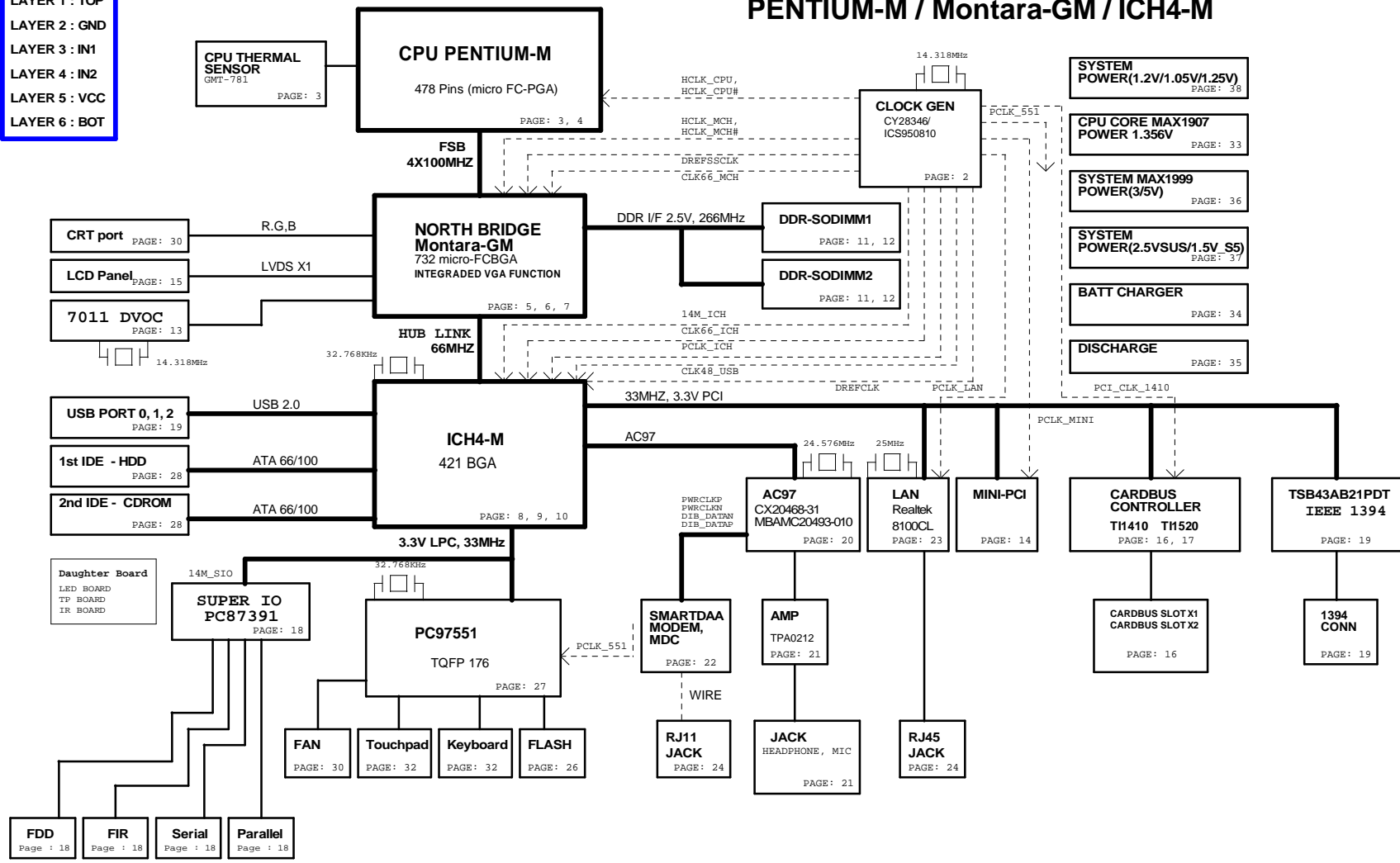


KT2 BLOCK DIAGRAM

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



REQ0#, GNT0# : PCMCIA
 REQ1#, GNT1# : MINIPCI
 REQ2#, GNT2# : LAN
 REQ3#, GNT3# : IEEE1394
 REQ4#, GNT4# : N/A

INTA# : LAN
 INTB# : CARDBUS 1520
 INTC# : MINIPCI
 INTD# : MINIPCI
 INTE# : CARDBUS
 INTF# : IEEE1394
 INTG# : NC
 INTH# : Internal USB

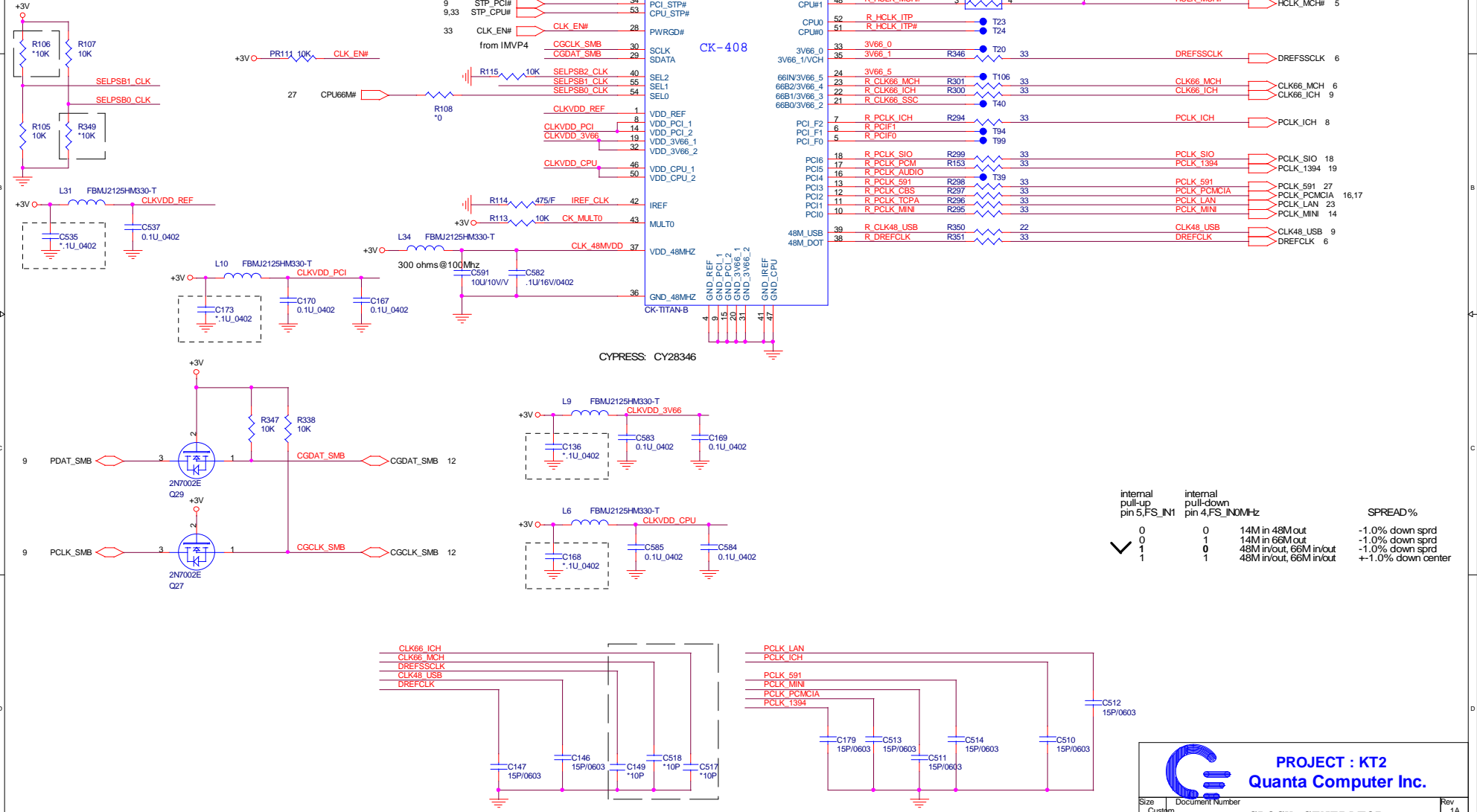
AD16 : RTL8100CL
 AD17 : PCI1520
 AD21 : PCI1410
 AD22 : MINIPCI
 AD23 : IEEE1394

PROJECT : KT2
Quanta Computer Inc.


Size	Document Number	Rev
C	01--BLOCK DIAGRAM	1/A
Date	Wednesday, April 07, 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

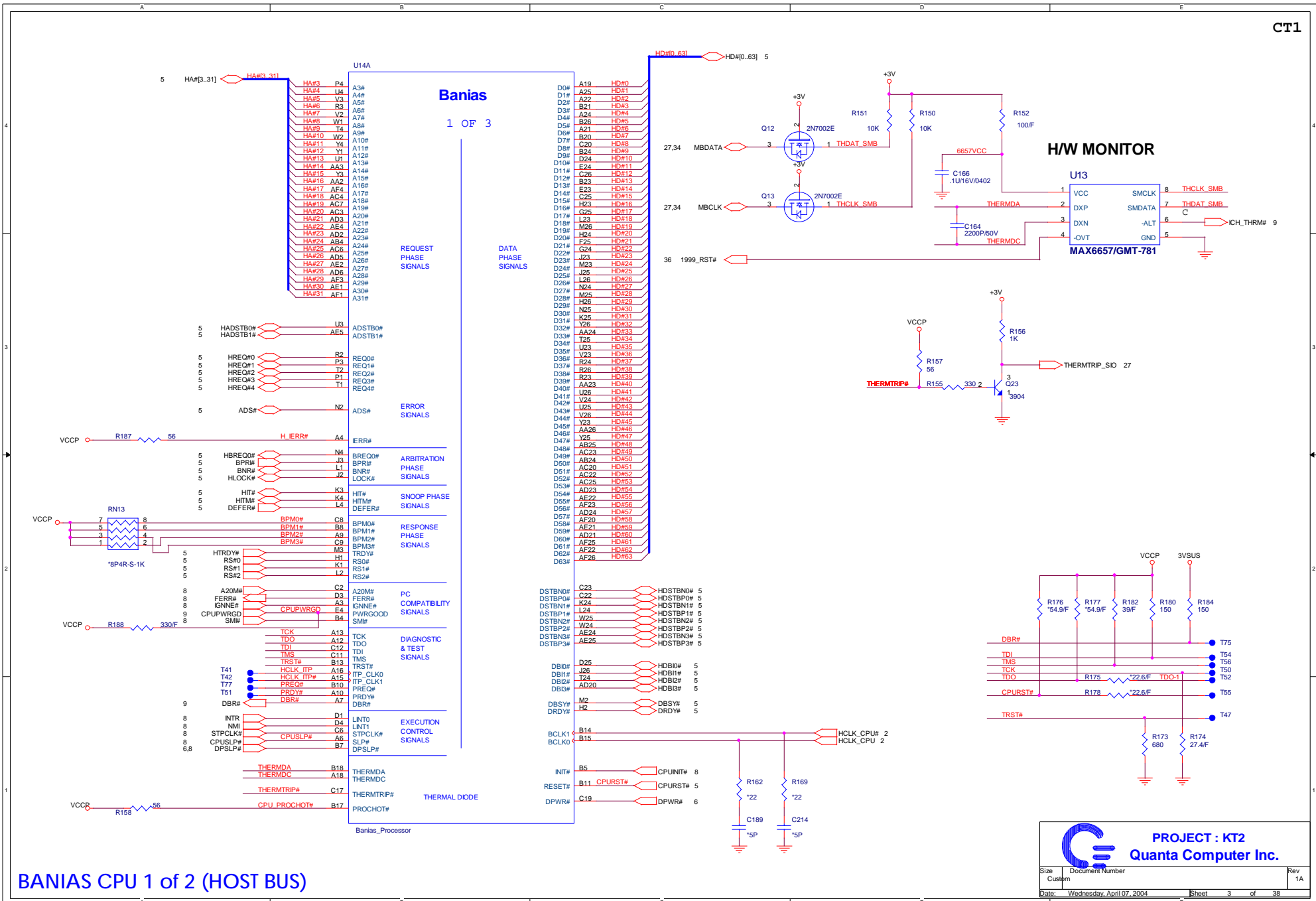


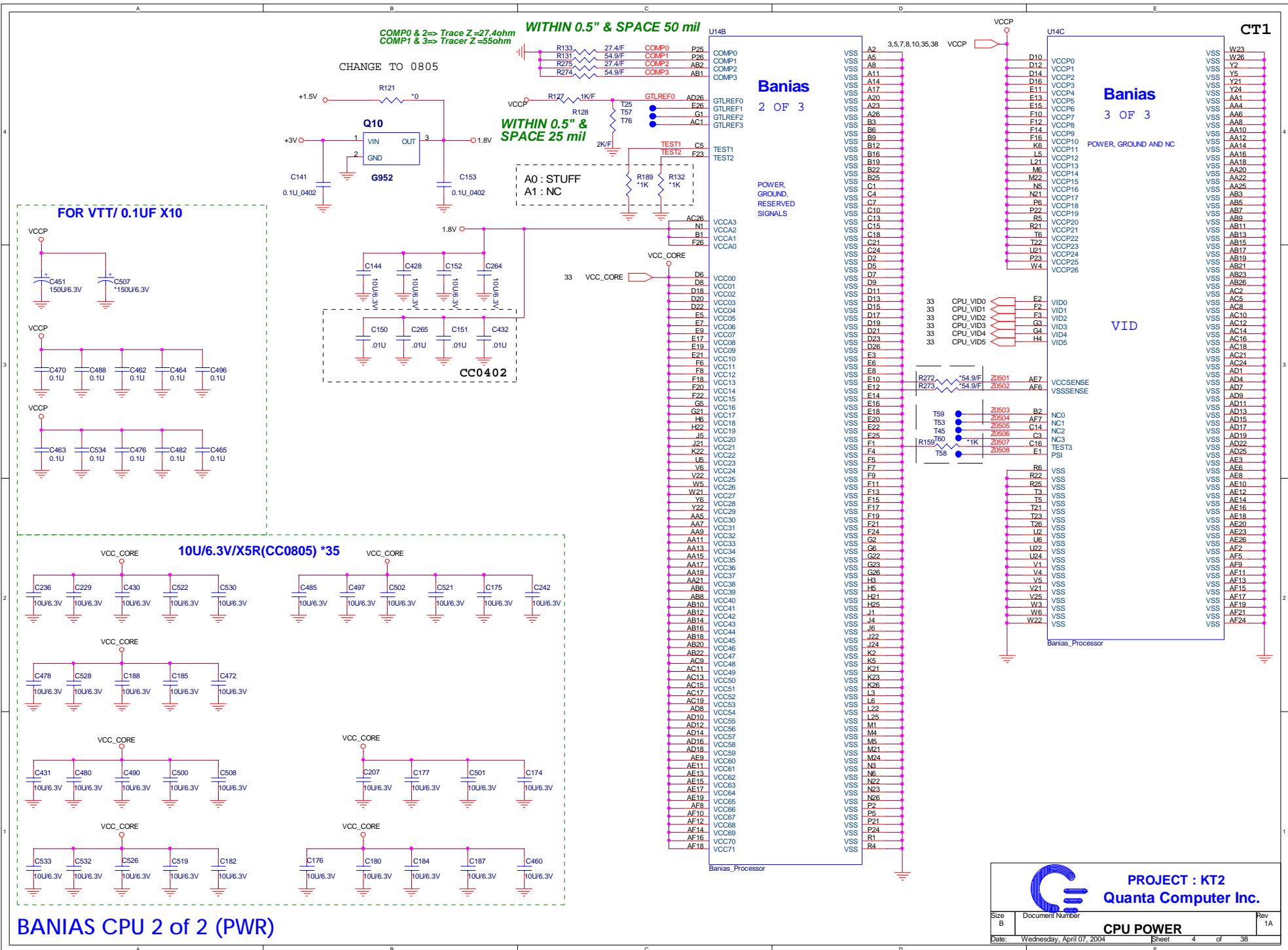
internal pull-up pin 5,FS_IN1	internal pull-down pin 4,FS_IN0MHz	SPREAD%
0	0	14M in 48M out -1.0% down sprd
0	1	14M in 66M out -1.0% down sprd
1	0	48M in/out, 66M in/out -1.0% down sprd
1	1	48M in/out, 66M in/out +1.0% down center




PROJECT : KT2
Quanta Computer Inc.

