

RW3 SYSTEM BLOCK DIAGRAM

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
+3V_S5	3.3V switched power rail (off in S5-S5)
+1.8VSUS	+1.8V switched power rail (off in S4-S5)
+5V	5V switched power rail (off in S3-S5)
5VPCU	5V always on power rail
+5VSUS	5V switched power rail (off in S5-S5)
VDDR2	+1.8V switched power rail (off in S3-S5)

VCC_CORE	1.34V/0.94V switched power rail for CPU core voltage (off in S3-S5)
+VCCP	1.2V power rail regulator from 2.5VSUS for CPU VID (off in S3-S5)
+1.35V	+1.35V power rail for NB_CORE (off in S3-S5)

+2.5VSUS	2.5V switched power rail for DDR Memory (off in S4-S5)
+1.25V	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)
+1.5V_S5	1.5V power rail regulator from 2.5VSUS for AGP I/F (off in S5-S5)

+2.5V	2.5V switched power rail for VGA Frame Buffer (off in S3-S5)
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SMDDR_VREF	0.9V switched power rail for DDR2 reference (off in S4-S5)
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LANVCC	3V switched power rail (off in S5-S5)
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BATT CHARGER

PAGE :27

DC/DC

PAGE :23,24,25,26

EC board

EC connector

KBC NS PC97551

+3V
+5V
3VPCU
+3V_S5
+3VSUS
VCCRTC

Flash BIOS

3VPCU

TouchPad

+5V

Int. Keyboard

DOTHAN

(Micro-FCPGA 478)

+3V
+1.5V
+1.8V
+VCCP
VCC_CORE

Page : 02, 03

CPU VR

MAX1907

VHCORE Page :28

X'TAL
14.318M

CLOCKS (ICS9554206BG-T)

+3V
+VCCP

Page :09

TFT LCD 14" (RESOLUTION 1280x768)

Panel Connector

+3VSUS
VIN
+3V
+5V

Page :16

CRT

+3V
+5V

Page :16

LAN 10/100

RTL8100CL

LANVCC
REQ0
GNT0
PIRQ0#
AD29

Page :13

RJ45

PAGE :13

DDR-SODIMM1

+1.8VSUS SMDDR_VREF
+3V VDDR2

Page :8

DDR-SODIMM2

+1.8VSUS SMDDR_VREF
+3V VDDR2

Page :8

NORTH BRIDGE Intel 915GME

(BGA 1257P)

Page : 04, 05, 06, 07

100/133Mhz

FSB400(3.2GB/s)/533(4.3GB/s)Mhz

UMA

LVDS

RGB

DMI I/F
(X2 or X4)

266/533Mhz

SOUTH BRIDGE ICH6-M

(BGA 609)

+1.5V
+2.5V
+3V
+5V
+1.5V_S5
+3V_S5
+VCCP
3VPCU
+5VSUS
+VCCRTC

Page : 10, 11, 12

PCI BUS

33Mhz (133 MB)

USB 2.0

LPC BUS

EC board

Page : 20

Hard Disk Drive

+5V

Page : 10

ATA 66/100

DVD ROM Drive

+5V

Page : 10

ATA 66/100

AC'97

MDC

+3VSUS

PAGE :19

AC'97 CODEC

ALC203

+3V
+5V
VDDA

Page :18

Audio AMP

MAX9750CETI

VDDA

Page :19

Stereo Speaker

Page :19

USB 2.0 Conn.

BLUETOOTH

USB 5

+5V

Page : 17

USB 2.0 Conn.

USB 0, 1, 2

+5V

Page : 17

USB 2.0 Conn.

3 IN 1

USB 3, 4

+3V
+5V

Page :21

1394 CONN

Page :14

TI4510

1394+CardBus

VA
+3V
REQ2
GNT2
PIRQ2, C#
AD22

Page :14,15

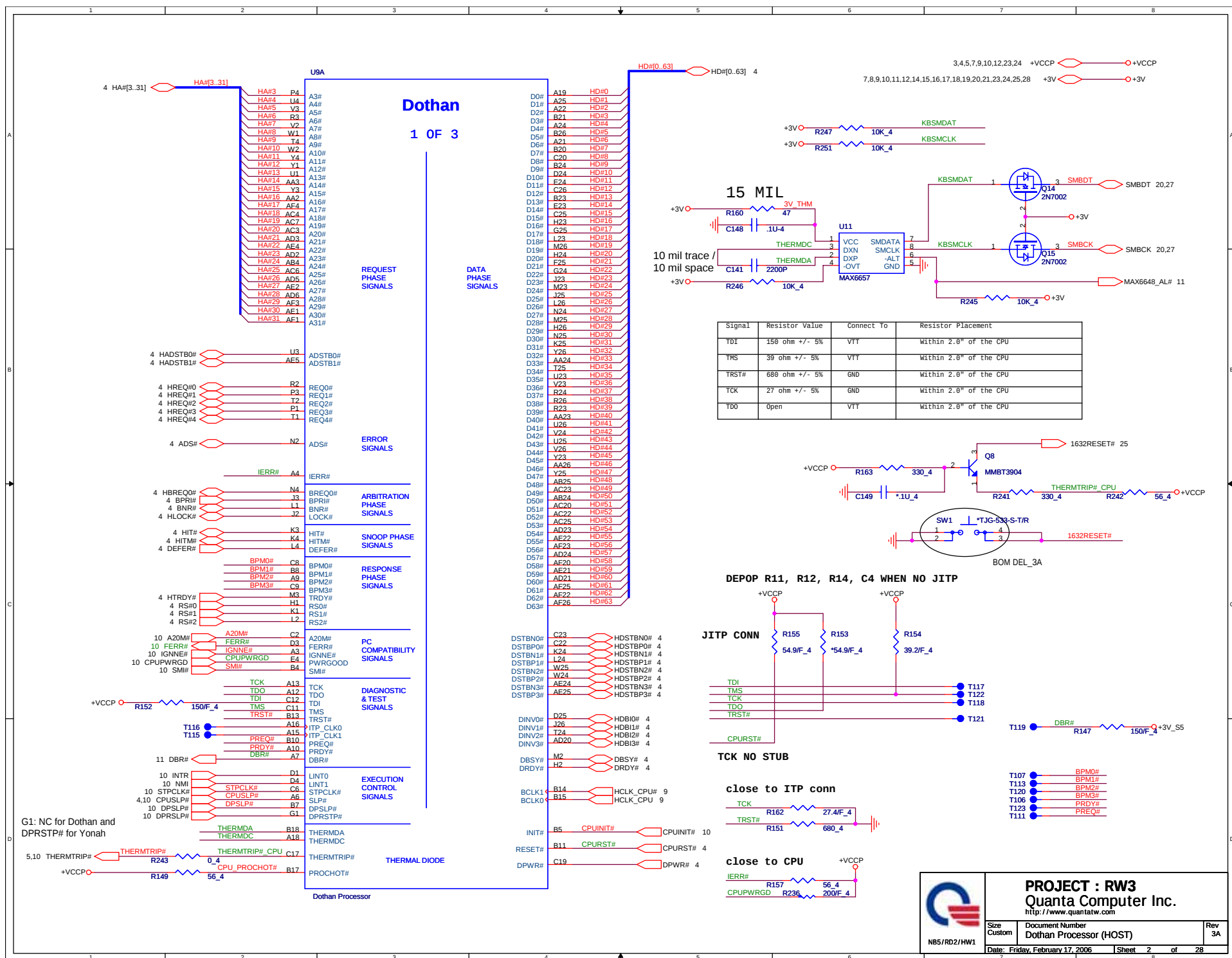
CardBus CONN

Page :15

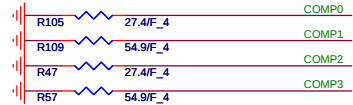


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<http://www.quantatw.com>

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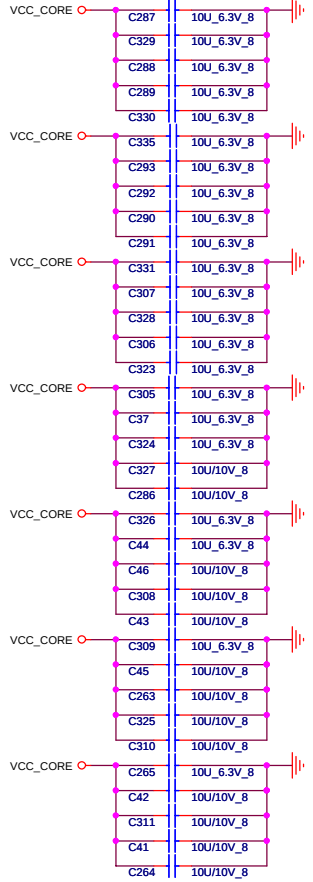
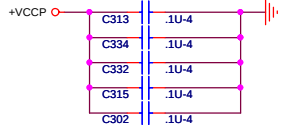
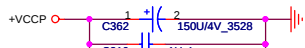
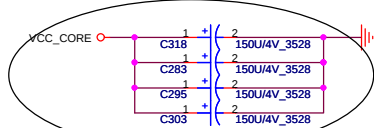
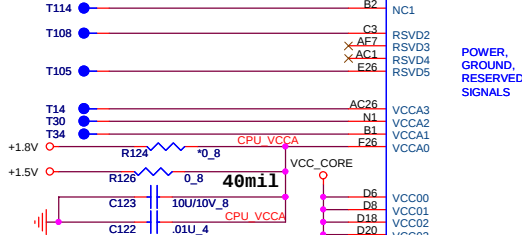


COMP0, COMP2 Trace should be 27.4 15%
COMP1, COMP3 Trace should be 55 15%



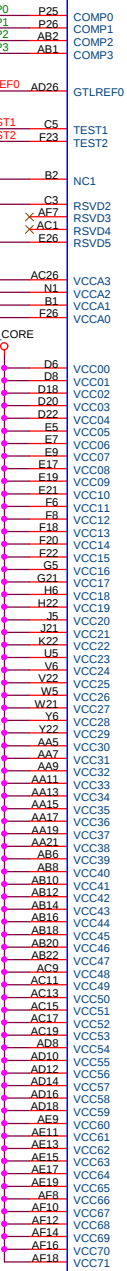
Place pull-down resistors within 0.5" of COMP pins

Place voltage divider within 0.5" of GTLREF pin

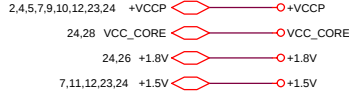


Dothan
2 OF 3

POWER, GROUND, RESERVED SIGNALS

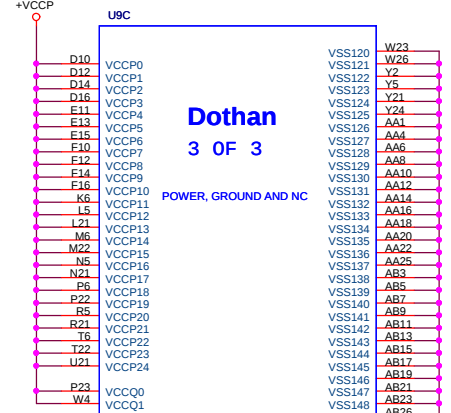


Dothan Processor

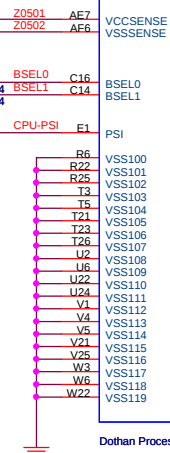
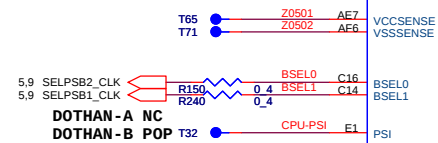


