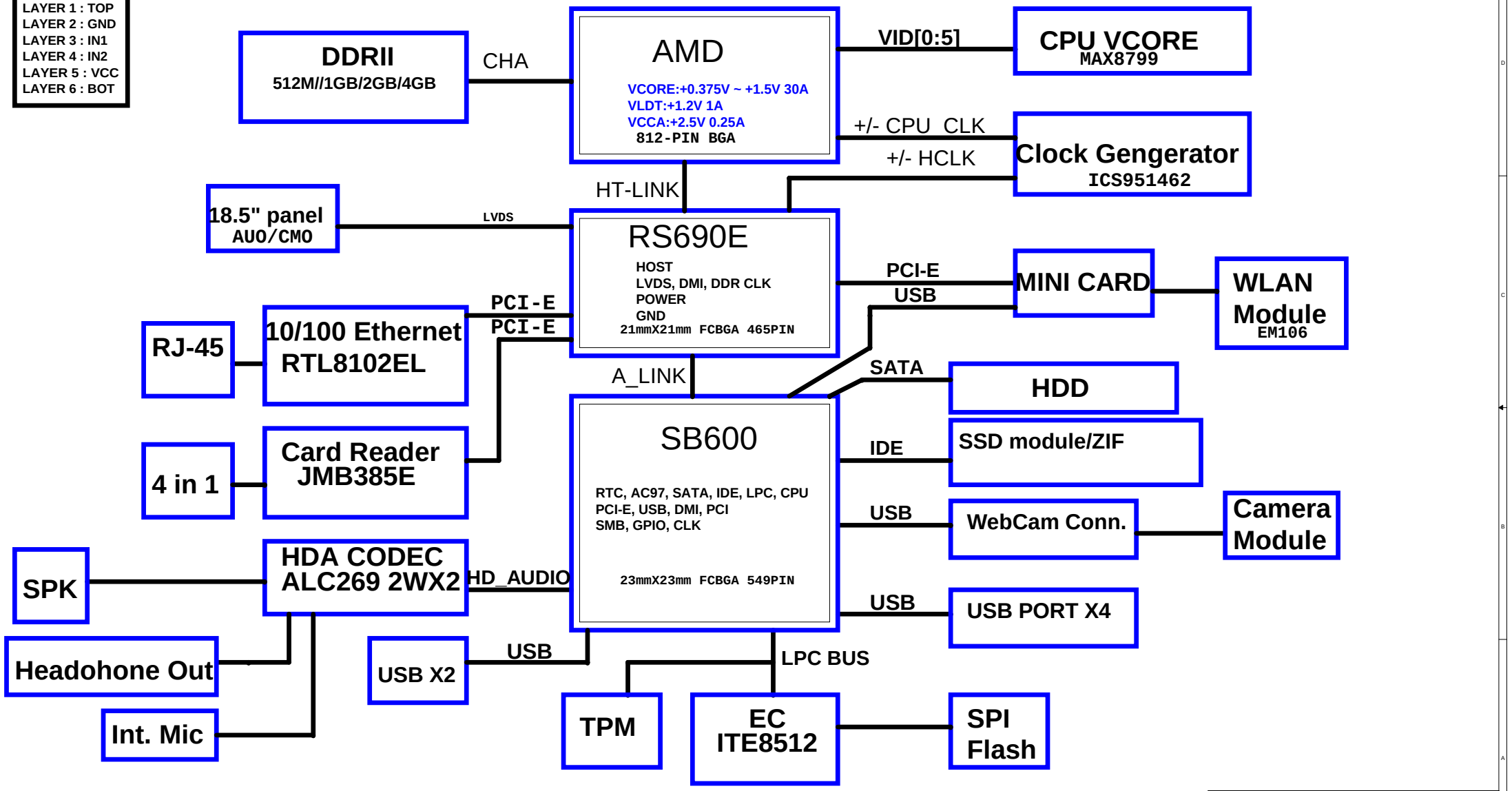
BENQ(EL3) LCDPC Block Diagram

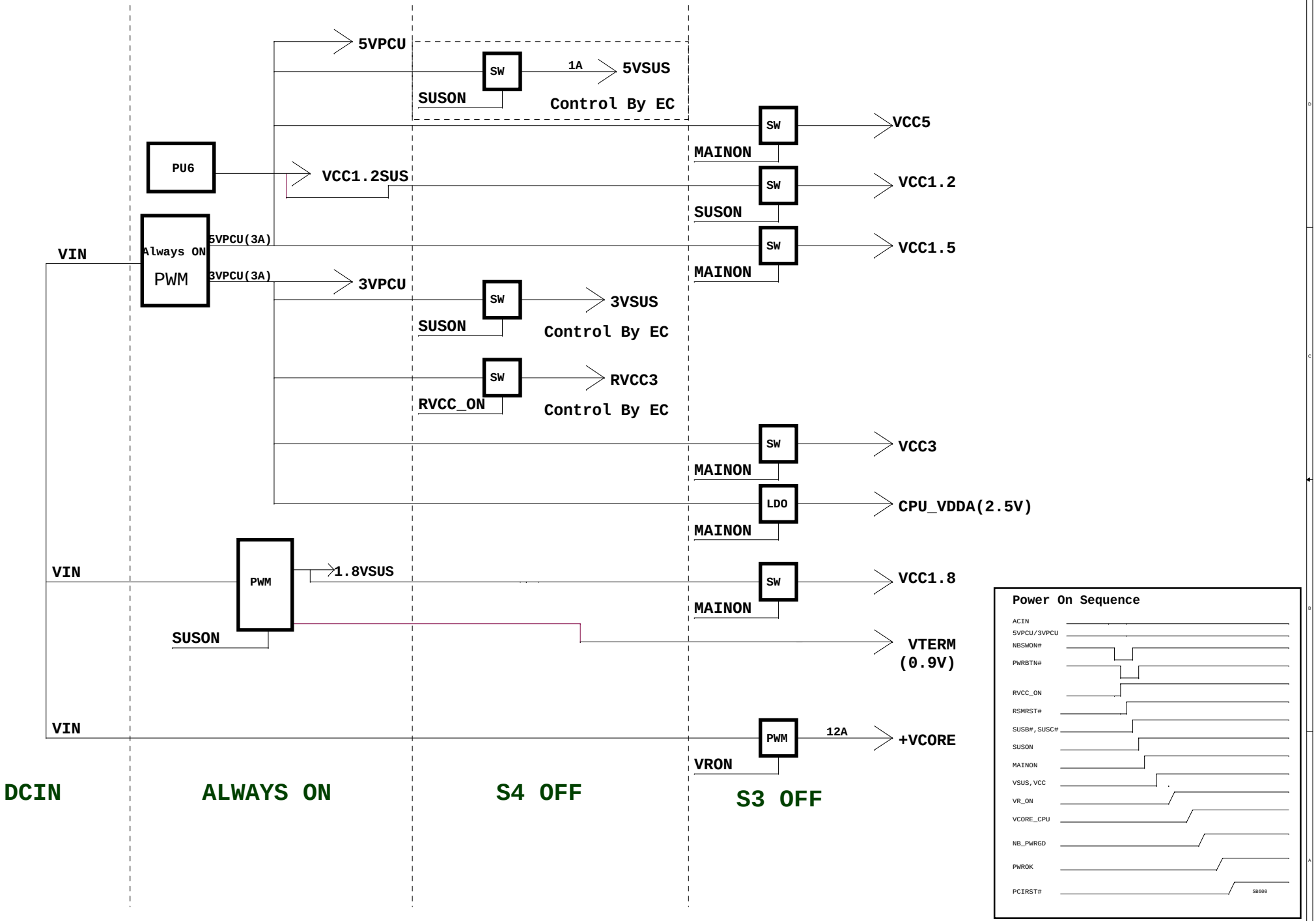
PCB STACK UP

LAYER 1 : TOP
LAYER 2 : GND
LAYER 3 : IN1
LAYER 4 : IN2
LAYER 5 : VCC
LAYER 6 : BOT



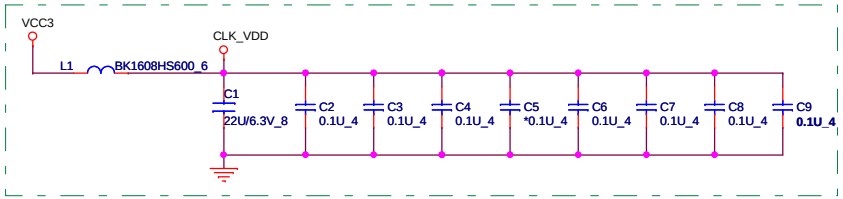
Quanta Computer Inc.
PROJECT : BENQ

Size	Document Number	Rev
	Block Diagram	1A
Date: Tuesday, January 06, 2009	Sheet 1 of 35	

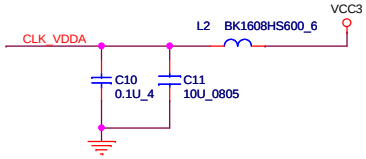


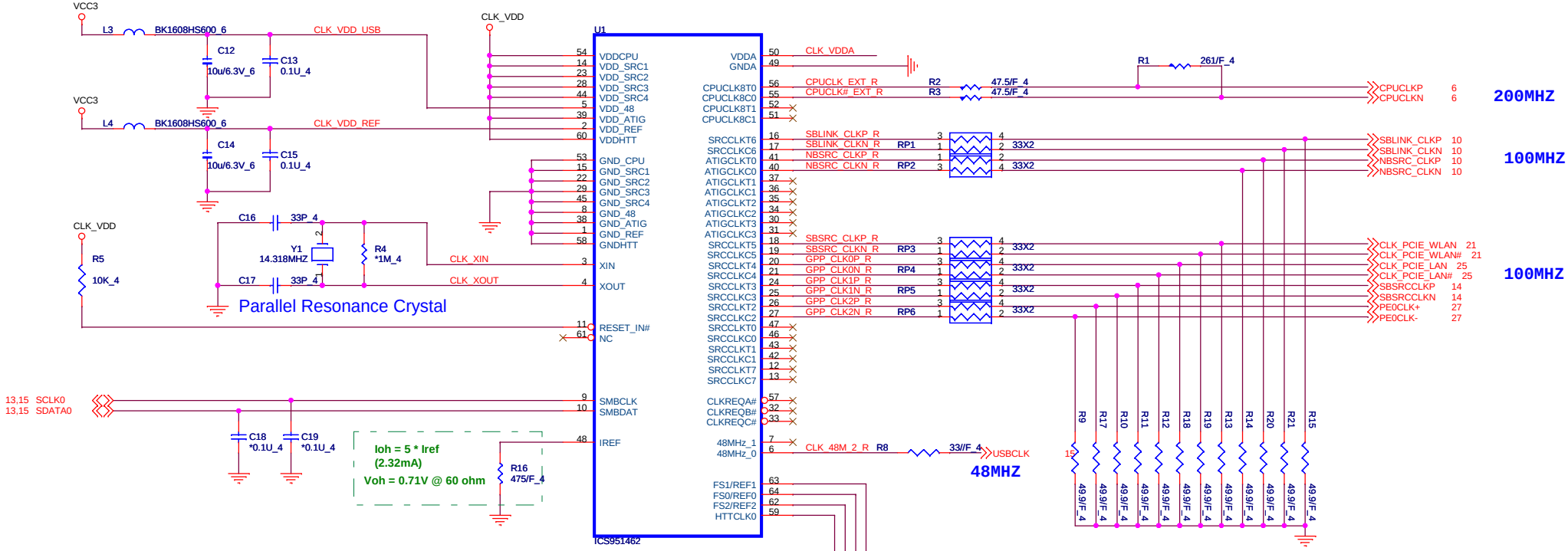
Quanta Computer Inc.
PROJECT : EL3

Size	Document Number	Rev
	Block Diagram	1A
Date: Tuesday, January 06, 2009	Sheet 2 of 35	

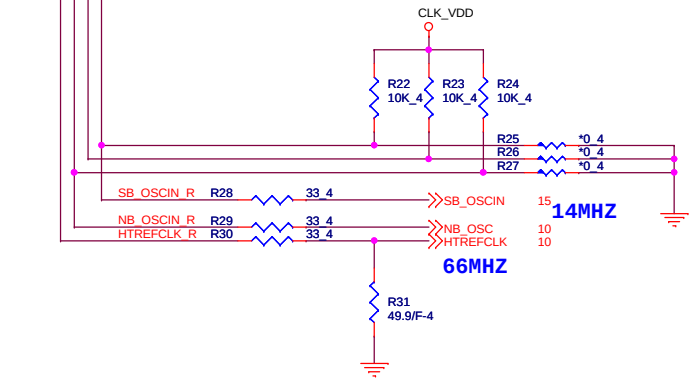


Put Decoupling Caps close to Clock Gen. power pin





CLKREQA# CONTROL SRC5,6,7
CLKREQB# CONTROL SRC2,3,4 ATIG3
CLKREQC# CONTROL SRC0,1 ATIG0,1,2

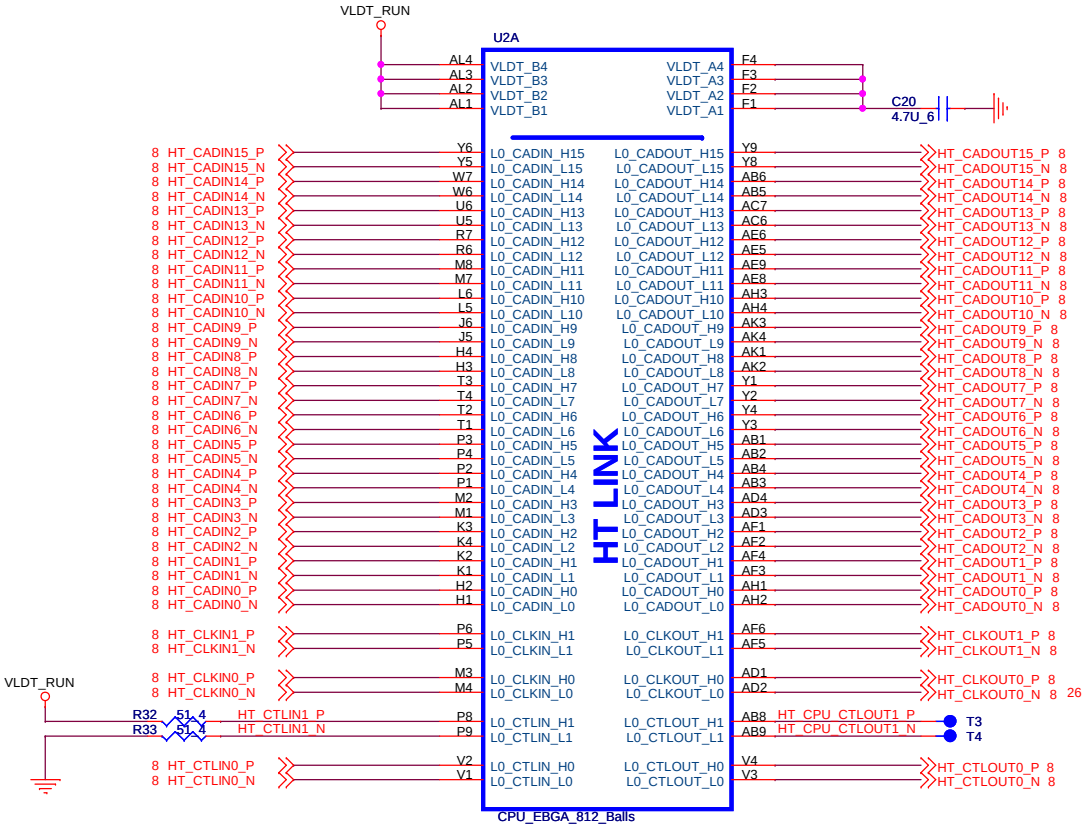


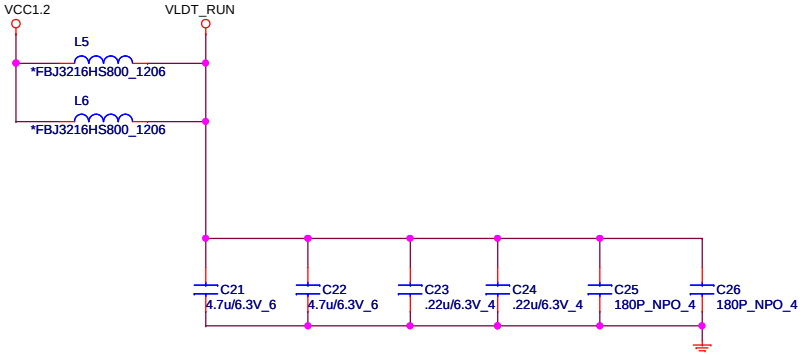
EXT CLK FREQUENCY SELECT TABLE(MHZ)

FS2	FS1	FS0	CPU	SRCCLK [2:1]	HTT	PCI	USB	COMMENT
0	0	0	Hi-Z	100.00	Hi-Z	Hi-Z	48.00	Reserved
0	0	1	X	100.00	X/3	X/6	48.00	Reserved
0	1	0	180.00	100.00	60.00	30.00	48.00	Reserved
0	1	1	220.00	100.00	36.56	73.12	48.00	Reserved
1	0	0	100.00	100.00	66.66	33.33	48.00	Reserved
1	0	1	133.33	100.00	66.66	33.33	48.00	Reserved
1	1	1	200.00	100.00	66.66	33.33	48.00	Normal operation

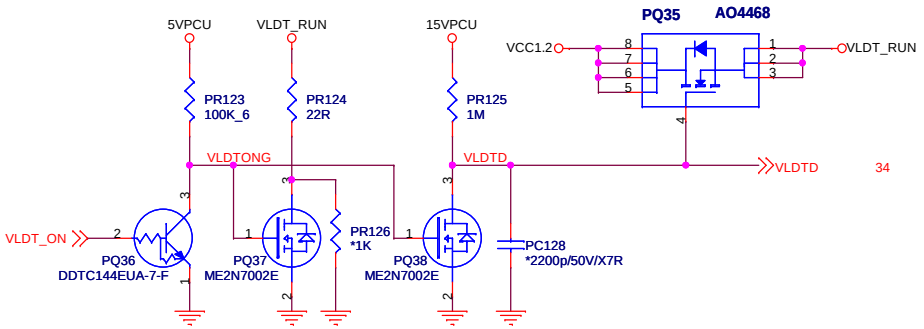
Quanta Computer Inc.
PROJECT : BenQ
Size | Document Number: Clock Generator | Rev: 1A
Date: Tuesday, January 06, 2009 | Sheet 3 of 35

LAYOUT NOTE: VLDT must be routed as a pour or a trace at least 100 mils wide. VLDT may be routed from the source to either ALx balls or Fx balls. Choose whichever makes routing simpler.