Size Custom	Document Number	Rev 1A
CLOCK GENERATOR		
Date: Wednesday, April 07, 2004	Sheet 2 of 38	

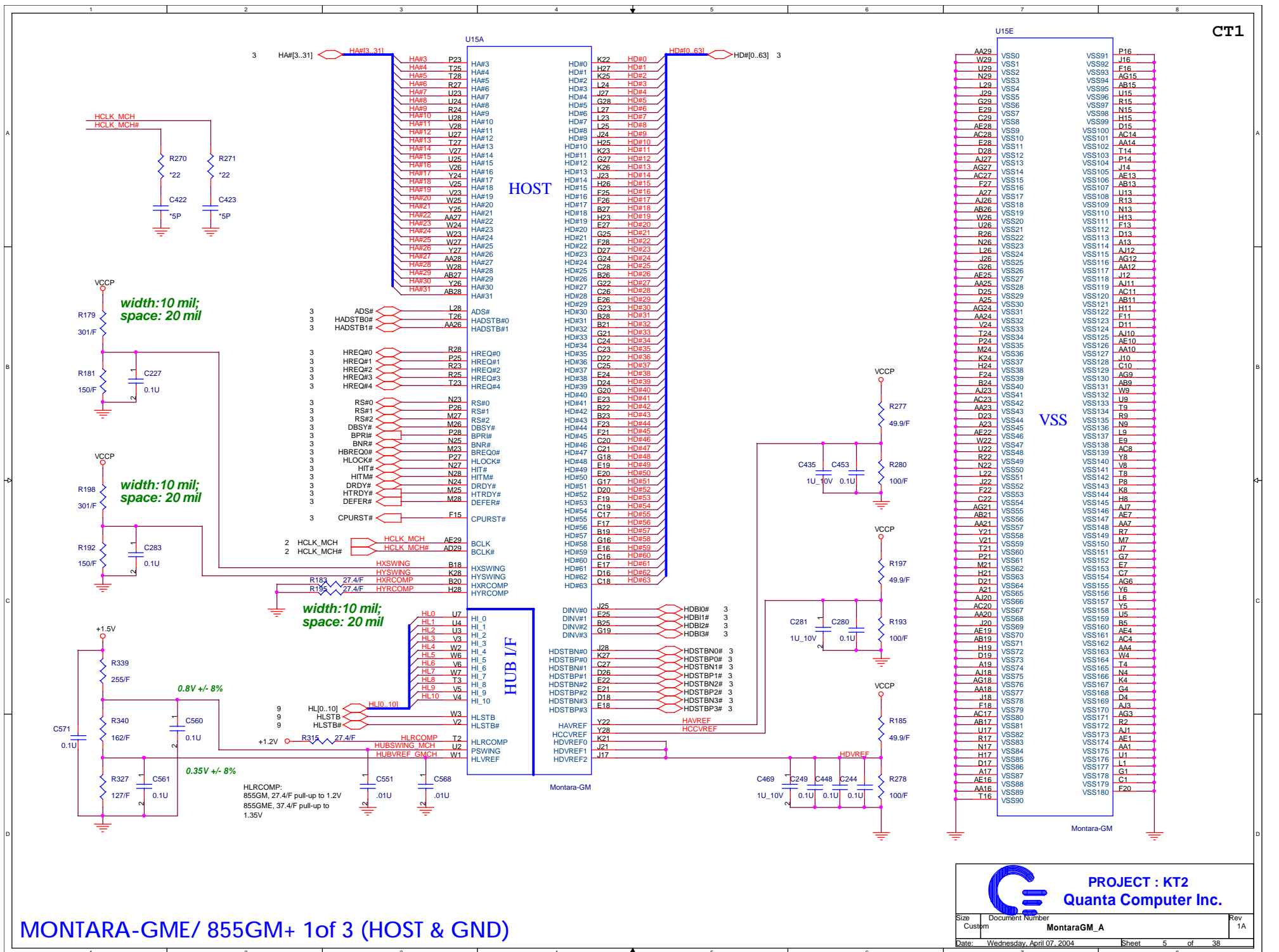




BANIAS CPU 2 of 2 (PWR)


PROJECT : KT2
Quanta Computer Inc.

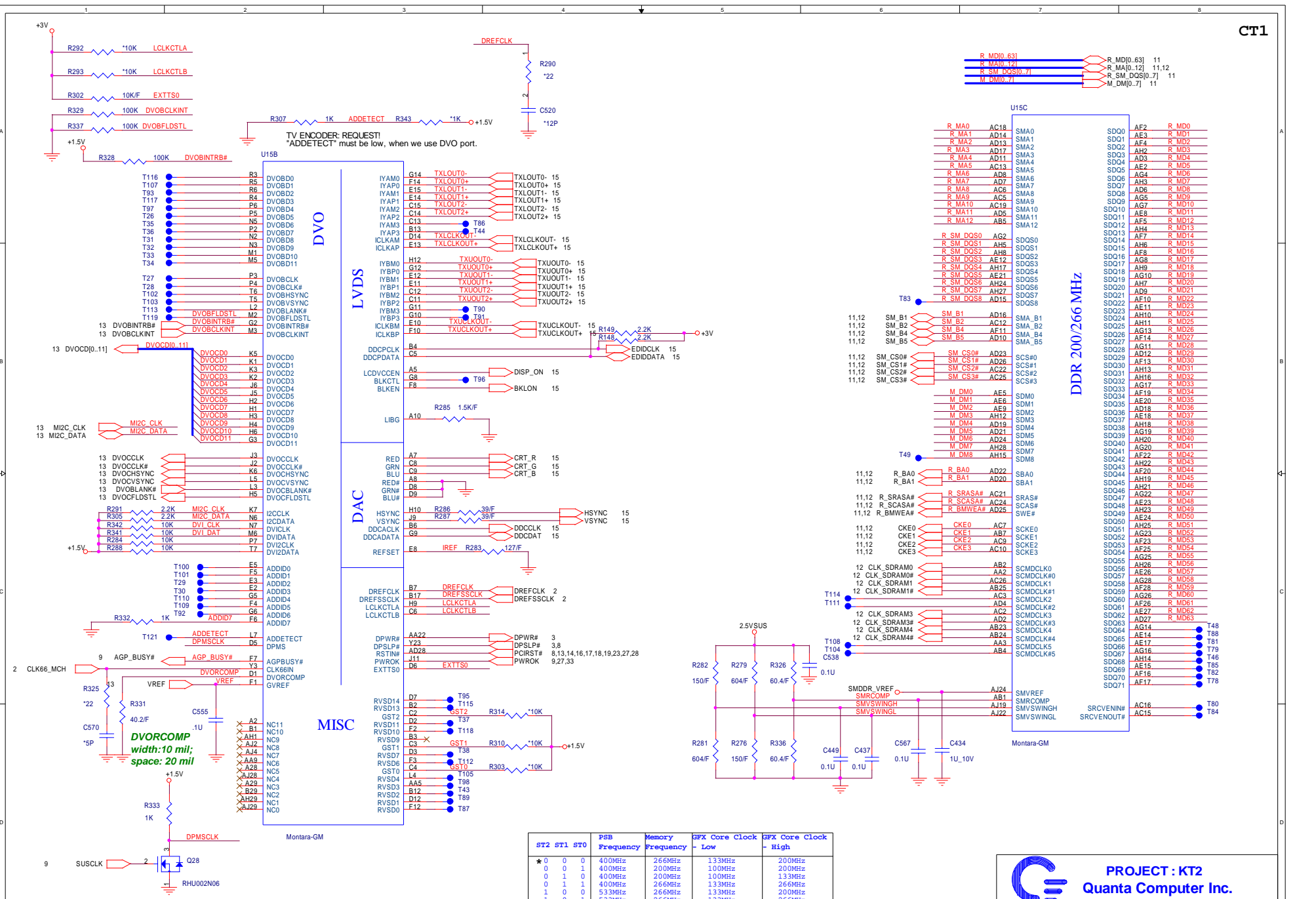
Size B	Document Number	Rev 1A
CPU POWER		
Date: Wednesday, April 07, 2004		Sheet 4 of 38



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

PROJECT : KT2
Quanta Computer Inc.

Size: Custom Document Number: MontaraGM_A Rev 1A
 Date: Wednesday, April 07, 2004 Sheet 5 of 38



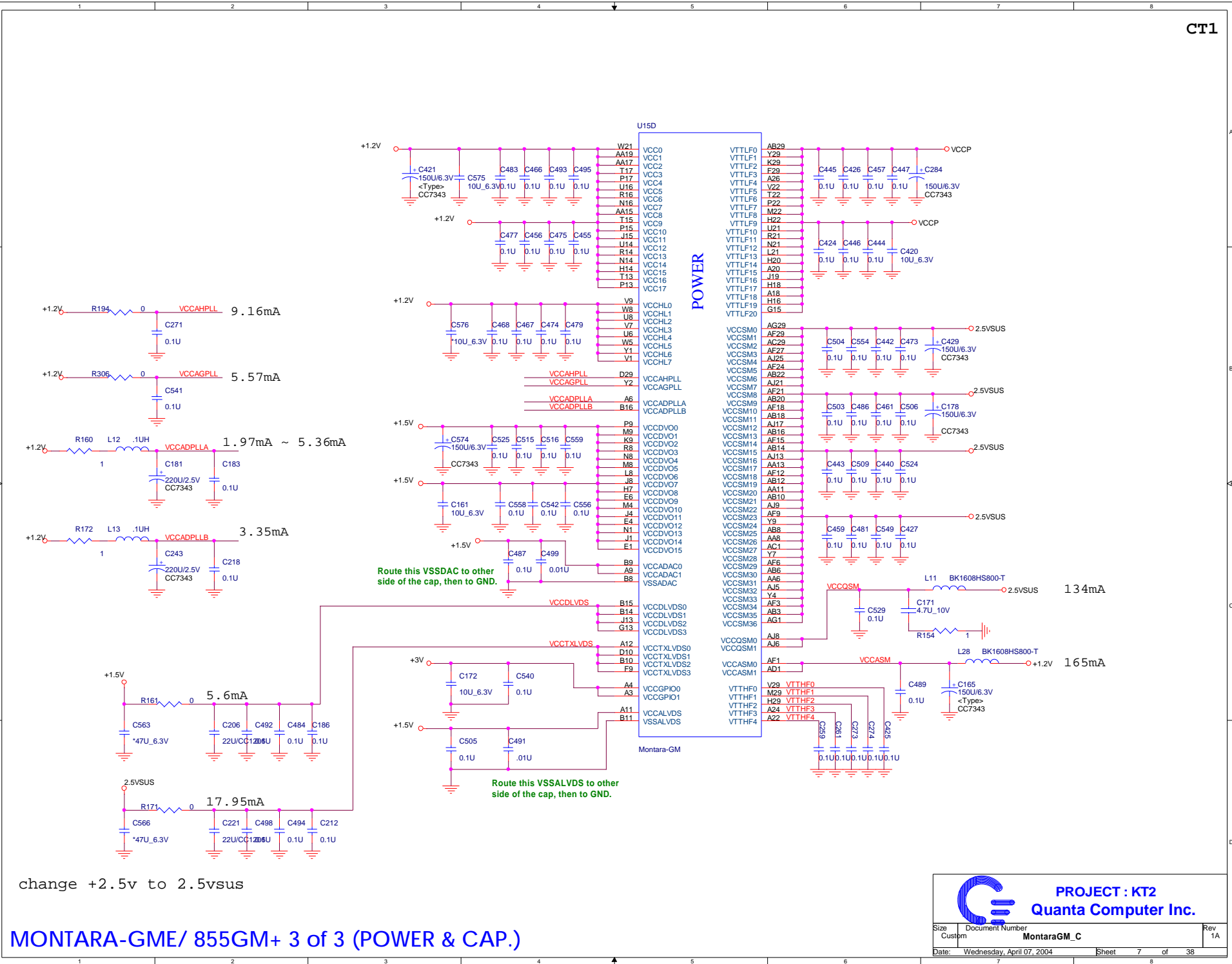
MONTARA-GME/ 855GM+ 2 of 3 (DVO & DDR)

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

PROJECT : KT2
Quanta Computer Inc.

Size: Custom Document Number: MontaraGM_B Rev: 1A

Date: Wednesday, April 07, 2004 Sheet: 8 of 38



change +2.5v to 2.5vsus

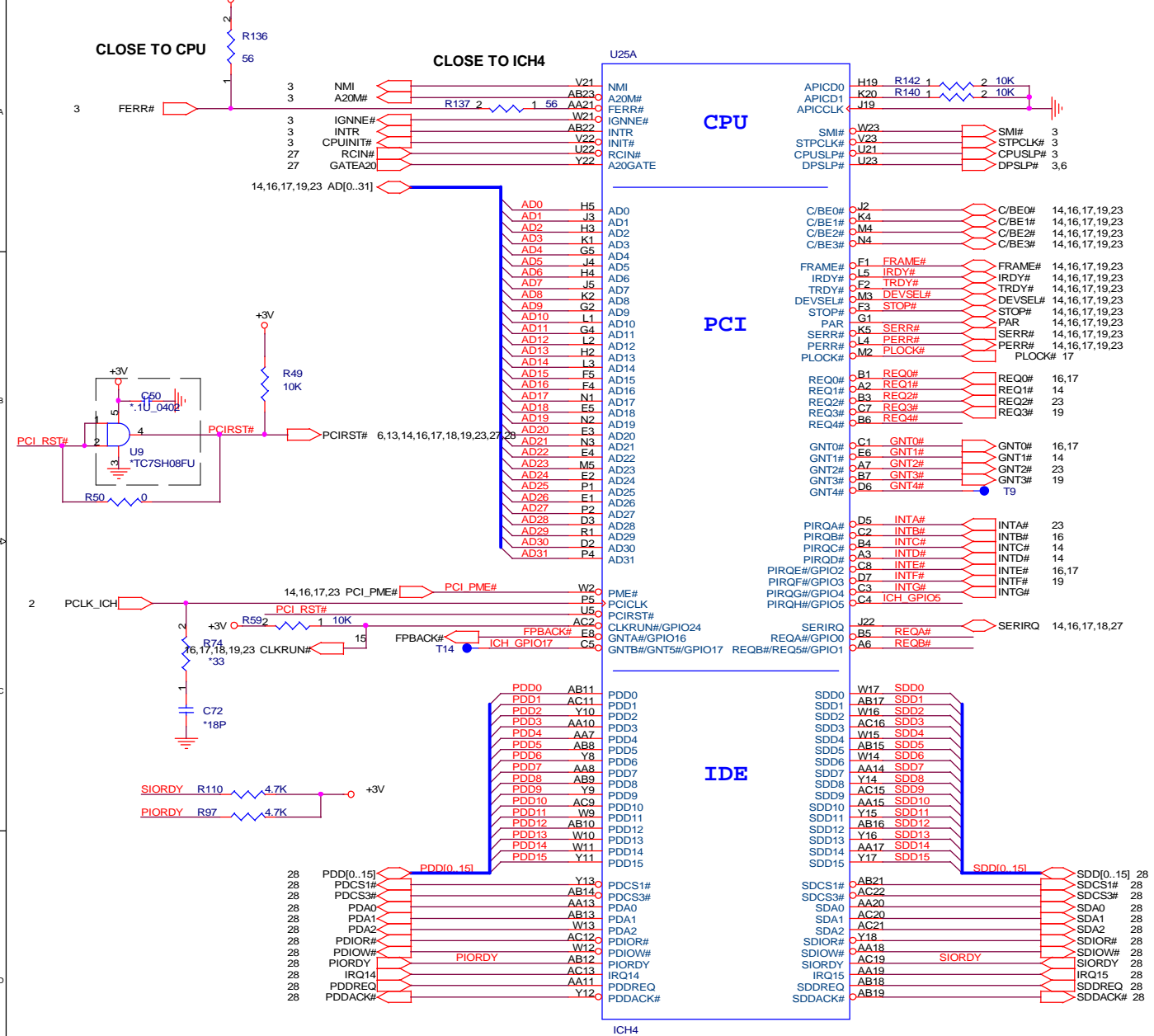
MONTARA-GME/ 855GM+ 3 of 3 (POWER & CAP.)

PROJECT : KT2
 Quanta Computer Inc.

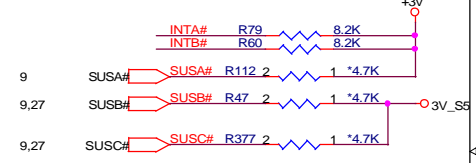
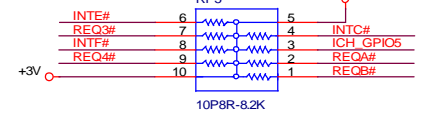
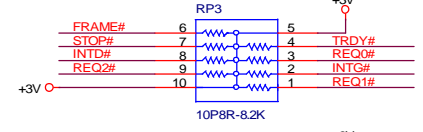
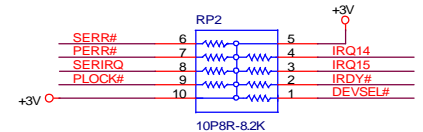
Size	Document Number	Rev
Custom	MontaraGM_C	1A
Date: Wednesday, April 07, 2004		Sheet 7 of 38

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

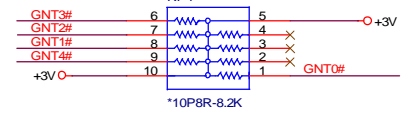
CT1



PCI Bus pull high resistor

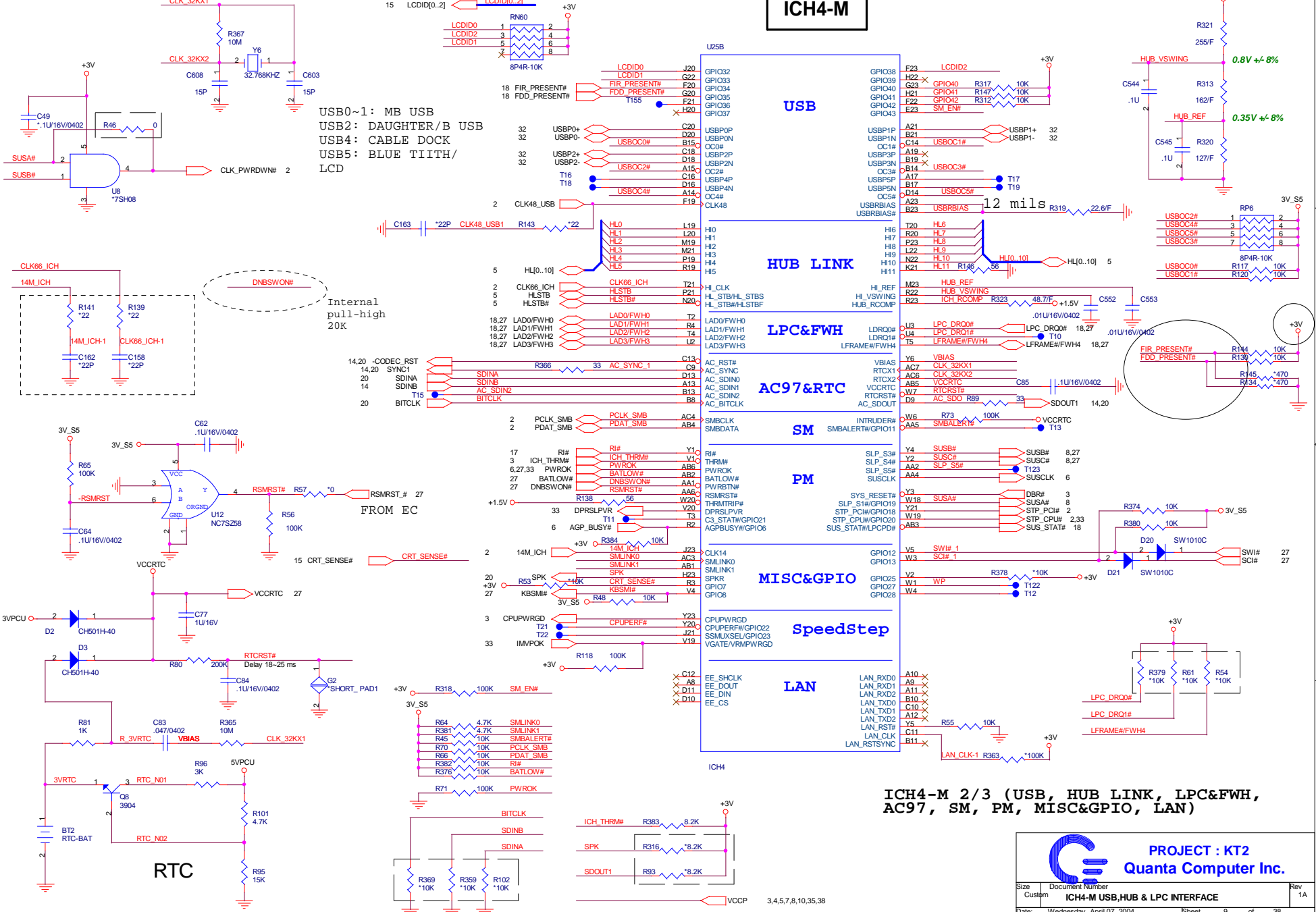


PME CIRCUIT



PROJECT : KT2
Quanta Computer Inc.

