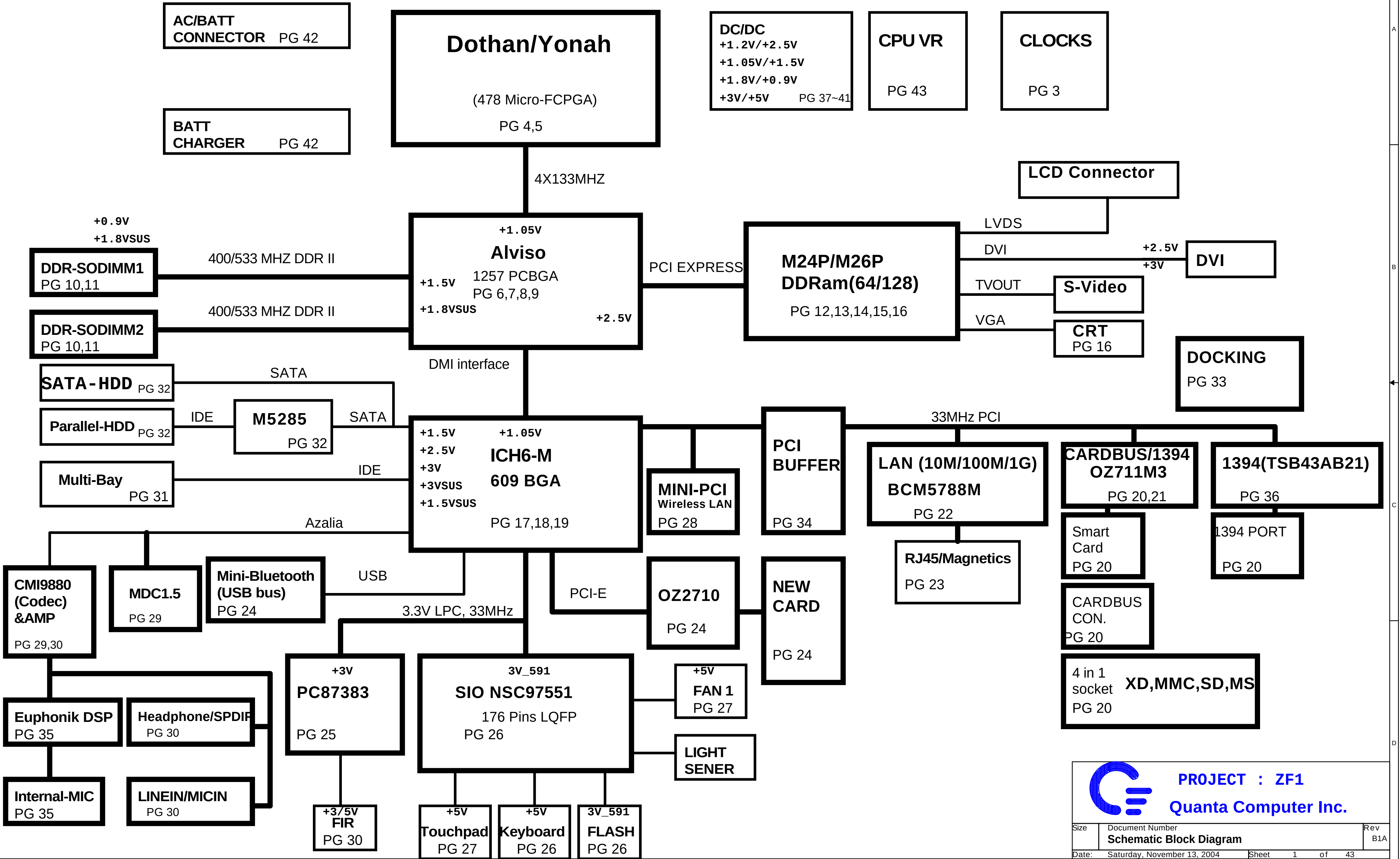
ZF1



PROJECT : ZF1

Quanta Computer Inc.

Size	Document Number	Rev
	Schematic Block Diagram	B1A
Date:	Saturday, November 13, 2004	Sheet 1 of 43

Check again

Voltage Rails		ON S0~S1	ON S3	ON S4	ON S5	Control signal
12VOUT		X	X	X	X	
3V_591		X	X	X	X	
5VPCU		X	X	X	X	
+3V_S5		X	X	X	X	S5_ON
3V_LAN		X	X	X	X	
+1.5V_S5		X	X	X	X	S5_ON
+1.8VSUS		X	X			SUSON
+3VSUS		X	X			SUSD
+5VSUS		X	X			SUSD
SMDDR_VTERM	DDR Termination voltage	X	X			MAINON
SMDDR_VREF		X				MAINON
VGA_PCIE_1.2V		X				MAINON
VCC_CORE	Core voltage for Processor	X				VR_ON
+VCCP	1.05V rail for Processor I/O	X				MAINON
+1.5V		X				MAINON
+1.8V		X				MAIND
+2.5V		X				MAIND
+3V		X				MAIND
+5V						MAIND
+12V		X				MAINON
+3VRUN		X				PCI_Switch_Power_ON
+5VRUN		X				PCI_Switch_Power_ON

Change History

5/28
1.System DVI DET function move in EZ port , So,Del Q47,R557
2.Addition AND gate for DOCKING Power Good AND DockingIN Singal combine Circuit
3.Addition Power led circuit for system
4.Change D34 AND D35 + -
5.Addition LID Switch and LID connector
6.Addition RC Delay for PCIE1.2V
7.Change EC Three GPIO port same to ZL2
5/31
1.Change C145 PCB Footprint to 3528
2.Combine USB and bluetooth connector to 19pin connector 87212-1900
3.Change PCBFootprint 88216-1200 to 88213-1200
4.Change USB connector bypass C to 0805 10u
5.Adujst 80pin connector 3 singal
6/1
1.Update power all circuit for GND name
2.Addition OR to PRST
3.Change IDE RST

6/2
1.Change ICH-6 USB Port
2.Del CDR,CDL,CDGND Singal and DEL prevent CDR,CDL,CDGND noise circuit.
6/4
1.U49,U50, Form 3VRUN change to +3V AND CHANGE MINPCI connector to PCI BUS,And addition PCI_SWRST # AND PCI_SWRST1#
2.Change BT_POWER NAME
3.Change VOIP AGND

6/7
1.Change VOIP AGND TO AGND2 for Layout

External PCI Devices

Device	IDSEL#	REQ#/GNT#	Interrupts
CardBus+Smart Card	AD25	1	PIRQC/B
Mini-PCI	AD19	2	PIRQB/D
LAN	AD22	0	PIRQA
1394	AD23	3	PIRQD

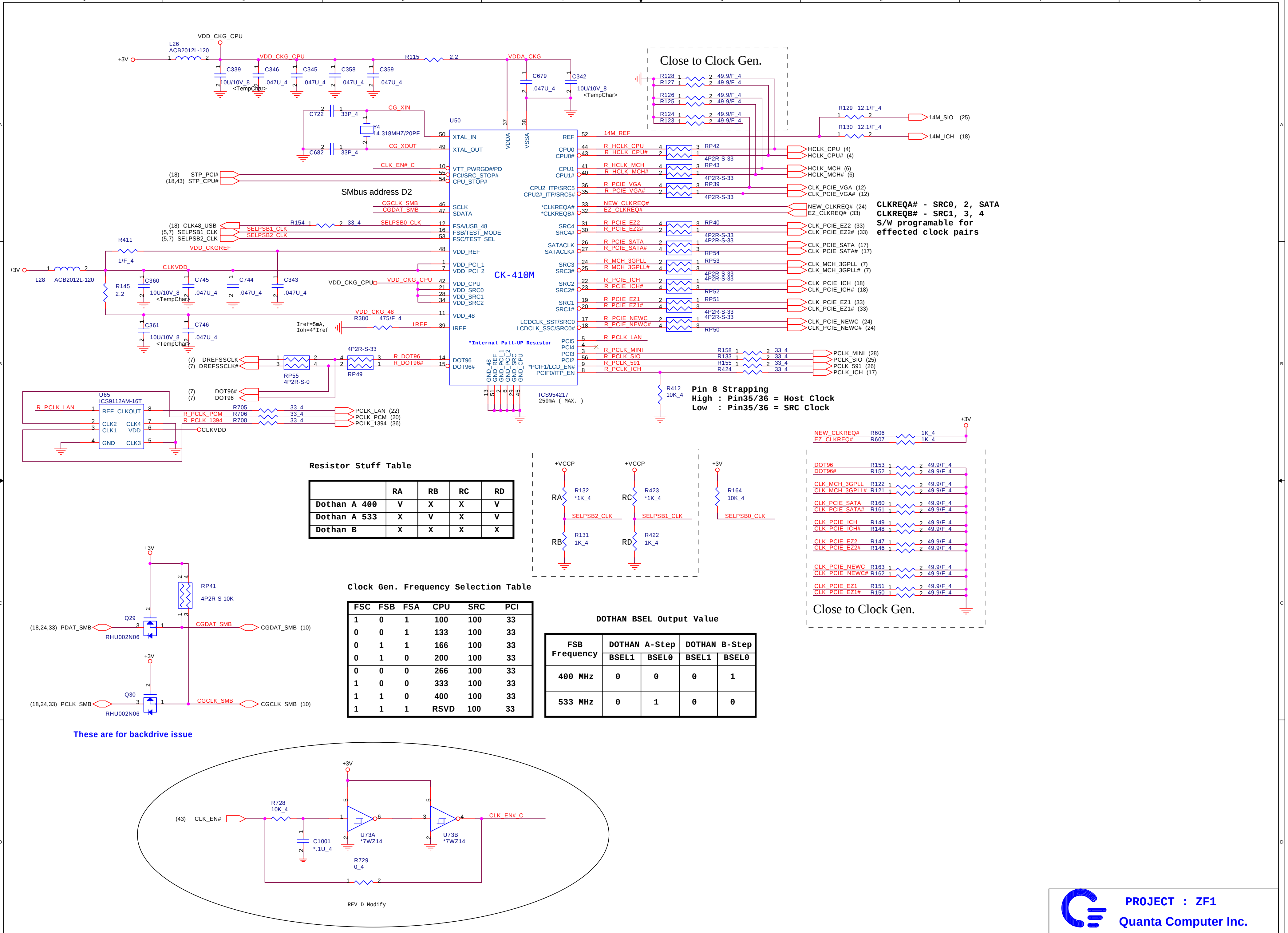
EC SM Bus1 address

Device

Smart Battery
THERMAL SENSOR
LIGHT SENER
VOIP FLASH ROM

ICH6-M SM Bus address

Device	
SODIMM	**1010 000X b**
Clock Gen	**1101 001x b**



Resistor Stuff Table

	RA	RB	RC	RD
Dothan A 400	V	X	X	V
Dothan A 533	X	V	X	V
Dothan B	X	X	X	V

Clock Gen. Frequency Selection Table

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

DOTHAN BSEL Output Value

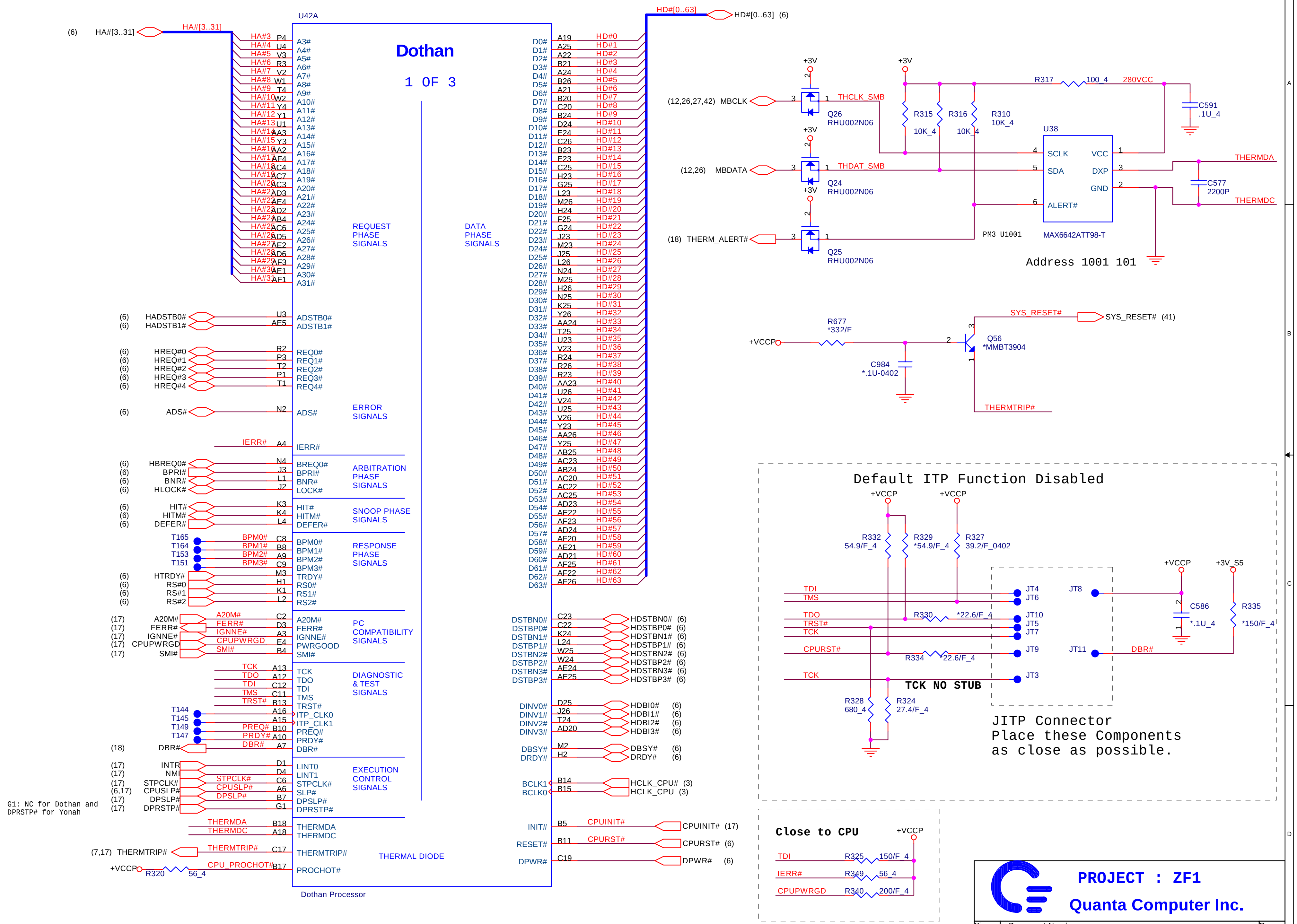
FSB Frequency	DOTHAN A-Step		DOTHAN B-Step	
	BSEL1	BSEL0	BSEL1	BSEL0
400 MHz	0	0	0	1
533 MHz	0	1	0	0

PROJECT : ZF1

Quanta Computer Inc.

Size	Document Number	Rev
	Clock Gen.	A1A

Date: Saturday, November 13, 2004 Sheet 3 of 43

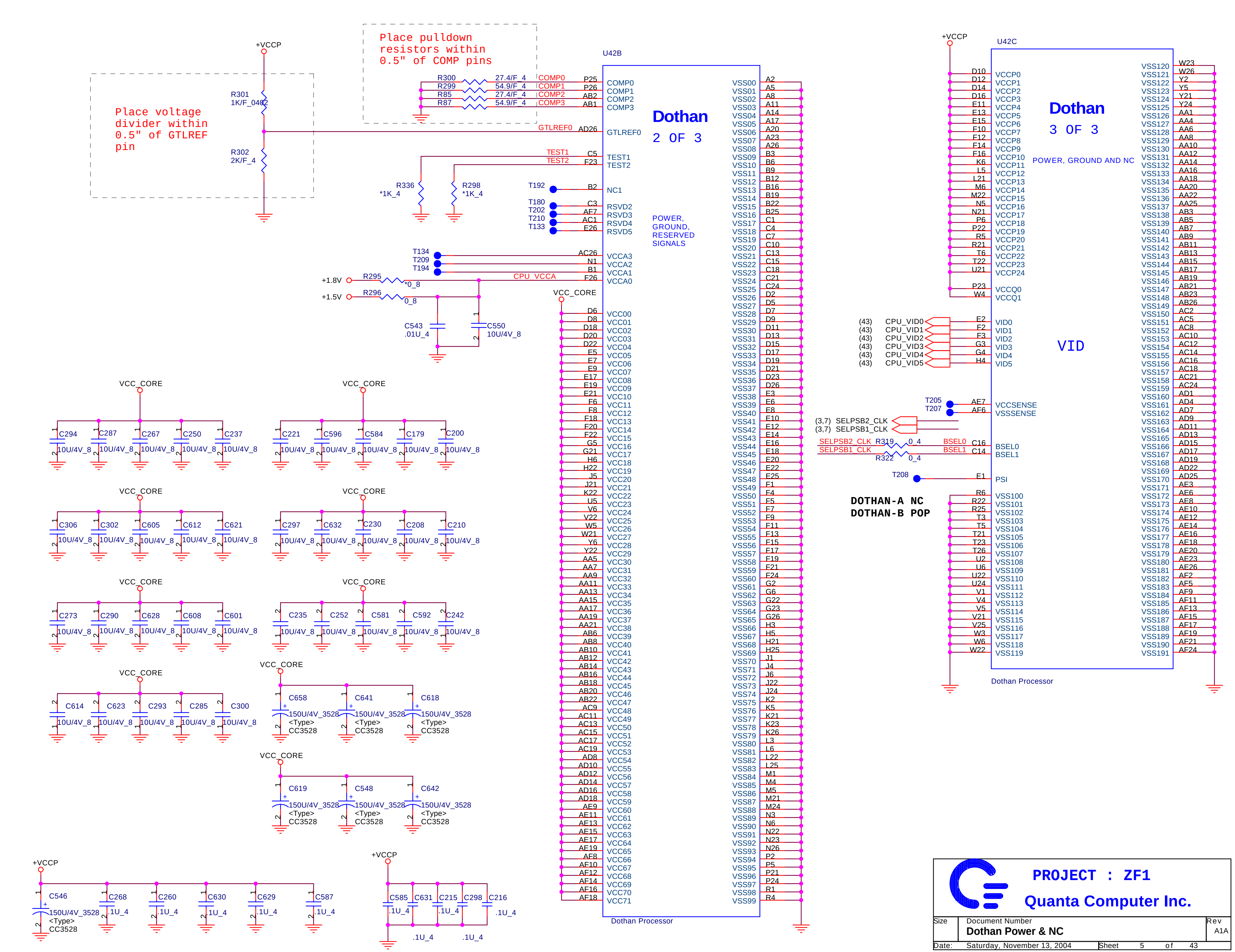


PROJECT : ZF1

Quanta Computer Inc.

Size	Document Number	Rev
	Dothan Host	A1A

Date: Saturday, November 13, 2004 Sheet 4 of 43

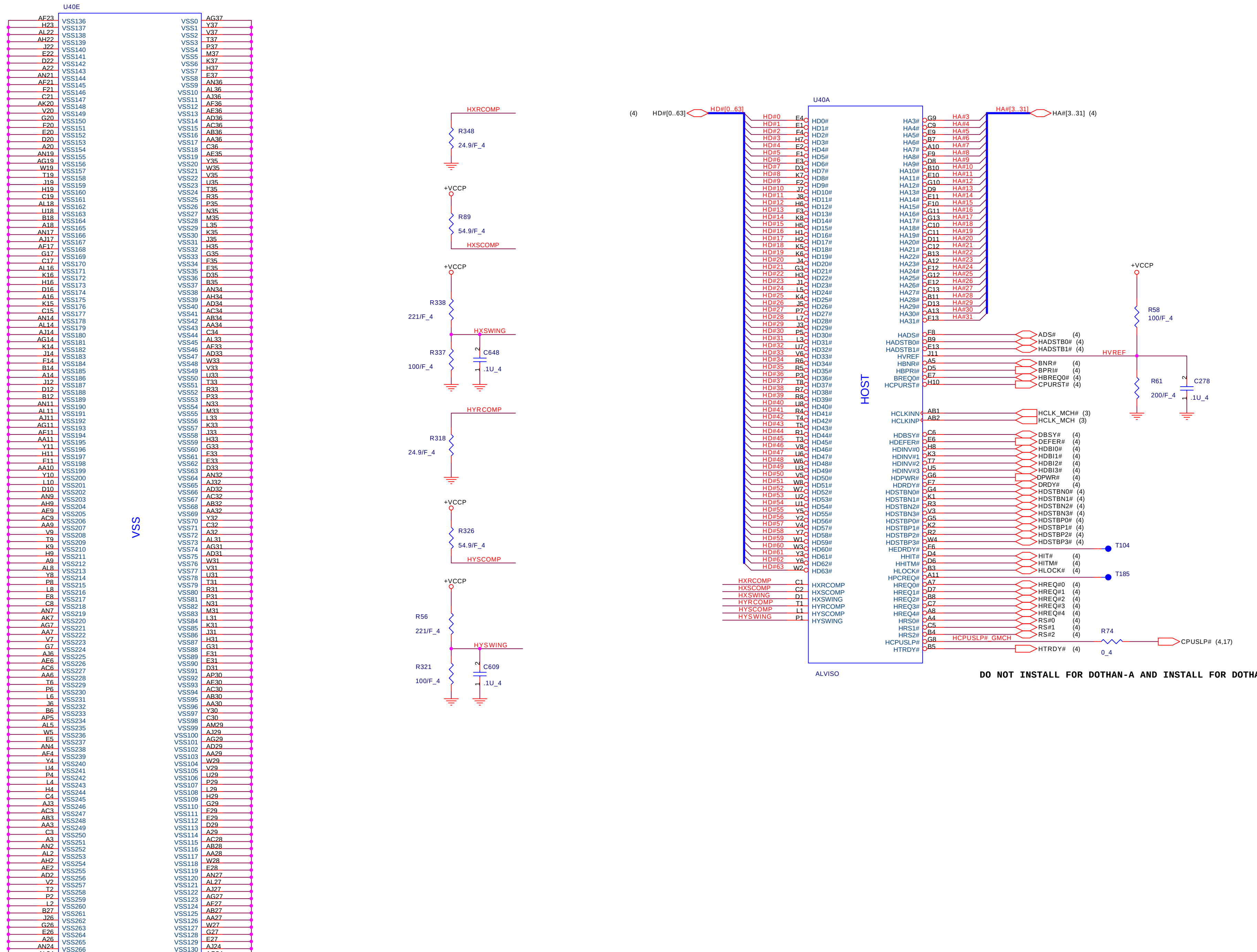


PROJECT : ZF1

Quanta Computer Inc.

