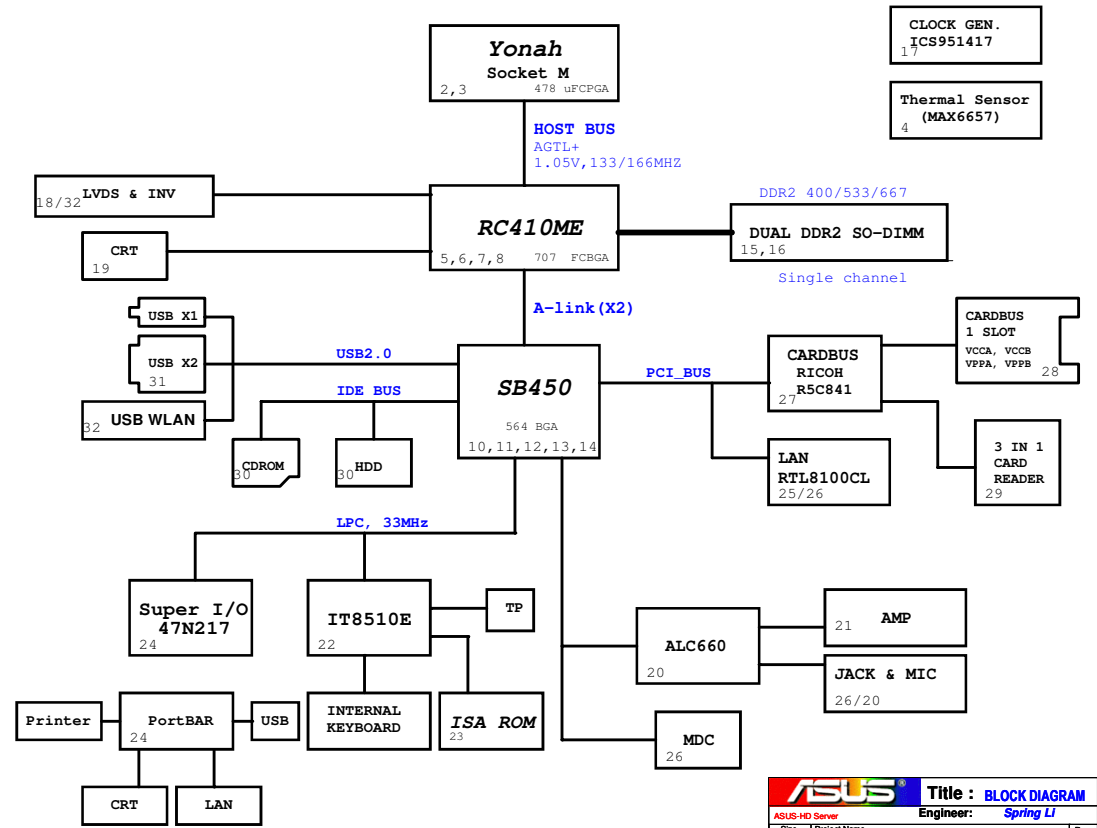


# Z94Rp

Rev.1.2

## Yonah/RC410ME/IXP450 BLOCK DIAGRAM

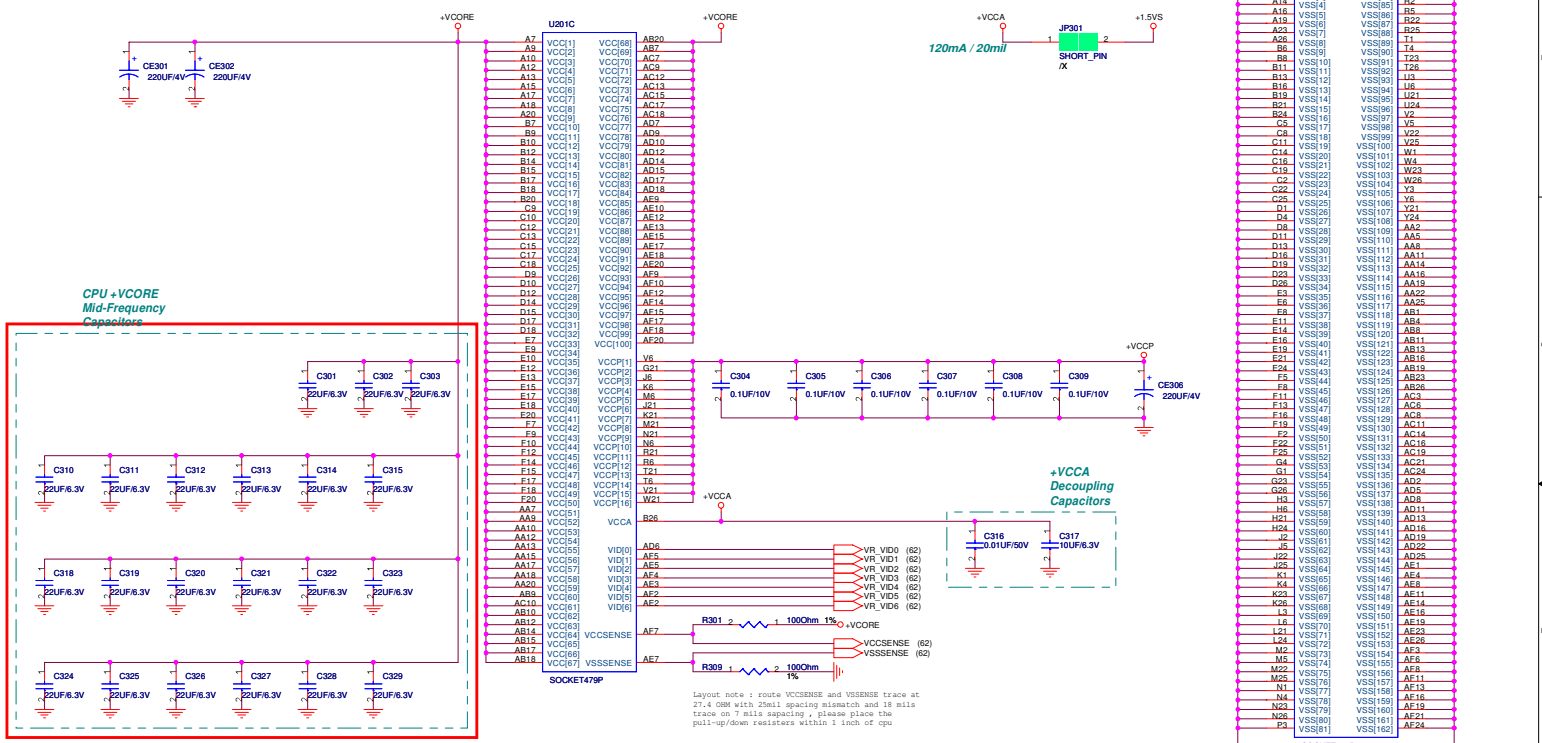
PAGE	TITLE
01	Block Diagram
02	Yonah CPU(1)
03	Yonah CPU(2)
04	THERMAL SENSOR/FAN
05	RC410ME AGTL+ I/F (1)
06	RC410ME A-LINK (2)
07	RC410ME DDR2 I/F (3)
08	RC410ME VIDEO I/F (4)
09	RC410ME POWER (5)
10	SB450 ALINK/PCI/CPU/LPC (1)
11	SB450 IDE (2)
12	SB450 AC97/USB (3)
13	SB450 POWER (4)
14	SB450 STRAPS (5)
15	DDR2 DIMMs
16	DDR2 TERMINATION
17	CLOCK GEN.-ICS951417
18	LVDS
19	CRT
20	ALC660/MIC
21	AMP/Speaker
22	EC IT8510E
23	ISA ROM
24	SIO/PortBAR
25	LAN 8100CL
26	RJ11+45 & MDC
27	CARDBUS R5C841
28	PCMCIA&Debug Port
29	SD/MS
30	HDD/CD-ROM
31	USB/LED/TP
32	INV/WLAN
33	Hole
34	System poweron sequency
35	System Resource
61	Power-SEQUENCE
62	Power-VCORE
63	Power-3VSUS/5VSUS
64	Power-1.8VSUS/1.2VS
65	Power-VCCP/1.5VS/0.9VS
66	Power-BAT
67	Power-CHARGE
68	Power-POWER LIMIT/AC-BAT DETECT
69	Power-LOAD SWITCH
70	Power Block Diagram
**	
**	



« Kennedy\_Zhang »

<b>ASUS</b>		<b>Title : BLOCK DIAGRAM</b>
ASUS-HP Server	Engineer: Spring Li	Rev
Size	Project Name	1.1
Custom	Z94Rp	
Date: 08/18/2006	Sheet 1 of 46	





CPU +VCCORE  
Mid-Frequency  
Capacitors

+VCCORE Low-Freq Capacitor  
Intel: 330UF \*6  
ATI: 330UF \*6  
R1F: 330UF \*4  
A7J: 330UF \*5  
+VCCORE Mid-Frequency Capacitor  
Intel: 22UF \*32  
ATI: 10UF \*26  
R1F: 22UF \*16  
A7J: 22UF\*29 use 19  
A6R7: 22UF\*21 use 21  
+VCCP Decoupling Capacitor  
Intel: 270UF \*1, 0.1UF \*6  
R1F: 220UF \*1, 0.1UF \*4  
A7J: 220UF \*1, 0.1UF \*6

A6R7: 220UF \*1, 0.1UF \*6

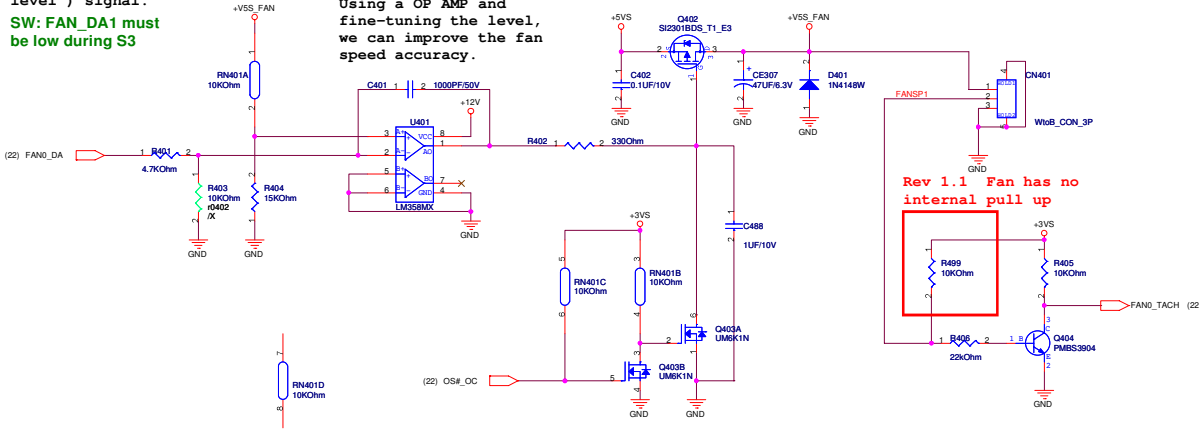
Layout note: route VCCSENSE and VSSSENSE trace at 27.4 Ohm with 2mil spacing mismatch and 18 mils trace on 7 mils spacing, please place the pull-up/down resistors within 1 inch of cpu

U201D		
A4	VSS11	VSS182
A5	VSS12	VSS183
A6	VSS13	VSS184
A7	VSS14	VSS185
A8	VSS15	VSS186
A9	VSS16	VSS187
A10	VSS17	VSS188
A11	VSS18	VSS189
A12	VSS19	VSS190
A13	VSS20	VSS191
A14	VSS21	VSS192
A15	VSS22	VSS193
A16	VSS23	VSS194
A17	VSS24	VSS195
A18	VSS25	VSS196
A19	VSS26	VSS197
A20	VSS27	VSS198
B1	VSS28	VSS199
B2	VSS29	VSS200
B3	VSS30	VSS201
B4	VSS31	VSS202
B5	VSS32	VSS203
B6	VSS33	VSS204
B7	VSS34	VSS205
B8	VSS35	VSS206
B9	VSS36	VSS207
B10	VSS37	VSS208
B11	VSS38	VSS209
B12	VSS39	VSS210
B13	VSS40	VSS211
B14	VSS41	VSS212
B15	VSS42	VSS213
B16	VSS43	VSS214
B17	VSS44	VSS215
B18	VSS45	VSS216
C1	VSS46	VSS217
C2	VSS47	VSS218
C3	VSS48	VSS219
C4	VSS49	VSS220
C5	VSS50	VSS221
C6	VSS51	VSS222
C7	VSS52	VSS223
C8	VSS53	VSS224
C9	VSS54	VSS225
C10	VSS55	VSS226
C11	VSS56	VSS227
C12	VSS57	VSS228
C13	VSS58	VSS229
C14	VSS59	VSS230
C15	VSS60	VSS231
C16	VSS61	VSS232
C17	VSS62	VSS233
C18	VSS63	VSS234
D1	VSS64	VSS235
D2	VSS65	VSS236
D3	VSS66	VSS237
D4	VSS67	VSS238
D5	VSS68	VSS239
D6	VSS69	VSS240
D7	VSS70	VSS241
D8	VSS71	VSS242
D9	VSS72	VSS243
D10	VSS73	VSS244
D11	VSS74	VSS245
D12	VSS75	VSS246
D13	VSS76	VSS247
D14	VSS77	VSS248
D15	VSS78	VSS249
D16	VSS79	VSS250
D17	VSS80	VSS251
D18	VSS81	VSS252
E1	VSS82	VSS253
E2	VSS83	VSS254
E3	VSS84	VSS255
E4	VSS85	VSS256
E5	VSS86	VSS257
E6	VSS87	VSS258
E7	VSS88	VSS259
E8	VSS89	VSS260
E9	VSS90	VSS261
E10	VSS91	VSS262
E11	VSS92	VSS263
E12	VSS93	VSS264
E13	VSS94	VSS265
E14	VSS95	VSS266
E15	VSS96	VSS267
E16	VSS97	VSS268
E17	VSS98	VSS269
E18	VSS99	VSS270
F1	VSS100	VSS271
F2	VSS101	VSS272
F3	VSS102	VSS273
F4	VSS103	VSS274
F5	VSS104	VSS275
F6	VSS105	VSS276
F7	VSS106	VSS277
F8	VSS107	VSS278
F9	VSS108	VSS279
F10	VSS109	VSS280
F11	VSS110	VSS281
F12	VSS111	VSS282
F13	VSS112	VSS283
F14	VSS113	VSS284
F15	VSS114	VSS285
F16	VSS115	VSS286
F17	VSS116	VSS287
F18	VSS117	VSS288
F19	VSS118	VSS289
F20	VSS119	VSS290
G1	VSS120	VSS291
G2	VSS121	VSS292
G3	VSS122	VSS293
G4	VSS123	VSS294
G5	VSS124	VSS295
G6	VSS125	VSS296
G7	VSS126	VSS297
G8	VSS127	VSS298
G9	VSS128	VSS299
G10	VSS129	VSS300
G11	VSS130	VSS301
G12	VSS131	VSS302
G13	VSS132	VSS303
G14	VSS133	VSS304
G15	VSS134	VSS305
G16	VSS135	VSS306
G17	VSS136	VSS307
G18	VSS137	VSS308
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H2	VSS139	VSS310
H3	VSS140	VSS311
H4	VSS141	VSS312
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H6	VSS143	VSS314
H7	VSS144	VSS315
H8	VSS145	VSS316
H9	VSS146	VSS317
H10	VSS147	VSS318
H11	VSS148	VSS319
H12	VSS149	VSS320
H13	VSS150	VSS321
H14	VSS151	VSS322
H15	VSS152	VSS323
H16	VSS153	VSS324
H17	VSS154	VSS325
H18	VSS155	VSS326
I1	VSS156	VSS327
I2	VSS157	VSS328
I3	VSS158	VSS329
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I5	VSS160	VSS331
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I10	VSS165	VSS336
I11	VSS166	VSS337
I12	VSS167	VSS338
I13	VSS168	VSS339
I14	VSS169	VSS340
I15	VSS170	VSS341
I16	VSS171	VSS342
I17	VSS172	VSS343
I18	VSS173	VSS344
J1	VSS174	VSS345
J2	VSS175	VSS346
J3	VSS176	VSS347
J4	VSS177	VSS348
J5	VSS178	VSS349
J6	VSS179	VSS350
J7	VSS180	VSS351
J8	VSS181	VSS352
J9	VSS182	VSS353
J10	VSS183	VSS354
J11	VSS184	VSS355
J12	VSS185	VSS356
J13	VSS186	VSS357
J14	VSS187	VSS358
J15	VSS188	VSS359
J16	VSS189	VSS360
J17	VSS190	VSS361
J18	VSS191	VSS362
K1	VSS192	VSS363
K2	VSS193	VSS364
K3	VSS194	VSS365
K4	VSS195	VSS366
K5	VSS196	VSS367
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K13	VSS204	VSS375
K14	VSS205	VSS376
K15	VSS206	VSS377
K16	VSS207	VSS378
K17	VSS208	VSS379
K18	VSS209	VSS380
L1	VSS210	VSS381
L2	VSS211	VSS382
L3	VSS212	VSS383
L4	VSS213	VSS384
L5	VSS214	VSS385
L6	VSS215	VSS386
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L13	VSS222	VSS393
L14	VSS223	VSS394
L15	VSS224	VSS395
L16	VSS225	VSS396
L17	VSS226	VSS397
L18	VSS227	VSS398
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M2	VSS229	VSS400
M3	VSS230	VSS401
M4	VSS231	VSS402
M5	VSS232	VSS403
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N11	VSS256	VSS427
N12	VSS257	VSS428
N13	VSS258	VSS429
N14	VSS259	VSS430
N15	VSS260	VSS431
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N17	VSS262	VSS433
N18	VSS263	VSS434
N19	VSS264	VSS435
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N30	VSS275	VSS446
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N33	VSS278	VSS449
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N125	VSS370	VSS541
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N147	VSS392	VSS563
N148	VSS393	VSS564
N149	VSS394	VSS565
N150	VSS395	VSS566
N151	VSS396	VSS567
N152	VSS397	VSS568
N153	VSS398	VSS569
N154	V	

# Fan Speed Control

KBC will issue a analog ( a voltage level ) signal.  
**SW: FAN\_DA1 must be low during S3**

Using a OP AMP and fine-tuning the level, we can improve the fan speed accuracy.

