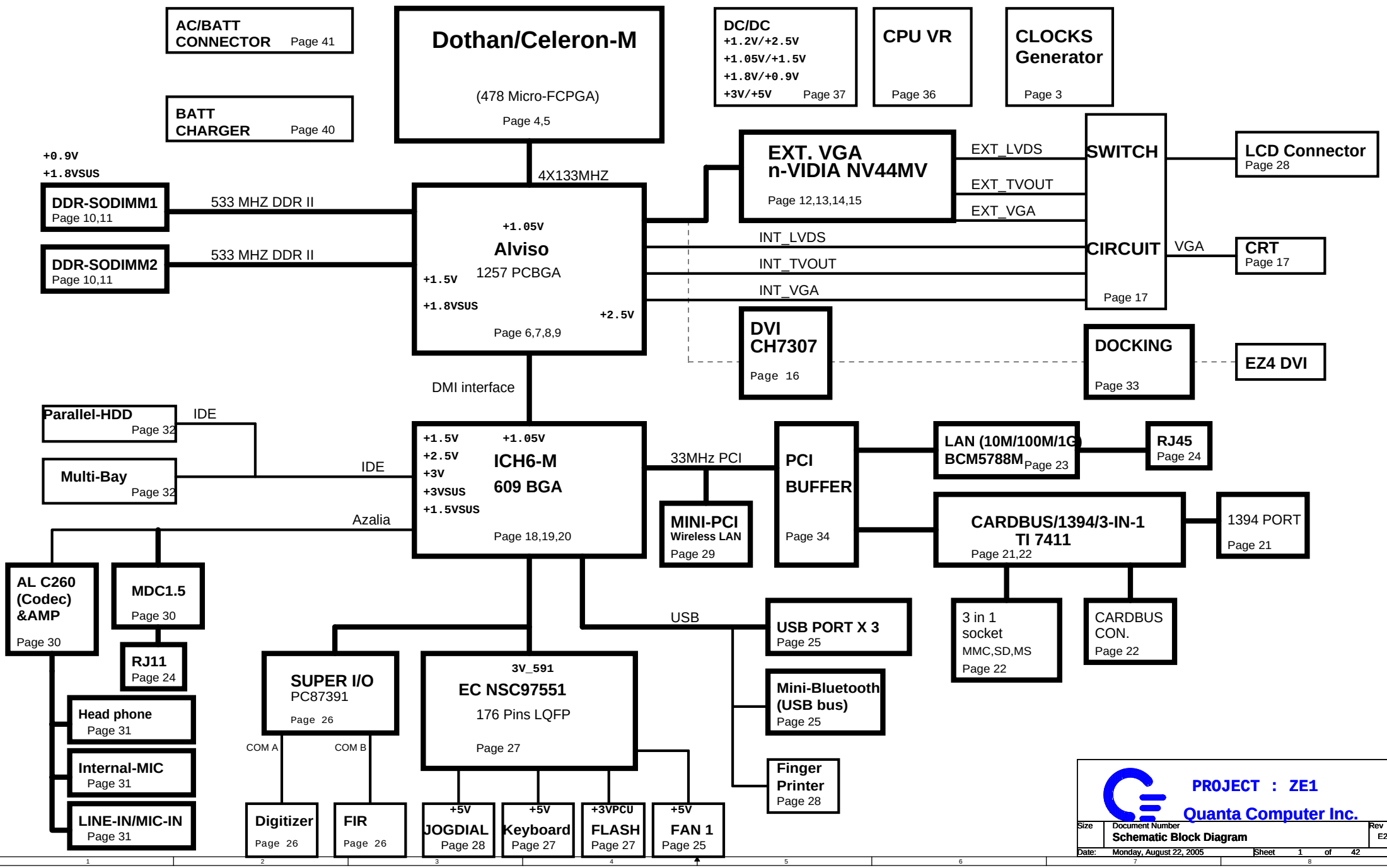
ZE1

REV : E2C



PROJECT : ZE1

Quanta Computer Inc.

Size	Document Number	Rev
	Schematic Block Diagram	E2C
Date: Monday, August 22, 2005	Sheet 1 of 42	

B TEST CHANGE ITMES:

06/22 MODIFY LIST

1. Remove all no-use text meno, ie: Rev A2.
2. Page 12. Chage R157, R158, R162~R167 power source from +3V to IFPC_IOVDD.
3. Page 15. Add R615, R616, R614 Q44 and Q43. Follow nVIDIA's suggestion. TMDS Backdrive Prevention circuit.
4. Page 16. Change single R to RN. R62, R63 => RN16; R56, R57 => RN17; R58, R59 => RN18; R60, R61=> RN19. And all use 0 ohm.
5. Page 24. Swap net of CN10-12 and CN10-13. Wrong connection.
6. Page 25. Change USB power source from 5VPCU to +5VSUS. Wrong design.
7. Page 30. Reserve R617 (stuff), R618 (stuff), C859 (NA), C869 (NA), C861 (NA) and C862 (NA). For noise in EZ4's LINE-IN.

06/23 MODIFY LIST

8. Page 23. Delete R36 and R76. VESDchange PWR source from LAN_3V to 3V_LAN directly.
9. Page 23. Delete R40 from TCK.
10. Page 23. Delete R42 from Q9-B and Q9-C.
11. Page 23. Add option resisters in 3VLAN. Add R56 and R57 for BCM4401.
12. Page 23. Add PI-filiter for AVDD and separate from VDDP. Add L72.
13. Page 23. Add PI-filiter for AVDDL. Add L73 and C863.
14. Page 23. BOM modification. Correct RDAC's resister from 1.18K to 1.24K (BCM5788).
15. Page 23. BOM modification. R70: stuff; R68: NA. FAE: Support CLKRUN#.

	R51, R48	R56, R57	R38	R97, R87	Q5, Q9	U7	U8
BCM5788M	STUFF	NA	1.24K	STUFF	STUFF	STUFF	NA
BCM4401	NA	STUFF	1.27K	NA	NA	NA	STUFF
NOTE	+3VRUN	3V_LAN	RDAC			AT93C46	24LC128

06/28 MODIFY LIST

16. Page 28. Delete R112 (pull hign/ 10K) and Add R624 (0 ohm) to GND. BOM.
17. Page 28. Add R625 and R626 to GND. ALPS setting. BOM.
18. Page 28. Add R619, R620, R621 and R623 for bypass 3D function. BOM.
19. Page 28. Reserve R624, R622, C864 and U62. Those are for 3D function.

06/28 MODIFY LIST

20. Page 13. Update and correct U27 and U28 footprint. Correct DQS and DQM.
21. Page 13. Re-route MDA[0..63], QSA[0..7] and -DQMA[0..7]
22. Page 9. C272 change from CH73301M8B9 to CH747LM8801(LOW profile). BOM

B2 TEST CHANGE ITMES:

07/19 MODIFY LIST

23. Page 25. Change U32, U58 and U33 to AL000547001 (GMT).
    Change C489, C800 and C490 to CH71001M393 (100uF).
    Del R289, R296, R562, R555, R292 and R294
24. Page 25. Add USB PWR control (SUSON) circuit. Add R554 (10K) and Q39(DTC144EUA)
25. Page 42. Add Semtcech solution in Track-point.
    Add U63, U66, U65, U64, C866, C868, C867, C870, C872, C871, R637, R638, R643, R642, R645, R644, R647, R641, R646, R640, R639, R638.
26. Page 22. Chane CN13 from 4 in1 to 3 in 1. Re-routing it.
27. Page 28. BOM delete D4. Acer: no action in LID.

07/26 MODIFY LIST

28. Page 32. Add HOLE45 for MDC.
29. Page 32. Add HOLE46 for VRAM. (NO SPACE!!!)
30. Page 32. Add clip's PAD. P5, P6 and P7.

07/29 MODIFY LIST

31. Page 27. Add PULL HIGH 10K/ R649 to 3V. (EC)
32. Page 40. BOM: Remove PR149 and Stuff PR147. (EC)
33. Page 40. Delete PQ41, PU10, PC97, PC98 and PC99. REFP => VIN; REF3V => 3V_591. (EC and PWR)
    REFP in PD19-1 and PC130-1; REF3V in PU13-12, PR40-1, PR64-1 and PU14-5.
34. Page 40. Delete PR134 and PR139. Then SHORT them. (PWR)
35. Page 40. Change PQ52-3 from PU13-13(CC-SET) to PU13-8. And change PR87 from 0 ohm to 10K.(PWR)
36. Page 28. Upate CN7's footprint to 88264-06XX-6P-R
37. Page 28. Upate CN8's footprint to 88264-10XX-10P-R
38. Page 28. Upate CN3's footprint to 88264-04XX-4P-L
39. Page 39. Delete JP1. Change +1V5_S5 to +1.5V_S5.
40. Page 39. Delete JP2 and JP5. Change VCCP-OUT to +VCCP.
41. Page 31. Reserve and Stuff R650 and R651. For Fine-tune the value of headphone.

07/30 MODIFY LIST

41. Page 35. Disable NVVDD & +1.2V for INT VGA cost-down
42. Page 35. change R128 from 100K to 97.6Kohm, R127 from 34K to 100Kohm for power fine-tune VGA voltage
43. Page 42. Change trackpointer function from ALPS to SEMTECH
44. Page 12. Change EXT_BLON reistor R446 form 10K to 1K for boot white screen
45. Page 04. Disable R596 for Battery only can't boot

C TEST CHANGE ITMES:

08/9 MODIFY LIST

46. Page 26. Modify serial port function for EZ4 (MRXD1 & MTXD1)
47. Page 25. Change USB_Power_on voltage from +5VSUS to 5VPCU
48. Page 25. Modify all USB power switch OC# pull-up 10k to +3VSUS

08/10 MODIFY LIST

49. Page 26. Add GND in C577 & C578 for FIR
50. Page 33. Remove LAN's reserve capacitors(C817/C513/C542/C546/C554/C555/C525/C523/C533/C530) by EMI engineer confirm

08/11 MODIFY LIST

51. Page 36. CPU CORE Power(PU11's pin25) add another CAP 0.022UF(C170) by power engineer request
52. Page 23. Add two new CAP 0.1UF(C873 & C874) for AVDD_LAN & +1.8V_1.2V_LAN by EMI request

08/12 MODIFY LIST

53. Page 23. Change R38 from 1.24k to 1.18k for LAN droop & template
54. Page 17. Change L59/L60/L61 from FBM-10-160808-470(47ohm) to BLM18BA220(22ohm) for EA measure fail
55. Page 28. Modify Bluetooth led can't light for FOXCONN Bluetooth module (Add R652 & R653)
56. Page 31. Modify Line-in noise change R650 &R651 from 0ohm to 1kohm
    Page 30. Modify Line-in noise add C859 &C861 (0.1UF)
57. Page 31. Add AND gate(U67) & R654(0 ohm) for popo sound (delete D29 & D30 & R550)
58. Page 31. Add MOSFET (Q48&Q49) for headphone popo sound, and reserve Q46/Q47 for speaker popo sound issue
59. Page 33. Change L33/L34/L36 from 22ohm BEAD to short

08/13 MODIFY LIST

60. Page 26. Change R449 from 1k ohm to 4.7k ohm for SIO

08/18 MODIFY LIST

61. Page 17. Change R399/R400/R401/R387/R388/R390 size from 0402 to 0603 for EMI request
62. Page 31. Add Q50 & R656(10K) for Normal close type audio jack issue (Reserve)
63. Page 32. Change Q13 from Transistor to MOS and R110 (47k to 10k) & C139(0.22U to 0.1U) and add R657 (0R) from EC (154pin) for Lite_On ODD issue
64. Page 33. Add C875/C876/C877/C878 (12pf) for Docking DVI EMI issue(Reserve)

08/19 MODIFY LIST

65. Page 21. Change 1394 connecotor(CN28) type form SMD to DIP for SMT request
66. Page 28. Update CN7's footprint to 88264-06XX-6P-R-ZE1 & CN8's footprint to 88264-10XX-10P-R-ZE1 for SMT request (Increase PAD length 0.2mm)
67. Page 25. Update CN5's footprint to SM08B-SURS-8P-R-ZE1 for SMT request (Increase PAD length 0.2mm)
68. Page 41. Add new CAP(PC171/PC172) in BAT-V plane for EMI request
69. Page 23. Add new CAP(C879/C880) in AVDD_LAN plane for EMI request
70. Page 23. Add new CAP(C881/C882) in +3V plane for EMI request
71. Page 33. Change C1/C2 from TOP to BOT side for Mechanical request

06/27 LAYOUT SWAP

Pin 'JDIM1.152' moved to net 'R_B_MD42'.
Pin 'JDIM2.153' moved to net 'R_A_MD46'.
Pin 'JDIM2.191' moved to net 'R_A_MD54'.
Pin 'JDIM2.181' moved to net 'R_A_MD48'.
Pin 'JDIM1.58' moved to net 'R_B_MD19'.
Pin 'JDIM2.6' moved to net 'R_A_MD0'.
Pin 'JDIM2.175' moved to net 'R_A_MD61'.
Pin 'JDIM2.16' moved to net 'R_A_MD6'.
Pin 'JDIM2.44' moved to net 'R_A_MD16'.
Pin 'JDIM2.43' moved to net 'R_A_MD21'.
Pin 'JDIM1.56' moved to net 'R_B_MD18'.
Pin 'JDIM2.154' moved to net 'R_A_MD42'.
Pin 'JDIM1.57' moved to net 'R_B_MD22'.
Pin 'JDIM2.192' moved to net 'R_A_MD51'.
Pin 'JDIM1.176' moved to net 'R_B_MD51'.
Pin 'JDIM2.179' moved to net 'R_A_MD49'.
Pin 'JDIM1.194' moved to net 'R_B_MD59'.
Pin 'JDIM1.192' moved to net 'R_B_MD58'.
Pin 'JDIM2.186' moved to net 'R_A_DQS#6'.
Pin 'JDIM1.5' moved to net 'R_B_MD4'.
Pin 'JDIM2.7' moved to net 'R_A_MD5'.
Pin 'JDIM2.167' moved to net 'R_A_DQS#7'.
Pin 'JDIM2.152' moved to net 'R_A_MD43'.
Pin 'JDIM1.7' moved to net 'R_B_MD5'.
Pin 'JDIM2.157' moved to net 'R_A_MD57'.
Pin 'JDIM2.20' moved to net 'R_A_MD13'.
Pin 'JDIM1.158' moved to net 'R_B_MD48'.
Pin 'JDIM2.159' moved to net 'R_A_MD60'.
Pin 'JDIM2.173' moved to net 'R_A_MD56'.
Pin 'JDIM1.191' moved to net 'R_B_MD62'.
Pin 'JDIM2.5' moved to net 'R_A_MD1'.
Pin 'JDIM1.61' moved to net 'R_B_MD29'.
Pin 'JDIM2.170' moved to net 'R_A_DM7'.
Pin 'JDIM2.57' moved to net 'R_A_MD22'.
Pin 'JDIM1.154' moved to net 'R_B_MD43'.
Pin 'JDIM2.188' moved to net 'R_A_DQS6'.
Pin 'JDIM1.62' moved to net 'R_B_MD24'.
Pin 'JDIM2.61' moved to net 'R_A_MD29'.
Pin 'JDIM1.182' moved to net 'R_B_MD57'.
Pin 'JDIM1.153' moved to net 'R_B_MD46'.
Pin 'JDIM1.151' moved to net 'R_B_MD47'.
Pin 'JDIM1.126' moved to net 'R_B_MD32'.
Pin 'JDIM1.157' moved to net 'R_B_MD52'.
Pin 'JDIM1.180' moved to net 'R_B_MD56'.
Pin 'JDIM1.175' moved to net 'R_B_MD55'.
Pin 'JDIM2.17' moved to net 'R_A_MD3'.
Pin 'JDIM1.4' moved to net 'R_B_MD0'.
Pin 'JDIM2.169' moved to net 'R_A_DQS7'.
Pin 'JDIM1.63' moved to net 'R_B_MD28'.
Pin 'JDIM1.36' moved to net 'R_B_MD15'.
Pin 'JDIM2.64' moved to net 'R_A_MD25'.
Pin 'JDIM1.38' moved to net 'R_B_MD10'.
Pin 'JDIM1.64' moved to net 'R_B_MD25'.
Pin 'RP4.4' moved to net 'R_B_MA4'.
Pin 'RP6.4' moved to net 'SM_CS2#'.
Pin 'RP7.2' moved to net 'M_ODT2'.
Pin 'RP20.2' moved to net 'R_A_MA13'.
Pin 'RP6.2' moved to net 'R_B_SRASA#'.
Pin 'RP28.4' moved to net 'R_A_BMWEA#'.
Pin 'RP24.2' moved to net 'R_A_MA12'.
Pin 'RP20.4' moved to net 'M_ODT0'.
Pin 'RP4.2' moved to net 'R_B_MA2'.
Pin 'RP7.4' moved to net 'R_B_MA13'.
Pin 'RP2.4' moved to net 'R_B_MA6'.
Pin 'RP2.2' moved to net 'CKE3'.
Pin 'RP24.4' moved to net 'R_A_MA9'.
Pin 'RP3.2' moved to net 'R_B_MA7'.
Pin 'RP14.2' moved to net 'R_B_MA12'.
Pin 'RP28.2' moved to net 'R_A_SCASA#'.
Pin 'RP14.4' moved to net 'R_B_MA9'.
Pin 'JDIM1.55' moved to net 'R_B_MD23'.
Pin 'JDIM1.45' moved to net 'R_B_MD20'.
Pin 'JDIM2.180' moved to net 'R_A_MD53'.
Pin 'JDIM2.58' moved to net 'R_A_MD19'.
Pin 'JDIM2.23' moved to net 'R_A_MD12'.
Pin 'JDIM2.185' moved to net 'R_A_DM6'.
Pin 'JDIM1.35' moved to net 'R_B_MD14'.
Pin 'JDIM1.174' moved to net 'R_B_MD50'.
Pin 'JDIM2.63' moved to net 'R_A_MD28'.
Pin 'JDIM2.45' moved to net 'R_A_MD20'.
Pin 'JDIM2.160' moved to net 'R_A_MD63'.
Pin 'JDIM1.179' moved to net 'R_B_MD61'.
Pin 'JDIM1.43' moved to net 'R_B_MD21'.
Pin 'JDIM2.182' moved to net 'R_A_MD52'.
Pin 'JDIM1.159' moved to net 'R_B_MD53'.
Pin 'JDIM2.151' moved to net 'R_A_MD47'.
Pin 'JDIM2.158' moved to net 'R_A_MD58'.
Pin 'JDIM1.189' moved to net 'R_B_MD63'.
Pin 'JDIM1.6' moved to net 'R_B_MD1'.
Pin 'JDIM2.14' moved to net 'R_A_MD2'.
Pin 'JDIM1.173' moved to net 'R_B_MD54'.
Pin 'JDIM2.62' moved to net 'R_A_MD24'.
Pin 'JDIM2.194' moved to net 'R_A_MD50'.
Pin 'JDIM1.160' moved to net 'R_B_MD49'.
Pin 'JDIM1.181' moved to net 'R_B_MD60'.
Pin 'JDIM2.46' moved to net 'R_A_MD17'.
Pin 'JDIM1.44' moved to net 'R_B_MD16'.
Pin 'JDIM2.189' moved to net 'R_A_MD55'.
Pin 'JDIM2.174' moved to net 'R_A_MD62'.
Pin 'JDIM1.46' moved to net 'R_B_MD17'.
Pin 'JDIM2.22' moved to net 'R_A_MD8'.
Pin 'JDIM2.19' moved to net 'R_A_MD7'.
Pin 'JDIM2.56' moved to net 'R_A_MD23'.
Pin 'JDIM2.176' moved to net 'R_A_MD59'.
Pin 'JDIM1.123' moved to net 'R_B_MD37'.

PROJECT : ZE1
Quanta Computer Inc.

Size	Document Number	Rev
		EDC

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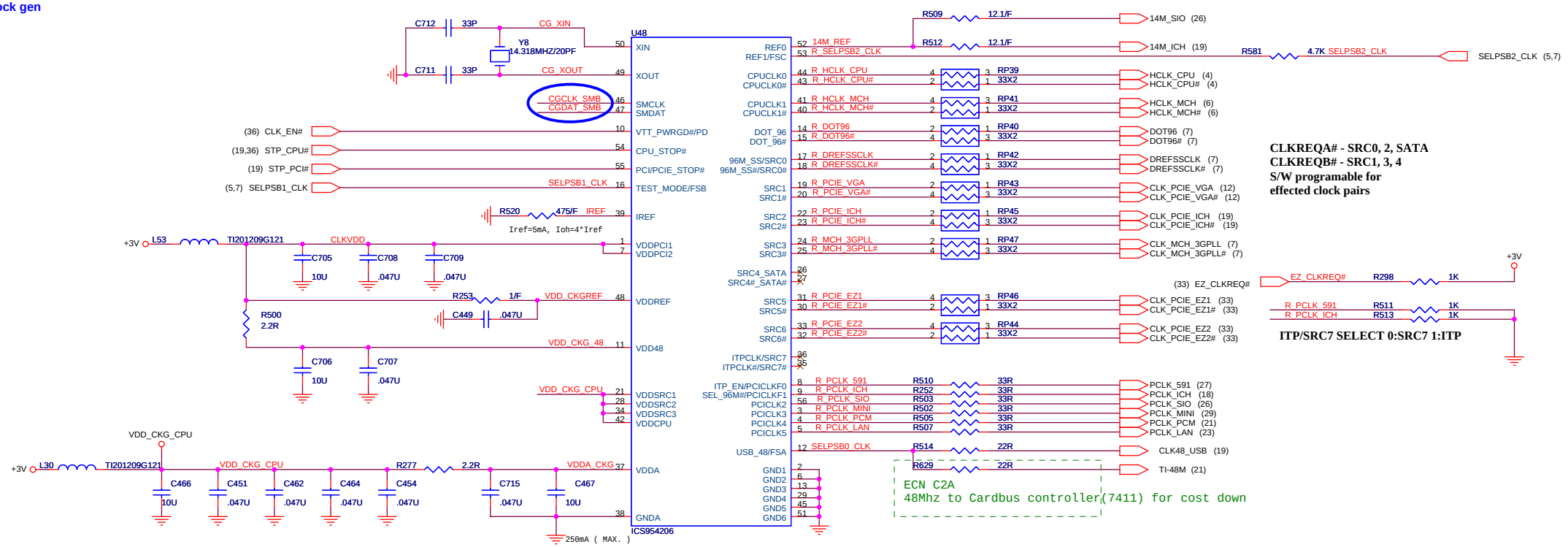
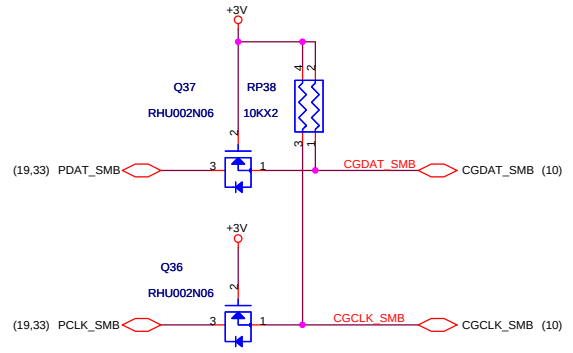
Clock gen



SM Bus

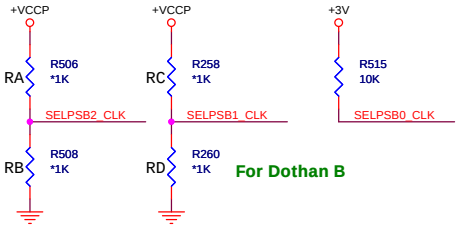


Speed setting

Resistor Stuff Table

	RA	RB	RC	RD
Dothan A 400	V	X	X	V
Dothan A 533	X	V	X	V
Dothan B	X	X	X	X

Default



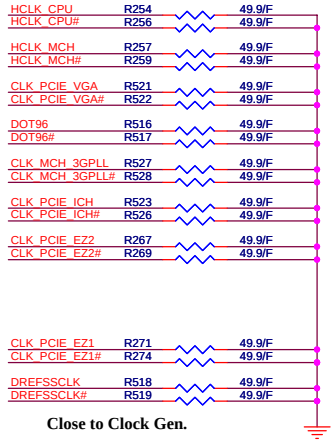
Clock Gen. Frequency Selection Table

FSC	FSB	FSA	CPU	SRC	PCI
1	0	1	100	100	33
0	0	1	133	100	33
0	1	1	166	100	33
0	1	0	200	100	33
0	0	0	266	100	33
1	0	0	333	100	33
1	1	0	400	100	33
1	1	1	RSVD	100	33

DOTHAN BSEL Output Value

FSB Frequency	DOTHAN A-Step		DOTHAN B-Step	
	BSEL1	BSEL0	BSEL1	BSEL0
400 MHz	0	0	0	1
533 MHz	0	1	0	0

Clock terminator



PROJECT : ZE1

Quanta Computer Inc.

