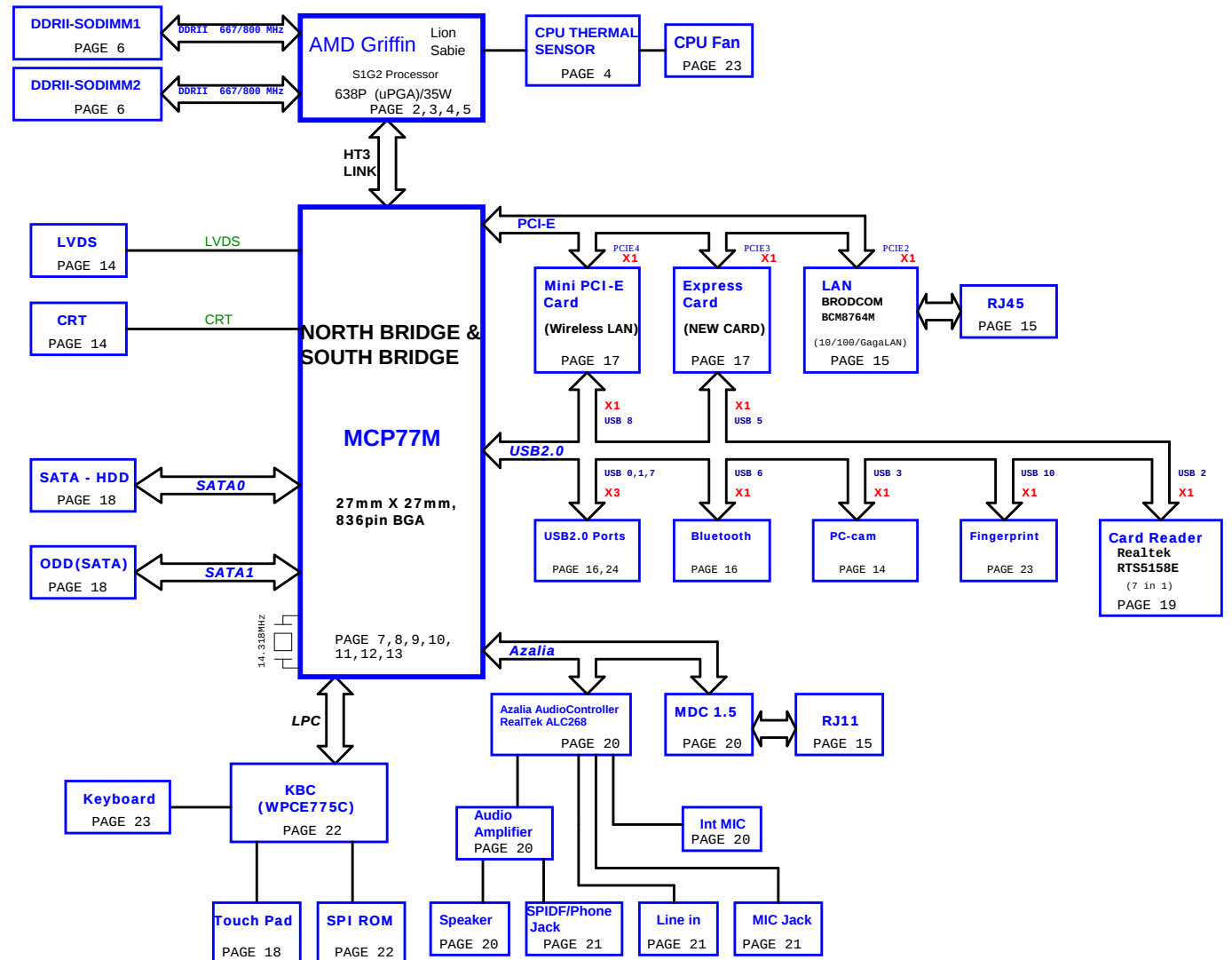


Z05 SYSTEM BLOCK DIAGRAM



CPU CORE / VDDNB (ISL6265A)	PAGE 26
NB_CORE +1.1V (RT8202)	PAGE 28
+1.1V_NB (RT8202)	PAGE 27
DDR II SMD DR_VTERM 1.8VSUS(TPSS116REGR)	PAGE 29
SYSTEM POWER (ISL6237)	PAGE 25
SYSTEM CHARGER (ISL6251A)	PAGE 24



PCB STACK UP

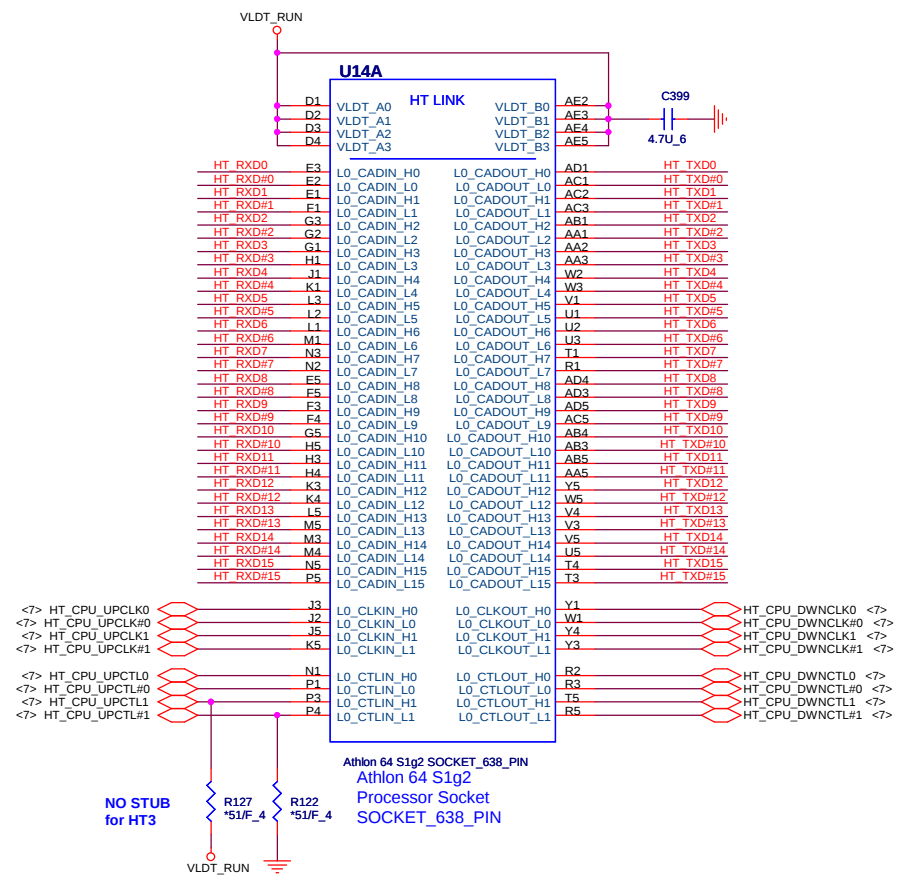
LAYER 1 : TOP
LAYER 2 : GND
LAYER 3 : IN1
LAYER 4 : IN2
LAYER 5 : VCC
LAYER 6 : BOT

<7> HT_RXD#[15..0] HT_RXD#[15..0]
 <7> HT_TXD#[15..0] HT_TXD#[15..0]

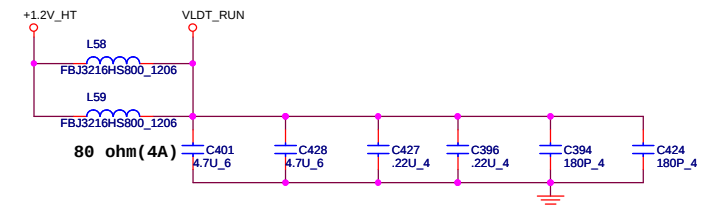


PROCESSOR HYPERTRANSPORT INTERFACE

VLDLT_Ax AND VLDLT_Bx ARE CONNECTED TO THE LDT_RUN POWER SUPPLY THROUGH THE PACKAGE OR ON THE DIE. IT IS ONLY CONNECTED ON THE BOARD TO DECOUPLING NEAR THE CPU PACKAGE



Note: on MCP77, (HT=+1.1V) and CPU(HT=+1.2V) and therefore cannot be connected to the same HT power rail.

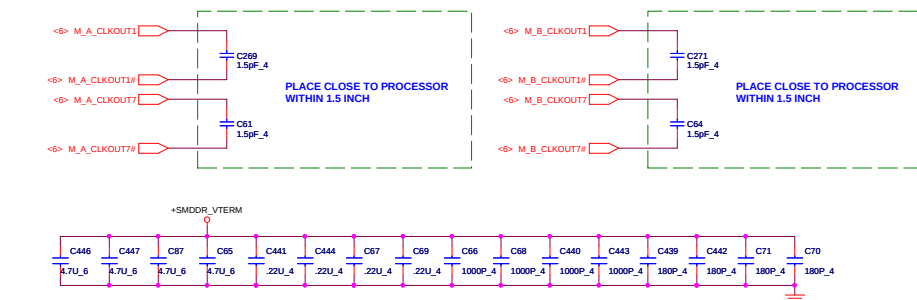
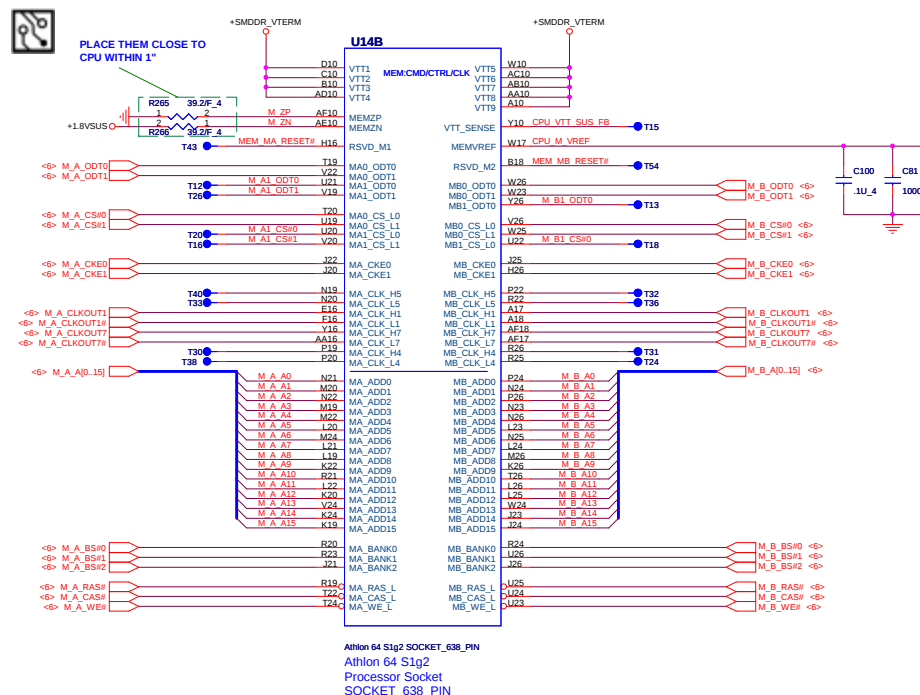


