# BL3

**CPU CORE**
SENTECH
SC451
Page:25
→ VCC_CORE

**+3VPCU**
**+3V_S5/+3VSUS**
**+3V**
**+5VSUS/+5V**
**10V/15V**
**+1.8V_S5**
MAXIM
MAX8744ETJ+ Page:26
→ +3VPCU, +3V_S5, +3VSUS, +3V, +5VSUS, +5V, 10V/15V, +1.8V_S5

**+1.8VSUS/+1.8V**
**+1.2V**
MAXIM
MAX8743EEI Page:27
→ +1.8VSUS, +1.8V, +1.2V

**+1.05V**
SENTECH
SC4215*2 Page:29
→ +1.05V

**+0.9VSUS**
**+0.9V**
GMT
G2996 Page:26,29
→ +0.9VSUS, +0.9V

**BATTERY CHARGER**
MAXIM
MAX8724 Page:28

**CLOCK GEN**
**RTM865-300**
+3V Page:4

**Yonah Celeron-M**
INTEL Mobile_479 CPU
SOCKET_M
Page:2, 3

HOST BUS 533MHZ

**NB**
**RC410MD**
**ATI**
Page: 5, 6 , 7, 8

RGB → **CRT** Page: 10

LVDS → **LVDS** Page: 10

**DDR-II SODIMM1** Page: 9
**DDR-II SODIMM2** Page: 9
DDR-II

2X PCIE

**SB**
**ATi SB450**
Page: 11, 12, 13, 14

**SATA HDD** Page: 18 — SATA

**IDE-ODD** Page: 18 — ATA 66/100

HD AUDIO

PCI BUS 33MHZ

USB 2.0

LPC 33MHZ

**ENE PCMCIA**
**CB1410 (option)**
AD17
REQ3# / GNT3#
INTE#
Page: 16
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**MINI-PCI**
**Wireless LAN**
AD20
REQ1# / GNT1#
INTG# , INTH#
Page: 17

**REALTEK**
**RTL8100CL**
AD18
REQ0# / GNT0#
INTF#
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→ **RJ45** Page: 15

**AUDIO CODEC**
**REALTEK**
**ALC861**
Page: 19

**Winbond**
**PC87383**
**(Option)**
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→ **RS-232 (option)** Page: 30

**KBC**
**NS**
**PC97551**
Page: 23

**GMT**
**G1432+G1410**
Page: 20

**MODEM**
**AGERE**
**DELPHI-MOM**
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**MIC IN** Page: 20
**SPEAKER** Page: 20
**LINE OUT** Page: 20
**RJ11**
**Touchpad** Page: 24
**Keyboard** Page: 24
**FLASH** Page: 24
**FAN** Page: 24

**SYSTEM**
**USB PORT *2**
USB2,3 Page: 17

## Power State Table

| Power Name | Control Signal | Power State | Power Source |
|---|---|---|---|
| VCC_CORE | VRON | S0 | VIN |
| +3VPCU | N/A | ALWAYS | VIN |
| +3V_S5 | S5_ON | S0-S5 | +3VPCU |
| +3VSUS | SUSON | S0-S3 | +3VPCU |
| +3V | MAINON | S0 | +3VPCU |
| +5VPCU | N/A | ALWAYS | VIN |
| +5V_S5 | S5_ON | S0-S5 | +5VPCU |
| +5VSUS | SUSON | S0-S3 | +5VPCU |
| +5V | MAINON | S0 | +5VPCU |
| 15V/10V | N/A | S0 | +5VPCU |
| +1.2V | MAINON | S0 | VIN |
| +1.05V | MAINON | S0 | +1.8VSUS |
| +0.9V | MAINON | S0 | +1.8VSUS |
| +1.8V_S5 | S5_ON | S0-S5 | +3VPCU |
| +1.8VSUS | SUSON | S0-S3 | VIN |
| +1.8V | MAINON | S0 | +1.8VSUS |
| +1.5V | MAINON | S0 | +3V |

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**Quanta Computer Inc.**

| Size | Document Number | Rev |
|---|---|---|
| | BLOCK DIAGRAM | 3B |

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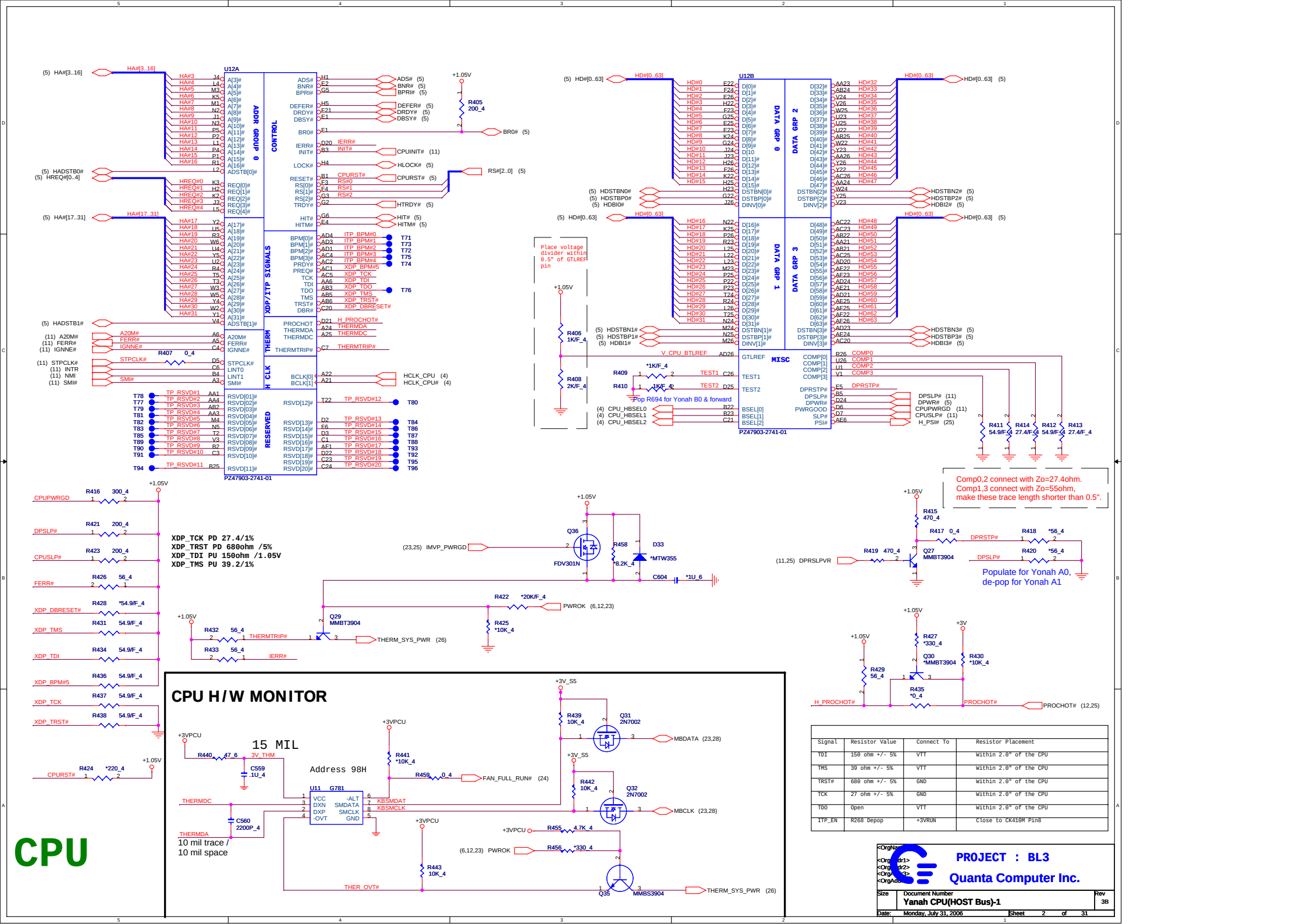
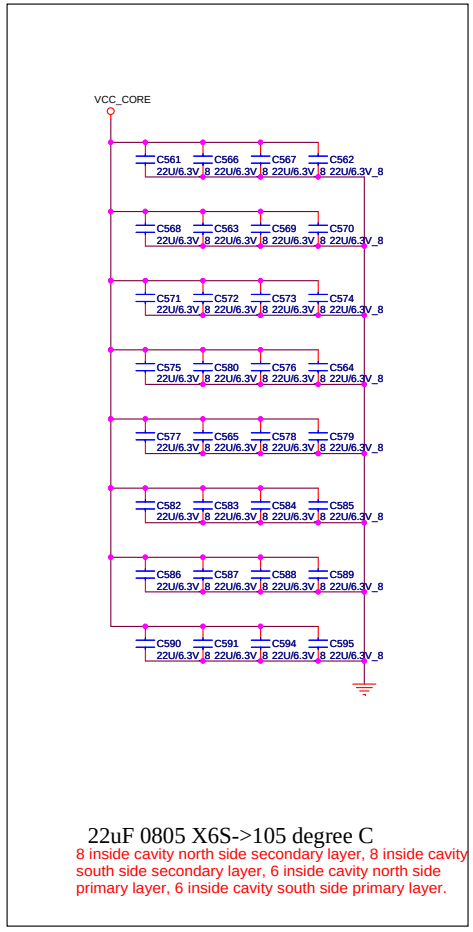
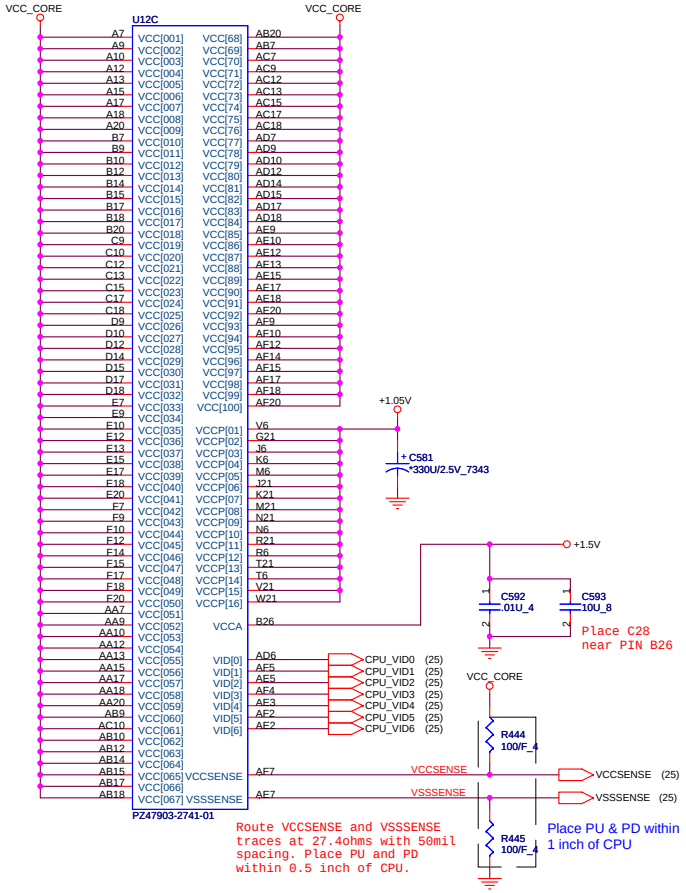
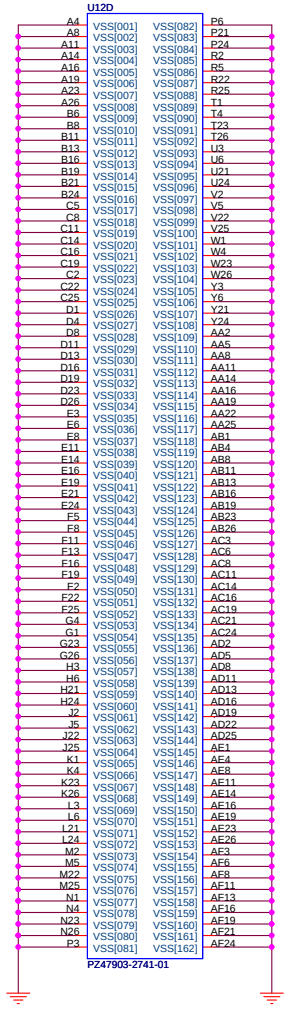
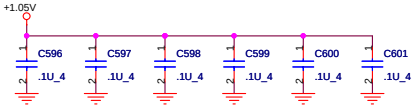



| Signal | Resistor Value | Connect To | Resistor Placement |
|---|---|---|---|
| TDI | 150 ohm +/- 5% | VTT | Within 2.0" of the CPU |
| TMS | 39 ohm +/- 5% | VTT | Within 2.0" of the CPU |
| TRST# | 680 ohm +/- 5% | GND | Within 2.0" of the CPU |
| TCK | 27 ohm +/- 5% | GND | Within 2.0" of the CPU |
| TDO | Open | VTT | Within 2.0" of the CPU |
| ITP_EN | R268 Depop | +3VRUN | Close to CK410M Pin8 |



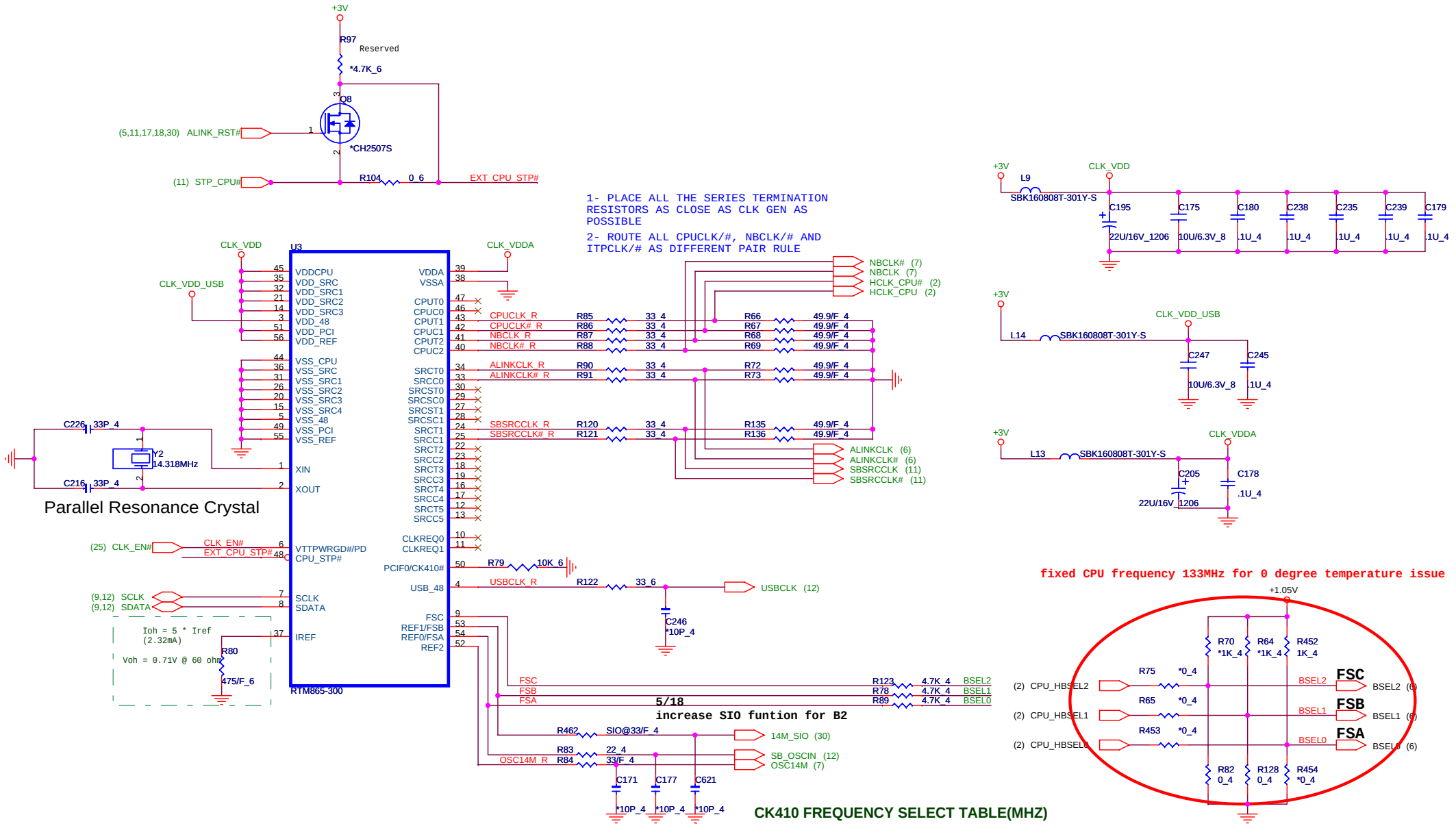




# CPU

| | | |
|---|---|---|
| PROJECT : BL3 | | |
| Quanta Computer Inc. | | |
| Size | Document Number: Yanah CPU(Power/NC)-2 | Rev: 3B |
| Date: Friday, August 11, 2006 | Sheet 3 of 31 | |




## CK410 FREQUENCY SELECT TABLE(MHZ)

| FSC BSEL2 | FSB BSEL1 | FSA BSEL0 | CPU | SRC | PCI | REF |
|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 100 | 100 | 33 | 14.31 |
| 0 | 0 | 1 | 133 | 100 | 33 | 14.31 |
| 0 | 1 | 1 | 166 | 100 | 33 | 14.31 |
| 0 | 1 | 0 | 200 | 100 | 33 | 14.31 |
| 0 | 0 | 0 | 266 | 100 | 33 | 14.31 |
| 1 | 0 | 0 | 333 | 100 | 33 | 14.31 |
| 1 | 1 | 0 | 400 | 100 | 33 | 14.31 |
| 1 | 1 | 1 | Resv | 100 | 33 | 14.31 |

