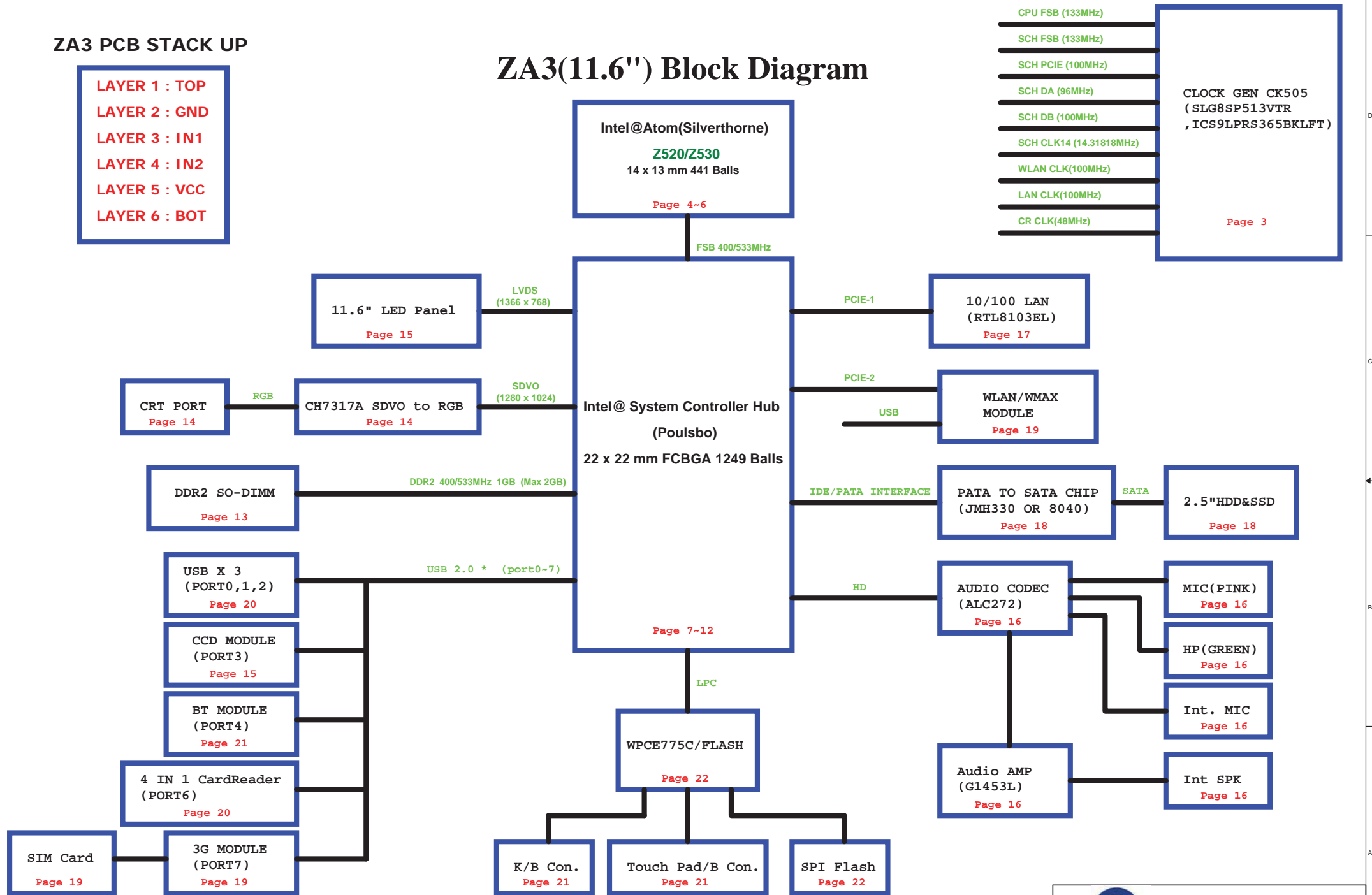


ZA3 PCB STACK UP

- LAYER 1 : TOP
- LAYER 2 : GND
- LAYER 3 : IN1
- LAYER 4 : IN2
- LAYER 5 : VCC
- LAYER 6 : BOT

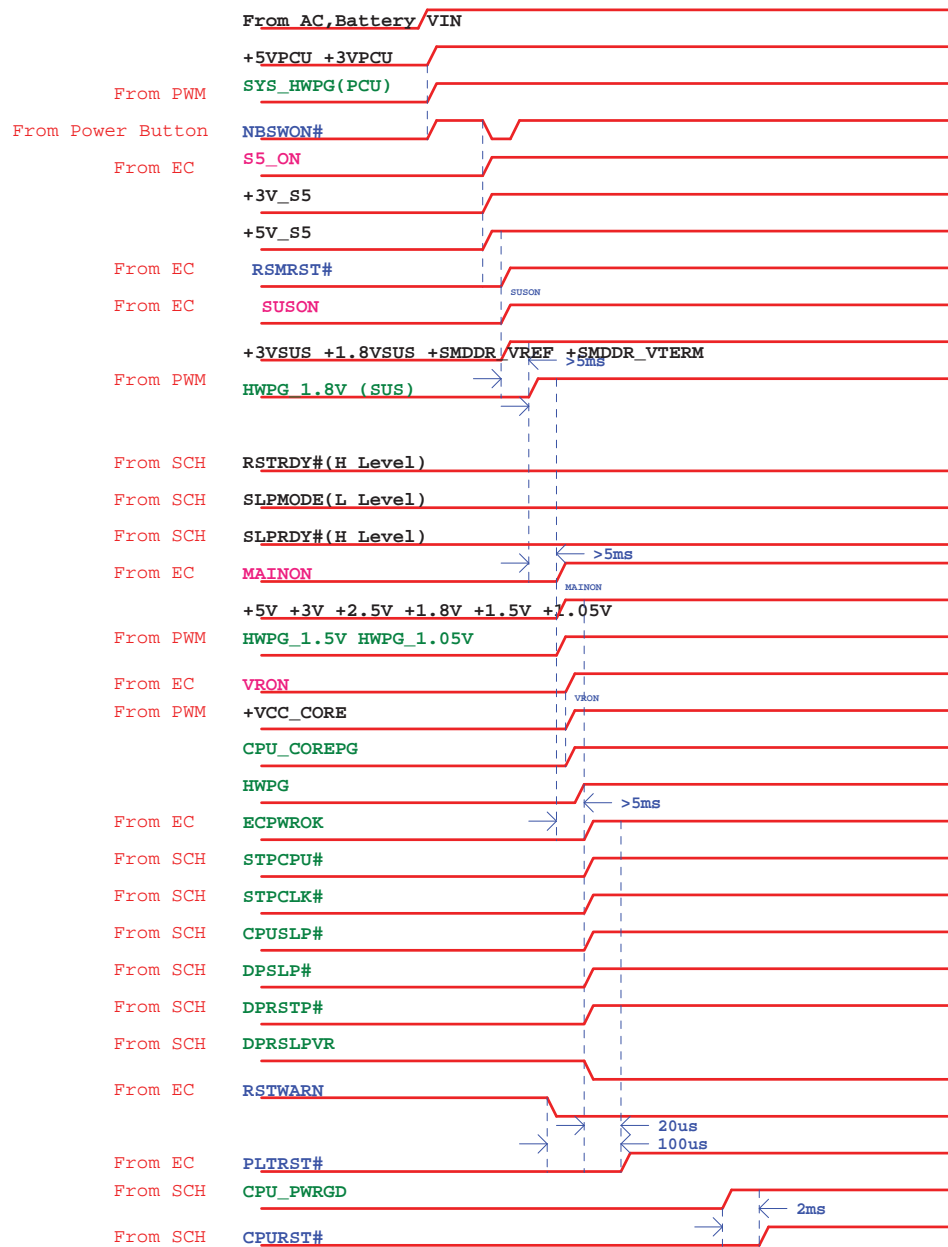
ZA3(11.6") Block Diagram



Quanta Computer Inc.
PROJECT : ZA3

Size	Document Number	Rev
	BLOCK DIAGRAM	1A
Date:	Sunday, March 08, 2009	Sheet 1 of 34

ZA3 Power On Sequence



BOM naming rule

Items	Function	Name	Description
1	PATA TO SATA BRIDGE	8040@	Marvell 88SE8040
2	PATA TO SATA BRIDGE	330@	Jmicron JMH330
3	3G Module	3G@	
4	FAN Module	FAN_PWM@	PWM FAN
5			
6			

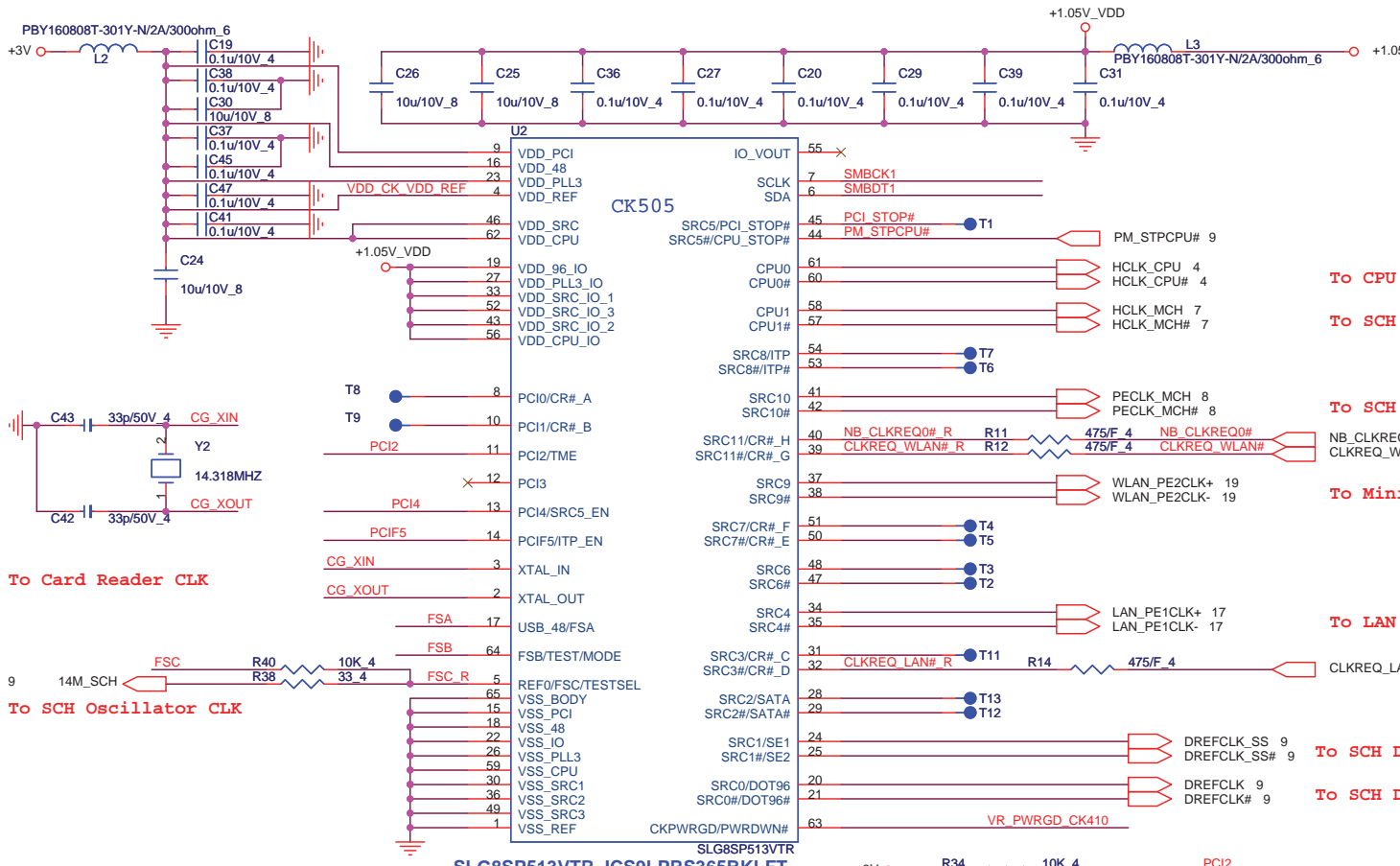
Poulsbo SCH SMBUS Table

	CLK GEN	RAM	Mini Card (WLAN/WMAX)	Mini Card (3G)
(SMB_DATA) / (SMB_CLK) (+3V)	V	V	V	V
Power Plane	+3V	+3V	+3V	+3VSUS
MOS CKT	Reserve	Reserve	Reserve	Reserve

EC SMBUS Table

	Battery	CPU thermal Sensor	EC EEPROM
EC775 SDA1 / SCL1 (+3VPCU)	V		
EC775 SDA2 / SCL2 (+3VPCU)		V	V
Power Plane	+3VPCU	+3V	+3VPCU
MOS CKT	X	Stuff	X

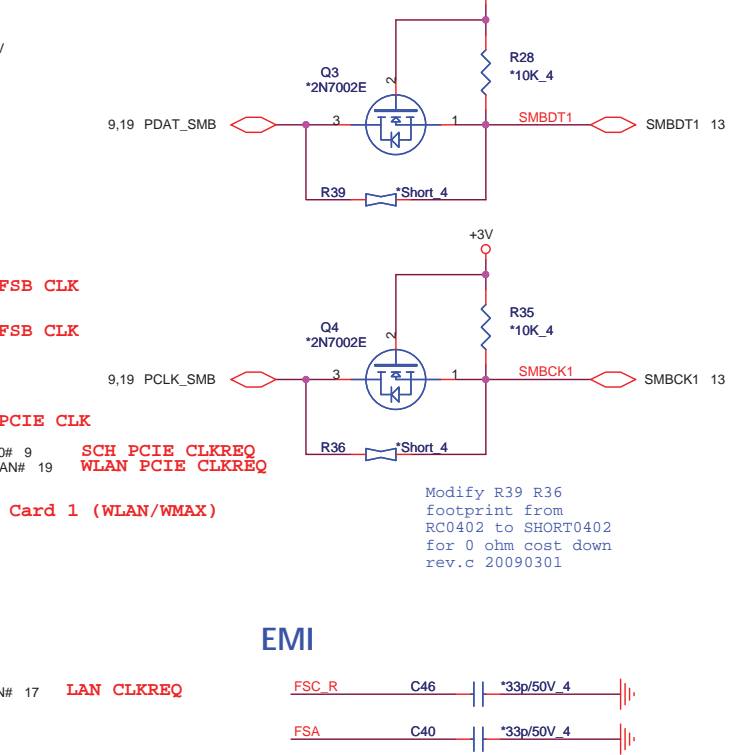
Clock Generator(CLK)