VLDT_RUN



Quanta Computer Inc.
PROJECT : BENQ

Size	Document Number	Rev
	HT LINK	1A
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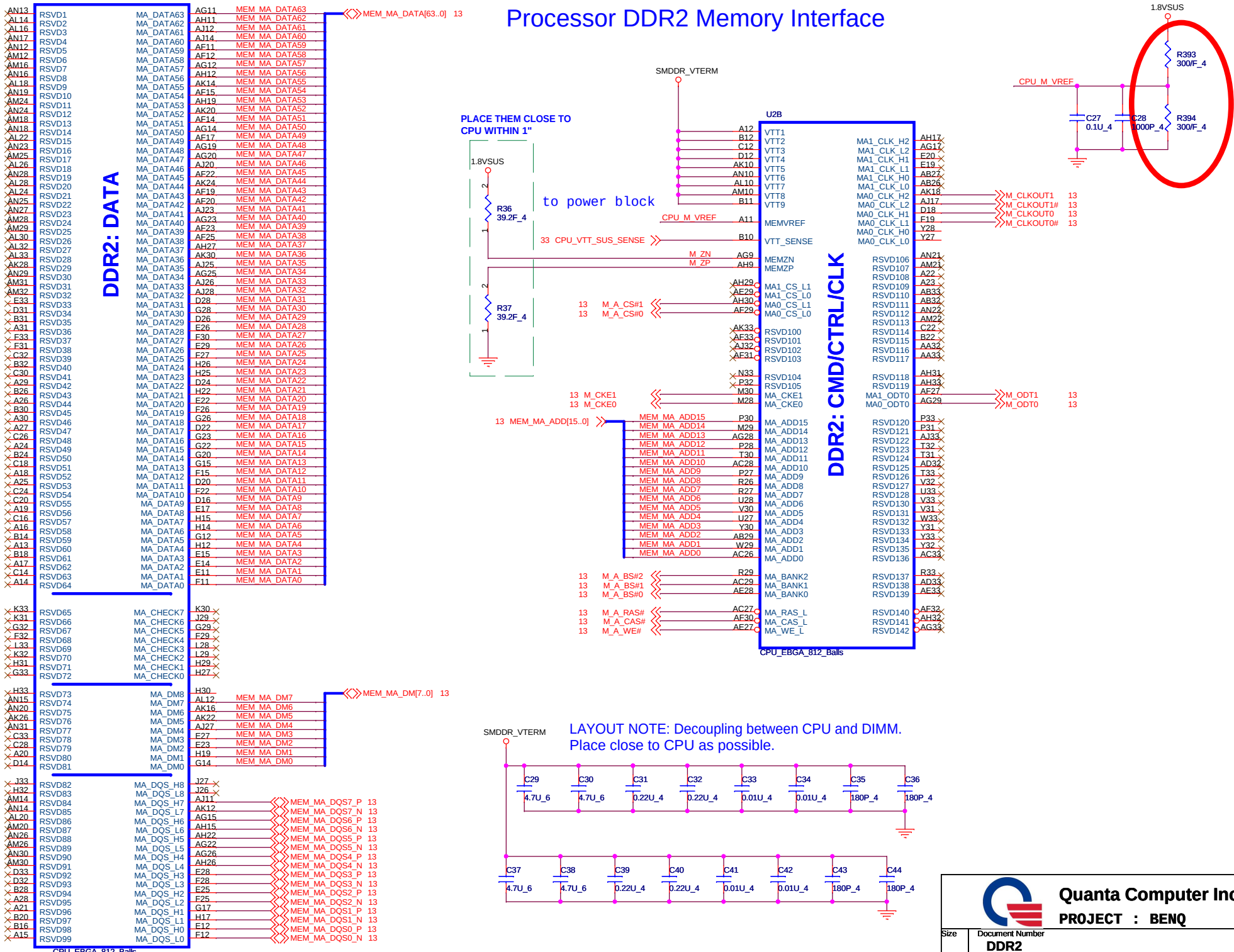
Processor DDR2 Memory Interface



Quanta Computer Inc.

PROJECT : BENQ

Size	Document Number	Rev
	DDR2	1A

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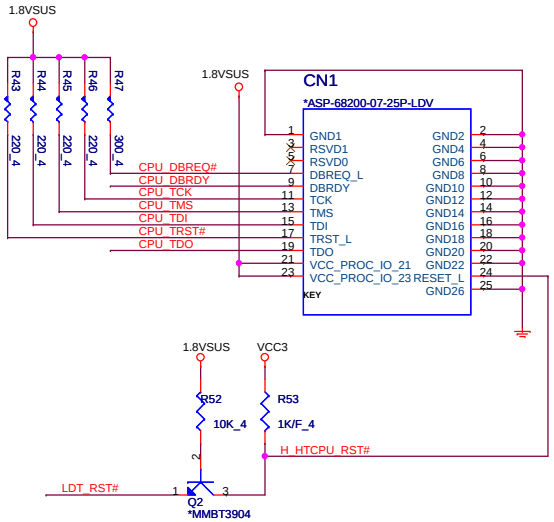
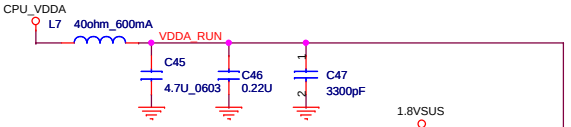
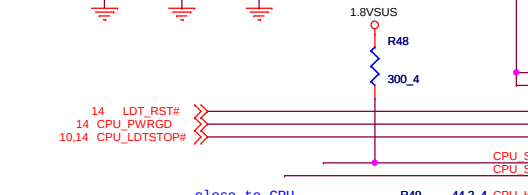
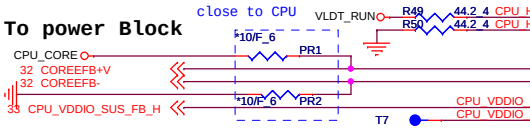
HDT Connector

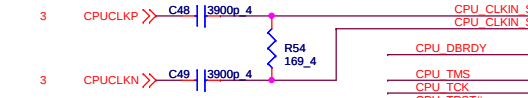


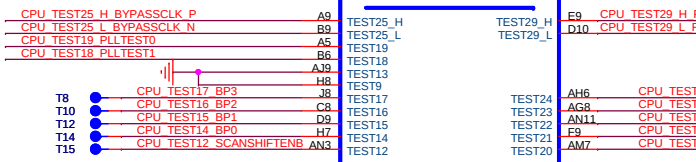


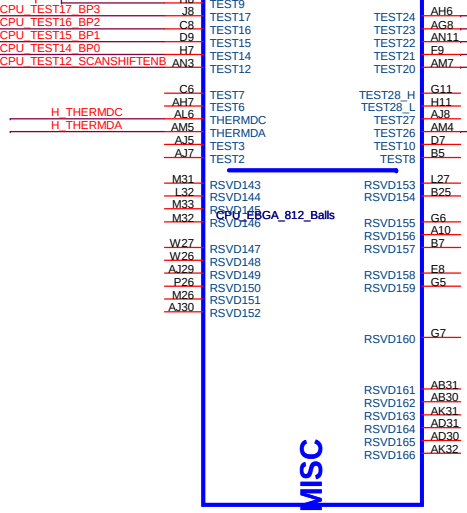


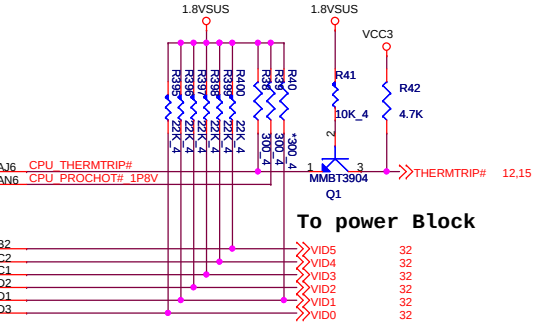
To power Block





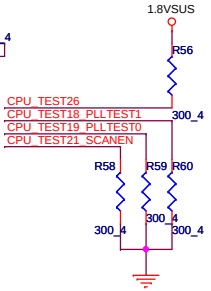


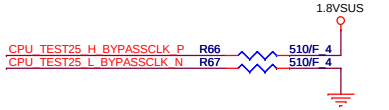




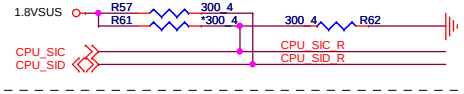
To power Block

To power Block



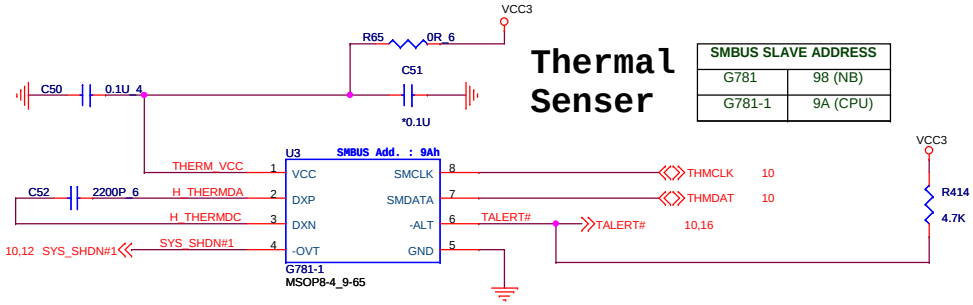


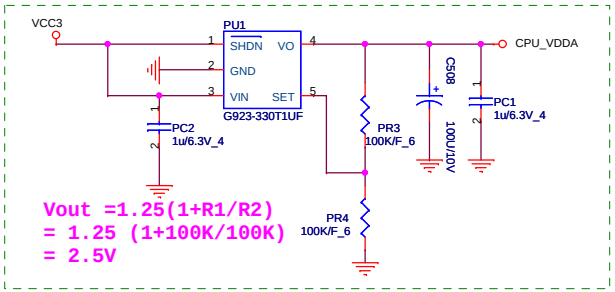
If AMD SI is not used, the SID pin can be left unconnected and SIC should have a 300-Ω (±5%) pulldown to VSS.

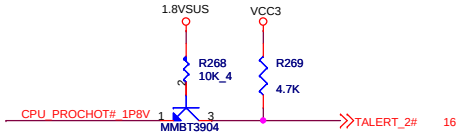


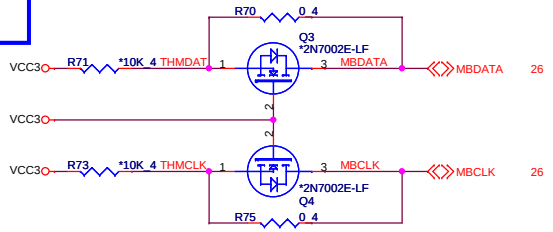
Thermal Senser

SMBUS SLAVE ADDRESS	
G781	98 (NB)
G781-1	9A (CPU)









Quanta Computer Inc.

PROJECT : BENQ

Size	Document Number	Rev
	MISC	1A
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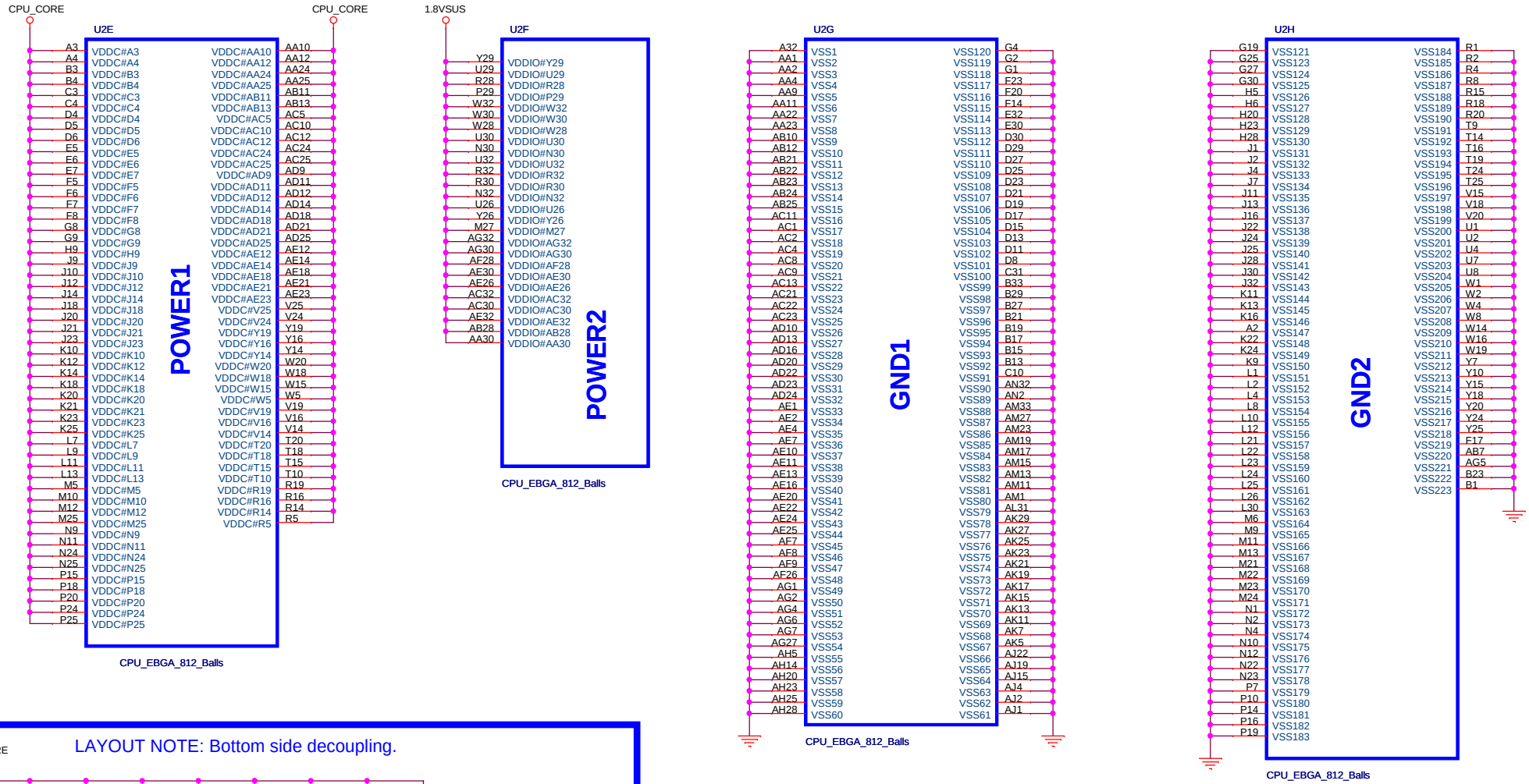
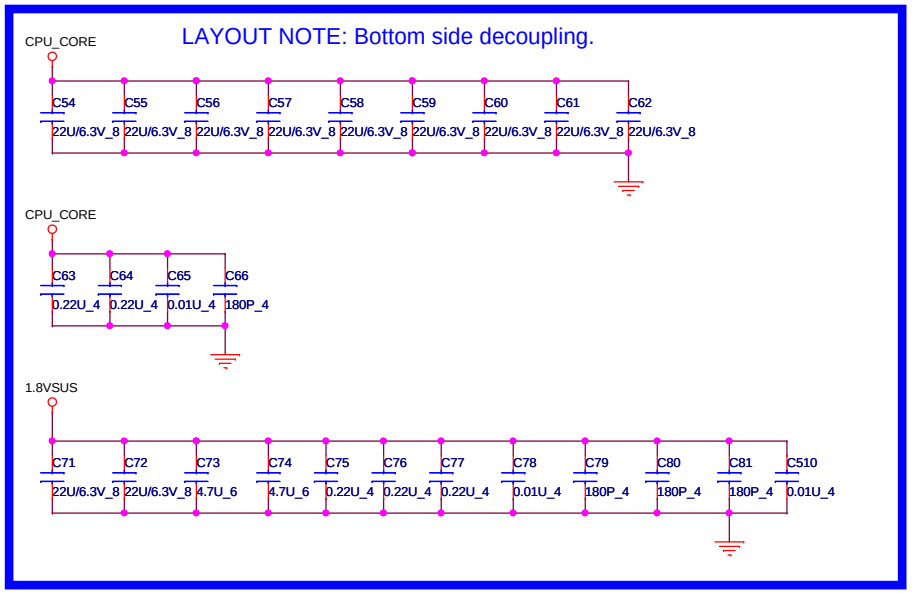
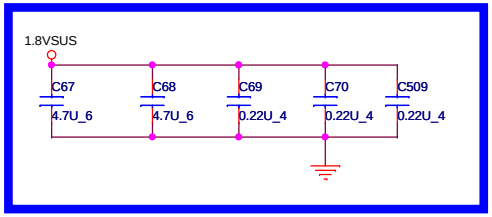