# CLK


<OrgName>
<OrgAddr1>
<OrgAddr2>
<OrgAddr3>
<OrgAddr4>


PROJECT : BL3

Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| | EXTERNAL CLKGEN | 3B |

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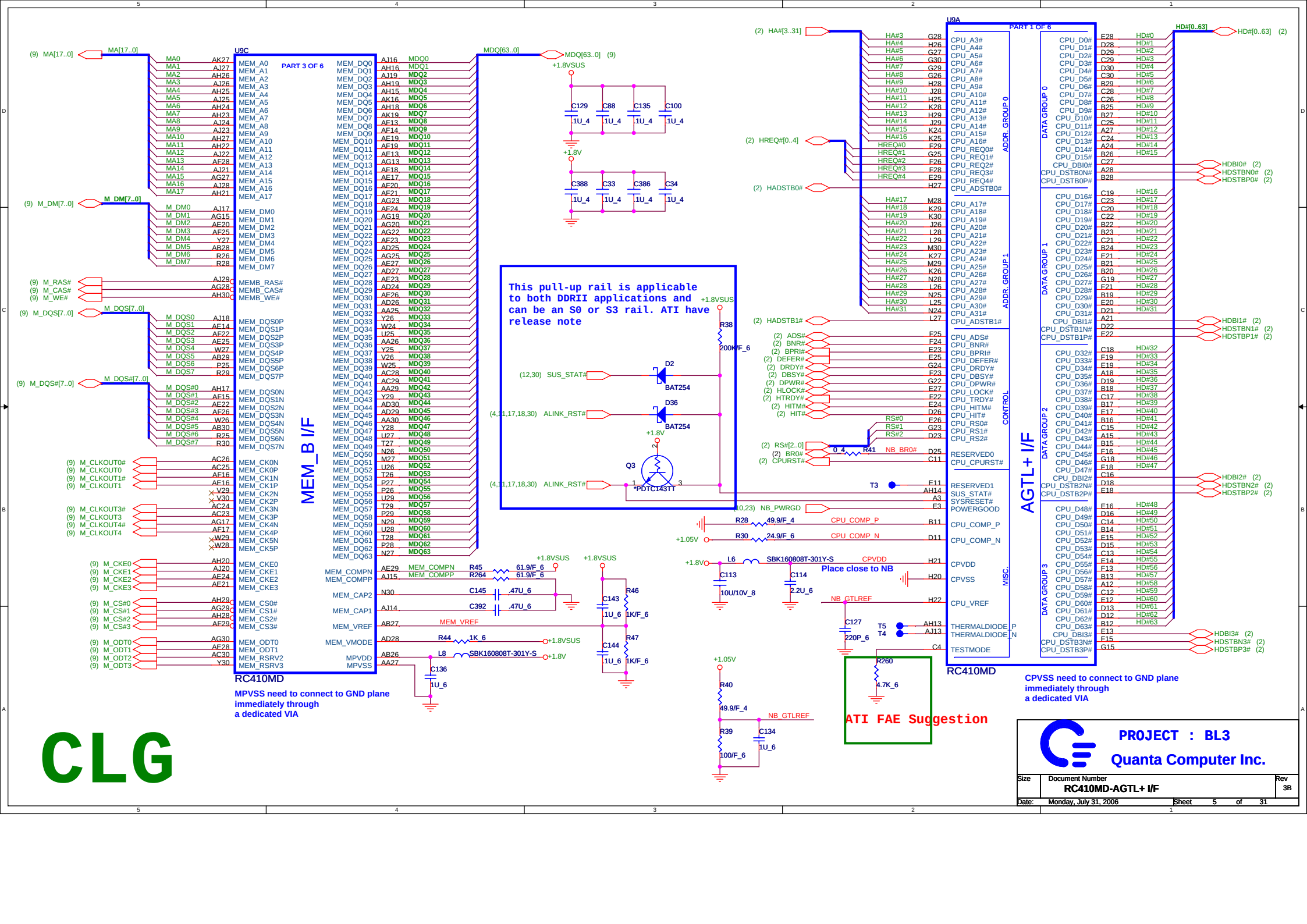
U9C
PART 3 OF 6
MEM_B I/F
RC410MD
MPVSS need to connect to GND plane immediately through a dedicated VIA
This pull-up rail is applicable to both DDRII applications and can be an S0 or S3 rail. ATI have release note
BAT254
BAT254
*PDTC143TT
U9A
PART 1 OF 6
AGTL+ I/F
ADDR. GROUP 0
ADDR. GROUP 1
CONTROL
MISC.
DATA GROUP 0
DATA GROUP 1
DATA GROUP 2
DATA GROUP 3
RC410MD
CPVSS need to connect to GND plane immediately through a dedicated VIA
Place close to NB
ATI FAE Suggestion
CLG
PROJECT : BL3
Quanta Computer Inc.
RC410MD-AGTL+ I/F
Monday, July 31, 2006
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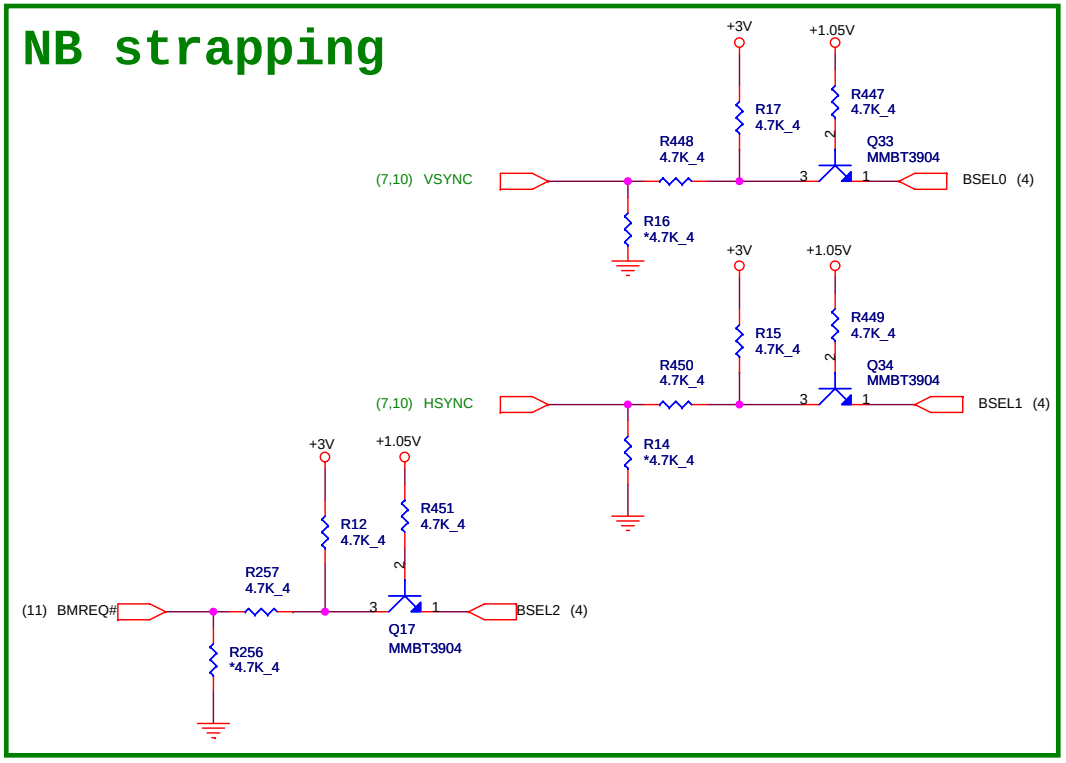
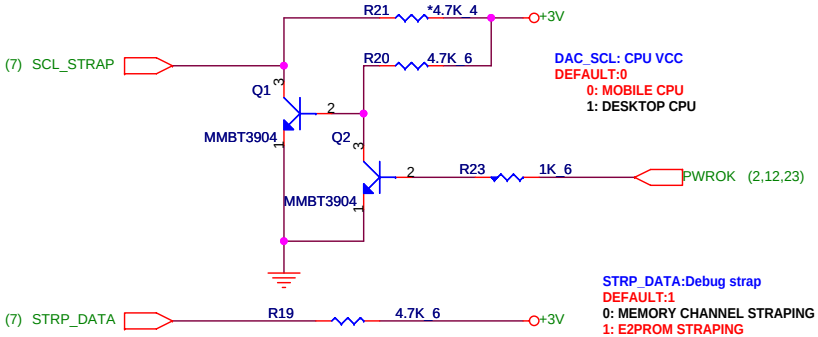
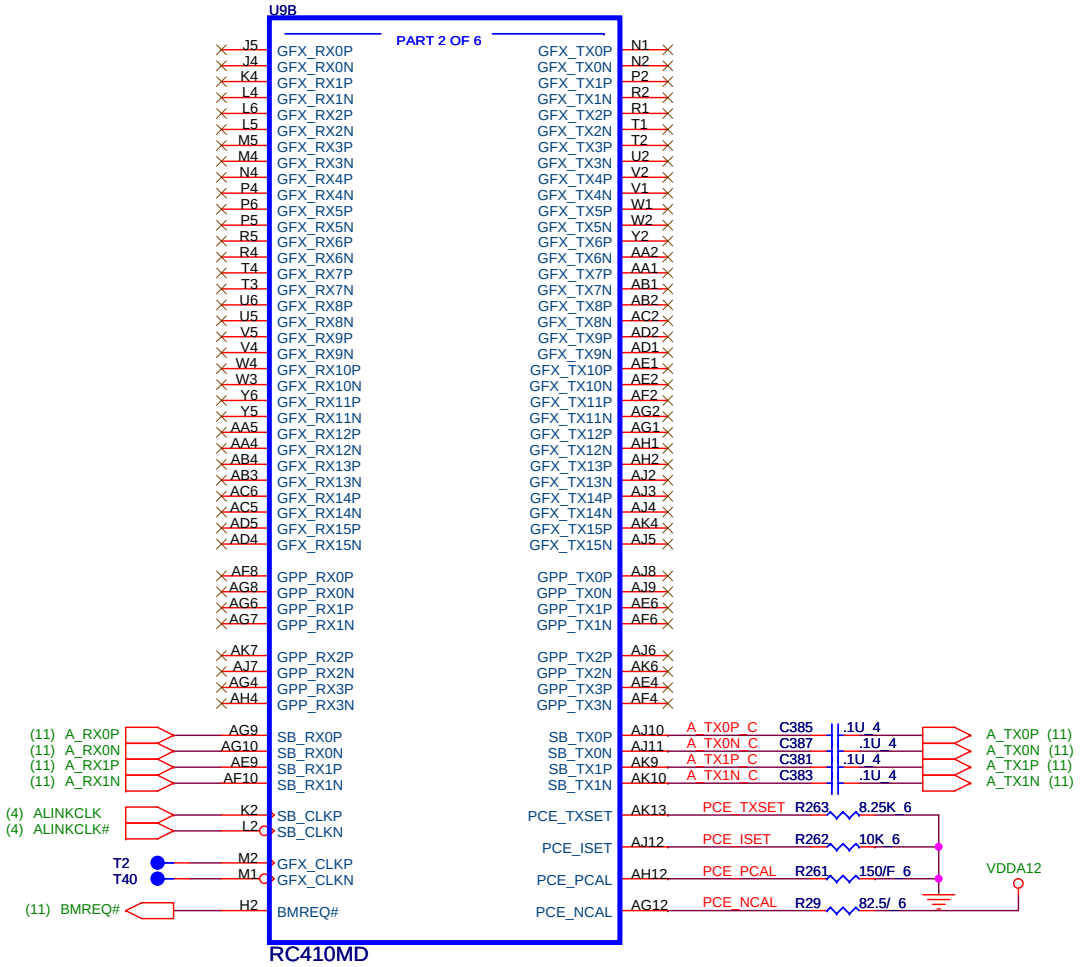
# NB strapping




CLG





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<OrgAddr2>
<OrgAddr3>
<OrgAddr4>


PROJECT : BL3

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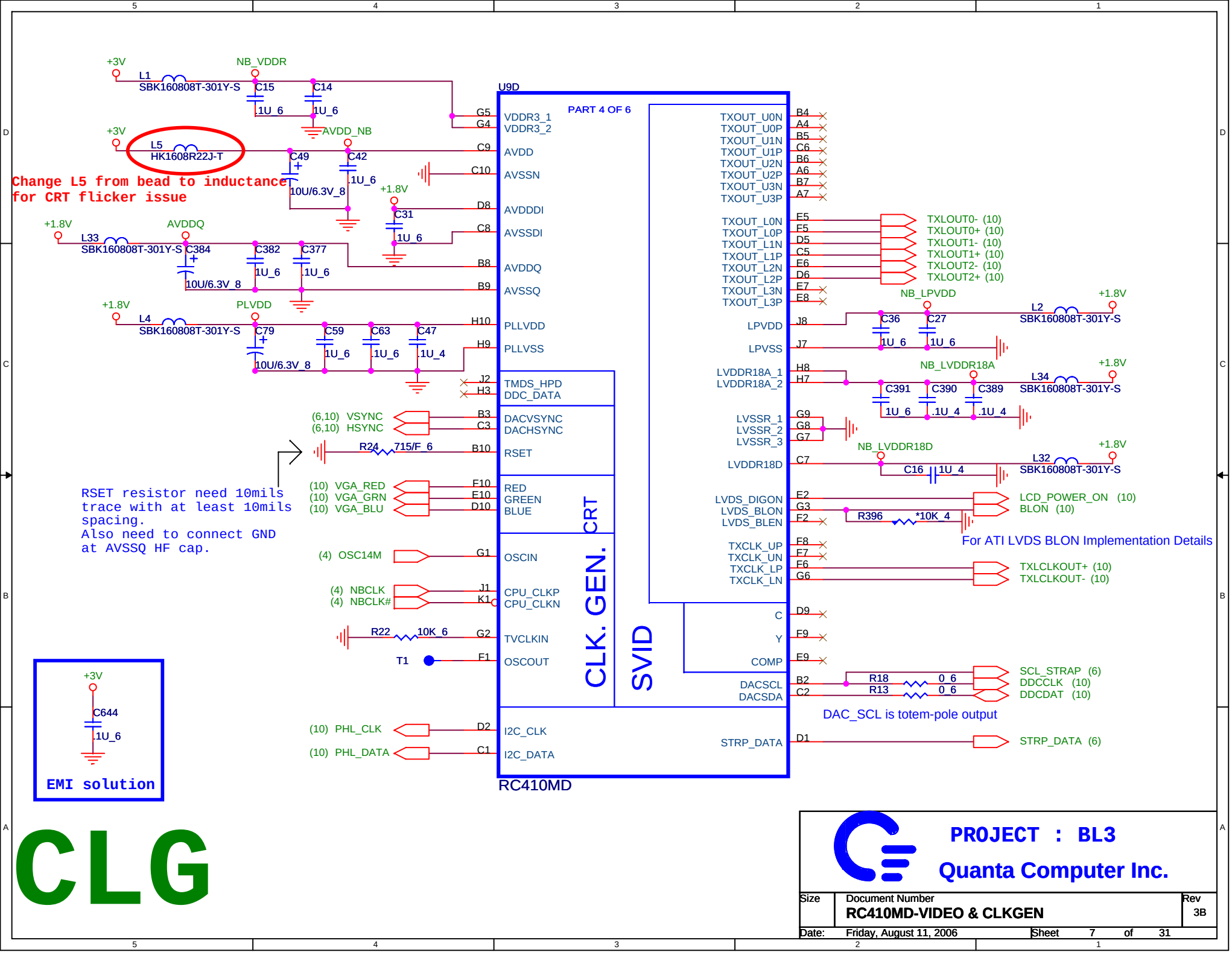
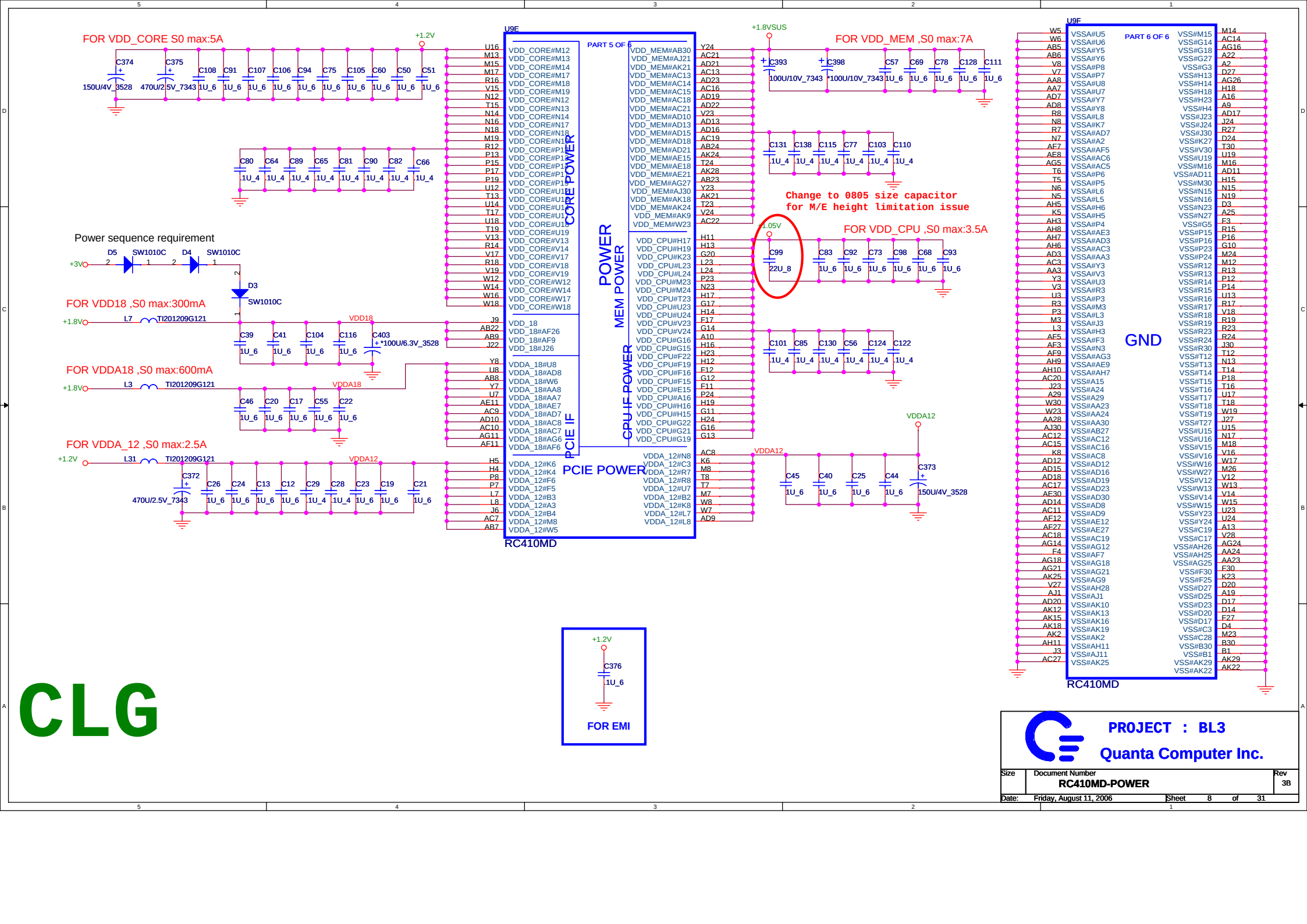
| Size | Document Number | Rev |
|---|---|---|
| | RC410MD-PCIE LINK I/F | 3B |
| Date: Friday, August 11, 2006 | Sheet 6 of 31 | |


U9D
PART 4 OF 6
RC410MD
CLK. GEN.
CRT
SVID
Change L5 from bead to inductance for CRT flicker issue
RSET resistor need 10mils trace with at least 10mils spacing.
Also need to connect GND at AVSSQ HF cap.
For ATI LVDS BLON Implementation Details
DAC_SCL is totem-pole output
EMI solution
+3V
NB_VDDR
AVDD_NB
AVDDQ
PLVDD
NB_LPVDD
NB_LVDDR18A
NB_LVDDR18D
+1.8V
L1 SBK160808T-301Y-S
L5 HK1608R22J-T
L33 SBK160808T-301Y-S
L4 SBK160808T-301Y-S
L2 SBK160808T-301Y-S
L34 SBK160808T-301Y-S
L32 SBK160808T-301Y-S
VDDR3_1
VDDR3_2
AVDD
AVSSN
AVDDDI
AVSSDI
AVDDQ
AVSSQ
PLLVDD
PLLVSS
TMDS_HPD
DDC_DATA
DACVSYNC
DACHSYNC
RSET
RED
GREEN
BLUE
OSCIN
CPU_CLKP
CPU_CLKN
TVCLKIN
OSCOUT
I2C_CLK
I2C_DATA
TXOUT_U0N
TXOUT_U0P
TXOUT_U1N
TXOUT_U1P
TXOUT_U2N
TXOUT_U2P
TXOUT_U3N
TXOUT_U3P
TXOUT_L0N
TXOUT_L0P
TXOUT_L1N
TXOUT_L1P
TXOUT_L2N
TXOUT_L2P
TXOUT_L3N
TXOUT_L3P
LPVDD
LPVSS
LVDDR18A_1
LVDDR18A_2
LVSSR_1
LVSSR_2
LVSSR_3
LVDDR18D
LVDS_DIGON
LVDS_BLON
LVDS_BLEN
TXCLK_UP
TXCLK_UN
TXCLK_LP
TXCLK_LN
C
Y
COMP
DACSCL
DACSDA
STRP_DATA
TXLOUT0- (10)
TXLOUT0+ (10)
TXLOUT1- (10)
TXLOUT1+ (10)
TXLOUT2- (10)
TXLOUT2+ (10)
LCD_POWER_ON (10)
BLON (10)
TXLCLKOUT+ (10)
TXLCLKOUT- (10)
SCL_STRAP (6)
DDCCLK (10)
DDCDAT (10)
STRP_DATA (6)
(6,10) VSYNC
(6,10) HSYNC
(10) VGA_RED
(10) VGA_GRN
(10) VGA_BLU
(4) OSC14M
(4) NBCLK
(4) NBCLK#
(10) PHL_CLK
(10) PHL_DATA
R24 715/F_6
R22 10K_6
R396 *10K_4
R18 0_6
R13 0_6
T1
C644 .1U_6
PROJECT : BL3
Quanta Computer Inc.
Size
Document Number
RC410MD-VIDEO & CLKGEN
Rev 3B
Date: Friday, August 11, 2006
Sheet 7 of 31
CLG


