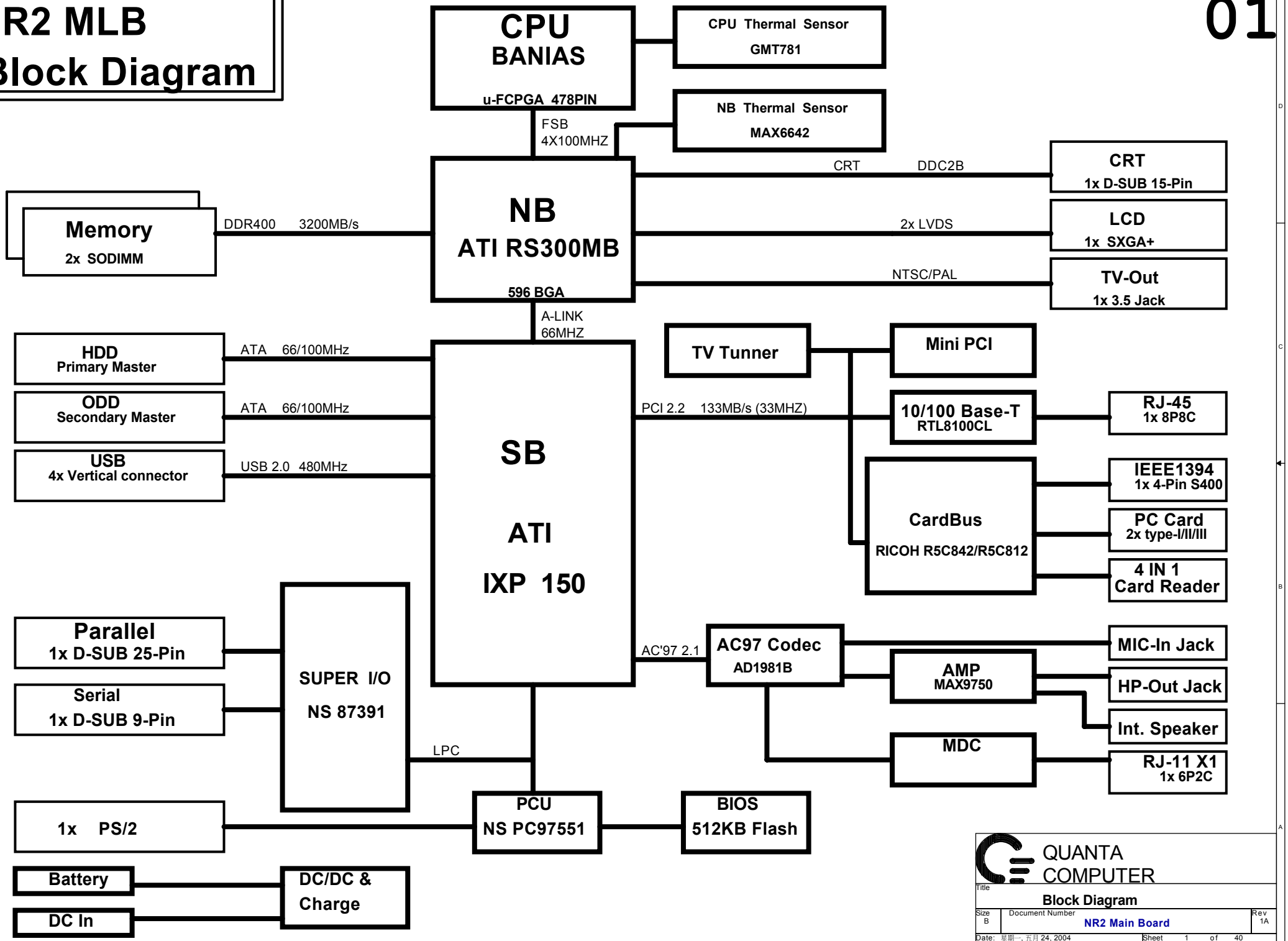
NR2 MLB Block Diagram

01



QUANTA COMPUTER

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02 Page List
03 BANIAS CPU (HOST BUS)-1
04 BANIAS CPU (POWER/NC)-2
05 RS300MB-AGTL+&AGP&A_LINK-1

06 RS300MB-DDR I/F-2
07 RS300MB-VIDEO I/F&CLKGEN-3
08 RS300MB-POWER-4
09 RS300MB-STRAPS-5
10 DDR SDRAM(on board)

11 DDR SODIMM
12 DDR Terminator A CHANNEL
13 DDR Terminator B CHANNEL
14 CRT&SVIDEO PORT
15 MEM CLK BUFFER/EXT CLK GEN

16 SB150M-ALINK/PCI/CPU/LP-1
17 SB150M-IDE/USB-2
18 SB150M-PWR & DECOUPLING-3
19 SB150M-STRAPS-4
20 R5C842_ PCI/1394

21 R5C842_CARDBUS/MEDIA
22 SD_MS_XD SLOT
23 LAN_RTL8100CL
24 AUDIO CODEC_AD1981B
25 AMP_MAX9750&INT.SPEAKER

26 MINI PCI&MDC
27 IDE HDD&ODD CONNECT
28 TV TUNNER MODULE
29 SUPER I/O_NS87391
30 PARALLEL/SERIAL PORT

31 PCU_NS97551 & BIOS
32 INT. KEYBOARD &TP CONN.
33 USB CONNECT&LKB PWR DRIVE
34 DC/DC 3V&5V
35 2.5V/VCC_NB

36 BATTERY CHARGER
37 BATTERY CONNECTOR
38 CPU CORE (MAX1907)
39 1.05/1.2/1.8 & VGA POWER
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Thermal Control

