Z05 SYSTEM BLOCK DIAGRAM

CPU CORE / VDDNB (ISL6265A) PAGE 26

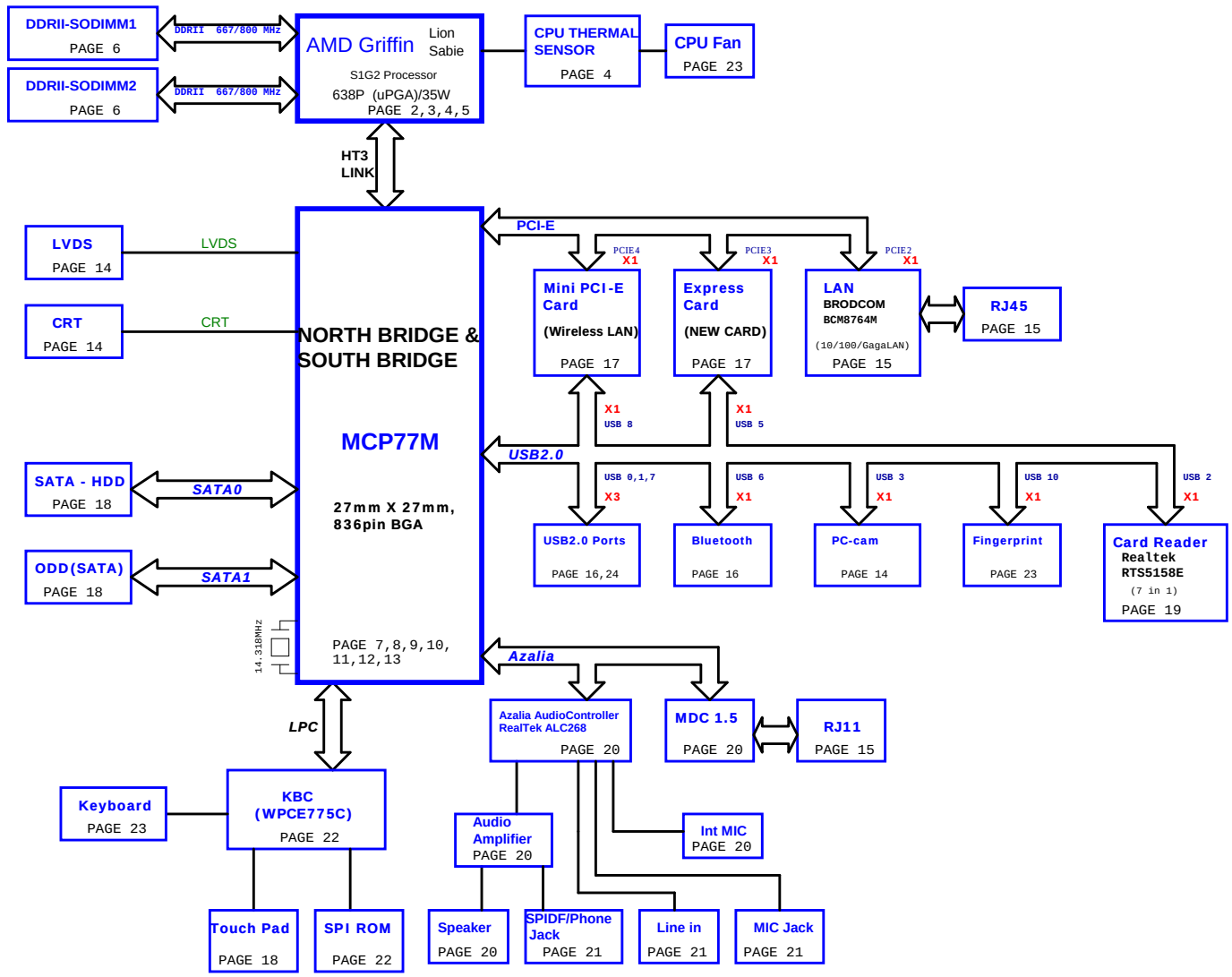
NB_CORE +1.1V (RT8202) PAGE 28

+1.1V_NB (RT8202) PAGE 27

DDR II SMDDR_VTERM 1.8VSUS(TPS51116REGR) PAGE 29

SYSTEM POWER (ISL6237) PAGE 25

SYSTEM CHARGER (ISL6251A) PAGE 24



PCB STACK UP

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

Quanta Computer Inc.
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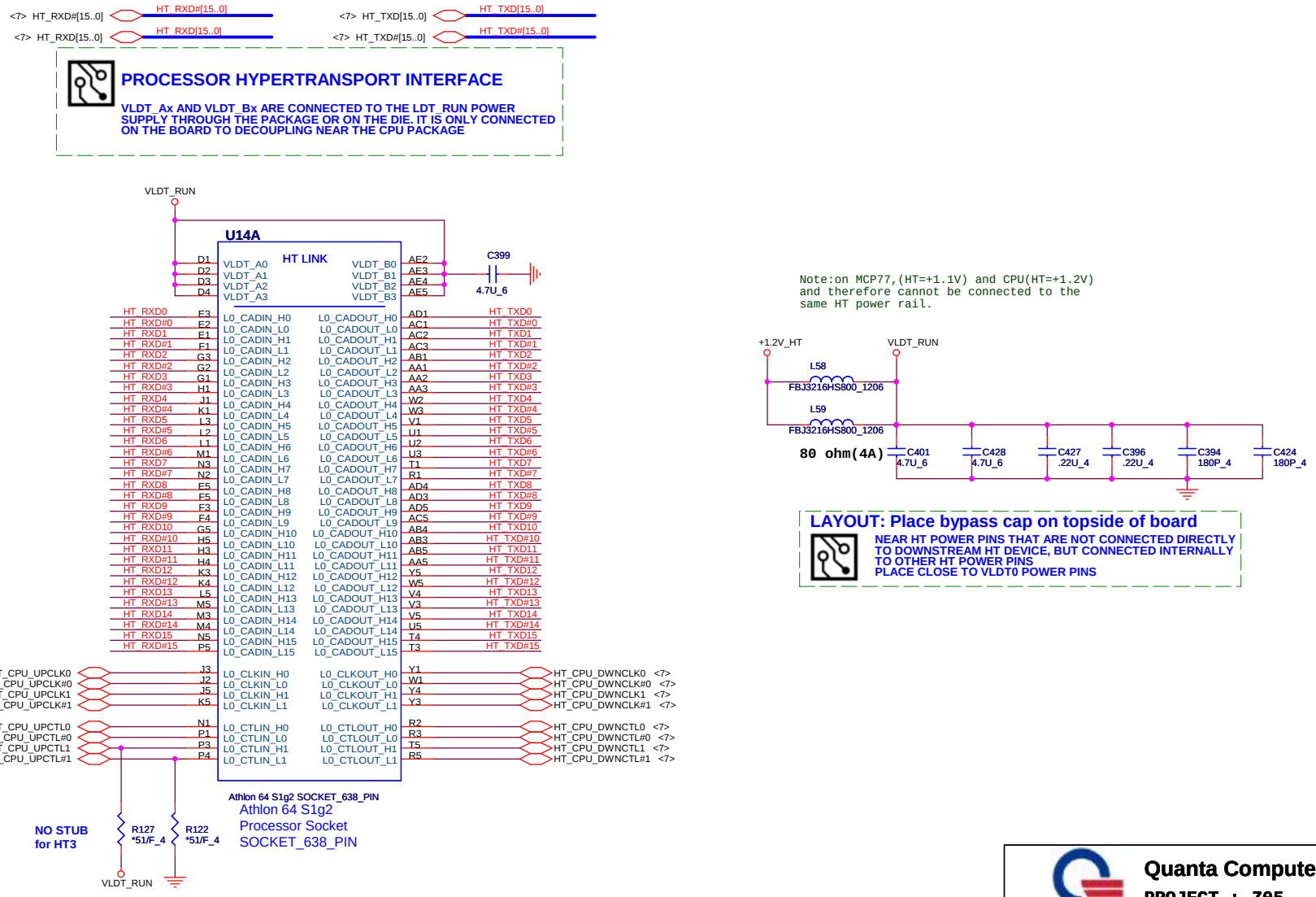

Processor DDR2 Memory Interface

VDD_VTT_SUS_CPU IS CONNECTED TO THE VDD_VTT_SUS POWER SUPPLY THROUGH THE PACKAGE OR ON THE DIE. IT IS ONLY CONNECTED ON THE BOARD TO DECOUPLING NEAR THE CPU PACKAGE

PLACE THEM CLOSE TO CPU WITHIN 1"

U14B

MEM:CMD/CTRL/CLK

Athlon 64 S1g2 SOCKET_638_PIN

Athlon 64 S1g2
Processor Socket
SOCKET_638_PIN

U14C

MEM:DATA

To reverse SODIMM socket

To normal SODIMM socket

PLACE CLOSE TO PROCESSOR WITHIN 1.5 INCH

PLACE CLOSE TO PROCESSOR WITHIN 1.5 INCH

Quanta Computer Inc.	
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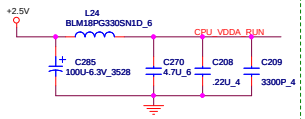
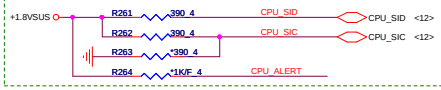
ATHLON Control and Debug

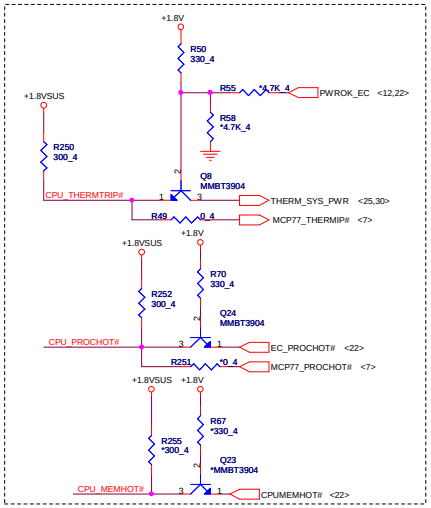
LAYOUT: ROUTE VDDA TRACE APPROX. 50 mils WIDE (USE 2x25 mil TRACES TO EXIT BALL FIELD) AND 500 mils LONG.

CPU_VDDA_RUN

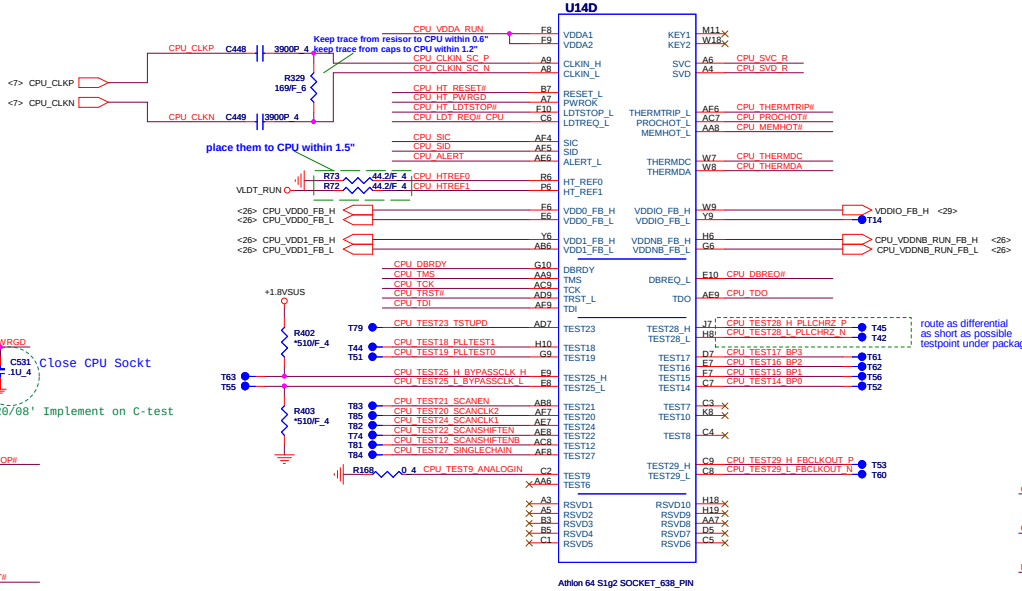


If AMD SI is not used, the SID pin can be left unconnected and SIC should have a 390- (±5%) pulldown to VSS.





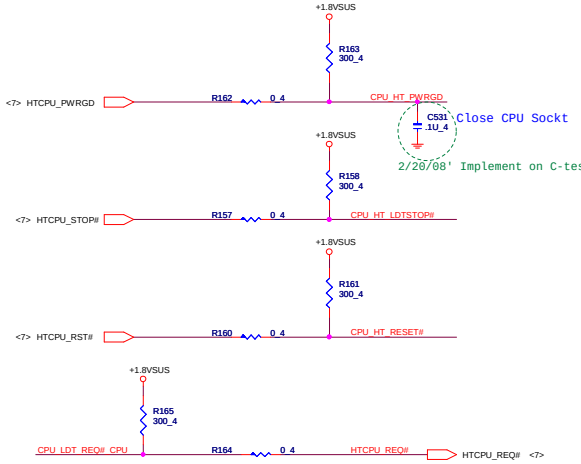
U14D



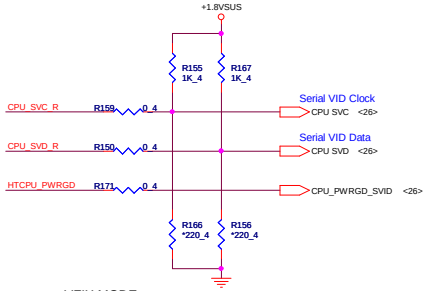
Athlon 64 S1g2 SOCKET_638_PIN

Athlon 64 S1g2
Processor Socket
SOCKET_638_PIN

route as differential as short as possible testpoint under package



VID Override Circuit

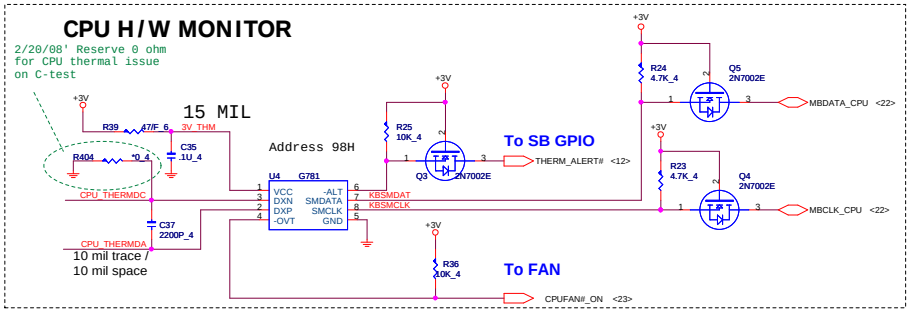


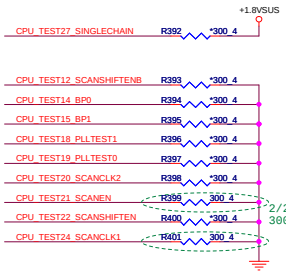
VFIX MODE

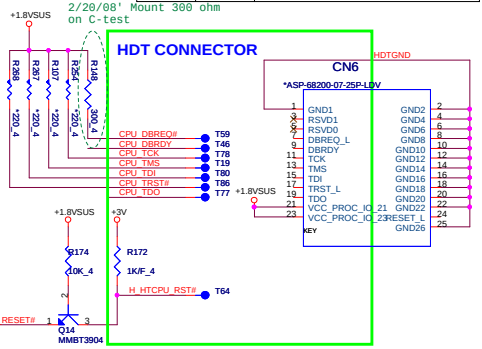
SVC	SVD	Voltage Output(CPU Power)
0	0	1.4V
0	1	1.2V
1	0	1.0V
1	1	0.8V