LAYOUT: Place bypass cap on topside of board

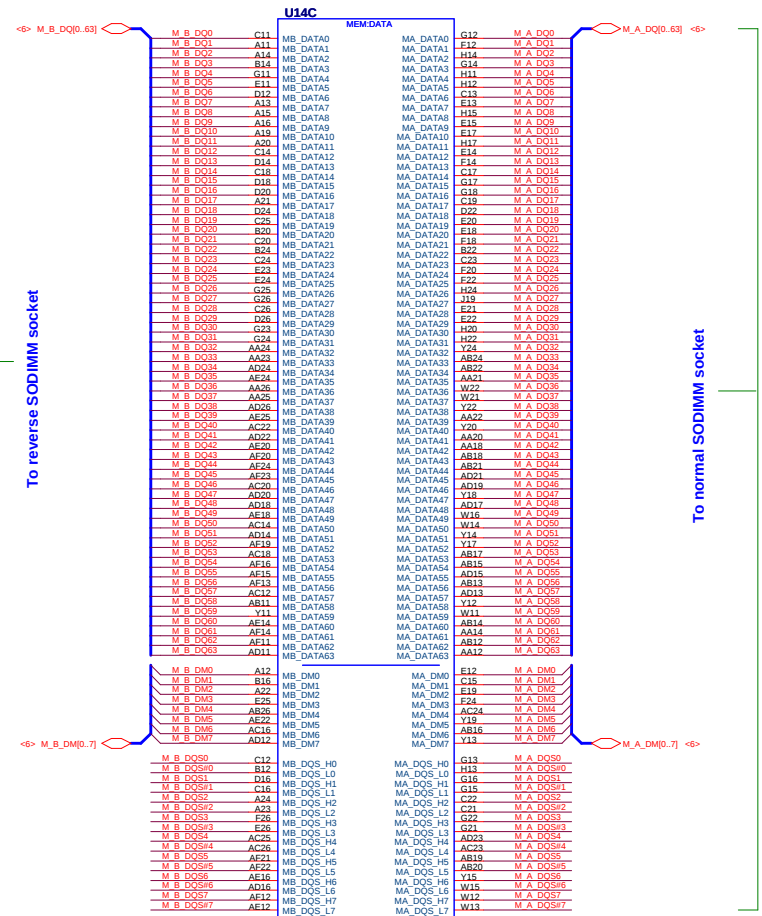
NEAR HT POWER PINS THAT ARE NOT CONNECTED DIRECTLY TO DOWNSTREAM HT DEVICE, BUT CONNECTED INTERNALLY TO OTHER HT POWER PINS
 PLACE CLOSE TO VLDLT0 POWER PINS

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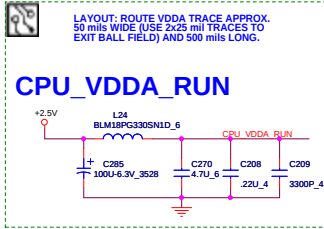
Size	Document Number	Rev
		1A
AMD Griffin HT I/F		
Date:	Monday, February 25, 2008	Sheet 2 of 34



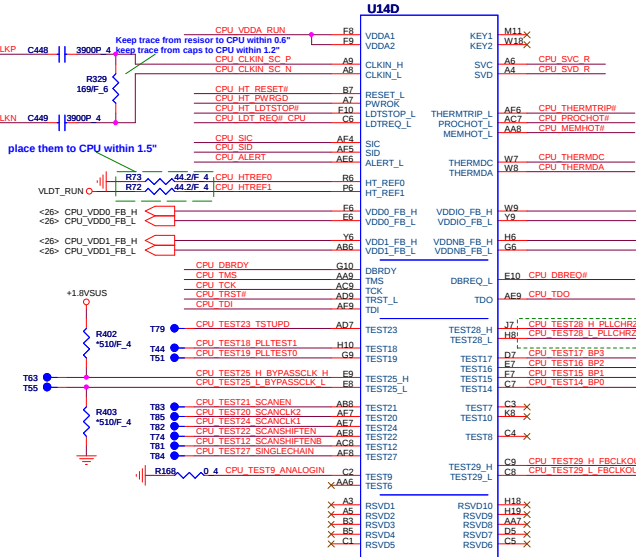
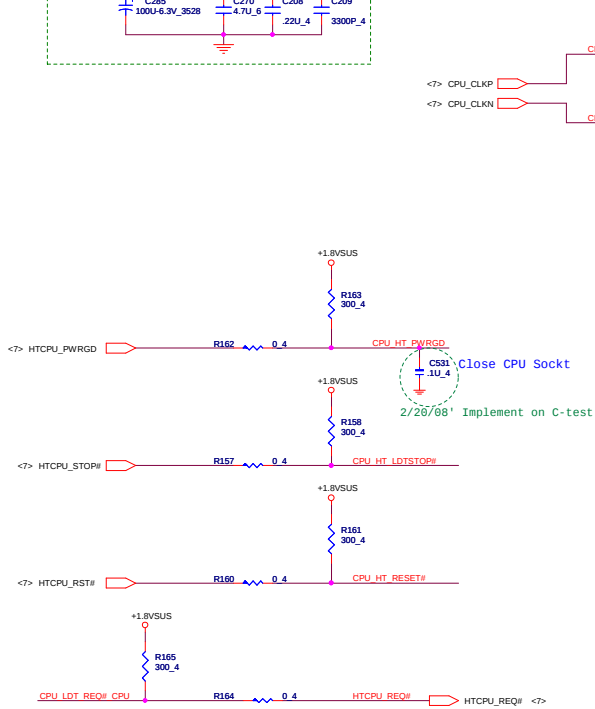
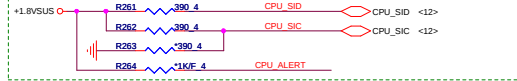
Processor DDR2 Memory Interface



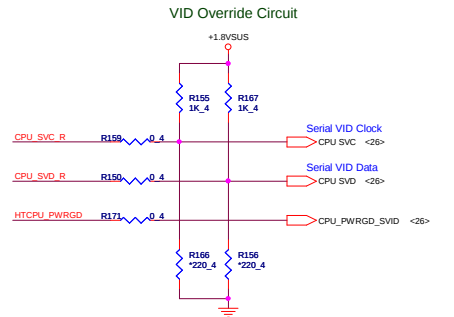
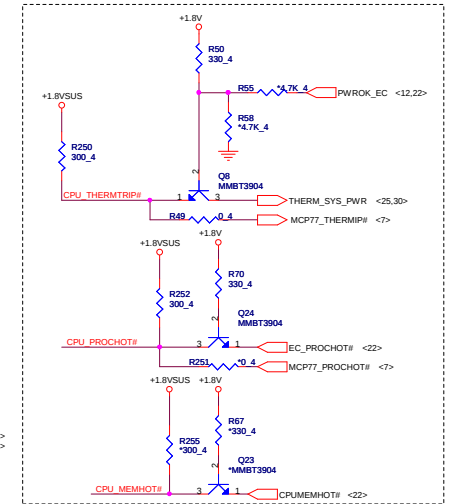
ATHLON Control and Debug



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

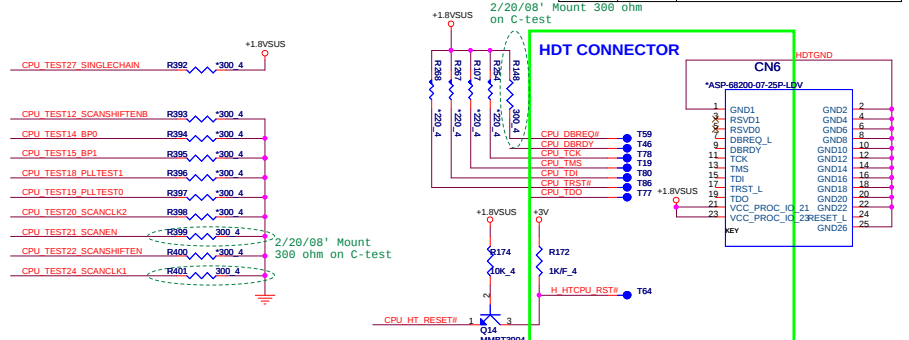
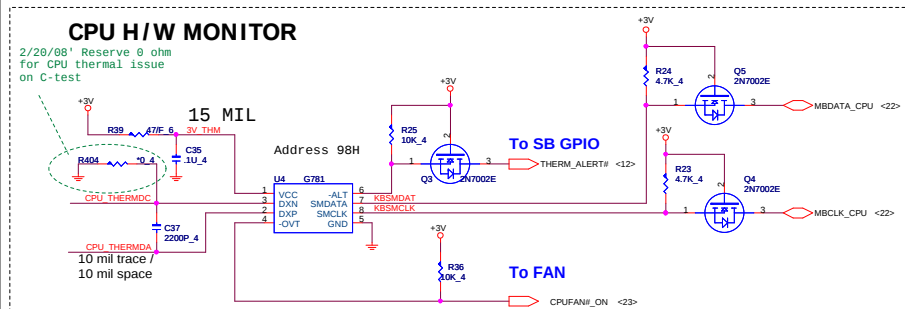


Athlon 64 S1g2 SOCKET_638_PIN



VID Override Circuit

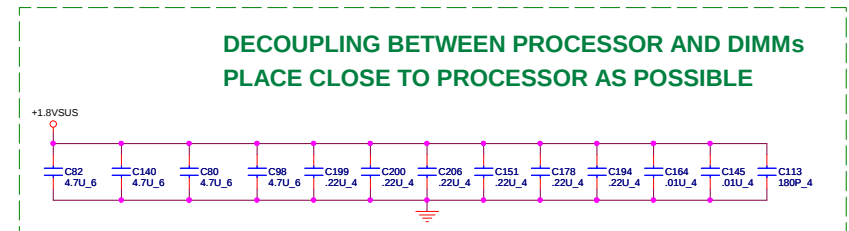
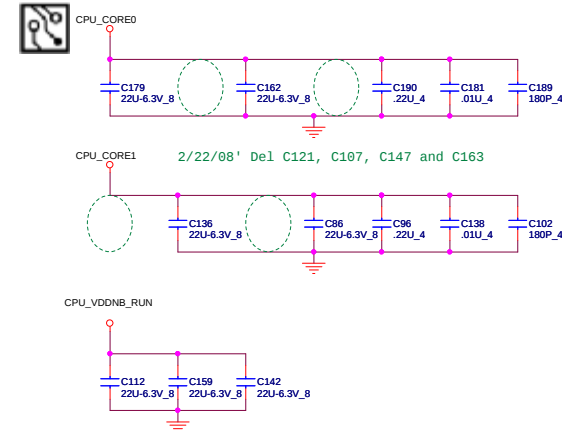
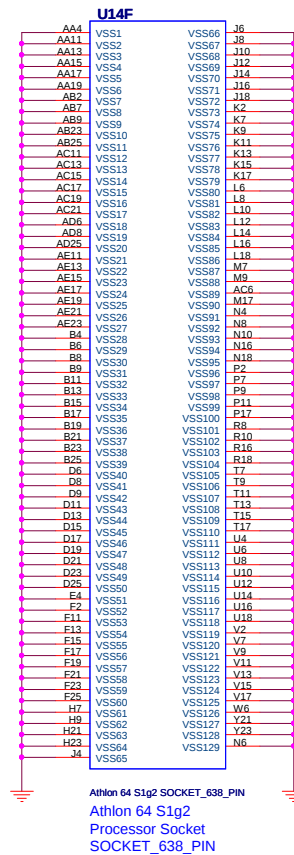
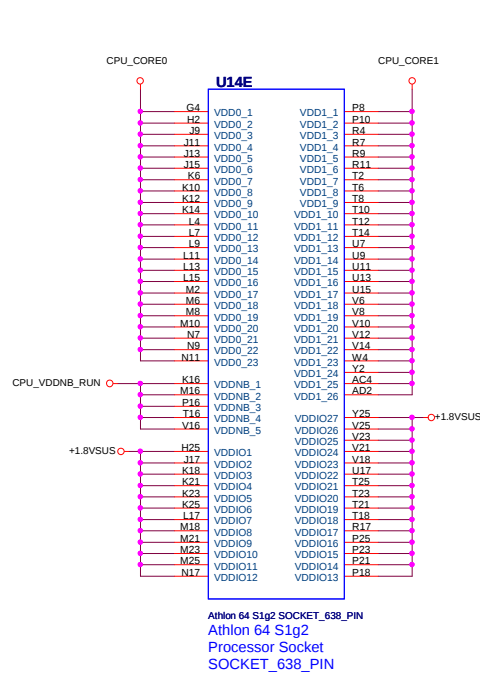
SVC	SVD	Voltage Output(CPU Power)
0	0	1.4V
0	1	1.2V
1	0	1.0V
1	1	0.8V