Size	Document Number	Rev
	Dothan Power & NC	A1A

Date: Saturday, November 13, 2004 | Sheet 5 of 43

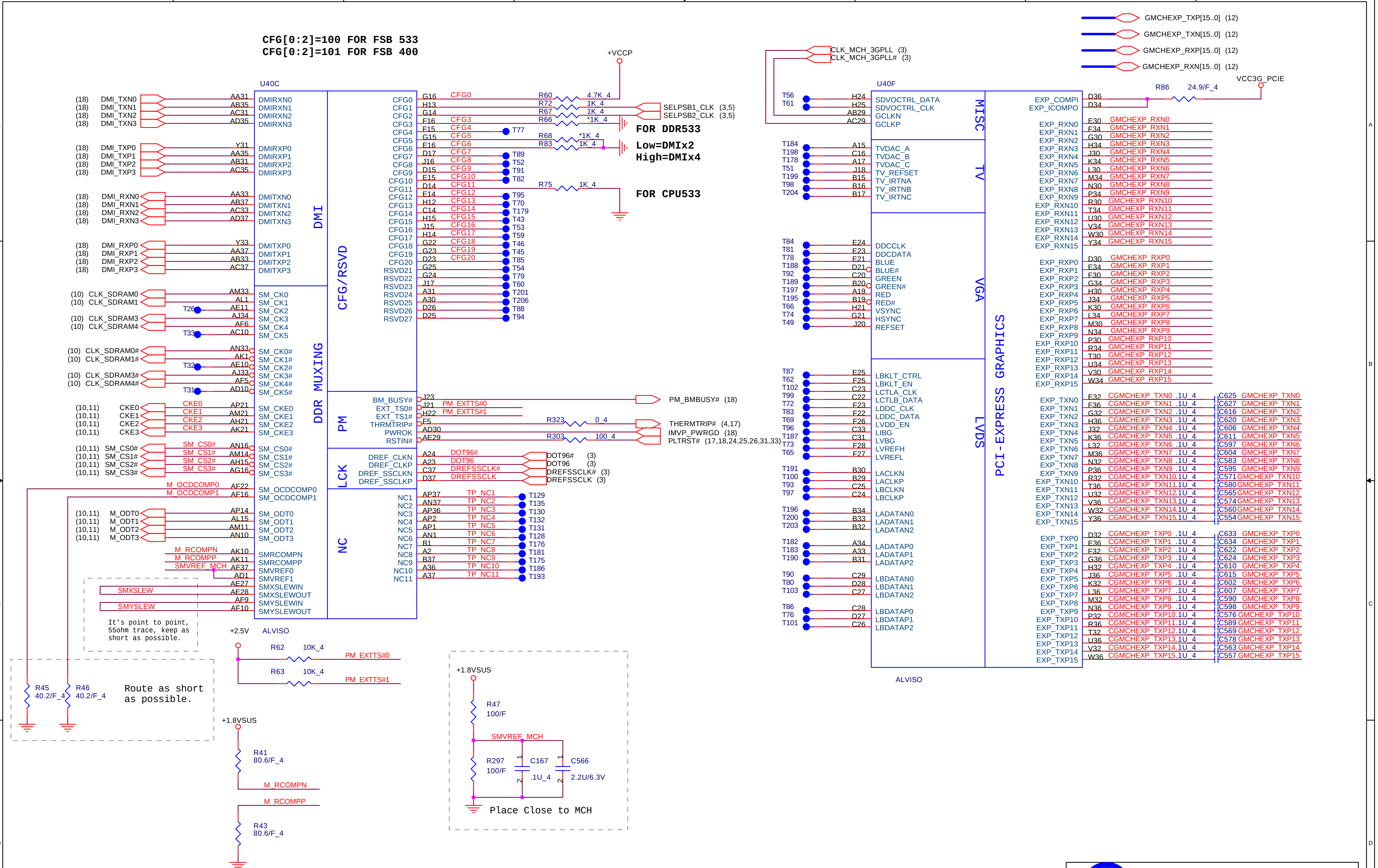


DO NOT INSTALL FOR DOTHAN-A AND INSTALL FOR DOTHAN-B

PROJECT : ZF1
Quanta Computer Inc.

Size	Document Number	Rev
	Alviso Host	A1A

Date: Saturday, November 13, 2004 Sheet 6 of 43

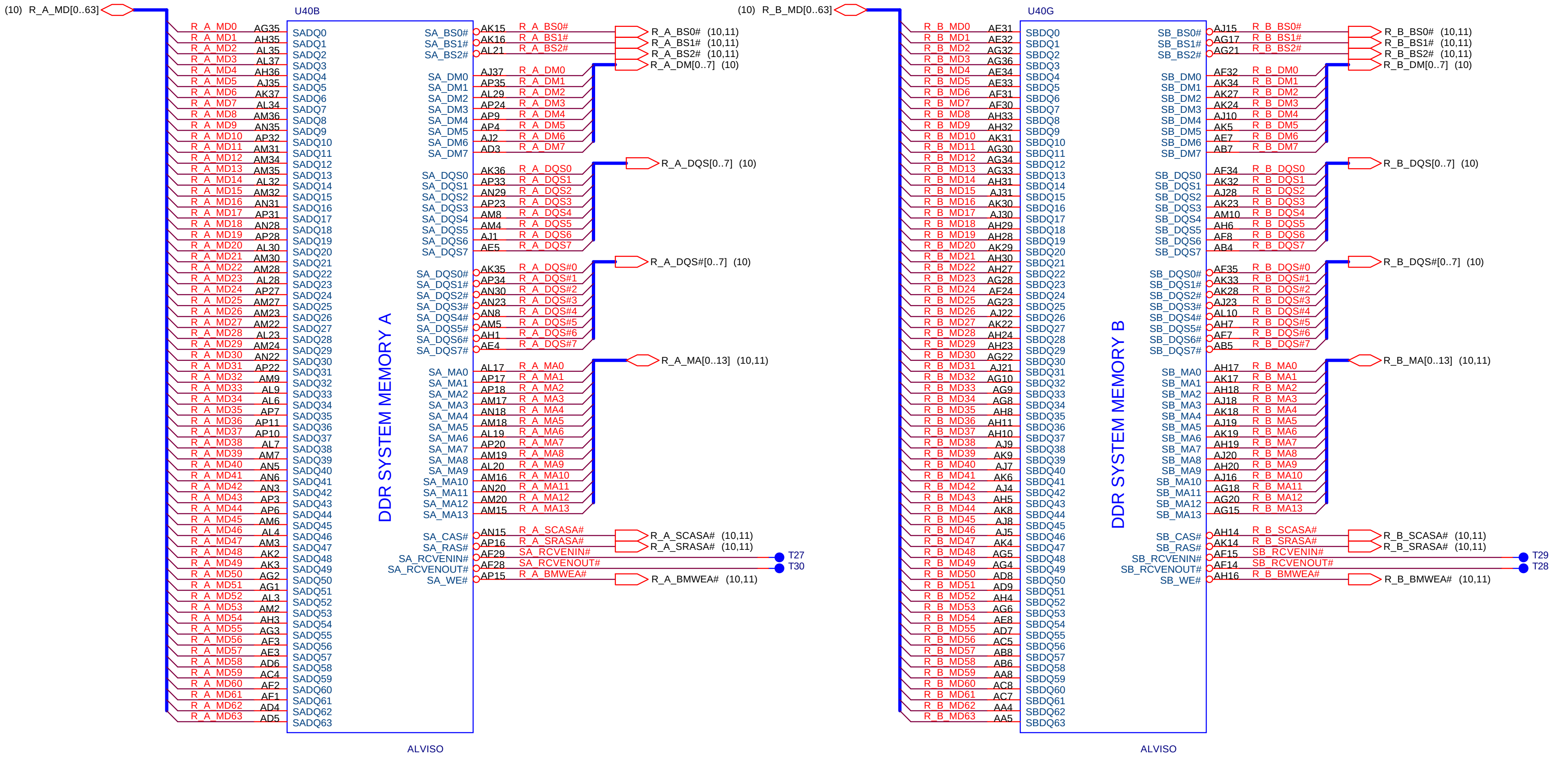


Size	Document Number	Rev
	Alviso DMI & PCIE	A1A

PROJECT : ZF1

Quanta Computer Inc.

Date: Saturday, November 13, 2004 Sheet 7 of 43

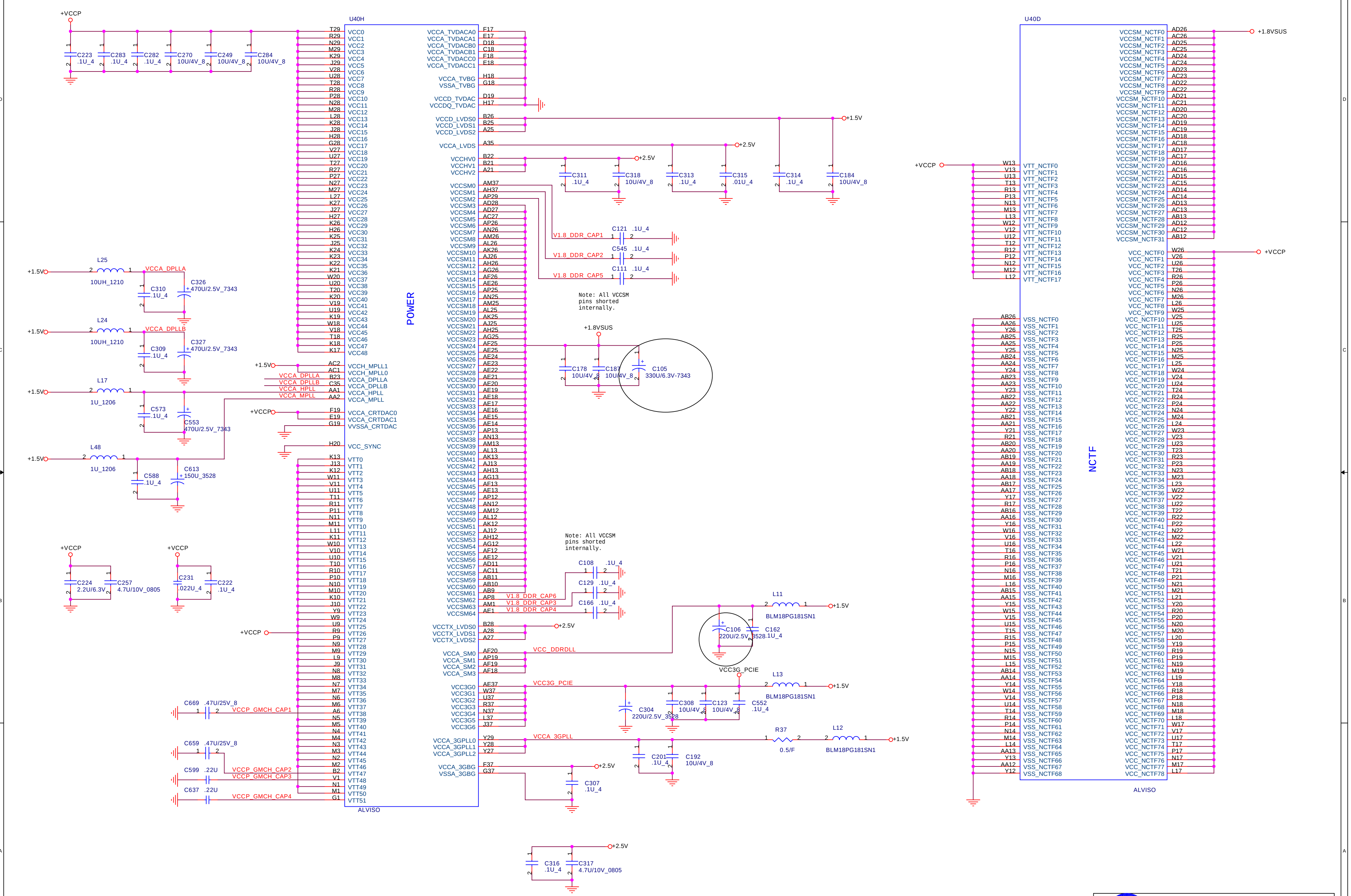


PROJECT : ZF1

Quanta Computer Inc.

Size	Document Number	Rev
	Alviso DDR	A1A

Date: Saturday, November 13, 2004 Sheet 8 of 43

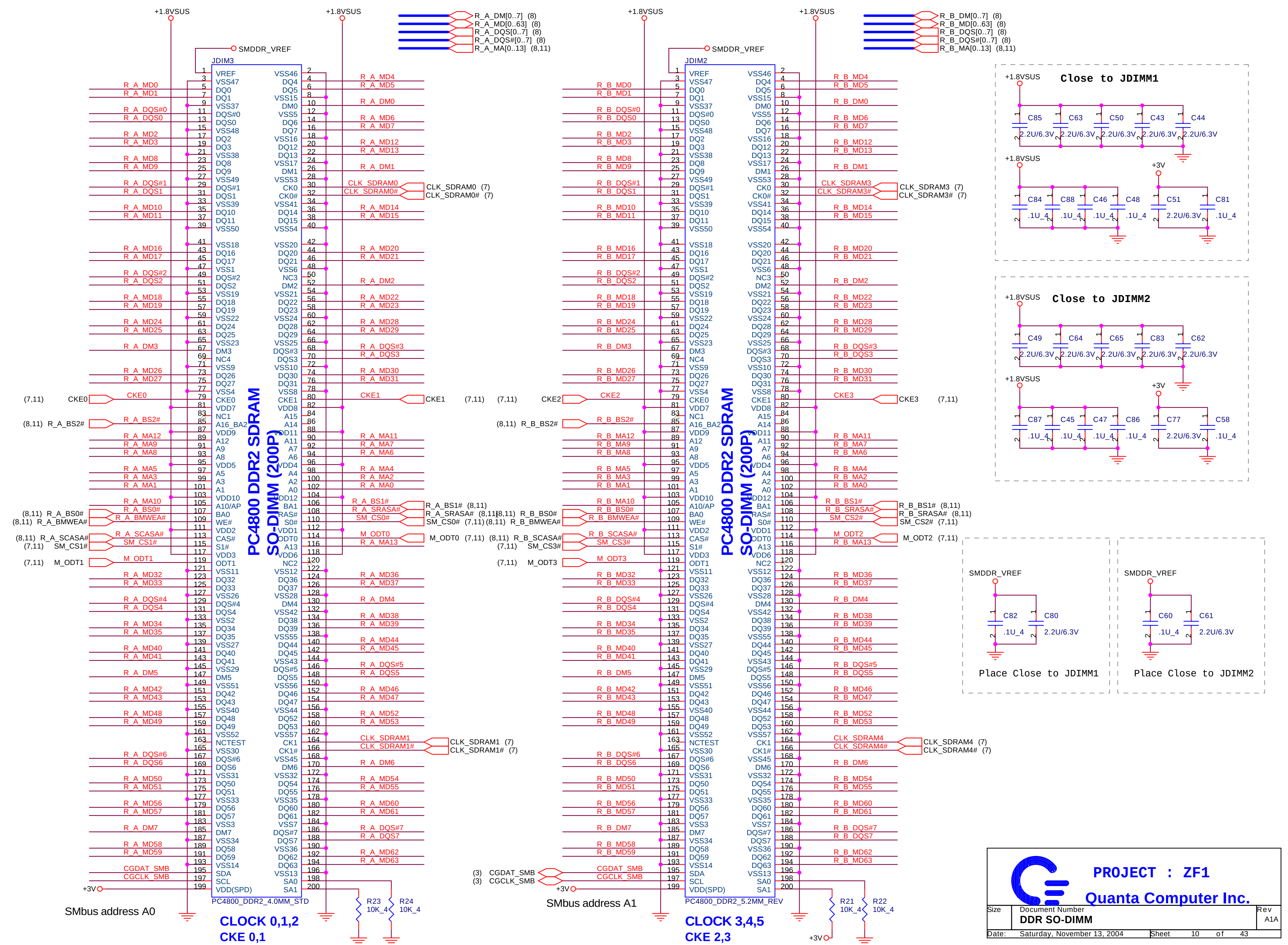


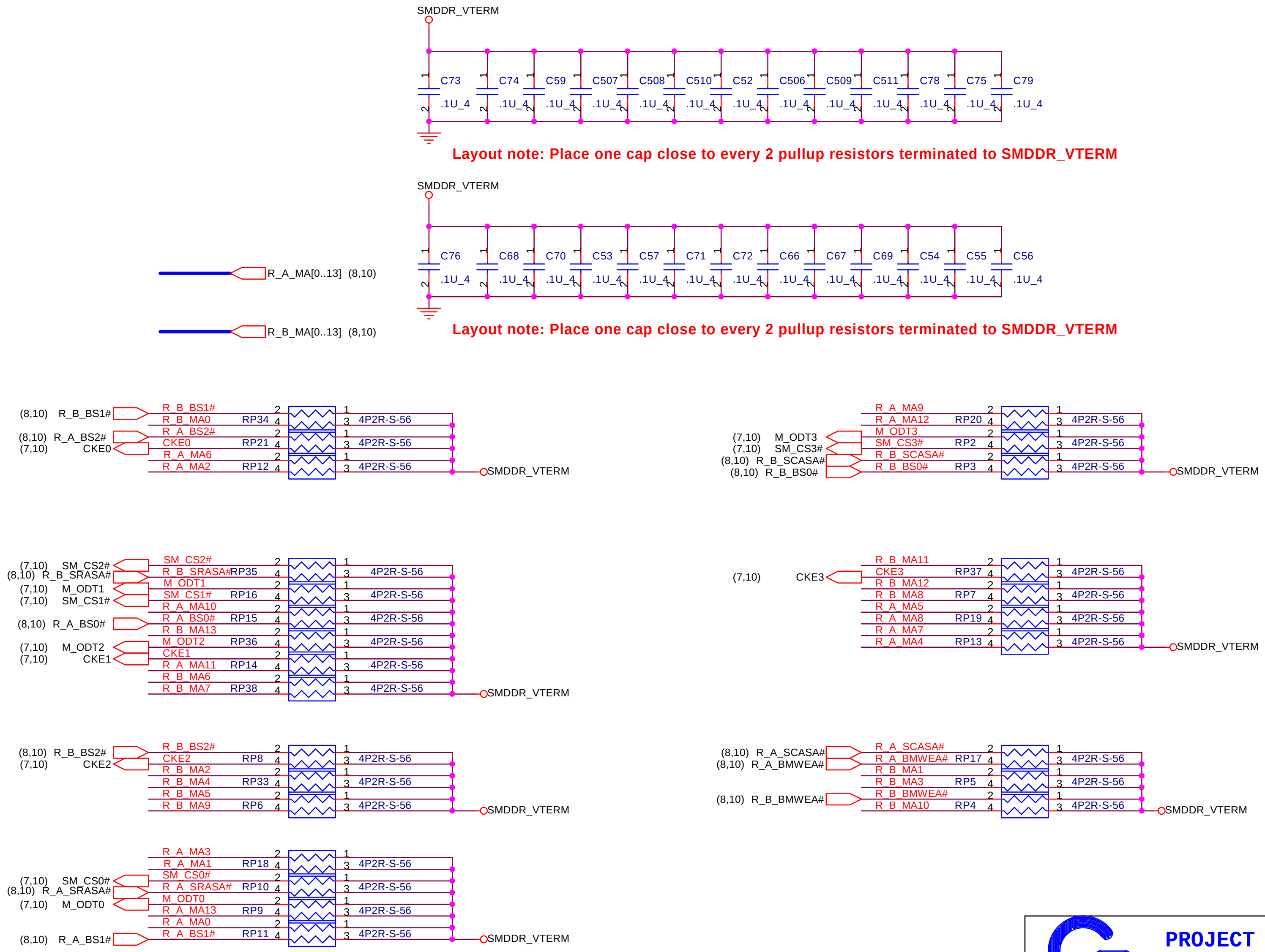
PROJECT : ZF1

Quanta Computer Inc.

Size	Document Number	Rev
	Alviso Power	A1A

Date: Saturday, November 13, 2004 Sheet 9 of 43


+1.8VSUS
SMDDR_VREF
JDIM3
PC4800 DDR2 SDRAM
SO-DIMM (200P)
PC4800_DDR2_4.0MM_STD
R_A_DM[0..7] (8)
R_A_MD[0..63] (8)
R_A_DQS[0..7] (8)
R_A_DQS#[0..7] (8)
R_A_MA[0..13] (8,11)
CLK_SDRAM0 (7)
CLK_SDRAM0# (7)
CLK_SDRAM1 (7)
CLK_SDRAM1# (7)
(7,11) CKE0
CKE1 (7,11)
(8,11) R_A_BS2#
R_A_BS1# (8,11)
R_A_SRASA# (8,11)
SM_CS0# (7,11)
(8,11) R_A_BS0#
(8,11) R_A_BMWEA#
(8,11) R_A_SCASA#
(7,11) SM_CS1#
M_ODT0 (7,11)
(7,11) M_ODT1
CGDAT_SMB
CGCLK_SMB
+3V
R23 10K_4
R24 10K_4
SMbus address A0
CLOCK 0,1,2
CKE 0,1
JDIM2
PC4800_DDR2_5.2MM_REV
R_B_DM[0..7] (8)
R_B_MD[0..63] (8)
R_B_DQS[0..7] (8)
R_B_DQS#[0..7] (8)
R_B_MA[0..13] (8,11)
CLK_SDRAM3 (7)
CLK_SDRAM3# (7)
CLK_SDRAM4 (7)
CLK_SDRAM4# (7)
(7,11) CKE2
CKE3 (7,11)
(8,11) R_B_BS2#
R_B_BS1# (8,11)
R_B_SRASA# (8,11)
SM_CS2# (7,11)
(8,11) R_B_BS0#
(8,11) R_B_BMWEA#
(8,11) R_B_SCASA#
(7,11) SM_CS3#
M_ODT2 (7,11)
(7,11) M_ODT3
(3) CGDAT_SMB
(3) CGCLK_SMB
R21 10K_4
R22 10K_4
SMbus address A1
CLOCK 3,4,5
CKE 2,3
Close to JDIMM1
C85 C63 C50 C43 C44 2.2U/6.3V
C84 C88 C46 C48 .1U_4
+3V
C51 2.2U/6.3V
C81 .1U_4
Close to JDIMM2
C49 C64 C65 C83 C62 2.2U/6.3V
C87 C45 C47 C86 .1U_4
C77 2.2U/6.3V
C58 .1U_4
C82 .1U_4
C80 2.2U/6.3V
Place Close to JDIMM1
C60 .1U_4
C61 2.2U/6.3V
Place Close to JDIMM2
PROJECT : ZF1
Quanta Computer Inc.
Size
Document Number
DDR SO-DIMM
Rev
A1A
Date: Saturday, November 13, 2004
Sheet 10 of 43

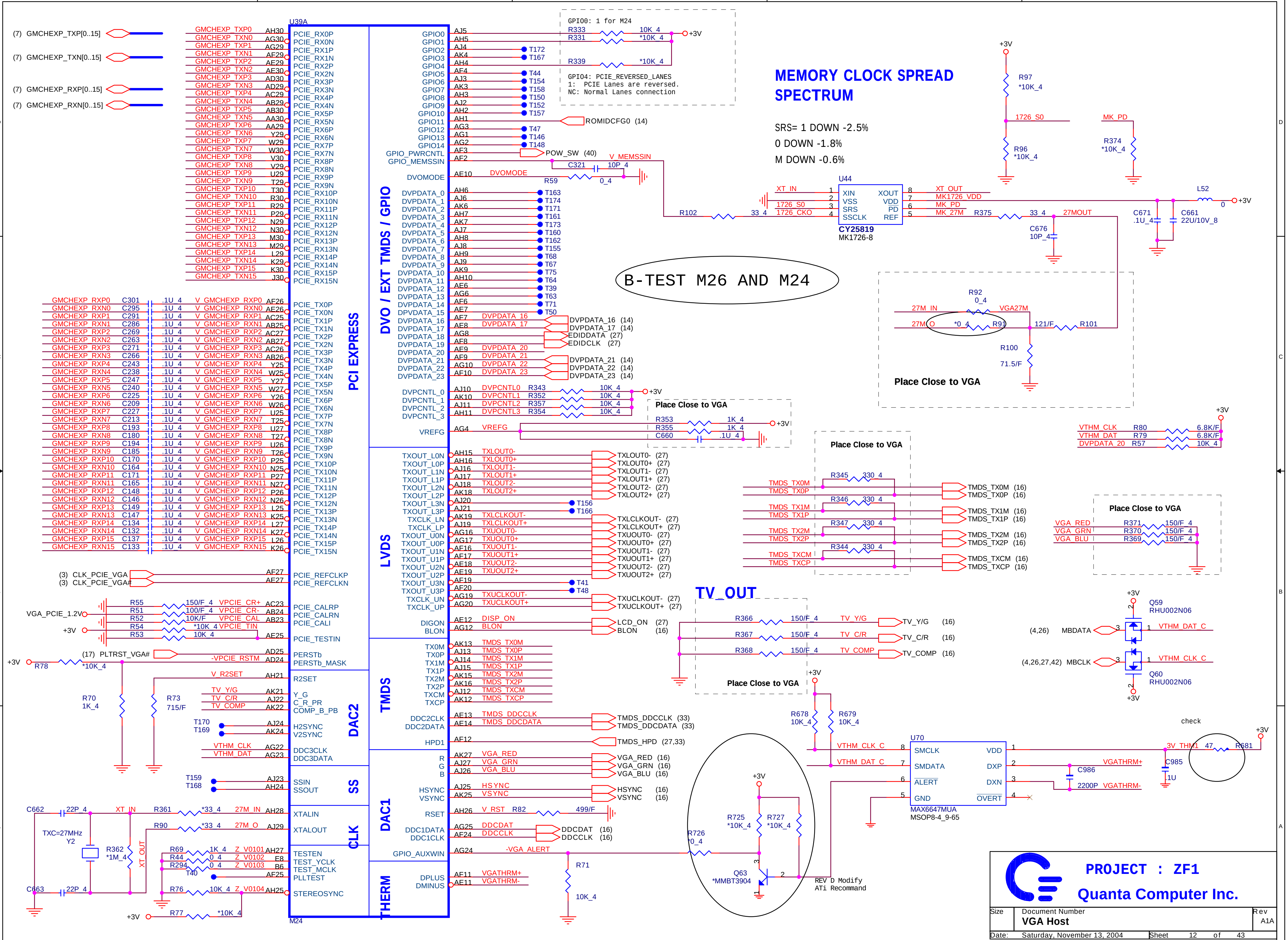


PROJECT : ZF1

Quanta Computer Inc.

