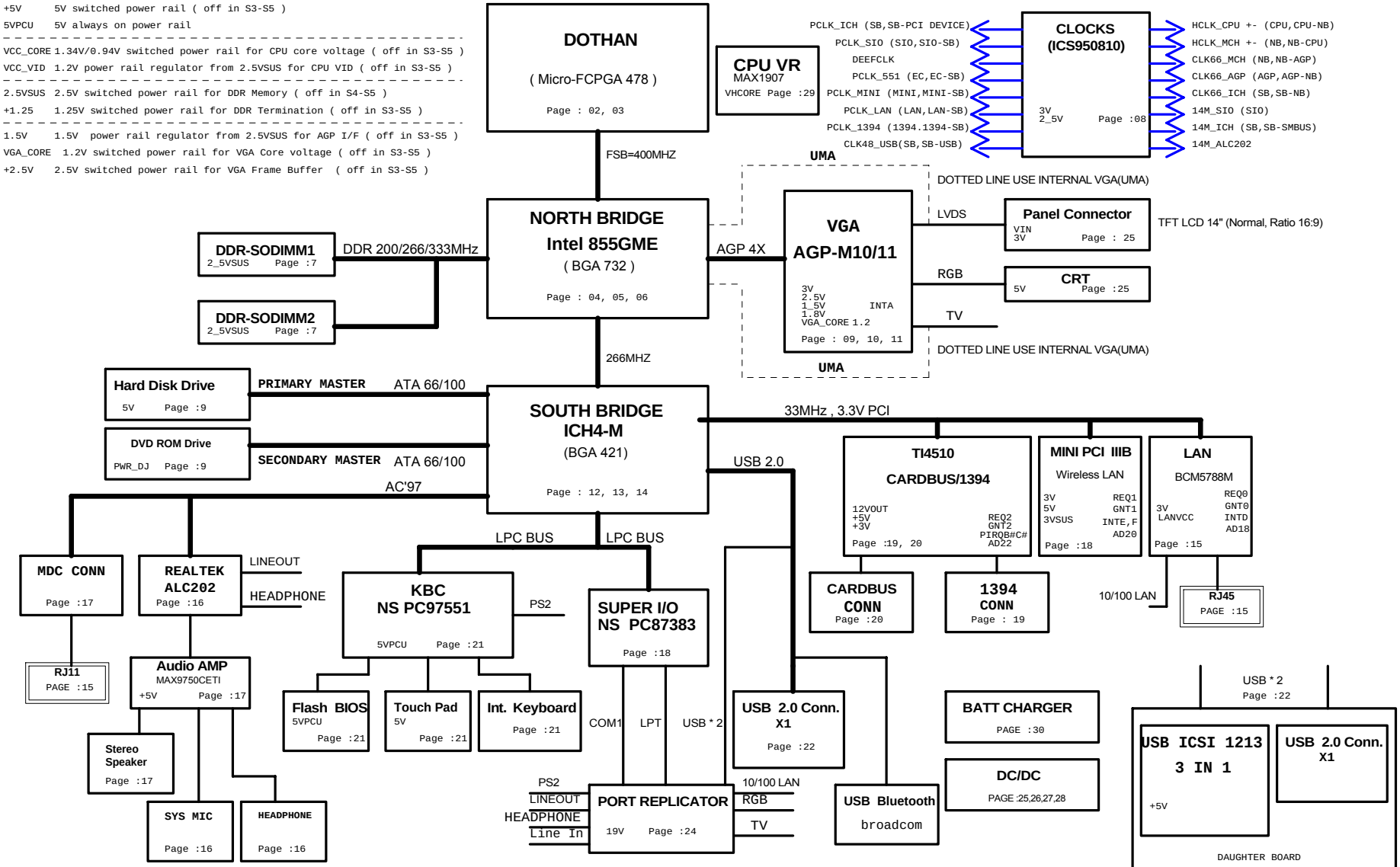
Voltage Rails

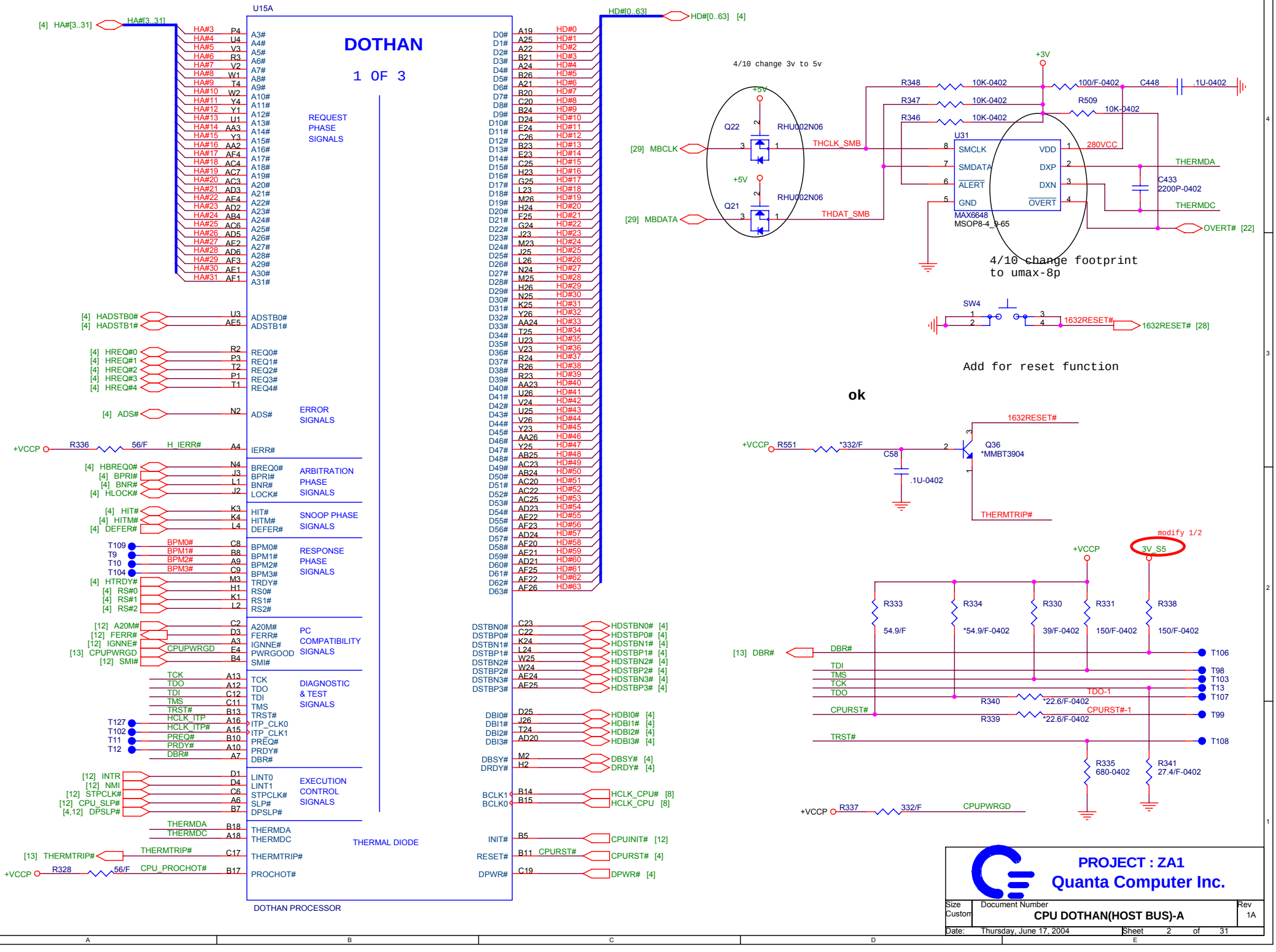
PWR_SRC	Primary DC system power supply
3VSUS	3.3V switched power rail (off in S4-S5)
+3V	3.3V switched power rail (off in S3-S5)
3VPCU	3V always on power rail
5VSUS	5V switched power rail (off in S4-S5)
+5V	5V switched power rail (off in S3-S5)
5VPCU	5V always on power rail
VCC_CORE	1.34V/0.94V switched power rail for CPU core voltage (off in S3-S5)
VCC_VID	1.2V power rail regulator from 2.5VSUS for CPU VID (off in S3-S5)
2.5VSUS	2.5V switched power rail for DDR Memory (off in S4-S5)
+1.25	1.25V switched power rail for DDR Termination (off in S3-S5)
1.5V	1.5V power rail regulator from 2.5VSUS for AGP I/F (off in S3-S5)
VGA_CORE	1.2V switched power rail for VGA Core voltage (off in S3-S5)
+2.5V	2.5V switched power rail for VGA Frame Buffer (off in S3-S5)

ZA1 SYSTEM BLOCK DIAGRAM



PROJECT : ZA1
Quanta Computer Inc.

Size: Custom	Document Number: BLOCK DIAGRAM	Rev: 1A
Date: Thursday, June 17, 2004	Sheet 1 of 31	


DOTHAN
1 0F 3
U15A
REQUEST PHASE SIGNALS
ERROR SIGNALS
ARBITRATION PHASE SIGNALS
SNOOP PHASE SIGNALS
RESPONSE PHASE SIGNALS
PC COMPATIBILITY SIGNALS
DIAGNOSTIC & TEST SIGNALS
EXECUTION CONTROL SIGNALS
THERMAL DIODE
DOTHAN PROCESSOR
4/10 change 3v to 5v
MAX6648
MSOP8-4_9-65
4/10 change footprint to umax-8p
Add for reset function
ok
modify 1/2
PROJECT : ZA1
Quanta Computer Inc.
CPU DOTHAN(HOST BUS)-A
Document Number
Rev 1A
Size Custom
Date: Thursday, June 17, 2004
Sheet 2 of 31

CH44702K912

VCC_CORE
C429 .47U/10V
C418 .47U/10V
C414 .47U/10V
C430 .47U/10V

VCC_CORE
C420 .47U/10V
C416 .47U/10V
C432 .47U/10V
C431 .47U/10V

220U/2.5V(CC7343) *2

VCC_CORE
C82 150U/4V-3528
C402 150U/4V-3528

D: Change CH7220LMJB0(45mΩ)to CH7221LMJB4(18mΩ).

CPU_VCCA
C404 10U/6.3V-0805
C451 10U/6.3V-0805
C217 10U/6.3V-0805
C428 10U/6.3V-0805
C403 .1U-0402
C449 .1U-0402
C214 .1U-0402
C415 .1U-0402

+VCCP
C238 150U/4V-3528
C239 150U/4V-3528
150u
C426 10U/6.3V-0805
C425 10U/6.3V-0805
C424 10U/6.3V-0805
C423 10U/6.3V-0805
C422 10U/6.3V-0805

+VCCP
C438 .1U-0402
C446 .1U-0402
C450 .1U-0402
C447 .1U-0402
C452 .1U-0402
C436 .1U-0402

10U/6.3V/X5R(CC0805) *38

VCC_CORE
C457 10U/6.3V-0805
C456 10U/6.3V-0805
C458 10U/6.3V-0805
C459 10U/6.3V-0805
C460 10U/6.3V-0805

VCC_CORE
C461 10U/6.3V-0805
C440 10U/6.3V-0805
C441 10U/6.3V-0805
C442 10U/6.3V-0805
C443 10U/6.3V-0805

VCC_CORE
C444 10U/6.3V-0805
C445 10U/6.3V-0805
C219 10U/6.3V-0805
C218 10U/6.3V-0805

VCC_CORE
C225 10U/6.3V-0805
C220 10U/6.3V-0805
C226 10U/6.3V-0805
C212 10U/6.3V-0805

VCC_CORE
C213 10U/6.3V-0805
C221 10U/6.3V-0805
C427 10U/6.3V-0805
C468 10U/6.3V-0805
C469 10U/6.3V-0805

VCC_CORE
C470 10U/6.3V-0805
C464 10U/6.3V-0805
C465 10U/6.3V-0805
C453 10U/6.3V-0805
C463 10U/6.3V-0805

VCC_CORE
C467 10U/6.3V-0805
C454 10U/6.3V-0805
C462 10U/6.3V-0805
C466 10U/6.3V-0805
C455 10U/6.3V-0805

4/10 change P/N
to CS02743F907

R351 27.4/F COMP0 P25
R350 54.9/F COMP1 P26
R352 27.4/F COMP2 AB2
R353 54.9/F COMP3 AB1

+VCCP
R181 1K/F-0402 GTLREF0 AD26
R182 2K/F-0402 E26
G1
AC1

A0: stuff
A1: NC
R329 *1K-0402 TEST1 C5
R345 *1K-0402 TEST2 F23

60MIL
20mil
+1.8V
R191 0-0805 CPU_VCCA AC26
+1.5V
R192 *0-0805 N1
B1
F26

VCC_CORE [30]
+VCCP [2,4,6,12,27,30]

U15B

DOTHAN
2 OF 3
POWER, GROUND, RESERVED SIGNALS

COMP0 COMP1 COMP2 COMP3
GTLREF0 GTLREF1 GTLREF2 GTLREF3
TEST1 TEST2
VCCA3 VCCA2 VCCA1 VCCA0
VCC_CORE
VCC00 VCC01 VCC02 VCC03 VCC04 VCC05 VCC06 VCC07 VCC08 VCC09 VCC10 VCC11 VCC12 VCC13 VCC14 VCC15 VCC16 VCC17 VCC18 VCC19 VCC20 VCC21 VCC22 VCC23 VCC24 VCC25 VCC26 VCC27 VCC28 VCC29 VCC30 VCC31 VCC32 VCC33 VCC34 VCC35 VCC36 VCC37 VCC38 VCC39 VCC40 VCC41 VCC42 VCC43 VCC44 VCC45 VCC46 VCC47 VCC48 VCC49 VCC50 VCC51 VCC52 VCC53 VCC54 VCC55 VCC56 VCC57 VCC58 VCC59 VCC60 VCC61 VCC62 VCC63 VCC64 VCC65 VCC66 VCC67 VCC68 VCC69 VCC70 VCC71
VSS1 VSS2 VSS3 VSS4 VSS5 VSS6 VSS7 VSS8 VSS9 VSS10 VSS11 VSS12 VSS13 VSS14 VSS15 VSS16 VSS17 VSS18 VSS19 VSS20 VSS21 VSS22 VSS23 VSS24 VSS25 VSS26 VSS27 VSS28 VSS29 VSS30 VSS31 VSS32 VSS33 VSS34 VSS35 VSS36 VSS37 VSS38 VSS39 VSS40 VSS41 VSS42 VSS43 VSS44 VSS45 VSS46 VSS47 VSS48 VSS49 VSS50 VSS51 VSS52 VSS53 VSS54 VSS55 VSS56 VSS57 VSS58 VSS59 VSS60 VSS61 VSS62 VSS63 VSS64 VSS65 VSS66 VSS67 VSS68 VSS69 VSS70 VSS71 VSS72 VSS73 VSS74 VSS75 VSS76 VSS77 VSS78 VSS79 VSS80 VSS81 VSS82 VSS83 VSS84 VSS85 VSS86 VSS87 VSS88 VSS89 VSS90 VSS91 VSS92 VSS93 VSS94 VSS95 VSS96 VSS97 VSS98 VSS99 VSS100
A2 A5 A8 A11 A14 A17 A20 A23 A26 B3 B6 B9 B12 B16 B19 B22 B25 C1 C4 C7 C10 C13 C15 C18 C21 C24 D2 D5 D7 D9 D11 D13 D15 D17 D19 D21 D23 D26 E3 E6 E8 E10 E12 E14 E16 E18 E20 E22 E25 F1 F4 F5 F7 F9 F11 F13 F15 F17 F19 F21 F24 G2 G6 G22 G23 G26 H3 H5 H21 H25 J1 J4 J6 J22 J24 K2 K5 K21 K23 K26 L3 L6 L22 L25 M1 M4 M5 M21 M24 N3 N6 N22 N23 N26 P2 P5 P21 P24 R1 R4

DOTHAN PROCESSOR

U15C

+VCCP

DOTHAN
3 OF 3
POWER, GROUND AND NC

VCCP0 VCCP1 VCCP2 VCCP3 VCCP4 VCCP5 VCCP6 VCCP7 VCCP8 VCCP9 VCCP10 VCCP11 VCCP12 VCCP13 VCCP14 VCCP15 VCCP16 VCCP17 VCCP18 VCCP19 VCCP20 VCCP21 VCCP22 VCCP23 VCCP24 VCCP25 VCCP26
D10 D12 D14 D16 E11 E13 E15 F10 F12 F14 F16 K6 L5 L21 M6 M22 N5 N21 P6 P22 R5 R21 T6 T22 U21 P23 W4

VID
[30] CPU_VID0 E2 VID0
[30] CPU_VID1 F2 VID1
[30] CPU_VID2 F3 VID2
[30] CPU_VID3 G3 VID3
[30] CPU_VID4 G4 VID4
[30] CPU_VID5 H4 VID5

R180 *54.9/F Z0501 AE7 VCCSENSE
R179 *54.9/F Z0502 AF6 VSSSENSE

T97 Z0503 B2 NC0
T54 Z0504 AF7 NC1
T14 Z0505 C14 NC2
T100 Z0506 G3 NC3
R332 *1K-0402 Z0507 C16 TEST3
T120 Z0508 E1 PSI

R6 R22 R25 T3 T5 T21 T23 T26 U2 U6 U22 U24 V1 V4 V5 V21 V25 W3 W6 W22
VSS1 VSS2 VSS3 VSS4 VSS5 VSS6 VSS7 VSS8 VSS9 VSS10 VSS11 VSS12 VSS13 VSS14 VSS15 VSS16 VSS17 VSS18 VSS19 VSS20

