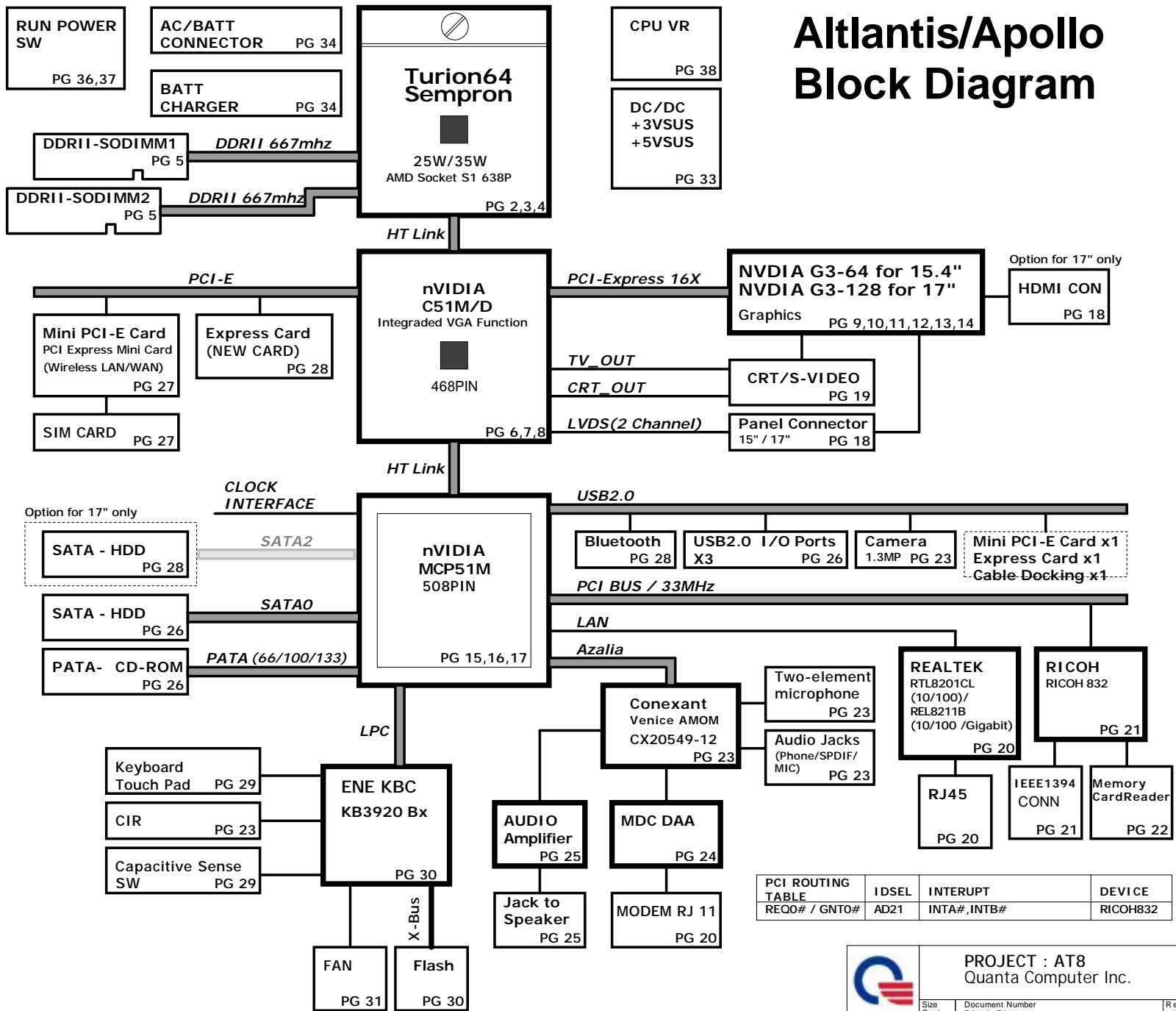


**PCB STACK UP**

- LAYER 1 : TOP
- LAYER 2 : SGND1
- LAYER 3 : IN1
- LAYER 4 : IN2
- LAYER 5 : VCC
- LAYER 6 : IN3
- LAYER 7 : SGND2
- LAYER 8 : BOT

- Cable Docking**
- TV\_OUT
  - VGA
  - RJ-45
  - CIR/Pwr btn
  - SPDIF Out
  - Stereo MIC
  - Headphone Jack
  - USB Port
  - VOL Cntr
- PG 31

# Atlantis/Apollo Block Diagram



**VAULE DEFINE**

A=0603,B=0805,C=1206,F=1%, OTHER IS 0402

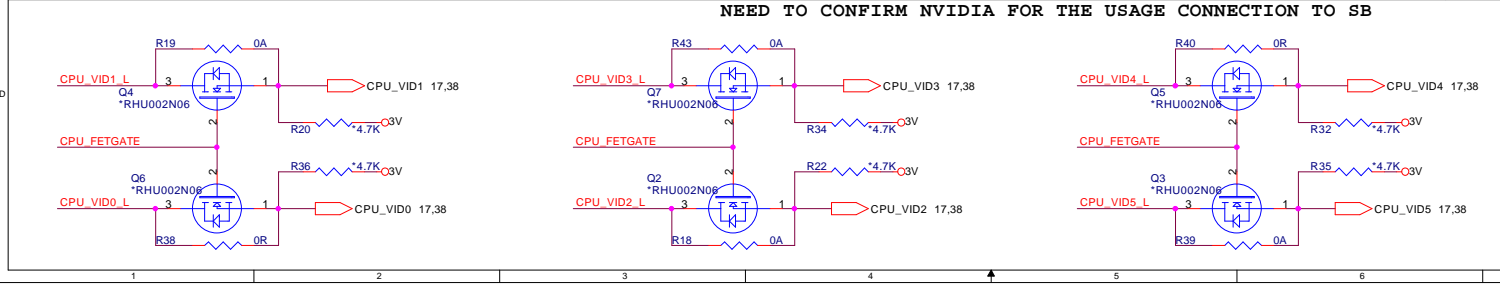
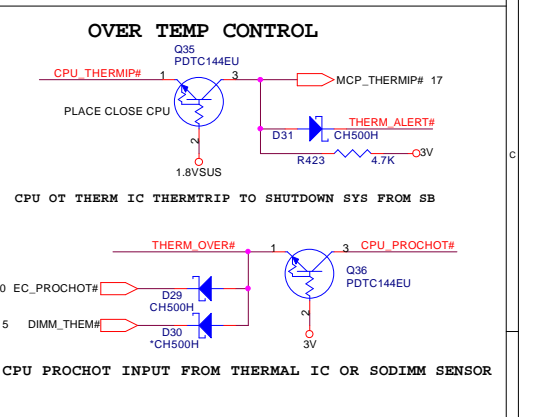
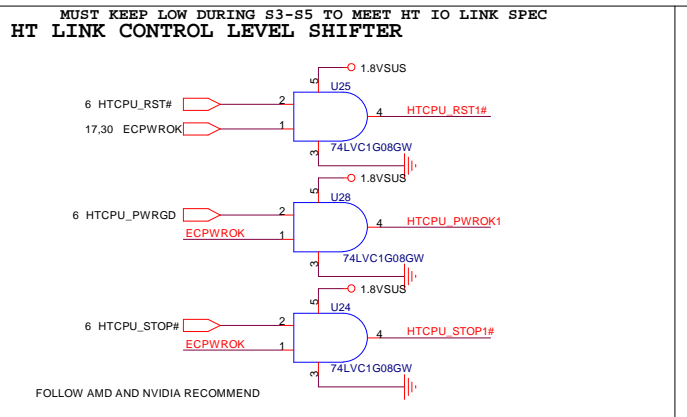
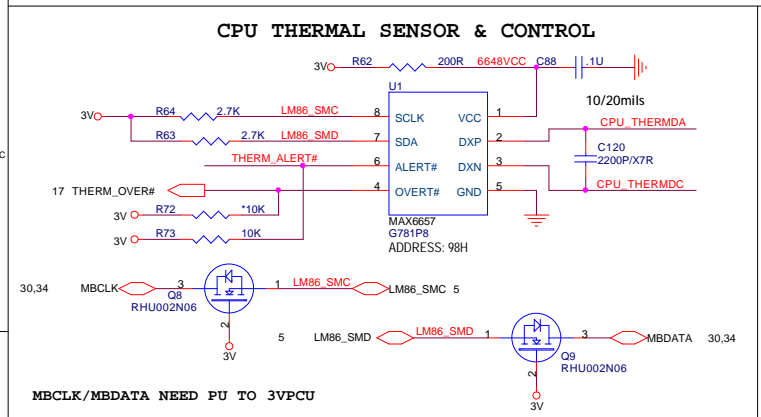
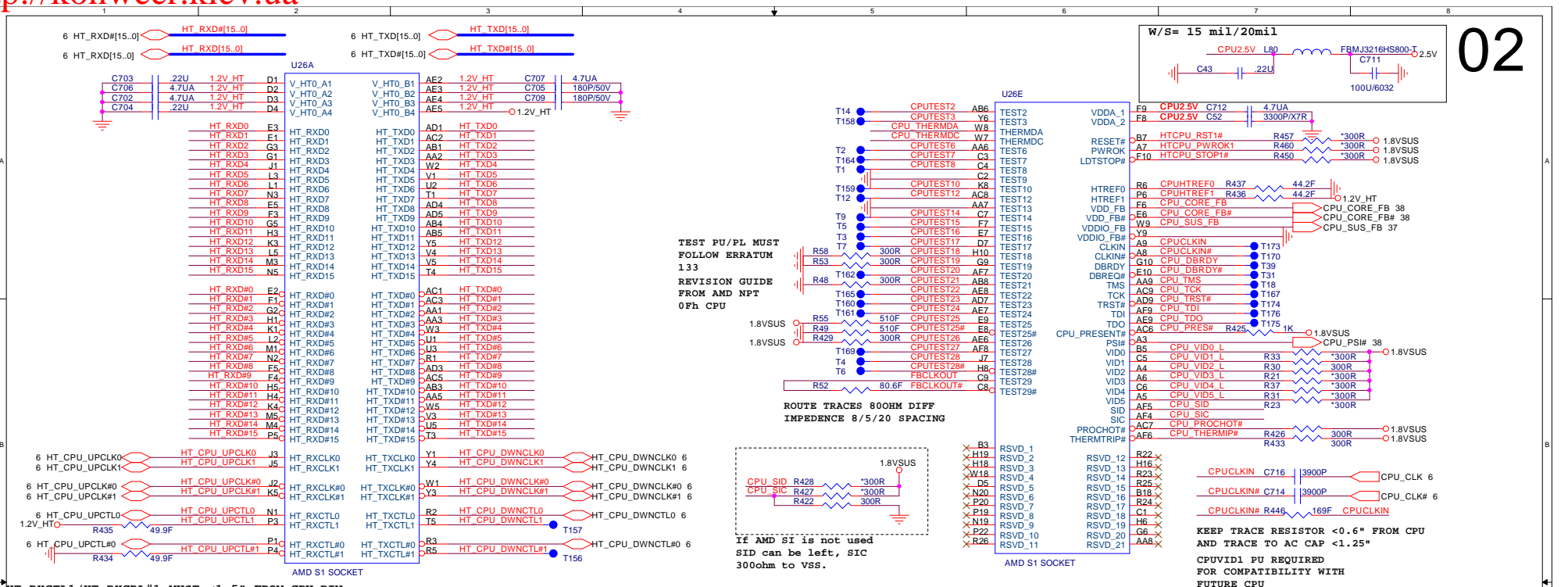
EXAMPLE  
 10R=10ohm(0402)  
 10A=10ohm(0603)  
 10B=10ohm(0805)  
 10C=10ohm(1206)  
 10F=10ohm(0402 and 1%)

PCI ROUTING TABLE	IDSEL	INTERUPT	DEVICE
REQ0# / GNT0#	AD21	INTA#,INTB#	RICOH832

**PROJECT : AT8**  
 Quanta Computer Inc.

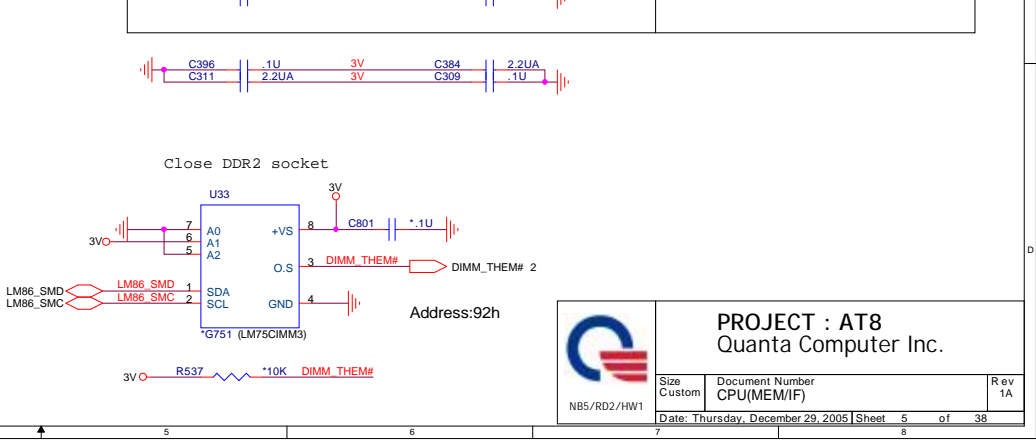
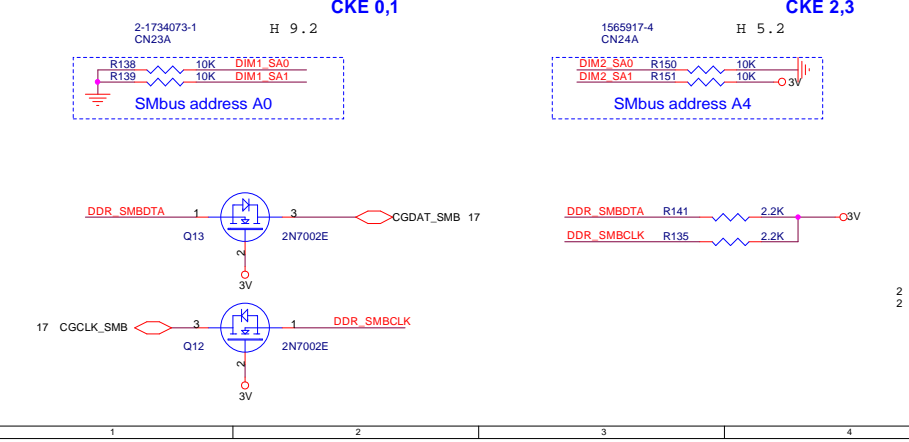
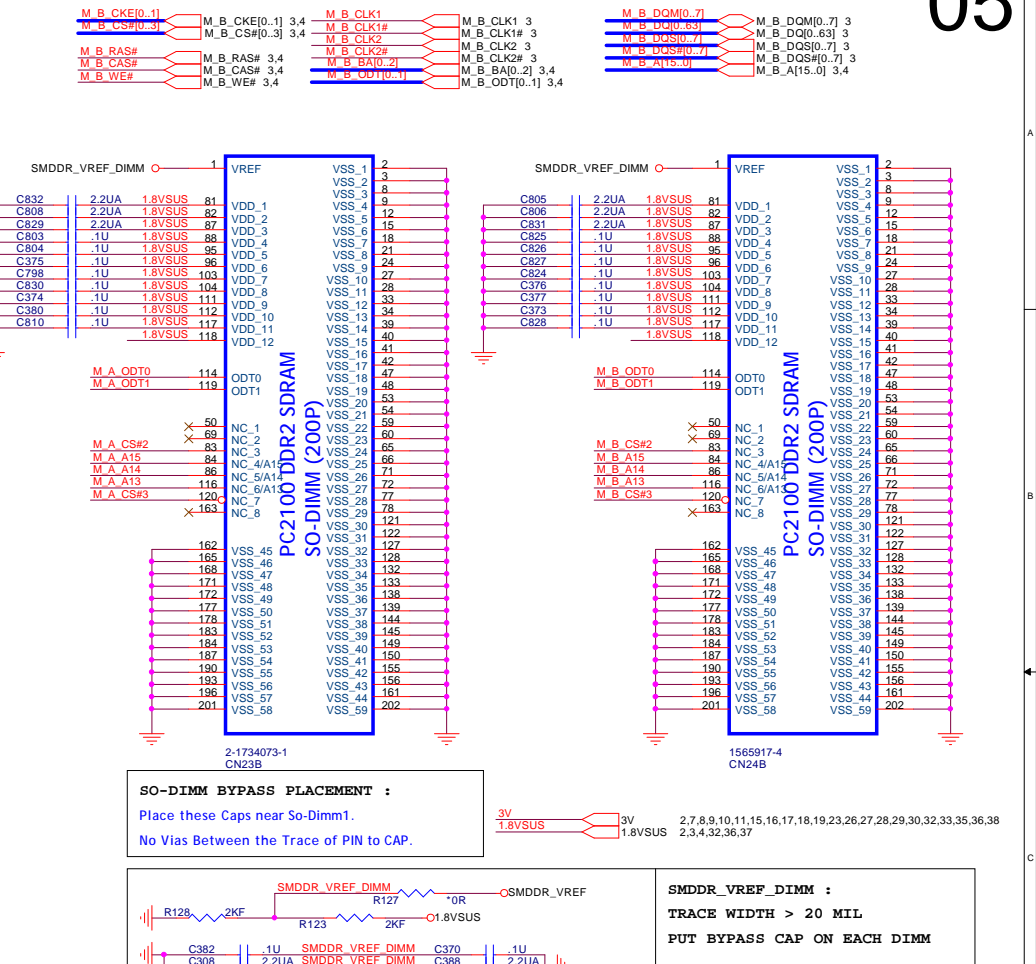
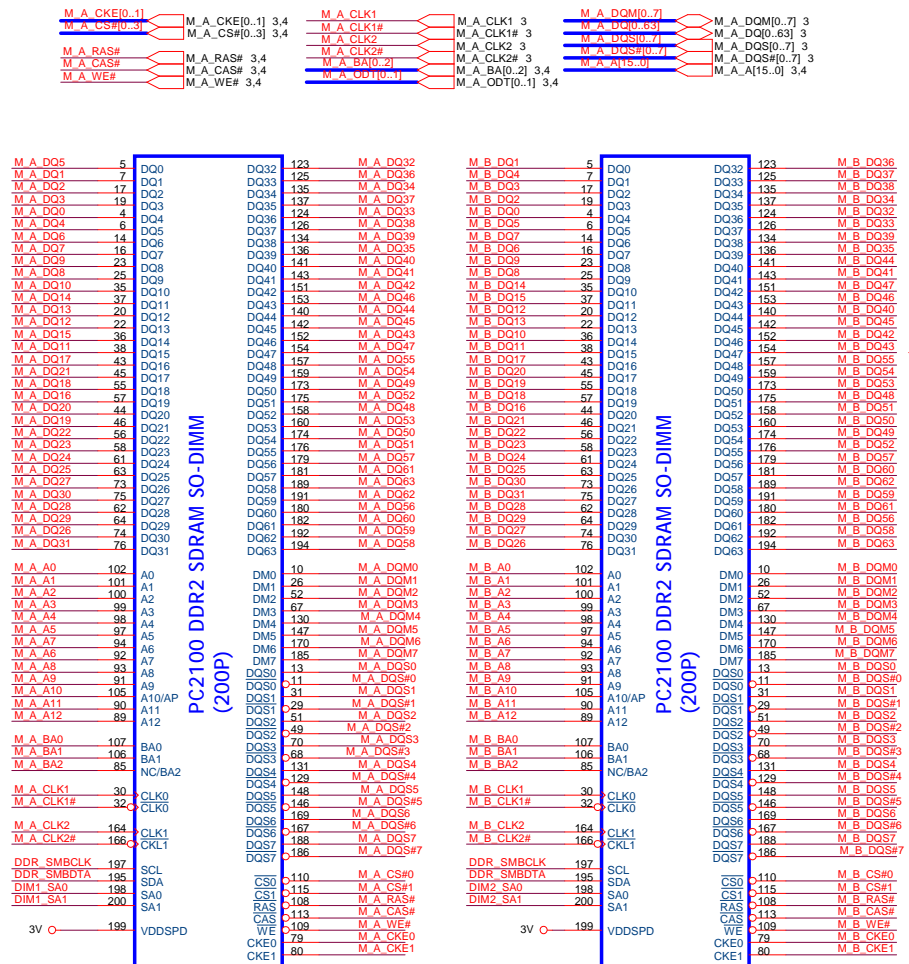
Size Custom	Document Number Block Diagram	Rev 1A
Date: Thursday, December 29, 2005 Sheet 1 of 38		

