BQ1 SYSTEM BLOCK DIAGRAM

BOM MARK
E@ EXT VGA 要打
I@ INTVGA 要打

X'TAL 14.318M
CLOCK GEN ICS ICS954206 Page : 2

CPU Thermal Sensor Page : 3

DOTHAN PROCESSOR 478 uFCPGA Page : 3 , 4

VRAM (64M) Page : 14

Fan Control Page : 25

100/133Mhz
FSB 400(3.2GB/s)/533(4.3GB/s) MHz

VGA 708 BGA ATI (M24-P) Page : 11 ~ 13

PCI-EXPRESS X16

EXT LVDS
EXT CRT
EXT TV-OUT

SWITCH CIRCUIT

CRT Page:16
LVDS Page:15
TV-OUT Page:15

DDRII-SODIMM1 Page:9~10
DDRII-SODIMM2 Page:9~10
533MHZ DDRII

ALVISO-PM/GM GMCH NQ82915PM/GM 1257 BGA Page : 5 ~ 8

LVDS INT LVDS
RGB INT CRT
TVOUT INT TV-OUT

DMI I/F
(X2 or X4)
266/533 Mhz

X'TAL 32.768K

Primary Master IDE - HDD Page:16
Primary Slave IDE-ODD Page:16
ATA 66/100

ICH6-M FW82801FBM 609 BGA Page : 17 ~ 19

PCI BUS 33Mhz (133 MB)

TI PCMCIA+1394 +4 IN 1 PCI7411 Page: 21,22

SD/MMC/MS
4 IN 1 Page: 22
PCMCIA Page: 22
1394 Page: 21

MINI-PCI Wireless LAN Modem/LAN Page : 20

REALTEK 10/100 LAN RTL8100C Page:23
10/100 Mbps
RJ45(with LED) Page:23

USB 2.0

LPC I/F

X'TAL 32.768K

NS KBC(97551) Page : 24

Touchpad Page:25
Keyboard Page:25
Flash ROM Page:24

SYSTEM 4 USB PORT Page : 20
USB 2,3,4,5

Bluetooth Page:25
USB 0

Primary
HD-Audio
Secondary

AUDIO CODEC REALTEK ALC260 AUDIO/B
AMP MAX975X AUDIO/B
HD-MODEM MDC1.5 AUDIO/B

MIC IN AUDIO/B
LINE IN AUDIO/B
SPEKER AUDIO/B
HP OUT SPDIF AUDIO/B
RJ11 USB/B

Audio Board

PCI ROUTING TABLE	IDSEL	INTERUPT	DEVICE
REQ0# / GNT0#	AD24	INTA#	REALTEK LAN
REQ2# / GNT2#	AD19	INTB# , INTD#	MINI-PCI
REQ1# / GNT1#	AD17	INTC#,INTD#,INTA#	TI 7411

PROJECT : BQ1
Quanta Computer Inc.

Size	Document Number	Rev
	BLOCK DIAGRAM	1A

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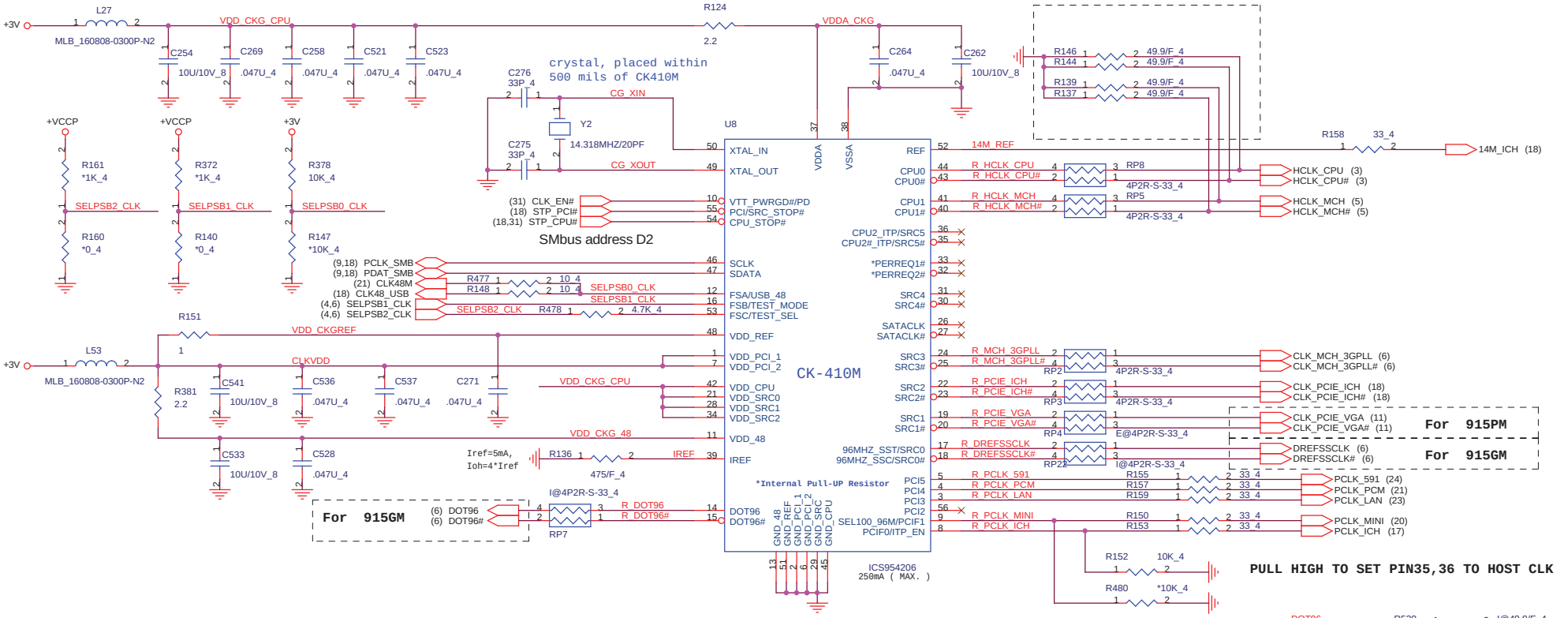
Place these termination
to close CK410M.



	FSC	FSB	FSA	CPU	SRC	PCI
DOTHAN-A 400	1	0	1	100	100	33
DOTHAN-A 533	0	0	1	133	100	33
	0	1	1	166	100	33
	0	1	0	200	100	33
	0	0	0	266	100	33
	1	0	0	333	100	33
	1	1	0	400	100	33
	1	1	1	RSVD	100	33

Place these termination
to close CK410M.

QUANTA COMPUTER

Title	CLOCK GENERATOR	
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U17A

Dothan

1 OF 3

(5) HA#[3..31] — HA#[3..31]

HA#3 P4 · HA#4 U4 · HA#5 V3 · HA#6 R3 · HA#7 V2 · HA#8 W1 · HA#9 T4 · HA#10 W2 · HA#11 Y4 · HA#12 Y1 · HA#13 U1 · HA#14 AA3 · HA#15 Y3 · HA#16 AA2 · HA#17 AF4 · HA#18 AC4 · HA#19 AC7 · HA#20 AC3 · HA#21 AD3 · HA#22 AE4 · HA#23 AD2 · HA#24 AB4 · HA#25 AC6 · HA#26 AD5 · HA#27 AE2 · HA#28 AD6 · HA#29 AF3 · HA#30 AE1 · HA#31 AF1

A3# A4# A5# A6# A7# A8# A9# A10# A11# A12# A13# A14# A15# A16# A17# A18# A19# A20# A21# A22# A23# A24# A25# A26# A27# A28# A29# A30# A31#

REQUEST PHASE SIGNALS

DATA PHASE SIGNALS

HD#[0..63] — HD#[0..63] (5)

D0# A19 HD#0 · D1# A25 HD#1 · D2# A22 HD#2 · D3# B21 HD#3 · D4# A24 HD#4 · D5# B26 HD#5 · D6# A21 HD#6 · D7# B20 HD#7 · D8# C20 HD#8 · D9# B24 HD#9 · D10# D24 HD#10 · D11# F24 HD#11 · D12# C26 HD#12 · D13# B23 HD#13 · D14# F23 HD#14 · D15# C25 HD#15 · D16# H23 HD#16 · D17# G25 HD#17 · D18# L23 HD#18 · D19# M26 HD#19 · D20# H24 HD#20 · D21# F25 HD#21 · D22# G24 HD#22 · D23# J23 HD#23 · D24# M23 HD#24 · D25# J25 HD#25 · D26# L26 HD#26 · D27# N24 HD#27 · D28# M25 HD#28 · D29# H26 HD#29 · D30# N25 HD#30 · D31# K25 HD#31 · D32# Y26 HD#32 · D33# AA24 HD#33 · D34# T25 HD#34 · D35# U23 HD#35 · D36# V23 HD#36 · D37# R24 HD#37 · D38# R26 HD#38 · D39# R23 HD#39 · D40# AA23 HD#40 · D41# U26 HD#41 · D42# V24 HD#42 · D43# U25 HD#43 · D44# V26 HD#44 · D45# Y23 HD#45 · D46# AA26 HD#46 · D47# Y25 HD#47 · D48# AB25 HD#48 · D49# AC23 HD#49 · D50# AB24 HD#50 · D51# AC20 HD#51 · D52# AC22 HD#52 · D53# AC25 HD#53 · D54# AD23 HD#54 · D55# AE22 HD#55 · D56# AF23 HD#56 · D57# AD24 HD#57 · D58# AF20 HD#58 · D59# AE21 HD#59 · D60# AD21 HD#60 · D61# AF25 HD#61 · D62# AF22 HD#62 · D63# AF26 HD#63

(5) HADSTB0# — U3 ADSTB0#
(5) HADSTB1# — AE5 ADSTB1#

(5) HREQ#0 — R2 REQ0#
(5) HREQ#1 — P3 REQ1#
(5) HREQ#2 — T2 REQ2#
(5) HREQ#3 — P1 REQ3#
(5) HREQ#4 — T1 REQ4#

(5) ADS# — N2 ADS#

ERROR SIGNALS

+VCCP — R269 56_4 — IERR# A4 IERR#

ARBITRATION PHASE SIGNALS

(5) HBREQ0# — N4 BREQ0#
(5) BPRI# — J3 BPRI#
(5) BNR# — L1 BNR#
(5) HLOCK# — J2 LOCK#

SNOOP PHASE SIGNALS

(5) HIT# — K3 HIT#
(5) HITM# — K4 HITM#
(5) DEFER# — L4 DEFER#

RESPONSE PHASE SIGNALS

T130 BPM0# C8 BPM0#
T123 BPM1# B8 BPM1#
T118 BPM2# A9 BPM2#
T129 BPM3# C9 BPM3#
(5) HTRDY# — M3 TRDY#
(5) RS#0 — H1 RS0#
(5) RS#1 — K1 RS1#
(5) RS#2 — L2 RS2#

+VCCP — R267 200/F_4

PC COMPATIBILITY SIGNALS

(17) A20M# — C2 A20M#
(17) FERR# — D3 FERR#
(17) IGNNE# — A3 IGNNE#
(17) CPUPWRGD — E4 PWRGOOD
(17) SMI# — B4 SMI#

DIAGNOSTIC & TEST SIGNALS

TCK A13 TCK
TDO A12 TDO
TDI C12 TDI
TMS C11 TMS
TRST# B13 TRST#

T115 A16 ITP_CLK0
T114 A15 ITP_CLK1
T117 PREQ# B10 PREQ#
T112 PRDY# A10 PRDY#

+3V_S5 — R270 150_4 — A7 DBR# — (18) DBR#

EXECUTION CONTROL SIGNALS

(17) INTR — D1 LINT0
(17) NMI — D4 LINT1
(17) STPCLK# — C6 STPCLK#
(5,17) CPUSLP# — A6 SLP#
(17) DPSLP# — B7 DPSLP#
(17) DPRSLP# — G1 DPRSTP#

G1: Dothan is NC pin and Yonah is DPRSTP# pin

THERMAL DIODE

THERMDA B18 THERMDA
THERMDC A18 THERMDC
(6,17) THERMTRIP# — THERMTRIP# R280 0_4 — THERMTRIP# CPU C17 THERMTRIP#
+VCCP — R19 56_4 — CPU_PROCHOT# B17 PROCHOT#

Dothan Processor

DSTBN0# C23 HDSTBN0# (5)
DSTBP0# C22 HDSTBP0# (5)
DSTBN1# K24 HDSTBN1# (5)
DSTBP1# L24 HDSTBP1# (5)
DSTBN2# W25 HDSTBN2# (5)
DSTBP2# W24 HDSTBP2# (5)
DSTBN3# AE24 HDSTBN3# (5)
DSTBP3# AE25 HDSTBP3# (5)

DINV0# D25 HDBI0# (5)
DINV1# J26 HDBI1# (5)
DINV2# T24 HDBI2# (5)
DINV3# AD20 HDBI3# (5)

DBSY# M2 DBSY# (5)
DRDY# H2 DRDY# (5)

BCLK1 B14 HCLK_CPU# (2)
BCLK0 B15 HCLK_CPU (2)

INIT# B5 CPUINIT# (17)
RESET# B11 CPURST# (5)
DPWR# C19 DPWR# (5)

R272 54.9/F_4 +VCCP

+3V — R24 10K_4 — Q5 2N7002E — MBDATA (11,24,32)
+3V — R22 10K_4 — Q3 2N7002E — MBCLK (11,24,32)

+3V — R23 47 — 3V_THM — C449 .1U_4

15 MIL

Address :98H

U4 MAX6657
VCC DXN DXP -OVT SMDATA SMCLK -ALT GND
KBSMDAT KBSMCLK
MAX6648_AL# (18,24)

THERMDC — C60 2200P — THERMDA

10 mil trace / 10 mil space

+3V — R20 10K_4 — R25 10K_4 — R21 0_4 — MAX6648_OV# (24,25)

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

+3V — R481 1K — +3VSUS — U26 TC7SH08FU — R483 200K — C634 0.1U_0402 — Q29 2N7002EPT — 1632RESET# (24,28)

+VCCP — R482 *56 — R484 470 — Q30 PMBT3904 — THERMTRIP# — C871 1000P_4 — (6,11,17,24) PLTRST#

close to ITP conn

+VCCP

TDI R274 150_4
TMS R273 39.2/F_4
TDO R275 *54.9/F_4
TCK R278 27.4/F_4
TRST# R277 680_4

(25) LSDATA_1 — R548 *0_4 — KBSMDAT
(25) LSCLK_1 — R549 *0_4 — KBSMCLK

Light Sensor

QUANTA COMPUTER

Title	Dothan Processor (HOST)	
Size	Document Number BQ1	Rev 1A
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COMP0, COMP2 Trace should be 27.4 ± 15%
COMP1, COMP3 Trace should be 55 ± 15%

COMP0
COMP1
COMP2
COMP3

R14 27.4/F_4
R13 54.9/F_4
R10 27.4/F_4
R9 54.9/F_4

Place pulldown resistors within 0.5" of COMP pins

U27
CNOISE
DELAY
GND
VIN
SD
ERROR
SENSE
VOUT
SI9181-15
+3V
CPU_VCCA
C635 0.1U_0402
C636 0.1U_0402

+VCCP
R12 1K/F
R11 2K/F_4
Place voltage divider within 0.5" of GTLREF pin

R268 *1K_4
R15 *1K_4

T122
T126
T111

40mil
CPU_VCCA
C57 0.01U/16V_4
C56 10U_4V_8

U17B
Dothan
2 OF 3
POWER, GROUND, RESERVED SIGNALS
Dothan Processor

COMP0 P25
COMP1 P26
COMP2 AB2
COMP3 AB1
GTLREF0 AD26
TEST1 C5
TEST2 F23
NC1 B2
RSVD2 C3
RSVD3 AF7
RSVD4 AC1
RSVD5 E26
VCCA3 AC26
VCCA2 N1
VCCA1 B1
VCCA0 F26

VCC_CORE
VCC00 D6
VCC01 D8
VCC02 D18
VCC03 D20
VCC04 D22
VCC05 E5
VCC06 E7
VCC07 E9
VCC08 E17
VCC09 E19
VCC10 E21
VCC11 F6
VCC12 F8
VCC13 F18
VCC14 F20
VCC15 F22
VCC16 G5
VCC17 G21
VCC18 H6
VCC19 H22
VCC20 J5
VCC21 J21
VCC22 K22
VCC23 U5
VCC24 V6
VCC25 V22
VCC26 W5
VCC27 W21
VCC28 Y6
VCC29 Y22
VCC30 AA5
VCC31 AA7
VCC32 AA9
VCC33 AA11
VCC34 AA13
VCC35 AA15
VCC36 AA17
VCC37 AA19
VCC38 AA21
VCC39 AB6
VCC40 AB8
VCC41 AB10
VCC42 AB12
VCC43 AB14
VCC44 AB16
VCC45 AB18
VCC46 AB20
VCC47 AB22
VCC48 AC9
VCC49 AC11
VCC50 AC13
VCC51 AC15
VCC52 AC17
VCC53 AC19
VCC54 AD8
VCC55 AD10
VCC56 AD12
VCC57 AD14
VCC58 AD16
VCC59 AD18
VCC60 AE9
VCC61 AE11
VCC62 AE13
VCC63 AE15
VCC64 AE17
VCC65 AE19
VCC66 AF8
VCC67 AF10
VCC68 AF12
VCC69 AF14
VCC70 AF16
VCC71 AF18

