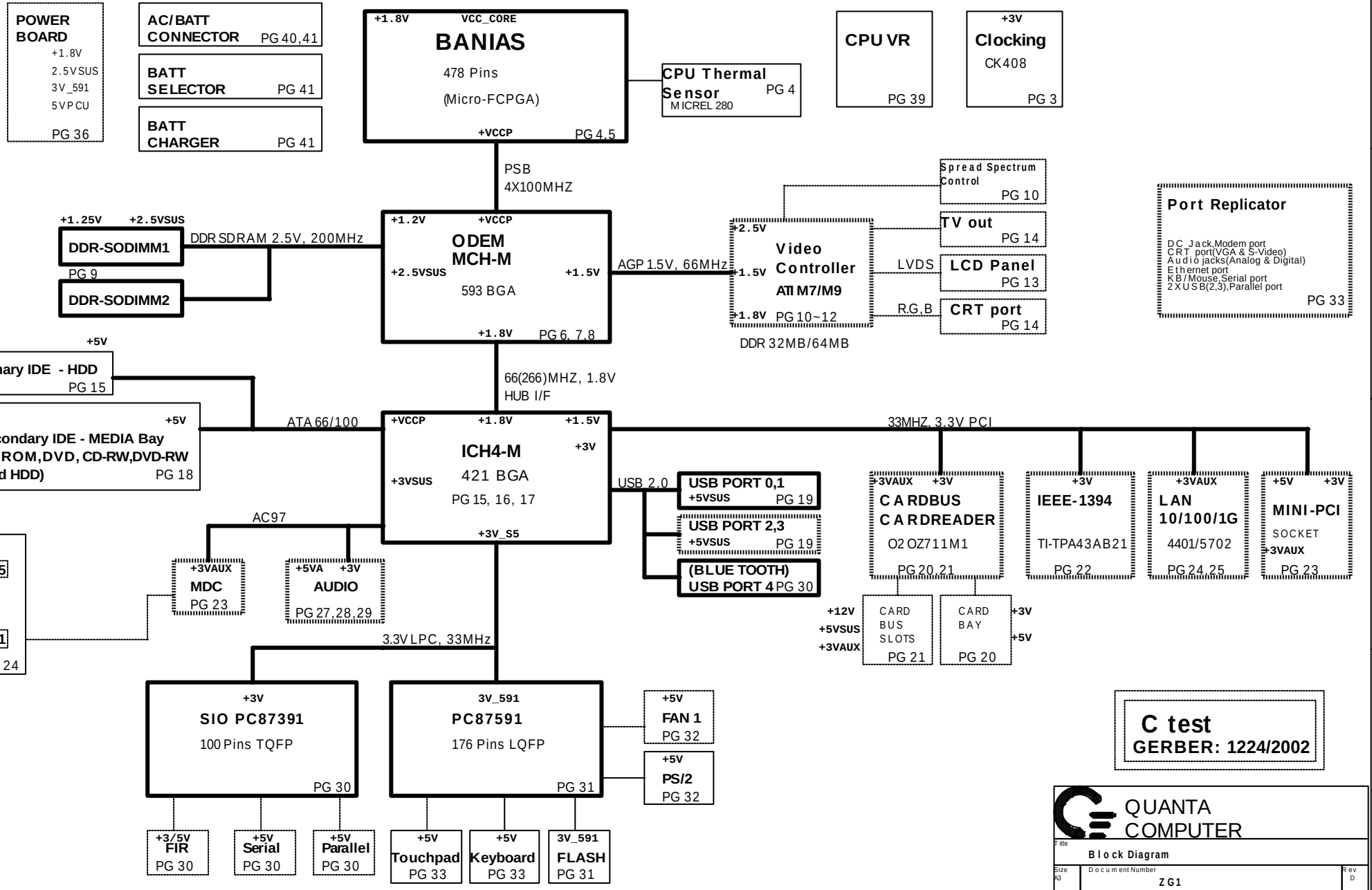
ZG1 BLOCK DIAGRAM
BANIAS / ODEM



Voltage Rails		ON S0-S1	ON S3	ON S4	ON S5	Control signal
CPU_CORE	Core voltage for Processor	X				VR_ON
+VCCP	1.05V rail for Processor I/O	X				VR_ON
+1.2V	1.2V for ODEM Core	X				
+1.25V	1.25V for DDR Termination voltage	X	X			SUSON
+1.5V		X				
+1.5V		X				
+1.5V_S5		X	X	X		
+1.8V		X				
+2.5VSUS		X	X			
+2.5V		X				
+2.5VSUS	2.5V for DDR Termination voltage	X				MAINON
3V_591		X	X	X	X	
+3VSUS		X	X			
+3V		X				
5VPCU		X	X	X	X	
+5VSUS		X	X			
+5V		X				
+12V		X				
12VOUT		X	X	X	X	

External PCI Devices

Device	IDSEL#	REQ#/GNT#	Interrupts
LAN	AD18	0	PIRQD
CardBus	AD22	3	PIRQB
Mini-PCI	AD20	1	PIRQE/F
Mini-PCI LAN			
IEEE-1394 Controller	AD23	2	PIRQC
AGP VGA	AD17(INTERNAL)		PIRQA

EC SM Bus1 address

Device
Smart Battery
THERMAL SENSOR

ICH4-M SM Bus address

Device	
SODIMM	**1010 000X b**
Clock Gen	**1101 001x b**

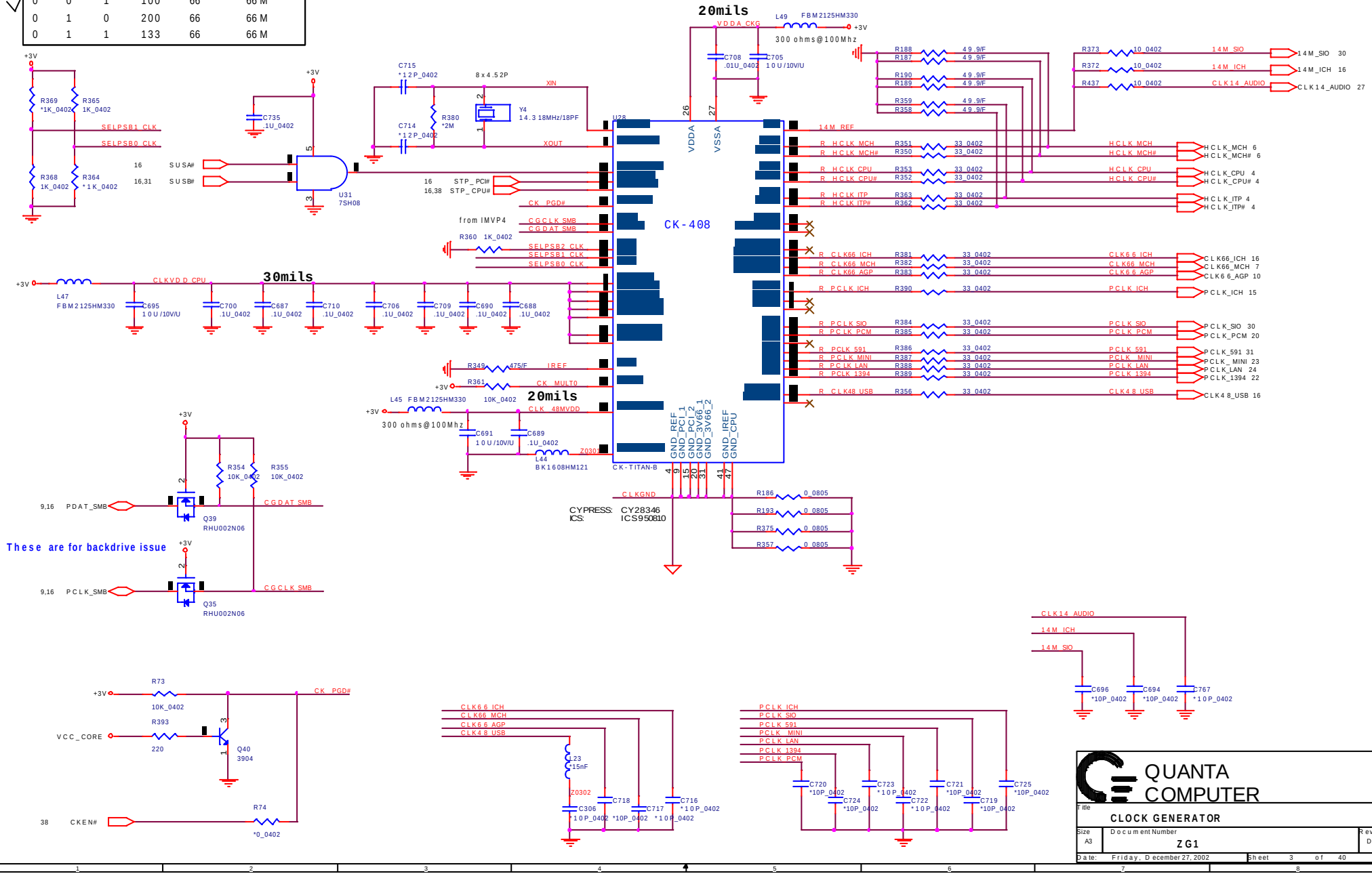
QUANTA COMPUTER

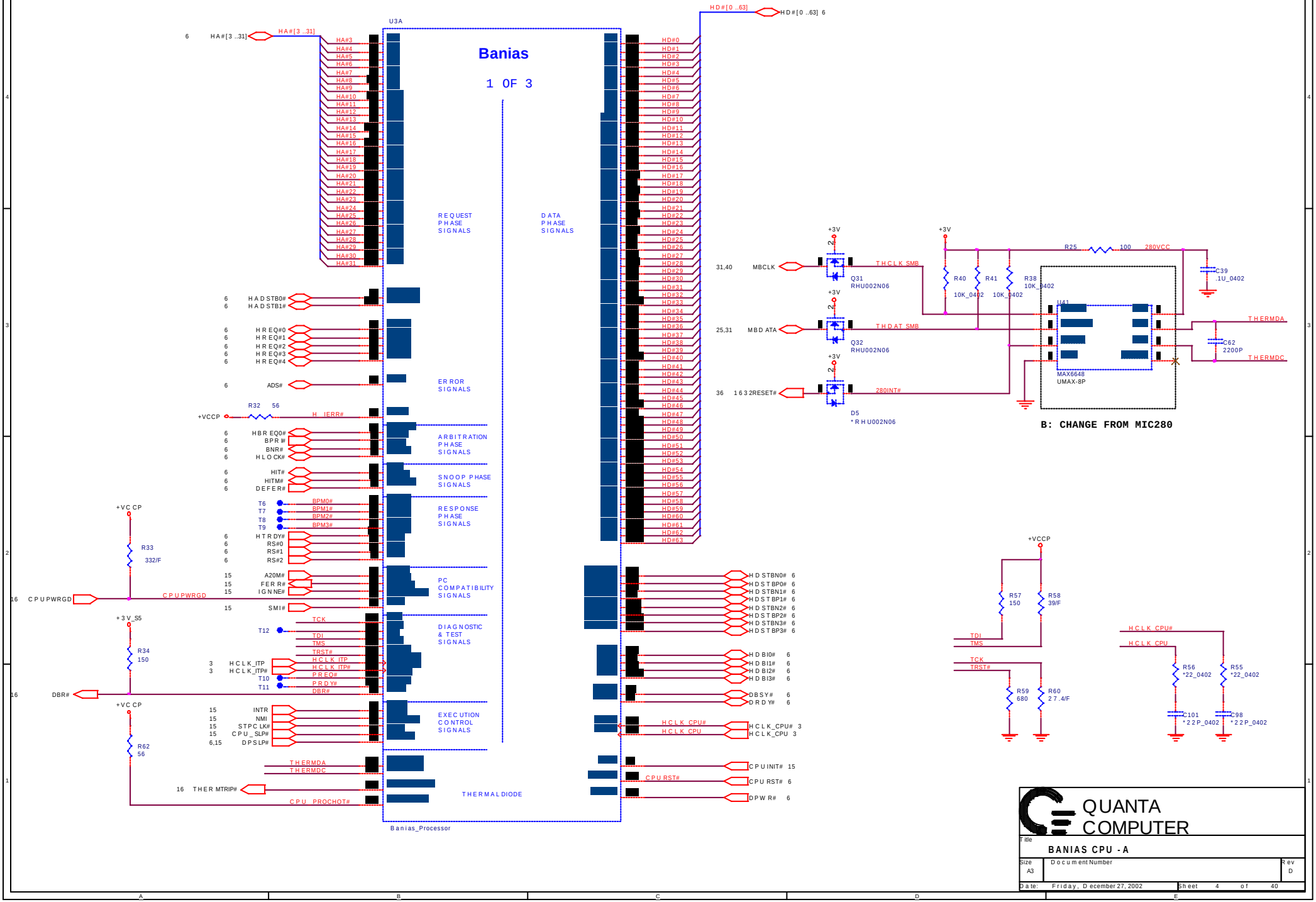
Title: **CLOCK GENERATOR**

Size: A3 | Document Number: **ZG1** | Rev: D

Date: Friday, December 27, 2002 | Sheet 2 of 40

S2	S1	S0	CPU	3V66[0..4]	3V66_ 5/66IN
1	0	0	66	66IN	66 Input
1	0	1	100	66IN	66 Input
1	1	0	200	66IN	66 Input
1	1	1	133	66IN	66 Input
0	0	0	66	66	66 M
0	0	1	100	66	66 M
0	1	0	200	66	66 M
0	1	1	133	66	66 M




Banias
1 OF 3
U3A
REQUEST PHASE SIGNALS
DATA PHASE SIGNALS
ERROR SIGNALS
ARBITRATION PHASE SIGNALS
SNOOP PHASE SIGNALS
RESPONSE PHASE SIGNALS
PC COMPATIBILITY SIGNALS
DIAGNOSTIC & TEST SIGNALS
EXECUTION CONTROL SIGNALS
THERMAL DIODE
Banias_Processor
MAX6648
UMAX-8P
B: CHANGE FROM MIC280
QUANTA COMPUTER
BANIAS CPU -A
Size A3
Document Number
Rev D
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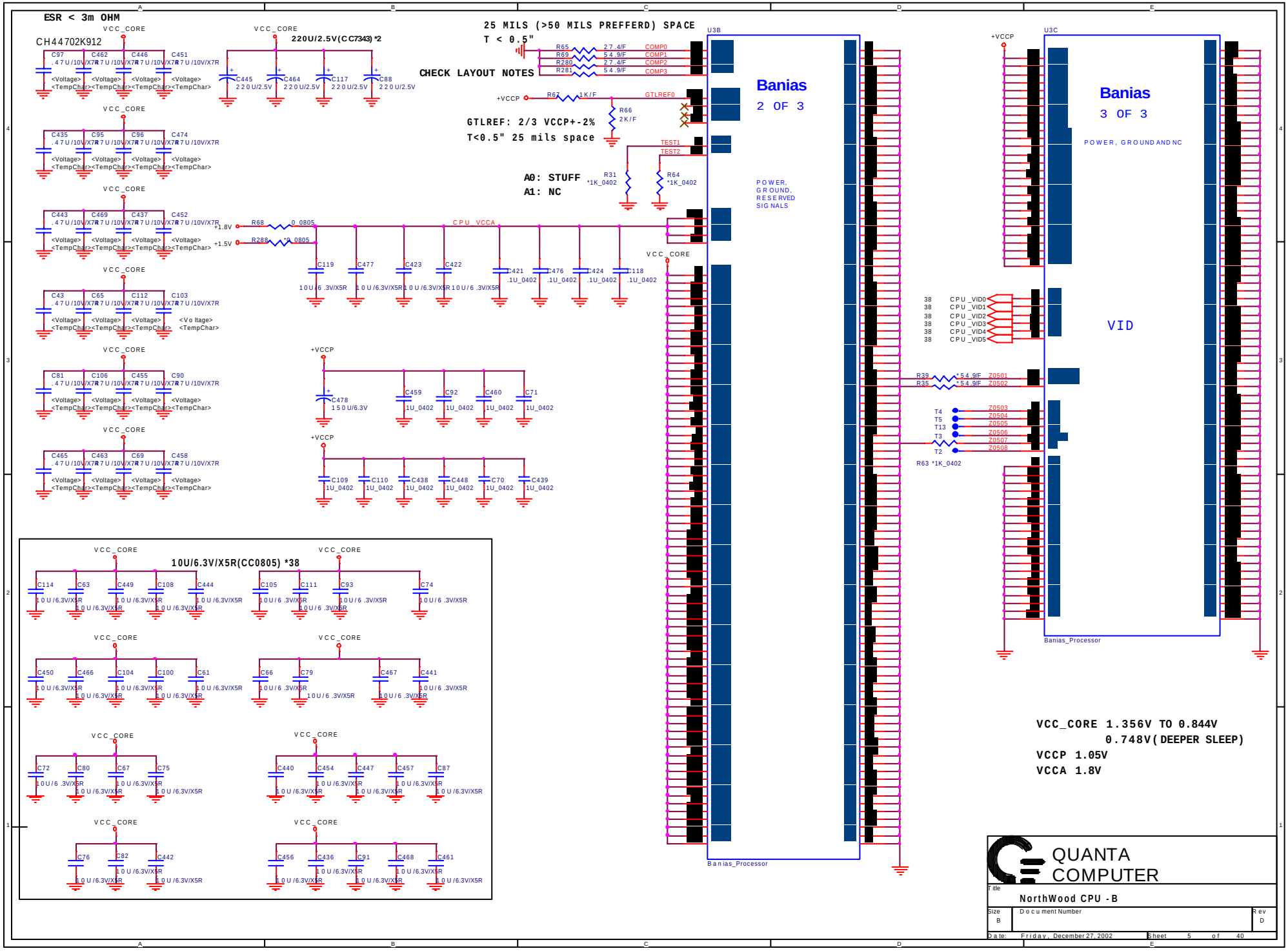
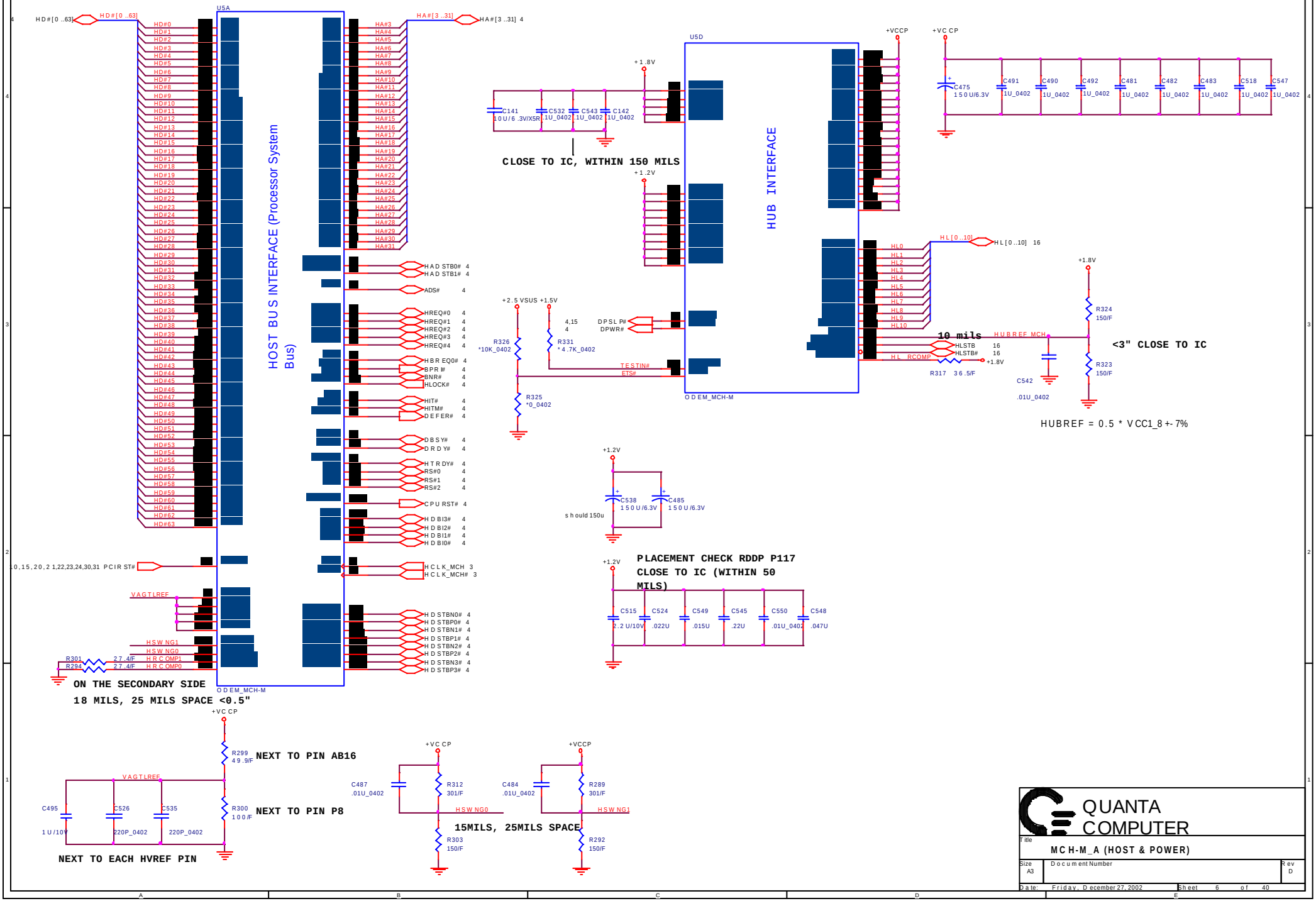
Sheet 4 of 40


ESR < 3m OHM
CH44702K912
220U/2.5V(CC7343)*2
25 MILS (>50 MILS PREFFERD) SPACE
T < 0.5"
CHECK LAYOUT NOTES
GTLREF: 2/3 VCCP+-2%
T<0.5" 25 mils space
A0: STUFF
A1: NC
Banias
2 OF 3
POWER, GROUND, RESERVED SIGNALS
Banias
3 OF 3
POWER, GROUND AND NC
VID
10U/6.3V/X5R(CC0805) *38
VCC_CORE 1.356V TO 0.844V
0.748V(DEEPER SLEEP)
VCCP 1.05V
VCCA 1.8V
QUANTA COMPUTER
NorthWood CPU -B
Size B
Document Number
Rev D
Date: Friday, December 27, 2002
Sheet 5 of 40