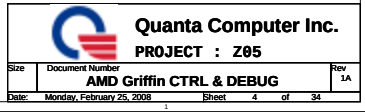
CPU H/W MONITOR

2/20/08' Reserve 0 ohm for CPU thermal issue on C-test

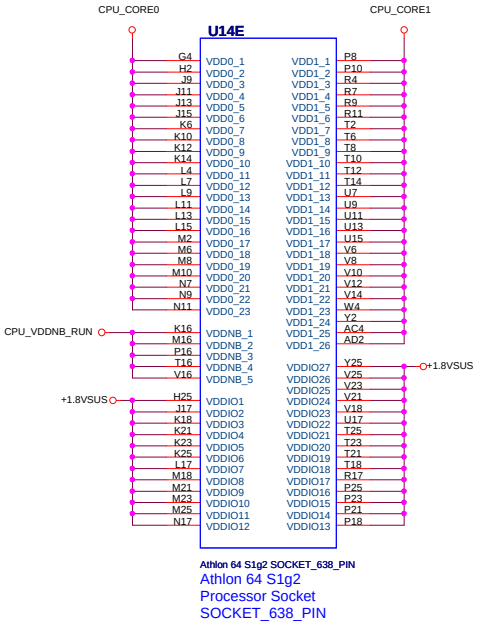


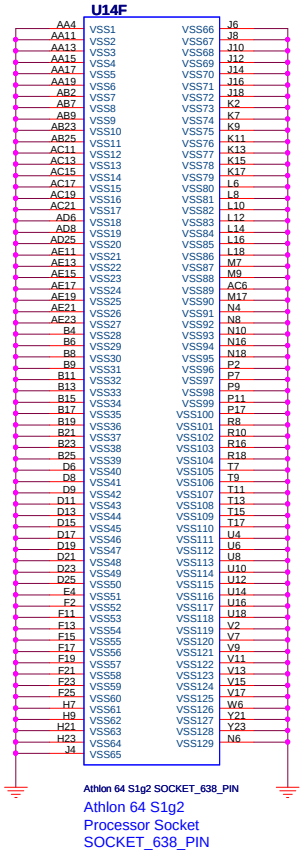


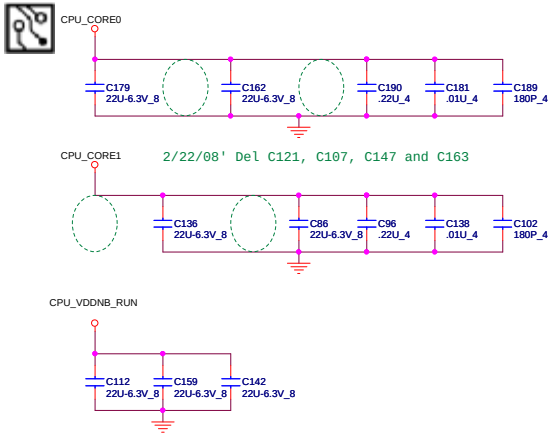




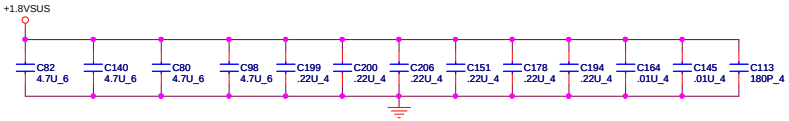
PROCESSOR POWER AND GROUND

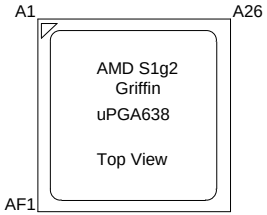




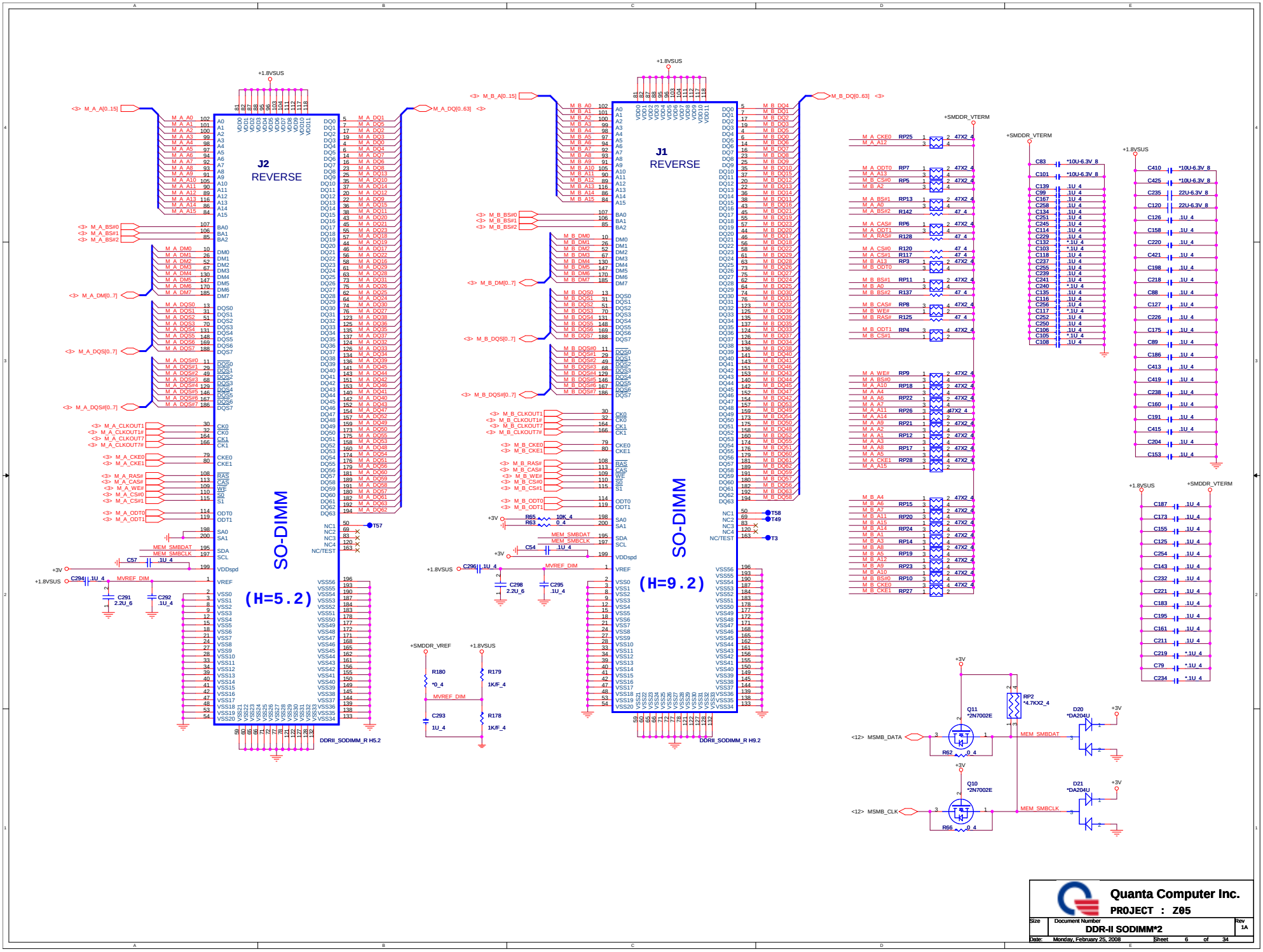


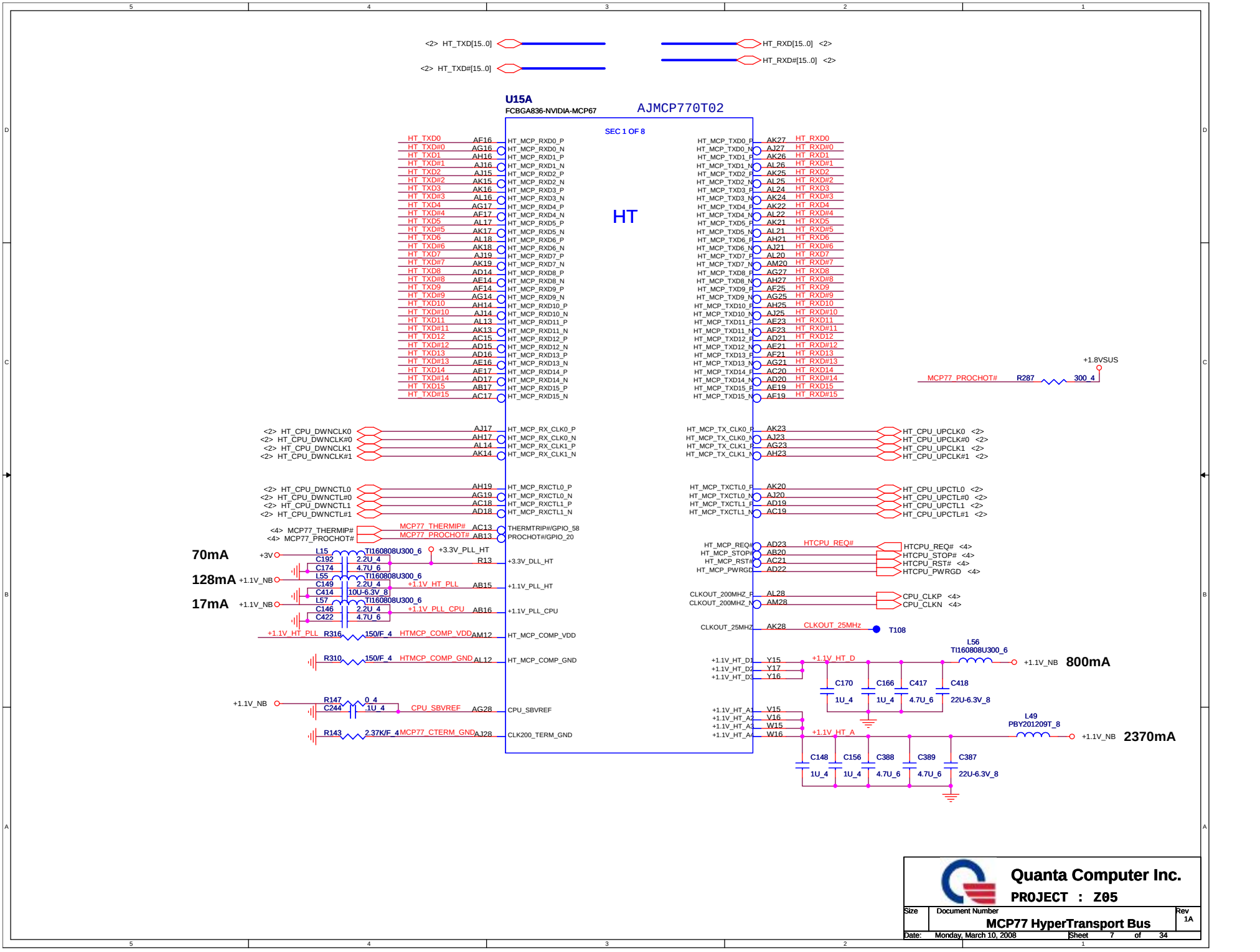
DECOUPLING BETWEEN PROCESSOR AND DIMMs
