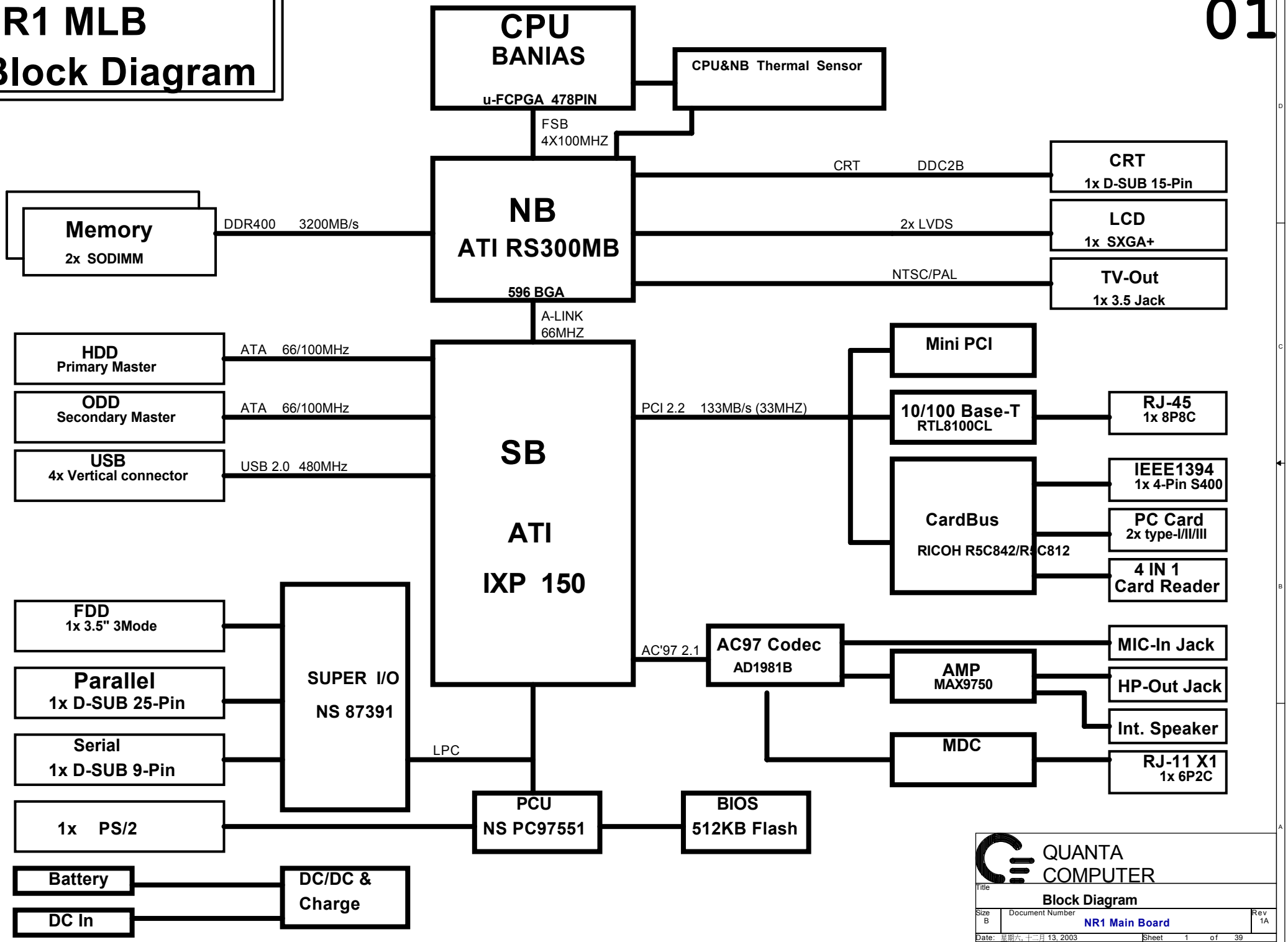
NR1 MLB Block Diagram

01



QUANTA COMPUTER

Title: Block Diagram		
Size: B	Document Number: NR1 Main Board	Rev: 1A
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Title: COVER PAGE

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Thermal Control

03

U8A

Banias

1 OF 3

Banias Processor

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

FOR PP

ATI recommended

PUT CLOSE TO CPU WITHIN 300 MIL

U9 ADM1032 GMT781

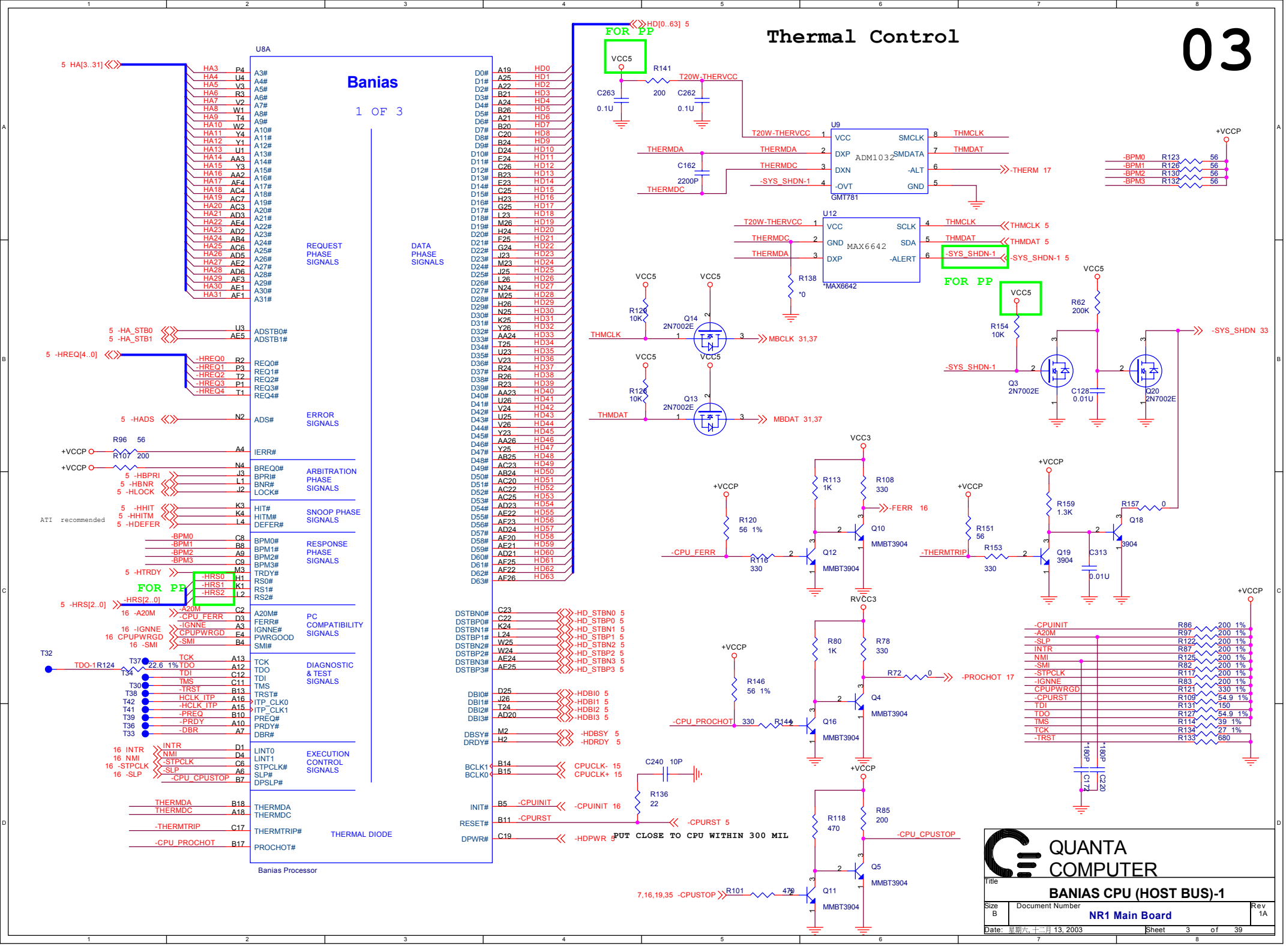
U12 MAX6642 *MAX6642

Q10 Q12 Q4 Q16 Q5 Q11 MMBT3904

Q14 Q13 Q3 Q20 2N7002E

Q18 3904

Q19 3904



Title	BANIAS CPU (HOST BUS)-1
Size	B
Document Number	NR1 Main Board
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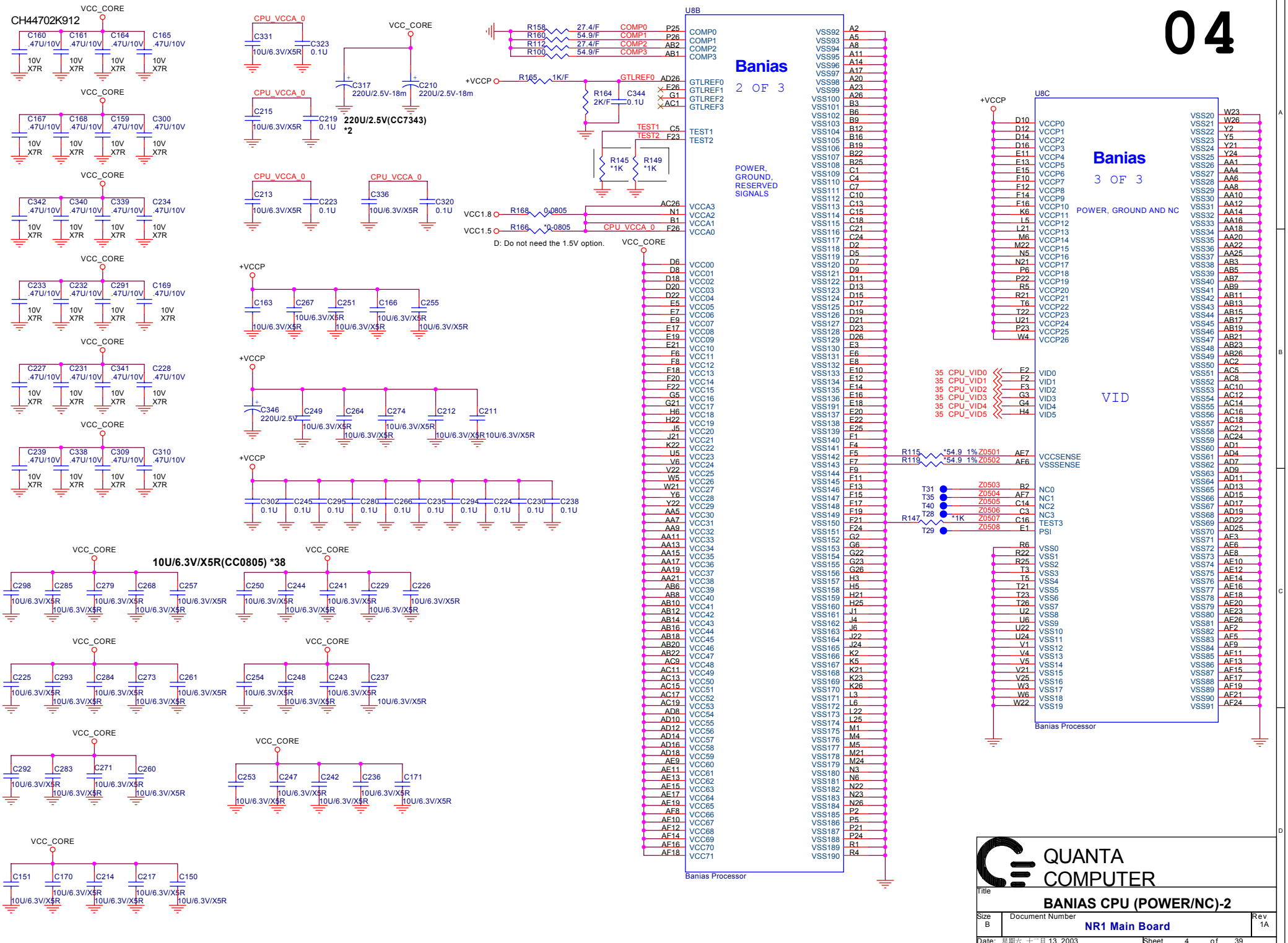
QUANTA COMPUTER


04
CH44702K912
VCC_CORE
C160 .47U/10V
C161 .47U/10V
C164 .47U/10V
C165 .47U/10V
C167 .47U/10V
C168 .47U/10V
C159 .47U/10V
C300 .47U/10V
C342 .47U/10V
C340 .47U/10V
C339 .47U/10V
C234 .47U/10V
C233 .47U/10V
C232 .47U/10V
C291 .47U/10V
C169 .47U/10V
C227 .47U/10V
C231 .47U/10V
C341 .47U/10V
C228 .47U/10V
C239 .47U/10V
C338 .47U/10V
C309 .47U/10V
C310 .47U/10V
10V X7R
CPU_VCCA_0
C331
C323 0.1U
C215
C219 0.1U
220U/2.5V(CC7343) *2
C317 220U/2.5V-18m
C210 220U/2.5V-18m
C213
C223 0.1U
C336
C320 0.1U
10U/6.3V/X5R
+VCCP
C163
C267
C251
C166
C255
C346 220U/2.5V
C249
C264
C274
C212
C211
C302
C245
C295
C280
C266
C235
C294
C224
C230
C238
0.1U
10U/6.3V/X5R(CC0805) *38
C298
C285
C279
C268
C257
C250
C244
C241
C229
C226
C225
C293
C284
C273
C261
C254
C248
C243
C237
C292
C283
C271
C260
C253
C247
C242
C236
C171
C151
C170
C214
C217
C150
R158 27.4/F
R160 54.9/F
R112 27.4/F
R100 54.9/F
COMP0
COMP1
COMP2
COMP3
P25
P26
AB2
AB1
R165 1K/F
GTLREF0
AD26
E26
G1
AC1
GTLREF1
GTLREF2
GTLREF3
R164 2K/F
C344 0.1U
TEST1
TEST2
C5
F23
R145 *1K
R149 *1K
VCC1.8
VCC1.5
R168 0-0805
R166 *0-0805
AC26
N1
B1
F26
VCCA3
VCCA2
VCCA1
VCCA0
D: Do not need the 1.5V option.
U8B
Banias
2 OF 3
POWER, GROUND, RESERVED SIGNALS
VCC00
VCC01
VCC02
VCC03
VCC04
VCC05
VCC06
VCC07
VCC08
VCC09
VCC10
VCC11
VCC12
VCC13
VCC14
VCC15
VCC16
VCC17
VCC18
VCC19
VCC20
VCC21
VCC22
VCC23
VCC24
VCC25
VCC26
VCC27
VCC28
VCC29
VCC30
VCC31
VCC32
VCC33
VCC34
VCC35
VCC36
VCC37
VCC38
VCC39
VCC40
VCC41
VCC42
VCC43
VCC44
VCC45
VCC46
VCC47
VCC48
VCC49
VCC50
VCC51
VCC52
VCC53
VCC54
VCC55
VCC56
VCC57
VCC58
VCC59
VCC60
VCC61
VCC62
VCC63
VCC64
VCC65
VCC66
VCC67
VCC68
VCC69
VCC70
VCC71
Banias Processor
VSS92
VSS93
VSS94
VSS95
VSS96
VSS97
VSS98
VSS99
VSS100
VSS101
VSS102
VSS103
VSS104
VSS105
VSS106
VSS107
VSS108
VSS109
VSS110
VSS111
VSS112
VSS113
VSS114
VSS115
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VSS136
VSS191
VSS137
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VSS177
VSS178
VSS179
VSS180
VSS181
VSS182
VSS183
VSS184
VSS185
VSS186
VSS187
VSS188
VSS189
VSS190
U8C
Banias
3 OF 3
POWER, GROUND AND NC
VCCP0
VCCP1
VCCP2
VCCP3
VCCP4
VCCP5
VCCP6
VCCP7
VCCP8
VCCP9
VCCP10
VCCP11
VCCP12
VCCP13
VCCP14
VCCP15
VCCP16
VCCP17
VCCP18
VCCP19
VCCP20
VCCP21
VCCP22
VCCP23
VCCP24
VCCP25
VCCP26
VID
35 CPU_VID0
35 CPU_VID1
35 CPU_VID2
35 CPU_VID3
35 CPU_VID4
35 CPU_VID5
VID0
VID1
VID2
VID3
VID4
VID5
R115 *54.9 1% Z0501
R119 *54.9 1% Z0502
VCCSENSE
VSSSENSE
T31
T35
T40
T28
T29
R147 *1K
Z0503
Z0504
Z0505
Z0506
Z0507
Z0508
NC0
NC1
NC2
NC3
TEST3
PSI
VSS0
VSS1
VSS2
VSS3
VSS4
VSS5
VSS6
VSS7
VSS8
VSS9
VSS10
VSS11
VSS12
VSS13
VSS14
VSS15
VSS16
VSS17
VSS18
VSS19
Banias Processor
VSS20
VSS21
VSS22
VSS23
VSS24
VSS25
VSS26
VSS27
VSS28
VSS29
VSS30
VSS31
VSS32
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VSS72
VSS73
VSS74
VSS75
VSS76
VSS77
VSS78
VSS79
VSS80
VSS81
VSS82
VSS83
VSS84
VSS85
VSS86
VSS87
VSS88
VSS89
VSS90
VSS91
QUANTA COMPUTER
Title
BANIAS CPU (POWER/NC)-2
Size B
Document Number
NR1 Main Board
Rev 1A
Date: 星期六, 十二月 13, 2003
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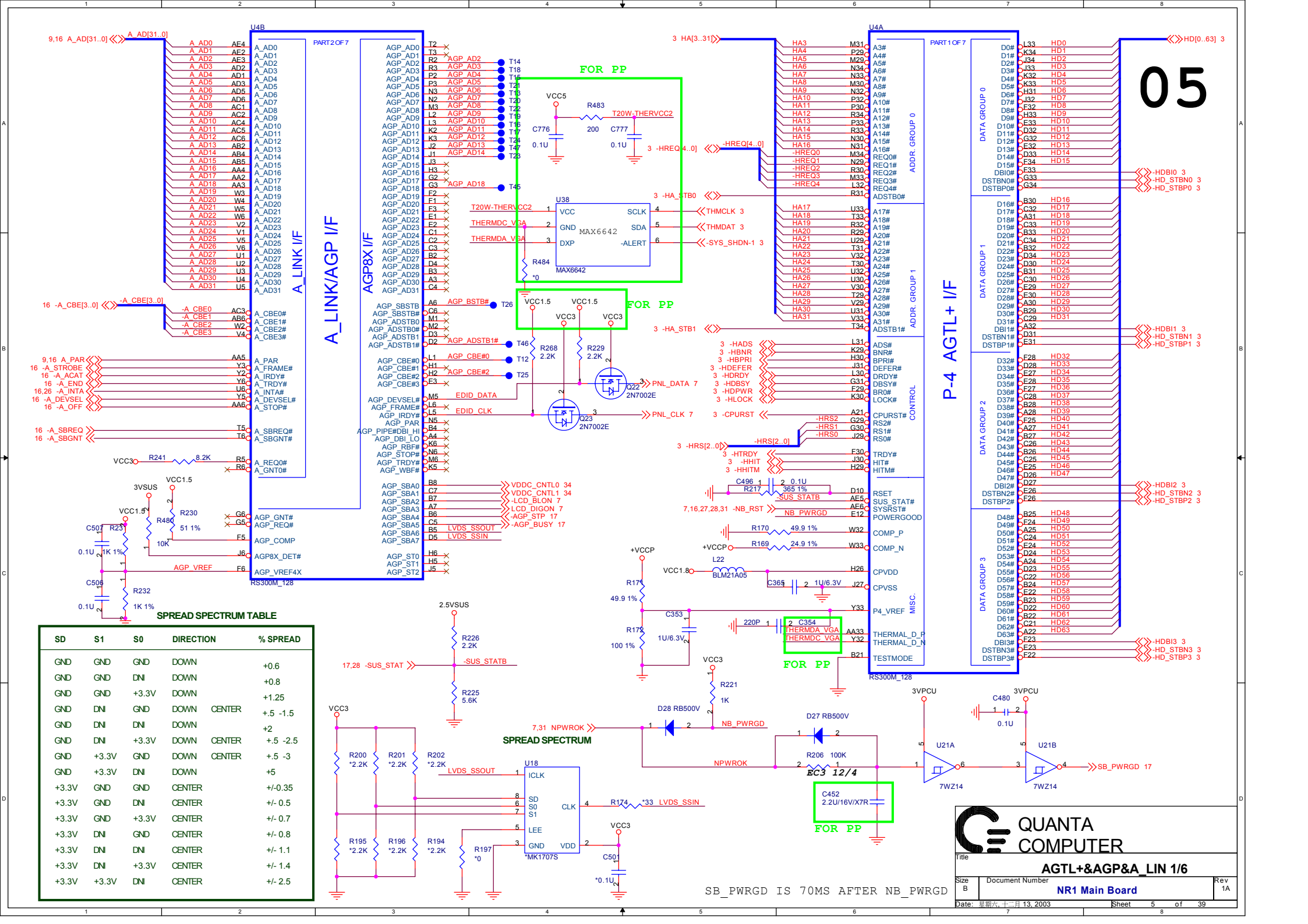
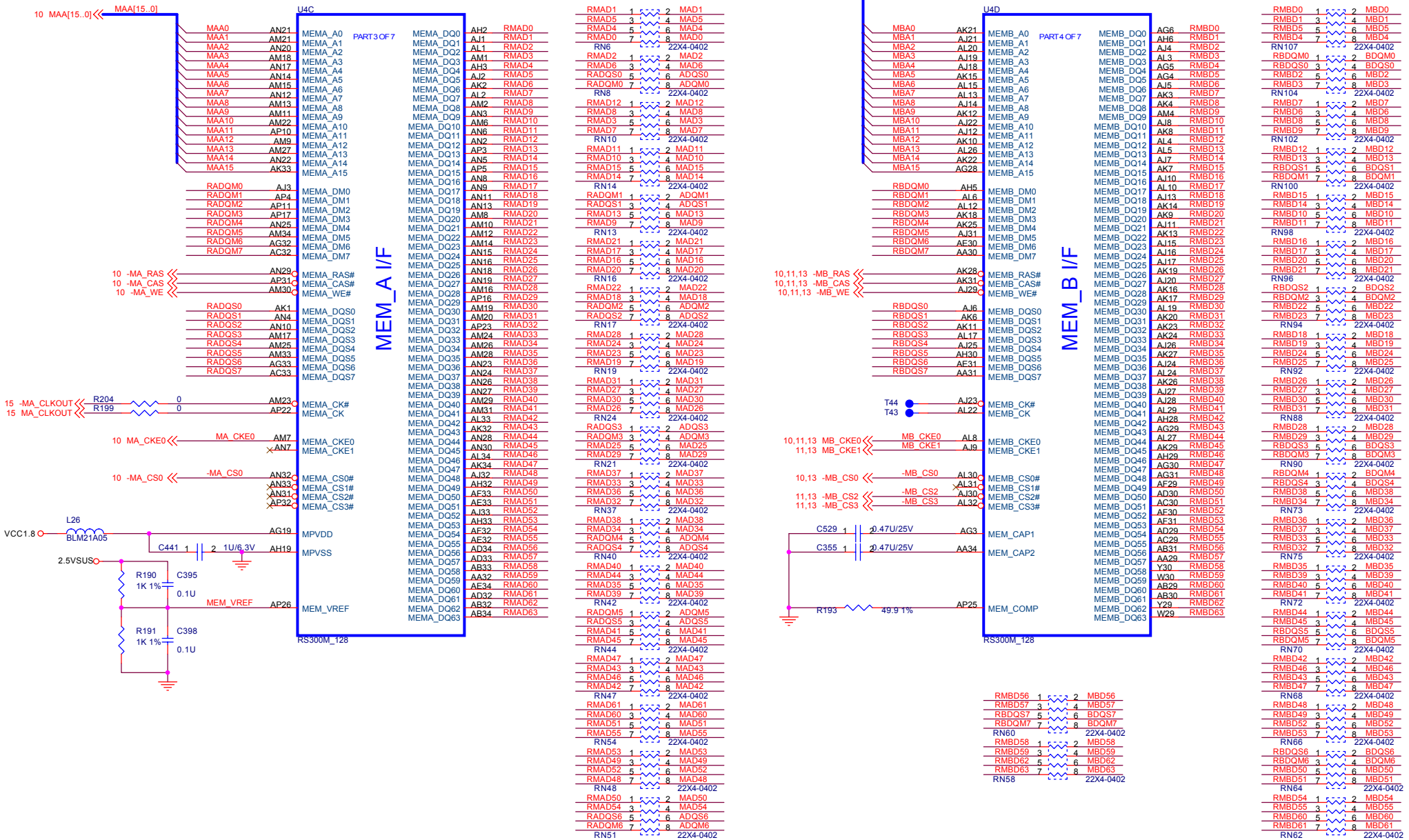