VSS21 VSS22 VSS23 VSS24 VSS25 VSS26 VSS27 VSS28 VSS29 VSS30 VSS31 VSS32 VSS33 VSS34 VSS35 VSS36 VSS37 VSS38 VSS39 VSS40 VSS41 VSS42 VSS43 VSS44 VSS45 VSS46 VSS47 VSS48 VSS49 VSS50 VSS51 VSS52 VSS53 VSS54 VSS55 VSS56 VSS57 VSS58 VSS59 VSS60 VSS61 VSS62 VSS63 VSS64 VSS65 VSS66 VSS67 VSS68 VSS69 VSS70 VSS71 VSS72 VSS73 VSS74 VSS75 VSS76 VSS77 VSS78 VSS79 VSS80 VSS81 VSS82 VSS83 VSS84 VSS85 VSS86 VSS87 VSS88 VSS89 VSS90 VSS91 VSS92
W23 W26 Y2 Y5 Y21 Y24 AA1 AA4 AA6 AA8 AA10 AA12 AA14 AA16 AA18 AA20 AA22 AA25 AB3 AB5 AB7 AB9 AB11 AB13 AB15 AB17 AB19 AB21 AB23 AB26 AC2 AC5 AC8 AC10 AC12 AC14 AC16 AC18 AC21 AC24 AD1 AD4 AD7 AD9 AD11 AD13 AD15 AD17 AD19 AD22 AD25 AE3 AE6 AE8 AE10 AE12 AE14 AE16 AE18 AE20 AE23 AE26 AF2 AF5 AF9 AF11 AF13 AF15 AF17 AF19 AF21 AF24

DOTHAN PROCESSOR

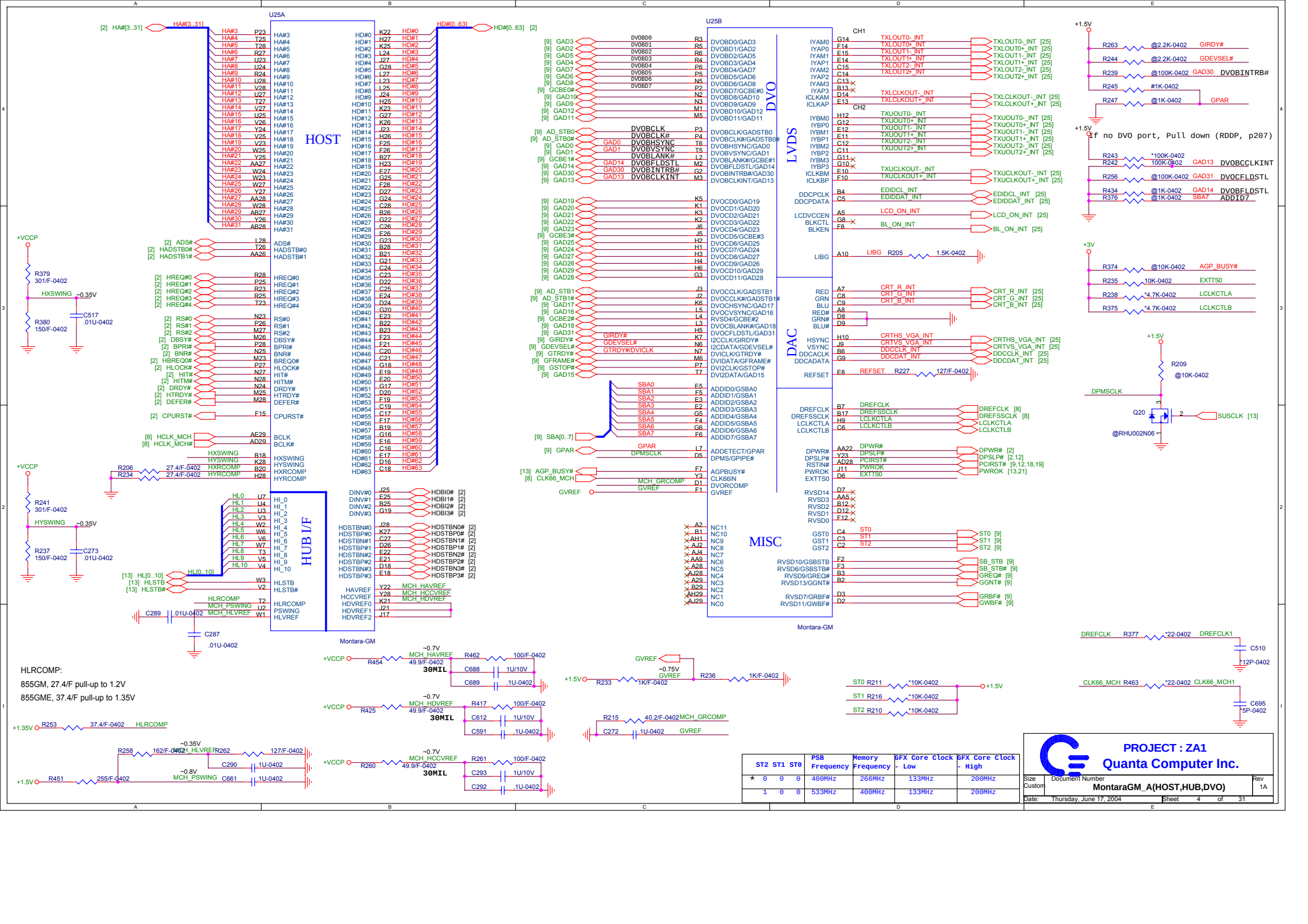
VCC_CORE: 1.356V~0.844V ,0.748V(Deeper sleep)

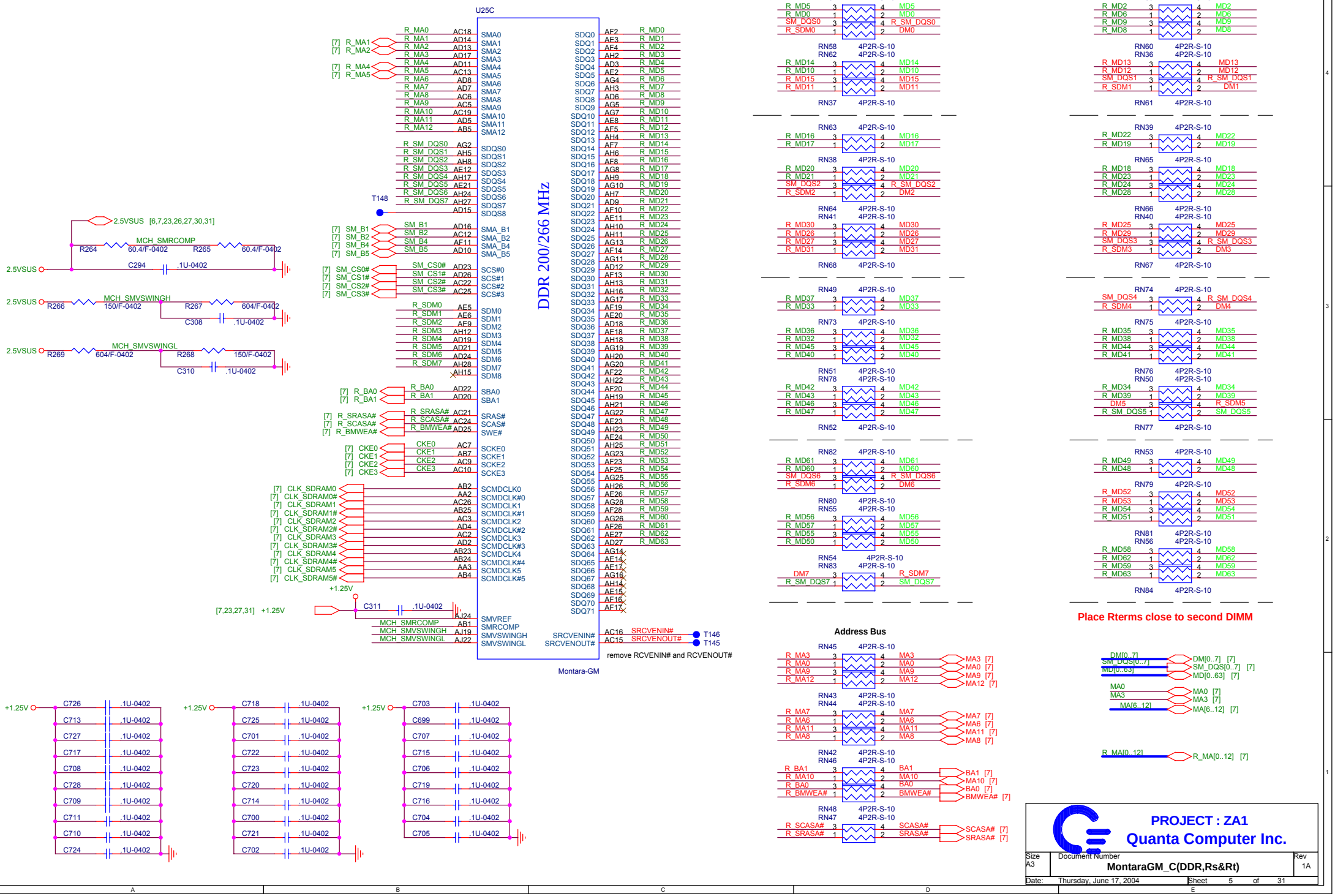
VCCP : 1.05V

VCCA : 1.8V

PROJECT : ZA1
Quanta Computer Inc.

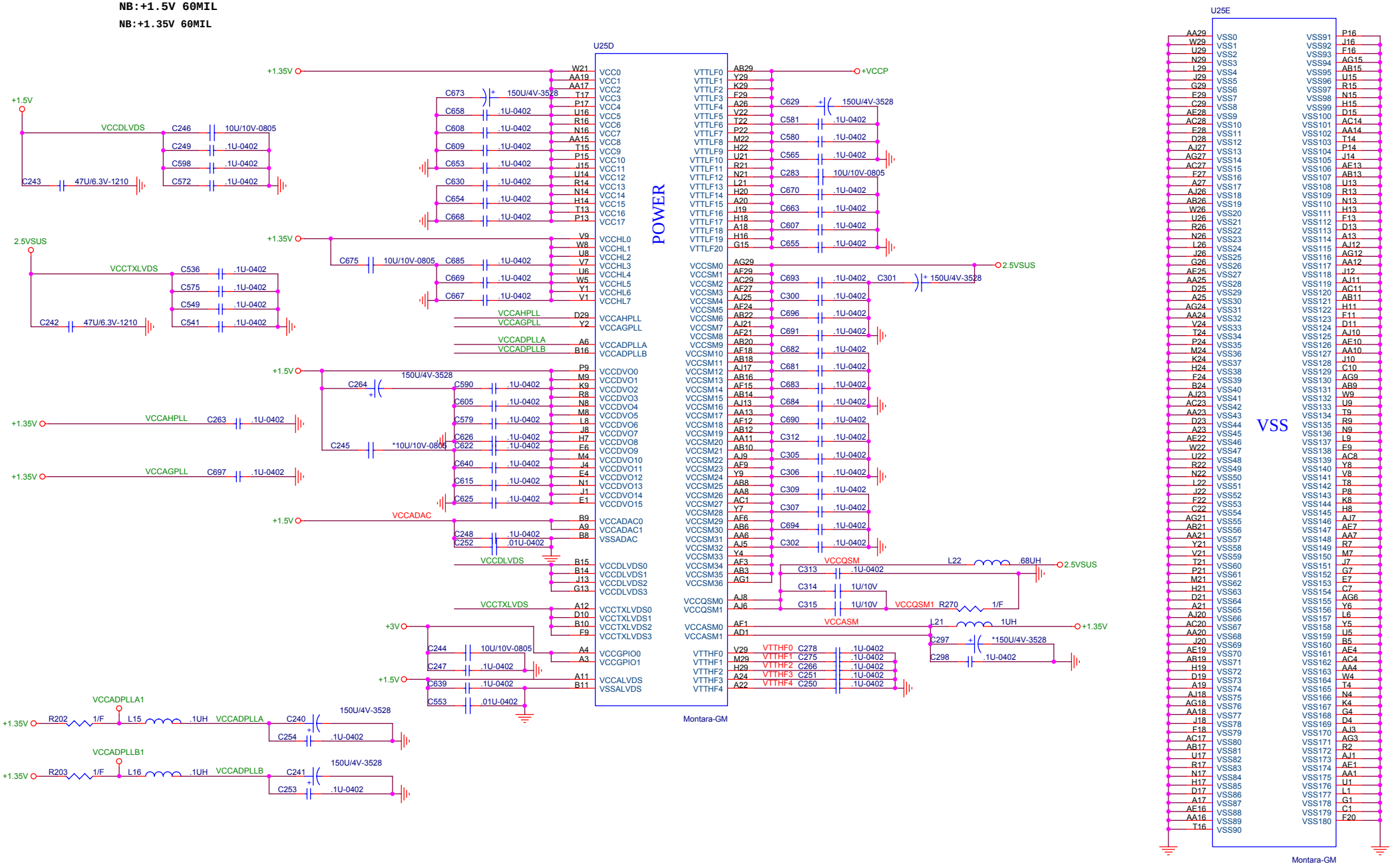
Size	Document Number	Rev
B	CPU DOTHAN (POWER/NC)-B	1A
Date: Tuesday, July 06, 2004	Sheet 3 of 31	


U25A
HOST
HUB I/F
U25B
LVDS
DVO
DAC
MISC
CH1
CH2
Montara-GM
HLRCOMP:
855GM, 27.4/F pull-up to 1.2V
855GME, 37.4/F pull-up to 1.35V
If no DVO port, Pull down (RDDP, p207)
PROJECT : ZA1
Quanta Computer Inc.
MontaraGM_A(HOST,HUB,DVO)
Thursday, June 17, 2004
Sheet 4 of 31
Rev 1A


U25C
DDR 200/266 MHz
Montara-GM
2.5VSUS [6,7,23,26,27,30,31]
MCH_SMRCOMP
R264 60.4/F-0402
R265 60.4/F-0402
C294 .1U-0402
MCH_SMVSWINGH
R266 150/F-0402
R267 604/F-0402
C308 .1U-0402
MCH_SMVSWINGL
R269 604/F-0402
R268 150/F-0402
C310 .1U-0402
T148
+1.25V
C311 .1U-0402
[7,23,27,31] +1.25V
remove RCVENIN# and RCVENOUT#
Data Bus
Address Bus
Place Rterms close to second DIMM
PROJECT : ZA1
Quanta Computer Inc.
Document Number
MontaraGM_C(DDR,Rs&Rt)
Size A3
Rev 1A
Date: Thursday, June 17, 2004
Sheet 5 of 31