U5A
HOST BUS INTERFACE (Processor System Bus)
HD#[0..63]
HA#[3..31]
HADSTB0# 4
HADSTB1# 4
ADS# 4
HREQ#0 4
HREQ#1 4
HREQ#2 4
HREQ#3 4
HREQ#4 4
HBREQ0# 4
BPR# 4
BNR# 4
HLOCK# 4
HIT# 4
HITM# 4
DEFER# 4
DBSY# 4
DRDY# 4
HTRDY# 4
RS#0 4
RS#1 4
RS#2 4
CPURST# 4
HDBI3# 4
HDBI2# 4
HDBI1# 4
HDBI0# 4
HCLK_MCH 3
HCLK_MCH# 3
HDSTBN0# 4
HDSTBP0# 4
HDSTBN1# 4
HDSTBP1# 4
HDSTBN2# 4
HDSTBP2# 4
HDSTBN3# 4
HDSTBP3# 4
VAGTLREF
HSWNG1
HSWNG0
HRCOMP1
HRCOMP0
R301 27.4/F
R294 27.4/F
ODEM_MCH-M
ON THE SECONDARY SIDE
18 MILS, 25 MILS SPACE <0.5"
U5D
HUB INTERFACE
+1.8V
C141 10U/6.3V/X5R
C532 1U_0402
C543 1U_0402
C142 1U_0402
CLOSE TO IC, WITHIN 150 MILS
+1.2V
+2.5VSUS
+1.5V
R326 *10K_0402
R331 *4.7K_0402
R325 *0_0402
DPSLP#
DPWR#
TESTIN#
ETS#
ODEM_MCH-M
+VCCP
+VCCP
C475 150U/6.3V
C491 1U_0402
C490 1U_0402
C492 1U_0402
C481 1U_0402
C482 1U_0402
C483 1U_0402
C518 1U_0402
C547 1U_0402
HL[0..10]
HL[0..10] 16
HL0
HL1
HL2
HL3
HL4
HL5
HL6
HL7
HL8
HL9
HL10
HLRCOMP
HLSTB 16
HLSTB# 16
R317 36.5/F
10 mils
HUBREF_MCH
C542 .01U_0402
R324 150/F
R323 150/F
<3" CLOSE TO IC
HUBREF = 0.5 * VCC1_8 +- 7%
C538 150U/6.3V
C485 150U/6.3V
should 150u
PLACEMENT CHECK RDDP P117
CLOSE TO IC (WITHIN 50 MILS)
C515 2.2U/10V
C524 .022U
C549 .015U
C545 .22U
C550 .01U_0402
C548 .047U
+VCCP
R299 49.9/F
NEXT TO PIN AB16
R300 100/F
NEXT TO PIN P8
C495 1U/10V
C526 220P_0402
C535 220P_0402
NEXT TO EACH HVREF PIN
C487 .01U_0402
R312 301/F
R303 150/F
15MILS, 25MILS SPACE
C484 .01U_0402
R289 301/F
R292 150/F
QUANTA COMPUTER
Title
MCH-M_A (HOST & POWER)
Size A3
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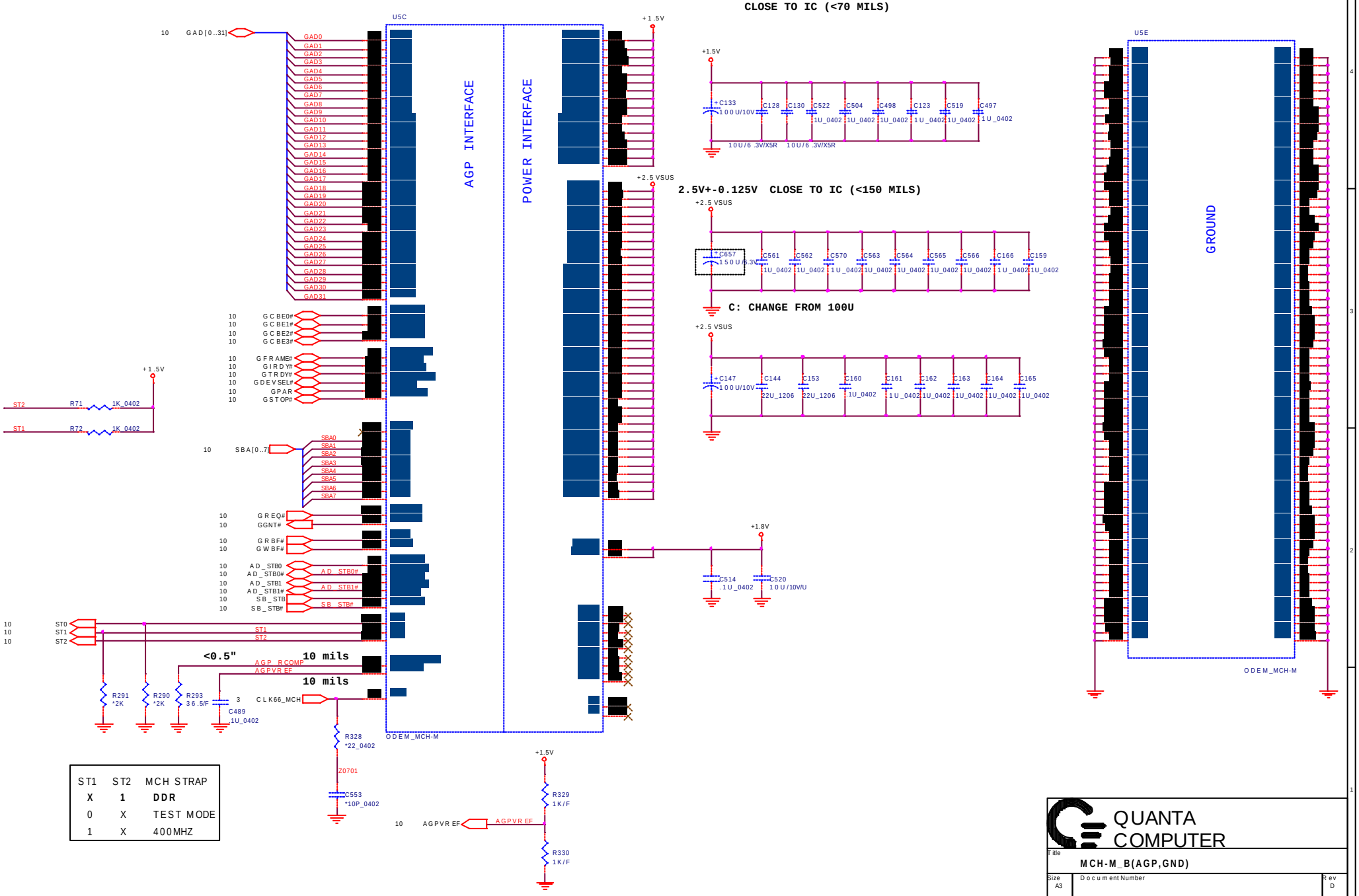
CLOSE TO IC (<70 MILS)
U5C
AGP INTERFACE
POWER INTERFACE
U5E
GROUND
ODEM_MCH-M
+1.5V
+2.5 VSUS
+1.8V
2.5V+-0.125V CLOSE TO IC (<150 MILS)
C: CHANGE FROM 100U
<0.5"
10 mils
10 mils
ST1 ST2 MCH STRAP
X 1 DDR
0 X TEST MODE
1 X 400MHZ
QUANTA COMPUTER
MCH-M_B(AGP,GND)
Size A3
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SM_DQS[0..8] → SM_DQS[0..8] 9
MD[0..63] → MD[0..63] 9
MA[0..12] → MA[0..12] 9

USE 8P4R-0402 package

+1.25V

RN54 8P4R-S-56: MD59 MD63 SM_DQS7 MD60 → MD62 MD58 MD57 MD56
RN53 8P4R-S-56: MD61 MD51 MD50 SM_DQS6 → MD55 MD54 MD52 MD48
RN52 8P4R-S-56: MD53 MD49 MD46 MD42 → MD47 MD43 MD40 MD39
RN51 8P4R-S-56: SM_DQS5 MD44 MD45 MD35 → MD34 MD41 SCASA# MD32
RN50 8P4R-S-56: MD38 SM_DQS4 MD37 MD36 → SM_CS2# MA6 MA11 MA8
RN33 8P4R-S-56: SM_CS1# SM_CS3# MD33 → SRASA# BA1
RN49 8P4R-S-56: MA1 MA3 MA5 MA7 → SM_CS0# MA0 MA2 MA4
RN48 8P4R-S-56: MA12 MA9 CKE3 → CKE2 CKE0 CKE1
RN46 8P4R-S-56: MD27 MD29 SM_DQS3 MD25 → MD31 MD30 MD26 MD28
RN45 8P4R-S-56: MD23 MD24 MD18 SM_DQS2 → MD19 MD22 MD17 MD21
RN44 8P4R-S-56: MD16 MD20 MD11 MD15 → MD14 MD10 MD8 MD9
RN43 8P4R-S-56: SM_DQS1 MD12 MD13 MD7 → MD2 MD3 MD0 MD4
RN42 8P4R-S-56: MD1 SM_DQS0 MD6 MD5 → BA0 MA10 BMWEA#

R469 56_0402 BA0
R470 56_0402 MA10
R471 56_0402 BMWEA#

CAP
8P4R
CAP

U5B

9 SM_CS0#
9 SM_CS1#
9 SM_CS2#
9 SM_CS3#

R_SM_DQS0 R_SM_DQS1 R_SM_DQS2 R_SM_DQS3 R_SM_DQS4 R_SM_DQS5 R_SM_DQS6 R_SM_DQS7

T34

9 BMWEA#
9 SRASA#
9 SCASA#
9 BA0
9 BA1
9 CKE0
9 CKE1
9 CKE2
9 CKE3

MA0 MA1 MA2 MA3 MA4 MA5 MA6 MA7 MA8 MA9 MA10 MA11 MA12

9 CLK_SDRAM0
9 CLK_SDRAM1
9 CLK_SDRAM2
9 CLK_SDRAM3
9 CLK_SDRAM4
9 CLK_SDRAM5

9 CLK_SDRAM0#
9 CLK_SDRAM1#
9 CLK_SDRAM2#
9 CLK_SDRAM3#
9 CLK_SDRAM4#
9 CLK_SDRAM5#

DDR INTERFACE

R_MD0 R_MD1 R_MD2 R_MD3 R_MD4 R_MD5 R_MD6 R_MD7 R_MD8 R_MD9 R_MD10 R_MD11 R_MD12 R_MD13 R_MD14 R_MD15 R_MD16 R_MD17 R_MD18 R_MD19 R_MD20 R_MD21 R_MD22 R_MD23 R_MD24 R_MD25 R_MD26 R_MD27 R_MD28 R_MD29 R_MD30 R_MD31 R_MD32 R_MD33 R_MD34 R_MD35 R_MD36 R_MD37 R_MD38 R_MD39 R_MD40 R_MD41 R_MD42 R_MD43 R_MD44 R_MD45 R_MD46 R_MD47 R_MD48 R_MD49 R_MD50 R_MD51 R_MD52 R_MD53 R_MD54 R_MD55 R_MD56 R_MD57 R_MD58 R_MD59 R_MD60 R_MD61 R_MD62 R_MD63

T33 T36 T37 T38 T31 T32 T39 T35

ODEM_MCH-M

1.25V+-0.04V
+1.25V
+1.25VSUS
R337 30.1/F SMRCOMP
C576 1U_0402 C560 1U_0402 C554 1U_0402
RCVENIN#
WITHIN 1", TRACE (12,10)
1.25V+-0.025V
180 mils (total length pad to pad)

+1.25V
C676 C664 C666 C650 C653 C654 C652 C659 C639 C647
1U_0402

R_SM_DQS7 R132 10_0402 SM_DQS7
RN20 8P4R-S-10: R_MD57 R_MD60 R_MD61 R_MD56 R_MD62 R_MD59 R_MD63 R_MD58 → MD57 MD60 MD61 MD56 MD62 MD59 MD63 MD58
RN21 8P4R-S-10

R_MA[0..12] → R_MA[0..12] 9
RN12 8P4R-S-10: MA8 MA11 MA12 MA9 MA6 MA7 MA5 MA4 → R_MA8 R_MA11 R_MA12 R_MA9 R_MA6 R_MA7 R_MA5 R_MA4
RN22 8P4R-S-10
RN13 8P4R-S-10: MA2 MA0 MA3 MA1 MA10 SRASA# BMWEA# SCASA# → R_MA2 R_MA0 R_MA3 R_MA1 R_MA10 R_SRASA# R_BMWEA# R_SCASA#
RN24 8P4R-S-10
R_SRASA# 9
R_BMWEA# 9
R_SCASA# 9

BA0 R159 10_0402 R_BA0
BA1 R158 10_0402 R_BA1
R_BA0 9
R_BA1 9

Place Rterms close to second DIMM

+1.25V
C622 C656 C655 C651 C649 C642 C640 C648 C630 C660
C641 C632 C634 C628 C636 C658 C644 C643 C645 C646
C677 C624 C623 C637 C621 C617 C620 C631 C627 C638
C616 C626 C679 C670 C667 C672 C673 C675
1U_0402

50 PCS

R_SM_DQS0 R126 10_0402 SM_DQS0
RN4 8P4R-S-10: R_MD6 R_MD5 R_MD4 R_MD0 R_MD1 R_MD7 R_MD3 R_MD2 → MD6 MD5 MD4 MD0 MD1 MD7 MD3 MD2
RN5 8P4R-S-10

R_SM_DQS1 R128 10_0402 SM_DQS1
RN6 8P4R-S-10: R_MD12 R_MD13 R_MD9 R_MD8 R_MD11 R_MD15 R_MD14 R_MD10 → MD12 MD13 MD9 MD8 MD11 MD15 MD14 MD10
RN7 8P4R-S-10

R_SM_DQS2 R125 10_0402 SM_DQS2
RN9 8P4R-S-10: R_MD19 R_MD22 R_MD18 R_MD23 R_MD17 R_MD21 R_MD20 R_MD16 → MD19 MD22 MD18 MD23 MD17 MD21 MD20 MD16
RN8 8P4R-S-10

R_SM_DQS3 R127 10_0402 SM_DQS3
RN11 8P4R-S-10: R_MD31 R_MD27 R_MD29 R_MD30 R_MD26 R_MD25 R_MD24 R_MD28 → MD31 MD27 MD29 MD30 MD26 MD25 MD24 MD28
RN10 8P4R-S-10

R_SM_DQS4 R129 10_0402 SM_DQS4
RN15 8P4R-S-10: R_MD35 R_MD39 R_MD34 R_MD38 R_MD32 R_MD33 R_MD37 R_MD36 → MD35 MD39 MD34 MD38 MD32 MD33 MD37 MD36
RN14 8P4R-S-10

R_SM_DQS5 R130 10_0402 SM_DQS5
RN17 8P4R-S-10: R_MD47 R_MD46 R_MD42 R_MD43 R_MD40 R_MD44 R_MD45 R_MD41 → MD47 MD46 MD42 MD43 MD40 MD44 MD45 MD41
RN16 8P4R-S-10

R_SM_DQS6 R131 10_0402 SM_DQS6
RN18 8P4R-S-10: R_MD52 R_MD48 R_MD49 R_MD53 R_MD55 R_MD54 R_MD50 R_MD51 → MD52 MD48 MD49 MD53 MD55 MD54 MD50 MD51
RN19 8P4R-S-10

QUANTA COMPUTER

Title: MCH-M_C(DDR)
Size: A3
Document Number:
Rev: D
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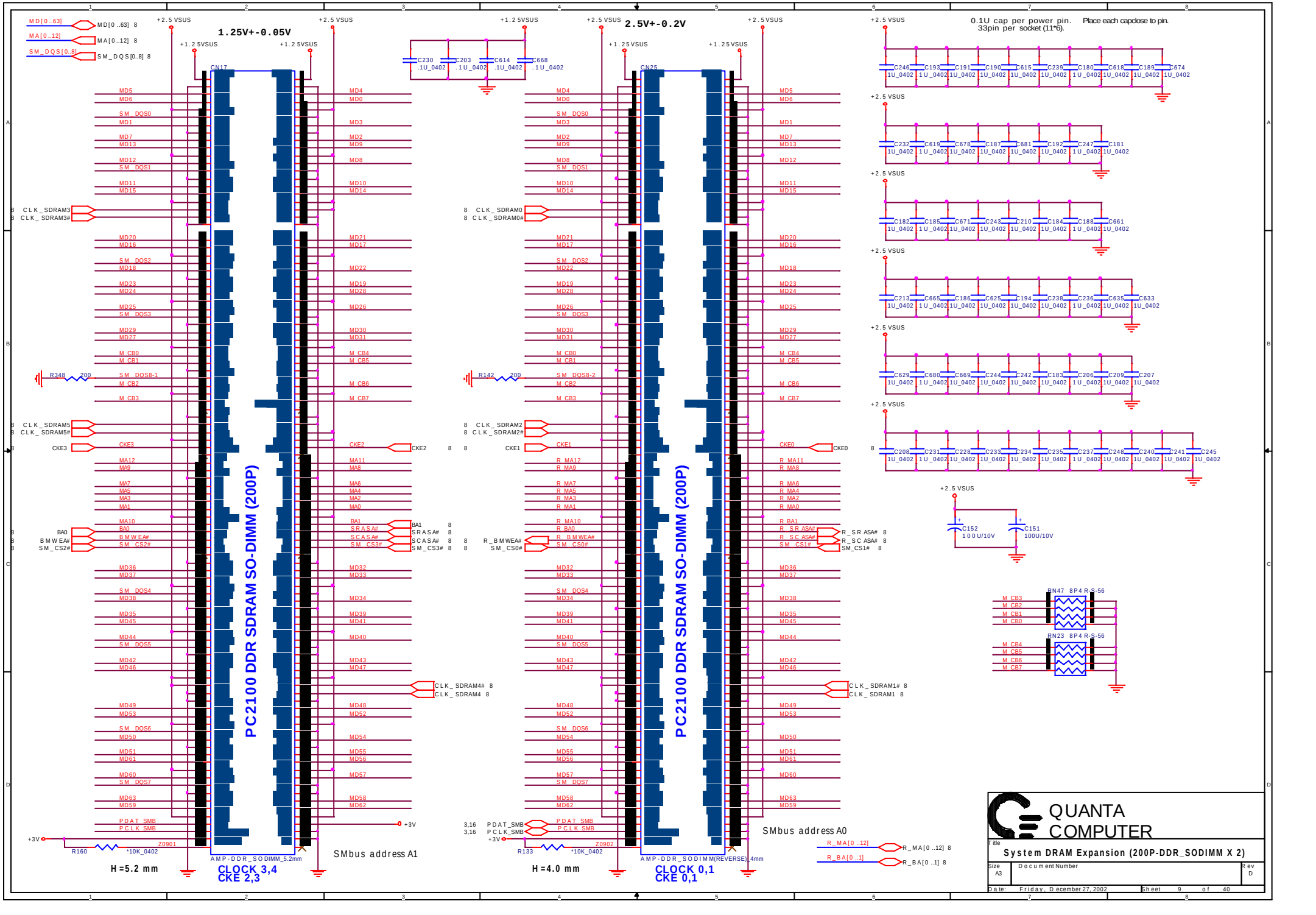
1.25V+-0.05V
2.5V+-0.2V
0.1U cap per power pin. Place each capclose to pin.
33pin per socket (11*6).
PC2100 DDR SDRAM SO-DIMM (200P)
PC2100 DDR SDRAM SO-DIMM (200P)
AMP-DDR_SODIMM_5.2mm
AMP-DDR_SODIMM(REVERSE)_4mm
H=5.2 mm
H=4.0 mm
CLOCK 3,4
CKE 2,3
CLOCK 0,1
CKE 0,1
SMbus address A1
SMbus address A0
QUANTA COMPUTER
System DRAM Expansion (200P-DDR_SODIMM X 2)
Size A3
Document Number
Rev D
Date: Friday, December 27, 2002
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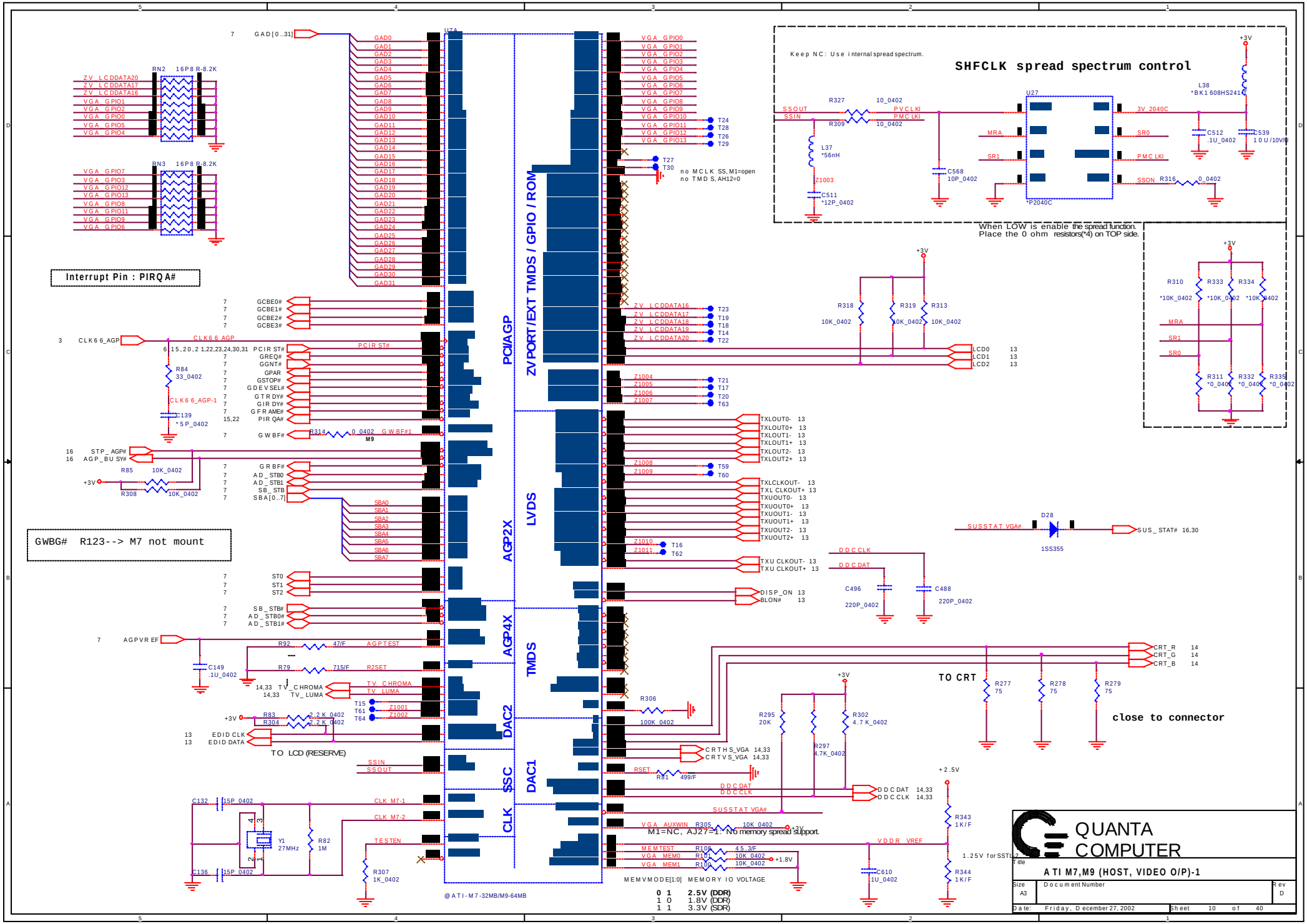
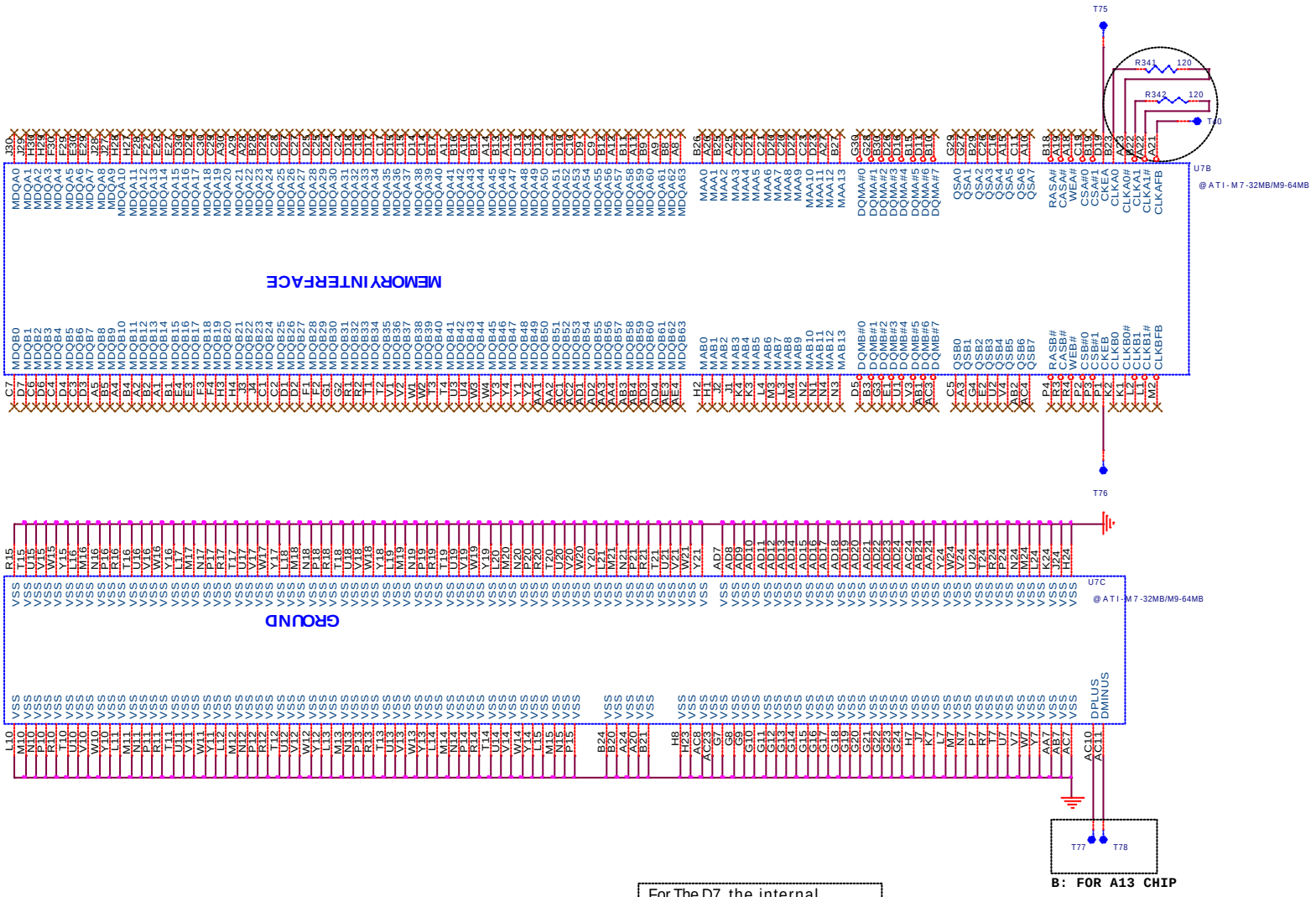
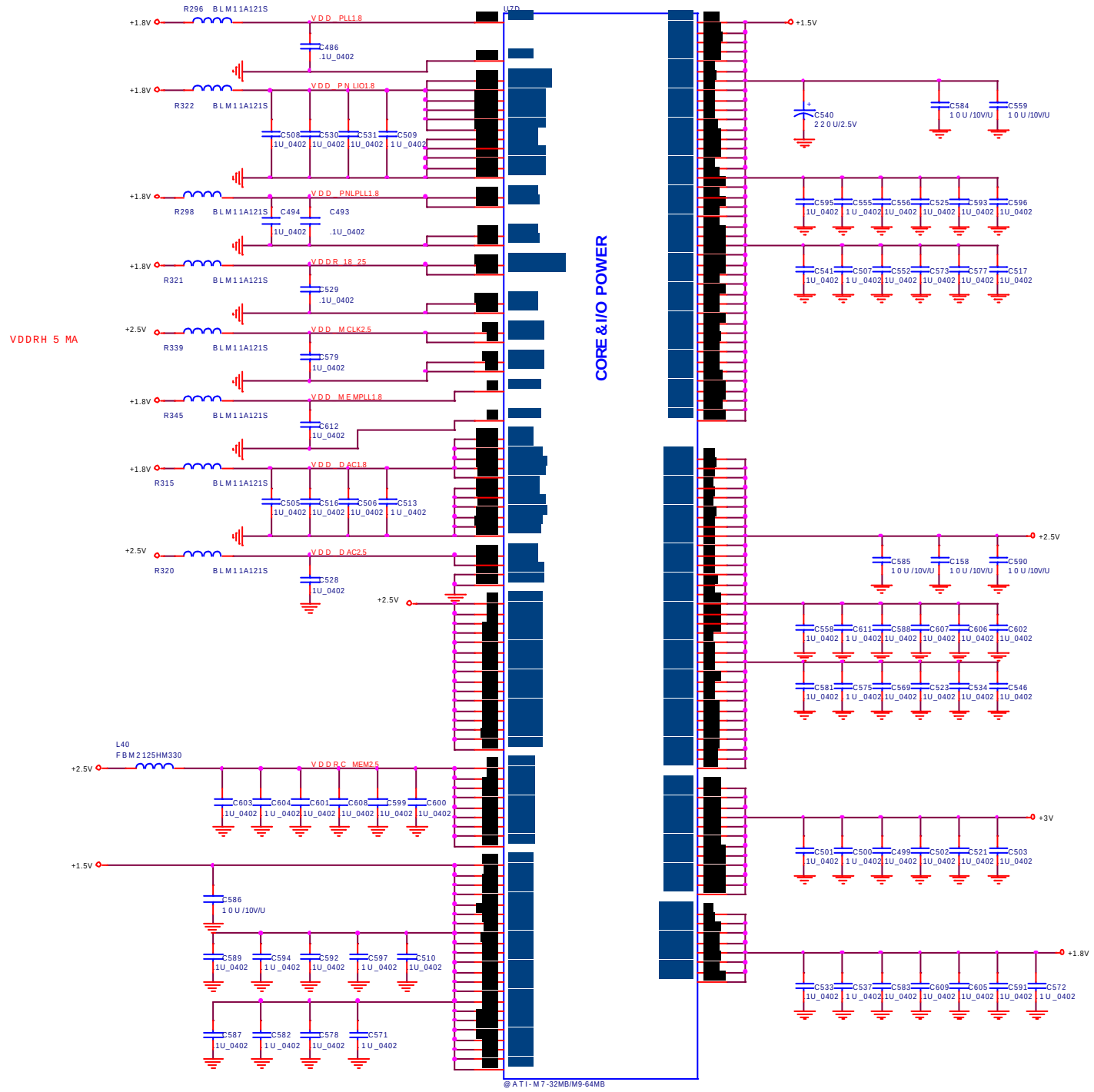