Size	Document Number	Rev
	DDR Res. ARRAY	A1A

Date: Saturday, November 13, 2004 Sheet 11 of 43

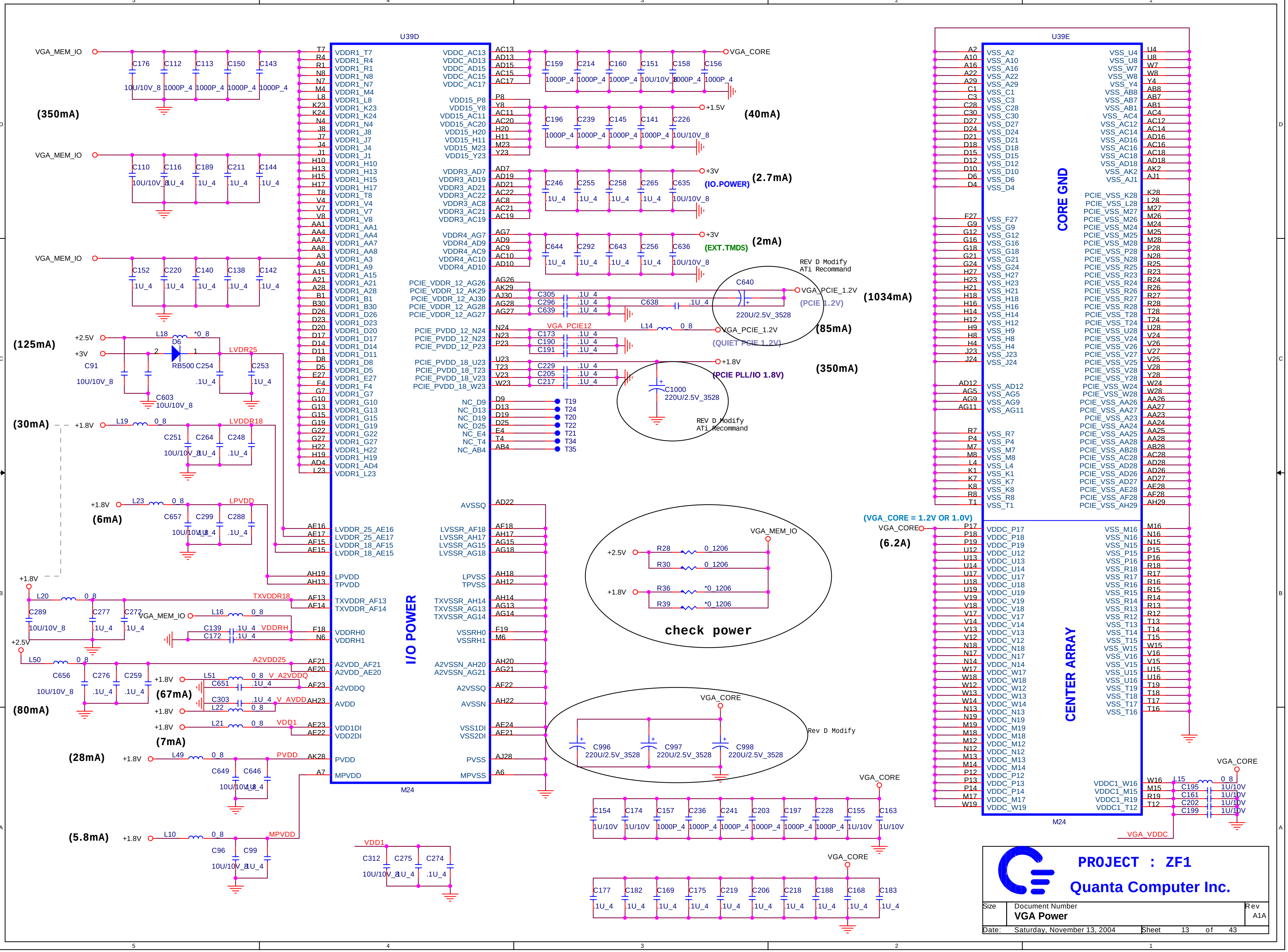


PROJECT : ZF1

Quanta Computer Inc.

Size	Document Number	Rev
	VGA Host	A1A

Date: Saturday, November 13, 2004 Sheet 12 of 43

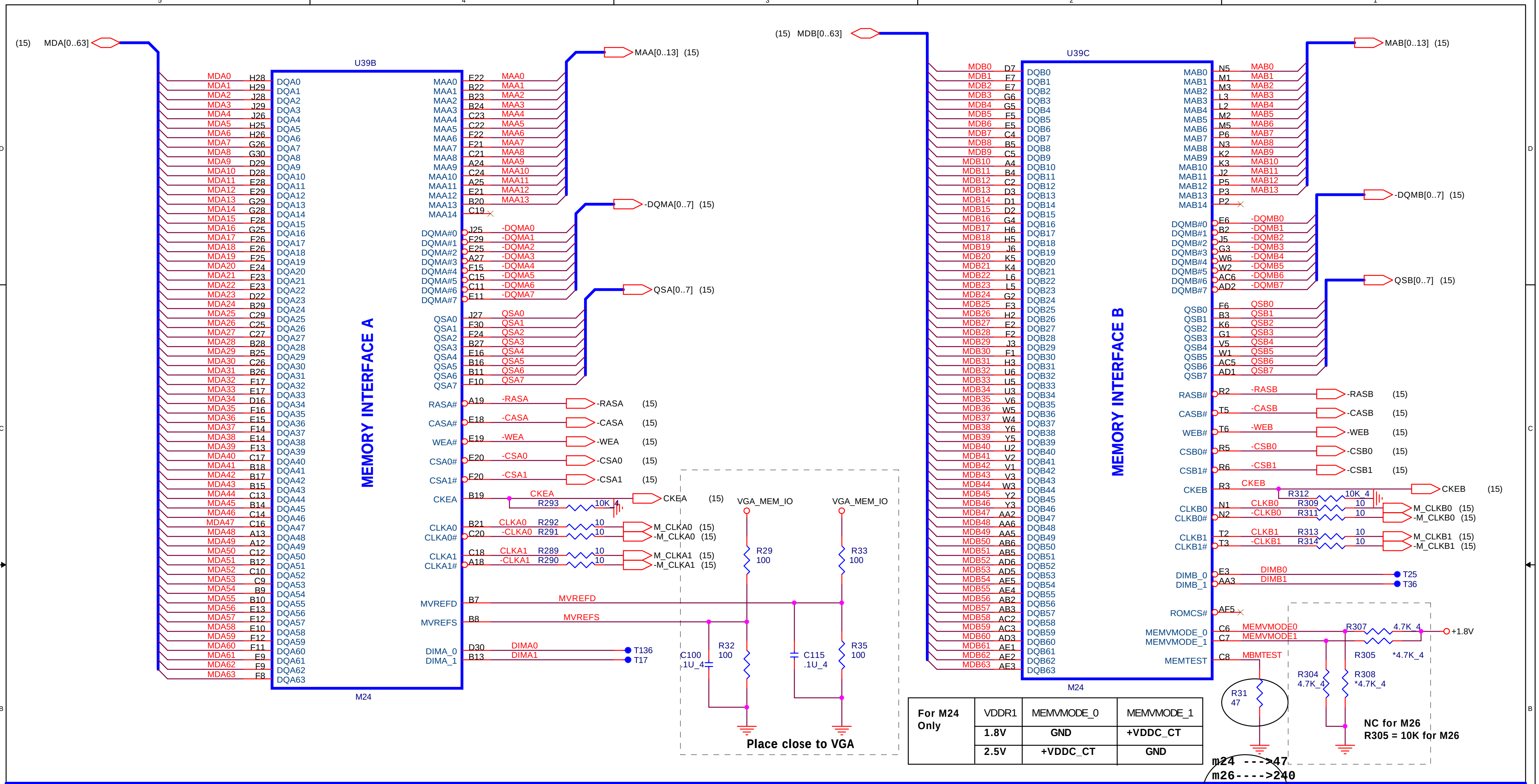


PROJECT : ZF1

Quanta Computer Inc.

Size	Document Number	Rev
	VGA Power	A1A

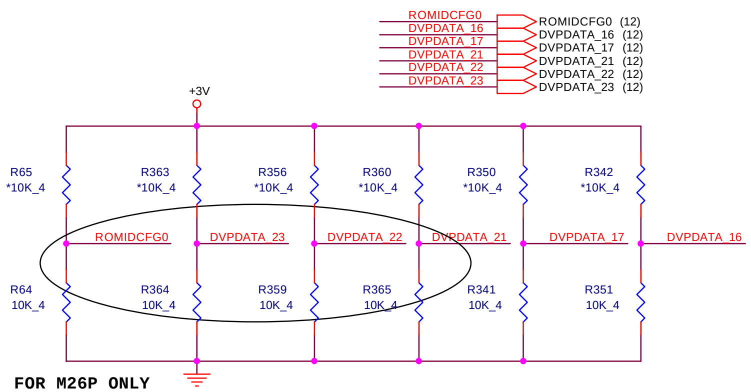
Date: Saturday, November 13, 2004 Sheet 13 of 43



For M24 Only	VDDR1	MEMVMODE_0	MEMVMODE_1
	1.8V	GND	+VDDC_CT
	2.5V	+VDDC_CT	GND

STRAPS PIN

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

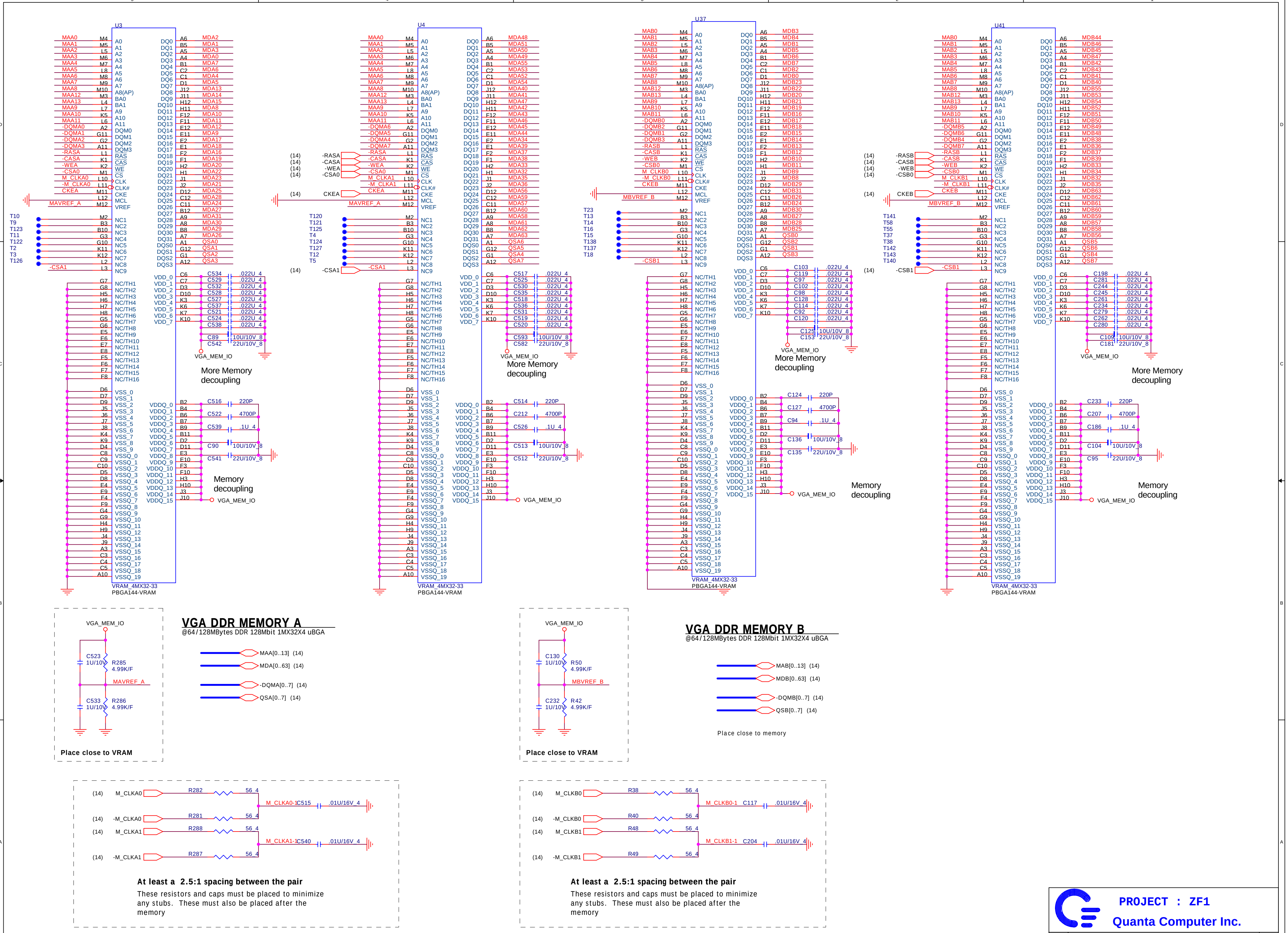


FOR M26P ONLY
0: 128M
1: 256M

PROJECT : ZF1

Quanta Computer Inc.

Size	Document Number	Rev
	VGA MEM & Strapping	A1A
Date: Saturday, November 13, 2004	Sheet 14 of 43	

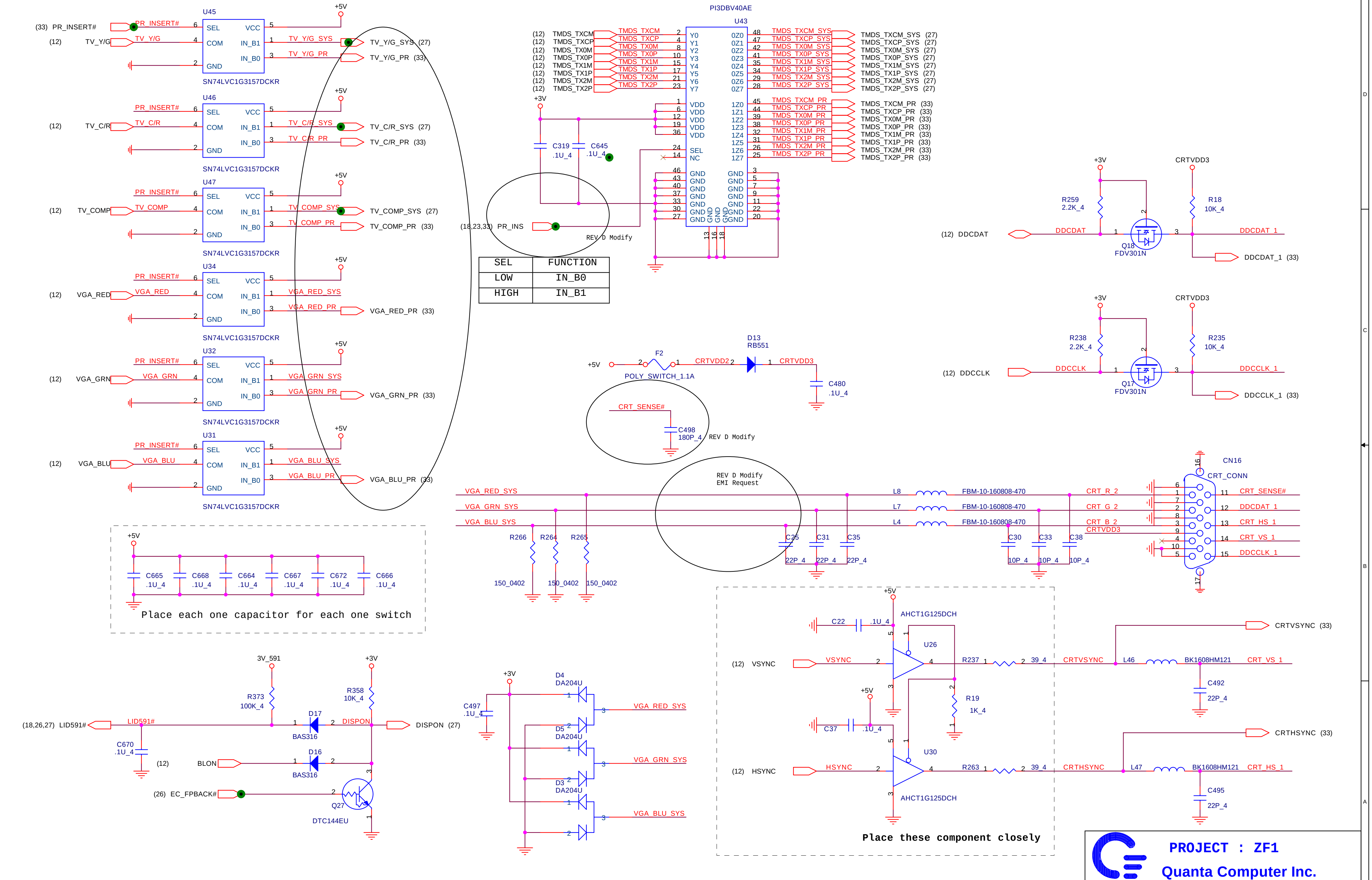


PROJECT : ZF1

Quanta Computer Inc.

Size	Document Number	Rev
	VGA DDR VRAM	A1A

Date: Saturday, November 13, 2004 Sheet 15 of 43



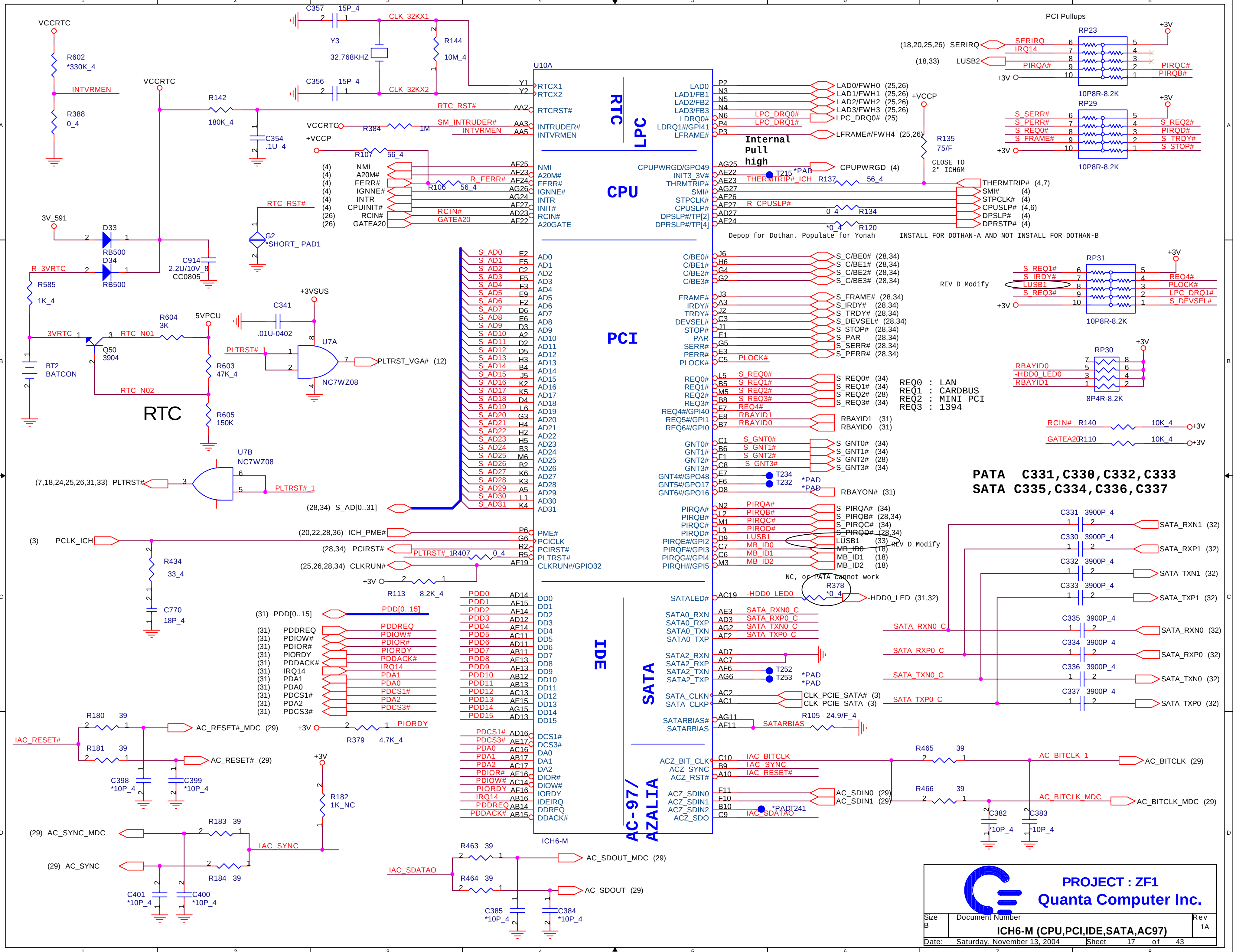
SEL	FUNCTION
LOW	IN_B0
HIGH	IN_B1

PROJECT : ZF1

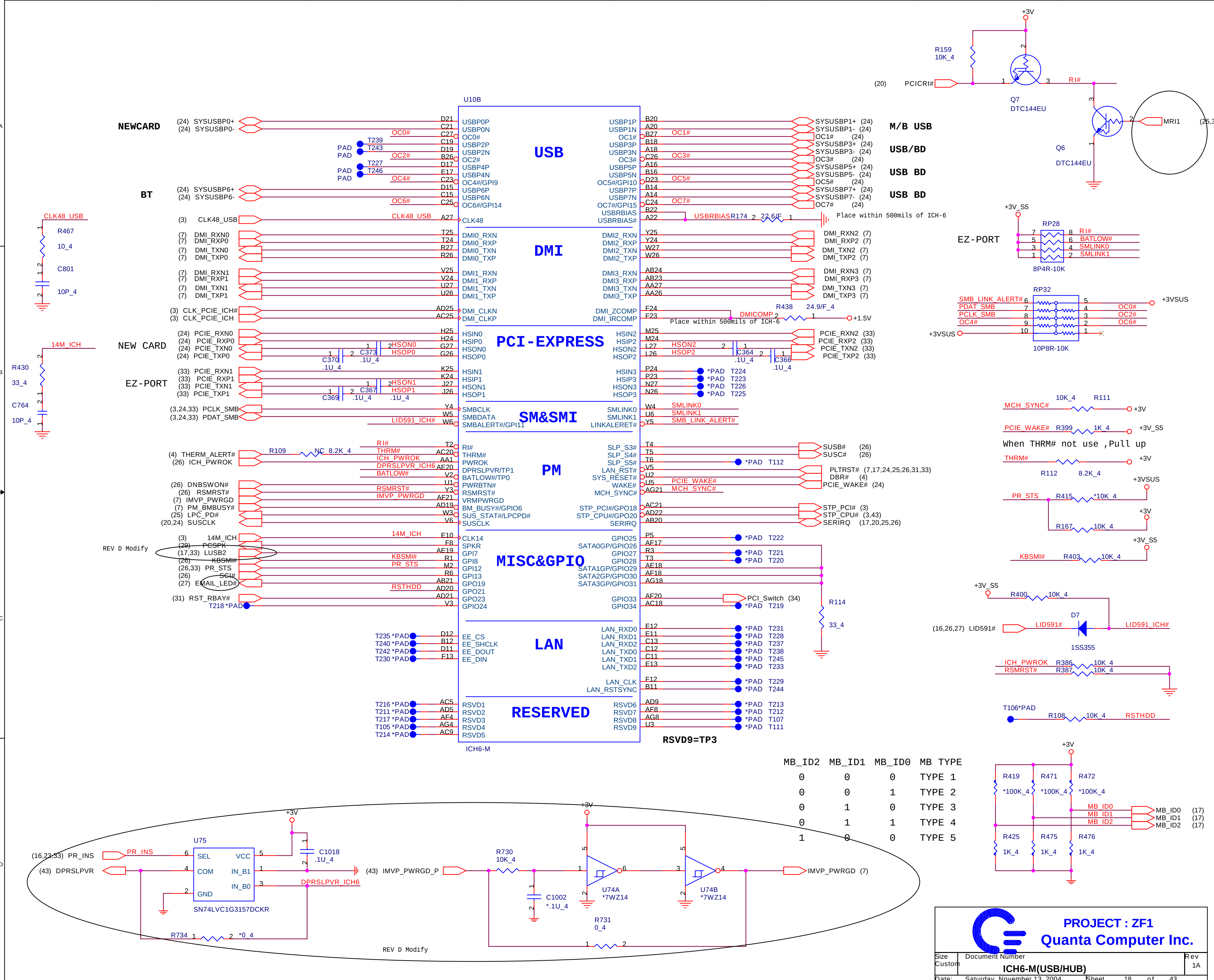
Quanta Computer Inc.

