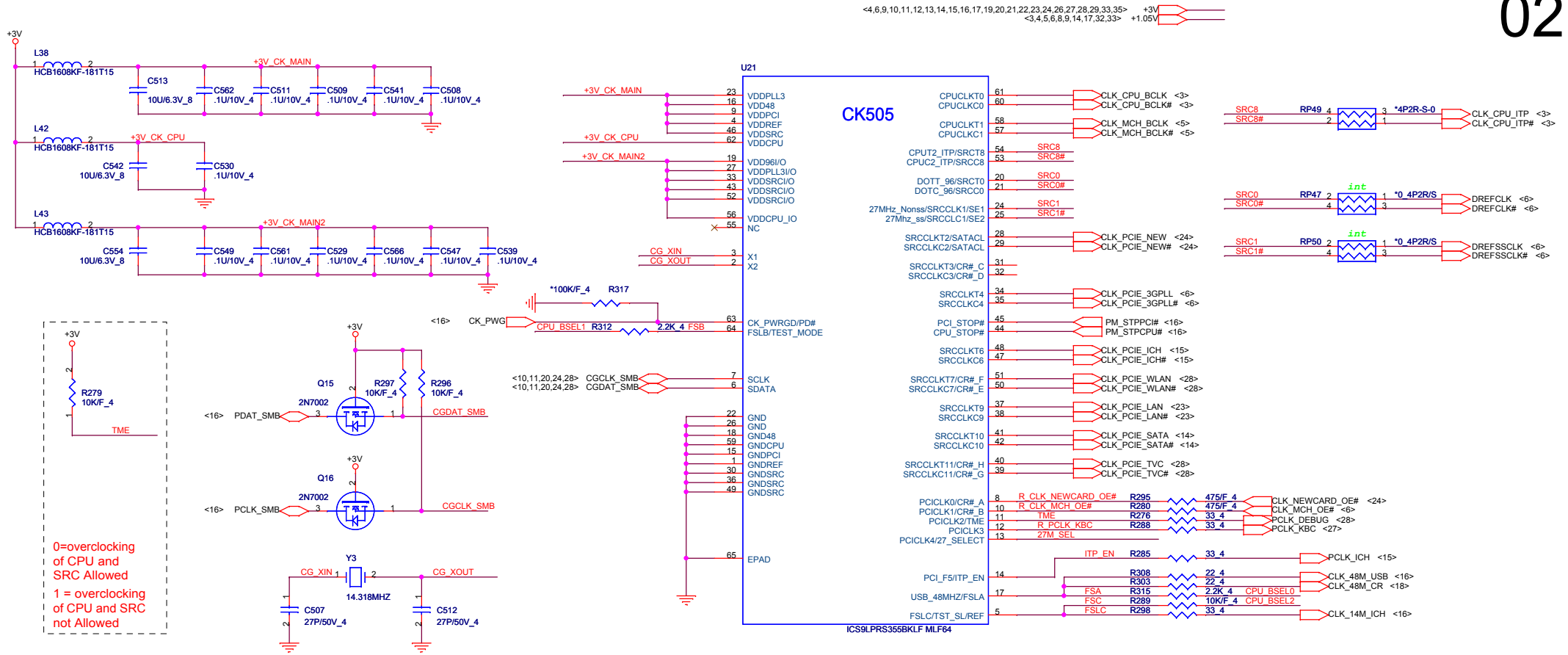
CPU CORE ISL6266A  
PAGE 33

DDR III SMDDR\_VTERM  
+1.5VSUS (TPS5116REGR)  
PAGE 34

GMCH  
+1.8VSUS (G913C)  
PAGE 34



PROJECT : UT3/5  
Quanta Computer Inc.

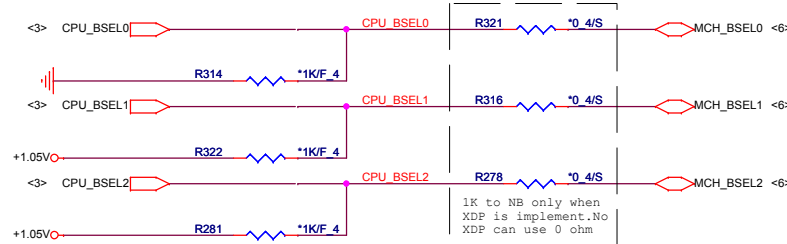


## CK505 QFN64

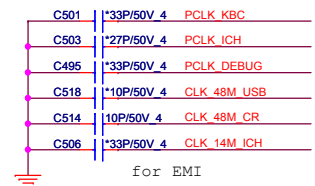
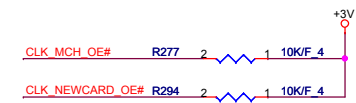
ICS	ICS9LPRS355BKLF	ALPRS355000
Silego	SLG8SP513VTR	AL8SP513000
Realtek	RTM875N-606-VD-GR	AL000875000

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

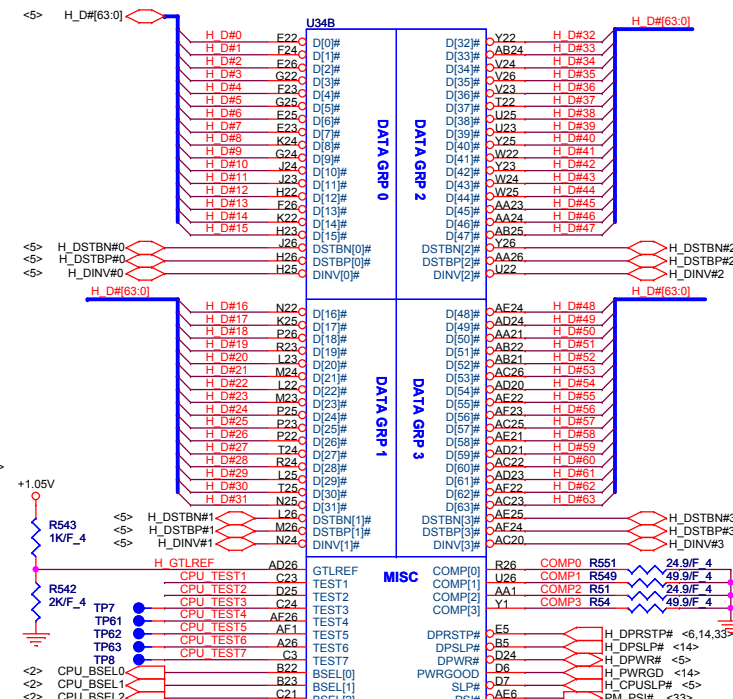
## CPU Clock select



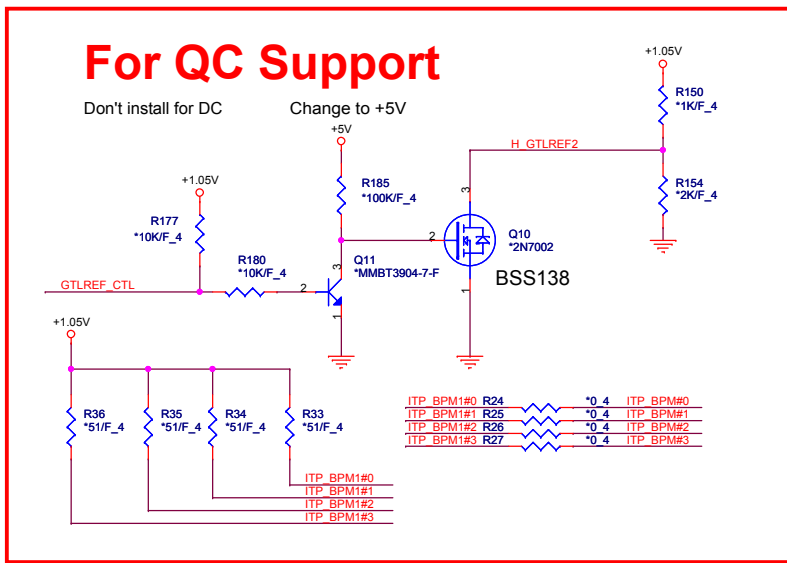
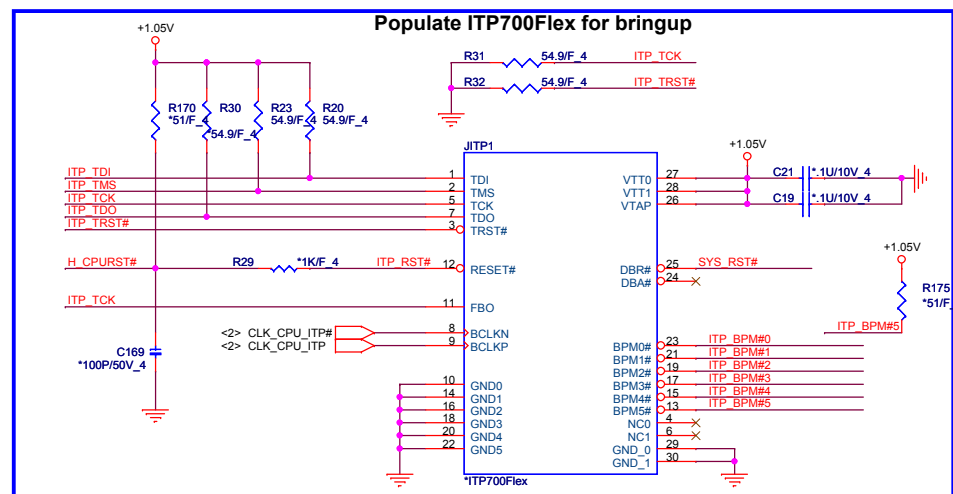
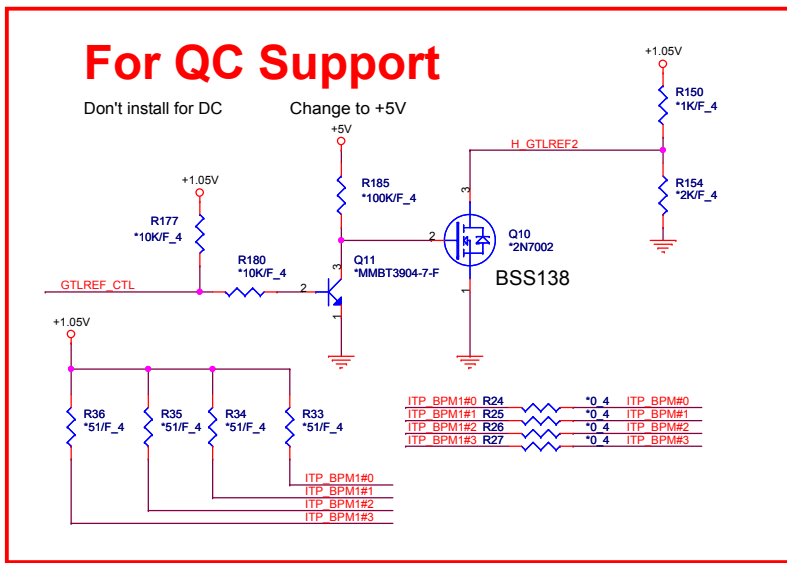
FSC	FSB	FSA	CPU	SRC	PCI
1	0	1	100	100	33
0	0	1	133	100	33
0	1	1	166	100	33
0	1	0	200	100	33
0	0	0	266	100	33
1	0	0	333	100	33
1	1	0	400	100	33
1	1	1	RSVD	100	33



PROJECT : UT3/5  
Quanta Computer Inc.

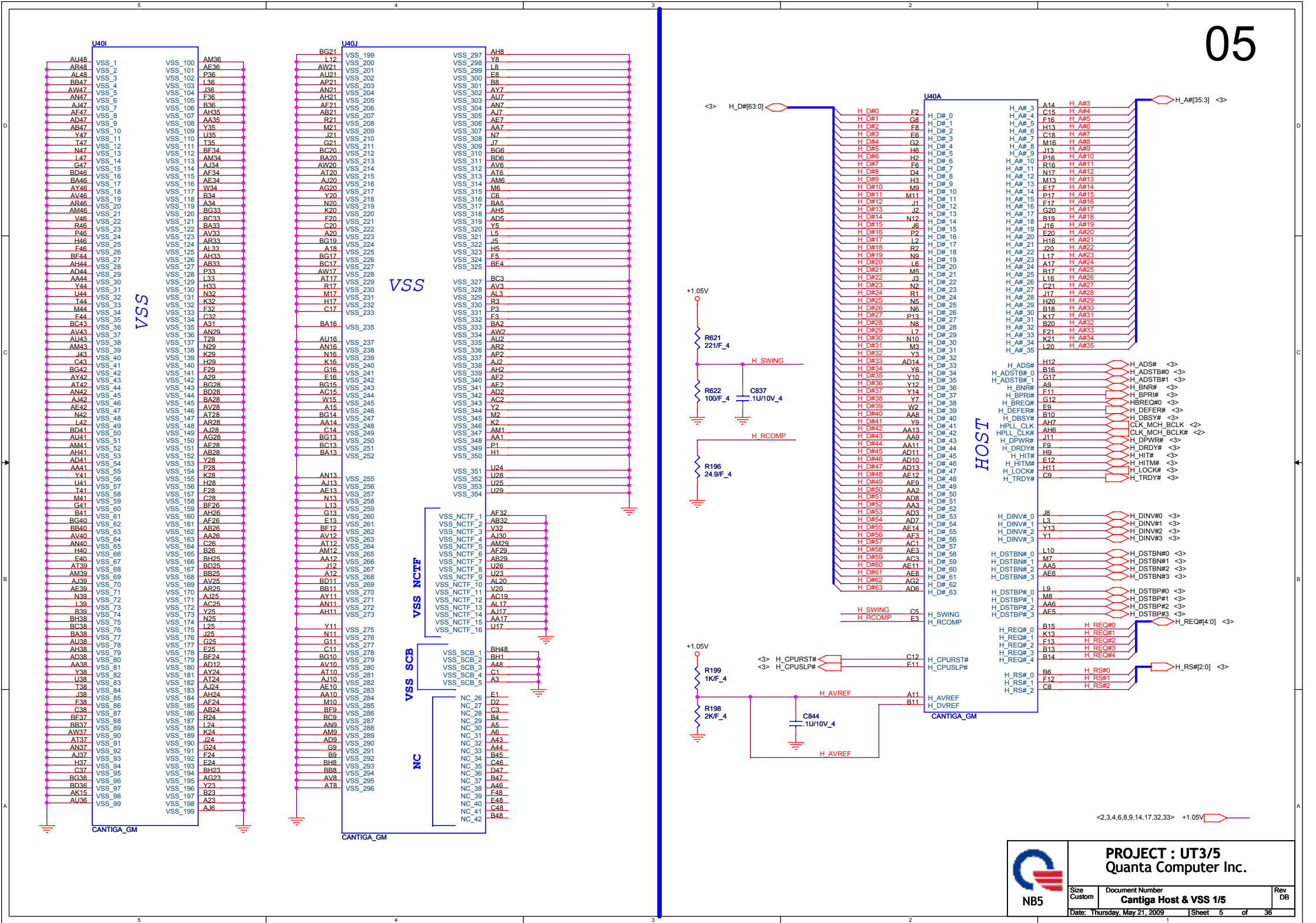


CPU TEST2 R141 \*1K/F 4





Size Custom	Document Number <b>Penryn &amp; TH Monitor 2/2</b>	Rev DB
Date: Thursday, May 21, 2009		Sheet 4 of 36





## 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

0	0	Reserved
1	0	XOR Mode enabled
0	1	All-Z Mode enabled
1	1	Normal operation (Default)

TP36 ME\_JTAG\_TCK  
 TP32 AK34 ME\_JTAG\_TDI  
 TP29 AN35 ME\_JTAG\_TDO  
 TP28 AM35 ME\_JTAG\_TMS

<2> MCH\_BSEL0  
 <2> MCH\_BSEL1  
 <2> MCH\_BSEL2

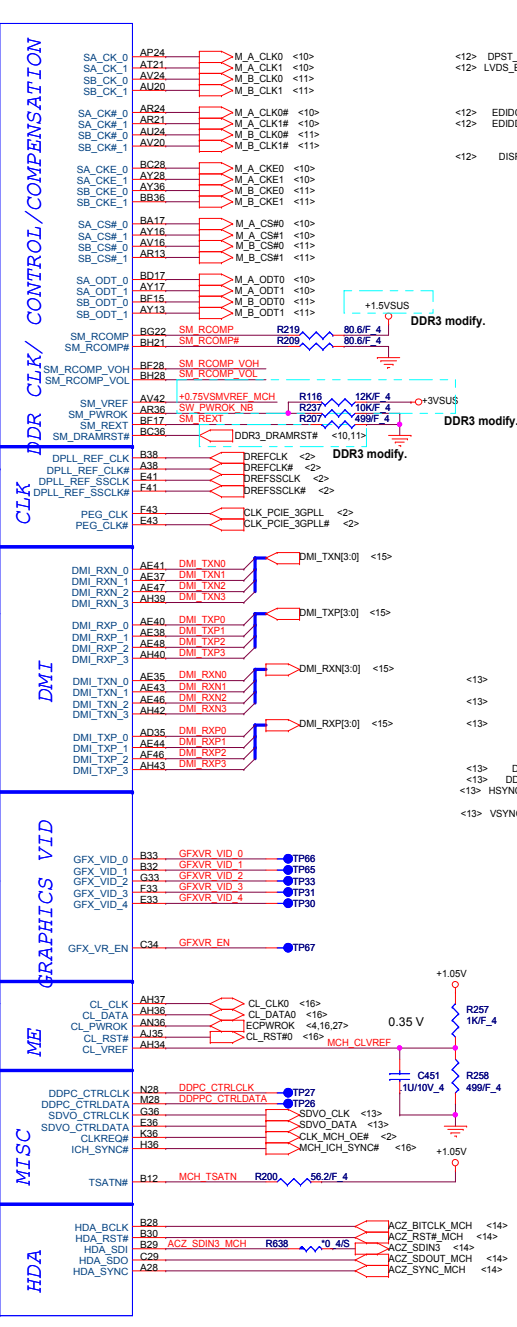
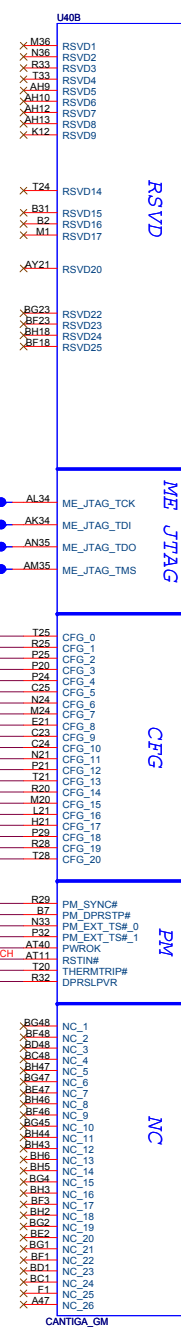
TP36 MCH\_CFG\_3  
 TP32 MCH\_CFG\_4  
 TP29 MCH\_CFG\_5  
 TP20 MCH\_CFG\_6  
 TP24 MCH\_CFG\_7  
 TP12 MCH\_CFG\_8  
 TP19 MCH\_CFG\_9  
 TP18 MCH\_CFG\_10  
 TP13 MCH\_CFG\_11  
 TP10 MCH\_CFG\_12  
 TP15 MCH\_CFG\_13  
 TP16 MCH\_CFG\_14  
 TP17 MCH\_CFG\_15  
 TP25 MCH\_CFG\_16  
 TP21 MCH\_CFG\_17  
 TP24 MCH\_CFG\_18  
 TP22 MCH\_CFG\_19  
 TP24 MCH\_CFG\_20