05
U4B
PART 2 OF 7
A_LINK I/F
AGP8X I/F
A_LINK/AGP I/F
RS300M_128
U4A
PART 1 OF 7
P-4 AGTL+ I/F
ADDR. GROUP 0
ADDR. GROUP 1
DATA GROUP 0
DATA GROUP 1
DATA GROUP 2
DATA GROUP 3
CONTROL
MISC.
FOR PP
U38
MAX6642
U18
*MK1707S
SPREAD SPECTRUM
SPREAD SPECTRUM TABLE
SD S1 S0 DIRECTION % SPREAD
GND GND GND DOWN +0.6
GND GND DNI DOWN +0.8
GND GND +3.3V DOWN +1.25
GND DNI GND DOWN CENTER +.5 -1.5
GND DNI DNI DOWN +2
GND DNI +3.3V DOWN CENTER +.5 -2.5
GND +3.3V GND DOWN CENTER +.5 -3
GND +3.3V DNI DOWN +5
+3.3V GND GND CENTER +/-0.35
+3.3V GND DNI CENTER +/- 0.5
+3.3V GND +3.3V CENTER +/- 0.7
+3.3V DNI GND CENTER +/- 0.8
+3.3V DNI DNI CENTER +/- 1.1
+3.3V DNI +3.3V CENTER +/- 1.4
+3.3V +3.3V DNI CENTER +/- 2.5
SB_PWRGD IS 70MS AFTER NB_PWRGD
QUANTA COMPUTER
Title
AGTL+&AGP&A_LIN 1/6
Size B
Document Number NR1 Main Board
Rev 1A
Date: 星期六, 十二月 13, 2003
Sheet 5 of 39

ATI_RS300M - 2 (DDR Interface)

06



QUANTA COMPUTER

Title

RS300MB-DDR I/F 2/6

Size	Document Number	Rev
Custom	NR1 Main Board	1A

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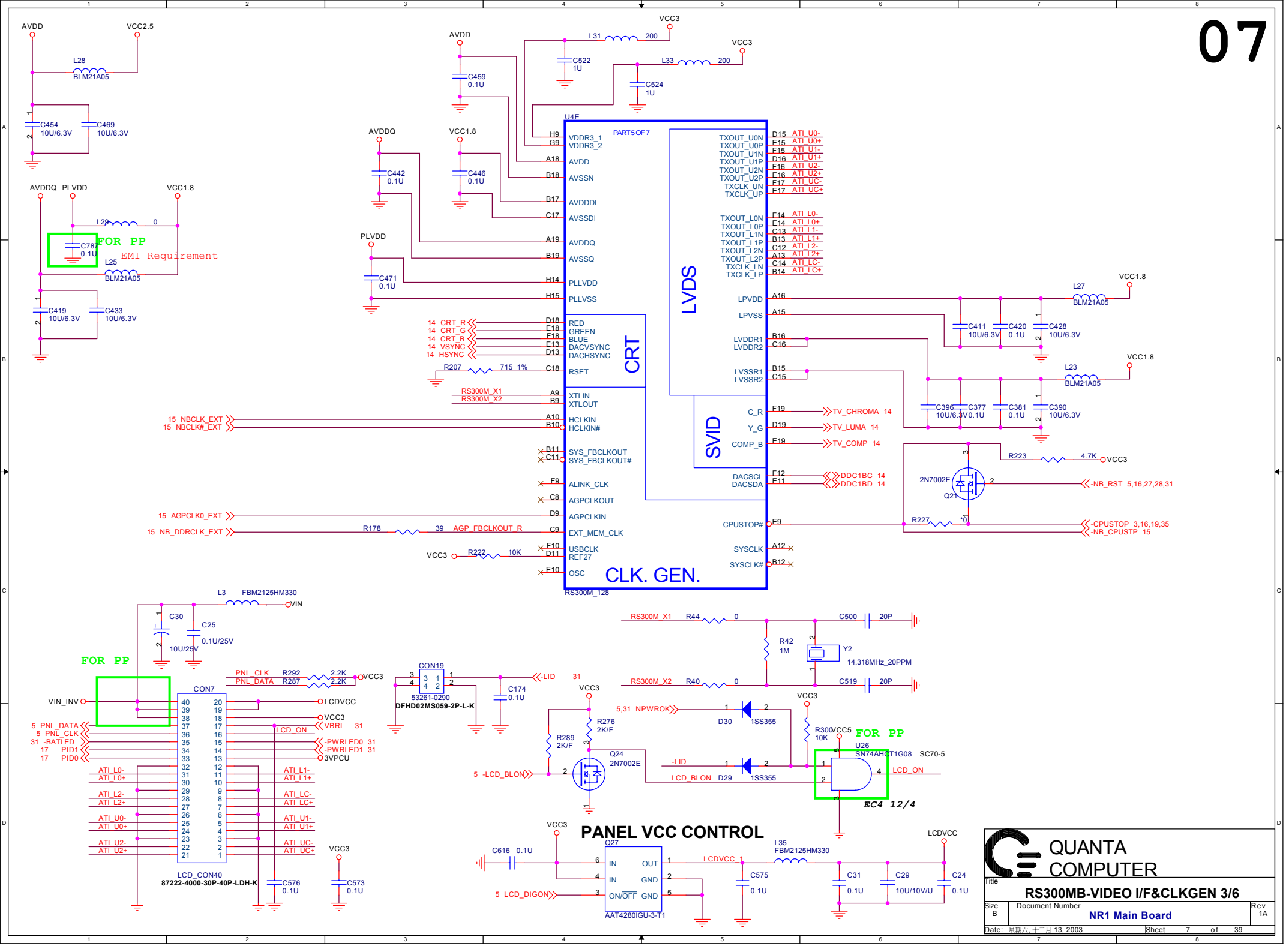

QUANTA COMPUTER

Title: RS300MB-VIDEO I/F&CLKGEN 3/6

Size	Document Number	Rev
B	NR1 Main Board	1A

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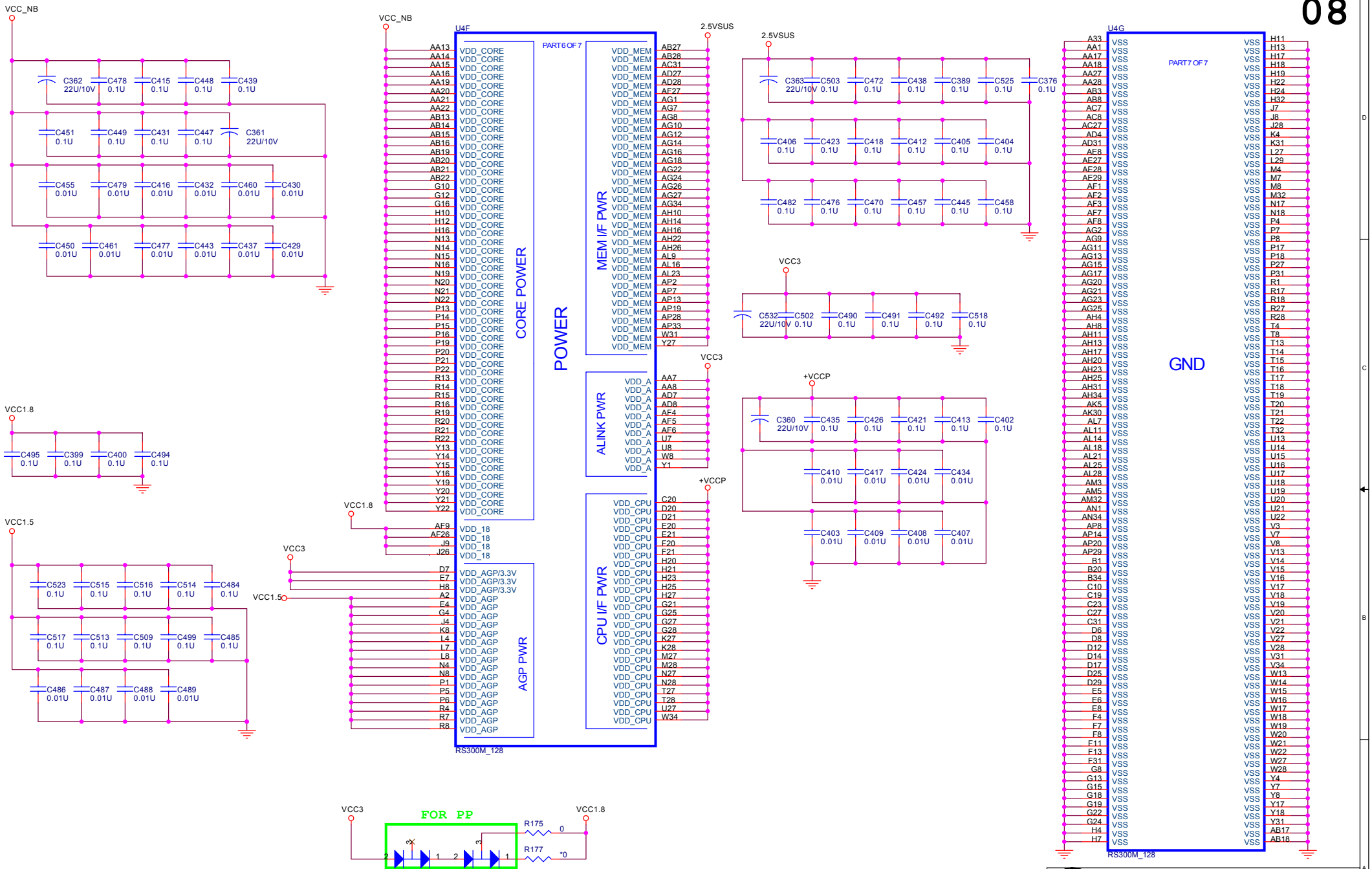

1.8V (NB) should ramp up with 3V, < 2.1V

QUANTA COMPUTER

Title: RS300MB-POWER 4/6

Size: Custom | Document Number: NR1 Main Board | Rev: 1A

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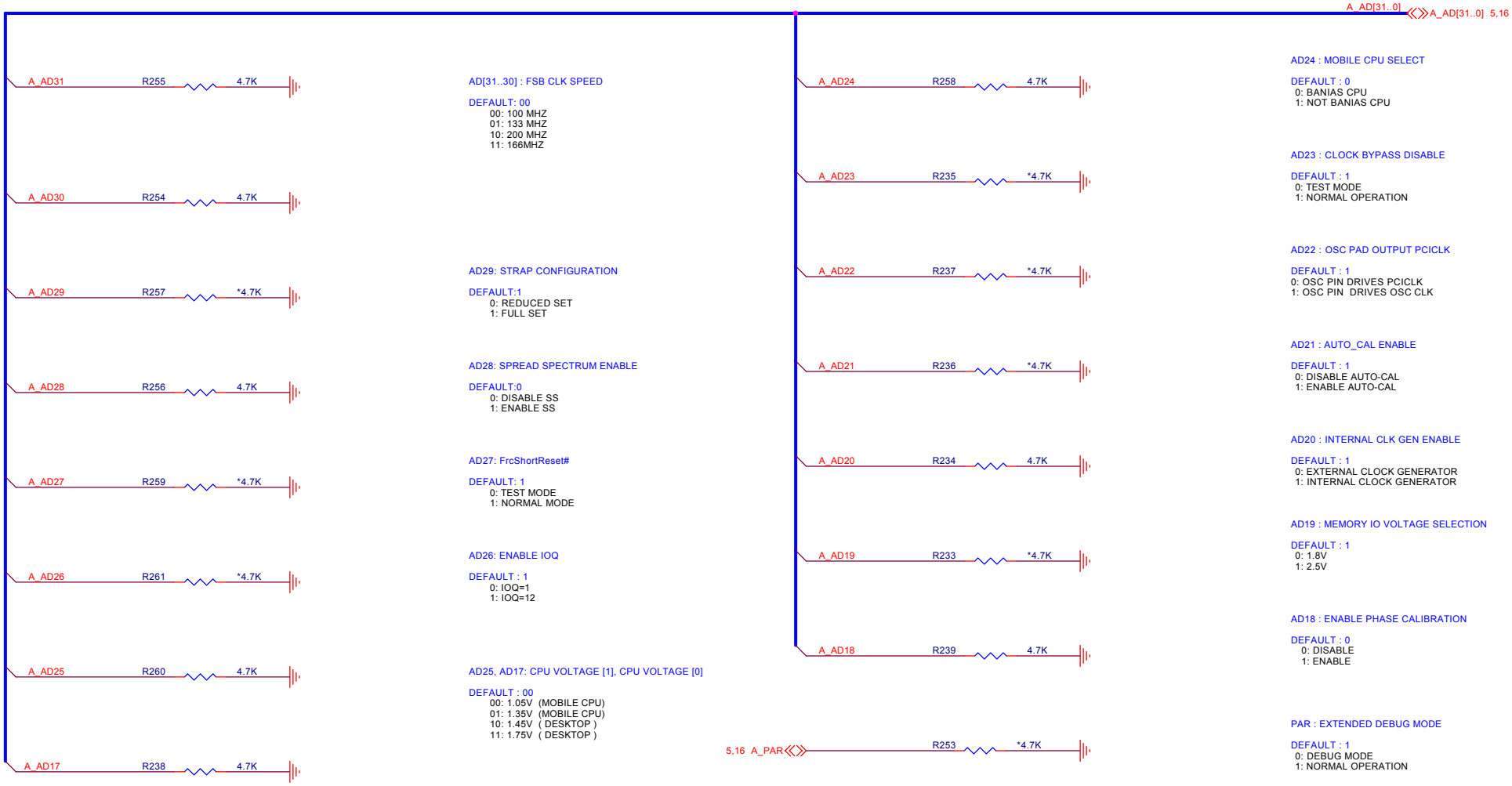

AD[31..30] : FSB CLK SPEED

DEFAULT: 00
- 00: 100 MHZ
- 01: 133 MHZ
- 10: 200 MHZ
- 11: 166MHZ

AD29: STRAP CONFIGURATION

DEFAULT:1
- 0: REDUCED SET
- 1: FULL SET

AD28: SPREAD SPECTRUM ENABLE

DEFAULT:0
- 0: DISABLE SS
- 1: ENABLE SS

AD27: FrcShortReset#

DEFAULT: 1
- 0: TEST MODE
- 1: NORMAL MODE

AD26: ENABLE IOQ

DEFAULT : 1
- 0: IOQ=1
- 1: IOQ=12

AD25, AD17: CPU VOLTAGE [1], CPU VOLTAGE [0]

DEFAULT : 00
- 00: 1.05V (MOBILE CPU)
- 01: 1.35V (MOBILE CPU)
- 10: 1.45V (DESKTOP)
- 11: 1.75V (DESKTOP)

AD24 : MOBILE CPU SELECT

DEFAULT : 0
- 0: BANIAS CPU
- 1: NOT BANIAS CPU

AD23 : CLOCK BYPASS DISABLE

DEFAULT : 1
- 0: TEST MODE
- 1: NORMAL OPERATION

AD22 : OSC PAD OUTPUT PCICLK

DEFAULT : 1
- 0: OSC PIN DRIVES PCICLK
- 1: OSC PIN DRIVES OSC CLK

AD21 : AUTO_CAL ENABLE

DEFAULT : 1
- 0: DISABLE AUTO-CAL
- 1: ENABLE AUTO-CAL

AD20 : INTERNAL CLK GEN ENABLE

DEFAULT : 1
- 0: EXTERNAL CLOCK GENERATOR
- 1: INTERNAL CLOCK GENERATOR

AD19 : MEMORY IO VOLTAGE SELECTION

DEFAULT : 1
- 0: 1.8V
- 1: 2.5V

AD18 : ENABLE PHASE CALIBRATION

DEFAULT : 0
- 0: DISABLE
- 1: ENABLE

PAR : EXTENDED DEBUG MODE

DEFAULT : 1
- 0: DEBUG MODE
- 1: NORMAL OPERATION

QUANTA COMPUTER

Title: RS300MB-STRAPS 5/6

Size: B | Document Number: NR1 Main Board | Rev: 1A

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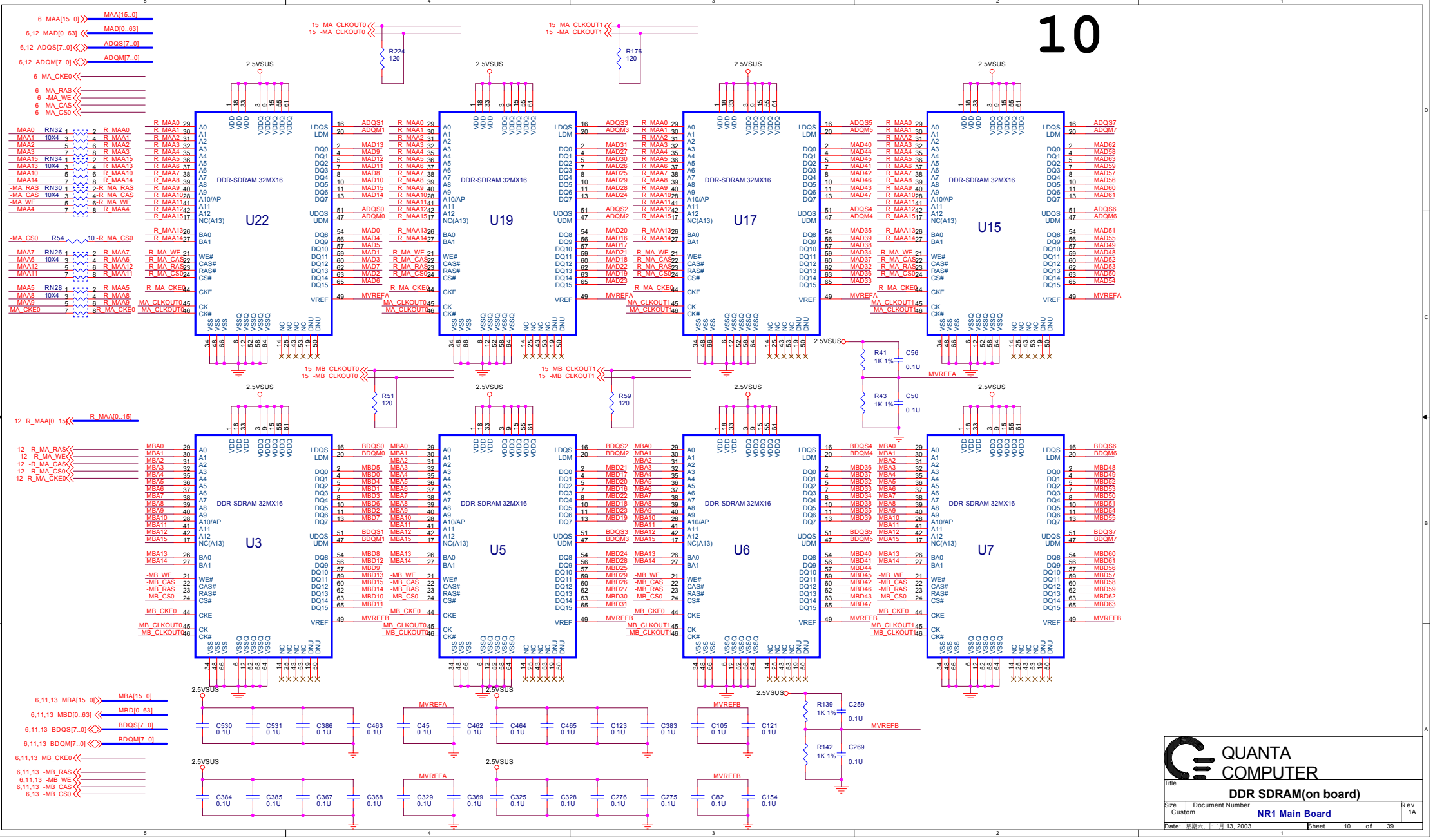