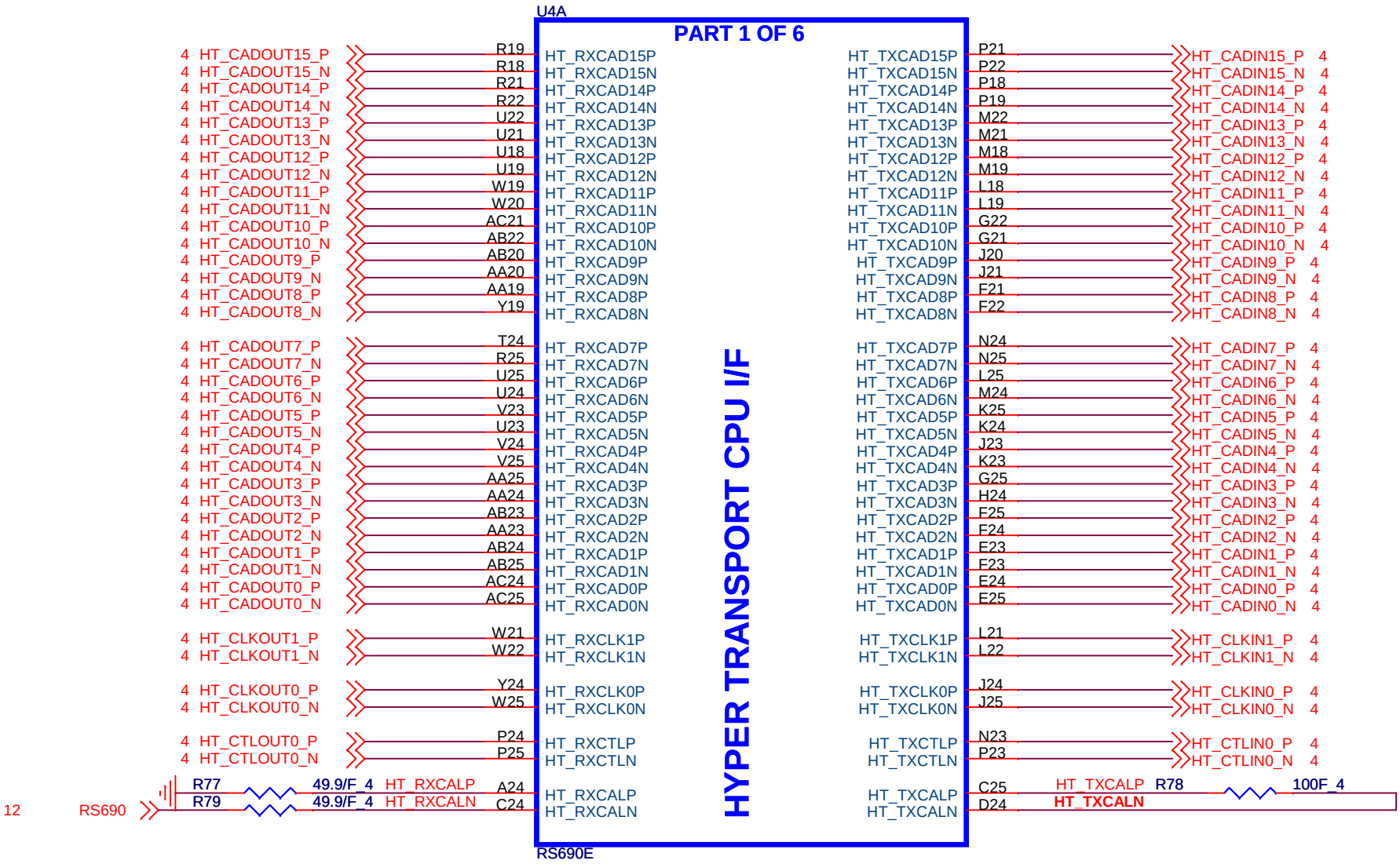




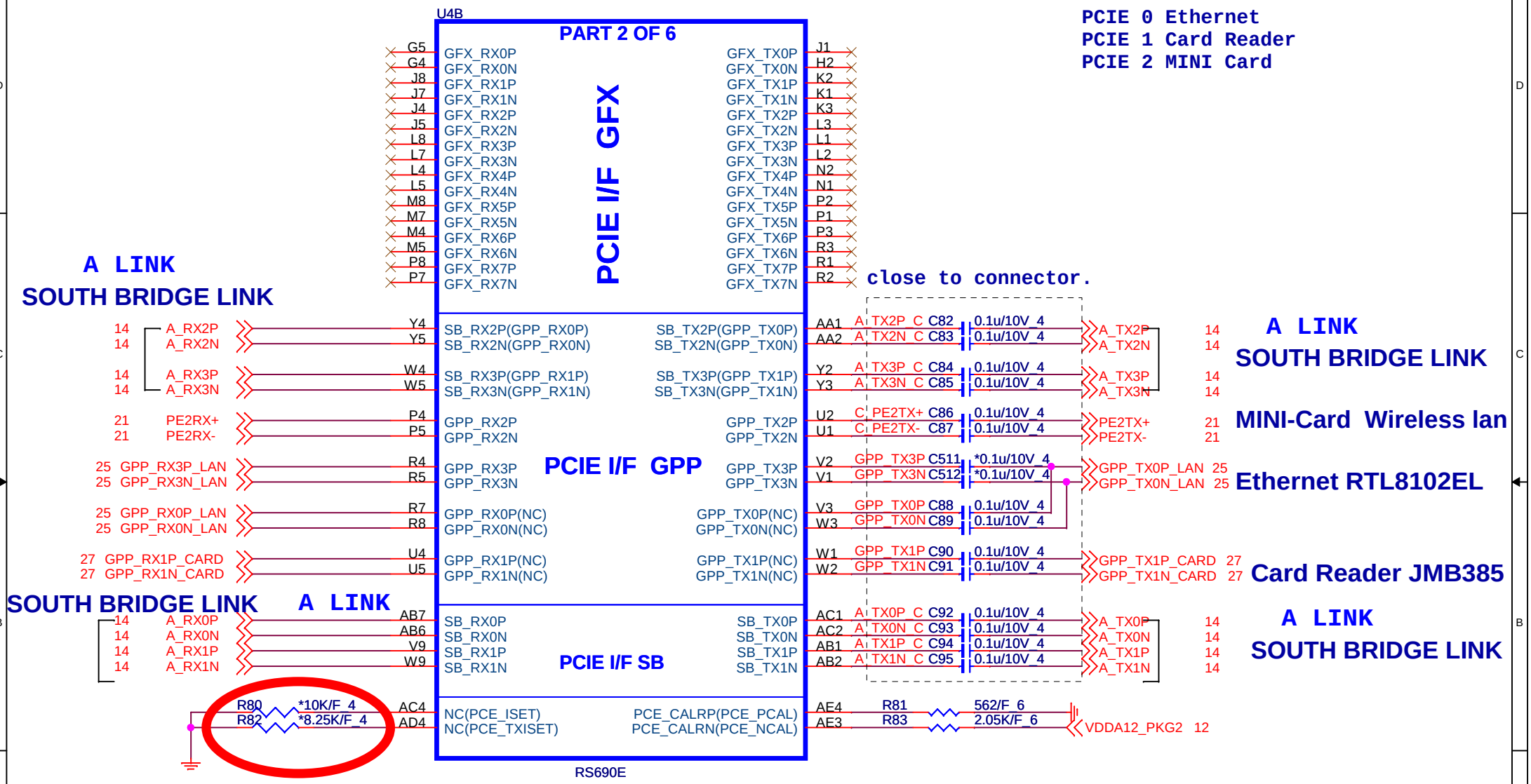
Quanta Computer Inc.

PROJECT : BENQ

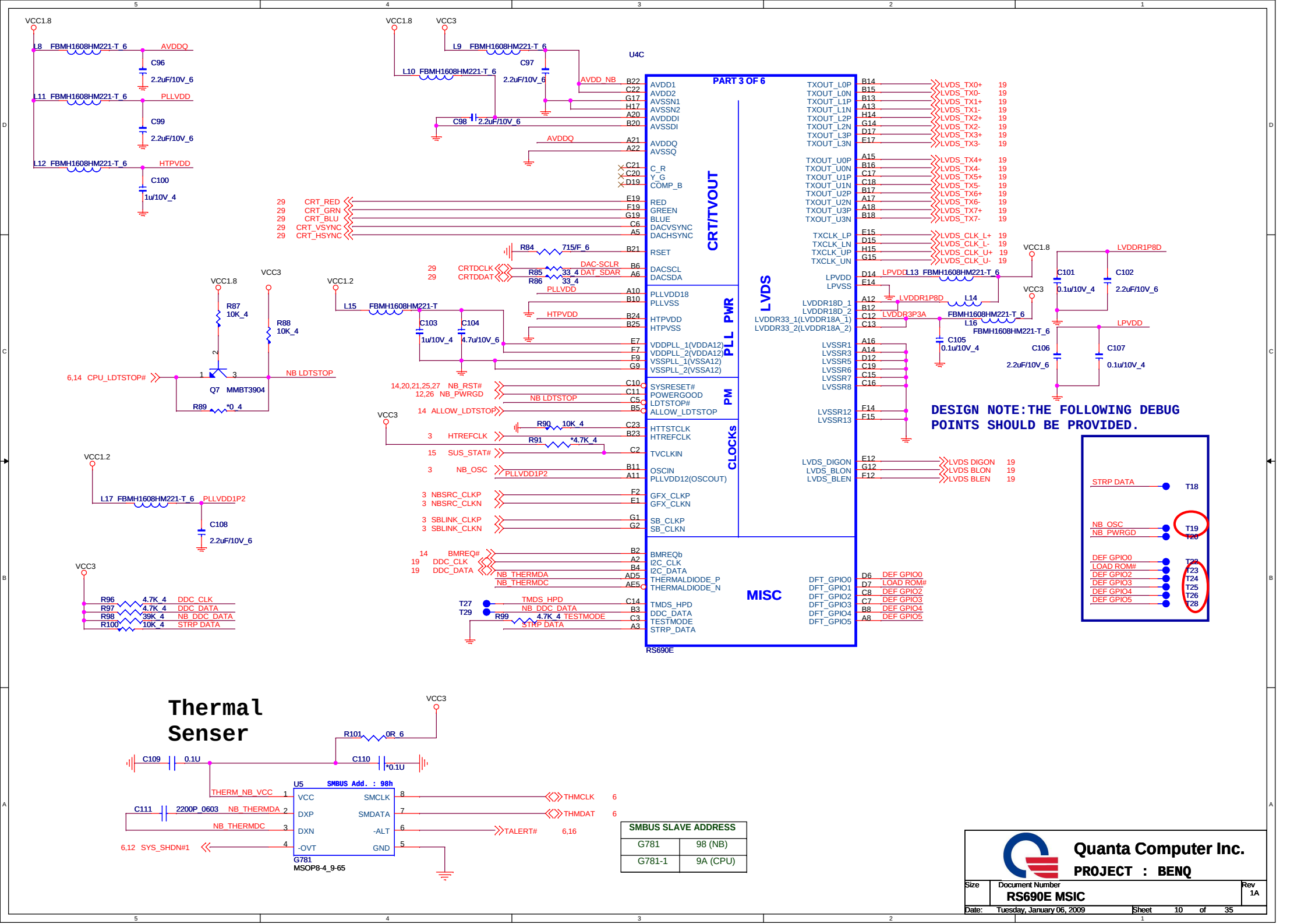
Size	Document Number	Rev
	CPU Power and GND	1A
Date: Tuesday, January 06, 2009	Sheet 7 of 35	



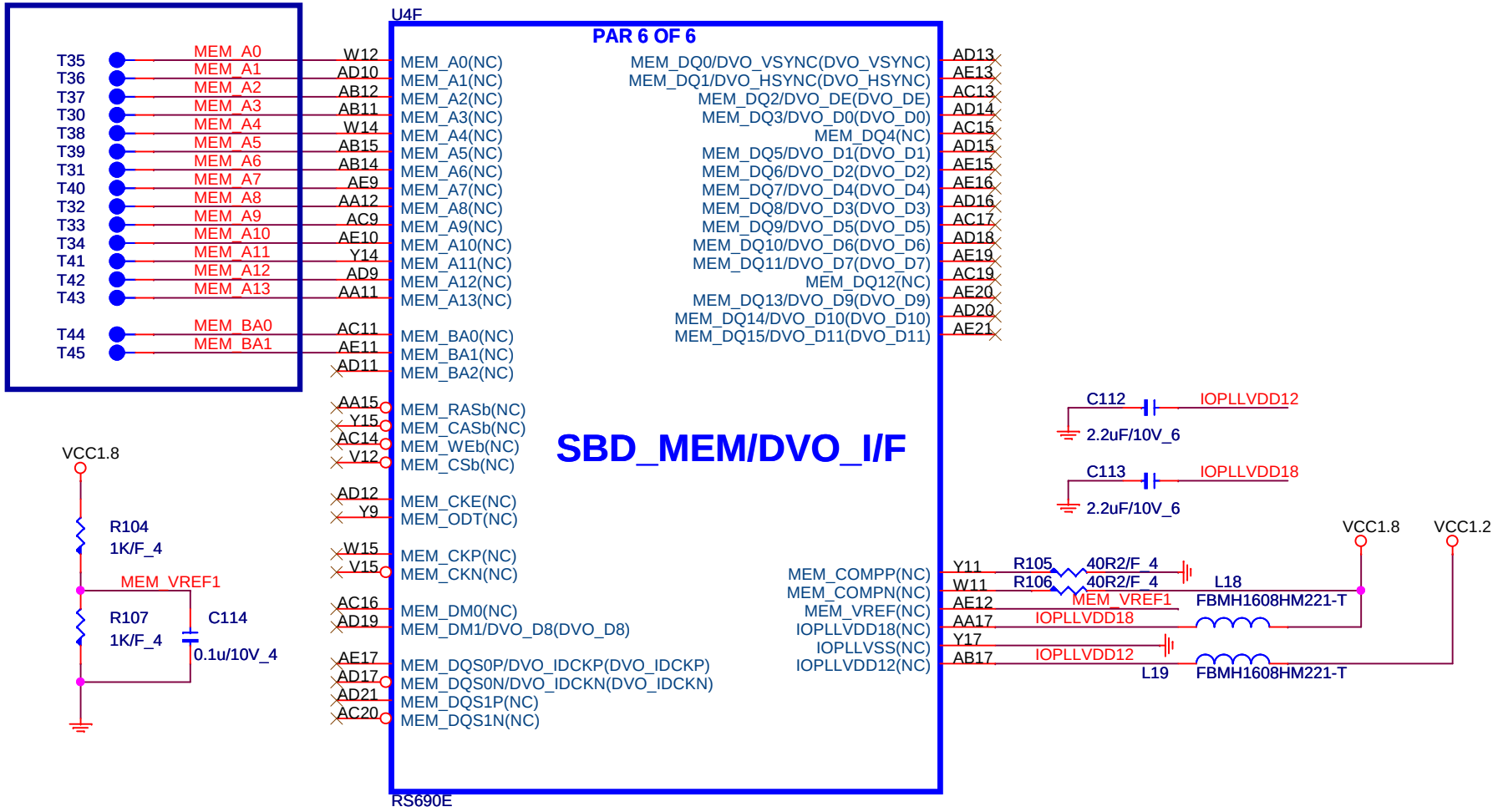
Quanta Computer Inc.		
PROJECT : BENQ		
Size	Document Number: RS690E HT	Rev: 1A
Date: Tuesday, January 06, 2009	Sheet 8 of 35	



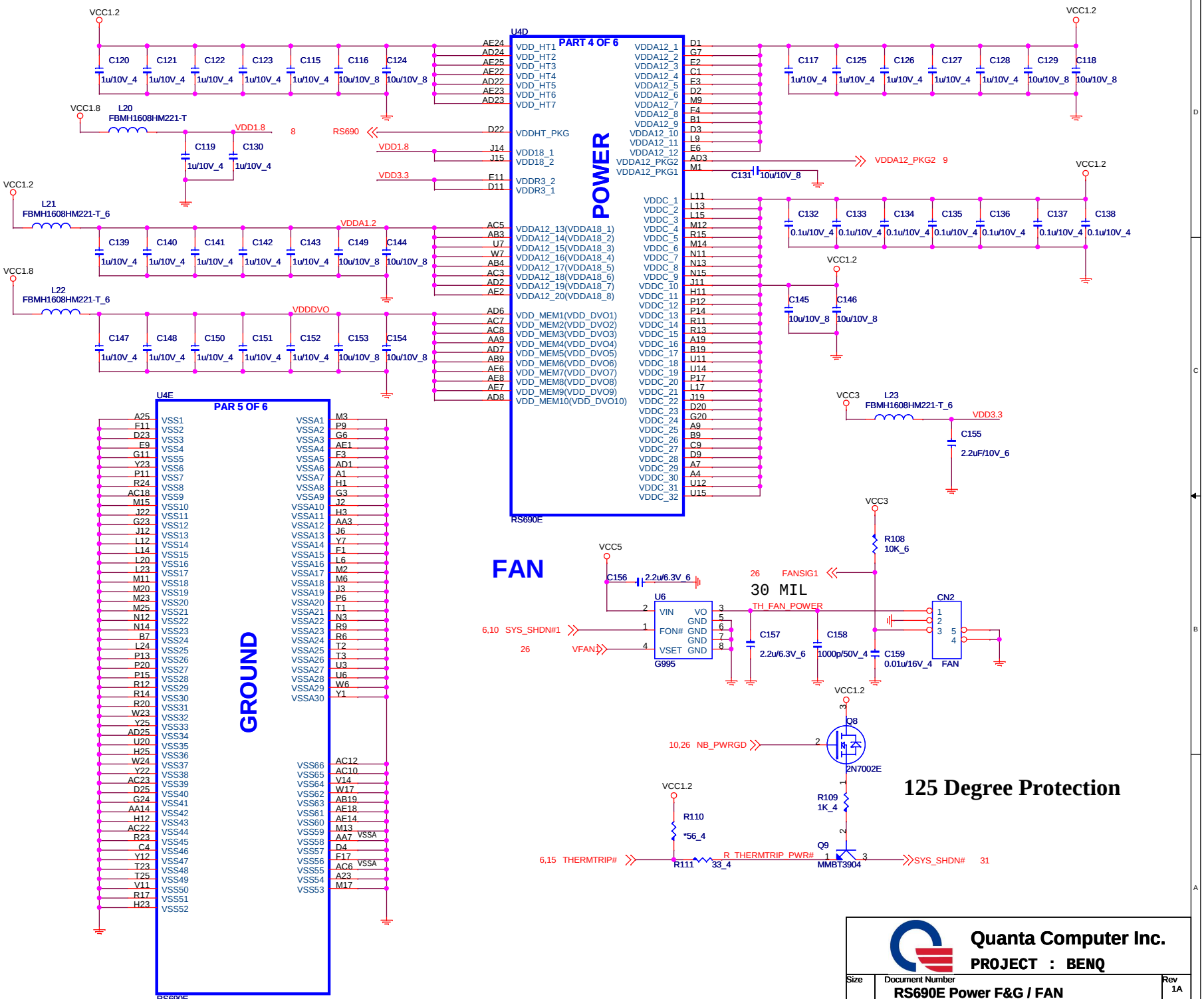
Quanta Computer Inc.		
PROJECT : BENQ		
Size	Document Number: RS690E PCIE	Rev: 1A
Date: Tuesday, January 06, 2009	Sheet 9 of 35	


U4C
PART 3 OF 6
CRT/TVOUT
LVDS
PLL PWR
PM
CLOCKs
MISC
RS690E
DESIGN NOTE:THE FOLLOWING DEBUG POINTS SHOULD BE PROVIDED.
Thermal Senser
U5 SMBUS Add. : 98h
G781
MSOP8-4_9-65
SMBUS SLAVE ADDRESS
G781 98 (NB)
G781-1 9A (CPU)
Quanta Computer Inc.
PROJECT : BENQ
Size Document Number Rev
RS690E MSIC 1A
Date: Tuesday, January 06, 2009 Sheet 10 of 35

DESIGN NOTE:THE FOLLOWING DEBUG POINTS SHOULD BE PROVIDED.



Quanta Computer Inc.		
PROJECT : BENQ		
Size	Document Number: RS690E PCIE	Rev: 1A
Date: Tuesday, January 06, 2009	Sheet 11 of 35	


U4D
PART 4 OF 6
POWER
RS690E
VCC1.2
VCC1.8
VDD1.8
VDD3.3
VDDA1.2
VDDDVO
L20
FBMH1608HM221-T
L21
FBMH1608HM221-T_6
L22
FBMH1608HM221-T_6
L23
FBMH1608HM221-T_6
VDDA12_PKG2 9
RS690 8
U4E
PAR 5 OF 6
GROUND
RS690E
FAN
VCC5
VCC3
U6
G995
CN2
FAN
FANSIG1 26
SYS_SHDN#1 6,10
VFAN1 26
TH_FAN_POWER
30 MIL
R108 10K_6
C156 2.2u/6.3V_6
C157 2.2u/6.3V_6
C158 1000p/50V_4
C159 0.01u/16V_4
Q8
2N7002E
10,26 NB_PWRGD
Q9
MMBT3904
R109 1K_4
R110 *56_4
R111 33_4
6,15 THERMTRIP#
R_THERMTRIP_PWR#
SYS_SHDN# 31
125 Degree Protection
Quanta Computer Inc.
PROJECT : BENQ
Size
Document Number
RS690E Power F&G / FAN
Rev 1A
Date: Tuesday, January 06, 2009
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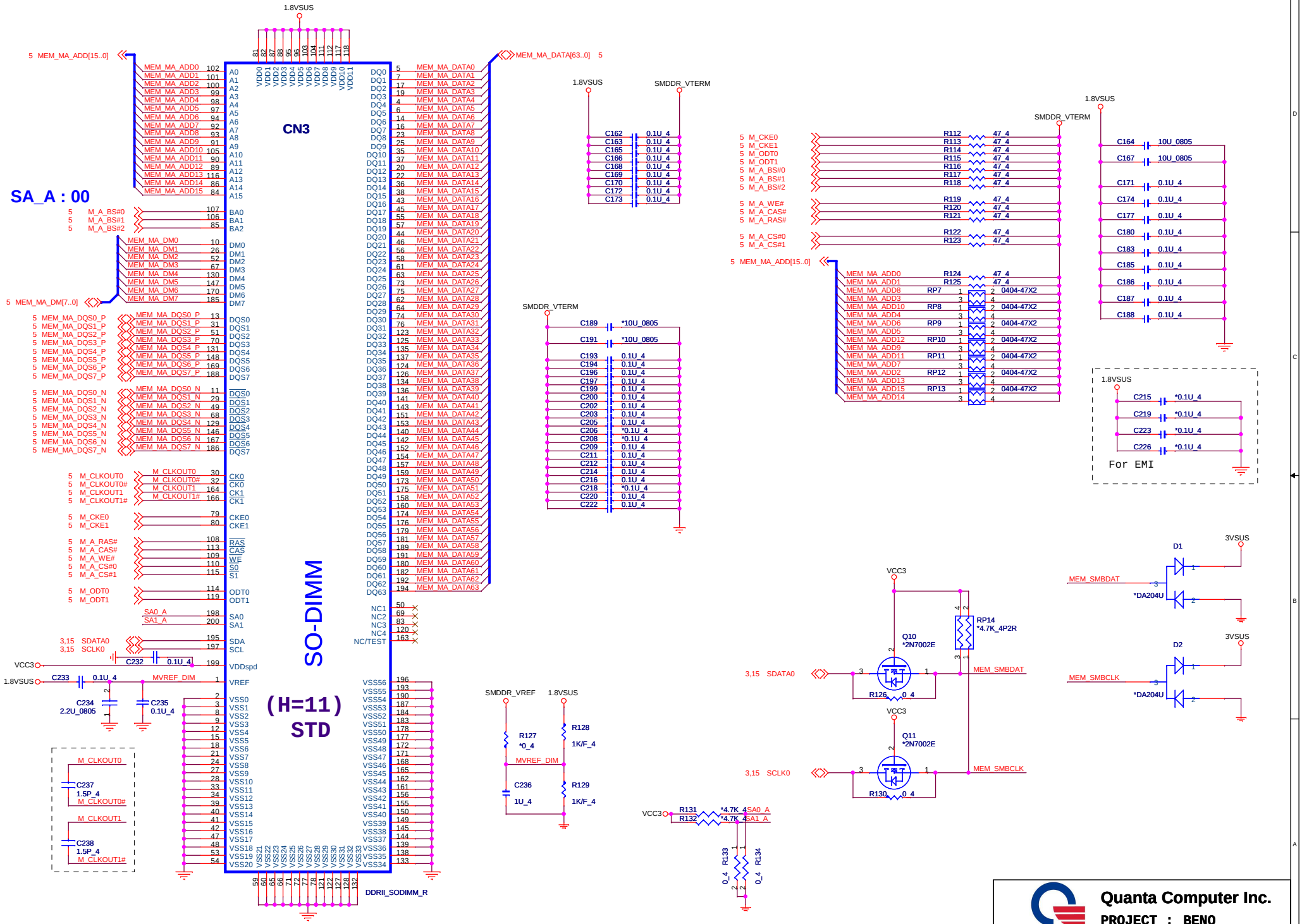