<16> PM\_SYNC#  
 <3,14,33> H\_DPRSTP#  
 <10,11> PM\_EXTTSM0  
 <11> PM\_EXTTSM1  
 <16,33> DELAY\_VR\_PWRGOOD  
 <15> PLT\_RST-R#  
 <3,14> PM\_THRMTRIP#  
 <16,33> DPRSLPVR

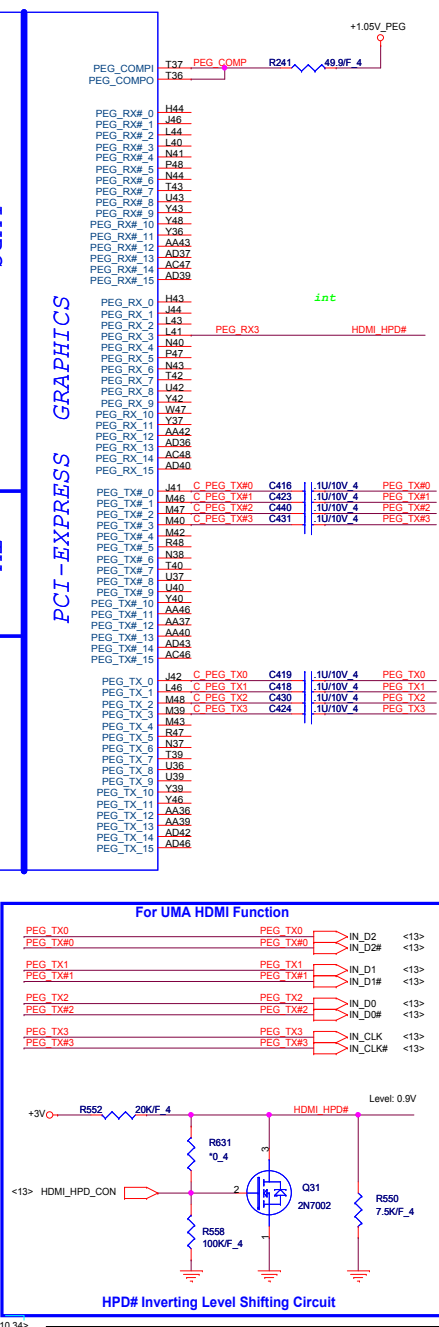
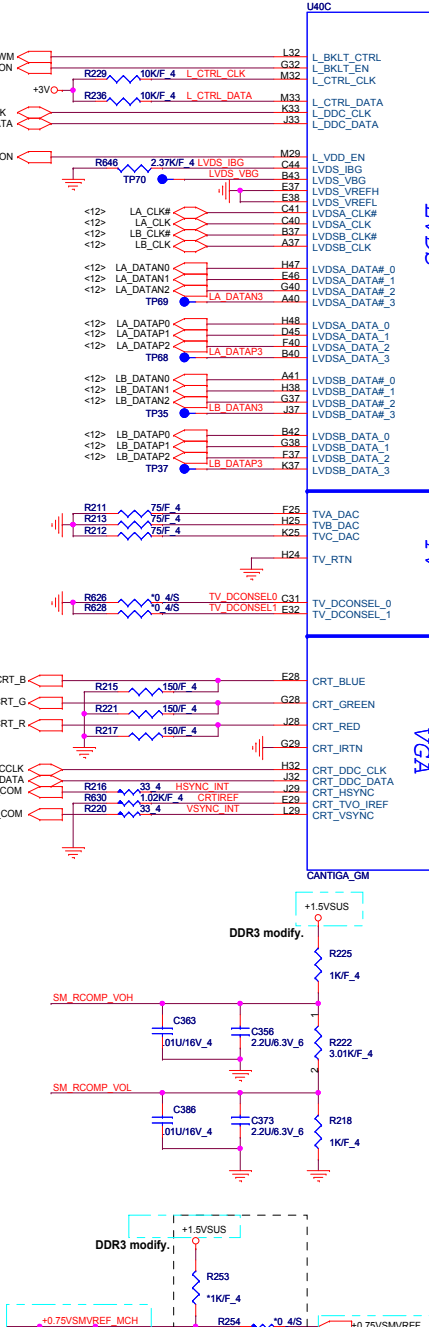
R235 10K/4 PM\_EXTTSM0  
 R230 10K/4 PM\_EXTTSM1

ACZ\_BITCLK\_MCH  
 R834 33.4  
 C874 33P/50V\_4

CANTIGA\_GM



<2,9,10,11,12,13,14,15,16,17,19,20,21,22,23,24,26,27,28,29,33,35> +3V  
 <8,9,10,11,25,32,34> +1.5VSUS  
 <2,3,4,5,8,9,14,17,32,33> +1.05V  
 <2,3,4,5,8,9,14,17,32,33> +1.05V\_PEG



**For UMA HDMI Function**

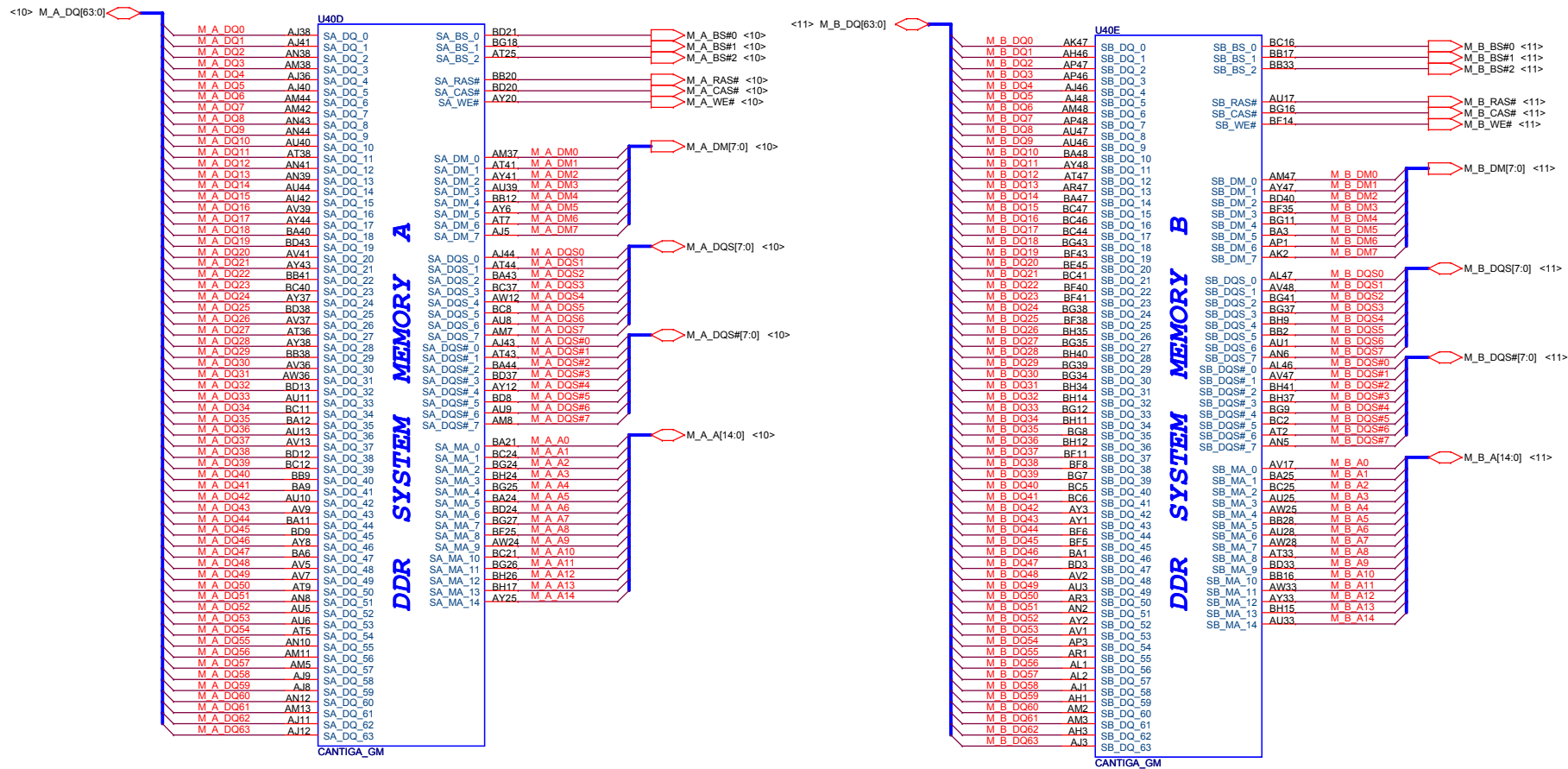
PEG\_TX0 PEG\_TX#0 IN\_D2 <13>  
 PEG\_TX1 PEG\_TX#1 IN\_D1 <13>  
 PEG\_TX2 PEG\_TX#2 IN\_D0 <13>  
 PEG\_TX3 PEG\_TX#3 IN\_CLK# <13>

**HPD# Inverting Level Shifting Circuit**

HDMI\_HPD# 2 2N7002  
 R558 100K/4  
 R550 7.9K/4  
 Level: 0.9V

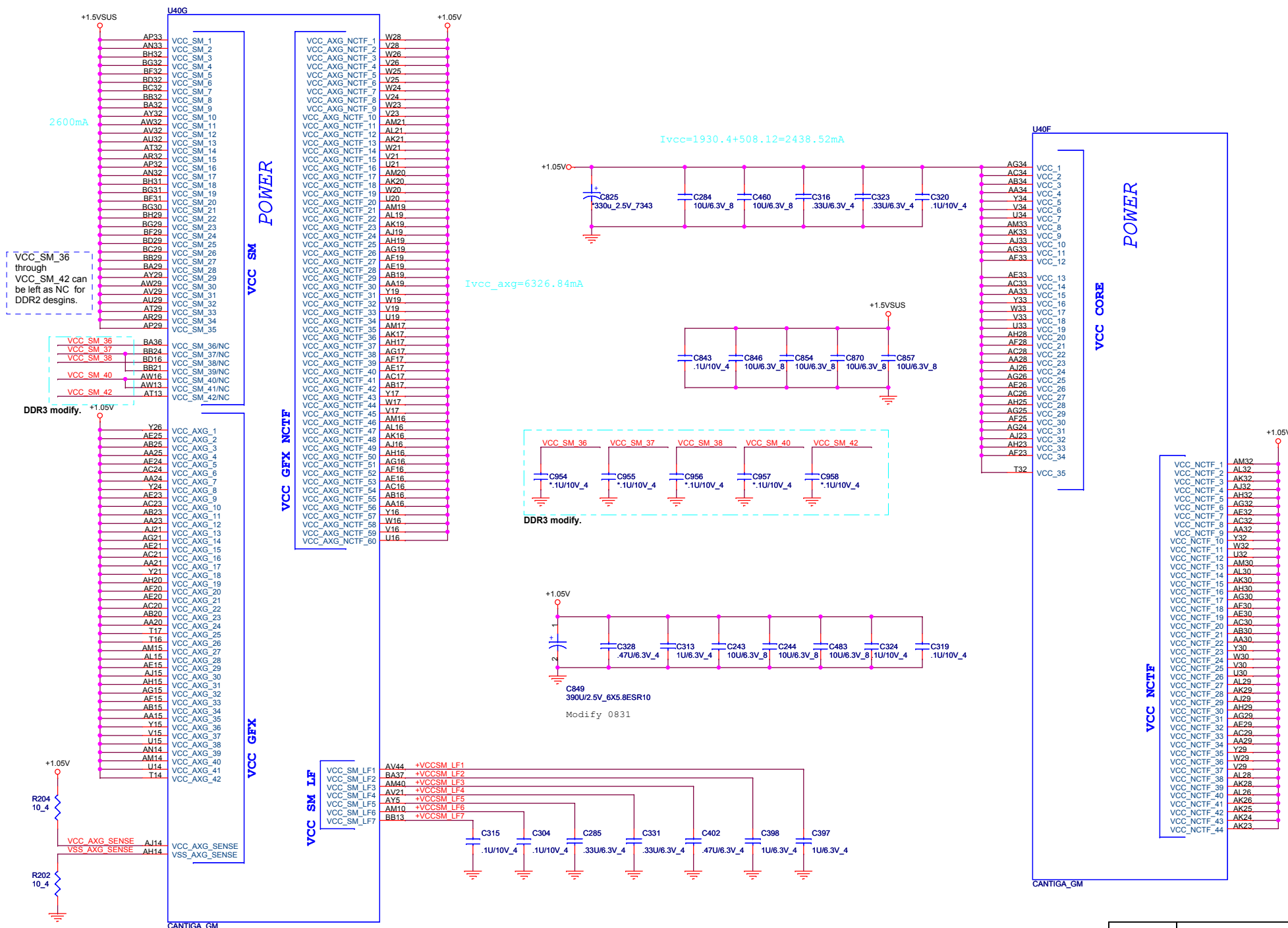
**PROJECT : UT3/5**  
**Quanta Computer Inc.**

NBS  
 Size Custom  
 Document Number  
 Cantiga DMI/DISP 2/5  
 Date: Thursday, May 21, 2009  
 Sheet 6 of 36  
 Rev DB



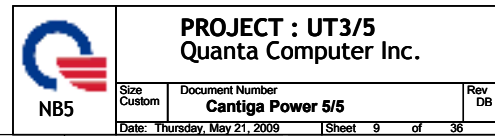
**PROJECT : UT3/5**  
**Quanta Computer Inc.**

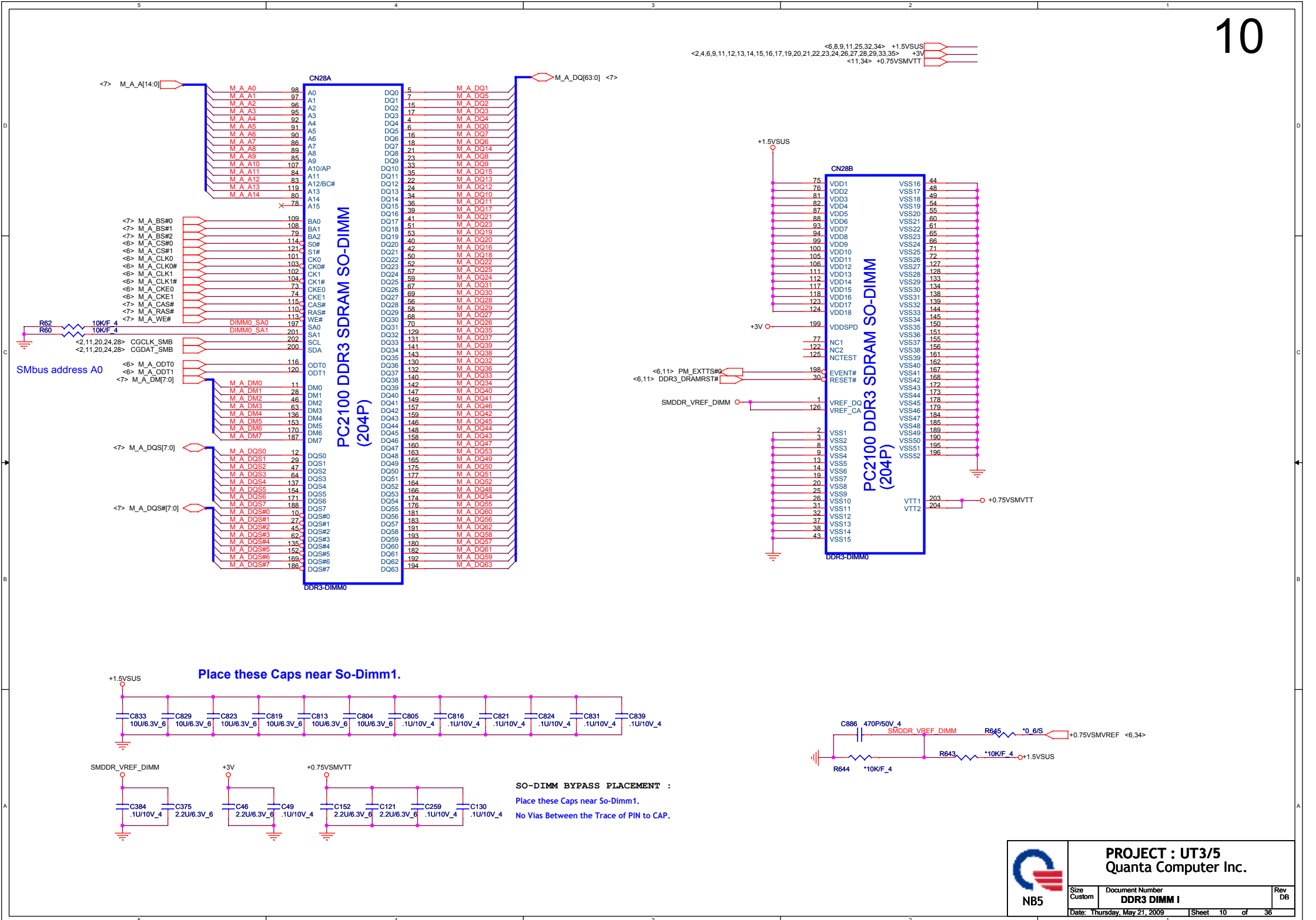
Size Custom	Document Number <b>Cantiga DDR2 3/5</b>	Rev DB
Date: Thursday, May 21, 2009	Sheet 7 of 36	

