CT1 BLOCK DIAGRAM

PENTIUM-M / Montara-GM / ICH4-M

PCB STACK UP

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

CPU THERMAL SENSOR
GMT-781
PAGE: 3

CPU PENTIUM-M
478 Pins (micro FC-PGA)
PAGE: 3, 4

HCLK_CPU, HCLK_CPU#
HCLK_MCH, HCLK_MCH#
DREFSSCLK
CLK66_MCH

14.318MHz

CLOCK GEN
CY28346/
ICS950810
PAGE: 2

PCLK_591

SYSTEM POWER(1.2V/1.05V/1.25V) PAGE: 38
CPU CORE MAX1907 POWER 1.356V PAGE: 33
SYSTEM MAX1999 POWER(3/5V) PAGE: 36
SYSTEM POWER(2.5VSUS/1.5V_S5) PAGE: 37
BATT CHARGER PAGE: 34
DISCHARGE PAGE: 35

FSB
4X100MHZ

NORTH BRIDGE Montara-GM
732 micro-FCBGA
INTEGRADED VGA FUNCTION
PAGE: 5, 6, 7

DDR I/F 2.5V, 266MHz

DDR-SODIMM1 PAGE: 11, 12
DDR-SODIMM2 PAGE: 11, 12

CRT port PAGE: 30 — R.G,B
LCD Panel PAGE: 15 — LVDS X1
7015 DVOC PAGE: 13

14.318MHz

HUB LINK
66MHZ

32.768KHz

14M_ICH
CLK66_ICH
PCLK_ICH
CLK48_USB
DREFCLK
PCLK_LAN
PCI_CLK_7411
PCLK_MINI

33MHZ, 3.3V PCI

ICH4-M
421 BGA
PAGE: 8, 9, 10

AC97

USB PORT 0, 1 PAGE: 19 — USB 2.0
1st IDE - HDD PAGE: 28 — ATA 66/100
2nd IDE - CDROM PAGE: 28 — ATA 66/100

3.3V LPC, 33MHz

24.576MHz
25MHz
24.576MHz
48MHz

PWRCLKP
PWRCLKN
DIB_DATAN
DIB_DATAP

AC97
CX20468-31
MBAMC20493-010
PAGE: 20

LAN
Realtek
8100CL
PAGE: 23

MINI-PCI
PAGE: 14

CARDBUS / IEEE 1394 CONTROLLER/CF
TI 7411
PAGE: 16, 17, 18, 19

CABLE DOCK
Daughter Board
TV, USB, BLUE TOOTH
AV BOARD
Power Board

32.768KHz

PC97551
TQFP 176
PAGE: 27

PCLK_591

SMARTDAA MODEM, MDC PAGE: 22
WIRE
RJ11 JACK PAGE: 24

AMP
TPA0312
PAGE: 21

JACK
HEADPHONE, 2ND HEADPHONE, MIC
PAGE: 21

RJ45 JACK PAGE: 24

5 IN 1
CARD READER
SD/MMC, SM, MS, XD
PAGE: 18

CARDBUS SLOT X1 PAGE: 16

1394 CONN PAGE: 19

FAN PAGE: 30
Touchpad PAGE: 32
Keyboard PAGE: 32
FLASH PAGE: 26

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

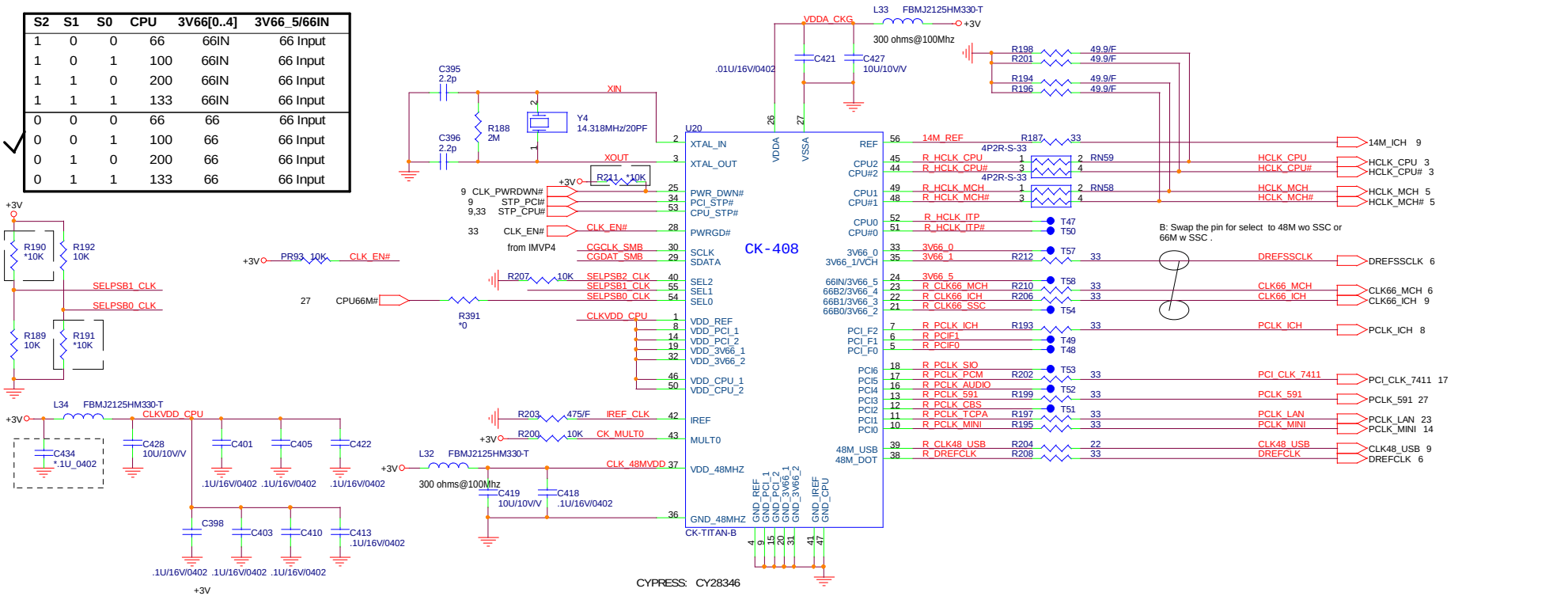
PIRQA#: RTL8100CL
PIRQB#: NC
PIRQC#: MINI PCI
PIRQD#: MINI PCI
PIRQE#: 7411
PIRQF#: 7411
PIRQG#: 7411
PIRQH#: Internal USB

PROJECT : CT1
Quanta Computer Inc.

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

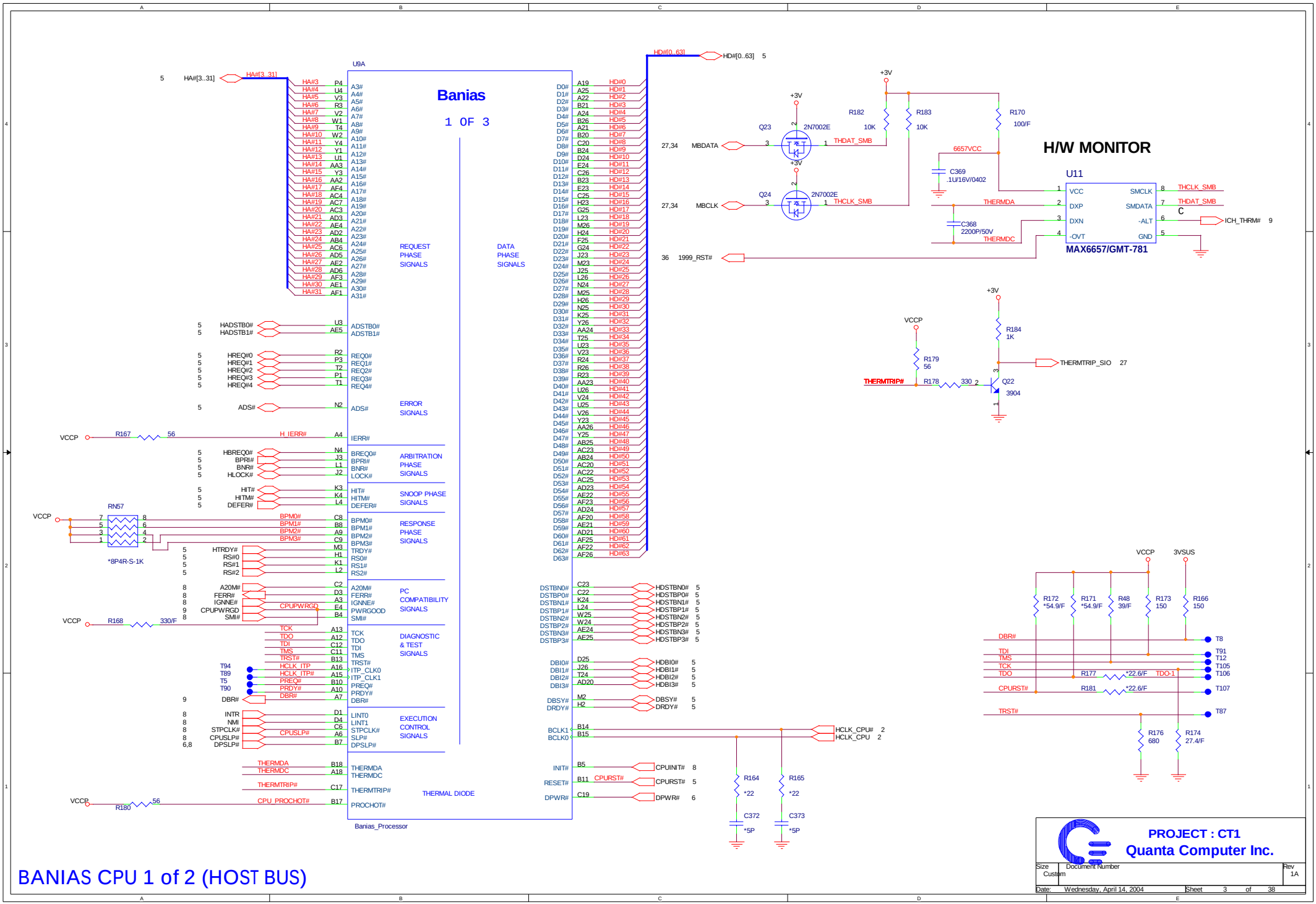
CLK GEN

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

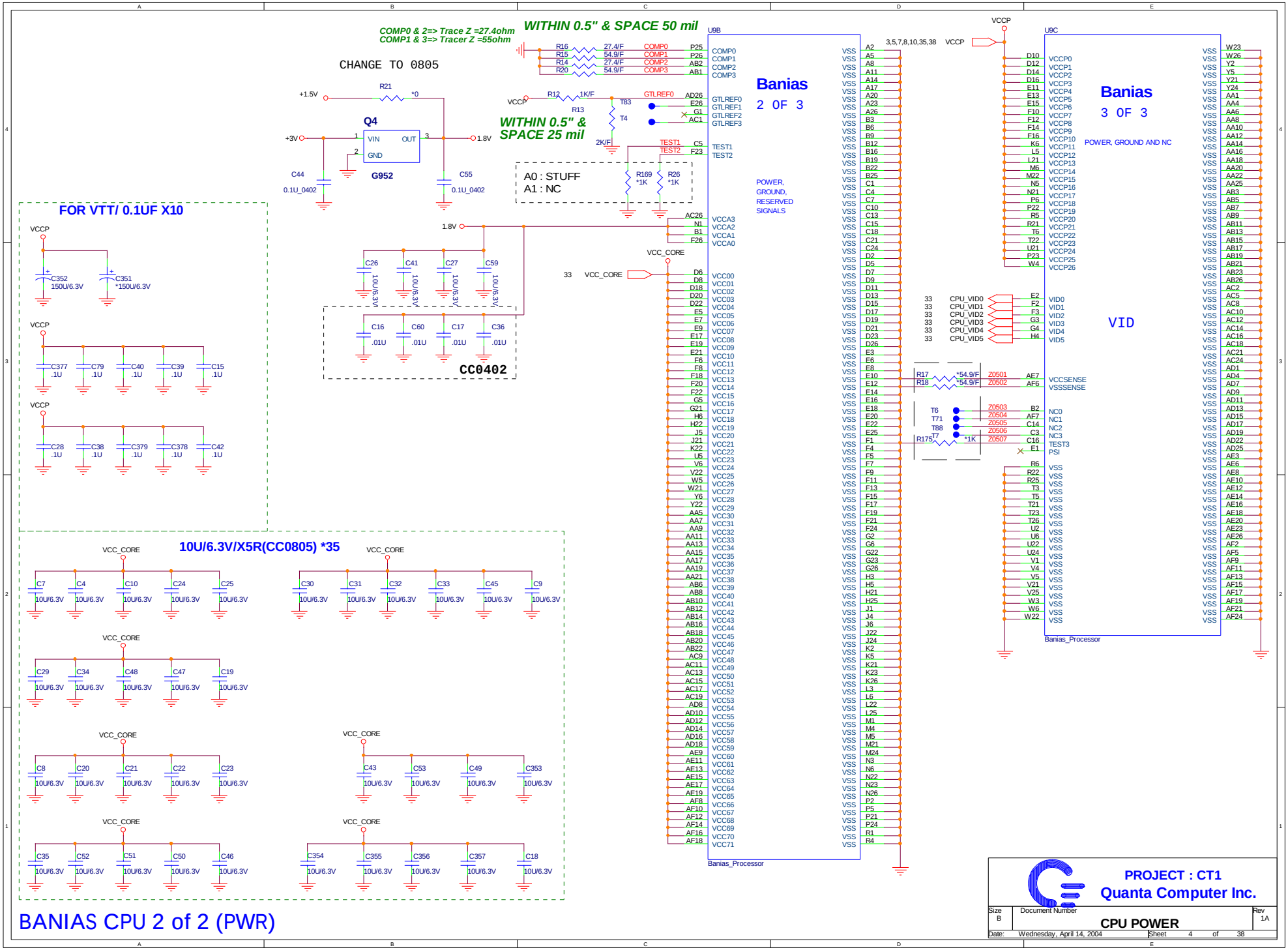


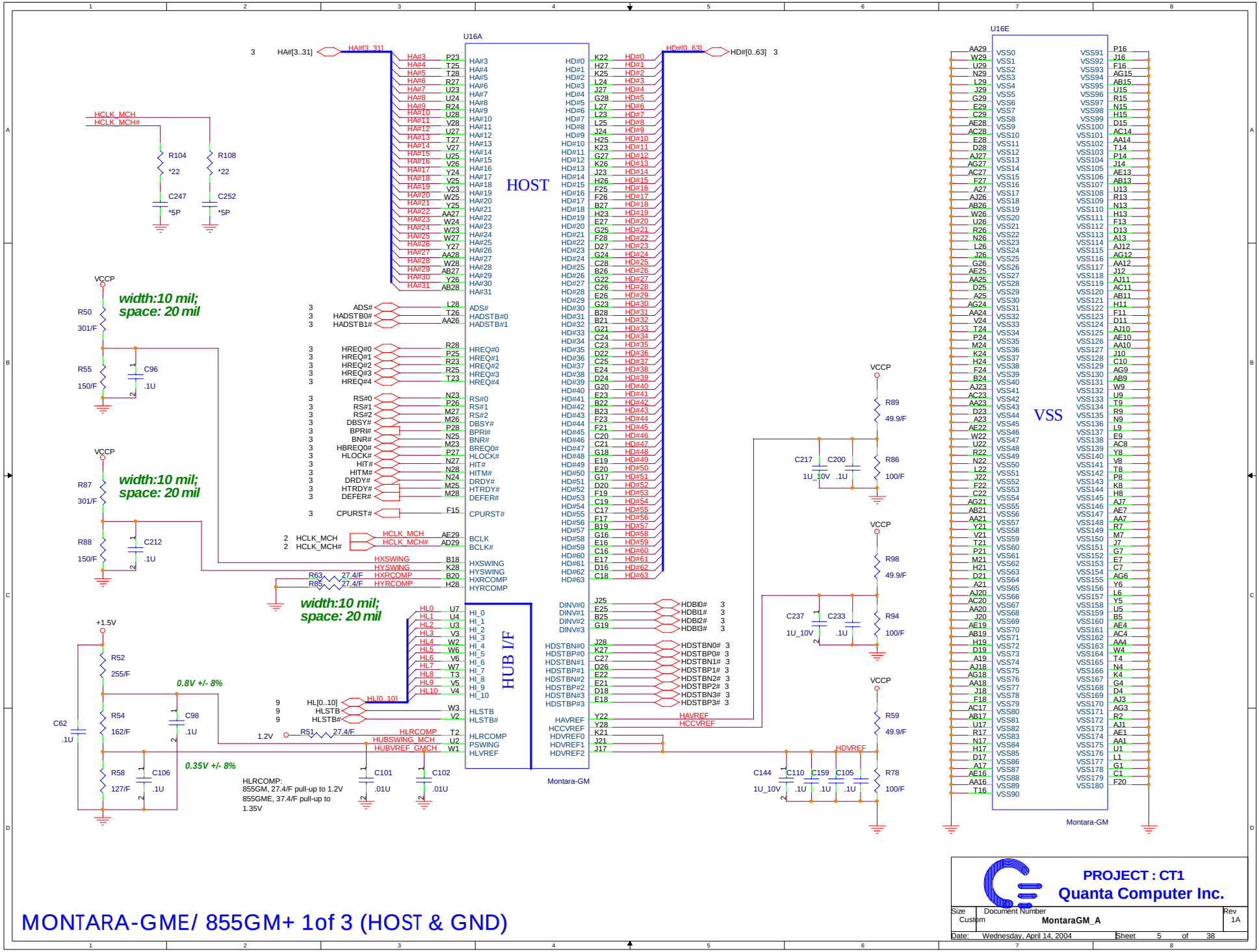
PROJECT : CT1
Quanta Computer Inc.

