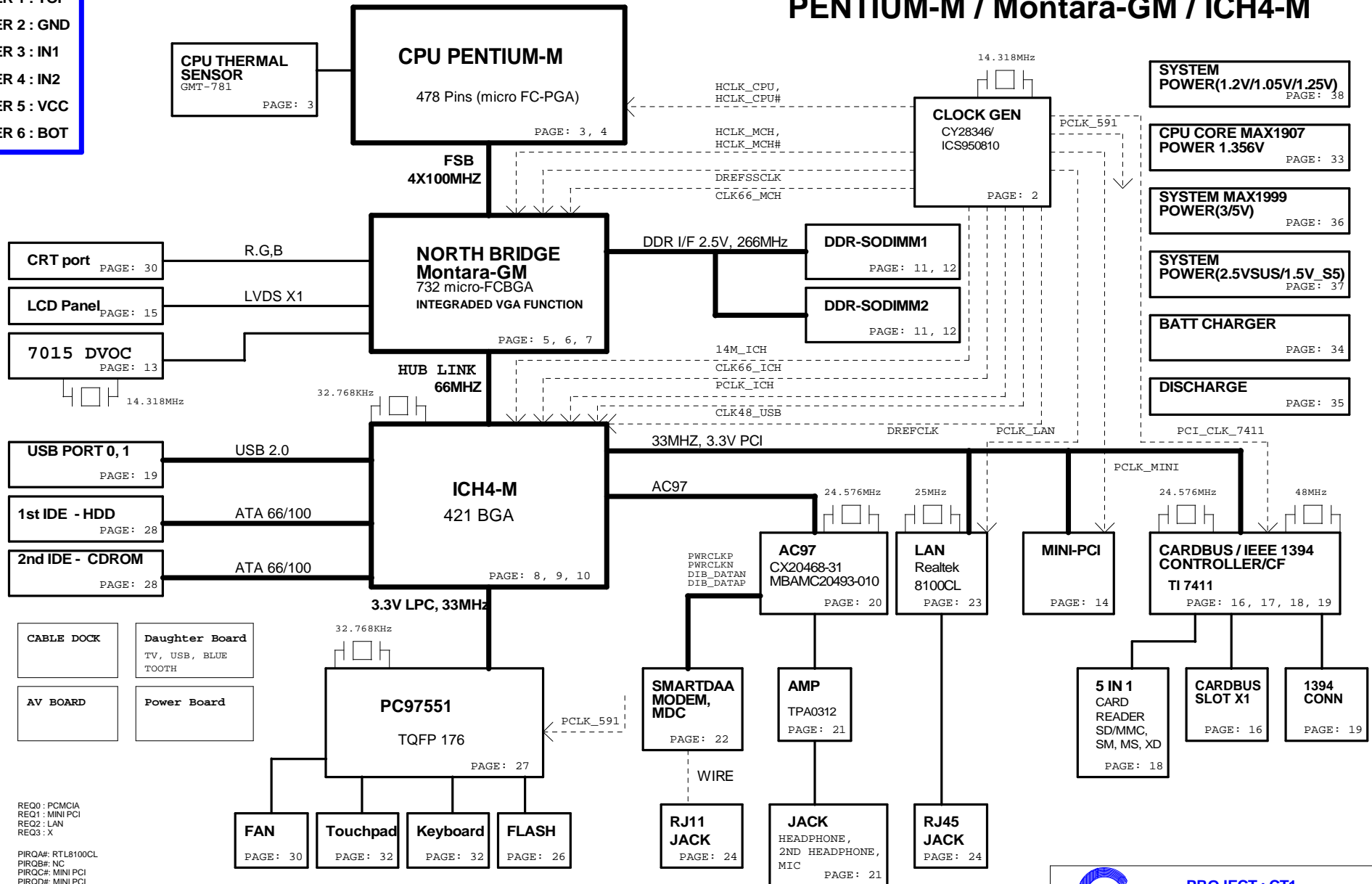


**PCB STACK UP**

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

# CT1 BLOCK DIAGRAM

## PENTIUM-M / Montara-GM / ICH4-M



**PROJECT : CT1**  
**Quanta Computer Inc.**

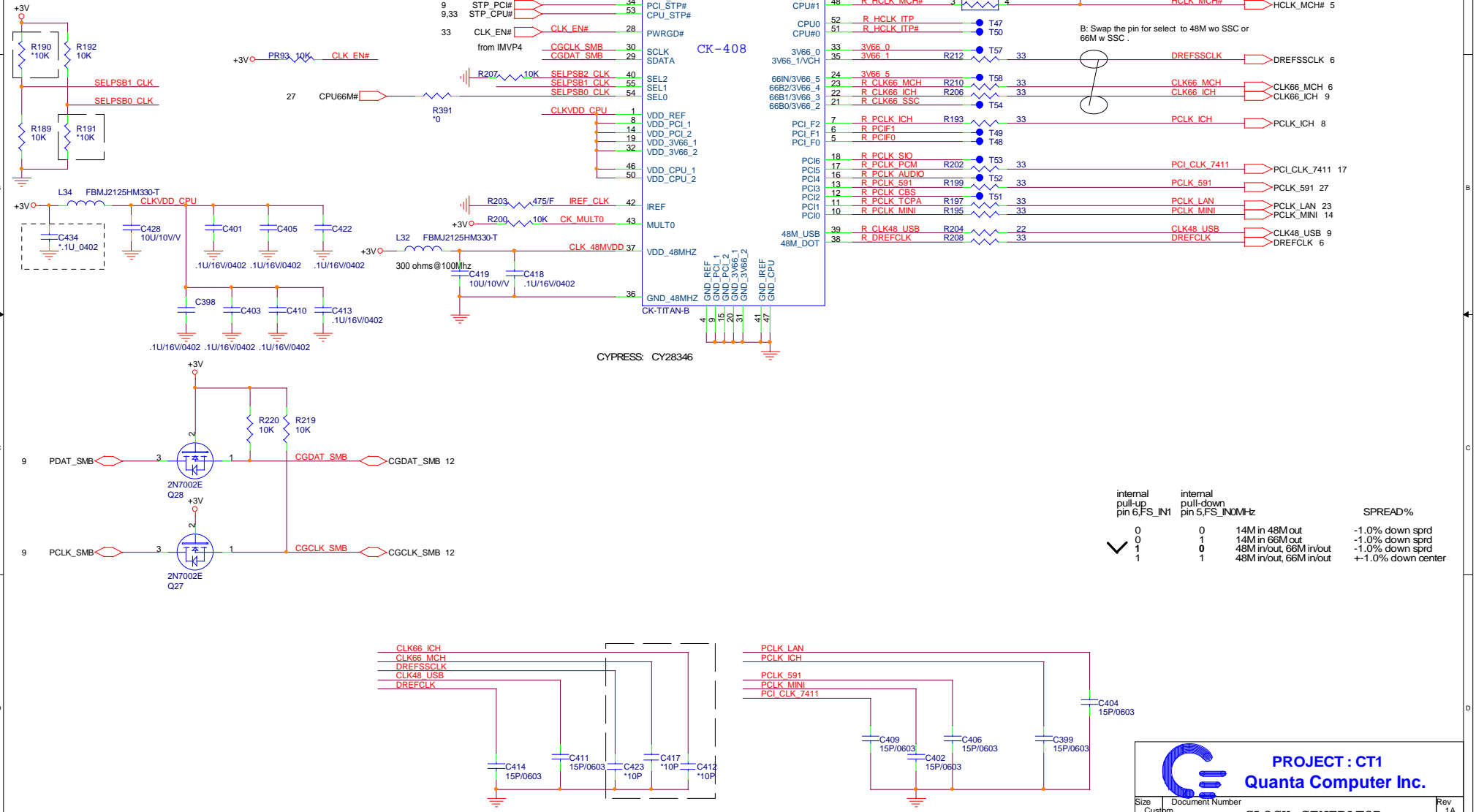
Size Custm	Document Number <b>BLOCK DIAGRAM</b>	Rev 1A
Date: Wednesday, April 14, 2004	Sheet 1 of 38	

REQ0 : PCMCIA  
REQ1 : MINI PCI  
REQ2 : LAN  
REQ3 : X

PIRQA# : RTL8100CL  
PIRQB# : NC  
PIRQC# : MINI PCI  
PIRQD# : MINI PCI  
PIRQE# : 7411  
PIRQF# : 7411  
PIRQG# : 7411  
PIRQH# : Internal USB

# CLK GEN

S2	S1	S0	CPU	3V66[0..4]	3V66_5/66IN
1	0	0	66	66IN	66 Input
1	0	1	100	66IN	66 Input
1	1	0	200	66IN	66 Input
1	1	1	133	66IN	66 Input
0	0	0	66	66	66 Input
0	0	1	100	66	66 Input
0	1	0	200	66	66 Input
0	1	1	133	66	66 Input



B: Swap the pin for select to 48M wo SSC or 66M w SSC.

internal pull-up pin 6,FS_IN1	internal pull-down pin 5,FS_IN0MHz	SPREAD%
0	0	14M in 48M out
0	1	14M in 66M out
1	0	48M in/out, 66M in/out
1	1	48M in/out, 66M in/out

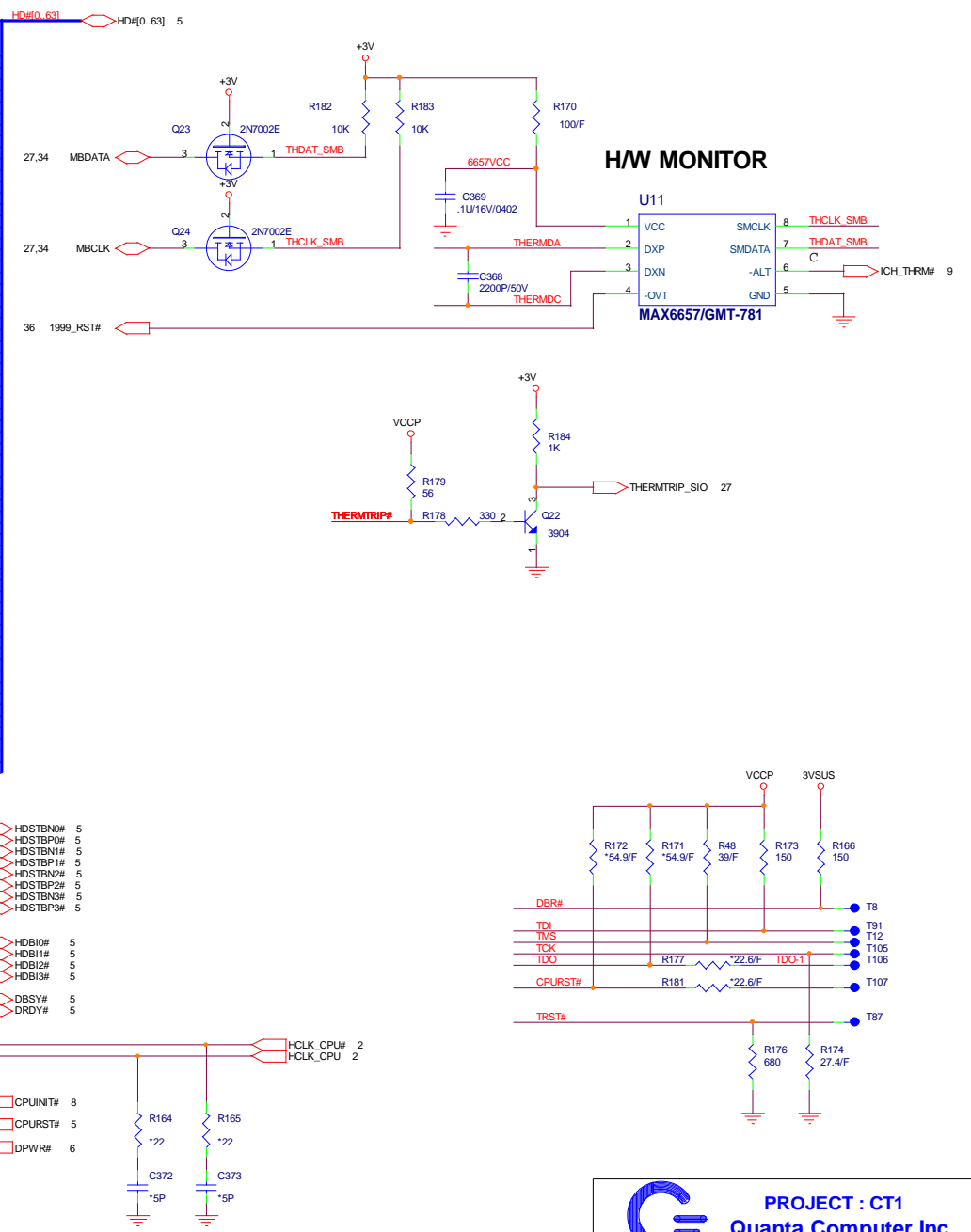
**PROJECT : CT1**  
**Quanta Computer Inc.**

Size	Document Number	Rev
Custm	CLOCK GENERATOR	1A
Date:	Wednesday, April 14, 2004	Sheet 2 of 38

# Banias

1 OF 3

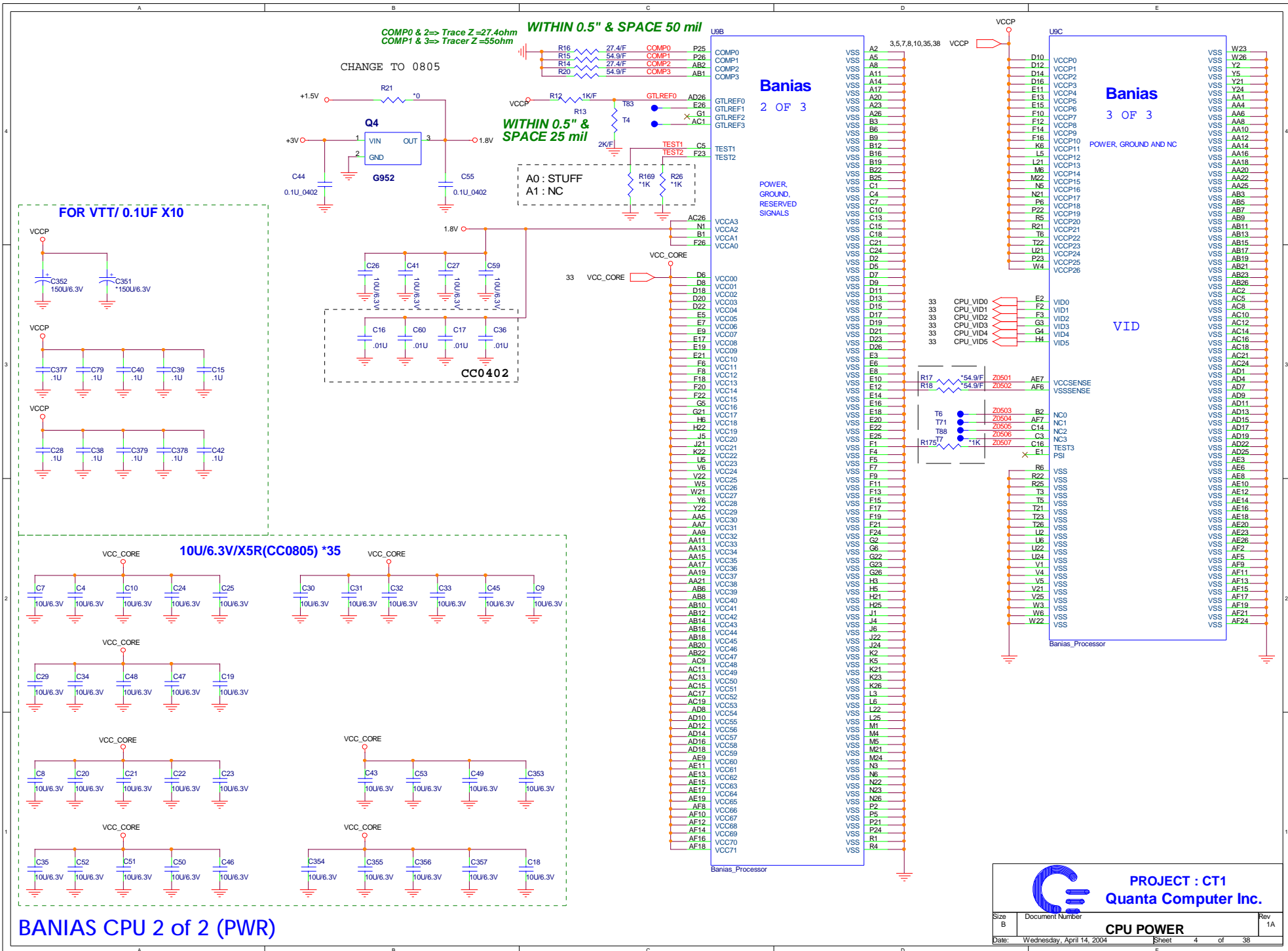
U9A

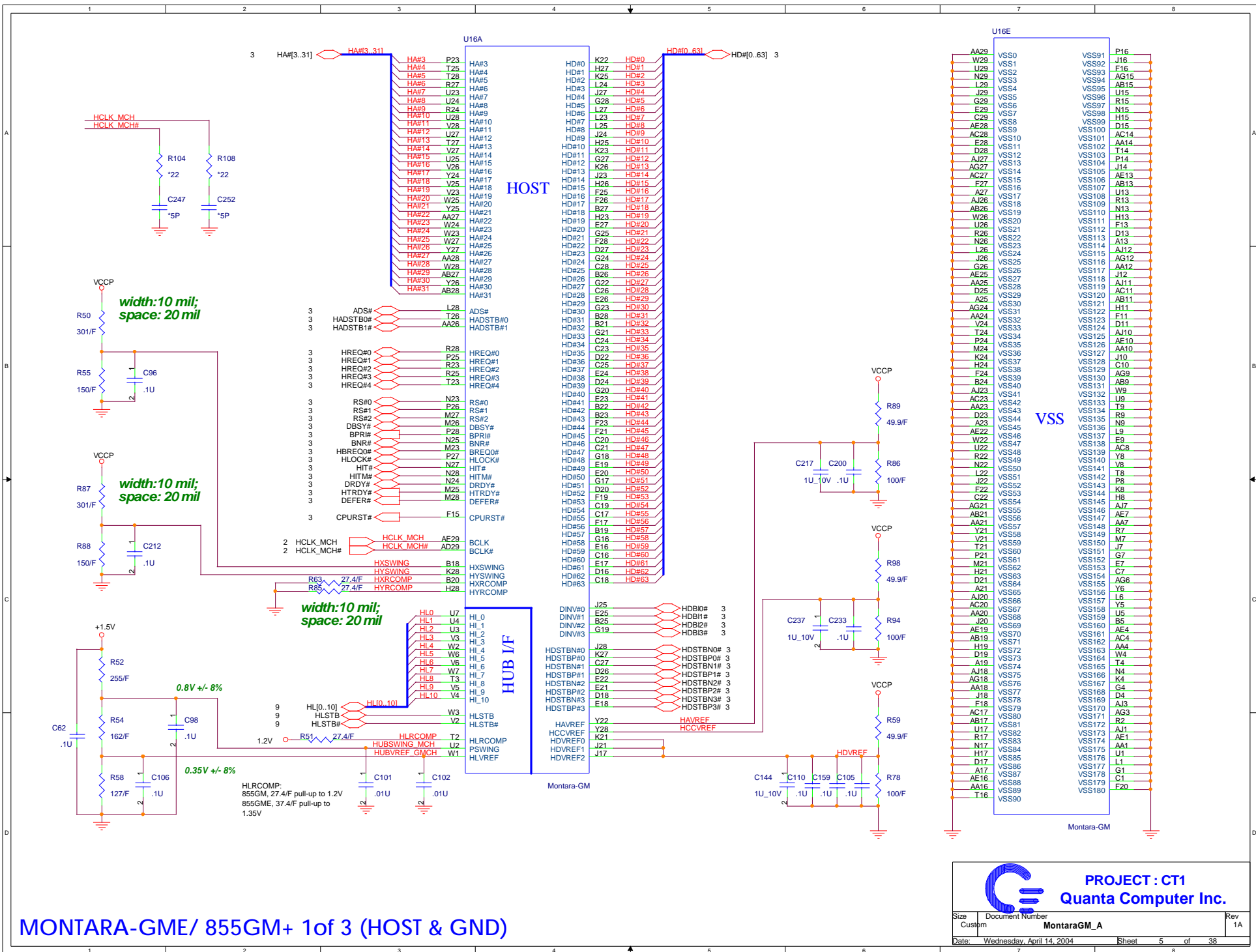


## BANIAS CPU 1 of 2 (HOST BUS)

**PROJECT : CT1**  
**Quanta Computer Inc.**

Size: Custom Document Number: Rev: 1A  
 Date: Wednesday, April 14, 2004 Sheet: 3 of 38