PLACE CLOSE TO PROCESSOR AS POSSIBLE

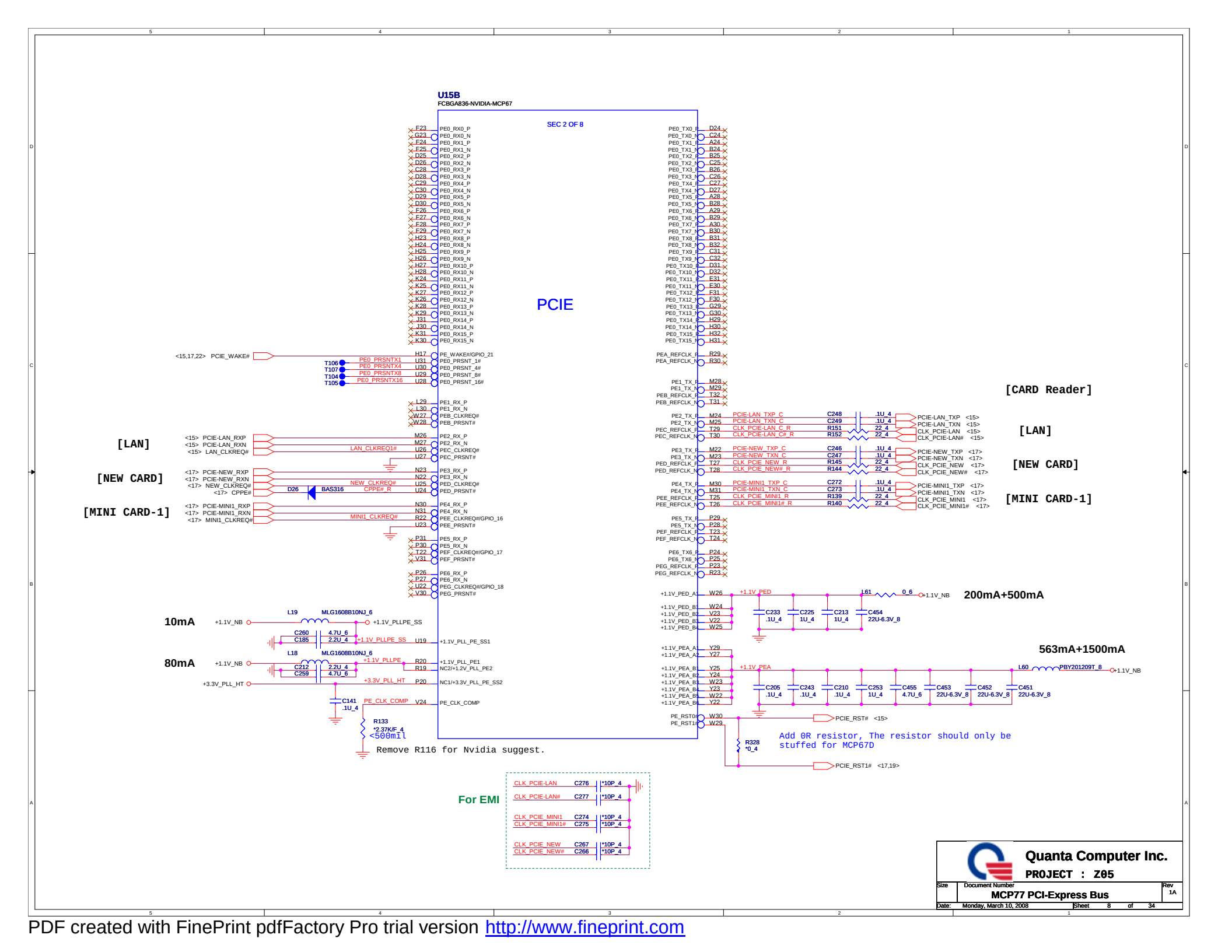




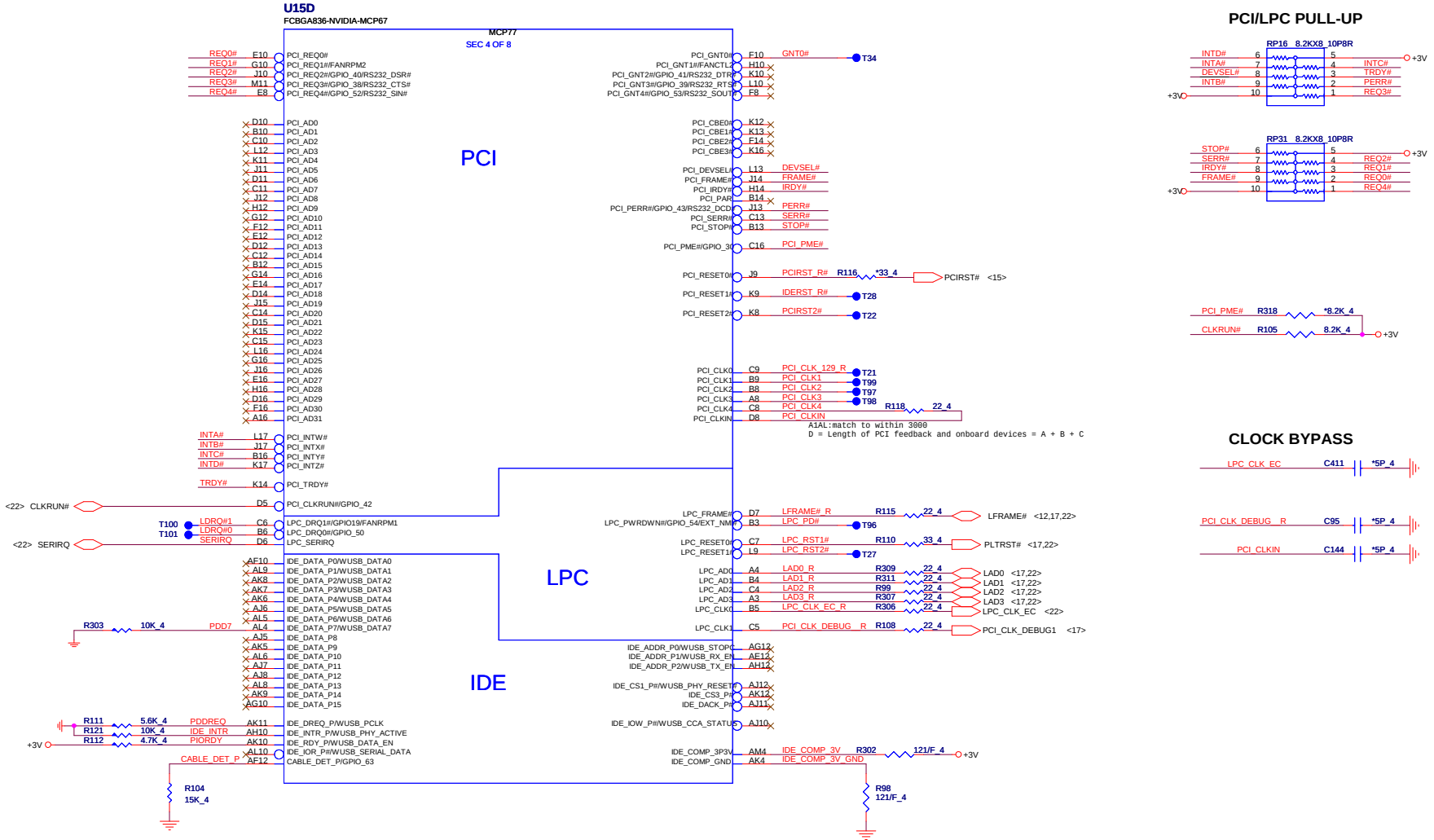
Quanta Computer Inc.		
PROJECT : Z05		
Size	Document Number: AMD Griffin PWR & GND	Rev: 1A
Date: Monday, February 25, 2008	Sheet 5 of 34	

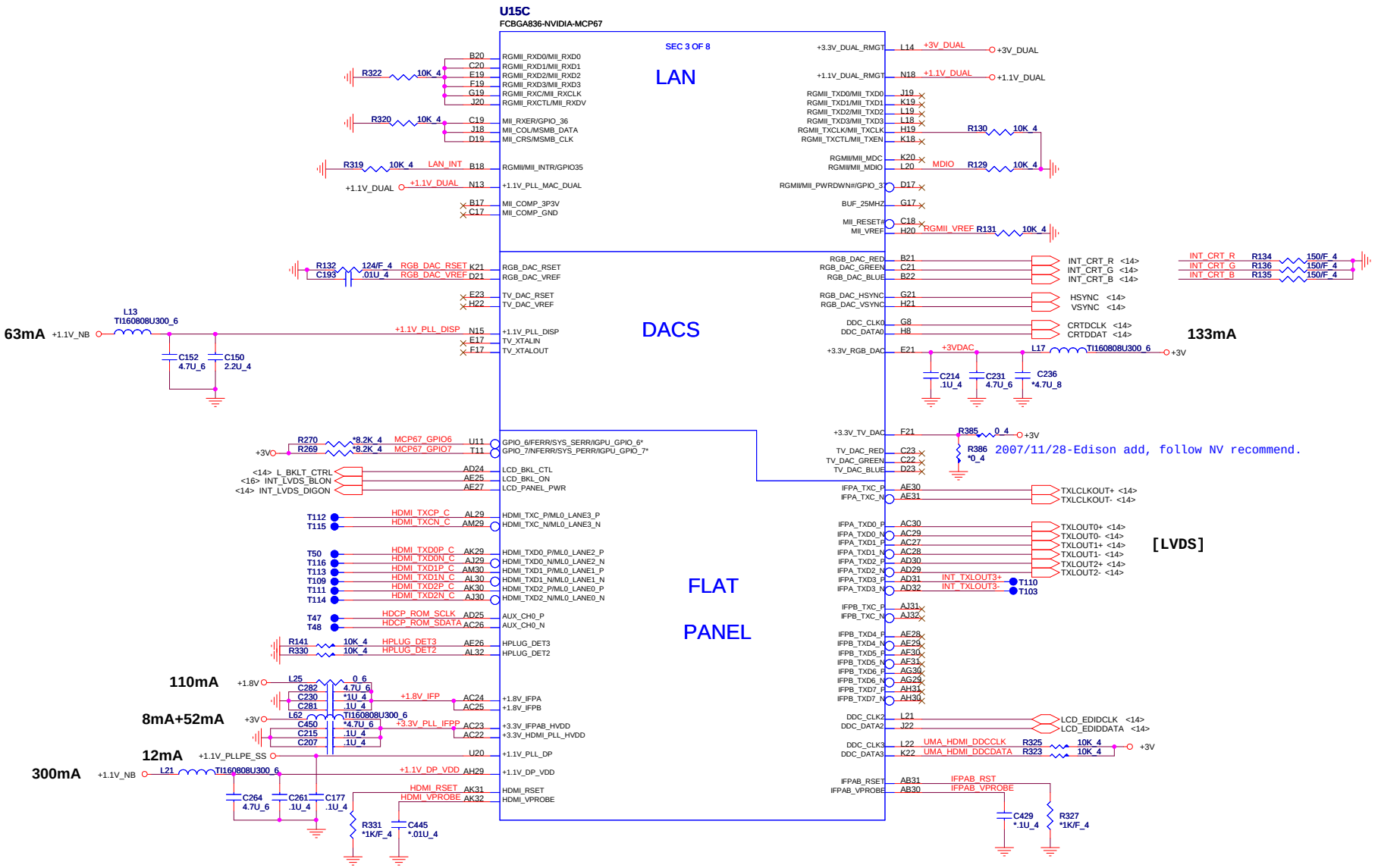






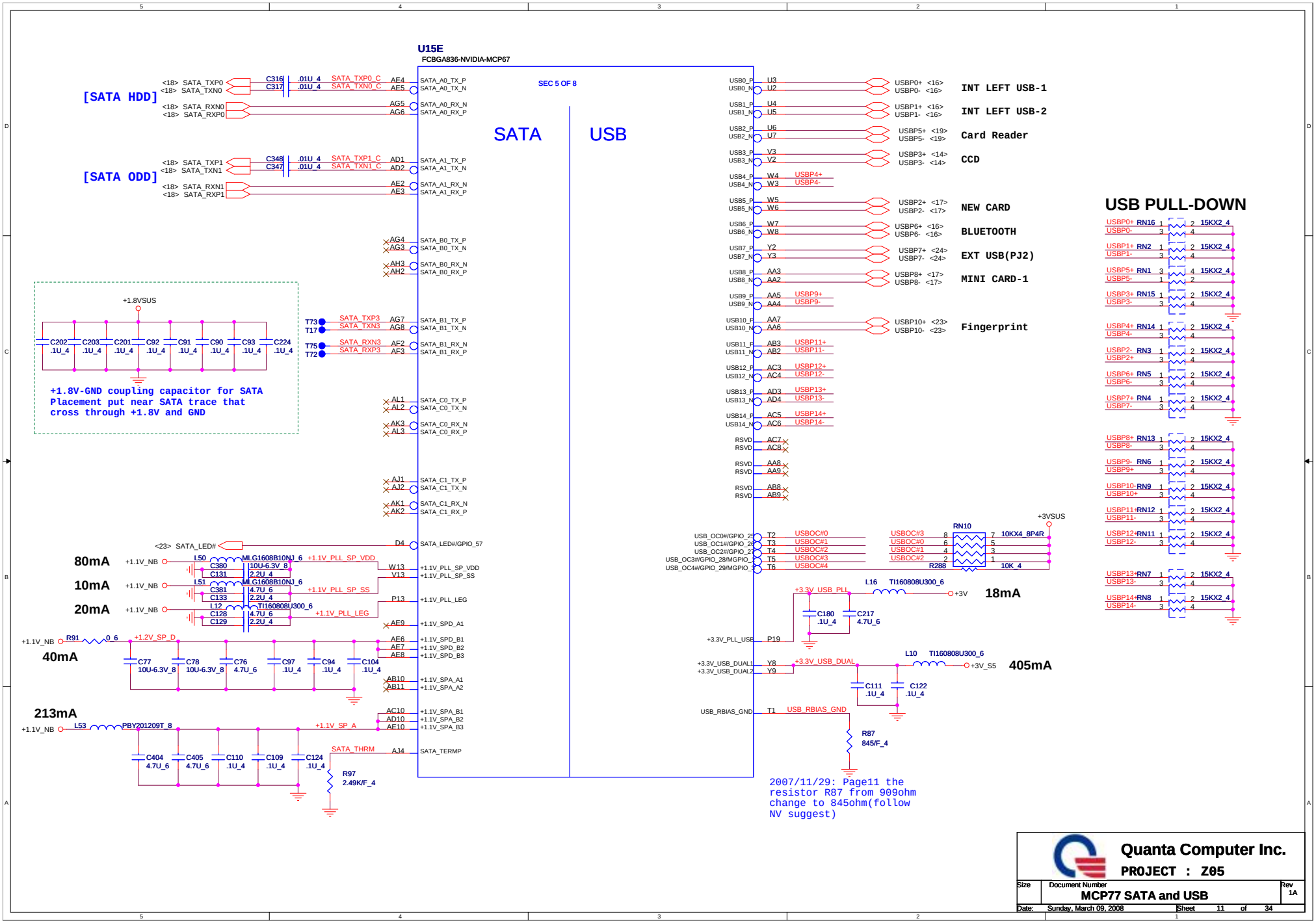
Quanta Computer Inc.	PROJECT : Z05
Size	Document Number: MCP77 PCI-Express Bus
Rev	1A
Date: Monday, March 10, 2008	Sheet 8 of 34