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



BANIAS CPU 1 of 2 (HOST BUS)

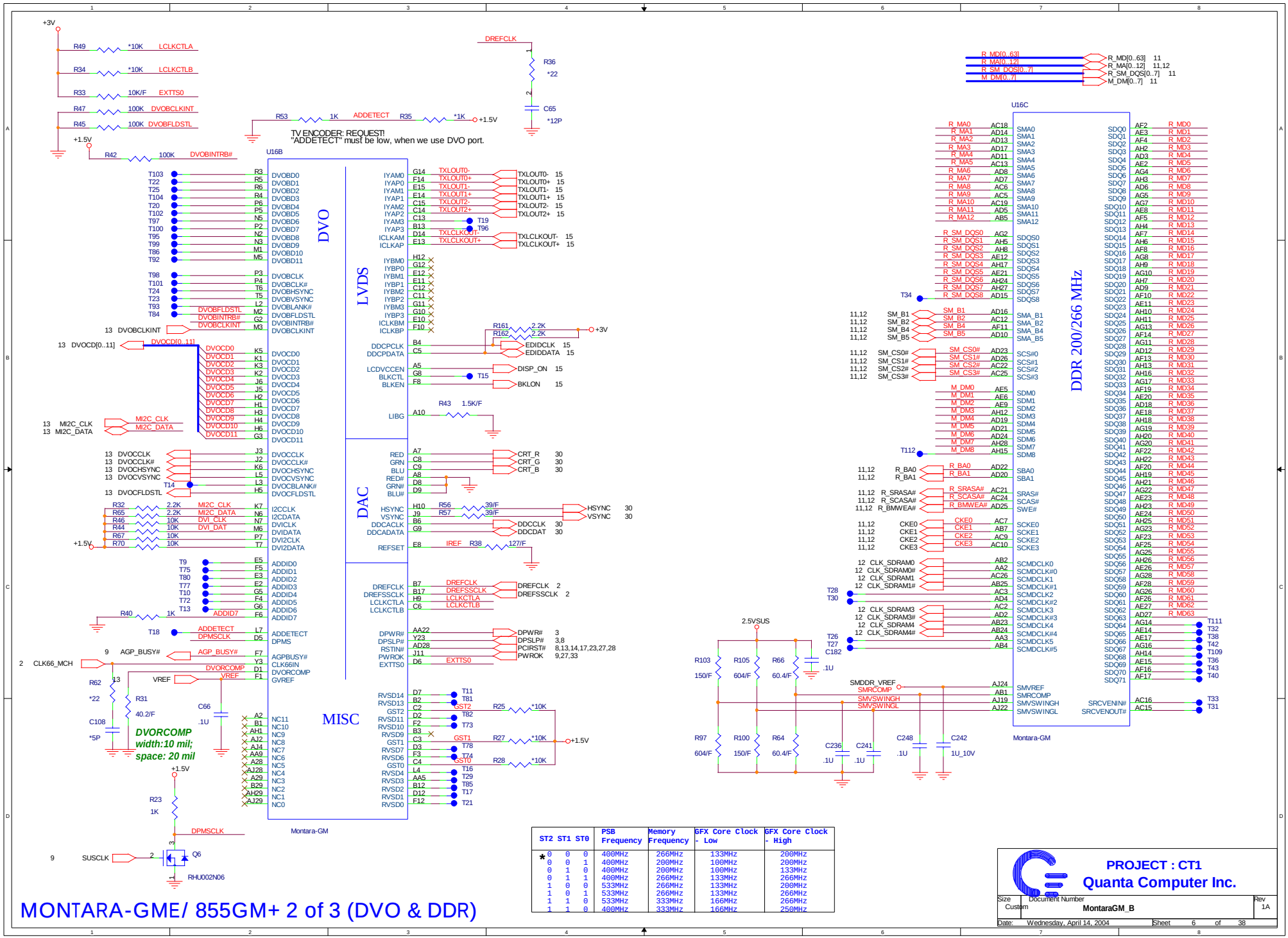




MONTARA-GME/ 855GM+ 1of 3 (HOST & GND)

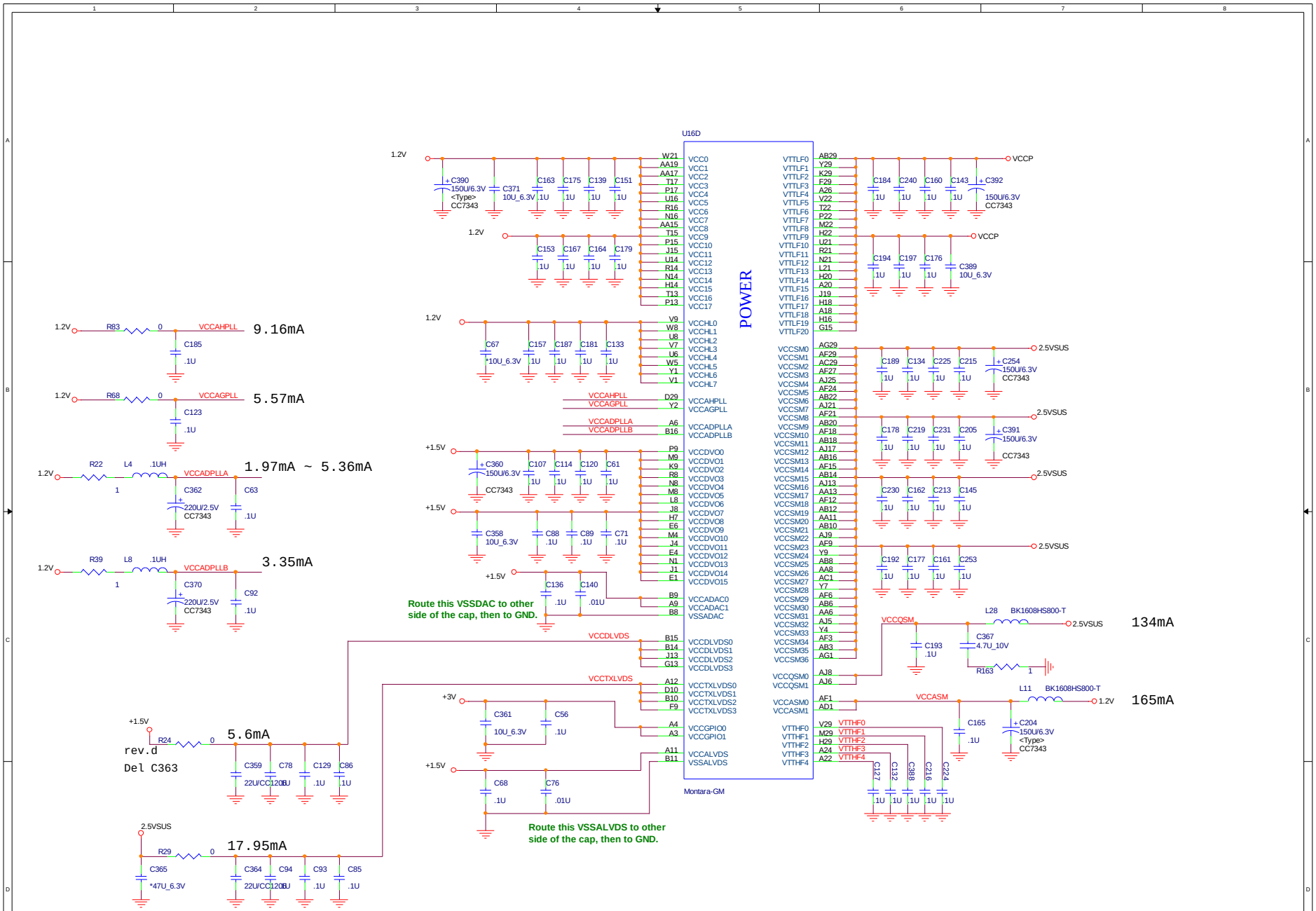
PROJECT : CT1
Quanta Computer Inc.

Size	Document Number	Rev
Custom	MontaraGM_A	1A
Date: Wednesday, April 14, 2004	Sheet 5 of 38	



ST2	ST1	ST0	PSB Frequency	Memory Frequency	GFX Core Clock - Low	GFX Core Clock - High
* 0	0	0	400MHz	266MHz	133MHz	200MHz
0	0	1	400MHz	200MHz	100MHz	200MHz
0	1	0	400MHz	200MHz	100MHz	133MHz
0	1	1	400MHz	266MHz	133MHz	266MHz
1	0	0	533MHz	266MHz	133MHz	200MHz
1	0	1	533MHz	266MHz	133MHz	266MHz
1	1	0	533MHz	333MHz	166MHz	266MHz
1	1	0	400MHz	333MHz	166MHz	250MHz

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



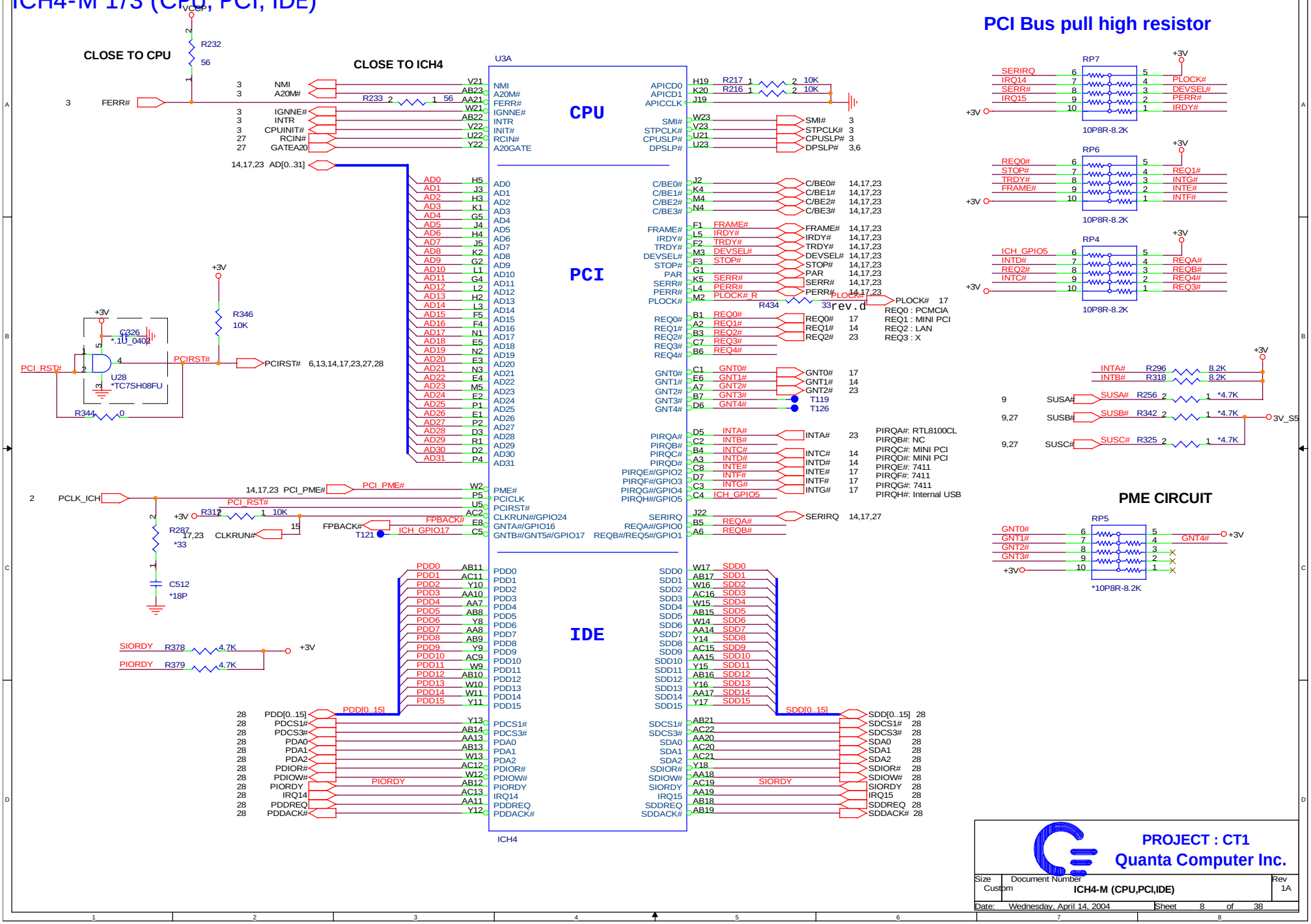
change +2.5v to 2.5vsus

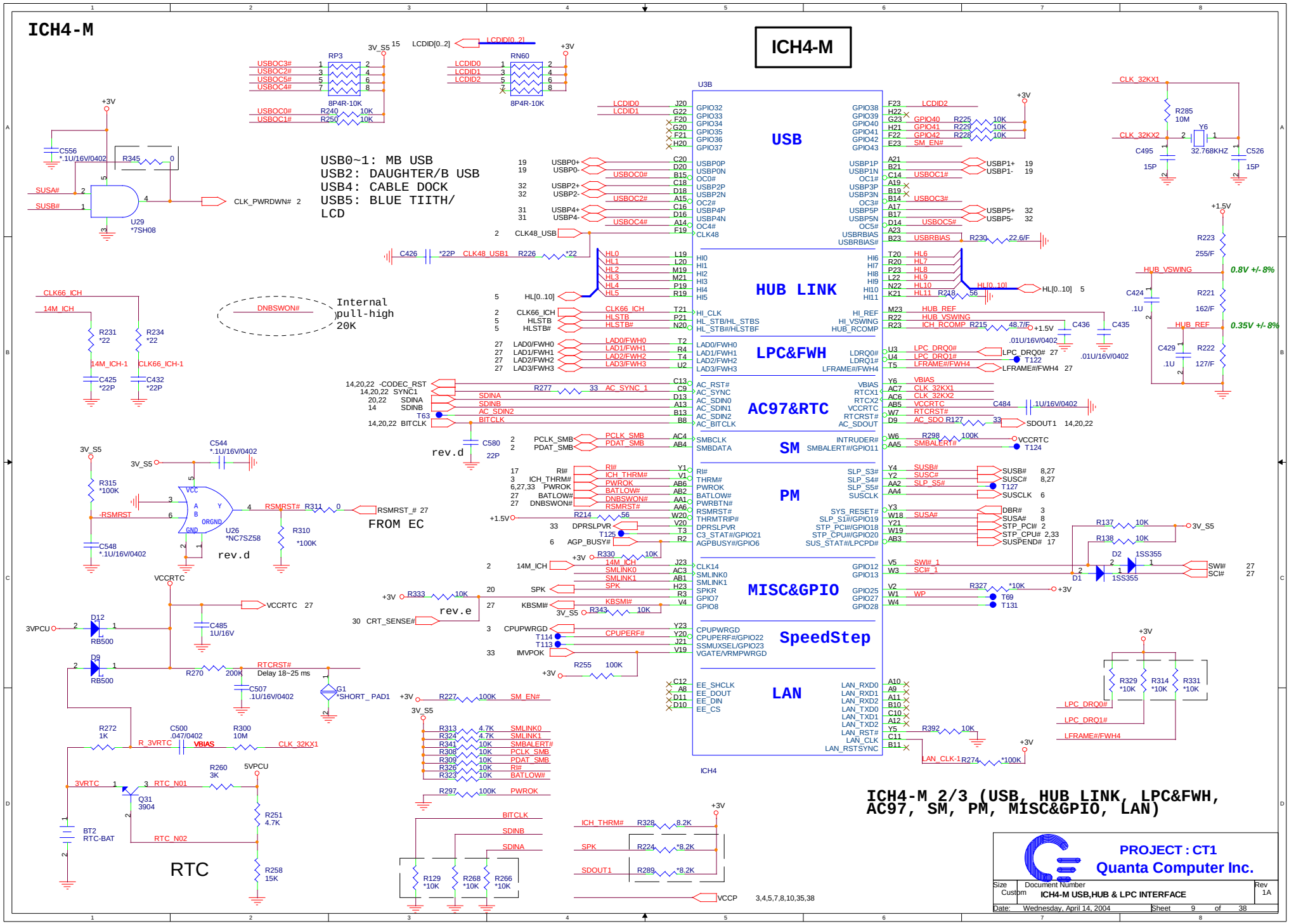
MONTARA-GME/ 855GM+ 3 of 3 (POWER & CAP.)