FOR VDD_CORE S0 max:5A
+1.2V
C374 150U/4V_3528
C375 470U/2.5V_7343
C108 C91 C107 C106 C94 C75 C105 C60 C50 C51 1U_6
C80 C64 C89 C65 C81 C90 C82 C66 1U_4
Power sequence requirement
+3V
D5 SW1010C D4 SW1010C
D3 SW1010C
FOR VDD18 ,S0 max:300mA
+1.8V
L7 TI201209G121
VDD18
C39 C41 C104 C116 C403 1U_6 *100U/6.3V_3528
FOR VDDA18 ,S0 max:600mA
+1.8V
L3 TI201209G121
VDDA18
C46 C20 C17 C55 C22 1U_6
FOR VDDA_12 ,S0 max:2.5A
+1.2V
L31 TI201209G121
VDDA12
C372 470U/2.5V_7343
C26 C24 C13 C12 C29 C28 C23 C19 C21 1U_6
U9E
PART 5 OF 6
CORE POWER
VDD_CORE#M12 VDD_CORE#M13 VDD_CORE#M14 VDD_CORE#M17 VDD_CORE#M18 VDD_CORE#M19 VDD_CORE#N12 VDD_CORE#N13 VDD_CORE#N14 VDD_CORE#N17 VDD_CORE#N18 VDD_CORE#P11 VDD_CORE#P12 VDD_CORE#P13 VDD_CORE#P14 VDD_CORE#P15 VDD_CORE#U11 VDD_CORE#U12 VDD_CORE#U13 VDD_CORE#U14 VDD_CORE#U17 VDD_CORE#U18 VDD_CORE#U19 VDD_CORE#V13 VDD_CORE#V14 VDD_CORE#V17 VDD_CORE#V18 VDD_CORE#V19 VDD_CORE#W12 VDD_CORE#W14 VDD_CORE#W17 VDD_CORE#W18
U16 M13 M15 M17 R16 V15 N12 T15 N14 N16 N18 M19 R12 P13 P15 P17 P19 U12 T13 U14 T17 U18 T19 V13 R14 V17 R18 V19 W12 W14 W16 W18
POWER
MEM POWER
VDD_MEM#AB30 VDD_MEM#AJ21 VDD_MEM#AK21 VDD_MEM#AC13 VDD_MEM#AC14 VDD_MEM#AC15 VDD_MEM#AC18 VDD_MEM#AC21 VDD_MEM#AD10 VDD_MEM#AD13 VDD_MEM#AD15 VDD_MEM#AD18 VDD_MEM#AD21 VDD_MEM#AE15 VDD_MEM#AE18 VDD_MEM#AE21 VDD_MEM#AG27 VDD_MEM#AJ30 VDD_MEM#AK18 VDD_MEM#AK24 VDD_MEM#AK9 VDD_MEM#W23
Y24 AC21 AD21 AC13 AD23 AC16 AD19 AD22 V23 AD13 AD16 AC19 AB24 AK24 T24 AK28 AB23 Y23 AK21 T23 V24 AC22
VDD_CPU#H17 VDD_CPU#H19 VDD_CPU#K23 VDD_CPU#L23 VDD_CPU#L24 VDD_CPU#M23 VDD_CPU#M24 VDD_CPU#T23 VDD_CPU#U23 VDD_CPU#U24 VDD_CPU#V23 VDD_CPU#V24 VDD_CPU#G16 VDD_CPU#G15 VDD_CPU#F22 VDD_CPU#F19 VDD_CPU#F16 VDD_CPU#F15 VDD_CPU#E15 VDD_CPU#A16 VDD_CPU#H16 VDD_CPU#H15 VDD_CPU#G22 VDD_CPU#G21 VDD_CPU#G19
H11 H13 G20 L23 L24 P23 N23 H17 G17 H14 F17 G14 A10 H16 H23 H12 F12 G12 F11 P24 H19 G11 H24 G16 G13
CPU IF POWER
PCIE IF
PCIE POWER
VDDA_12#N8 VDDA_12#C3 VDDA_12#R7 VDDA_12#R8 VDDA_12#U7 VDDA_12#B2 VDDA_12#K8 VDDA_12#L7 VDDA_12#L8
AC8 K6 M8 T8 T7 M7 W8 W7 AD9
VDDA_18#U8 VDDA_18#AD8 VDDA_18#W6 VDDA_18#AA8 VDDA_18#AA7 VDDA_18#AE7 VDDA_18#AD7 VDDA_18#AC8 VDDA_18#AC7 VDDA_18#AG6 VDDA_18#AF6
Y8 U8 AB8 Y7 U7 AE11 AC9 AD10 AC10 AG11 AF11
VDDA_12#K6 VDDA_12#K4 VDDA_12#F6 VDDA_12#F5 VDDA_12#B3 VDDA_12#A3 VDDA_12#B4 VDDA_12#M8 VDDA_12#W5
H5 H4 P8 P7 L7 L8 J6 AC7 AB7
VDD_18 VDD_18#AF26 VDD_18#AF9 VDD_18#J26
J9 AB22 AB9 J22
RC410MD
+1.8VSUS
FOR VDD_MEM ,S0 max:7A
C393 100U/10V_7343
C398 *100U/10V_7343
C57 C69 C78 C128 C111 1U_6
C131 C138 C115 C77 C103 C110 1U_4
Change to 0805 size capacitor
for M/E height limitation issue
+1.05V
FOR VDD_CPU ,S0 max:3.5A
C99 22U_8
C83 C92 C73 C98 C68 C93 1U_6
C101 C85 C130 C56 C124 C122 1U_4
VDDA12
C45 C40 C25 C44 1U_6
C373 150U/4V_3528
U9F
PART 6 OF 6
GND
VSSA#U5 VSSA#U6 VSSA#Y5 VSSA#Y6 VSSA#P8 VSSA#P7 VSSA#U8 VSSA#U7 VSSA#Y7 VSSA#Y8 VSSA#L8 VSSA#K7 VSSA#AD7 VSSA#A2 VSSA#AF5 VSSA#AC6 VSSA#AC5 VSSA#P6 VSSA#P5 VSSA#L6 VSSA#L5 VSSA#H6 VSSA#H5 VSSA#P4 VSSA#AE3 VSSA#AD3 VSSA#AC3 VSSA#AA3 VSSA#Y3 VSSA#V3 VSSA#U3 VSSA#R3 VSSA#P3 VSSA#M3 VSSA#L3 VSSA#J3 VSSA#H3 VSSA#F3 VSSA#N3 VSSA#AG3 VSSA#AE9 VSSA#AH7 VSS#A15 VSS#A24 VSS#A29 VSS#AA23 VSS#AA24 VSS#AA30 VSS#AB27 VSS#AC12 VSS#AC16 VSS#AC8 VSS#AD12 VSS#AD16 VSS#AD19 VSS#AD23 VSS#AD30 VSS#AD8 VSS#AD9 VSS#AE12 VSS#AE27 VSS#AC19 VSS#AG12 VSS#AF7 VSS#AG18 VSS#AG21 VSS#AG9 VSS#AH28 VSS#AJ1 VSS#AK10 VSS#AK13 VSS#AK16 VSS#AK19 VSS#AK2 VSS#AH11 VSS#AJ11 VSS#AK25
W5 W6 AB5 AB6 V8 V7 AA8 AA7 AD7 AD8 R8 N8 R7 N7 AF7 AE8 AG5 T6 T5 N6 N5 AH5 K5 AH3 AH8 AH7 AH6 AD3 AC3 AA3 Y3 V3 U3 R3 P3 M3 L3 AF5 AF3 AF9 AH9 AH10 AC20 J23 A29 W30 W23 AA28 AJ30 AC12 AC15 K8 AD12 AD15 AD18 AC17 AE30 AD14 AC11 AF12 AF27 AC18 AG14 F4 AG18 AG21 AK25 V27 AJ1 AD20 AK12 AK15 AK18 AK2 AH11 J3 AC27
VSS#M15 VSS#G14 VSS#G18 VSS#G27 VSS#G3 VSS#H13 VSS#H14 VSS#H18 VSS#H23 VSS#H4 VSS#J23 VSS#J24 VSS#J30 VSS#K27 VSS#V30 VSS#U19 VSS#M16 VSS#AD11 VSS#M30 VSS#N15 VSS#N16 VSS#N23 VSS#N27 VSS#G5 VSS#P15 VSS#P16 VSS#P23 VSS#P24 VSS#R12 VSS#R13 VSS#R14 VSS#R15 VSS#R16 VSS#R17 VSS#R18 VSS#R19 VSS#R23 VSS#R24 VSS#R30 VSS#T12 VSS#T13 VSS#T14 VSS#T15 VSS#T16 VSS#T17 VSS#T18 VSS#T19 VSS#T27 VSS#U15 VSS#U16 VSS#V15 VSS#V16 VSS#W16 VSS#W27 VSS#V12 VSS#W13 VSS#V14 VSS#W15 VSS#U23 VSS#Y23 VSS#Y24 VSS#C19 VSS#C17 VSS#AH26 VSS#AH25 VSS#AG25 VSS#F30 VSS#F25 VSS#D27 VSS#D25 VSS#D23 VSS#D20 VSS#D17 VSS#C3 VSS#C28 VSS#B30 VSS#B1 VSS#AK29 VSS#AK22
M14 AC14 AG16 A22 A2 D27 AG26 H18 A16 A9 AD17 J24 R27 D24 T30 U19 M16 AD11 H15 N15 N19 D3 A25 E3 R15 P16 G10 M24 M12 R13 P12 P14 U13 R17 V18 R19 R23 R24 J30 T12 N13 T14 P18 T16 U17 T18 W19 J27 U15 N17 M18 V16 W17 M26 V12 W13 V14 W15 U23 U24 A13 V28 AG24 AA24 AA23 F30 K23 D20 A19 D17 D14 F27 D4 M23 B30 B1 AK29 AK22
RC410MD
+1.2V
C376 1U_6
FOR EMI
CLG
PROJECT : BL3
Quanta Computer Inc.
Size
Document Number
RC410MD-POWER
Rev 3B
Date: Friday, August 11, 2006
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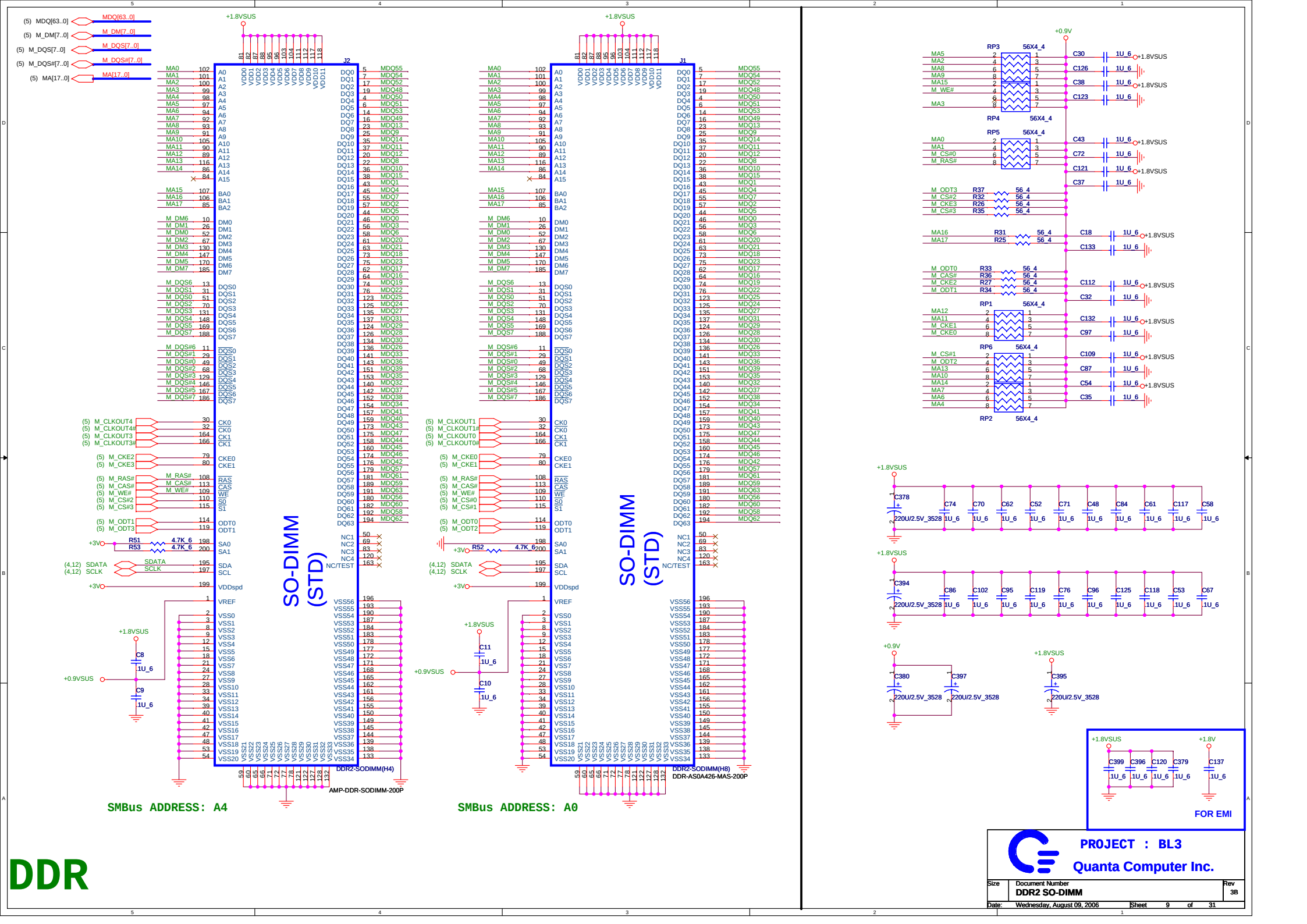
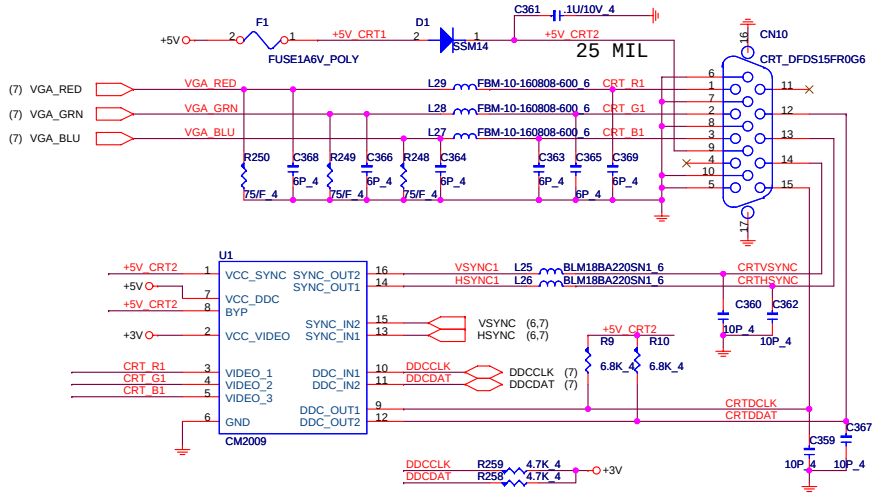
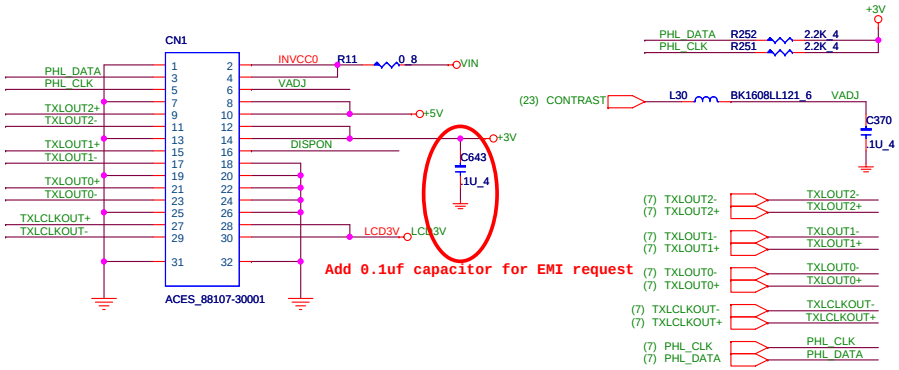
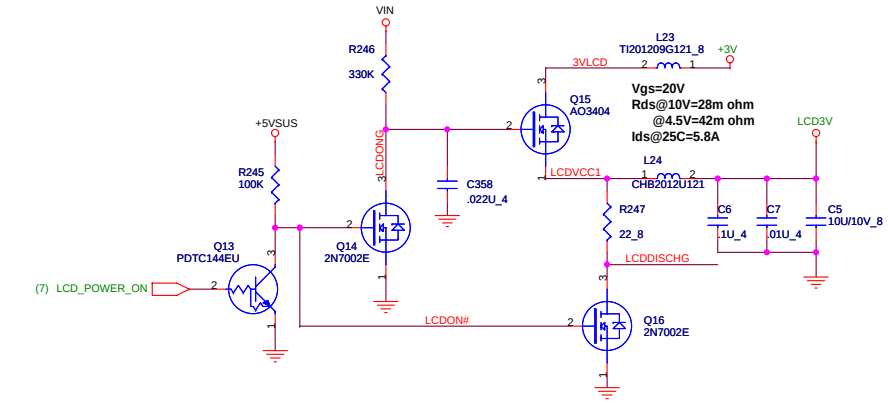

(5) MDQ[63..0]
(5) M_DM[7..0]
(5) M_DQS[7..0]
(5) M_DQS#[7..0]
(5) MA[17..0]
MDQ[63..0]
M_DM[7..0]
M_DQS[7..0]
M_DQS#[7..0]
MA[17..0]
+1.8VSUS
J2
SO-DIMM (STD)
DDR2-SODIMM(H4)
AMP-DDR-SODIMM-200P
SMBus ADDRESS: A4
J1
SO-DIMM (STD)
DDR2-SODIMM(H8)
DDR-AS0A426-MAS-200P
SMBus ADDRESS: A0
+0.9V
RP3 56X4_4
RP4 56X4_4
RP5 56X4_4
RP1 56X4_4
RP6 56X4_4
RP2 56X4_4
+3V
+0.9VSUS
+1.8V
FOR EMI
DDR
PROJECT : BL3
Quanta Computer Inc.
Size
Document Number
DDR2 SO-DIMM
Rev
3B
Date: Wednesday, August 09, 2006
Sheet 9 of 31

# CRT PORT

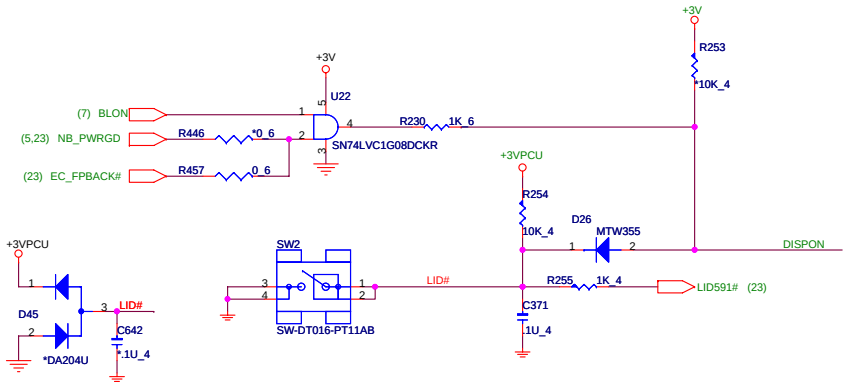


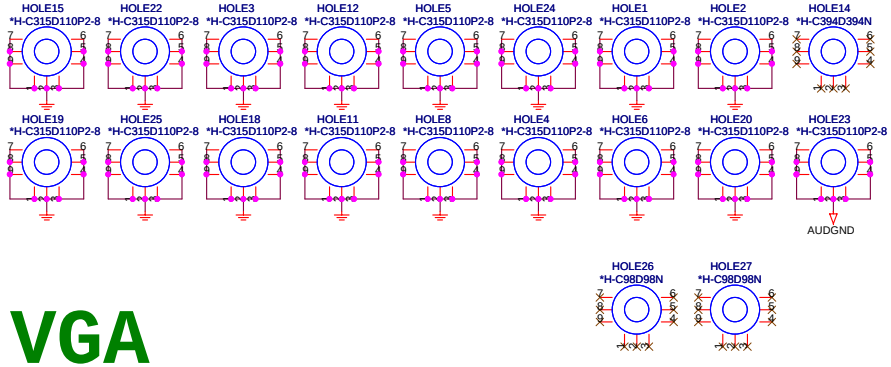

# LCD Connector




# Lid Switch




## EMI PAD

PAD4 *EMI_PAD
PAD3 *EMI_PAD

## Modem

PAD1 *Modem_PAD
PAD2 *Modem_PAD

## NB SINK

HOLE13 H-C236D142P2-8
HOLE7 H-C236D142P2-8

## CPU SINK

HOLE10 H-C295D142P2-8
HOLE9 H-C295D142P2-8
HOLE16 H-C295D142P2-8
HOLE17 H-C295D142P2-8

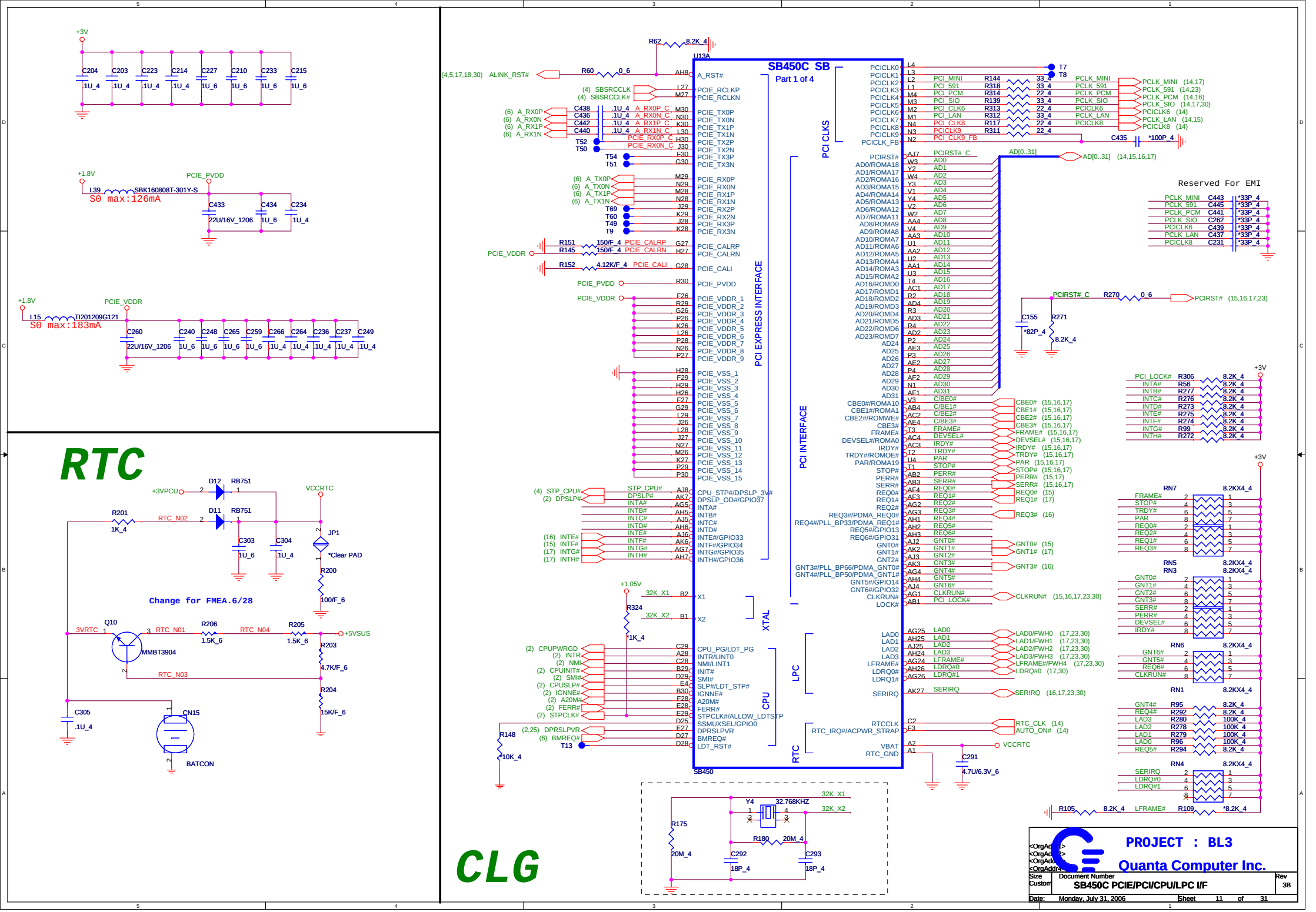
C645 +3V VIN *.1U_4
EMI solution

# VGA

PROJECT : BL3
Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| | VGA Ports, LID, & HOLES | 3B |