NB5/RD2/HW1



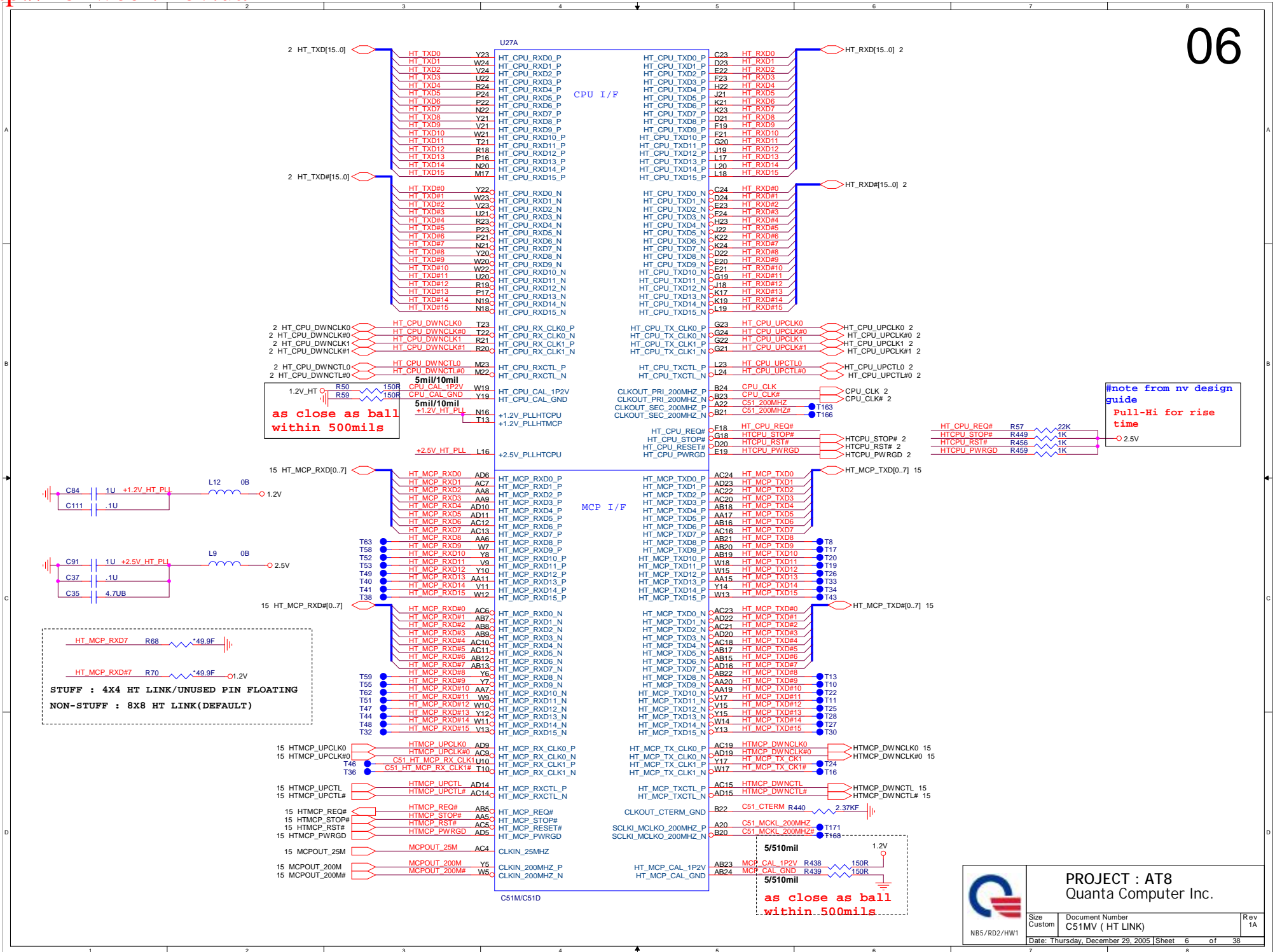






**PROJECT : AT8**  
**Quanta Computer Inc.**

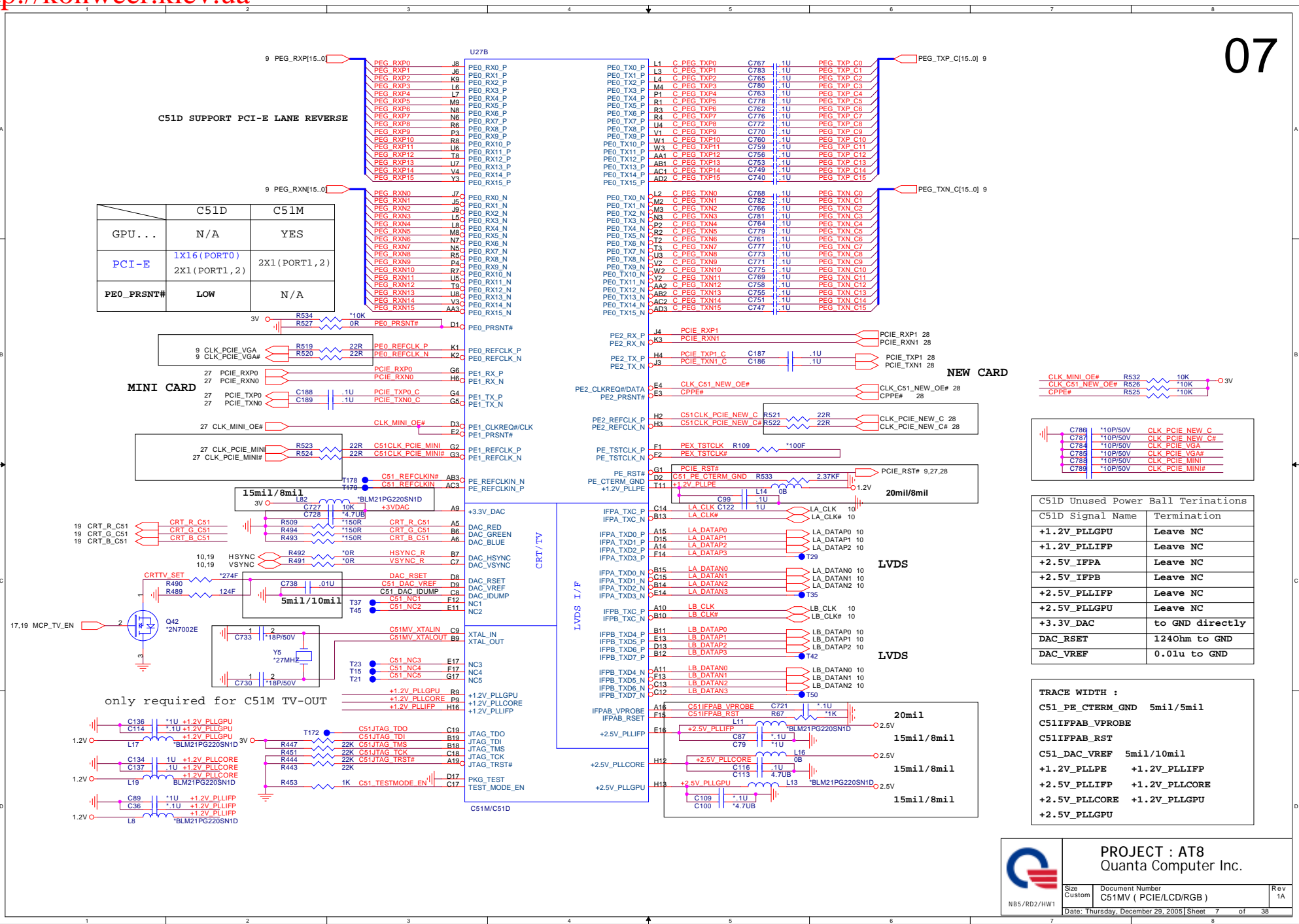
Size Custom	Document Number CPU(MEM/F)	Rev 1A
Date: Thursday, December 29, 2005		Sheet 5 of 38



**PROJECT : AT8**  
**Quanta Computer Inc.**

Size	Document Number	Rev
Custom	C51M1V (HT LINK)	1A

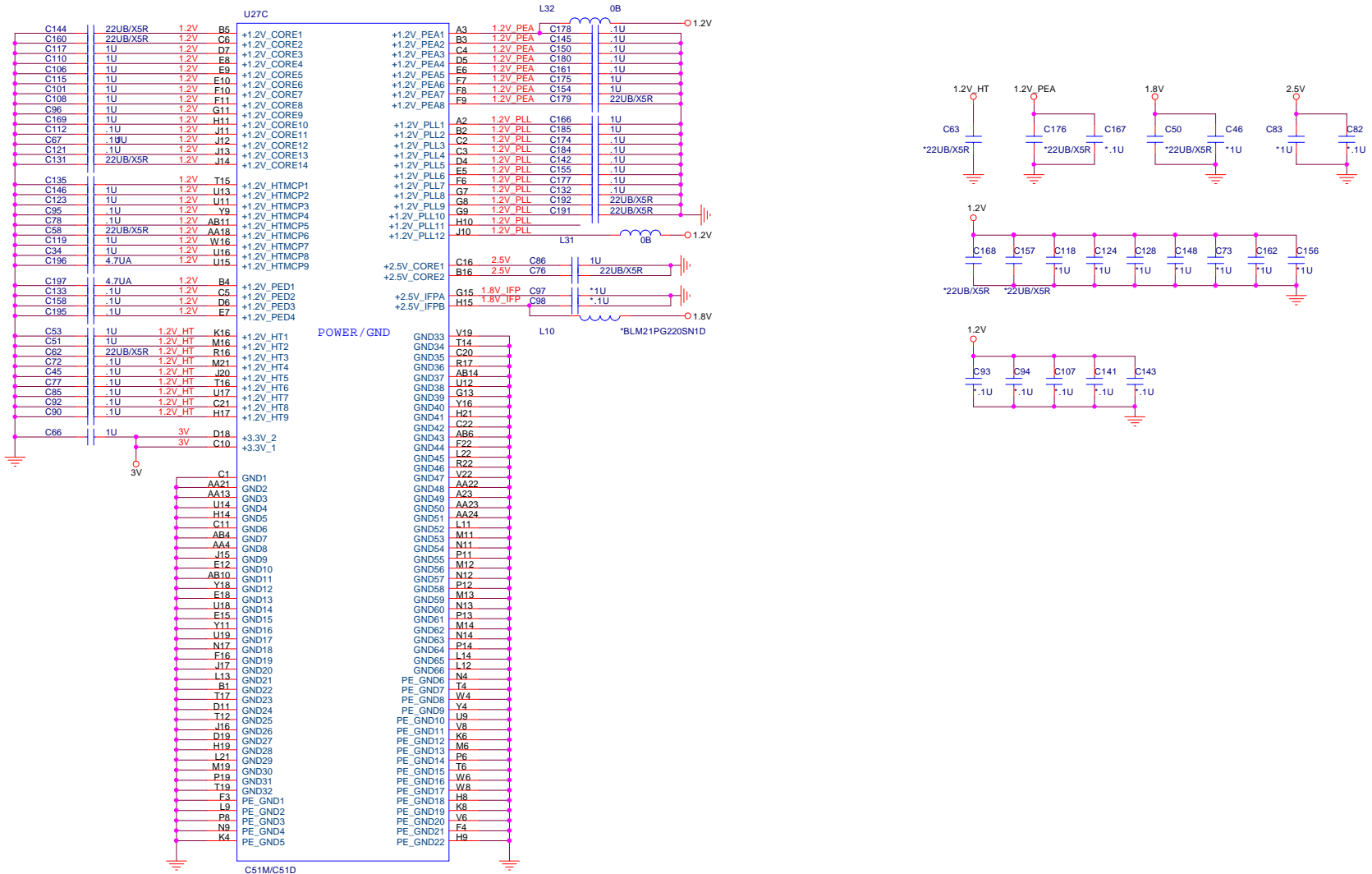
Date: Thursday, December 29, 2005 | Sheet 6 of 38




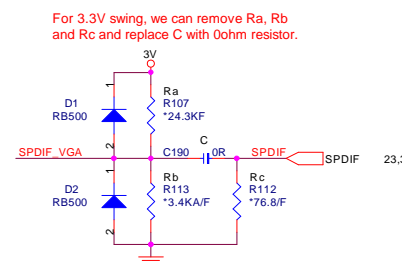
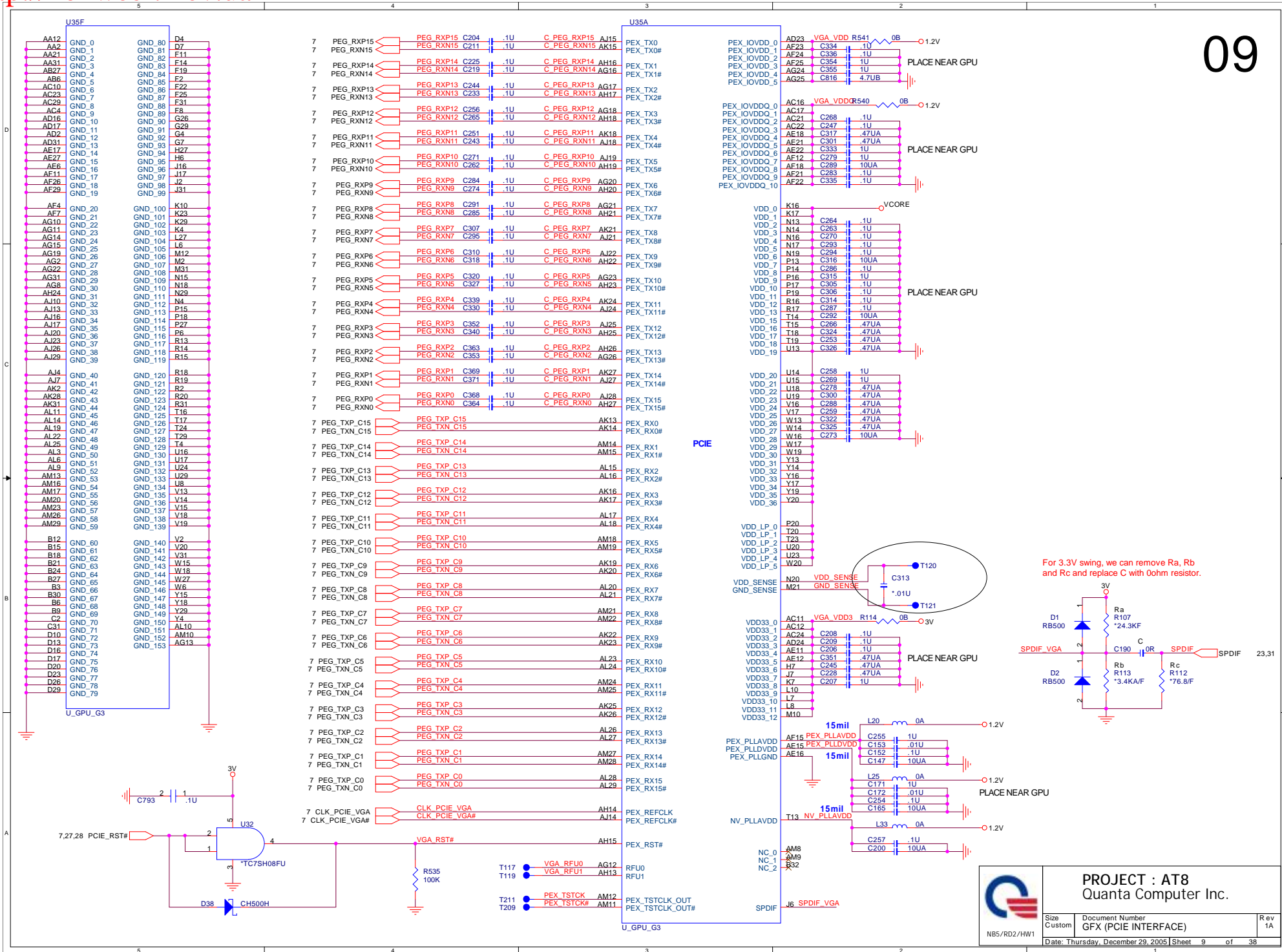
**PROJECT : AT8**  
Quanta Computer Inc.

Size Custom	Document Number C51MV ( PCIE/LCD/RGB )	Rev 1A
Date: Thursday, December 29, 2005   Sheet 7 of 38		

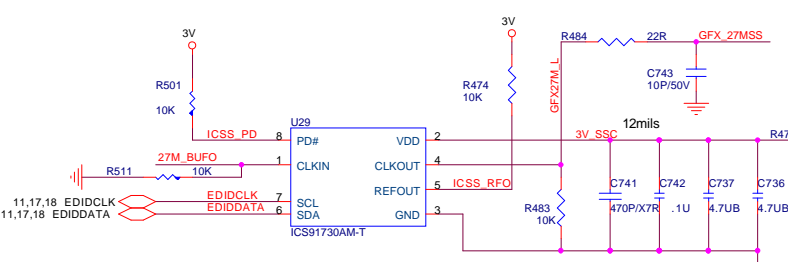
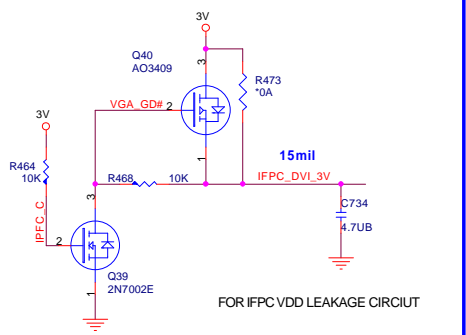
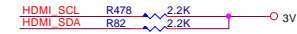
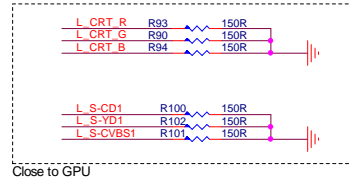
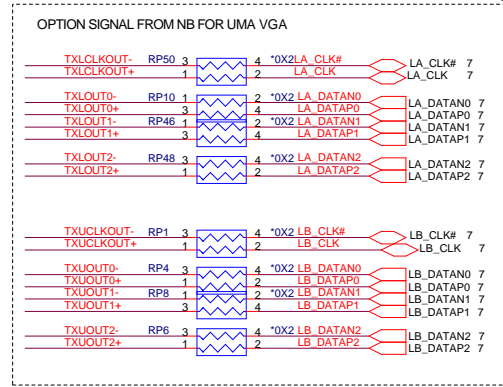
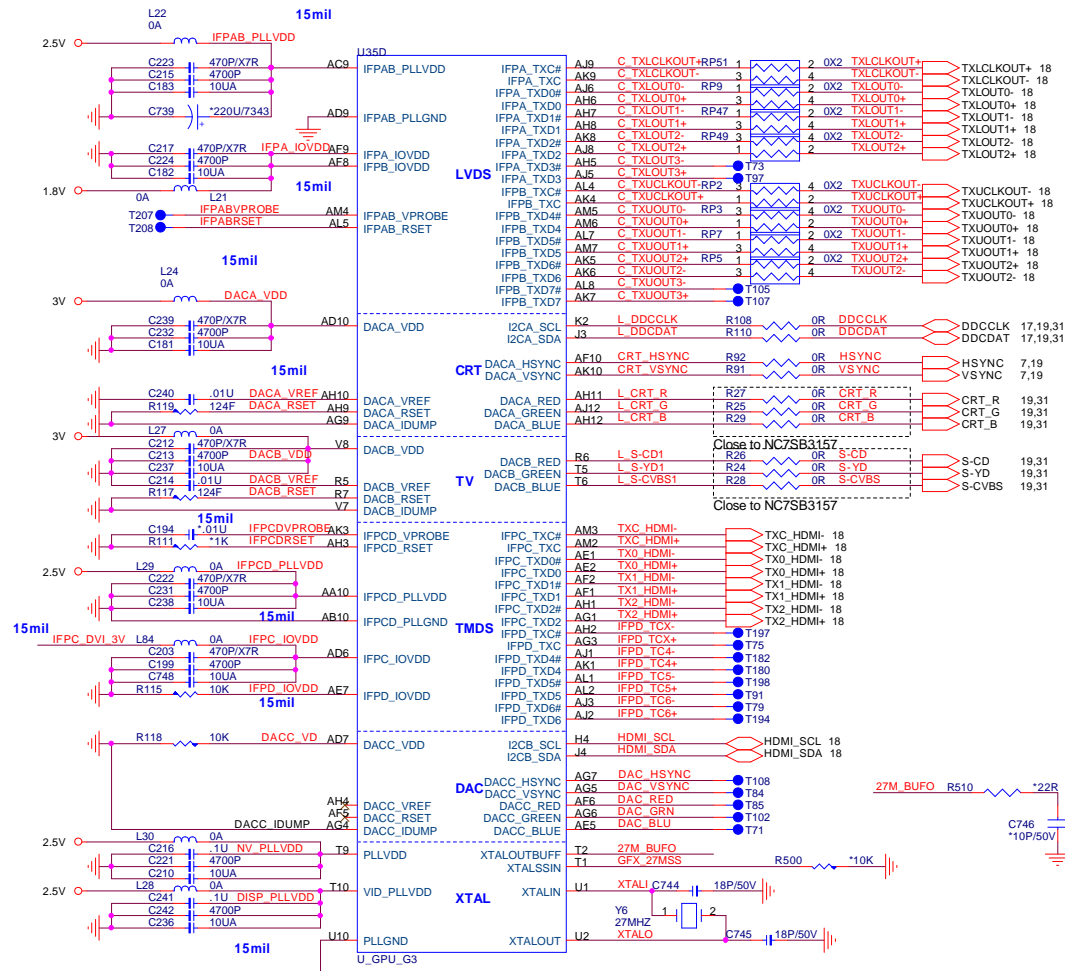
### C51M/C51D POWER PLANE/GND & BYPASS



 NB5/RDZ/HW1	<b>PROJECT : AT8</b> Quanta Computer Inc.	
	Size Custom Document Number C51M (POWER/GND)	Date: Wednesday, January 11, 2006 Sheet 8 of 38



	PROJECT : AT8		Rev 1A
	Quanta Computer Inc.		
Size Custom	Document Number	GFX (PCIe INTERFACE)	
Date: Thursday, December 29, 2005		Sheet 9	of 38