SHFCLK spread spectrum control
Keep NC: Use internal spread spectrum.
When LOW is enable the spread function.
Place the 0 ohm resistors(*4) on TOP side.
Interrupt Pin : PIRQA#
GWBG# R123--> M7 not mount
PCI/AGP
ZVPORT/EXT TMDS / GPIO / ROM
LVDS
AGP2X
AGP4X
TMDS
DAC2
DAC1
SSC
CLK
TO LCD (RESERVE)
TO CRT
close to connector
MEMVMODE[1:0] MEMORY IO VOLTAGE
0 1 2.5V (DDR)
1 0 1.8V (DDR)
1 1 3.3V (SDR)
M1=NC, AJ27=1: No memory spread support.
@ATI-M7-32MB/M9-64MB
QUANTA COMPUTER
ATI M7,M9 (HOST, VIDEO O/P)-1
Friday, December 27, 2002
Sheet 10 of 40



For The D7, the internal memory is on the A channel. Do not populate Termination or momory on this channel if you are making a D7 Board or Board variant.

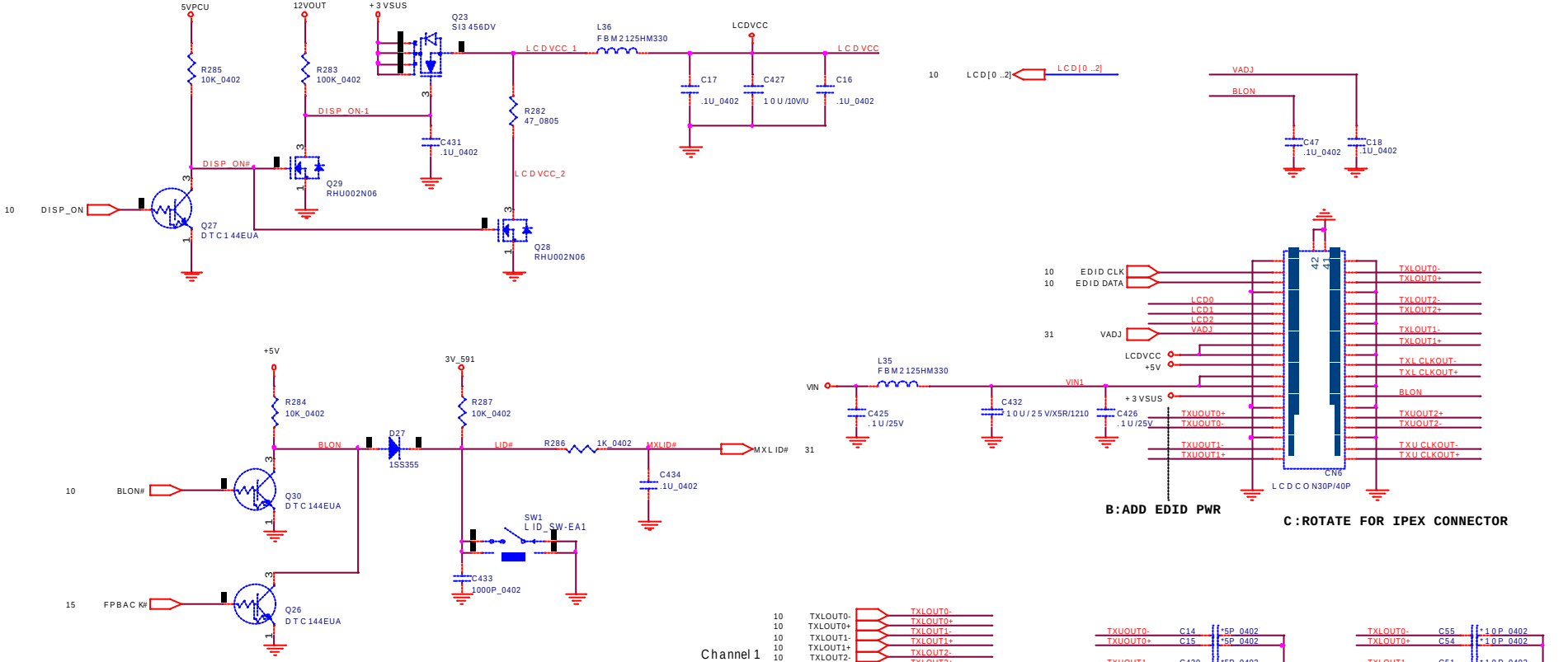
QUANTA COMPUTER

Title: ATI M7,M9		
Size: A3	Document Number: ZG1	Rev: D
Date: Friday, December 27, 2002	Sheet 11 of 40	



QUANTA COMPUTER

Title	ATI M7, M9	
Size A3	Document Number	Rev D
Date: Friday, December 27, 2002	Sheet 12 of 40	



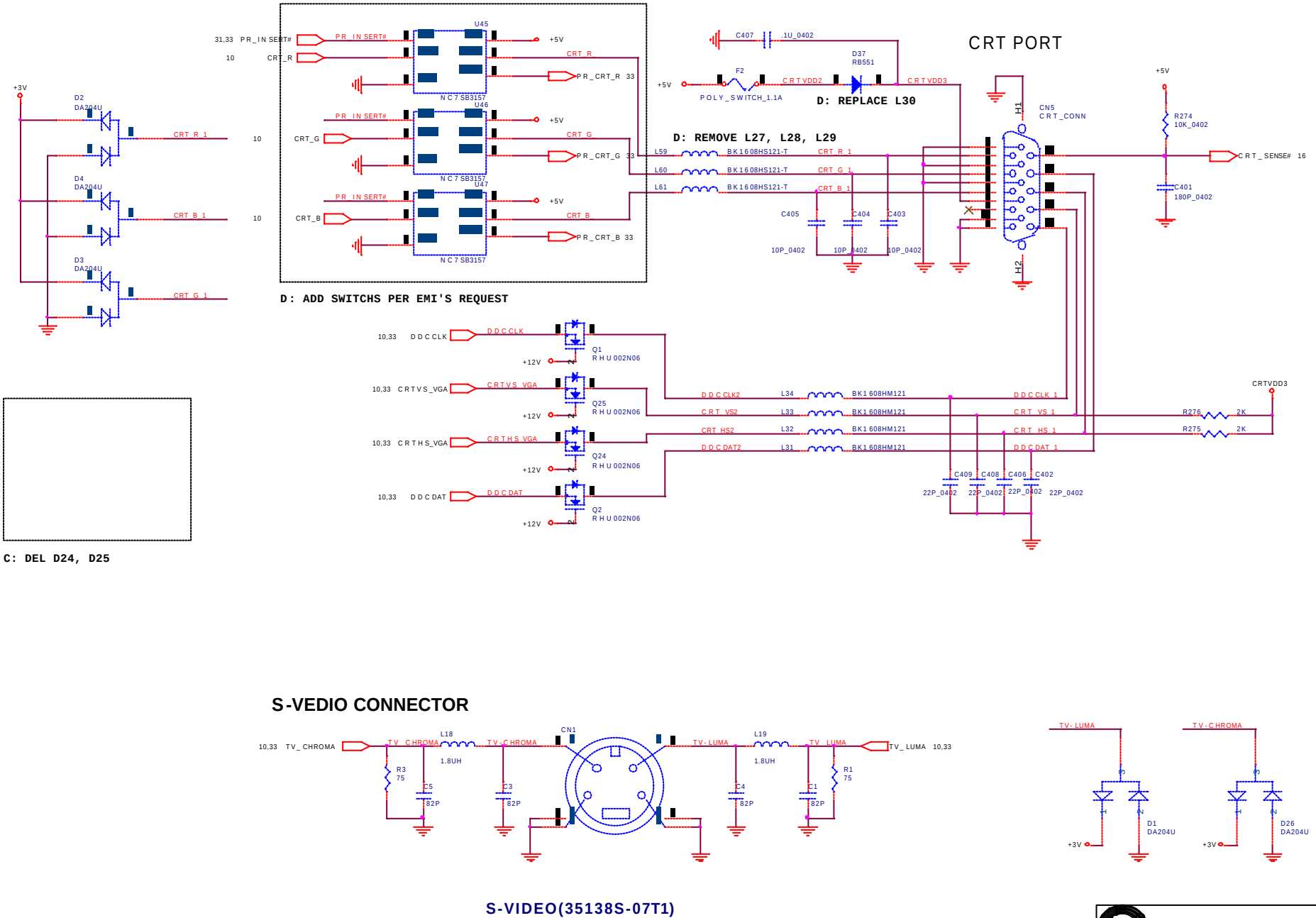
				LCD2	LCD1	LCD0
ID1	QDI	14.1" XGA	QD141X1LH12	0	0	1
ID2	LG	14.1" XGA	LP141X13	0	1	0
ID3	LG	15" XGA	LP150X05-A2C1	0	1	1
ID4	CPT	15" XGA	CLAA150XH01	1	0	0
ID5	CPT	15" SXGA+	CLAA150PA01	1	0	1
ID6	HannStar	15" SXGA+	HSD150PK12	1	1	0
ID7				1	1	1

QUANTA COMPUTER

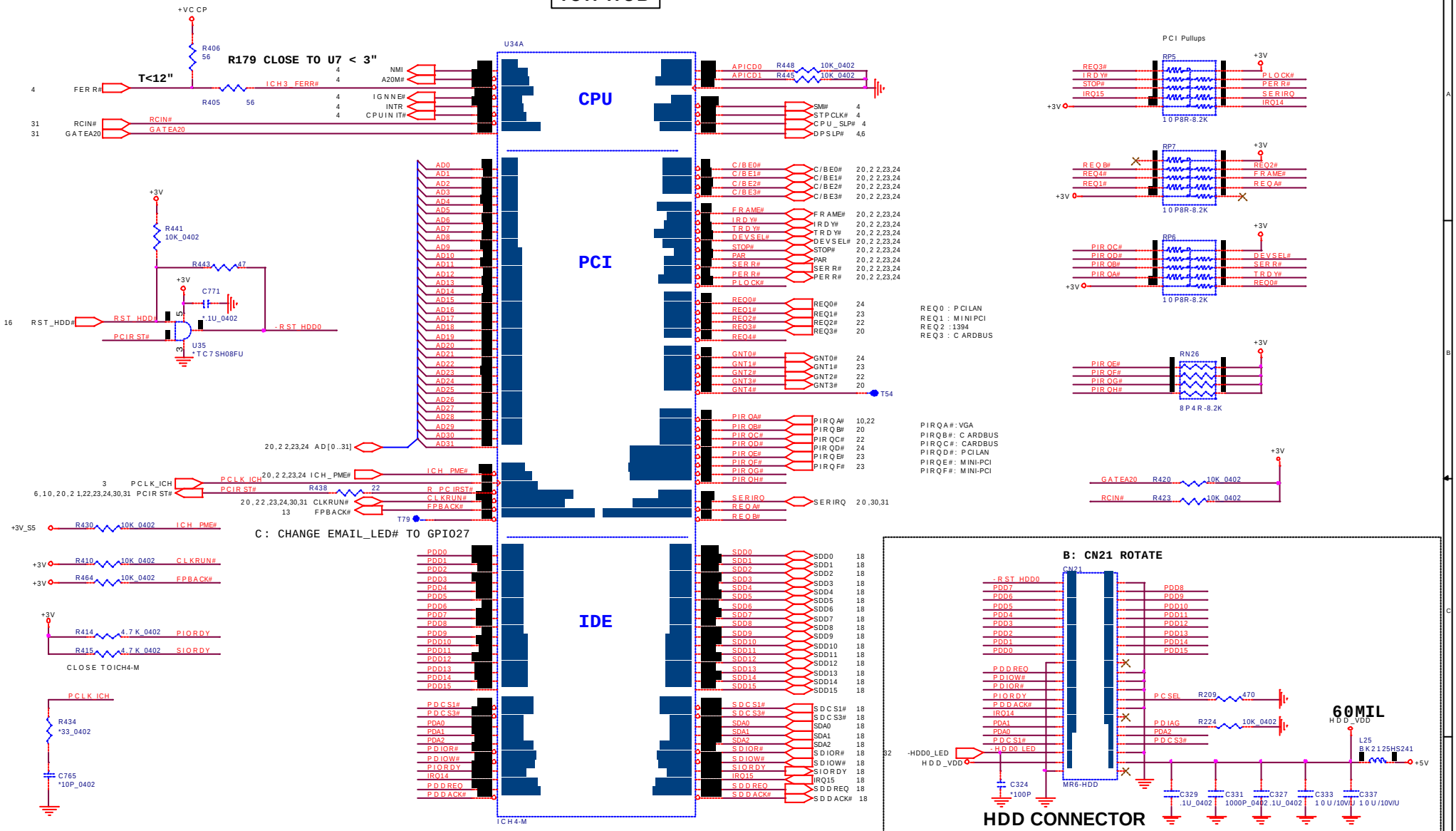
Title: LCD CONN & LCDVCC

Size: A3 | Document Number | Rev: D

Date: Friday, December 27, 2002 | Sheet 13 of 40


CRT PORT
D: REPLACE L30
D: REMOVE L27, L28, L29
D: ADD SWITCHS PER EMI'S REQUEST
C: DEL D24, D25
S-VEDIO CONNECTOR
S-VIDEO(35138S-07T1)
QUANTA COMPUTER
CRT & TV DECORDER
Friday, December 27, 2002

ICH HUB



Title	ICH4-M (CPU,PCI,IDE)
Size	A3
Document Number	
Rev	D
Date:	Friday, December 27, 2002
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QUANTA COMPUTER