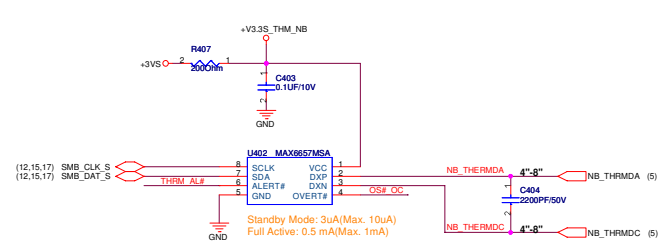


Route H\_THERMDA and H\_THERMDC on the same layer

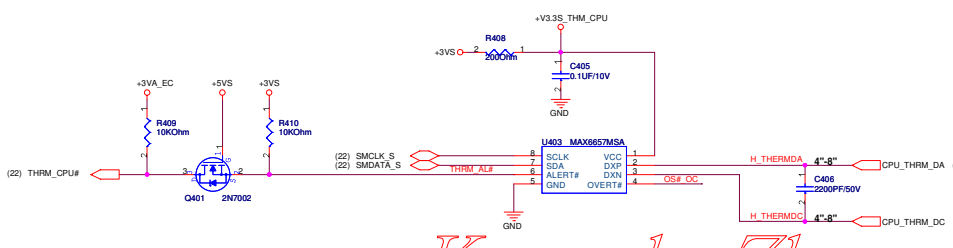
-----OTHER SIGNALS  
 12 mils  
 =====GND  
 10 mils  
 =====H\_THERMDA(10 mils)  
 10 mils  
 =====H\_THERMDC(10 mils)  
 10 mils  
 =====GND  
 12 mils  
 -----OTHER SIGNALS

Avoid BPSB,Power

Rev 1.1 Fan has no internal pull up



NB Detect

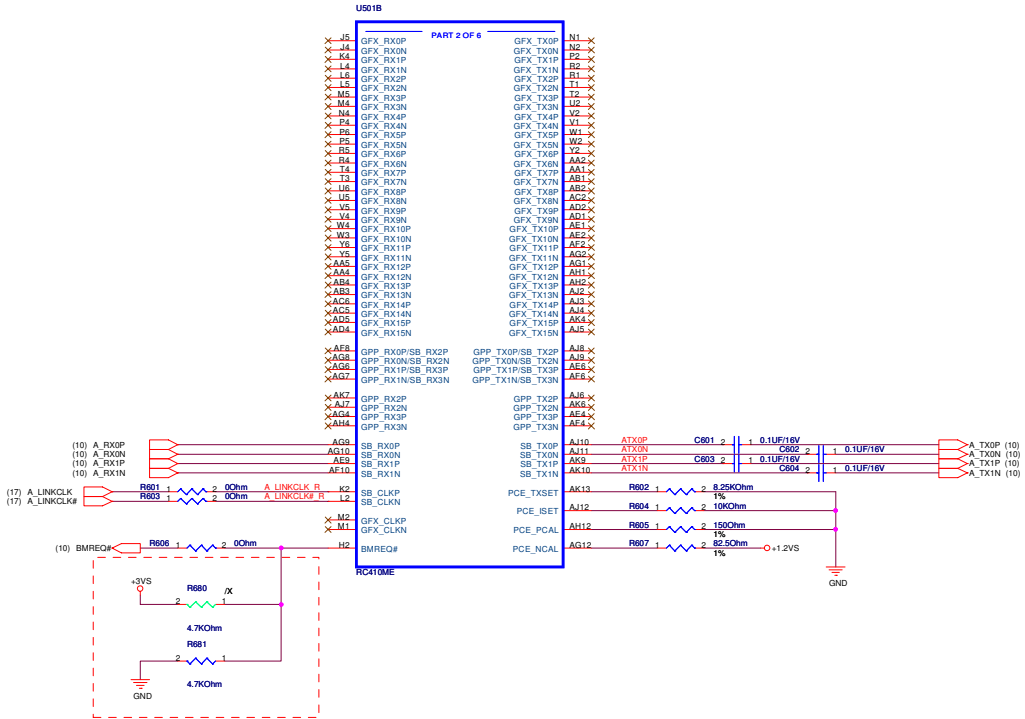


CPU Detect

« Kennedy\_Zhang »

<b>ASUS</b>		<b>Title : THERMAL SERSOR,FAN</b>	
Size: Custom		Engineer: Spring LI	
Project Name: Z94Rp		Rev: 1.1	
Date: 五月 23, 2008	Sheet: 4	of 45	

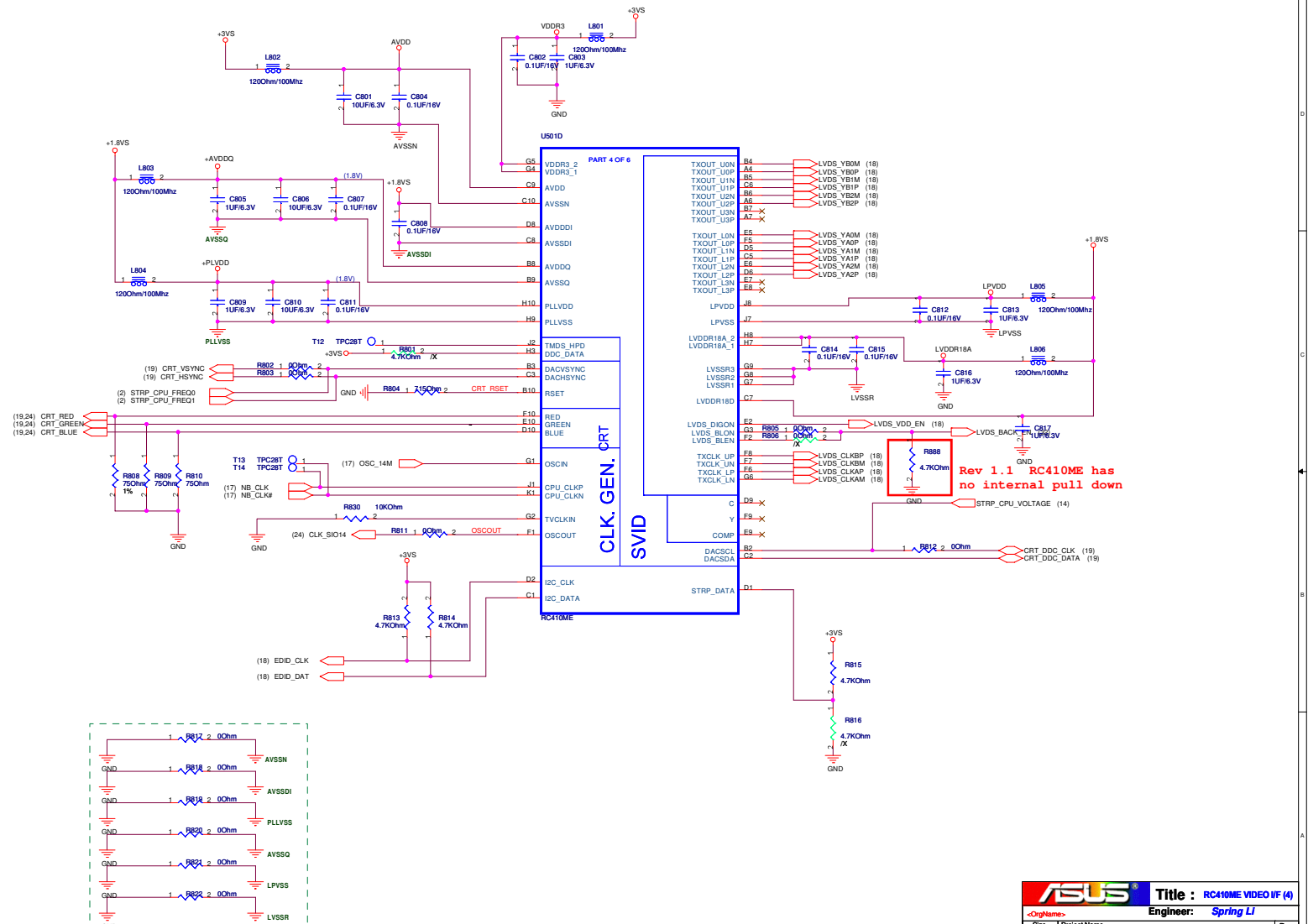




<b>ASUS</b>		<b>Title : RC410ME PCIe &amp; A-Link42</b>	
<OrigName>		Engineer: Spring LI	
Site	Project Name	Rev	
Custom	<b>Z94Rp</b>	3.1	
Date: 8/11/2008	Sheet: 6	of 48	

<< Kennedy\_Zhang >>

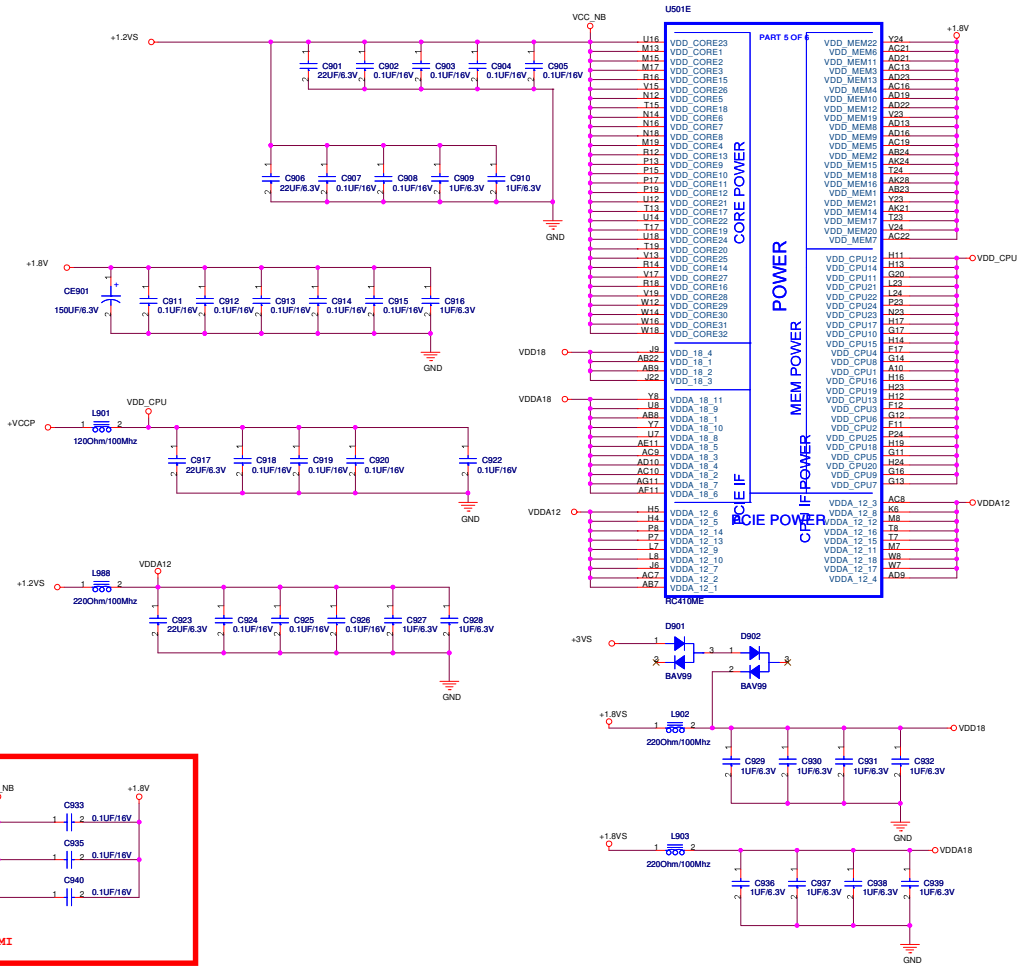




« Kennedy\_Zhang »

<b>ASUS</b>		<b>Title : RC410ME VIDEO I/F (4)</b>	
<OrigName>		Engineer: Spring Li	
Size	Project Name	CRT_DDC_CLK	Rev
Custom	294Rp	CRT_DDC_DATA	1.1
Date: 8/1/2008		Sheet: 8	of 45