VSS00 A2
VSS01 A5
VSS02 A8
VSS03 A11
VSS04 A14
VSS05 A17
VSS06 A20
VSS07 A23
VSS08 A26
VSS09 B3
VSS10 B6
VSS11 B9
VSS12 B12
VSS13 B16
VSS14 B19
VSS15 B22
VSS16 B25
VSS17 C1
VSS18 C4
VSS19 C7
VSS20 C10
VSS21 C13
VSS22 C15
VSS23 C18
VSS24 C21
VSS25 C24
VSS26 D2
VSS27 D5
VSS28 D7
VSS29 D9
VSS30 D11
VSS31 D13
VSS32 D15
VSS33 D17
VSS34 D19
VSS35 D21
VSS36 D23
VSS37 D26
VSS38 E3
VSS39 E6
VSS40 E8
VSS41 E10
VSS42 E12
VSS43 E14
VSS44 E16
VSS45 E18
VSS46 E20
VSS47 E22
VSS48 E25
VSS49 F1
VSS50 F4
VSS51 F5
VSS52 F7
VSS53 F9
VSS54 F11
VSS55 F13
VSS56 F15
VSS57 F17
VSS58 F19
VSS59 F21
VSS60 F24
VSS61 G2
VSS62 G6
VSS63 G22
VSS64 G23
VSS65 G26
VSS66 H3
VSS67 H5
VSS68 H21
VSS69 H25
VSS70 J1
VSS71 J4
VSS72 J6
VSS73 J22
VSS74 J24
VSS75 K2
VSS76 K5
VSS77 K21
VSS78 K23
VSS79 K26
VSS80 L3
VSS81 L6
VSS82 L22
VSS83 L25
VSS84 M1
VSS85 M4
VSS86 M5
VSS87 M21
VSS88 M24
VSS89 N3
VSS90 N6
VSS91 N22
VSS92 N23
VSS93 N26
VSS94 P2
VSS95 P5
VSS96 P21
VSS97 P24
VSS98 R1
VSS99 R4

VSS100 R6
VSS101 R22
VSS102 R25
VSS103 T3
VSS104 T5
VSS105 T21
VSS106 T23
VSS107 T26
VSS108 U2
VSS109 U6
VSS110 U22
VSS111 U24
VSS112 V1
VSS113 V4
VSS114 V5
VSS115 V21
VSS116 V25
VSS117 W3
VSS118 W6
VSS119 W22
VSS120 W23
VSS121 W26
VSS122 Y2
VSS123 Y5
VSS124 Y21
VSS125 Y24
VSS126 AA1
VSS127 AA4
VSS128 AA6
VSS129 AA8
VSS130 AA10
VSS131 AA12
VSS132 AA14
VSS133 AA16
VSS134 AA18
VSS135 AA20
VSS136 AA22
VSS137 AA25
VSS138 AB3
VSS139 AB5
VSS140 AB7
VSS141 AB9
VSS142 AB11
VSS143 AB13
VSS144 AB15
VSS145 AB17
VSS146 AB19
VSS147 AB21
VSS148 AB23
VSS149 AB26
VSS150 AC2
VSS151 AC5
VSS152 AC8
VSS153 AC10
VSS154 AC12
VSS155 AC14
VSS156 AC16
VSS157 AC18
VSS158 AC21
VSS159 AC24
VSS160 AD1
VSS161 AD4
VSS162 AD7
VSS163 AD9
VSS164 AD11
VSS165 AD13
VSS166 AD15
VSS167 AD17
VSS168 AD19
VSS169 AD22
VSS170 AD25
VSS171 AE3
VSS172 AE6
VSS173 AE8
VSS174 AE10
VSS175 AE12
VSS176 AE14
VSS177 AE16
VSS178 AE18
VSS179 AE20
VSS180 AE23
VSS181 AE26
VSS182 AF2
VSS183 AF5
VSS184 AF9
VSS185 AF11
VSS186 AF13
VSS187 AF15
VSS188 AF17
VSS189 AF19
VSS190 AF21
VSS191 AF24

+VCCP
U17C
Dothan
3 OF 3
POWER, GROUND AND NC
Dothan Processor

D10 VCCP0
D12 VCCP1
D14 VCCP2
D16 VCCP3
E11 VCCP4
E13 VCCP5
E15 VCCP6
F10 VCCP7
F12 VCCP8
F14 VCCP9
F16 VCCP10
K6 VCCP11
L5 VCCP12
L21 VCCP13
M6 VCCP14
M22 VCCP15
N5 VCCP16
N21 VCCP17
P6 VCCP18
P22 VCCP19
R5 VCCP20
R21 VCCP21
T6 VCCP22
T22 VCCP23
U21 VCCP24
P23 VCCQ0
W4 VCCQ1

VID

(31) CPU_VID0 E2 VID0
(31) CPU_VID1 F2 VID1
(31) CPU_VID2 F3 VID2
(31) CPU_VID3 G3 VID3
(31) CPU_VID4 G4 VID4
(31) CPU_VID5 H4 VID5

T109 Z0501 AE7 VCCSENSE
T108 Z0502 AF6 VSSSENSE
(2,6) SELPSB2_CLK
(2,6) SELPSB1_CLK
SELPSB2_CLK R279 BSEL0 C16 BSEL0
SELPSB1_CLK R18 BSEL1 C14 BSEL1

DOTHAN-A NC
DOTHAN-B POP
06/21:Auto select

(31) PSI# E1 PSI

C31 C39 C42 C52 C21 10U_6.3V_8
C33 C20 C32 C45 C41 10U_4V_8 10U_6.3V_8
C47 C49 C16 C15 C51 10U_4V_8 10U_6.3V_8
C25 C26 C27 C28 C29 10U_6.3V_8
C19 C43 C18 C17 C14 10U_4V_8 10U_6.3V_8
C12 C13 C40 C50 C48 10U_4V_8 10U_6.3V_8
C30 C38 C22 C23 C24 10U_6.3V_8
C815 *470U/2.5V/9m
C814 *470U/2.5V/9m
C816 470U/2.5V/9m
C61 150U/4V-3528 <Type> CC3528
C55 C54 C53 C34 C36 .1U_4
C37 C46 C35 C44 C59 .1U_4
C794 C795 C796 C797 C798 C799 C800 C801 C802 C803 0.1U_4
C804 C805 C806 C807 C808 C809 C810 C811 C812 C813 0.1U_4

QUANTA COMPUTER

Title	Dothan Processor (POWER)	
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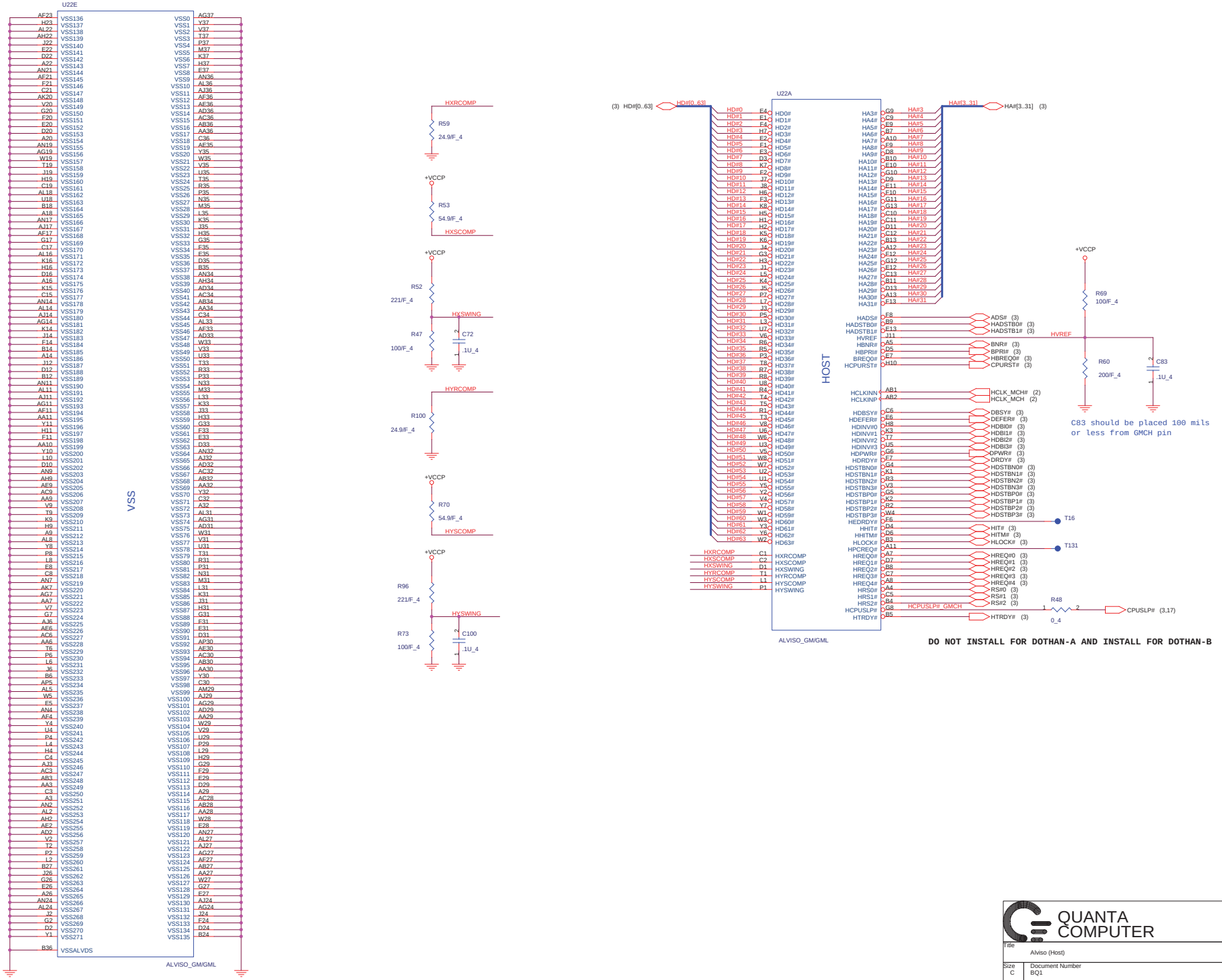


QUANTA COMPUTER		
Title: Alviso (Host)		
Size: C	Document Number: BQ1	Rev: 1A
Date: Thursday, August 18, 2005	Sheet 5 of 32	

I@ is only for Internal VGA;
E@ is only for External VGA;

CFG[0:2]=100 FOR FSB 533
CFG[0:2]=101 FOR FSB 400

FOR DDR533

CFG5 Low=DMIx2
*High=DMIx4
CFG6 *Low=DDR2
High=DDR
CFG7 Low=Mobile Prescott
*High=Dothan

CFG9 Low=REVERSE LANE
*High=NORMAL
CFG11 FOR CPU533
CFG16 Low=FSB Dynamic ODT Disable
*High=FSB Dynamic ODT Enable
CFG18 *Low=CPU Core VCC 1.05V
High=CPU Core VCC 1.5V

6

U22C

DMI
CFG/RSVD
DDR MUXING
PM
LCK
NC

PULL LOW FOR DVO NOT PRESENT(INTERNAL PULLLOW IN 915GM)

CFG19 Low=CPU VTT 1.05V
High=CPU VTT 1.2V

CFG[17:3] have internal pullup resistors.
CFG[19:18] have internal pulldown resistors

Route as short as possible.

It's point to point, 55ohm trace, keep as short as possible.

Close to AF37 and AD1 pin

U22F

MISC
TV
VGA
LVDS
PCI-EXPRESS GRAPHICS

ALVISO_GM/GML

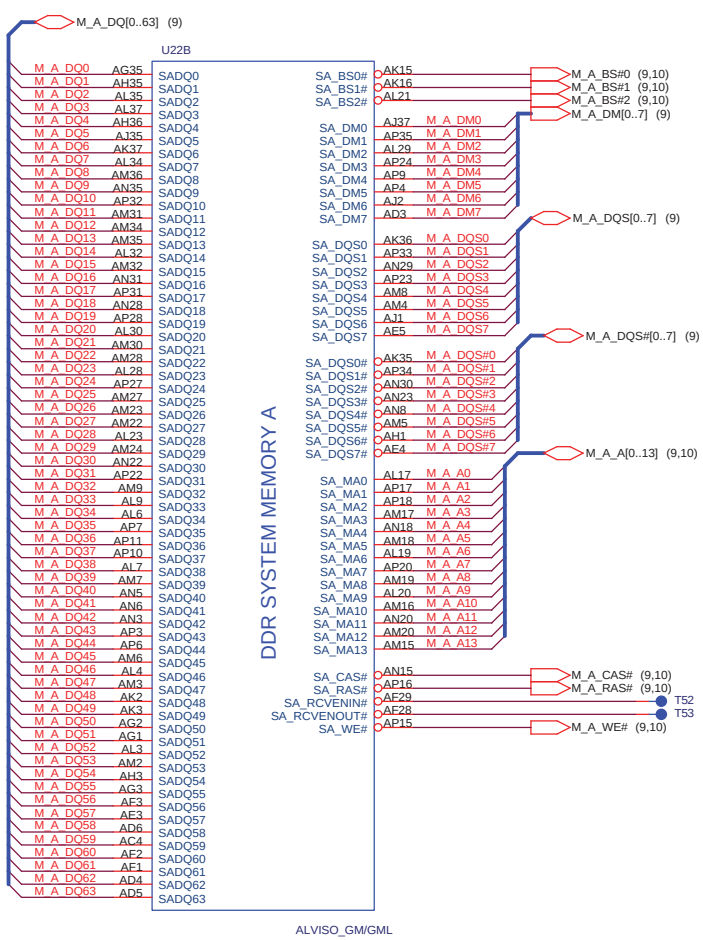
Signal		915GM	915PM
TV_RSET	R94	4.99K/F	0_0603
TV_COMP	R26	0_0402	NI
TV_Y/G	R27	0_0402	NI
TV_C/R	R28	0_0402	NI
	R312	150/F	0_0402
	R313	150/F	0_0402
	R314	150/F	0_0402
VSYNC	R32	39	NI
	R578	NI	0_0402
HSYNC	R33	39	NI
	R579	NI	0_0402
L_BKLT_CRTL	R317	100K	NI
L_BKLT_EN	R315	0_0402	NI
LVDD_EN	R83	0_0402	NI
LIBG	R72	1.5K	NI
INT_VGA_RED	R289	0_0402	NI
	R311	150/F	NI
	R580	NI	0_0402
INT_VGA_GRN	R290	0_0402	NI
	R310	150/F	NI
	R581	NI	0_0402
INT_VGA_BLU	R291	0_0402	NI
	R309	150/F	NI
	R582	NI	0_0402
CRT_COM#	R584	0_0402	NI
	R583	NI	0_0402
REFSET	R95	255/F 0402	NI
	R585	NI	0_0402
DDCLK/DAT	RN109	0_0402	NI
LVDS	RN5	0_0402	NI
	RN9	0_0402	NI
	RN3	0_0402	NI
	RN10	0_0402	NI
	RN4	0_0402	NI
	RN6	0_0402	NI
	RN7	0_0402	NI
	RN8	0_0402	NI
DOT96#	R574	NI	0_0402
DOT96	R575	NI	0_0402
DREFSSCLK#	R576	NI	0_0402
DREFSSCLK	R577	NI	0_0402

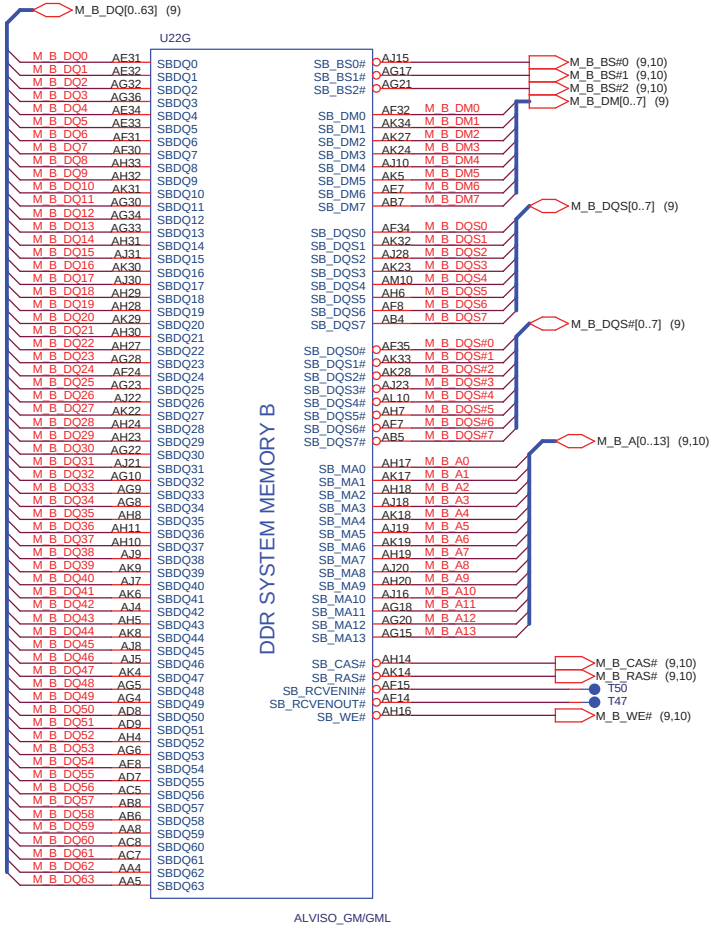
QUANTA COMPUTER

Title: Alviso (VGA,DMI)

Size: Custom | Document Number: BQ1 | Rev: 1A

Date: Thursday, August 18, 2005 | Sheet 6 of 32





QUANTA COMPUTER

Title	Alviso (DDRII)	
Size	Document Number BQ1	Rev 1A
Date: Thursday, August 18, 2005	Sheet 7 of 32	

I@ is only for Internal VGA;
E@ is only for External VGA;

