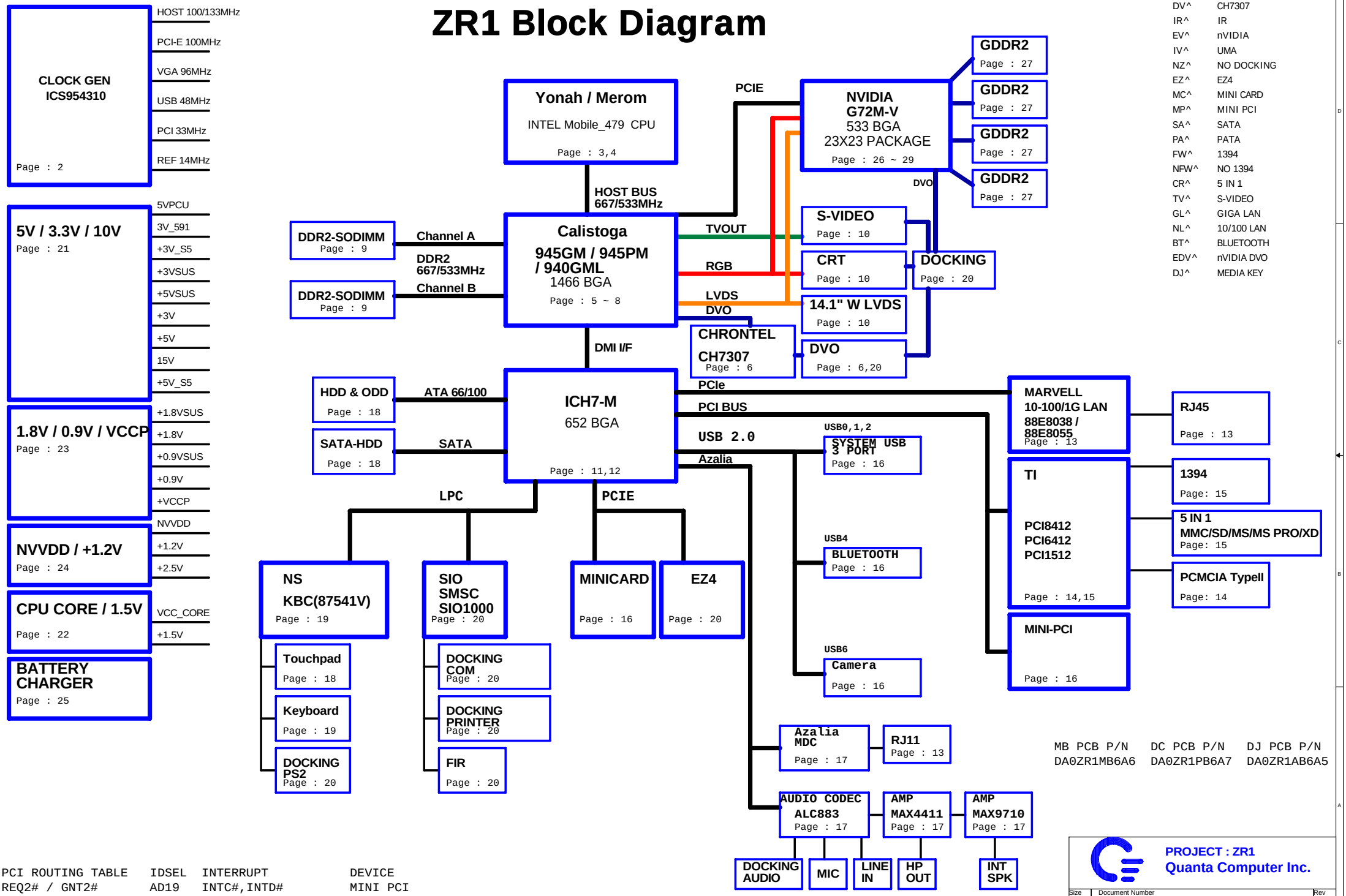
ZR1 Block Diagram



DV^	CH7307
IR^	IR
EV^	nVIDIA
IV^	UMA
NZ^	NO DOCKING
EZ^	EZ4
MC^	MINI CARD
MP^	MINI PCI
SA^	SATA
PA^	PATA
FW^	1394
NFW^	NO 1394
CR^	5 IN 1
TV^	S-VIDEO
GL^	GIGA LAN
NL^	10/100 LAN
BT^	BLUETOOTH
EDV^	nVIDIA DVO
DJ^	MEDIA KEY

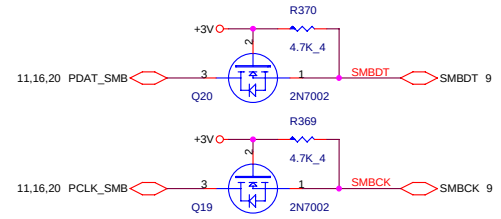
MB PCB P/N	DC PCB P/N	DJ PCB P/N
DA0ZR1MB6A6	DA0ZR1PB6A7	DA0ZR1AB6A5

PCI ROUTING TABLE	IDSEL	INTERRUPT	DEVICE
REQ2# / GNT2#	AD19	INTC#,INTD#	MINI PCI
REQ0# / GNT0#	AD25	INTE#,INTF#,INTG#	TI XX12

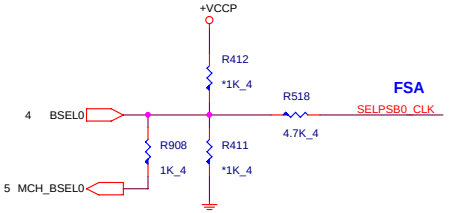
PROJECT : ZR1
Quanta Computer Inc.

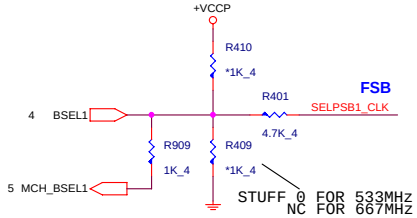
Size	Document Number	Rev
	BLOCK DIAGRAM	1A
Date: Wednesday, March 29, 2006	Sheet 1 of 29	

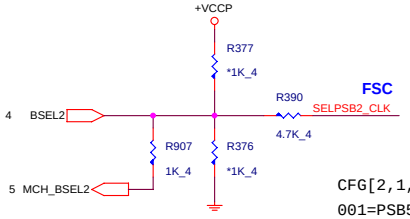
CLOCK GENERATOR



PEREQ1# --> PCIE0 & PCIE6
PEREQ2# --> PCIE1 & PCIE8
PEREQ3# --> PCIE2 & PCIE4
PEREQ4# --> PCIE3 & PCIE5 & PCIE7







CFG[2,1,0]
001=PSB533
011=PSB667

FSB SETTING

FSC	FSB	FSA	CPU	PCIE	PCI
0	0	0	266	100	33
0	0	1	133	100	33
0	1	0	200	100	33
0	1	1	166	100	33
1	0	0	333	100	33
1	0	1	100	100	33
1	1	0	400	100	33
1	1	1	200	100	33

PROJECT : ZR1
Quanta Computer Inc.

Size	Document Number	Rev
	CLOCK GENERATOR	1A

Date: Wednesday, March 29, 2006 Sheet 2 of 29

CPU

U36A

YONAH/MEROM

1 OF 3

479P_SOCKET

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

HOLE1 *H-C276D118P2-8
HOLE2 *H-C276D118P2-8
HOLE3 *H-C276D118P2-8
HOLE4 *H-C276D118P2-8
HOLE5 *H-C276D118P2-8
HOLE6 *H-C276D118P2-8
HOLE7 *H-C276D118P2-8
HOLE8 *H-C276D118P2-8
HOLE9 *H-C276D118P2-8
HOLE10 *H-C276D118P2-8
HOLE11 *H-C276D118P2-8
HOLE12 *H-C276D118P2-8
HOLE13 *H-C276D118P2-8
HOLE27 *Hole
HOLE19 *H-C276D118P2
AUDGND
HOLE16 CPU_HOLE
HOLE15 CPU_HOLE
HOLE22 CPU_HOLE
HOLE21 CPU_HOLE
HOLE14 EV^VGA_HOLE
HOLE23 EV^VGA_HOLE
HOLE17 MC^MC_HOLE
HOLE24 MC^MC_HOLE
HOLE18 MDC_HOLE
HOLE25 MDC_HOLE
HOLE26 DCB_HOLE
HOLE20 DCB_HOLE

125 degree protection

+VCCP
Q40 2N7002
5,11,19,22 IMVP_PWRGD
R254 1K_4
R266 56_4
R255 33/F_4
R_THERMTRIP#
RR_THERMTRIP#
Q10 MMBT3904
1999_SHT# 21

+3V
R896 1K_4
R897 330_4
ICH_PROCHOT# 11
CPU_N2
Q66 MMBT3904
CPU_PROCHOT#
R898 330_4
CPU_N1
Q67 MMBT3904

+3V
R253 10K_4
R257 2.2K_4
U10
KBSMDAT
KBSMCLK
SDAT
SCLK
VCC
GND
OVT
ALERT
DXP
DXN
G781
MAX6648_OV#
MAX6648_AL#
THERMDA
THERMDC
R282 47_6
3V_THM
C381 .1u/16V_4
C378 2200p_4
Width : 10mil
Length < 500mil

MAXIM 6657 : AL006657020
GMT G781 : AL000781101

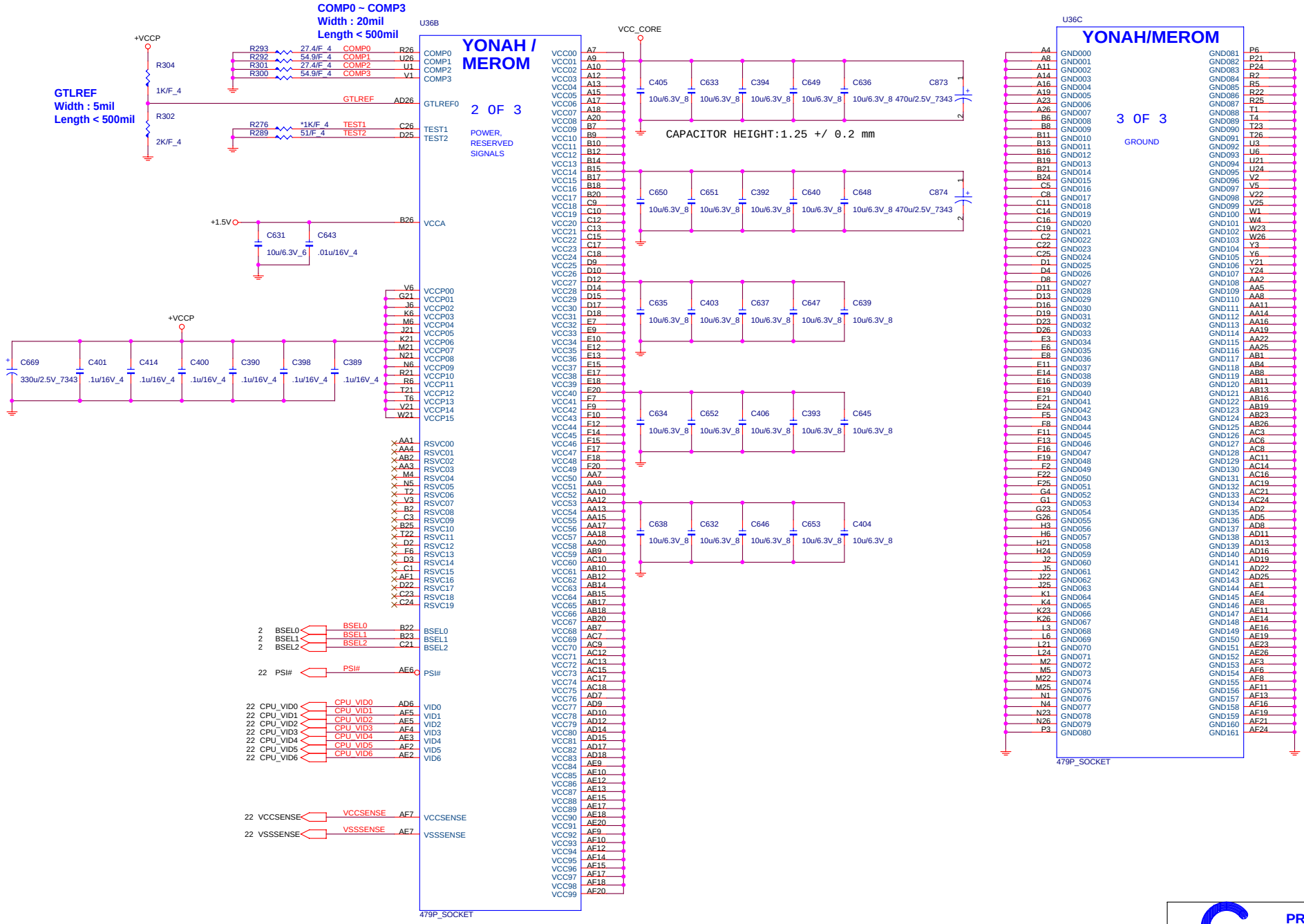
+3V
R268 10K_4
19,25 MBDATA
MBDATA
Q12 2N7002
KBSMDAT
R273 10K_4
19,25 MBCLK
MBCLK
Q13 2N7002
KBSMCLK

+VCCP
XDP_DBRESET# R250 *54.9/F_4
IERR# R274 56_4
TDI R260 54.9/F_4
TMS R259 54.9/F_4
TDO R261 *54.9/F_4
CPURST# R258 54.9/F_4
R517 54.9/F_4 PREQ#
TCK R263 54.9/F_4
TRST# R262 54.9/F_4

PROJECT : ZR1
Quanta Computer Inc.

Size	Document Number	Rev
	CPU (HOST)	1A
Date: Wednesday, March 29, 2006	Sheet 3 of 29	

CPU

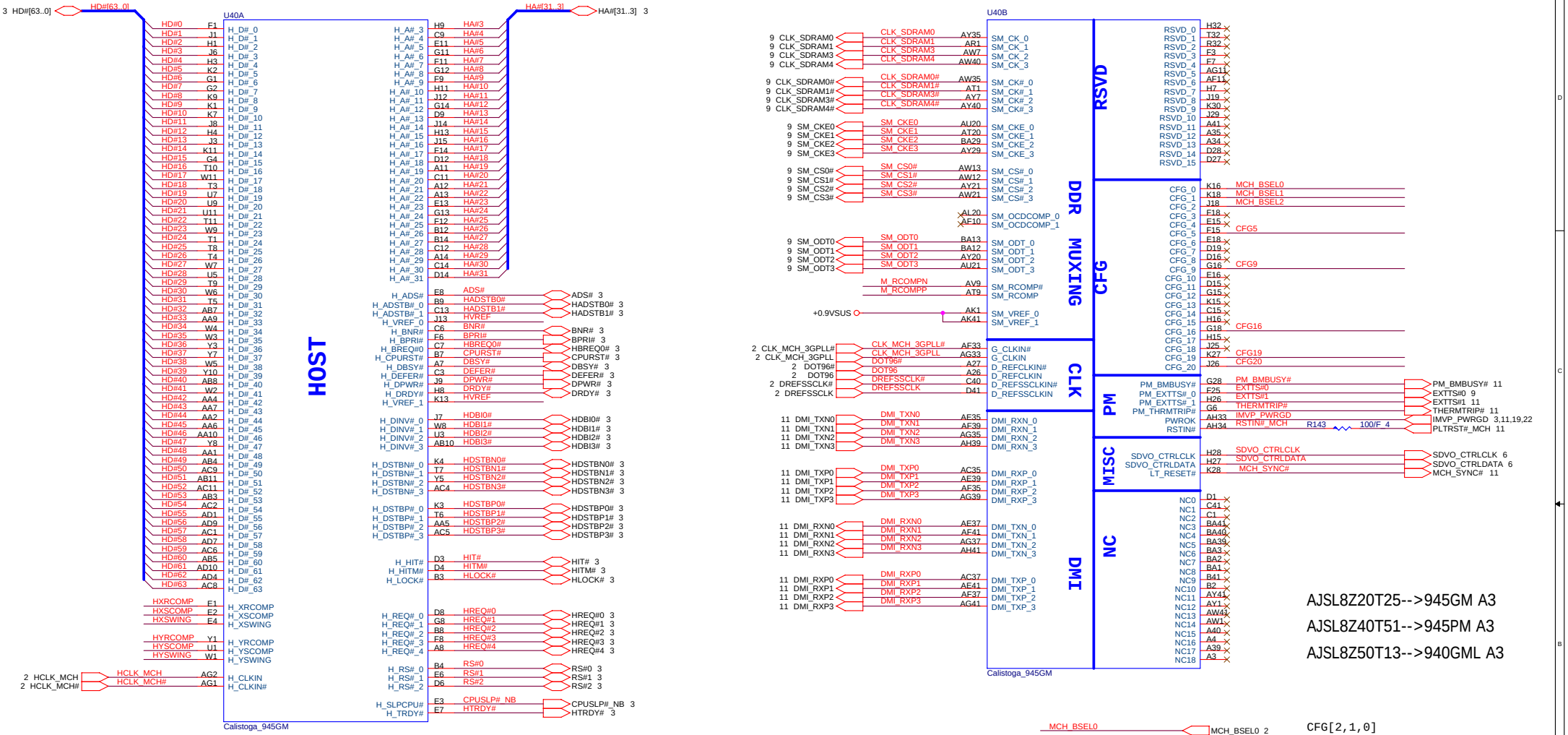


PROJECT : ZR1
Quanta Computer Inc.

Size	Document Number	Rev
	CPU (POWER)	1A

Date: Wednesday, March 29, 2006 Sheet 4 of 29

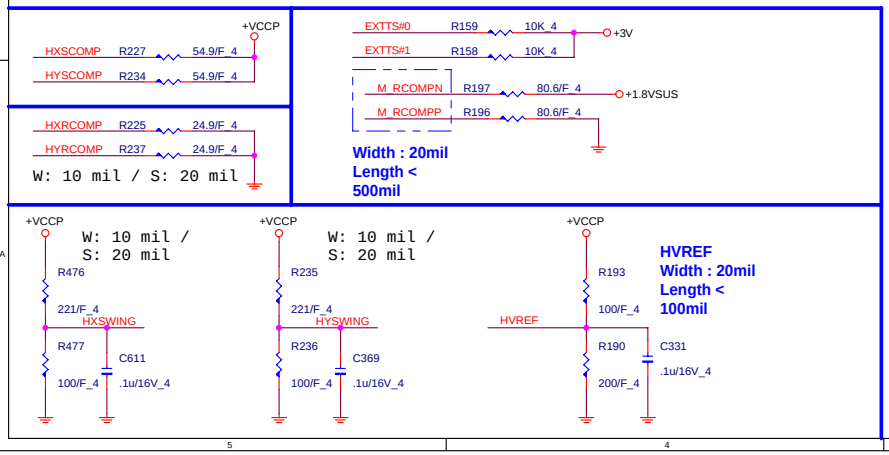
NB_945GM/PM/940GML



AJSL8Z20T25-->945GM A3

AJSL8Z40T51-->945PM A3

AJSL8Z50T13-->940GML A3



1.MCH_CFG_5 : Low = DMI X2, High=DMIX4

2.MCH_CFG_6 : Low = Moby Dick, High = Calistoga (Default)

3.MCH_CFG_7 : Low = RSVD, High = Mobile CPU

4.MCH_CFG_9 PCI Exp Graphics Lane: Low =Reverse lane ,High=Normal

5.MCH_CFG_10 Host PLL VCC Select: Low=Reserved, High=Mobility

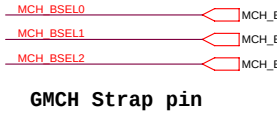
6.MCH_CFG_11: PSB 4x Enable : Low=Rsvd, High=Calistoga.

7.MCH_CFG_16 FSB Dynmic ODT: Low = Dynamic ODT Disabled,
High= Dynamic ODT Enabled.

8.MCH_CFG_18 VCC Select: LOW=1.05V, High=1.5V

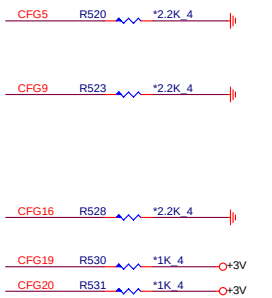
9.MCH_CFG_19 DMI LANE Reversal:Low=Normal,High=LANES Reversed.

10.MCH_CFG_20 PCIE Backward interpoerability mode: Low=
only SDVO or PCIE x1 is operational (defaults) ,
High=SDVO and PCIE x1 are operation
simultaneously via the PEG port.



CFG[2,1,0]
001=PSB533
011=PSB667

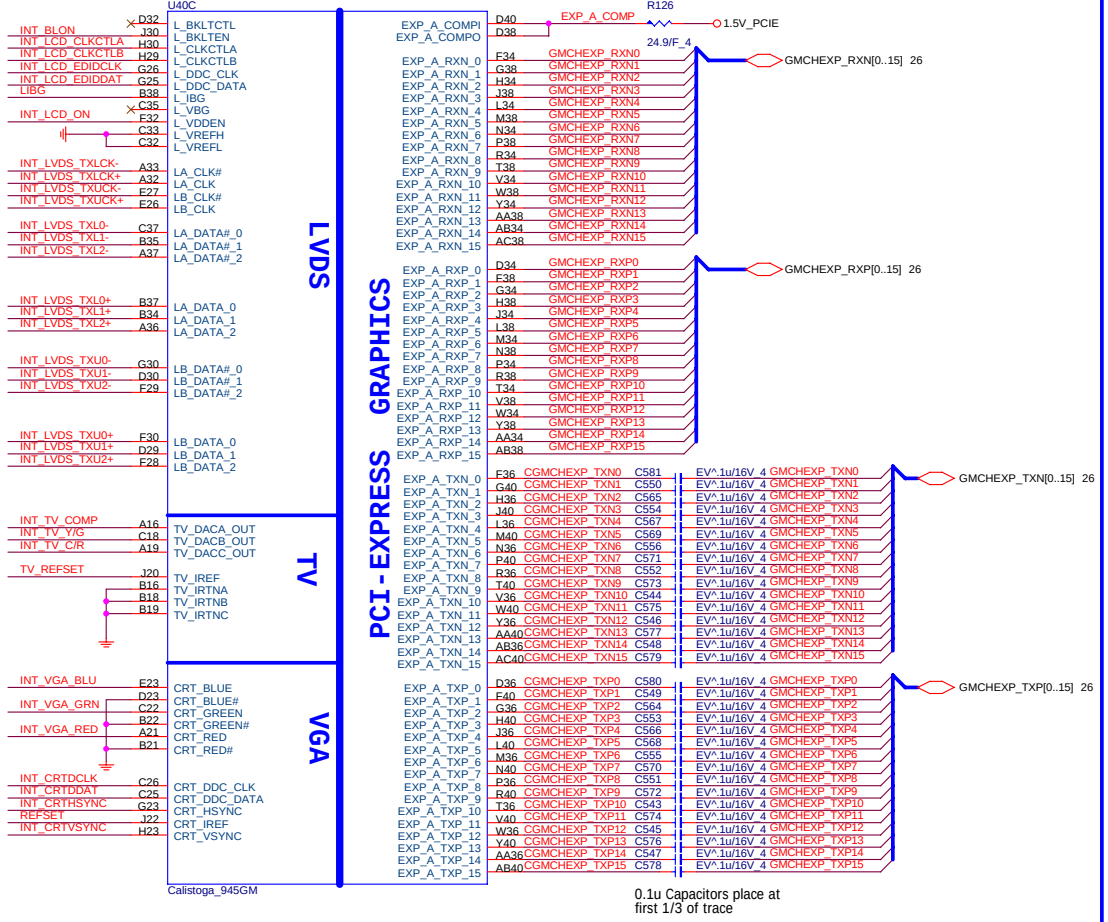
GMCH Strap pin



PROJECT : ZR1
Quanta Computer Inc.