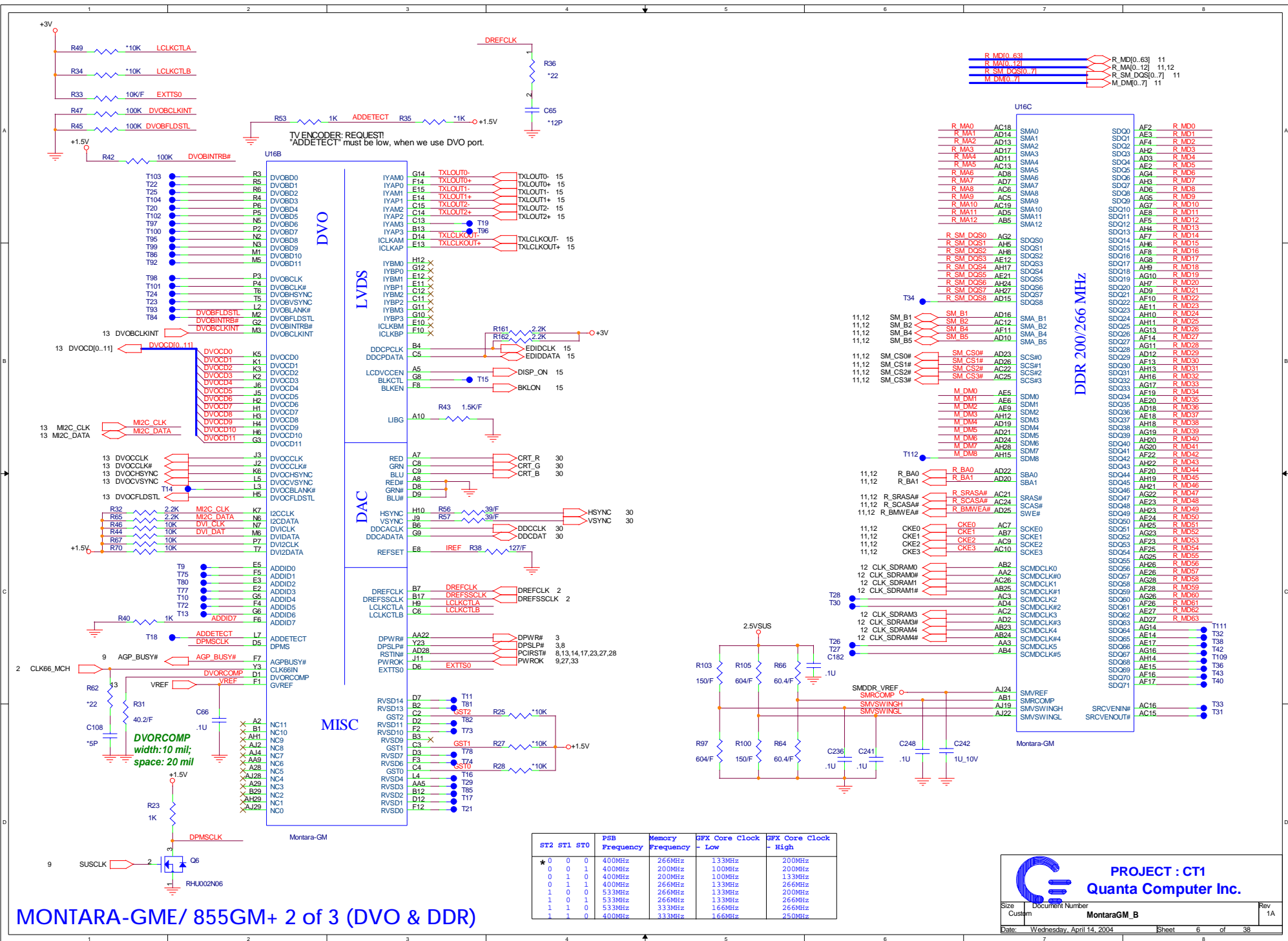


MONTARA-GME/ 855GM+ 1of 3 (HOST & GND)

**PROJECT: CT1**  
**Quanta Computer Inc.**

Size: Custom  
 Document Number: MontaraGM\_A  
 Rev: 1A

Date: Wednesday, April 14, 2004  
 Sheet: 5 of 38



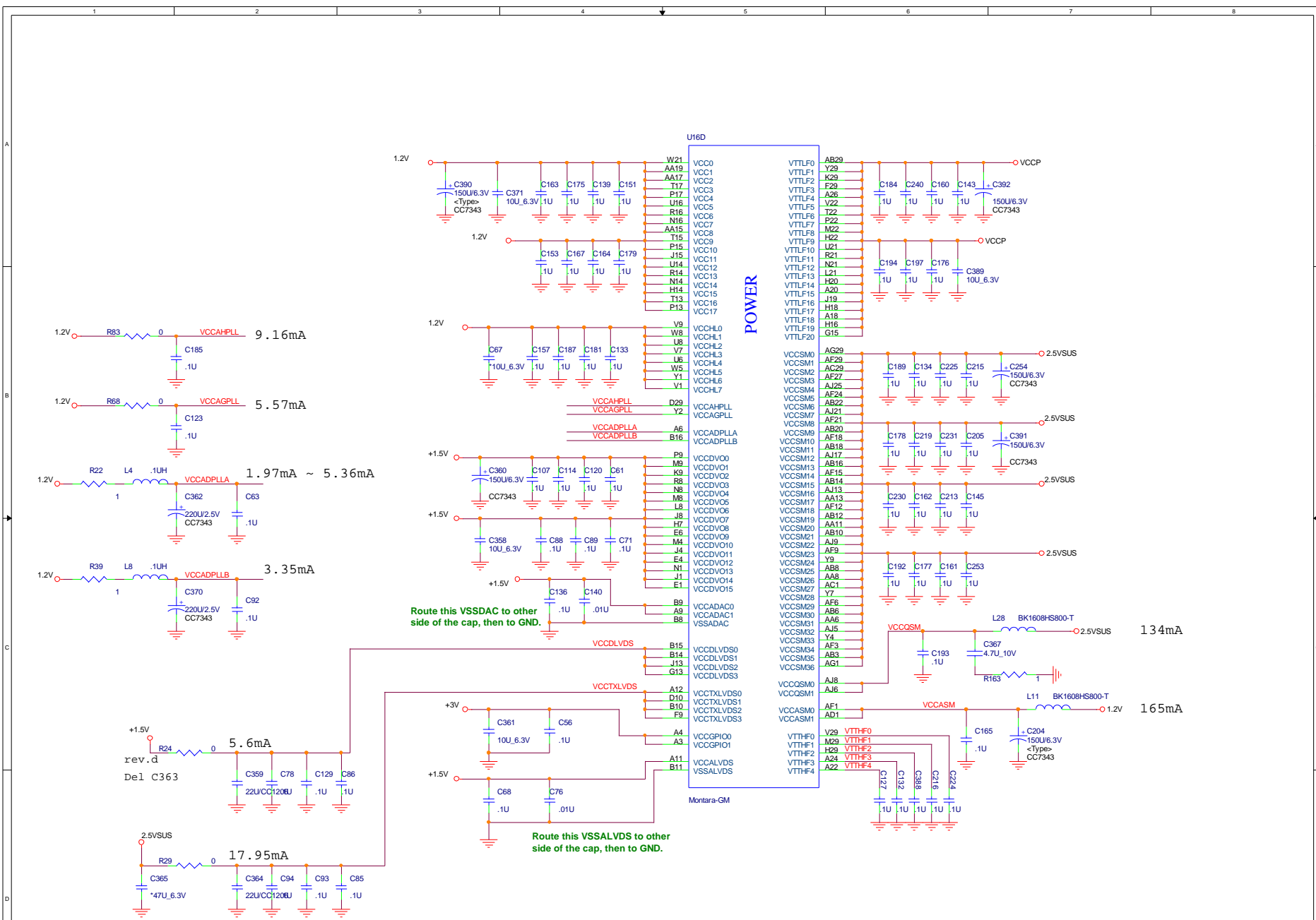
MONTARA-GME/855GM+ 2 of 3 (DVO & DDR)

ST2	ST1	ST0	PSB Frequency	Memory Frequency	GFX Core Clock - Low	GFX Core Clock - High
*	0	0	400MHz	266MHz	1.33MHz	200MHz
0	0	1	400MHz	200MHz	1.00MHz	200MHz
0	1	0	400MHz	266MHz	1.33MHz	266MHz
1	0	0	533MHz	266MHz	1.33MHz	200MHz
1	0	1	533MHz	266MHz	1.33MHz	266MHz
1	1	0	533MHz	333MHz	1.66MHz	266MHz
1	1	1	400MHz	333MHz	1.66MHz	250MHz

**PROJECT : CT1**  
**Quanta Computer Inc.**


Size: Custom Document Number: MontaraGM\_B Rev: 1A  
 Date: Wednesday, April 14, 2004 Sheet: 6 of 38



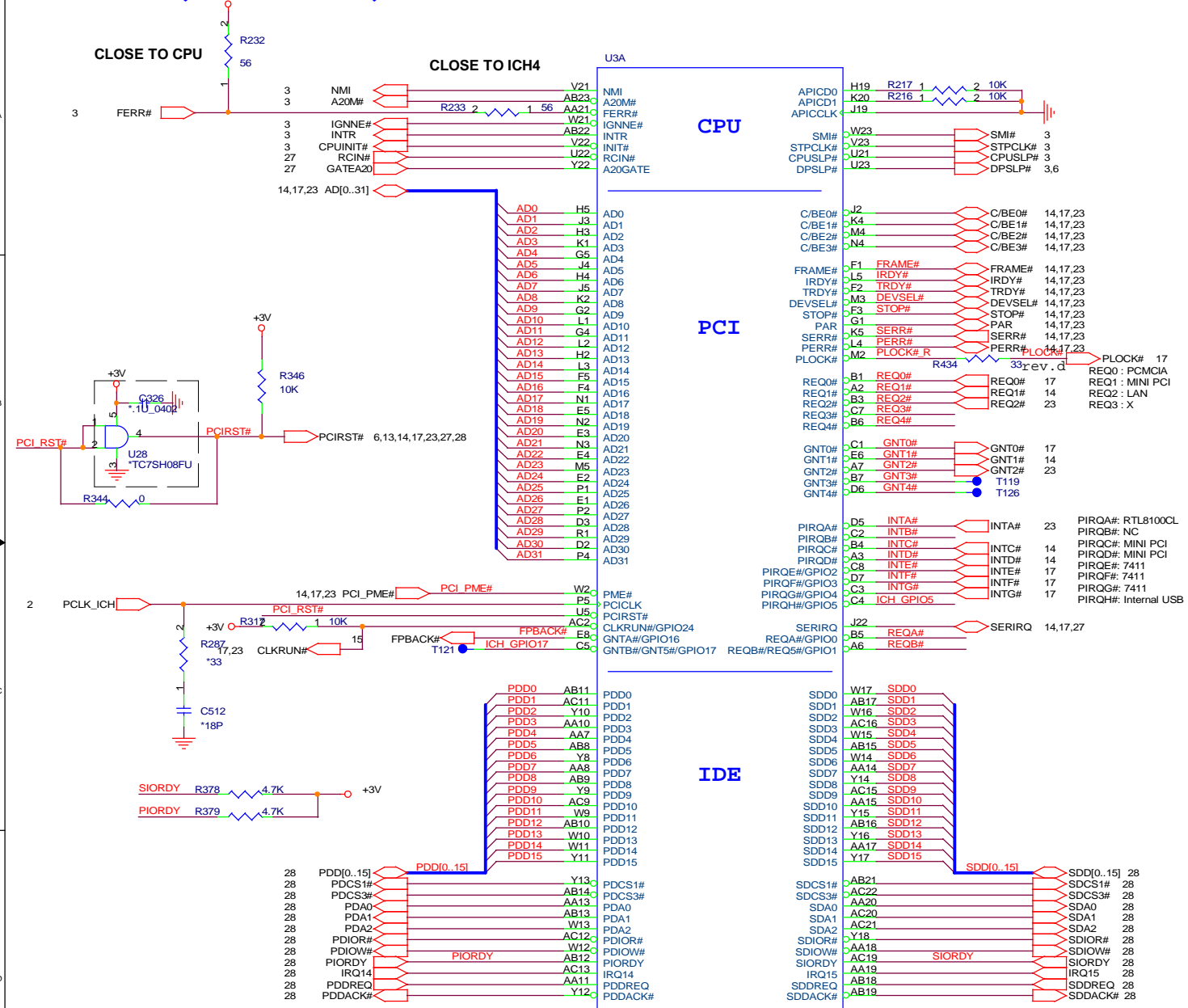


change +2.5v to 2.5vsus

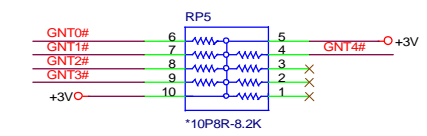
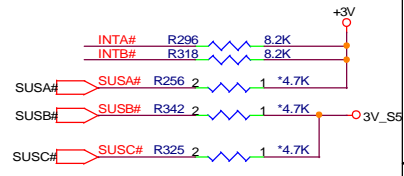
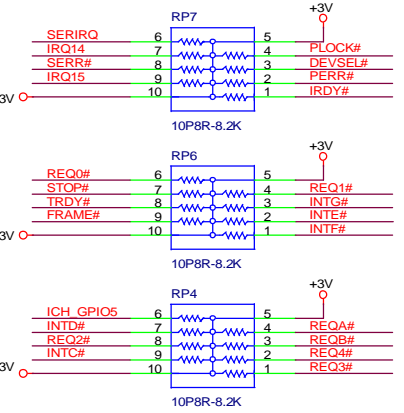
# MONTARA-GME/ 855GM+ 3 of 3 (POWER & CAP.)

		<b>PROJECT : CT1</b> <b>Quanta Computer Inc.</b>	
Size	Document Number	MontaraGM_C	Rev
Custom			1A
Date:	Wednesday, April 14, 2004	Sheet	7 of 38

# ICH4-M 1/3 (CPU, PCI, IDE)



## PCI Bus pull high resistor



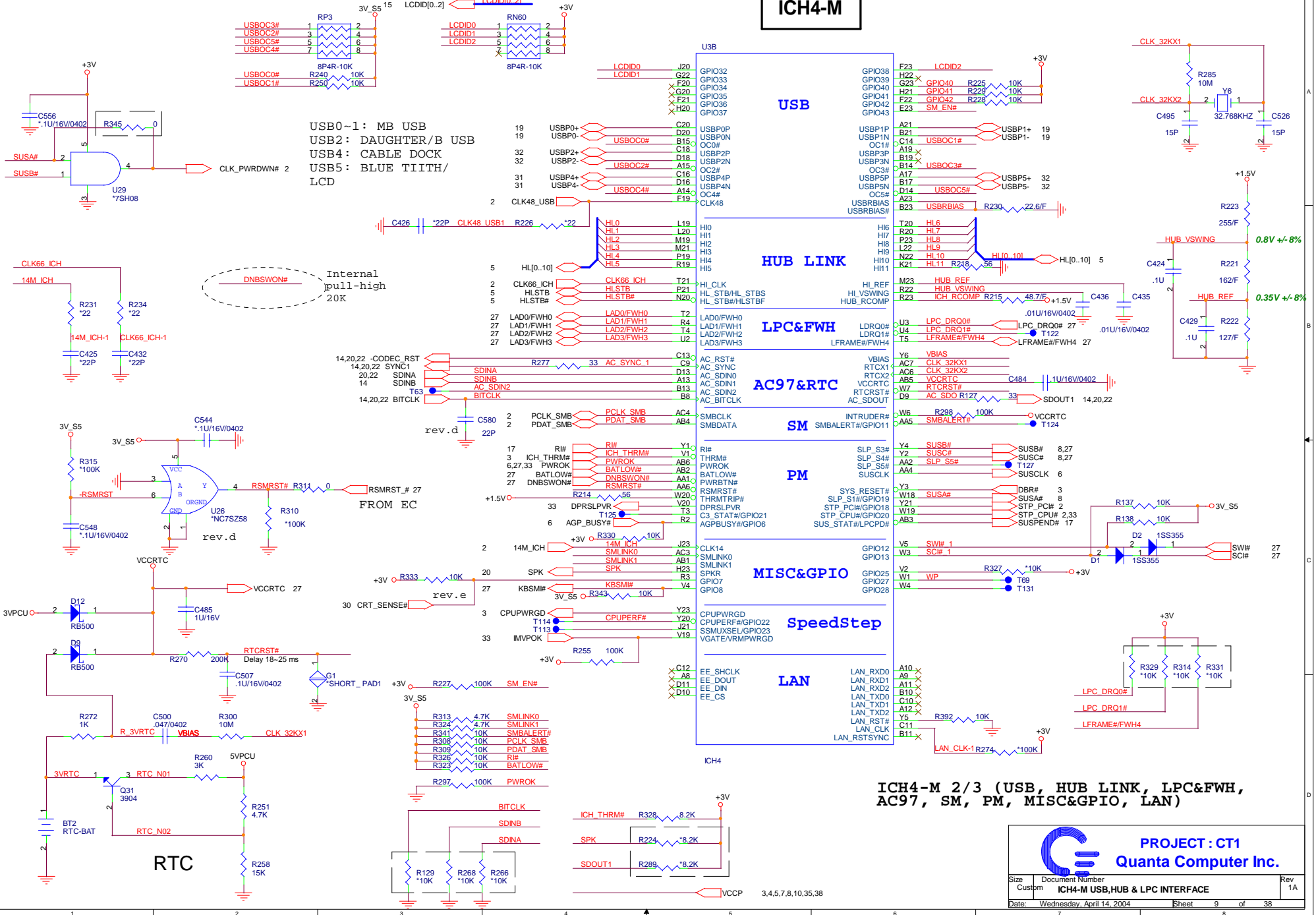
**PROJECT : CT1**  
**Quanta Computer Inc.**

Size	Document Number	Rev
Custbrn	ICH4-M (CPU,PCI,IDE)	1A
Date: Wednesday, April 14, 2004		Sheet 8 of 38