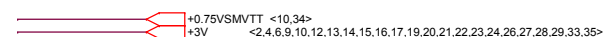
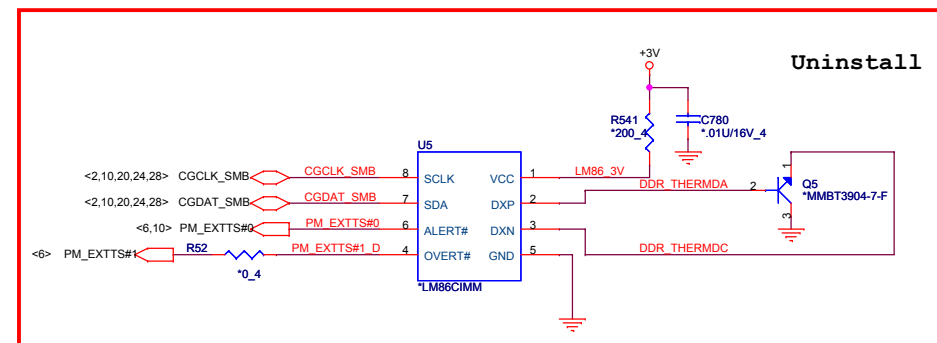


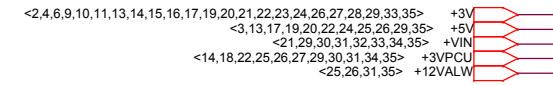
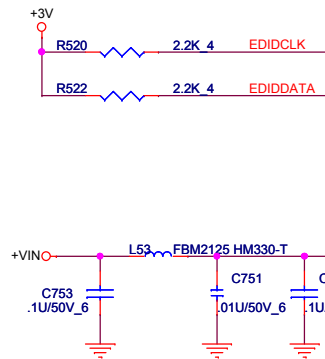
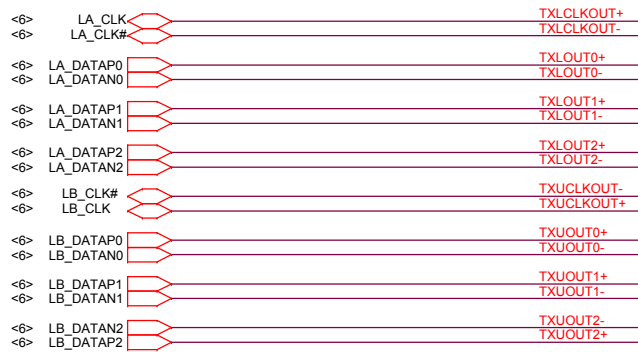
<6,9,10,11,25,32,34> +1.5VSUS  
<2,3,4,5,6,9,14,17,32,33> +1.05V



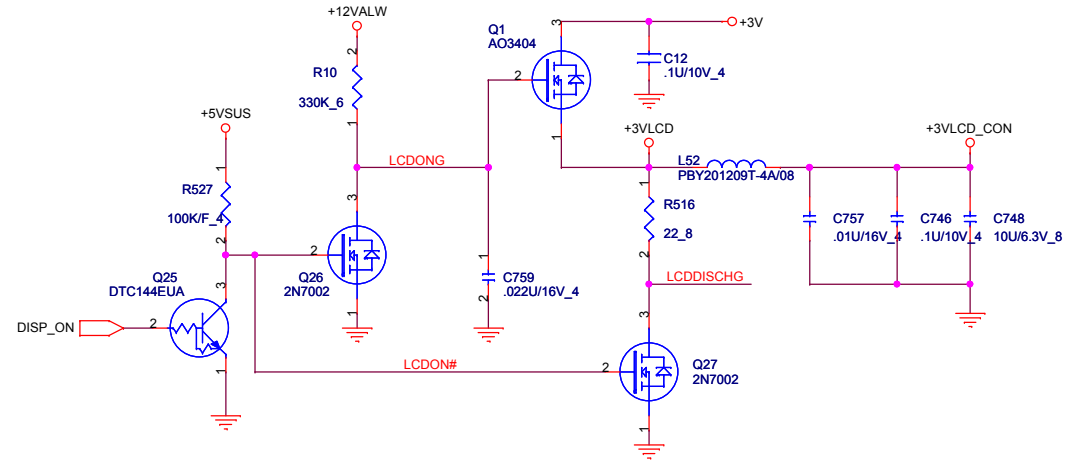
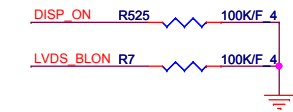
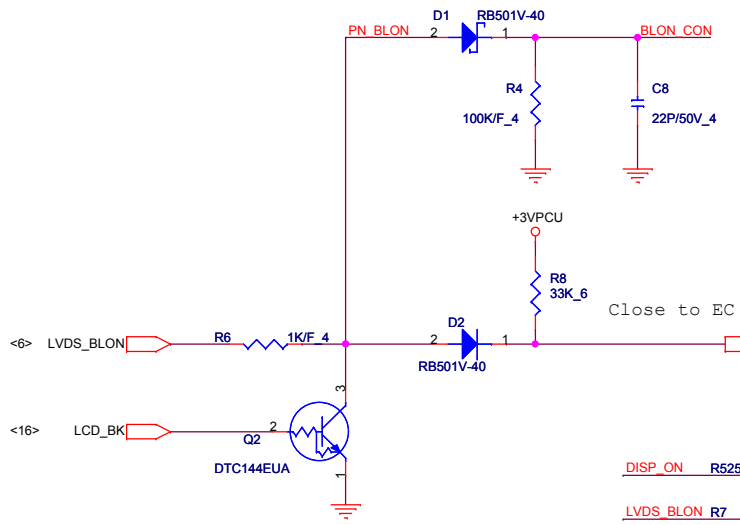
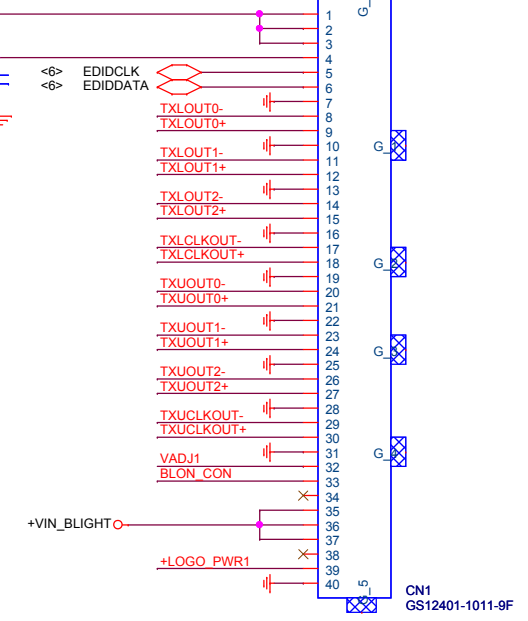
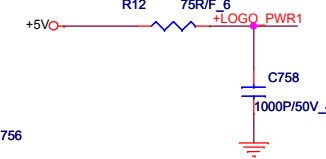
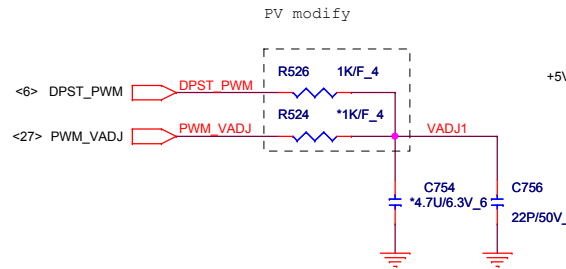
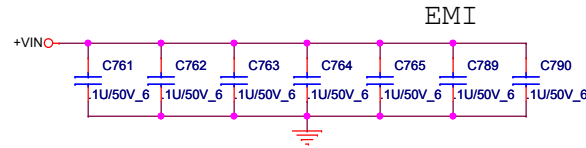









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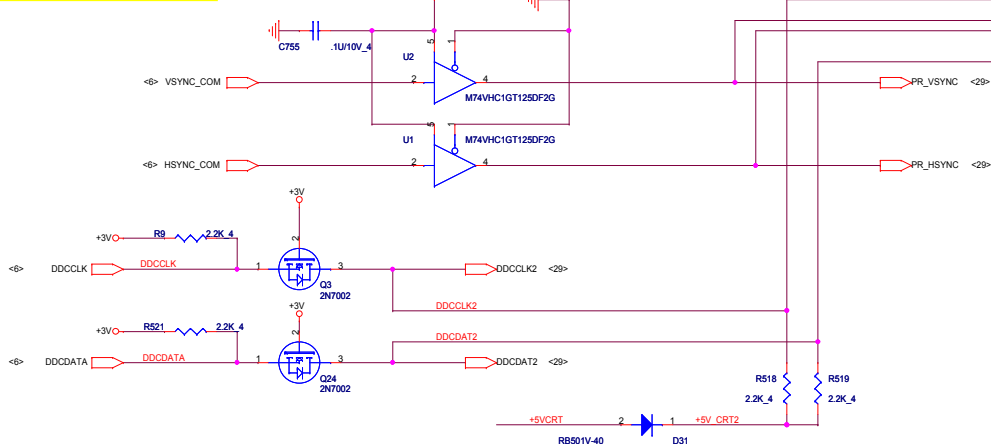
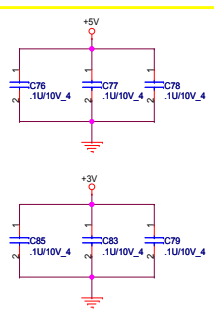




**PROJECT : UT3/5**  
Quanta Computer Inc.

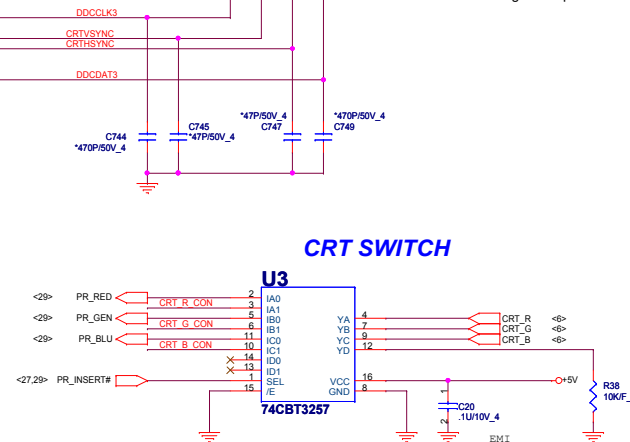
Size B	Document Number	Rev DB
LCD CONN/Lid function		
Date: Thursday, May 21, 2009	Sheet 12	of 36

For EMI request

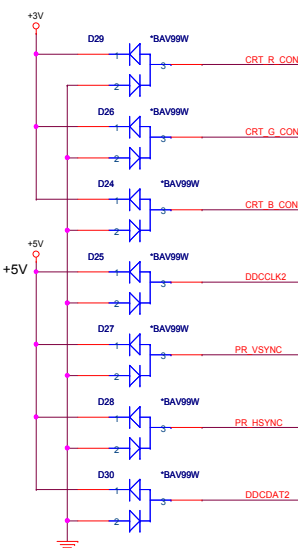


## CRT PORT

Change Layout footprint to dsusb-070546fr015sx68zr-15p

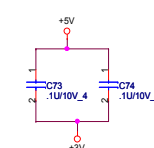


## CRT SWITCH

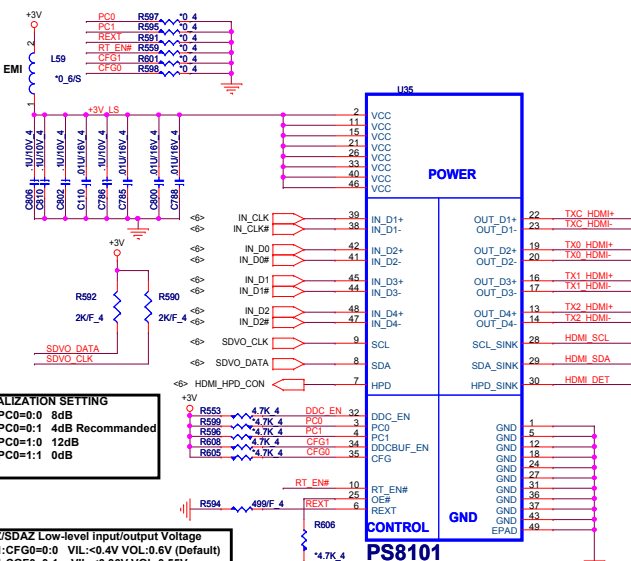


Change ESD protection to +5V

inputs	function
/E	SET
L	L
L	H
H	X



## For UMA HDMI function



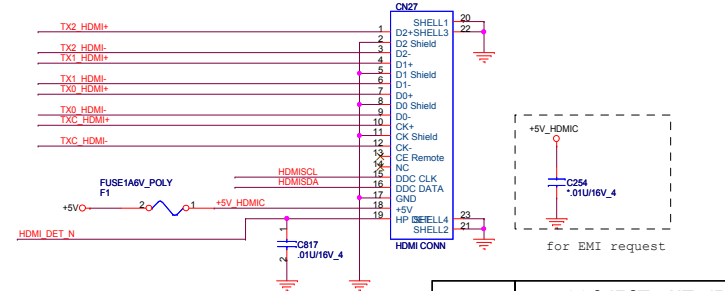
	PDT	CHR	PIM
R631	NC	0	0
R596	NC	4.7K	NC
R605	NC	NC	NC
R608	4.7K	NC	NC
R558	100K	NC	NC
R594	499	1.2K	4.7K
R550	7.5K	7.5K	NC
R552	20K	20K	NC
R595	NC	NC	4.7K
Q31	2N7002	NC	NC
R606	NC	4.7K	NC

Vendor:PDT P/N:AL008101000

Vendor:CHR P/N:AL007318001

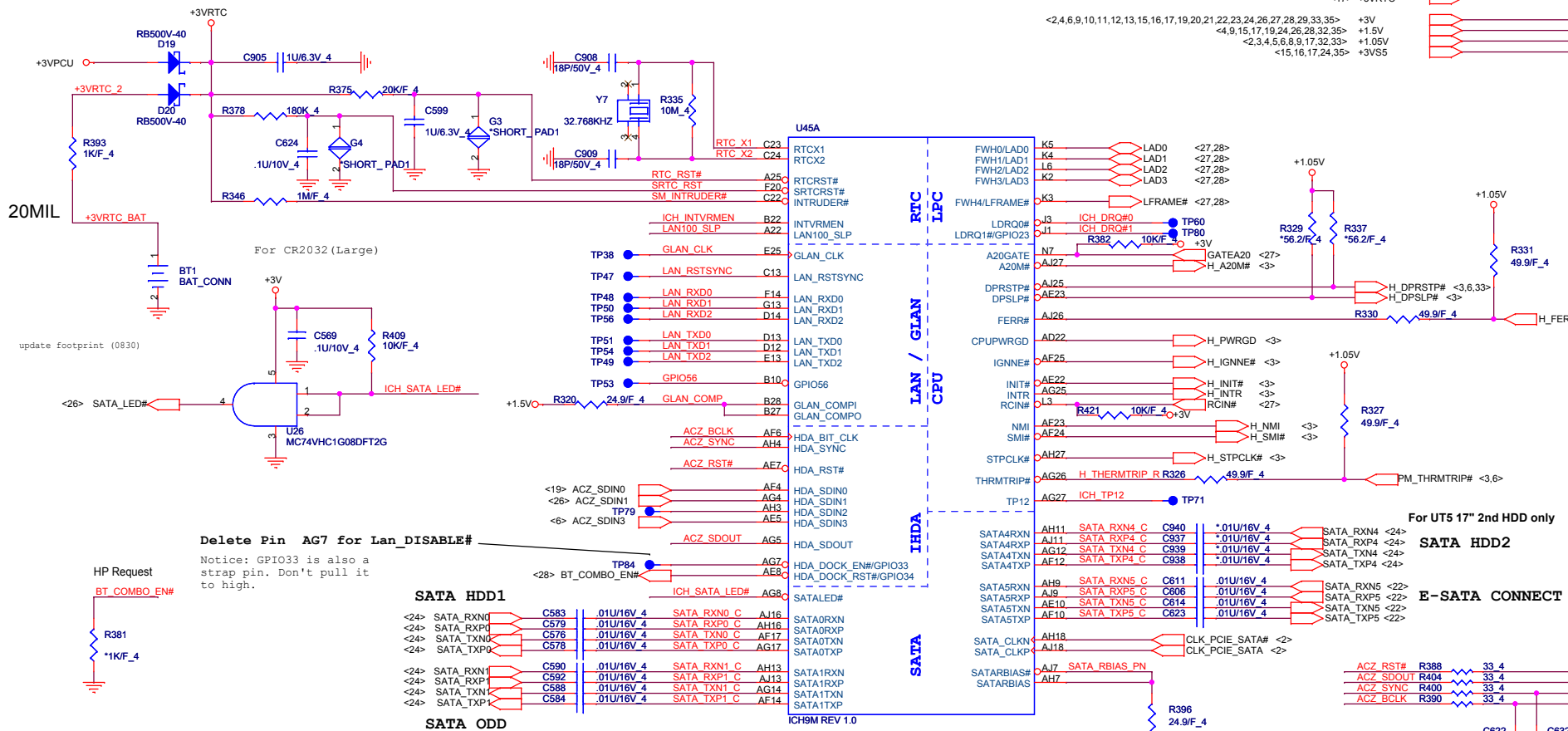
Vendor:PIM P/N:ALP411L5001

## HDMI PORT

PROJECT : UT3/5  
Quanta Computer Inc.