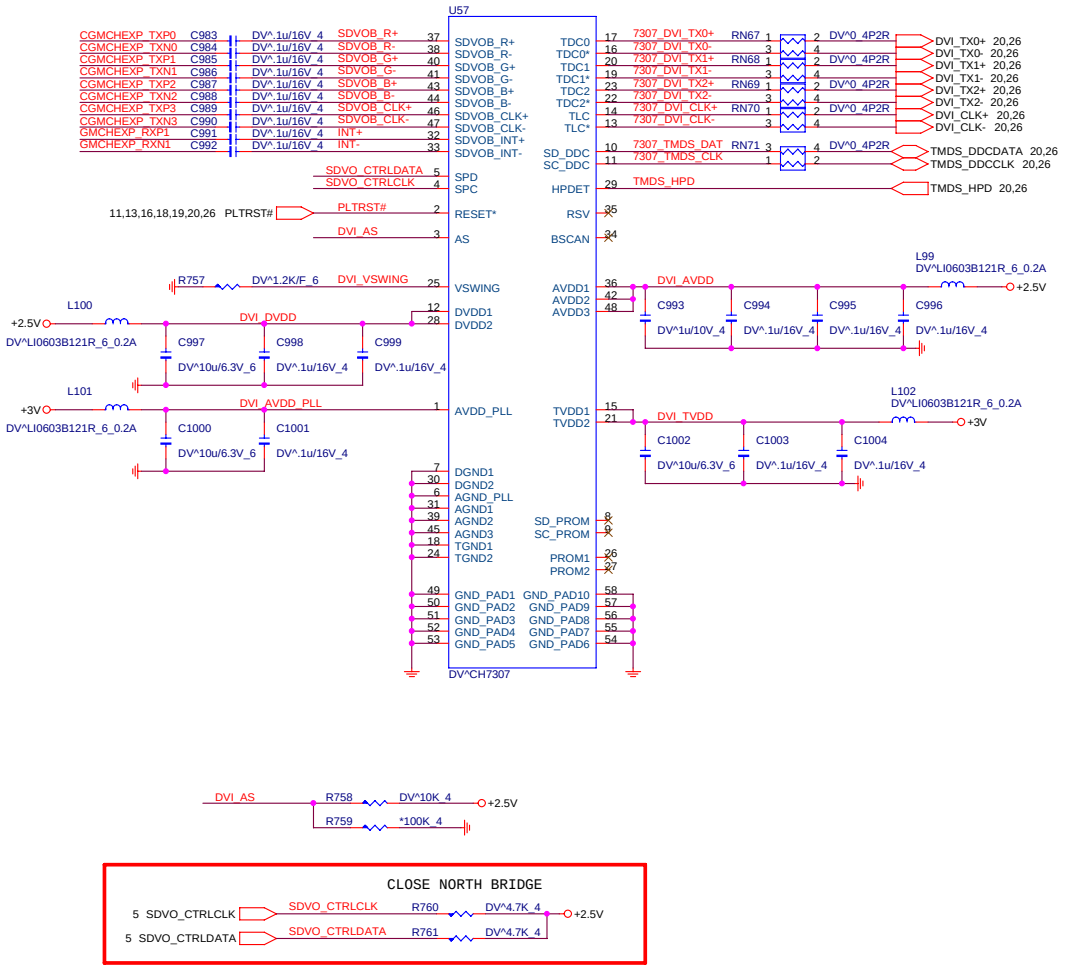
Size	Document Number	Rev
	GMCH (HOST / DMI)	1A
Date: Wednesday, March 29, 2006	Sheet 5 of 29	

NB_945GM/PM/940GML

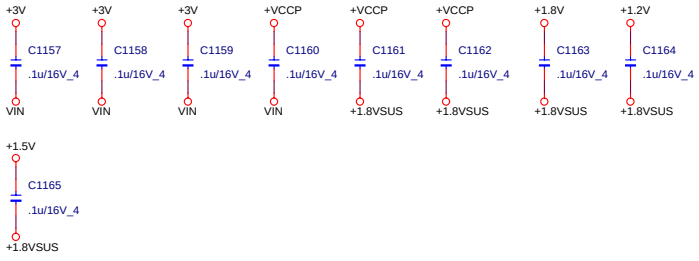


0.1u Capacitors place at first 1/3 of trace

DVO_CH7307



Signal Cross Moat

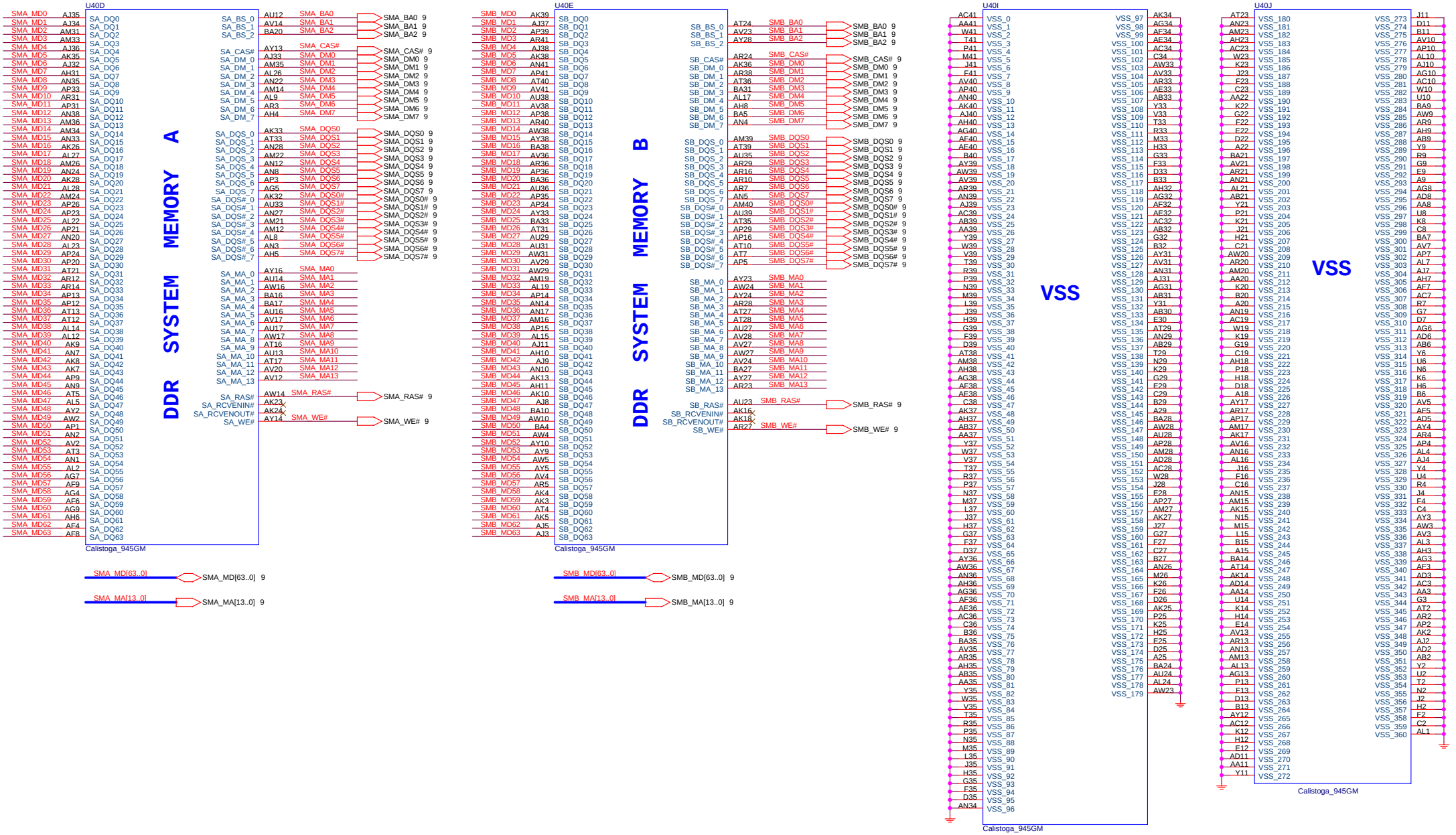


Intel D32387 REV:1.601 delete

PROJECT : ZR1
Quanta Computer Inc.

Size	Document Number	Rev
	GMCH (VGA)	1A
Date: Wednesday, March 29, 2006	Sheet 6 of 29	

NB_945GM/PM/940GML



PROJECT : ZR1
Quanta Computer Inc.

Size	Document Number	Rev
	GMCH (MEMORY)	1A

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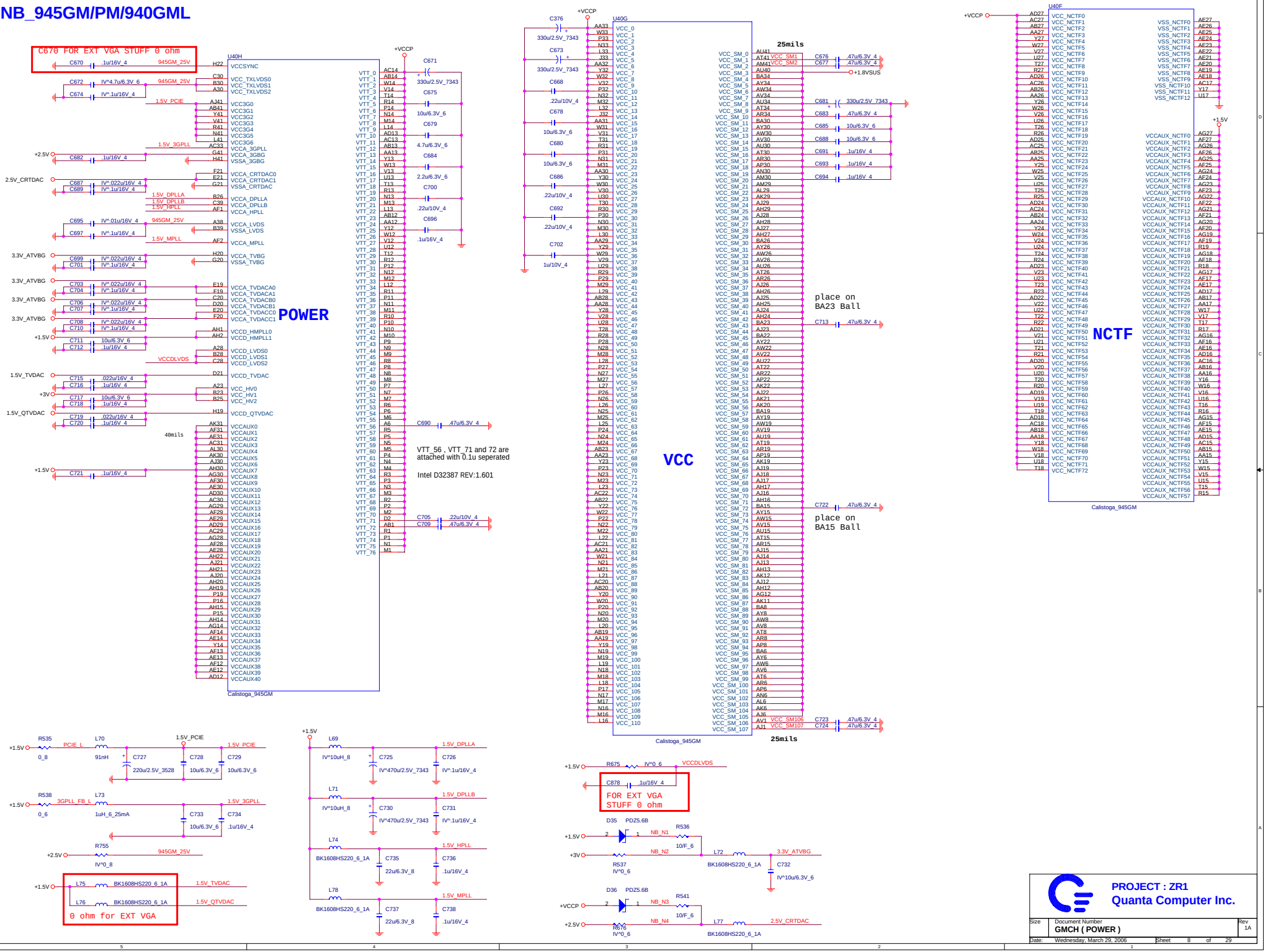
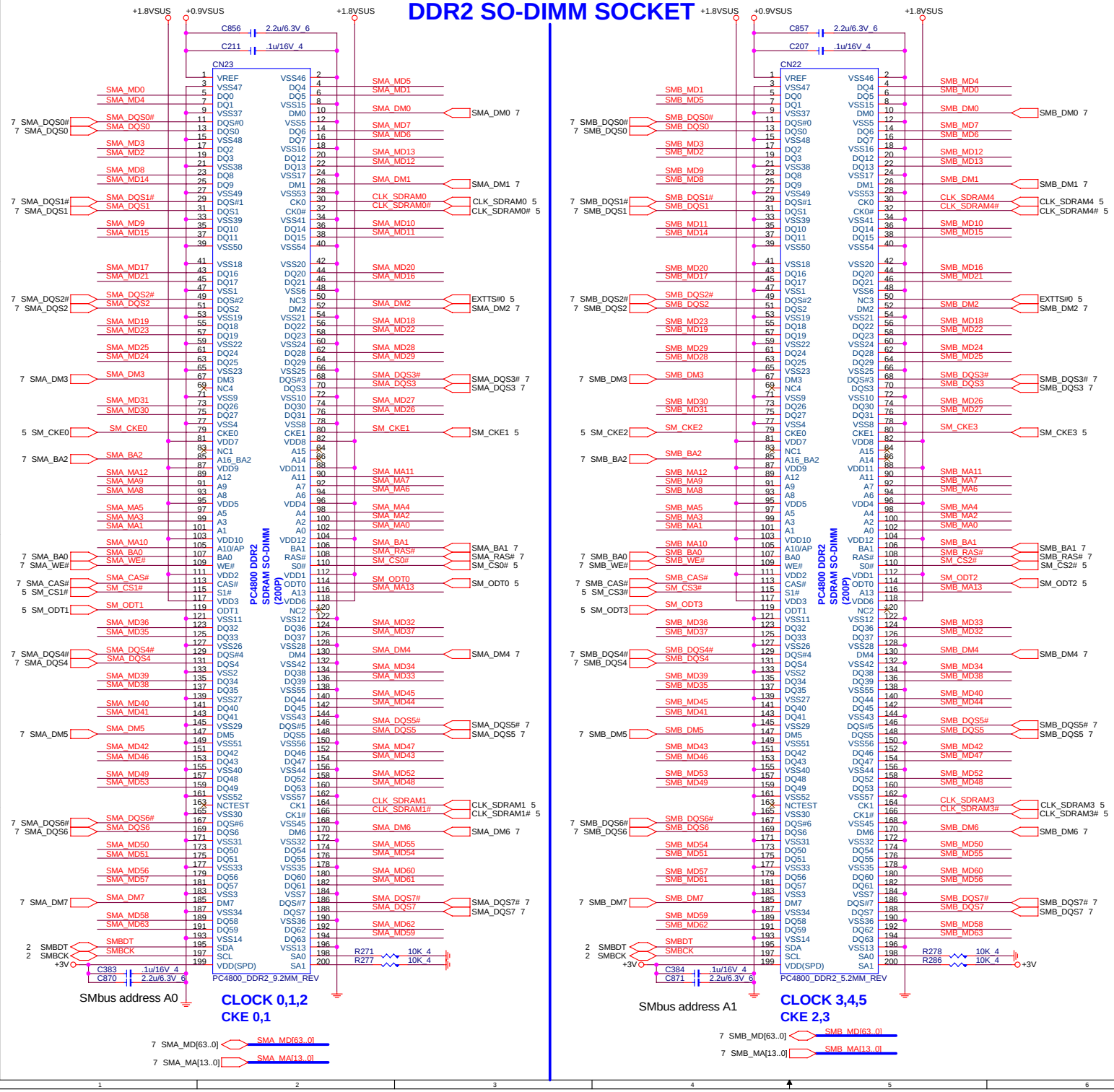
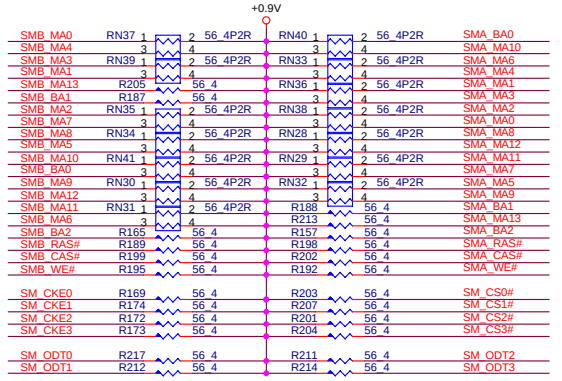
NB_945GM/PM/940GML



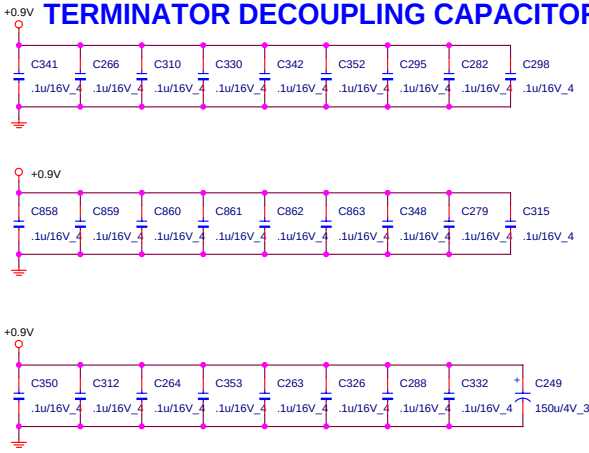
DDR2 SO-DIMM SOCKET



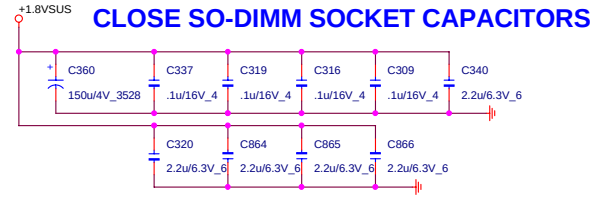
DDR2 TERMINATOR



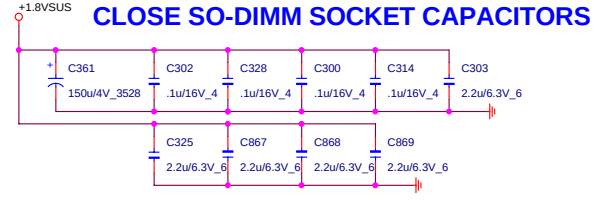
TERMINATOR DECOUPLING CAPACITOR



CLOSE SO-DIMM SOCKET CAPACITORS



CLOSE SO-DIMM SOCKET CAPACITORS

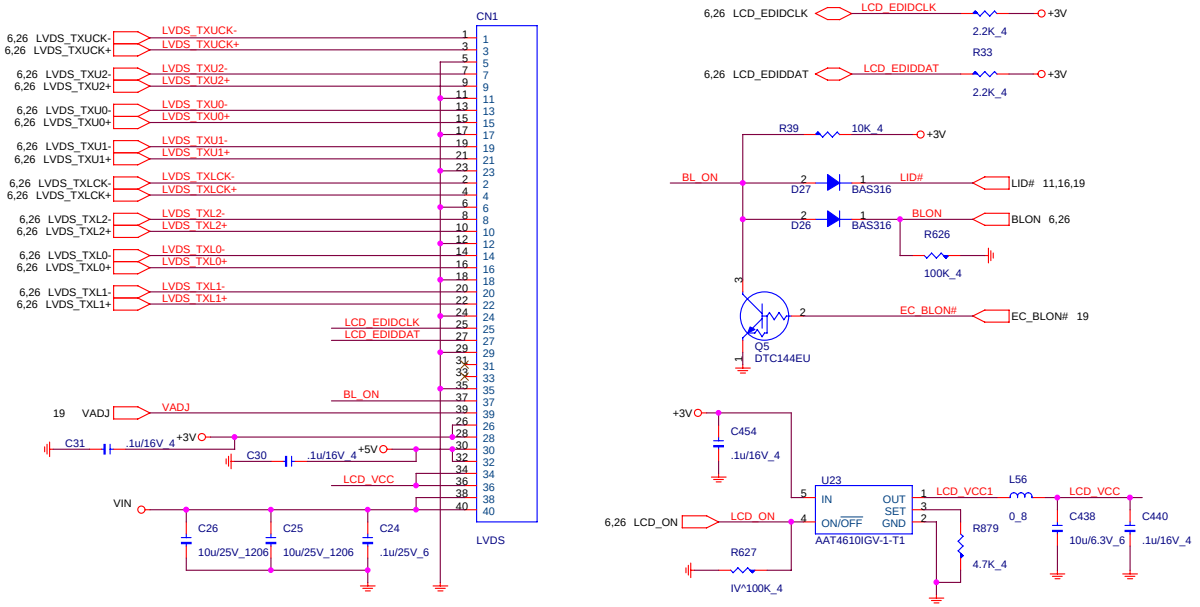


PROJECT : ZR1
Quanta Computer Inc.

