

ZF1

AC/BATT
CONNECTOR PG 42

BATT
CHARGER PG 42

Dothan/Yonah
(478 Micro-FCPGA)
PG 4,5

DC/DC
+1.2V/+2.5V
+1.05V/+1.5V
+1.8V/+0.9V
+3V/+5V PG 37-41

CPU VR
PG 43

CLOCKS
PG 3

+0.9V
+1.8V_{SUS}
DDR-SODIMM1
PG 10,11
400/533 MHZ DDR II

DDR-SODIMM2
PG 10,11
400/533 MHZ DDR II

SATA-HDD PG 32
SATA

Parallel-HDD PG 32
IDE

Multi-Bay PG 31
IDE

Mini-Bluetooth (USB bus)
PG 24
USB

CMI9880 (Codec) & AMP
PG 29,30

Euphonik DSP PG 35
Headphone/SPDIF PG 30

Internal-MIC PG 35
LINEIN/MICIN PG 30

+3V
FIR PG 30

+3V
PC87383 PG 25

+5V
Touchpad PG 27

+5V
Keyboard PG 26

3V_591
FLASH PG 26

+1.05V
Alviso 1257 PCBGA
PG 6,7,8,9
+1.5V
+1.8V_{SUS}
+2.5V
4X133MHZ
PCI EXPRESS

ICH6-M 609 BGA
PG 17,18,19
+1.5V
+1.05V
+2.5V
+3V
+3V_{SUS}
+1.5V_{SUS}
DMI interface
SATA
IDE
Azalia
PCI-E

MINI-PCI Wireless LAN PG 28

OZ2710 PG 24

+5V
FAN 1 PG 27

LIGHT SENER

PCI BUFFER PG 34

LAN (10M/100M/1G) BCM5788M PG 22

RJ45/Magnetics PG 23

M24P/M26P
DDRam(64/128)
PG 12,13,14,15,16

LCD Connector

LVDS

DVI

S-Video

CRT PG 16

DOCKING PG 33

33MHZ PCI

LAN (10M/100M/1G) BCM5788M PG 22

RJ45/Magnetics PG 23

NEW CARD PG 24

OZ2710 PG 24

+5V
FAN 1 PG 27

LIGHT SENER

PCI BUFFER PG 34

LAN (10M/100M/1G) BCM5788M PG 22

RJ45/Magnetics PG 23

+2.5V
+3V
DVI

S-Video

CRT PG 16

DOCKING PG 33

33MHZ PCI

LAN (10M/100M/1G) BCM5788M PG 22

RJ45/Magnetics PG 23

NEW CARD PG 24

OZ2710 PG 24

+5V
FAN 1 PG 27

LIGHT SENER

PCI BUFFER PG 34

LAN (10M/100M/1G) BCM5788M PG 22

RJ45/Magnetics PG 23

LAN (10M/100M/1G) BCM5788M PG 22

RJ45/Magnetics PG 23

CARDBUS/1394 OZ711M3 PG 20,21

Smart Card PG 20

CARDBUS CON. PG 20

4 in 1 socket XD,MMC,SD,MS PG 20

1394(TSB43AB21) PG 36

1394 PORT PG 20

PROJECT : ZF1
Quanta Computer Inc.

Size Document Number
Schematic Block Diagram Rev B1A

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Check again

Change History

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			SUS_ON
+3VSUS	X	X			SUS_D
+5VSUS	X	X			SUS_D
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

5/28

- System DVI DET function move in EZ port , So Del Q47_R557
 - Addition AND gate for DOCKING Power Good AND DockingIN Singal combine Circuit
 - Addition Power led circuit for system
 - Change D34 AND D35 + -
 - Addition LID Switch and LID connector
 - Addition RC Delay for PCIe1.2V
 - Change EC Three GPIO port same to ZL2
- 5/31
- Change C145 PCB Footprint to 3528
 - Combine USB and bluetooth connector to 19pin connector 87212-1900
 - Change PCBFootprint 88216-1200 to 88213-1200
 - Change USB connector bypass C to 0805 10u
 - Adjust 80pin connector 3 singal
- 6/1
- Update power all circuit for GND name
 - Addition OR to PRST
 - Change IDE RST
- 6/2
- Change ICH-6 USB Port
 - Del CDR,CDL,CDGND Singal and DEL prevent CDR,CDL,CDGND noise circuit.
- 6/4
- U49,U50_Form 3VRUN change to +3V AND CHANGE MINPCI connector to PCI BUS,And addition PCI_SWRST # AND PCI_SWRST1#
 - Change BT_POWER NAME
 - Change VOIP AGND
- 6/7
- Change VOIP AGND TO AGND2 for Layout

External PCI Devices

Device	IDSEL#	REQ#/GNT#	Interrupts
CardBus+Smart Card	AD25	1	PIRQCB
Mini-PCI	AD19	2	PIRQBD
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

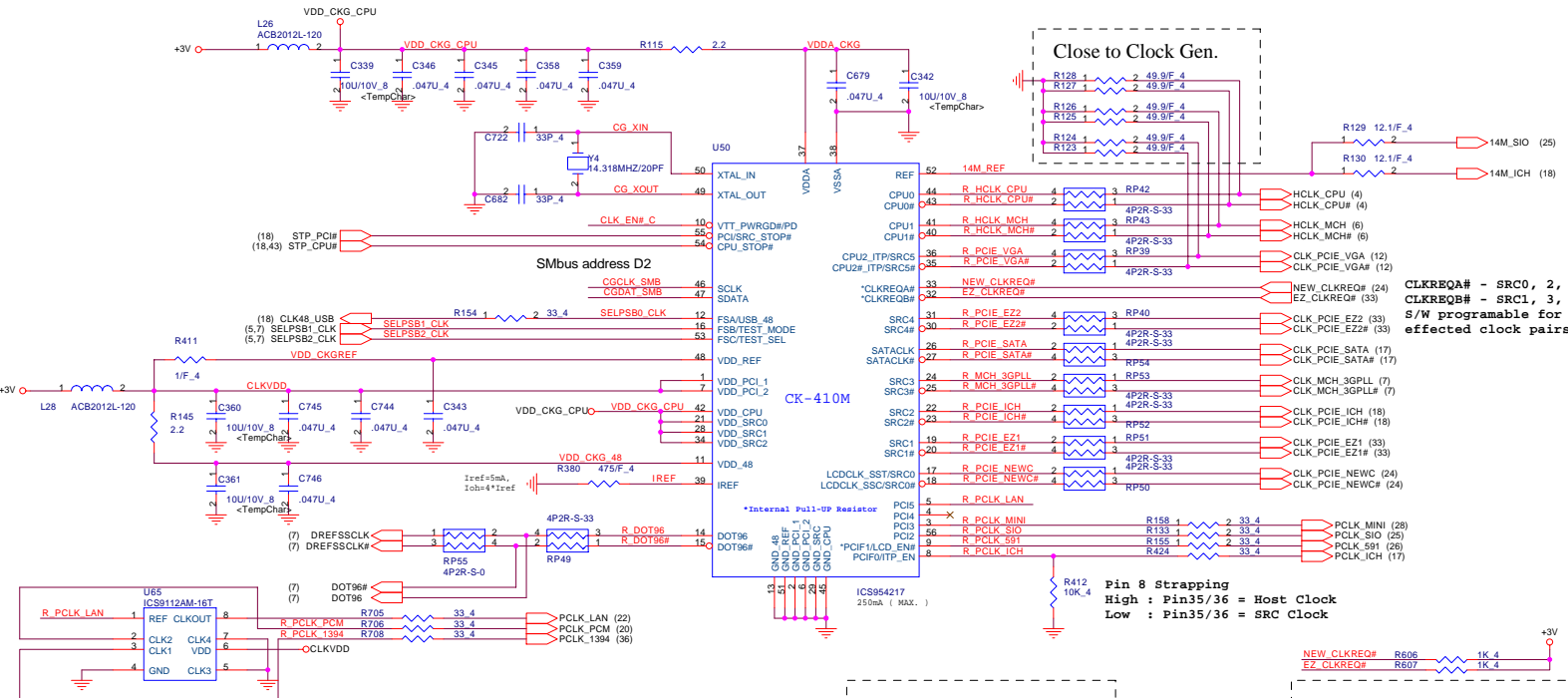
Device

- SODIMM 1010 000X b
- Clock Gen 1101 001x b



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Close to Clock Gen.

CLKREQA# - SRC0, 2, SATA
CLKREQB# - SRC1, 3, 4
S/W programmable for
effected clock pairs

Pin 8 Strapping
High : Pin35/36 = Host Clock
Low : Pin35/36 = SRC Clock

Resistor Stuff Table

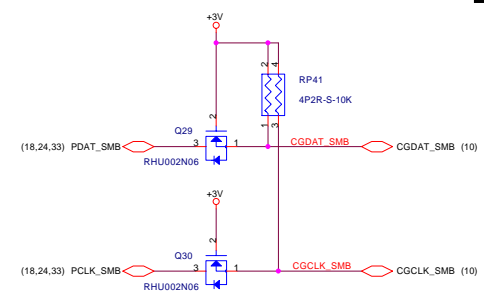
	RA	RB	RC	RD
Dothan A 400	V	X	X	V
Dothan A 533	X	V	X	V
Dothan B	X	X	X	X

Clock Gen. Frequency Selection Table

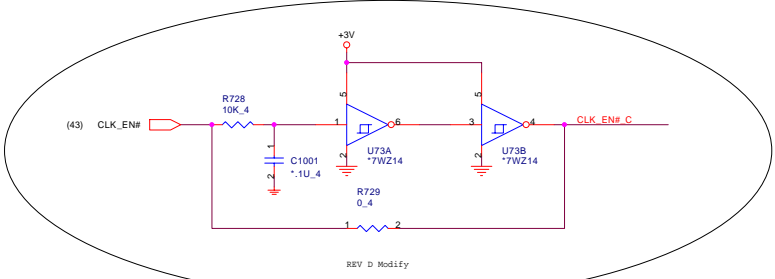
FSC	FSB	FSA	CPU	SRC	PCI
1	0	1	100	100	33
0	0	1	133	100	33
0	1	1	166	100	33
0	1	0	200	100	33
0	0	0	266	100	33
1	0	0	333	100	33
1	1	0	400	100	33
1	1	1	RSVD	100	33

DOTHAN BSEL Output Value

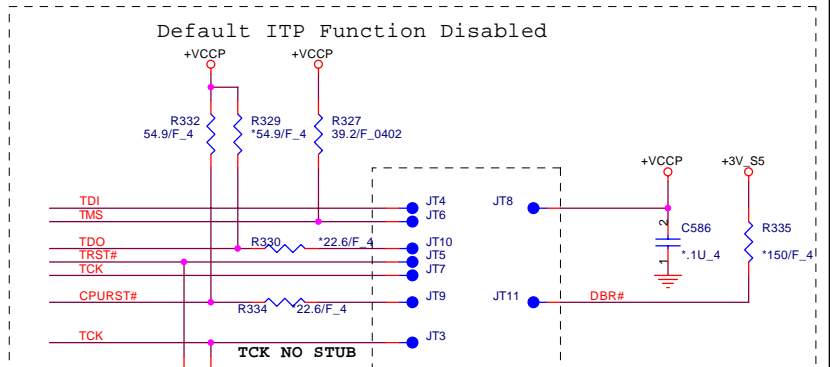
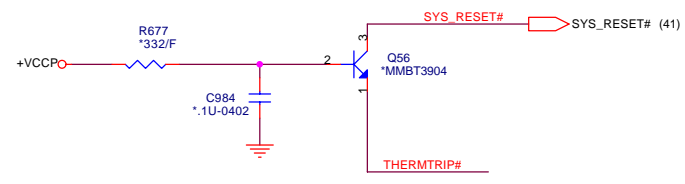
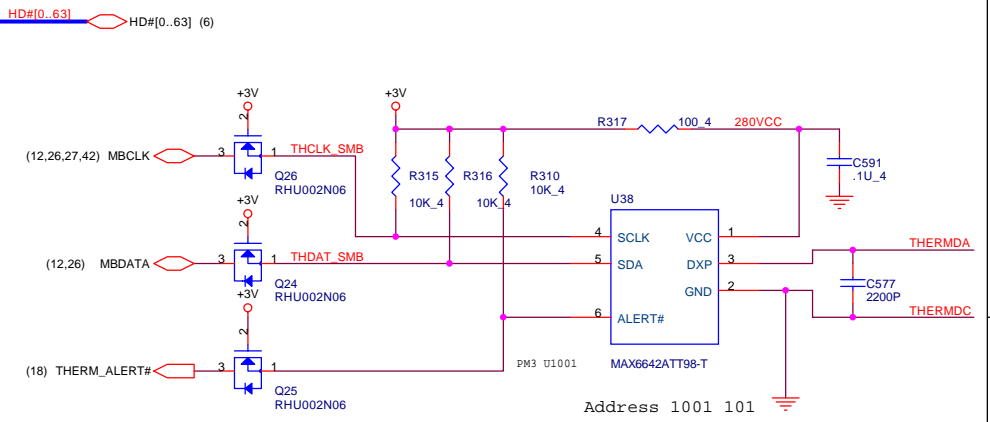
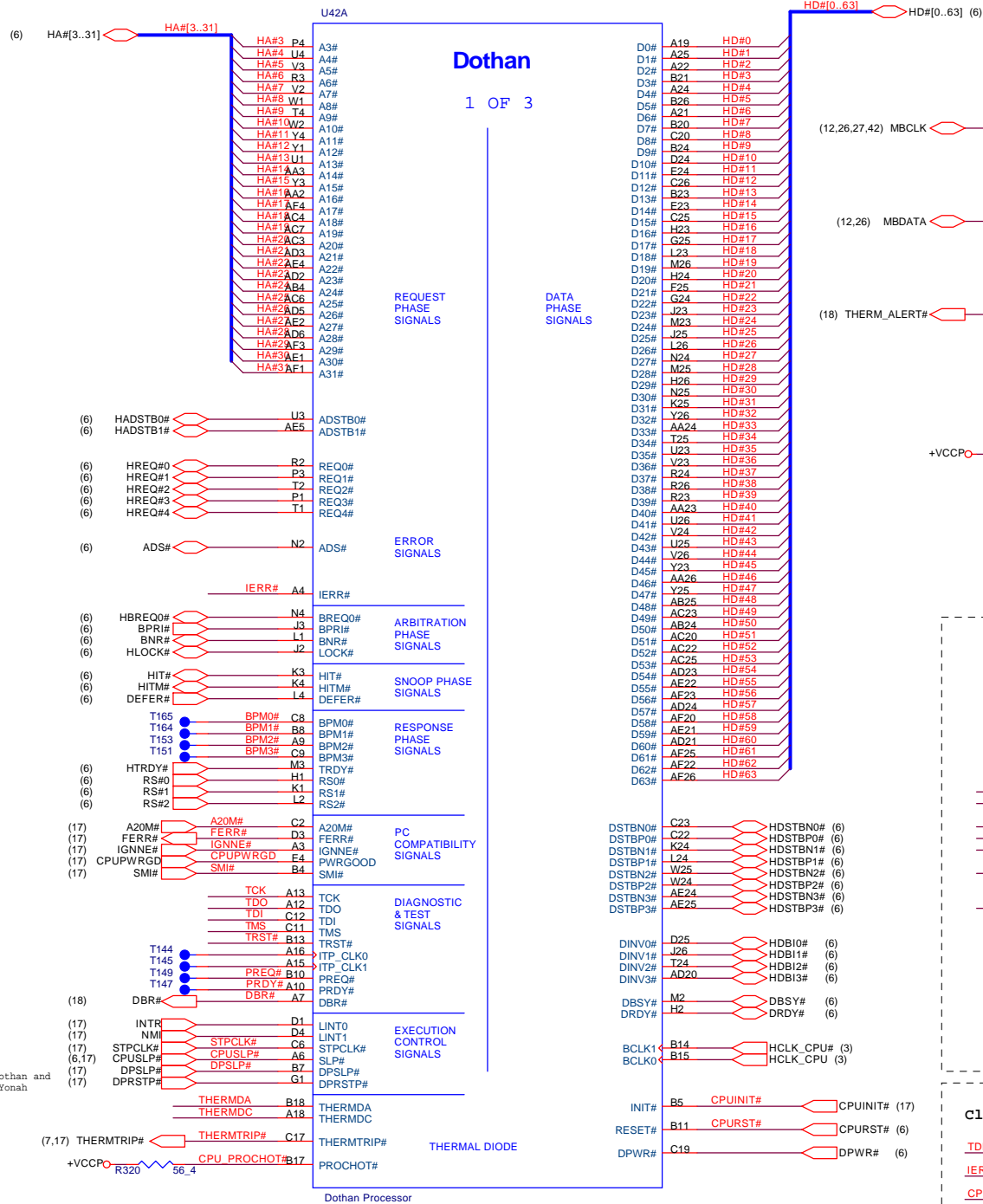
FSB Frequency	DOTHAN A-Step		DOTHAN B-Step	
	BSEL1	BSEL0	BSEL1	BSEL0
400 Mhz	0	0	0	1
533 Mhz	0	1	0	0



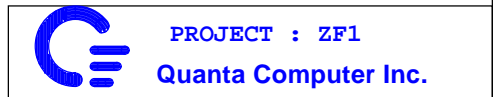
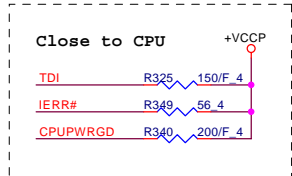
These are for backdrive issue

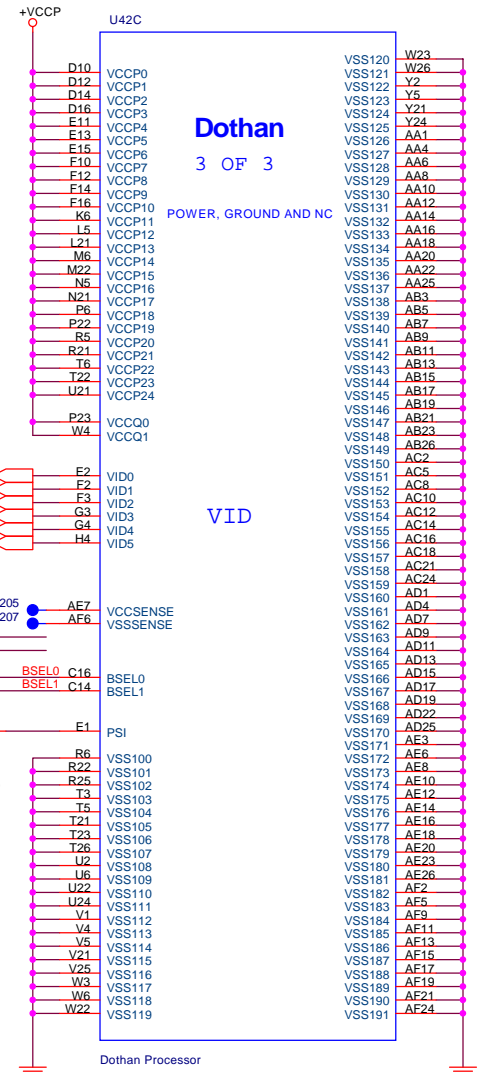
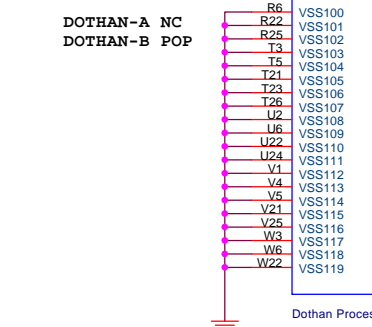
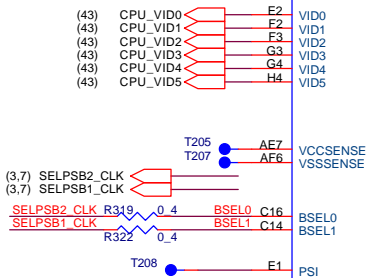
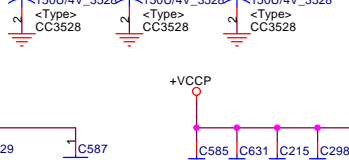
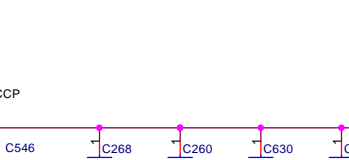
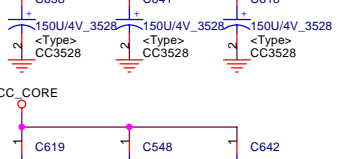
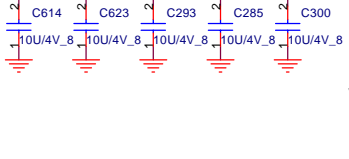
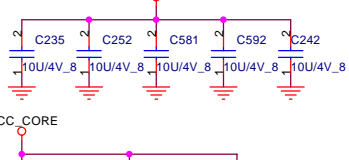
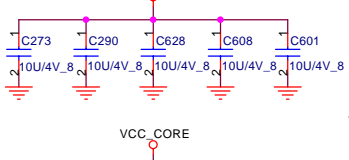
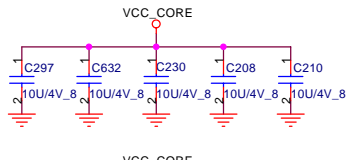
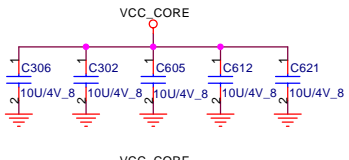
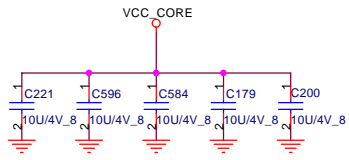
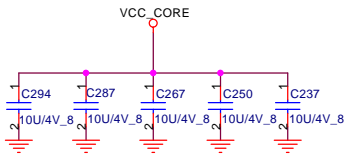
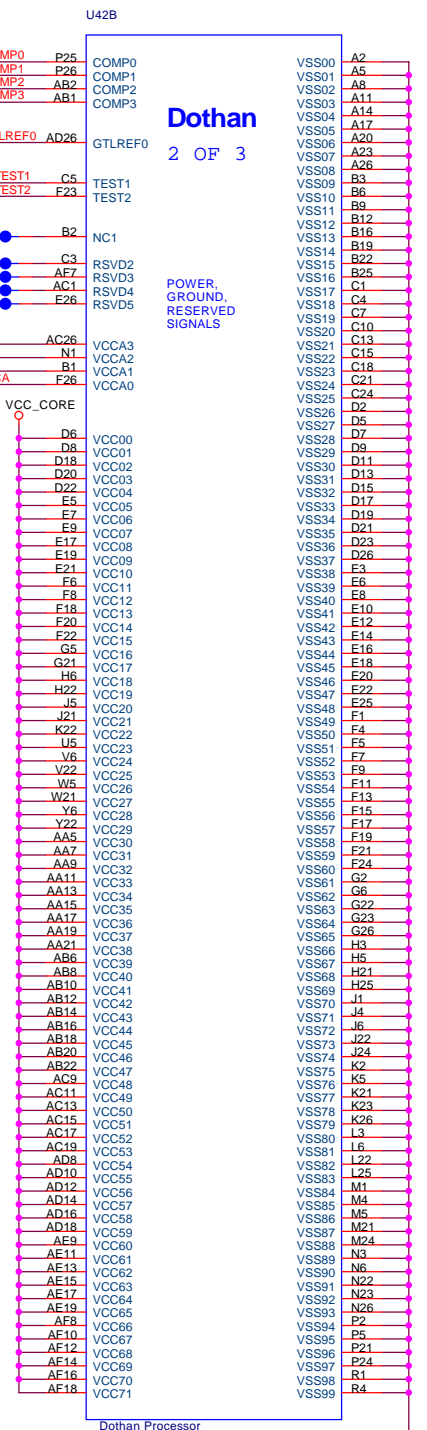
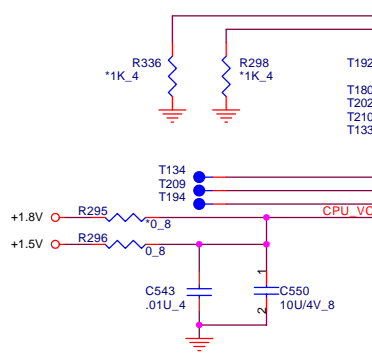
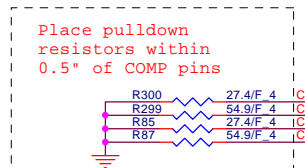
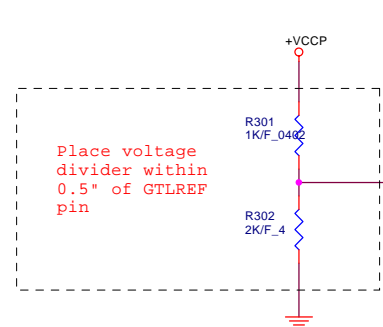


REV D Modify



JITP Connector
Place these Components
as close as possible.

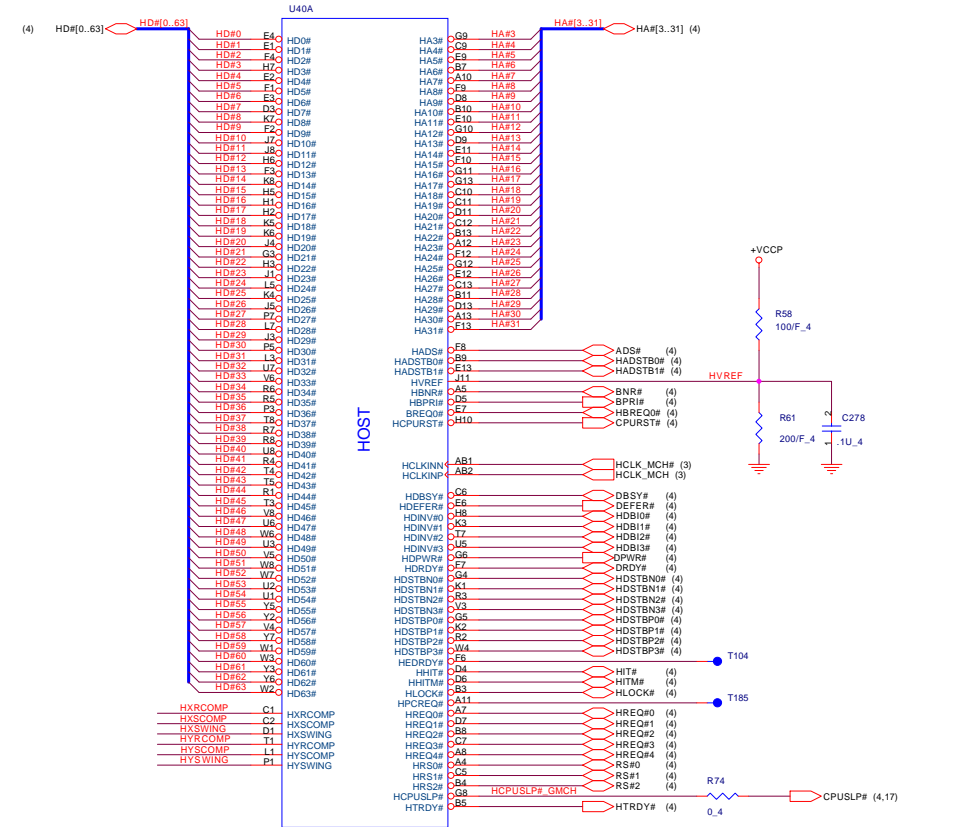
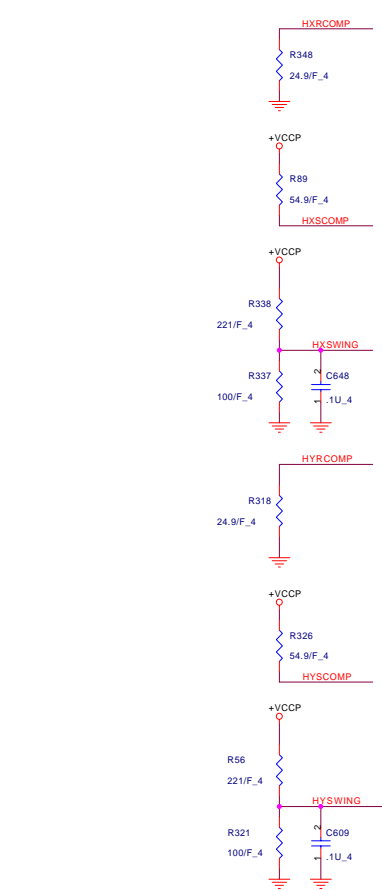