Size	Document Number	Rev
	Clock Gen.	B2A

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CPU

U51A

Dothan

1 0F 3

(6) HA#[3..31] — HA#[3..31]

HA#3 P4 A3# · HA#4 U4 A4# · HA#5 V3 A5# · HA#6 R3 A6# · HA#7 V2 A7# · HA#8 W1 A8# · HA#9 T4 A9# · HA#10 W2 A10# · HA#11 Y4 A11# · HA#12 Y1 A12# · HA#13 U1 A13# · HA#14 AA3 A14# · HA#15 Y3 A15# · HA#16 AA2 A16# · HA#17 AF4 A17# · HA#18 AC4 A18# · HA#19 AC7 A19# · HA#20 AC3 A20# · HA#21 AD3 A21# · HA#22 AE4 A22# · HA#23 AD2 A23# · HA#24 AB4 A24# · HA#25 AC6 A25# · HA#26 AD5 A26# · HA#27 AE2 A27# · HA#28 AD6 A28# · HA#29 AF3 A29# · HA#30 AE1 A30# · HA#31 AF1 A31#

REQUEST PHASE SIGNALS

(6) HADSTB0# U3 ADSTB0# · (6) HADSTB1# AE5 ADSTB1#

(6) HREQ#0 R2 REQ0# · (6) HREQ#1 P3 REQ1# · (6) HREQ#2 T2 REQ2# · (6) HREQ#3 P1 REQ3# · (6) HREQ#4 T1 REQ4#

ERROR SIGNALS

(6) ADS# N2 ADS# · IERR# A4 IERR#

ARBITRATION PHASE SIGNALS

(6) HBREQ0# N4 BREQ0# · (6) BPRI# J3 BPRI# · (6) BNR# L1 BNR# · (6) HLOCK# J2 LOCK#

SNOOP PHASE SIGNALS

(6) HIT# K3 HIT# · (6) HITM# K4 HITM# · (6) DEFER# L4 DEFER#

RESPONSE PHASE SIGNALS

T200 BPM0# C8 BPM0# · T197 BPM1# B8 BPM1# · T111 BPM2# A9 BPM2# · T113 BPM3# C9 BPM3# · (6) HTRDY# M3 TRDY# · (6) RS#0 H1 RS0# · (6) RS#1 K1 RS1# · (6) RS#2 L2 RS2#

PC COMPATIBILITY SIGNALS

(18) A20M# C2 A20M# · (18) FERR# FERR# D3 FERR# · (18) IGNNE# IGNNE# A3 IGNNE# · (18) CPUPWRGD CPUPWRGD E4 PWRGOOD · (18) SMI# SMI# B4 SMI#

DIAGNOSTIC & TEST SIGNALS

TCK A13 TCK · TDO A12 TDO · TDI C12 TDI · TMS C11 TMS · TRST# B13 TRST#

T196 A16 ITP_CLK0 · T198 A15 ITP_CLK1 · T112 PREQ# B10 PREQ# · T199 PRDY# A10 PRDY# · (19) DBR# DBR# A7 DBR#

EXECUTION CONTROL SIGNALS

(18) INTR D1 LINT0 · (18) NMI D4 LINT1 · (18) STPCLK# STPCLK# C6 STPCLK# · (6,18) CPUSLP# CPUSLP# A6 SLP# · (18) DPSLP# DPSLP# B7 DPSLP# · (18) DPRSTP# G1 DPRSTP#

THERMAL DIODE

THERMDA B18 THERMDA · THERMDC A18 THERMDC · THERMTRIP# C17 THERMTRIP# · PROCHOT# B17 PROCHOT#

DATA PHASE SIGNALS

HD#[0..63] — HD#[0..63] (6)

D0# A19 HD#0 · D1# A25 HD#1 · D2# A22 HD#2 · D3# B21 HD#3 · D4# A24 HD#4 · D5# B26 HD#5 · D6# A21 HD#6 · D7# B20 HD#7 · D8# C20 HD#8 · D9# B24 HD#9 · D10# D24 HD#10 · D11# E24 HD#11 · D12# C26 HD#12 · D13# B23 HD#13 · D14# E23 HD#14 · D15# C25 HD#15 · D16# H23 HD#16 · D17# G25 HD#17 · D18# L23 HD#18 · D19# M26 HD#19 · D20# H24 HD#20 · D21# F25 HD#21 · D22# G24 HD#22 · D23# J23 HD#23 · D24# M23 HD#24 · D25# J25 HD#25 · D26# L26 HD#26 · D27# N24 HD#27 · D28# M25 HD#28 · D29# H26 HD#29 · D30# N25 HD#30 · D31# K25 HD#31 · D32# Y26 HD#32 · D33# AA24 HD#33 · D34# T25 HD#34 · D35# U23 HD#35 · D36# V23 HD#36 · D37# R24 HD#37 · D38# R26 HD#38 · D39# R23 HD#39 · D40# AA23 HD#40 · D41# U26 HD#41 · D42# V24 HD#42 · D43# U25 HD#43 · D44# V26 HD#44 · D45# Y23 HD#45 · D46# AA26 HD#46 · D47# Y25 HD#47 · D48# AB25 HD#48 · D49# AC23 HD#49 · D50# AB24 HD#50 · D51# AC20 HD#51 · D52# AC22 HD#52 · D53# AC25 HD#53 · D54# AD23 HD#54 · D55# AE22 HD#55 · D56# AE23 HD#56 · D57# AD24 HD#57 · D58# AF20 HD#58 · D59# AE21 HD#59 · D60# AD21 HD#60 · D61# AF25 HD#61 · D62# AF22 HD#62 · D63# AF26 HD#63

DSTBN0# C23 HDSTBN0# (6) · DSTBP0# C22 HDSTBP0# (6) · DSTBN1# K24 HDSTBN1# (6) · DSTBP1# L24 HDSTBP1# (6) · DSTBN2# W25 HDSTBN2# (6) · DSTBP2# W24 HDSTBP2# (6) · DSTBN3# AE24 HDSTBN3# (6) · DSTBP3# AE25 HDSTBP3# (6)

DINV0# D25 HDBI0# (6) · DINV1# J26 HDBI1# (6) · DINV2# T24 HDBI2# (6) · DINV3# AD20 HDBI3# (6)

DBSY# M2 DBSY# (6) · DRDY# H2 DRDY# (6)

BCLK1 B14 HCLK_CPU# (3) · BCLK0 B15 HCLK_CPU (3)

INIT# B5 CPUINIT# CPUINIT# (18) · RESET# B11 CPURST# CPURST# (6) · DPWR# C19 DPWR# (6)

Dothan Processor

G1 Pin:NC for Dothan and DPRSTP# for Yonah

ECN D2B For Battery only can't boot

(7,18) THERMTRIP# — R596 *0R THERMTRIP#_RR

EMI request

+VCCP — R499 56R CPU_PROCHOT#

Thermal monitor

(12,27,41) MBCLK — Q38 RHU002N06 — THCLK_SMB

(12,27) MBDATA — Q40 RHU002N06 — THDAT_SMB

(9) THERM_ALERT# — Q41 *RHU002N06 — THERM_ALERT#_RR

+3V — R549 10K · R553 10K · R575 10K

R566 100R 280VCC

C799 .1U

U57 MAX6642ATT98-T

SCLK · SDA · ALERT# · VCC · DXP · GND

THERMDA · C775 2200P · THERMDC

Address 1001 101

Power reset circuit

+VCCP — R263 332/F — C453 .1U

Q25 MMBT3904

1999_SHT# — 1999_SHT# (37)

R610 330R THERMTRIP#

ITP debug

Default ITP Function Disabled

+VCCP — R489 54.9/F · R494 *54.9/F · R491 39.2/F

TDI · TMS · TDO · TRST# · CPURST# · TCK

R493 *22.6/F · R490 *22.6/F

JT7 JT2 · JT4 JT3 · JT1 · JT6

JT8 · JT5 · DBR#

+VCCP — C733 *.1U

+3V_S5 — R488 150/F

TCK NO STUB

R496 680R · R495 27.4/F

JITP Connector Place these Components as close as possible.

Close to CPU

+VCCP

TDI — R492 150/F

IERR# — R486 56R

CPUPWRGD R276 200/F

PROJECT : ZE1

Quanta Computer Inc.

Size	Document Number	Rev
	DOTHAN (HOST)	B2A
Date: Monday, August 22, 2005	Sheet 4 of 42	

CPU

Place pulldown resistors within 0.5" of COMP pins

Place voltage divider within 0.5" of GTLREF pin

U51B

Dothan 2 0F 3

POWER, GROUND, RESERVED SIGNALS

Dothan Processor

U51C

Dothan 3 0F 3

POWER, GROUND AND NC

VID

Dothan Processor

DOTHAN-A NC

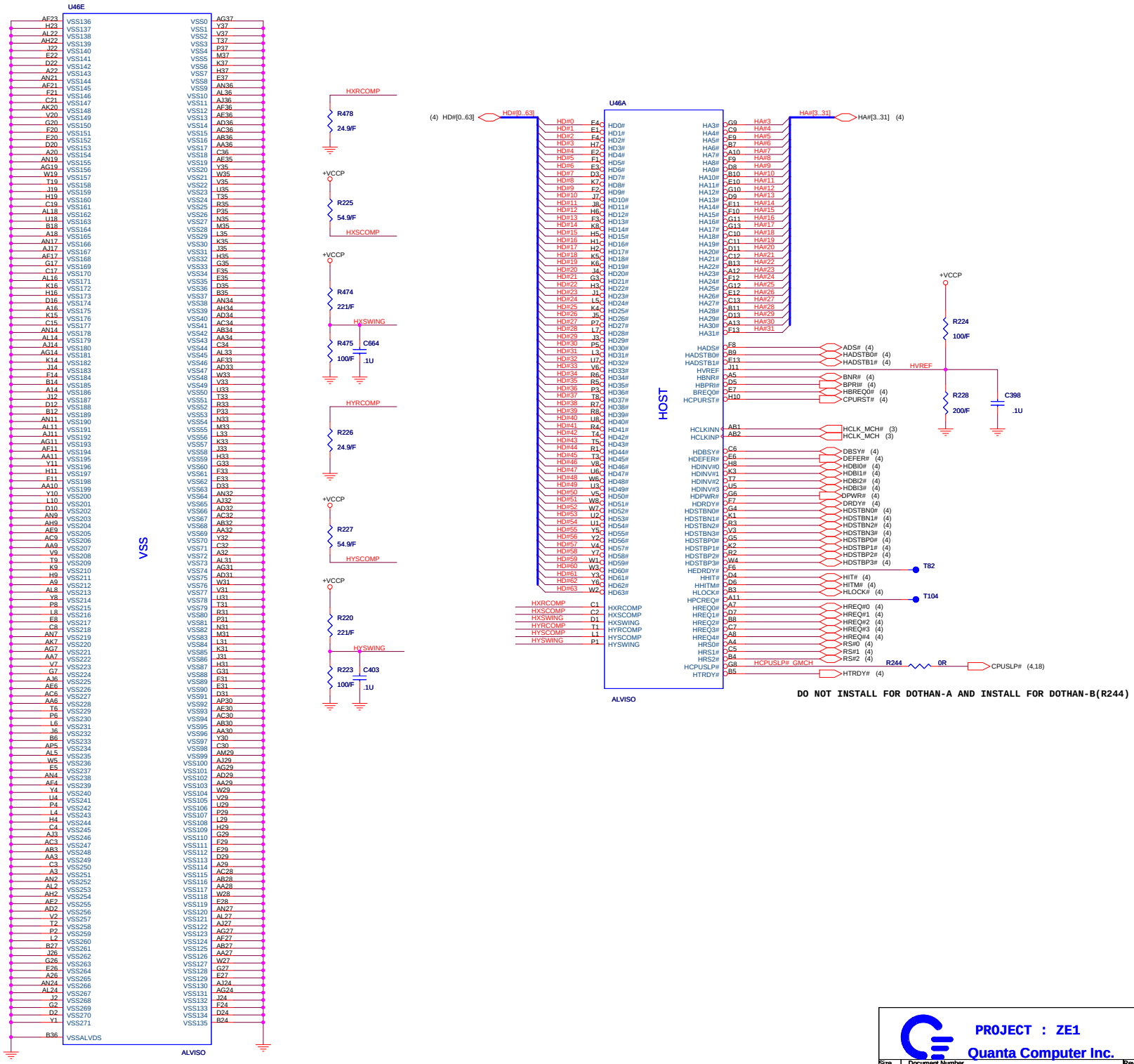
DOTHAN-B POP

ECN C2A

Reserve for Power saving

CAP

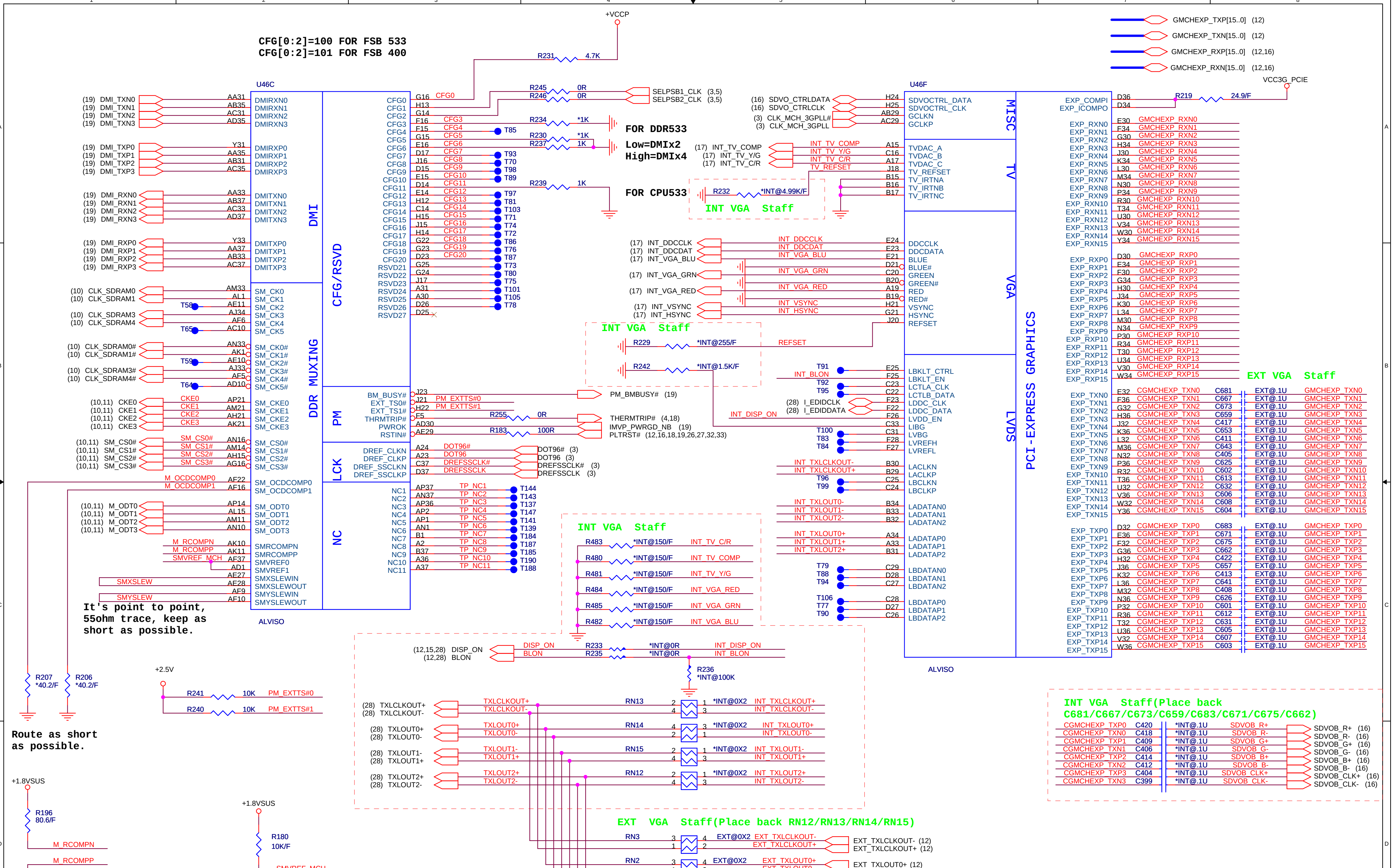
PROJECT :	ZE1
Quanta Computer Inc.	
Size	Document Number: DOTHAN (POWER & NC) — Rev: B2A
Date: Monday, August 22, 2005	Sheet 5 of 42



PROJECT : ZE1

Quanta Computer Inc.

Size	Document Number	Rev
	ALVISO_A (HOST)	B2A
Date: Monday, August 22, 2005	Sheet 6 of 42	

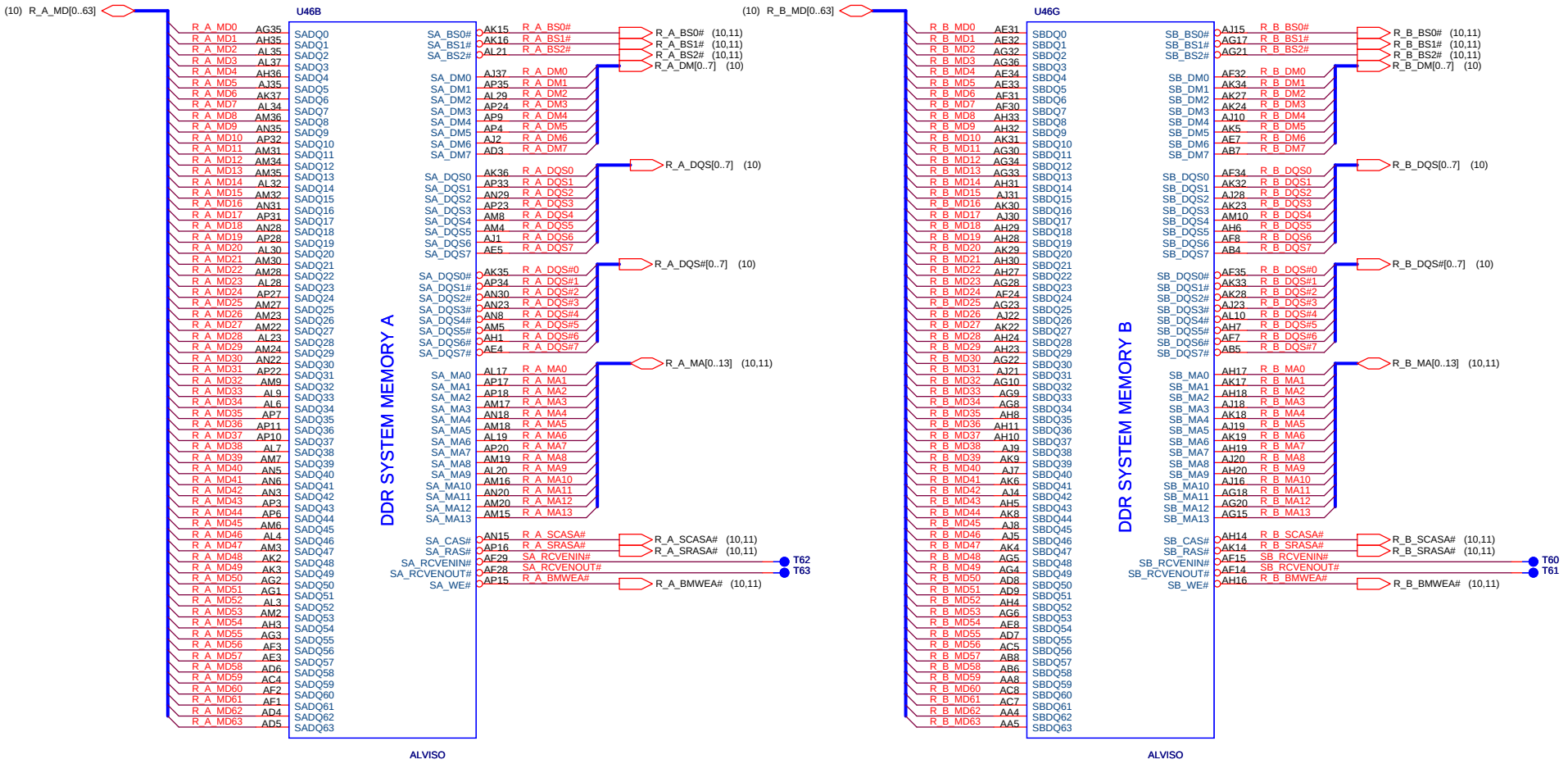


PROJECT : ZE1

Quanta Computer Inc.

Size	Document Number	Rev
	ALVISO_B (DMI & PCIE)	B2A

Date: Monday, August 22, 2005 Sheet 7 of 42



PROJECT : ZE1

Quanta Computer Inc.

Size	Document Number	Rev
	ALVISO_C (DDR2)	B2A
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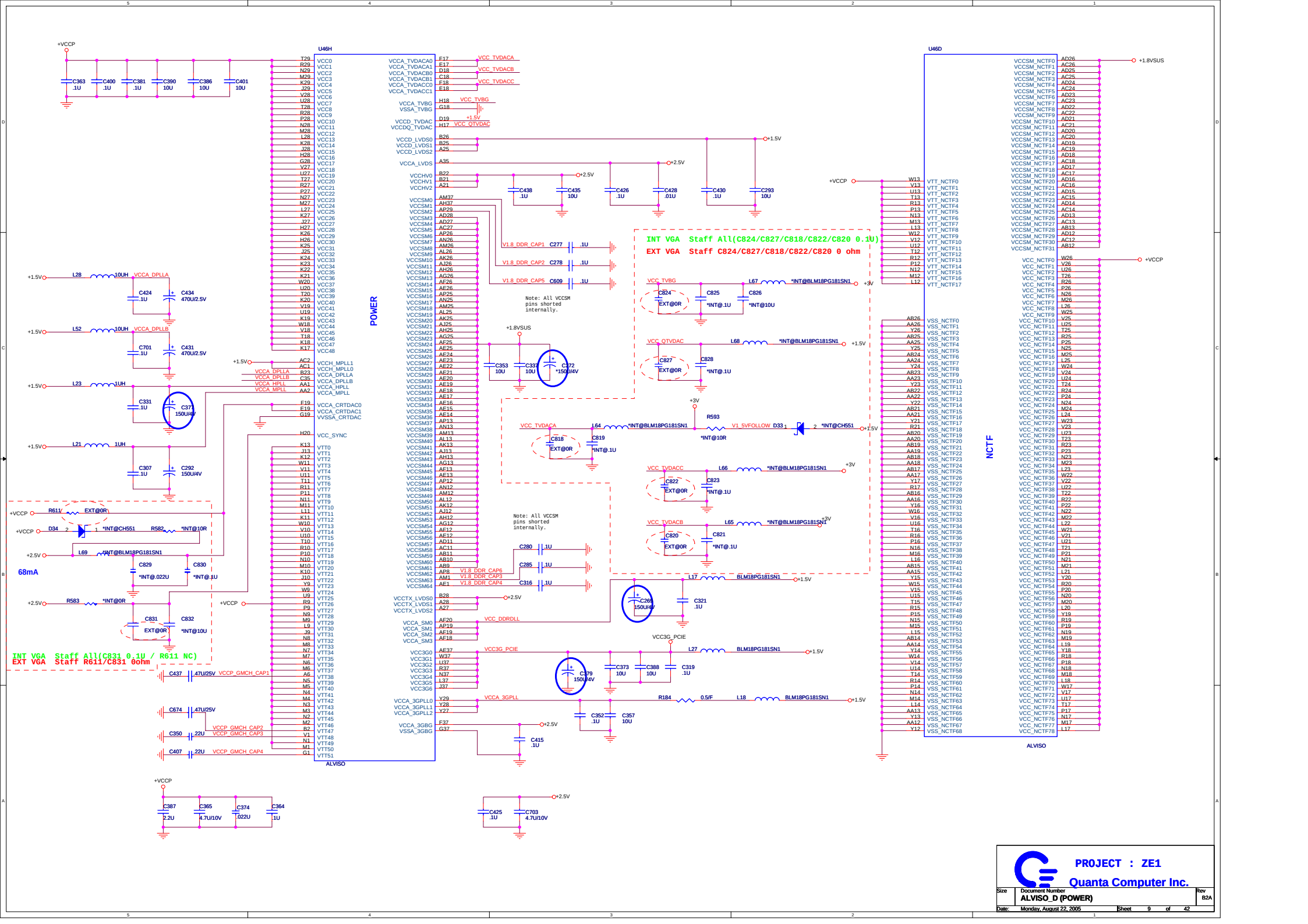
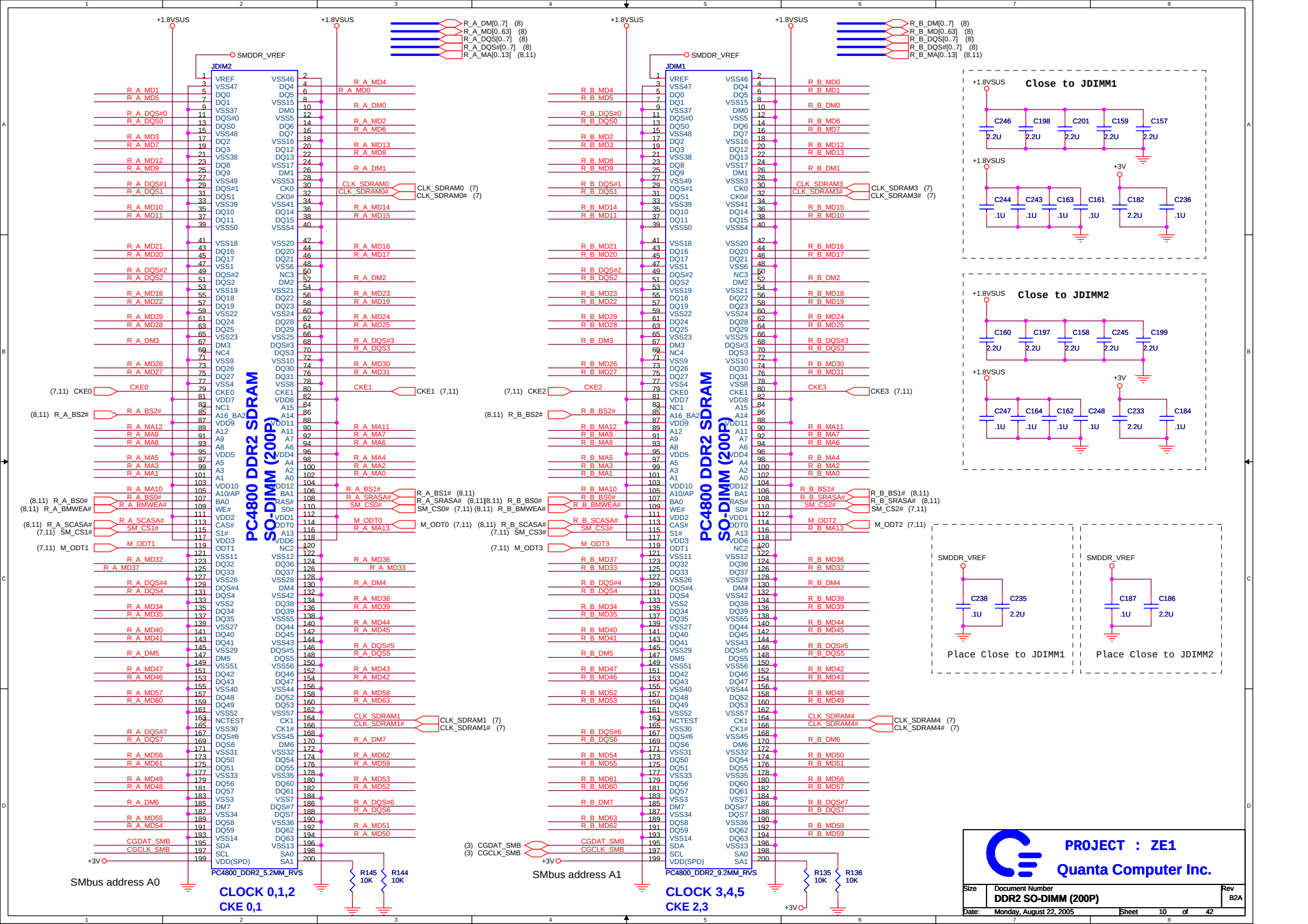

U46H
POWER
ALVISO
U46D
NCTF
ALVISO
INT VGA Staff All(C824/C827/C818/C822/C820 0.1U)
EXT VGA Staff C824/C827/C818/C822/C820 0 ohm
INT VGA Staff All(C831 0.1U / R611 NC)
EXT VGA Staff R611/C831 0ohm
68mA
Note: All VCCSM pins shorted internally.
Note: All VCCSM pins shorted internally.
PROJECT : ZE1
Quanta Computer Inc.
ALVISO_D (POWER)
Monday, August 22, 2005
Sheet 9 of 42


JDIM2
PC4800 DDR2 SDRAM SO-DIMM (200P)
PC4800_DDR2_5.2MM_RVS
SMDDR_VREF
+1.8VSUS
+3V
R_A_DM[0..7] (8)
R_A_MD[0..63] (8)
R_A_DQS[0..7] (8)
R_A_DQS#[0..7] (8)
R_A_MA[0..13] (8,11)
CLK_SDRAM0 (7)
CLK_SDRAM0# (7)
CLK_SDRAM1 (7)
CLK_SDRAM1# (7)
CKE0
CKE1 (7,11)
R_A_BS2# (8,11)
R_A_BS0# (8,11)
R_A_BMWEA# (8,11)
R_A_SCASA# (8,11)
SM_CS1# (7,11)
M_ODT1 (7,11)
SM_CS0# (7,11)
M_ODT0 (7,11)
R_A_SRASA# (8,11)
R_A_BS1# (8,11)
R145 10K
R144 10K
SMbus address A0
CLOCK 0,1,2
CKE 0,1
JDIM1
PC4800_DDR2_9.2MM_RVS
R_B_DM[0..7] (8)
R_B_MD[0..63] (8)
R_B_DQS[0..7] (8)
R_B_DQS#[0..7] (8)
R_B_MA[0..13] (8,11)
CLK_SDRAM3 (7)
CLK_SDRAM3# (7)
CLK_SDRAM4 (7)
CLK_SDRAM4# (7)
CKE2
CKE3 (7,11)
R_B_BS2# (8,11)
R_B_BS0# (8,11)
R_B_BMWEA# (8,11)
R_B_SCASA# (8,11)
SM_CS3# (7,11)
M_ODT3 (7,11)
SM_CS2# (7,11)
M_ODT2 (7,11)
R_B_SRASA# (8,11)
R_B_BS1# (8,11)
CGDAT_SMB (3)
CGCLK_SMB (3)
R135 10K
R136 10K
SMbus address A1
CLOCK 3,4,5
CKE 2,3
Close to JDIMM1
C246 2.2U
C198 2.2U
C201 2.2U
C159 2.2U
C157 2.2U
C244 .1U
C243 .1U
C163 .1U
C161 .1U
C182 2.2U
C236 .1U
Close to JDIMM2
C160 2.2U
C197 2.2U
C158 2.2U
C245 2.2U
C199 2.2U
C247 .1U
C164 .1U
C162 .1U
C248 .1U
C233 2.2U
C184 .1U
C238 .1U
C235 2.2U
Place Close to JDIMM1
C187 .1U
C186 2.2U
Place Close to JDIMM2
PROJECT : ZE1
Quanta Computer Inc.
Size
Document Number
DDR2 SO-DIMM (200P)
Rev
B2A
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SMDDR_VTERM

C227 .1U, C226 .1U, C229 .1U, C177 .1U, C173 .1U, C174 .1U, C192 .1U, C175 .1U, C172 .1U, C176 .1U, C228 .1U, C231 .1U, C232 .1U

Layout note: Place one cap close to every 2 pullup resistors terminated to SMDDR_VTERM

SMDDR_VTERM

C230 .1U, C213 .1U, C208 .1U, C191 .1U, C185 .1U, C212 .1U, C211 .1U, C215 .1U, C214 .1U, C209 .1U, C190 .1U, C189 .1U, C188 .1U

R_A_MA[0..13] (8,10)

R_B_MA[0..13] (8,10)

Layout note: Place one cap close to every 2 pullup resistors terminated to SMDDR_VTERM

RP5 (56X2): (8,10) R_B_BS1# → R_B_BS1#; R_B_MA0; R_A_BS2#; CKE0; R_A_MA6; R_A_MA2 → SMDDR_VTERM
(8,10) R_A_BS2#
(7,10) CKE0

RP24 (56X2): (7,10) M_ODT3; (7,10) SM_CS3#; (8,10) R_B_SCASA#; (8,10) R_B_BMWEA# → R_A_MA12; R_A_MA9; M_ODT3; SM_CS3#; R_B_SCASA#; R_B_BMWEA# → SMDDR_VTERM

RP6 (56X2): (8,10) R_B_SRASA#; (7,10) SM_CS2#; (7,10) M_ODT1; (7,10) SM_CS1# → R_B_SRASA#; SM_CS2#; M_ODT1; SM_CS1#; R_A_MA10; R_A_BS0#; M_ODT2; R_B_MA13; CKE1; R_A_MA7; R_B_MA7; R_B_MA11 → SMDDR_VTERM
(8,10) R_A_BS0#
(7,10) M_ODT2
(7,10) CKE1

RP2 (56X2): (7,10) CKE3 → CKE3; R_B_MA6; R_B_MA12; R_B_MA9; R_A_MA5; R_A_MA8; R_A_MA11; R_A_MA4 → SMDDR_VTERM

RP13 (56X2): (8,10) R_B_BS2#; (7,10) CKE2 → R_B_BS2#; CKE2; R_B_MA2; R_B_MA4; R_B_MA5; R_B_MA8 → SMDDR_VTERM

RP28 (56X2): (8,10) R_A_BMWEA#; (8,10) R_A_SCASA# → R_A_BMWEA#; R_A_SCASA#; R_B_MA1; R_B_MA3; R_B_BS0#; R_B_MA10 → SMDDR_VTERM
(8,10) R_B_BS0#

RP27 (56X2): R_A_MA3; R_A_MA1; SM_CS0#; R_A_SRASA#; R_A_MA13; M_ODT0; R_A_MA0; R_A_BS1# → SMDDR_VTERM
(7,10) SM_CS0#
(8,10) R_A_SRASA#
(7,10) M_ODT0
(8,10) R_A_BS1#

PROJECT : ZE1

Quanta Computer Inc.