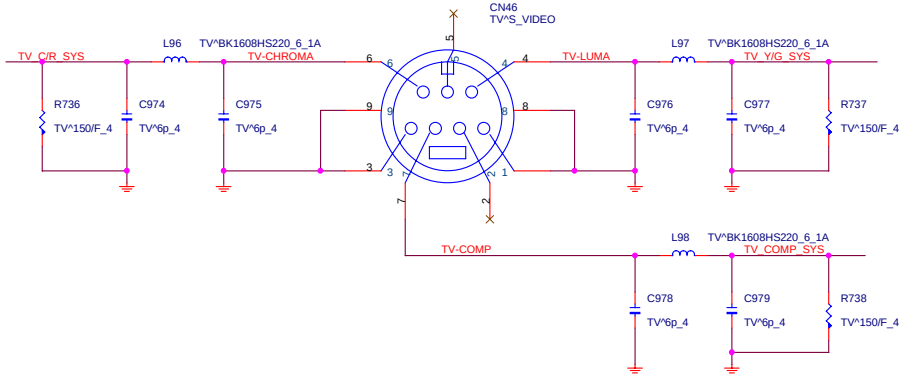
Size	Document Number	Rev
	DDR SO-DIMM(200P)	1A

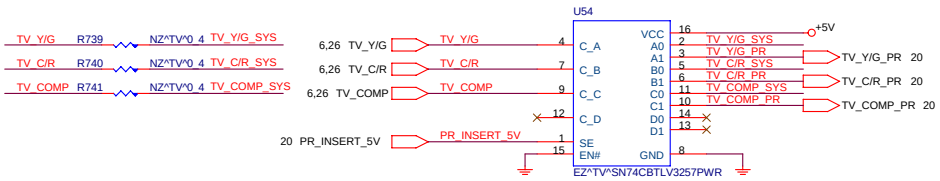
Date: Wednesday, March 29, 2006 Sheet 9 of 29

LVDS

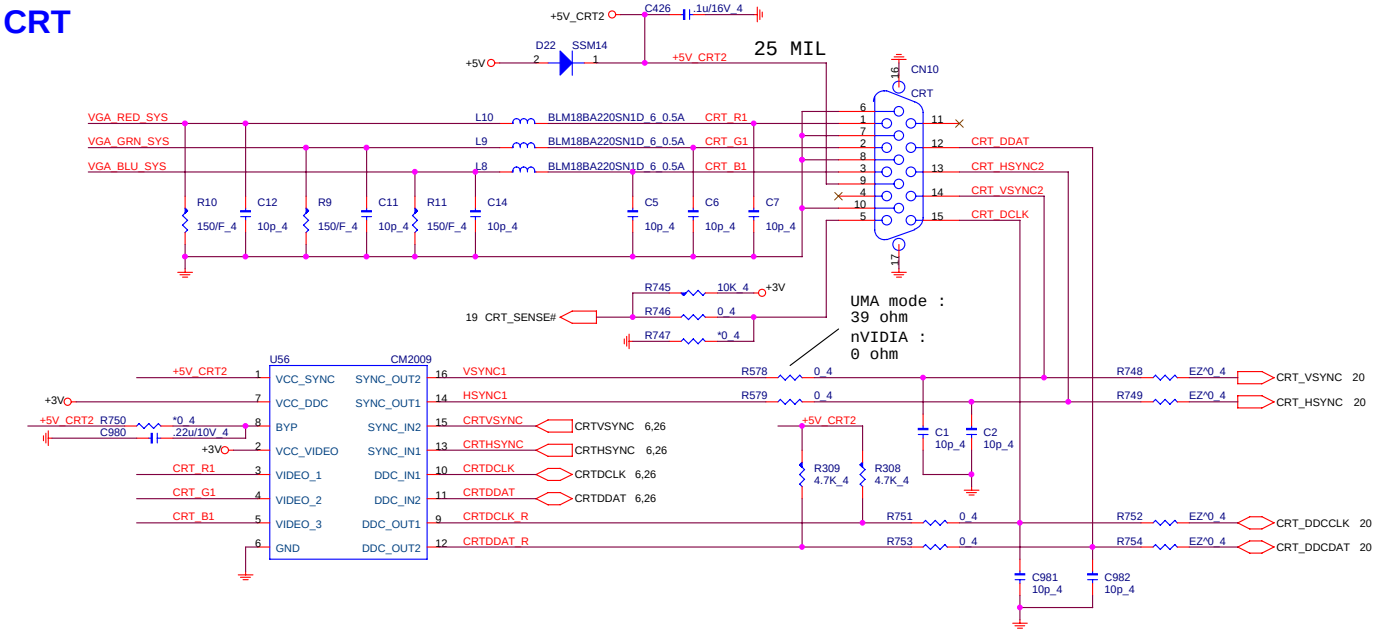


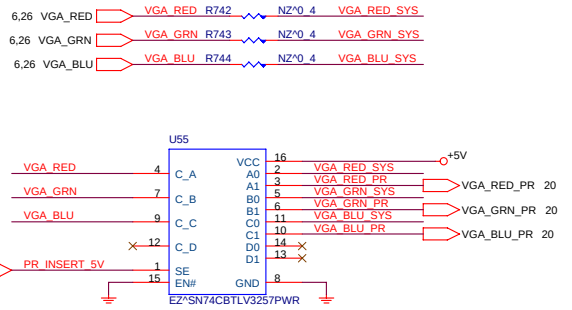
S-VIDEO





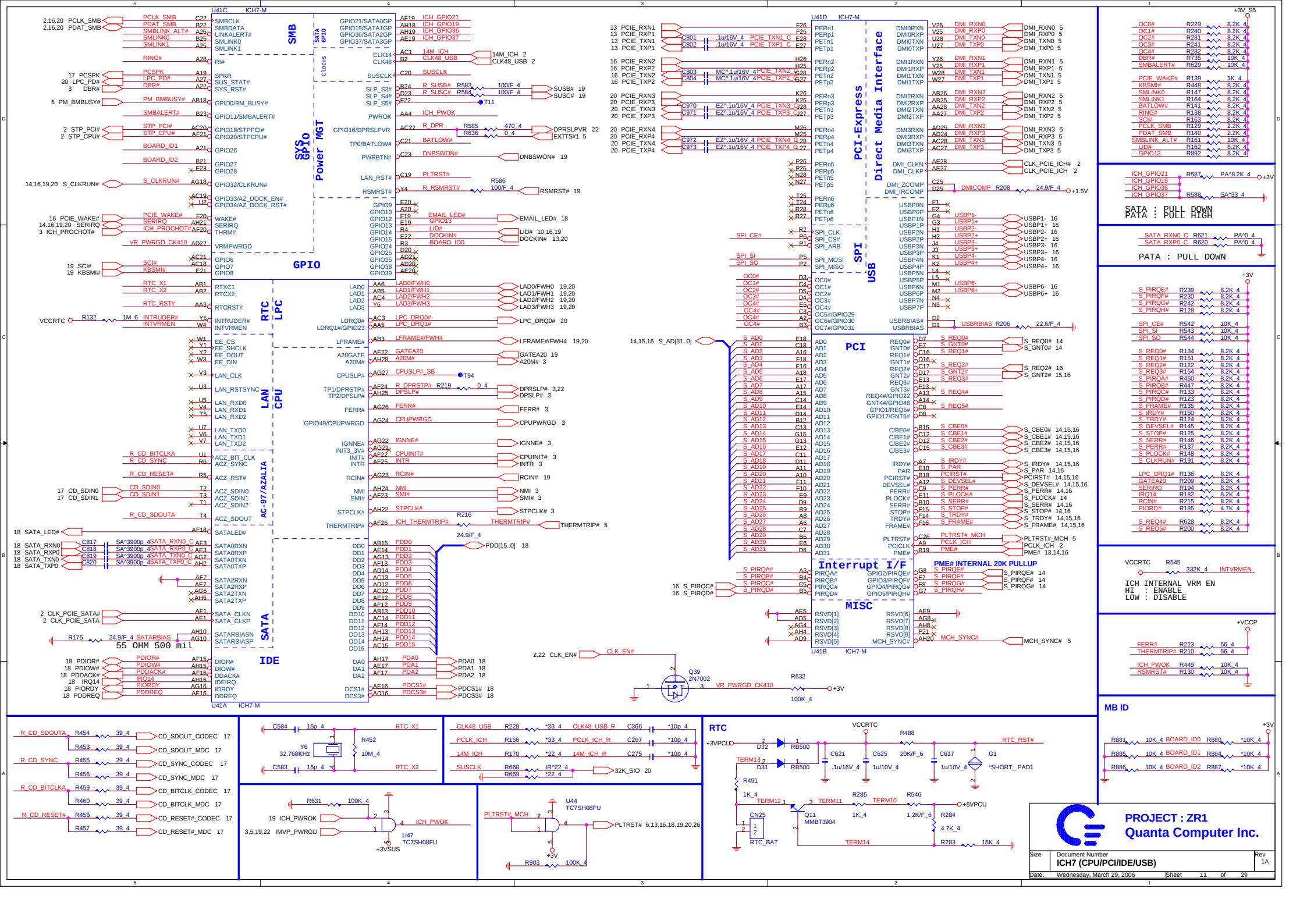
CRT

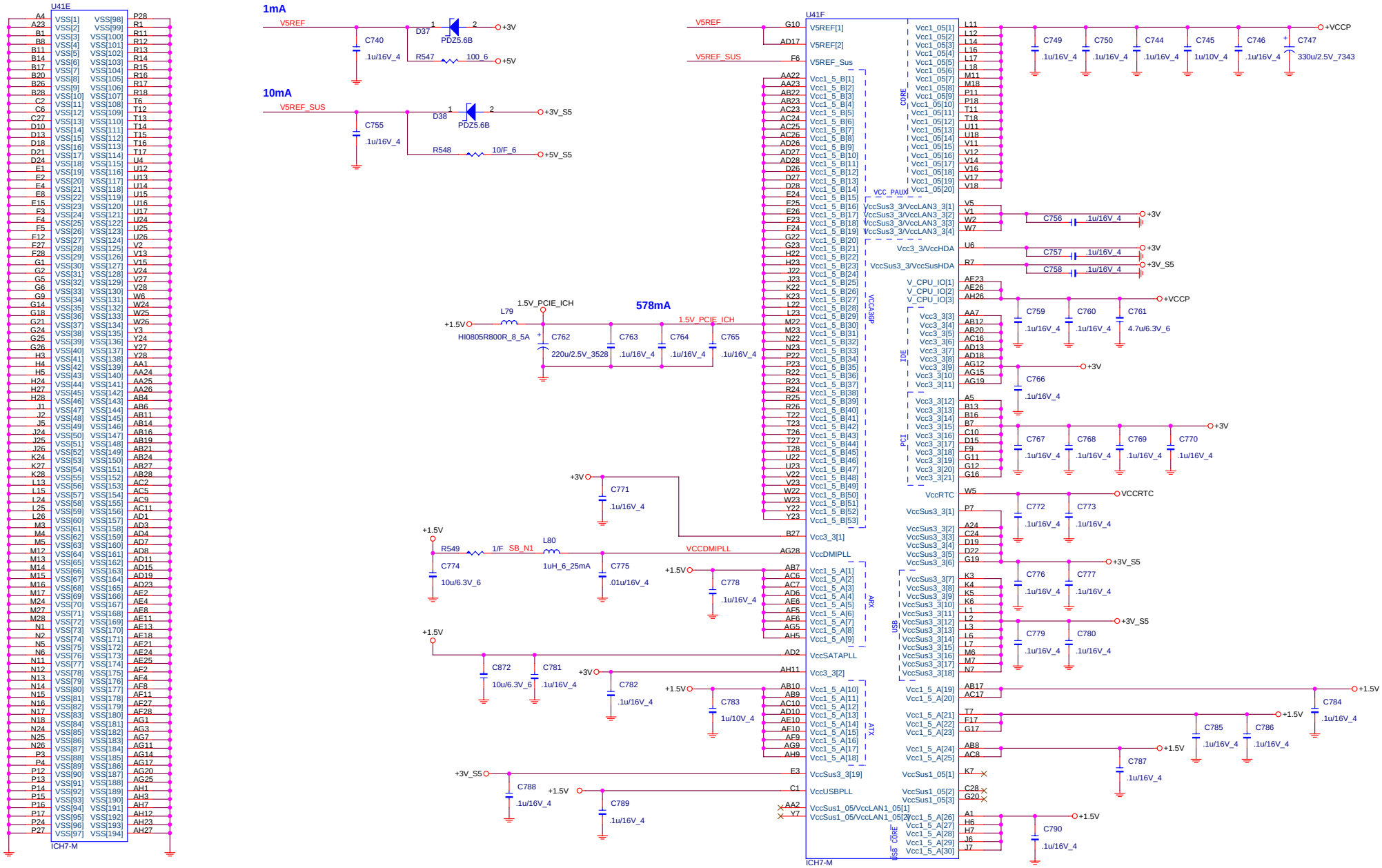




PROJECT : ZR1
Quanta Computer Inc.

Size	Document Number	Rev
	LCD / CRT / TV	1A
Date: Wednesday, March 29, 2006	Sheet 10 of 29	


U41C ICH7-M
SMB
SYS GPIO Power MGT
GPIO
RTC
LPC
LAN CPU
AC-97/AZALIA
SATA
IDE
U41A ICH7-M
U41D ICH7-M
PCI-Express
Direct Media Interface
SPI
USB
PCI
Interrupt I/F
MISC
U41B ICH7-M
PME# INTERNAL 20K PULLUP
55 OHM 500 mil
SATA : PULL DOWN
PATA : PULL HIGH
PATA : PULL DOWN
ICH INTERNAL VRM EN
HI : ENABLE
LOW : DISABLE
MB ID
RTC
PROJECT : ZR1
Quanta Computer Inc.
ICH7 (CPU/PCI/IDE/USB)
Wednesday, March 29, 2006



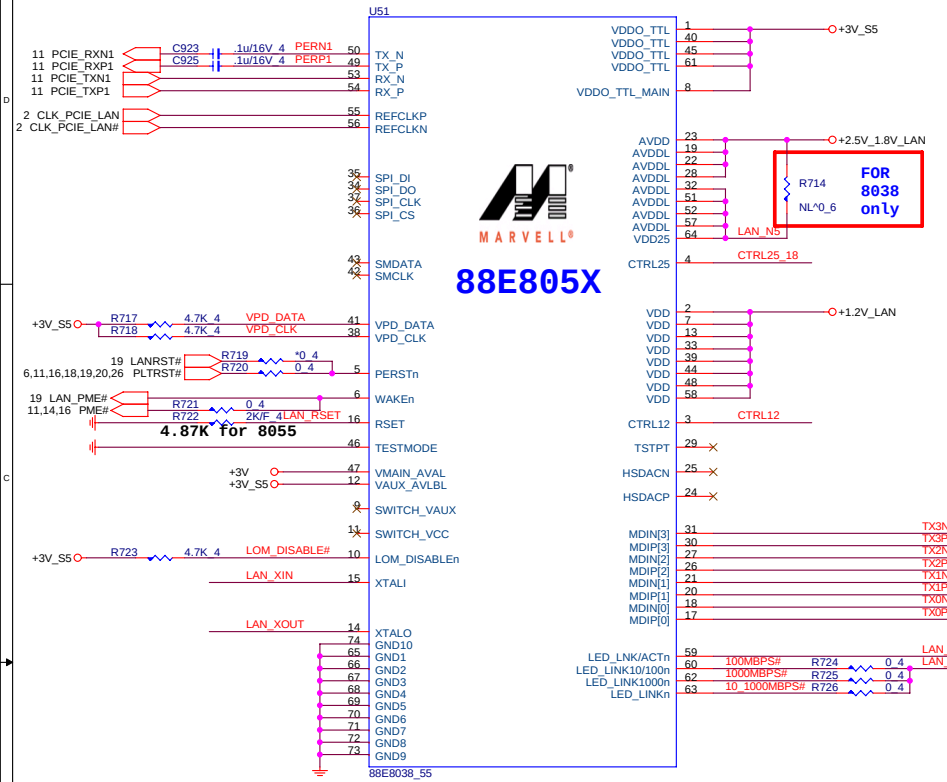
PROJECT : ZR1
Quanta Computer Inc.

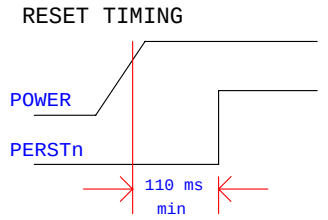
Size	Document Number	Rev
	ICH7 (POWER)	1A
Date: Wednesday, March 29, 2006	Sheet 12 of 29	

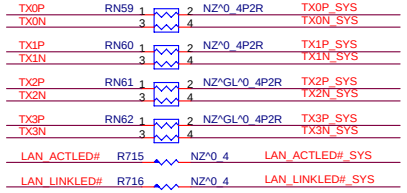
LAN_88E8038/88E8055

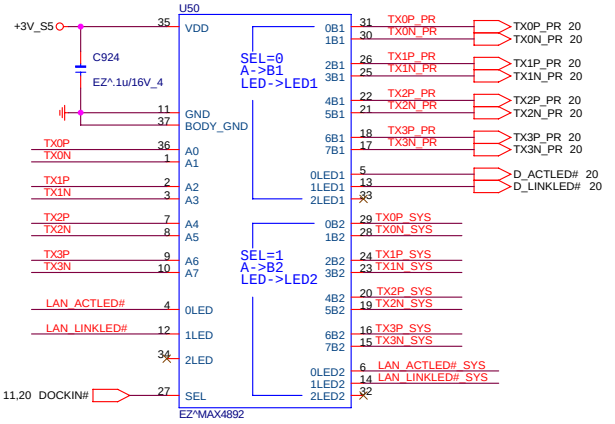
10/100 : 88E8038 AJ080380000

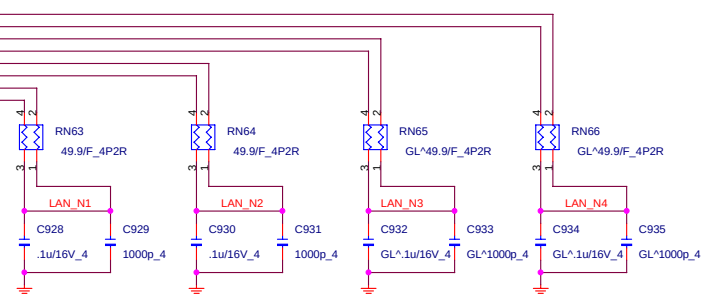
GIGA : 88E8055 AJ080550011 A2



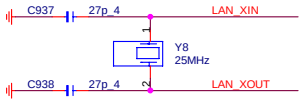


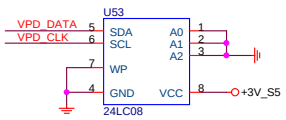


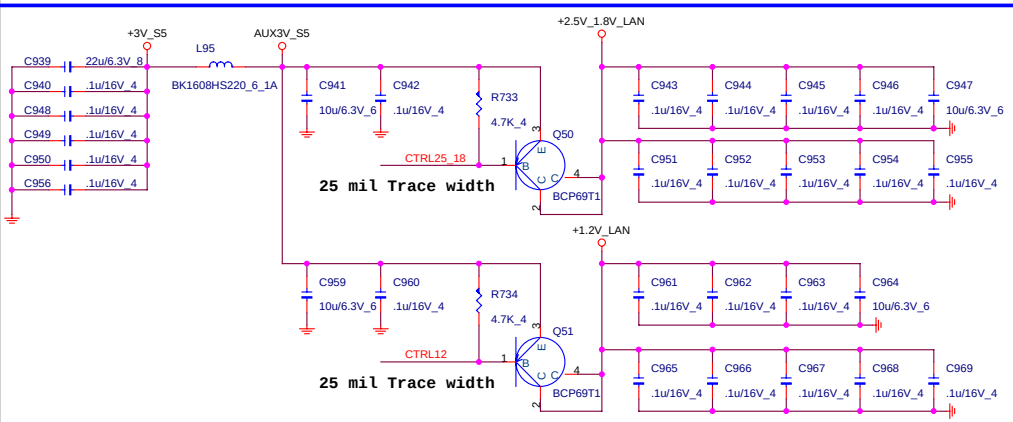


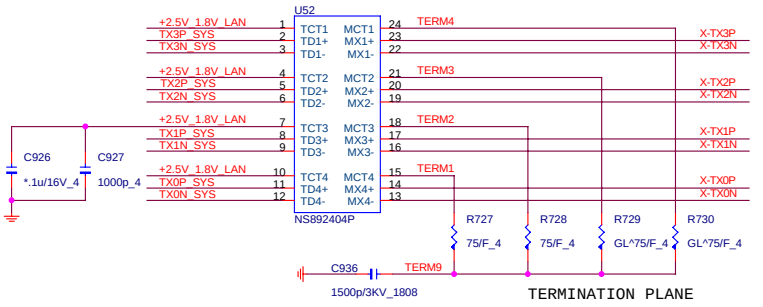


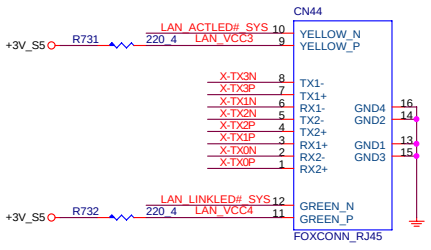
	BOTHHAND	FCE
10/100	DB0KN7LAN24	DBED2LLAN05
GiGa	DBKN1NLAN03	DB0ZH1LAN06











PROJECT : ZR1

Quanta Computer Inc.

Size	Document Number	Rev
	LAN (MARVELL 8038/8055)	1A

Date: Wednesday, March 29, 2006 Sheet 13 of 29

PCIXX12_PCMCIA

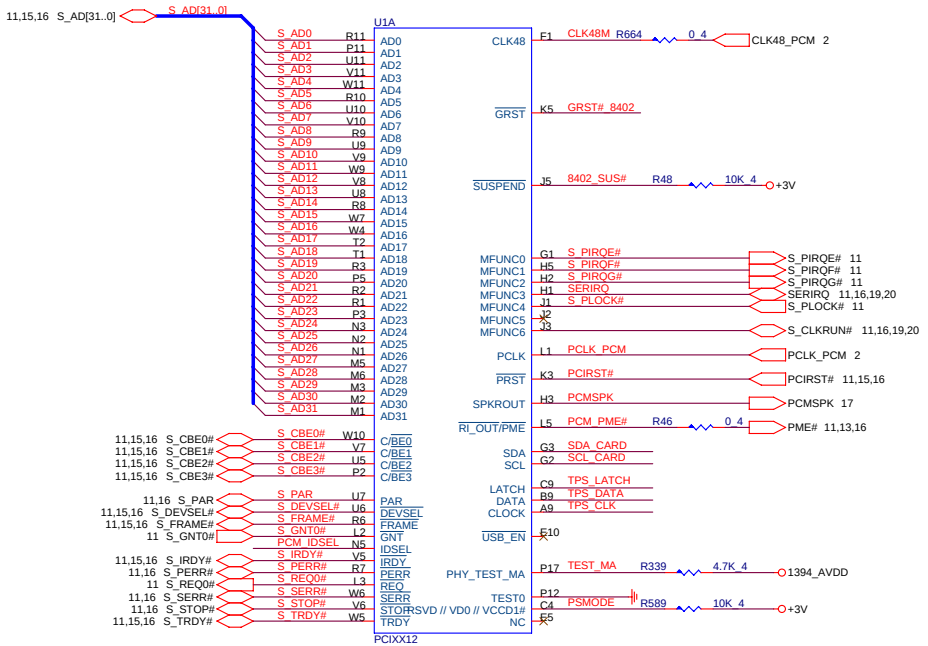
PCI8412 : AJ084120T08 PCMCIA / 1394 / 5 IN 1

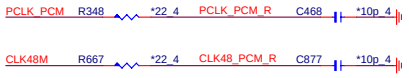
PCI6412 : AL064120T04 PCMCIA / 5 IN 1

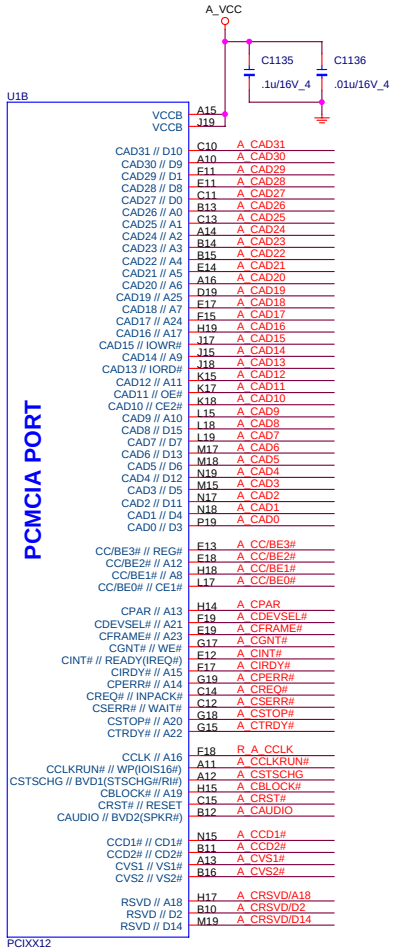
PCI1512 : AJ015120T02 PCMCIA

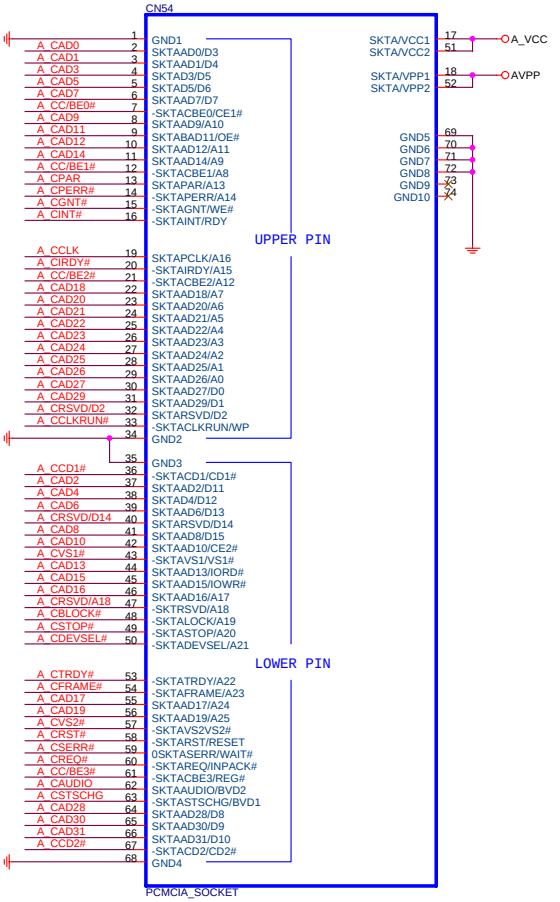
REQ0# AD25
GNT0# PIRQ(E,F,G)#

S_AD25 R346 150/F_4 PCM_IDSEL

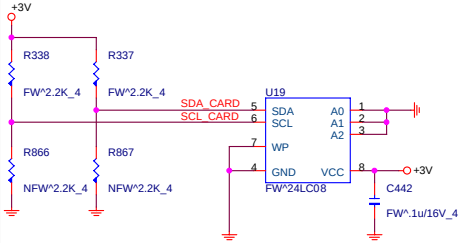


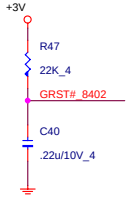


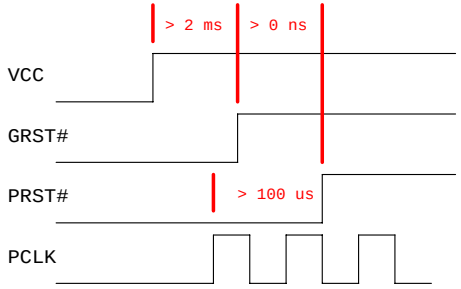


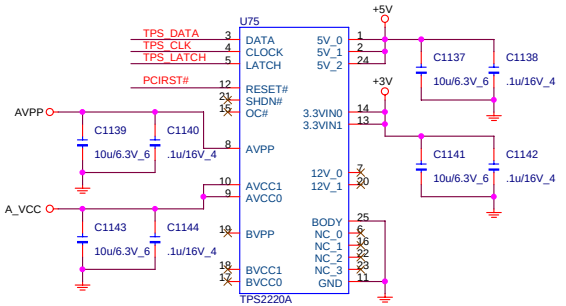


R_A_CCLK R863 33_4 A_CCLK









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Quanta Computer Inc.