03

U8A

Dothan/Banias

1 OF 3

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

SKT478-BANIAS

Support Dothan & Banias CPU

PUT CLOSE TO CPU WITHIN 300 MIL

U9 ADM1032 GMT781

U12 MAX6642 *MAX6642

Q3 Q10 Q11 Q12 Q13 Q14 Q16 Q18 Q20 Q4 Q5

Title	BANIAS CPU (HOST BUS)-1
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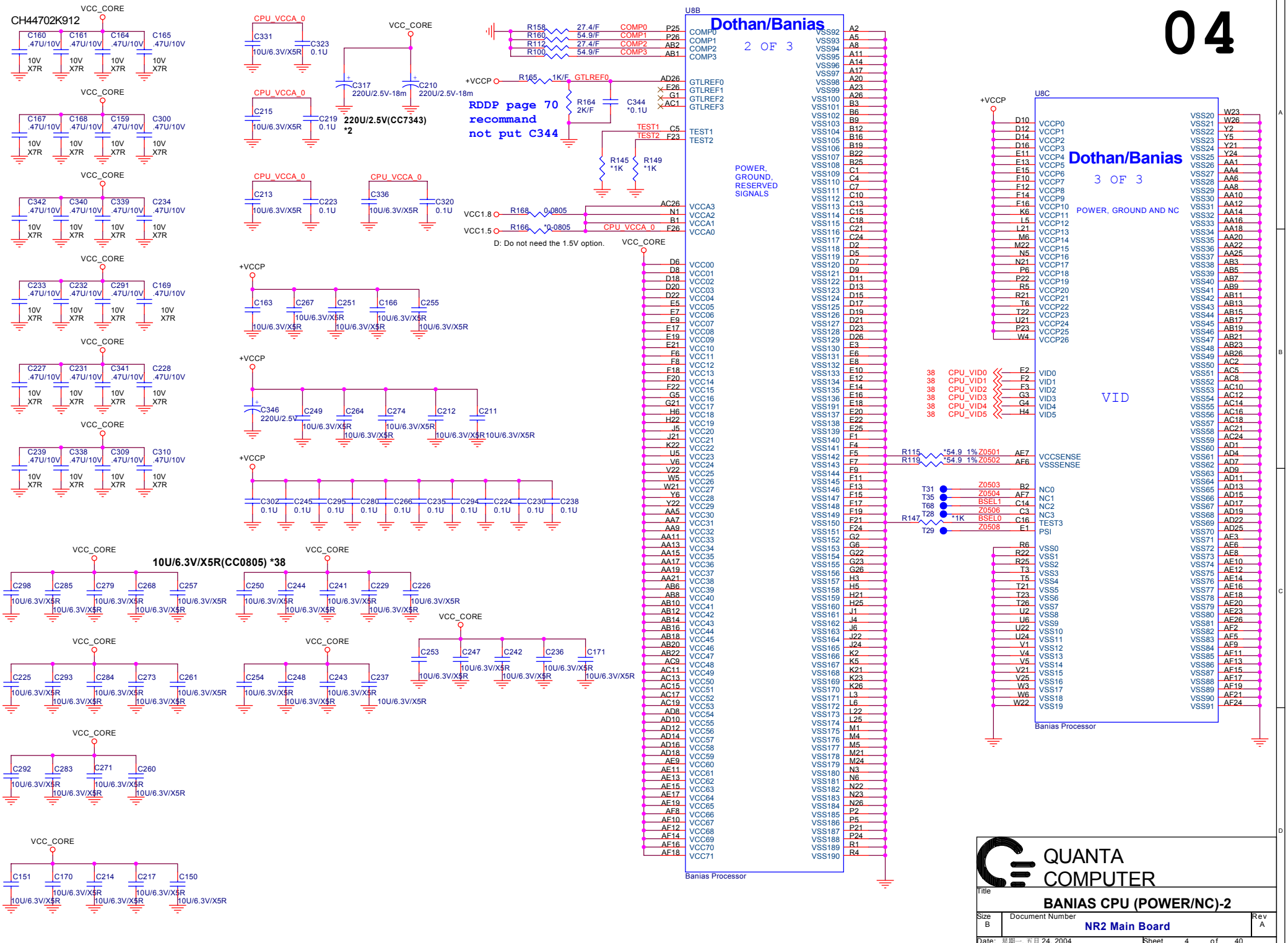
04
CH44702K912
VCC_CORE
C160 .47U/10V
C161 .47U/10V
C164 .47U/10V
C165 .47U/10V
C167 .47U/10V
C168 .47U/10V
C159 .47U/10V
C300 .47U/10V
C342 .47U/10V
C340 .47U/10V
C339 .47U/10V
C234 .47U/10V
C233 .47U/10V
C232 .47U/10V
C291 .47U/10V
C169 .47U/10V
C227 .47U/10V
C231 .47U/10V
C341 .47U/10V
C228 .47U/10V
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
C253
C247
C242
C236
C171
C292
C283
C271
C260
C151
C170
C214
C217
C150
RDDP page 70 recommand not put C344
R158 27.4/F COMP0
R160 54.9/F COMP1
R112 27.4/F COMP2
R100 54.9/F COMP3
R165 1K/F GTLREF0
R164 2K/F
C344 *0.1U
TEST1 C5
TEST2 F23
R145 *1K
R149 *1K
VCC1.8
VCC1.5
R168 0-0805
R166 *0-0805
D: Do not need the 1.5V option.
U8B
Dothan/Banias
2 OF 3
POWER, GROUND, RESERVED SIGNALS
Banias Processor
U8C
Dothan/Banias
3 OF 3
POWER, GROUND AND NC
VID
CPU_VID0
CPU_VID1
CPU_VID2
CPU_VID3
CPU_VID4
CPU_VID5
R115 *54.9 1% Z0501
R119 *54.9 1% Z0502
VCCSENSE
VSSSENSE
R147 *1K
Z0503
Z0504 BSEL1
Z0506 BSEL0
Z0508
NC0
NC1
NC2
NC3
TEST3
PSI
Banias Processor
QUANTA COMPUTER
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BANIAS CPU (POWER/NC)-2
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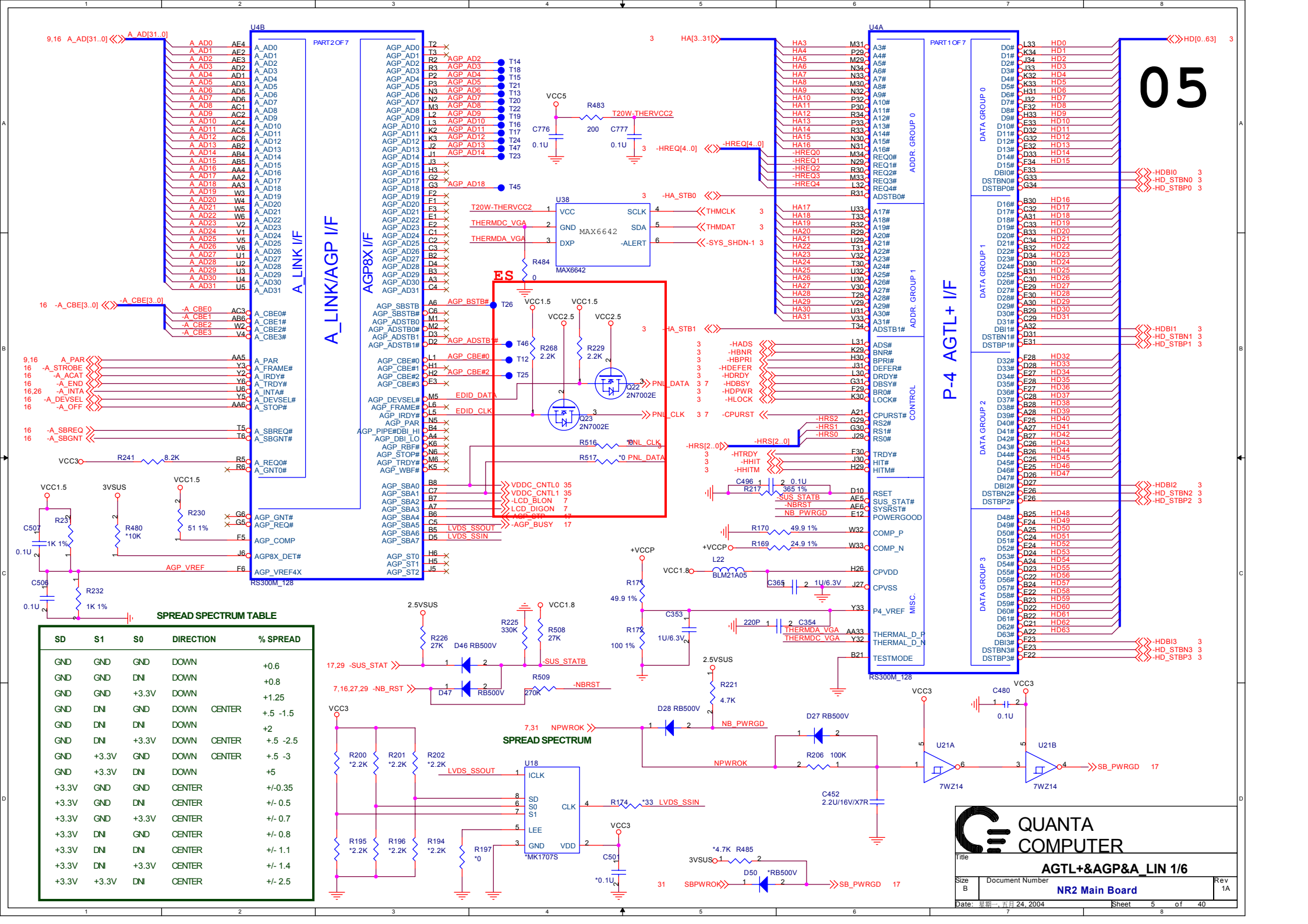
05
U4B
PART 2 OF 7
A_LINK I/F
AGP8X I/F
A_LINK/AGP I/F
RS300M_128
U4A
PART 1 OF 7
P-4 AGTL+ I/F
ADDR. GROUP 0
ADDR. GROUP 1
DATA GROUP 0
DATA GROUP 1
DATA GROUP 2
DATA GROUP 3
CONTROL
MISC.
ES
U38
MAX6642
SPREAD SPECTRUM
SPREAD SPECTRUM TABLE
SD S1 S0 DIRECTION % SPREAD
GND GND GND DOWN +0.6
GND GND 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
QUANTA COMPUTER
Title
AGTL+&AGP&A_LIN 1/6
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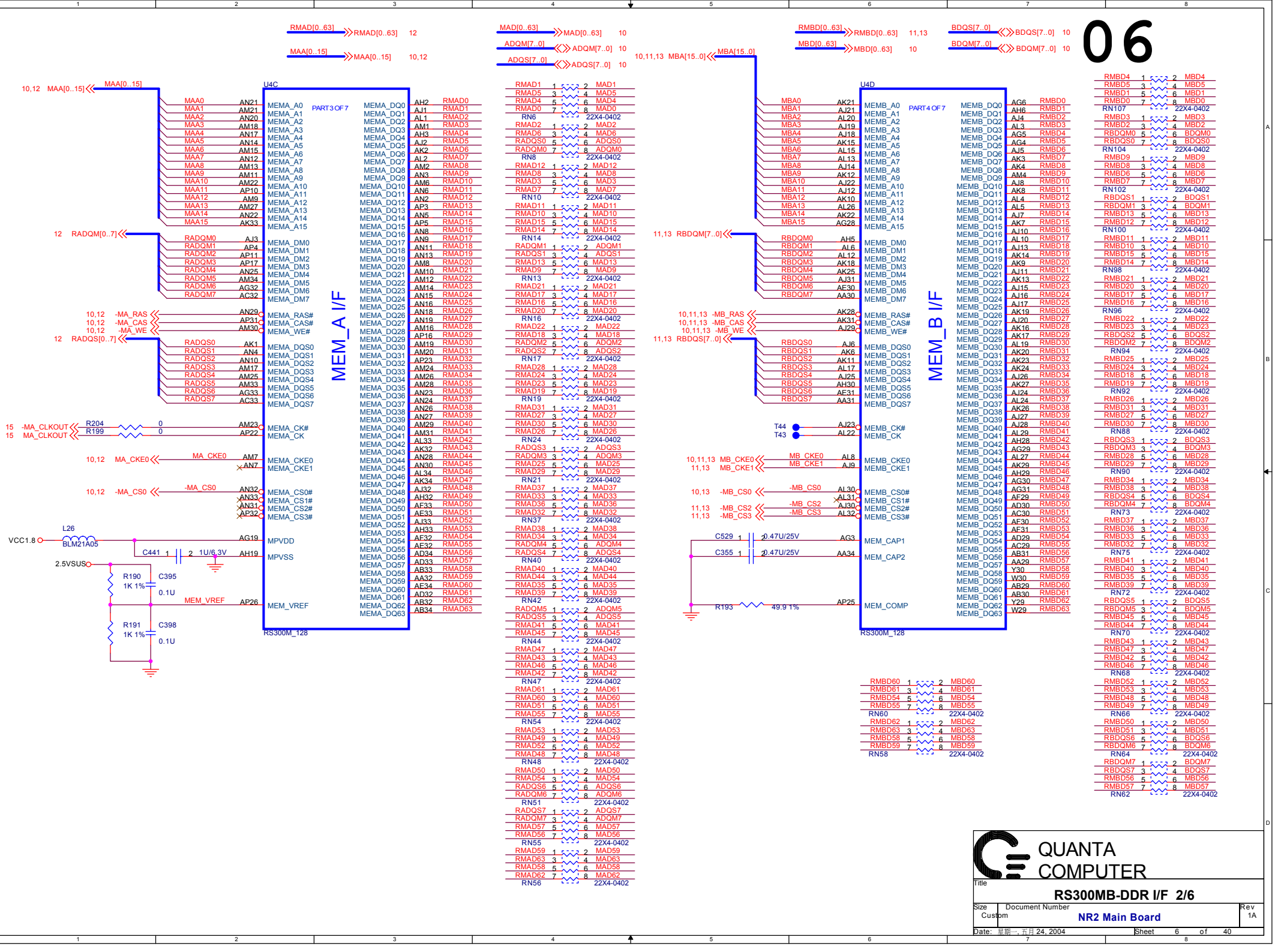
06
RMAD[0..63] RMAD[0..63] 12
MAA[0..15] MAA[0..15] 10,12
MAD[0..63] MAD[0..63] 10
ADQM[7..0] ADQM[7..0] 10
ADQS[7..0] ADQS[7..0] 10
RMBD[0..63] RMBD[0..63] 11,13
MBD[0..63] MBD[0..63] 10
BDQS[7..0] BDQS[7..0] 10
BDQM[7..0] BDQM[7..0] 10
10,11,13 MBA[15..0] MBA[15..0]
U4C
PART3 OF 7
MEM_A I/F
RS300M_128
U4D
PART4 OF 7
MEM_B I/F
RS300M_128
MAA0 MAA1 MAA2 MAA3 MAA4 MAA5 MAA6 MAA7 MAA8 MAA9 MAA10 MAA11 MAA12 MAA13 MAA14 MAA15
RADQM0 RADQM1 RADQM2 RADQM3 RADQM4 RADQM5 RADQM6 RADQM7
RADQS0 RADQS1 RADQS2 RADQS3 RADQS4 RADQS5 RADQS6 RADQS7
-MA_RAS -MA_CAS -MA_WE
MA_CKE0 -MA_CS0
MEMA_DQ0 MEMA_DQ1 MEMA_DQ2 MEMA_DQ3 MEMA_DQ4 MEMA_DQ5 MEMA_DQ6 MEMA_DQ7 MEMA_DQ8 MEMA_DQ9 MEMA_DQ10 MEMA_DQ11 MEMA_DQ12 MEMA_DQ13 MEMA_DQ14 MEMA_DQ15 MEMA_DQ16 MEMA_DQ17 MEMA_DQ18 MEMA_DQ19 MEMA_DQ20 MEMA_DQ21 MEMA_DQ22 MEMA_DQ23 MEMA_DQ24 MEMA_DQ25 MEMA_DQ26 MEMA_DQ27 MEMA_DQ28 MEMA_DQ29 MEMA_DQ30 MEMA_DQ31 MEMA_DQ32 MEMA_DQ33 MEMA_DQ34 MEMA_DQ35 MEMA_DQ36 MEMA_DQ37 MEMA_DQ38 MEMA_DQ39 MEMA_DQ40 MEMA_DQ41 MEMA_DQ42 MEMA_DQ43 MEMA_DQ44 MEMA_DQ45 MEMA_DQ46 MEMA_DQ47 MEMA_DQ48 MEMA_DQ49 MEMA_DQ50 MEMA_DQ51 MEMA_DQ52 MEMA_DQ53 MEMA_DQ54 MEMA_DQ55 MEMA_DQ56 MEMA_DQ57 MEMA_DQ58 MEMA_DQ59 MEMA_DQ60 MEMA_DQ61 MEMA_DQ62 MEMA_DQ63
MEMB_DQ0 MEMB_DQ1 MEMB_DQ2 MEMB_DQ3 MEMB_DQ4 MEMB_DQ5 MEMB_DQ6 MEMB_DQ7 MEMB_DQ8 MEMB_DQ9 MEMB_DQ10 MEMB_DQ11 MEMB_DQ12 MEMB_DQ13 MEMB_DQ14 MEMB_DQ15 MEMB_DQ16 MEMB_DQ17 MEMB_DQ18 MEMB_DQ19 MEMB_DQ20 MEMB_DQ21 MEMB_DQ22 MEMB_DQ23 MEMB_DQ24 MEMB_DQ25 MEMB_DQ26 MEMB_DQ27 MEMB_DQ28 MEMB_DQ29 MEMB_DQ30 MEMB_DQ31 MEMB_DQ32 MEMB_DQ33 MEMB_DQ34 MEMB_DQ35 MEMB_DQ36 MEMB_DQ37 MEMB_DQ38 MEMB_DQ39 MEMB_DQ40 MEMB_DQ41 MEMB_DQ42 MEMB_DQ43 MEMB_DQ44 MEMB_DQ45 MEMB_DQ46 MEMB_DQ47 MEMB_DQ48 MEMB_DQ49 MEMB_DQ50 MEMB_DQ51 MEMB_DQ52 MEMB_DQ53 MEMB_DQ54 MEMB_DQ55 MEMB_DQ56 MEMB_DQ57 MEMB_DQ58 MEMB_DQ59 MEMB_DQ60 MEMB_DQ61 MEMB_DQ62 MEMB_DQ63
MEMA_CK# MEMA_CK
MEMA_CKE0 MEMA_CKE1
MEMA_CS0# MEMA_CS1# MEMA_CS2# MEMA_CS3#
MEMB_CK# MEMB_CK
MEMB_CKE0 MEMB_CKE1
MEMB_CS0# MEMB_CS1# MEMB_CS2# MEMB_CS3#
MEMA_RAS# MEMA_CAS# MEMA_WE#
MEMB_RAS# MEMB_CAS# MEMB_WE#
MEMA_DQS0 MEMA_DQS1 MEMA_DQS2 MEMA_DQS3 MEMA_DQS4 MEMA_DQS5 MEMA_DQS6 MEMA_DQS7
MEMB_DQS0 MEMB_DQS1 MEMB_DQS2 MEMB_DQS3 MEMB_DQS4 MEMB_DQS5 MEMB_DQS6 MEMB_DQS7
MEMA_DM0 MEMA_DM1 MEMA_DM2 MEMA_DM3 MEMA_DM4 MEMA_DM5 MEMA_DM6 MEMA_DM7
MEMB_DM0 MEMB_DM1 MEMB_DM2 MEMB_DM3 MEMB_DM4 MEMB_DM5 MEMB_DM6 MEMB_DM7
MPVDD MPVSS MEM_VREF MEM_CAP1 MEM_CAP2 MEM_COMP
R204 0 R199 0
L26 BLM21A05 VCC1.8 2.5VSUS
C441 1U/6.3V
R190 1K 1% C395 0.1U
R191 1K 1% C398 0.1U
C529 0.47U/25V
C355 0.47U/25V
R193 49.9 1%
T44 T43
RMAD1 RMAD5 RMAD4 RMAD0 RN6 22X4-0402
RMAD2 RMAD6 RADQS0 RADQM0 RN8 22X4-0402
RMAD12 RMAD8 RMAD3 RMAD7 RN10 22X4-0402
RMAD11 RMAD10 RMAD15 RMAD14 RN14 22X4-0402
RADQM1 RADQS1 RMAD13 RMAD9 RN13 22X4-0402
RMAD21 RMAD17 RMAD16 RMAD20 RN16 22X4-0402
RMAD22 RMAD18 RADQM2 RADQS2 RN17 22X4-0402
RMAD28 RMAD24 RMAD23 RMAD19 RN19 22X4-0402
RMAD31 RMAD27 RMAD30 RMAD26 RN24 22X4-0402
RADQS3 RADQM3 RMAD25 RMAD29 RN21 22X4-0402
RMAD37 RMAD33 RMAD36 RMAD32 RN37 22X4-0402
RMAD38 RMAD34 RADQM4 RADQS4 RN40 22X4-0402
RMAD40 RMAD44 RMAD35 RMAD39 RN42 22X4-0402
RADQM5 RADQS5 RMAD41 RMAD45 RN44 22X4-0402
RMAD47 RMAD43 RMAD46 RMAD42 RN47 22X4-0402
RMAD61 RMAD60 RMAD51 RMAD55 RN54 22X4-0402
RMAD53 RMAD49 RMAD52 RMAD48 RN48 22X4-0402
RMAD50 RMAD54 RADQS6 RADQM6 RN51 22X4-0402
RADQS7 RADQM7 RMAD57 RMAD56 RN55 22X4-0402
RMAD59 RMAD63 RMAD58 RMAD62 RN56 22X4-0402
RMBD60 RMBD61 RMBD54 RMBD55 RN60 22X4-0402
RMBD62 RMBD63 RMBD58 RMBD59 RN58 22X4-0402
RMBD4 RMBD5 RMBD1 RMBD0 RN107 22X4-0402
RMBD3 RMBD2 RBDQM0 RBDQS0 RN104 22X4-0402
RMBD9 RMBD8 RMBD6 RMBD7 RN102 22X4-0402
RBDQS1 RBDQM1 RMBD13 RMBD12 RN100 22X4-0402
RMBD11 RMBD10 RMBD15 RMBD14 RN98 22X4-0402
RMBD21 RMBD20 RMBD17 RMBD16 RN96 22X4-0402
RMBD22 RMBD23 RBDQS2 RBDQM2 RN94 22X4-0402
RMBD25 RMBD24 RMBD18 RMBD19 RN92 22X4-0402
RMBD26 RMBD31 RMBD27 RMBD30 RN88 22X4-0402
RBDQS3 RBDQM3 RMBD28 RMBD29 RN90 22X4-0402
RMBD34 RMBD38 RBDQS4 RBDQM4 RN73 22X4-0402
RMBD37 RMBD36 RMBD33 RMBD32 RN75 22X4-0402
RMBD41 RMBD40 RMBD35 RMBD39 RN72 22X4-0402
RBDQS5 RBDQM5 RMBD45 RMBD44 RN70 22X4-0402
RMBD43 RMBD47 RMBD42 RMBD46 RN68 22X4-0402
RMBD52 RMBD53 RMBD48 RMBD49 RN66 22X4-0402
RMBD50 RMBD51 RBDQS6 RBDQM6 RN64 22X4-0402
RBDQM7 RBDQS7 RMBD56 RMBD57 RN62 22X4-0402
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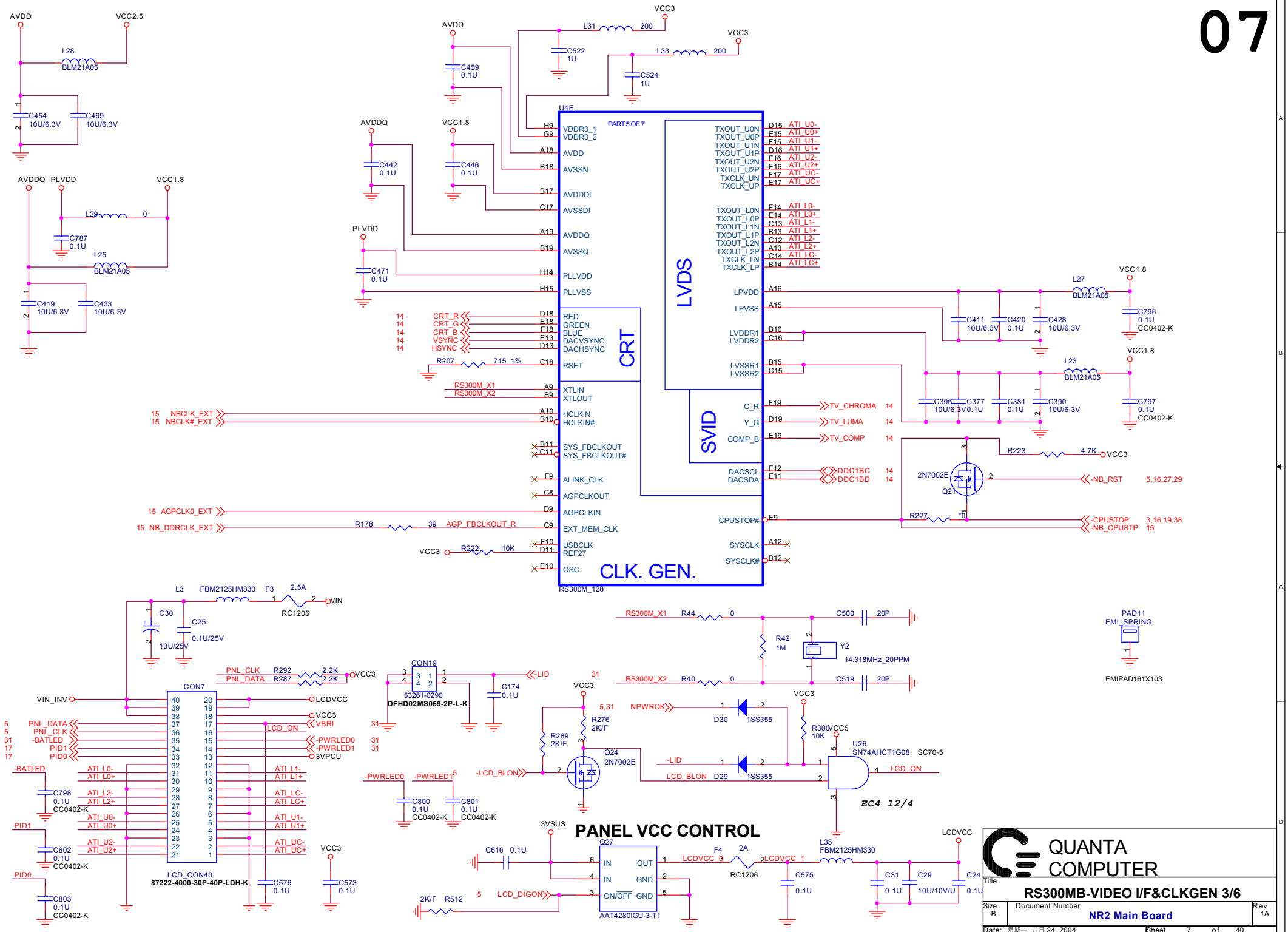
AVDD
VCC2.5
L28
BLM21A05
C454 10U/6.3V
C469 10U/6.3V
AVDDQ
PLVDD
VCC1.8
L29
0
C787 0.1U
L25
BLM21A05
C419 10U/6.3V
C433 10U/6.3V
AVDD
VCC3
L31
200
C522 1U
L33
200
C524 1U
C459 0.1U
U4E
PART 5 OF 7
AVDDQ
VCC1.8
C442 0.1U
C446 0.1U
PLVDD
C471 0.1U
VDDR3_1
VDDR3_2
AVDD
AVSSN
AVDDDI
AVSSDI
AVDDQ
AVSSQ
PLLVDD
PLLVSS
CRT_R
CRT_G
CRT_B
VSYNC
HSYNC
RED
GREEN
BLUE
DACVSYNC
DACHSYNC
CRT
R207 715 1%
RSET
RS300M_X1
RS300M_X2
XTLIN
XTLOUT
15 NBCLK_EXT
15 NBCLK#_EXT
HCLKIN
HCLKIN#
SYS_FBCLKOUT
SYS_FBCLKOUT#
ALINK_CLK
AGPCLKOUT
15 AGPCLK0_EXT
AGPCLKIN
15 NB_DDRCLK_EXT
R178 39 AGP_FBCLKOUT_R
EXT_MEM_CLK
VCC3
R222 10K
USBCLK
REF27
OSC
CLK. GEN.
RS300M_128
LVDS
TXOUT_U0N
TXOUT_U0P
TXOUT_U1N
TXOUT_U1P
TXOUT_U2N
TXOUT_U2P
TXCLK_UN
TXCLK_UP
ATI_U0-
ATI_U0+
ATI_U1-
ATI_U1+
ATI_U2-
ATI_U2+
ATI_UC-
ATI_UC+
TXOUT_L0N
TXOUT_L0P
TXOUT_L1N
TXOUT_L1P
TXOUT_L2N
TXOUT_L2P
TXCLK_LN
TXCLK_LP
ATI_L0-
ATI_L0+
ATI_L1-
ATI_L1+
ATI_L2-
ATI_L2+
ATI_LC-
ATI_LC+
LPVDD
LPVSS
LVDDR1
LVDDR2
LVSSR1
LVSSR2
SVID
C_R
Y_G
COMP_B
TV_CHROMA
TV_LUMA
TV_COMP
DACSCL
DACSDA
DDC1BC
DDC1BD
CPUSTOP#
SYSCLK
SYSCLK#
L27
BLM21A05
C411 10U/6.3V
C420 0.1U
C428 10U/6.3V
C796 0.1U CC0402-K
L23
BLM21A05
C396 10U/6.3V
C377 0.1U
C381 0.1U
C390 10U/6.3V
C797 0.1U CC0402-K
R223 4.7K
VCC3
2N7002E
Q21
-NB_RST
5,16,27,29
R227
-CPUSTOP
-NB_CPUSTP
3,16,19,38
15
L3 FBM2125HM330 F3 2.5A
RC1206
VIN
C30 10U/25V
C25 0.1U/25V
PNL_CLK R292 2.2K
PNL_DATA R287 2.2K
VCC3
CON19
53261-0290
DFHD02MS059-2P-L-K
C174 0.1U
-LID
31
CON7
VIN_INV
LCDVCC
VCC3
VBRI
LCD_ON
-PWRLED0
-PWRLED1
3VPCU
5 PNL_DATA
5 PNL_CLK
31 -BATLED
17 PID1
17 PID0
-BATLED
PID1
PID0
C798 0.1U CC0402-K
C802 0.1U CC0402-K
C803 0.1U CC0402-K
LCD_CON40
87222-4000-30P-40P-LDH-K
C576 0.1U
C573 0.1U
RS300M_X1 R44 0
C500 20P
R42 1M
Y2
14.318MHz_20PPM
RS300M_X2 R40 0
C519 20P
PAD11
EMI_SPRING
EMIPAD161X103
5,31 NPWROK
D30 1SS355
R276 2K/F
R289 2K/F
Q24 2N7002E
-LCD_BLON
-LID
LCD_BLON D29 1SS355
R300 10K
VCC5
U26
SN74AHCT1G08 SC70-5
LCD_ON
EC4 12/4
-PWRLED0
-PWRLED1
C800 0.1U CC0402-K
C801 0.1U CC0402-K
PANEL VCC CONTROL
3VSUS
C616 0.1U
Q27
IN
OUT
GND
ON/OFF
AAT4280IGU-3-T1
2K/F R512
LCD_DIGON
F4 2A
RC1206
LCDVCC_1
L35
FBM2125HM330
LCDVCC
C575 0.1U
C31 0.1U
C29 10U/10V/U
C24 0.1U
QUANTA COMPUTER
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RS300MB-VIDEO I/F&CLKGEN 3/6
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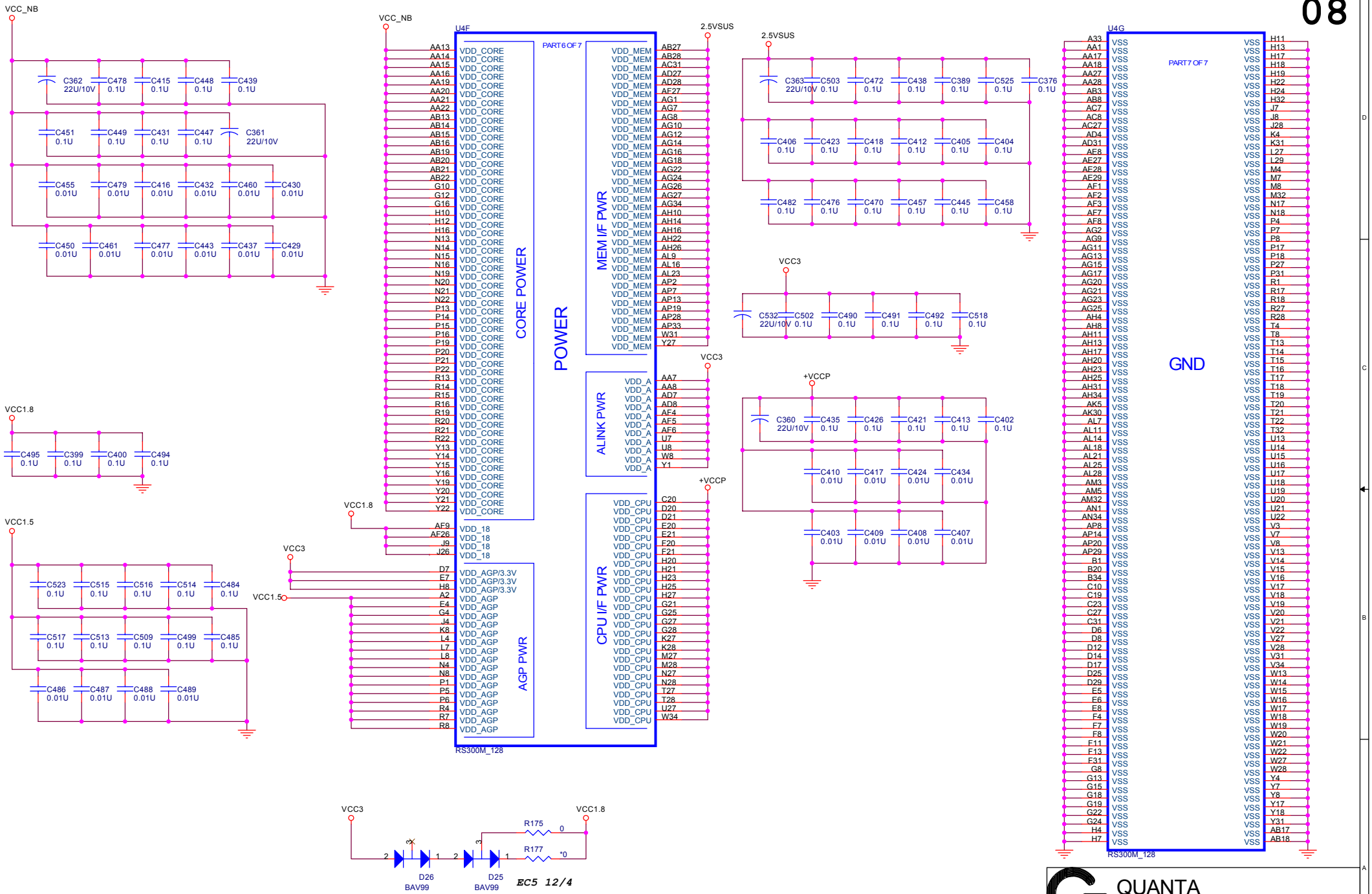

1.8V (NB) should ramp up with 3V, < 2.1V

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Title: RS300MB-POWER 4/6

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A_AD[31..0] A_AD[31..0] 5,16

A_AD31 R255 4.7K

A_AD30 R254 4.7K

A_AD29 R257 *4.7K

A_AD28 R256 4.7K

A_AD27 R259 *4.7K

A_AD26 R261 *4.7K

A_AD25 R260 4.7K

A_AD17 R238 4.7K

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)

A_AD24 R258 4.7K

A_AD23 R235 *4.7K

A_AD22 R237 *4.7K

A_AD21 R236 *4.7K

A_AD20 R234 4.7K

A_AD19 R233 *4.7K

A_AD18 R239 4.7K

5,16 A_PAR R253 *4.7K

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

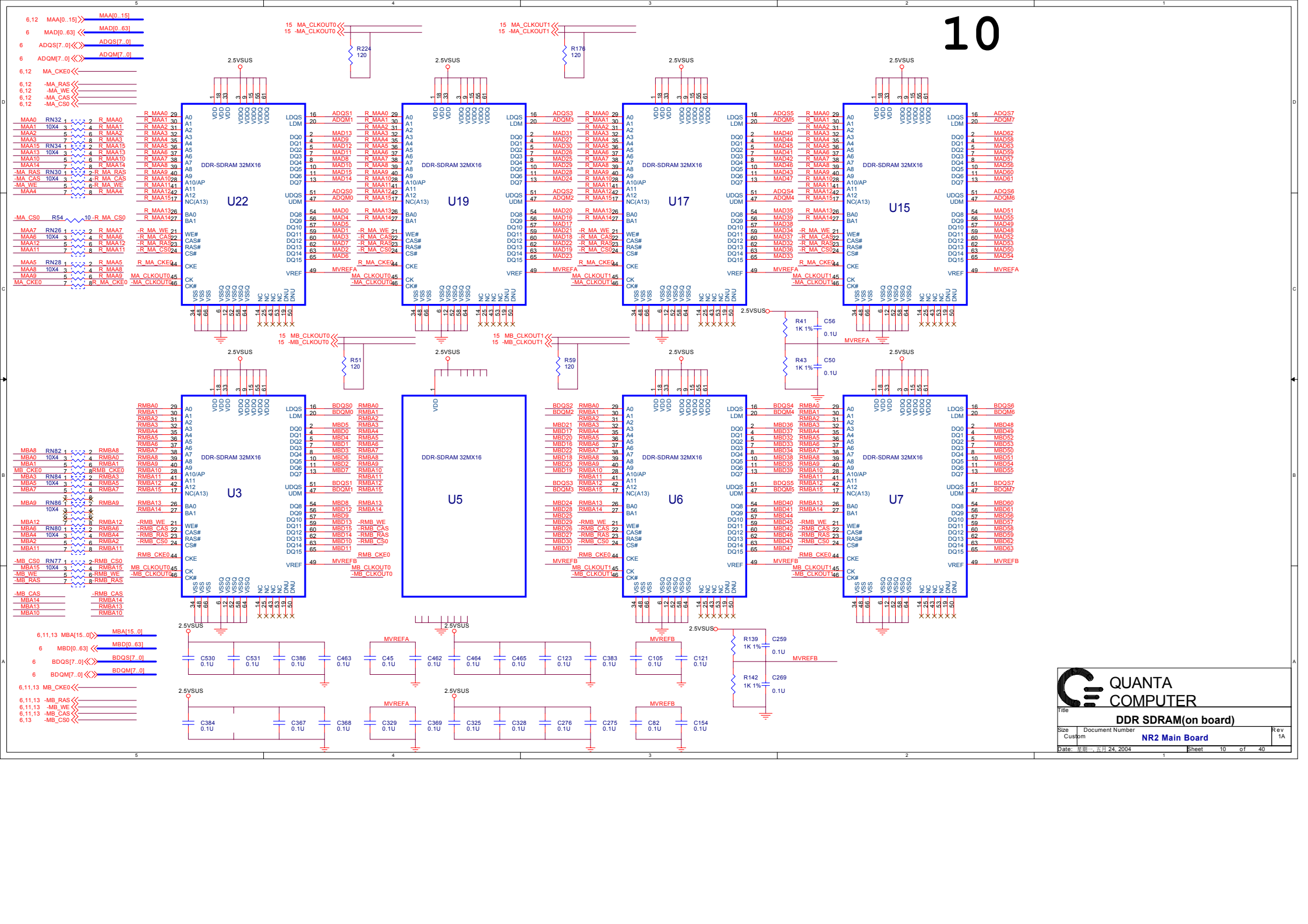
DEFAULT : 1
0: DEBUG MODE
1: NORMAL OPERATION