To Card Reader CLK

To SCH Oscillator CLK

Clock Gen I2C



Modify R39 R36 footprint from RC0402 to SHORT0402 for 0 ohm cost down rev.c 20090301

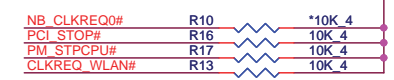
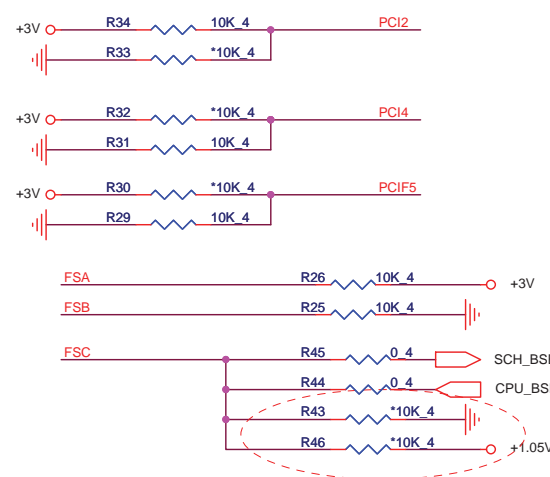
EMI



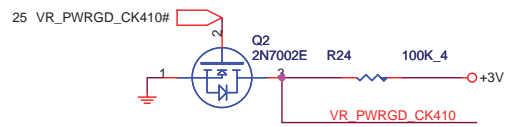
	SLG8SP513VTR (AL8SP513000)	ICS9LPRS365 (ALPRS365000)	PULL HIGH	PULL DOWN
Pin 11	PCI2/TME	PCI2/TME	NO OVERCLOCKING (default)	NORMAL RUN
Pin 13	PCI4/27_Select	PCI_4/SEL_LCDCLK#	PIN 24/25 IS 27MHz	PIN 24/25 IS SRC/DOT (default)
Pin 14	PCIF-5/ITP_EN	PCIF-5/ITP_EN	PIN 53/54 IS CPUITP	PIN 53/54 IS SRC8 (default)

<MAIN> : SLG8SP513VTR(AL8SP513000)
 <SECOND> : ICS9LPRS365BKLF(ALPRS365000)


SEL2	SEL1	SELO	Frequence select			States
FSC	FSB	FSA	CPU	SRC	PCI	
1	0	1	100	100	33	
0	0	1	133	100	33	Default



CLK GEN & PWR



Change R43 P/N from CS00002JB38 to CS31002JB28 rev.c 20090301

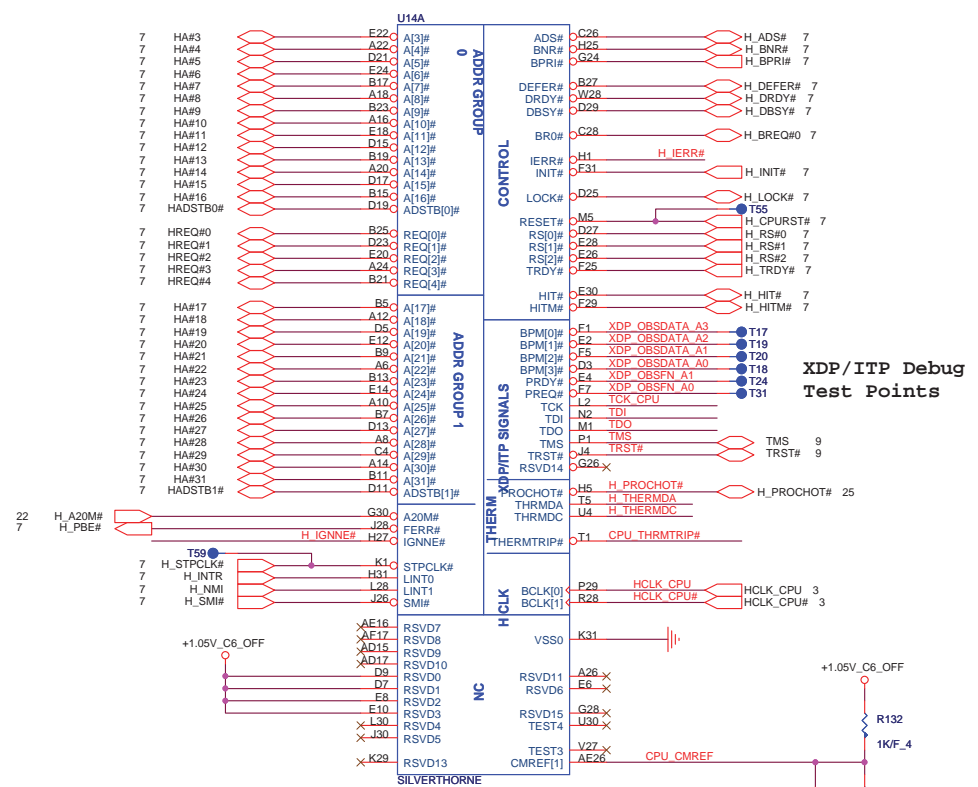


Quanta Computer Inc.

PROJECT : ZA3

Size	Document Number	Rev
	CLOCK GEN(CK505)	1A
Date:	Sunday, March 08, 2009	Sheet 3 of 34

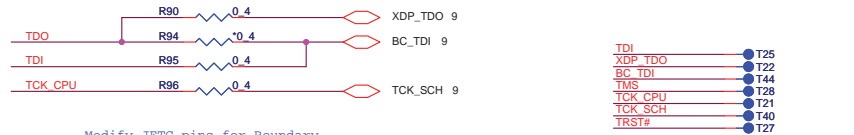
Silverthorne(CPU)



Note : H_FERR# for layout length must be greater than 150mils 20081128

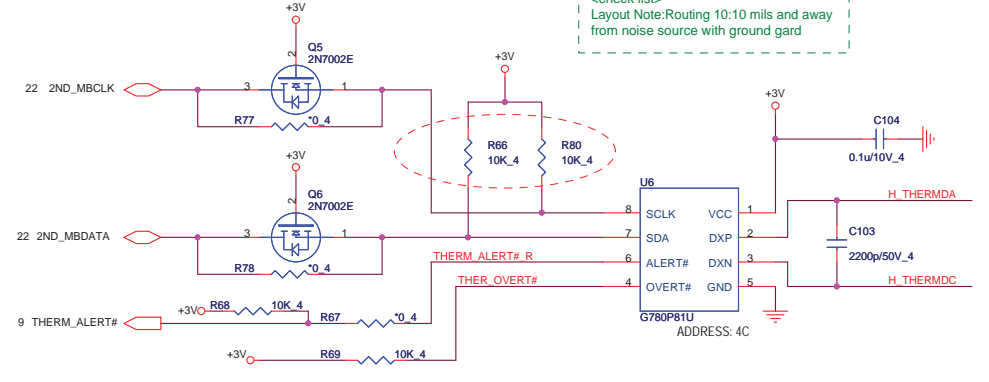


For intel suggest R115 connect to +1.05V_C6_OFF 20081218

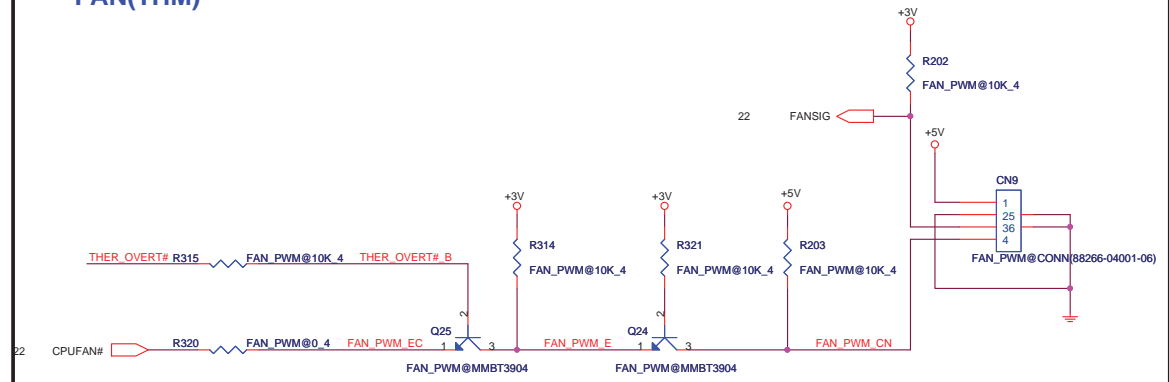


Modify JETC pins for Boundary Scan rev.b 20090205

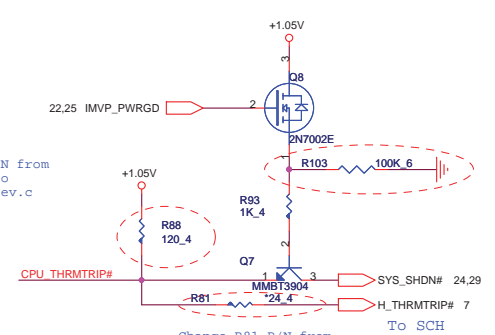
CPU Thermal monitor(THM)



FAN(THM)



Thermal Trip(CPU)



Change R88 P/N from CS05602JB17 to CS11202JB21 rev.c 20090301

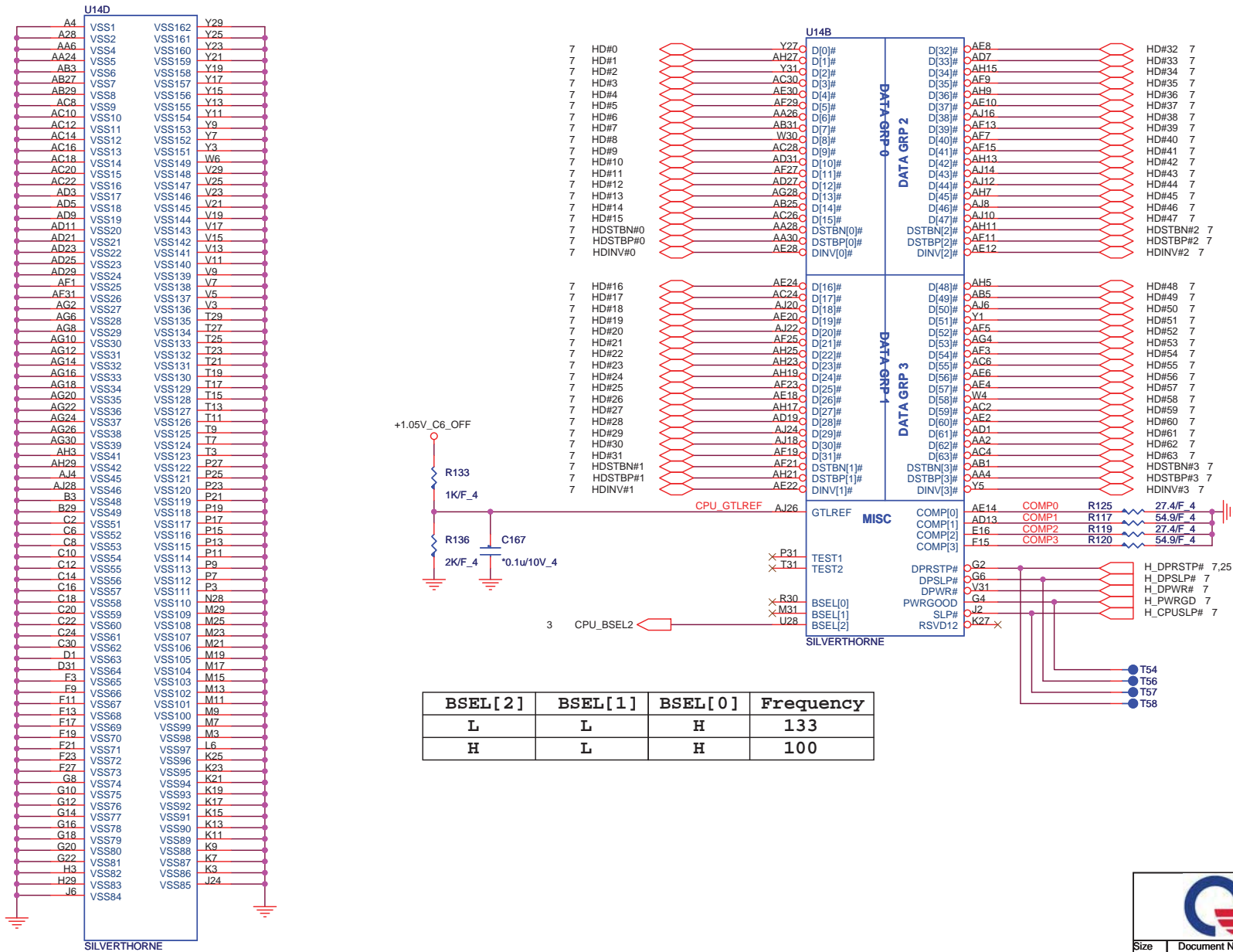
Change R81 P/N from CS00002JB38 to CS02402JB11 rev.c 20090301

Quanta Computer Inc.