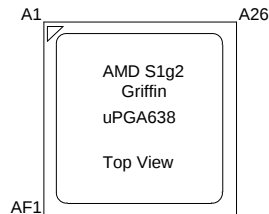
Quanta Computer Inc.
PROJECT : Z05

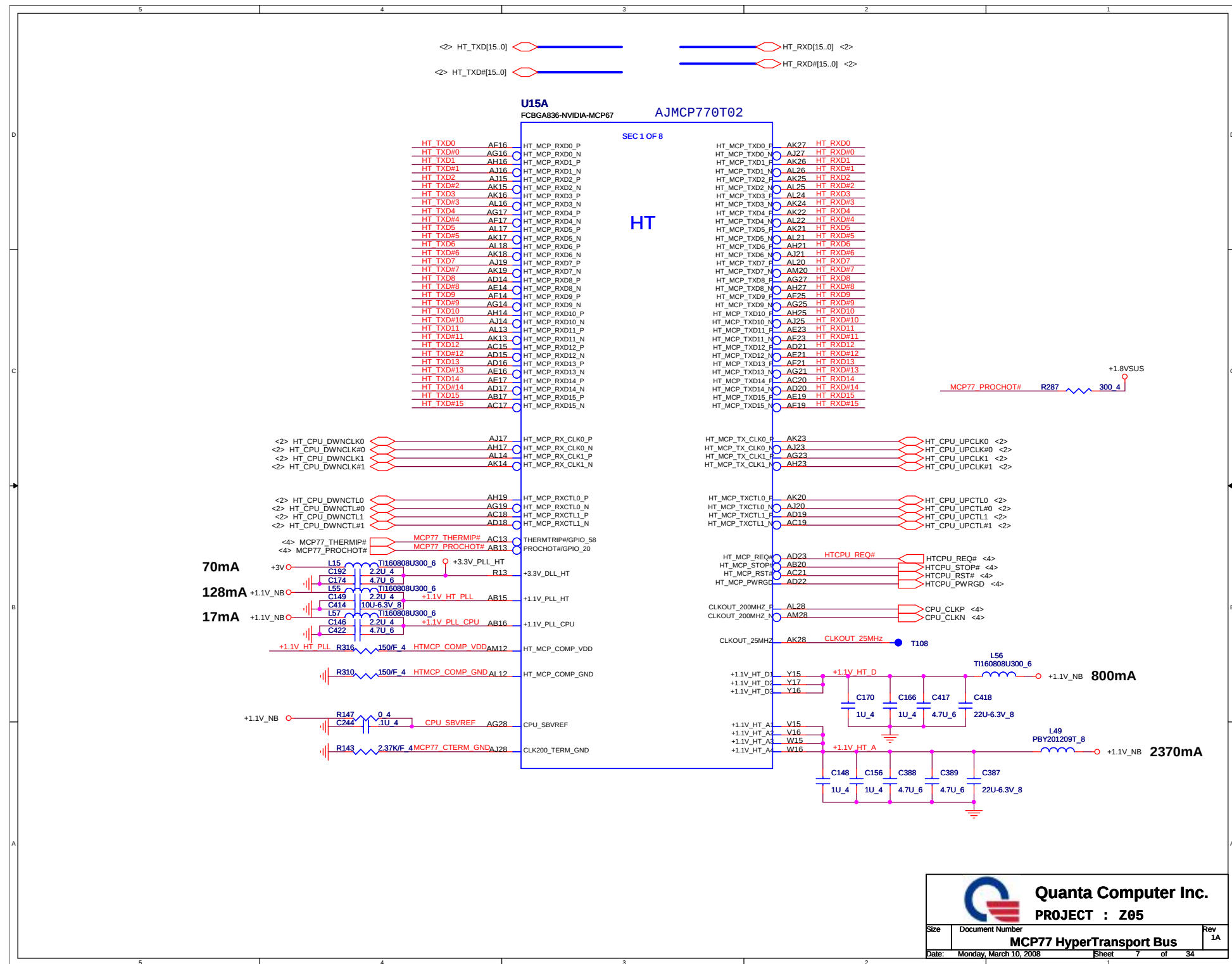
Size	Document Number AMD Griffin CTRL & DEBUG	Rev 1A
Date: Monday, February 25, 2008	Sheet 4 of 34	