Date: Friday, August 11, 2006 Sheet 10 of 31


+3V
C204 C203 C223 C214 C227 C210 C233 C215
1U_4 1U_4 1U_4 1U_4 1U_6 1U_6 1U_6 1U_6
+1.8V
PCIE_PVDD
L39 SBK160808T-301Y-S
S0 max:126mA
C433 C434 C234
22U/16V_1206 1U_6 1U_4
+1.8V
PCIE_VDDR
L15 TI201209G121
S0 max:183mA
C260 C240 C248 C265 C259 C266 C264 C236 C237 C249
22U/16V_1206 1U_6 1U_6 1U_6 1U_6 1U_4 1U_4 1U_4 1U_4 1U_4 1U_4
RTC
+3VPCU
D12 RB751
D11 RB751
VCCRTC
R201 1K_4
RTC_N02
C303 1U_6
C304 1U_4
JP1
*Clear PAD
R200 100/F_6
Change for FMEA.6/28
Q10
3VRTC
RTC_N01
R206 1.5K_6
RTC_N04
R205 1.5K_6
+5VSUS
MMBT3904
R203 4.7K/F_6
RTC_N03
R204 15K/F_6
C305 .1U_4
CN15
BATCON
R62 8.2K_4
U13A
SB450C SB
Part 1 of 4
(4,5,17,18,30) ALINK_RST#
R60 0_6
A_RST#
(4) SBSRCCLK
(4) SBSRCCLK#
PCIE_RCLKP
PCIE_RCLKN
(6) A_RX0P
(6) A_RX0N
(6) A_RX1P
(6) A_RX1N
C438 C436 C442 C440 .1U_4
A_RX0P_C
A_RX0N_C
A_RX1P_C
A_RX1N_C
PCIE_RX0P_C
PCIE_RX0N_C
T52 T50
T54 T51
PCIE_TX0P
PCIE_TX0N
PCIE_TX1P
PCIE_TX1N
PCIE_TX2P
PCIE_TX2N
PCIE_TX3P
PCIE_TX3N
(6) A_TX0P
(6) A_TX0N
(6) A_TX1P
(6) A_TX1N
T69 T60 T49 T9
PCIE_RX0P
PCIE_RX0N
PCIE_RX1P
PCIE_RX1N
PCIE_RX2P
PCIE_RX2N
PCIE_RX3P
PCIE_RX3N
PCIE_VDDR
R151 150/F_4 PCIE_CALRP
R145 150/F_4 PCIE_CALRN
PCIE_CALRP
PCIE_CALRN
R152 4.12K/F_4 PCIE_CALI
PCIE_CALI
PCIE_PVDD
PCIE_VDDR_1
PCIE_VDDR_2
PCIE_VDDR_3
PCIE_VDDR_4
PCIE_VDDR_5
PCIE_VDDR_6
PCIE_VDDR_7
PCIE_VDDR_8
PCIE_VDDR_9
PCIE_VSS_1
PCIE_VSS_2
PCIE_VSS_3
PCIE_VSS_4
PCIE_VSS_5
PCIE_VSS_6
PCIE_VSS_7
PCIE_VSS_8
PCIE_VSS_9
PCIE_VSS_10
PCIE_VSS_11
PCIE_VSS_12
PCIE_VSS_13
PCIE_VSS_14
PCIE_VSS_15
PCI EXPRESS INTERFACE
(4) STP_CPU#
(2) DPSLP#
STP_CPU#
DPSLP#
CPU_STP#/DPSLP_3V#
DPSLP_OD#/GPIO37
INTA# INTB# INTC# INTD# INTE# INTF# INTG# INTH#
(16) INTE#
(15) INTF#
(17) INTG#
(17) INTH#
INTA#
INTB#
INTC#
INTD#
INTE#/GPIO33
INTF#/GPIO34
INTG#/GPIO35
INTH#/GPIO36
+1.05V
32K_X1
32K_X2
R324 *1K_4
X1
X2
XTAL
(2) CPUPWRGD
(2) INTR
(2) NMI
(2) CPUINIT#
(2) SMI#
(2) CPUSLP#
(2) IGNNE#
(2) A20M#
(2) FERR#
(2) STPCLK#
CPU_PG/LDT_PG
INTR/LINT0
NMI/LINT1
INIT#
SMI#
SLP#/LDT_STP#
IGNNE#
A20M#
FERR#
STPCLK#/ALLOW_LDTSTP
SSMUXSEL/GPIO0
DPRSLPVR
BMREQ#
LDT_RST#
CPU
(2,25) DPRSLPVR
(6) BMREQ#
T13
R148 10K_4
SB450
PCI CLKS
PCICLK0
PCICLK1
PCICLK2
PCICLK3
PCICLK4
PCICLK5
PCICLK6
PCICLK7
PCICLK8
PCICLK9
PCICLK_FB
T7
T8
PCI_MINI R144 33_4 PCLK_MINI
PCI_591 R318 33_4 PCLK_591
PCI_PCM R314 22_4 PCLK_PCM
PCI_SIO R139 33_4 PCLK_SIO
PCI_CLK6 R313 22_4 PCICLK6
PCI_LAN R312 33_4 PCLK_LAN
PCI_CLK8 R117 22_4 PCICLK8
PCICLK9 R311 22_4
PCI_CLK9_FB
PCLK_MINI (14,17)
PCLK_591 (14,23)
PCLK_PCM (14,16)
PCLK_SIO (14,17,30)
PCICLK6 (14)
PCLK_LAN (14,15)
PCICLK8 (14)
C435 *100P_4
PCI INTERFACE
PCIRST#
AD0/ROMA18
AD1/ROMA17
AD2/ROMA16
AD3/ROMA15
AD4/ROMA14
AD5/ROMA13
AD6/ROMA12
AD7/ROMA11
AD8/ROMA9
AD9/ROMA8
AD10/ROMA7
AD11/ROMA6
AD12/ROMA5
AD13/ROMA4
AD14/ROMA3
AD15/ROMA2
AD16/ROMD0
AD17/ROMD1
AD18/ROMD2
AD19/ROMD3
AD20/ROMD4
AD21/ROMD5
AD22/ROMD6
AD23/ROMD7
AD24 AD25 AD26 AD27 AD28 AD29 AD30 AD31
PCIRST# C
AD0 AD1 AD2 AD3 AD4 AD5 AD6 AD7 AD8 AD9 AD10 AD11 AD12 AD13 AD14 AD15 AD16 AD17 AD18 AD19 AD20 AD21 AD22 AD23 AD24 AD25 AD26 AD27 AD28 AD29 AD30 AD31
AD[0..31]
AD[0..31] (14,15,16,17)
C/BE0# C/BE1# C/BE2# C/BE3#
CBE0#/ROMA10
CBE1#/ROMA1
CBE2#/ROMWE#
CBE3#
FRAME#
DEVSEL#/ROMA0
IRDY#
TRDY#/ROMOE#
PAR/ROMA19
STOP#
PERR#
SERR#
REQ0#
REQ1#
REQ2#
REQ3#/PDMA_REQ0#
REQ4#/PLL_BP33/PDMA_REQ1#
REQ5#/GPIO13
REQ6#/GPIO31
GNT0#
GNT1#
GNT2#
GNT3#/PLL_BP66/PDMA_GNT0#
GNT4#/PLL_BP50/PDMA_GNT1#
GNT5#/GPIO14
GNT6#/GPIO32
CLKRUN#
LOCK#
CBE0# (15,16,17)
CBE1# (15,16,17)
CBE2# (15,16,17)
CBE3# (15,16,17)
FRAME# (15,16,17)
DEVSEL# (15,16,17)
IRDY# (15,16,17)
TRDY# (15,16,17)
PAR (15,16,17)
STOP# (15,16,17)
PERR# (15,17)
SERR# (15,16,17)
REQ0# (15)
REQ1# (17)
REQ3# (16)
GNT0# (15)
GNT1# (17)
GNT3# (16)
CLKRUN# (15,16,17,23,30)
PCI_LOCK#
LAD0 LAD1 LAD2 LAD3
LFRAME#
LDRQ0#
LDRQ1#
SERIRQ
LAD0/FWH0 (17,23,30)
LAD1/FWH1 (17,23,30)
LAD2/FWH2 (17,23,30)
LAD3/FWH3 (17,23,30)
LFRAME#/FWH4 (17,23,30)
LDRQ#0 (17,30)
SERIRQ (16,17,23,30)
LPC
RTCCLK
RTC_IRQ#/ACPWR_STRAP
VBAT
RTC_GND
RTC_CLK (14)
AUTO_ON# (14)
VCCRTC
C291 4.7U/6.3V_6
RTC
Reserved For EMI
PCLK_MINI C443 *33P_4
PCLK_591 C445 *33P_4
PCLK_PCM C441 *33P_4
PCLK_SIO C262 *33P_4
PCICLK6 C439 *33P_4
PCLK_LAN C437 *33P_4
PCICLK8 C231 *33P_4
PCIRST# (15,16,17,23)
PCIRST#_C R270 0_6
C155 *82P_4
R271 8.2K_4
+3V
PCI_LOCK# R306 8.2K_4
INTA# R56 8.2K_4
INTB# R277 8.2K_4
INTC# R276 8.2K_4
INTD# R273 8.2K_4
INTE# R275 8.2K_4
INTF# R274 8.2K_4
INTG# R99 8.2K_4
INTH# R272 8.2K_4
RN7 8.2KX4_4
FRAME# STOP# TRDY# PAR REQ0# REQ2# REQ1# REQ3#
RN5 8.2KX4_4
RN3 8.2KX4_4
GNT0# GNT1# GNT2# GNT3# SERR# PERR# DEVSEL# IRDY#
RN6 8.2KX4_4
GNT6# GNT5# REQ6# CLKRUN#
RN1 8.2KX4_4
GNT4# REQ4# LAD3 LAD2 LAD1 LAD0 REQ5#
RN4 8.2KX4_4
SERIRQ LDRQ#0 LDRQ#1
R105 8.2K_4 LFRAME# R109 *8.2K_4
Y4 32.768KHZ
R175 20M_4
R180 20M_4
C292 18P_4
C293 18P_4
CLG
PROJECT : BL3
Quanta Computer Inc.
Size Custom
Document Number
SB450C PCIE/PCI/CPU/LPC I/F
Rev 3B
Date: Monday, July 31, 2006
Sheet 11 of 31

## PU/PD

| | | |
|---|---|---|
| SUSB# | R181 | 4.7K_4 |
| SUSC# | R160 | 4.7K_4 |
| DNBSWON# | R179 | 4.7K_4 |
| TEMP_ALARM# | R184 | 4.7K_4 |
| SBPME# | R182 | 4.7K_4 |
| SWI# | R170 | 10K_4 |
| SCI# | R174 | 10K_4 |
| SUS_STAT# | R178 | *10K_4 |
| GPM7# | R185 | 10K_4 |
| GEVENT8# | R171 | 10K_4 |
| H_THERMTRIP# | R165 | 10K_4 |
| EMAIL_LED# | R183 | 4.7K_4 |

| | | |
|---|---|---|
| GPIO11 | R167 | 10K_4 |
| GPIO3 | R176 | 10K_4 |
| PCSPK | R333 | 10K_4 |
| GPIO12 | R157 | 10K_4 |

| | | |
|---|---|---|
| GPIO6 | R191 | 10K_4 |
| ROM_CS#/GPIO1 | R158 | 10K_4 |
| GPIO4 | R163 | 10K_4 |
| CD_SDIN1 | R161 | 10K_4 |
| CD_SDIN0 | R150 | 10K_4 |
| AC_BITCLK_R | R166 | 10K_4 |

+3V_S5 / +3V

| | | |
|---|---|---|
| R81 | 10K_4 | RCIN# |
| R192 | 4.7K_4 | EXTEVNT1# |
| R335 | 4.7K_4 | FPBACK# |
| R186 | 2.2K_4 | SDATA |
| R193 | 2.2K_4 | SCLK |

**With CRT/Modem, Without SIO**

| | | | | | |
|---|---|---|---|---|---|
| R334 | 4.7K_4 | GPIO7 | R463 | *10K_4 |
| R366 | *4.7K_4 | GPIO8 | R164 | 10K_4 |
| R403 | *4.7K_4 | GPIO9 | R172 | 10K_4 |

| Configuration Table | GPIO9 PIN | GPIO8 PIN | GPIO7 PIN |
|---|---|---|---|
| CRT (default) | LOW | | |
| W/O CRT | HIGH | | |
| Modem (default) | | LOW | |
| W/O Modem | | HIGH | |
| RS-232 (default) | | | LOW |
| W/O RS-232 | | | HIGH |

## USB power

+3V_S5

| | | |
|---|---|---|
| KBSMI# | R196 | 4.7K_4 |
| USB_OCP1# | R197 | 10K_4 |
| | RN2 | 10KX4_4 |
| USB_OCP4# | 2 4 | 1 3 |
| USB_OCP3# | 6 | 5 |
| USB_OCP2# | 8 | 7 |

+3V_S5

| | | |
|---|---|---|
| LUSB1 | R194 | 10K_4 |
| LUSB2 | R195 | 10K_4 |

USB power use S3 power,But
Over current signal datasheet
is S5 only,But ATI FAE say use
S3 is ok

+3VSUS — L16 TI201209G121 — AVDD_USB

S0 max:382.7mA

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| C263 | C273 | C269 | C268 | C284 | C272 | C285 | C280 | C283 |
| 22U/16V_1206 | 1U_6 | 1U_6 | 1U_6 | 1U_6 | 1U_6 | 1U_4 | 1U_4 | 1U_4 |

+3VSUS — L17 SBK160808T-301Y-S — +3.3V_AVDDC

S0 max:11.7mA

| | | | |
|---|---|---|---|
| C296 | C294 | C286 |
| 22U/16V_1206 | 1U_6 | 1U_4 |

CD_BITCLKA_MD — C446 22P_4

**CLG**

## U13D — SB450C SB — Part 4 of 4

| | | |
|---|---|---|
| TEMP_ALARM# | C6 | TALERT#/TEMP_ALERT#/GPIO10 |
| EMAIL_LED# | D5 | BLINK/AZ_SDIN3/GPM6# |
| SBPME# | C4 | PCI_PME#/GEVENT4# |
| SCI# | D3 | RI#/EXTEVNT0# |
| SUSB# | B4 | SLP_S3# |
| SUSC# | E3 | SLP_S5# |
| DNBSWON# | B3 | PWR_BTN# |
| | C3 | PWR_GOOD |
| | D4 | SUS_STAT# |
| | F2 | TEST1 |
| | E2 | TEST0 |
| GATEA20 | AJ26 | GA20IN |
| RCIN# | AJ27 | KBRST# |
| H_THERMTRIP# | D6 | SMBALERT#/THRMTRIP#/GEVENT2# |
| SWI# | C5 | LPC_PME#/GEVENT3# |
| EXTEVNT1# | A25 | LPC_SMI#/EXTEVNT1# |
| PROCHOT# | D8 | VOLT_ALERT#/GEVENT5# |
| GPM7# | D7 | SYS_RESET#/GPM7# |
| GEVENT8# | D2 | WAKE#/GEVENT8# |
| RSMRST# | D1 | RSMRST# |
| SB_14M_X1 | A23 | 14M_X1/OSC |
| SB_14M_X2 | B23 | 14M_X2 |
| | AK24 | SIO_CLK |
| ROM_CS#/GPIO1 | B25 | ROM_CS#/GPIO1 |
| GPIO6 | C25 | GHI#/GPIO6 |
| GPIO7 | C23 | VGATE/GPIO7 |
| GPIO4 | D24 | AGP_STP#/GPIO4 |
| FPBACK# | D23 | AGP_BUSY#/GPIO5 |
| GPIO3 | A27 | FANOUT0/GPIO3 |
| PCSPK | C24 | SPKR/GPIO2 |
| SCLK | A26 | SCL0/GPOC0# |
| SDATA | B26 | SDA0/GPOC1# |
| GPIO9 | B27 | DDC1_SCL/GPIO9 |
| GPIO8 | C26 | DDC1_SDA/GPIO8 |
| GPIO11 | C27 | DDC2_SCL/GPIO11 |
| GPIO12 | D26 | DDC2_SDA/GPIO12 |
| AC_BITCLK_R | J2 | AZ_BITCLK |
| | K3 | 48M_AZ |
| AC_DATA_OUT_R | J3 | AZ_SDOUT |
| | K2 | AZ_SYNC |
| AC_SYNC_R | | |
| | G1 | AC_BITCLK |
| | G2 | AC_SDOUT |
| CD_SDIN0 | H4 | ACZ_SDIN0 |
| CD_SDIN1 | G3 | ACZ_SDIN1 |
| | G4 | ACZ_SDIN2 |
| | H1 | AC_SYNC |
| | H3 | AC_RST# |
| | H2 | SPDIF_OUT |

ACPI / WAKE UP EVENTS · CLK / RST · GPIO · (NOT USED) · AC97

| | | |
|---|---|---|
| 48M_X1/USBCLK | A15 | SB_48M_X1 |
| 48M_X2 | B15 | SB_48M_X2 |
| USB_RCOMP | C15 | USB_RCOMP |
| USB_VREFOUT | D16 | T14 |
| USB_ATEST1 | C16 | T58 |
| USB_ATEST0 | D15 | T59 |
| USB_OC0#/GPM0# | B8 | KBSMI# (17,23) |
| USB_OC1#/GPM1# | C8 | USB_OCP1# |
| USB_OC2#/FANOUT1/GPM2# | C7 | USB_OCP2# |
| USB_OC3#/GPM3# | B7 | USB_OCP3# |
| USB_OC4#/GPM4# | B6 | USB_OCP4# |
| USB_OC5#/AZ_RST#/GPM5# | A6 | AZ_RST# |
| USB_OC6#/FAN_ALERT#/GEVENT6# | B5 | LUSB1 |
| USB_OC7#/CASE_ALERT#/GEVENT7# | A5 | LUSB2 |
| USB_HSDP7+ | A11 | |
| USB_HSDM7- | B11 | |
| USB_HSDP6+ | A10 | |
| USB_HSDM6- | B10 | |
| USB_HSDP5+ | A14 | |
| USB_HSDM5- | B14 | |
| USB_HSDP4+ | A13 | |
| USB_HSDM4- | B13 | |
| USB_HSDP3+ | A18 | |
| USB_HSDM3- | B18 | |
| USB_HSDP2+ | A17 | USBP2+ (17) |
| USB_HSDM2- | B17 | USBP2- (17) |
| USB_HSDP1+ | A21 | |
| USB_HSDM1- | B21 | |
| USB_HSDP0+ | A20 | USBP3+ (17) |
| USB_HSDM0- | B20 | USBP3- (17) |

USB INTERFACE · USB PWR

| | | |
|---|---|---|
| AVDDTX_0 | C21 | AVDD_USB |
| AVDDTX_1 | C18 | |
| AVDDTX_2 | D13 | |
| AVDDTX_3 | D10 | |
| AVDDRX_0 | D20 | |
| AVDDRX_1 | D17 | |
| AVDDRX_2 | C14 | |
| AVDDRX_3 | C11 | |
| AVDDC | A16 | +3.3V_AVDDC |
| AVSSC | B16 | |
| AVSS_USB_1 | A9 | |
| AVSS_USB_2 | A12 | |
| AVSS_USB_3 | A19 | |
| AVSS_USB_4 | A22 | |
| AVSS_USB_5 | B9 | |
| AVSS_USB_6 | B12 | |
| AVSS_USB_7 | B19 | |
| AVSS_USB_8 | B22 | |
| AVSS_USB_9 | C9 | |
| AVSS_USB_10 | C10 | |
| AVSS_USB_11 | C12 | |
| AVSS_USB_12 | C13 | |
| AVSS_USB_13 | C17 | |
| AVSS_USB_14 | C19 | |
| AVSS_USB_15 | C20 | |
| AVSS_USB_16 | C22 | |
| AVSS_USB_17 | D9 | |
| AVSS_USB_18 | D11 | |
| AVSS_USB_19 | D12 | |
| AVSS_USB_20 | D14 | |
| AVSS_USB_21 | D18 | |
| AVSS_USB_22 | D19 | |
| AVSS_USB_23 | D21 | |
| AVSS_USB_24 | D22 | |

SB450

| | | |
|---|---|---|
| R188 | 0_6 | USBCLK (4) |
| R189 | *0_6 | |
| R190 | *0_6 | |
| R187 | 11.8K/F_6 | |
| R337 | 33_4 | CD_RESET#_MD (21) |
| R336 | 33_4 | CD_RESET# (19) |
| R332 | 10K_4 | +3V_S5 |

| | | | |
|---|---|---|---|
| (23) SCI# | R328 | 10K_4 | |
| (16,23) SUSB# | R329 | 10K_4 | |
| (23) SUSC# | | | |
| (23) DNBSWON# | | | |
| (2,6,23) PWROK | | | |
| (5,30) SUS_STAT# | | | |