Size	Document Number	Rev
	DDR2 RES. ARRAY	B2A
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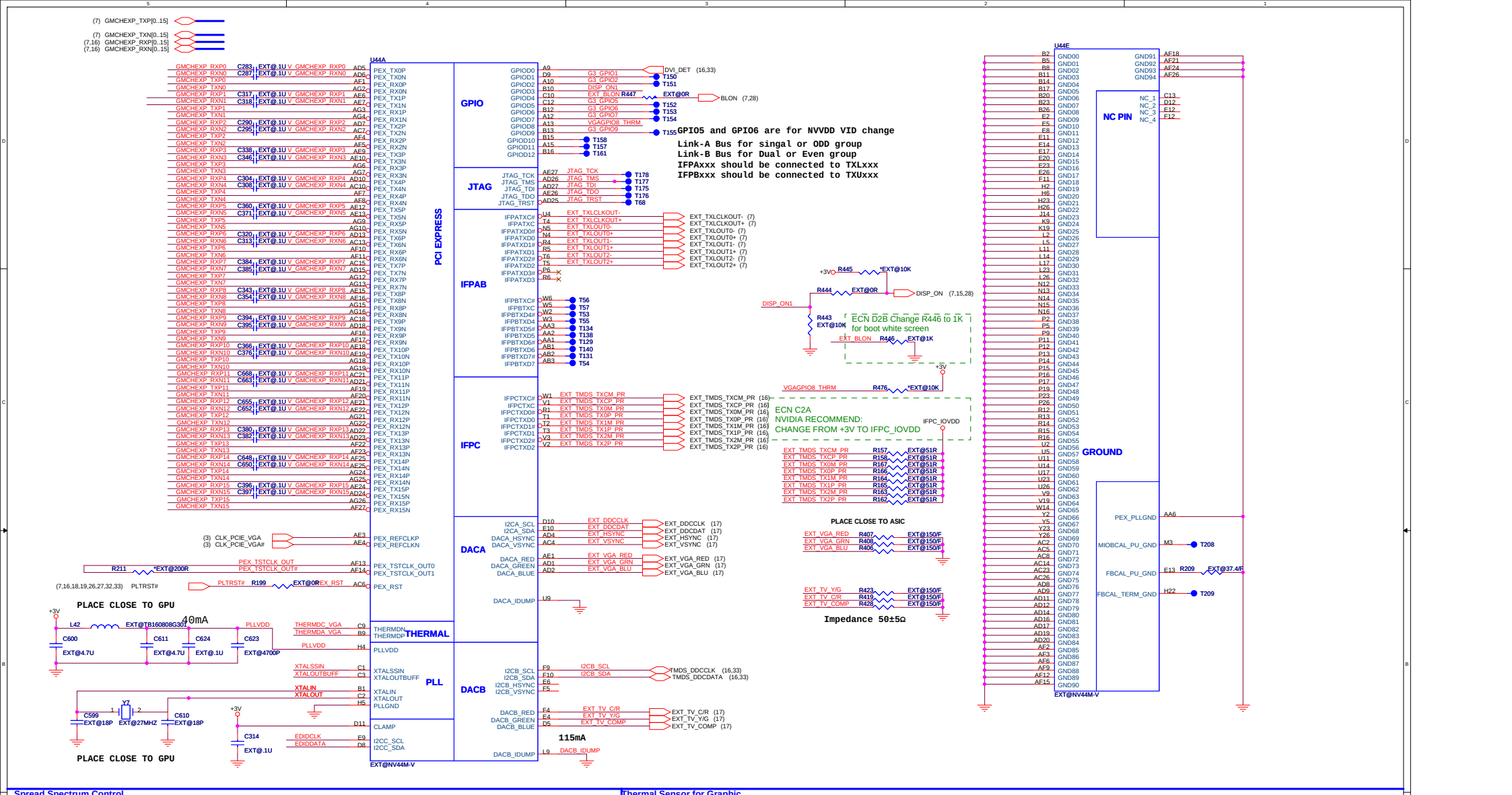

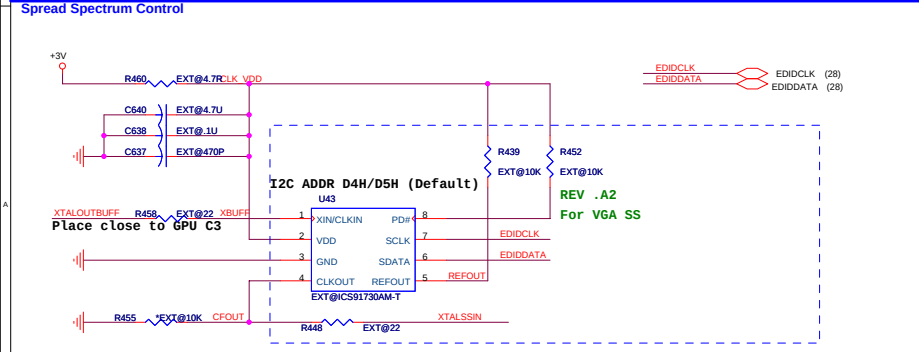

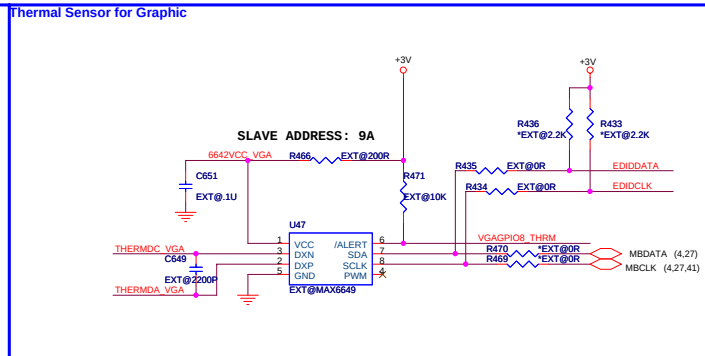

PROJECT : ZE1			
Quanta Computer Inc.			
Size	Document Number		Rev
	NV44M_V_PCIE/DAC/GND		B2A
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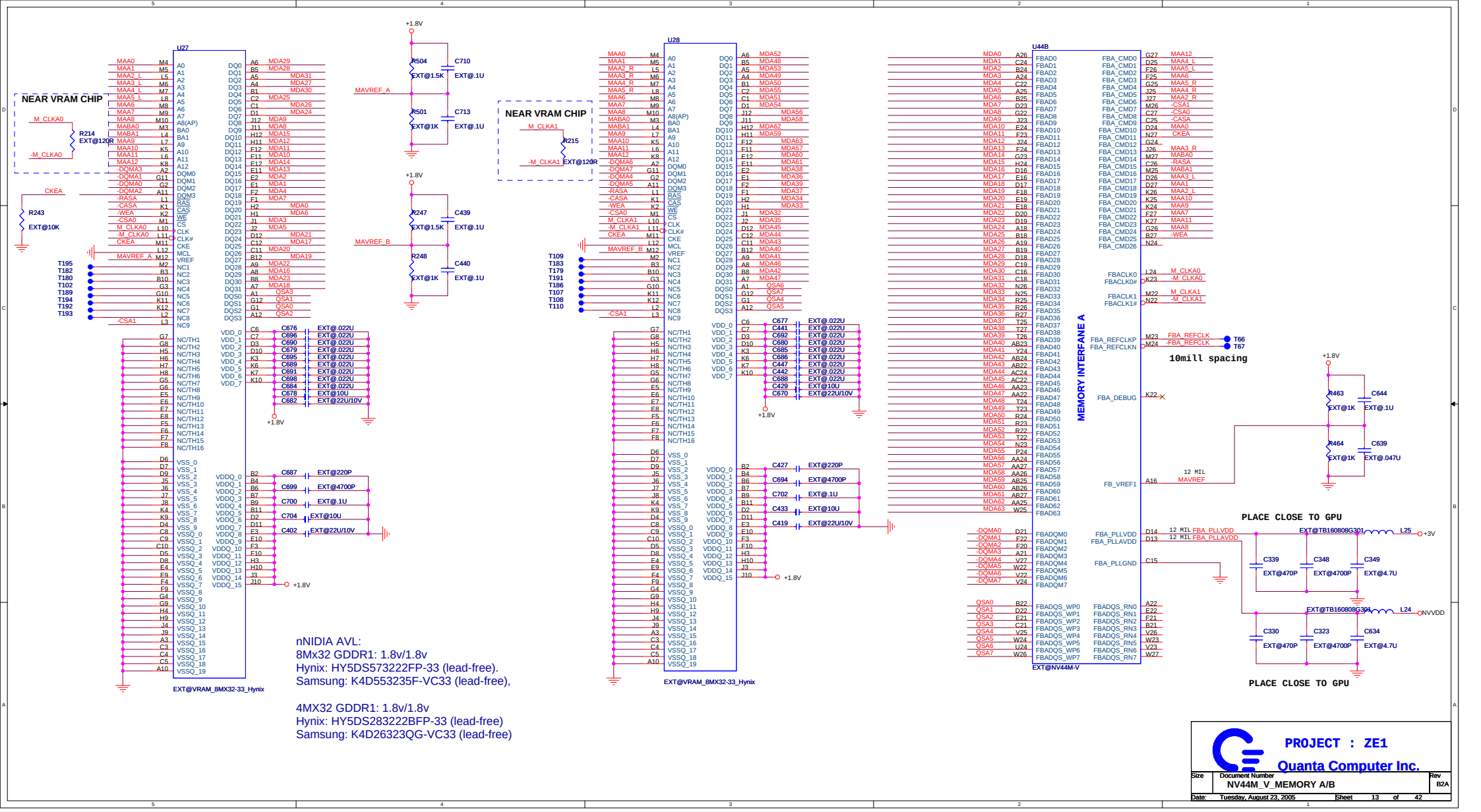
NEAR VRAM CHIP
M_CLKA0
R214
EXT@120R
-M_CLKA0
CKEA
R243
EXT@10K
MAVREF_A
U27
EXT@VRAM_8MX32-33_Hynix
R504
EXT@1.5K
C710
EXT@.1U
R501
EXT@1K
C713
EXT@.1U
MAVREF_A
R247
EXT@1.5K
C439
EXT@.1U
R248
EXT@1K
C440
EXT@.1U
MAVREF_B
+1.8V
NEAR VRAM CHIP
M_CLKA1
R215
-M_CLKA1
EXT@120R
U28
EXT@VRAM_8MX32-33_Hynix
MEMORY INTERFANE A
U44B
EXT@NV44M-V
10mill spacing
PLACE CLOSE TO GPU
PLACE CLOSE TO GPU
nNIDIA AVL:
8Mx32 GDDR1: 1.8v/1.8v
Hynix: HY5DS573222FP-33 (lead-free).
Samsung: K4D553235F-VC33 (lead-free),
4MX32 GDDR1: 1.8v/1.8v
Hynix: HY5DS283222BFP-33 (lead-free)
Samsung: K4D26323QG-VC33 (lead-free)
PROJECT : ZE1
Quanta Computer Inc.
NV44M_V_MEMORY A/B
Size
Document Number
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B2A
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AD23~PEX_IOVDD
280mA
AC16~PEX_IOVDDQ
1580mA

MEP43=1.05V/11.03A
MEP44(400/350)1.25V/9.02A

U44C

POWER

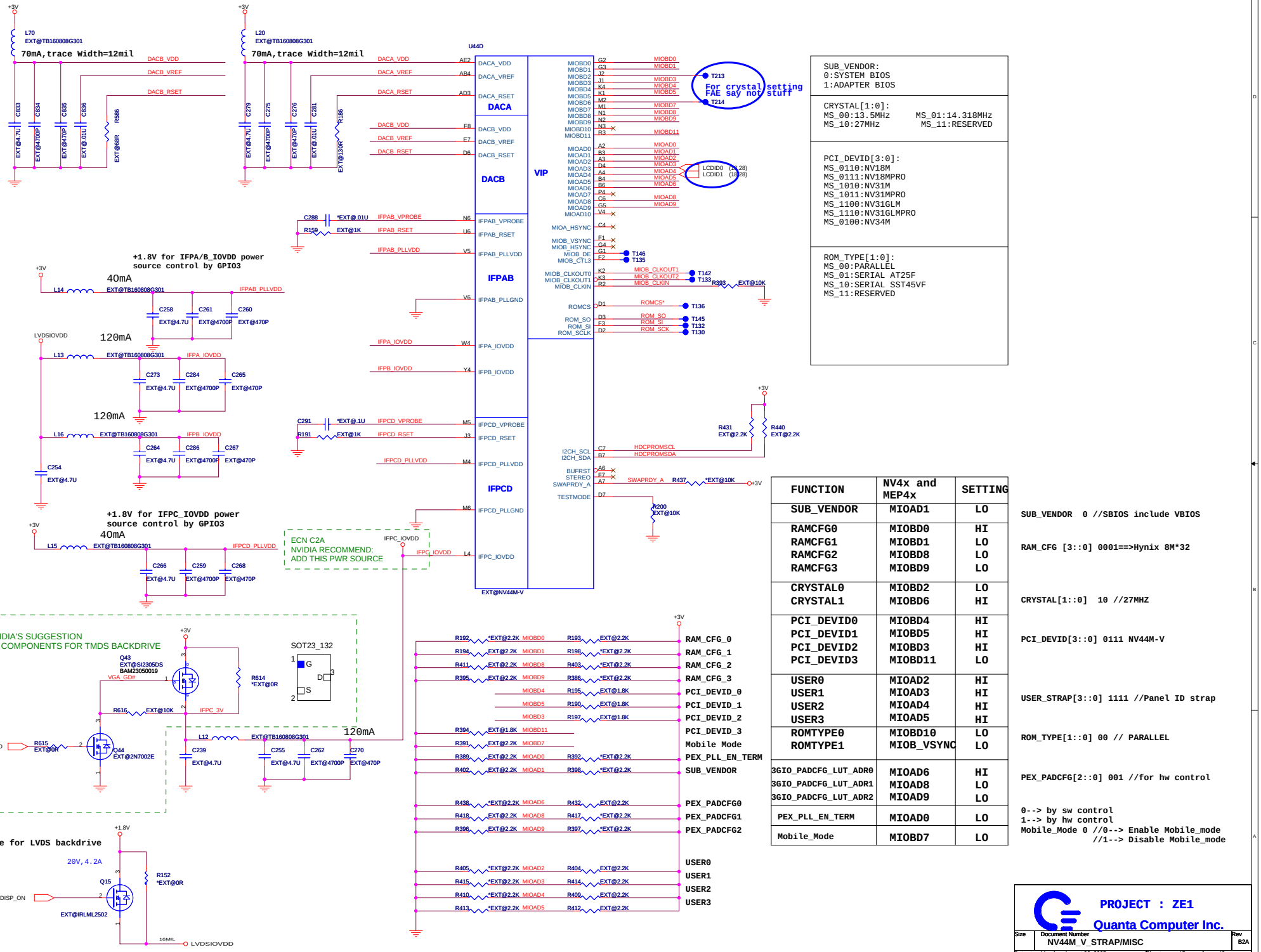
EXT@NV44M-V

PLACE NEAR BALLS

PLACE NEAR BGA

180mA

20mA



FUNCTION	NV4x and MEP4x	SETTING
SUB_VENDOR	MIOAD1	LO
RAMCFG0	MIOBD0	HI
RAMCFG1	MIOBD1	LO
RAMCFG2	MIOBD8	LO
RAMCFG3	MIOBD9	LO
CRYSTAL0	MIOBD2	LO
CRYSTAL1	MIOBD6	HI
PCI_DEVID0	MIOBD4	HI
PCI_DEVID1	MIOBD5	HI
PCI_DEVID2	MIOBD3	HI
PCI_DEVID3	MIOBD11	LO
USER0	MIOAD2	HI
USER1	MIOAD3	HI
USER2	MIOAD4	HI
USER3	MIOAD5	HI
ROMTYPE0	MIOBD10	LO
ROMTYPE1	MIOB_VSYNC	LO
3GIO_PADCFG_LUT_ADR0	MIOAD6	HI
3GIO_PADCFG_LUT_ADR1	MIOAD8	LO
3GIO_PADCFG_LUT_ADR2	MIOAD9	LO
PEX_PLL_EN_TERM	MIOAD0	LO
Mobile_Mode	MIOBD7	LO

```
SUB_VENDOR  0 //SBIOS include VBIOS

RAM_CFG [3::0] 0001==>Hynix 8M*32

CRYSTAL[1::0]  10 //27MHZ

PCI_DEVID[3::0] 0111 NV44M-V

USER_STRAP[3::0] 1111 //Panel ID strap

ROM_TYPE[1::0] 00 // PARALLEL

PEX_PADCFG[2::0] 001 //for hw control

0--> by sw control
1--> by hw control
Mobile_Mode 0 //0--> Enable Mobile_mode
              //1--> Disable Mobile_mode
```

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Quanta Computer Inc.

Size	Document Number	Rev
	NV44M_V_STRAP/MISC	B2A
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DVI control schematic(INT VGA USE)

INT VGA Staff

(7) SDVOB_R+
(7) SDVOB_R-
SDVOB_R+
SDVOB_R-
(7) SDVOB_G+
(7) SDVOB_G-
SDVOB_G+
SDVOB_G-
DVI_AVDD
(7) SDVOB_B+
(7) SDVOB_B-
SDVOB_B+
SDVOB_B-
(7) SDVOB_CLK+
(7) SDVOB_CLK-
SDVOB_CLK+
SDVOB_CLK-

DVI_AVDD

Always not, Reserve only

+2.5V R90 *INT@10K R91 *100K

U4

AVDD3 47
SDVOB_CLK- 46
SDVOB_CLK+ 45
AGND3 44
SDVOB_B- 43
SDVOB_B+ 42
AVDD2 41
SDVOB_G- 40
SDVOB_G+ 39
AGND2 38
SDVOB_R- 37
SDVOB_R+ 36

+3V L7 *INT@BLM11A601S DVI_AVDD_PLL

C83 *INT@.1U
C111 *INT@10U

(7,12,18,19,26,27,32,33) PLTRST#
(7) SDVO_CTRLCLK
(7) SDVO_CTRLDATA

1 AVDD_PLL
2 RESET*
3 AS
4 SPC
5 SPD
6 AGND_PLL
7 DGND1
8 SD_PROM
9 SC_PROM
10 SD_DDC
11 SC_DDC
12 DVDD1

DVODATA
DVOCLK

(12,33) TMDS_DDCDATA
(12,33) TMDS_DDCCLK

+2.5V L3 *INT@BLM11A601S DVI_DVDD

C55 *INT@.1U
C58 *INT@.1U
C46 *INT@10U

*EXT@CH7307C-DE

13 TLC*
14 TLC
15 TVDD1
16 TDC0*
17 TDC0
18 TGND1
19 TDC1*
20 TDC1
21 TVDD2
22 TDC2*
23 TDC2
24 TGND2

36 AVDD1
35 SDVOB_STALL-
34 SDVOB_STALL+
33 SDVOB_INT-
32 SDVOB_INT+
31 AGND1
30 DGND2
29 HPDET
28 DVDD2
27 ATPG
26 SCEN
25 VSWING

INT- INT+

C85 *INT@.1U
C70 *INT@.1U
C84 *INT@.1U
C77 *INT@10U

DVI_AVDD L2 *INT@BLM11A601S +2.5V

DVI_DVDD
DVI_DET (12,33)

R72 *INT@10K
R69 *INT@10K

R66 *INT@1.2K

DVI_TVDD L6 *INT@BLM11A601S +3V

C48 *INT@.1U
C47 *INT@.1U
C110 *INT@10U

Always not, Test only

U6

DVOCLK 6 SCL
DVODATA 5 SDA
7 WP
A0 1
A1 2
A2 3
VCC 8
GND 4

*AT24C16

+3V C75 *1U

+3V R80 *1K DVOCLK
+3V R84 *1K DVODATA

DVI_CLK-
DVI_CLK+
DVI_TX0-
DVI_TX0+
DVI_TX1-
DVI_TX1+
DVI_TX2-
DVI_TX2+

ECN C2A
N-vidia suggestio
Del R584/R585

INT- C65 *INT@.01U/16V R584 *EXT@0R GMCHEXP_RXN1 (7,12)
INT+ C61 *INT@.01U/16V R585 *EXT@0R GMCHEXP_RXP1 (7,12)

+2.5V R89 *INT@1K SDVO_CTRLCLK

+2.5V R88 *INT@1K SDVO_CTRLDATA

PULL Low For DVO Not
Present(Internal PULL LOW In 915GM)

+2.5V 250mA
+3V 190mA

DVI Output select

ECN C2A
CAHGE FROM R TO RN

INT VGA Staff

DVI_CLK+ DVI_CLK- RN16 *INT@0X2 TMDS_TXCP_PR (33) TMDS_TXCM_PR (33)
DVI_TX0+ DVI_TX0- RN17 *INT@0X2 TMDS_TX0P_PR (33) TMDS_TX0M_PR (33)
DVI_TX1+ DVI_TX1- RN18 *INT@0X2 TMDS_TX1P_PR (33) TMDS_TX1M_PR (33)
DVI_TX2+ DVI_TX2- RN19 *INT@0X2 TMDS_TX2P_PR (33) TMDS_TX2M_PR (33)

EXT VGA Staff(Default)

(12) EXT_TMDS_TXCP_PR (12) EXT_TMDS_TXCM_PR RN5 EXT@0X2
(12) EXT_TMDS_TX0P_PR (12) EXT_TMDS_TX0M_PR RN8 EXT@0X2
(12) EXT_TMDS_TX1P_PR (12) EXT_TMDS_TX1M_PR RN7 EXT@0X2
(12) EXT_TMDS_TX2P_PR (12) EXT_TMDS_TX2M_PR RN6 EXT@0X2

PROJECT : ZE1
Quanta Computer Inc.

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	INT. DVI	B2A
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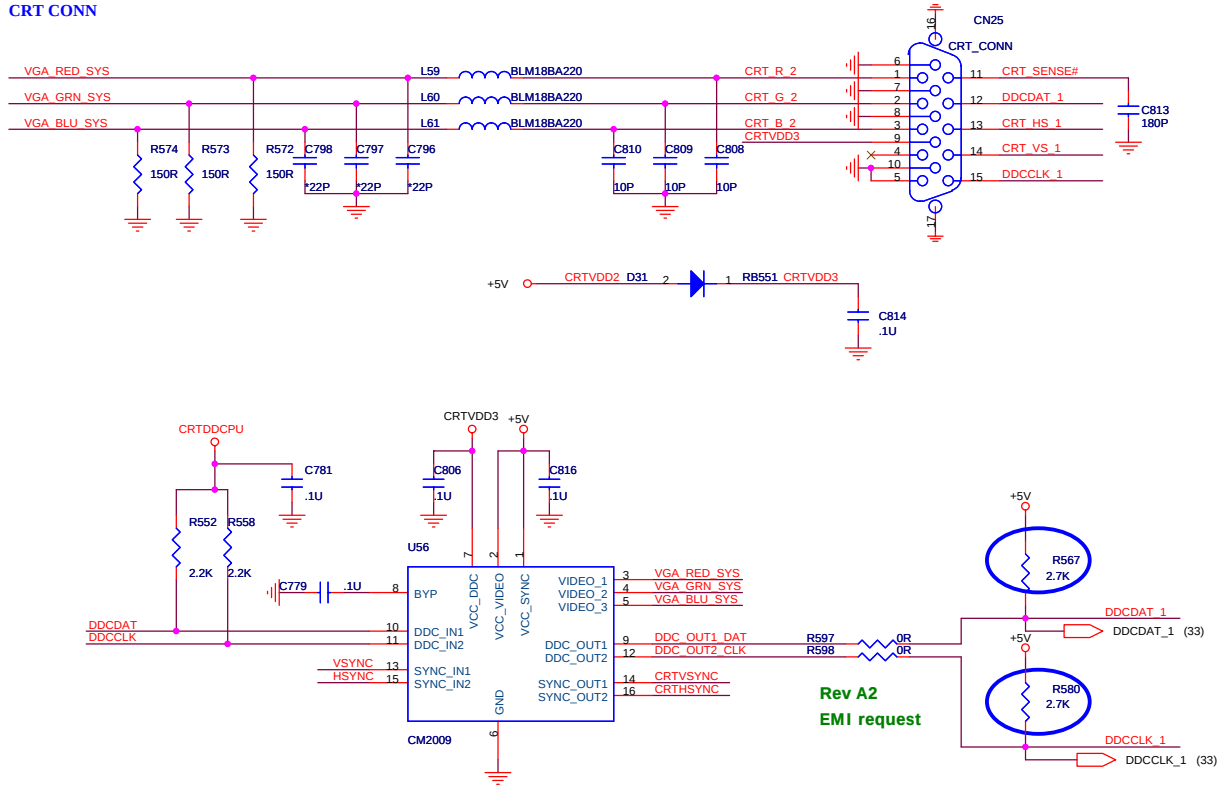
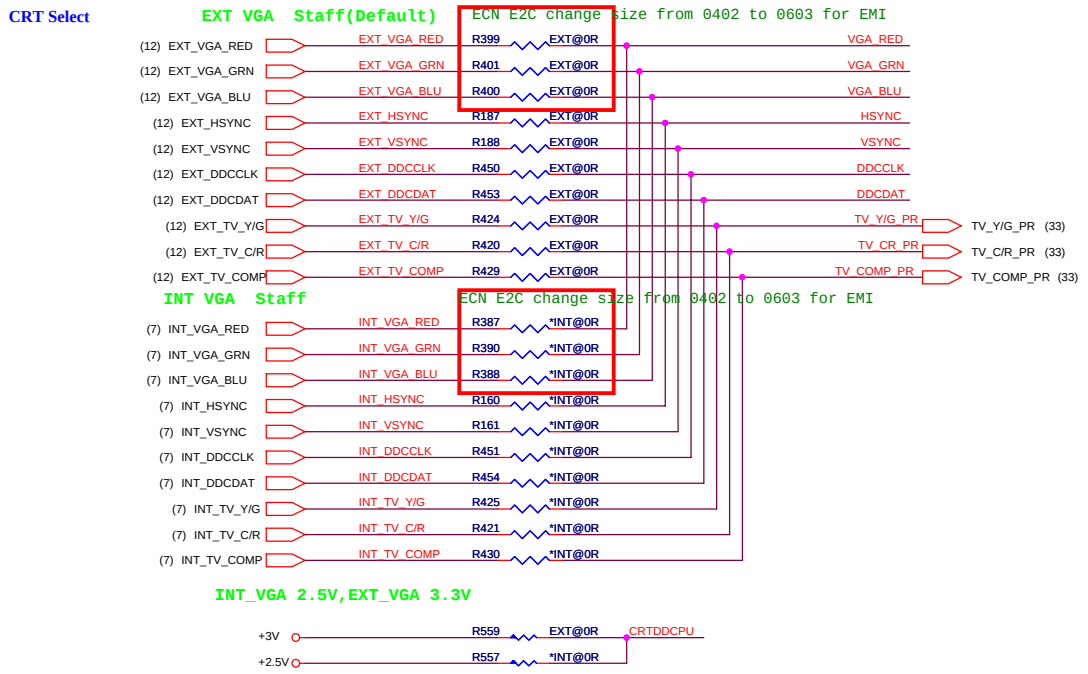
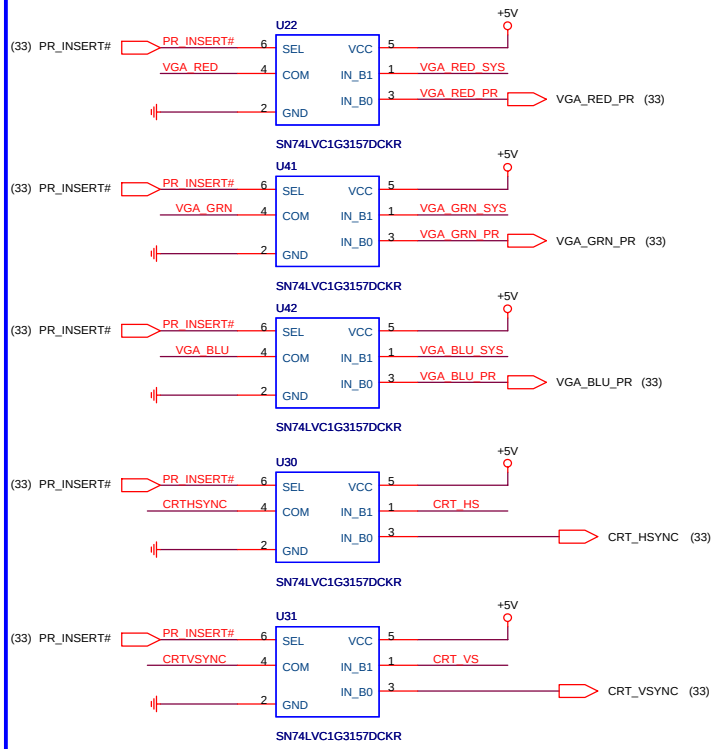
CRT CONN

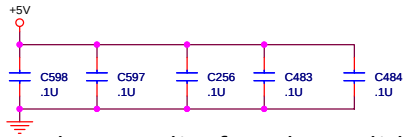


CRT Select

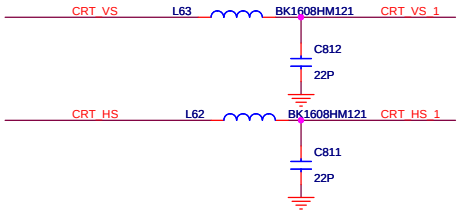


SWITCH CIRCUIT





Place each one capacitor for each one switch



PROJECT : ZE1

Quanta Computer Inc.