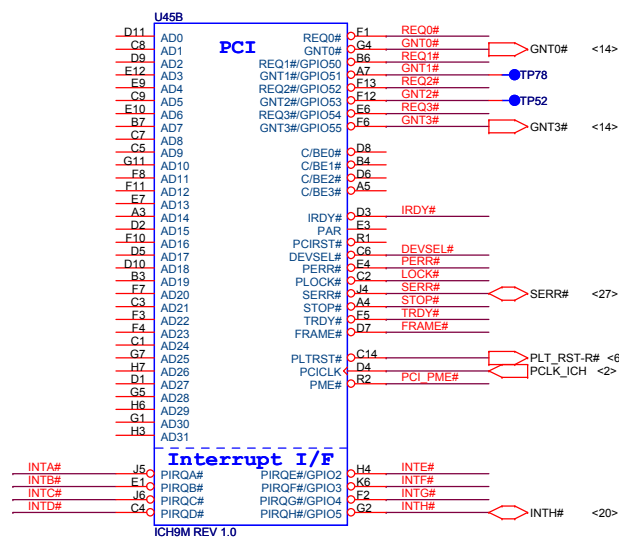
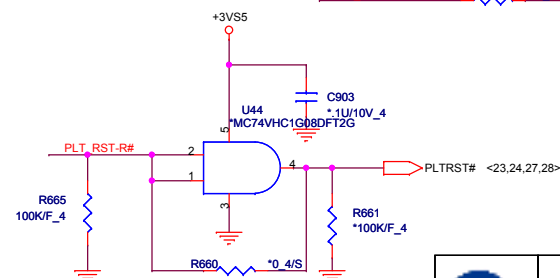
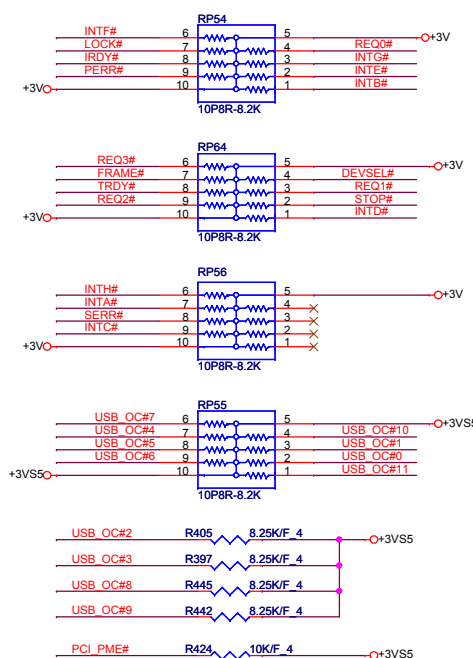
Size	Document Number	Rev
C	CRT/ HDMI	D8
Date: Thursday, May 21, 2009	Sheet 13 of 36	



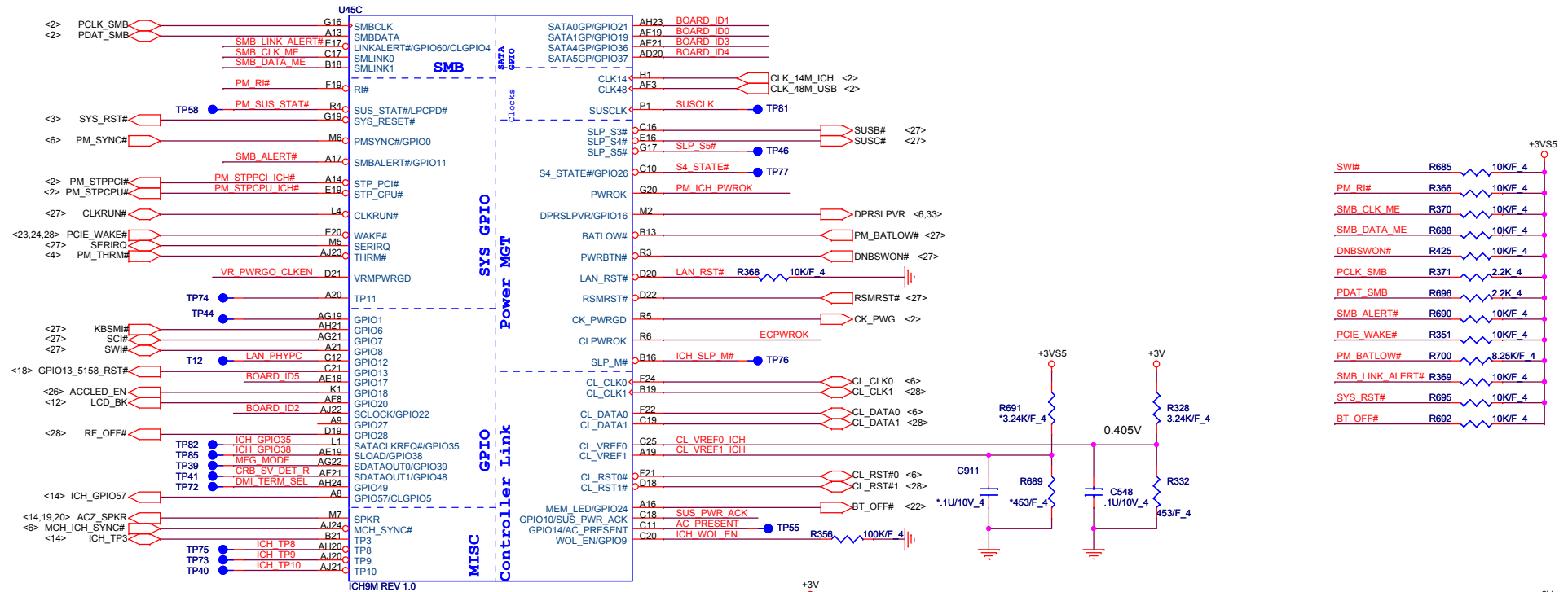


**PROJECT : UT3/5**  
**Quanta Computer Inc.**

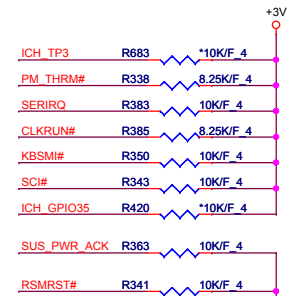
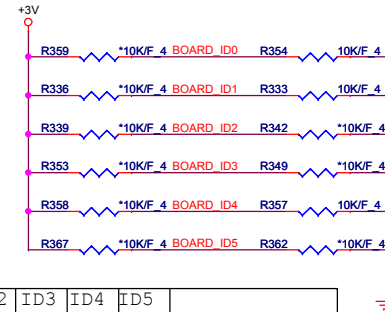
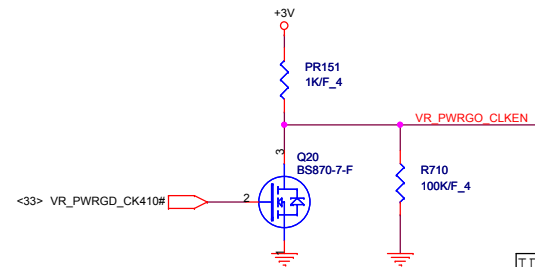
Size Custom Document Number ICH9-M Host 1/4 Rev DB  
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<4,9,14,15,17,19,24,26,28,32,35> +1.5V  
 <2,4,6,9,10,11,12,13,14,15,17,19,20,21,22,23,24,26,27,28,29,33,35> +3V  
 <14,15,17,24,35> +3V5S  
 <6,18,22,28,32,33,35> +3VSUS



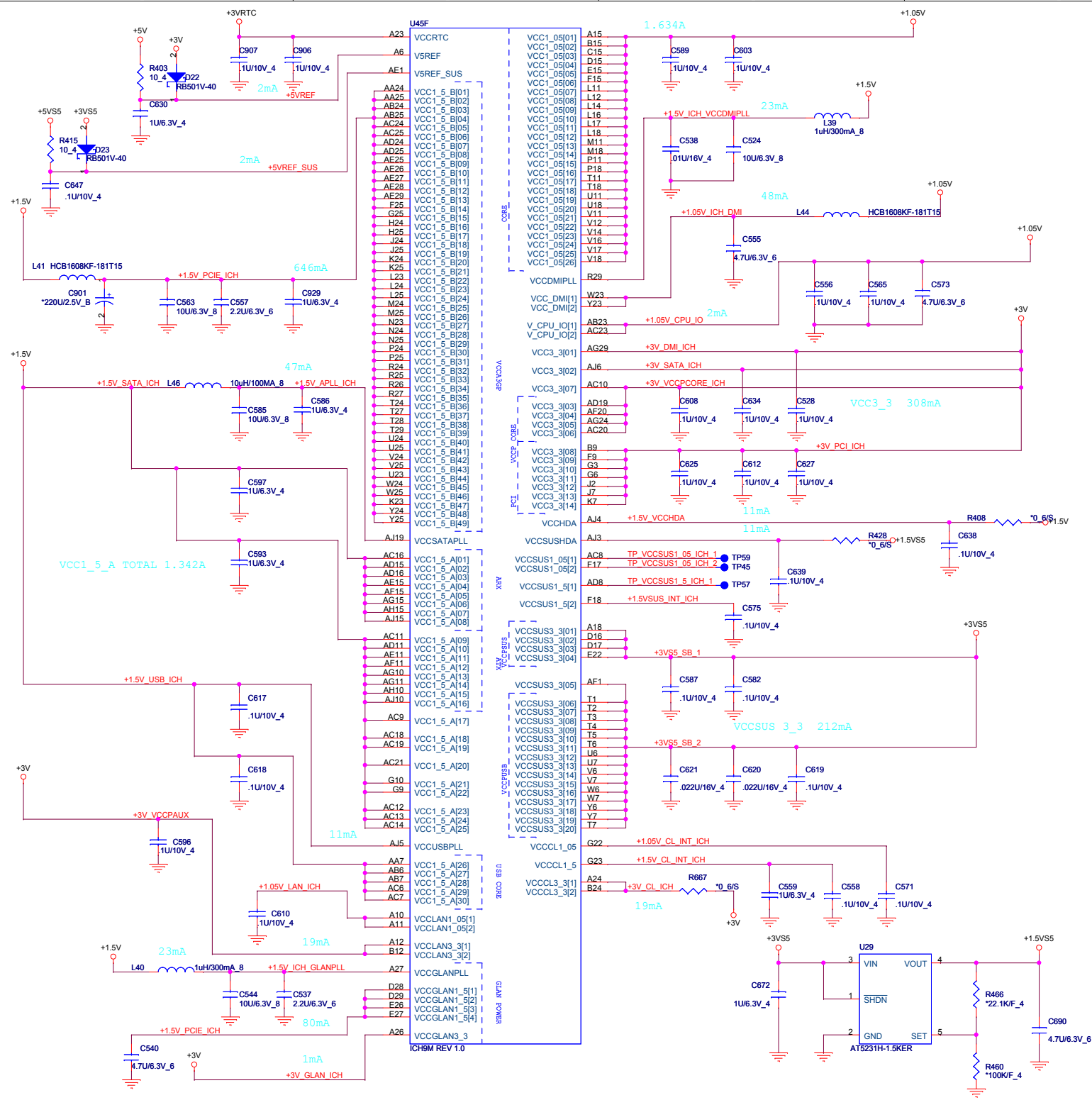
Delete R361,G2 as Bios\_Rec can be cover by Bios

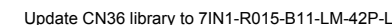
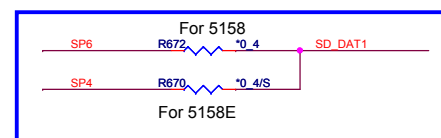


ID0	ID1	ID2	ID3	ID4	ID5	
0	0	NC	NC	NC	NC	Jones 1.0 UMA
0	0	NC	1	NC	NC	Jones 1.1 UMA
0	1	0	NC	NC	0	Jones 1.0 DIS
0	1	0	1	1	1	Jones 1.1 M92
0	1	1	1	1	0	Jones 1.1 M96
0	1	1	1	0	1	Jones 1.3 UMA
0	1	0	1	0	1	Jones 1.3 M92
0	1	1	1	0	0	Jones 1.3 M96
1	0	NC	0	NC	NC	Cujo 1.0 UMA
1	1	0	0	1	1	Cujo 1.0 M92
1	1	1	0	1	0	Cujo 1.0 M96
1	1	0	0	0	1	Cujo 1.1 M92
1	1	1	0	0	0	Cujo 1.1 M96



PROJECT : UT3/5  
Quanta Computer Inc.

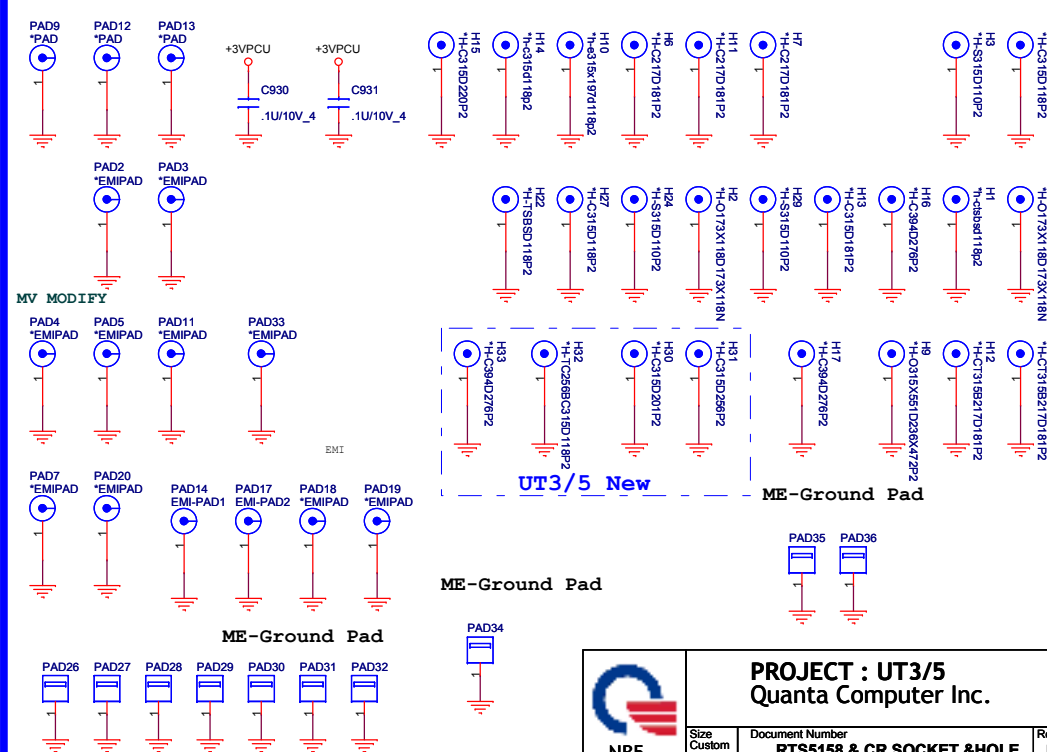




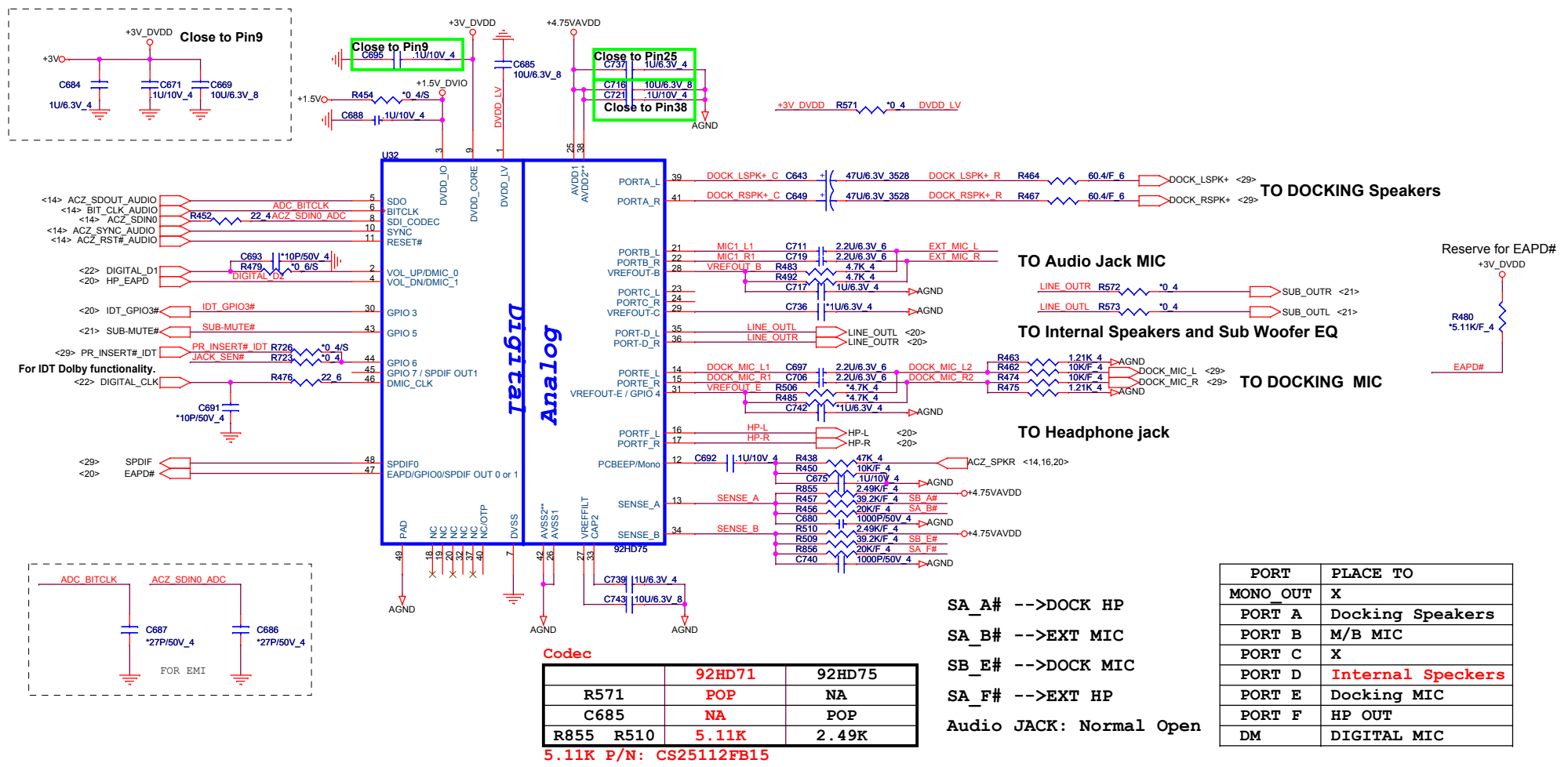
**XD ,MMC/SD ,MS/MSP**



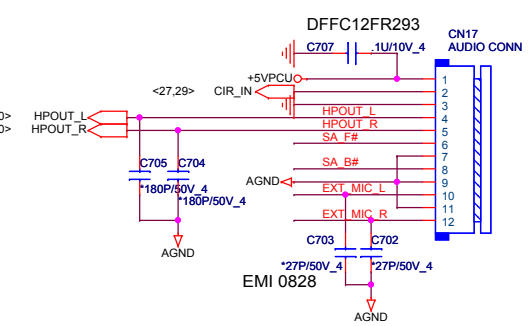
	SD/MMC	MS	XD
SP0			XD CD#
SP1	SD WP		
SP2	SD CD#		
SP4	SD DAT1		XD D4
SP5		MS BS	XD D5
SP6	SD DA11	MS D1	XD D3
SP7	SD DAT0	MS D0	XD D6
SP8	SD DAT7	MS D2	XD D2
SP9		MS INS#	
SP10	SD DAT6	MS D3	XD D7
SP11	SD CLK	MS SCLK	XD D1
SP12	SD DAT5		XD D0
SP13	SD DAT4		XD WP#
SP14			XD R/B#
SP15	SD DAT3		XD WE#
SP16	SD DAT2		XD RE#
SP17			XD ALE
SP18			XD CE#
SP19			XD CLE