ICH4_M

USB 0,1 to SYSTEM
USB 2,3 to SYSTEM
USB 4 to Blue Tooth only
USB 5: TO EASY PORT

B: CHANGE RF_ENABLE TO EC

D: CHANGE BT_PWRON# TO EC

B:SWAP USB2 & USB3

B:SWAP USB2 & USB3

B: SWAP SLP_S4# AND SLP_S5#

C: CHANGE EMAIL_LED# TO GPIO27

D: CHANGE LOCATION
PLACE NEAR RAMDOOR

HUBREF = 0.5*VCC1_8
Place divider in the middle of the bus

USB
HUB LINK
LPC&FWH
AC97&RTC
SM
PM
MISC&GPIO
SpeedStep
LAN

U34B
ICH4-M

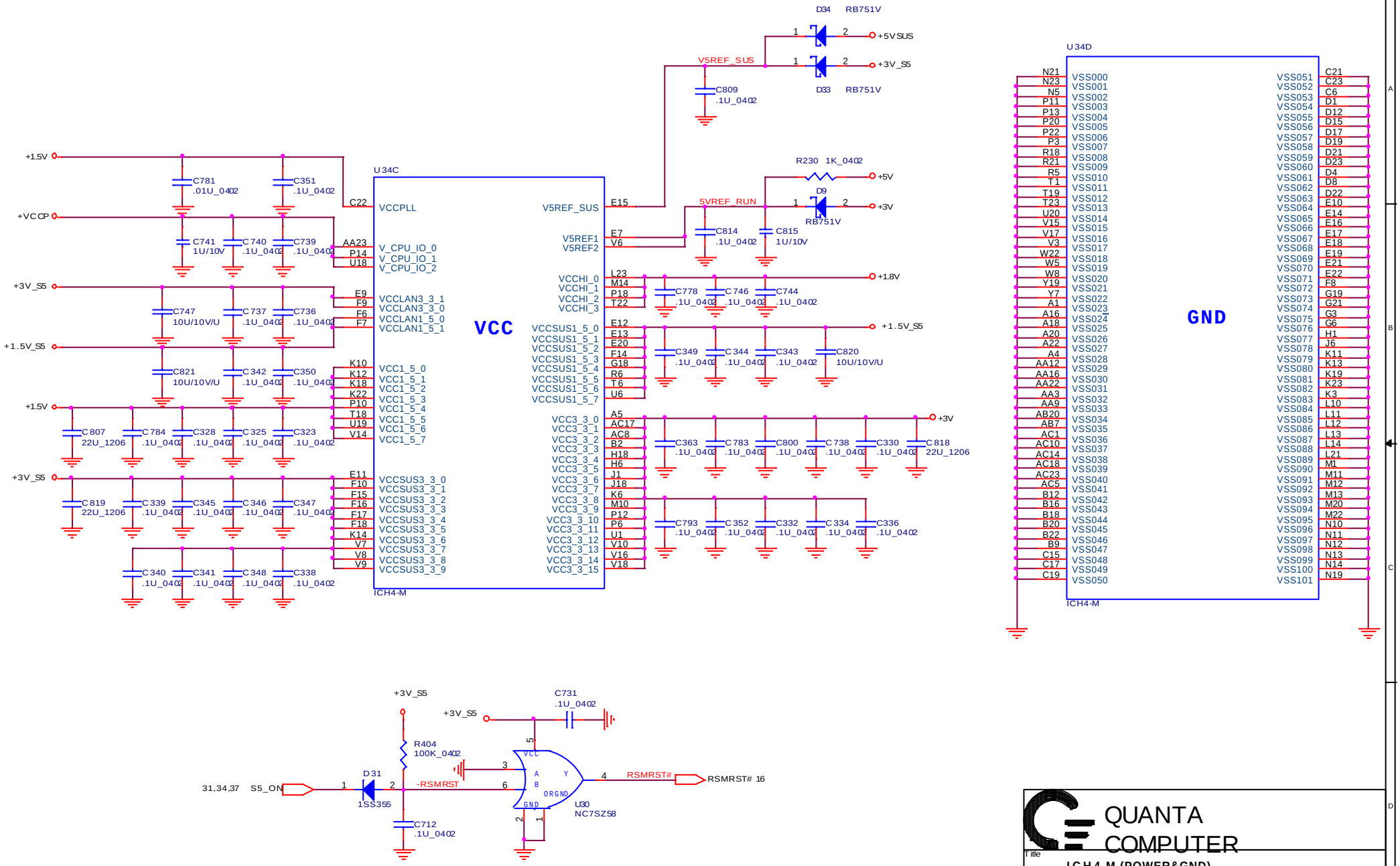
RTC

QUANTA COMPUTER

ICH4-M USB,HUB & LPC INTERFACE

Size	Document Number	Rev
A3		D

Date: Friday, December 27, 2002 Sheet 16 of 40


U34C
VCC
ICH4-M
VCCPLL
V_CPU_IO_0
V_CPU_IO_1
V_CPU_IO_2
VCCLAN3_3_1
VCCLAN3_3_0
VCCLAN1_5_0
VCCLAN1_5_1
VCC1_5_0
VCC1_5_1
VCC1_5_2
VCC1_5_3
VCC1_5_4
VCC1_5_5
VCC1_5_6
VCC1_5_7
VCCSUS3_3_0
VCCSUS3_3_1
VCCSUS3_3_2
VCCSUS3_3_3
VCCSUS3_3_4
VCCSUS3_3_5
VCCSUS3_3_6
VCCSUS3_3_7
VCCSUS3_3_8
VCCSUS3_3_9
V5REF_SUS
V5REF1
V5REF2
VCCHI_0
VCCHI_1
VCCHI_2
VCCHI_3
VCCSUS1_5_0
VCCSUS1_5_1
VCCSUS1_5_2
VCCSUS1_5_3
VCCSUS1_5_4
VCCSUS1_5_5
VCCSUS1_5_6
VCCSUS1_5_7
VCC3_3_0
VCC3_3_1
VCC3_3_2
VCC3_3_3
VCC3_3_4
VCC3_3_5
VCC3_3_6
VCC3_3_7
VCC3_3_8
VCC3_3_9
VCC3_3_10
VCC3_3_11
VCC3_3_12
VCC3_3_13
VCC3_3_14
VCC3_3_15
+1.5V
+VCCP
+3V_S5
+1.5V_S5
+5VSUS
+3V_S5
+5V
+3V
+1.8V
+1.5V_S5
+3V
D34 RB751V
D33 RB751V
D9 RB751V
R230 1K_0402
C809 .1U_0402
C814 .1U_0402
C815 1U/10V
C778 .1U_0402
C746 .1U_0402
C744 .1U_0402
C349 .1U_0402
C344 .1U_0402
C343 .1U_0402
C820 10U/10V/U
C363 .1U_0402
C783 .1U_0402
C800 .1U_0402
C738 .1U_0402
C330 .1U_0402
C818 22U_1206
C793 .1U_0402
C352 .1U_0402
C332 .1U_0402
C334 .1U_0402
C336 .1U_0402
C781 .01U_0402
C351 .1U_0402
C741 1U/10V
C740 .1U_0402
C739 .1U_0402
C747 10U/10V/U
C737 .1U_0402
C736 .1U_0402
C821 10U/10V/U
C342 .1U_0402
C350 .1U_0402
C807 22U_1206
C784 .1U_0402
C328 .1U_0402
C325 .1U_0402
C323 .1U_0402
C819 22U_1206
C339 .1U_0402
C345 .1U_0402
C346 .1U_0402
C347 .1U_0402
C340 .1U_0402
C341 .1U_0402
C348 .1U_0402
C338 .1U_0402
U34D
GND
ICH4-M
VSS000
VSS001
VSS002
VSS003
VSS004
VSS005
VSS006
VSS007
VSS008
VSS009
VSS010
VSS011
VSS012
VSS013
VSS014
VSS015
VSS016
VSS017
VSS018
VSS019
VSS020
VSS021
VSS022
VSS023
VSS024
VSS025
VSS026
VSS027
VSS028
VSS029
VSS030
VSS031
VSS032
VSS033
VSS034
VSS035
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VSS037
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VSS039
VSS040
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VSS042
VSS043
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VSS051
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VSS061
VSS062
VSS063
VSS064
VSS065
VSS066
VSS067
VSS068
VSS069
VSS070
VSS071
VSS072
VSS073
VSS074
VSS075
VSS076
VSS077
VSS078
VSS079
VSS080
VSS081
VSS082
VSS083
VSS084
VSS085
VSS086
VSS087
VSS088
VSS089
VSS090
VSS091
VSS092
VSS093
VSS094
VSS095
VSS096
VSS097
VSS098
VSS099
VSS100
VSS101
+3V_S5
+3V_S5
C731 .1U_0402
R404 100K_0402
D31 1SS355
31,34,37 S5_ON
-RSMRST
RSMRST#
RSMRST# 16
C712 .1U_0402
U30 NC7SZ58
VCC
GND
A
B
Y
ORGND
QUANTA COMPUTER
Title
ICH4-M (POWER&GND)
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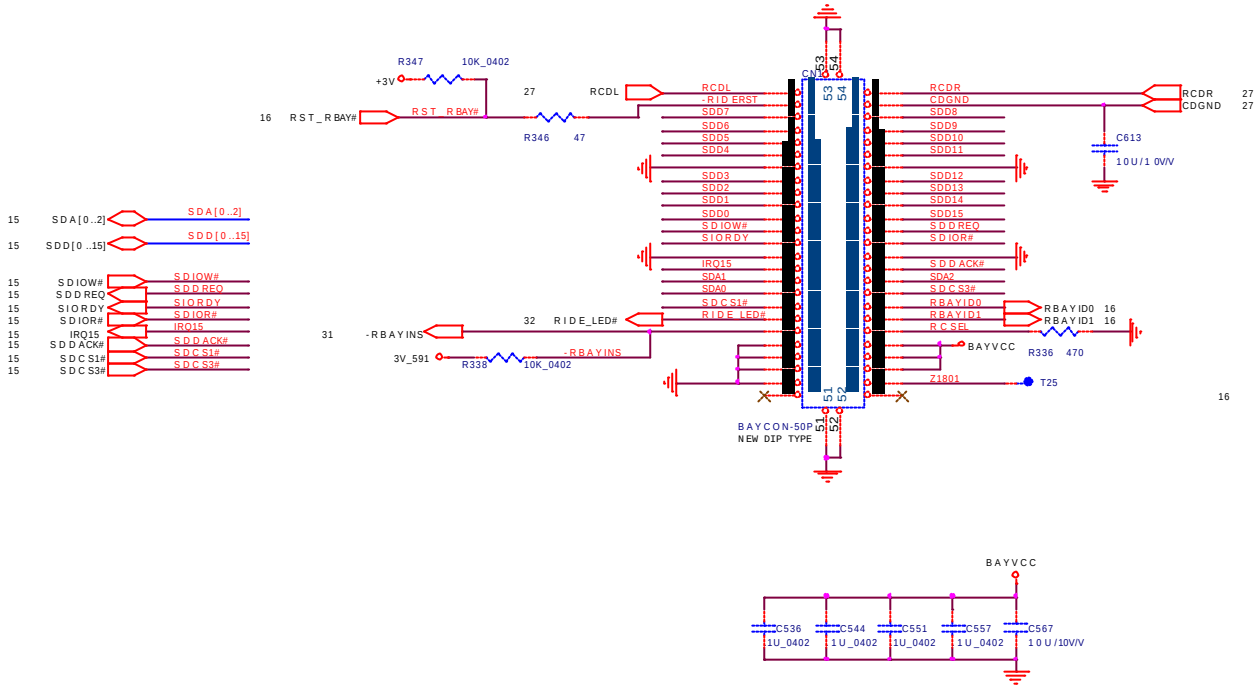
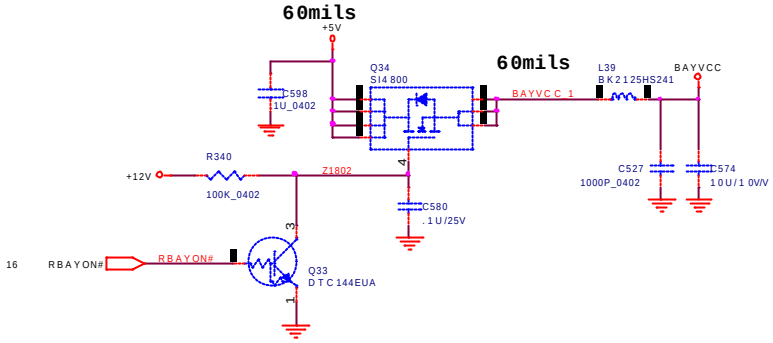
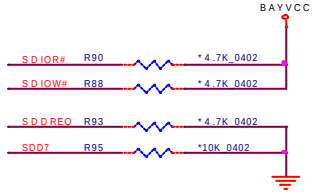
Sheet 17 of 40



BAY POWER CONTROL & RESET



MEDIA BAY(HDD, CD, DVD, FDD)



BAY ID STATUS

RBAYID0	RBAYID1	STATUS
0	0	FDD
0	1	HDD
1	0	CD/DVD

QUANTA COMPUTER

Title: DEVICE BAY

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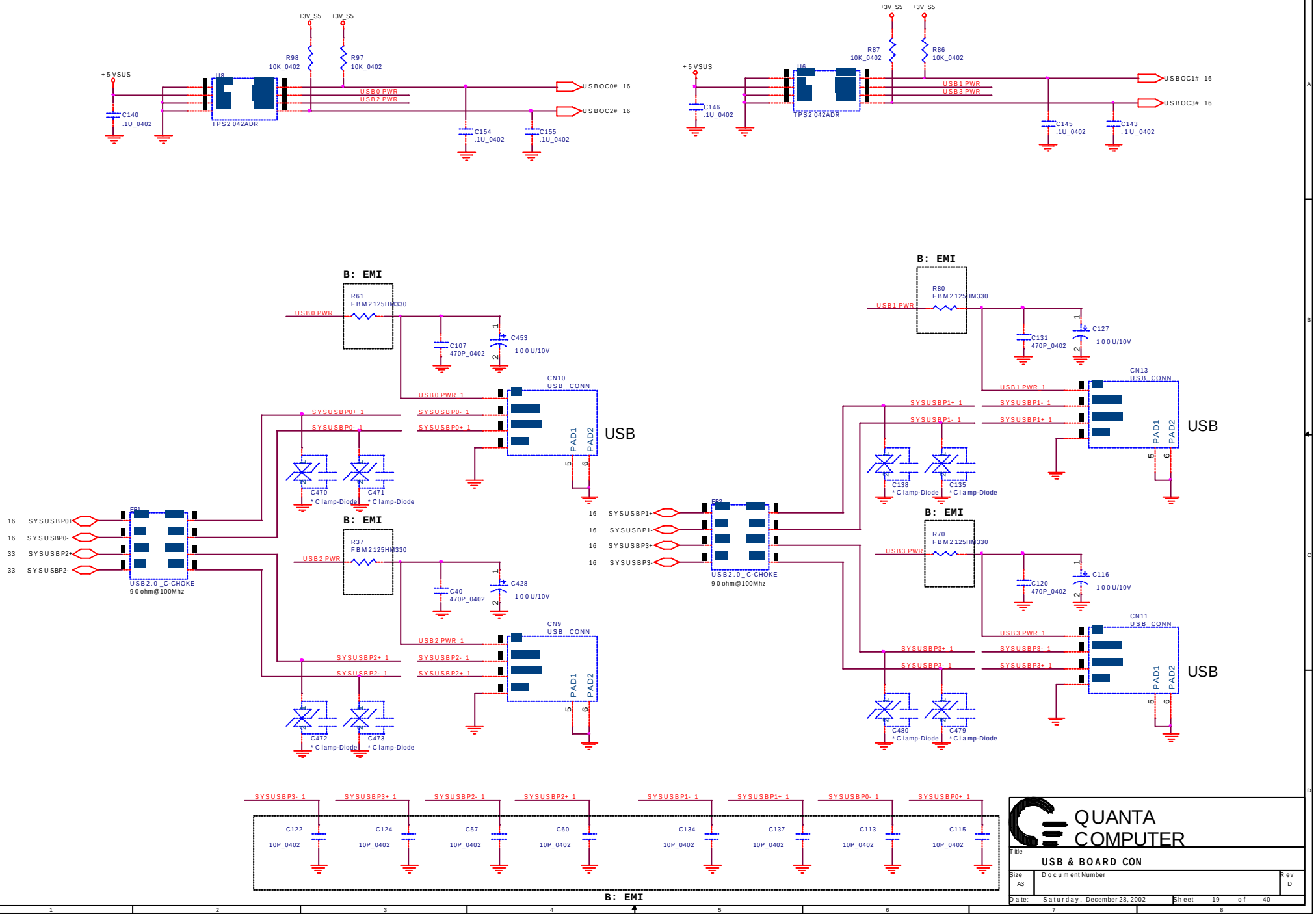
+3V_S5
+3V_S5
R98
10K_0402
R97
10K_0402
+5VSUS
U8
C140
.1U_0402
TPS2042ADR
USB0 PWR
USB2 PWR
USBOC0# 16
USBOC2# 16
C154
.1U_0402
C155
.1U_0402
R87
10K_0402
R86
10K_0402
U6
C146
.1U_0402
USB1 PWR
USB3 PWR
USBOC1# 16
USBOC3# 16
C145
.1U_0402
C143
.1U_0402
B: EMI
R61
FBM2125HM330
USB0 PWR
C107
470P_0402
C453
100U/10V
CN10
USB_CONN
USB0 PWR 1
SYSUSBP0+ 1
SYSUSBP0- 1
SYSUSBP0- 1
SYSUSBP0+ 1
PAD1
PAD2
USB
C470
* Clamp-Diode
C471
* Clamp-Diode
16 SYSUSBP0+
16 SYSUSBP0-
33 SYSUSBP2+
33 SYSUSBP2-
FB1
USB2.0_C-CHOKE
90ohm@100Mhz
B: EMI
R37
FBM2125HM330
USB2 PWR
C40
470P_0402
C428
100U/10V
CN9
USB_CONN
USB2 PWR 1
SYSUSBP2+ 1
SYSUSBP2- 1
SYSUSBP2- 1
SYSUSBP2+ 1
C472
* Clamp-Diode
C473
* Clamp-Diode
B: EMI
R80
FBM2125HM330
USB1 PWR
C131
470P_0402
C127
100U/10V
CN13
USB_CONN
USB1 PWR 1
SYSUSBP1+ 1
SYSUSBP1- 1
SYSUSBP1- 1
SYSUSBP1+ 1
USB
C138
* Clamp-Diode
C135
* Clamp-Diode
16 SYSUSBP1+
16 SYSUSBP1-
16 SYSUSBP3+
16 SYSUSBP3-
FB2
USB2.0_C-CHOKE
90ohm@100Mhz
B: EMI
R70
FBM2125HM330
USB3 PWR
C120
470P_0402
C116
100U/10V
CN11
USB_CONN
USB3 PWR 1
SYSUSBP3+ 1
SYSUSBP3- 1
SYSUSBP3- 1
SYSUSBP3+ 1
USB
C480
* Clamp-Diode
C479
* Clamp-Diode
SYSUSBP3- 1
SYSUSBP3+ 1
SYSUSBP2- 1
SYSUSBP2+ 1
SYSUSBP1- 1
SYSUSBP1+ 1
SYSUSBP0- 1
SYSUSBP0+ 1
C122
10P_0402
C124
10P_0402
C57
10P_0402
C60
10P_0402
C134
10P_0402
C137
10P_0402
C113
10P_0402
C115
10P_0402
B: EMI
QUANTA COMPUTER
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USB & BOARD CON
Size
A3
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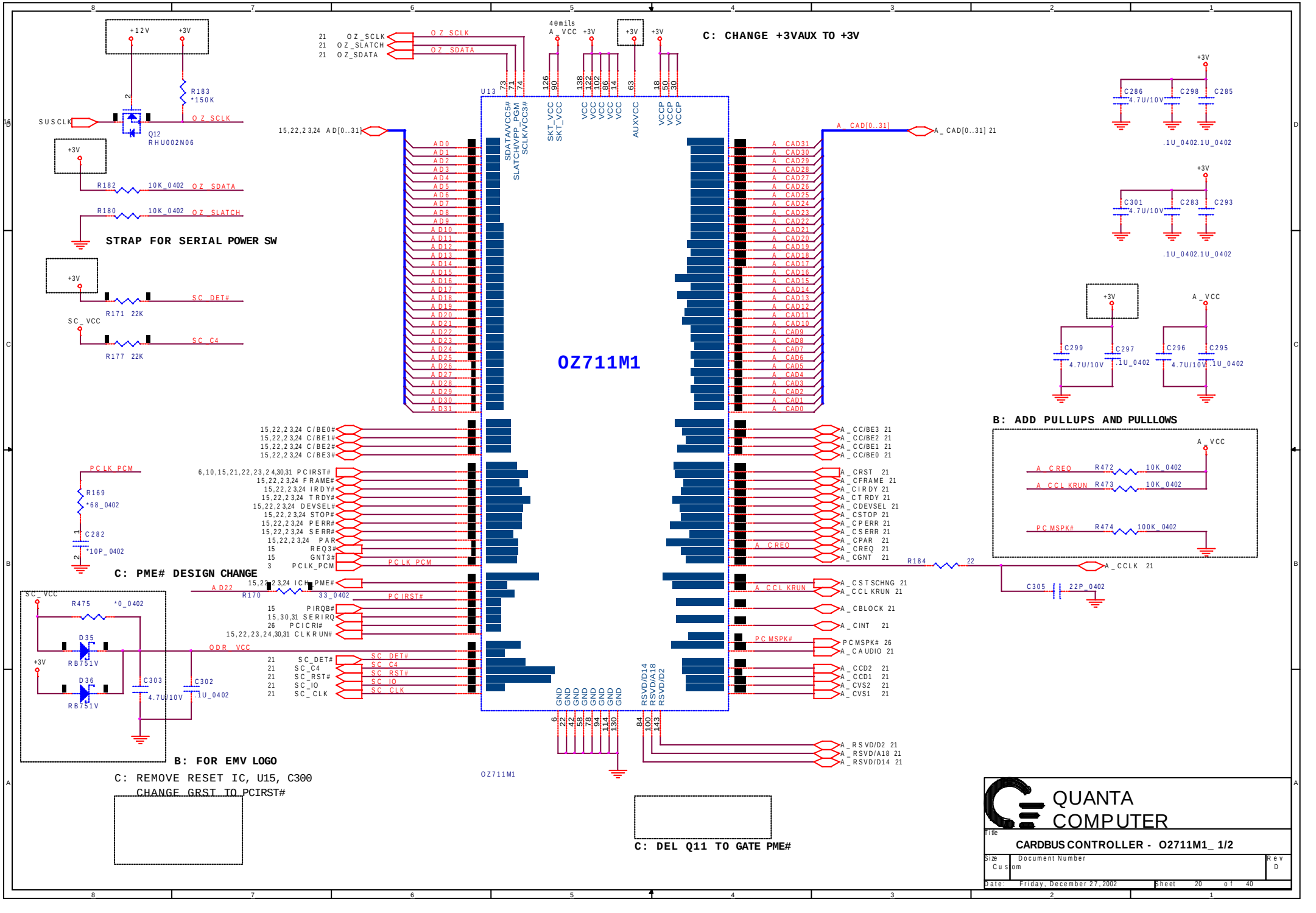
C: CHANGE +3VAUX TO +3V
OZ711M1
STRAP FOR SERIAL POWER SW
C: PME# DESIGN CHANGE
B: FOR EMV LOGO
C: REMOVE RESET IC, U15, C300
CHANGE GRST TO PCIRST#
B: ADD PULLUPS AND PULLLOWS
C: DEL Q11 TO GATE PME#
QUANTA COMPUTER
CARDBUS CONTROLLER - O2711M1_ 1/2
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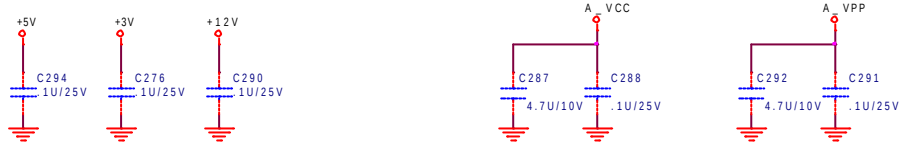
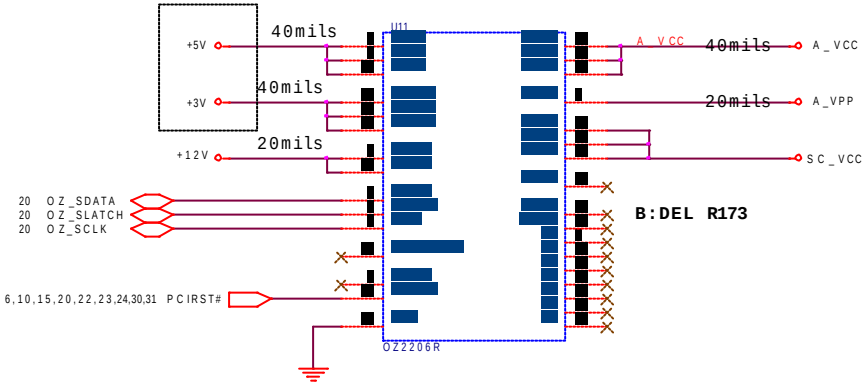
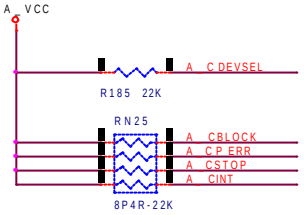
CARDBUS Slot