PROJECT : ZA3

Size	Document Number	Rev
	Silverthorne CPU(01_HOST)	1A
Date:	Sunday, March 08, 2009	Sheet 4 of 34

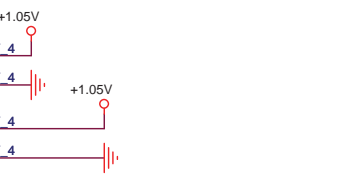
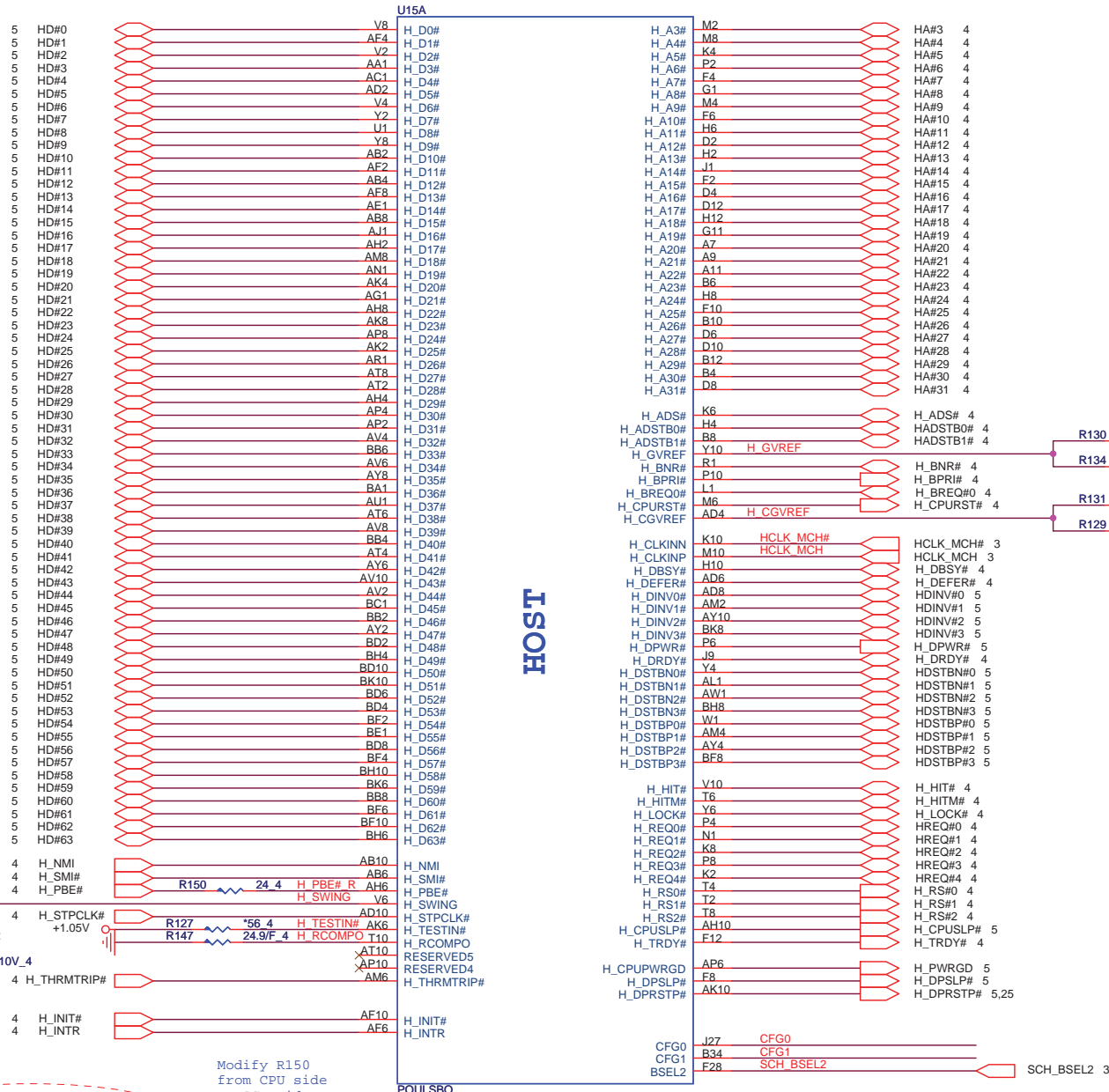
Silverthorne(CPU)



Quanta Computer Inc.
PROJECT : ZA3

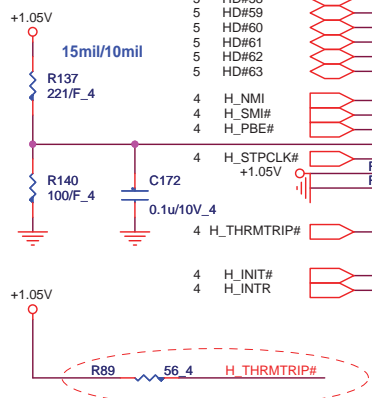
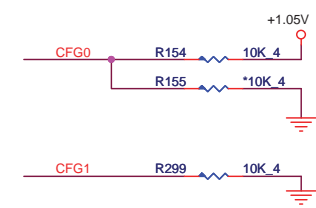
Size	Document Number	Rev
	Silverthorne CPU(02_HOST)	1A
Date:	Sunday, March 08, 2009	Sheet 5 of 34

Poulsbo(CLG)



FSB Clock

	FSB/DDR
CFG0 H	133
CFG0 L	100



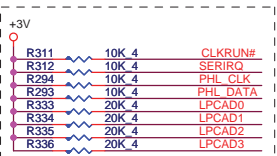
Modify R150 from CPU side to SCH side rev.c 20090301

Quanta Computer Inc.
PROJECT : ZA3

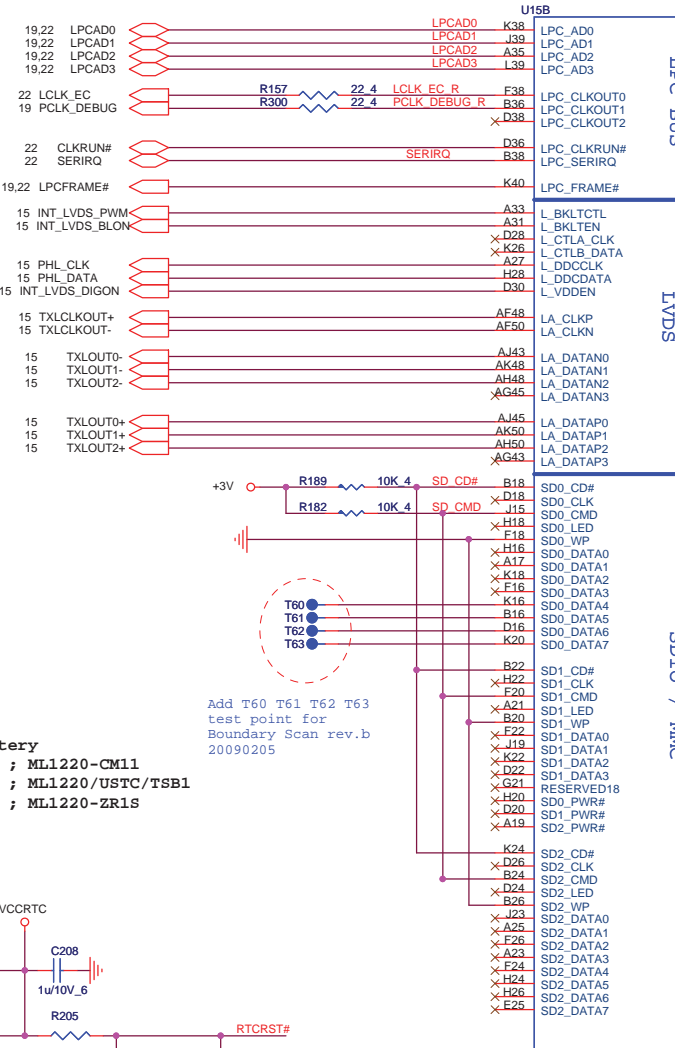
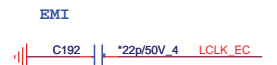
Size	Document Number	Rev
	Poulsbo(01_HOST)	1A
Date:	Sunday, March 08, 2009	Sheet 7 of 34

Poulsbo(CLG)

Stuff R312 for Keyboard
and TP issues rev.c
20090228



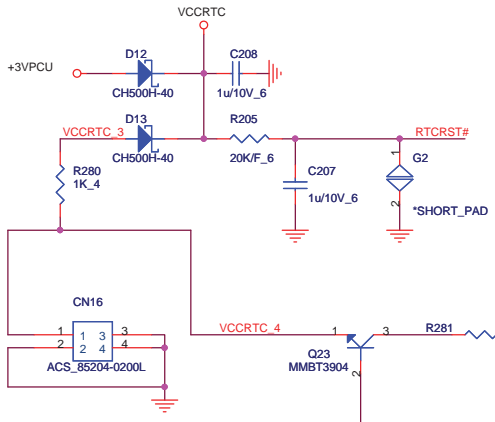
Add R333 R334
R335 R336 for
LPC AD0-AD3
rev.c 20090301



Add T60 T61 T62 T63
test point for
Boundary Scan rev.b
20090205

RTC Battery
SANYO: AHL03001502 ; ML1220-CM11
MATSUSHITA: AHL03001405 ; ML1220/USTC/TSB1
MAXELL: AHL03001404 ; ML1220-ZR1S

RTC(RTC)



SCH_RSVM1 : (LPC_CLKOUT0 buffer strength)
0 = 1 Load driver strength
1 = 2 Load driver strength
*** intel has integrated 300K pull-up

SDVO to CRT

Change C233 C231 C243
C240 C239 C238 C237
C235 from SDVO chip
side to SCH side rev.c
20090301

PCIE TO LAN

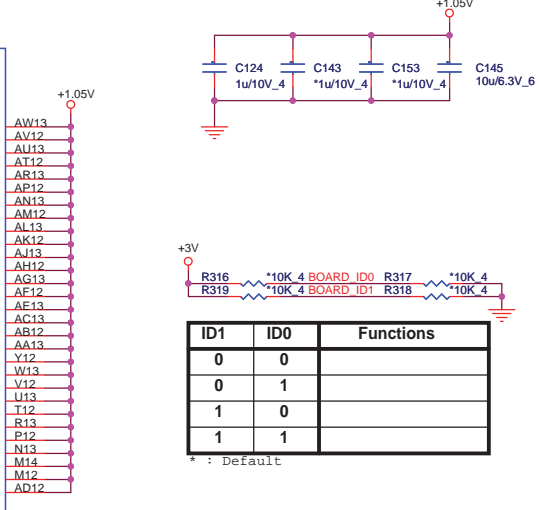
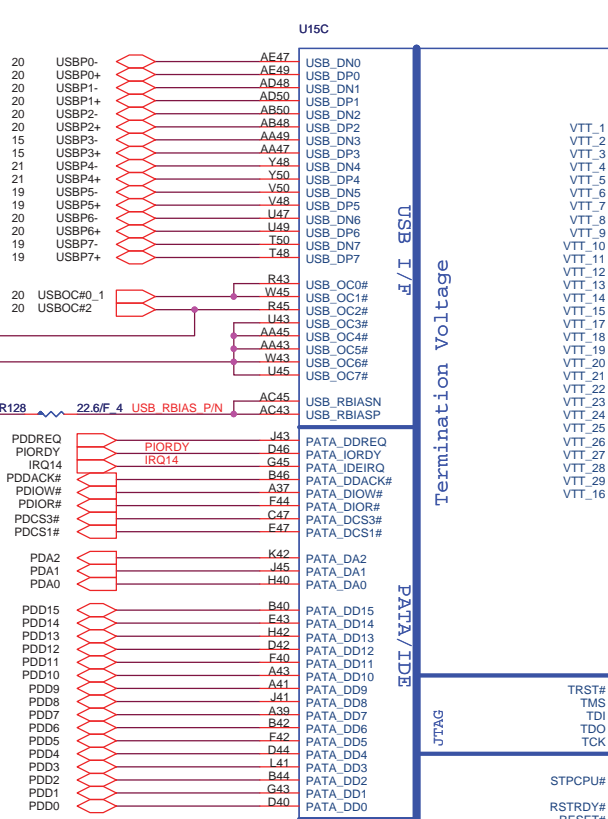
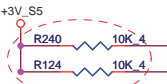
PCIE TO WLAN/WMMX

Quanta Computer Inc.
PROJECT : ZA3

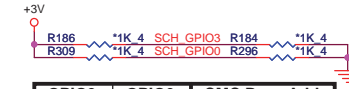
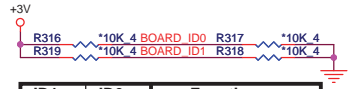
Size	Document Number	Rev
	Poulsbo(02 LPC/LVDS/SDIO)	1A
Date	Friday, March 06 2009	Sheet 8 of 34

Poulsbo(CLG)

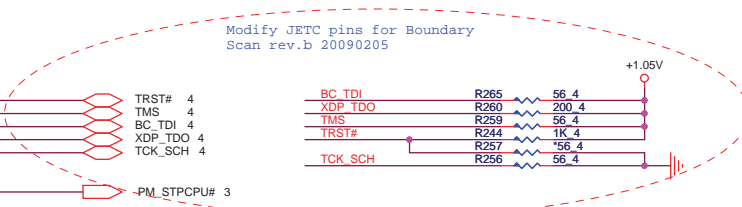
- 0--MB USB PORT1
- 1--MB USB PORT2
- 2--DB USB PORT3
- 3--CCD Module
- 4--BT Module
- 5--MINI WLAN/WMAX
- 6--CARD READER
- 7--MINI 3G Module