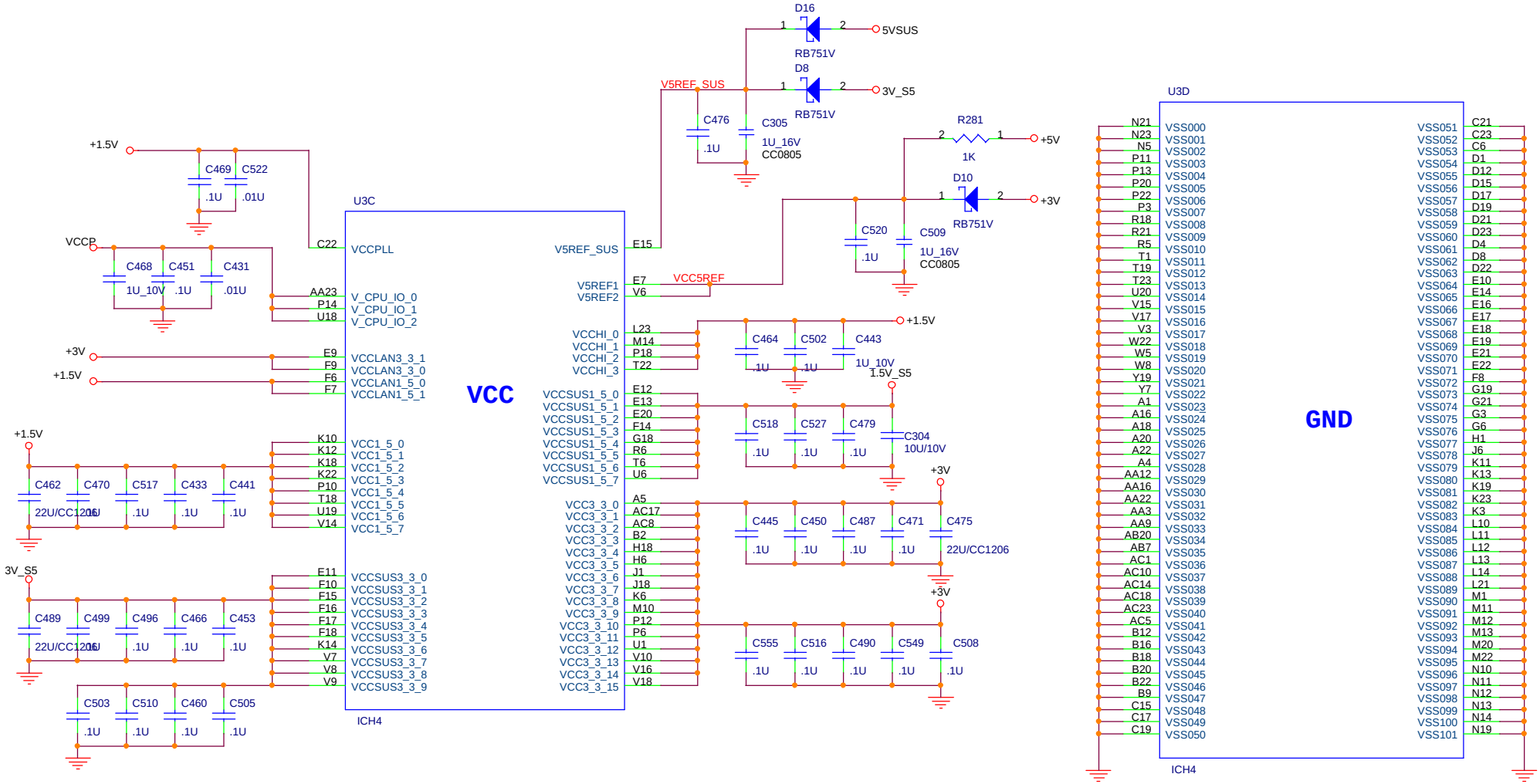
PROJECT : CT1
Quanta Computer Inc.

Size	Document Number	Rev
Custom	MontaraGM_C	1A
Date: Wednesday, April 14, 2004	Sheet 7 of 38	

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





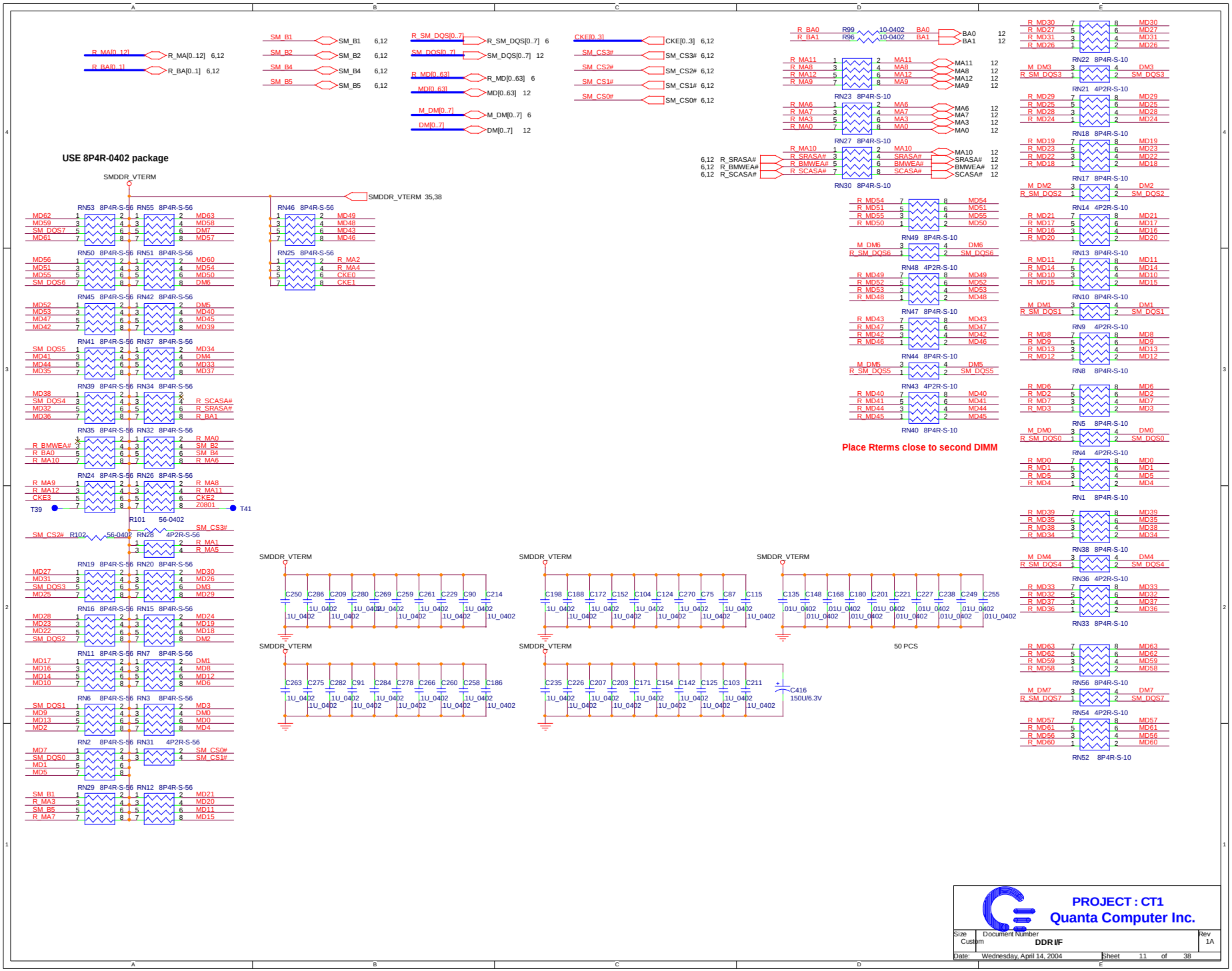


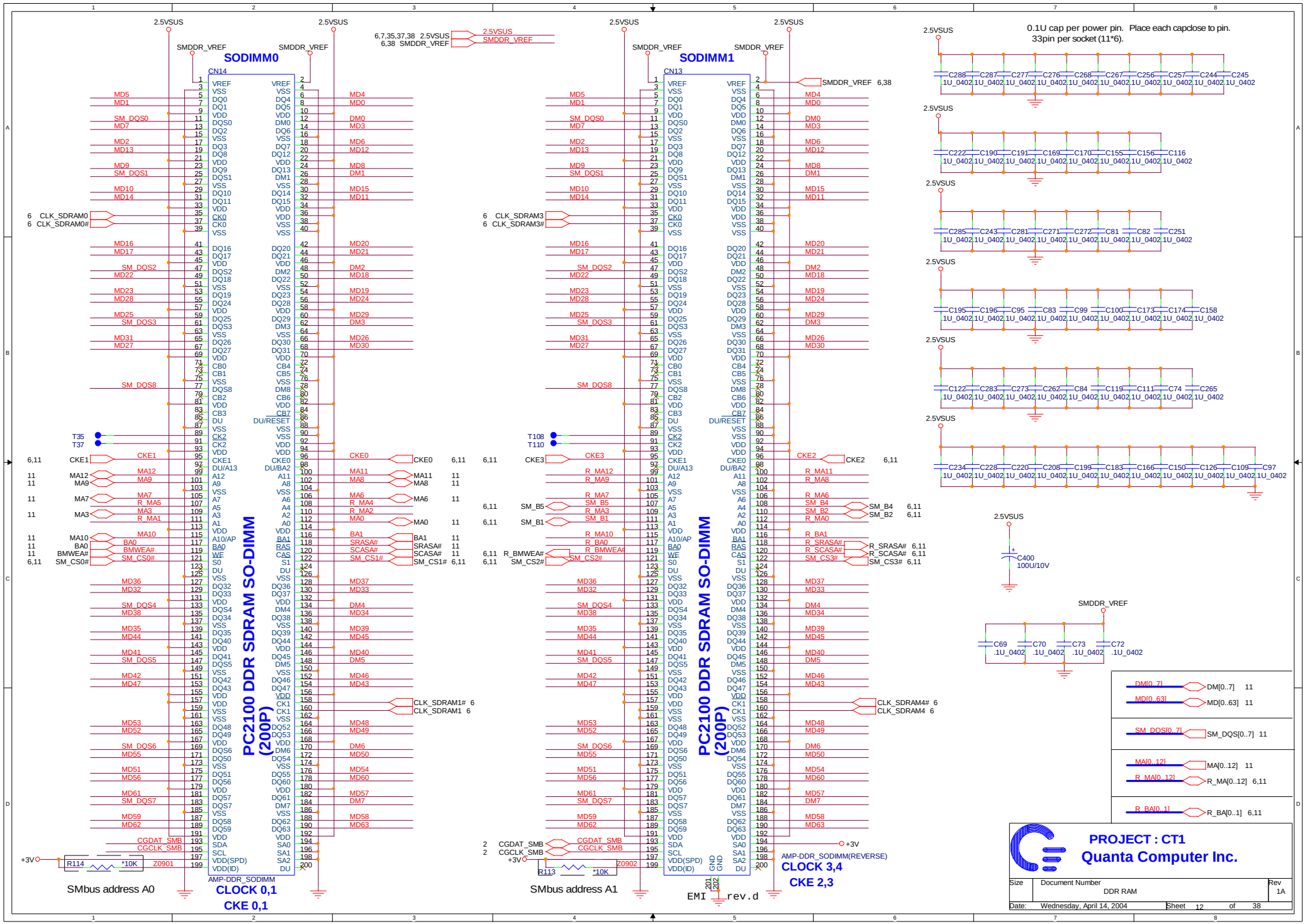
ICH4-M 3/3 (PWR, GND)

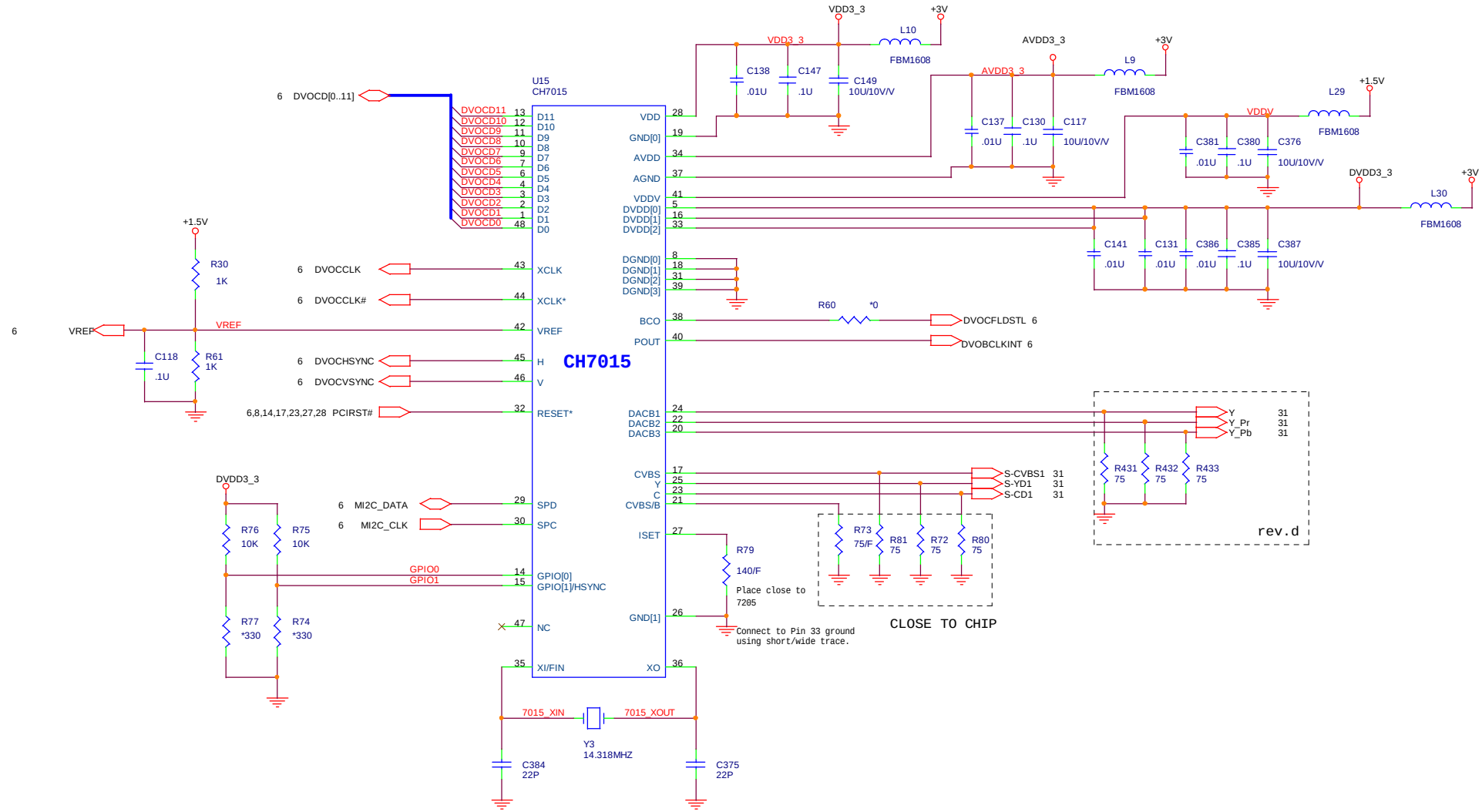
PROJECT : CT1

Quanta Computer Inc.