Size	Document Number	Rev
	CRT & SWITCH	B2A
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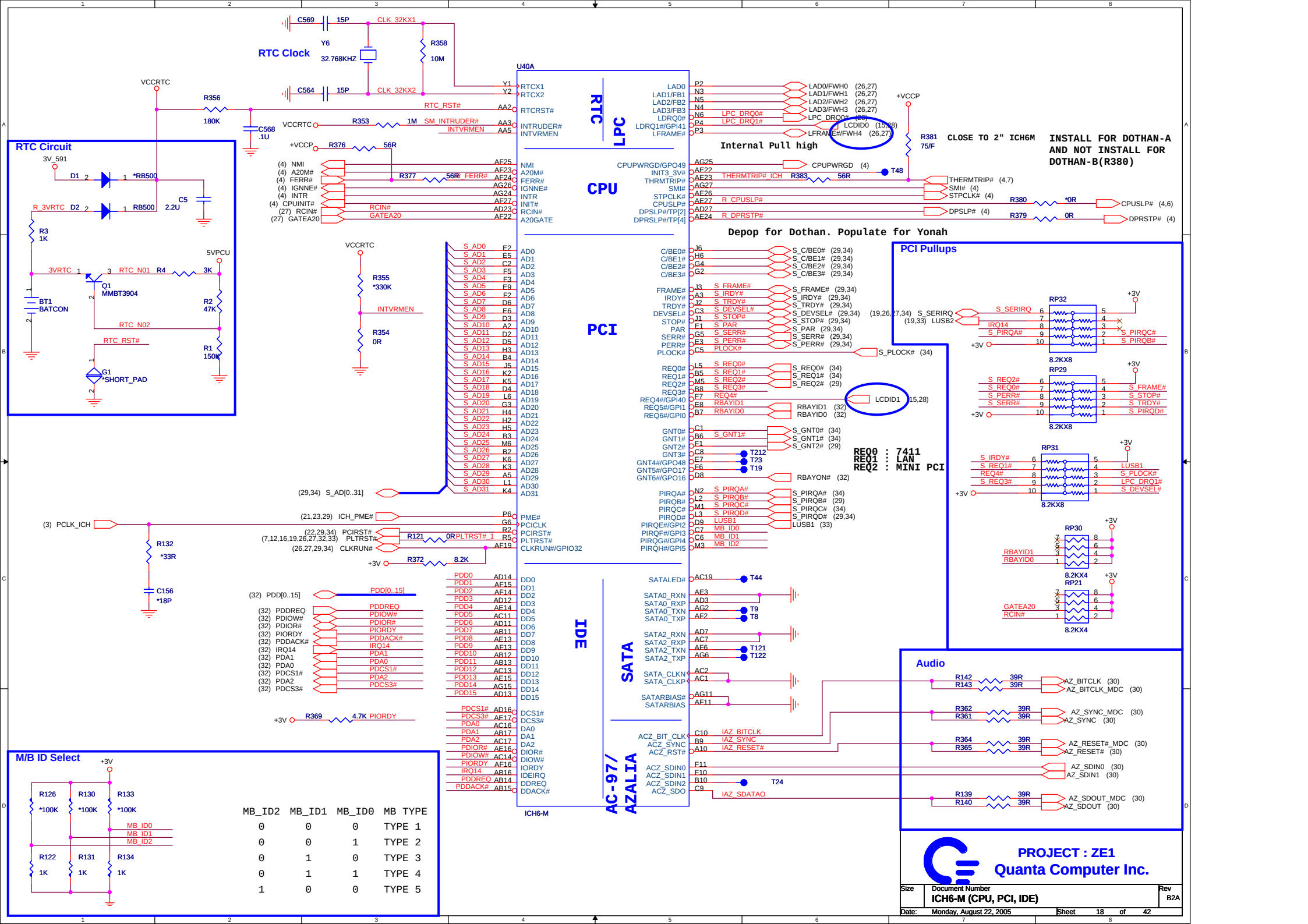
RTC Clock
RTC Circuit
M/B ID Select
U40A
RTC
LPC
CPU
PCI
IDE
SATA
AC-97/ AZALIA
ICH6-M
PCI Pullups
Audio
Internal Pull high
Depop for Dothan. Populate for Yonah
CLOSE TO 2" ICH6M
INSTALL FOR DOTHAN-A AND NOT INSTALL FOR DOTHAN-B(R380)
REQ0 : 7411
REQ1 : LAN
REQ2 : MINI PCI
MB_ID2 MB_ID1 MB_ID0 MB TYPE
0 0 0 TYPE 1
0 0 1 TYPE 2
0 1 0 TYPE 3
0 1 1 TYPE 4
1 0 0 TYPE 5
PROJECT : ZE1
Quanta Computer Inc.
ICH6-M (CPU, PCI, IDE)
Monday, August 22, 2005
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EMI

CLK48_USB
R378 *10R
C584 *10P

14M_ICH
R141 *33R
C166 *10P

U40B

USB

(25) SYSUSBP0+ D21 USBP0P
(25) SYSUSBP0- C21 USBP0N
OC0# C27 OC0#
T45 T40 C19 USBP2P
D19 USBP2N
OC2# B26 OC2#
T46 T39 D17 USBP4P
E17 USBP4N
OC4# C23 OC4#/GPI9
T37 T36 D15 USBP6P
C15 USBP6N
OC6# C25 OC6#/GPI14
(3) CLK48_USB CLK48_USB A27 CLK48

USBP1P B20 SYSUSBP1+ (25)
USBP1N A20 SYSUSBP1- (25)
OC1# B27 OC1# OC1# (25)
USBP3P B18 SYSUSBP3+ (25)
USBP3N A18 SYSUSBP3- (25)
OC3# C26 OC3# OC3# (25)
USBP5P A16 SYSUSBP5+ (25)
USBP5N B16 SYSUSBP5- (25)
OC5#/GPI10 D23 OC5# OC5# (25)
USBP7P B14 SYSUSBP7+ (28)
USBP7N A14 SYSUSBP7- (28)
OC7#/GPI15 C24 OC7#
USBRBIAS B22
USBRBIAS# A22 USBRBIAS R371 22.6/F

Finger Printer
Place within 500mils

DMI

(7) DMI_RXN0 T25 DMI0_RXN
(7) DMI_RXP0 T24 DMI0_RXP
(7) DMI_TXN0 R27 DMI0_TXN
(7) DMI_TXP0 R26 DMI0_TXP
(7) DMI_RXN1 V25 DMI1_RXN
(7) DMI_RXP1 V24 DMI1_RXP
(7) DMI_TXN1 U27 DMI1_TXN
(7) DMI_TXP1 U26 DMI1_TXP

DMI2_RXN Y25 DMI_RXN2 (7)
DMI2_RXP Y24 DMI_RXP2 (7)
DMI2_TXN W27 DMI_TXN2 (7)
DMI2_TXP W26 DMI_TXP2 (7)
DMI3_RXN AB24 DMI_RXN3 (7)
DMI3_RXP AB23 DMI_RXP3 (7)
DMI3_TXN AA27 DMI_TXN3 (7)
DMI3_TXP AA26 DMI_TXP3 (7)

(3) CLK_PCIE_ICH# AD25 DMI_CLKN
(3) CLK_PCIE_ICH AC25 DMI_CLKP
DMI_ZCOMP F24
DMI_IRCOMP F23 DMICOMP R148 24.9/F +1.5V

Place within 500mils

PCI-EXPRESS

T50 T49 T127 T128 H25 HSIN0 H24 HSIP0 G27 HSON0 G26 HSOP0
(33) PCIE_RXN1 K25 HSIN1
(33) PCIE_RXP1 K24 HSIP1
(33) PCIE_TXN1 C590 .1U HSON1 J27 HSON1
(33) PCIE_TXP1 C585 .1U HSOP1 J26 HSOP1

HSIN2 M25 PCIE_RXN2 (33)
HSIP2 M24 PCIE_RXP2 (33)
HSON2 L27 HSON2 C586 .1U PCIE_TXN2 (33)
HSOP2 L26 HSOP2 C587 .1U PCIE_TXP2 (33)
HSIN3 P24 T41
HSIP3 P23 T42
HSON3 N27 T51
HSOP3 N26 T52

SM&SMI

(3,33) PCLK_SMB Y4 SMBCLK
(3,33) PDAT_SMB W5 SMBDATA
LID591_ICH# W6 SMBALERT#/GPI11

SMLINK0 W4 SMLINK0
SMLINK1 U6 SMLINK1
LINKALERET# Y5 SMB_LINK_ALERT#

PM

RI# T2 RI#
(4) THERM_ALERT# R374 *8.2K THRM# AC20 THRM#
(27) ICH_PWROK ICH_PWROK AA1 PWROK
DPRSLPVR_ICH6 AE20 DPRSLPVR/TP1
BATLOW# V2 BATLOW#/TP0
U1 PWRBTN#
(27) DNBSWON# Y3 RSMRST#
(27) RSMRST# AF21 VRMPWRGD
(36) IMVP_PWRGD AD19 BM_BUSY#/GPIO6
(7) PM_BMBUSY# W3 SUS_STAT#/LPCPD#
(21,26) LPC_PD# V6 SUSCLK
T22

SLP_S3# T4 SUSB# (27)
SLP_S4# T5 SUSC# (27)
SLP_S5# T6 T21
LAN_RST# V5 PLTRST# (7,12,16,18,26,27,32,33)
SYS_RESET# U2 DBR# (4)
WAKE# U5 WAKE#
MCH_SYNC# AG21 MCH_SYNC#
STP_PCI#/GPO18 AC21 STP_PCI# (3)
STP_CPU#/GPO20 AD22 STP_CPU# (3,36)
SERIRQ AB20 S_SERIRQ (18,26,27,34)

MISC&GPIO

(3) 14M_ICH E10 CLK14
(30) PCSPK F8 SPKR
(18,33) LUSB2 AE19 GPI7
(26,27) KBSMI# R1 GPI8
(27,33) PR_STS M2 GPI12
(27) SCI# R6 GPI13
T47 AB21 GPO19
(32) RST_HDD# AD20 GPO21
(32) RST_RBAY# AD21 GPO23
T4 V3 GPIO24

GPIO25 P5 T17
SATA0GP/GPIO26 AF17
GPIO27 R3 T10
GPIO28 T3 T7
SATA1GP/GPIO29 AE18
SATA2GP/GPIO30 AF18
SATA3GP/GPIO31 AG18
GPIO33 AF20 PCI_Switch (34)
GPIO34 AC18 *PAD T43

R370 33R

LAN

T29 T32 T25 T33 D12 EE_CS B12 EE_SHCLK D11 EE_DOUT F13 EE_DIN

LAN_RXD0 E12 T28
LAN_RXD1 E11 T26
LAN_RXD2 C13 T35
LAN_TXD0 C12 T31
LAN_TXD1 C11 T30
LAN_TXD2 E13 T34
LAN_CLK F12 T27
LAN_RSTSYNC B11 T126

RESERVED

T3 T6 T11 T12 T2 AC5 RSVD1 AD5 RSVD2 AF4 RSVD3 AG4 RSVD4 AC9 RSVD5

RSVD6 AD9 T5
RSVD7 AF8 T124
RSVD8 AG8 T123
RSVD9 U3 T18

RSVD9=TP3

ICH6-M

PU/PD

+3V_S5
RP1 10KX4
7 SMLINK0
5 BATLOW#
3 SMLINK1
1 RI#

RP33 10KX8
SMB_LINK_ALERT# 6
PDAT_SMB 7
PCLK_SMB 8
OC4# 9
10 +3VSUS
5 +3VSUS
4 OC0#
3 OC2#
2 OC6#
1 OC7#

WAKE# 1K R589 +3V_S5
MCH_SYNC# 10K R375 +3V
THRM# R373 8.2K +3V
PR_STS R127 *10K +3VSUS
R128 10K +3V
KBSMI# R125 10K +3V_S5
ICH_PWROK R357 10K
RSMRST# R129 10K

LID circuit

+3V_S5 R137 10K D19
(27,28) LID591# LID591# LID591_ICH#
1SS355

RI circuit

+3V
R352 *10K RP1 have PU
RI#
Q31 DTC144EUA
MRI1 (26,33)

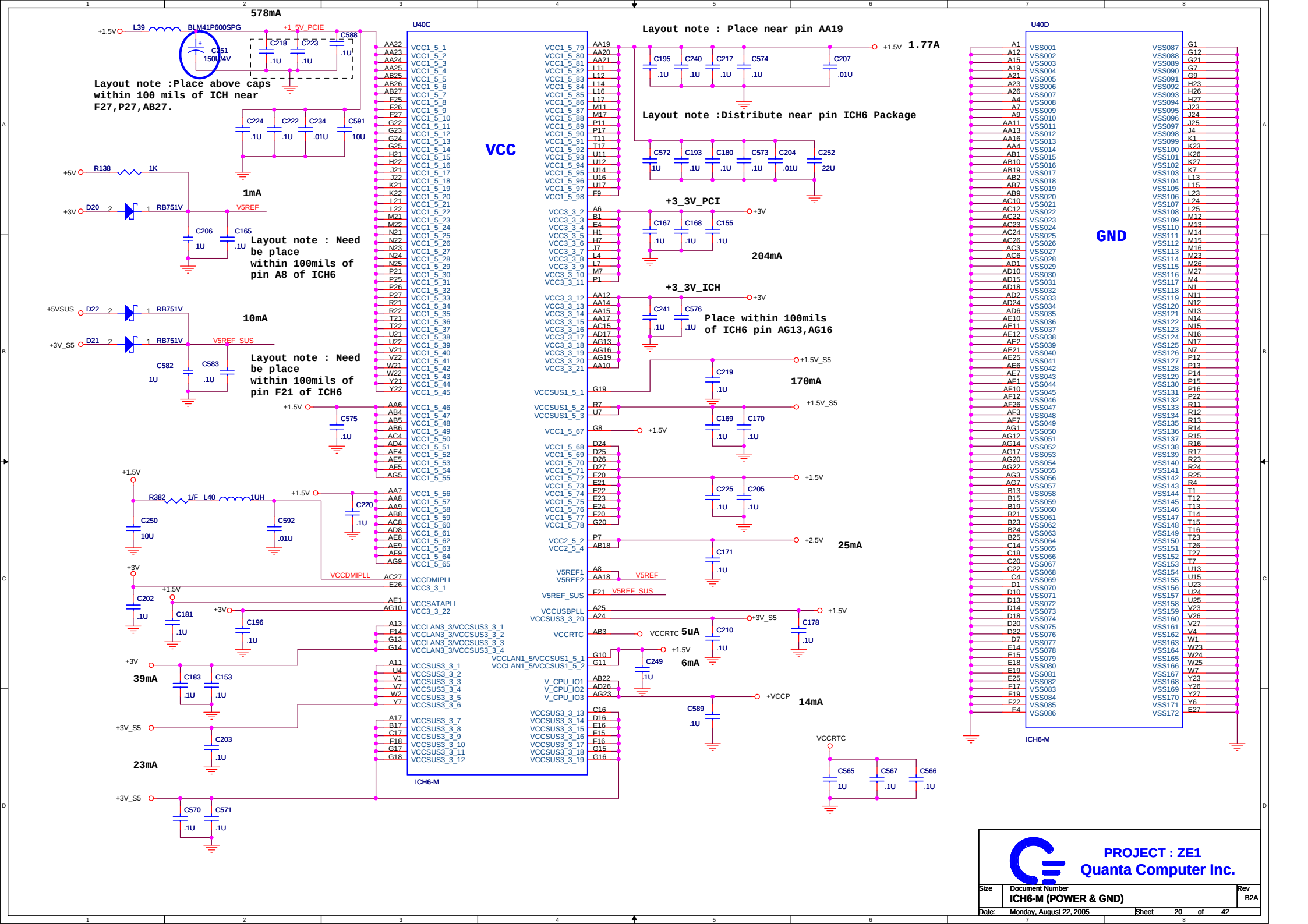
Power good to SB and NB/Deeper Sleep Voltage control for C4

+3V
U21
(24,33) PR_INS PR_INS 6 SEL VCC 5 C242 .1U
(36) DPRSLPVR 4 COM IN_B1 1 (36) IMVP_PWRGD
IN_B0 3 DPRSLPVR_ICH6
2 GND
SN74LVC1G3157DCKR
R146 *0R

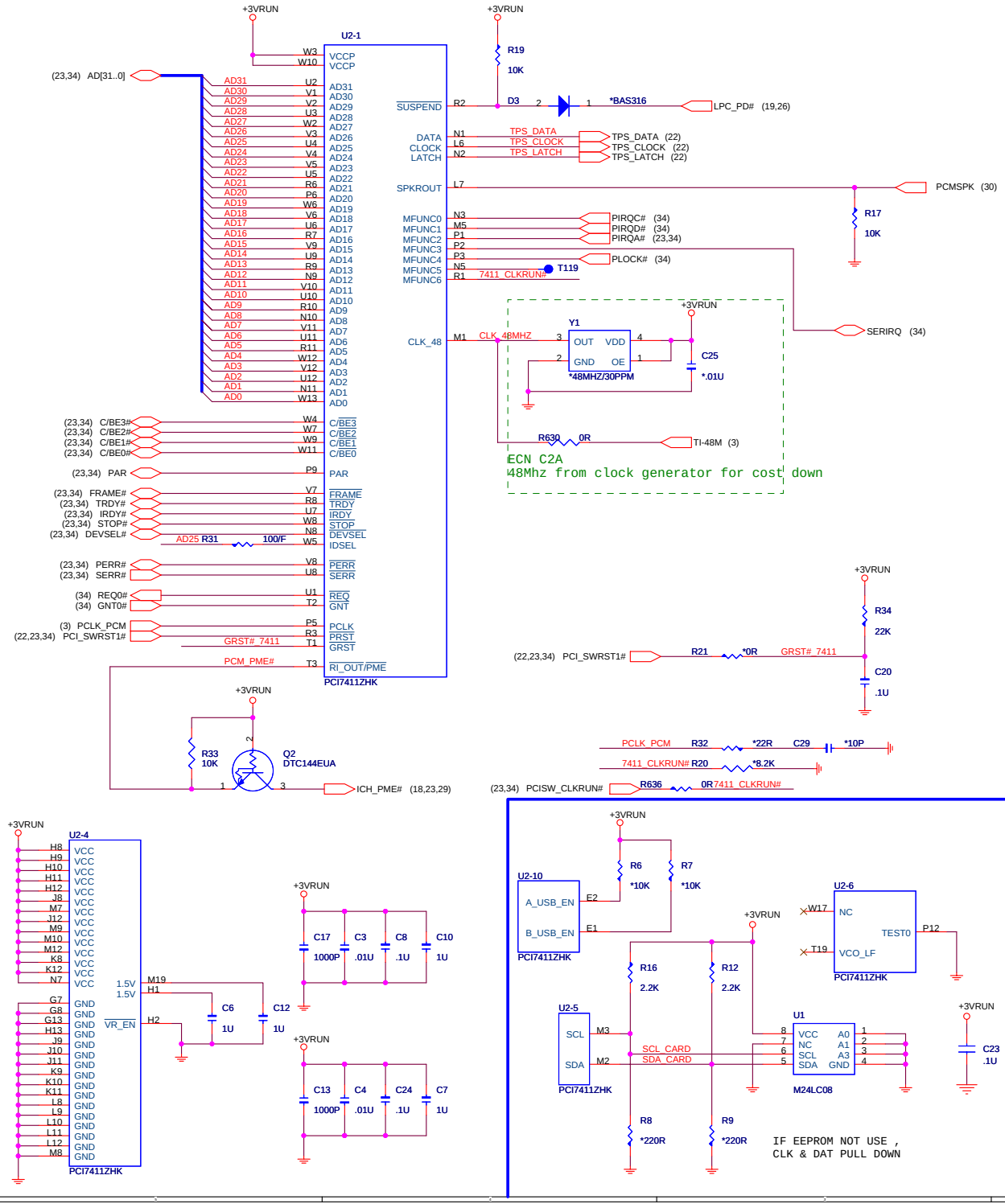
+3V
R147 *10K
C216 *.1U
U20A *7WZ14
U20B *7WZ14
IMVP_PWRGD_NB (7)
R150 0R

PROJECT : ZE1
Quanta Computer Inc.

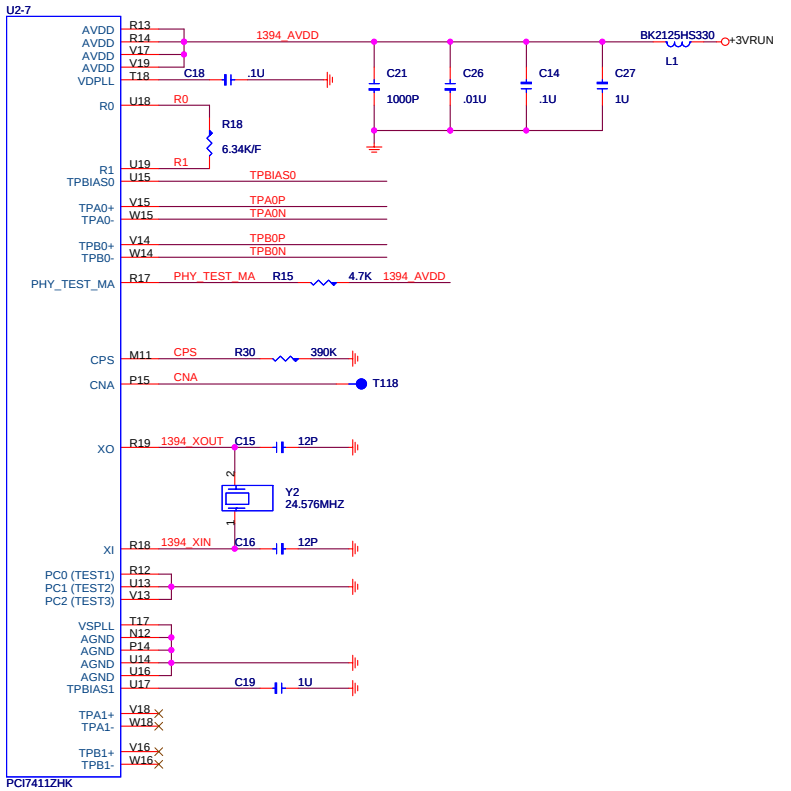
Size	Document Number	Rev
	ICH6-M (USB & HUB)	B2A
Date: Tuesday, August 23, 2005	Sheet 19 of 42	


578mA
U40C
VCC
Layout note : Place near pin AA19
1.77A
Layout note :Place above caps within 100 mils of ICH near F27,P27,AB27.
Layout note :Distribute near pin ICH6 Package
1mA
+3_3V_PCI
204mA
Layout note : Need be place within 100mils of pin A8 of ICH6
+3_3V_ICH
Place within 100mils of ICH6 pin AG13,AG16
10mA
170mA
Layout note : Need be place within 100mils of pin F21 of ICH6
25mA
5uA
6mA
14mA
39mA
23mA
ICH6-M
U40D
GND
ICH6-M
PROJECT : ZE1
Quanta Computer Inc.
Document Number
ICH6-M (POWER & GND)
Rev
B2A
Date: Monday, August 22, 2005
Sheet 20 of 42

7411 PCI Interface



1394 Interface(CONN/EEPROM)



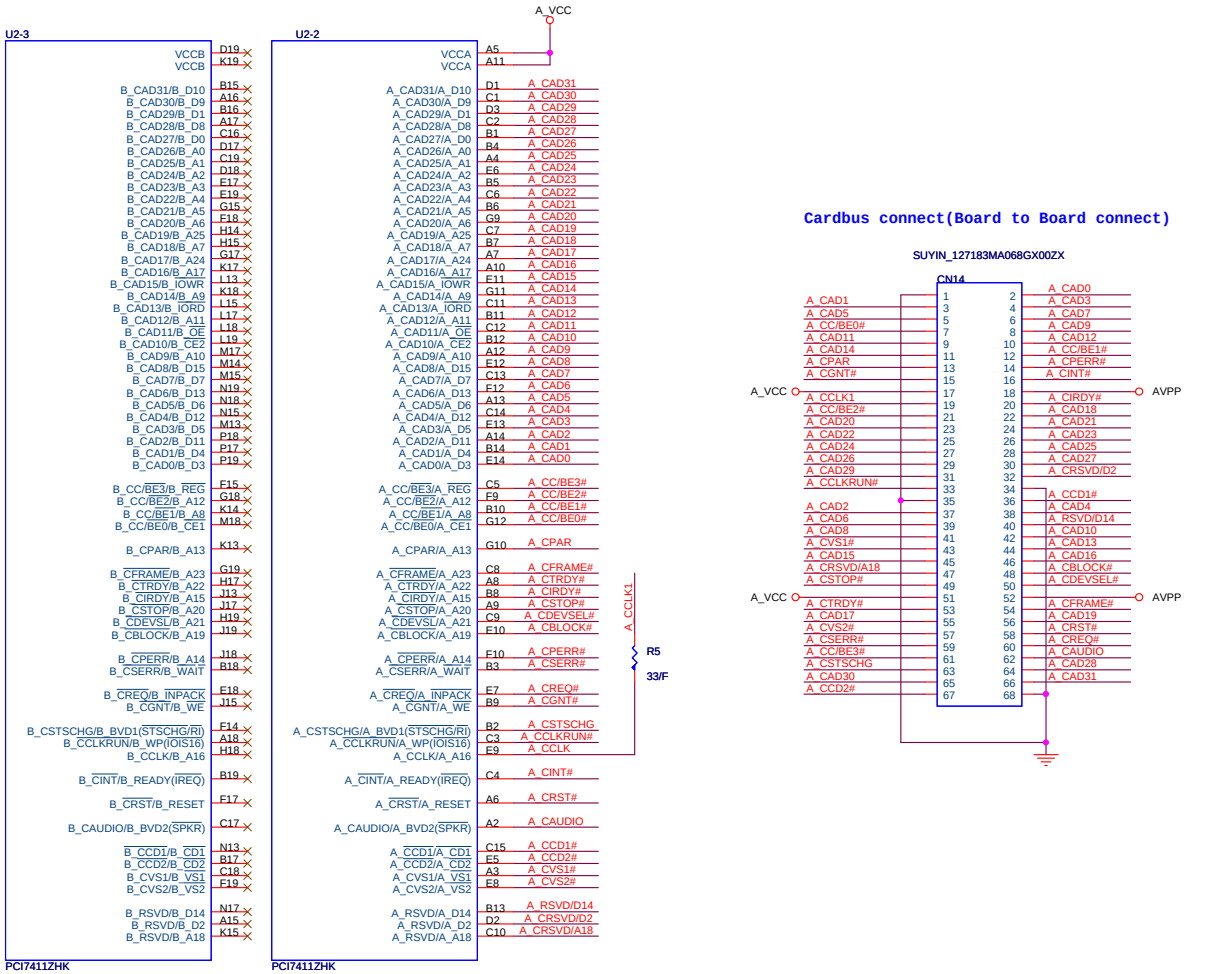
ECN E2C change 1394 connector type from SMD to DIP type

PROJECT : ZE1

Quanta Computer Inc.