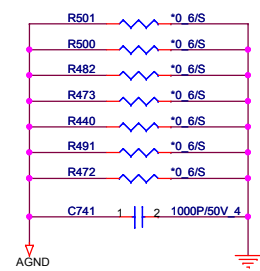
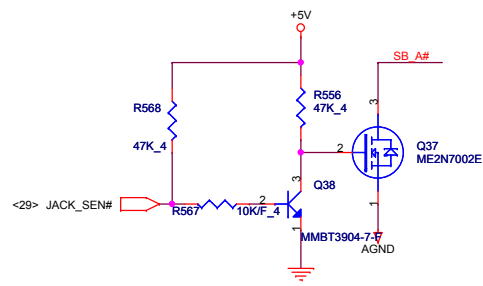
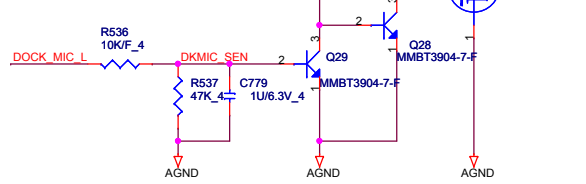




**AUDIO/B CON.**



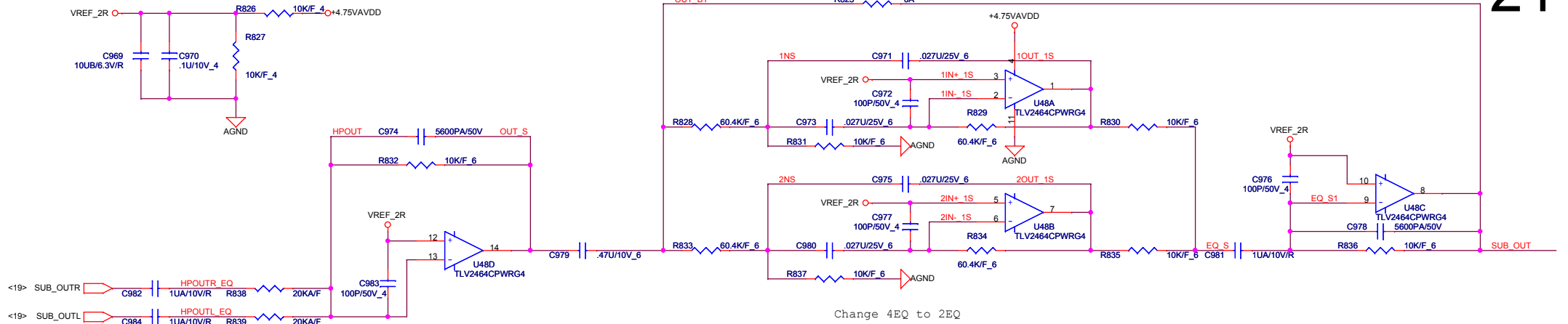
**DOCK MIC DETECT**



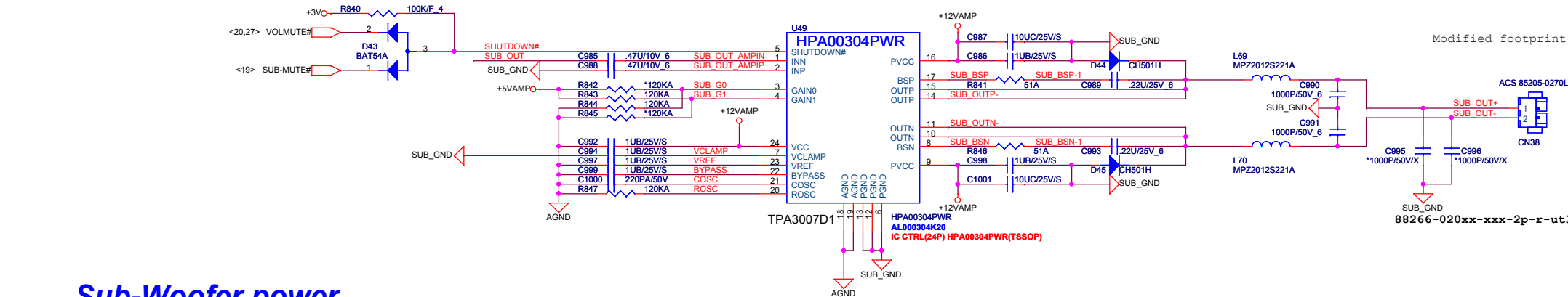


# EQ FOR SUBWOOFER

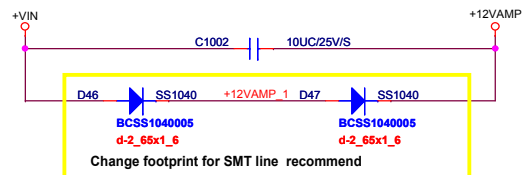
21



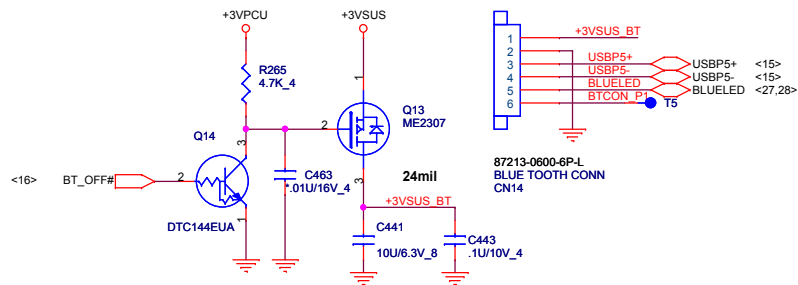
MODEL	UT3	UT5
R828	60.4K/F_6	40.2K/F_6
R833	60.4K/F_6	40.2K/F_6
R829	60.4K/F_6	80.6K/F_6
R834	60.4K/F_6	80.6K/F_6
C971	0.027U/25V_6	0.022U/50V_6
C973	0.027U/25V_6	0.022U/50V_6
C975	0.027U/25V_6	0.039U/16V_6
C980	0.027U/25V_6	0.039U/16V_6



## Sub-Woofer power

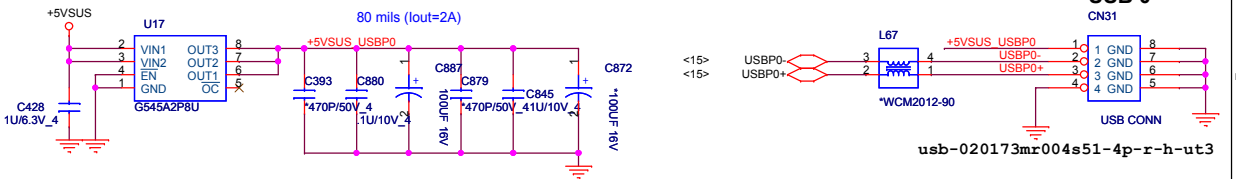


## BLUETOOTH

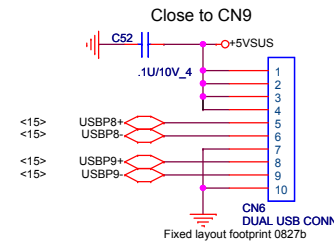


## LEFT SIDE USBX1 and E-SATA/USB COMBO

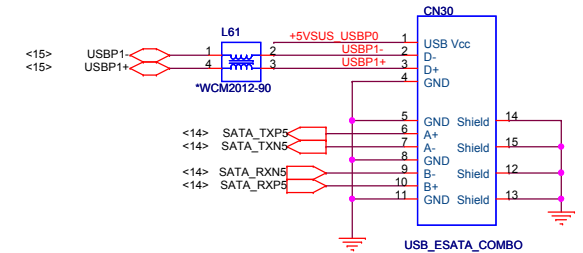
22



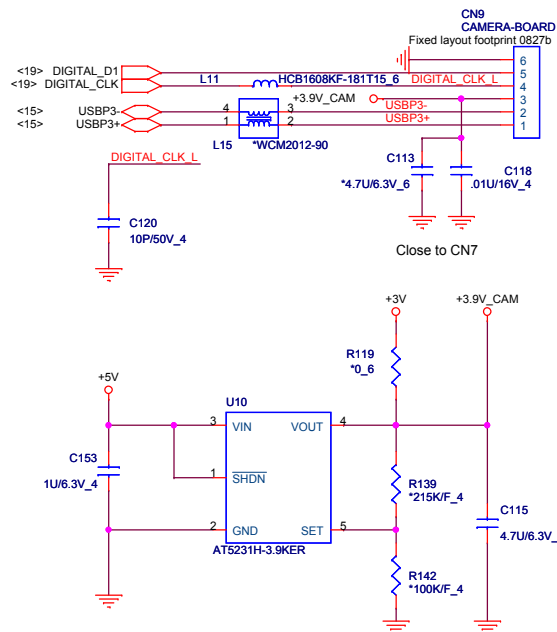
## RIGHT SIDE USBX2



## USB & ESATA

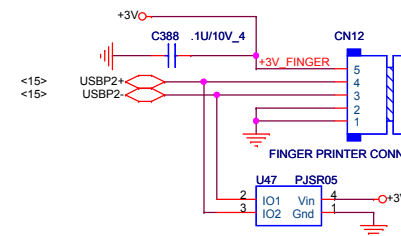


## USB CAMERA /DIGITAL MIC CONNECT

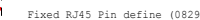
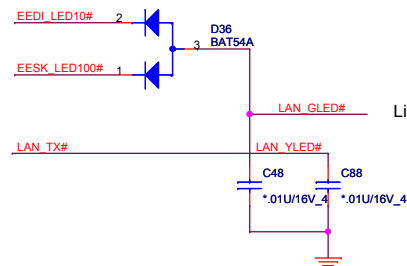
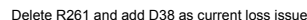
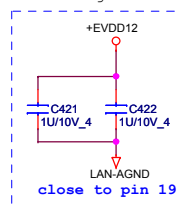


## USB fingerprint CON

1. ESD GND
2. SYSTEM GND
3. USB-
4. USB+
5. USB PWR(+3V)

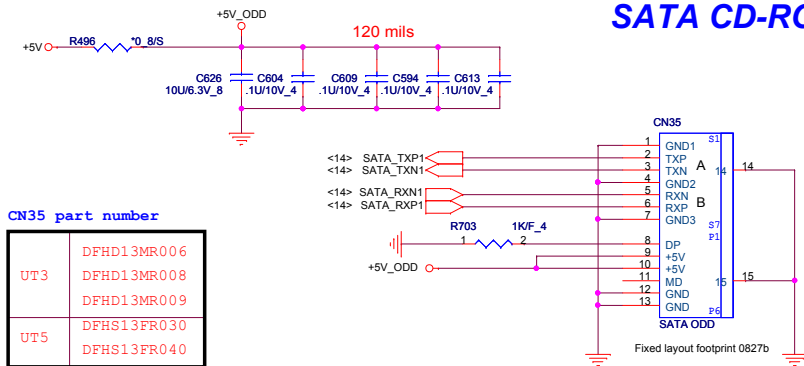


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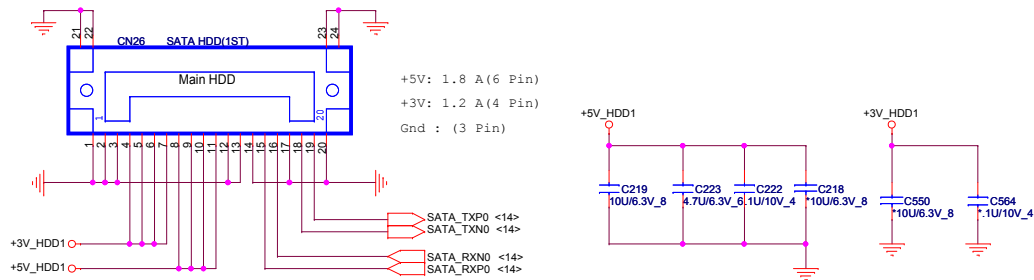


## SATA CD-ROM



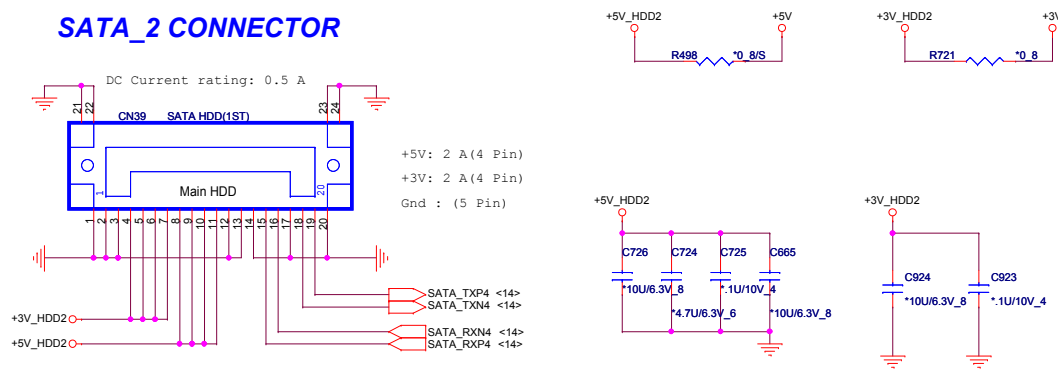
## SATA\_1 CONNECTOR

DC Current rating: 0.3 A



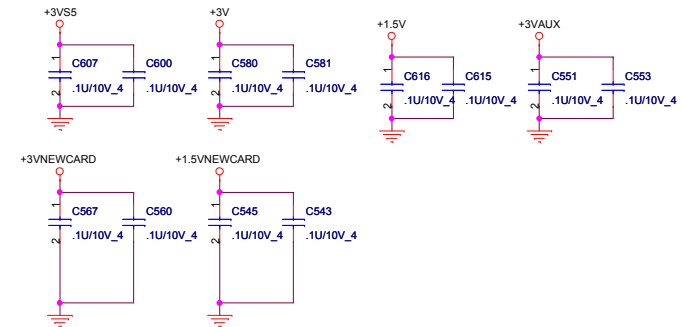
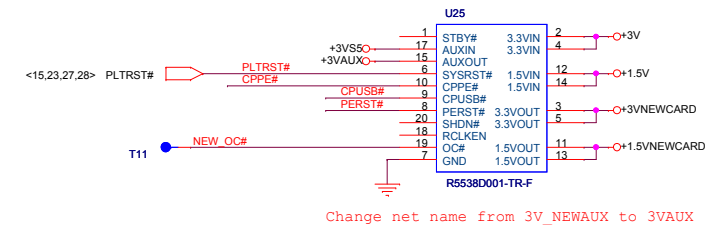
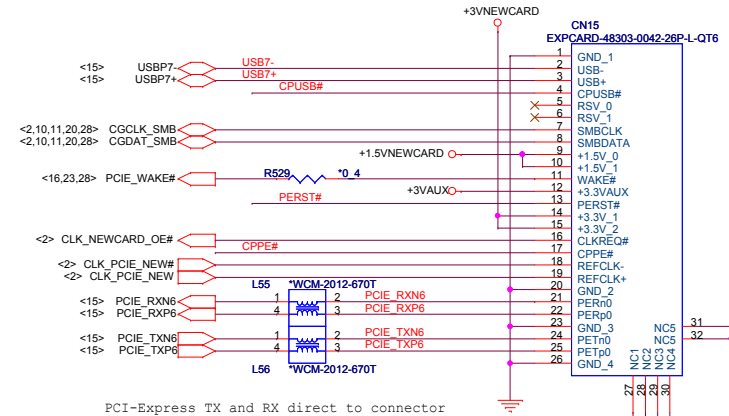
## SATA\_2 CONNECTOR

DC Current rating: 0.5 A



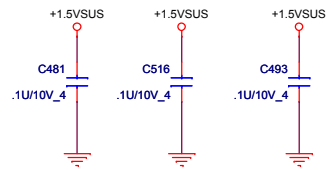
## NEWCARD

## NEWCARD (PCIEXPRESS\*1 + USB\*1)



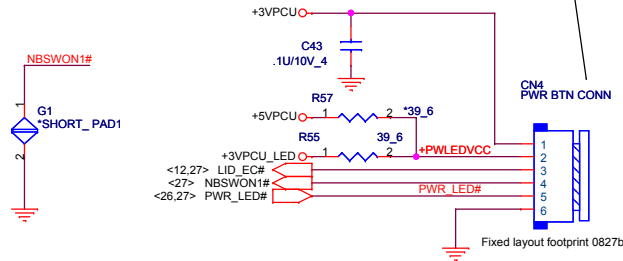
**PROJECT : UT3/5**  
**Quanta Computer Inc.**