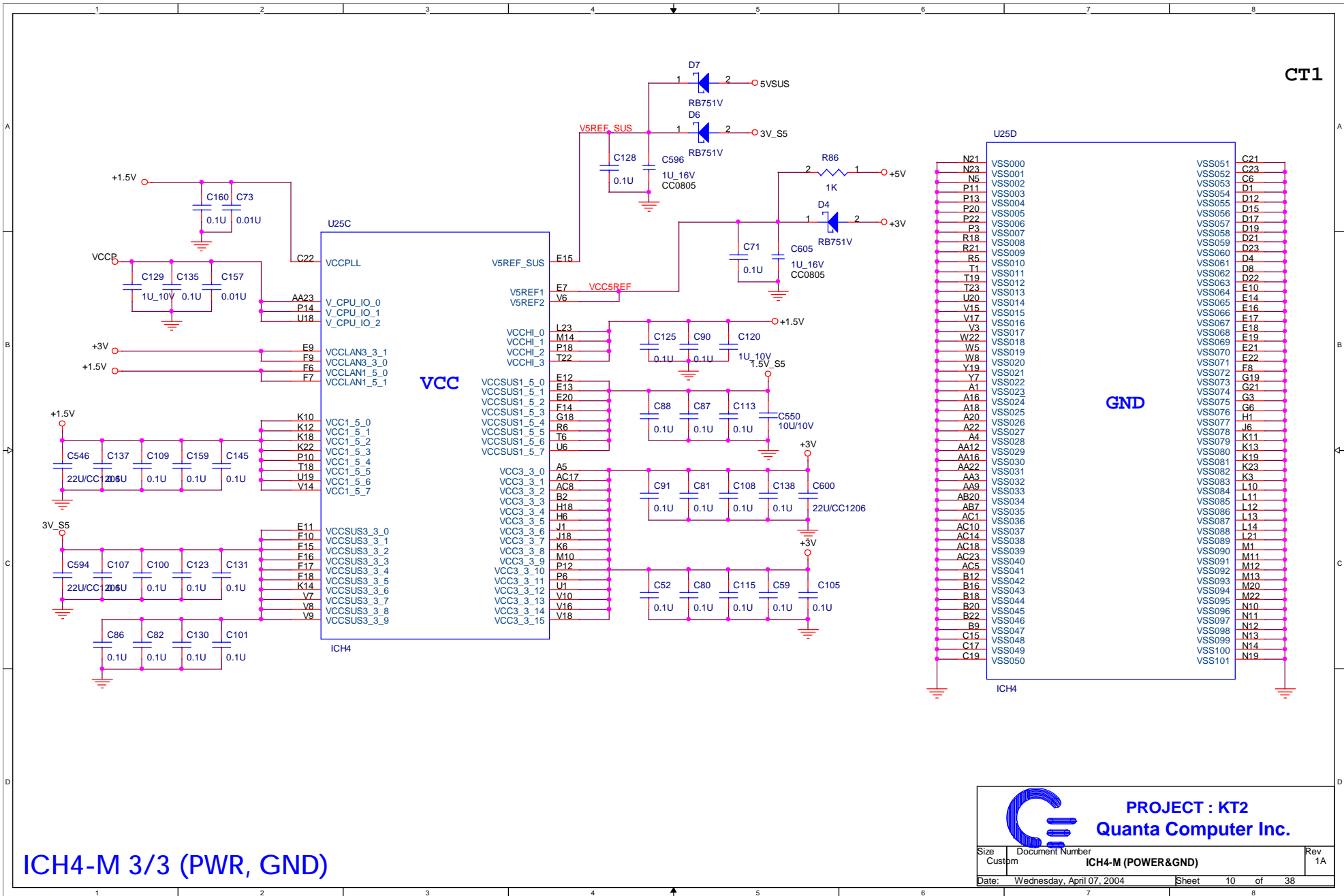
Size	Document Number	Rev
Custom	ICH4-M (CPU,PCI,IDE)	1A
Date:	Wednesday, April 07, 2004	Sheet 8 of 38



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

PROJECT : KT2
Quanta Computer Inc.

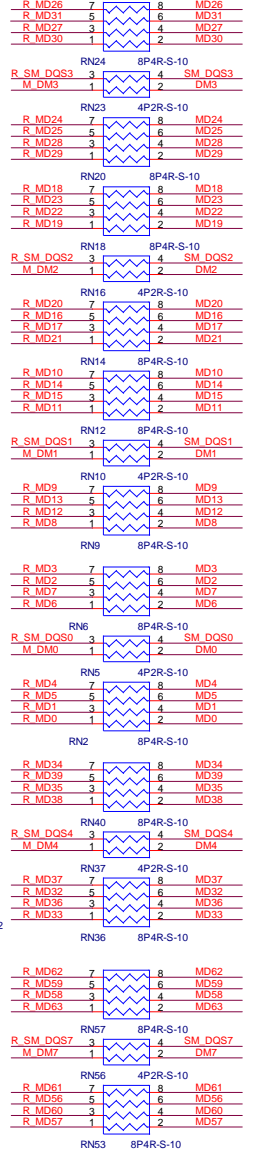
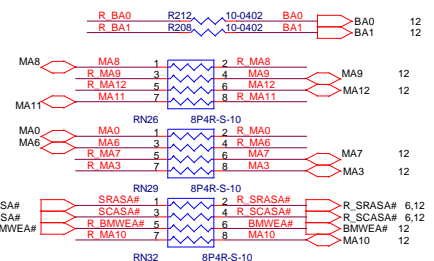
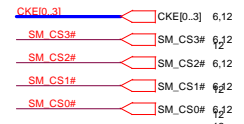
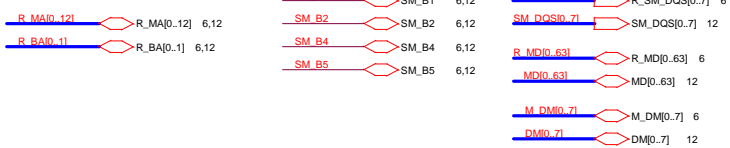
Size	Document Number	Rev
Custom	ICH4-M USB,HUB & LPC INTERFACE	1A
Date:	Wednesday, April 07, 2004	Sheet 9 of 38



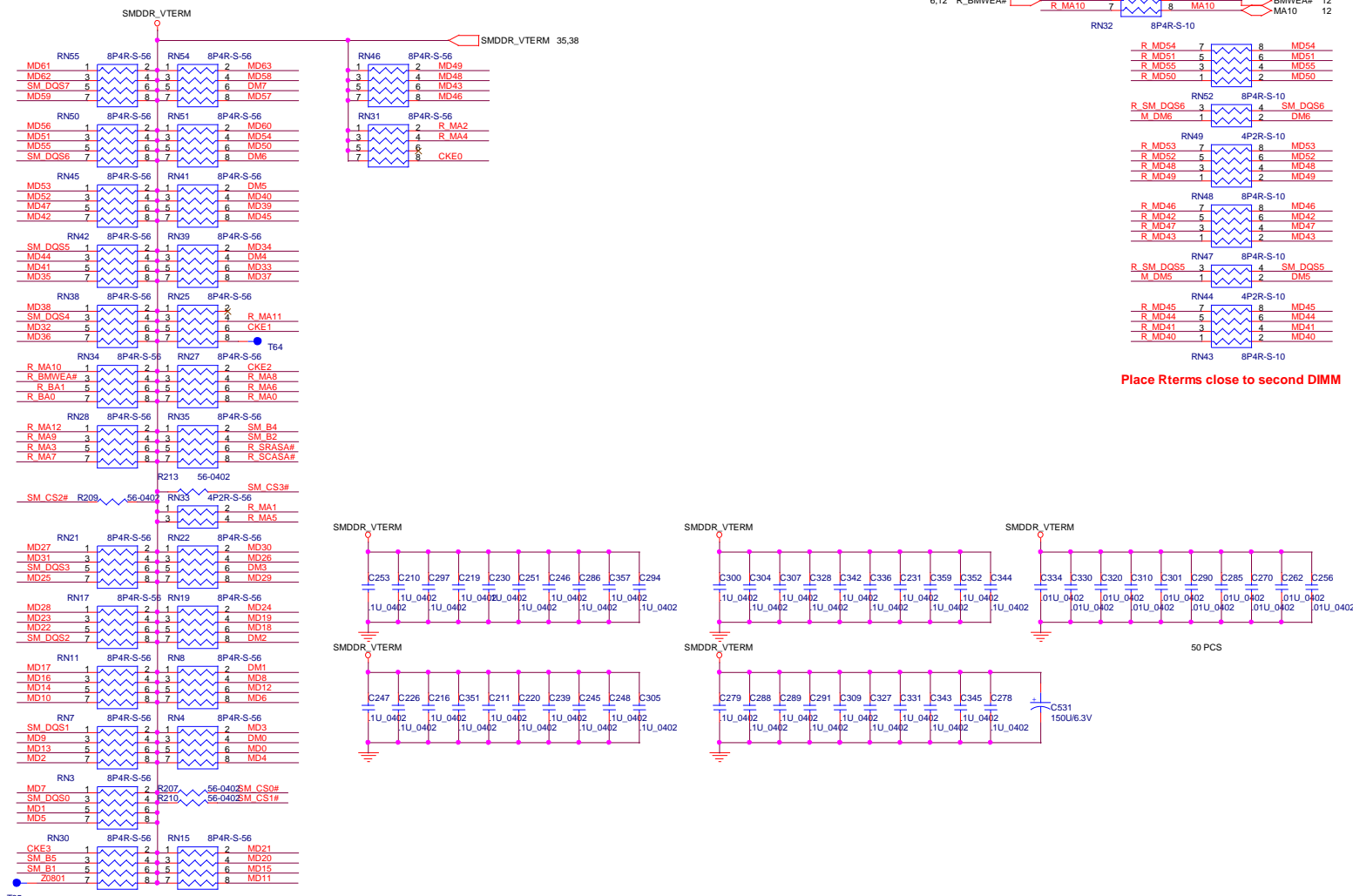
ICH4-M 3/3 (PWR, GND)

PROJECT : KT2
Quanta Computer Inc.

Size	Document Number	Rev
Custom	ICH4-M (POWER&GND)	1A
Date: Wednesday, April 07, 2004		Sheet 10 of 38



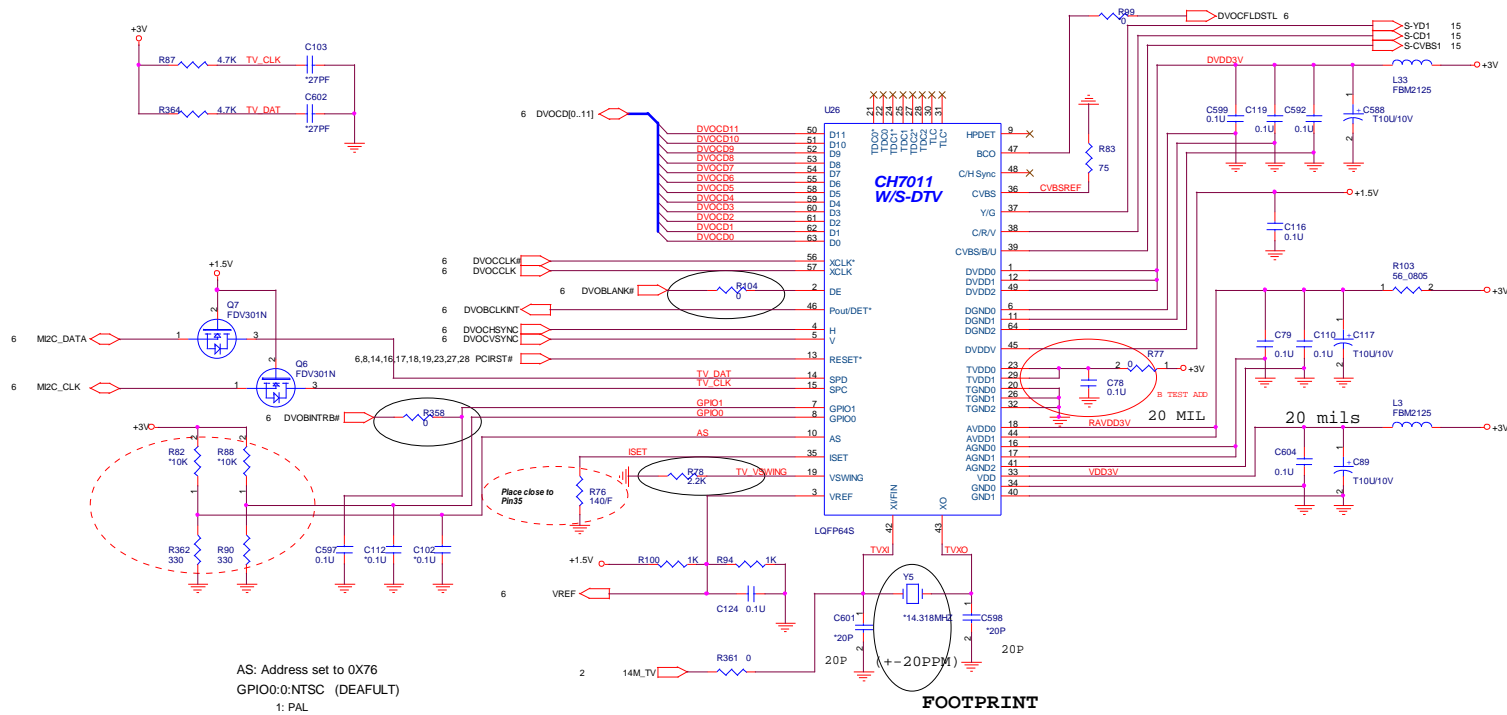
USE 8P4R-0402 package



Place Terms close to second DIMM

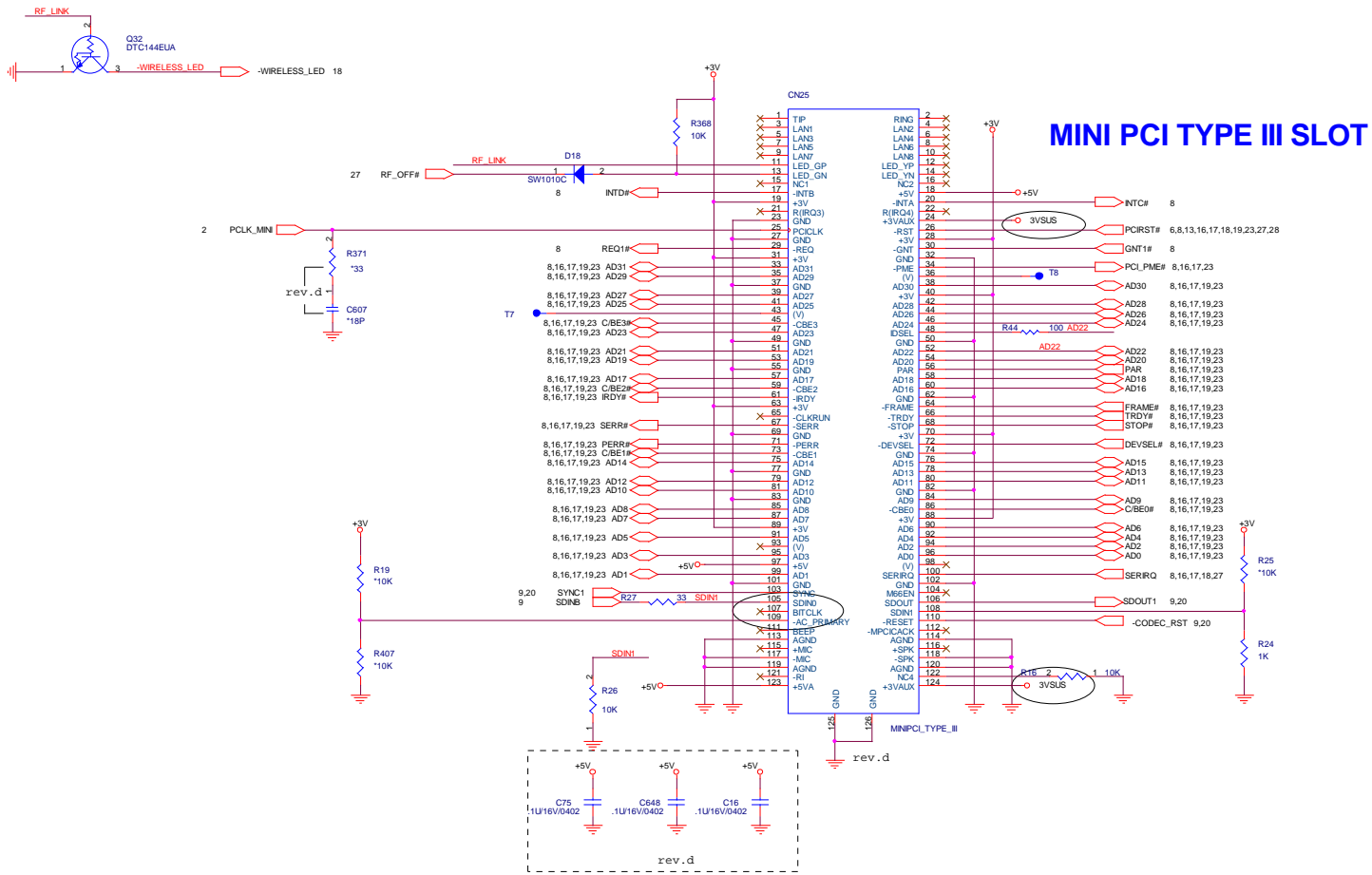
PROJECT : KT2
Quanta Computer Inc.