Size	Document Number	Rev
	VGA Output	A1A

Date: Saturday, November 13, 2004 — Sheet 16 of 43



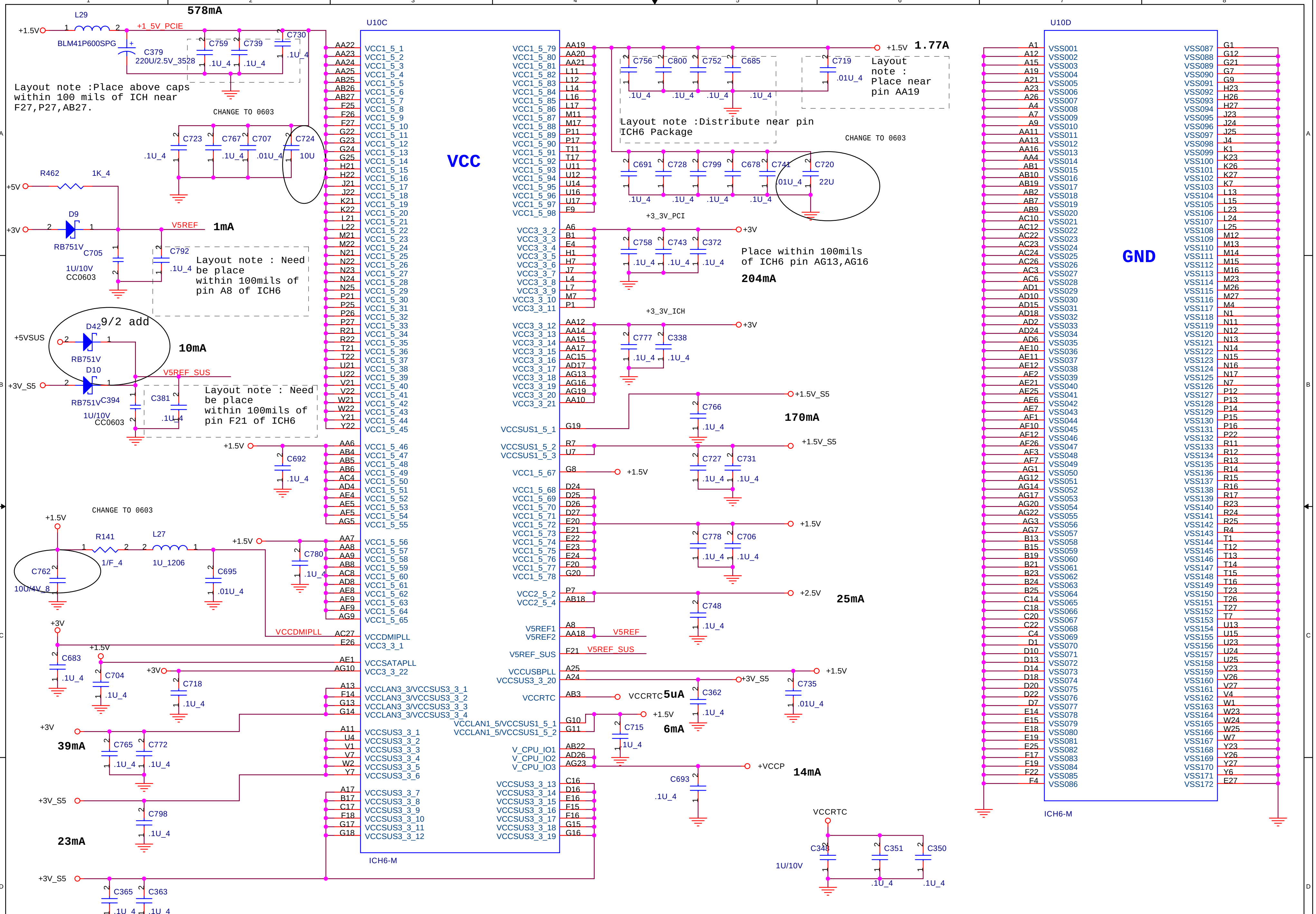
VCCRTC
R602 *330K_4
INTVRMEN
R388 0_4
R142 180K_4
RTC_RST#
C354 .1U_4
C357 15P_4
Y3 32.768KHZ
C356 15P_4
CLK_32KX1
CLK_32KX2
R144 10M_4
U10A
RTC
LPC
CPU
PCI
IDE
SATA
AC-97/AZALIA
ICH6-M
RTCX1
RTCX2
RTCRST#
INTRUDER#
INTVRMEN
SM_INTRUDER#
R384 1M
R107 56_4
R106 56_4
R_FERR#
NMI
A20M#
FERR#
IGNNE#
INTR
INIT#
RCIN#
A20GATE
CPUINIT#
GATEA20
G2 *SHORT_PAD1
3V_S91
D33 RB500
D34 RB500
R_3VRTC
C914 2.2U/10V_8 CC0805
R585 1K_4
3VRTC
Q50 3904
RTC_N01
RTC_N02
R604 3K
5VPCU
R603 47K_4
R605 150K
BT2 BATCON
RTC
+3VSUS
C341 .01U-0402
U7A NC7WZ08
PLTRST#_1
PLTRST_VGA# (12)
U7B NC7WZ08
(7,18,24,25,26,31,33) PLTRST#
(28,34) S_AD[0..31]
(20,22,28,36) ICH_PME#
(3) PCLK_ICH
R434 33_4
C770 18P_4
(28,34) PCIRST#
R407 0_4
(25,26,28,34) CLKRUN#
R113 8.2K_4
(31) PDD[0..15]
PDDREQ
PDIOW#
PDIOR#
PIORDY
PDDACK#
IRQ14
PDA1
PDA0
PDCS1#
PDA2
PDCS3#
R180 39
R181 39
IAC_RESET#
AC_RESET#_MDC (29)
AC_RESET# (29)
C398 *10P_4
C399 *10P_4
R379 4.7K_4
R182 1K_NC
R183 39
R184 39
(29) AC_SYNC_MDC
(29) AC_SYNC
IAC_SYNC
C401 *10P_4
C400 *10P_4
R463 39
R464 39
IAC_SDATAO
AC_SDOUT_MDC (29)
AC_SDOUT (29)
C385 *10P_4
C384 *10P_4
LAD0/FWH0 (25,26)
LAD1/FWH1 (25,26)
LAD2/FWH2 (25,26)
LAD3/FWH3 (25,26)
LPC_DRQ0# (25)
LFRAME#/FWH4 (25,26)
Internal Pull high
CPUPWRGD (4)
T215 *PAD
THERMTRIP#_ICH
R137 56_4
R135 75/F
CLOSE TO 2" ICH6M
THERMTRIP# (4,7)
SMI# (4)
STPCLK# (4)
CPUSLP# (4,6)
DPSLP# (4)
DPRSTP# (4)
R134 0_4
R120 *0_4
Depop for Dothan. Populate for Yonah
INSTALL FOR DOTHAN-A AND NOT INSTALL FOR DOTHAN-B
PCI Pullups
RP23 10P8R-8.2K
RP29 10P8R-8.2K
RP31 10P8R-8.2K
RP30 8P4R-8.2K
(18,20,25,26) SERIRQ
(18,33) LUSB2
REV D Modify
REQ0 : LAN
REQ1 : CARDBUS
REQ2 : MINI PCI
REQ3 : 1394
RCIN# R140 10K_4
GATEA20 R110 10K_4
PATA C331,C330,C332,C333
SATA C335,C334,C336,C337
RBAYID1 (31)
RBAYID0 (31)
RBAYON# (31)
T234 T232 *PAD
T252 T253 *PAD
NC, or PATA cannot work
R378 *0_4
-HDD0_LED (31,32)
SATA_RXN1 (32)
SATA_RXP1 (32)
SATA_TXN1 (32)
SATA_TXP1 (32)
SATA_RXN0 (32)
SATA_RXP0 (32)
SATA_TXN0 (32)
SATA_TXP0 (32)
3900P_4
CLK_PCIE_SATA# (3)
CLK_PCIE_SATA (3)
R105 24.9/F_4
SATARBIAS
R465 39
R466 39
AC_BITCLK (29)
AC_BITCLK_MDC (29)
AC_SDIN0 (29)
AC_SDIN1 (29)
*PADT241
C382 *10P_4
C383 *10P_4
PROJECT : ZF1
Quanta Computer Inc.
Size B
Document Number
ICH6-M (CPU,PCI,IDE,SATA,AC97)
Rev 1A
Date: Saturday, November 13, 2004
Sheet 17 of 43



MB_ID2	MB_ID1	MB_ID0	MB TYPE
0	0	0	TYPE 1
0	0	1	TYPE 2
0	1	0	TYPE 3
0	1	1	TYPE 4
1	0	0	TYPE 5

PROJECT : ZF1
Quanta Computer Inc.

Size: Custom
Document Number: ICH6-M(USB/HUB)
Rev: 1A
Date: Saturday, November 13, 2004
Sheet 18 of 43

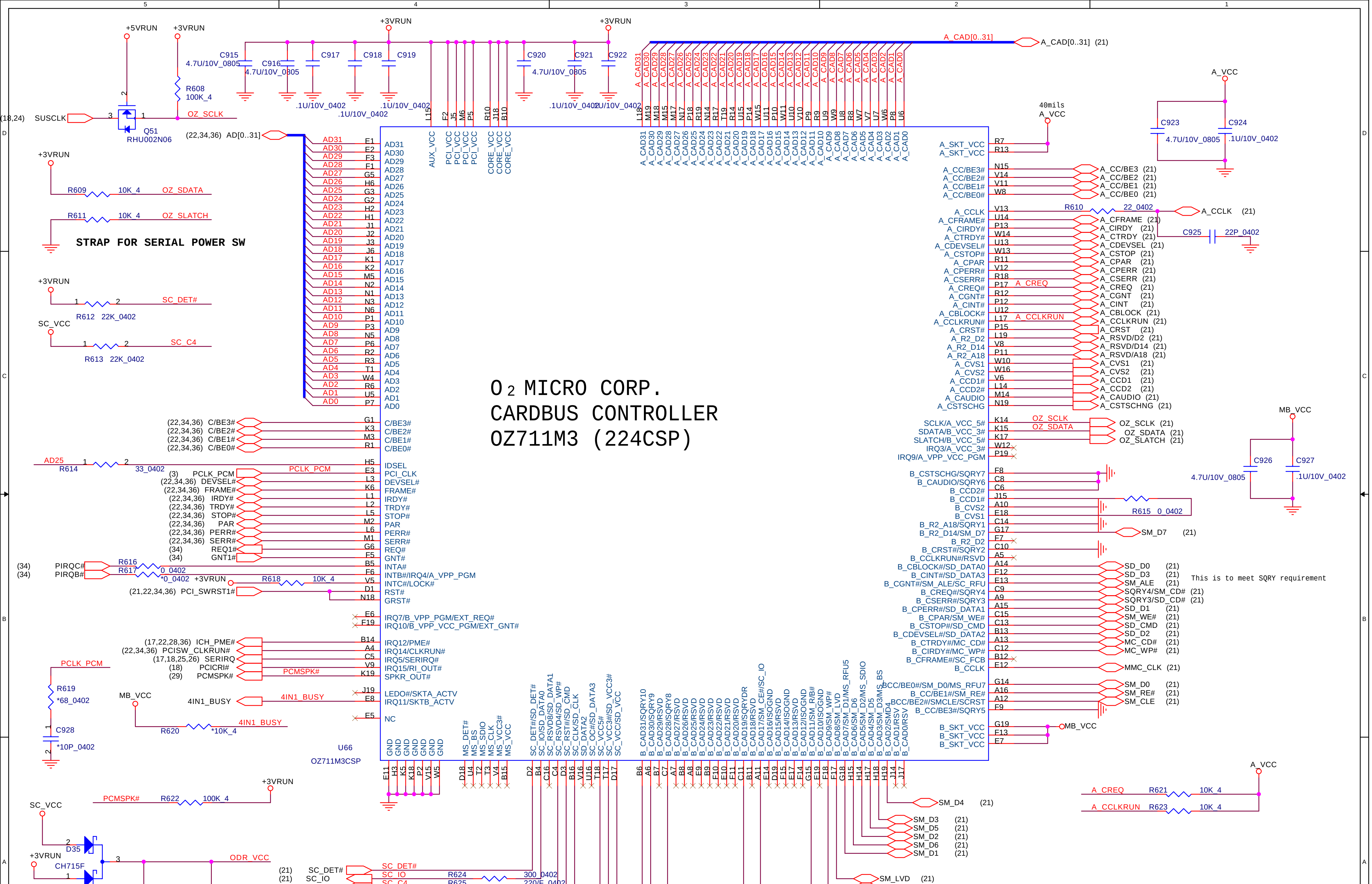


PROJECT : ZF1

Quanta Computer Inc.

Size	Document Number	Rev
B	ICH6 POWER	1A

Date: Saturday, November 13, 2004   Sheet 19 of 43



PROJECT : ZF1

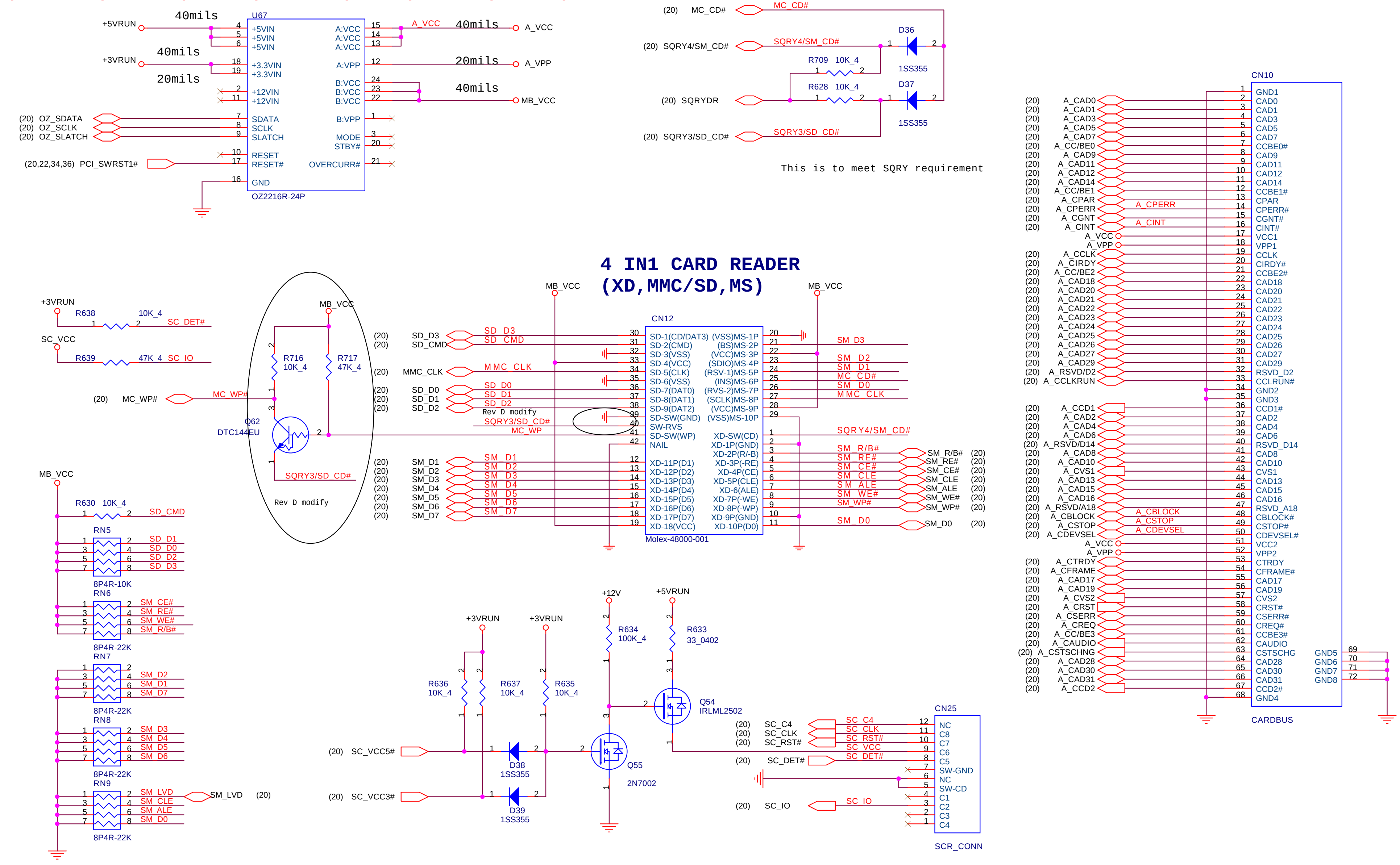
Quanta Computer Inc.