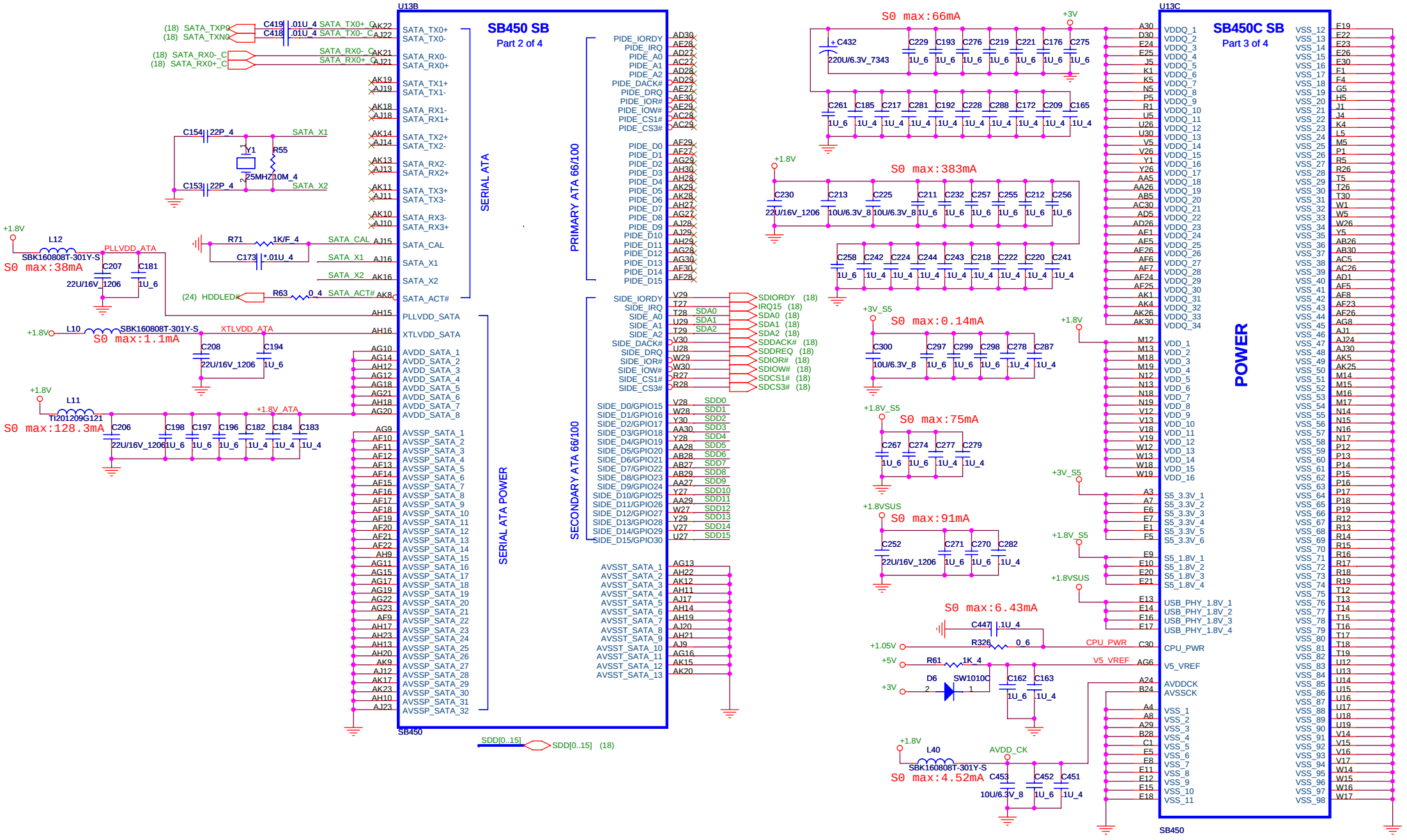
| | | |
|---|---|---|
| (23) GATEA20 | | |
| (23) RCIN# | | |
| (23) SWI# | | |
| (2,25) PROCHOT# | R156 | 330_4 |
| +3V_S5 | | |
| (23) RSMRST# | | |

22ms delay

| | | |
|---|---|---|
| (19) CD_BITCLKA | R327 | 33_4 |
| (21) CD_BITCLKA_MD | R162 | 33_4 |
| | R141 | *10K_4 |
| (19) CD_SDOUTA | R322 | 33_4 |
| (21) CD_SDOUTA_MD | R155 | 33_4 |
| (19) CD_SYNC | R319 | 33_4 |
| (21) CD_SYNC_MD | R154 | 33_4 |
| (14) AC_SDOUT | T53 | |
| (19) CD_SDIN0 | | |
| (21) CD_SDIN1 | | |
| | T11 | |
| | T12 | |
| | T10 | |
| (14) SB_SPDIF_OUT | | |

| | | |
|---|---|---|
| (4) SB_OSCIN | R169 | 0_4 |
| C289 | *33P_4 | |
| | R173 | *0-4 SB_14M_X1 |
| Y3 | *14.318MHz | R177 *1M_4 |
| C290 | *33P_4 | |
| | R168 | *0-4 SB_14M_X2 |

| | | | |
|---|---|---|---|
| PROJECT : BL3 | | | |
| Quanta Computer Inc. | | | |
| Size: Custom | Document Number: SB450C ACPI/GPIO/USB/AC97 | | Rev: 3B |
| Date: Monday, July 31, 2006 | Sheet 12 of 31 | | |

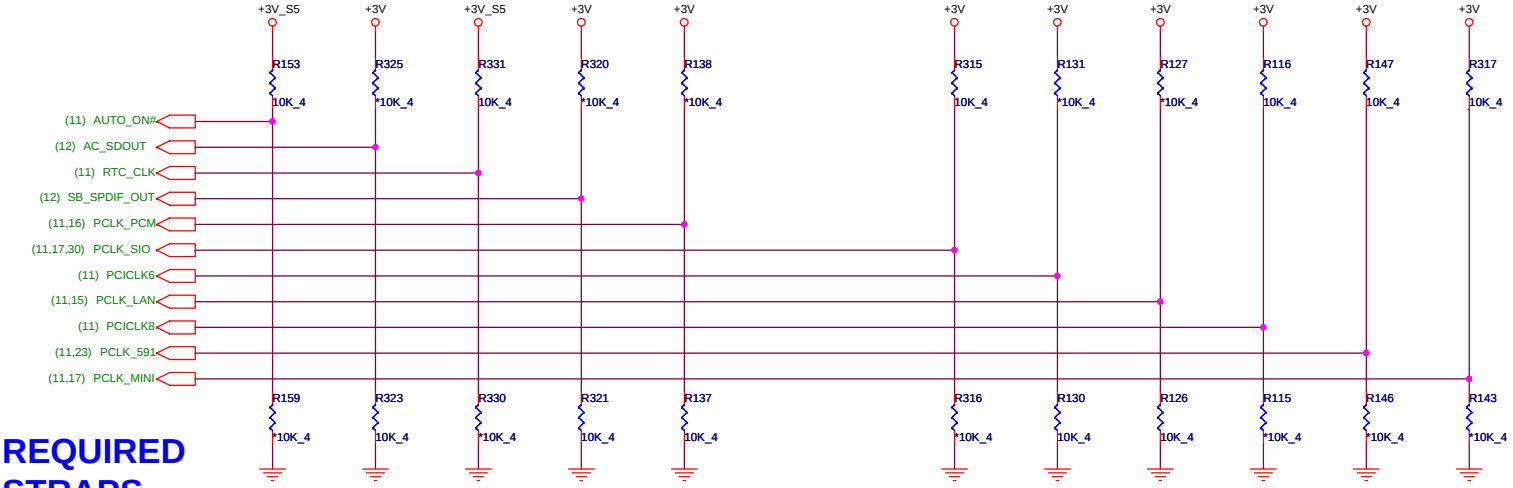



CLG

PROJECT : BL3

Quanta Computer Inc.

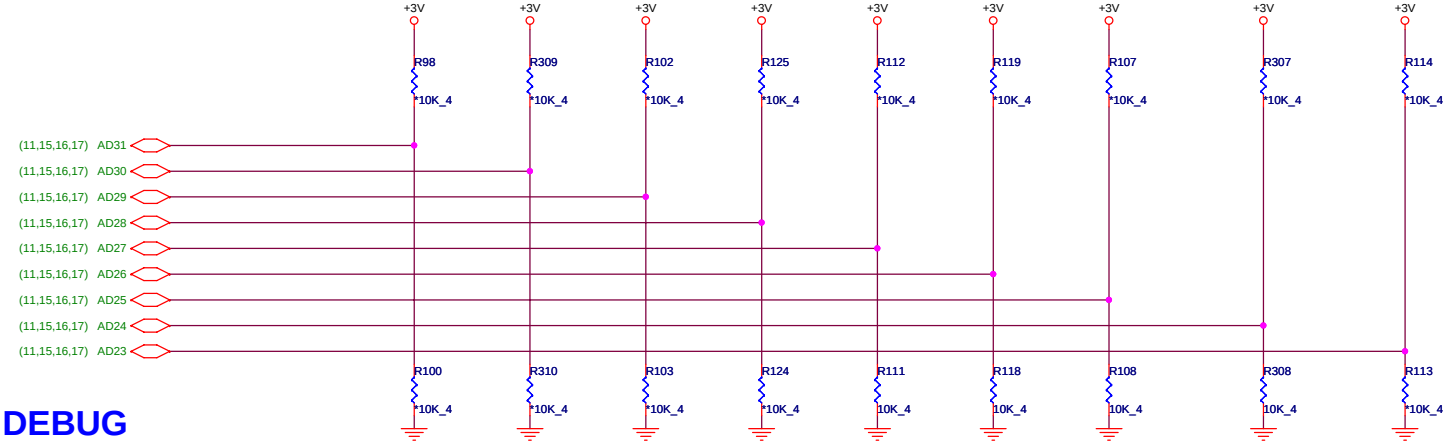
| Size | Document Number | Rev |
|---|---|---|
| Custom | SB450C HDD/POWER/DECOUPLING | 3B |
| Date: Tuesday, August 08, 2006 | Sheet 13 of 31 | |




## REQUIRED STRAPS

| | ACPWRON | AC_SDOUT | RTC_CLK | SPDIF_OUT | PCI_CLK4 PCLK_PCM | PCLK_SIO | PCI_CLK6 | PCI_CLK7 PCLK_LAN | PCI_CLK8 | PCI_CLK3 PCLK_591 | PCI_CLK2 PCLK_MINI* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PULL HIGH | MANUAL PWR ON DEFAULT | USE DEBUG STRAPS | INTERNAL RTC DEFAULT | SIO 24MHz | 48MHz use Internal PLL | 14MHz OSC MODE DEFAULT | CPU I/F = K8 | H,H = PCI(X BUS) ROM<br>H,L = LPC ROM I (LPC addresses are translated to the top of the 4G address space) | | USB PHY PWRDOWN DISABLE DEFAULT | 48MHz Crystal Pad DEFAULT |
| PULL LOW | AUTO PWR ON | IGNORE DEBUG STRAPS DEFAULT | EXTERNAL RTC (NOT SUPPORTED W/ IT8712 ) | SIO 48MHz DEFAULT | 48MHz use External Clock DEFAULT | 14MHz XTAL MODE | CPU I/F = P4 DEFAULT | L,H = LPC ROM II DEFAULT (addresses mapped to below 1M)<br>L,L = FWH ROM | | USB PHY PWRDOWN ENABLE | 48MHz OSC/Clock Buffer |

*This strap is only required if the strap on PCICLK4 is configured for External Clock.




## DEBUG STRAPS

| | PDACK# | PCI_AD31 | PCI_AD30 | PCI_AD29 | PCI_AD28 | PCI_AD27 | PCI_AD26 | PCI_AD25 | PCI_AD24 | PCI_AD23 |
|---|---|---|---|---|---|---|---|---|---|---|
| PULL HIGH | USE LONG RESET DEFAULT | Reserved | Reserved | Reserved | Reserved | BYPASS PCI PLL | BYPASS ACPI BCLK | BYPASS IDE PLL | USE EEPROM PCIE STRAPS | Reserved |
| PULL LOW | USE SHORT RESET | | | | | USE PCI PLL DEFAULT | USE ACPI BCLK DEFAULT | USE IDE PLL DEFAULT | USE DEFAULT PCIE STRAPS DEFAULT | |

CLG

PROJECT : BL3

Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| Custom | SB450C STRAPS | 3B |
| Date: Monday, July 31, 2006 | Sheet 14 of 31 | |

ID Select : AD18
Interrupt Pin : INTF#
Request Indicate : REQ0#
Grant Indicate : GNT0#

# LAN

## RTL8110SBL/8100CL

U15

RTL8110SBL
VDD33---+3.3V DIGITAL
AVDDH------+3.3V ANALOG
AVDDL-----+2.5V ANALOG
DVDD-----+1.2V DIGITAL
DVDD_A----+1.2V ANALOG

RTL8100CL
VDD33---+3.3V DIGITAL
AVDDL-----+3.3V ANALOG
DVDD-----+2.5V DIGITAL
AVDDH-----+2.5V ANALOG

Near Lan chipset

U18 93C46-3GR

U8 13F-39C

CN9 RJ45-C100F8-100B-8P-L

PROJECT : BL3
Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| | LAN RTL8110SBL/8100CL | 3B |

Date: Friday, August 11, 2006 Sheet 15 of 31

ID Select : AD17
Interrupt Pin : INTE#
Request Indicate : REQ3#
Grant Indicate : GNT3#

U16
CB1410

U5
CP2211

Near TPS2211A

Near TPS2211A

Near Slot

CN4 PCMCIA SOCKET

+3V Plane

+3V Plane

Near Chipset

Near Chipset

Near Chipset

delay 10ms at least

*DTC144EU

SANTA-1306-68P

CBS

PROJECT : BL3

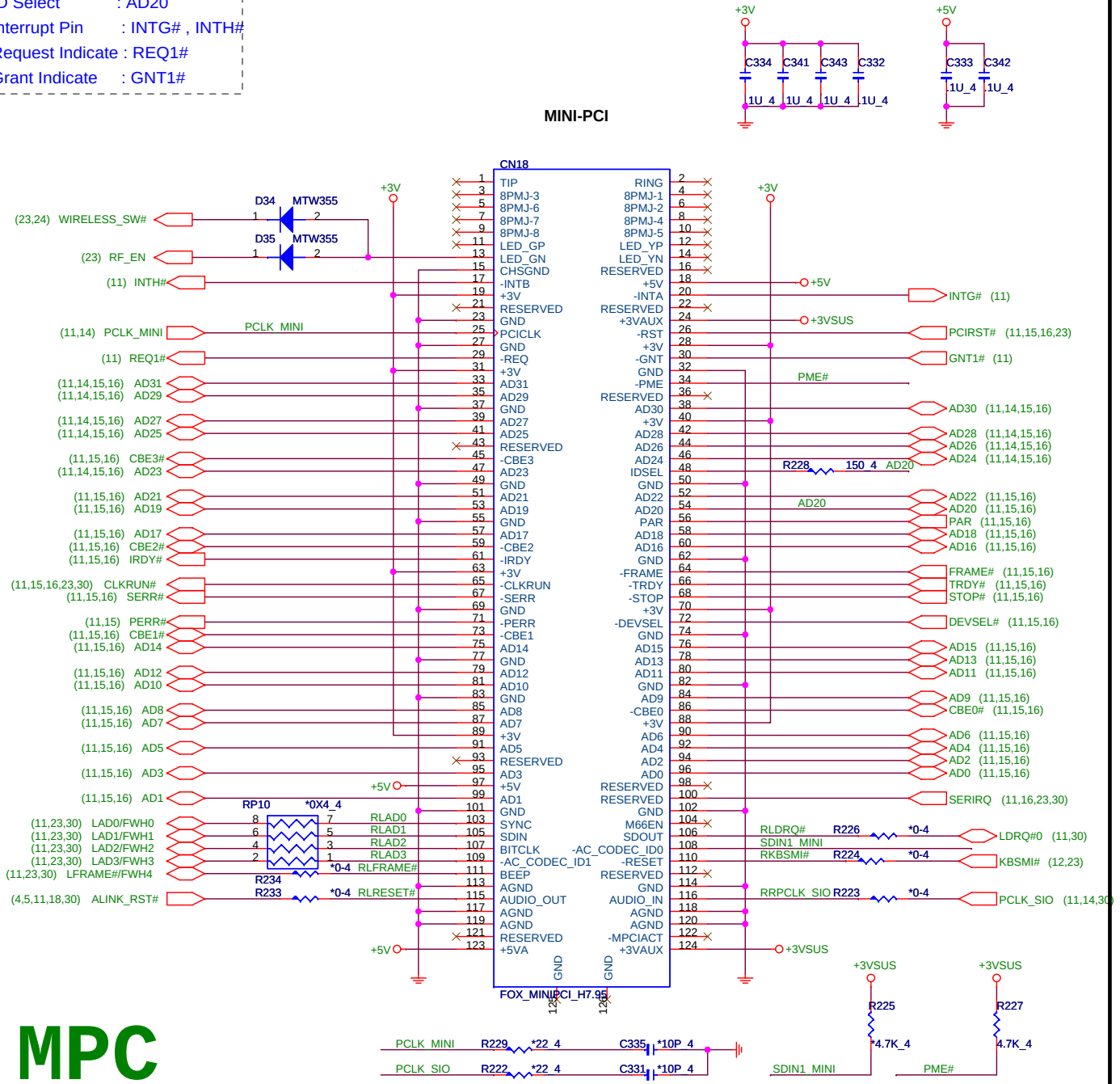
Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| | PCMCIA(CB1410) -OPTION | 3B |

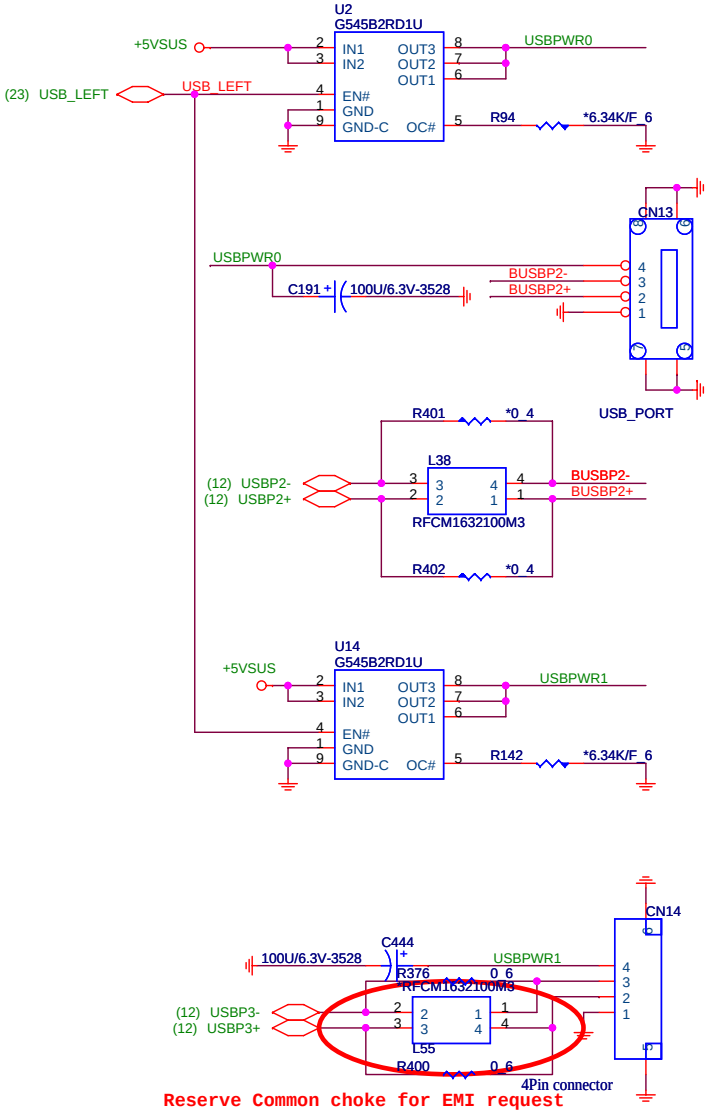
Date: Monday, July 31, 2006 Sheet 16 of 31

ID Select : AD20
Interrupt Pin : INTG# , INTH#
Request Indicate : REQ1#
Grant Indicate : GNT1#

## MINI-PCI




## USB




Reserve Common choke for EMI request

MPC


<OrgName>
<OrgAddr1>
<OrgAddr2>
<OrgAddr3>
<OrgAddr4>

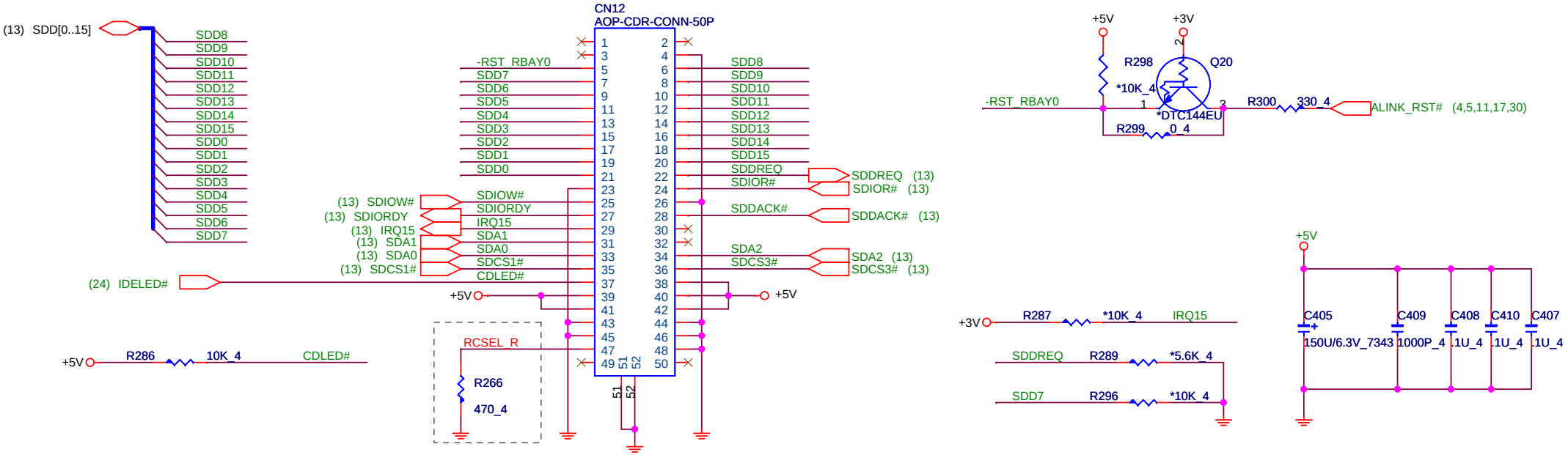

PROJECT : BL3

Quanta Computer Inc.