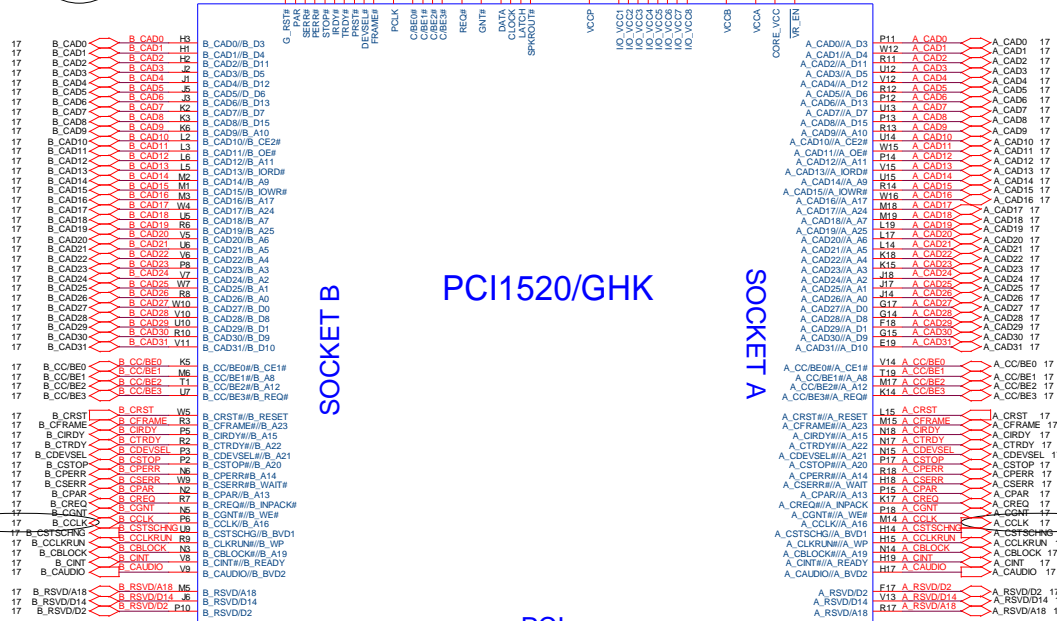
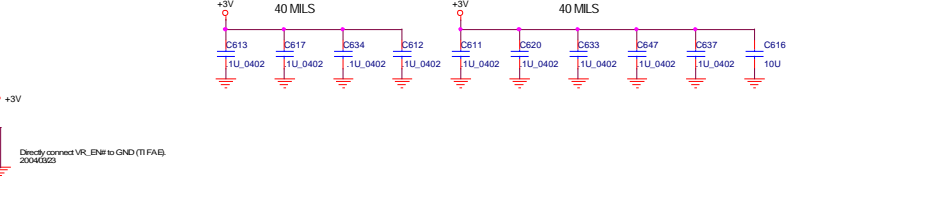
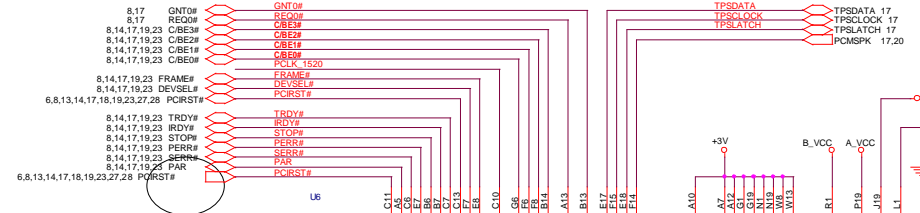
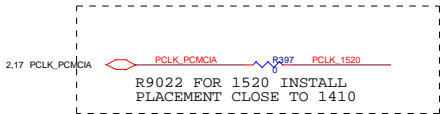
Size	Customer	Document Number	DDR IF	Rev
				1A
Date:	Wednesday, April 07, 2004		Sheet	11 of 38

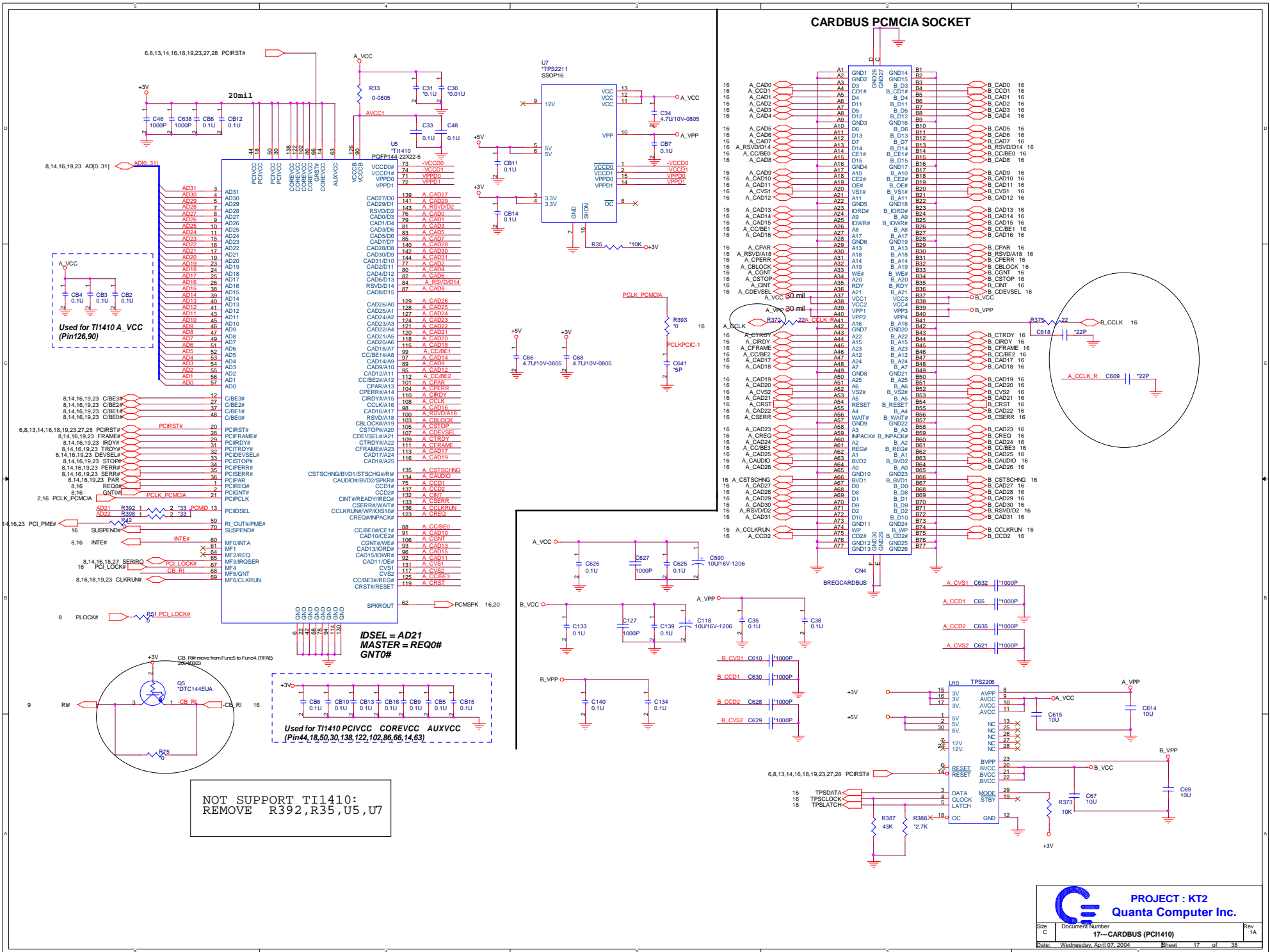


PROJECT : KT2
Quanta Computer Inc.

Size	Document Number	Rev
C	13-TV ENCODER (CH7011)	1/A
Date	Wednesday, April 07, 2004	Sheet 13 of 38







CARDBUS PCMCIA SOCKET

NOT SUPPORT TI1410:
REMOVE R392, R35, U5, U7

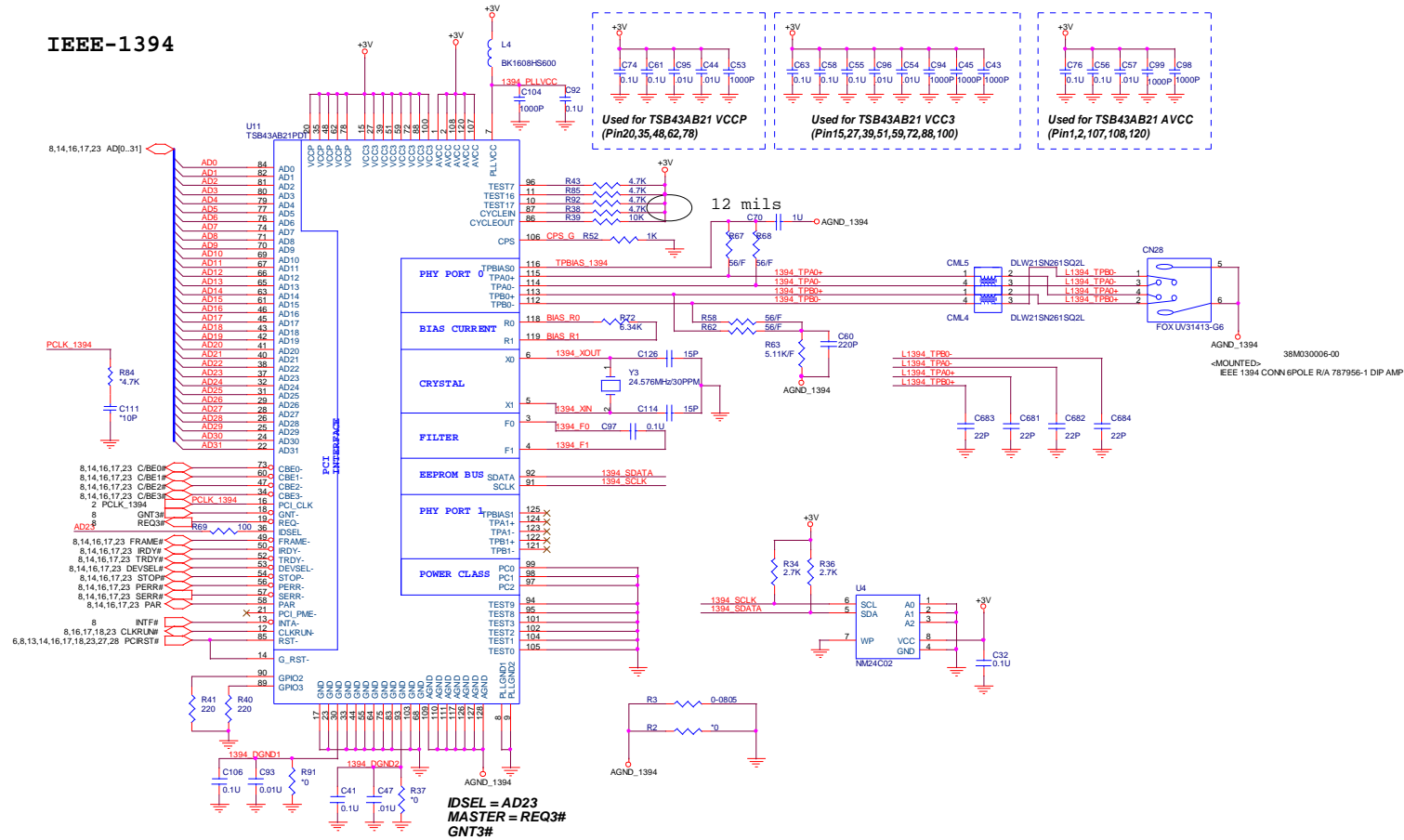
ISDEL = AD21
MASTER = REQ#
GNT0#

Used for TI1410 PCIVCC COREVCC AUXVCC
(Pin44,18,50,30,138,122,102,86,66,14,63)

QUANTA
PROJECT : KT2
Quanta Computer Inc.

Doc Number 17-CARBUS (PCI1410)
Rev 1/A
Date: Wednesday, April 07, 2004 Sheet 17 of 38

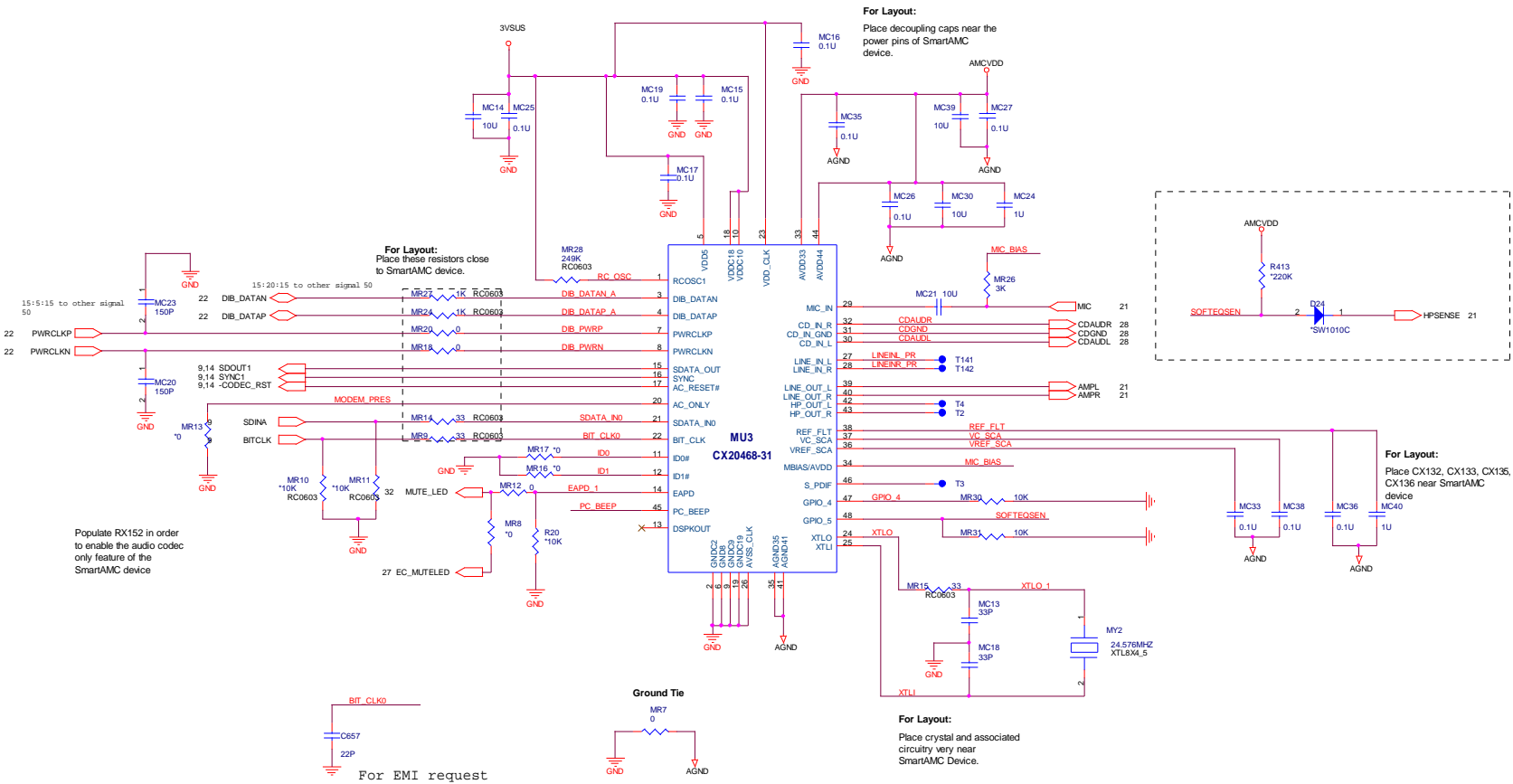
IEEE-1394



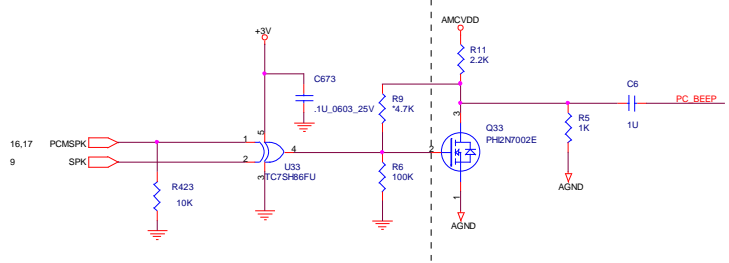
ISEL = AD23
 MASTER = REQ3#
 GNT3#

PROJECT : KT2
Quanta Computer Inc.