Size	Document Number	Rev
	OZ711M3	A1A

Date: Saturday, November 13, 2004 Sheet 20 of 43

4 IN1 CARD READER (XD,MMC/SD,MS)

Card	XD	MMC/SD	MS
SQRY3	1	0	1
SQRY4	0	1	1
MC_CD#	0	0	0

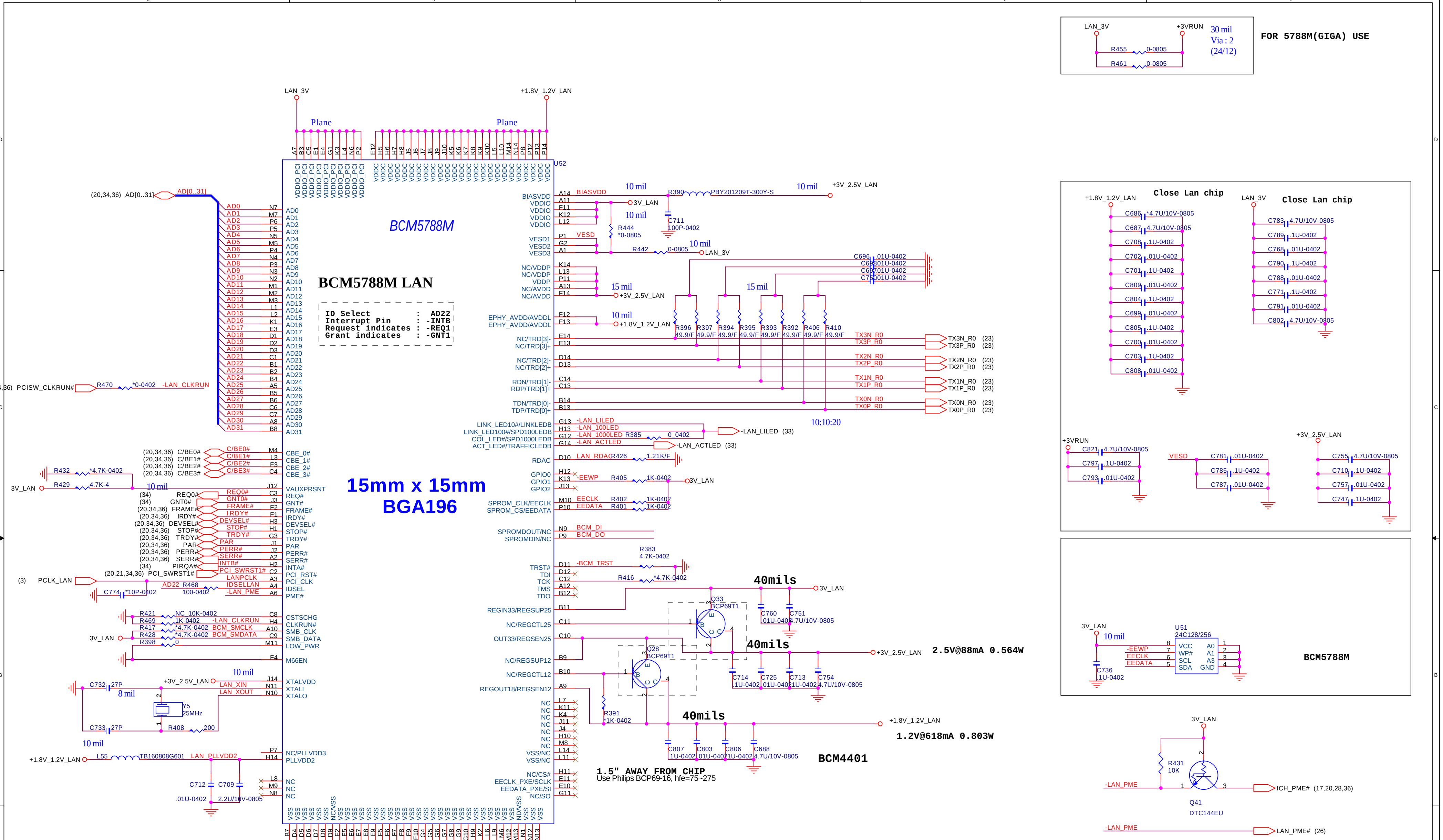


QUANTA COMPUTER

Title: CARDBUS & CONN

Size | Document Number: ZF1 | Rev: D

Date: Saturday, November 13, 2004 | Sheet 21 of 43

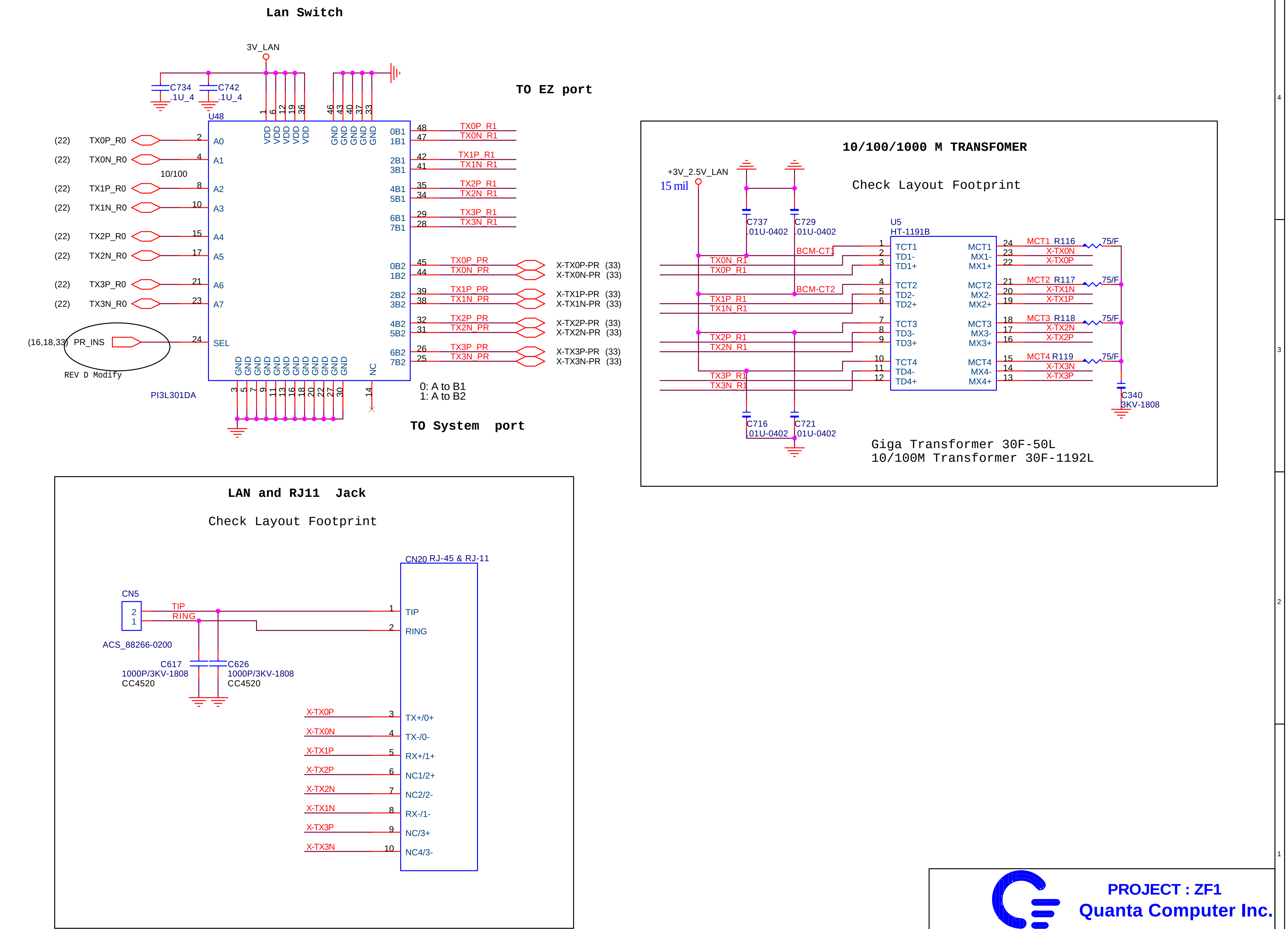


Voltage Rail	4401	5702	5705M
VDDIO_PCI	3V_S5	+3V	+3V
+3V_2.5V_LAN	3.3V	2.5V	2.5V
+1.8V_1.2V_LAN	1.8V	1.2V	1.2V

	BCM4401	BCM5788M
DNS	Q16,Q17,U26 R327,R329	U55,R331,R332
STU	R331,R332,U55	Q16,Q17,U26

PROJECT : ZF1
Quanta Computer Inc.

Size: C
Document Number: LAN BCM5788
Rev: 1A
Date: Saturday, November 13, 2004
Sheet 22 of 43



PROJECT : ZF1
Quanta Computer Inc.

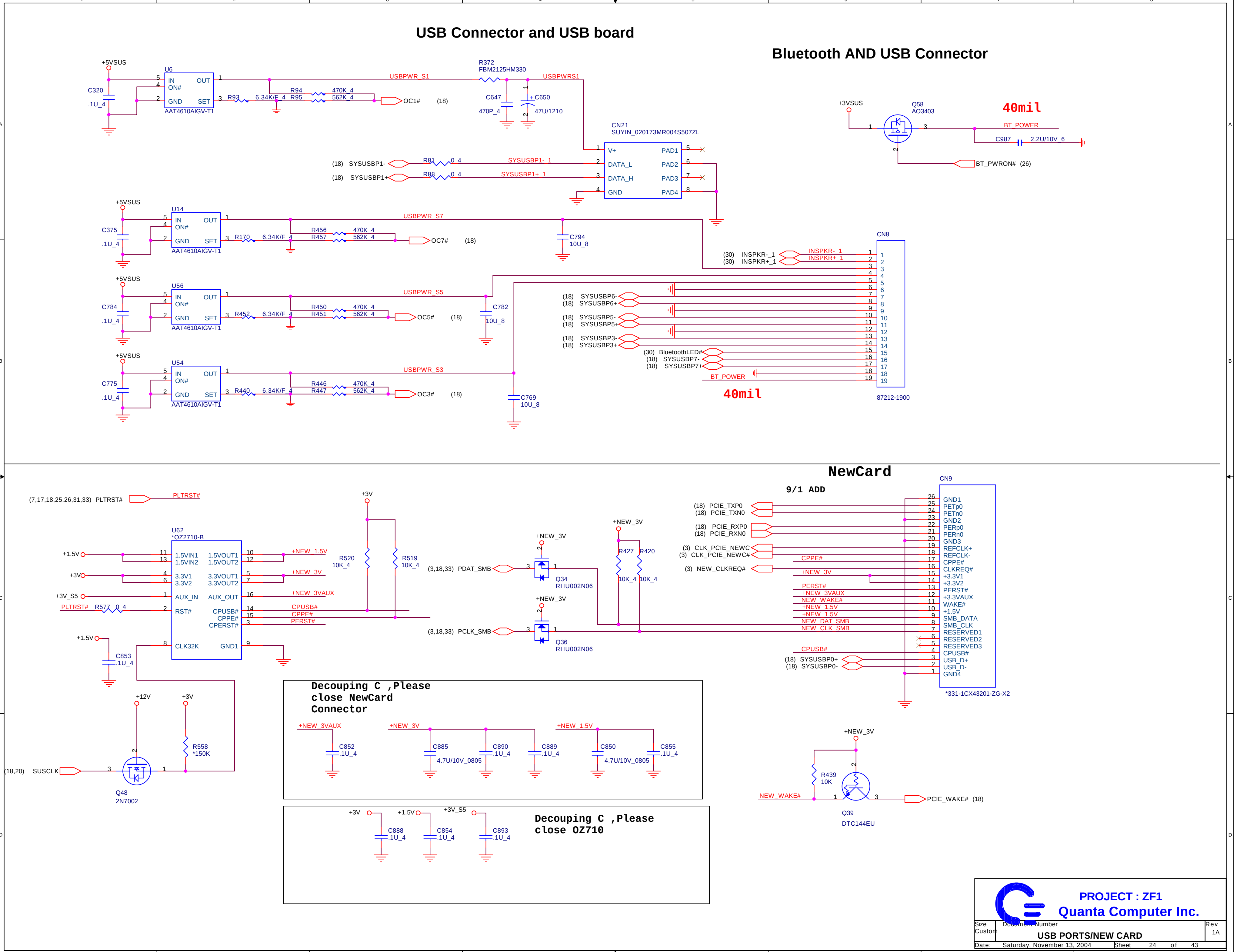
Size	Document Number	Rev
	LAN JACK	A1A

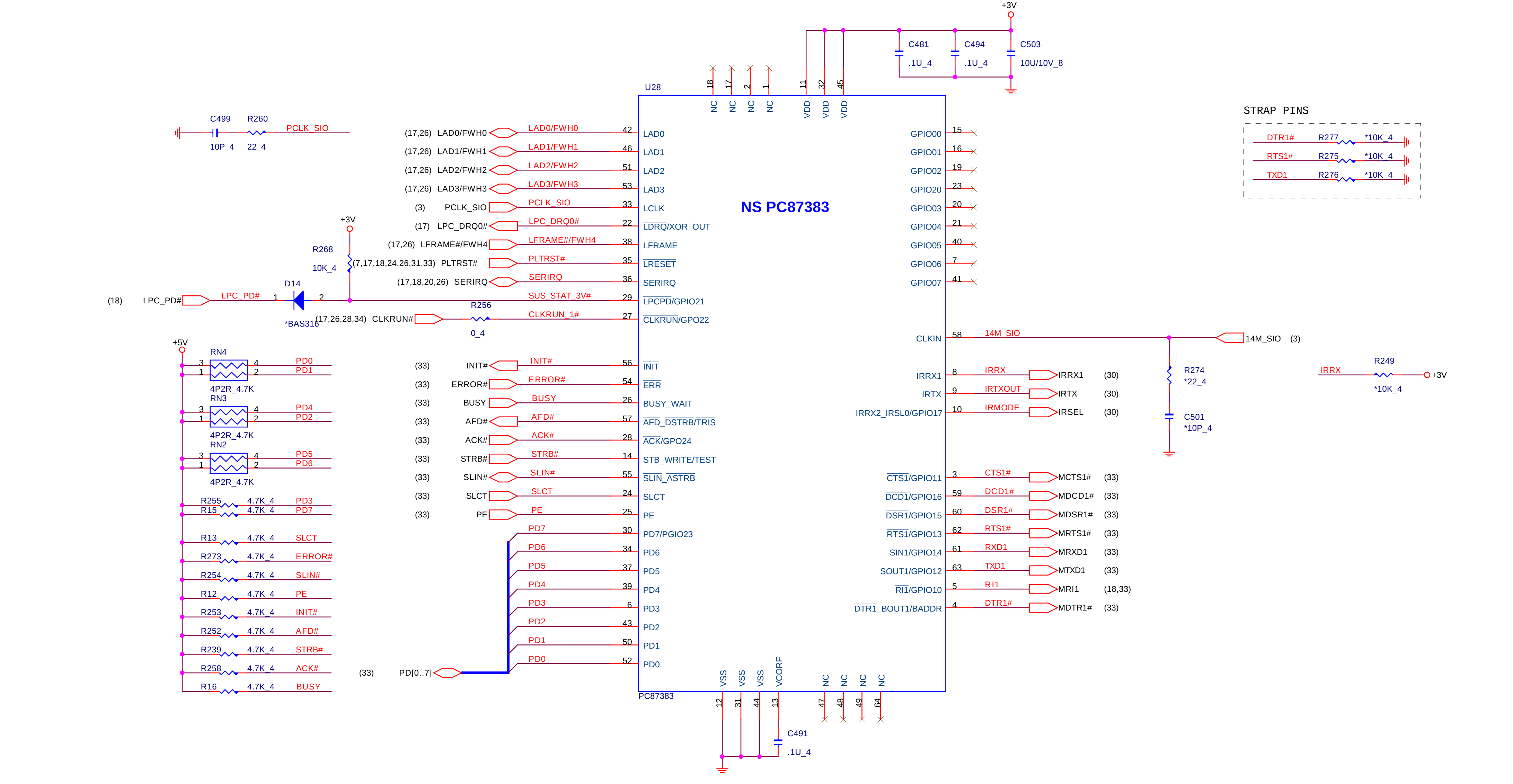
Date: Saturday, November 13, 2004 Sheet 23 of 43

USB Connector and USB board

Bluetooth AND USB Connector

NewCard

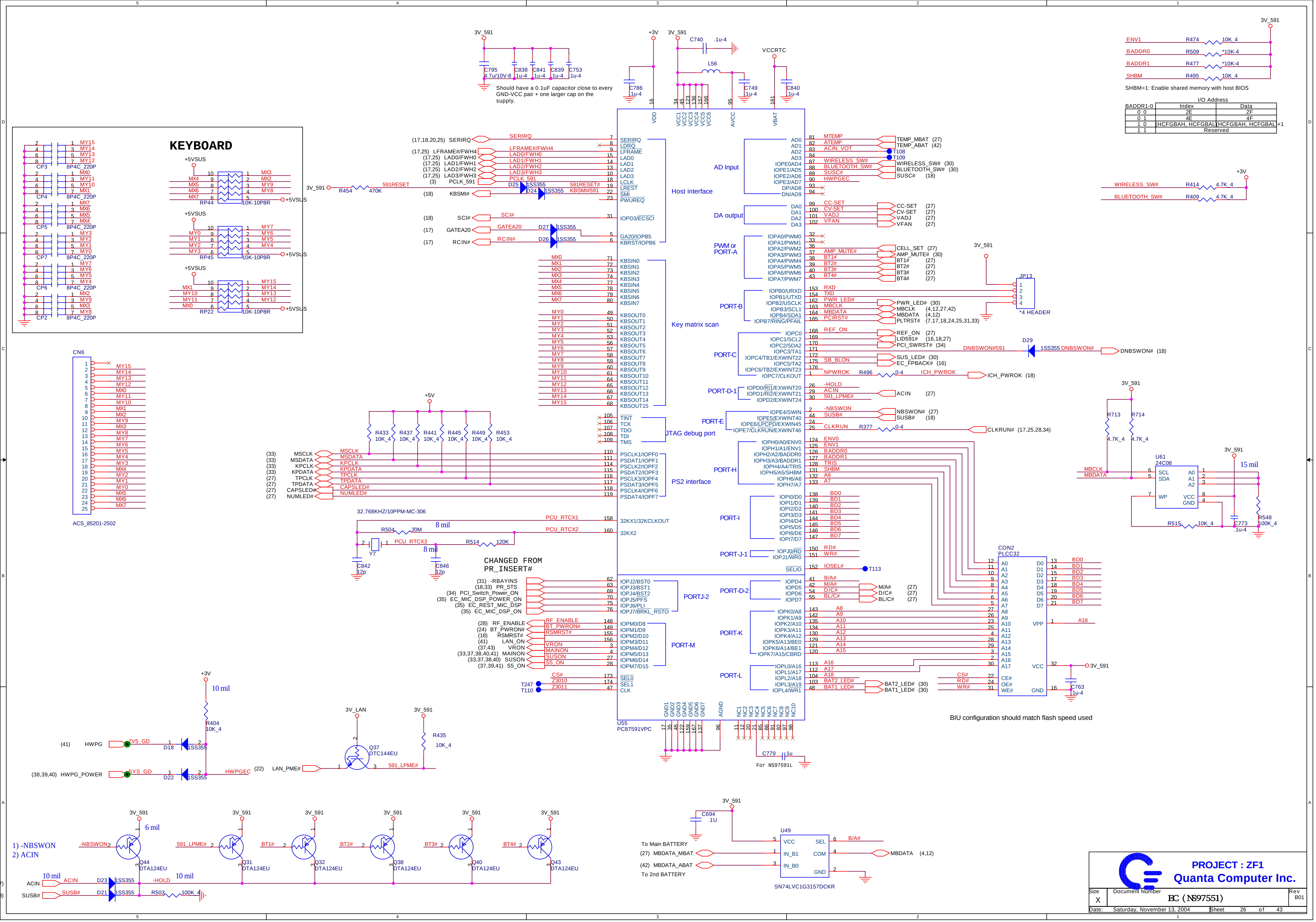


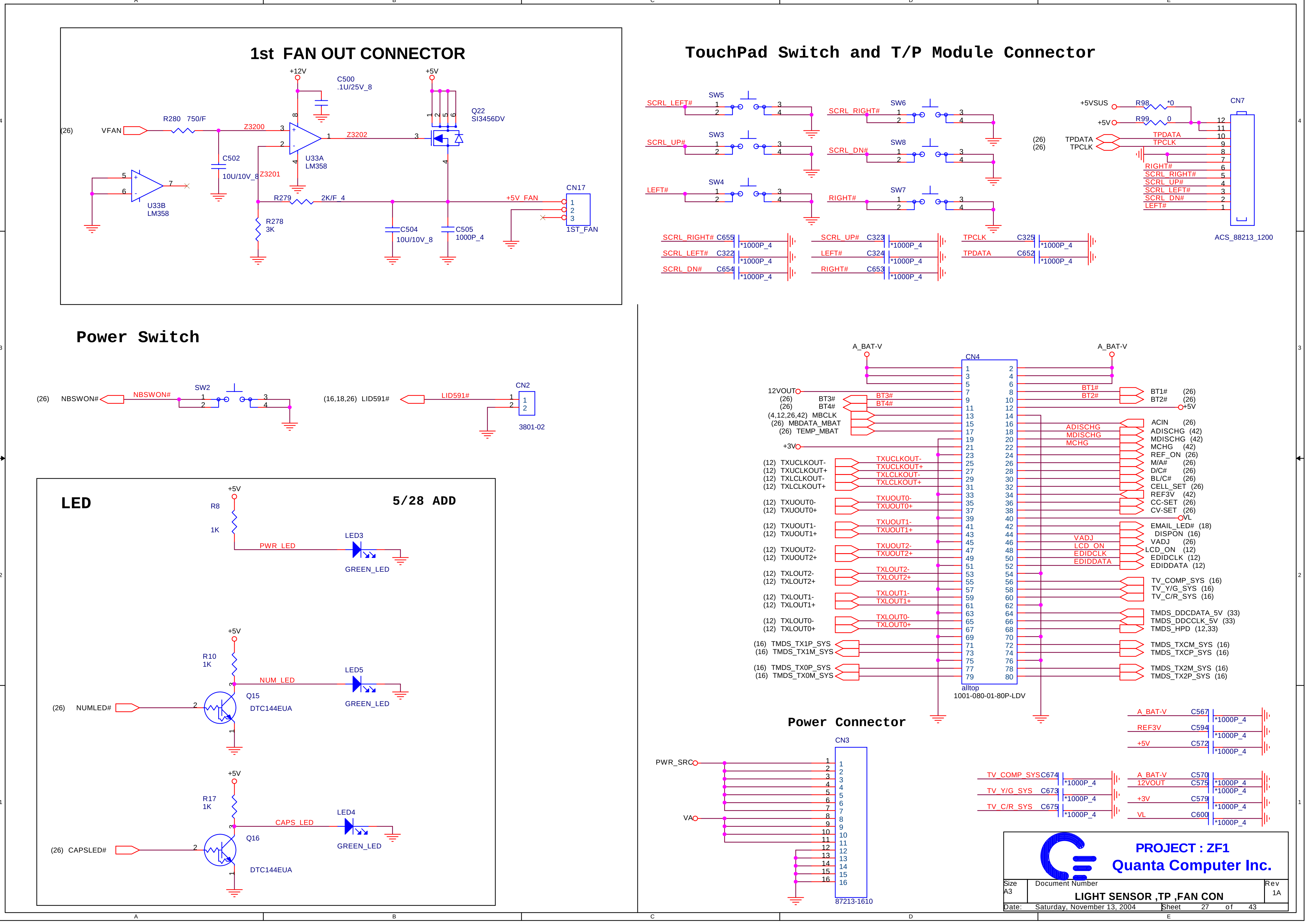


PROJECT : ZF1

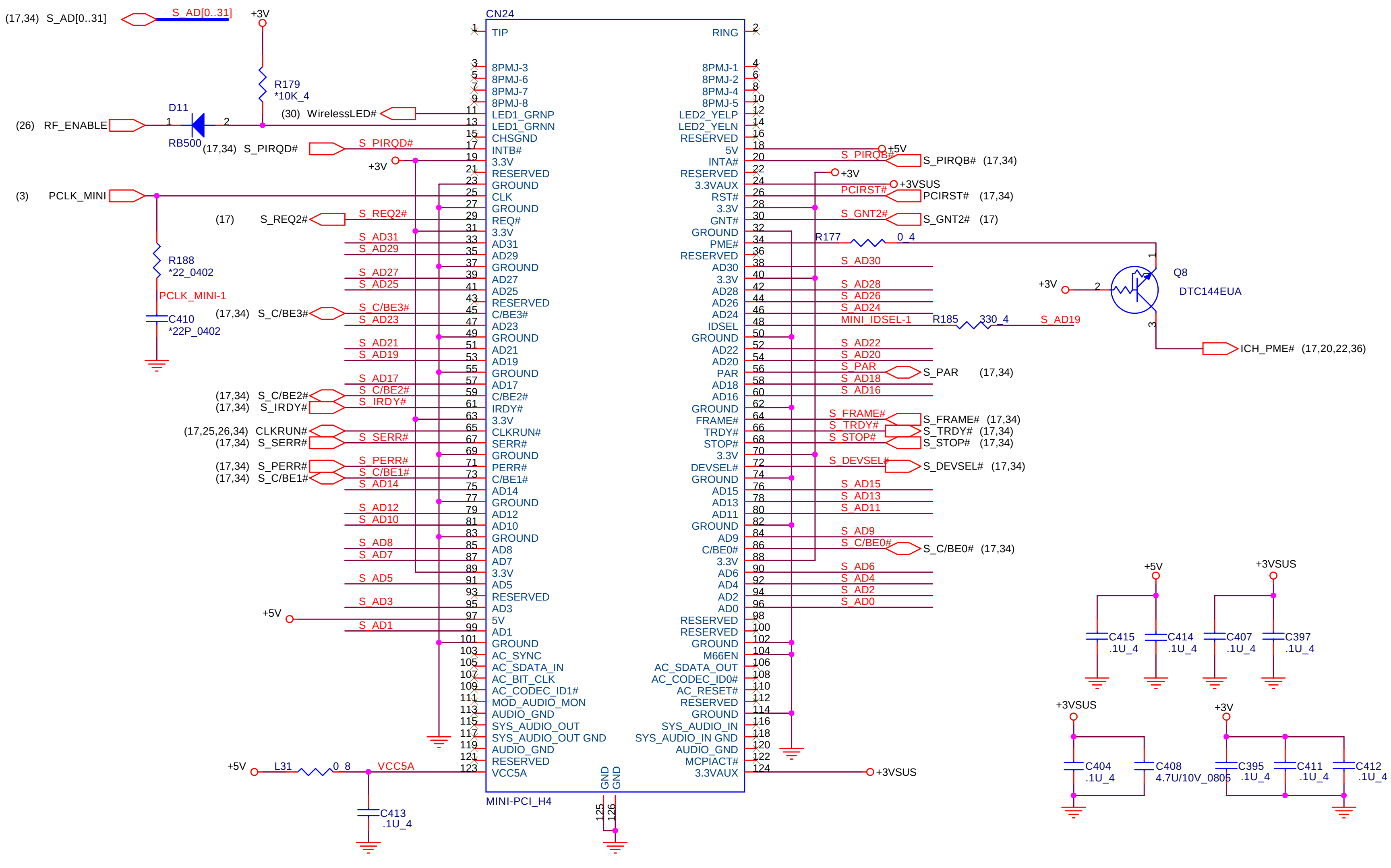
Quanta Computer Inc.