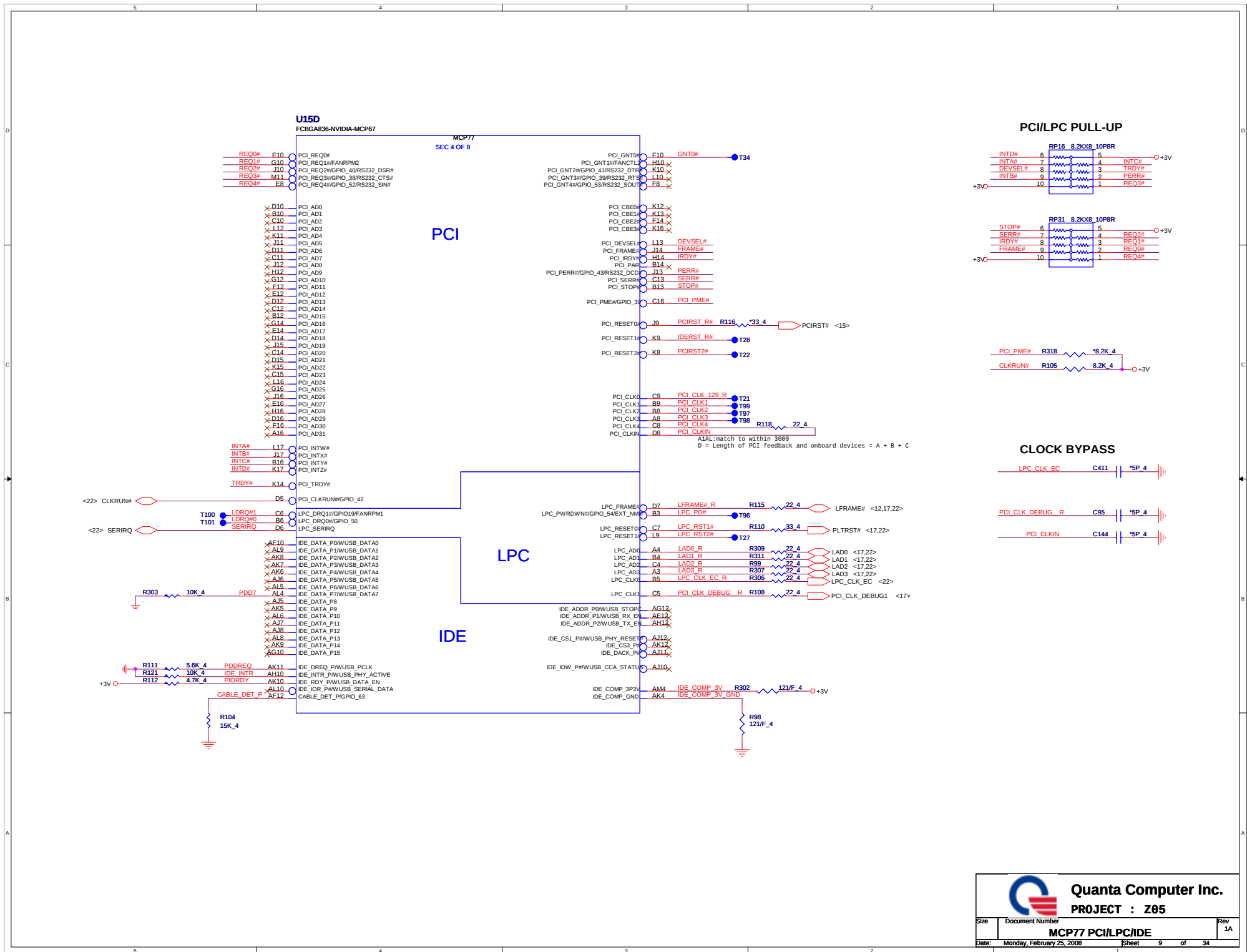
PROCESSOR POWER AND GROUND

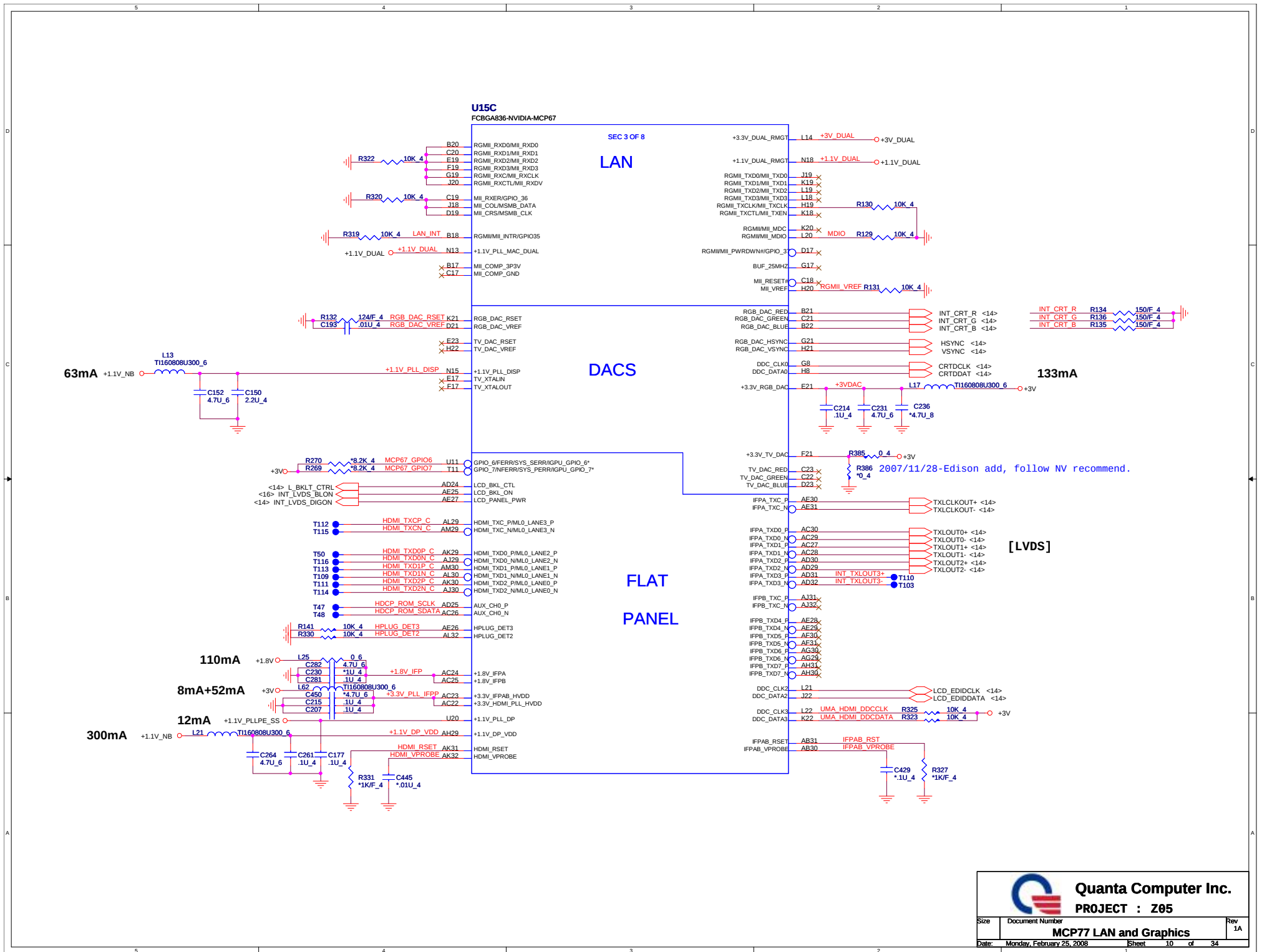


**DECOUPLING BETWEEN PROCESSOR AND DIMMs
PLACE CLOSE TO PROCESSOR AS POSSIBLE**

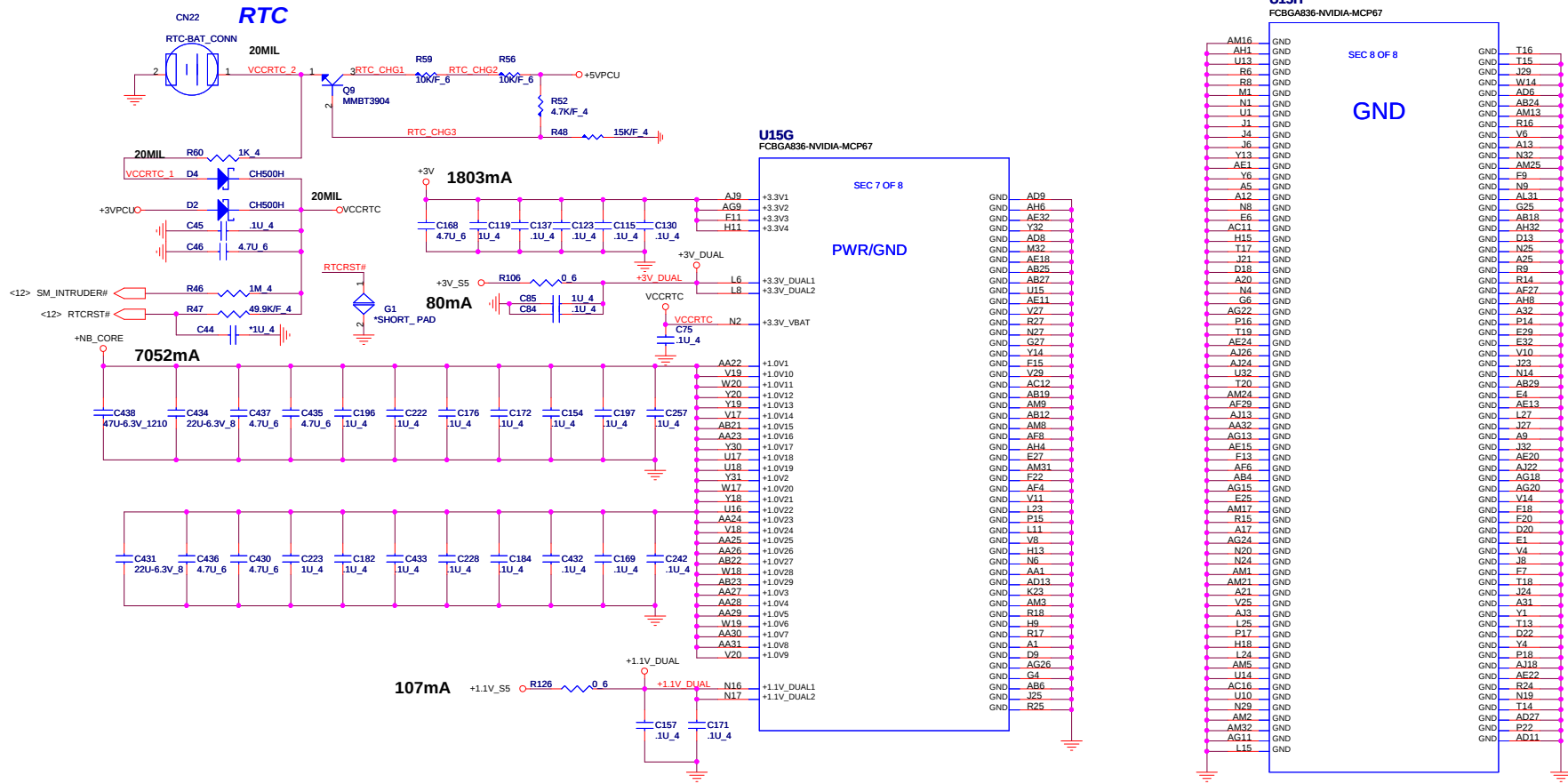






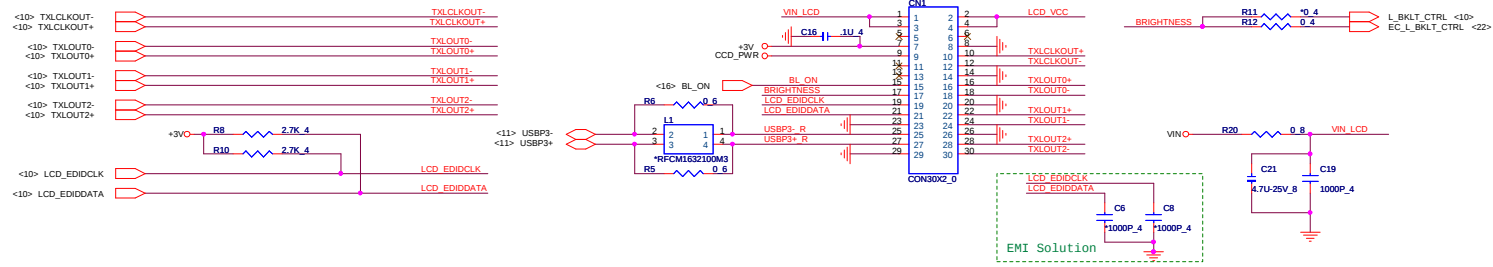


MCP77 POWER PLANE/GND & BYPASS

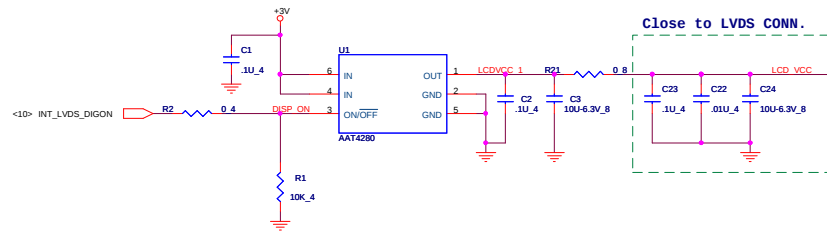


LVDS

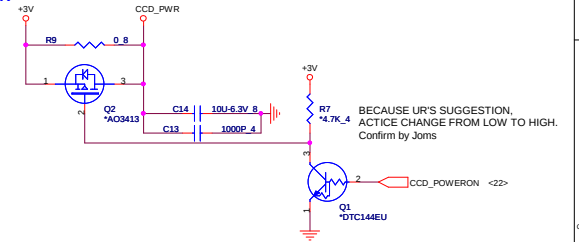
SINGLE_CH



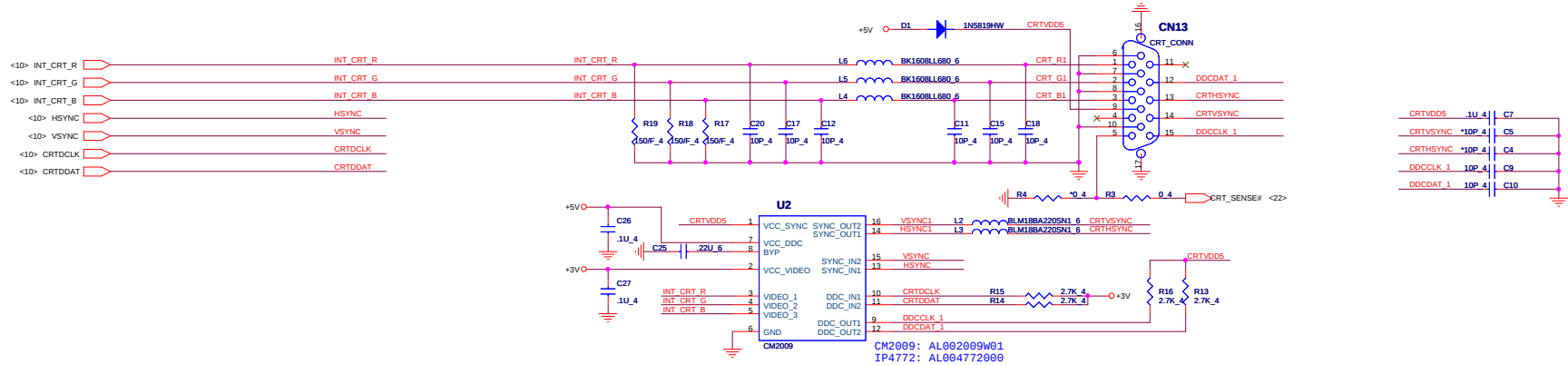
LCD POWER



CAMERA MODULE POWER



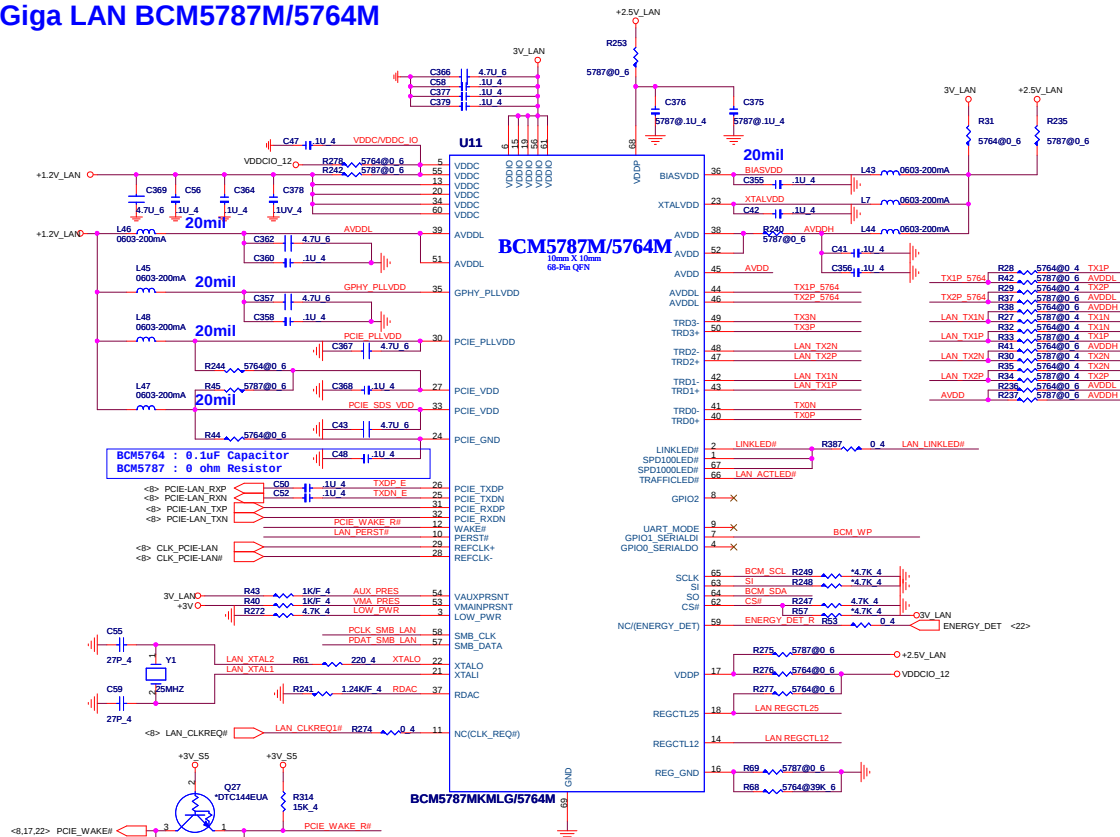
CRT



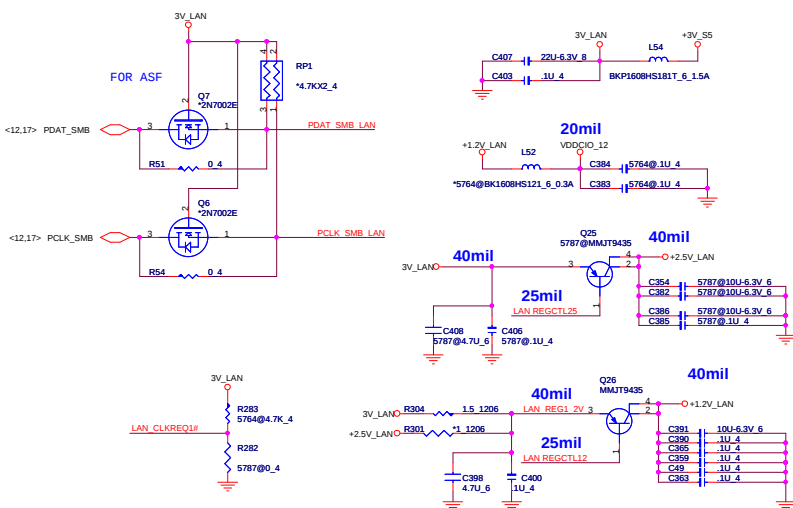