Size C Document Number 19-IEEE1394a (43AB21A) Rev 1A
 Date Wednesday, April 07, 2004 Sheet 19 of 38



PC SPEAKER

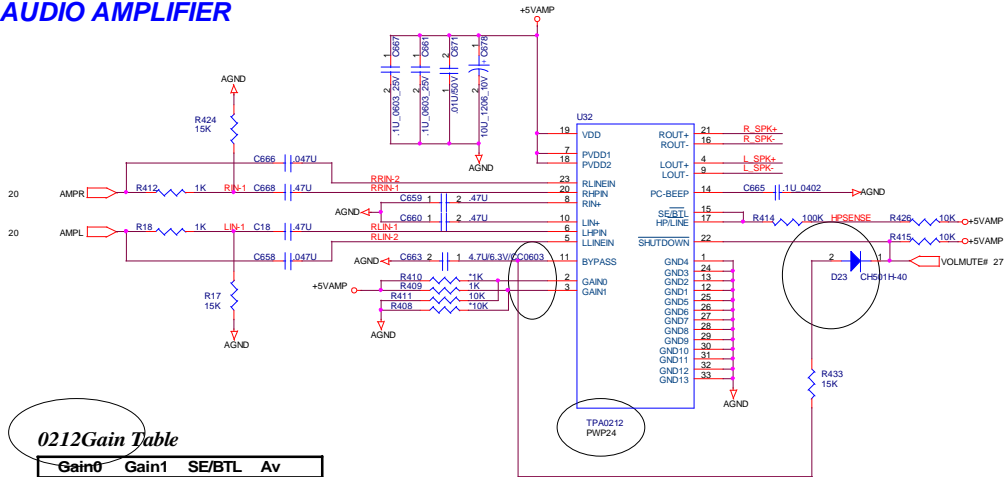


- CX20468-21: ADD R9026, MR9, MR19
REMOVE MR8, R9025, D8
- CX20468-31: ADD MR8, R9025, D8
REMOVE R9026, MR9, MR19
- CX20468-31 without software EQ:
ADD MR8, MR9
REMOVE R9025, D8

PROJECT : KT2
Quanta Computer Inc.

Size	Document Number	Rev
C	20--AC97 CTRL_CONEXANT20468-31	1A
Date:	Wednesday, April 07, 2004	Sheet 20 of 38

AUDIO AMPLIFIER

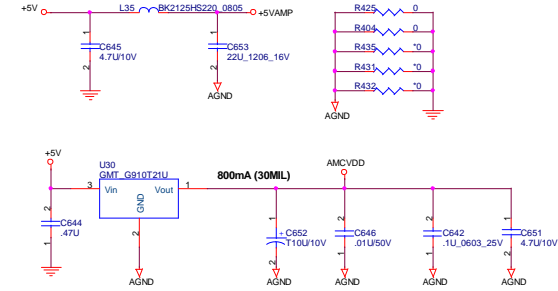
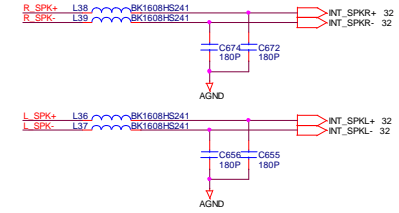


0212Gain Table

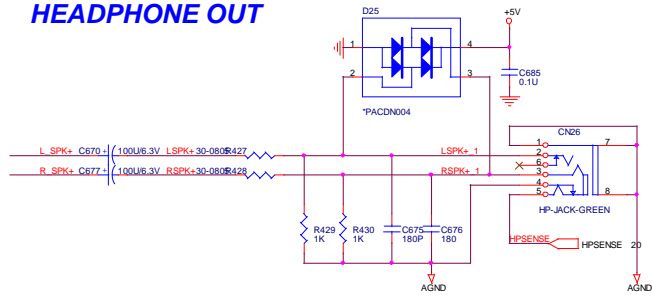
Gain0	Gain1	SE/BTL	Av
0	0	0	6dB
0	1	0	15.6dB
1	0	0	21.6dB
1	1	0	27.6dB
X	X	1	4.1dB

Priority:
 1. Port-replicator headphone is 1st priority
 2. Notebook headphone is 2nd priority
 3. Notebook internal speaker is 3rd priority
 2004/03/20

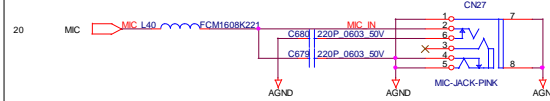
INTERNAL SPK



HEADPHONE OUT

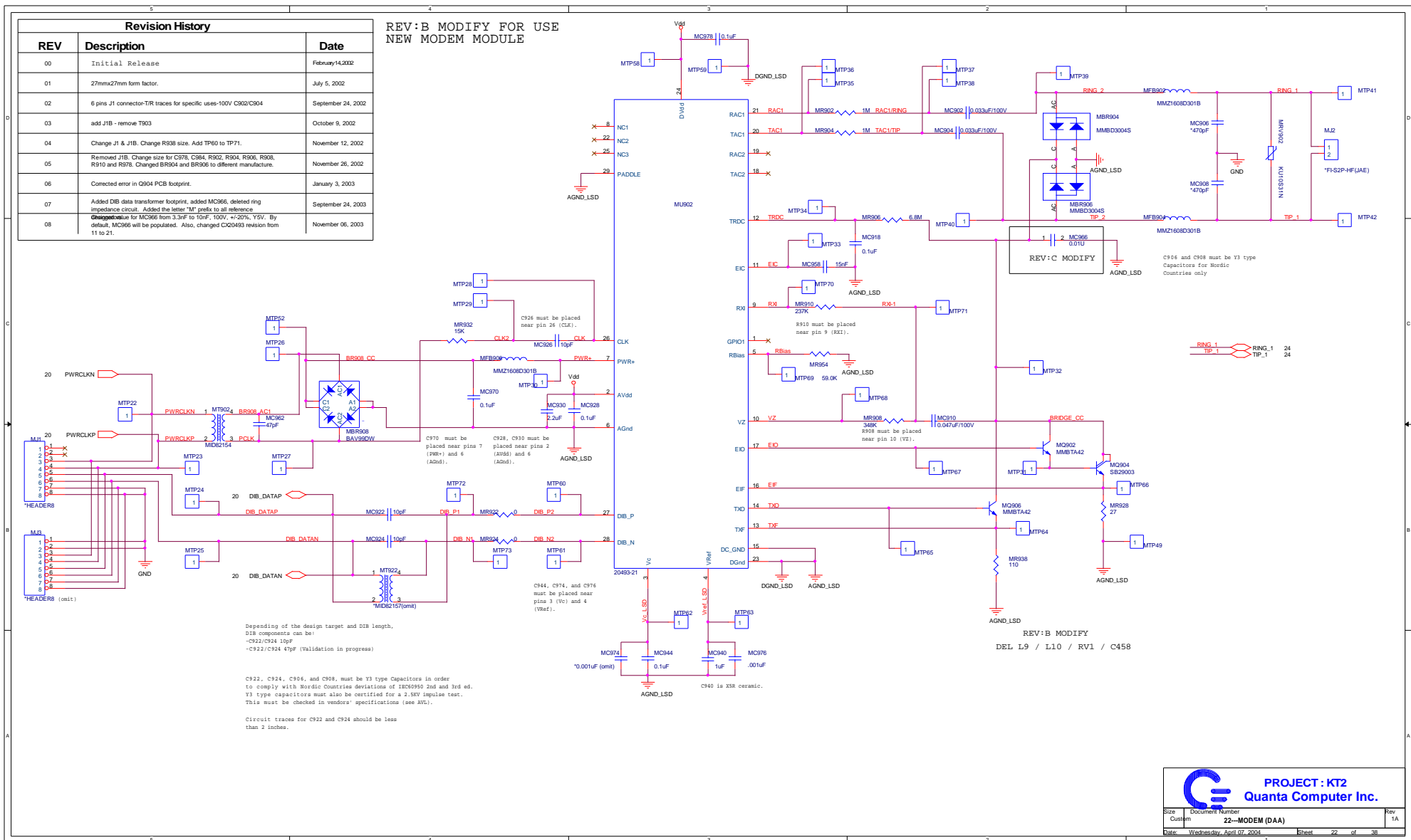


MICROPHONE



REV:B MODIFY FOR USE
NEW MODEM MODULE

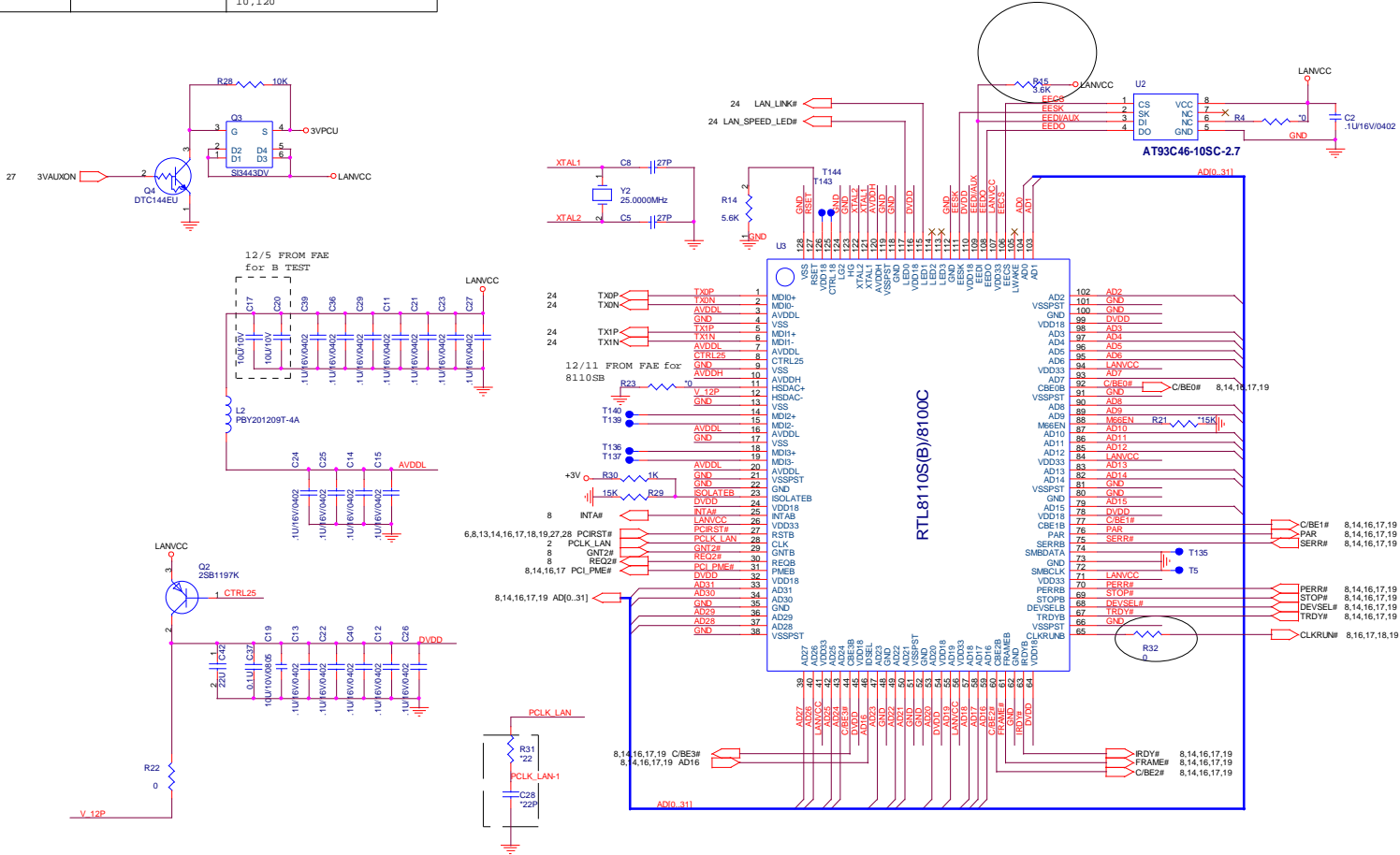
Revision History		
REV	Description	Date
00	Initial Release	February 14, 2002
01	27mmx27mm form factor.	July 5, 2002
02	6 pins J1 connector-T/R traces for specific: uses-100V C902/C904	September 24, 2002
03	add J1B - remove T903	October 9, 2002
04	Change J1 & J1B. Change R338 size. Add TP60 to TP71.	November 12, 2002
05	Removed J1B. Change size for C978, C984, R902, R904, R906, R908, R910 and R976. Changed BR904 and BR906 to different manufacture.	November 26, 2002
06	Corrected error in Q904 PCB footprint.	January 3, 2003
07	Added DIB data transformer footprint, added MC966, deleted ring impedance circuit. Added the letter "M" prefix to all reference.	September 24, 2003
08	Changed value for MC966 from 3.3nF to 10nF, 100V, +/-20%, Y5V. By default, MC966 will be populated. Also, changed CX20493 revision from 11 to 21.	November 06, 2003



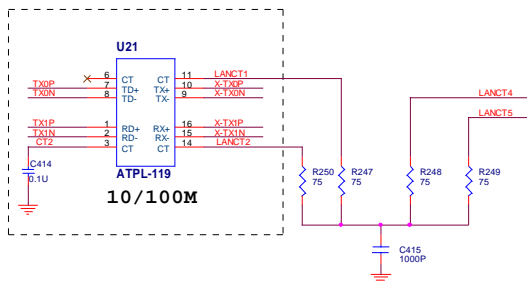
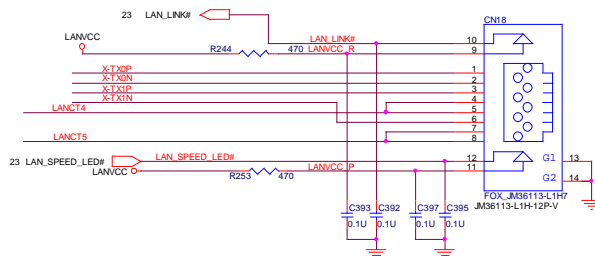
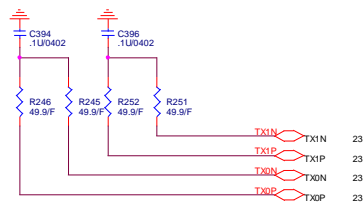
PROJECT : KT2
Quanta Computer Inc.