ICH4-M

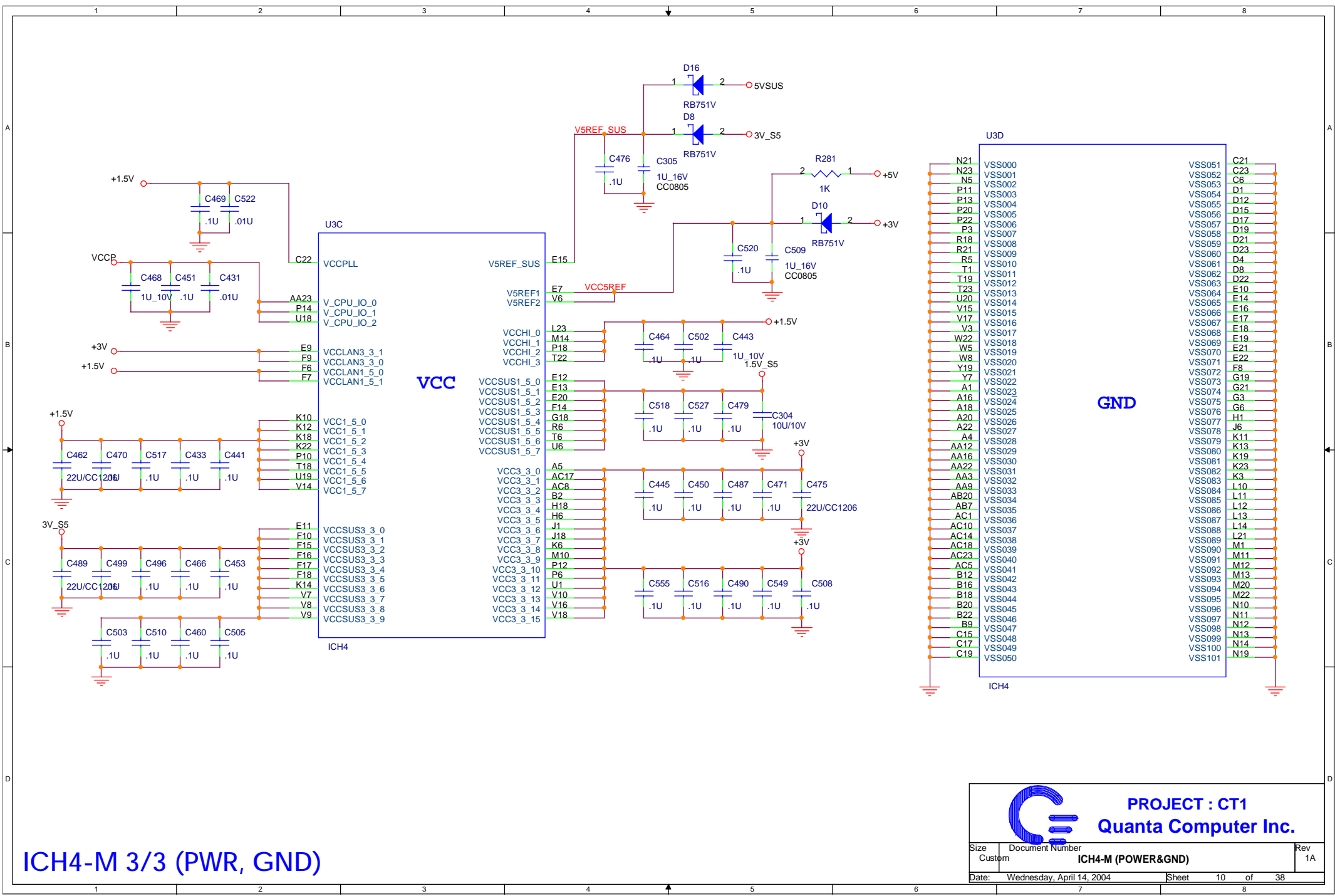
ICH4-M



ICH4-M 2/3 (USB, HUB LINK, LPC&FWH, AC97, SM, PM, MISC&GPIO, LAN)

**PROJECT : CT1**  
**Quanta Computer Inc.**

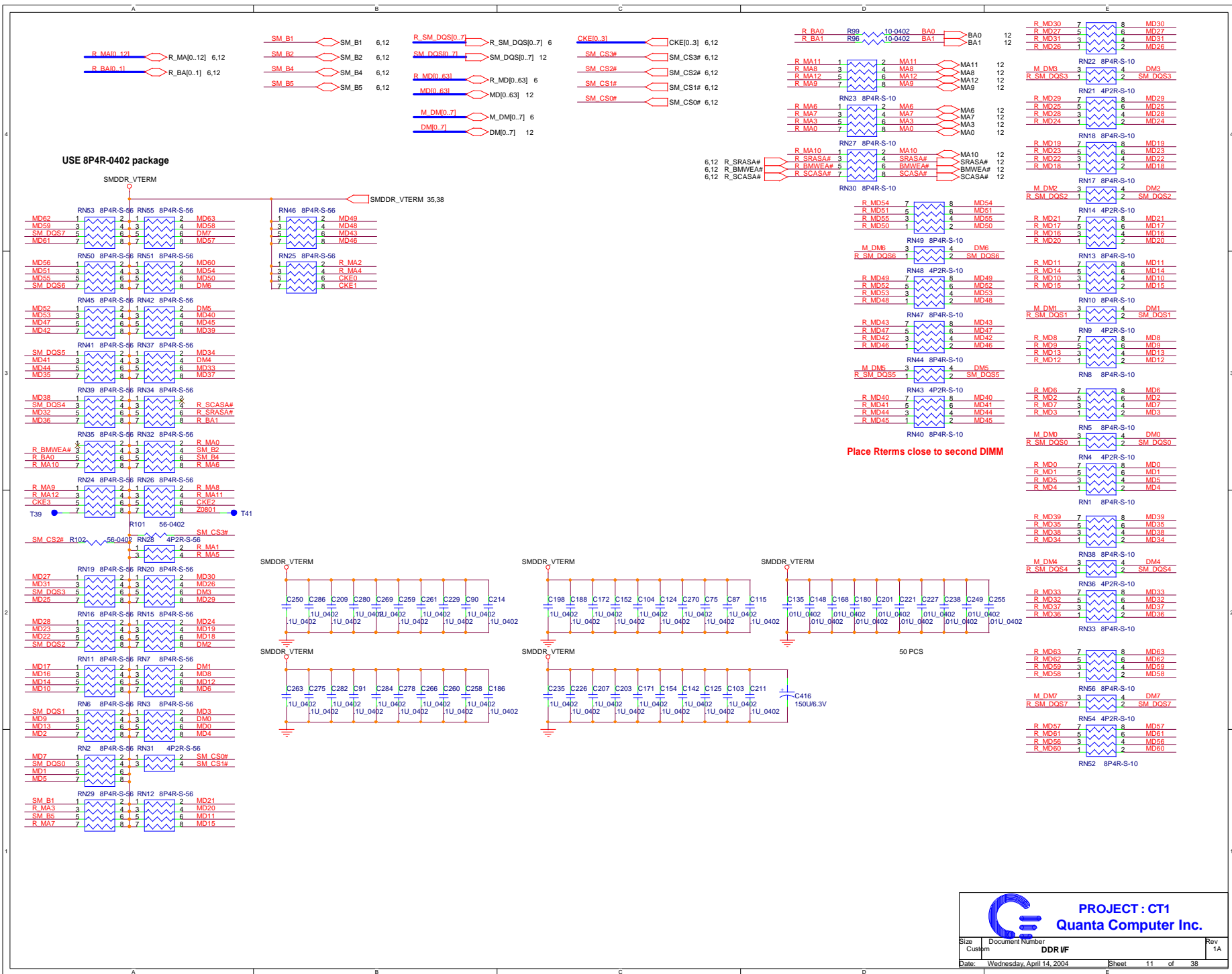
Size	Document Number	Rev
Custpm	ICH4-M USB,HUB & LPC INTERFACE	1A
Date:	Wednesday, April 14, 2004	Sheet 9 of 38

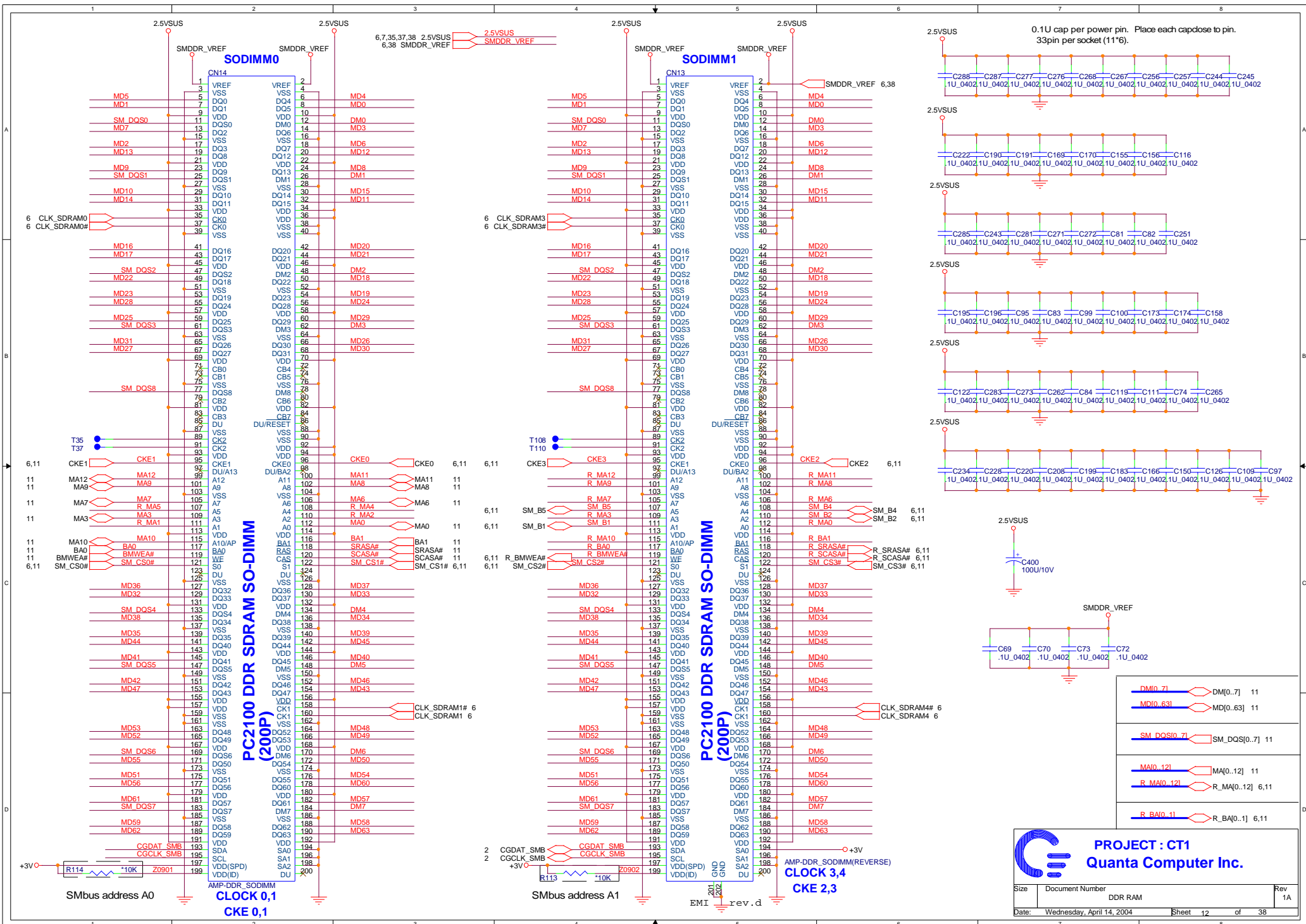


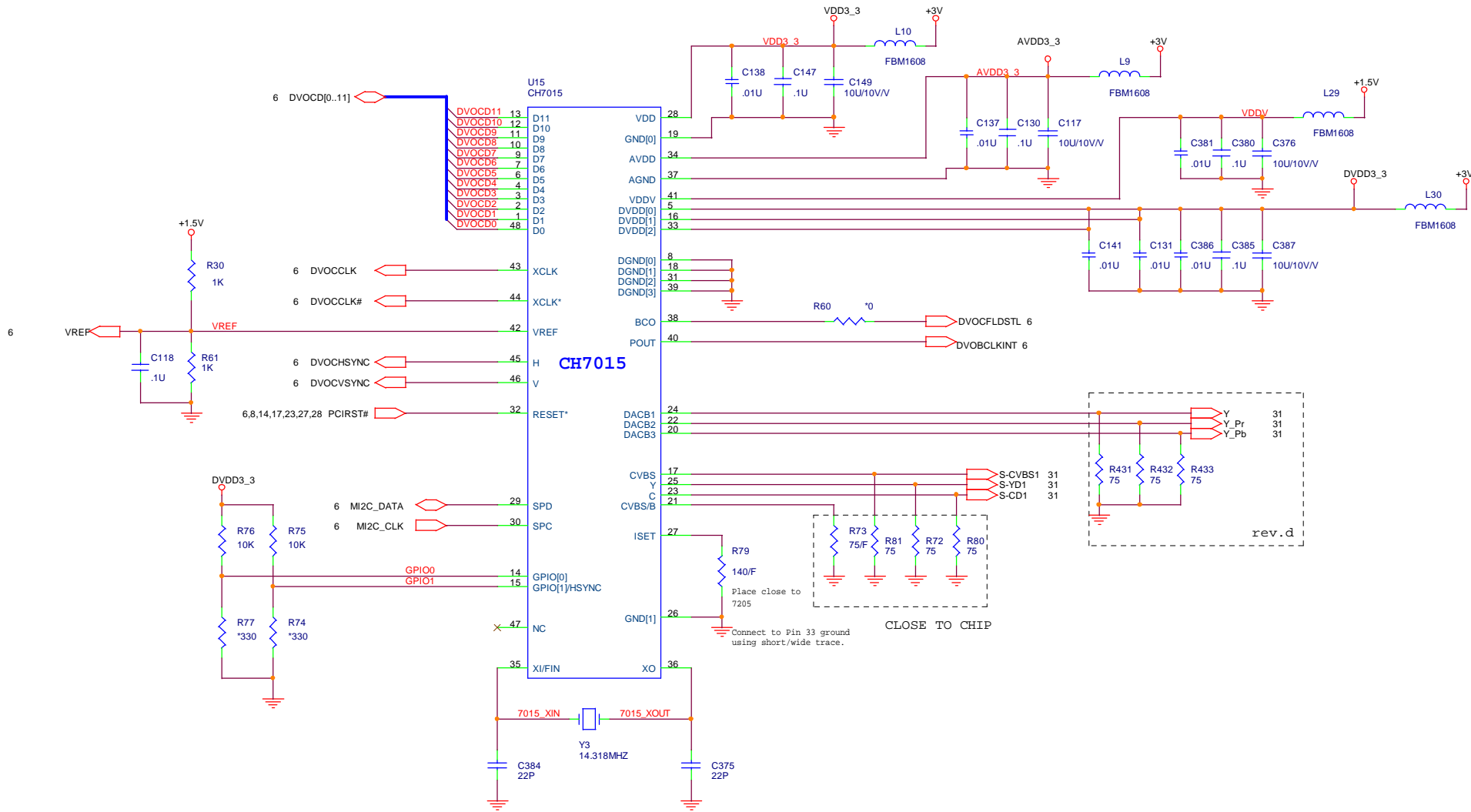
**ICH4-M 3/3 (PWR, GND)**

**PROJECT : CT1**  
**Quanta Computer Inc.**


Size	Document Number	Rev
Custom	ICH4-M (POWER&GND)	1A
Date:	Wednesday, April 14, 2004	Sheet 10 of 38

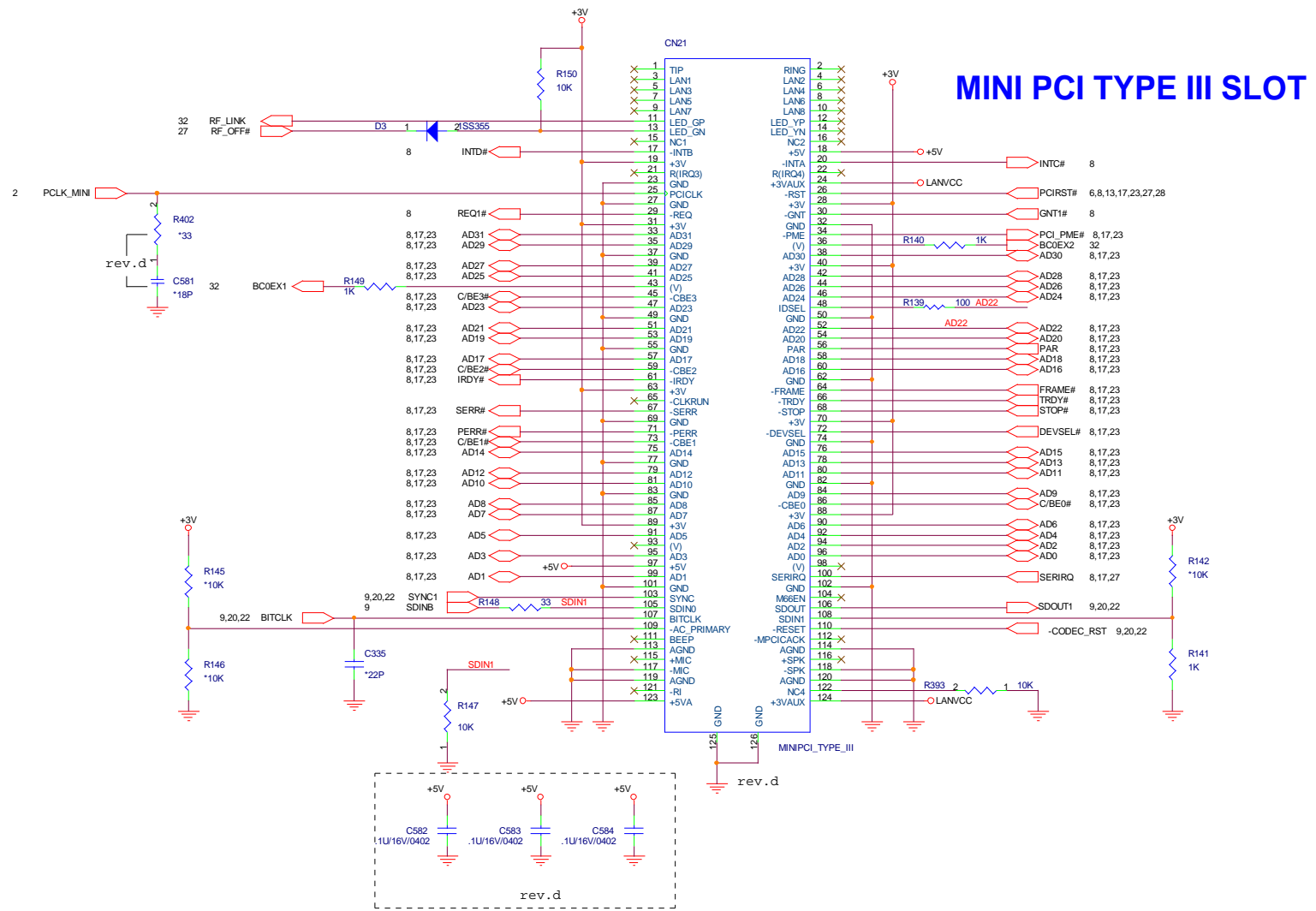







GPIO[1:0] Pull Up and Pull Down  
TV output option will be  
defined later by SW group.