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





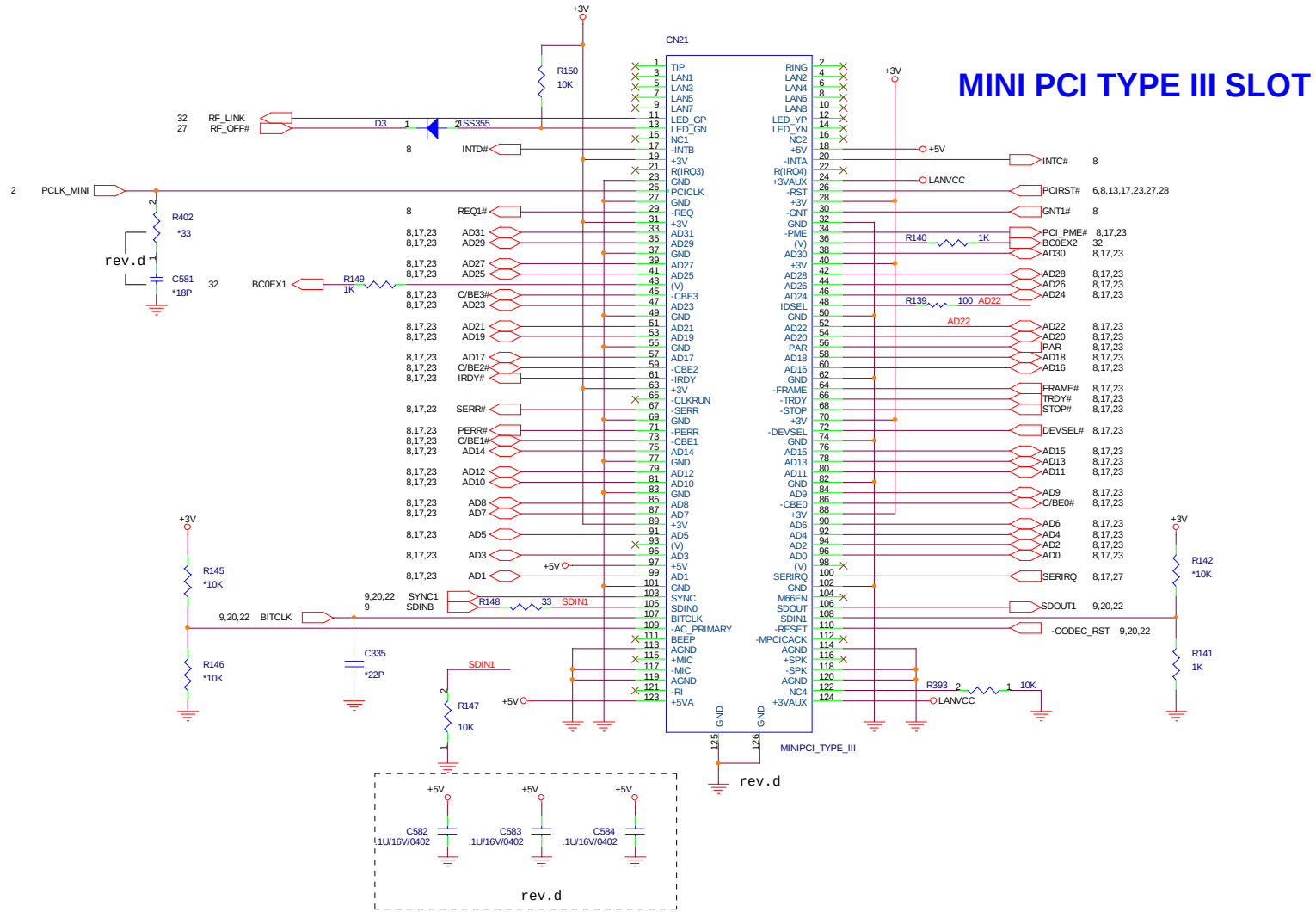


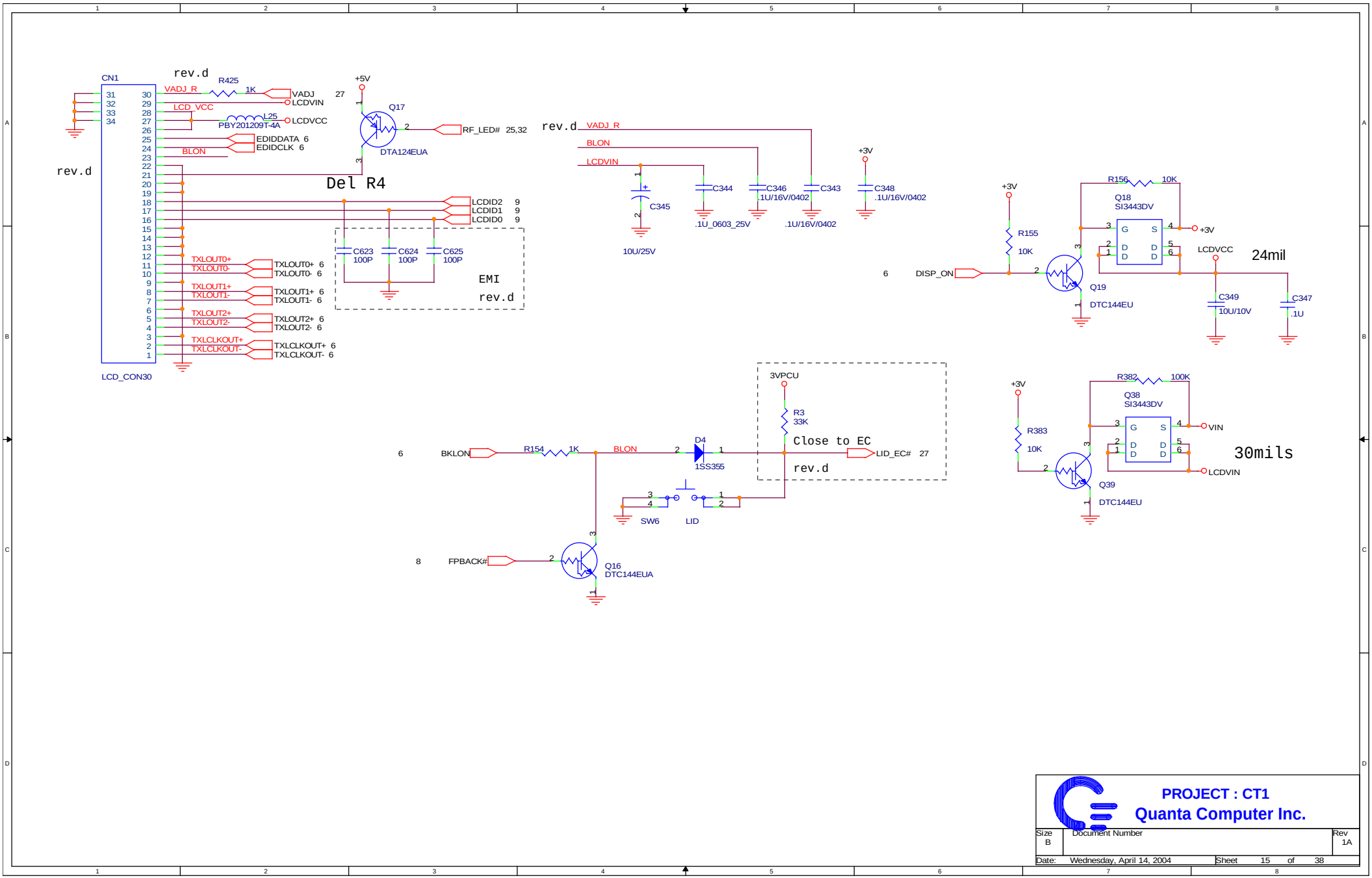
GPIO[1:0] Pull Up and Pull Down TV output option will be defined later by SW group.

PROJECT : CT1
Quanta Computer Inc.

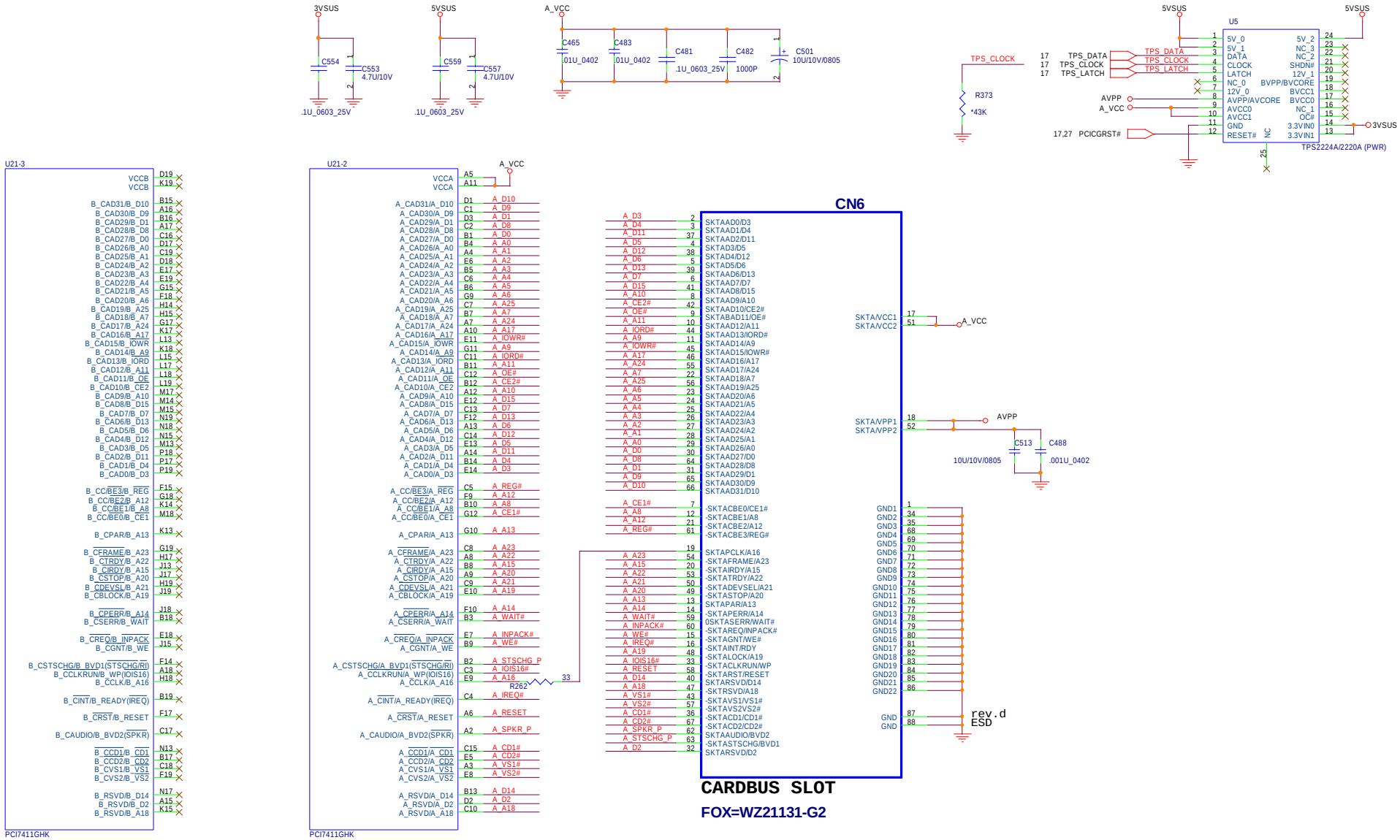
Size	Document Number	Rev
Custom		1A

Date: Wednesday, April 14, 2004 Sheet 13 of 38





CardBus Connector

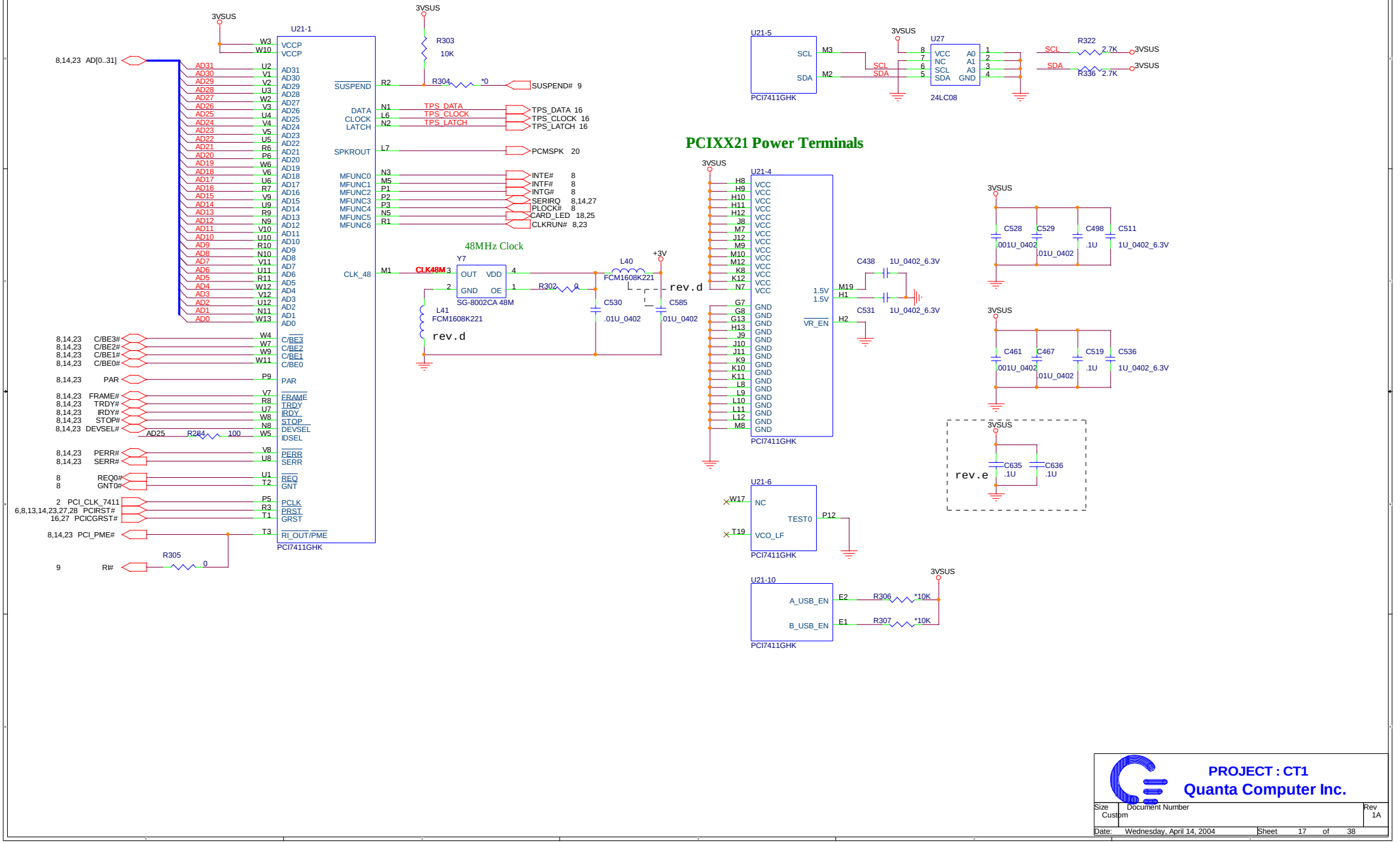


PROJECT : CT1
Quanta Computer Inc.

Size	Document Number	Rev
Custom		1A

Date: Wednesday, April 14, 2004 Sheet 16 of 38

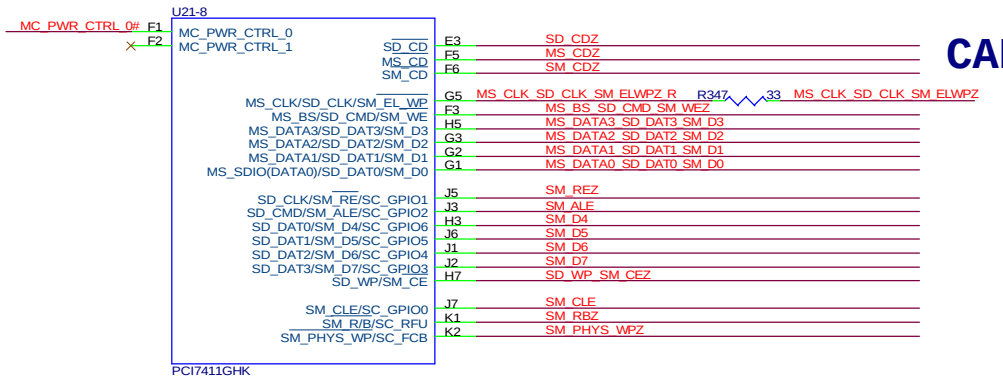
CardBus

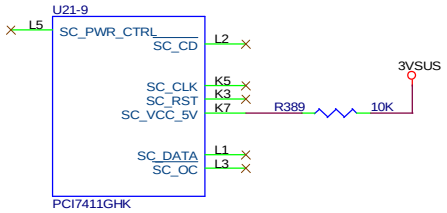


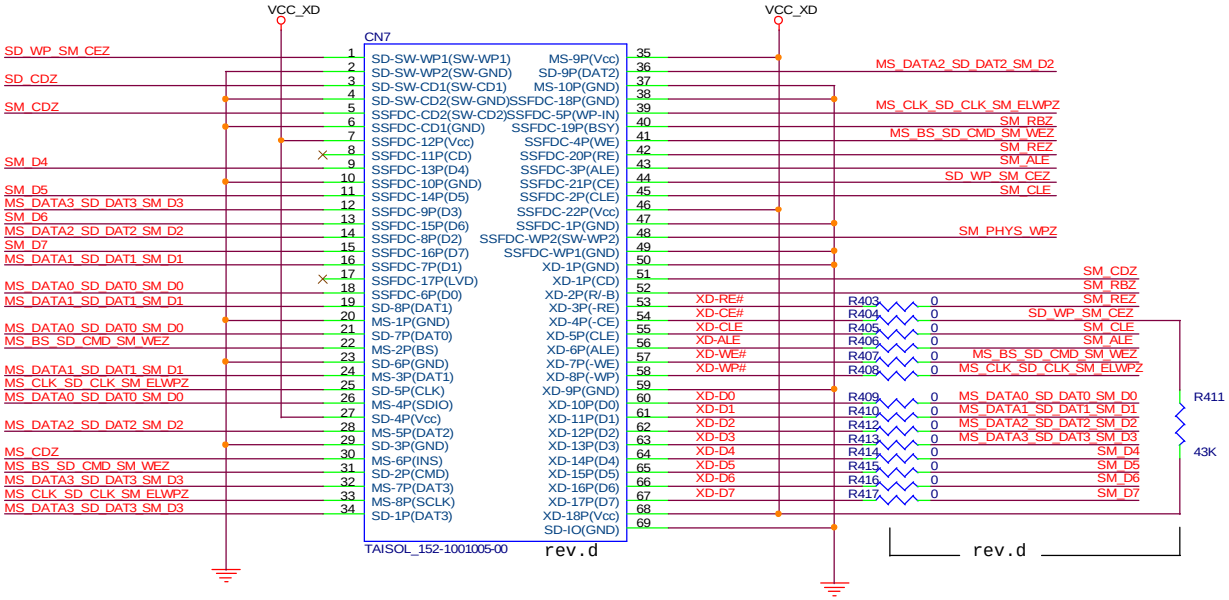
PROJECT : CT1
Quanta Computer Inc.

