

ZL8

CPU CORE
SENTECH
SC4511TSTR
 Page: 23

SYSTEM 3V/5V
MAXIM
MAX1999
 Page: 24

+3VPCU
 +3V_S5/+3VSUS
 +3V
 +5VPCU
 +5VSUS
 +5V
 +15V

+1.8VSUS
 +1.8V ON NCP5214

+0.9VSUS
 +0.9V ON NCP5214

+1.5V SENTECH SC1470

+1.5V_S5 SI9183-AD

+2.5V SENTECH SC1565

+1.05V SENTECH SC4215
 Page: 25

BATTERY CHARGER
MAXIM
MAX8724
 Page: 26

CLOCK GEN
ICS954206
 Page: 4

CELERON-M/PENTIUM-M
 INTEL Mobile_479 CPU
 Page: 2, 3

DDR-II SODIMM1
 Page: 10

DDR-II SODIMM2
 Page: 10

NB
INTEL
ALVISO 915GM
 Page: 5, 6, 7, 8

PATA HDD
 Page: 16

IDE-ODD
 Page: 16

SB
INTEL
ICH6-M
 Page: 9, 10, 11, 12

AUDIO CODEC
 Realtek
ALC260 (ALC883)
 Page: 19

AMP
MAX9755
 Page: 20

MODEM
 Page: 19

KBC
NS
PC97551
 Page: 21

MIC IN Page: 19

SPEAKER Page: 20

LINE OUT Page: 20

RJ11 Page: 17

Touchpad Page: 22

Keyboard Page: 22

FLASH Page: 21

FAN Page: 22

SYSTEM
USB PORT *3
USB2,3,5 Page: 16

Bluetooth
USB interface
USB4 Page: 16

CRT
 Page: 11

LVDS
 Page: 11

(Option)

MINI-PCIE slot
Wireless LAN
 Page: 16

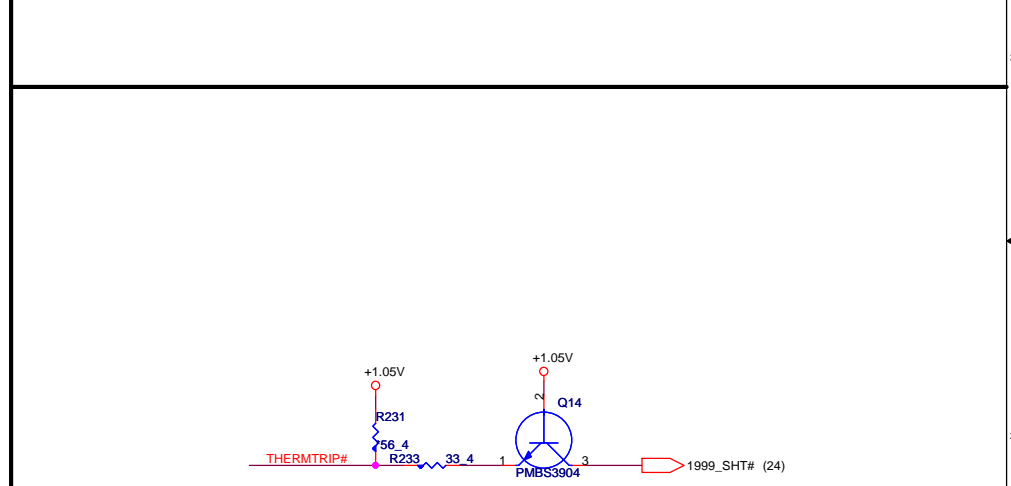
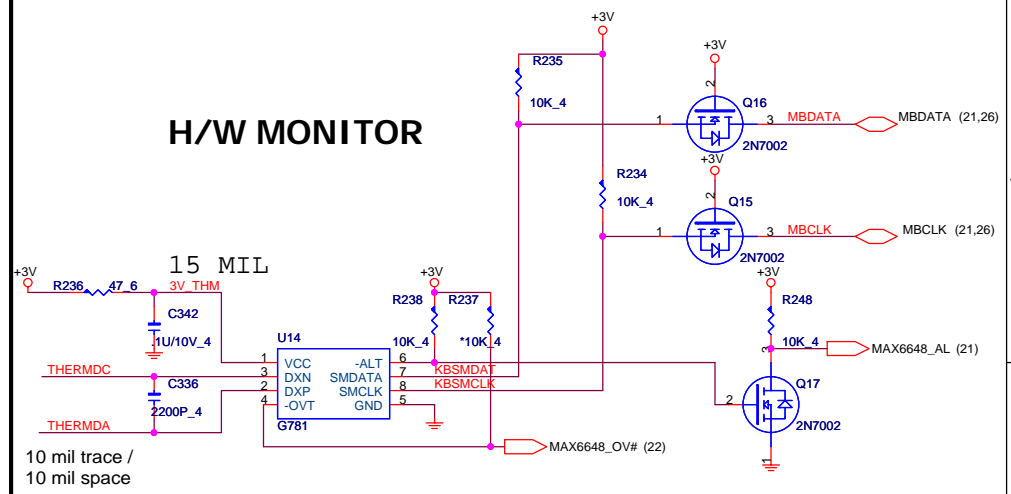
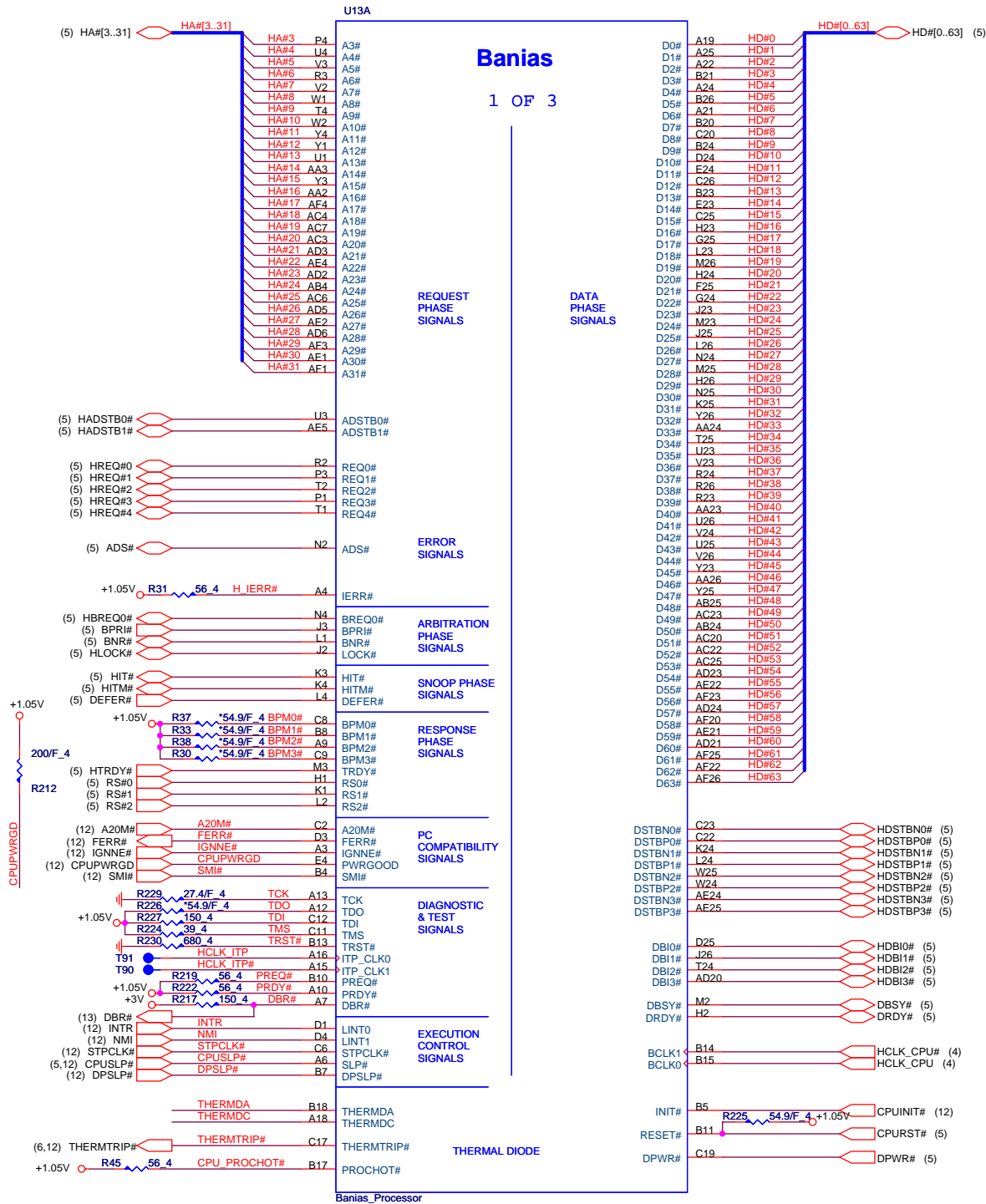
TI PCMCIA
PCI1510A (L-F)
 AD17
 REQ1# / GNT1#
 INTC#
 Page: 18

TYPE II
SLOT
 Page: 18

MINI-PCI
Wireless LAN
 AD20
 REQ2# / GNT2#
 INTB# , INTD#
 Page: 16

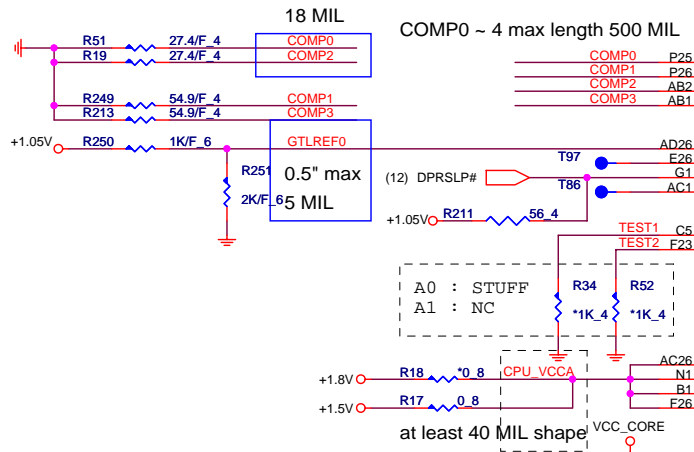
REALTEK
RTL8100CL
 AD24
 REQ0# / GNT0#
 INTA#
 Page: 17

RJ45
 Page: 17



PROJECT : ZL8
Quanta Computer Inc.

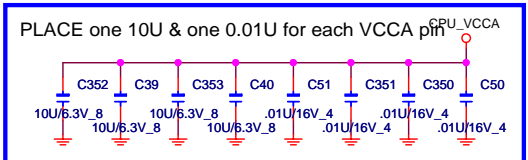
Size	Document Number	Rev
	CPU (HOST BUS)-1	1A
Date:	Friday, June 10, 2005	Sheet 2 of 26



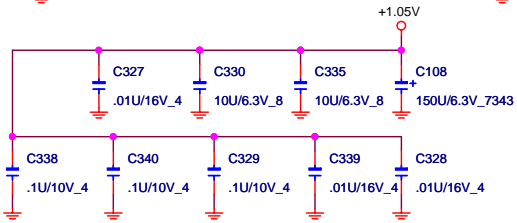
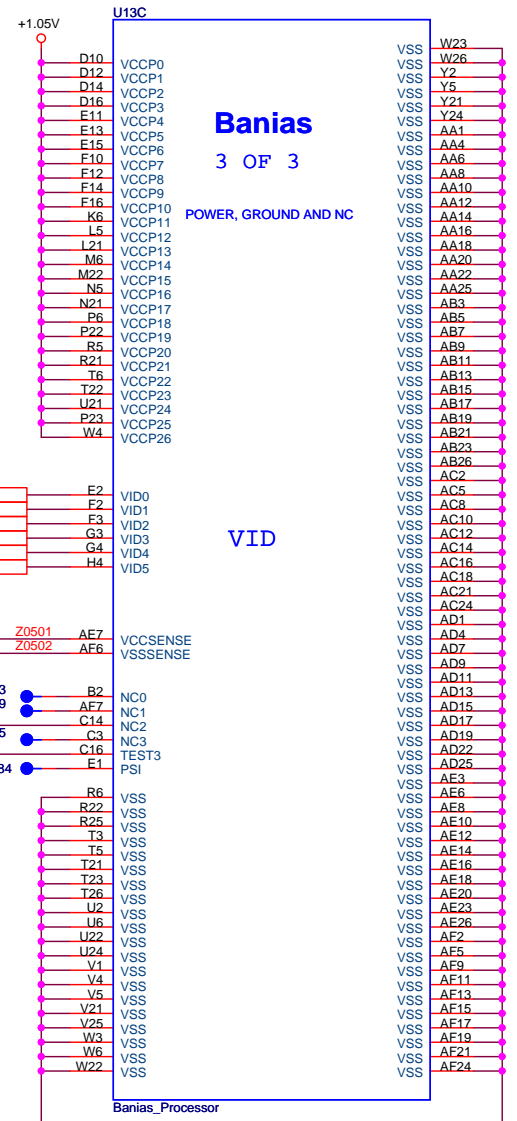
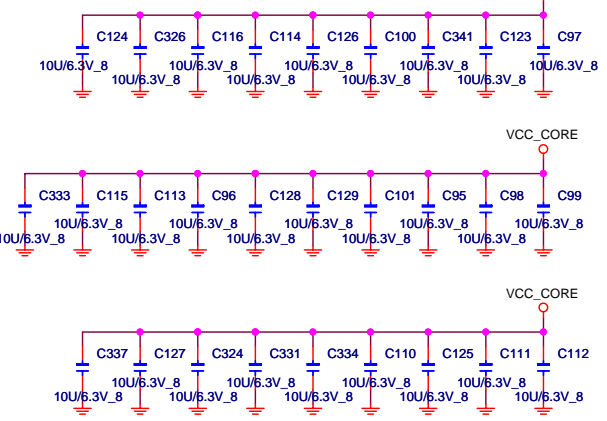
Banias
2 OF 3

POWER, GROUND, RESERVED SIGNALS

COMP0	P25
COMP1	P26
COMP2	AB2
COMP3	AB1
TEST1	C5
TEST2	F23
VCCA3	AC26
VCCA2	N1
VCCA1	B1
VCCA0	F26
VCC00	D6
VCC01	D8
VCC02	D18
VCC03	D20
VCC04	D22
VCC05	E5
VCC06	E7
VCC07	E9
VCC08	E17
VCC09	E19
VCC10	E21
VCC11	F6
VCC12	F8
VCC13	F18
VCC14	F20
VCC15	F22
VCC16	G5
VCC17	G21
VCC18	H6
VCC19	H22
VCC20	J5
VCC21	J21
VCC22	K22
VCC23	U5
VCC24	V6
VCC25	V22
VCC26	W5
VCC27	W4
VCC28	Y22
VCC29	AA5
VCC30	AA7
VCC31	AA9
VCC32	AA11
VCC33	AA13
VCC34	AA15
VCC35	AA17
VCC36	AA19
VCC37	AA21
VCC38	AB6
VCC39	AB8
VCC40	AB10
VCC41	AB12
VCC42	AB14
VCC43	AB14
VCC44	AB16
VCC45	AB18
VCC46	AB20
VCC47	AB22
VCC48	AC3
VCC49	AC11
VCC50	AC13
VCC51	AC15
VCC52	AC17
VCC53	AC19
VCC54	AD8
VCC55	AD10
VCC56	AD12
VCC57	AD14
VCC58	AD16
VCC59	AD18
VCC60	AE9
VCC61	AE11
VCC62	AE13
VCC63	AE15
VCC64	AE17
VCC65	AE19
VCC66	AF8
VCC67	AF10
VCC68	AF12
VCC69	AF14
VCC70	AF16
VCC71	AF18



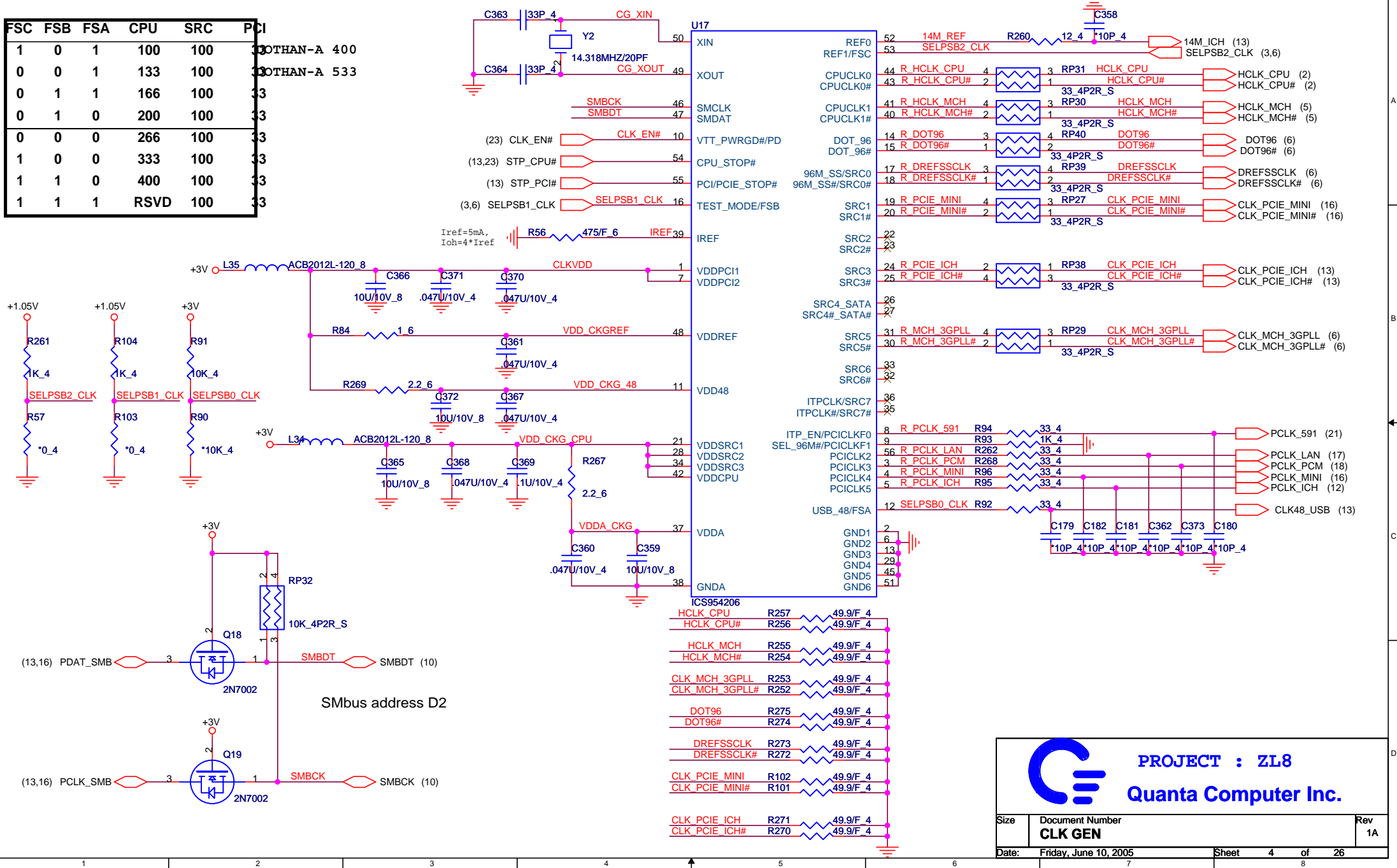
10U/6.3V/X5R(CC0805) *30




PROJECT : ZL8
Quanta Computer Inc.