 <b>PROJECT : CT1</b> <b>Quanta Computer Inc.</b>		Rev
		1A
Size	Document Number	Date: Wednesday, April 14, 2004
Custom		
Date: Wednesday, April 14, 2004		Sheet 13 of 38



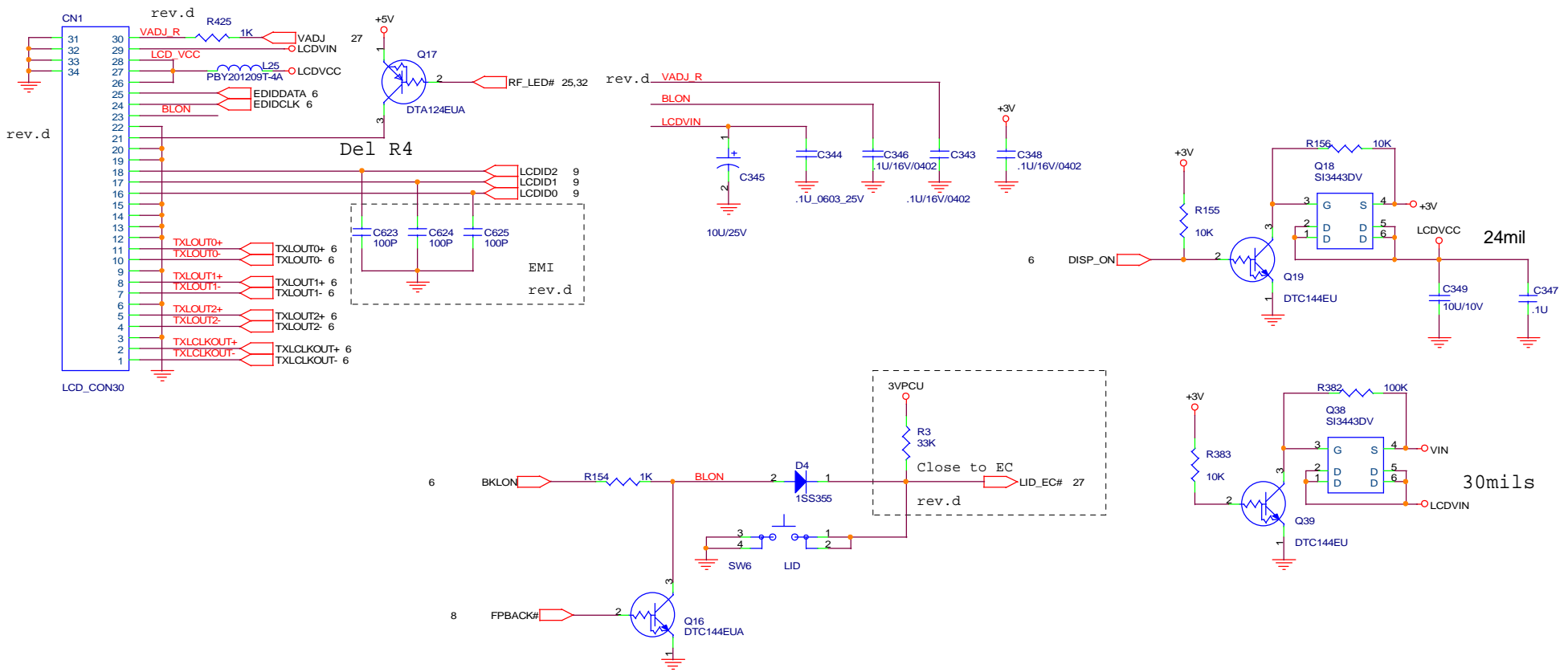
# MINI PCI TYPE III SLOT




**PROJECT : CT1**  
**Quanta Computer Inc.**

Size	Document Number	Rev
Custom		1A
Date:	Wednesday, April 14, 2004	Sheet 14 of 38

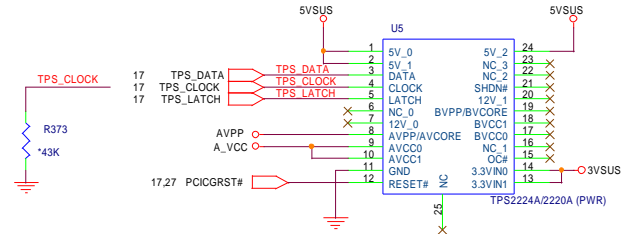
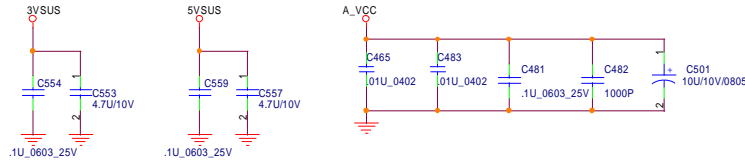





**PROJECT : CT1**  
**Quanta Computer Inc.**

Size B	Document Number	Rev 1A
Date: Wednesday, April 14, 2004		Sheet 15 of 38

# CardBus Connector

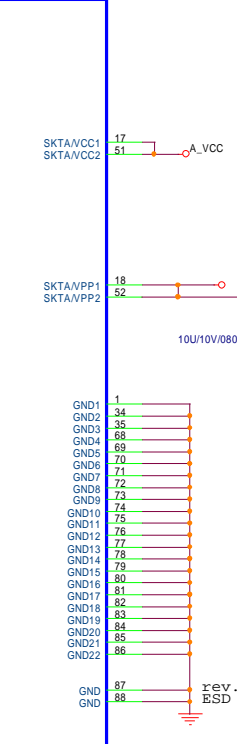


U21-3	VCCB	D19	X
	VCCB	K19	X
B_CAD31/B_D10	B15	X	
B_CAD30/B_D9	A16	X	
B_CAD29/B_D1	B16	X	
B_CAD28/B_D8	C17	X	
B_CAD27/B_D0	D17	X	
B_CAD26/A_A0	C18	X	
B_CAD25/A_A1	C19	X	
B_CAD24/A_A2	D18	X	
B_CAD23/A_A3	E17	X	
B_CAD22/A_A4	G15	X	
B_CAD21/A_A5	H14	X	
B_CAD20/A_A6	H14	X	
B_CAD19/A_A25	H15	X	
B_CAD18/A_A7	G17	X	
B_CAD17/A_A24	K17	X	
B_CAD16/A_A17	L13	X	
B_CAD15/B_IOWR	K18	X	
B_CAD14/B_A8	L15	X	
B_CAD13/B_IORD	L18	X	
B_CAD12/B_A11	L18	X	
B_CAD11/B_OE	L19	X	
B_CAD10/A_CE2	M17	X	
B_CAD9/B_A10	M14	X	
B_CAD8/B_D15	M15	X	
B_CAD7/B_D7	N19	X	
B_CAD6/B_D13	N18	X	
B_CAD5/B_D6	N15	X	
B_CAD4/A_D12	M13	X	
B_CAD3/B_D5	P18	X	
B_CAD2/B_D11	P17	X	
B_CAD1/B_D4	P19	X	
B_CAD0/B_D3	P19	X	
B_CCBE3/B_REG	F15	X	
B_CCBE2/B_A12	G18	X	
B_CCBE1/B_A8	K14	X	
B_CCBE0/B_CE1	M18	X	
B_CPAR/B_A13	K13	X	
B_CFRAME/B_A23	G19	X	
B_CTRDY/B_A22	H17	X	
B_CIRDY/B_A15	J13	X	
B_CSTOP/B_A20	J17	X	
B_CDEVSLE/B_A21	H19	X	
B_CBLOCK/B_A19	J19	X	
B_CPERR/B_A14	J18	X	
B_CSERR/B_WAIT	B18	X	
B_CREQ/B_INPACK	F18	X	
B_CGNT/B_WE	J15	X	
B_CSTSCHG/B_BVD1(STSCHGR)	F14	X	
B_CCLKRUN/B_WP(IOIS16)	A18	X	
B_CCLK/B_A16	H18	X	
B_CINT/B_READY(IREQ)	B19	X	
B_CRST/B_RESET	F17	X	
B_CAUDIO/B_BVD2(SPKR)	C17	X	
B_CCD1/B_CD1	N13	X	
B_CCD2/B_CD2	B17	X	
B_CVS1/B_VS1	C18	X	
B_CVS2/B_VS2	F19	X	
B_RSVD/B_D14	N17	X	
B_RSVD/B_D2	A15	X	
B_RSVD/B_A18	K15	X	


U21-2	VCCA	A5	X
	VCCA	A11	X
A_CAD31/A_D10	D1	A_D10	
A_CAD30/A_D9	C1	A_D9	
A_CAD29/A_D1	D3	A_D1	
A_CAD28/A_D8	C2	A_D8	
A_CAD27/A_D0	B4	A_D0	
A_CAD26/A_A0	A4	A_A1	
A_CAD25/A_A1	E6	A_A2	
A_CAD24/A_A2	B5	A_A3	
A_CAD23/A_A3	C6	A_A4	
A_CAD22/A_A4	G9	A_A6	
A_CAD21/A_A5	C7	A_A25	
A_CAD20/A_A6	B7	A_A7	
A_CAD19/A_A25	A7	A_A24	
A_CAD18/A_A7	A10	A_A17	
A_CAD17/A_A24	E11	A_IOWR#	
A_CAD16/A_A17	G11	A_A9	
A_CAD15/A_IOWR	C11	A_IORD#	
A_CAD14/A_A8	L17	A_A24	
A_CAD13/A_IORD	C12	A_OE#	
A_CAD12/A_A11	B12	A_CE2#	
A_CAD11/A_OE	A12	A_A10	
A_CAD10/A_CE2	E12	A_D15	
A_CAD9/A_A10	C13	A_D7	
A_CAD8/A_D15	F12	A_D13	
A_CAD7/A_D7	A13	A_D6	
A_CAD6/A_D13	C14	A_D12	
A_CAD5/A_D6	E13	A_D5	
A_CAD4/A_D12	A14	A_D11	
A_CAD3/A_D5	B14	A_D4	
A_CAD2/A_D11	E14	A_D3	
A_CAD1/A_D4	A_D9	A_D9	
A_CAD0/A_D3	A_D10	A_D10	
A_CCBE3/A_REG	C5	A_REG#	
A_CCBE2/A_A12	F9	A_A12	
A_CCBE1/A_A8	B10	A_A8	
A_CCBE0/A_CE1	G12	A_CE1#	
A_CPAR/A_A13	G10	A_A13	
A_CFRAME/A_A23	C8	A_A23	
A_CTRDY/A_A22	A8	A_A22	
A_CIRDY/A_A15	B8	A_A15	
A_CSTOP/A_A20	A9	A_A20	
A_CDEVSLE/A_A21	C9	A_A21	
A_CBLOCK/A_A19	E10	A_A19	
A_CPERR/A_A14	F10	A_A14	
A_CSERR/A_WAIT	B3	A_WAIT#	
A_CREQ/A_INPACK	E7	A_INPACK#	
A_CGNT/A_WE	B9	A_WE#	
A_CSTSCHG/A_BVD1(STSCHGR)	B2	A_STSCHG_P	
A_CCLKRUN/A_WP(IOIS16)	C3	A_IOIS16#	
A_CCLK/A_A16	E9	A_A16	
A_CINT/A_READY(IREQ)	C4	A_IREQ#	
A_CRST/A_RESET	A6	A_RESET	
A_CAUDIO/A_BVD2(SPKR)	A2	A_SPKR_P	
A_CCD1/A_CD1	C15	A_CD1#	
A_CCD2/A_CD2	E5	A_CD2#	
A_CVS1/A_VS1	A3	A_VS1#	
A_CVS2/A_VS2	E8	A_VS2#	
A_RSVD/A_D14	B13	A_D14	
A_RSVD/A_D2	D2	A_D2	
A_RSVD/A_A18	C10	A_A18	

A_D3	2	SKTAA0/D3
A_D4	3	SKTAA1/D4
A_D11	37	SKTAA2/D11
A_D5	4	SKTAD3/D5
A_D12	38	SKTAD4/D12
A_D6	5	SKTAD5/D6
A_D13	39	SKTAA6/D13
A_D7	6	SKTAA7/D7
A_D15	41	SKTAA8/D15
A_A0	1	SKTAA9/A10
A_CE2#	42	SKTAA10/CE2#
A_OE#	9	SKTAA11/OE#
A_A11	10	SKTAA12/A11
A_IORD#	11	SKTAA13/IORD#
A_A9	11	SKTAA14/A9
A_IOWR#	45	SKTAA15/IOWR#
A_A17	46	SKTAA16/A17
A_A24	55	SKTAA17/A24
A_A7	55	SKTAA18/A7
A_A25	56	SKTAA19/A25
A_A6	23	SKTAA20/A6
A_D15	23	SKTAA21/A5
A_A4	24	SKTAA22/A4
A_A3	26	SKTAA23/A3
A_A2	27	SKTAA24/A2
A_D12	28	SKTAA25/A1
A_A0	28	SKTAA26/A0
A_D1	31	SKTAA27/D1
A_D0	30	SKTAA28/D8
A_D8	64	SKTAA29/D1
A_D1	31	SKTAA30/D9
A_D9	65	SKTAA31/D10
A_D10	66	SKTAA32/D11
A_CE1#	7	-SKTACBE0/CE1#
A_A8	12	-SKTACBE1/A8
A_A12	21	-SKTACBE2/A12
A_REG#	61	-SKTACBE3/REG#
A_A23	19	SKTAPCLK/A16
A_A15	20	SKTAFRAME/A23
A_A22	53	SKTAIRDY/A15
A_A21	50	SKTATRDY/A22
A_A20	49	SKTADVSLE/A21
A_A13	13	SKTASTOP/A20
A_A14	14	SKTAPARA/A13
A_WAIT#	14	-SKTAPERR/A14
A_INPACK#	60	SKTASERR/WAIT#
A_WE#	15	SKTAREQ/INPACK#
A_IREQ#	16	SKTAGNT/WE#
A_A19	48	SKTAINTRDY
A_IOIS16#	33	SKTALOCK/A19
A_RESET	58	SKTACLKRUN/WP
A_A16	40	SKTARST/RESET
A_A18	47	SKTARSDVD/D14
A_VS1#	43	SKTARSDVD/A18
A_VS2#	57	SKTAVS1/V51#
A_CD1#	39	SKTAVS2/V52#
A_CD2#	69	SKTACD1/CD1#
A_SPKR_P	62	SKTACD2/CD2#
A_STSCHG_P	63	SKTAAUDIO/BVD2
A_D2	32	SKTASTSCHG/BVD1
		SKTARSDVD/D2

## CN6



CARDBUS SLOT  
FOX=WZ21131-G2



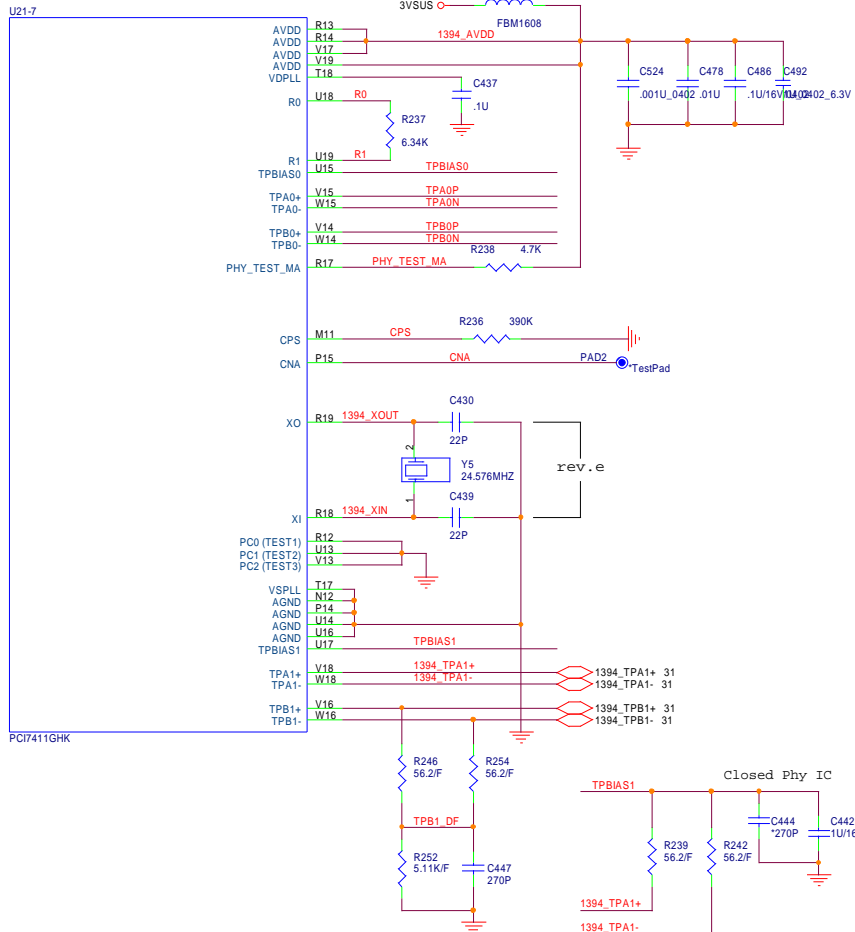
**PROJECT : CT1**  
**Quanta Computer Inc.**

Size Custom	Document Number	Rev 1A
Date: Wednesday, April 14, 2004	Sheet 16 of 38	

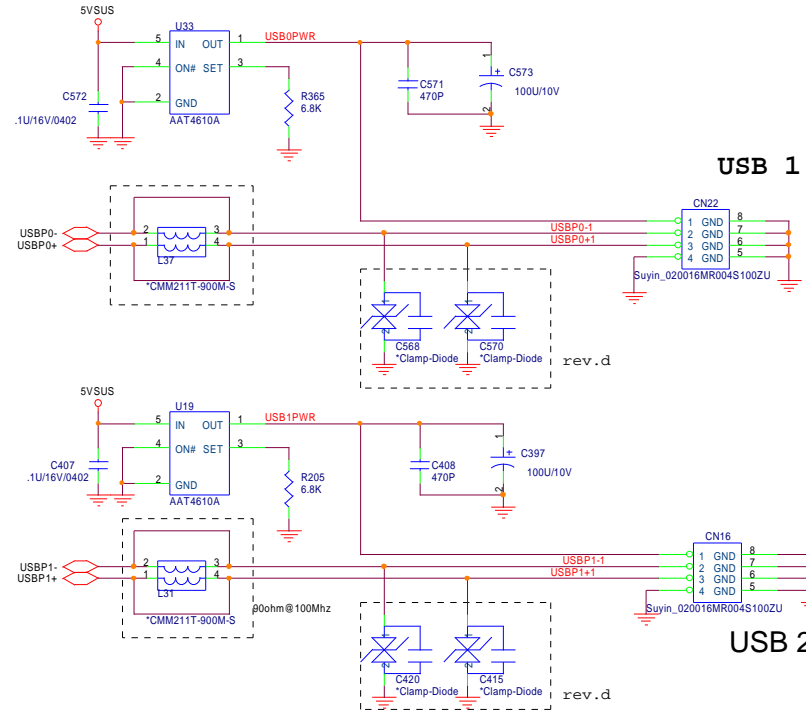
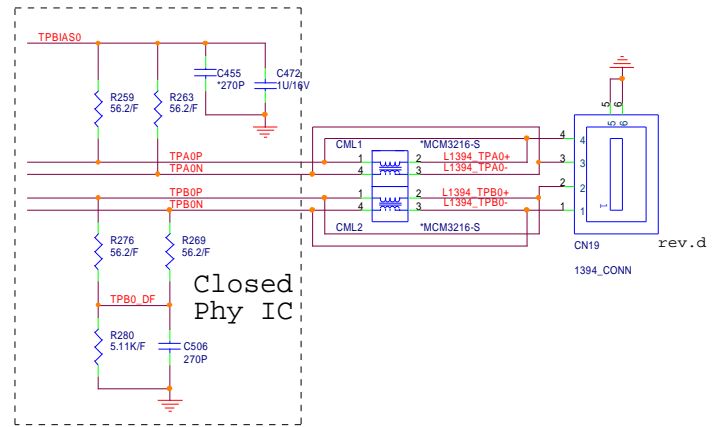