Dothan
3 OF 3

POWER, GROUND AND NC



VID



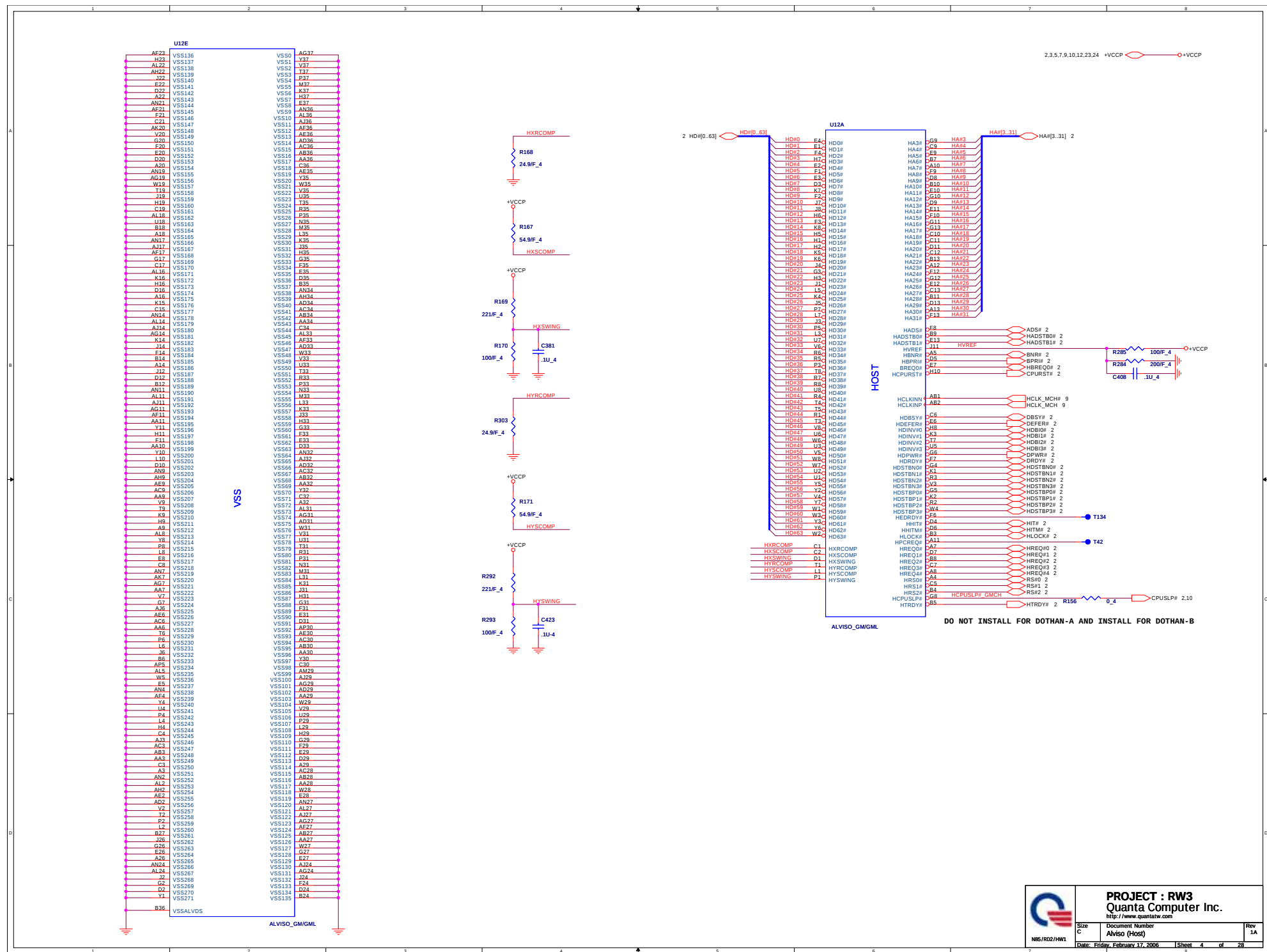
Dothan Processor

Total caps = 2633 uF

ESR = 15m ohm/5 // 5m ohm/25 // 5m ohm/15

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Size C	Document Number Alviso (Host)	Rev 1A
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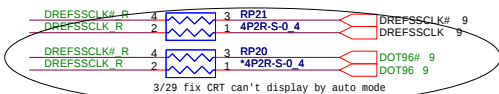
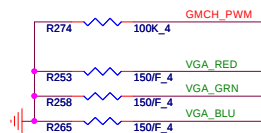
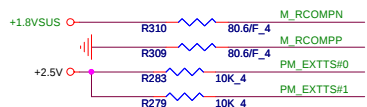
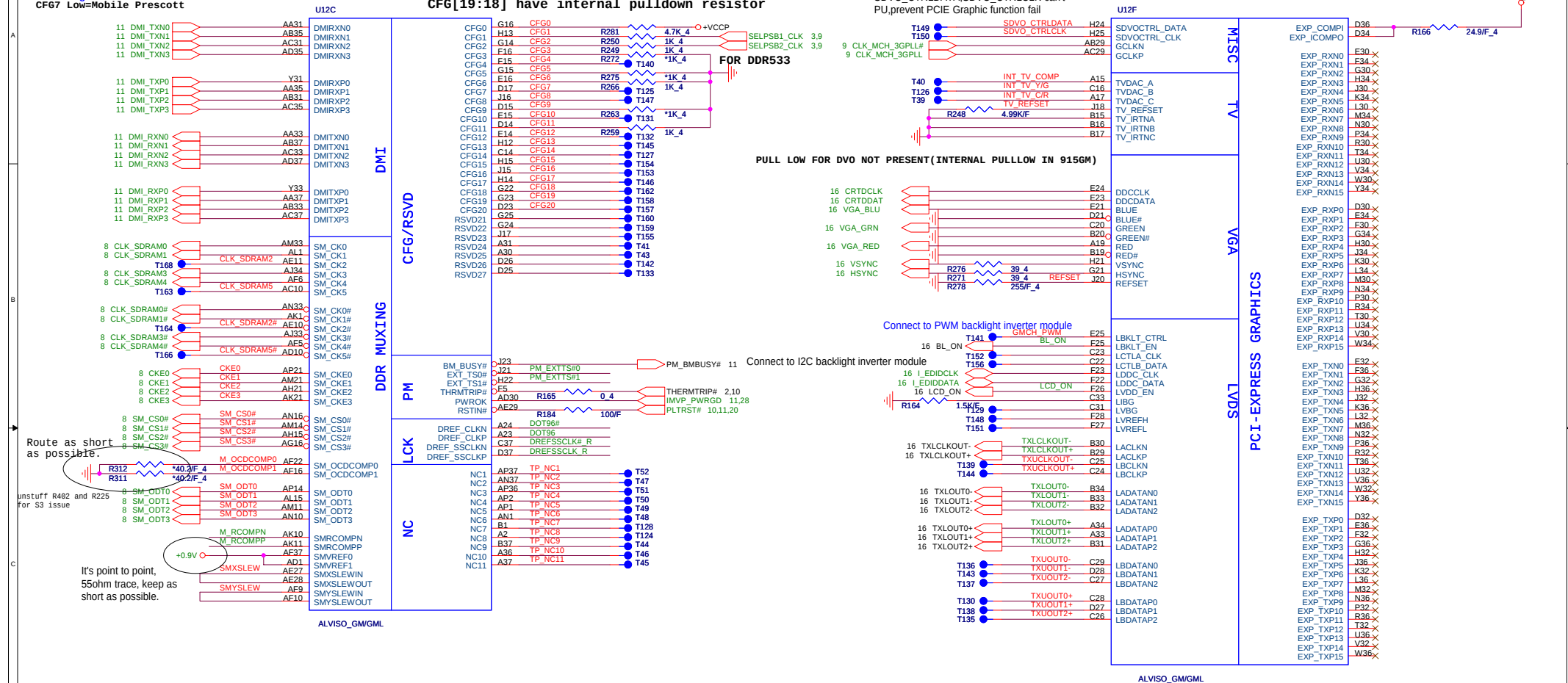
CFG[0:2]=100 FOR FSB 533
CFG[0:2]=101 FOR FSB 400
CFG5 High=DMIX4
CFG5 Low=DMIX2
CFG6 Low=DDR2
CFG6 High=DDR1
CFG7 High=Dothan
CFG7 Low=Mobile Prescott

CFG69 High=NORMAL
CFG9 Low=REVERSE LANE
CFG11 FOR CPU533
CFG16 High=FSB Dynamic ODT Enable
CFG16 Low=FSB Dynamic ODT Disable

CFG18 Low=CPU Core VCC 1.05V
CFG18 High=CPU Core VCC 1.5V
CFG19 Low=CPU VTT 1.05V
CFG19 High=CPU VTT 1.2V

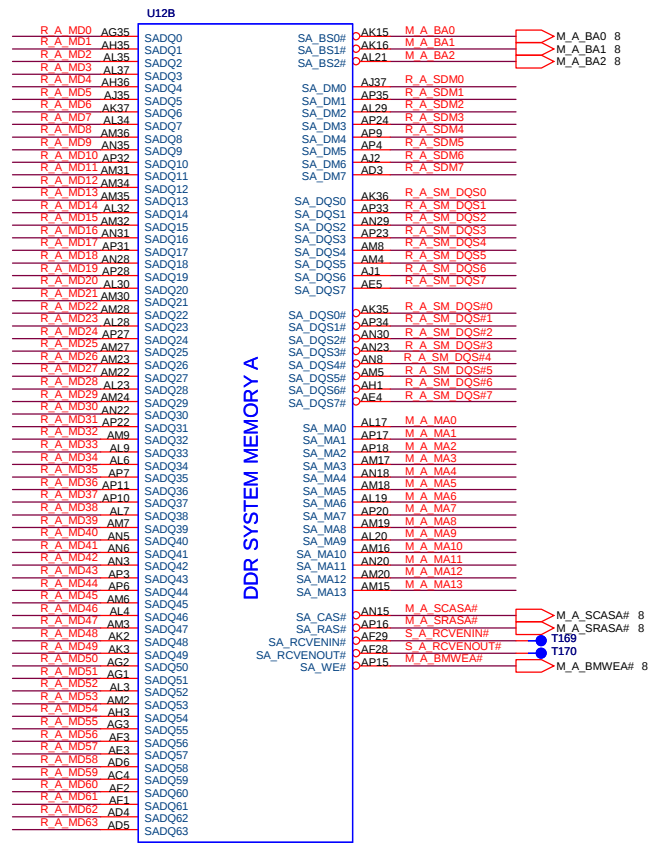
CFG[17:3] have internal pullup resistors.
CFG[19:18] have internal pulldown resistor

2,3,4,7,9,10,12,23,24 +VCCP
7 VCC3G_PCIE
7,8,23,24,26 +1.8VSUS
7,12,16,23,24 +2.5V

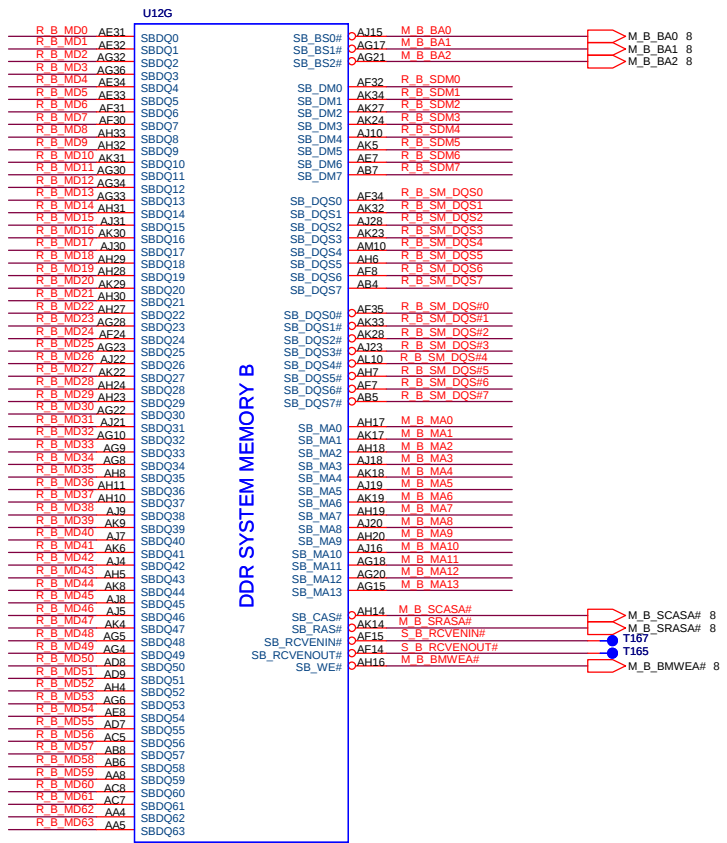


3/29 fix CRT can't display by auto mode

R_A_MD[0..63] R_A_MD[0..63] 8
M_A_MA[0..13] M_A_MA[0..13] 8
R_A_SM_DQS[0..7] R_A_SM_DQS[0..7] 8
R_A_SDM[0..7] R_A_SDM[0..7] 8
R_A_SM_DQS#0..7 R_A_SM_DQS#0..7 8