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	PCIXX12 (PCMCIA)	1A
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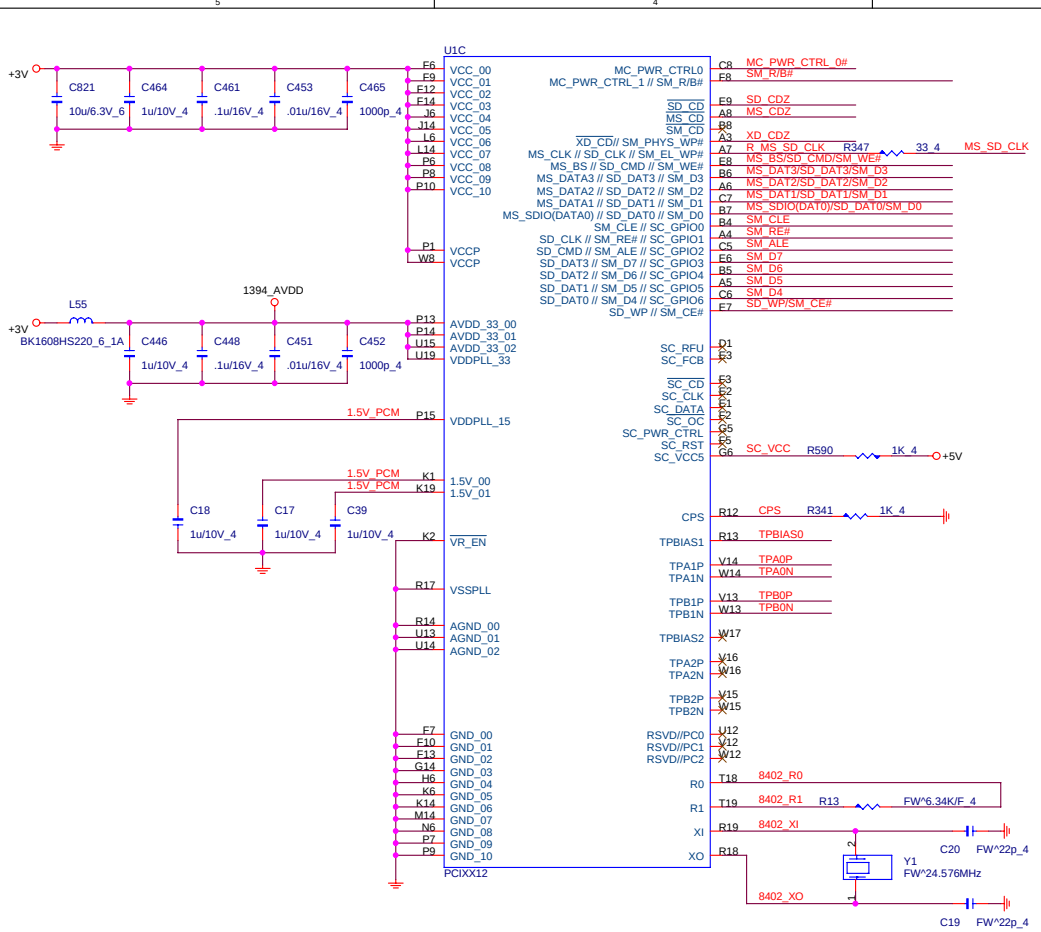

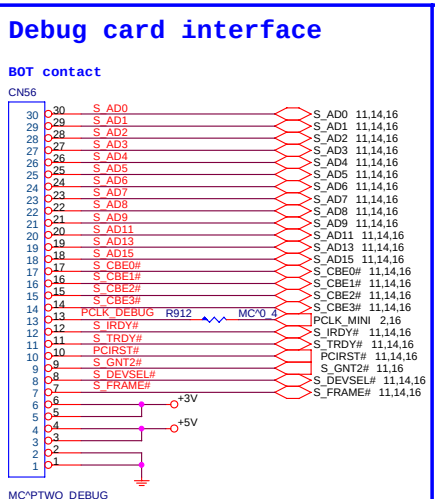

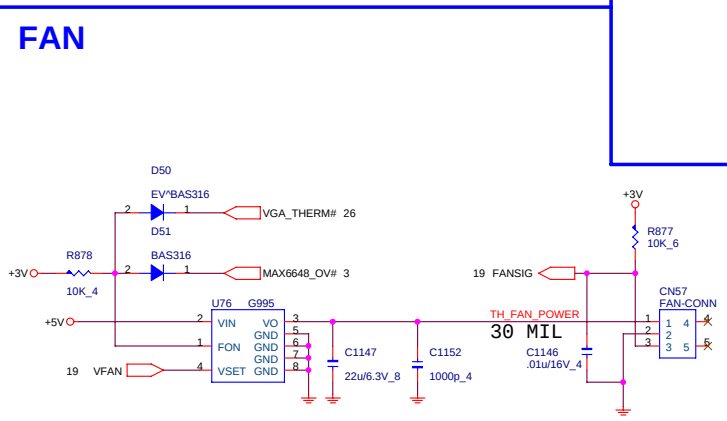

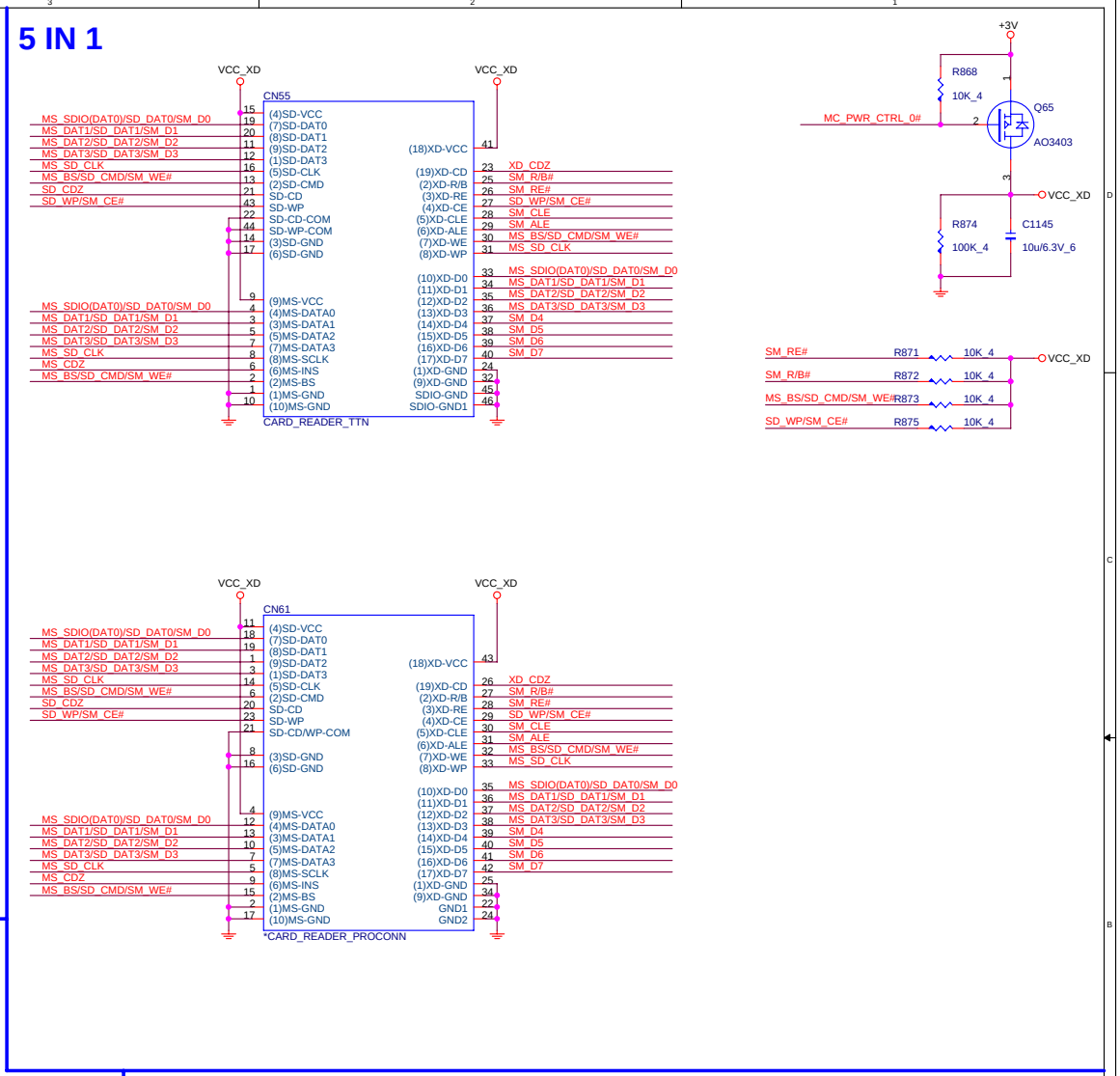

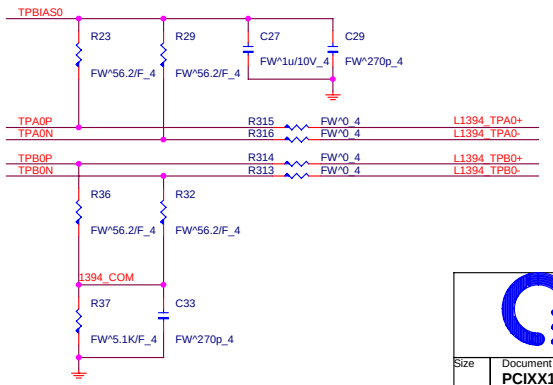

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Size	Document Number	Rev
	PCIXX12 (1394/5 IN 1) & FAN	1A
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MINI-PCI

REQ2# AD19
GNT2# PIRQ(C,D)#

S_AD19 R705 MP^150/F_4 MINI_IDSEL

PCLK_MINI R704 *22_4 C904 *22p_4

S_AD[31..0] S_AD[31..0] 11,14,15

CN40 MP^PTWO_MINIPCI_H6.8

D41 BAS316

18 RF_LED
19 RF_ENABLE
RF_EN_R
11 S_PIRQD#
2,15 PCLK_MINI
11 S_REQ2#
11,14,15 S_CBE3#
11,14,15 S_CBE2#
11,14,15 S_IRDY#
11,14,19,20 S_CLKRUN#
11,14 S_SERR#
11,14 S_PERR#
11,14,15 S_CBE1#

TIP LAN1 LAN3 LAN5 LAN7 LED_GP LED_GN NC1 -INTB +3V R(IRQ3) GND PCICLK GND -REQ +3V AD31 AD29 GND AD27 AD25 (V) -CBE3 AD23 GND AD21 AD19 GND AD17 -CBE2 -IRDY +3V -CLKRUN -SERR GND -PERR -CBE1 AD14 GND AD12 AD10 GND AD8 AD7 +3V AD5 (V) AD3 +5V AD1 GND SYNC SDIN0 BITCLK -AC_PRIMARY BEEP AGND +MIC -MIC AGND -RI +5VA

RING LAN2 LAN4 LAN6 LAN8 LED_YP LED_YN NC2 +5V -INTA R(IRQ4) +3VAUX -RST +3V -GNT GND -PME (V) AD30 +3V AD28 AD26 AD24 IDSEL GND AD22 AD20 PAR AD18 AD16 GND -FRAME -TRDY -STOP +3V -DEVSEL GND AD15 AD13 AD11 GND AD9 -CBE0 +3V AD6 AD4 AD2 AD0 (V) SERIRQ GND M66EN SDOUT SDIN1 -RESET -MPCICACK AGND +SPK -SPK AGND NC4 +3VAUX

S_PIRQC# +5V
PCIRST# +3VSUS
S_GNT2#
PME#
S_AD30
S_AD28
S_AD26
S_AD24
MINI_IDSEL
S_AD22
S_AD20
S_PAR
S_AD18
S_AD16
S_FRAME#
S_TRDY#
S_STOP#
S_DEVSEL#
S_AD15
S_AD13
S_AD11
S_AD9
S_CBE0#
S_AD6
S_AD4
S_AD2
S_AD0
SERIRQ

S_PIRQC# 11
PCIRST# 11,14,15
S_GNT2# 11,15
PME# 11,13,14
S_PAR 11,14
S_FRAME# 11,14,15
S_TRDY# 11,14,15
S_STOP# 11,14
S_DEVSEL# 11,14,15
S_CBE0# 11,14,15
SERIRQ 11,14,19,20

+3V +5V +3VSUS GND

C907 C908 C909 C910 MP^.1u/16V_4
C911 C912 C913 C914 MP^.1u/16V_4

BLUETOOTH

+3VSUS Q47 BT^AO3403 BT_POWER
C922 BT^10u/6.3V_6
19 BT_PWRON#
11 USBP4+
11 USBP4-
R890 R891 BT^0_4
BUSBP4+ BUSBP4-
L94 *DLW21HN900SQ2L
CN43 BT^USB_BT
18 BT_LED

USB

11 USBP1-
11 USBP1+
USBP1- USBP1+
R706 R707 0_4
BUSBP1- BUSBP1+
L92 *DLW21HN900SQ2L
USBPWRP1
CN39 USB
C905 470p_4
C906 100u/6.3V_3528
L91 TI201209G121_8_3A
USBPWR1

+5V_S5
U48 G548A2P8U
IN1 IN2 EN# GND GND-C OUT3 OUT2 OUT1 OC#
19 USBON#
R709 *6.34K/F_4

DC/B CONNECTOR

USB PORT
USB PORT
USB Camera

11 USBP3-
11 USBP3+
11 USBP2-
11 USBP2+
11 USBP6-
11 USBP6+
USBP3- USBP3+ USBP2- USBP2+ USBP6- USBP6+
CN60 B2B
VA VA 20,25
+5V_S5
+3V
USBON# CCD_PWRON# LID# NBSWON#
USBON# 19
CCD_PWRON# 19
LID# 10,11,19
NBSWON# 19

MINI-CARD

CN41 MC^MINI CARD

Reserved GND +1.5V LED_WPAN# LED_WLAN# LED_WWAN# GND USB_D+ USB_D- GND SMB_DATA SMB_CLK +1.5V GND +3.3Vaux PERST# Reserved GND GND Reserved Reserved Reserved Reserved +1.5V GND +3.3V

PETp0 PETn0 GND GND PERp0 PERn0 GND Reserved Reserved GND REFCLK+ REFCLK- GND CLKREQ# Reserved Reserved WAKE# +3.3V

11 PCIE_TXP2
11 PCIE_TXN2
11 PCIE_RXP2
11 PCIE_RXN2
C915 C916 MC^.1u/16V_4
PERP2 PERN2
2 CLK_PCIE_MINICARD
2 CLK_PCIE_MINICARD#
2 MINI_CLKREQ#
11 PCIE_WAKE#

RF_LED 18
PDAT_SMB 2,11,20
PCLK_SMB 2,11,20
PLTRST# 6,11,13,18,19,20,26
RF_EN_R

+1.5V +3V +3V_S5
C921 MC^.1u/16V_4
C918 C919 C920 MC^.1u/16V_4

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	MINI_CARDPCI/USB/BT/DC	1A
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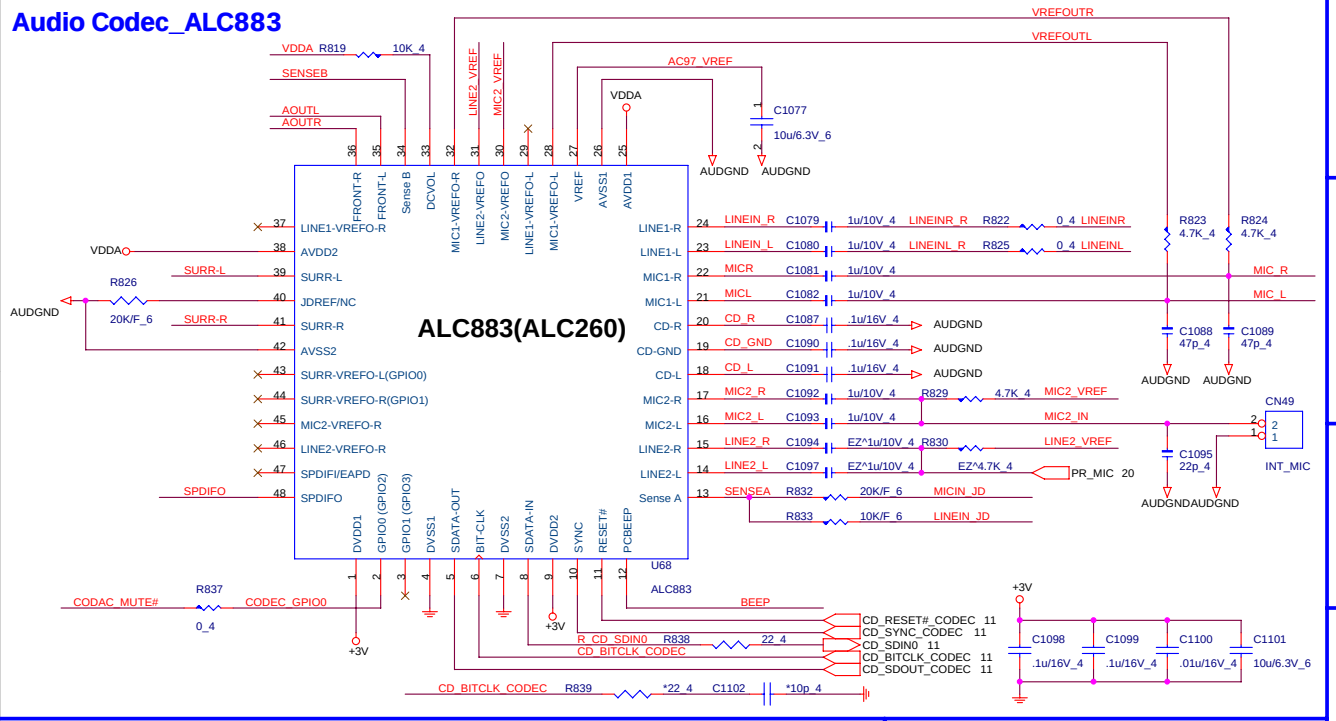
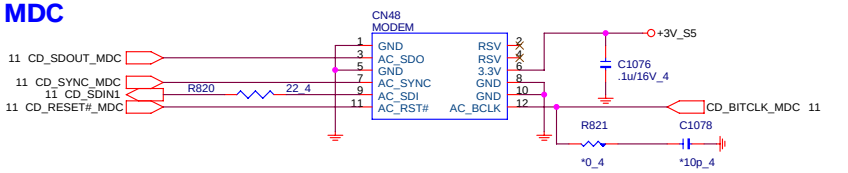
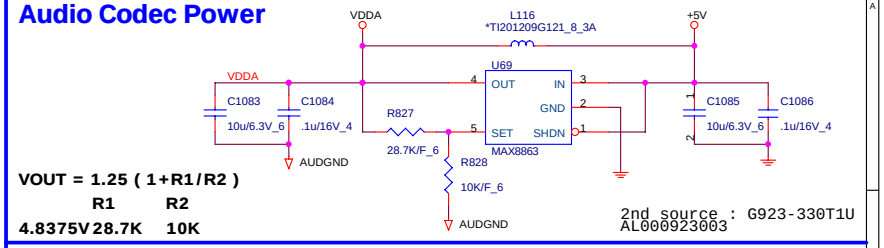
Audio Codec_ALC883