QUANTA COMPUTER

Title: RS300MB-STRAPS 5/6

Size: B | Document Number: NR2 Main Board | Rev: A

Date: 星期一, 五月 24, 2004 | Sheet 9 of 40



QUANTA COMPUTER

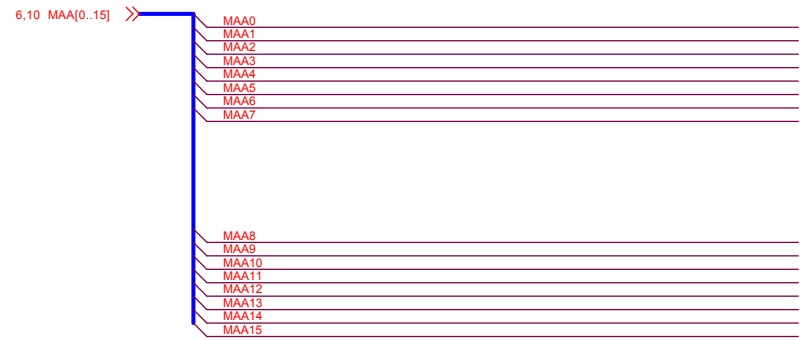
Title: DDR SDRAM(on board)

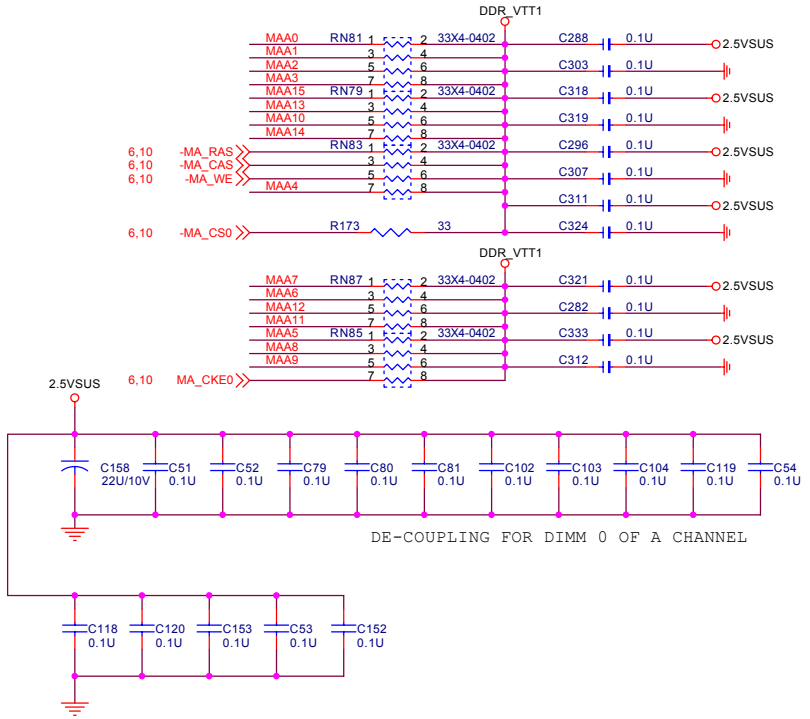
Size: Custom | Document Number: NR2 Main Board | Rev: 1A

Date: 星期一, 五月 24, 2004 | Sheet 10 of 40

DDR TERMINATOR CHANNEL A

MAA Terminator

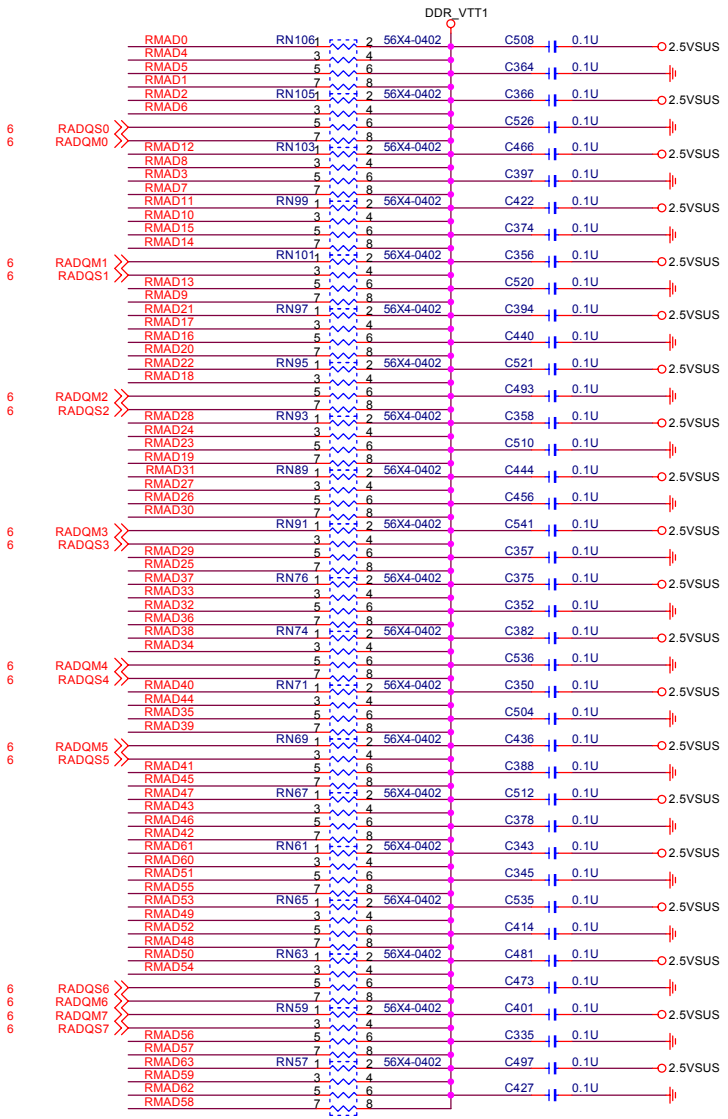




6 RMAD[0..63] RMAD[0..63]

6 RADQS[0..7] RADQS[0..7]

6 RADQM[0..7] RADQM[0..7]

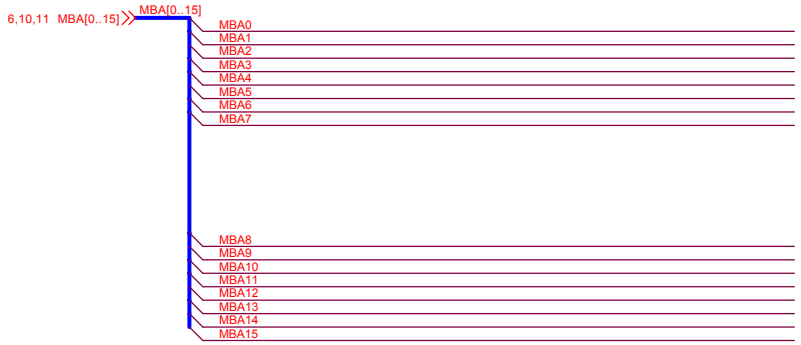


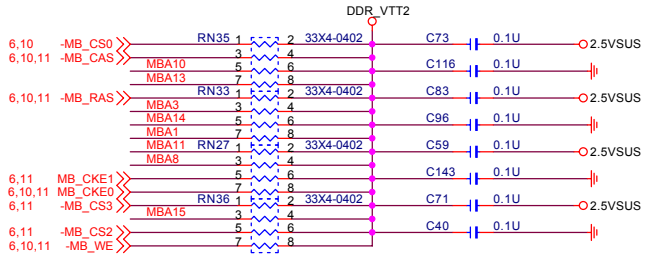
11/03 CHANGE FOOTPRINT FORM 0603 TO 0402

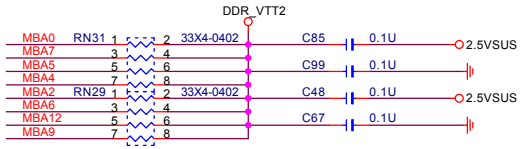
QUANTA COMPUTER

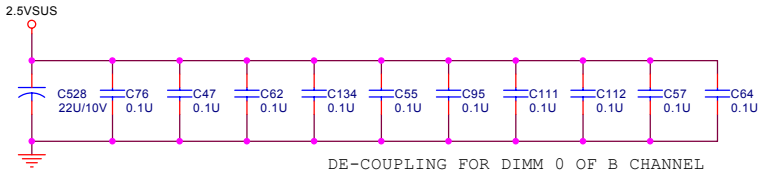
Title	DDR Terminator-A CHANNEL	
Size B	Document Number NR2 Main Board	Rev 1A
Date: 星期一, 五月 24, 2004	Sheet 12 of 40	

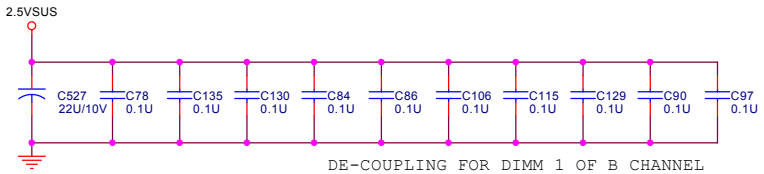
DDR TERMINATOR CHANNEL B
MBA Terminator

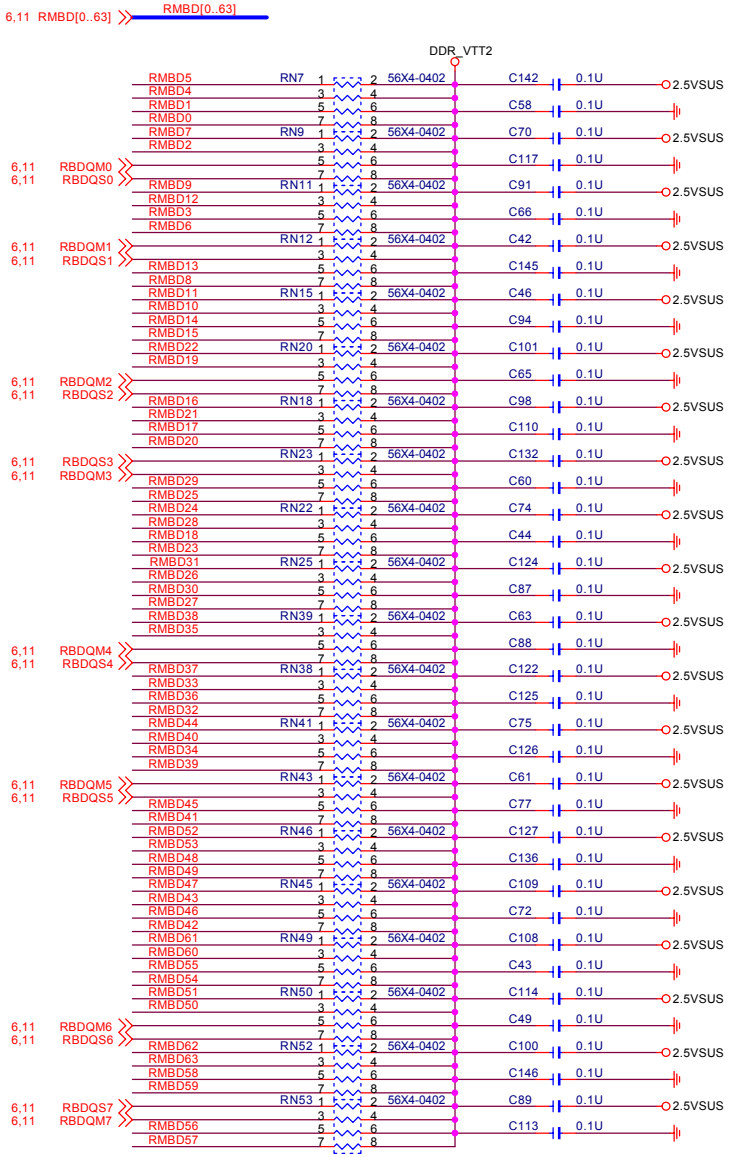












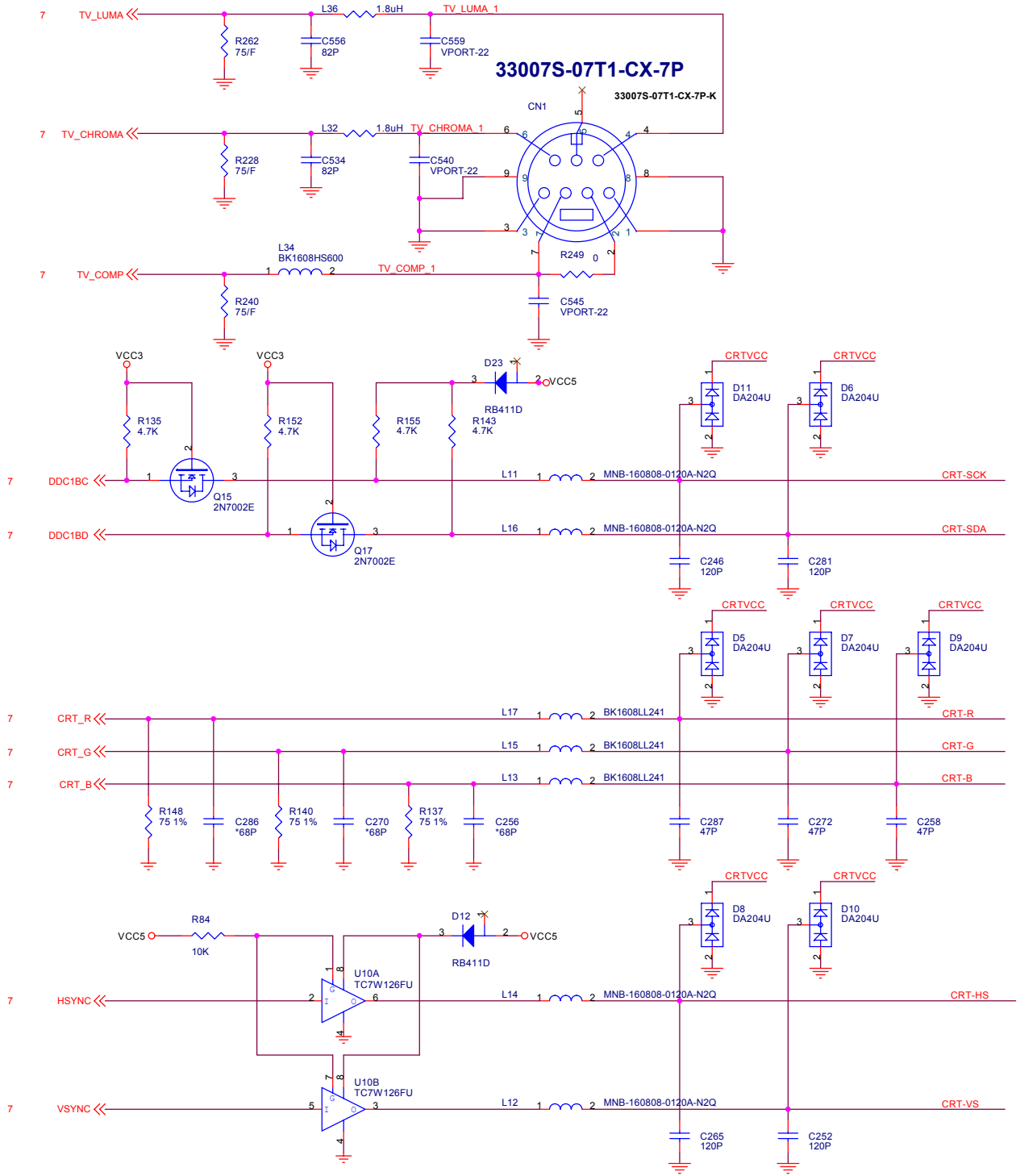
QUANTA COMPUTER

Title: DDR Terminator B CHANNEL

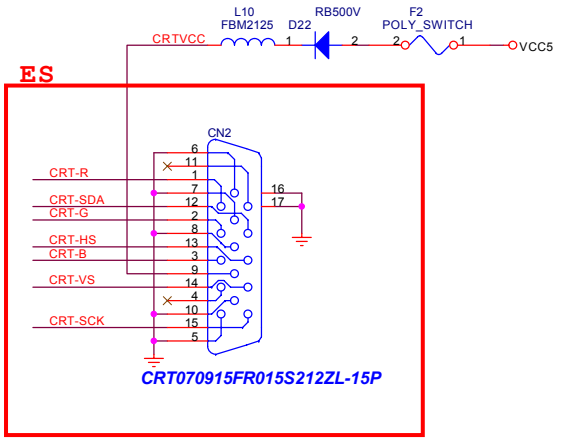
Size	Document Number	Rev
Custom	NR2 Main Board	1A

Date: 星期一, 五月 24, 2004 Sheet 13 of 40

S-VIDEO CONNECTOR

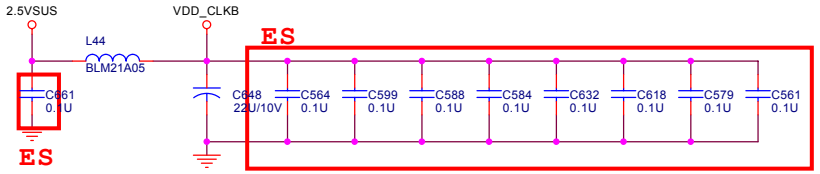


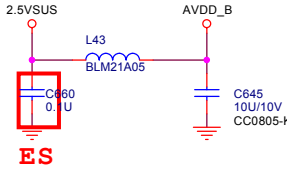
CRT CONNECTOR

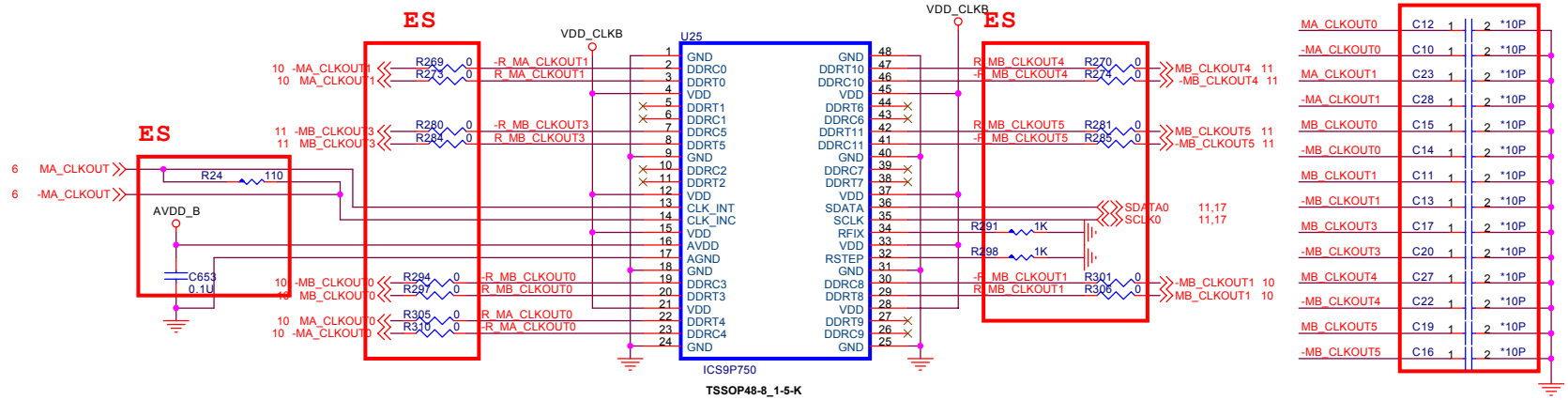


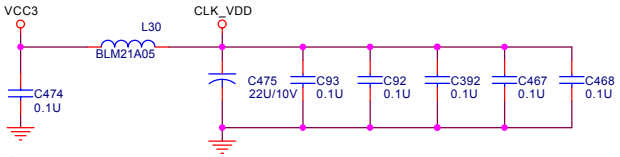
QUANTA COMPUTER

Title	CRT/S-VIDEO PORT	
Size B	Document Number NR2 Main Board	Rev 1A
Date: 星期一, 五月 24, 2004	Sheet 14 of 40	