NB:+1.5V 60MIL

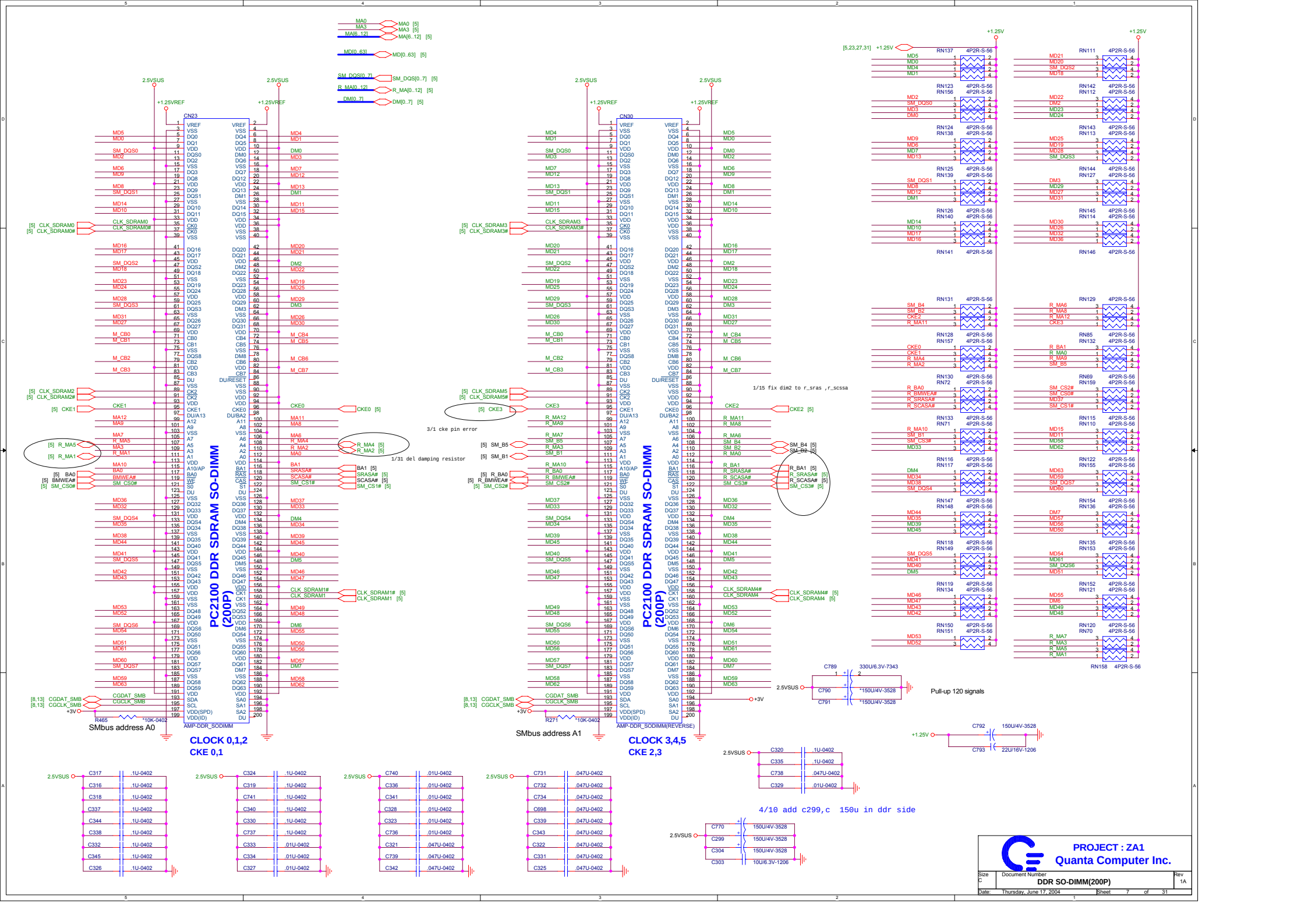
NB:+1.35V 60MIL



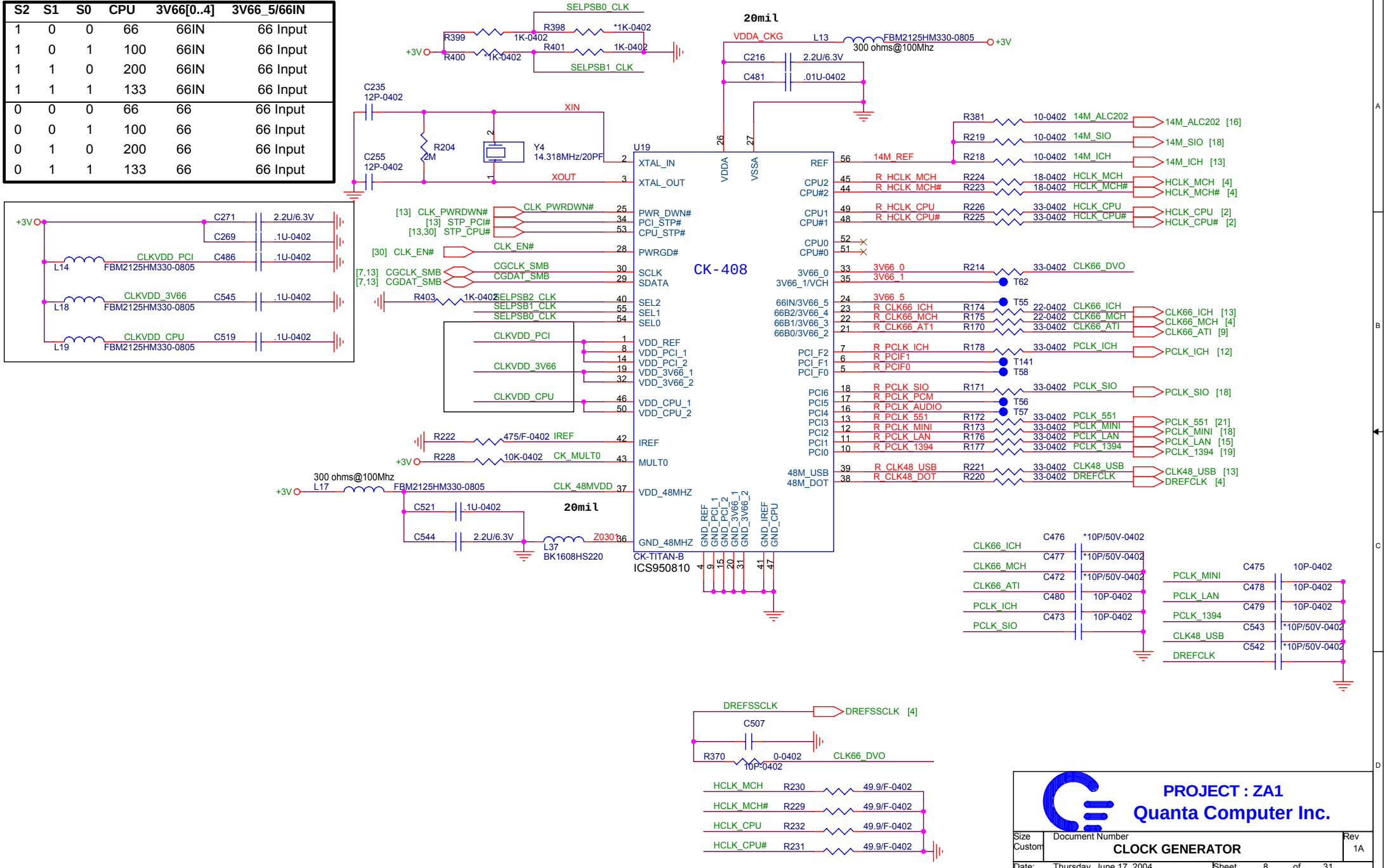
PROJECT : ZA1

Quanta Computer Inc.

Size	Document Number	Rev
A3	MontaraGM_B(VCC,GND)	1A
Date: Thursday, June 17, 2004	Sheet 6 of 31	


CN23
PC2100 DDR SDRAM SO-DIMM (200P)
AMP-DDR_SODIMM
SMbus address A0
CLOCK 0,1,2
CKE 0,1
CN30
PC2100 DDR SDRAM SO-DIMM (200P)
AMP-DDR_SODIMM(REVERSE)
SMbus address A1
CLOCK 3,4,5
CKE 2,3
3/1 cke pin error
1/31 del damping resistor
1/15 fix dim2 to r_sras ,r_scssa
Pull-up 120 signals
4/10 add c299,c 150u in ddr side
PROJECT : ZA1
Quanta Computer Inc.
DDR SO-DIMM(200P)
Thursday, June 17, 2004

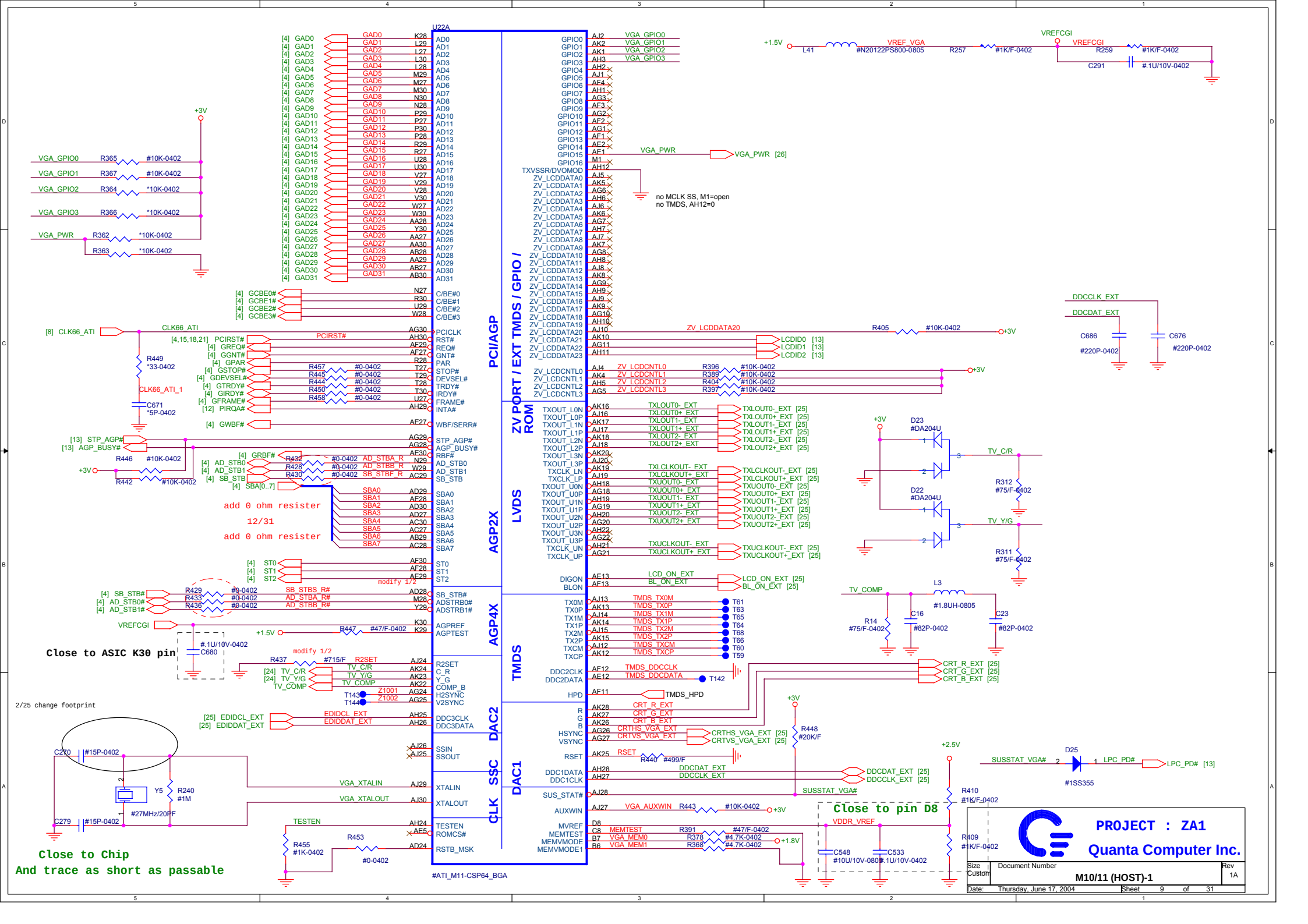
S2	S1	S0	CPU	3V66[0..4]	3V66_5/66IN
1	0	0	66	66IN	66 Input
1	0	1	100	66IN	66 Input
1	1	0	200	66IN	66 Input
1	1	1	133	66IN	66 Input
0	0	0	66	66	66 Input
0	0	1	100	66	66 Input
0	1	0	200	66	66 Input
0	1	1	133	66	66 Input

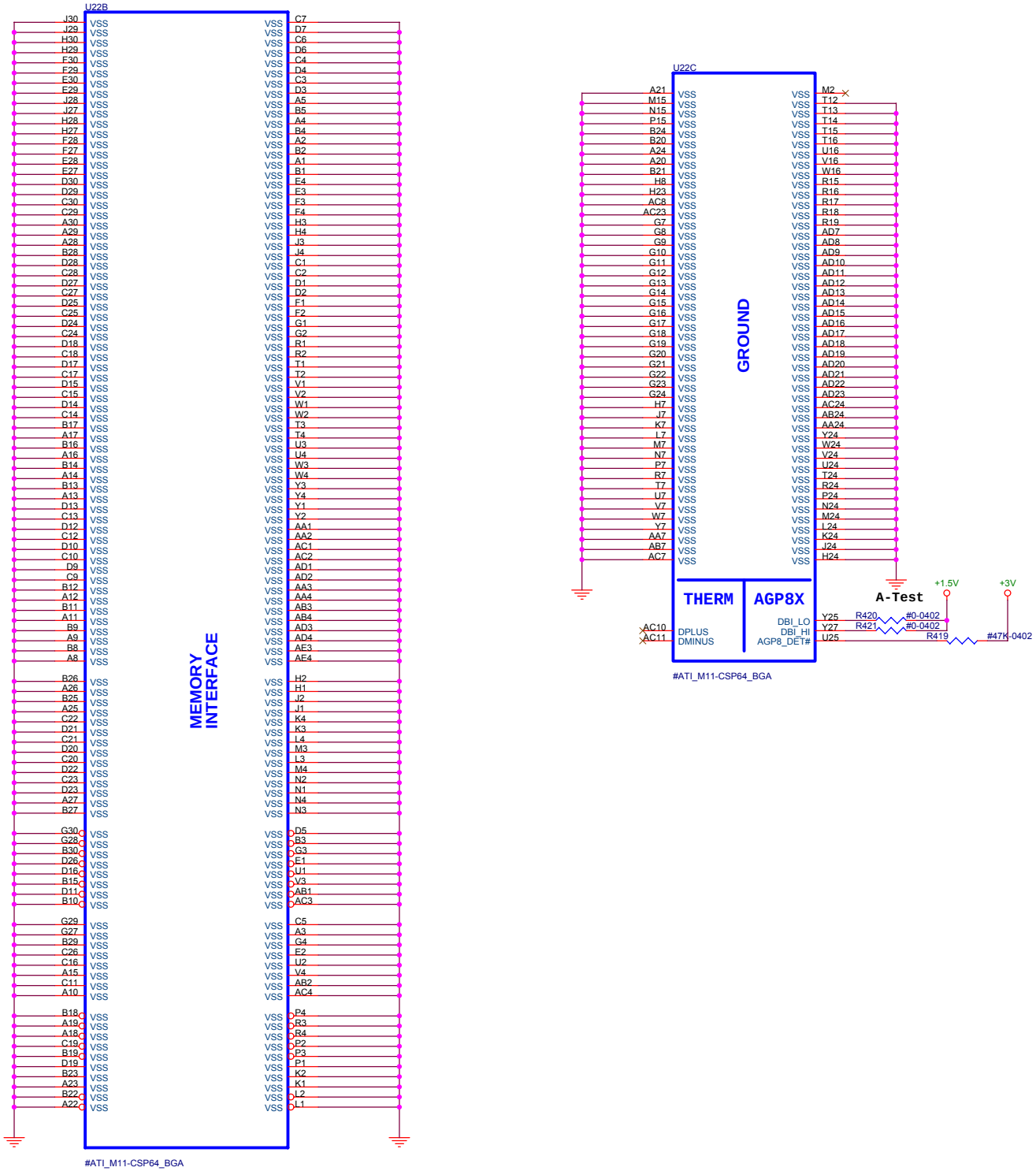


PROJECT : ZA1

Quanta Computer Inc.

Size	Document Number	Rev
Custom	CLOCK GENERATOR	1A
Date: Thursday, June 17, 2004	Sheet 8 of 31	

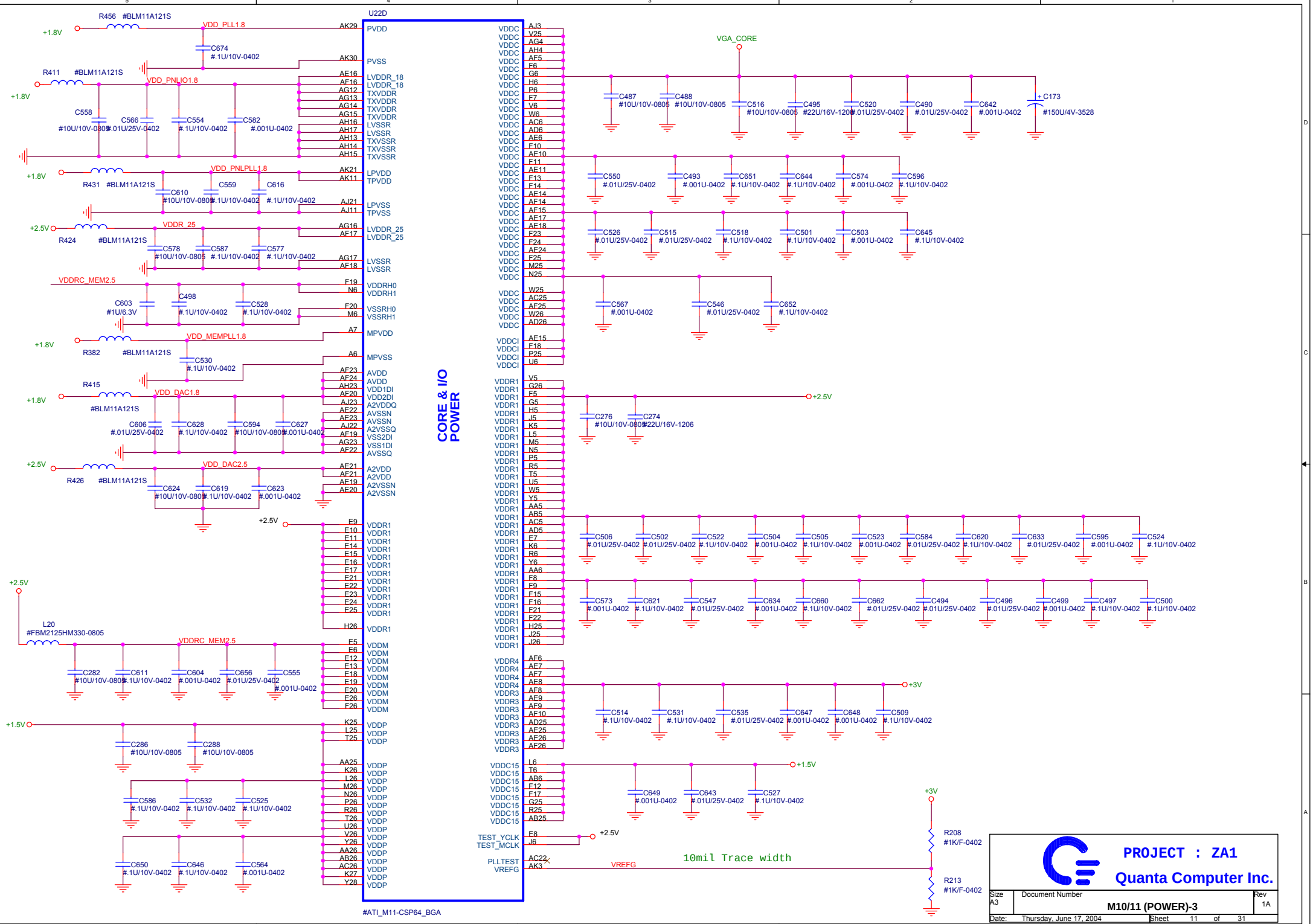

U22A
PCI/AGP
ZV PORT / EXT TMDS / GPIO / ROM
LVDS
AGP2X
AGP4X
TMDS
DAC2
SSC
DAC1
CLK
#ATI_M11-CSP64_BGA
add 0 ohm resister
12/31
add 0 ohm resister
Close to ASIC K30 pin
2/25 change footprint
Close to Chip
And trace as short as passable
Close to pin D8
PROJECT : ZA1
Quanta Computer Inc.
M10/11 (HOST)-1
Thursday, June 17, 2004
Sheet 9 of 31



PROJECT : ZA1

Quanta Computer Inc.