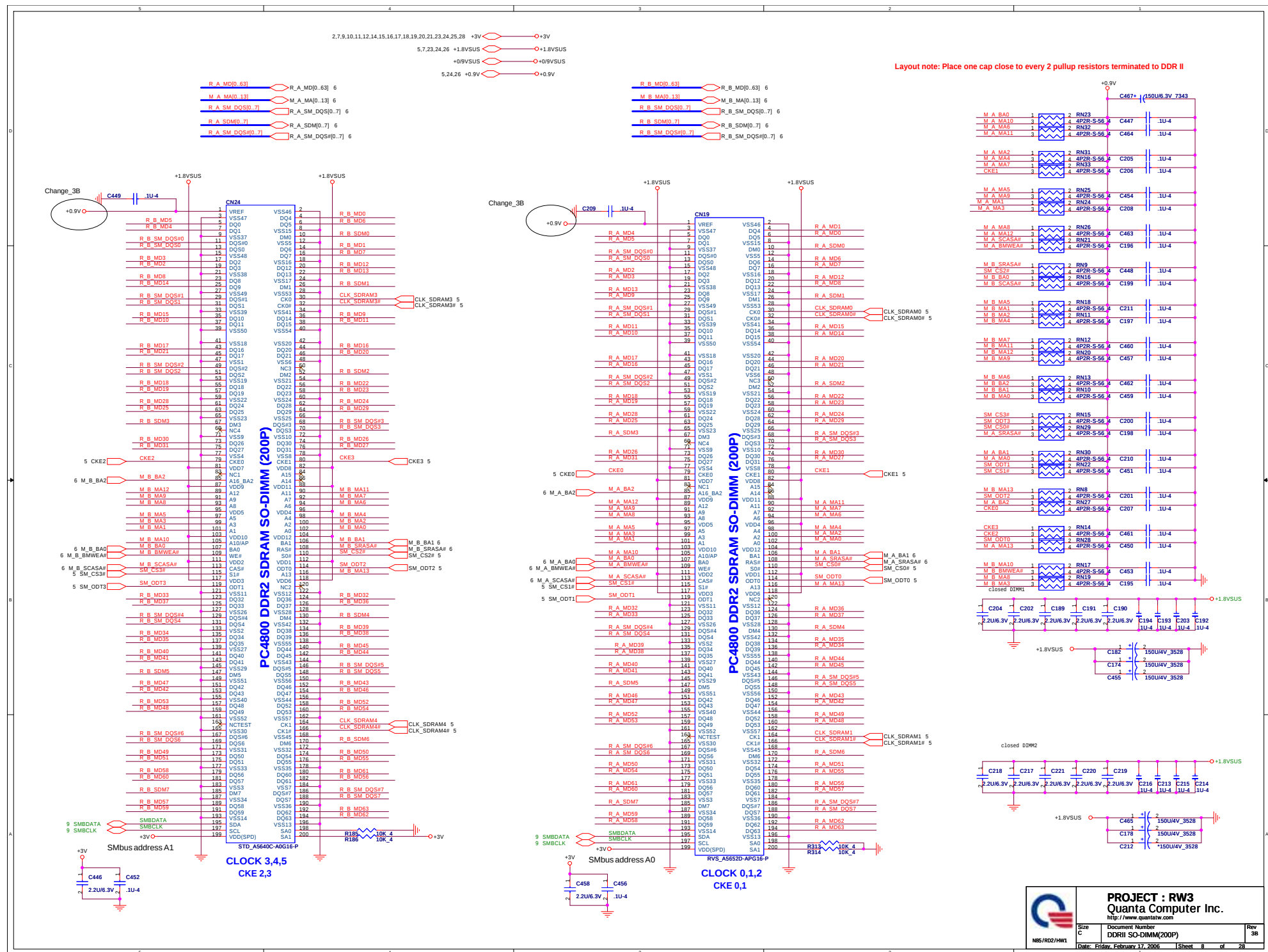


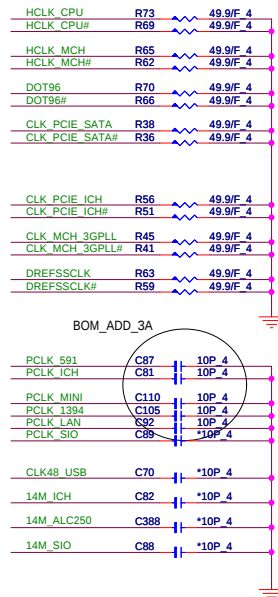
R_B_MD[0..63] R_B_MD[0..63] 8
M_B_MA[0..13] M_B_MA[0..13] 8
R_B_SM_DQS[0..7] R_B_SM_DQS[0..7] 8
R_B_SDM[0..7] R_B_SDM[0..7] 8
R_B_SM_DQS#0..7 R_B_SM_DQS#0..7 8



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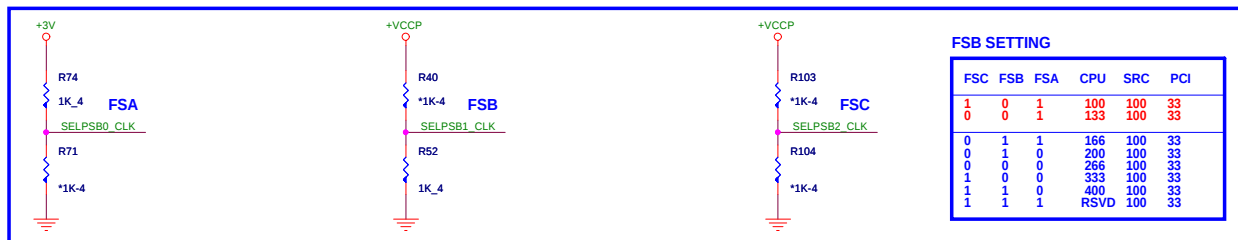
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R_PCLK_591 R76 10K_4

ITP/SRC7 SELECT



FSC	FSB	FSA	CPU	SRC	PCI
1	0	1	100	100	33
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



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NB5/RD2/HW1

Size
Custom

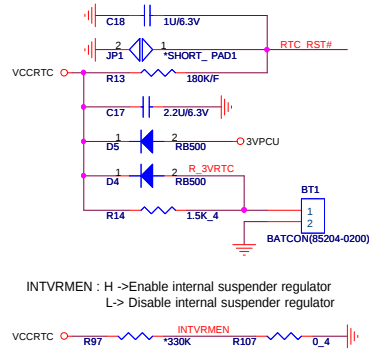
Size Custom	Document Number CLOCK GENERATOR
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3A

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RTC

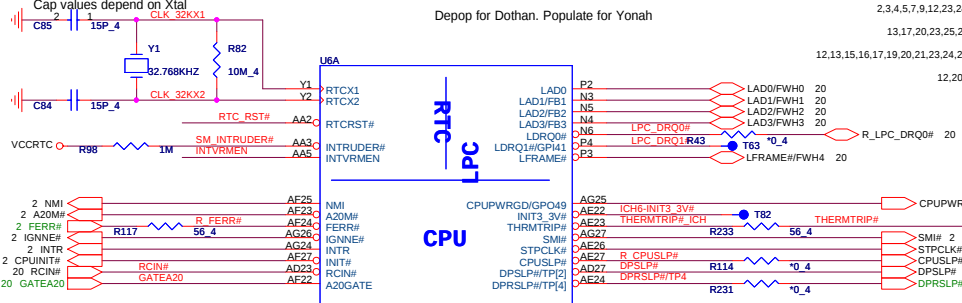


INTVRMEN : H -> Enable internal suspender regulator
L -> Disable internal suspender regulator



ThermTRIP# 75 pull-up to VCCP within 2" from the series resistor
CPUSLP# INSTALL FOR DOTHAN-A AND NOT INSTALL FOR DOTHAN-B