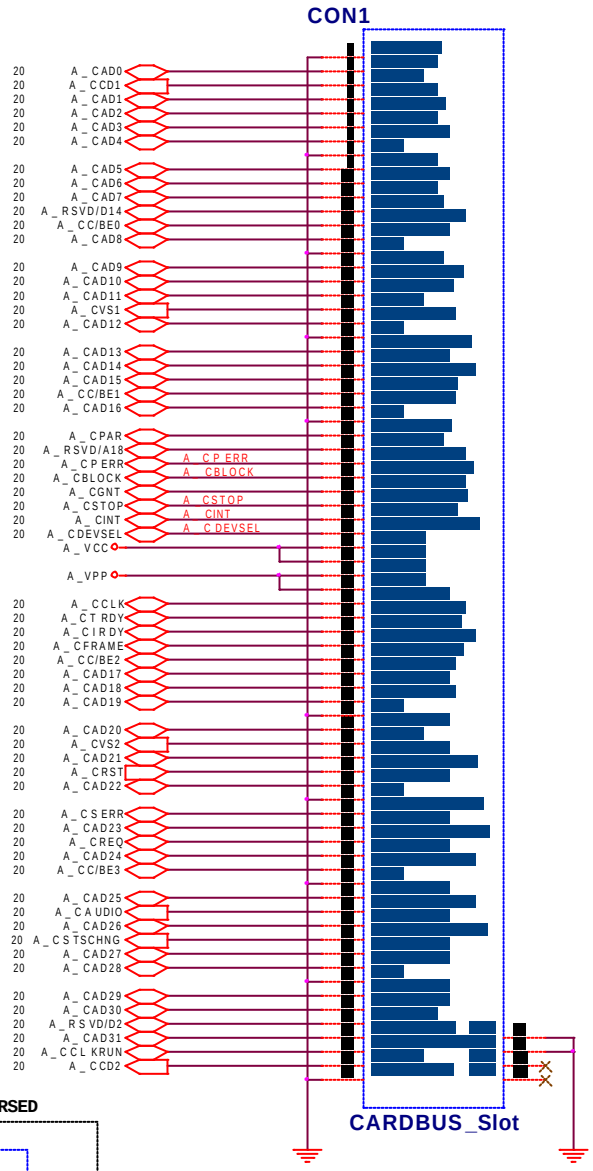


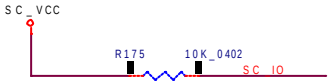
C: CHANGE FROM +5VSUS AND +3VAUX

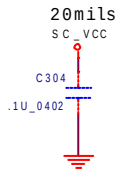


B:DEL R173

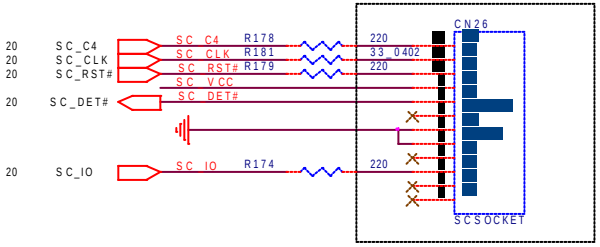








B: CN26 REVERSED



QUANTA COMPUTER

Title: CARDBUS SLOT

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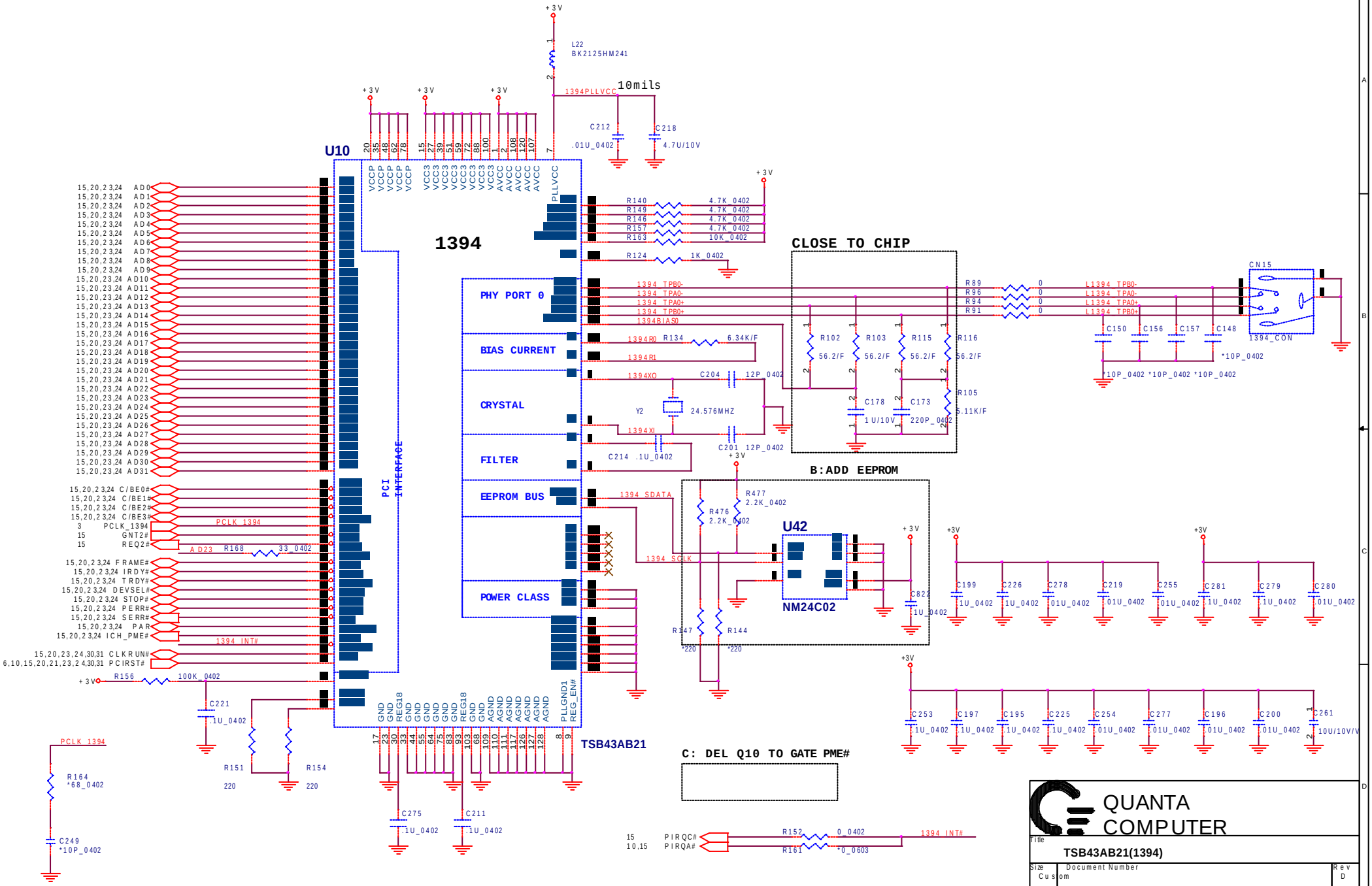
IEEE 1394 CONTROLLER - TI_TSB43AB21



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Title: TSB43AB21(1394)

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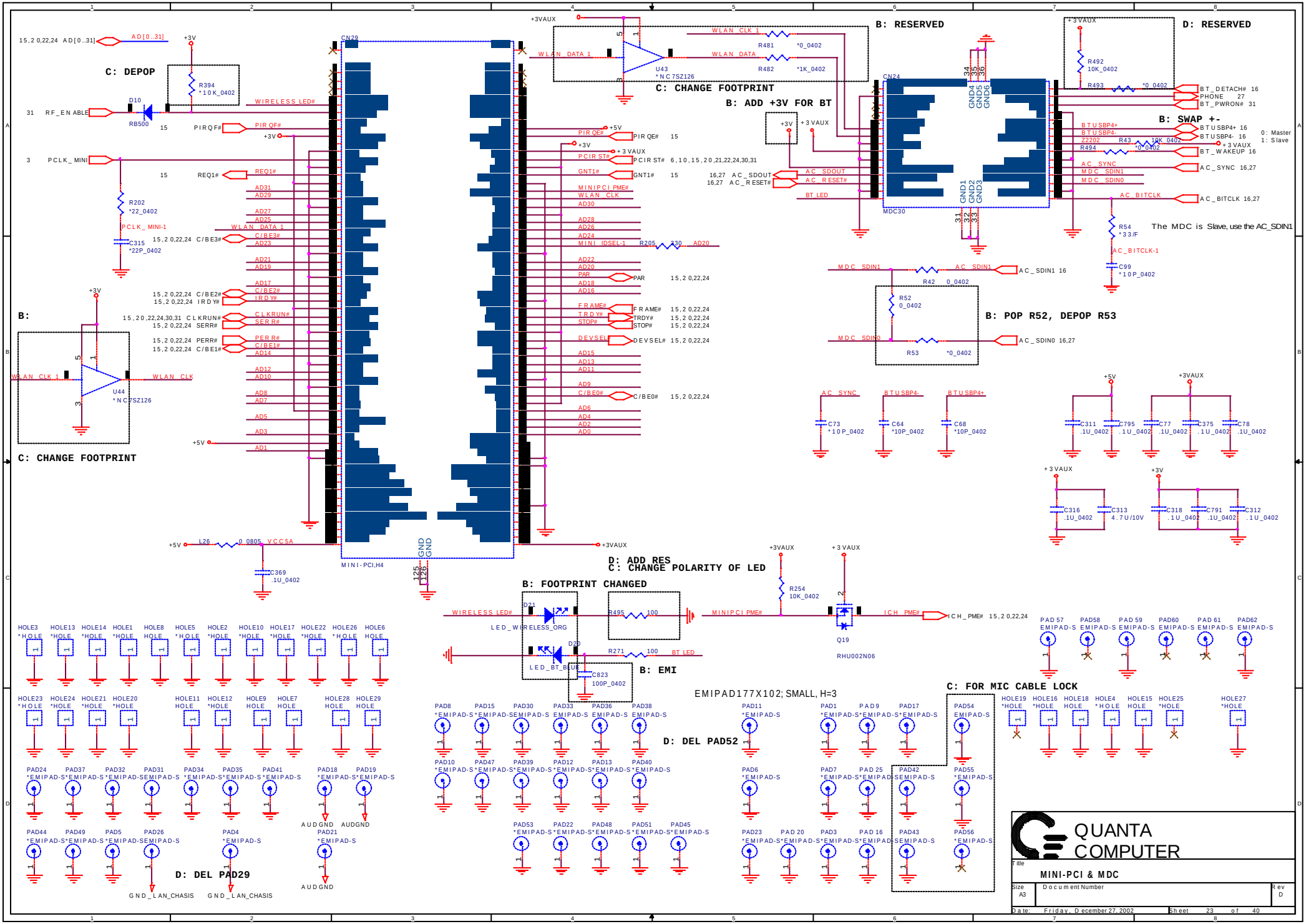
C: DEPOP
B: RESERVED
D: RESERVED
C: CHANGE FOOTPRINT
B: ADD +3V FOR BT
B: SWAP +-
B:
C: CHANGE FOOTPRINT
B: POP R52, DEPOP R53
The MDC is Slave, use the AC_SDIN1
D: ADD RES
C: CHANGE POLARITY OF LED
B: FOOTPRINT CHANGED
B: EMI
C: FOR MIC CABLE LOCK
D: DEL PAD52
D: DEL PAD29
EMIPAD177X102; SMALL, H=3
MINI-PCI,H4
QUANTA COMPUTER
MINI-PCI & MDC
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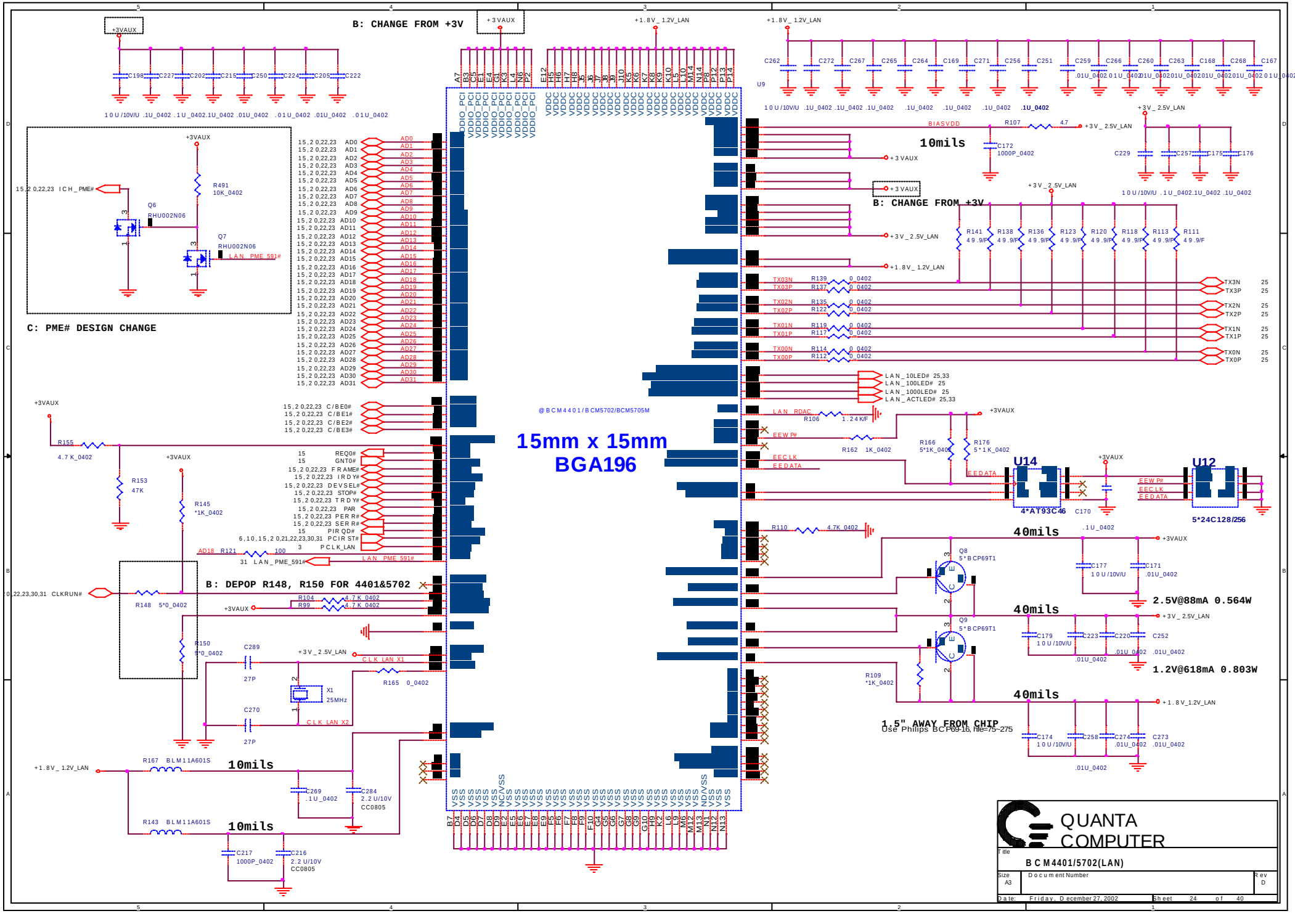
B: CHANGE FROM +3V
+3VAUX
+3 VAUX
+1.8V_1.2V_LAN
+3V_2.5V_LAN
C: PME# DESIGN CHANGE
Q6 RHU002N06
Q7 RHU002N06
R491 10K_0402
15mm x 15mm
BGA196
@BCM4401/BCM5702/BCM5705M
B: DEPOP R148, R150 FOR 4401&5702
10mils
40mils
1.5" AWAY FROM CHIP
Use Philips BCP69-16, tie=75~275
2.5V@88mA 0.564W
1.2V@618mA 0.803W
U14 4*AT93C46
U12 5*24C128/256
X1 25MHz
QUANTA COMPUTER
BCM4401/5702(LAN)
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Rev D
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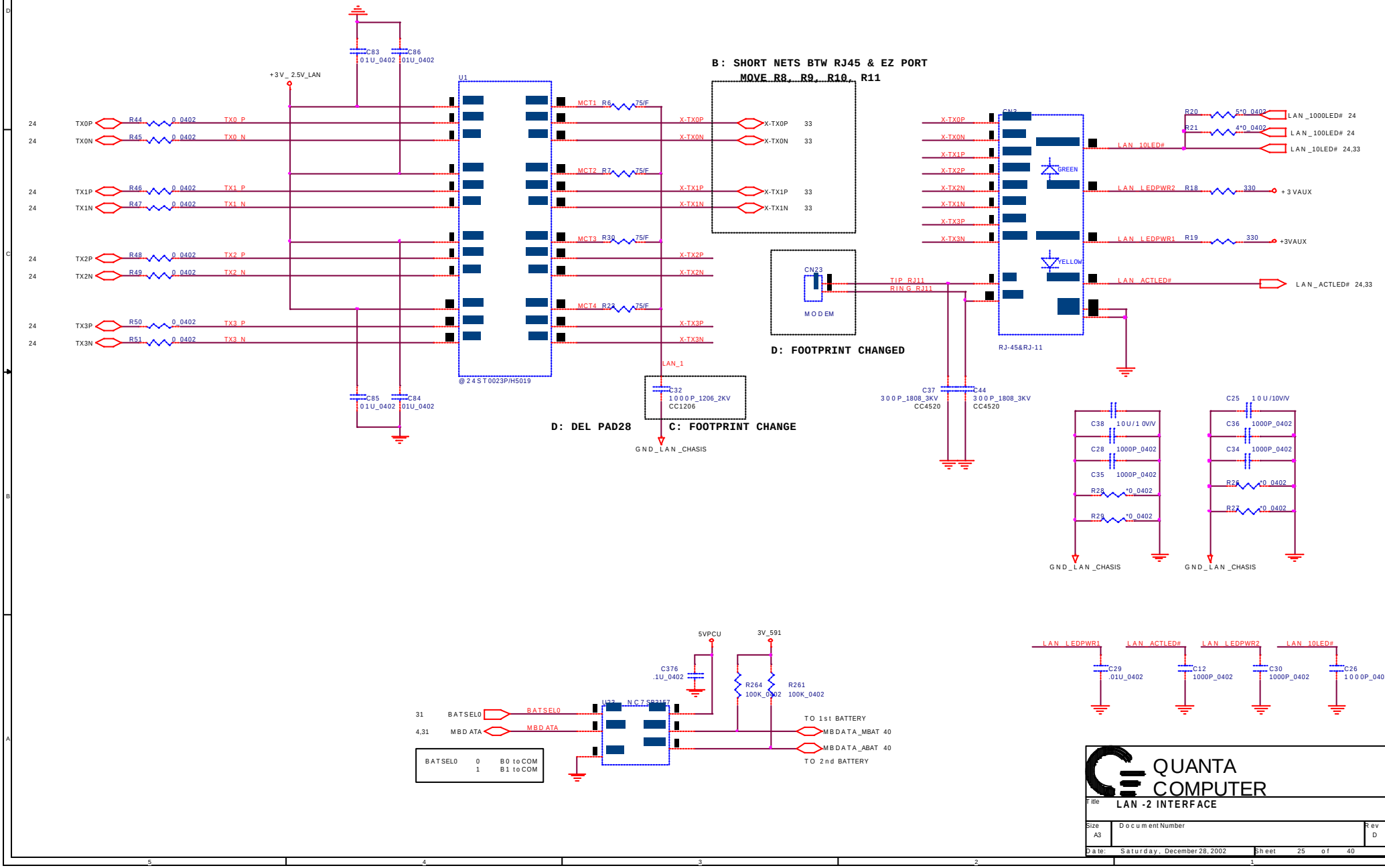

Title	LAN -2 INTERFACE
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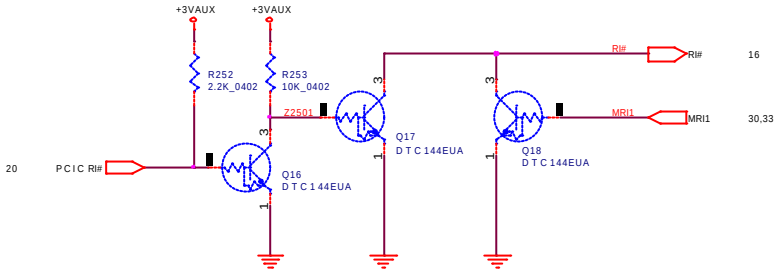
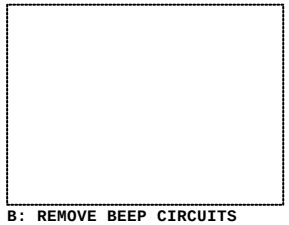
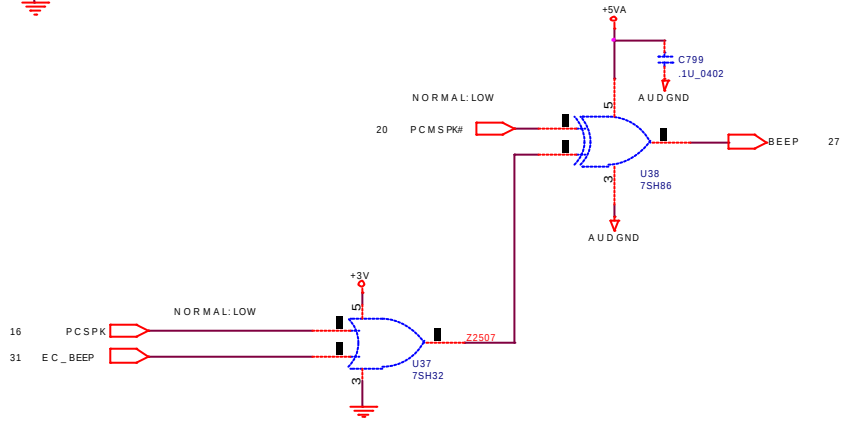