Size	Document Number	Rev
Custom	M10/11 (MEMORY) & SS-2	1A
Date: Thursday, June 17, 2004	Sheet 10 of 31	


U22D
CORE & I/O POWER
#ATI_M11-CSP64_BGA
VGA_CORE
VDD_PLL1.8
VDD_PNLIO1.8
VDD_PNLPLL1.8
VDDR_25
VDDRC_MEM2.5
VDD_MEMPLL1.8
VDD_DAC1.8
VDD_DAC2.5
+1.8V
+2.5V
+1.5V
+3V
R456 #BLM11A121S
R411 #BLM11A121S
R431 #BLM11A121S
R424 #BLM11A121S
R382 #BLM11A121S
R415 #BLM11A121S
R426 #BLM11A121S
L20 #FBM2125HM330-0805
R208 #1K/F-0402
R213 #1K/F-0402
10mil Trace width
PROJECT : ZA1
Quanta Computer Inc.
Size A3
Document Number M10/11 (POWER)-3
Rev 1A
Date: Thursday, June 17, 2004
Sheet 11 of 31

ICH HUB

U11A

CPU

PCI

IDE

ICH4-M

HDD CONNECTOR

150MIL

4/10 del L50

CD-ROM CONNECTOR

4/10 del L49

4/10 siordy pull high to +3v

4/10 cn24 pin 41 connect to +5v

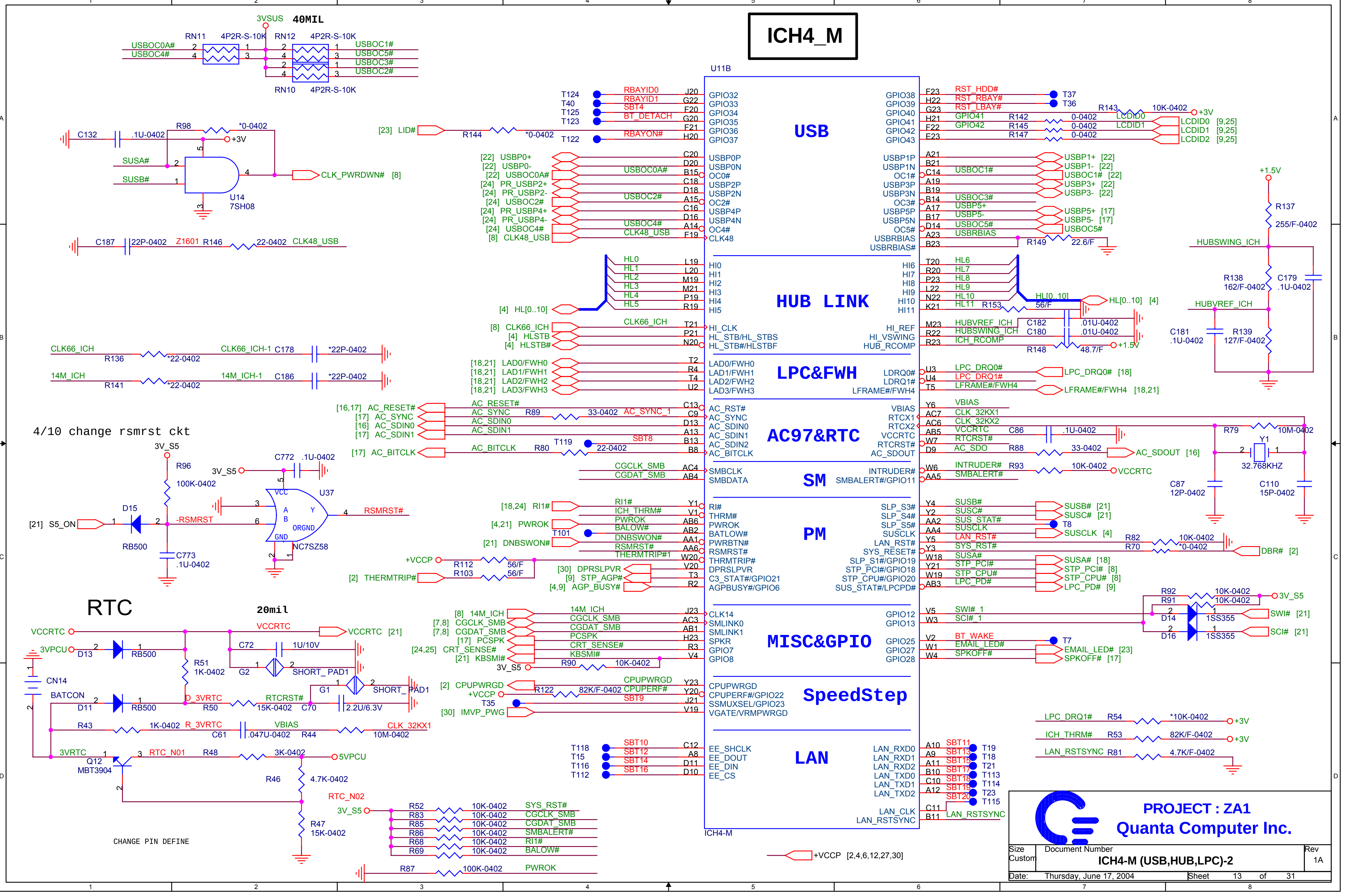
4/10 add 10u

PCI Pullups

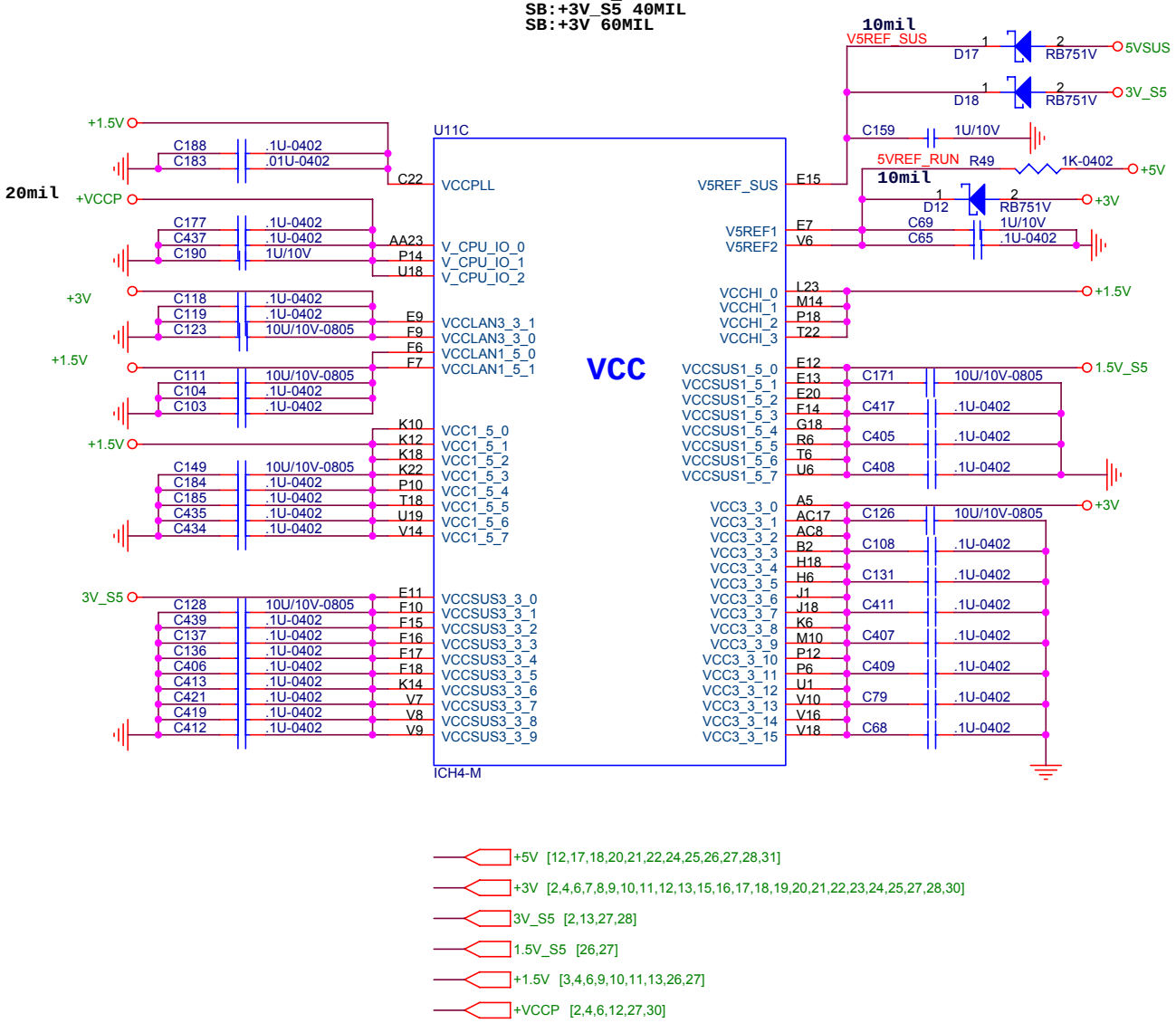
REQ0 : PCI LAN
REQ1 : MINI PCI
REQ2 : 1394/CARDBUS

PIRQA#: VGA
PIRQB#: MINI-PCI
PIRQC#: MINI-PCI
PIRQD#: PCI LAN
PIRQE#: CARDBUS/1394
PIRQF#: CARDBUS/1394

Project	PROJECT : ZA1
Company	Quanta Computer Inc.
Size	Custom
Document Number	ICH4-M (CPU,PCI,IDE)
Rev	1A
Date	Thursday, June 17, 2004
Sheet	12 of 31


ICH4_M
U11B
USB
HUB LINK
LPC&FWH
AC97&RTC
SM
PM
MISC&GPIO
SpeedStep
LAN
ICH4-M
40MIL
4/10 change rsmrst ckt
RTC
20mil
CHANGE PIN DEFINE
+VCCP [2,4,6,12,27,30]
PROJECT : ZA1
Quanta Computer Inc.
Size
Custom
Document Number
ICH4-M (USB,HUB,LPC)-2
Rev
1A
Date: Thursday, June 17, 2004
Sheet 13 of 31

SB:+1.5V 40MIL
SB:+1.5V_S5 40MIL
SB:+3V_S5 40MIL
SB:+3V 60MIL



+5V [12,17,18,20,21,22,24,25,26,27,28,31]

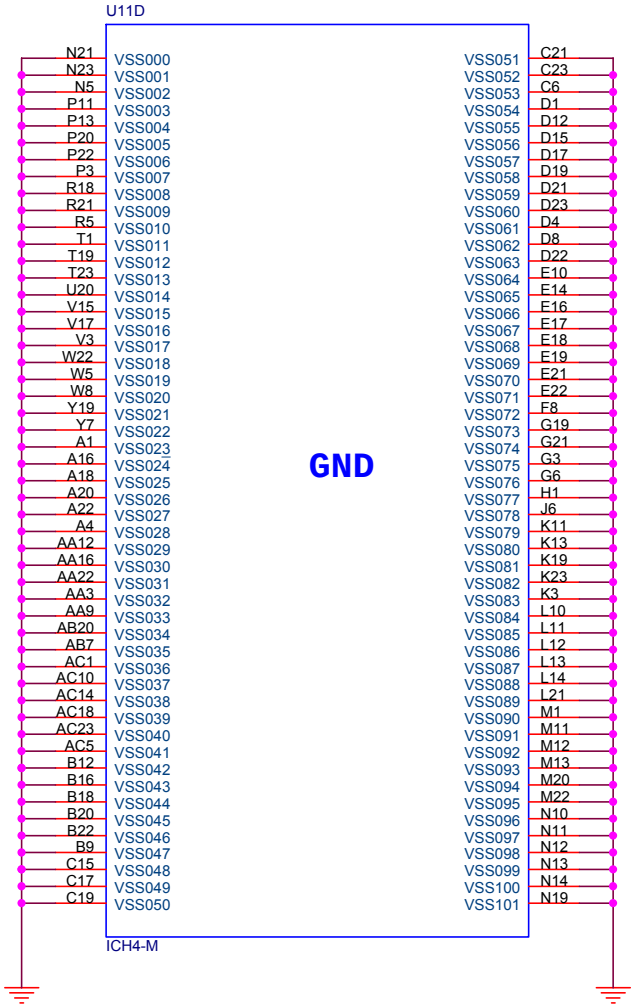
+3V [2,4,6,7,8,9,10,11,12,13,15,16,17,18,19,20,21,22,23,24,25,27,28,30]

3V_S5 [2,13,27,28]

1.5V_S5 [26,27]

+1.5V [3,4,6,9,10,11,13,26,27]

+VCCP [2,4,6,12,27,30]



PROJECT : ZA1
Quanta Computer Inc.

Size	Document Number	Rev
Custom	ICH4-M (POWER&GND)	1A
Date: Thursday, June 17, 2004	Sheet 14 of 31	

LAN (Boardcom BCM5705M)

ID Select	: AD18
Interrupt Pin	: PIRQB#
Request indicates	: REQ0#
Grant indicates	: GNT0#

15mm x 15mm BGA196

BCM5788M

RJ11

RJ45

BCM4401 is for 10/100(1.8)
BCM5702 is for giga
BCM5705M is for giga cost-down(12)

DB00A2LAN01(24ST0023P) is for 10/100
DB00A2LAN10(GS5019P) is for giga

10/23:Change L13 from TB160808G601 to TB160808B601(Stock issue)

10/23:Change L12 from TB160808G601 to TB160808B601(Stock issue)

10/23:Change L14 from TB160808G601 to TB160808B601(Stock issue)

08/27:(10)For RDAC, use 1.27K 1% for 4401, 1.24K 1% for BCM5705

10/22:Change U26 P/N from AKE3B1NKE05 to AKE3N8BKA04(AT24C128-10TI-2.7)

4/10:If use CLKRUN#,mount R128
If not use CLKRUN#,mount R127

add for 5705M 4/15

1.5" AWAY FROM CHIP
Use Philips BCP69-16, hfe=75~275

2.5V@88mA 0.564W

1.2V@618mA 0.803W

ok

PROJECT : ZA1
Quanta Computer Inc.

Size	Document Number	Rev
Custom	LAN (Boardcom BCM5788M) & RJ45,RJ11	1A
Date: Thursday, June 17, 2004	Sheet 15 of 31	

AC97 CODEC

1A not stuff

change to FBMJ2125HM330_T-0805

4/10 add 22u

External Clock	ID1	ID0
48MHz	X	low
14.318MHz	low	x
24.576MHz	x	x

ALC202

4/10 change r252,r251 from 1k to 300

change value to 330

U23

ALC202

SEL	FUNCTION
LOW	IN_B0
HIGH	IN_B1

change value to 100k

modify 5/19

1/10 change net

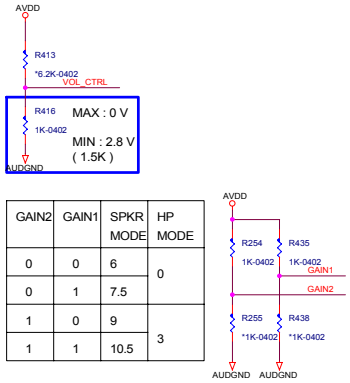
REMOVE D20

Spec Change 10/02

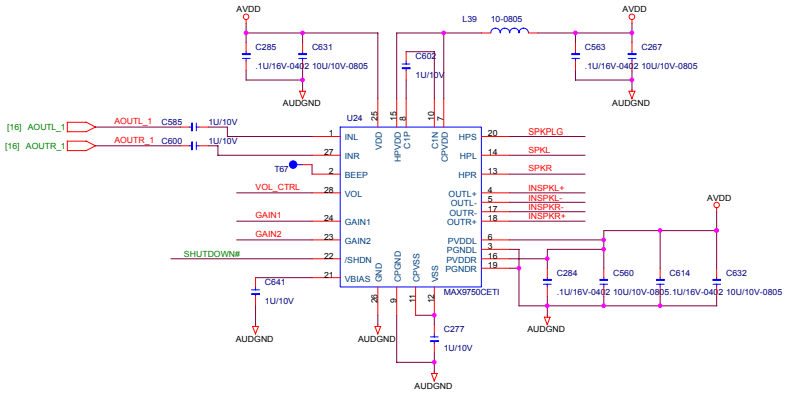
Size: Custom	Document Number: AC97 CODEC
Rev: 1A	
Date: Thursday, June 17, 2004	Sheet 16 of 31

PROJECT : ZA1

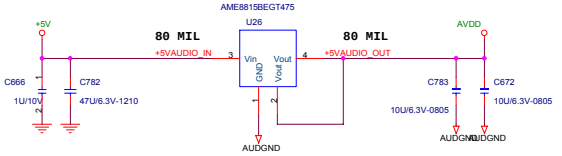
Quanta Computer Inc.