Depop for Dothan. Populate for Yonah



CPU

PCI

IDE

SATA

AC-97/AZALIA

ICH6-M

AC-97/AZALIA

ICH6-M

AC-97/AZALIA

ICH6-M

AC-97/AZALIA

ICH6-M

AC-97/AZALIA

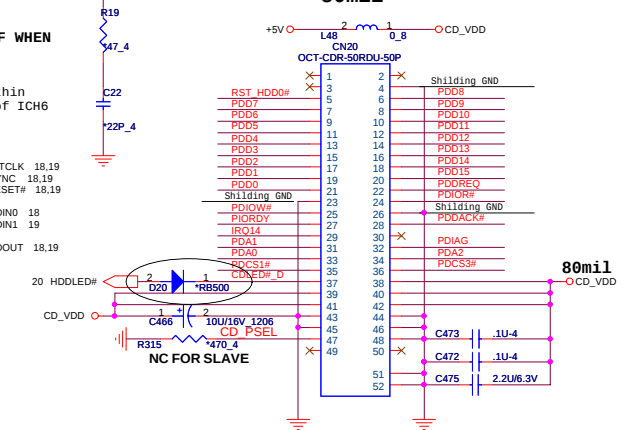
ICH6-M

AC-97/AZALIA

ICH6-M

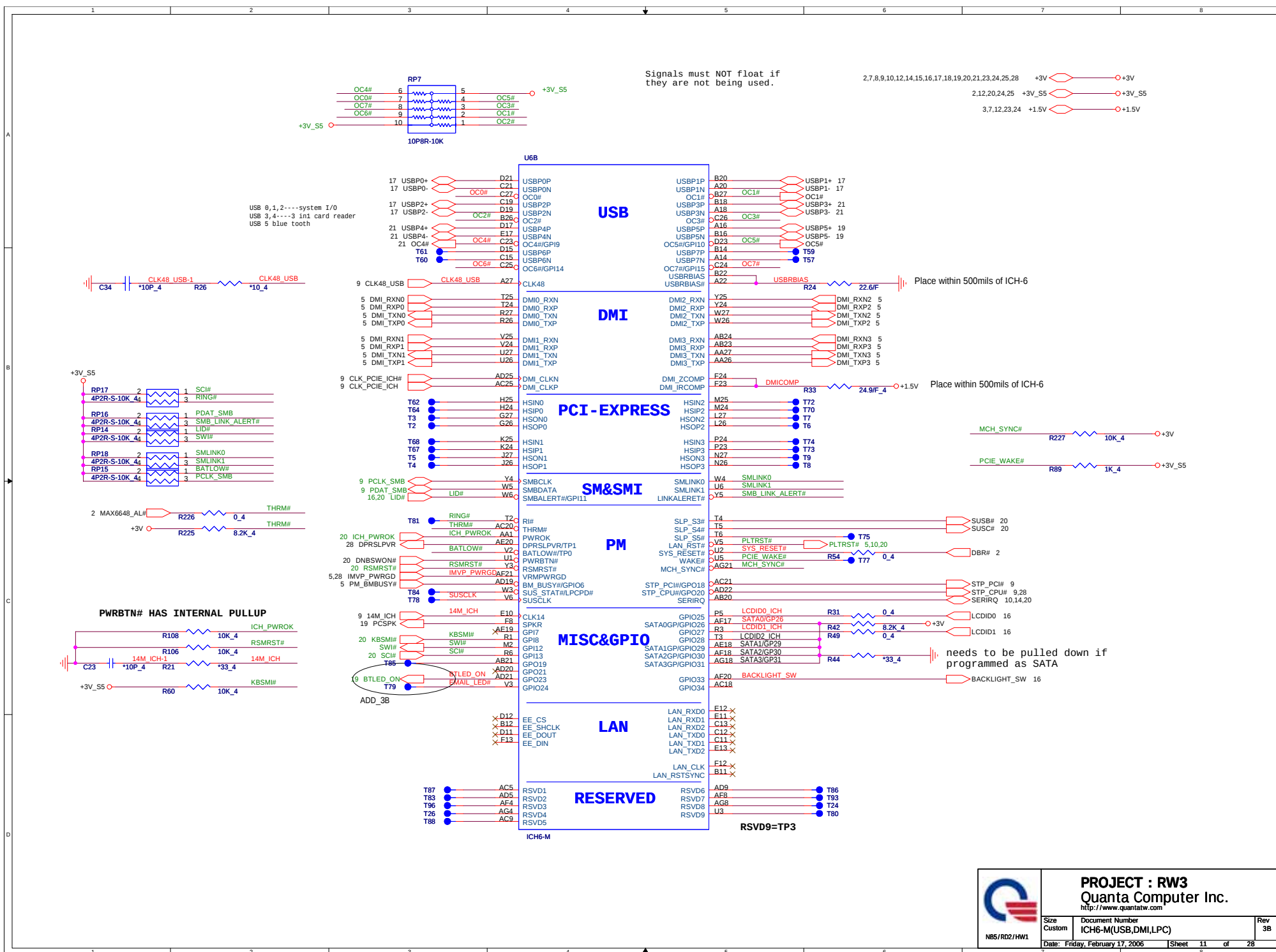
CD-ROM CONNECTOR

80mil

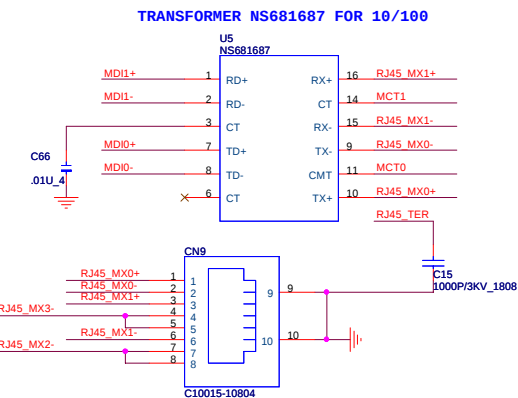
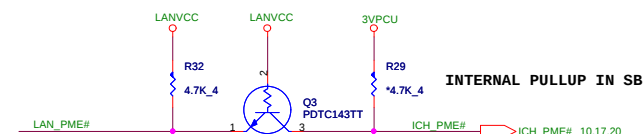
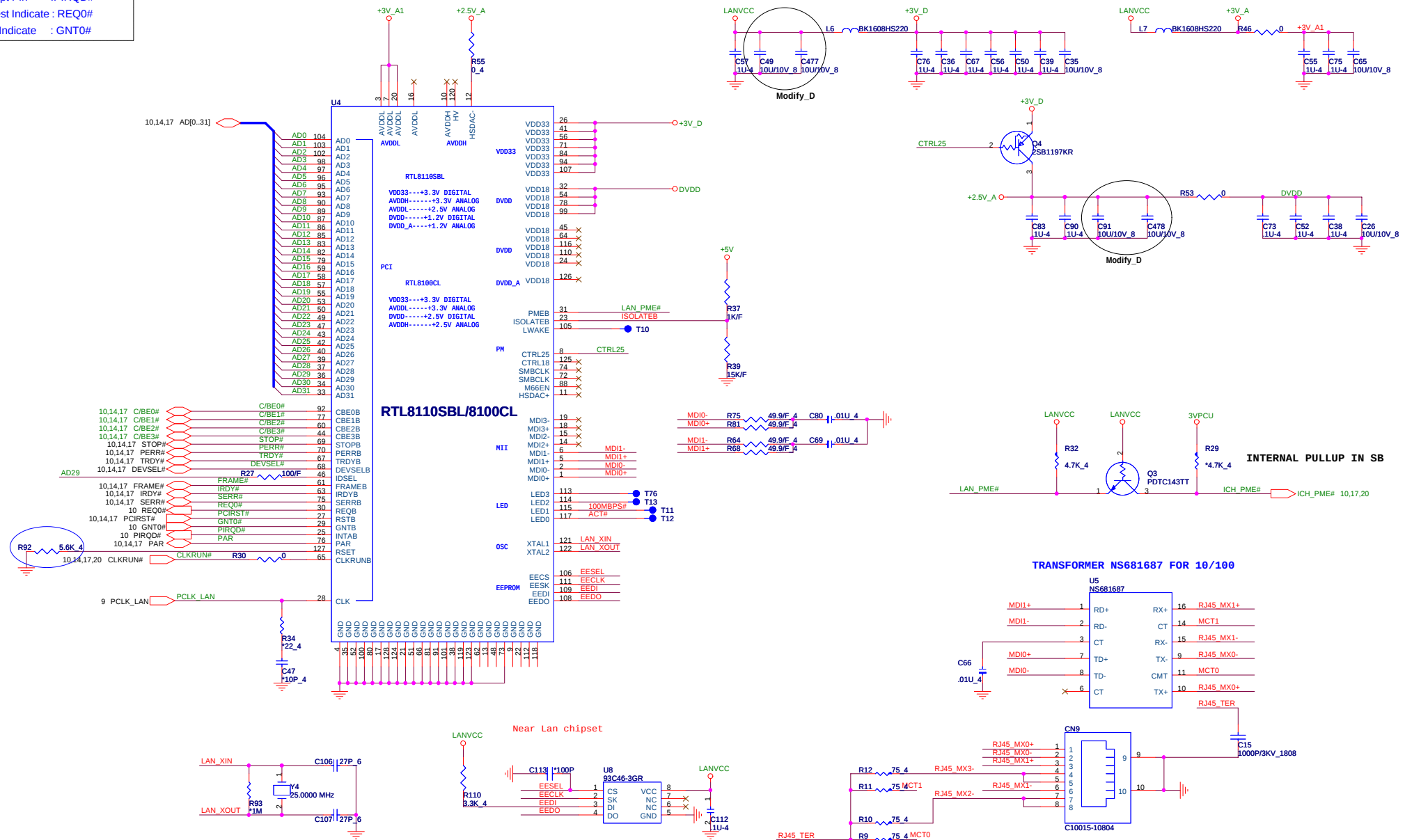


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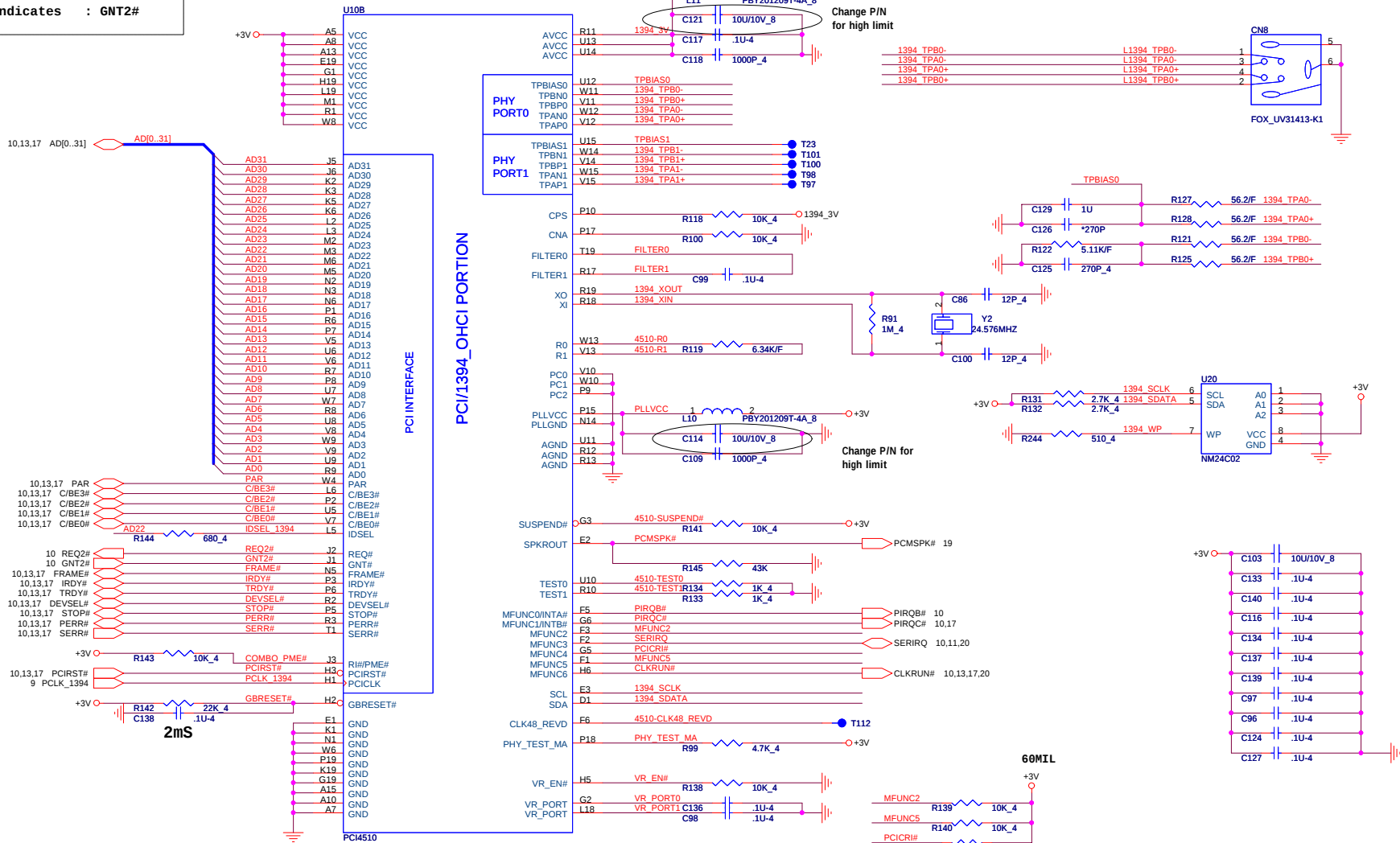


ID Select : AD29
Interrupt Pin : PIRQD#
Request Indicate : REQ0#
Grant Indicate : GNT0#



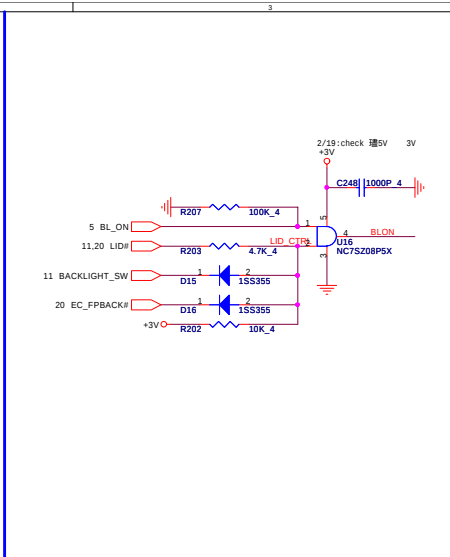
ID Select : AD22
Interrupt Pin : PIRQ B,C#
Request indicates : REQ2#
Grant indicates : GNT2#

CARDBUS/1394



PANEL CONNECTOR

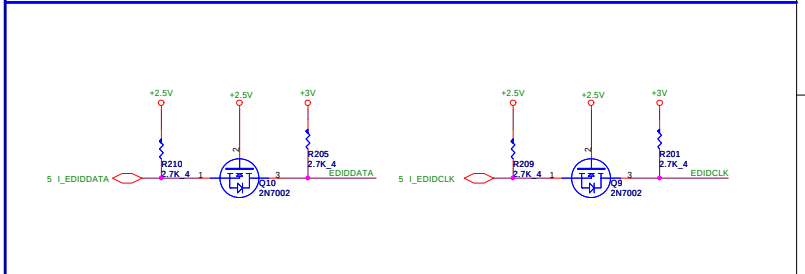
The schematic diagram illustrates the panel connector circuit, showing the connection of various power and signal lines from the main board to the LCD panel. The circuit includes several power supply lines (VIN, +3V, LCDVDD, PWR_SRC) and signal lines (LCDID0, LCDID1, BRIGHT, BLON, TXCLKOUT, TXCLKOUT+, TXLOUT0-, TXLOUT0+, TXLOUT1-, TXLOUT1+, TXLOUT2-, TXLOUT2+, EDIC, EDIT, EDIDCLK, EDIDDATA). The diagram also shows the connection of various components, including capacitors (C7, C14, C18, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100) and resistors (R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100). The diagram is divided into two main sections: the top section shows the connection of the main board to the panel, and the bottom section shows the connection of the panel to the main board.



PANEL VCC CONTROL

TRACE
80MIL

The diagram illustrates the PANEL VCC CONTROL circuit. A 5V LCD_ON signal is connected to the IN pin of the AAT4280_3 driver. The driver's OUT pin is connected to the LCDVDD_1 supply line. The supply line includes a 1uF capacitor (C250) and a 10uF/10V_8 capacitor (C251) for decoupling. The driver is also connected to a 3V supply and ground.