Title	DDR SDRAM(on board)
Size	Custom
Document Number	NR1 Main Board
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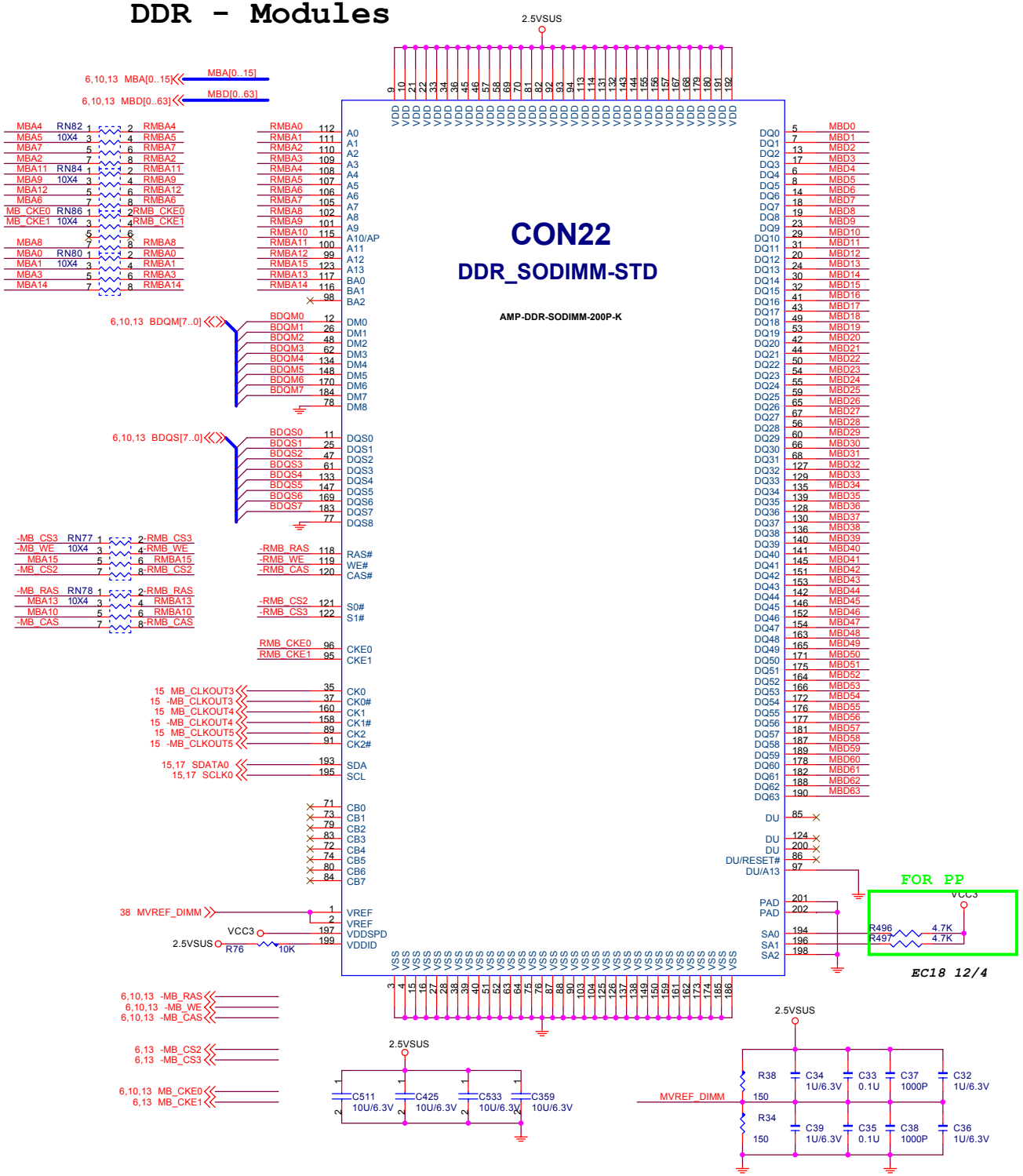
DDR - Modules



Title	
DDR SODIMMX2	
Size: Custom	Document Number: NR1 Main Board
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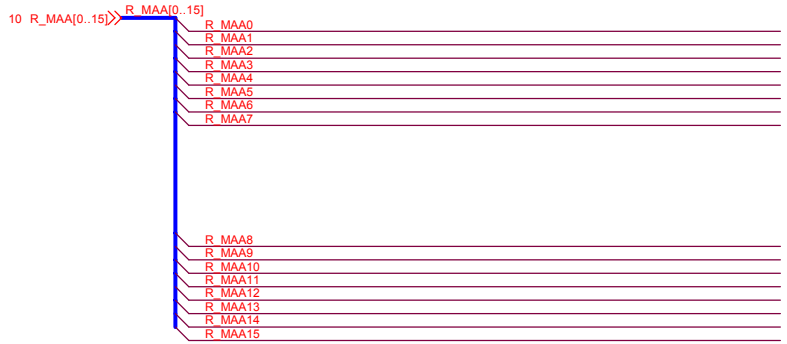
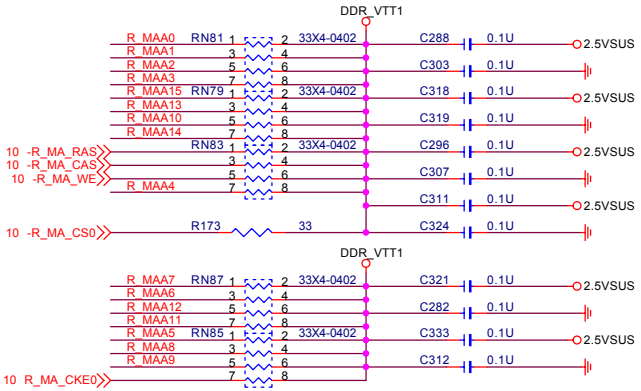
QUANTA COMPUTER

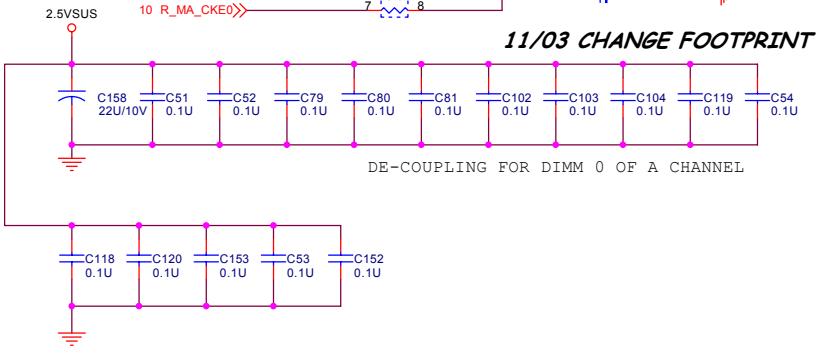
DDR TERMINATOR CHANNEL A

MAA Terminator





11/03 CHANGE FOOTPRINT FORM 0603 TO 0402



11/03 CHANGE FOOTPRINT FORM 0603 TO 0402

QUANTA COMPUTER

Title: **DDR Terminator-A CHANNEL**

Size	Document Number	Rev
B	NR1 Main Board	1A

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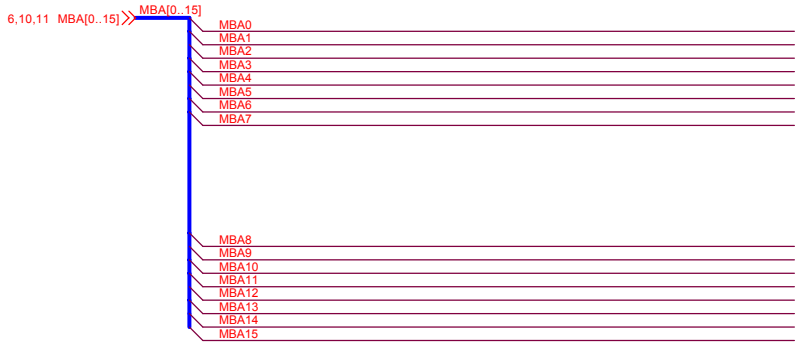
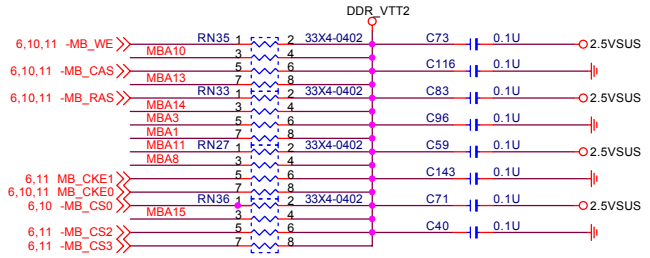
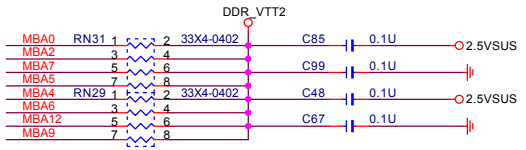
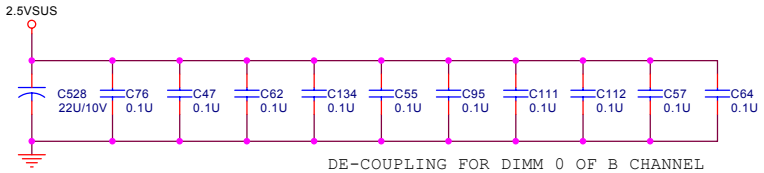
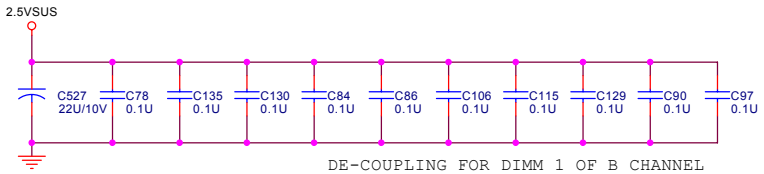
DDR TERMINATOR CHANNEL B
MBA Terminator

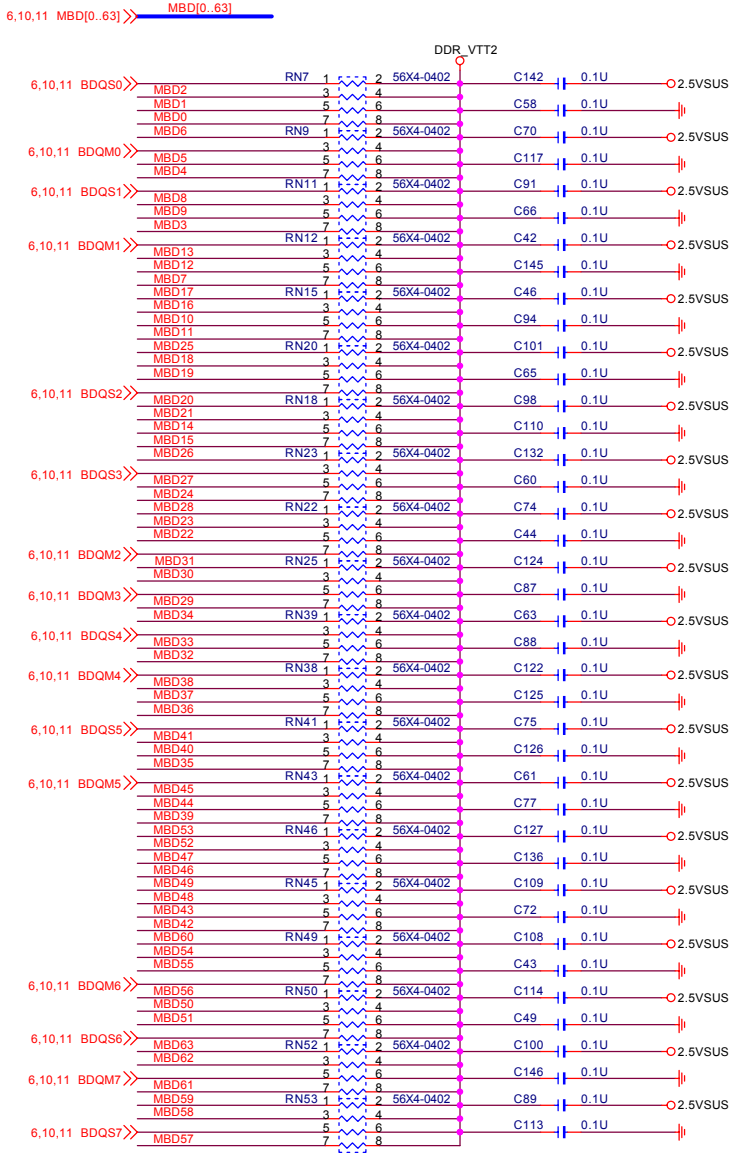












QUANTA COMPUTER

Title: DDR Terminator B CHANNEL

Size	Document Number	Rev
Custom	NR1 Main Board	1A

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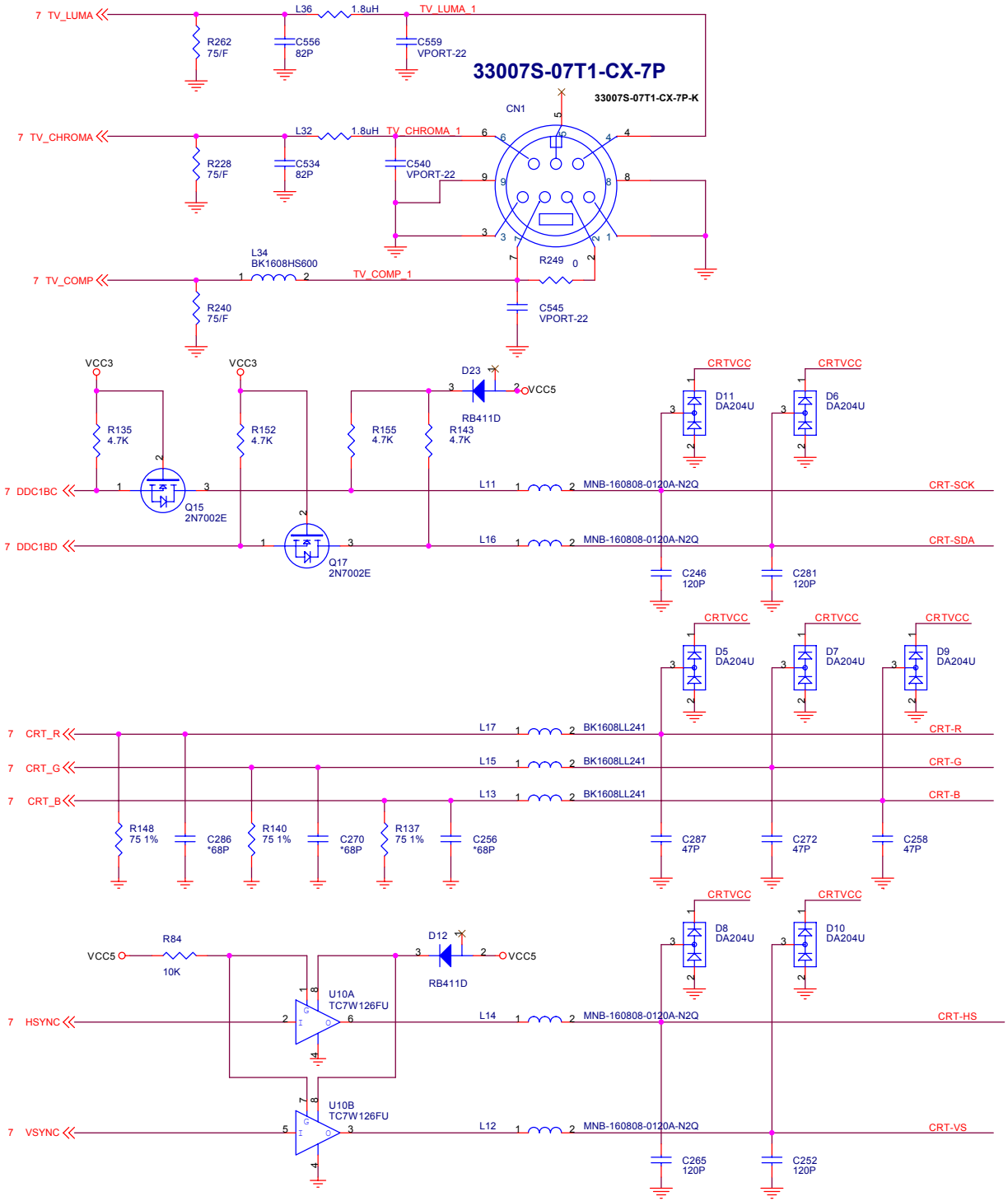
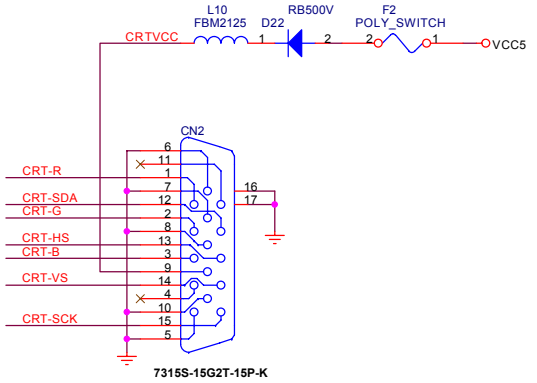


CRT CONNECTOR



QUANTA COMPUTER

Title: CRT/FDD PORT

Size	Document Number	Rev
B	NR1 Main Board	1A

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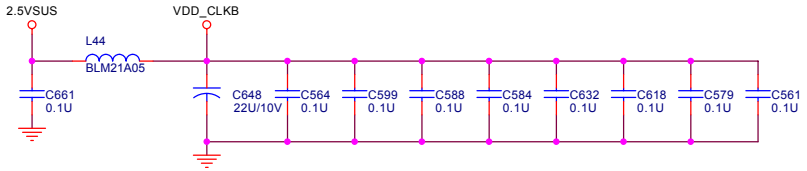
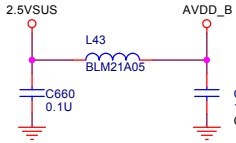
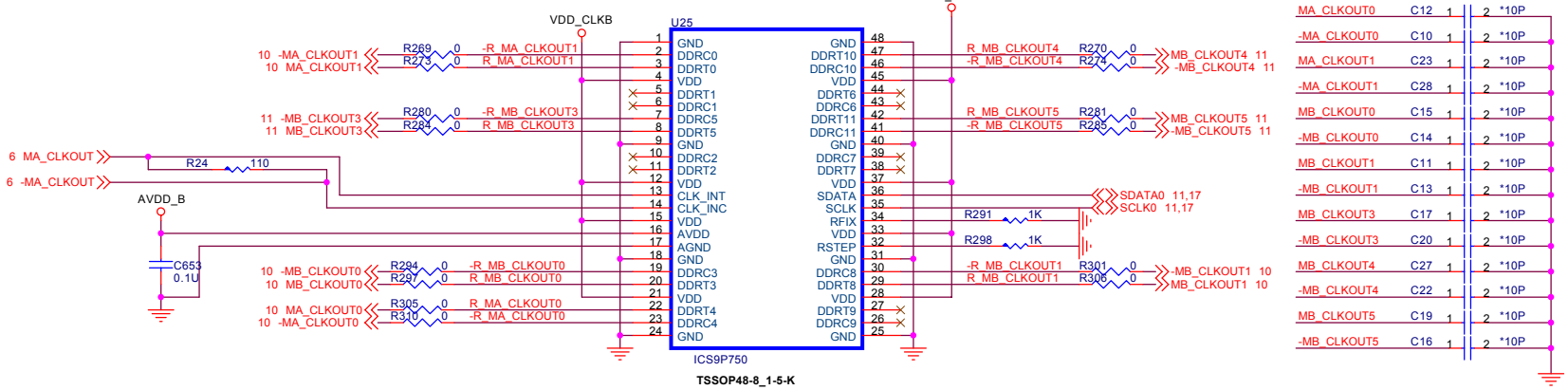
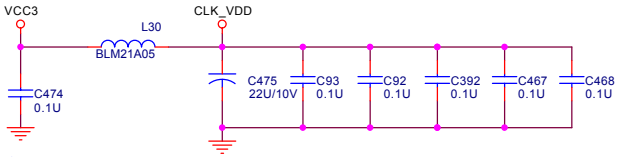