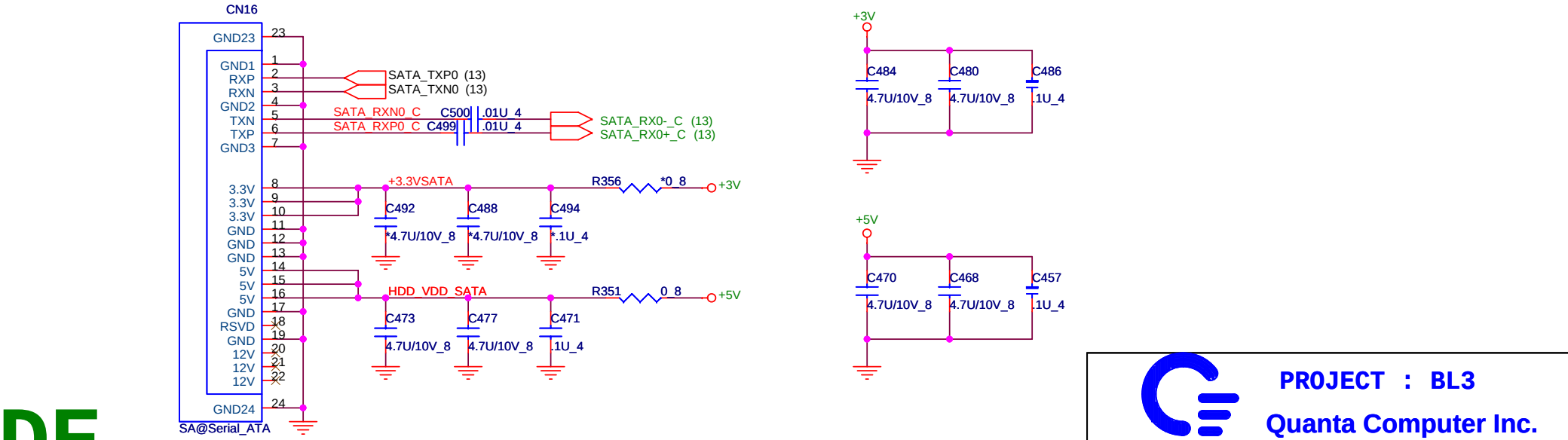
| Size | Document Number | Rev |
|---|---|---|
| | MINI PCI,USB | 3B |

Date: Friday, August 11, 2006 Sheet 17 of 31

# ODD CONN




# SATA HDD CONN



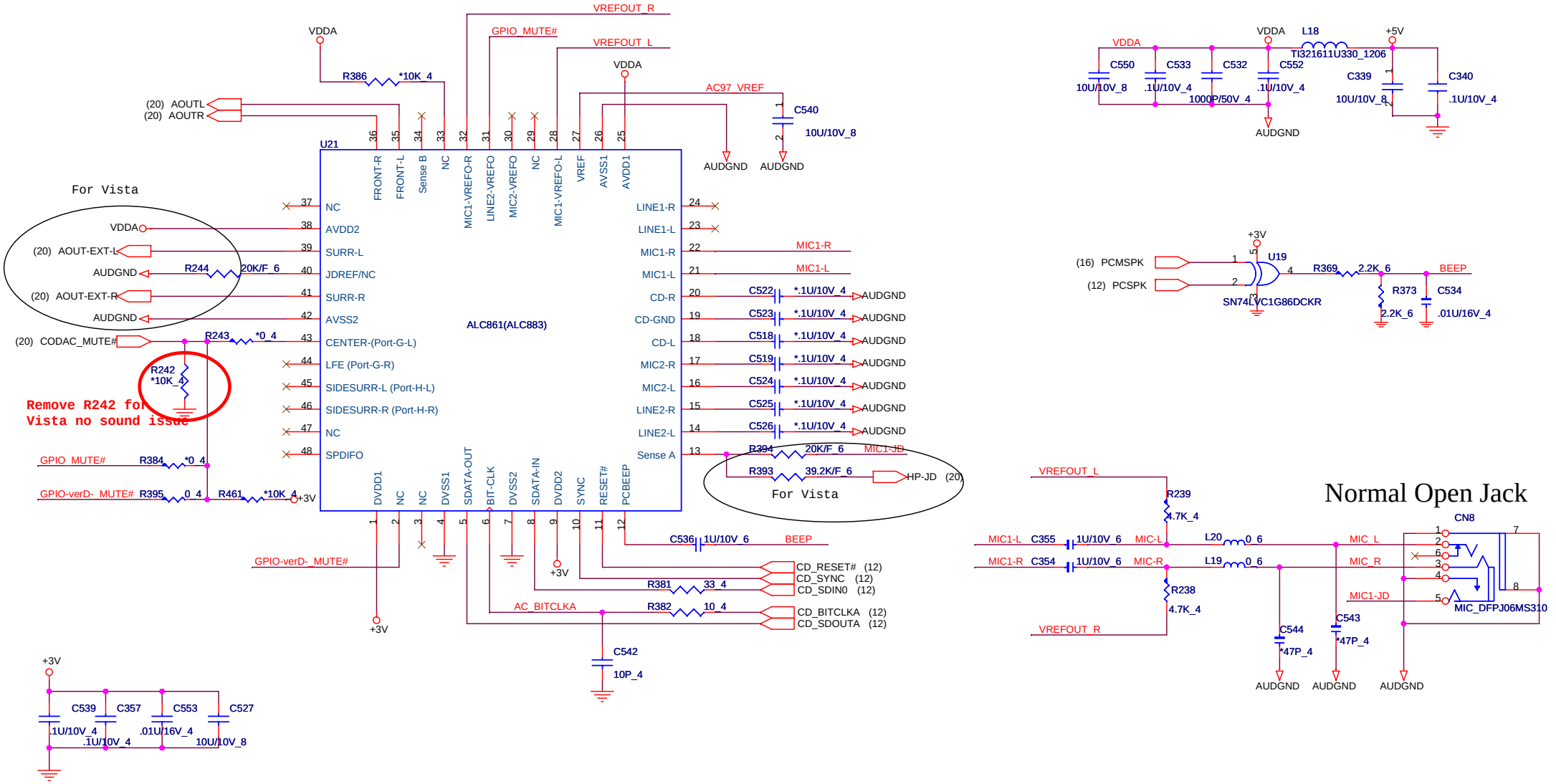

IDE

PROJECT : BL3

Quanta Computer Inc.

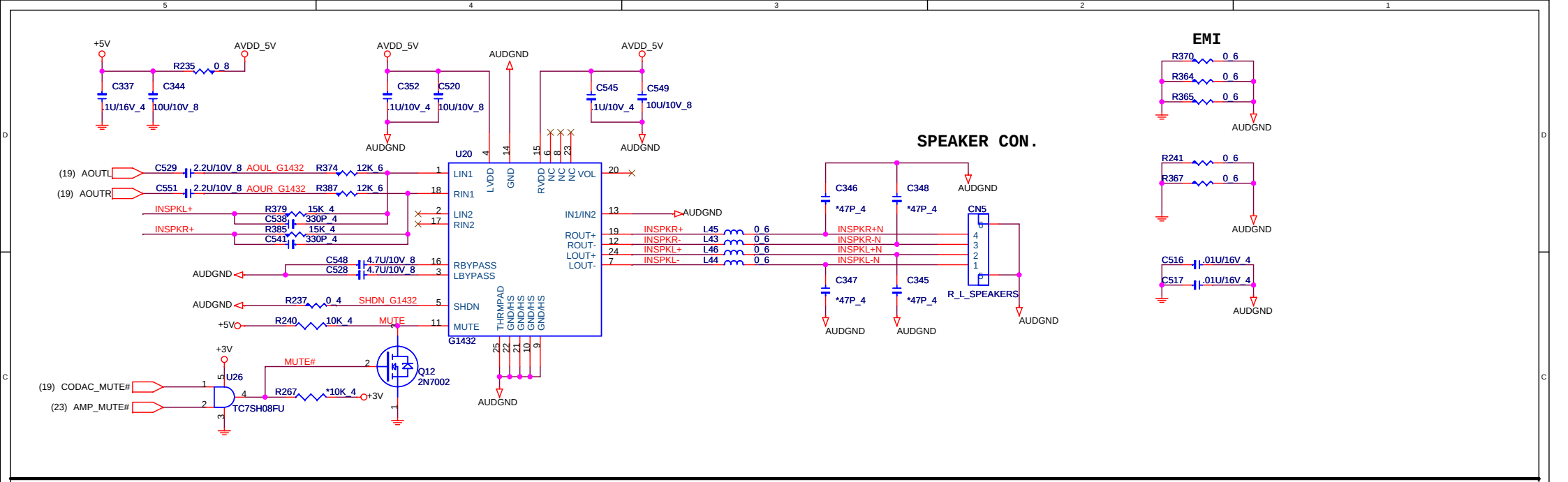
| Size | Document Number | Rev |
|---|---|---|
| | HDD & CDROM | 3B |

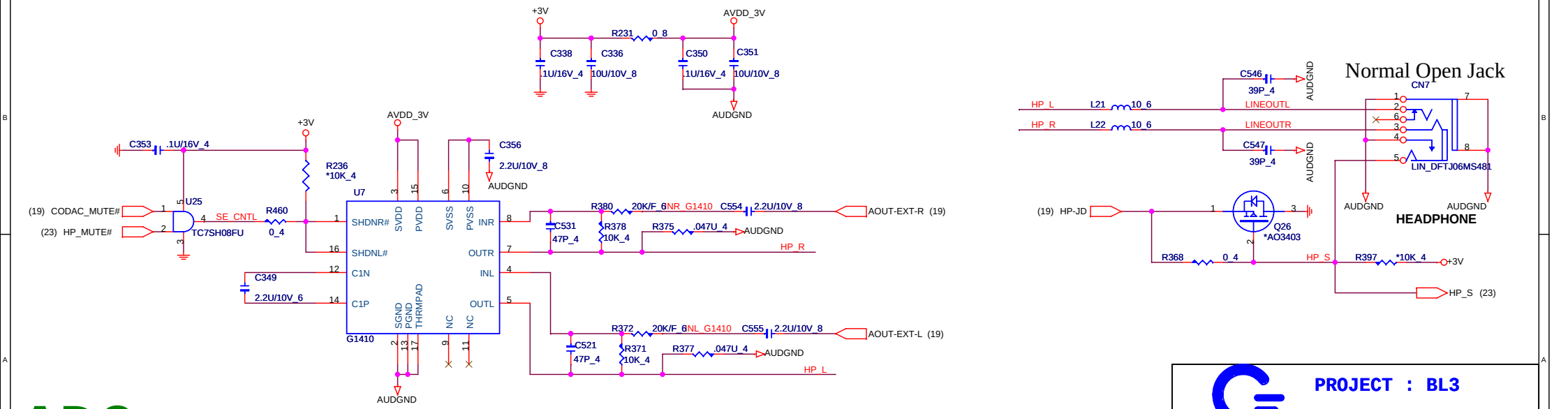
Date: Tuesday, August 08, 2006 Sheet 18 of 31




ADO

| | | |
|---|---|---|
| PROJECT : BL3 | | |
| Quanta Computer Inc. | | |
| Size | Document Number: REALTEK ALC861 | Rev: 3B |
| Date: Friday, August 11, 2006 | Sheet 19 of 31 | |



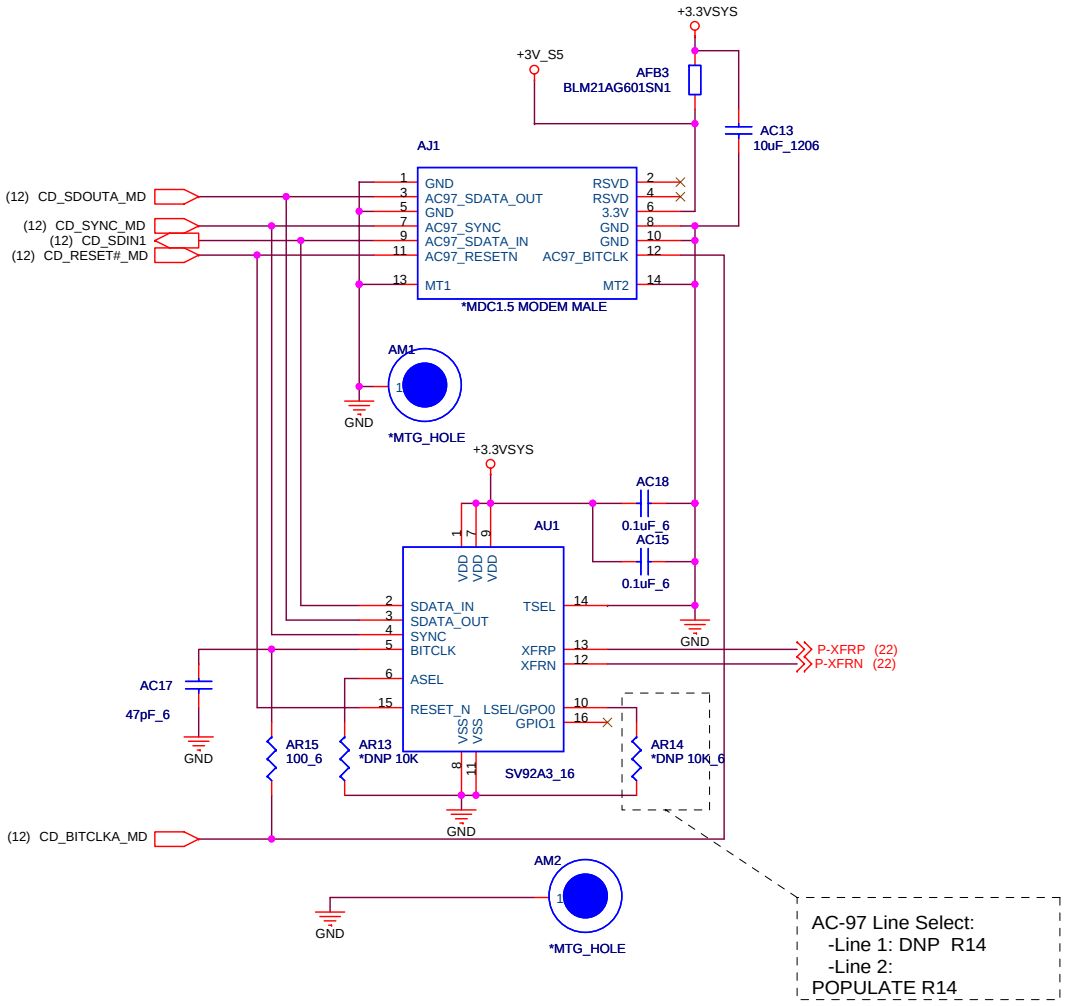




ADO

PROJECT : BL3

Quanta Computer Inc.

| Size | Document Number | Rev |
|---|---|---|
| | AUDIO AMP(G1432 / G1410) | 3B |
| Date: Tuesday, August 08, 2006 | Sheet 20 of 31 | |




# MDM

Agere Systems Proprietary
DRAFT COPY - FOR REVIEW ONLY
SUBJECT TO CHANGE

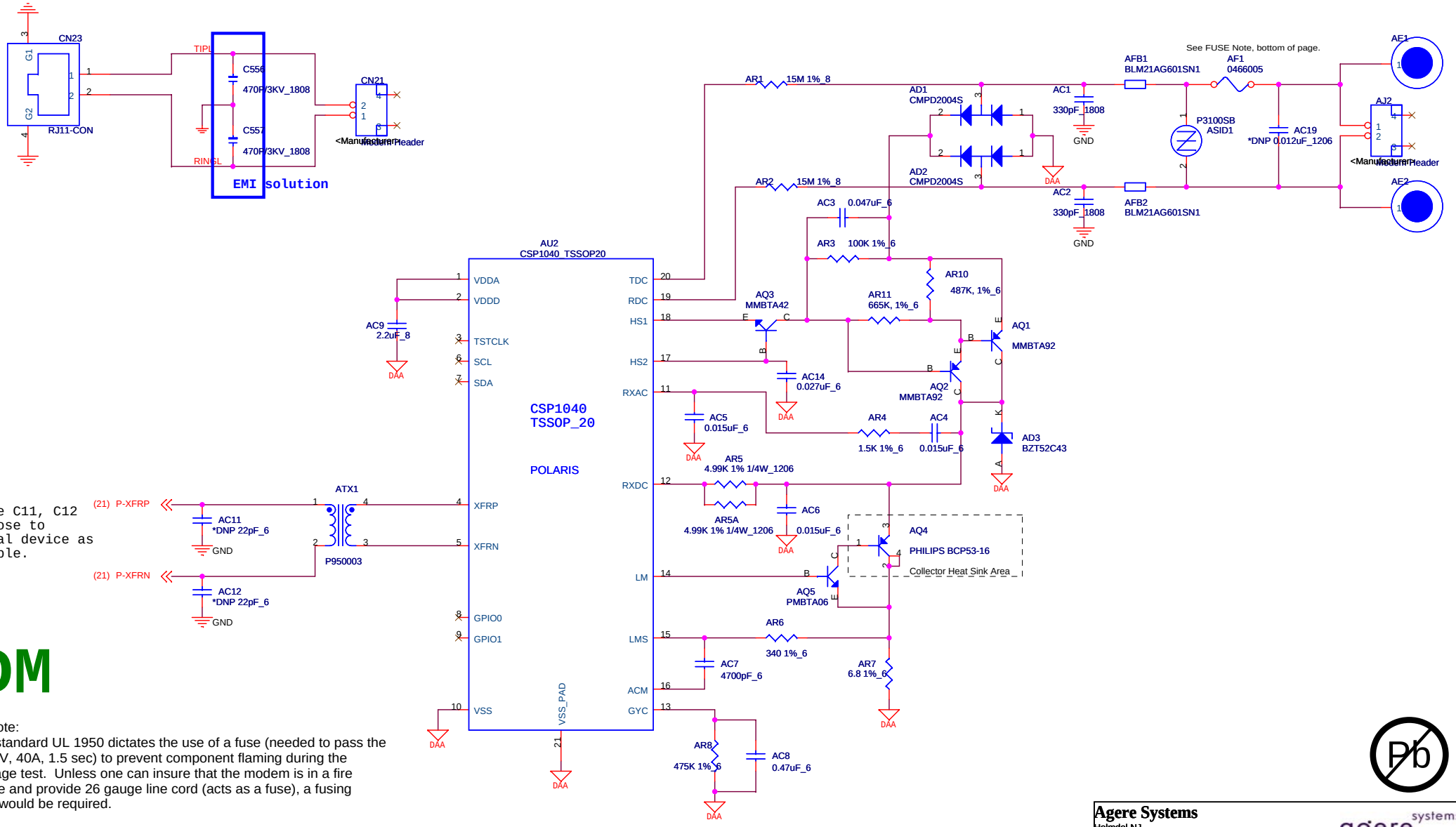
**Agere Systems**
Holmdel NJ

**Design Engineer: C. Russo**

Title
**DELPHI SV92A3 MDC 1.5 Reference Design**

| Size | Document Number | Rev |
|---|---|---|
| B | **DIGITAL INTERFACE** | 3B |

Date: Monday, July 31, 2006 Sheet 21 of 31




# MDM

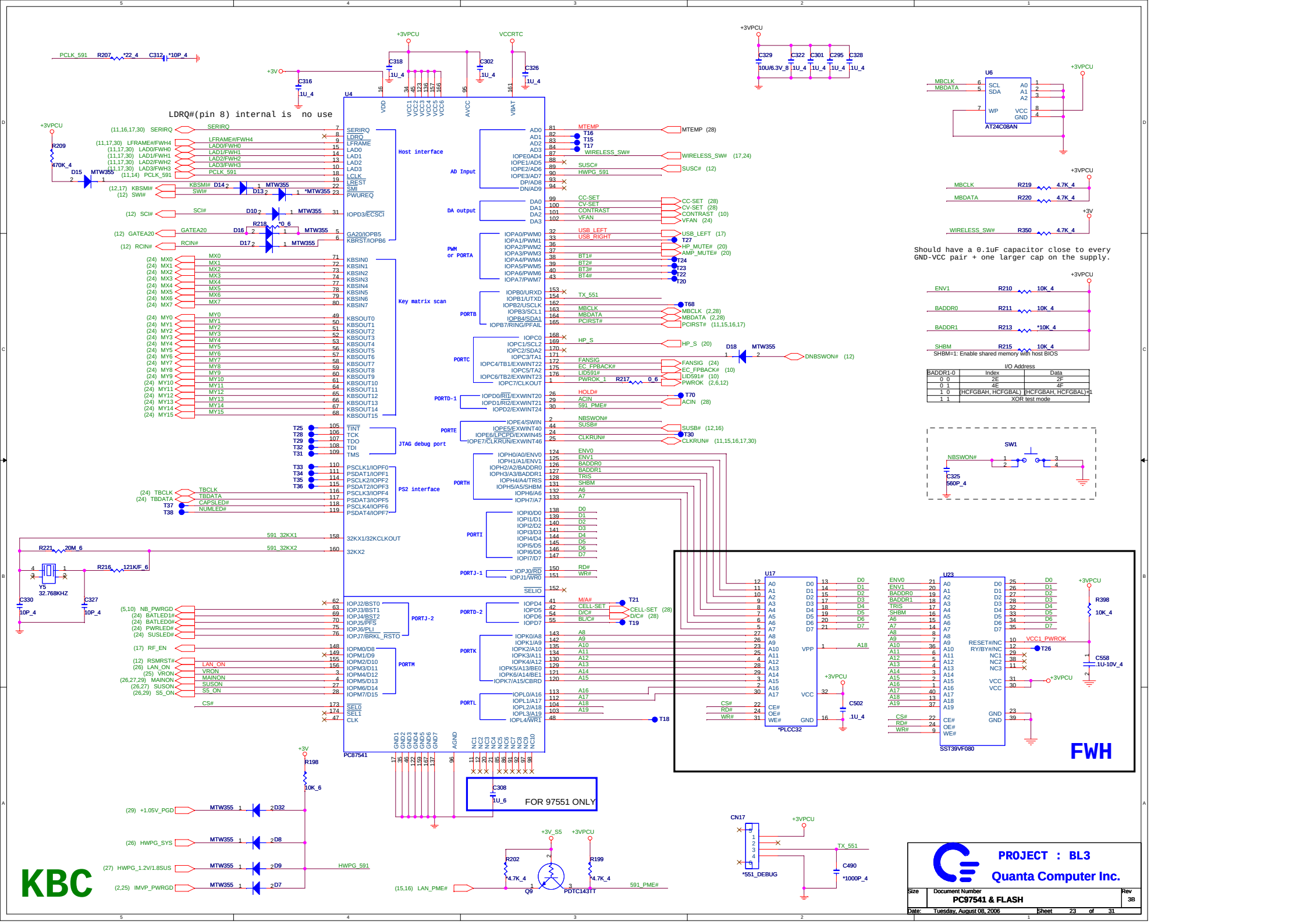
FUSE Note:
The UL standard UL 1950 dictates the use of a fuse (needed to pass the M1, 600 V, 40A, 1.5 sec) to prevent component flaming during the overvoltage test. Unless one can insure that the modem is in a fire enclosure and provide 26 gauge line cord (acts as a fuse), a fusing element would be required.