Size	Document Number	Rev
Custom	ODD/HDD/NEW CARD	DB
Date: Thursday, May 21, 2009	Sheet 24 of 36	

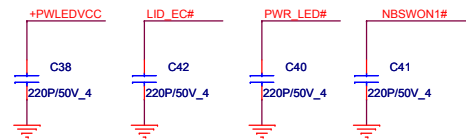
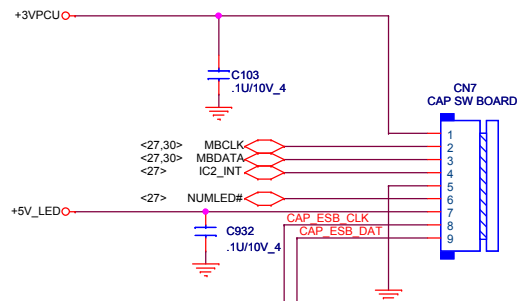


Close to U21 For EMI

Change CN4 to BL123-06R-6P-L-QT6-A



1. +3VPCU(LIDSWITCH PWR)
2. LEDVCC(+3VPCU)
3. LIDSWITCH
4. POWERON#
5. PWRLED#
6. GND

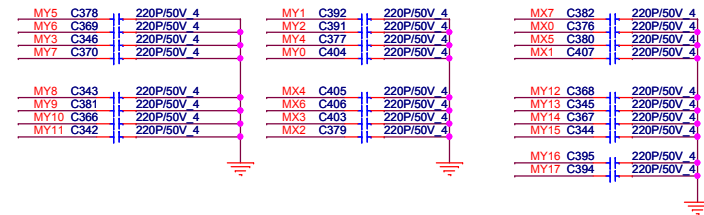
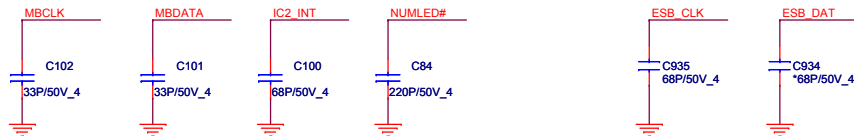
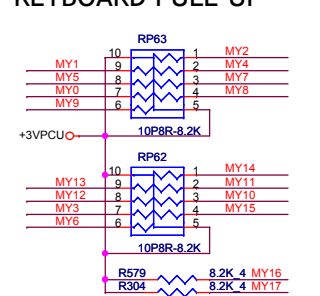
**POWER BUTTON CONNECT****CAP SW CONNECT**

Change CN7 to BL123-09R-9P-L-QT6-A

1. +3VPCU
2. MBCLK
3. MBDATA
4. CAP\_INT
5. GND
6. NUM LOCK LED
7. +5V\_LED
8. ESB\_CLK
9. ESB\_DAT

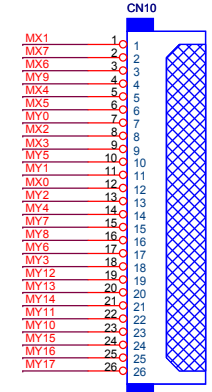
<27> ESB\_CLK R471 \*0.4/S L68 FRMA-11-160808-6011

<27> ESB\_DAT R513 \*0.4/S L57 FRMA-11-160808-6011

**KEYBOARD PULL-UP**

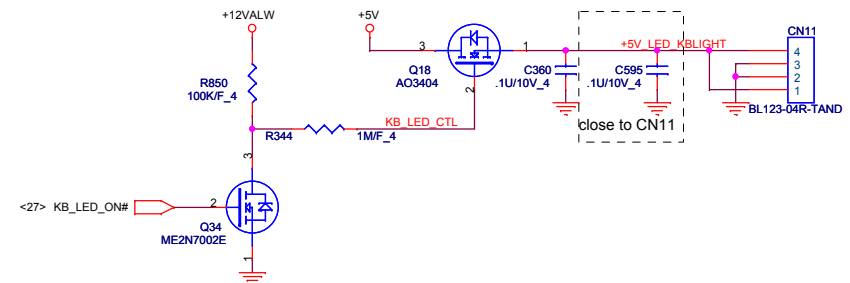
<27> MY[0..17] MY[0..17]

<27> MX[0..7] MX[0..7]



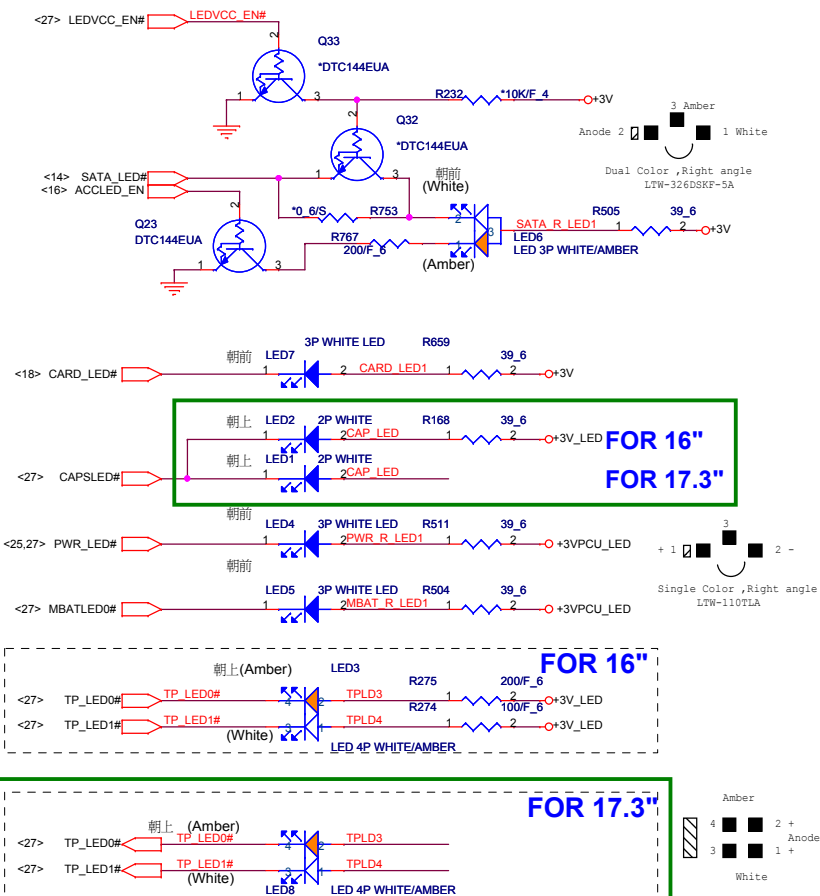
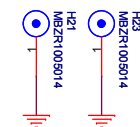
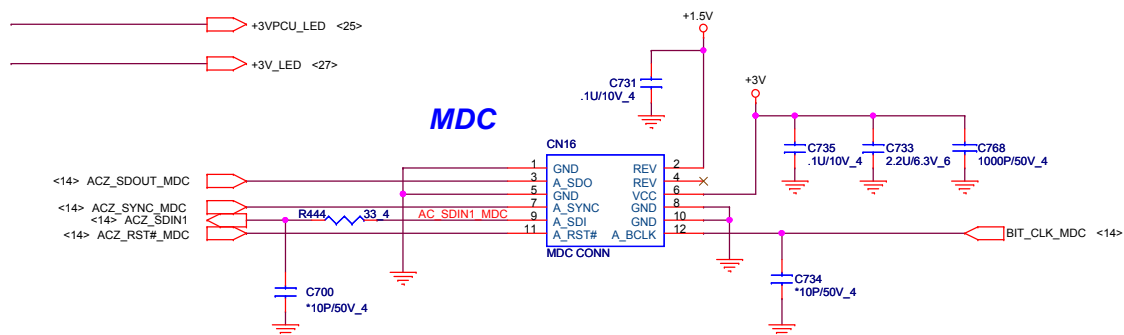
Footprint: "gb1rf260-1253-7f-26p-1"

Max = 140 mA

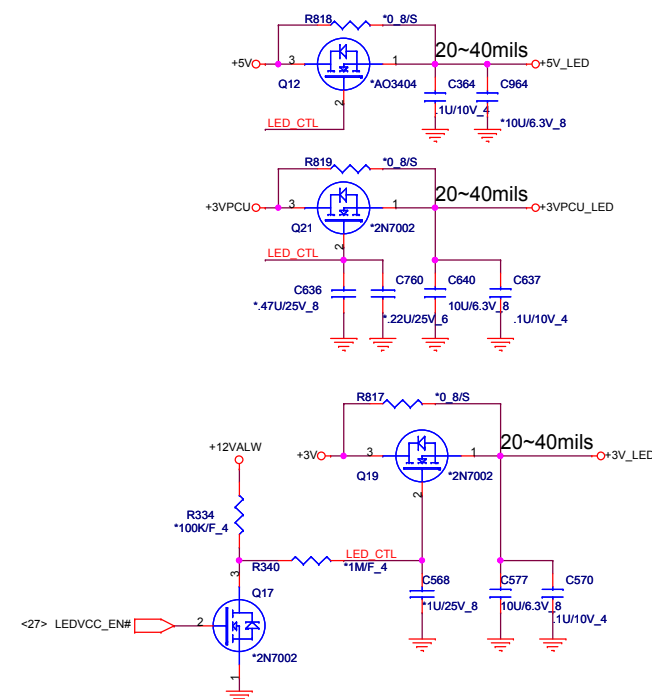


**PROJECT : UT3/5**  
Quanta Computer Inc.

Size	Document Number	Rev
Custom	KB/CAP/POWER CONN	DB
Date: Thursday, May 21, 2009	Sheet 25 of 36	

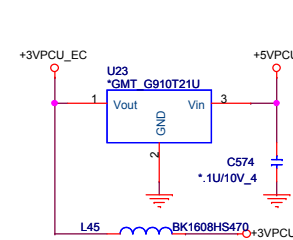
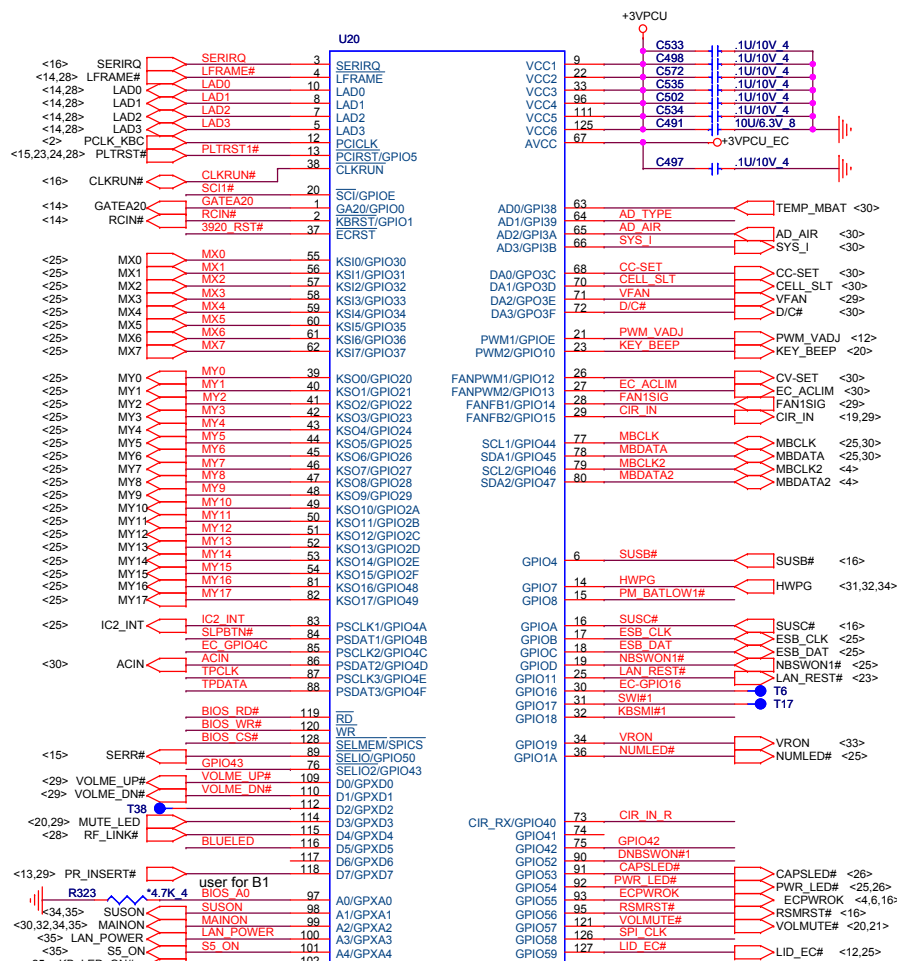


## LED PWR CONTROL

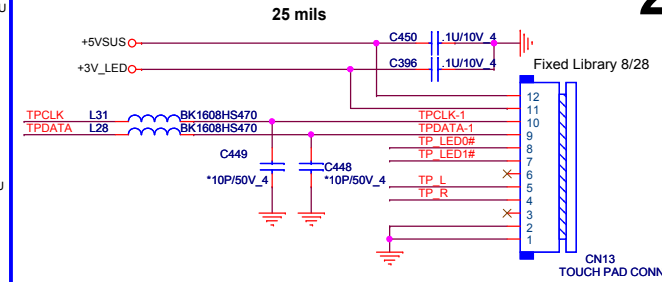


**PROJECT : UT3/5**  
**Quanta Computer Inc.**

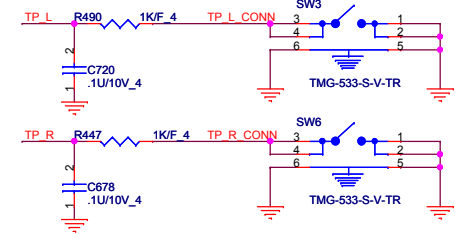
Size	Document Number	Rev
Custom	MDC/LED	DB
Date: Thursday, May 21, 2009	Sheet 26 of 36	



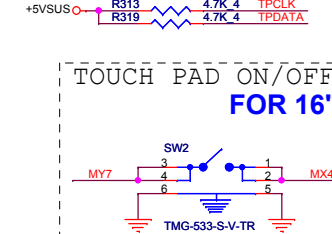
## TOUCH PAD CONNECTOR



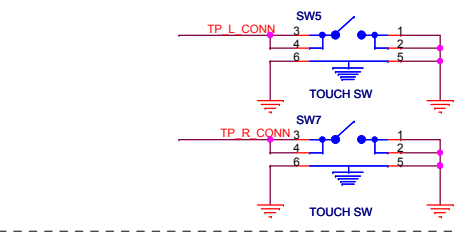
## TOUCH PAD L/R FOR 16"



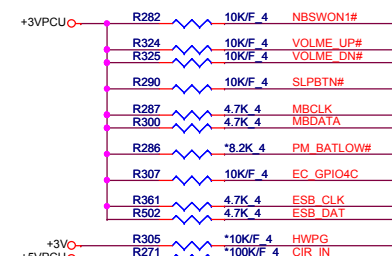
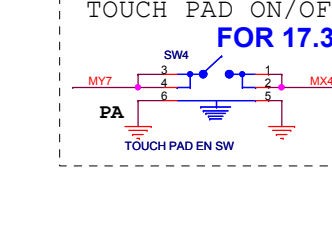
## close conn



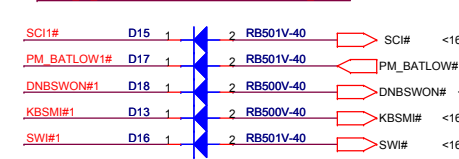
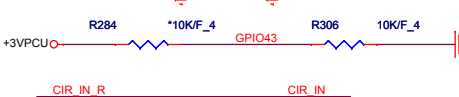
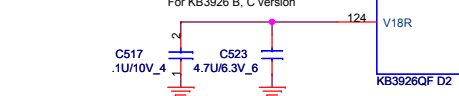
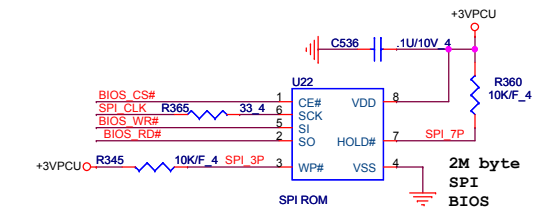
## TOUCH PAD L/R FOR 17.3"



## TOUCH PAD ON/OFF FOR 17.3"



ID	R851	R852
UT5	10K	N/A
UT3	N/A	10K



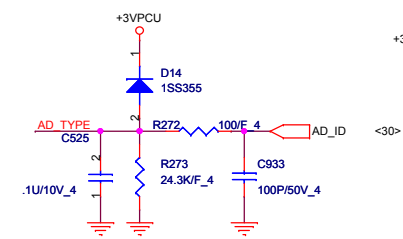
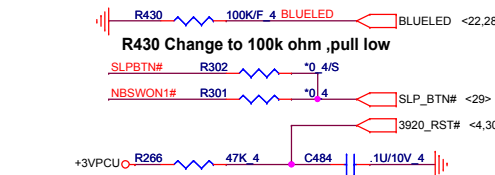
Add Pin 117,103 for DSM, Pin 116 for Bluetooth, Pin 23 for Key Beep to Amplifier

Delete T37, T38, T39 for EC

Delete T10 and tie pin 117 from Lan for DSM

Hi ==> 120W

Low ==> 65W/90W



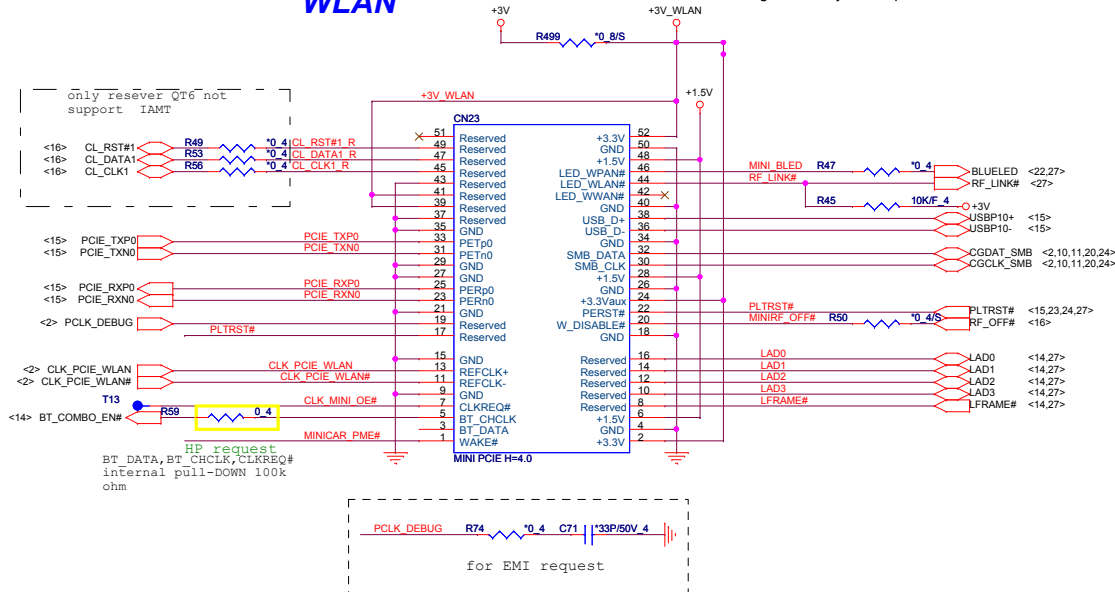
PROJECT : UT3/5

Quanta Computer Inc.