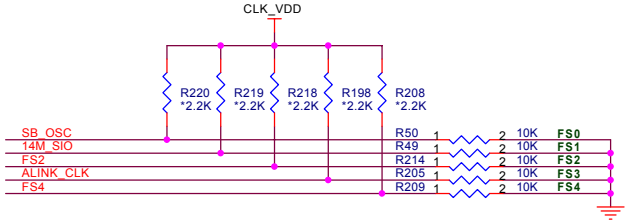


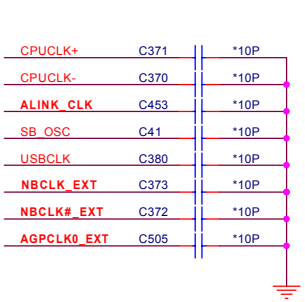
1- PLACE ALL THE SERIES TERMINATION RESISTORS AS CLOSE AS U300 AS POSSIBLE

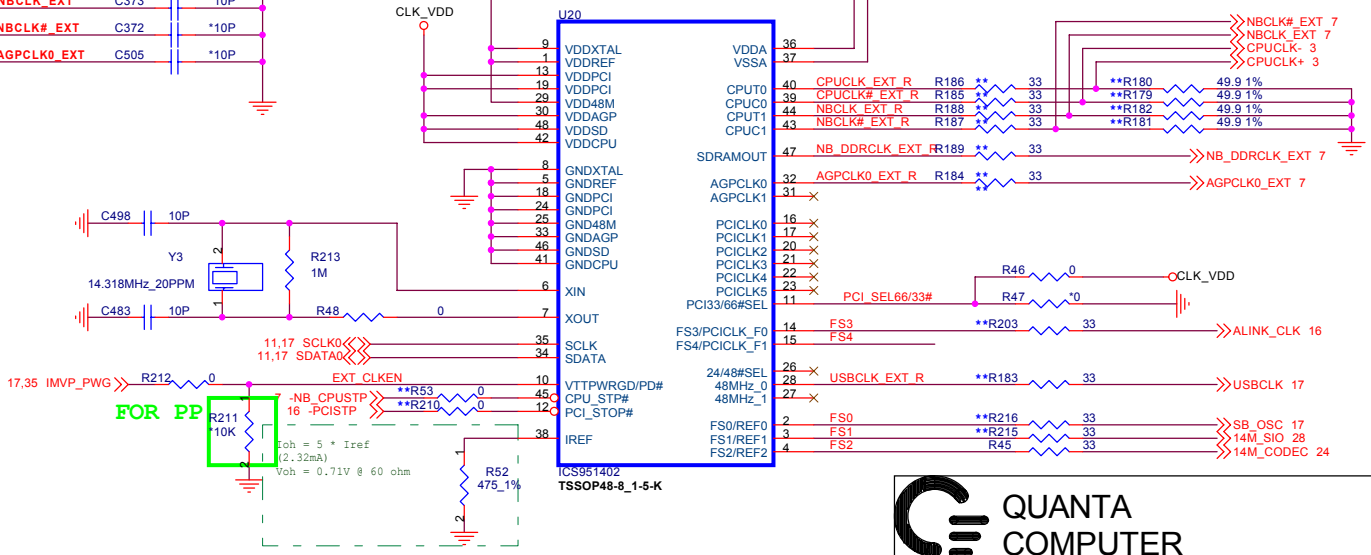
2- ROUTE ALL CPUCLK/#, NBCLK/# AND ITPCLK/# AS DIFFERENT PAIR RULE

3- PUT DECOUPLING CAPS CLOSE TO U300 POWER PIN

10/28







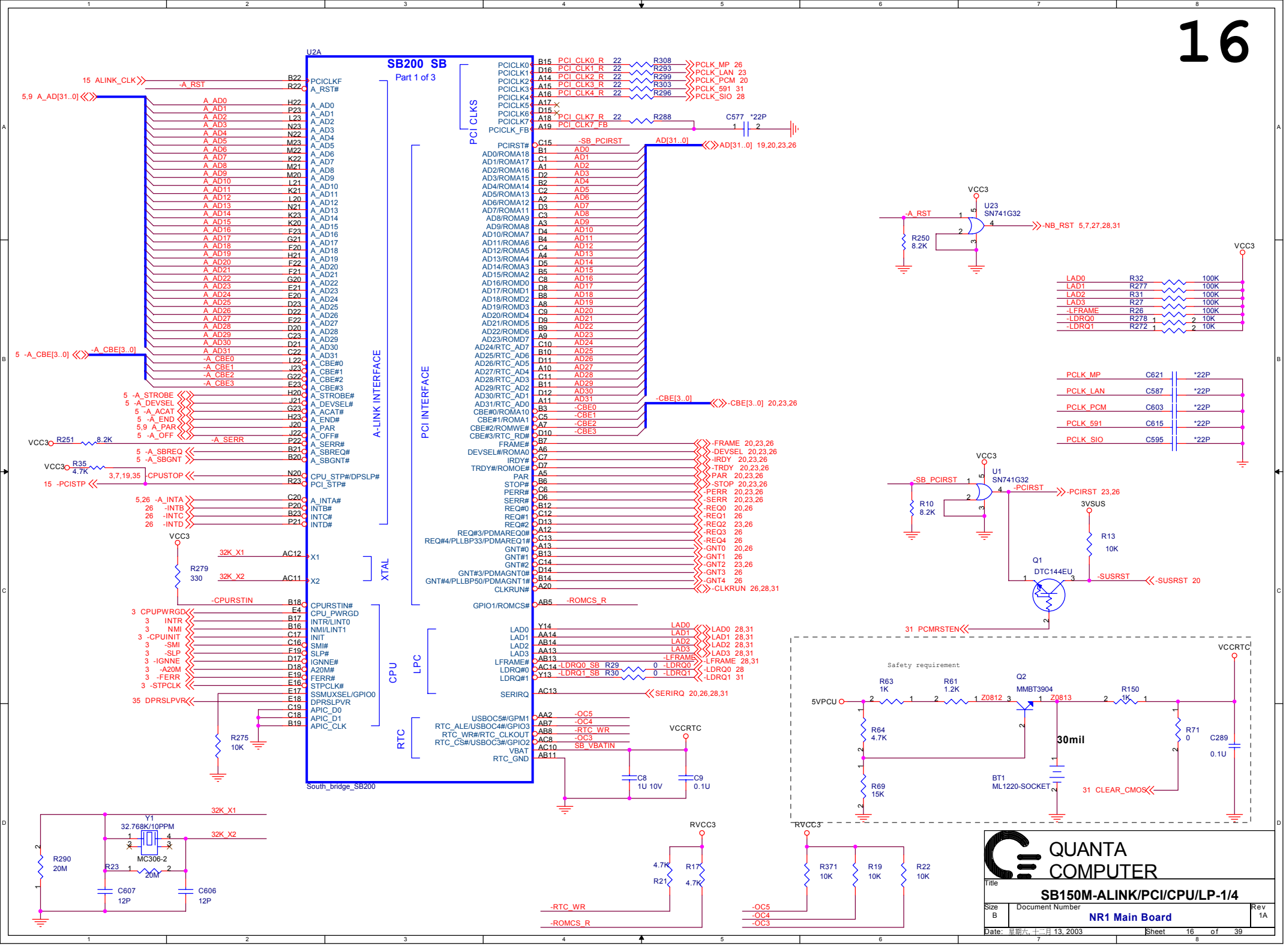
CLK FREQ

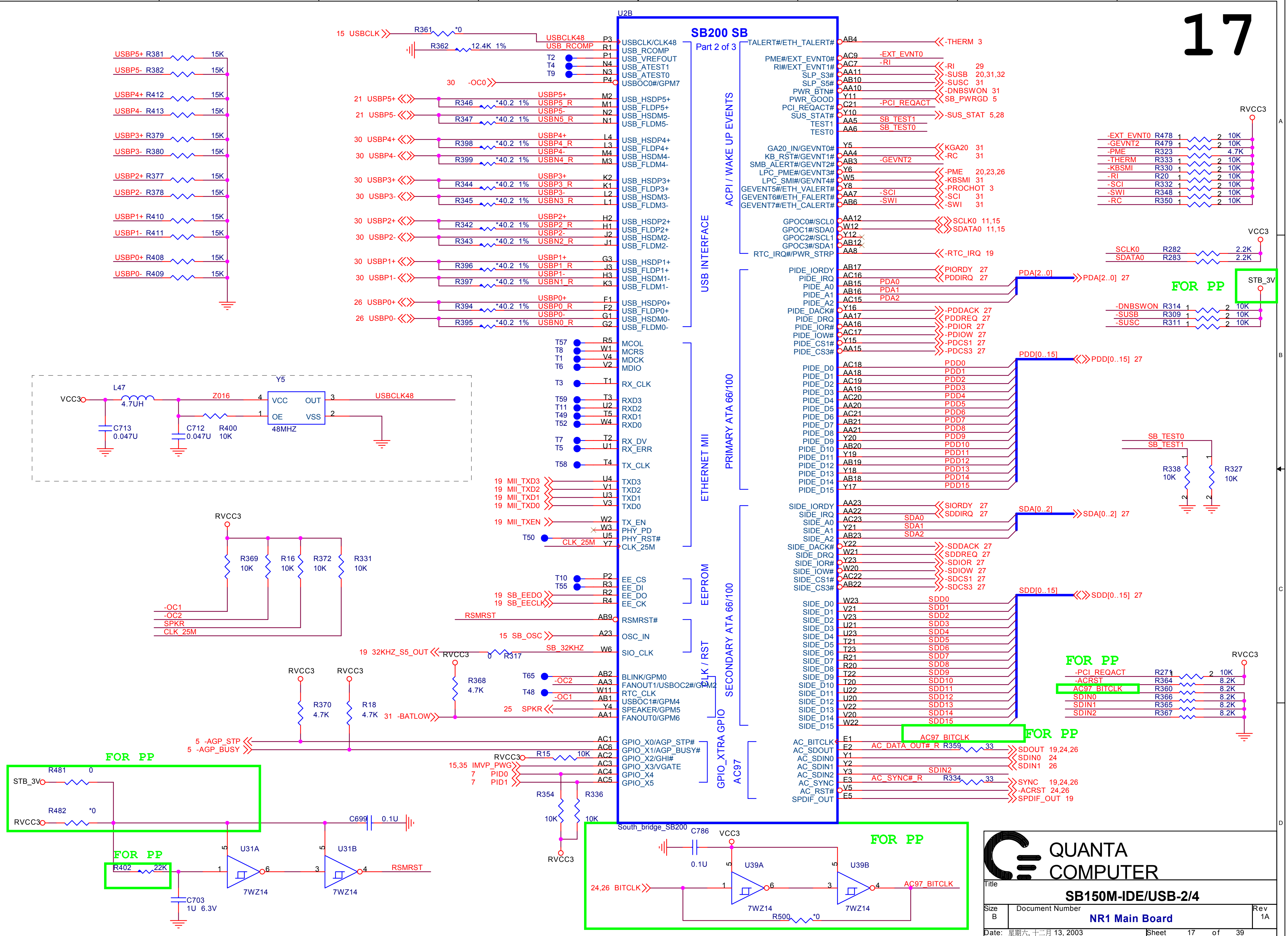
QUANTA COMPUTER

Title: MEM CLK BUFFER/EXT CLK GEN

Size: B | Document Number: NR1 Main Board | Rev: 1A

Date: 星期六, 十二月 13, 2003 | Sheet 15 of 39


U2A
SB200 SB
Part 1 of 3
South_bridge_SB200
A-LINK INTERFACE
PCI INTERFACE
PCI CLKS
CPU
LPC
XTAL
RTC
15 ALINK_CLK
-A_RST
5,9 A_AD[31..0]
5 -A_CBE[3..0]
-PCISTP
-PCIRST#
AD[31..0] 19,20,23,26
-CBE[3..0] 20,23,26
-FRAME 20,23,26
-DEVSEL 20,23,26
-IRDY 20,23,26
-TRDY 20,23,26
PAR 20,23,26
-STOP 20,23,26
-PERR 20,23,26
-SERR 20,23,26
-REQ0 20,26
-REQ1 26
-REQ2 23,26
-REQ3 26
-REQ4 26
-GNT0 20,26
-GNT1 26
-GNT2 23,26
-GNT3 26
-GNT4 26
-CLKRUN 26,28,31
-ROMCS_R
LAD0 28,31
LAD1 28,31
LAD2 28,31
LAD3 28,31
-LFRAME 28,31
-LDRQ0 28
-LDRQ1 31
SERIRQ 20,26,28,31
-OC5
-OC4
-RTC_WR
-OC3
SB_VBATIN
VCCRTC
RVCC3
-RTC_WR
-ROMCS_R
-OC5
-OC4
-OC3
VCC3
-A_RST
-NB_RST 5,7,27,28,31
LAD0 R32 100K
LAD1 R277 100K
LAD2 R31 100K
LAD3 R27 100K
-LFRAME R26 100K
-LDRQ0 R278 10K
-LDRQ1 R272 10K
PCLK_MP C621 *22P
PCLK_LAN C587 *22P
PCLK_PCM C603 *22P
PCLK_591 C615 *22P
PCLK_SIO C595 *22P
-SB_PCIRST
-PCIRST
-PCIRST 23,26
3VSUS
-SUSRST
-SUSRST 20
31 PCMRSTEN
Safety requirement
5VPCU
Z0812
Z0813
30mil
31 CLEAR_CMOS
32K_X1
32K_X2
32.768K/10PPM
MC306-2
VCCRTC
RVCC3
QUANTA COMPUTER
SB150M-ALINK/PCI/CPU/LP-1/4
NR1 Main Board
Rev 1A
Sheet 16 of 39



17
U2B
SB200 SB
Part 2 of 3
USBCLK/CLK48
USB_RCOMP
USB_VREFOUT
USB_ATEST1
USB_ATEST0
USBOC0#/GPM7
USB_HSDP5+
USB_FLDP5+
USB_HSDM5-
USB_FLDM5-
USB_HSDP4+
USB_FLDP4+
USB_HSDM4-
USB_FLDM4-
USB_HSDP3+
USB_FLDP3+
USB_HSDM3-
USB_FLDM3-
USB_HSDP2+
USB_FLDP2+
USB_HSDM2-
USB_FLDM2-
USB_HSDP1+
USB_FLDP1+
USB_HSDM1-
USB_FLDM1-
USB_HSDP0+
USB_FLDP0+
USB_HSDM0-
USB_FLDM0-
USB INTERFACE
MCOL
MCRS
MDCK
MDIO
RX_CLK
RXD3
RXD2
RXD1
RXD0
RX_DV
RX_ERR
TX_CLK
TXD3
TXD2
TXD1
TXD0
TX_EN
PHY_PD
PHY_RST#
CLK_25M
ETHERNET MII
EE_CS
EE_DI
EE_DO
EE_CK
EEPROM
RSMRST#
OSC_IN
SIO_CLK
CLK / RST
BLINK/GPM0
FANOUT1/USBOC2#/GPM2
RTC_CLK
USBOC1#/GPM4
SPEAKER/GPM5
FANOUT0/GPM6
GPIO_X0/AGP_STP#
GPIO_X1/AGP_BUSY#
GPIO_X2/GHI#
GPIO_X3/VGATE
GPIO_X4
GPIO_X5
GPIO XTRA GPIO
TALERT#/ETH_TALERT#
PME#/EXT_EVNT0#
RI#/EXT_EVNT1#
SLP_S3#
SLP_S5#
PWR_BTN#
PWR_GOOD
PCI_REQACT#
SUS_STAT#
TEST1
TEST0
GA20_IN/GEVNT0#
KB_RST#/GEVNT1#
SMB_ALERT#/GEVNT2#
LPC_PME#/GEVNT3#
LPC_SMI#/GEVNT4#
GEVENT5#/ETH_VALERT#
GEVENT6#/ETH_FALERT#
GEVENT7#/ETH_CALERT#
ACPI / WAKE UP EVENTS
GPOC0#/SCL0
GPOC1#/SDA0
GPOC2#/SCL1
GPOC3#/SDA1
RTC_IRQ#/PWR_STRP
PIDE_IORDY
PIDE_IRQ
PIDE_A0
PIDE_A1
PIDE_A2
PIDE_DACK#
PIDE_DRQ
PIDE_IOR#
PIDE_IOW#
PIDE_CS1#
PIDE_CS3#
PIDE_D0 … PIDE_D15
PRIMARY ATA 66/100
SIDE_IORDY
SIDE_IRQ
SIDE_A0
SIDE_A1
SIDE_A2
SIDE_DACK#
SIDE_DRQ
SIDE_IOR#
SIDE_IOW#
SIDE_CS1#
SIDE_CS3#
SIDE_D0 … SIDE_D15
SECONDARY ATA 66/100
AC_BITCLK
AC_SDOUT
AC_SDIN0
AC_SDIN1
AC_SDIN2
AC_SYNC
AC_RST#
SPDIF_OUT
AC97
South_bridge_SB200
-THERM 3
-EXT_EVNT0
-RI 29
-SUSB 20,31,32
-SUSC 31
-DNBSWON 31
SB_PWRGD 5
-PCI_REQACT
-SUS_STAT 5,28
SB_TEST1
SB_TEST0
KGA20 31
-RC 31
-GEVNT2
-PME 20,23,26
-KBSMI 31
-PROCHOT 3
-SCI 31
-SWI 31
SCLK0 11,15
SDATA0 11,15
-RTC_IRQ 19
PIORDY 27
PDDIRQ 27
PDA[2..0] 27
PDA0
PDA1
PDA2
-PDDACK 27
PDDREQ 27
-PDIOR 27
-PDIOW 27
-PDCS1 27
-PDCS3 27
PDD[0..15] 27
PDD0 … PDD15
SIORDY 27
SDDIRQ 27
SDA[0..2] 27
SDA0
SDA1
SDA2
-SDDACK 27
SDDREQ 27
-SDIOR 27
-SDIOW 27
-SDCS1 27
-SDCS3 27
SDD[0..15] 27
SDD0 … SDD15
AC97_BITCLK
AC_DATA_OUT#_R R359 33
SDOUT 19,24,26
SDIN0 24
SDIN1 26
SDIN2
AC_SYNC#_R R334 33
SYNC 19,24,26
-ACRST 24,26
SPDIF_OUT 19
RVCC3
-EXT_EVNT0 R478 10K
-GEVNT2 R479 10K
-PME R323 4.7K
-THERM R333 10K
-KBSMI R330 10K
-RI R20 10K
-SCI R332 10K
-SWI R348 10K
-RC R350 10K
VCC3
SCLK0 R282 2.2K
SDATA0 R283 2.2K
FOR PP
STB_3V
-DNBSWON R314 10K
-SUSB R309 10K
-SUSC R311 10K
SB_TEST0
SB_TEST1
R338 10K
R327 10K
FOR PP
-PCI_REQACT R271 10K
-ACRST R364 8.2K
AC97_BITCLK R360 8.2K
SDIN0 R366 8.2K
SDIN1 R365 8.2K
SDIN2 R367 8.2K
15 USBCLK
R361 *0
USBCLK48
R362 12.4K 1%
USB_RCOMP
30 -OC0
USBP5+ R381 15K
USBP5- R382 15K
USBP4+ R412 15K
USBP4- R413 15K
USBP3+ R379 15K
USBP3- R380 15K
USBP2+ R377 15K
USBP2- R378 15K
USBP1+ R410 15K
USBP1- R411 15K
USBP0+ R408 15K
USBP0- R409 15K
21 USBP5+ R346 *40.2 1% USBP5_R
21 USBP5- R347 *40.2 1% USBN5_R
30 USBP4+ R398 *40.2 1% USBP4_R
30 USBP4- R399 *40.2 1% USBN4_R
30 USBP3+ R344 *40.2 1% USBP3_R
30 USBP3- R345 *40.2 1% USBN3_R
30 USBP2+ R342 *40.2 1% USBP2_R
30 USBP2- R343 *40.2 1% USBN2_R
30 USBP1+ R396 *40.2 1% USBP1_R
30 USBP1- R397 *40.2 1% USBN1_R
26 USBP0+ R394 *40.2 1% USBP0_R
26 USBP0- R395 *40.2 1% USBN0_R
Y5
VCC3
L47 4.7UH
Z016
VCC OUT
OE VSS
48MHZ
USBCLK48
C713 0.047U
C712 0.047U
R400 10K
19 MII_TXD3
19 MII_TXD2
19 MII_TXD1
19 MII_TXD0
19 MII_TXEN
CLK_25M
RVCC3
R369 10K
R16 10K
R372 10K
R331 10K
-OC1
-OC2
SPKR
CLK_25M
19 SB_EEDO
19 SB_EECLK
RSMRST
15 SB_OSC
19 32KHZ_S5_OUT
SB_32KHZ
R317 0
R368 4.7K
-OC2
-OC1
25 SPKR
31 -BATLOW
R370 4.7K
R18 4.7K
5 -AGP_STP
5 -AGP_BUSY
15,35 IMVP_PWG
7 PID0
7 PID1
R15 10K
R354 10K
R336 10K
FOR PP
STB_3V
R481 0
RVCC3
R482 *0
C699 0.1U
U31A
U31B
7WZ14
FOR PP
R402 22K
C703 1U 6.3V
RSMRST
C786 0.1U
VCC3
U39A
U39B
FOR PP
24,26 BITCLK
AC97_BITCLK
R500 *0
QUANTA COMPUTER
Title
SB150M-IDE/USB-2/4
Size B
Document Number
NR1 Main Board
Rev 1A
Date: 星期六, 十二月 13, 2003
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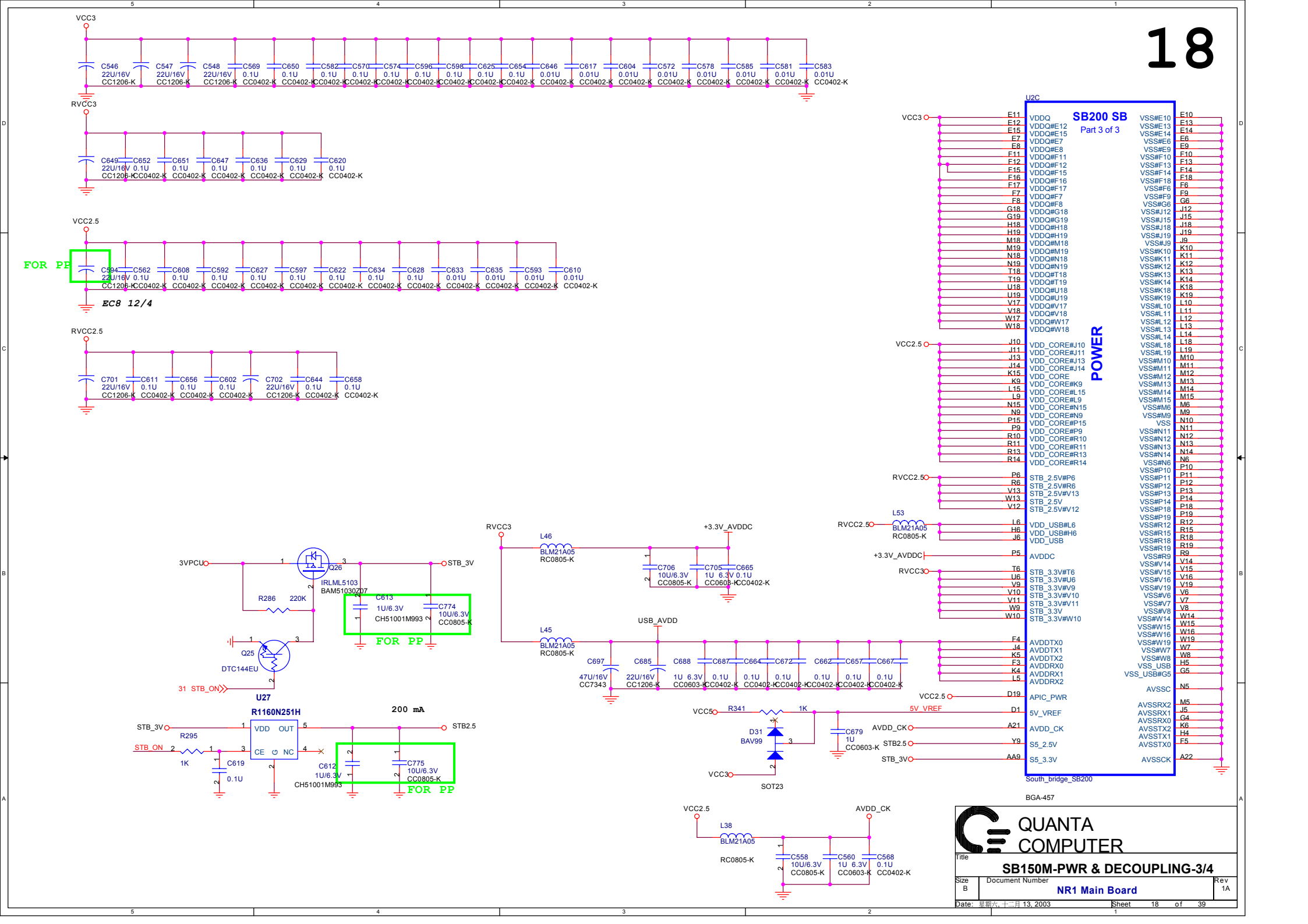