Size A3	Document Number **PC87383 SUPER I/O**	Rev 1A
Date: Saturday, November 13, 2004	Sheet 25 of 43	


KEYBOARD
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
BADDR1-0 | Index | Data
0 0 | 2E | 2F
0 1 | 4E | 4F
1 0 | (HCFGBAH, HCFGBAL) | (HCFGBAH, HCFGBAL)+1
1 1 | Reserved
Host interface
AD Input
DA output
PWM or PORT-A
PORT-B
Key matrix scan
PORT-C
PORT-D-1
PORT-E
JTAG debug port
PORT-H
PS2 interface
PORT-I
PORT-J-1
PORTJ-2
PORT-D-2
PORT-K
PORT-M
PORT-L
U55
PC87591VPC
CN6
ACS_85201-2502
32.768KHZ/10PPM-MC-306
CHANGED FROM PR_INSERT#
CON2
PLCC32
U61
24C08
JP13
*4 HEADER
U49
SN74LVC1G3157DCKR
To Main BATTERY
To 2nd BATTERY
For NS97591L
BIU configuration should match flash speed used
1) -NBSWON
2) ACIN
PROJECT : ZF1
Quanta Computer Inc.
Size
X
Document Number
EC (NS97551)
Rev
B01
Date: Saturday, November 13, 2004
Sheet 26 of 43



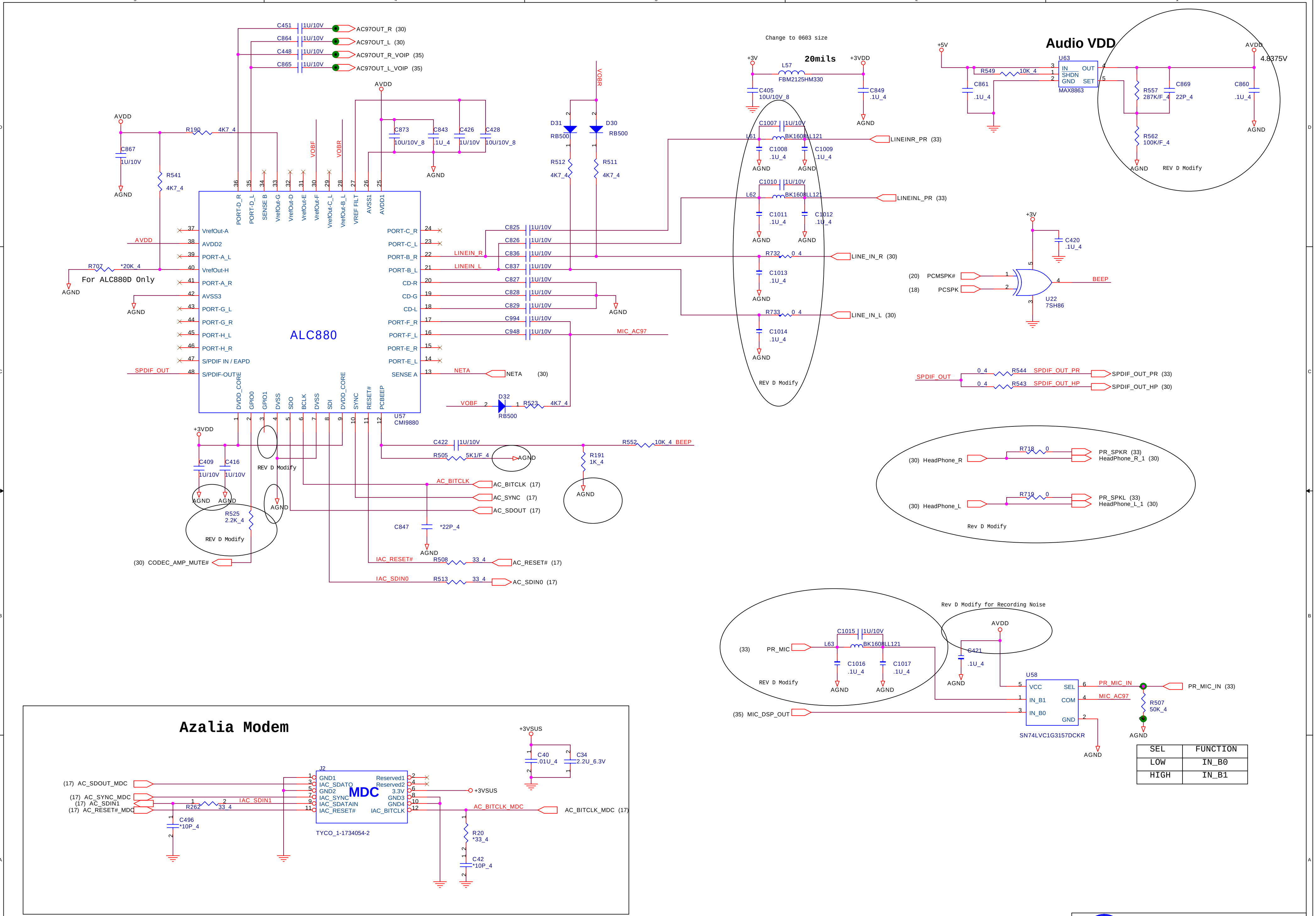
1st FAN OUT CONNECTOR
+12V
C500 .1U/25V_8
+5V
Q22 SI3456DV
(26) VFAN
R280 750/F
Z3200
Z3202
U33A LM358
C502 10U/10V_8
Z3201
U33B LM358
R279 2K/F_4
+5V_FAN
CN17
1ST_FAN
R278 3K
C504 10U/10V_8
C505 1000P_4
TouchPad Switch and T/P Module Connector
SCRL_LEFT# SW5
SCRL_RIGHT# SW6
SCRL_UP# SW3
SCRL_DN# SW8
LEFT# SW4
RIGHT# SW7
+5VSUS R98 *0
+5V R99 0
CN7
(26) TPDATA
(26) TPCLK
ACS_88213_1200
SCRL_RIGHT# C655 *1000P_4
SCRL_LEFT# C322 *1000P_4
SCRL_DN# C654 *1000P_4
SCRL_UP# C323 *1000P_4
LEFT# C324 *1000P_4
RIGHT# C653 *1000P_4
TPCLK C325 *1000P_4
TPDATA C652 *1000P_4
Power Switch
(26) NBSWON#
SW2
(16,18,26) LID591#
CN2
3801-02
LED
5/28 ADD
R8 1K
PWR_LED
LED3 GREEN_LED
R10 1K
NUM_LED
LED5 GREEN_LED
(26) NUMLED#
Q15 DTC144EUA
R17 1K
CAPS_LED
LED4 GREEN_LED
(26) CAPSLED#
Q16 DTC144EUA
A_BAT-V
CN4
12VOUT
(26) BT3#
(26) BT4#
(4,12,26,42) MBCLK
(26) MBDATA_MBAT
(26) TEMP_MBAT
+3V
(12) TXUCLKOUT-
(12) TXUCLKOUT+
(12) TXLCLKOUT-
(12) TXLCLKOUT+
(12) TXUOUT0-
(12) TXUOUT0+
(12) TXUOUT1-
(12) TXUOUT1+
(12) TXUOUT2-
(12) TXUOUT2+
(12) TXLOUT2-
(12) TXLOUT2+
(12) TXLOUT1-
(12) TXLOUT1+
(12) TXLOUT0-
(12) TXLOUT0+
(16) TMDS_TX1P_SYS
(16) TMDS_TX1M_SYS
(16) TMDS_TX0P_SYS
(16) TMDS_TX0M_SYS
BT1# (26)
BT2# (26)
ACIN (26)
ADISCHG (42)
MDISCHG (42)
MCHG (42)
REF_ON (26)
M/A# (26)
D/C# (26)
BL/C# (26)
CELL_SET (26)
REF3V (42)
CC-SET (26)
CV-SET (26)
VL
EMAIL_LED# (18)
DISPON (16)
VADJ (26)
LCD_ON (12)
EDIDCLK (12)
EDIDDATA (12)
TV_COMP_SYS (16)
TV_Y/G_SYS (16)
TV_C/R_SYS (16)
TMDS_DDCDATA_5V (33)
TMDS_DDCCLK_5V (33)
TMDS_HPD (12,33)
TMDS_TXCM_SYS (16)
TMDS_TXCP_SYS (16)
TMDS_TX2M_SYS (16)
TMDS_TX2P_SYS (16)
alltop
1001-080-01-80P-LDV
Power Connector
PWR_SRC
VA
CN3
87213-1610
A_BAT-V C567 *1000P_4
REF3V C594 *1000P_4
+5V C572 *1000P_4
TV_COMP_SYS C674 *1000P_4
TV_Y/G_SYS C673 *1000P_4
TV_C/R_SYS C675 *1000P_4
A_BAT-V C570 *1000P_4
12VOUT C575 *1000P_4
+3V C579 *1000P_4
VL C600 *1000P_4
PROJECT : ZF1
Quanta Computer Inc.
Size A3
Document Number
LIGHT SENSOR ,TP ,FAN CON
Rev 1A
Date: Saturday, November 13, 2004
Sheet 27 of 43



PROJECT : ZF1

Quanta Computer Inc.

Size	Document Number	Rev
B	MININ PCI	1A
Date: Saturday, November 13, 2004	Sheet 28 of 43	



SEL	FUNCTION
LOW	IN_B0
HIGH	IN_B1

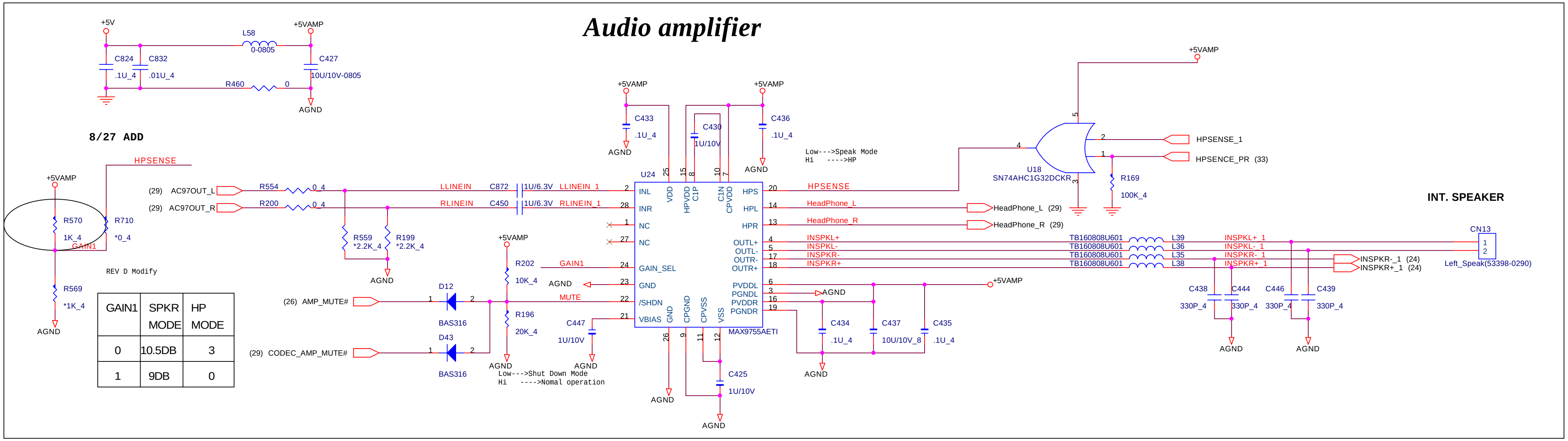
PROJECT : ZF1

Quanta Computer Inc.

Size	Document Number	Rev
C	CODEC	1A

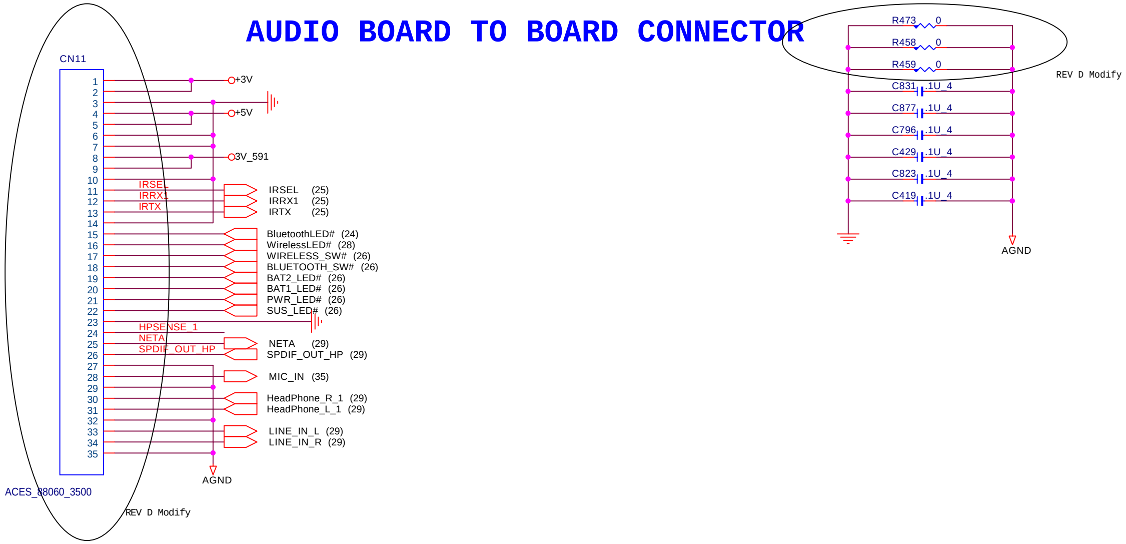
Date: Saturday, November 13, 2004 Sheet 29 of 43

Audio amplifier



GAIN1	SPKR MODE	HP MODE
0	10.5DB	3
1	9DB	0

AUDIO BOARD TO BOARD CONNECTOR



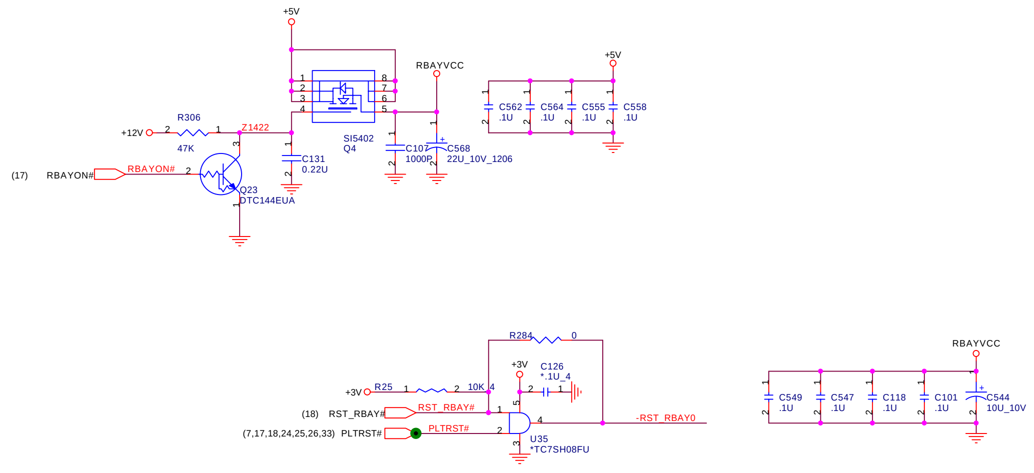
PROJECT : ZF1

Quanta Computer Inc.

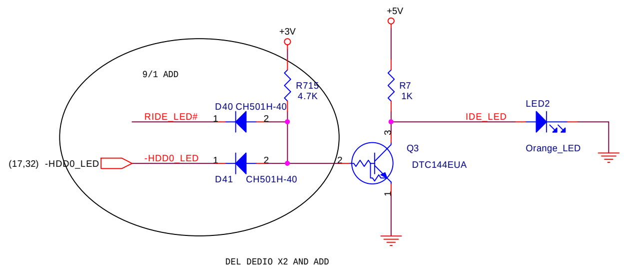
Size	Document Number	Rev
Custom	AUDIO AMP & JACK	1A

Date: Saturday, November 13, 2004 Sheet 30 of 43

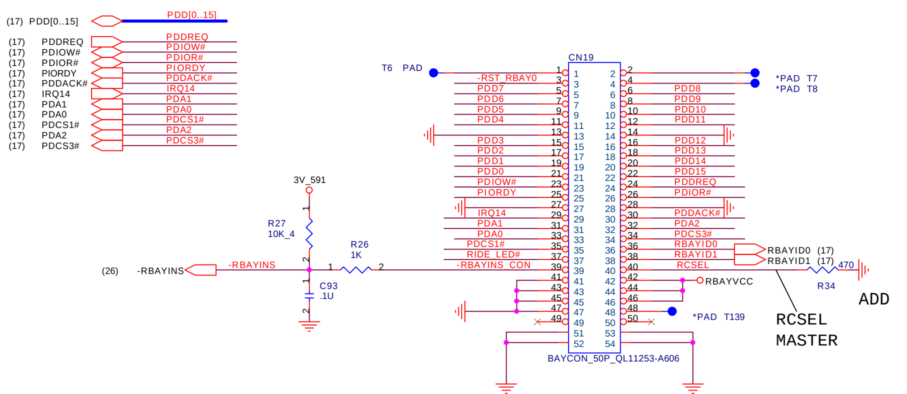
SWAP BAY POWER CONTROL& RESET

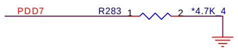


IDE LED CONTROL LOGIC



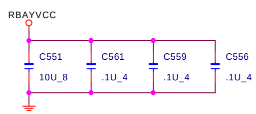
Multi-Bay Connector

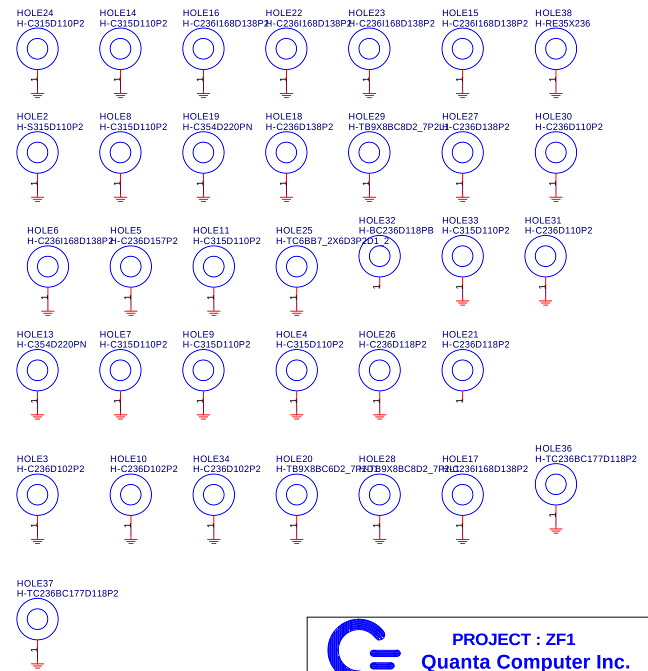




BAY ID STATUS

RBAYID0/ LBAYID0	RBAYID1/ LBAYID1	STATUS
0	1	HDD
1	0	CD/DVD



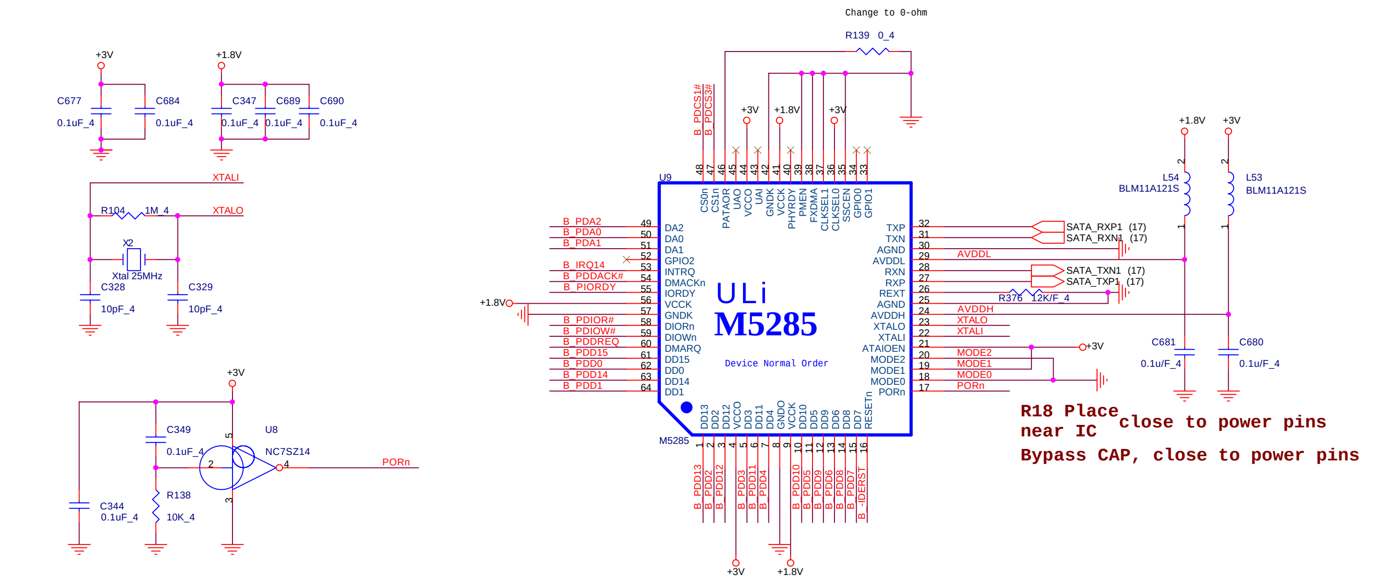


PROJECT : ZF1

Quanta Computer Inc.