NO FILTER WHEN EXT. VGA

DEPOP C65, C70, C71, C76 WHEN NO EXT.VGA

U22H

POWER

ALVISO_GM/GML

U22D

NCTF

ALVISO_GM/GML

To add LDO for clear power to slove TV ripple issue

Signal	915GM	915PM
VCCA_CRTDAC	L40 160808-0300P	NI
	R571 NI	0
	R297 10	NI
VCC_SYNC	R570 0 0402	NI
	C98 0.1U 0402	0 0402
VDD_DPLLB	L44 10UH	NI
	C76 470U	NI
	C71 0.1U 0402	NI
VDD_DPLLA	L43 10UH	NI
	C65 470U	NI
	C70 0.1U 0402	NI
VCC_TVDACA	D23 CH501H-40	NI
	R39 10	NI
	L8 160808-0300P	NI
	C79 0.1U 0402	0 0402
VCC_TVDACB	L6 160808-0300P	NI
	C86 0.1U 0402	0 0402
	C68 0.022U 0402	NI
VCC_TVDACC	L41 160808-0300P	NI
	C471 0.022U 0402	NI
	C99 0.1U 0402	0 0402
VCCD_TVDAC	L64 160808-0300P	NI
	C206 0.022U 0402	NI
	C241 0.1U 0402	0 0402
VCCQ_TVDAC	L7 160808-0300P	NI
	C64 0.022U 0402	NI
	C63 0.1U 0402	0 0402
VCC_TVBG	L42 160808-0300P	NI
	C472 0.022U 0402	NI
	C111 0.1U 0402	0 0402

Close to F19,E19 PIN

Close to F19,E19 PIN

close to PIN B28,A28,A27

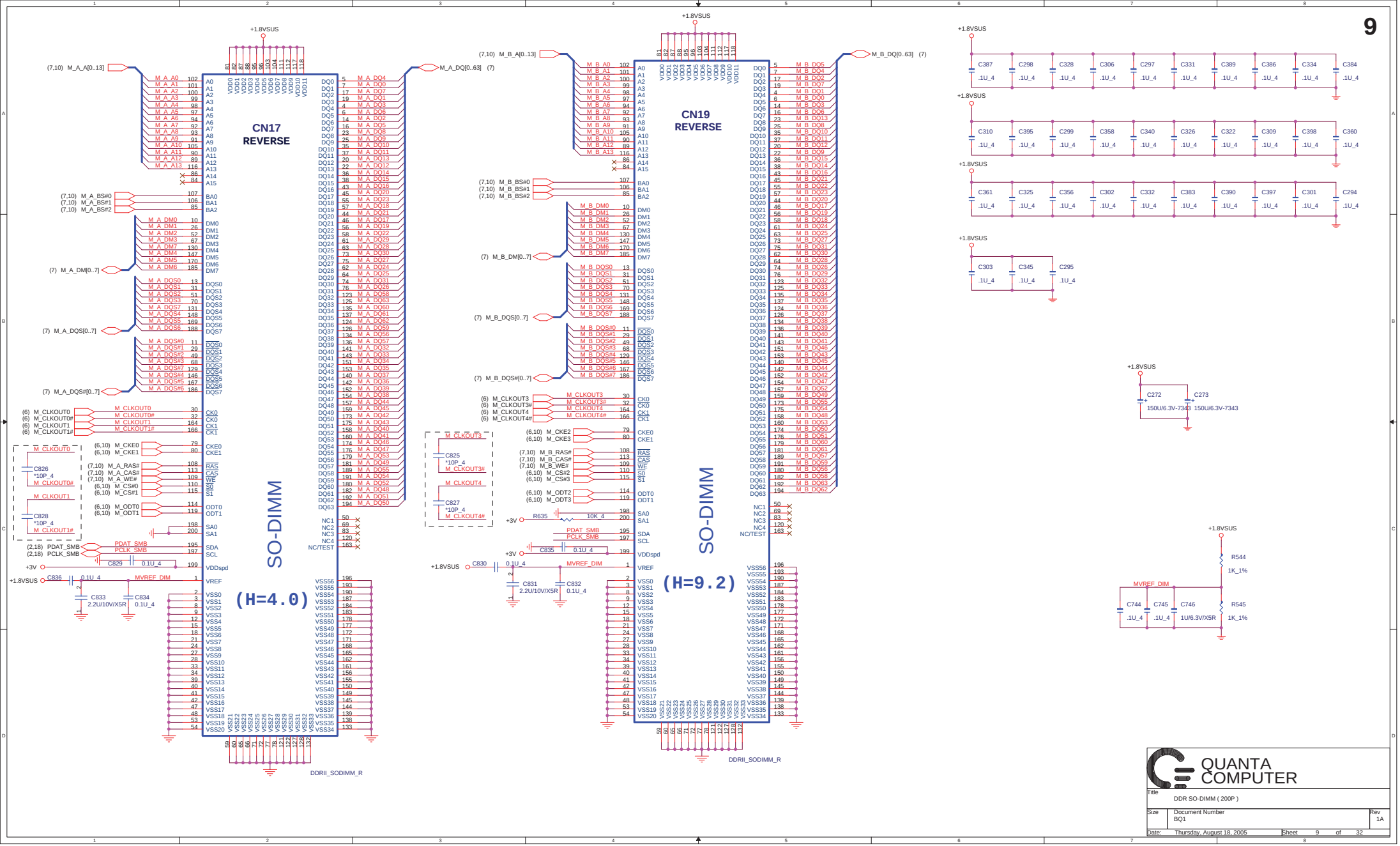
close to PIN D19

QUANTA COMPUTER

Title: Alviso (Power)

Size: Custom | Document Number: BQ1 | Rev: 1A

Date: Thursday, August 18, 2005 | Sheet 8 of 32



Title	DDR SO-DIMM (200P)
Size	Document Number BQ1 — Rev 1A
Date:	Thursday, August 18, 2005 — Sheet 9 of 32

QUANTA COMPUTER

For terminal R-pack.

VTT_MEM

C376 0.1U_4 | C370 0.1U_4 | C388 0.1U_4 | C342 0.1U_4 | C365 0.1U_4 | C283 0.1U_4 | C335 0.1U_4 | C320 0.1U_4 | C286 0.1U_4 | C317 0.1U_4 | C285 0.1U_4 | C375 0.1U_4 | C329 0.1U_4 | C290 0.1U_4 | C313 0.1U_4 | C287 0.1U_4 | C366 0.1U_4 | C379 0.1U_4 | C394 0.1U_4

19 PCS

VTT_MEM

C373 0.1U_4 | C282 0.1U_4 | C377 0.1U_4 | C337 0.1U_4 | C281 0.1U_4

VTT_MEM

C341 0.1U_4 | C316 0.1U_4 | C336 0.1U_4 | C378 0.1U_4

VTT_MEM

C817 10U/6.3V | C818 10U/6.3V | C819 10U/6.3V

VTT_MEM

(6,9) M_CKE0	R607	56_4	
(6,9) M_CKE1	R608	56_4	
(6,9) M_CKE2	R609	56_4	
(6,9) M_CKE3	R610	56_4	
(6,9) M_ODT0	R611	56_4	
(6,9) M_ODT1	R612	56_4	
(6,9) M_ODT2	R613	56_4	
(6,9) M_ODT3	R614	56_4	
(7,9) M_A_BS#0	R615	56_4	
(7,9) M_A_BS#1	R616	56_4	
(7,9) M_A_BS#2	R617	56_4	
(7,9) M_A_WE#	R618	56_4	
(7,9) M_A_CAS#	R619	56_4	
(7,9) M_A_RAS#	R620	56_4	
(7,9) M_B_BS#0	R621	56_4	
(7,9) M_B_BS#1	R622	56_4	
(7,9) M_B_BS#2	R623	56_4	
(7,9) M_B_WE#	R624	56_4	
(7,9) M_B_CAS#	R625	56_4	
(7,9) M_B_RAS#	R626	56_4	
(6,9) M_CS#0	R627	56_4	
(6,9) M_CS#1	R628	56_4	
(6,9) M_CS#2	R629	56_4	
(6,9) M_CS#3	R630	56_4	
(7,9) M_A_A13	R631	56_4	
(7,9) M_A_A10	R632	56_4	
(7,9) M_A_A2	RP24 1	2 0404-56X2	
(7,9) M_A_A0	3	4	
(7,9) M_A_A6	RP25 1	2 0404-56X2	
(7,9) M_A_A4	3	4	
(7,9) M_A_A11	RP26 1	2 0404-56X2	
(7,9) M_A_A7	3	4	
(7,9) M_A_A9	RP27 1	2 0404-56X2	
(7,9) M_A_A12	3	4	
(7,9) M_A_A3	RP28 1	2 0404-56X2	
(7,9) M_A_A1	3	4	
(7,9) M_A_A8	RP29 1	2 0404-56X2	
(7,9) M_A_A5	3	4	
(7,9) M_B_A2	RP30 1	2 0404-56X2	
(7,9) M_B_A0	3	4	
(7,9) M_B_A6	RP31 1	2 0404-56X2	
(7,9) M_B_A4	3	4	
(7,9) M_B_A7	RP32 1	2 0404-56X2	
(7,9) M_B_A11	3	4	
(7,9) M_B_A3	RP33 1	2 0404-56X2	
(7,9) M_B_A1	3	4	
(7,9) M_B_A5	RP34 1	2 0404-56X2	
(7,9) M_B_A8	3	4	
(7,9) M_B_A9	RP35 1	2 0404-56X2	
(7,9) M_B_A12	3	4	
(7,9) M_B_A10	R633	56_4	
(7,9) M_B_A13	R634	56_4	

QUANTA COMPUTER

Title	DDRII TERMINATION	
Size	Document Number BQ1	Rev 1A
Date: Thursday, August 18, 2005	Sheet 10 of 32	

MEMORY CLOCK SPREAD SPECTRUM

SRS= 1 DOWN -2.5%
0 DOWN -1.8%
M DOWN -0.6%

VGA_PWR to control 1.0V/1.2V

U23A

PCI EXPRESS

DVO / EXT TMDS / GPIO

LVDS

TMDS

DAC2

SS

CLK

DAC1

THERM

U7 E@CY25819 MK1726-8

Modification in DVT

PLACE CLOSE TO ASIC

ADD ON 2/21

15 MIL

Address :9CH

U21 MAX6647MUA

10 mil trace / 10 mil space

Close to pin ASIC

PCIE_TESTIN PL

If BIOS can program pin as output, may not need pulldown

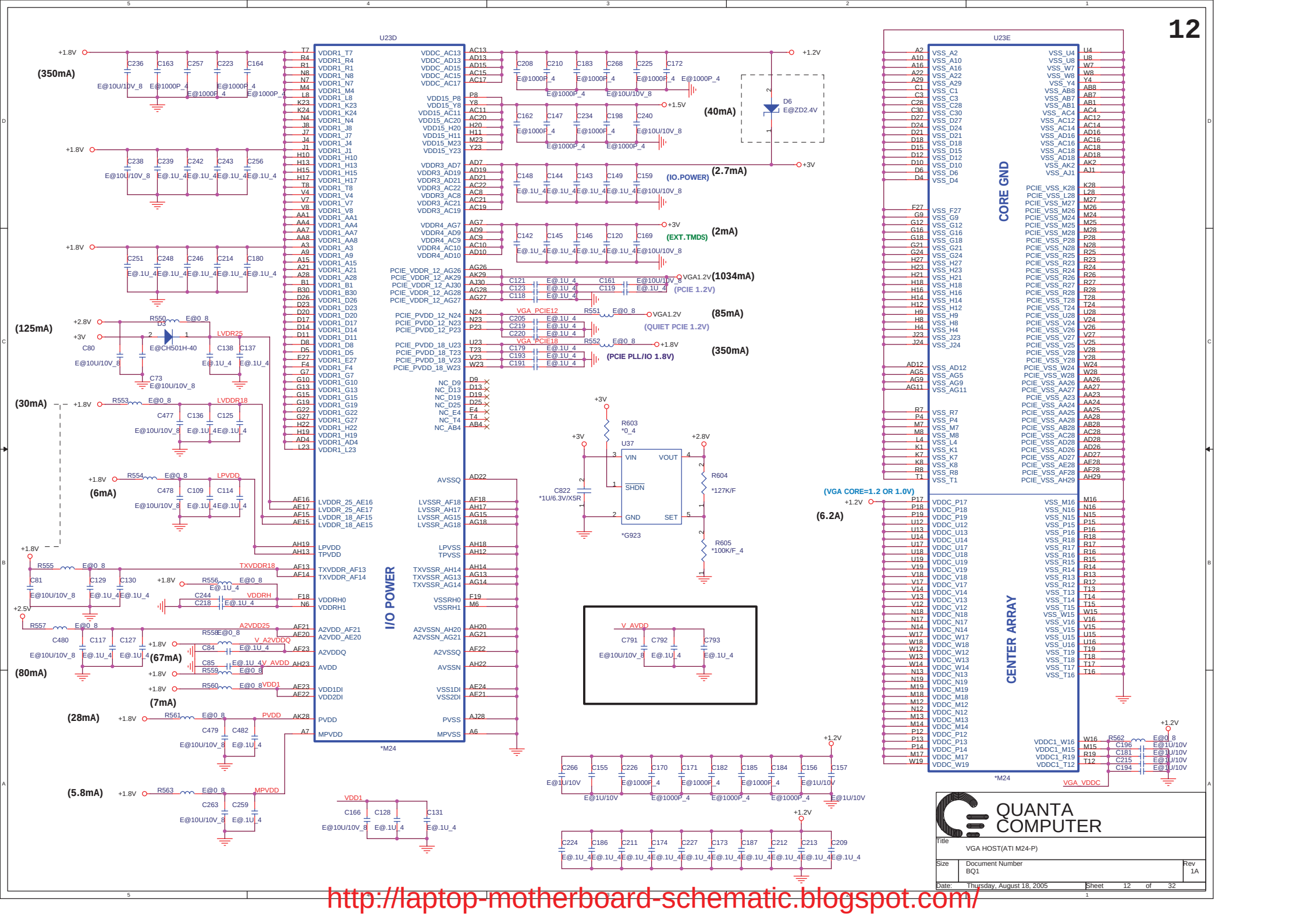
*M24

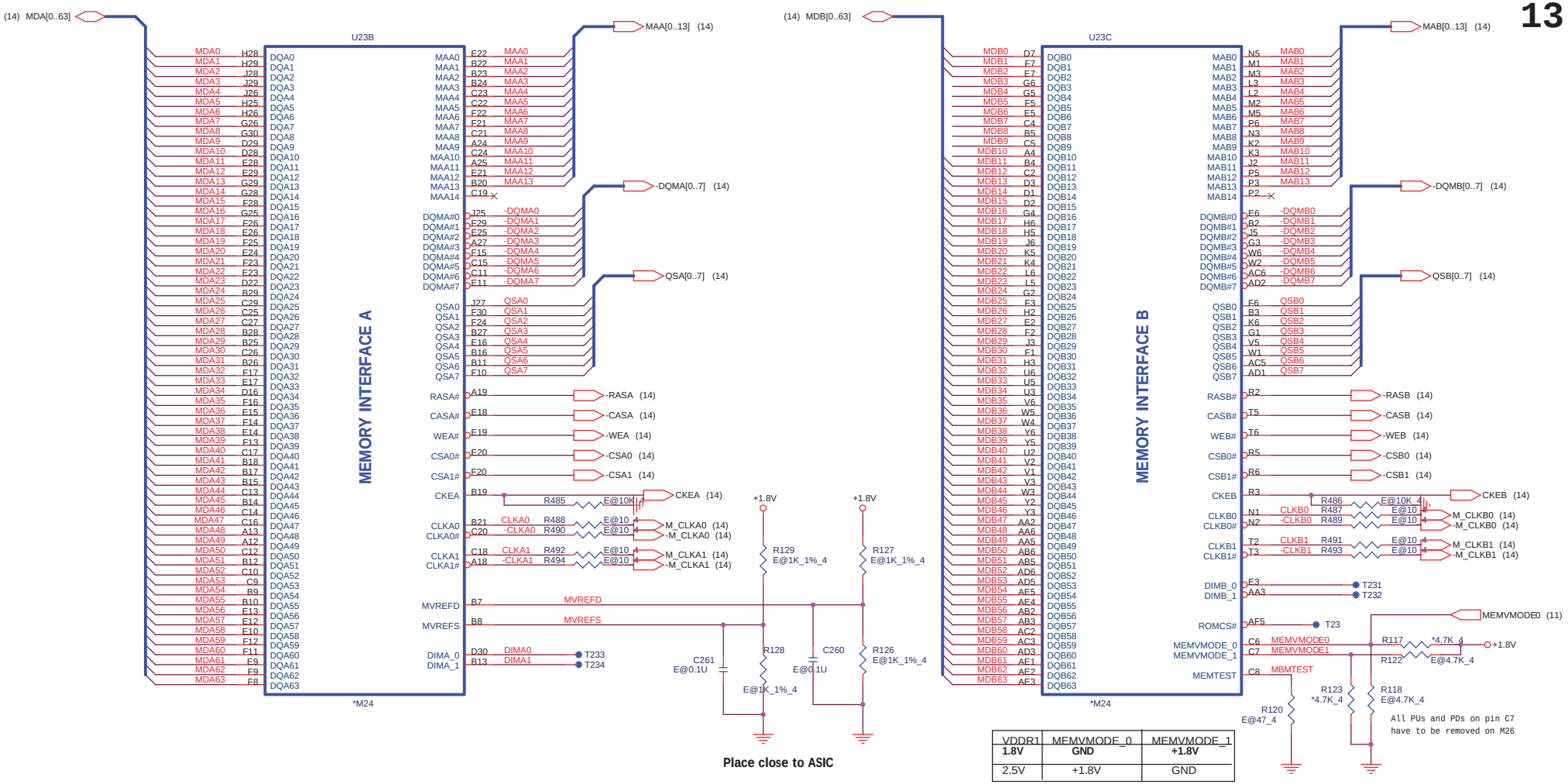
QUANTA COMPUTER

Title: VGA HOST(ATI M24-P)