Size	Document Number	Rev
Custom	22--MODEM (DAA)	1A
Date:	Wednesday, April 07, 2004	Sheet 22 of 38

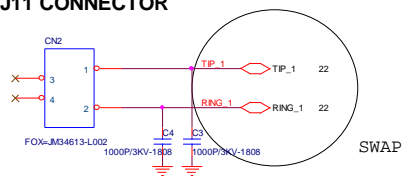
	8100CL(10/100M)	8110SB(1G)
DVDD33	3.3VD 26,41,56,71,84,94,107	3.3VD 26,41,56,71,84,94,107
AVDDL	3.3VA 3,7,20	2.5VA 3,7,20,16
DVDD	2.5VD 32,54,78,99	1.8VD 32,54,78,99,24,45,64,130,116,126
AVDD25	2.5VA 12	NC
AVDDH	NC	3.3VA 10,120




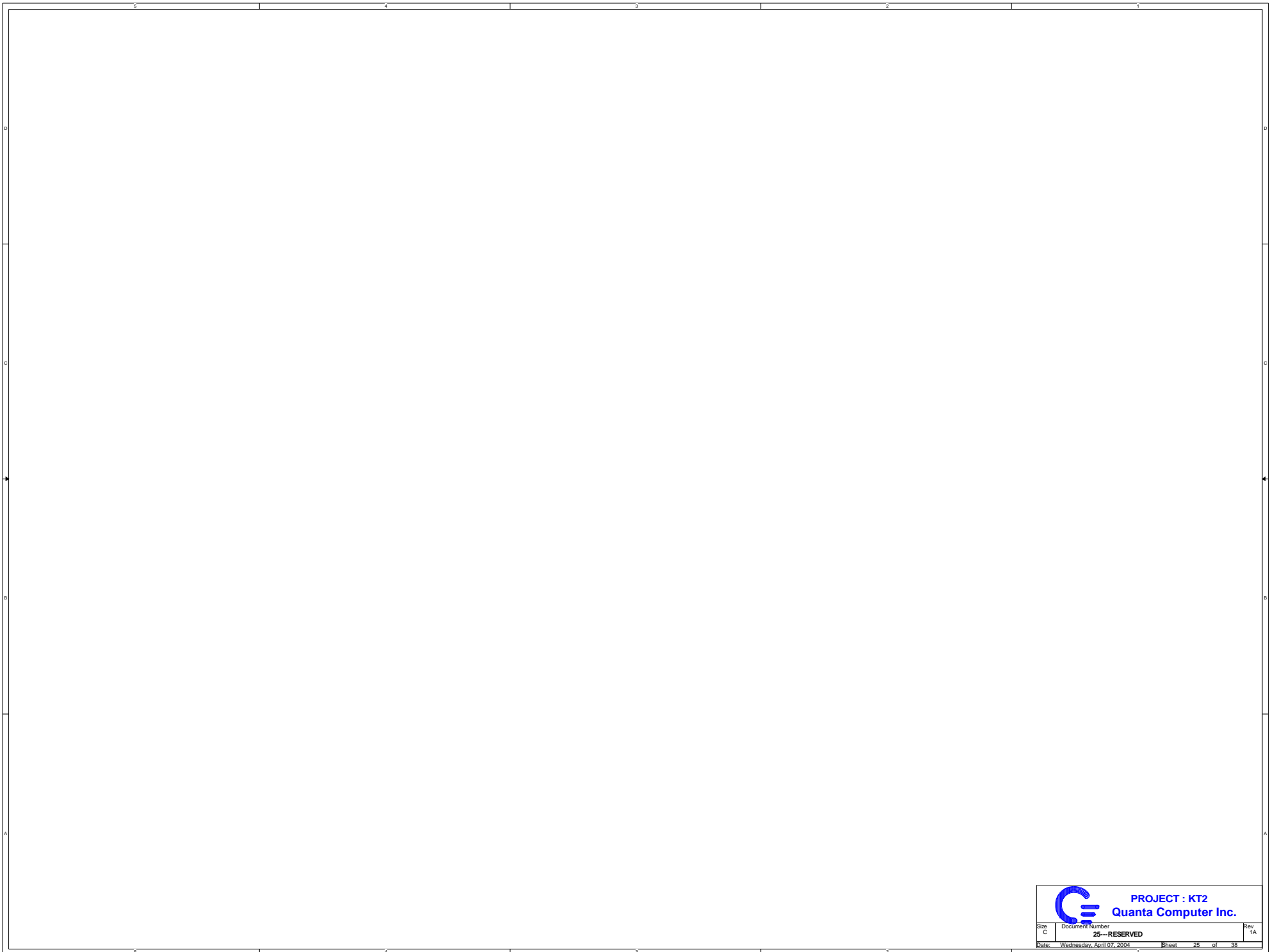
Close to Chip




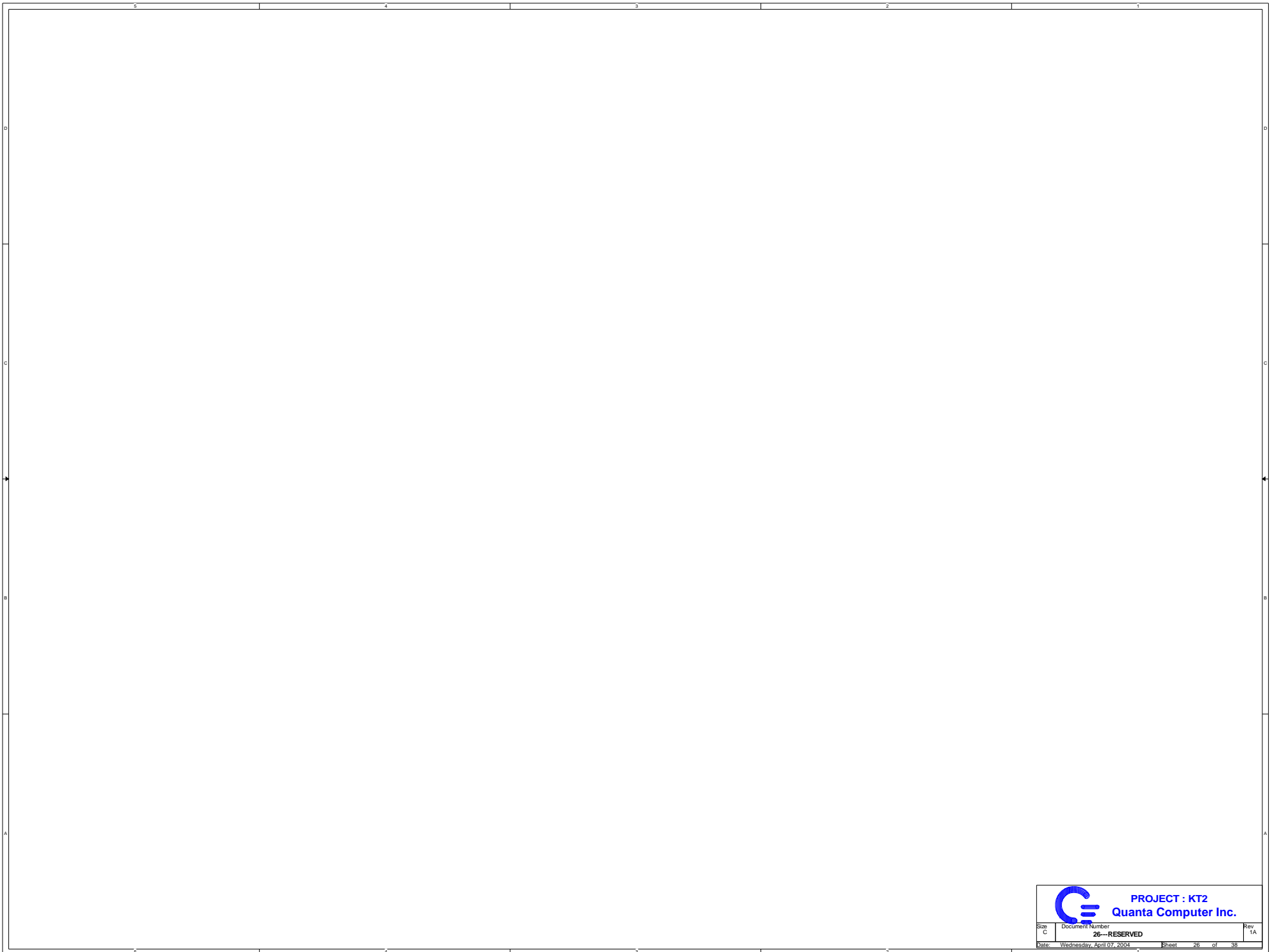
RJ11 CONNECTOR




		PROJECT : KT2	
		Quanta Computer Inc.	
Size	Document Number	Rev	TA
C	24--LAN (RJ11 & RJ45)		
Date	Wednesday, April 07, 2004	Sheet	24 of 38



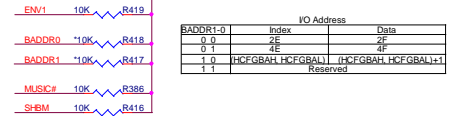
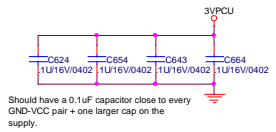
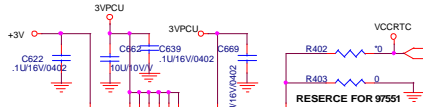
		PROJECT : KT2	
		Quanta Computer Inc.	
Size	Document Number	Rev	Rev
C	25-RESERVED	1A	1A
Date	Wednesday, April 07, 2004	Sheet	26 of 38



		PROJECT : KT2	
		Quanta Computer Inc.	
Size	Document Number	Rev	Rev
C	26--RESERVED	1A	1A
Date	Wednesday, April 07, 2004	Sheet	26 of 38

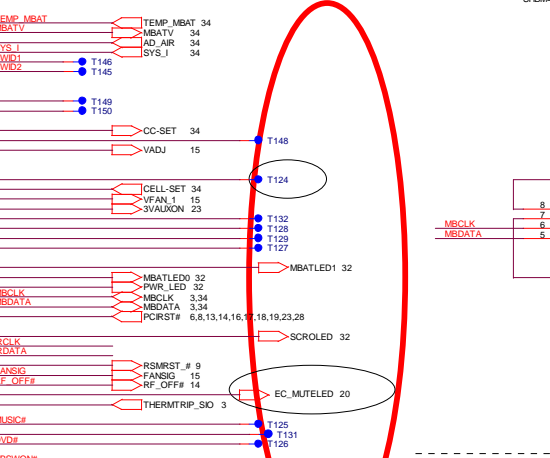
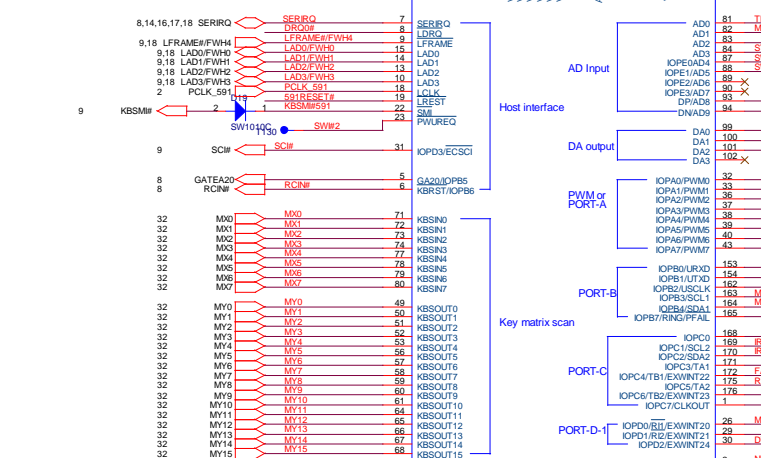
KBC-NS87551L

LDRQ#(pin 8) internal is no use
9,18 LPC_DRQ0# → LPC_DRQ0# R385 → DROQ#



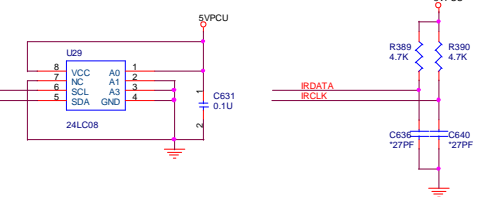
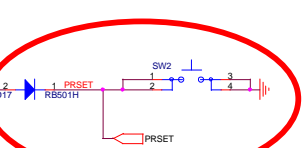
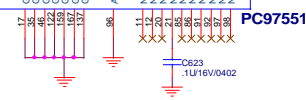
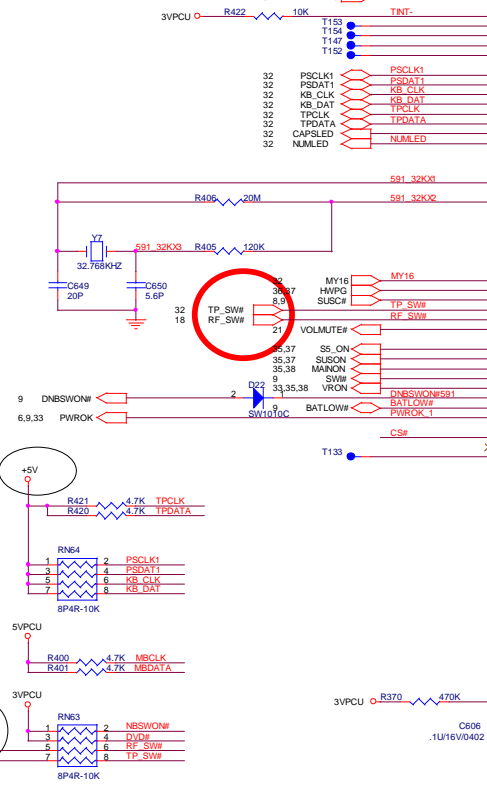
IO Address table with columns: Index, Data

SHM=1: Enable shared memory with host BIOS

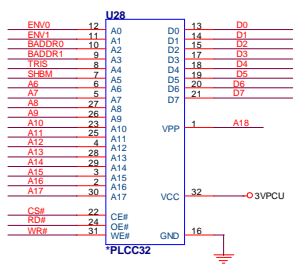
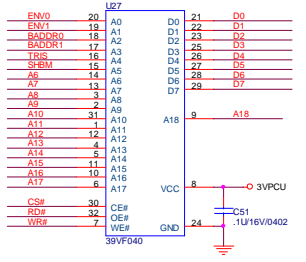


Pin 24 if no pull-high, will can't reboot.

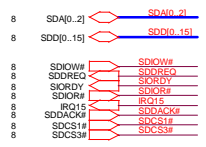
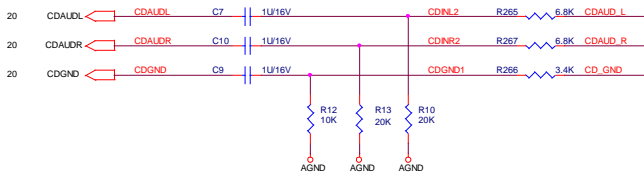
Pin 103 internal is "GPI0". Can't use to



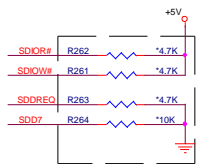
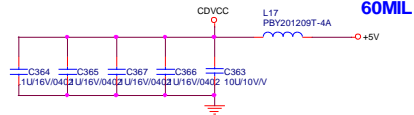
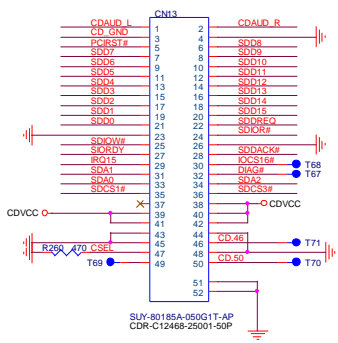
BIOS ROM



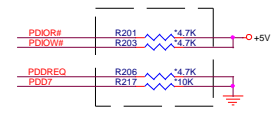
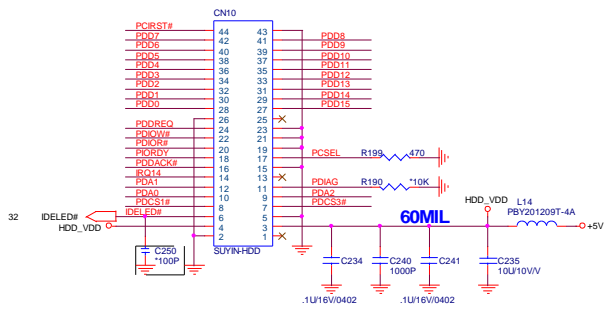
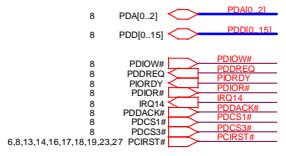
PROJECT: KT2 Quanta Computer Inc. Document Number: 27-KBC PCU-97551