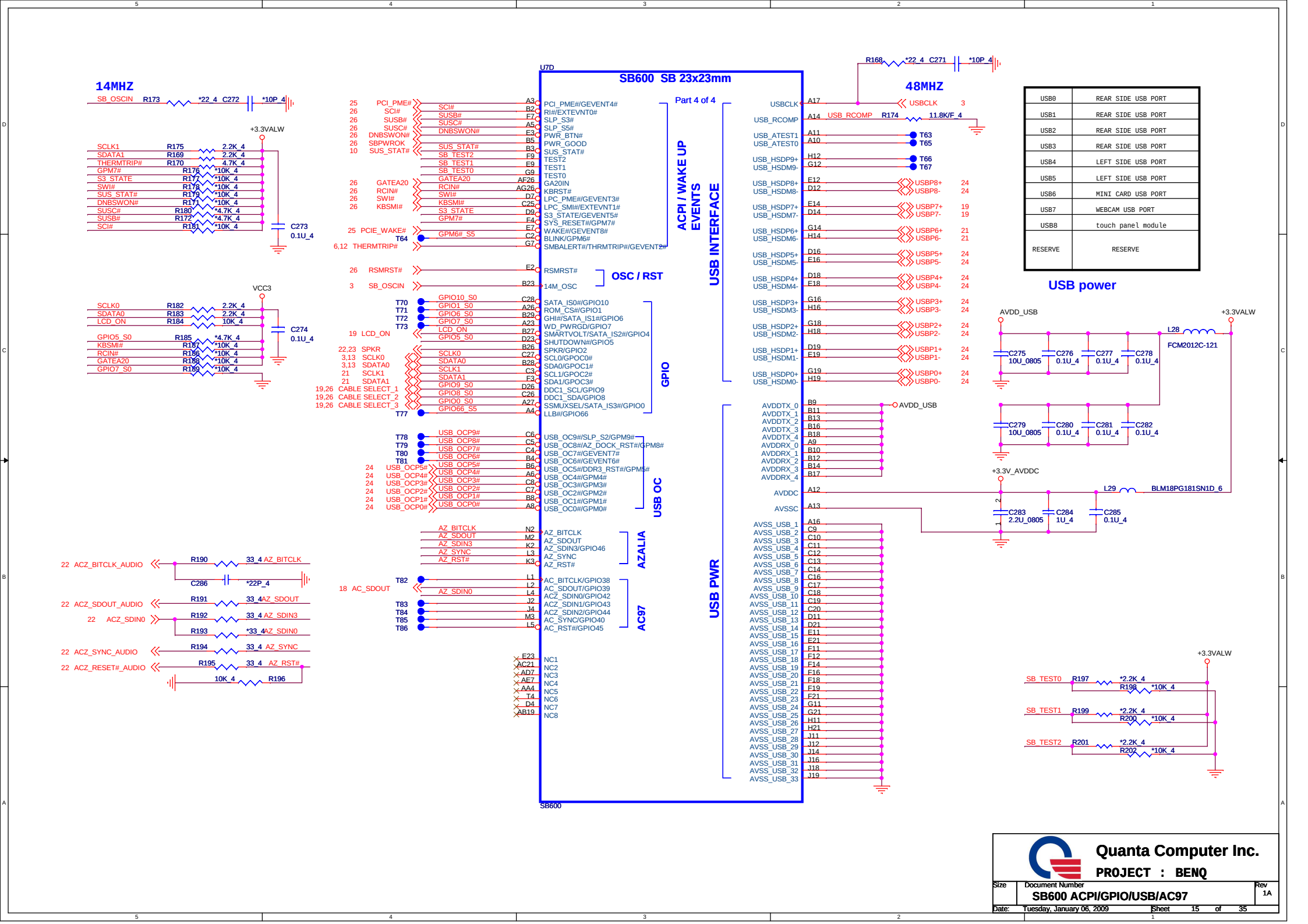
1.This part should not contain any substances which are specified in SS-00259-1
2.Purchase ink, paint, wire rods and molding resins only from the business partners that Sony approves as Green Partners.

Quanta Computer Inc.		
PROJECT : BENQ		
Size	Document Number: DDRII SODIMM x1	Rev: 1A
Date: Tuesday, January 06, 2009	Sheet 13 of 35	

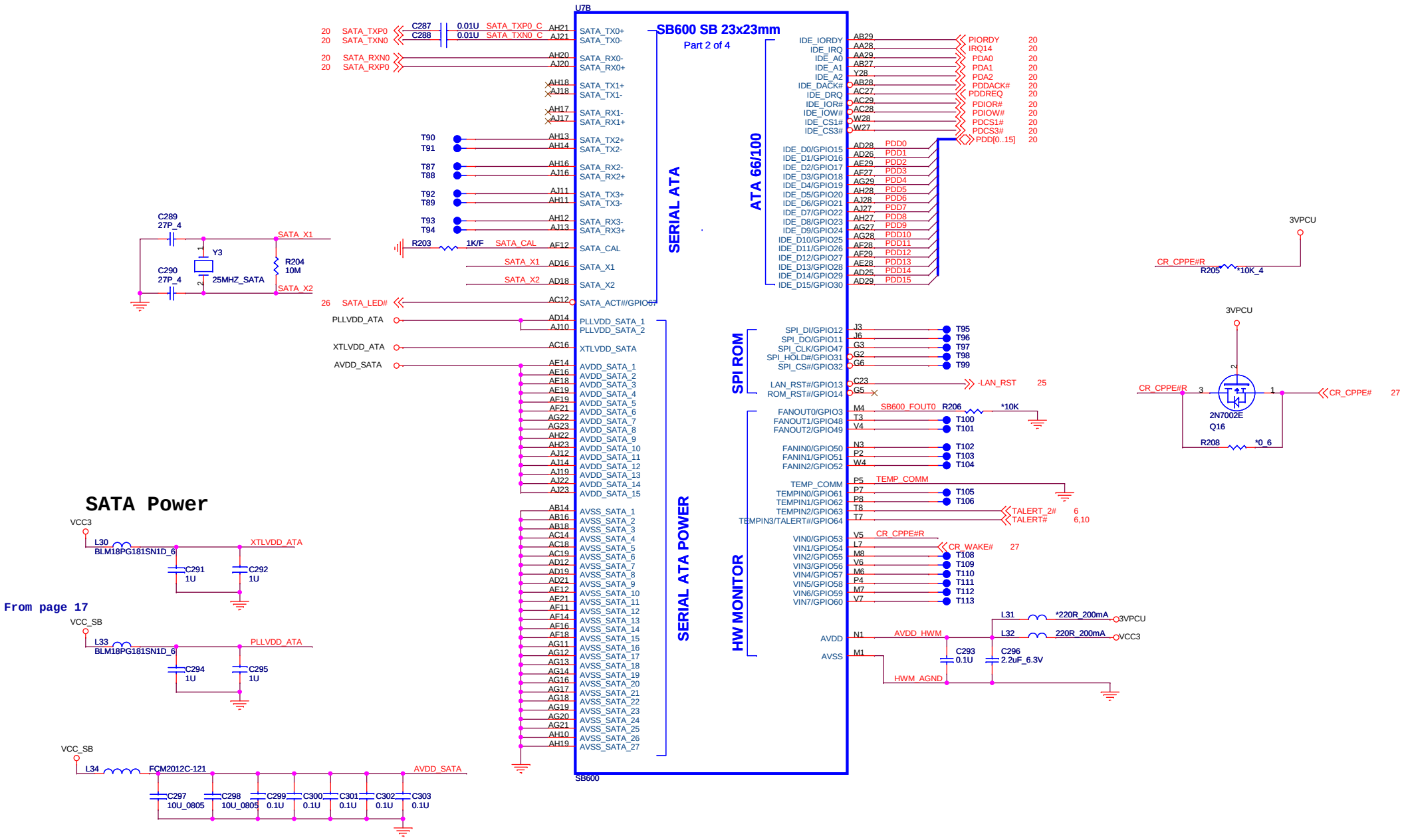
23,26 LPC_RST#
R420 0_4
10,20,21,25,27 NB_RST#
10,20,21,25,27 PCIE_RST#
10,20,21,25,27 IDERST#
100MHZ
R135 8.2K_4
ALINK_RST#
R137 33_4
U7A
SB600 SB 23x23mm
Part 1 of 4
AG10 A_RST#
3 SBSRCCLKP
3 SBSRCCLKN
J24 PCIE_RCLKP
J25 PCIE_RCLKN
9 A_RX0P
9 A_RX0N
9 A_RX1P
9 A_RX1N
9 A_RX2P
9 A_RX2N
9 A_RX3P
9 A_RX3N
C240 0.1U_4 A_RX0P_C
C242 0.1U_4 A_RX0N_C
C244 0.1U_4 A_RX1P_C
C245 0.1U_4 A_RX1N_C
C247 0.1U_4 A_RX2P_C
C248 0.1U_4 A_RX2N_C
C249 0.1U_4 A_RX3P_C
C250 0.1U_4 A_RX3N_C
P29 PCIE_TX0P
P28 PCIE_TX0N
M29 PCIE_TX1P
M28 PCIE_TX1N
K29 PCIE_TX2P
K28 PCIE_TX2N
H29 PCIE_TX3P
H28 PCIE_TX3N
9 A_TX0P
9 A_TX0N
9 A_TX1P
9 A_TX1N
9 A_TX2P
9 A_TX2N
9 A_TX3P
9 A_TX3N
T25 PCIE_RX0P
T26 PCIE_RX0N
T22 PCIE_RX1P
T23 PCIE_RX1N
M25 PCIE_RX2P
M26 PCIE_RX2N
M22 PCIE_RX3P
M23 PCIE_RX3N
R148 562
R149 2.05K
PCIE_CALRP
PCIE_CALRN
E29 PCIE_CALRP
E28 PCIE_CALRN
PCIE_CALI
E27 PCIE_CALI
U29 PCIE_PVDD
U28 PCIE_PVSS
F27 PCIE_VDDR_1
F28 PCIE_VDDR_2
F29 PCIE_VDDR_3
G26 PCIE_VDDR_4
G27 PCIE_VDDR_5
G28 PCIE_VDDR_6
G29 PCIE_VDDR_7
J27 PCIE_VDDR_8
J29 PCIE_VDDR_9
L25 PCIE_VDDR_10
L26 PCIE_VDDR_11
L29 PCIE_VDDR_12
N29 PCIE_VDDR_13
PCIE_VDDR
PCIE_PVDD
PCIE_VDDR
PCIE_PWR
VCC_SB
L24 *BLM18PG181SN1D_6
L25 220ohm_2A
C251 10U_0805
C252 1U_6
C253 0.1U_4
PCIE Power
Stuff L81 in A-test
2A
Stuff L80 in A-test
VCC_SB
L26 *FCM2012C-121
PCIE_PWR
L27 220ohm_2A
C255 10U_0805
C256 10U_0805
C257 0.1U_4
C258 0.1U_4
C259 0.1U_4
C260 1U_6
C261 1U_6
C262 1U_6
C263 1U_6
C264 1U_6
PCI EXPRESS INTERFACE
SB600
R153 *0_4
26 PCIEPWR_ON
D3
*1SS355
R158
10K_4
26,31,33,34 MAINON
C265 0.1U_4
5VPCU
R154 100K_6
Q13 2N7002E-LF
15VPCU
R155 1M_6
Q12 2N7002E-LF
VCC_SB
PQ1 AO6402
PCIE_PWR_D
PCIE_PWR
R156 22_6
PCIE_PWR_D
Q14 2N7002E-LF
32K_X1
Y2 32.768KHZ
32K_X2
R165 *20M_4
R167 20M_4
C266 18P_4
C267 18P_4
CPU_PWR_SB
R161 1K_4
32K_X1 D2 X1
32K_X2 C1 X2
XTAL
6 CPU_PWRGD
AC26 CPU_PG/LDT_PG
T53 W26 INTR/LINT0
T54 W24 NMI/LINT1
T55 W25 INIT#
T56 AA24 SMI#
6,10 CPU_LDTSTOP# AA23 SLP#/LDT_STP#
6 CPU_SIC AA22 IGNNE#/SIC
6 CPU_SID AA26 A20M#/SID
Y27 FERR#
10 ALLOW_LDTSTOP
T57 AA25 STPCLK#/ALLOW_LDTSTP
T59 AH9 CPU_STP#/DPSLP_3V#
23 LPCPD#
R422 *0_4
B24 DPSLP_OD#/GPIO37
T62 W23 DPRSLPVR
6 LDT_RST# AC25 LDT_RST#/DPRSTP#/PROCHOT#
CPU
R403 20K_4 LDT_RST#
R404 20K_4 CPU_PWRGD
R405 20K_4 CPU_LDTSTOP#
PCI CLKS
PCI INTERFACE
U2 PCICLK0
T2 PCICLK1
U1 PCICLK2
V2 PCICLK3
W3 PCICLK4
U3 PCICLK5
V1 PCICLK6
T1 SPDIF_OUT/PCICLK7/GPIO41
PCICLK0_R R138 22_4 PCLK_R5C843
PCICLK1_R R140 22_4 PCLK_DBC
PCICLK2_R R142 22_4 PCLK_EC
PCICLK3_R R421 22_4 PCLK_TPM
PCICLK4_R R143 22_4 PCICLK4
PCICLK5_R R144 22_4
PCICLK6_R R145 22_4
SB_SPDIF_R T46
PCLK_R5C843 18
PCLK_DBC 18,21
PCLK_EC 26
PCLK_TPM 23
PCICLK4 18
PCICLK6 18
Reserved For EMI
PCLK_R5C843 C239 10P_4
PCLK_DBC C241 10P_4
PCLK_EC C243 10P_4
PCICLK4 C246 10P_4
AJ9 PCIRST#
PCIRST#_C
AD[23..28] 18
PCIRST#_C
PCIRST# 21
R147 8.2K_4
AD0/ROMA18 W7
AD1/ROMA17 Y1
AD2/ROMA16 W8
AD3/ROMA15 W5
AD4/ROMA14 AA5
AD5/ROMA13 Y3
AD6/ROMA12 AA6
AD7/ROMA11 AC5
AD8/ROMA9 AA7
AD9/ROMA8 AC3
AD10/ROMA7 AC7
AD11/ROMA6 AJ7
AD12/ROMA5 AD4
AD13/ROMA4 AB11
AD14/ROMA3 AE6
AD15/ROMA2 AC9
AD16/ROMD0 AA3
AD17/ROMD1 AJ4
AD18/ROMD2 AB1
AD19/ROMD3 AH4
AD20/ROMD4 AB2
AD21/ROMD5 AJ3
AD22/ROMD6 AB3
AD23/ROMD7 AH3 AD23
AD24 AC1 AD24
AD25 AH2 AD25
AD26 AC2 AD26
AD27 AH1 AD27
AD28 AD2 AD28
AD29 AG2
AD30 AD1
AD31 AG1
CBE0#/ROMA10 AB9
CBE1#/ROMA1 AF9
CBE2#/ROMWE# AJ5
CBE3# AG3
FRAME# AA2
DEVSEL#/ROMA0 AH6
IRDY# AG5
TRDY#/ROMOE# AA1
PAR/ROMA19 AF7
STOP# Y2
PERR# AG8
SERR# AC11
REQ0# AJ8
REQ1# AE2
REQ2# AG9
REQ3#/GPIO70 AH8 REQ3# T48
REQ4#/GPIO71 AH5 REQ4# T47
GNT0# AD11
GNT1# AF2
GNT2# AH7
GNT3#/GPIO72 AB12 GNT3# T49
GNT4#/GPIO73 AG4 GNT4# T50
CLKRUN# AG7 T51
LOCK# AF6 PCI_LOCK# T52
INTE#/GPIO33 AD3
INTF#/GPIO34 AF1
INTG#/GPIO35 AF4
INTH#/GPIO36 AF3
LPC
LAD0 AG24
LAD1 AG25
LAD2 AH24
LAD3 AH25
LFRAME# AF24
LDRQ0# AJ24
LDRQ1#/GNT5#/GPIO68 AH26 LPC_DRQ1# T120
BMREQ#/REQ5#/GPIO65 W22 R164 *0_4
SERIRQ AF23
LAD0 21,23,26
LAD1 21,23,26
LAD2 21,23,26
LAD3 21,23,26
LFRAME# 21,23,26
LPC_DRQ0# 21
BMREQ# 10
SERIRQ 21,23,26
RTC
RTCCLK D3 RTC_CLK T58
RTC_IRQ#/GPIO69 E5 T60
VBAT E1 SSM14 D4 VCCRTC
RTC_GND D1
C270 1U_4
RTC
VCCRTC
C254 *1U_6
G1
SHORT_PAD
R151 510_6
30mil
BT1
53261-0290
85204-0200-2P-L
R152 *0_6
CLEAR_CMOS 26
5VPCU
R157 2.2K_6 VCCRTC_3
Q15 MMBT3904
R159 4.7K_4
R160 15K_6
RTC_CLK R448 10K_4 +3.3VALW
SERIRQ R163 *10K_4 VCC3
VCC3
BMREQ# R166 *10K_4
C268 *18P_4
C269 *0.1U_4

Quanta Computer Inc.
PROJECT : BENQ

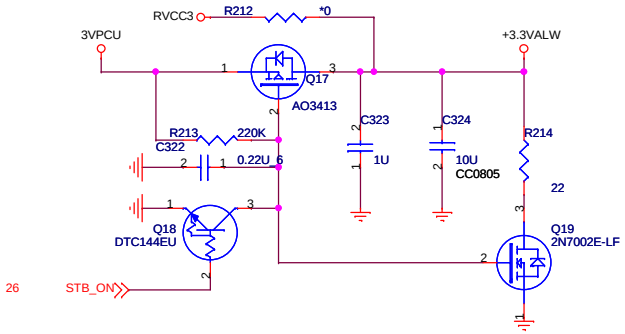
Size	Document Number	Rev
	SB600 PCIE/PCI/CPU/LPC	1A
Date: Tuesday, January 06, 2009	Sheet 14 of 35	

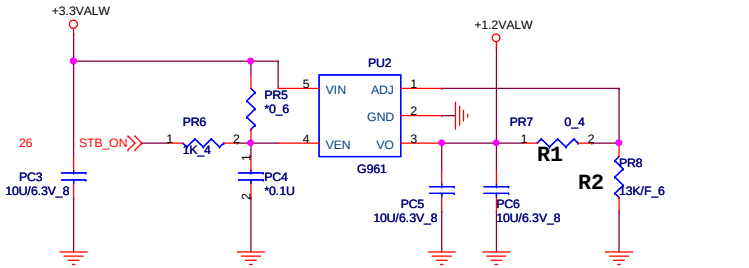


Quanta Computer Inc.	
PROJECT : BENQ	
Size	Document Number: SB600 ACPI/GPIO/USB/AC97 — Rev: 1A
Date: Tuesday, January 06, 2009	Sheet 15 of 35