CRT CONNECTOR

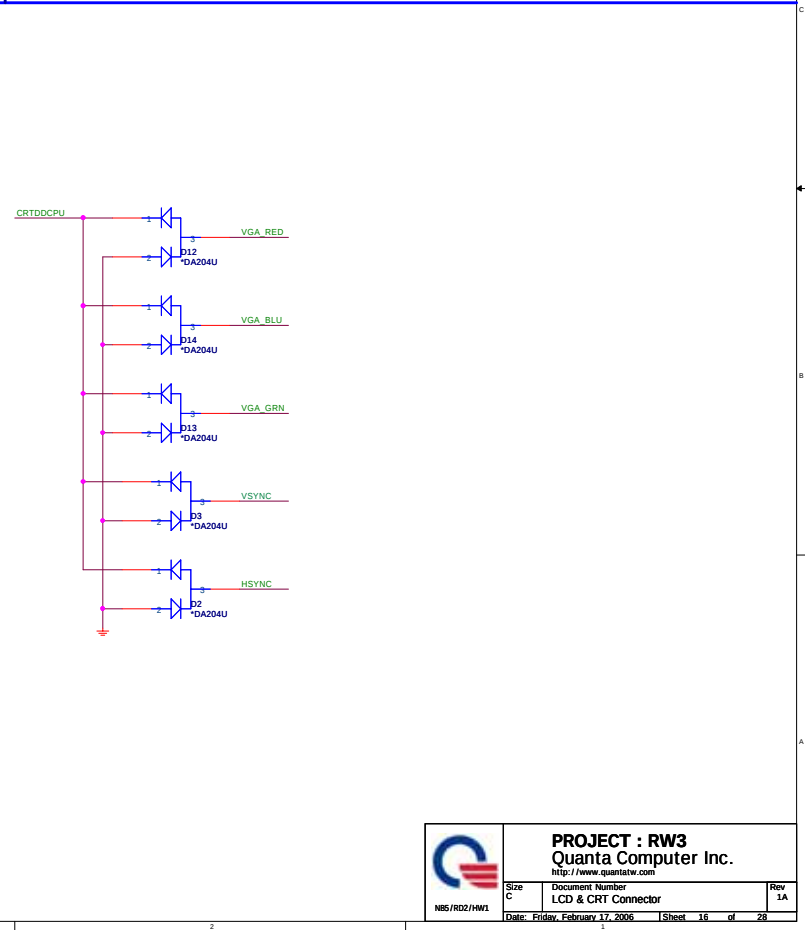
The schematic diagram illustrates the internal circuitry of a CRT connector. It features a 25-pin D-sub connector (CN1) connected to various input signals and power rails. The signals include VGA_RED, VGA_GRN, VGA_BLU, VSYNC, HSYNC, CRTDCLK, CRTDDAT, and power rails like +5V, +3V, +5V, and +3VSUS. The circuit includes resistors (R190-R229), capacitors (C230-C239), and integrated circuits (U13, U14, U15, U16, U17, U18, U19, U20, U21, U22, U23, U24, U25, U26, U27, U28, U29, U30, U31, U32, U33, U34, U35, U36, U37, U38, U39, U40, U41, U42, U43, U44, U45, U46, U47, U48, U49, U50, U51, U52, U53, U54, U55, U56, U57, U58, U59, U60, U61, U62, U63, U64, U65, U66, U67, U68, U69, U70, U71, U72, U73, U74, U75, U76, U77, U78, U79, U80, U81, U82, U83, U84, U85, U86, U87, U88, U89, U90, U91, U92, U93, U94, U95, U96, U97, U98, U99, U100).

24.25.26.27.28 VIN

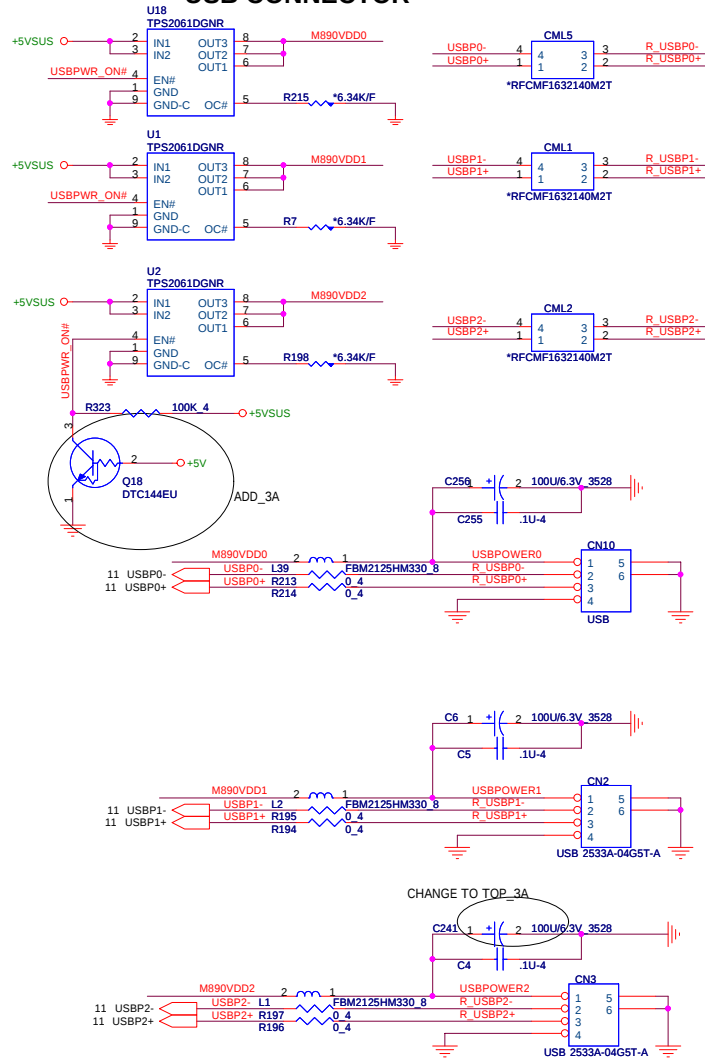
2.7.8.9.10.11.12.14.15.17.18.19.20.21.23.24.25.28 +3V