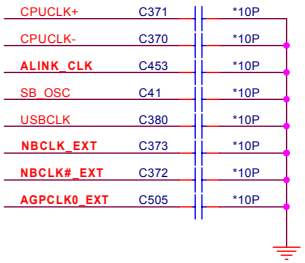


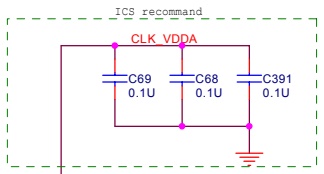


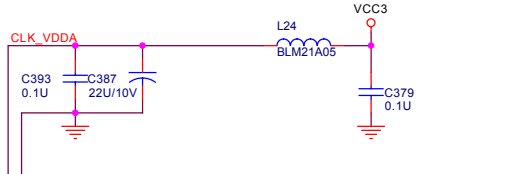
1- PLACE ALL THE SERIES TERMINATION RESISTORS AS CLOSE AS U300 AS POSSIBLE

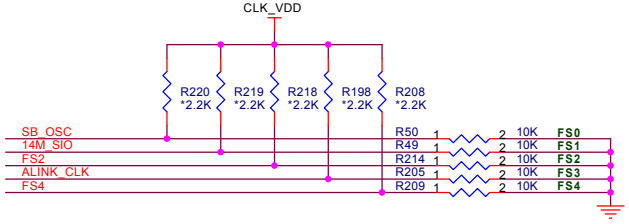
2- ROUTE ALL CPUCLK/#, NBCLK/# AND ITPCLK/# AS DIFFERENT PAIR RULE

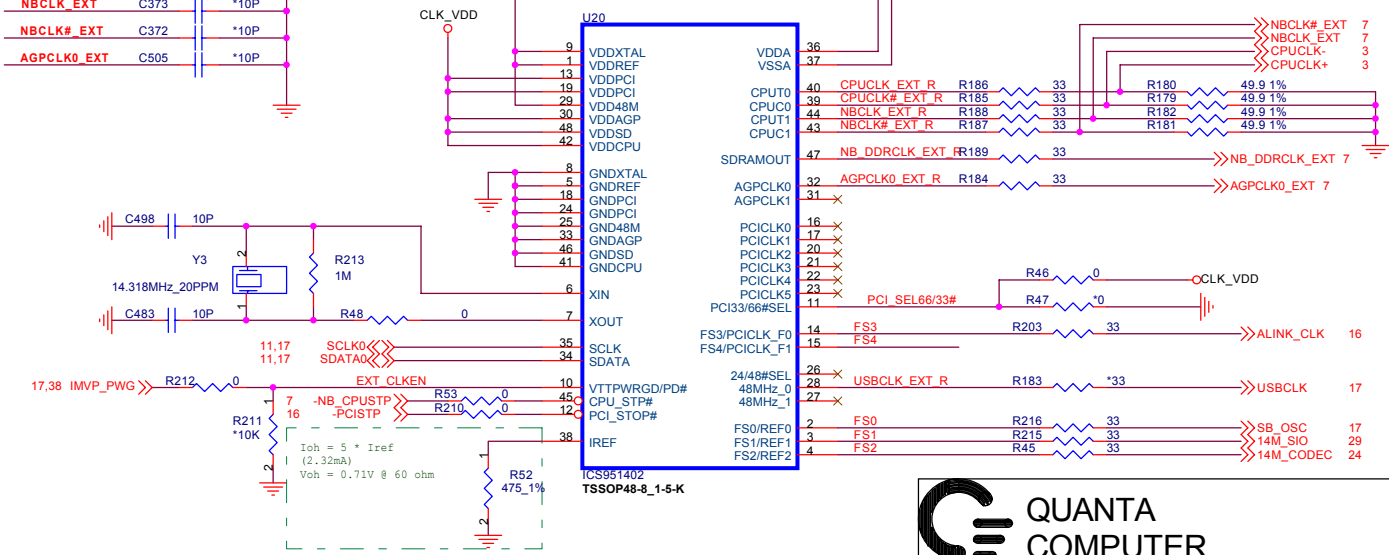
3- PUT DECOUPLING CAPS CLOSE TO U300 POWER PIN











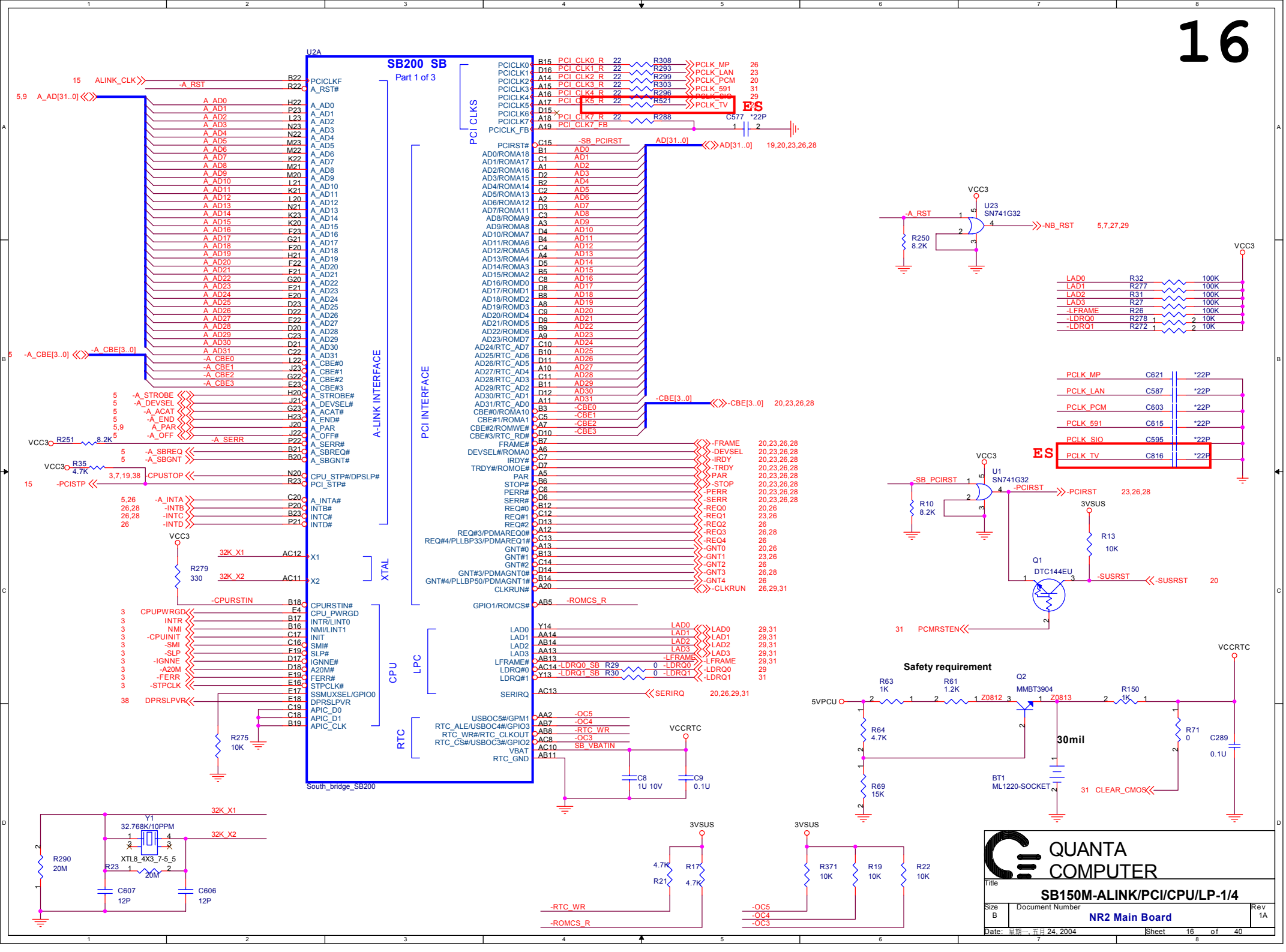
CLK FREQ

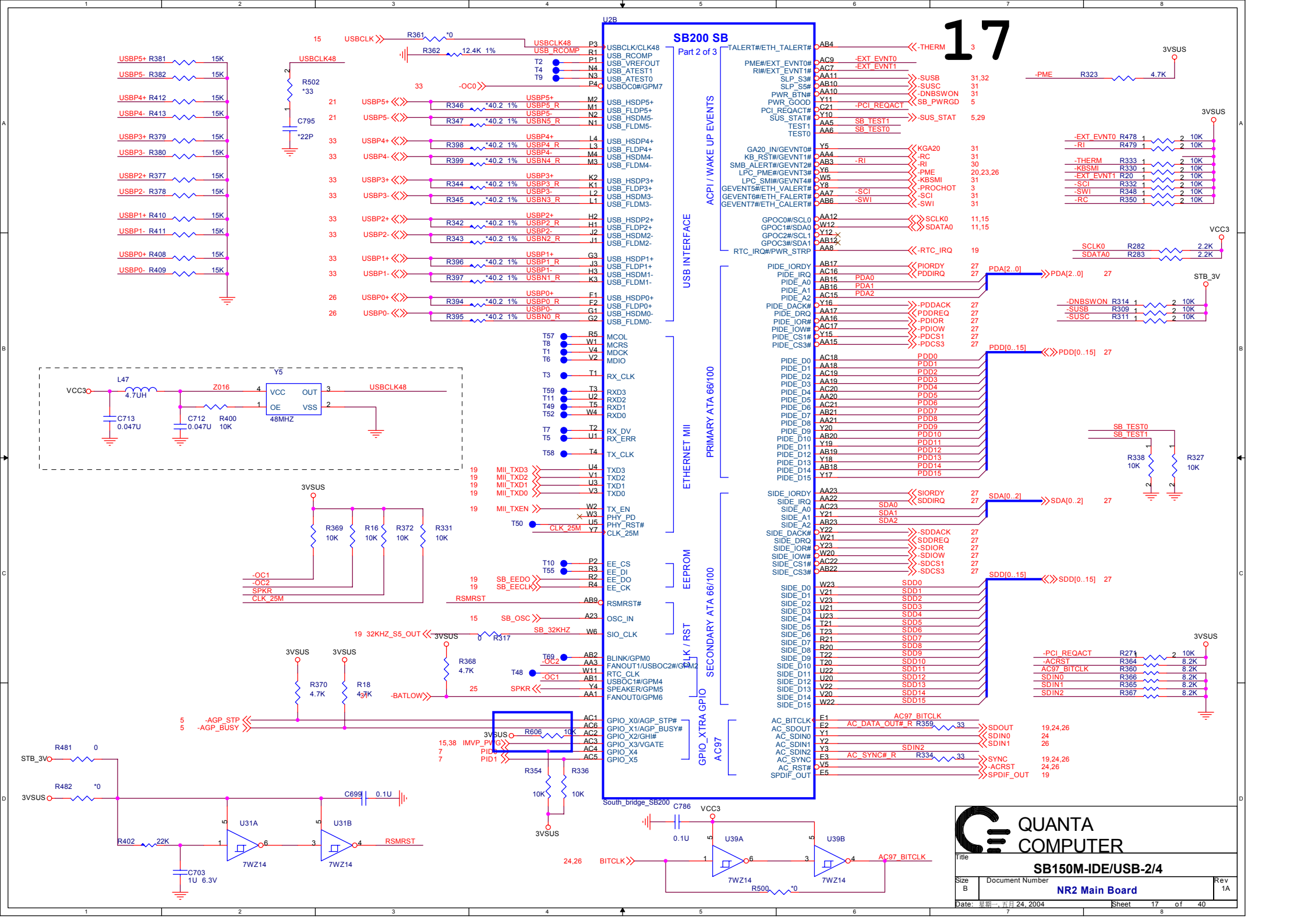
QUANTA COMPUTER

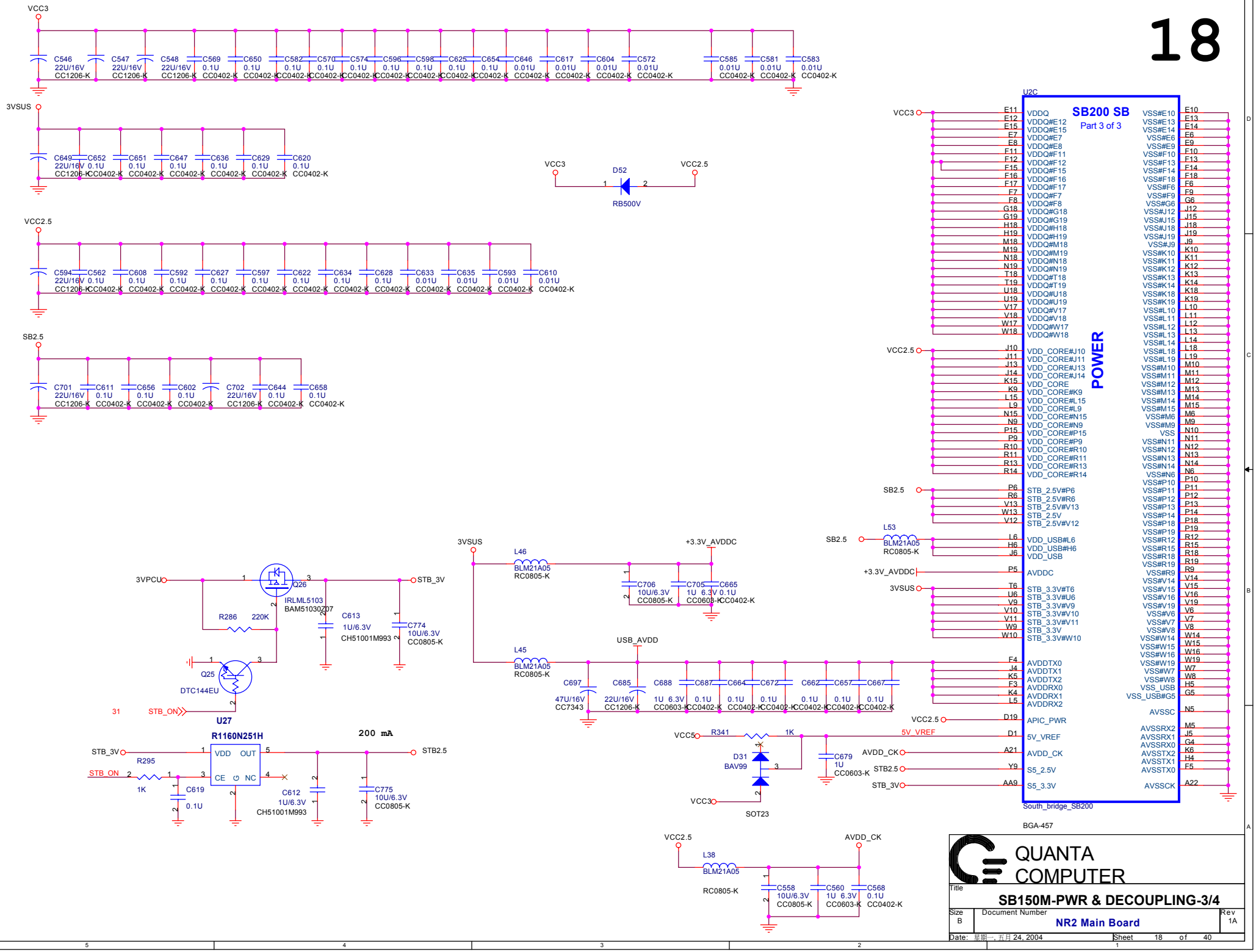
Title: MEM CLK BUFFER/EXT CLK GEN

Size: B | Document Number: NR2 Main Board | Rev: 1A

Date: 星期一, 五月 24, 2004 | Sheet 15 of 40


U2A
SB200 SB
Part 1 of 3
South_bridge_SB200
A-LINK INTERFACE
PCI INTERFACE
PCI CLKS
CPU
LPC
XTAL
RTC
ES
Safety requirement
30mil
QUANTA COMPUTER
SB150M-ALINK/PCI/CPU/LP-1/4
NR2 Main Board
Rev 1A
Sheet 16 of 40


17
SB200 SB
Part 2 of 3
U2B
USB INTERFACE
ACPI / WAKE UP EVENTS
ETHERNET MII
PRIMARY ATA 66/100
EEPROM
SECONDARY ATA 66/100
CLK / RST
GPIO_XTRA GPIO
AC97
South_bridge_SB200
QUANTA COMPUTER
SB150M-IDE/USB-2/4
NR2 Main Board
Rev 1A
Sheet 17 of 40

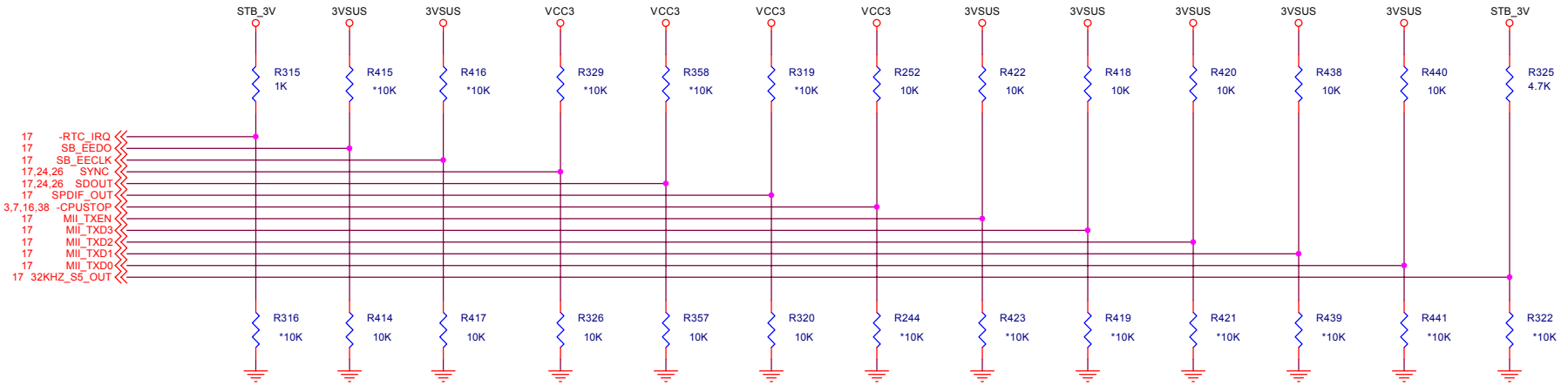


QUANTA COMPUTER

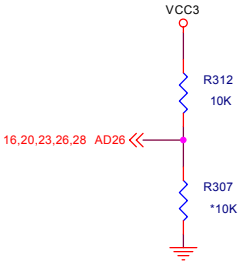
Title: SB150M-PWR & DECOUPLING-3/4

Size: B | Document Number: NR2 Main Board | Rev: 1A

Date: 星期一, 五月 24, 2004 | Sheet 18 of 40



	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)



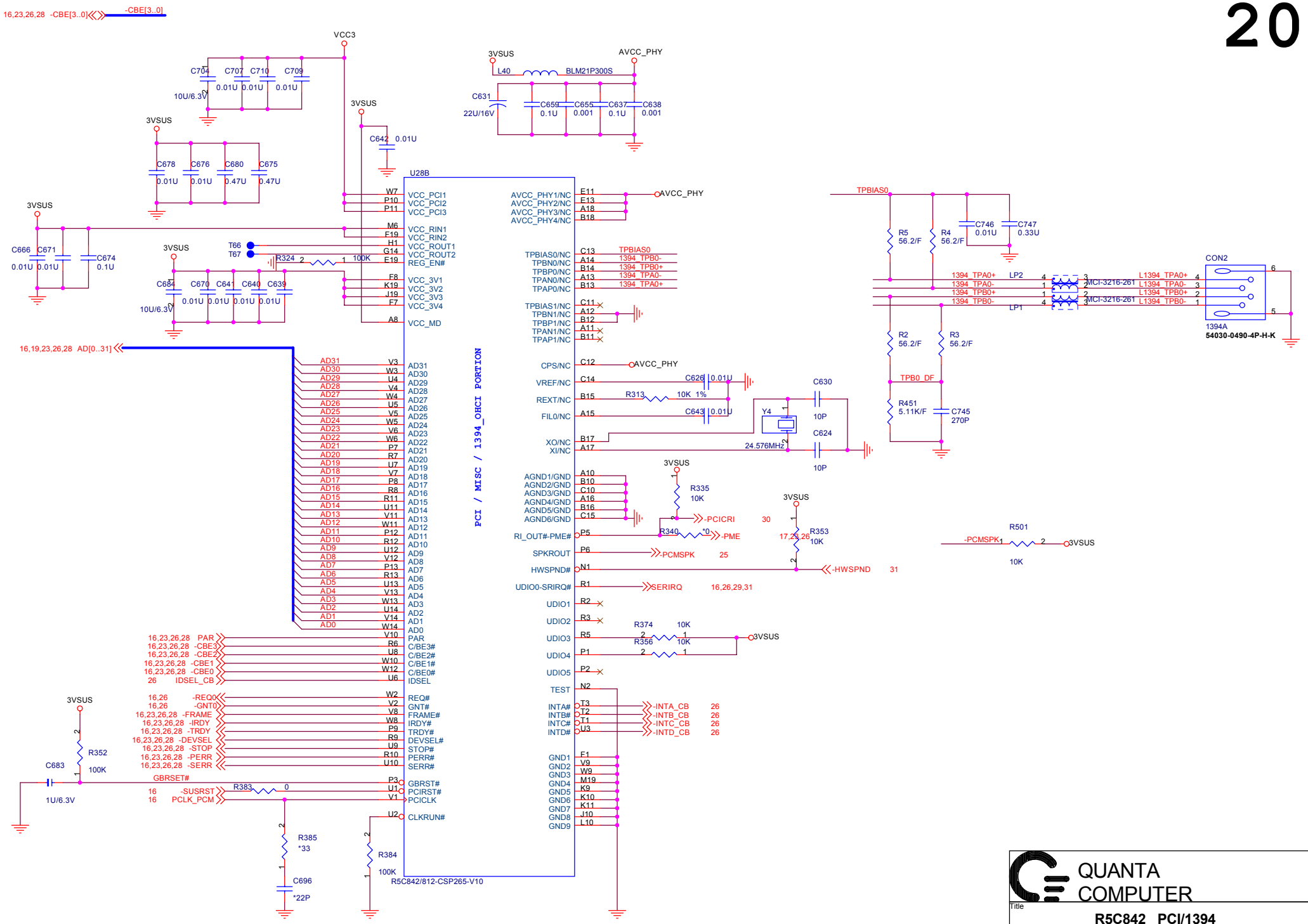
AD26
BIOS use LPC cycle DEFAULT
BIOS uSE FWH Cycle