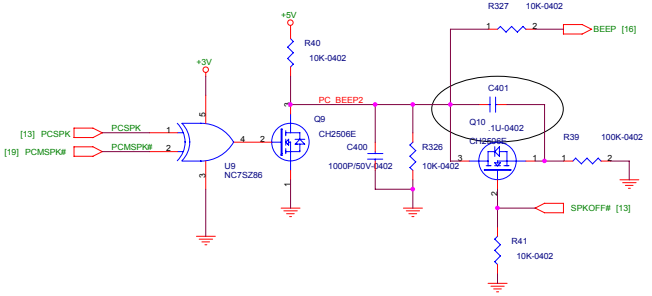
GAIN2	GAIN1	SPKR MODE	HP MODE
0	0	6	0
0	1	7.5	
1	0	9	3
1	1	10.5	

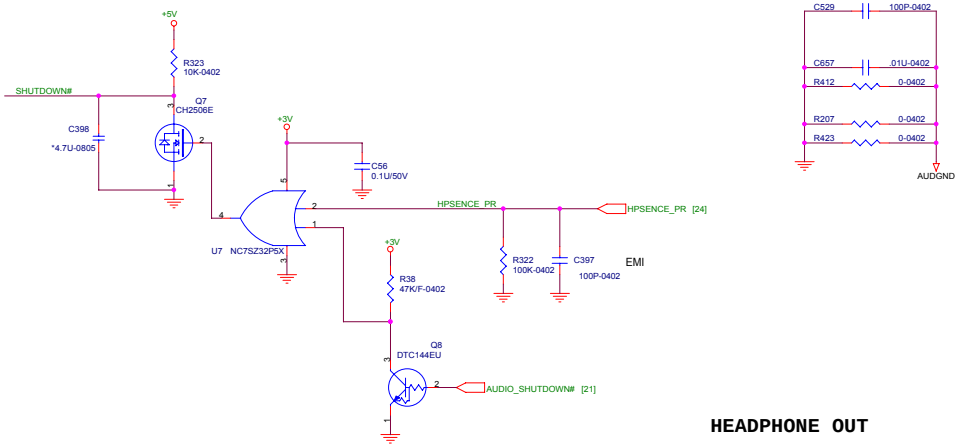


AUDIO POWER

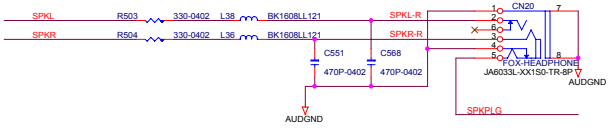


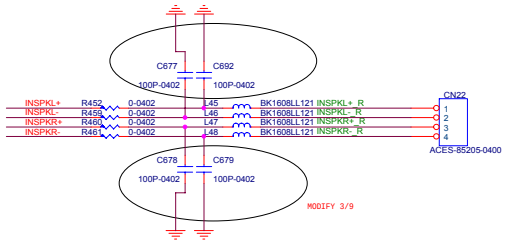
AUDIO BEEP



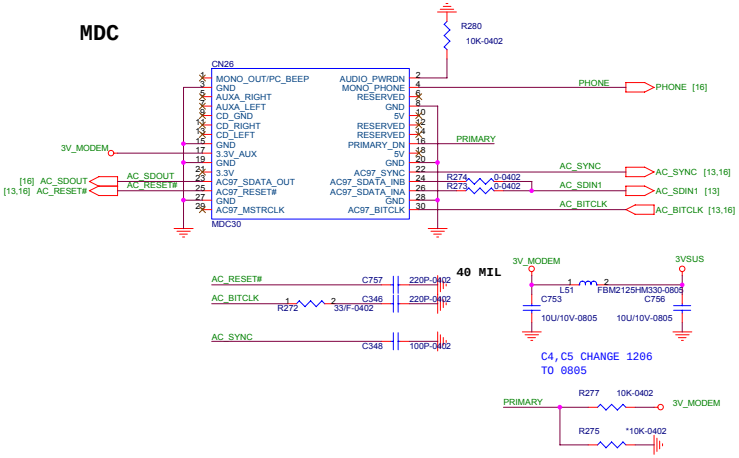


HEADPHONE OUT



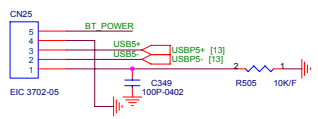


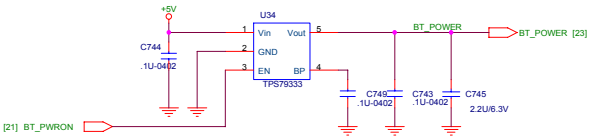
MDC

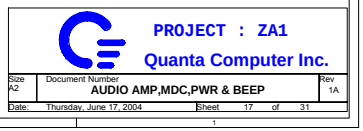


BLUETOOTH

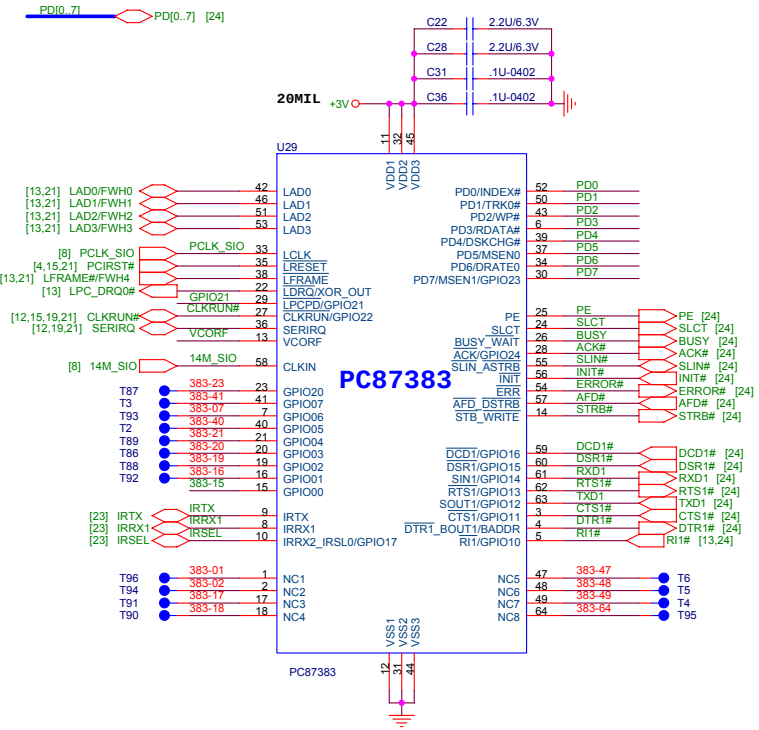
BT CONNECTOR

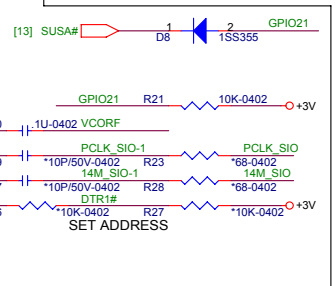


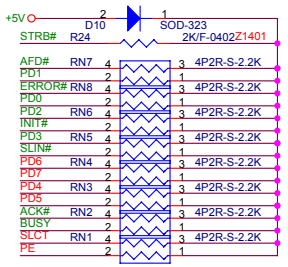




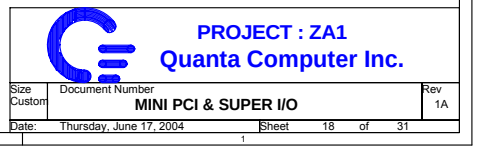
Super I/O







TYPE III MINI PCI SOCKET



CARDBUS/1394

ID Select : AD22
Interrupt Pin : PIRQ B,C#
Request indicates : REQ2#
Grant indicates : GNT2#

U17B

PCI/1394_OHCI PORTION

PCI INTERFACE

PCI4510

CN5 FOX_UV31413-K1

U33 NM24C02

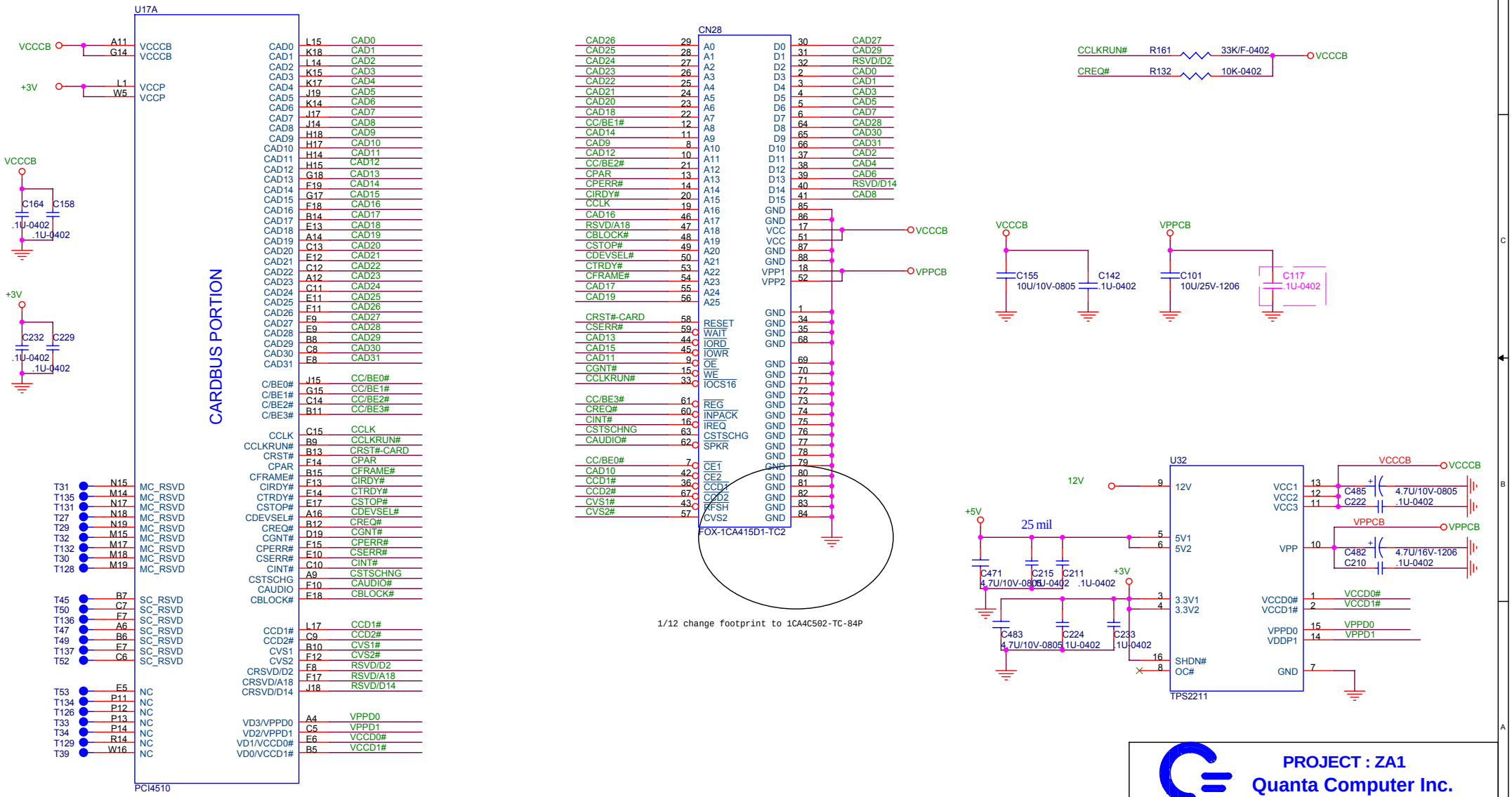
60MIL

2mS

PROJECT : ZA1
Quanta Computer Inc.

Size	Document Number	Rev
B	TI-PCI4510-1394	1A

Date: Thursday, June 17, 2004 Sheet 19 of 31

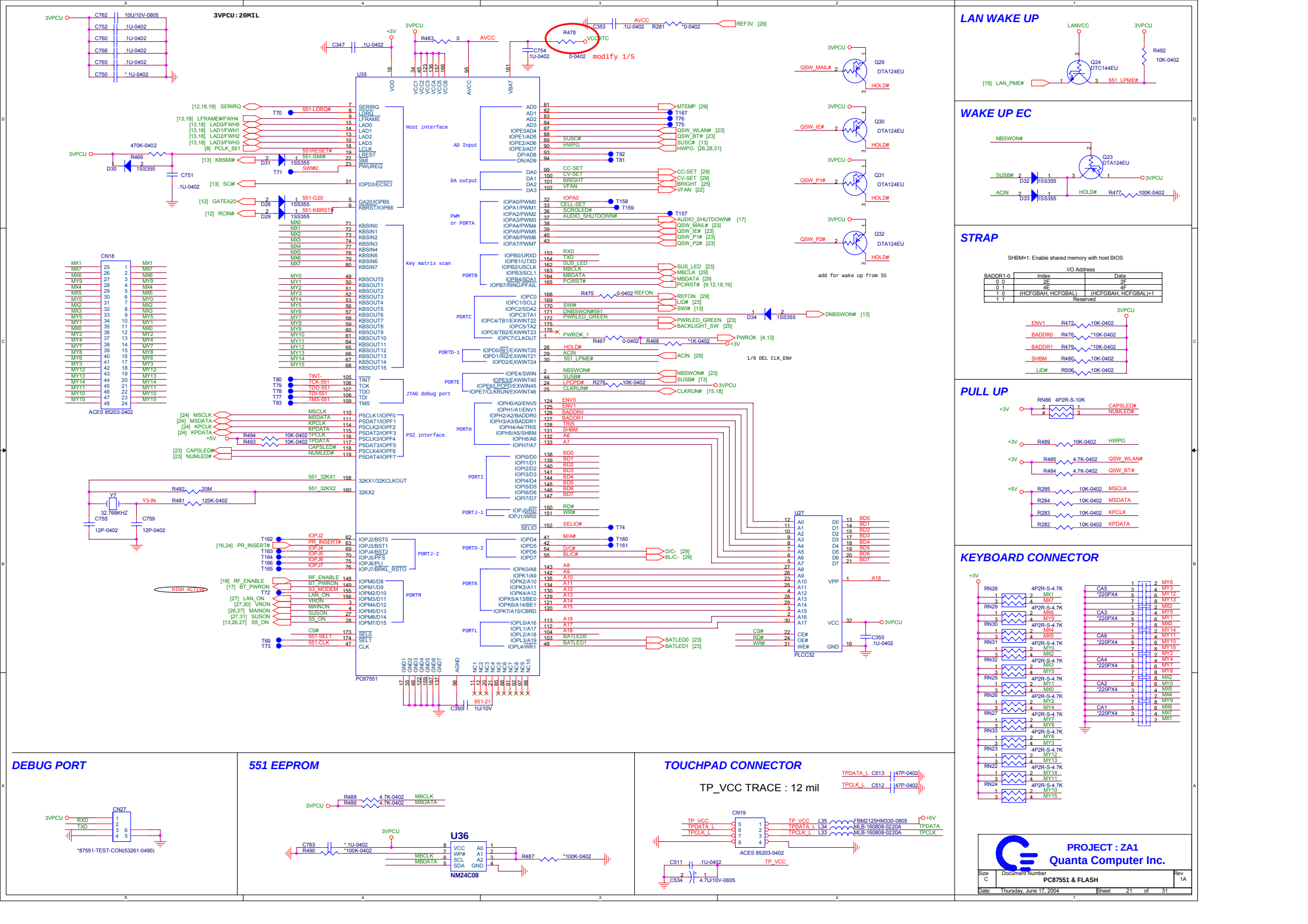


PROJECT : ZA1

Quanta Computer Inc.

Size	Document Number	Rev
B	TI-PCI4510-1394	1A

Date: Thursday, June 17, 2004 Sheet 20 of 31



LAN WAKE UP

WAKE UP EC

STRAP

SHBM=1: Enable shared memory with host BIOS

I/O Address

BADDR1-0	Index	Data
0 0	2E	2F
0 1	4E	4F
1 0	(HCFGBAH, HCFGBAL)	(HCFGBAH, HCFGBAL)+1
1 1	Reserved	

PULL UP

KEYBOARD CONNECTOR

DEBUG PORT

551 EEPROM

TOUCHPAD CONNECTOR

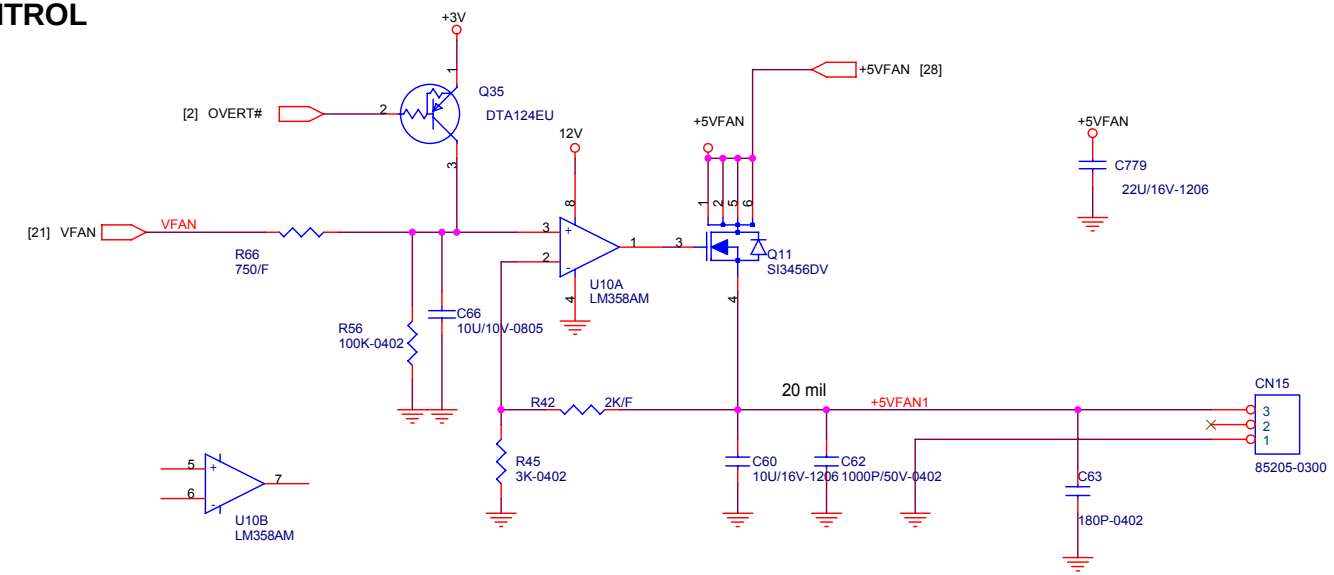
TP_VCC TRACE : 12 mil

PROJECT : ZA1
Quanta Computer Inc.

Size	Document Number	Rev
C	PC87551 & FLASH	1A

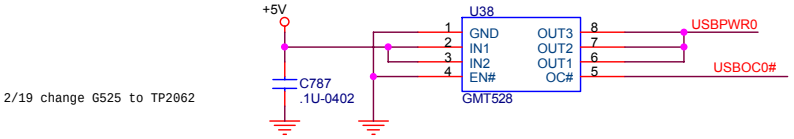
Date: Thursday, June 17, 2004 Sheet 21 of 31

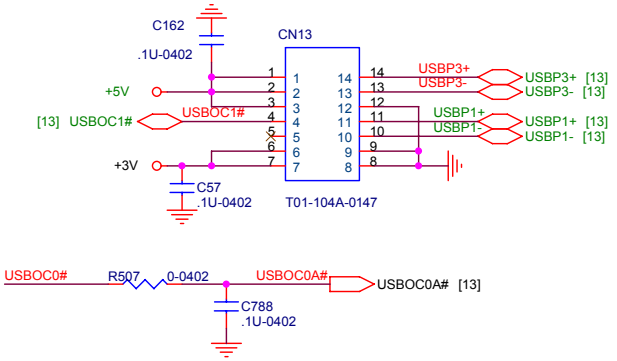
FAN CONTROL

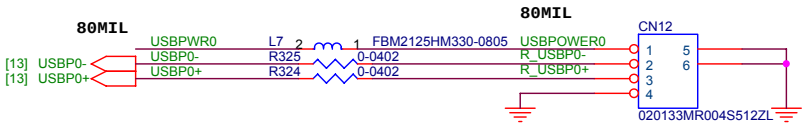


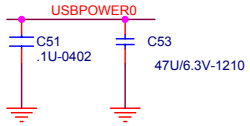
USB LIFT

USB RIGHT









PROJECT : ZA1
Quanta Computer Inc.