CD-ROM

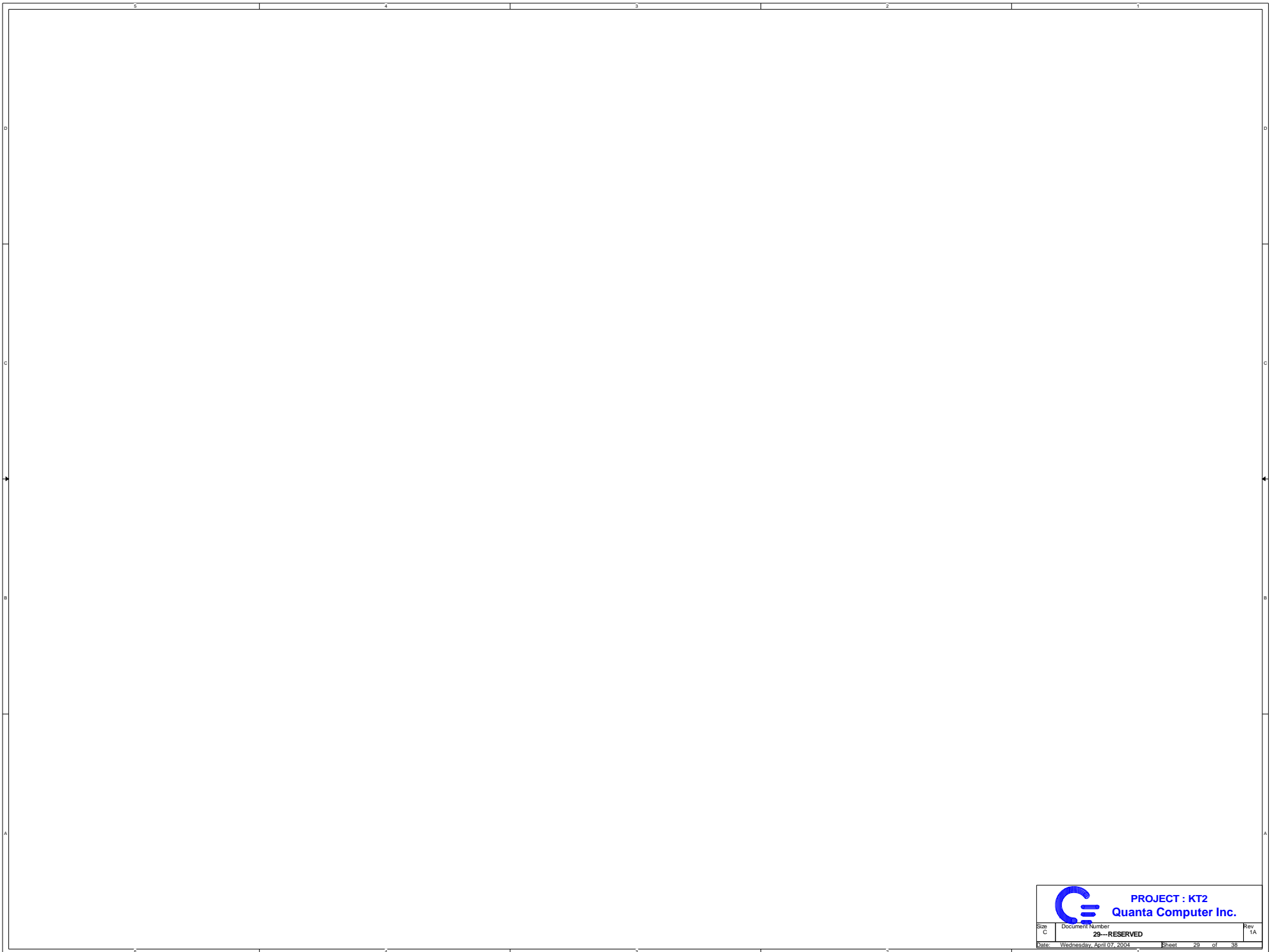



HDD CONNECTOR

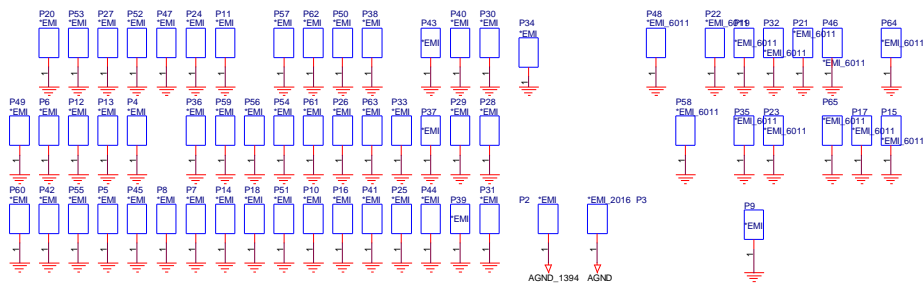
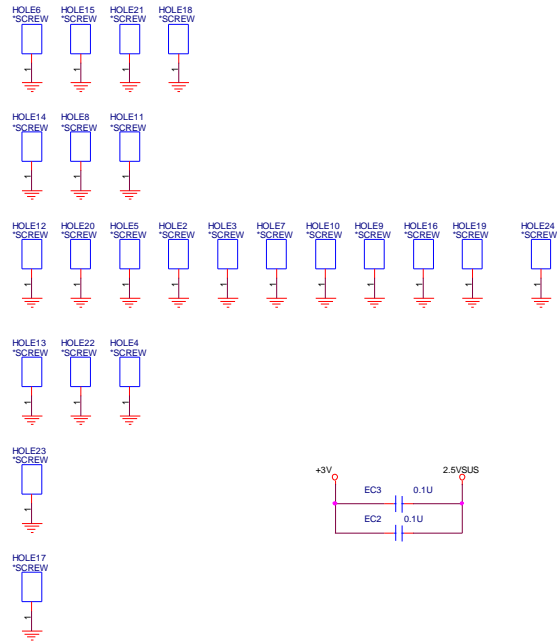


PROJECT : KT2
Quanta Computer Inc.


Size C Document Number **28--HDD_ODD** Rev 1/A
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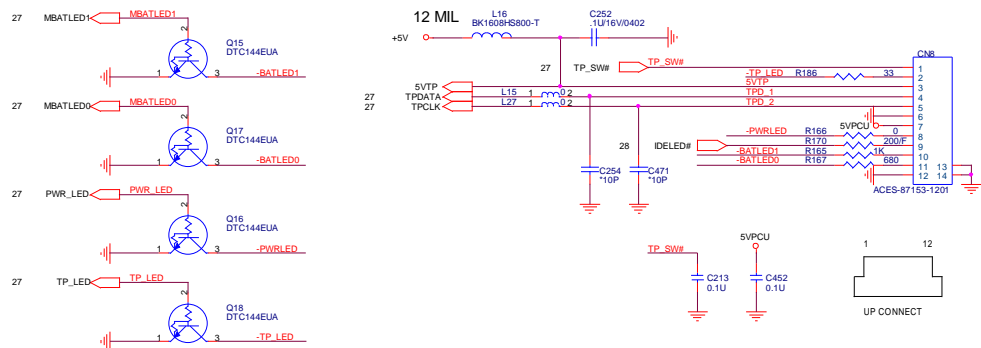
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		Quanta Computer Inc.	
Size	Document Number	Rev	Rev
C	23--RESERVED	1A	1A
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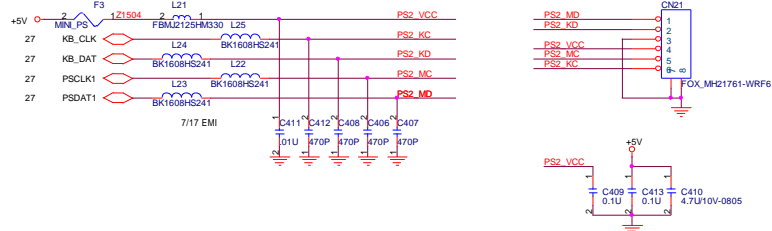


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		Quanta Computer Inc.	
Size	Document Number	Rev	
C	31--PORT REPLICATOR	1A	
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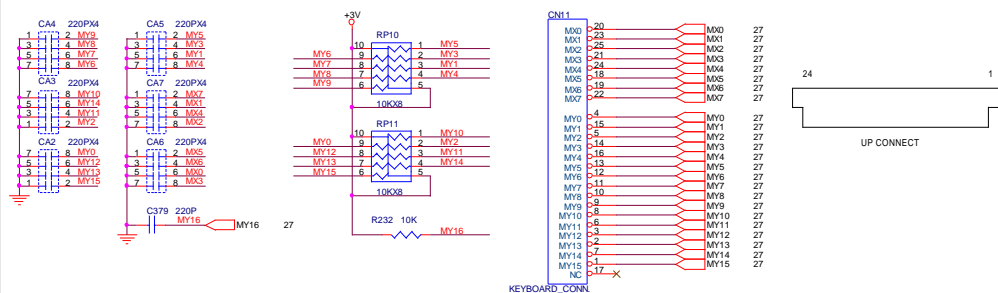
TOUCH PAD CONNECTOR



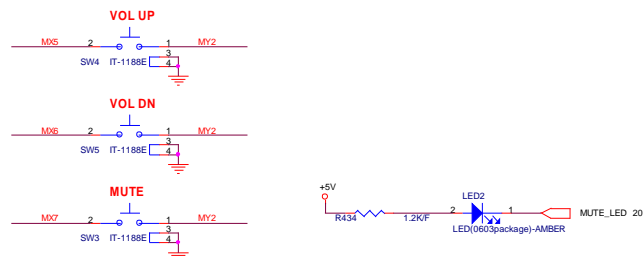
PS/2 PORT



KEYBOARD CONNECTOR

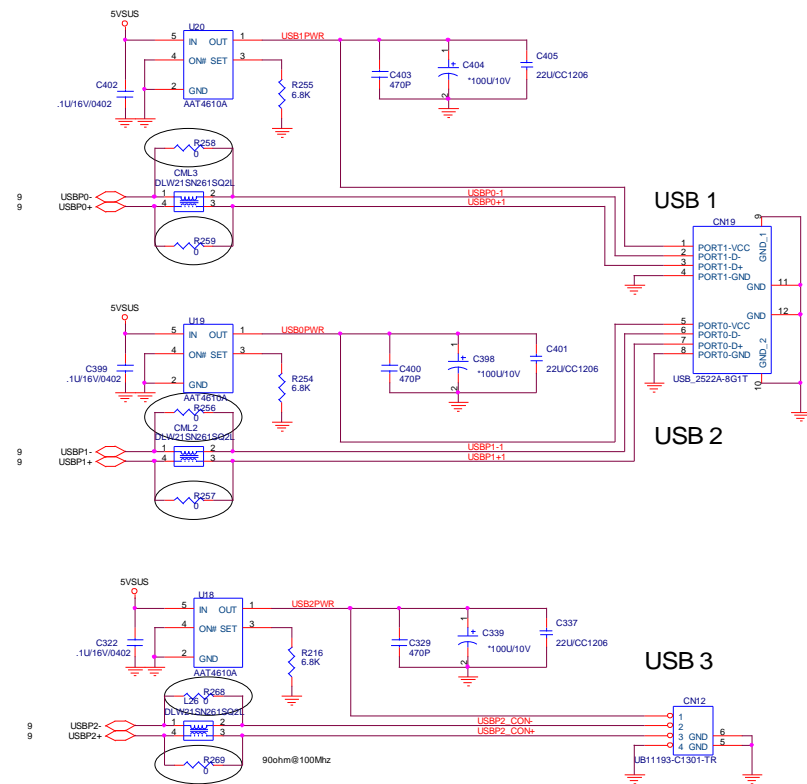


VOLUME CONTROL

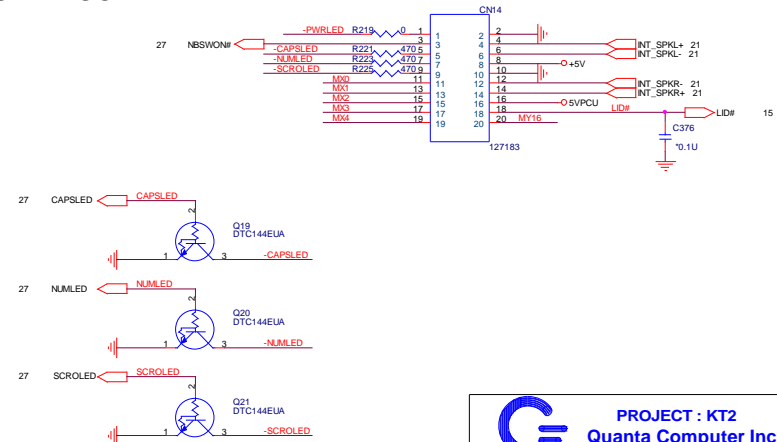


	MX0	MX1	MX2	MX3	MX4	MX5	MX6	MX7
MY2	RF	TouchPad				VOL UP	VOL DN	MUTE
MY7								
MY16	QS1	QS2	QS3	QS4	QS5			

USB PORT

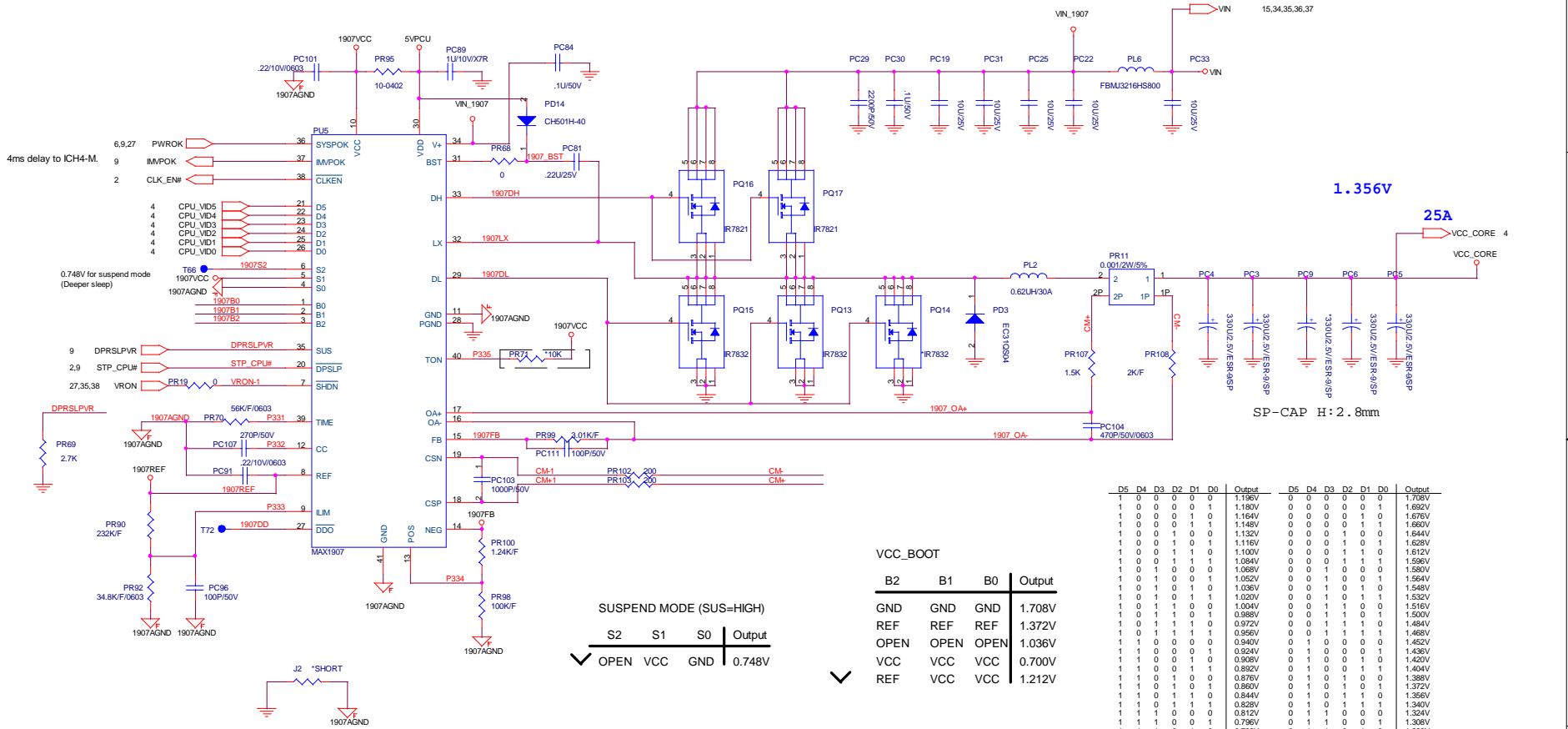


LED BOARD CON



PROJECT : KT2
Quanta Computer Inc.

Size C Document Number 32--TP, KB, PS2, LEDB, KEY, USB Rev 1/A
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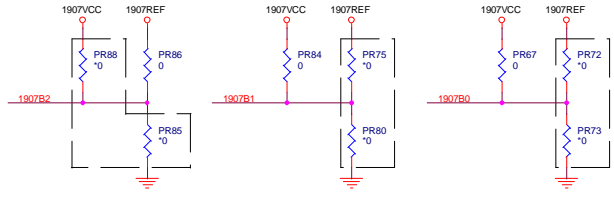
SUSPEND MODE (SUS=HIGH)