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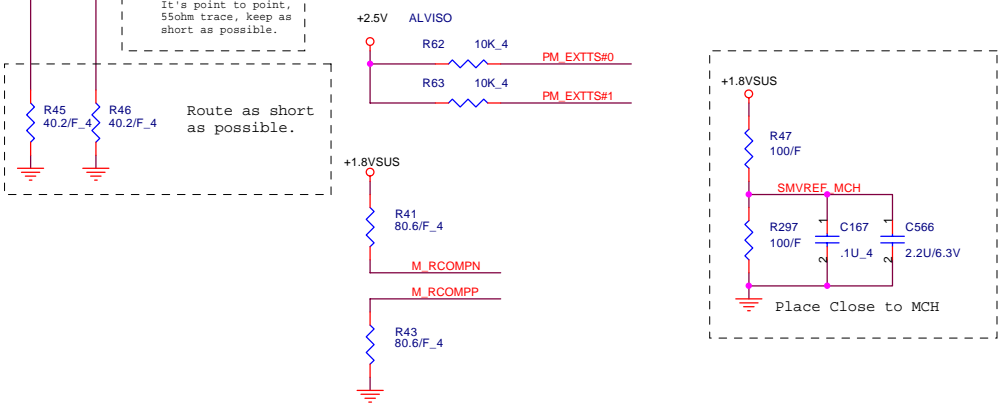
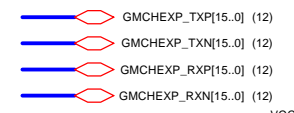
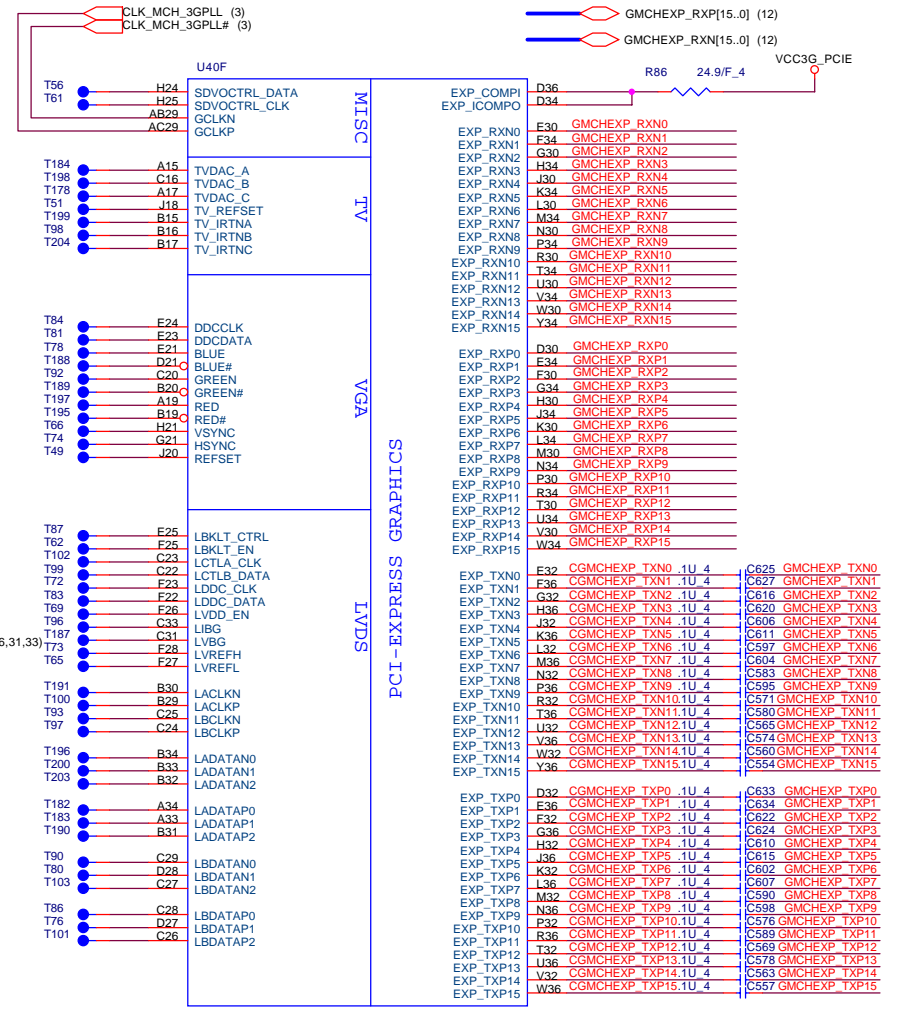
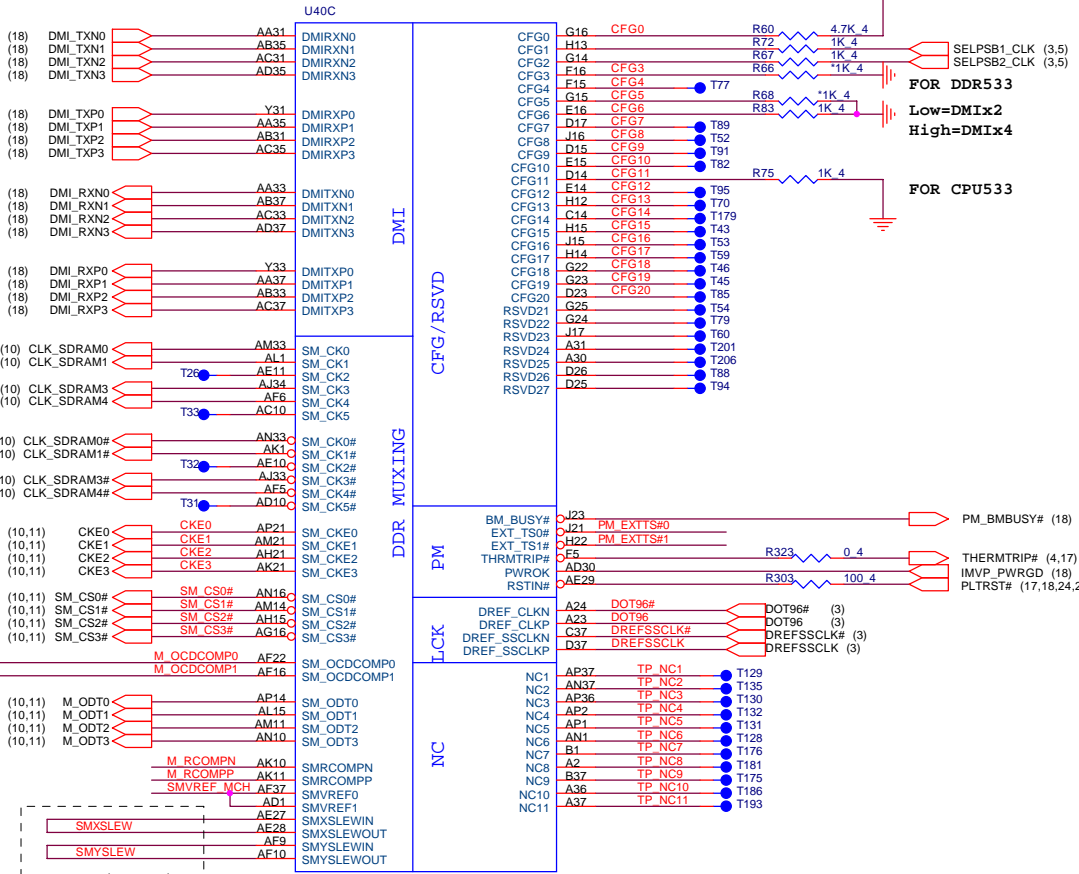
Size	Document Number	Rev
	Dothan Power & NC	A1A
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U40E		VSS	
AF23	VSS136	AG37	VSS0
H23	VSS137	Y37	VSS1
AL22	VSS138	V37	VSS2
AM22	VSS139	T37	VSS3
J22	VSS140	PM37	VSS4
E22	VSS141	LM37	VSS5
D22	VSS142	K37	VSS6
A22	VSS143	H37	VSS7
AN21	VSS144	E37	VSS8
FE21	VSS145	AN36	VSS9
F21	VSS146	AL36	VSS10
C21	VSS147	AJ36	VSS11
AK20	VSS148	AE36	VSS12
V20	VSS149	AD36	VSS13
G20	VSS150	AC36	VSS14
F20	VSS151	AB36	VSS15
E20	VSS152	AA36	VSS16
D20	VSS153	CA36	VSS17
K20	VSS154	CB36	VSS18
AN19	VSS155	AE35	VSS19
AG19	VSS156	WA35	VSS20
W19	VSS157	LV35	VSS21
T19	VSS158	VS35	VSS22
J19	VSS159	US35	VSS23
H19	VSS160	TS35	VSS24
C19	VSS161	RS35	VSS25
UH8	VSS162	NS35	VSS26
AL8	VSS163	MS35	VSS27
B18	VSS164	LM35	VSS28
A18	VSS165	K35	VSS29
AN17	VSS166	J35	VSS30
AJ17	VSS167	IS35	VSS31
FE17	VSS168	H35	VSS32
G17	VSS169	G35	VSS33
C17	VSS170	F35	VSS34
AL16	VSS171	E35	VSS35
K16	VSS172	D35	VSS36
D16	VSS173	C35	VSS37
D16	VSS174	BA34	VSS38
A16	VSS175	AH34	VSS39
K15	VSS176	AD34	VSS40
C15	VSS177	AC34	VSS41
AN14	VSS178	AB34	VSS42
AL14	VSS179	AA34	VSS43
UH14	VSS180	CA34	VSS44
AG14	VSS181	AL33	VSS45
K14	VSS182	AD33	VSS46
J14	VSS183	AD33	VSS47
E14	VSS184	W33	VSS48
B14	VSS185	V33	VSS49
A14	VSS186	U33	VSS50
D12	VSS187	T33	VSS51
B12	VSS188	P33	VSS52
AN11	VSS189	N33	VSS53
AL11	VSS190	M33	VSS54
AA11	VSS191	L33	VSS55
FE11	VSS192	K33	VSS56
Y11	VSS193	J33	VSS57
H11	VSS194	H33	VSS58
F11	VSS195	G33	VSS59
AA10	VSS196	F33	VSS60
Y10	VSS197	E33	VSS61
L10	VSS198	D33	VSS62
D10	VSS199	CA32	VSS63
AN9	VSS200	AJ32	VSS64
AH9	VSS201	AD32	VSS65
AE9	VSS202	AB32	VSS66
AC9	VSS203	AA32	VSS67
AA9	VSS204	WA32	VSS68
Y9	VSS205	VS32	VSS69
T9	VSS206	UV32	VSS70
K9	VSS207	U32	VSS71
H9	VSS208	T32	VSS72
A9	VSS209	AL31	VSS73
AL8	VSS210	AG31	VSS74
Y8	VSS211	AD31	VSS75
PR	VSS212	W31	VSS76
L8	VSS213	V31	VSS77
CR	VSS214	US31	VSS78
FR	VSS215	TS31	VSS79
OR	VSS216	R31	VSS80
AN7	VSS217	P31	VSS81
AK7	VSS218	N31	VSS82
AG7	VSS219	M31	VSS83
AA7	VSS220	L31	VSS84
AE6	VSS221	K31	VSS85
AE6	VSS222	J31	VSS86
G7	VSS223	H31	VSS87
AL6	VSS224	G31	VSS88
AE6	VSS225	F31	VSS89
AC6	VSS226	E31	VSS90
AA6	VSS227	D31	VSS91
TR	VSS228	CA30	VSS92
PE	VSS229	AP30	VSS93
LE	VSS230	AE30	VSS94
BE	VSS231	AC30	VSS95
AF5	VSS232	Y30	VSS96
AL5	VSS233	C30	VSS97
WE	VSS234	AM29	VSS98
ES	VSS235	AJ29	VSS99
AN4	VSS236	AD29	VSS100
Y4	VSS237	AA29	VSS101
UH	VSS238	WA29	VSS102
PA	VSS239	V29	VSS103
L4	VSS240	U29	VSS104
H4	VSS241	T29	VSS105
CA	VSS242	L29	VSS106
A3	VSS243	H29	VSS107
AC3	VSS244	G29	VSS108
AB3	VSS245	F29	VSS109
AA3	VSS246	E29	VSS110
C3	VSS247	D29	VSS111
CA3	VSS248	CA28	VSS112
CA3	VSS249	AA28	VSS113
AN2	VSS250	WA28	VSS114
AL2	VSS251	V28	VSS115
AH2	VSS252	U28	VSS116
AE2	VSS253	E28	VSS117
AD2	VSS254	U27	VSS118
Y2	VSS255	AE27	VSS119
V2	VSS256	AD27	VSS120
P2	VSS257	AG27	VSS121
L2	VSS258	AE27	VSS122
B27	VSS259	AB27	VSS123
Q26	VSS260	AA27	VSS124
E26	VSS261	W27	VSS125
A26	VSS262	G27	VSS126
AN24	VSS263	E27	VSS127
AL24	VSS264	AJ24	VSS128
G2	VSS265	AD24	VSS129
C2	VSS266	AA24	VSS130
D2	VSS267	WA24	VSS131
Y1	VSS268	V24	VSS132
B36	VSS269	U24	VSS133
	VSS270	T24	VSS134
	VSS271	D24	VSS135
		B24	VSS135



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

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



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Size	Document Number	Rev
	Alviso DMI & PCIE	A1A
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(10) R_A_MD[0..63]

R A MD0	AG35	SADO0
R A MD1	AH35	SADO1
R A MD2	AL35	SADO2
R A MD3	AL37	SADO3
R A MD4	AH36	SADO4
R A MD5	AJ35	SADO5
R A MD6	AK37	SADO6
R A MD7	AL34	SADO7
R A MD8	AM36	SADO8
R A MD9	AN35	SADO9
R A MD10	AP32	SADO10
R A MD11	AM31	SADO11
R A MD12	AM34	SADO12
R A MD13	AM35	SADO11
R A MD14	AL32	SADO13
R A MD15	AM32	SADO14
R A MD16	AN31	SADO15
R A MD17	AP31	SADO16
R A MD18	AP28	SADO17
R A MD19	AP28	SADO18
R A MD20	AL30	SADO19
R A MD21	AM30	SADO20
R A MD22	AM28	SADO21
R A MD23	AL28	SADO22
R A MD24	AP27	SADO23
R A MD25	AM27	SADO24
R A MD26	AM27	SADO25
R A MD27	AM22	SADO26
R A MD28	AL23	SADO27
R A MD29	AM24	SADO28
R A MD30	AN22	SADO29
R A MD31	AP22	SADO30
R A MD32	AM9	SADO31
R A MD33	AL9	SADO32
R A MD34	AL6	SADO33
R A MD35	AP7	SADO34
R A MD36	AP11	SADO35
R A MD37	AP10	SADO36
R A MD38	AL7	SADO37
R A MD39	AM7	SADO38
R A MD40	AN5	SADO39
R A MD41	AN6	SADO40
R A MD42	AN3	SADO41
R A MD43	AP3	SADO42
R A MD44	AP6	SADO43
R A MD45	AM6	SADO44
R A MD46	AL4	SADO45
R A MD47	AM3	SADO46
R A MD48	AK2	SADO47
R A MD49	AK3	SADO48
R A MD50	AG2	SADO49
R A MD51	AG1	SADO50
R A MD52	AL3	SADO51
R A MD53	AM2	SADO52
R A MD54	AH3	SADO53
R A MD55	AG3	SADO54
R A MD56	AF3	SADO55
R A MD57	AE3	SADO56
R A MD58	AD6	SADO57
R A MD59	AC4	SADO58
R A MD60	AF2	SADO59
R A MD61	AF1	SADO60
R A MD62	AD4	SADO61
R A MD63	AD5	SADO62
		SADO63

DDR SYSTEM MEMORY A

SA_BS0#	AK15	R A BS0#	R_A_BS0# (10,11)
SA_BS1#	AK16	R A BS1#	R_A_BS1# (10,11)
SA_BS2#	AL21	R A BS2#	R_A_BS2# (10,11)
SA_DM0	AJ37	R A DM0	R_A_DM[0..7] (10)
SA_DM1	AP35	R A DM1	
SA_DM2	AL29	R A DM2	
SA_DM4	AP24	R A DM3	
SA_DM5	AP9	R A DM4	
SA_DM6	AP4	R A DM5	
SA_DM7	AJ2	R A DM6	
SA_DM7	AD3	R A DM7	
SA_DQS0	AK36	R A DQS0	R_A_DQS[0..7] (10)
SA_DQS1	AP33	R A DQS1	
SA_DQS2	AN29	R A DQS2	
SA_DQS3	AP23	R A DQS3	
SA_DQS4	AM8	R A DQS4	
SA_DQS5	AM4	R A DQS5	
SA_DQS6	AJ1	R A DQS6	
SA_DQS7	AE5	R A DQS7	
SA_DQS0#	AK35	R A DQS#0	R_A_DQS#[0..7] (10)
SA_DQS1#	AP34	R A DQS#1	
SA_DQS2#	AN30	R A DQS#2	
SA_DQS3#	AN23	R A DQS#3	
SA_DQS4#	AN8	R A DQS#4	
SA_DQS5#	AM5	R A DQS#5	
SA_DQS6#	AH1	R A DQS#6	
SA_DQS7#	AE4	R A DQS#7	
SA_MA0	AL17	R A MA0	R_A_MA[0..13] (10,11)
SA_MA1	AP17	R A MA1	
SA_MA2	AP18	R A MA2	
SA_MA3	AM17	R A MA3	
SA_MA4	AN18	R A MA4	
SA_MA5	AM18	R A MA5	
SA_MA6	AL19	R A MA6	
SA_MA7	AP20	R A MA7	
SA_MA8	AM19	R A MA8	
SA_MA9	AL20	R A MA9	
SA_MA10	AM16	R A MA10	
SA_MA11	AN20	R A MA11	
SA_MA12	AM20	R A MA12	
SA_MA13	AM15	R A MA13	
SA_CAS#	AN15	R A SCASA#	R_A_SCASA# (10,11)
SA_RAS#	AP16	R A SRASA#	R_A_SRASA# (10,11)
SA_RCVENIN#	AE29	SA RCVENIN#	
SA_RCVENOUT#	AE28	SA RCVENOUT#	
SA_WE#	AP15	R A BMWEA#	R_A_BMWEA# (10,11)

ALVISO

(10) R_B_MD[0..63]

R B MD0	AE31	SBDQ0
R B MD1	AE32	SBDQ1
R B MD2	AG32	SBDQ2
R B MD3	AG36	SBDQ3
R B MD4	AE34	SBDQ4
R B MD5	AE33	SBDQ5
R B MD6	AF31	SBDQ6
R B MD7	AF30	SBDQ7
R B MD8	AH33	SBDQ8
R B MD9	AH32	SBDQ9
R B MD10	AK31	SBDQ10
R B MD11	AG30	SBDQ11
R B MD12	AG33	SBDQ12
R B MD13	AG33	SBDQ13
R B MD14	AH31	SBDQ14
R B MD15	AJ31	SBDQ15
R B MD16	AK30	SBDQ16
R B MD17	AJ30	SBDQ17
R B MD18	AH28	SBDQ18
R B MD19	AH28	SBDQ19
R B MD20	AK29	SBDQ20
R B MD21	AH30	SBDQ21
R B MD22	AH27	SBDQ22
R B MD23	AG28	SBDQ23
R B MD24	AF24	SBDQ24
R B MD25	AG23	SBDQ25
R B MD26	AJ22	SBDQ26
R B MD27	AK22	SBDQ27
R B MD28	AH24	SBDQ28
R B MD29	AH23	SBDQ29
R B MD30	AG22	SBDQ30
R B MD31	AJ21	SBDQ31
R B MD32	AG10	SBDQ32
R B MD33	AG9	SBDQ33
R B MD34	AG8	SBDQ34
R B MD35	AH8	SBDQ35
R B MD36	AH11	SBDQ36
R B MD37	AH10	SBDQ37
R B MD38	AJ8	SBDQ38
R B MD39	AK9	SBDQ39
R B MD40	AJ7	SBDQ40
R B MD41	AK6	SBDQ41
R B MD42	AJ4	SBDQ42
R B MD43	AH6	SBDQ43
R B MD44	AK8	SBDQ44
R B MD45	AJ8	SBDQ45
R B MD46	AJ5	SBDQ46
R B MD47	AK4	SBDQ47
R B MD48	AG5	SBDQ48
R B MD49	AG4	SBDQ49
R B MD50	AD8	SBDQ50
R B MD51	AD9	SBDQ51
R B MD52	AH4	SBDQ52
R B MD53	AG6	SBDQ53
R B MD54	AE8	SBDQ54
R B MD55	AD7	SBDQ55
R B MD56	AC5	SBDQ56
R B MD57	AB8	SBDQ57
R B MD58	AB6	SBDQ58
R B MD59	AA8	SBDQ59
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R B MD61	AC7	SBDQ61
R B MD62	AA4	SBDQ62
R B MD63	AA5	SBDQ63

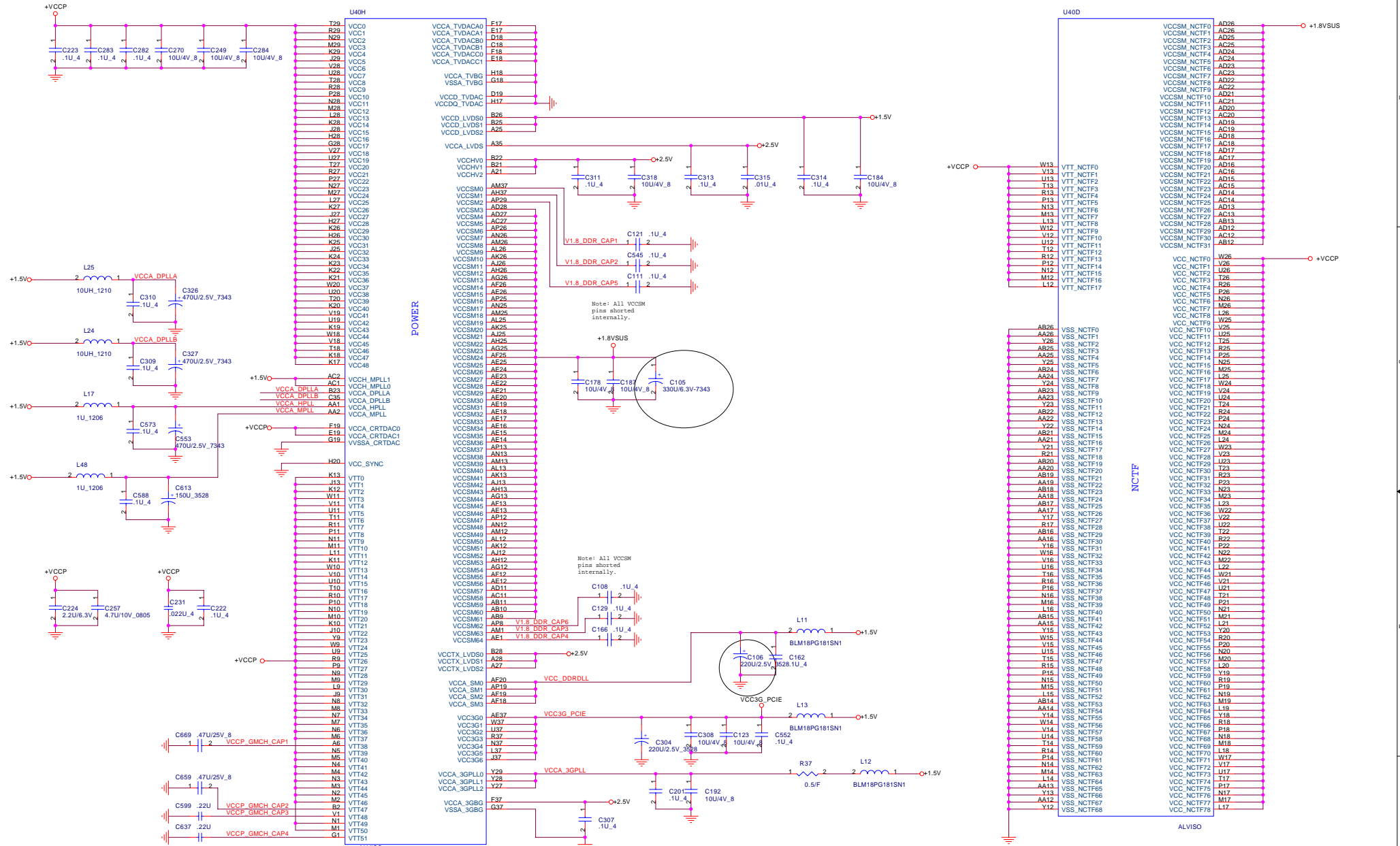
DDR SYSTEM MEMORY B

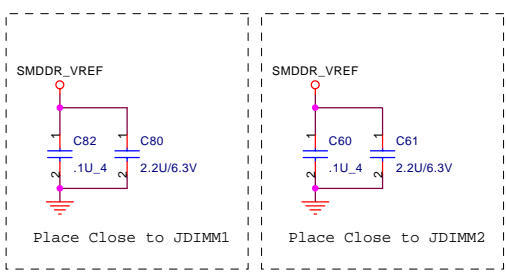
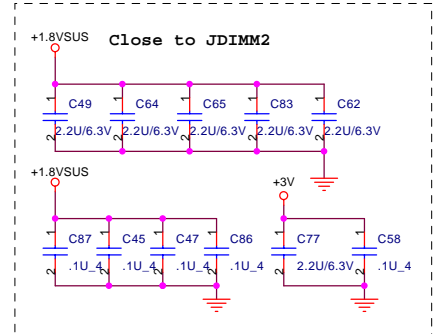
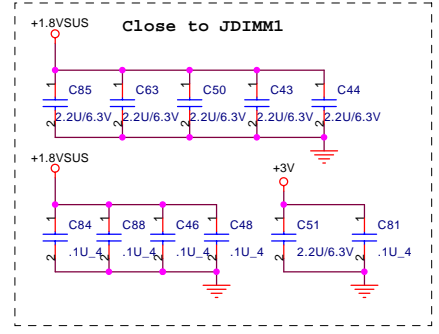
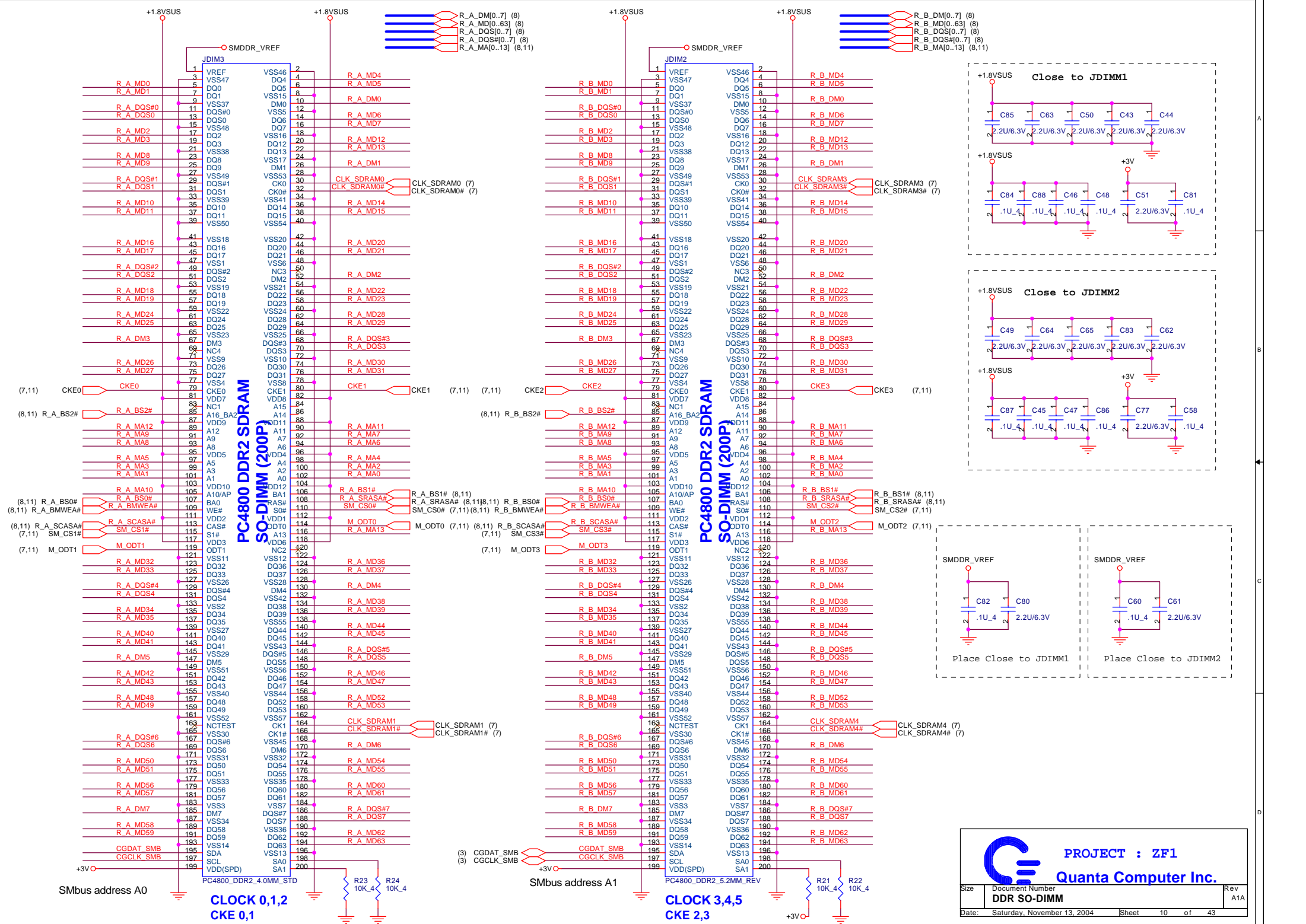
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SB_BS1#	AG17	R B BS1#	R_B_BS1# (10,11)
SB_BS2#	AG21	R B BS2#	R_B_BS2# (10,11)
SB_DM0	AF32	R B DM0	R_B_DM[0..7] (10)
SB_DM1	AK34	R B DM1	
SB_DM2	AK27	R B DM2	
SB_DM3	AK24	R B DM3	
SB_DM4	AJ10	R B DM4	
SB_DM5	AK5	R B DM5	
SB_DM6	AE7	R B DM6	
SB_DM7	AB7	R B DM7	
SB_DQS0	AF34	R B DQS0	R_B_DQS[0..7] (10)
SB_DQS1	AK32	R B DQS1	
SB_DQS2	AJ28	R B DQS2	
SB_DQS3	AK23	R B DQS3	
SB_DQS4	AM10	R B DQS4	
SB_DQS5	AH6	R B DQS5	
SB_DQS6	AF8	R B DQS6	
SB_DQS7	AB4	R B DQS7	
SB_DQS0#	AF35	R B DQS#0	R_B_DQS#[0..7] (10)
SB_DQS1#	AK33	R B DQS#1	
SB_DQS2#	AK28	R B DQS#2	
SB_DQS3#	AJ23	R B DQS#3	
SB_DQS4#	AL10	R B DQS#4	
SB_DQS5#	AH7	R B DQS#5	
SB_DQS6#	AF7	R B DQS#6	
SB_DQS7#	AB5	R B DQS#7	
SB_MA0	AH17	R B MA0	R_B_MA[0..13] (10,11)
SB_MA1	AK17	R B MA1	
SB_MA2	AH18	R B MA2	
SB_MA3	AJ18	R B MA3	
SB_MA4	AK18	R B MA4	
SB_MA5	AJ19	R B MA5	
SB_MA6	AK19	R B MA6	
SB_MA7	AH19	R B MA7	
SB_MA8	AJ20	R B MA8	
SB_MA9	AH20	R B MA9	
SB_MA10	AJ16	R B MA10	
SB_MA11	AG18	R B MA11	
SB_MA12	AG20	R B MA12	
SB_MA13	AG15	R B MA13	
SB_CAS#	AH14	R B SCASA#	R_B_SCASA# (10,11)
SB_RAS#	AK14	R B SRASA#	R_B_SRASA# (10,11)
SB_RCVENIN#	AF15	SB RCVENIN#	
SB_RCVENOUT#	AF14	SB RCVENOUT#	
SB_WE#	AH16	R B BMWEA#	R_B_BMWEA# (10,11)

ALVISO

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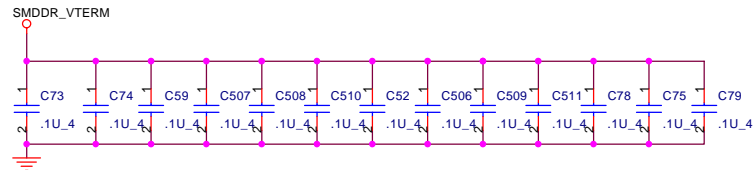
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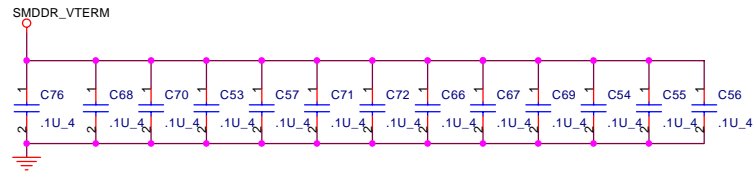


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Quanta Computer Inc.