# IEEE 1394a



# IEEE 1394 CONNECTOR

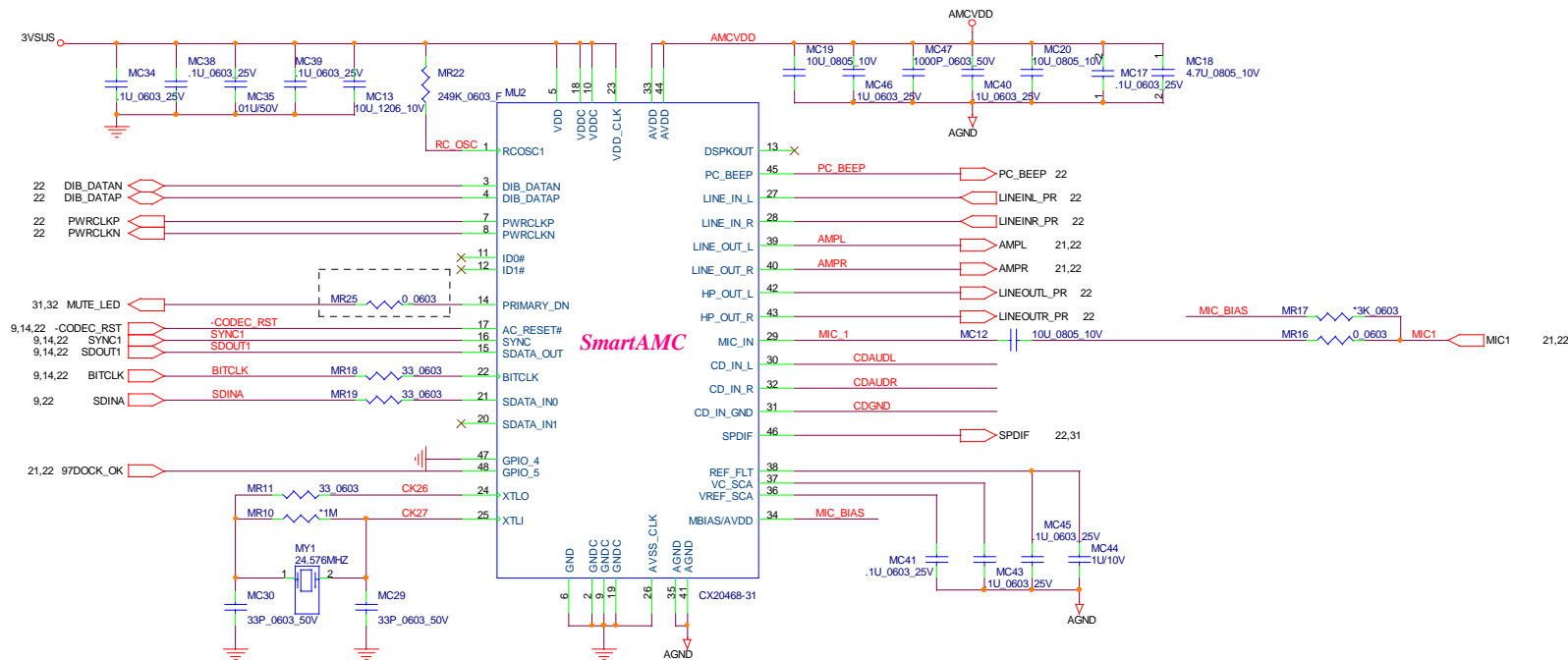




**PROJECT : CT1**  
**Quanta Computer Inc.**

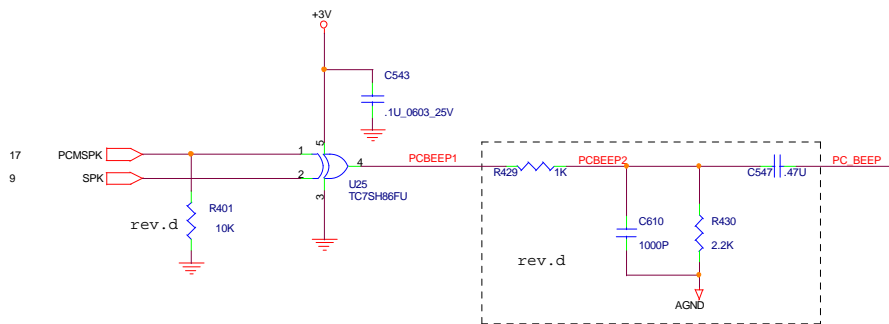
Size	Document Number	Rev
Custom		1A
Date:	Wednesday, April 14, 2004	Sheet 19 of 38

The AMC20493-001 modem is used for mother board family MBAMC20493-010.

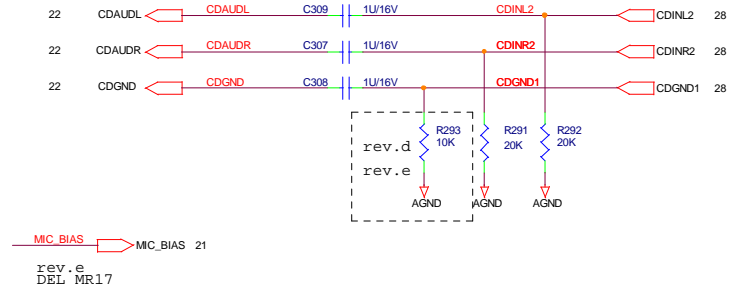


SmartAMC

PC SPEAKER



FROM CD-ROM

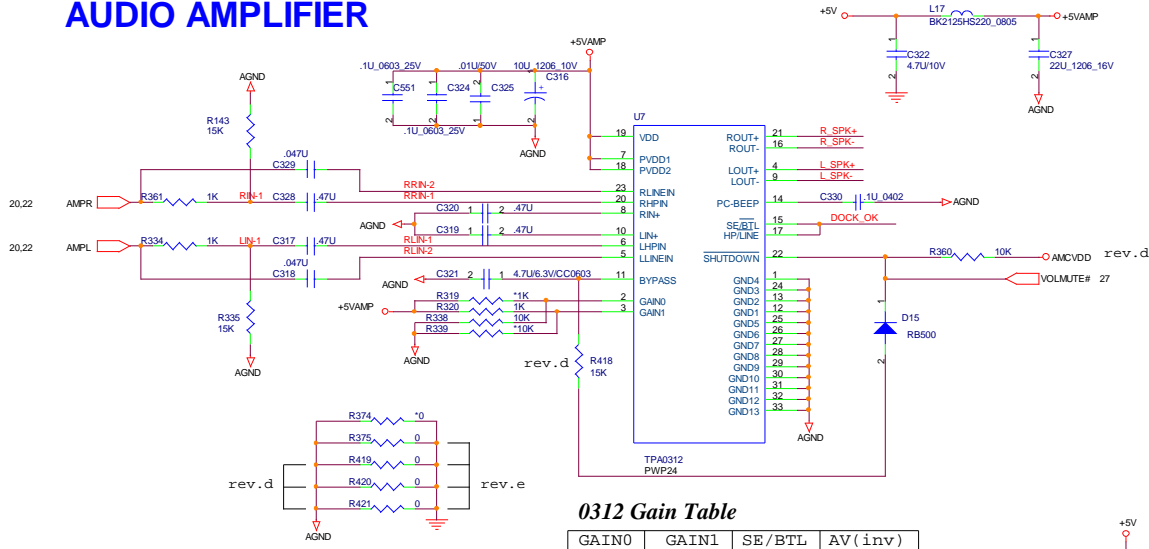


**PROJECT : CT1**  
**Quanta Computer Inc.**

Size: Document Number  
**AMC97 CODEC**  
 Date: Wednesday, April 14, 2004 Sheet 20 of 38 Rev 1A



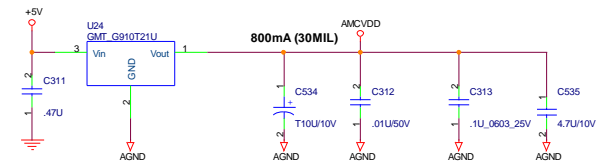
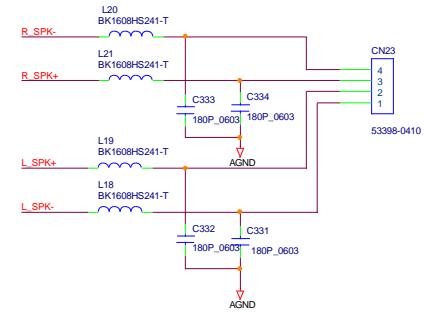
# AUDIO AMPLIFIER



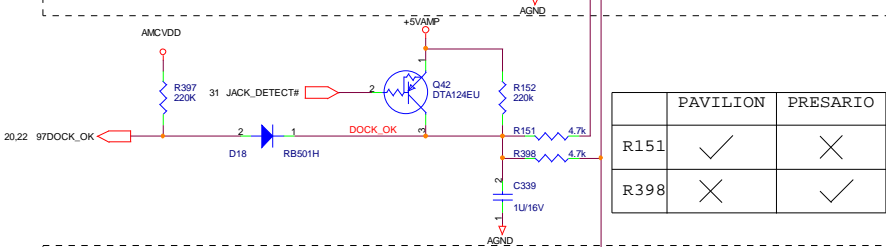
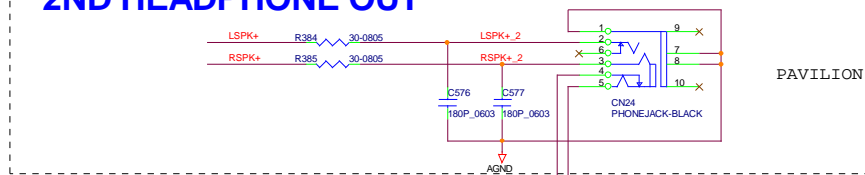
**0312 Gain Table**

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

# SPEAKER OUT

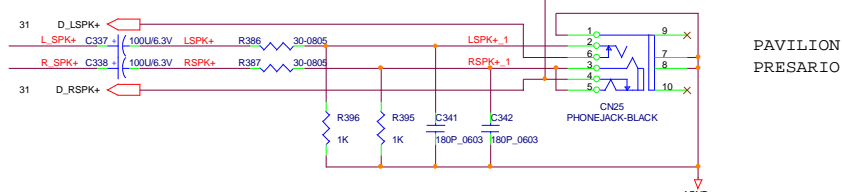


# 2ND HEADPHONE OUT

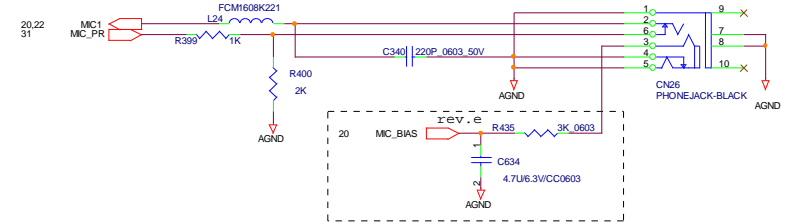


	PAVILION	PRESARIO
R151	✓	✗
R398	✗	✓

# HEADPHONE OUT

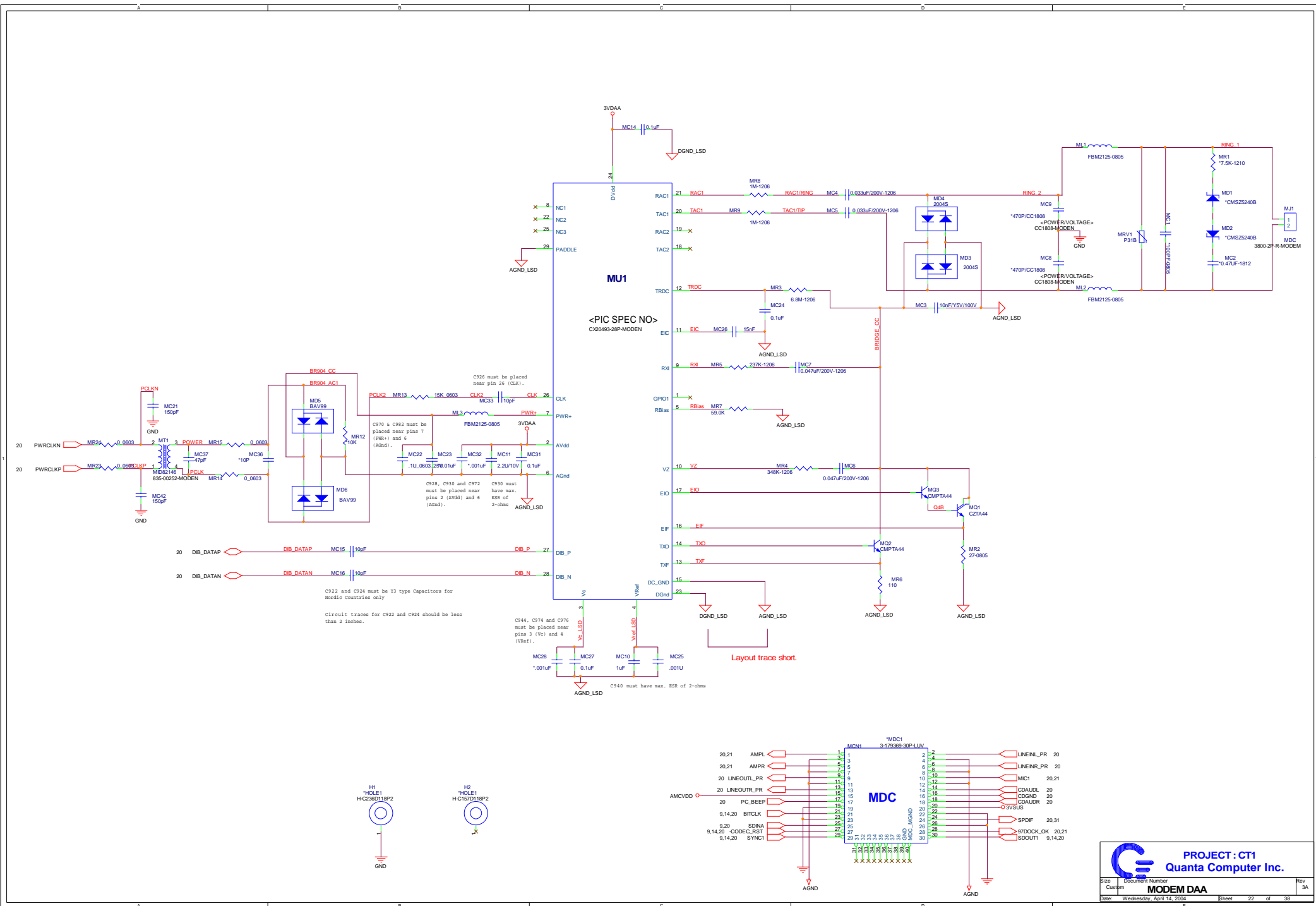


# MICROPHONE



**PROJECT : CT1**  
**Quanta Computer Inc.**

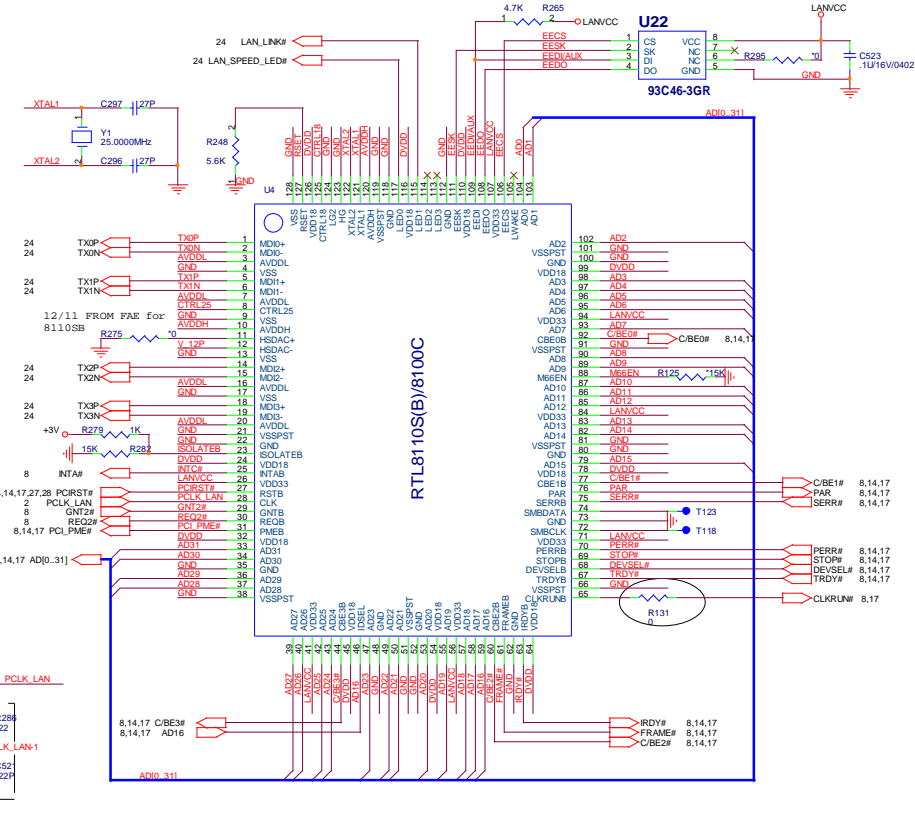
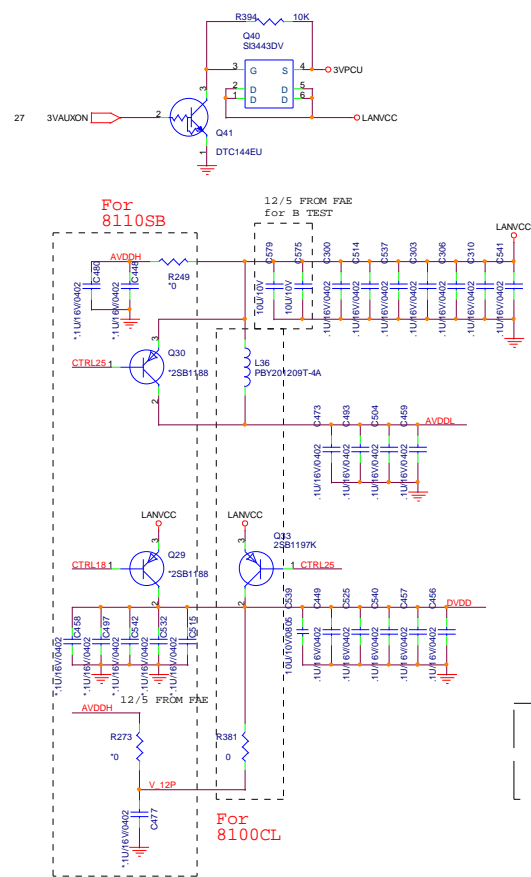
Size: Document Number  
**AUDIO AMP - TI-TPA0312**  
 Date: Wednesday, April 14, 2004 Sheet 21 of 38 Rev 1A

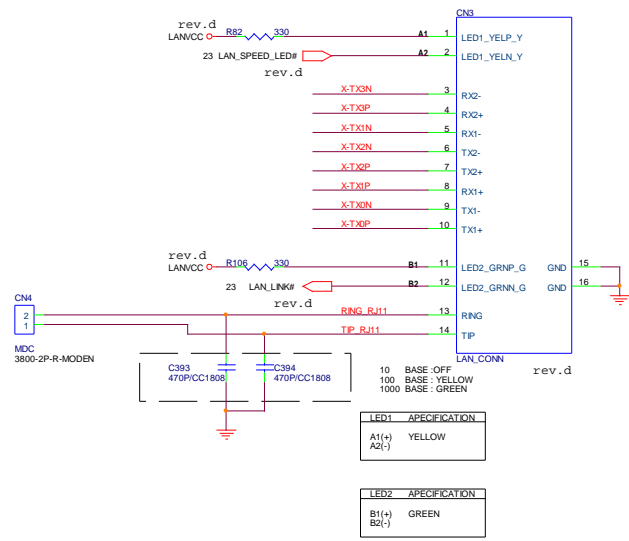
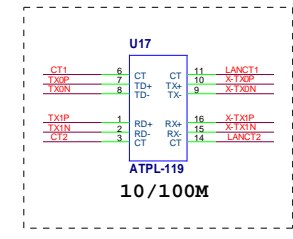
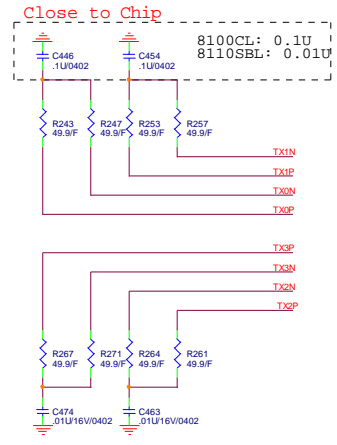
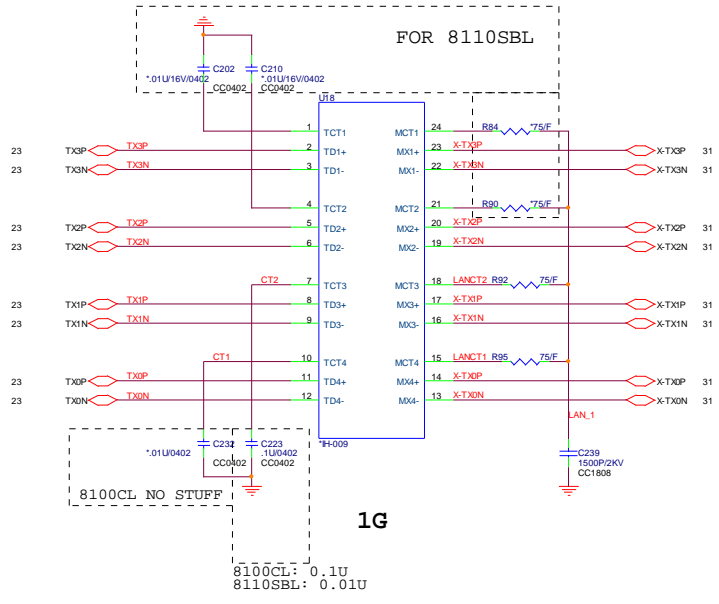