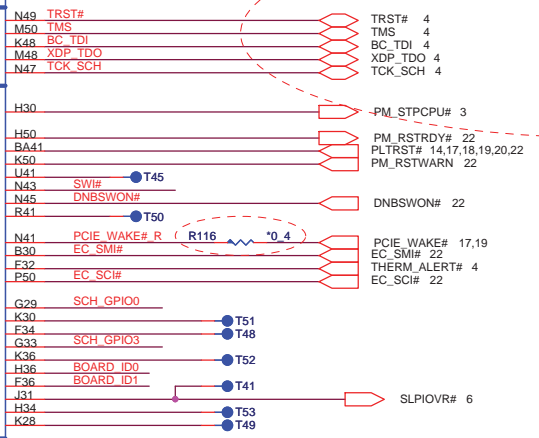
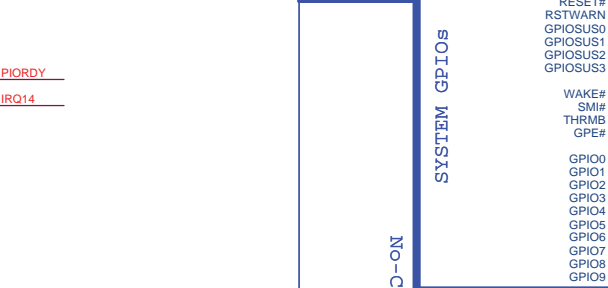
Change R186 R184 R309 R296
P/N from CS31002JB28 to
CS21002JB34 rev.c 20090301



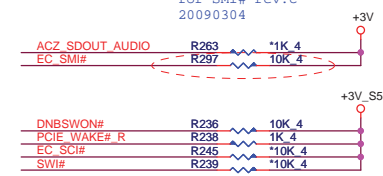
XDP/ITP Debug Test Points



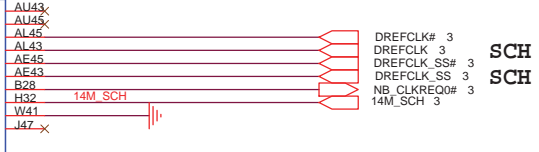
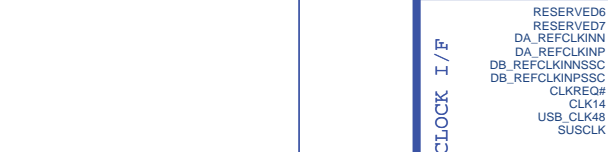
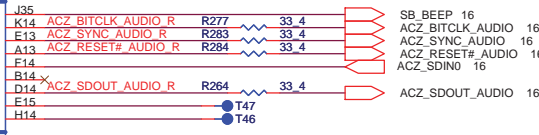
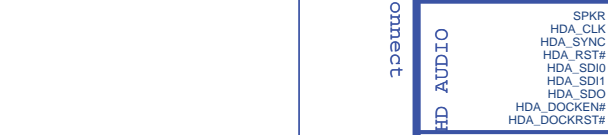
Modify JETC pins for Boundary
Scan rev.b 20090205



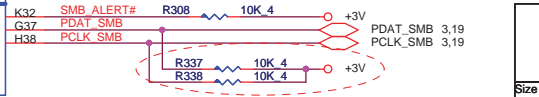
Change R297 from
+3V_S5 to +3V
for SMI# rev.c
20090304



For intel suggest add R295 pull
down 20081218



SCH GFX Clock
SCH GFX SS Clock

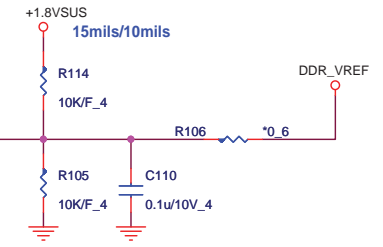
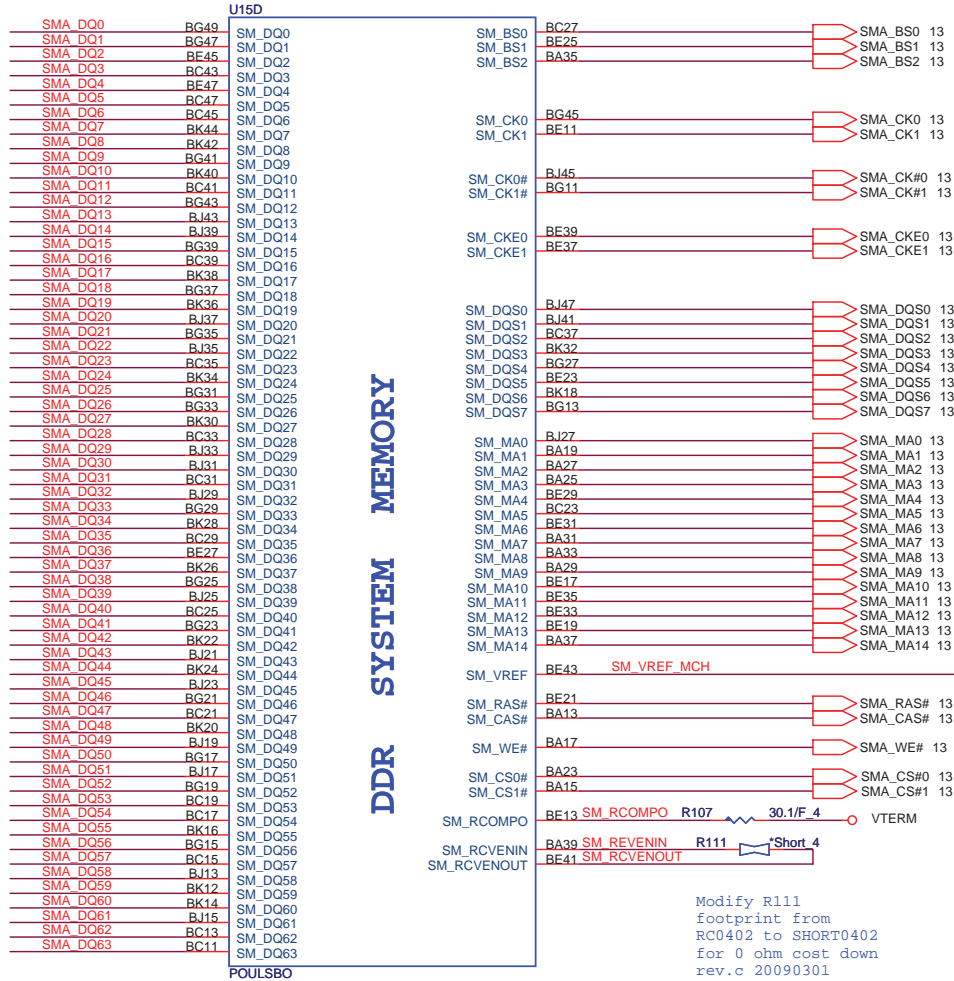


Quanta Computer Inc.
PROJECT : ZA3

Size	Document Number	Rev
Poulsbo(03 USB/PATA/HD)	Poulsbo(03 USB/PATA/HD)	1A
Date:	Sunday, March 08, 2009	Sheet 9 of 34

Poulsbo(CLG)

13 SMA_DQ[63..0]

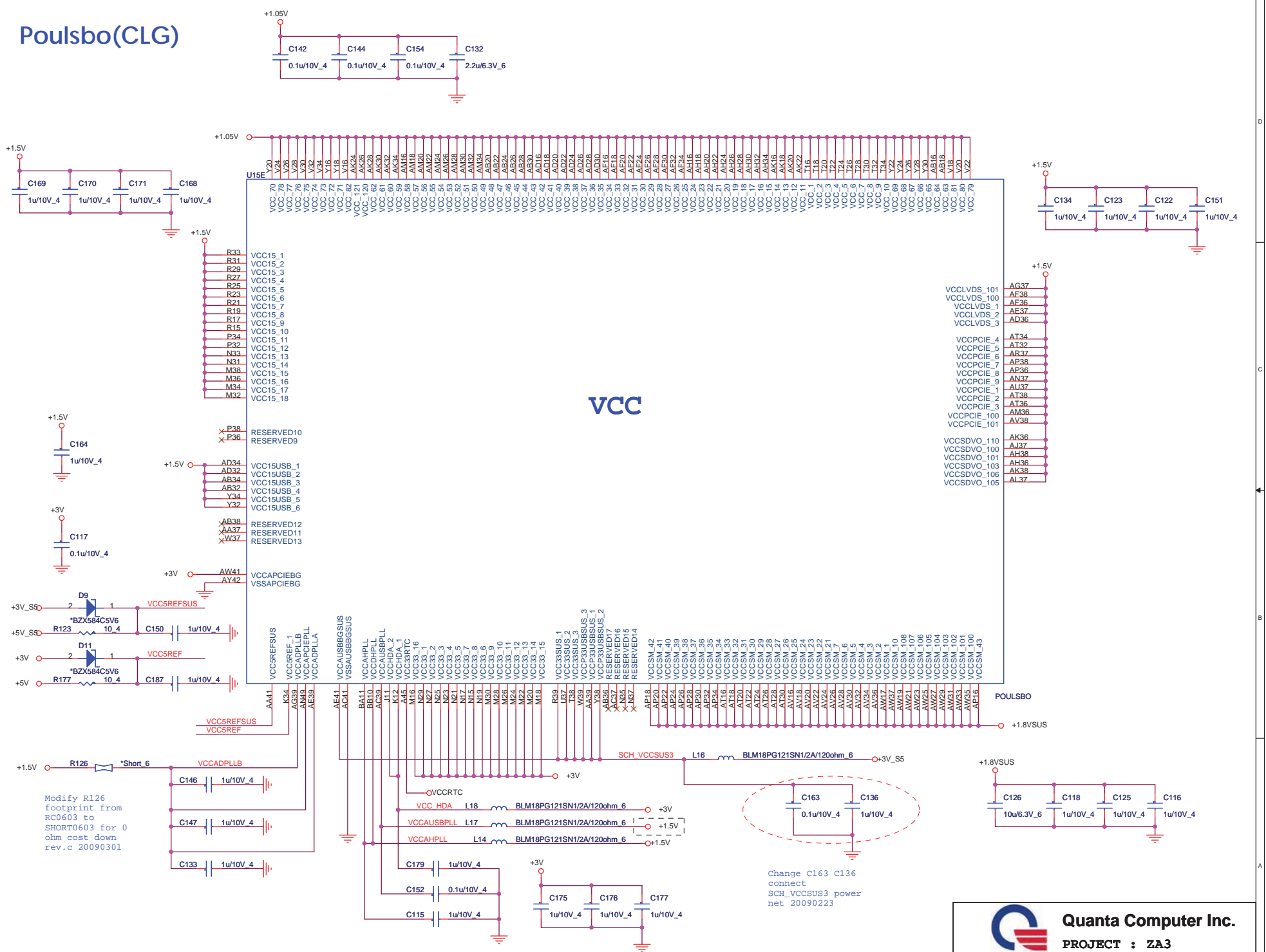


Modify R111 footprint from RC0402 to SHORT0402 for 0 ohm cost down rev.c 20090301

Quanta Computer Inc.
PROJECT : ZA3

Size	Document Number	Rev
	Poulsbo(04_MEM)	1A
Date:	Sunday, March 08, 2009	Sheet 10 of 34

Poulsbo(CLG)



Modify R126 footprint from RC0603 to SHORT0603 for 0 ohm cost down rev.c 20090301

Change C163 C136 connect SCH_VCCSUS3 power net 20090223

Quanta Computer Inc.
PROJECT : ZA3

Size	Document Number	Rev
	Poulsbo(05 Power)	1A
Date	Monday, March 06 2009	Sheet 11 of 34