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	DDR SO-DIMM	A1A
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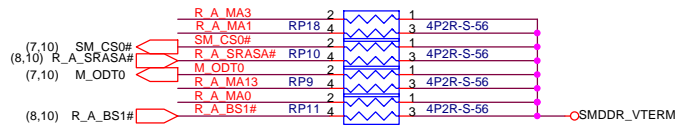
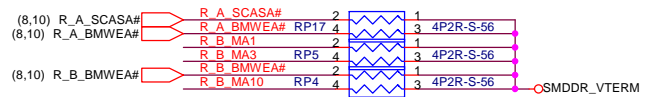
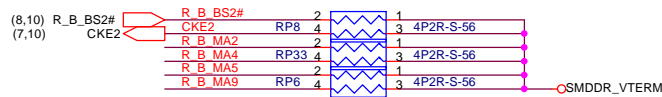
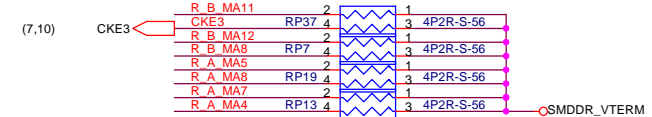
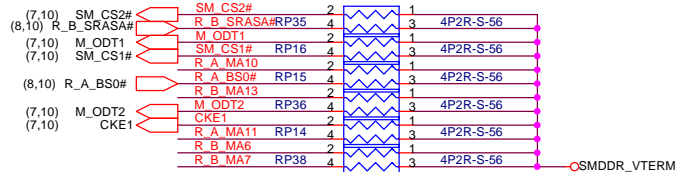
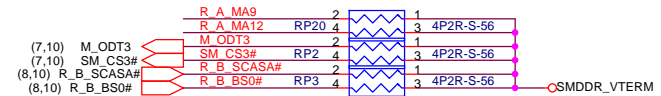
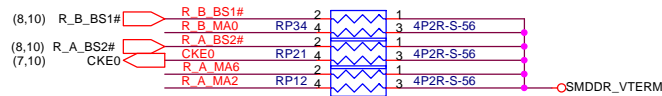
Layout note: Place one cap close to every 2 pullup resistors terminated to SMDDR_VTERM



Layout note: Place one cap close to every 2 pullup resistors terminated to SMDDR_VTERM

R_A_MA[0..13] (8,10)

R_B_MA[0..13] (8,10)

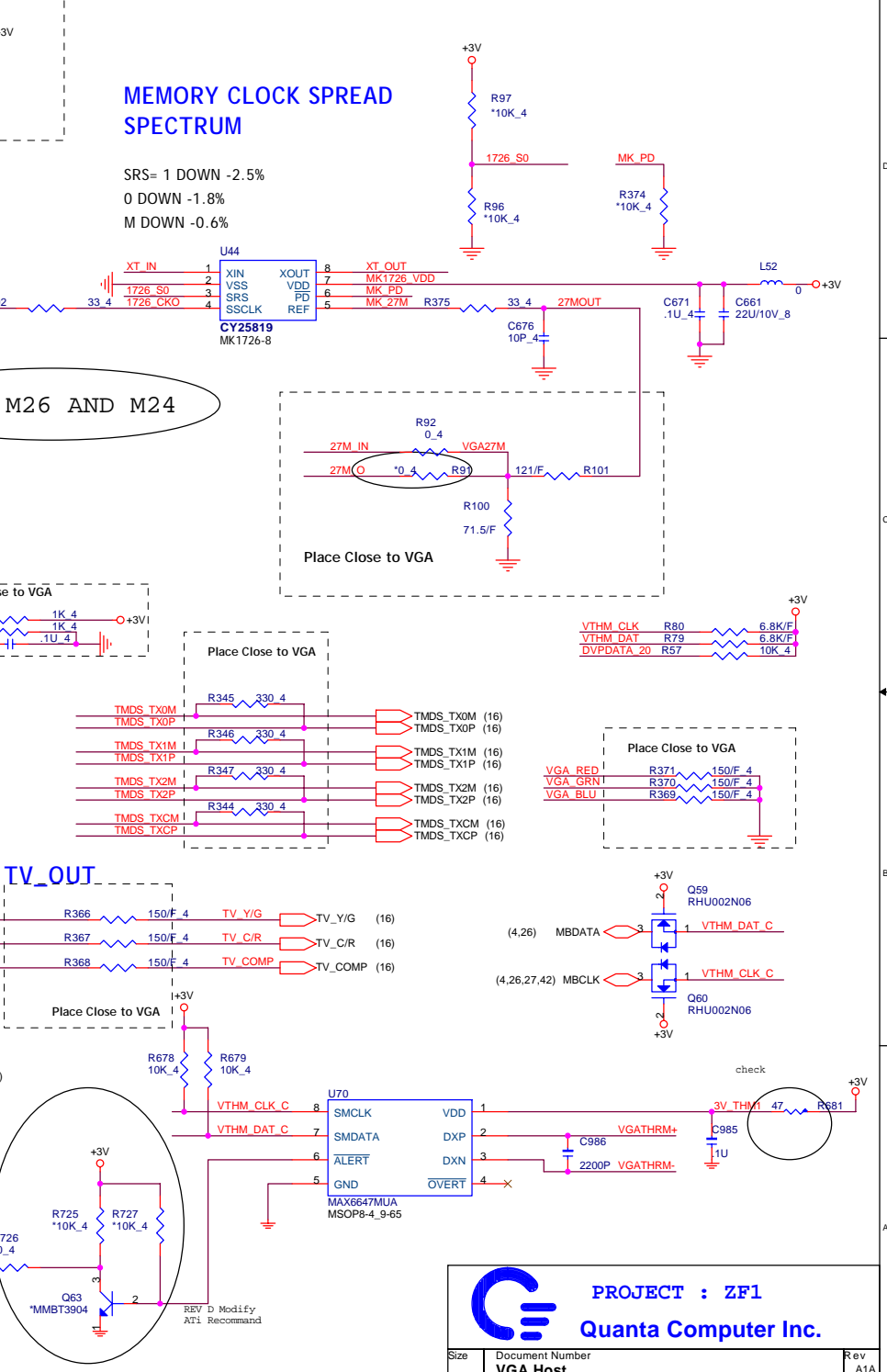
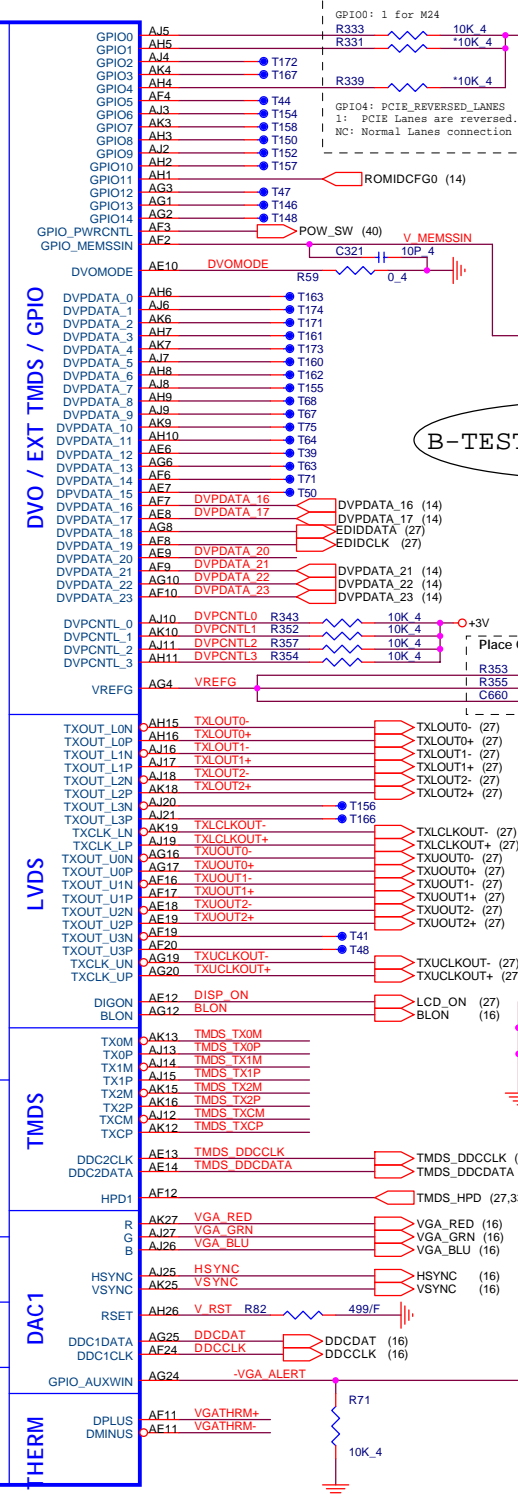
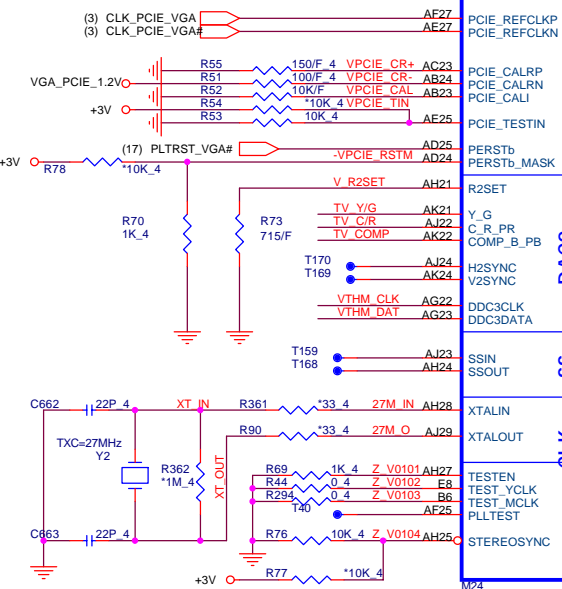


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(7) GMCEXP_TXP[0..15]	GMCEXP_TXP0 AH30	PCIE_RX0P
	GMCEXP_TXN0 AG30	PCIE_RX0N
	GMCEXP_TXP1 AG29	PCIE_RX1P
	GMCEXP_TXN1 AE29	PCIE_RX1N
	GMCEXP_TXP2 AE29	PCIE_RX2P
	GMCEXP_TXN2 AE30	PCIE_RX2N
	GMCEXP_TXP3 AD30	PCIE_RX3P
	GMCEXP_TXN3 AD29	PCIE_RX3N
	GMCEXP_TXP4 AC29	PCIE_RX4P
	GMCEXP_TXN4 AB29	PCIE_RX4N
	GMCEXP_TXP5 AB30	PCIE_RX5P
	GMCEXP_TXN5 AB30	PCIE_RX5N
	GMCEXP_TXP6 AA29	PCIE_RX6P
	GMCEXP_TXN6 Y29	PCIE_RX6N
	GMCEXP_TXP7 W29	PCIE_RX7P
	GMCEXP_TXN7 W30	PCIE_RX7N
	GMCEXP_TXP8 W29	PCIE_RX8P
	GMCEXP_TXN8 V29	PCIE_RX8N
	GMCEXP_TXP9 U29	PCIE_RX9P
	GMCEXP_TXN9 T29	PCIE_RX9N
	GMCEXP_TXP10 T30	PCIE_RX10P
	GMCEXP_TXN10 R30	PCIE_RX10N
	GMCEXP_TXP11 R30	PCIE_RX11P
	GMCEXP_TXN11 P29	PCIE_RX11N
	GMCEXP_TXP12 N29	PCIE_RX12P
	GMCEXP_TXN12 N30	PCIE_RX12N
	GMCEXP_TXP13 M30	PCIE_RX13P
	GMCEXP_TXN13 M29	PCIE_RX13N
	GMCEXP_TXP14 L29	PCIE_RX14P
	GMCEXP_TXN14 K29	PCIE_RX14N
	GMCEXP_TXP15 K30	PCIE_RX15P
	GMCEXP_TXN15 J30	PCIE_RX15N

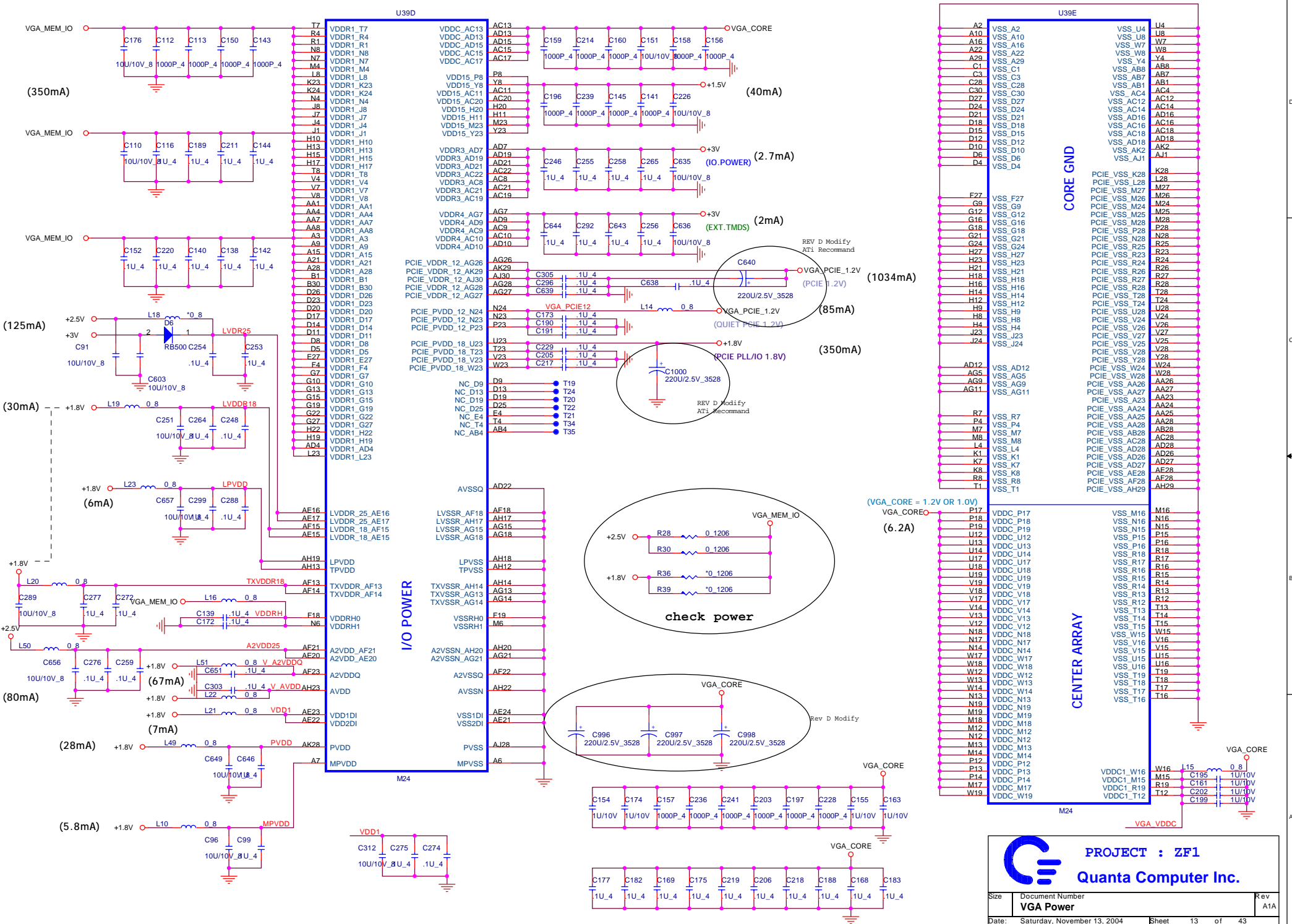
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GMCEXP_RXN0 C295	.1U 4	V GMCEXP_RXN0	AE26	PCIE_TX0N
GMCEXP_RXP1 C291	.1U 4	V GMCEXP_RXP1	AC25	PCIE_TX1P
GMCEXP_RXN1 C286	.1U 4	V GMCEXP_RXN1	AB25	PCIE_TX1N
GMCEXP_RXP2 C269	.1U 4	V GMCEXP_RXP2	AC27	PCIE_TX2P
GMCEXP_RXN2 C263	.1U 4	V GMCEXP_RXN2	AB27	PCIE_TX2N
GMCEXP_RXP3 C271	.1U 4	V GMCEXP_RXP3	AC26	PCIE_TX3P
GMCEXP_RXN3 C266	.1U 4	V GMCEXP_RXN3	AB26	PCIE_TX3N
GMCEXP_RXP4 C243	.1U 4	V GMCEXP_RXP4	Y25	PCIE_TX4P
GMCEXP_RXN4 C238	.1U 4	V GMCEXP_RXN4	W25	PCIE_TX4N
GMCEXP_RXP5 C247	.1U 4	V GMCEXP_RXP5	L27	PCIE_TX5P
GMCEXP_RXN5 C240	.1U 4	V GMCEXP_RXN5	W27	PCIE_TX5N
GMCEXP_RXP6 C225	.1U 4	V GMCEXP_RXP6	Y26	PCIE_TX6P
GMCEXP_RXN6 C209	.1U 4	V GMCEXP_RXN6	W26	PCIE_TX6N
GMCEXP_RXP7 C227	.1U 4	V GMCEXP_RXP7	U25	PCIE_TX7P
GMCEXP_RXN7 C213	.1U 4	V GMCEXP_RXN7	T25	PCIE_TX7N
GMCEXP_RXP8 C193	.1U 4	V GMCEXP_RXP8	T27	PCIE_TX8P
GMCEXP_RXN8 C180	.1U 4	V GMCEXP_RXN8	T27	PCIE_TX8N
GMCEXP_RXP9 C194	.1U 4	V GMCEXP_RXP9	U26	PCIE_TX9P
GMCEXP_RXN9 C185	.1U 4	V GMCEXP_RXN9	T26	PCIE_TX9N
GMCEXP_RXP10 C170	.1U 4	V GMCEXP_RXP10	P25	PCIE_TX10P
GMCEXP_RXN10 C164	.1U 4	V GMCEXP_RXN10	N25	PCIE_TX10N
GMCEXP_RXP11 C171	.1U 4	V GMCEXP_RXP11	P27	PCIE_TX11P
GMCEXP_RXN11 C165	.1U 4	V GMCEXP_RXN11	N27	PCIE_TX11N
GMCEXP_RXP12 C148	.1U 4	V GMCEXP_RXP12	P26	PCIE_TX12P
GMCEXP_RXN12 C146	.1U 4	V GMCEXP_RXN12	N26	PCIE_TX12N
GMCEXP_RXP13 C149	.1U 4	V GMCEXP_RXP13	L25	PCIE_TX13P
GMCEXP_RXN13 C147	.1U 4	V GMCEXP_RXN13	K25	PCIE_TX13N
GMCEXP_RXP14 C134	.1U 4	V GMCEXP_RXP14	L27	PCIE_TX14P
GMCEXP_RXN14 C132	.1U 4	V GMCEXP_RXN14	K27	PCIE_TX14N
GMCEXP_RXP15 C137	.1U 4	V GMCEXP_RXP15	L26	PCIE_TX15P
GMCEXP_RXN15 C133	.1U 4	V GMCEXP_RXN15	K26	PCIE_TX15N



B-TEST M26 AND M24

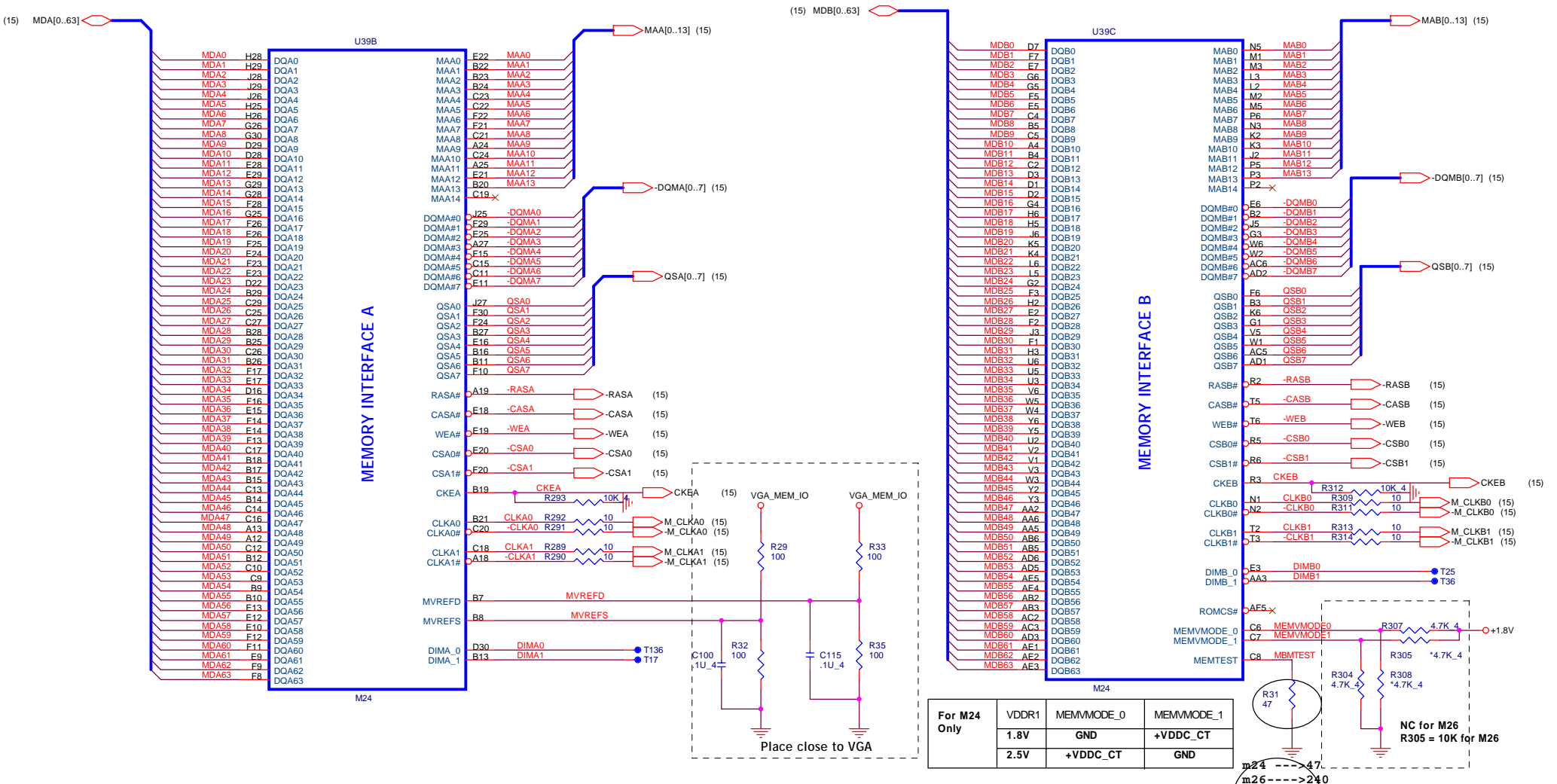
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Quanta Computer Inc.

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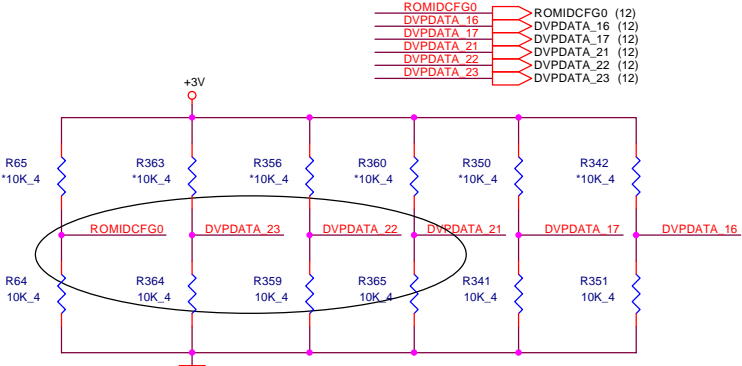
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	VGA Power	A1A
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For M24 Only	VDDR1	MEMVMODE_0	MEMVMODE_1
	1.8V	GND	+VDDC_CT
	2.5V	+VDDC_CT	GND

STRAPS PIN

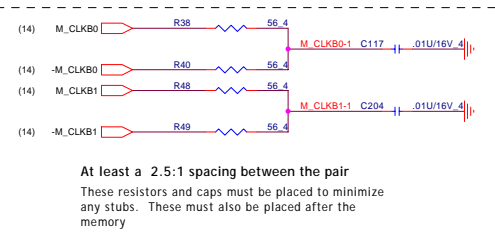
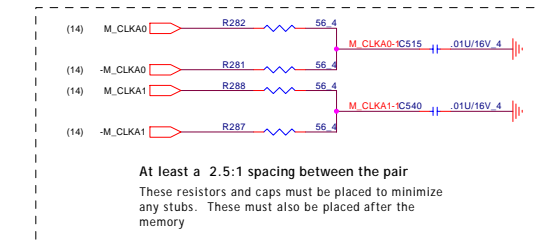
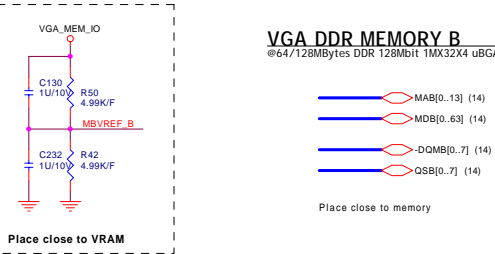
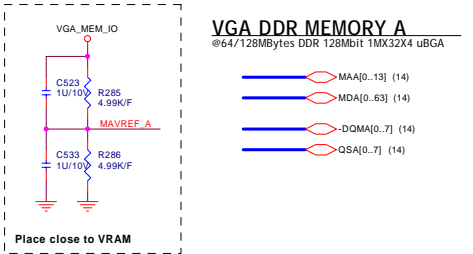
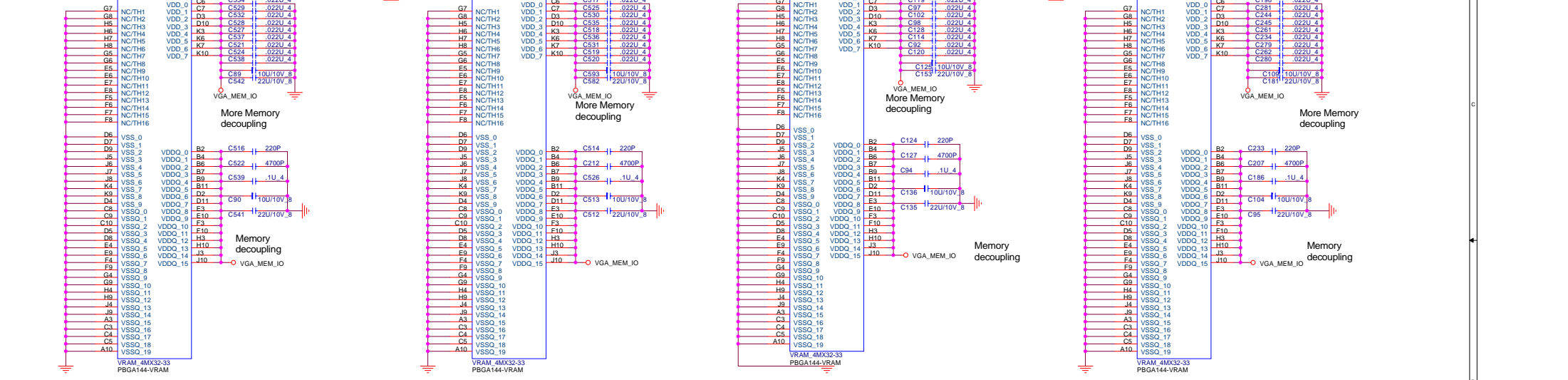
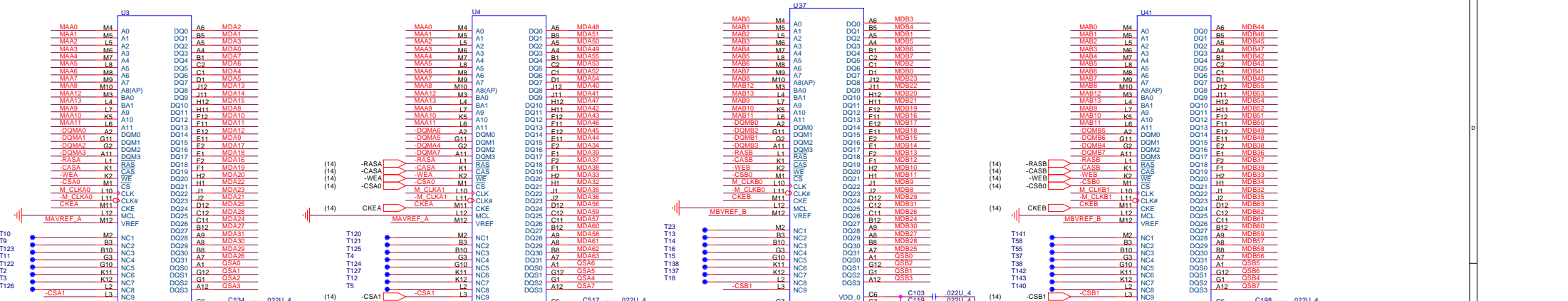
GPIO(9,13:11) INT P/D	ROMIDCFG
	0x0x: No ROM, CHG_ID=0 0x1x: No Rom, CHG_ID=1 1000: Parallel ROM, Chip ID'S from ROM 1000: Parallel ROM, Chip ID'S from ROM
DVPDATA_21-23 MEM TYPE	DVPDATA_21: 0=4Mx32 1=8Mx32
	DVPDATA_22: 0=128M 1=64M
	DVPDATA_23: 0=Hynix 1=Samsung