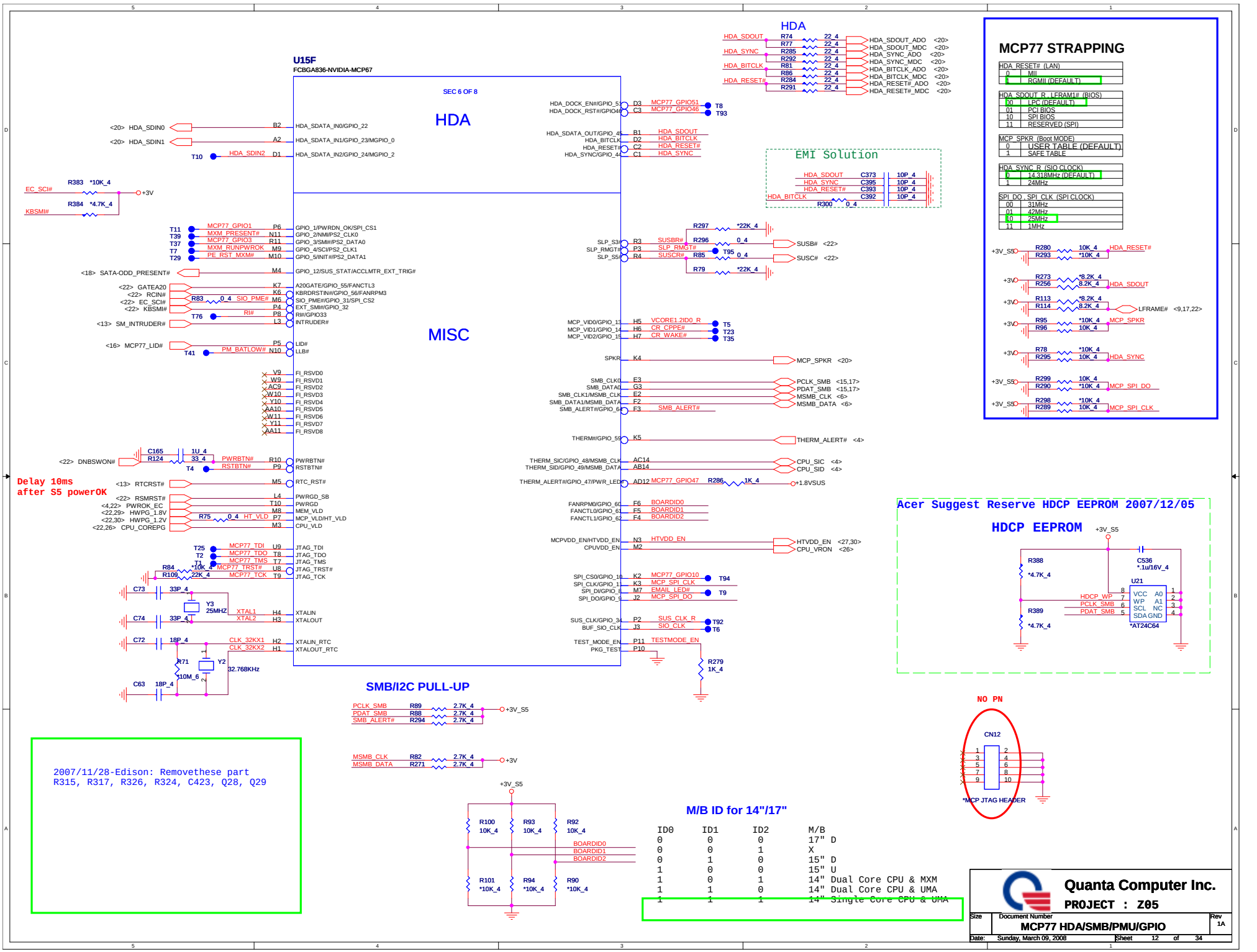




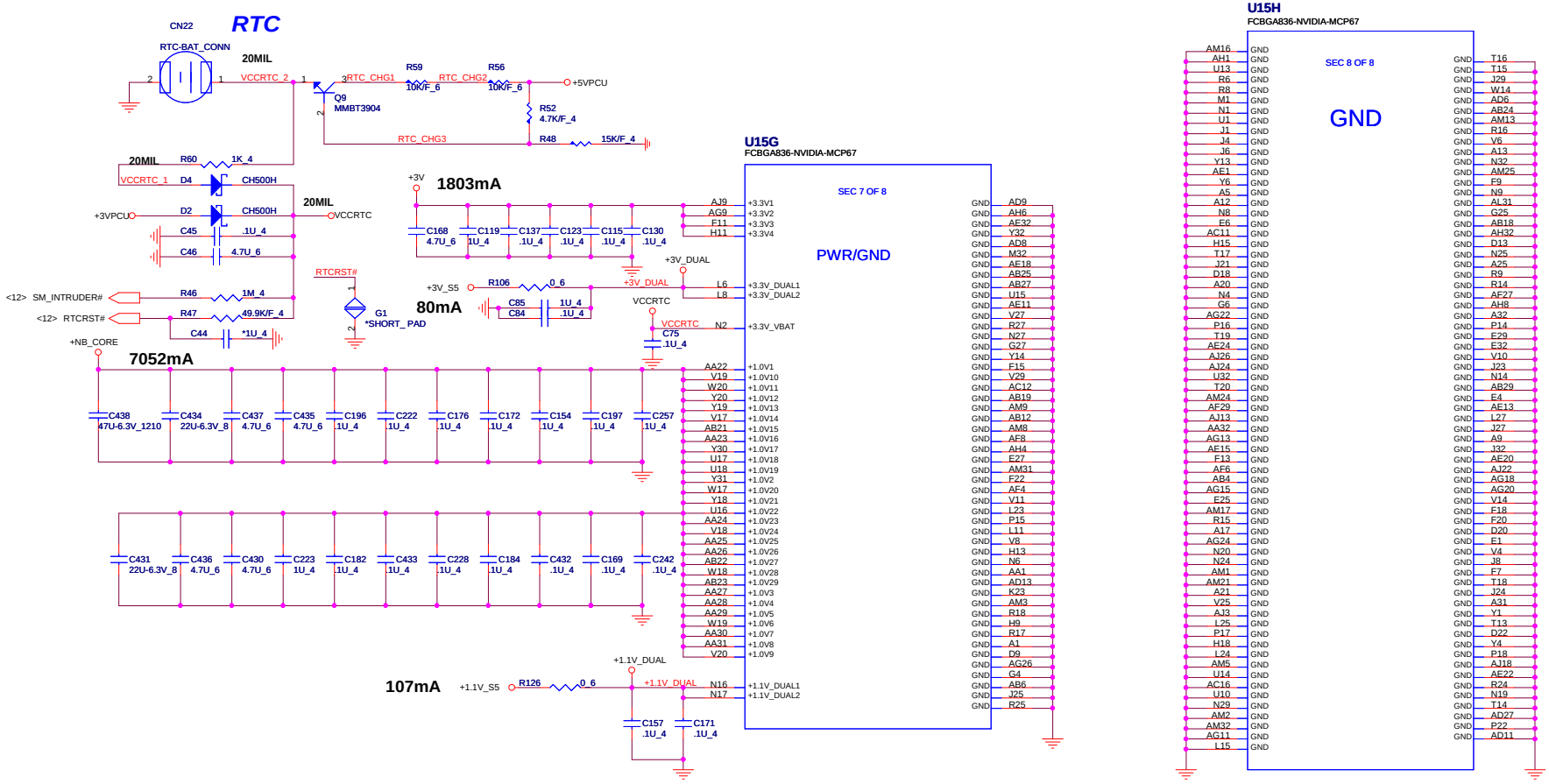
Quanta Computer Inc.
PROJECT : Z05

Size	Document Number	Rev
	MCP77 LAN and Graphics	1A
Date: Monday, February 25, 2008	Sheet 10 of 34	





MCP77 POWER PLANE/GND & BYPASS



Quanta Computer Inc.

PROJECT : Z05

Size	Document Number	Rev
	MCP77 POWER/GND/RTC	1A
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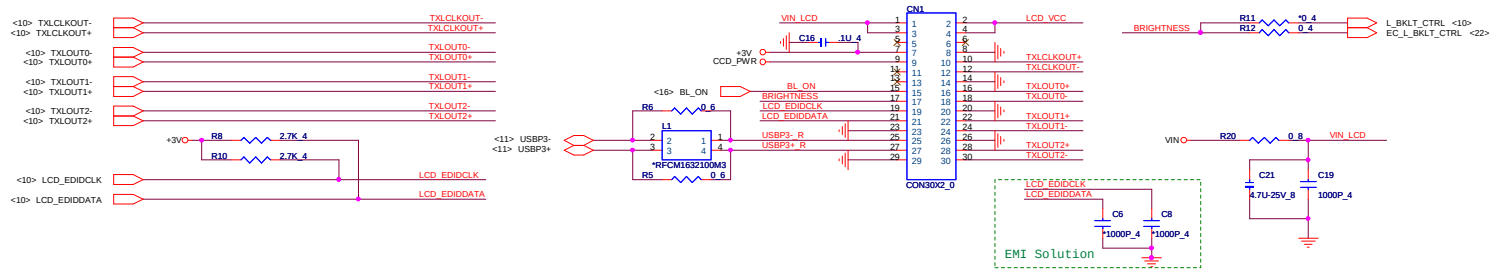
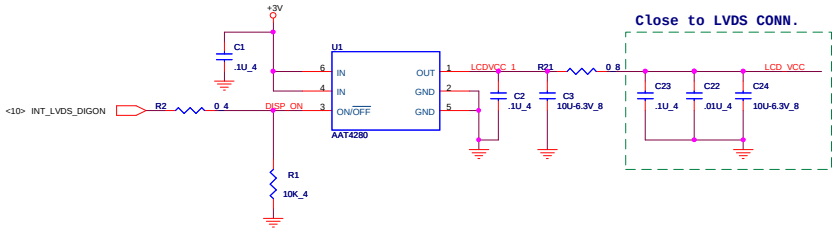
LVDS

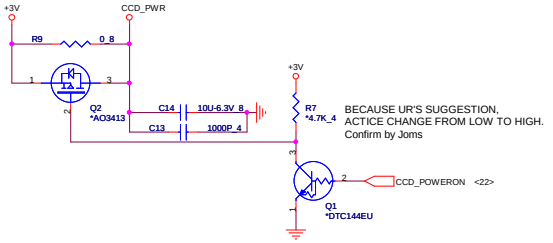
SINGLE_CH



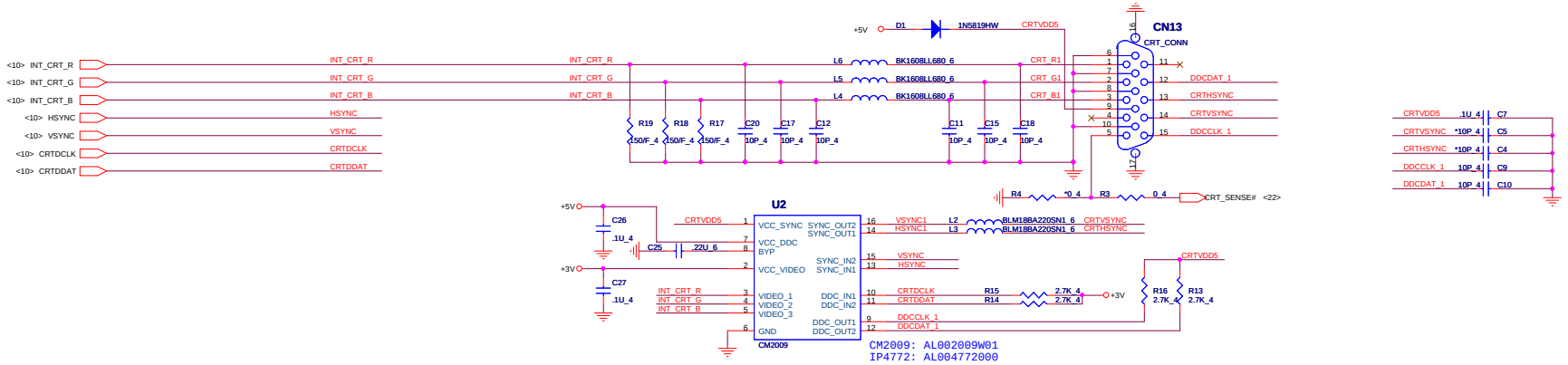
LCD POWER



CAMERA MODULE POWER



CRT



TV Out (SVHS) MiniDIN 7-pin

Delete TVOUT MiniDIN

Quanta Computer Inc.		
PROJECT : Z05		
Size	Document Number: LVDS/CRT/PC-Camera	Rev: 1A
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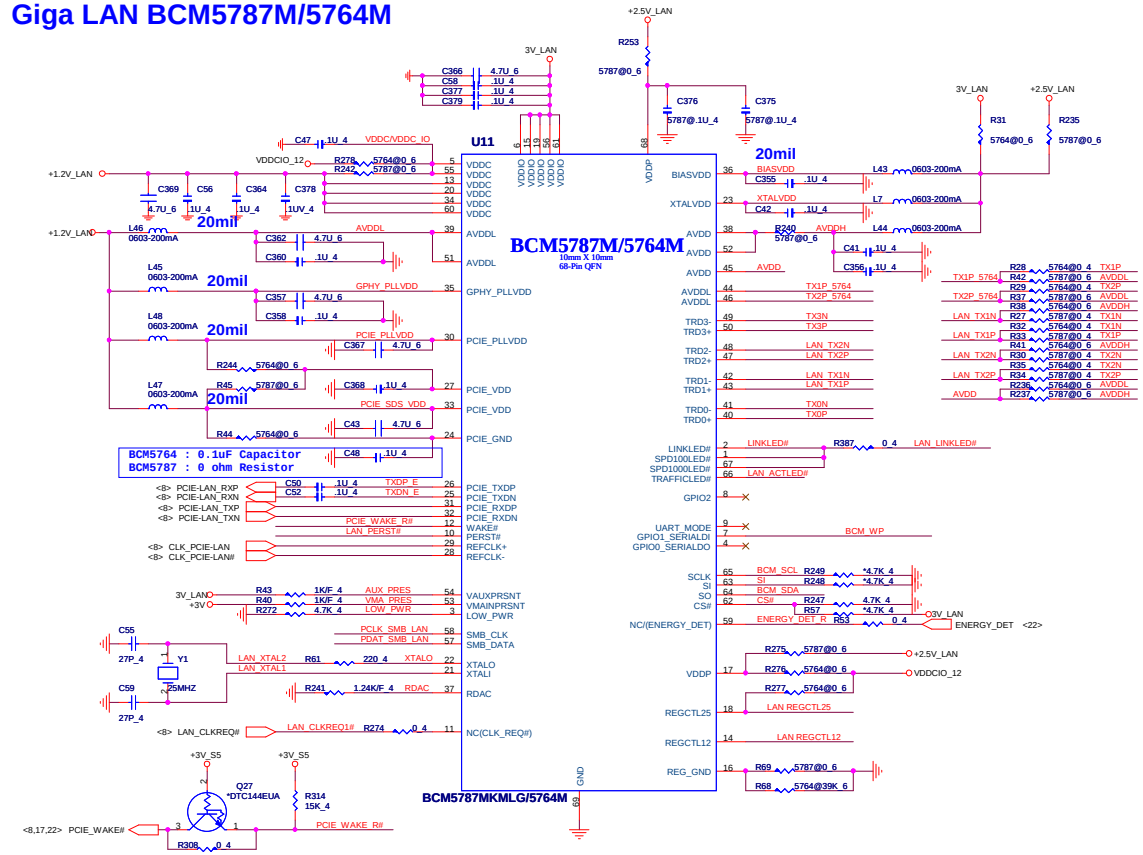
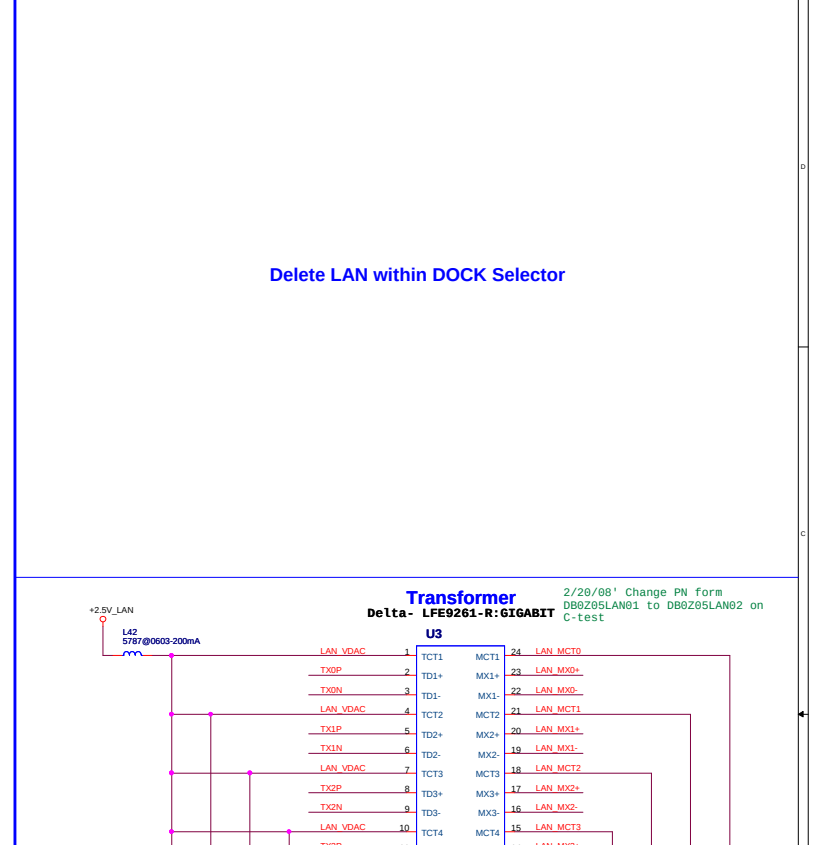
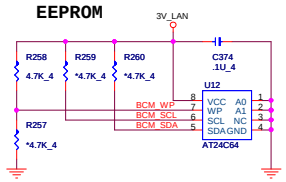
Giga LAN BCM5787M/5764M