10.12.13.15.17.19.20.21.23.24.25.26 +5V

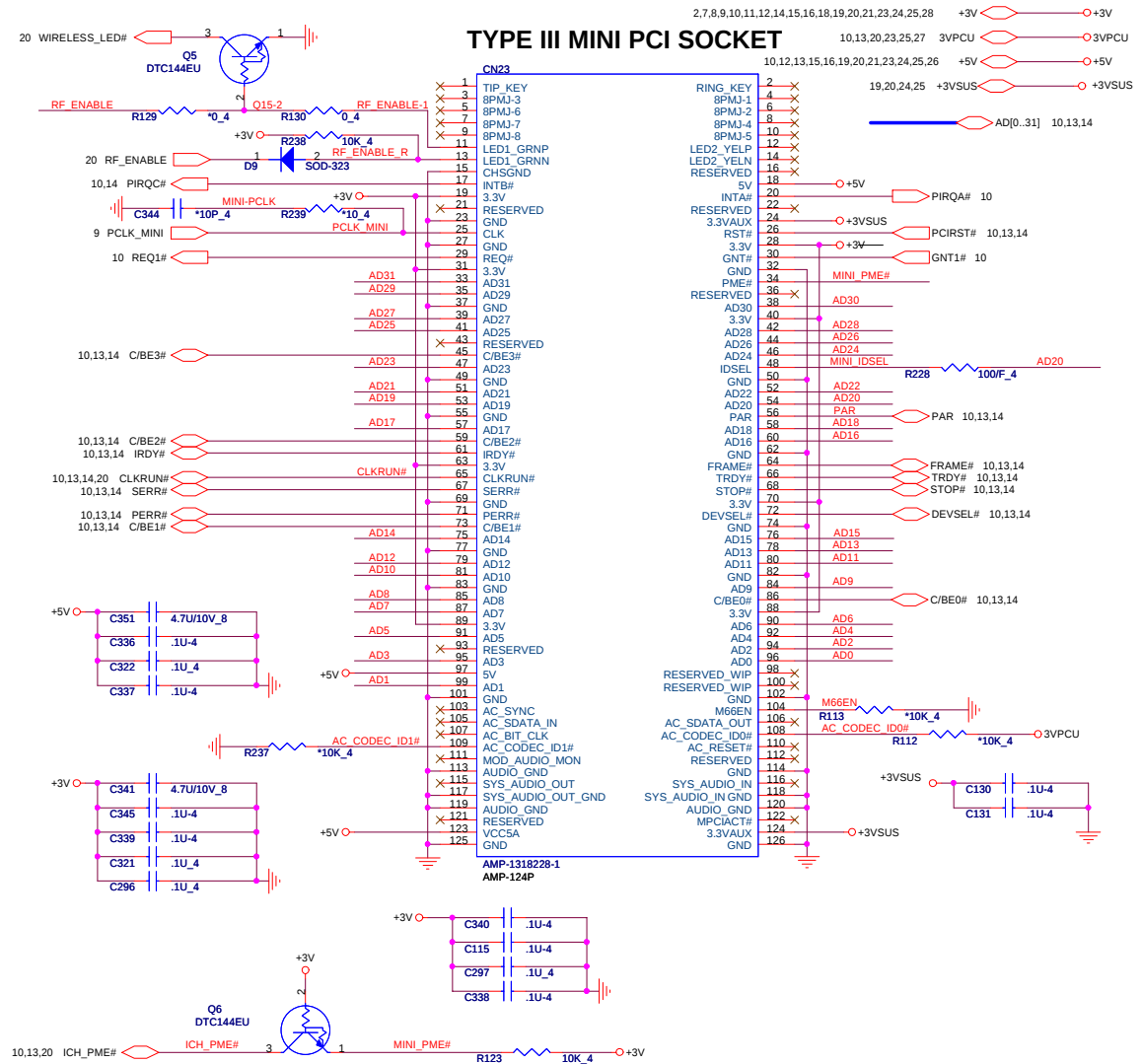
17.19.20.24.25 +3VSUS



USB CONNECTOR



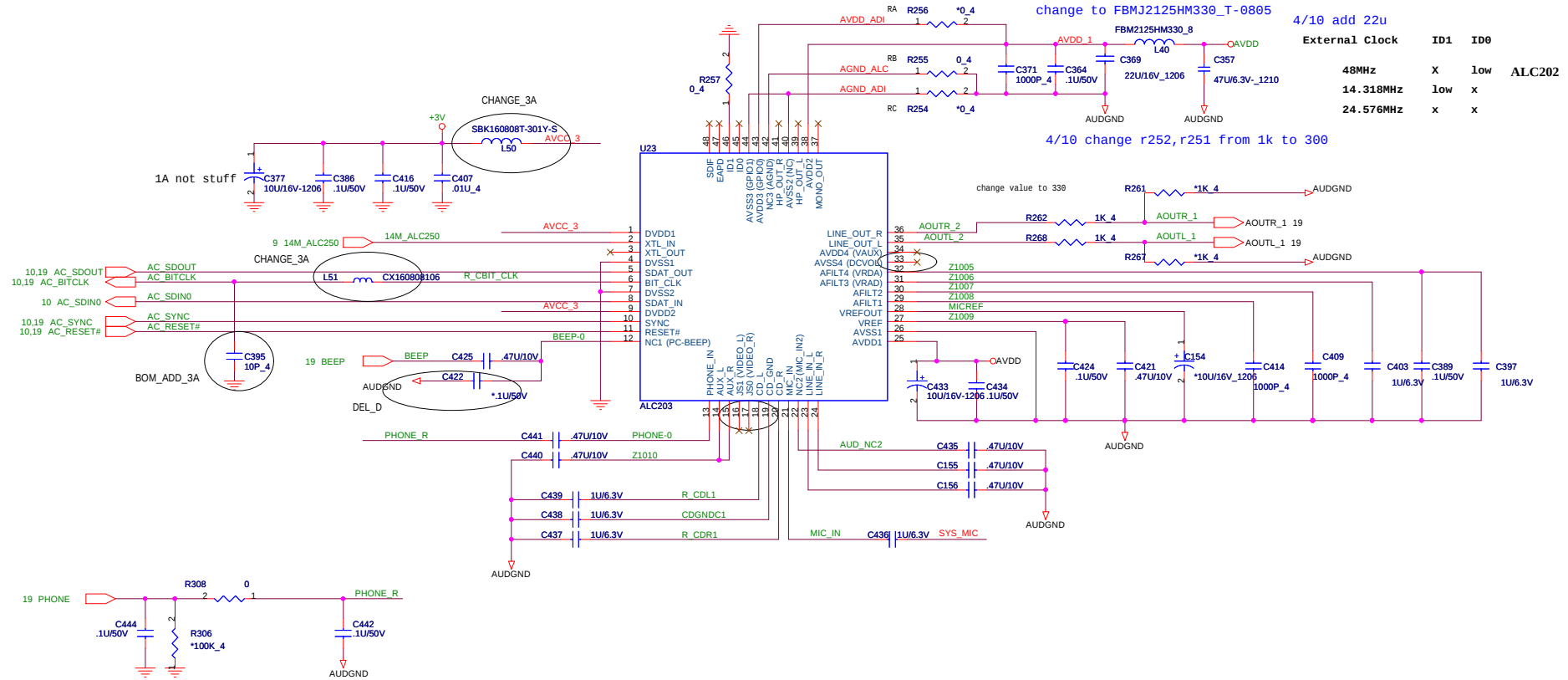
TYPE III MINI PCI SOCKET



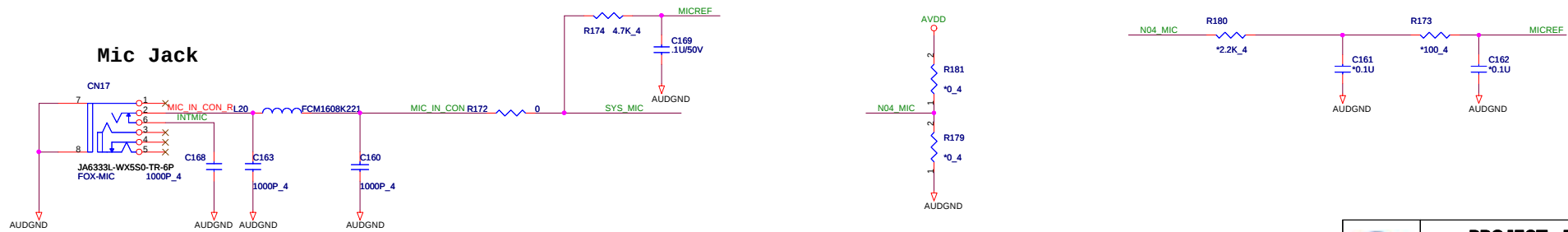
PROJECT : RW3
Quanta Computer Inc.
<http://www.quantatw.com>

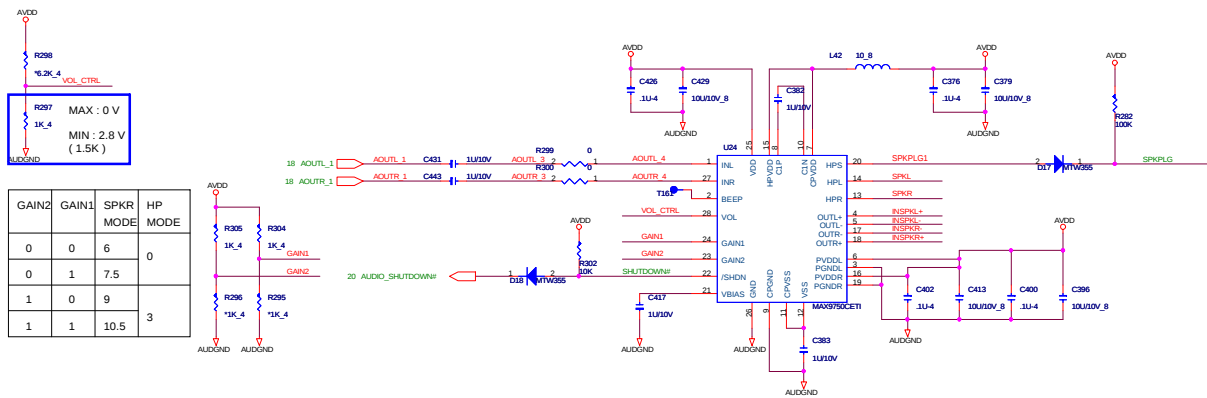
Size Custom	Document Number MINI PCI & USB Connector	Rev 3A
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AC97 CODEC

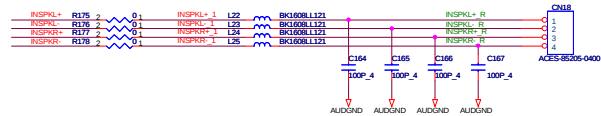


Mic Jack

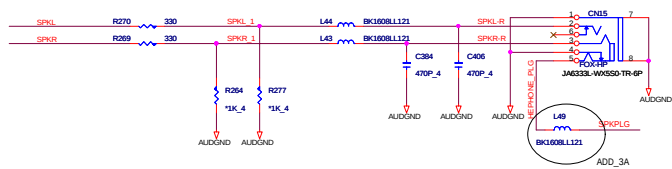




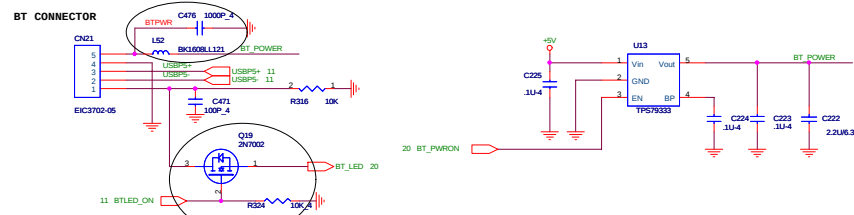
internal speaker



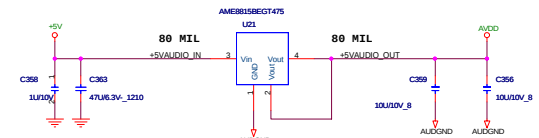
HEADPHONE OUT



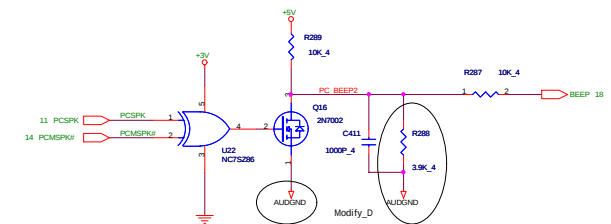
BLUETOOTH



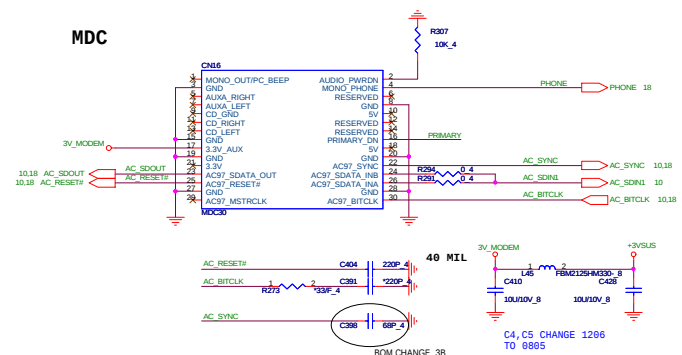
AUDIO POWER



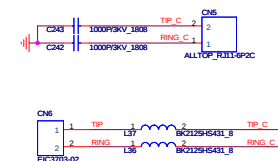
AUDIO BEEP

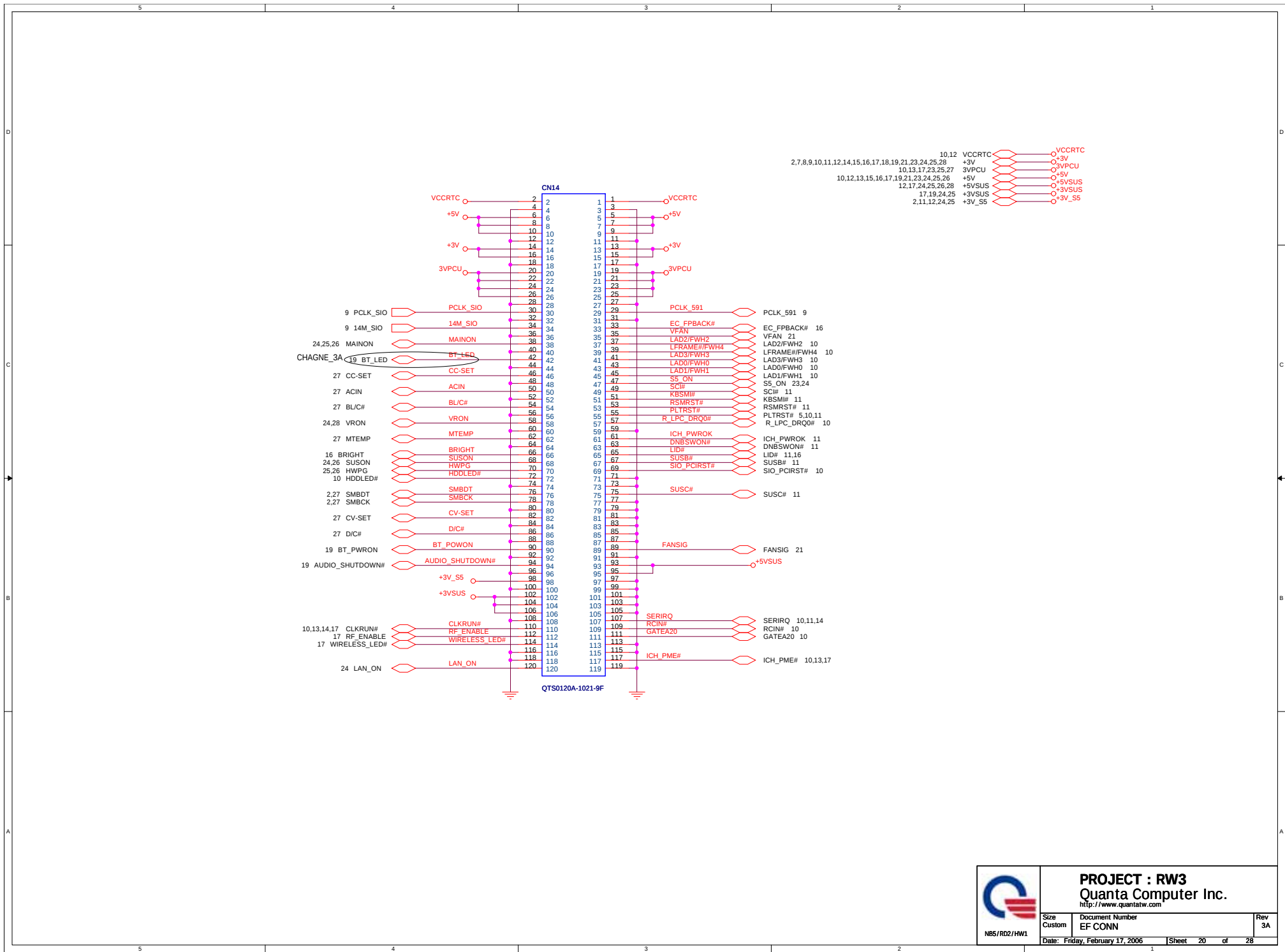


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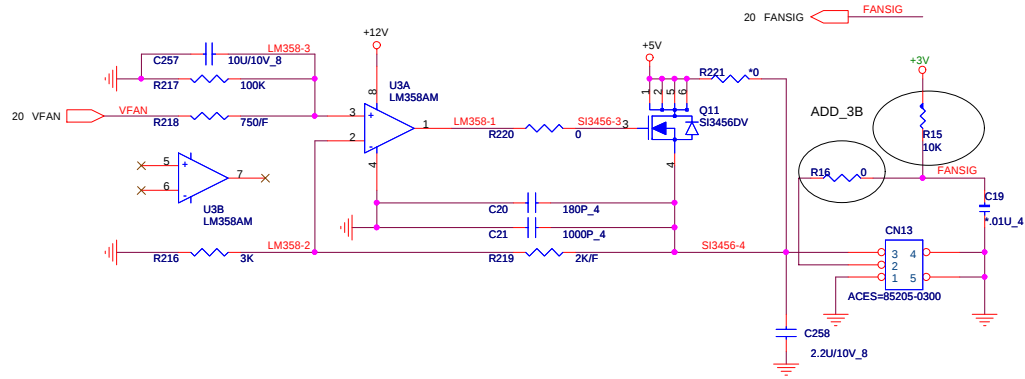