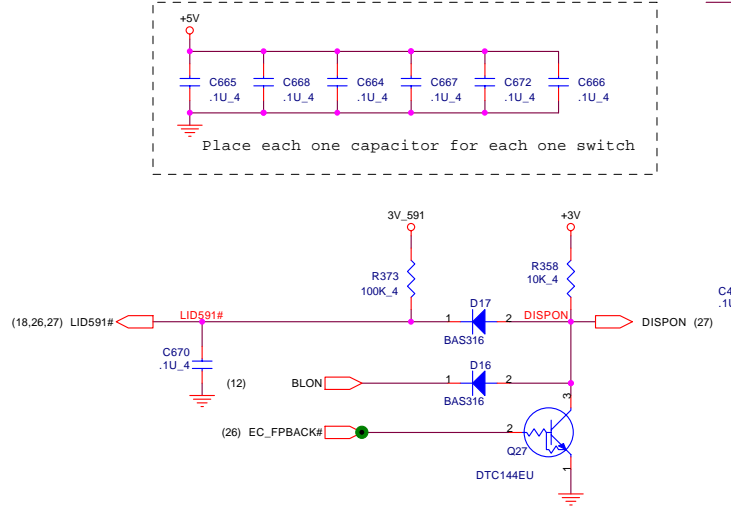
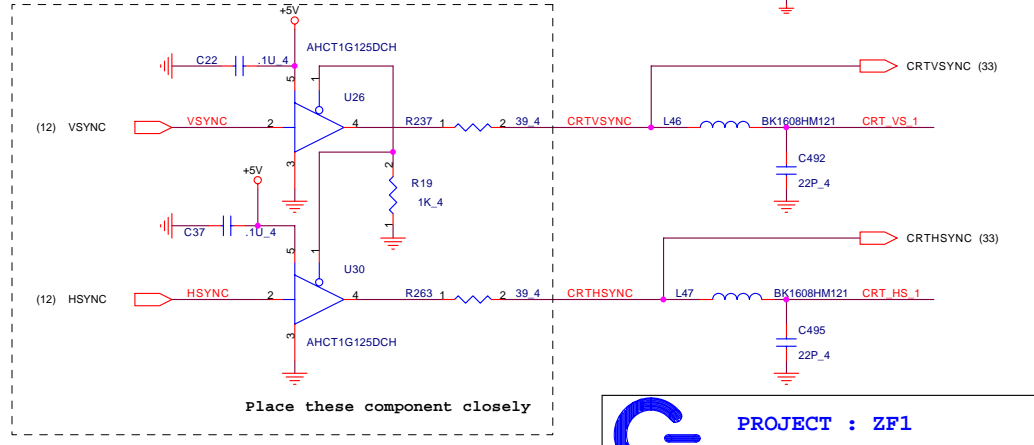
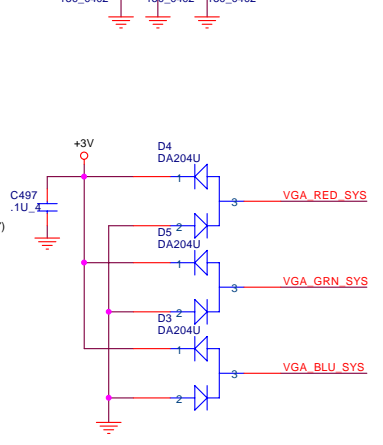
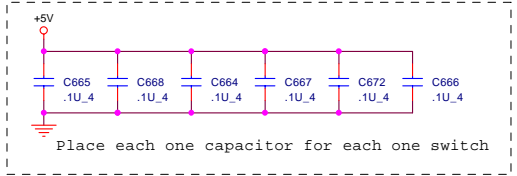
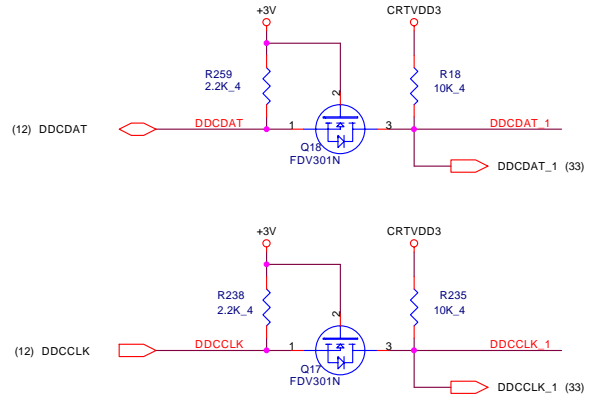
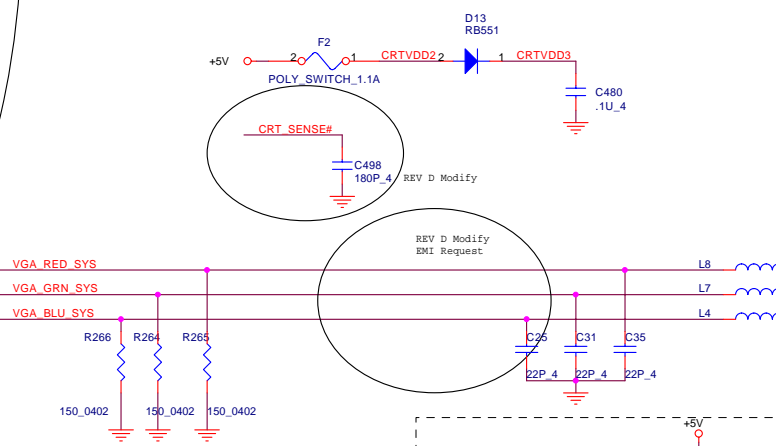
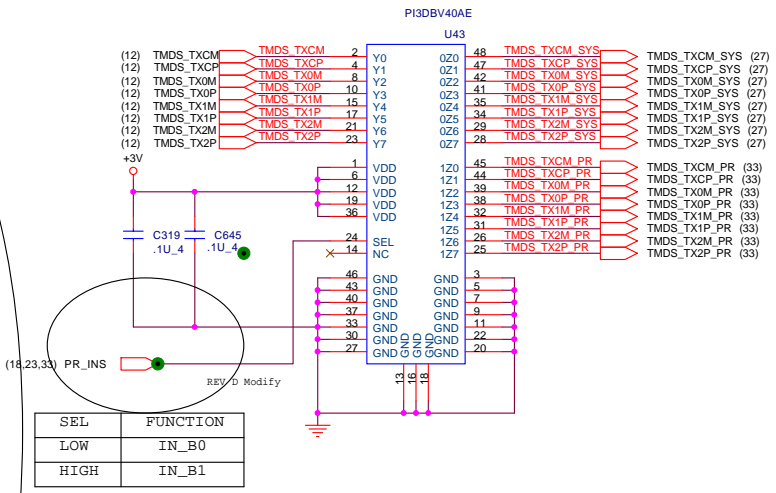
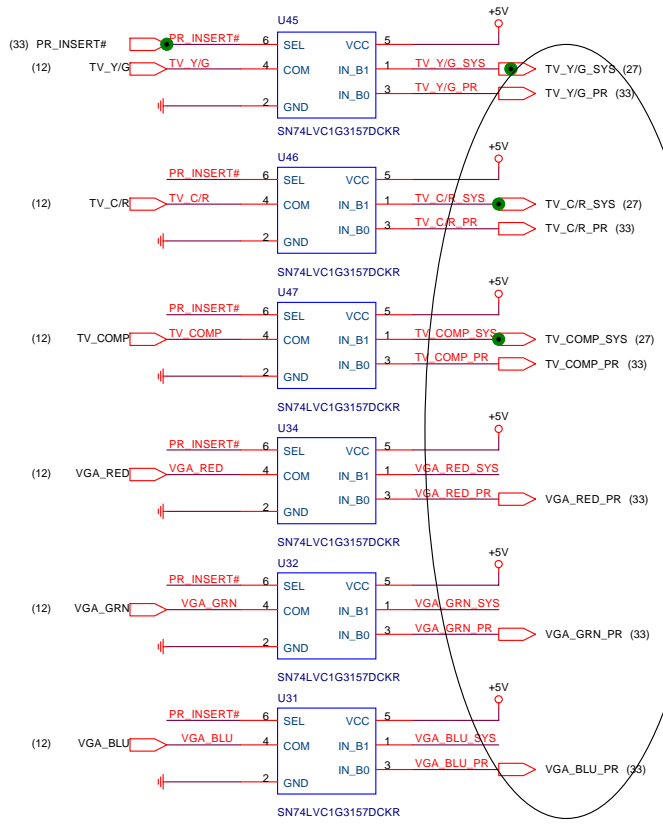


FOR M26P ONLY
0 : 128M
1 : 256M

PROJECT : ZF1
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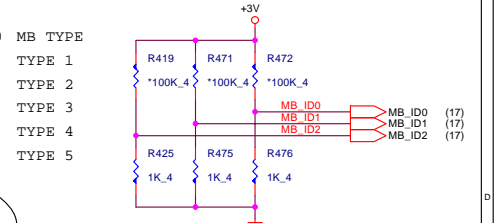
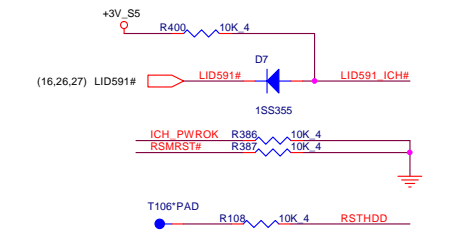
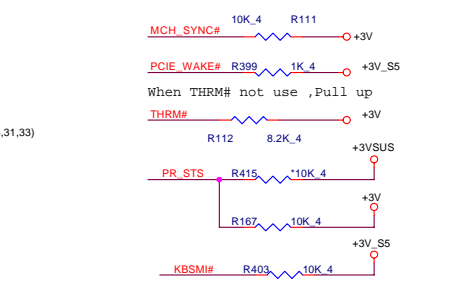
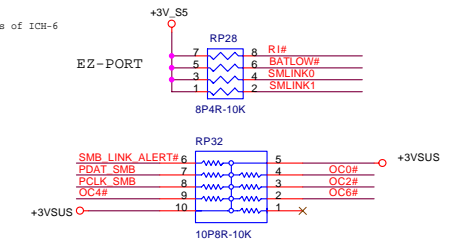
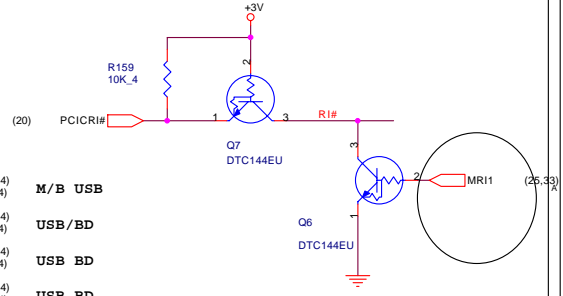
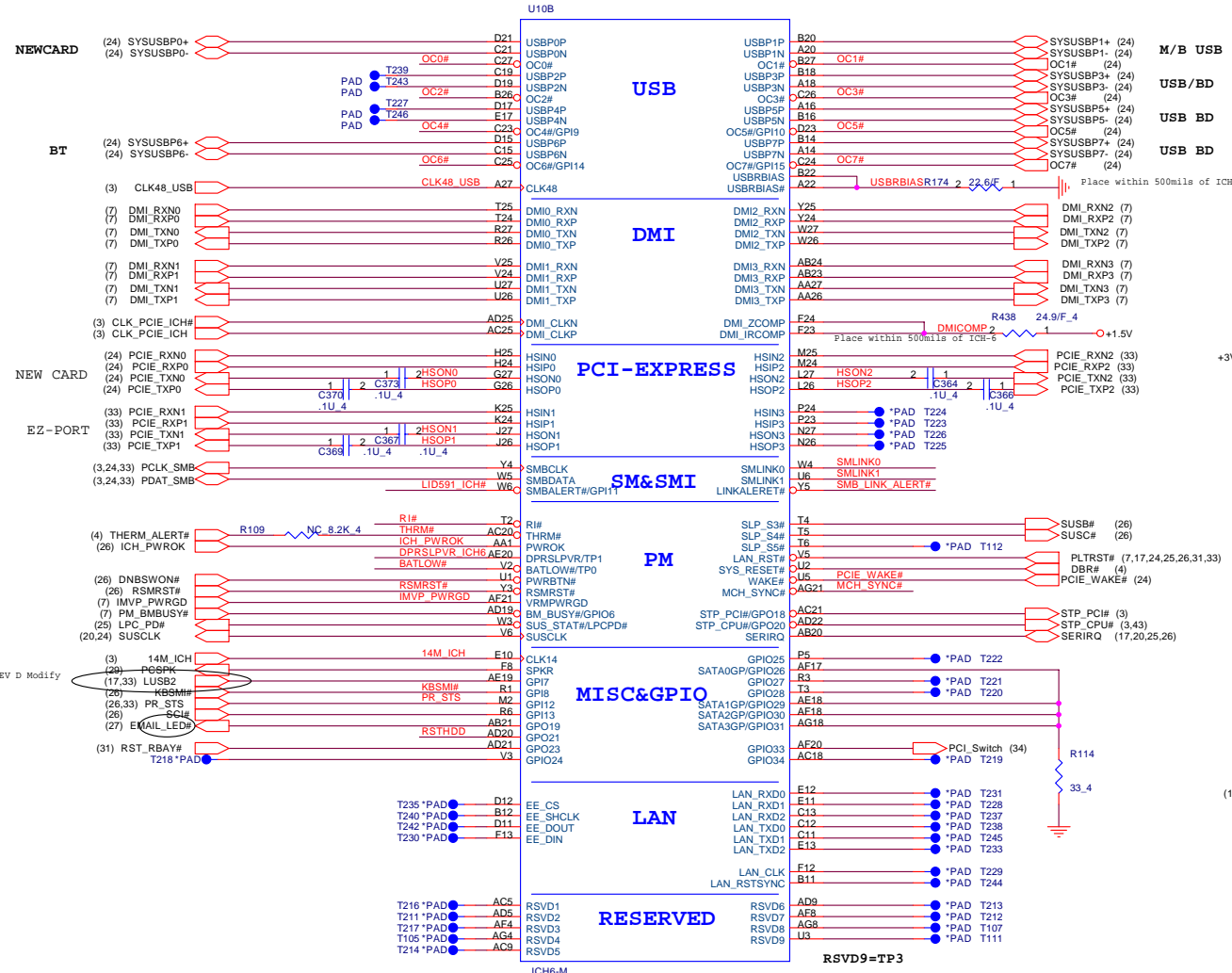
Size	Document Number	Rev
	VGA MEM & Strapping	A1A
Date:	Saturday, November 13, 2004	Sheet 14 of 43



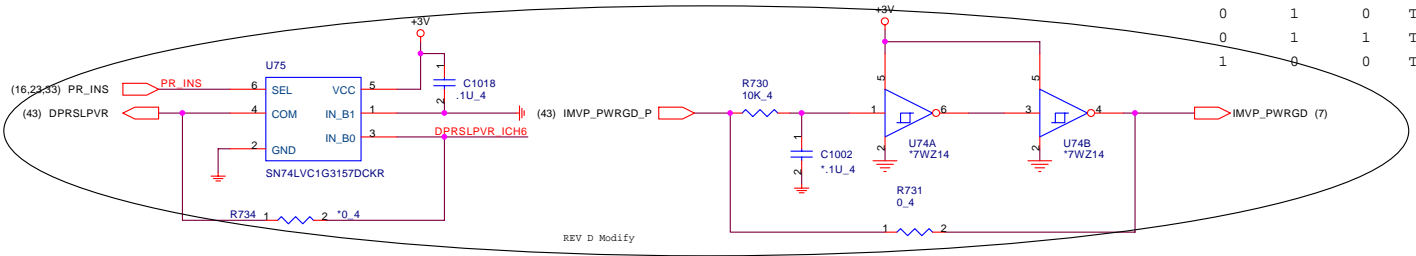
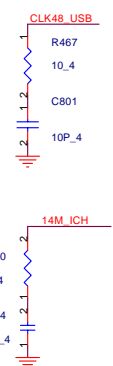


PROJECT : ZF1
Quanta Computer Inc.

Size	Document Number	Rev
	VGA Output	A1A
Date:	Saturday, November 13, 2004	Sheet 16 of 43

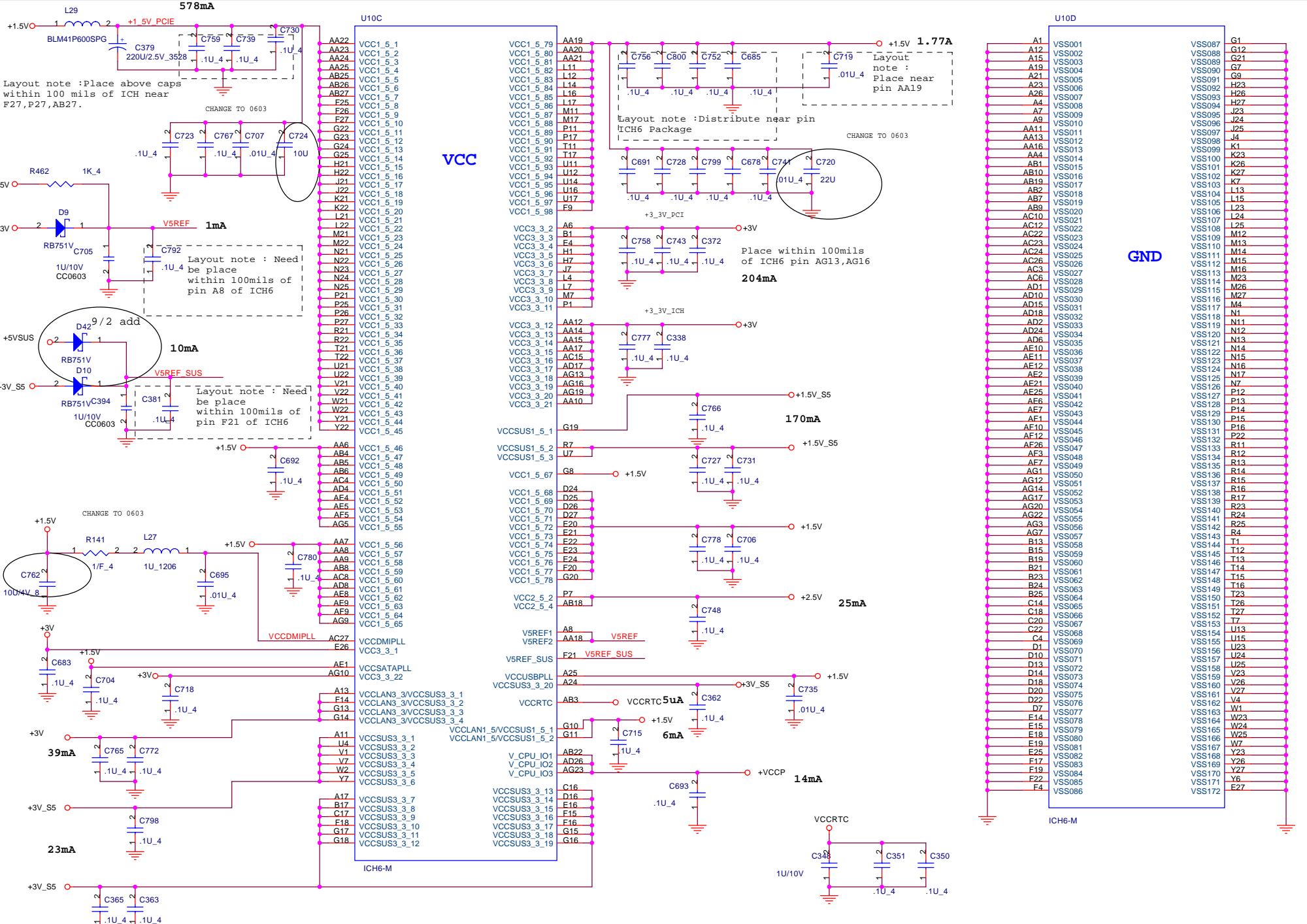


MB_ID2	MB_ID1	MB_ID0	MB TYPE
0	0	0	TYPE 1
0	0	1	TYPE 2
0	1	0	TYPE 3
0	1	1	TYPE 4
1	0	0	TYPE 5



PROJECT : ZF1
Quanta Computer Inc.

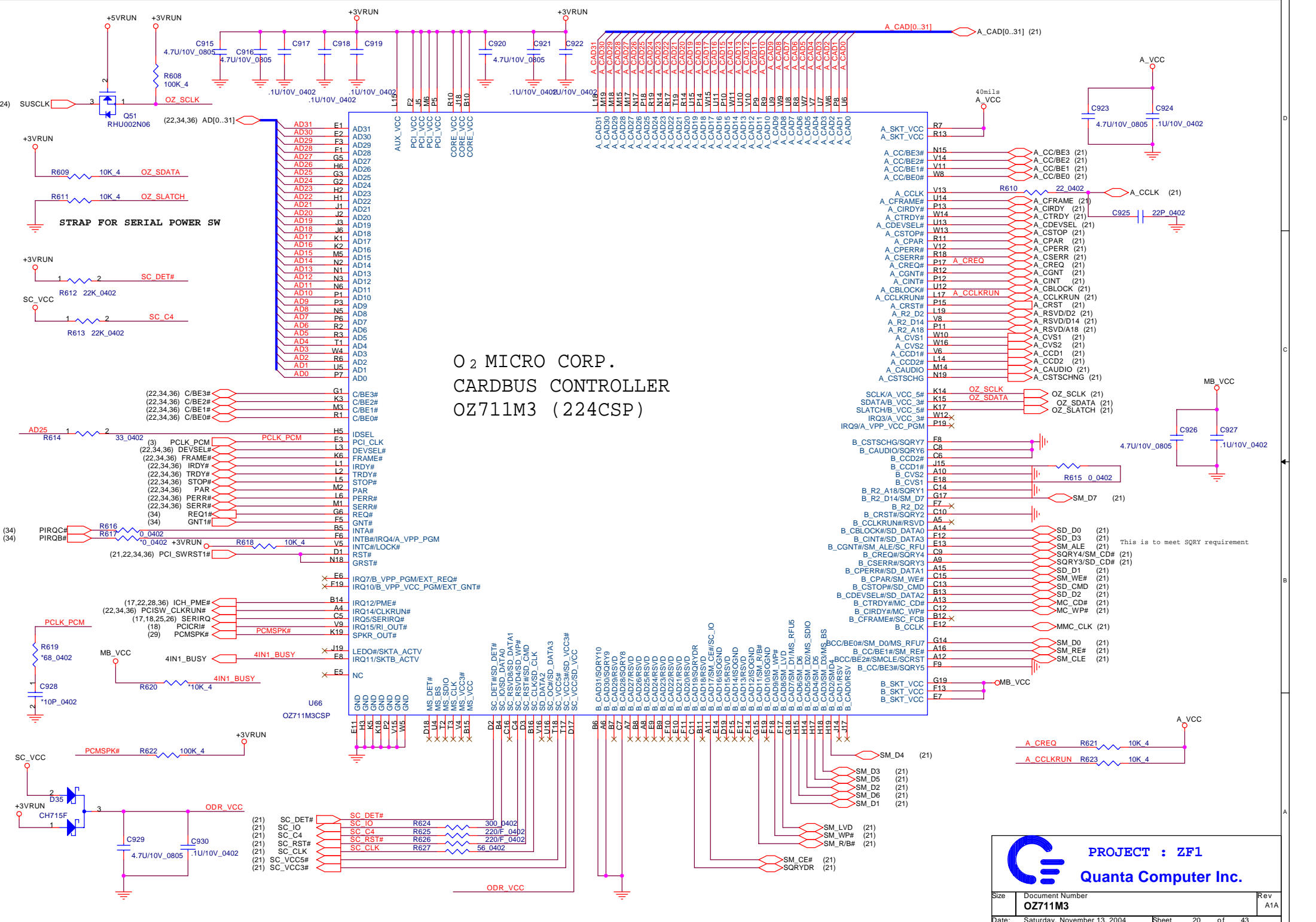
Size Custom
Document Number ICH6-M(USB/HUB)
Date: Saturday, November 13, 2004 Sheet 18 of 43 Rev 1A



LAN NO SUS VOLTAGE

PROJECT : ZF1
Quanta Computer Inc.

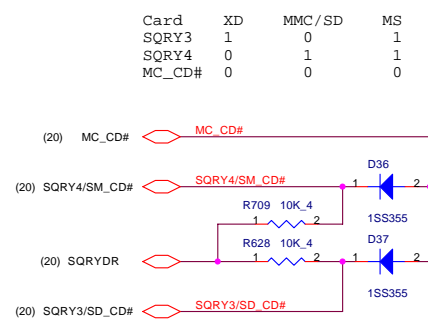
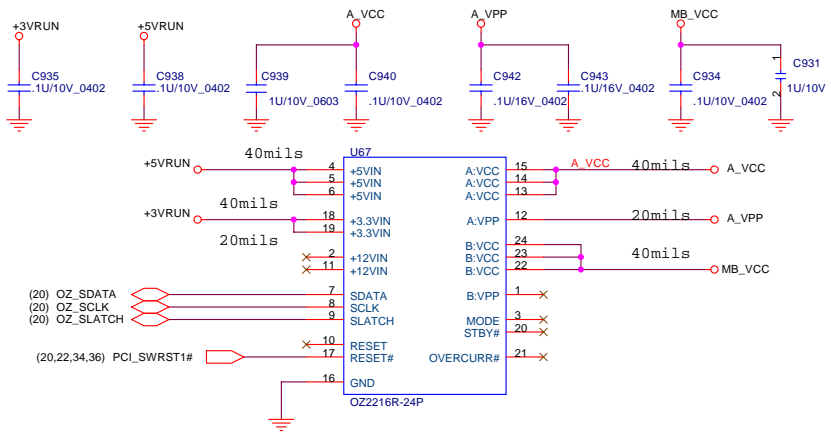
Size B	Document Number		Rev
	ICH6 POWER		1A
Date: Saturday, November 13, 2004		Sheet 19 of 43	



O₂ MICRO CORP.
 CARBUS CONTROLLER
 OZ711M3 (224CSP)

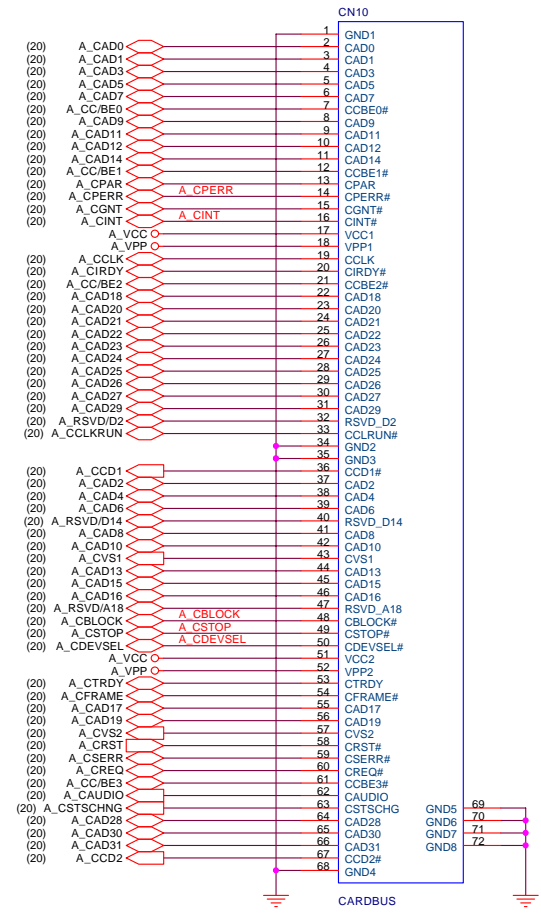
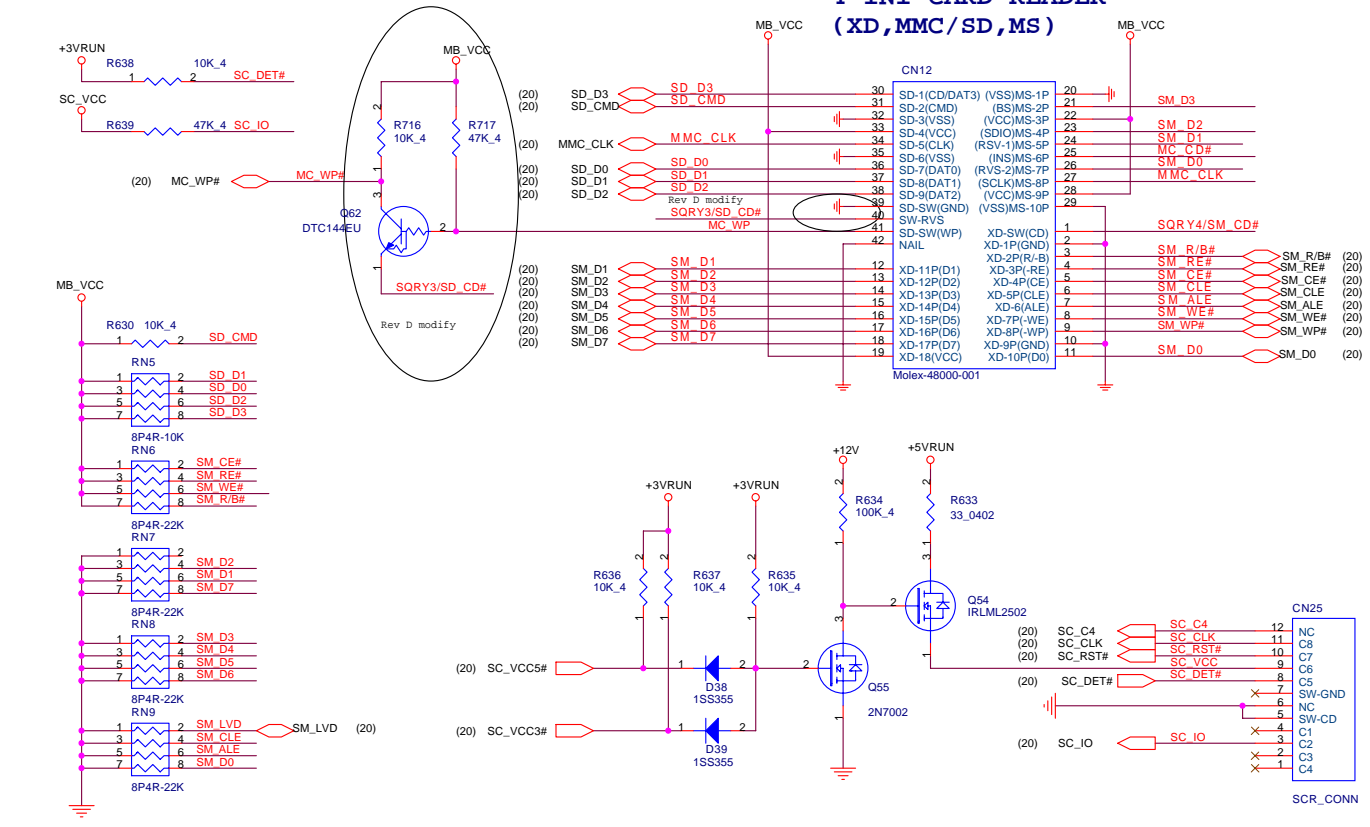
PROJECT : ZF1
Quanta Computer Inc.