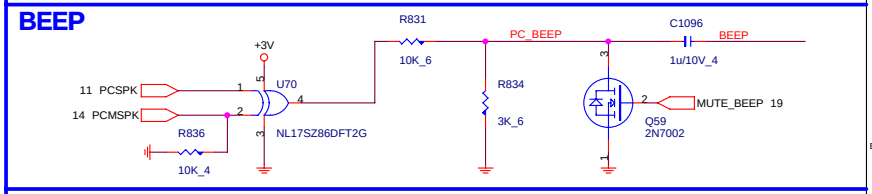
MDC



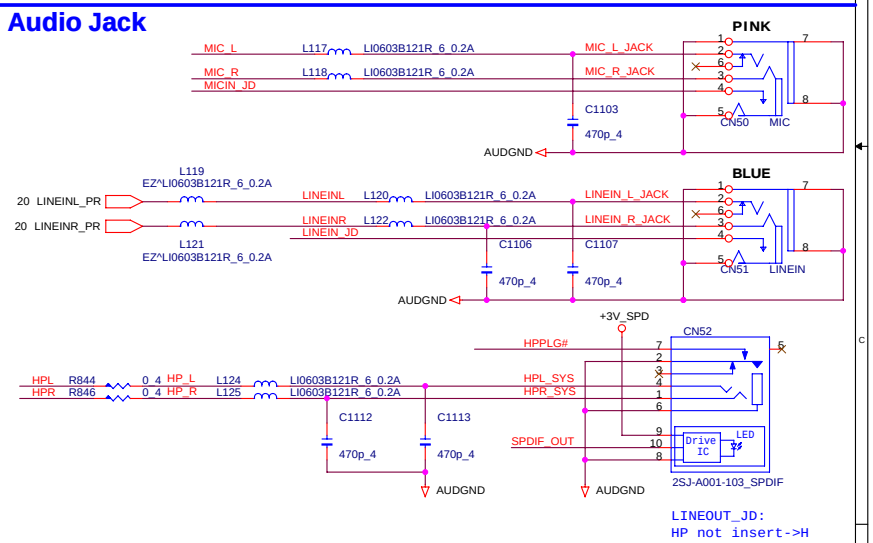
Audio Codec Power



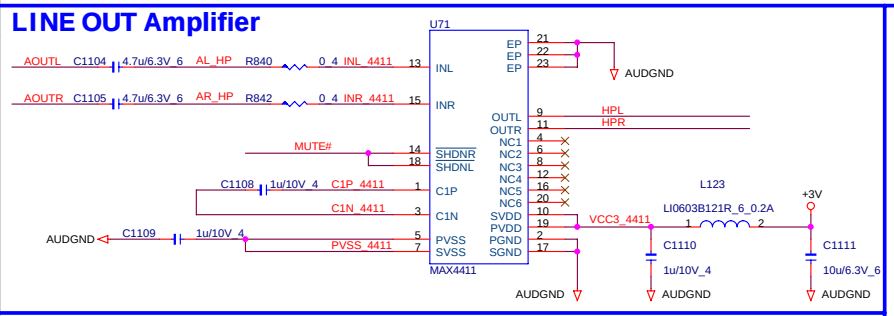
BEEP

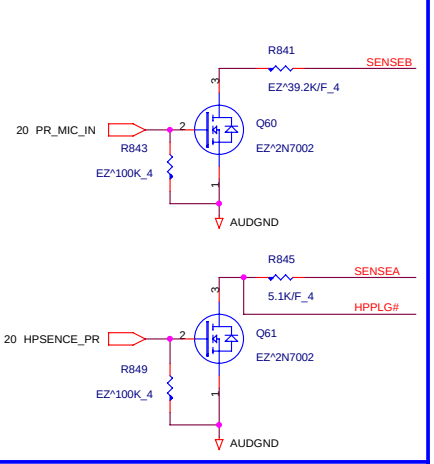


Audio Jack

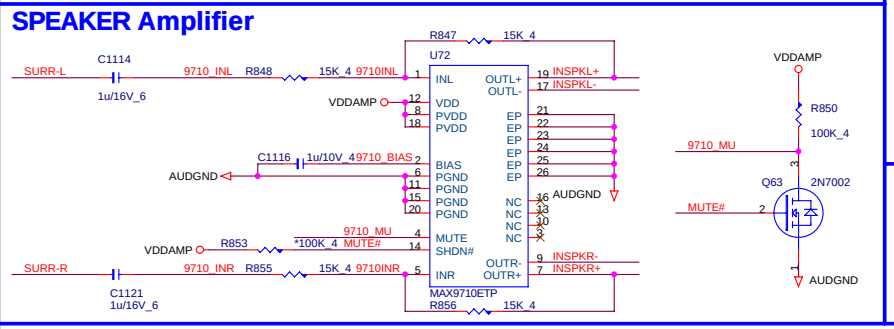


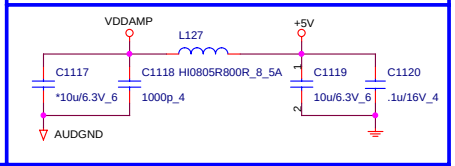
LINE OUT Amplifier

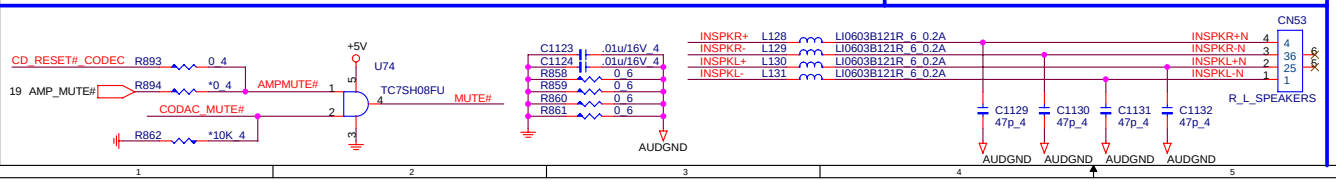


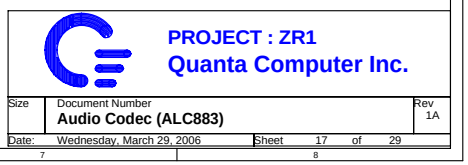


SPEAKER Amplifier

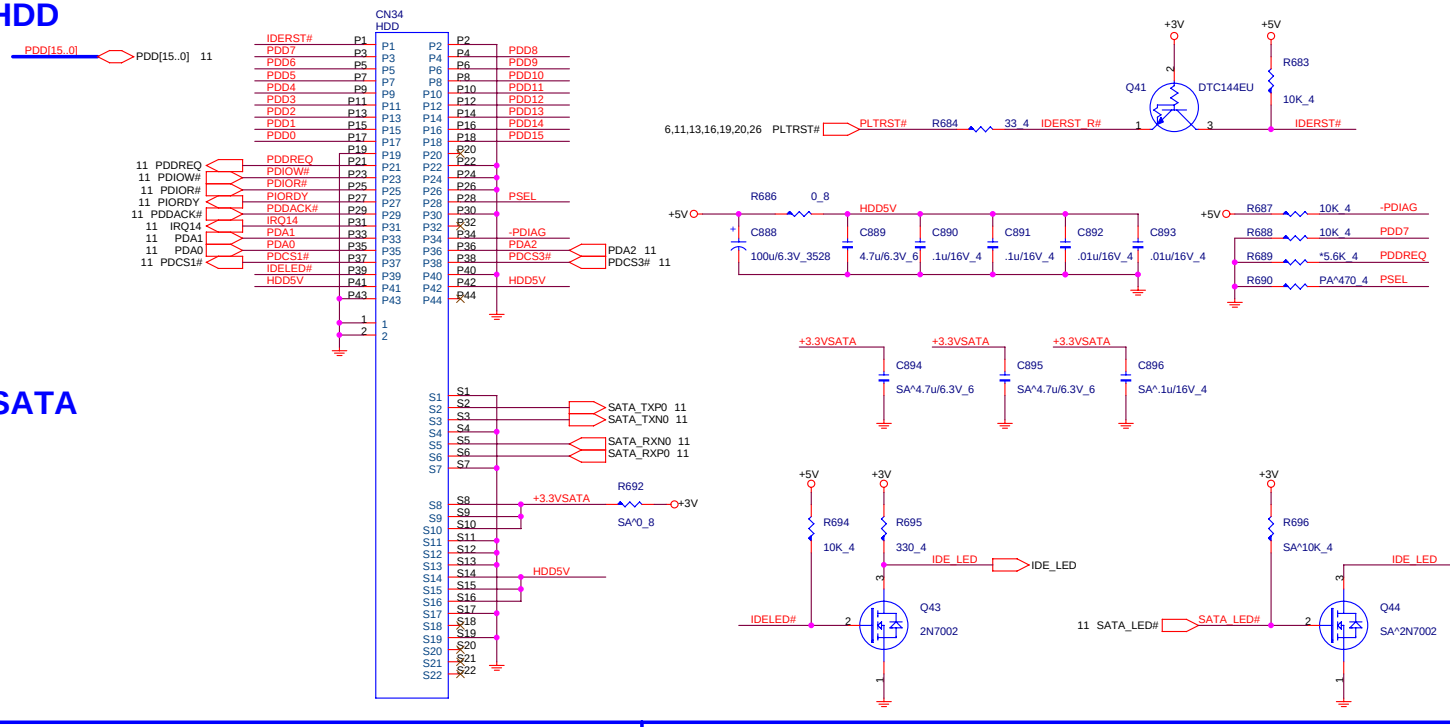






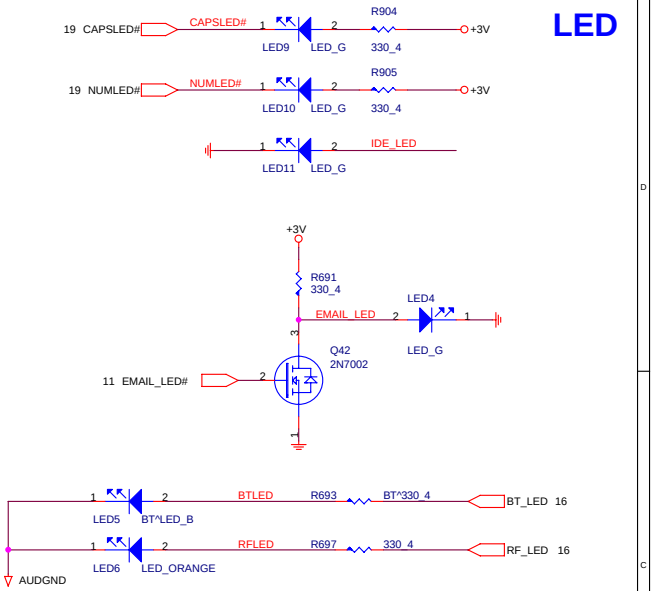


HDD

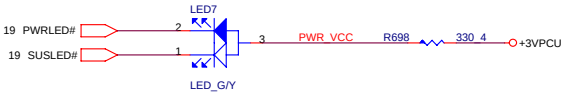


SATA

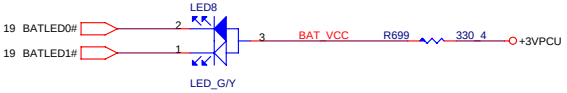
LED



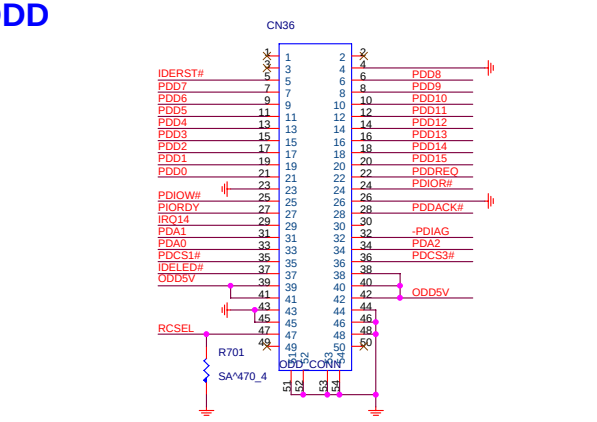
Power LED



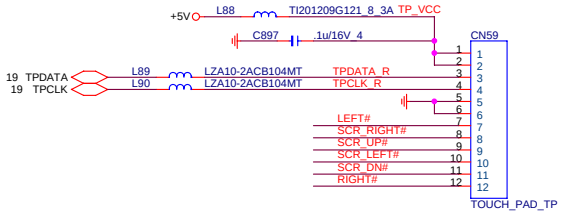
Battery LED



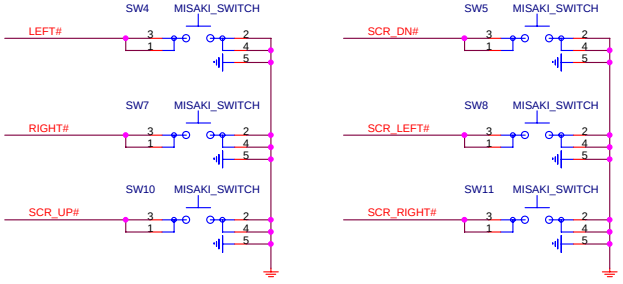
ODD



TP CONN

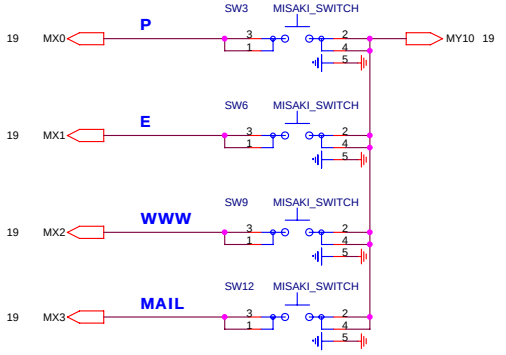


TP SWITCH



WL & BT SWITCH

QUICK KEY SWITCH



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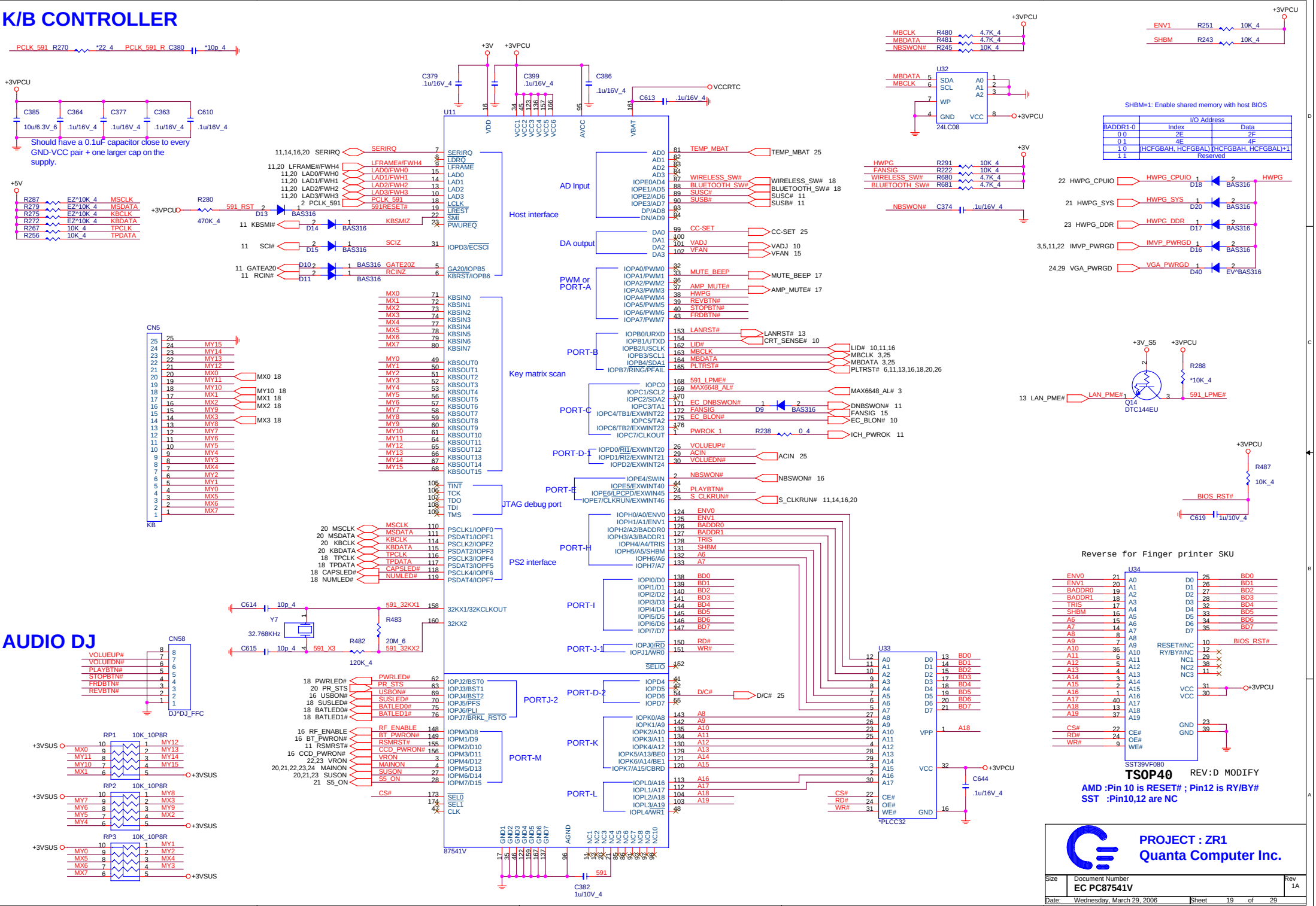
K/B CONTROLLER



AUDIO DJ

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SMSC SIO1000

SYSOPT1	SYSOPT0	DEFAULT CONFIGURATION PORT BASE ADDRESS
0	0	0X002E
0	1	0X004E
1	0	0X162E
1	1	0X164E

U65 SMSC (IR^SIO1000)

Pin	Signal	Pin	Signal
2	14M_SIO	9	CLOCKI
11,19	LAD0/FWH0	10	LAD0
11,19	LAD1/FWH1	12	LAD1
11,19	LAD2/FWH2	13	LAD2
11,19	LAD3/FWH3	14	LAD3
11,19	LFRAME#/FWH4	15	LFRAME#
11	LPC_DRQ0#	16	LDRQ~
6,11,13,16,18,19,26	PLTRST#	17	PCI_RESET#
		18	LPCPD#
2	PCLK_SIO	20	PCI_CLK
11,14,16,19	SERIRQ	21	SER_IRQ
		6	IO_PME#
11,14,16,19	S_CLKRUN#	19	CLKRUN#
		34	GP12/IO_SMI#
	SYSOPT0	33	GP11/SYSOPT0
	SYSOPT1	40	GP23/SYSOPT1
		32	GP10
		35	GP13/IRQIN1
		36	GP14/IRQIN2
		23	GP40/IRRX
		24	GP41/IRTX
11	32K_SIO	25	GP42/CLKI32
		27	GP43
		28	GP44
		29	GP45
		30	GP46
		31	GP47
		54	VCC4
		45	VCC3
		26	VCC2
		11	VCC1
		7	VTR
	SLCT	55	SLCT
	PE	56	PE
	BUSY	57	BUSY
	ACK#	58	ACK#
	PD7	53	PD7
	PD6	51	PD6
	PD5	50	PD5
	PD4	49	PD4
	PD3	48	PD3
	PD2	47	PD2
	PD1	46	PD1
	PD0	44	PD0
	SLCTIN#	42	SLIN#
	INIT#	41	INIT#
	ERROR#	59	ERROR#
	ALF#	60	AFD#
	STROBE#	61	STRB#
	DCD1#	5	MDCD1#
	DSR1#	64	MDSR1#
	RXD1	62	MRXD1
	RTS1#	1	MRTS1#
	TXD1	63	MTXD1
	CTS1#	2	MCTS1#
	DTR1#	3	MDTR1#
	RI1#	4	MRI1
	IRRX2	37	IRRX2
	IRTX2	38	IRTX2
	IRMODE/IRRX3	39	IRMODE
	GND4	52	
	GND3	43	
	GND2	22	
	GND1	8	

C1047 IR^10u/6.3V_6, C1048 IR^.1u/16V_4, C1049 IR^.1u/16V_4, R807 IR^0_6, +3V_S5

R810 IR^10K_4, LPC_PD# 11, D47 *BAS316, SIO_LPC_PD#

C1051 *10p_4, R811 *22_4 PCLK_SIO

C1054 *10p_4, R812 *22_4 14M_SIO

R796 *10K_4, R797 IR^10K_4, R801 IR^10K_4, R802 *10K_4, SYSOPT1, SYSOPT0, +3V

RN98 STRB# ERROR#, RN99 ACK# BUSY, RN100 SLIN# INIT#, RN101 PD7 PD6, RN102 PD5 PD4, RN103 PD3 PD2, RN104 PD0 PD1, RN105 PE SLCT, AFD# R806 EZ^4.7K_4, EZ^4.7K_4P2R, +5V

IrDA

U66 (IR^VISHAY_TFDU6102): IRTX2, IRRX2, IRMODE, IR_VCC, VLOGIC, TXD, RXD, SD, VCC, LEDA, LEDC, GND

R809 IR^47_6, C1052 IR^4.7u/6.3V_6, C1053 IR^.1u/16V_4, IR_LEDA, R808 IR^0_8, C1050 IR^4.7u/6.3V_6, +3V

R798 EZ^100K_4, R799 EZ^10K_4, C1045 EZ^.1u/16V_4, U64 EZ^TC7SH08FU, PR_STS, PR_STS 19, DOCKPRG, Q56 EZ^2N7002, R803 EZ^1M_6, DOCKIN#, C1046 EZ^.1u/16V_4, +3V_S5

R800 EZ^10K_4, PR_INSERT_5V, PR_INSERT_5V 10, Q57 EZ^2N7002, DOCKIN#, +5V

D46 EZ^DA204U, DOCKIN# 3, +3V_S5

17 SPKR_PR, R804 EZ^0_4, PR_SPKR

17 SPKL_PR, R805 EZ^0_4, PR_SPKL

EZ4

CN47B

10	CRT_HSYNC	CRT_HSYNC	L111 EZ^0_6	HSYNC_PR	78 CRT_HS
10	CRT_VSYNC	CRT_VSYNC	L112 EZ^0_6	VSYNC_PR	79 CRT_VS
10	CRT_DDCCLK	CRT_DDCCLK			81 CRT_DDCK
10	CRT_DDCDAT	CRT_DDCDAT			80 CRT_DDCDT
					105 GND105
10	VGA_RED_PR	VGA_RED_PR	L113 EZ^68nH	RED_PR	106 VGA_R
10	VGA_GRN_PR	VGA_GRN_PR	L114 EZ^68nH	GRN_PR	107 VGA_G
10	VGA_BLU_PR	VGA_BLU_PR	L115 EZ^68nH	BLU_PR	108 VGA_B
					109 GND109
					117 GND117
2	CLK_PCIE_EZ1	CLK_PCIE_EZ1			119 PCIE1_CLK+
2	CLK_PCIE_EZ1#	CLK_PCIE_EZ1#			120 PCIE1_CLK-
					118 GND118
11	PCIE_TXP3	PCIE_TXP3			115 PCIE1_TP
11	PCIE_TXN3	PCIE_TXN3			116 PCIE1_TN
					114 GND114
11	PCIE_RXP3	PCIE_RXP3			111 PCIE1_RP
11	PCIE_RXN3	PCIE_RXN3			112 PCIE1_RN
					113 GND113
2	CLK_PCIE_EZ2	CLK_PCIE_EZ2			29 PCIE2_CLK+
2	CLK_PCIE_EZ2#	CLK_PCIE_EZ2#			30 PCIE2_CLK-
					27 GND27
11	PCIE_TXP4	PCIE_TXP4			59 PCIE2_TP
11	PCIE_TXN4	PCIE_TXN4			60 PCIE2_TN
					28 GND28
11	PCIE_RXP4	PCIE_RXP4			89 PCIE2_RP
11	PCIE_RXN4	PCIE_RXN4			90 PCIE2_RN
					88 GND88
6,11,13,16,18,19,26	PLTRST#	D48 EZ^BAS316		PCIE_RST_PR#	57 PCIERST
					26 PCIEWAKE
2,11,16	PDAT_SMB	PDAT_SMB			86 PCIESMBDT
2,11,16	PCLK_SMB	PCLK_SMB			83 PCIESMBCK
2	EZ_CLKREQ#	EZ_CLKREQ#			87 PCIEREQ#
VA					122 P2
					125 GND125