RJ11 CONNECTOR



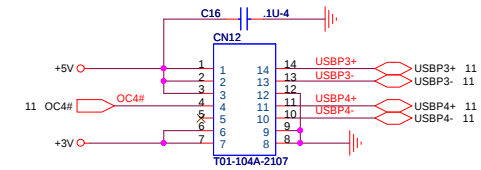


FAN CONTROL



25 +12V
2,7,8,9,10,11,12,14,15,16,17,18,19,20,23,24,25,28 +3V
10,12,13,15,16,17,19,20,23,24,25,26 +5V

3 IN 1 CONNECTOR

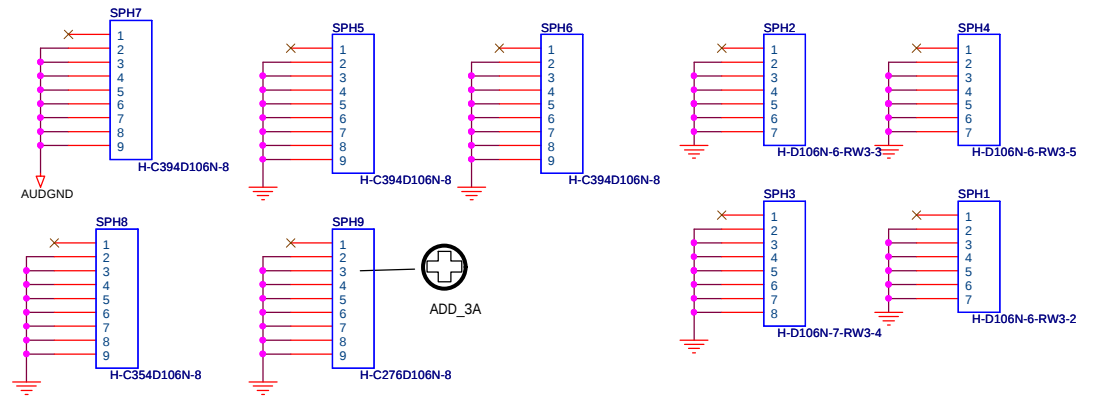


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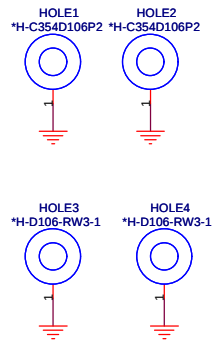
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10,13,17,20,23,25,27 3VPCU  3VPCU
2,7,8,9,10,11,12,14,15,16,17,18,19,20,21,23,24,25,28 +3V  +3V

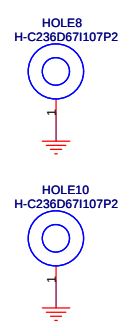
LED	COLOR	SWITCH
POWER	GREEN & RED	POWER
BATTERY	GREEN & RED	MAIL
CAPS	GREEN	INTERNAL
NUM	GREEN	WIRELESS
SCROLL	GREEN	
HDD & CDROM	GREEN	
WIRELESS	GREEN	



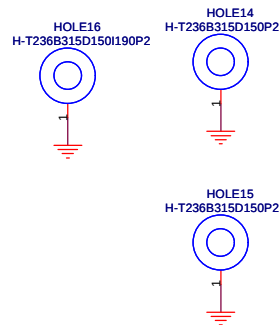
SCREW



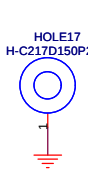
EC board



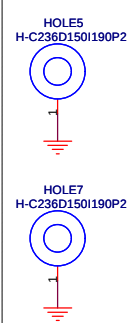
PCB HOLD



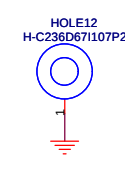
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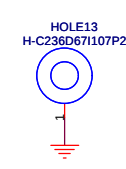
3 IN1



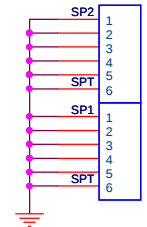
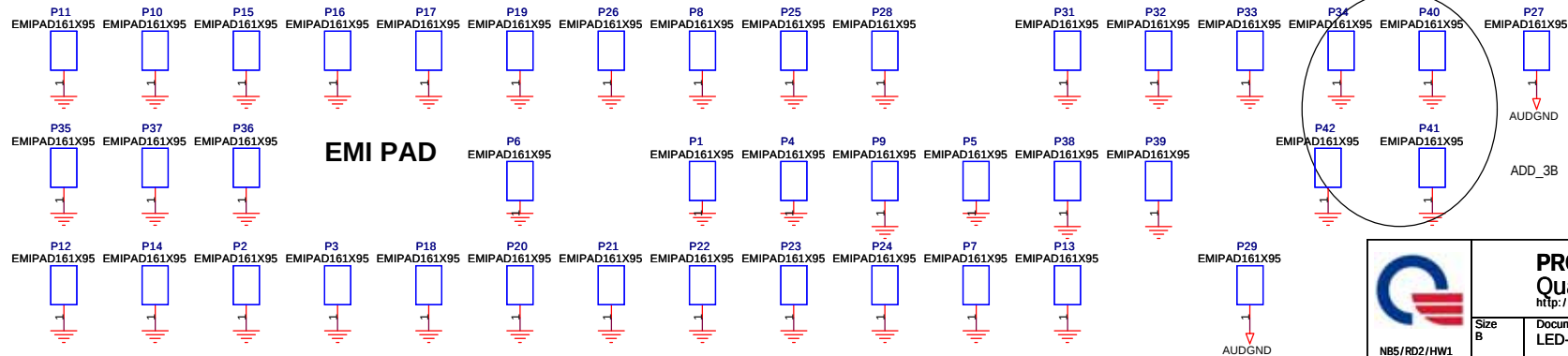
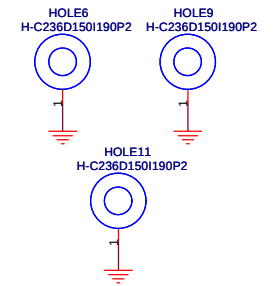
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MODEM

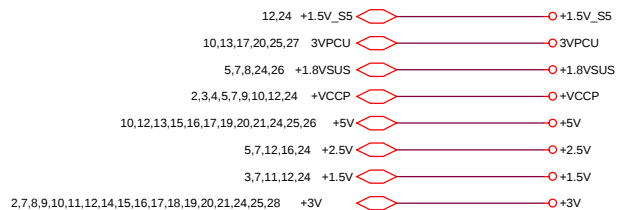
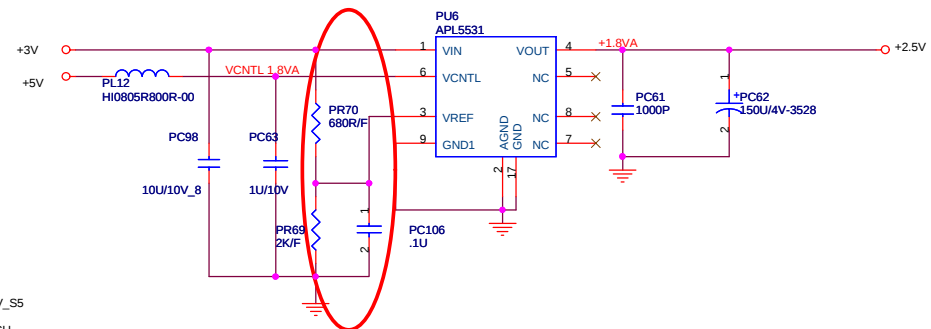
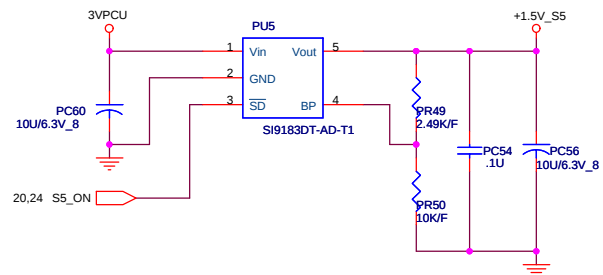
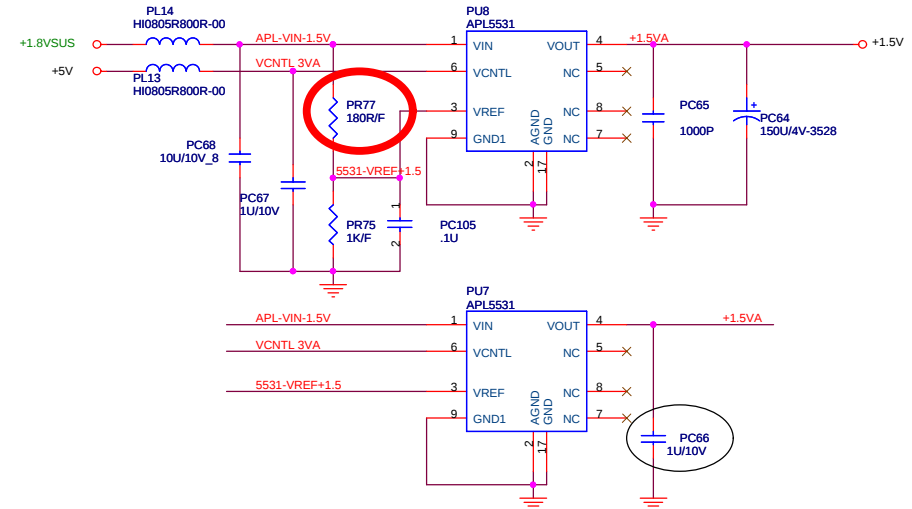
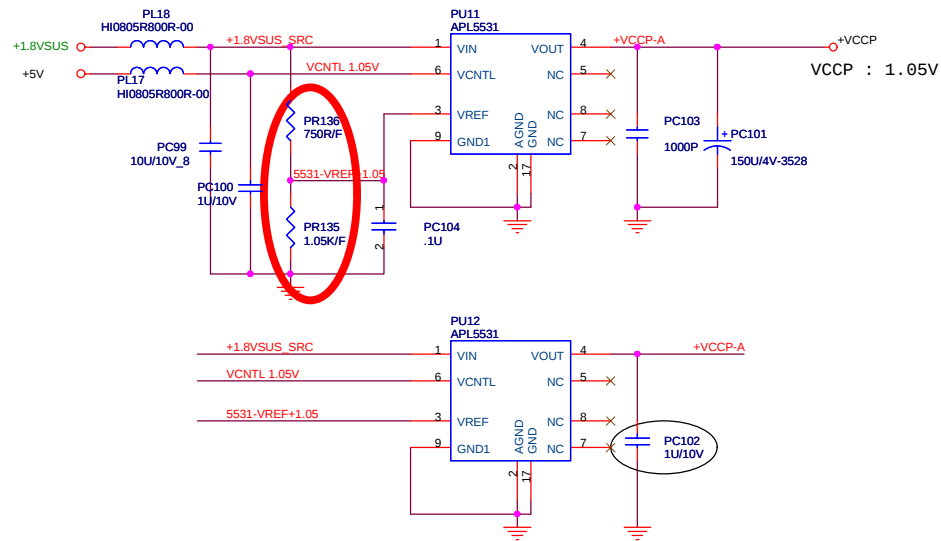