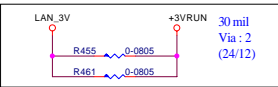
Size	Document Number	Rev
	OZ711M3	A1A
Date:	Saturday, November 13, 2004	Sheet 20 of 43



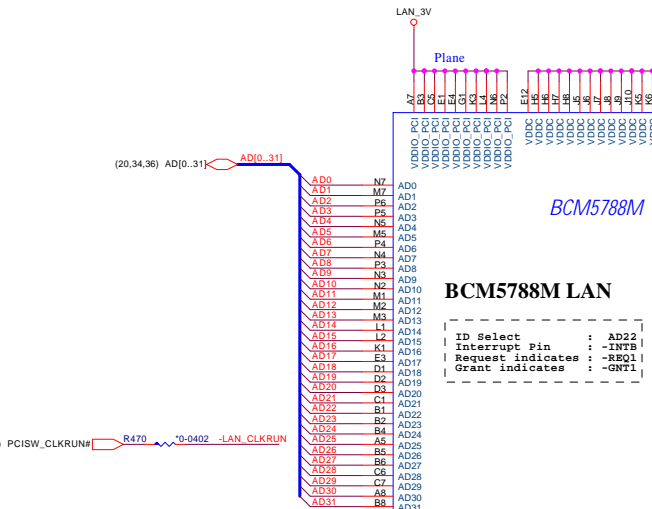
This is to meet SQR_Y requirement

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





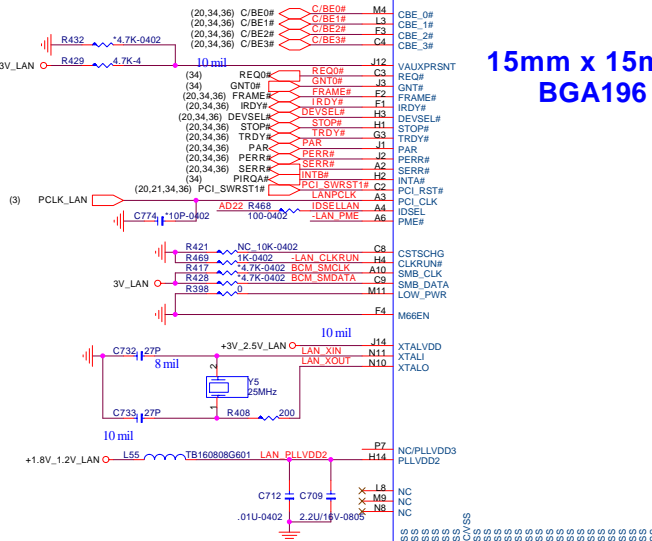
FOR 5788M(GIGA) USE



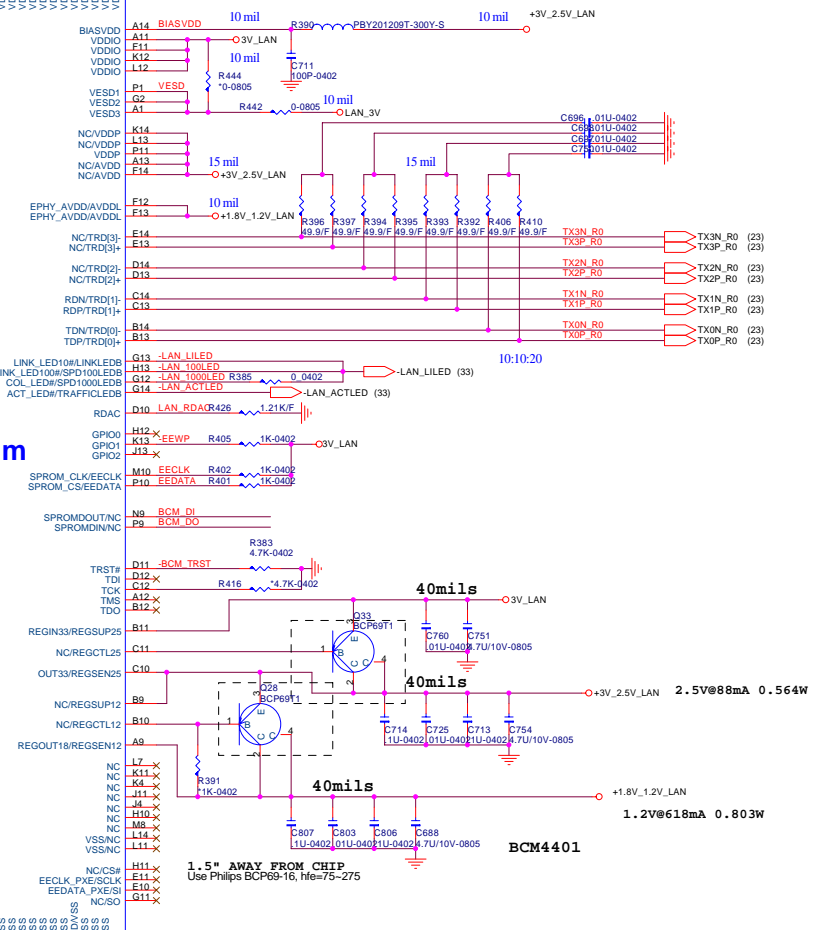
BCM5788M

BCM5788M LAN

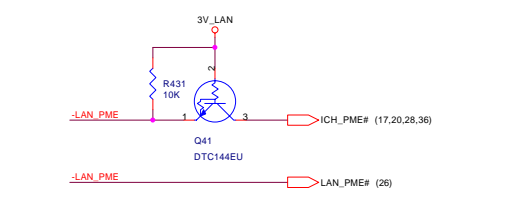
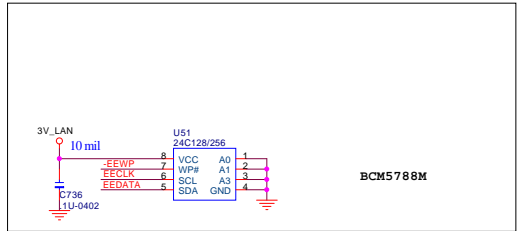
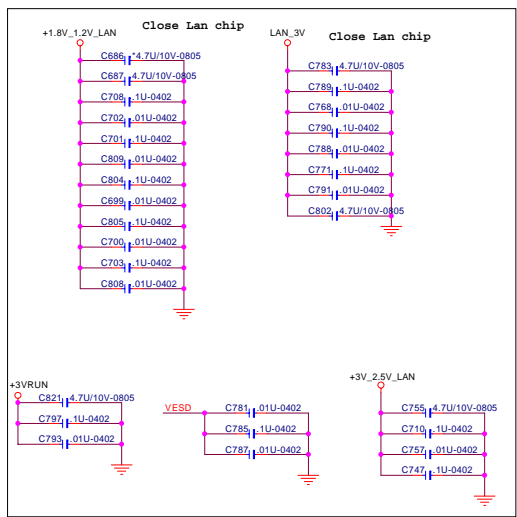
ID Select : AD22
 Interrupt Pin : INTB
 Request indicates : --REQ1
 Grant indicates : --GNT1



15mm x 15mm BGA196

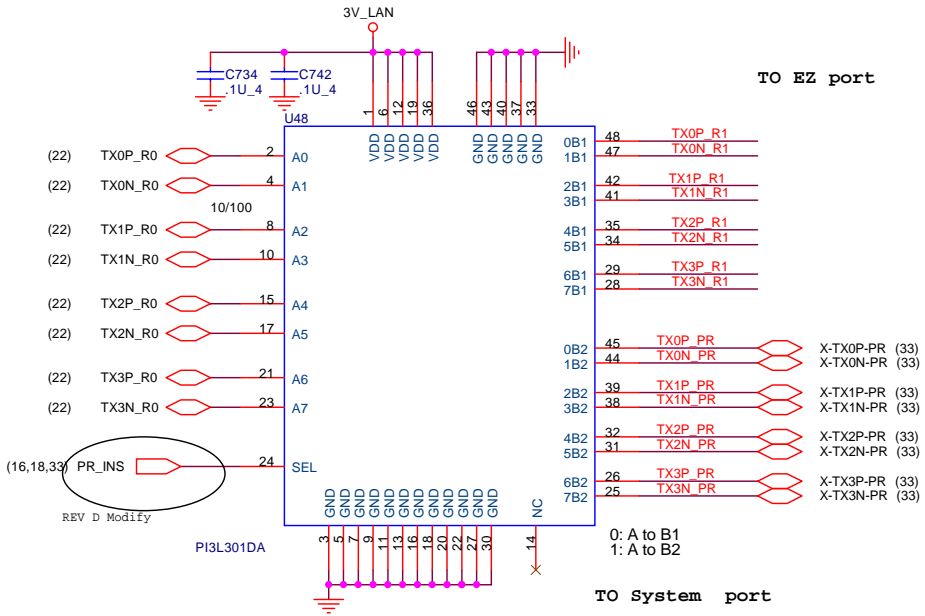


BCM4401
 1.5" AWAY FROM CHIP
 Use Philips BCP69-16, I_{fe}=75-275

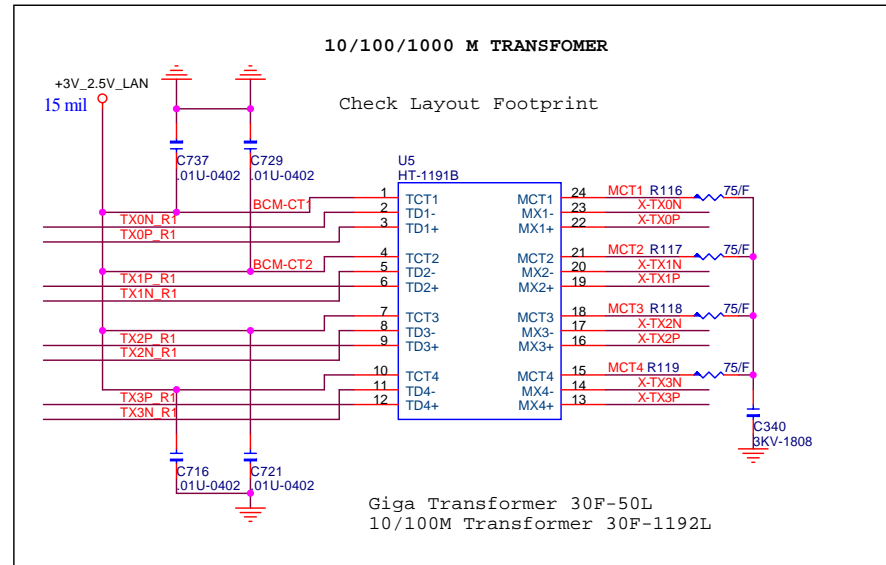


Voltage Rail	4401	5702	5705M
VDDIO_PCI	3V_S5	+3V	+3V
+3V_2.5V_LAN	3.3V	2.5V	2.5V
+1.8V_1.2V_LAN	1.8V	1.2V	1.2V
DNS	BCM4401	BCM5788M	
STU	Q16, Q17, U26 R327, R329 R331, R332, U55	U55, R331, R332 Q16, Q17, U26	

Lan Switch

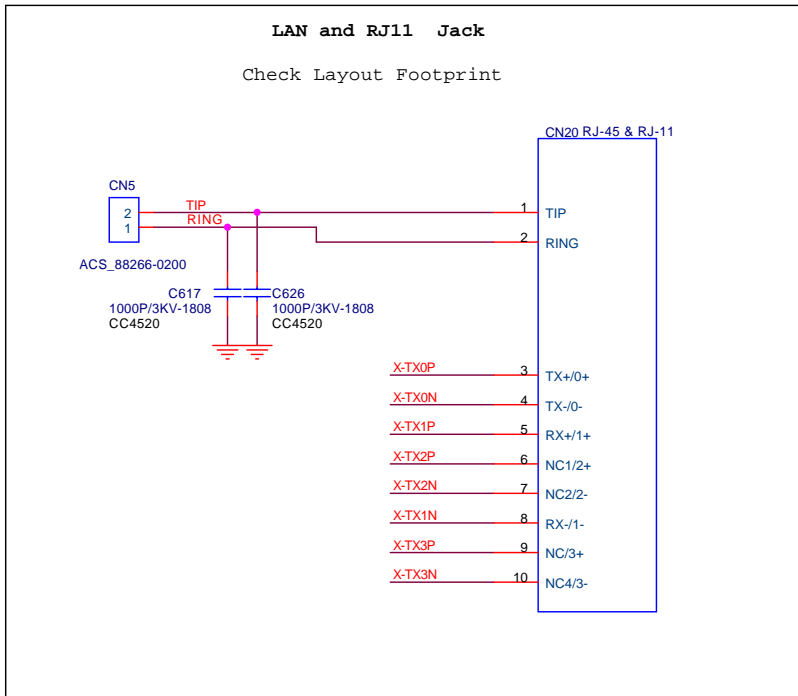


10/100/1000 M TRANSFORMER



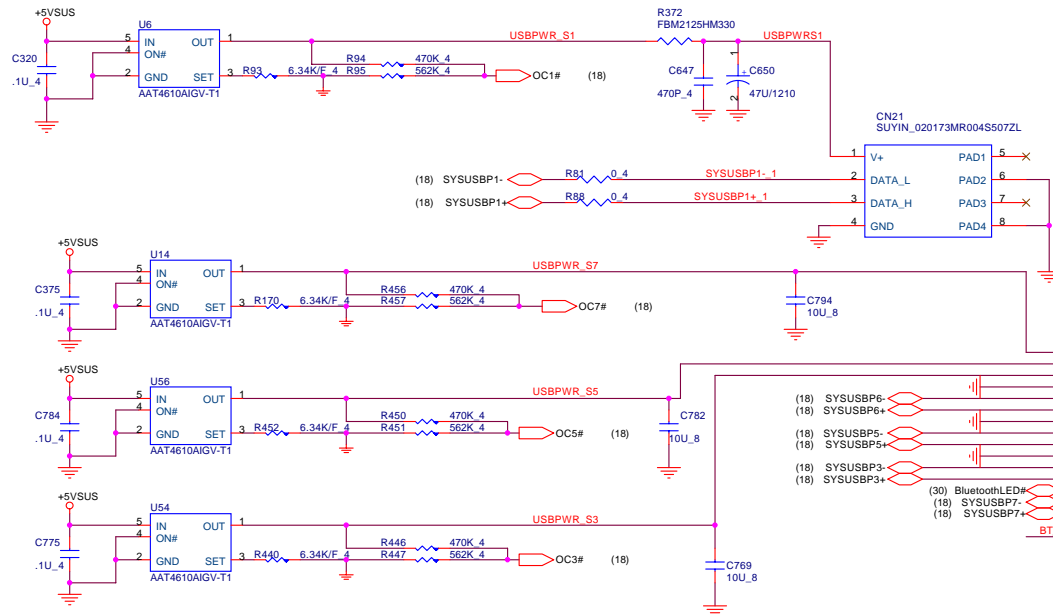
LAN and RJ11 Jack

Check Layout Footprint

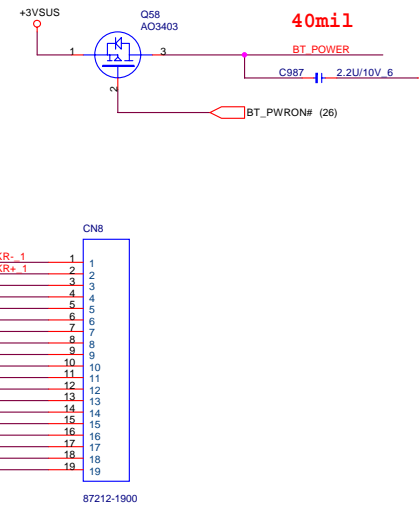


PROJECT : ZF1
Quanta Computer Inc.

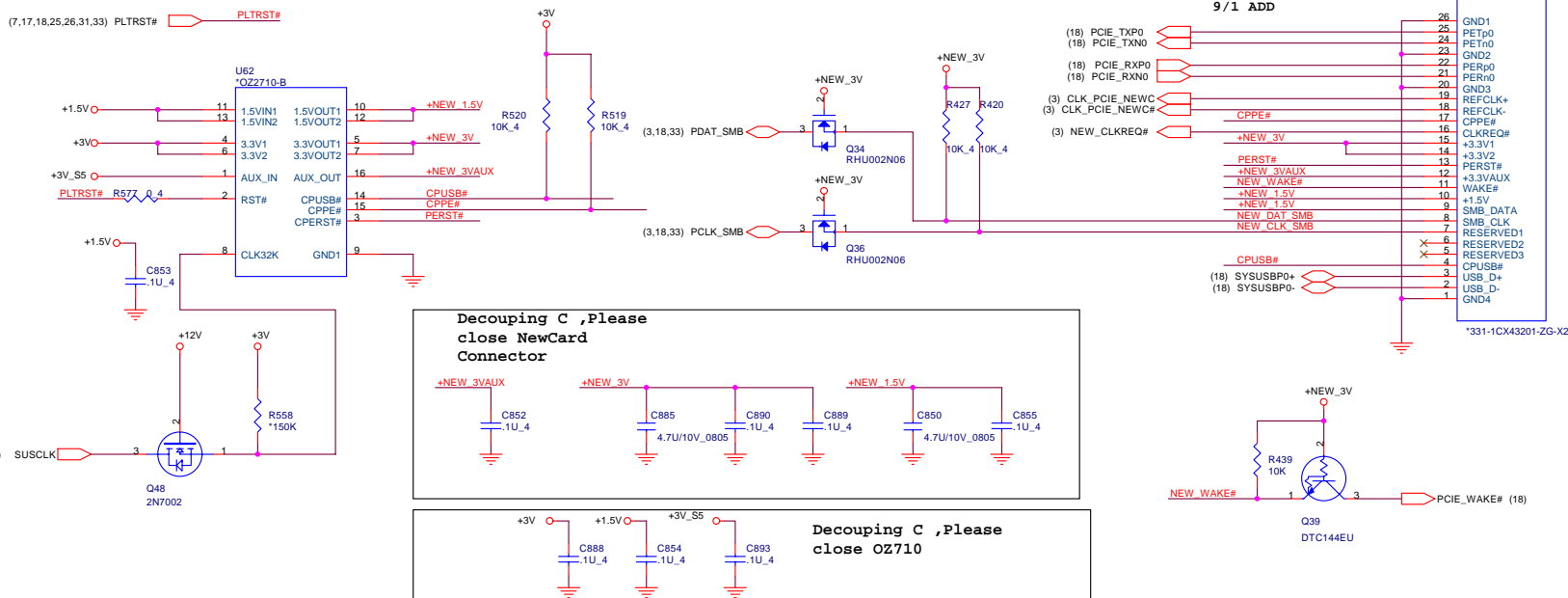
USB Connector and USB board

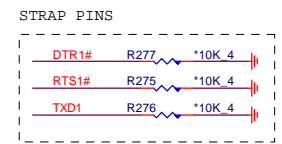
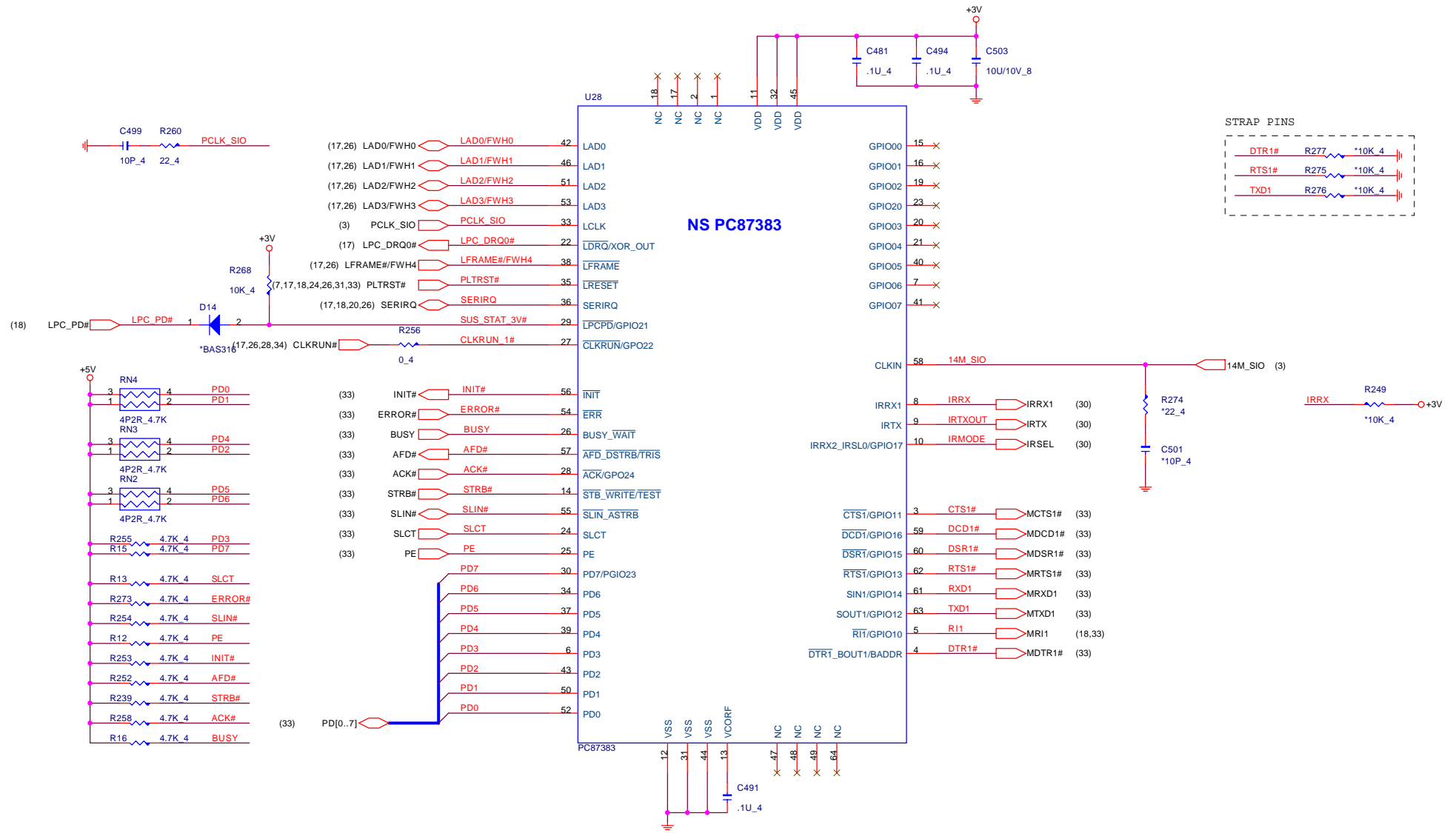


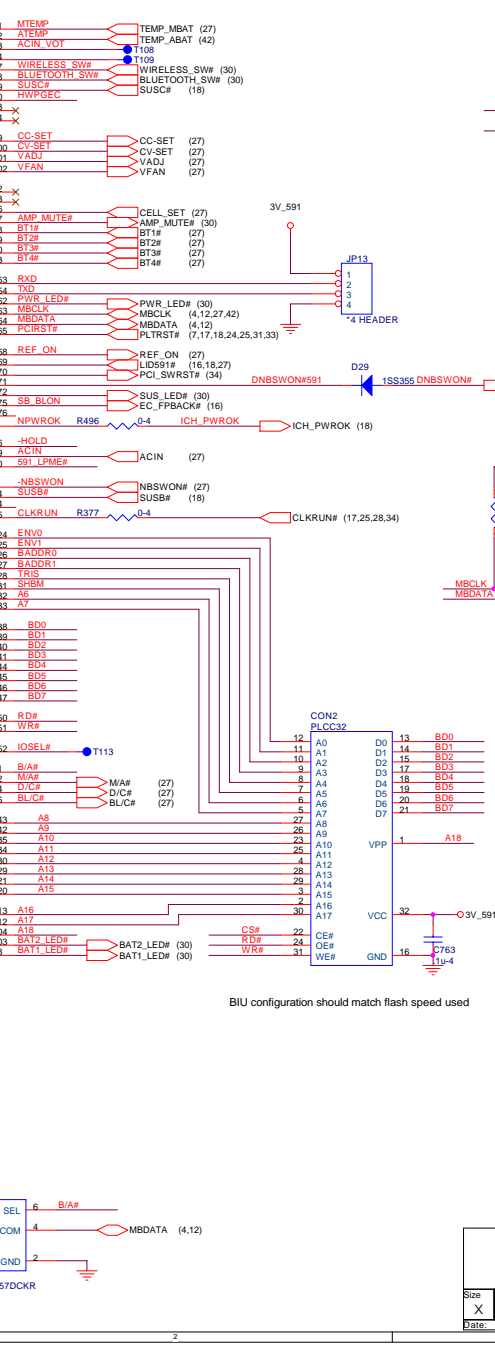
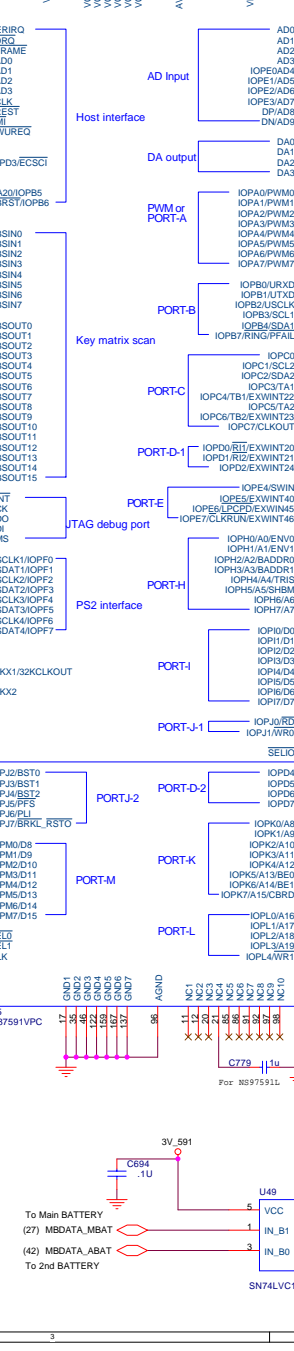
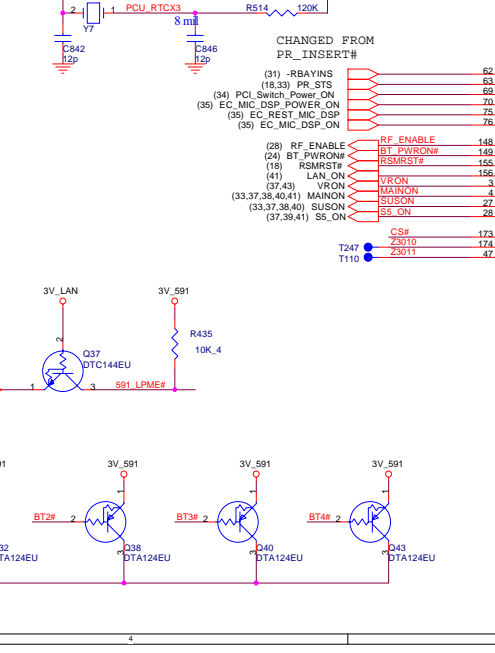
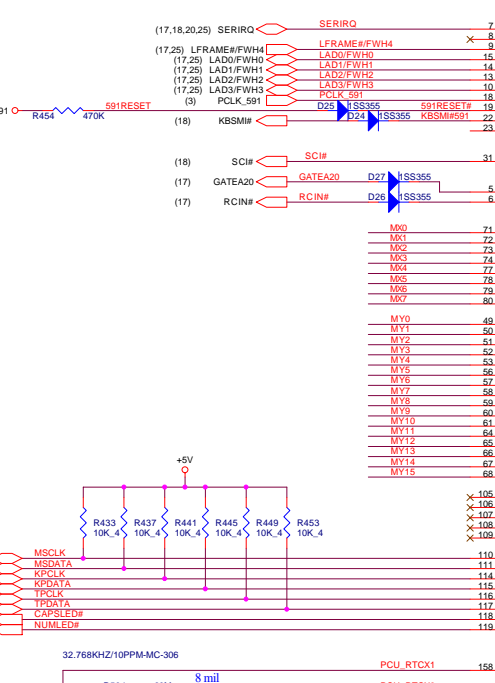
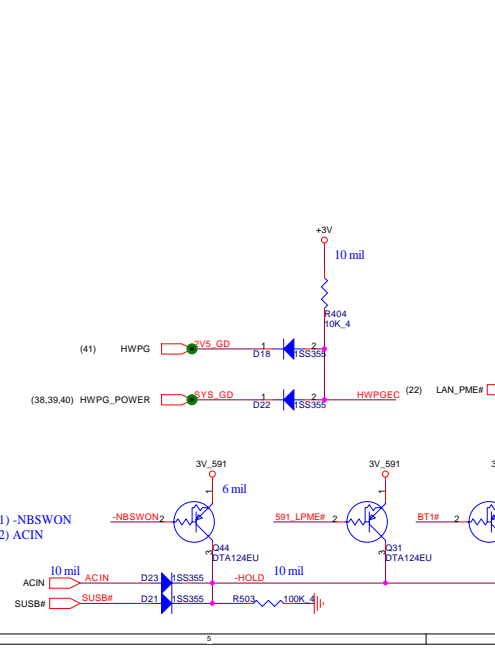
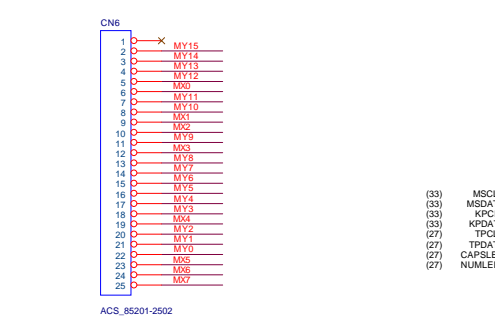
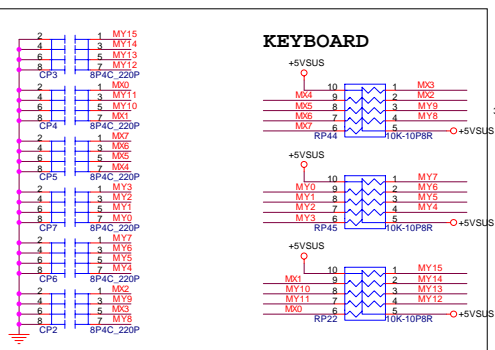
Bluetooth AND USB Connector