Size	Document Number	Rev
	CPU (POWER)-2	1A
Date:	Friday, June 10, 2005	Sheet 3 of 26

FSC	FSB	FSA	CPU	SRC	PCI
1	0	1	100	100	DOOTHAN-A 400
0	0	1	133	100	DOOTHAN-A 533
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

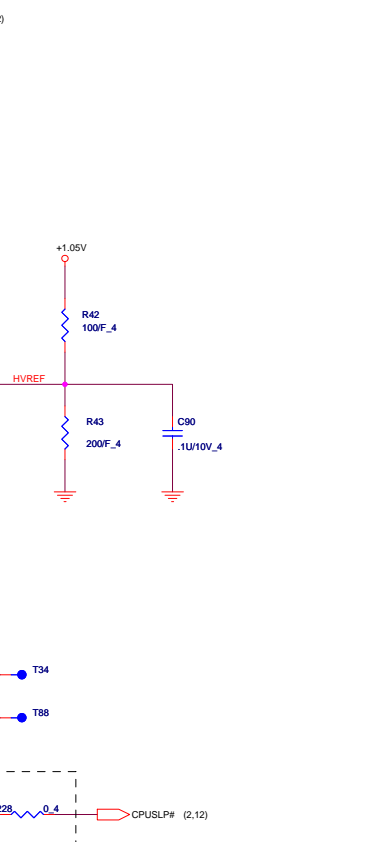
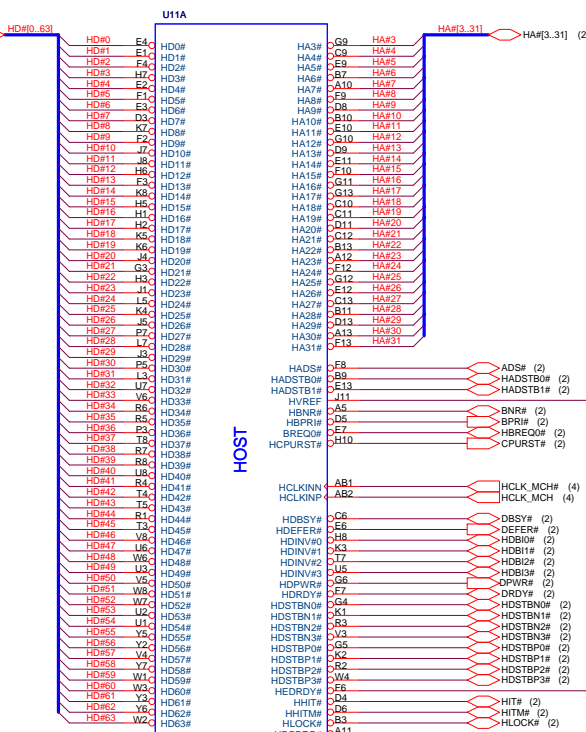
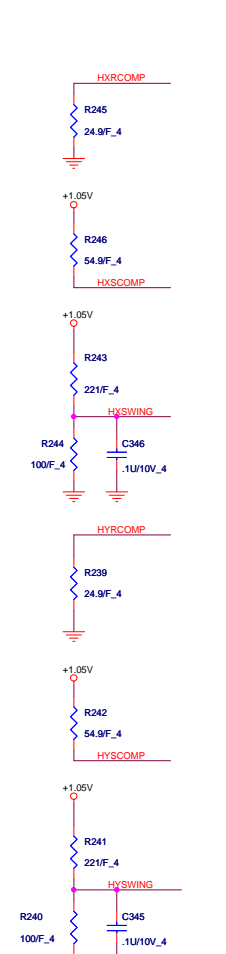




PROJECT : ZL8
Quanta Computer Inc.

Size	Document Number	Rev
	CLK GEN	1A
Date:	Friday, June 10, 2005	Sheet 4 of 26

U11E		VSS	
AF23	VSS136	AG37	VSS0
AP23	VSS137	V37	VSS1
AL22	VSS138	VSS2	VSS2
AH22	VSS139	T37	VSS3
J22	VSS140	P37	VSS4
VSS141	VSS5	M37	VSS5
D22	VSS6	K37	VSS6
AN21	VSS7	H37	VSS7
AN21	VSS8	E37	VSS8
AF21	VSS9	AN36	VSS9
F21	VSS10	AL36	VSS10
C21	VSS11	AD36	VSS11
AK20	VSS12	AF36	VSS12
VSS148	VSS13	AE36	VSS13
VSS149	VSS14	AD36	VSS14
F20	VSS15	AC36	VSS15
C20	VSS16	AB36	VSS16
F20	VSS17	AC36	VSS17
D20	VSS18	C36	VSS18
VSS153	VSS19	AE35	VSS19
A20	VSS20	Y35	VSS20
AN19	VSS21	W35	VSS21
AG19	VSS22	V35	VSS22
W19	VSS23	L35	VSS23
T19	VSS24	T35	VSS24
H19	VSS25	R35	VSS25
C19	VSS26	N35	VSS26
AL18	VSS27	M35	VSS27
U18	VSS28	L35	VSS28
B18	VSS29	J35	VSS29
A18	VSS30	H35	VSS30
AN17	VSS31	G35	VSS31
AF17	VSS32	F35	VSS32
C17	VSS33	E35	VSS33
VSS169	VSS34	D35	VSS34
AL16	VSS35	C35	VSS35
K16	VSS36	B35	VSS36
H16	VSS37	A35	VSS37
D16	VSS38	AN34	VSS38
A16	VSS39	AH34	VSS39
VSS175	VSS40	AD34	VSS40
K15	VSS41	AC34	VSS41
C15	VSS42	AE34	VSS42
AN14	VSS43	AA34	VSS43
AL14	VSS44	C34	VSS44
AG14	VSS45	AD34	VSS45
K14	VSS46	AE33	VSS46
J14	VSS47	AD33	VSS47
F14	VSS48	W33	VSS48
B14	VSS49	V33	VSS49
A14	VSS50	U33	VSS50
J12	VSS51	T33	VSS51
D12	VSS52	R33	VSS52
B12	VSS53	P33	VSS53
AN11	VSS54	M33	VSS54
AL11	VSS55	L33	VSS55
AJ11	VSS56	K33	VSS56
AG11	VSS57	J33	VSS57
AF11	VSS58	H33	VSS58
AA11	VSS59	G33	VSS59
Y11	VSS60	F33	VSS60
F11	VSS61	E33	VSS61
AA10	VSS62	D33	VSS62
L10	VSS63	C33	VSS63
VSS200	VSS64	B33	VSS64
VSS202	VSS65	A33	VSS65
D10	VSS66	AN32	VSS66
AH9	VSS67	AJ32	VSS67
AC9	VSS68	AD32	VSS68
AE9	VSS69	AE32	VSS69
AA9	VSS70	AA32	VSS70
VSS206	VSS71	C32	VSS71
VSS207	VSS72	H32	VSS72
VSS208	VSS73	AD31	VSS73
VSS209	VSS74	AG31	VSS74
VSS210	VSS75	AD31	VSS75
VSS211	VSS76	AE31	VSS76
VSS212	VSS77	W31	VSS77
VSS213	VSS78	V29	VSS78
VSS214	VSS79	U29	VSS79
VSS215	VSS80	T29	VSS80
VSS216	VSS81	L29	VSS81
VSS217	VSS82	H29	VSS82
VSS218	VSS83	G29	VSS83
VSS219	VSS84	F29	VSS84
VSS220	VSS85	E29	VSS85
VSS221	VSS86	D29	VSS86
VSS222	VSS87	C29	VSS87
VSS223	VSS88	B29	VSS88
VSS224	VSS89	A29	VSS89
VSS225	VSS90	AN29	VSS90
VSS226	VSS91	AJ29	VSS91
VSS227	VSS92	AD29	VSS92
VSS228	VSS93	AE29	VSS93
VSS229	VSS94	AE30	VSS94
VSS230	VSS95	AE30	VSS95
VSS231	VSS96	AE30	VSS96
VSS232	VSS97	Y30	VSS97
VSS233	VSS98	C30	VSS98
VSS234	VSS99	AM29	VSS99
VSS235	VSS100	AJ29	VSS100
VSS236	VSS101	AG29	VSS101
VSS237	VSS102	AD29	VSS102
VSS238	VSS103	AE29	VSS103
VSS239	VSS104	W29	VSS104
VSS240	VSS105	V29	VSS105
VSS241	VSS106	U29	VSS106
VSS242	VSS107	T29	VSS107
VSS243	VSS108	L29	VSS108
VSS244	VSS109	H29	VSS109
VSS245	VSS110	G29	VSS110
VSS246	VSS111	F29	VSS111
VSS247	VSS112	E29	VSS112
VSS248	VSS113	D29	VSS113
VSS249	VSS114	A29	VSS114
VSS250	VSS115	AC28	VSS115
VSS251	VSS116	AB28	VSS116
VSS252	VSS117	AA28	VSS117
VSS253	VSS118	W28	VSS118
VSS254	VSS119	E28	VSS119
VSS255	VSS120	AN27	VSS120
VSS256	VSS121	AL27	VSS121
VSS257	VSS122	AJ27	VSS122
VSS258	VSS123	AG27	VSS123
VSS259	VSS124	AE27	VSS124
VSS260	VSS125	AE27	VSS125
VSS261	VSS126	AE27	VSS126
VSS262	VSS127	W27	VSS127
VSS263	VSS128	G27	VSS128
VSS264	VSS129	E27	VSS129
VSS265	VSS130	AJ24	VSS130
VSS266	VSS131	AG24	VSS131
VSS267	VSS132	J24	VSS132
VSS268	VSS133	F24	VSS133
VSS269	VSS134	D24	VSS134
VSS270	VSS135	B24	VSS135
VSS271	VSS135		
B36	VSSALVDS		

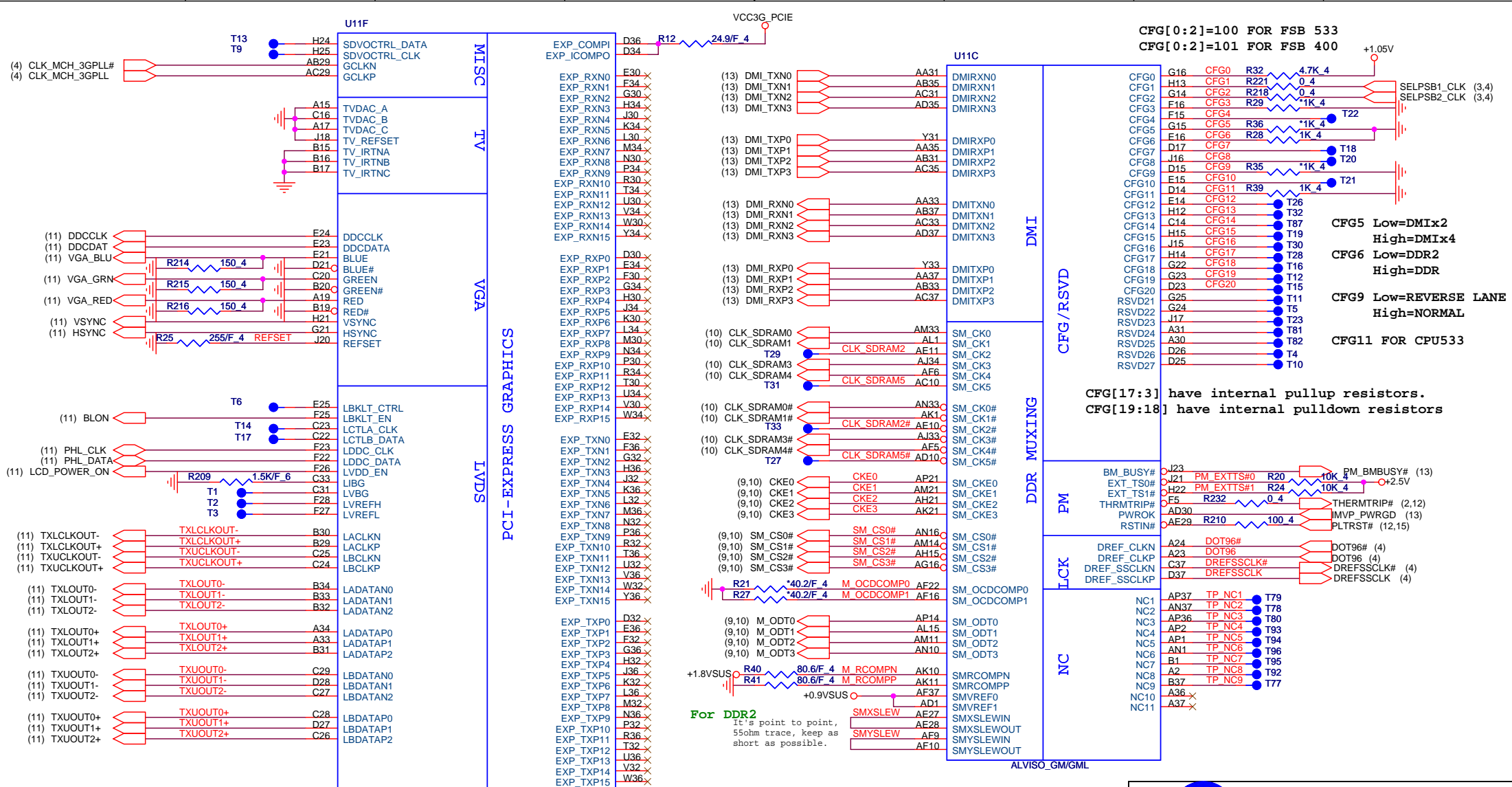


HXRCOMP	C1	HXRCOMP	C1
HXSCOMP	C2	HXSCOMP	C2
HXSWING	D1	HXSWING	D1
HYRCOMP	T1	HYRCOMP	T1
HYSCOMP	L1	HYSCOMP	L1
HYSWING	P1	HYSWING	P1