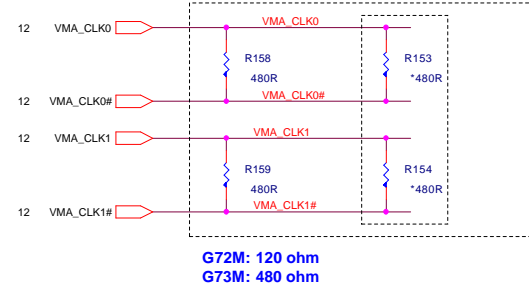
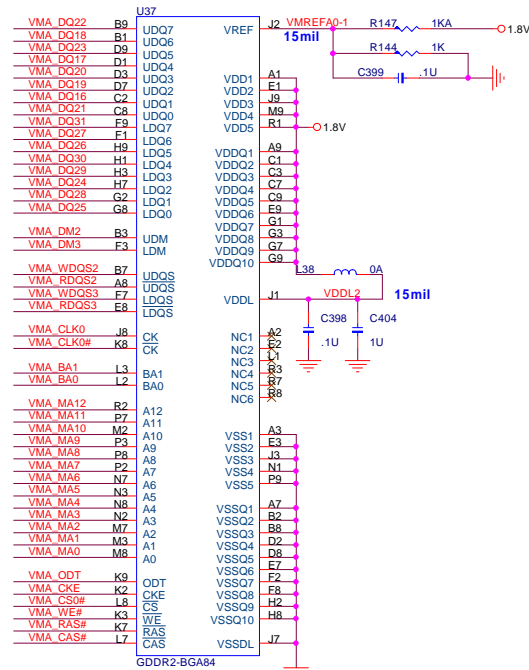
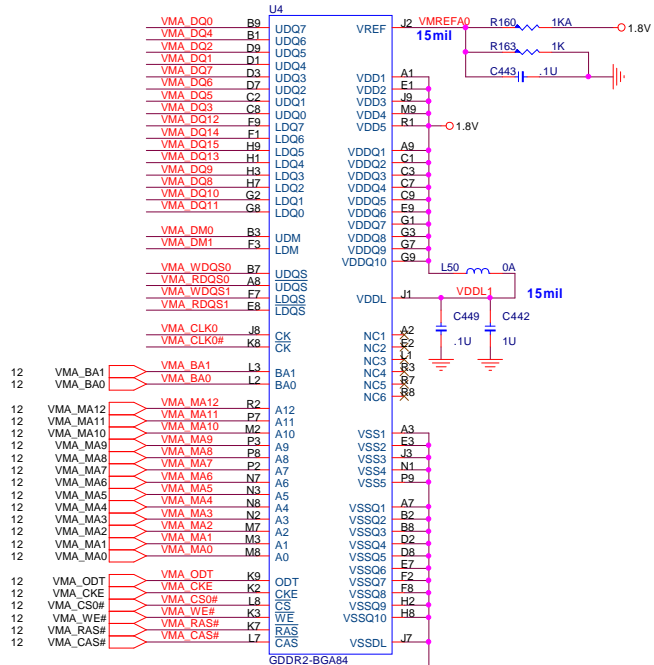
SPREAD SPECTRUM

I2C ADDRESS: 0xD4H

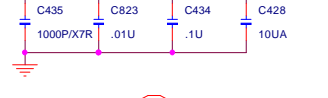
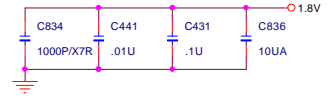
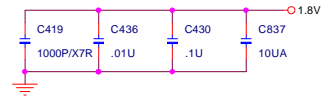
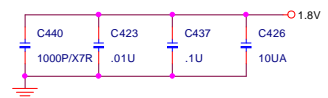
	PROJECT : AT8		Rev 1A
	Quantas Computer Inc.		
Size Custom	Document Number GFX(LVDS, CRT, TV)	Date: Thursday, December 29, 2005 Sheet 10 of 38	



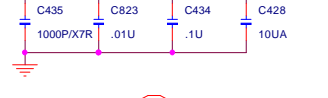
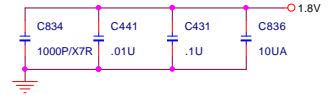
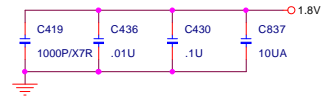
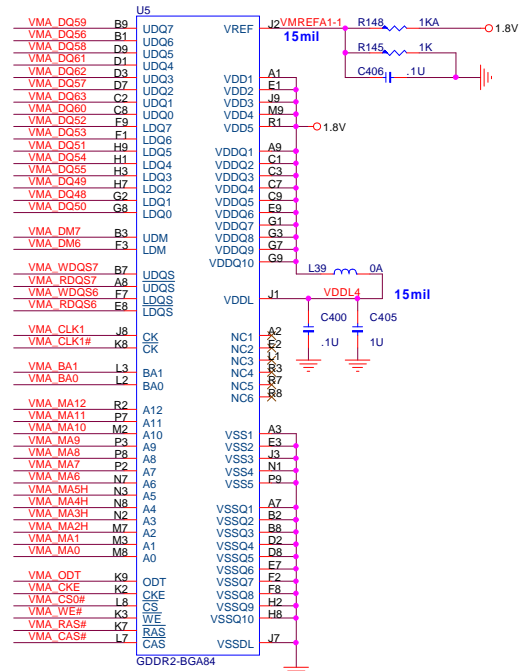
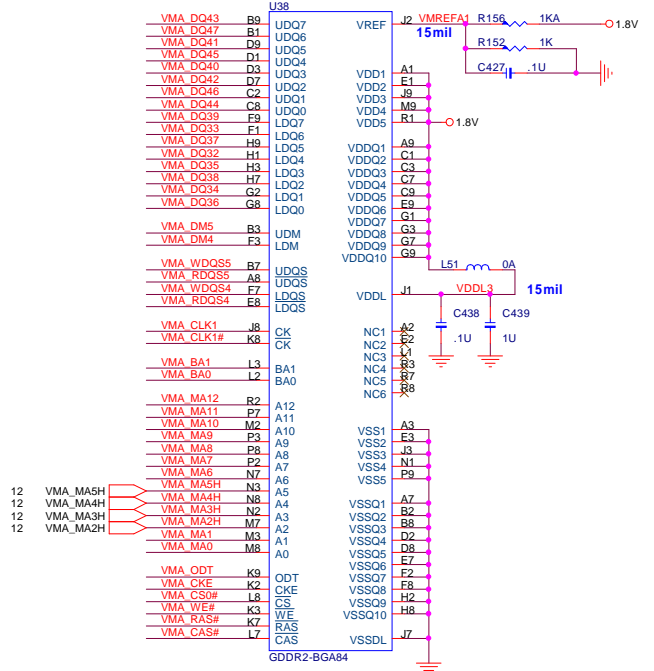




VMA\_CKE R548 10K

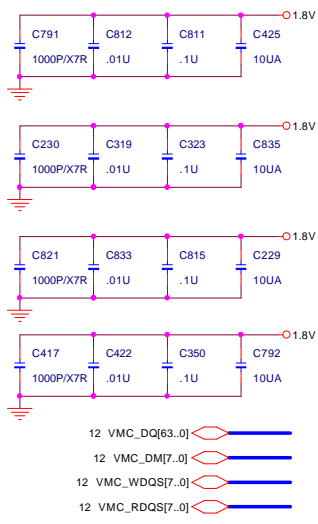
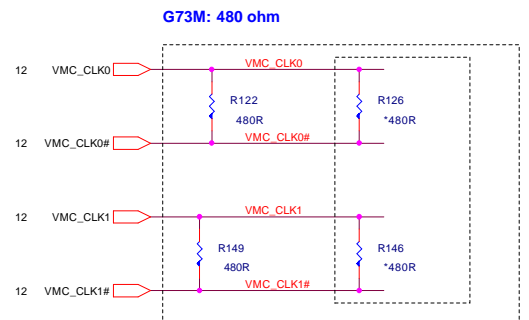
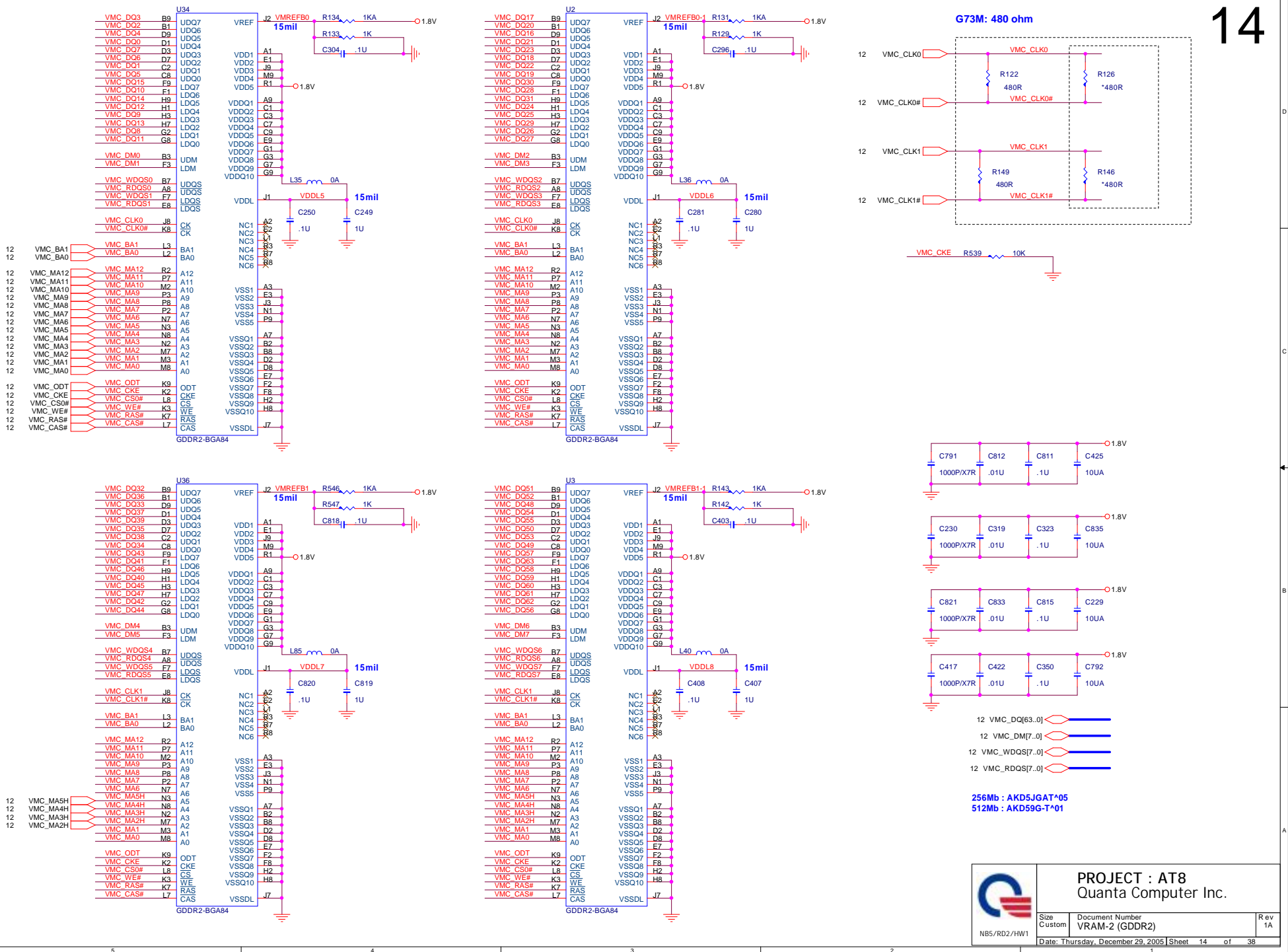


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512Mb : AKD59G-T\*01




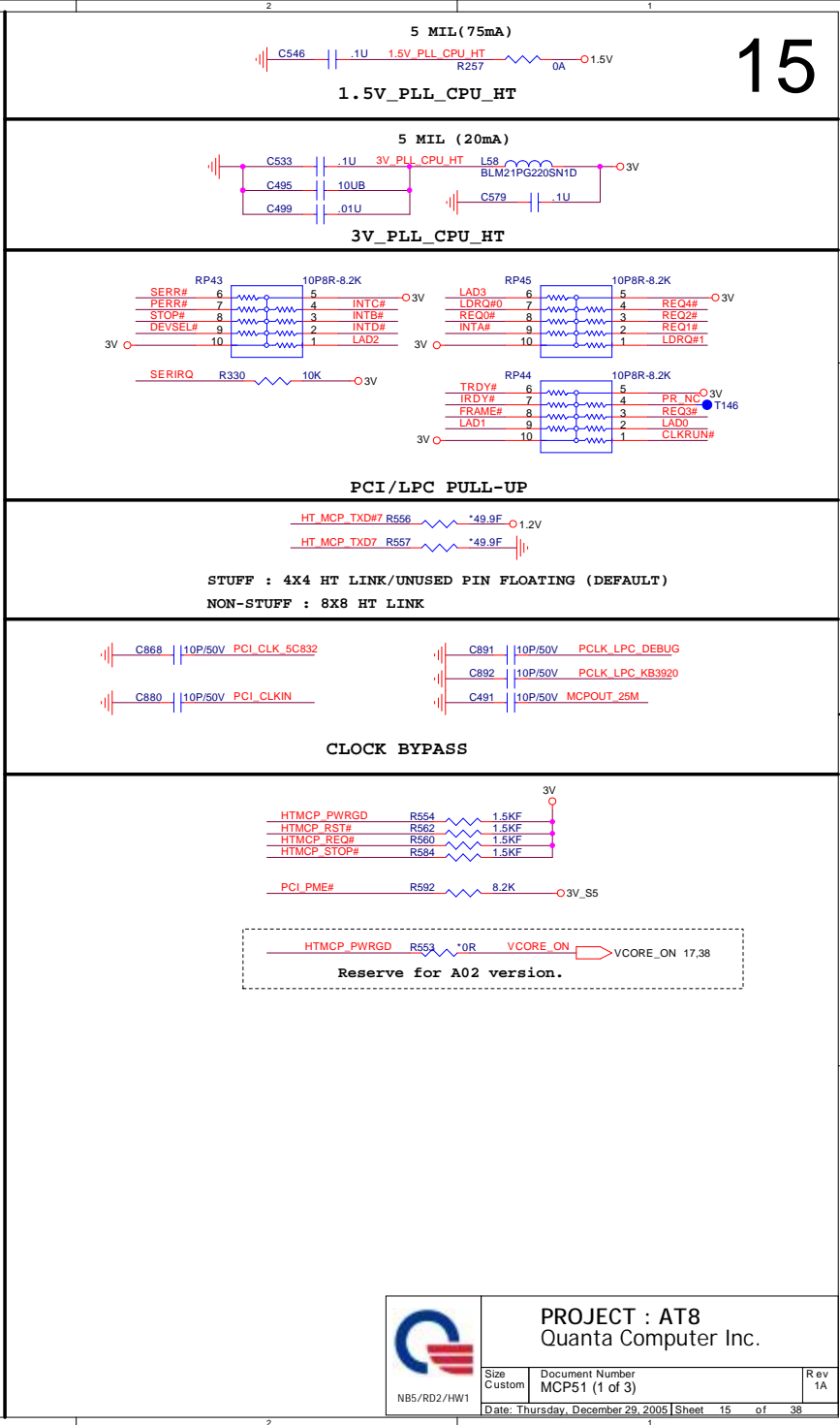
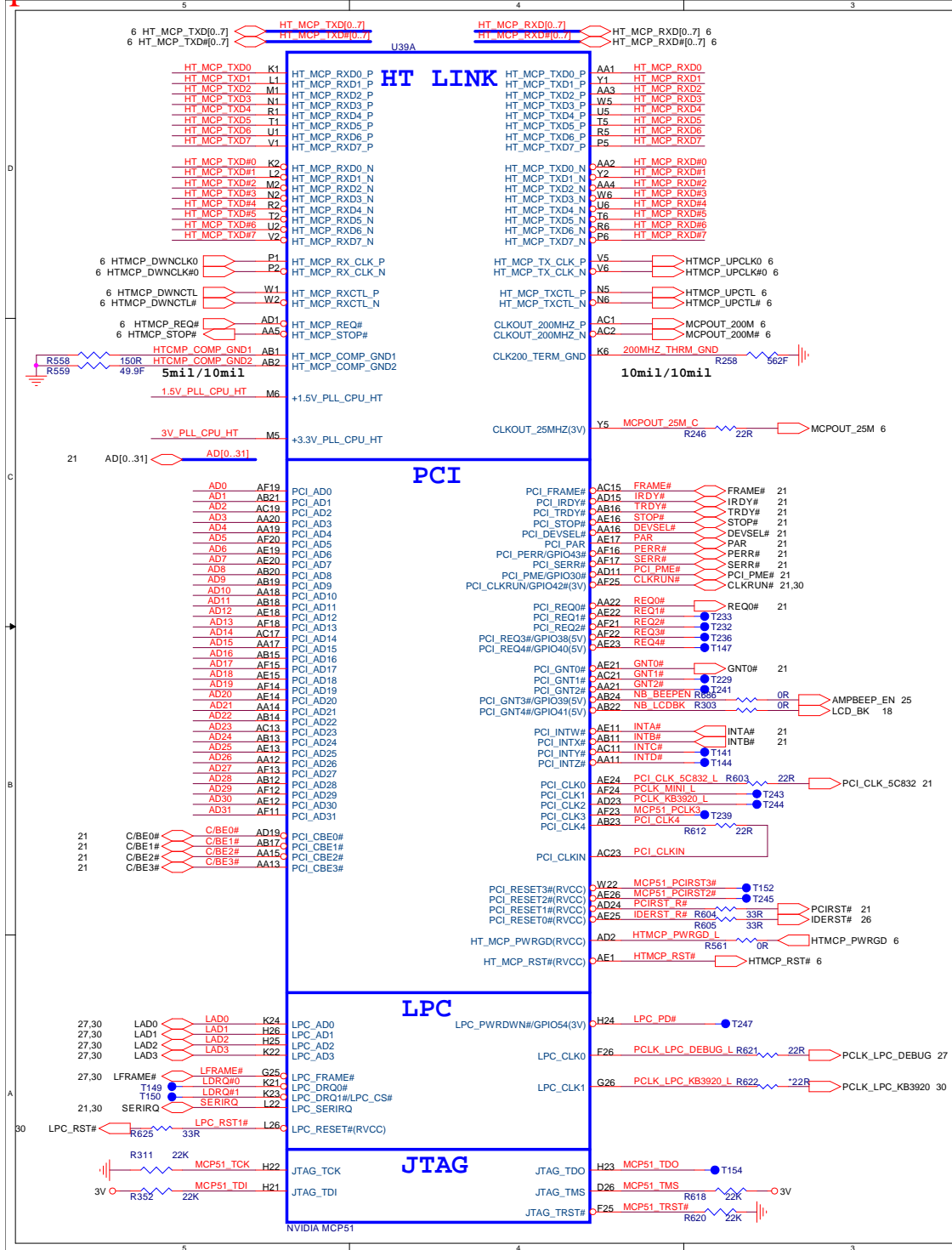
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512Mb : AKD59G-T\*01

	PROJECT : AT8 Quantas Computer Inc.	
	Size Custom Document Number VRAM-1 (GDDR2) Date: Thursday, December 29, 2005 Sheet 13 of 38	Rev 1A