NewCard





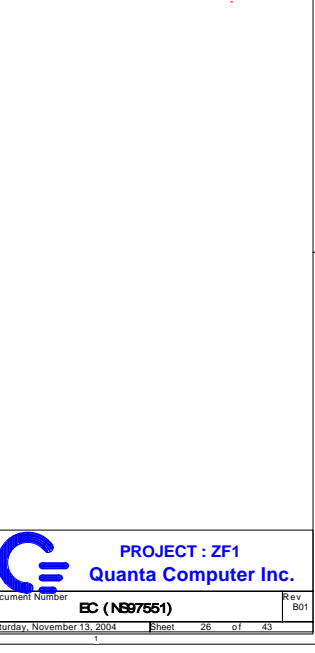
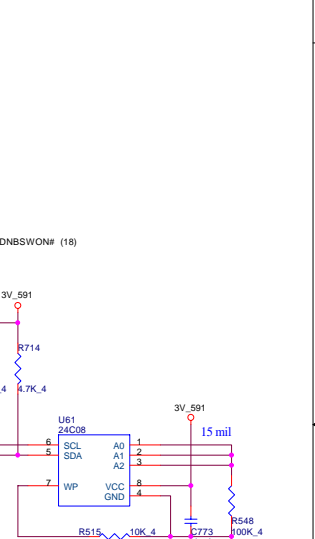


ENV1: R474 10K_4
 BADDR0: R509 10K_4
 BADDR1: R477 10K_4
 SHBM: R495 10K_4

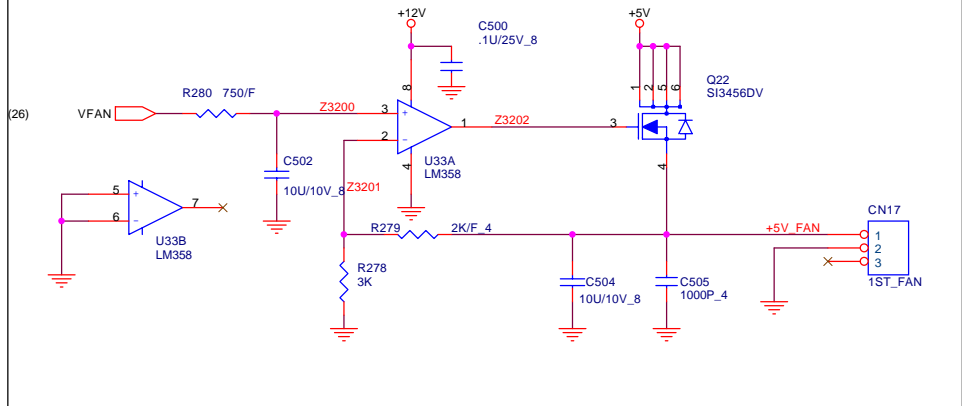
SHBM=1: Enable shared memory with host BIOS

I/O Address		
Index	Data	
0 0	2E	2E
0 1	4E	4F
1 0	HC-FGBAH, HC-FGBAL, HC-FGBAL, HC-FGBAL+1	
1 1	Reserved	

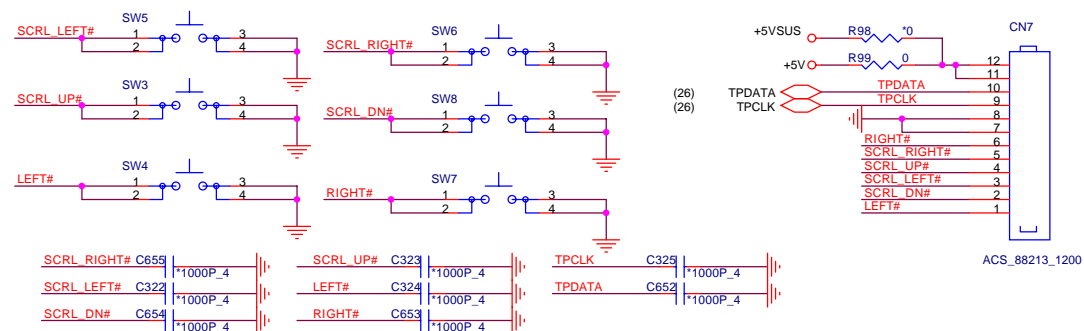
WIRELESS_SW# R414 4.7K_4
 BLUETOOTH_SW# R409 4.7K_4



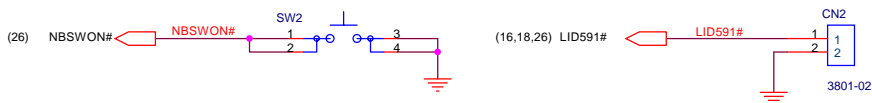
1st FAN OUT CONNECTOR



TouchPad Switch and T/P Module Connector

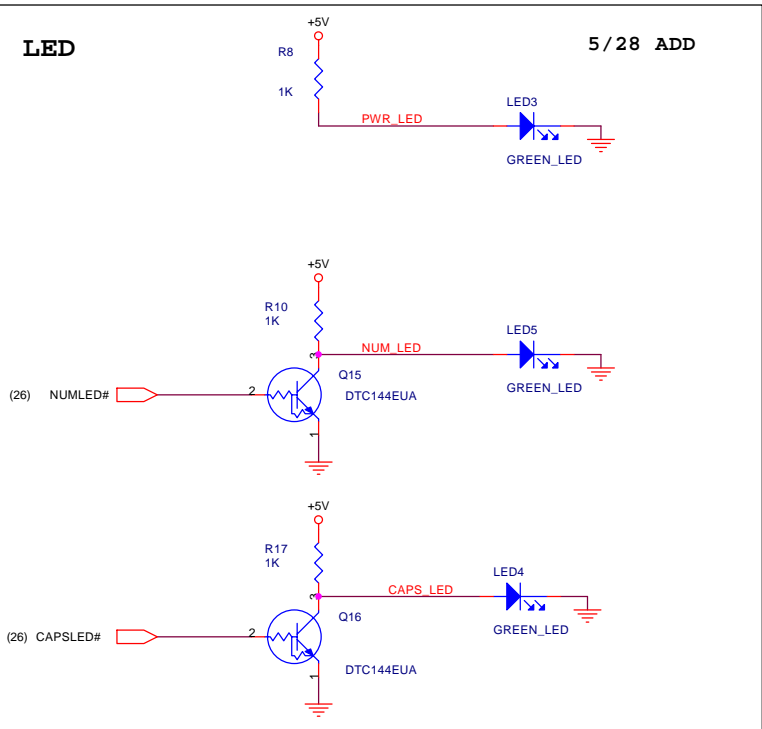


Power Switch

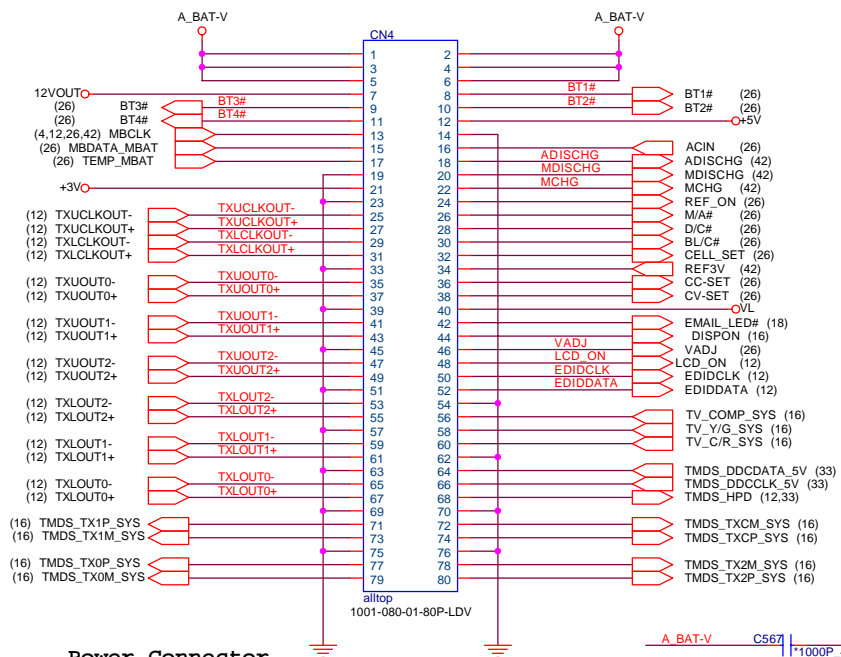
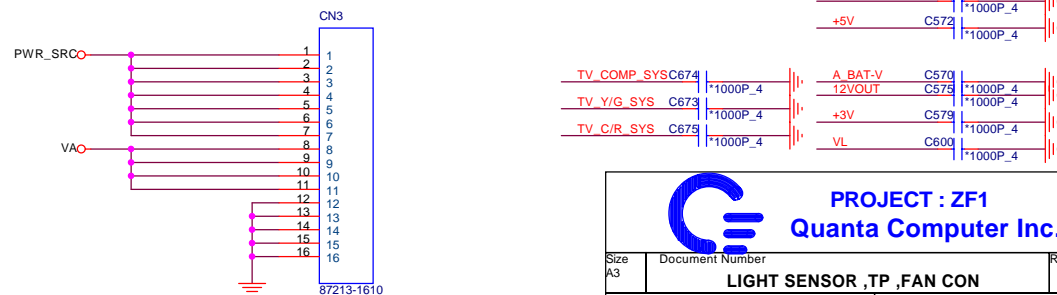


LED

5/28 ADD

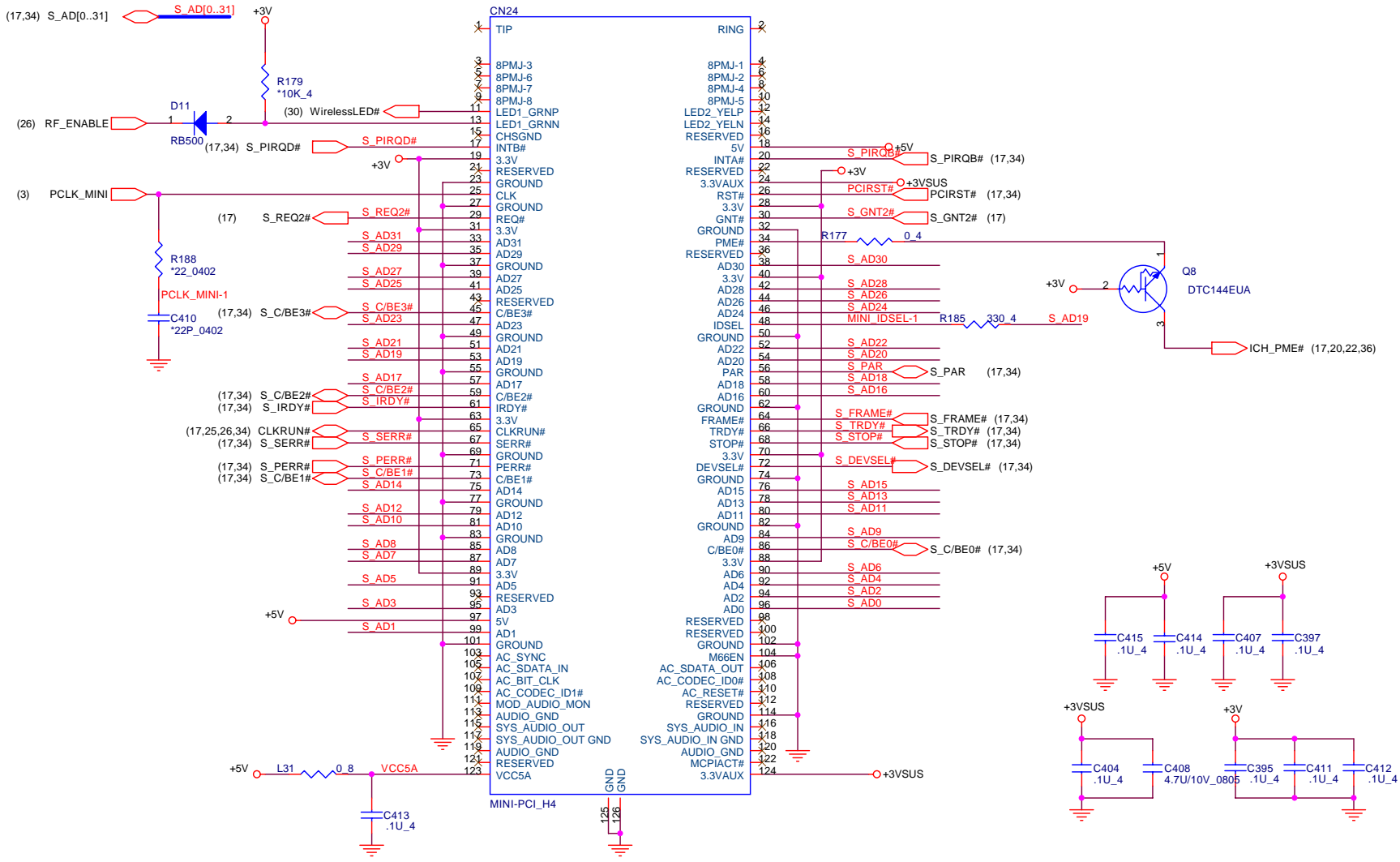


Power Connector



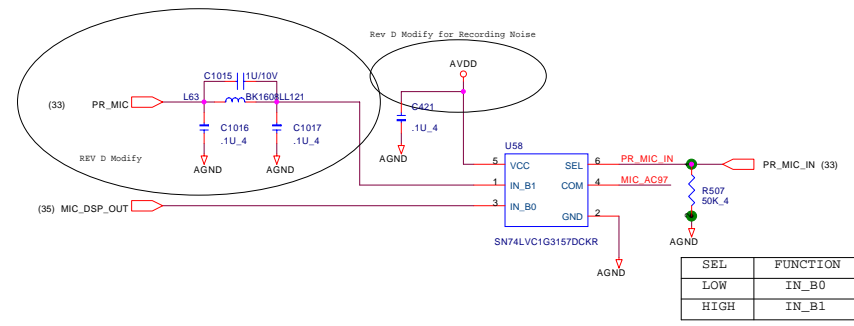
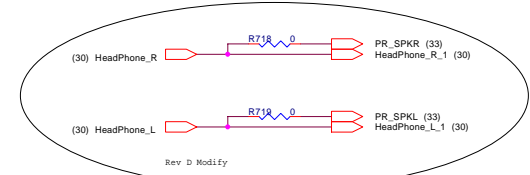
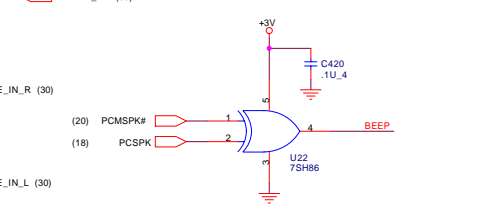
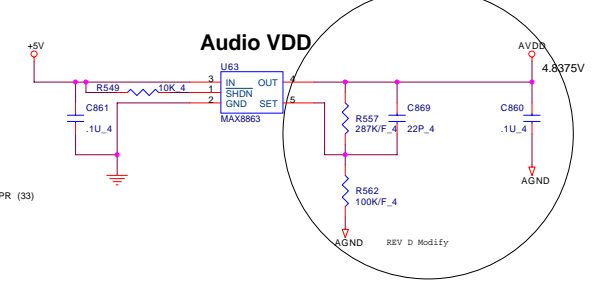
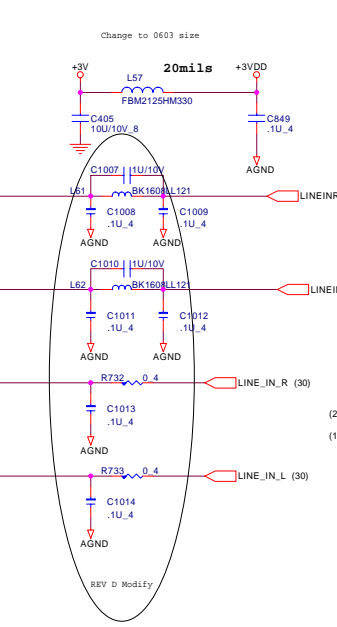
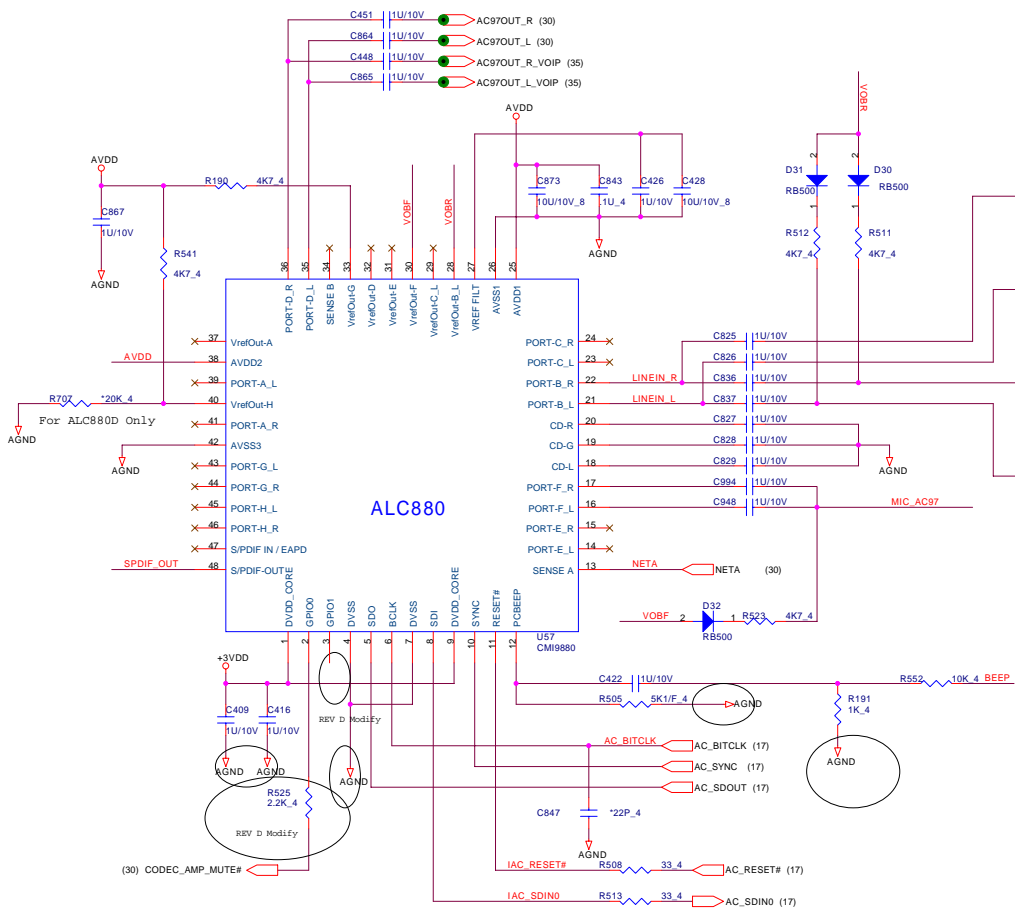
PROJECT : ZF1
 Quanta Computer Inc.

Size A3 Document Number Rev 1A
LIGHT SENSOR ,TP, FAN CON
 Date: Saturday, November 13, 2004 Sheet 27 of 43

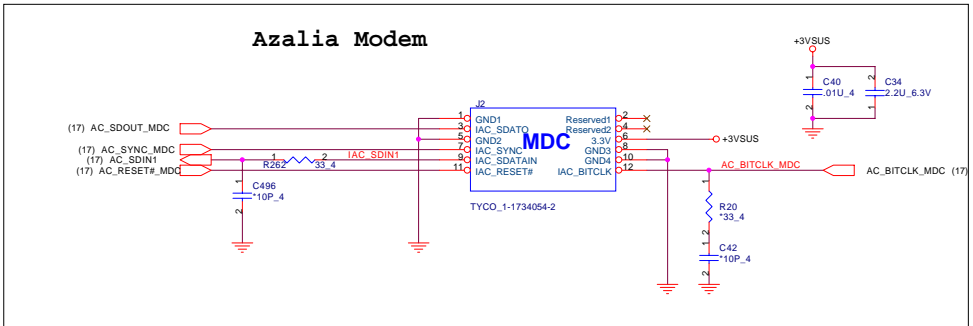


PROJECT : ZF1
Quanta Computer Inc.

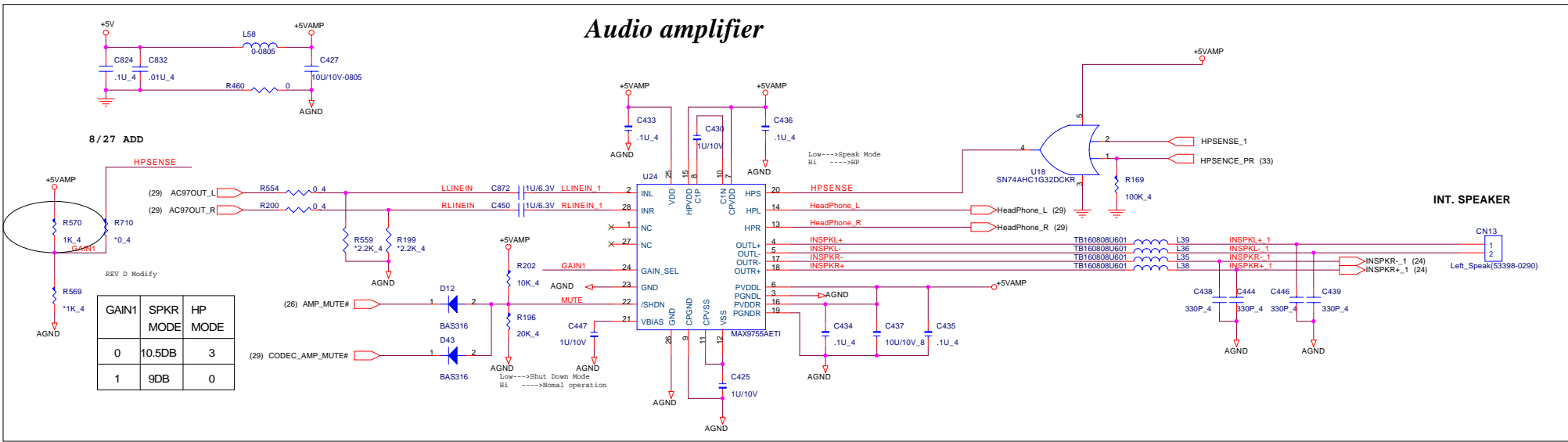
Size	Document Number	Rev
B		1A
MININ PCI		
Date:	Saturday, November 13, 2004	Sheet 28 of 43



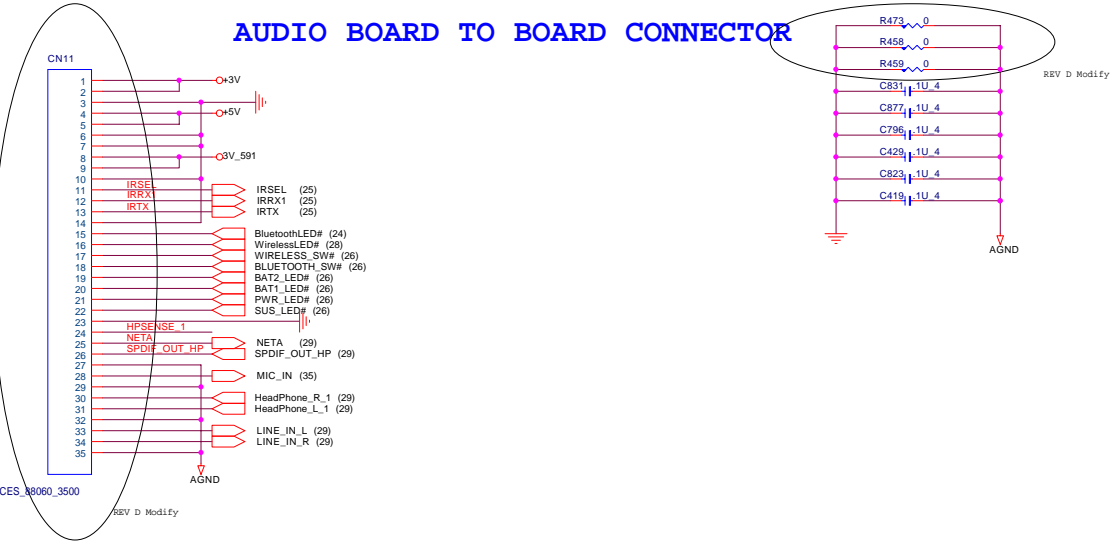
SEL	FUNCTION
LOW	IN_B0
HIGH	IN_B1



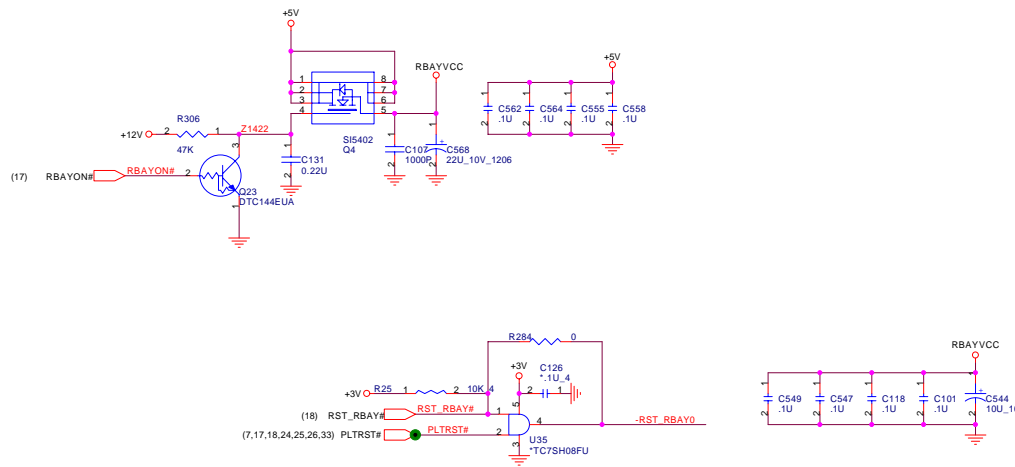
Audio amplifier



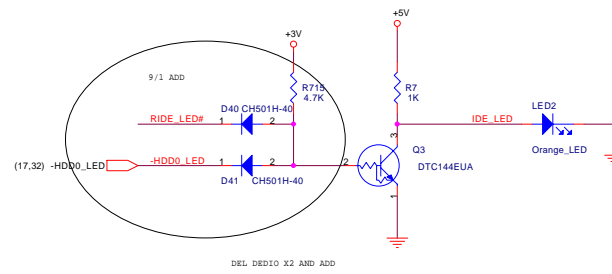
AUDIO BOARD TO BOARD CONNECTOR



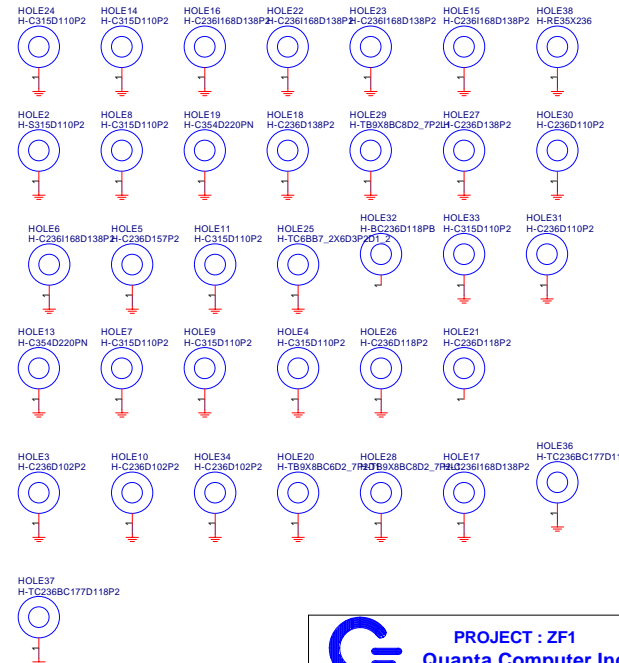
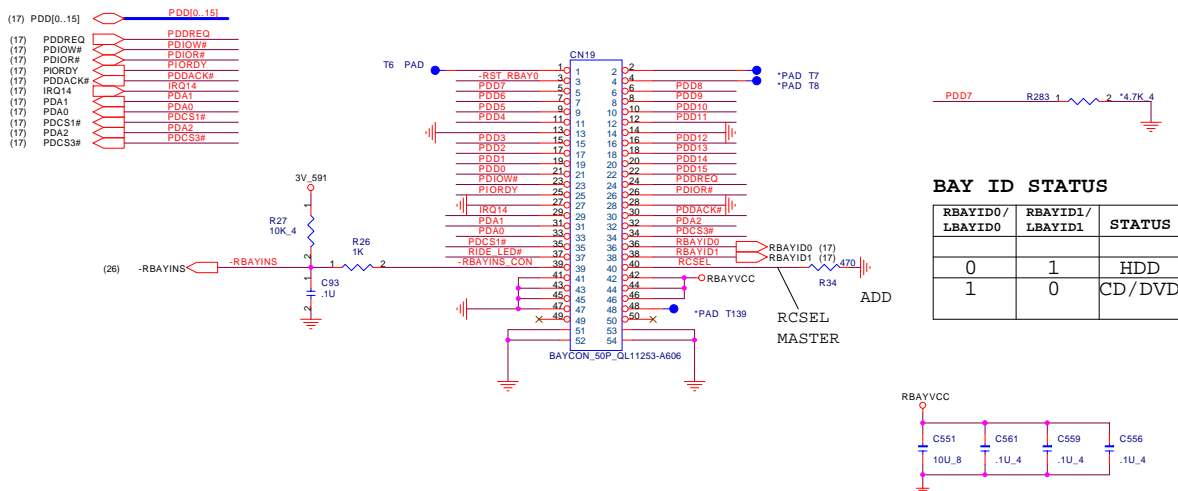
SWAP BAY POWER CONTROL & RESET