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**Quanta Computer Inc.**

Size: Custom Document Number: **MODEM DAA** Rev: 3A  
 Date: Wednesday, April 14, 2004 Sheet: 22 of 38

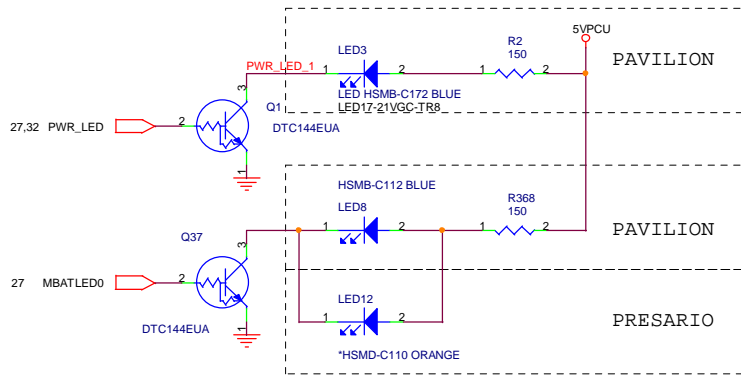
	8100CL(10/100M)	8110SB(1G)
DVDD33	3.3VD 26,41,56,71,84,94,107	3.3VD 26,41,56,71,84,94,107
AVDDL	3.3VA 3,7,20	2.5VA 3,7,20,16
DVDD	2.5VD 32,54,78,99	1.8VD 32,54,78,99,24,45,64,110,116,125
AVDD25	2.5VA 12	NC
AVDD2H	NC	3.3VA 10,120



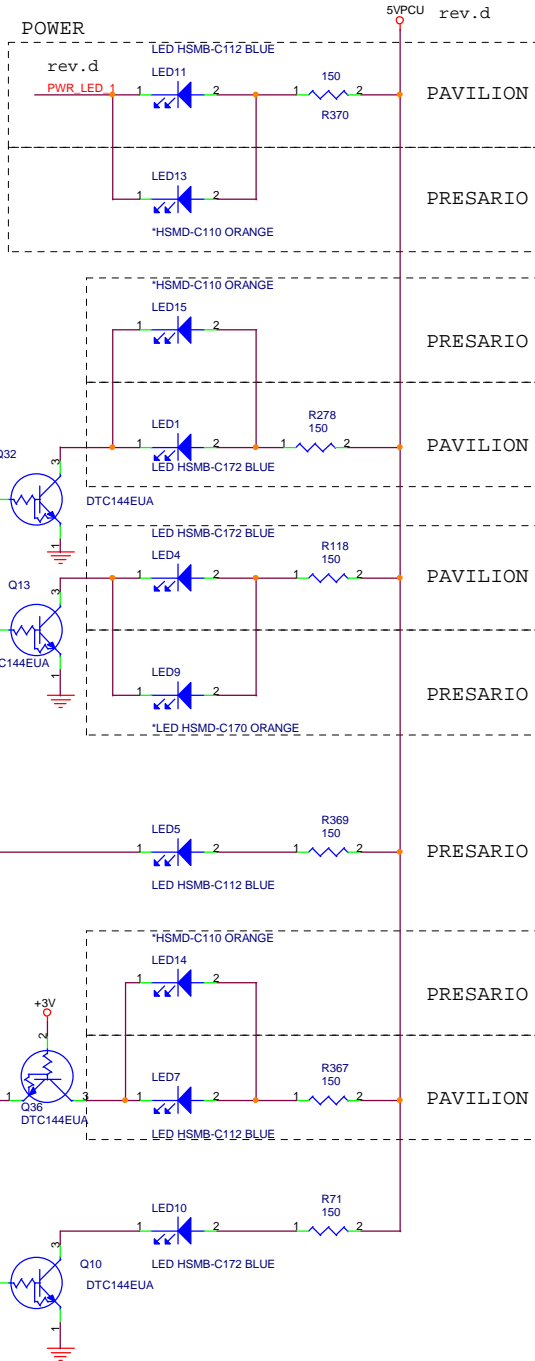
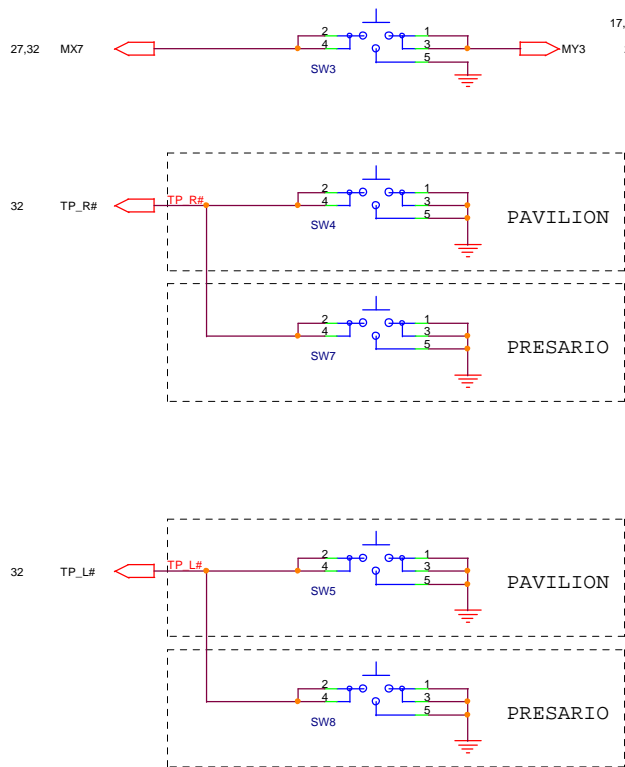


**PROJECT : CT1**  
**Quanta Computer Inc.**

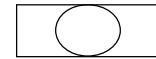
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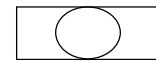
### Touchpad control



LED HSMD-C170 ORANGE



LED HSMB-C172 BLUE




LED HSMD-C110 ORANGE



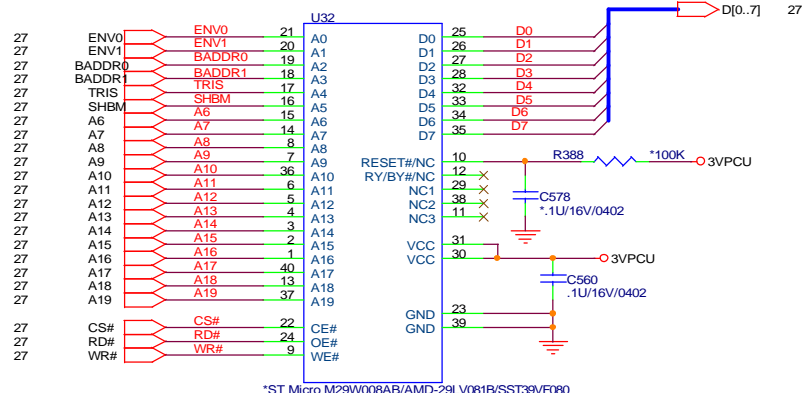
LED HSMD-C112 BLUE



REV.B: LED7 AND LED8 SWAP

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		0.2
Size	Document Number	Date:
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### 8Mbit (1M Byte), TSSOP40

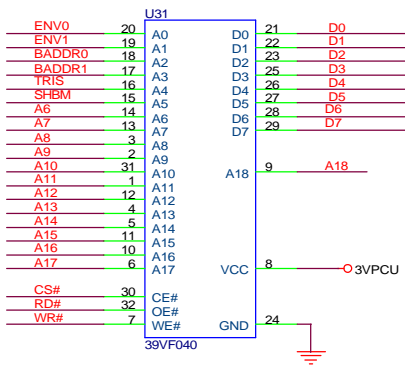


\*ST Micro M29W008AB/AMD-29LV081B/SST39VF080

AMD :Pin 10 is RESET# ; Pin12 is RY/BY#  
SST :Pin10,12 are NC

- 1.AMD-29LV081B require MAX 500nS Tready for it's hardware reset.And MAX6326\_UR29 has >100mS reset timing.So we can tie it's reset# pin to +3VALW directly.
- 2.SIO has internal 20 mS delay of VCC1\_PWROK

### 4Mbit (512k Byte), TSSOP32



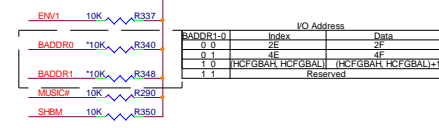
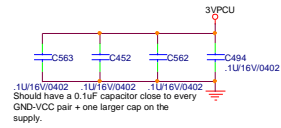
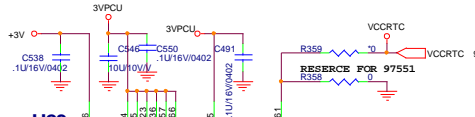
**PROJECT : CT1**  
**Quanta Computer Inc.**

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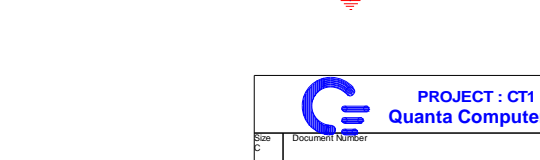
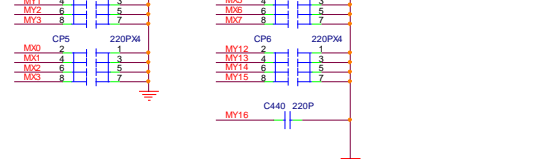
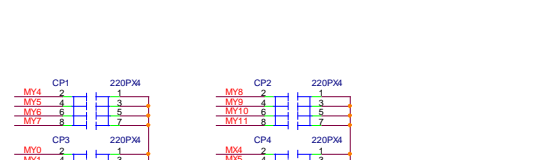
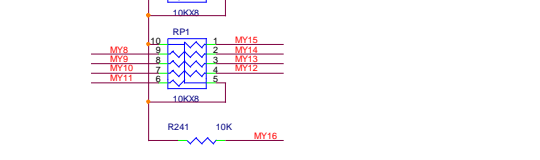
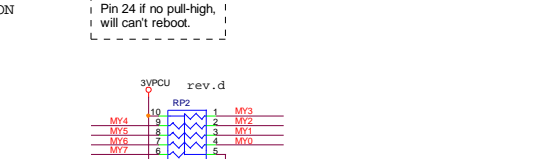
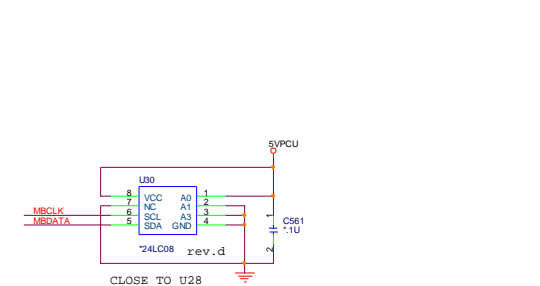
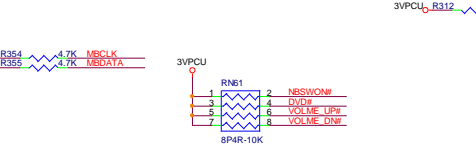
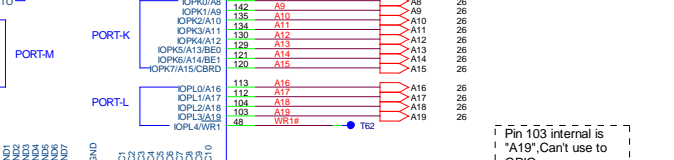
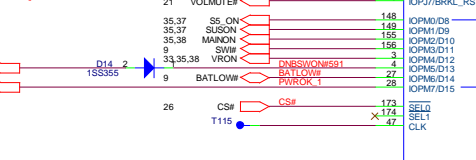
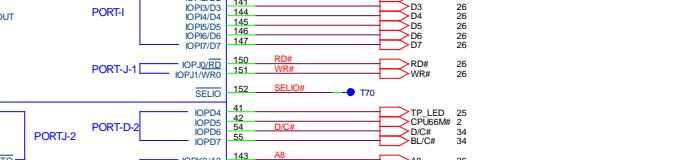
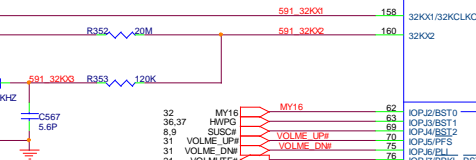
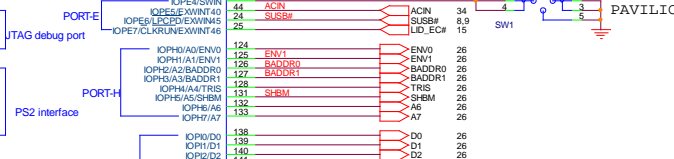
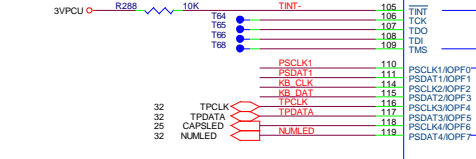
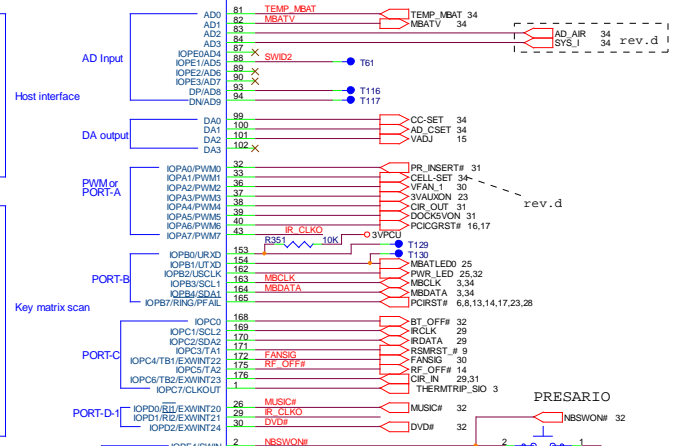
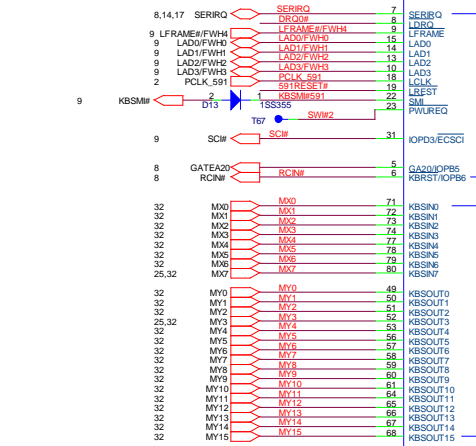
KBC-NS87551L

LDRQ#(pin 8) internal is no use



IO Address	Diglex	Dig0
BADDR1-D	1	2
BADDR1	4E	4F
MLSC1#	10	11
SHBM	10	11

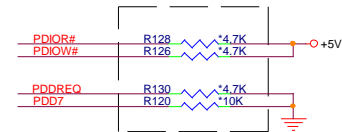
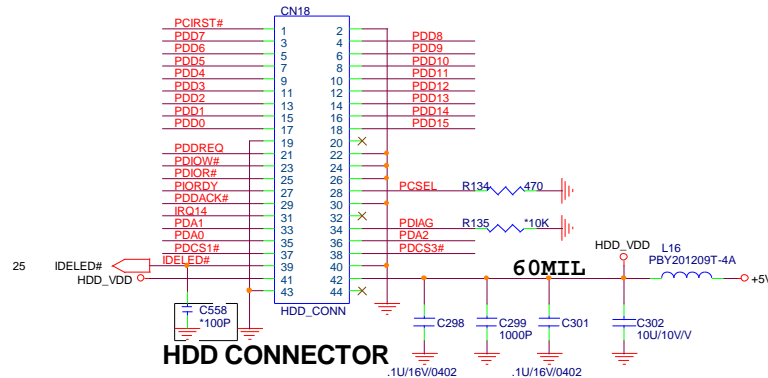
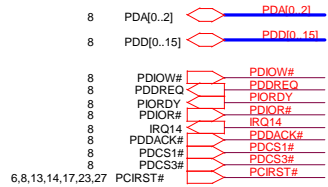
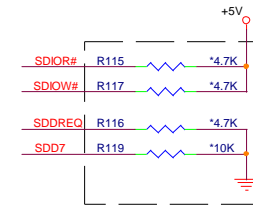
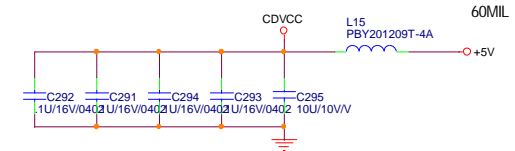
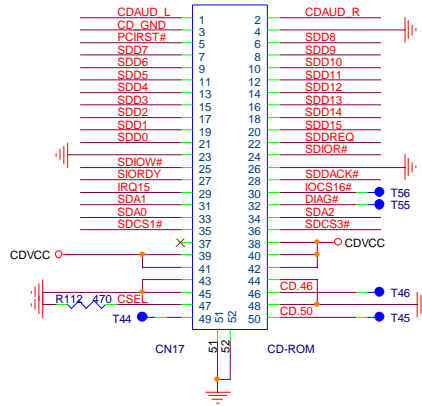
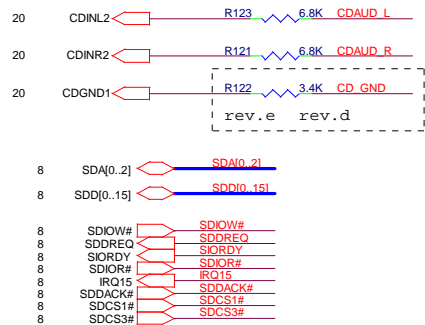
SHBM=1: Enable shared memory with host BIOS



Pin 103 internal is "A19", Can't use to GPIO

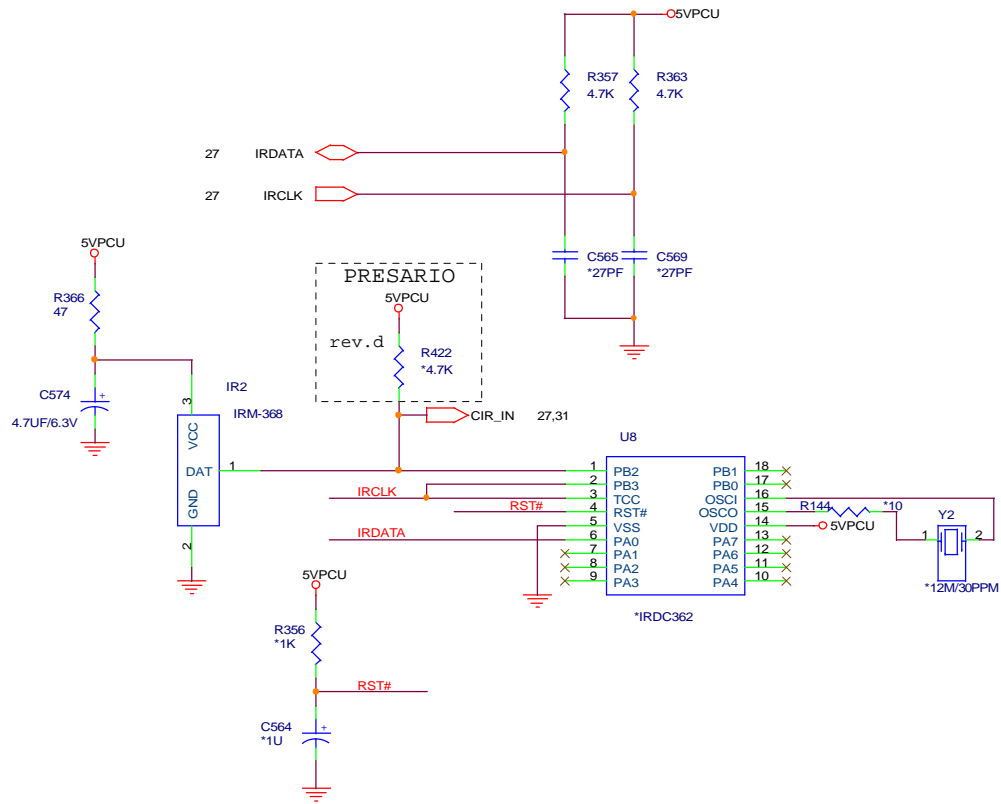
Pin 24 if no pull-high, will can't reboot.