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

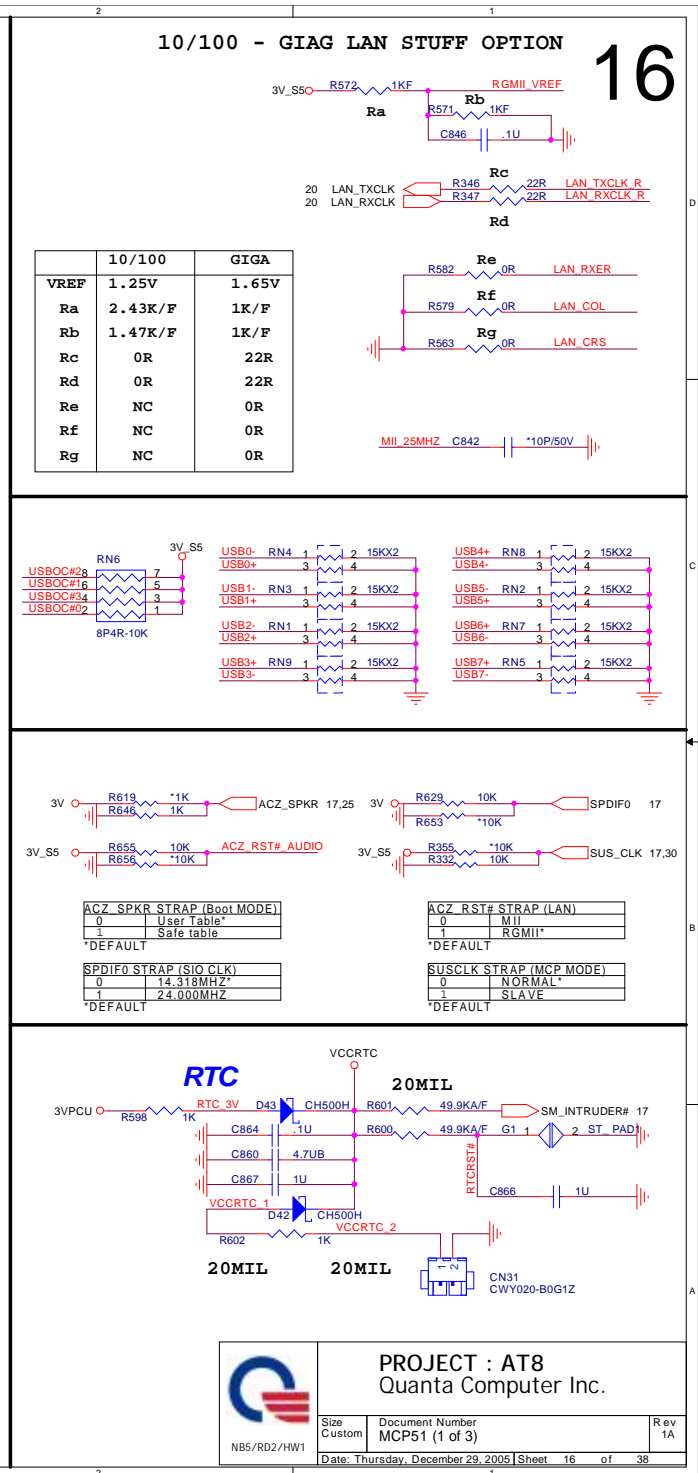
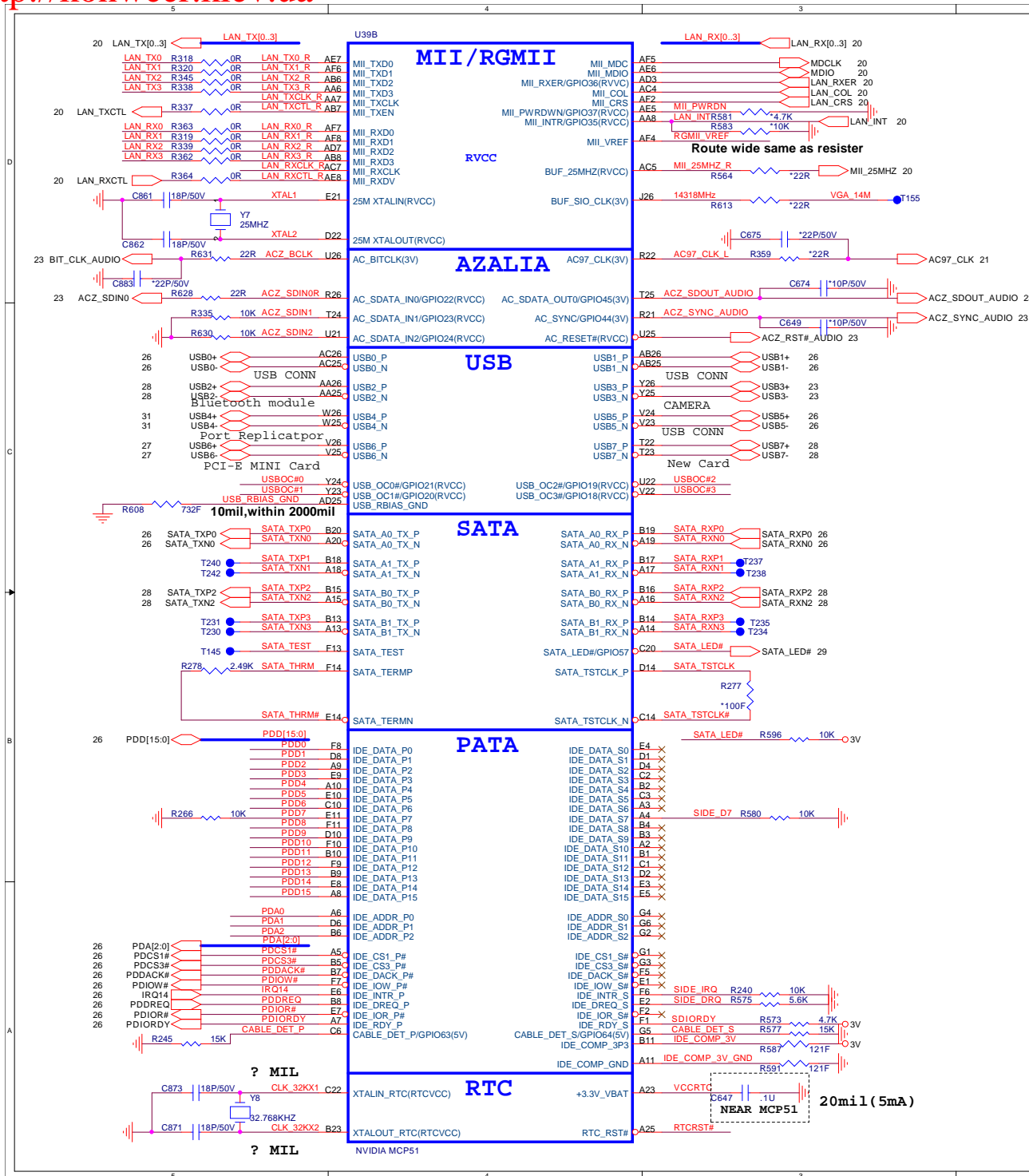
 NBS/RDZ/HW1	<b>PROJECT : AT8</b> Quanta Computer Inc.		Rev 1A
	Size Custom	Document Number VRAM-2 (GDDR2)	

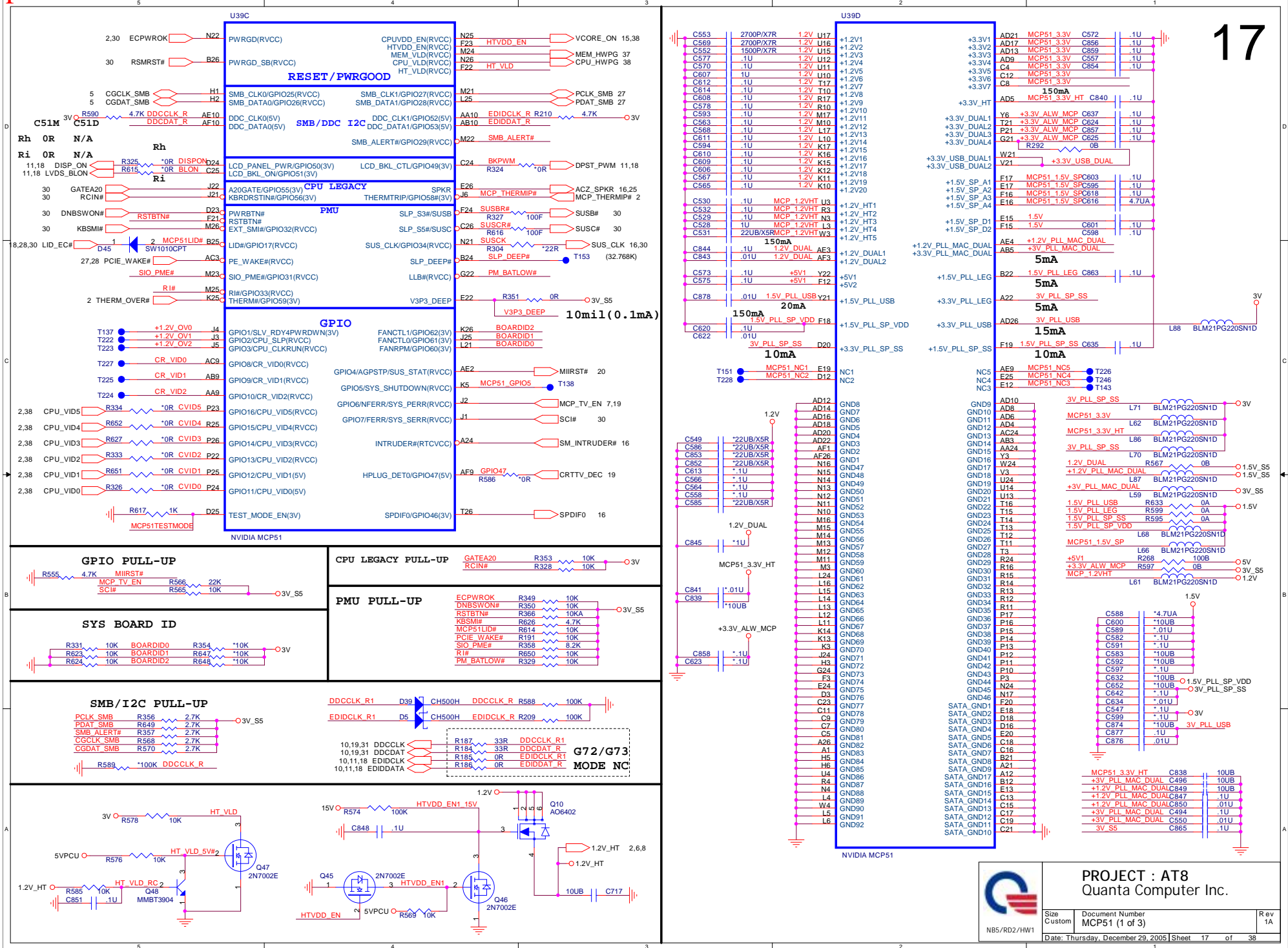


**PROJECT : AT8**  
 Quanta Computer Inc.

Size Custom	Document Number MCP51 (1 of 3)	Rev 1A
Date: Thursday, December 29, 2005 Sheet 15 of 38		

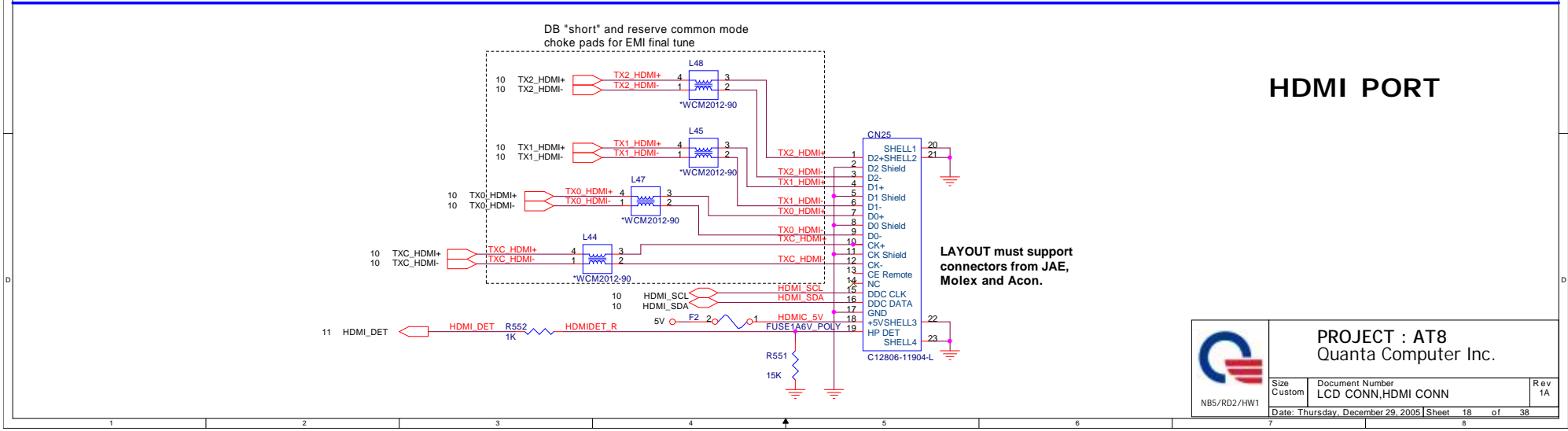
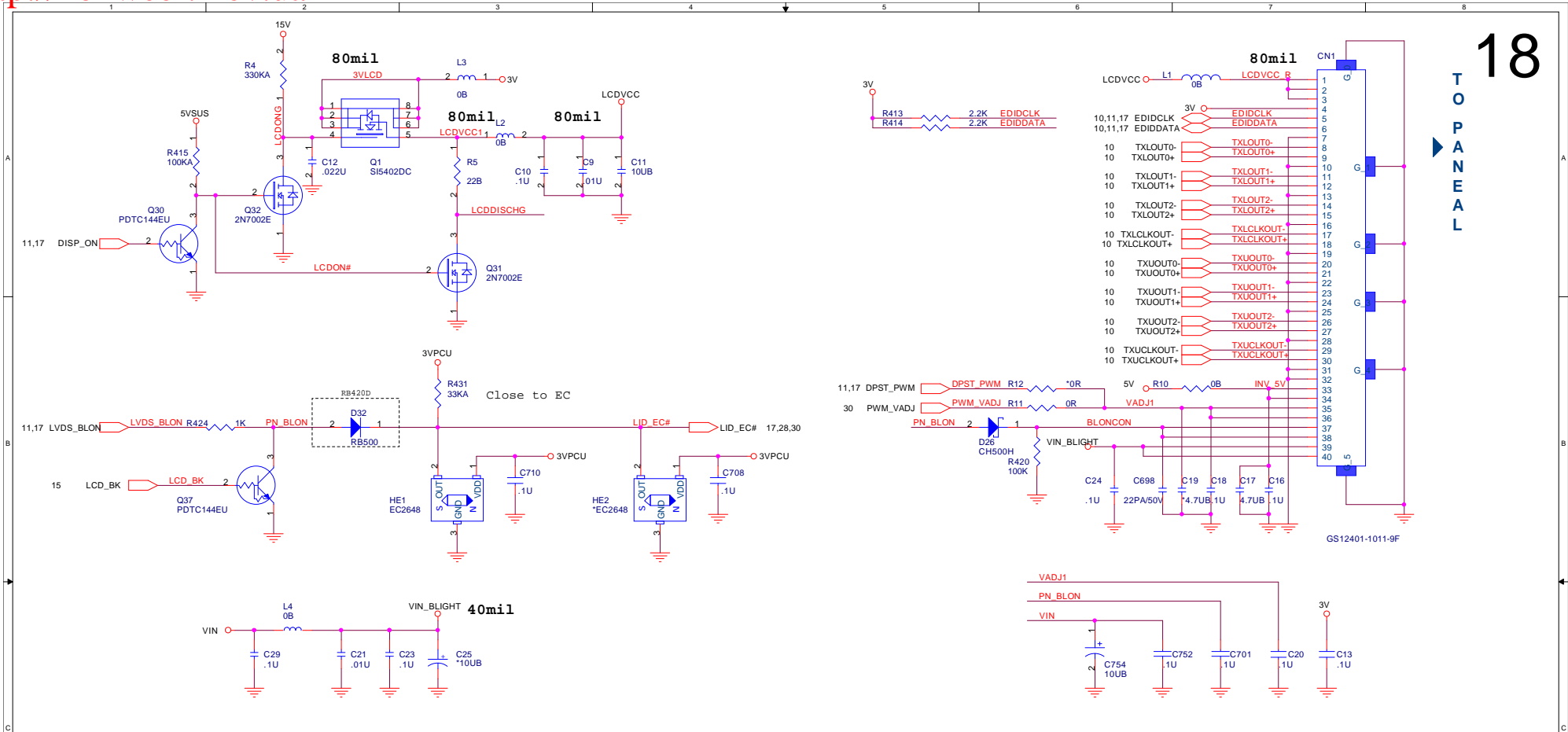
NB5/RD2/HW1






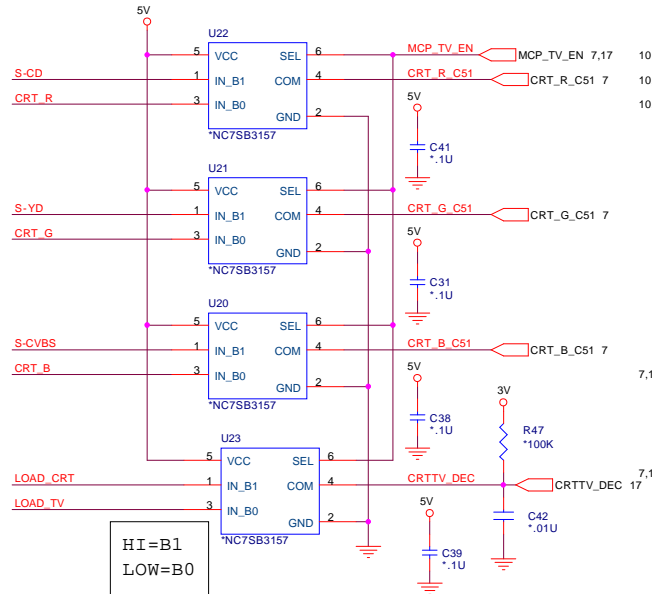
**PROJECT : AT8**  
Quanta Computer Inc.

Size Custom	Document Number MCP51 (1 of 3)	Rev 1A
Date: Thursday, December 29, 2005 Sheet 17 of 38		



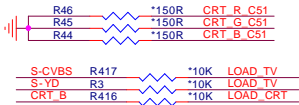
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	<p>Size Custom</p>	<p>Document Number LCD CONN,HDMI CONN</p>
<p>Date: Thursday, December 29, 2005 Sheet 18 of 38</p>		

### CRT PORT

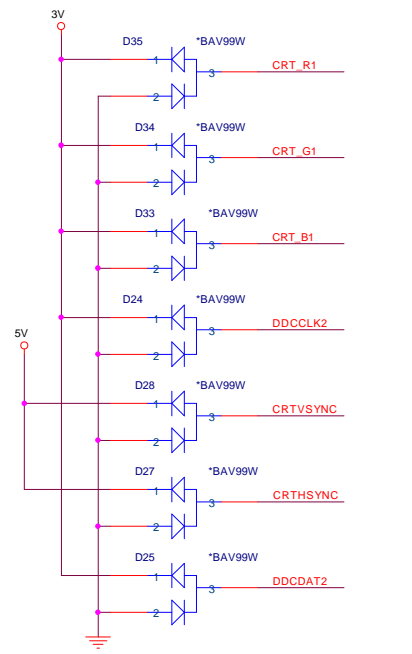
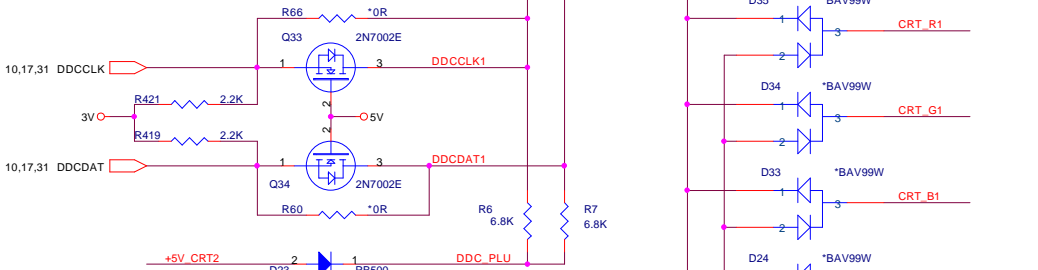
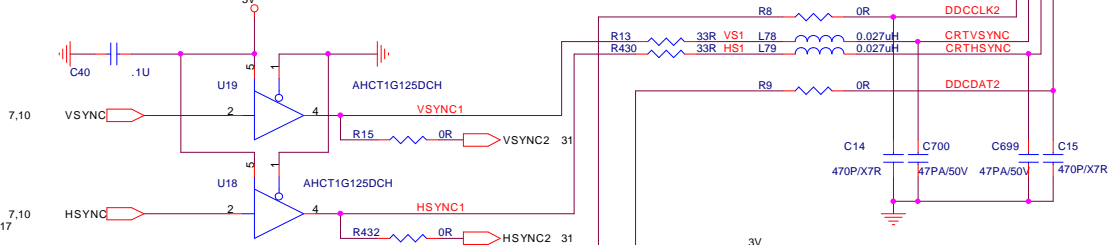
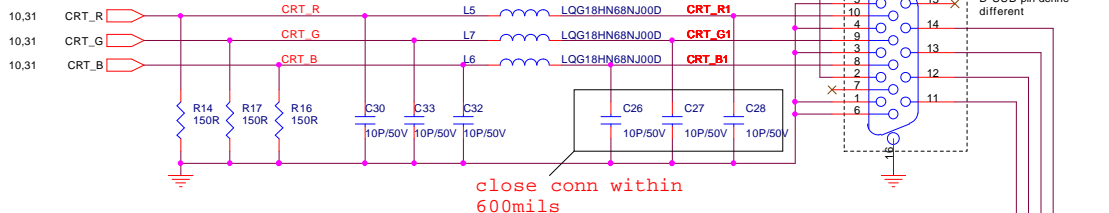


HI=B1  
LOW=B0

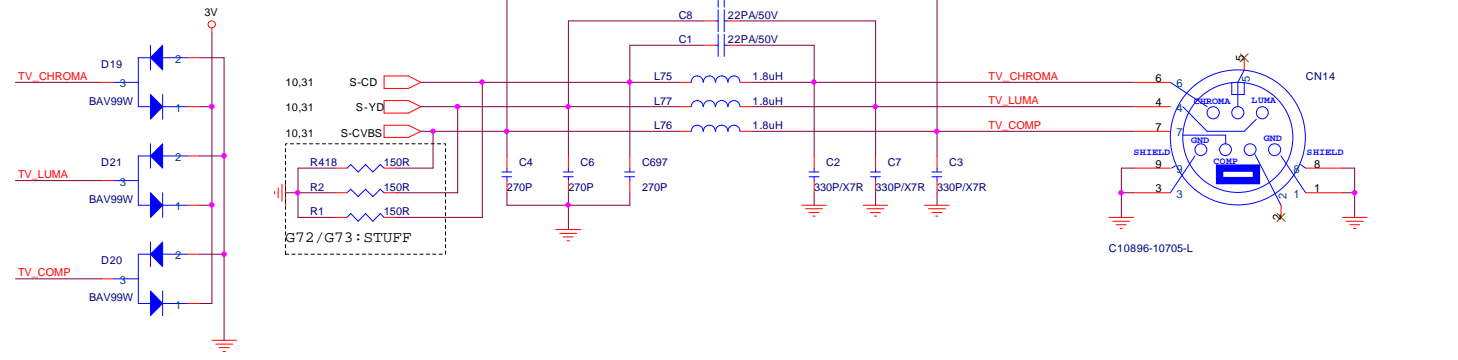
close within  
600mils



75-R as possible as  
closed to SB

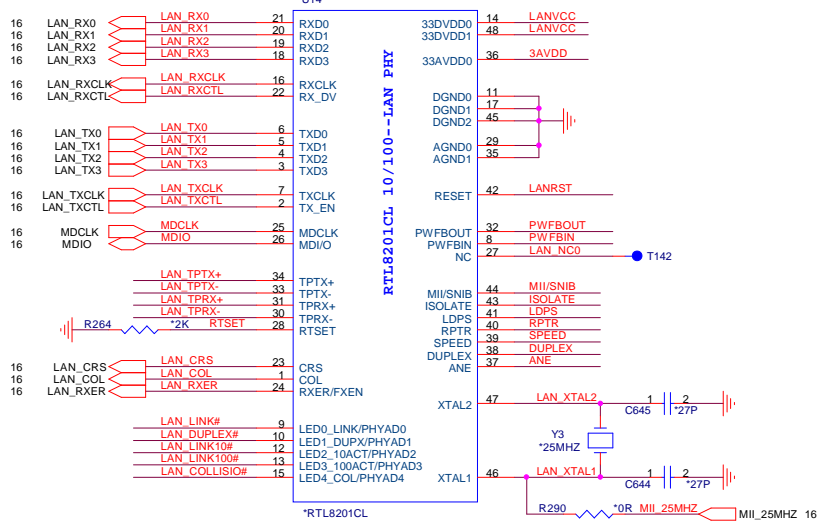


### TV\_OUT

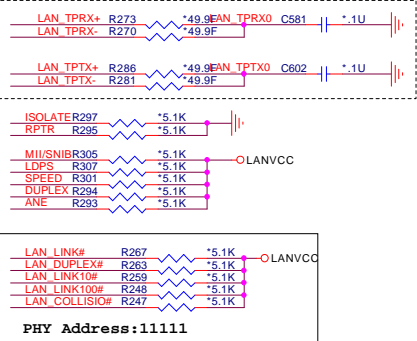


	PROJECT : AT8 Quanta Computer Inc.		
	Size Custom	Document Number CRT_TV_OUT	Rev 1A
	Date: Thursday, December 29, 2005 Sheet 19 of 38		