US01F

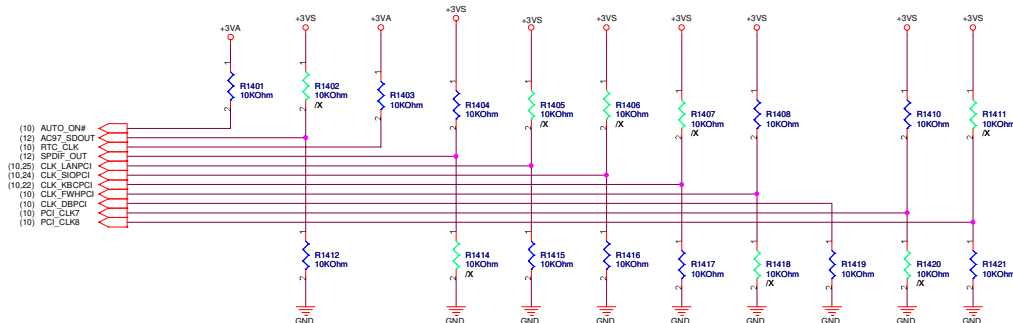
W5	VSSA40	VSS70	M14
M6	VSSA41	VSS71	AC14
AB5	VSSA44	VSS72	AG16
AB6	VSSA45	VSS73	AG16
AB7	VSSA46	VSS74	AG16
AB8	VSSA47	VSS75	AG16
AB9	VSSA48	VSS76	AG16
AC1	VSSA49	VSS77	D27
AC2	VSSA50	VSS78	AC06
AC3	VSSA51	VSS79	H18
AC4	VSSA52	VSS80	VSS2
AC5	VSSA53	VSS81	AD17
AC6	VSSA54	VSS82	R2
AC7	VSSA55	VSS83	R27
AC8	VSSA56	VSS84	VSS9
AC9	VSSA57	VSS85	D28
AC10	VSSA58	VSS86	T30
AC11	VSSA59	VSS87	VSS10
AC12	VSSA60	VSS88	VSS11
AC13	VSSA61	VSS89	VSS12
AC14	VSSA62	VSS90	VSS13
AC15	VSSA63	VSS91	VSS14
AC16	VSSA64	VSS92	VSS15
AC17	VSSA65	VSS93	VSS16
AC18	VSSA66	VSS94	VSS17
AC19	VSSA67	VSS95	VSS18
AC20	VSSA68	VSS96	VSS19
AC21	VSSA69	VSS97	VSS20
AC22	VSSA70	VSS98	VSS21
AC23	VSSA71	VSS99	VSS22
AC24	VSSA72	VSS100	VSS23
AC25	VSSA73	VSS101	VSS24
AC26	VSSA74	VSS102	VSS25
AC27	VSSA75	VSS103	VSS26
AC28	VSSA76	VSS104	VSS27
AC29	VSSA77	VSS105	VSS28
AC30	VSSA78	VSS106	VSS29
AC31	VSSA79	VSS107	VSS30
AC32	VSSA80	VSS108	VSS31
AC33	VSSA81	VSS109	VSS32
AC34	VSSA82	VSS110	VSS33
AC35	VSSA83	VSS111	VSS34
AC36	VSSA84	VSS112	VSS35
AC37	VSSA85	VSS113	VSS36
AC38	VSSA86	VSS114	VSS37
AC39	VSSA87	VSS115	VSS38
AC40	VSSA88	VSS116	VSS39
AC41	VSSA89	VSS117	VSS40
AC42	VSSA90	VSS118	VSS41
AC43	VSSA91	VSS119	VSS42
AC44	VSSA92	VSS120	VSS43
AC45	VSSA93	VSS121	VSS44
AC46	VSSA94	VSS122	VSS45
AC47	VSSA95	VSS123	VSS46
AC48	VSSA96	VSS124	VSS47
AC49	VSSA97	VSS125	VSS48
AC50	VSSA98	VSS126	VSS49
AC51	VSSA99	VSS127	VSS50
AC52	VSSA100	VSS128	VSS51
AC53	VSSA101	VSS129	VSS52
AC54	VSSA102	VSS130	VSS53
AC55	VSSA103	VSS131	VSS54
AC56	VSSA104	VSS132	VSS55
AC57	VSSA105	VSS133	VSS56
AC58	VSSA106	VSS134	VSS57
AC59	VSSA107	VSS135	VSS58
AC60	VSSA108	VSS136	VSS59
AC61	VSSA109	VSS137	VSS60
AC62	VSSA110	VSS138	VSS61
AC63	VSSA111	VSS139	VSS62
AC64	VSSA112	VSS140	VSS63
AC65	VSSA113	VSS141	VSS64
AC66	VSSA114	VSS142	VSS65
AC67	VSSA115	VSS143	VSS66
AC68	VSSA116	VSS144	VSS67
AC69	VSSA117	VSS145	VSS68
AC70	VSSA118	VSS146	VSS69
AC71	VSSA119	VSS147	VSS70
AC72	VSSA120	VSS148	VSS71
AC73	VSSA121	VSS149	VSS72
AC74	VSSA122	VSS150	VSS73
AC75	VSSA123	VSS151	VSS74
AC76	VSSA124	VSS152	VSS75
AC77	VSSA125	VSS153	VSS76
AC78	VSSA126	VSS154	VSS77
AC79	VSSA127	VSS155	VSS78
AC80	VSSA128	VSS156	VSS79
AC81	VSSA129	VSS157	VSS80
AC82	VSSA130	VSS158	VSS81
AC83	VSSA131	VSS159	VSS82
AC84	VSSA132	VSS160	VSS83
AC85	VSSA133	VSS161	VSS84
AC86	VSSA134	VSS162	VSS85
AC87	VSSA135	VSS163	VSS86
AC88	VSSA136	VSS164	VSS87
AC89	VSSA137	VSS165	VSS88
AC90	VSSA138	VSS166	VSS89
AC91	VSSA139	VSS167	VSS90
AC92	VSSA140	VSS168	VSS91
AC93	VSSA141	VSS169	VSS92
AC94	VSSA142	VSS170	VSS93
AC95	VSSA143	VSS171	VSS94
AC96	VSSA144	VSS172	VSS95
AC97	VSSA145	VSS173	VSS96
AC98	VSSA146	VSS174	VSS97
AC99	VSSA147	VSS175	VSS98
AC100	VSSA148	VSS176	VSS99
AC101	VSSA149	VSS177	VSS100
AC102	VSSA150	VSS178	VSS101
AC103	VSSA151	VSS179	VSS102
AC104	VSSA152	VSS180	VSS103
AC105	VSSA153	VSS181	VSS104
AC106	VSSA154	VSS182	VSS105
AC107	VSSA155	VSS183	VSS106
AC108	VSSA156	VSS184	VSS107
AC109	VSSA157	VSS185	VSS108
AC110	VSSA158	VSS186	VSS109
AC111	VSSA159	VSS187	VSS110
AC112	VSSA160	VSS188	VSS111
AC113	VSSA161	VSS189	VSS112
AC114	VSSA162	VSS190	VSS113
AC115	VSSA163	VSS191	VSS114
AC116	VSSA164	VSS192	VSS115
AC117	VSSA165	VSS193	VSS116
AC118	VSSA166	VSS194	VSS117
AC119	VSSA167	VSS195	VSS118
AC120	VSSA168	VSS196	VSS119
AC121	VSSA169	VSS197	VSS120
AC122	VSSA170	VSS198	VSS121
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AC124	VSSA172	VSS200	VSS123
AC125	VSSA173	VSS201	VSS124
AC126	VSSA174	VSS202	VSS125
AC127	VSSA175	VSS203	VSS126
AC128	VSSA176	VSS204	VSS127
AC129	VSSA177	VSS205	VSS128
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AC131	VSSA179	VSS207	VSS130
AC132	VSSA180	VSS208	VSS131
AC133	VSSA181	VSS209	VSS132
AC134	VSSA182	VSS210	VSS133
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AC139	VSSA187	VSS215	VSS138
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AC141	VSSA189	VSS217	VSS140
AC142	VSSA190	VSS218	VSS141
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AC144	VSSA192	VSS220	VSS143
AC145	VSSA193	VSS221	VSS144
AC146	VSSA194	VSS222	VSS145
AC147	VSSA195	VSS223	VSS146
AC148	VSSA196	VSS224	VSS147
AC149	VSSA197	VSS225	VSS148
AC150	VSSA198	VSS226	VSS149
AC151	VSSA199	VSS227	VSS150
AC152	VSSA200	VSS228	VSS151
AC153	VSSA201	VSS229	VSS152
AC154	VSSA202	VSS230	VSS153
AC155	VSSA203	VSS231	VSS154
AC156	VSSA204	VSS232	VSS155
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AC160	VSSA208	VSS236	VSS159
AC161	VSSA209	VSS237	VSS160
AC162	VSSA210	VSS238	VSS161
AC163	VSSA211	VSS239	VSS162
AC164	VSSA212	VSS240	VSS163
AC165	VSSA213	VSS241	VSS164
AC166	VSSA214	VSS242	VSS165
AC167	VSSA215	VSS243	VSS166
AC168	VSSA216	VSS244	VSS167
AC169	VSSA217	VSS245	VSS168
AC170	VSSA218	VSS246	VSS169
AC171	VSSA219	VSS247	VSS170
AC172	VSSA220	VSS248	VSS171
AC173	VSSA221	VSS249	VSS172
AC174	VSSA222	VSS250	VSS173
AC175	VSSA223	VSS251	VSS174
AC176	VSSA224	VSS252	VSS175
AC177	VSSA225	VSS253	VSS176
AC178	VSSA226	VSS254	VSS177
AC179	VSSA227	VSS255	VSS178
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AC182	VSSA230	VSS258	VSS181
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AC184	VSSA232	VSS260	VSS183
AC185	VSSA233	VSS261	VSS184
AC186	VSSA234	VSS262	VSS185
AC187	VSSA235	VSS263	VSS186
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AC194	VSSA242	VSS270	VSS193
AC195	VSSA243	VSS271	VSS194
AC196	VSSA244	VSS272	VSS195
AC197	VSSA245	VSS273	VSS196
AC198	VSSA246	VSS274	VSS197
AC199	VSSA247	VSS275	VSS198
AC200	VSSA248	VSS276	VSS199
AC201	VSSA249	VSS277	VSS200
AC202	VSSA250	VSS278	VSS201
AC203	VSSA251	VSS279	VSS202
AC204	VSSA252	VSS280	VSS203
AC205	VSSA253	VSS281	VSS204
AC206	VSSA254	VSS282	VSS205
AC207	VSSA255	VSS283	VSS206
AC208	VSSA256	VSS284	VSS207
AC209	VSSA257	VSS285	VSS208
AC210	VSSA258	VSS286	VSS209
AC211	VSSA259	VSS287	VSS210
AC212	VSSA260	VSS288	VSS211
AC213	VSSA261	VSS289	VSS212
AC214	VSSA262	VSS290	VSS213
AC215	VSSA263	VSS291	VSS214
AC216	VSSA264	VSS292	VSS215
AC217	VSSA265	VSS293	VSS216
AC218	VSSA266	VSS294	VSS217
AC219	VSSA267	VSS295	VSS218
AC220	VSSA268	VSS296	VSS219
AC221	VSSA269	VSS297	VSS220
AC222	VSSA270	VSS298	VSS221
AC223	VSSA271	VSS299	VSS222
AC224	VSSA272	VSS300	VSS223
AC225	VSSA273	VSS301	VSS224
AC226	VSSA274	VSS302	VSS225
AC227	VSSA275	VSS303	VSS226
AC228	VSSA276	VSS304	VSS227
AC229	VSSA277	VSS305	VSS228
AC230	VSSA278	VSS306	VSS229
AC231	VSSA279	VSS307	VSS230
AC232	VSSA280	VSS308	VSS231
AC233	VSSA281	VSS309	VSS232
AC234	VSSA282	VSS310	VSS233
AC235	VSSA283	VSS311	VSS234
AC236	VSSA284	VSS312	VSS235
AC237	VSSA285	VSS313	VSS236
AC238	VSSA286	VSS314	VSS237
AC239	VSSA287	VSS315	VSS238
AC240	VSSA288	VSS316	VSS239
AC241	VSSA289	VSS317	VSS240
AC242	VSSA290	VSS318	VSS241
AC243	VSSA291	VSS319	VSS242
AC244	VSSA292	VSS320	VSS243
AC245	VSSA293	VSS321	VSS244
AC246	VSSA294	VSS322	VSS245
AC247	VSSA295	VSS323	VSS246
AC248	VSSA296	VSS324	VSS247
AC249	VSSA297	VSS325	VSS248
AC250	VSSA298	VSS326	VSS249
AC251	VSSA299	VSS327	VSS250
AC252	VSSA300	VSS328	VSS251
AC253	VSSA301	VSS329	VSS252
AC254	VSSA302	VSS330	VSS253
AC255	VSSA303	VSS331	VSS254
AC256	VSSA304	VSS332	VSS255
AC257	VSSA305	VSS333	VSS256
AC258	VSSA306	VSS334	VSS257
AC259	VSSA307	VSS335	VSS258
AC260	VSSA308	VSS336	VSS259
AC261	VSSA309	VSS337	VSS260
AC262	VSSA310	VSS338	VSS261
AC263	VSSA311	VSS339	VSS262
AC264	VSSA312	VSS340	VSS263
AC265	VSSA313	VSS341	VSS264
AC266	VSSA314	VSS342	VSS265
AC267	VSSA315	VSS343	VSS266
AC268	VSSA316	VSS344	VSS267
AC269	VSSA317	VSS345	VSS268
AC270	VSSA318	VSS346	VSS269
AC271	VSSA319	VSS347	VSS270
AC272	VSSA320	VSS348	VSS271
AC273	VSSA321	VSS349	VSS272
AC274	VSSA322	VSS350	VSS273
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AC276	VSSA324	VSS352	VSS275
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AC278	VSSA326	VSS354	VSS277
AC279	VSSA327	VSS355	VSS278
AC280	VSSA328	VSS356	VSS279
AC281	VSSA329	VSS357	VSS280
AC282	VSSA330	VSS358	VSS281
AC283	VSSA331	VSS359	VSS282
AC284	VSSA332	VSS360	VSS283
AC285	VSSA333	VSS361	VSS284
AC286	VSSA334	VSS362	VSS285
AC287	VSSA335	VSS363	VSS286
AC288	VSSA336	VSS364	VSS287
AC289	VSSA337	VSS365	VSS288
AC290</			











**REQUIRED STRAPS**

	AUTO_ON#	AC_SDOOUT	RTC_CLK	SPDIF_OUT	CLK_LAN	CLK_SIO	CLK_KB	CLK_FW	CLK_DB	PCI_CLK7	PCI_CLK8
<b>PULL HIGH</b>	MANUAL PWR ON	USE DEBUG STRAPS	INTERNAL RTC	SIO 24MHz					CPU I/F = K8	ROM TYPE H,H = PCI ROM	
<b>PULL LOW</b>	AUTO PWR ON	IGNORE DEBUG STRAPS	EXTERNAL RTC (NOT SUPPORTED W/ IT8712)	SIO 48MHz	<b>SEE NOTE1</b>	USB PHY PWRDOWN DISABLE	USE USB PLL	<b>SEE NOTE2</b>	CPU I/F = P4	H,L = LPC ROM I DEFAULT LPC Address Mapped below 1M L,H = LPC ROM II LPC Address Mapped to top 4G L,L = FW ROM	

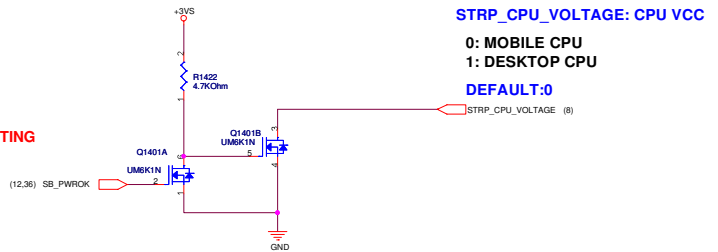
**NOTE**

1. USB CLK STRAPPING CHANGE

	A21,A22,A23	A31 AND NEWER
10K PULL UP	OSC/CLOCK BUFFER	CRYSTAL PAD
10K PULL DOWN	CRYSTAL PAD	OSC/CLOCK BUFFER

2. 14MHz CLOCK TYPE STRAPPING

	A11~A31	A32 AND ABOVE
	14MHz CLOCK PAD IS CRYSTAL PAD	PCIE COMMON MODE SETTING
10K PULL UP	CLOCK INPUT BUFFER	PCIE CM_SET LOW
10K PULL DOWN	CRYSTAL PAD	PCIE CM_SET HIGH



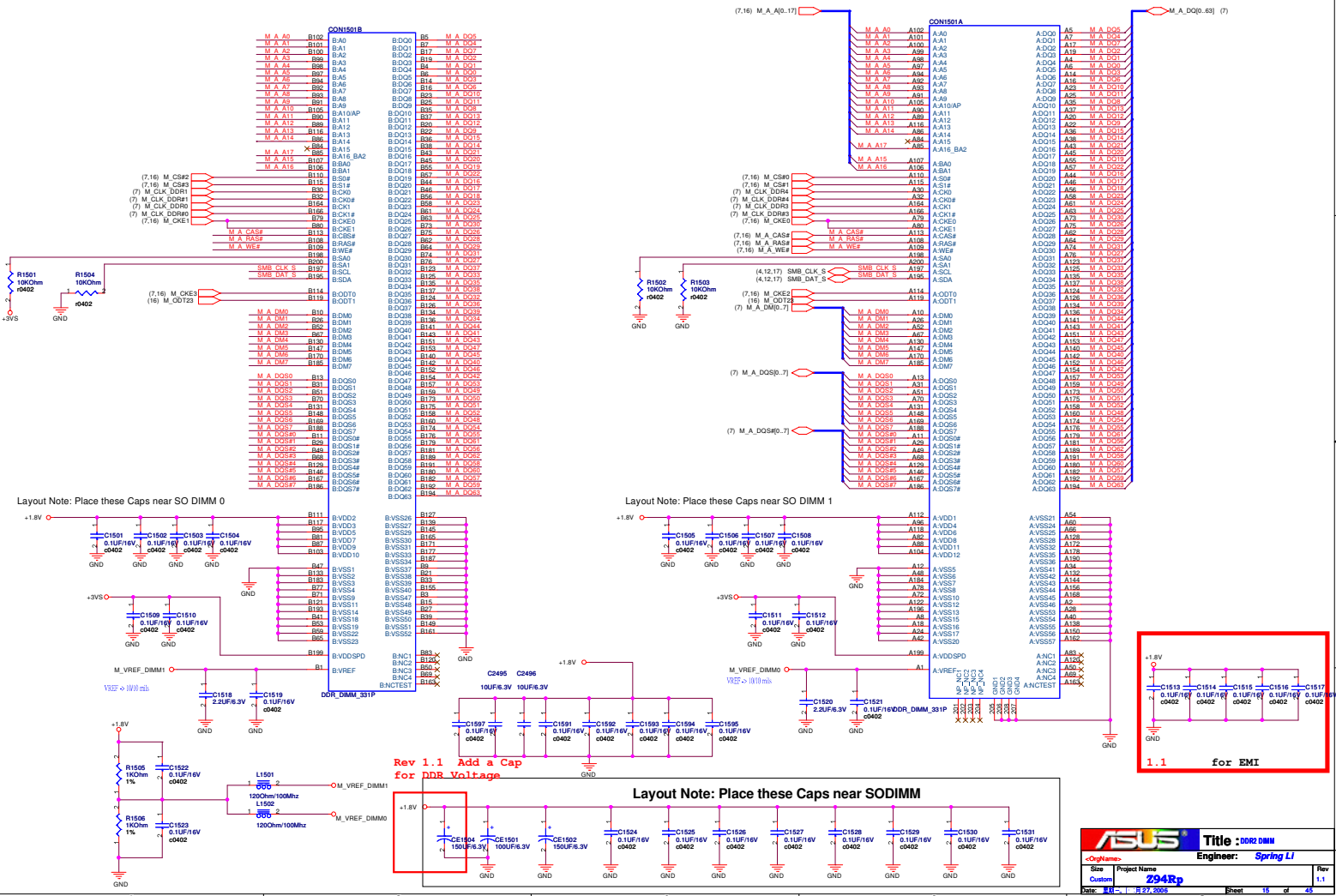
STRP\_CPU\_VOLTAGE: CPU VCC

0: MOBILE CPU  
1: DESKTOP CPU

DEFAULT: 0

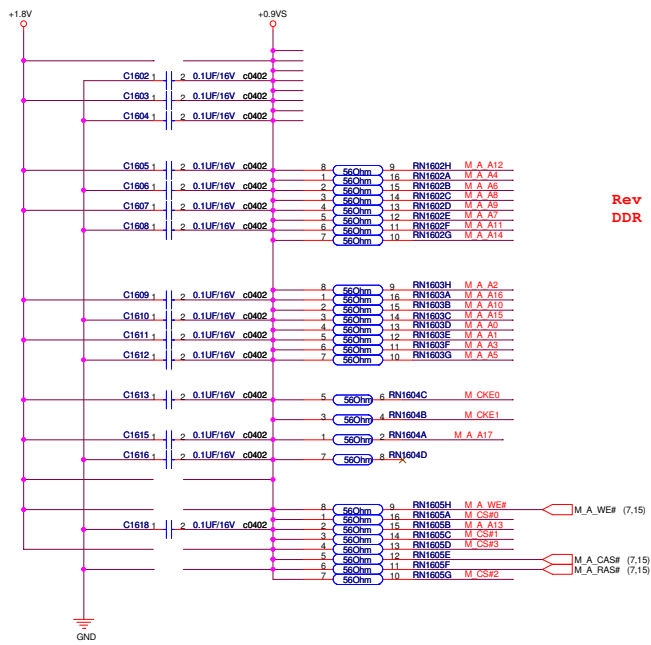
<b>ASUS</b>		<b>Title : SB450 STRAPS(5)</b>	
OrigName:	Project Name	Engineer:	Spring LJ
Site:	Customer	Date:	Rev
	Z94Rp	# 23 2006	1.1
		Sheet	14 of 45

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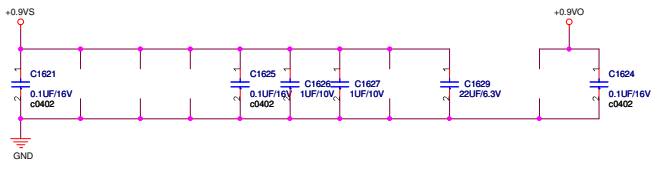
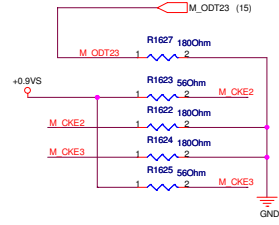


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ASUS		Title: DDR2 DIMM
Size	Project Name	Engineer: Spring LI
Client	294Rq	Rev 1.1
Date: 18-1-27-2005	Sheet	15 of 45