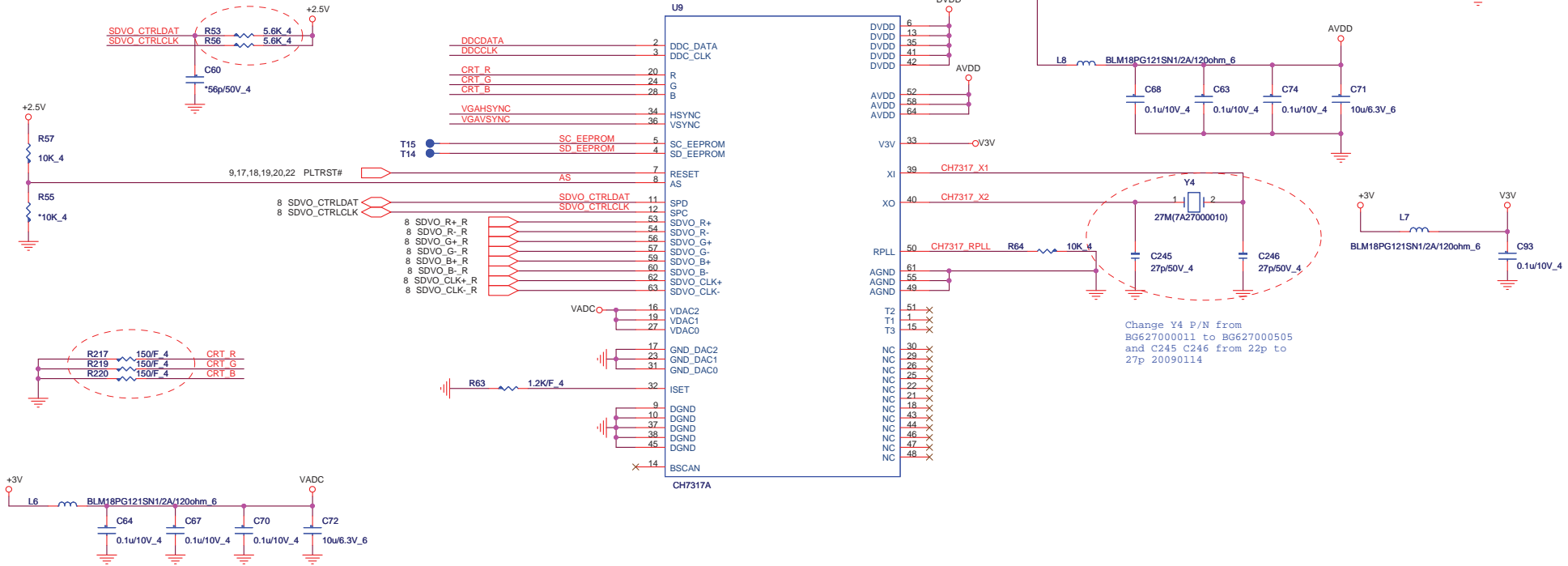
U15F	
BH30	VSS_1
BH28	VSS_2
BH26	VSS_3
BH24	VSS_4
BH22	VSS_5
BH20	VSS_6
BH18	VSS_7
BH16	VSS_8
BH14	VSS_9
BH12	VSS_10
BH10	VSS_11
BH8	VSS_12
BH6	VSS_13
BH4	VSS_14
BH2	VSS_15
BH0	VSS_16
BH32	VSS_17
BH34	VSS_18
BH36	VSS_19
BH38	VSS_20
BH40	VSS_21
BH42	VSS_22
BH44	VSS_23
BH46	VSS_24
BH48	VSS_25
BH50	VSS_26
BH52	VSS_27
BH54	VSS_28
BH56	VSS_29
BH58	VSS_30
BH60	VSS_31
BH62	VSS_32
BH64	VSS_33
BH66	VSS_34
BH68	VSS_35
BH70	VSS_36
BH72	VSS_37
BH74	VSS_38
BH76	VSS_39
BH78	VSS_40
BH80	VSS_41
BH82	VSS_42
BH84	VSS_43
BH86	VSS_44
BH88	VSS_45
BH90	VSS_46
BH92	VSS_47
BH94	VSS_48
BH96	VSS_49
BH98	VSS_50
BH100	VSS_51
BH102	VSS_52
BH104	VSS_53
BH106	VSS_54
BH108	VSS_55
BH110	VSS_56
BH112	VSS_57
BH114	VSS_58
BH116	VSS_59
BH118	VSS_60
BH120	VSS_61
BH122	VSS_62
BH124	VSS_63
BH126	VSS_64
BH128	VSS_65
BH130	VSS_66
BH132	VSS_67
BH134	VSS_68
BH136	VSS_69
BH138	VSS_70
BH140	VSS_71
BH142	VSS_72
BH144	VSS_73
BH146	VSS_74
BH148	VSS_75
BH150	VSS_76
BH152	VSS_77
BH154	VSS_78
BH156	VSS_79
BH158	VSS_80
BH160	VSS_81
BH162	VSS_82
BH164	VSS_83
BH166	VSS_84
BH168	VSS_85
BH170	VSS_86
BH172	VSS_87
BH174	VSS_88
BH176	VSS_89
BH178	VSS_90
BH180	VSS_91
BH182	VSS_92
BH184	VSS_93
BH186	VSS_94
BH188	VSS_95
BH190	VSS_96
BH192	VSS_97
BH194	VSS_98
BH196	VSS_99
BH198	VSS_100
BH200	VSS_101
BH202	VSS_102
BH204	VSS_103
BH206	VSS_104
BH208	VSS_105
BH210	VSS_106
BH212	VSS_107
BH214	VSS_108
BH216	VSS_109
BH218	VSS_110
BH220	VSS_111
BH222	VSS_112
BH224	VSS_113
BH226	VSS_114
BH228	VSS_115
BH230	VSS_116
BH232	VSS_117
BH234	VSS_118
BH236	VSS_119
BH238	VSS_120
BH240	VSS_121
BH242	VSS_122
BH244	VSS_123
BH246	VSS_124
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BH250	VSS_126
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BH258	VSS_130
BH260	VSS_131
BH262	VSS_132
BH264	VSS_133
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BH268	VSS_135
BH270	VSS_136
BH272	VSS_137
BH274	VSS_138
BH276	VSS_139
BH278	VSS_140
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BH292	VSS_147
BH294	VSS_148
BH296	VSS_149
BH298	VSS_150
BH300	VSS_151
BH302	VSS_152
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BH306	VSS_154
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BH310	VSS_156
BH312	VSS_157
BH314	VSS_158
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BH318	VSS_160
BH320	VSS_161
BH322	VSS_162
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BH328	VSS_165
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BH332	VSS_167
BH334	VSS_168
BH336	VSS_169
BH338	VSS_170
BH340	VSS_171
BH342	VSS_172
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BH346	VSS_174
BH348	VSS_175
BH350	VSS_176
BH352	VSS_177
BH354	VSS_178
BH356	VSS_179
BH358	VSS_180
BH360	VSS_181
BH362	VSS_182
BH364	VSS_183
BH366	VSS_184
BH368	VSS_185
BH370	VSS_186
BH372	VSS_187
BH374	VSS_188
BH376	VSS_189
BH378	VSS_190
BH380	VSS_191
BH382	VSS_192
BH384	VSS_193
BH386	VSS_194
BH388	VSS_195
BH390	VSS_196
BH392	VSS_197
BH394	VSS_198
BH396	VSS_199
BH398	VSS_200
BH400	VSS_201
BH402	VSS_202
BH404	VSS_203
BH406	VSS_204
BH408	VSS_205
BH410	VSS_206
BH412	VSS_207
BH414	VSS_208
BH416	VSS_209
BH418	VSS_210
BH420	VSS_211
BH422	VSS_212
BH424	VSS_213
BH426	VSS_214
BH428	VSS_215
BH430	VSS_216
BH432	VSS_217
BH434	VSS_218
BH436	VSS_219
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BH442	VSS_222
BH444	VSS_223
BH446	VSS_224
BH448	VSS_225
BH450	VSS_226
BH452	VSS_227
BH454	VSS_228
BH456	VSS_229
BH458	VSS_230
BH460	VSS_231
BH462	VSS_232
BH464	VSS_233
BH466	VSS_234
BH468	VSS_235
BH470	VSS_236
BH472	VSS_237
BH474	VSS_238
BH476	VSS_239
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BH486	VSS_244
BH488	VSS_245
BH490	VSS_246
BH492	VSS_247
BH494	VSS_248
BH496	VSS_249
BH498	VSS_250
BH500	VSS_251
BH502	VSS_252
BH504	VSS_253
BH506	VSS_254
BH508	VSS_255
BH510	VSS_256
BH512	VSS_257
BH514	VSS_258
BH516	VSS_259
BH518	VSS_260
BH520	VSS_261
BH522	VSS_262

VSS

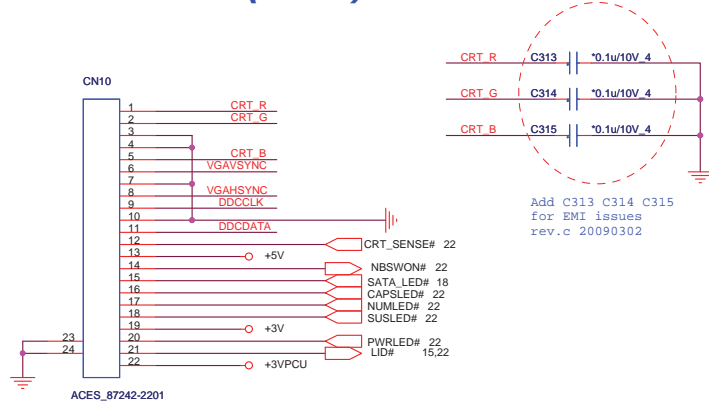
U15G	
W35	VSS_263
W33	VSS_264
W31	VSS_265
W29	VSS_266
W27	VSS_267
W25	VSS_268
W23	VSS_269
W21	VSS_270
W19	VSS_271
W17	VSS_272
W15	VSS_273
W13	VSS_274
W11	VSS_275
W9	VSS_276
W7	VSS_277
W5	VSS_278
W3	VSS_279
W1	VSS_280
V46	VSS_281
V44	VSS_282
V42	VSS_283
V40	VSS_284
V38	VSS_285
V36	VSS_286
V34	VSS_287
V32	VSS_288
V30	VSS_289
V28	VSS_290
V26	VSS_291
V24	VSS_292
V22	VSS_293
V20	VSS_294
V18	VSS_295
V16	VSS_296
V14	VSS_297
V12	VSS_298
V10	VSS_299
V8	VSS_300
V6	VSS_301
V4	VSS_302
V2	VSS_303
V1	VSS_304
A147	VSS_305
A145	VSS_306
A143	VSS_307
A141	VSS_308
A139	VSS_309
A137	VSS_310
A135	VSS_311
A133	VSS_312
A131	VSS_313
A129	VSS_314
A127	VSS_315
A125	VSS_316
A123	VSS_317
A121	VSS_318
A119	VSS_319
A117	VSS_320
A115	VSS_321
A113	VSS_322
A111	VSS_323
A109	VSS_324
A107	VSS_325
A105	VSS_326
A103	VSS_327
A101	VSS_328
A99	VSS_329
A97	VSS_330
A95	VSS_331
A93	VSS_332
A91	VSS_333
A89	VSS_334
A87	VSS_335
A85	VSS_336
A83	VSS_337
A81	VSS_338
A79	VSS_339
A77	VSS_340
A75	VSS_341
A73	VSS_342
A71	VSS_343
A69	VSS_344
A67	VSS_345
A65	VSS_346
A63	VSS_347
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A55	VSS_351
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A45	VSS_356
A43	VSS_357
A41	VSS_358
A39	VSS_359
A37	VSS_360
A35	VSS_361
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A31	VSS_363
A29	VSS_364
A27	VSS_365
A25	VSS_366
A23	VSS_367
A21	VSS_368
A19	VSS_369
A17	VSS_370
A15	VSS_371
A13	VSS_372
A11	VSS_373
A9	VSS_374
A7	VSS_375
A5	VSS_376
A3	VSS_377
A1	VSS_378
A0	VSS_379
A-1	VSS_380
A-2	VSS_381
A-3	VSS_382
A-4	VSS_383
A-5	VSS_384
A-6	VSS_385
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A-117	VSS_496
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A-141	VSS_520
A-142	VSS_521
A-143	VSS_522
A-144	VSS_523
A-145	VSS_524
A-146	VSS_525
A-147	VSS_526
A-148	VSS_527
A-149	VSS_528
A-150</	

SDVO To CRT(CRT)

For vender FAE check, Change R53
R56 from 3.9K to 5.6K 20081205



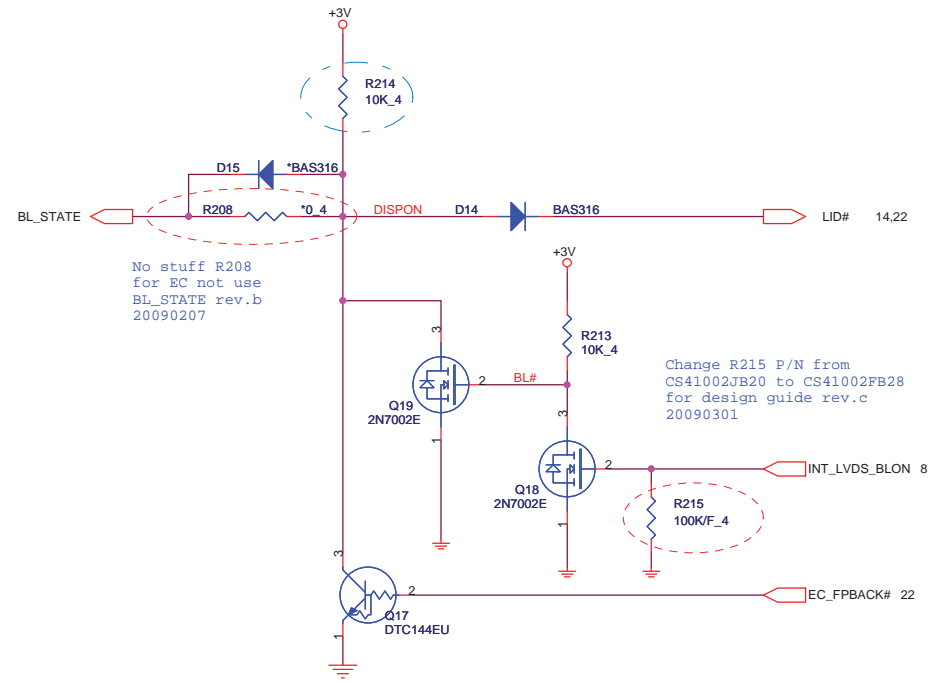
CRT DB CONNECTER(CRT)



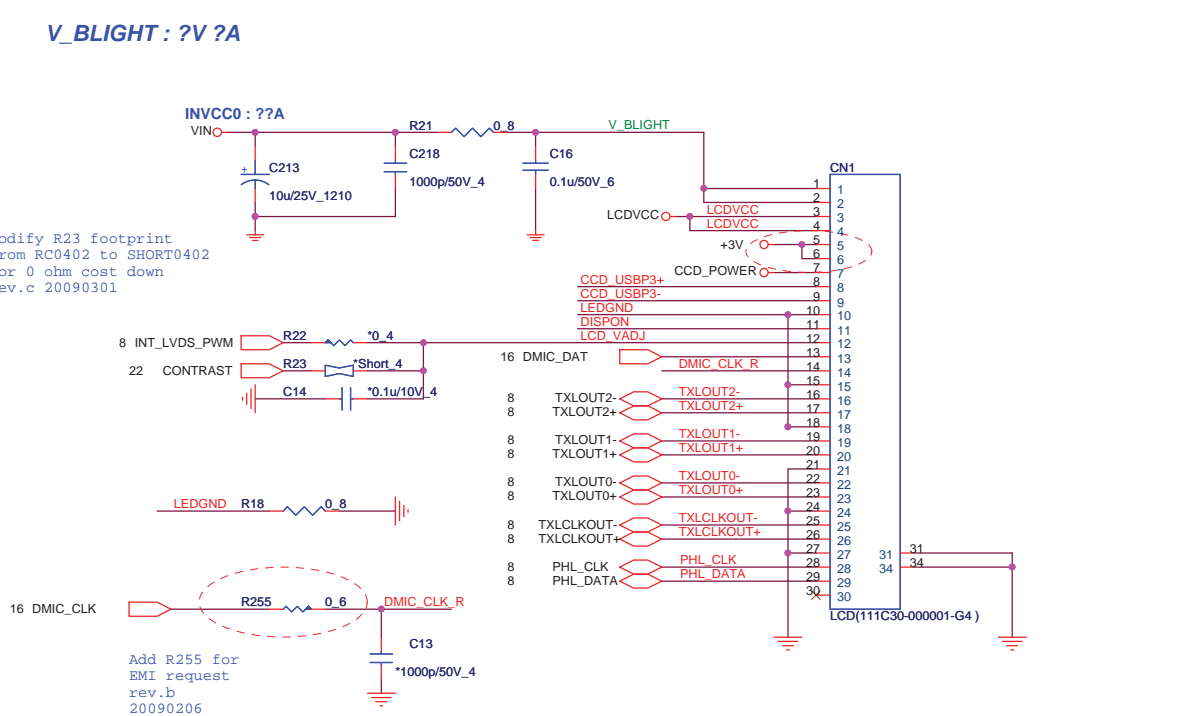
Quanta Computer Inc.
PROJECT : ZA3

Size	Document Number	Rev
	SDVO TO CRT(CH7317A)	1A
Date	Friday, March 06, 2009	Sheet 14 of 34