QUANTA COMPUTER

Title: SB150M-STRAPS-4/4

Size: B | Document Number: NR2 Main Board | Rev: 1A

Date: 星期一, 五月 24, 2004 | Sheet 19 of 40

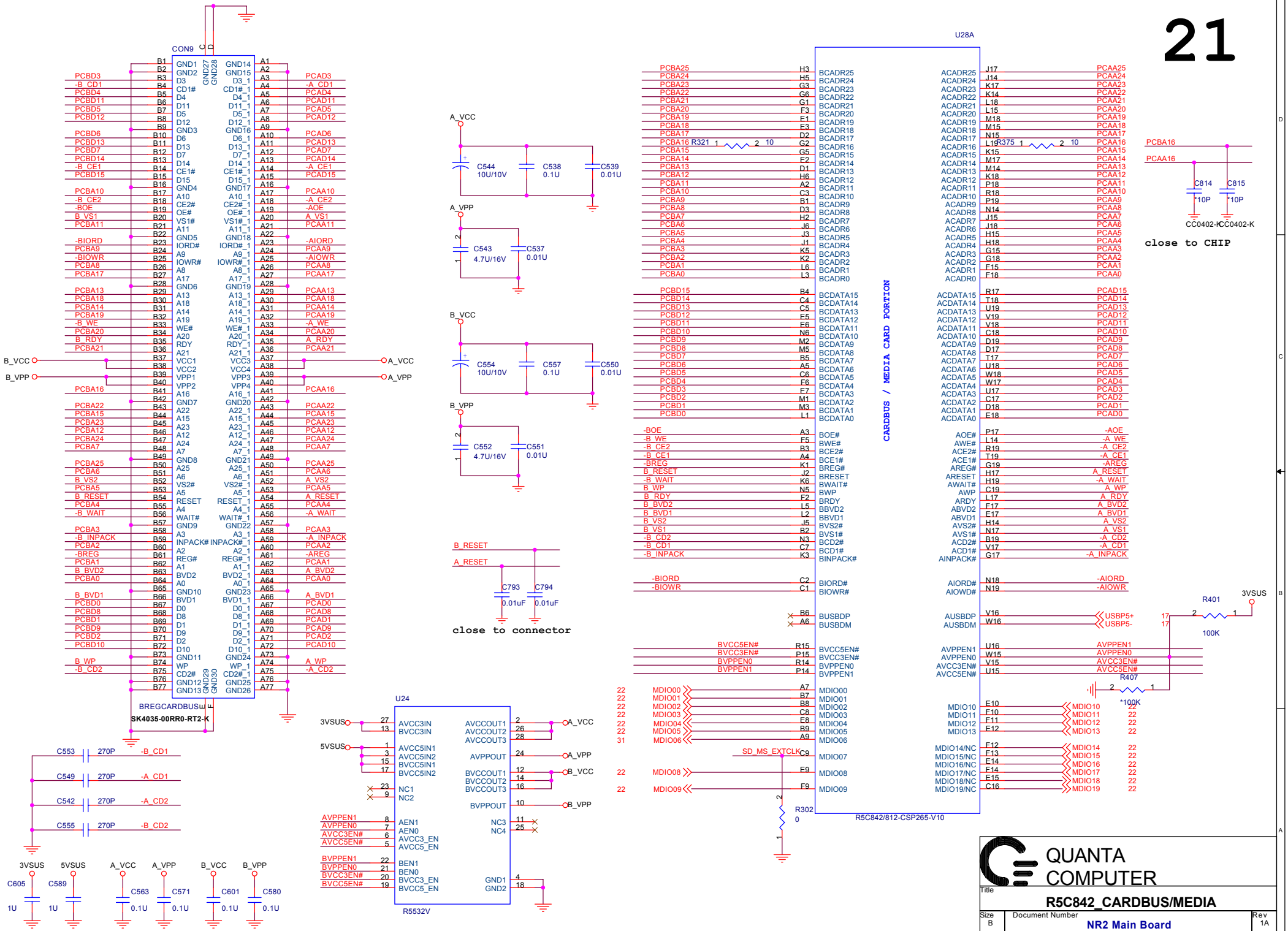


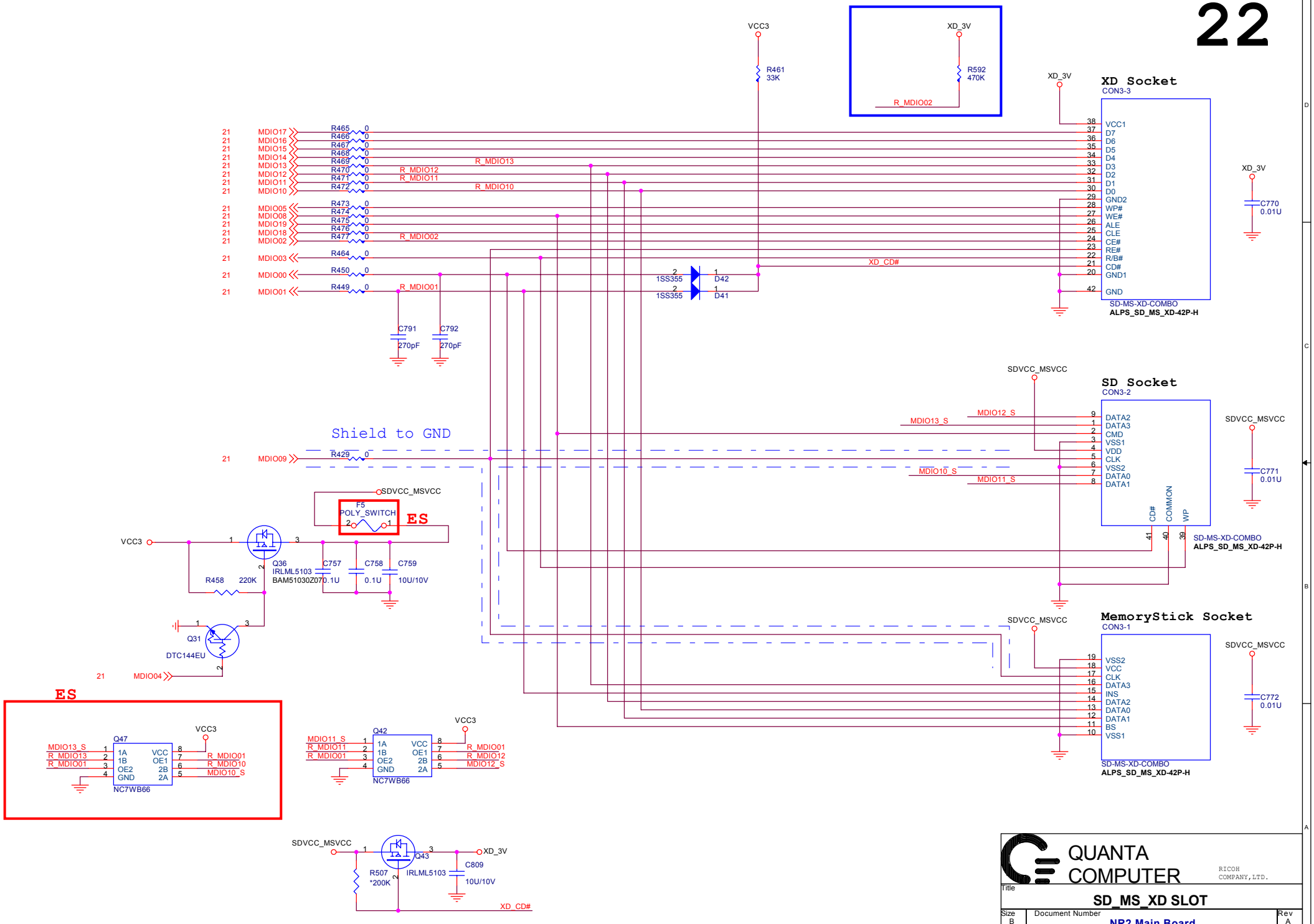
QUANTA COMPUTER

Title: R5C842_ PCI/1394

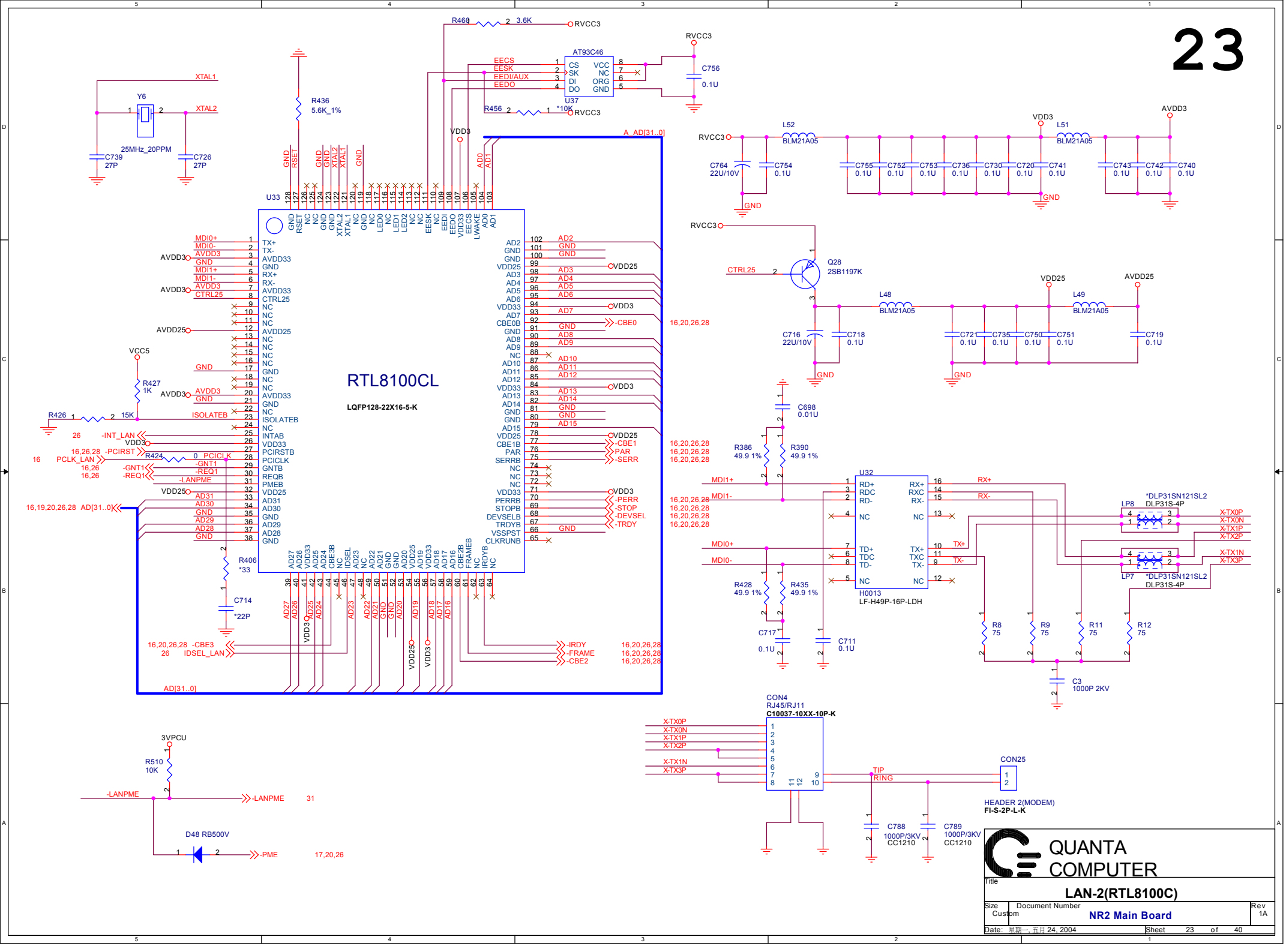
Size	Document Number	Rev
B	NR2 Main Board	1A

Date: 星期一, 五月 24, 2004 Sheet 20 of 40


CON9
SK4035-00RR0-RT2-K
BREGCARDBUS
U28A
CARDBUS / MEDIA CARD PORTION
R5C842/812-CSP265-V10
U24
R5532V
close to connector
close to CHIP
A_VCC
A_VPP
B_VCC
B_VPP
3VSUS
5VSUS
B_RESET
A_RESET
QUANTA COMPUTER
R5C842_CARDBUS/MEDIA
NR2 Main Board
Rev 1A
Sheet 21 of 40

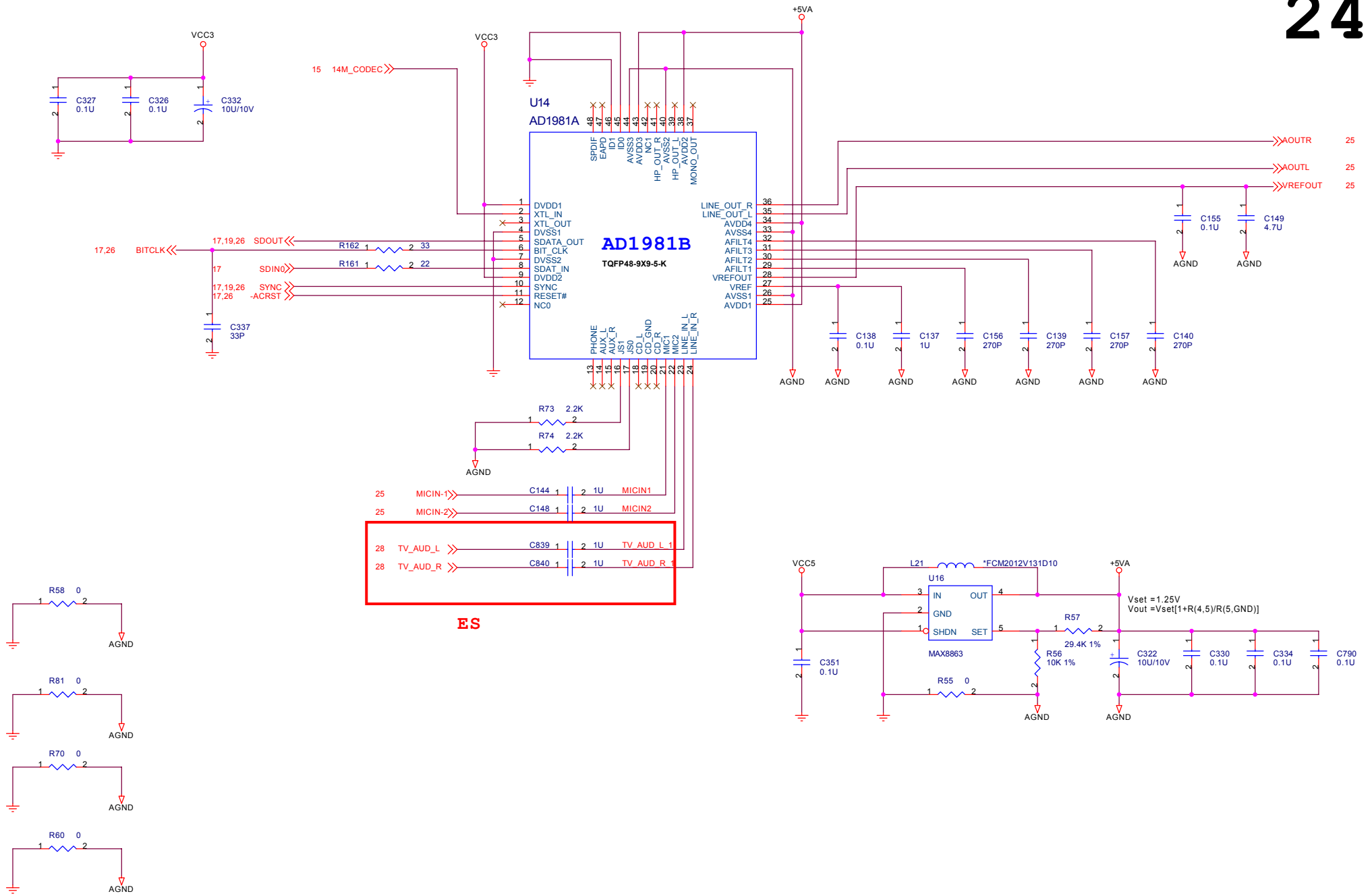


QUANTA COMPUTER	RICOH COMPANY,LTD.		
Title: SD_MS_XD SLOT			
Size: B	Document Number: NR2 Main Board		Rev: A
Date: 星期一, 五月 24, 2004	Sheet 22 of 40		

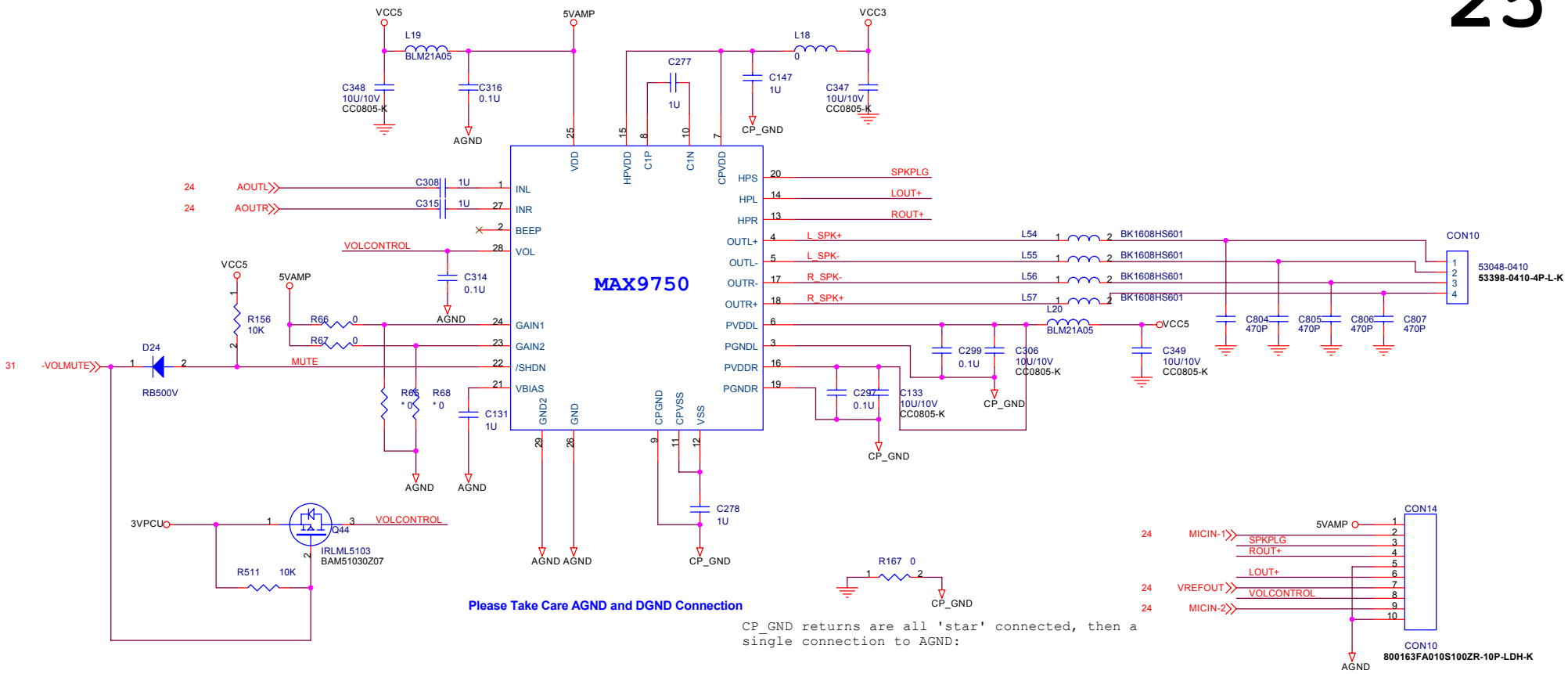


Title	LAN-2(RTL8100C)		
Size: Custom	Document Number: NR2 Main Board		Rev: 1A
Date: 星期一, 五月 24, 2004	Sheet 23 of 40		

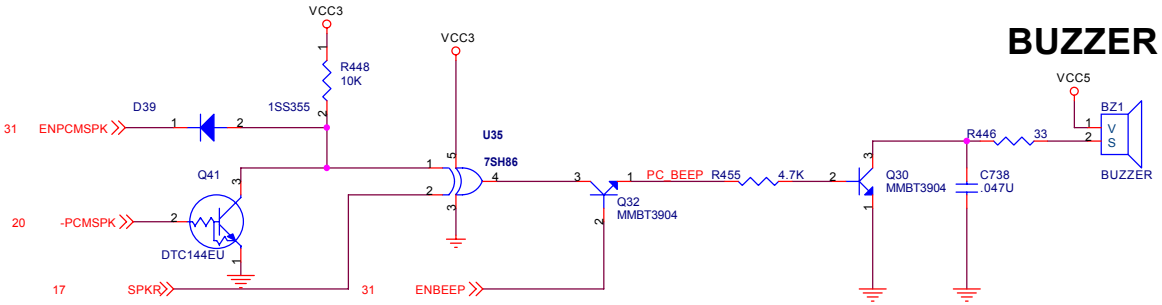
QUANTA COMPUTER



QUANTA COMPUTER			
Title: AUDIO CODEC_AD1981B			
Size: B	Document Number: NR2 Main Board		Rev: 1A
Date: 星期一, 五月 24, 2004	Sheet 24 of 40		



BUZZER



QUANTA COMPUTER

Title	AMP_MAX9750& INT.SPEAKER	
Size B	Document Number NR2 Main Board	Rev 1A
Date: 星期二, 五月 24, 2004	Sheet 25 of 40	

16,19,20,23,28 AD[0..31] AD[0..31]
16,20,23,28 -CBE[3..0] -CBE[3..0]