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

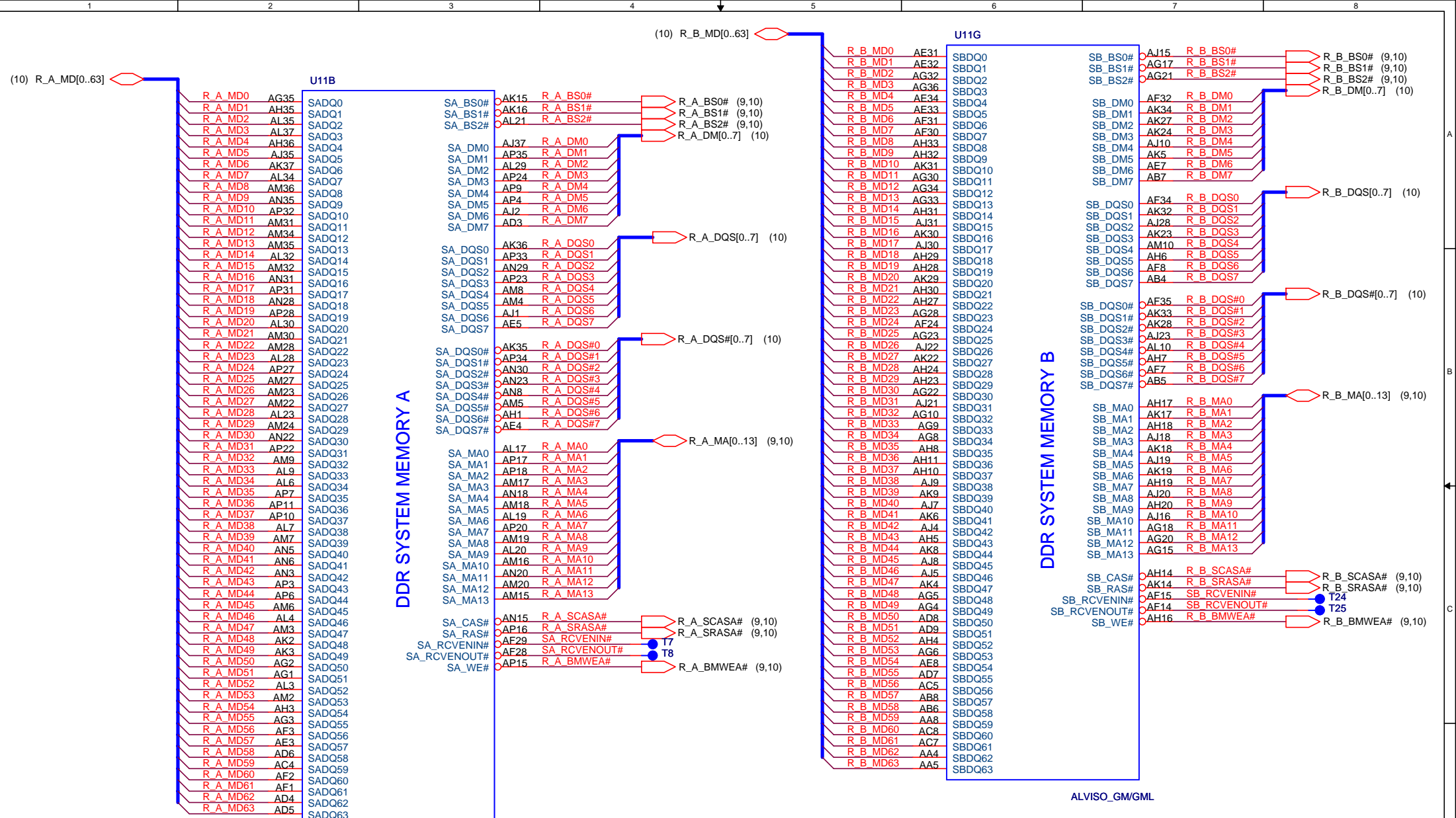
PROJECT : ZL8
Quanta Computer Inc.

Size	Document Number	Rev
	ALVISO - HOST	1A
Date:	Friday, June 10, 2005	Sheet 5 of 26



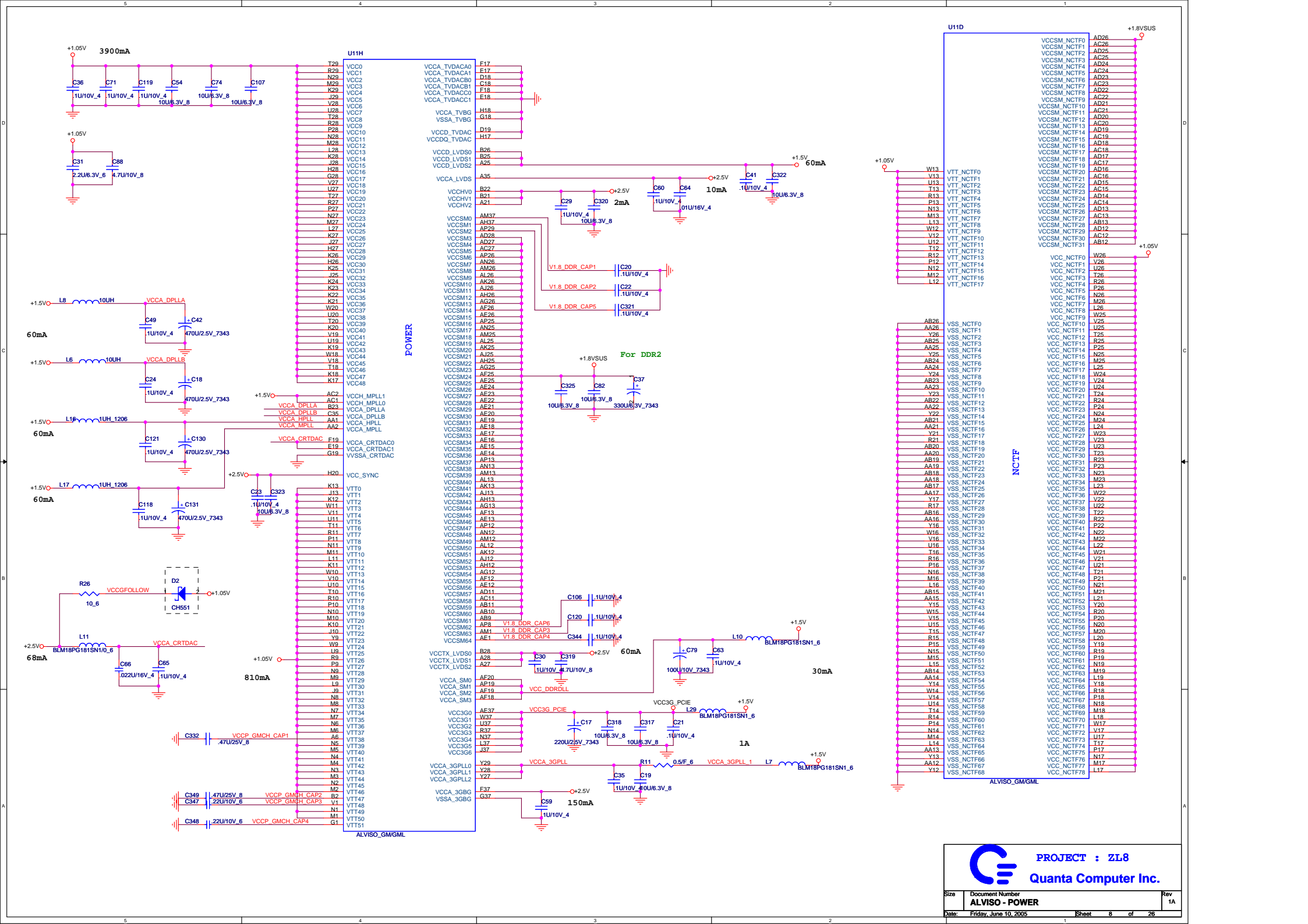
PROJECT : ZL8
Quanta Computer Inc.

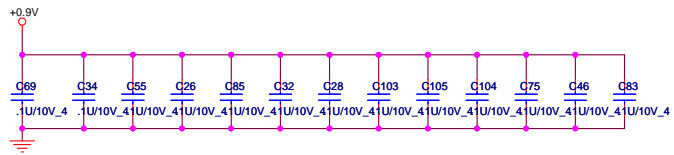
Size	Document Number	Rev
	ALVISO - DMI / VGA	1A
Date:	Friday, June 10, 2005	Sheet 6 of 26



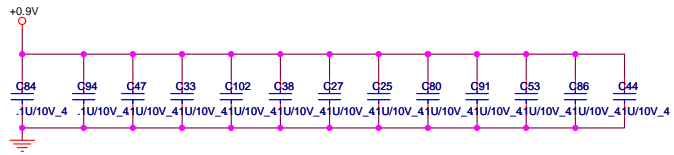
PROJECT : ZL8
Quanta Computer Inc.

Size	Document Number ALVISO - DDRII	Rev 1A
Date:	Friday, June 10, 2005	Sheet 7 of 26

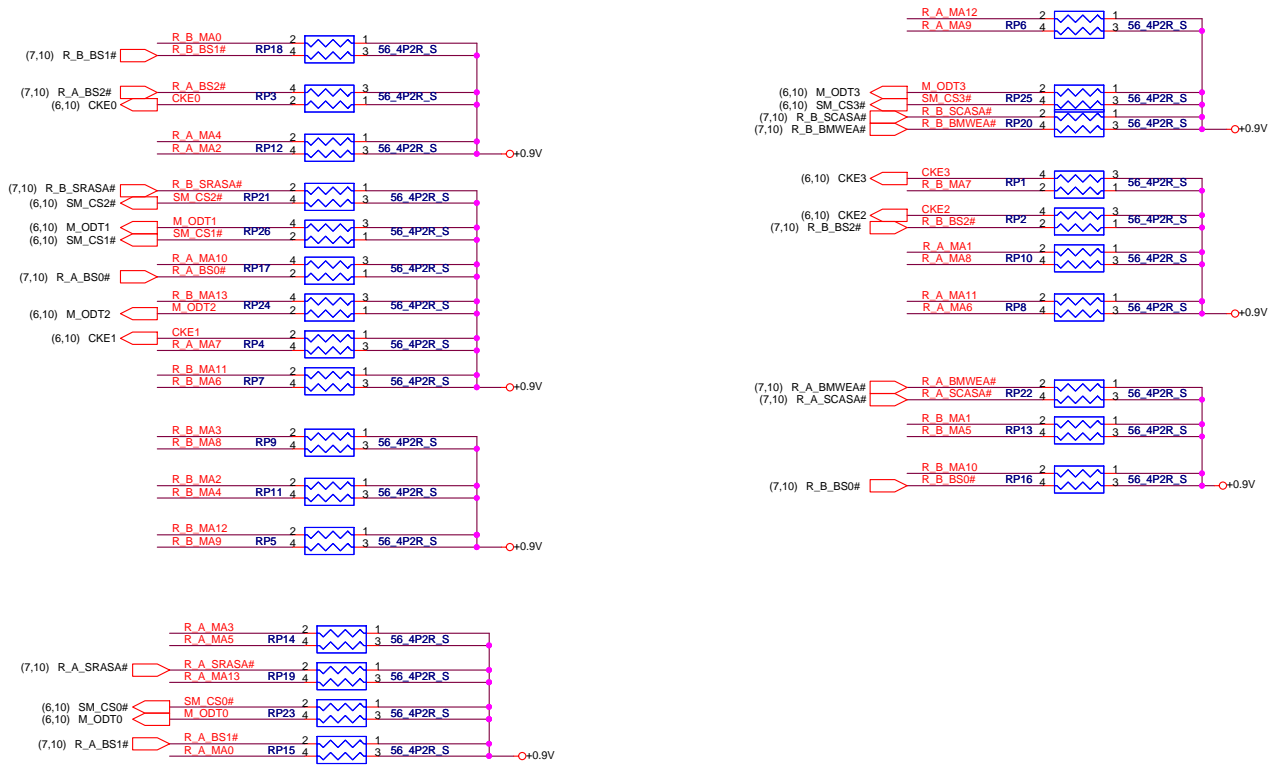




Layout note: Place one cap close to every 2 pullup resistors terminated to +0.9V

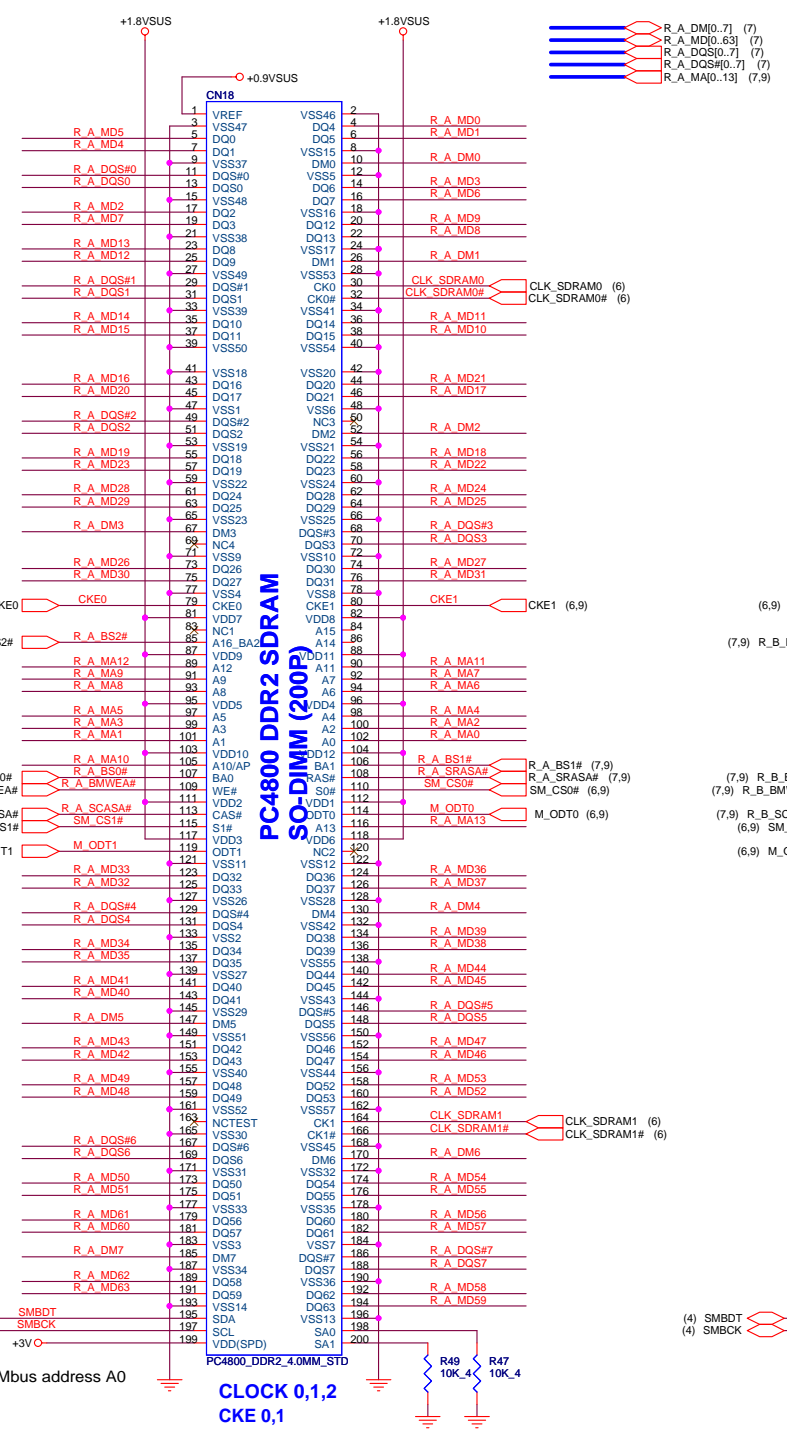


Layout note: Place one cap close to every 2 pullup resistors terminated to +0.9V



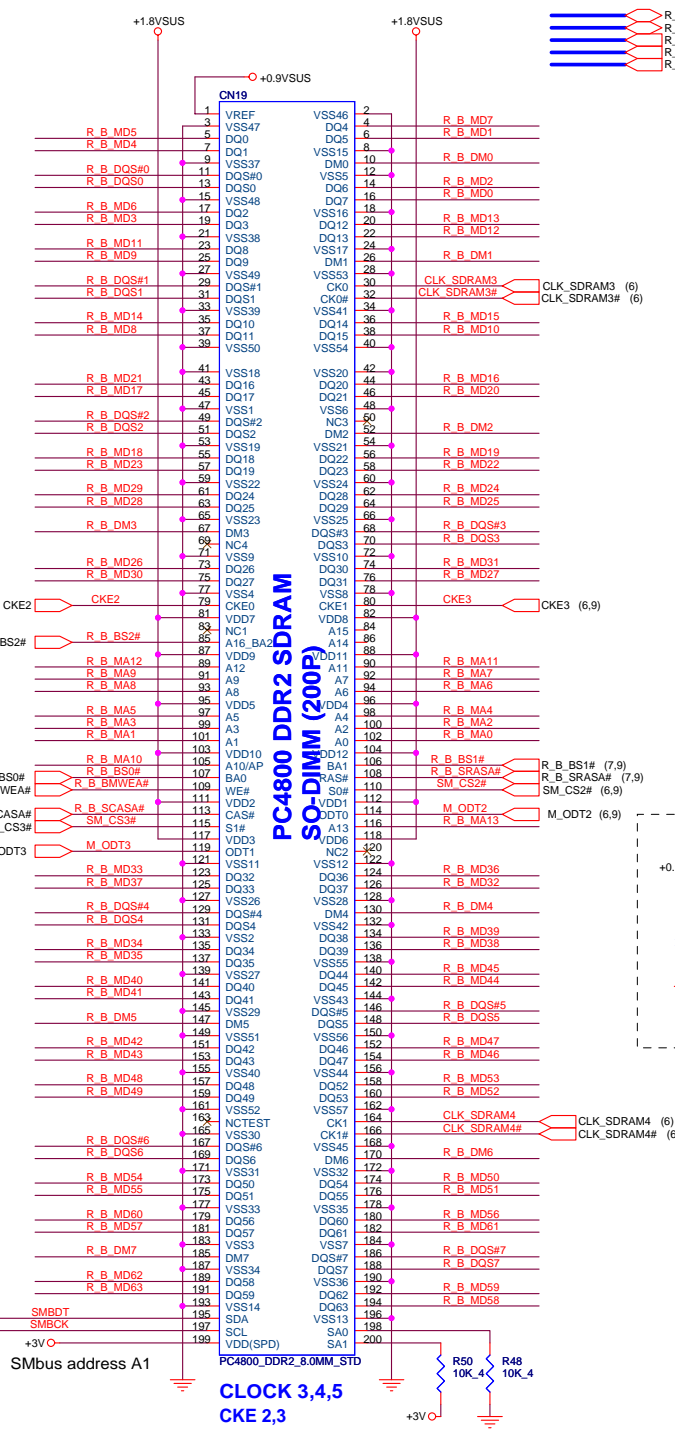
PROJECT : ZL8
Quanta Computer Inc.