QUANTA COMPUTER

Title: SB150M-PWR & DECOUPLING-3/4

Size: B | Document Number: NR1 Main Board | Rev: 1A

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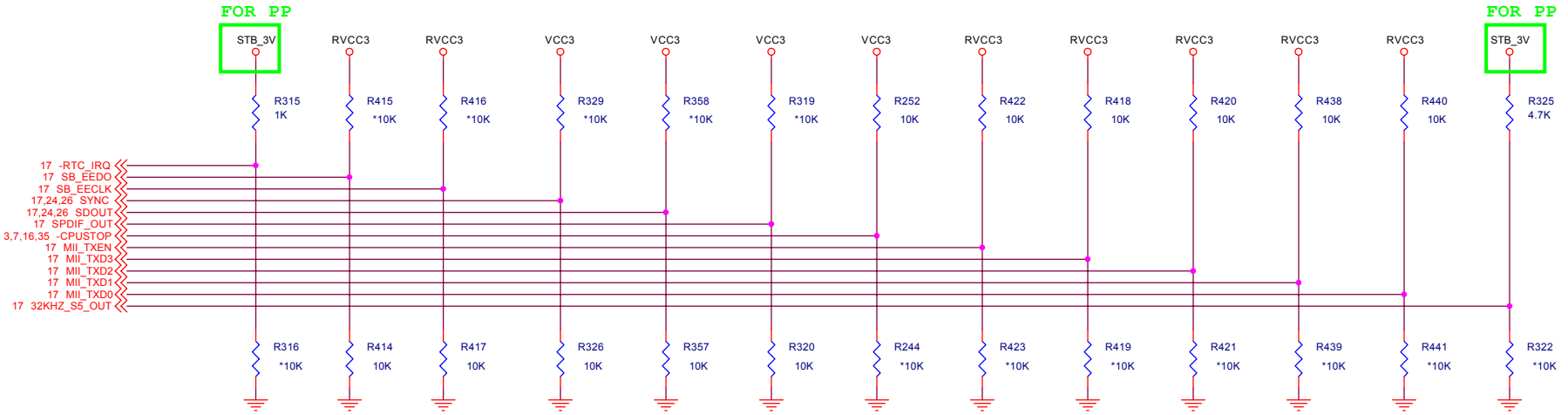
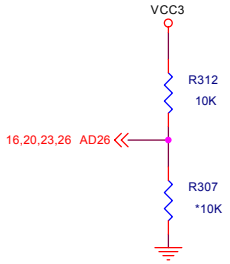


	ACPWRON	EEDO	EECK	SYNC	SDOUT	SPDIF_OUT	-CPUSTOP	TX_EN	ETHERNET TXD[3:0]	32KHZ_S5
STRAP HIGH	MANUAL PWR ON DEFAULT	USE DEBUG STRAPS DEFAULT	ROM ON PCI BUS	INIT ACTIVE HIGH	33MHz NB BUS	SIO 24MHz	ENABLE SPEED STEP DEFAULT	DISABLE CPU FREQ SETTING DEFAULT	PROCESSOR FREQ MULTIPLIER	32KHZ OUTPUT FROM SB200 (INT RTC) DEFAULT
STRAP LOW	AUTO PWR ON	IGNORE DEBUG STRAPS	ROM ON LPC BUS DEFAULT	INIT ACTIVE LOW (PIII) DEFAULT	HISPEED A-LINK DEFAULT	SIO 48MHz DEFAULT	DISABLE SPEED STEP	ENABLE CPU FREQSETTING		32KHZ INPUT TO SB200 (EXT RTC)



AD26
BIOS use LPC cycle DEFAULT
BIOS uSE FWH Cycle

QUANTA COMPUTER

Title: SB150M-STRAPS-4/4

Size: B | Document Number: NR1 Main Board | Rev: 1A

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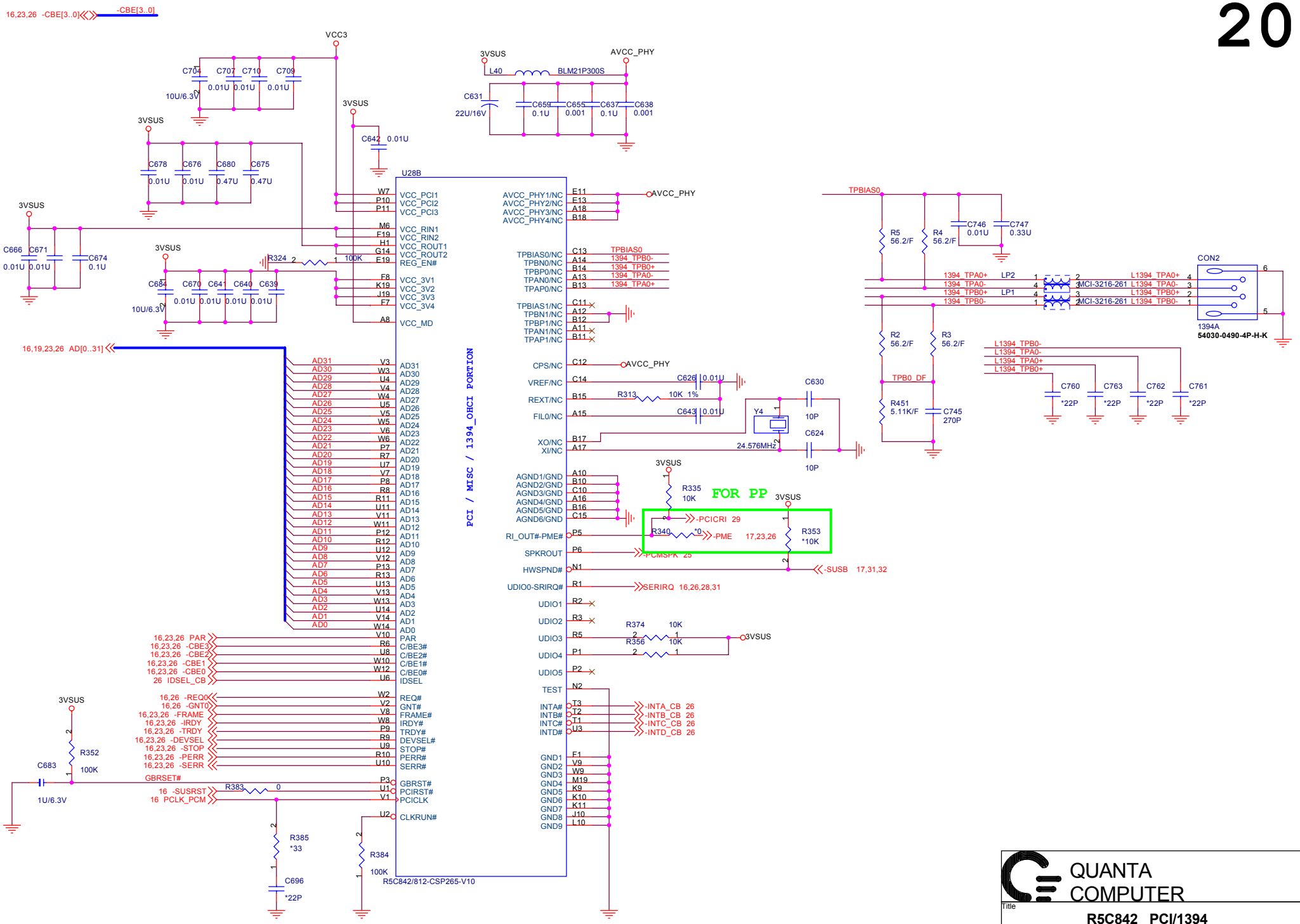

QUANTA COMPUTER

Title: R5C842_ PCI/1394

Size	Document Number	Rev
B	NR1 Main Board	1A

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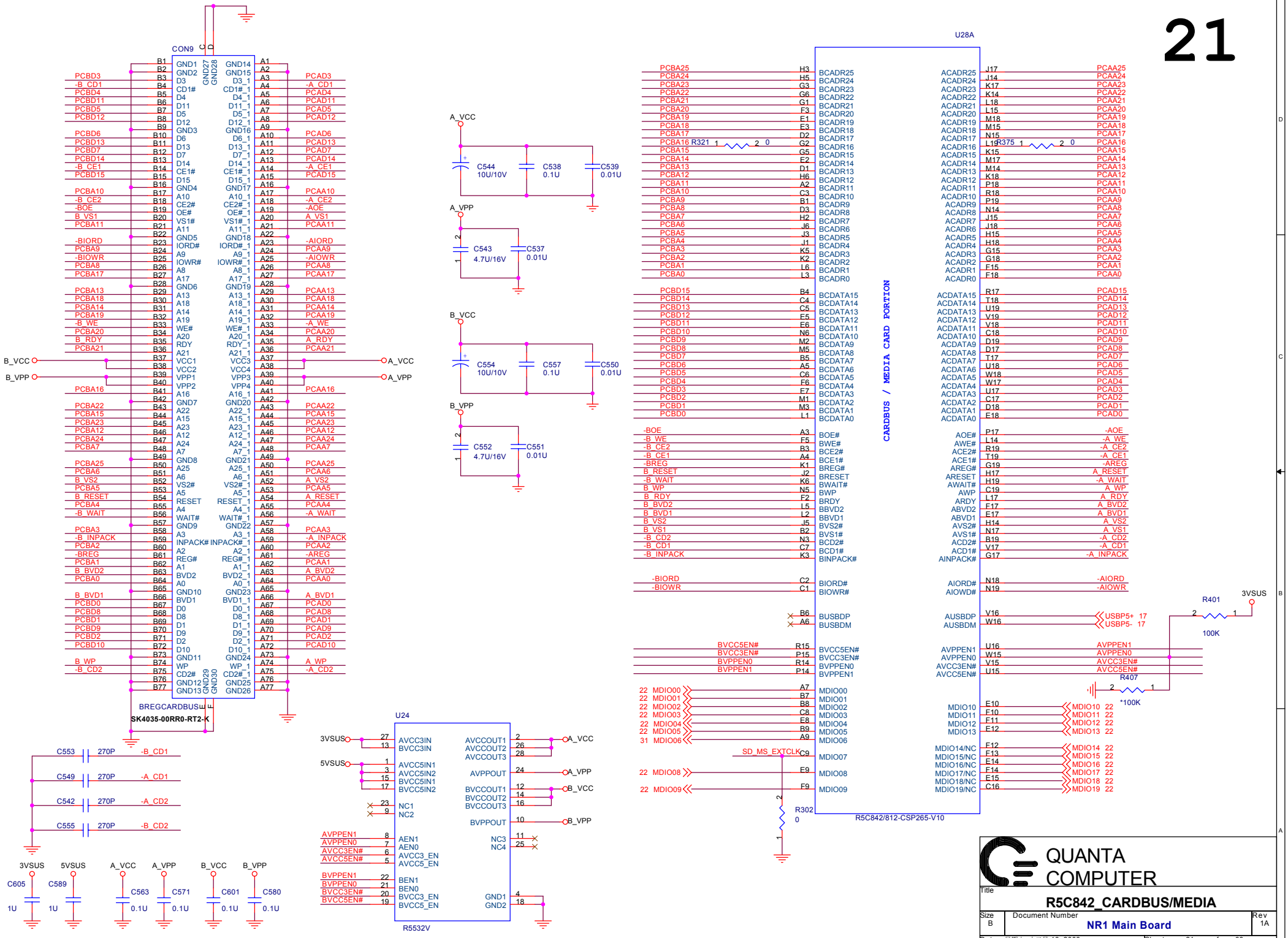

QUANTA COMPUTER

Title: R5C842_CARDBUS/MEDIA

Size	Document Number	Rev
B	NR1 Main Board	1A

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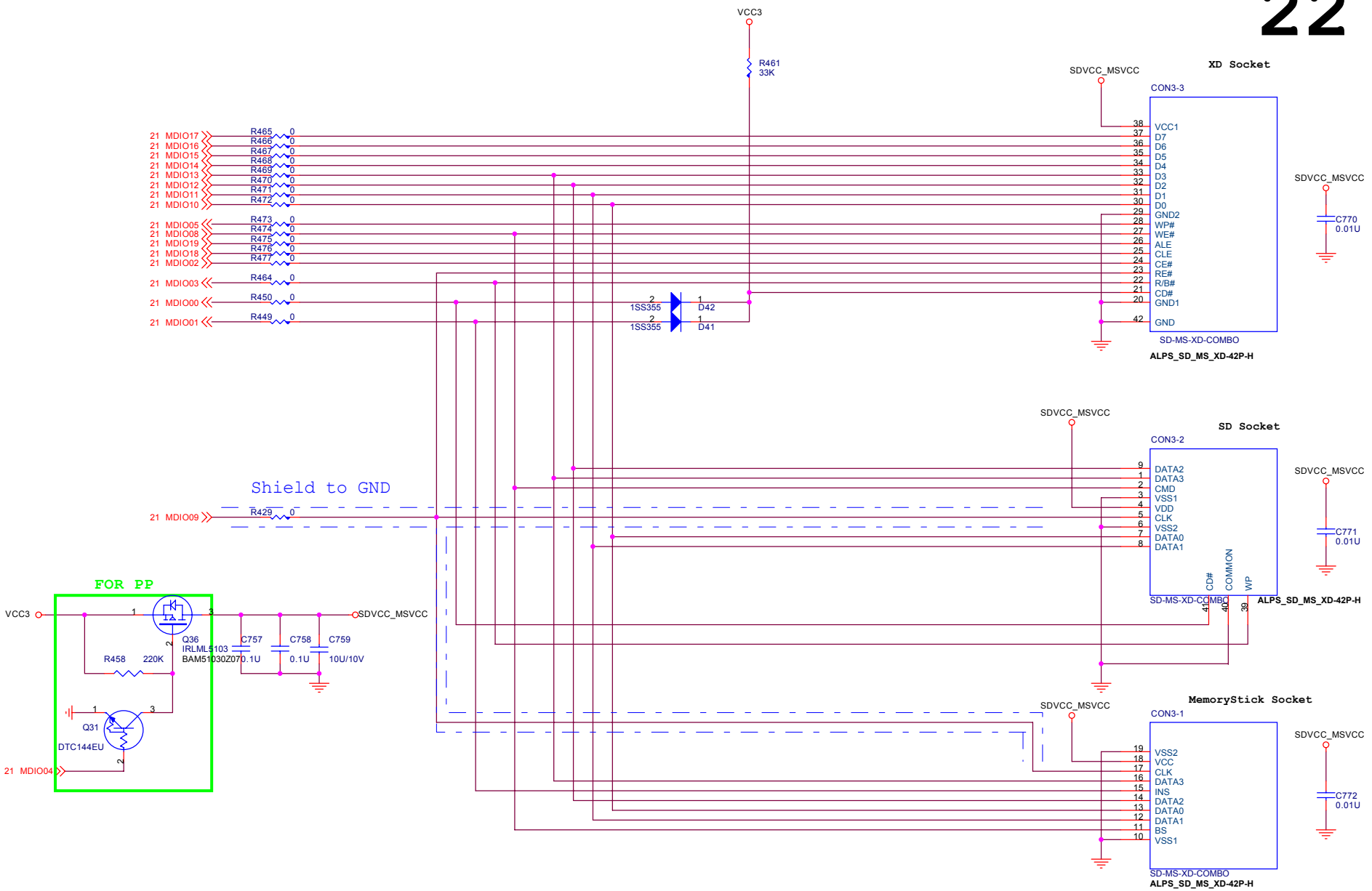

QUANTA COMPUTER

RICOH COMPANY,LTD.

Title: SD_MS_XD SLOT

Size	Document Number	Rev
B	NR1 Main Board	1A

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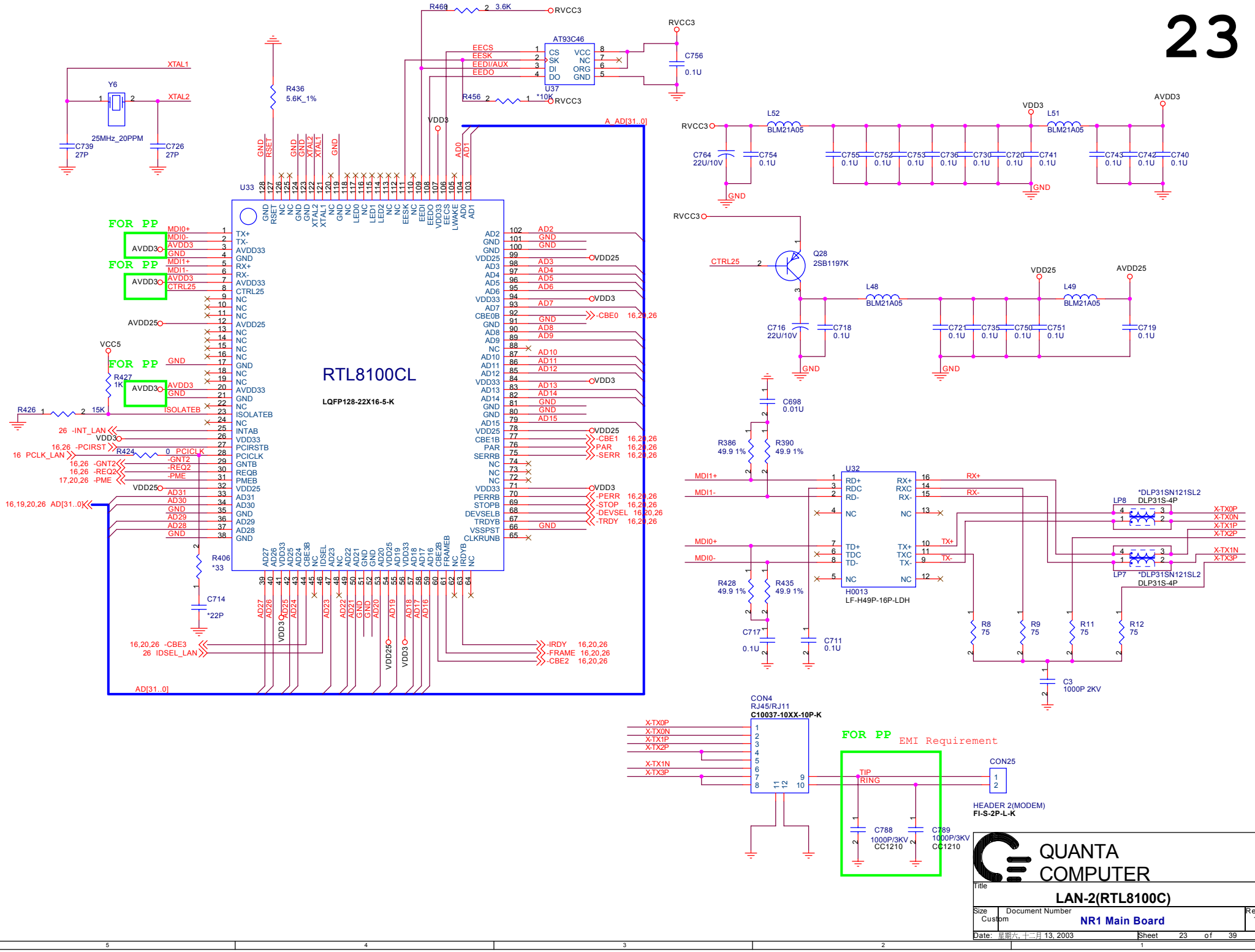