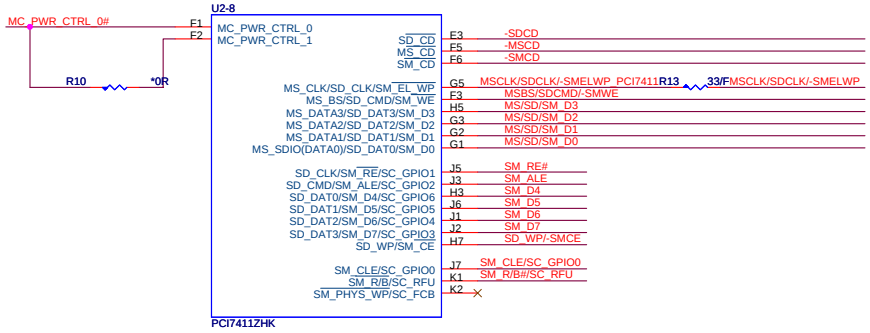
Size	Document Number	Rev
	PCMCIA CONTROLLER & 1394	B2A
Date: Monday, August 22, 2005	Sheet 21 of 42	

Cardbus Interface



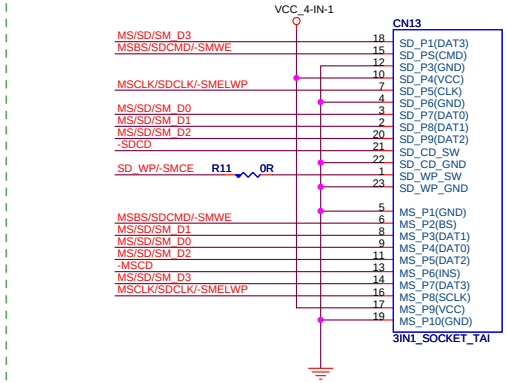
Cardbus connect(Board to Board connect)

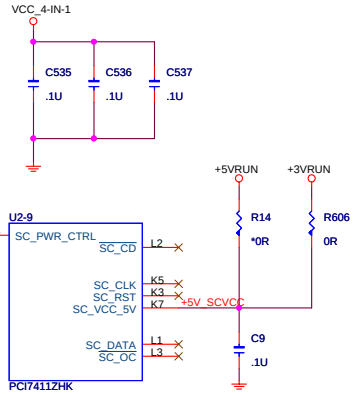
Card Reader Interface

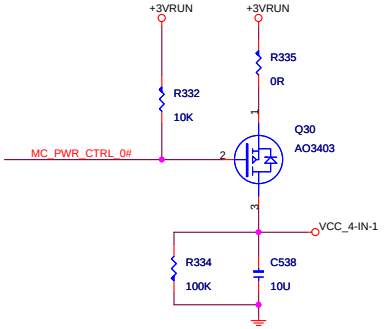


3 IN 1 CARD READER(SD/MMC/MS/MS Pro)

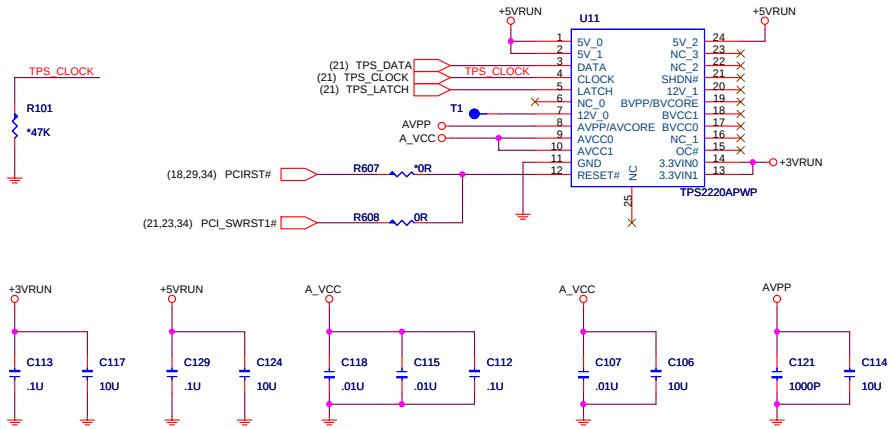
ECN D2B
PER ME'S REQUEST,
UPDATE 3 IN 1 CONNECTOR







Cardbus Power



Voltage Rail	BCM4401	BCM5788
VDDIO_PCI	3V_LAN (EC)	+3VRUN (PCI SW)
+3V_2.5V_LAN	3.3V	2.5V
+1.8V_1.2V_LAN	1.8V	1.2V

	R51, R48	R56, R57	R38	R97, R87	Q5, Q9	U7	U8
BCM5788M	STUFF	NA	1.24K	STUFF	STUFF	STUFF	NA
BCM4401	NA	STUFF	1.27K	NA	NA	NA	STUFF
NOTE	+3VRUN	3V_LAN	RDAC			AT93C46	24LC128

BCM5788M

15mm x 15mm BGA196

ECN C2A
FAE: BCM4401 and BCM5788 support CLKRUN#

ECN C2A: BOM REMOVE R68

ECN C2A
DEL R36 & R76
CHANGE PWR TO 3VLAN

ECN C2A
FAE: REMOVE R40 FROM TCK

ECN C2A
FAE: REMOVE R42 FROM Q9 (B,C)

ECN E2C
Change to 1.18K for IEEE

ECN E2C
Add new CAP(0.1uf) for EMI

BCM5788: R97, R98 (STUFF))
BCM4401: R97, R98 (NO-STUFF)

BCM5788: MOUNTED BCP69T1
BCM4401: NA BCP69T1 (Q5, Q9)

1.5" AWAY FROM CHIP
Use Philips BCP69-16, hfe=75~275

2.5V@88mA 0.564W

1.2V@618mA 0.803W

BCM 5788M LAN Power

30 mil
via : 2 (24/12)

BCM 4401 LAN Power

ECN C2A
NEW Add for 4401

ECN C2A
FAE: ADD THIS PI-FILTER FOR AVDD AND AVDDL

ECN E2C
Add new three pcs CAP(0.1uf) for EMI

LAN EEPROM

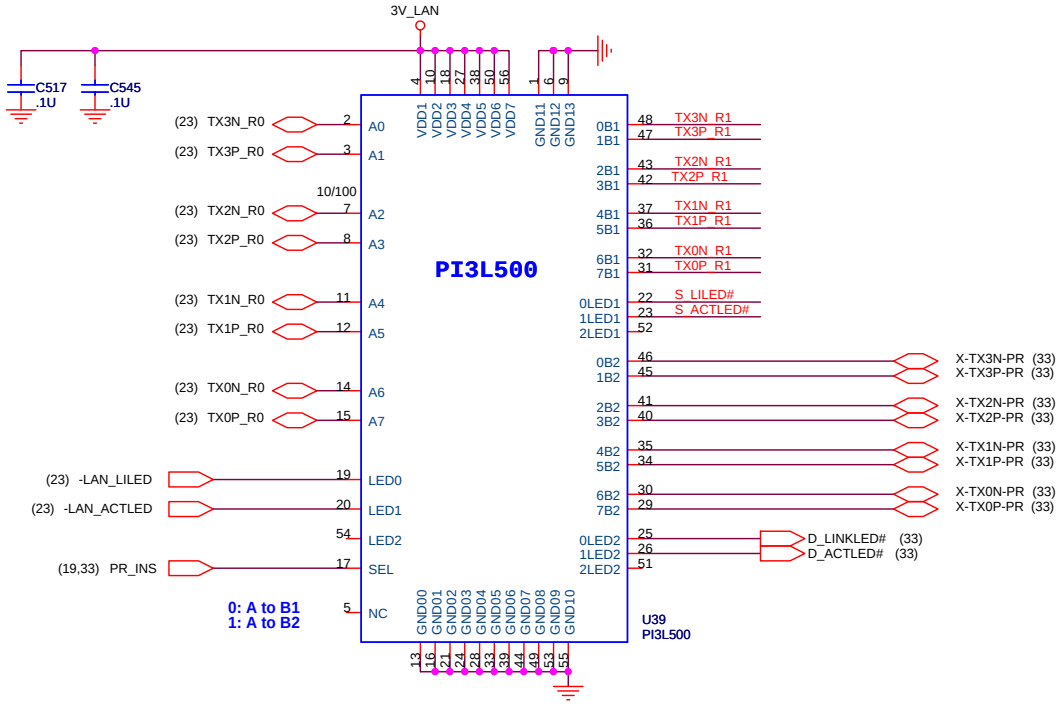
BCM4401 Staff

BCM5788M Staff

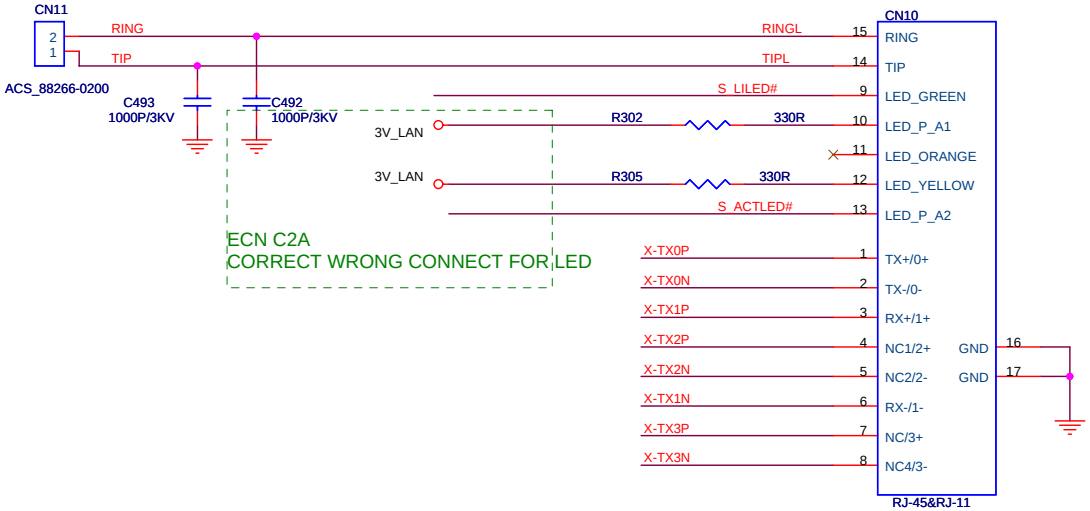
LAN PME

PROJECT : ZE1		
Quanta Computer Inc.		
Size	Document Number: LAN BCM5788/BCM4401	Rev: B2A
Date: Monday, August 22, 2005	Sheet 23 of 42	

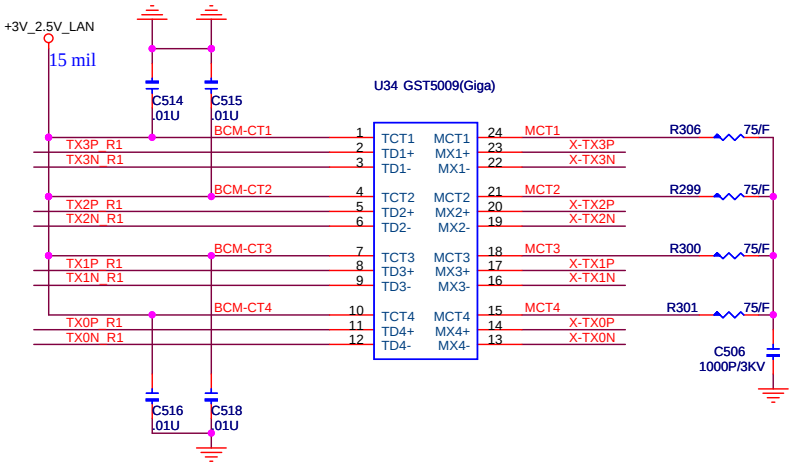
LAN Switch



Modem conn and LAN connect



LAN transformer



PROJECT : ZE1

Quanta Computer Inc.

Size	Document Number	Rev
	RJ11/RJ45 CONN.	B2A
Date: Monday, August 22, 2005		Sheet 24 of 42

USB PORTS

+5VSUS

U32
G547B2P8U
AL000547001

C487 .1U

USB_PWR_ON#

ECN D2B
ACER: CHANGE TO GMT

USBPWR_S1 R293 FBM2125HM330

ECN D2B
CHANGE TO 100UF

USBPWRS1

C486 470P

C489 100U

CH71001M393

+3VSUS

ECN E2C
Change R295 from 470k to 10k

R295 10K

ECN D2B
DEL R289 & R296

OC1# (19)

Acer: every port support 1.5A current

ECN B2A
CHANGE PWR FROM 5VPCU TO +5VSUS

CN22
SUYIN_USB

(19) SYSUSBP1- R578 0R SYSUSBP1-_1

(19) SYSUSBP1+ R579 0R SYSUSBP1+_1

U58
G547B2P8U
AL000547001

C782 .1U

USB_PWR_ON#

ECN D2B
ACER: CHANGE TO GMT

USBPWR_S3 R571 FBM2125HM330

ECN D2B
CHANGE TO 100UF

USBPWRS3

C802 470P

C800 100U

CH71001M393

+3VSUS

ECN E2C
Change R295 from 470k to 10k

R560 10K

ECN D2B
DEL R562 & R555

OC3# (19)

CN24
SUYIN_USB

(19) SYSUSBP3- R576 0R SYSUSBP3-_1

(19) SYSUSBP3+ R577 0R SYSUSBP3+_1

U33
G547B2P8U
AL000547001

C488 .1U

USB_PWR_ON#

ECN D2B
ACER: CHANGE TO GMT

USBPWR_S5 R291 FBM2125HM330

ECN D2B
CHANGE TO 100UF

USBPWRS5

C485 470P

C490 100U

CH71001M393

+3VSUS

ECN E2C
Change R295 from 470k to 10k

R297 10K

ECN D2B
DEL R292 & R294

OC5# (19)

CN23
SUYIN_USB

(19) SYSUSBP5- R290 0R SYSUSBP5-_1

(19) SYSUSBP5+ R288 0R SYSUSBP5+_1

ECN E2C
Chang +5VSUS to 5VPCU

ECN D2B
ACER: ADD USB PWR ON (R554/Q39)
ECN C2A
Del S5_ON Circuit(R554/Q39)

5VPCU

R554 10K

USB_PWR_ON#

(27,33,37,38) SUSON

Q35 DTC144EUA

S0, S3: HI
S4, S5: LOW

Bluetooth

ECN E2C
Increase PAD length 0.2mm

40mil

BLUETOOTH

BT_POWER

(19) SYSUSBP0+
(19) SYSUSBP0-

(28) BT_LED#

CN5

C423 *22P

C421 *22P

C432 .01U

+3VSUS

Q24
AO3403

40mil

BT_POWER

C416 2.2U

BT_PWRON# (27)

FAN

U29 use together with Transfer 2.5V circuit
(Page 38)

+5V

(27) VFAN R272 750/F Z3200

U29B
LM358

Z3202

Q26
SI3456DV

C455 10U

Z3201

C865 2200P

R264 2K/F

R266 3K

C452 10U

C450 1000P

+5V_FAN

CN20

1ST_FAN

(27) FINSIG

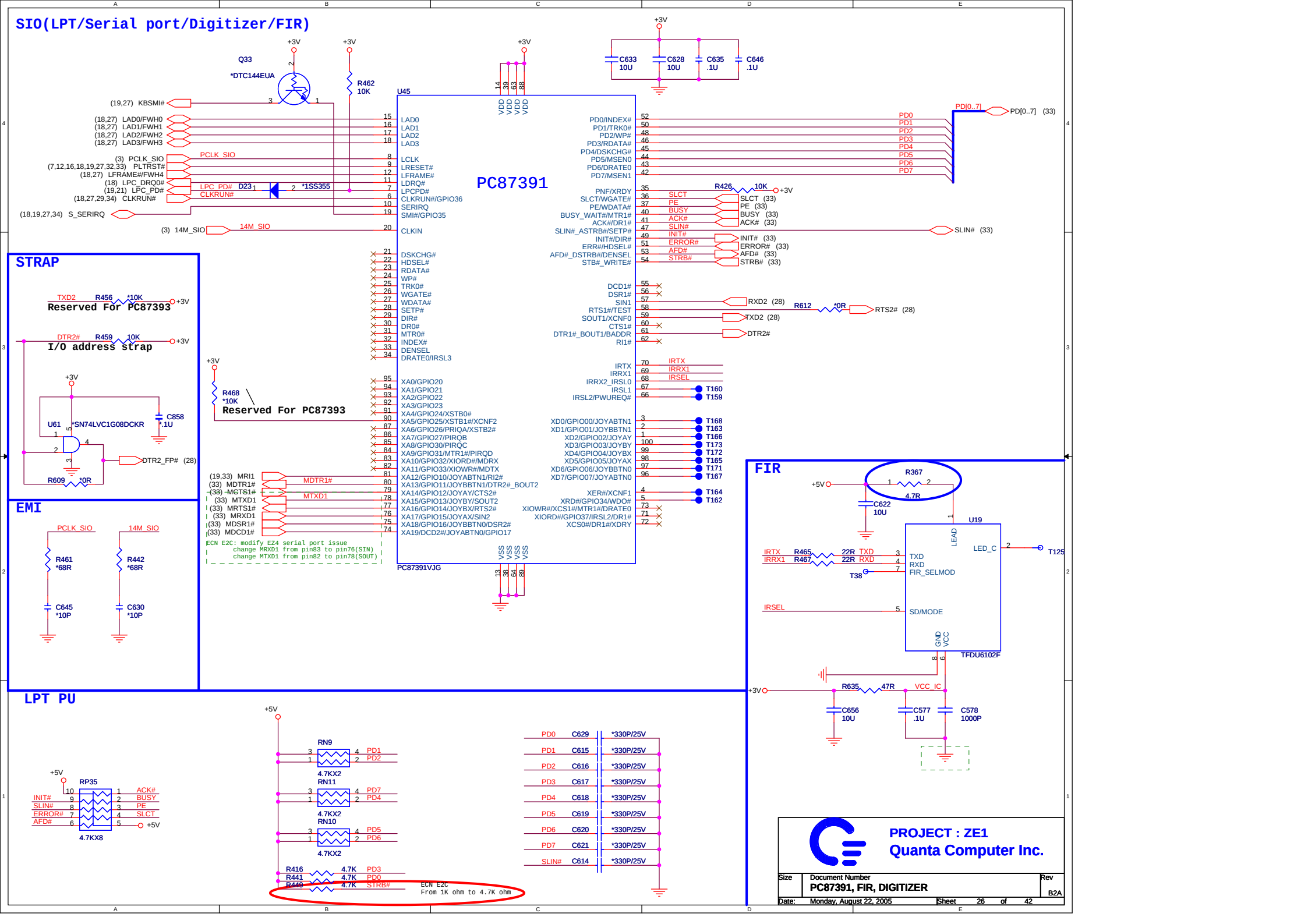
PROJECT : ZE1

Quanta Computer Inc.

Size	Document Number	Rev
	USB PORTS & BLUETOOTH & FAN	D2B

Date: Monday, August 22, 2005 Sheet 25 of 42

SIO(LPT/Serial port/Digitizer/FIR)

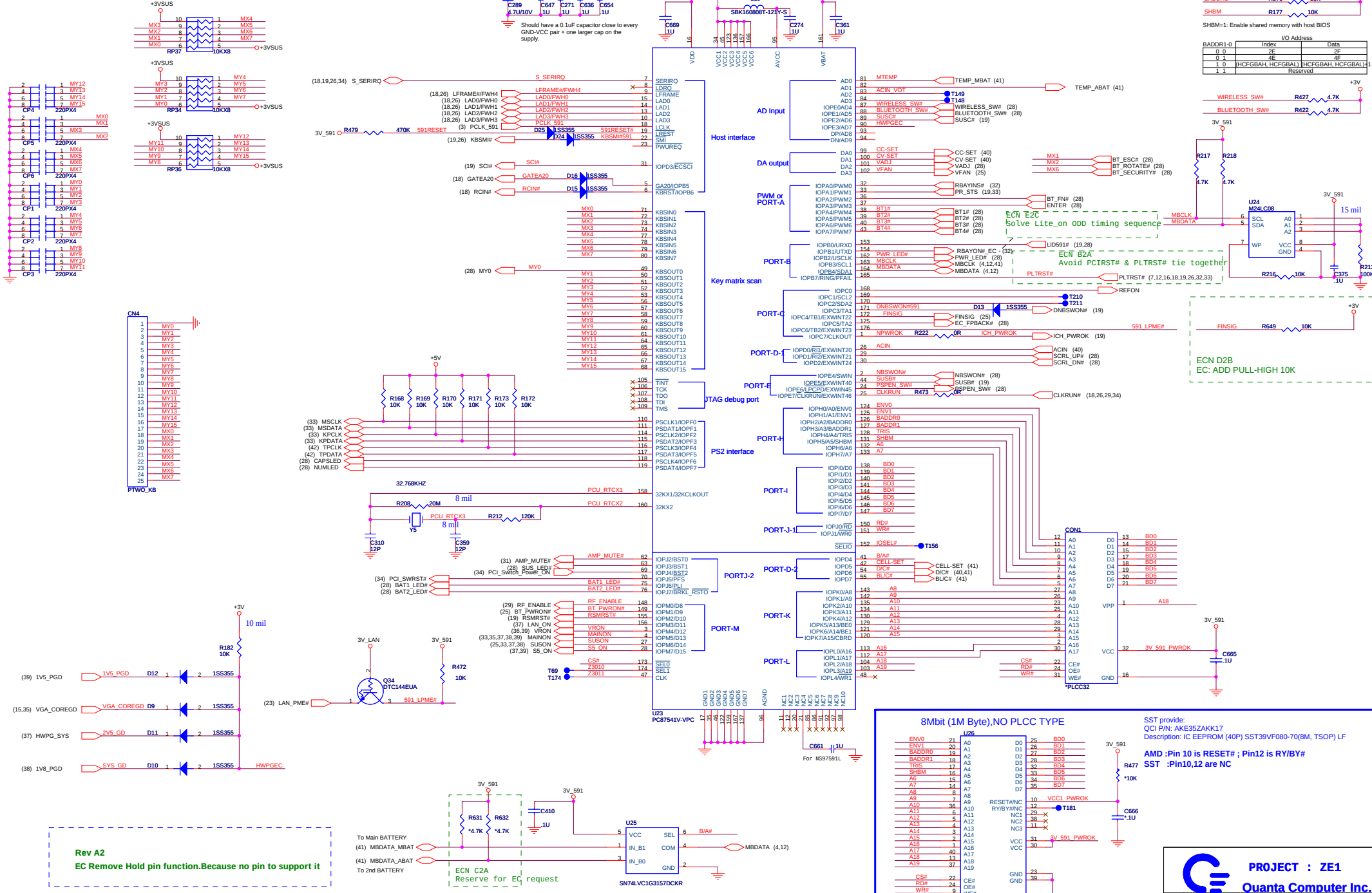


PROJECT : ZE1
Quanta Computer Inc.

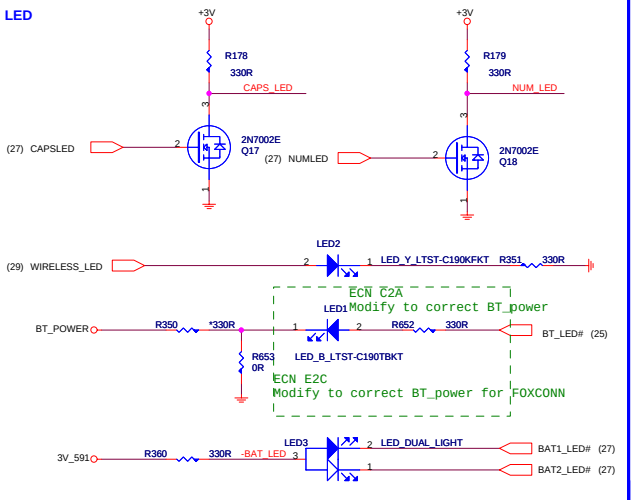
Size	Document Number	Rev
	PC87391, FIR, DIGITIZER	B2A
Date: Monday, August 22, 2005	Sheet 26 of 42	

EC suggestion for S3 wake-up change power from 5VPCU to +3VSUS

KEYBOARD

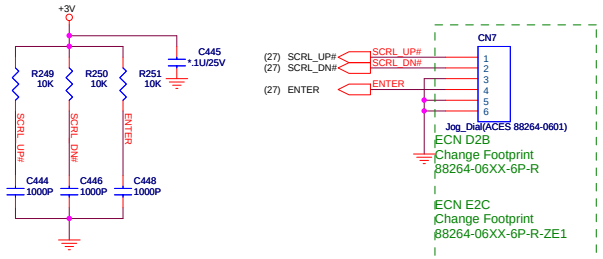


LED

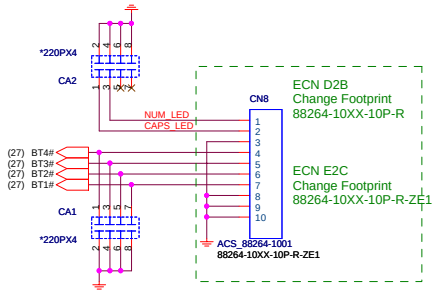


TRACK POINT CIRCUITS
MOVE TO PAGE 42

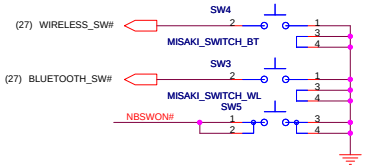
Jogdial & CONN.



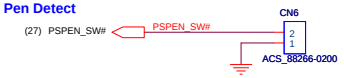
Quick Button Board



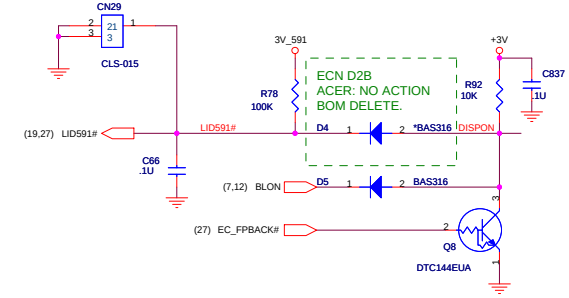
Switch

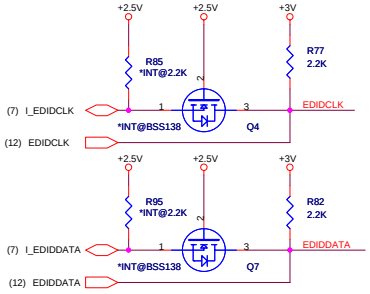


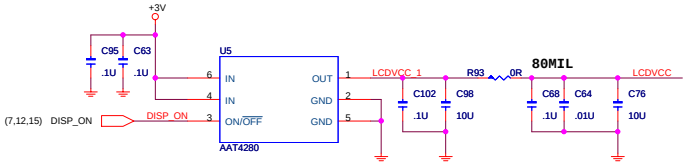
Pressure Sensitive Pen Detect

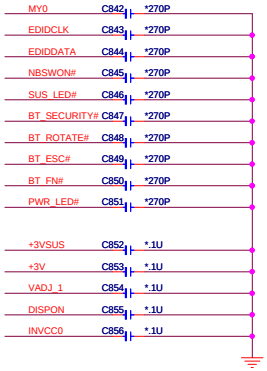


LID/Display on

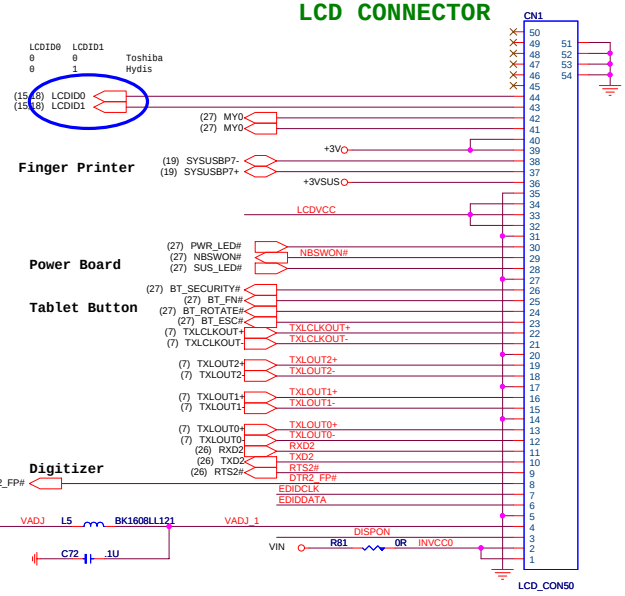








LCD CONNECTOR



PROJECT : ZE1

Quanta Computer Inc.