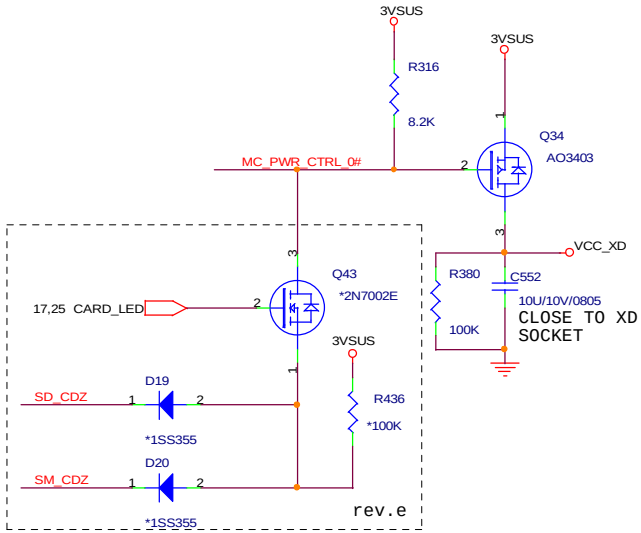
Size	Document Number	Rev
Custom		1A
Date: Wednesday, April 14, 2004	Sheet 17 of 38	

CARD POWER CONTROL







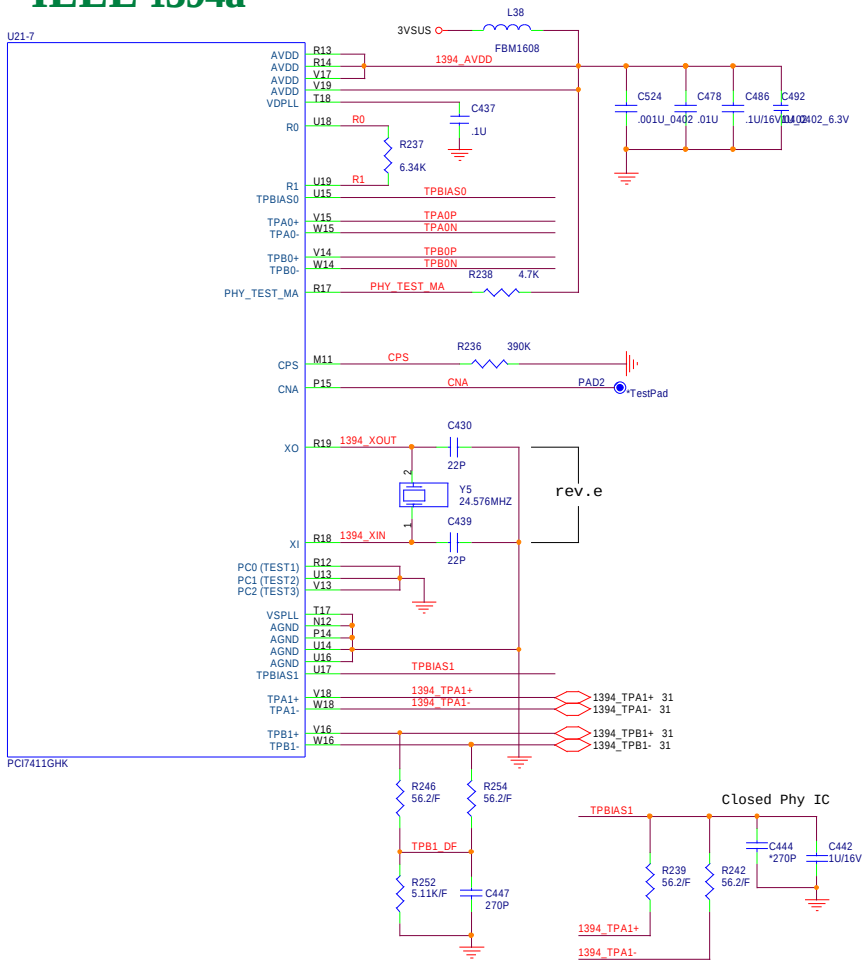


5 IN1 CARD READER

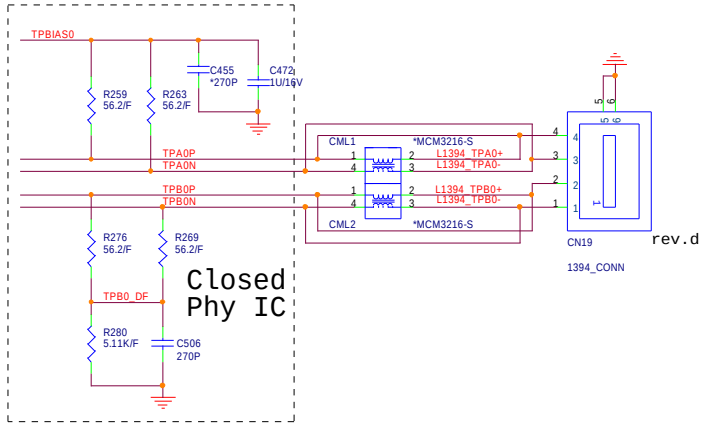
PROJECT : CT1
Quanta Computer Inc.

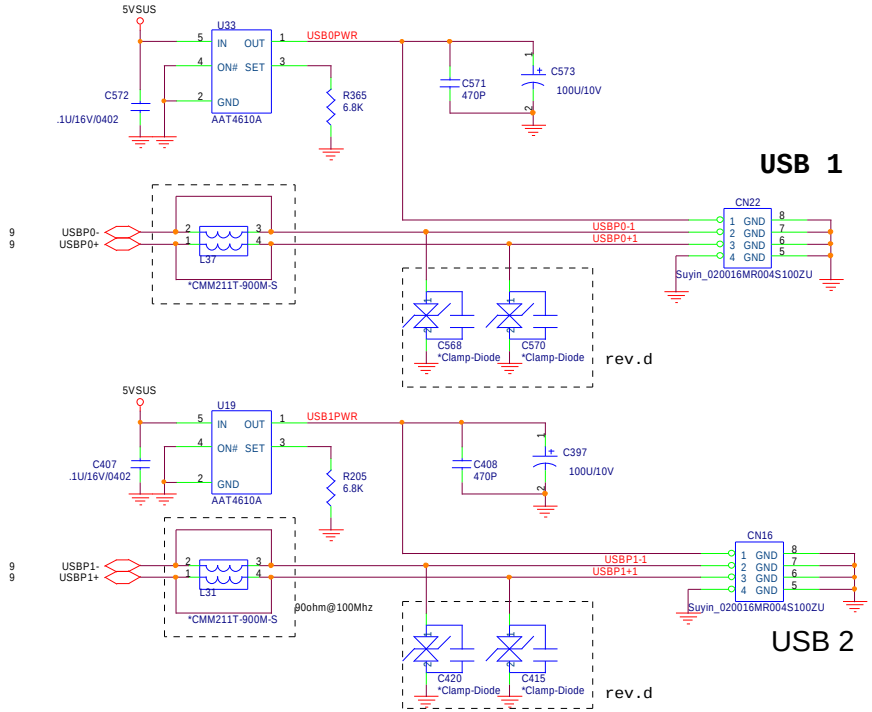
Size	Document Number	Rev
Custom		1A
Date: Wednesday, April 14, 2004	Sheet 18 of 38	

IEEE 1394a



IEEE 1394 CONNECTOR



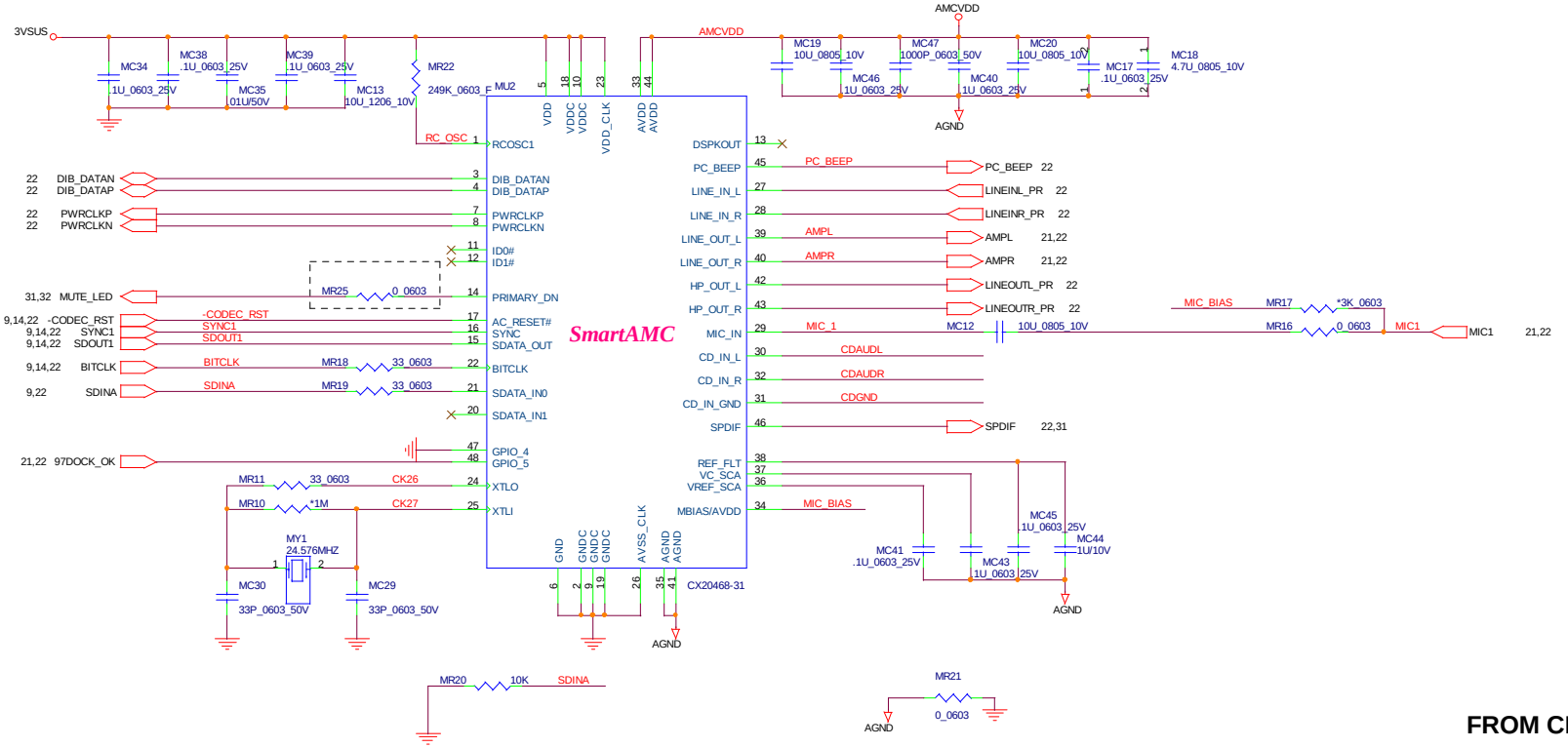


PROJECT : CT1
Quanta Computer Inc.

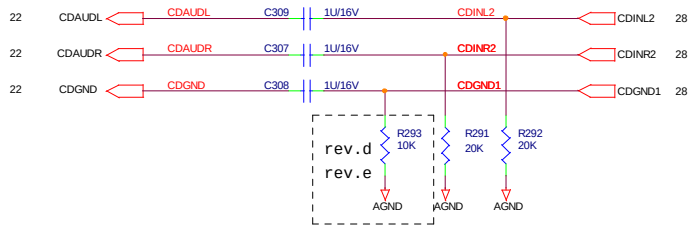
Size	Document Number	Rev
Custom		1A

Date: Wednesday, April 14, 2004 Sheet 19 of 38

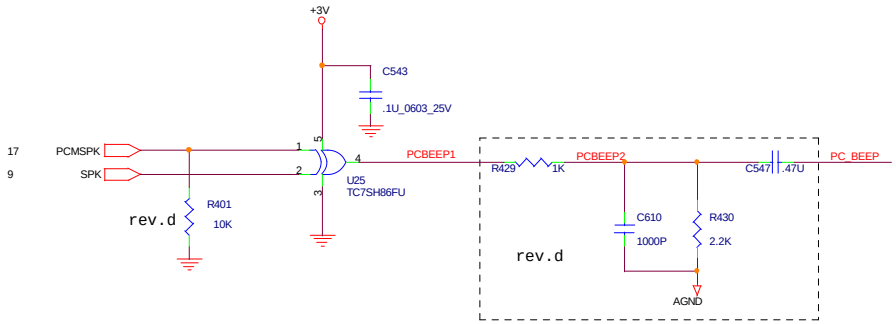
The AMC20493-001 modem is used for mother board family MBAMC20493-010.

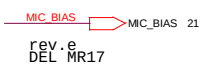


FROM CD-ROM



PC SPEAKER





PROJECT : CT1
Quanta Computer Inc.

Size	Document Number	Rev
	AMC97 CODEC	1A

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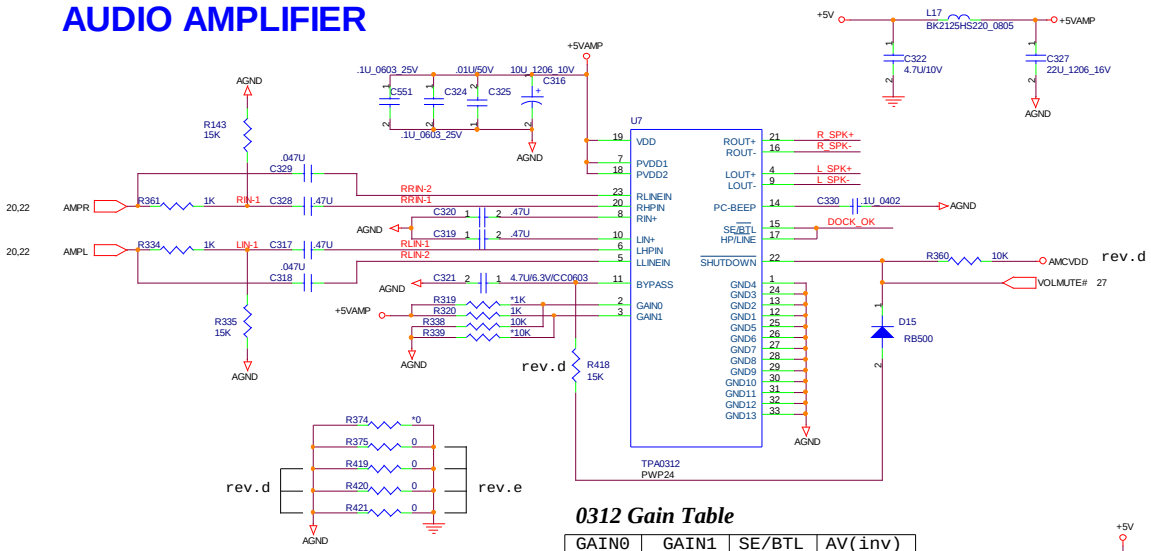
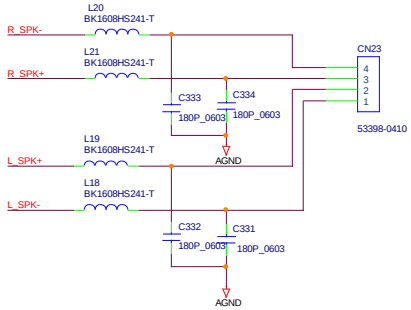
AUDIO AMPLIFIER

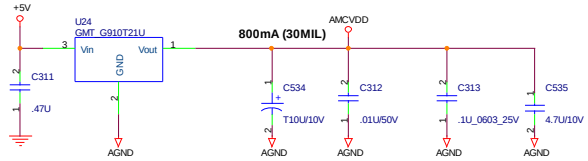


0312 Gain Table

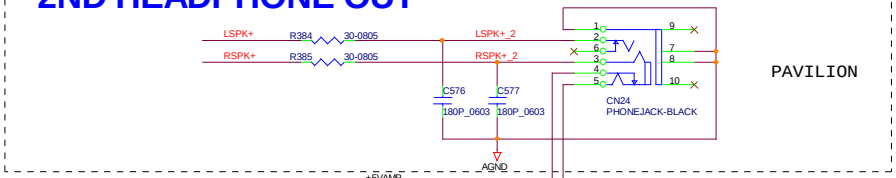
GAIN0	GAIN1	SE/BTL	AV(inv)
0	0	0	6 dB
0	1	0	10 dB
1	0	0	15.6 dB
1	1	0	21.6 dB
X	X	1	4.1 dB