Mini PCI Type III

CON5 MINIPCI-IIIA

1	TIP	RING	2
3	8PMJ-3	8PMJ-1	4
5	8PMJ-6	8PMJ-2	6
7	8PMJ-7	8PMJ-4	8
9	8PMJ-8	8PMJ-5	10
11	LED1_GRNP	LED2_YELP	12
13	LED1_GRNN	LED2_YELN	14
15	CHSGND	RESERVED	16
17	INTB#	5V	18
19	3.3V	INTA#	20
21	RESERVED0	RESERVED1	22
23	GND	3.3VAUX	24
25	CLK	RST#	26
27	GND	3.3V	28
29	REQ#	GNT#	30
31	3.3V	GND	32
33	AD31	PME#	34
35	AD29	RESERVED2	36
37	GND	AD30	38
39	AD27	3.3V	40
41	AD25	AD28	42
43	RESERVED3	AD26	44
45	C/BE3#	AD24	46
47	AD23	IDSEL	48
49	GND	GND	50
51	AD21	AD22	52
53	AD19	AD20	54
55	GND	PAR	56
57	AD17	AD18	58
59	C/BE2#	AD16	60
61	IRDY#	GND	62
63	3.3V	FRAME#	64
65	CLKRUN#	TRDY#	66
67	SERR#	STOP#	68
69	GND	3.3V	70
71	PERR#	DEVSEL#	72
73	C/BE1#	GND	74
75	AD14	AD15	76
77	GND	AD13	78
79	AD12	AD11	80
81	AD10	GND	82
83	GND	AD9	84
85	AD8	C/BE0#	86
87	AD7	3.3V	88
89	3.3V	AD6	90
91	AD5	AD4	92
93	RESERVED4	AD2	94
95	AD3	AD0	96
97	5V	RESERVED_WIP0	98
99	AD1	RESERVED_WIP1	100
101	GND	GND	102
103	AC_SYNC	M66EN	104
105	AC_SDATA_IN	AC_SDATA_OUT	106
107	AC_BIT_CLK	AC_CODEC_ID0#	108
109	AC_CODE_ID1#	AC_RESET#	110
111	MOD_AUDIO_MON	RESERVED5	112
113	AGND	GND	114
115	SYS_AUDIO_OUT	SYS_AUDIO_IN	116
117	SYS_AUDIO_OUTGND	SYS_AUDIO_INGND	118
119	AGND	AGND	120
121	RESERVED6	MPCIACT#	122
123	VCC5VA	3.3VAUX	124
125	GND	GND	126

AMP-124P-K

VCC3 C810 0.1U
VCC3 0.1U C812
VCC5 L37 FBMJ2125HM330
MPGND L39 FBMJ2125HM330 MPGND MPGND

D32 RB500V
31 RF_ON
-INTB_MP
16 PCLK_MP
-REQ2
AD31 AD29 AD27 AD25 -CBE3 AD23 AD21 AD19 AD17 -CBE2
16,20,23,28 -IRDY
16,29,31 -CLKRUN
16,20,23,28 -SERR
16,20,23,28 -PERR
-CBE1 AD14 AD12 AD10 AD8 AD7 AD5 AD3 AD1

-INTA_MP
C811 0.1U
-PCIRST 16,23,28
-GNT2
-PME 17,20,23
AD30
AD28 AD26 AD24 IDSEL_MP
C813 0.1U
17,19,24 SDOUT
17,24 -ACRST
AD22 AD20
PAR 16,20,23,28
AD18 AD16
-FRAME 16,20,23,28
-TRDY 16,20,23,28
-STOP 16,20,23,28
-DEVSEL 16,20,23,28
AD15 AD13 AD11 AD9 -CBE0 AD6 AD4 AD2 AD0
USBP0+ 17
USBP0- 17

VCC3
C691 0.1U
C695 0.1U
C673 0.1U
C623 0.1U
C700 10U/10V CC0805-K

VCC5
C614 0.1U
C715 0.1U
C708 0.1U
C600 10U/10V CC0805-K

3VSUS
C565 0.1U
C566 0.1U
C567 10U/10V CC0805-K

MDC

3VSUS C21 0.1U
VCC3 C18 0.1U
VCC5 C26 0.1U

CON23

1	MONO_OUT/PC_BEEP	AUDIO_PWRDN	2
3	GND	MONO_PHONE	4
5	AUXA_RIGHT	BT_ENABLE	6
7	AUXA_LEFT	GND	8
9	CD_GND	5V	10
11	CD_RIGHT	USB_DATA+	12
13	CD_LEFT	USB_DATA-	14
15	GND	RESERVED	16
17	3.3V_AUX	RESERVED	18
19	GND	RESERVED	20
21	3.3V	AC97_SYNC	22
23	AC97 SDATA OUT	AC97_SDATA_IN1	24
25	AC97 RESET#	AC97_SDATA_IN0	26
27	GND	GND	28
29	AC97 MSTRCLK	AC97_BITCLK	30
GND	GND		
31	MDC		32

MDC 3-179397-0-30P-RUV-K

VCC3 R28 10K
R25 22 SYNC 17,19,24 SDIN1 17
BITCLK 17,24
R491 *33/F
AC_BITCLK-1
C785 *10P

20 IDSEL_CB R392 100 AD26
23 IDSEL_LAN R443 100 AD27
IDSEL_MP R444 100 AD20
28 IDSEL_TV IDSEL_TV R522 100 AD28

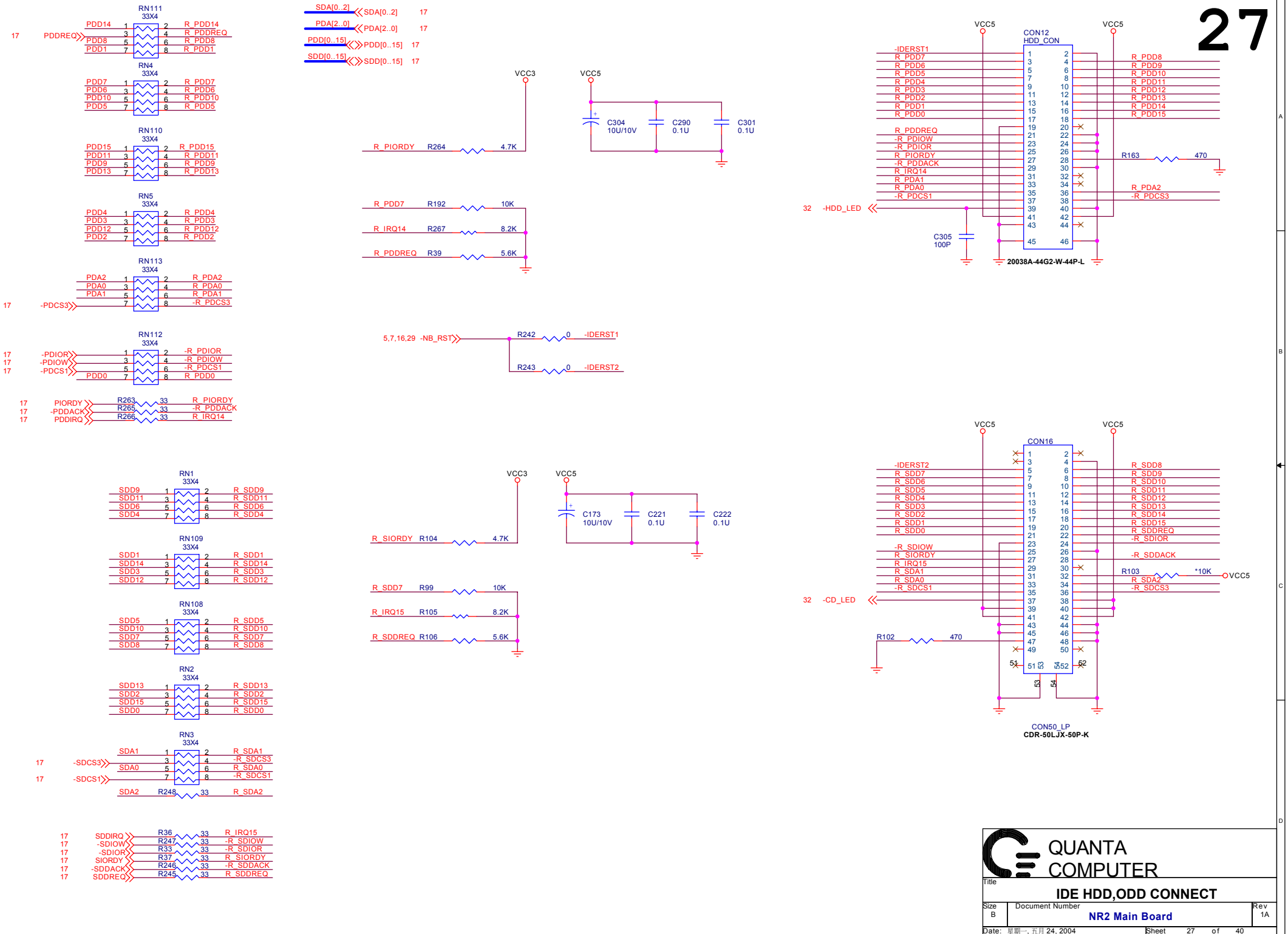
20 -INTA_CB R393 -A_INTA
20 -INTB_CB R388 -INTB
20 -INTC_CB R373 -INTC
20 -INTD_CB R387 -INTD
23 -INT_LAN R405 -INTB
-INTA_MP R391 -INTC
-INTB_MP R404 -INTD

ES

VCC3
16,20,29,31 SERIRQ R304 8.2K
16,20,23,28 -PERR R318 8.2K
RN115 8.2Kx4
16,29,31 -CLKRUN
16,20,23,28 -SERR
16,20,23,28 -IRDY
16,20,23,28 -TRDY
RN116 8.2Kx4
16,20,23,28 PAR
16,20,23,28 -FRAME
16,20,23,28 -DEVSEL
16,20,23,28 -STOP
RN114 8.2Kx4
16,28 -INTB
16 -INTD
5,16 -A_INTA
16,28 -INTC
RN118 8.2Kx4
16 -REQ2
16,23 -GNT1
16,20 -REQ0
16 -REQ4
RN117 8.2Kx4
16 -GNT2
16,28 -GNT3
16,20 -GNT0
16 -GNT4
RN119 8.2Kx4
16,28 -REQ3
16,23 -REQ1

QUANTA COMPUTER

Title: MINI PCI & MDC
Size: B
Document Number: NR2 Main Board
Rev: 1A
Date: 星期一, 五月 24, 2004
Sheet 26 of 40

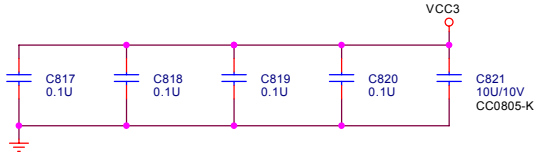


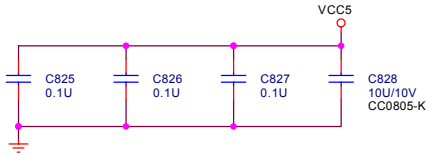
QUANTA COMPUTER

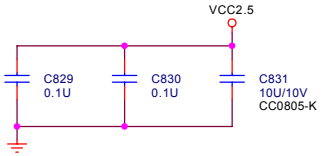
Title: IDE HDD,ODD CONNECT

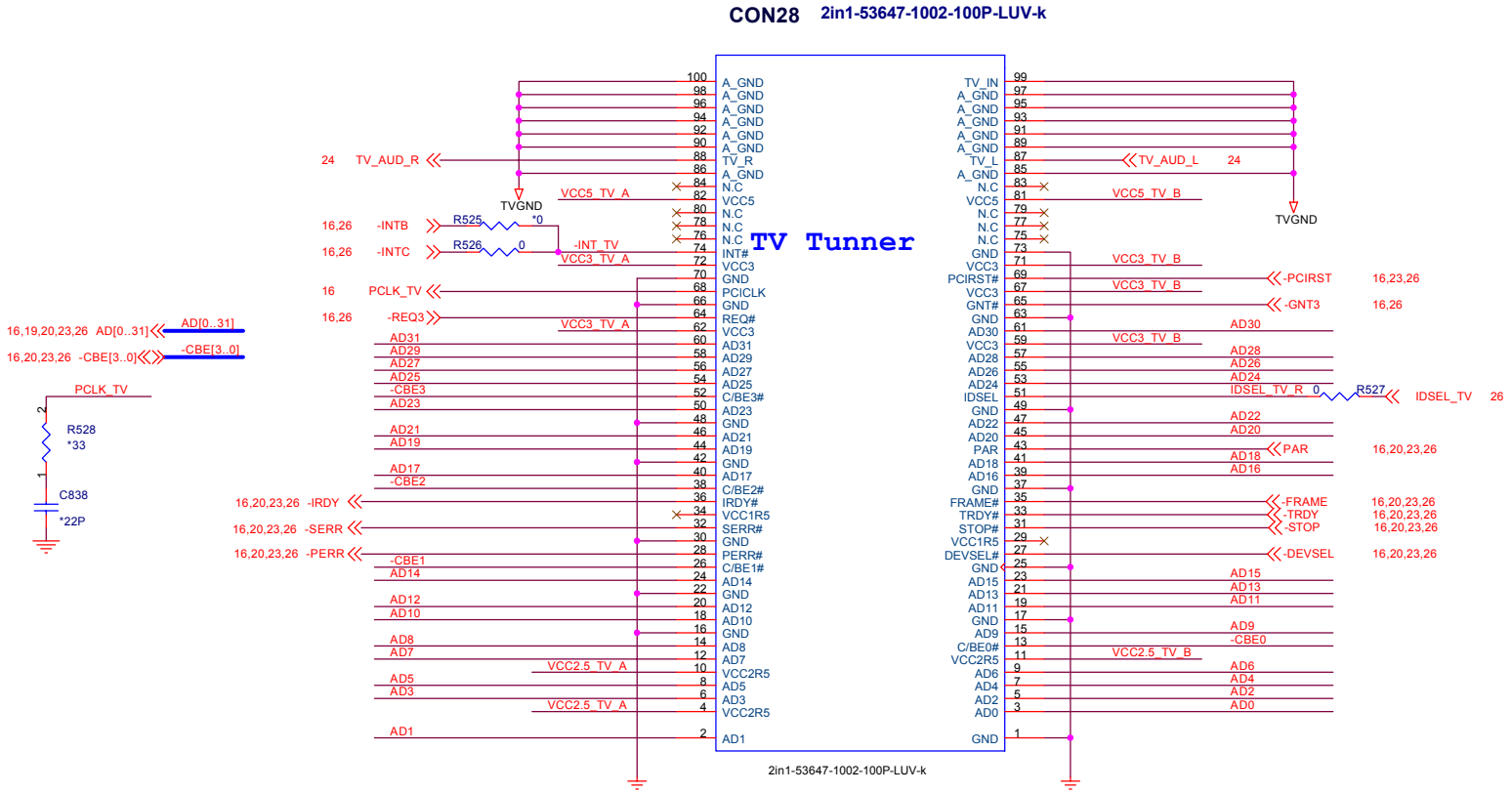
Size: B | Document Number: NR2 Main Board | Rev: 1A

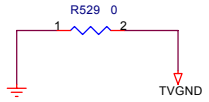
Date: 星期一, 五月 24, 2004 | Sheet 27 of 40

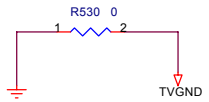


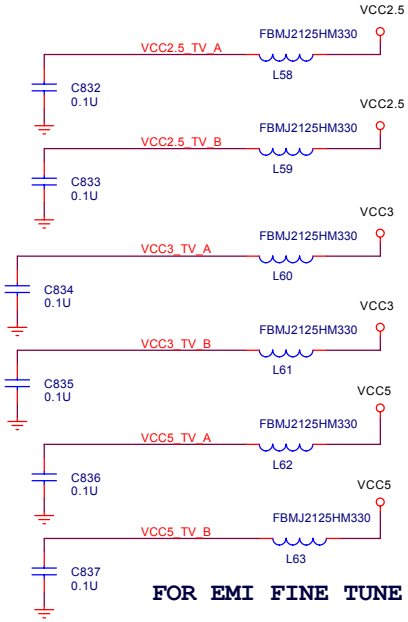










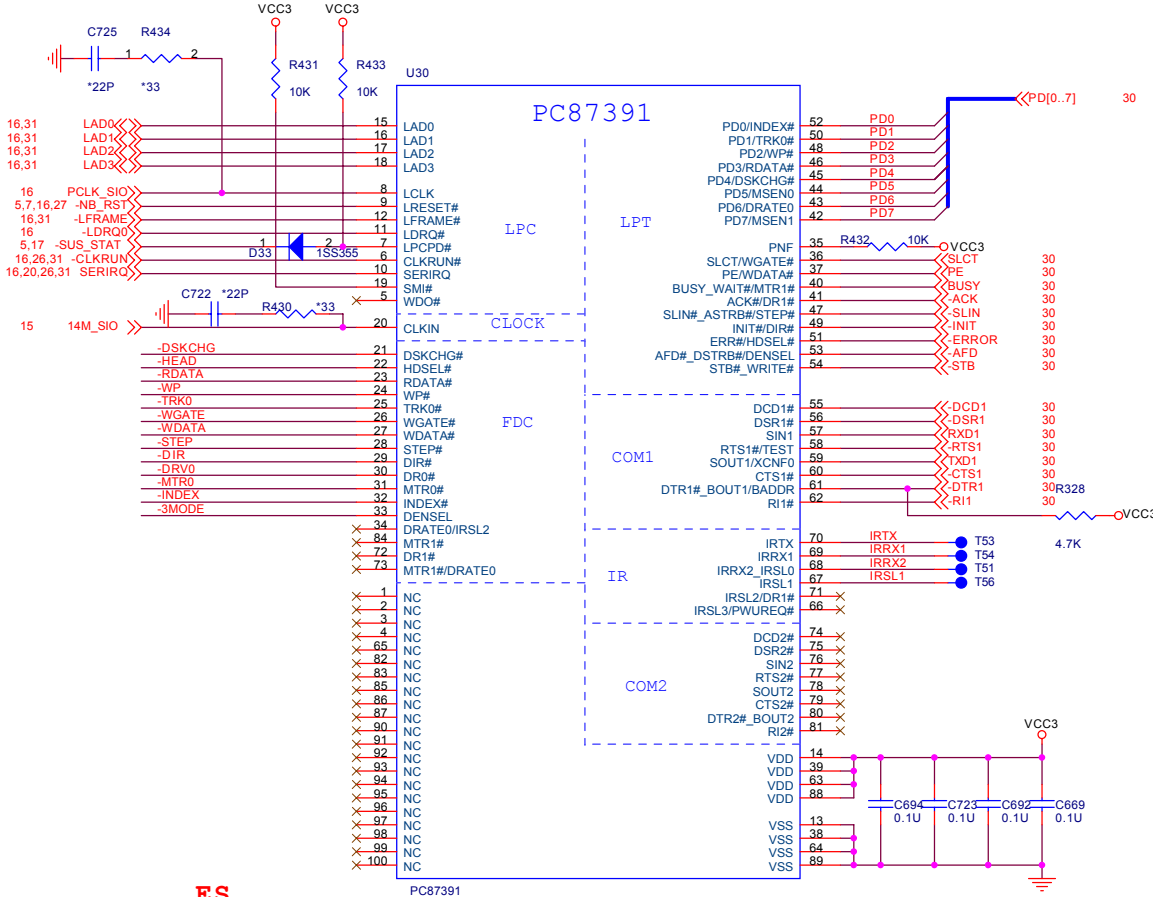


VCC5:240mA
VCC3:520mA
VCC2.5:560mA
VCC1.5:0mA(Not used)

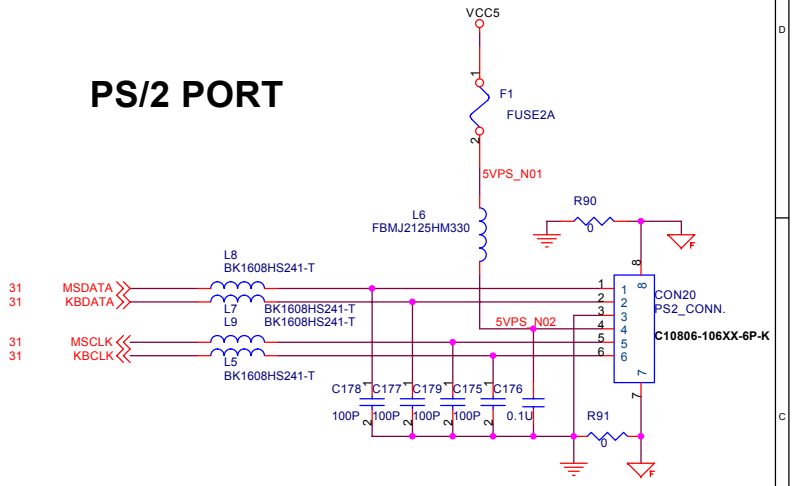
Power Consumpation description :
5V = ? W ;
3V = ? W ;
2.5V = ? W ;
1.5V = 0 W .