Size: Document Number BQ1 Rev 1A

Date: Thursday, August 18, 2005 Sheet 11 of 32



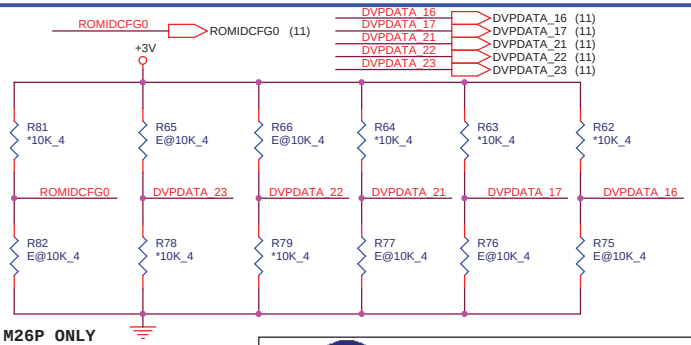


VDDR1	MEMVMODE_0	MEMVMODE_1
1.8V	GND	+1.8V
2.5V	+1.8V	GND

STRAPS PIN

GPIO_0	PCI-Express Current Calibration Bandgap Backup **0: use reference voltage from Bandgap** 1: use reference voltage from resistor divider
GPIO_1	PCI-Express PLL Calibration force enable **0: Disable PLL force calibration** 1: Enable PLL force calibration
GPIO_(3,2)	**00: PCI Express 1.0 mode** 01: RESERVED 10: PCI Express 1.0 mode 11: RESERVED
GPIO_4	Turn off PCI-Express impedance / strength calibration **0: enable** 1: disable
GPIO_5	Bypass PCI-Express PLL

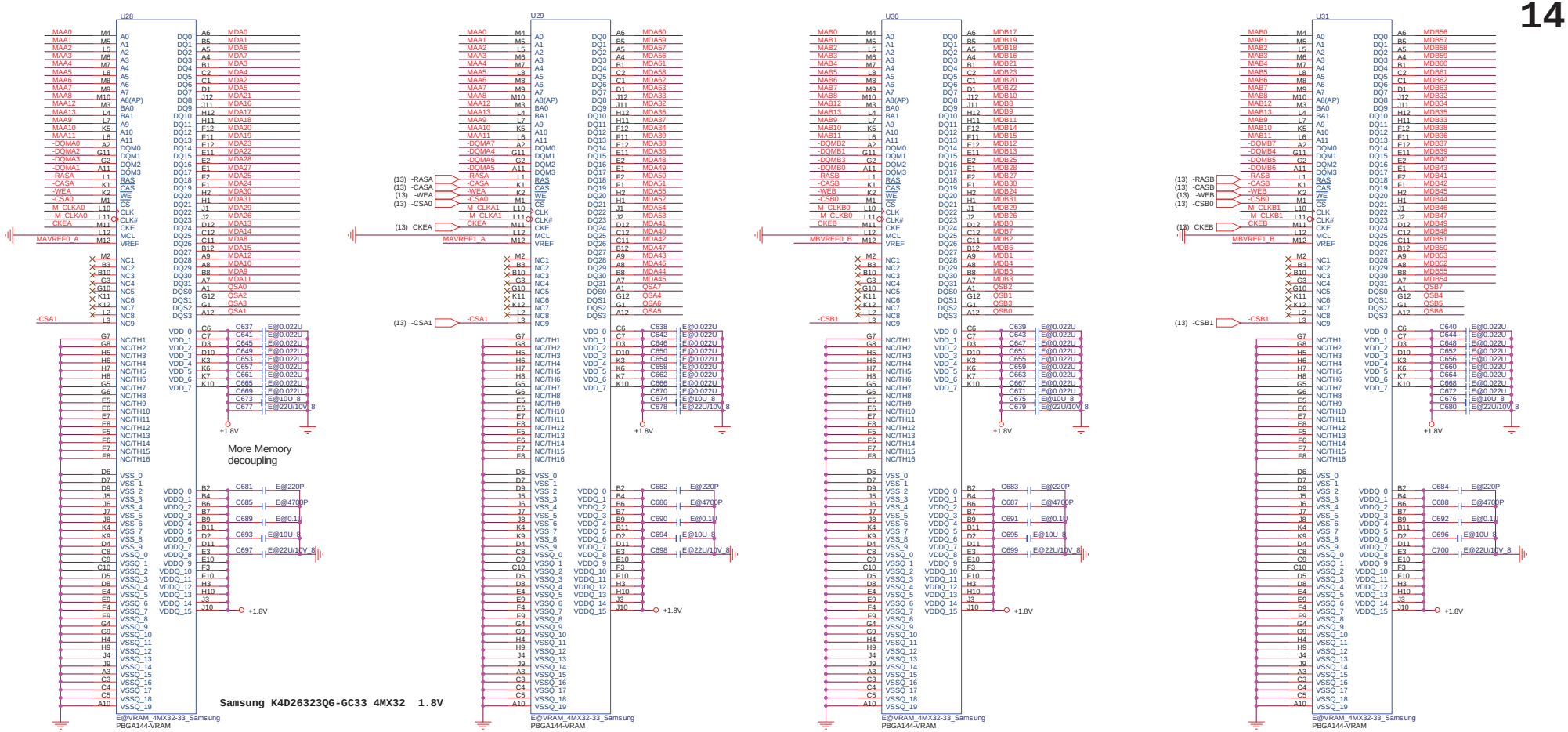
GPIO_6	PCI-Express transmitter current compensation **0: Normal** 1: Inject extra current for output buffer switching
GPIO_8	Strap to set the debug muxes to bting out DEBUG signals even if registers are inaccessible
GPIO(9,13:11) INT P/D	ROMIDCFG **0x0x: No ROM, CHG_ID=0** 0x1x: No Rom, CHG_ID=1 1000: Parallel ROM, Chip ID'S from ROM 1000: Parallel ROM, Chip ID'S from ROM
DVPDATA_21~23 MEM TYPE	DVPDATA_21: 0=4Mx32 1=8Mx32 DVPDATA_22: 0=128M 1=64M DVPDATA_23: 0=Hynix 1=Samsung



FOR M26P ONLY
0: 128M
1: 256M

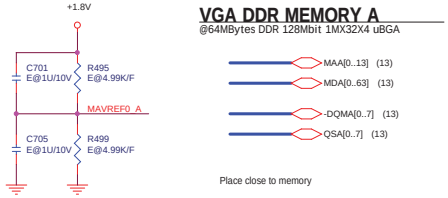
PROJECT :BQ1
Quanta Computer Inc.

Size	Document Number	Rev
Custom	ATI M24-P MEM/STRAPS	1A
Date: Thursday, August 18, 2005	Sheet 13 of 32	



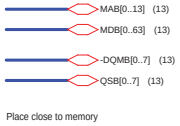
VGA DDR MEMORY A

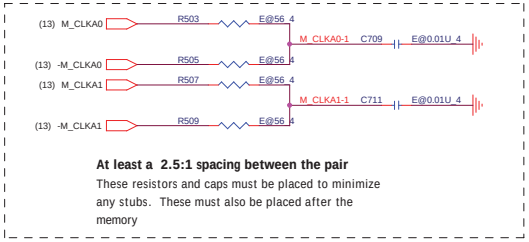
@64MBytes DDR 128Mbit 1MX32X4 uBGA

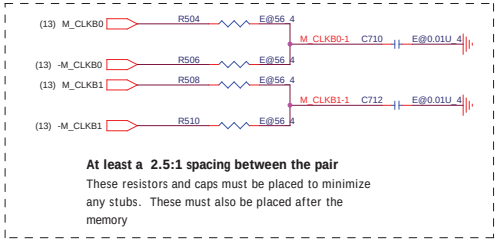


VGA DDR MEMORY B

@64MBytes DDR 128Mbit 1MX32X4 uBGA

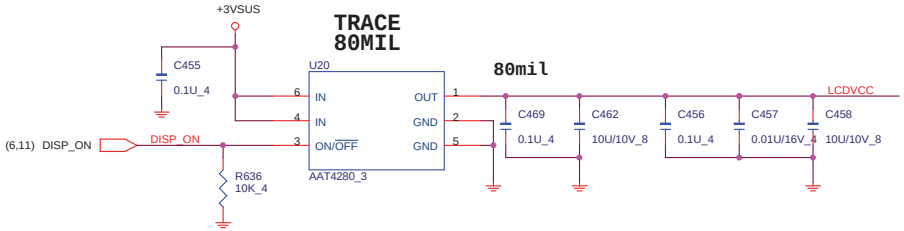


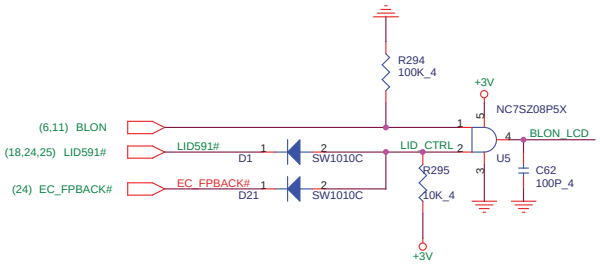


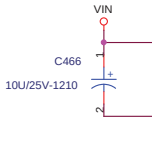


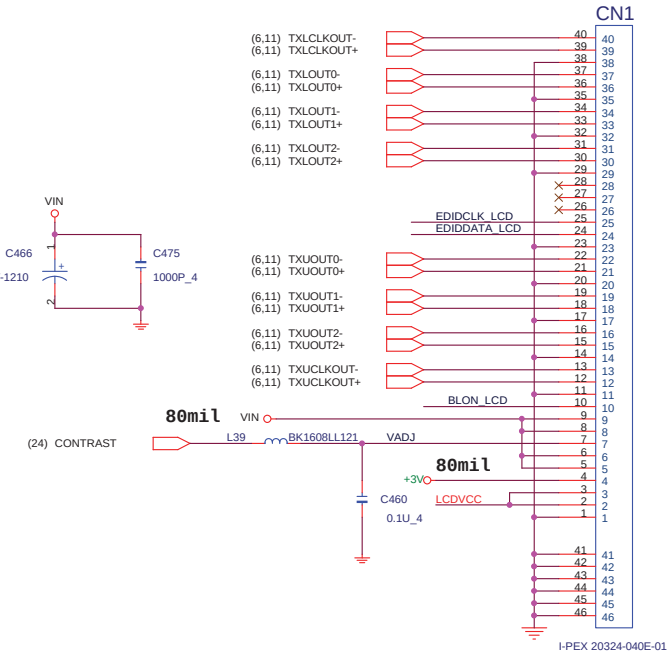
QUANTA COMPUTER

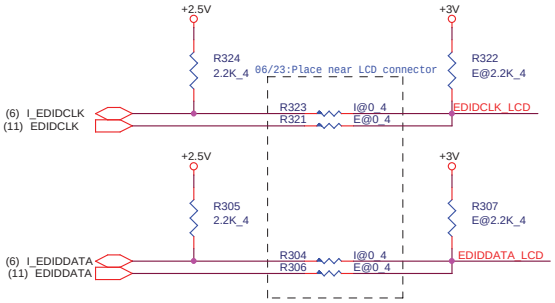
Title	VGA HOST(ATI M24-P)	
Size	Document Number BQ1	Rev 1A
Date: Thursday, August 18, 2005	Sheet 14 of 32	



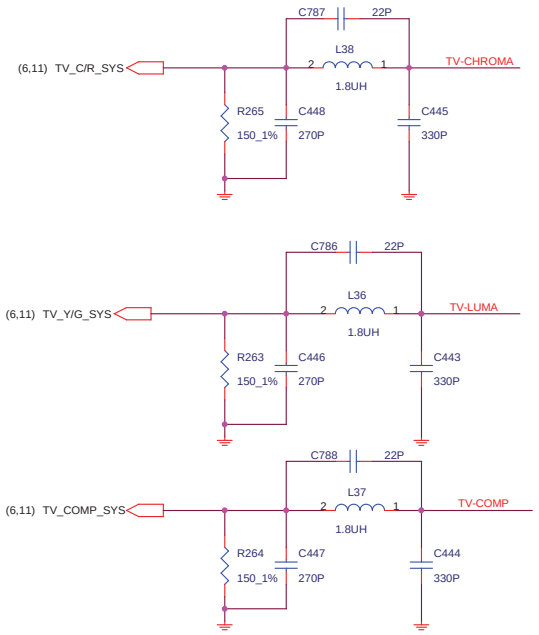


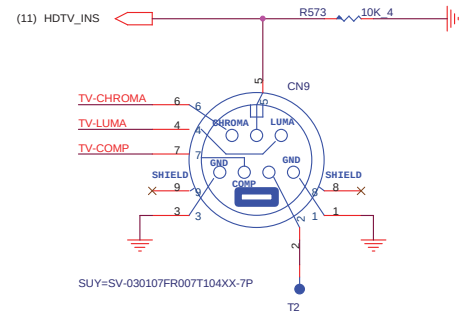






S-Video



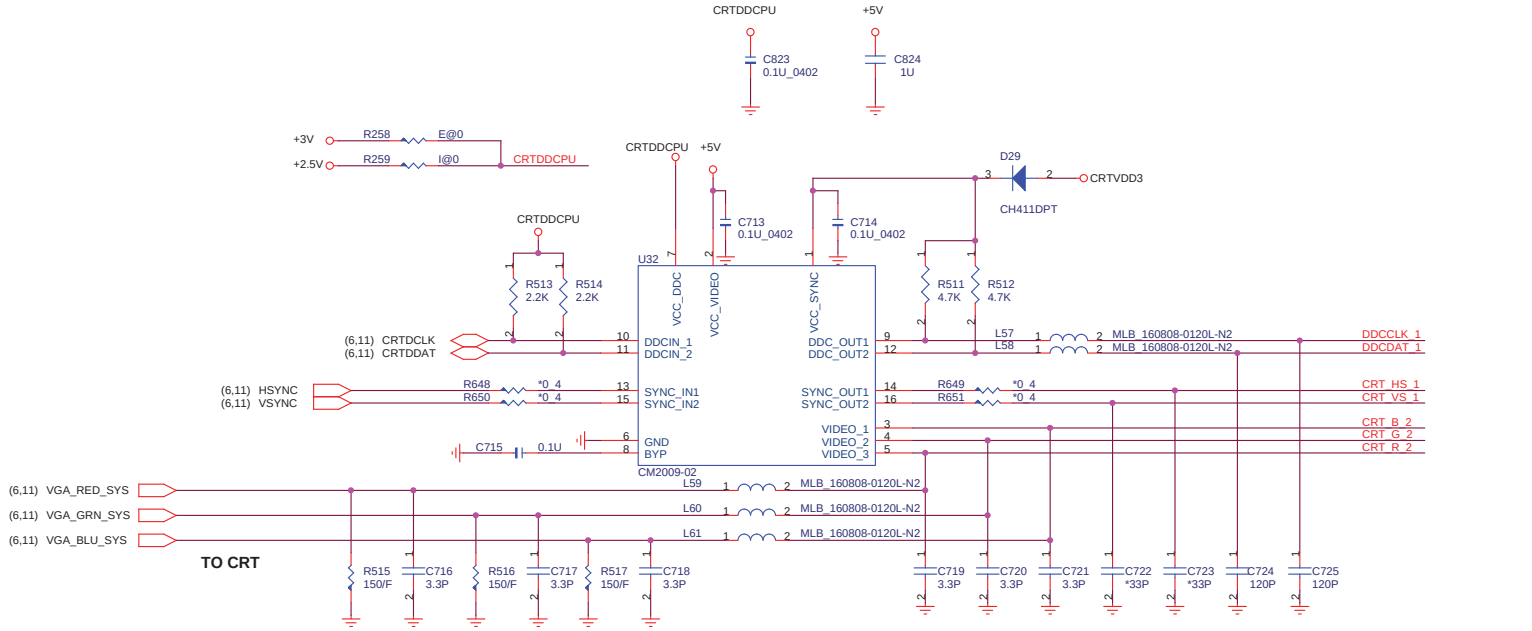


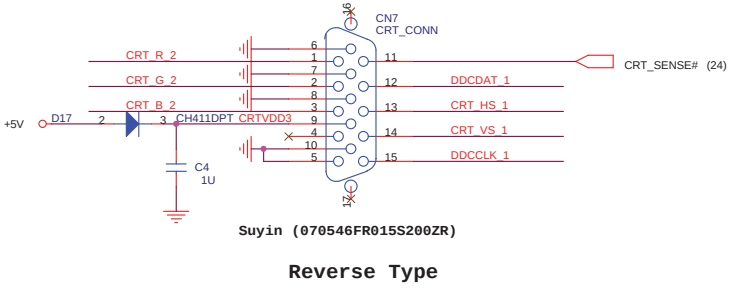
PROJECT : BQ1

Quanta Computer Inc.