S2	S1	S0	Output
✓ OPEN	VCC	GND	0.748V

VCC_BOOT

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

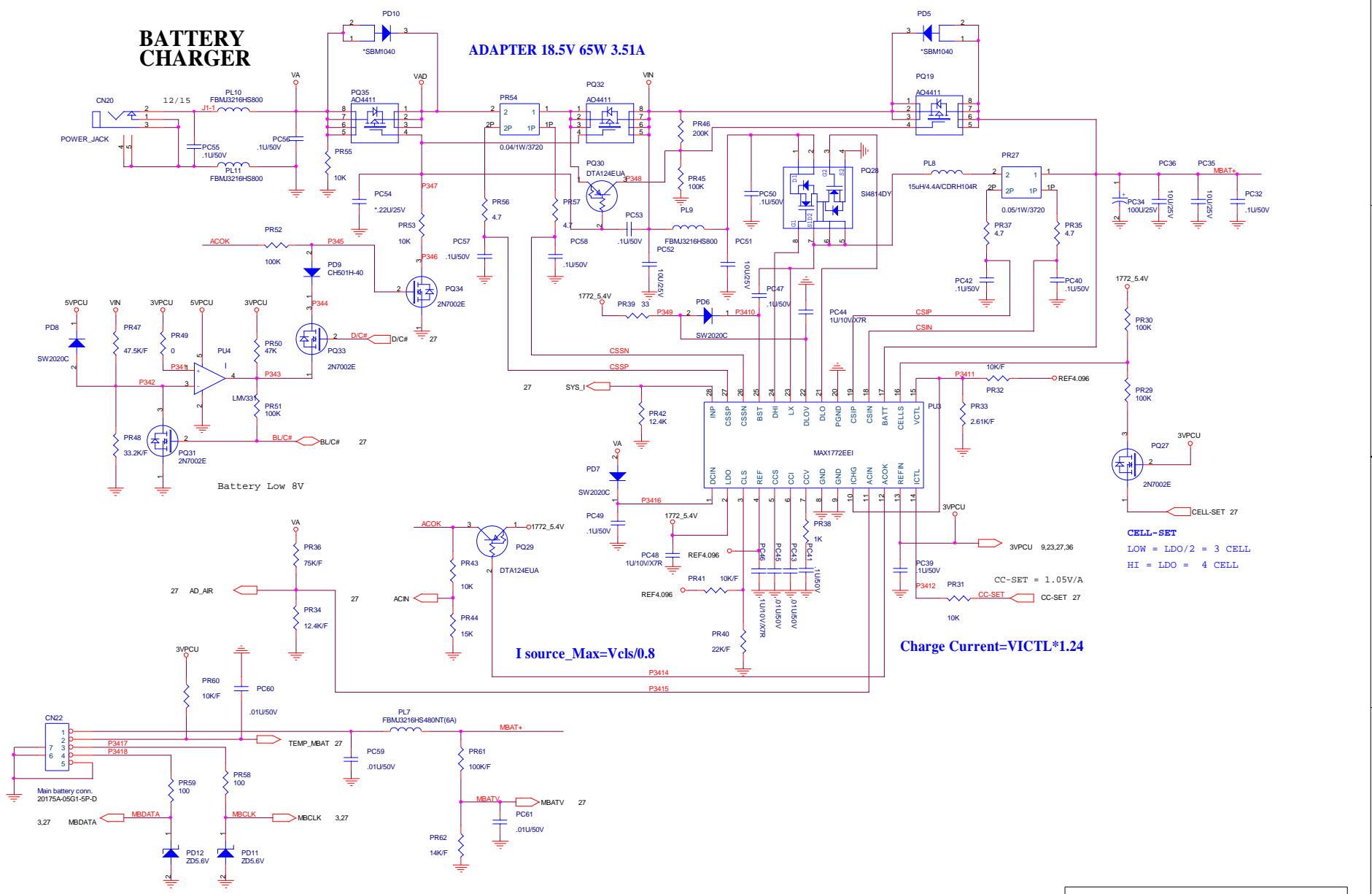
D5	D4	D3	D2	D1	D0	Output	D5	D4	D3	D2	D1	D0	Output
1	0	0	0	0	0	1.186V	0	0	0	0	0	0	1.708V
1	0	0	0	0	1	1.180V	0	0	0	0	0	1	1.692V
1	0	0	0	1	0	1.164V	0	0	0	0	1	0	1.676V
1	0	0	0	1	1	1.148V	0	0	0	0	1	1	1.660V
1	0	0	1	0	0	1.132V	0	0	0	1	0	0	1.644V
1	0	0	1	0	1	1.116V	0	0	0	1	0	1	1.628V
1	0	0	1	1	0	1.100V	0	0	0	1	1	0	1.612V
1	0	0	1	1	1	1.084V	0	0	0	1	1	1	1.596V
1	0	1	0	0	0	1.068V	0	0	1	0	0	0	1.580V
1	0	1	0	0	1	1.052V	0	0	1	0	0	1	1.564V
1	0	1	0	1	0	1.036V	0	0	1	0	1	0	1.548V
1	0	1	0	1	1	1.020V	0	0	1	0	1	1	1.532V
1	0	1	1	0	0	1.004V	0	0	1	1	0	0	1.516V
1	0	1	1	0	1	0.988V	0	0	1	1	0	1	1.500V
1	0	1	1	1	0	0.972V	0	0	1	1	1	0	1.484V
1	0	1	1	1	1	0.956V	0	0	1	1	1	1	1.468V
1	1	0	0	0	0	0.940V	0	1	0	0	0	0	1.452V
1	1	0	0	0	1	0.924V	0	1	0	0	0	1	1.436V
1	1	0	0	1	0	0.908V	0	1	0	0	1	0	1.420V
1	1	0	0	1	1	0.892V	0	1	0	0	1	1	1.404V
1	1	0	1	0	0	0.876V	0	1	0	1	0	0	1.388V
1	1	0	1	0	1	0.860V	0	1	0	1	0	1	1.372V
1	1	0	1	1	0	0.844V	0	1	0	1	0	1	1.356V
1	1	0	1	1	1	0.828V	0	1	0	1	1	1	1.340V
1	1	1	0	0	0	0.812V	0	1	1	0	0	0	1.324V
1	1	1	0	0	1	0.796V	0	1	1	0	1	0	1.308V
1	1	1	0	1	0	0.780V	0	1	1	0	1	0	1.292V
1	1	1	0	1	1	0.764V	0	1	1	0	1	1	1.276V
1	1	1	1	0	0	0.748V	0	1	1	1	0	0	1.260V
1	1	1	1	0	1	0.732V	0	1	1	1	0	1	1.244V
1	1	1	1	1	0	0.716V	0	1	1	1	1	0	1.228V
1	1	1	1	1	1	0.700V	0	1	1	1	1	1	1.212V



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BATTERY CHARGER

ADAPTER 18.5V 65W 3.51A



Battery Low 8V

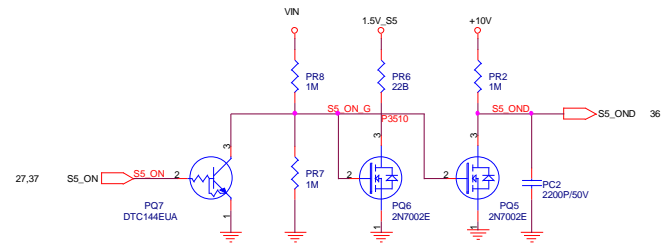
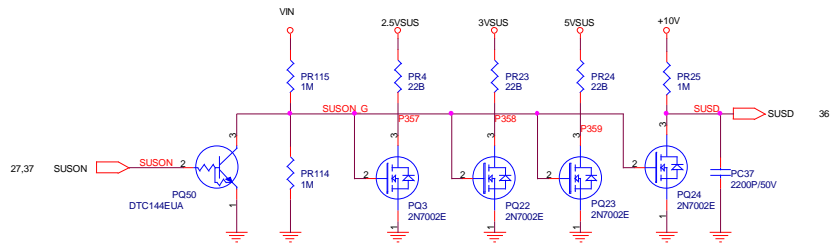
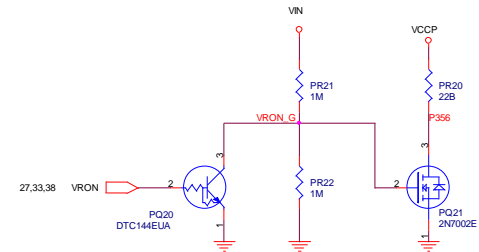
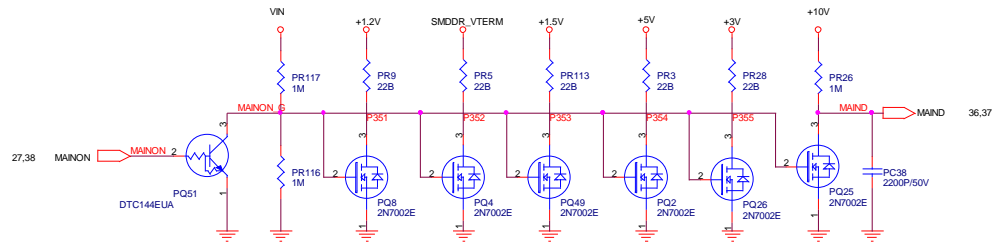
$I_{source_Max} = V_{cls} / 0.8$

Charge Current = $VICTL * 1.24$

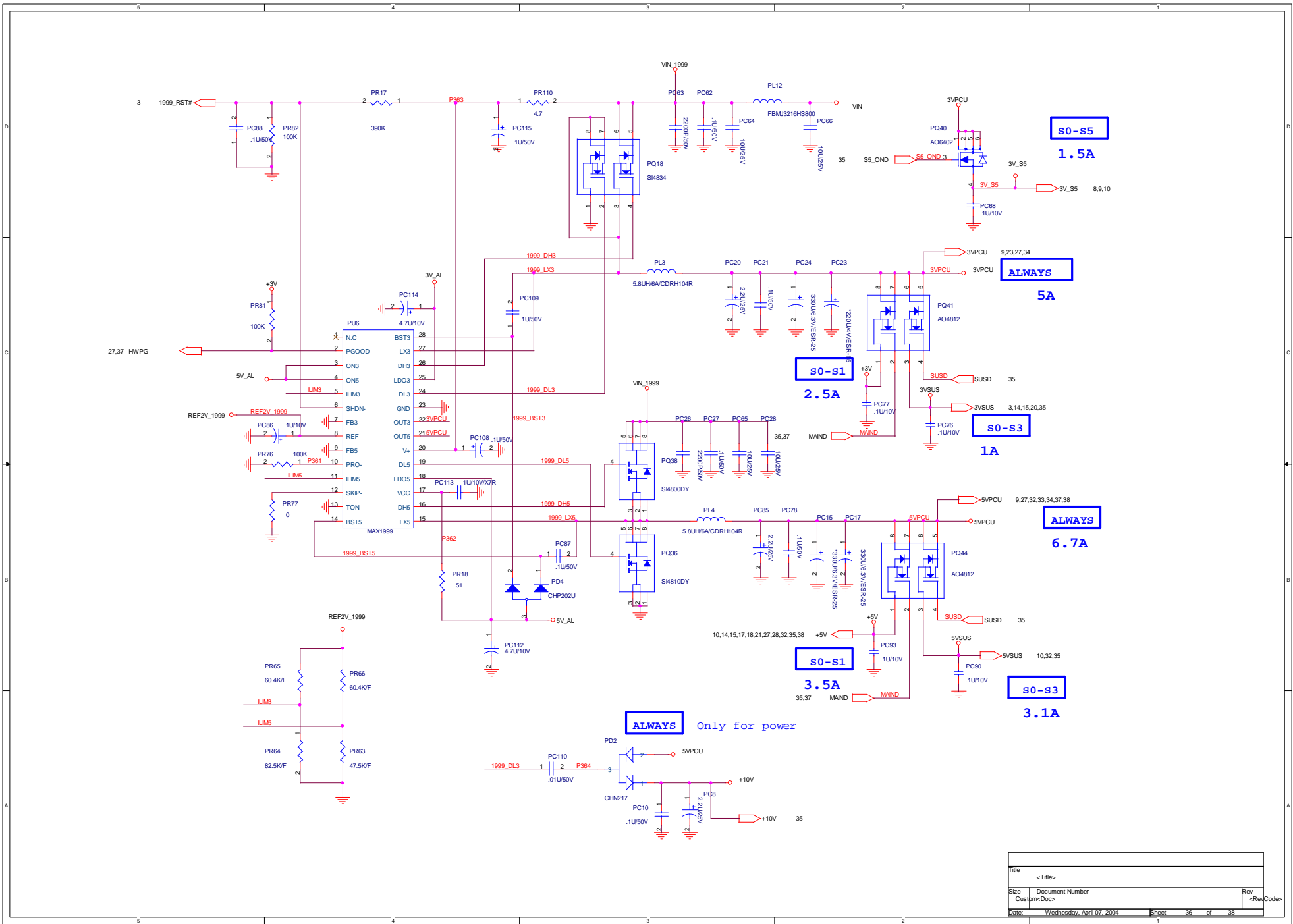
CELL-SET
 LOW = LDO / 2 = 3 CELL
 HI = LDO = 4 CELL

CC-SET = 1.05V/A

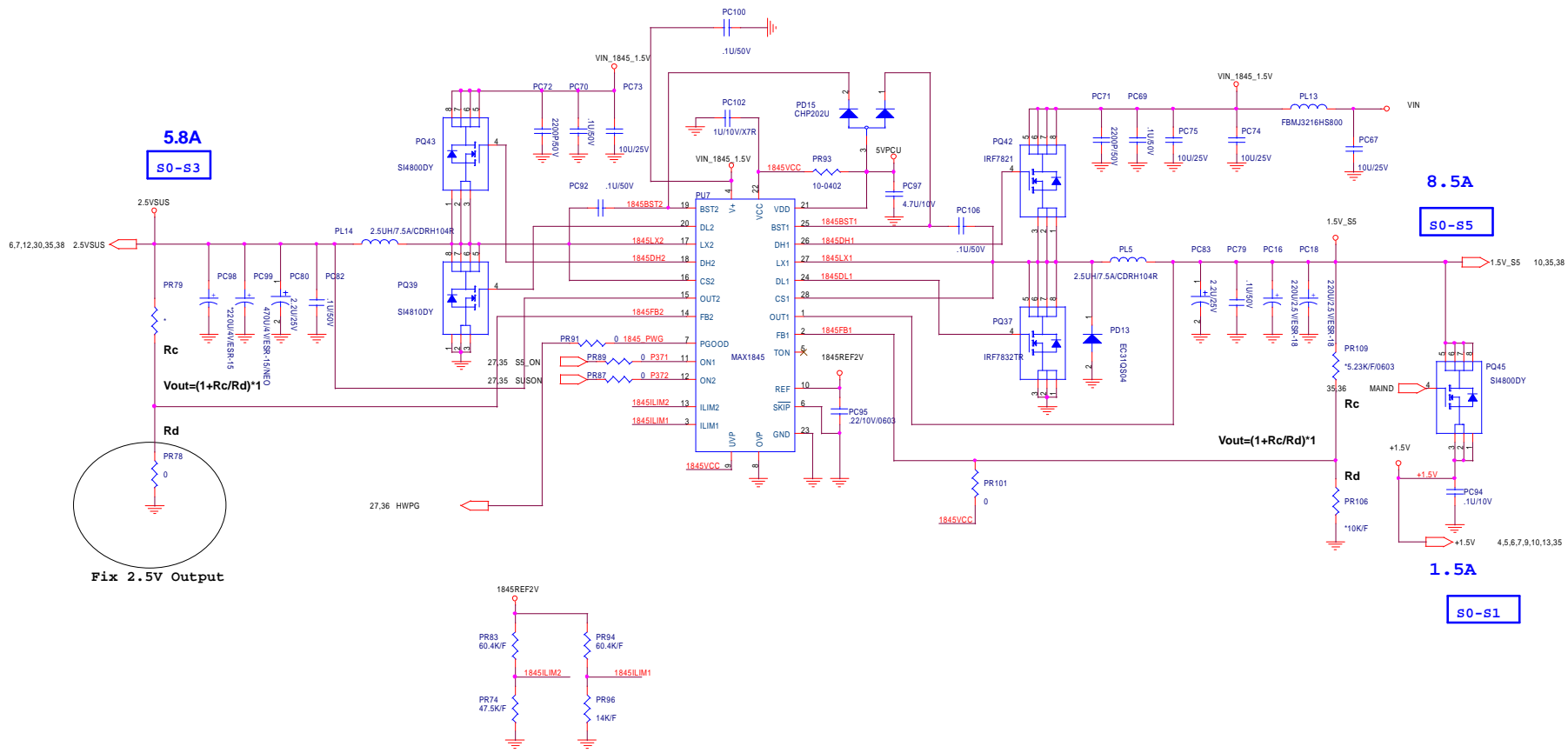
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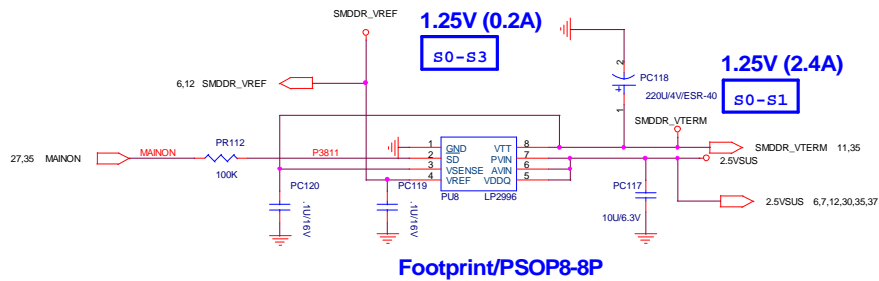
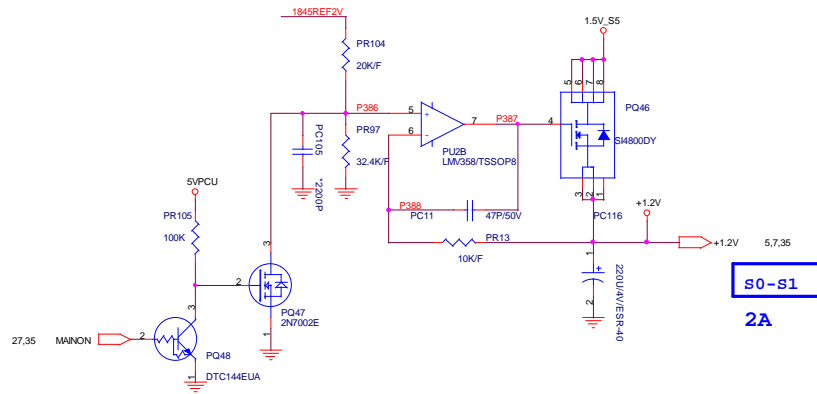
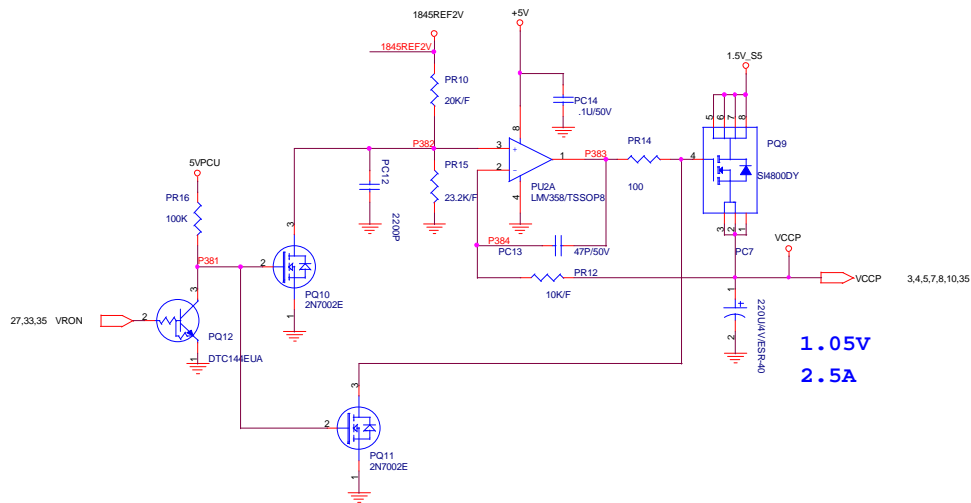


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Fix 2.5V Output

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<Title>		
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