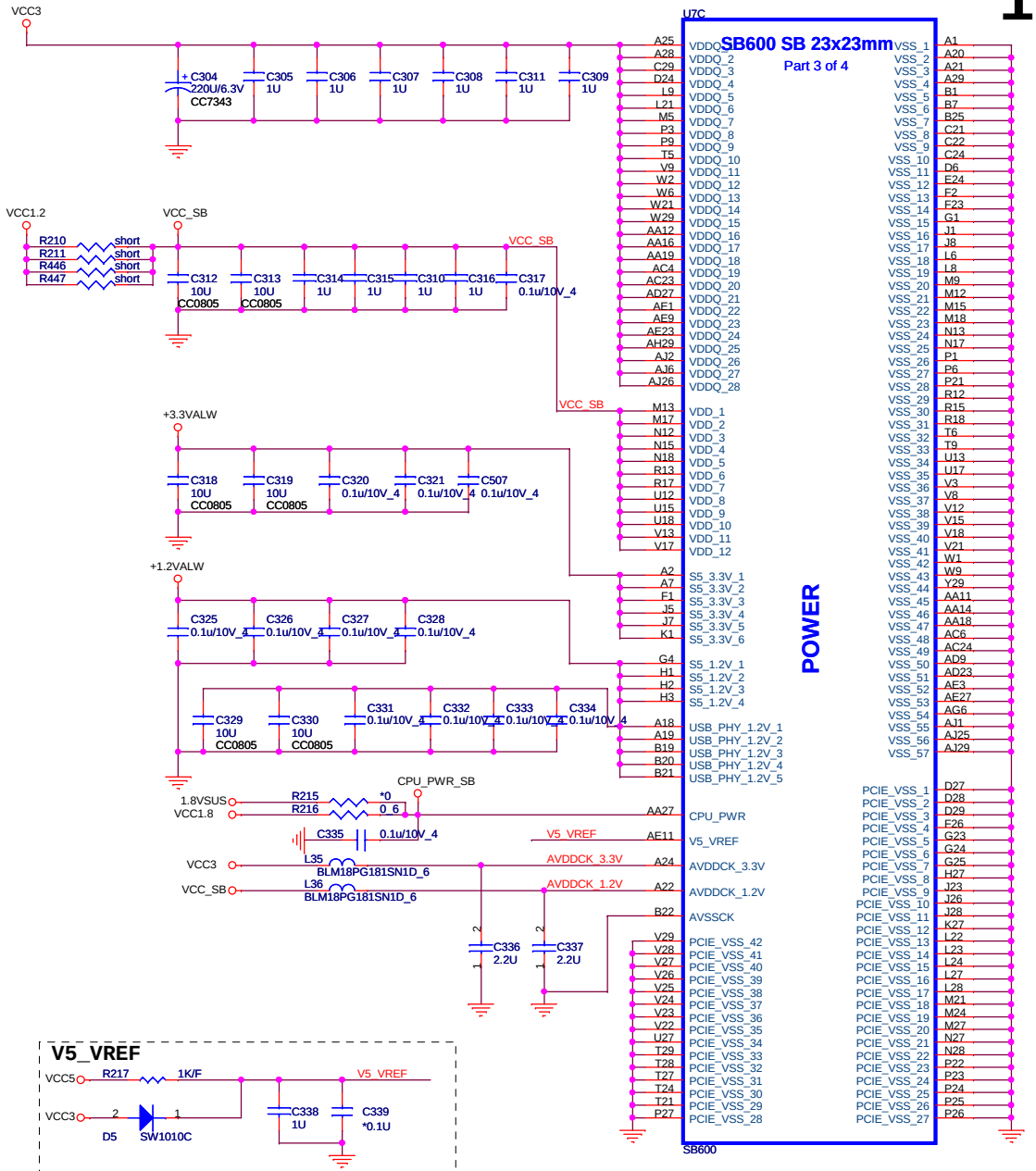
Quanta Computer Inc.		
PROJECT : BENQ		
Size	Document Number: SB600 HDD	Rev: 1A
Date: Tuesday, January 06, 2009	Sheet 16 of 35	





1.2V R1= 0 R2=13K

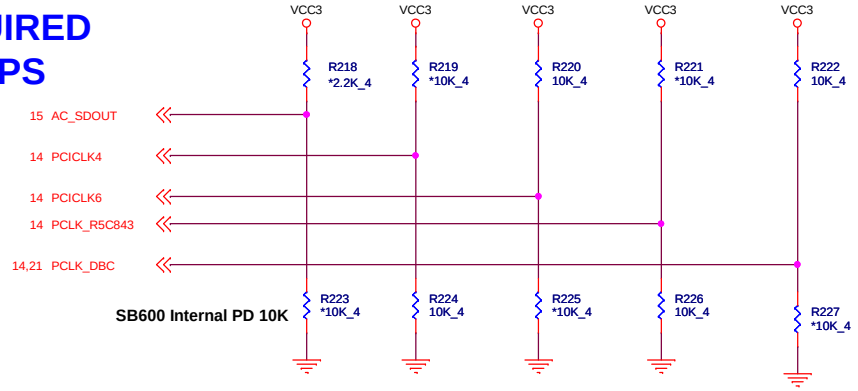
Vo=1.2*(1+R1/R2)



Quanta Computer Inc.
PROJECT : BENQ

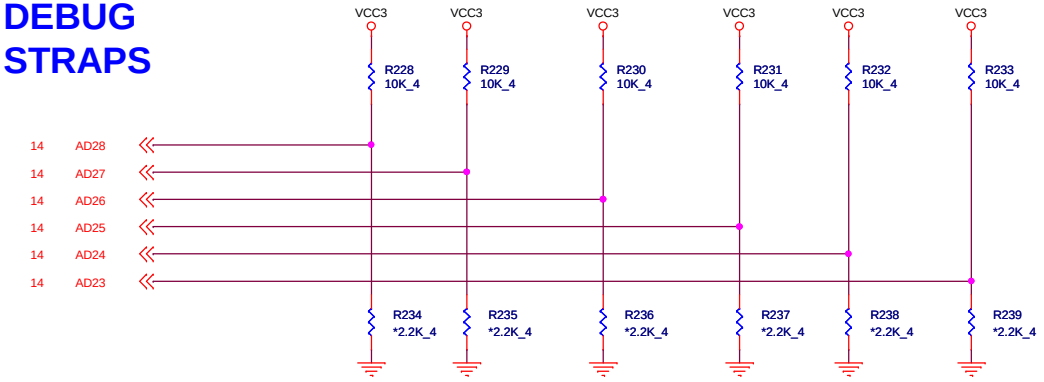
Size	Document Number	Rev
	SB600 POWER/DECOUPLING	1A
Date: Tuesday, January 06, 2009	Sheet 17 of 35	

REQUIRED STRAPS



	AC_SDOUT	PCICLK4	PCICLK6	PCLK_R5C843 / PCI_CLK0	PCLK_DBC / PCI_CLK1
PULL HIGH	USE DEBUG STRAPS	USE INT. PLL48	CPU IF=K8 DEFAULT	ROM TYPE: H, H = PCI ROM; H, L = SPI ROM; L, H = LPC ROM; L, L = FWH ROM	DEFAULT
PULL LOW	IGNORE DEBUG STRAPS DEFAULT	USE EXT. 48MHZ DEFAULT	CPU IF=P4		

DEBUG STRAPS



	PCI_AD28	PCI_AD27	PCI_AD26	PCI_AD25	PCI_AD24	PCI_AD23
PULL HIGH	USE LONG RESET DEFAULT	USE PCI PLL DEFAULT	USE ACPI BCLK DEFAULT	USE IDE PLL DEFAULT	USE DEFAULT PCIE STRAPS DEFAULT	BOOTFAILTIMER DISABLED DEFAULT
PULL LOW	USE SHORT RESET	BYPASS PCI PLL	BYPASS ACPI BCLK	BYPASS IDE PLL	USE EEPROM PCIE STRAPS	BOOTFAILTIMER ENABLED

WEB CAM MODULE

FOR EMI

C340 *22P_4
DMIC_CLK
C342 0.1u/16V_4
CCD_PWR

CCD_PWR
WCM2012-110
15 USBP7+
15 USBP7-
L37
USB_7_FB
USB_7_FB#
22 DMIC_CLK
22 DMIC_DAT
R241 0_4
R242 0_4
MIC+_2
DMIC_DAT_1
22 MIC+
R245 *0_4
R244 *0_4
CN4

C	B	A	Panel
0	0	0	18.5 AUO
0	0	1	18.5 CMO
0	1	0	21.5 AUO
0	1	1	21.5 CMO
1	0	0	
1	0	1	
1	1	0	
1	1	1	

TO INVERTER POWER

F1 3A
RC1206
VIN
C343 10U_1206
C344 0.1U_0603
C525 0.1U_4
C345 0.1U_4
C346 *10U_1206
For EMI
BLON
C347 1000p/50V_4

LCD CONNECTOR

CN5
VIN_LCD
BLON
LCD_VADJ
LCDVCC
C348 *0.1u/50V_6
10 LVDS_CLK_U+
10 LVDS_CLK_U-
CABLE SELECT_3 15,26
10 LVDS_TX7+
10 LVDS_TX7-
LVDS_CLK_L+ 10
LVDS_CLK_L- 10
10 LVDS_TX6+
10 LVDS_TX6-
LVDS_TX0+ 10
LVDS_TX0- 10
10 LVDS_TX5+
10 LVDS_TX5-
LVDS_TX1+ 10
LVDS_TX1- 10
10 LVDS_TX4+
10 LVDS_TX4-
LVDS_TX2+ 10
LVDS_TX2- 10
15,26 CABLE SELECT_1
15,26 CABLE SELECT_2
LVDS_TX3+ 10
LVDS_TX3- 10
C353 22P_4
C354 22P_4

3VPCU
Serial EEPROM
C515 0.1U
U21
VCC A0
NC A1
SCL A3
SDA GND
24C02
10 DDC_CLK
10 DDC_DATA
R248 0_4
R249 0_4
RWPROTECTE
PANEL_DDC_CLK
PANEL_DDC_DATA

BACKLIGHT ON/OFF CONTROL

VCC3
C341 0.1U
R240 10K_4
BLON
D6 1SS355
LCD_ON 15
LVDS BLEN 10
AU1 TC7SH08FU(F)
R243 10K_4

H:ENABLE
L:DISABLE

VIN
C349 *0.1u/50V_6
C350 *0.1u/50V_6
C351 *0.1u/50V_6

26 VADJ
10 LVDS BLON
R246 0_4
R247 *0_4
C352 *0.1u/50V_6
LCD_VADJ

PWM signal

5VPCU
R257 10K_4
RWPROTECTE
PANEL_DDC_CLK
PANEL_DDC_DATA
R436 0
R437 0
CN19
DFHD04MR701
53398-0410-4P-L
D35
PANEL_DDC_CLK
*DA204U
D36
PANEL_DDC_DATA
*DA204U
RWPROTECTE
G2
*SHORT_PAD
C523 22P_6
C524 22P_6

CAMERA POWER

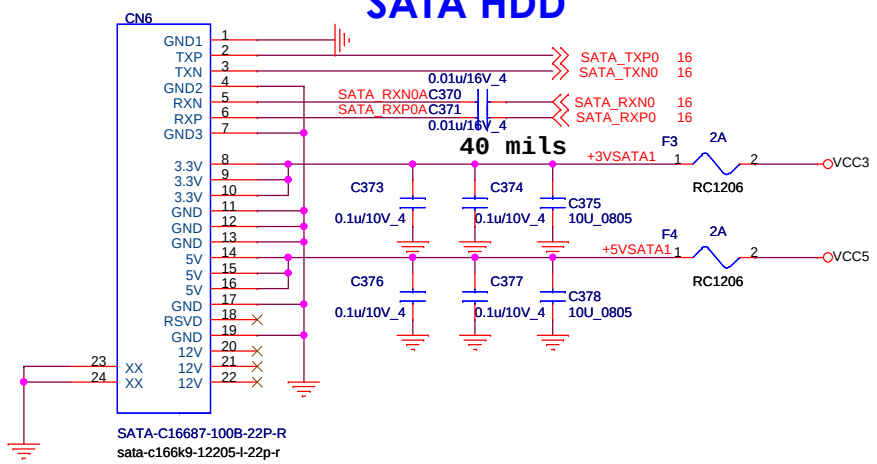
VCC5 VCC3
R250 0_8
R251 *0_8
CCD_PWR
R255 *0_8
CCD_POWER
Q21 AO3403
C363 10u/10V_8
C364 1000p/50V_4
C366 0.1u/10V_4
CCD_POWER_ON# 26
C355 *0.1u/16V_4
C356 *0.1u/16V_4
C357 *0.1u/16V_4
C360 *0.1u/16V_4
C361 *0.1u/16V_4
C362 *0.1u/16V_4

PANEL VCC CONTROL

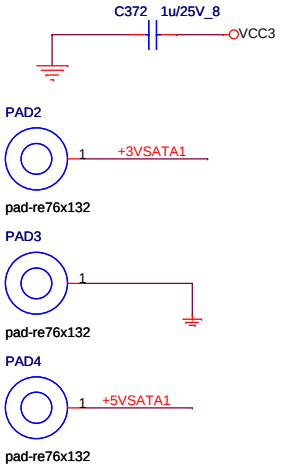
LCDVCC
C358 10U/10V_8
C359 10U/10V_8
VCC5
C528 0.1U_4
FOR EMI
C365 0.1U_4
U8
IN OUT
IN GND
ON/OFF GND
AAT4280IGU-1-T1
10 LVDS DIGON
R256 10K_4
F2 2A
LCDVCC1
RC1206
LCDVCC
C368 10U/10V_8
C369 0.1U_4
VCC5
R252 20K_6
R253 169_6
2N7002E
Q20
Q22 DTC144EU
LVDS DIGON
C367 3300pF_4
LCDVCC

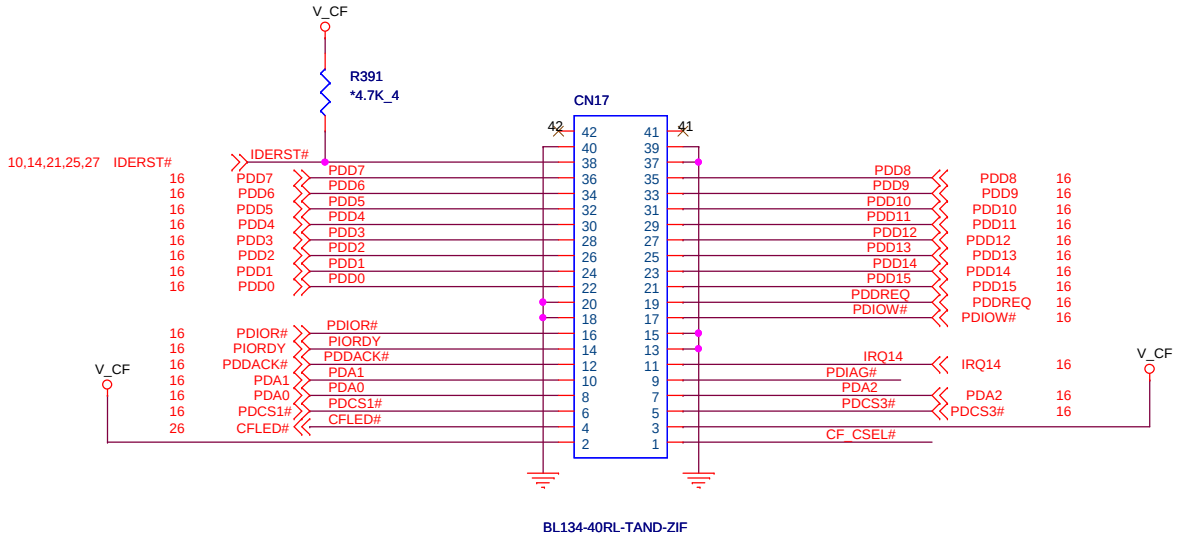
Quanta Computer Inc.		
PROJECT : BENQ		
Size	Document Number: LCD PANEL/CCD	Rev: 1A
Date: Tuesday, January 06, 2009	Sheet 19 of 35	