TV Out (SVHS) MiniDIN 7-pin

Delete TVOUT MiniDIN

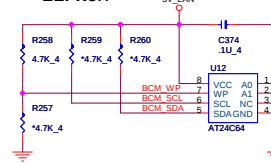
Giga LAN BCM5787M/5764M



LAN POWER



EEPROM



EEPROM Strapping

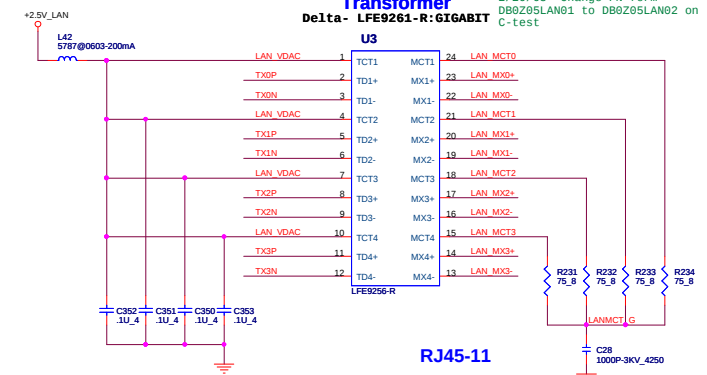
	S0	SI	CS#	SCLK
24c64	1	1	0	1

Delete LAN within DOCK Selector

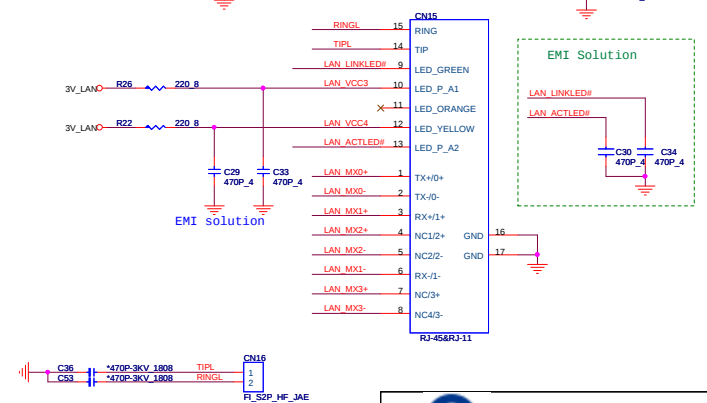
Transformer

Delta- LFE9261-R:GIGABIT

2/20/08' Change PN form
DB0Z05LAN01 to DB0Z05LAN02 on
C-test

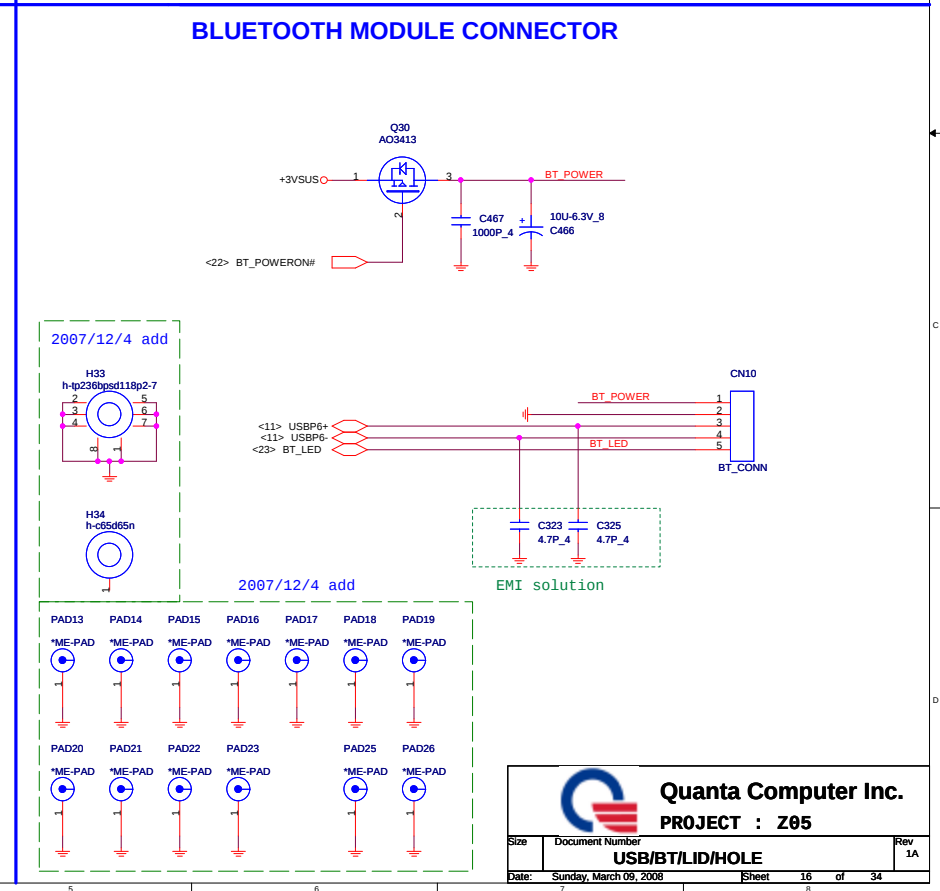
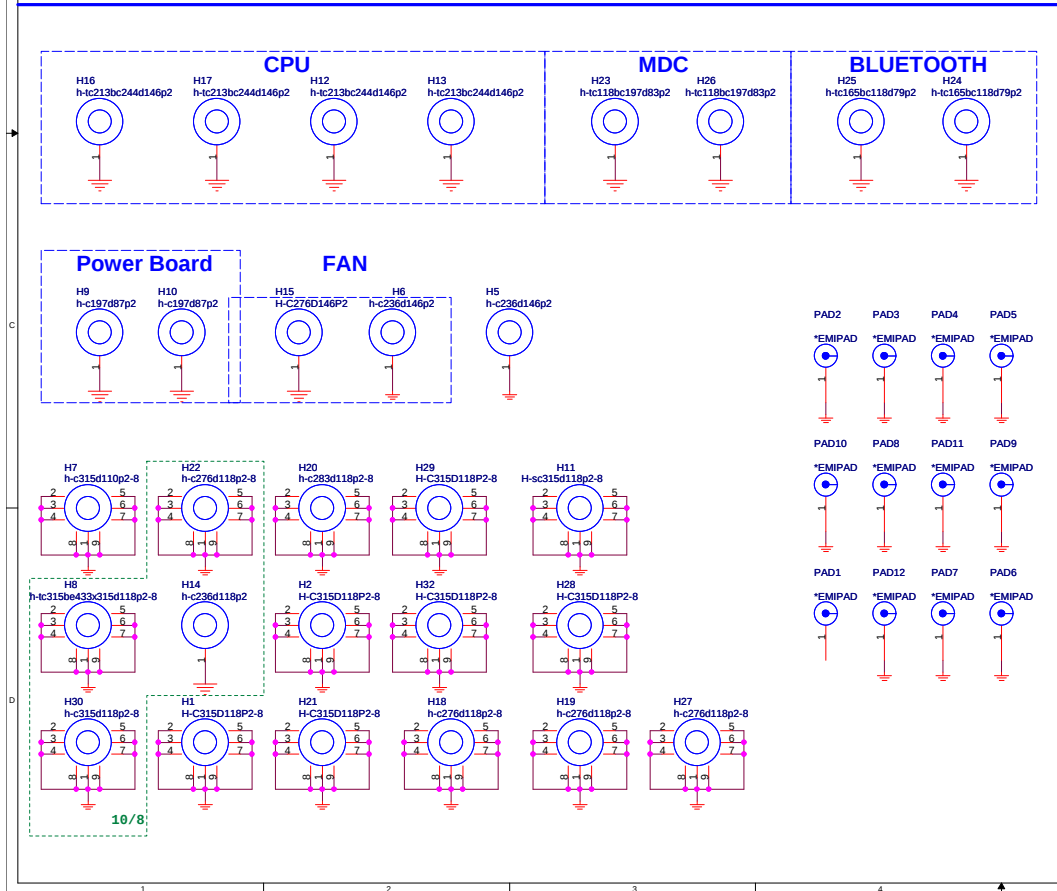
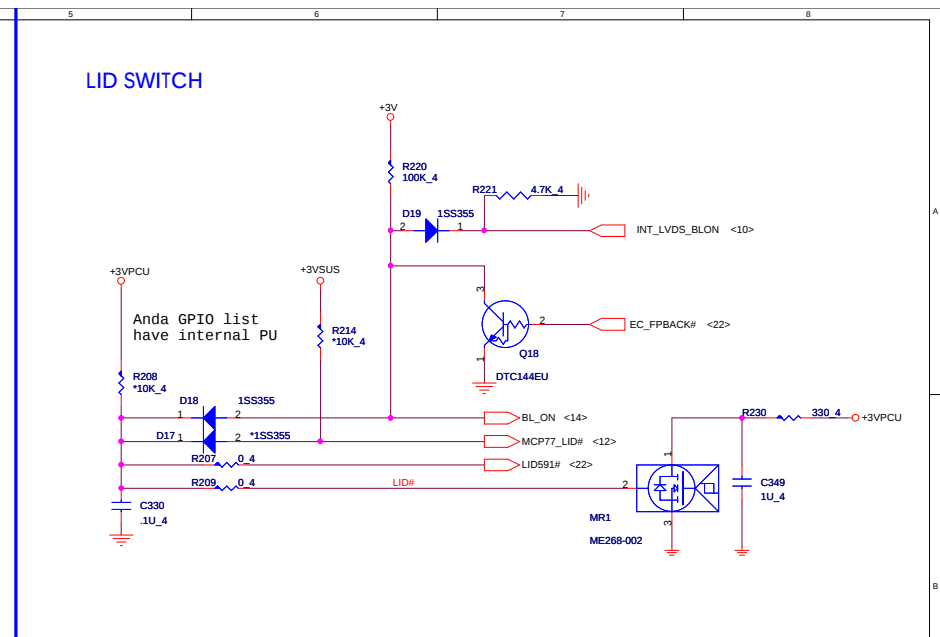
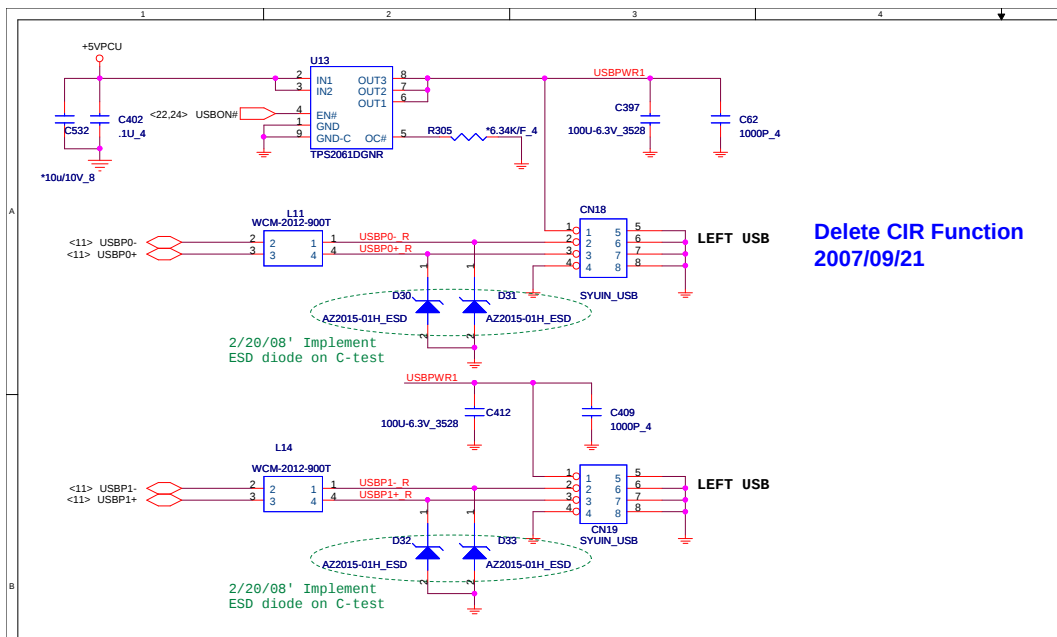