Size	Document Number	Rev
	DDR2 TERMINATION	1A
Date:	Friday, June 10, 2005	Sheet 9 of 26



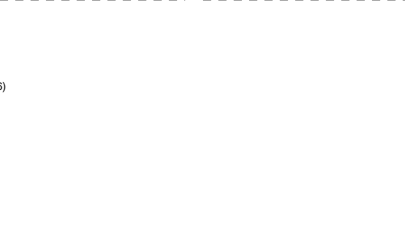
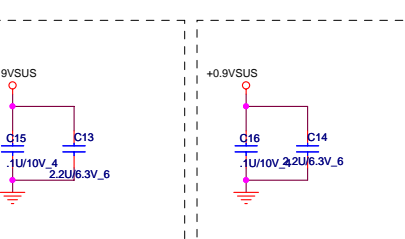
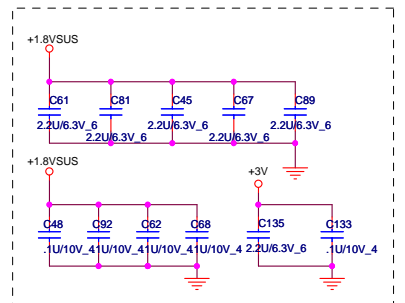
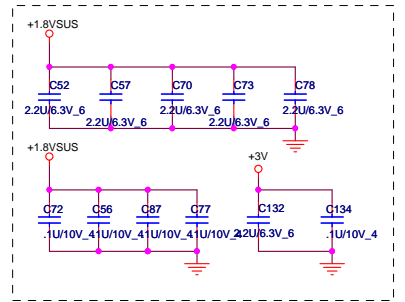
**PC4800 DDR2 SDRAM
SO-DIMM (200P)**

**CLOCK 0,1,2
CKE 0,1**

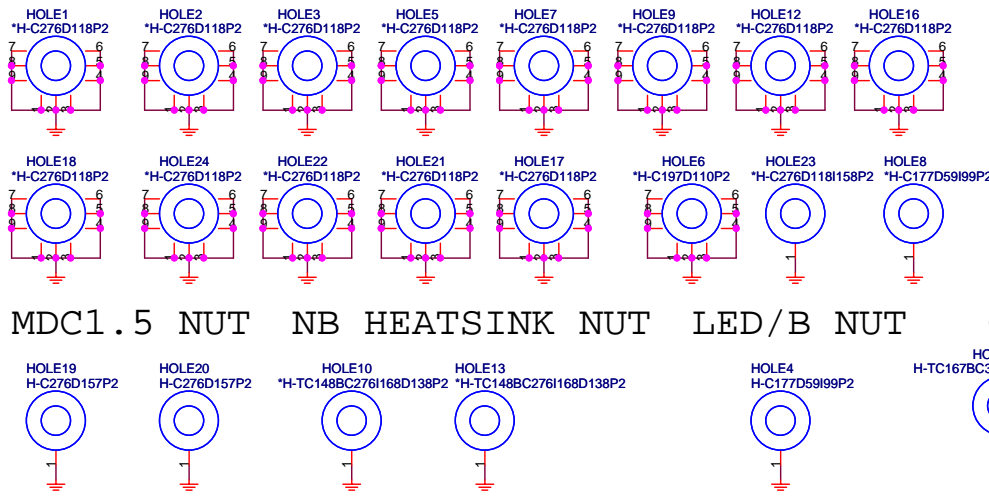
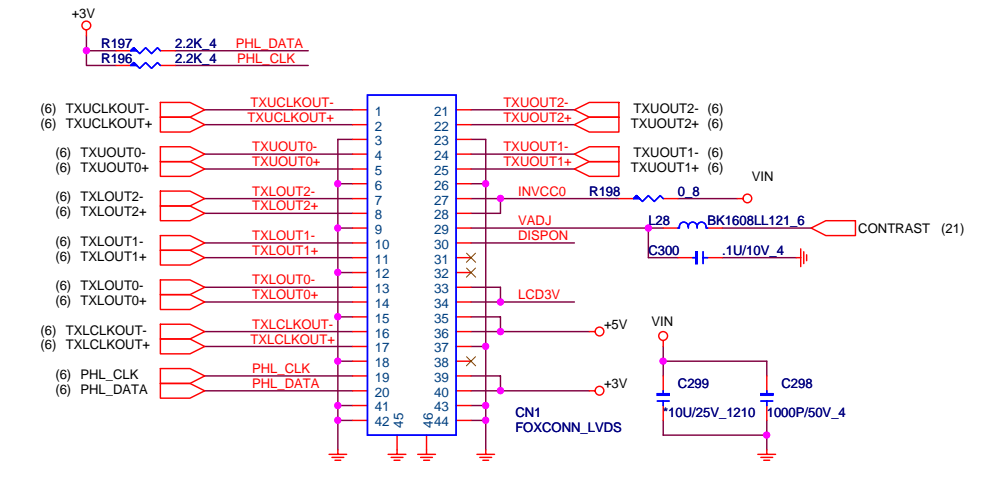
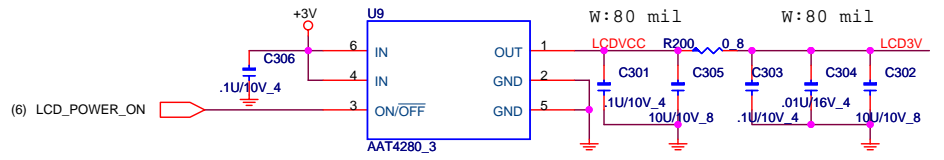
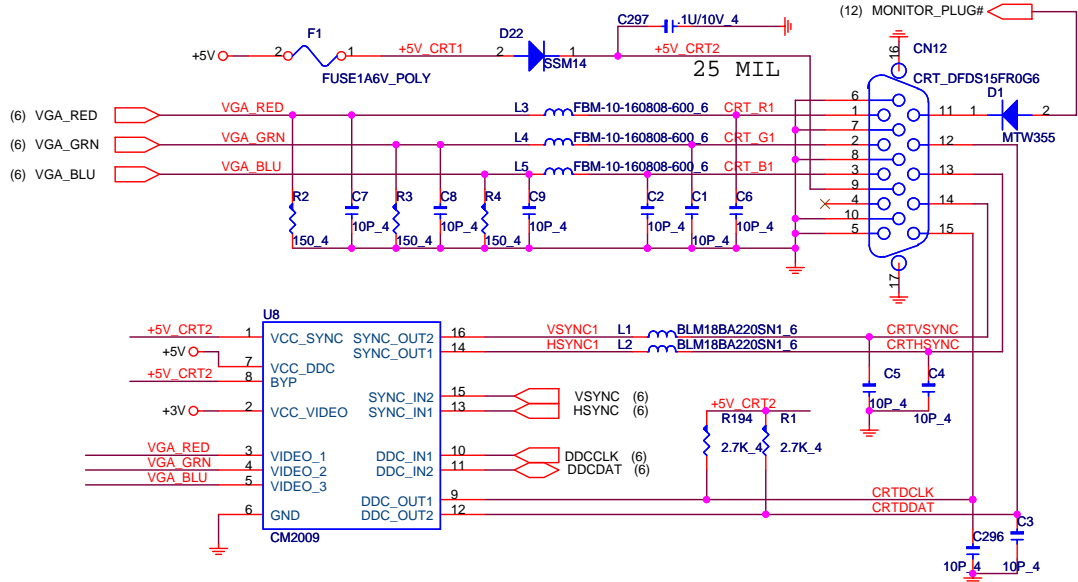


**PC4800 DDR2 SDRAM
SO-DIMM (200P)**

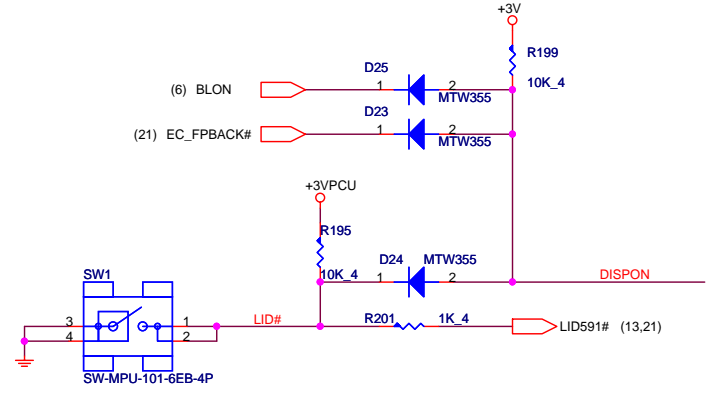
**CLOCK 3,4,5
CKE 2,3**



CRT PORT



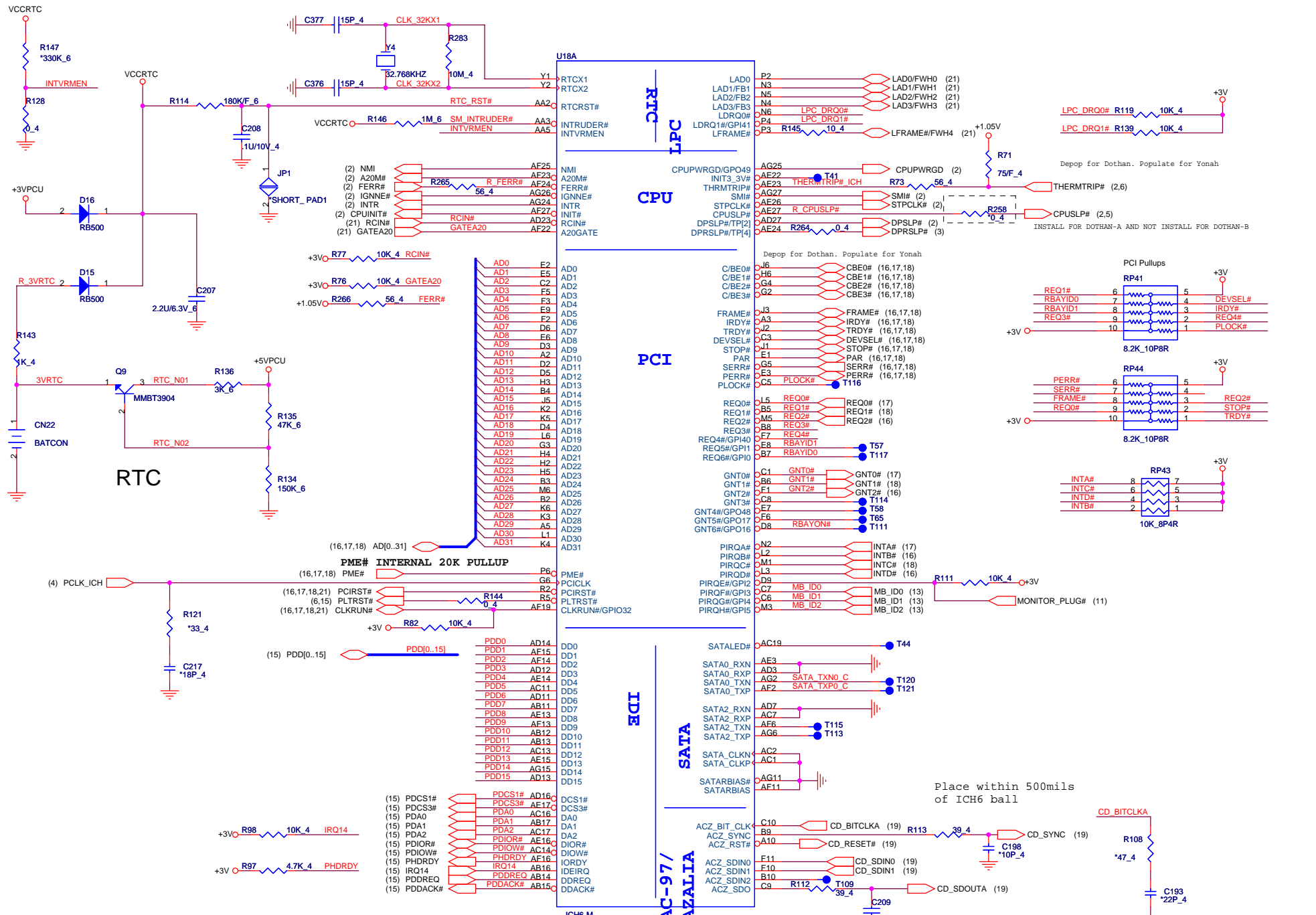
PCIE-CARD NUT

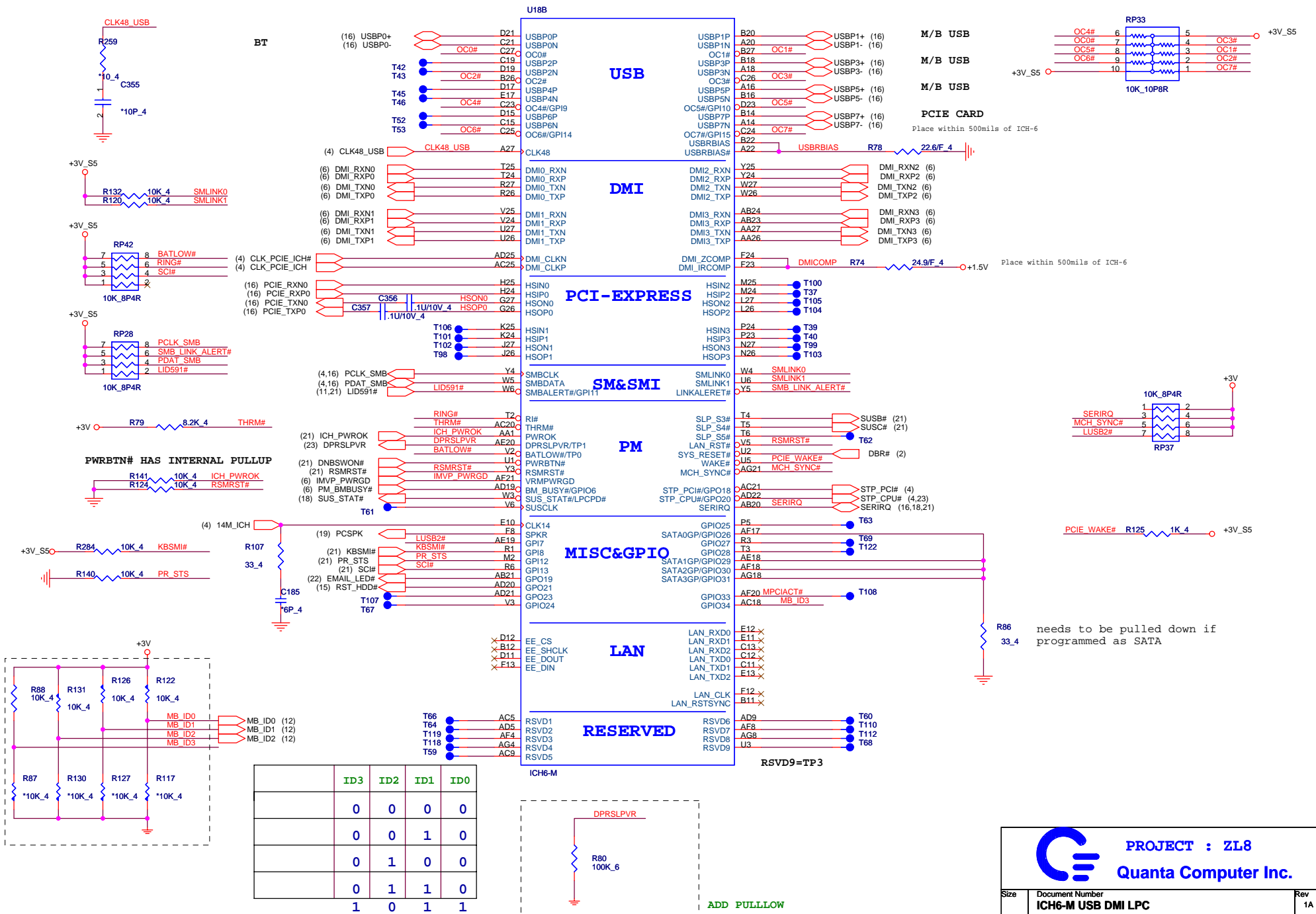


Lid Switch

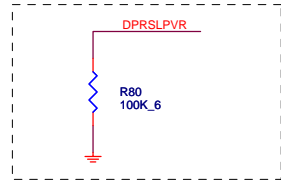
PROJECT : ZL8
Quanta Computer Inc.