Size	Document Number	Rev
Custom	LAN, FAN CONN & USB POWER	1A
Date: Thursday, June 17, 2004	Sheet 22 of 31	

CPU THERMAL NUT

HOLE13 H-C236D150P2
HOLE14 H-C236D150P2
HOLE20 H-C236D150P2
HOLE16 H-C236D150P2
HOLE17 H-C236D150P2
HOLE21 H-C236D150P2

VGA THERMAL NUT

CD ROM NUT

HOLE23 H-TC236BC315D150P2
HOLE27 *H-C355D106I276P2

EZPORT NUT

HOLE4 *H-C355D106I276P2
HOLE2 *H-C355D106I276P2

HOLE26 *H-C355D106I315P2
HOLE22 *H-C355D106I276P2 AUDGND
HOLE11 *H-C355D106I276P2
HOLE15 *H-C236D150P2
HOLE7 *H-C236D150P2
HOLE12 *H-C236D150P2
HOLE10 *H-C236D118P2
HOLE9 *H-C355D106I276P2
HOLE19 *H-C315D106P2
HOLE18 *H-C355D106I315P2
HOLE8 *H-C355D106I276P2

HOLE6 *H-C236D110P2
HOLE5 *H-C276D110I236P2
HOLE24 *H-C236D150P2

SP

SP3 SPT SP2 SPT SP1 SPT

MDC NUT

HOLE25 *H-C236D150P2

CRT NUT

HOLE3 *H-C355D106I276P2
HOLE1 *H-C355D106I276P2

EMI

5VSUS: C295 C160 C296 C156 C157 .1U-0402
+3V: C64 C88 C130 C77 .1U-0402
5VPCU: C161 C105 C148 C138 .1U-0402
3VPCU: C116 C354 C113 C106 C193 .1U-0402
+1.25V: C735 .1U-0402, C712 .1U-0402
2.5VSUS: C593 .1U-0402
3VPCU: C761 C764 .1U-0402
3VSUS: C189 C758 .1U-0402
5VPCU: C133 .1U-0402

P23 EMIPAD158X87 AUDGND AUDIO
P10 EMIPAD98X177 USB

P9 P6 P17 P19 P8 P21 P26 P20 P5 P18 P31 P33 P13 P32 P14 EMIPAD158X87
P27 EMIPAD98X177
P24 P22 P2 P34 P12 P28 P30 P15 P16 P29 P4 P1 P3 P7 EMIPAD158X87
P25 EMIPAD98X177 AUDGND
P11 EMIPAD158X87 GND_LAN_CHASIS LAN

[21] BATLED1 → BATLED1 → LED3 AMBER → BAT1 → R288 1.5K-0402
BATLED0 [21] [21] SUS_LED → BATLED0 → LED1 GREEN → BAT0 → R289 330-0402

BATTERY LED:
1.GREEN: ACIN
2.ORANGE: CHARGE
3.RED: BATT LOW

PWRLED_GREEN [21] → SUS_LED1 → LED4 AMBER, LED2 GREEN
R285 1.5K-0402, R287 150-0402

POWER BOTTON AND LAMP
1.GREEN: POWERON
2.ORANGE : SUSPEND

POWER AND LED BOARD CONN

CN16 ACES 88203-1800

+3V
[21] NBSWON# → NBSWON#
3VPCU
[21] CAPSLED# → CAPSLED#
[21] NUMLED# → NUMLED#
[12] HDDLED# → HDD_LED#
+3V → LID# → LID# [13,21,25]
3VPCU → QSW_P1# → QSW_P1# [21]
QSW_P2# → QSW_P2# [21]
QSW_MAIL# → QSW_MAIL# [21]
EMAIL_LED# → EMAIL_LED# [13]
QSW_IE# → QSW_IE# [21]

3VPCU
R474 10K-0402
NBSWON# SW1

BT,WLAN AND IR

ORANGE

+3V → LED5 AMBER → R290 1K → WIRELESS_LED# → WIRELESS_LED# [18]

P35 EMIPAD98X177 P36 EMIPAD98X177

BLUE

[17] BT_POWER → BT_POWER → LED6 BLUE → R292 330

WLAN

[21] QSW_WLAN# → QSW_WLAN# SW2 HCH-PTS-05

BT

[21] QSW_BT# → QSW_BT# SW3 HCH-PTS-05

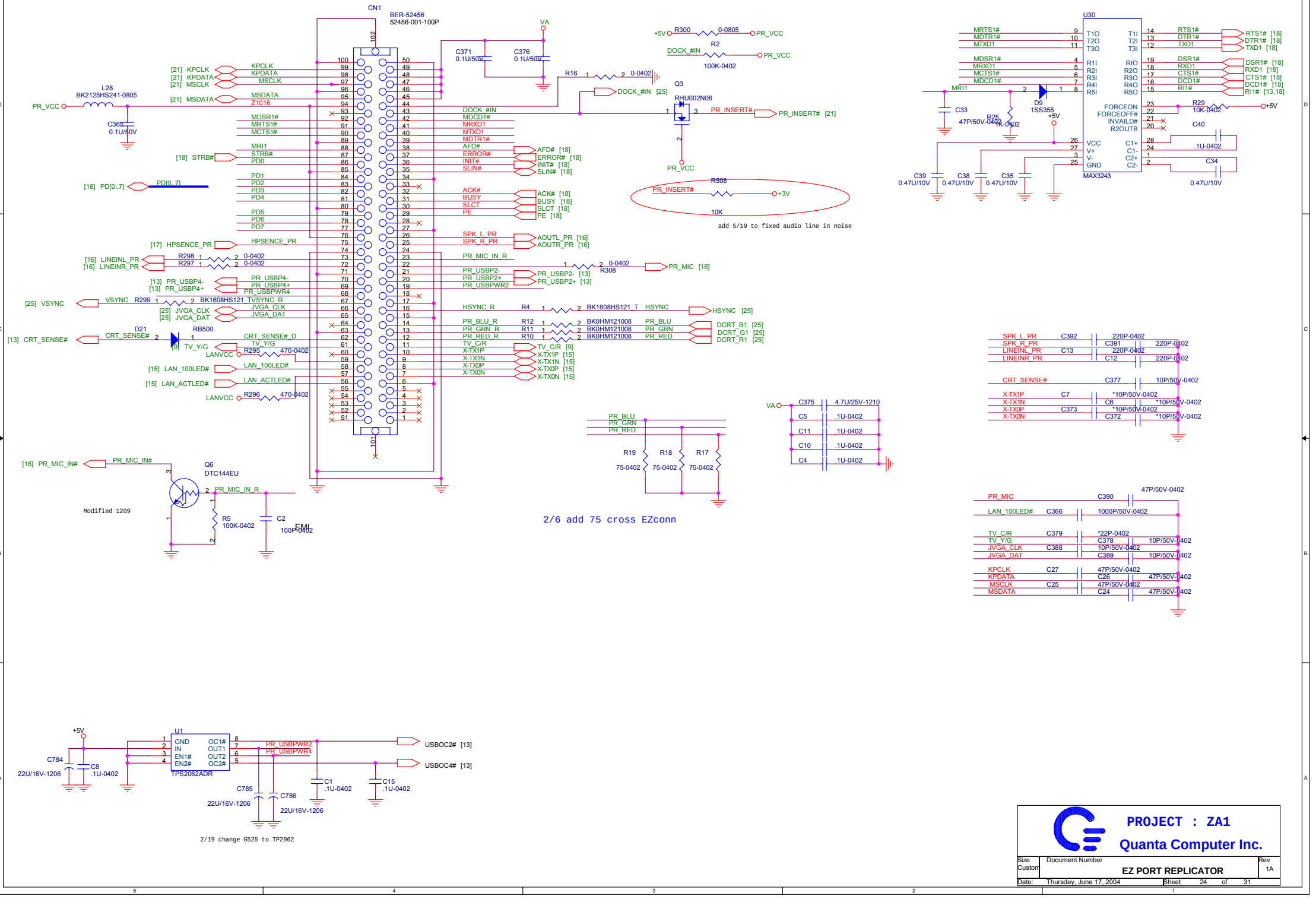
+3V → R291 2-0805 → VCC_LED
C356 10U/10V-0805
U28 TFDU6102
LED_C → T84
[18] IRTX → IRTX → R496 22 → TXD
[18] IRRX1 → IRRX1 → R497 22 → RXD
T85
TXD RXD FIR_SELMOD
[18] IRSEL → IRSEL → SD/MODE
LEAD GND VCC

+3V → R495 0-0805 → VCC_IC
C767 10U/10V-0805
C769 .1U-0402
C768 1000P/50V-0402

40mil: Power/ GND
35mil: VCC_LED, VCC_IC, GND_IC
10mil: TXD, RXD, IRSEL, IRTX, IRRX1

PROJECT : ZA1
Quanta Computer Inc.

Size	Document Number	Rev
Custom	LED BOARD/EMI PAD/SKEW	1A
Date: Wednesday, June 16, 2004	Sheet 23 of 31	


CN1
BER-52456
52456-001-100P
L28
BK2125HS241-0805
PR_VCC
C365
0.1U/50V
KPCLK
KPDATA
MSCLK
MSDATA
Z1016
MDSR1#
MRTS1#
MCTS1#
MRI1
STRB#
PD0
PD1
PD2
PD3
PD4
PD5
PD6
PD7
PD[0..7]
HPSENCE_PR
LINEINL_PR
LINEINR_PR
PR_USBP4-
PR_USBP4+
PR_USBPWR4
VSYNC
JVGA_CLK
JVGA_DAT
D21
RB500
CRT_SENSE#
CRT_SENSE# D
TV_Y/G
LANVCC
R295
470-0402
R296
LAN_100LED#
LAN_ACTLED#
BK1608HS121_TVSYNC_R
BK1608HS121_T
R299
R298
R297
R308
0-0402
VA
C371
C376
0.1U/50V
R16
DOCK_#IN
Q3
RHU002N06
PR_INSERT#
R508
10K
+3V
add 5/19 to fixed audio line in noise
MDCD1#
MRXD1
MTXD1
MDTR1#
AFD#
ERROR#
INIT#
SLIN#
ACK#
BUSY
SLCT
PE
SPK_L_PR
SPK_R_PR
AOUTL_PR
AOUTR_PR
PR_MIC_IN_R
PR_MIC
PR_USBP2-
PR_USBP2+
PR_USBPWR2
HSYNC_R
HSYNC
PR_BLU_R
PR_GRN_R
PR_RED_R
TV_C/R
X-TX1P
X-TX1N
X-TX0P
X-TX0N
BK0HM121008
PR_BLU
PR_GRN
PR_RED
DCRT_B1
DCRT_G1
DCRT_R1
R12
R11
R10
R4
R19
R18
R17
75-0402
C375
4.7U/25V-1210
C5
C11
C10
C4
.1U-0402
Q6
DTC144EU
PR_MIC_IN#
PR_MIC_IN_R
R5
100K-0402
C2
100P-0402
EMI
Modified 1209
2/6 add 75 cross EZconn
U30
MAX3243
T1O
T2O
T3O
R1I
R2I
R3I
R4I
R5I
T1I
T2I
T3I
R1O
R2O
R3O
R4O
R5O
FORCEON
FORCEOFF#
INVAILD#
R2OUTB
VCC
V+
V-
GND
C1+
C1-
C2+
C2-
RTS1#
DTR1#
TXD1
DSR1#
RXD1
CTS1#
DCD1#
RI1#
D9
1SS355
R25
1K-0402
R29
10K-0402
C33
47P/50V-0402
C40
.1U-0402
C34
0.47U/10V
C39
C38
C35
SPK_L_PR
SPK_R_PR
LINEINL_PR
LINEINR_PR
CRT_SENSE#
X-TX1P
X-TX1N
X-TX0P
X-TX0N
C392
C391
C13
C12
C377
C7
C6
C373
C372
220P-0402
10P/50V-0402
*10P/50V-0402
PR_MIC
LAN_100LED#
TV_C/R
TV_Y/G
JVGA_CLK
JVGA_DAT
KPCLK
KPDATA
MSCLK
MSDATA
C390
C366
C379
C378
C388
C389
C27
C26
C25
C24
47P/50V-0402
1000P/50V-0402
*22P-0402
U1
TPS2062ADR
GND
IN
EN1#
EN2#
OC1#
OUT1
OUT2
OC2#
C784
C8
22U/16V-1206
C785
C786
C1
C15
USBOC2# [13]
USBOC4# [13]
2/19 change G525 to TP2062
PROJECT : ZA1
Quanta Computer Inc.
EZ PORT REPLICATOR
Size
Custom
Document Number
Rev
1A
Date: Thursday, June 17, 2004
Sheet 24 of 31

PANEL CONNECTOR

CN7

TXLCLKOUT-
TXLCLKOUT+
TXLOUT0-
TXLOUT0+
TXLOUT1-
TXLOUT1+
TXLOUT2-
TXLOUT2+
LCDID2
LCDID1
LCDID0
EDIDCL
EDIDDAT
TXUOUT0-
TXUOUT0+
TXUOUT1-
TXUOUT1+
TXUOUT2-
TXUOUT2+
TXUCLKOUT-
TXUCLKOUT+
BLON

80MIL
L6 0-0805
VIN
[21] BRIGHT
BRIGHT
modify edid function
2/6 del 5v
+3V
LCDVDD

i-PEX 20324-040E-01

VIN
C55 1000P/50V-0402
C54 .01U-0402

+3V
R315 10K-0402 LCDID0 [13]
R314 10K-0402 LCDID1 [13]
R313 10K-0402 LCDID2 [13]

+3V
R316 2.2K-0402 EDIDCL
R317 2.2K-0402 EDIDDAT
R34 2.2K-0402 LID_CTRL

LCDID0 C43 100P-0402
LCDID1 C42 100P-0402
LCDID2 C41 100P-0402
EDIDCL C46 100P-0402
EDIDDAT C393 100P-0402
BRIGHT C59 100P-0402

MODIFY 3/9

PANEL VCC CONTROL

+3V
80 MIL
R321 0-0805
LCDVCC2
C396 1U-0402
U5
IN IN ON/OFF OUT GND GND
AAT4280-3
[4] LCD_ON_INT LCD_ON_INT R35 @0-0402
[9] LCD_ON_EXT LCD_ON_EXT R36 #0-0402
R37 10K-0402
LCDVCC1 L5 PBY201209T-300Y-S-0805 LCDVDD
C48 01U-0402 C49 10U/10V-0805
C45 01U-0402 C44 C47 10U/10V-0805

TRACE
80MIL

[4] BL_ON_INT BL_ON_INT R33 @0-0402
[9] BL_ON_EXT BL_ON_EXT R32 #0-0402
[23] LID# LID# D35 1SS355
[12] FPBACK# FPBACK# D24 *1SS355
[21] BACKLIGHT_SW D36 1SS355
R30 100K-0402 +3V
NC7SZ08P5X
LID_CTRL
R329 10K-0402
U6
BLON
C50 100P-0402
+3V

PANEL ID

POSISTOR 1.1A,0.15 (SMD100-2018)
+5V F1 POLY_SWITCH
D7 RB500
CRT_VCC
C14 .1U-0402
+3V
R3 10K-0402
D1 RB500
[13] CRT_SENSE# CRT_SENSE#
C9 .01U-0402
100P-0402 C357

JVGAR L23 BK0HM121008 JVGA_R
JVGAG L24 BK0HM121008 JVGA_G
JVGAB L25 BK0HM121008 JVGA_B
JVGA_NC
T1 *PAD

R303 75/F-0402
R302 75/F-0402
R301 75/F-0402
C382 *10P/50V-0402
C381 *10P/50V-0402
C380 *10P/50V-0402
C358 10P/50V-0402
C359 10P/50V-0402
C360 10P/50V-0402

CN2
SUYIN 070912FR015S206CU-15P

CRT_VCC
R294 2.2K-0402
R293 2.2K-0402
R7 4.7K-0402
R6 4.7K-0402
Q1 RHU002N06
DDCDAT
DDCCLK
Q2 RHU002N06
JVGA_DAT JVGA_DAT [24]
JVGA_CLK JVGA_CLK [24]
JVGA_HS
JVGA_VS

CRTHS_VGA
Q4 RHU002N06
HSYNC HSYNC [24]
L26 HZ0603B601R_00
CRTVS_VGA
Q5 RHU002N06
VSYNC VSYNC [24]
L27 HZ0603B601R_00
R305 820-0402
R304 820-0402
C363 10P/50V-0402
C364 10P/50V-0402
C384 10P/50V-0402
C383 10P/50V-0402
C361 10P/50V-0402
C362 10P/50V-0402

CRT PORT

CRT OUT

D2 *DA204U JVGA_R
D3 *DA204U JVGA_G
D4 *DA204U JVGA_B
D5 *DA204U JVGA_HS
D6 *DA204U JVGA_VS

[4] CRT_R_INT R360 @0-0402 CRT_R R189 #0-0402 CRT_R_EXT [9]
[4] CRT_G_INT R359 @0-0402 CRT_G R188 #0-0402 CRT_G_EXT [9]
[4] CRT_B_INT R358 @0-0402 CRT_B R187 #0-0402 CRT_B_EXT [9]
[4] DDCDAT_INT R354 @0-0402 DDCDAT R183 #0-0402 DDCDAT_EXT [9]
[4] DDCCLK_INT R355 @0-0402 DDCCLK R184 #0-0402 DDCCLK_EXT [9]
[4] CRTHS_VGA_INT R357 @0-0402 CRTHS_VGA R186 #0-0402 CRTHS_VGA_EXT [9]
[4] CRTVS_VGA_INT R356 @0-0402 CRTVS_VGA R185 #0-0402 CRTVS_VGA_EXT [9]