RJ45-11



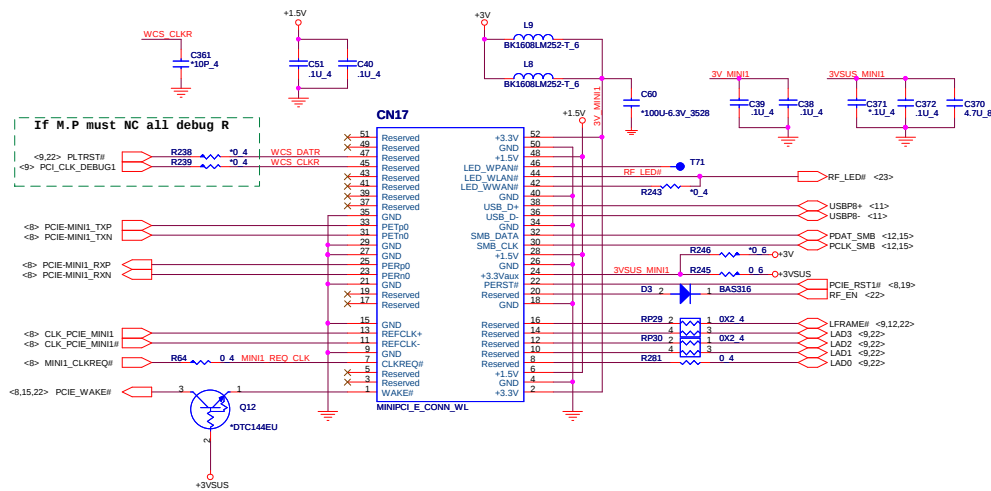
Quanta Computer Inc.
PROJECT : Z05

Size	Document Number	Rev
	GigaLAN BCM5787/RJ45 & RJ11	1A
Date:	Friday, March 07, 2008	Sheet 15 of 34



MINI-Card

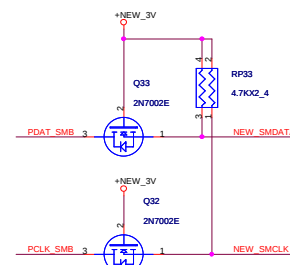
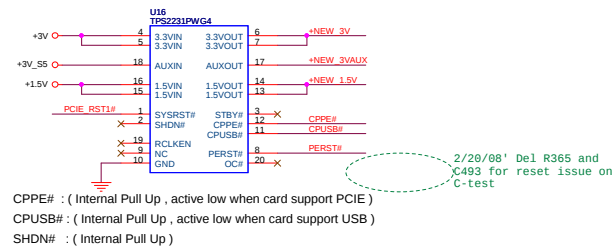
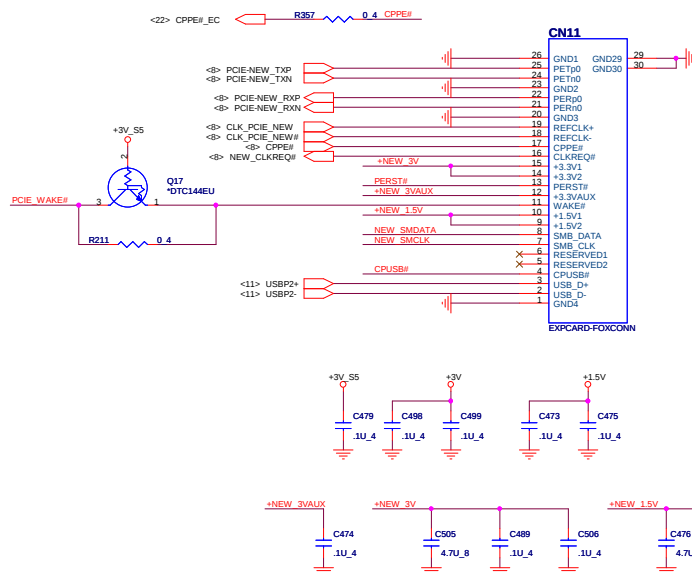
MINI-Card Port-1



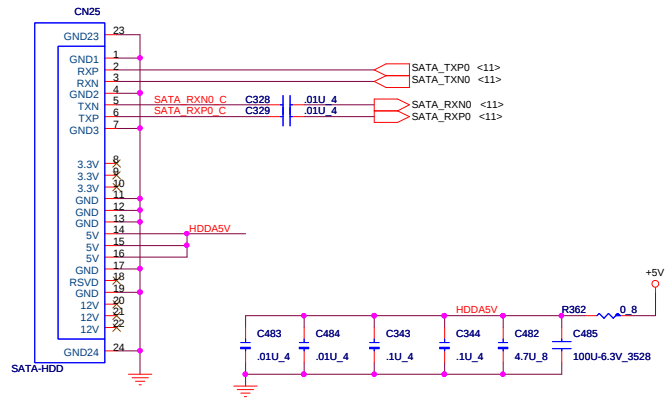
Delete MINI-Card Port-2

New card

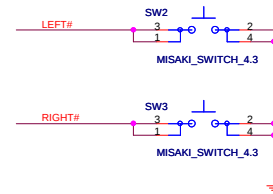
NEW CARD'S POWER SWITCH



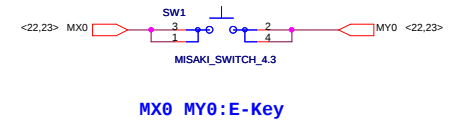
SATA HDD



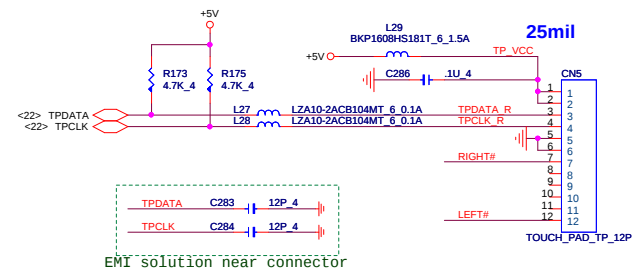
TP SWITCH



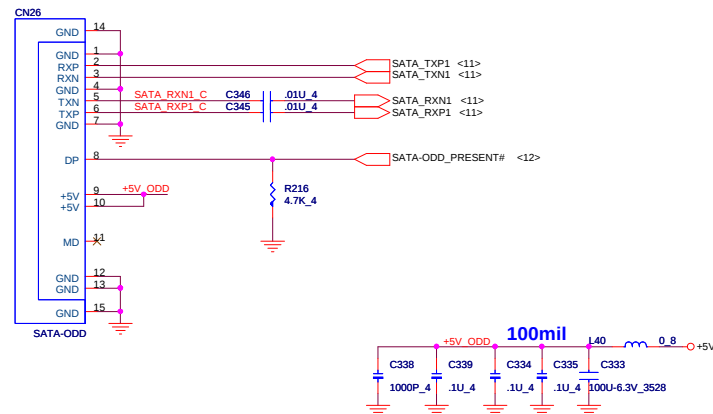
E-KEY

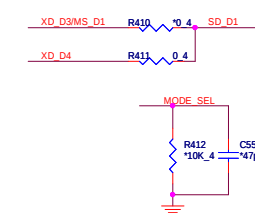
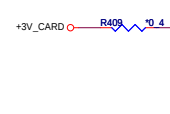
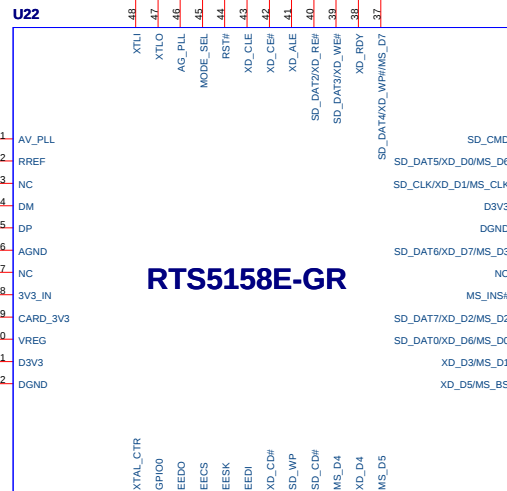
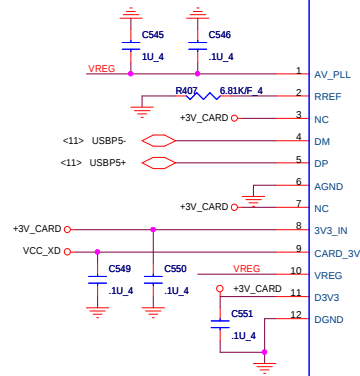
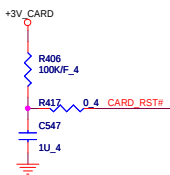
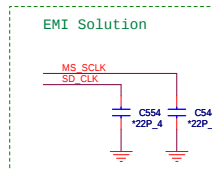
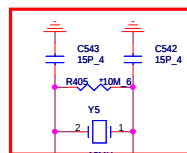
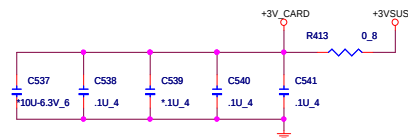