C1072 EZ^2200p_4, C1073 EZ^.1u/25V_6, C1074 EZ^.1u/25V_6, EZ^EZ4

CN47A

	DVI_HPD	64	TMDS_HPD
	DVI_CLK-	98	DVI_CLK-
	DVI_CLK+	97	DVI_CLK+
	GND99	99	
	DVI_D0-	94	DVI_TX0-
	DVI_D0+	95	DVI_TX0+
	GND96	96	
	DVI_D1-	91	DVI_TX1-
	DVI_D1+	92	DVI_TX1+
	GND93	93	
	DVI_D2-	61	DVI_TX2-
	DVI_D2+	62	DVI_TX2+
	GND63	63	
	DVI_DDCCK	67	TMDS_DDCCLK
	DVI_DDCDT	65	TMDS_DDCDATA
	GND66	66	
	TX3P	37	TX3P_PR
	TX3N	38	TX3N_PR
	GND39	39	
	TX2P	34	TX2P_PR
	TX2N	35	TX2N_PR
	GND36	36	
	TX1P	4	TX1P_PR
	TX1N	5	TX1N_PR
	GND6	6	
	TX0P	1	TX0P_PR
	TX0N	2	TX0N_PR
	GND3	3	
	GND7	7	
	DOCK_IN#	68	DOCKIN#
	DOCKED#	84	
	P1	121	VA

R814 EZ^100K_4

TMDS_HPD 6,26, DVI_CLK- 6,26, DVI_CLK+ 6,26, DVI_TX0- 6,26, DVI_TX0+ 6,26, DVI_TX1- 6,26, DVI_TX1+ 6,26, DVI_TX2- 6,26, DVI_TX2+ 6,26, TMDS_DDCCLK 6,26, TMDS_DDCDATA 6,26, TX3P_PR 13, TX3N_PR 13, TX2P_PR 13, TX2N_PR 13, TX1P_PR 13, TX1N_PR 13, TX0P_PR 13, TX0N_PR 13, DOCKIN# 11,13

R816 EZ^1K_4

CN47D

13	D_LINKLED#	D_LINKLED#	8 LANLED_LINK
13	D_ACTLED#	D_ACTLED#	31 LANLED_ACT
			33 GND33
		SUSON_PR	55 SUSON
		MAINON_PR	56 MAINON
		DOCKPRG	85 BRG_PWROK
19	KBCLK	KBCLK	52 PS2KBCK
19	KBDATA	KBDATA	51 PS2KBDT
19	MSCLK	MSCLK	54 PS2MSCK
19	MSDATA	MSDATA	53 PS2MSDT
		MDSR1#	48 DSR#
		MRTS1#	46 RTS#
		MCTS1#	44 CTS#
		MRI1	42 RI
		MDCD1#	49 DCD#
		MRXD1	47 RXD#
		MTXD1	45 TXD#
		MDTR1#	43 DTR#
			50 GND50
17	SPDIF_OUT	R895 EZ^0_6	SPDIF_OUT_EZ 41 SPDIF_OUT
	AUDGND1		72 AGND72
		PR_SPKR	74 LINEOUT_R
		PR_SPKL	75 LINEOUT_L
17	LINEINR_PR	LINEINR_PR	70 LINEIN_R
17	LINEINL_PR	LINEINL_PR	71 LINEIN_L
17	PR_MIC	PR_MIC	73 MICIN
	AUDGND1		76 AGND76
17	PR_MIC_IN	PR_MIC_IN	69 PRMIC_DET
17	HPSENCE_PR	HPSENCE_PR	40 HPSENSE_PR
			124 G2

EZ^EZ4

CN47C

	GND100		100
	TV_COMPS	TV_COMP_PR	101 TV_COMP_PR 10
	TV_LUMA	TV_Y/G_PR	102 TV_Y/G_PR 10
	TV_CRMA	TV_C/R_PR	103 TV_C/R_PR 10
	GND104		104
	STRB#		9 STRB#
	PD0		11 PD0
	PD1		13 PD1
	PD2		15 PD2
	PD3		17 PD3
	PD4		18 PD4
	PD5		19 PD5
	PD6		20 PD6
	PD7		21 PD7
	PE		24 PE
	AFD#		10 AFD#
	ERROR#		12 ERROR#
	INIT#		14 INIT#
	SLIN#		16 SLIN#
	ACK#		22 ACK#
	BUSY		23 BUSY
	SLCT		25 SLCT
	GND58		58
	GND77		77
	GND110		110
	RESERVE32		32
	RESERVE82	EZ_N1 R815 EZ^0_6 +5V	82
			123 G1
	GND126		126

EZ^EZ4

KBCLK C1148 *10p_4, KBDATA C1149 *10p_4, MSCLK C1150 *10p_4, MSDATA C1151 *10p_4, TV_COMP_PR C1055 *10p_4, TV_Y/G_PR C1056 *10p_4, TV_C/R_PR C1057 *10p_4, PR_SPKR C1058 10p_4, PR_SPKL C1059 10p_4, LINEINR_PR C1060 10p_4, LINEINL_PR C1061 10p_4, PR_MIC C1062 10p_4, RED_PR C1063 10p_4, GRN_PR C1064 10p_4, BLU_PR C1065 10p_4, HSYNC_PR C1066 *10p_4, VSYNC_PR C1067 *10p_4, CRT_HSYNC C1068 *10p_4, CRT_VSYNC C1069 *10p_4, CRT_DDCCLK C1070 *10p_4, CRT_DDCDAT C1071 *10p_4

TMDS_DDCDATA R817 EZ^2.2K_4, TMDS_DDCCLK R818 EZ^2.2K_4, +5V

R813 EZ^0_6, AUDGND1

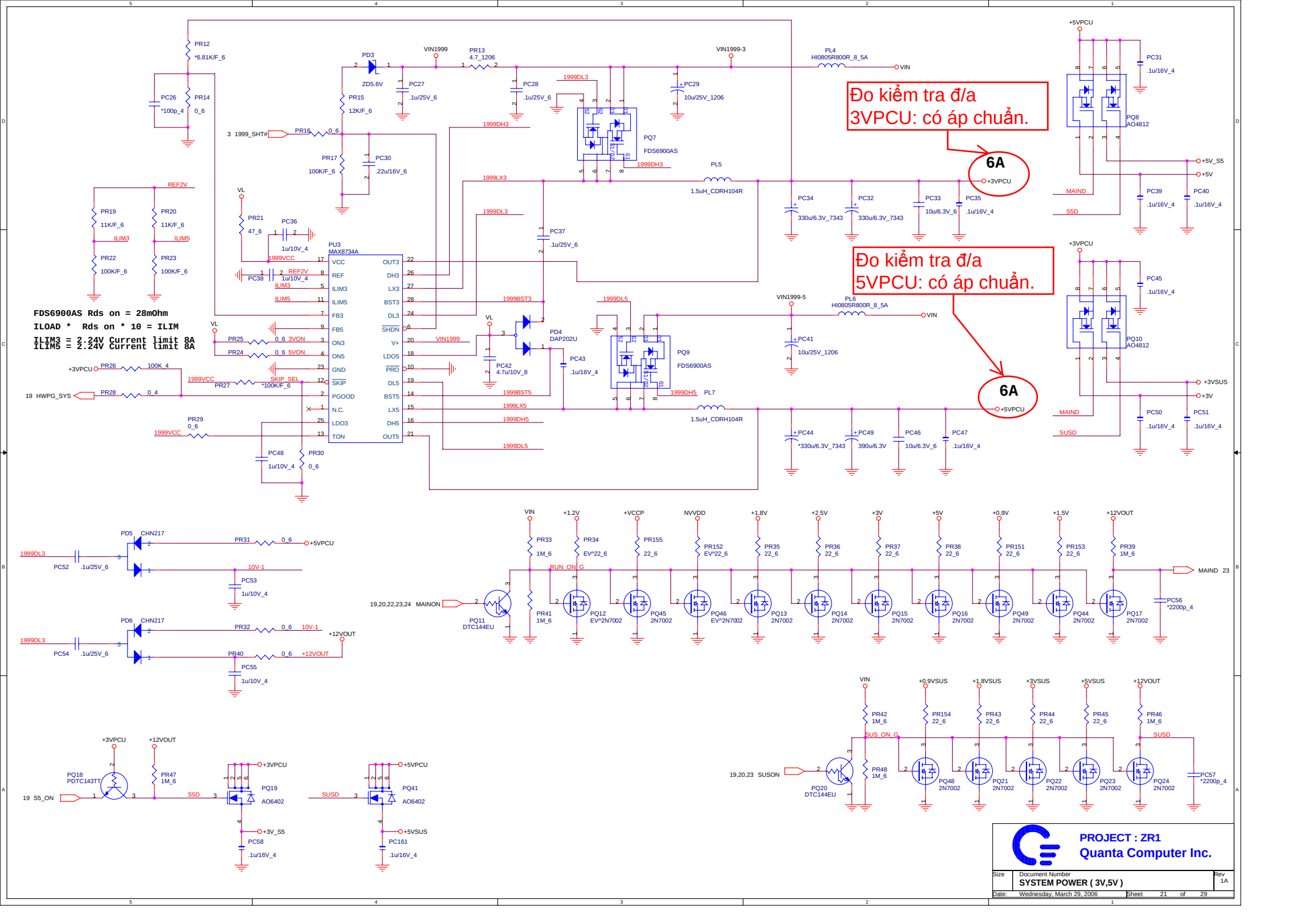
U67

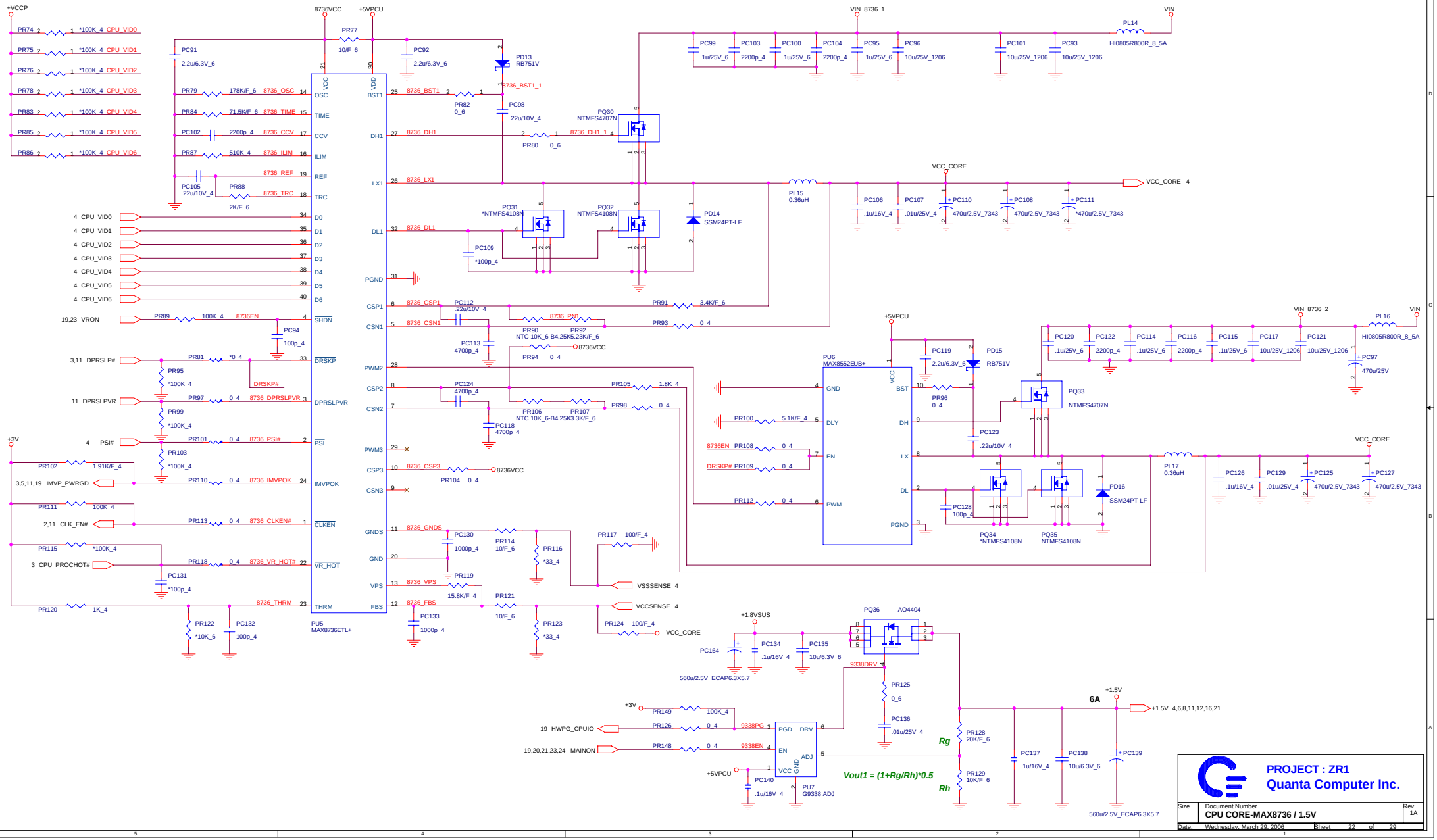
19,21,22,23,24	MAINON	MAINON	2 A1
19,21,23	SUSON	SUSON	5 A2
			6 Y1 MAINON_PR
			3 Y2 SUSON_PR
	DOCKIN#		1 G1
			7 G2
			8 VCC +3V_S5
			4 GND

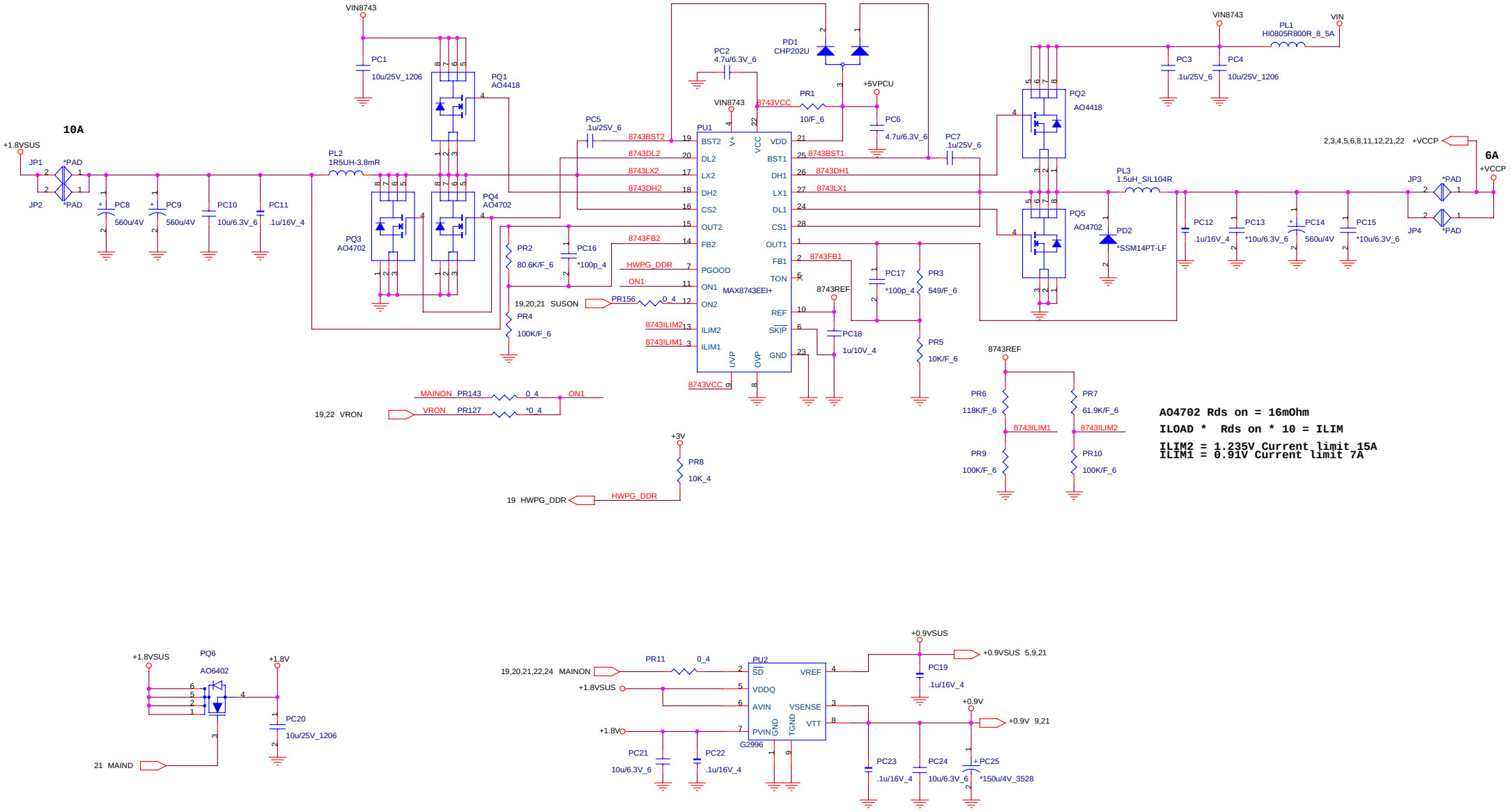
EZ^7W125FU, C1075 EZ^.1u/16V_4

PROJECT : ZR1
Quanta Computer Inc.

Size	Document Number	Rev
	SIO & EZ PORT4	1A
Date: Wednesday, March 29, 2006	Sheet 20 of 29	


Đo kiểm tra đ/a
3VPCU: có áp chuẩn.
6A
Đo kiểm tra đ/a
5VPCU: có áp chuẩn.
6A
FDS6900AS Rds on = 28mOhm
ILOAD * Rds on * 10 = ILIM
ILIM3 = 2.24V Current limit 8A
ILIM5 = 2.24V Current limit 8A
PROJECT : ZR1
Quanta Computer Inc.
SYSTEM POWER (3V,5V)
Wednesday, March 29, 2006
Sheet 21 of 29


+VCCP
8736VCC
+5VPCU
VIN_8736_1
VIN
PL14
HI0805R800R_8_5A
PR74 *100K_4 CPU_VID0
PR75 *100K_4 CPU_VID1
PR76 *100K_4 CPU_VID2
PR78 *100K_4 CPU_VID3
PR83 *100K_4 CPU_VID4
PR85 *100K_4 CPU_VID5
PR86 *100K_4 CPU_VID6
PR77 10/F_6
PC91 2.2u/6.3V_6
PC92 2.2u/6.3V_6
PD13 RB751V
PC99 .1u/25V_6
PC103 2200p_4
PC100 .1u/25V_6
PC104 2200p_4
PC95 .1u/25V_6
PC96 10u/25V_1206
PC101 10u/25V_1206
PC93 10u/25V_1206
PR79 178K/F_6 8736_OSC
PR84 71.5K/F_6 8736_TIME
PC102 2200p_4 8736_CCV
PR87 510K_4 8736_ILIM
8736_REF
PC105 .22u/10V_4
PR88 2K/F_6 8736_TRC
VCC
VDD
OSC
TIME
CCV
ILIM
REF
TRC
BST1
DH1
LX1
DL1
PGND
8736_BST1
8736_BST1_1
PR82 0_6
PC98 .22u/10V_4
PQ30 NTMFS4707N
8736_DH1
PR80 0_6
8736_DH1_1
8736_LX1
PQ31 *NTMFS4108N
PQ32 NTMFS4108N
PD14 SSM24PT-LF
PC109 *100p_4
PL15 0.36uH
VCC_CORE
PC106 .1u/16V_4
PC107 .01u/25V_4
PC110 470u/2.5V_7343
PC108 470u/2.5V_7343
PC111 *470u/2.5V_7343
VCC_CORE 4
4 CPU_VID0
4 CPU_VID1
4 CPU_VID2
4 CPU_VID3
4 CPU_VID4
4 CPU_VID5
4 CPU_VID6
D0
D1
D2
D3
D4
D5
D6
19,23 VRON
PR89 100K_4 8736EN
SHDN
PC94 100p_4
CSP1
CSN1
8736_CSP1
8736_CSN1
PC112 .22u/10V_4
8736_PN1
PR90 NTC 10K_6-B4.25K5.23K/F_6
PR92
PR91 3.4K/F_6
PR93 0_4
PC113 4700p_4
8736VCC
PR94 0_4
3,11 DPRSLP#
PR81 *0_4
PR95 *100K_4
DRSKP#
11 DPRSLPVR
PR97 0_4 8736_DPRSLPVR
PR99 *100K_4
DRSKP
DPRSLPVR
PWM2
CSP2
CSN2
PC124 4700p_4
PR106 NTC 10K_6-B4.25K3.3K/F_6
PR107
PR105 1.8K_4
PR98 0_4
PC118 4700p_4
PWM3
CSP3
CSN3
8736_CSP3
PR104 0_4
8736VCC
+3V
4 PSI#
PR101 0_4 8736_PSI#
PR103 *100K_4
PSI
PR102 1.91K/F_4
3,5,11,19 IMVP_PWRGD
PR110 0_4 8736_IMVPOK
IMVPOK
PR111 100K_4
2,11 CLK_EN#
PR113 0_4 8736_CLKEN#
CLKEN
PR115 *100K_4
3 CPU_PROCHOT#
PR118 0_4 8736_VR_HOT#
VR_HOT
PC131 *100p_4
PR120 1K_4
8736_THRM
THRM
PR122 *10K_6
PC132 100p_4
PU5 MAX8736ETL+
GNDS
GND
VPS
FBS
8736_GNDS
PC130 1000p_4
PR114 10/F_6
PR116 *33_4
PR117 100/F_4
VSSSENSE 4
8736_VPS
PR119 15.8K/F_4
PR121 10/F_6
8736_FBS
PR123 *33_4
PR124 100/F_4
VCCSENSE 4
PC133 1000p_4
VCC_CORE
PU6 MAX8552EUB+
GND
DLY
EN
PWM
VCC
BST
DH
LX
DL
PGND
PR100 5.1K/F_4
8736EN PR108 0_4
DRSKP# PR109 0_4
PR112 0_4
PC119 2.2u/6.3V_6
PD15 RB751V
PR96 0_4
PC123 .22u/10V_4
PC128 100p_4
PQ33 NTMFS4707N
PQ34 *NTMFS4108N
PQ35 NTMFS4108N
PD16 SSM24PT-LF
PL17 0.36uH
VIN_8736_2
PC120 .1u/25V_6
PC122 2200p_4
PC114 .1u/25V_6
PC116 2200p_4
PC115 .1u/25V_6
PC117 10u/25V_1206
PC121 10u/25V_1206
PC97 470u/25V
PC126 .1u/16V_4
PC129 .01u/25V_4
PC125 470u/2.5V_7343
PC127 470u/2.5V_7343
+1.8VSUS
PC164 560u/2.5V_ECAP6.3X5.7
PC134 .1u/16V_4
PC135 10u/6.3V_6
PQ36 AO4404
9338DRV
PR125 0_6
PC136 .01u/25V_4
+3V
PR149 100K_4
19 HWPG_CPUIO
PR126 0_4 9338PG
19,20,21,23,24 MAINON
PR148 0_4 9338EN
+5VPCU
PC140 .1u/16V_4
PU7 G9338 ADJ
PGD
DRV
EN
ADJ
VCC
GND
Rg
Rh
Vout1 = (1+Rg/Rh)*0.5
PR128 20K/F_6
PR129 10K/F_6
PC137 .1u/16V_4
PC138 10u/6.3V_6
PC139 560u/2.5V_ECAP6.3X5.7
+1.5V
6A
+1.5V 4,6,8,11,12,16,21
PROJECT : ZR1
Quanta Computer Inc.
Size
Document Number
CPU CORE-MAX8736 / 1.5V
Rev 1A
Date: Wednesday, March 29, 2006
Sheet 22 of 29

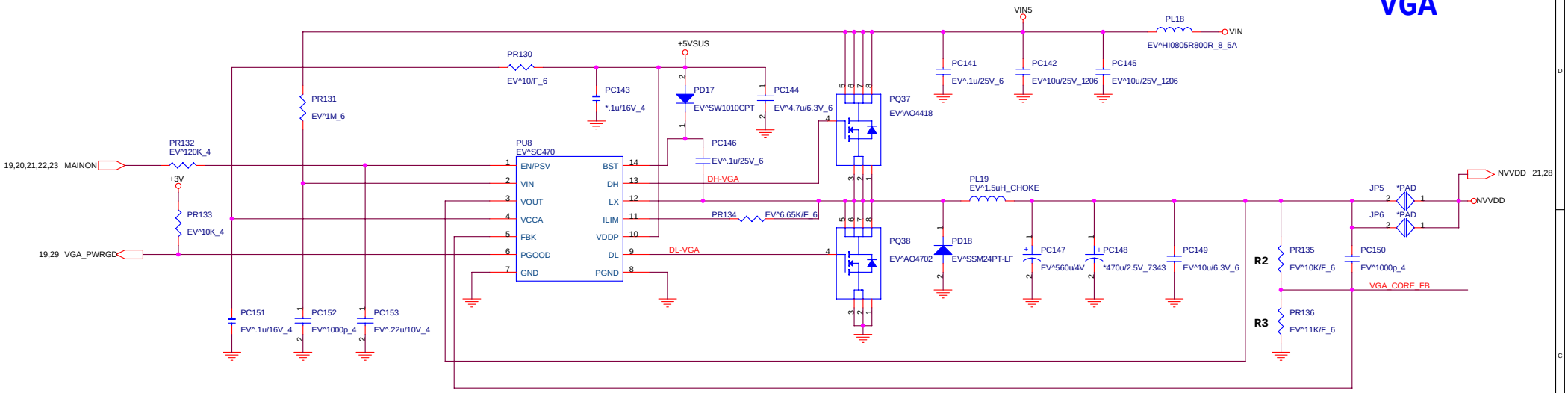


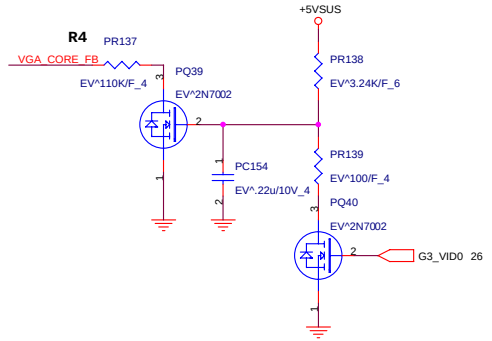
PROJECT : ZR1
Quanta Computer Inc.