Size	Document Number	Rev
C	Multi-Bay	1A

Date: Monday, November 15, 2004 Sheet 31 of 43

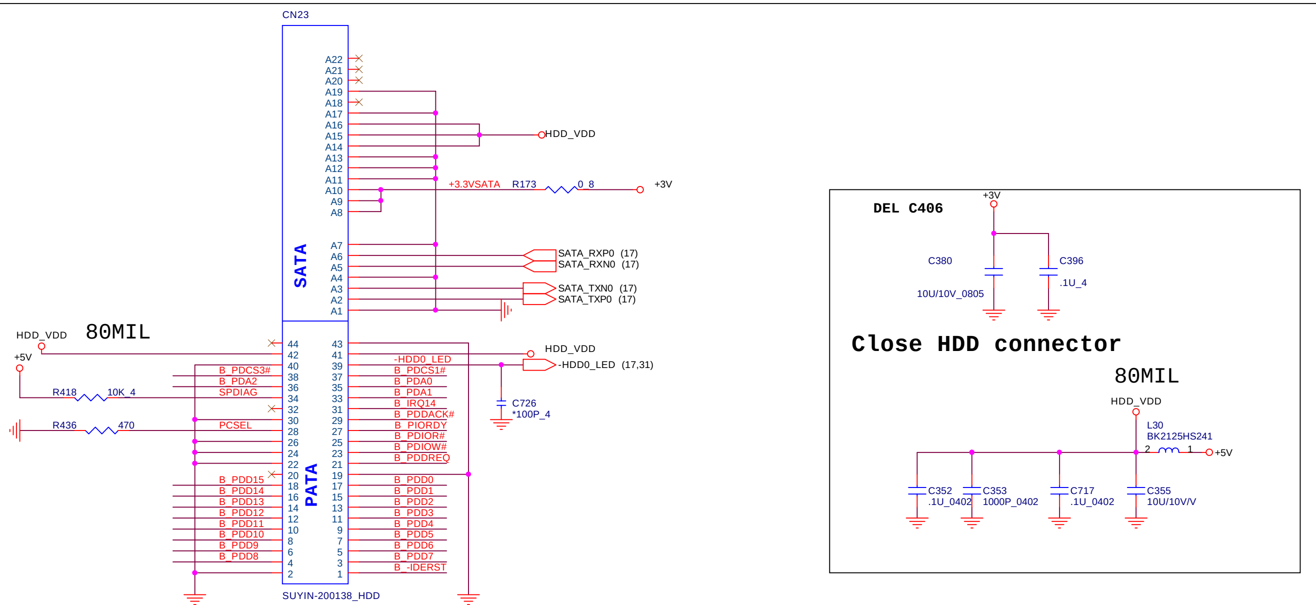


Operation Mode

MODE[2..0]	
0 0 0	Device mode 100MB/S
0 0 1	Device mode 133MB/S
0 1 0	**Device mode 150MB/S**
0 1 1	RESERVE
1 0 0	Host mode 100MB/S
1 0 1	Host mode 133MB/S
1 1 0	Host mode 150MB/S
1 1 1	RESERVED

Reference clock select

CLKSEL[1..0]	External clock
0 0	20 MHZ
0 1	**25 MHZ**

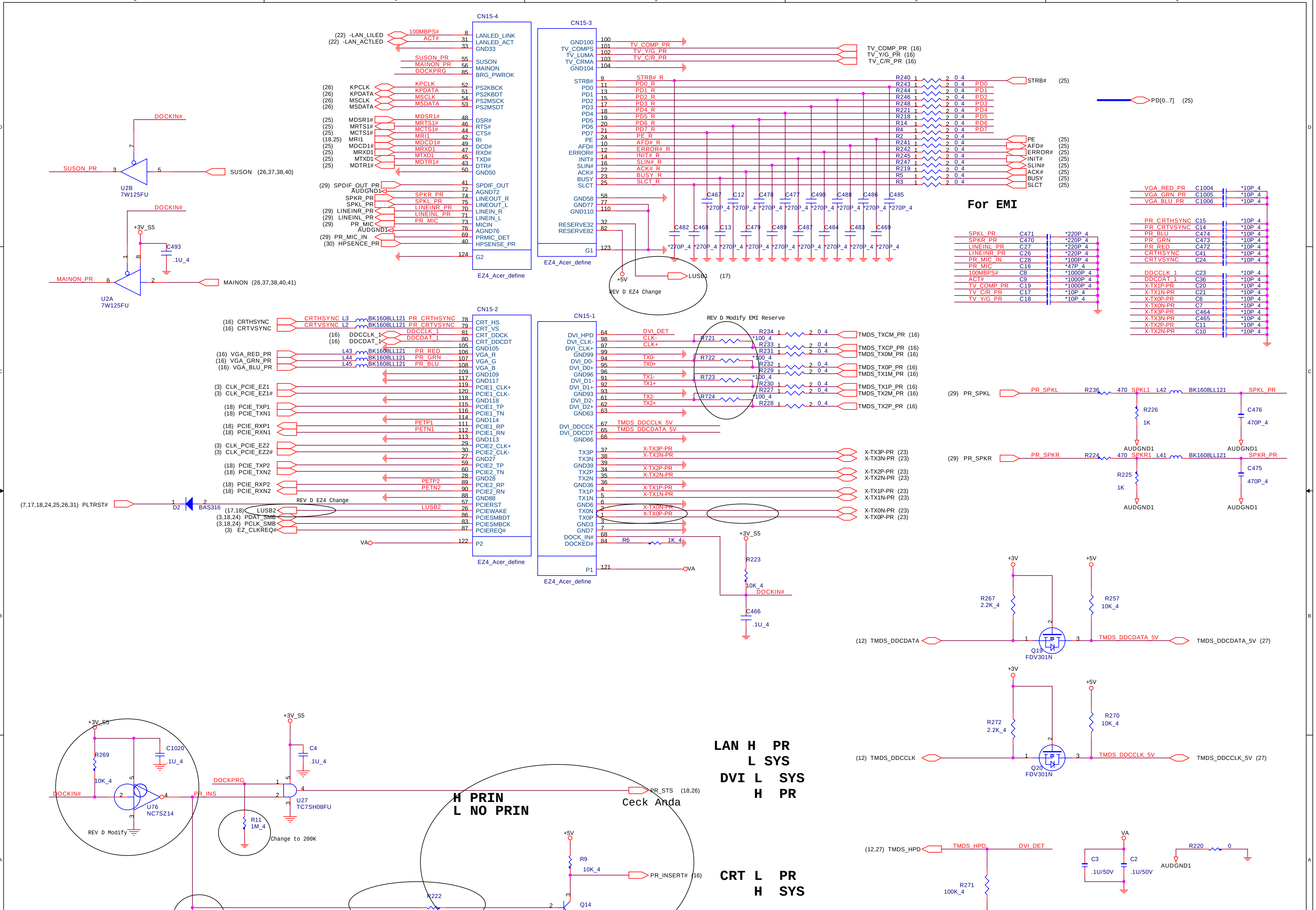


PROJECT : ZF1

Quanta Computer Inc.

Size	Document Number	Rev
Custom	HDD	1A

Date: Saturday, November 13, 2004 Sheet 32 of 43

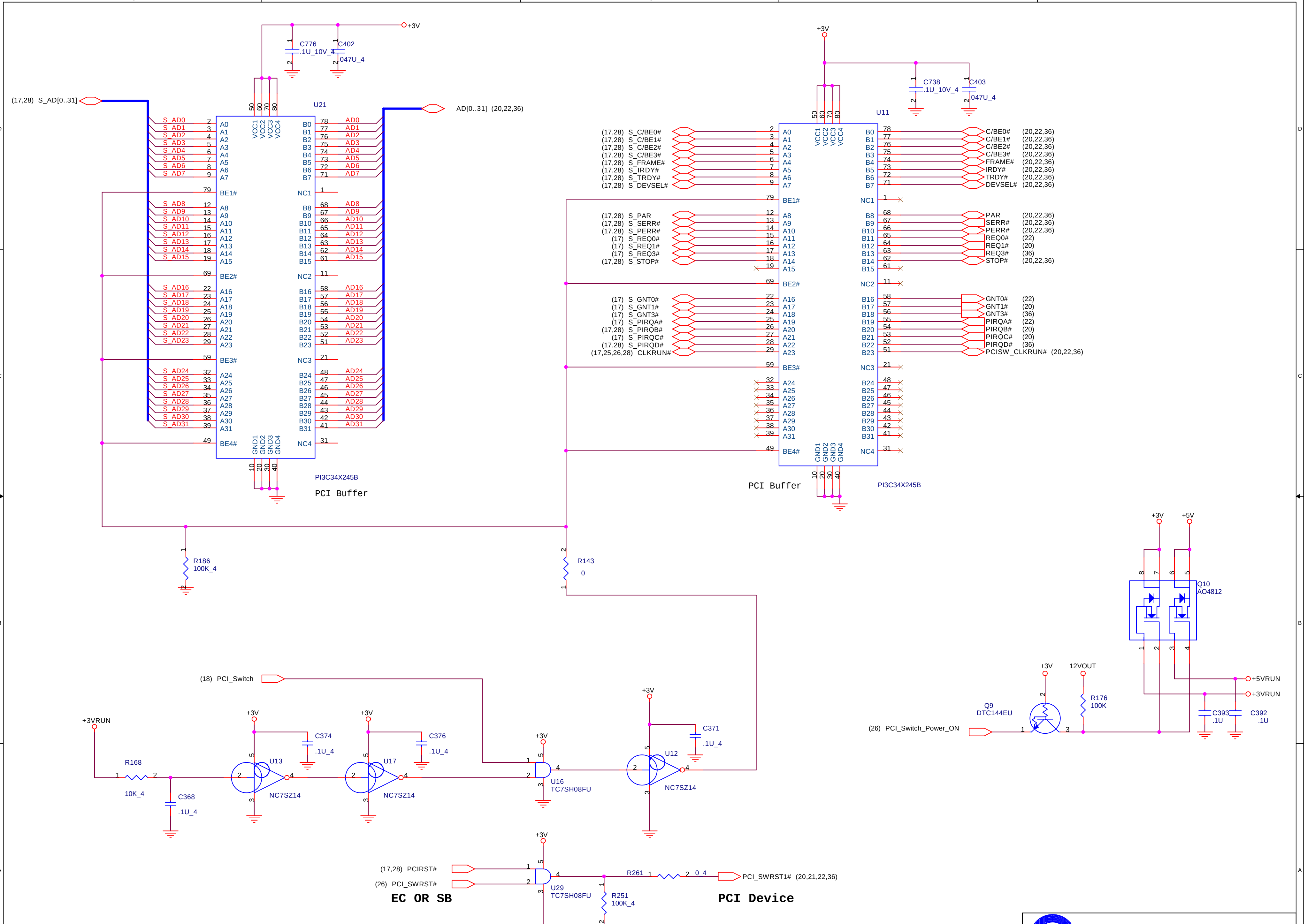


PROJECT : ZF1

Quanta Computer Inc.

Size	Document Number	Rev
C	EZ PORT 4	1A

Date: Saturday, November 13, 2004 Sheet 33 of 43

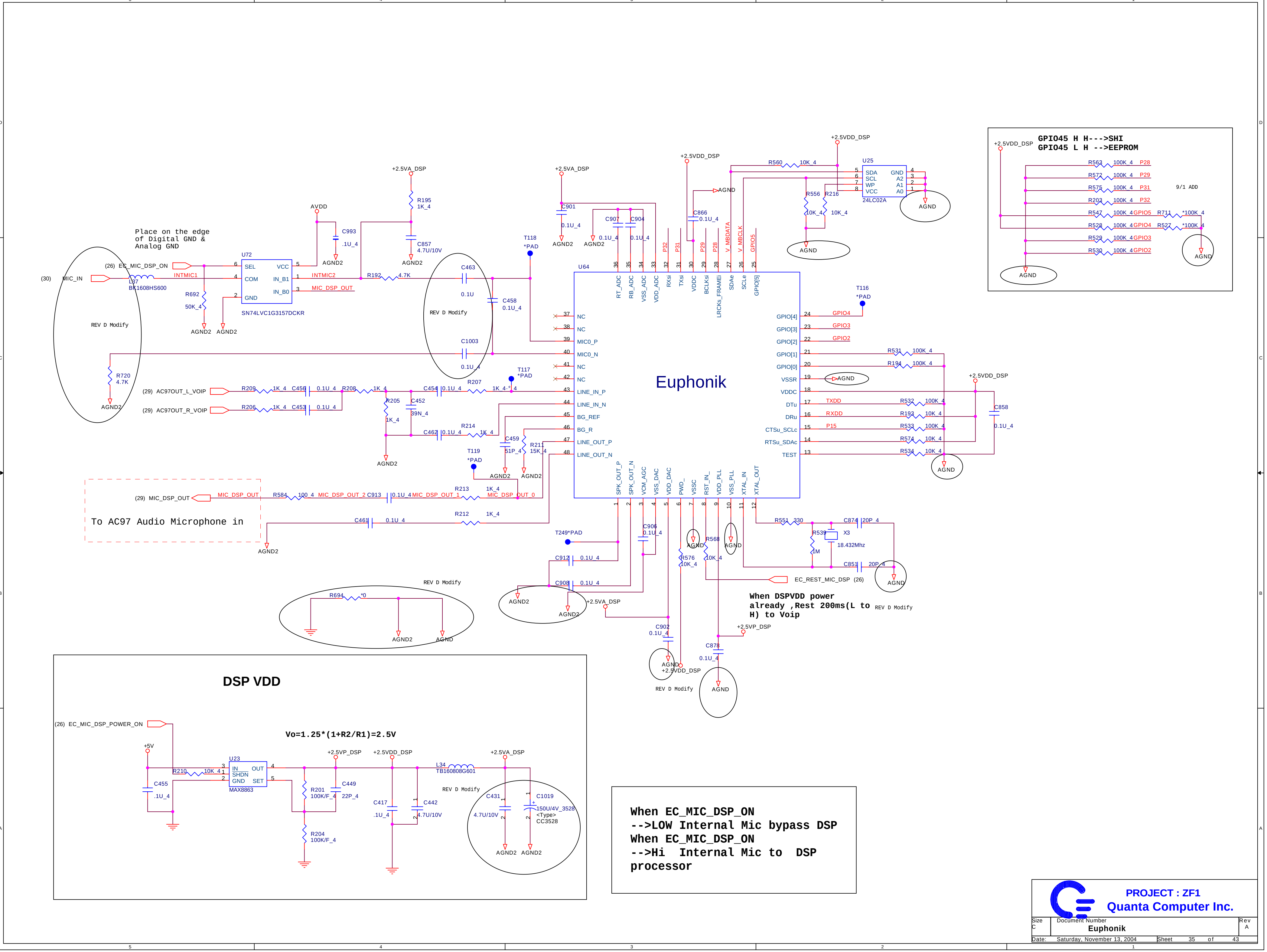


PROJECT : ZF1

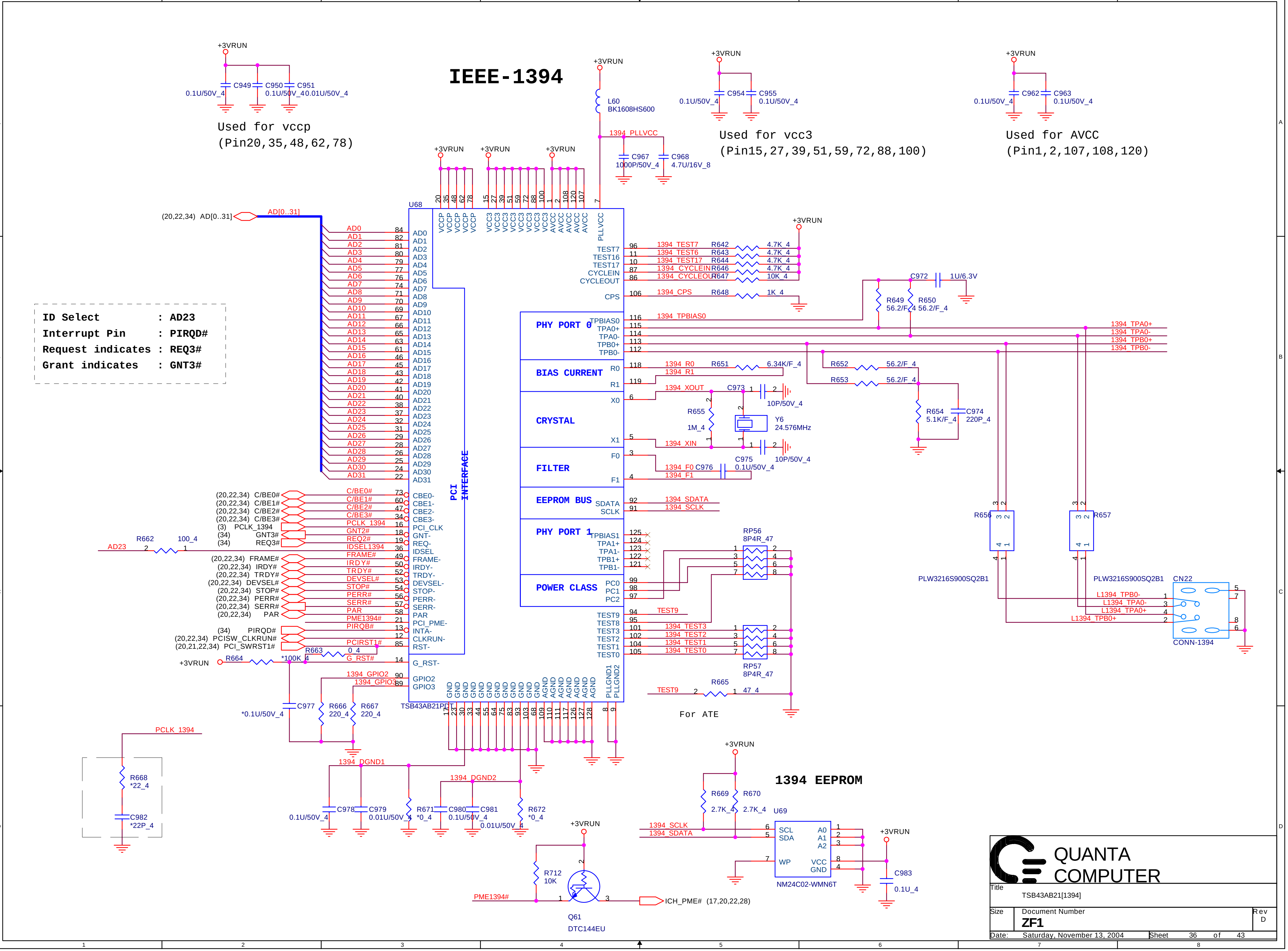
Quanta Computer Inc.

Size	Document Number	Rev
Custom	PCI Buffer	A

Date: Saturday, November 13, 2004 Sheet 34 of 43

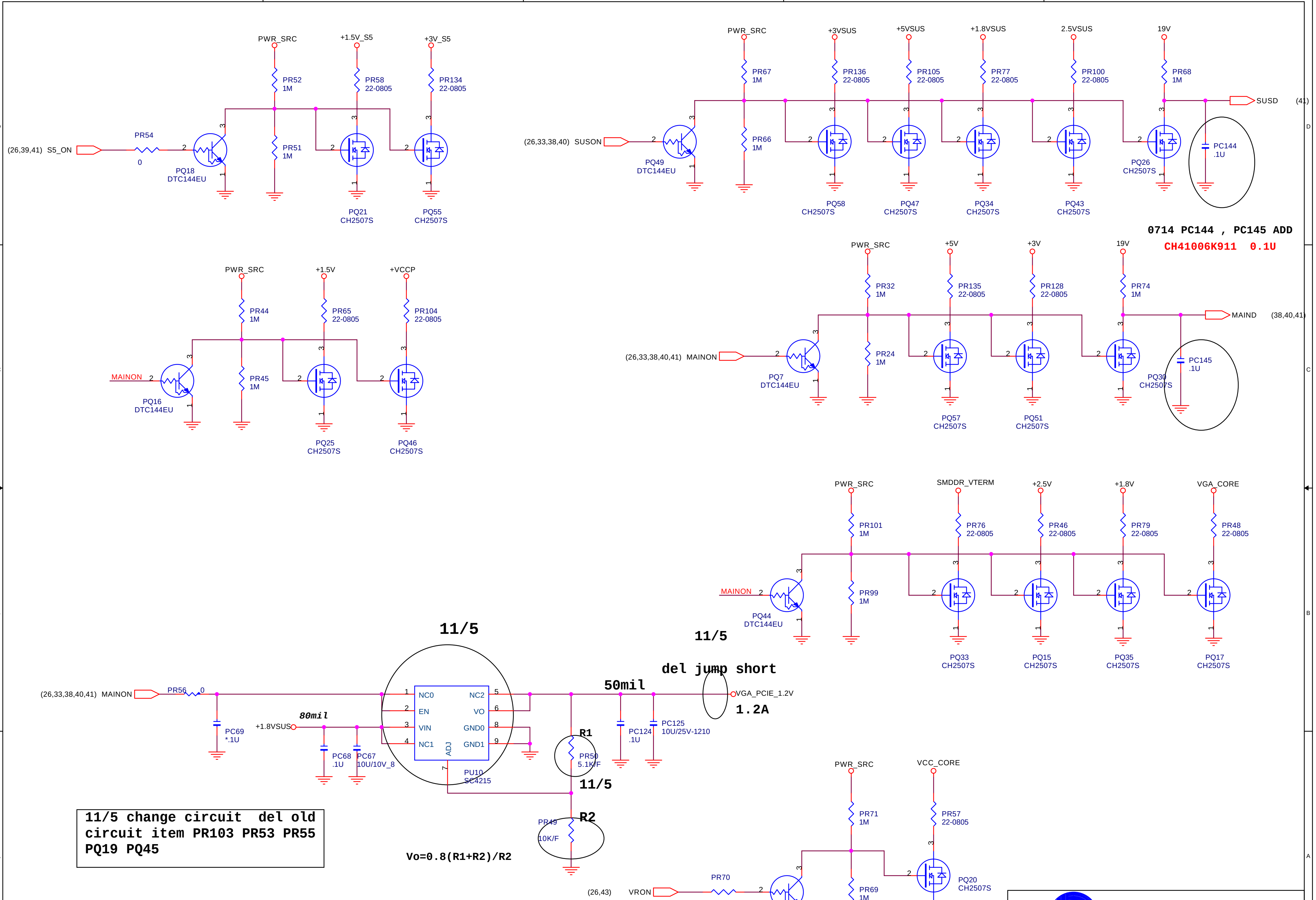


Place on the edge of Digital GND & Analog GND
REV D Modify
SN74LVC1G3157DCKR
Euphonik
U64
U25
24LC02A
GPIO45 H H--->SHI
GPIO45 L H -->EEPROM
9/1 ADD
To AC97 Audio Microphone in
When DSPVDD power already ,Rest 200ms(L to H) to Voip
DSP VDD
Vo=1.25*(1+R2/R1)=2.5V
MAX8863
When EC_MIC_DSP_ON
-->LOW Internal Mic bypass DSP
When EC_MIC_DSP_ON
-->Hi Internal Mic to DSP processor
PROJECT : ZF1
Quanta Computer Inc.
Document Number
Euphonik
Size C
Rev A
Date: Saturday, November 13, 2004
Sheet 35 of 43



QUANTA COMPUTER

Title	TSB43AB21[1394]
Size / Document Number	ZF1
Rev	D
Date:	Saturday, November 13, 2004
Sheet	36 of 43

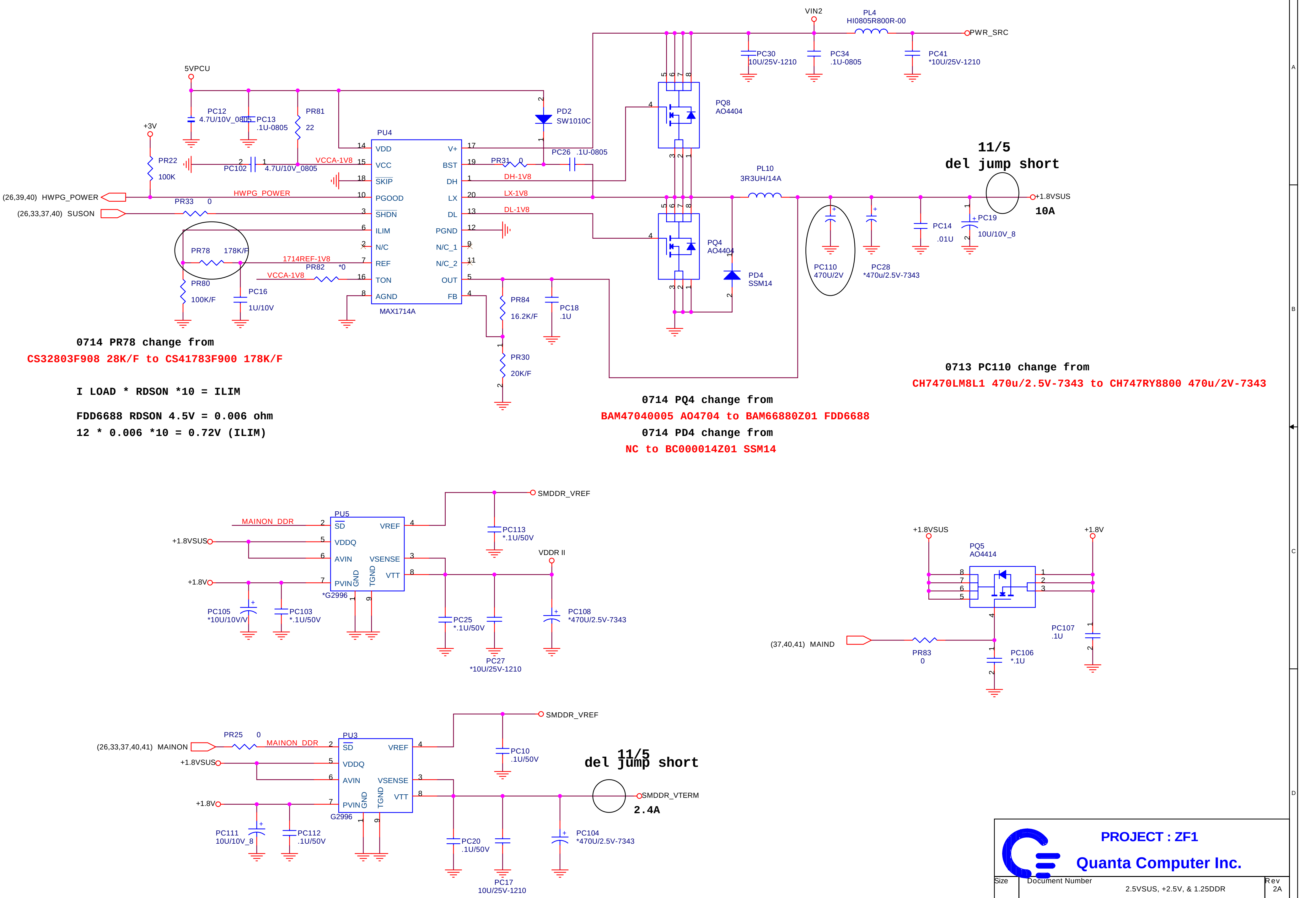


PROJECT : ZF1

Quanta Computer Inc.