TP CONN



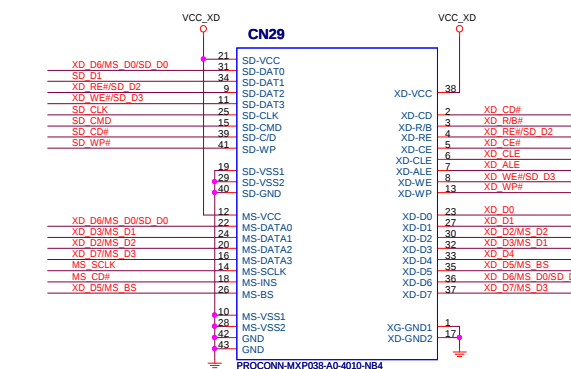
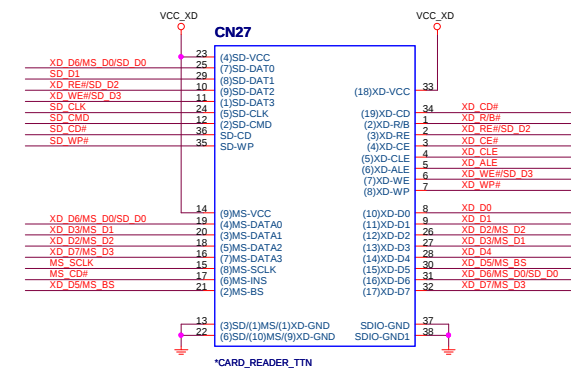
ODD (SATA)



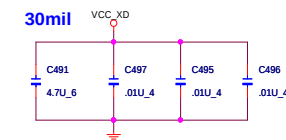


R412/C553 = 10K/47pF => R410 Reside
R412/C553 = NC / NC => R411 Reside

7 IN 1 CARD READER



CARDREADER POWER



[illegible]

$V_0 = 1.2 * (R_{371} + R_{372}) / R_{372} = 4.8V$

Diagram 1: C533 .1U_4 connected between ADOGND and CPGND_3.

Diagram 2: C534 .1U_4 connected between ADOGND and CPGND_2.

Diagram 3: C535 .1U_4 connected between ADOGND and CPGND_1.

AGC Attack (4 pin)	Attack time
LOW	1 ms
Hi	2 ms

AGC ON/OFF selection

AGC ON/OFF (6 pin)	AGC ON/OFF
LOW	ON
Hi	OFF

AGC Recovery1 (10 pin)	AGC Recovery2 (11 pin)	Recovery Time
LOW	LOW	1.0 s
LOW	Hi	2.0 s
Hi	LOW	4.0 s
Hi	Hi	8.0 s

AGC Lv1 (2 pin)	AGC Lv2 (3 pin)	AGC ON Level	Output Po (RL=8 ohm)
LOW	LOW	9.8 dBV	1.2 W
LOW	Hi	9.0 dBV	1.0 W
Hi	LOW	8.1 dBV	0.8 W
Hi	Hi	6.0 dBV	0.5 W

<12> HDA_SDOUT_MDC
 <12> HDA_SYNC_MDC
 <12> HDA_SDI#
 <12> HDA_RESET#_MDC

1 GND
 2 AC_SDO
 3 AC_SYNC
 4 AC_SDI
 5 AC_RST#
 6 AC_BCLK
 7 GND
 8 GND
 9 GND
 10 GND
 11 GND
 12 GND

1 RSV
 2 RSV
 3 RSV
 4 RSV
 5 RSV
 6 RSV
 7 RSV
 8 RSV
 9 RSV
 10 RSV
 11 RSV
 12 RSV

R381 0.6
 R380 0.4
 C529 1uF
 C530 10pF

3V5US
 3V3

HDA_BITCLK_MDC <12>

EMI Solution

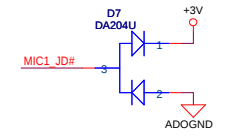
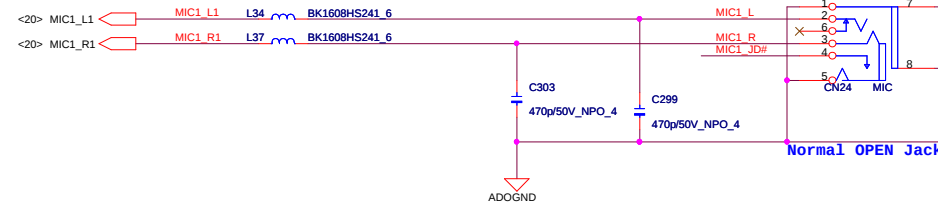
SP STBY1 (33 pin)	SP STBY2 (34 pin)	SP STBY ON/OFF
LOW	LOW	ON
LOW	Hi	OFF
Hi	LOW	OFF
Hi	Hi	OFF

HP STBY1 (35 pin)	HP STBY2 (36 pin)	HP STBY ON/OFF
LOW	LOW	ON
LOW	Hi	OFF
Hi	LOW	OFF
Hi	Hi	OFF

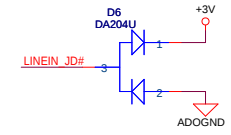
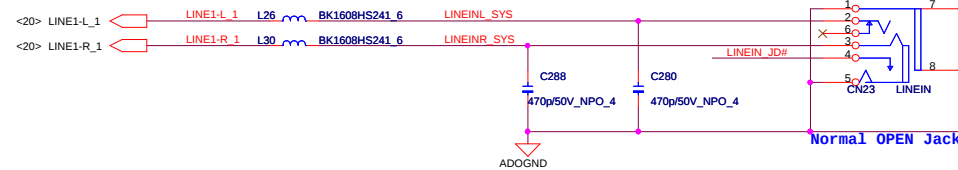
[illegible]

PDF created with FinePrint pdfFactory Pro trial version <http://www.fineprint.com>

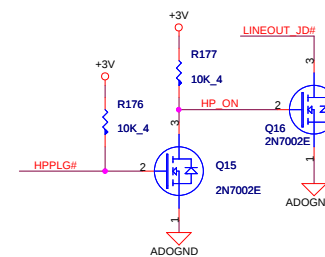
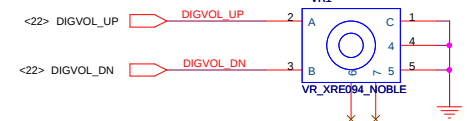
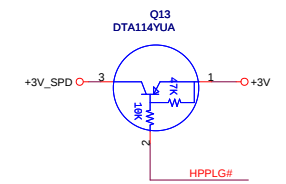
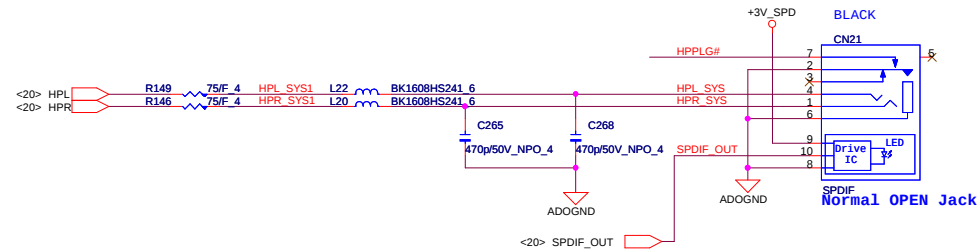
MIC



LINE IN



HeadPhone OUT/SPDIF

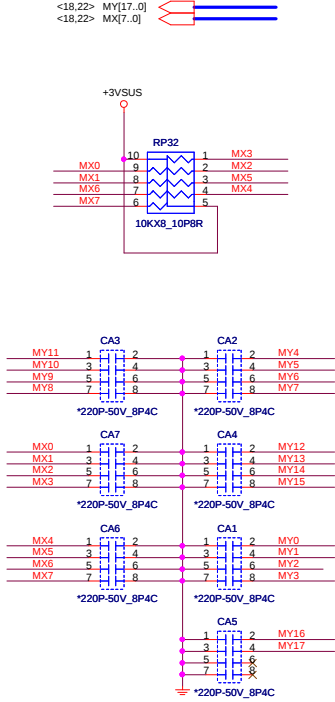


 Quanta Computer Inc. PROJECT : Z05			
Size	Document Number		Rev 1A
Audio Jack			
Date: Monday, February 25, 2008	Sheet	21 of 34	

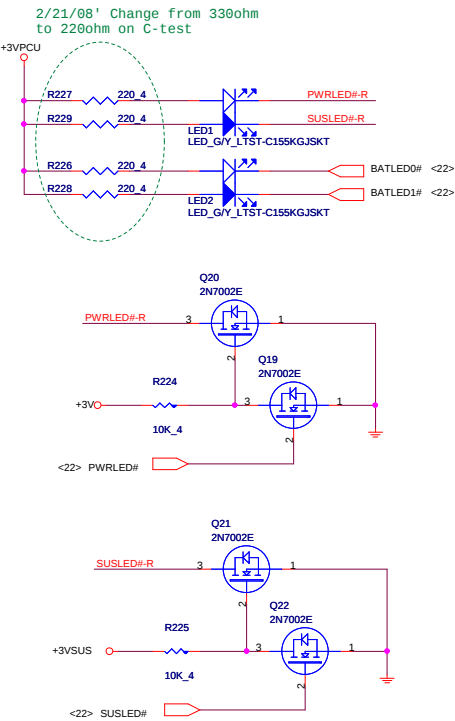
INT K/B

CN4	
1	MY0
2	MY1
3	MY2
4	MY3
5	MY4
6	MY5
7	MY6
8	MY7
9	MY8
10	MY9
11	MY10
12	MY11
13	MY12
14	MY13
15	MY14
16	MY15
17	MY16
18	MX7
19	MX6
20	MX5
21	MX4
22	MX3
23	MX2
24	MX1
25	MX0
26	

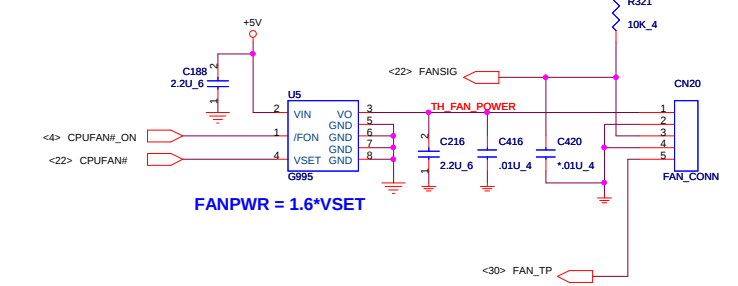
FFC_26P_KB



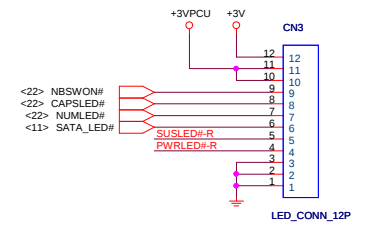
LED



CPU FAN



LED BOARD CONN.



Debug

Delete Debug Port(PCI & IDE)

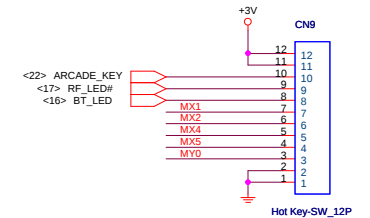
Fingerprint BOARD CONN.