B: REMOVE BEEP CIRCUITS



QUANTA COMPUTER

Title: AUDIO POWER & BEEP		
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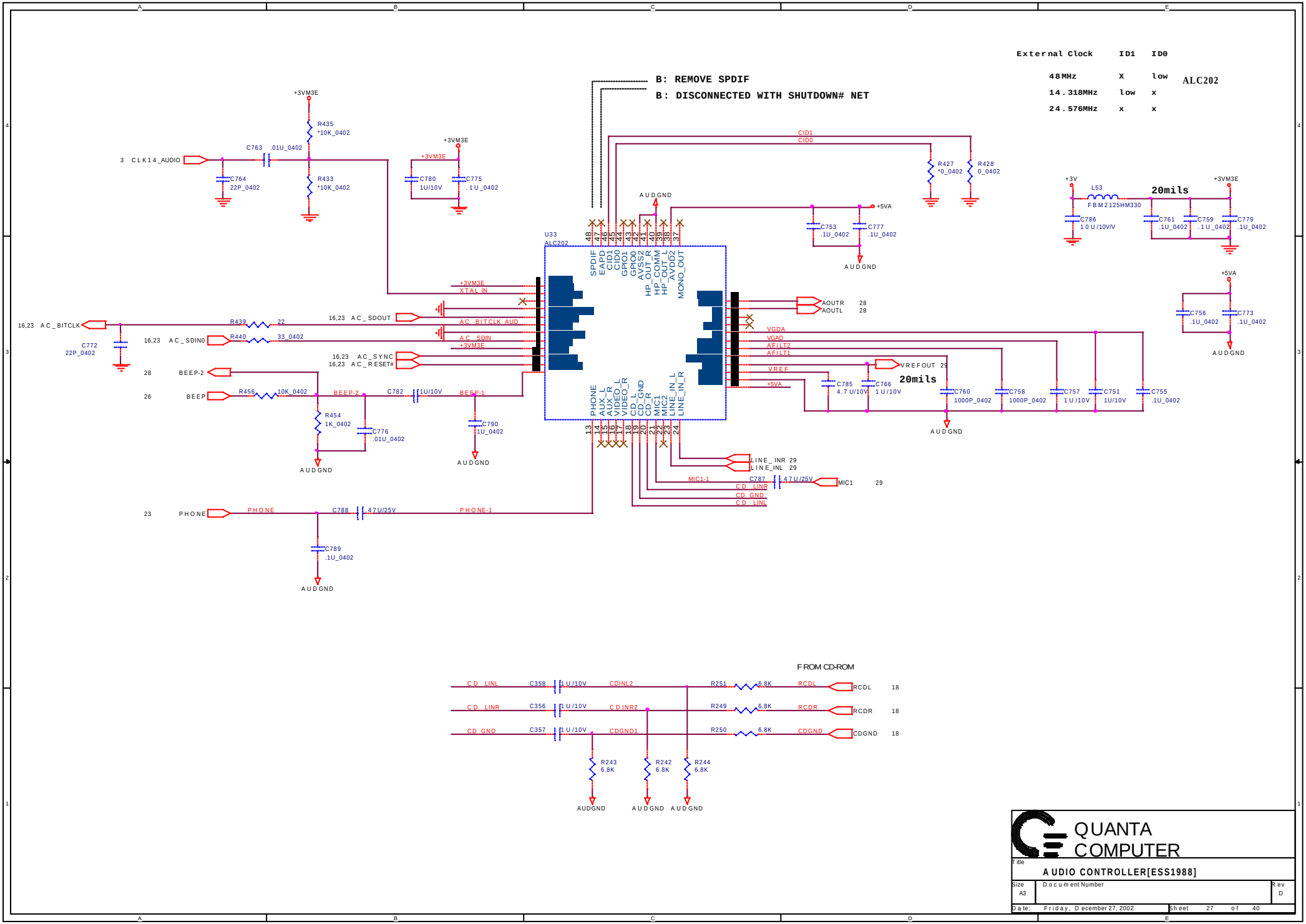

Title	AUDIO CONTROLLER[ESS1988]
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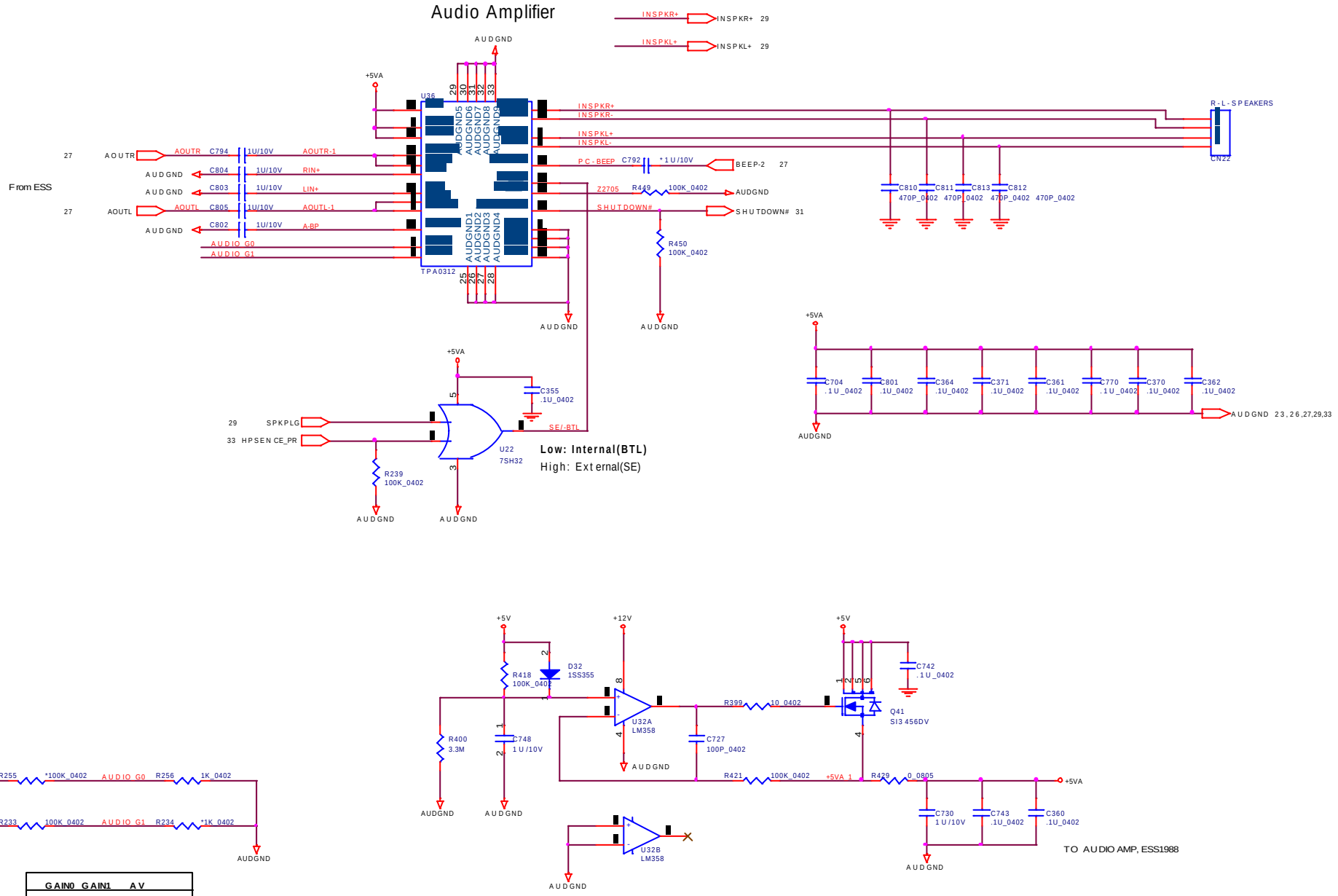
Audio Amplifier



GAIN0	GAIN1	AV
0	0	6dB
0	**1**	**10dB**
1	0	15.6dB
1	1	21.6dB

QUANTA COMPUTER

Title: AUDIO AMP		
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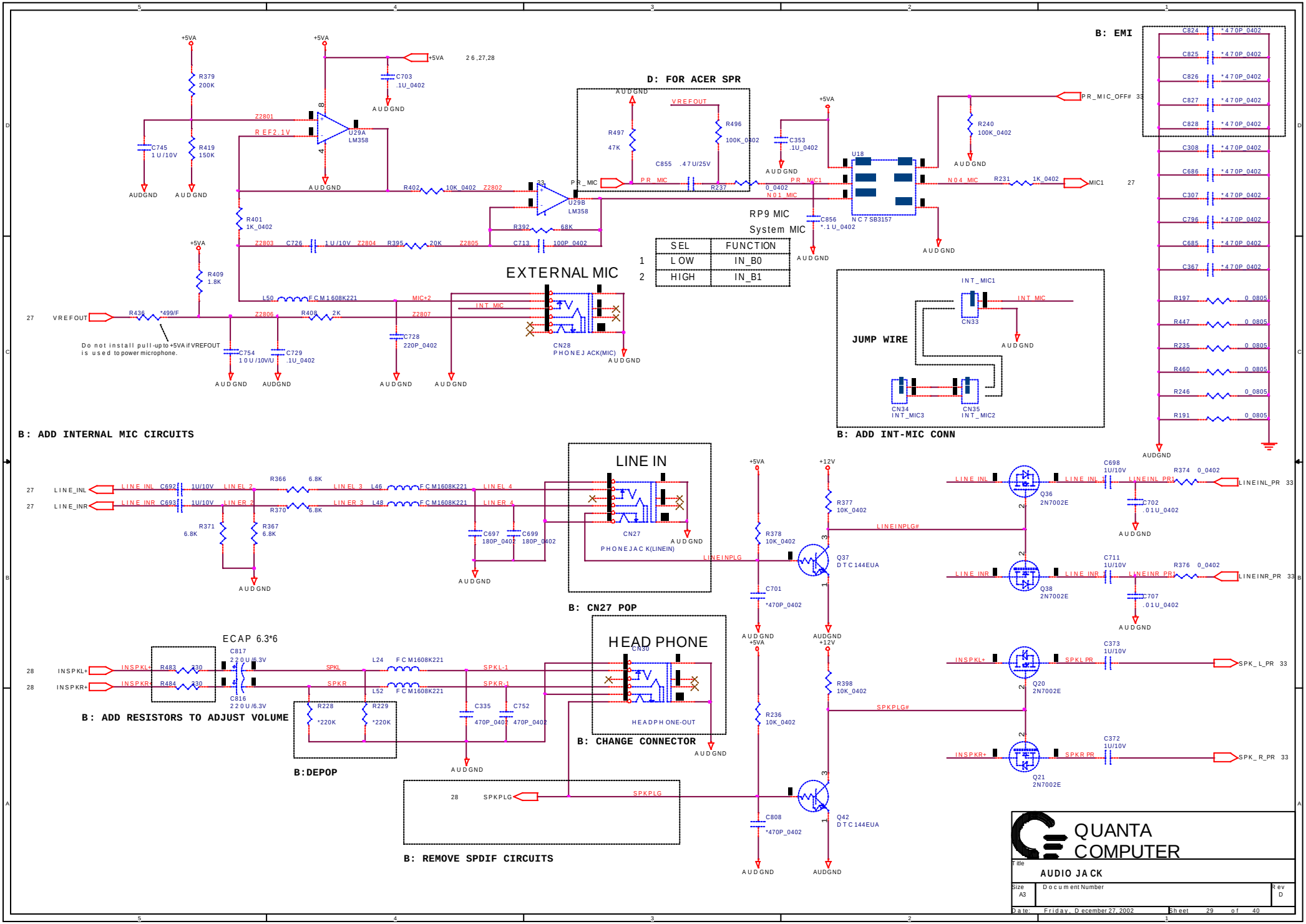
B: EMI
D: FOR ACER SPR
B: ADD INTERNAL MIC CIRCUITS
EXTERNAL MIC
RP9 MIC
System MIC
SEL FUNCTION
1 LOW IN_B0
2 HIGH IN_B1
JUMP WIRE
B: ADD INT-MIC CONN
LINE IN
B: CN27 POP
HEAD PHONE
B: CHANGE CONNECTOR
ECAP 6.3*6
B: ADD RESISTORS TO ADJUST VOLUME
B:DEPOP
B: REMOVE SPDIF CIRCUITS
Do not install pull-up to +5VA if VREFOUT is used to power microphone.
QUANTA COMPUTER
Title
AUDIO JACK
Size A3
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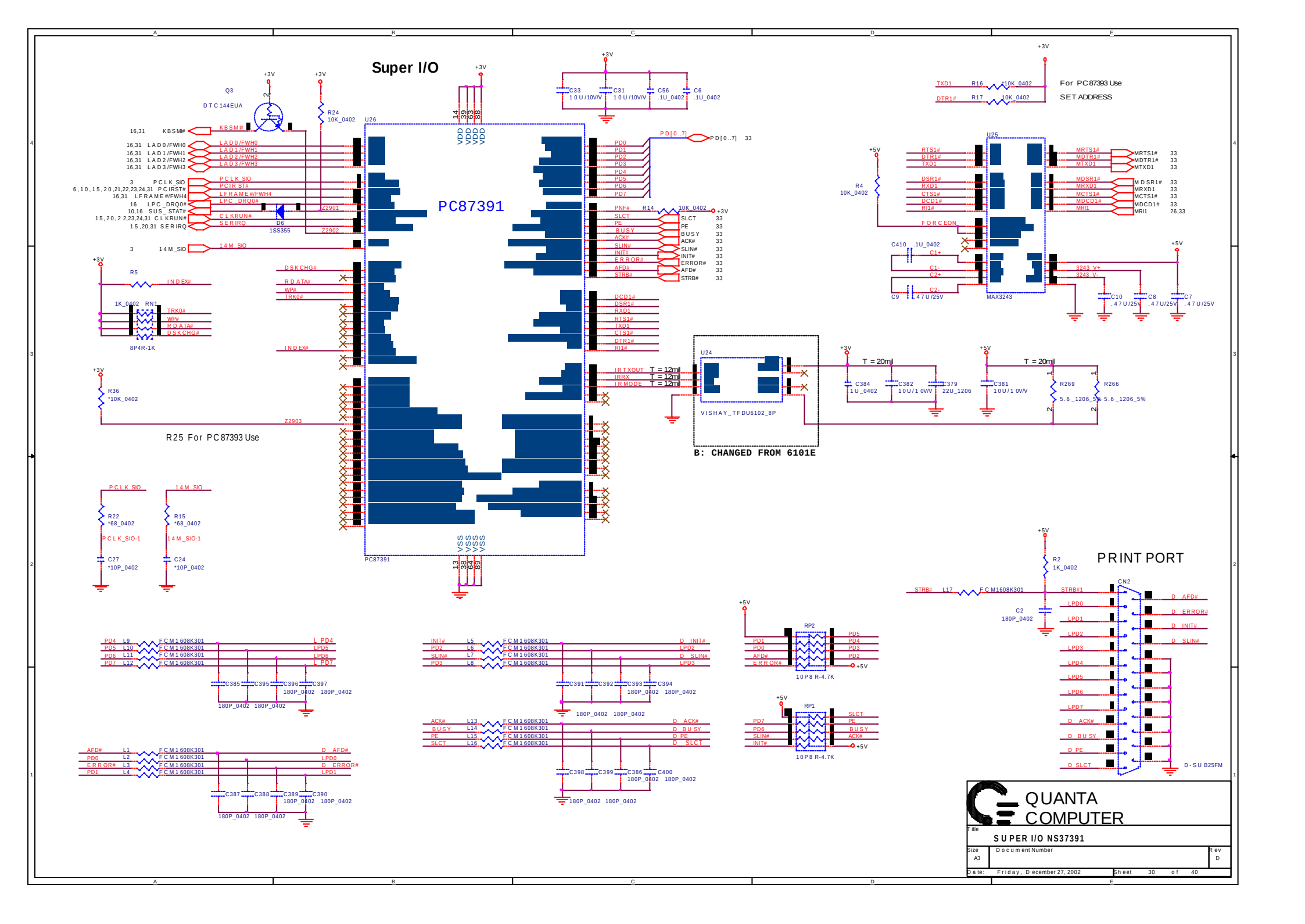
Super I/O
PC87391
Q3
DTC144EUA
R24
10K_0402
KBSMI#
LAD0/FWH0
LAD1/FWH1
LAD2/FWH2
LAD3/FWH3
PCLK_SIO
PCIRST#
LFRAME#/FWH4
LPC_DRQ0#
CLKRUN#
SERIRQ
14M_SIO
D6
1SS355
R5
INDEX#
1K_0402
RN1
8P4R-1K
TRK0#
WP#
RDATA#
DSKCHG#
R36
*10K_0402
R25 For PC87393 Use
PD[0..7]
PNF#
SLCT
PE
BUSY
ACK#
SLIN#
INIT#
ERROR#
AFD#
STRB#
DCD1#
DSR1#
RXD1
RTS1#
TXD1
CTS1#
DTR1#
RI1#
IRTXOUT
IRRX
IRMODE
T = 12mil
U24
VISHAY_TFDU6102_8P
B: CHANGED FROM 6101E
C33
C31
C56
C6
.1U_0402
10U/10V/V
For PC87393 Use
SET ADDRESS
TXD1
DTR1#
R16
R17
U25
MAX3243
FORCEON
C410
C1+
C1-
C2+
C2-
C9
C10
C8
C7
3243_V+
3243_V-
MRTS1#
MDTR1#
MTXD1
MDSR1#
MRXD1
MCTS1#
MDCD1#
MRI1
C384
C382
C379
C381
R269
R266
T = 20mil
5.6_1206_5%
PCLK_SIO
14M_SIO
R22
R15
*68_0402
PCLK_SIO-1
14M_SIO-1
C27
C24
*10P_0402
PRINT PORT
CN2
D-SUB25FM
R2
1K_0402
C2
180P_0402
STRB#
L17
FCM1608K301
D_AFD#
D_ERROR#
D_INIT#
D_SLIN#
LPD0
LPD1
LPD2
LPD3
LPD4
LPD5
LPD6
LPD7
D_ACK#
D_BUSY
D_PE
D_SLCT
RP1
RP2
10P8R-4.7K
PD4
PD5
PD6
PD7
L_PD4
L_PD5
L_PD6
L_PD7
C385
C395
C396
C397
C391
C392
C393
C394
C398
C399
C386
C400
C387
C388
C389
C390
180P_0402
QUANTA COMPUTER
SUPER I/O NS37391
Size
A3
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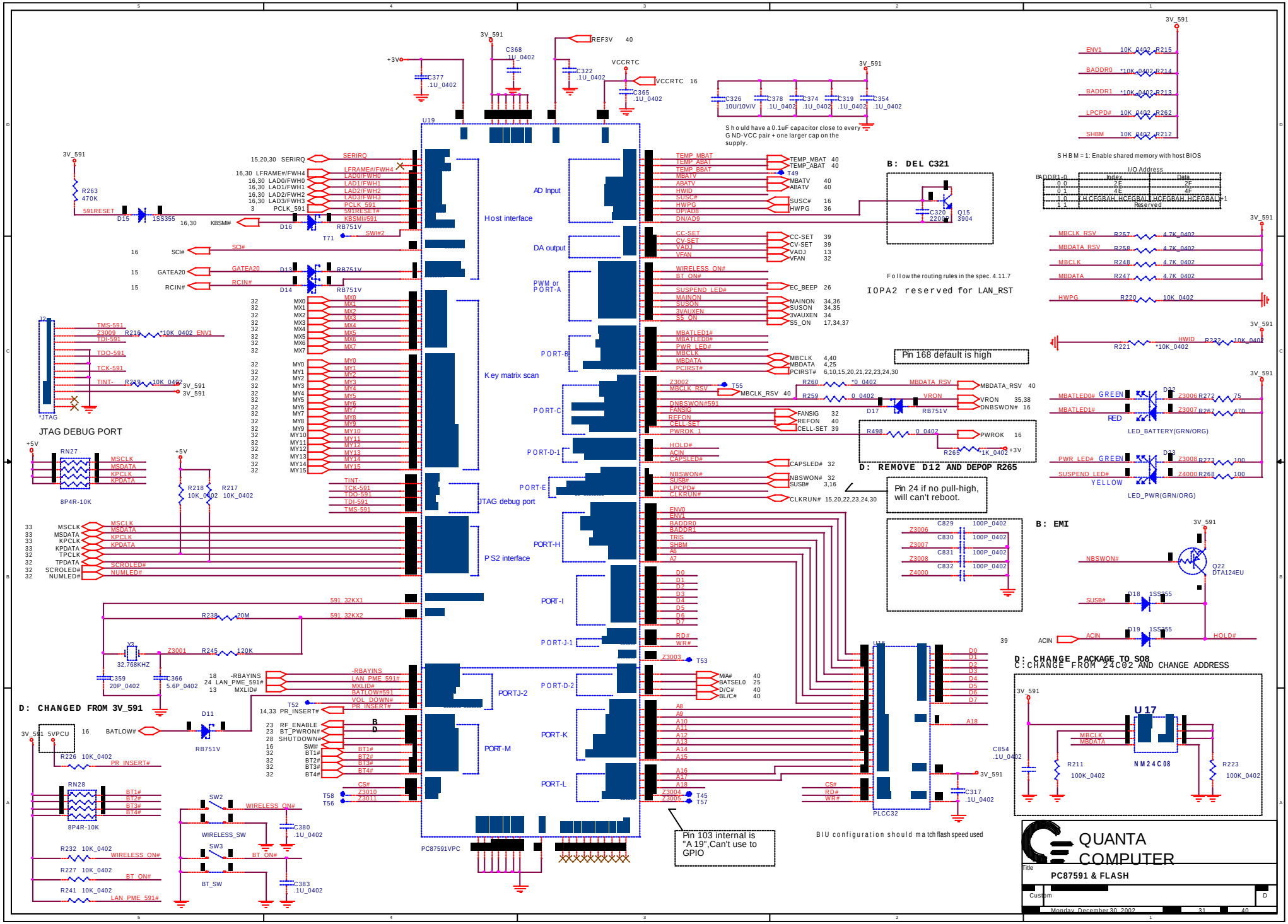
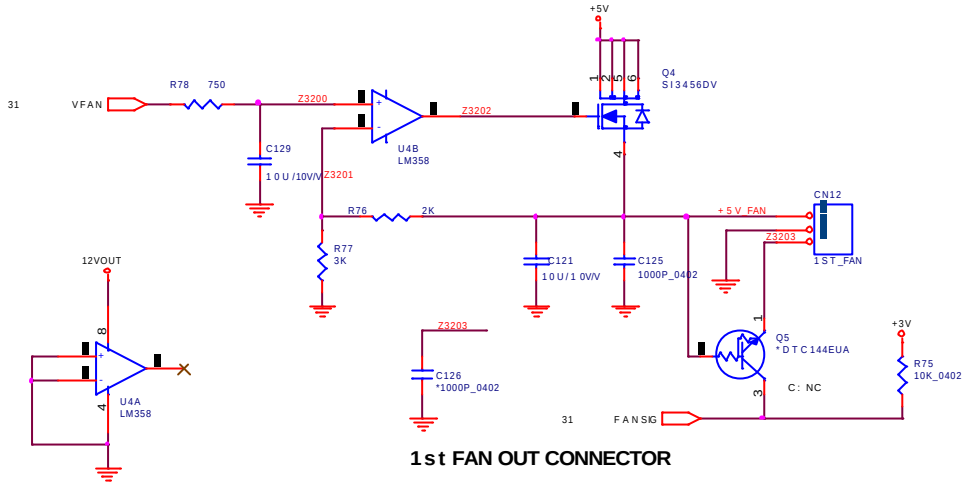
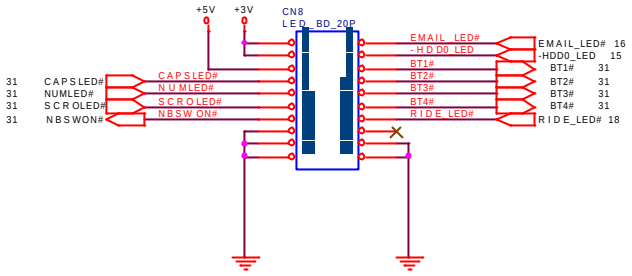