Size	Document Number	Rev
	LVDS & S-VIDEO	1A

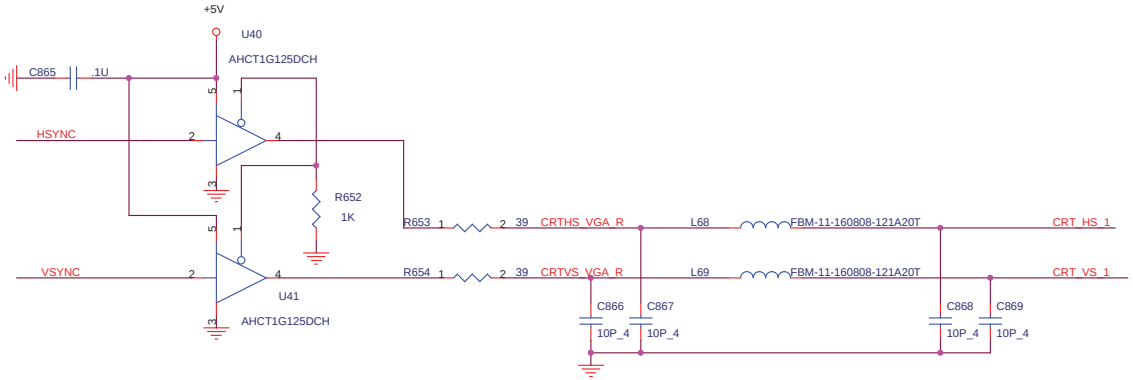
Date: Thursday, August 18, 2005 Sheet 15 of 32





Suyin (070546FR015S200ZR)

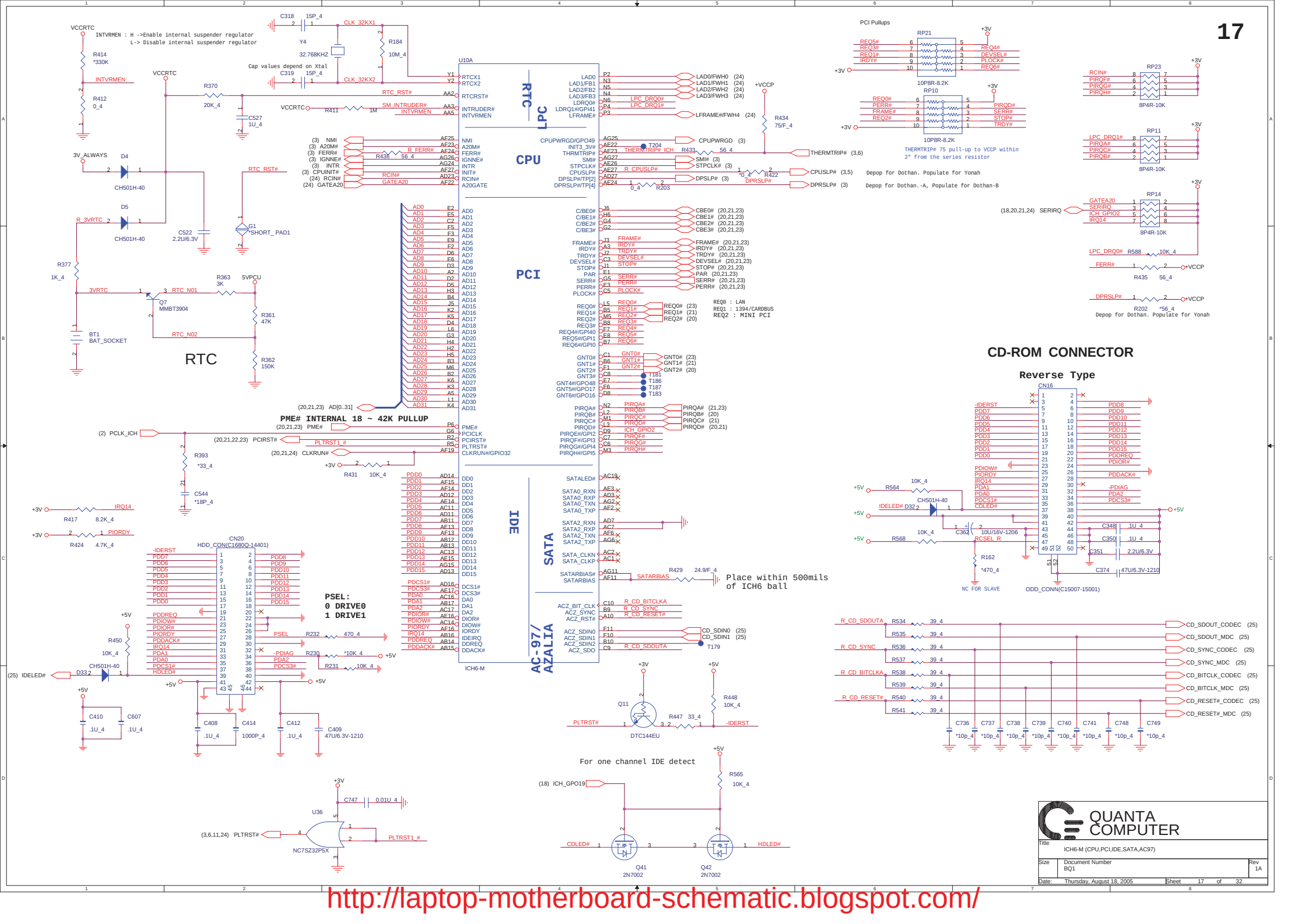
Reverse Type

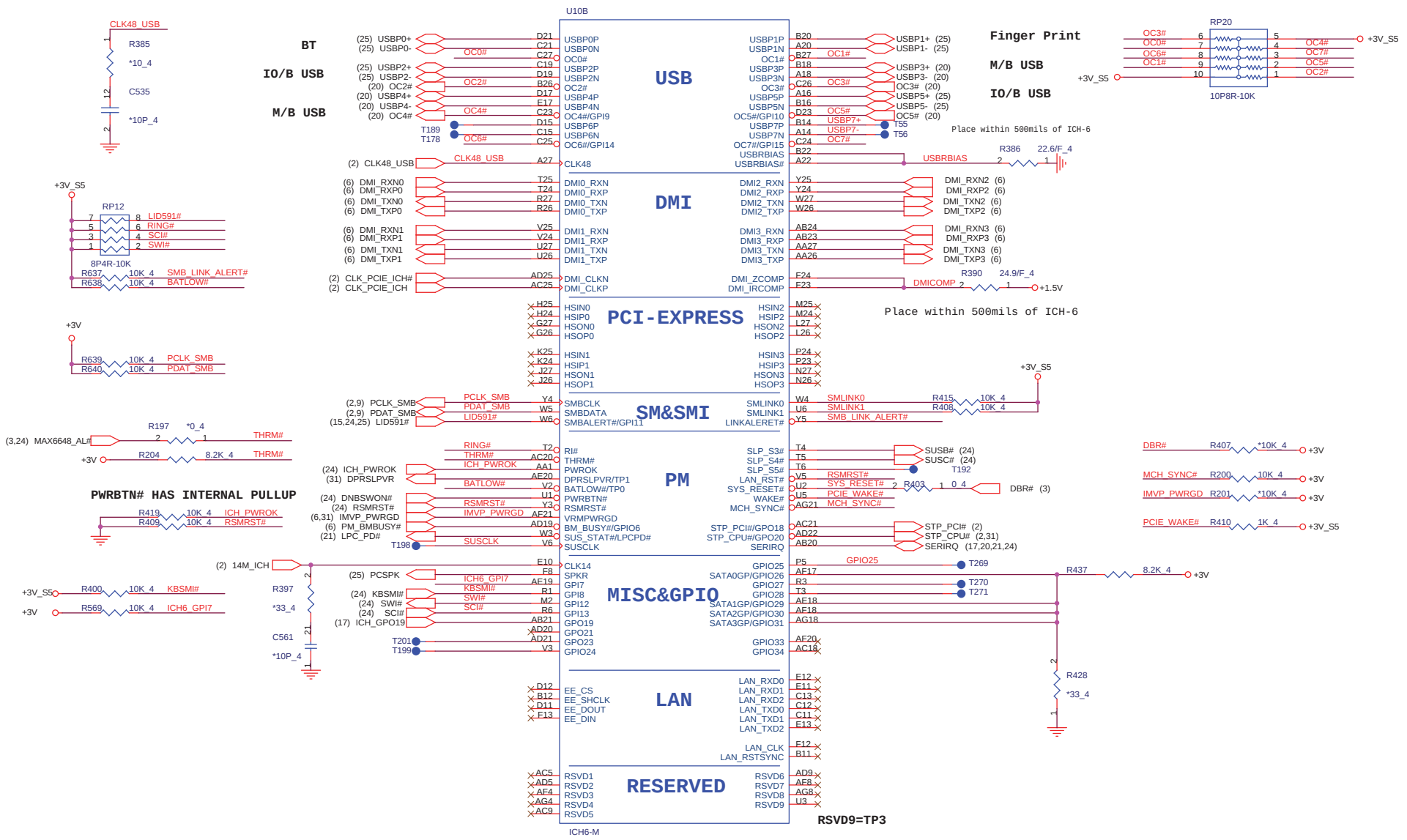


33BQ1AB0002
43BQ1SS0007

PROJECT : BQ1
Quanta Computer Inc.

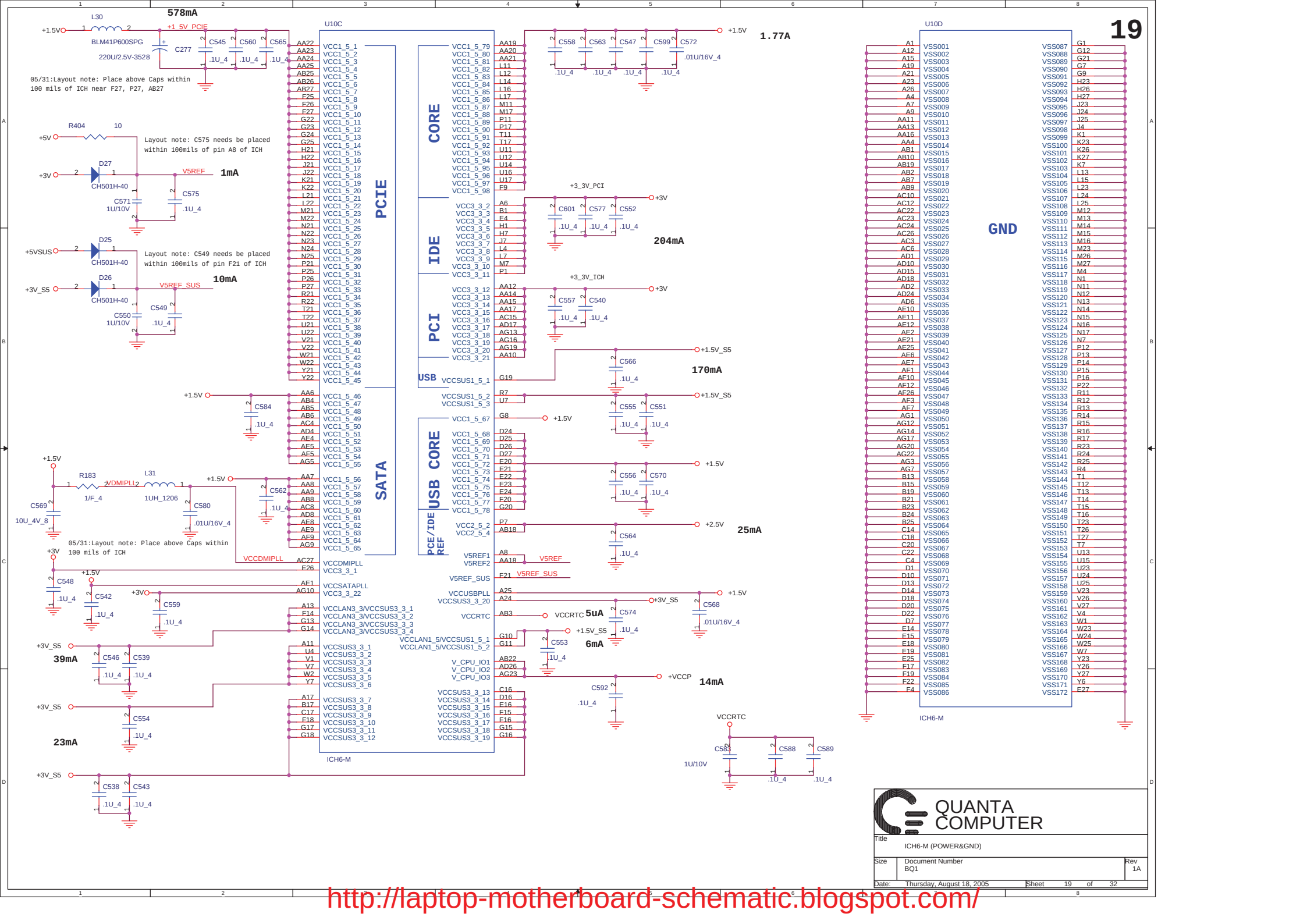
Size	Document Number	Rev
	CRT	1A
Date: Tuesday, August 16, 2005	Sheet 16 of 32	





QUANTA COMPUTER

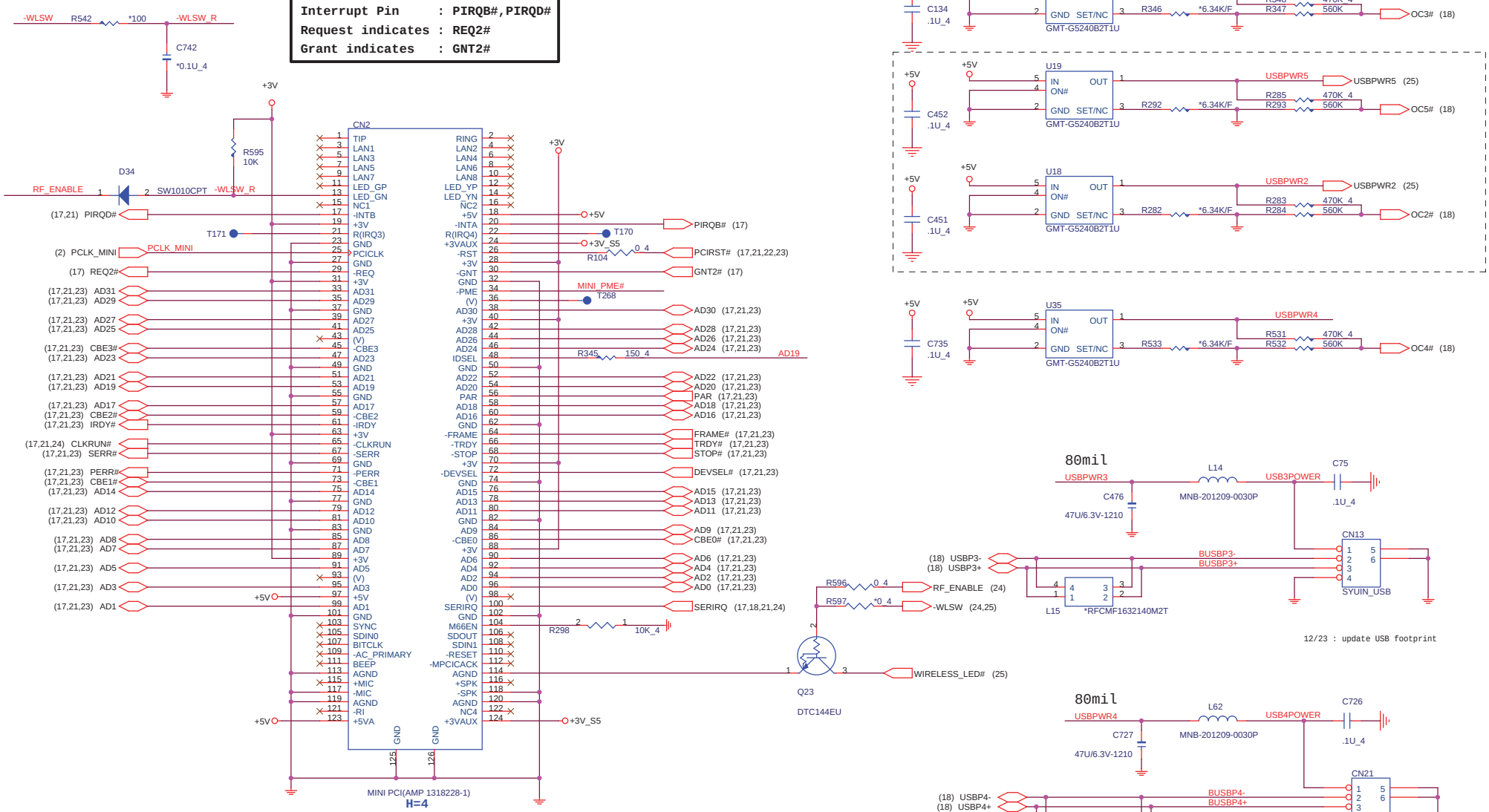
Title	ICH6-M (USB,DMI,LPC)	
Size	Document Number BQ1	Rev 1A
Date: Thursday, August 18, 2005	Sheet 18 of 32	

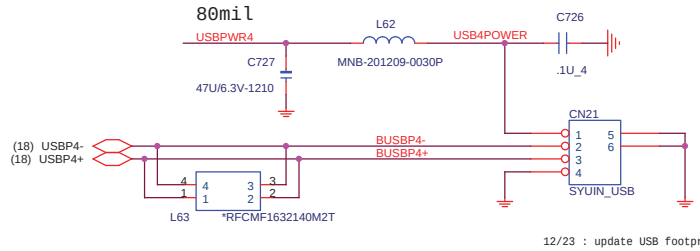


MINI PCI SOCKET

ID Select	: AD19
Interrupt Pin	: PIRQB#,PIRQD#
Request indicates	: REQ2#
Grant indicates	: GNT2#