Size	Document Number	Rev
	LED, T/P, FAN, Q-BUTTON, LCD CONN.	D2B
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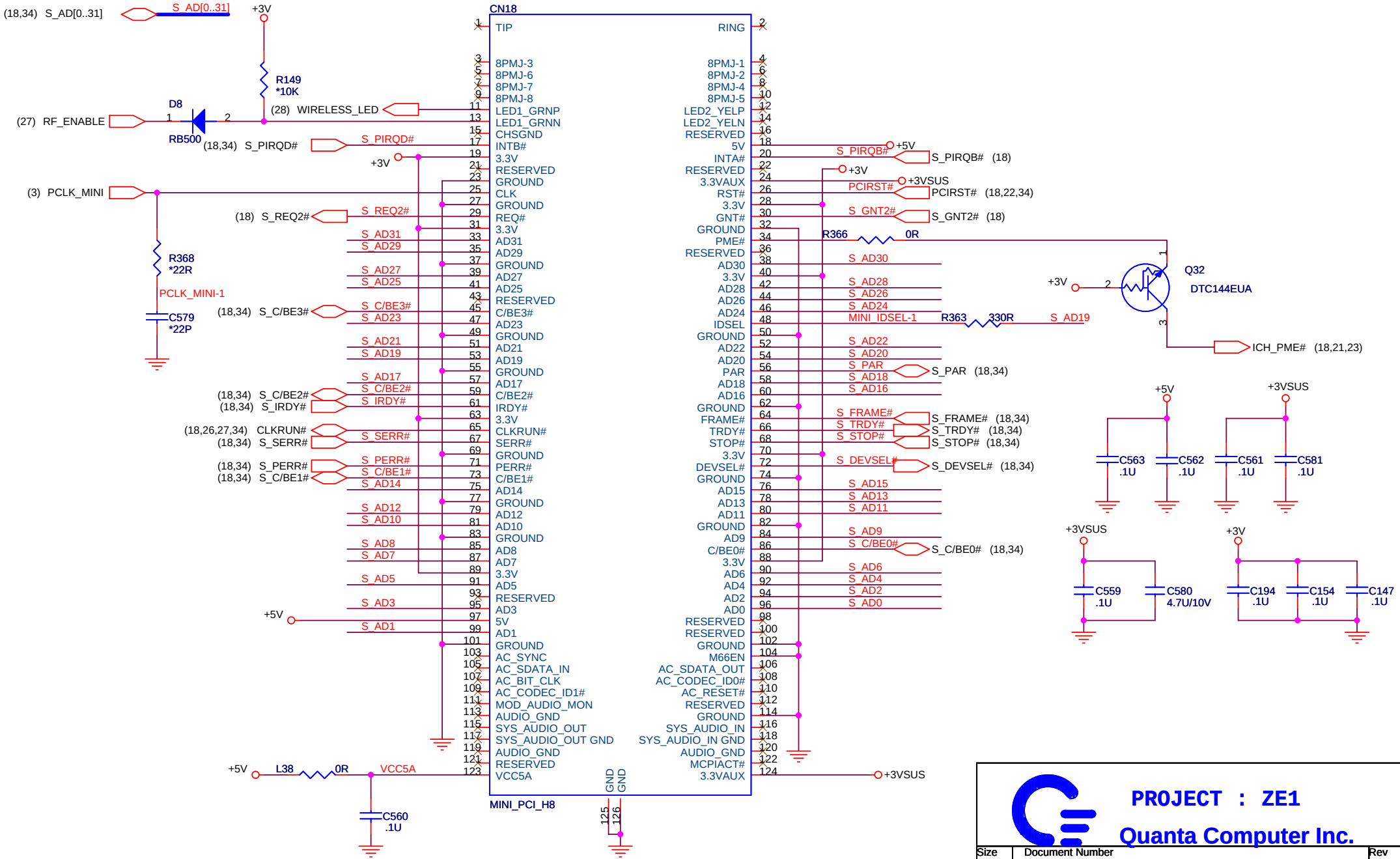
(18,34) S_AD[0..31]
S_AD[0..31]
+3V
R149
*10K
D8
(27) RF_ENABLE
RB500
(28) WIRELESS_LED
(18,34) S_PIRQD#
S_PIRQD#
(3) PCLK_MINI
R368
*22R
PCLK_MINI-1
C579
*22P
(18) S_REQ2#
S_REQ2#
S_AD31
S_AD29
S_AD27
S_AD25
(18,34) S_C/BE3#
S_C/BE3#
S_AD23
S_AD21
S_AD19
S_AD17
(18,34) S_C/BE2#
(18,34) S_IRDY#
S_C/BE2#
S_IRDY#
(18,26,27,34) CLKRUN#
(18,34) S_SERR#
S_SERR#
(18,34) S_PERR#
(18,34) S_C/BE1#
S_PERR#
S_C/BE1#
S_AD14
S_AD12
S_AD10
S_AD8
S_AD7
S_AD5
S_AD3
S_AD1
+5V
+5V
L38
0R
VCC5A
C560
.1U
CN18
TIP
RING
8PMJ-3
8PMJ-6
8PMJ-7
8PMJ-8
LED1_GRNP
LED1_GRNN
CHSGND
INTB#
3.3V
RESERVED
GROUND
CLK
GROUND
REQ#
3.3V
AD31
AD29
GROUND
AD27
AD25
RESERVED
C/BE3#
AD23
GROUND
AD21
AD19
GROUND
AD17
C/BE2#
IRDY#
3.3V
CLKRUN#
SERR#
GROUND
PERR#
C/BE1#
AD14
GROUND
AD12
AD10
GROUND
AD8
AD7
3.3V
AD5
RESERVED
AD3
5V
AD1
GROUND
AC_SYNC
AC_SDATA_IN
AC_BIT_CLK
AC_CODEC_ID1#
MOD_AUDIO_MON
AUDIO_GND
SYS_AUDIO_OUT
SYS_AUDIO_OUT GND
AUDIO_GND
RESERVED
VCC5A
GND
GND
MINI_PCI_H8
8PMJ-1
8PMJ-2
8PMJ-4
8PMJ-5
LED2_YELP
LED2_YELN
RESERVED
5V
INTA#
RESERVED
3.3VAUX
RST#
3.3V
GNT#
GROUND
PME#
RESERVED
AD30
3.3V
AD28
AD26
AD24
IDSEL
GROUND
AD22
AD20
PAR
AD18
AD16
GROUND
FRAME#
TRDY#
STOP#
3.3V
DEVSEL#
GROUND
AD15
AD13
AD11
GROUND
AD9
C/BE0#
3.3V
AD6
AD4
AD2
AD0
RESERVED
RESERVED
GROUND
M66EN
AC_SDATA_OUT
AC_CODEC_ID0#
AC_RESET#
RESERVED
GROUND
SYS_AUDIO_IN
SYS_AUDIO_IN GND
AUDIO_GND
MCPIACT#
3.3VAUX
+3VSUS
S_PIRQB#
+5V
S_PIRQB# (18)
+3V
PCIRST#
+3VSUS
PCIRST# (18,22,34)
S_GNT2#
S_GNT2# (18)
R366
0R
S_AD30
S_AD28
S_AD26
S_AD24
MINI_IDSEL-1
R363
330R
S_AD19
S_AD22
S_AD20
S_PAR
S_PAR (18,34)
S_AD18
S_AD16
S_FRAME#
S_FRAME# (18,34)
S_TRDY#
S_TRDY# (18,34)
S_STOP#
S_STOP# (18,34)
S_DEVSEL#
S_DEVSEL# (18,34)
S_AD15
S_AD13
S_AD11
S_AD9
S_C/BE0#
S_C/BE0# (18,34)
S_AD6
S_AD4
S_AD2
S_AD0
+3V
Q32
DTC144EUA
ICH_PME# (18,21,23)
+5V
+3VSUS
C563
.1U
C562
.1U
C561
.1U
C581
.1U
+3VSUS
+3V
C559
.1U
C580
4.7U/10V
C194
.1U
C154
.1U
C147
.1U
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Quanta Computer Inc.
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Rev
B2A
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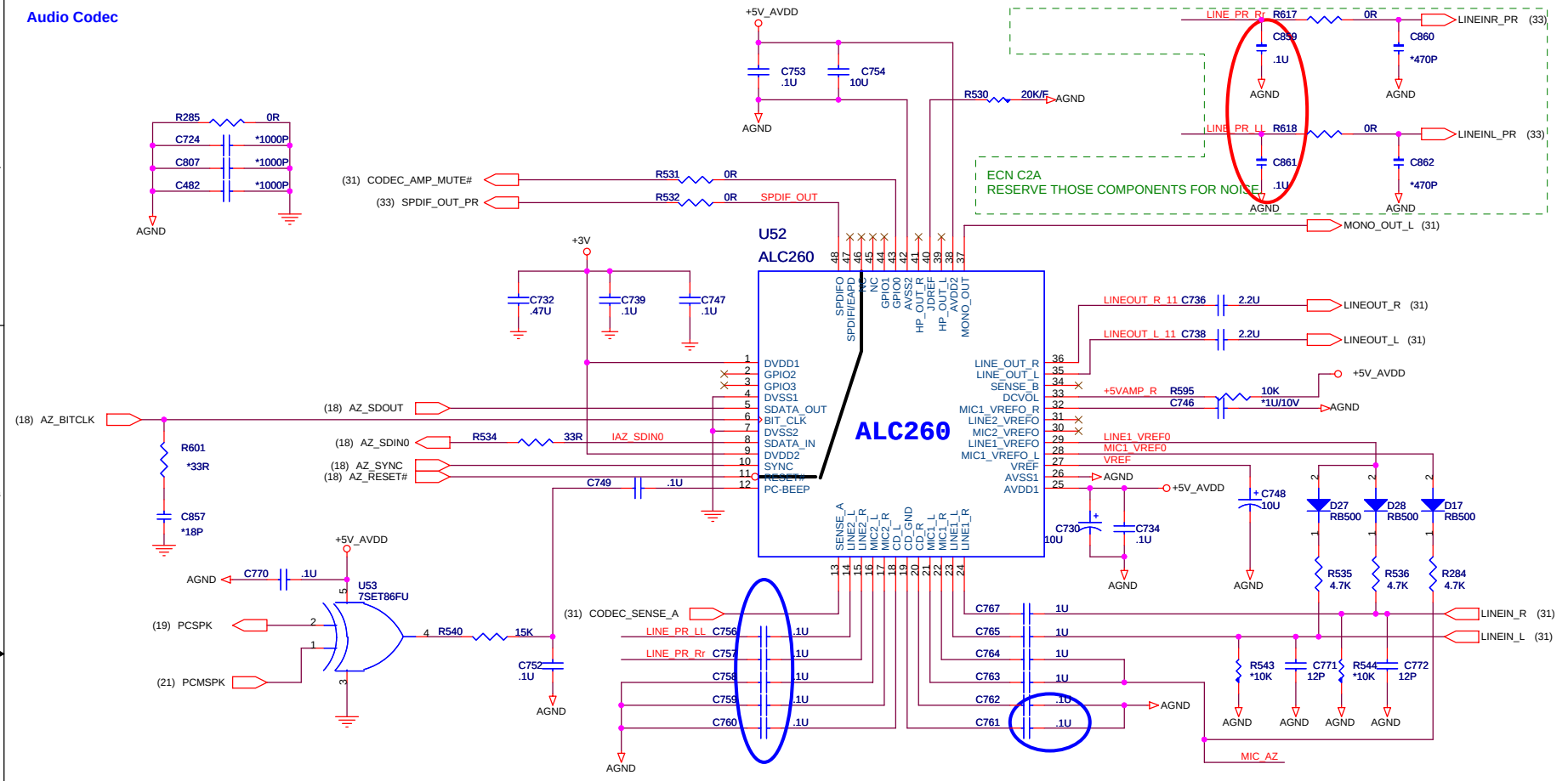
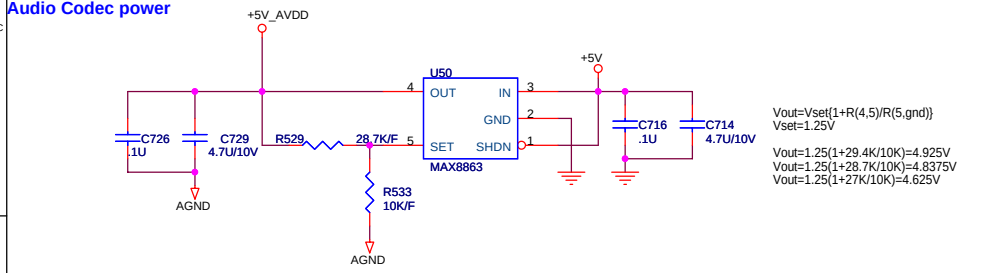
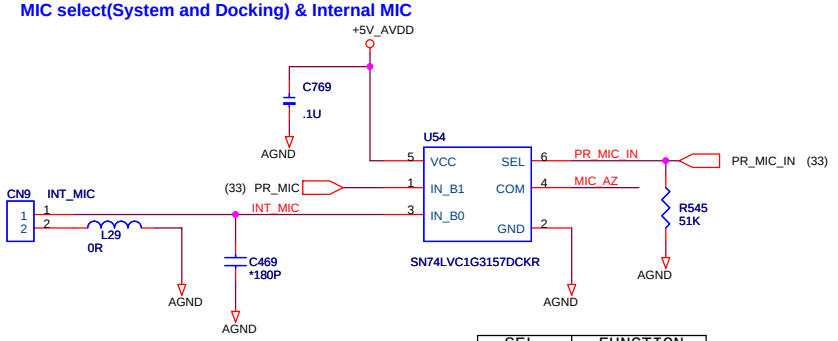
Audio Codec



Audio Codec power

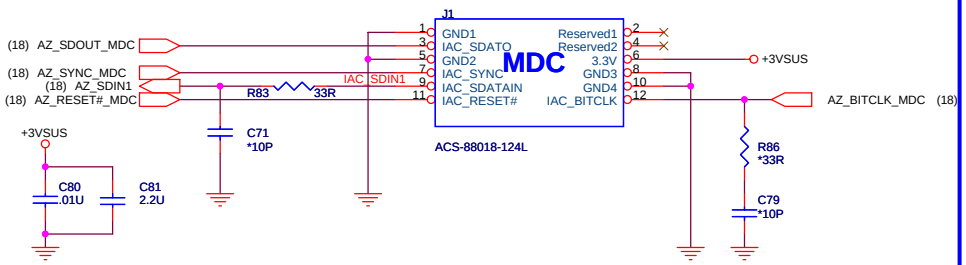


MIC select(System and Docking) & Internal MIC



SEL	FUNCTION
LOW	IN_B0
HIGH	IN_B1

Azalia Modem



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Quanta Computer Inc.			
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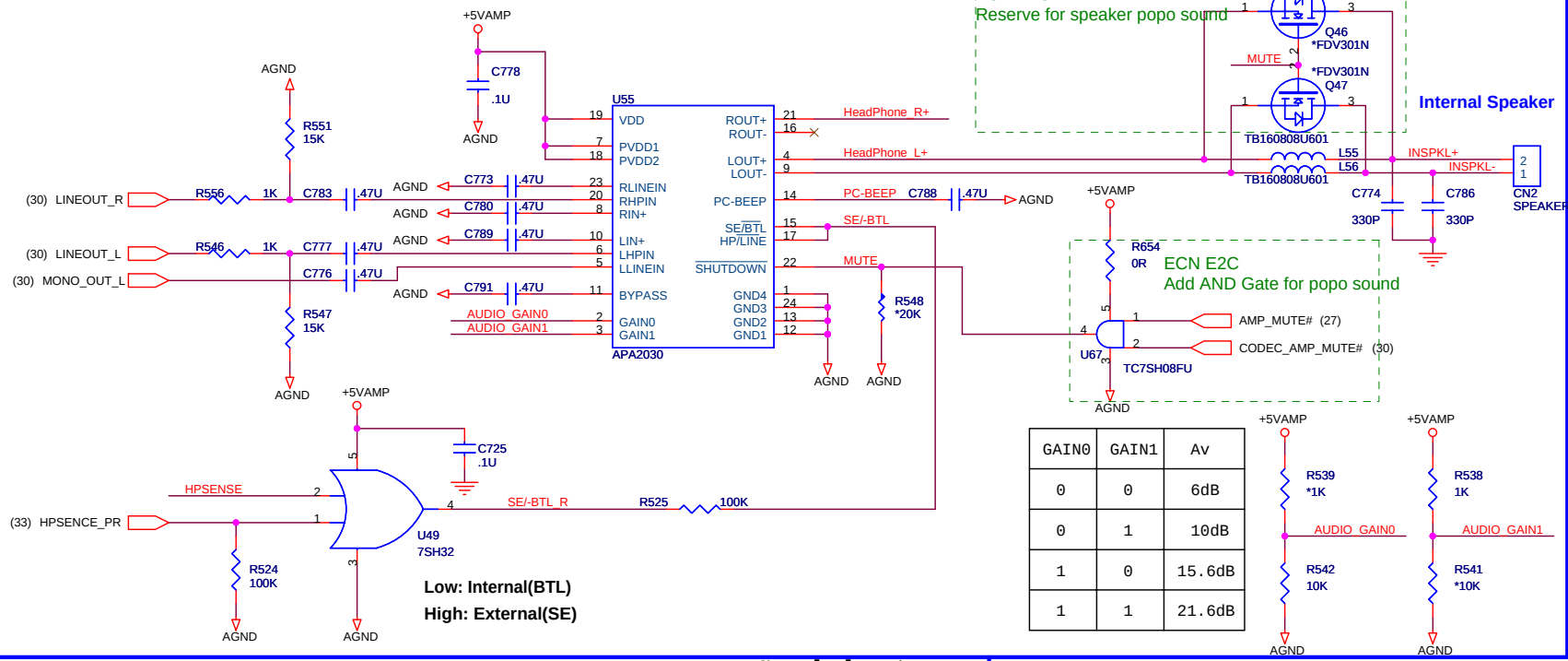
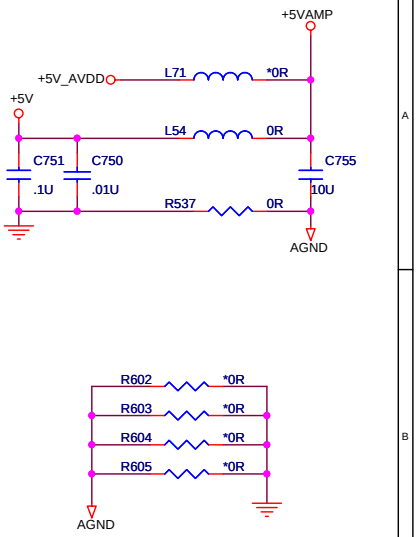
Audio Amplifier

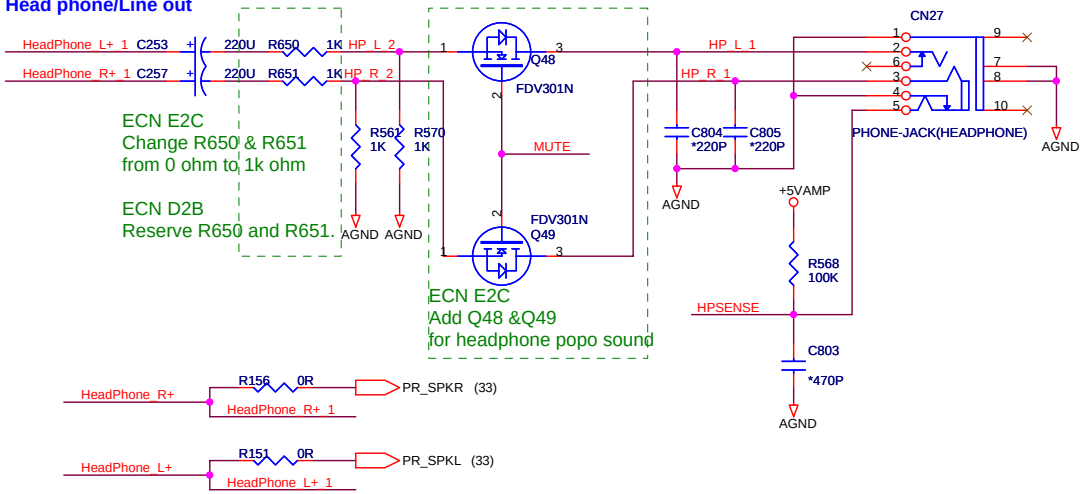


GAIN0	GAIN1	Av
0	0	6dB
0	1	10dB
1	0	15.6dB
1	1	21.6dB

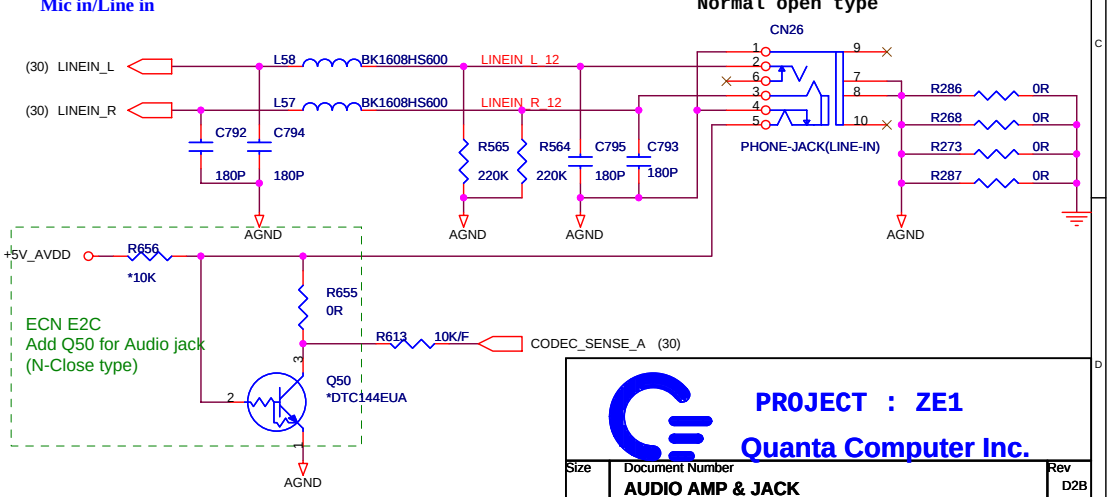
AMP power



Head phone/Line out



Mic in/Line in



PROJECT : ZE1

Quanta Computer Inc.

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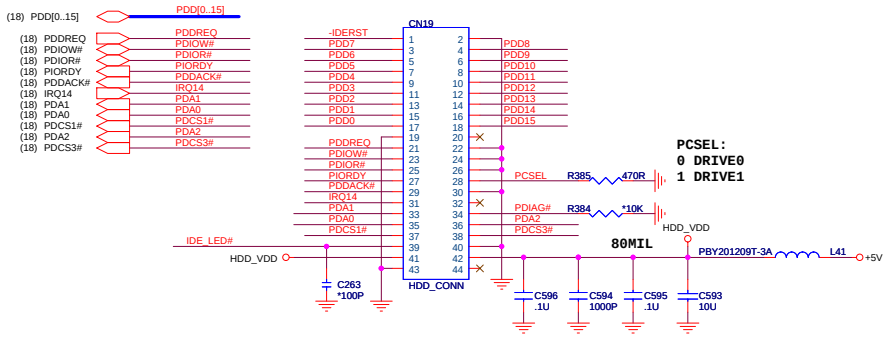
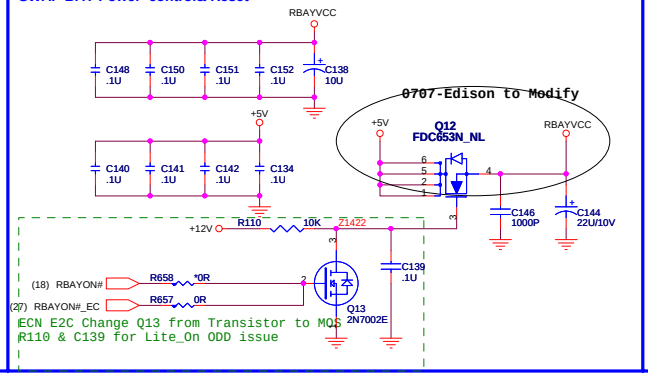
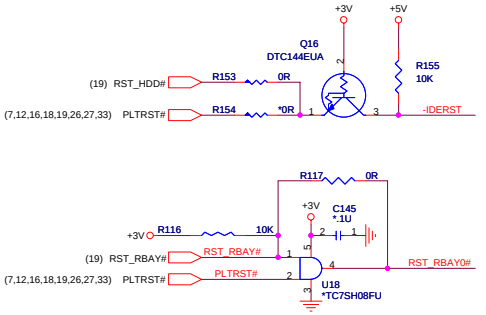
HDD(Master) CONN



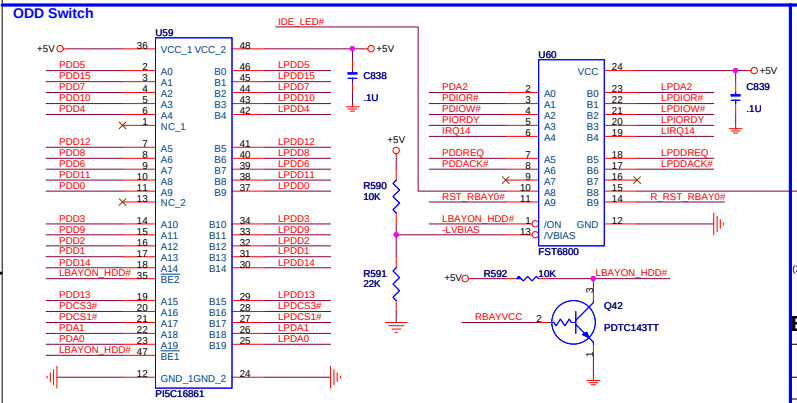
SWAP BAY Power control& Reset



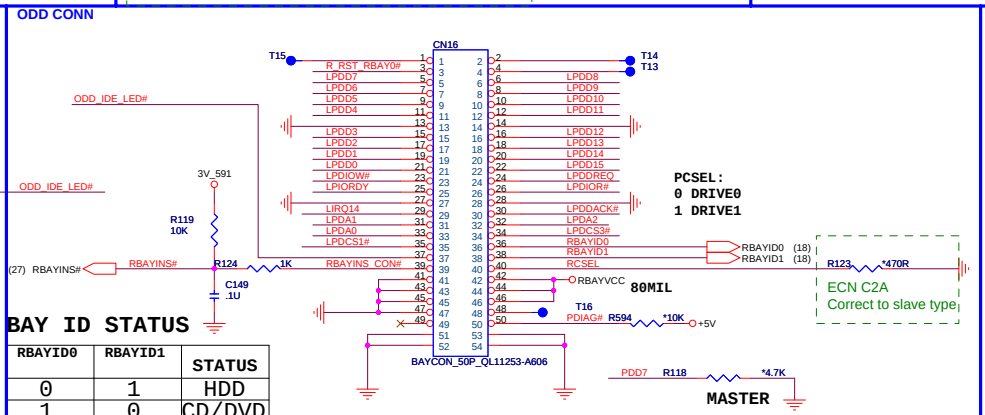
IDE Reset



ODD Switch



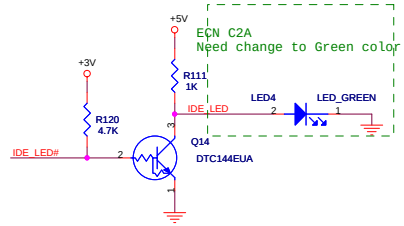
ODD CONN



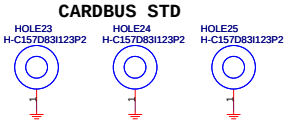
BAY ID STATUS

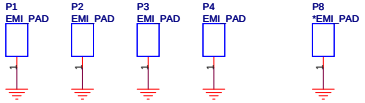
RBAYID0	RBAYID1	STATUS
0	1	HDD
1	0	CD/DVD

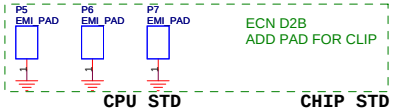
IDE LED Control logic

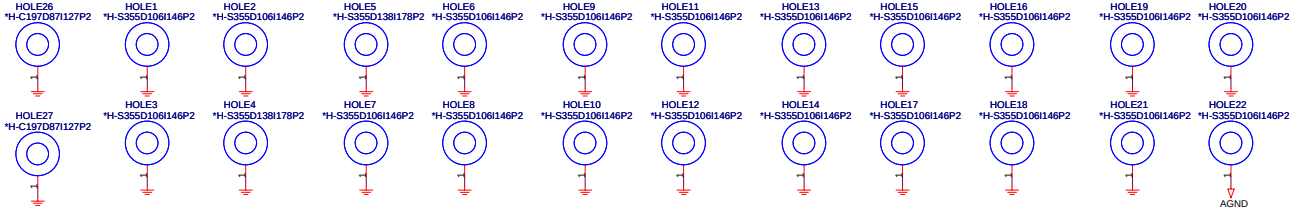


CARDBUS STD

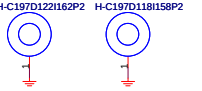




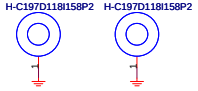


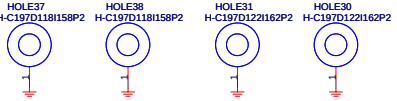


CPU STD

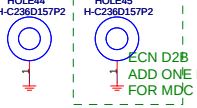


CHIP STD

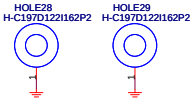


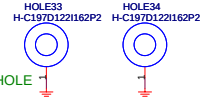


MDC STD

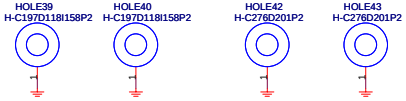


TOP STD





SENSOR STD



CD STD

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Quanta Computer Inc.