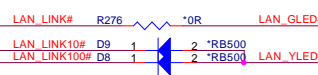
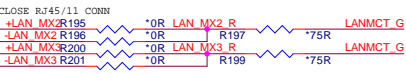
10/100M



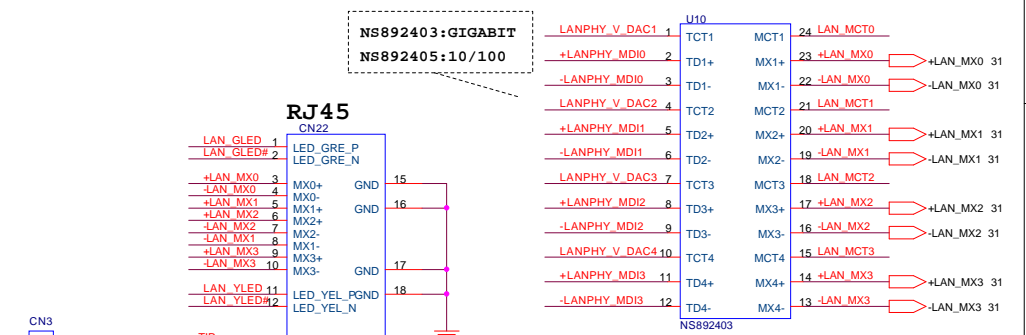
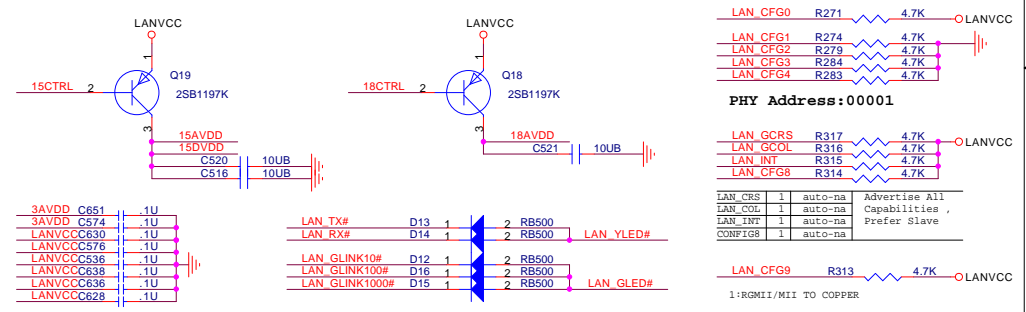
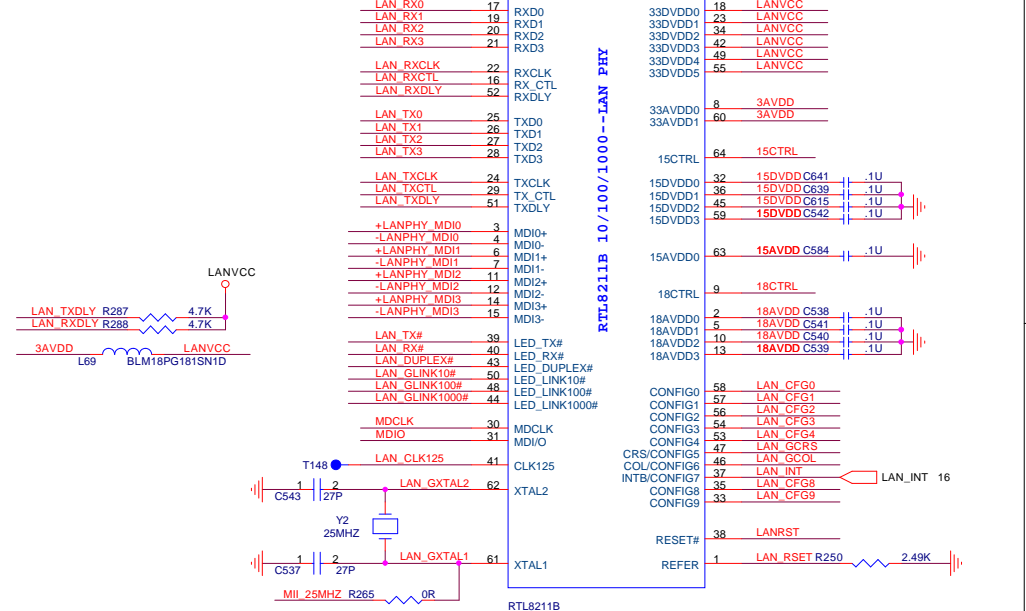
Close To RTL8201CL



LAN_COL	1		RTL8201BL LED
LAN_COL	0	Default	RTL8201CL LED
LAN_RXER_R	1		Fiber Mode
LAN_CRIS	0	Default	UTP Mode
LAN_CRIS	1	Default	Ensure operating at normal mode



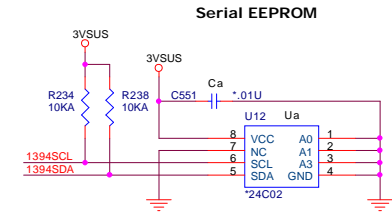
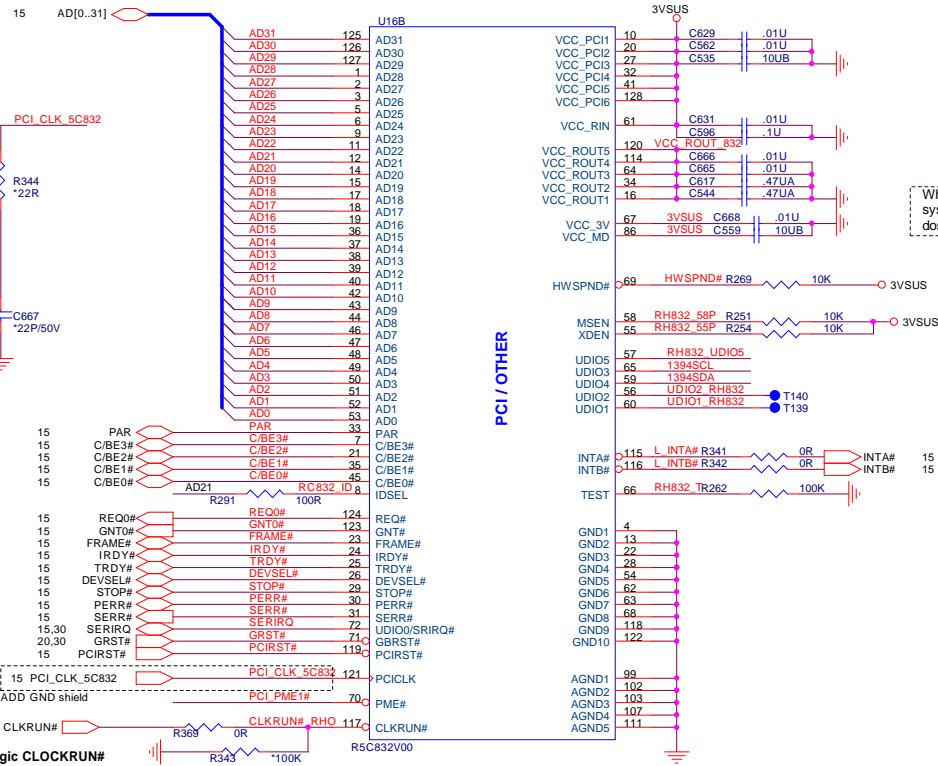
10/100/1000M



N892403:GIGABIT  
N892405:10/100

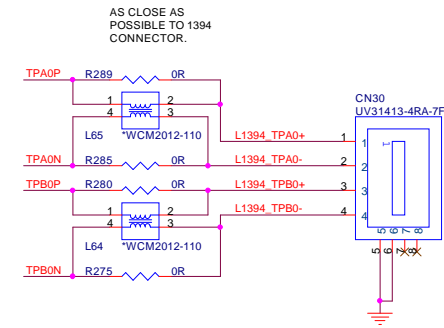
**PROJECT : AT8**  
Quanta Computer Inc.

Size Custom	Document Number	Rev 1A
	LAN PHY RTL8211B/8201CL,RJ45	
Date: Tuesday, February 07, 2006	Sheet 20 of 38	

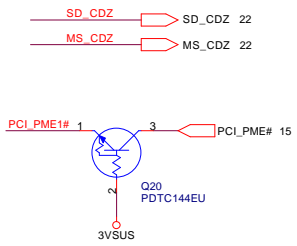


\*NOT Use EEPROM :  
Ra : installed  
Rb,Ua,Ca : NOT installed

\*Use EEPROM :  
Rb,Ua,Ca : installed  
Ra : NOT installed



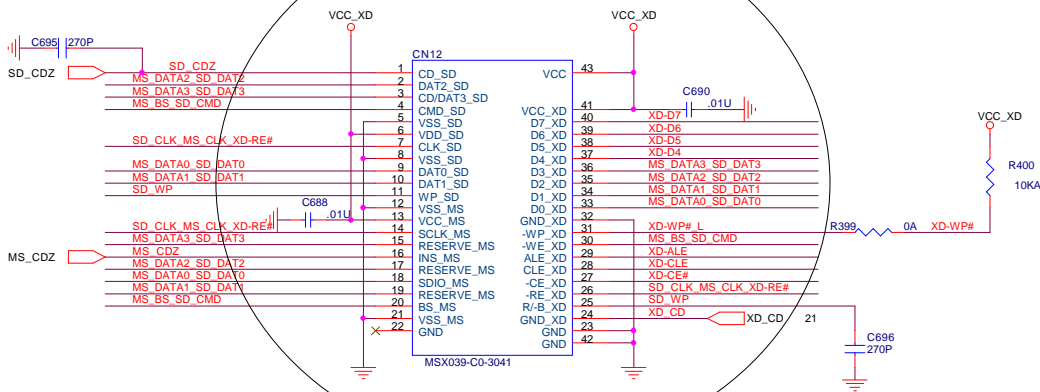
\*TPA/TPA#, TPB/TPB# pair trace : As close as possible.  
\*TPA/TPA#, TPB/TPB# pair trace : Same length electrically. And layout with shields termination resistor for TPA+/- TPB+/- . As close as possible to its cable driver (device pin out).



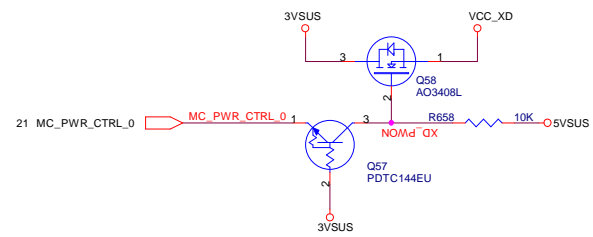
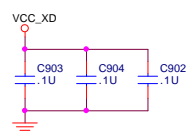
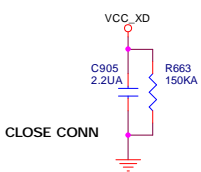
	PROJECT : AT8		Rev 1A
	Quanta Computer Inc.		
Size Custom	Document Number R5C832 CONTROL	Date: Thursday, December 29, 2005 Sheet 21 of 38	

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

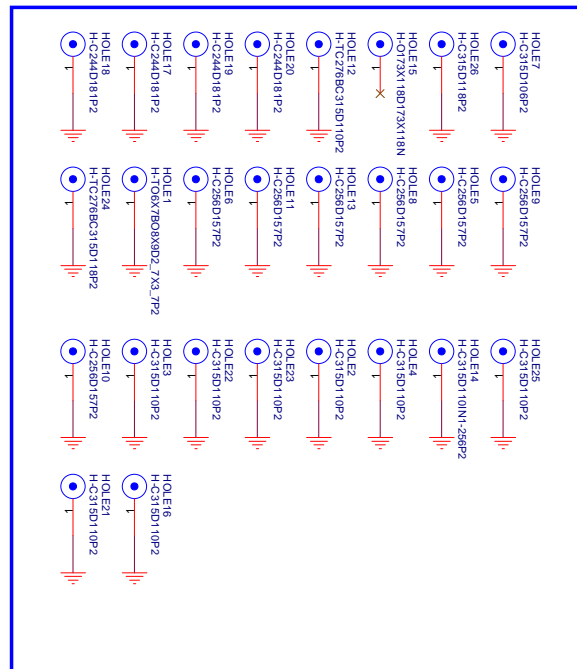
CHECK CONN.



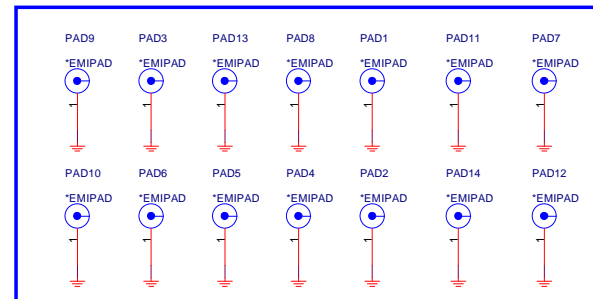
21	MDIO03	R398	56R	SD_WP
21	MDIO17	R409	56R	XD-D7
21	MDIO16	R408	56R	XD-D6
21	MDIO15	R407	56R	XD-D5
21	MDIO14	R406	56R	XD-D4
21	MDIO13	R405	56R	MS_DATA3_SD_DAT3
21	MDIO12	R404	56R	MS_DATA2_SD_DAT2
21	MDIO11	R403	56R	MS_DATA1_SD_DAT1
21	MDIO10	R402	56R	MS_DATA0_SD_DAT0
21	MDIO08	R397	56R	MS_BS_SD_CMD
21	MDIO05	R401	56R	XD-WP#
21	MDIO19	R396	56R	XD-ALE
21	MDIO18	R395	56R	XD-CLE
21	MDIO02	R394	56R	XD-CE#
21	MDIO09	R393	56R	SD_CLK_MS_CLK_XD-RE#




SCREW HOLE



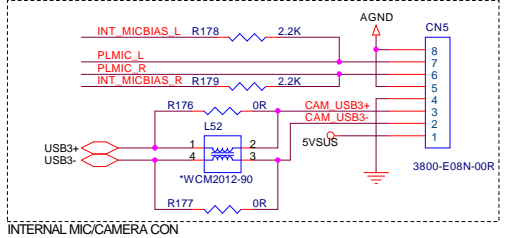
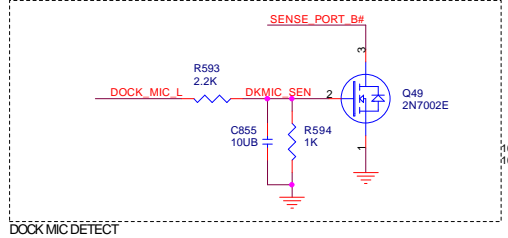
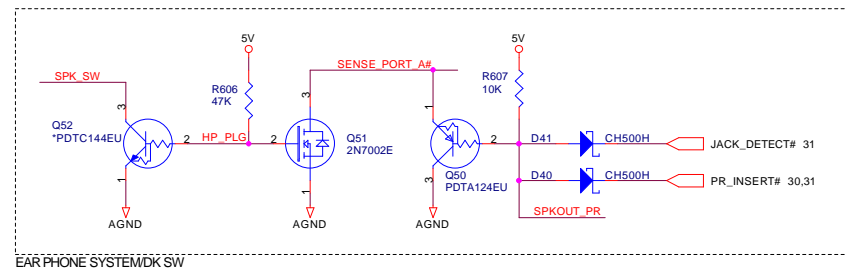
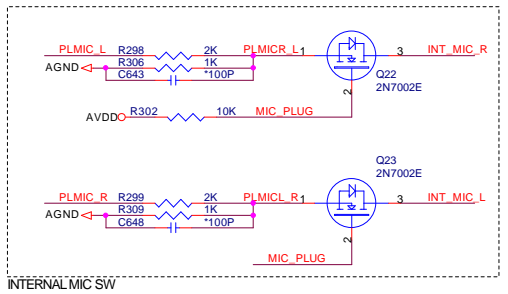
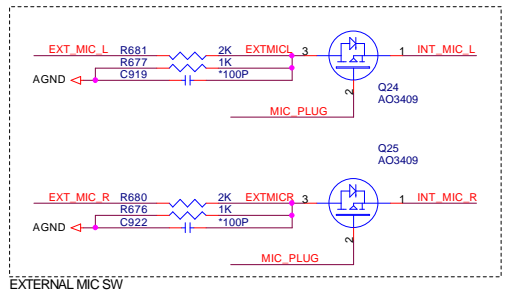
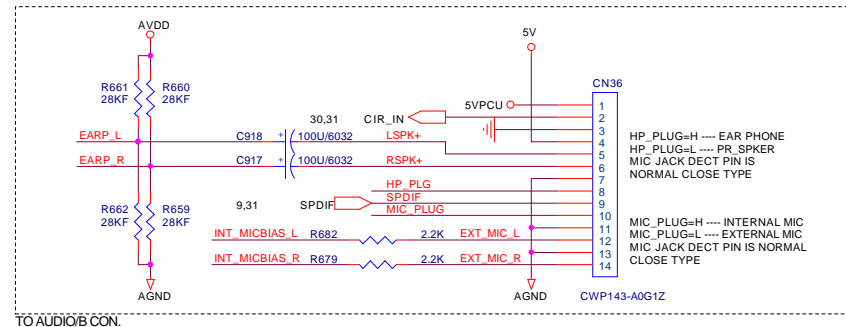
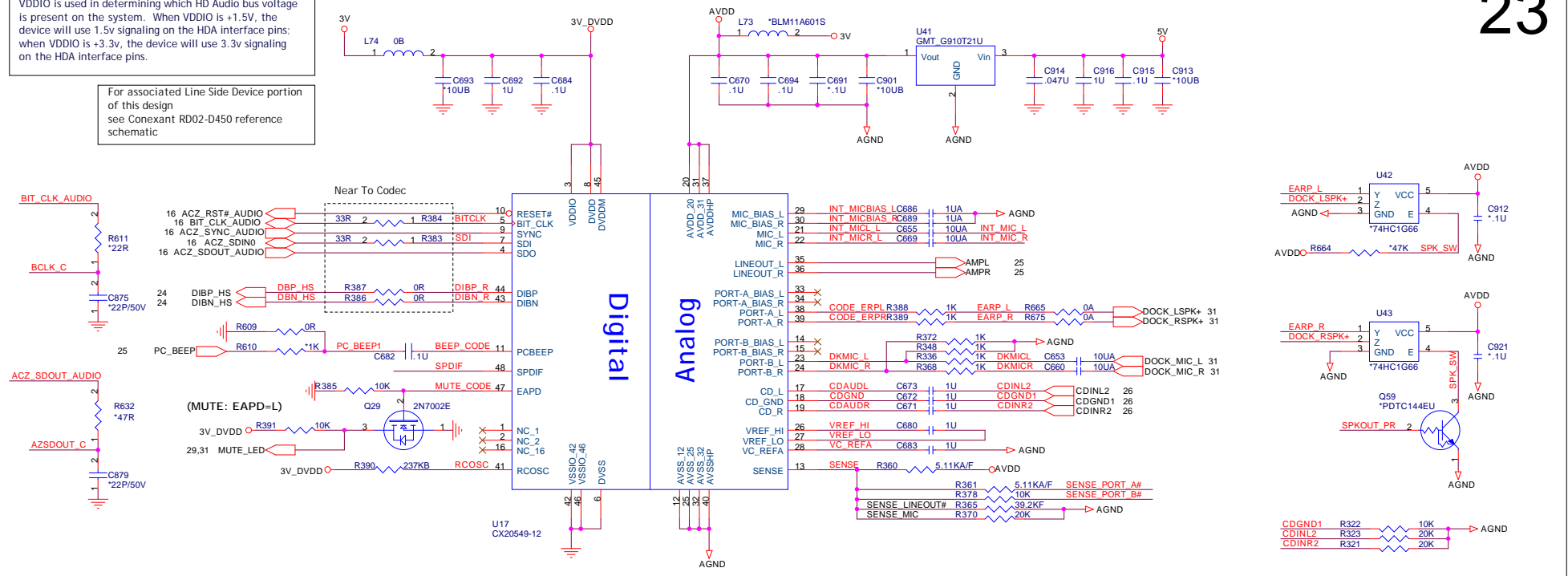
EMI PAD



 NB5/RD2/HW1	PROJECT : AT8 Quanta Computer Inc.	
	Size Custom	Document Number CARD READER CONN
Date: Thursday, December 29, 2005 Sheet 22 of 38		

VDDIO is used in determining which HD Audio bus voltage is present on the system. When VDDIO is +1.5V, the device will use 1.5v signaling on the HDA interface pins; when VDDIO is +3.3v, the device will use 3.3v signaling on the HDA interface pins.