MINI-PCI

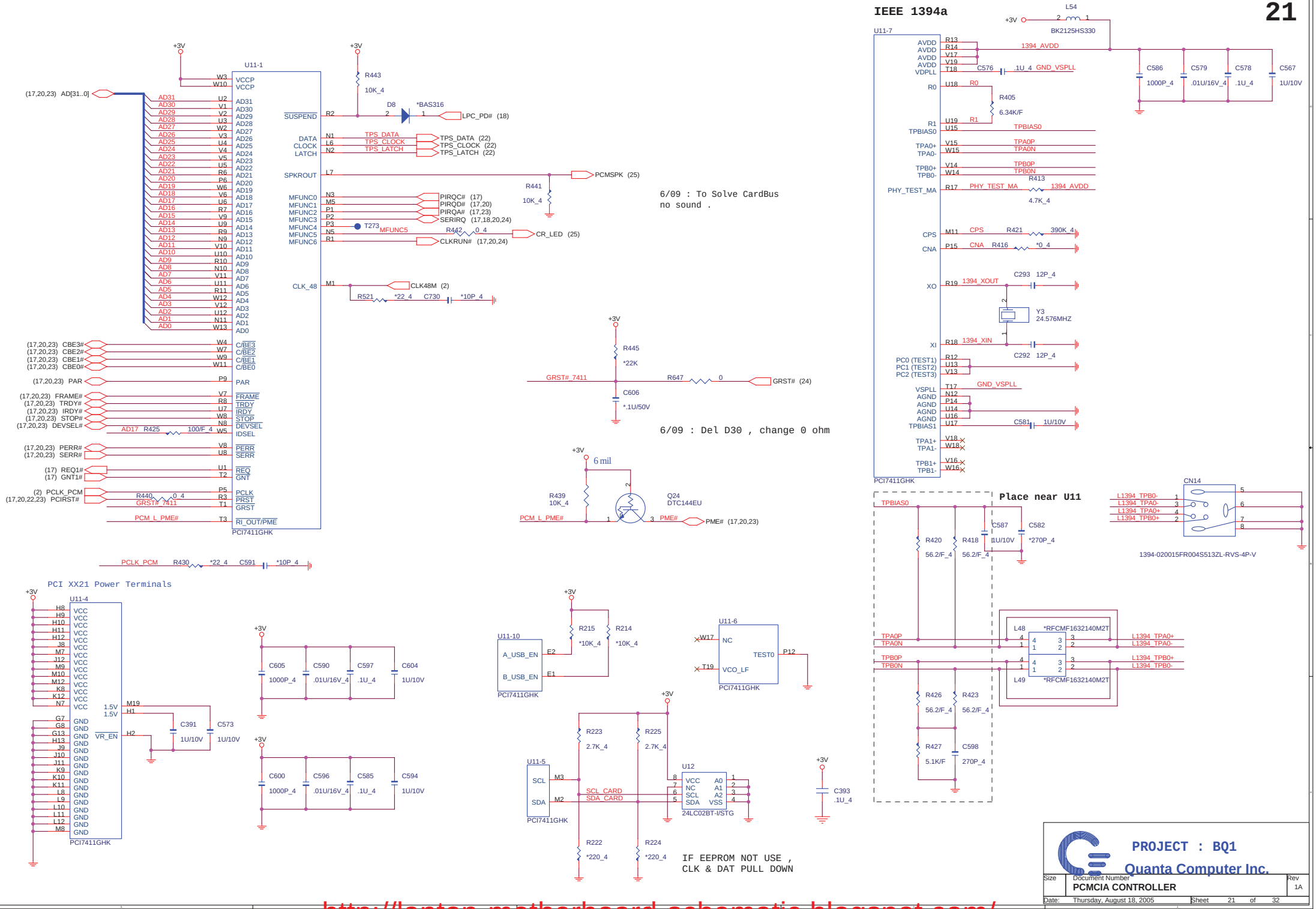


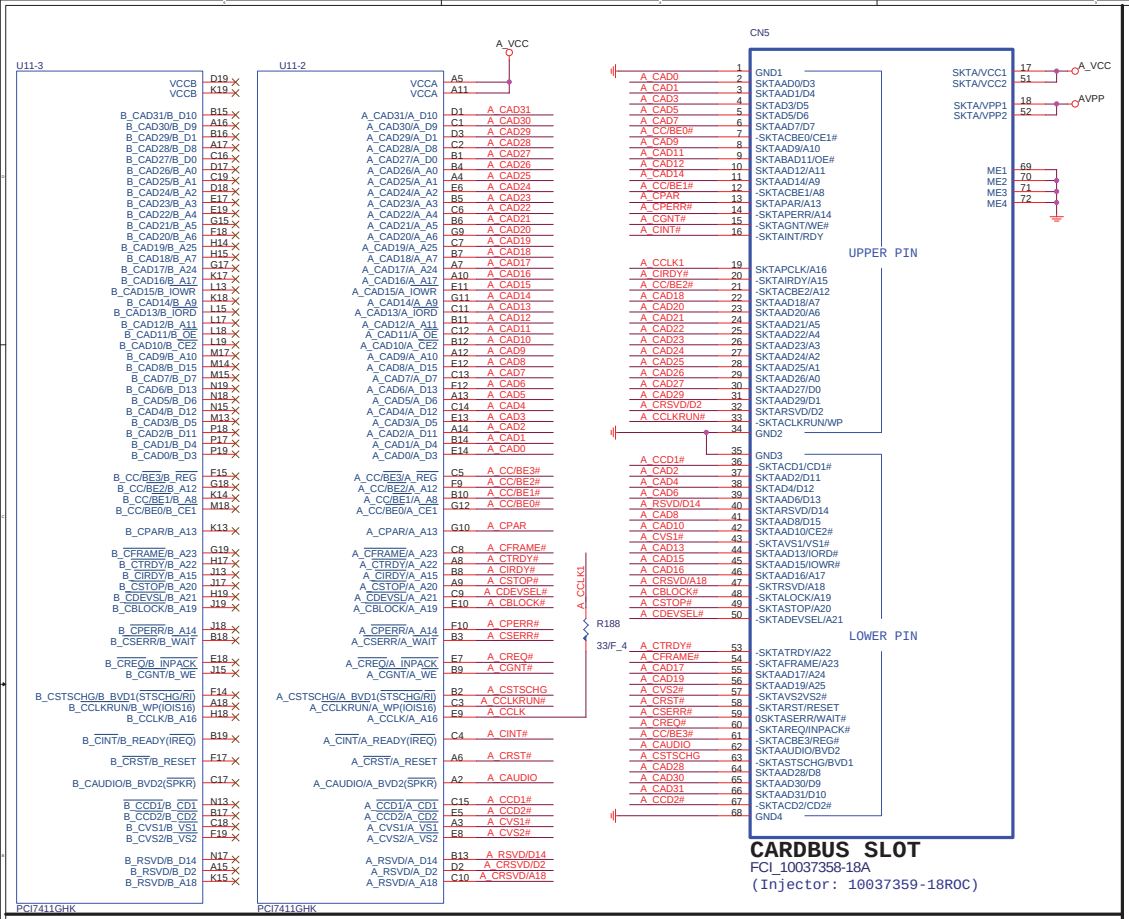


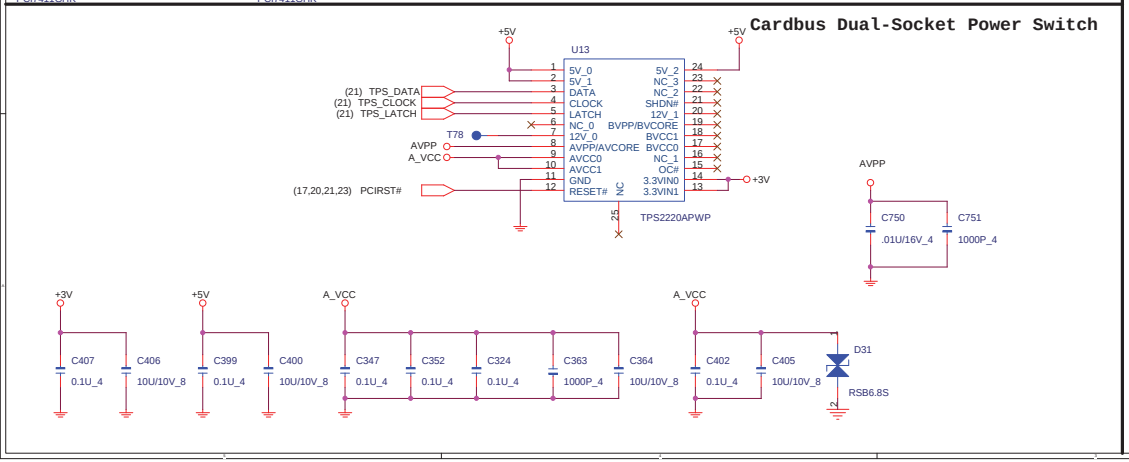
PROJECT : BQ1

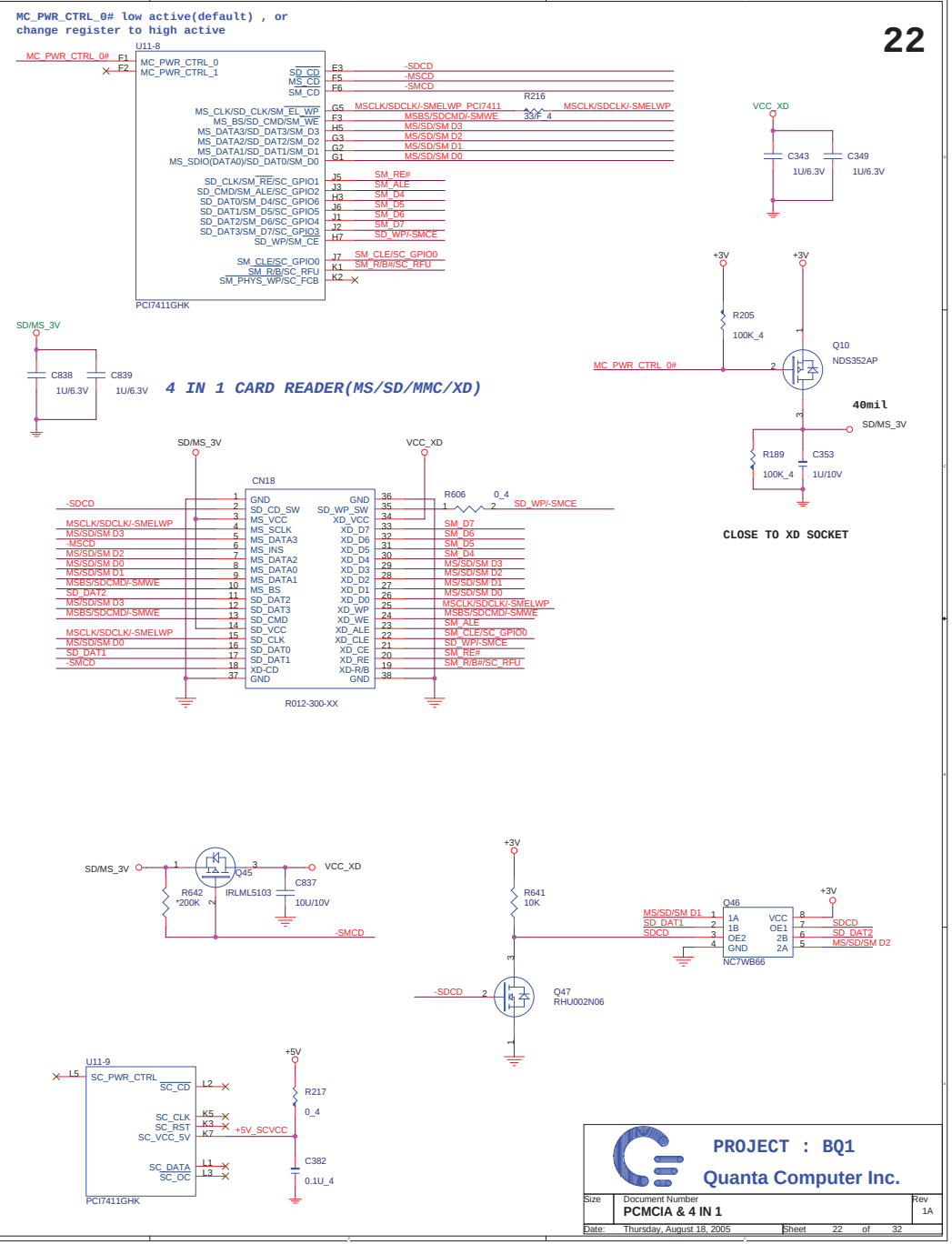
Quanta Computer Inc.

Size	Document Number	Rev
	MINI PCI,USB	1A
Date: Thursday, August 18, 2005	Sheet 20 of 32	









22

93c46 pin6(ORG) 8bit/16bit

RSET Place near ASIC

RTL8100CL LQFP

RJ45 CONNECTOR

STAFF FOR 8100CL

10mil

05726:Place near RJ45 connector

	RTL 8100C
LAN_DVDD25/12	2.5V
LAN_AVDD33/25	3.3V Analog
LAN_AVDD33	none
LAN_V12P	2.5V Analog

LAN_DVDD25/12-->1A
LAN_AVDD33/25-->300mA

RJ45 CONNECTOR

LAN(RTL8100CL)

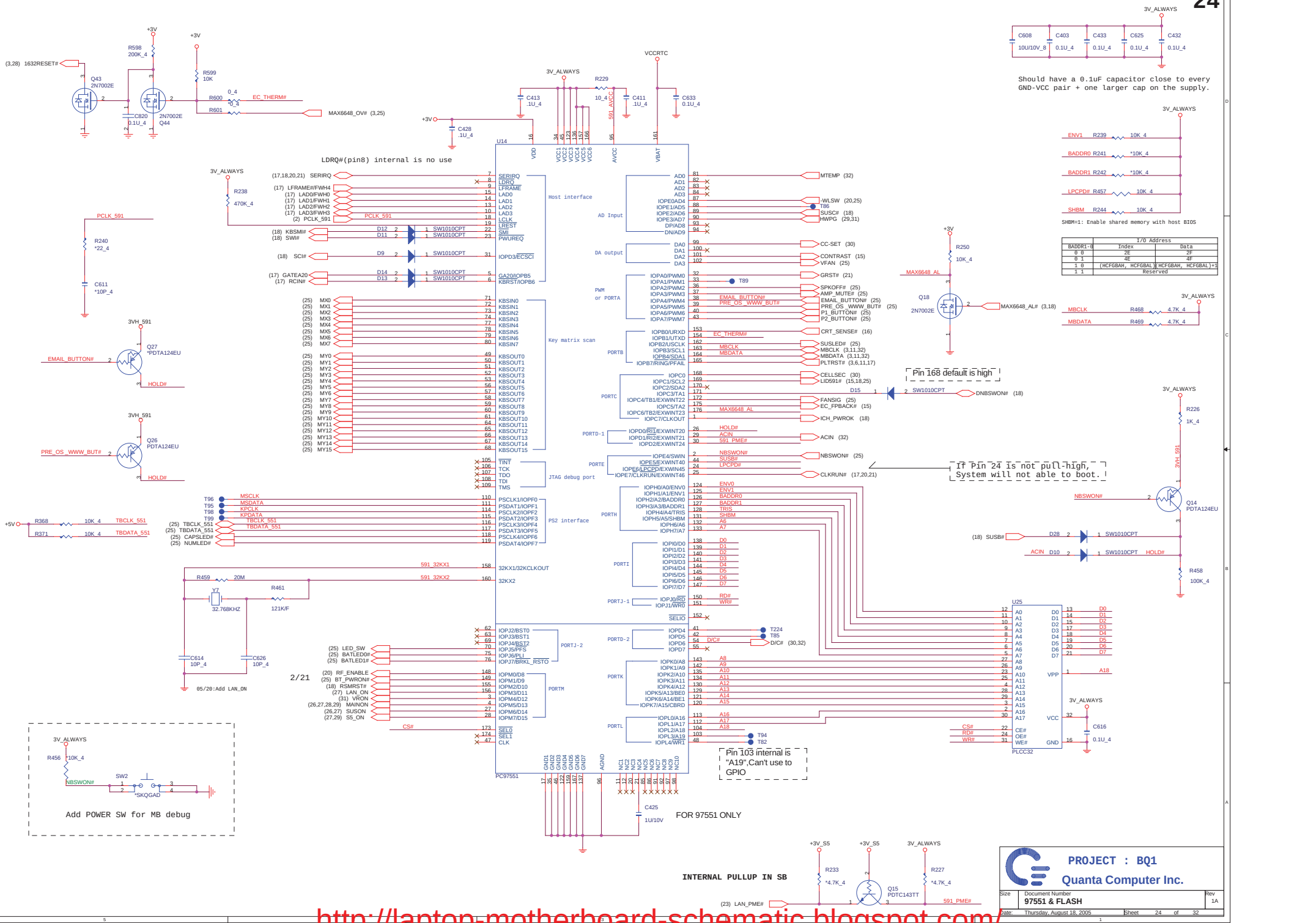
ID Select : AD24
Interrupt Pin : PIRQA#
Request indicates : REQ0#
Grant indicates : GNT0#

Place near RTL8100CL

Place near RJ45 connector(CN15)

10/100M LAN transformer

PROJECT : BQ1		
Quanta Computer Inc.		
Size	Document Number: RTL8100CL LAN	Rev: 1A
Date: Thursday, August 18, 2005	Sheet 23 of 32	


LDRQ#(pin8) internal is no use
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
Pin 168 default is high
If Pin 24 is not pull-high, System will not able to boot.
Pin 103 internal is "A19",Can't use to GPIO
FOR 97551 ONLY
INTERNAL PULLUP IN SB
Add POWER SW for MB debug
2/21
05/20:Add LAN_ON
PROJECT : BQ1
Quanta Computer Inc.
97551 & FLASH
Thursday, August 18, 2005
http://laptop-motherboard-schematic.blogspot.com/

KEYBOARD CONNECTOR

INT K/B

(24) MY15 (24) MY14 (24) MY13 (24) MY12 (24) MY11 (24) MY10 (24) MY9 (24) MY8 (24) MY7 (24) MY6 (24) MY5 (24) MY4 (24) MY3 (24) MX7 (24) MX6 (24) MX2 (24) MX5 (24) MX4 (24) MX3 (24) MX2 (24) MX1 (24) MY0 (24) MX1 (24) MX0

CN3

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

KB-CON(85202-2402)

CA5 220PX4: MY3 MX2 MX3 MX1
CA3 220PX4: MY5 MY7 MY6 MY4
CA6 220PX4: MY0 MY1 MX5 MX4
CA4 220PX4: MX0 MY2 MX7 MY10
CA2 220PX4: MY11 MY10 MY9 MY8
CA1 220PX4: MX15 MY14 MY13 MY12

3V_ALWAYS

RP18: MX2 MX3 MX1 MX0 — 8P4R-10K
RP17: MX7 MX6 MX5 MX4 — 8P4R-10K

FAN CONTROL

+12V, +5V

R8 10K_4

Q21 AO6402

Q34 *DTC144EU

Q1 2N7002E

(24) FANSIG — R527 *10K — +3V

MAX6648_OV# (3,24)

U34 G993: VIN, Vout, GND, VEN, VSET

+5V — C10 10U/10V_8

(24) VFAN — R528 10K

FAN_PWR — 40 MIL

C733 1000P — C734 *1000P

CN10: FAN CONN-ACES=85205-0300

TOUCH PAD CONNECTOR

CN4: TPCLK, TPDATA, +5V

TP/B-CON(4601-04) (85201-0405-4P-R)