CD-ROM



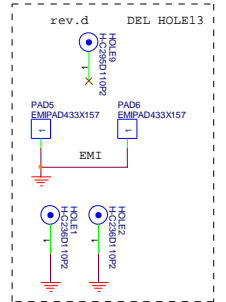
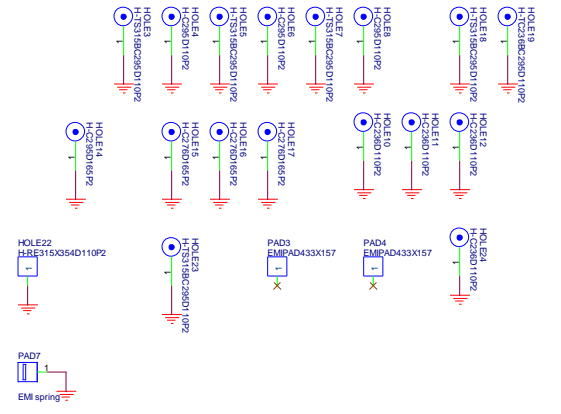
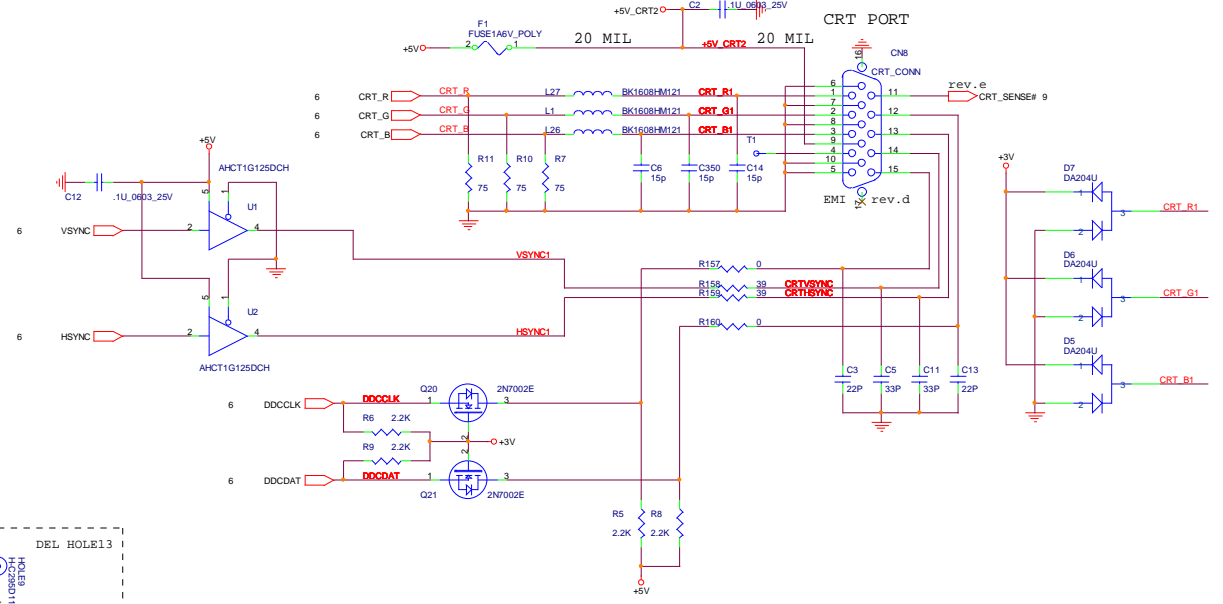
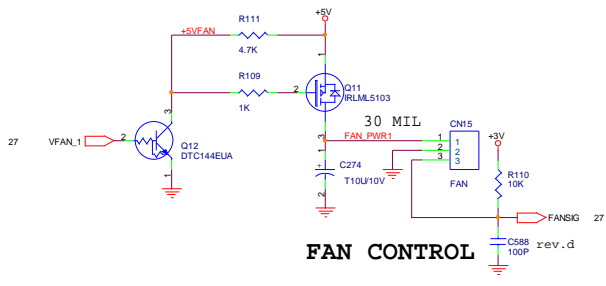
**PROJECT : CT1**  
**Quanta Computer Inc.**

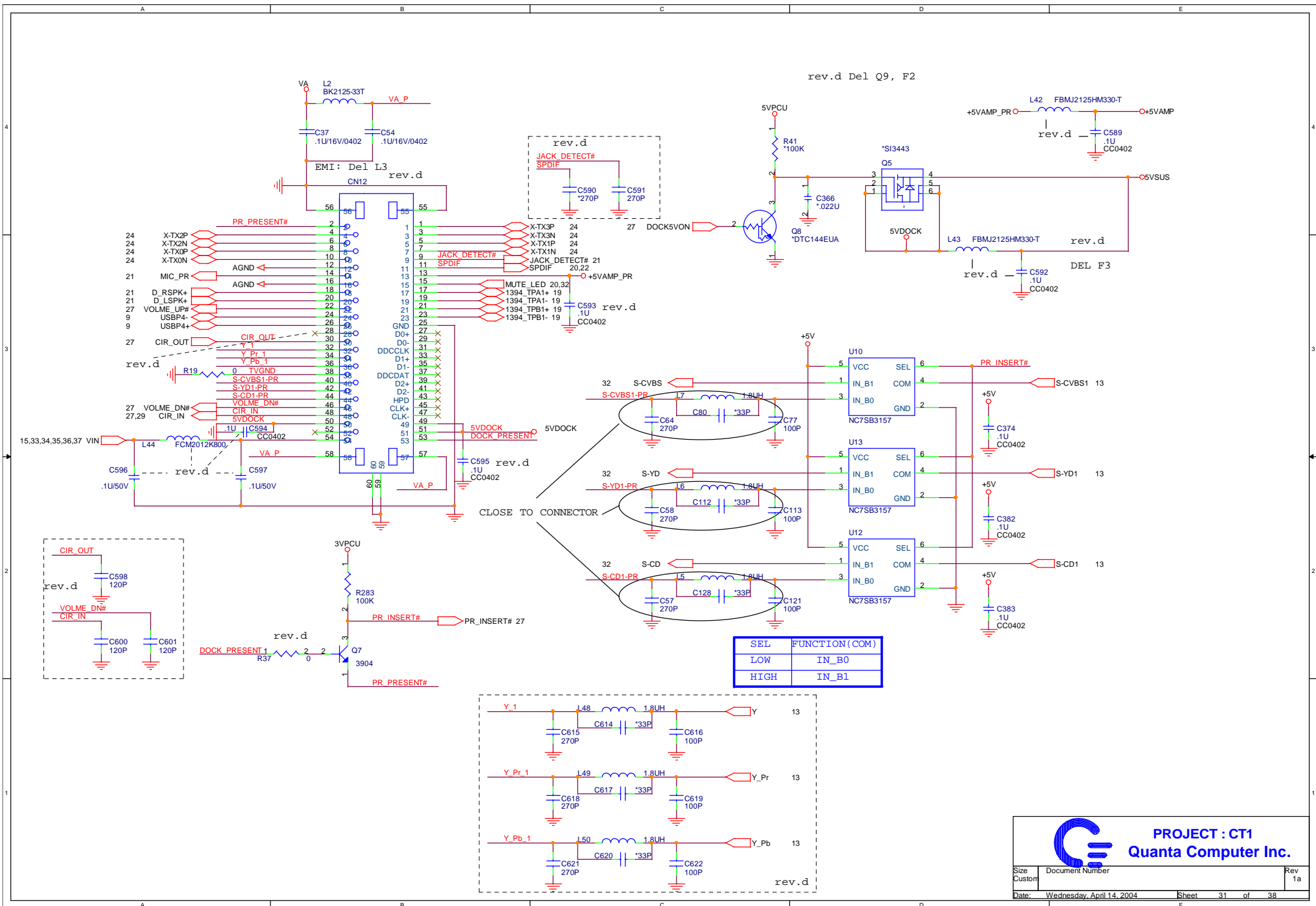
Size	Document Number	Rev
Custom	HDD&ODD CONN.	1A
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**Quanta Computer Inc.**

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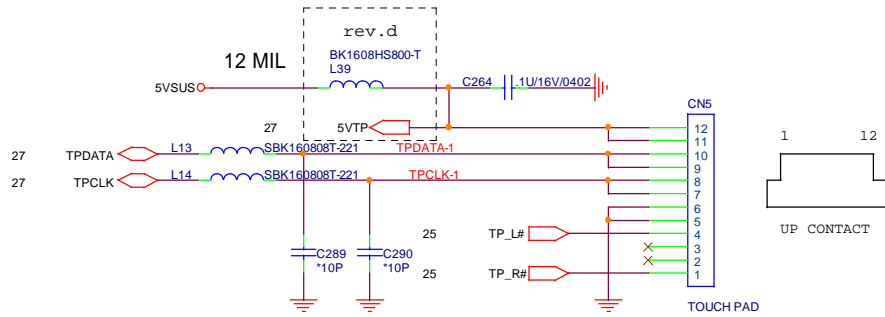


**PROJECT : CT1**  
**Quanta Computer Inc.**

Size Custom Document Number Rev 1a

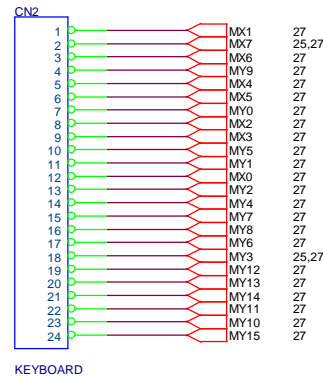
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### TOUCH PAD CONNECTOR

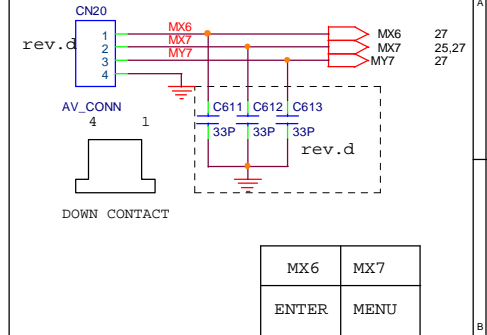


CHECK PIN DEFINE

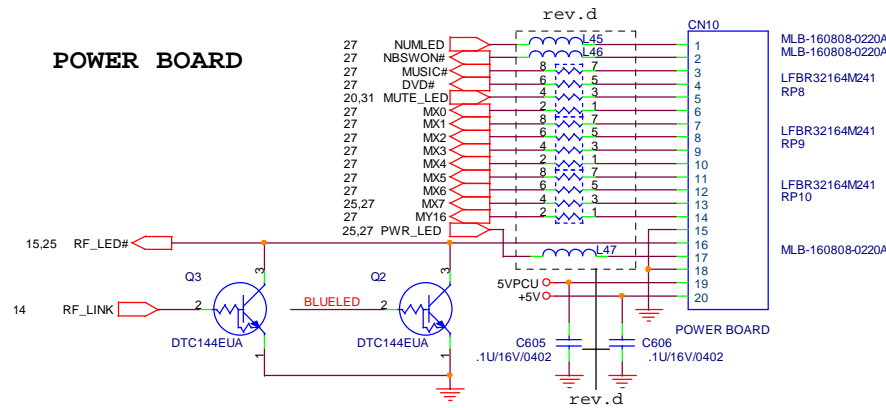
### KEYBOARD CONNECTOR



### AV BOARD

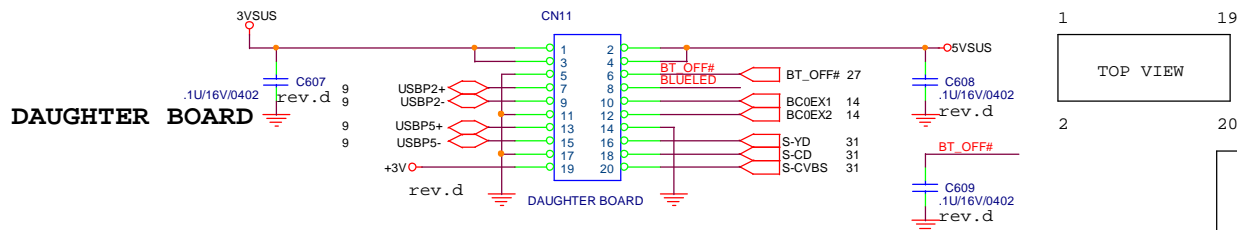


### POWER BOARD

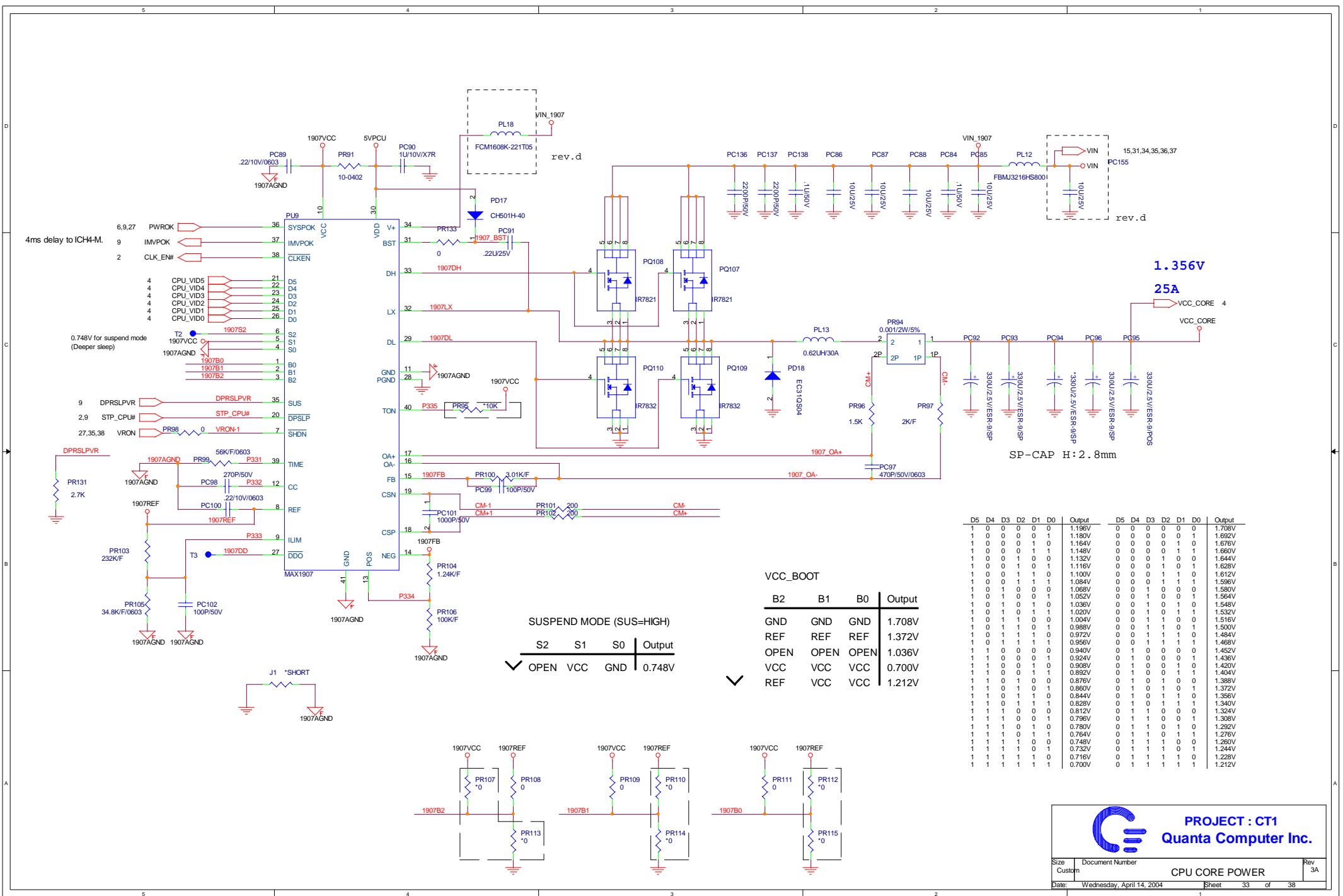


MX0	MX1	MX2	MX3	MX4	MX5	MX6	MX7
BACK	PLAY/PAUSE	FORWARD	STOP	VOL UP	MUTE	VOL DN	WIRELESS

### DAUGHTER BOARD



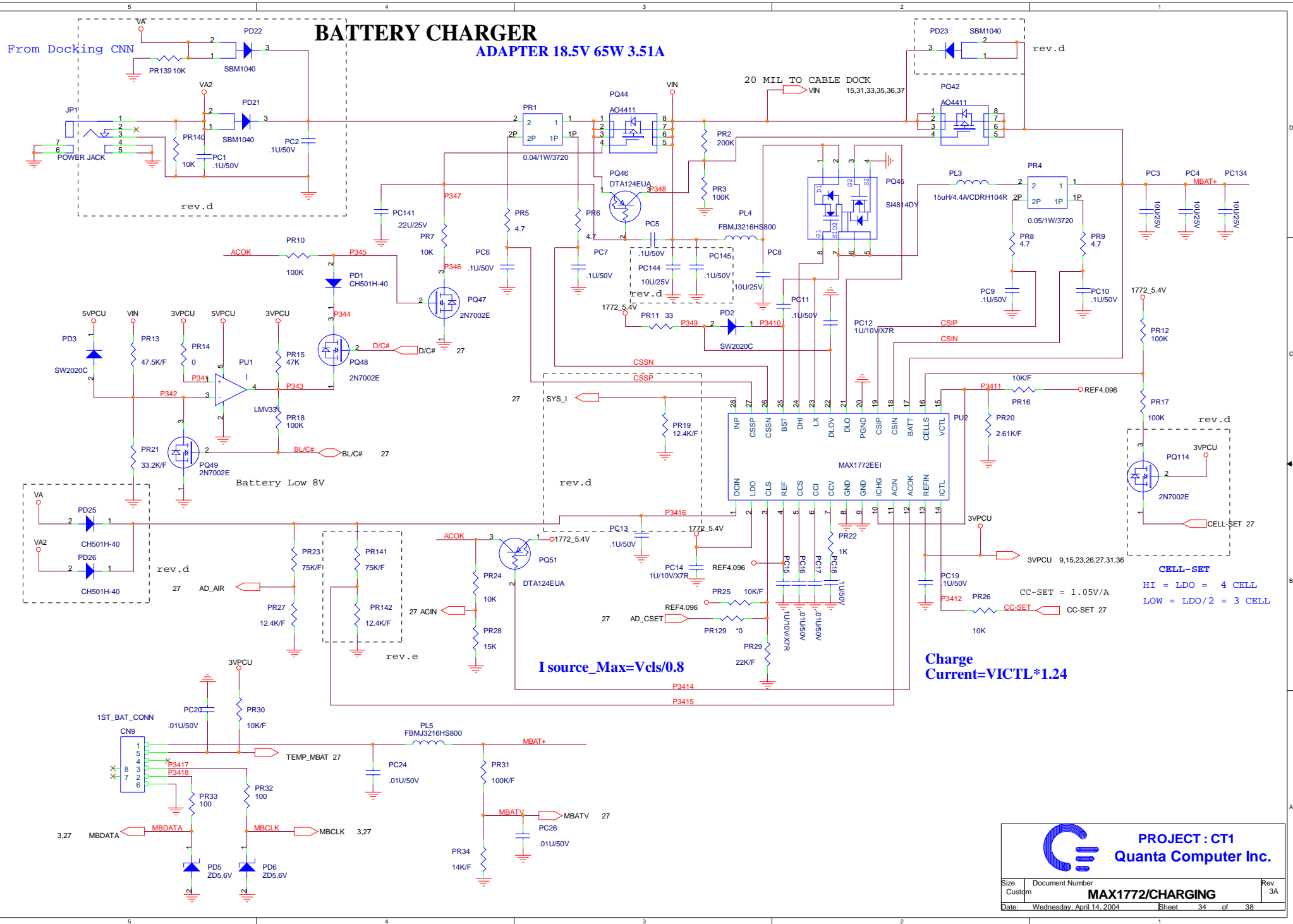
Size	Document Number	Rev
Custom	MDC	1A
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**Quanta Computer Inc.**