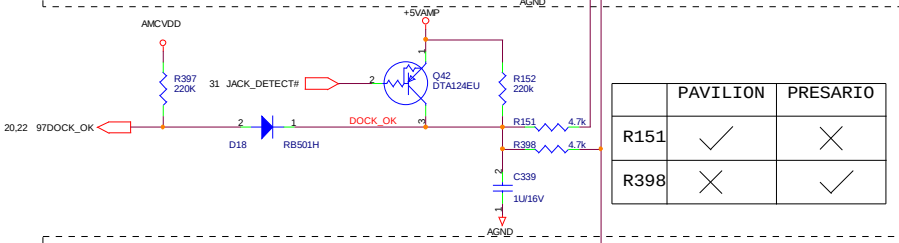
SPEAKER OUT





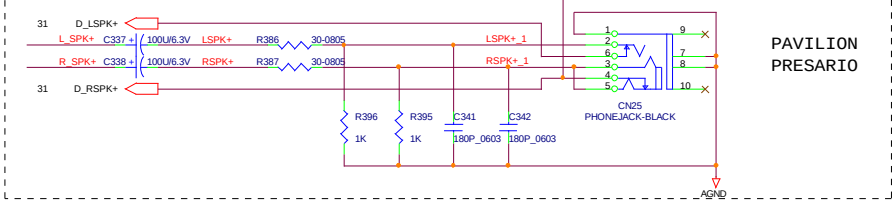
2ND HEADPHONE OUT



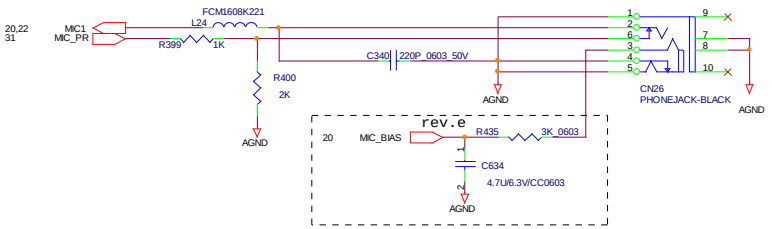


	PAVILION	PRESARIO
R151	✓	✗
R398	✗	✓

HEADPHONE OUT

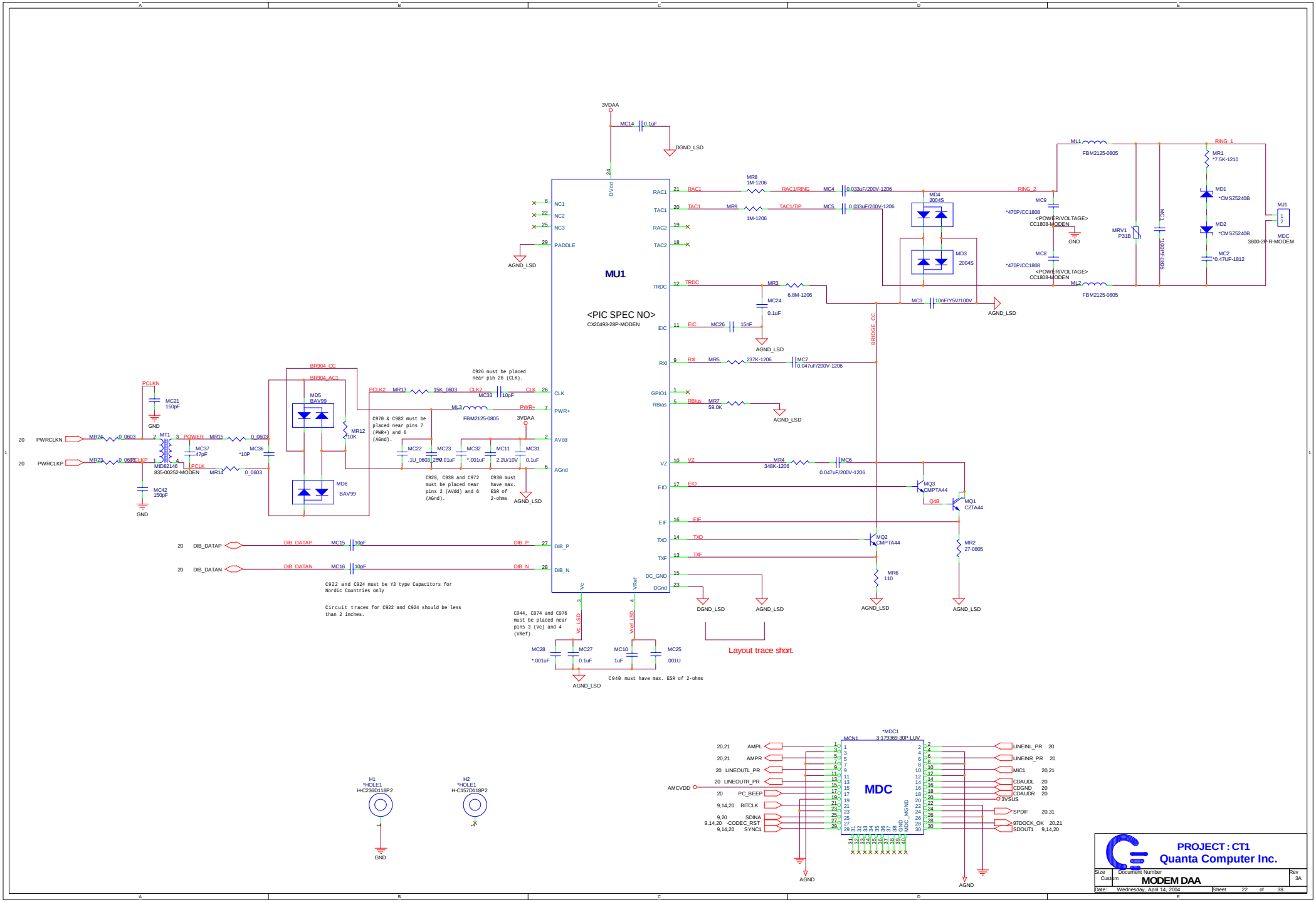


MICROPHONE

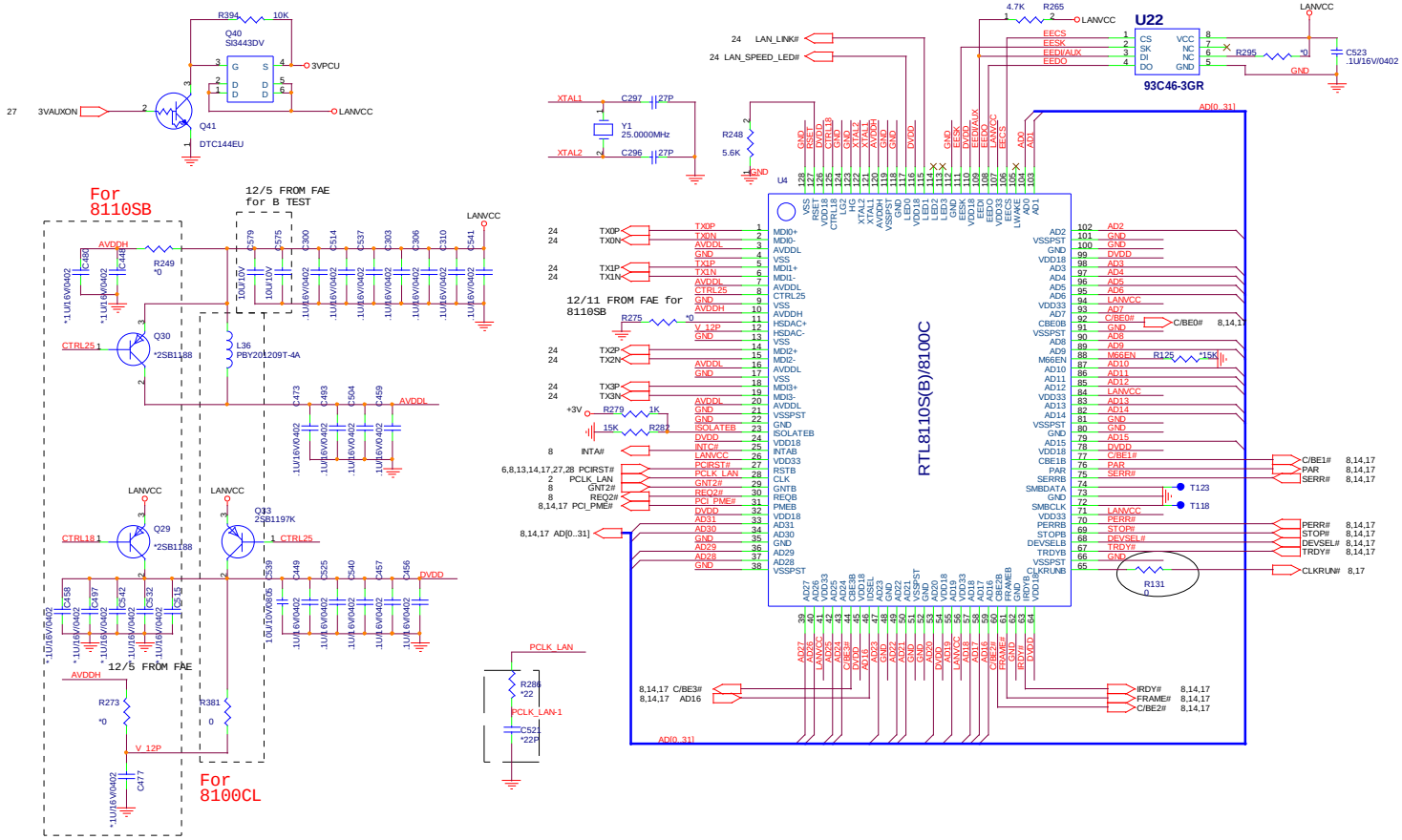


PROJECT : CT1
Quanta Computer Inc.

Size	Document Number	Rev
	AUDIO AMP_ TI-TPA0312	1A
Date: Wednesday, April 14, 2004	Sheet 21 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 32,54,78,99,24,45,64,110,116,126
AVDD25	2.5VA 12	NC
AVDDH	NC	3.3VA 10,120



PROJECT : CT1
Quanta Computer Inc.

Size	Document Number	Rev
C	RTL8100CL	1A

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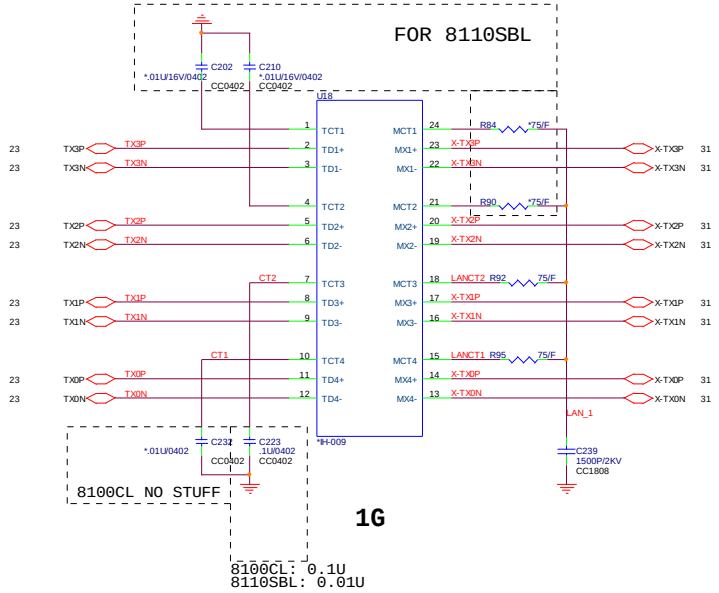
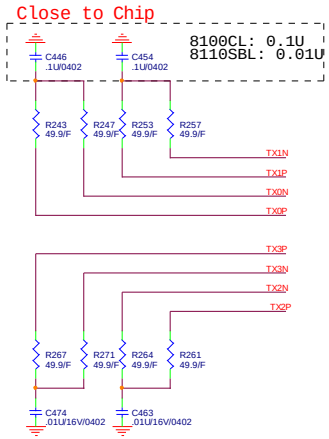
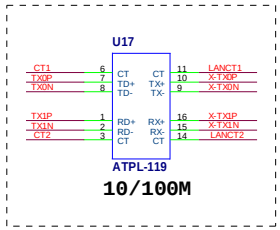
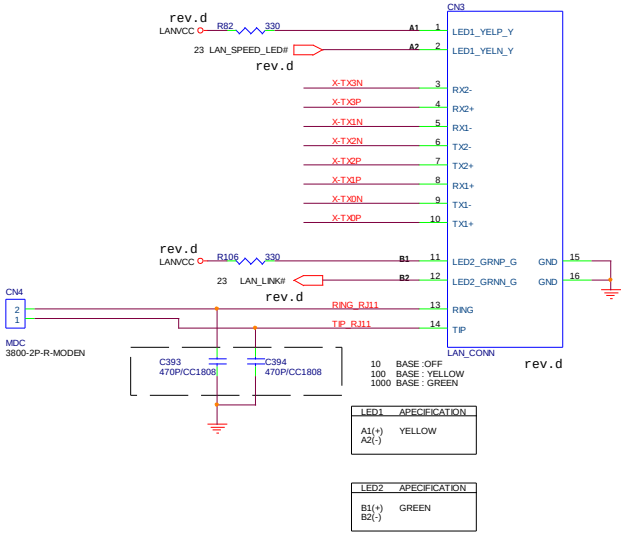




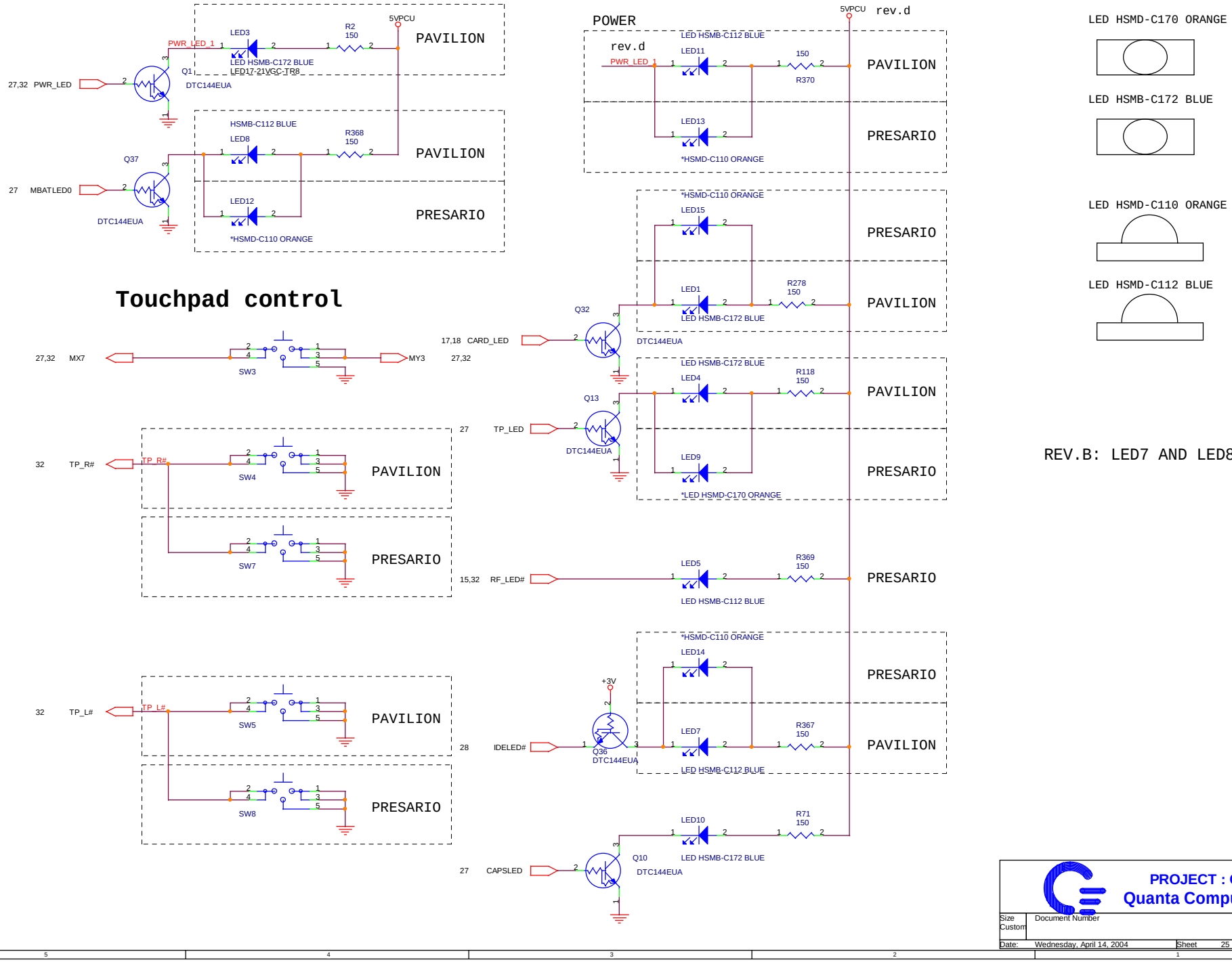




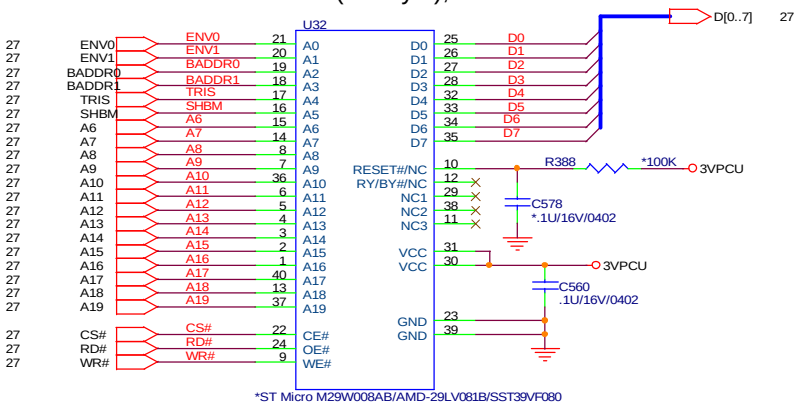
PROJECT : CT1
Quanta Computer Inc.