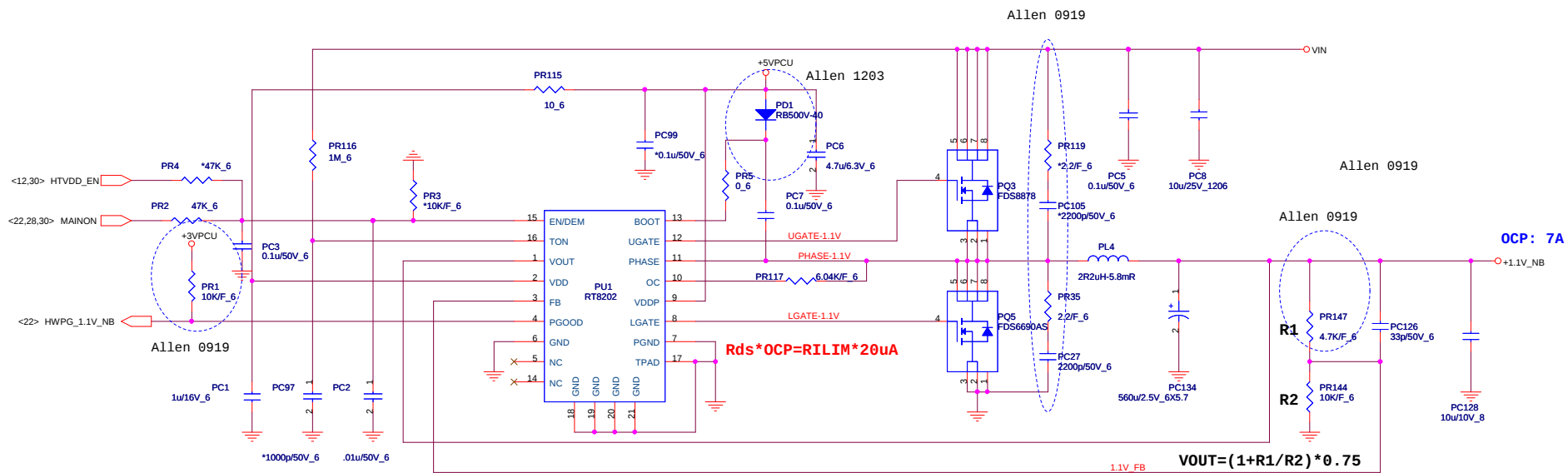


Button BOARD CONN.

BUTTON MATRIX

	MY0
MX1	MAIL
MX2	WWW
MX4	WIRELESS
MX5	BLUETOOTH





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

$$Frequency = Vout / (Vin * TON)$$

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

$$Frequency = 1 / (0.0036767) = 272K$$

FDS6690AS Rds=12~15mOhm

OCP=7-0.8A

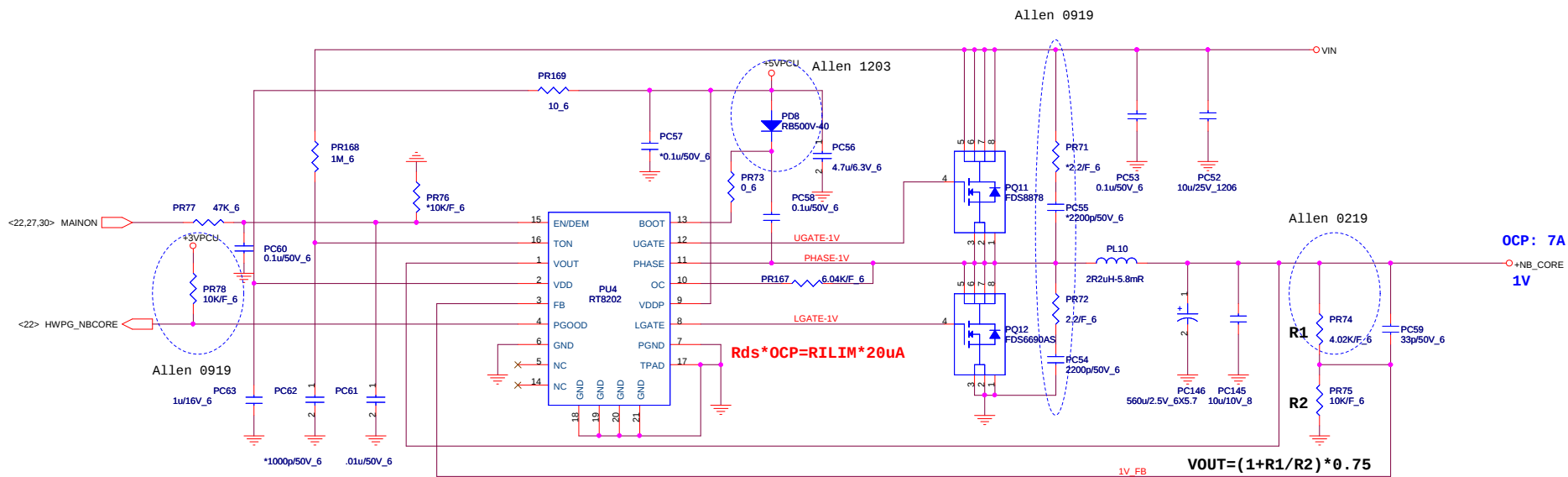
L(ripple current)
 $= (19-1) * 1 / (2.2u * 272k * 19)$
 $\sim 1.58A$

$12m * 6 = RILIM * 20uA$
 $RILIM = 3.6K (2.5 \sim 8K)$



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

$$Frequency = Vout / (Vin * TON)$$

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

$$Frequency = 1 / (0.0036767) = 272K$$

FDS6690AS Rds=12~15mOhm

OCP=7-0.8A

L(ripple current)
 $= (19-1) * 1 / (2.2u * 272k * 19)$
 ~1.58A

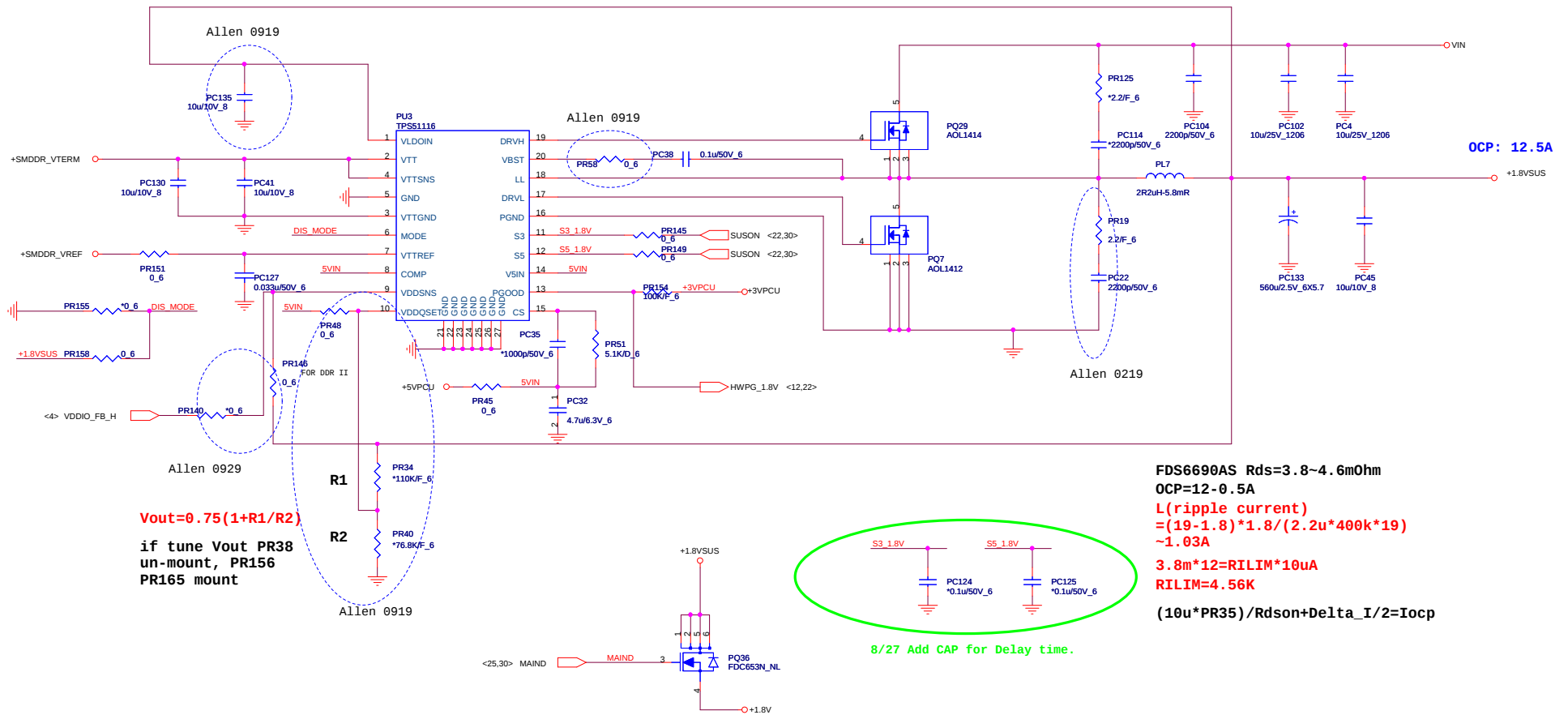
$12m * 6 = RILIM * 20uA$
 RILIM=3.6K (2.5~8K)

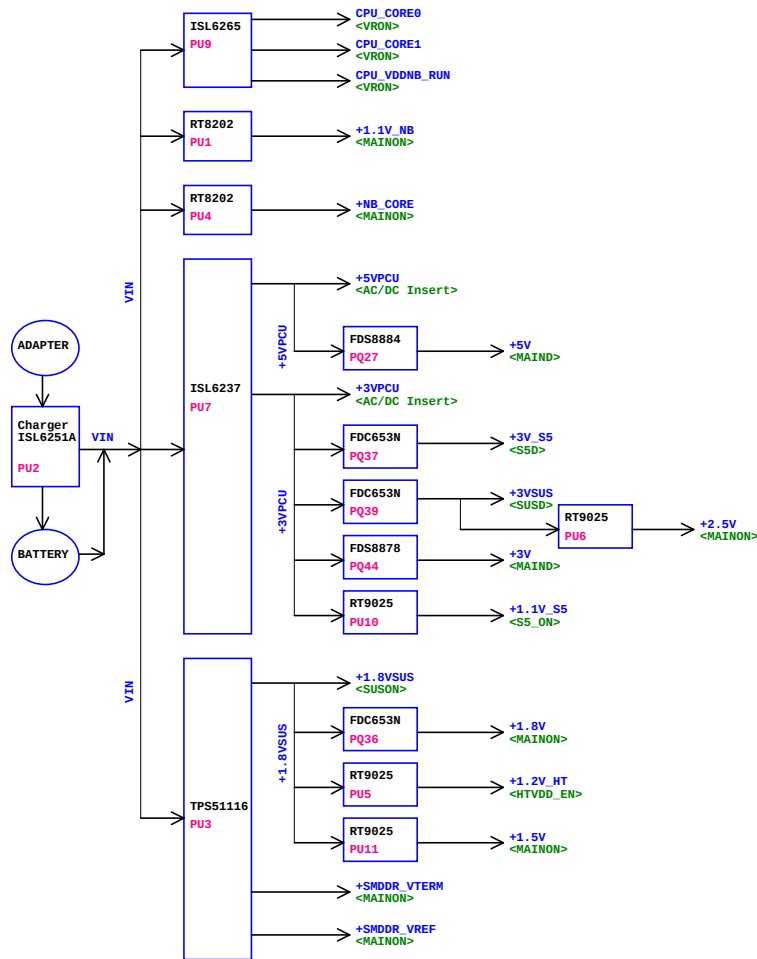
$$VOUT = (1 + R1/R2) * 0.75$$



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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. +2.5VPCU 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.