QUANTA COMPUTER

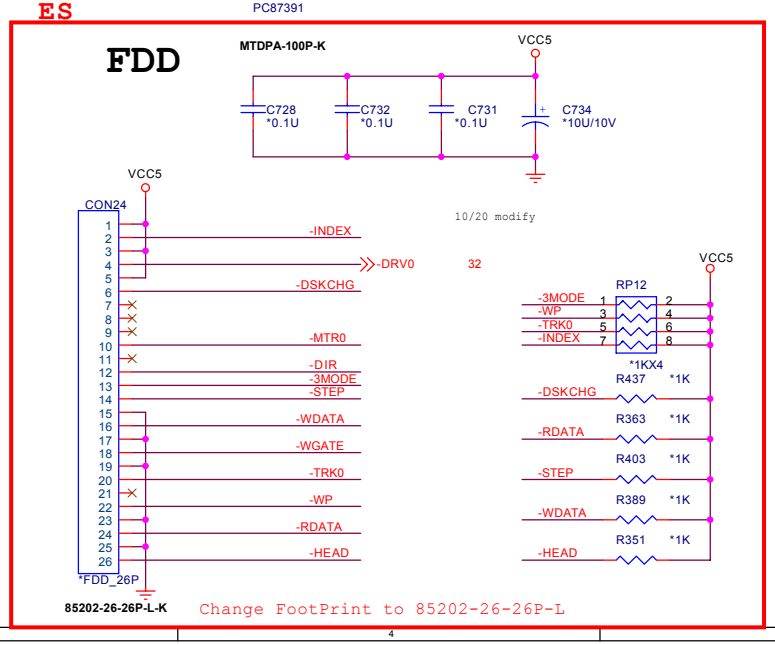
Title	TV TUNNER MODULE	
Size B	Document Number NR2 Main Board	Rev A
Date: 星期一, 五月 24, 2004	Sheet 28 of 40	



PS/2 PORT



ES FDD

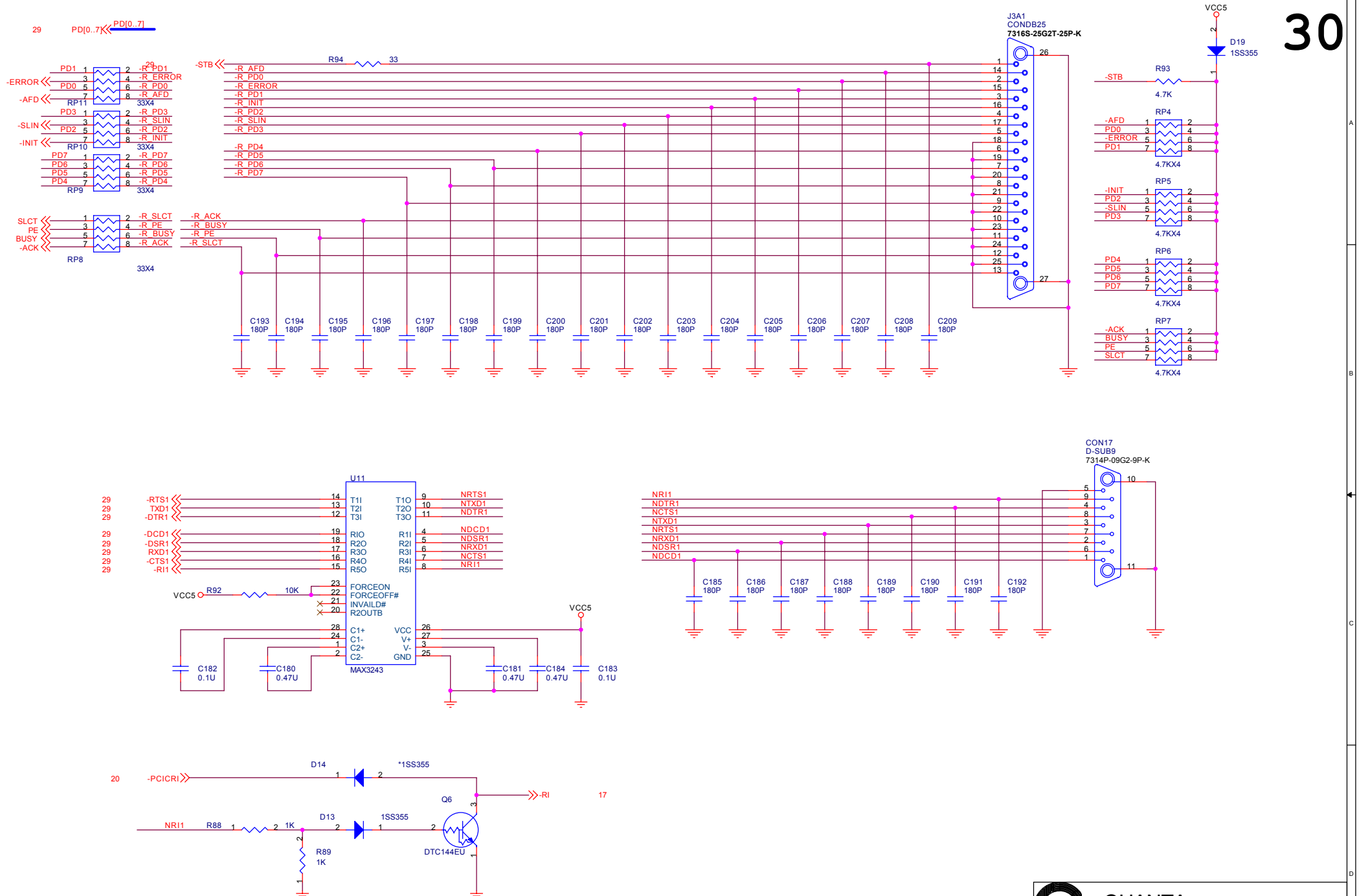


QUANTA COMPUTER

Title: SUPER I/O_NS87391

Size	Document Number	Rev
B	NR2 Main Board	1A

Date: 星期一, 五月 24, 2004 | Sheet 29 of 40



QUANTA COMPUTER		
Title: PARALLEL/SERIAL PORT		
Size: B	Document Number: NR2 Main Board	Rev: 1A
Date: 星期一, 五月 24, 2004	Sheet 30 of 40	

PC97551

EC15 12/4

TQFP176-S-K

Strapping Pin

	I/O Address	
BADDR1-0	Index	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)

U36 39VF040

CON29 CON44A 85203-2402-48P-RUV-K

CON15 FAN_CONN. 53398-0310-3P-L-K

CON21 MODEL_ ID_CON 200109MA10XXXAFZR-10P-LDV-K

Title	PCU-87591 & BIOS
Size	Custom
Document Number	NR2 Main Board
Rev	1A
Date	星期一, 五月 24, 2004
Sheet	31 of 40

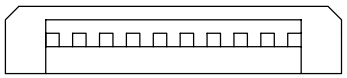
Int. keyboard

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

CON13

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

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



CP5 220Px4: 1 MX4, 2 MX5, 3 MX6, 4 MX7
CP4 220Px4: 1 MY7, 2 MY6, 3 MY5, 4 MY4
CP3 220Px4: 1 MY1, 2 MY0, 3 MY3, 4 MY2
CP2 220Px4: 1 MX3, 2 MX2, 3 MX1, 4 MX0
CP1 220Px4: 1 MY15, 2 MY14, 3 MY13, 4 MY12
CP6 220Px4: 1 MY11, 2 MY10, 3 MY9, 4 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

PAD14 EMI_SPRING EMIPAD161X103
PAD15 EMI_SPRING EMIPAD161X103
PAD16 EMI_SPRING EMIPAD161X103
PAD17 EMI_SPRING EMIPAD161X103
PAD18 EMI_SPRING EMIPAD161X103
PAD19 EMI_SPRING EMIPAD161X103

TOUCHPAD BOARD CON

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

CON11: VDD, DAT, CLK, GND, NC_1, NC_2, NC_3, NC_4
31 TPDATA
31 TPCLK
T20W-TPVCC
TPDATA
TPCLK
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 -FORWARD
31 -REWIND
31 -ODDON
31 -TVON

3VPCU

31 -NBSWON → Q33 DTA124EU
Q45 DTA124EU
Q46 DTA124EU
Q37 *DTA124EU
Q38 *DTA124EU
Q40 *DTA124EU
Q35 *DTA124EU
Q29 DTA124EU

31,36 ACIN → RB500V D37
17,31 -SUSB → D38 1SS355
-PCUHOLD → R447 100K
31 -PCUHOLD

ES

27 -HDD_LED
27 -CD_LED
29 -DRV0

D17 RB500V
D15 *RB500V
D16 RB500V
D18 *RB500V

-IDE_LED 31
-MIX-LED 31

PP

EMI Requirement

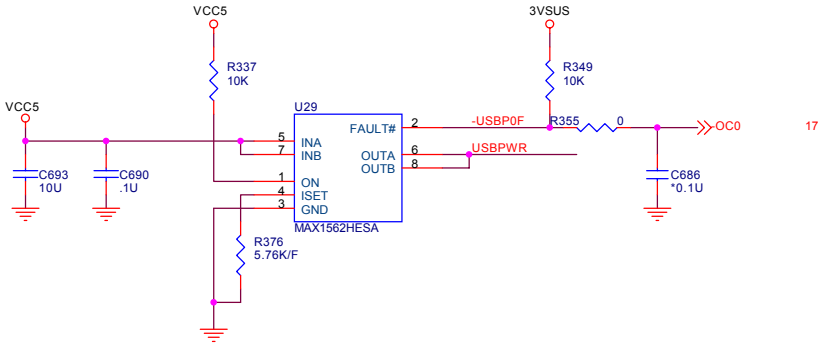
PAD12 EMI_SPRING EMIPAD161X103
PAD13 EMI_SPRING EMIPAD161X103
PAD1 EMI_SPRING EMIPAD161X103
PAD2 EMI_SPRING EMIPAD161X103
PAD3 EMI_SPRING EMIPAD161X103
PAD4 EMI_SPRING EMIPAD161X103
PAD5 EMI_SPRING EMIPAD161X103
PAD6 EMI_SPRING EMIPAD161X103
PAD7 EMI_SPRING EMIPAD161X103
PAD8 EMI_SPRING EMIPAD161X103
PAD9 EMI_SPRING EMIPAD161X103
PAD10 EMI_SPRING EMIPAD161X103

H23 H-TC276BC315D118P2
H18 H-TC276BC315D118P2
H17 H-TC276BC315D118P2
H10 H-TC276BC315D118P2
H2 H-C354D118P2-A
H25 H-C236D130P2i160
H26 H-C236D130P2i160 H-C236I176D146P2
H1 H-R512D118P2-NR1
H9 H-TC276BC315D118P2
H5 H-C276D138P2
H22 H-TC276BC315D118P2
H13 H-TC276BC315D118P2
H16 H-TC236BC315D142P2
H12 H-TC236BC315D142P2
H15 H-TC236BC315D142P2
H19 H-C315D118P2
H27 H-C236D130P2i160 H-C236I176D146P2
H14 H-NR1CPU1
H11 H-NR1HDD
H4 H-C394D118P2
H24 H-C394D118P2
H7 H-C276D146P2
H8 H-C276D146P2
H3 H-TC236BC315D130P2
H20 H-NR1CPU
H21 H-NR1CPU

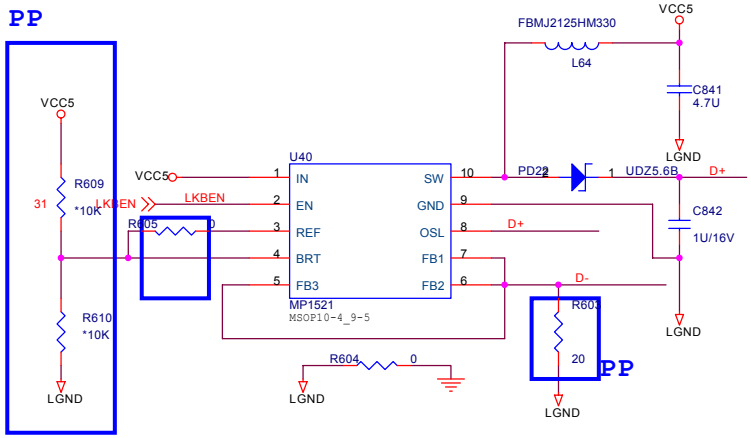
QUANTA COMPUTER

Title: **Int. Keyboard &TP Conn.**
Size: B
Document Number: **NR2 Main Board**
Rev: 1A
Date: 星期一, 五月 24, 2004
Sheet 32 of 40

USB Power and Over current



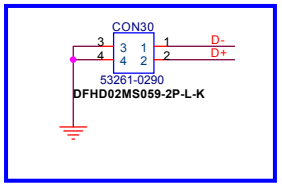
PP



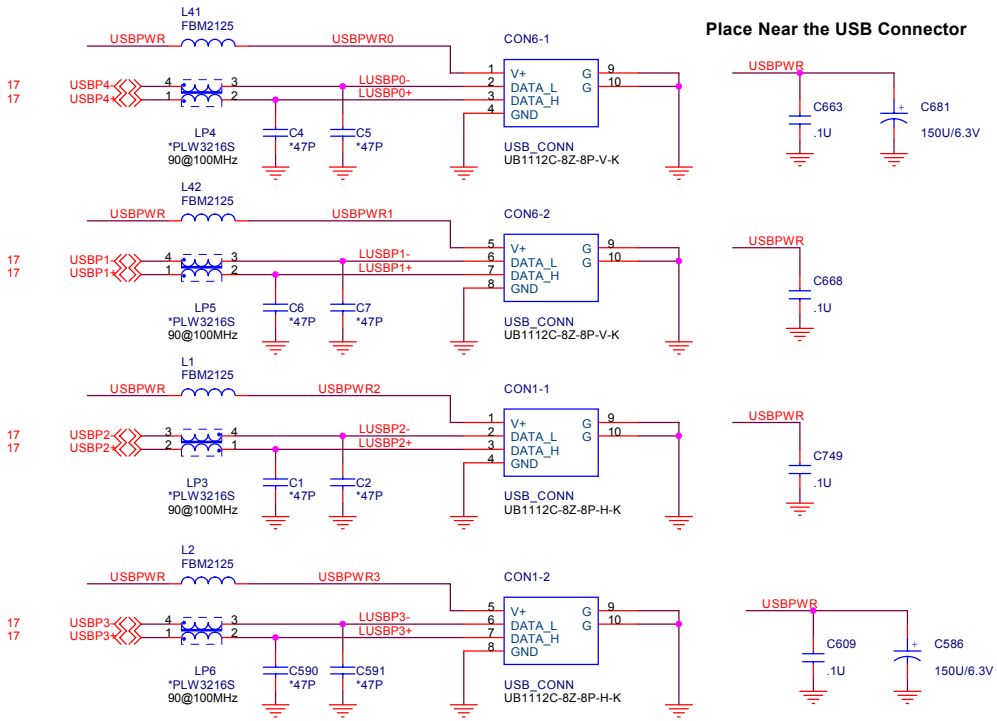
Luminous K/B Power drive

4 LED:150mA<
6 LED:200mA<

PP



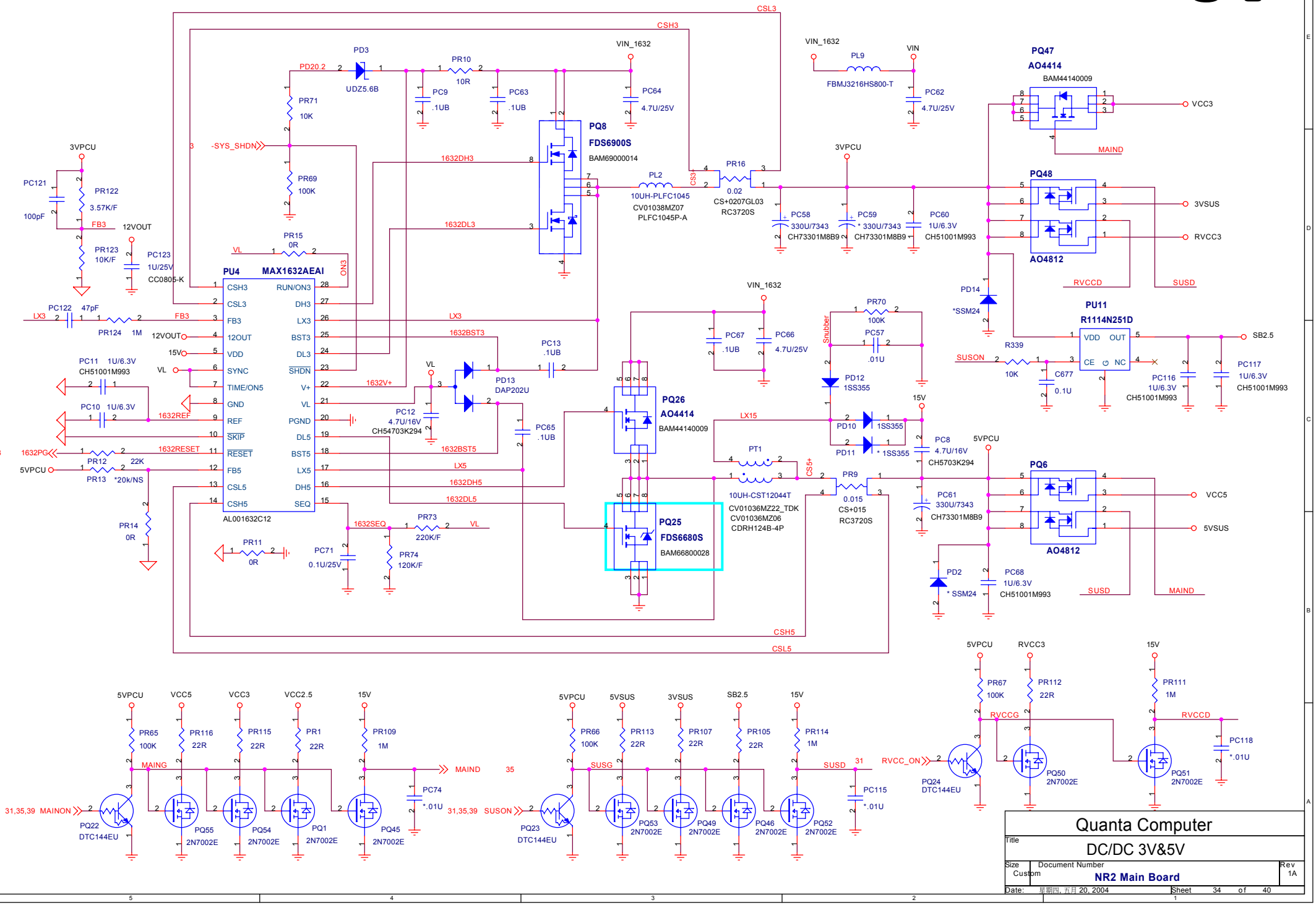
USB Connector



Place Near the USB Connector

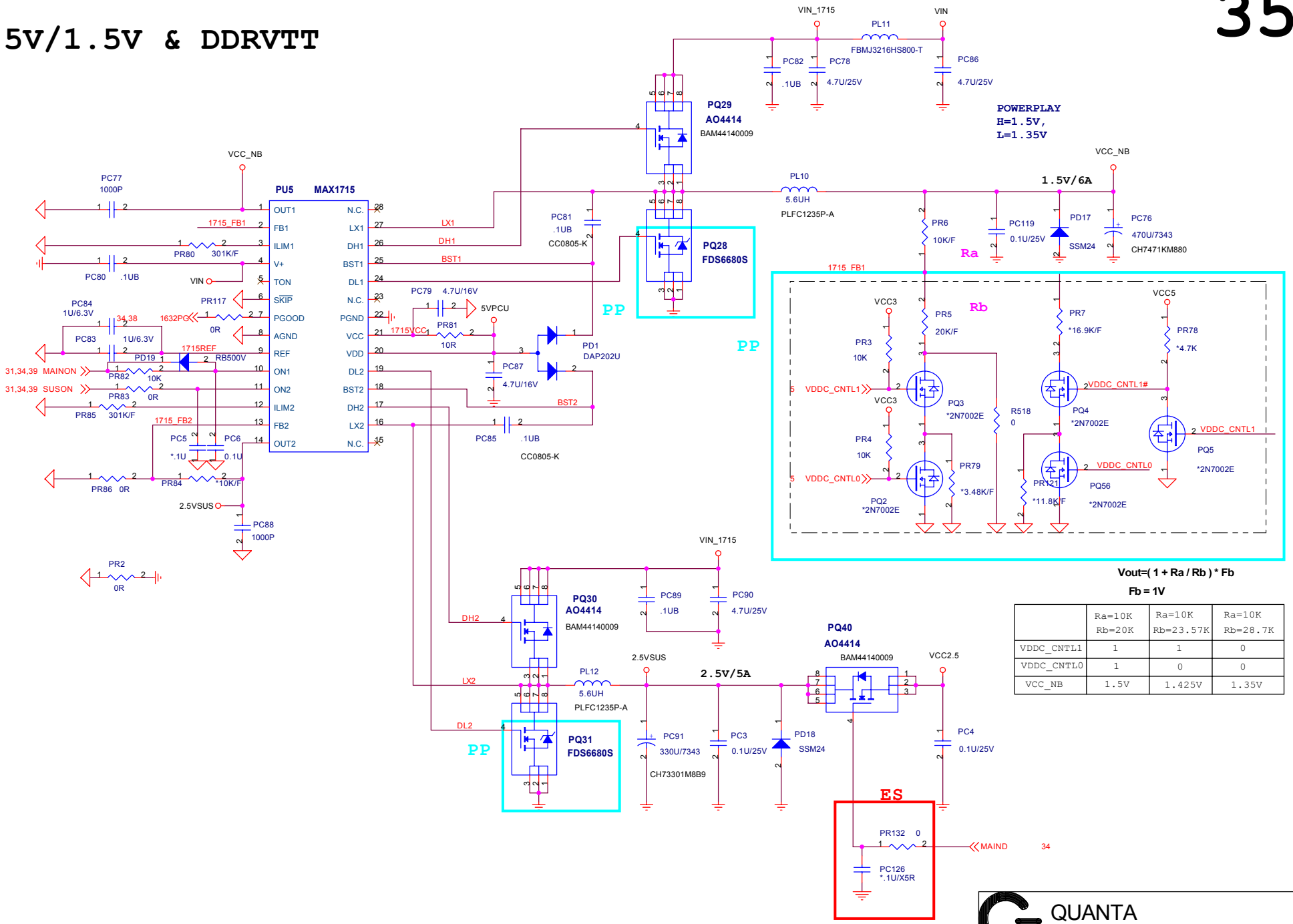
QUANTA COMPUTER			
Title: USB_CONNECT&LKB_PWR_DRIVE			
Size: B	Document Number: NR2 Main Board		Rev: 1A
Date: 星期一, 五月 24, 2004		Sheet 33 of 40	

DC/DC 3.3V&5V POWER



Quanta Computer	
Title	DC/DC 3V&5V
Size: Custom	Document Number: NR2 Main Board
Rev	1A
Date: 星期四, 五月 20, 2004	Sheet 34 of 40

2.5V/1.5V & DDRVTT



	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: NR2 Main Board | Rev: 1A

Date: 星期一, 五月 24, 2004 | Sheet 35 of 40

Battery Charger

DC19V/3.16A

87502-0400-4P-L

87502-0400-4P-L-K

PJ1

PL8 FBMJ3216HS480NT

PF1 5A

PF1.1

PF1.2

PD8 SSM24

PD9 SSM24

VA

90mV/30mOHM=3A

3A*19.5V=58.5W

PR39 0.030 RC3720S 1W/CS+0338FL00

Iin_CS+

Iin_CS-

VA1

PC34 .1UB

PC33 1000P

PC36 .1UB

PR43 10K

PC35 .1UB

PR42 220K

PR44 220K

PQ14 AO4407

PQ13 AO4407

PQ15 IMD2

PQ58 IMD2

PR128 4.7k

PC124 0.1U

PR129 2K

2711_gate

PD21 UDZ22B

PP

VIN

PC37 .1UB

PC38 .1UB

PR40 33K

PR41 10K

PQ16 2N7002E

31 BAT/AC-

PRO

PQ57 * 2N7002E

PR125 * NS

AC

PR126 0

PR37 10R

PR118 0

31 CHG-

PQ12 DTC144EU

PR48 *0/NS

PC39 0.1U

PU2 OZ862AS/QSOP20

1	ACAV	COMP	20
2	BL	ICHM	19
3	CELLS	ICHP	18
4	ICHG	IACP	17
5	COR	CHIGH	16
6	VSET	HDR	15
7	ISET	VAC	14
8	REF_EN	IACM	13
9	SYS_BL	GND	12
10	LV	REF	11

31,32 ACIN

4.7K PR131

PR45 *100K

PR46 100K

PR47 100K

REF_862

REF_862=3.27V

PR36 22.6K/F

Vset=1.0V,V_bat=16.8V

31 CC-SET

PR34 10K

PR35 10K/F

CC-SET :

V=1.88V, I_chg = 2.6A

V=1.42V, I_chg = 2.0A

V=0.30V, I_chg = 0.4A

PC32 0.1U/25V

PC31 0.1U/25V CC0805-K

862_HDR

CHG_VIN

Ichg_CS-

Ichg_CS+

PR130 470

CHG_VIN

PL7 FBMJ3216HS800-T

PC28 .1UB

PC29 4.7U/25V

PC27 4.7U/25V

PQ11 AO4407

Rch

PR32

PL6 15UH-PLFC1045R

CHG_LX

PLFC1045P-A CV01532TZ01

CHG_OUT

PD7 SSM24

PD6 SSM24

PC26 0.1U/25V

PC24 10U/X5R

PC25 10U/X5R

0.025 RC3720S CS+0508FL03

MBAT+

37

LV

PC30 10U/6.3V CC0805-K

16.9K/F PR33

PC43 10U/6.3V CC0805-K

REFP_862

PC42 1U/25V CC0805-K

AC

PR38 33K

REFP

Rx

V_REFP_Low=7V

Max. CHG current .