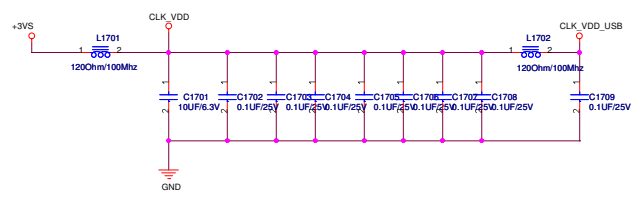
Rev 1.1 swap for  
DDR Termination



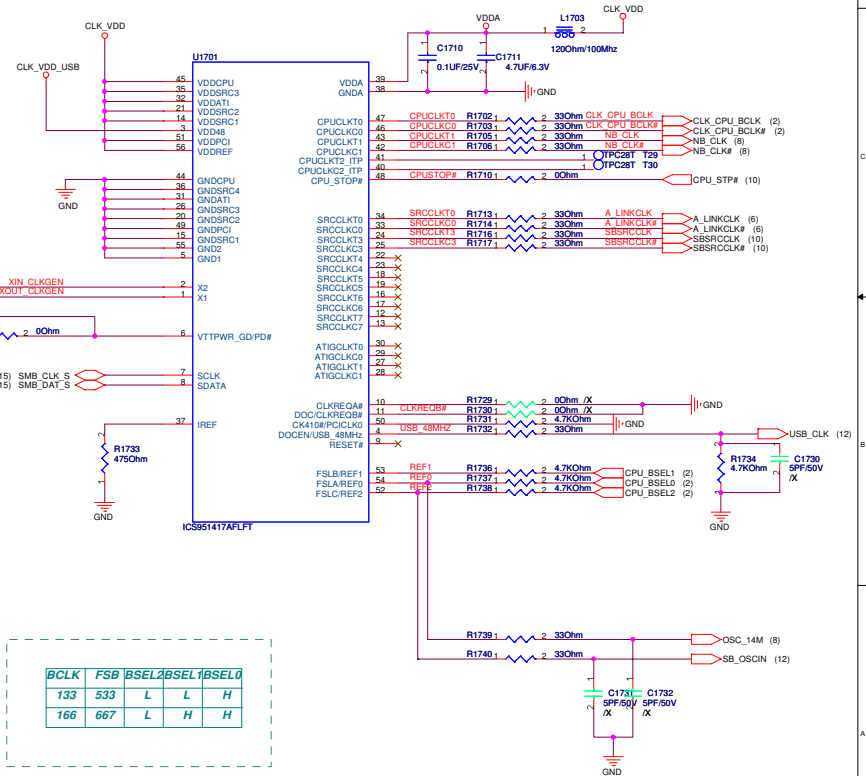
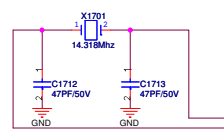
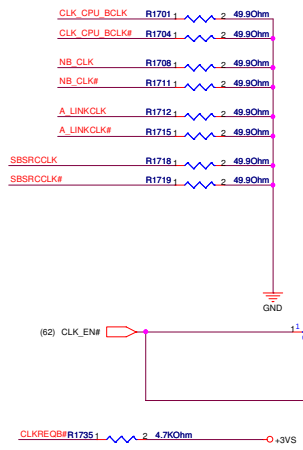
<b>ASUS</b>		<b>Title : DDR2 Termination</b>	
<OrigName>		Engineer: Spring LI	
Size	Project Name		Rev
Custom	Z94Rp		1.1
Date: 星期三, 十一月 27, 2008		Sheet 16	of 45

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PLACE termination close to source IC



BCLK	FSB	BSEL2	BSEL1	BSEL0
133	533	L	L	H
166	667	L	H	H

**ASUS** Title: **CLOCK GENERATOR**

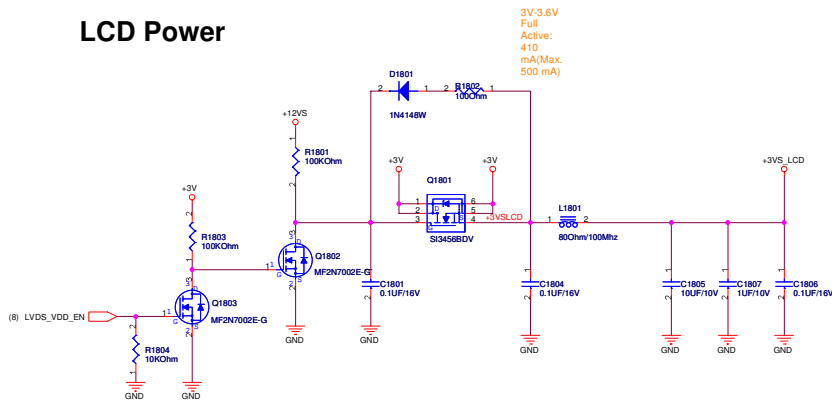
-<OrigName> Engineer: **Spring Li**

Size	Project Name	Rev
Custom	<b>Z94Rp</b>	1.1

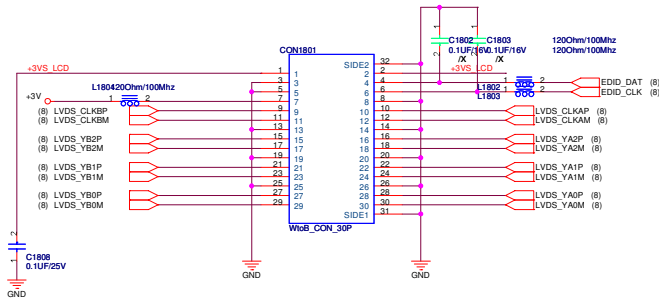
Date: 五月 23, 2006 Sheet 17 of 45

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# LCD Power



3V-3.6V  
Full  
Active:  
410  
mA(Max.  
500 mA)

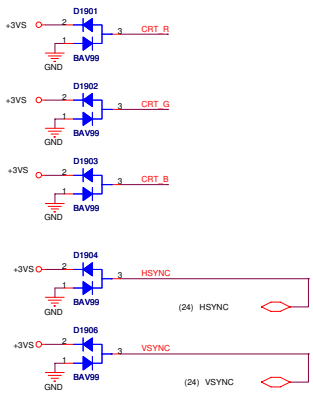


Cable Requirement:  
Impedance: 100 ohm +/- 10%  
Length Mismatch <= 10 mils  
Twisted Pair(Not Ribbon)  
Maximum Length <= 16"

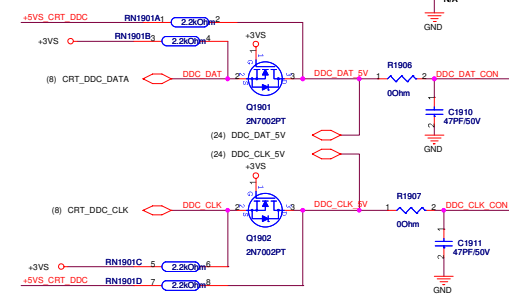
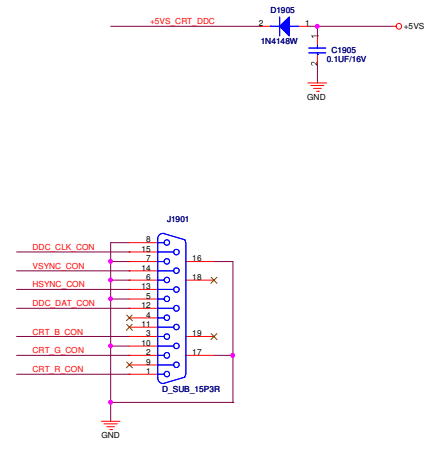
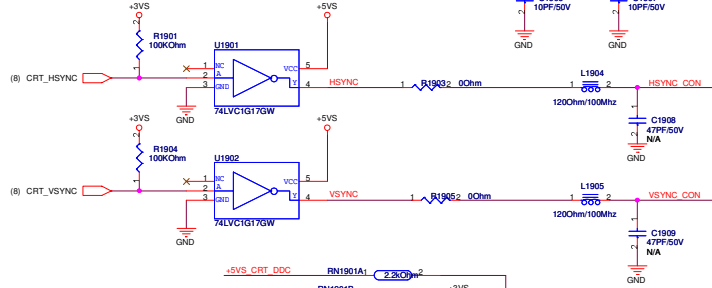
# LCD LVDS Interface

<b>ASUS</b>		<b>Title : LVDS &amp; INVERTER (CAMERA)</b>	
<OrigName>		Engineer: Spring Li	
Site	Project Name		Rev
Custom	<b>Z94Rp</b>		1.1
Date: 8/23/2006		Sheet: 18	of 48

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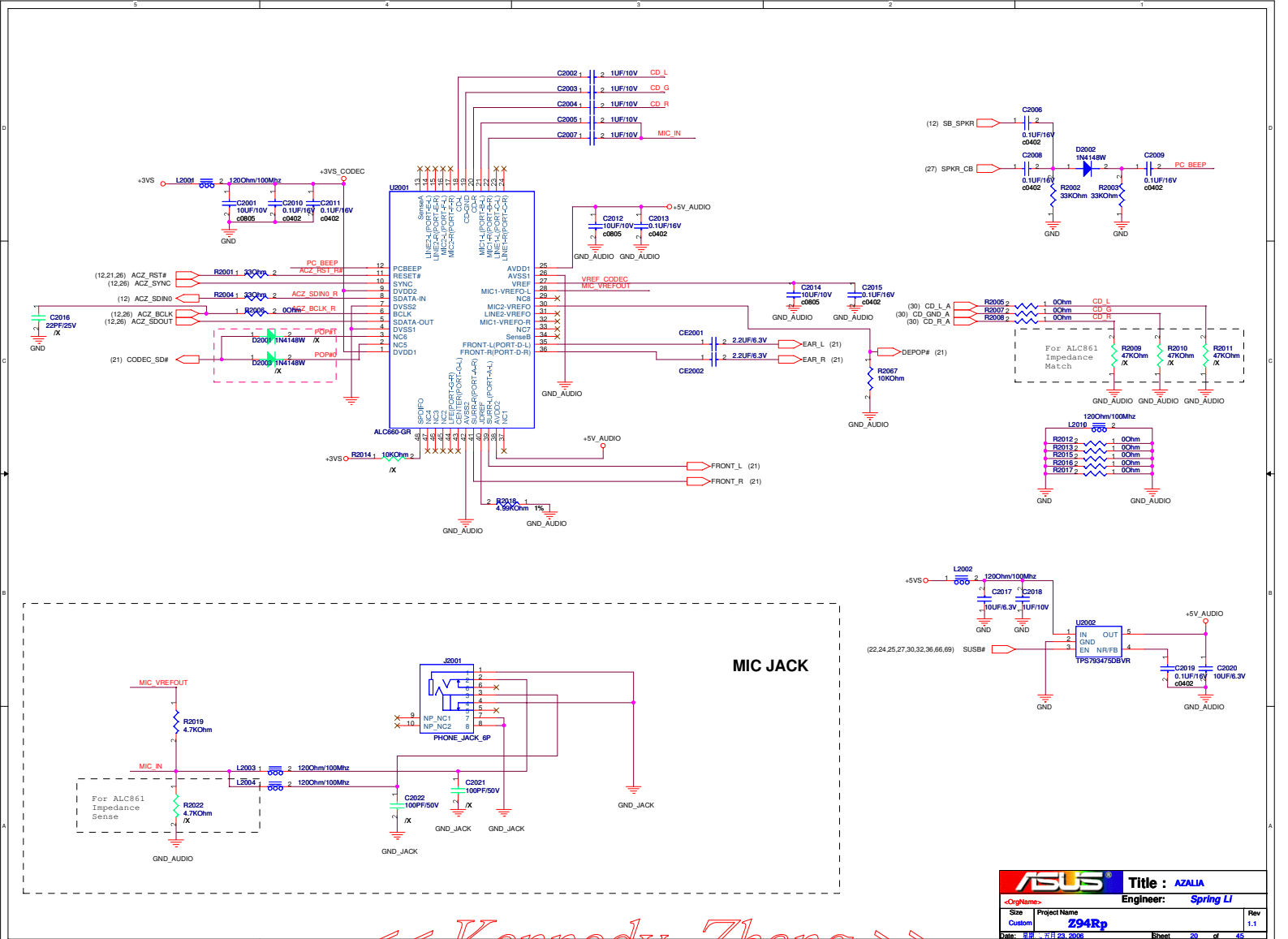


PLACE ESD Diodes near VGA port



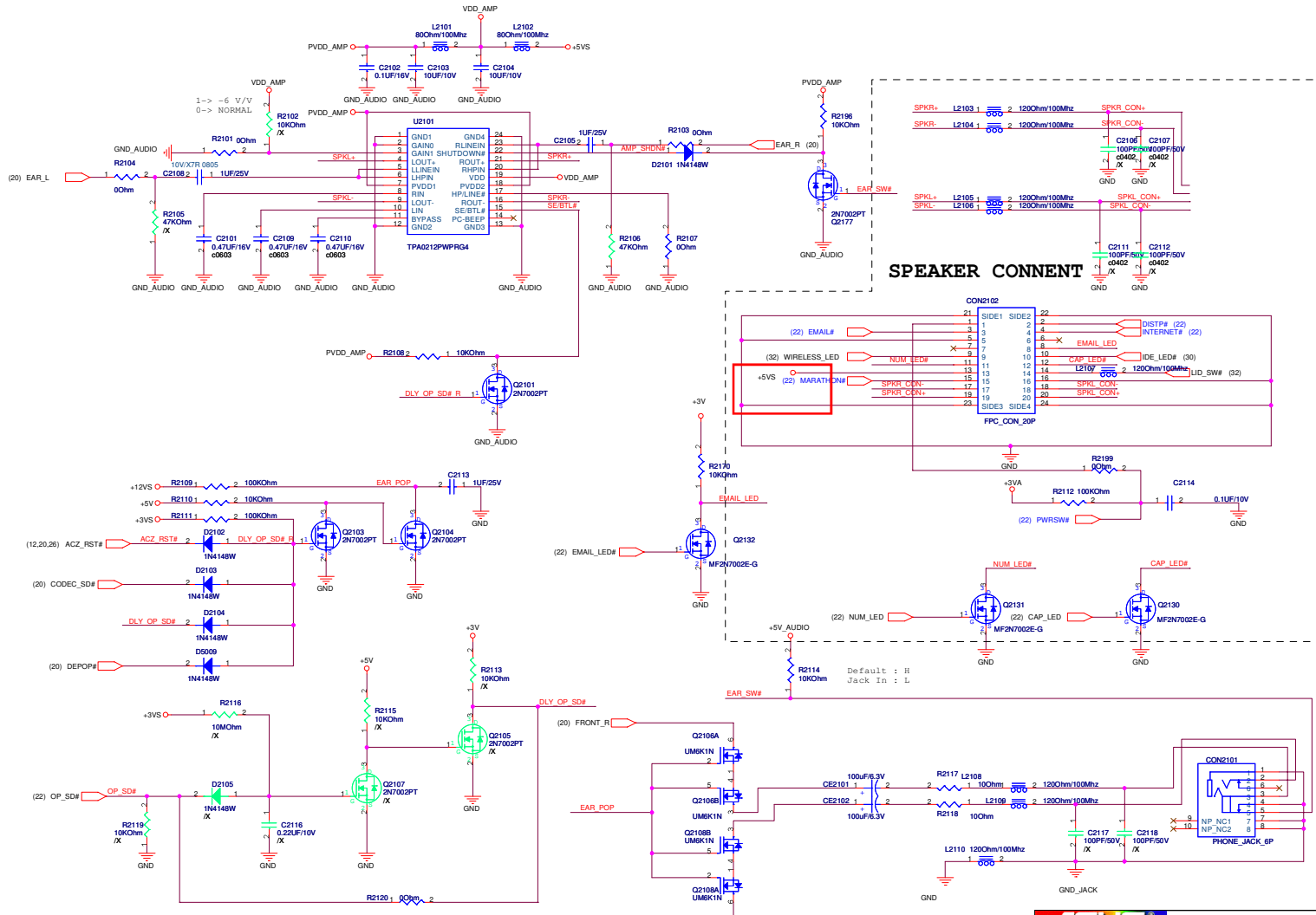
<b>ASUS</b>		<b>Title : CRT CONNECTOR</b>	
<OrigName>	Project Name	Engineer:	Spring LI
Site	Custom	Part Name	294Rp
Date:	Rev:	Sheet:	19 of 48

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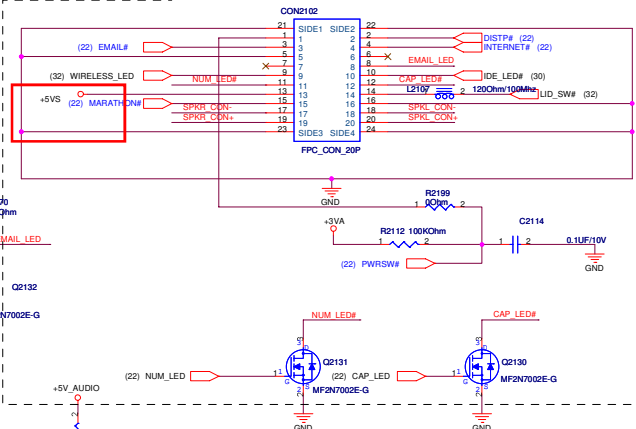


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<b>ASUS</b>		<b>Title : AZALIA</b>	
<OrigName>		Engineer: Spring LI	
Site	Project Name		Rev
Custom	294Rp		1.1
Date: 08. 05. 2008		Sheet	20 of 48