EEPROM



EEPROM Strapping

	SO	SI	CS#	SCLK
24c64	1	1	0	1

Quanta Computer Inc.
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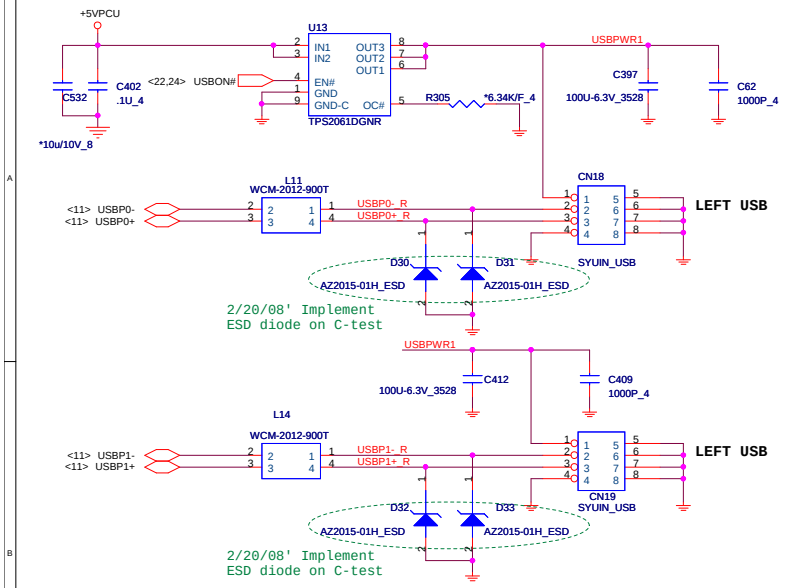
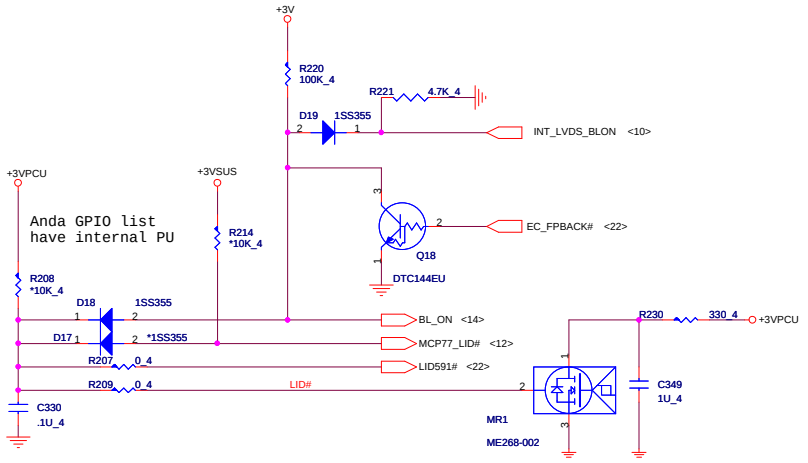
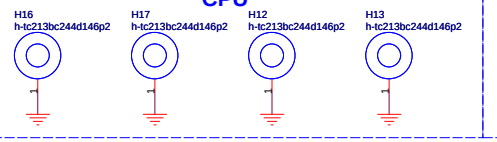


Delete CIR Function
2007/09/21

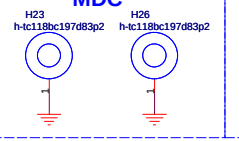
LID SWITCH



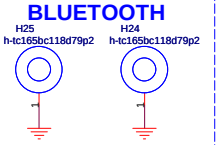
CPU



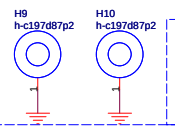
MDC



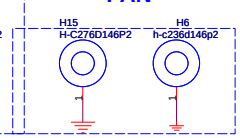
BLUETOOTH

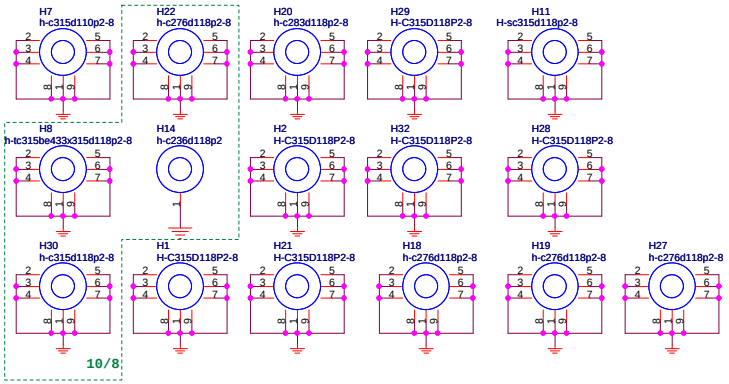


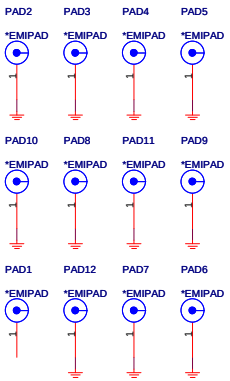
Power Board



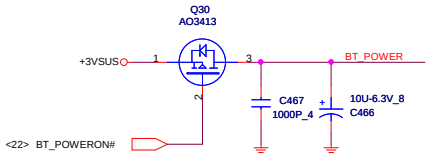
FAN



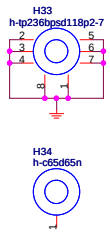


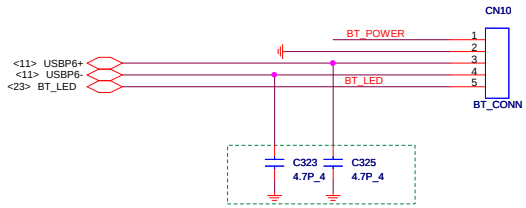


BLUETOOTH MODULE CONNECTOR

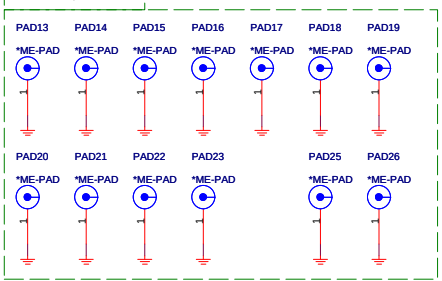


2007/12/4 add





2007/12/4 add



Quanta Computer Inc.
PROJECT : Z05

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	USB/BT/LID/HOLE	1A
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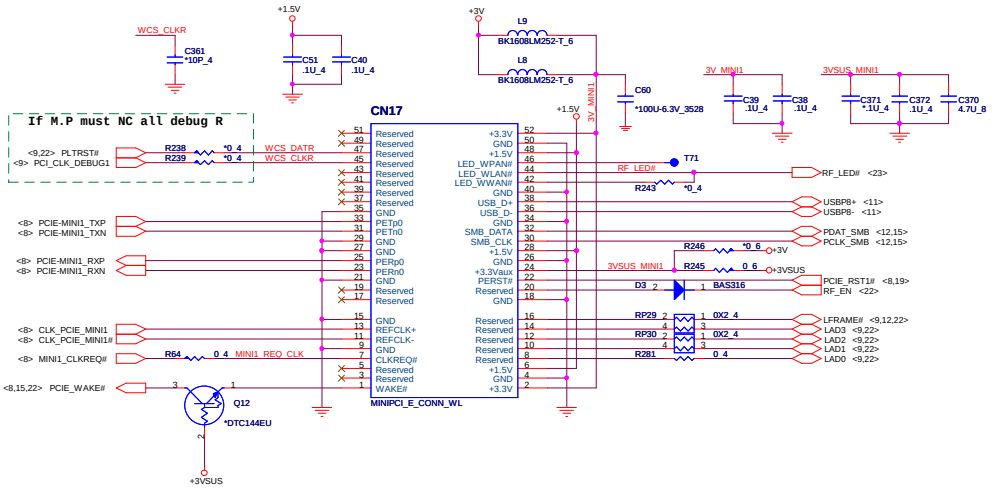
MINI-Card

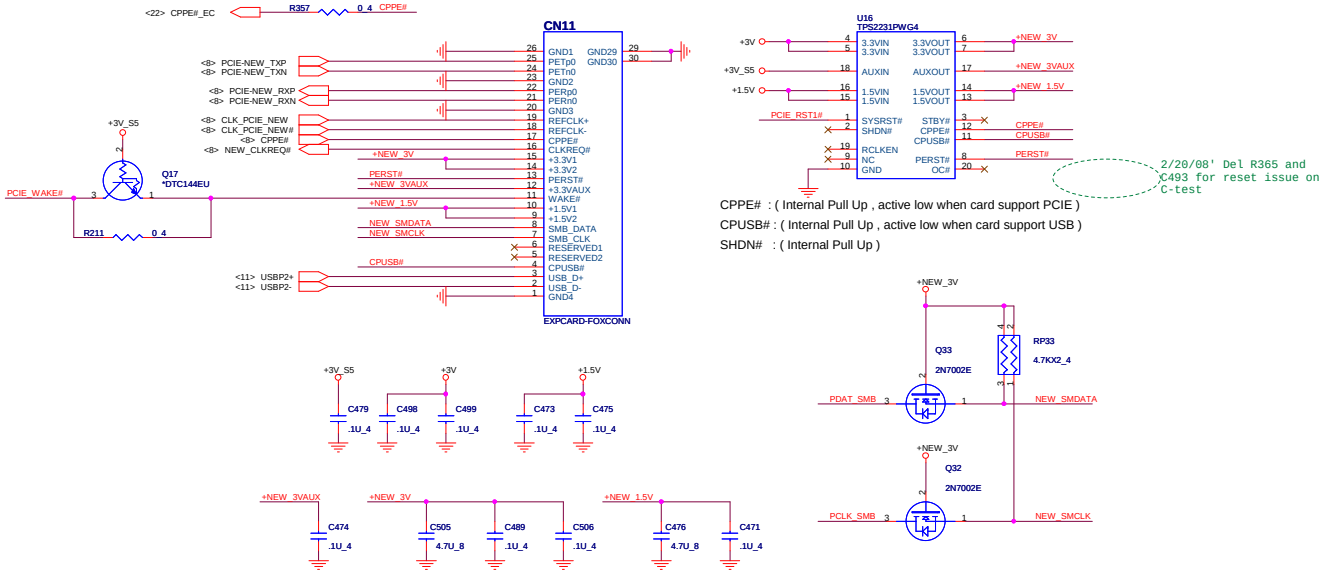
MINI-Card Port-1



Delete MINI-Card Port-2

New card

NEW CARD'S POWER SWITCH



CPPE# : (Internal Pull Up , active low when card support PCIE)
CPUSB# : (Internal Pull Up , active low when card support USB)
SHDN# : (Internal Pull Up)

Quanta Computer Inc.
PROJECT : Z05
Size | Document Number: MINI PCI-E card & NEW CARD | Rev 1A
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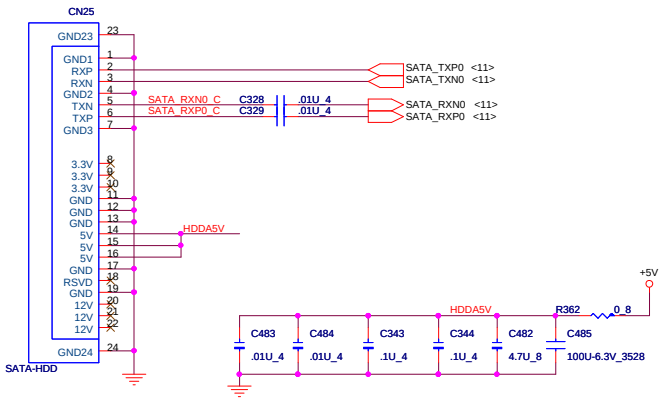
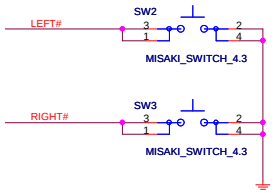
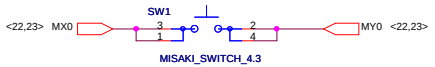
SATA HDD



TP SWITCH

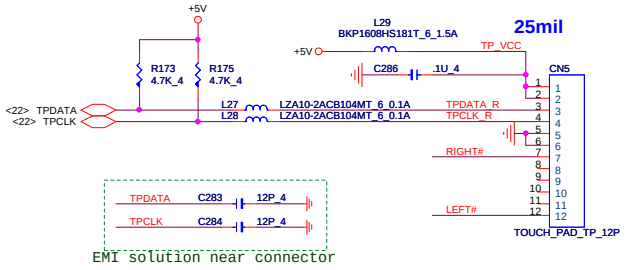


E-KEY



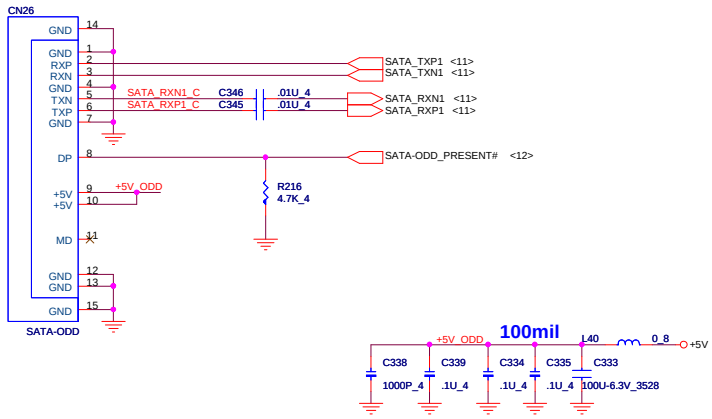
MX0 MY0:E-Key

TP CONN



EMI solution near connector

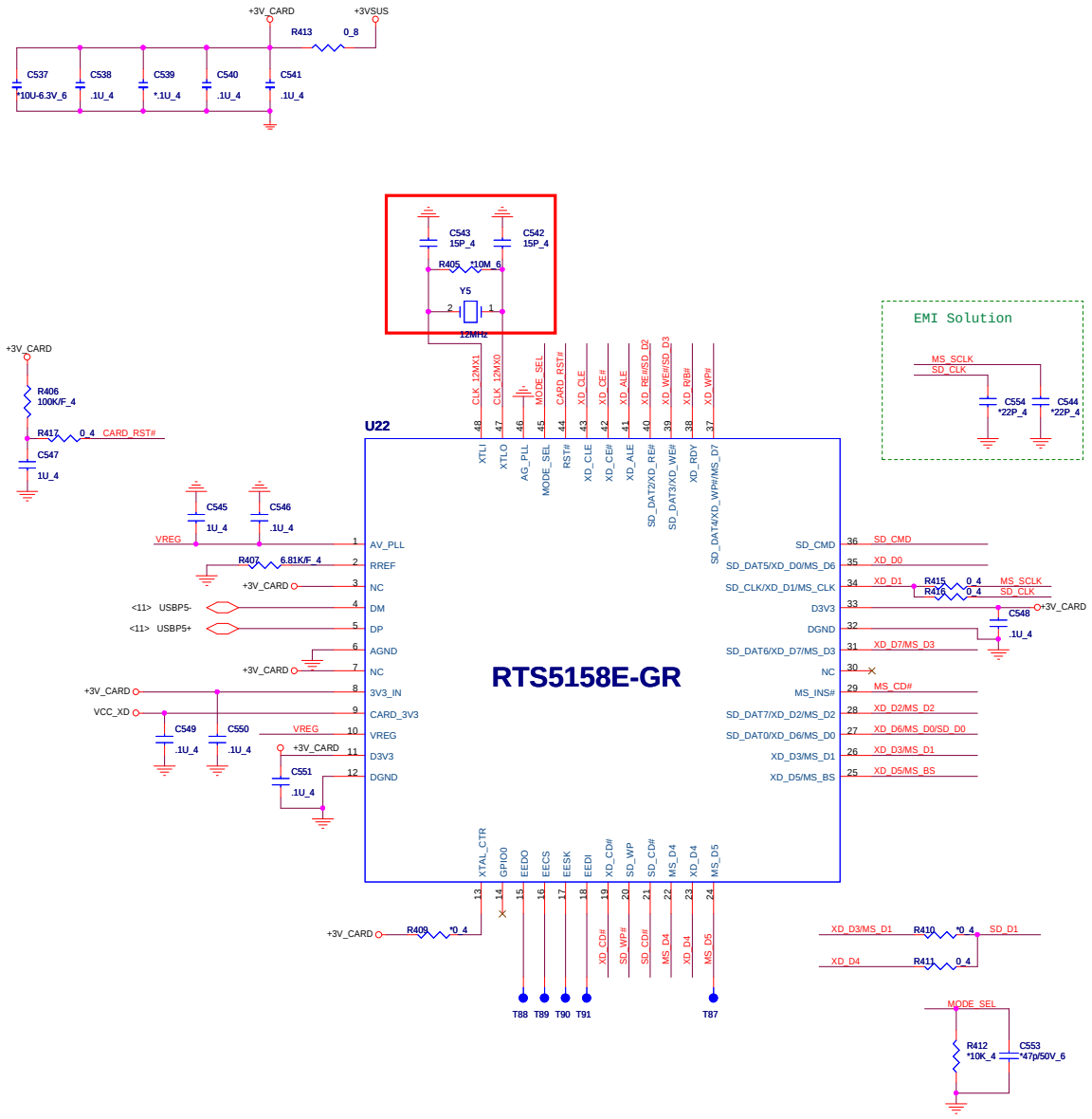
ODD (SATA)