U19
PC87591VPC
Host interface
AD Input
DA output
PWM or PORT-A
PORT-B
Key matrix scan
PORT-C
PORT-D-1
PORT-E
JTAG debug port
PS2 interface
PORT-H
PORT-I
PORT-J-1
PORTJ-2
PORT-D-2
PORT-K
PORT-M
PORT-L
JTAG DEBUG PORT
*JTAG
8P4R-10K
B: DEL C321
IOPA2 reserved for LAN_RST
Follow the routing rules in the spec. 4.11.7
Pin 168 default is high
D: REMOVE D12 AND DEPOP R265
Pin 24 if no pull-high, will can't reboot.
B: EMI
D: CHANGED FROM 3V_591
D: CHANGE PACKAGE TO SO8
C:CHANGE FROM 24C02 AND CHANGE ADDRESS
U17
NM24C08
PLCC32
BIU configuration should match flash speed used
Pin 103 internal is "A 19",Can't use to GPIO
SHBM = 1: Enable shared memory with host BIOS
LED_BATTERY(GRN/ORG)
LED_PWR(GRN/ORG)
QUANTA COMPUTER
PC87591 & FLASH
Custom
Monday, December 30, 2002
31
40

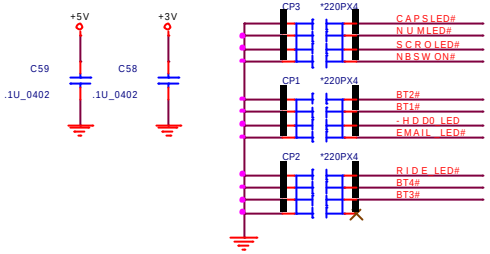


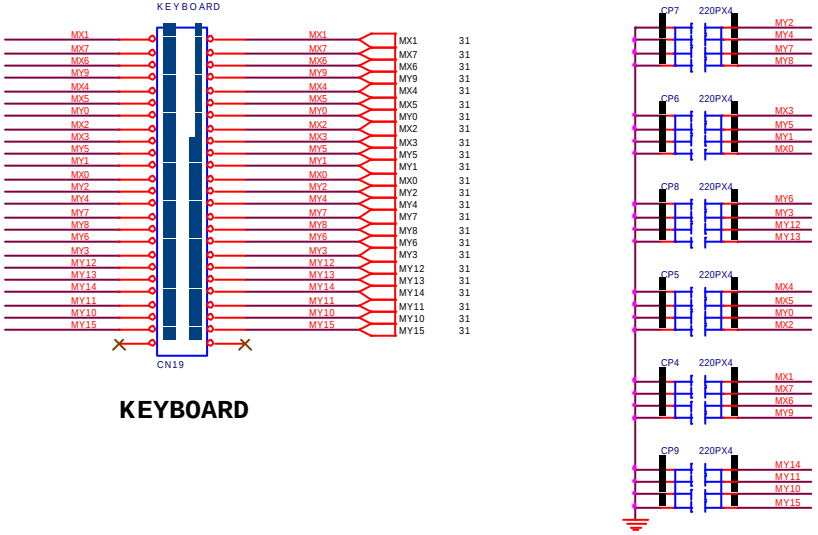
1st FAN OUT CONNECTOR

B: FOOTPRINT CHANGED

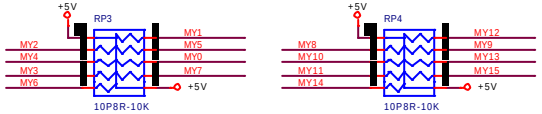


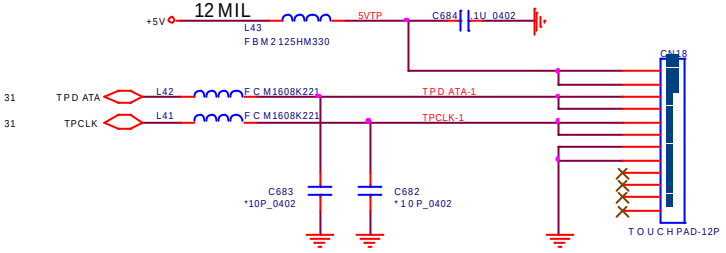
TO LED BOARD 30P





KEYBOARD





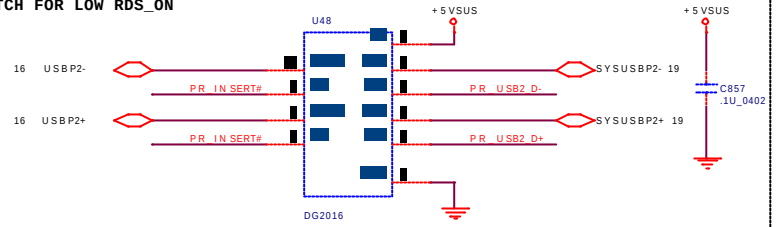
TOUCH PAD

QUANTA COMPUTER

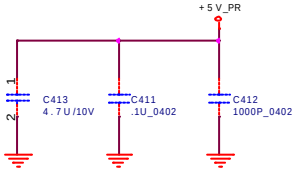
Title	K/B ,FDD ,FANCON	
Size A3	Document Number	Rev D
Date: Friday, December 27, 2002	Sheet 32 of 40	

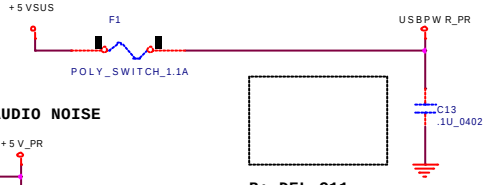
B: SWAP USBP2 AND USBP3

D: CHANGE SWITCH FOR LOW RDS_ON



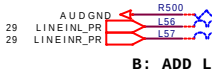
D: FOR AUDIO NOISE



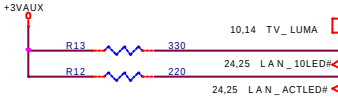


B: DEL C11

D: DISCONNECT AUDGND TO SPR



B: ADD L56, L57 FOR EMI



D: FOR AUDIO NOISE

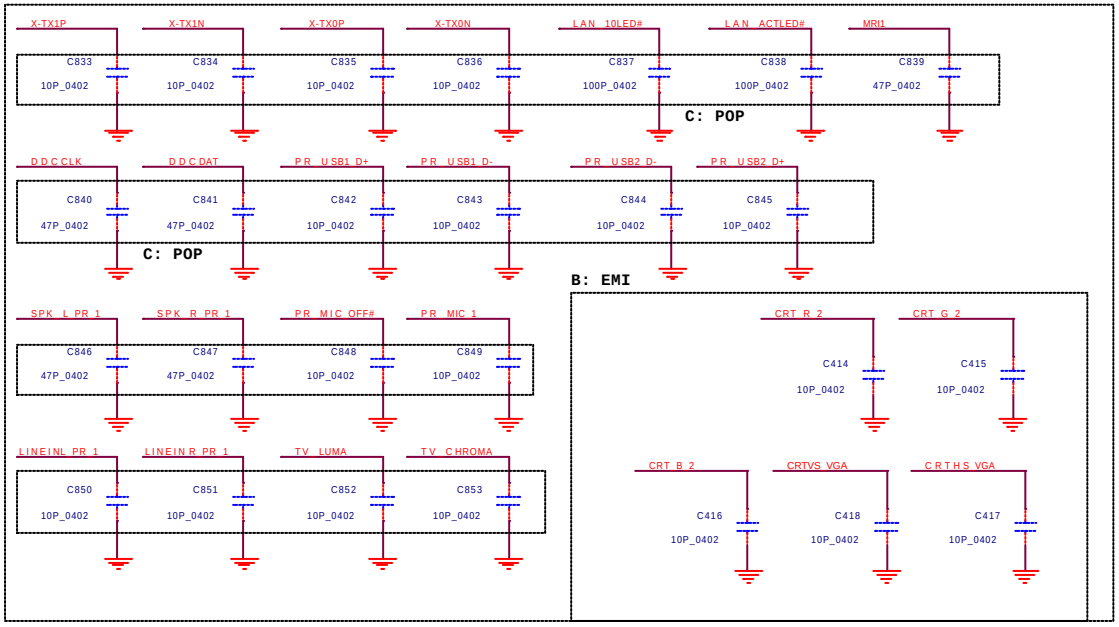
B: EMI

C: CHANGE TO BEAD

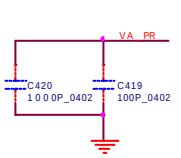
B: EMI

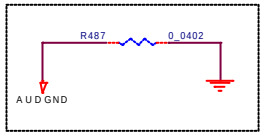
PIN 101 MATCH PIN9 FOR R PGETARP_INLOOP

B: EMI



B: EMI





B: EMI C: POP

QUANTA COMPUTER

Title	PORT REPLICATOR(152P)	
Size A3	Document Number ZG1	Rev D
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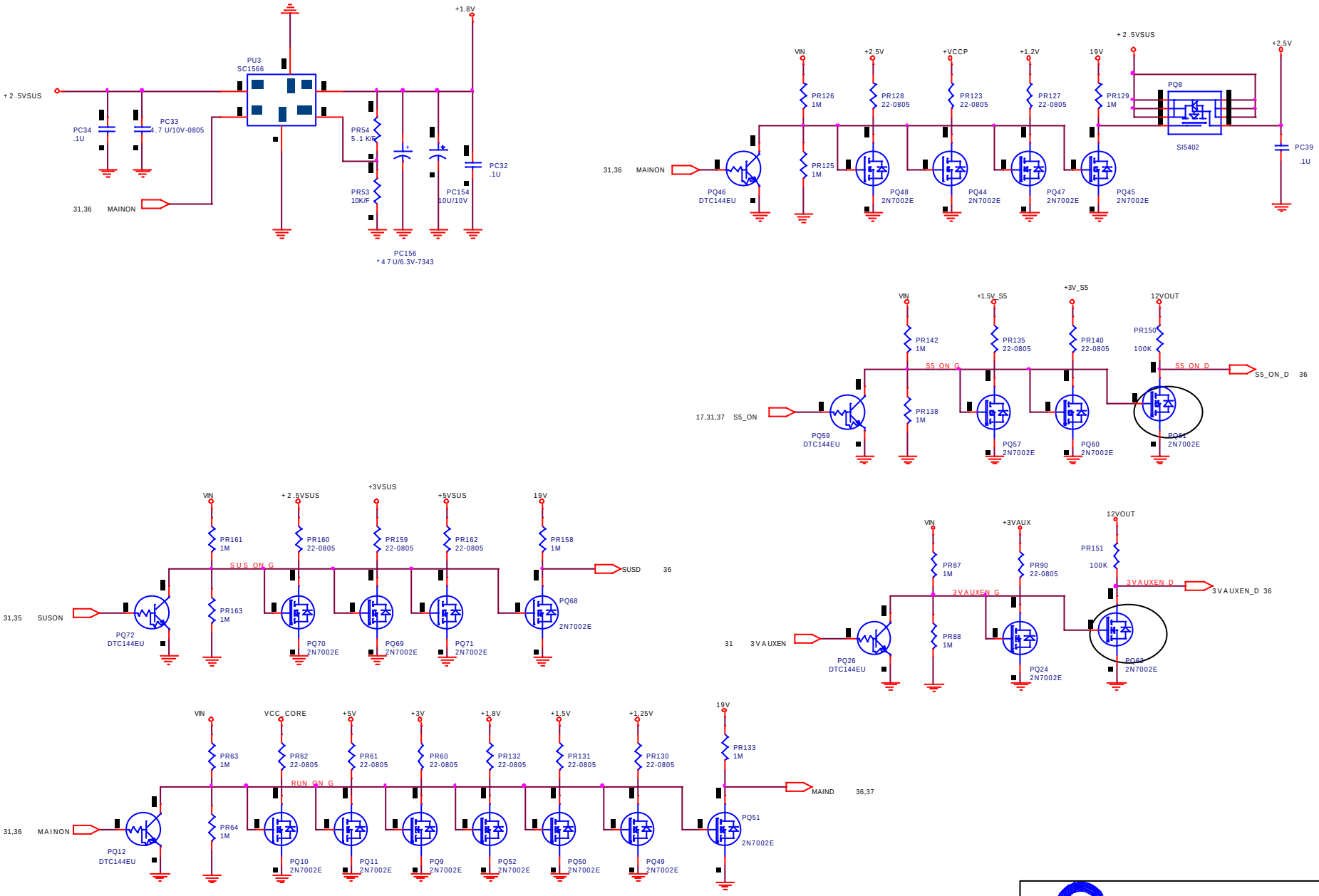
+2.5VSUS
PU3
SC1566
+1.8V
PC34
.1U
PC33
4.7 U/10V-0805
PR54
5.1 K/F
PR53
10K/F
PC154
10U/10V
PC32
.1U
PC156
*4 7 U/6.3V-7343
31,36 MAINON
VIN
+2.5V
+VCCP
+1.2V
19V
+2.5VSUS
+2.5V
PR126
1M
PR128
22-0805
PR123
22-0805
PR127
22-0805
PR129
1M
PR125
1M
PQ8
SI5402
PC39
.1U
PQ46
DTC144EU
PQ48
2N7002E
PQ44
2N7002E
PQ47
2N7002E
PQ45
2N7002E
VIN
+1.5V_S5
+3V_S5
12VOUT
PR142
1M
PR135
22-0805
PR140
22-0805
PR150
100K
S5_ON_G
S5_ON_D
S5_ON_D 36
17,31,37 S5_ON
PR138
1M
PQ59
DTC144EU
PQ57
2N7002E
PQ60
2N7002E
PQ61
2N7002E
VIN
+2.5VSUS
+3VSUS
+5VSUS
19V
PR161
1M
PR160
22-0805
PR159
22-0805
PR162
22-0805
PR158
1M
SUS_ON_G
SUSD 36
31,35 SUSON
PR163
1M
PQ72
DTC144EU
PQ70
2N7002E
PQ69
2N7002E
PQ71
2N7002E
PQ68
2N7002E
VIN
+3VAUX
12VOUT
PR87
1M
PR90
22-0805
PR151
100K
3VAUXEN_G
3VAUXEN_D
3VAUXEN_D 36
31 3VAUXEN
PR88
1M
PQ26
DTC144EU
PQ24
2N7002E
PQ62
2N7002E
VIN
VCC_CORE
+5V
+3V
+1.8V
+1.5V
+1.25V
19V
PR63
1M
PR62
22-0805
PR61
22-0805
PR60
22-0805
PR132
22-0805
PR131
22-0805
PR130
22-0805
PR133
1M
RUN_ON_G
MAIND 36,37
31,36 MAINON
PR64
1M
PQ12
DTC144EU
PQ10
2N7002E
PQ11
2N7002E
PQ9
2N7002E
PQ52
2N7002E
PQ50
2N7002E
PQ49
2N7002E
PQ51
2N7002E
PROJECT : ZG1
Quanta Computer Inc.
Size
Custom
Document Number
DISCHARGE CIRCUIT
Rev
D
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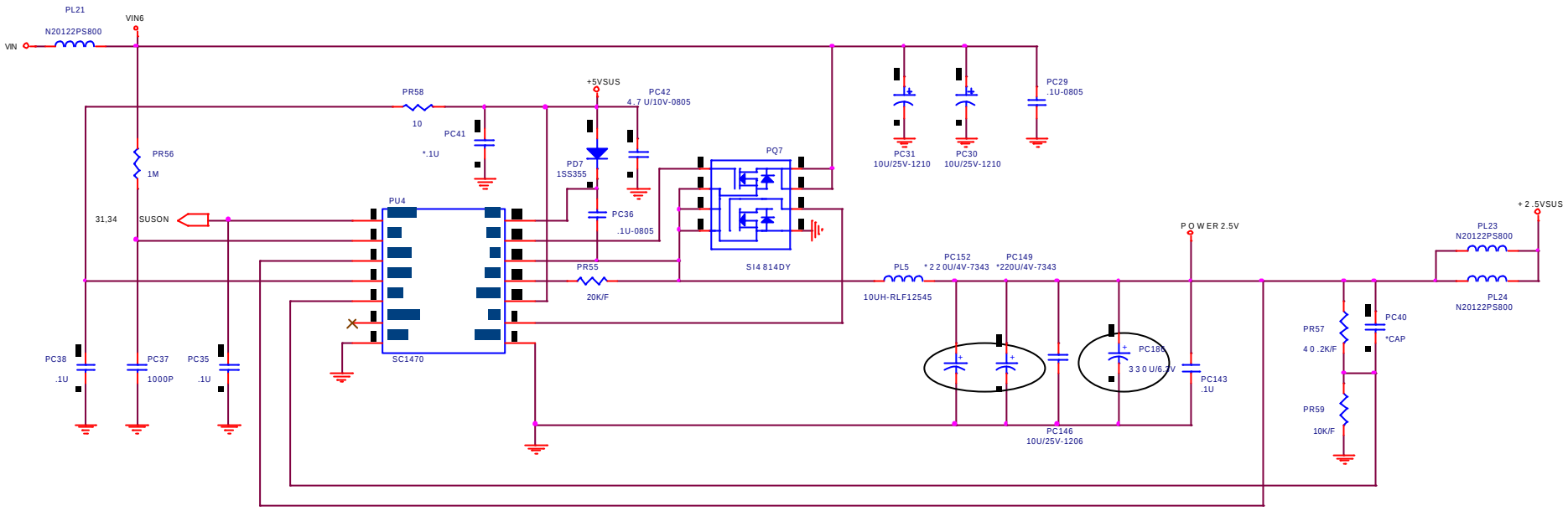

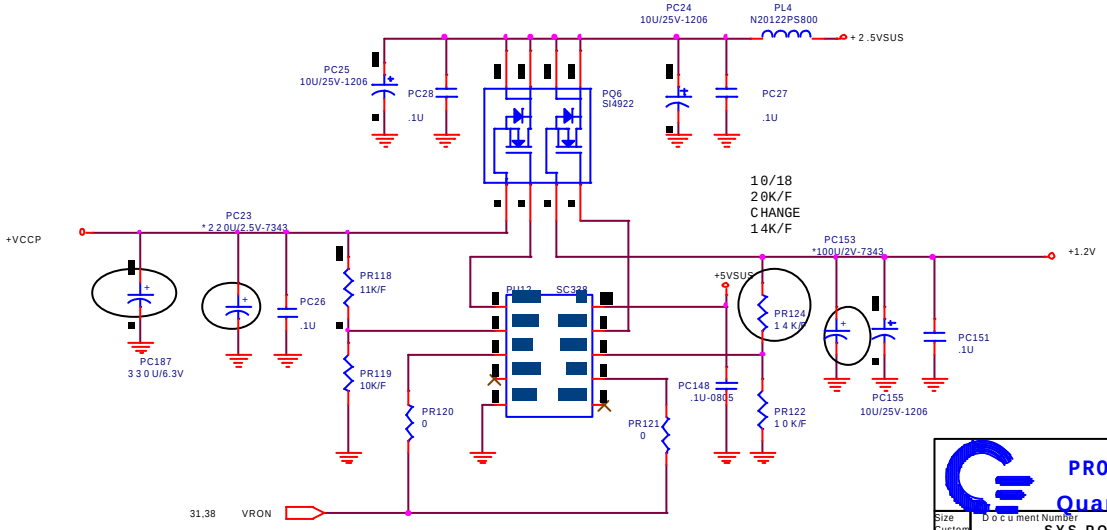

PROJECT : ZG1

Quanta Computer Inc.