Size: Custom  
 Document Number: CPU CORE POWER  
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# BATTERY CHARGER ADAPTER 18.5V 65W 3.51A



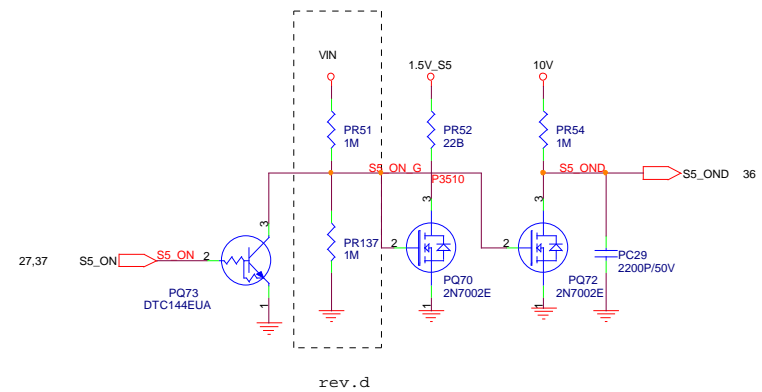
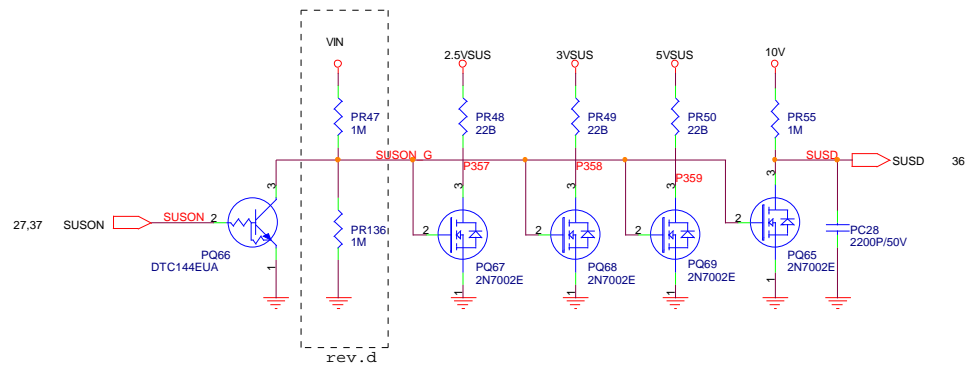
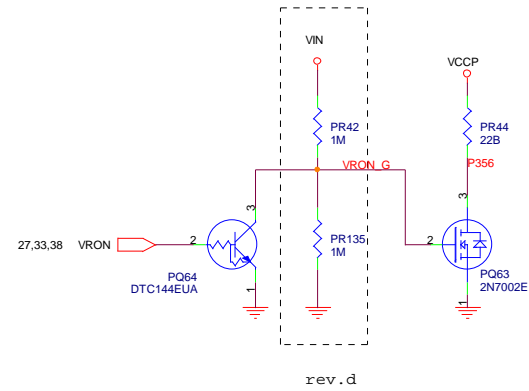
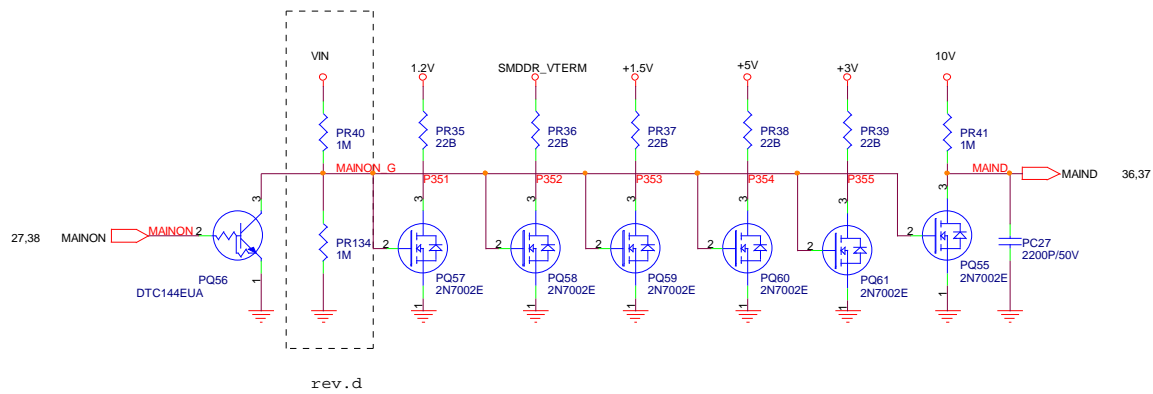
$I_{source\_Max} = V_{cls} / 0.8$

Charge Current =  $VICTL * 1.24$

**CELL-SET**  
 HI = LDO = 4 CELL  
 LOW = LDO/2 = 3 CELL

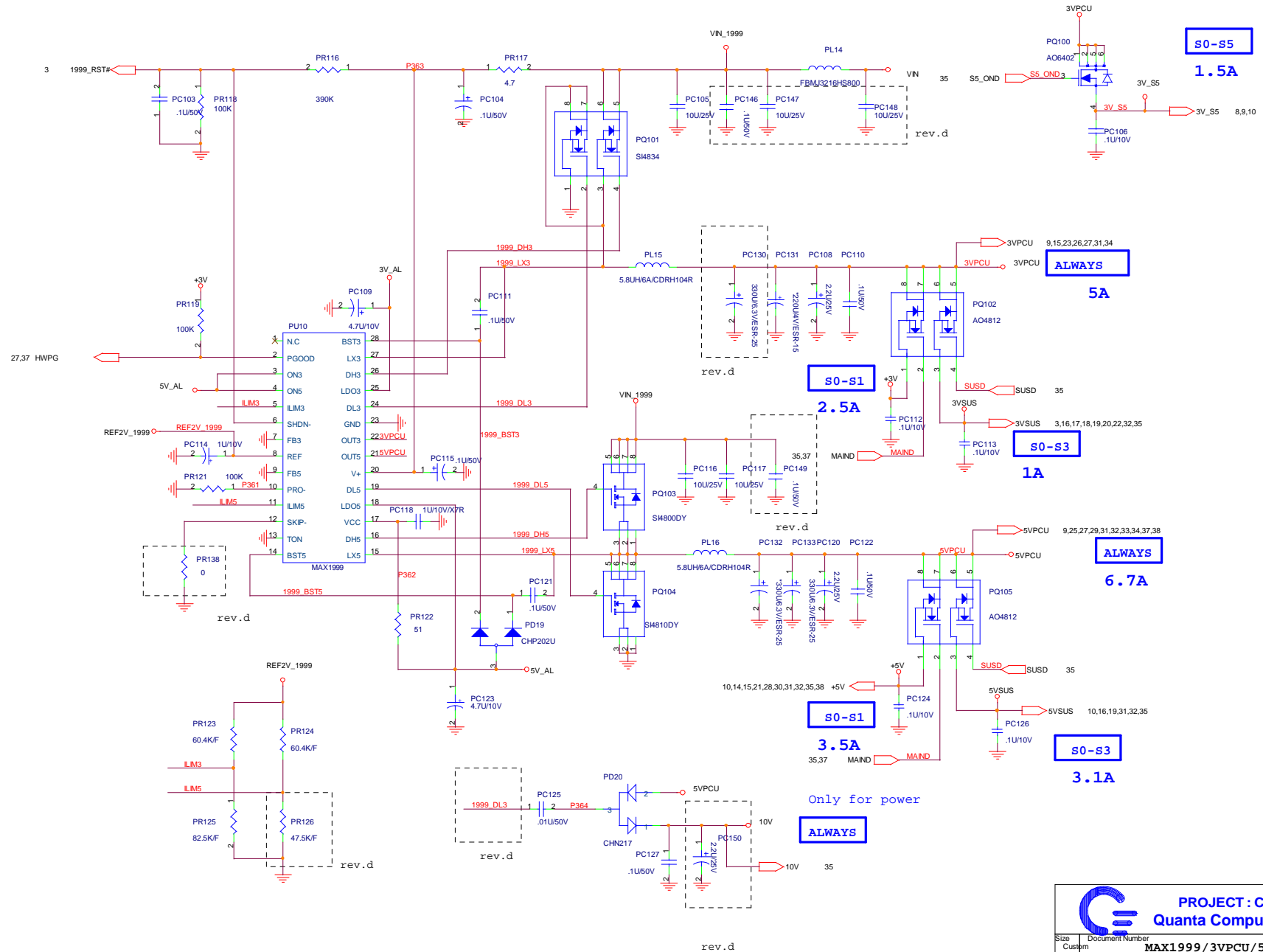
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		3A
Size	Document Number	<b>MAX1772/CHARGING</b>
Custom		
Date:	Wednesday, April 14, 2004	Sheet 34 of 38

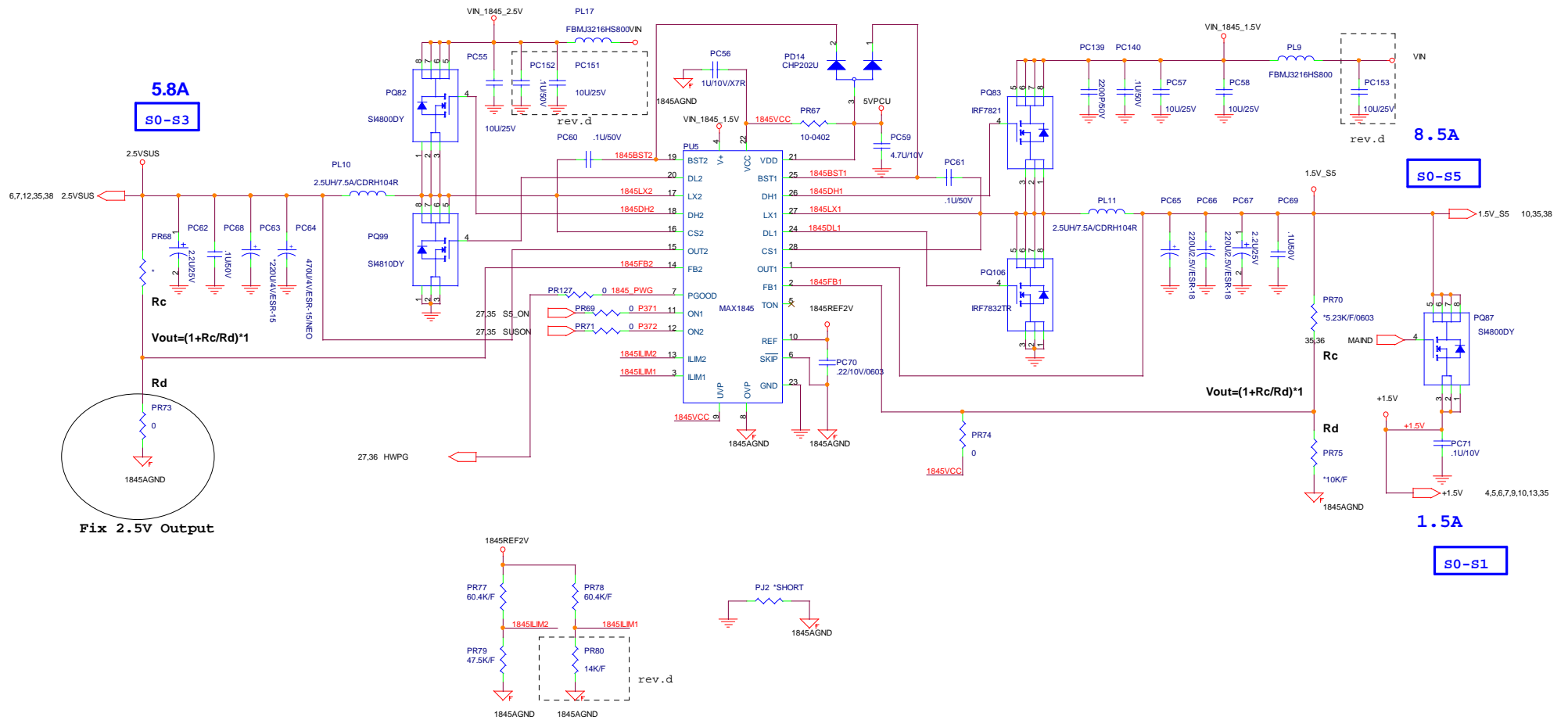





PROJECT : CT1  
Quanta Computer Inc.

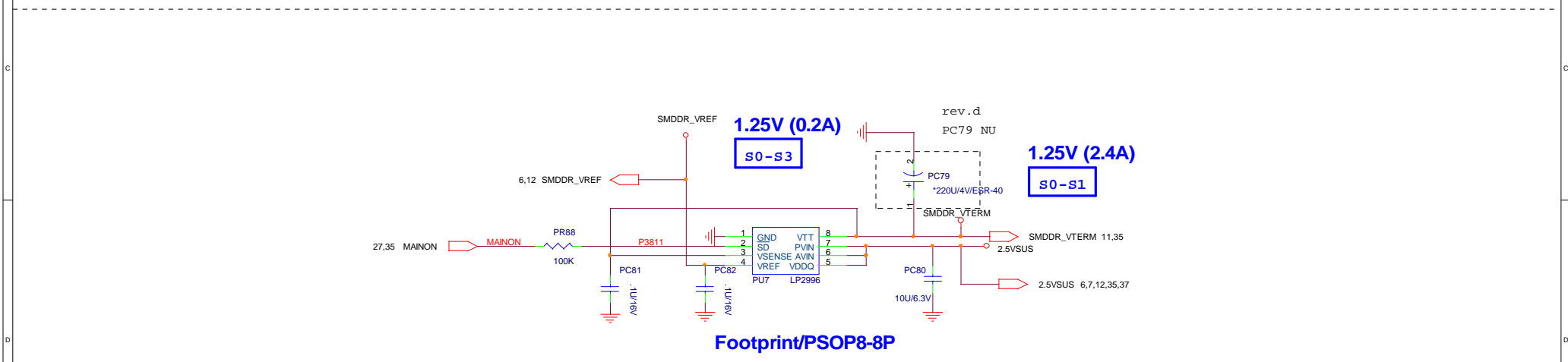
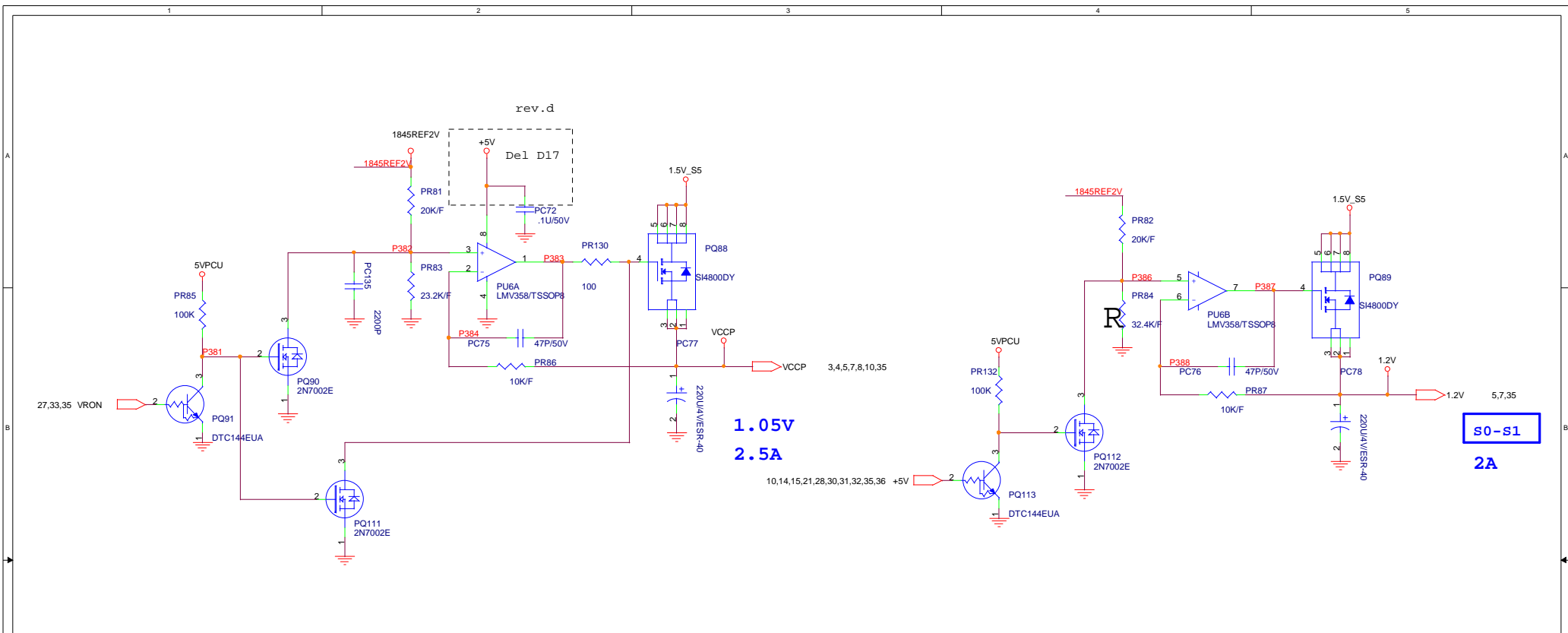
Size Custom	Document Number <b>DISCHARGE</b>	Rev 3A
Date: Wednesday, April 14, 2004	Sheet 35 of 38	





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Quanta Computer Inc.

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Custom	MAX1845/2.5VSUS/1.5V_S5	1A
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**Quanta Computer Inc.**

Size	Document Number	Rev
Custom	VCCP / 1.2V / DDR-VTERM	1A
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