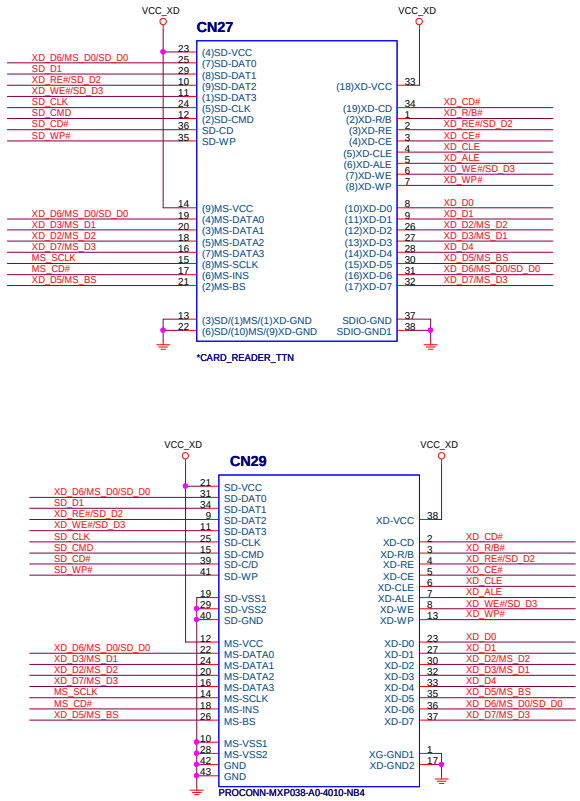
Quanta Computer Inc.

PROJECT : Z05

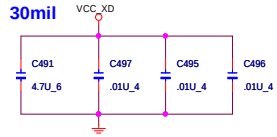
Size	Document Number	Rev
	SATA-HDD & SATA-ODD&TP	1A
Date: Monday, February 25, 2008	Sheet 18 of 34	



7 IN 1 CARD READER



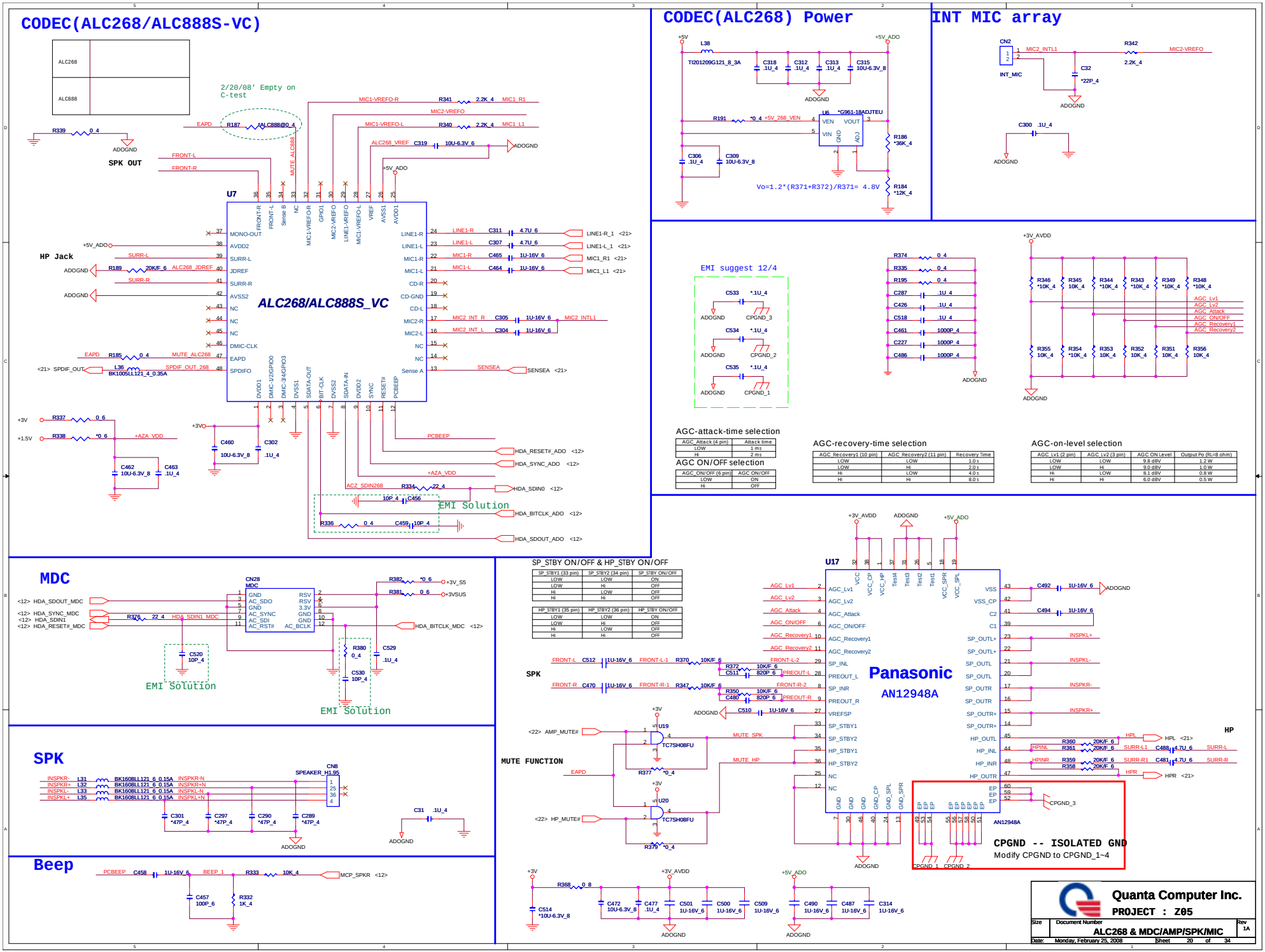
CARDREADER POWER



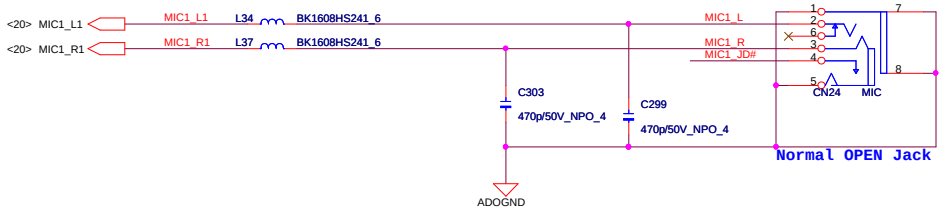
Quanta Computer Inc.

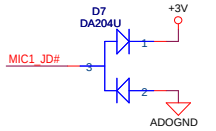
PROJECT : Z05

Size	Document Number	Rev
	RTS5158E -Card Reader	1A
Date: Monday, March 10, 2008	Sheet 19 of 34	

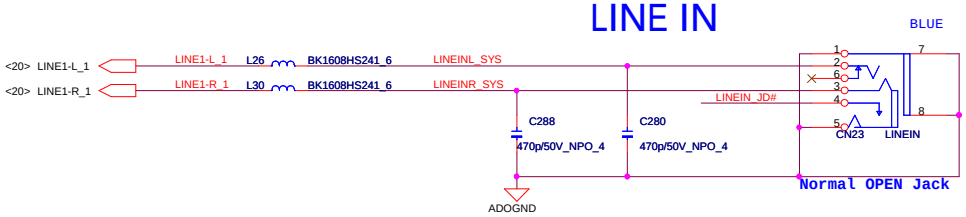


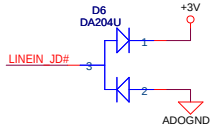
MIC

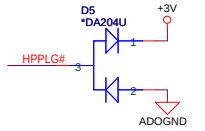




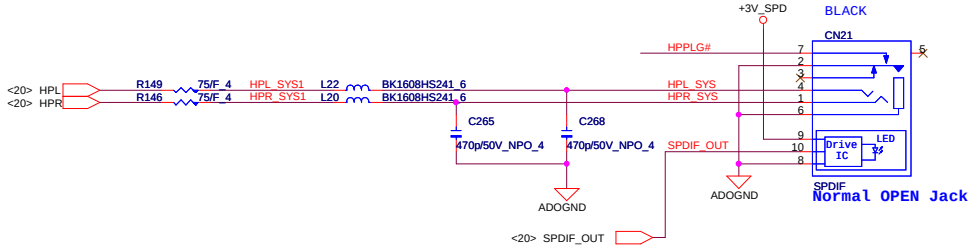
LINE IN

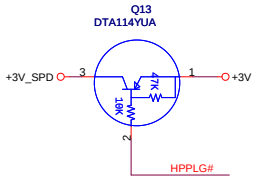


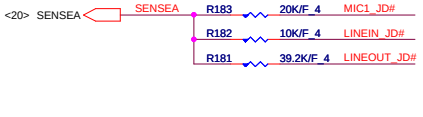




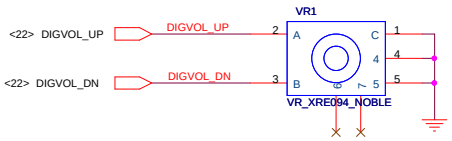
HeadPhone OUT/SPDIF

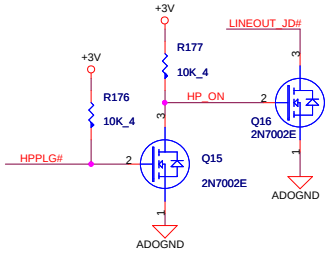






VR





Quanta Computer Inc.

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	Audio Jack	1A
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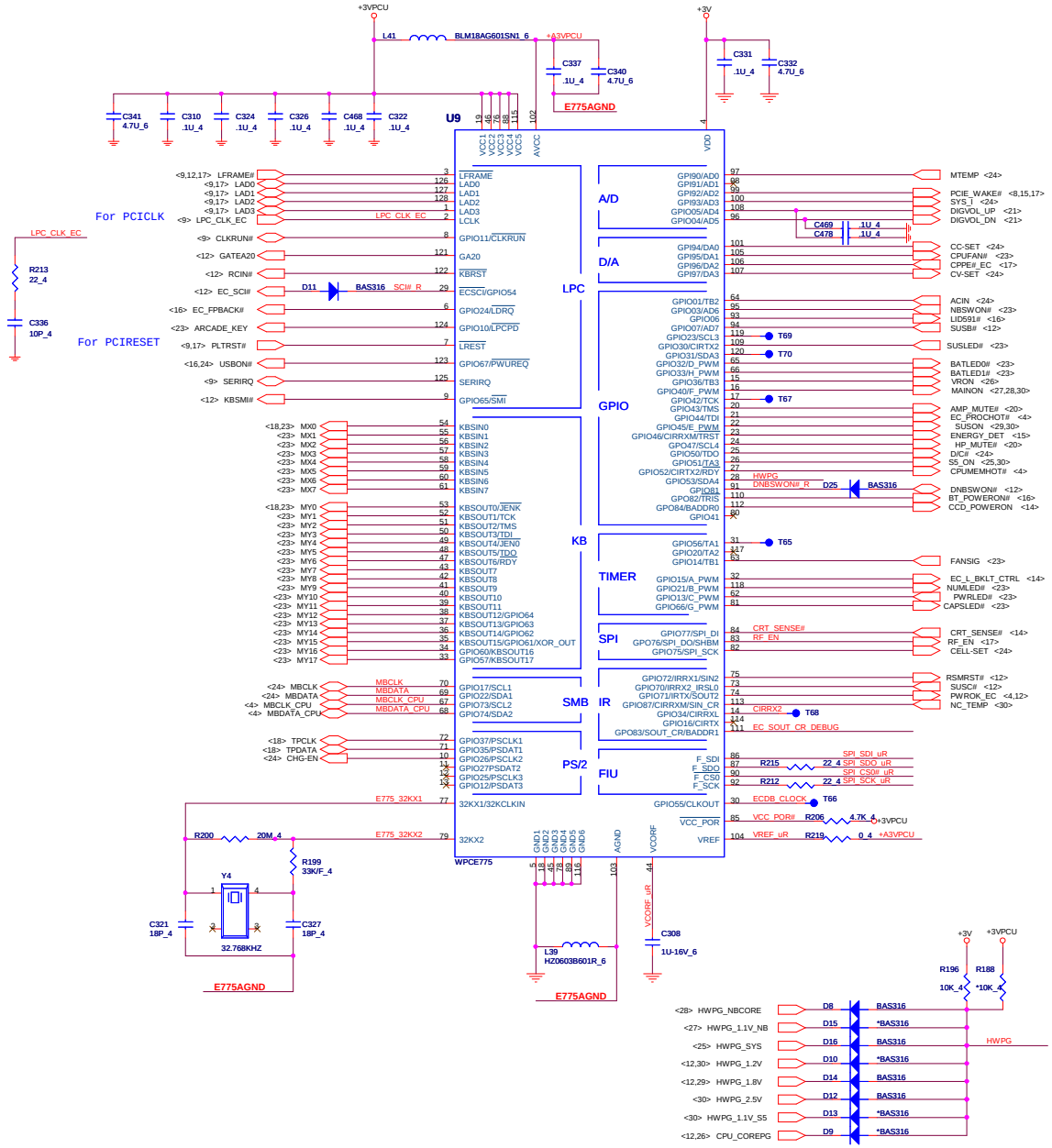
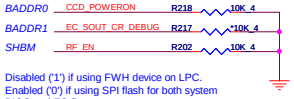
WPCE775C



I/O ADDRESS SETTING

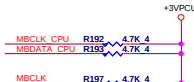
BADDR1-0	I/O Address	
	Index	Data
0 0	XOR TREE TEST MODE	
0 1	CORE DEFINED	
1 0	2Eh	2Fh
1 1	164Eh	164Fh

SHBM=0: Enable shared memory with host BIOS

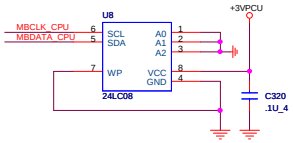


Disabled ('1') if using FWH device on LPC.
Enabled ('0') if using SPI flash for both system BIOS and EC firmware