Size	Document Number	Rev
Custom	SYS POWER 2.5V& CPUIO	D
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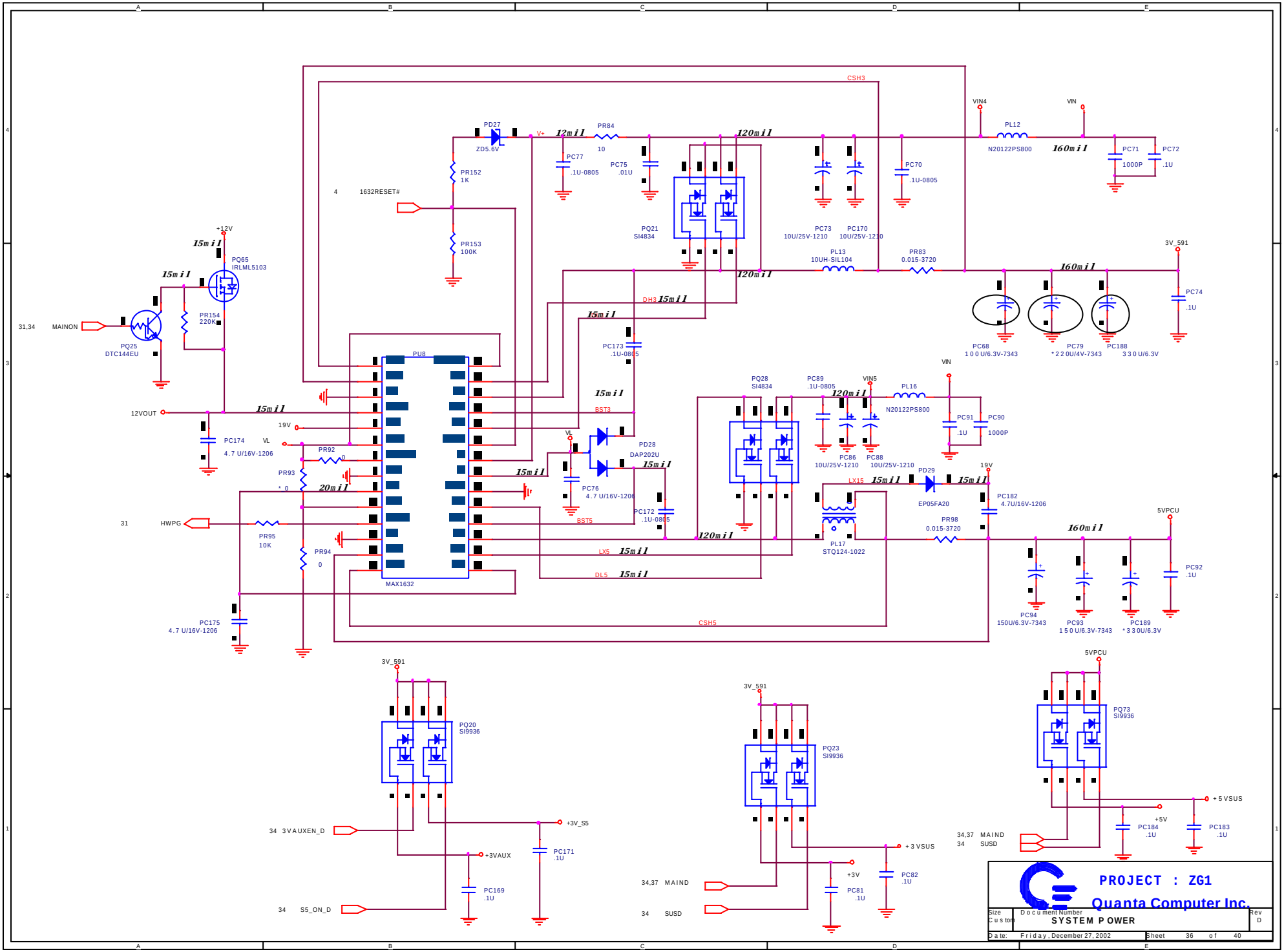
CSH3
VIN4
VIN
PL12
N20122PS800
160mil
PC71
1000P
PC72
.1U
PD27
ZD5.6V
V+
12mil
PR84
10
120mil
PC77
.1U-0805
PC75
.01U
PC70
.1U-0805
PR152
1K
4 1632RESET#
PR153
100K
PQ21
SI4834
PC73
10U/25V-1210
PC170
10U/25V-1210
PL13
10UH-SIL104
PR83
0.015-3720
3V_591
PC74
.1U
PC68
1 0 0 U/6.3V-7343
PC79
* 2 2 0U/4V-7343
PC188
3 3 0 U/6.3V
+12V
15mil
PQ65
IRLML5103
31,34 MAINON
PR154
220K
PQ25
DTC144EU
DH3
PC173
.1U-0805
PU8
12VOUT
19V
PC174
4.7 U/16V-1206
VL
PR92
0
PR93
* 0
20mil
31 HWPG
PR95
10K
PR94
0
PC175
4.7 U/16V-1206
MAX1632
BST3
PD28
DAP202U
PC76
4.7 U/16V-1206
BST5
PC172
.1U-0805
LX5
DL5
CSH5
PQ28
SI4834
PC89
.1U-0805
VIN5
PL16
N20122PS800
PC91
.1U
PC90
1000P
PC86
10U/25V-1210
PC88
10U/25V-1210
LX15
PD29
EP05FA20
PC182
4.7U/16V-1206
PR98
0.015-3720
PL17
STQ124-1022
5VPCU
PC92
.1U
PC94
150U/6.3V-7343
PC93
1 5 0 U/6.3V-7343
PC189
* 3 3 0U/6.3V
PQ20
SI9936
34 3VAUXEN_D
+3V_S5
+3VAUX
PC171
.1U
PC169
.1U
34 S5_ON_D
PQ23
SI9936
34,37 MAIND
34 SUSD
+3VSUS
+3V
PC82
.1U
PC81
.1U
PQ73
SI9936
+5VSUS
+5V
PC184
.1U
PC183
.1U
34,37 MAIND
34 SUSD
PROJECT : ZG1
Quanta Computer Inc.
Size
Custom
Document Number
SYSTEM POWER
Rev
D
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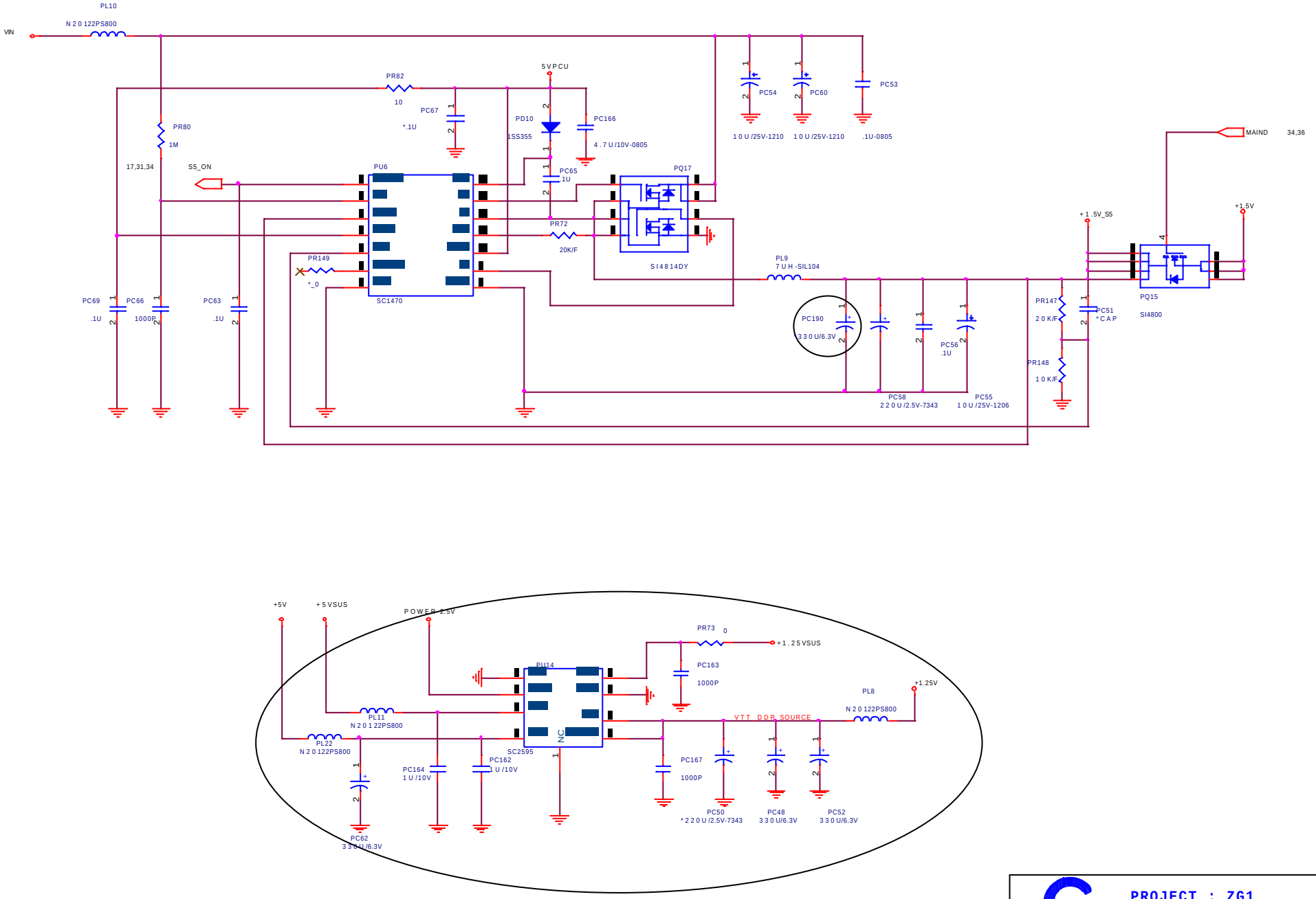

PROJECT : ZG1

Quanta Computer Inc.

Size	Document Number	Rev
Custom	POWER 1.5V & DDR	D
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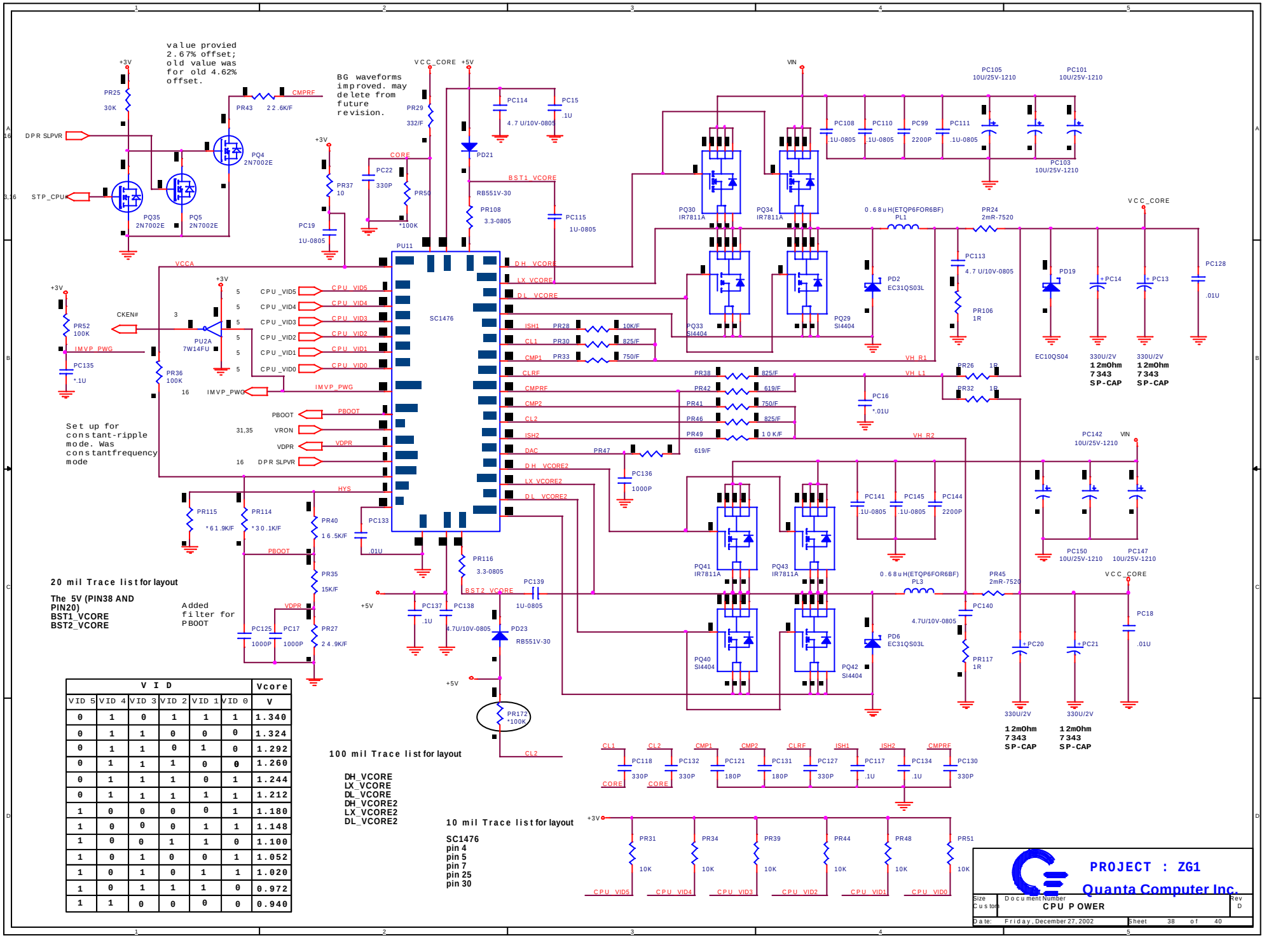
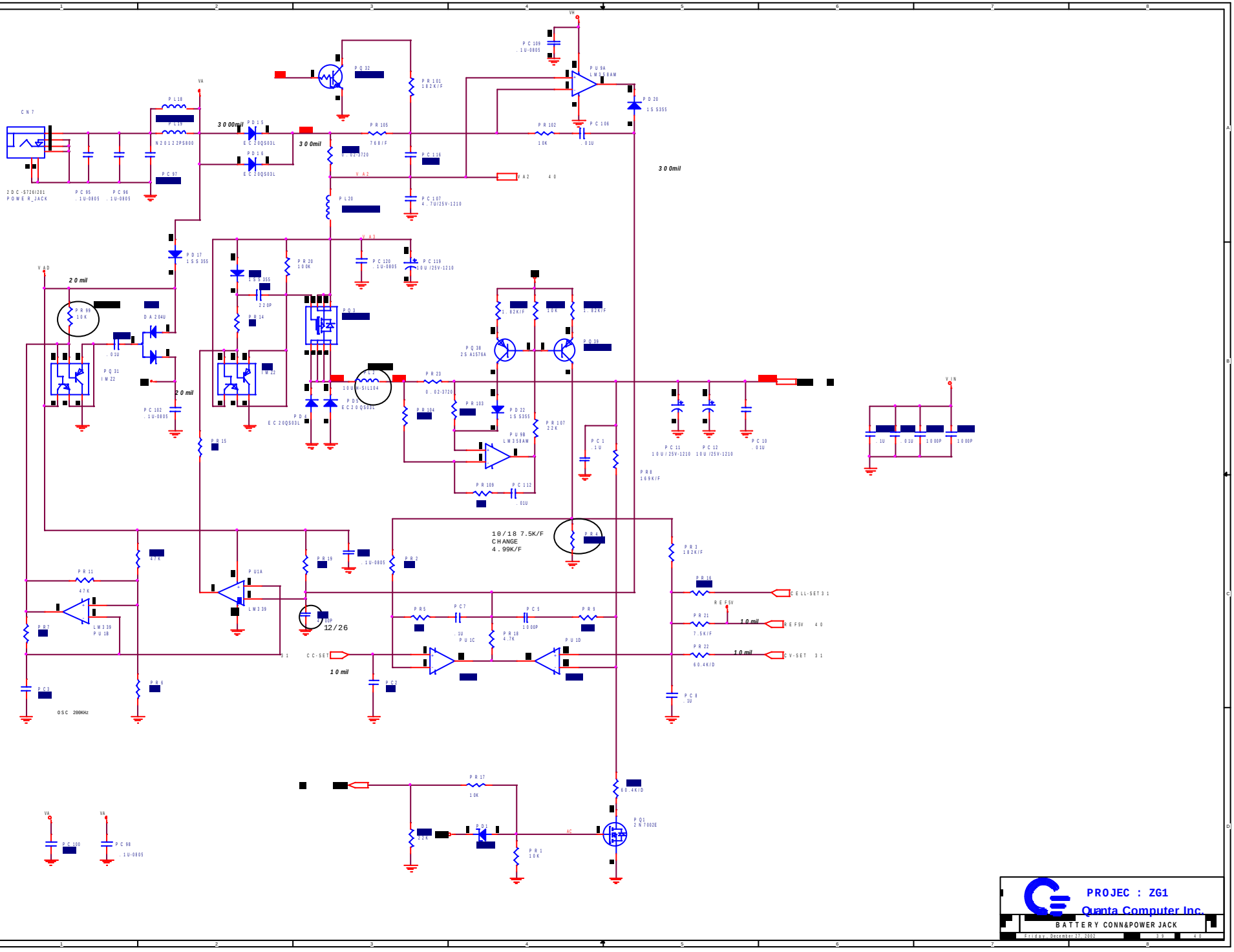
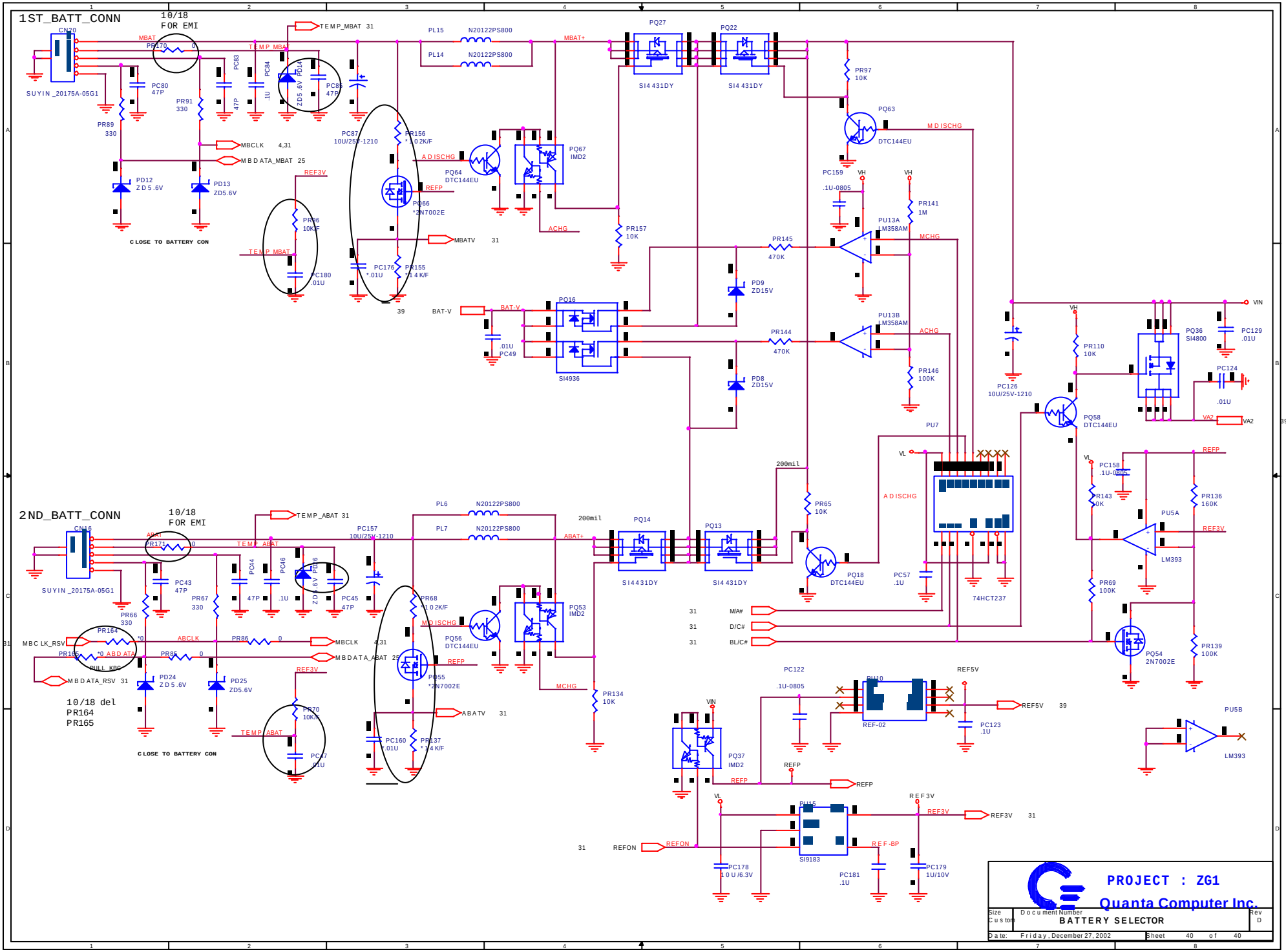


V I D						Vcore
VID 5	VID 4	VID 3	VID 2	VID 1	VID 0	V
0	1	0	1	1	1	1.340
0	1	1	0	0	0	1.324
0	1	1	0	1	0	1.292
0	1	1	1	0	0	1.260
0	1	1	1	0	1	1.244
0	1	1	1	1	1	1.212
1	0	0	0	0	1	1.180
1	0	0	0	1	1	1.148
1	0	0	1	1	0	1.100
1	0	1	0	0	1	1.052
1	0	1	0	1	1	1.020
1	0	1	1	1	0	0.972
1	1	0	0	0	0	0.940


PROJEC : ZG1
Quanta Computer Inc.
BATTERY CONN&POWER JACK
Friday, December 27, 2002
3.0
4.0


1ST_BATT_CONN
10/18
FOR EMI
CN20
SUYIN_20175A-05G1
MBAT
PR170
0
TEMP_MBAT
TEMP_MBAT 31
PC80
47P
PR91
330
PC83
47P
PC84
.1U
PD14
ZD5.6V
PC85
47P
PR89
330
MBCLK
4,31
MBDATA_MBAT 25
PD12
ZD5.6V
PD13
ZD5.6V
CLOSE TO BATTERY CON
REF3V
PR96
10K/F
TEMP_MBAT
PC180
.01U
PC87
10U/25V-1210
PR156
*102K/F
ADISCHG
PQ64
DTC144EU
REFP
PQ66
*2N7002E
MBATV
31
PC176
*.01U
PR155
*14K/F
39
BAT-V
PL15
N20122PS800
PL14
N20122PS800
MBAT+
PQ27
SI4431DY
PQ22
SI4431DY
PR97
10K
PQ63
DTC144EU
MDISCHG
PQ67
IMD2
ACHG
PR157
10K
PC159
.1U-0805
VH
PR141
1M
PU13A
LM358AM
MCHG
PR145
470K
PD9
ZD15V
PQ16
SI4936
PR144
470K
PU13B
LM358AM
ACHG
PR146
100K
PD8
ZD15V
PC126
10U/25V-1210
PQ58
DTC144EU
PR110
10K
PQ36
SI4800
PC129
.01U
PC124
.01U
VA2
VIN
2ND_BATT_CONN
10/18
FOR EMI
CN16
SUYIN_20175A-05G1
ABAT
PR171
0
TEMP_ABAT
TEMP_ABAT 31
PC157
10U/25V-1210
PL6
N20122PS800
PL7
N20122PS800
ABAT+
200mil
PQ14
SI4431DY
PQ13
SI4431DY
PC43
47P
PR67
330
PC44
47P
PC46
.1U
PD16
ZD5.6V
PC45
47P
PR66
330
PR164
*0
MBCLK_RSV
PR165
*0
ABDATA
PULL_KBC
MBDATA_RSV 31
ABCLK
PR86
0
MBCLK
4,31
MBDATA_ABAT 25
PD24
ZD5.6V
PD25
ZD5.6V
REF3V
PR70
10K/F
TEMP_ABAT
PC47
.01U
CLOSE TO BATTERY CON
10/18 del
PR164
PR165
PR68
*102K/F
MDISCHG
PQ56
DTC144EU
REFP
PQ55
*2N7002E
ABATV
31
PC160
.01U
PR137
*14K/F
PQ53
IMD2
MCHG
PR134
10K
PR65
10K
ADISCHG
PQ18
DTC144EU
PC57
.1U
74HCT237
PU7
VL
PC158
.1U-0805
PR143
10K
PU5A
LM393
REFP
PR136
160K
REF3V
PR69
100K
PQ54
2N7002E
PR139
100K
PU5B
LM393
31
M/A#
31
D/C#
31
BL/C#
PC122
.1U-0805
PU10
REF-02
REF5V
PC123
.1U
REF5V
39
VIN
PQ37
IMD2
REFP
REFP
REFP
VL
PU15
SI9183
REF3V
REF3V
REF3V
31
31
REFON
REFON
REF-BP
PC178
10U/6.3V
PC181
.1U
PC179
1U/10V
PROJECT : ZG1
Quanta Computer Inc.
Size
Custom
Document Number
BATTERY SELECTOR
Rev
D
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