Size	Document Number	Rev
	1.8VSUS / +VCCP / 0.9V	1A

Date: Wednesday, March 29, 2006 Sheet 23 of 29

VGA





HI-->VOUT=(1+R2/R3)*0.5

LO-->VOUT=(1+R2/(R3//R4))*0.5

M52P(G)

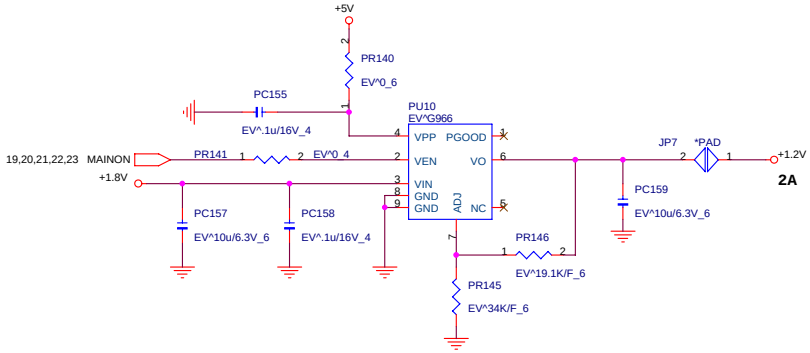
PR1 : 10K
PR4 : 11K
PR2 : 110K

M54P

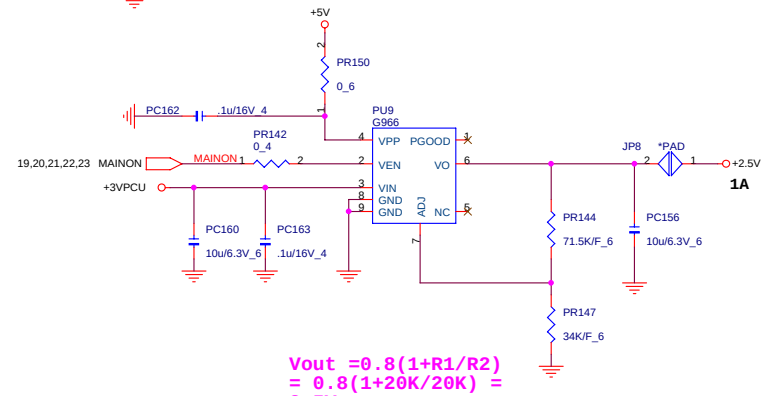
PR1 : 12K
PR4 : 12K
PR2 : 60.4K

Power Play Mode

	VGA_PWR_SW	VGA_CORE
	HI	0.95V--M52P(G) 1.0V --M54P
Default	LO	1.0V--M52P(G) 1.1V--M54P



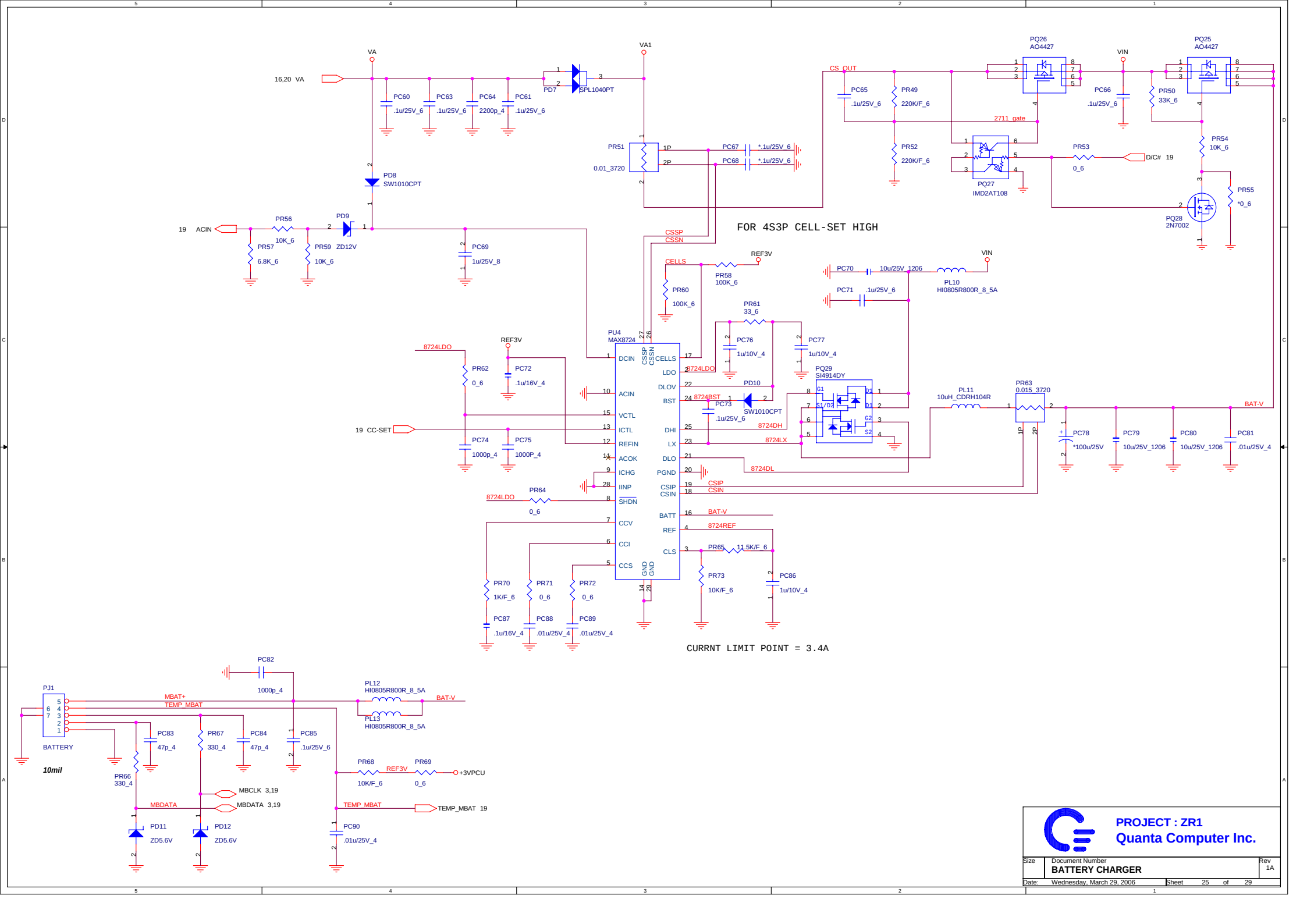
Vout =0.8(1+R1/R2) = 0.8(1+20K/20K) = 1.2V



Vout =0.8(1+R1/R2) = 0.8(1+20K/20K) = 2.5V

PROJECT : ZR1
Quanta Computer Inc.

Size	Document Number	Rev
	VGA (1.0V/1.2V/2.5V)	1A
Date: Wednesday, March 29, 2006	Sheet 24 of 29	


VA
16,20 VA
PC60 .1u/25V_6
PC63 .1u/25V_6
PC64 2200p_4
PC61 .1u/25V_6
PD7 SPL1040PT
VA1
PD8 SW1010CPT
PR51 0.01_3720
PC67 *.1u/25V_6
PC68 *.1u/25V_6
19 ACIN
PR56 10K_6
PD9
PR57 6.8K_6
PR59 10K_6 ZD12V
PC69 1u/25V_8
CSSP
CSSN
CELLS
REF3V
PR58 100K_6
PR60 100K_6
PU4 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
PR62 0_6
PC72 .1u/16V_4
19 CC-SET
PC74 1000p_4
PC75 1000P_4
PR64 0_6
PR61 33_6
PC76 1u/10V_4
PC77 1u/10V_4
PD10 SW1010CPT
PC73 .1u/25V_6
8724BST
8724DH
8724LX
8724DL
PQ29 SI4914DY
PC70 10u/25V_1206
PC71 .1u/25V_6
PL10 HI0805R800R_8_5A
PL11 10uH_CDRH104R
PR63 0.015_3720
BAT-V
PC78 *100u/25V
PC79 10u/25V_1206
PC80 10u/25V_1206
PC81 .01u/25V_4
PR65 11.5K/F_6
PR70 1K/F_6
PR71 0_6
PR72 0_6
PR73 10K/F_6
PC86 1u/10V_4
PC87 .1u/16V_4
PC88 .01u/25V_4
PC89 .01u/25V_4
8724REF
CURRNT LIMIT POINT = 3.4A
CS_OUT
PC65 .1u/25V_6
PR49 220K/F_6
PR52 220K/F_6
2711_gate
PQ26 AO4427
PQ27 IMD2AT108
VIN
PC66 .1u/25V_6
PR50 33K_6
PQ25 AO4427
PR53 0_6
D/C# 19
PR54 10K_6
PR55 *0_6
PQ28 2N7002
FOR 4S3P CELL-SET HIGH
PC82 1000p_4
PJ1
BATTERY
10mil
MBAT+
TEMP_MBAT
PL12 HI0805R800R_8_5A
PL13 HI0805R800R_8_5A
PC83 47p_4
PR67 330_4
PC84 47p_4
PC85 .1u/25V_6
PR66 330_4
PR68 10K/F_6
REF3V
PR69 0_6
+3VPCU
MBCLK 3,19
MBDATA
MBDATA 3,19
TEMP_MBAT
TEMP_MBAT 19
PD11 ZD5.6V
PD12 ZD5.6V
PC90 .01u/25V_4
PROJECT : ZR1
Quanta Computer Inc.
Size
Document Number
BATTERY CHARGER
Rev 1A
Date: Wednesday, March 29, 2006
Sheet 25 of 29

NVIDIA G72M G3-64 (23X 23)

0.1u Capacitors place at last 1/3 of trace

6 GMCHEXP_TXP[0..15]
6 GMCHEXP_TXN[0..15]
6 GMCHEXP_RXP[0..15]
6 GMCHEXP_RXN[0..15]

U25A

PCI EXPRESS

GMCHEXP_RXP0 C182 EV^.1u/16V_4 V_GMCHEXP_RXP0 AD5 PEX_TX0P
GMCHEXP_RXN0 C185 EV^.1u/16V_4 V_GMCHEXP_RXN0 AD6 PEX_TX0N
GMCHEXP_TXP0 AF1 PEX_RX0P
GMCHEXP_TXN0 AG2 PEX_RX0N
GMCHEXP_RXP1 C192 EV^.1u/16V_4 V_GMCHEXP_RXP1 AE6 PEX_TX1P
GMCHEXP_RXN1 C200 EV^.1u/16V_4 V_GMCHEXP_RXN1 AE7 PEX_TX1N
GMCHEXP_TXP1 AG3 PEX_RX1P
GMCHEXP_TXN1 AG4 PEX_RX1N
GMCHEXP_RXP2 C190 EV^.1u/16V_4 V_GMCHEXP_RXP2 AD7 PEX_TX2P
GMCHEXP_RXN2 C187 EV^.1u/16V_4 V_GMCHEXP_RXN2 AC7 PEX_TX2N
GMCHEXP_TXP2 AF4 PEX_RX2P
GMCHEXP_TXN2 AF5 PEX_RX2N
GMCHEXP_RXP3 C212 EV^.1u/16V_4 V_GMCHEXP_RXP3 AE9 PEX_TX3P
GMCHEXP_RXN3 C213 EV^.1u/16V_4 V_GMCHEXP_RXN3 AE10 PEX_TX3N
GMCHEXP_TXP3 AG6 PEX_RX3P
GMCHEXP_TXN3 AG7 PEX_RX3N
GMCHEXP_RXP4 C206 EV^.1u/16V_4 V_GMCHEXP_RXP4 AD10 PEX_TX4P
GMCHEXP_RXN4 C205 EV^.1u/16V_4 V_GMCHEXP_RXN4 AC10 PEX_TX4N
GMCHEXP_TXP4 AF7 PEX_RX4P
GMCHEXP_TXN4 AF8 PEX_RX4N
GMCHEXP_RXP5 C208 EV^.1u/16V_4 V_GMCHEXP_RXP5 AE12 PEX_TX5P
GMCHEXP_RXN5 C209 EV^.1u/16V_4 V_GMCHEXP_RXN5 AE13 PEX_TX5N
GMCHEXP_TXP5 AG9 PEX_RX5P
GMCHEXP_TXN5 AG10 PEX_RX5N
GMCHEXP_RXP6 C214 EV^.1u/16V_4 V_GMCHEXP_RXP6 AD13 PEX_TX6P
GMCHEXP_RXN6 C210 EV^.1u/16V_4 V_GMCHEXP_RXN6 AC13 PEX_TX6N
GMCHEXP_TXP6 AF10 PEX_RX6P
GMCHEXP_TXN6 AF11 PEX_RX6N
GMCHEXP_RXP7 C203 EV^.1u/16V_4 V_GMCHEXP_RXP7 AC15 PEX_TX7P
GMCHEXP_RXN7 C204 EV^.1u/16V_4 V_GMCHEXP_RXN7 AD15 PEX_TX7N
GMCHEXP_TXP7 AG12 PEX_RX7P
GMCHEXP_TXN7 AG13 PEX_RX7N
GMCHEXP_RXP8 C191 EV^.1u/16V_4 V_GMCHEXP_RXP8 AE15 PEX_TX8P
GMCHEXP_RXN8 C195 EV^.1u/16V_4 V_GMCHEXP_RXN8 AE16 PEX_TX8N
GMCHEXP_TXP8 AG15 PEX_RX8P
GMCHEXP_TXN8 AG16 PEX_RX8N
GMCHEXP_RXP9 C201 EV^.1u/16V_4 V_GMCHEXP_RXP9 AC18 PEX_TX9P
GMCHEXP_RXN9 C202 EV^.1u/16V_4 V_GMCHEXP_RXN9 AD18 PEX_TX9N
GMCHEXP_TXP9 AF16 PEX_RX9P
GMCHEXP_TXN9 AF17 PEX_RX9N
GMCHEXP_RXP10 C194 EV^.1u/16V_4 V_GMCHEXP_RXP10 AE18 PEX_TX10P
GMCHEXP_RXN10 C193 EV^.1u/16V_4 V_GMCHEXP_RXN10 AE19 PEX_TX10N
GMCHEXP_TXP10 AG18 PEX_RX10P
GMCHEXP_TXN10 AG19 PEX_RX10N
GMCHEXP_RXP11 C215 EV^.1u/16V_4 V_GMCHEXP_RXP11 AC21 PEX_TX11P
GMCHEXP_RXN11 C216 EV^.1u/16V_4 V_GMCHEXP_RXN11 AD21 PEX_TX11N
GMCHEXP_TXP11 AF19 PEX_RX11P
GMCHEXP_TXN11 AF20 PEX_RX11N
GMCHEXP_RXP12 C196 EV^.1u/16V_4 V_GMCHEXP_RXP12 AE21 PEX_TX12P
GMCHEXP_RXN12 C197 EV^.1u/16V_4 V_GMCHEXP_RXN12 AE22 PEX_TX12N
GMCHEXP_TXP12 AG21 PEX_RX12P
GMCHEXP_TXN12 AG22 PEX_RX12N
GMCHEXP_RXP13 C217 EV^.1u/16V_4 V_GMCHEXP_RXP13 AD22 PEX_TX13P
GMCHEXP_RXN13 C218 EV^.1u/16V_4 V_GMCHEXP_RXN13 AD23 PEX_TX13N
GMCHEXP_TXP13 AF22 PEX_RX13P
GMCHEXP_TXN13 AF23 PEX_RX13N
GMCHEXP_RXP14 C198 EV^.1u/16V_4 V_GMCHEXP_RXP14 AF25 PEX_TX14P
GMCHEXP_RXN14 C199 EV^.1u/16V_4 V_GMCHEXP_RXN14 AE25 PEX_TX14N
GMCHEXP_TXP14 AG24 PEX_RX14P
GMCHEXP_TXN14 AG25 PEX_RX14N
GMCHEXP_RXP15 C219 EV^.1u/16V_4 V_GMCHEXP_RXP15 AE24 PEX_TX15P
GMCHEXP_RXN15 C220 EV^.1u/16V_4 V_GMCHEXP_RXN15 AD24 PEX_TX15N
GMCHEXP_TXP15 AG26 PEX_RX15P
GMCHEXP_TXN15 AF27 PEX_RX15N

2 CLK_PCIE_VGA AE3 PEX_REFCLK
2 CLK_PCIE_VGA# AE4 PEX_REFCLK#
AF13 PEX_TSTCLK_OUT
AF14 PEX_TSTCLK_OUT#
6,11,13,16,18,19,20 PLTRST# PLTRST# R117 EV^0_4 PEX_RST AC6 PEX_RST

THERMDC_VGA C9 THERMDN
THERMDA_VGA B9 THERMDP
THERMAL
PLLVDD H4 PLLVDD
XTALSSIN C1 XTALSSIN
XTALOUTBUFF C3 XTALOUTBUFF
XTAL_BUFF R394 *EV^22_4
XTALIN B1 XTALIN
XTALOUT C2 XTALOUT
H5 PLLGND
PLL
D11 CLAMP
6,10 LCD_EDIDCLK RN8 3 1 4 2 EV^33_4P2R VTHM_CLK E9 I2CC_SCL
6,10 LCD_EDIDDAT VTHM_DAT D8 I2CC_SDA
EV^GF_GO7300

GPIO
GPIO0 A9 G3_GPIO0 R766 EV^100K_4 R767 EV^10K_4 TMDS_HPD TMDS_HPD 6,20
GPIO1 D9
GPIO2 A10
GPIO3 B10 DISP_ON1 R380 EV^0_4 LCD_ON LCD_ON 6,10
GPIO4 C10 EXT_BLON R364 EV^0_4 BLON BLON 6,10
GPIO5 C12 G3_VID0 R768 EV^10K_4 +3V G3_VID0 24
GPIO6 B12
GPIO7 A12 VGAGPIO8_THRM
GPIO8 A13 R906 EV^0_4 VGA_THERM#
GPIO9 B13
GPIO10 B15
GPIO11 A15
GPIO12 B16

JTAG
JTAG_TCK AE27 G72_JTAG_TCK R769 EV^10K_4
JTAG_TMS AD26 G72_JTAG_TMS R770 EV^10K_4 +3V
JTAG_TDI AD27 G72_JTAG_TDI R771 EV^10K_4
JTAG_TDO AE26
JTAG_TRST AD25 G72_JTAG_TRST R772 EV^10K_4

IFPA LVDS-L
IFPATXC# U4 EXT_LVDS_TXLCK- RN18 3 4 EV^0_4P2R LVDS_TXLCK- LVDS_TXLCK- 6,10
IFPATXC T4 EXT_LVDS_TXLCK+ 1 2 LVDS_TXLCK+ LVDS_TXLCK+ 6,10
IFPATXD0# N5 EXT_LVDS_TXL0- RN16 3 4 EV^0_4P2R LVDS_TXL0- LVDS_TXL0- 6,10
IFPATXD0 N4 EXT_LVDS_TXL0+ 1 2 LVDS_TXL0+ LVDS_TXL0+ 6,10
IFPATXD1# R4 EXT_LVDS_TXL1- RN17 3 4 EV^0_4P2R LVDS_TXL1- LVDS_TXL1- 6,10
IFPATXD1 R5 EXT_LVDS_TXL1+ 1 2 LVDS_TXL1+ LVDS_TXL1+ 6,10
IFPATXD2# T6 EXT_LVDS_TXL2- RN19 3 4 EV^0_4P2R LVDS_TXL2- LVDS_TXL2- 6,10
IFPATXD2 T5 EXT_LVDS_TXL2+ 1 2 LVDS_TXL2+ LVDS_TXL2+ 6,10
IFPATXD3# P6
IFPATXD3 R6

IFPB LVDS-U
IFPBTXC# W6 EXT_LVDS_TXUCK- RN90 3 4 EV^0_4P2R LVDS_TXUCK- LVDS_TXUCK- 6,10
IFPBTXC W5 EXT_LVDS_TXUCK+ 1 2 LVDS_TXUCK+ LVDS_TXUCK+ 6,10
IFPBTXD0# W2 EXT_LVDS_TXU0- RN91 3 4 EV^0_4P2R LVDS_TXU0- LVDS_TXU0- 6,10
IFPBTXD0 W3 EXT_LVDS_TXU0+ 1 2 LVDS_TXU0+ LVDS_TXU0+ 6,10
IFPBTXD4 AA3 EXT_LVDS_TXU1- RN92 3 4 EV^0_4P2R LVDS_TXU1- LVDS_TXU1- 6,10
IFPBTXD5# AA2 EXT_LVDS_TXU1+ 1 2 LVDS_TXU1+ LVDS_TXU1+ 6,10
IFPBTXD5 AA1 EXT_LVDS_TXU2- RN93 3 4 EV^0_4P2R LVDS_TXU2- LVDS_TXU2- 6,10
IFPBTXD6# AB1 EXT_LVDS_TXU2+ 1 2 LVDS_TXU2+ LVDS_TXU2+ 6,10
IFPBTXD6 AB2
IFPBTXD7# AB3
IFPBTXD7