Size	Document Number	Rev
C		1A

Date: Wednesday, April 14, 2004 Sheet 24 of 38



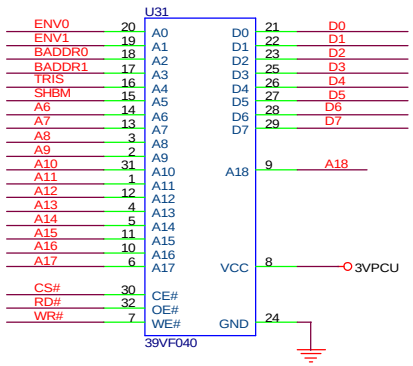
8Mbit (1M Byte), TSSOP40



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



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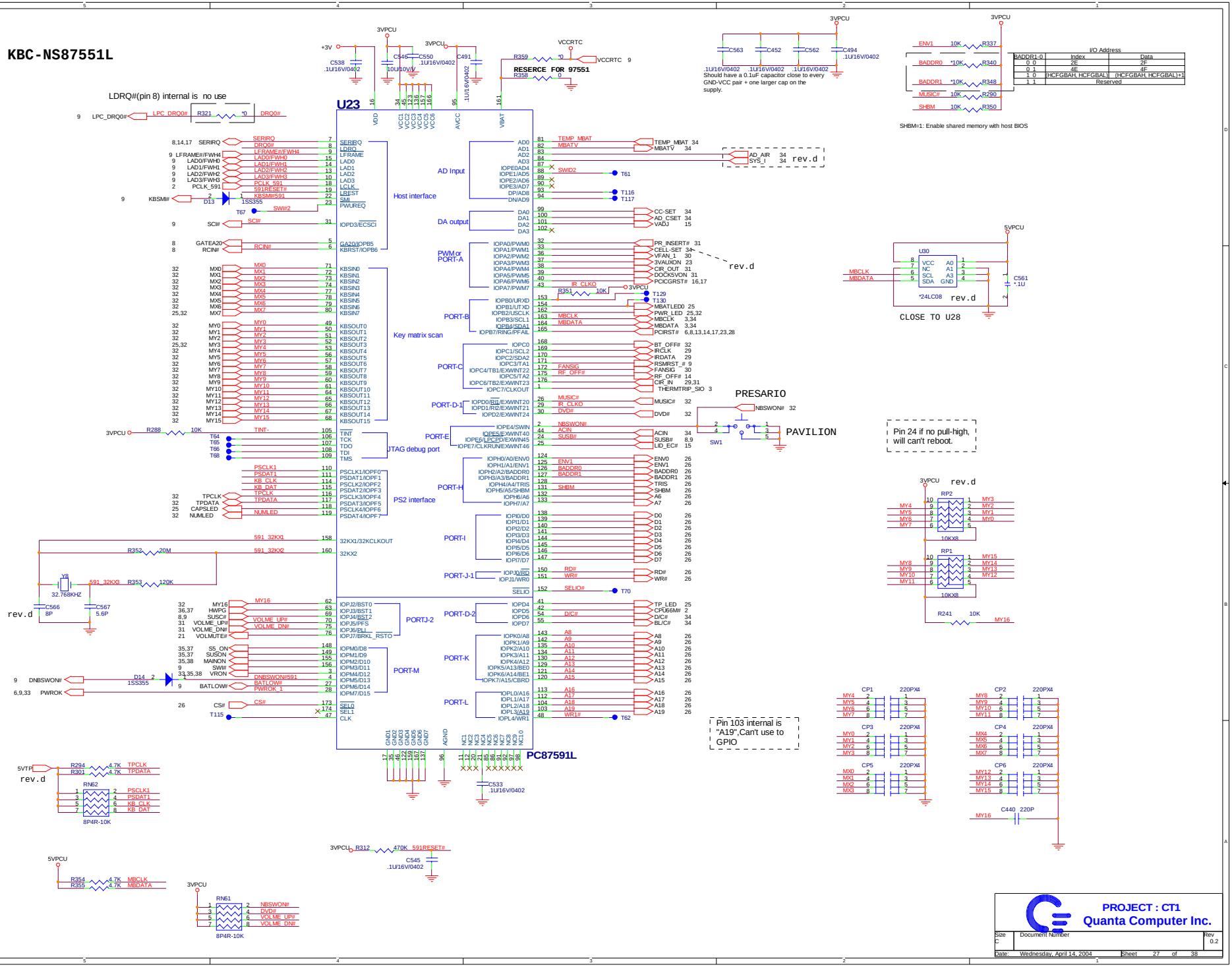
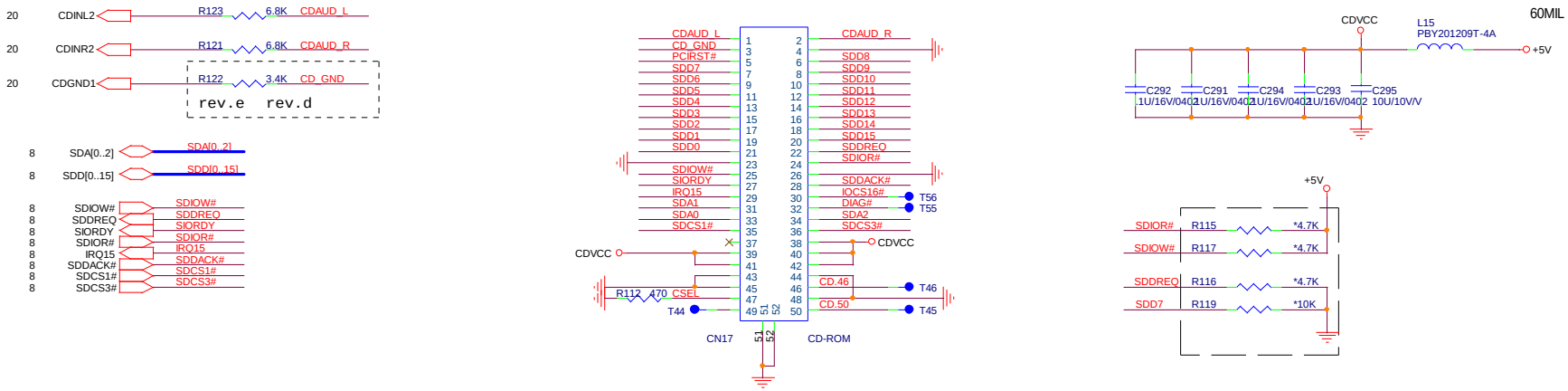
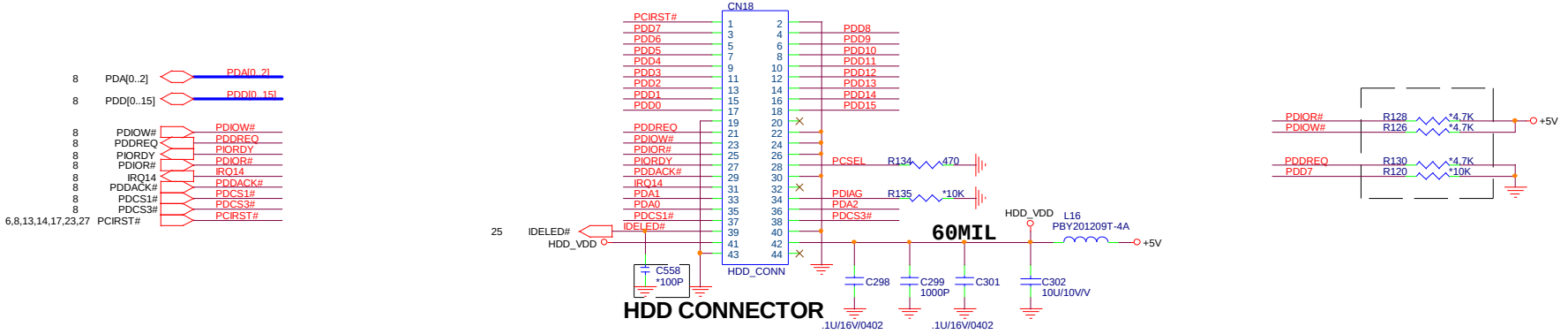
KBC-NS87551L



CD-ROM



HDD CONNECTOR



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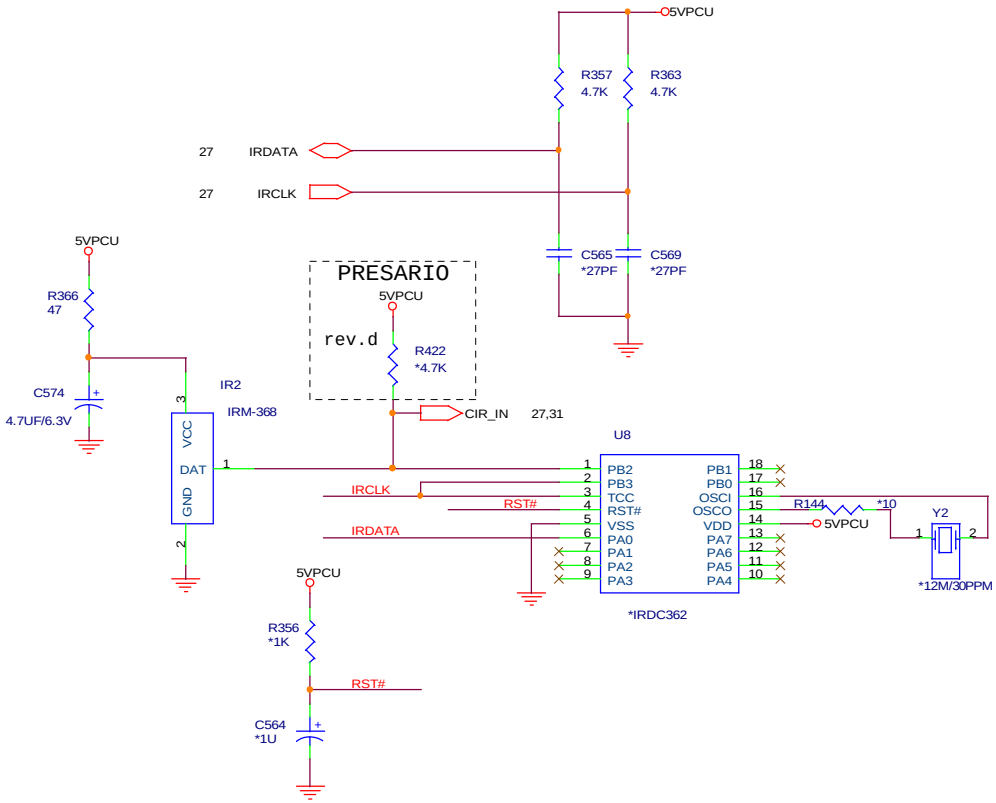

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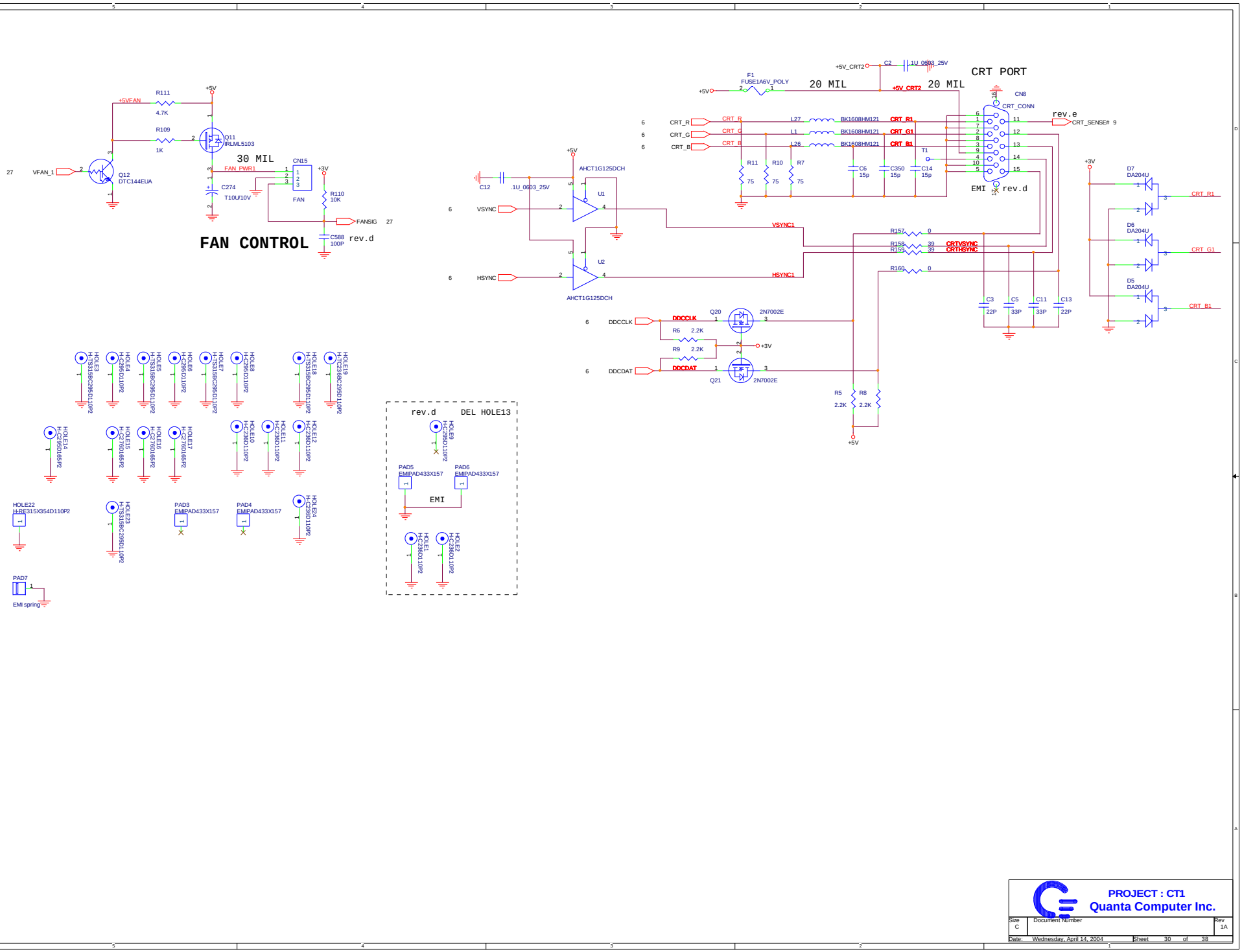
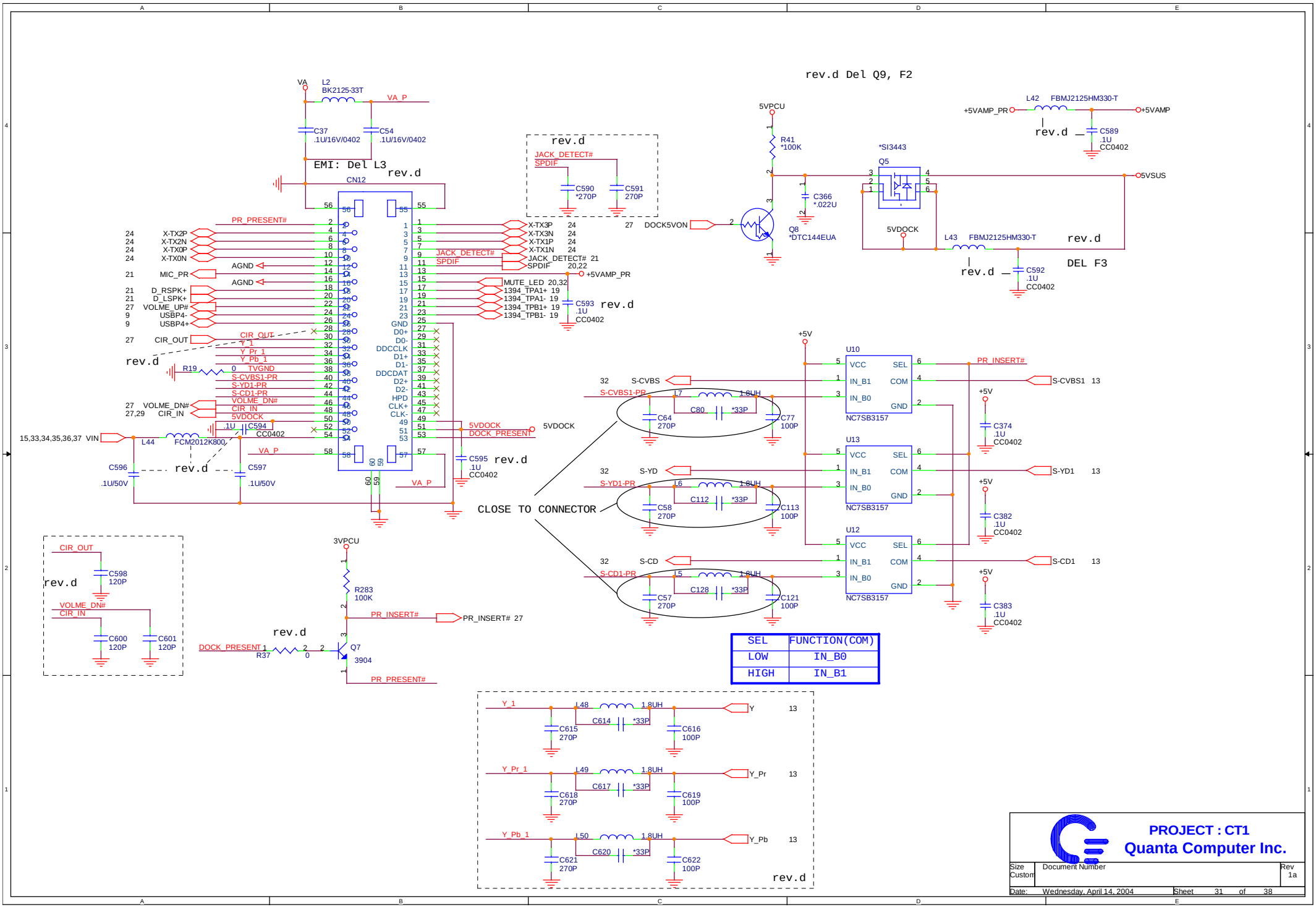
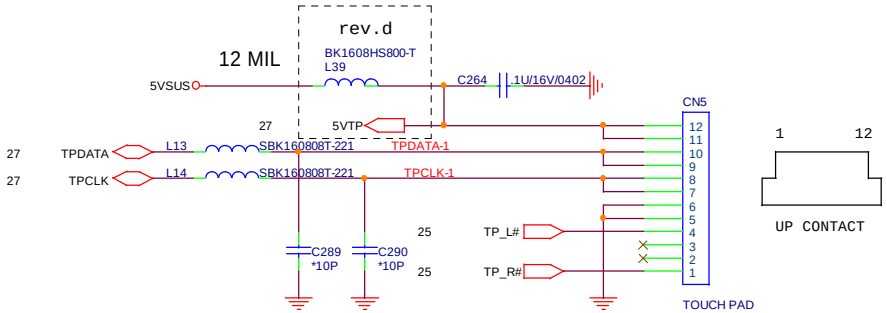