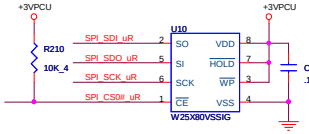
SMBUS PULL-UP



ACER ID



SPI FLASH



INTERNAL KEYBOARD STRIP SET

Quanta Computer Inc.		
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Size	Document Number: EC WPCE775C_0DG & SPI	Rev 1A
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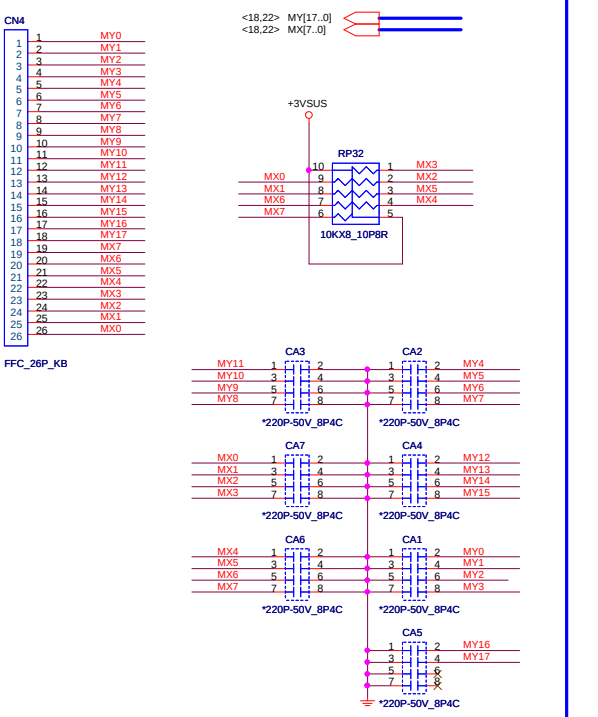
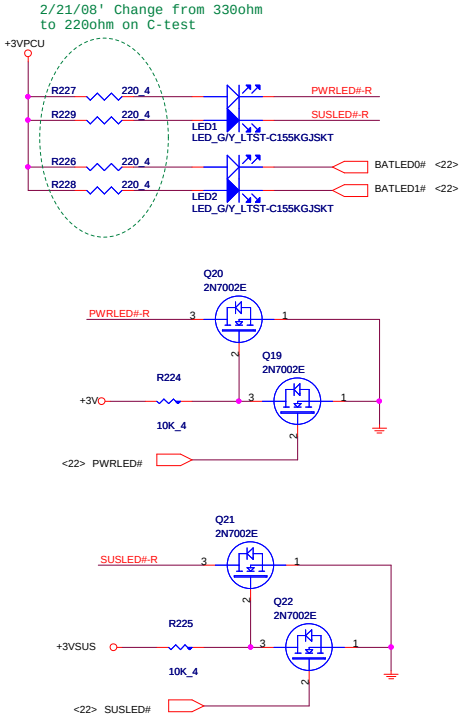
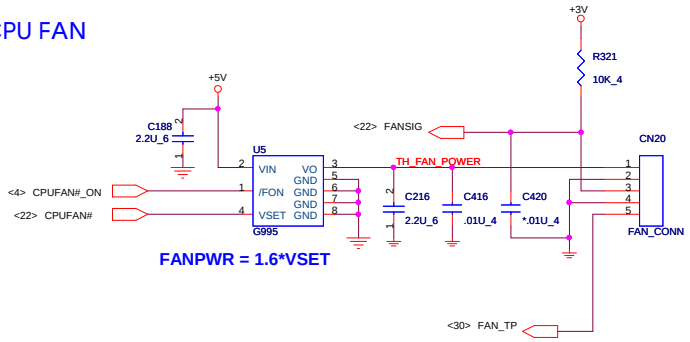
INT K/B



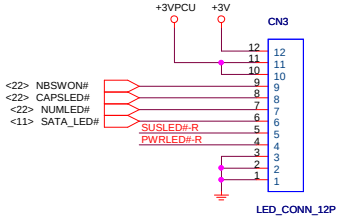
LED



CPU FAN



LED BOARD CONN.



Debug

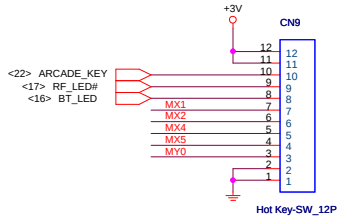
Delete Debug Port(PCI & IDE)

Fingerprint BOARD CONN.

Button BOARD CONN.

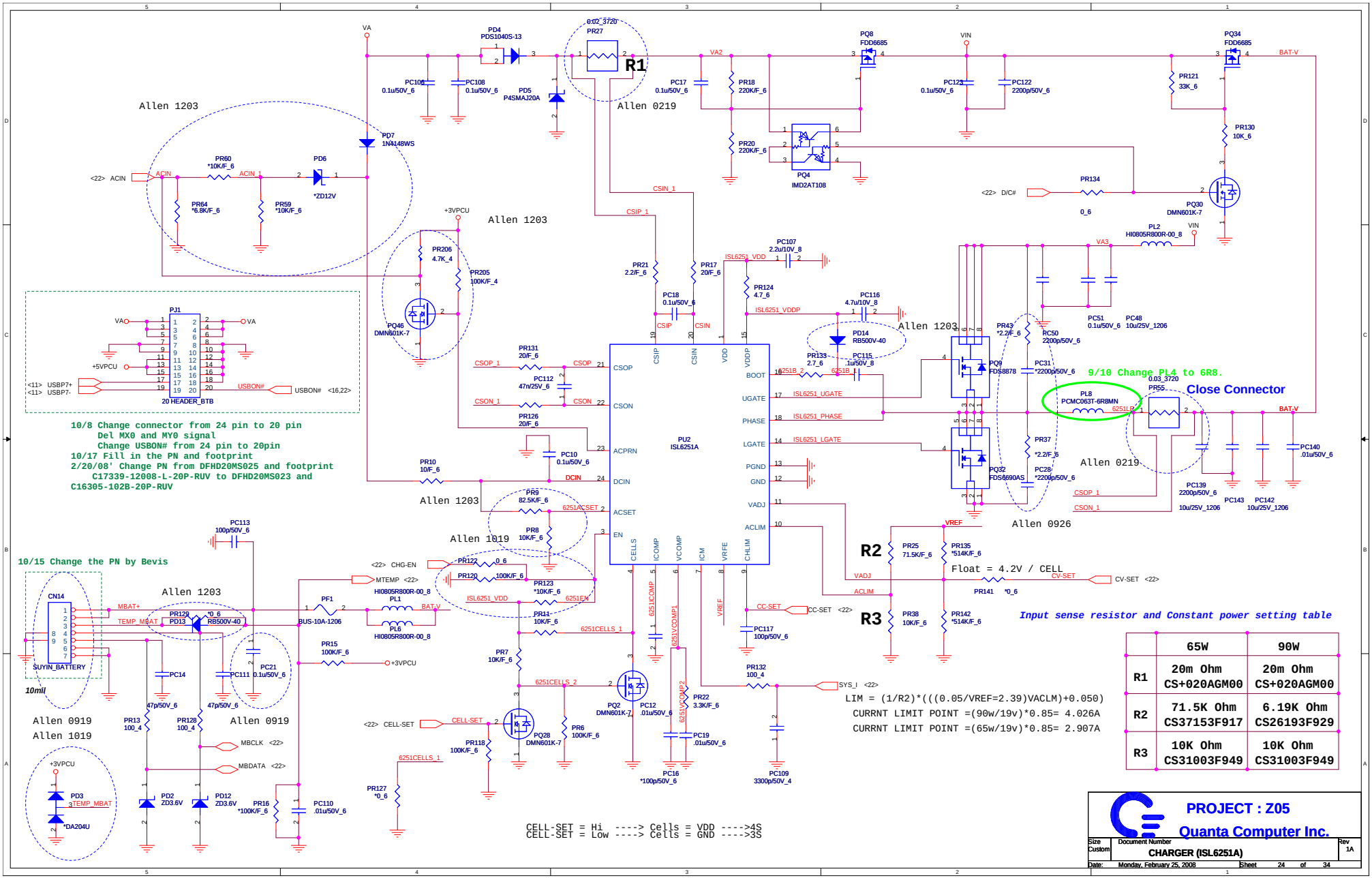
BUTTON MATRIX

	MY0
MX1	MAIL
MX2	WWW
MX4	WIRELESS
MX5	BLUETOOTH

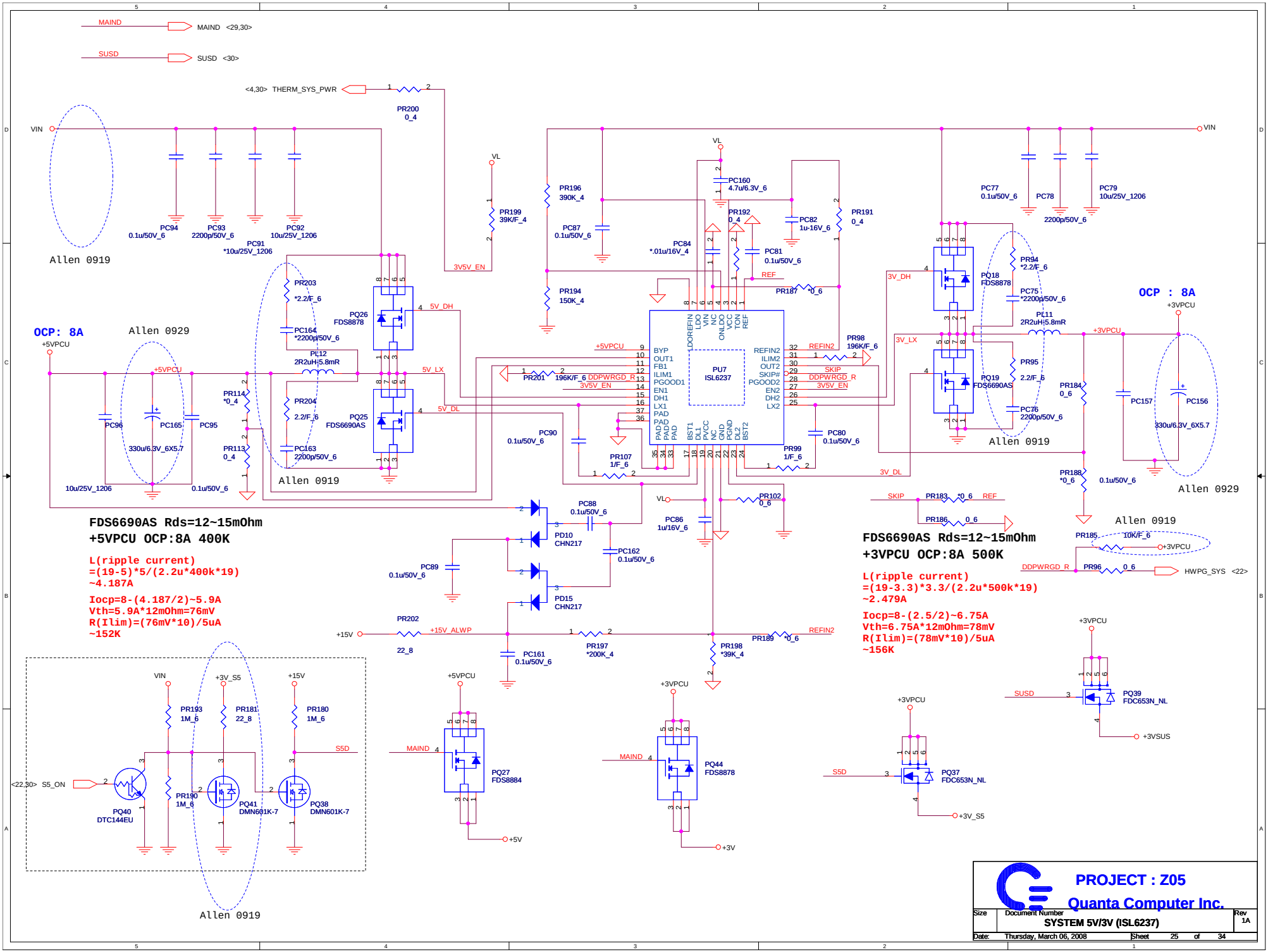


Quanta Computer Inc.
PROJECT : Z05

Size	Document Number	Rev
	FAN,SWITCH,LED,KB,FINGERPRINT	1A
Date: Sunday, March 09, 2008	Sheet 23 of 34	



	65W	90W
R1	20m Ohm CS+020AGM00	20m Ohm CS+020AGM00
R2	71.5K Ohm CS37153F917	6.19K Ohm CS26193F929
R3	10K Ohm CS31003F949	10K Ohm CS31003F949



OFS/VFIXEN	Offset & Droop	SVI	VFIX
GND	0	0	X
+3.3V	X	X	0
+5V	X	0	X

Metal VID Codes

SVC	SVD	Output
0	0	1.1
0	1	1.0
1	0	0.9
1	1	0.8

VFIXEN VID Codes

SVC	SVD	Output
0	0	1.4
0	1	1.2
1	0	1.0
1	1	0.8

OCP:3A 260K

OCP:20A 300K

OCP:20A 300K

Pin 49 is GND Pin

Close to CPU socket

Parallel

Close to CPU socket

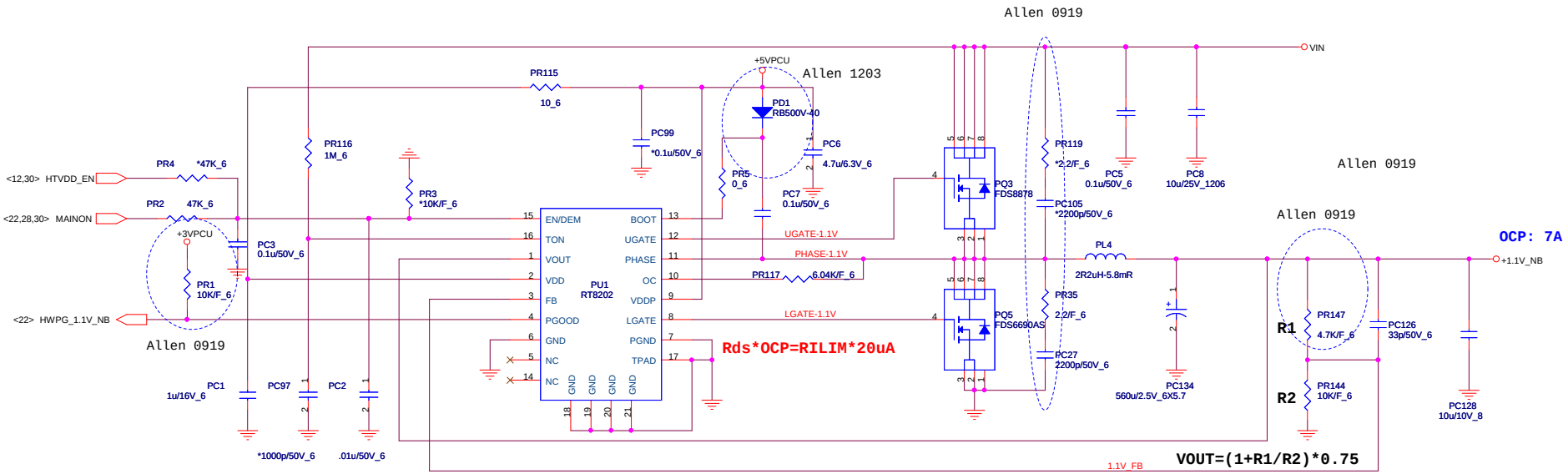
PROJECT : Z05

Quanta Computer Inc.