For associated Line Side Device portion of this design see Conexant RD02-D450 reference schematic



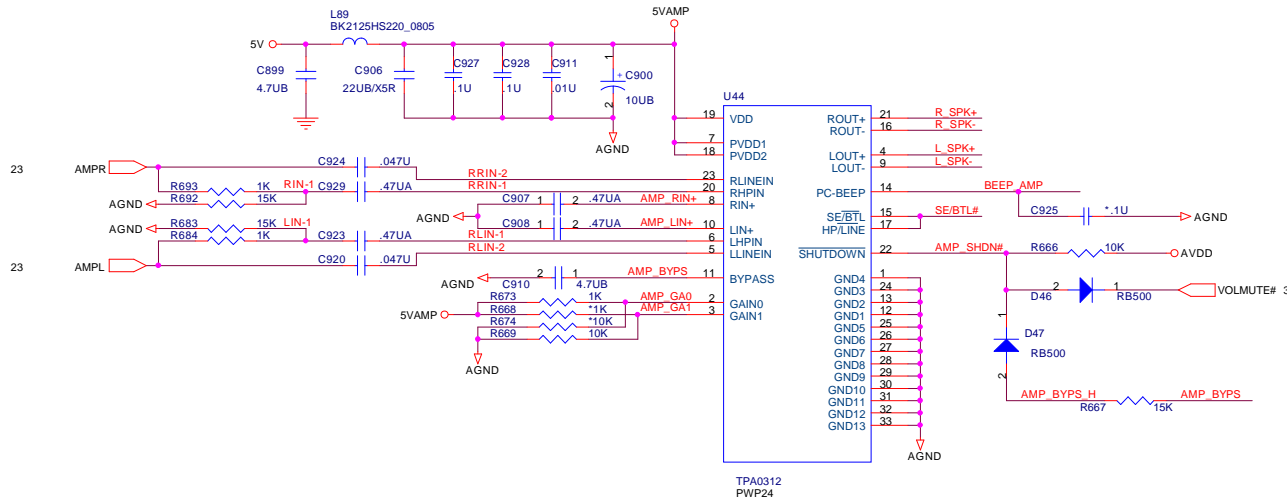
**PROJECT : AT8**  
Quanta Computer Inc.

Size Custom	Document Number Azalia CTRL_CONEXANT20549-12	Rev 1A
Date: Thursday, December 29, 2005		Sheet 23 of 38

NB5/RD2/HW1

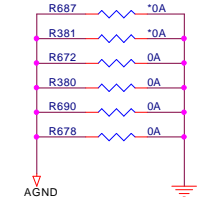


# AUDIO AMPLIFIER



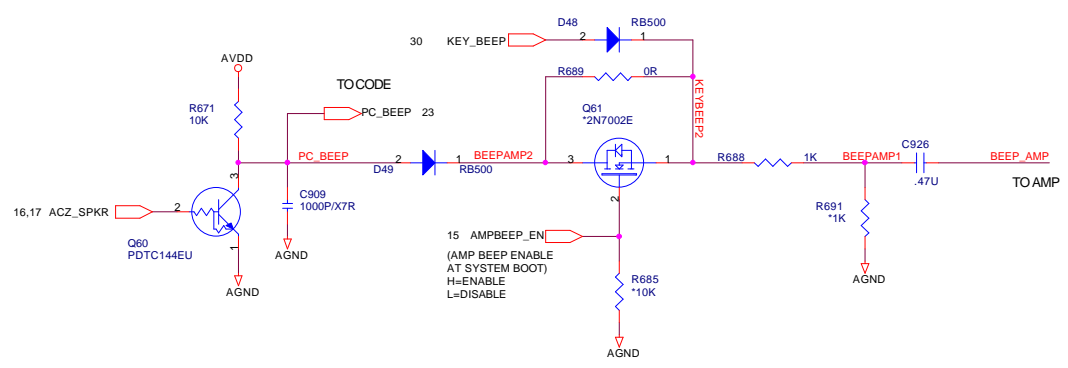
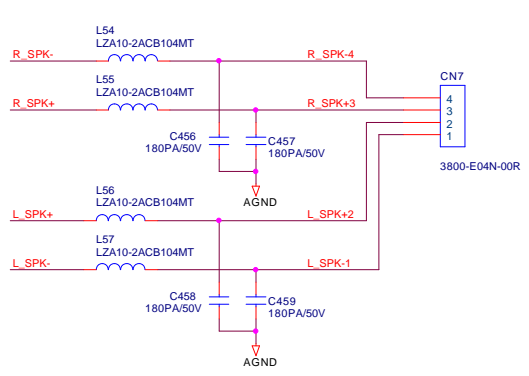
**0312 Gain Table**

GAIN0	GAIN1	SE/BTL	AV(INV)
0	0	0	6dB
0	1	0	10dB
1	0	0	15.6dB
1	1	0	21.6dB
x	x	1	4.1dB



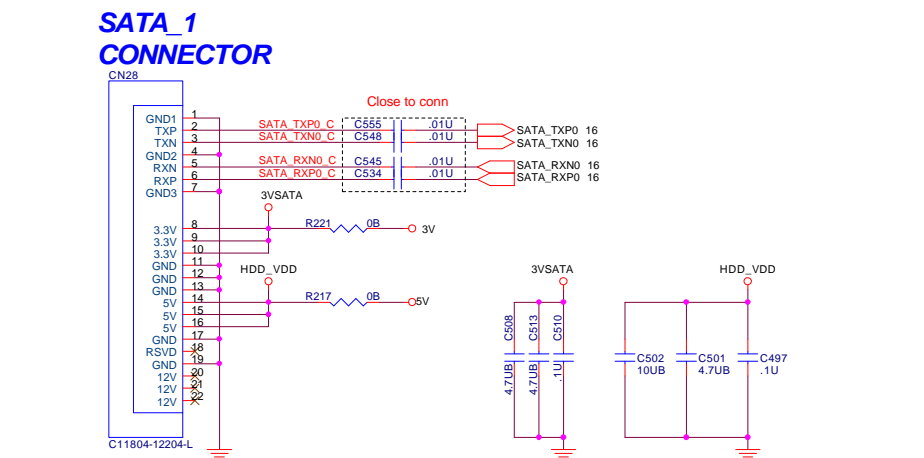
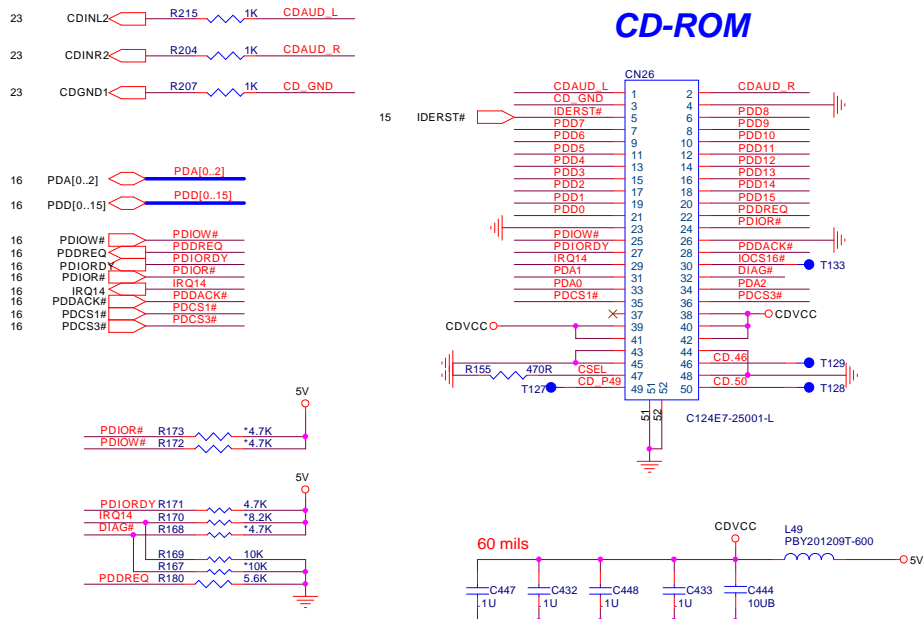
## INT. SPEAKER

## PCSPK BEEP

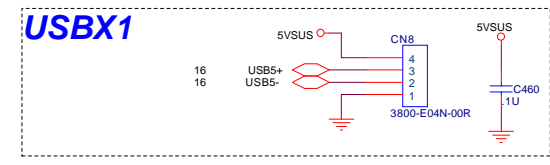
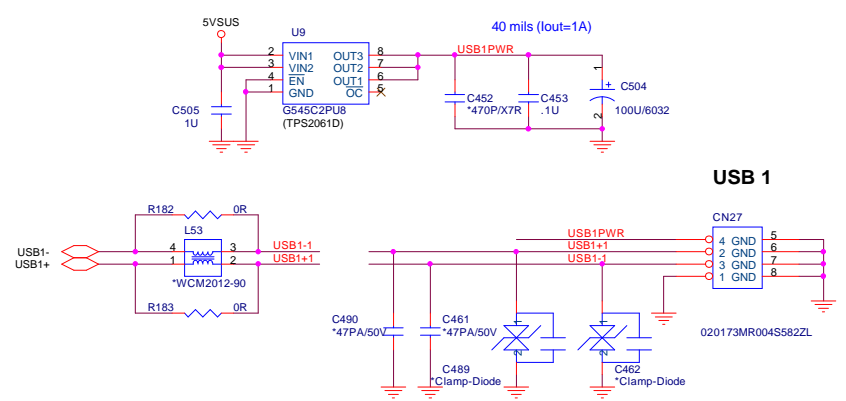
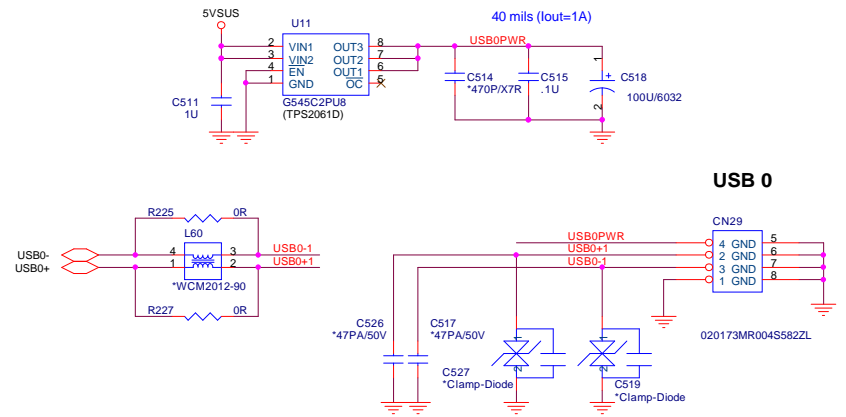


**PROJECT : AT8**  
Quantas Computer Inc.

Size Custom	Document Number JACK, AMP_TPA0312	Rev 1A
Date: Thursday, December 29, 2005 Sheet 25 of 38		



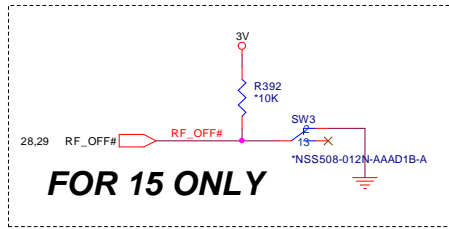
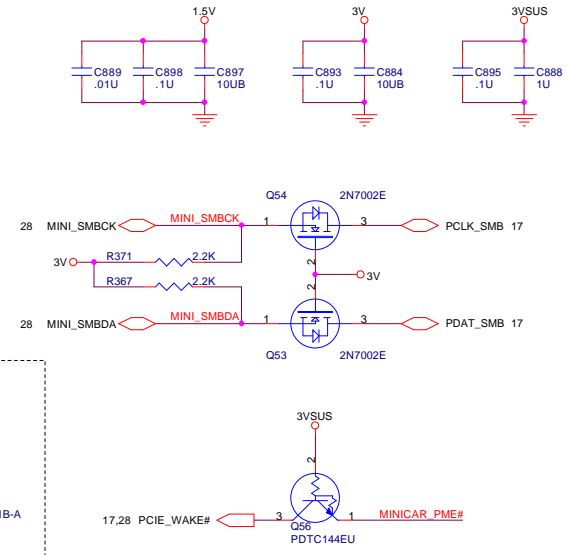
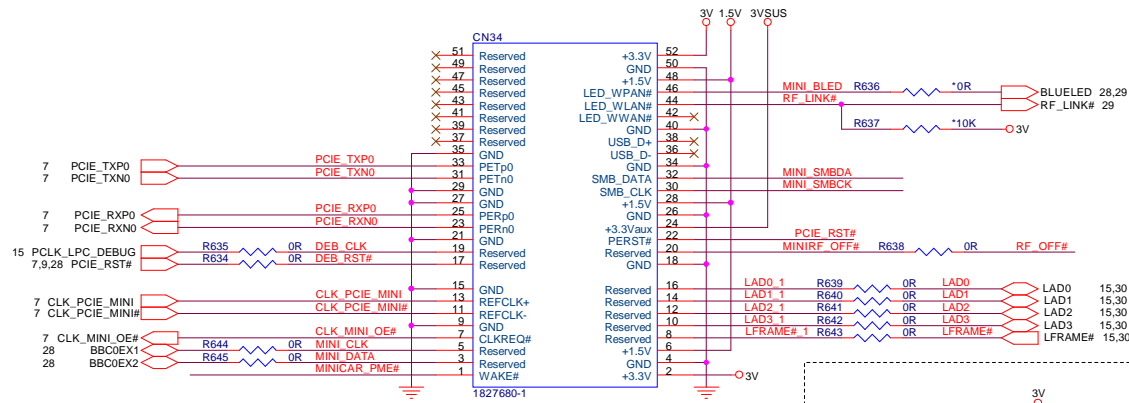
### USBX2



TO AD/B

	PROJECT : AT8 Quanta Computer Inc.	
	Size Custom Document Number SATA HDD, CD-ROM, USBX2 Date: Thursday, December 29, 2005   Sheet 26 of 38	Rev 1A

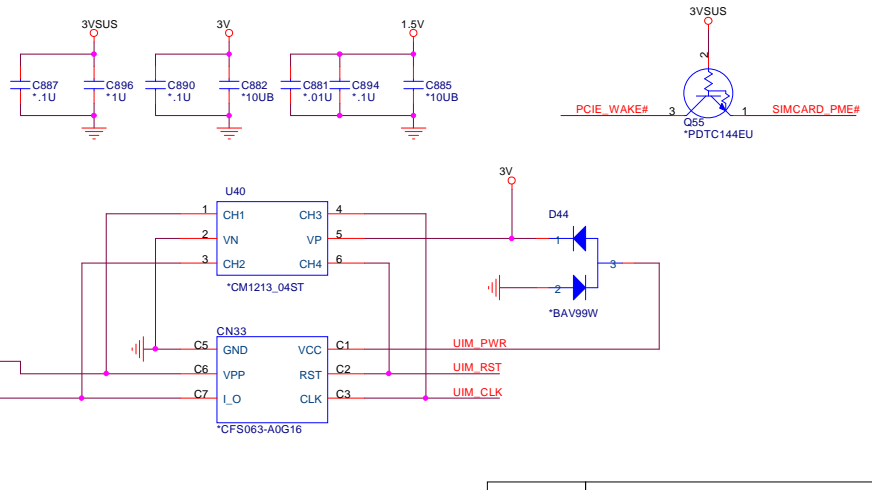
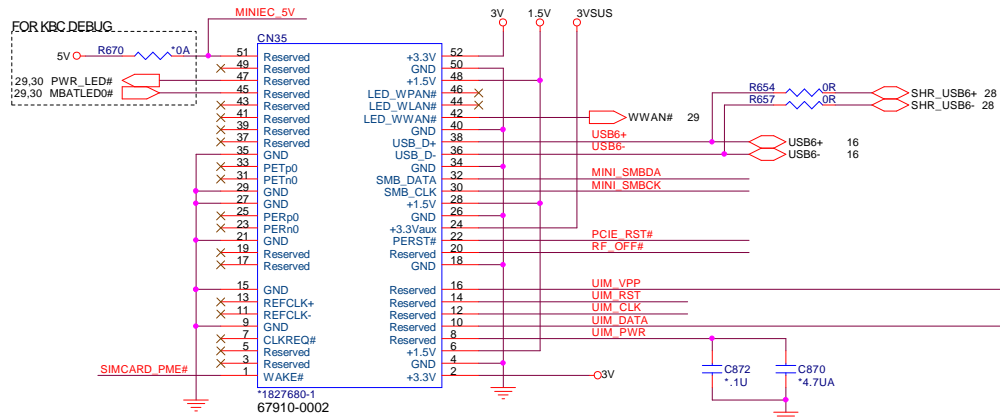
### Mini PCI-E Card 1 WLAN




**FOR 15 ONLY**

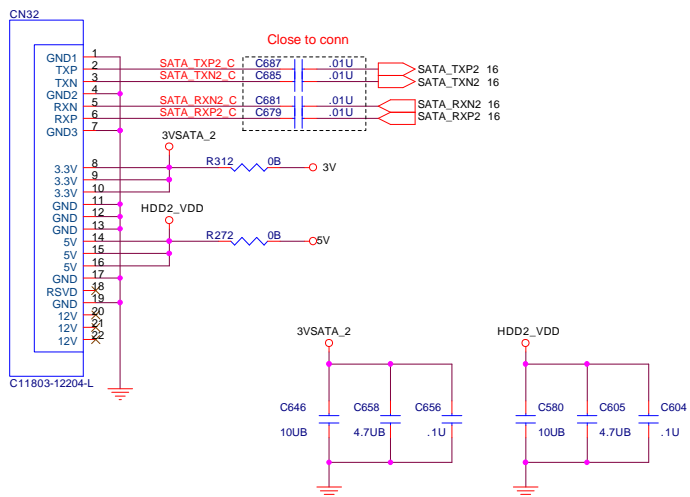
### Mini PCI-E Card 2 WWAN(W/SIM)

**FOR 15 ONLY**

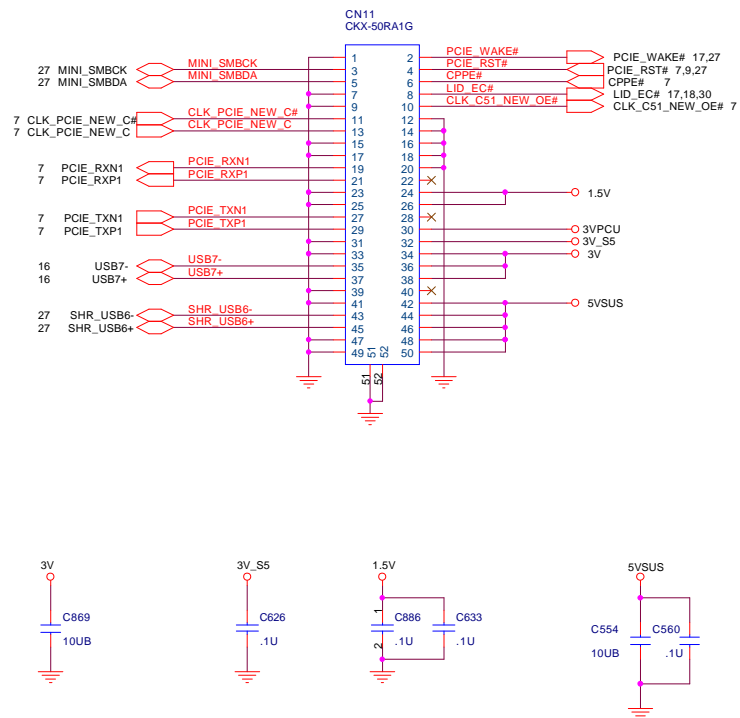


 NB5/RD2/HW1	<b>PROJECT : AT8</b> Quanta Computer Inc.	
	Size Custom Date: Thursday, December 29, 2005	Document Number MINI CARD Sheet 27 of 38

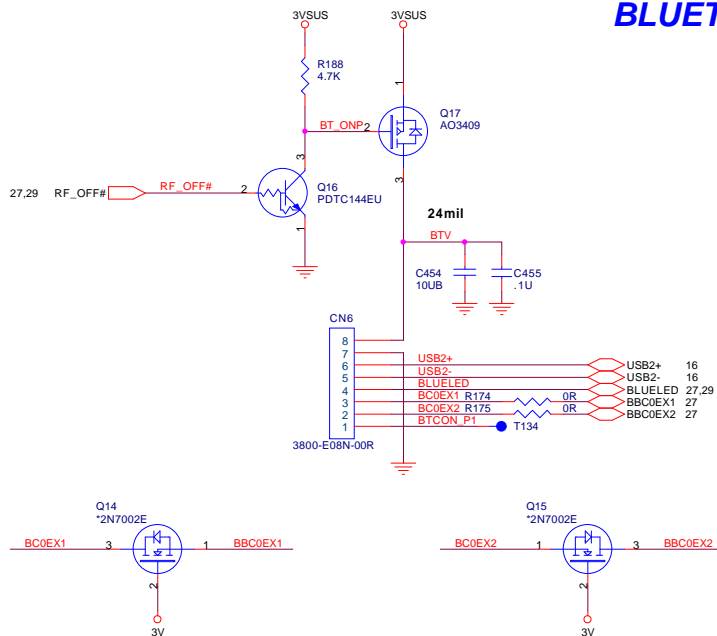
### SATA\_2 CONNECTOR For 17"W Second HDD



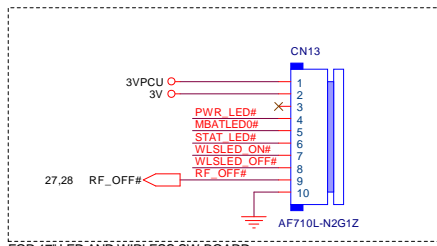
### NEWCARD



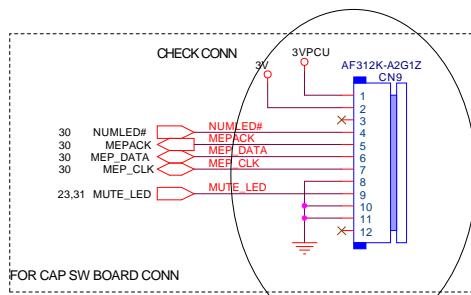
### BLUETOOTH



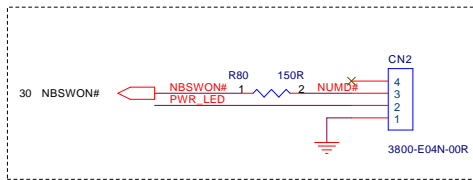
	<b>PROJECT : AT8</b> Quantia Computer Inc.	
	Size Custom Document Number NEW CARD/BT	Date: Thursday, December 29, 2005 Sheet 28 of 38