Title	LAN-2(RTL8100C)
Size	Custom
Document Number	NR1 Main Board
Rev	1A
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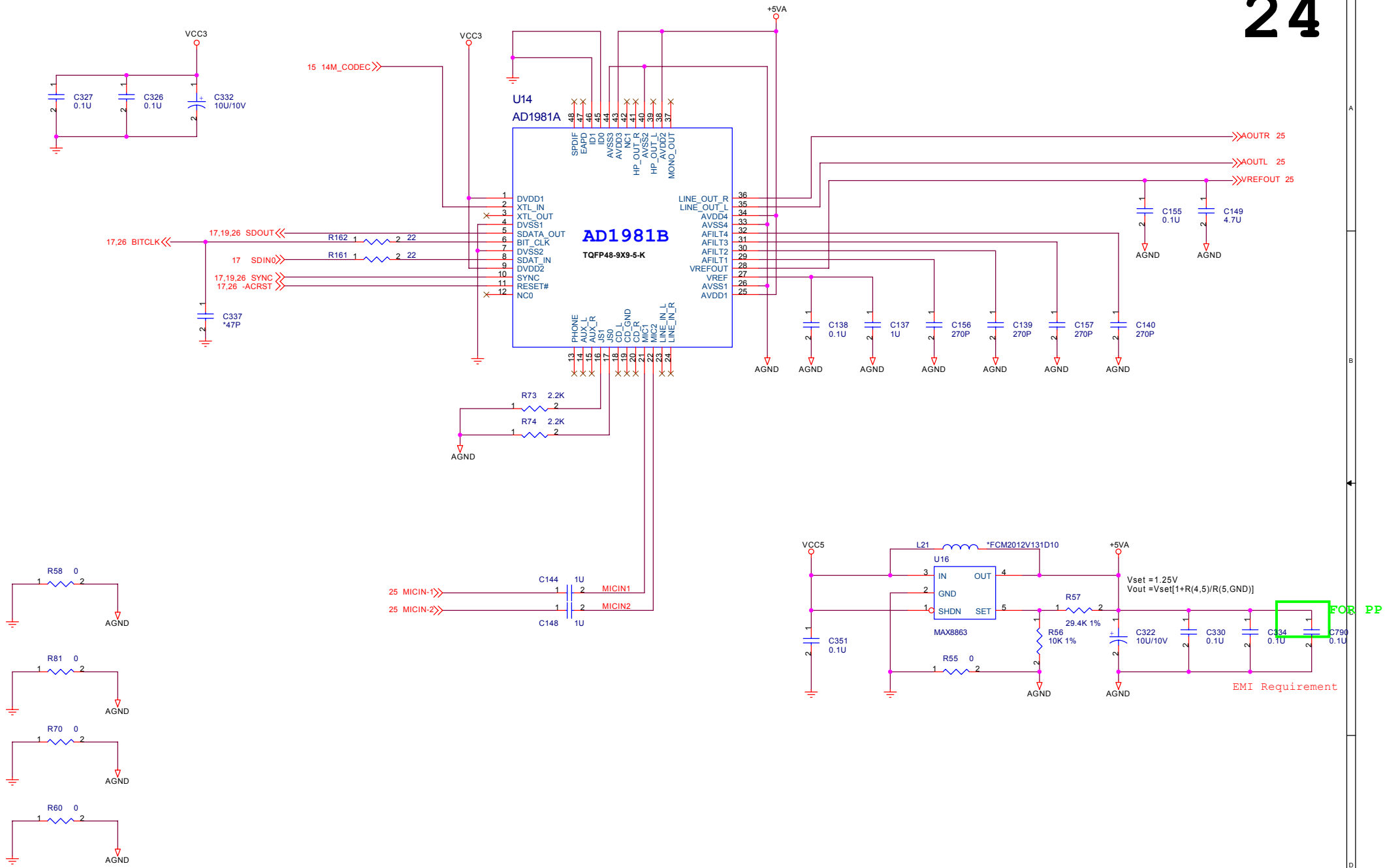
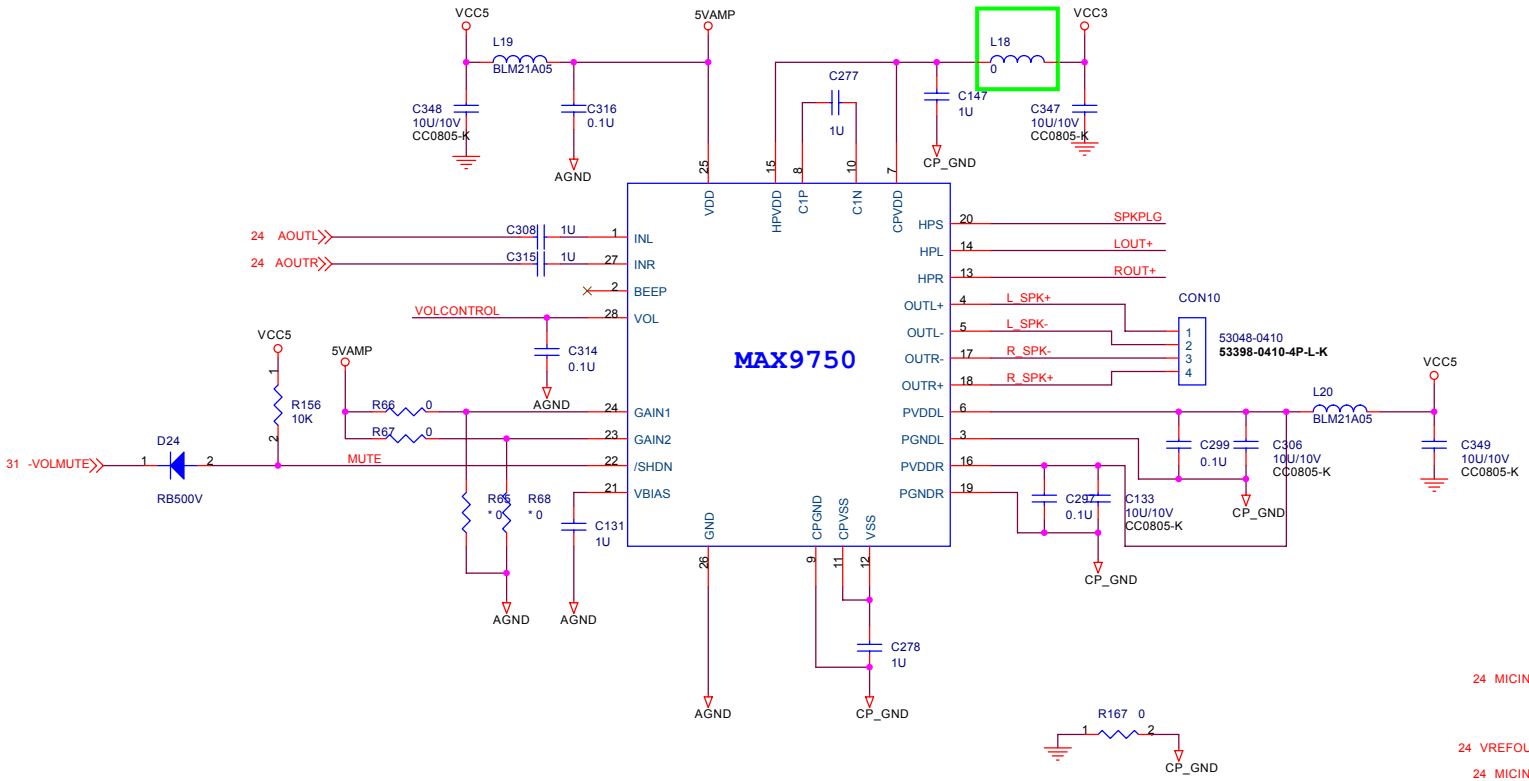
QUANTA COMPUTER

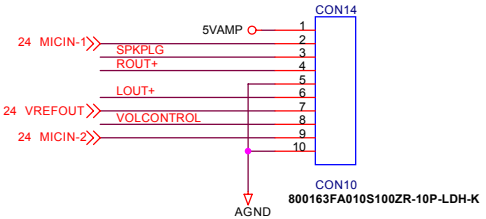


QUANTA COMPUTER		
Title: AUDIO CODEC		
Size: B	Document Number: NR1 Main Board	Rev: 1A
Date: 星期六, 十二月 13, 2003	Sheet 24 of 39	

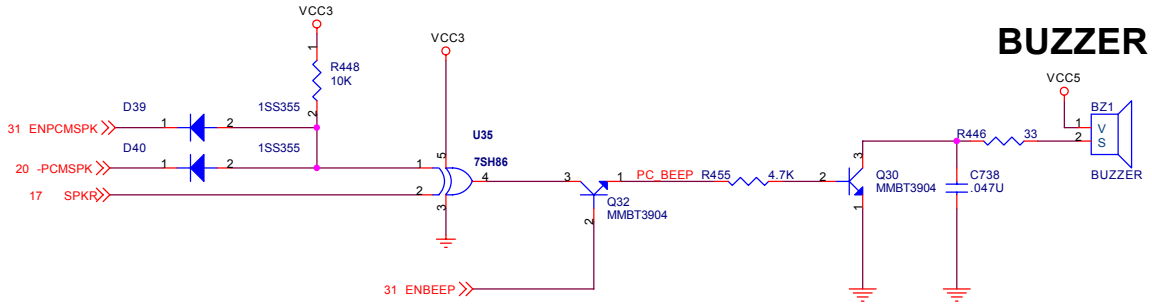
FOR PP



CP_GND returns are all 'star' connected, then a single connection to AGND:

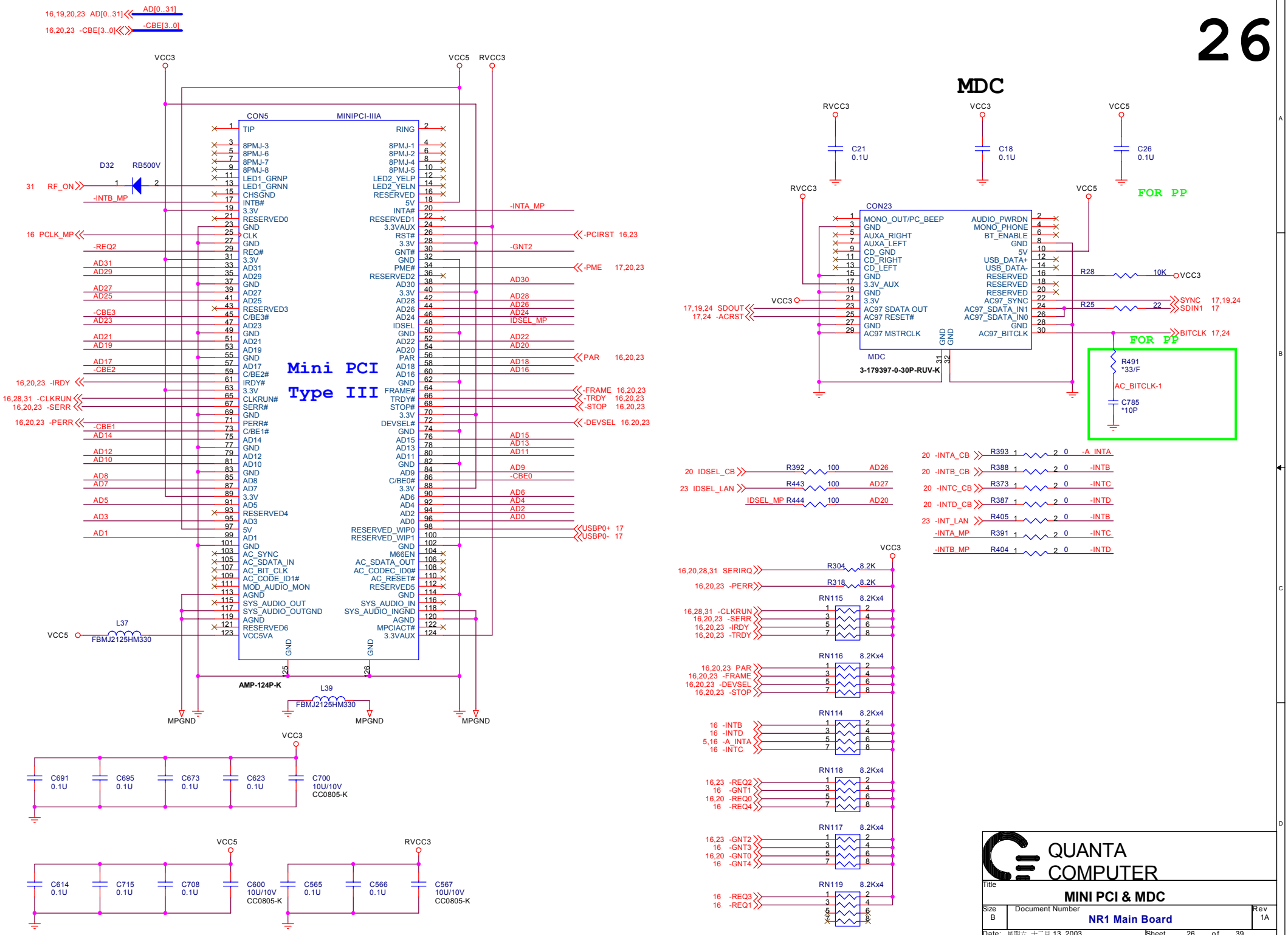


BUZZER



QUANTA COMPUTER

Title	AUDIO AMP & INT. SPEAKER	
Size B	Document Number NR1 Main Board	Rev 1A
Date: 星期六, 十二月 13, 2003	Sheet 25 of 39	

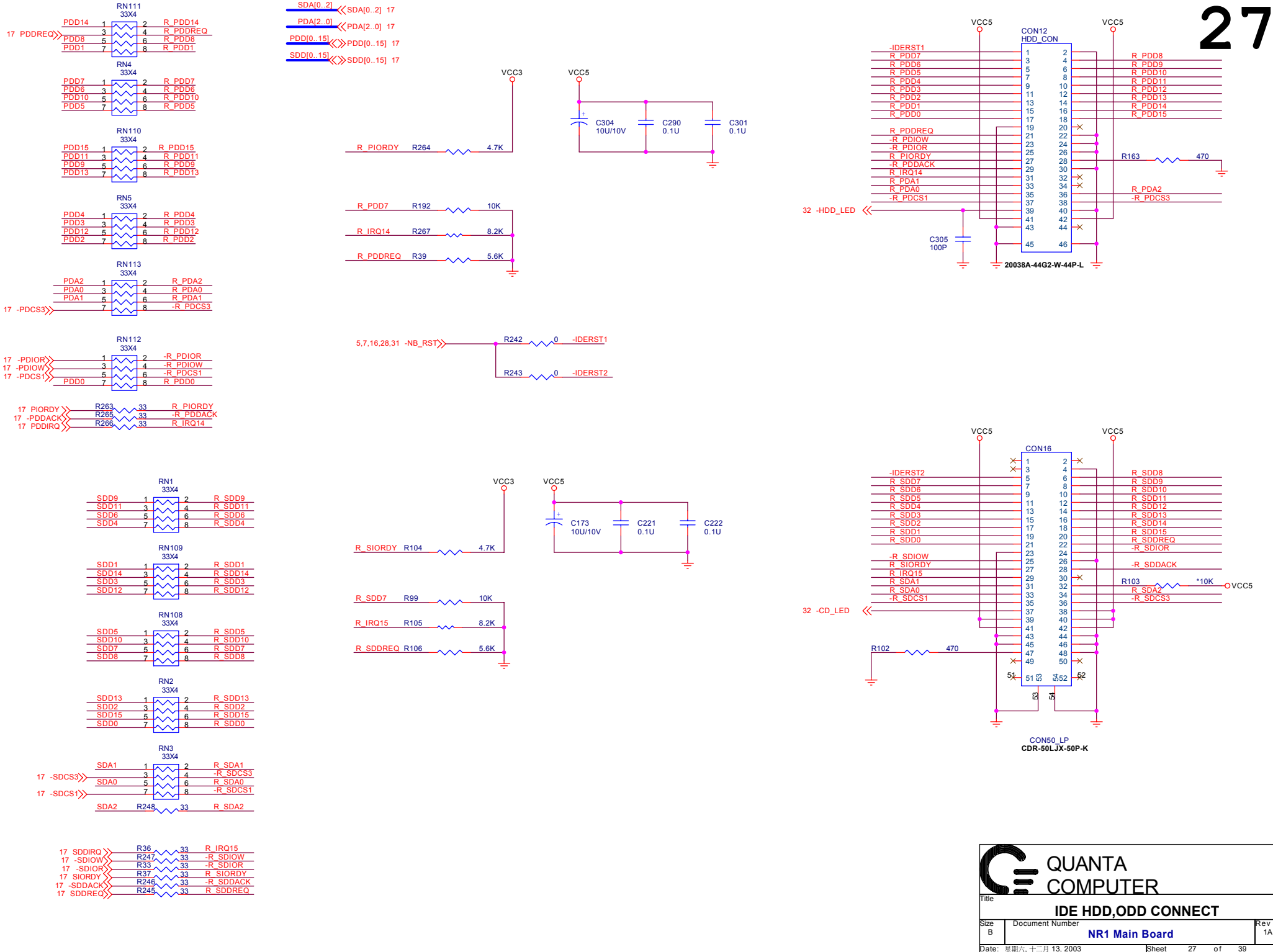


QUANTA COMPUTER

Title: MINI PCI & MDC

Size	Document Number	Rev
B	NR1 Main Board	1A

Date: 星期六, 十二月 13, 2003 Sheet 26 of 39



QUANTA COMPUTER

Title: **IDE HDD,ODD CONNECT**

Size	Document Number	Rev
B	NR1 Main Board	1A

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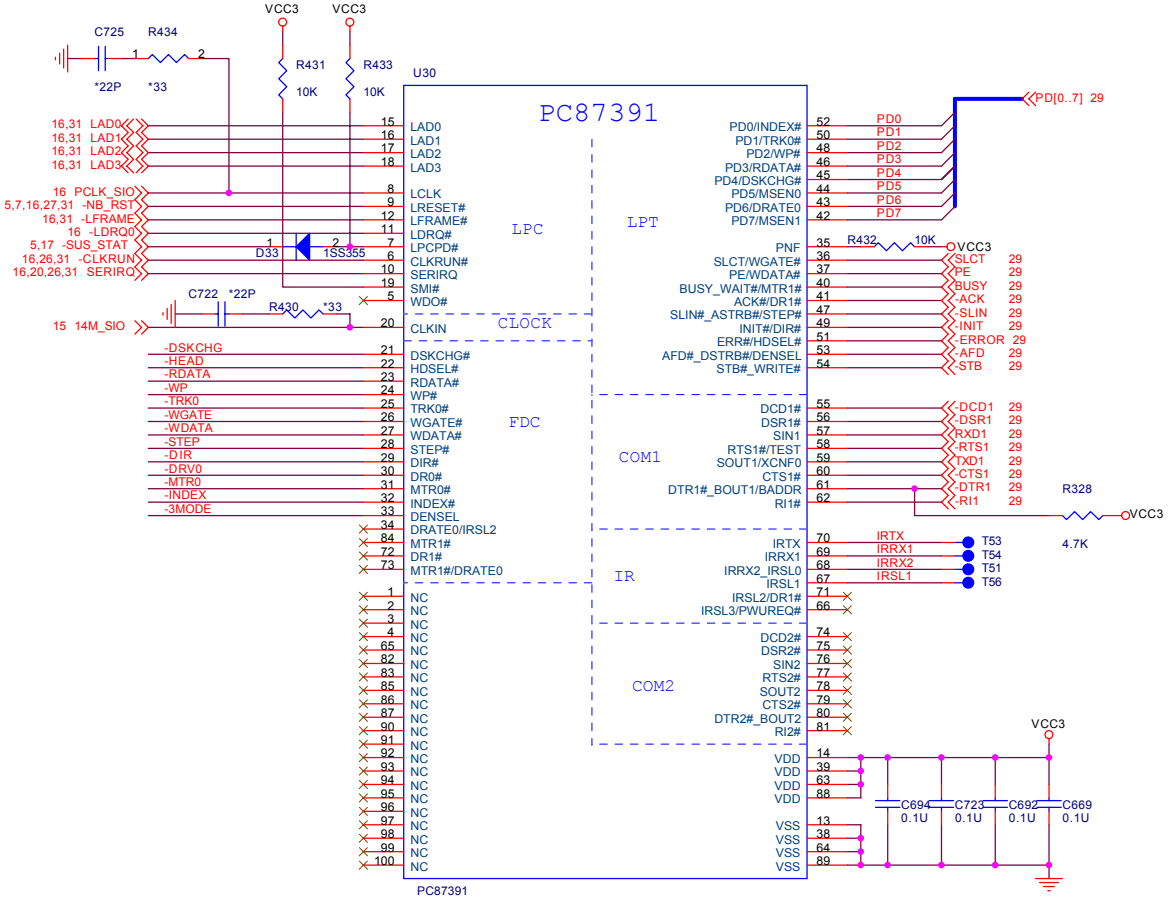