Size	Document Number	Rev
	LVDS,VGA Ports, LID, & HOLES	1A
Date:	Friday, June 10, 2005	Sheet 11 of 26



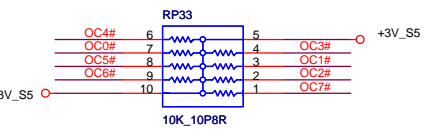


	ID3	ID2	ID1	ID0
	0	0	0	0
	0	0	1	0
	0	1	0	0
	0	1	1	0
	1	0	1	1



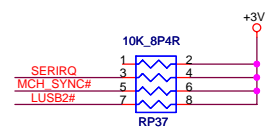
PROJECT : ZL8
Quanta Computer Inc.

Size	Document Number	Rev
	ICH6-M USB DMI LPC	1A
Date:	Friday, June 10, 2005	Sheet 13 of 26



Place within 500mils of ICH-6

Place within 500mils of ICH-6

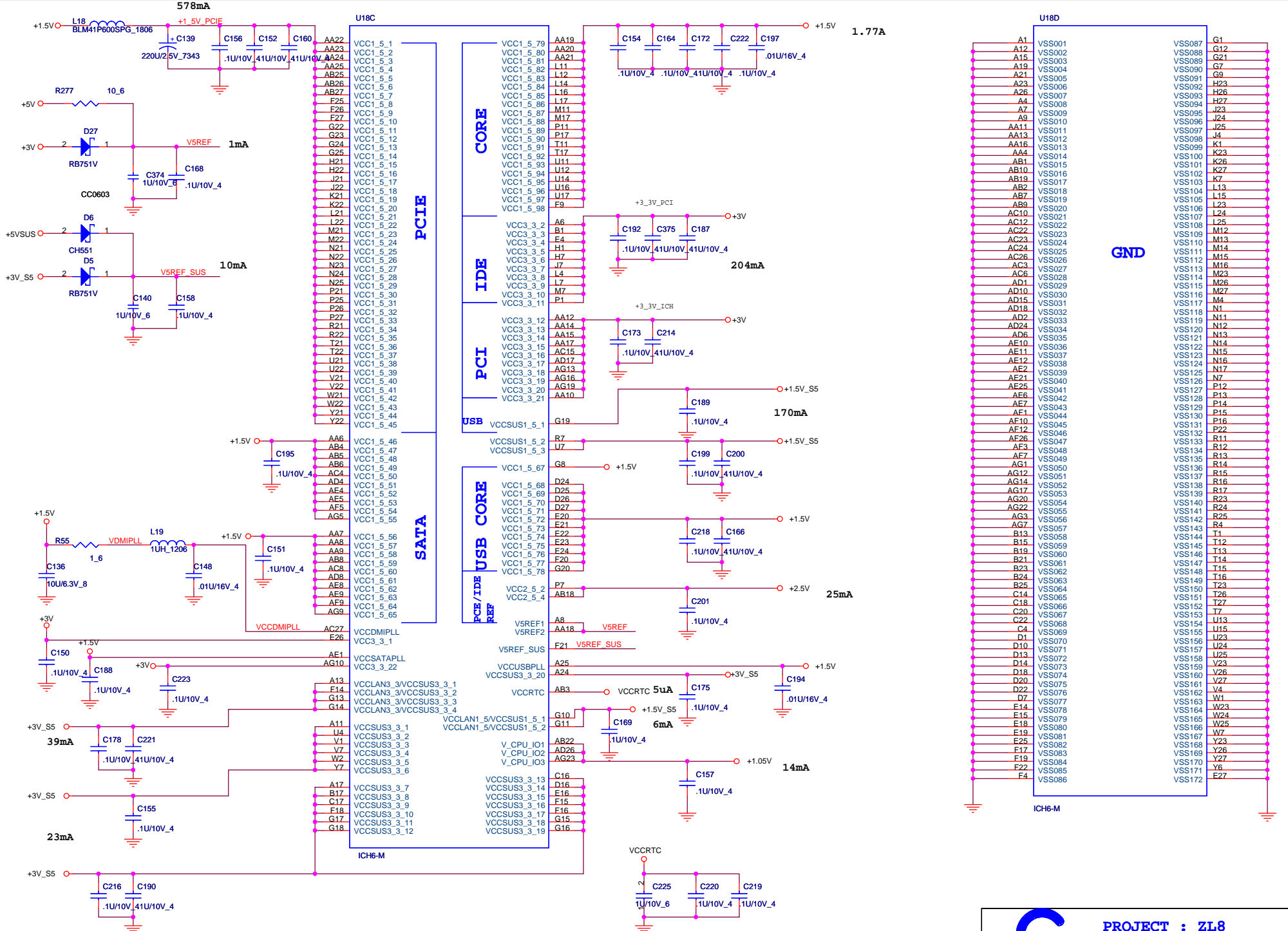


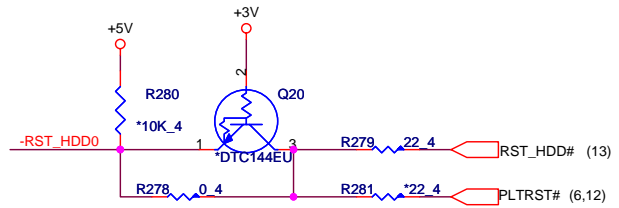
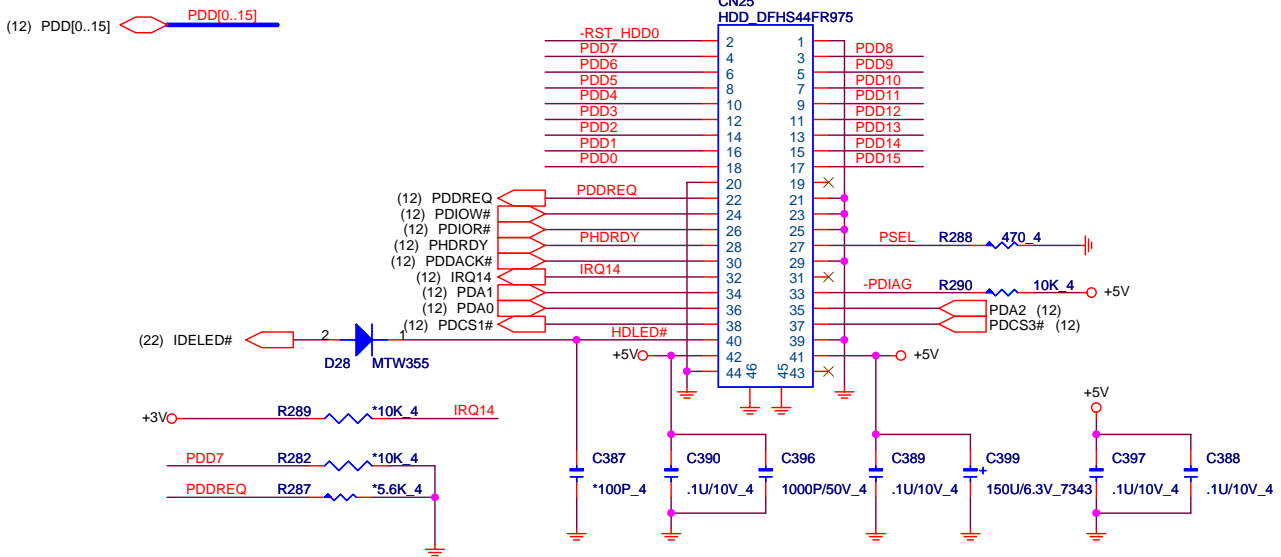
PCIE_WAKE# R125 1K_4 +3V_S5

R86 needs to be pulled down if programmed as SATA

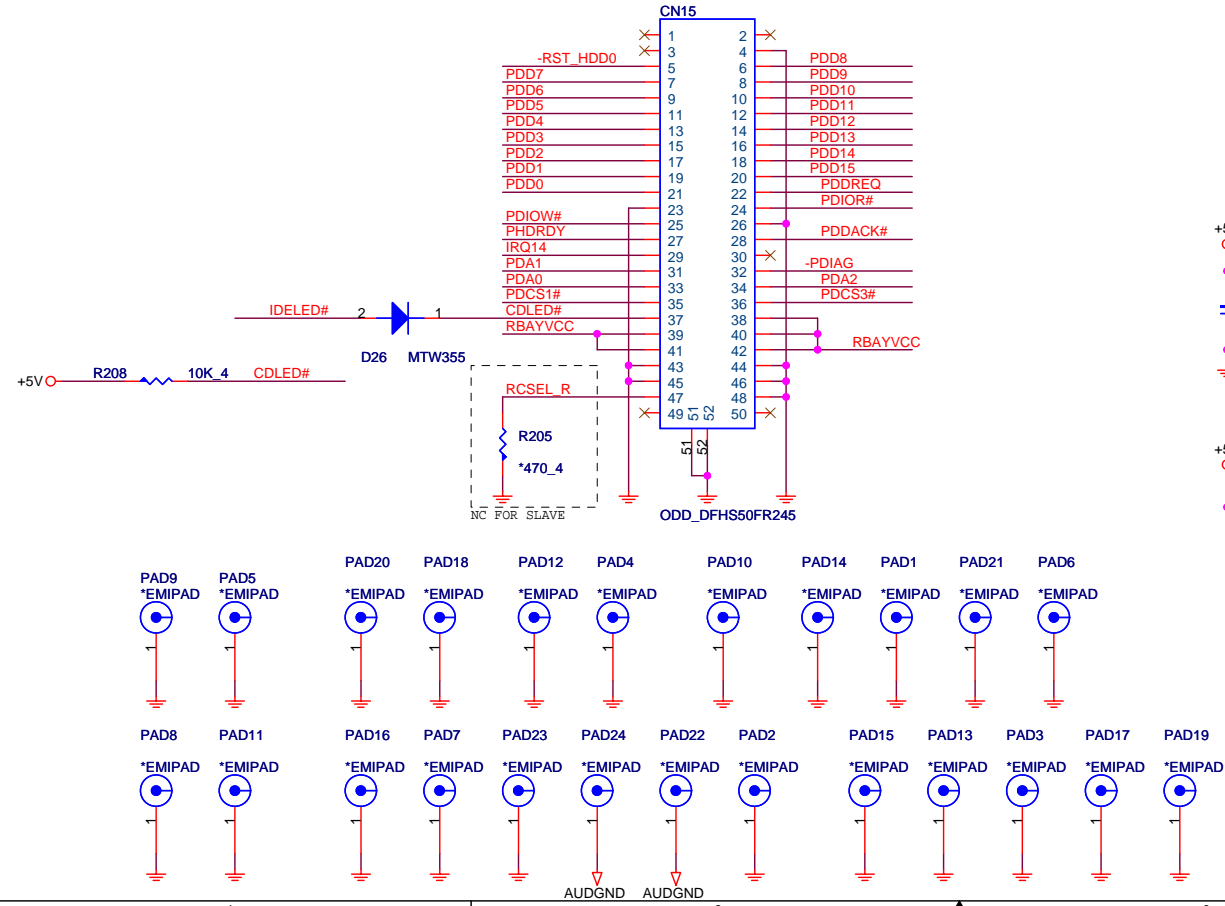
RSVD9=TP3

ADD PULLLOW





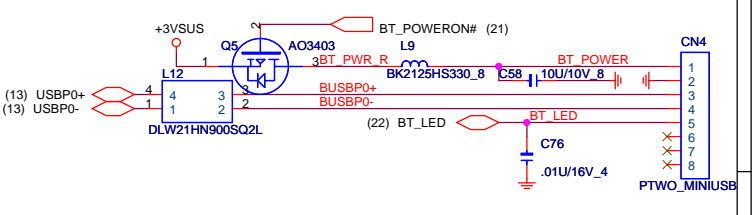
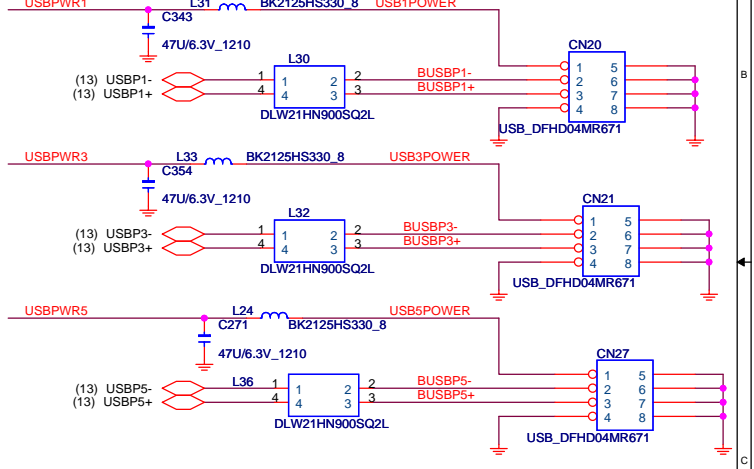
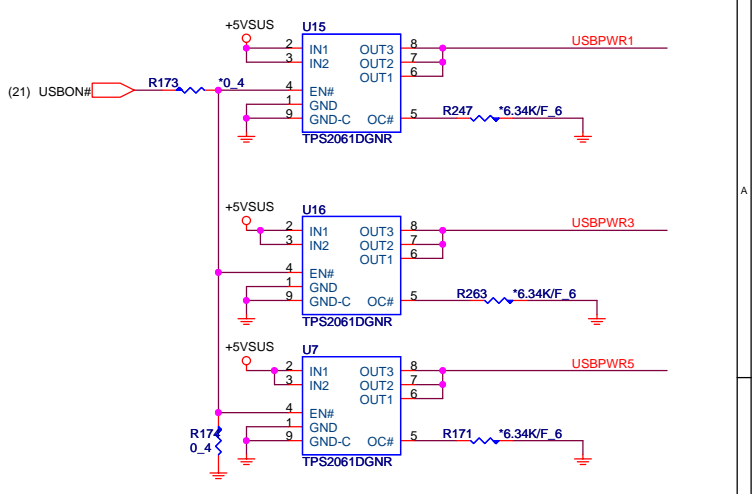
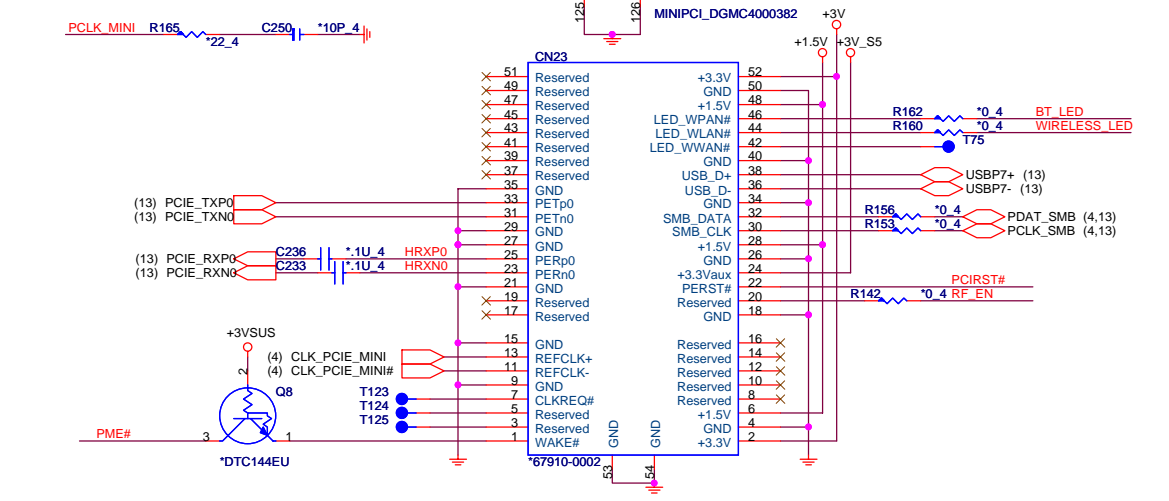
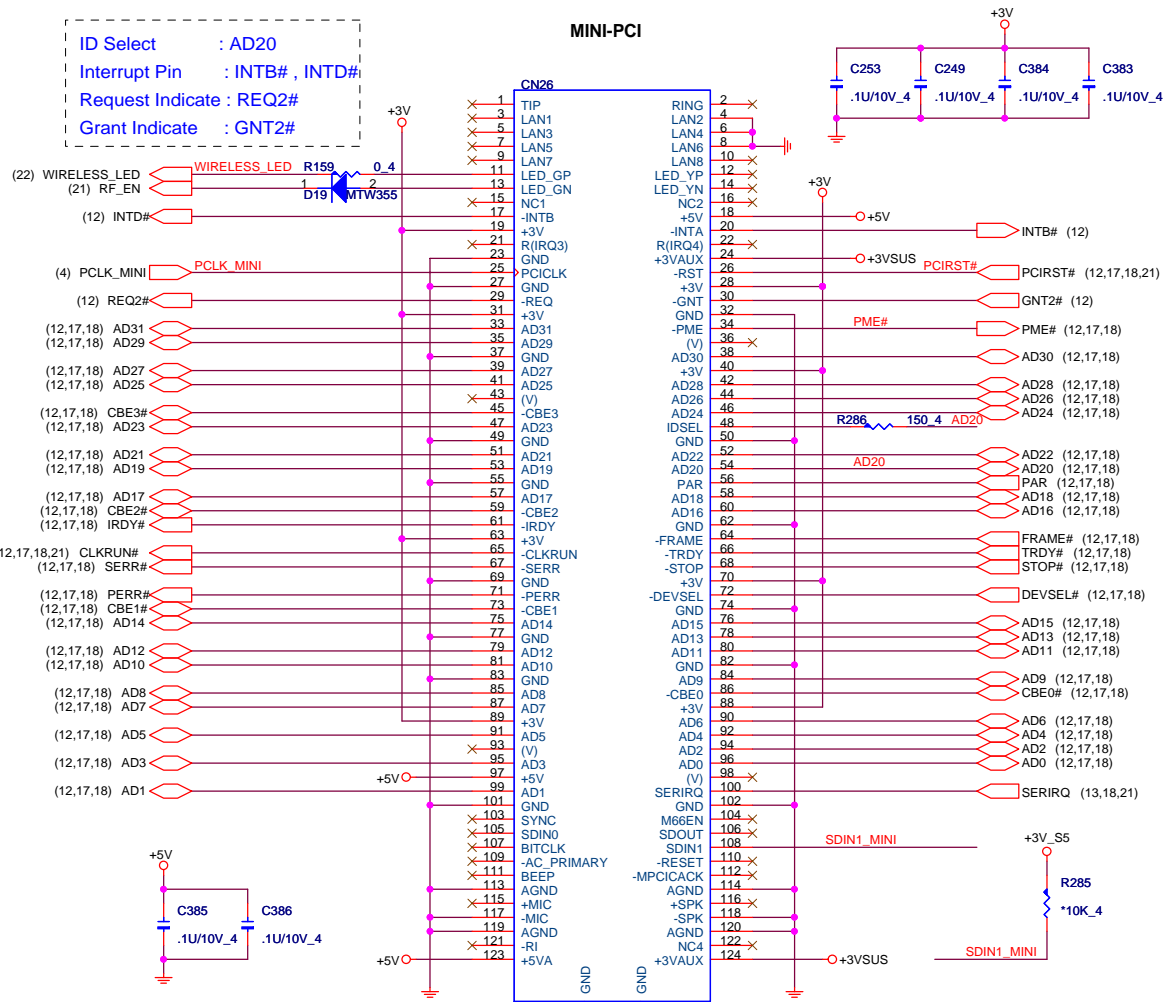
ODD Connector