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Docking Interface

CN12-4

(24) D_LINKLED# — 100MBPS# — 8 LANLED_LINK
(24) D_ACTLED# — ACT# — 31 LANLED_ACT
33 GND33
SUSON_PR — 55 SUSON
MAINON_PR — 56 MAINON
DOCKPRG — 85 BRG_PWROK
(27) KPCLK — KPCLK — 52 PS2KBCK
(27) KPDATA — KPDATA — 51 PS2KBDT
(27) MSCLK — MSCLK — 54 PS2MSCK
(27) MSDATA — MSDATA — 53 PS2MSDT
(26) MDSR1# — MDSR1# — 48 DSR#
(26) MRTS1# — MRTS1# — 46 RTS#
(26) MCTS1# — MCTS1# — 44 CTS#
(19,26) MRI1 — MRI1 — 42 RI
(26) MDCD1# — MDCD1# — 49 DCD#
(26) MRXD1 — MRXD1 — 47 RXD#
(26) MTXD1 — MTXD1 — 45 TXD#
(26) MDTR1# — MDTR1# — 43 DTR#
50 GND50
(30) SPDIF_OUT_PR — 41 SPDIF_OUT
AUDGND1 — 72 AGND72
SPKR_PR — 74 LINEOUT_R
SPKL_PR — 75 LINEOUT_L
(30) LINEINR_PR — LINEINR_PR — 70 LINEIN_R
(30) LINEINL_PR — LINEINL_PR — 71 LINEIN_L
(30) PR_MIC — PR_MIC — 73 MICIN
AUDGND1 — 76 AGND76
(30) PR_MIC_IN — 69 PRMIC_DET
(31) HPSENCE_PR — 40 HPSENSE_PR
124 G2
EZ4_Acer_define

CN12-3

GND100 — 100
TV_COMPS — TV_COMP_PR — 101 — TV_COMP_PR (17)
TV_LUMA — TV_Y/G_PR — 102 — TV_Y/G_PR (17)
TV_CRMA — TV_C/R_PR — 103 — TV_C/R_PR (17)
GND104 — 104
STRB# — STRB#_R — 9 — R331 0R — STRB# (26)
PD0 — PD0_R — 11 — R326 0R — PD0
PD1 — PD1_R — 13 — R323 0R — PD1
PD2 — PD2_R — 15 — R317 0R — PD2
PD3 — PD3_R — 17 — R315 0R — PD3
PD4 — PD4_R — 18 — R314 0R — PD4
PD5 — PD5_R — 19 — R313 0R — PD5
PD6 — PD6_R — 20 — R312 0R — PD6
PD7 — PD7_R — 21 — R311 0R — PD7
PD[0..7] (26)
PE — PE_R — 24 — R304 0R — PE (26)
AFD# — AFD#_R — 10 — R327 0R — AFD# (26)
ERROR# — ERROR#_R — 12 — R324 0R — ERROR# (26)
INIT# — INIT#_R — 14 — R319 0R — INIT# (26)
SLIN# — SLIN#_R — 16 — R316 0R — SLIN# (26)
ACK# — ACK#_R — 22 — R309 0R — ACK# (26)
BUSY — BUSY_R — 23 — R307 0R — BUSY (26)
SLCT — SLCT_R — 25 — R303 0R — SLCT (26)
GND58 — 58
GND77 — 77
GND110 — 110
RESERVE32 — 32
RESERVE82 — 82
G1 — 123
EZ4_Acer_define

+5V — LUSB1 (18)

C498 *270P, C501 *270P, C502 *270P, C507 *270P, C509 *270P, C512 *270P, C521 *270P, C524 *270P
C527 *270P, C491 *270P, C495 *270P, C496 *270P, C510 *270P, C519 *270P, C522 *270P, C526 *270P, C494 *270P

For EMI

SPKL_PR — C553 *220P
SPKR_PR — C534 *220P
LINEINL_PR — C528 *220P
LINEINR_PR — C531 *220P
PR_MIC_IN — C529 *100P
PR_MIC — C532 *47P
100MBPS# — C549 *1000P
ACT# — C556 *1000P
TV_COMP_PR — C550 *1000P
TV_C/R_PR — C557 *10P
TV_Y/G_PR — C552 *10P

PR_CRTHSYNC — C508 *10P
PR_CRTVSYNC — C497 *10P
PR_BLU — C539 *10P
PR_GRN — C543 *10P
PR_RED — C547 *10P
CRT_HSYNC — C511 *10P
CRT_VSYNC — C503 *10P

ECN E2C
Remove LAN's reserve capacitors

CN12-2

(17) CRT_HSYNC — CRT_HSYNC — L32 BLM18BA220 — PR_CRTHSYNC — 78 CRT_HS
(17) CRT_VSYNC — CRT_VSYNC — L31 BLM18BA220 — PR_CRTVSYNC — 79 CRT_VS
(17) DDCCLK_1 — DDCCLK_1 — 81 CRT_DDCK
(17) DDCDAT_1 — DDCDAT_1 — 80 CRT_DDCDT
106 GND105
(17) VGA_RED_PR — VGA_R — 107
(17) VGA_GRN_PR — VGA_G — 108
(17) VGA_BLU_PR — VGA_B — 109
GND109 — 117
GND117
(3) CLK_PCIE_EZ1 — PCIE1_CLK+ — 119
(3) CLK_PCIE_EZ1# — PCIE1_CLK- — 120
GND118 — 118
(19) PCIE_TXP1 — PCIE1_TP — 115
(19) PCIE_TXN1 — PCIE1_TN — 116
GND114 — 114
(19) PCIE_RXP1 — PCIE1_RP — PETP1 — 111
(19) PCIE_RXN1 — PCIE1_RN — PETN1 — 112
GND113 — 113
(3) CLK_PCIE_EZ2 — PCIE2_CLK+ — 29
(3) CLK_PCIE_EZ2# — PCIE2_CLK- — 30
GND27 — 27
(19) PCIE_TXP2 — PCIE2_TP — 59
(19) PCIE_TXN2 — PCIE2_TN — 60
GND28 — 28
(19) PCIE_RXP2 — PCIE2_RP — PETP2 — 89
(19) PCIE_RXN2 — PCIE2_RN — PETN2 — 90
GND88 — 88
(7,12,16,18,19,26,27,32) PLTRST# — D18 1N4148 BAS316 — PCIERST — 57
(18,19) LUSB2 — PCIEWAKE — LUSB2 — 26
(3,19) PDAT_SMB — PCIESMBDT — 86
(3,19) PCLK_SMB — PCIESMBCK — 83
(3) EZ_CLKREQ# — PCIEREQ# — 87
VA — 122 P2
C2 .1U, C1 .1U
EZ4_Acer_define

CN12-1

DVI_HPD — DVI_DET — 64
DVI_CLK- — 98
DVI_CLK+ — 97
GND99 — 99
DVI_D0- — 94
DVI_D0+ — 95
GND96 — 96
DVI_D1- — 91
DVI_D1+ — 92
GND93 — 93
DVI_D2- — 61
DVI_D2+ — 62
GND63 — 63
DVI_DDCCK — TMDS_DDCCLK_5V — 67
DVI_DDCDT — TMDS_DDCDATA_5V — 65
GND66 — 66
TX3P — X-TX3P-PR — 37
TX3N — X-TX3N-PR — 38
GND39 — 39
TX2P — X-TX2P-PR — 34
TX2N — X-TX2N-PR — 35
GND36 — 36
TX1P — X-TX1P-PR — 4
TX1N — X-TX1N-PR — 5
GND6 — 6
TX0N — X-TX0N-PR — 2
TX0P — X-TX0P-PR — 1
GND3 — 3
GND7 — 7
DOCK_IN# — 68
DOCKED# — 84 — R308 1K
P1 — 121 — VA

ECN E2C Reserve for Docking DVI EMI issue

C875 *12P — TMDS_TXCM_PR (16)
C876 *12P — TMDS_TXCP_PR (16)
C877 *12P — TMDS_TX0M_PR (16)
C878 *12P — TMDS_TX0P_PR (16), TMDS_TX1M_PR (16)
TMDS_TX1P_PR (16)
TMDS_TX2M_PR (16)
TMDS_TX2P_PR (16)

X-TX3P-PR (24)
X-TX3N-PR (24)
X-TX2P-PR (24)
X-TX2N-PR (24)
X-TX1P-PR (24)
X-TX1N-PR (24)
X-TX0N-PR (24)
X-TX0P-PR (24)

+3V_S5
R320 100K — Rev A2 — For correct voltage level
DOCKIN#
C520 .1U

Docking power sequence circuit

DOCKIN#
SUSON_PR — U35B 7W125FU — SUSON (25,27,37,38)
DOCKIN#
+3V_S5
C499 .1U
MAINON_PR — U35A 7W125FU — MAINON (27,35,37,38,39)

Docking Insert circuit

+3V_S5
C504 .1U
U36 NC7SZ14
DOCKIN#
PR_INS
DOCKPRG
U37 TC7SH08FU
R318 200K
C500 .1U
+3V_S5

For EC and SB detect Docking insert
H==>Docking insert
PR_STS (19,27)

+5V
R325 10K
For CRT and S-VIDEO detect Docking insert
L==>Docking insert
PR_INSERT# (17)

R321 68K
Q27 MMBT3904

For LAN and TMDS detect Docking insert
H==>Docking insert
PR_INS (19,24)

Docking TMDS circuit

(12,16) DVI_DET — DVI_DET
R345 100K

ECN E2C
Add new CAP for EMI request
+3V
C881 .1U
R322 2.2K
+5V
R329 10K
(12,16) TMDS_DDCDATA — Q28 FDV301N — TMDS_DDCDATA_5V — TMDS_DDCDATA_5V

ECN E2C
Add new CAP for EMI request
+3V
C882 .1U
R330 2.2K
+5V
R333 10K
(12,16) TMDS_DDCCLK — Q29 FDV301N — TMDS_DDCCLK_5V — TMDS_DDCCLK_5V

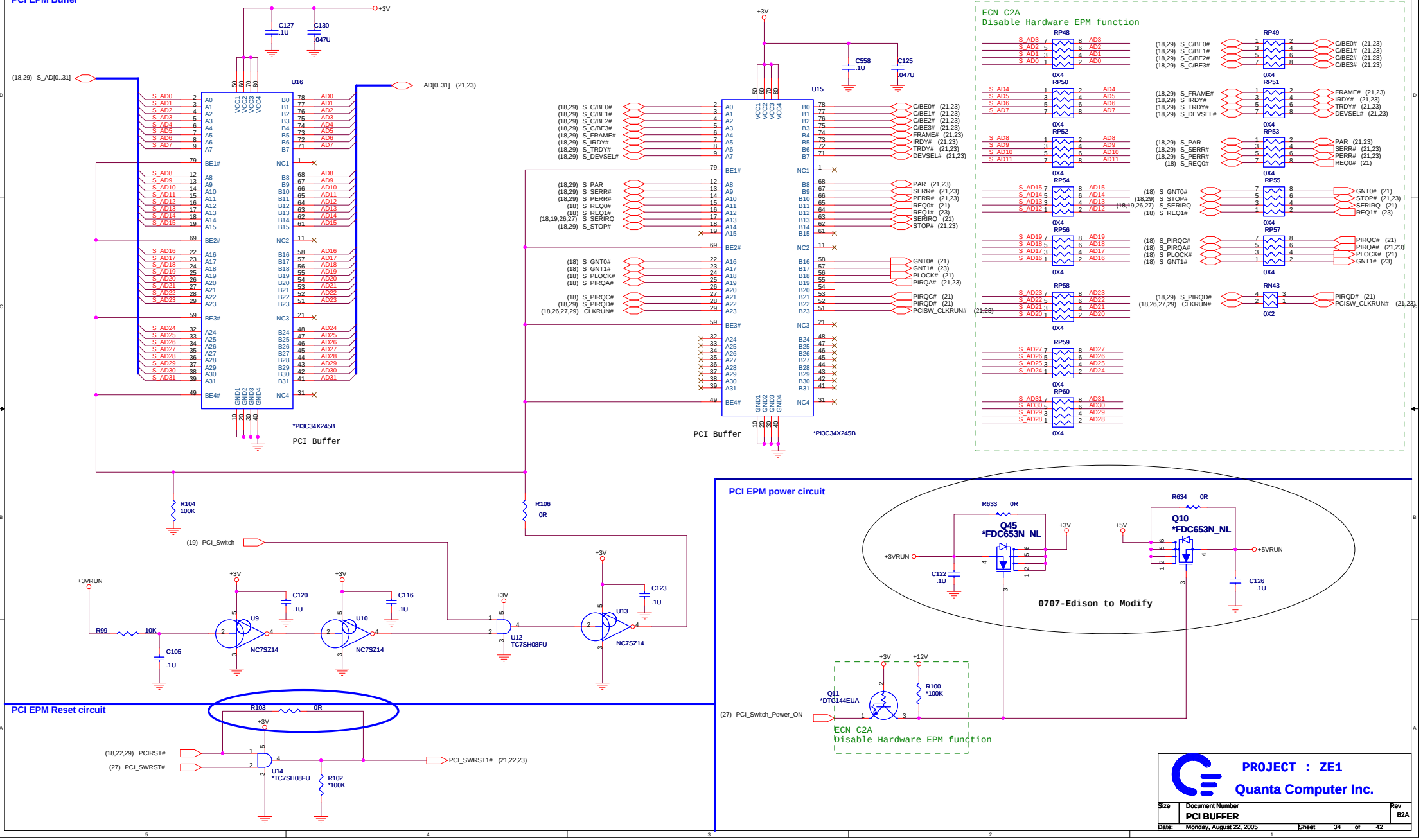
Docking Audio circuit

(31) PR_SPKL — PR_SPKL — R348 470R — SPKL1 — L37 BK1608LL121 — SPKL_PR
R342 1K — AUDGND1
C551 470P — AUDGND1
(31) PR_SPKR — PR_SPKR — R340 470R — SPKR1 — L35 BK1608LL121 — SPKR_PR
R337 1K — AUDGND1
C541 470P — AUDGND1
R343 0R — AUDGND1

PROJECT : ZE1
Quanta Computer Inc.

Size	Document Number	Rev
	EZ PORT	B2A
Date: Monday, August 22, 2005	Sheet 33 of 42	

PCI EPM Buffer



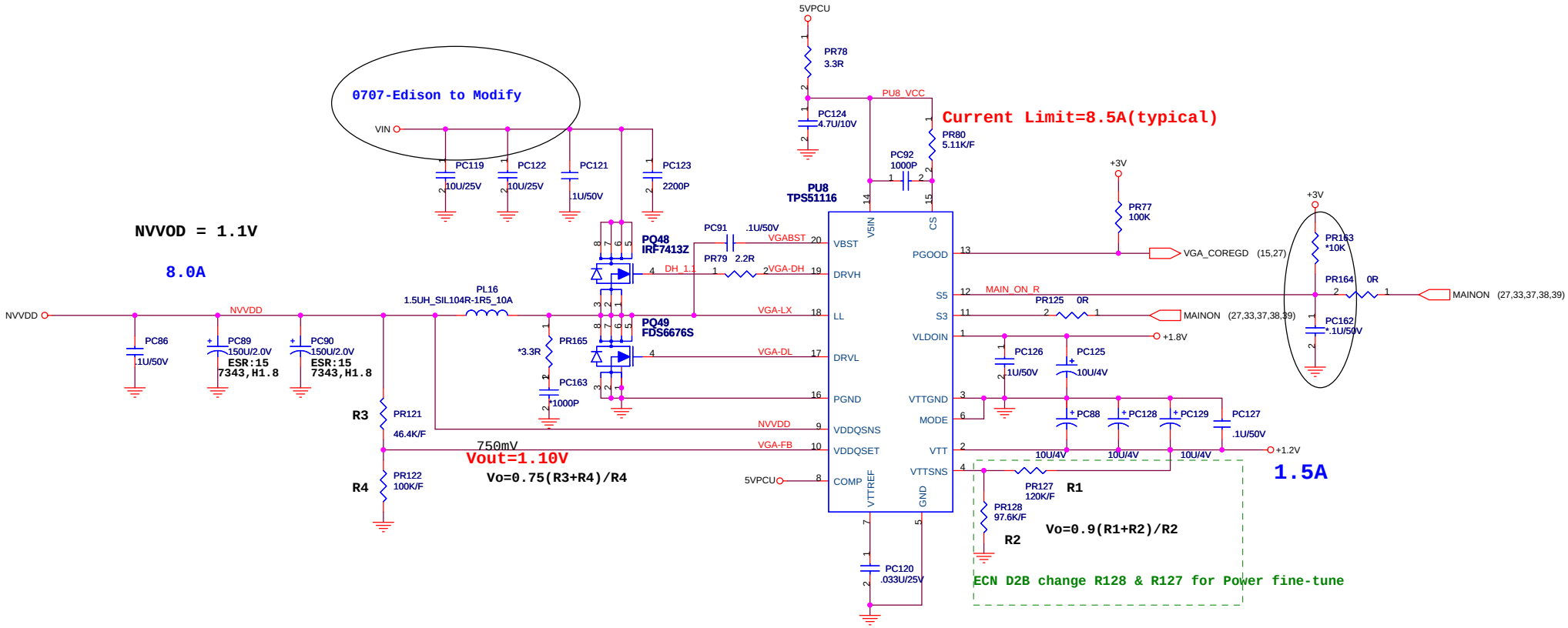
PCI EPM power circuit

PCI EPM Reset circuit

PROJECT : ZE1

Quanta Computer Inc.

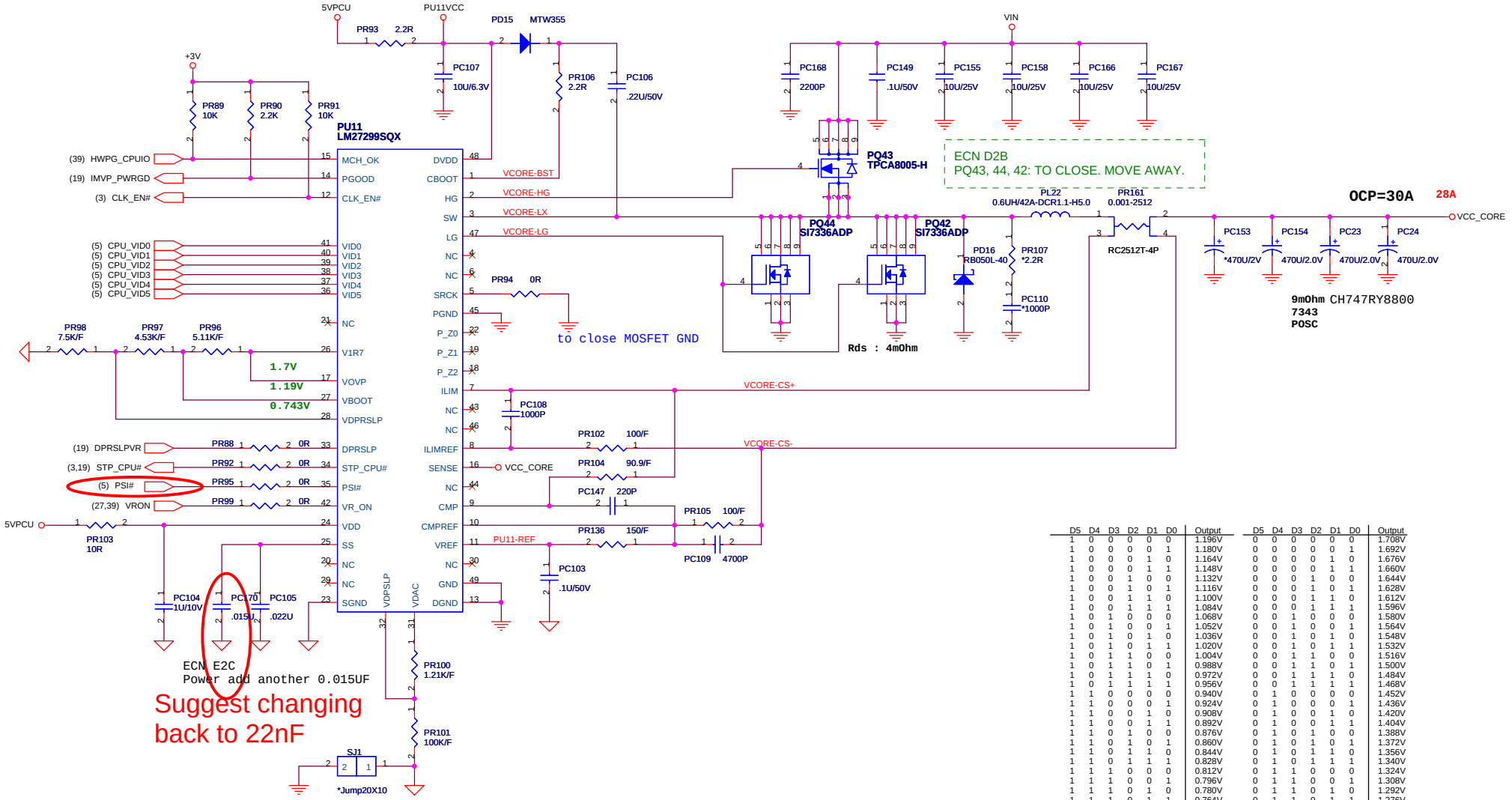
Size	Document Number	Rev
	PCI BUFFER	B2A
Date: Monday, August 22, 2005	Sheet 34 of 42	



PROJECT : ZE1

Quanta Computer Inc.

Size	Document Number	Rev
	VGA CORE / VRAM POWER	B2A
Date: Monday, August 22, 2005	Sheet 35 of 42	

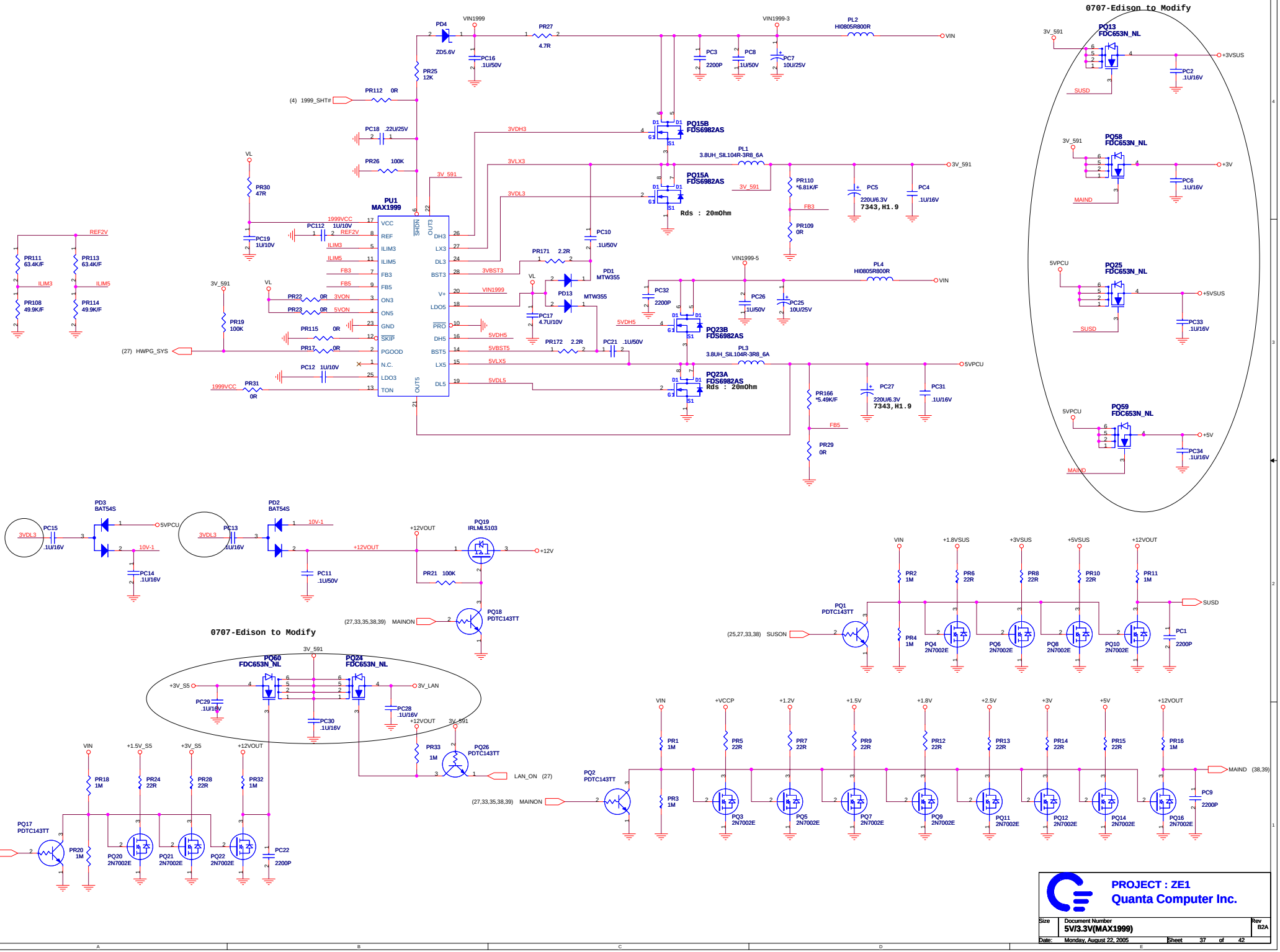


D5	D4	D3	D2	D1	D0	Output
1	0	0	0	0	0	1.196V
1	0	0	0	0	1	1.180V
1	0	0	0	1	0	1.164V
1	0	0	0	1	1	1.148V
1	0	0	1	0	0	1.132V
1	0	0	1	0	1	1.116V
1	0	0	1	1	0	1.100V
1	0	0	1	1	1	1.084V
1	0	1	0	0	0	1.068V
1	0	1	0	0	1	1.052V
1	0	1	0	1	0	1.036V
1	0	1	0	1	1	1.020V
1	0	1	1	0	0	1.004V
1	0	1	1	0	1	0.988V
1	0	1	1	1	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

PROJECT : ZE1
Quanta Computer Inc.