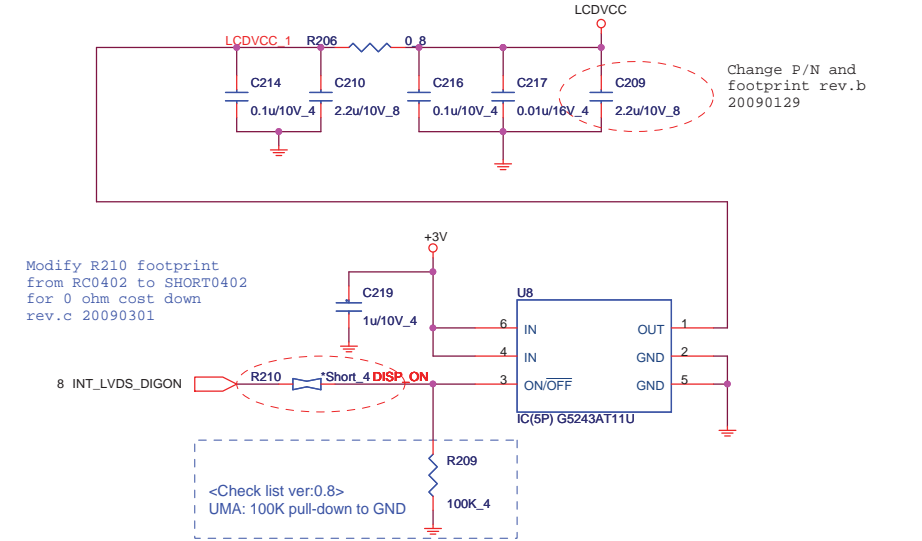
Backlight Control(LDS)



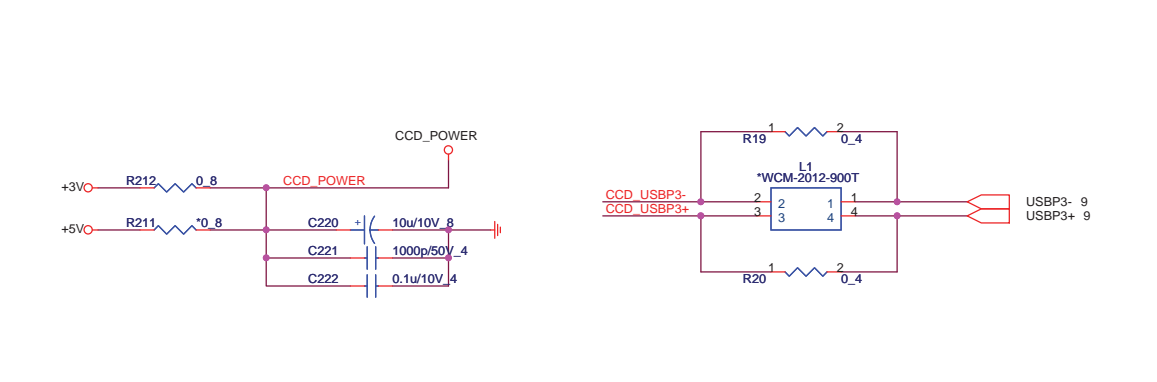
LED Panel(LDS)



LED Panel POWER SWITCH(LDS)



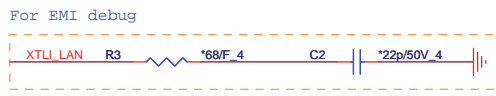
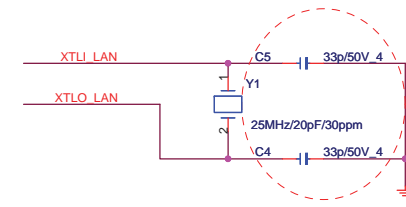
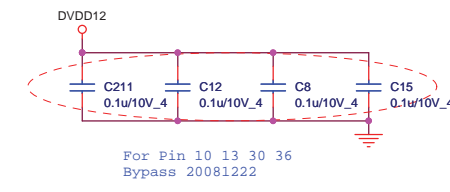
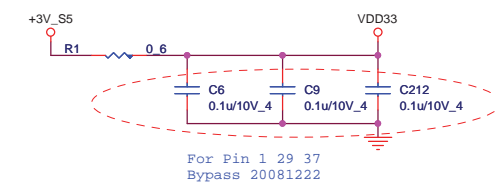
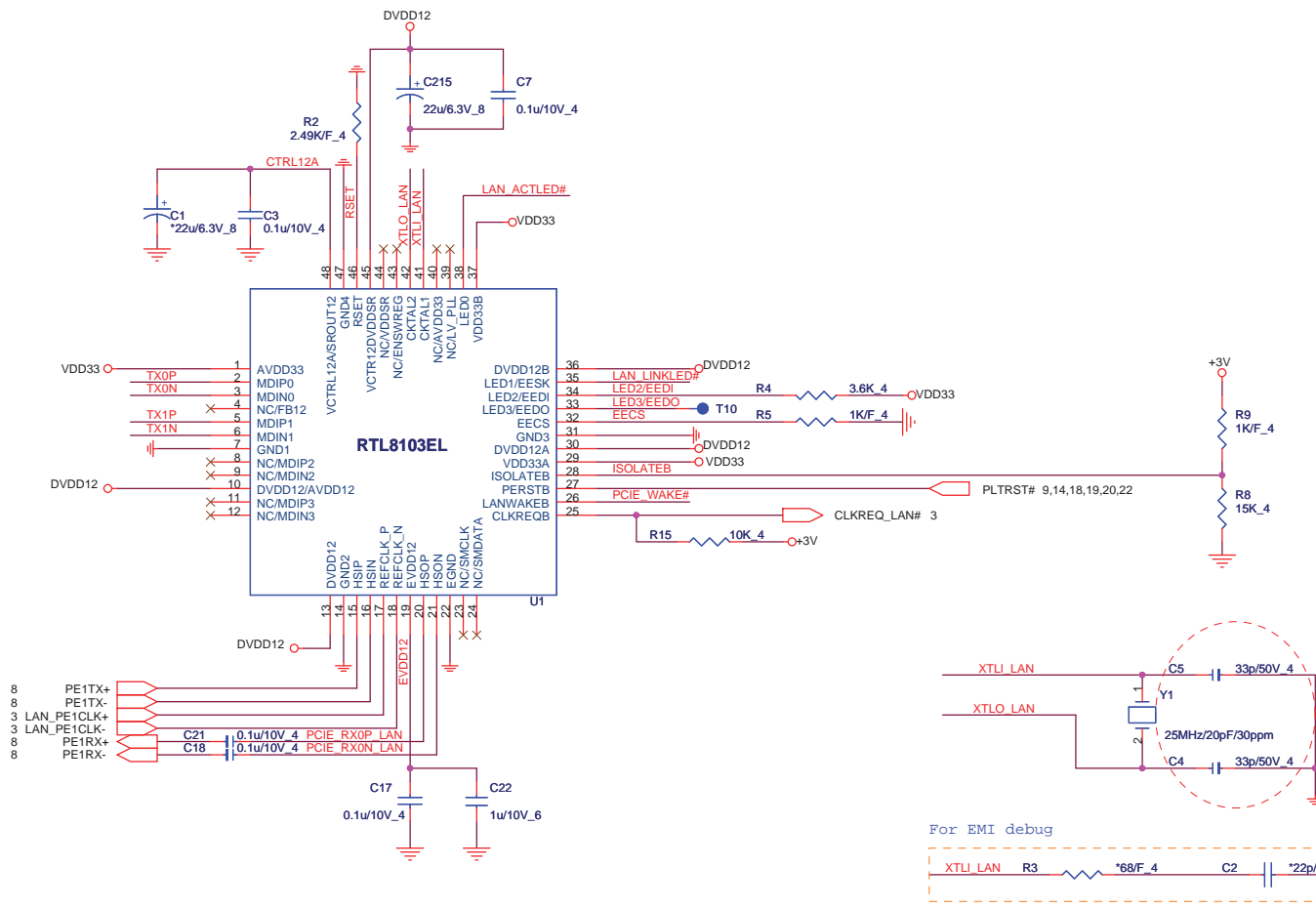
Camera(CCD)



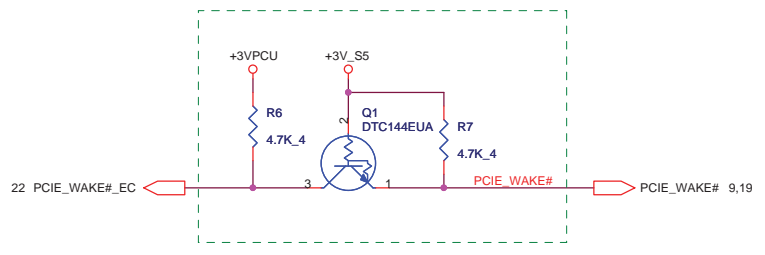
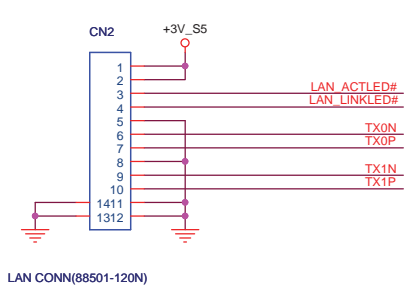
Quanta Computer Inc.
PROJECT : ZA3

Size	Document Number	Rev
	LED PANEL/CCD MODULE	1A
Date:	Sunday, March 08, 2009	Sheet 15 of 34

LAN RTL8103EL (LAN)

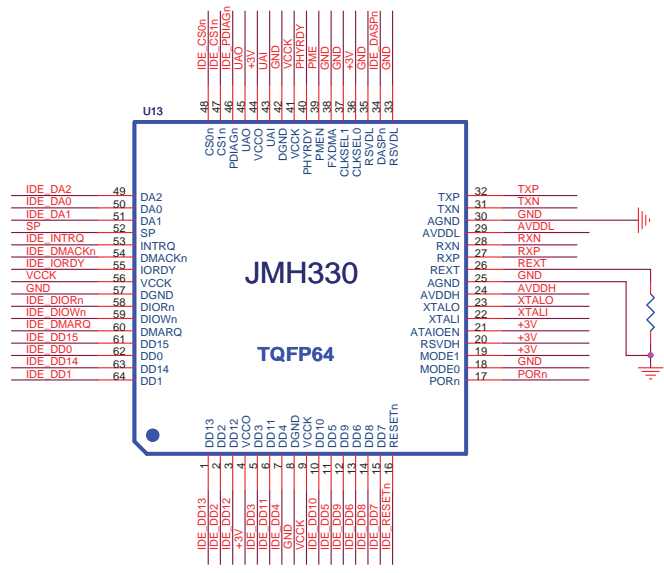
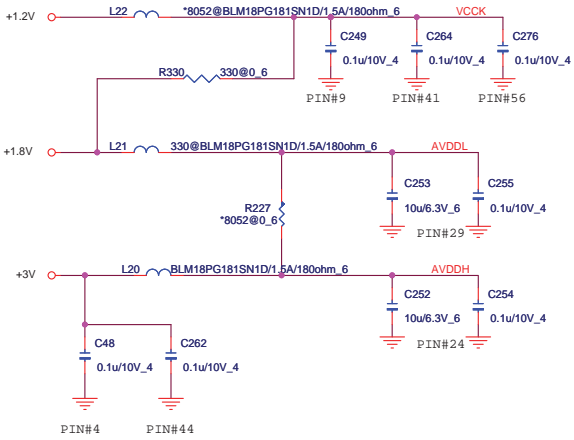


LAN D/B CONNECTER(LAN)



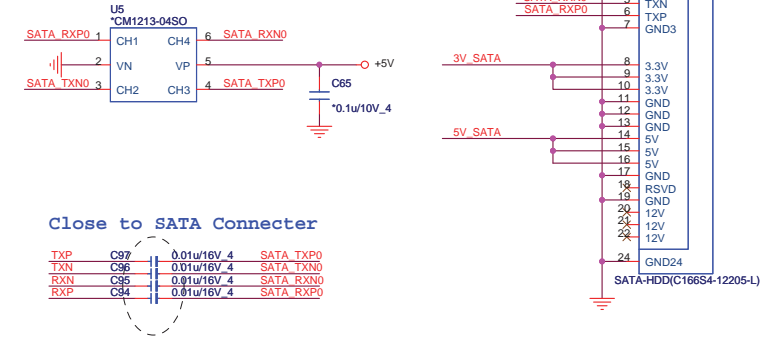
PATA TO SATA BRIDGE(HDD)