IFPC DVI
IFPCTXC# W1 G72_DVI_CLK- RN94 1 2 EV^0_4P2R DVI_CLK- DVI_CLK- 6,20
IFPCTXC V1 G72_DVI_CLK+ 3 4 DVI_CLK+ DVI_CLK+ 6,20
IFPCTXD0# R1 G72_DVI_TX0- RN95 3 4 EV^0_4P2R DVI_TX0- DVI_TX0- 6,20
IFPCTXD0 T1 G72_DVI_TX0+ 1 2 DVI_TX0+ DVI_TX0+ 6,20
IFPCTXD1# T2 G72_DVI_TX1- RN96 3 4 EV^0_4P2R DVI_TX1- DVI_TX1- 6,20
IFPCTXD1 T3 G72_DVI_TX1+ 1 2 DVI_TX1+ DVI_TX1+ 6,20
IFPCTXD2# V3 G72_DVI_TX2- RN97 3 4 EV^0_4P2R DVI_TX2- DVI_TX2- 6,20
IFPCTXD2 V2 G72_DVI_TX2+ 1 2 DVI_TX2+ DVI_TX2+ 6,20

DACA CRT
I2CA_SCL D10 EXT_DDCCLK RN20 3 4 EV^0_4P2R CRTDCLK CRTDCLK 6,10
I2CA_SDA E10 EXT_DDCDAT 1 2 CRTDDAT CRTDDAT 6,10
DACA_HSYNC AD4 EXT_HSYNC R421 EV^0_4 CRTHSYNC CRTHSYNC 6,10
DACA_VSYNC AC4 EXT_VSYNC R419 EV^0_4 CRTVSYNC CRTVSYNC 6,10
DACA_RED AE1 EXT_VGA_RED R427 EV^0_4 VGA_RED VGA_RED 6,10
DACA_GREEN AD1 EXT_VGA_GRN R425 EV^0_4 VGA_GRN VGA_GRN 6,10
DACA_BLUE AD2 EXT_VGA_BLU R426 EV^0_4 VGA_BLU VGA_BLU 6,10
DACA_IDUMP U9

DACB TV
I2CB_SCL F9 G72_TMDS_CLK RN106 3 4 EV^0_4P2R TMDS_DDCCLK TMDS_DDCCLK 6,20
I2CB_SDA F10 G72_TMDS_DAT 1 2 TMDS_DDCDATA TMDS_DDCDATA 6,20
DACB_HSYNC E6
DACB_VSYNC F5
DACB_RED F4 EXT_TV_C/R R773 EV^0_4 TV_C/R TV_C/R 6,10
DACB_GREEN E4 EXT_TV_Y/G R774 EV^0_4 TV_Y/G TV_Y/G 6,10
DACB_BLUE D5 EXT_TV_COMP R775 EV^0_4 TV_COMP TV_COMP 6,10
DACB_IDUMP L9

DACC

U25F
GROUND
B2 GND00
E2 GND01
H2 GND02
L2 GND03
P2 GND04
U2 GND05
Y2 GND06
AC2 GND07
AF2 GND08
AF3 GND09
B5 GND10
E5 GND11
L5 GND12
P5 GND13
U5 GND14
Y5 GND15
AC5 GND16
H6 GND17
AF6 GND18
B8 GND19
E8 GND20
AD8 GND21
K9 GND22
P9 GND23
V9 GND24
AD9 GND25
AF9 GND26
B11 GND27
E11 GND28
F11 GND29
L11 GND30
P11 GND31
U11 GND32
AD11 GND33
N12 GND34
P12 GND35
R12 GND36
AD12 GND37
AF12 GND38
N13 GND39
P13 GND40
R13 GND41
B14 GND42
E14 GND43
J14 GND44
L14 GND45
N14 GND46
P14 GND47
R14 GND48
U14 GND49
W14 GND50
AC14 GND51
AD14 GND52
N15 GND53
P15 GND54
R15 GND55
AF15 GND56
N16 GND57
P16 GND58
R16 GND59
AD16 GND60
B17 GND61
E17 GND62
L17 GND63
P17 GND64
U17 GND65
AD17 GND66
AF18 GND67
K19 GND68
P19 GND69
V19 GND70
AD19 GND71
B20 GND72
E20 GND73
AD20 GND74
AF21 GND75
B23 GND76
E23 GND77
H23 GND78
L23 GND79
P23 GND80
U23 GND81
Y23 GND82
AC23 GND83
AF24 GND84
B26 GND85
E26 GND86
H26 GND87
L26 GND88
P26 GND89
U26 GND90
Y26 GND91
AC26 GND92
AF26 GND93
EV^GF_GO7300

Thermal Sensor for Graphic

SLAVE ADDRESS: 9A

15 MIL

+3V R59 *EV^200_6 3V_THM2 C45 *EV^.1u/16V_4
THERMDC_VGA C50 *EV^2200p_4
10 mil trace / 10 mil space
THERMDA_VGA
U5 VCC DXN DXP GND /ALERT SDA SCLK /THERM *EV^MAX6649
VTHM_DAT VTHM_CLK
R63 *EV^2.2K_4 R60 *EV^2.2K_4 R362 *EV^2.2K_4
R373 *EV^0_4 VGAGPIO8_THRM
VGA_THERM# R363 *EV^0_4 VGA_THERM# 15

MAXIM : AL000649019
GMT : AL000799001

MEMORY CLOCK SPREAD SPECTRUM

3V_THM3 R57 *EV^4.7/F_6 +3V
C46 *EV^.1u/16V_4
U6 XIN VSS SRS SSCLK XOUT VDD PD REF *EV^25819
XTAL_BUFF 1726_S0 XTALOUT XTALSSIN R91 *EV^22_4
MK_PD MK_27M R776 *10K_4 R777 *EV^10K_4 +3V
1726_S0 R780 *10K_4 R782 *EV^10K_4 +3V

+2.5V L25 EV^BK1608HS220_6_1A PLLVDD
C81 *4.7u/6.3V_6 C94 EV^4.7u/6.3V_6 C99 EV^470p_4 C89 EV^4700p_4

XTALIN Y5 XTALOUT C528 EV^22p_4 EV^27MHz C533 EV^22p_4
PLACE CLOSE TO GPU

DISP_ON1 R388 EV^1K_4
EXT_BLON R389 EV^1K_4
EXT_TV_C/R R778 EV^150/F_4 R424 EV^150/F_4 EXT_VGA_RED
EXT_TV_Y/G R779 EV^150/F_4 R422 EV^150/F_4 EXT_VGA_GRN
EXT_TV_COMP R781 EV^150/F_4 R423 EV^150/F_4 EXT_VGA_BLU

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Quanta Computer Inc.

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	G72MV_PCIE/DAC/GND	1A
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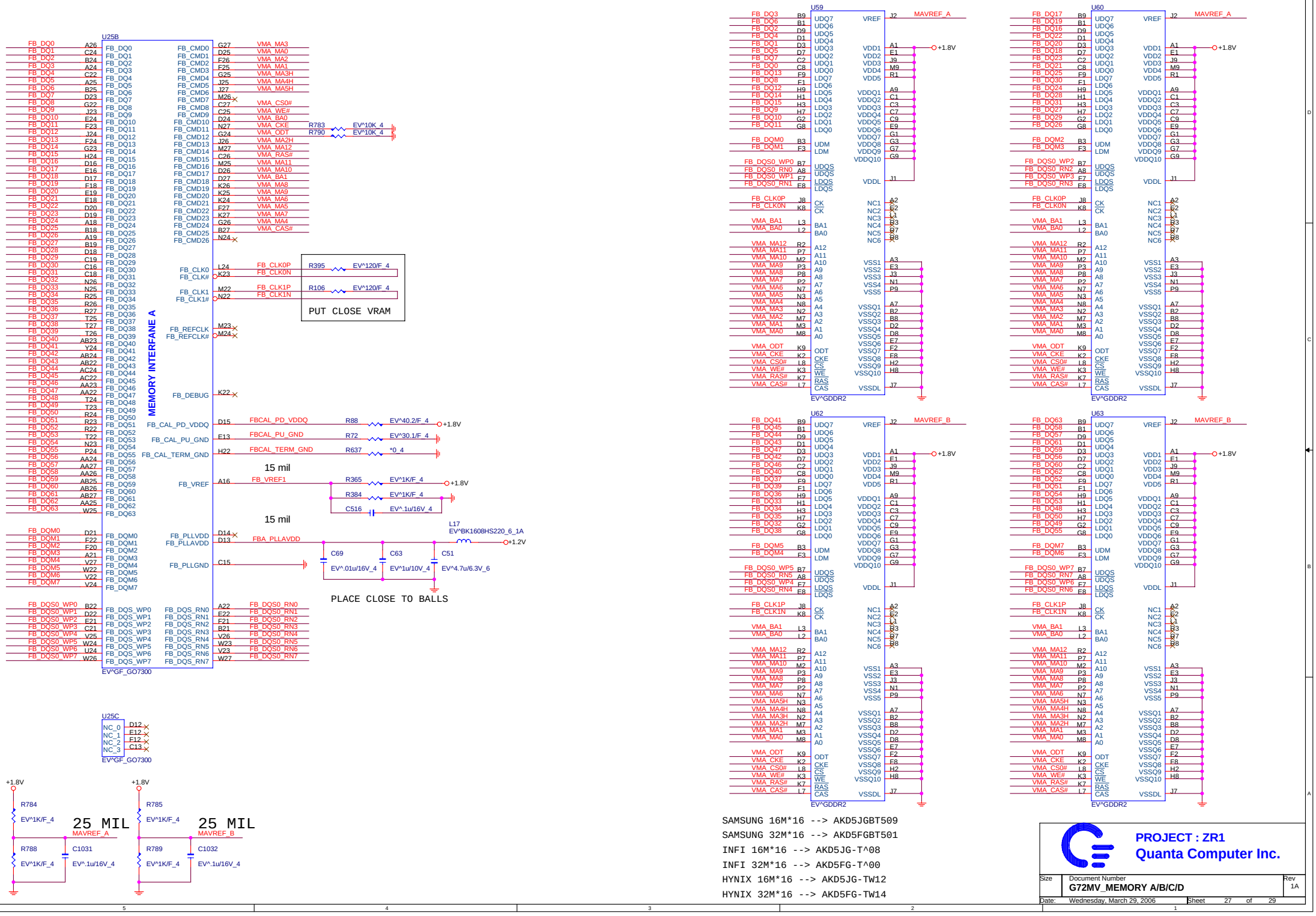
U25B
MEMORY INTERFANE A
EV^GF_GO7300
PUT CLOSE VRAM
15 mil
15 mil
PLACE CLOSE TO BALLS
L17
EV^BK1608HS220_6_1A
U25C
EV^GF_GO7300
25 MIL
MAVREF_A
25 MIL
MAVREF_B
U59
U60
U62
U63
EV^GDDR2
SAMSUNG 16M*16 --> AKD5JGBT509
SAMSUNG 32M*16 --> AKD5FGBT501
INFI 16M*16 --> AKD5JG-T^08
INFI 32M*16 --> AKD5FG-T^00
HYNIX 16M*16 --> AKD5JG-TW12
HYNIX 32M*16 --> AKD5FG-TW14
PROJECT : ZR1
Quanta Computer Inc.
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G72MV_MEMORY A/B/C/D
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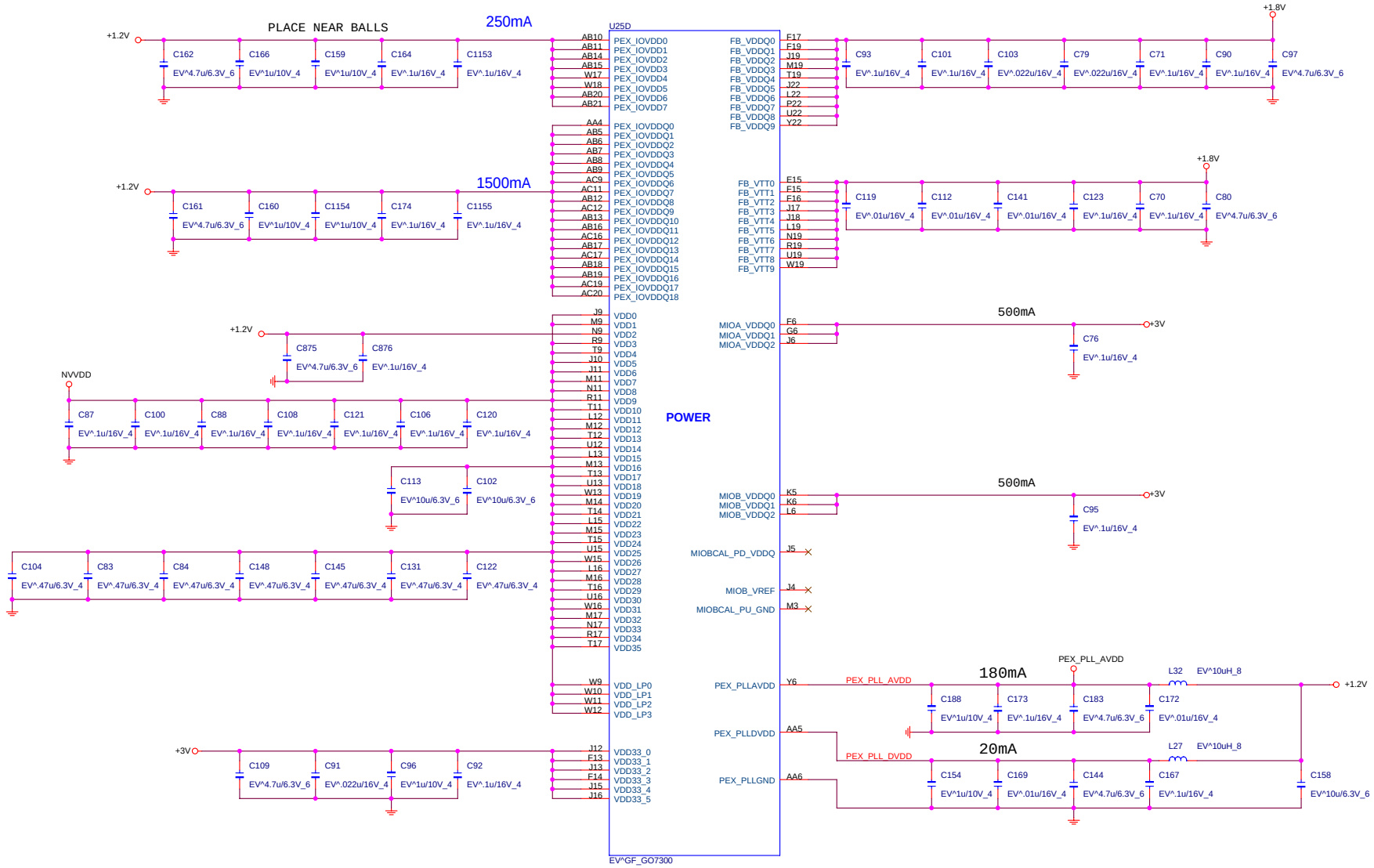
PLACE NEAR BALLS
250mA
1500mA
500mA
500mA
180mA
20mA
U25D
POWER
EV^GF_GO7300
+1.2V
+1.8V
+3V
NVVDD
PEX_PLL_AVDD
PEX_PLL_DVDD
PEX_IOVDD0
PEX_IOVDD1
PEX_IOVDD2
PEX_IOVDD3
PEX_IOVDD4
PEX_IOVDD5
PEX_IOVDD6
PEX_IOVDD7
PEX_IOVDDQ0
PEX_IOVDDQ1
PEX_IOVDDQ2
PEX_IOVDDQ3
PEX_IOVDDQ4
PEX_IOVDDQ5
PEX_IOVDDQ6
PEX_IOVDDQ7
PEX_IOVDDQ8
PEX_IOVDDQ9
PEX_IOVDDQ10
PEX_IOVDDQ11
PEX_IOVDDQ12
PEX_IOVDDQ13
PEX_IOVDDQ14
PEX_IOVDDQ15
PEX_IOVDDQ16
PEX_IOVDDQ17
PEX_IOVDDQ18
VDD0
VDD1
VDD2
VDD3
VDD4
VDD5
VDD6
VDD7
VDD8
VDD9
VDD10
VDD11
VDD12
VDD13
VDD14
VDD15
VDD16
VDD17
VDD18
VDD19
VDD20
VDD21
VDD22
VDD23
VDD24
VDD25
VDD26
VDD27
VDD28
VDD29
VDD30
VDD31
VDD32
VDD33
VDD34
VDD35
VDD_LP0
VDD_LP1
VDD_LP2
VDD_LP3
VDD33_0
VDD33_1
VDD33_2
VDD33_3
VDD33_4
VDD33_5
FB_VDDQ0
FB_VDDQ1
FB_VDDQ2
FB_VDDQ3
FB_VDDQ4
FB_VDDQ5
FB_VDDQ6
FB_VDDQ7
FB_VDDQ8
FB_VDDQ9
FB_VTT0
FB_VTT1
FB_VTT2
FB_VTT3
FB_VTT4
FB_VTT5
FB_VTT6
FB_VTT7
FB_VTT8
FB_VTT9
MIOA_VDDQ0
MIOA_VDDQ1
MIOA_VDDQ2
MIOB_VDDQ0
MIOB_VDDQ1
MIOB_VDDQ2
MIOBCAL_PD_VDDQ
MIOB_VREF
MIOBCAL_PU_GND
PEX_PLLAVDD
PEX_PLLDVDD
PEX_PLLGND
C162
C166
C159
C164
C1153
EV^4.7u/6.3V_6
EV^1u/10V_4
EV^.1u/16V_4
C93
C101
C103
C79
C71
C90
C97
EV^.022u/16V_4
C161
C160
C1154
C174
C1155
C119
C112
C141
C123
C70
C80
C875
C876
C87
C100
C88
C108
C121
C106
C120
C113
C102
EV^10u/6.3V_6
C76
C95
C104
C83
C84
C148
C145
C131
C122
EV^.47u/6.3V_4
C109
C91
C96
C92
C188
C173
C183
C172
C154
C169
C144
C167
C158
L32
L27
EV^10uH_8
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Quanta Computer Inc.
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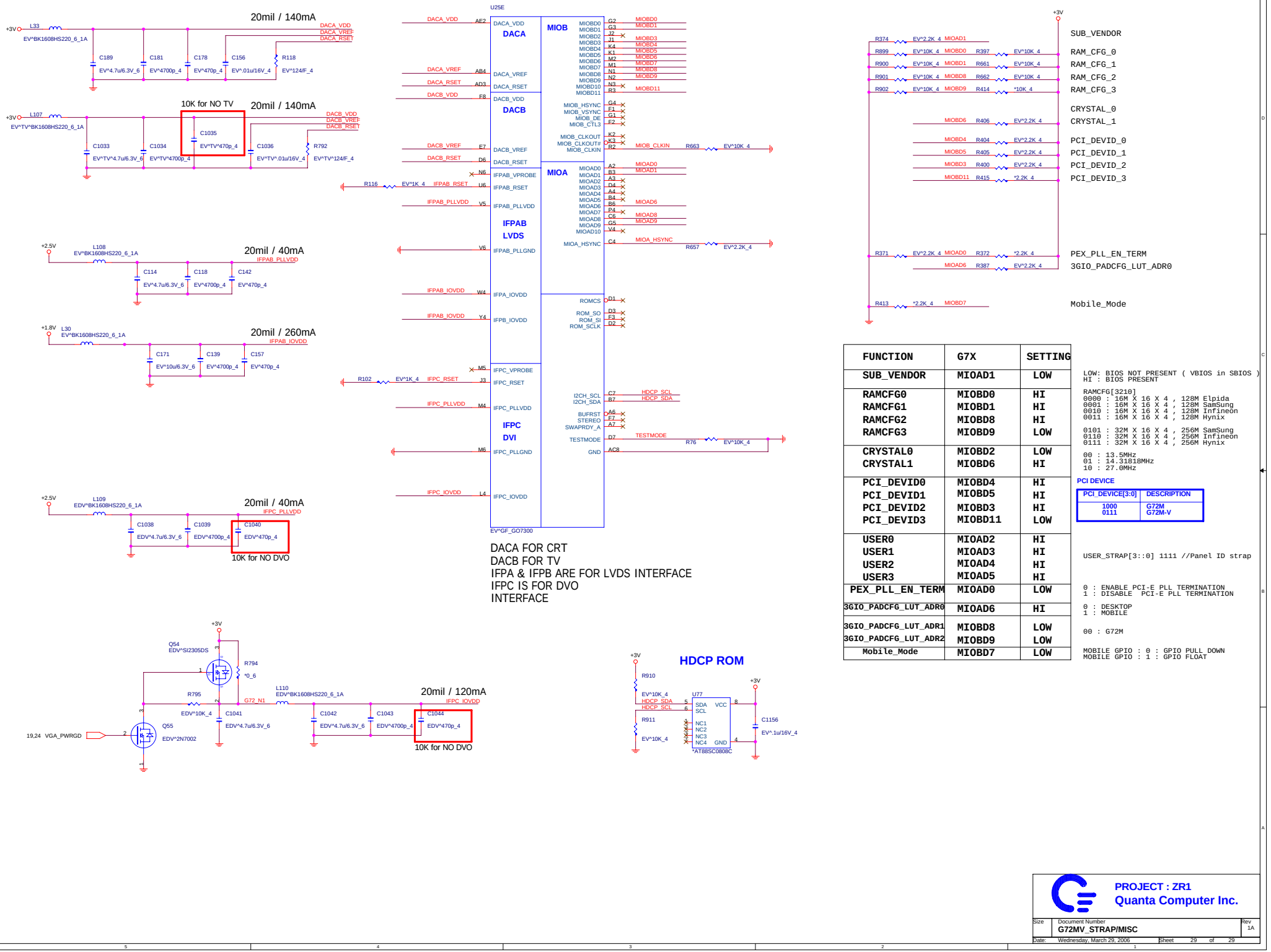

FUNCTION	G7X	SETTING
SUB_VENDOR	MIOAD1	LOW
RAMCFG0	MIOBD0	HI
RAMCFG1	MIOBD1	HI
RAMCFG2	MIOBD8	HI
RAMCFG3	MIOBD9	LOW
CRYSTAL0	MIOBD2	LOW
CRYSTAL1	MIOBD6	HI
PCI_DEVID0	MIOBD4	HI
PCI_DEVID1	MIOBD5	HI
PCI_DEVID2	MIOBD3	HI
PCI_DEVID3	MIOBD11	LOW
USER0	MIOAD2	HI
USER1	MIOAD3	HI
USER2	MIOAD4	HI
USER3	MIOAD5	HI
PEX_PLL_EN_TERM	MIOAD0	LOW
3GIO_PADCFG_LUT_ADR0	MIOAD6	HI
3GIO_PADCFG_LUT_ADR1	MIOBD8	LOW
3GIO_PADCFG_LUT_ADR2	MIOBD9	LOW
Mobile_Mode	MIOBD7	LOW

LOW: BIOS NOT PRESENT (VBIOS in SBIOS)
HI : BIOS PRESENT

RAMCFG[3210]
0000 : 16M X 16 X 4 , 128M Elpida
0001 : 16M X 16 X 4 , 128M SamSung
0010 : 16M X 16 X 4 , 128M Infineon
0011 : 16M X 16 X 4 , 128M Hynix

0101 : 32M X 16 X 4 , 256M SamSung
0110 : 32M X 16 X 4 , 256M Infineon
0111 : 32M X 16 X 4 , 256M Hynix

00 : 13.5Mhz
01 : 14.31818MHz
10 : 27.0MHz

PCI DEVICE

PCI_DEVICE[3:0]	DESCRIPTION
1000	G72M
0111	G72M-V

USER_STRAP[3::0] 1111 //Panel ID strap

0 : ENABLE PCI-E PLL TERMINATION
1 : DISABLE PCI-E PLL TERMINATION

0 : DESKTOP
1 : MOBILE

00 : G72M

MOBILE GPIO : 0 : GPIO PULL DOWN
MOBILE GPIO : 1 : GPIO FLOAT

PROJECT : ZR1
Quanta Computer Inc.

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