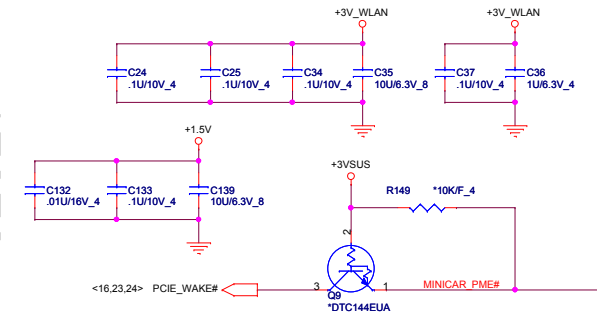
Size	Document Number	Rev
Custom	KB3926/ROM/TP	DB
Date: Thursday, May 21, 2009	Sheet 27 of 36	

## Mini PCI-E Card 1 WLAN

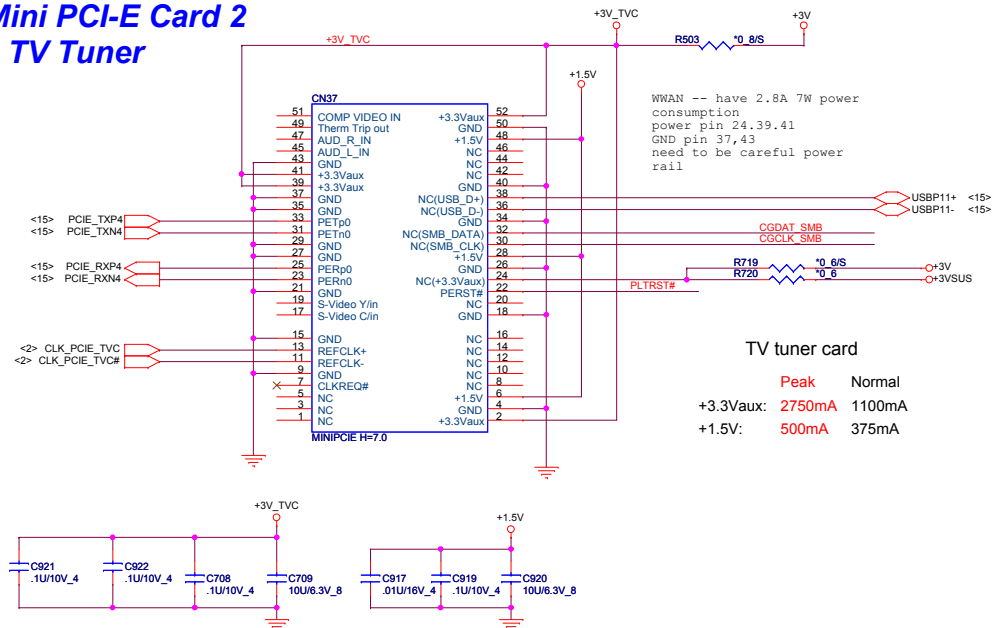
Delete R78 and tied the CN23#24 to R110 direction  
Change CN23 layout footprint to MIPCI-E-AS0B223-S40N-7F-52P-QT6 as ME drawing



INTEL WLAN  
CARD PIN 20  
W\_DISABLE#  
have  
internal  
pull-up 110k  
ohm



## Mini PCI-E Card 2 TV Tuner

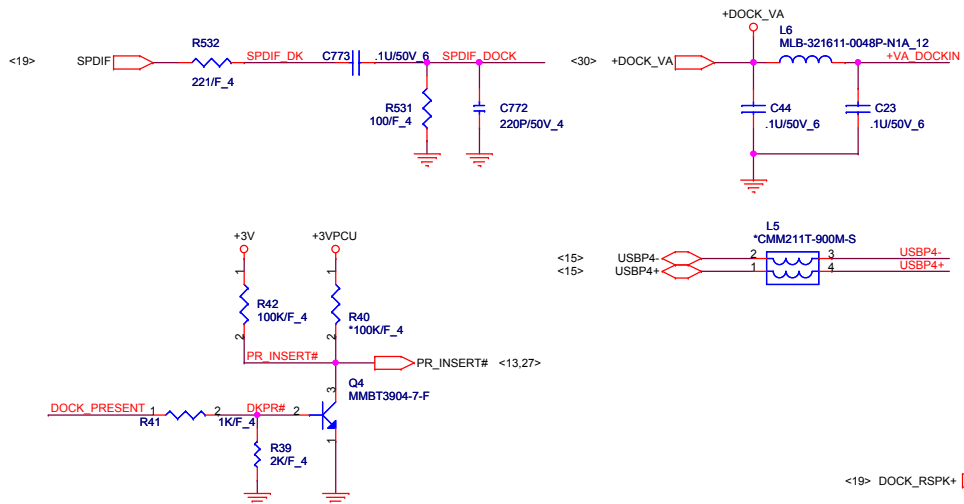




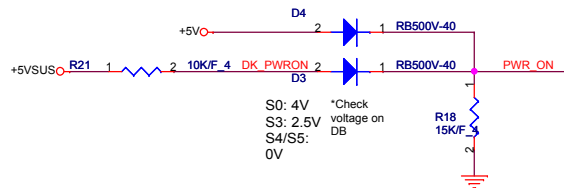
## CABLE DOCK

support 6A 200mils  
CX000480005

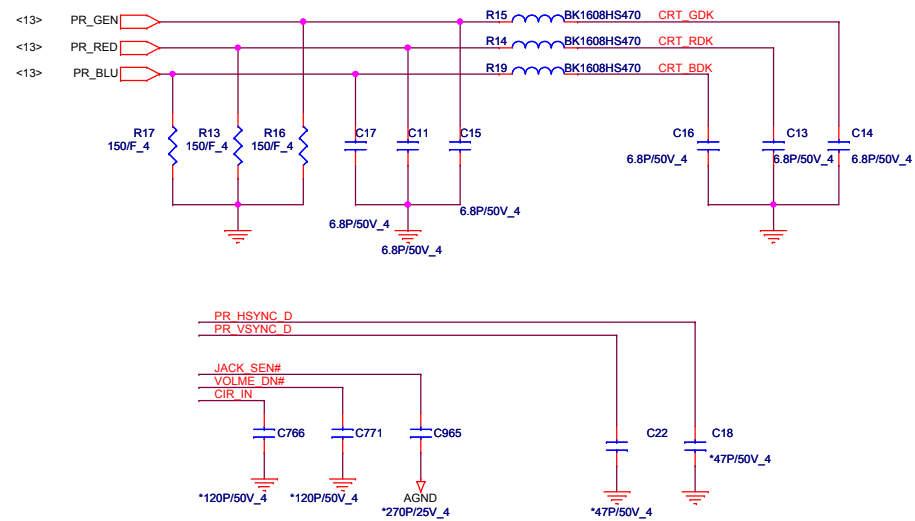
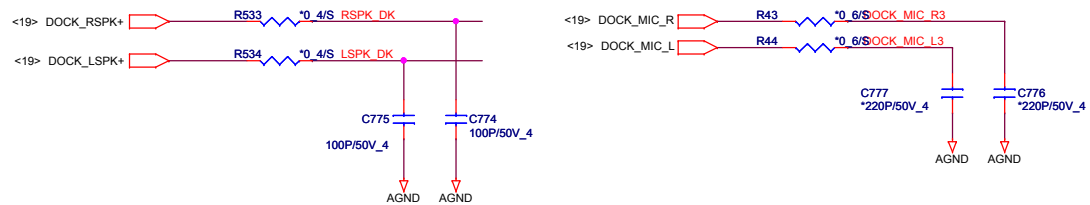
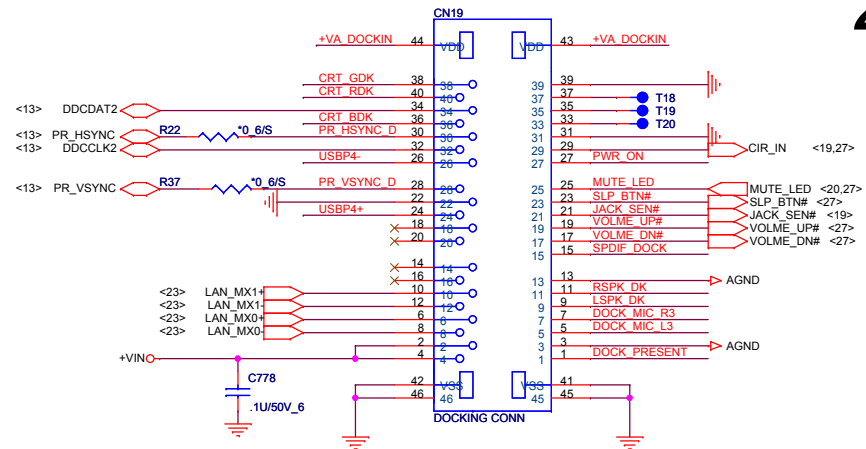
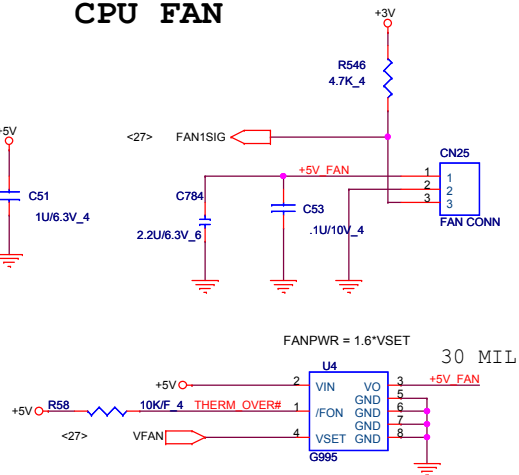
29



**For IDT Dolby functionality.**



## CPU FAN

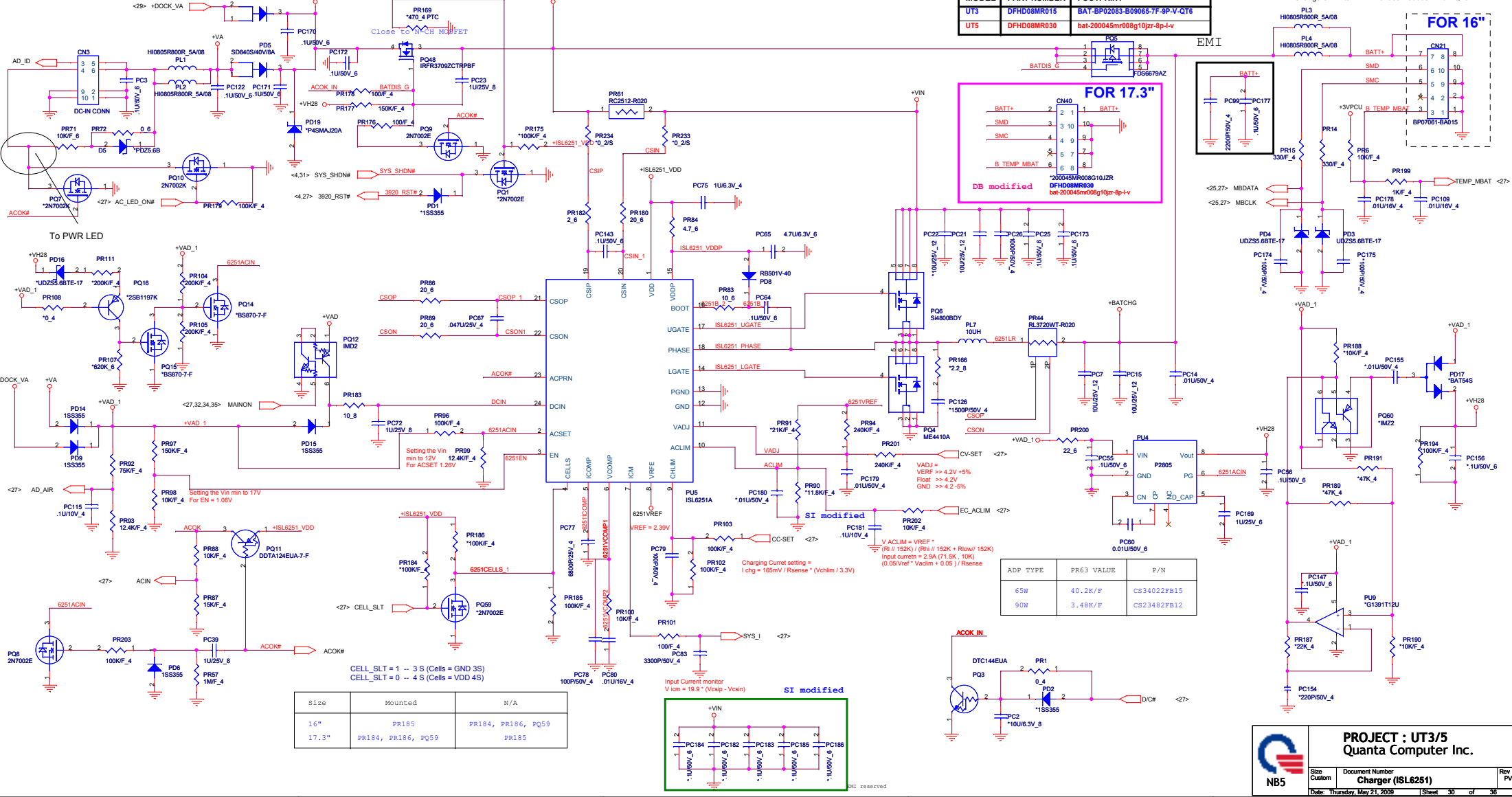


**PROJECT : UT3/5**  
**Quanta Computer Inc.**

Size Custom	Document Number <b>CABLE DOCKING/FAN</b>	Rev DB
Date: Thursday, May 21, 2009	Sheet 29 of 36	

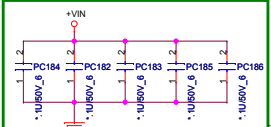
BATTERY CONNECTOR TYPE		
MODEL	PART NUMBER	FOOTPRINT
UT3	DFHD08MR016	BAT-BP02083-B09065-7F-9P-V-QT6
UT5	DFHD08MR030	bat-200045mr008g10jr-8p-4-v

Change CN21 to BAT-BP02083-B09065-7F-9P-QT6



Size	Mounted	N/A
16"	PR185	PR184, PR186, PQ59
17.3"	PR184, PR186, PQ59	PR185

ADP TYPE	PR63 VALUE	P/N
65W	40.2K/F	CS34022FB15
90W	3.48K/F	CS23482FB12



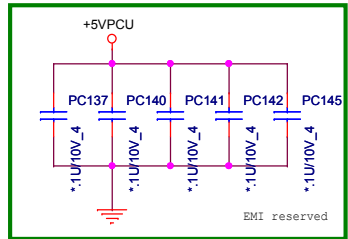
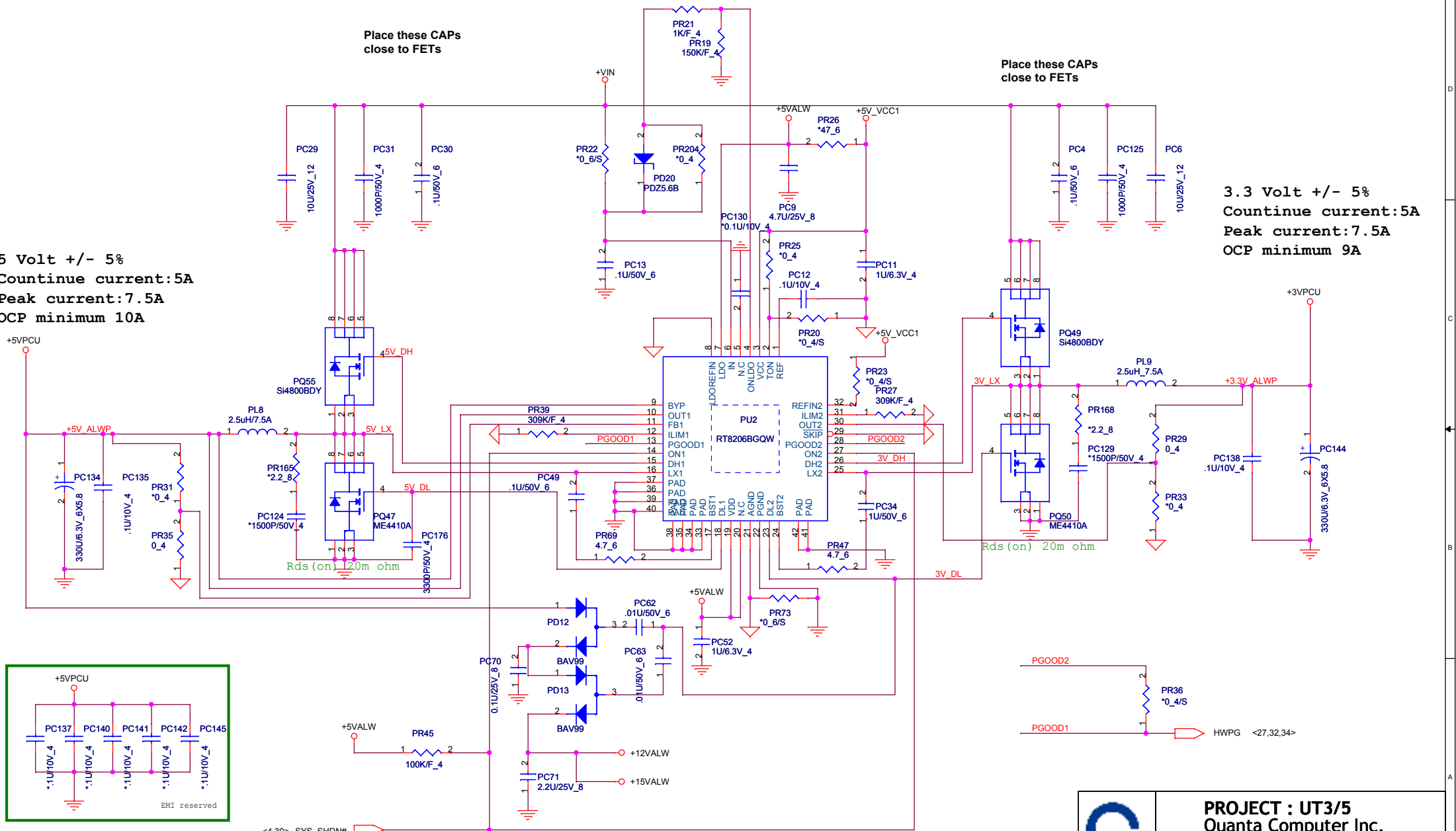
PROJECT : UT3/5  
Quanta Computer Inc.