Bypass CAP must place close to power pins

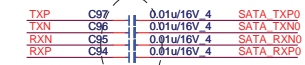


2.5" SATA HDD OR SSD(TOSHIBA)

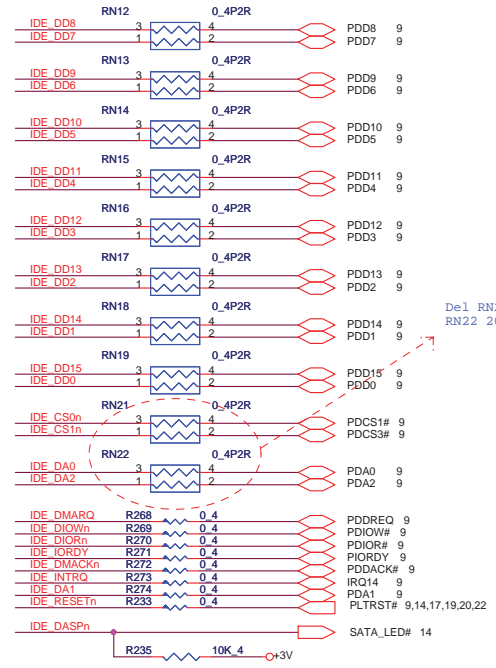
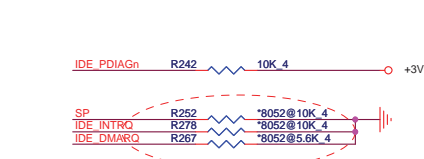
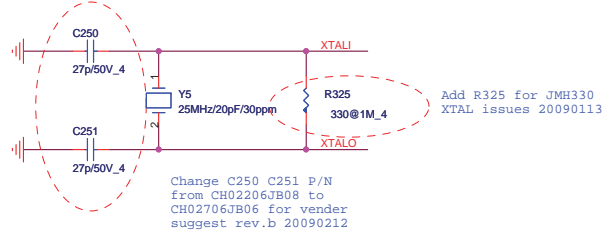
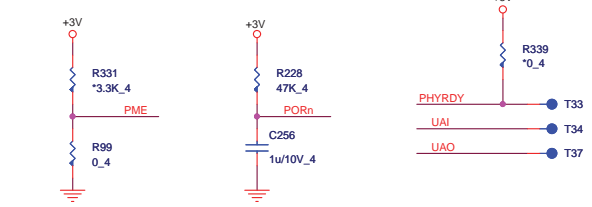
SATA ESD(EMC)



Close to SATA Connector

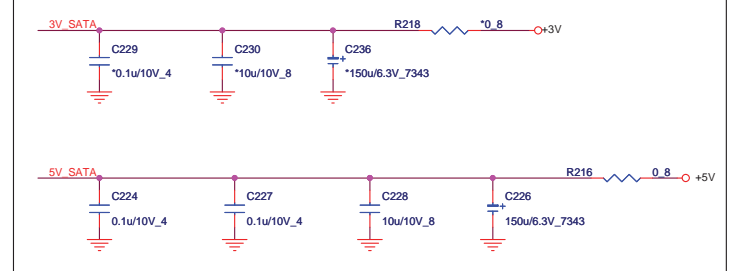


PME



Del RN20 and add RN21
RN22 20090113

SATA POWER(HDD)



	JM330 (AJ003300H00)	88SA8052 (AJ080520H00)
Stuff	L21 R330 R325	L22 R227
No Stuff	L22 R227	L21 R330 R325
Change	R229 = 12K	R229 = 6.04K

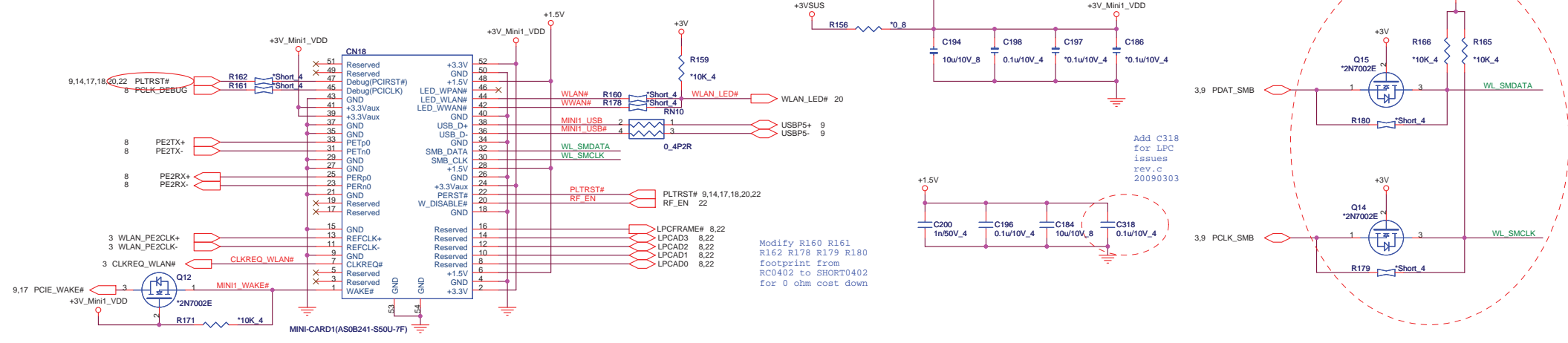
For JMicron FAE Check : Can change RN20 R269 R270 R272 R274 from 82ohm to 0ohm, R268 R271 R273 from 22ohm to 0ohm, RN12 RN13 RN14 RN15 RN16 RN17 RN18 RN19 R233 from 33ohm to 0ohm 20081223

Quanta Computer Inc.
PROJECT : ZA3

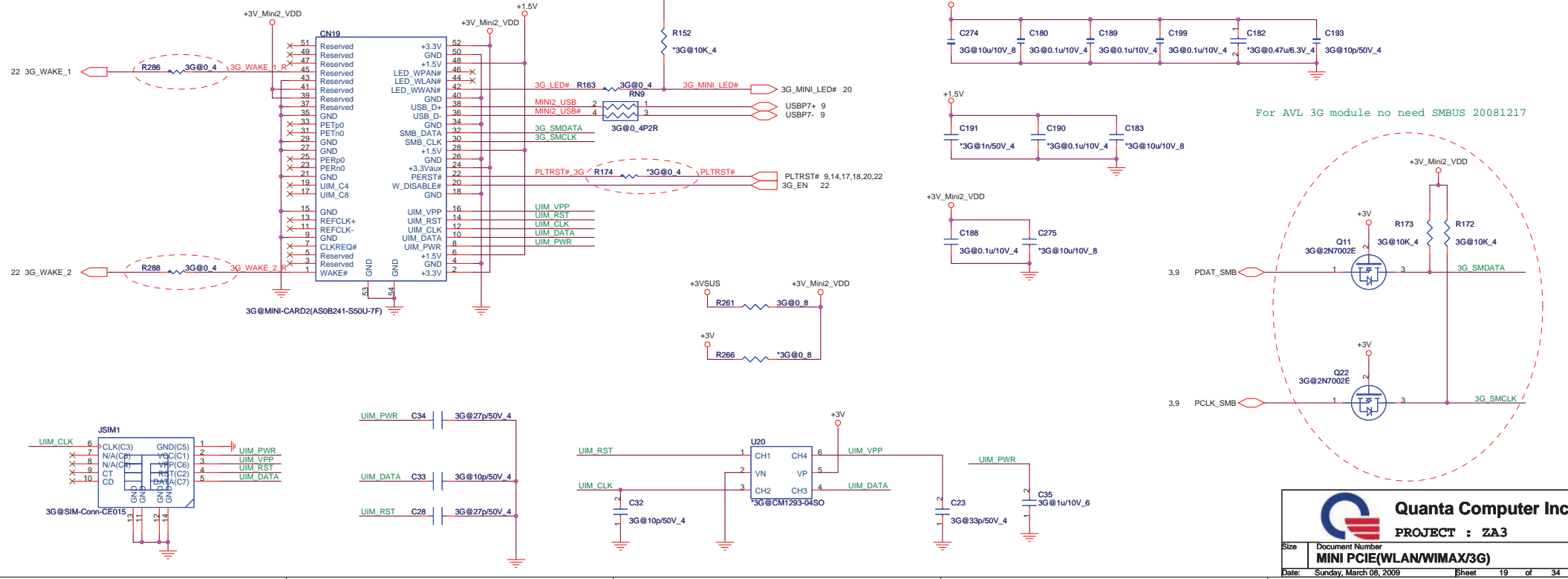
Size: Document Number
PATA TO SATA BRIDGE(88SA8052) Rev 1A


Date: Sunday, March 08, 2009 Sheet 18 of 34

Mini Card1-WLAN/WMAX (MPC)

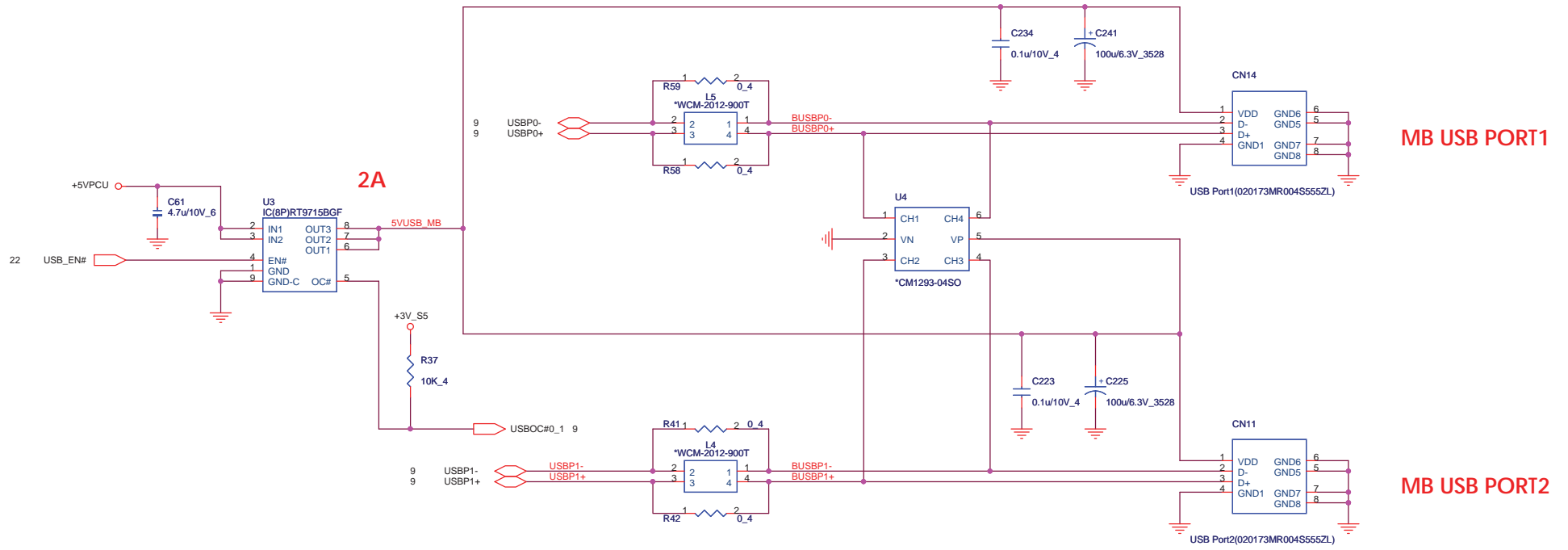


Mini Card2-3G(MNC)

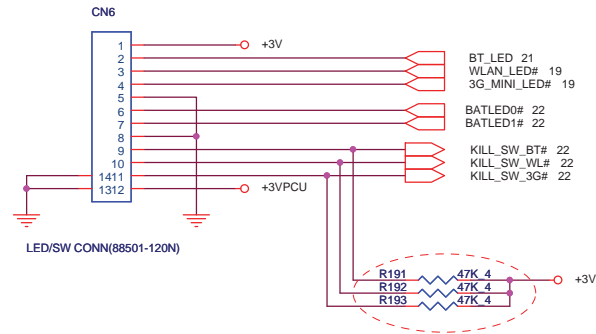



Quanta Computer Inc.
PROJECT : ZA3
 Size Document Number
MINI PCIE(WLAN/WIMAX/3G)
 Date: Sunday, March 08, 2009 Sheet 19 of 34 Rev 1A

MB USB PORTS(USB)

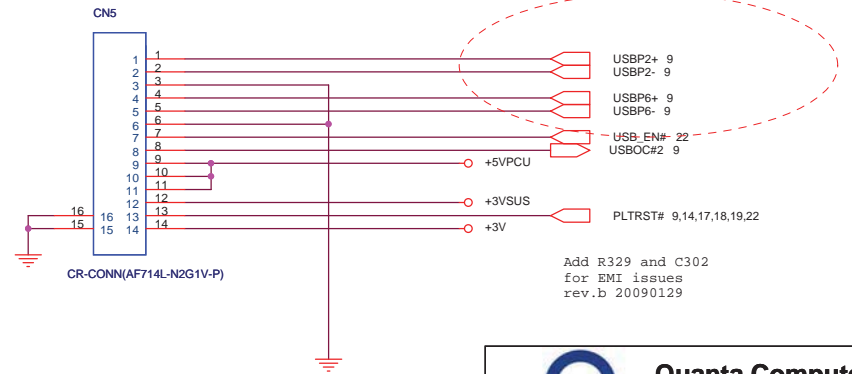


LED DB CONNECTER(UIF)



EC GPIO	Button
KILL_SW_WL#(GPIO57 PIN33)	WLAN Switch
KILL_SW_3G#(GPIO60 PIN34)	3G Switch
KILL_SW_BT#(GPIO12 PIN13)	BT Switch

Card Reader/USB DB CONNECTER(MMC)