PROJECT : ZL8
Quanta Computer Inc.
 Size Document Number Rev
HDD & CDROM 1A
 Date: Friday, June 10, 2005 Sheet 15 of 26

ID Select : AD20
 Interrupt Pin : INTB# , INTD#
 Request Indicate : REQ2#
 Grant Indicate : GNT2#

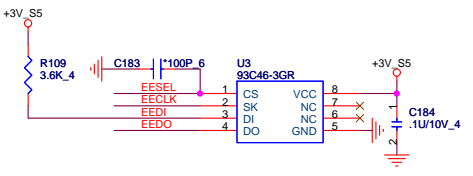
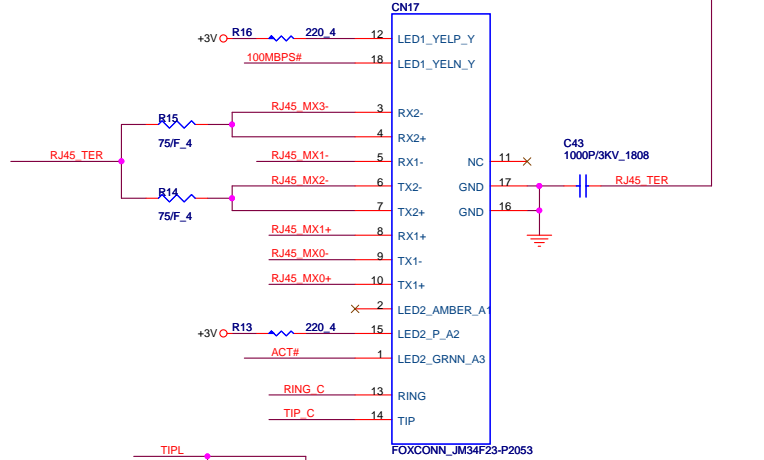
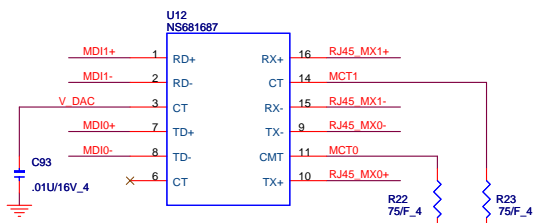
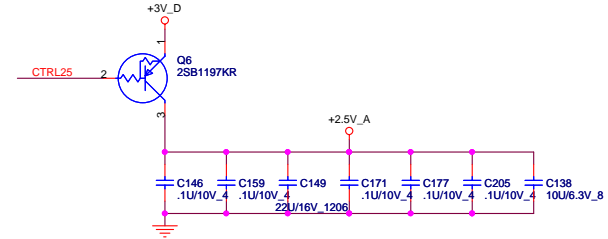
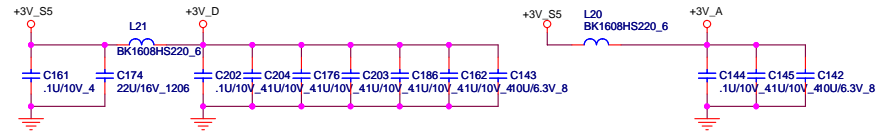
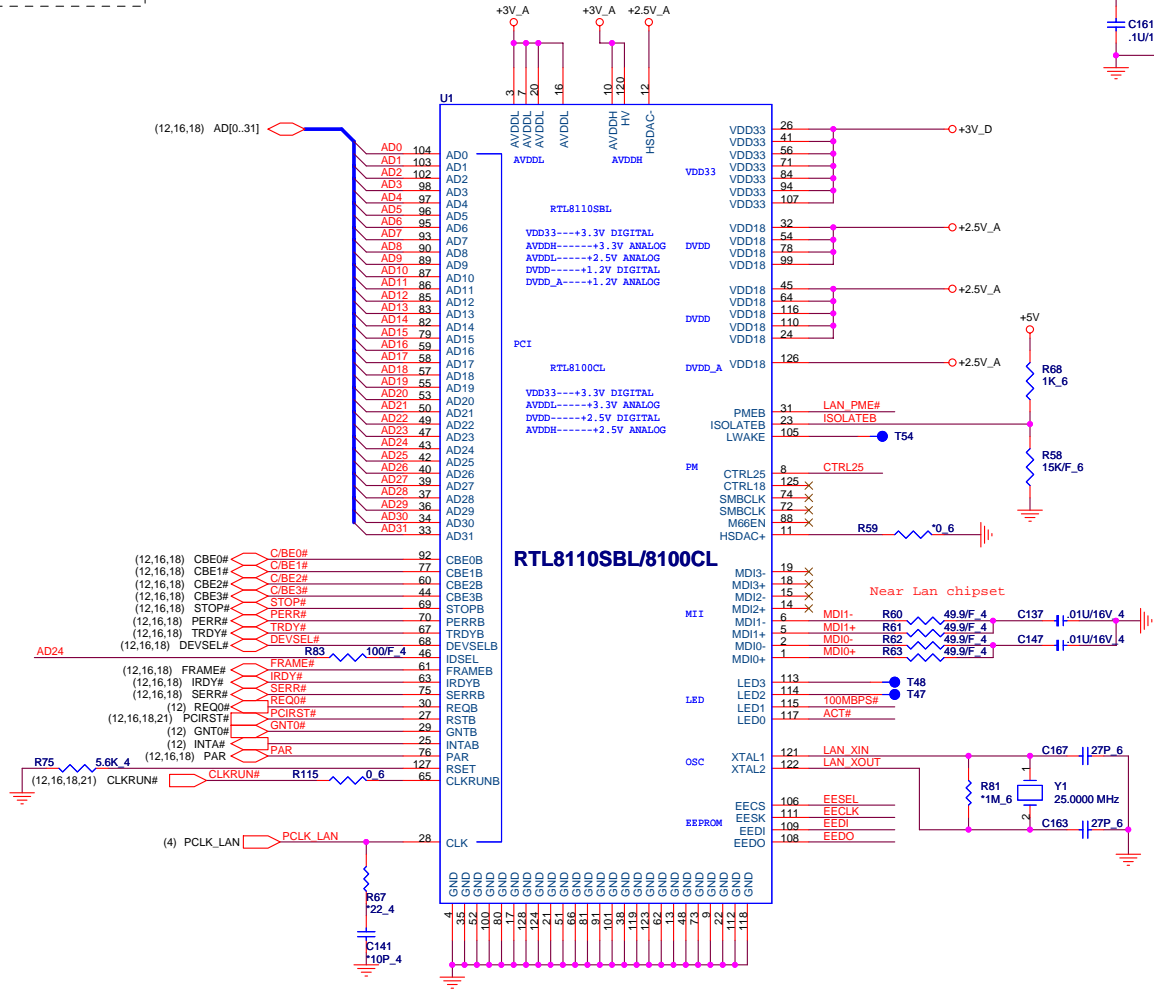
MINI-PCI



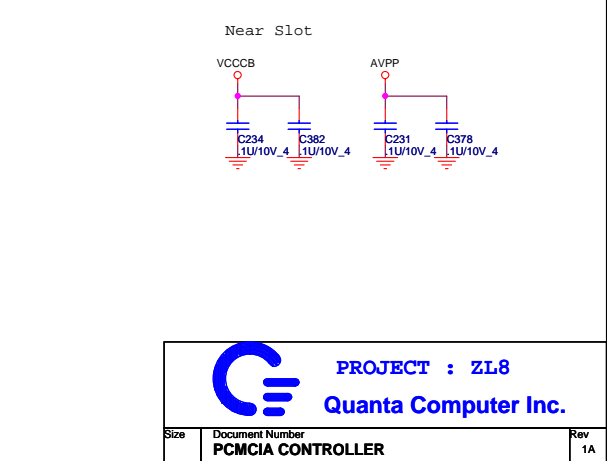
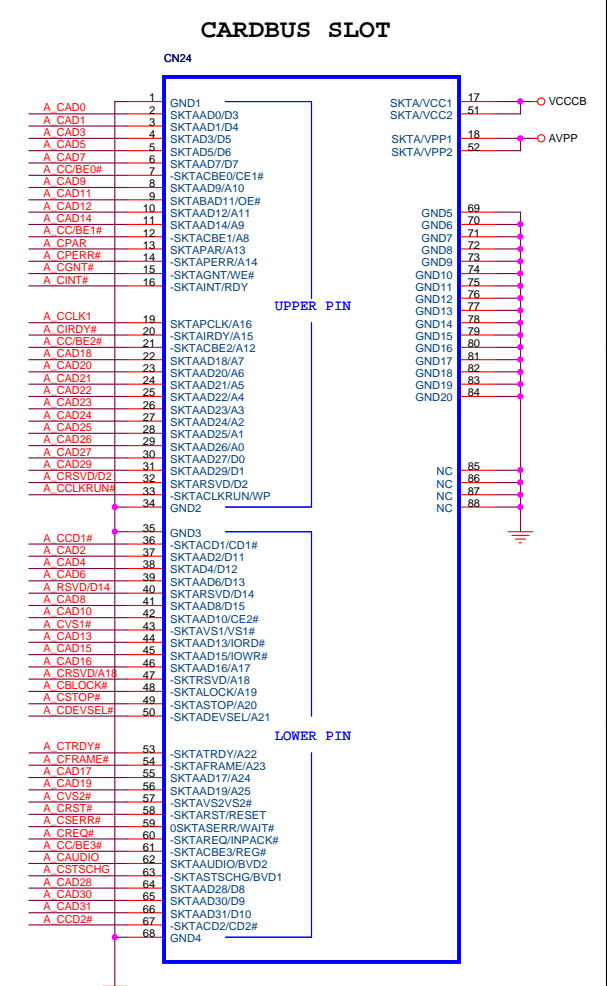
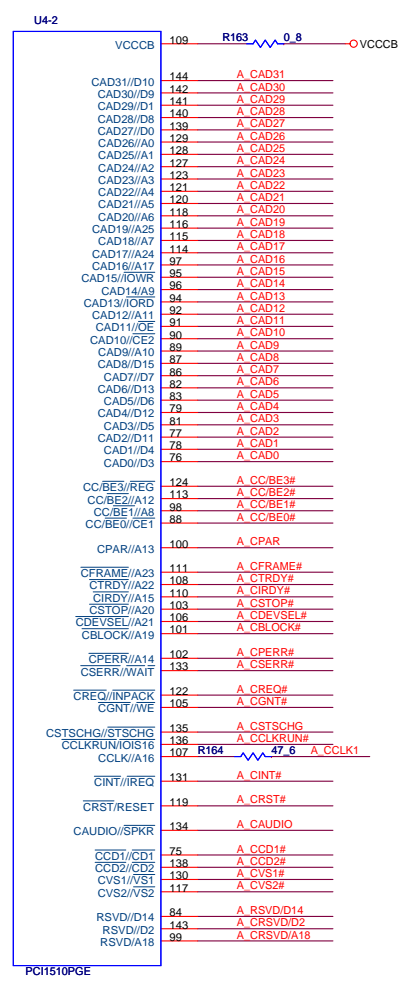
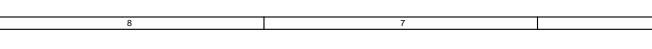
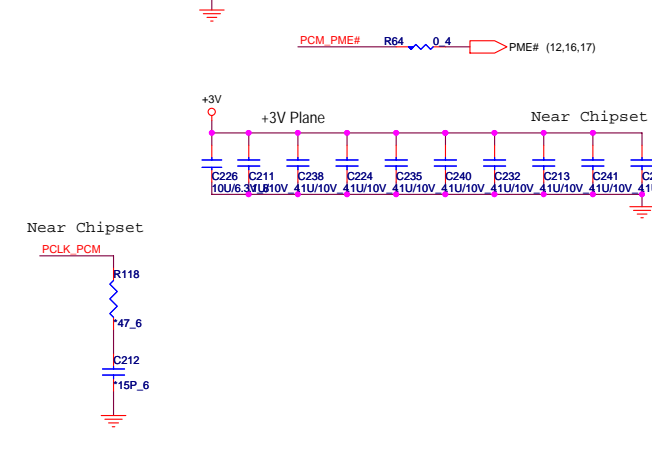
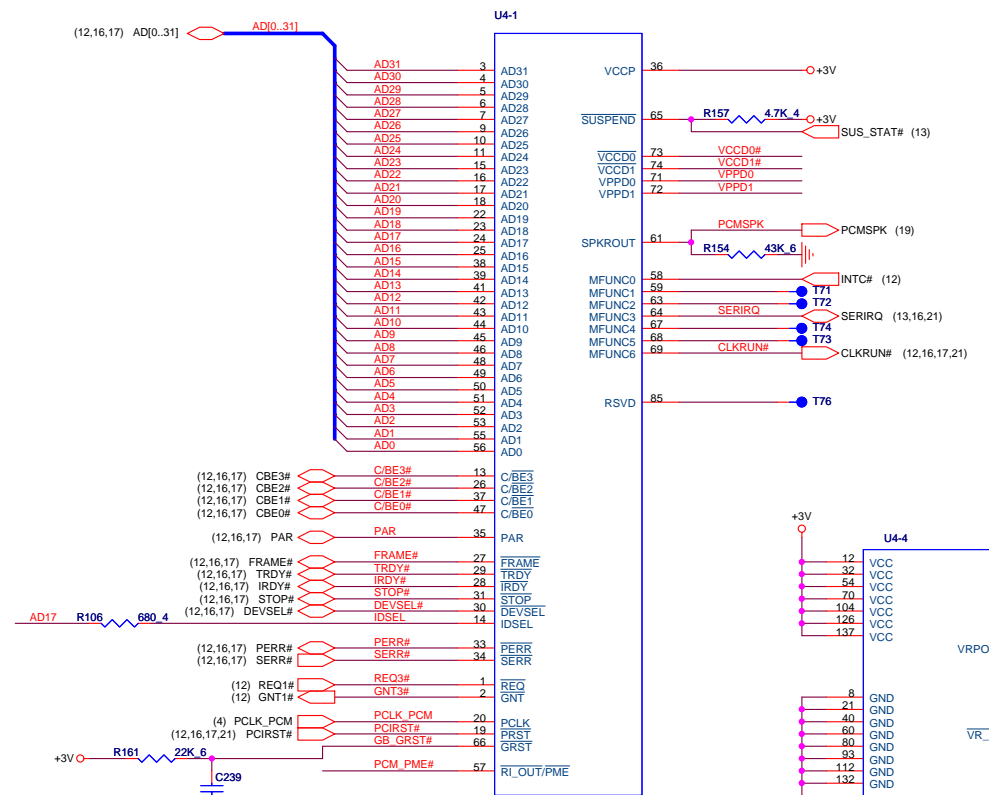

PROJECT : ZL8
Quanta Computer Inc.