Size	Document Number	Rev
Custom	DISCHARGE CIRCUIT	A

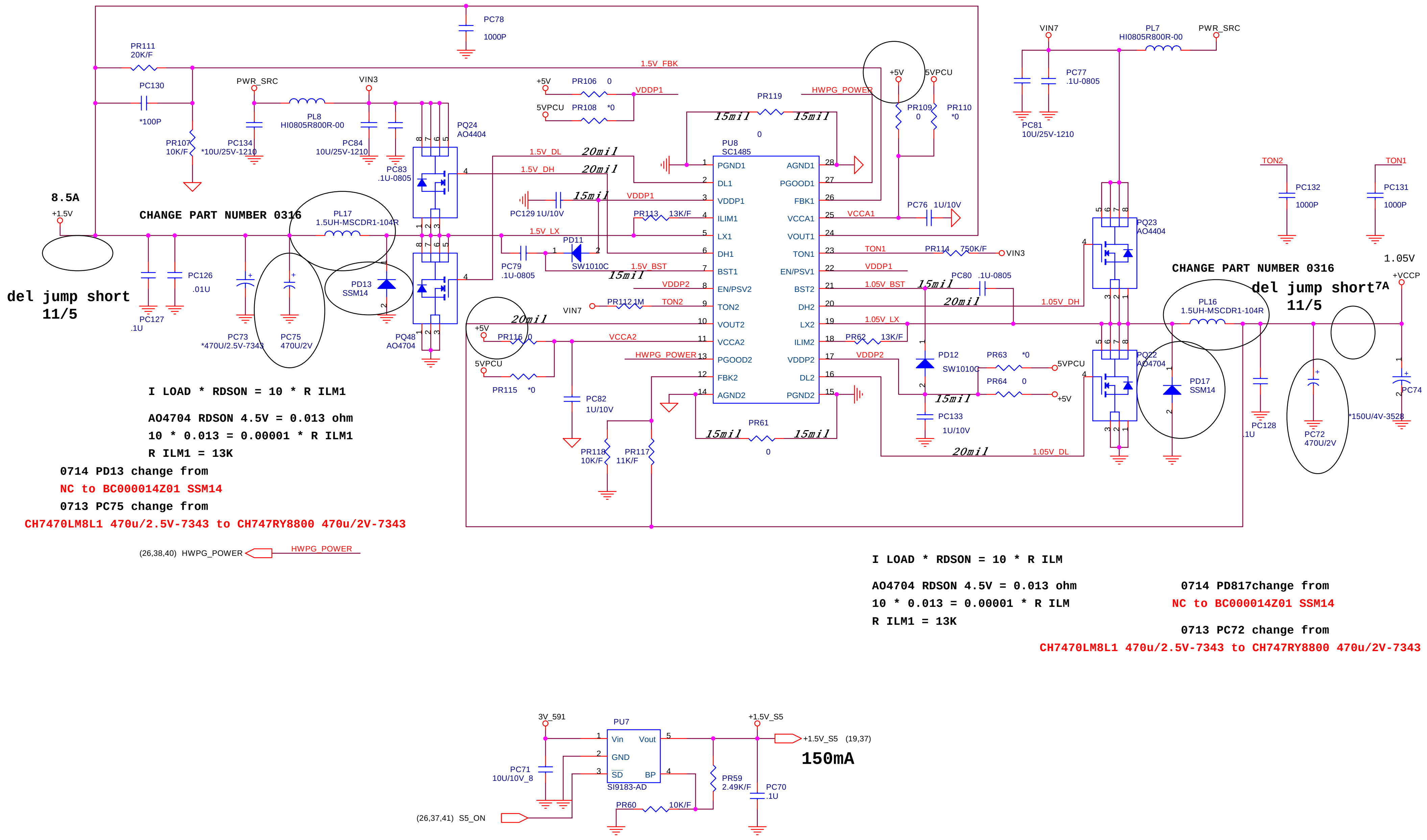
Date: Saturday, November 13, 2004 Sheet 37 of 43



PROJECT : ZF1

Quanta Computer Inc.

Size	Document Number	Rev
	2.5VSUS, +2.5V, & 1.25DDR	2A
Date: Saturday, November 13, 2004	Sheet 38 of 43	



I LOAD * RDSON = 10 * R ILM1

AO4704 RDSON 4.5V = 0.013 ohm

10 * 0.013 = 0.00001 * R ILM1

R ILM1 = 13K

0714 PD13 change from

NC to BC000014Z01 SSM14

0713 PC75 change from

CH7470LM8L1 470u/2.5V-7343 to CH747RY8800 470u/2V-7343

I LOAD * RDSON = 10 * R ILM

AO4704 RDSON 4.5V = 0.013 ohm

10 * 0.013 = 0.00001 * R ILM

R ILM1 = 13K

0714 PD817change from

NC to BC000014Z01 SSM14

0713 PC72 change from

CH7470LM8L1 470u/2.5V-7343 to CH747RY8800 470u/2V-7343

PROJECT : ZF1

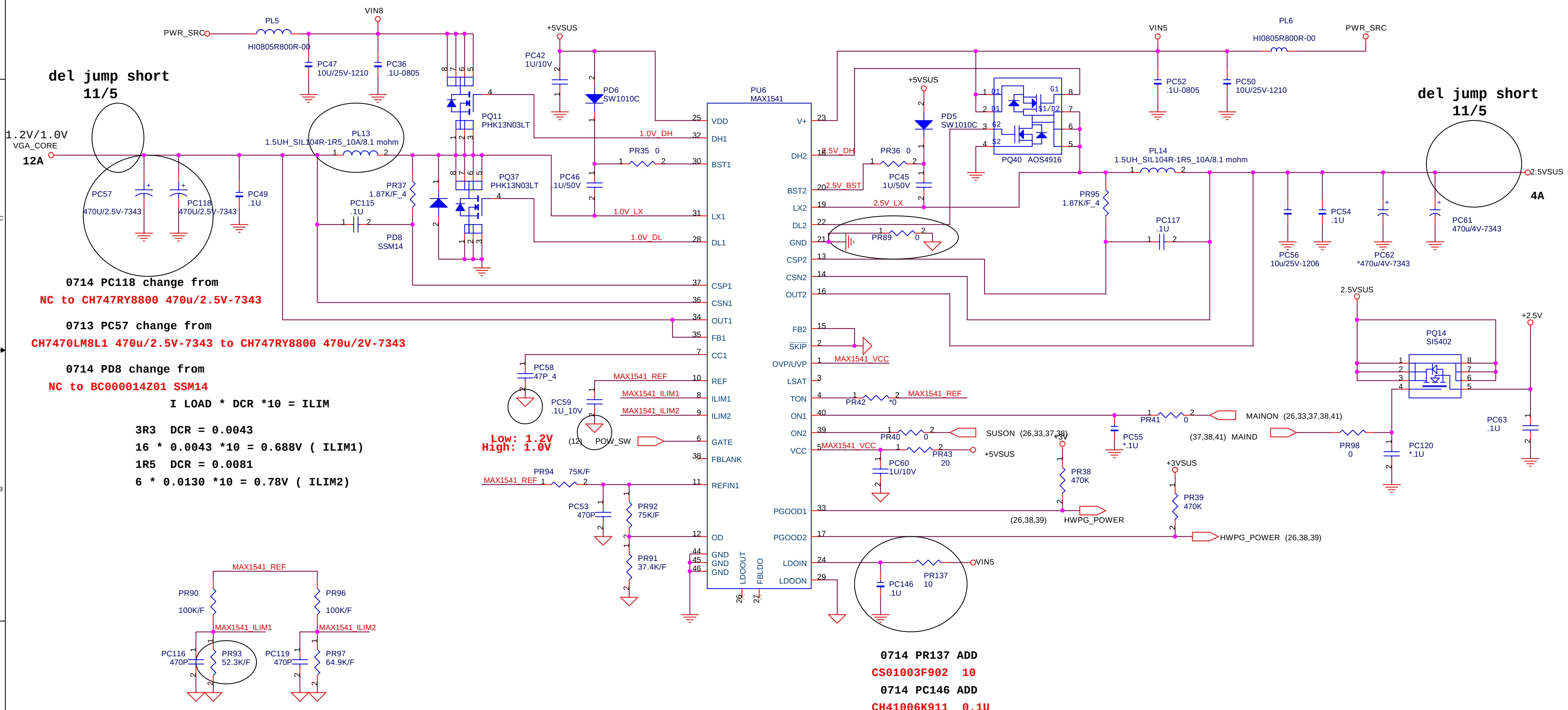
Quanta Computer Inc.

Size	Document Number	Rev
	2.5VSUS, +2.5V, & 1.25DDR	2A
Date: Saturday, November 13, 2004	Sheet 39 of 43	

0714 PR37 change from
CS21823F902 1.82K/F to CS27683F909 7.68K/F
0714 PL13 change from
CV-15A0MZ05 1R5 to CV-33E0MZ01 3R3
0714 PQ11 change from
BAM44040012 AO4404 to BAM60300Z11 FDD6030L
0714 PQ37 change from
BAM47040005 AO4704 to BAM66880Z01 FDD6688

L / RL(DCR) = Cqe * Rqe
3R3 DCR = 0.0043
3.3u / 0.0043 = 0.1u * Rqe
Rqe = 7.68K

L / RL(DCR) = Cqe * Rqe
3R8 DCR = 0.0130
3.8u / 0.0130 = 0.1u * Rqe
Rqe = 2.94K



0714 PC118 change from
NC to CH747RY8800 470u/2.5V-7343

0713 PC57 change from
CH7470LM8L1 470u/2.5V-7343 to CH747RY8800 470u/2V-7343

0714 PD8 change from
NC to BC000014Z01 SSM14

I LOAD * DCR *10 = ILIM

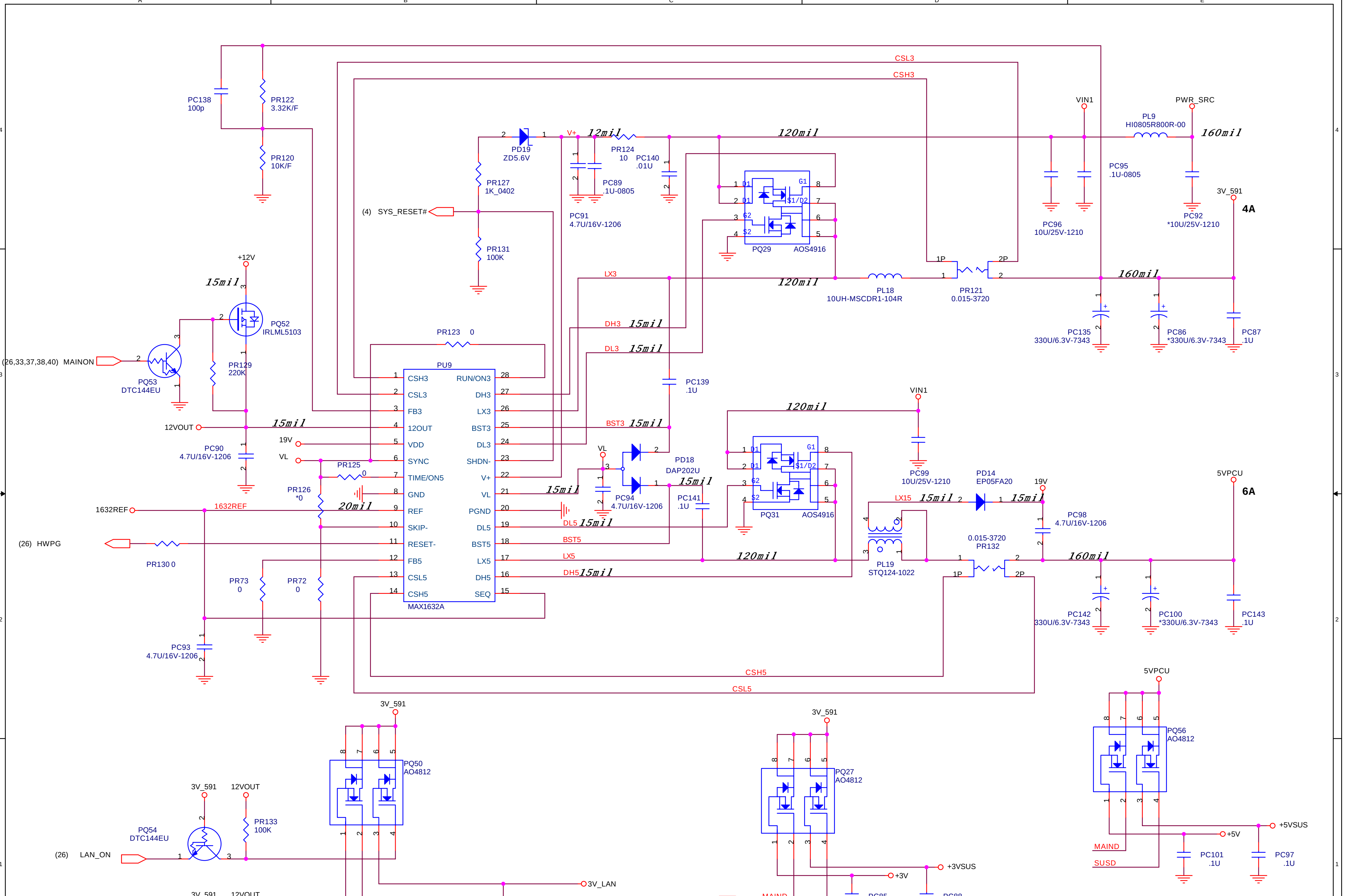
3R3 DCR = 0.0043
16 * 0.0043 *10 = 0.688V (ILIM1)
1R5 DCR = 0.0081
6 * 0.0130 *10 = 0.78V (ILIM2)

0714 PR137 ADD
CS01003F902 10
0714 PC146 ADD
CH41006K911 0.1U

0714 PR93 change from
CS34993F908 49.9K/F to CS35233F908 52.3K/F

PROJECT : ZF1
Quanta Computer Inc.

Size	Document Number	Rev
Custom	VGA POWER	1A
Date: Saturday, November 13, 2004	Sheet 40 of 43	

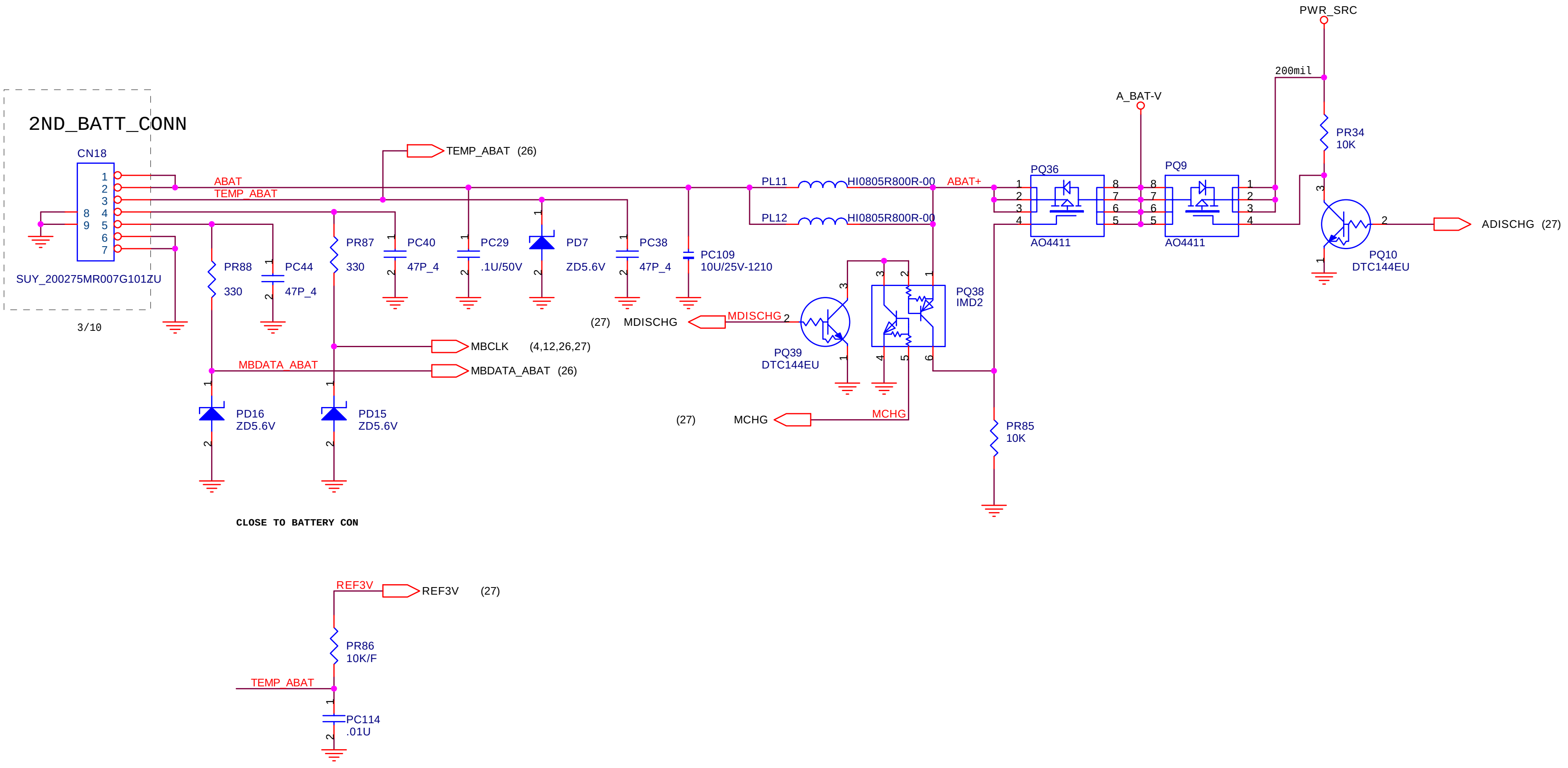


PROJECT : ZF1

Quanta Computer Inc.

Size	Document Number	Rev
Custom	SYSTEM POWER	A

Date: Saturday, November 13, 2004 | Sheet 41 of 43

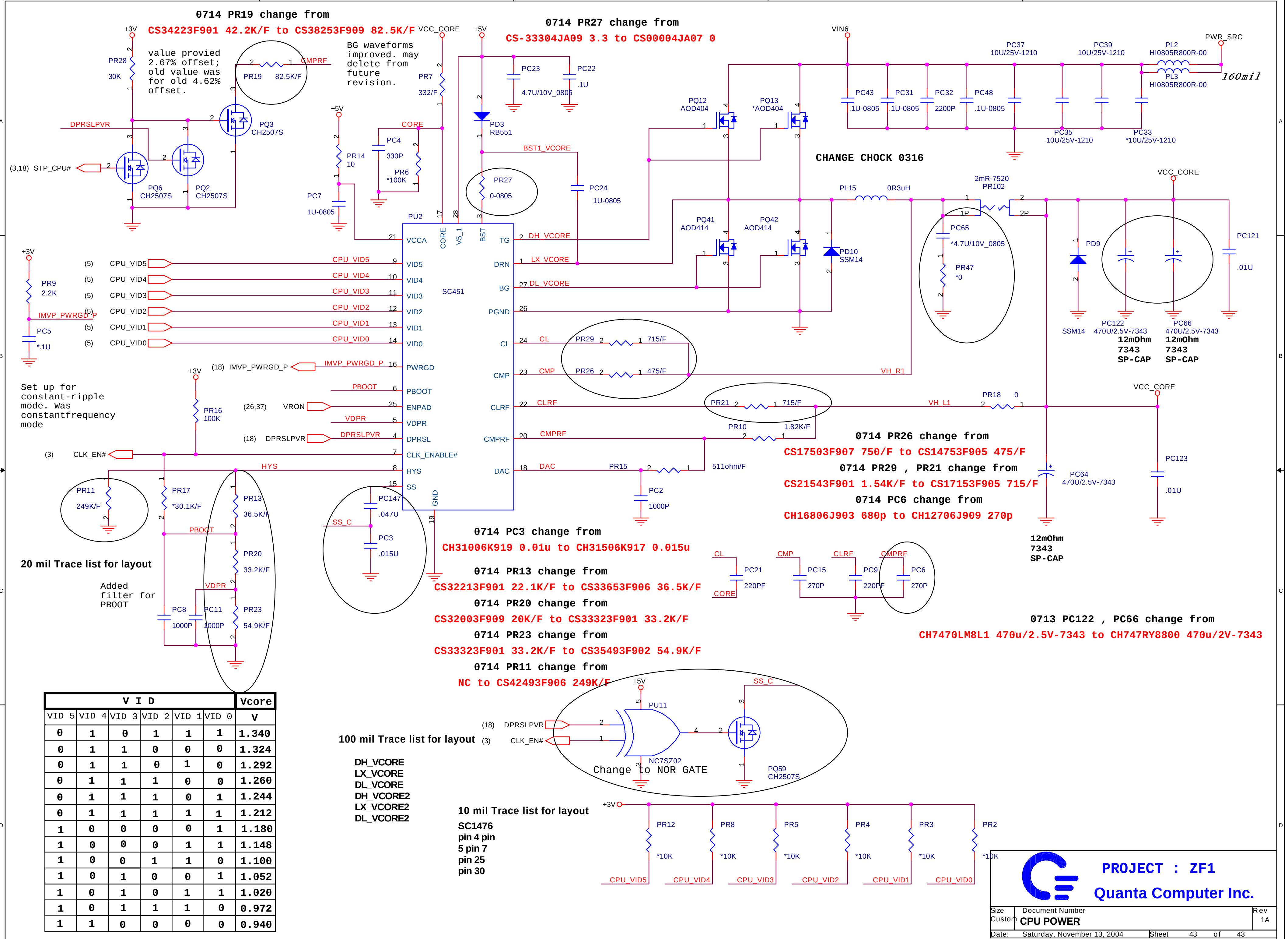


PROJECT : ZL1

Quanta Computer Inc.

Size	Document Number	Rev
	BATTERY SELECT	A1A

Date: Saturday, November 13, 2004 Sheet 42 of 43



V I D						Vcore
VID 5	VID 4	VID 3	VID 2	VID 1	VID 0	V
0	1	0	1	1	1	1.340
0	1	1	0	0	0	1.324
0	1	1	0	1	0	1.292
0	1	1	1	0	0	1.260
0	1	1	1	0	1	1.244
0	1	1	1	1	1	1.212
1	0	0	0	0	1	1.180
1	0	0	0	1	1	1.148
1	0	0	1	1	0	1.100
1	0	1	0	0	1	1.052
1	0	1	0	1	1	1.020
1	0	1	1	1	0	0.972
1	1	0	0	0	0	0.940

PROJECT : ZF1

Quanta Computer Inc.

Size: Custom | Document Number: CPU POWER | Rev: 1A

Date: Saturday, November 13, 2004 | Sheet 43 of 43