Alternatively, if a TNV-1 flame resistant material is used, either as a wrap or cover over the DAA portion of the modem, this could satisfy both overvoltage protection and the separation requirement also contained in UL 1950. This latter requirement provides isolation such that unearthed parts of the DAA cannot be touched by a test finger or test probe.

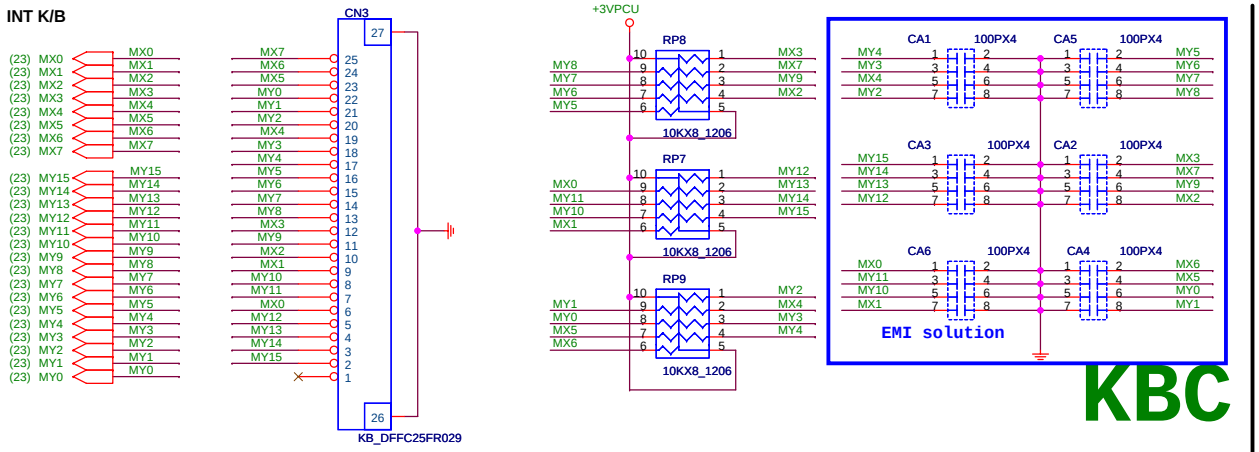


Pb

Agere Systems
Holmdel NJ
Design Engineer: R. Trevino
Title
DELPHI SV92A3 MDC 1.5 Reference Design
Size B
Document Number CSP1040 DAA
Rev 3B
Date: Tuesday, August 08, 2006
Sheet 22 of 31

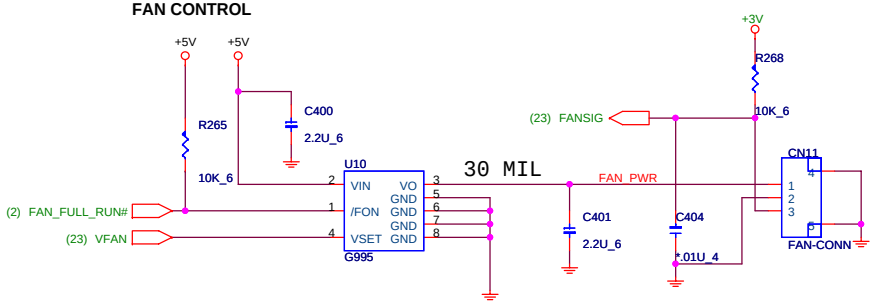

LDRQ#(pin 8) internal is no use
U4
PC87541
Host interface
AD Input
DA output
PWM or PORTA
PORTB
PORTC
PORTD-1
PORTE
PORTH
PORTI
PORTJ-1
PORTD-2
PORTJ-2
PORTK
PORTM
PORTL
Key matrix scan
JTAG debug port
PS2 interface
Should have a 0.1uF capacitor close to every GND-VCC pair + one larger cap on the supply.
SHBM=1: Enable shared memory with host BIOS
I/O Address
BADDR1-0 | Index | Data
0 0 | 2E | 2F
0 1 | 4E | 4F
1 0 | (HCFGBAH, HCFGBAL) | (HCFGBAH, HCFGBAL)+1
1 1 | XOR test mode
U17
*PLCC32
U23
SST39VF080
FWH
FOR 97551 ONLY
U6
AT24C08AN
PROJECT : BL3
Quanta Computer Inc.
PC97541 & FLASH
Rev 3B
Tuesday, August 08, 2006
Sheet 23 of 31

## INT K/B



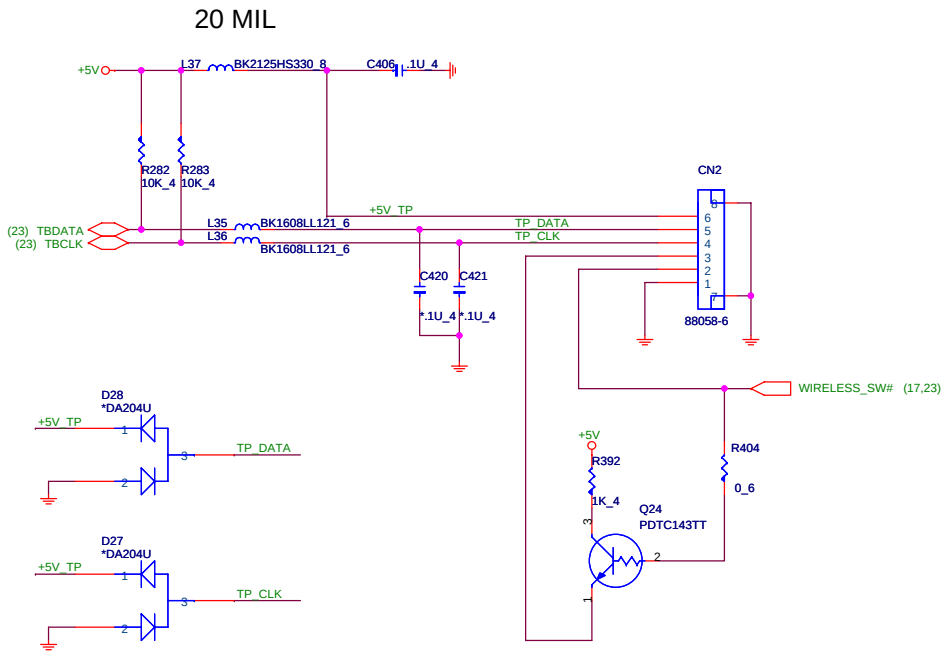

# KBC

## FAN CONTROL



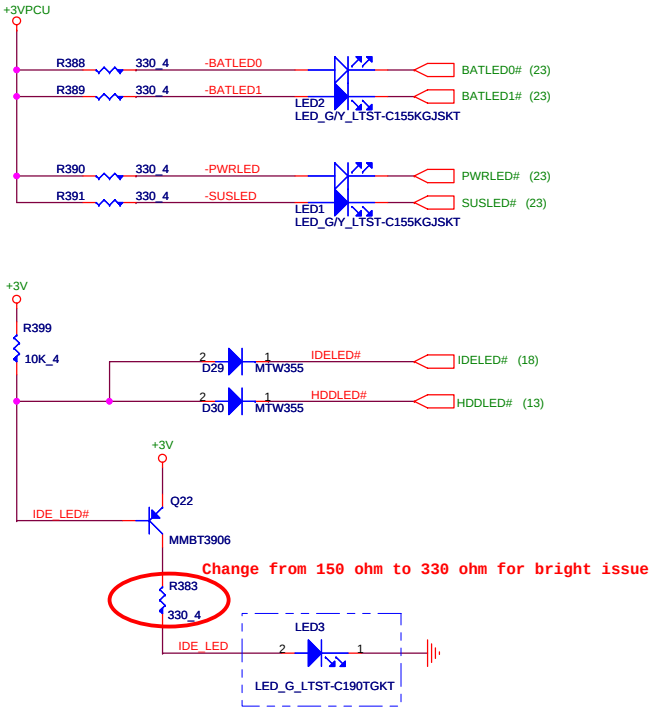

# THM

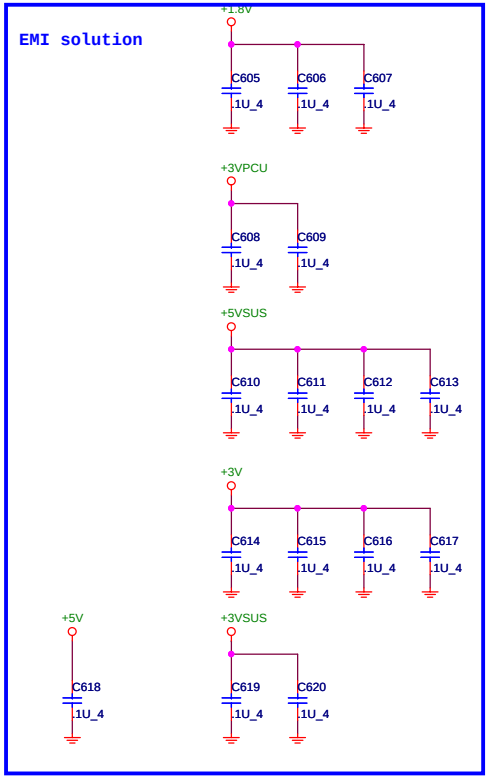
## TOUCH PAD




# TPD

# ON BOARD LED



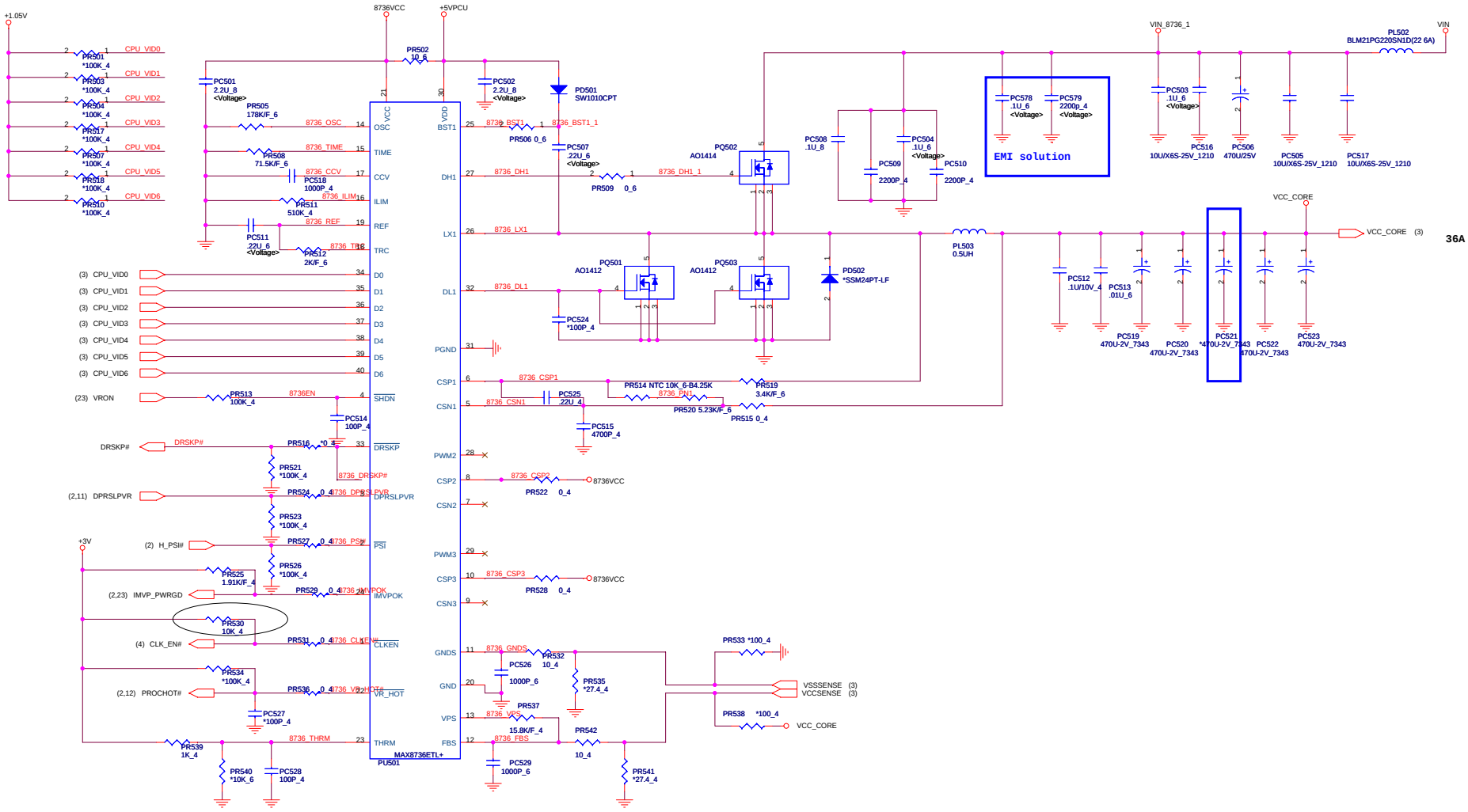




PROJECT : BL3

Quanta Computer Inc.

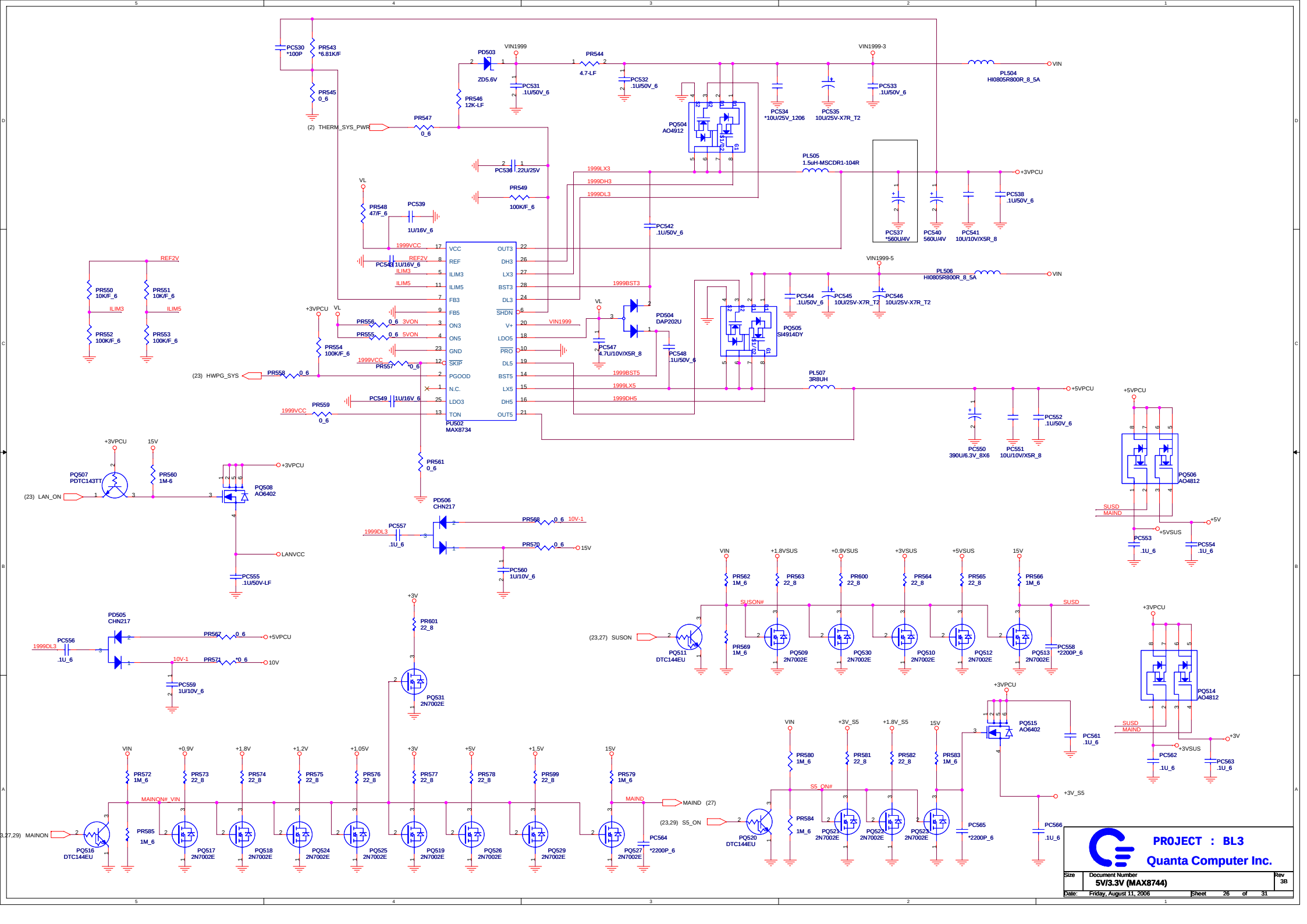
| Size | Document Number | Rev |
|---|---|---|
| | T/P,FAN,SWITCH,LED,K/B | 3B |

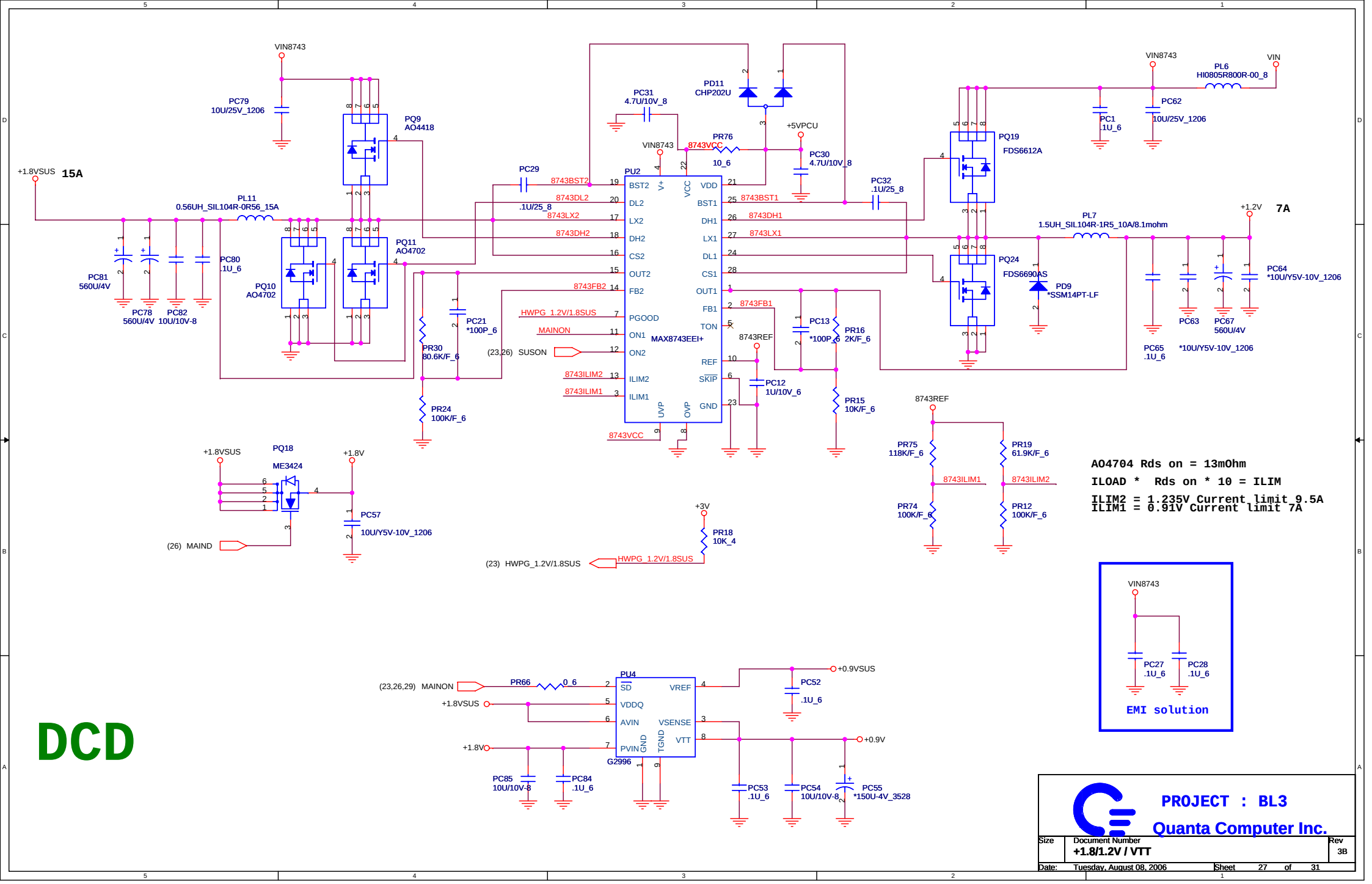
Date: Friday, August 11, 2006 Sheet 24 of 31




# CPU CORE

| | | | |
|---|---|---|---|
| PROJECT : BL3 | | | |
| Quanta Computer Inc. | | | |
| Size | Document Number | | Rev |
| | VCORE (MAX8736) | | 3B |
| Date: Friday, August 11, 2006 | Sheet 25 of 31 | | |