100mV/0.025=4A

For Li-ion I_chg=2.6A, V_Rch=65mV

For Ni-MH I_chg=2.0A, V_Rch=50mV

PC40 47P/50V

PC41 .01U/50V

PR49 82.5K/F

PR50 165K/F

31,37 REFON

PR54 255K/F

PR51 10K

Ry

31 BL/C-

PQ17 2N7002E

PR52 187K/F

PC44 .01U

PR53 0

(V_REFP_Low*Ry)/(Rx+Ry)=2.97V

OR

2.97V*(1+Rx/Ry)=V_REFP_Low

PRO

PQ61 DTC144EU

PC127 * .01U

PR137 10K

PR136 47K

PC128 1U

PQ62 2N7002E

PR138 680K

PR139 680K

PD24 UDZ2.7B

PQ59 AO3402/2SK3577

PR133 220/2512

PR134 220K

PR135 47K

PD23 UDZS5.6B

PQ60 DTC144EU

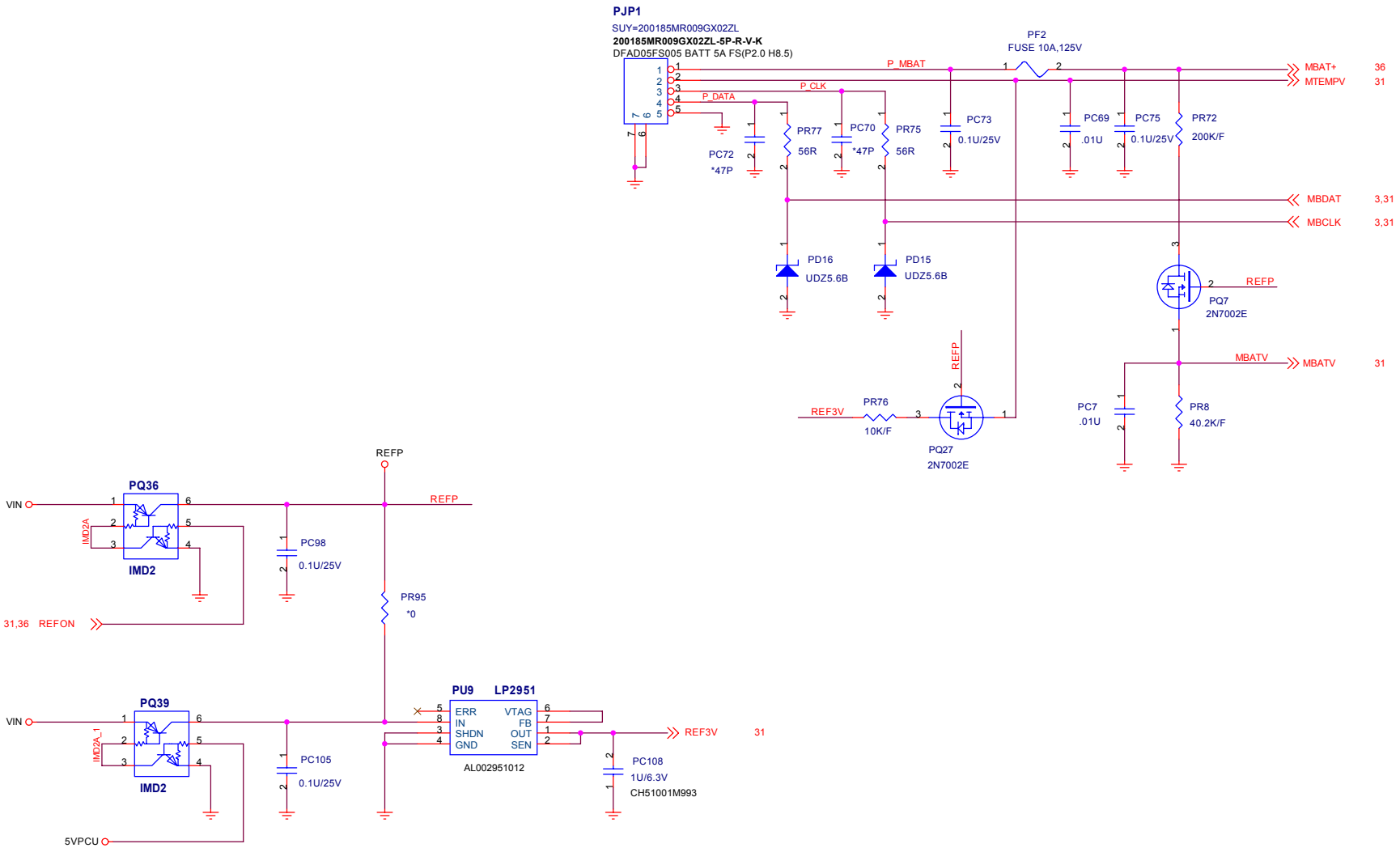
QUANTA COMPUTER

Title: BATTERY CHARGER

Size: B | Document Number: NR2 Main Board | Rev: 1A

Date: 星期一, 五月 24, 2004 | Sheet 36 of 40

Battery Connector



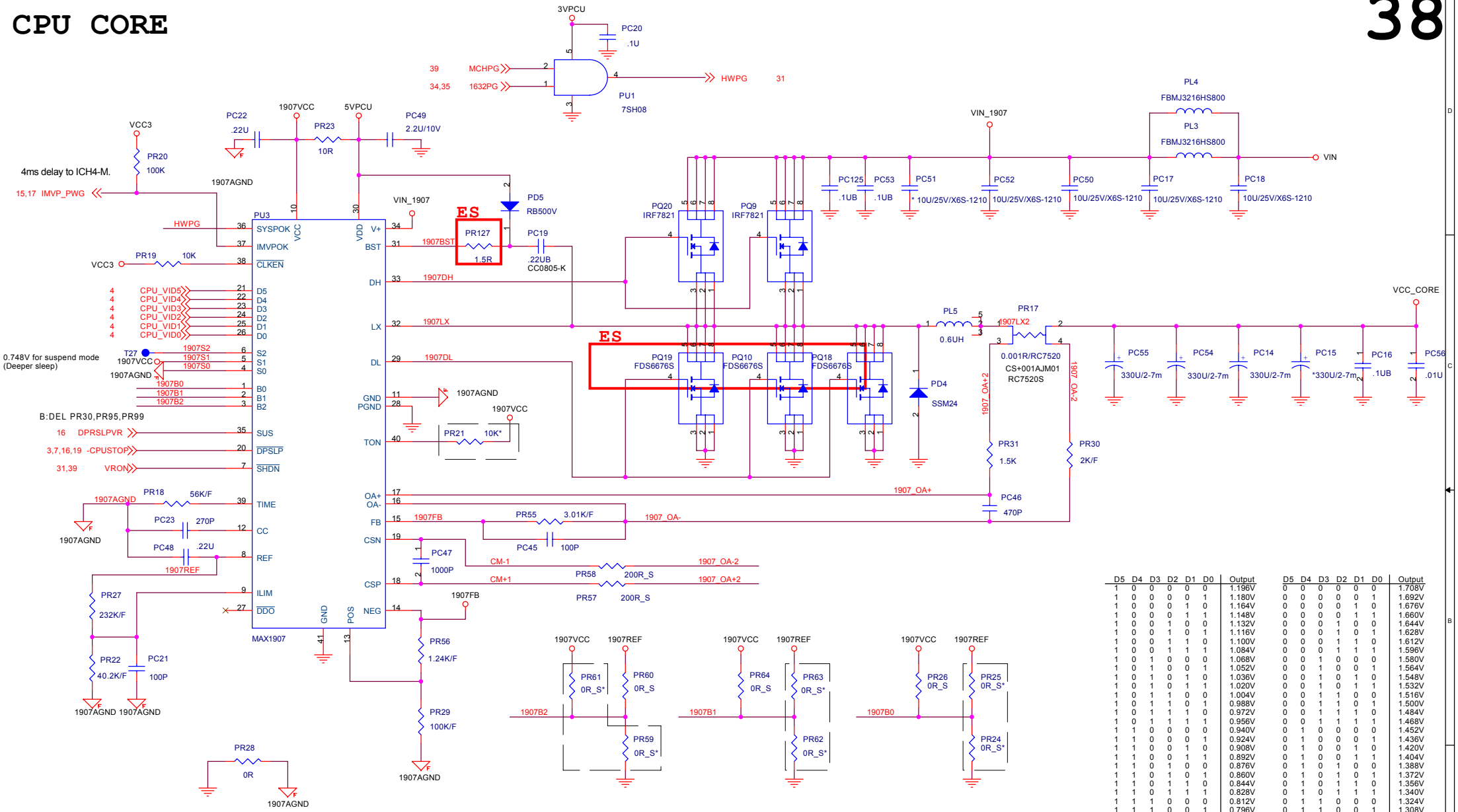
QUANTA COMPUTER

Title: **BATTERY SELECTOR**

Size	Document Number	Rev
B	**NR2 Main Board**	1A

Date: 星期一, 五月 24, 2004 Sheet 37 of 40

CPU CORE



D5	D4	D3	D2	D1	D0	Output	D5	D4	D3	D2	D1	D0	Output
1	0	0	0	0	0	1.196V	0	0	0	0	0	0	1.708V
1	0	0	0	0	1	1.180V	0	0	0	0	0	1	1.692V
1	0	0	0	1	0	1.164V	0	0	0	0	1	0	1.676V
1	0	0	0	1	1	1.148V	0	0	0	0	1	1	1.660V
1	0	0	1	0	0	1.132V	0	0	0	1	0	0	1.644V
1	0	0	1	0	1	1.116V	0	0	0	1	0	1	1.628V
1	0	0	1	1	0	1.100V	0	0	0	1	1	0	1.612V
1	0	0	1	1	1	1.084V	0	0	0	1	1	1	1.596V
1	0	1	0	0	0	1.068V	0	0	1	0	0	0	1.580V
1	0	1	0	0	1	1.052V	0	0	1	0	0	1	1.564V
1	0	1	0	1	0	1.036V	0	0	1	0	1	0	1.548V
1	0	1	0	1	1	1.020V	0	0	1	0	1	1	1.532V
1	0	1	1	0	0	1.004V	0	0	1	1	0	0	1.516V
1	0	1	1	0	1	0.988V	0	0	1	1	0	1	1.500V
1	0	1	1	1	0	0.972V	0	0	1	1	1	0	1.484V
1	0	1	1	1	1	0.956V	0	0	1	1	1	1	1.468V
1	1	0	0	0	0	0.940V	0	1	0	0	0	0	1.452V
1	1	0	0	0	1	0.924V	0	1	0	0	0	1	1.436V
1	1	0	0	1	0	0.908V	0	1	0	0	1	0	1.420V
1	1	0	0	1	1	0.892V	0	1	0	0	1	1	1.404V
1	1	0	1	0	0	0.876V	0	1	0	1	0	0	1.388V
1	1	0	1	0	1	0.860V	0	1	0	1	0	1	1.372V
1	1	0	1	1	0	0.844V	0	1	0	1	1	0	1.356V
1	1	0	1	1	1	0.828V	0	1	0	1	1	1	1.340V
1	1	1	0	0	0	0.812V	0	1	1	0	0	0	1.324V
1	1	1	0	0	1	0.796V	0	1	1	0	0	1	1.308V
1	1	1	0	1	0	0.780V	0	1	1	0	1	0	1.292V
1	1	1	0	1	1	0.764V	0	1	1	0	1	1	1.276V
1	1	1	1	0	0	0.748V	0	1	1	1	0	0	1.260V
1	1	1	1	0	1	0.732V	0	1	1	1	0	1	1.244V
1	1	1	1	1	0	0.716V	0	1	1	1	1	0	1.228V
1	1	1	1	1	1	0.700V	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: NR2 Main Board | Rev: 1A

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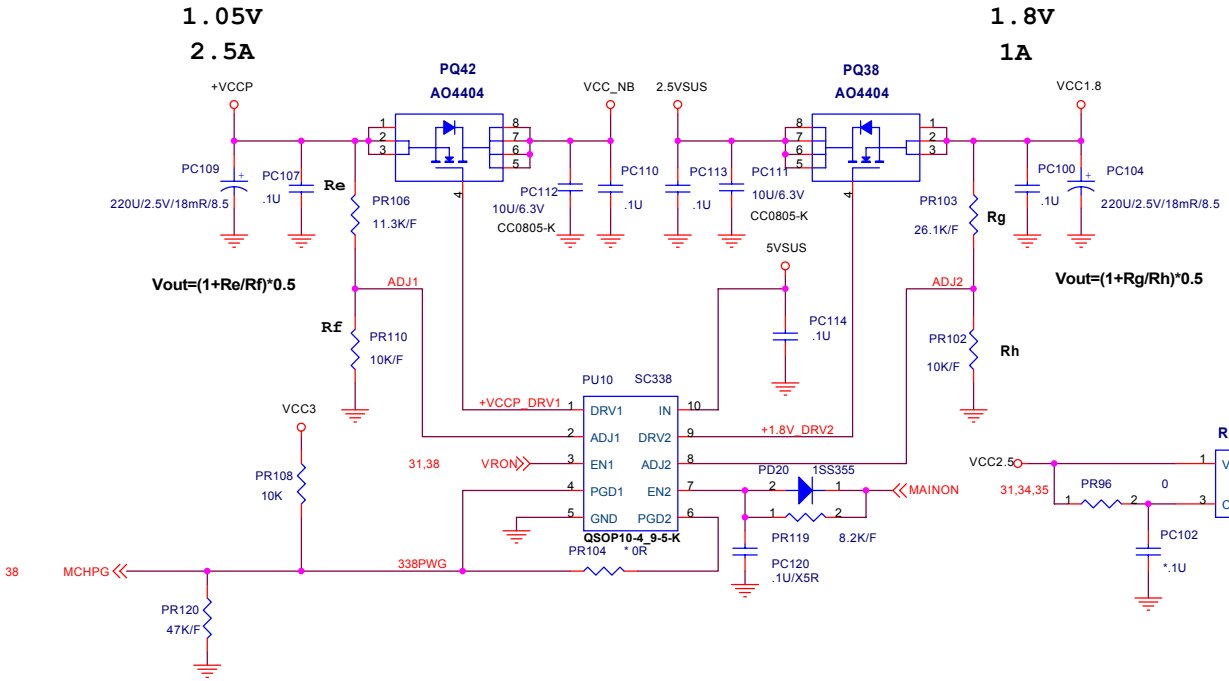
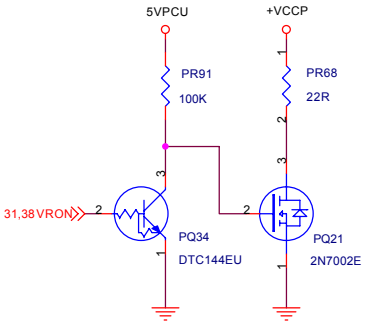
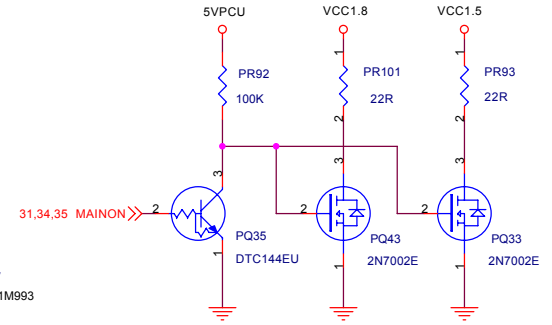
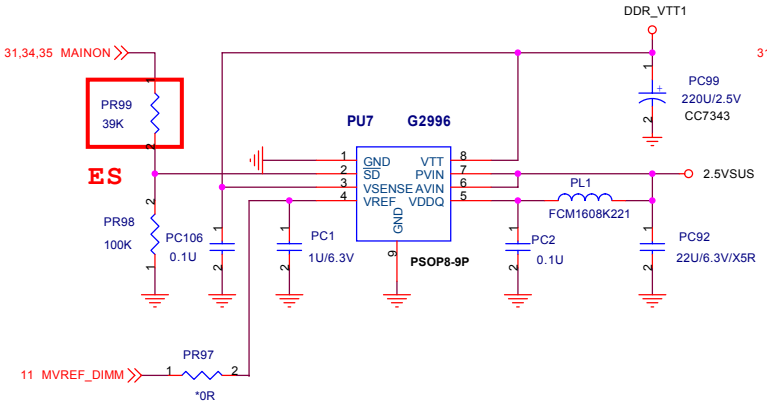
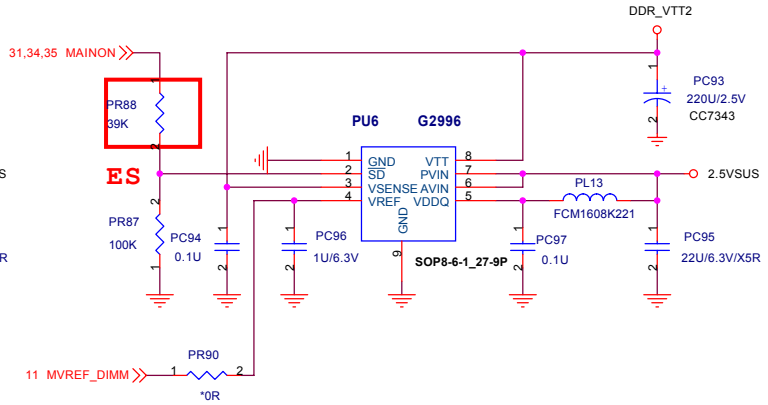
VCCP 1.05V/1.8V/1.5V/DDR_VTT

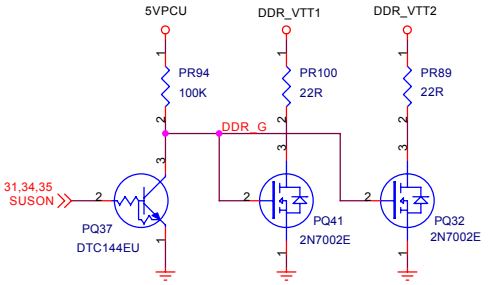












QUANTA COMPUTER

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

Size	Document Number	Rev
B	NR2 Main Board	1A

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ES stage
PAGE_03:Add parts:R566,C873
PAGE_04:Add:Nomount location:R593,R595 for CPU auto detect function
PAGE_05:Modify EDID source del:Q22,Q23 Add:R516,R517
PAGE_09:(1)Add:R598,D56 for CPU auto detect function
(2)Add:Nomount SW1 force CPU detect function
PAGE_14:Del TV TUNNER CON Del:CON26,CON27,Modify CRT connect from SMD type change to DIP type
PAGE_15:(1)Layout modify Memory buffer's parts package
(2)Add:R601,R602,D58 for CPU auto detect function
PAGE_16:Add TV TUNNER CLK Add:R521,C816(Non-mount)
PAGE_17:Add D53,D54,R533,R534,Add:CH-,CH+ GPIO Function
PAGE_22:Add F5,Q47, MS Duo Application
PAGE_24:Add TV Audio source(TV_AUD_R,TV_AUD_L)to Code,Add:C839,C840
PAGE_26:(1)Del TV Card power original protect part in MINI PCI card :L58,L59,L60,L61
(2)Add IDSEL_TV:R522
PAGE_28:Add TV TUNNER page from AF1 schematic
PAGE_29:Del FDD interface Del:CON24,C728,C732,C731,C734,RP12,R437,R363,R403,R389,R351
PAGE_31:(1)Modify U/B CON:CON29,Del:R503,Add Parts:R531,R532,Add: -TVON,-ODDON GPIO Function,Del:-INTERNET,-E-MAIL GPIO Function
(2)Add: LKBEN GPIO Function
(3)Add: Nomount location L65
PAGE_32:(1)Add wake up function in location:Q45(-TVON),Q46(-ODDON),Del Non-mount location:Q34,Q38(-E-MAIL,-INTERNET)
(2)Add screw holder:H26,H27
PAGE_33:Add U40,L64,PD22,C842,C841,R603,R604 for Luminous K/B power drive schematic
PAGE_35:Add PR132,PC126 for RC delay circuit on VCC3 and VCC2.5 power
PAGE_38:Modify PWR value:PR127,PQ10,PQ18,PQ19
PAGE_39:Modify PWR value:PR88,PR99

PP stage
PAGE_03:Del parts:R566,C873
PAGE_04:Del Non-mount location:R593,R595 for CPU detect function
PAGE_09:Del PARTS:SW1,D56,R598 for CPU detect function
PAGE_15:Del PARTS:R601,R602,D58 for CPU detect function
PAGE_17:Add location:R606 for change CH+,CH- location pin
PAGE_33:Add LKB PWR Conn:CON30,R605
PAGE_31:(1)Del location:R533,R534 for change CH+,CH- location pin
(2)Add location:R607,R608 for -INTERNET,-E-MAIL function pull high

QUANTA COMPUTER

Title: **HISTORY**

Size	Document Number	Rev
A	NR2 Main Board	1A

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