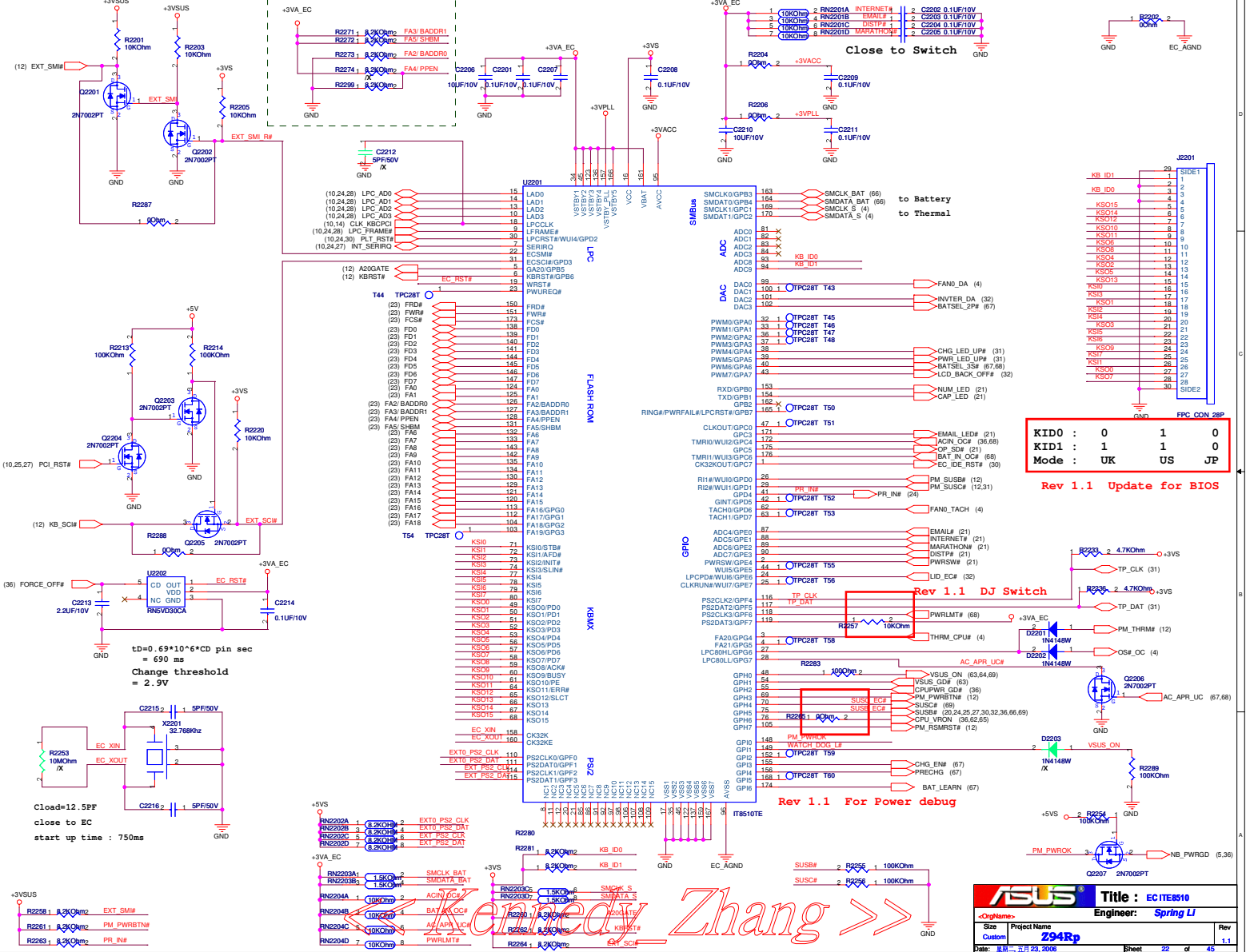


**SPEAKER CONNENT**



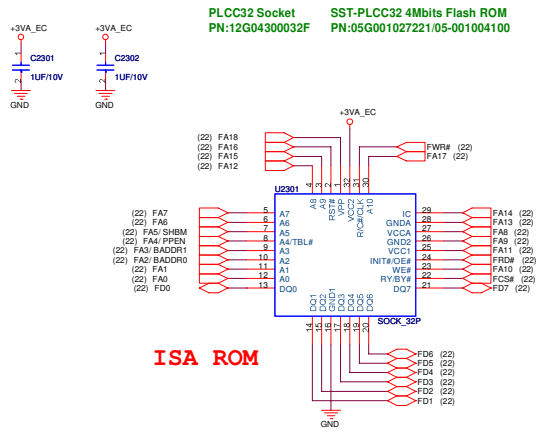
<b>ASUS</b>		<b>Title : AMPLIFIER 2 CHANNEL</b>	
<<OrigName>>	Project Name	Engineer:	Spring Li
Size	Custom	Part No.	794Rp
Date:	Rev:	Sheet:	21 of 46

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Zhang >>

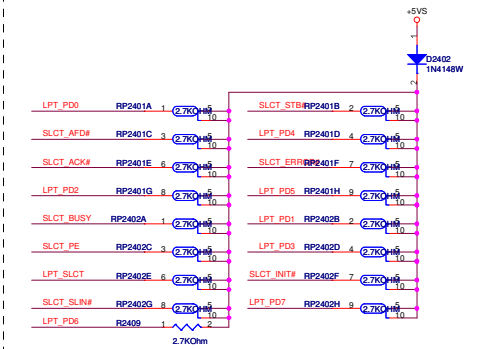
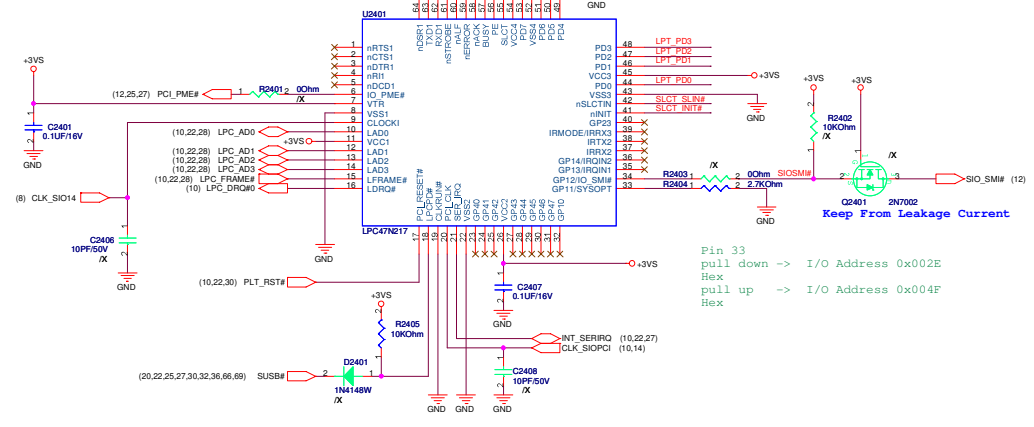
Size	Project Name	Rev
Custom	Z94Rp	1.1



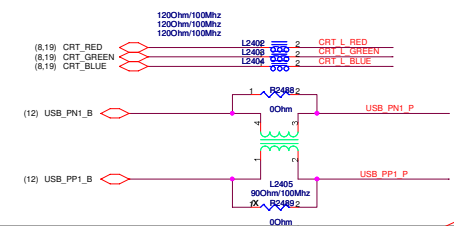
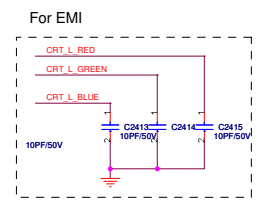
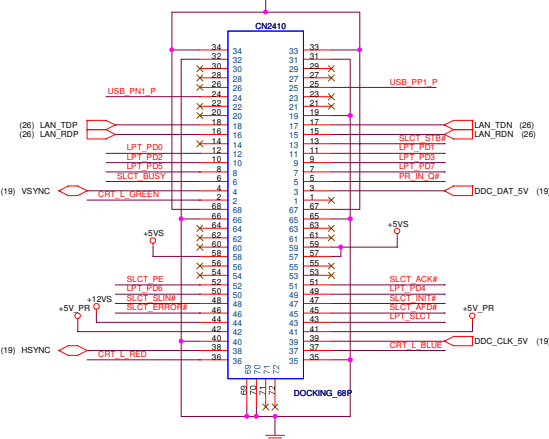
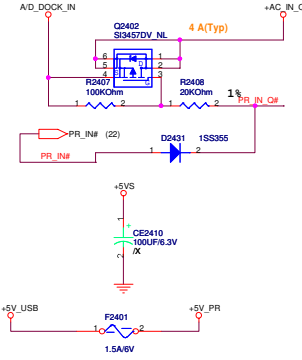
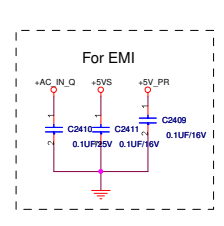
« Kennedy\_Zhang »

<b>ASUS</b>		<b>Title : ISA ROM &amp; SPI ROM</b>	
<OrigName>		Engineer: Spring LI	
Site	Project Name	Rev	
Custom	794Rp	1.1	
Date: 05/23/2006	Sheet: 23	of	45

# Super I/O



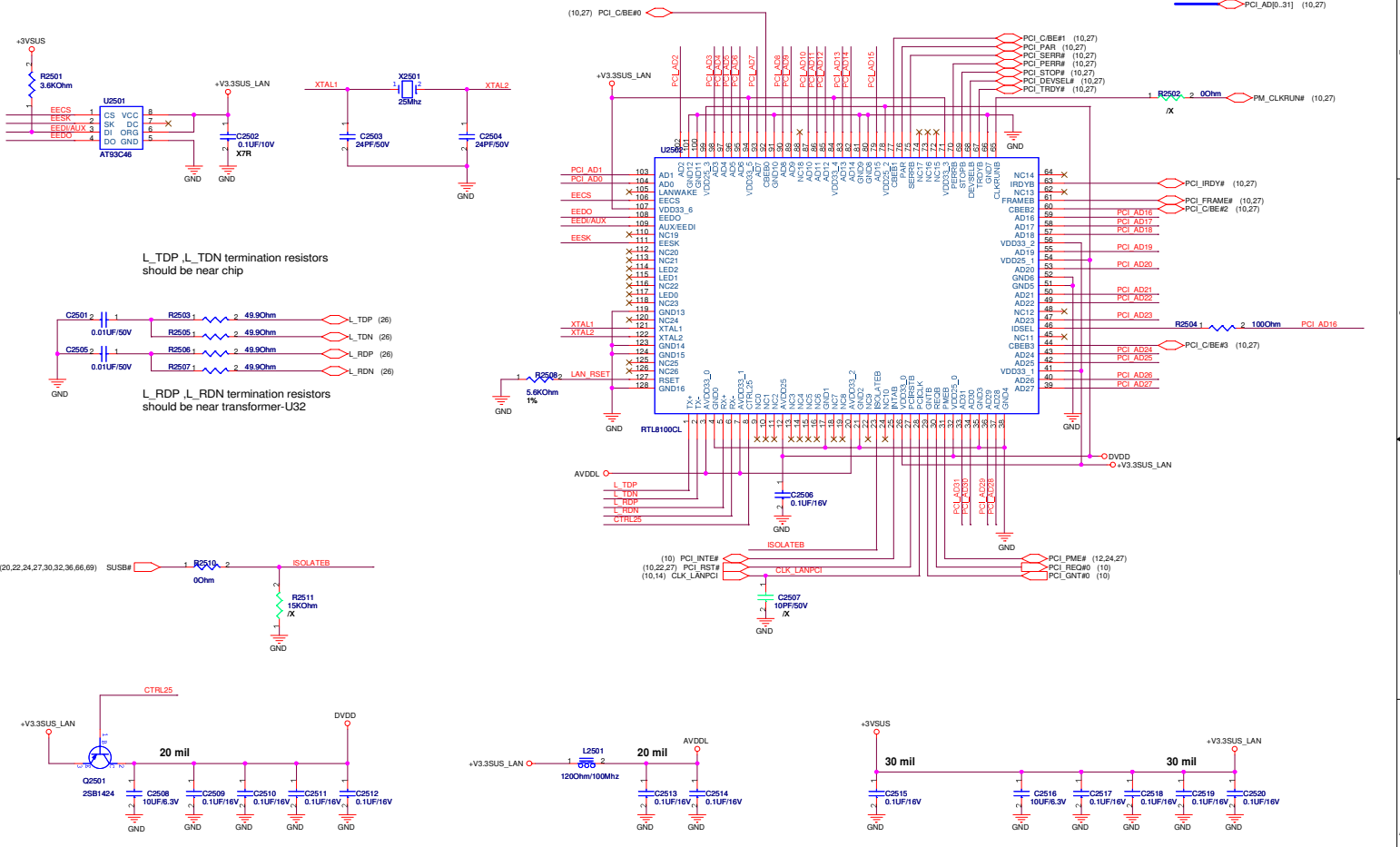
Pin 33 pull down -> I/O Address 0x002E  
 pull up -> I/O Address 0x004F  
 Hex



<b>ASUS</b>		<b>Title : Blank</b>	
<OrigName>	Project Name	Engineer :	Spring LI
Site	Custom	Part No.	794Rp
Date :	Rev. :	Sheet :	24 of 45

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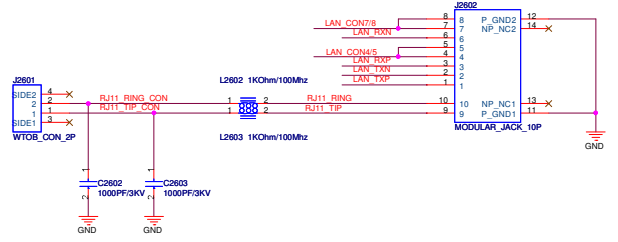
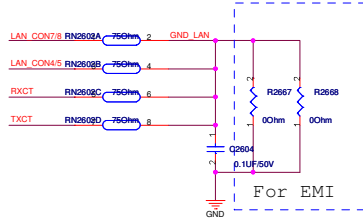
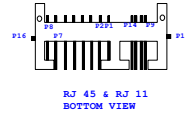
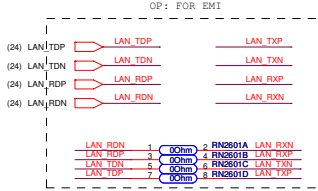
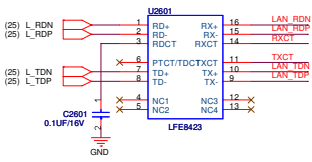
L\_TDP, L\_TDN termination resistors should be near chip

L\_RDP, L\_RDN termination resistors should be near transformer-U32

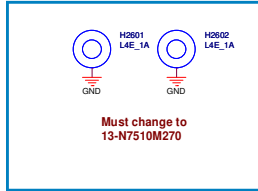
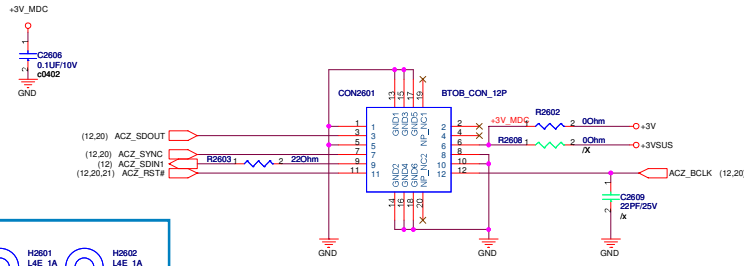
<b>ASUS</b>		<b>Title : LAN_8100CL</b>	
<OrigName>	Project Name	Engineer:	Spring LI
Site	Custom	Rev	1.1
Date: 08/11/2008	294Rp	Sheet	26 of 48

« Kennedy\_Zhang »

# LAN PORT

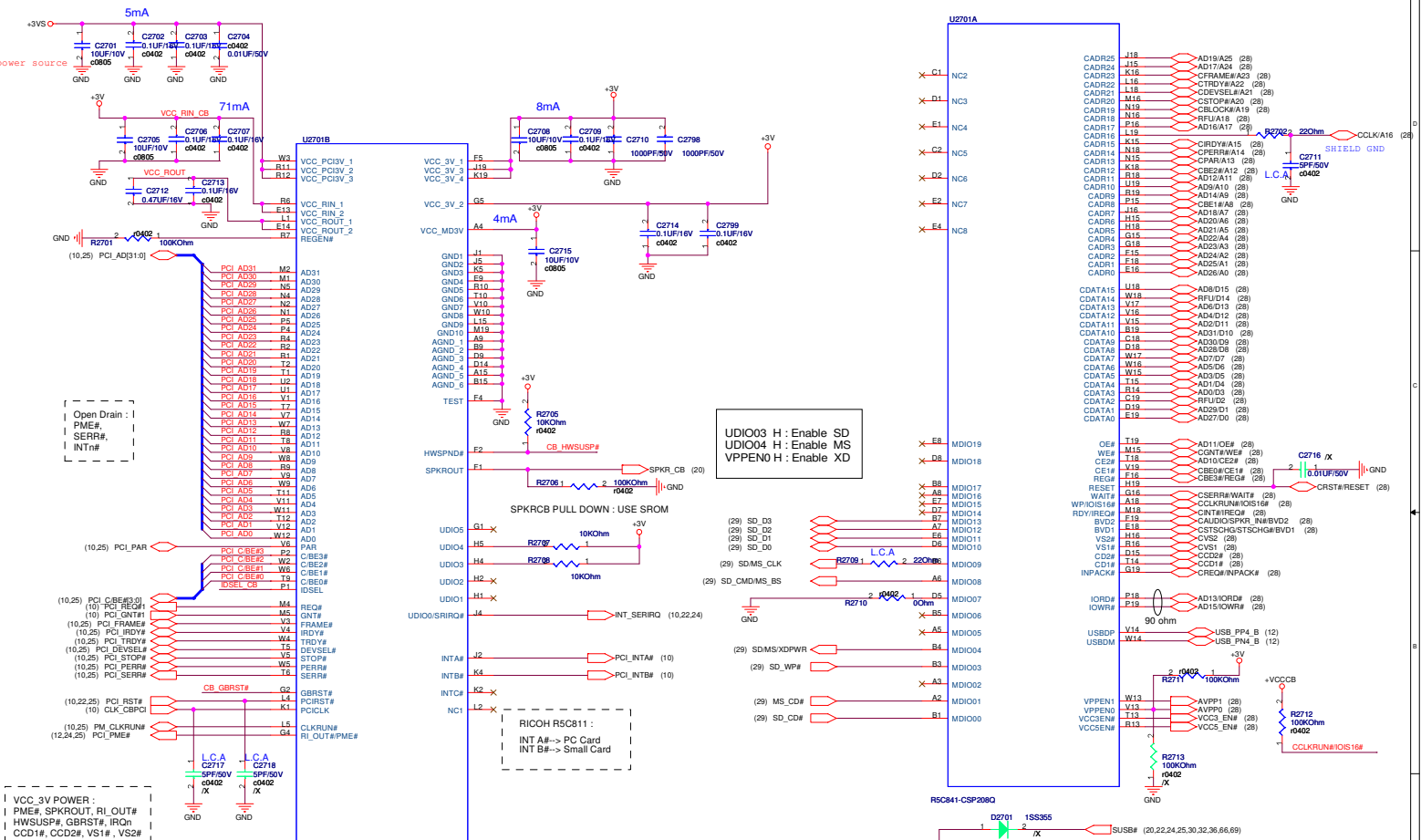


# MDC



		Title : RJ11+45 & MDC	
<OrigName>	Project Name	Engineer:	Spring LI
Site	Custom	Part No.	Z94Rp
Date:	Rev:	Sheet:	26 of 45