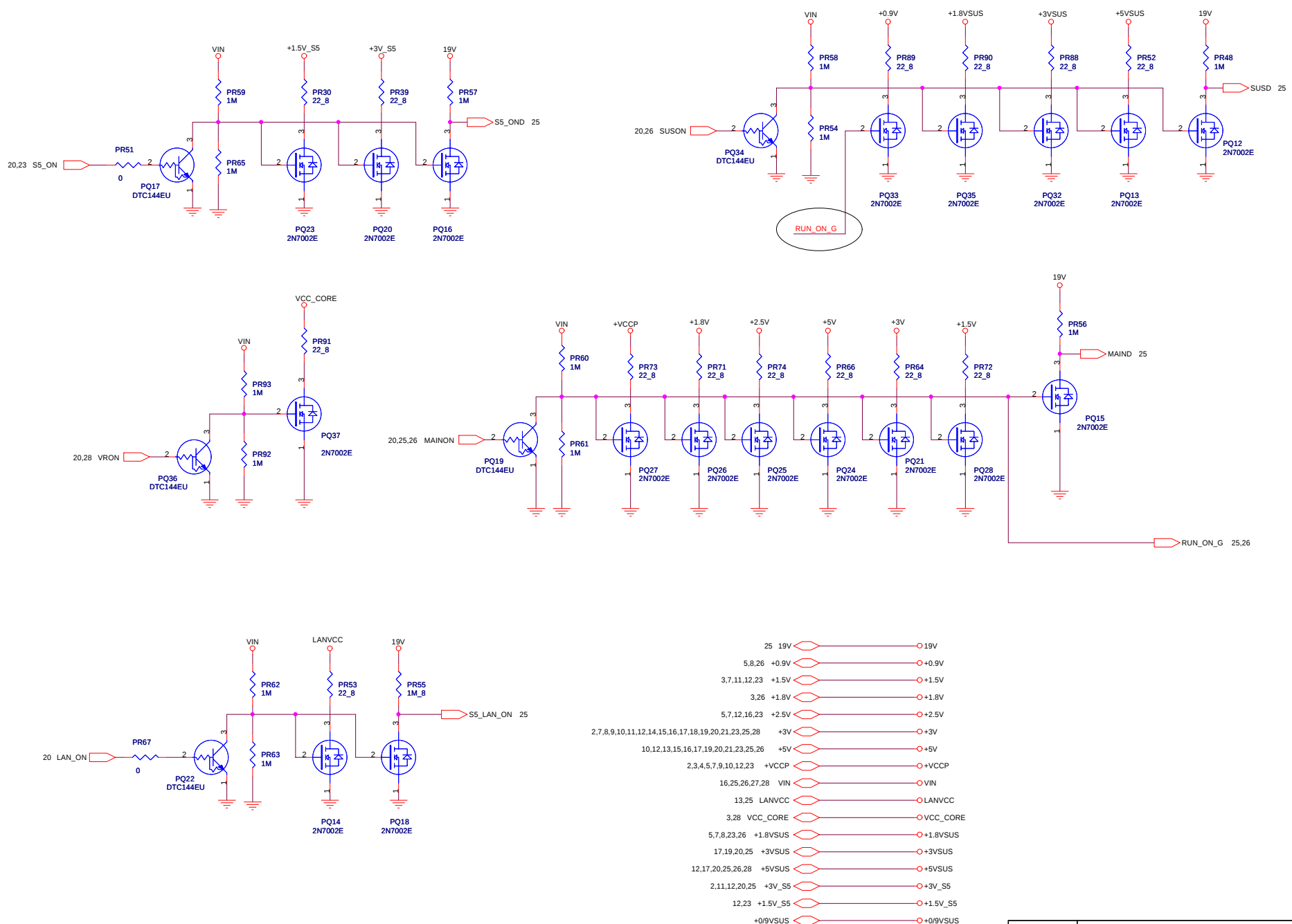
CPU

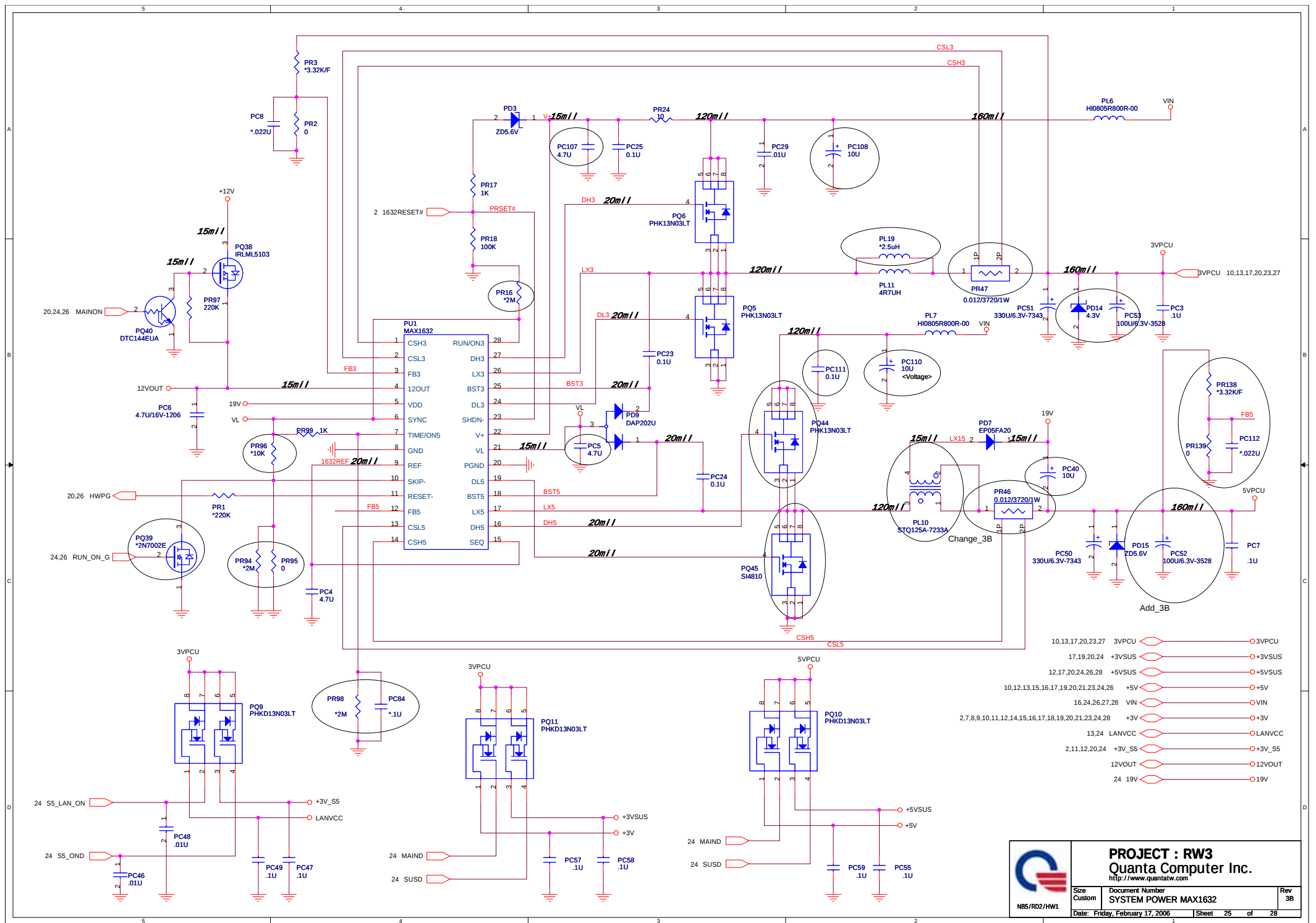


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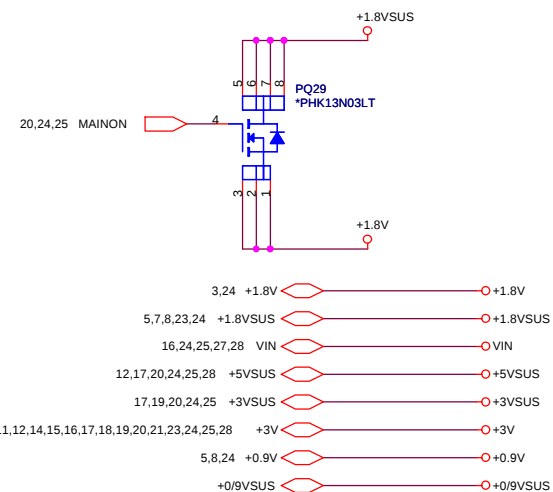
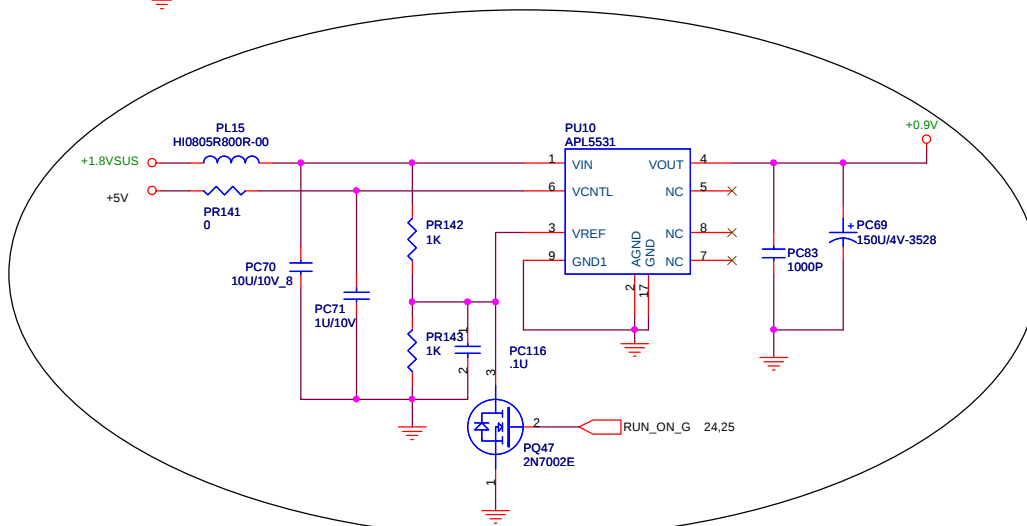
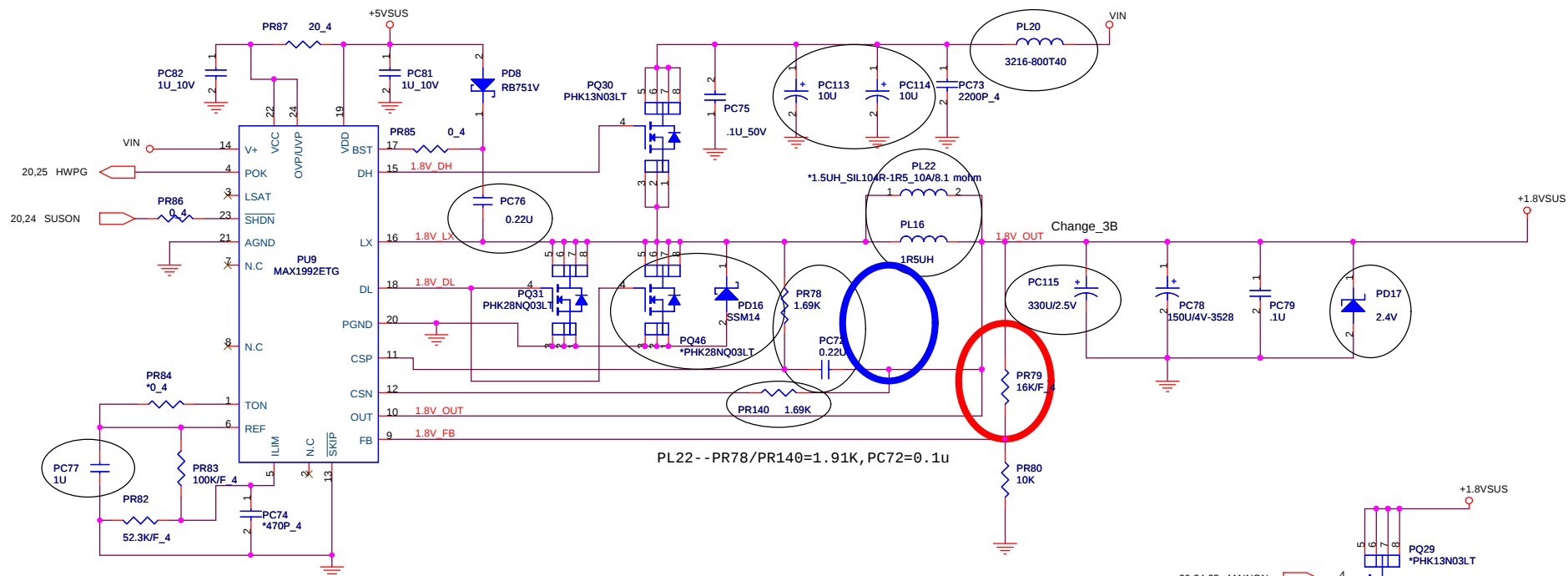
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