@:INTERAL VGA
#:EXTENTAL VGA

[4] TXLOUT0-_INT RN14 4P2R-S-0 TXLOUT0- RN88 4P2R-S-0 TXLOUT0-_EXT [9]
[4] TXLOUT0+_INT TXLOUT0+ TXLOUT0+_EXT [9]
[4] TXLOUT1+_INT RN15 4P2R-S-0 TXLOUT1+ RN89 4P2R-S-0 TXLOUT1+_EXT [9]
[4] TXLOUT1-_INT TXLOUT1- TXLOUT1-_EXT [9]
[4] TXLOUT2-_INT RN20 4P2R-S-0 TXLOUT2- RN94 4P2R-S-0 TXLOUT2-_EXT [9]
[4] TXLOUT2+_INT TXLOUT2+ TXLOUT2+_EXT [9]
[4] TXLCLKOUT+_INT RN19 4P2R-S-0 TXLCLKOUT+ RN93 4P2R-S-0 TXLCLKOUT+_EXT [9]
[4] TXLCLKOUT-_INT EDIDDAT TXLCLKOUT-_EXT [9]
[4] EDIDDAT_INT RN21 4P2R-S-0 EDIDCL RN95 4P2R-S-0 EDIDDAT_EXT [9]
[4] EDIDCL_INT EDIDCL_EXT [9]

[4] TXUOUT0-_INT RN16 4P2R-S-0 TXUOUT0- RN90 4P2R-S-0 TXUOUT0-_EXT [9]
[4] TXUOUT0+_INT TXUOUT0+ TXUOUT0+_EXT [9]
[4] TXUOUT1+_INT RN18 4P2R-S-0 TXUOUT1+ RN92 4P2R-S-0 TXUOUT1+_EXT [9]
[4] TXUOUT1-_INT TXUOUT1- TXUOUT1-_EXT [9]
[4] TXUOUT2+_INT RN17 4P2R-S-0 TXUOUT2+ RN91 4P2R-S-0 TXUOUT2+_EXT [9]
[4] TXUOUT2-_INT TXUOUT2- TXUOUT2-_EXT [9]
[4] TXUCLKOUT-_INT RN13 4P2R-S-0 TXUCLKOUT- RN87 4P2R-S-0 TXUCLKOUT-_EXT [9]
[4] TXUCLKOUT+_INT TXUCLKOUT+ TXUCLKOUT+_EXT [9]

[24] DOCK_#IN U3 NC7SB3157 SEL VCC +5V
CRT_R COM IN_B1 JVGAR
GND IN_B0 DCRT_R1 DCRT_R1 [24]
GND
IN_B0 DCRT_G1 DCRT_G1 [24]
CRT_G COM IN_B1 JVGAG
[24] DOCK_#IN DOCK_#IN SEL VCC +5V
U4 NC7SB3157

[24] DOCK_#IN U2 NC7SB3157 SEL VCC +5V
CRT_B COM IN_B1 JVGAB
GND IN_B0 DCRT_B1 DCRT_B1 [24]

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Quanta Computer Inc.

Size	Document Number	Rev
Custom	CRT,PANNEL CONN	1A
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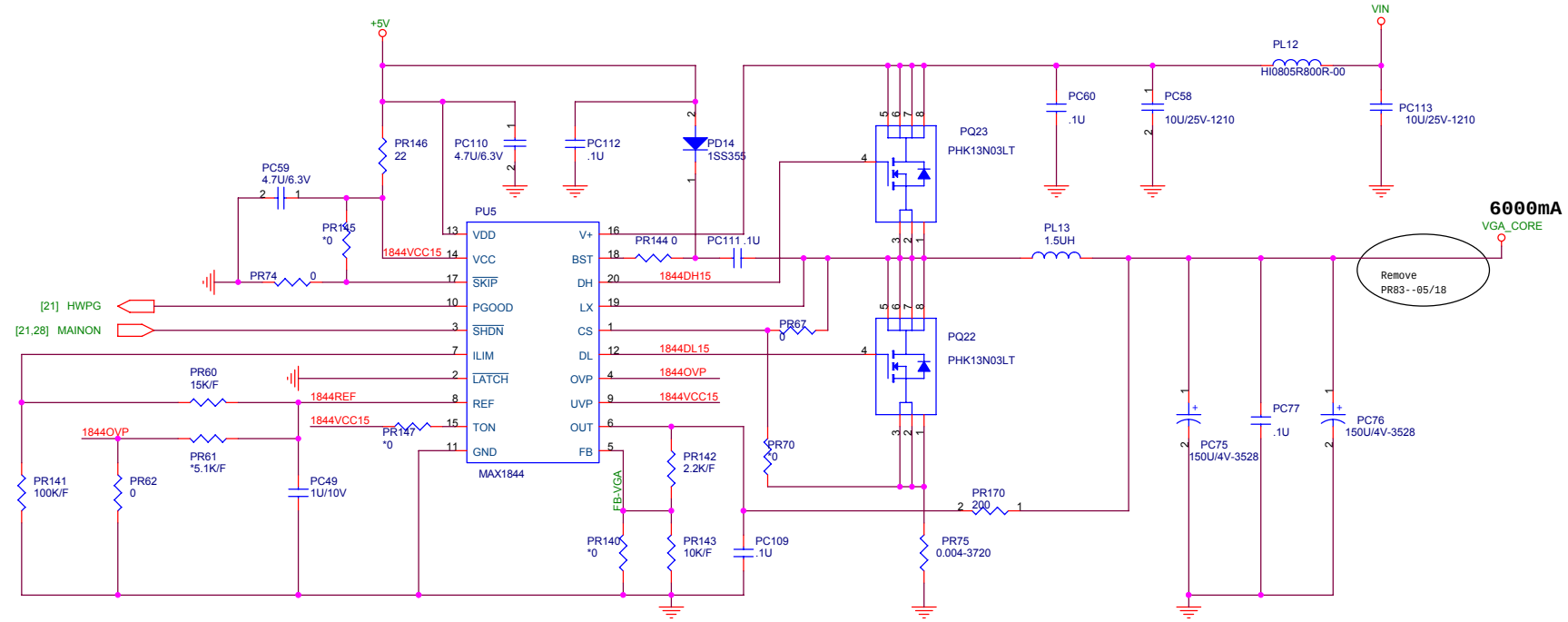
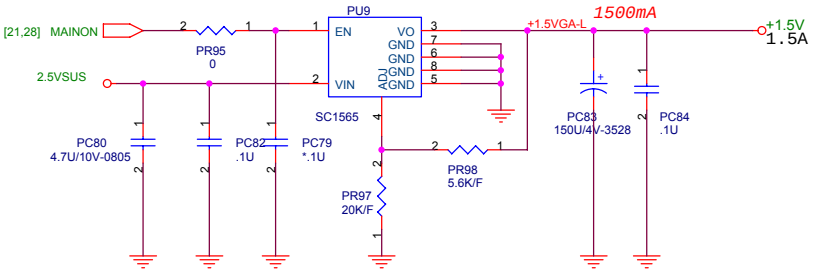
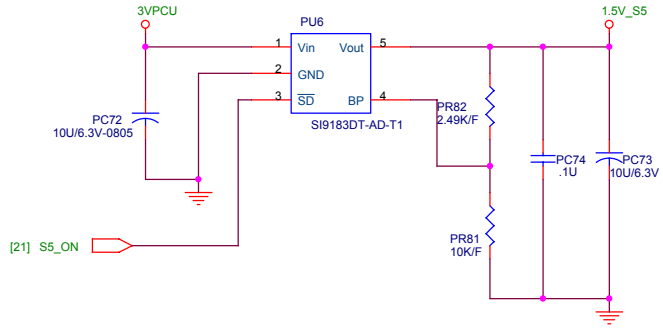
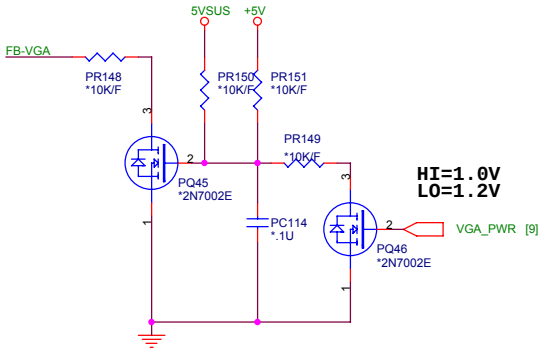




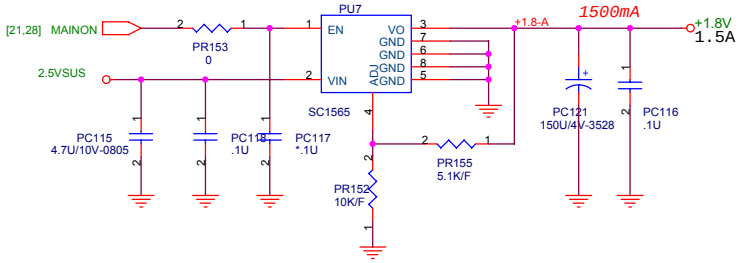


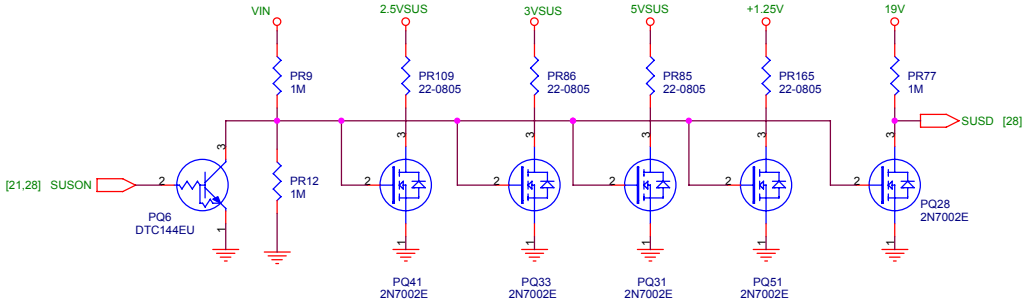


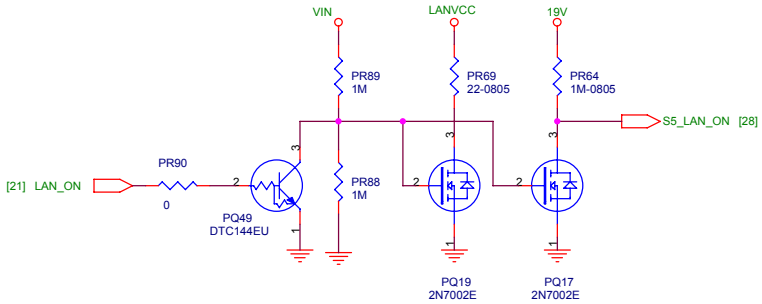
PROJECT : ZA1

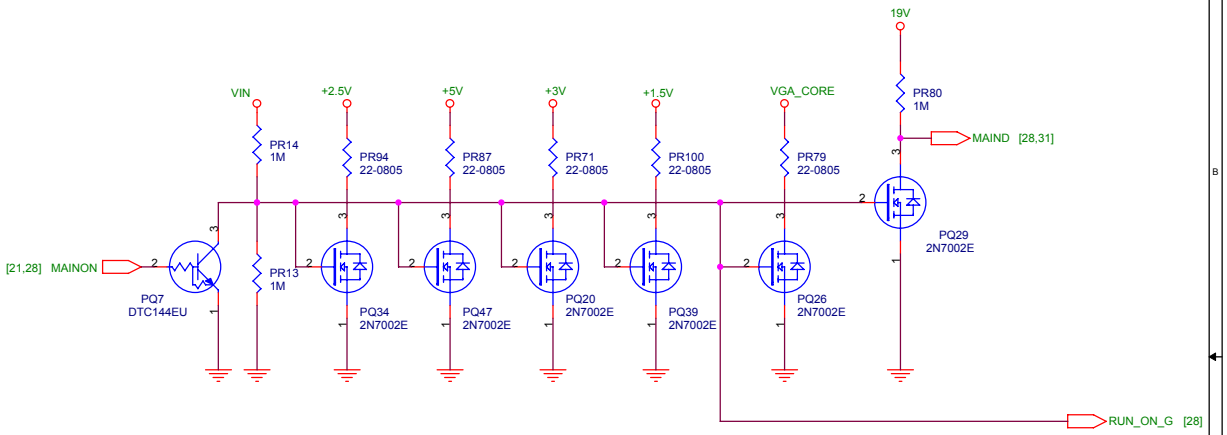
Quanta Computer Inc.

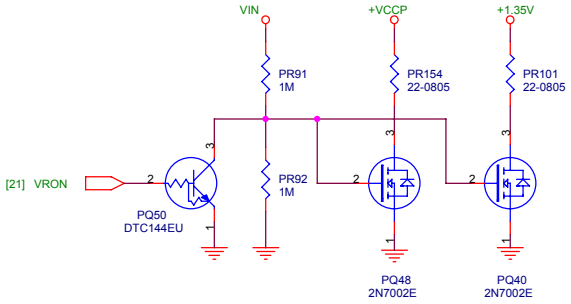
Size	Document Number	Rev
A3	VGA-1.25V+1.2SB & 1.8VGA	1A
Date: Thursday, June 17, 2004	Sheet 26 of 31	

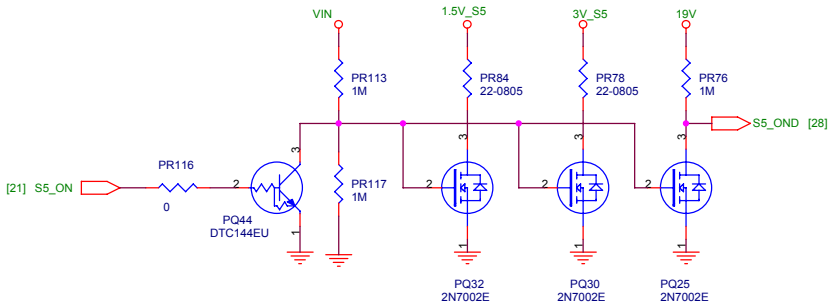












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Quanta Computer Inc.