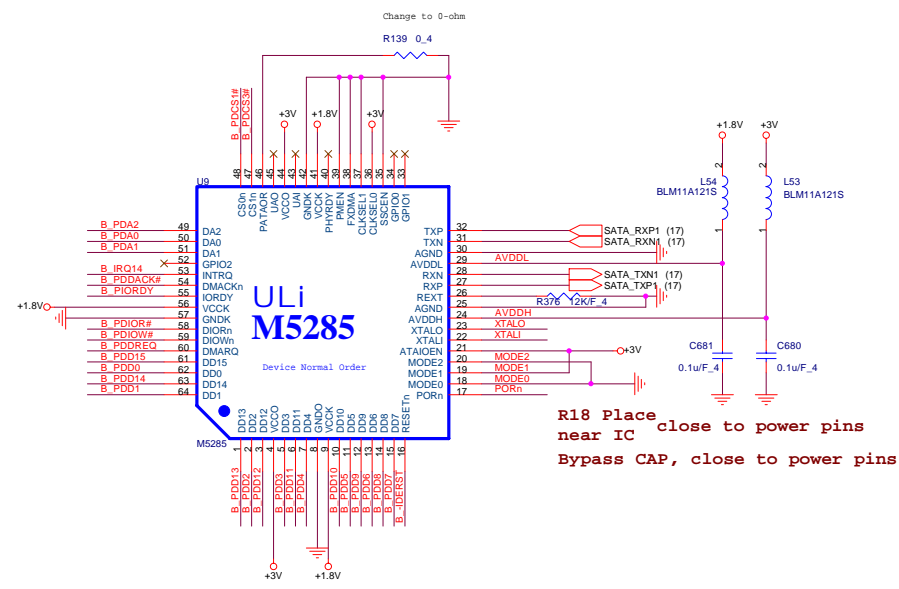
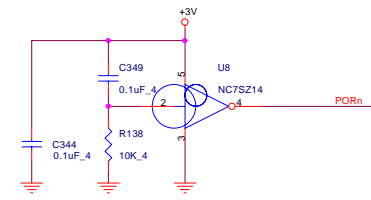
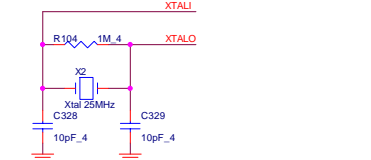
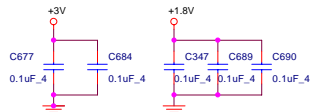


IDE LED CONTROL LOGIC



Multi-Bay Connector





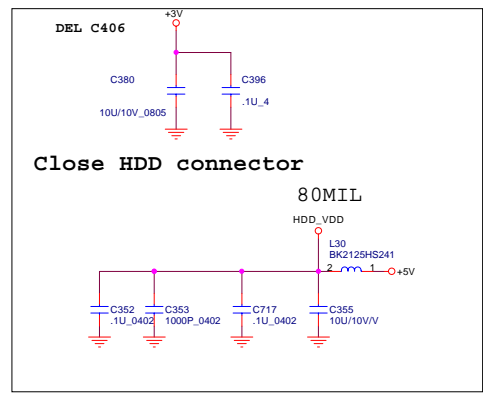
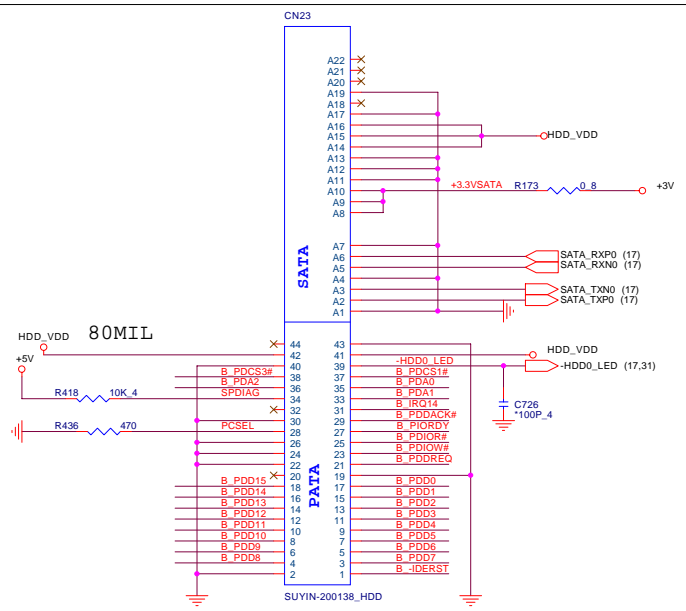
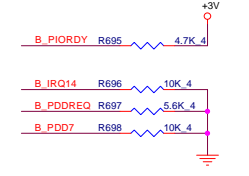
R18 Place near IC close to power pins
Bypass CAP, close to power pins

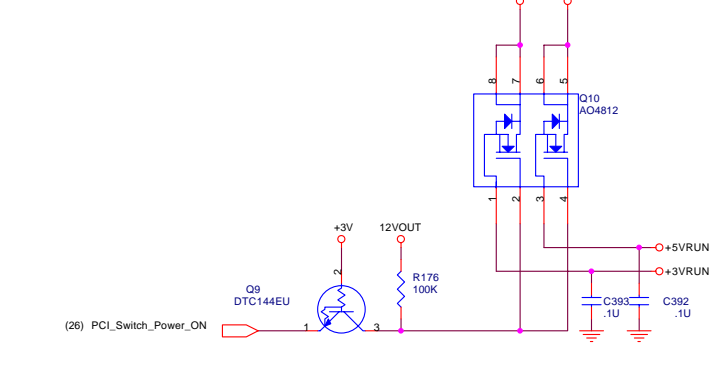
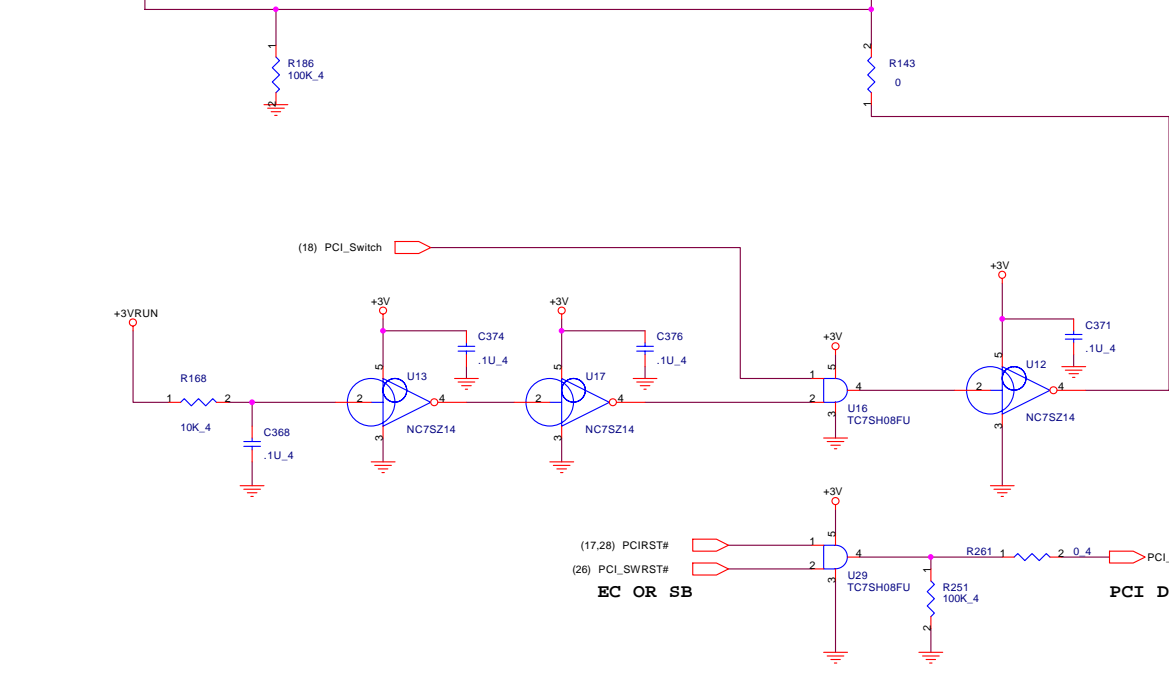
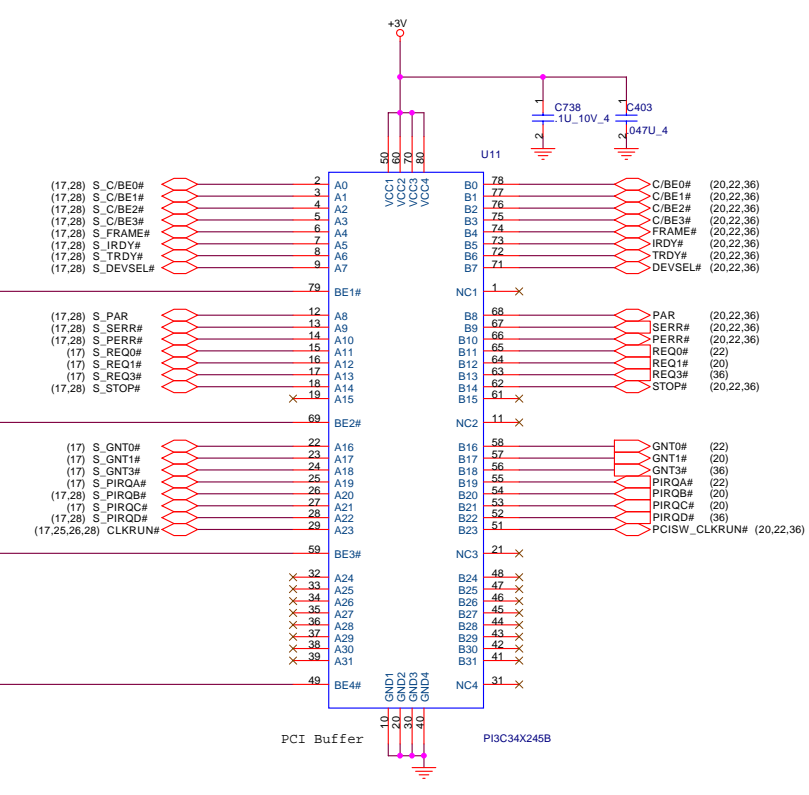
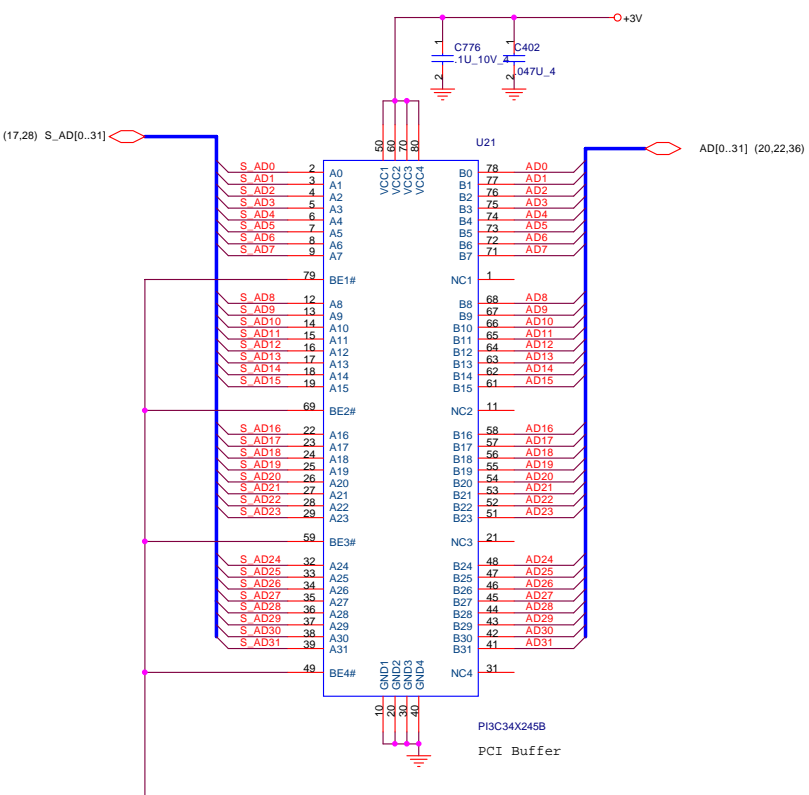
Operation Mode

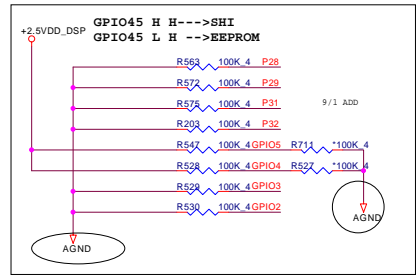
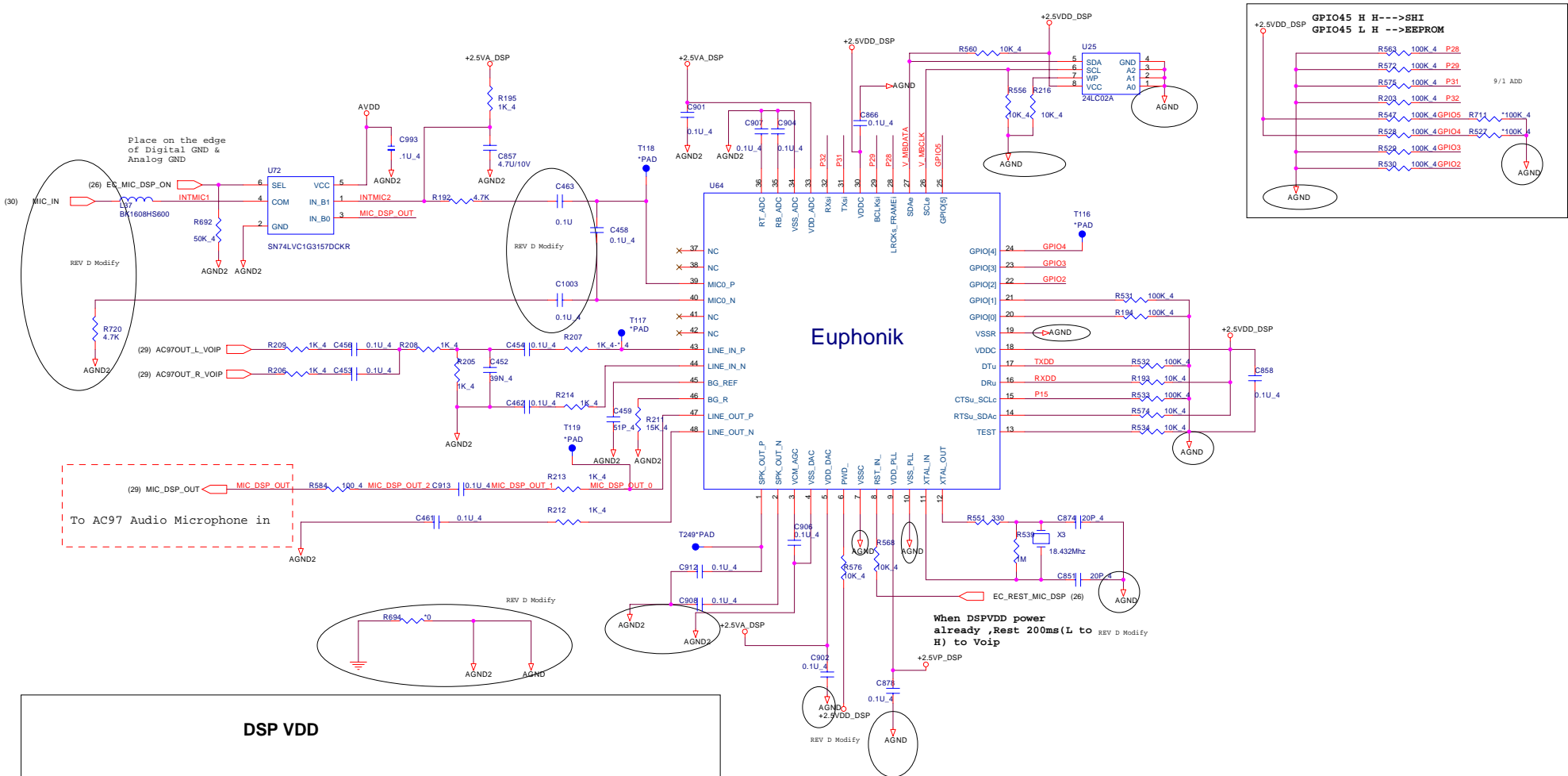
MODE[2..0]	Device mode
0 0 0	Device mode 100MB/S
0 0 1	Device mode 133MB/S
0 1 0	Device mode 150MB/S
0 1 1	RESERVE
1 0 0	Host mode 100MB/S
1 0 1	Host mode 133MB/S
1 1 0	Host mode 150MB/S
1 1 1	RESERVE

Reference clock select

CLKSEL[1..0]	External clock
0 0	20 MHz
0 1	25 MHz



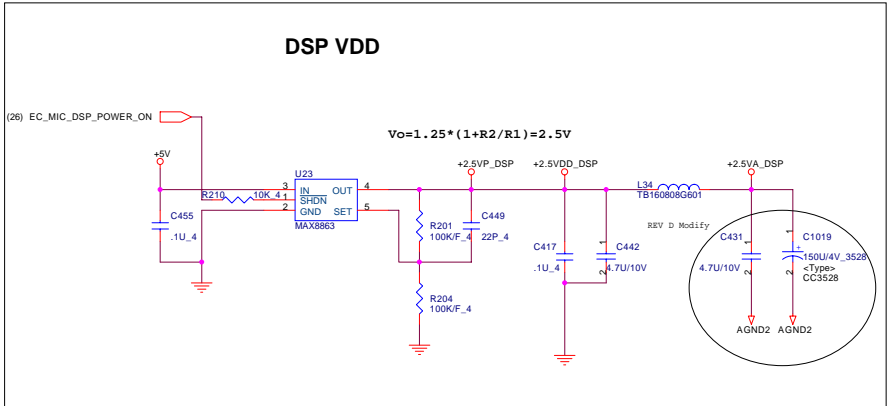


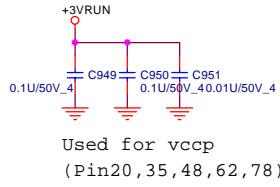


Euphonik

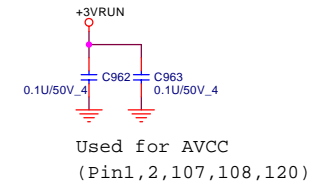
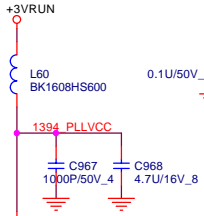
When DSPVDD power already, Rest 200ms(L to H) to Voip

When EC_MIC_DSP_ON -->LOW Internal Mic bypass DSP
 When EC_MIC_DSP_ON -->Hi Internal Mic to DSP processor

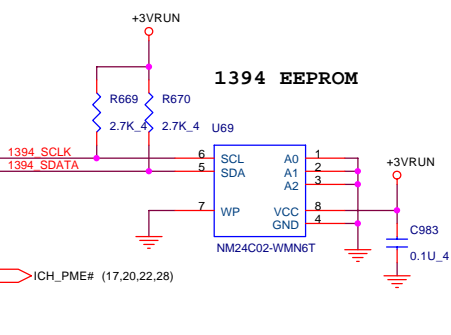
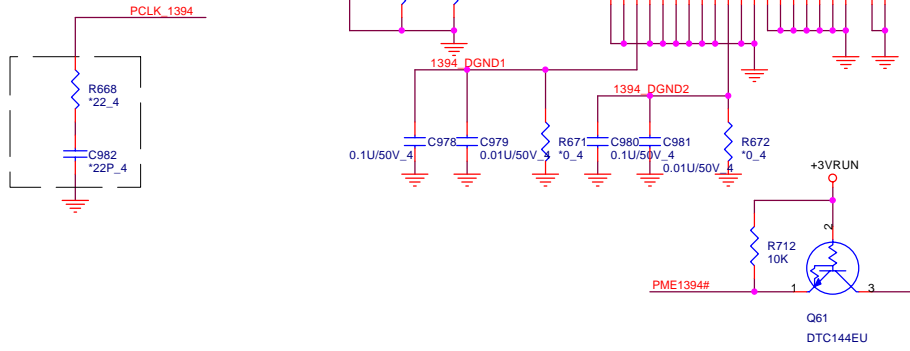
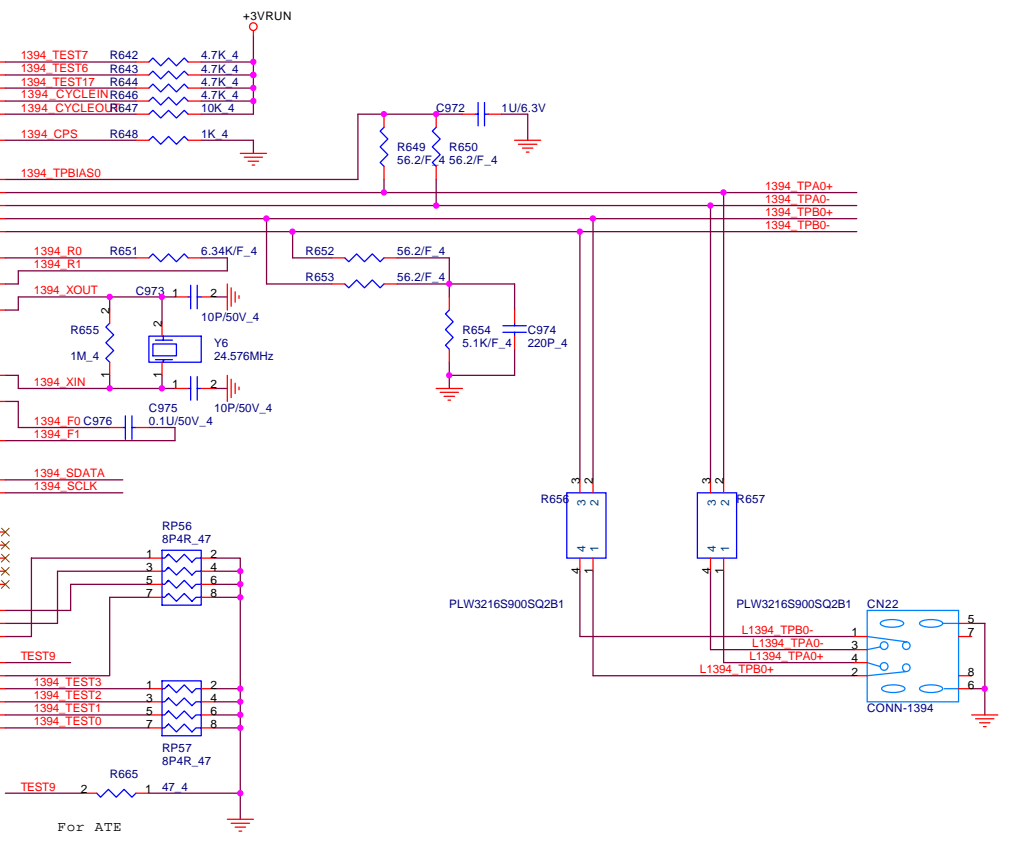
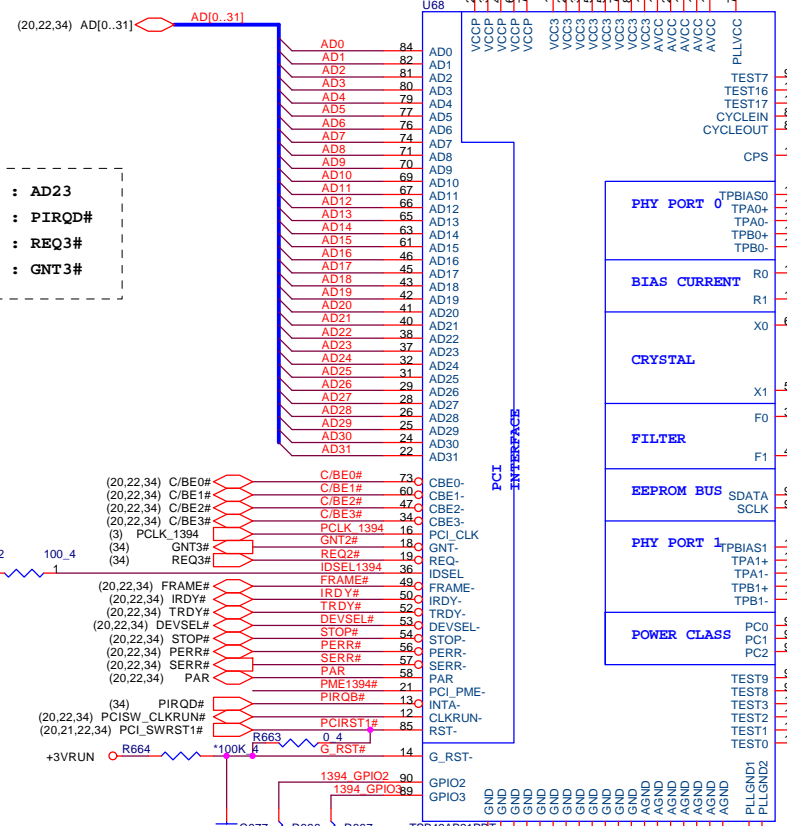




IEEE-1394

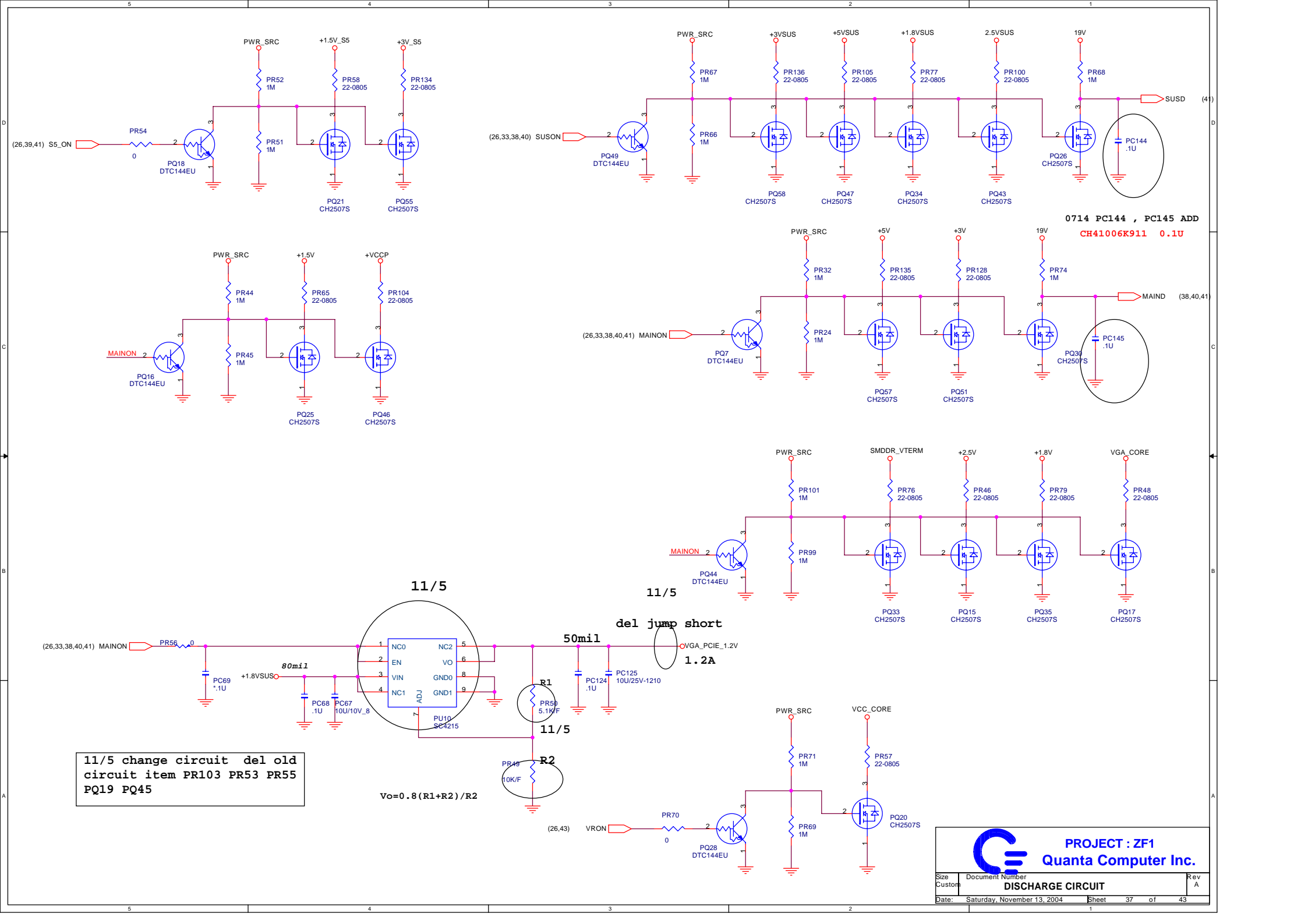


ID Select : AD23
Interrupt Pin : PIRQD#
Request indicates : REQ3#
Grant indicates : GNT3#