Size	Document Number	Rev
Custom	Charger (ISL6251)	PV
Date: Thursday, May 21, 2009	Sheet 30 of 38	

DC/DC +3V\_ALW/+5V\_ALW/+5V\_ALW2 /+12V\_ALW

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



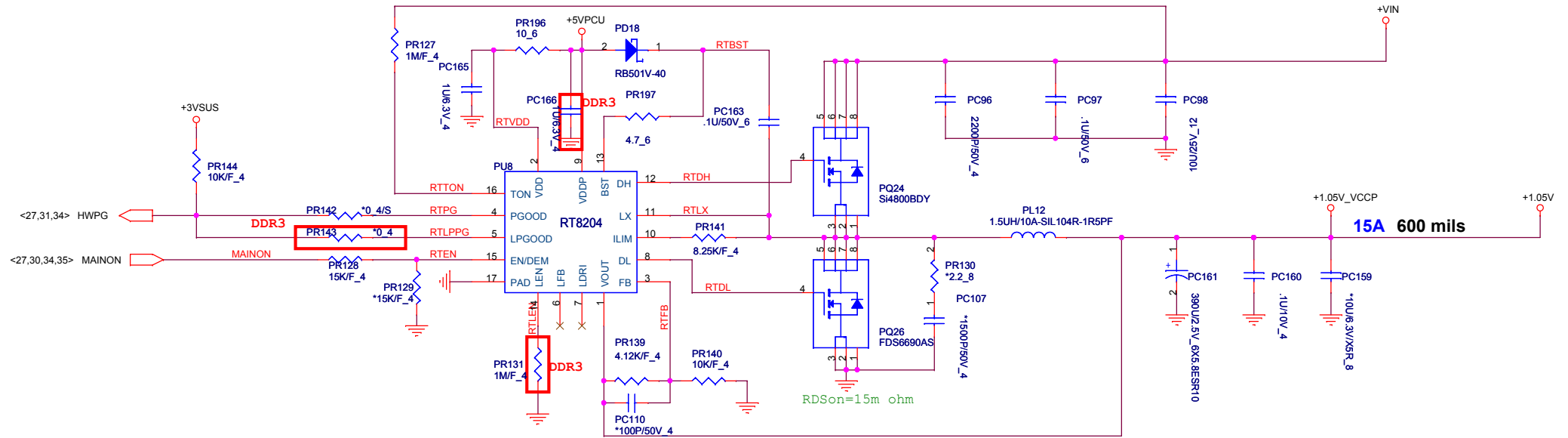


**PROJECT : UT3/5**  
**Quanta Computer Inc.**

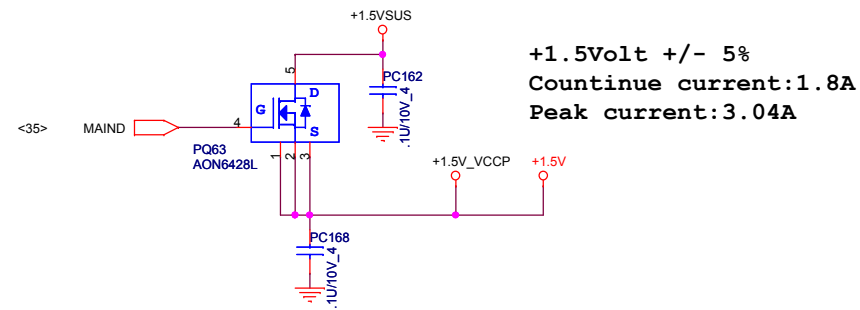
Size B	Document Number <b>+5V/+3V (ISL6237)</b>	Rev PV
Date: Thursday, May 21, 2009		Sheet 31 of 36

# VCCP1.05V & +1.5V

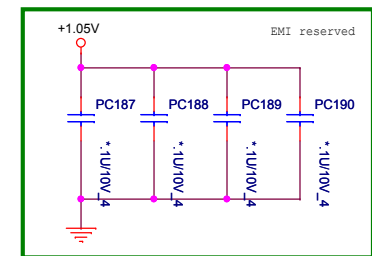
+1.05Volt +/- 5%  
 Countinue current:7.5A  
 Peak current:10A  
 OCP minimum 12A



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

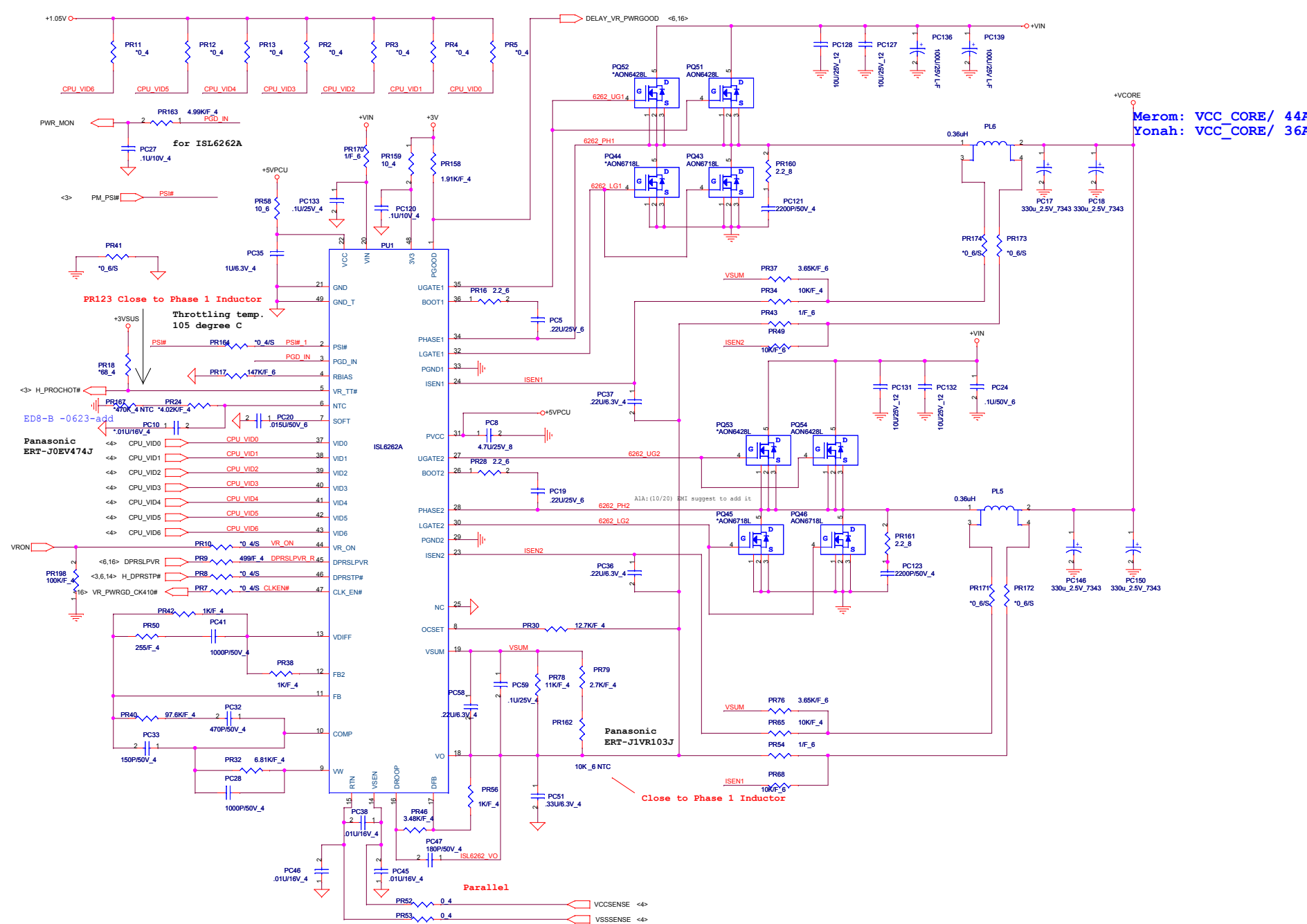


+1.5Volt +/- 5%  
 Countinue current:1.8A  
 Peak current:3.04A

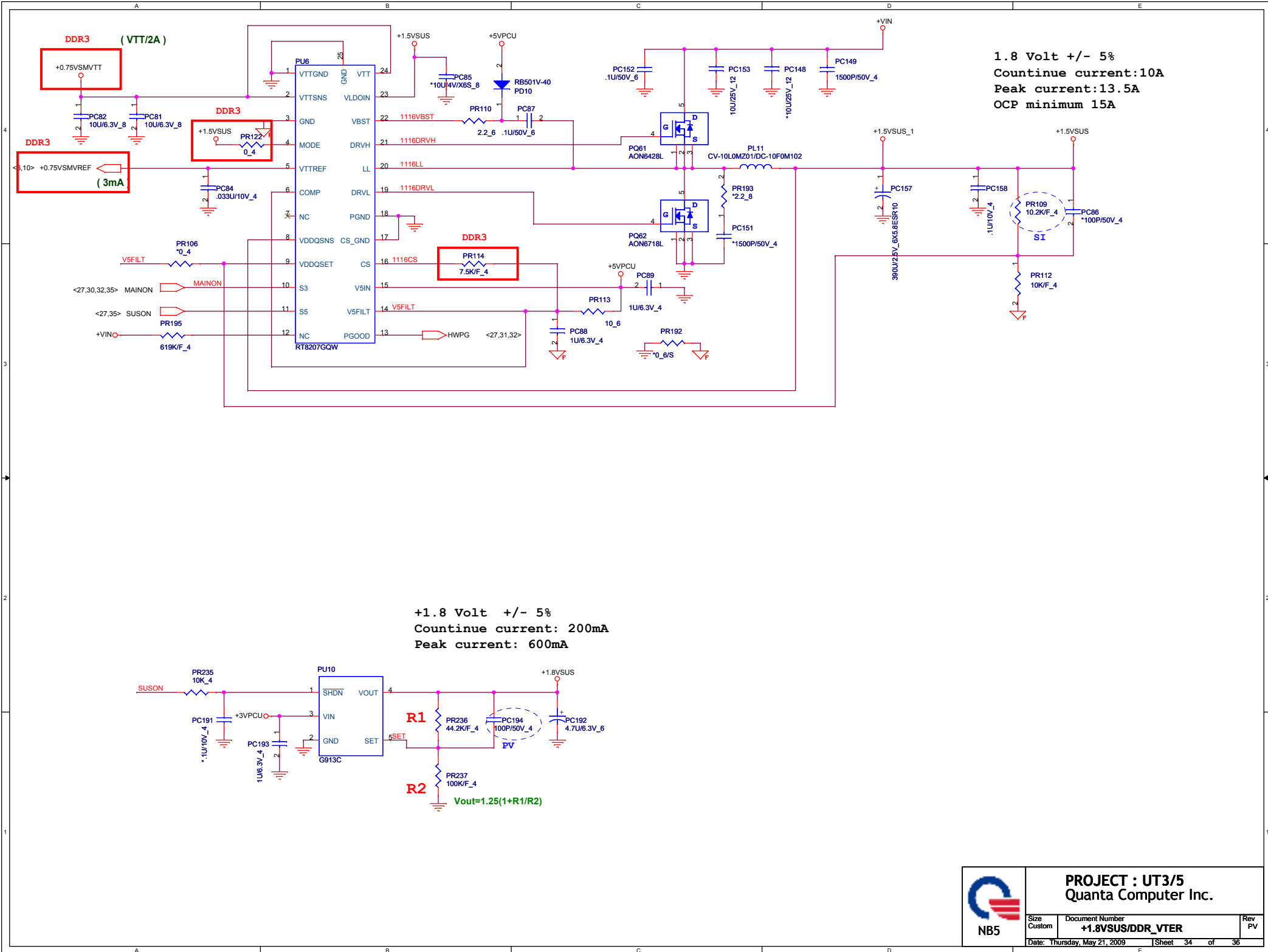


**PROJECT : UT3/5**  
**Quanta Computer Inc.**

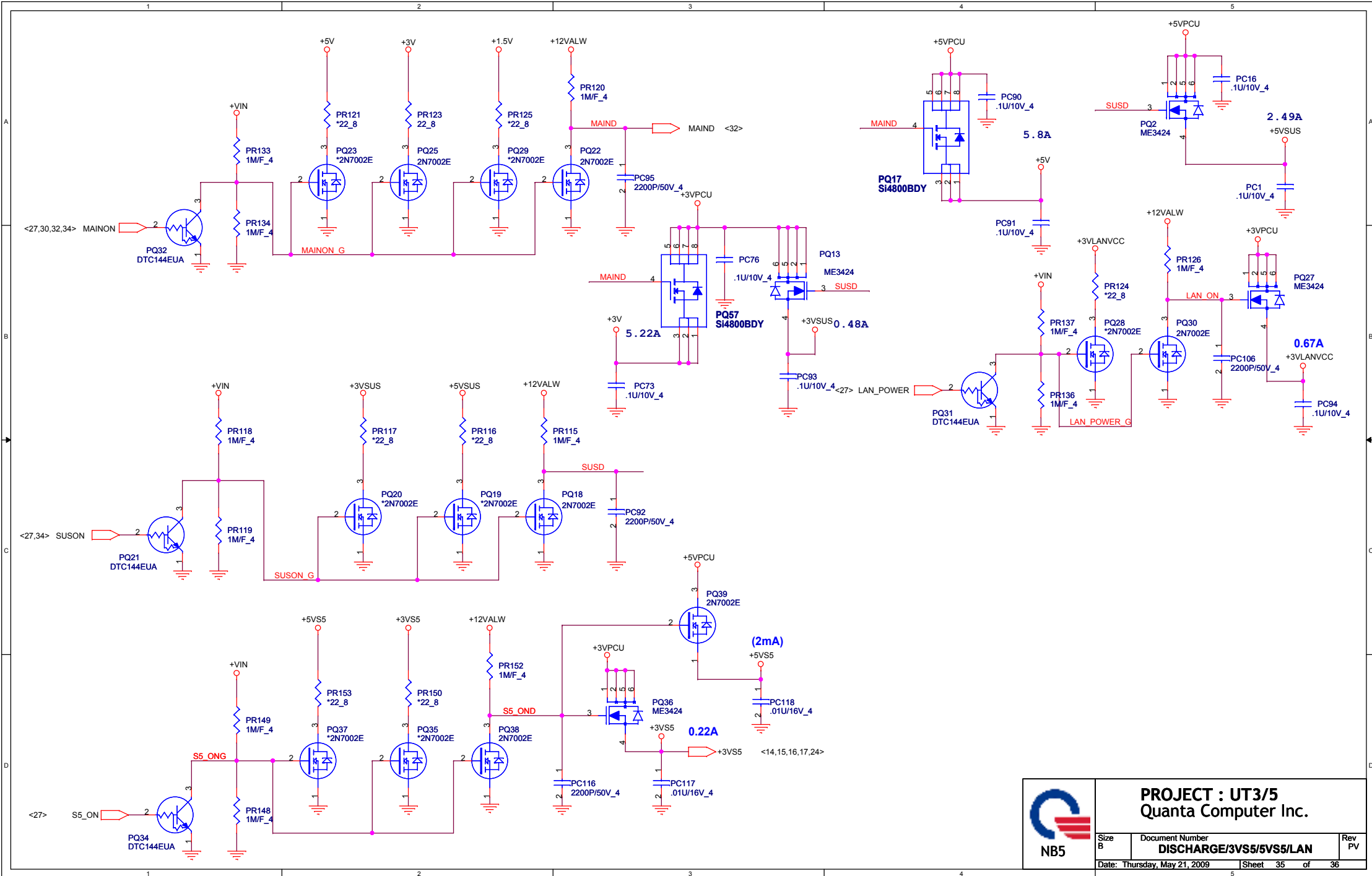
Size	Document Number	Rev
B	+1.05V/+1.5V (RT8204)	PV
Date: Thursday, May 21, 2009	Sheet 32 of 36	



Merom: VCC\_CORE/ 44A  
Yonah: VCC\_CORE/ 36A







**PROJECT : UT3/5**  
**Quanta Computer Inc.**

Size B	Document Number <b>DISCHARGE/3VS5/5VS5/LAN</b>	Rev PV
Date: Thursday, May 21, 2009		Sheet 35 of 36