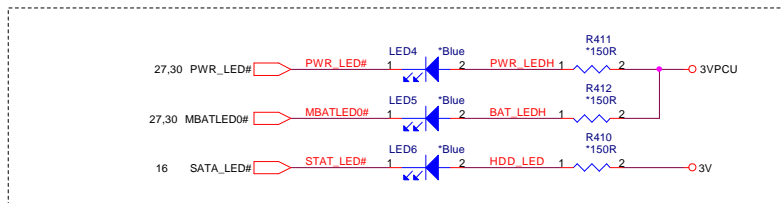
FOR 17" LED AND WIRLESS SW BOARD



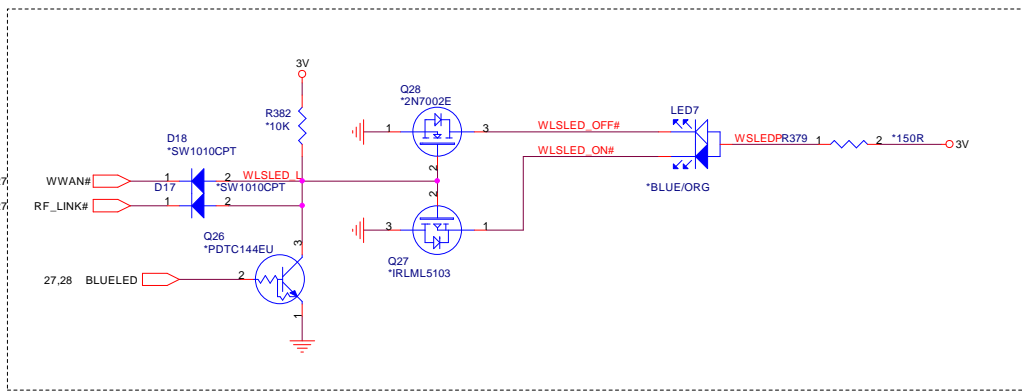
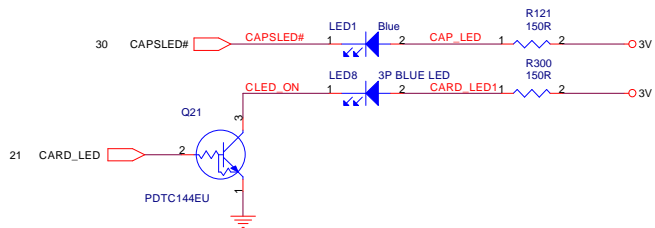
FOR CAP SW BOARD CONN



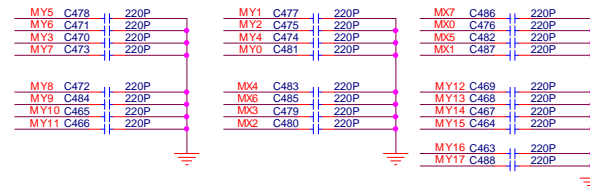
FOR POWER ON SW BOARD



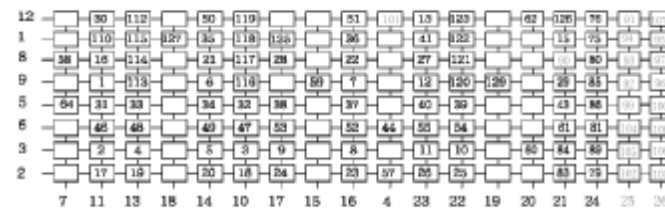
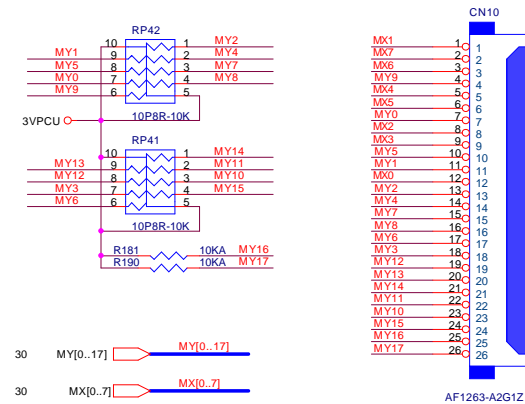
FOR 15.4" LED



FOR WIRELESS LED



KEYBOARD PULL-UP

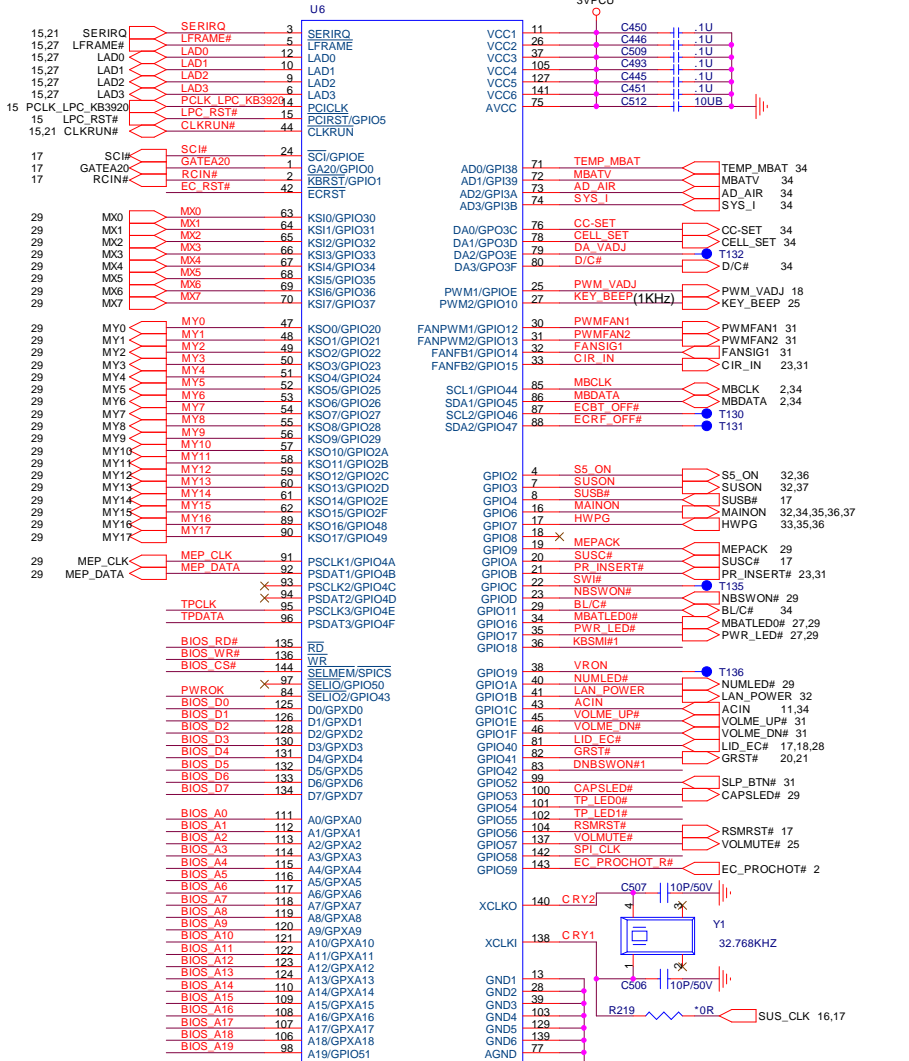
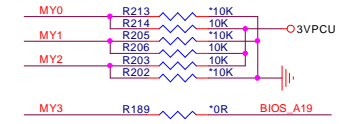


**PROJECT : AT8**  
Quanta Computer Inc.

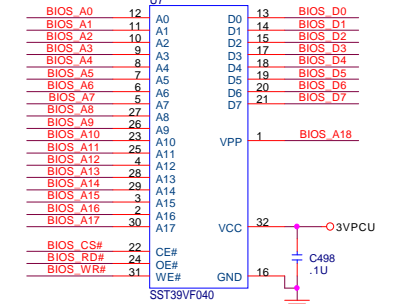
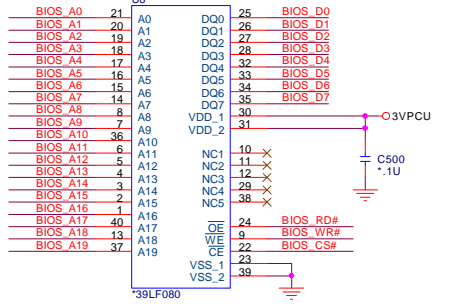
Size Custom	Document Number LED/KEYBOARD/TP	Rev 1A
Date: Thursday, December 29, 2005 Sheet 29 of 38		

STRAP PIN

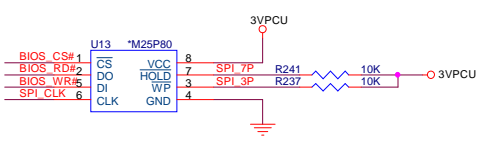
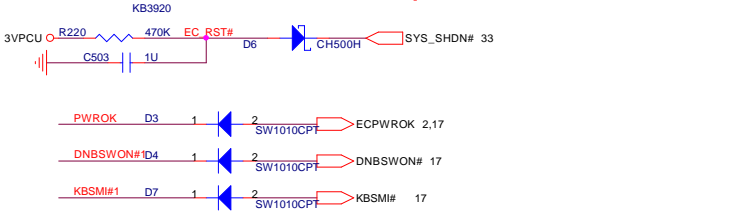
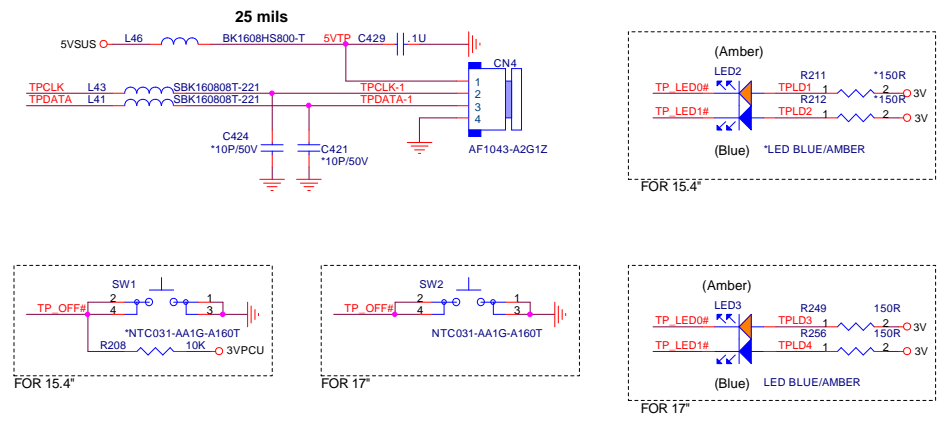
MY0	47	TP_TEST: Clock Test Mode Low: Test Mode HIGH: 3264Hz clock in normal running
MY1	48	TP_PLL: DRLL Test Mode Low: Test Mode HIGH: Normal operation
MY2	49	TP_SPI: Default flash access Low: Boot from SPI flash part HIGH: Boot from ISH flash part
MY3	50	TP_ISP: In System Programming Mode Low: ISP mode HIGH: Normal Mode



BIOS ROM



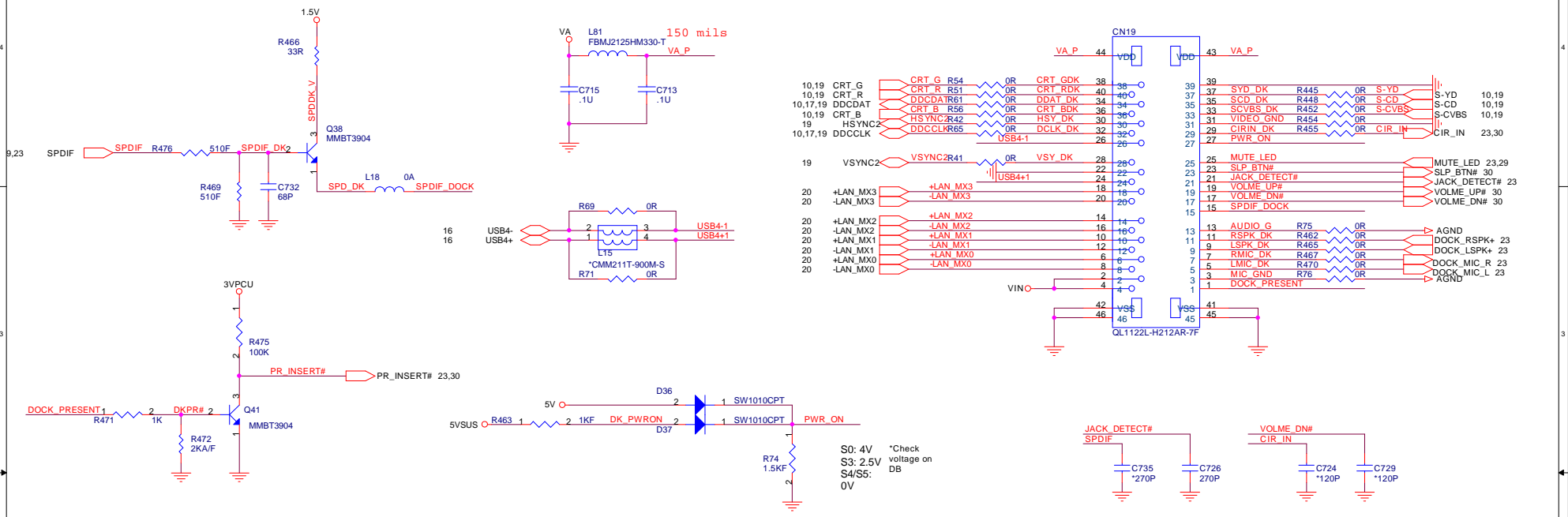
TOUCH PAD CONNECTOR



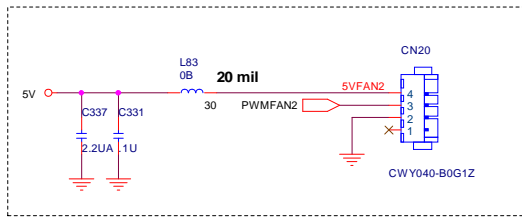
**PROJECT : AT8**  
Quanta Computer Inc.

Size Custom	Document Number KB3920	Rev 1A
Date: Thursday, December 29, 2005 Sheet 30 of 38		

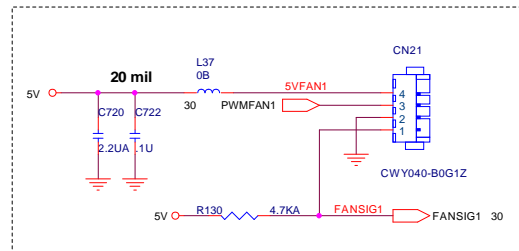
# CABLE DOCK




# FAN



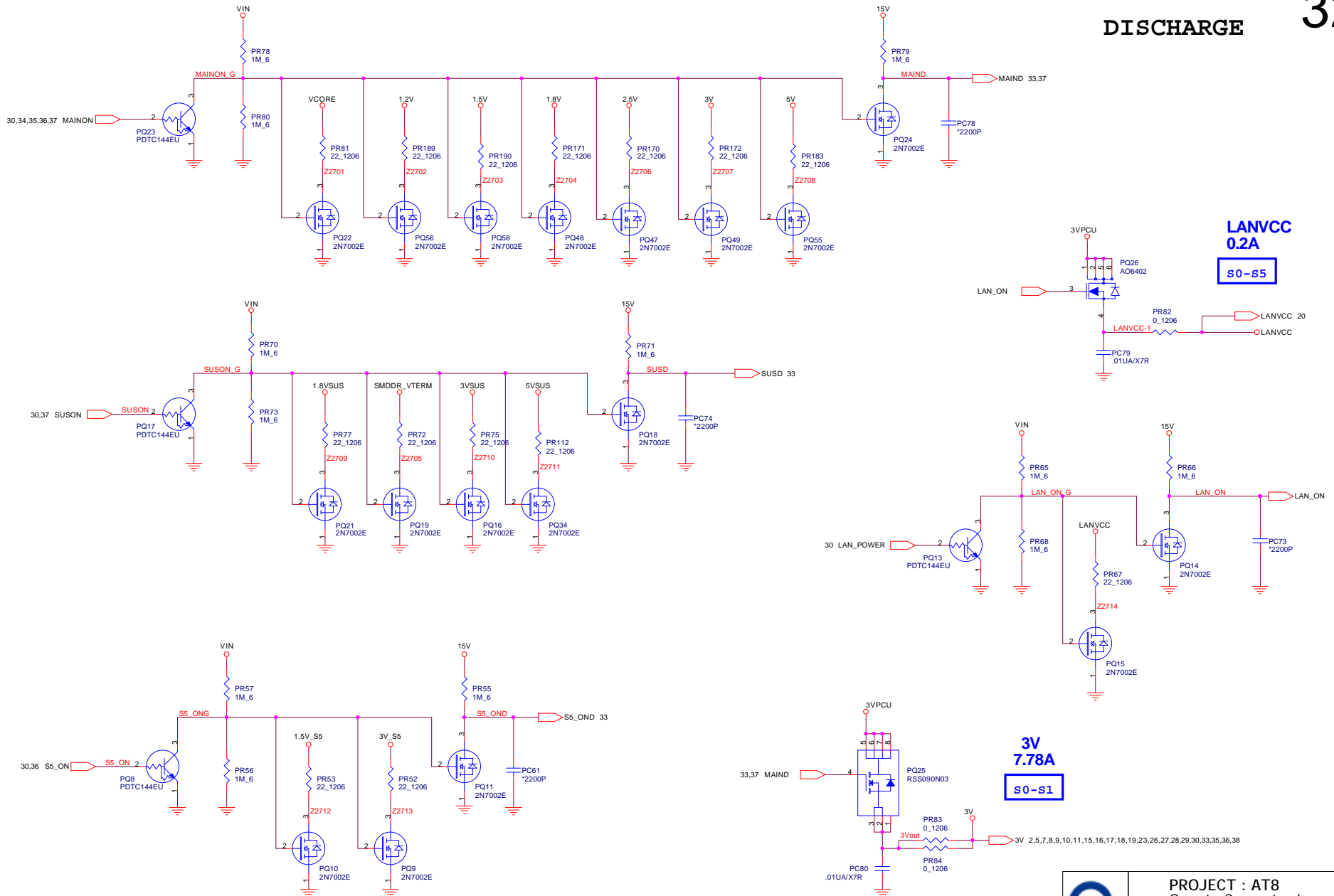
FAN2 PWM CONNECTOR




FAN1 PWM CONNECTOR

 NB5/RD2/HW1	<b>PROJECT : AT8</b> Quanta Computer Inc.	
	Size Custom Date: Thursday, December 29, 2005	Document Number <b>CABLE DOCKING</b> Sheet 31 of 38

DISCHARGE



 <p><b>PROJECT : AT8</b> Quanta Computer Inc.</p>		
Size Custom	Document Number DISCHARGE	Rev 1A
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Adapter  
19V/3.4A/65W  
4.75A/90W