AMD Gfiffin (ISL6265)

Rev 1A

Date: Thursday, March 06, 2008 Sheet 26 of 34



TON=3.85p*RTON*Vout/(Vin-0.5)

Frequency=Vout/(Vin*TON)

TON=3.85p*1M*1/(Vin-0.5)

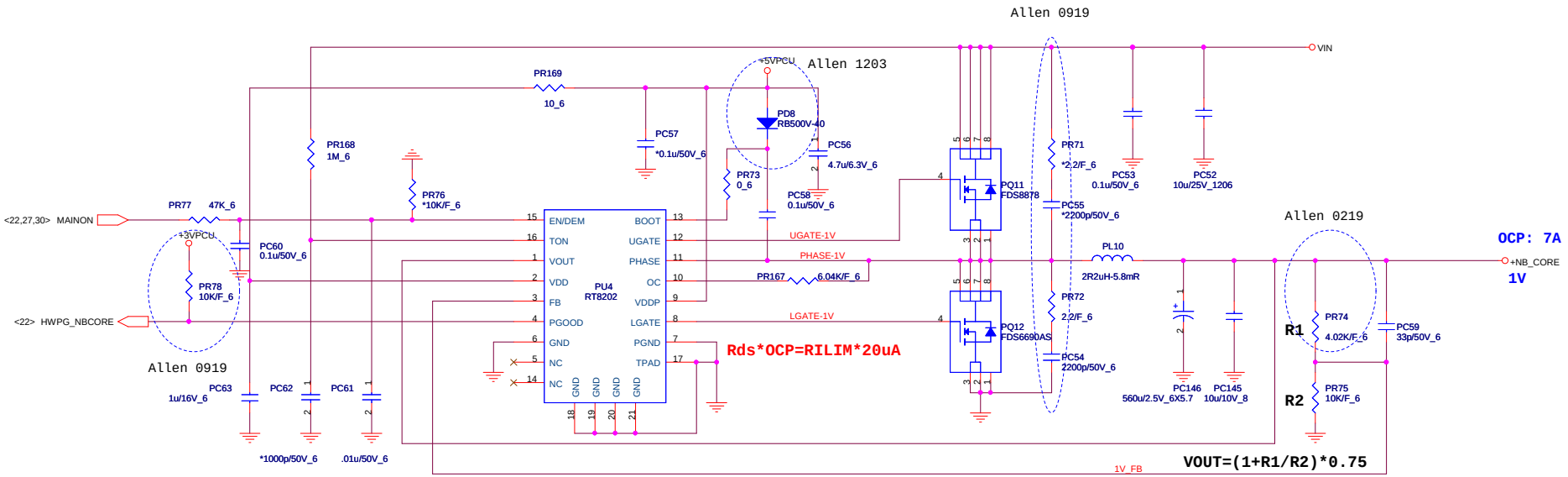
Frequency=1/(0.0036767)=272K

FDS6690AS Rds=12~15mOhm
OCP=7-0.8A
L(ripple current)
=(19-1)*1/(2.2u*272k*19)
~1.58A

12m*6=RILIM*20uA
RILIM=3.6K(2.5~8K)

PROJECT : Z05
Quanta Computer Inc.

Size	Document Number	Rev
	NB_VCC (RT8202)	1A
Date: Monday, February 25, 2008	Sheet 27 of 34	



TON=3.85p*RTON*Vout/(Vin-0.5)

Frequency=Vout/(Vin*TON)

TON=3.85p*1M*1/(Vin-0.5)

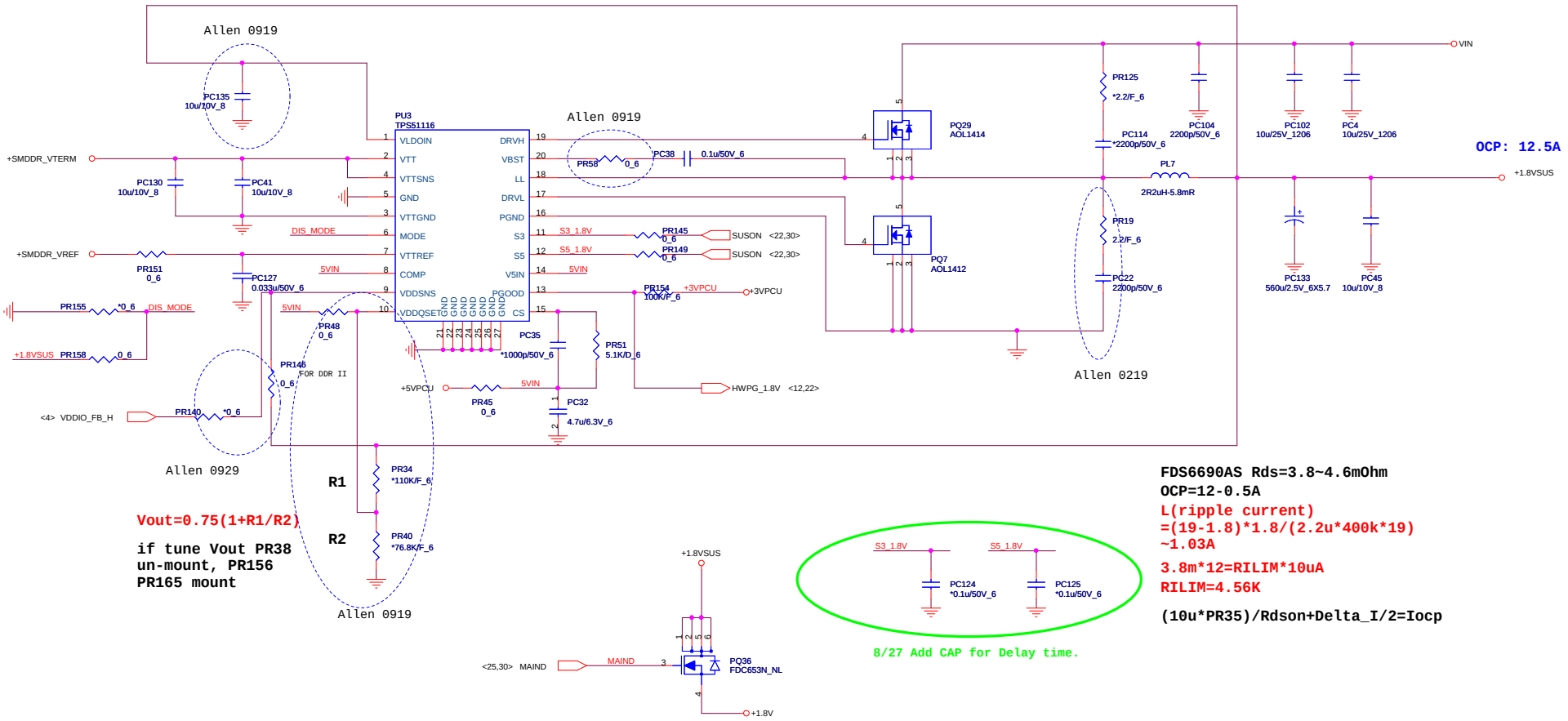
Frequency=1/(0.0036767)=272K

FDS6690AS Rds=12~15mOhm
OCP=7-0.8A
L(ripple current)
=(19-1)*1/(2.2u*272k*19)
~1.58A

12m*6=RILIM*20uA
RILIM=3.6K(2.5~8K)

PROJECT : Z05
Quanta Computer Inc.

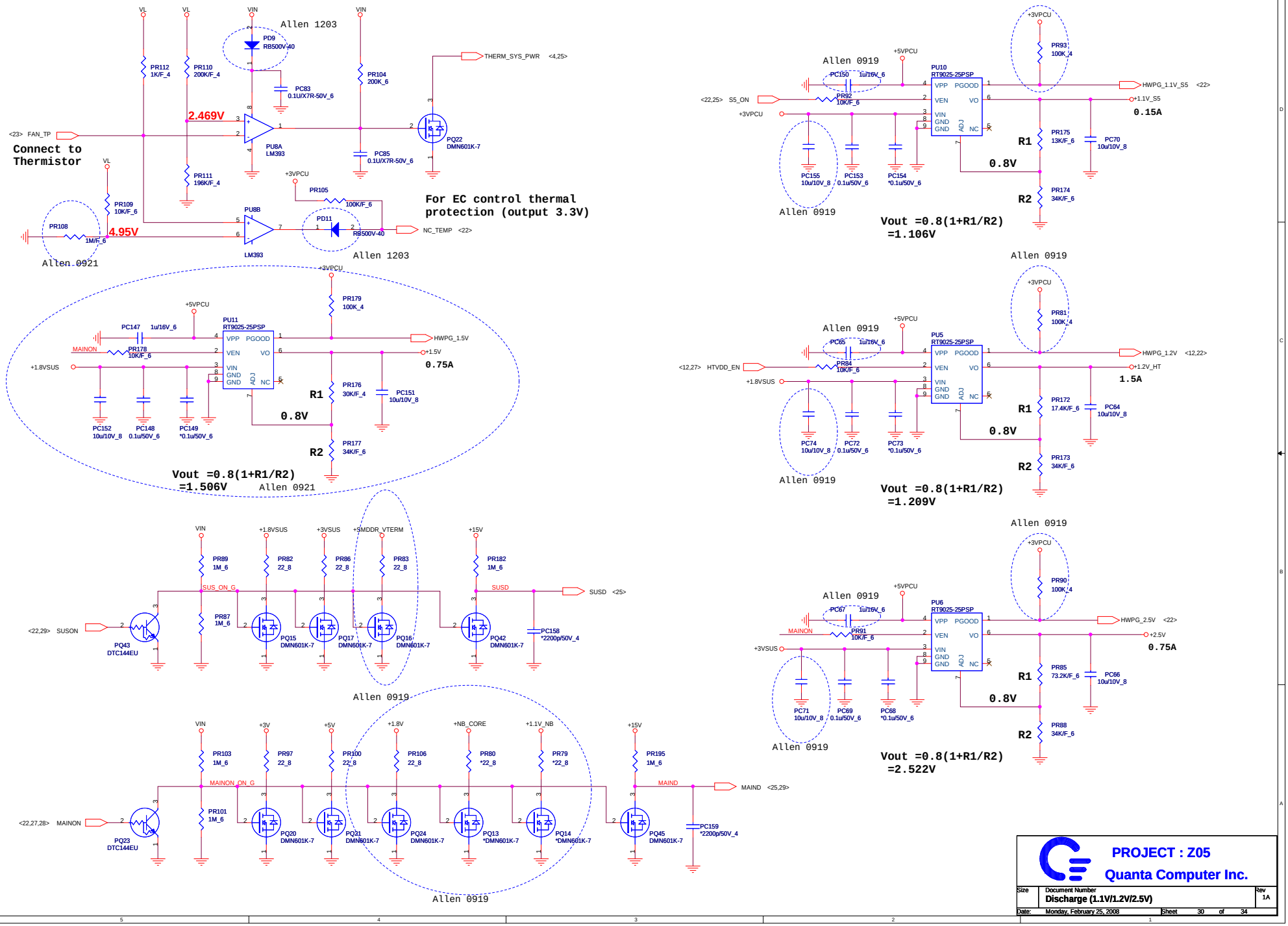
Size	Document Number	Rev
	NB_VCC (RT8202)	1A
Date: Monday, February 25, 2008	Sheet 28 of 34	

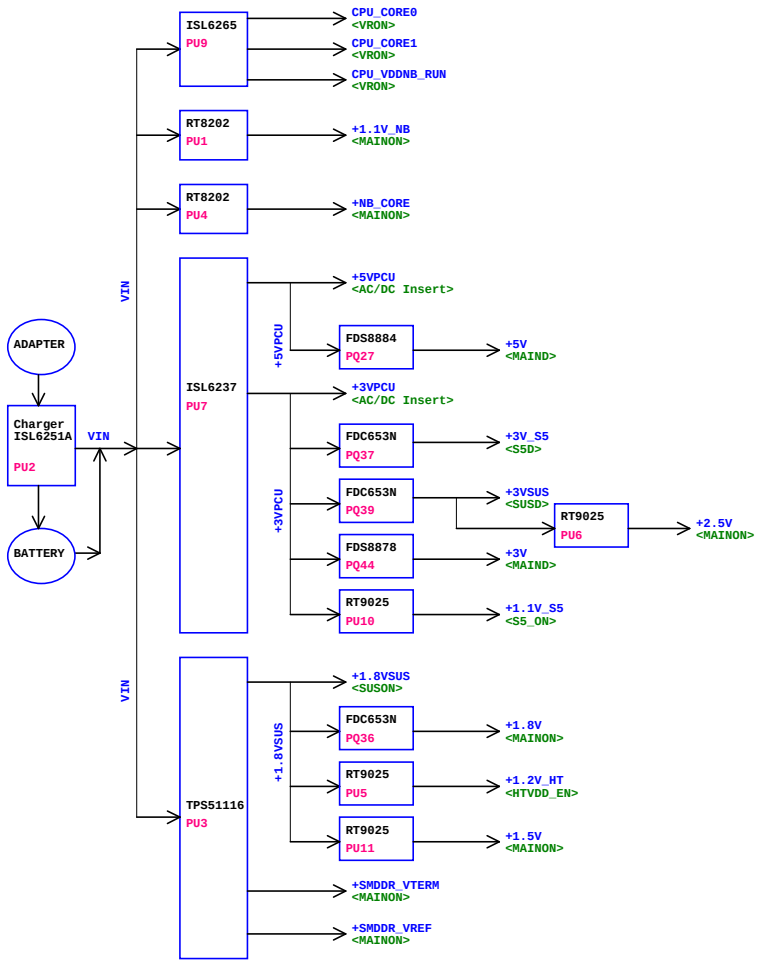


PROJECT : Z05

Quanta Computer Inc.

Size	Document Number	Rev
	DDR 1.8V(TPS51116)	1A
Date: Monday, February 25, 2008	Sheet 29 of 34	





1. +1.1V_S5MCP77M Power(+1.1V_DUAL)
2. +5VPCUPower IC VCC, USB PORT POWER(S3 control)
3. +5VAudio, FAN, Touch pad, SATA HDD, ODD, CRT
4. +3V_S5MCP77M, New Card, LAN Power
5. +3VPCUKBC WPCE755C,SPI ROM, LED, LID Switch, Fingerprint Module
6. +3VSUSBluetooth, Mini Card, MDC
7. +3VCPU Thermal Sense, MCP77M, System Memory, LCD Panel, PC Camera, Mini card, New Card, Audio, Codec, Card Reader, KBC WPCE775C, LED
8. +2.5VCPU VDDA
9. +3V_LANLAN Power(BCM5764M)
10. +1.2V_LANLAN Power(BCM5764M)
11. +2.5V_LANLAN Power(BCM5787M)
12. +1.5VMini Card, New Card
13. +1.8VSUSCPU VDD I/O, System Memory
14. SMDDR_VTEMCPU Memory Interface , SYSTEM DDR DIMM Memory Termination
15. +1.8VMCP77M LCD Interface
16. +1.1V_NBMCP77M (HT Interface, PCI-E Interface, I/O Power, SATA Interface)
17. +NB_COREMCP77M Core Power
18. +1.2V_HTCPU HT Power
19. CPU_CORE0 CPU Power
20. CPU_CORE1 CPU Power
21. CPU_VDDNB_RUNCPU NB Power
22.

PROJECT : Z05
Quanta Computer Inc.
Power Tree