C524 .1U_4

P1_BUTTON# C844 4700P_4 — C845 4700P_4 BATLED1#
P2_BUTTON# C846 4700P_4 — C847 4700P_4 BATLED0#
NUMLED# C848 4700P_4 — C849 4700P_4 NBSWON#
CAPSLED# C850 4700P_4 — C851 4700P_4 LID591#
IDELED# C852 4700P_4 — C853 4700P_4 SUSLED#
WIRELESS_LED# C854 4700P_4 — C855 4700P_4 LED_SW
CR_LED C856 4700P_4 — C857 4700P_4 EMAIL_BUTTON#
BT_LED# C858 4700P_4 — C859 4700P_4 PRE_OS_WWW_BUT#

CN22

(24) BATLED1# (24) BATLED0# (24) NBSWON# (15,18,24) LID591# (24) SUSLED# (24) LED_SW

3V_ALWAYS — C860 4700P_4

(24) EMAIL_BUTTON# (24) PRE_OS_WWW_BUT# (24) P1_BUTTON# (24) P2_BUTTON# (24) NUMLED# (24) CAPSLED# (17) IDELED# (20) WIRELESS_LED# (21) CR_LED (3) LSCLK_1 (3) LSDATA_1

BT_PWRON# — R602 0 — +3V — BT_LED#

+3V — C861 4700P_4

87151-2607-26P-L

M/B TO AUDIO/B

CN6 H=3.9

(17) CD_SDOUT_CODEC (17) CD_SDOUT_MDC — BK1608LL121 L65 — CD_BITCLKA_CON
(17) CD_BITCLK_CODEC (17) CD_BITCLK_MDC — BK1608LL121 L66 — CD_BITCLKA_MDC
(17) CD_SDIN0 (17) CD_SDIN1 (17) CD_SYNC_CODEC (17) CD_SYNC_MDC (17) CD_RESET#_CODEC (17) CD_RESET#_MDC

+12V 3V_ALWAYS +3V +3VSUS VIN

AMP_MUTE# (24) PCSPK (18) PCMSPK (21) SPKOFF# (24) BT_PWRON# (24) BT_LED# USBP0+ (18) USBP0- (18) +5V USBP1+ (18) USBP1- (18) +3V +3VSUS MIC

ACES 88079-4000

CD_BITCLKA_MDC C743 680P_6
CD_BITCLKA_CON C609 680P_6

TO USB/B

CN12

(18) USBP2+ (18) USBP2- (18) USBP5+ (18) USBP5-

USBPWR2 (20) USBPWR5 (20) WLSW (20,24) +3V

ACES 88107-1600

BT

Finger Print

CN23 — BK1608LL121 L67 — MIC — C843 680P_6

MIC-CON(85204-0200)

SCREW

HOLE1 H-C354D114P2 — HOLE2 H-C354D114P2 — HOLE3 H-C354D114P2 — HOLE4 H-C354D114P2 — HOLE5 H-C236D150P2 — HOLE23 H-C354D114P2 — GND_LAN_CHASIS — HOLE7 H-TC276BC354D114P2 — HOLE8 H-TC276BC354D114P2 — HOLE9 H-TC276BC354D114P2 — HOLE10 H-TC276BC354D114P2

HOLE12 H-C236D150P2 — HOLE13 H-C236D150P2 — HOLE14 H-C236D150P2 — HOLE15 H-C236D150P2 — HOLE16 H-C236D150P2 — HOLE17 H-C236D150P2 — HOLE19 H-C236D150P2 — HOLE20 H-C236D150P2 — HOLE22 H-C236D150P2 — HOLE24 H-TC276BC354D114P2 — HOLE25 *H-91X79D91X79N — HOLE21 *H-91X79D91X79N — HOLE18 *H-C71D71N

P1 EMI PAD

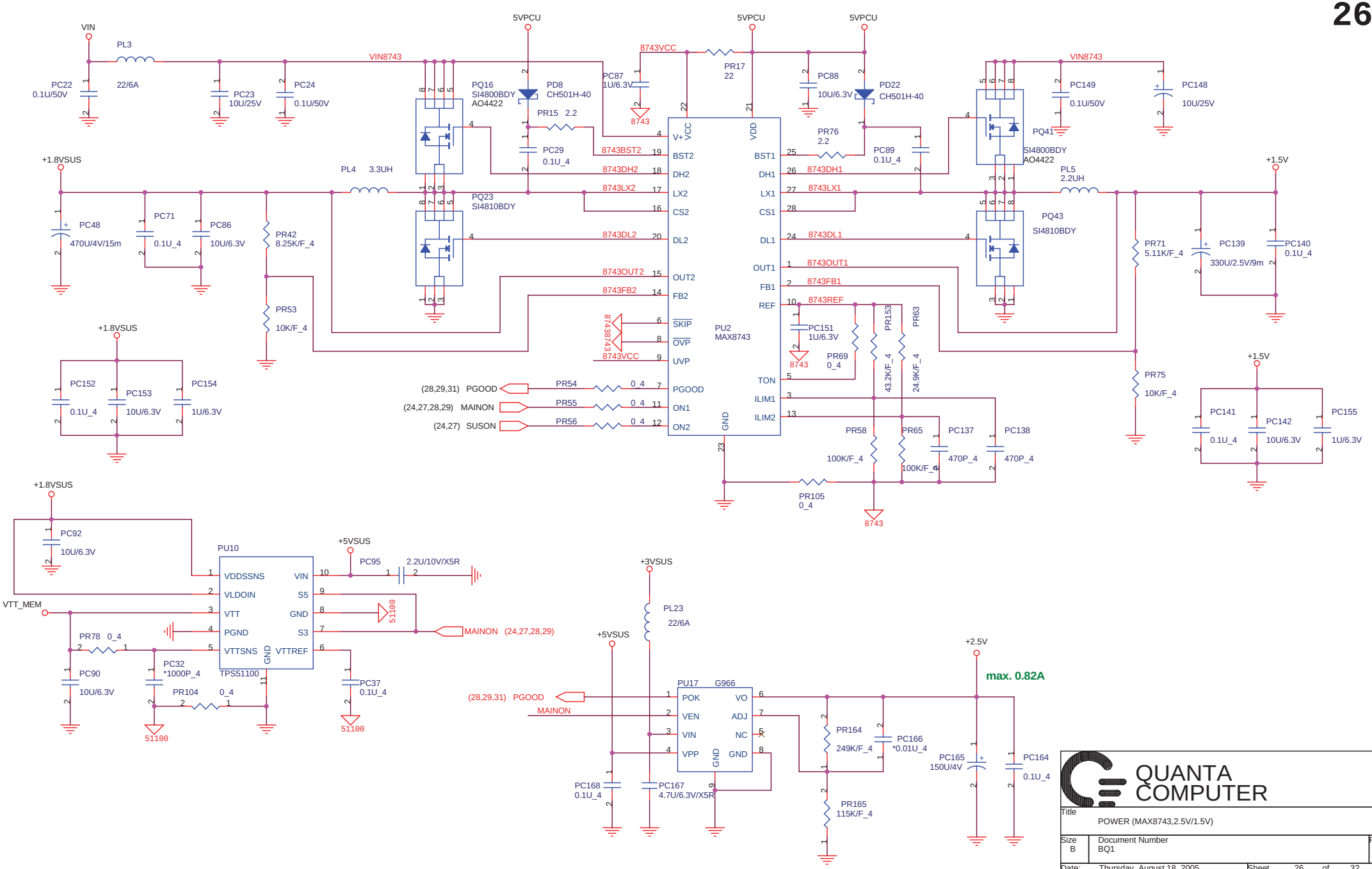
+5V +1.2V: C752 C753 C754 1000P
+5V +1.8VSUS: C755 C756 C757 1000P
+5V +1.5V: C758 C759 C760 1000P
+5V +1.5V: C761 C762 C763 1000P
+5V +1.5V: C766 1000P
+1.8VSUS +1.2V: C767 1000P
+1.8VSUS: C768 C769 C770 C775 1000P
+1.5V +VCCP +5V: C771 1000P
+1.8VSUS +1.2V: C772 C773 1000P
+VCCP +5V: C774 1000P
+VCCP +1.5V +1.2V: C776 1000P
+VCCP: C777 C778 C779 1000P
+VCCP: C780 C781 C782 1000P
VCC_CORE

P2 EMI PAD — P3 EMI PAD — P4 EMI PAD — P5 EMI PAD — P6 EMI PAD — P7 EMI PAD — P8 EMI PAD

PROJECT : BQ1
Quanta Computer Inc.

Size	Document Number	Rev
	T/P,FAN,KB,SCREW,EMI PAD	1A

Date: Thursday, August 18, 2005 Sheet 25 of 32



QUANTA COMPUTER

Title	POWER (MAX8743,2.5V/1.5V)	
Size B	Document Number BQ1	Rev 1A
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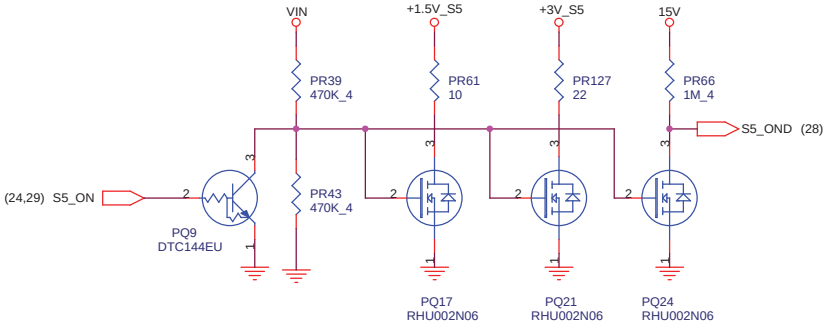

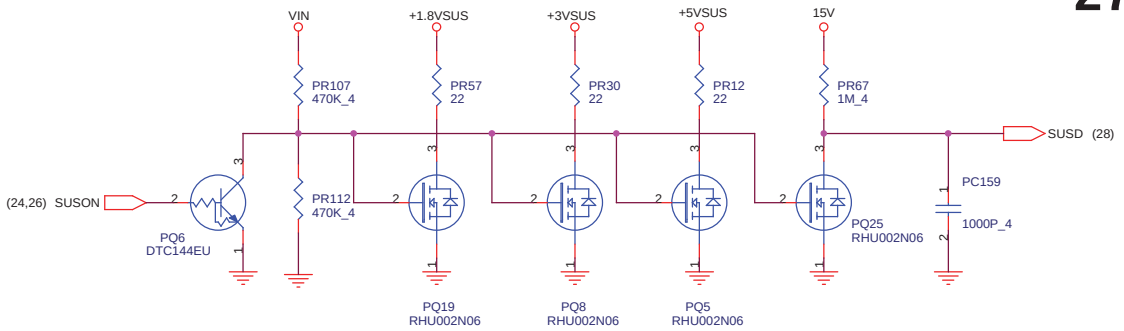

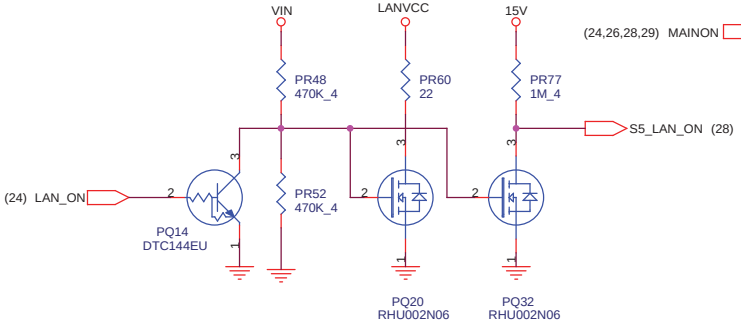

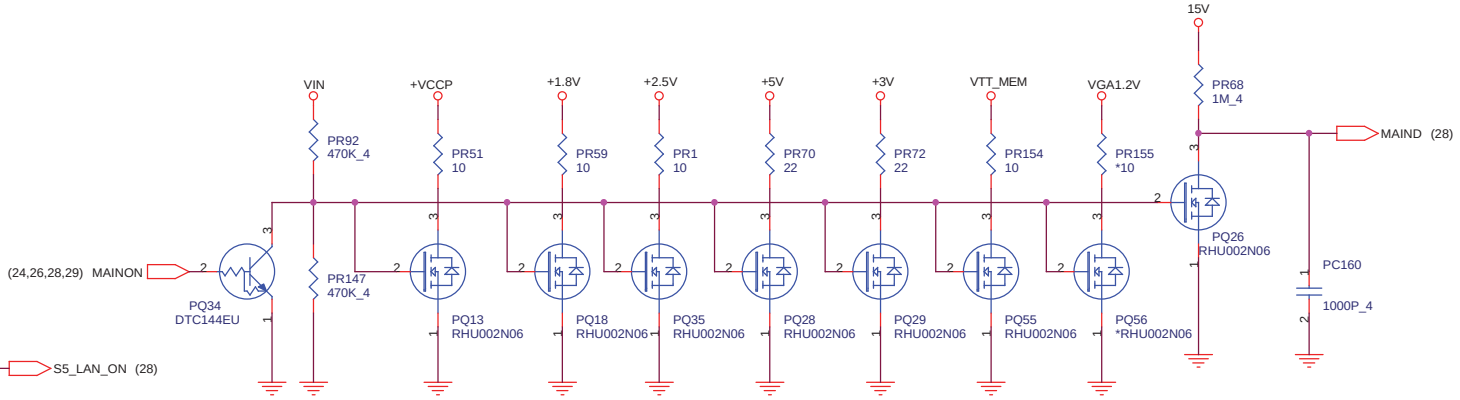

QUANTA COMPUTER

Title	POWER (DISCHAGE)	
Size	Document Number BQ1	Rev 1A
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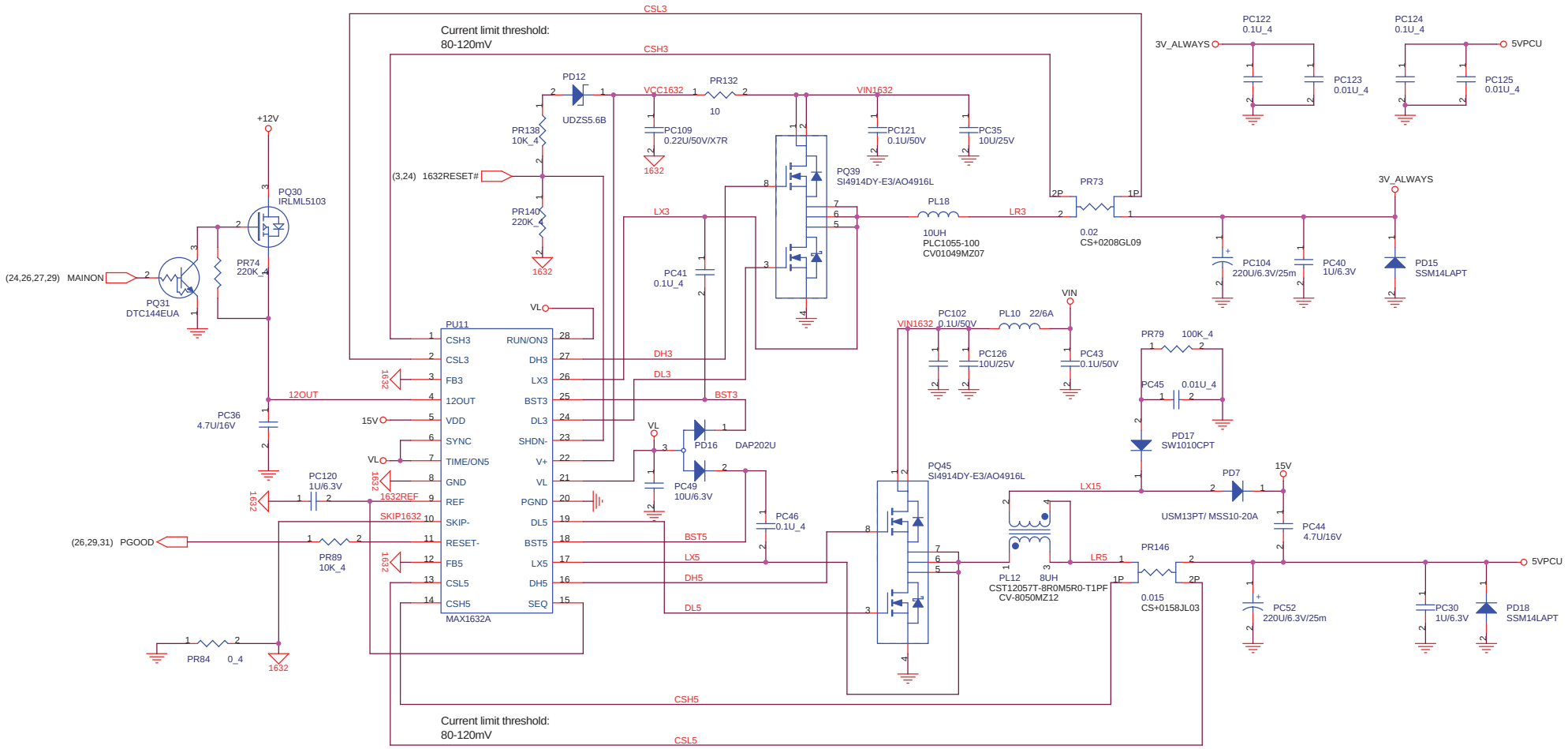