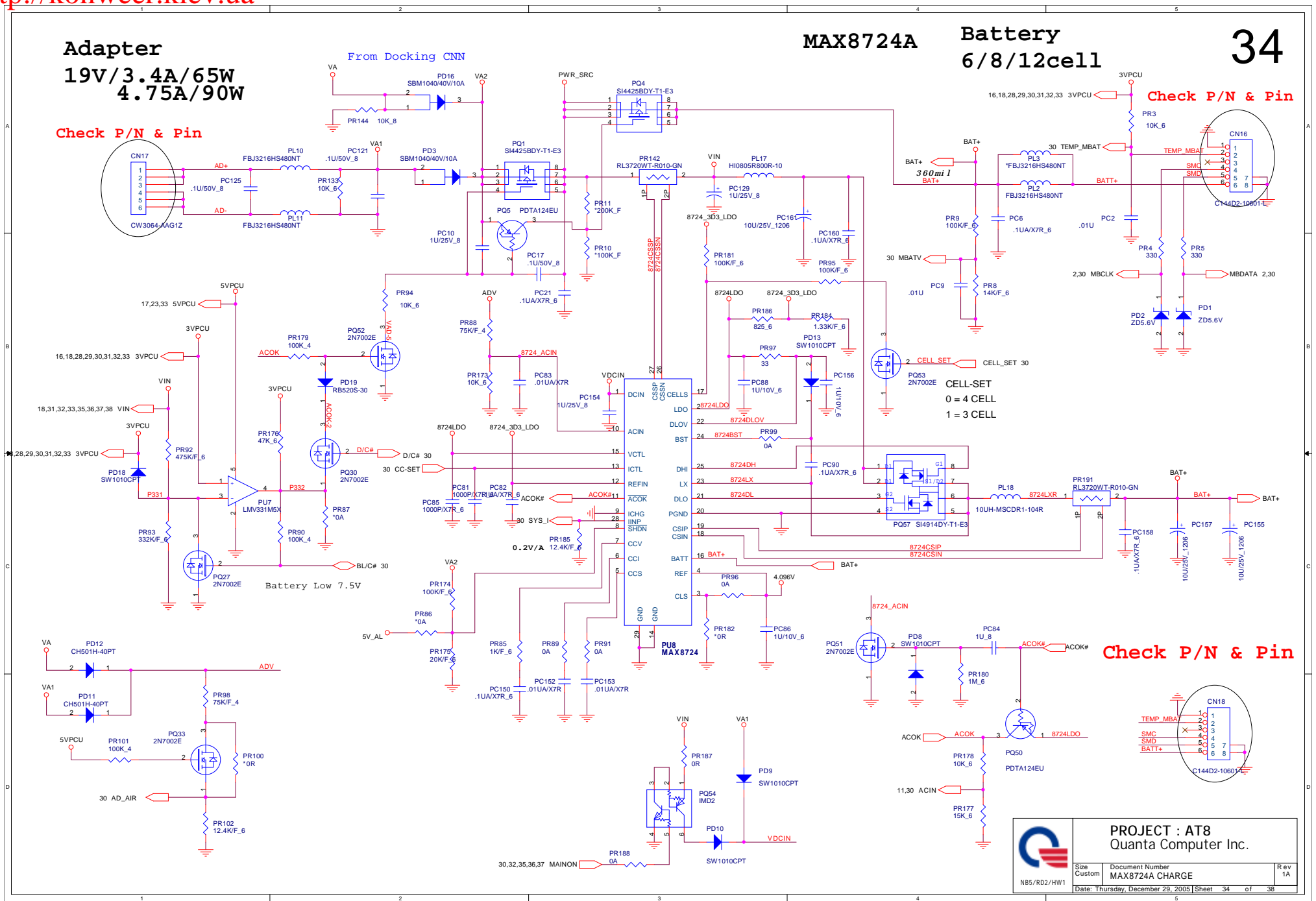
MAX8724A Battery  
6/8/12cell

34

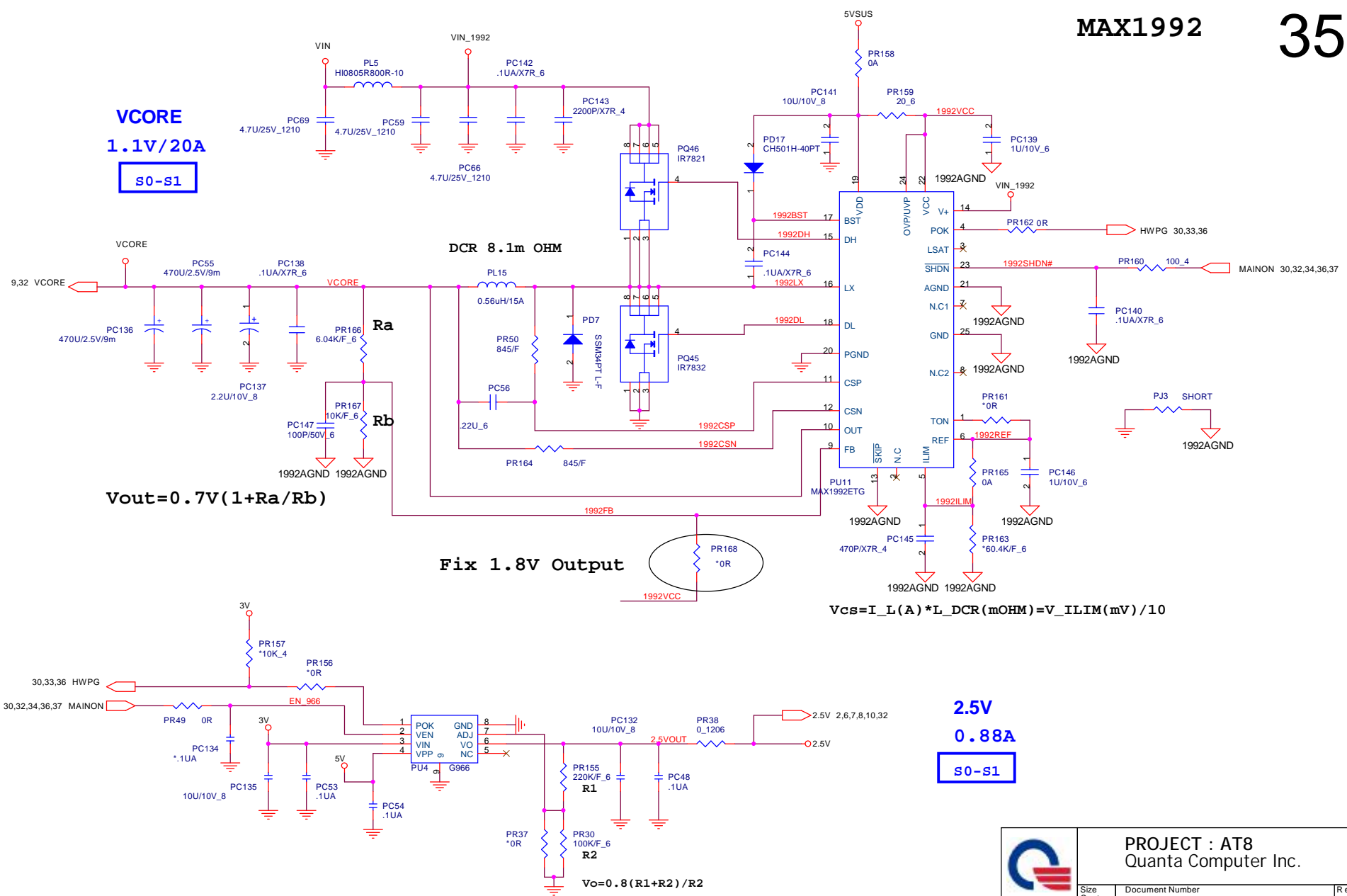
Check P/N & Pin

Check P/N & Pin

Check P/N & Pin



	PROJECT : AT8 Quanta Computer Inc.	
	Size Custom	Document Number MAX8724A CHARGE
Date: Thursday, December 29, 2005 Sheet 34 of 38		

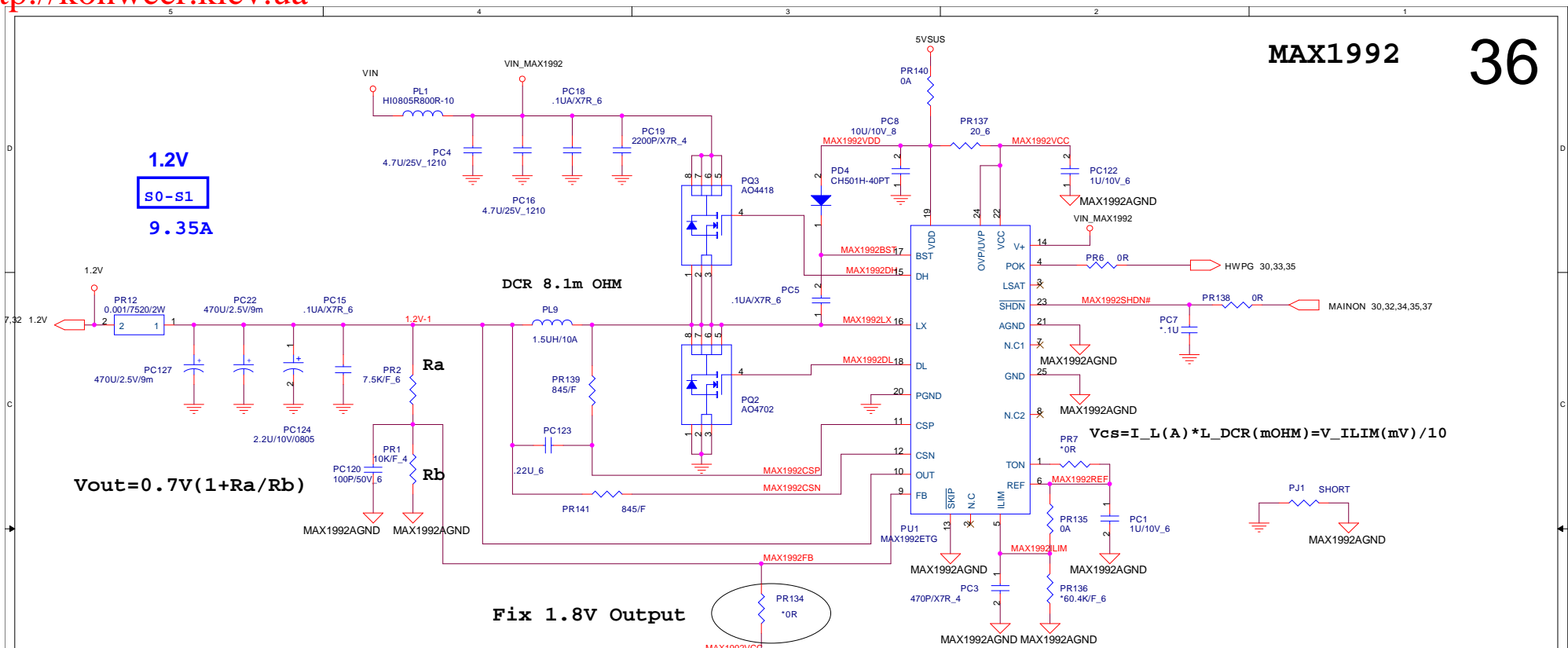


	PROJECT : AT8	
	Quanta Computer Inc.	
Size Custom	Document Number MAX1992 1.1V/2.5V	Rev 1A
Date: Thursday, January 12, 2006		Sheet 35 of 38

1.2V

S0-S1

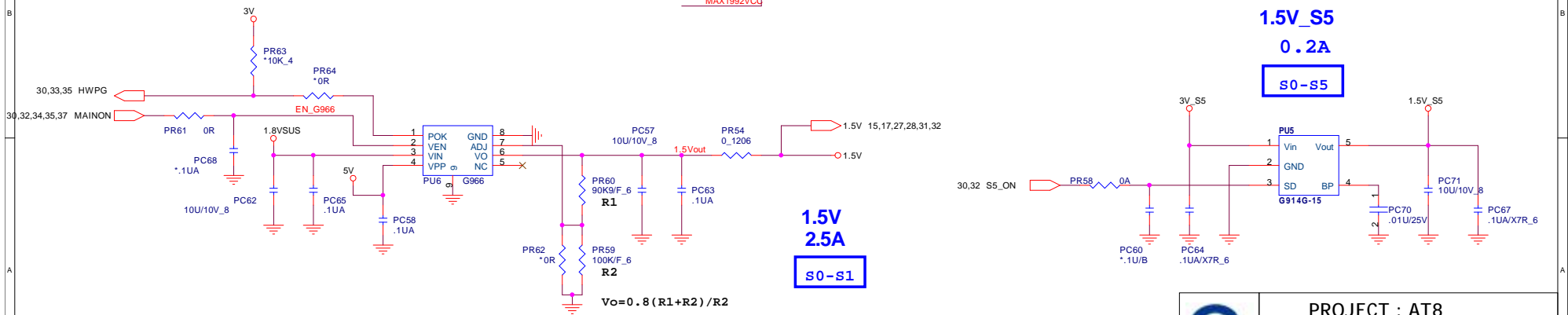
9.35A



1.5V\_S5

0.2A

S0-S5



	PROJECT : AT8		Rev 1A
	Quanta Computer Inc.		
	Size Custom	Document Number	
Date: Thursday, December 29, 2005		Sheet 36 of 38	

1.8VSUS  
9.1A  
S0-S3

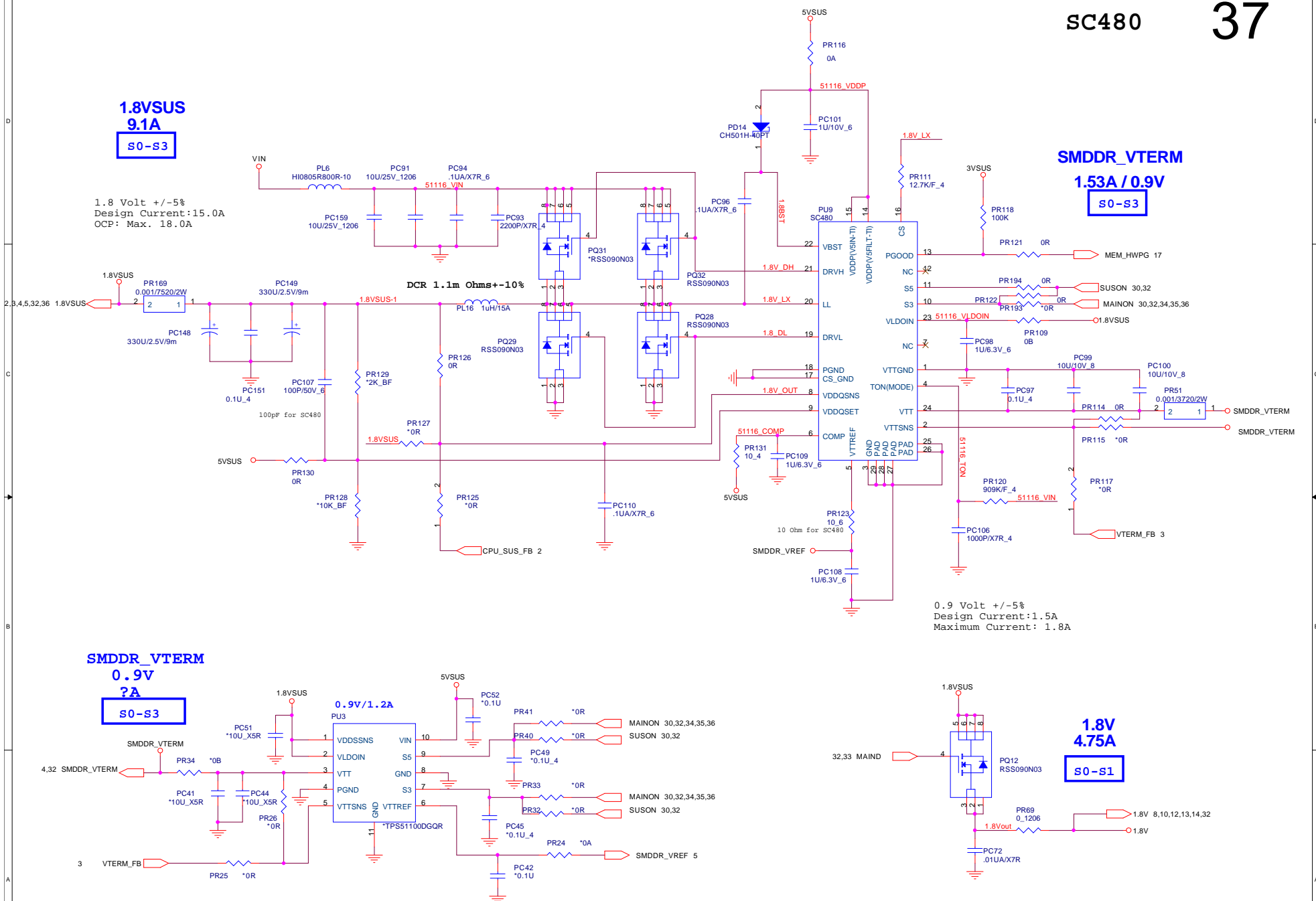
1.8 Volt +/-5%  
Design Current:15.0A  
OCP: Max. 18.0A


SMDDR\_VTERM  
1.53A / 0.9V  
S0-S3

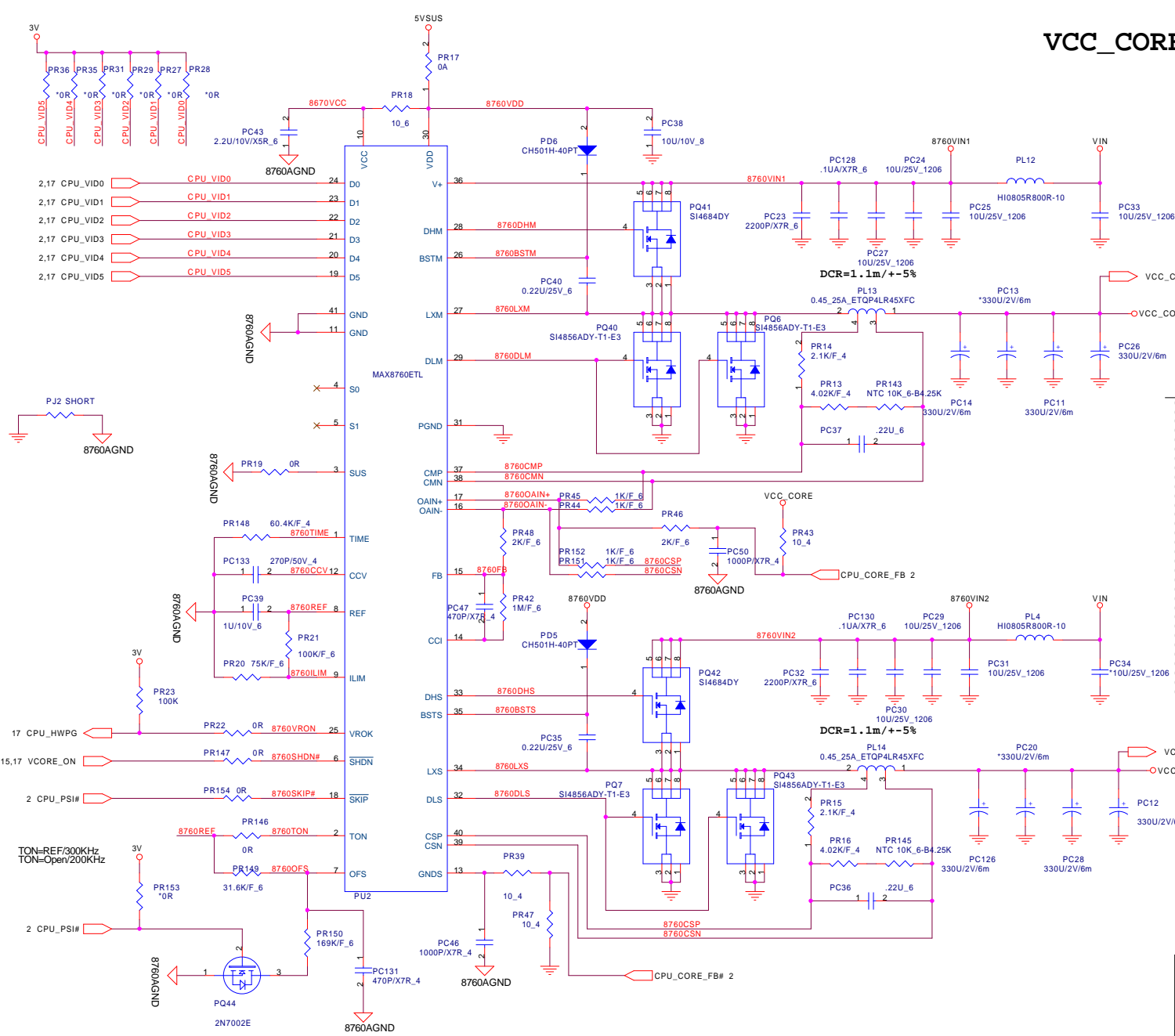
0.9 Volt +/-5%  
Design Current:1.5A  
Maximum Current: 1.8A

SMDDR\_VTERM  
0.9V  
?A  
S0-S3

1.8V  
4.75A  
S0-S1




	PROJECT : AT8 Quanta Computer Inc.	
	Size Custom	Document Number SC480 1.8VSUS/1.8V/SMDDR
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OCP=?A  
 VCC\_CORE  
 35A / 1.05V

D5	D4	D3	D2	D1	D0	Output	D5	D4	D3	D2	D1	D0	Output
0	0	0	0	0	0	1.5500V	1	0	0	0	0	0	0.7625V
0	0	0	0	0	1	1.5250V	1	0	0	0	0	1	0.7500V
0	0	0	0	1	0	1.5000V	1	0	0	0	1	0	0.7375V
0	0	0	0	1	1	1.4750V	1	0	0	0	1	1	0.7250V
0	0	0	1	0	0	1.4500V	1	0	1	0	0	0	0.7125V
0	0	0	1	0	1	1.4250V	1	0	1	0	1	0	0.7000V
0	0	0	1	1	0	1.4000V	1	0	1	0	1	0	0.6875V
0	0	0	1	1	1	1.3750V	1	0	1	1	1	0	0.6750V
0	0	1	0	0	0	1.3500V	1	0	1	0	0	0	0.6625V
0	0	1	0	0	1	1.3250V	1	0	1	0	1	0	0.6500V
0	0	1	0	1	0	1.3000V	1	0	1	1	0	0	0.6375V
0	0	1	0	1	1	1.2750V	1	0	1	1	1	0	0.6250V
0	0	1	1	0	0	1.2500V	1	0	1	1	0	0	0.6125V
0	0	1	1	0	1	1.2250V	1	0	1	1	1	0	0.6000V
0	0	1	1	1	0	1.2000V	1	0	1	1	1	0	0.5875V
0	0	1	1	1	1	1.1750V	1	0	1	1	1	1	0.5750V
0	1	0	0	0	0	1.1500V	1	1	0	0	0	0	0.5625V
0	1	0	0	0	1	1.1250V	1	1	0	0	1	0	0.5500V
0	1	0	0	1	0	1.1000V	1	1	0	1	0	0	0.5375V
0	1	0	0	1	1	1.0750V	1	1	0	1	1	0	0.5250V
0	1	0	1	0	0	1.0500V	1	1	0	1	0	0	0.5125V
0	1	0	1	0	1	1.0250V	1	1	0	1	1	0	0.5000V
0	1	0	1	1	0	1.0000V	1	1	0	1	1	0	0.4875V
0	1	0	1	1	1	0.9750V	1	1	0	1	1	1	0.4750V
0	1	1	0	0	0	0.9500V	1	1	1	0	0	0	0.4625V
0	1	1	0	0	1	0.9250V	1	1	1	0	1	0	0.4500V
0	1	1	0	1	0	0.9000V	1	1	1	1	0	0	0.4375V
0	1	1	0	1	1	0.8750V	1	1	1	1	1	0	0.4250V
0	1	1	1	0	0	0.8500V	1	1	1	1	0	0	0.4125V
0	1	1	1	0	1	0.8250V	1	1	1	1	1	0	0.4000V
0	1	1	1	1	0	0.8000V	1	1	1	1	1	0	0.3875V
0	1	1	1	1	1	0.7750V	1	1	1	1	1	1	0.3750V



**PROJECT : AT8**  
Quanta Computer Inc.

Site Custom	Document Number MAX8760 VCC_CORE	Rev 1A
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