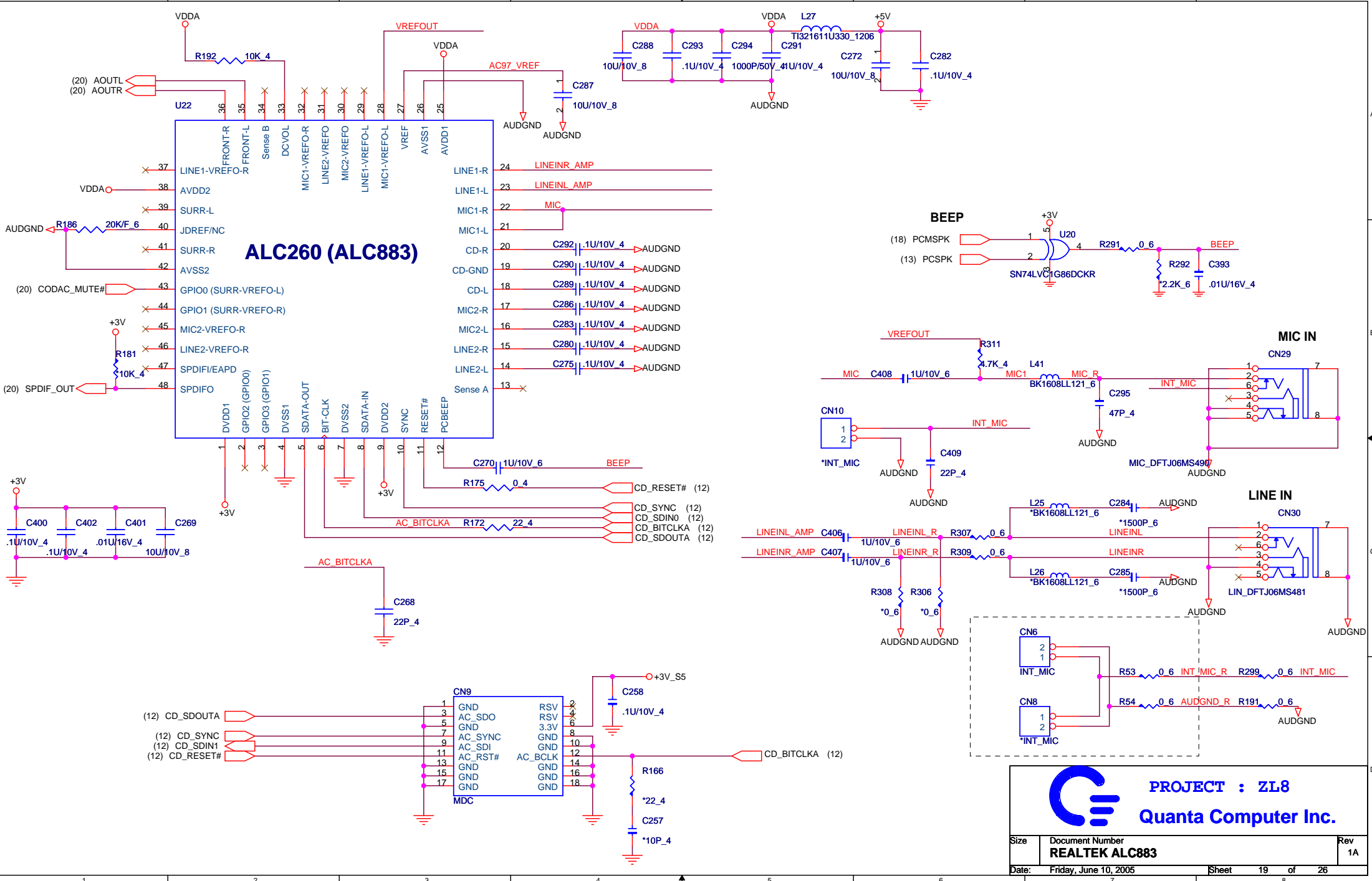
Size	Document Number	Rev
	MINI PCI,USB	1A
Date:	Friday, June 10, 2005	Sheet 16 of 26

ID Select : AD24
 Interrupt Pin : INTA#
 Request Indicate : REQ0#
 Grant Indicate : GNT0#



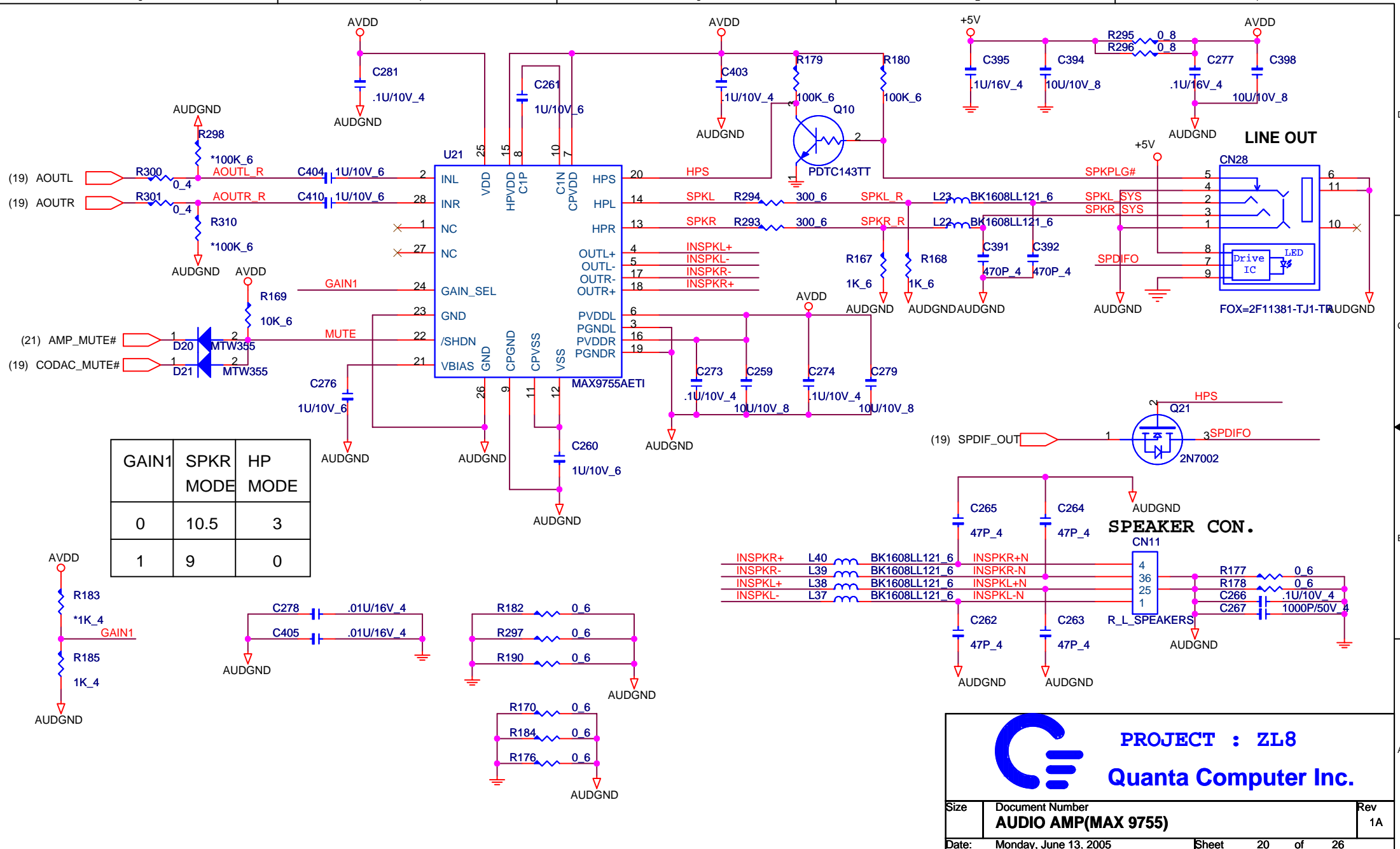
ID Select : AD17
 Interrupt Pin : INTC#
 Request Indicate : REQ1#
 Grant Indicate : GNT1#






PROJECT : ZL8
Quanta Computer Inc.

Size	Document Number	Rev
	REALTEK ALC883	1A
Date:	Friday, June 10, 2005	Sheet 19 of 26

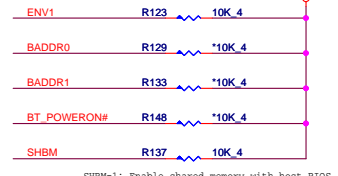
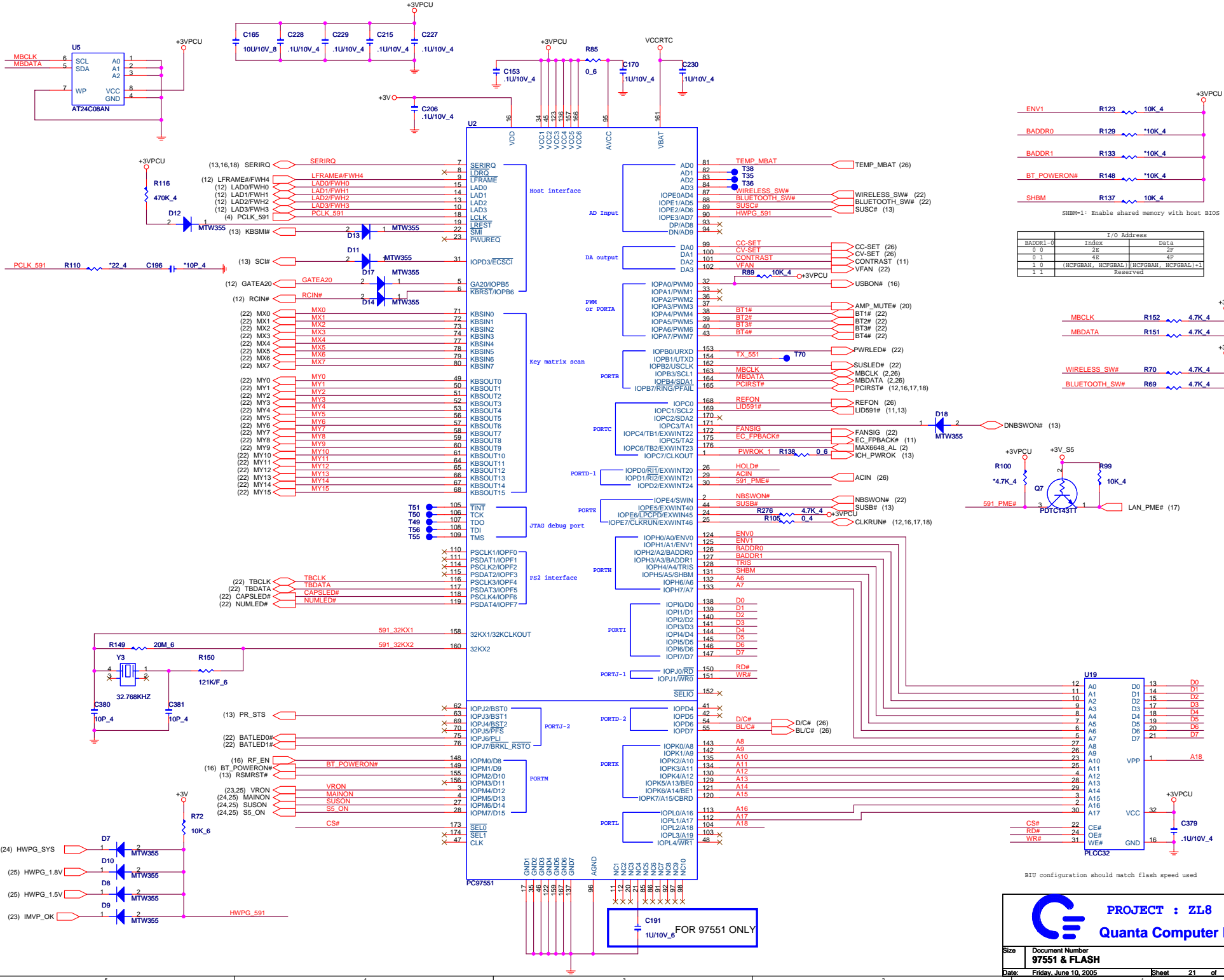


GAIN1	SPKR MODE	HP MODE
0	10.5	3
1	9	0

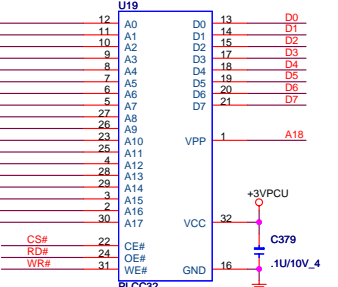
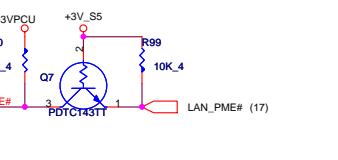
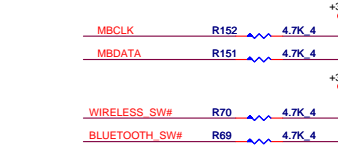


PROJECT : ZL8
Quanta Computer Inc.

Size	Document Number	Rev
	AUDIO AMP(MAX 9755)	1A
Date:	Monday, June 13, 2005	Sheet 20 of 26



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



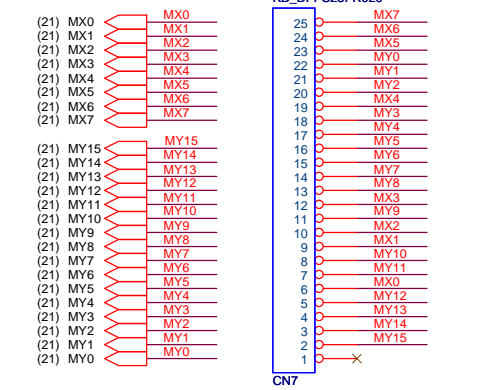
BIU configuration should match flash speed used

PROJECT : ZL8
Quanta Computer Inc.

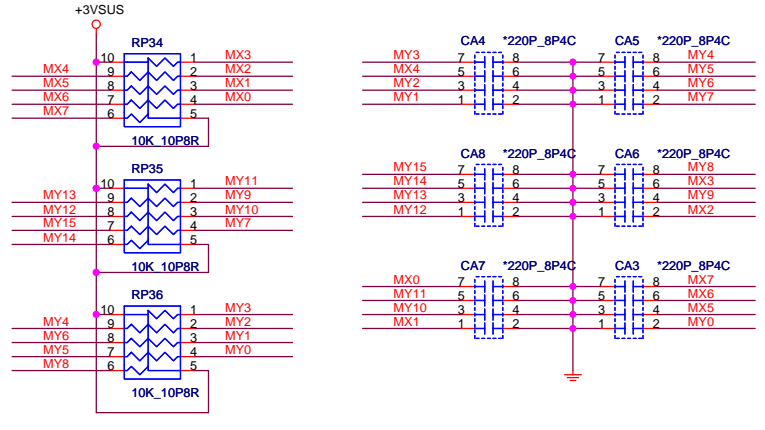
Size	Document Number	Rev
	97551 & FLASH	1A
Date	Friday, June 10, 2005	Sheet 21 of 26