QUANTA COMPUTER

Title	POWER (MAX1632/5V/3.3V)	
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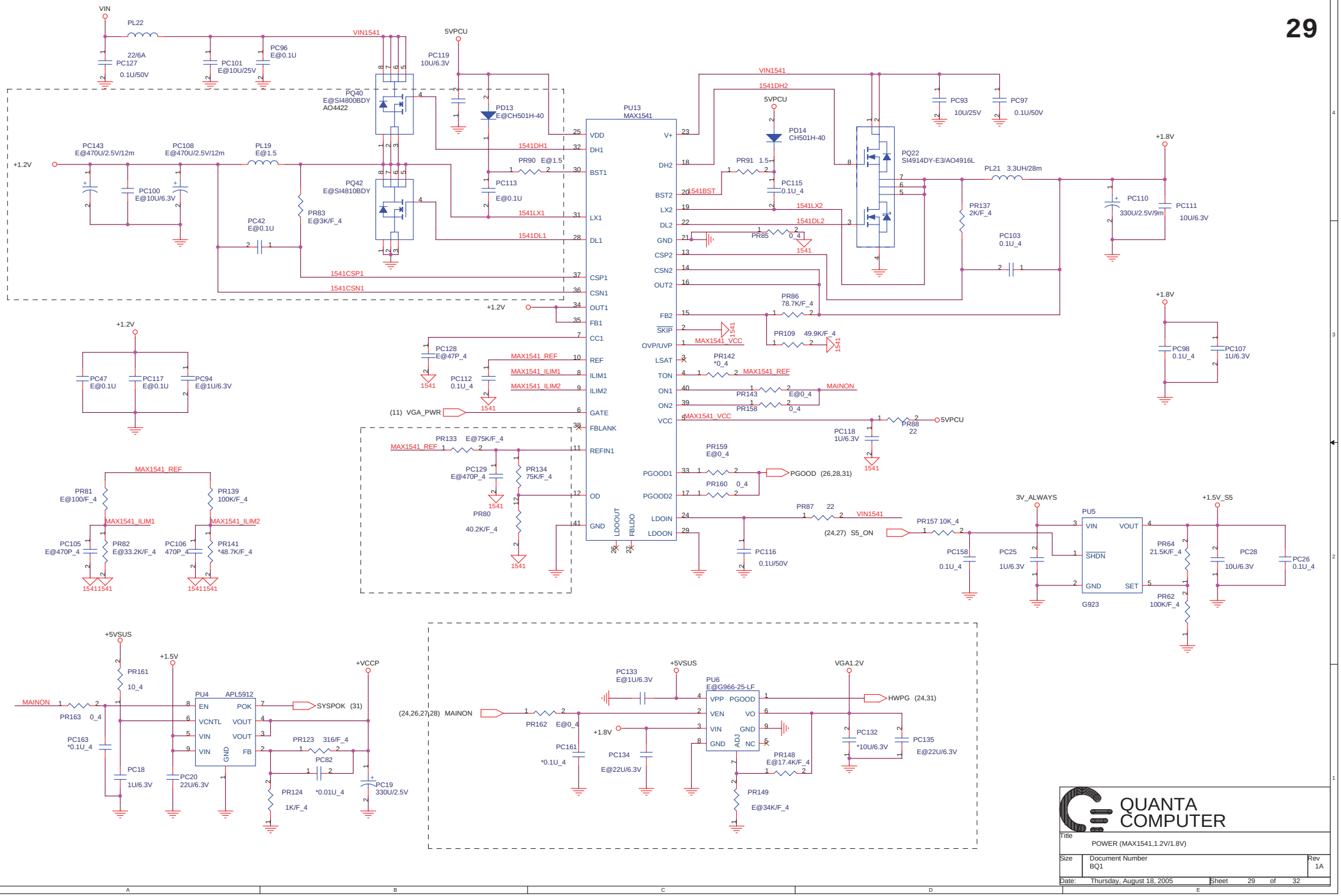

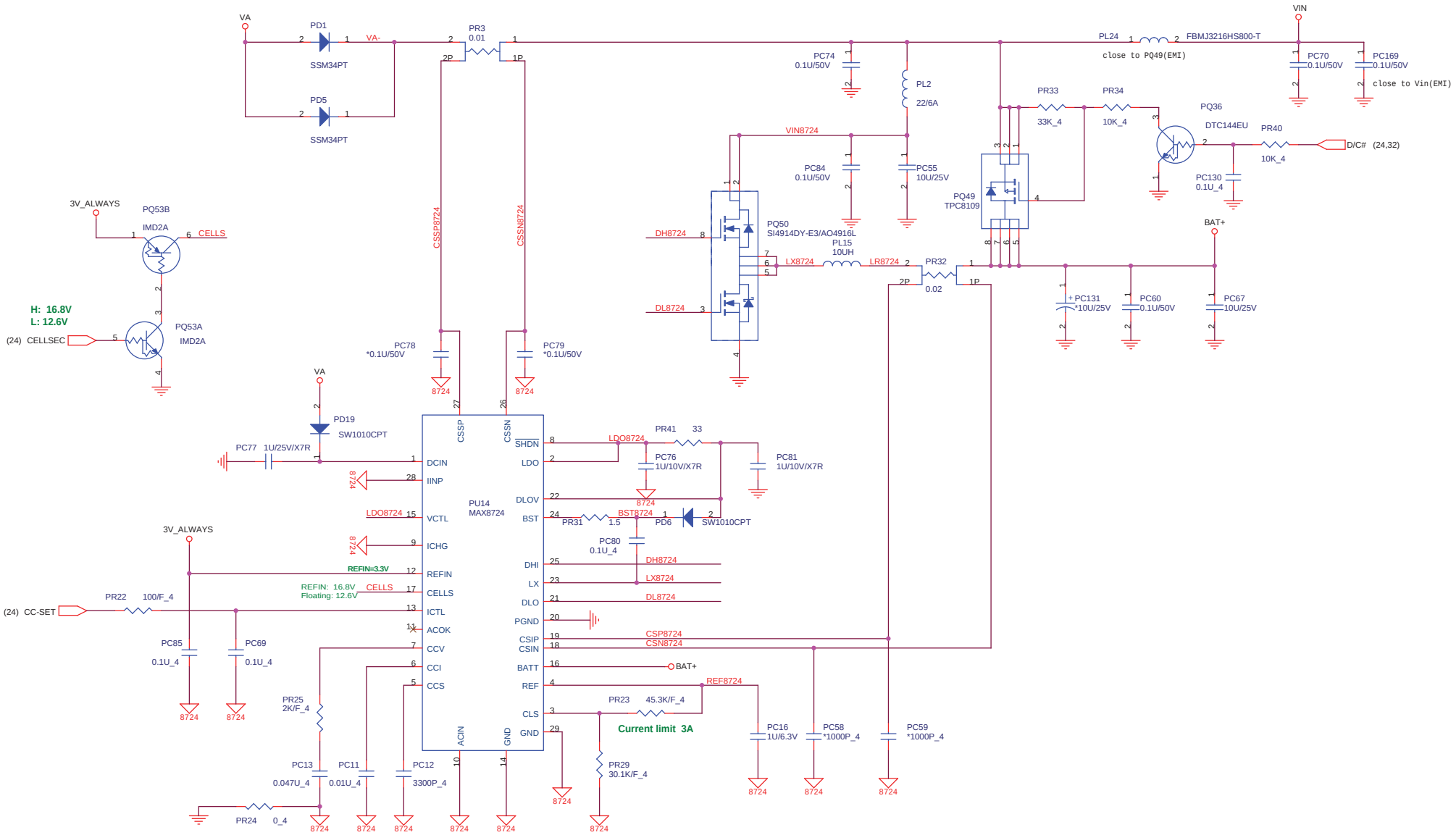

QUANTA COMPUTER		
Title	POWER (MAX8743,2.5V/1.8V)	
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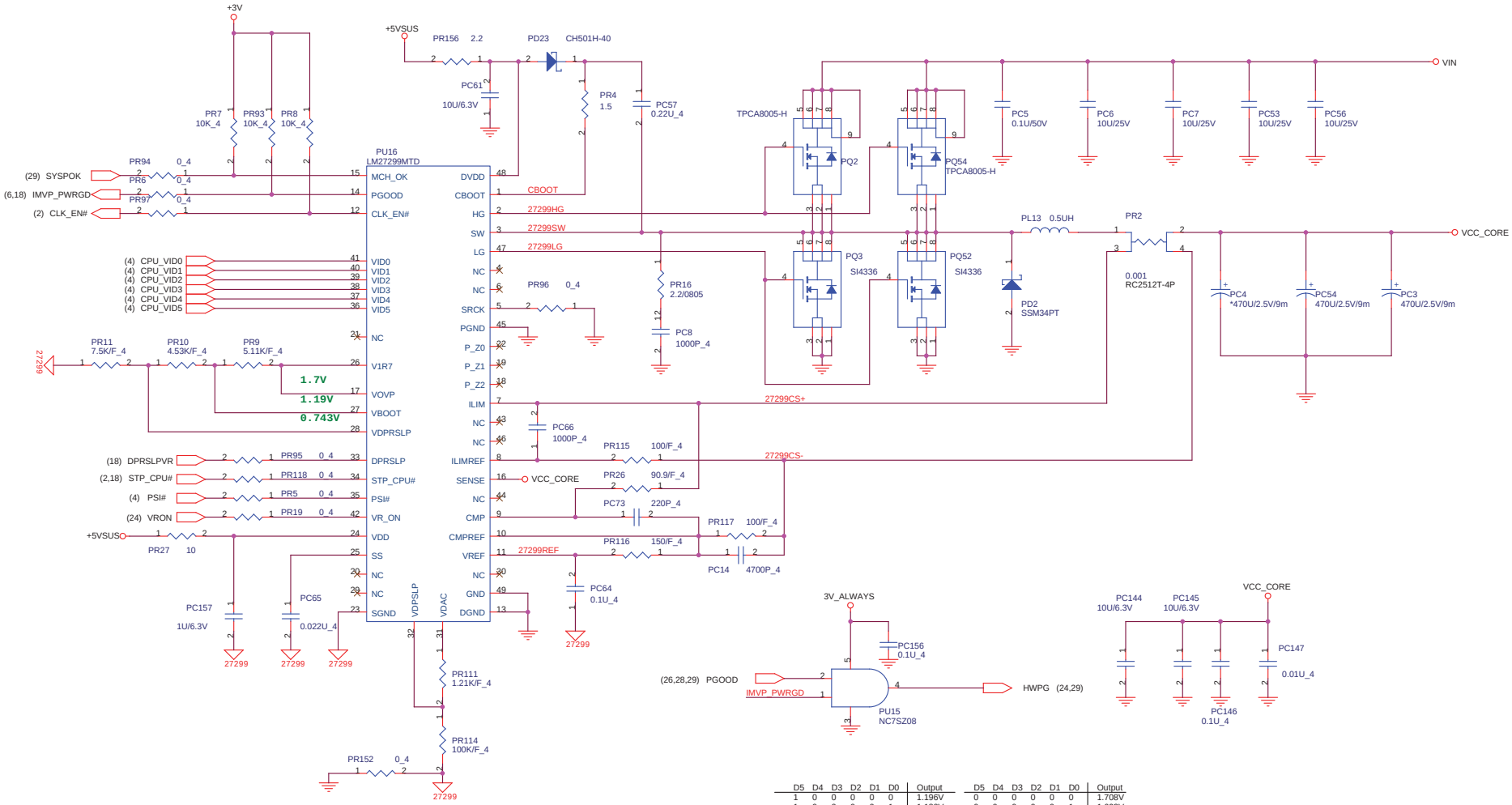

D5	D4	D3	D2	D1	D0	Output	D5	D4	D3	D2	D1	D0	Output
1	0	0	0	0	0	1.196V	0	0	0	0	0	0	1.708V
1	0	0	0	0	1	1.180V	0	0	0	0	0	1	1.692V
1	0	0	0	1	0	1.164V	0	0	0	0	1	0	1.676V
1	0	0	0	1	1	1.148V	0	0	0	0	1	1	1.660V
1	0	0	1	0	0	1.132V	0	0	0	1	0	0	1.644V
1	0	0	1	0	1	1.116V	0	0	0	1	0	1	1.628V
1	0	0	1	1	0	1.100V	0	0	0	1	1	0	1.612V
1	0	0	1	1	1	1.084V	0	0	0	1	1	1	1.596V
1	0	1	0	0	0	1.068V	0	0	1	0	0	0	1.580V
1	0	1	0	0	1	1.052V	0	0	1	0	0	1	1.564V
1	0	1	0	1	0	1.036V	0	0	1	0	1	0	1.548V
1	0	1	0	1	1	1.020V	0	0	1	0	1	1	1.532V
1	0	1	1	0	0	1.004V	0	0	1	1	0	0	1.516V
1	0	1	1	0	1	0.988V	0	0	1	1	0	1	1.500V
1	0	1	1	1	0	0.972V	0	0	1	1	1	0	1.484V
1	0	1	1	1	1	0.956V	0	0	1	1	1	1	1.468V
1	1	0	0	0	0	0.940V	0	1	0	0	0	0	1.452V
1	1	0	0	0	1	0.924V	0	1	0	0	0	1	1.436V
1	1	0	0	1	0	0.908V	0	1	0	0	1	0	1.420V
1	1	0	0	1	1	0.892V	0	1	0	0	1	1	1.404V
1	1	0	1	0	0	0.876V	0	1	0	1	0	0	1.388V
1	1	0	1	0	1	0.860V	0	1	0	1	0	1	1.372V
1	1	0	1	1	0	0.844V	0	1	0	1	1	0	1.356V
1	1	0	1	1	1	0.828V	0	1	0	1	1	1	1.340V
1	1	1	0	0	0	0.812V	0	1	1	0	0	0	1.324V
1	1	1	0	0	1	0.796V	0	1	1	0	0	1	1.308V
1	1	1	0	1	0	0.780V	0	1	1	0	1	0	1.292V
1	1	1	0	1	1	0.764V	0	1	1	0	1	1	1.276V
1	1	1	1	0	0	0.748V	0	1	1	1	0	0	1.260V
1	1	1	1	0	1	0.732V	0	1	1	1	0	1	1.244V
1	1	1	1	1	0	0.716V	0	1	1	1	1	0	1.228V
1	1	1	1	1	1	0.700V	0	1	1	1	1	1	1.212V

QUANTA COMPUTER

Title	POWER (LM27299/VCORE)	
Size	Document Number BQ1	Rev 1A
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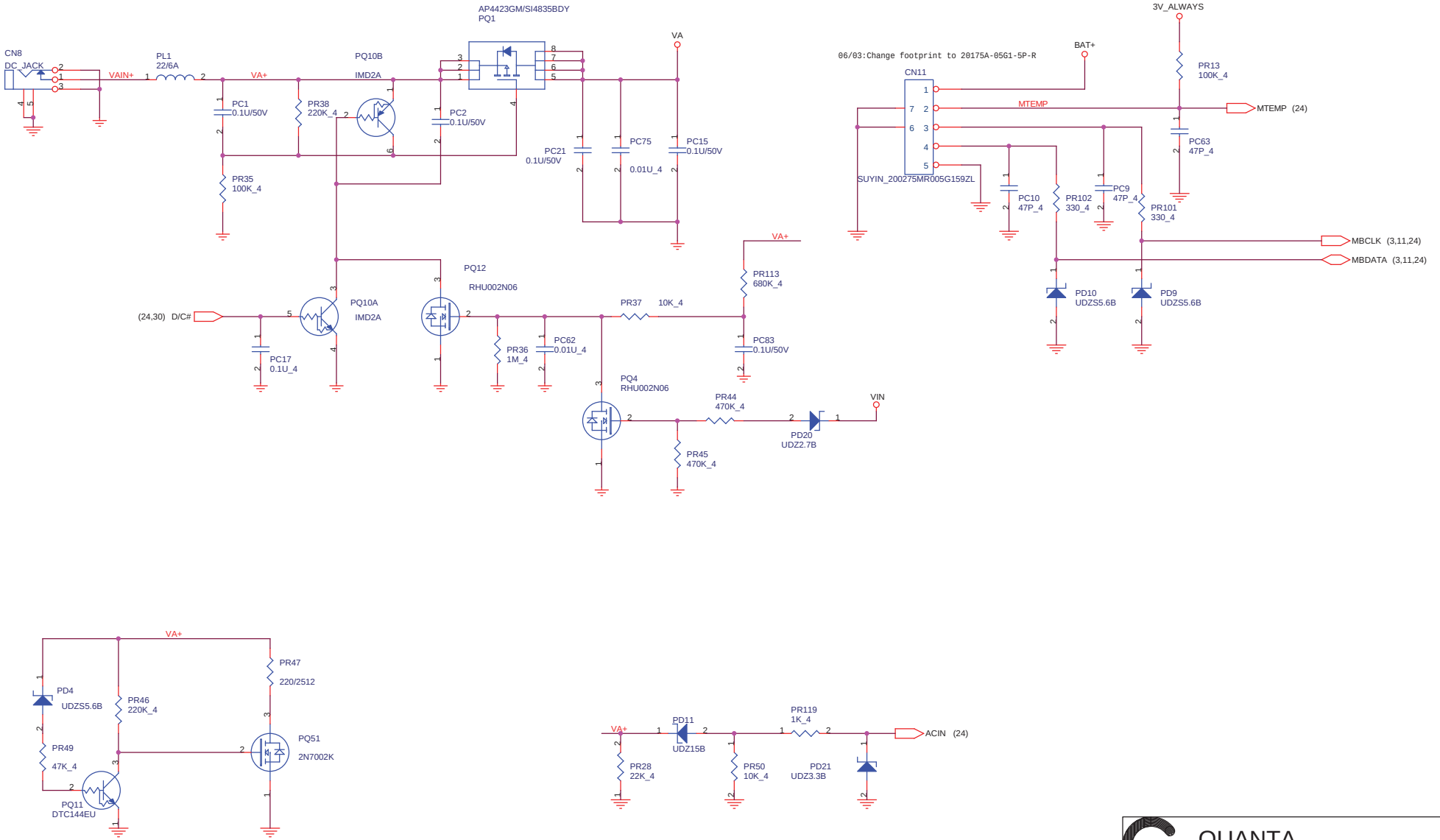

QUANTA COMPUTER

Title	POWER (ADAPTER IN)	
Size	Document Number BQ1	Rev 1A
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