Size	Document Number	Rev
Custom	DISCHAGE&+1.8V	1A
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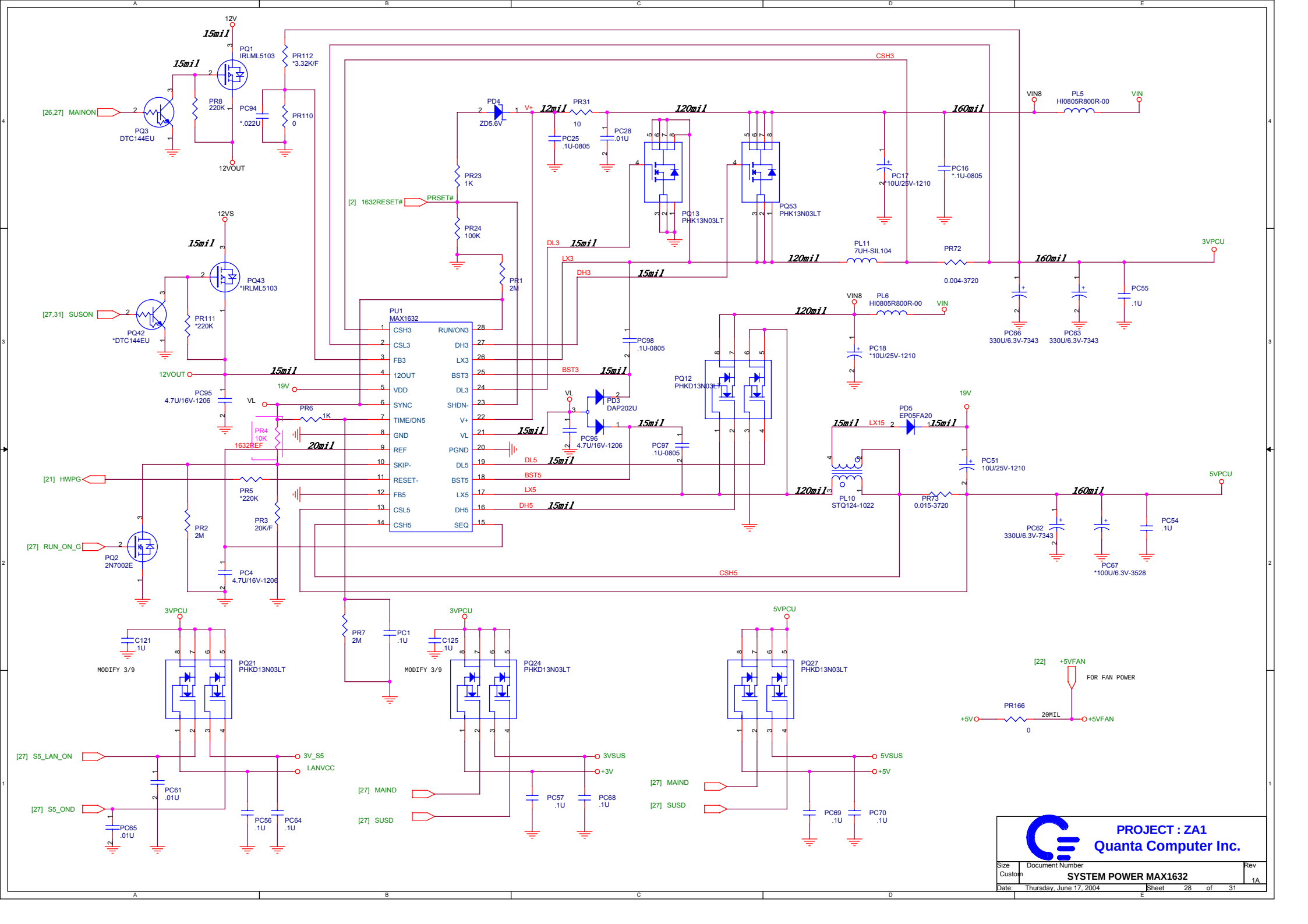
12V
15mil
PQ1
IRLML5103
PR112
*3.32K/F
[26,27] MAINON
PR8
220K
PC94
*.022U
PR110
0
PQ3
DTC144EU
12VOUT
CSH3
PD4
ZD5.6V
V+
12mil
PR31
10
120mil
160mil
VIN8
PL5
HI0805R800R-00
VIN
PC25
.1U-0805
PC28
.01U
PR23
1K
[2] 1632RESET#
PRSET#
PR24
100K
PQ13
PHK13N03LT
PQ53
PHK13N03LT
PC17
*10U/25V-1210
PC16
*.1U-0805
12VS
PQ43
*IRLML5103
[27,31] SUSON
PR111
*220K
PQ42
*DTC144EU
DL3
LX3
DH3
PR1
2M
PU1
MAX1632
PL11
7UH-SIL104
PR72
0.004-3720
3VPCU
PC66
330U/6.3V-7343
PC63
330U/6.3V-7343
PC55
.1U
PC98
.1U-0805
BST3
PQ12
PHKD13N03LT
PL6
HI0805R800R-00
PC18
*10U/25V-1210
19V
PC95
4.7U/16V-1206
VL
PR6
1K
PR4
10K
1632REF
20mil
PD3
DAP202U
PC96
4.7U/16V-1206
PC97
.1U-0805
PD5
EP05FA20
LX15
PC51
10U/25V-1210
5VPCU
[21] HWPG
PR5
*220K
PR2
2M
PR3
20K/F
DL5
BST5
LX5
DH5
PL10
STQ124-1022
PR73
0.015-3720
PC62
330U/6.3V-7343
PC67
*100U/6.3V-3528
PC54
.1U
[27] RUN_ON_G
PQ2
2N7002E
PC4
4.7U/16V-1206
CSH5
PR7
2M
PC1
.1U
C121
.1U
MODIFY 3/9
PQ21
PHKD13N03LT
C125
.1U
MODIFY 3/9
PQ24
PHKD13N03LT
PQ27
PHKD13N03LT
[22] +5VFAN
FOR FAN POWER
PR166
20MIL
+5V
+5VFAN
0
[27] S5_LAN_ON
3V_S5
LANVCC
PC61
.01U
[27] S5_OND
PC65
.01U
PC56
.1U
PC64
.1U
[27] MAIND
[27] SUSD
3VSUS
+3V
PC57
.1U
PC68
.1U
5VSUS
+5V
PC69
.1U
PC70
.1U
PROJECT : ZA1
Quanta Computer Inc.
Size
Custom
Document Number
SYSTEM POWER MAX1632
Rev
1A
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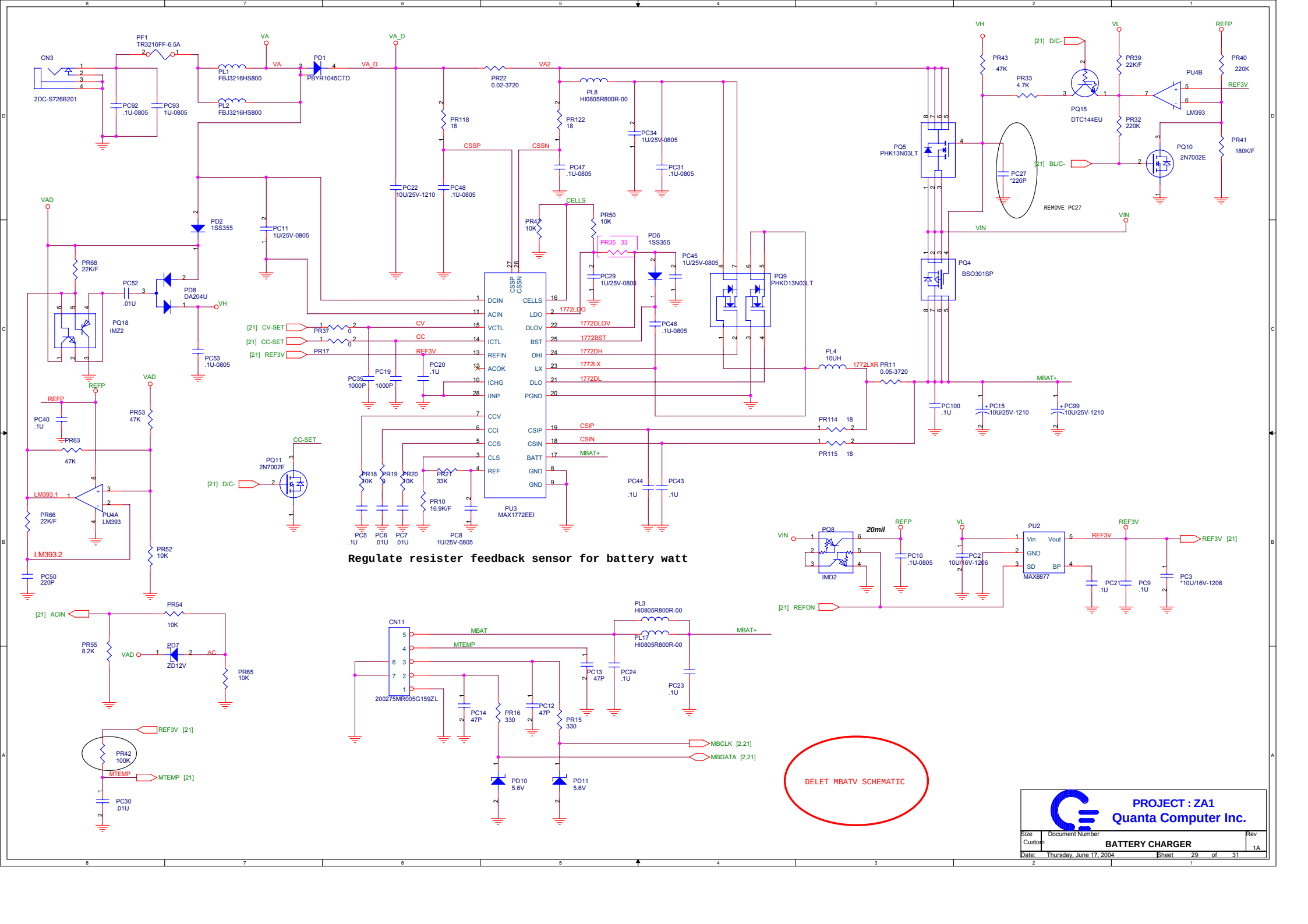
CN3
2DC-S726B201
PF1
TR3216FF-6.5A
PL1
FBJ3216HS800
PL2
FBJ3216HS800
PD1
PBYR1045CTD
VA
VA_D
VA2
PC92 .1U-0805
PC93 1U-0805
PR22 0.02-3720
PL8 HI0805R800R-00
PR118 18
PR122 18
PC34 1U/25V-0805
PC31 .1U-0805
PC47 .1U-0805
CSSP
CSSN
PC22 10U/25V-1210
PC48 .1U-0805
CELLS
PR42 10K
PR50 10K
PR35 33
PD6 1SS355
PC45 1U/25V-0805
PC29 1U/25V-0805
PC46 .1U-0805
PD2 1SS355
PC11 1U/25V-0805
PR68 22K/F
PC52 .01U
PD8 DA204U
PQ18 IMZ2
PC53 .1U-0805
VAD
VH
PU3 MAX1772EEI
DCIN
ACIN
VCTL
ICTL
REFIN
ACOK
ICHG
IINP
CCV
CCI
CCS
CLS
REF
CELLS
LDO
DLOV
BST
DHI
LX
DLO
PGND
CSIP
CSIN
BATT
GND
1772LDO
1772DLOV
1772BST
1772DH
1772LX
1772DL
MBAT+
[21] CV-SET
[21] CC-SET
[21] REF3V
PR37 0
PR17 0
CV
CC
REF3V
PC35 1000P
PC19 1000P
PC20 .1U
PR18 10K
PR19 0
PR20 10K
PR21 33K
PR10 16.9K/F
PC5 .1U
PC6 .01U
PC7 .01U
PC8 1U/25V-0805
PC44 .1U
PC43 .1U
PL4 10UH
1772LXR
PR11 0.05-3720
PR114 18
PR115 18
CSIP
CSIN
PQ9 PHKD13N03LT
PQ5 PHK13N03LT
PC27 *220P
REMOVE PC27
PR43 47K
PR33 4.7K
PQ15 DTC144EU
[21] D/C-
[21] BL/C-
PR39 22K/F
PR32 220K
PU4B LM393
PQ10 2N7002E
PR40 220K
REF3V
PR41 180K/F
VL
REFP
VIN
PQ4 BSO301SP
PC100 .1U
PC15 10U/25V-1210
PC99 10U/25V-1210
MBAT+
REFP
PC40 .1U
PR63 47K
PR53 47K
LM393.1
PR66 22K/F
PU4A LM393
LM393.2
PR52 10K
PC50 220P
CC-SET
PQ11 2N7002E
[21] D/C-
[21] ACIN
PR54 10K
PR55 8.2K
PD7 ZD12V
AC
PR65 10K
PR42 100K
MTEMP
MTEMP [21]
PC30 .01U
REF3V [21]
Regulate resister feedback sensor for battery watt
CN11
200275MR005G159ZL
MBAT
MTEMP
PL3 HI0805R800R-00
PL17 HI0805R800R-00
MBAT+
PC13 47P
PC24 .1U
PC23 .1U
PC14 47P
PR16 330
PC12 47P
PR15 330
MBCLK [2,21]
MBDATA [2,21]
PD10 5.6V
PD11 5.6V
PQ8 IMD2
20mil
VIN
REFP
PC10 .1U-0805
[21] REFON
VL
PC2 10U/16V-1206
PU2 MAX8877
Vin
Vout
GND
SD
BP
REF3V
PC21 .1U
PC9 .1U
PC3 *10U/16V-1206
REF3V [21]
DELET MBATV SCHEMATIC
PROJECT : ZA1
Quanta Computer Inc.
Size Custom
Document Number
BATTERY CHARGER
Rev 1A
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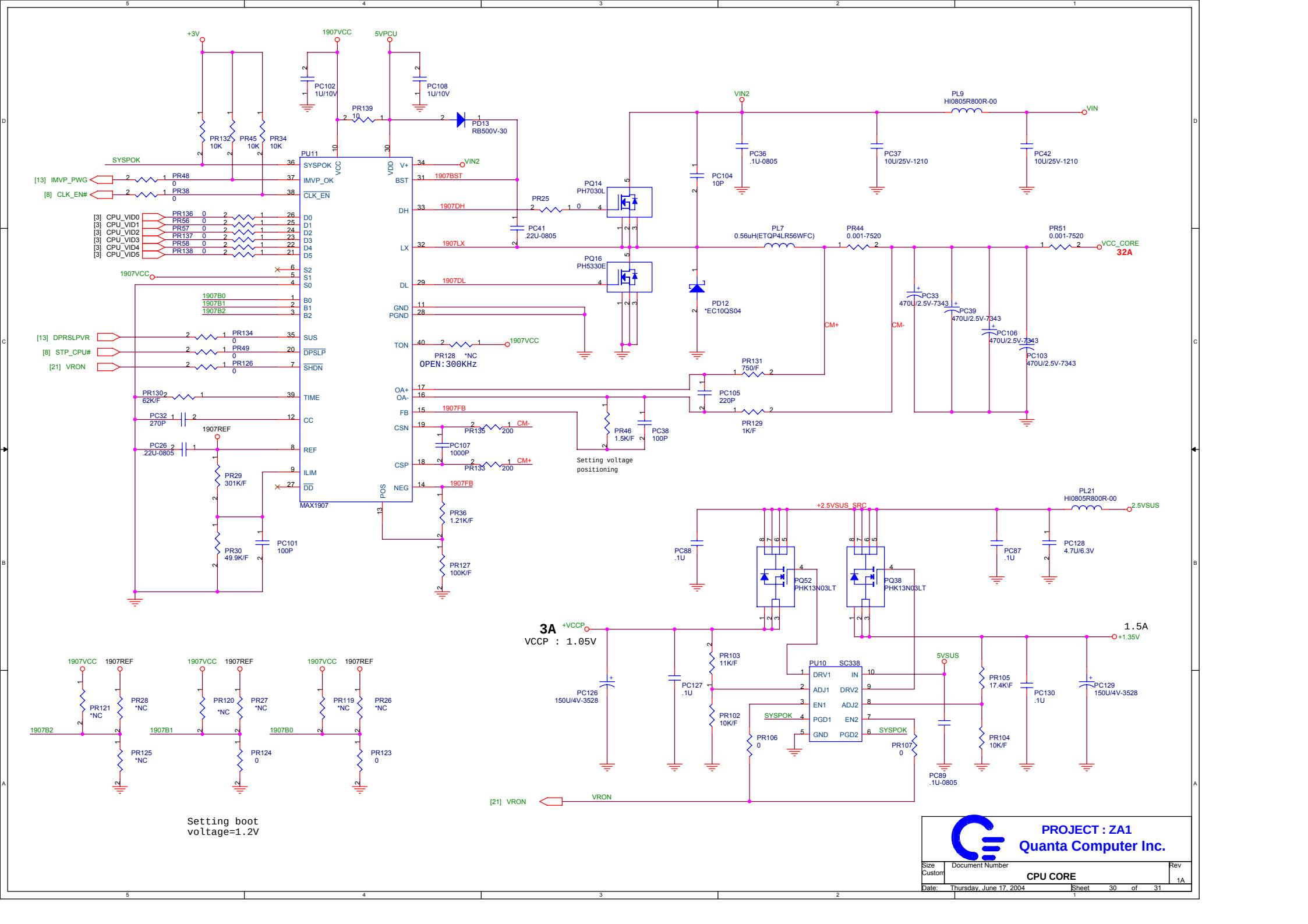

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Quanta Computer Inc.

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Custom	CPU CORE	1A
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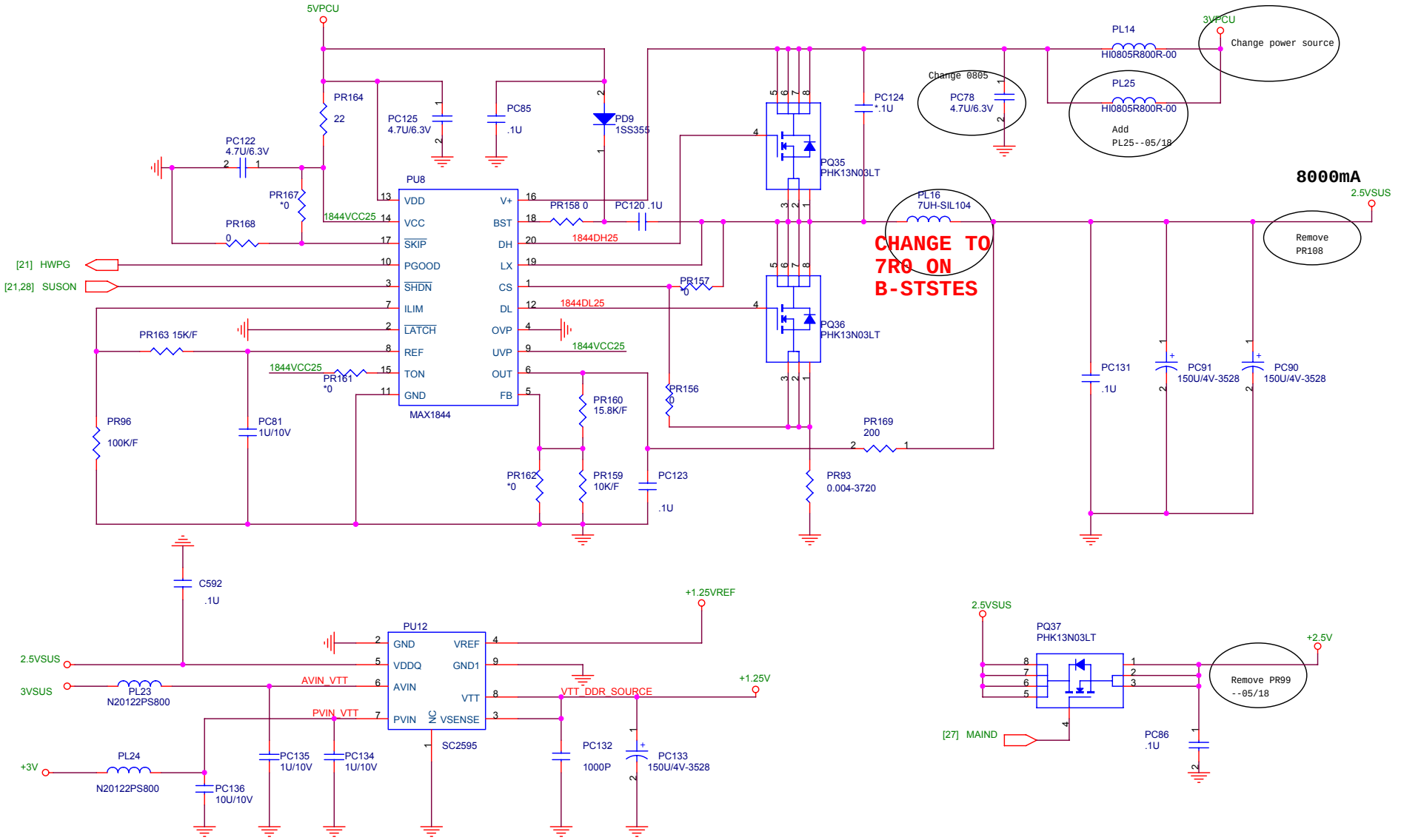

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Quanta Computer Inc.

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B	2.5V-DDR&VTERM	1A

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