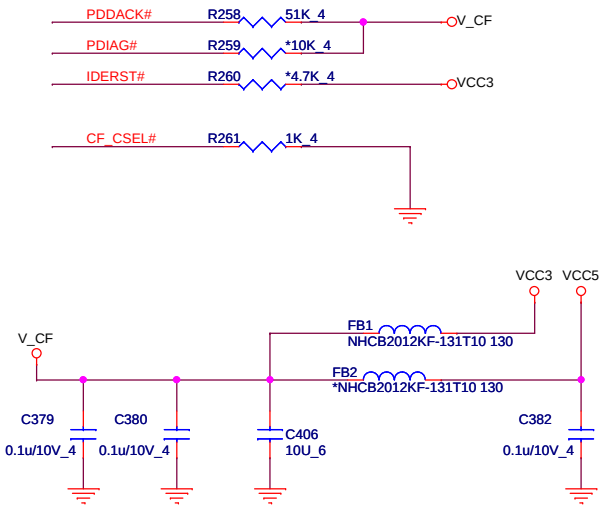
SATA HDD



FOR EMI

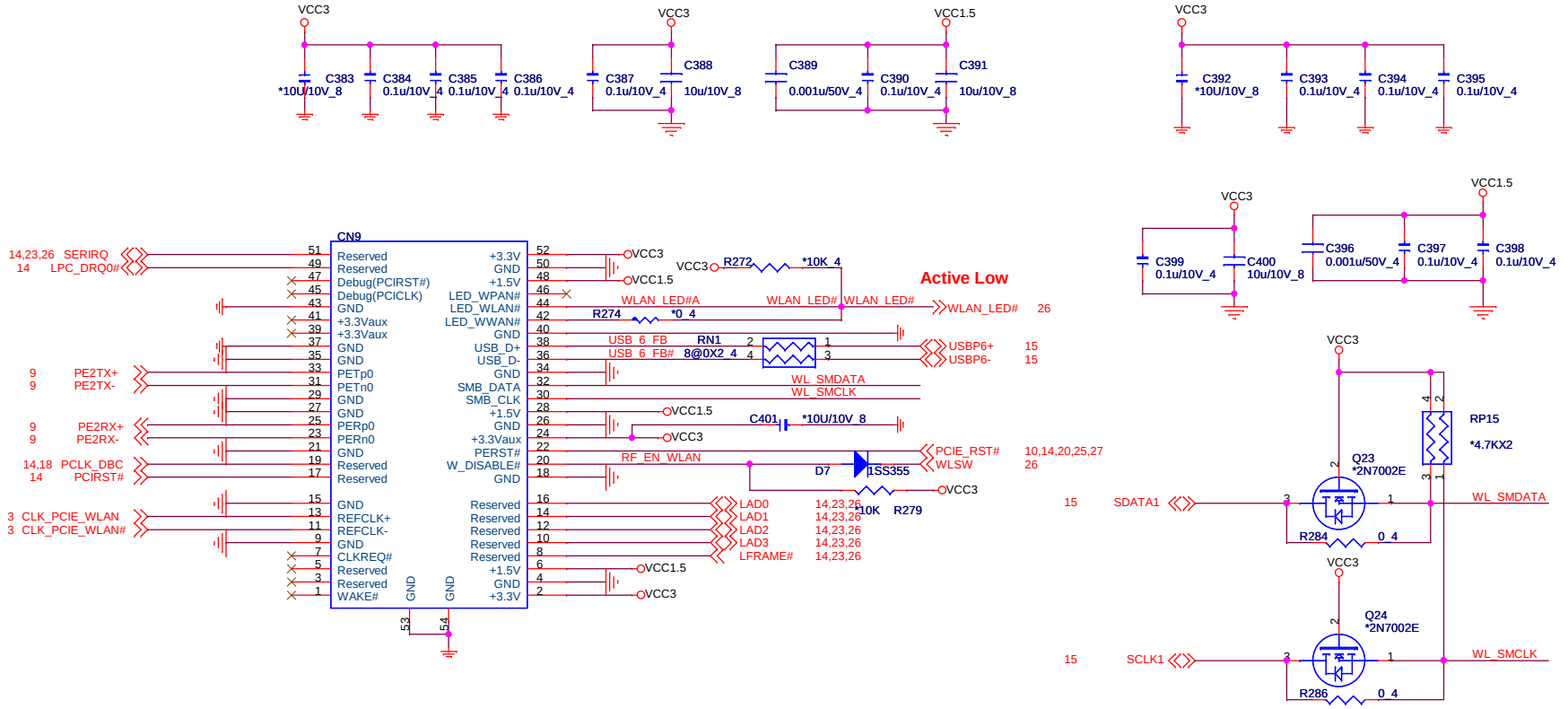




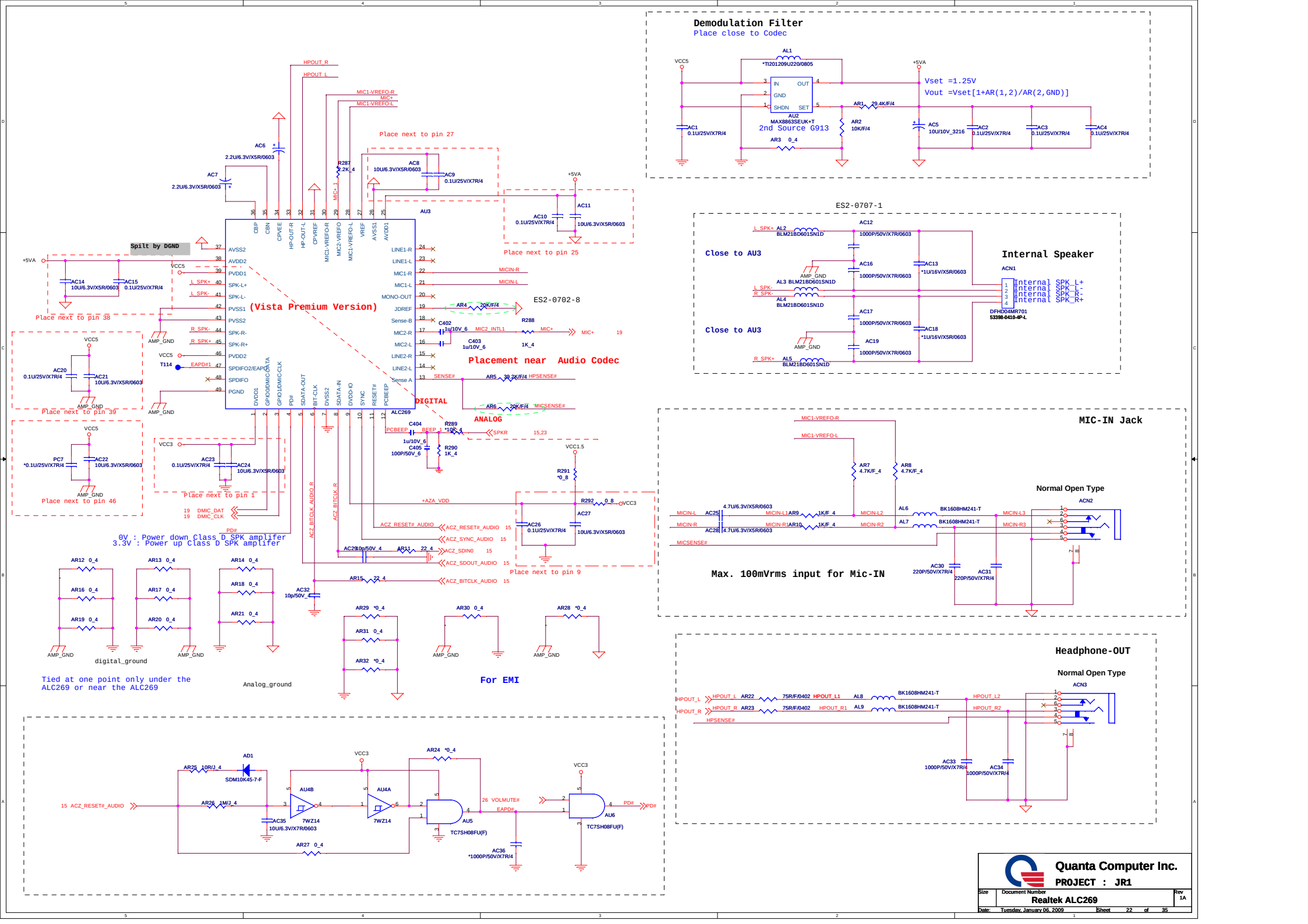


Quanta Computer Inc.		
PROJECT : BENQ		
Size	Document Number: SATA-HDD/CF	Rev 1A
Date: Tuesday, January 06, 2009	Sheet 20 of 35	

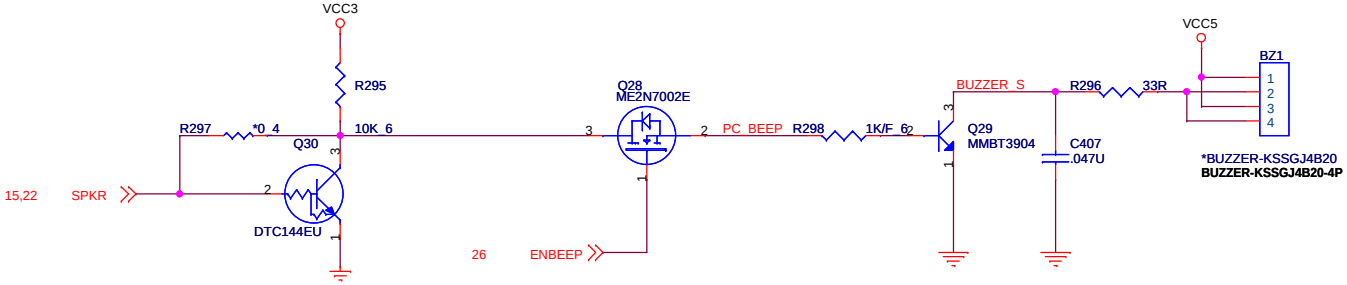
21.5" MINI-Card I (WLAN/ WiMAX)



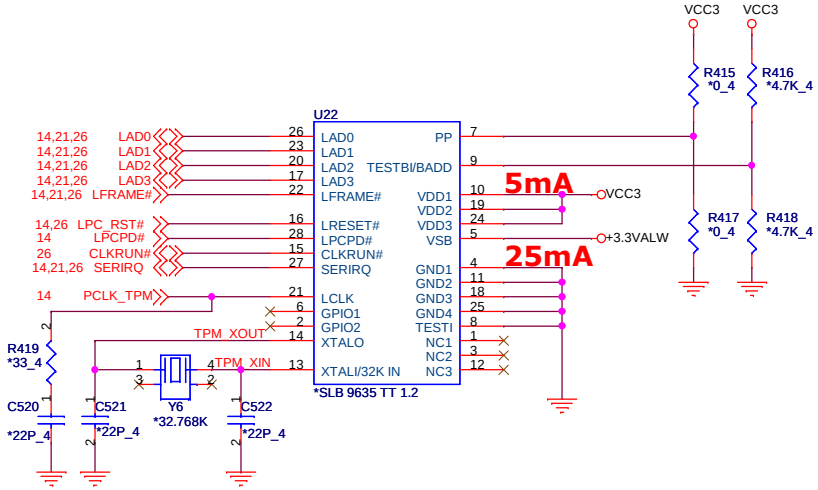
Quanta Computer Inc.		
PROJECT : BENQ		
Size	Document Number	Rev
	Mini-Card/WL	1A
Date: Tuesday, January 06, 2009	Sheet 21 of 35	

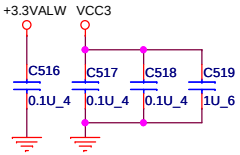

Demodulation Filter
Place close to Codec
AL1
*TI201209U220/0805
VCC5
+5VA
IN
OUT
GND
SHDN
SET
AU2
MAX8863SEUK+T
2nd Source G913
AR1 29.4K/F/4
AR2 10K/F/4
AR3 0_4
AC1 0.1U/25V/X7R/4
AC5 10U/10V_3216
AC2 0.1U/25V/X7R/4
AC3 0.1U/25V/X7R/4
AC4 0.1U/25V/X7R/4
Vset =1.25V
Vout =Vset[1+AR(1,2)/AR(2,GND)]
ES2-0707-1
Close to AU3
Internal Speaker
ACN1
Internal SPK_L+
Internal SPK_L-
Internal SPK_R-
Internal SPK_R+
DFHD04MR701
53398-0410-4P-L
L_SPK+
L_SPK-
R_SPK+
R_SPK-
AL2 BLM21BD601SN1D
AL3 BLM21BD601SN1D
AL4 BLM21BD601SN1D
AL5 BLM21BD601SN1D
AMP_GND
AC12 1000P/50V/X7R/0603
AC16 1000P/50V/X7R/0603
AC17 1000P/50V/X7R/0603
AC19 1000P/50V/X7R/0603
AC13 *1U/16V/X5R/0603
AC18 *1U/16V/X5R/0603
Close to AU3
MIC-IN Jack
Normal Open Type
ACN2
MIC1-VREFO-R
MIC1-VREFO-L
AR7 4.7K/F_4
AR8 4.7K/F_4
MICIN-L
MICIN-R
MICSENSE#
AC25 4.7U/6.3V/X5R/0603
AC28 4.7U/6.3V/X5R/0603
AR9 1K/F_4
AR10 1K/F_4
AL6 BK1608HM241-T
AL7 BK1608HM241-T
MICIN-L1
MICIN-R1
MICIN-L2
MICIN-R2
MICIN-L3
MICIN-R3
AC30 220P/50V/X7R/4
AC31 220P/50V/X7R/4
Max. 100mVrms input for Mic-IN
Headphone-OUT
Normal Open Type
ACN3
HPOUT_L
HPOUT_R
HPSENSE#
AR22 75R/F/0402
AR23 75R/F/0402
HPOUT_L1
HPOUT_R1
HPOUT_L2
HPOUT_R2
AL8 BK1608HM241-T
AL9 BK1608HM241-T
AC33 1000P/50V/X7R/4
AC34 1000P/50V/X7R/4
ES2-0702-8
(Vista Premium Version)
Spilt by DGND
Place next to pin 27
Place next to pin 25
Place next to pin 38
Place next to pin 39
Place next to pin 46
Place next to pin 1
Place next to pin 9
Placement near Audio Codec
DIGITAL
ANALOG
AU3
ALC269
AVSS2
AVDD2
PVDD1
SPK-L+
SPK-L-
PVSS1
PVSS2
SPK-R-
SPK-R+
PVDD2
SPDIFO2/EAPD
SPDIFO
PGND
DVDD1
GPIO0/DMIC-DATA
GPIO1/DMIC-CLK
PD#
SDATA-OUT
BIT-CLK
DVSS2
SDATA-IN
DVDD-IO
SYNC
RESET#
PCBEEP
SENSE#
LINE1-R
LINE1-L
MIC1-R
MIC1-L
MONO-OUT
JDREF
Sense-B
MIC2-R
MIC2-L
LINE2-R
LINE2-L
Sense A
CBP
CBN
CPVEE
HP-OUT-R
HP-OUT-L
CPVREF
MIC1-VREFO-R
MIC2-VREFO
MIC1-VREFO-L
VREF
AVSS1
AVDD1
MICIN-R
MICIN-L
MIC_INTL1
MIC+
HPSENSE#
MICSENSE#
SPKR
15,23
T114
EAPD#1
DMIC_DAT
DMIC_CLK
0V : Power down Class D SPK amplifier
3.3V : Power up Class D SPK amplifier
ACZ_RESET#_AUDIO
ACZ_SYNC_AUDIO
ACZ_SDIN0
ACZ_SDOUT_AUDIO
ACZ_BITCLK_AUDIO
+AZA_VDD
VOLMUTE#
EAPD#
PD#
AD1
SDM10K45-7-F
AU4B
AU4A
7WZ14
AU5
TC7SH08FU(F)
AU6
Tied at one point only under the
ALC269 or near the ALC269
digital_ground
Analog_ground
For EMI
Quanta Computer Inc.
PROJECT : JR1
Size
Document Number
Realtek ALC269
Rev
1A
Date: Tuesday, January 06, 2009
Sheet 22 of 35

BUZZER



TPM1.2





	I/O Address	
BADDR	Index	Data
0	2E	2F
* 1	4E	4F

Quanta Computer Inc.

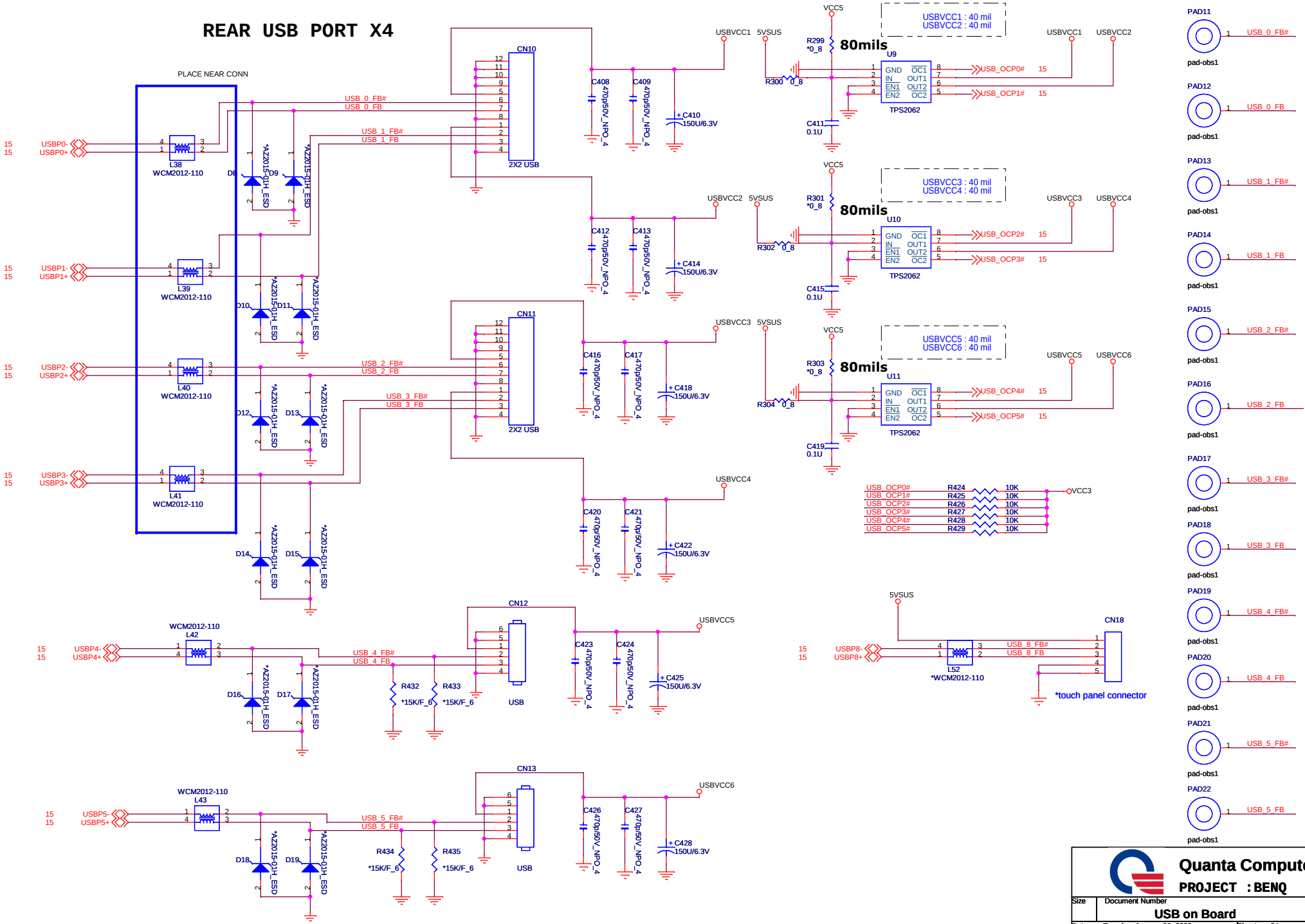
PROJECT : BENQ

Size	Document Number	Rev
	HEAD PHONE MUTE/BUZZER	1A

Date: Tuesday, January 06, 2009 Sheet 23 of 35

USB on M/B

REAR USB PORT X4



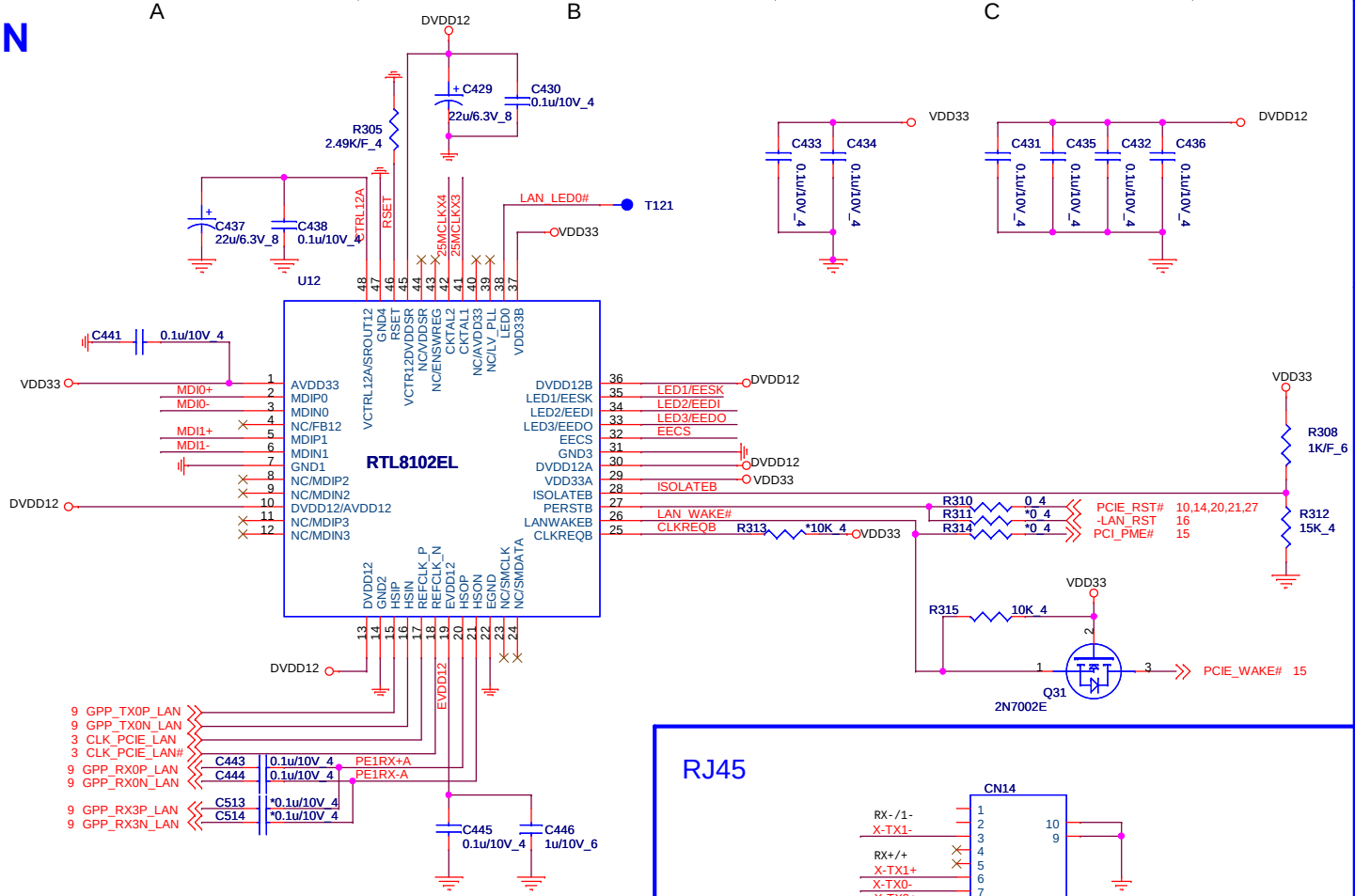
PAD

PAD11 USB_0_FB# pad-obs1
PAD12 USB_0_FB pad-obs1
PAD13 USB_1_FB# pad-obs1
PAD14 USB_1_FB pad-obs1
PAD15 USB_2_FB# pad-obs1
PAD16 USB_2_FB pad-obs1
PAD17 USB_3_FB# pad-obs1
PAD18 USB_3_FB pad-obs1
PAD19 USB_4_FB# pad-obs1
PAD20 USB_4_FB pad-obs1
PAD21 USB_5_FB# pad-obs1
PAD22 USB_5_FB pad-obs1