QUANTA COMPUTER

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

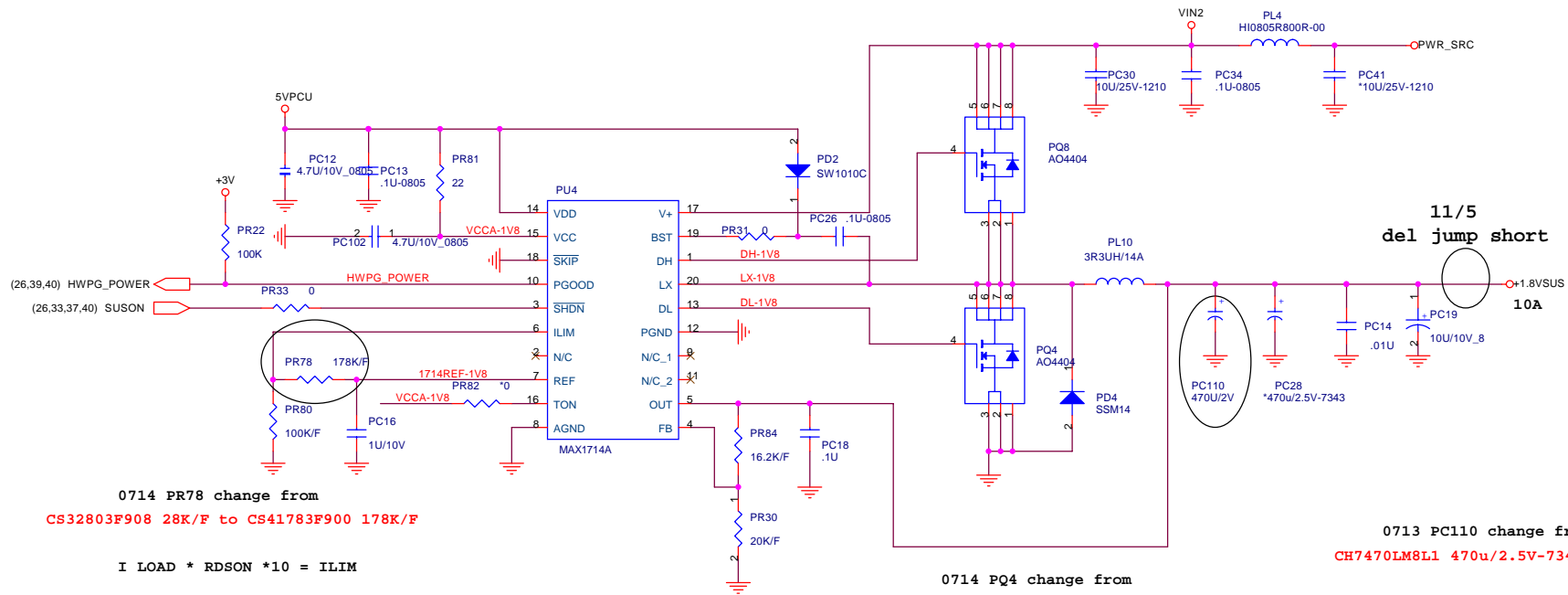


0714 PC144 , PC145 ADD
CH41006K911 0.1U

11/5 change circuit del old
circuit item PR103 PR53 PR55
PQ19 PQ45

$$V_o = 0.8 (R_1 + R_2) / R_2$$

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0714 PR78 change from
CS32803F908 28K/F to CS41783F900 178K/F

$$I \text{ LOAD} * R_{\text{DSON}} * 10 = I_{\text{LIM}}$$

$$FDD6688 R_{\text{DSON}} 4.5V = 0.006 \text{ ohm}$$

$$12 * 0.006 * 10 = 0.72V \text{ (ILIM)}$$

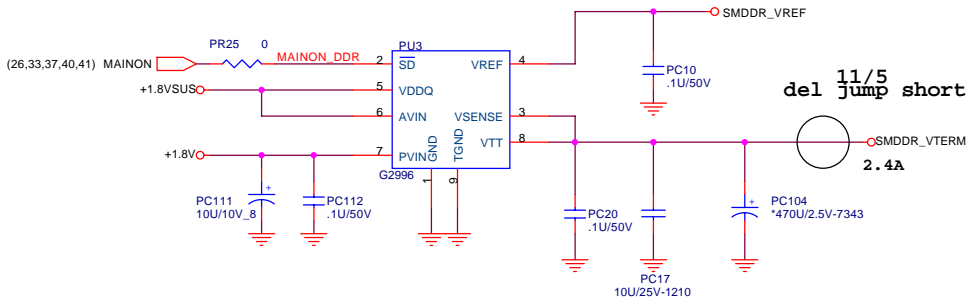
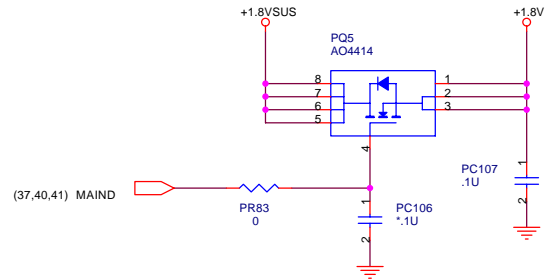
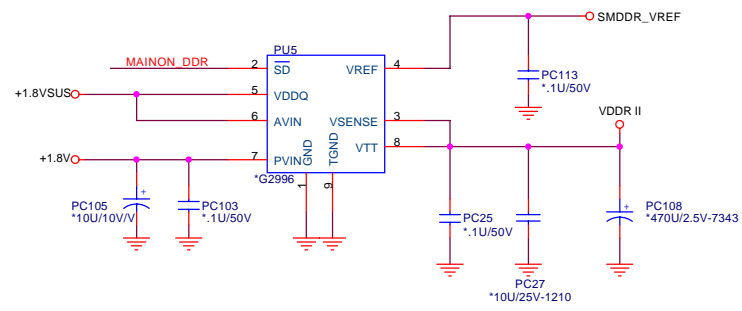
0714 PQ4 change from
BAM47040005 AO4704 to BAM66880Z01 FDD6688

0714 PD4 change from
NC to BC000014Z01 SSM14

11/5
del jump short

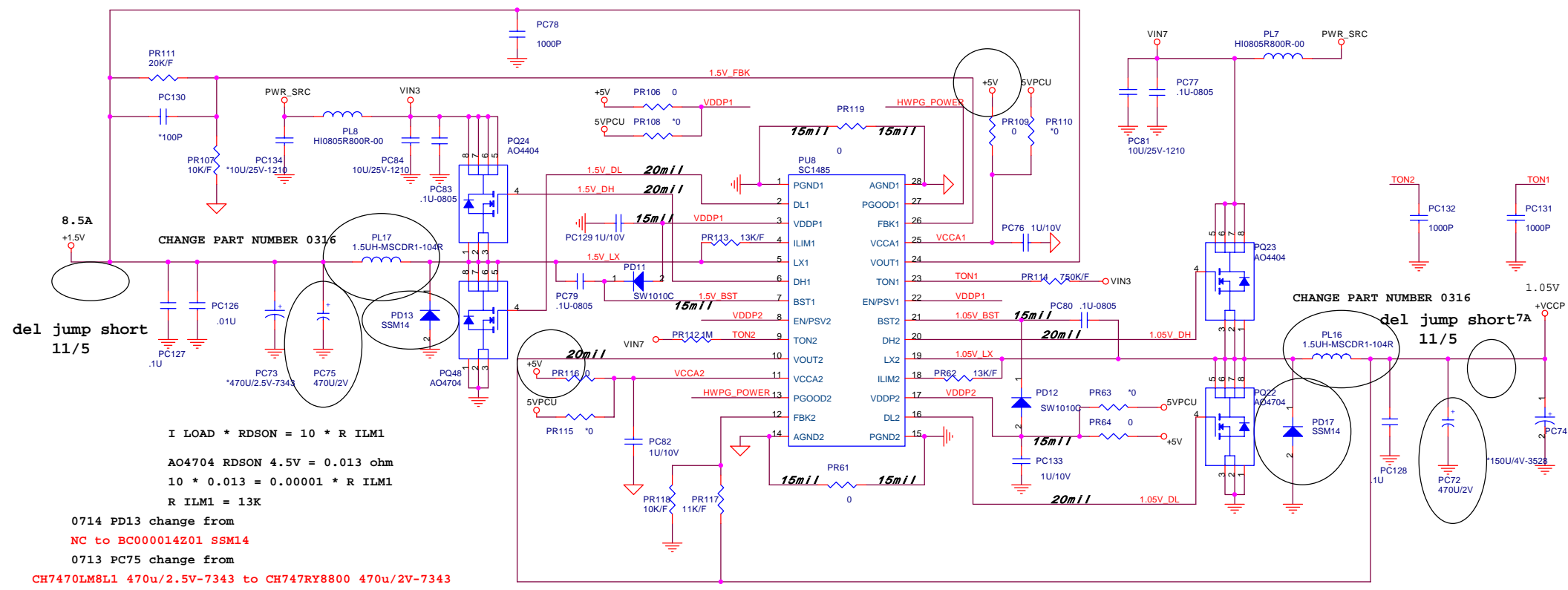
10A

0713 PC110 change from
CH7470LM8L1 470u/2.5V-7343 to CH747RY8800 470u/2V-7343



del 11/5
del jump short

2.4A



del jump short
11/5

CHANGE PART NUMBER 0316

$$I_{LOAD} * RDSON = 10 * R_{ILM1}$$

$$AO4704 RDSON 4.5V = 0.013 \text{ ohm}$$

$$10 * 0.013 = 0.00001 * R_{ILM1}$$

$$R_{ILM1} = 13K$$

- 0714 PD13 change from
NC to BC000014Z01 SSM14
- 0713 PC75 change from
CH7470LM8L1 470u/2.5V-7343 to CH747RY8800 470u/2V-7343

(26,38,40) HWPG_POWER ← HWPG_POWER

del jump short7A
11/5

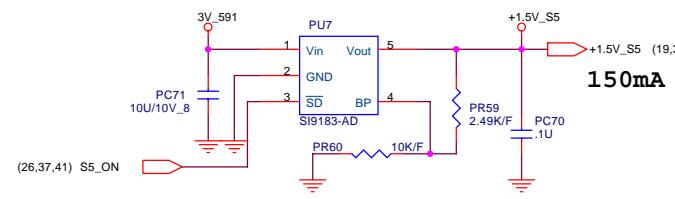
I LOAD * RDSON = 10 * R ILM

$$AO4704 RDSON 4.5V = 0.013 \text{ ohm}$$

$$10 * 0.013 = 0.00001 * R_{ILM}$$

$$R_{ILM1} = 13K$$

- 0714 PD817 change from
NC to BC000014Z01 SSM14
- 0713 PC72 change from
CH7470LM8L1 470u/2.5V-7343 to CH747RY8800 470u/2V-7343



(26,37,41) S5_ON

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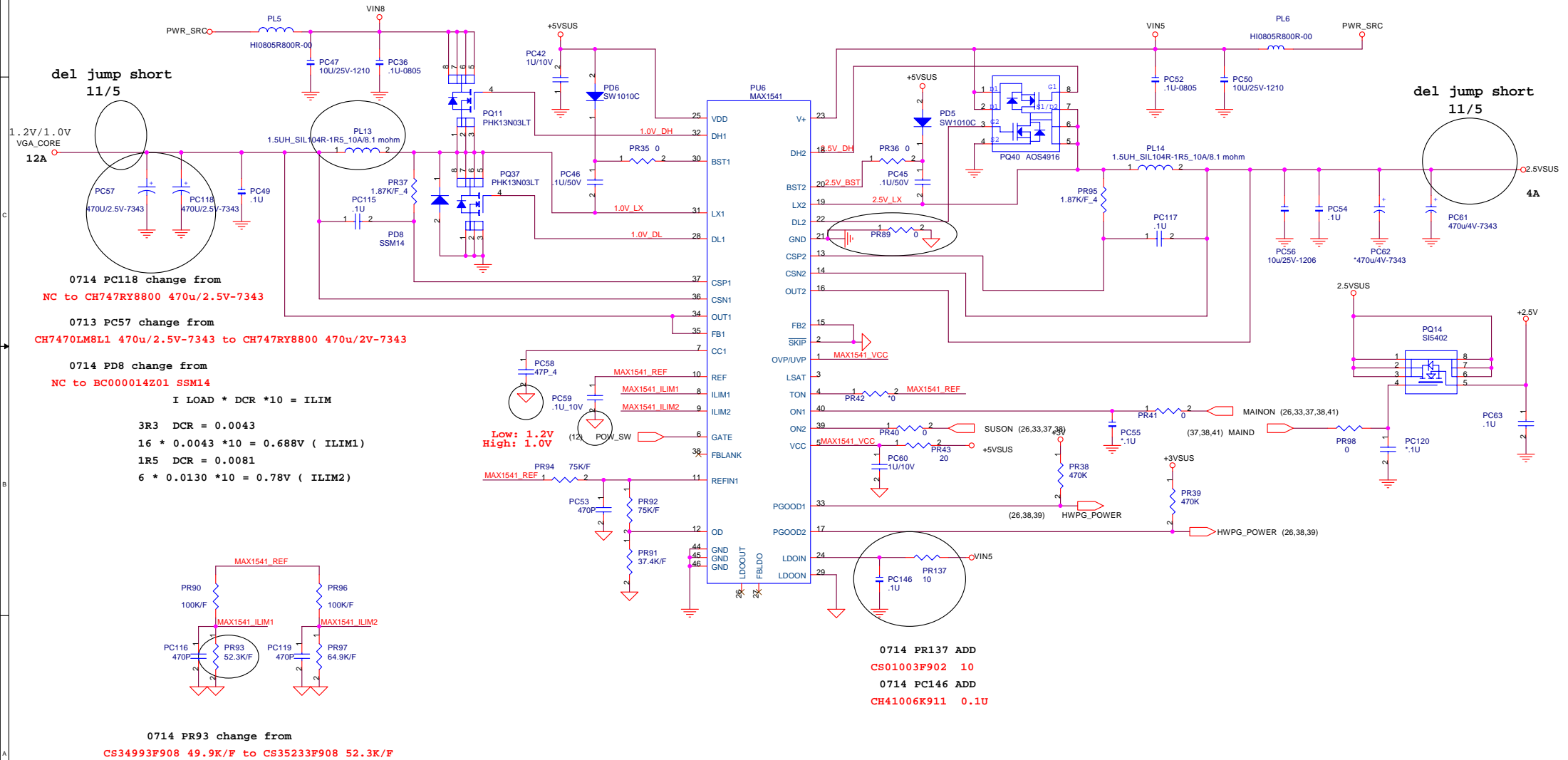
Quanta Computer Inc.

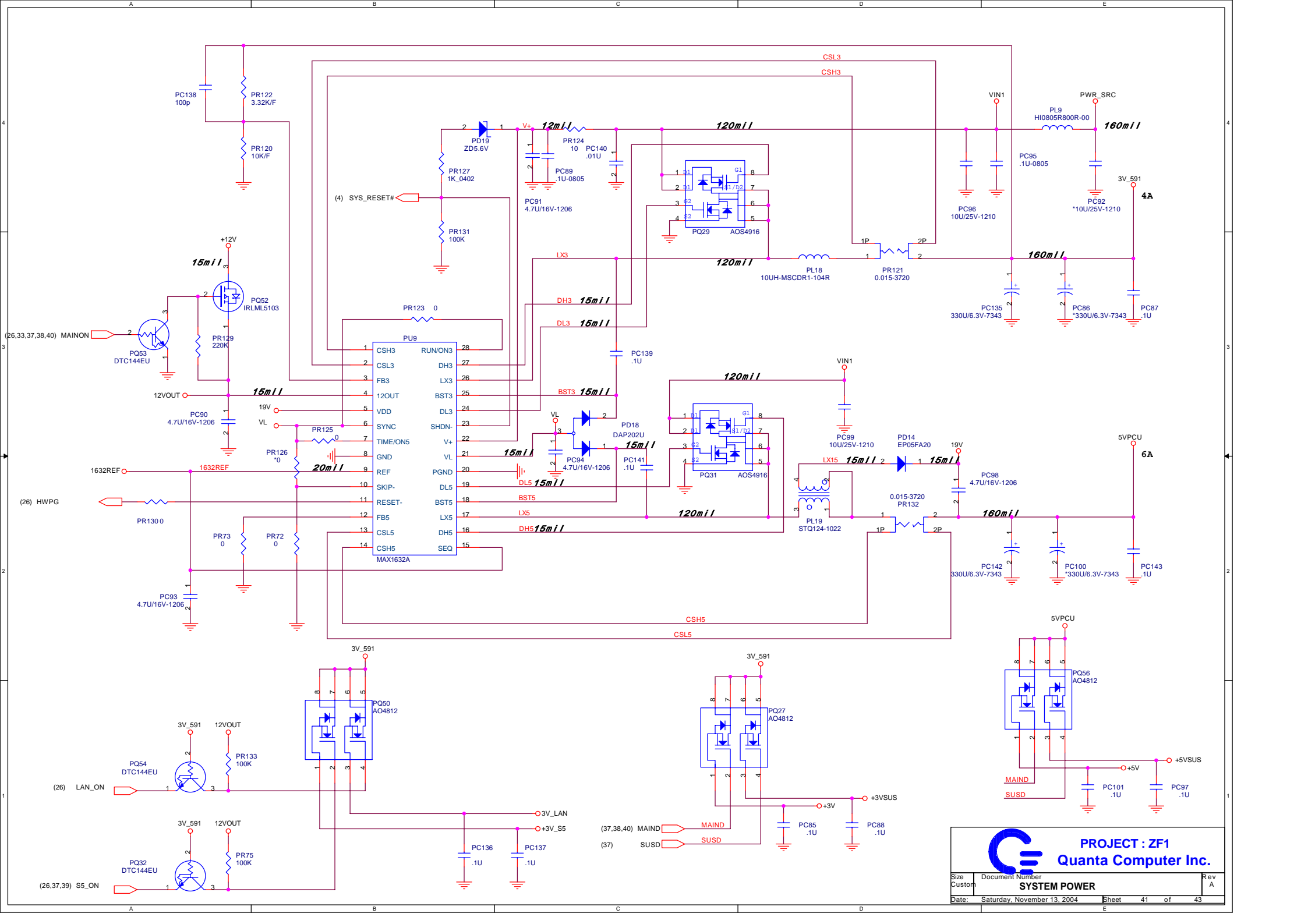
Size	Document Number	2.5VSUS, +2.5V, & 1.25DDR	Rev	2A
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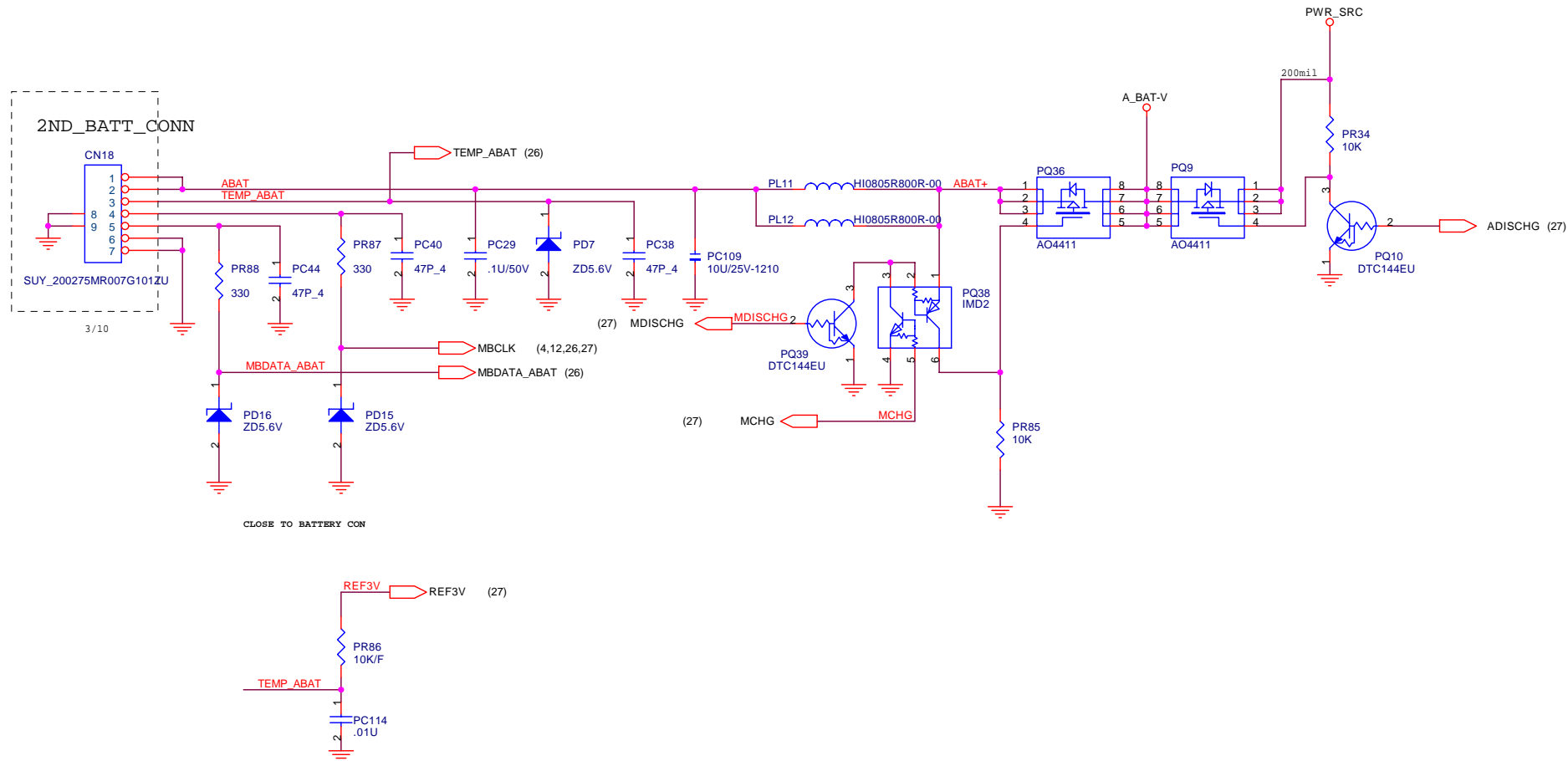
$L / RL(DCR) = Cqe * Rqe$
 $3R3 \ DCR = 0.0043$
 $3.3u / 0.0043 = 0.1u * Rqe$
 $Rqe = 7.68K$


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

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








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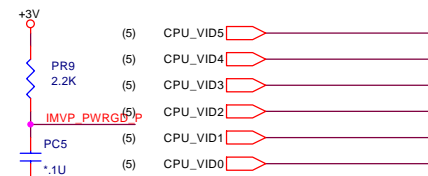
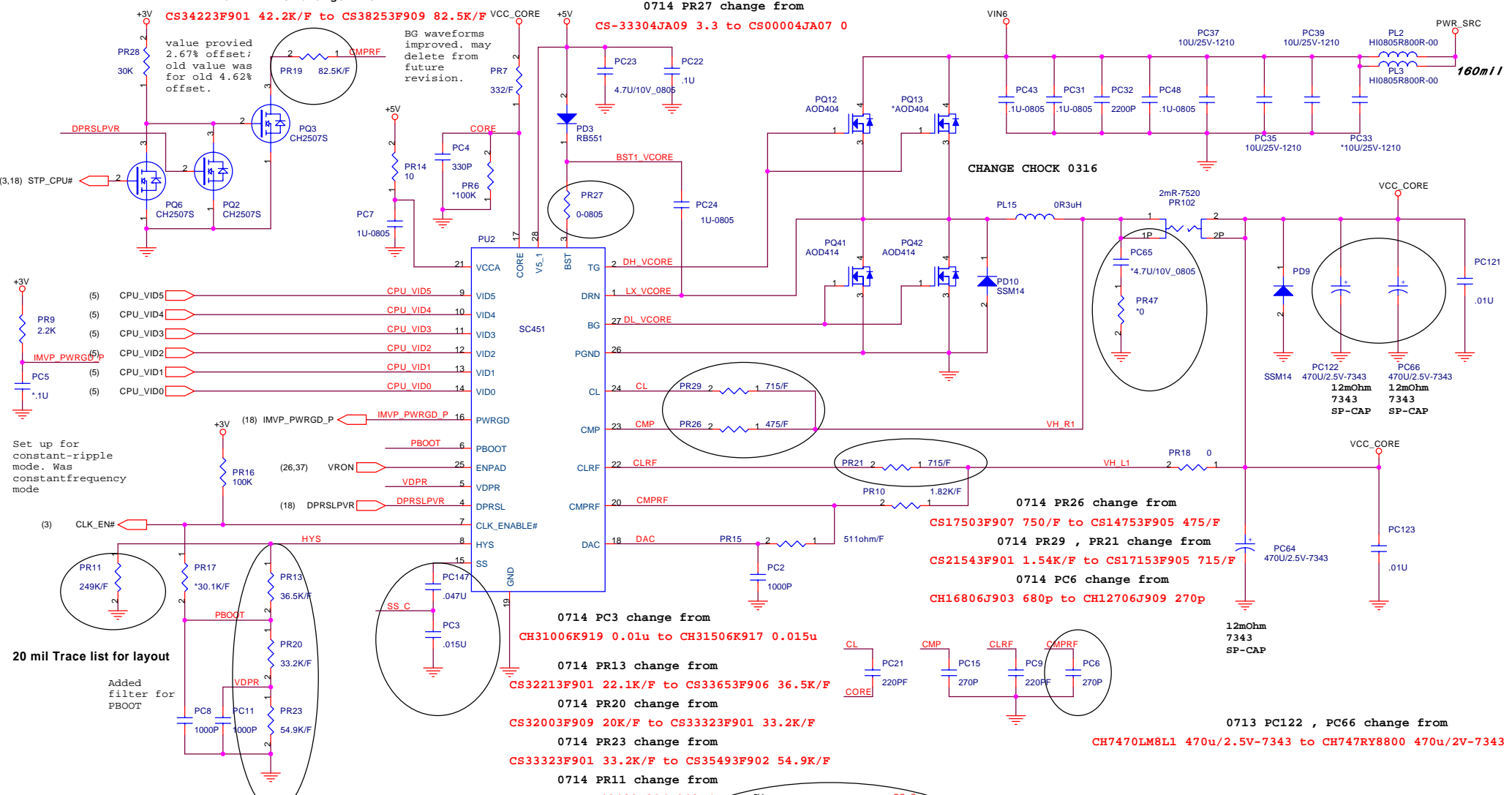
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0714 PR19 change from

CS34223F901 42.2K/F to CS38253F909 82.5K/F
 value provied 2.67% offset; old value was for old 4.62% offset.
 BG waveforms improved. may delete from future revision.

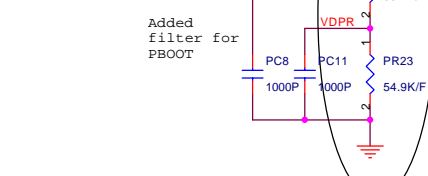
0714 PR27 change from

CS-33304JA09 3.3 to CS00004JA07 0



Set up for constant-ripple mode. Was constantfrequency mode

20 mil Trace list for layout



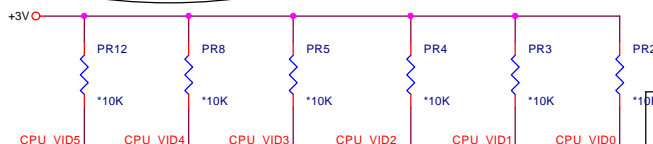
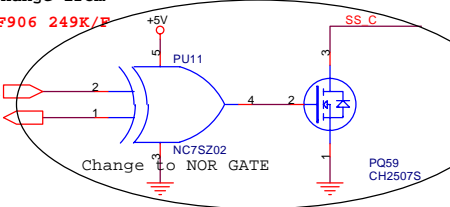
V I D							Vcore
VID 5	VID 4	VID 3	VID 2	VID 1	VID 0	V	
0	1	0	1	1	1	1.340	
0	1	1	0	0	0	1.324	
0	1	1	0	1	0	1.292	
0	1	1	1	0	0	1.260	
0	1	1	1	0	1	1.244	
0	1	1	1	1	1	1.212	
1	0	0	0	0	1	1.180	
1	0	0	0	1	1	1.148	
1	0	0	1	1	0	1.100	
1	0	1	0	0	1	1.052	
1	0	1	0	1	1	1.020	
1	0	1	1	1	0	0.972	
1	1	0	0	0	0	0.940	

100 mil Trace list for layout

- DH_VCORE
- LX_VCORE
- DL_VCORE
- DH_VCORE2
- LX_VCORE2
- DL_VCORE2

10 mil Trace list for layout

- SC1476 pin 4 pin 5 pin 7 pin 25 pin 30



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