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VCC\_3V\_POWER :  
 PME#, SPKR\_OUT, RI\_OUT#,  
 HWSUSP#, GBRST#, IRQn  
 CSD1#, CSD2#, VS1#, VS2#  
 TEST\_VCCSEN#, VCCSEN#  
 VPPEN0, VPPEN1, SD/MS I/F

VCC\_SLOT POWER :  
 CARD\_BUS,  
 AUDIO, CTSCHG

VCCPCI POWER :  
 PCI\_BUS

RSC841-CSP2090

ULDIO03 H : Enable SD  
 ULDIO04 H : Enable MS  
 VPPEN0 H : Enable XD

RICH0 R5C811 :  
 INT A# -> PC Card  
 INT B# -> Small Card

VCC\_3V\_POWER :  
 +3V => CB\_GBRST#  
 1ms < T < 100ms

CB\_GBRST# :  
 R2714 100KOhm  
 R2715 200KOhm  
 C2719 0.1uF/16V/0402

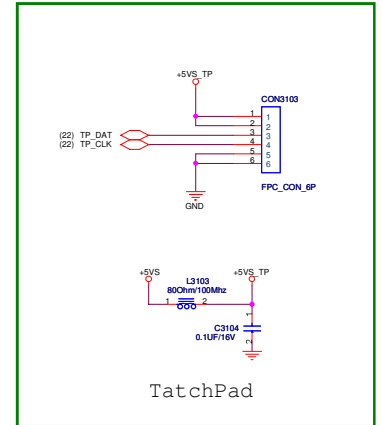
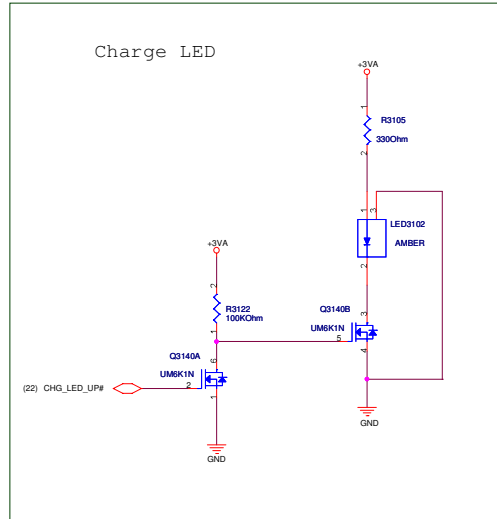
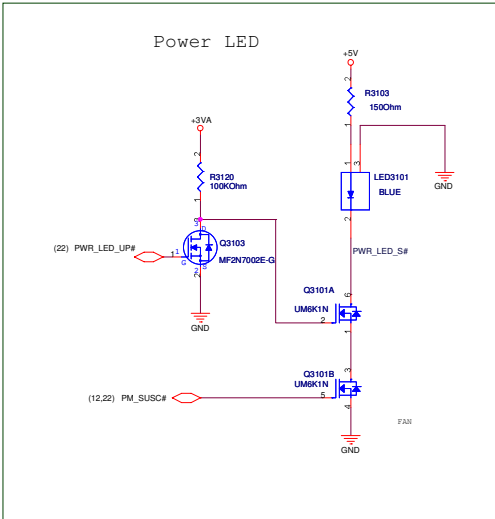
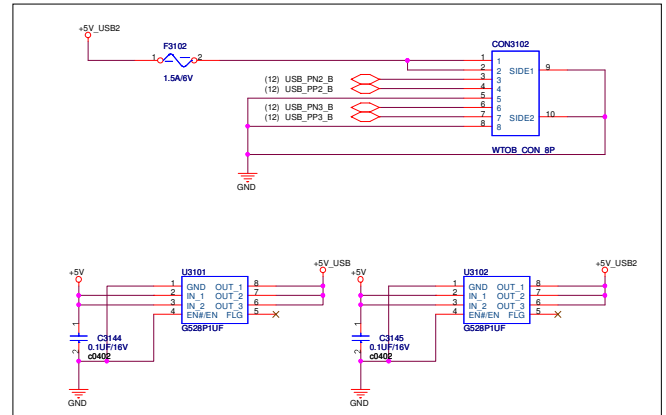
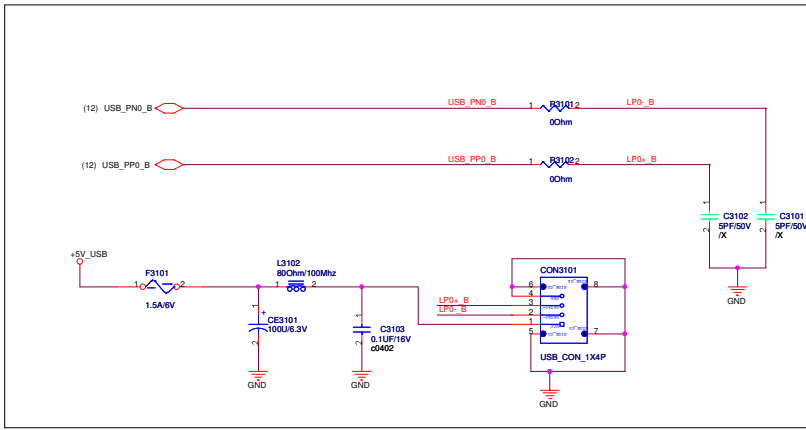
<< Kennedy\_Zhang >>







# USB

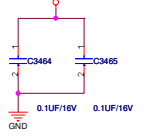
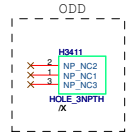
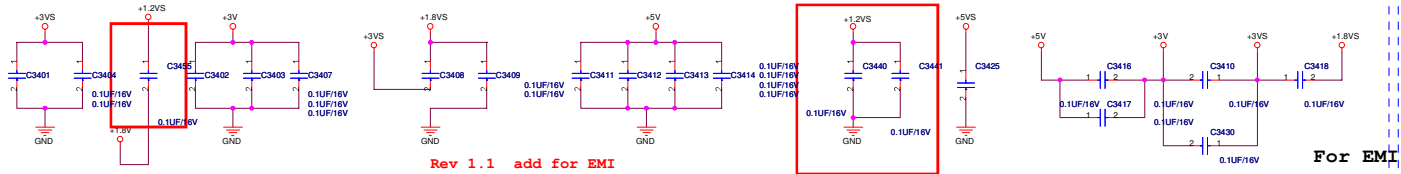


<b>ASUS</b>		<b>Title : USB / LED / TP</b>	
<OrigName>	Engineer: Spring LI		
Site	Project Name	Rev	
Custom	Z94Rp	3.1	
Date: 08/08/2008		Sheet	31 of 48

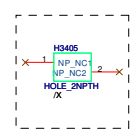
« Kennedy\_Zhang »



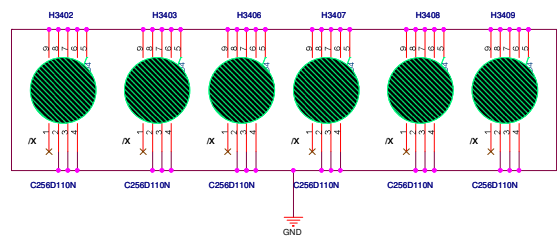




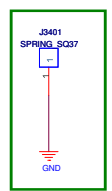
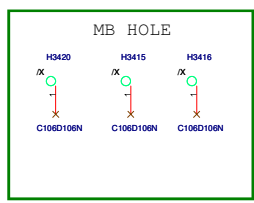
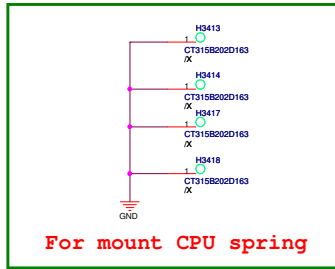
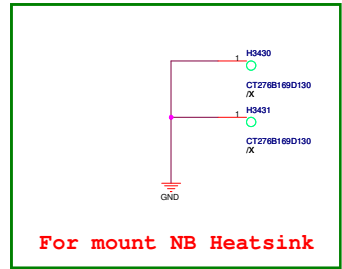
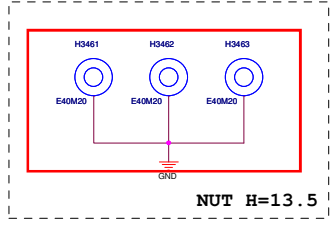
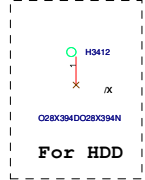
PAD Hole (2hole) --- E



Hole no GND --- A



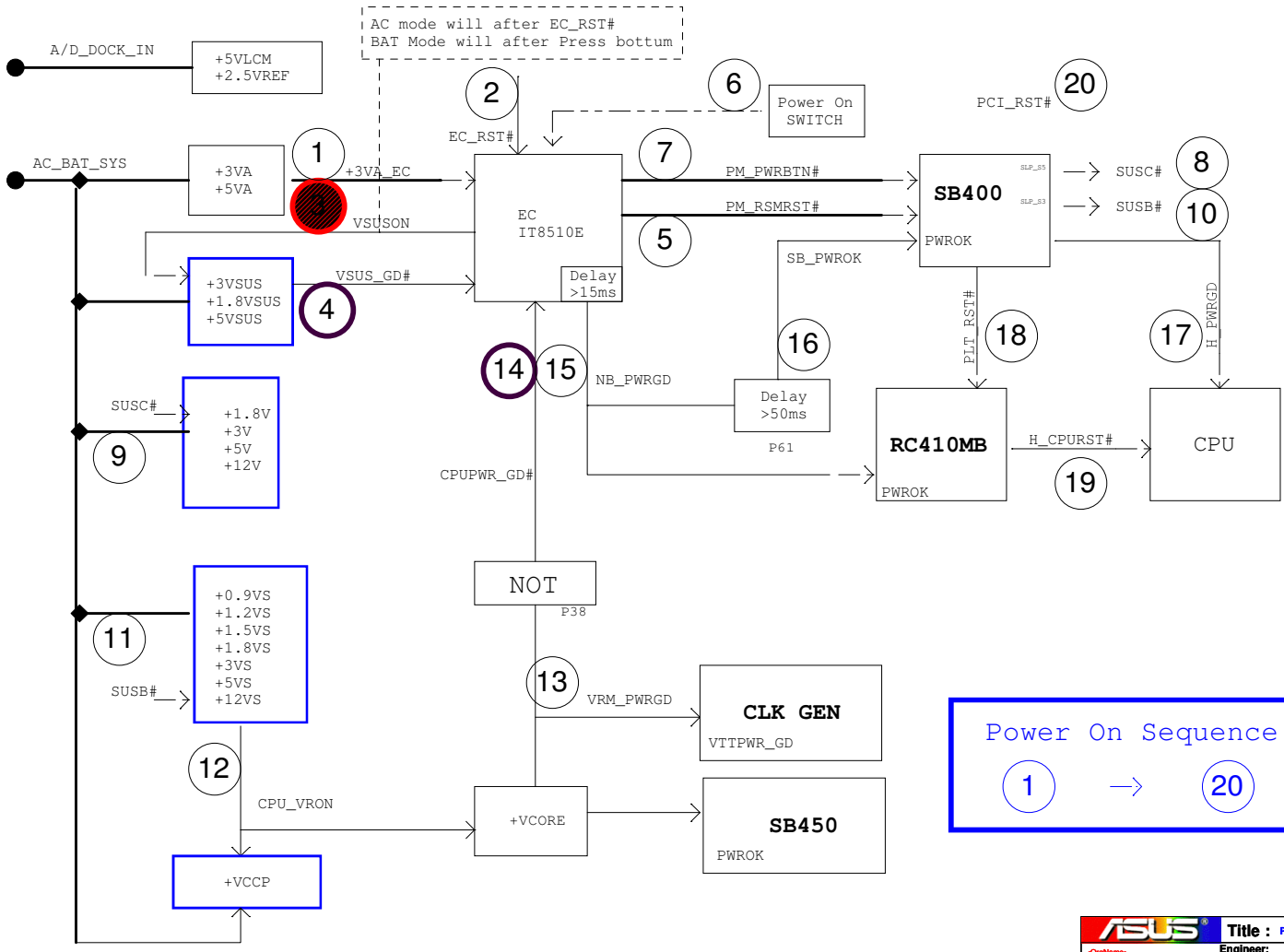
Oblong drill hole



PTH Hole

<b>ASUS</b>		<b>Title : Hole</b>	
<OrigName>	Engineer: Spring LI		
Site	Project Name	Rev	
Custom	Z94Rp	3.1	
Date: 2008.05.18.2008	Sheet: 33	of 45	

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<b>ASUS</b>		<b>Title : Power Sequence</b>	
<OrigName>		Engineer: Spring Li	
Site	Project Name		Rev
Custom	Z94Rp		1.1
Date: 08/11/2008		Sheet: 34	of 45

PCI Device	IDSEL#	REQ/GNT#	Interrupts
10/100 LAN	AD16	0	E
CARD READER	AD17	1	B
CARDBUS	AD17	1	A

SM-Bus Device	SM-Bus Address
Clock Generator	1101001x ( D2 )
SO-DIMM 0	1010000x ( A0 )
SO-DIMM 1	1010001x ( A2 )
Thermal Sensor	0101110x ( 5C )

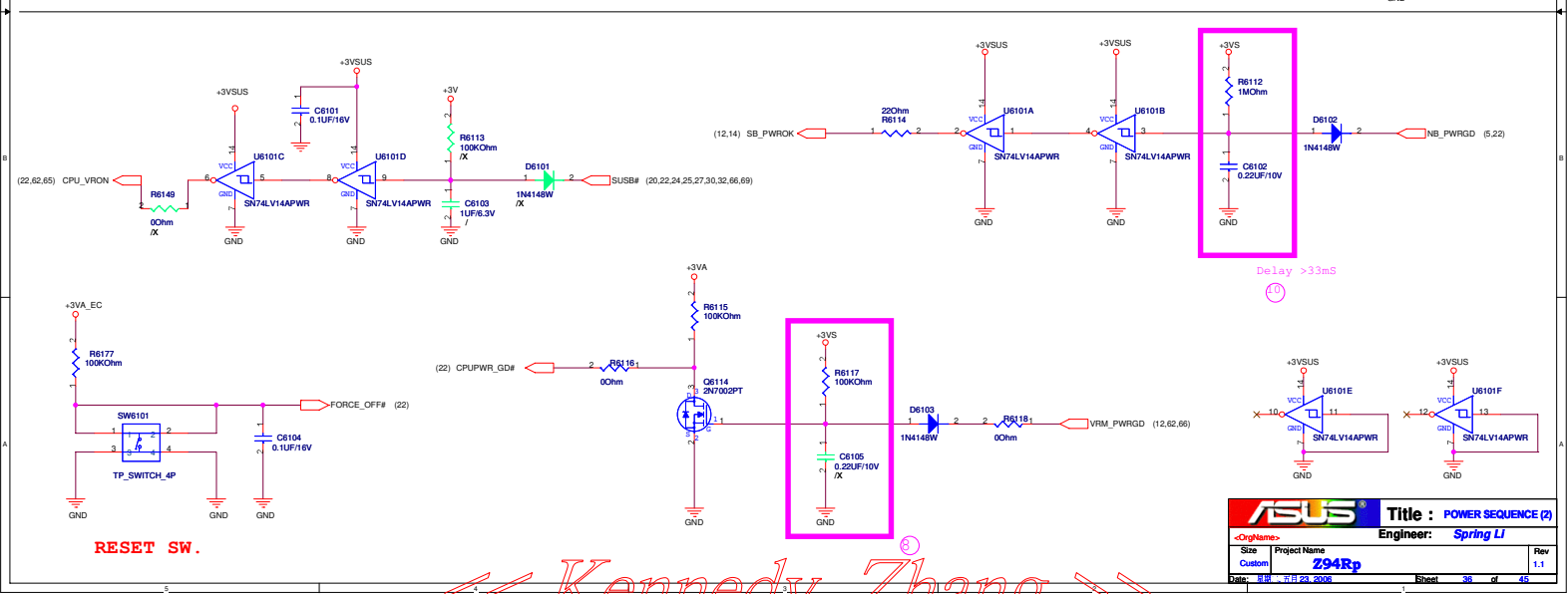
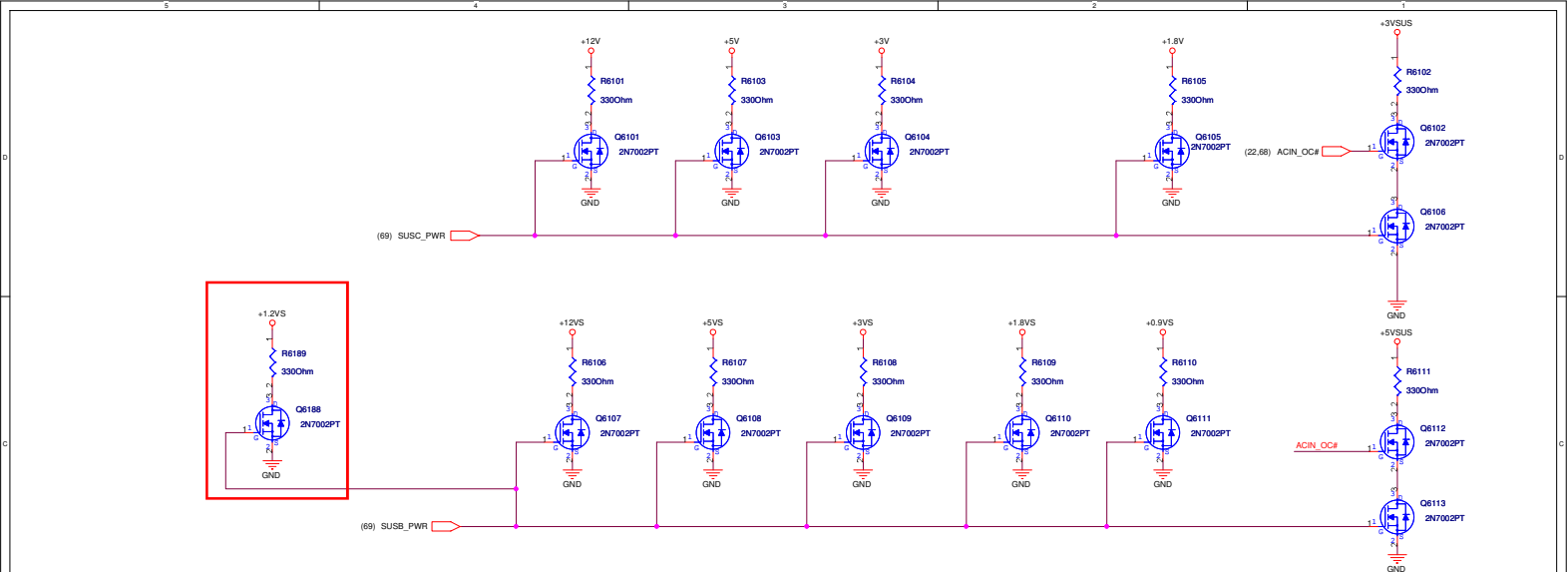
### SB400 GPIO TABLE