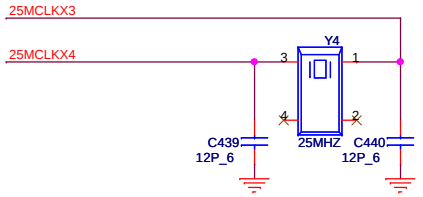
Quanta Computer Inc.
PROJECT : BENQ

Size	Document Number	Rev
	USB on Board	1A
Date: Tuesday, January 06, 2009	Sheet 24 of 35	

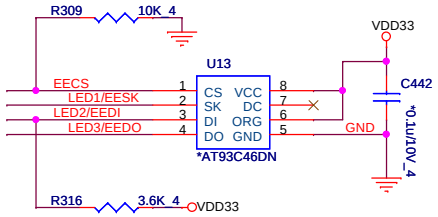
LAN



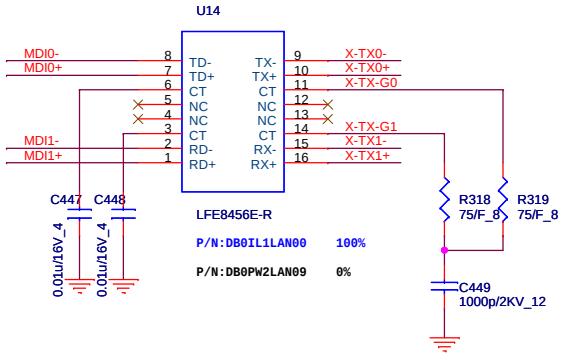
X'tal 25MHz



EEPROM

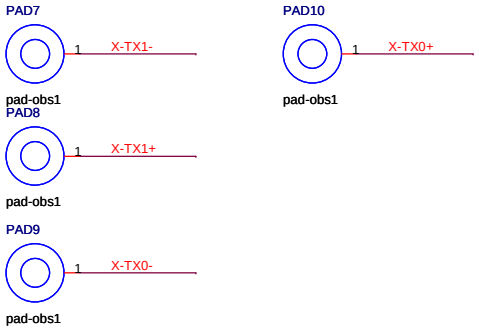


10/100 Transformer

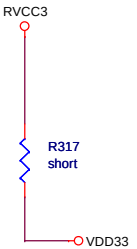


RJ45

PAD



LAN Power



Quanta Computer Inc.		
PROJECT : BENQ		
Size	Document Number	Rev
	LAN_RTL8102EL/RJ45	1A
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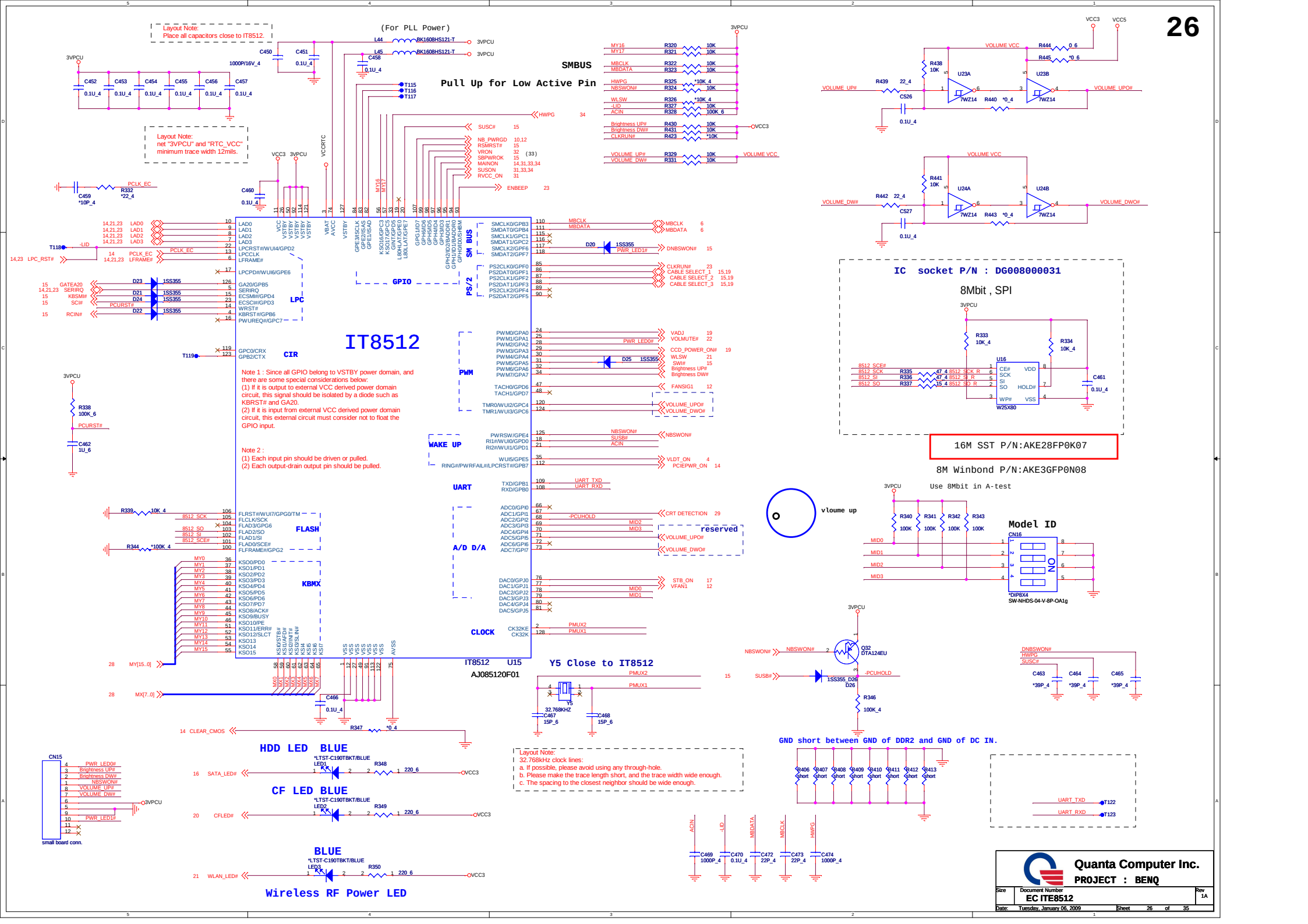
IT8512
(For PLL Power)
SMBUS
Pull Up for Low Active Pin
SM BUS
PS/2
GPIO
LPC
CIR
PWM
WAKE UP
UART
A/D D/A
FLASH
KBMX
CLOCK
reserved
IT8512 U15
AJ085120F01
Y5 Close to IT8512
Note 1 : Since all GPIO belong to VSTBY power domain, and there are some special considerations below:
(1) If it is output to external VCC derived power domain circuit, this signal should be isolated by a diode such as KBRST# and GA20.
(2) If it is input from external VCC derived power domain circuit, this external circuit must consider not to float the GPIO input.
Note 2 :
(1) Each input pin should be driven or pulled.
(2) Each output-drain output pin should be pulled.
Layout Note:
Place all capacitors close to IT8512.
Layout Note:
net "3VPCU" and "RTC_VCC" minimum trace width 12mils.
Layout Note:
32.768kHz clock lines:
a. If possible, please avoid using any through-hole.
b. Please make the trace length short, and the trace width wide enough.
c. The spacing to the closest neighbor should be wide enough.
HDD LED BLUE
CF LED BLUE
BLUE
Wireless RF Power LED
small board conn.
IC socket P/N : DG008000031
8Mbit , SPI
16M SST P/N:AKE28FP0K07
8M Winbond P/N:AKE3GFP0N08
Use 8Mbit in A-test
Model ID
vloume up
GND short between GND of DDR2 and GND of DC IN.
Quanta Computer Inc.
PROJECT : BENQ
Size
Document Number
EC ITE8512
Rev
1A
Date: Tuesday, January 06, 2009
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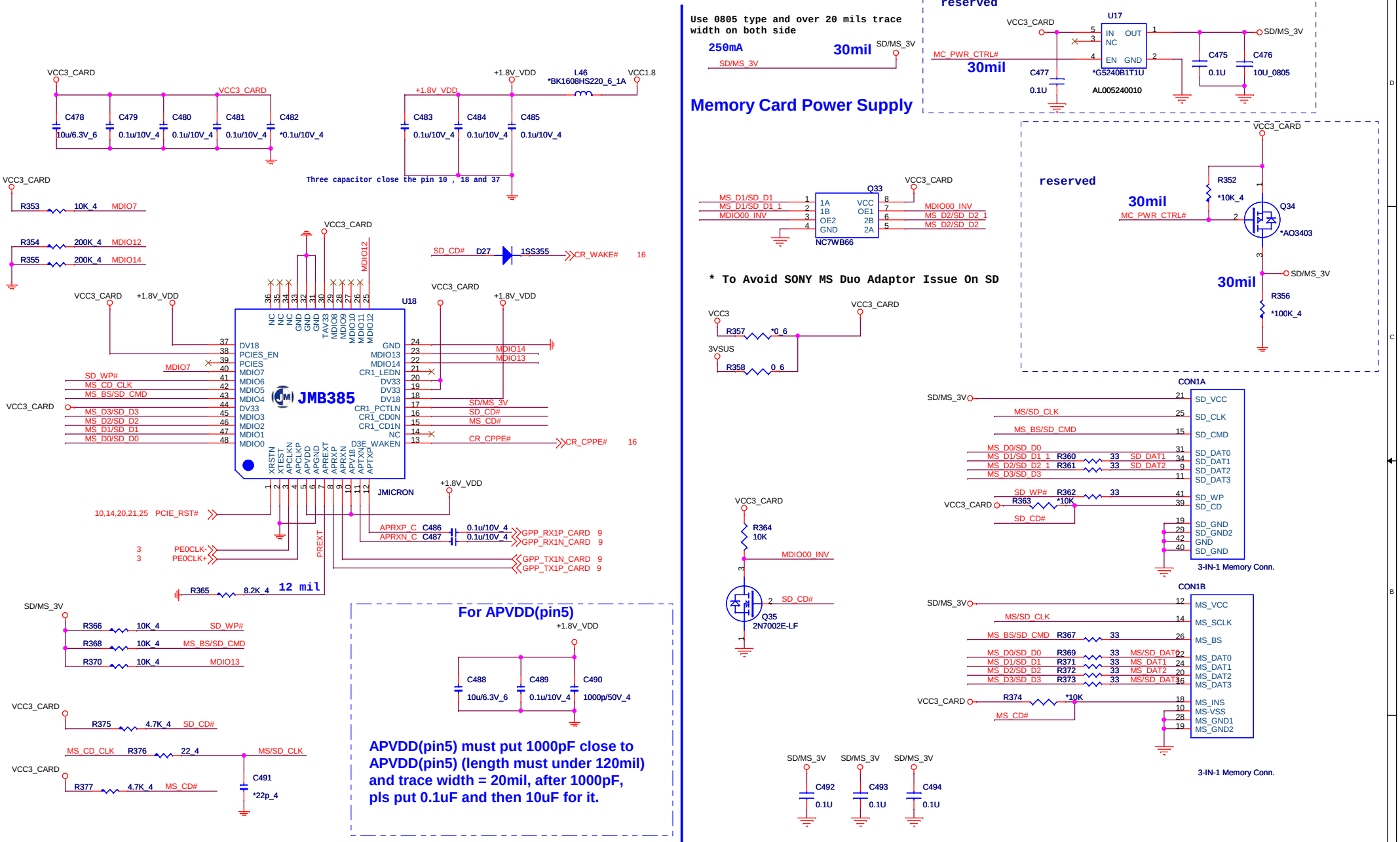

Quanta Computer Inc.		
PROJECT : BENQ		
Size	Document Number: Daughter Board : Card Reader	Rev 1A
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Need to change drill hole size

SCREW HOLE

H1 h-c256d185P2
H2 h-c256d185P2
H3 h-c256d185P2
H4 H-C256D59PT
H5 H-C256D59PT
H6 H-C256D110P2
H7 H-C315D106P2
H8 H-C315D106P2
H9 h-c256d185P2
H10 H-C315D106P2
H11 H-C315D106P2
H12 H-C315D106P2
H13 H-C315D146P2
H14 H-C315D146P2
H15 H-C256D59PT
H16 H-C256D59PT
H17 H-C256D59PT
H18 H-C256D59PT

Keyboard CONN Reserved for EC Debug

KEYBOARD

*88502-2401-24P-L

CON2

MX2 MX4 MX1 MX7 MX3 MX0 MX6 MX5 MY4 MY1 MY3 MY5 MY6 MY7 MY8 MY9 MY10 MY14 MY11 MY2 MY0 MY12 MY13 MY15

MX3 MX0 MX6 MX5 MY10 MY14 MY11 MY2 MY4 MY1 MY3 MY5 MY6 MY7 MY8 MY9 MX2 MX4 MX1 MX7 MY0 MY12 MY13 MY15

CP1 *220pX4_4
CP2 *220pX4_4
CP3 *220pX4_4
CP4 *220pX4_4
CP5 *220pX4_4
CP6 *220pX4_4

0402 size

PAD

PAD1 pad-s203
PAD5 pad-obs2
PAD6 pad-obs2
PAD23 spad-re70x120-np
PAD24 spad-re70x120np

AMP_GND

SATA screw hole H19 ; H20

Quanta Computer Inc.
PROJECT : BENQ

Size	Document Number	Rev
	SCREW HOLE/DEBUG KEY	1A
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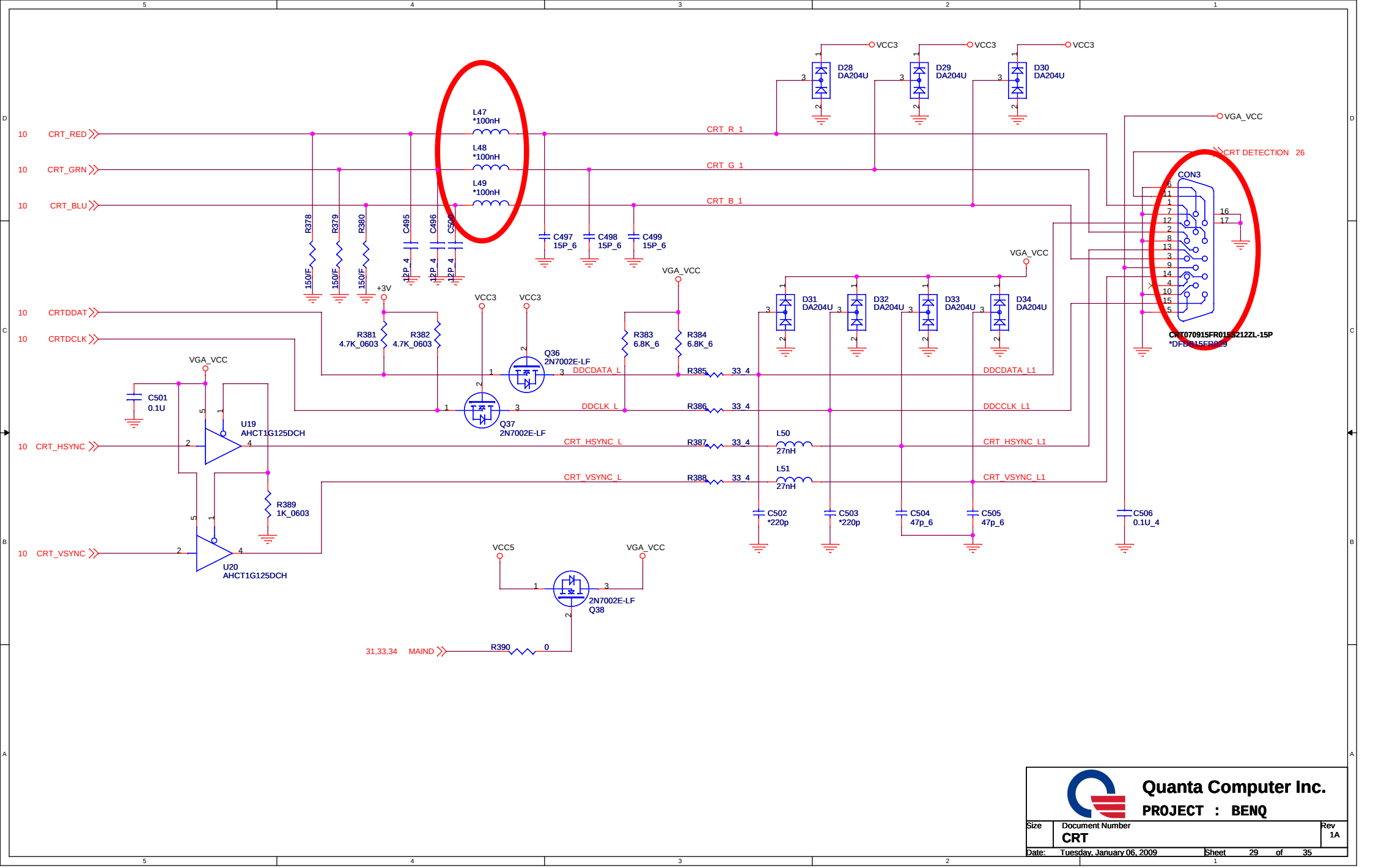