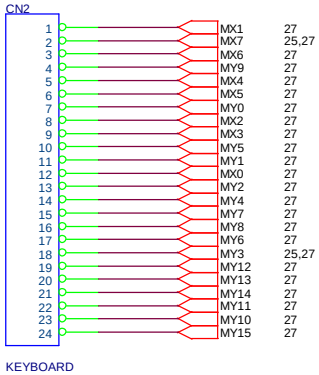


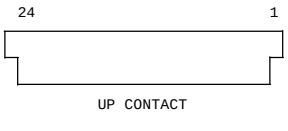
TOUCH PAD CONNECTOR



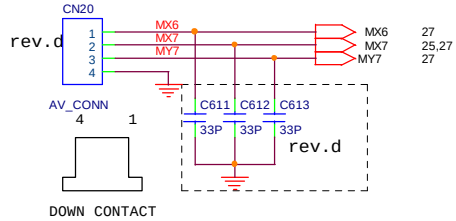
CHECK PIN DEFINE

KEYBOARD CONNECTOR



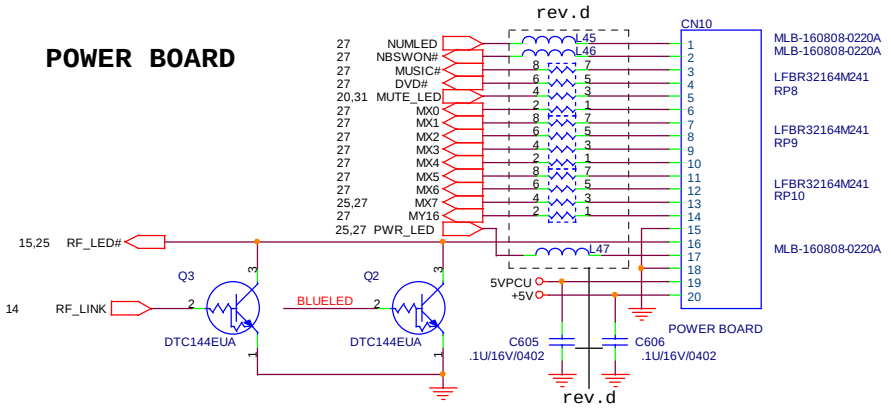


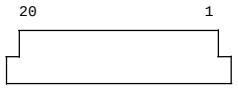
AV BOARD



MX6	MX7
ENTER	MENU

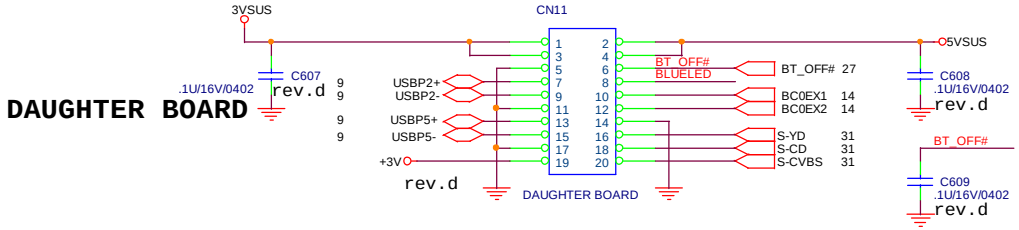
POWER BOARD

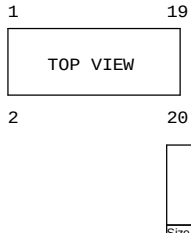




MX0	MX1	MX2	MX3	MX4	MX5	MX6	MX7
BACK	PLAY/PAUSE	FORWARE	STOP	VOL UP	MUTE	VOL DN	WIRELESS

DAUGHTER BOARD





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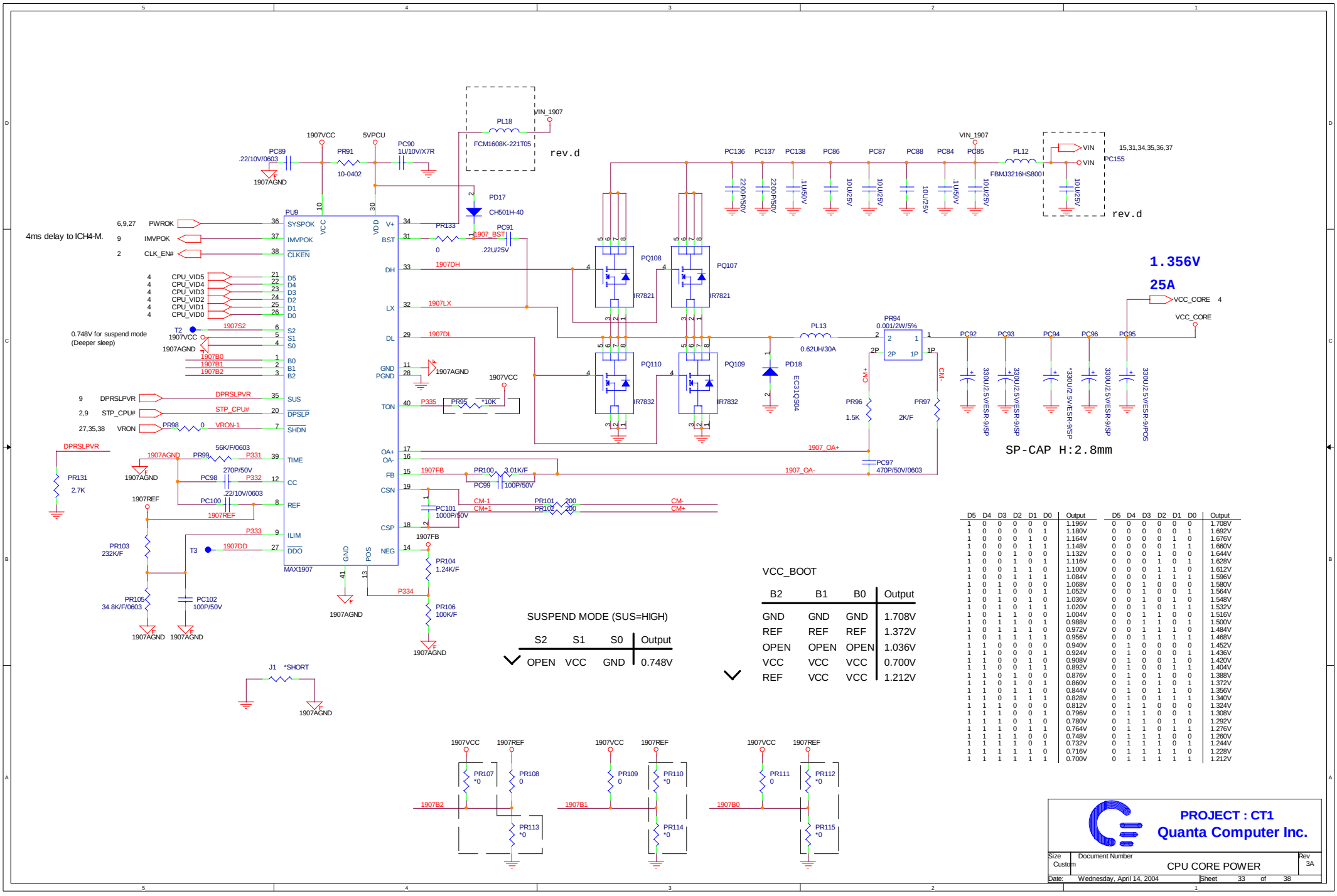
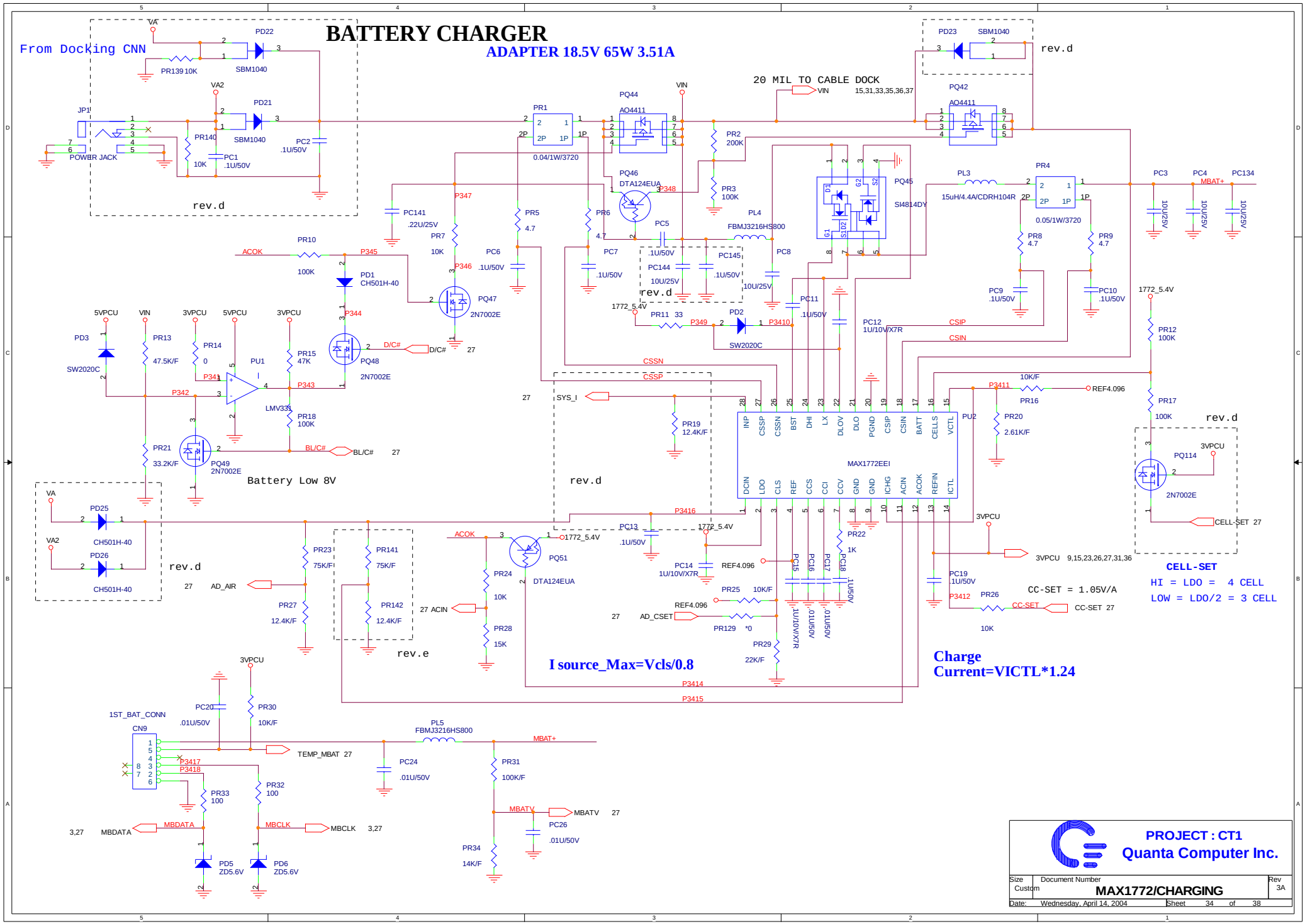


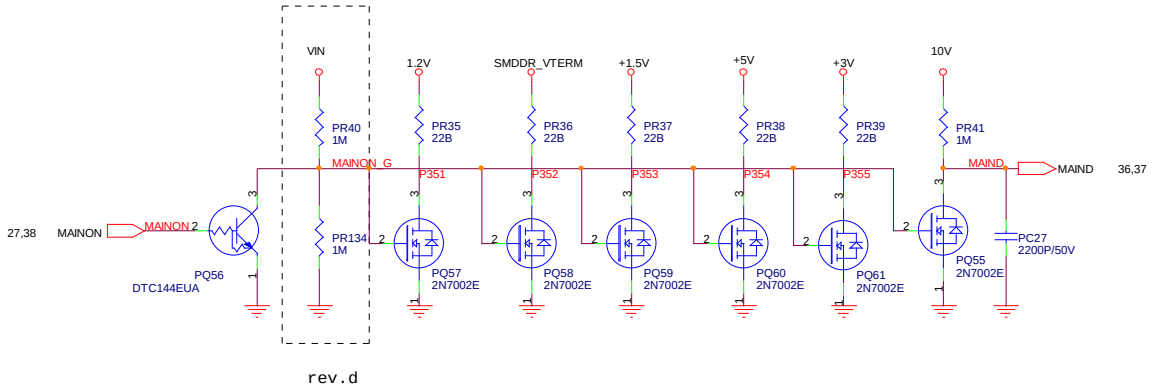
S2	S1	S0	Output
OPEN	VCC	GND	0.748V

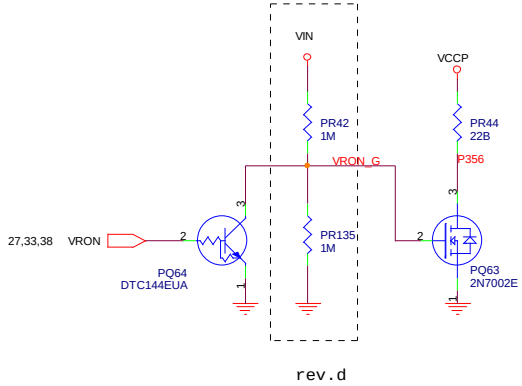
B2	B1	B0	Output
GND	GND	GND	1.708V
REF	REF	REF	1.372V
OPEN	OPEN	OPEN	1.036V
VCC	VCC	VCC	0.700V
REF	VCC	VCC	1.212V

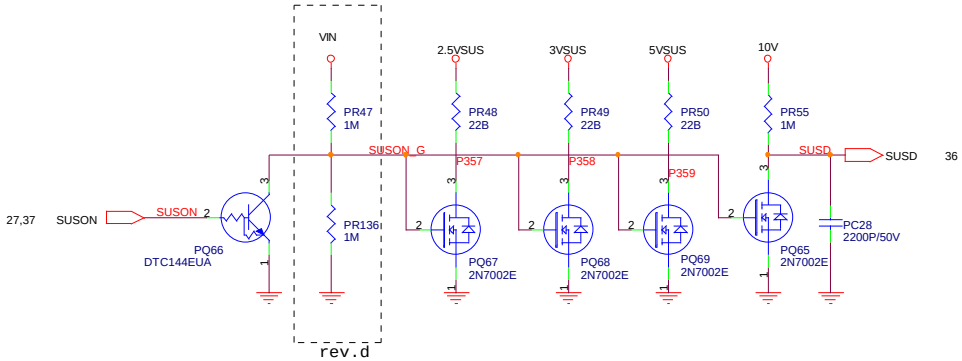
D5	D4	D3	D2	D1	D0	Output
1	0	0	0	0	0	1.196V
1	0	0	0	0	1	1.180V
1	0	0	0	1	0	1.164V
1	0	0	0	1	1	1.148V
1	0	0	1	0	0	1.132V
1	0	0	1	0	1	1.116V
1	0	0	1	1	0	1.100V
1	0	0	1	1	1	1.084V
1	0	1	0	0	0	1.068V
1	0	1	0	0	1	1.052V
1	0	1	0	1	0	1.036V
1	0	1	0	1	1	1.020V
1	0	1	1	0	0	1.004V
1	0	1	1	0	1	0.988V
1	0	1	1	1	0	0.972V
1	0	1	1	1	1	0.956V
1	1	0	0	0	0	0.940V
1	1	0	0	0	1	0.924V
1	1	0	0	1	0	0.908V
1	1	0	0	1	1	0.892V
1	1	0	1	0	0	0.876V
1	1	0	1	0	1	0.860V
1	1	0	1	1	0	0.844V
1	1	0	1	1	1	0.828V
1	1	1	0	0	0	0.812V
1	1	1	0	0	1	0.796V
1	1	1	0	1	0	0.780V
1	1	1	0	1	1	0.764V
1	1	1	1	0	0	0.748V
1	1	1	1	0	1	0.732V
1	1	1	1	1	0	0.716V
1	1	1	1	1	1	0.700V

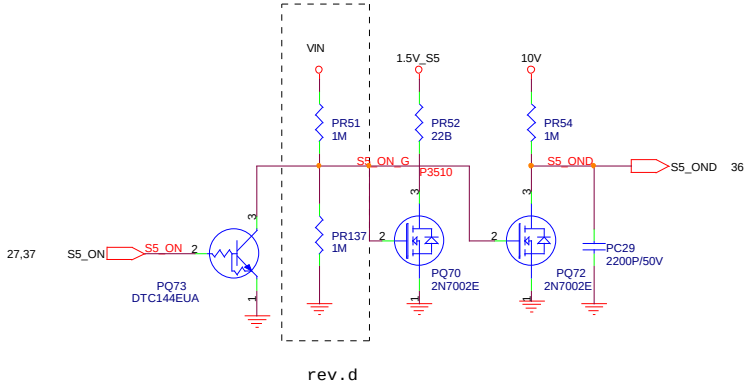
D5	D4	D3	D2	D1	D0	Output
0	0	0	0	0	0	1.708V
0	0	0	0	0	1	1.692V
0	0	0	0	1	0	1.676V
0	0	0	0	1	1	1.660V
0	0	0	1	0	0	1.644V
0	0	0	1	0	1	1.628V
0	0	0	1	1	0	1.612V
0	0	0	1	1	1	1.596V
0	0	1	0	0	0	1.580V
0	0	1	0	0	1	1.564V
0	0	1	0	1	0	1.548V
0	0	1	0	1	1	1.532V
0	0	1	1	0	0	1.516V
0	0	1	1	0	1	1.500V
0	0	1	1	1	0	1.484V
0	0	1	1	1	1	1.468V
0	1	0	0	0	0	1.452V
0	1	0	0	0	1	1.436V
0	1	0	0	1	0	1.420V
0	1	0	0	1	1	1.404V
0	1	0	1	0	0	1.388V
0	1	0	1	0	1	1.372V
0	1	0	1	1	0	1.356V
0	1	0	1	1	1	1.340V
0	1	1	0	0	0	1.324V
0	1	1	0	0	1	1.308V
0	1	1	0	1	0	1.292V
0	1	1	0	1	1	1.276V
0	1	1	1	0	0	1.260V
0	1	1	1	0	1	1.244V
0	1	1	1	1	0	1.228V
0	1	1	1	1	1	1.212V











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