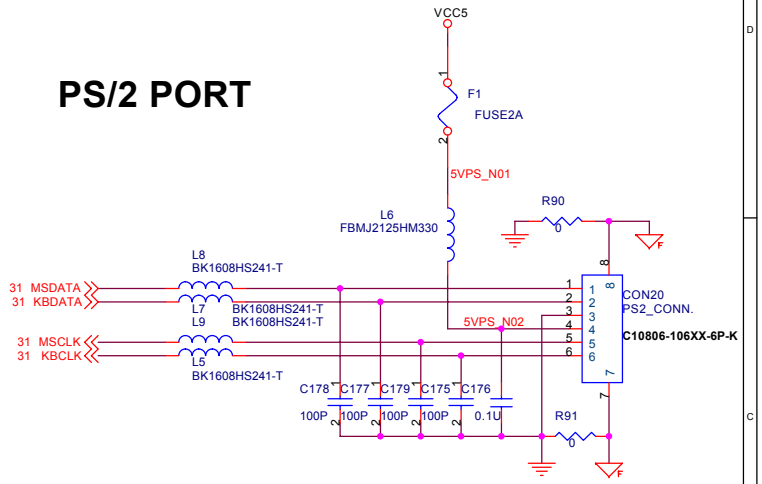

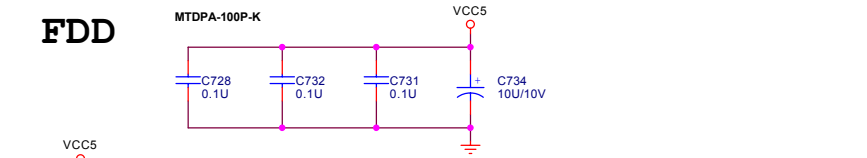

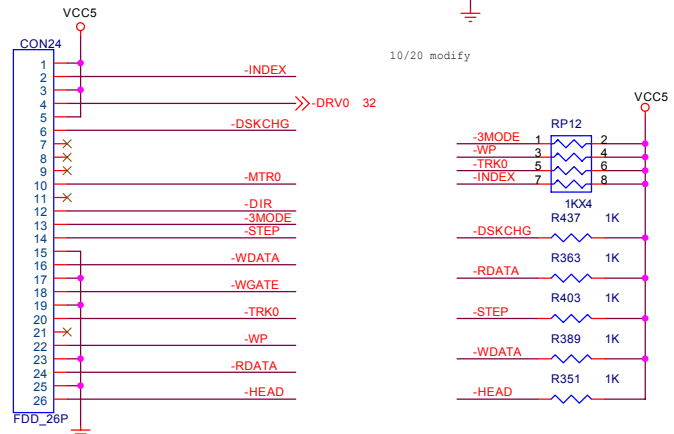

QUANTA COMPUTER

Title	PC87391 SUPER IO	
Size B	Document Number NR1 Main Board	Rev 1A
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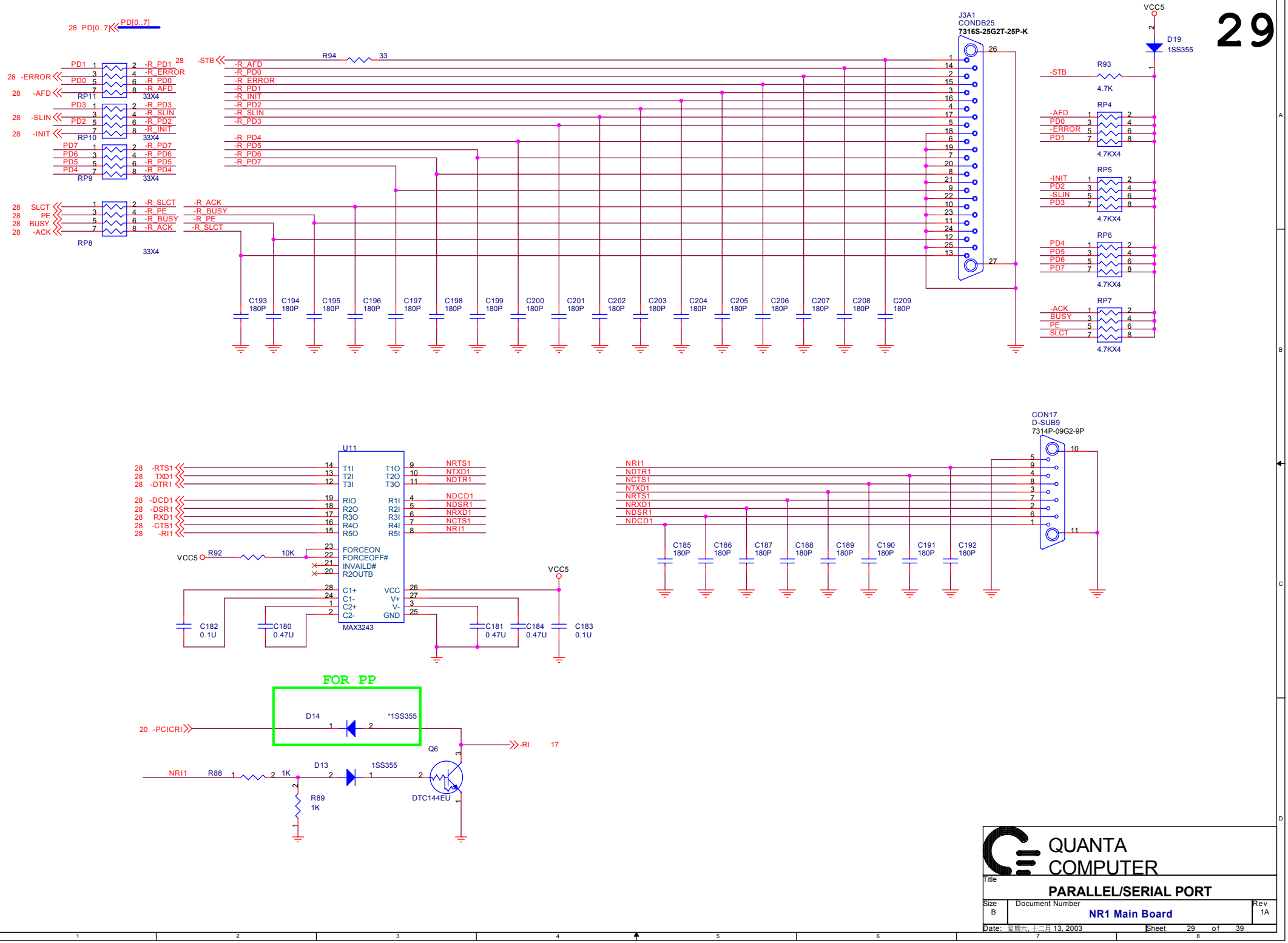

QUANTA COMPUTER

Title: PARALLEL/SERIAL PORT

Size	Document Number	Rev
B	NR1 Main Board	1A

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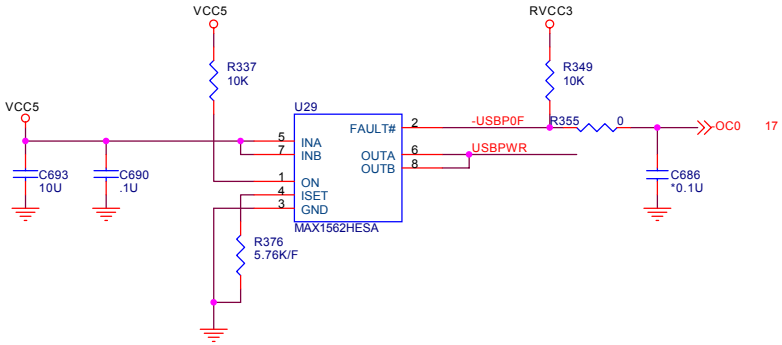
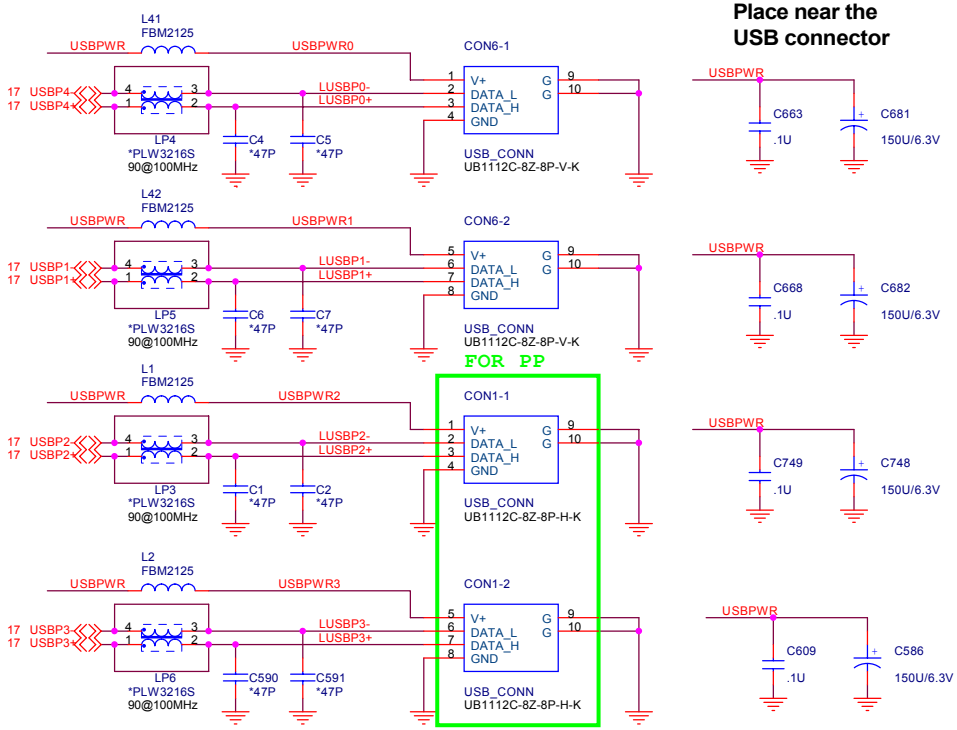
USB Power and Over current



USB Connector



Place near the USB connector

QUANTA COMPUTER

Title: **USB CONNECT**

Size	Document Number	Rev
B	NR1 Main Board	1A

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PC97551

EC15 12/4

TQFP176-S-K

FOR PP Model ID

3VPCU R498 100K MEM0 R499 100K MEM1 JP1 Model ID 200109MA006-6P-LDV

U36

39VF040

BA0–BA16 → A0–A16; BD0–BD7 → D0–D7; BA17 → A17; 3VPCU → VCC; C733 0.1U; -BCE → CE#; -BRD → OE#; -BWR → WE#; BA18 → VPP; GND

Strapping Pin

BA2	R454	*10K
BA3	R457	*10K
BA5	R459	10K
BA1	R453	*10K
-LID	R7	10K
IOPE3	R425	10K

*	BADDR1-0	I/O Address Index	I/O Address Data
*	0 0	2E	2F
	0 1	4E	4F
	1 0	(HCFGBAH, HCFGBAL)	(HCFGBAH, HCFGBAL)+1
	1 1	Reserved	

BA2 : BADDR0
BA3 : BADDR1

*	Enviroment	ENV0(BA0)	ENV1(BA1)	TRIS(BA4)
*	IRE	0	0	0
	OBD	0	1	0
	DEV	1	0	0
	PROG	1	1	0

BA0 : ENV0
BA1 : ENV1
BA4 : TRIS(If =1 will tristate all I/O pins)
BA5 : SHBM(If =1 Enable share host BIOS memory)

FOR PP

USB_TYPE MID1 MID2 MID3

FOR PP

MEM0 MEM1

FOR PP

3VPCU VCC5

CON18 / CON44A

85203-2202-44P-RUV-K

CON15

FAN_CONN. 53398-0310-3P-L-K

CON21

MODEL_ID_CON 200109MA10XXXAFZR-10P-LDV-K

QUANTA COMPUTER

Title: PCU-87591 & BIOS
Size: Custom
Document Number: NR1 Main Board
Rev: 1A
Date: 星期六, 十二月 13, 2003
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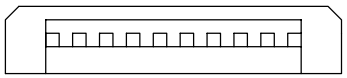
Int. keyboard

MX[0..7] → MX[0..7] 31
MY[0..15] → MY[0..15] 31

CON13

MX7	25	1	MX7
MX6	26	2	MX6
MX5	27	3	MX5
MX4	28	4	MX4
MX3	29	5	MX3
MX2	30	6	MX2
MX1	31	7	MX1
MX0	32	8	MX0
MY15	33	9	MY15
MY14	34	10	MY14
MY13	35	11	MY13
MY12	36	12	MY12
MY11	37	13	MY11
MY10	38	14	MY10
MY9	39	15	MY9
MY8	40	16	MY8
MY7	41	17	MY7
MY6	42	18	MY6
MY5	43	19	MY5
MY4	44	20	MY4
MY3	45	21	MY3
MY2	46	22	MY2
MY1	47	23	MY1
MY0	48	24	MY0

52610-24 **PIN ASIGN**
52610-24-48P-RUH-K



CP5 220Px4: MX4 MX5 MX6 MX7
CP4 220Px4: MY7 MY6 MY5 MY4
CP3 220Px4: MY1 MY0 MY3 MY2
CP2 220Px4: MX3 MX2 MX1 MX0
CP1 220Px4: MY15 MY14 MY13 MY12
CP6 220Px4: MY11 MY10 MY9 MY8

3VPCU
RP1 10KX8: MY9 MY10 MY11 MX0 → MY8 MY14 MY13 MY12
RP2 10KX8: MY15 MX4 MX2 MX7 → MX1 MX6 MX3 MX5
RP3 10KX8: MY5 MY6 MY7 MY4 → MY3 MY2 MY1 MY0

TOUCHPAD BOARD CON

C141 4.7U
C107 0.1U
T20W-TPVCC
L4 MNB-201209-0060P-N2Q
VCC5

CON11

31 TPDATA	2	DAT	NC_2
31 TPCLK	3	CLK	NC_3
	4	GND	NC_4
	1	VDD	NC_1
	5		T20W-TPVCC
	6		TPDATA
	7		TPCLK
	8		

ACES-85203-0402
85203-0402-8P-LDH-K

D15	No Stuff	Stuff
D16	Stuff	No Stuff
LED1 Function	ODD Acess	IDE Access
LED2 Function	HDD Acess	FDD Active

31 -RF_SW
31 -PLAY/PAUSE
31 -CD_STOP
31 -E-MAIL
31 -FORWARD
31 -REWIND
31 -INTERNET

3VPCU
31 -NBSWON → Q33 DTA124EU
Q34 *DTA124EU
Q37 *DTA124EU
Q38 DTA124EU
Q39 *DTA124EU
Q40 *DTA124EU
Q35 DTA124EU
Q29 DTA124EU

31,36 ACIN → D37 1SS355 → -PCUHOLD
17,20,31 -SUSB → D38 1SS355
R447 100K
EC 10/16

31 -PCUHOLD
EC 10/16

27 -CD_LED → D17 RB500V → -IDE_LED 31
27 -HDD_LED → D15 RB500V
D16 RB500V → -MIX-LED 31
28 -DRV0 → D18 RB500V

FOR PP
FOR PP
EMI Requirement

H23 H-TC276BC315D118P2
H18 H-TC276BC315D118P2
H17 H-TC276BC315D118P2
H10 H-TC276BC315D118P2
H2 H-C354D118P2-A
H25 H-TC89BC128D65P2
H26 H-TC89BC128D65P2

PAD1 EMI_SPRING
PAD2 EMI_SPRING
PAD3 EMI_SPRING
PAD4 EMI_SPRING
EMIPAD161X103

H1 H-TC276BC315D118P2
H9 H-TC276BC315D118P2
H5 H-TC276BC315D118P2
H22 H-TC276BC315D118P2
H13 H-TC276BC315D118P2
H16 H-TC236BC315D142P2
H12 H-TC236BC315D142P2
H15 H-TC236BC315D142P2
H19 H-C315D118P2

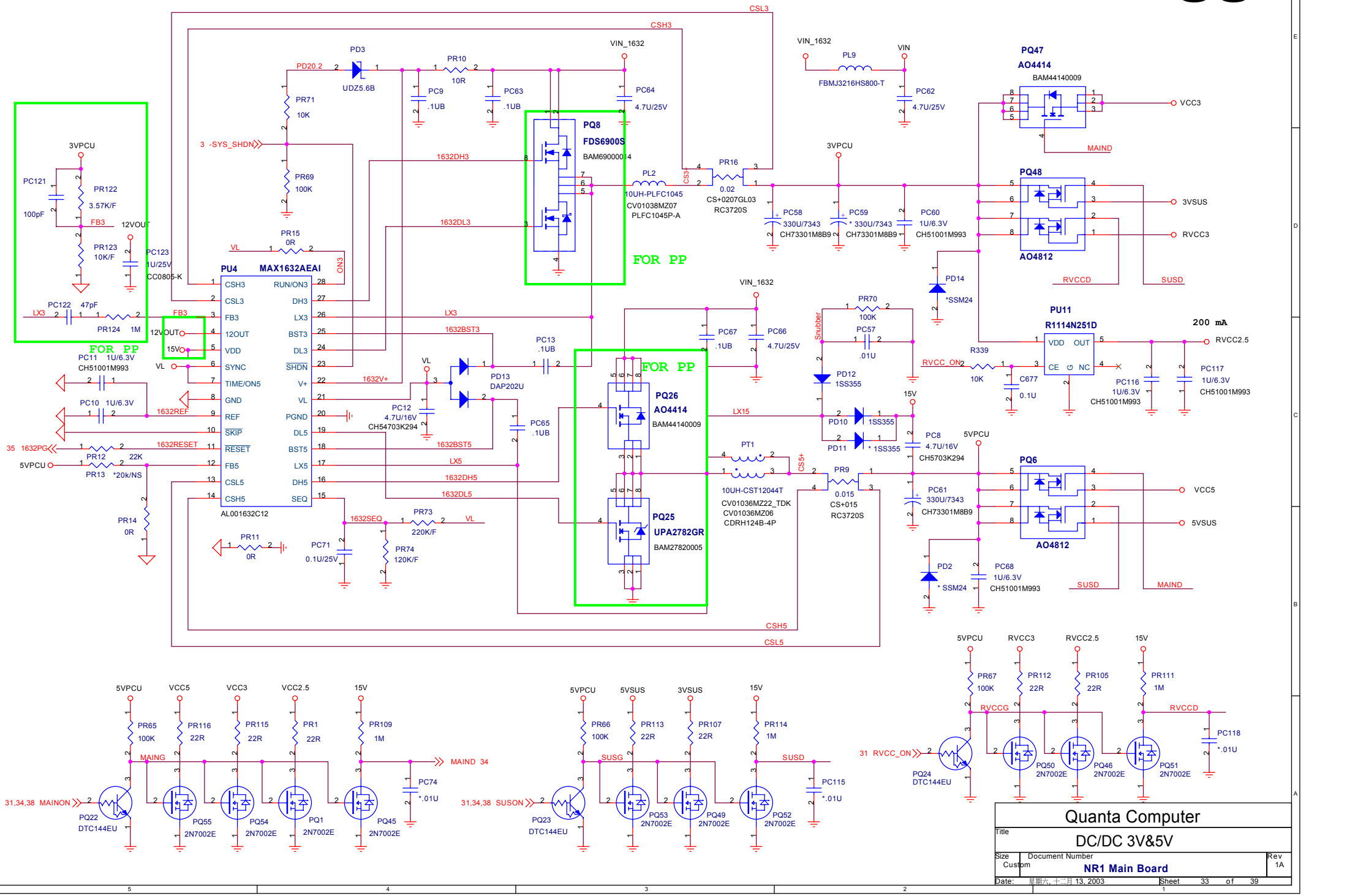
PAD5 EMI_SPRING
PAD10 EMI_SPRING
PAD6 EMI_SPRING
PAD7 EMI_SPRING
PAD8 EMI_SPRING
PAD9 EMI_SPRING
EMIPAD161X103

H14 H-NR1CPU1
H11 H-NR1HDD
H4 H-C394D118P2
H24 H-C394D118P2
H7 H-C276D146P2
H8 H-C276D146P2
H3 H-TC236BC315D118P2
H20 H-NR1CPU
H21 H-NR1CPU

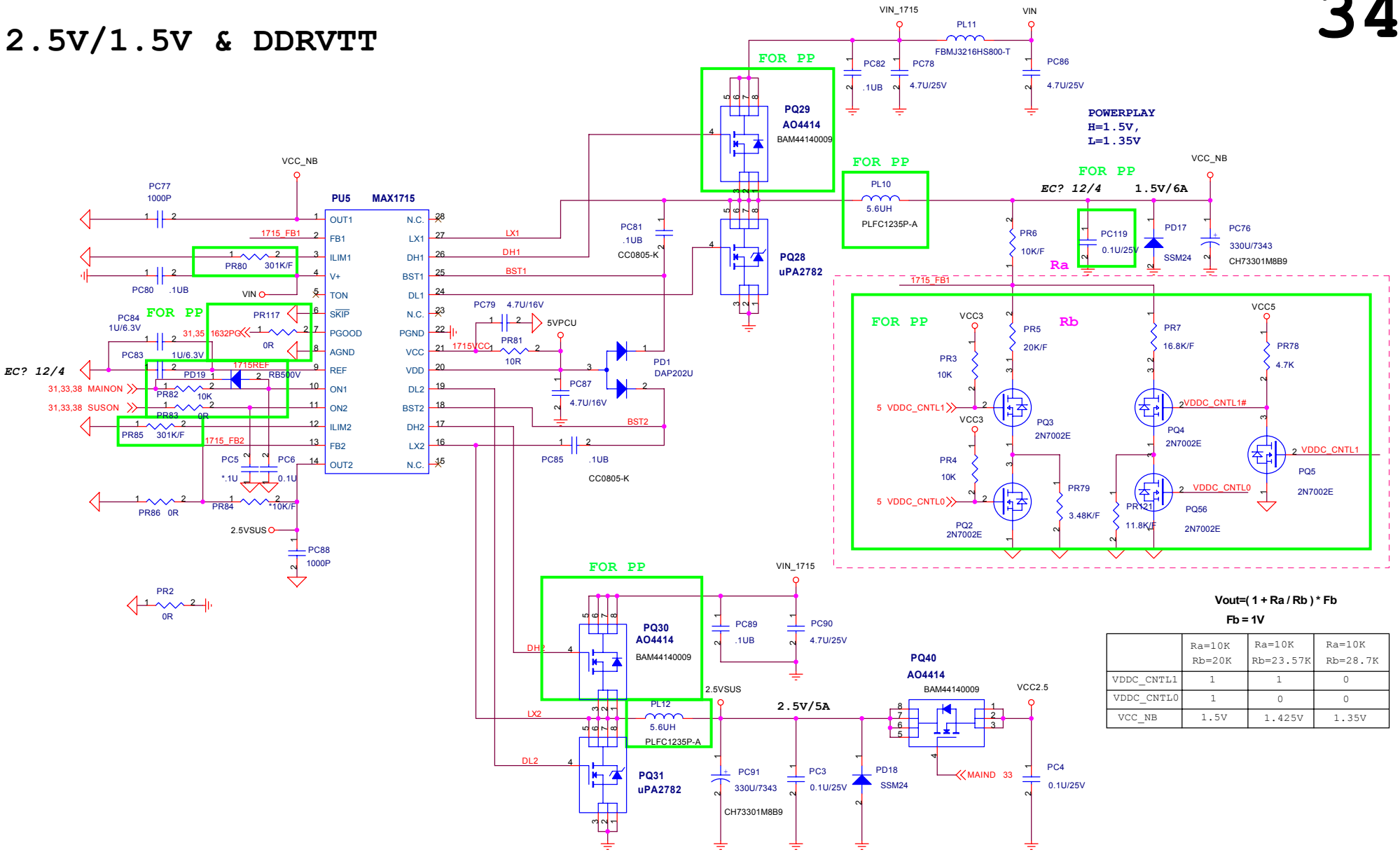
QUANTA COMPUTER

Title: **Int. Keyboard &TP Conn.**
Size: B
Document Number: **NR1 Main Board**
Rev: 1A
Date: 星期六, 十二月 13, 2003
Sheet 32 of 39