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PROJECT : BENQ

Size	Document Number	Rev
	CRT	1A

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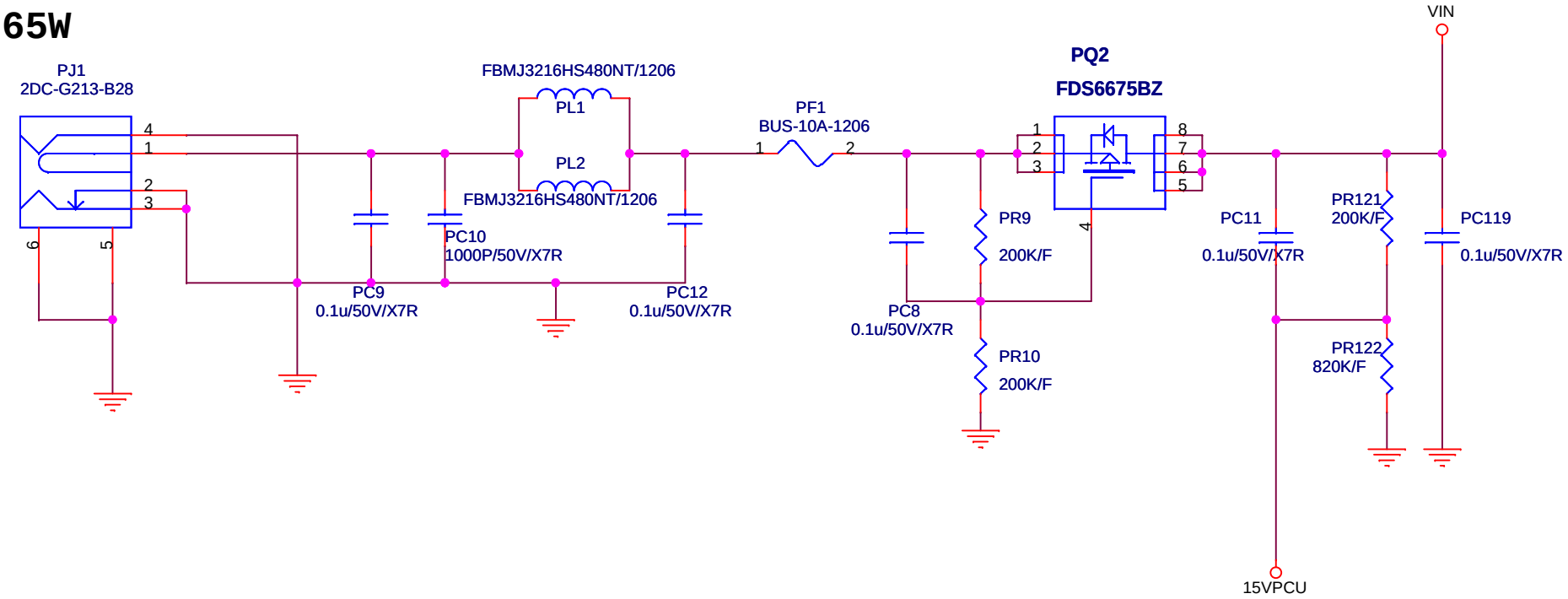
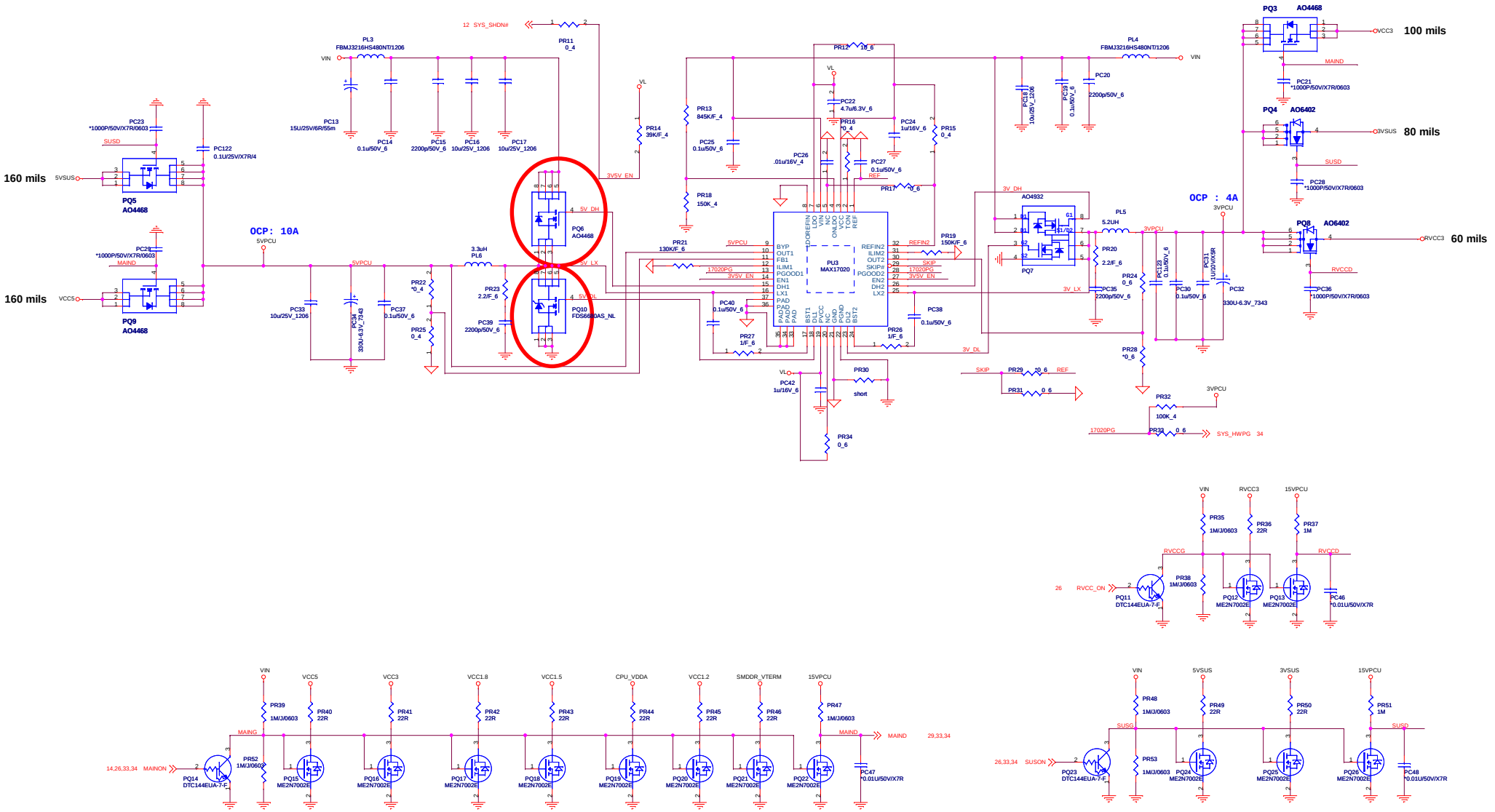
DC IN JACK

65W



Quanta Computer Inc.		
PROJECT : EL3		
Size	Document Number: DC IN	Rev: 2B
Date: Tuesday, January 06, 2009	Sheet 30 of 35	



PROJECT : EL3		
Quanta Computer Inc.		
Size	Document Number: SYSTEM 5V/3V (MAX17020)	Rev: 1A
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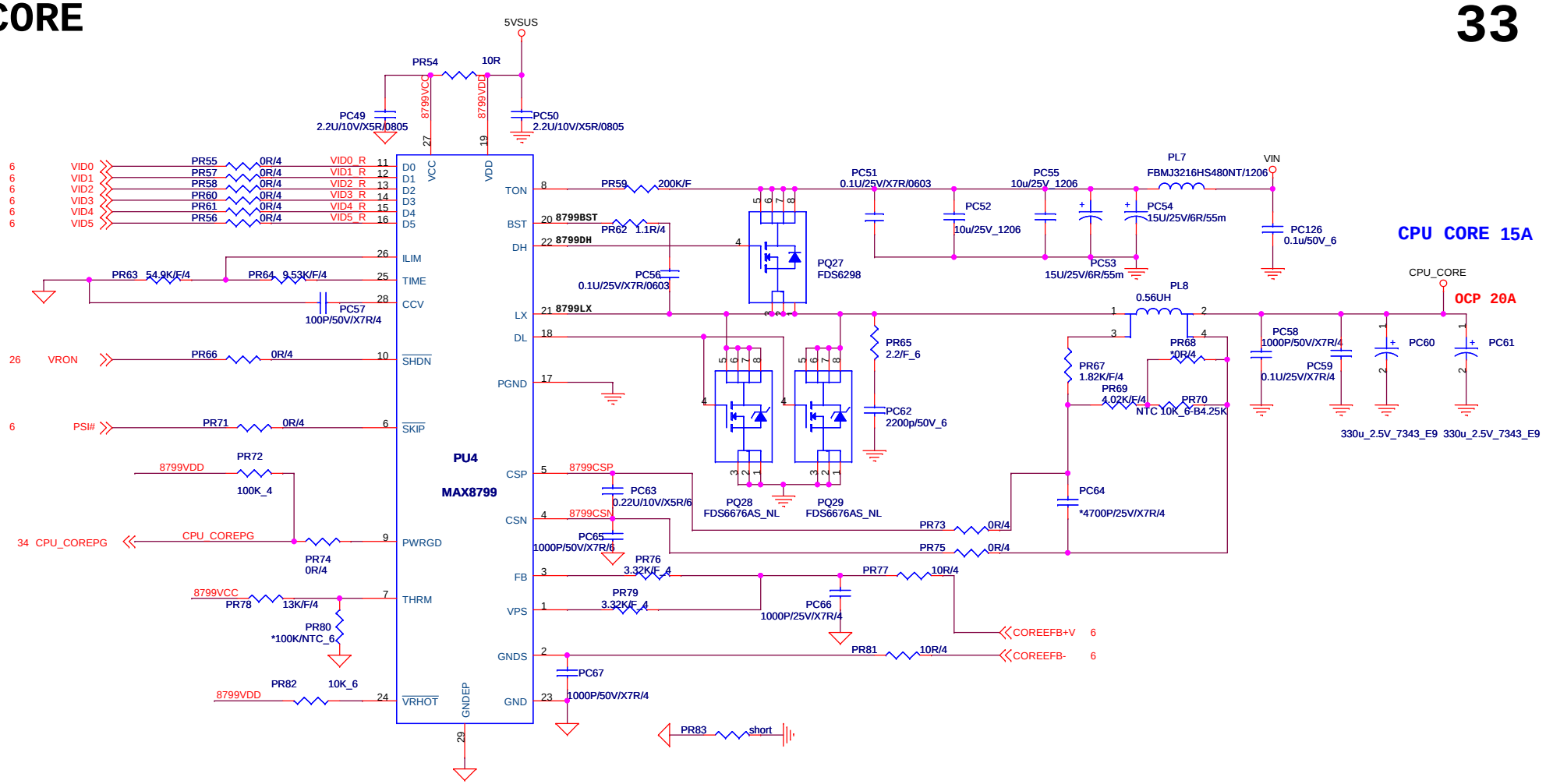
CPU CORE



QUANTA COMPUTER			
Title: CPU CORE			
Size: B	Document Number: EL3		Rev: B
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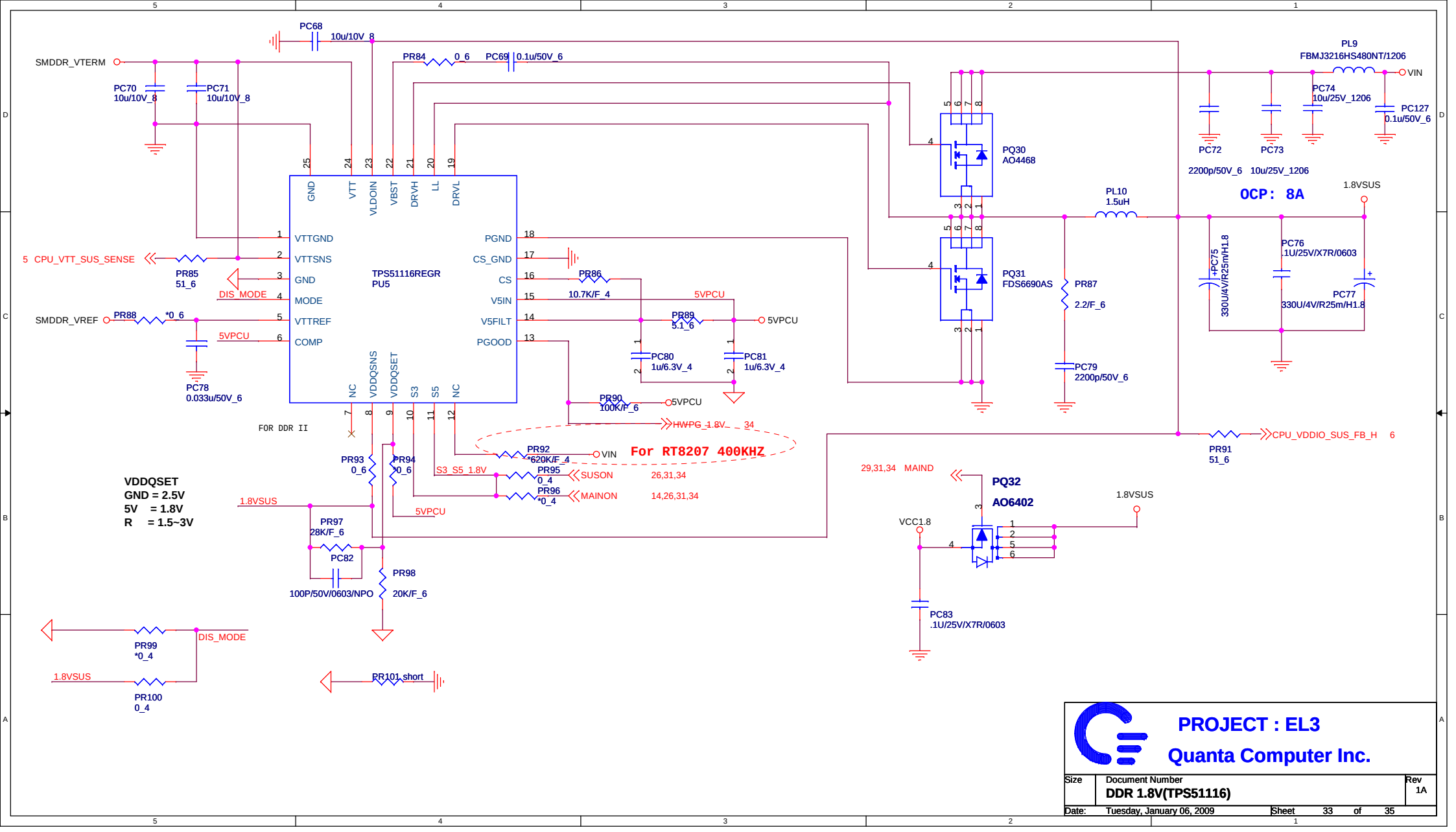

PROJECT : EL3

Quanta Computer Inc.

Size	Document Number	Rev
	DDR 1.8V(TPS51116)	1A
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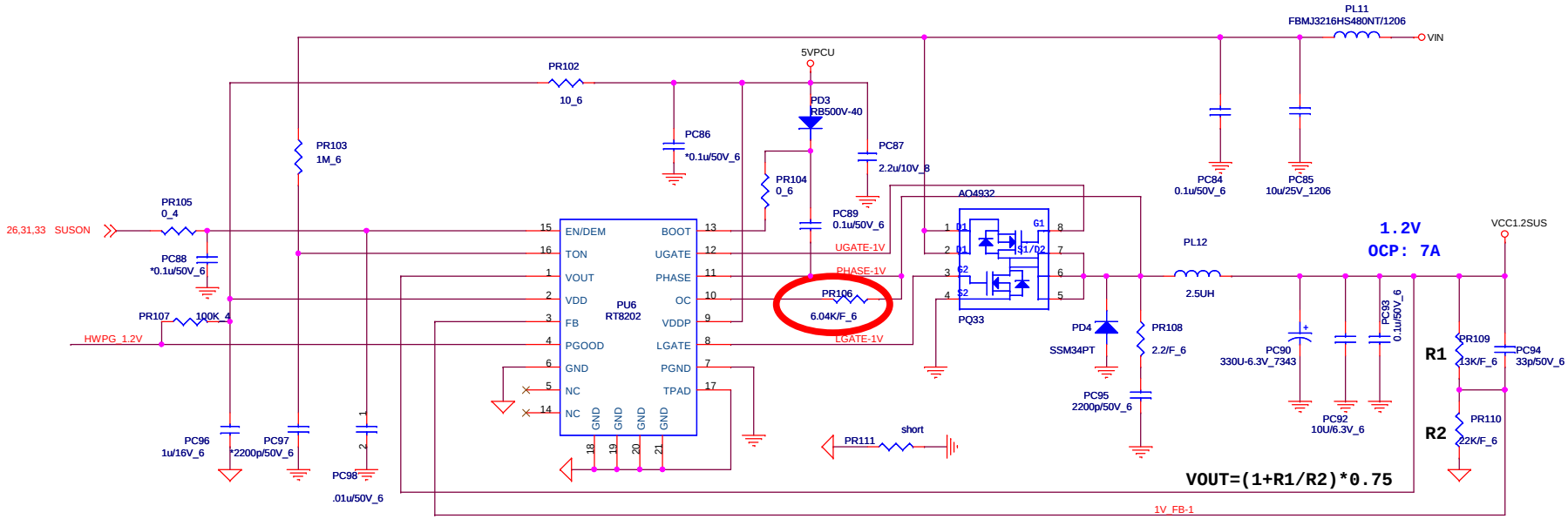
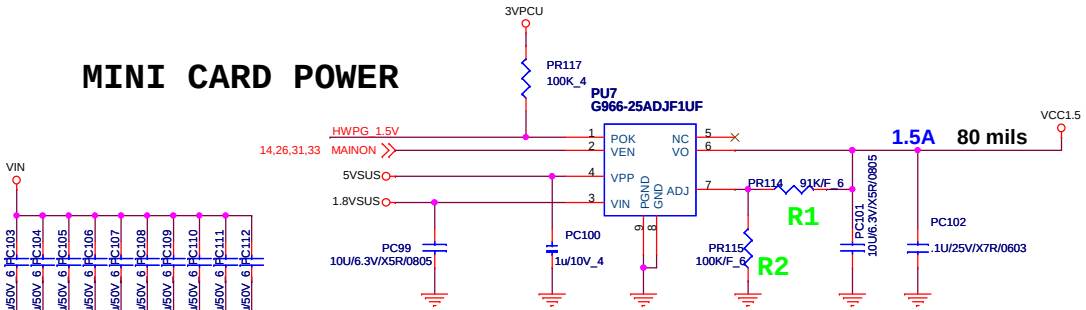
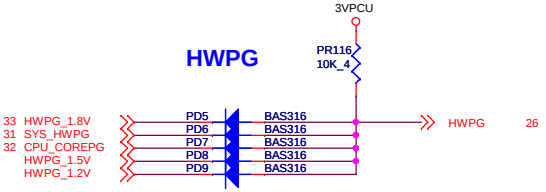
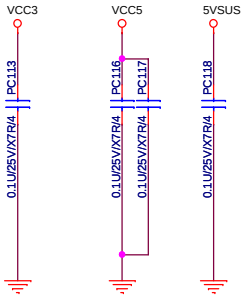
TON=3.85p*1M*1/(Vin-0.5)
Frequency=1/(0.0036767)=272K

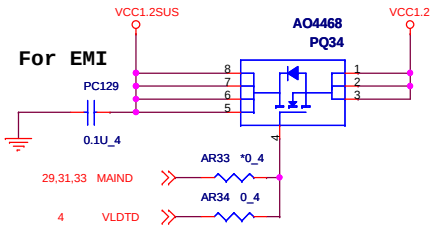


MINI CARD POWER









PROJECT : EL3
Quanta Computer Inc.

Size	Document Number	Rev
	VCC1.2VSUS(RT8202)&VCC1.5V(MINI CARD)	1A
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DATE	Description	Note	Page
2008 1006	1.page 3 pin9&pin10 short issue 2.page 5 change U2B VTT net SMDDR to SMDDR_VTERM 3.page 6 U2 E1&E2 symbol pin swap;AL6&AM5 pin swap 4.page 6 TALERT# pull high high 4.7K(CS24702FB10) 5.page 14 add LPC_RST to U7 A_RST 6.page 16 Y3 change P/N:BG625000A09 7.page19 add L37 P/N:CX201290009 8.page19 reserve the EEPROM 24c02 to panel edid data 9.page 21 USB6+/USB6- pin swap 10.page 24 change CN10 and CN11 pin symbol define 11.page 26 reserve LPC_RST# to SB600 12.page 27 update the CON1 symbol pin define 13.page 17 add D5 P/N:BC001010Z17 14.page 31add PQ11,PQ23,PQ14 P/N:BA001440013 15.page 34 delete PC97 for 1.2VSUS output 16.page 34 HWPG1.5V add resistor 10k to VCC3 17.page 25 pin 10 of CN15 Vcc 5V change to PWR_LED1#		
	18.Page 26 Add R430,R431 for brightness up and down. 19.C472, C473 changes to 22P. 20.The pin S3 and pin S5 of PU5 short and delete PR96. 21.Add R432,433,434,435 for USB detection. 22. Page 30 Add PC119,PR121,PR122 for 15VPCU. 23. Page 34 Change PR110 to 20.5K/F_6, Change PL12 to 2.5uH . 24. Page 31 Del PC41,PC43,PC44,PC45,PD1,PD2 for 15VPCU 25. Page 32 Change PR62 to 1.2R_4 26. Page 33 Change PR97 to 29.4K/F_6 27. Add the PC129 and C525 for EMI solution. 28. Add PQ35 ~ 38 for HT voltage (1.2V). 29. Add R424 ~ R429 for USB detection. 30. Add R448 for RTC clock. 31. Change the PQ06 and PQ10.		

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Size	Document Number	Rev
	CHANGE LIST	C
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