GPIO	TYPE	POWER DOMAIN	FUNCTION
GPIO 0	I/OD	S0	
GPIO 1	I/O	S0	
GPIO 2	I/O	S0	SB_SPKR
GPIO 3	I/O	S0	
GPIO 4	I/O	S0	PCB_ID0
GPIO 5	I/O	S0	PCB_ID1
GPIO 6	I/OD	S0	VRM_PWRGD
GPIO 7	I/O	S0	VRM_PWRGD
GPIO 8	I/O	S0	CB_SD#
GPIO 9	I/O	S0	BACK_OFF#
GPIO 10	I/O	S5	SB_PM_THERM#
GPIO 11	I/O	S0	
GPIO 12	I/O	S0	
GPIO 13	I/O	S0	
GPIO 14	I/O	S0	
GPIO 31	I/O	S0	PCI_GNT#5
GPIO 32	I/O	S0	PCI_GNT#6
GPIO 33	I/O	S0	PCI_INTE#
GPIO 34	I/O	S0	PCI_INTF#
GPIO 35	I/O	S0	PCI_INTG#
GPIO 36	I/O	S0	PCI_INTH#
GPM 0	I	S5	
GPM 1	I	S5	
GPM 2	I/O	S5	
GPM 3	I	S5	
GPM 4	I	S5	
GPM 5	I	S5	
GPM 6	I/OD	S5	PWRLED_1HZ
GPM 7	I	S5	SYS_RESET#
GEVENT 0	I	S5	
GEVENT 1	I	S0	
GEVENT 2	I	S5	THRMTRIP#
GEVENT 3	I	S5	LPC_PME#
GEVENT 4	I	S5	PCI_PME#
GEVENT 5	I	S5	H_PROCHOT#
GEVENT 6	I	S5	
GEVENT 7	I	S5	
GEVENT 8			KB_SCI
EXTEVENT#0			EXT_SMI#
EXTEVENT#1			STO_SMI#

KBC GPIO	W1V	Note
P23(Pin 35)	CHG_FULL_OC	
P22(Pin 36)	BAT_LEARN	
P21(Pin 37)	LID_EC#	
P20(Pin 38)	KBCRSM	
P42(Pin 23)		
P43(Pin 22)	OP_SD#	
P44(Pin 21)	KB_CPURST	
P45(Pin 20)	KB_GATEA20	
P46(Pin 19)	KBCSCI#	
P47(Pin 18)	PM_CLKRUN#	
P50(Pin 17)	BAT_LLOW#_OC	
P51(Pin 16)	KID0	
P52(Pin 15)	KID1	
P53(Pin 14)		
P54(Pin 13)	BAT_SEL#	
P55(Pin 12)	BAT1_IN#_OC	
P56(Pin 11)		
P57(Pin 10)	INV_DA	
P67(Pin 74)		
P66(Pin 75)		
P65(Pin 76)	GAIN_AMP_K#	0 -> 0 W1V 1 -> NORMAL
P64(Pin 77)	ACIN_OC	
P63(Pin 78)	DISTP#	
P62(Pin 79)	MARATHON#	
P61(Pin 80)	INTERNET#	
P60(Pin 1)	EMAIL#	
P75(Pin 4)	KB_CLK	
P74(Pin 5)	MS_CLK	
P73(Pin 6)	TPAD_CLK	
P72(Pin 7)	KB_DAT	
P71(Pin 8)	MS_DAT	
P70(Pin 9)	TPAD_DAT	
P77(Pin 2)	SMC_BAT	
P76(Pin 3)	SMD_BAT	
P27(Pin 31)		
P26(Pin 32)	NUM_LED#	
P25(Pin 33)	CAP_LED#	
P24(Pin 34)	SET_PLTRSTNS#	
P40(Pin 27)	EXT_SMI	
P41(Pin 26)	EMAIL_LED#	

		<b>Title : SYSTEM RESOURCE</b>	
<<OrigName>>		Engineer: Spring Li	
Site	Project Name		Rev
Custom	Z94Rp		1.1
Date: 08/19/04	2004	Sheet	35 of 45

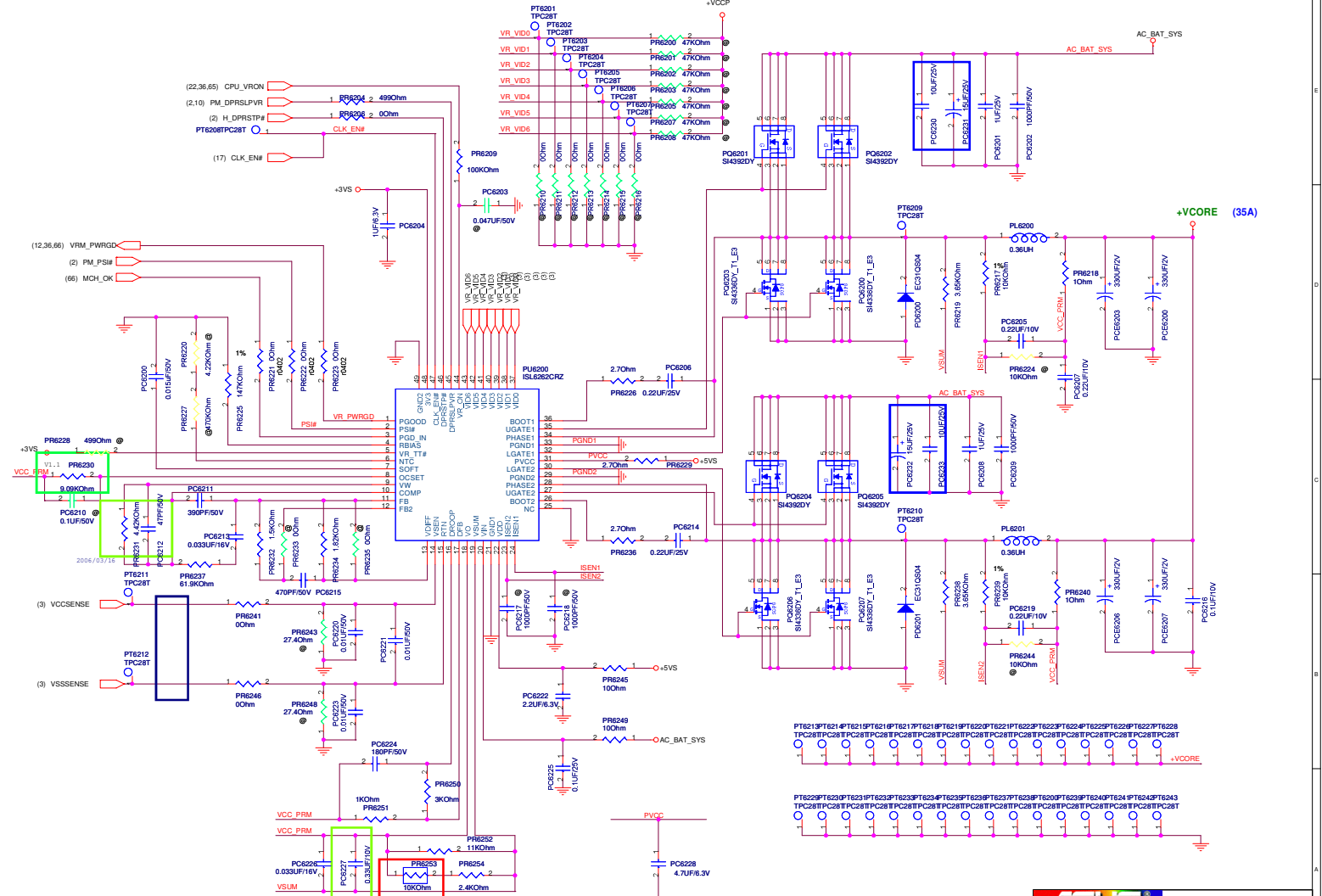
<< Kennedy\_Zhang >>



RESET SW.

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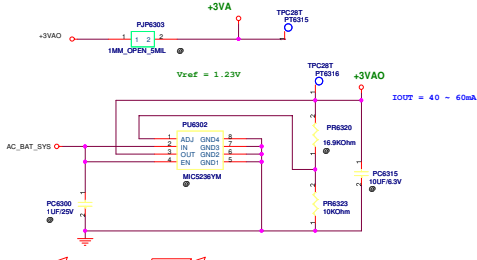
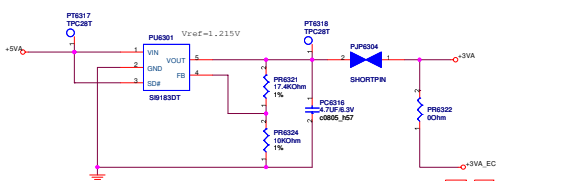
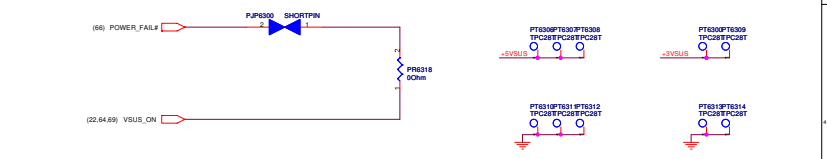
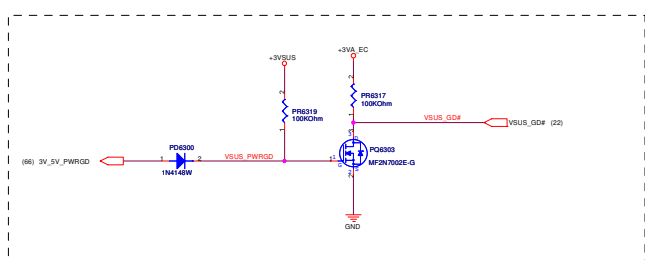
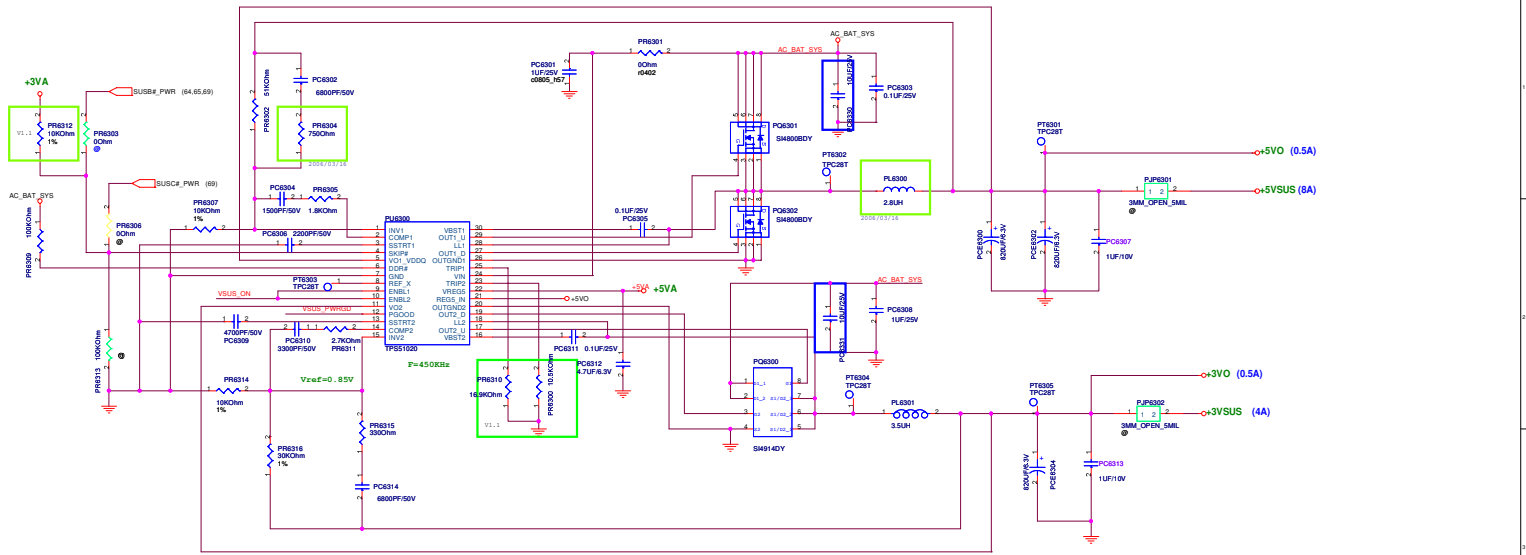
<b>ASUS</b>		<b>Title : POWER SEQUENCE (2)</b>	
<OrigName>	Engineer: Spring LI	Rev	1.1
Size	Project Name	Date	Sheet
Custom	294Rp	05/23/2008	36 of 48



Close to Phase 1 Inductor

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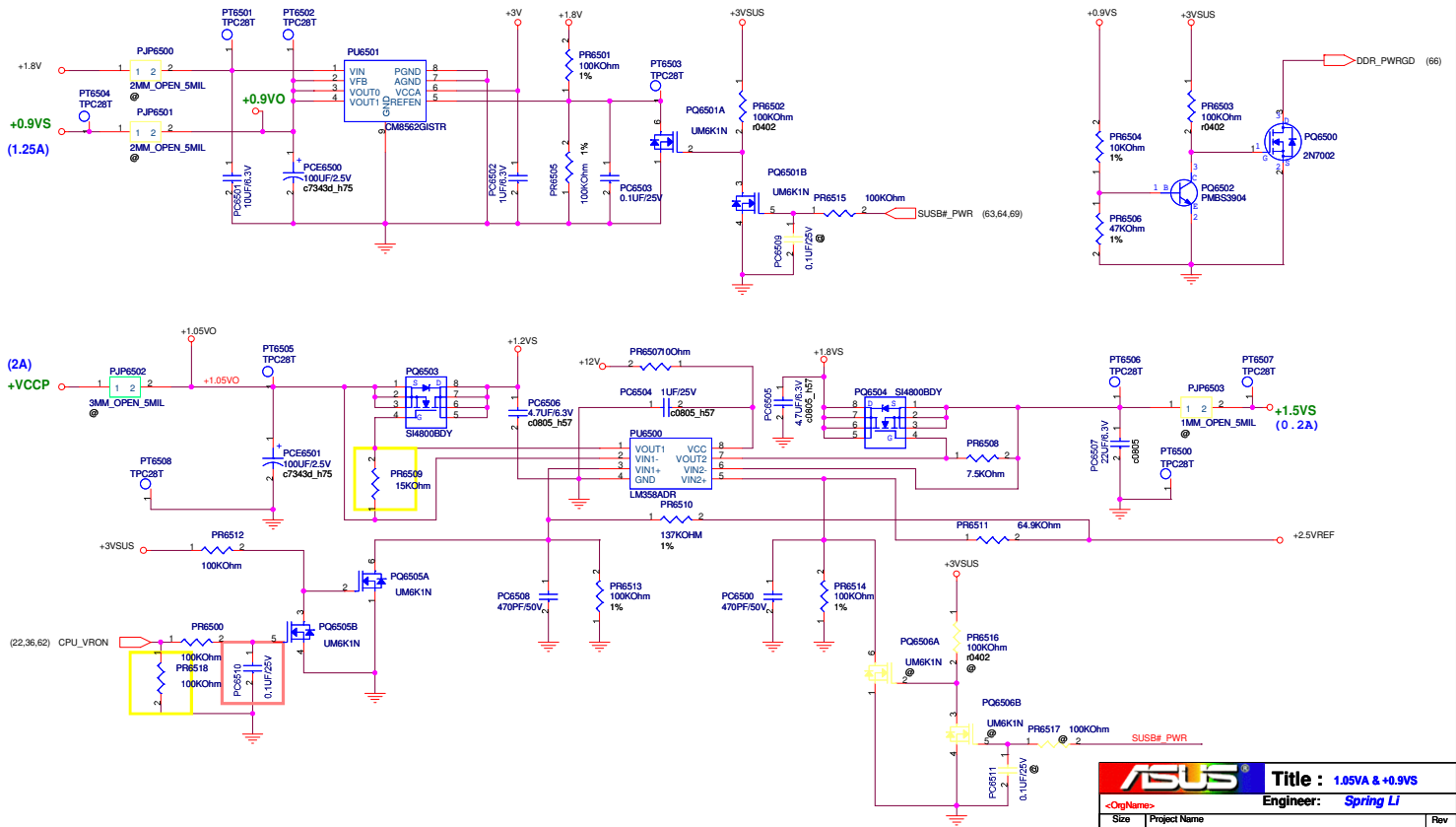
<b>ASUS</b>		<b>Title : POWER_VCORE</b>	
-<OrigName>		Engineer: Spring Li	
Site	Project Name	Custom	
Date: 8/11/23, 2009		Rev 1.1	
Sheet 82 of 46			