Size	Document Number	Rev
	CPU CORE	D2B
Date: Tuesday, August 23, 2005	Sheet 36 of 42	


0707-Edison to Modify
PU1
MAX1999
PD4
ZD5.6V
VIN1999
PR27
4.7R
VIN1999-3
PL2
HI0805R800R
VIN
PR25
12K
PR112 0R
(4) 1999_SHT#
PC16
.1U/50V
PC3
2200P
PC8
.1U/50V
PC7
10U/25V
PC18 .22U/25V
PR26 100K
PQ15B
FDS6982AS
PQ15A
FDS6982AS
Rds : 20mOhm
PL1
3.8UH_SIL104R-3R8_6A
3V_591
PR110
*6.81K/F
FB3
PR109
0R
PC5
220U/6.3V
7343,H1.9
PC4
.1U/16V
3VDH3
3VLX3
3VDL3
PR30
47R
PC19
1U/10V
PC112
1U/10V
1999VCC
REF2V
ILIM3
ILIM5
FB3
FB5
PR22 0R 3VON
PR23 0R 5VON
PR115 0R
PR17 0R
PC12 1U/10V
PR31
0R
PR19
100K
(27) HWPG_SYS
PR111
63.4K/F
PR113
63.4K/F
PR108
49.9K/F
PR114
49.9K/F
PC10
.1U/50V
PR171 2.2R
PD1
MTW355
PD13
MTW355
PC17
4.7U/10V
PR172 2.2R
PC21 .1U/50V
3VBST3
VIN1999
5VDH5
5VBST5
5VLX5
5VDL5
VIN1999-5
PL4
HI0805R800R
PC32
2200P
PC26
.1U/50V
PC25
10U/25V
PQ23B
FDS6982AS
PL3
3.8UH_SIL104R-3R8_6A
PQ23A
FDS6982AS
Rds : 20mOhm
5VPCU
PR166
*5.49K/F
PR29
0R
PC27
220U/6.3V
7343,H1.9
PC31
.1U/16V
PQ13
FDC653N_NL
PC2
.1U/16V
+3VSUS
SUSD
PQ58
FDC653N_NL
PC6
.1U/16V
+3V
MAIND
PQ25
FDC653N_NL
PC33
.1U/16V
+5VSUS
SUSD
PQ59
FDC653N_NL
PC34
.1U/16V
+5V
MAIND
PD3
BAT54S
PD2
BAT54S
PC15
.1U/16V
PC13
.1U/16V
PC14
.1U/16V
PC11
.1U/50V
10V-1
+12VOUT
PQ19
IRLML5103
PR21 100K
PQ18
PDTC143TT
(27,33,35,38,39) MAINON
PQ1
PDTC143TT
(25,27,33,38) SUSON
PR2
1M
PR4
1M
PR6
22R
PR8
22R
PR10
22R
PR11
1M
PQ4
2N7002E
PQ6
2N7002E
PQ8
2N7002E
PQ10
2N7002E
PC1
2200P
SUSD
0707-Edison to Modify
PQ60
FDC653N_NL
PQ24
FDC653N_NL
+3V_S5
3V_LAN
PC29
.1U/16V
PC30
.1U/16V
PC28
.1U/16V
PR33
1M
PQ26
PDTC143TT
LAN_ON (27)
PQ17
PDTC143TT
S5_ON
PR18
1M
PR24
22R
PR28
22R
PR32
1M
PQ20
2N7002E
PQ21
2N7002E
PQ22
2N7002E
PC22
2200P
PQ2
PDTC143TT
PR1
1M
PR3
1M
PR5
22R
PR7
22R
PR9
22R
PR12
22R
PR13
22R
PR14
22R
PR15
22R
PR16
1M
PQ3
2N7002E
PQ5
2N7002E
PQ7
2N7002E
PQ9
2N7002E
PQ11
2N7002E
PQ12
2N7002E
PQ14
2N7002E
PQ16
2N7002E
PC9
2200P
MAIND (38,39)
PROJECT : ZE1
Quanta Computer Inc.
Size
Document Number
5V/3.3V(MAX1999)
Rev
B2A
Date: Monday, August 22, 2005
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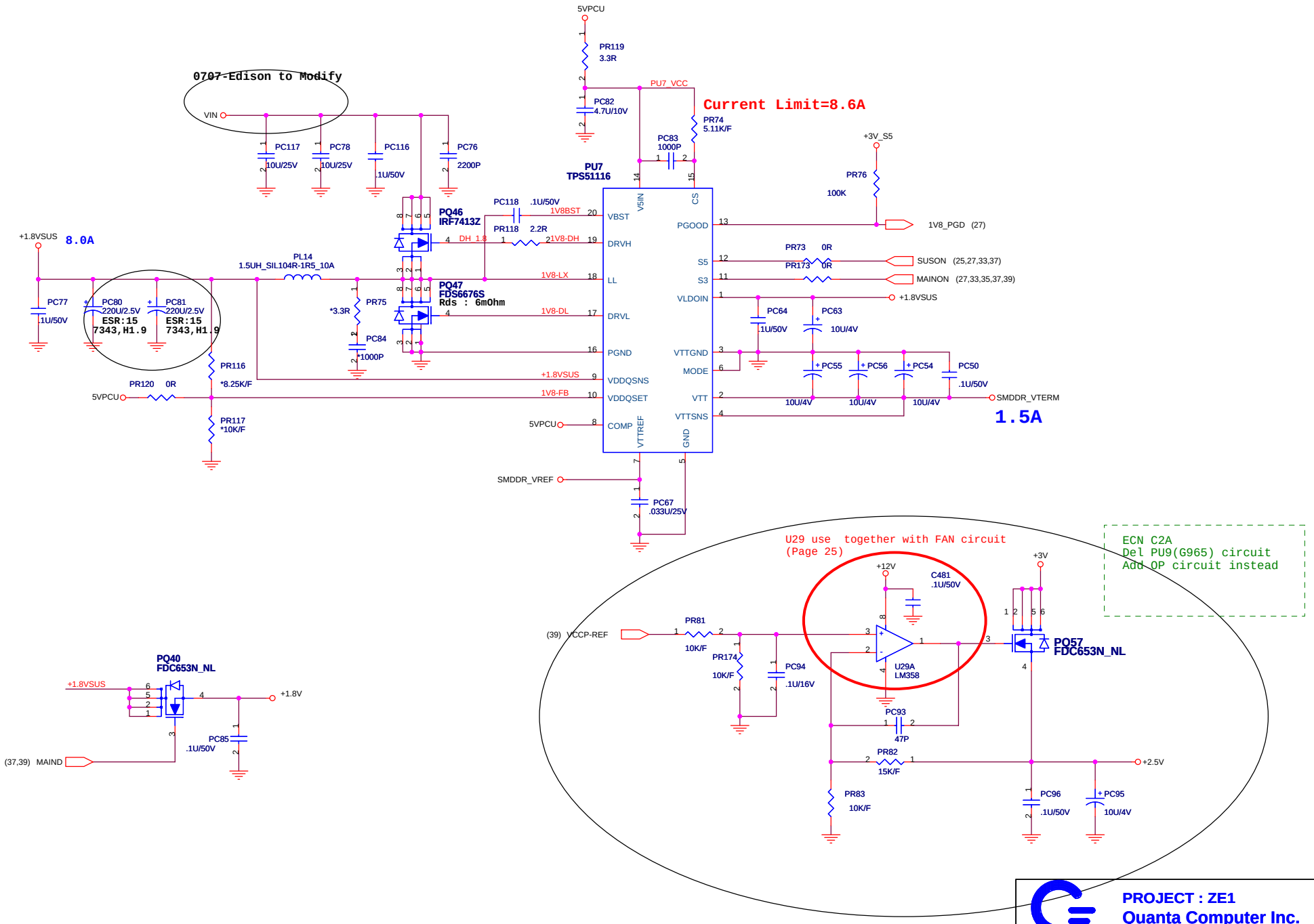
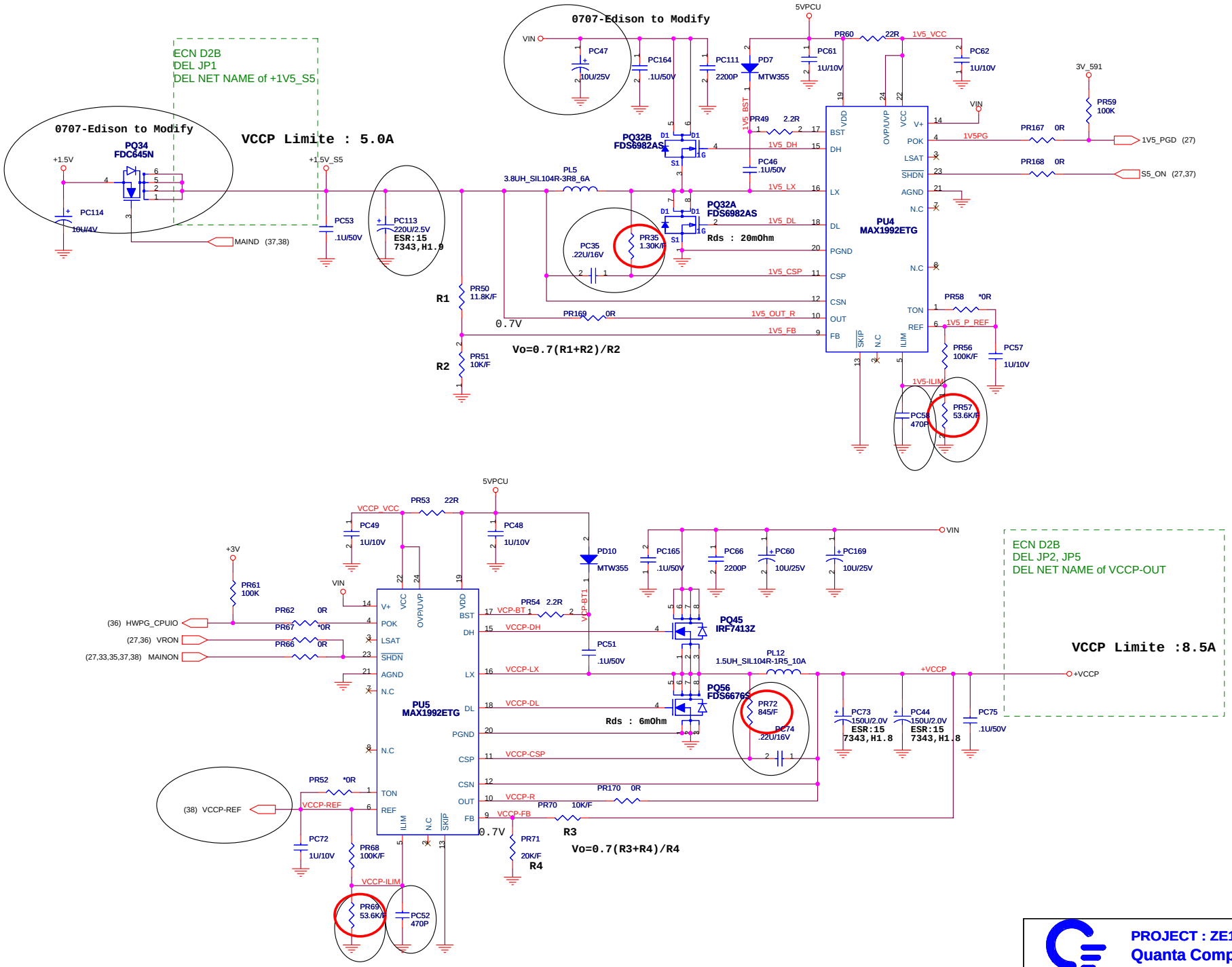


PROJECT : ZE1
Quanta Computer Inc.

Size	Document Number	Rev
	2.5VSUS / 1.25VTERM	B2A
Date: Monday, August 22, 2005	Sheet 38 of 42	


ECN D2B
DEL JP1
DEL NET NAME of +1V5_S5
0707-Edison to Modify
VCCP Limite : 5.0A
PQ34
FDC645N
+1.5V
+1.5V_S5
PC114
10U/4V
PC53
.1U/50V
PC113
220U/2.5V
ESR:15
7343,H1.9
MAIND (37,38)
PL5
3.8UH_SIL104R-3R8_6A
PC47
10U/25V
PC164
.1U/50V
PC111
2200P
PD7
MTW355
5VPCU
PR60
22R
1V5_VCC
PC61
1U/10V
PC62
1U/10V
3V_591
PR59
100K
PR167
0R
1V5PG
1V5_PGD (27)
PR168
0R
S5_ON (27,37)
PR49
2.2R
1V5_BST
1V5_DH
1V5_LX
1V5_DL
1V5_CSP
1V5_OUT_R
1V5_FB
PC46
.1U/50V
PQ32B
FDS6982AS
PQ32A
FDS6982AS
PC35
.22U/16V
PR35
1.30K/F
Rds : 20mOhm
PU4
MAX1992ETG
VDD
BST
DH
LX
DL
PGND
CSP
CSN
OUT
FB
SKIP
N.C
ILIM
VCC
OVP/UVP
V+
POK
LSAT
SHDN
AGND
N.C
TON
REF
R1
PR50
11.8K/F
R2
PR51
10K/F
0.7V
Vo=0.7(R1+R2)/R2
PR169
0R
PR58
*0R
1V5_P_REF
PR56
100K/F
PC57
1U/10V
1V5-ILIM
PC58
470P
PR57
53.6K/F
5VPCU
PR53
22R
VCCP_VCC
PC49
1U/10V
PC48
1U/10V
+3V
PR61
100K
VIN
PR62
0R
PR67
*0R
PR66
0R
(36) HWPG_CPUIO
(27,36) VRON
(27,33,35,37,38) MAINON
PD10
MTW355
PC165
.1U/50V
PC66
2200P
PC60
10U/25V
PC169
10U/25V
PR54
2.2R
VCP-BT1
VCCP-BT
VCCP-DH
VCCP-LX
VCCP-DL
VCCP-CSP
VCCP-R
VCCP-FB
PQ45
IRF7413Z
PC51
.1U/50V
PL12
1.5UH_SIL104R-1R5_10A
PQ56
FDS6676S
PR72
845/F
PC74
.22U/16V
Rds : 6mOhm
+VCCP
PC73
150U/2.0V
ESR:15
7343,H1.8
PC44
150U/2.0V
ESR:15
7343,H1.8
PC75
.1U/50V
VCCP Limite :8.5A
ECN D2B
DEL JP2, JP5
DEL NET NAME of VCCP-OUT
PU5
MAX1992ETG
(38) VCCP-REF
PR52
*0R
VCCP-REF
PC72
1U/10V
PR68
100K/F
VCCP-ILIM
PR69
53.6K/F
PC52
470P
PR170
0R
PR70
10K/F
PR71
20K/F
R3
R4
0.7V
Vo=0.7(R3+R4)/R4
PROJECT : ZE1
Quanta Computer Inc.
Size
Document Number
+1.5V / +VCCP
Rev
D2B
Date:
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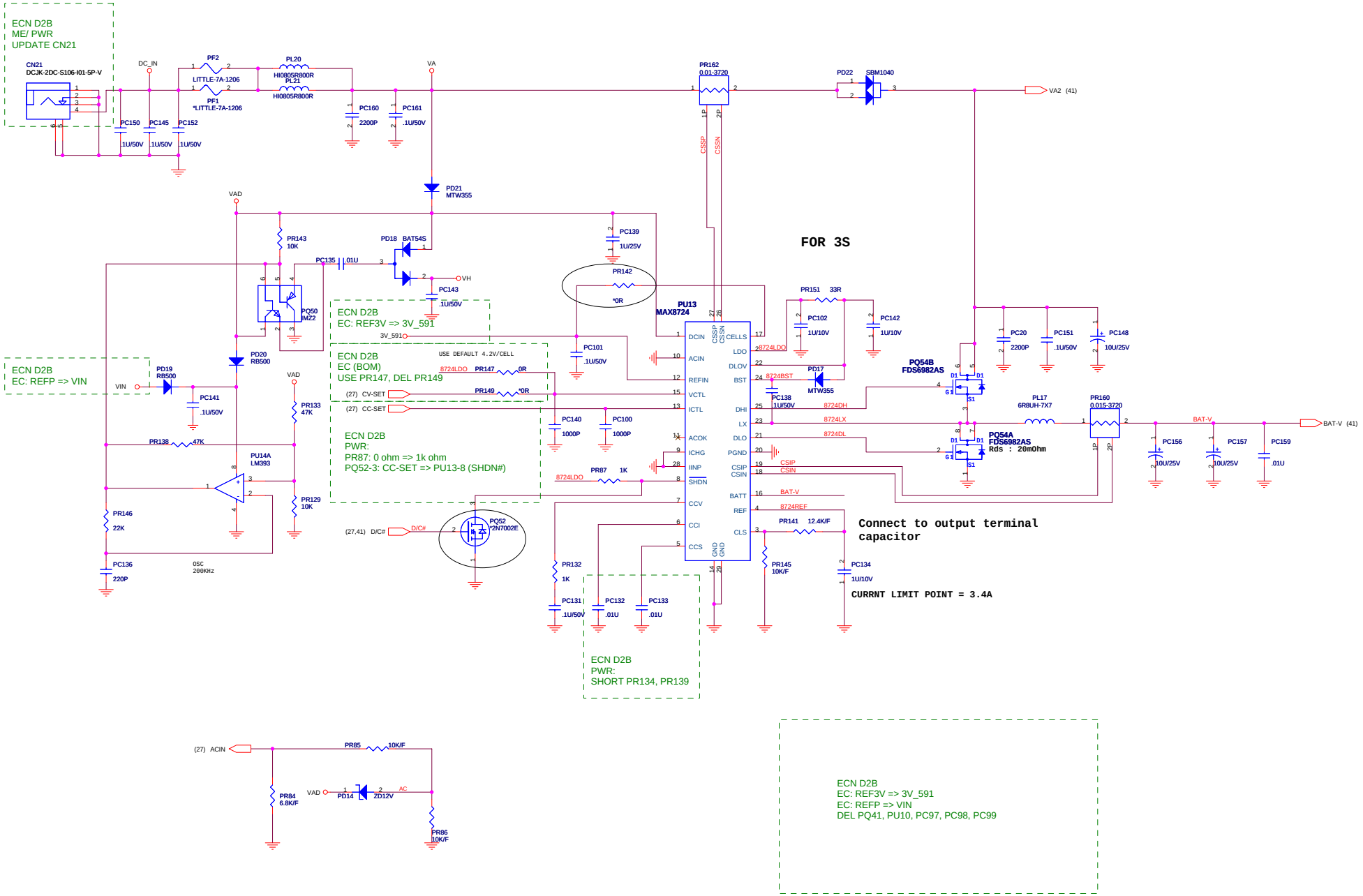
42


ECN D2B
ME/ PWR
UPDATE CN21
CN21
DCJK-2DC-S106-I01-5P-V
DC_IN
PF2
LITTLE-7A-1206
PF1
*LITTLE-7A-1206
PL20
HI0805R800R
PL21
HI0805R800R
VA
PR162
0.01-3720
PD22
SBM1040
VA2 (41)
PC150
1U/50V
PC145
1U/50V
PC152
1U/50V
PC160
2200P
PC161
.1U/50V
PD21
MTW355
VAD
PR143
10K
PC135
.01U
PD18
BAT54S
VH
PC143
.1U/50V
PC139
1U/25V
PR142
*0R
FOR 3S
PU13
MAX8724
PR151
33R
PC102
1U/10V
PC142
1U/10V
PD17
MTW355
PC138
1U/50V
PQ54B
FDS6982AS
PC20
2200P
PC151
.1U/50V
PC148
10U/25V
PL17
6R8UH-7X7
PR160
0.015-3720
PQ54A
FDS6982AS
Rds : 20mOhm
PC156
10U/25V
PC157
10U/25V
PC159
.01U
BAT-V
BAT-V (41)
ECN D2B
EC: REF3V => 3V_591
3V_591
PC101
.1U/50V
ECN D2B
EC (BOM)
USE PR147, DEL PR149
USE DEFAULT 4.2V/CELL
8724LDO
PR147
0R
PR149
*0R
(27) CV-SET
(27) CC-SET
PC140
1000P
PC100
1000P
ECN D2B
EC: REFP => VIN
VIN
PD19
RB500
PD20
RB500
PC141
.1U/50V
PR138
47K
PR133
47K
PU14A
LM393
PR129
10K
PR146
22K
PC136
220P
OSC
286KHz
ECN D2B
PWR:
PR87: 0 ohm => 1k ohm
PQ52-3: CC-SET => PU13-8 (SHDN#)
PR87
1K
(27,41) D/C#
PQ52
2N7002E
PR132
1K
PC131
.1U/50V
PC132
.01U
PC133
.01U
ECN D2B
PWR:
SHORT PR134, PR139
PR141
12.4K/F
PR145
10K/F
PC134
1U/10V
Connect to output terminal capacitor
CURRNT LIMIT POINT = 3.4A
(27) ACIN
PR85
10K/F
PR84
6.8K/F
PD14
ZD12V
PR86
10K/F
ECN D2B
EC: REF3V => 3V_591
EC: REFP => VIN
DEL PQ41, PU10, PC97, PC98, PC99
PROJECT : ZE1
Quanta Computer Inc.
Size
Document Number
BATTERY CHARGER
Rev
D2B
Date: Tuesday, August 23, 2005
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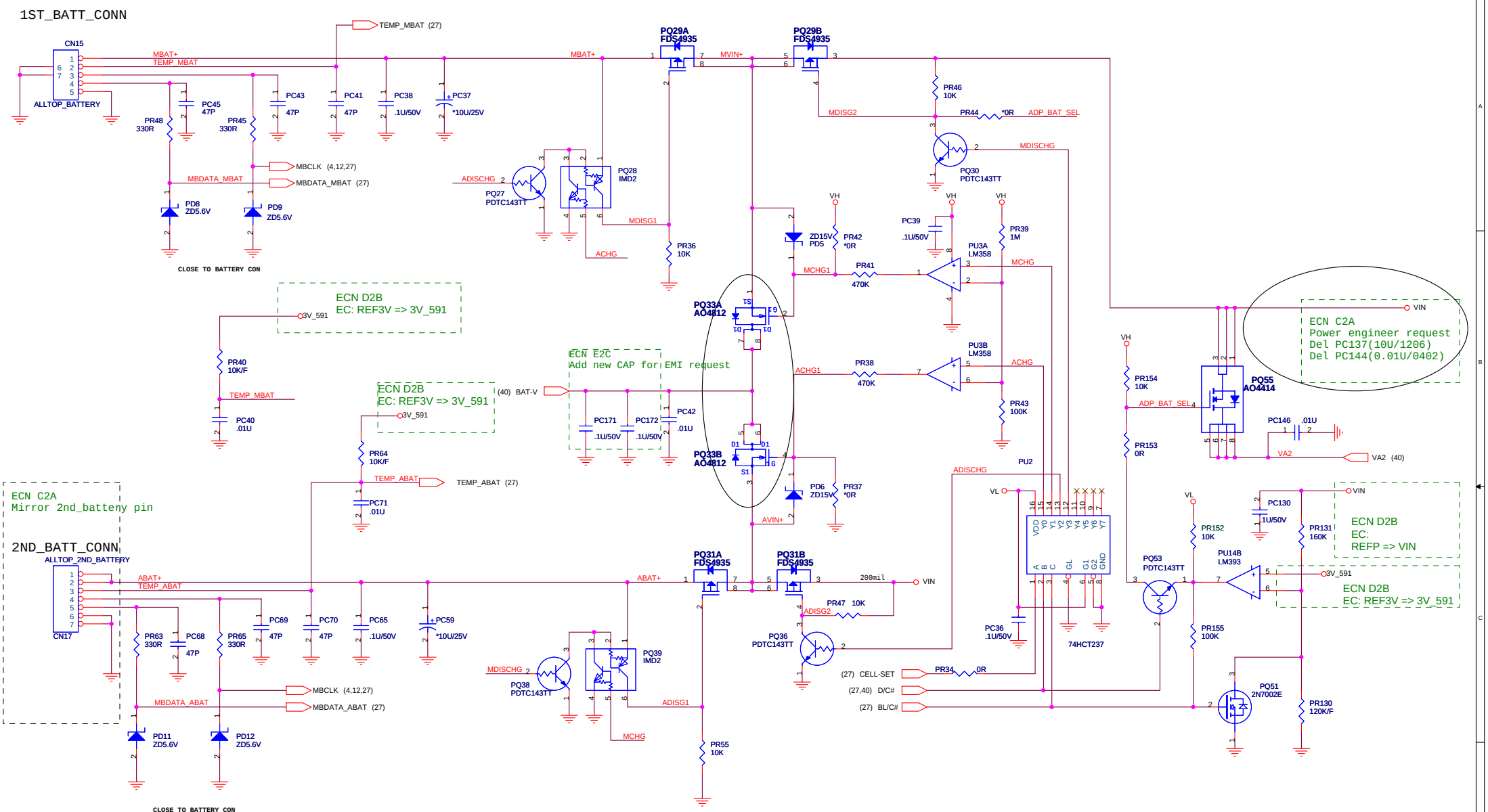

PROJECT : ZE1		
Quanta Computer Inc.		
Size	Document Number: BATTERY SELECT	Rev: D2B
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Track point circuit and CONN

ECN C2A
RESERVE FOR 3D FUNCTION

	2D MODE	3D MODE
C131	2200 pF	100 pF
C132	2200 pF	470 pF
R107	470 Kohm	1.8 Mohm
R109	470 Kohm	470 Kohm

R624 *3D@0 TP_X
R622 *3D@3.3K/F
U62
TP_PWR_CN
TP_X_CN
TP_Y_CN
TP_GND_CN
3D_ECNT2
3D_ECNT1
TP_Y
C864 *3D@1U
*3D@TC74LVX4053FT

C131 2D@2200P
R107 2D@470K
L9 BK1608LL121
TP_X R105 1.3K/F
C132 2D@2200P
R109 2D@470K
L10 BK1608LL121
TP_Y R108 1.3K/F
+5V
L8 BLM21P300S
TP_VREF
C133 1U
L11 TI201209G121

U17
ALPS_3DA3DT362A
3DA3DT362A
XOUT XIN YOUT YIN VREF AVDD AVSS AVSS AVSS AVSS
MOD3 -SWM -SWR -SWL
-RESETB OSCIN OSCOUT DVDD DVSS LCP TEST2 TEST1 HCLK HDAT ECNT2 ECNT1 MOD1 MOD2

R113 10K +5V
R114 100R
C143 1U
TP_OSCIN
T169
Y9
OUT VDD GND OE
4MHZ/30PPM
C179 .01U
C136 1U
TPCLK (27)
TPDATA (27)
PULL HIGH in E.C. side
3D_ECNT2
3D_ECNT1
R115 2D@0R
R627 0R
ECN C2A
ALPS: DEL R112 (P.H.) & ADD one R to GND

ECN C2A
ALPS: NEW ADD
R625 0R
R626 0R
CN3
ACES-88264-0401
88264-04XX-4P-L

SW1
SW2
LEFT#
RIGHT#

	at 3D	at 2D
MOD1	N.C.(High)	GND(Low)
MOD2	GND(Low)	GND(Low)
MOD3	GND(Low)	GND(Low)
SWM	GND(Low)	GND(Low)

ECN C2A
Change GND & PWR connect
TP_GND_CN
TP_Y_CN
TP_X_CN
TP_PWR_CN
3D MODE: C128= NO STUFF
C128 2D@.1U

DEFAULT: STUFF THOSE RESISTERS FOR BYPASS.
TP_VREF R619 2D@0R TP_PWR_CN
TP_Y R620 2D@0R TP_Y_CN
TP_X R621 2D@0R TP_X_CN
R623 2D@0R TP_GND_CN

ECN D2B
Change Footprint
88264-04XX-4P-L

GND
Y
X
Vcc
ALPS STICK-POINT SENSOR

ALPS SOLUTION

ECN D2B
ADD SEMTCH SOLUTION

SEMTECH SOLUTION

SEM_INH
FROM TACK-SWITCH (LEFT & RIGHT)
LEFT#
RIGHT#
TPDATA
TPCLK
TO E.C. PS/2 I/F

U63
SEMTECH
SH1202
M6/5B LB INH MDAT MCLK SSELECT XCLK1 XCLK
RB SPWR0 SPWR1 SPWR2 SPWR3 SPWR4 DA OFST
XDAT Z_SIG1 Z_SIG0 DRV_XY1 DRV_XY0 VSS OSCOUT OSCIN
AD SELX SELZ DRVZ VREF RESET VSS2 VDD
*SME@SH1202

SWITCHED_PWR
C866 *SEM@.047U
R637 *SEM@10K/F
C867 *SEM@180P
C868 *SEM@.047U
SEM_DA
SEM_OFFSET
SEM_SIG_IN
SEM_VREF
Z_SIG
DRV_XY
T215
TP_OSCIN

NCS2001SN1T1G
VOUT VCC V+ VEE V-
LM321_K
LM321_A
U64
*SEM@NCS2001SN1T1G

R638 *SEM@10K/F
FINE TUNE SENEITIVITY

OUT= 4.5V
IN= 5.0V
SEM_4.5V
U65
G923
OUT IN SET GND SHDN#
*SEM@G923
C870 *1U

R639 *SEM@100K
R640 *SEM@0
R641 *SEM@39K/F
C871 *SEM@1U
C872 *SEM@1U
R646 *SEM@15K/F

G923
SHDN# GND IN SET OUT

R648 *SEM@3.16K/F
3D FUNCTION ENABLE/DISABLE

TP_PWR_CN R643 *SEM@0
TP_X_CN R642 *SEM@0
TP_Y_CN R645 *SEM@0
TP_GND_CN R644 *SEM@0
INTERLEAVE TO
R619, R620, R621 & R623

U66
0X 1X 0Y 1Y 0Z 1Z INH A B C VCC X-COM Y-COM Z-COM VEE GND
XY_SIG
Z_SIG
SEM_TP_Y
SEM_TP_X
SEM_INH
Z_NOT_XY
X_NOT_Y
SIGNAL_Y
SIGNAL_Z
R647 *SEM@0 XY GAIN
*SEM@TC74LVX4053FT

Z_SIG
X_NOT_Y
Z_NOT_XY
DRV_XY

PROJECT : ZE1			
Quanta Computer Inc.			
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