PC530 *100P
PR543 *6.81K/F
PR545 0_6
PD503 ZD5.6V
VIN1999
PR544 4.7-LF
PC531 .1U/50V_6
PR546 12K-LF
PC532 .1U/50V_6
VIN1999-3
PC533 .1U/50V_6
PL504 HI0805R800R_8_5A
VIN
PC534 *10U/25V_1206
PC535 10U/25V-X7R_T2
PQ504 AO4912
(2) THERM_SYS_PWR
PR547 0_6
PC536 .22U/25V
PR549 100K/F_6
PL505 1.5uH-MSCDR1-104R
+3VPCU
PC537 *560U/4V
PC540 560U/4V
PC541 10U/10V/X5R_8
PC538 .1U/50V_6
VL
PR548 47/F_6
PC539 1U/16V_6
1999LX3
1999DH3
1999DL3
PC542 .1U/50V_6
1999VCC
REF2V
PC543 1U/16V_6
ILIM3
ILIM5
VCC
REF
ILIM3
ILIM5
FB3
FB5
ON3
ON5
GND
SKIP
PGOOD
N.C.
LDO3
TON
OUT3
DH3
LX3
BST3
DL3
SHDN
V+
LDO5
PRO
DL5
BST5
LX5
DH5
OUT5
PU502 MAX8734
PR550 10K/F_6
PR551 10K/F_6
PR552 100K/F_6
PR553 100K/F_6
+3VPCU
PR556 0_6 3VON
PR555 0_6 5VON
PR554 100K/F_6
PR557 *0_6
1999VCC
(23) HWPG_SYS
PR558 0_6
PR559 0_6
PC549 1U/16V_6
PR561 0_6
VIN1999-5
PL506 HI0805R800R_8_5A
VIN
PC544 .1U/50V_6
PC545 10U/25V-X7R_T2
PC546 10U/25V-X7R_T2
PD504 DAP202U
PC547 4.7U/10V/X5R_8
PC548 .1U/50V_6
PQ505 SI4914DY
1999BST3
1999BST5
1999LX5
1999DH5
PL507 3R8UH
+5VPCU
PC550 390U/6.3V_8X6
PC551 10U/10V/X5R_8
PC552 .1U/50V_6
+3VPCU
15V
PQ507 PDTC143TT
PR560 1M-6
(23) LAN_ON
PQ508 AO6402
LANVCC
PC555 .1U/50V-LF
PD506 CHN217
PC557 .1U_6
1999DL3
PR568 0_6 10V-1
PR570 0_6
15V
PC560 1U/10V_6
+5VPCU
PQ506 AO4812
SUSD
MAIND
+5V
+5VSUS
PC553 .1U_6
PC554 .1U_6
PD505 CHN217
PC556 .1U_6
1999DL3
PR567 0_6
+5VPCU
10V-1
PR571 *0_6
10V
PC559 1U/10V_6
+3V
PR601 22_8
PQ531 2N7002E
VIN
+1.8VSUS
+0.9VSUS
+3VSUS
+5VSUS
15V
PR562 1M_6
PR563 22_8
PR600 22_8
PR564 22_8
PR565 22_8
PR566 1M_6
SUSON#
SUSD
(23,27) SUSON
PQ511 DTC144EU
PR569 1M_6
PQ509 2N7002E
PQ530 2N7002E
PQ510 2N7002E
PQ512 2N7002E
PQ513 2N7002E
PC558 *2200P_6
+3VPCU
PQ514 AO4812
SUSD
MAIND
+3V
+3VSUS
PC562 .1U_6
PC563 .1U_6
VIN
+0.9V
+1.8V
+1.2V
+1.05V
+3V
+5V
+1.5V
15V
PR572 1M_6
PR573 22_8
PR574 22_8
PR575 22_8
PR576 22_8
PR577 22_8
PR578 22_8
PR599 22_8
PR579 1M_6
MAINON# VIN
MAIND
MAIND (27)
(23,27,29) MAINON
PQ516 DTC144EU
PR585 1M_6
PQ517 2N7002E
PQ518 2N7002E
PQ524 2N7002E
PQ525 2N7002E
PQ519 2N7002E
PQ526 2N7002E
PQ529 2N7002E
PQ527 2N7002E
PC564 *2200P_6
VIN
+3V_S5
+1.8V_S5
15V
PR580 1M_6
PR581 22_8
PR582 22_8
PR583 1M_6
S5_ON#
(23,29) S5_ON
PQ520 DTC144EU
PR584 1M_6
PQ521 2N7002E
PQ522 2N7002E
PQ523 2N7002E
PC565 *2200P_6
+3VPCU
PQ515 AO6402
PC561 .1U_6
+3V_S5
PC566 .1U_6
PROJECT : BL3
Quanta Computer Inc.
Size
Document Number
5V/3.3V (MAX8744)
Rev 3B
Date: Friday, August 11, 2006
Sheet 26 of 31


VIN8743
PC79
10U/25V_1206
PQ9
AO4418
+1.8VSUS
15A
PL11
0.56UH_SIL104R-0R56_15A
PC81
560U/4V
PC78
560U/4V
PC82
10U/10V-8
PC80
.1U_6
PQ10
AO4702
PQ11
AO4702
PC29
.1U/25_8
PC31
4.7U/10V_8
PD11
CHP202U
PR76
10_6
8743VCC
+5VPCU
PC30
4.7U/10V_8
PU2
MAX8743EEI+
8743BST2
8743DL2
8743LX2
8743DH2
8743FB2
HWPG_1.2V/1.8SUS
MAINON
(23,26) SUSON
8743ILIM2
8743ILIM1
PC21
*100P_6
PR30
80.6K/F_6
PR24
100K/F_6
PC32
.1U/25_8
8743BST1
8743DH1
8743LX1
8743FB1
8743REF
PC13
*100P_6
PR16
2K/F_6
PC12
1U/10V_6
PR15
10K/F_6
PQ19
FDS6612A
PQ24
FDS6690AS
PD9
*SSM14PT-LF
PL6
HI0805R800R-00_8
PC62
10U/25V_1206
PC1
.1U_6
PL7
1.5UH_SIL104R-1R5_10A/8.1mohm
+1.2V
7A
PC64
*10U/Y5V-10V_1206
PC63
PC67
560U/4V
PC65
.1U_6
*10U/Y5V-10V_1206
PQ18
ME3424
+1.8V
PC57
10U/Y5V-10V_1206
(26) MAIND
+3V
PR18
10K_4
(23) HWPG_1.2V/1.8SUS
PR75
118K/F_6
PR74
100K/F_6
PR19
61.9K/F_6
PR12
100K/F_6
AO4704 Rds on = 13mOhm
ILOAD * Rds on * 10 = ILIM
ILIM2 = 1.235V Current limit 9.5A
ILIM1 = 0.91V Current limit 7A
VIN8743
PC27
.1U_6
PC28
.1U_6
EMI solution
(23,26,29) MAINON
PR66
0_6
+1.8VSUS
+1.8V
PU4
G2996
+0.9VSUS
PC52
.1U_6
+0.9V
PC85
10U/10V-8
PC84
.1U_6
PC53
.1U_6
PC54
10U/10V-8
PC55
*150U-4V_3528
DCD
PROJECT : BL3
Quanta Computer Inc.
Size
Document Number
+1.8/1.2V / VTT
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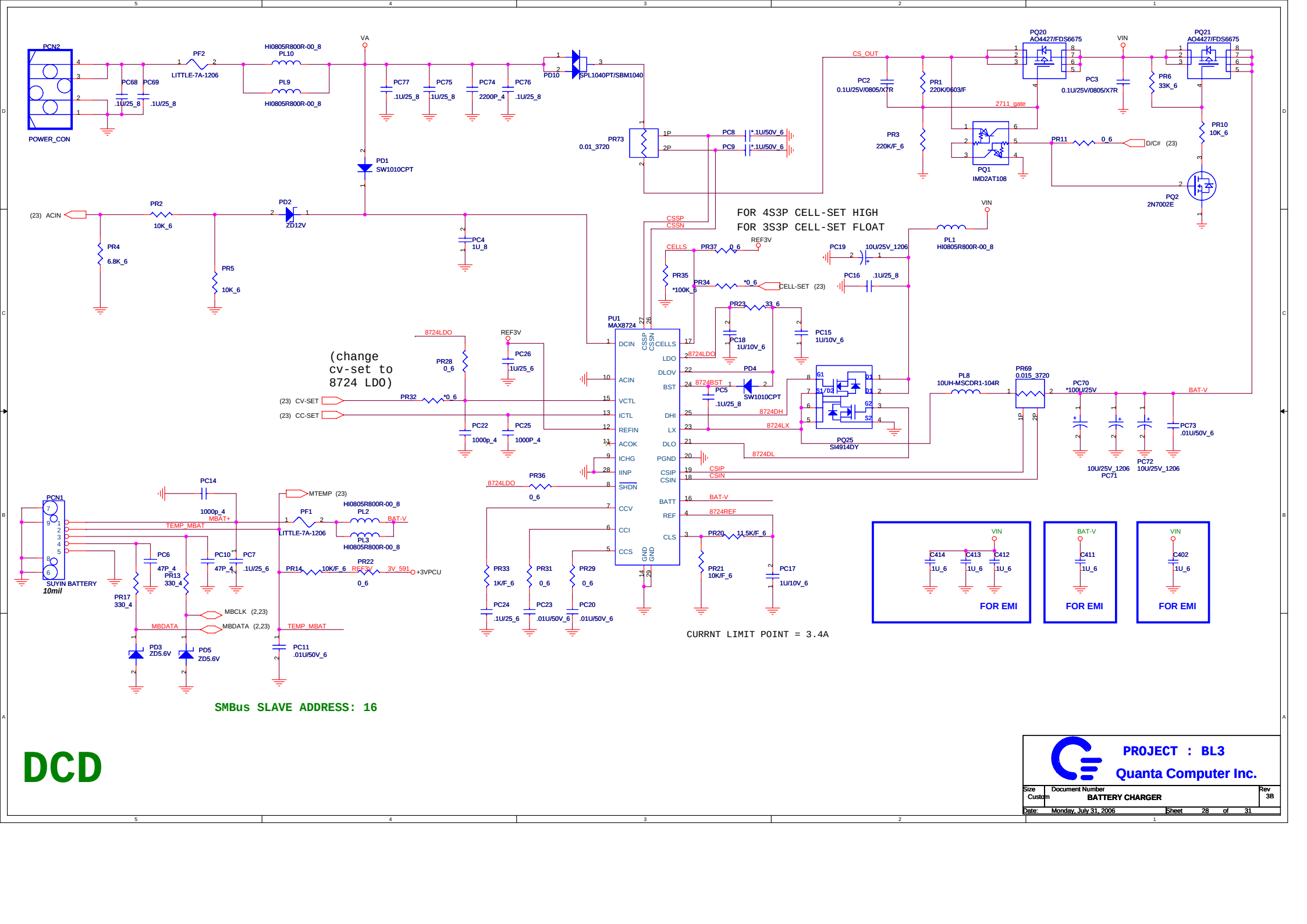
PCN2
POWER_CON
PF2
LITTLE-7A-1206
HI0805R800R-00_8
PL10
PL9
HI0805R800R-00_8
VA
PC68
PC69
.1U/25_8
.1U/25_8
PC77
.1U/25_8
PC75
.1U/25_8
PC74
2200P_4
PC76
.1U/25_8
PD10
SPL1040PT/SBM1040
PD1
SW1010CPT
PR73
0.01_3720
PC8
*.1U/50V_6
PC9
*.1U/50V_6
CS_OUT
PC2
0.1U/25V/0805/X7R
PR1
220K/0603/F
PQ20
AO4427/FDS6675
VIN
PC3
0.1U/25V/0805/X7R
PQ21
AO4427/FDS6675
PR6
33K_6
2711_gate
PR3
220K/F_6
PQ1
IMD2AT108
PR11
0_6
D/C# (23)
PR10
10K_6
PQ2
2N7002E
(23) ACIN
PR2
10K_6
PD2
ZD12V
PR4
6.8K_6
PR5
10K_6
PC4
1U_8
FOR 4S3P CELL-SET HIGH
FOR 3S3P CELL-SET FLOAT
CSSP
CSSN
CELLS
PR37
0_6
REF3V
PR35
*100K_6
PR34
*0_6
CELL-SET (23)
PC19
10U/25V_1206
PC16
.1U/25_8
PL1
HI0805R800R-00_8
PR23
33_6
PC18
1U/10V_6
PC15
1U/10V_6
PU1
MAX8724
DCIN
ACIN
VCTL
ICTL
REFIN
ACOK
ICHG
IINP
SHDN
CCV
CCI
CCS
CELLS
LDO
DLOV
BST
DHI
LX
DLO
PGND
CSIP
CSIN
BATT
REF
CLS
GND
8724LDO
PD4
SW1010CPT
8724BST
PC5
.1U/25_8
8724DH
8724LX
8724DL
PQ25
SI4914DY
PL8
10UH-MSCDR1-104R
PR69
0.015_3720
PC70
*100U/25V
BAT-V
PC73
.01U/50V_6
10U/25V_1206
PC71
PC72
10U/25V_1206
(change
cv-set to
8724 LDO)
8724LDO
REF3V
PR28
0_6
PC26
.1U/25_6
(23) CV-SET
PR32
*0_6
(23) CC-SET
PC22
1000p_4
PC25
1000P_4
PR36
0_6
BAT-V
8724REF
PR20
11.5K/F_6
PR21
10K/F_6
PC17
1U/10V_6
PR33
1K/F_6
PR31
0_6
PR29
0_6
PC24
.1U/25_6
PC23
.01U/50V_6
PC20
.01U/50V_6
CURRNT LIMIT POINT = 3.4A
PCN1
SUYIN BATTERY
10mil
PC14
1000p_4
MBAT+
TEMP_MBAT
PF1
LITTLE-7A-1206
MTEMP (23)
HI0805R800R-00_8
PL2
BAT-V
PL3
HI0805R800R-00_8
PC6
47P_4
PR13
330_4
PC10
47P_4
PC7
.1U/25_6
PR14
10K/F_6
REF3V
PR22
3V_591
0_6
+3VPCU
PR17
330_4
MBCLK (2,23)
MBDATA
MBDATA (2,23)
TEMP_MBAT
PD3
ZD5.6V
PD5
ZD5.6V
PC11
.01U/50V_6
SMBus SLAVE ADDRESS: 16
VIN
C414
1U_6
C413
1U_6
C412
1U_6
FOR EMI
BAT-V
C411
1U_6
FOR EMI
VIN
C402
1U_6
FOR EMI
DCD
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Quanta Computer Inc.
Size
Custom
Document Number
BATTERY CHARGER
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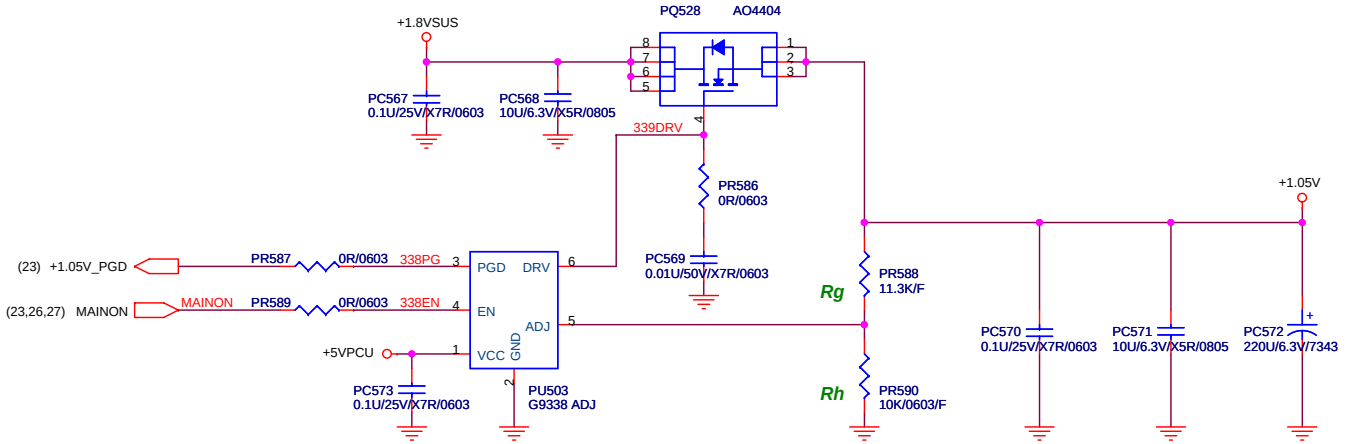
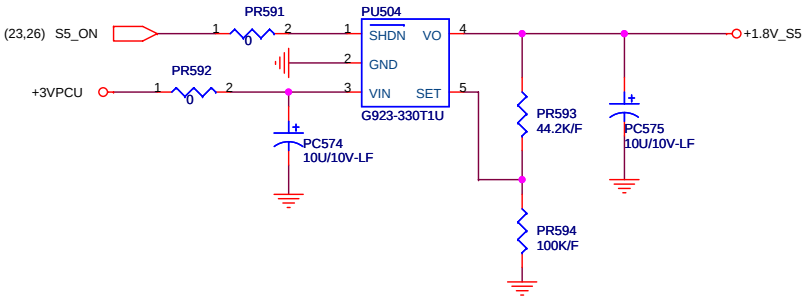
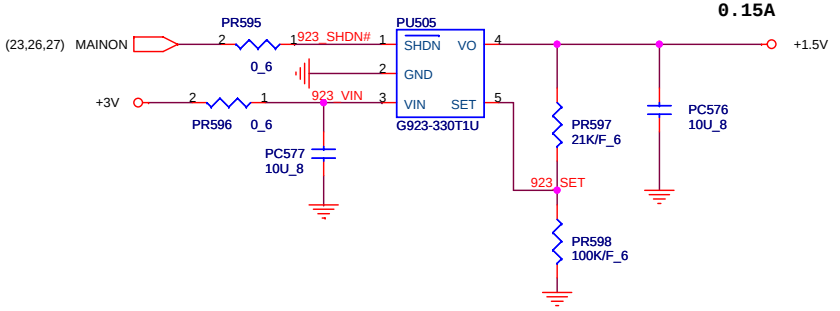



*Vout1 = (1+Rg/Rh)*0.5*




**0.15A**

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**Quanta Computer Inc.**

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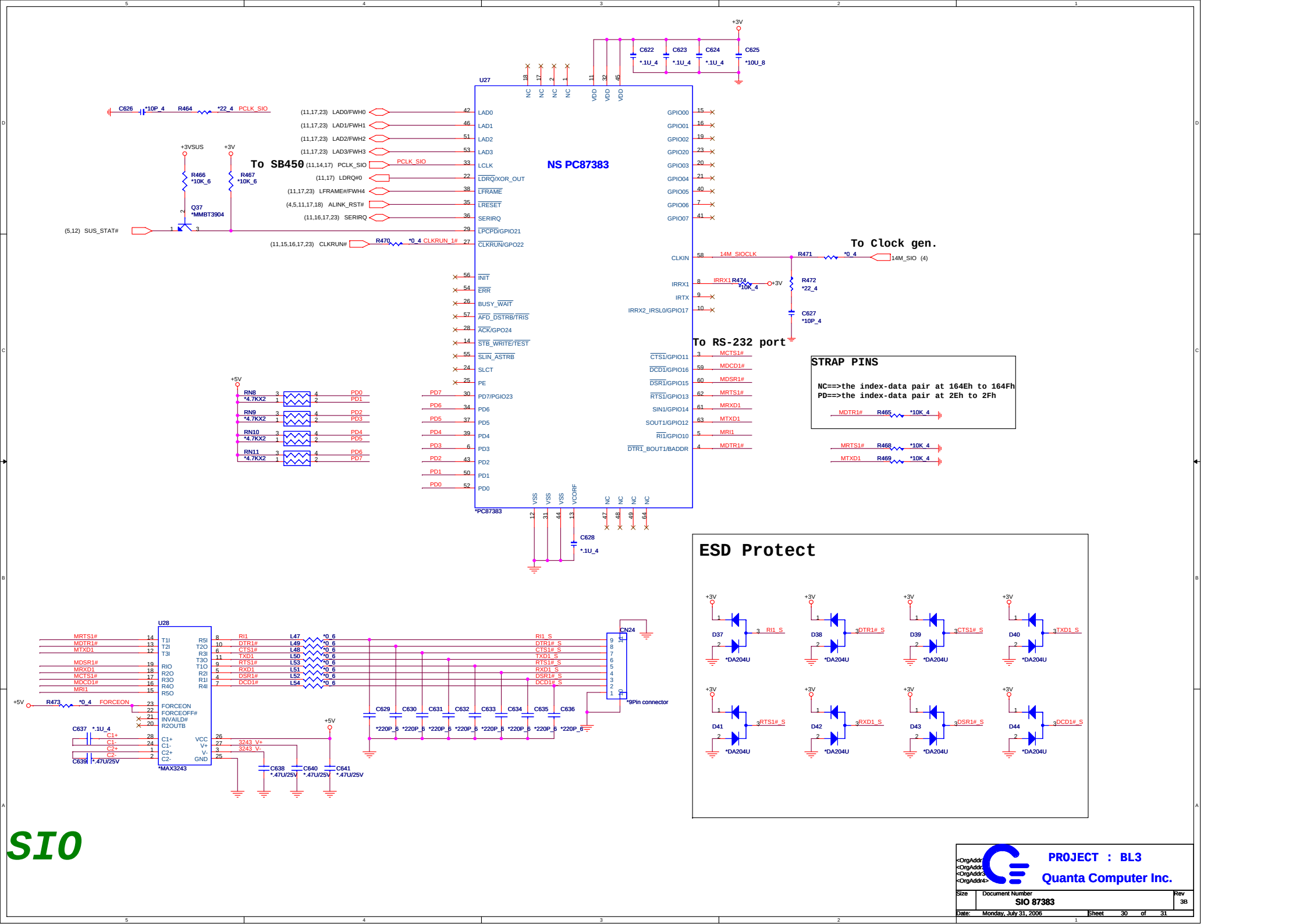
U27
NS PC87383
*PC87383
To SB450
To Clock gen.
To RS-232 port
STRAP PINS
NC==>the index-data pair at 164Eh to 164Fh
PD==>the index-data pair at 2Eh to 2Fh
ESD Protect
U28
*MAX3243
CN24
*9Pin connector
SIO
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