<b>ASUS</b>		<b>Title : SYSTEM +5V &amp; +3V</b>	
BSA	Project Name	Engineer: Spring LI	Rev
C	294Rp		1.1
Date: 11-14-2009	Sheet: 61	of	65

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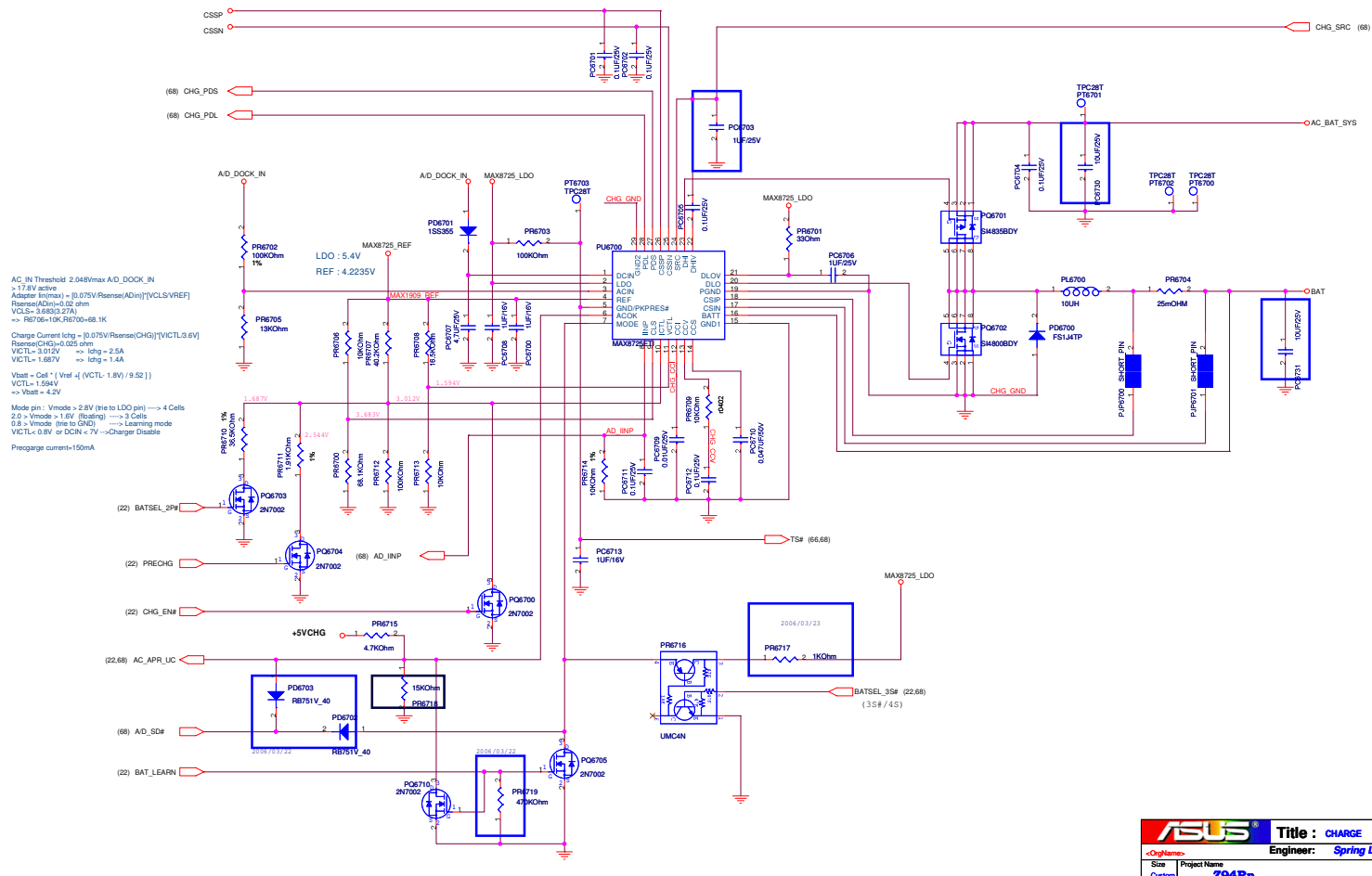


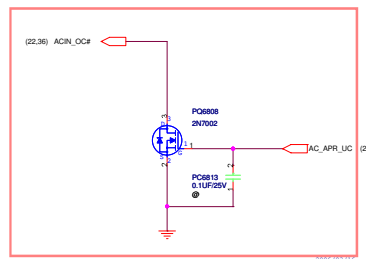
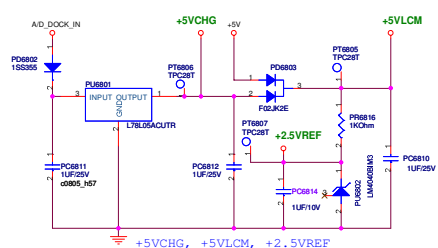
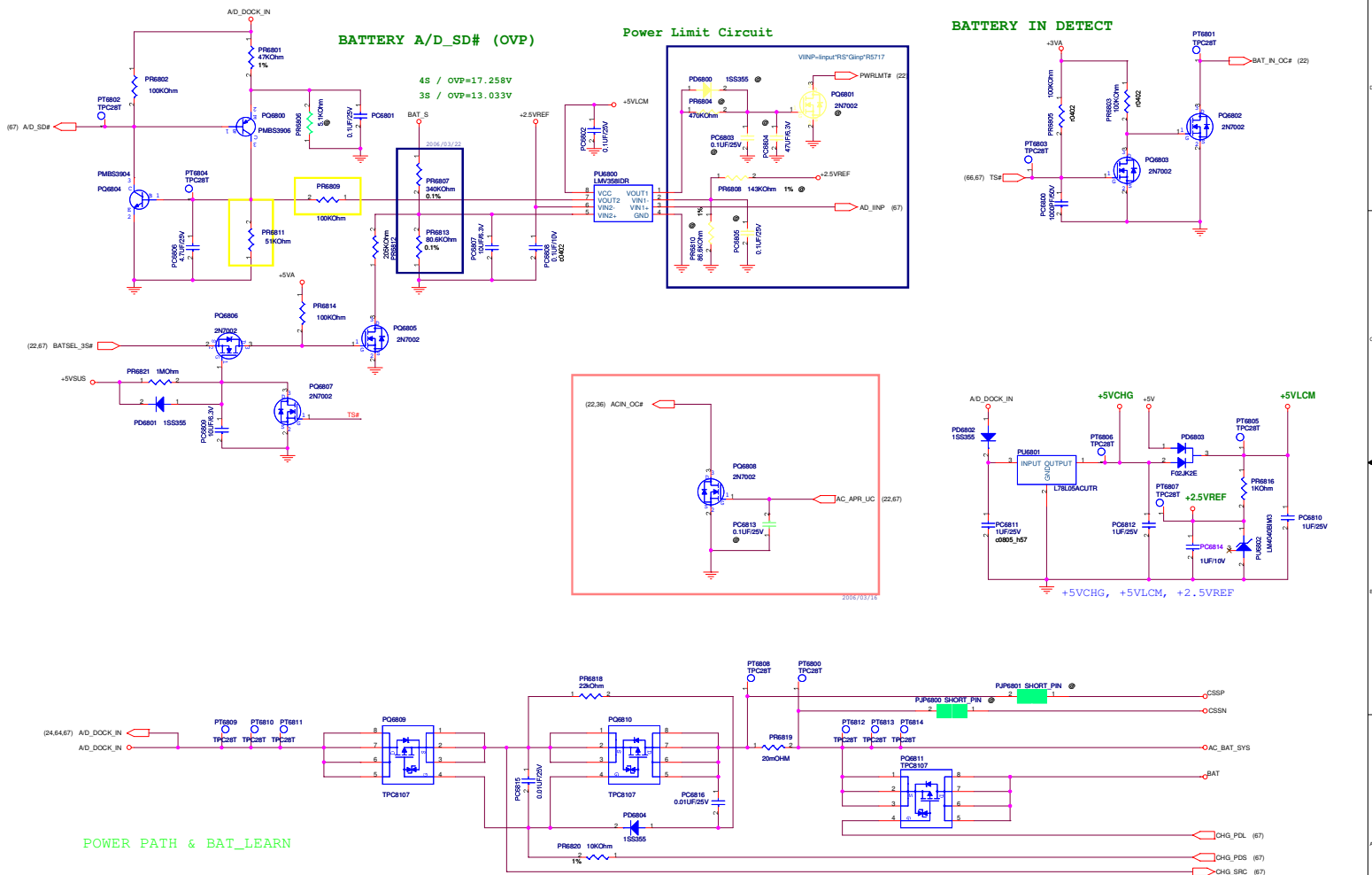
<b>ASUS</b>		<b>Title :</b> 1.05VA & +0.9VS
-<OrigName>		Engineer: Spring LI
Size	Project Name	Rev
B	294Rp	1.1
Date: 2006.11.23	Sheet	65 of 45

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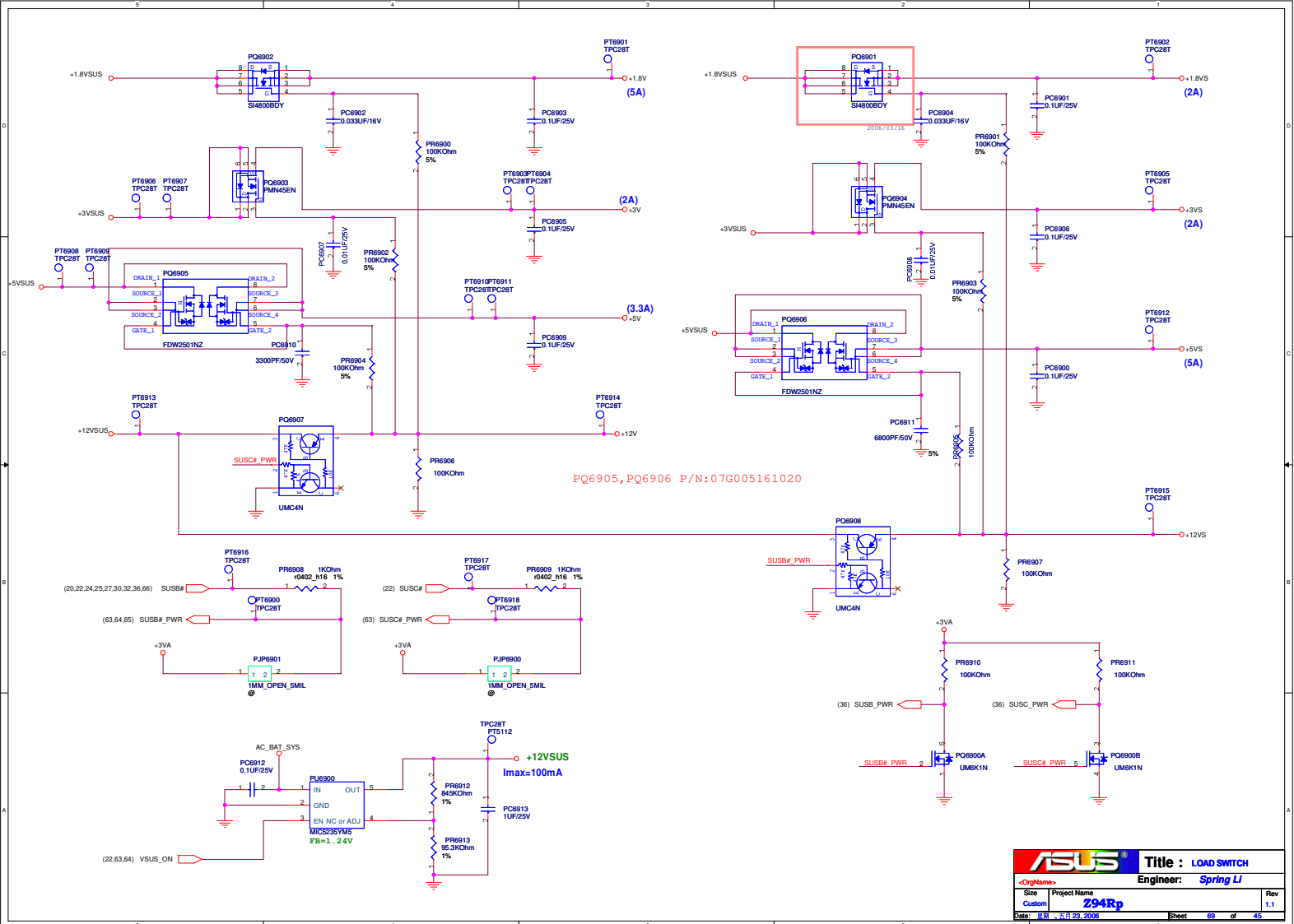






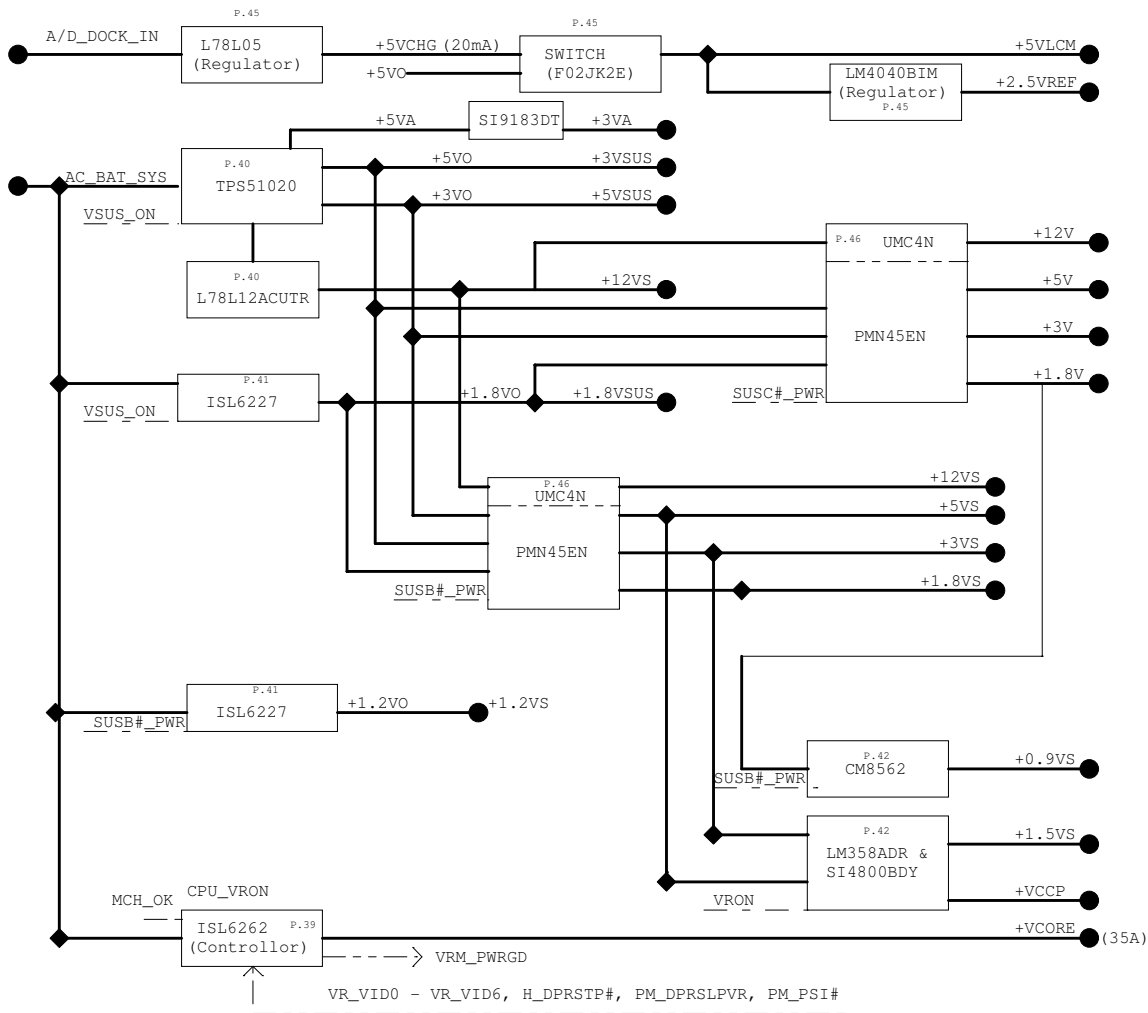
<b>ASUS</b>		<b>Title :</b> PROTECTIONSD#
Design Name	Engineer:	Spring LI
Size	Project Name	
Custom	Z94Rp	Rev 1.1
Date: 01-24-2005	Sheet	08 of 45

*<< Kennedy\_Zhang >>*



<b>ASUS</b>		<b>Title : LOAD SWITCH</b>	
<OrigName> Custom		Engineer: <b>Spring LJ</b>	
Project Name <b>Z94Rp</b>		Rev 1.1	
Date: 03月23, 2006		Sheet 69 of 45	

<< Kennedy\_Zhang >>



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<b>ASUS</b>		<b>Title : POWER BLOCK DIAGRAM</b>	
Engineer: <b>Spring Li</b>			
Site	Project Name	Rev	
Custom	<b>Z94Rp</b>	1.1	
Date: <b>11/04/2008</b>	Sheet: <b>70</b>	of	<b>48</b>