DC/DC 3.3V&5V POWER



2.5V/1.5V & DDRVTT



Vout=(1 + Ra / Rb) * Fb

Fb = 1V

	Ra=10K Rb=20K	Ra=10K Rb=23.57K	Ra=10K Rb=28.7K
VDDC_CNTL1	1	1	0
VDDC_CNTL0	1	0	0
VCC_NB	1.5V	1.425V	1.35V

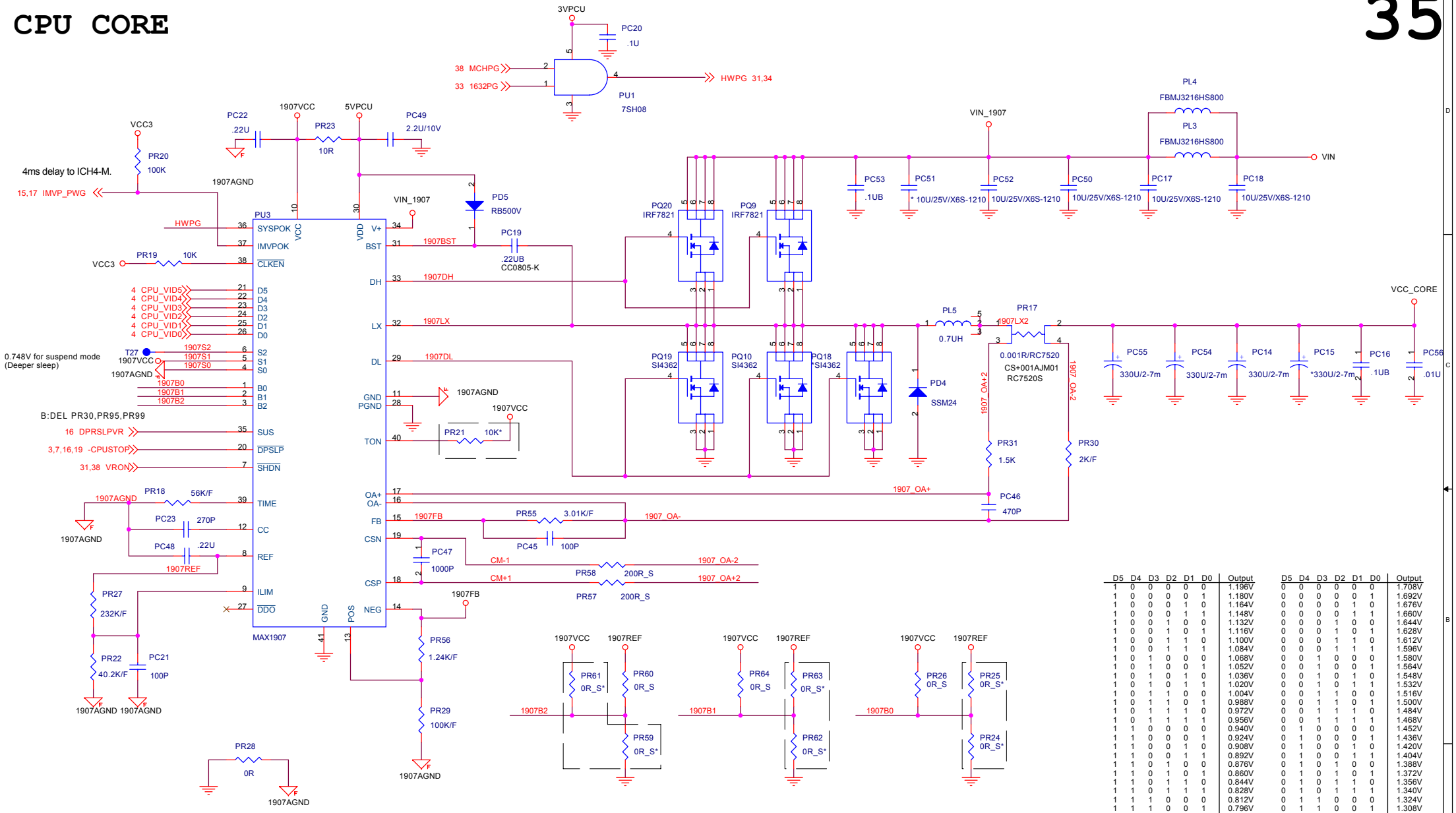
QUANTA COMPUTER

Title: DC/DC 2.5/1.8/1.5VSUS

Size: B | Document Number: NR1 Main Board | Rev: 1A

Date: 星期六, 十二月 13, 2003 | Sheet 34 of 39

CPU CORE



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

SUSPEND MODE (SUS=HIGH)

S2	S1	S0	Output
OPEN	VCC	GND	0.748V

VCC_BOOT

B2	B1	B0	Output
GND	GND	GND	1.708V
REF	REF	REF	1.372V
OPEN	OPEN	OPEN	1.036V
VCC	VCC	VCC	0.700V
REF	VCC	VCC	1.212V

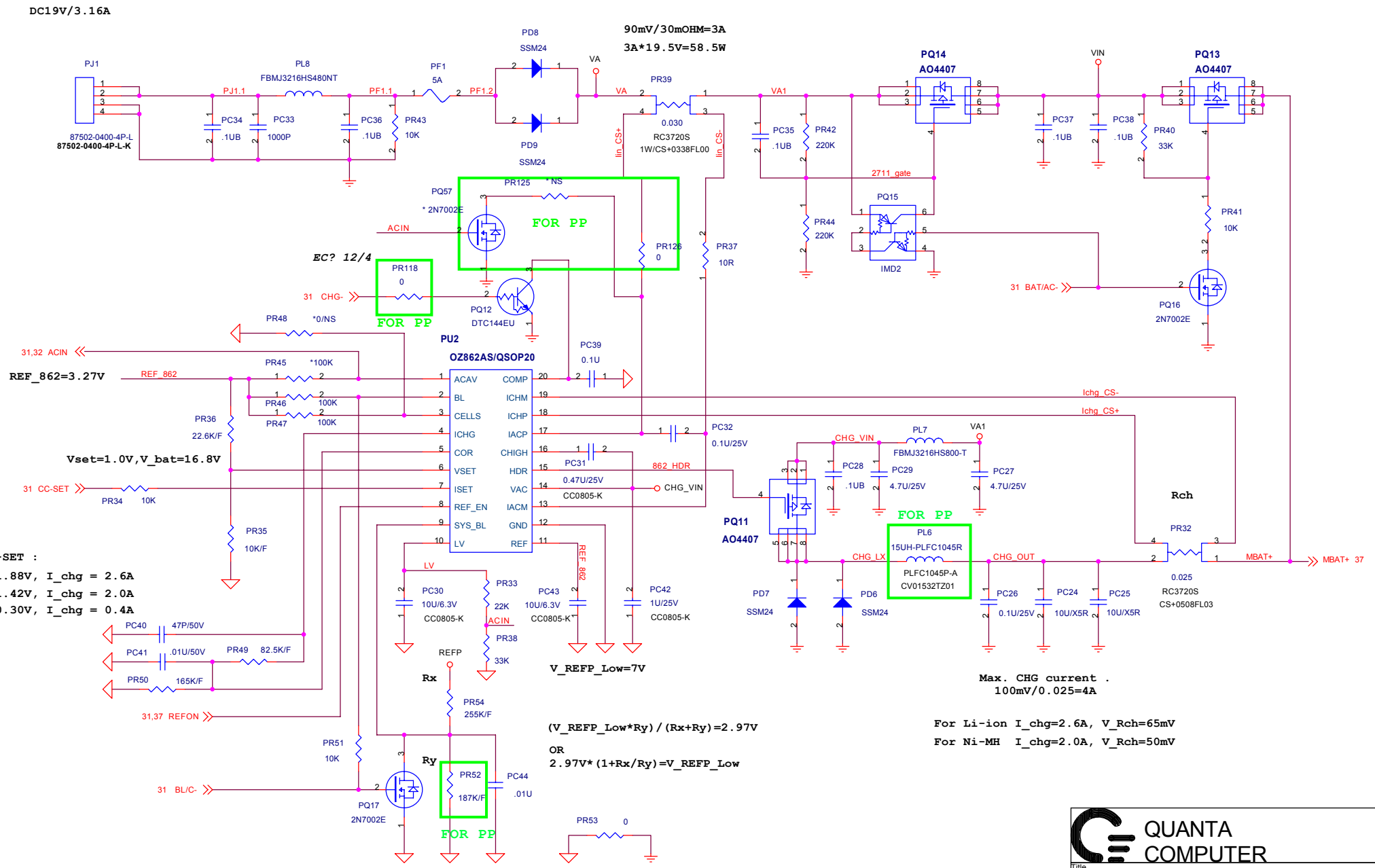
QUANTA COMPUTER

Title: CPU CORE

Size: A3 | Document Number: NR1 Main Board | Rev: 1A

Date: 星期六, 十二月 13, 2003 | Sheet 35 of 39

Battery Charger



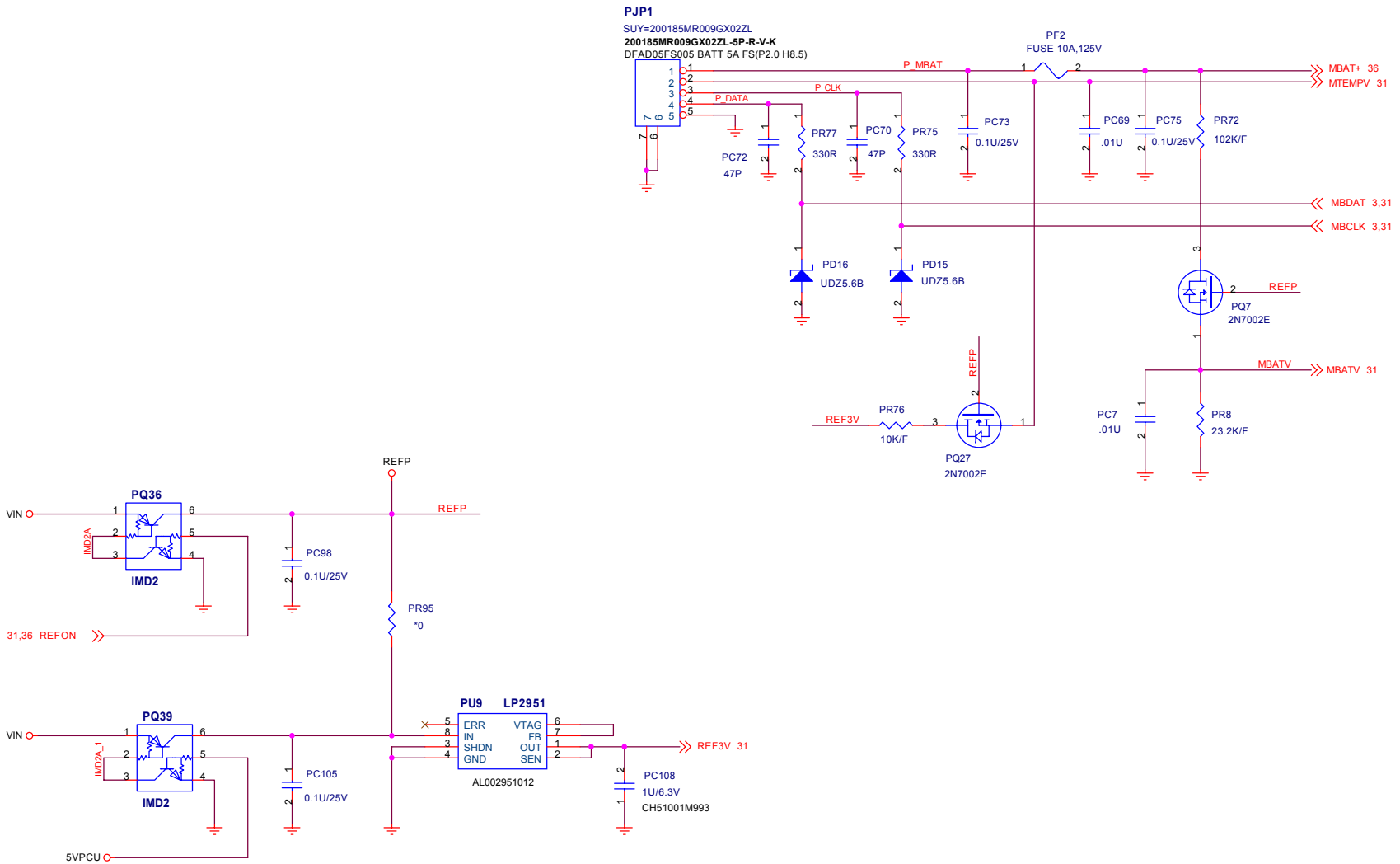
QUANTA COMPUTER

Title: BATTERY CHARGER

Size	Document Number	Rev
B	NR1 Main Board	1A

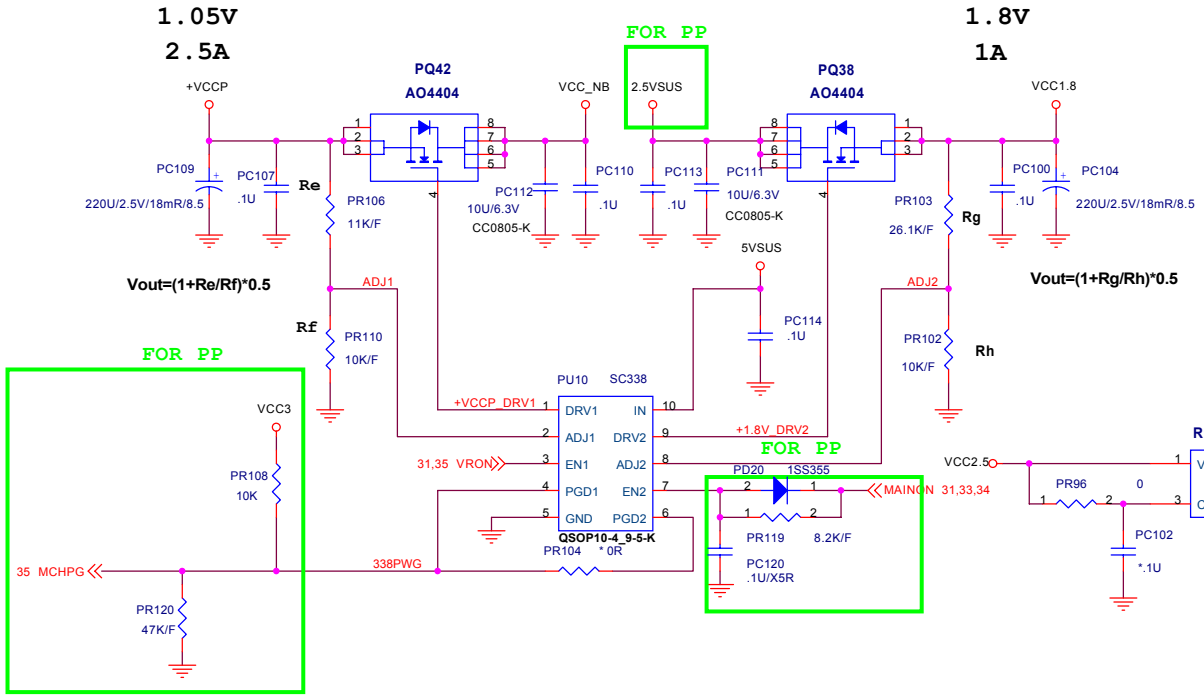
Date: 星期六, 十二月 13, 2003 Sheet 36 of 39

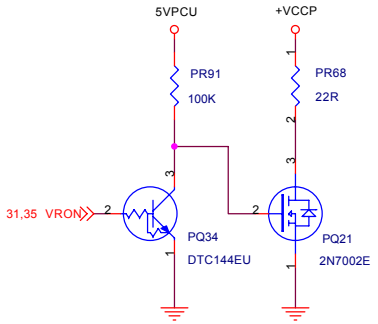
Battery Connector

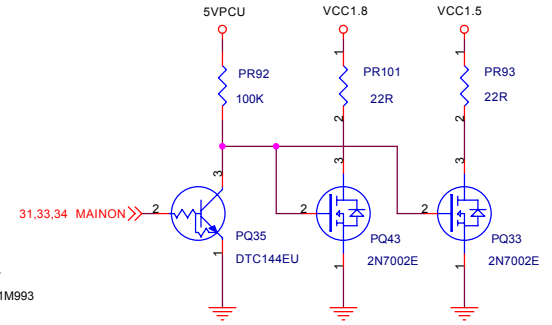


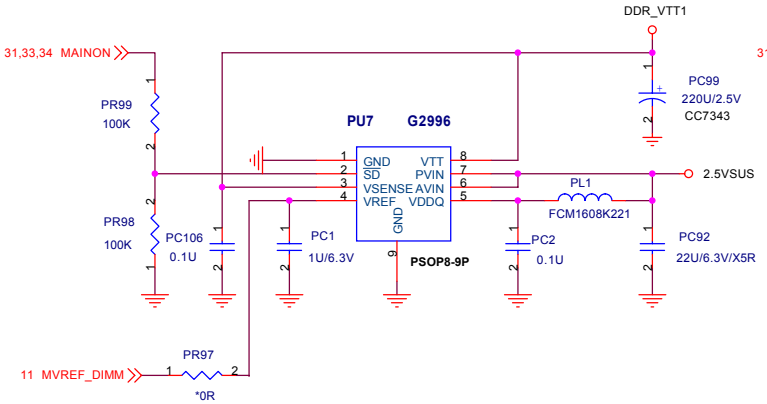
QUANTA COMPUTER			
Title: BATTERY SELECTOR			
Size: B	Document Number: NR1 Main Board		Rev: 1A
Date: 星期六, 十二月 13, 2003	Sheet 37 of 39		

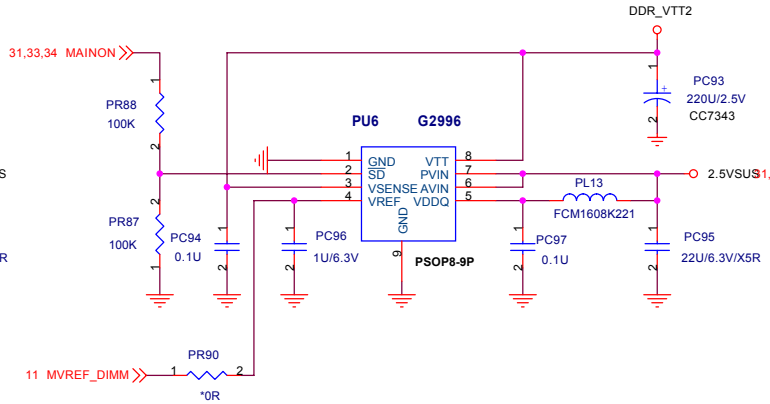
VCCP 1.05V/1.8V/1.5V/DDR_VTT

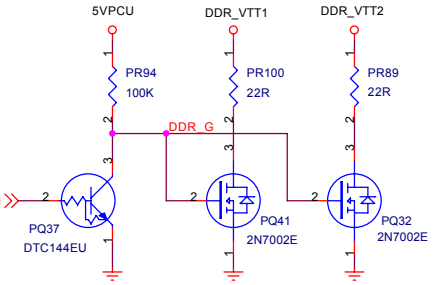












QUANTA COMPUTER

Title: VCCP/ 1.8V & VGA Power 1.5V&1.35V

Size	Document Number	Rev
B	NR1 Main Board	1A

Date: 星期六, 十二月 13, 2003 Sheet 38 of 39

1.12/10 PAGE31 ADD ON BOARD MEMORY SIZE JUMPER
2.12/10 PAGE5 LCD EDID PULL HIGH FORM VCC1.5 CHANGE TO VCC3
3.12/10 PAGE25 L18 FORM BEAD CHANGE TO 0 OHM

Title	<Title>	
Size A	Document Number <Doc>	Rev <RevCode>
Date: 星期六, 十二月 13, 2003	Sheet 39 of 39	