C191 1U/10V_5 FOR 97551 ONLY

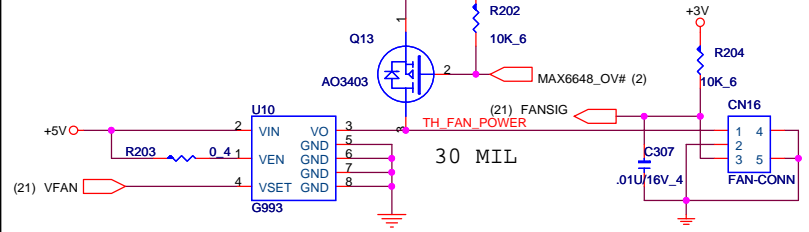
INT K/B



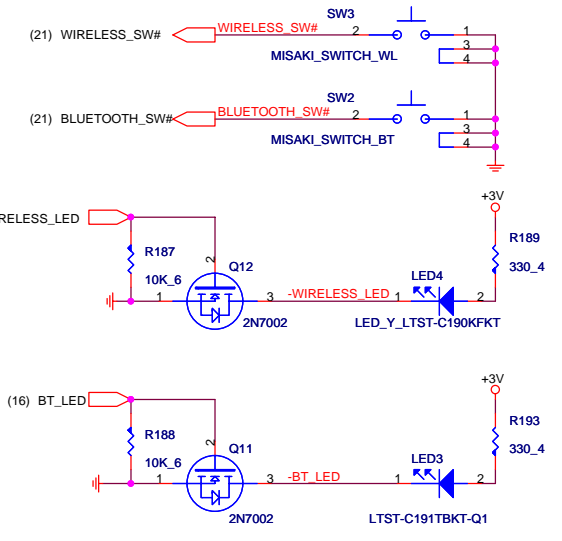
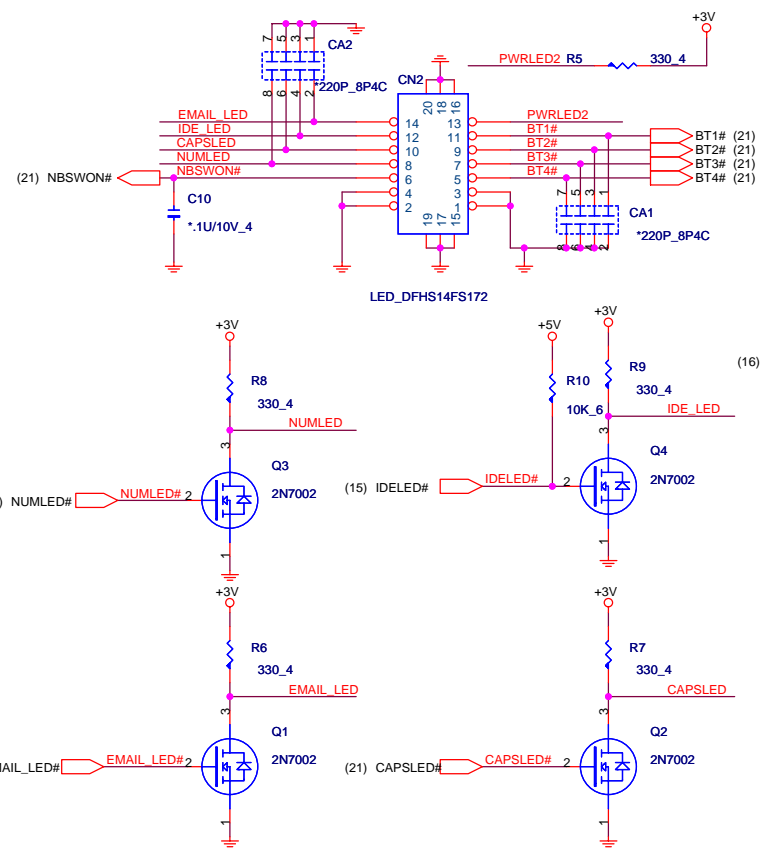
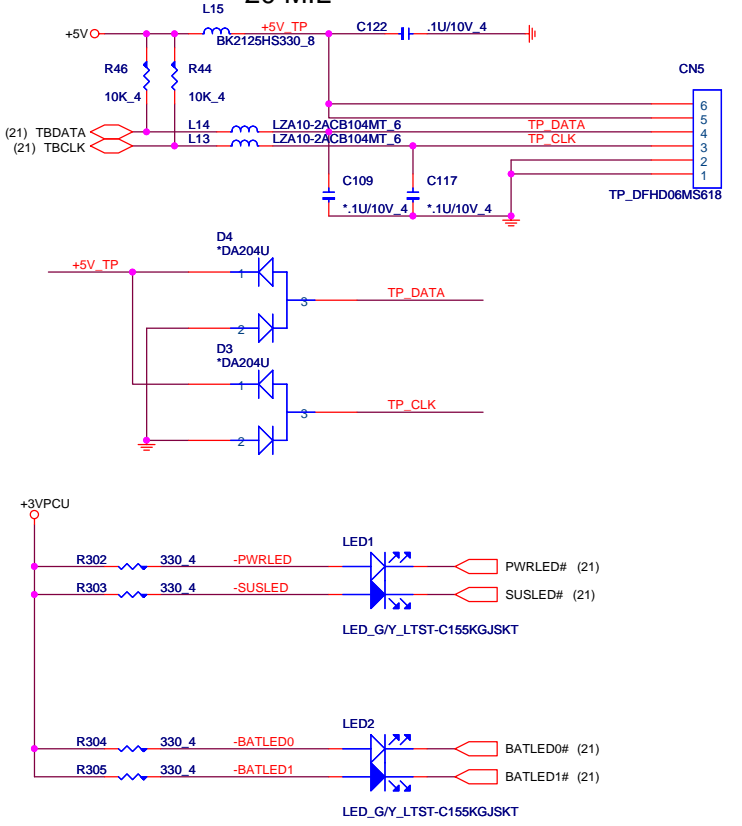
改上接點CONN



FAN CONTROL

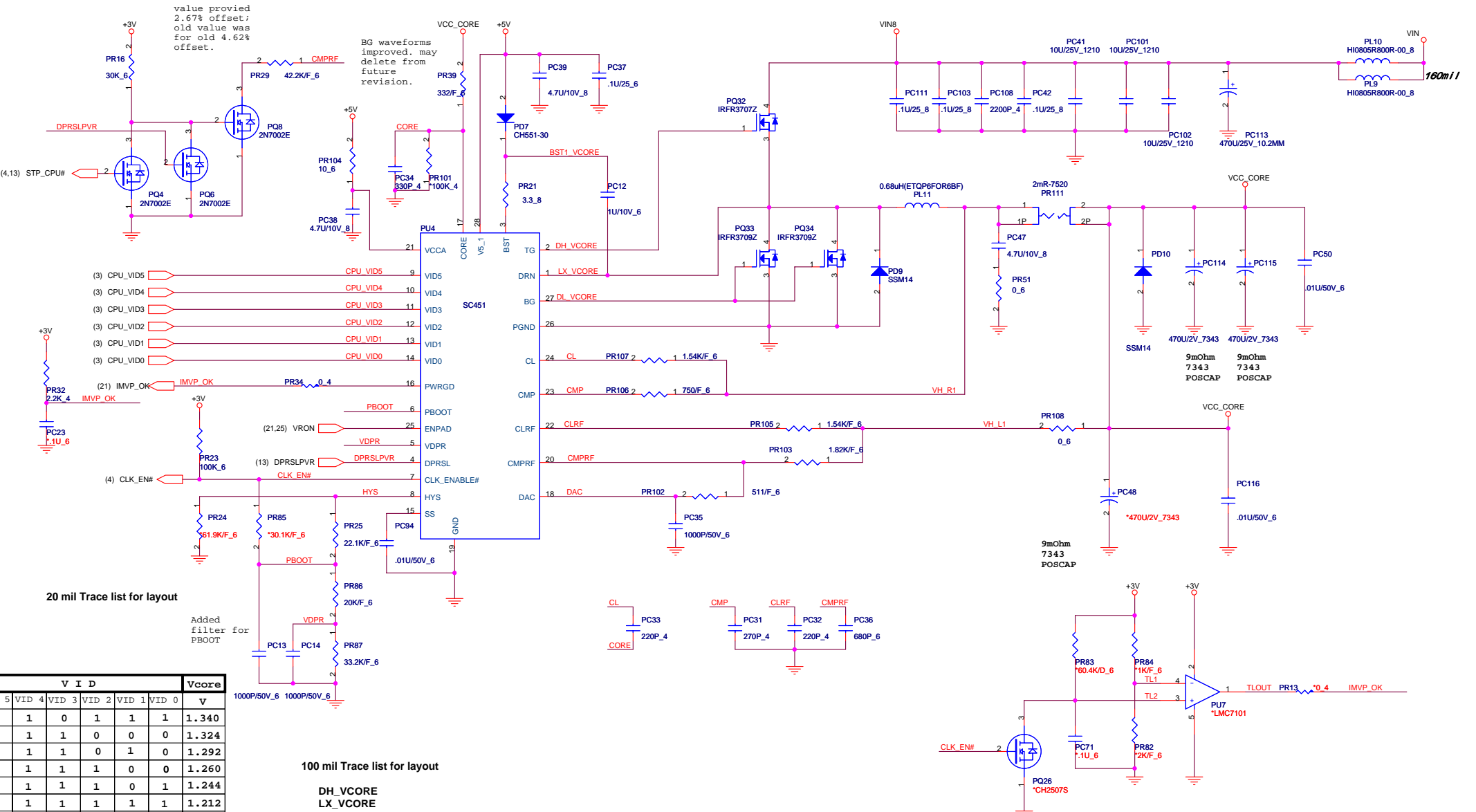


TOUCH PAD



PROJECT : ZL8
Quanta Computer Inc.
 Size: Document Number
T/P,FAN,SWITCH,LED,K/B
 Date: Friday, June 10, 2005 Sheet 22 of 26 Rev 1A

value provided
2.67% offset;
old value was
for old 4.62%
offset.



20 mil Trace list for layout

Added filter for PBOOT

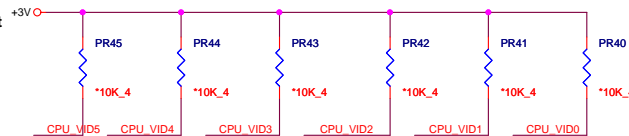
V I D							Vcore
VID 5	VID 4	VID 3	VID 2	VID 1	VID 0		v
0	1	0	1	1	1	1	1.340
0	1	1	0	0	0	0	1.324
0	1	1	0	1	0	0	1.292
0	1	1	1	0	0	0	1.260
0	1	1	1	1	0	1	1.244
0	1	1	1	1	1	1	1.212
1	0	0	0	0	1	1	1.180
1	0	0	1	1	0	0	1.100
1	0	1	0	0	1	1	1.052
1	0	1	0	1	1	1	1.020
1	0	1	1	1	0	0	0.972
1	1	0	0	0	0	0	0.940

100 mil Trace list for layout

DH_VCORE
LX_VCORE
DL_VCORE
DH_VCORE2
LX_VCORE2
DL_VCORE2

10 mil Trace list for layout

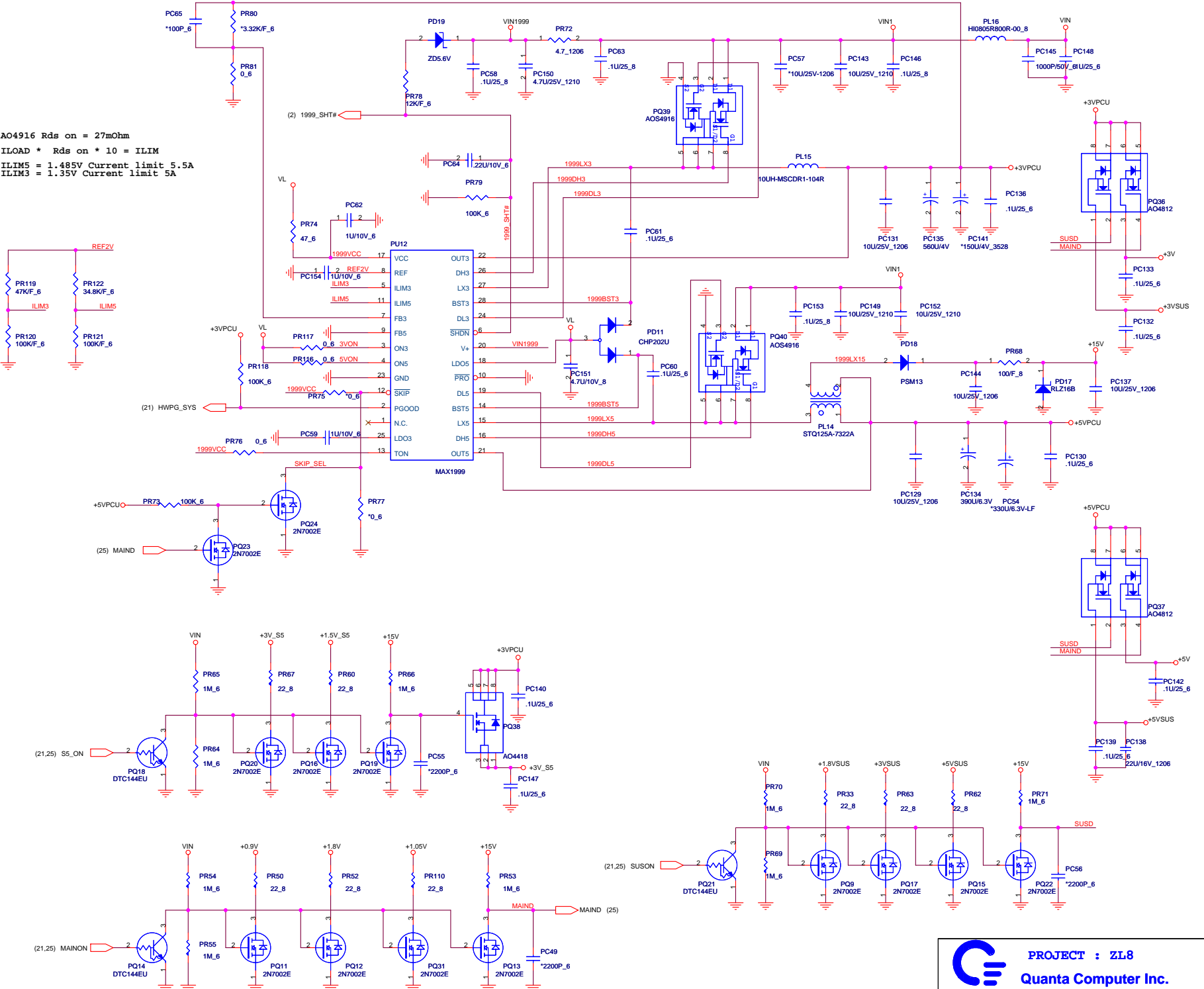
SC1476
pin 4 pin
5 pin 7
pin 25
pin 30



PROJECT : ZL8
Quanta Computer Inc.

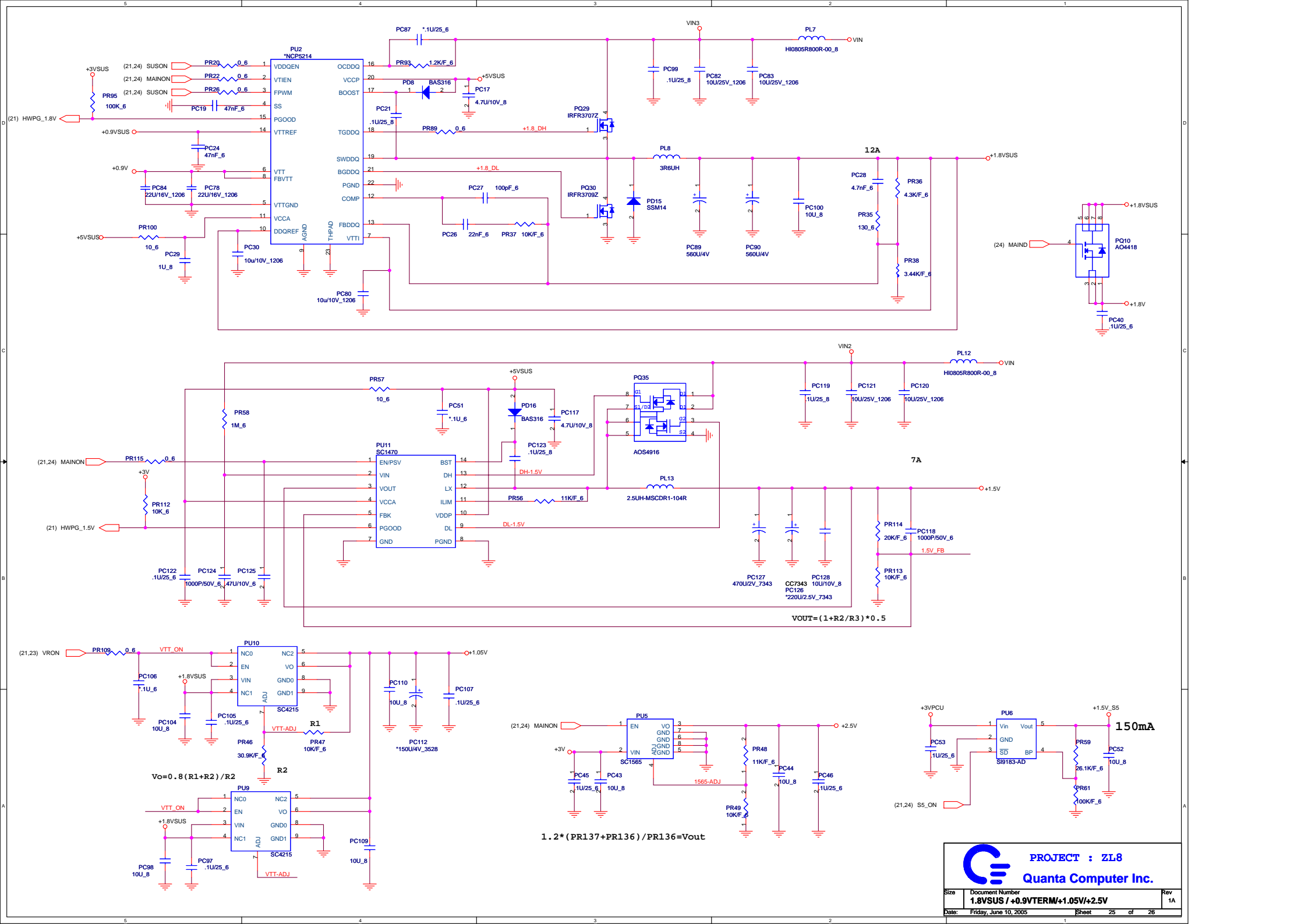
Size	Document Number	Rev
	CPU CORE (SC451)	1A
Date:	Friday, June 10, 2005	Sheet 23 of 26

AO4916 Rds on = 27mOhm
 ILOAD * Rds on * 10 = ILIM
 ILIM5 = 1.485V Current limit 5.5A
 ILIM3 = 1.35V Current limit 5A



PROJECT : ZL8
Quanta Computer Inc.

Size	Document Number	Rev
	5V/3.3V (MAX1999)	1A
Date:	Monday, June 13, 2005	Sheet 24 of 26



PROJECT : ZL8
Quanta Computer Inc.

Size	Document Number	Rev
Date:	1.8VSUS / +0.9VTERM/+1.05V/+2.5V	1A
Date:	Friday, June 10, 2005	Sheet 25 of 26

$$V_o = 0.8 (R1 + R2) / R2$$

$$1.2 * (PR137 + PR136) / PR136 = V_{out}$$

$$V_{OUT} = (1 + R2 / R3) * 0.5$$