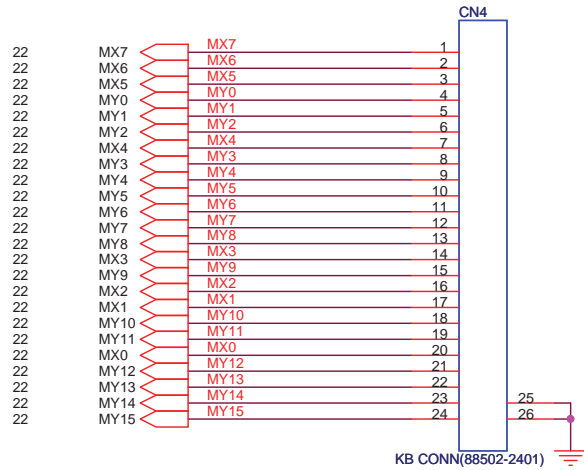


Add R329 and C302 for EMI issues rev.b 20090129

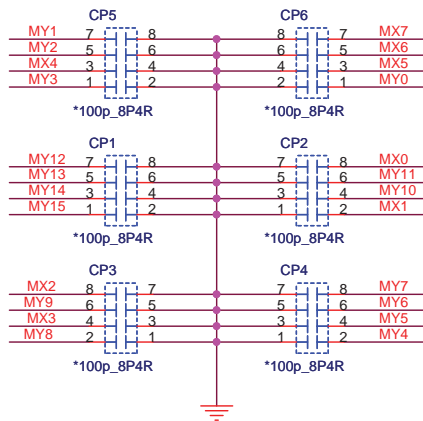
Quanta Computer Inc.
PROJECT : ZA3

Size	Document Number	Rev
	USB/SD_LED AND CR_USB DB	1A
Date:	Sunday, March 08, 2009	Sheet 20 of 34

Keyboard (KBC)

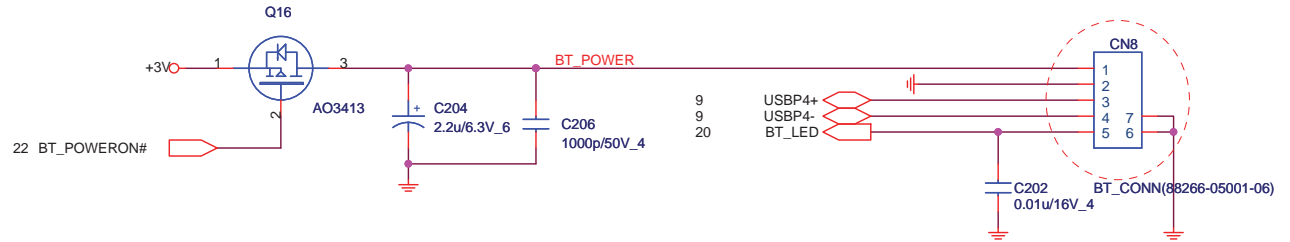


For EMI Reserve Caps for debug

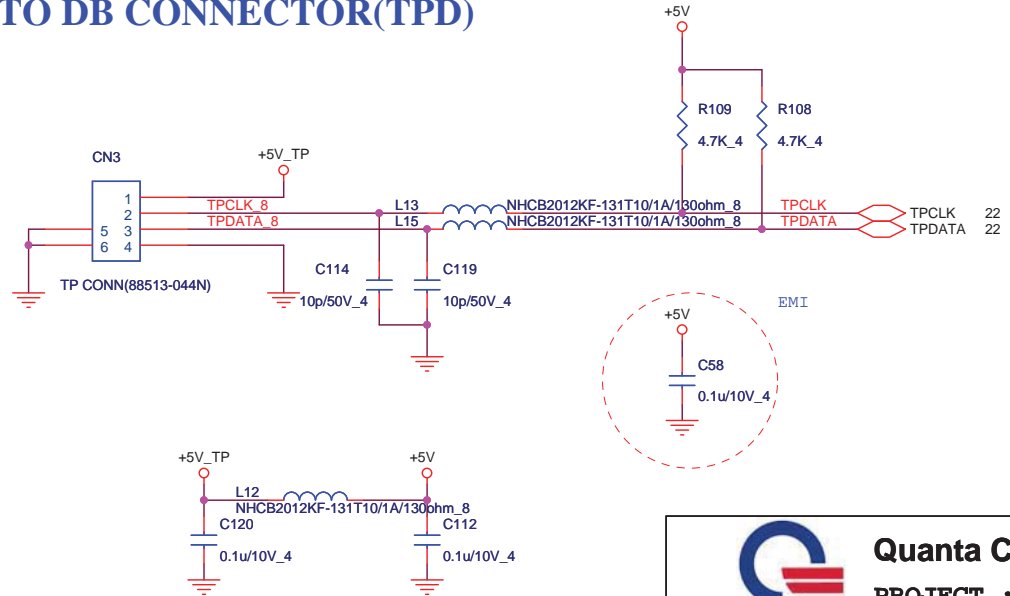


BT CONNECTER (BTM)

Modify CN8 footprint and pin define rev.c 20090301



TO DB CONNECTOR (TPD)



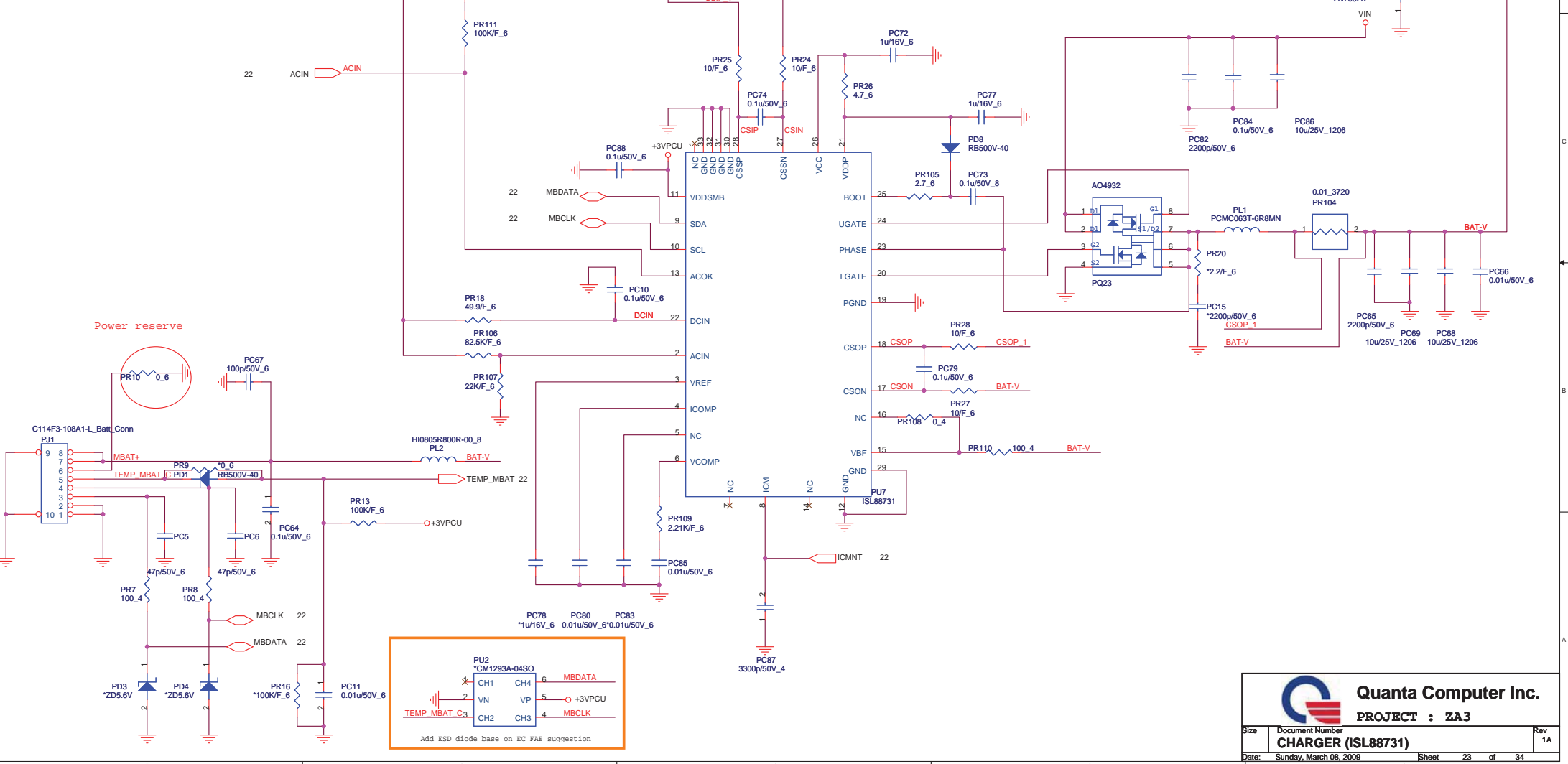
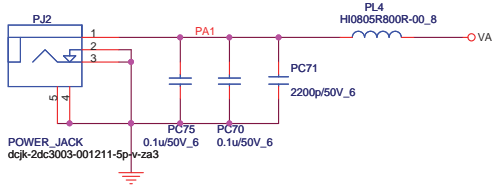
Quanta Computer Inc.
PROJECT : ZA3

Size	Document Number	Rev
	KB/BT/TP	1A

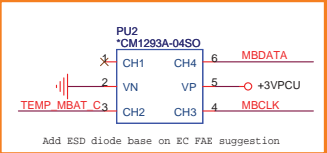
Date: Sunday, March 08, 2009 Sheet 21 of 34

DC-IN JACK

65W Yellow DFPJ05MR007

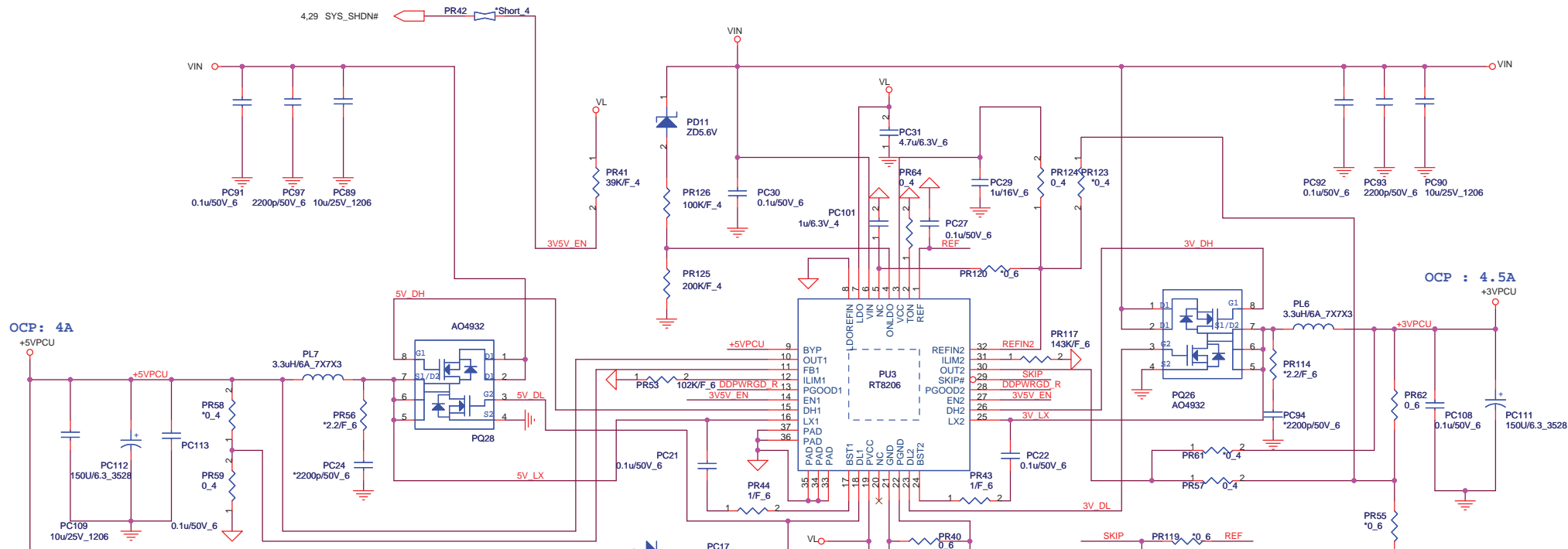


Power reserve



Add ESD diode base on EC FAE suggestion

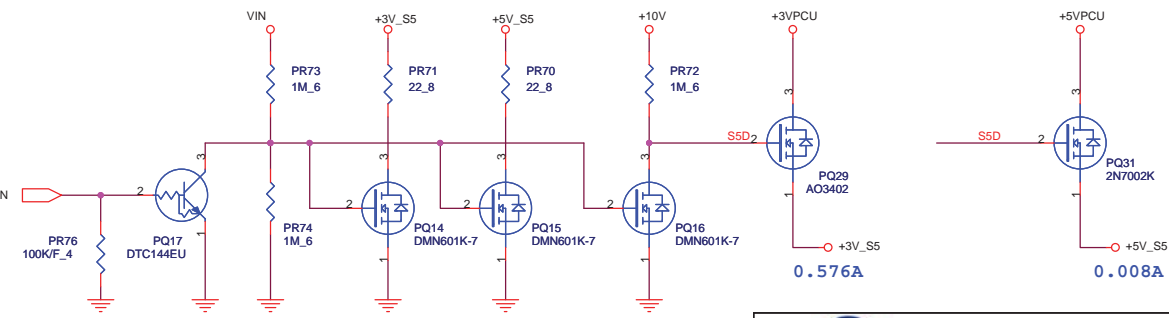
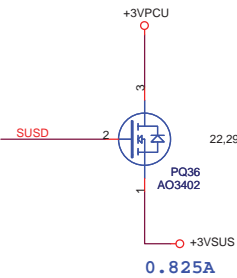
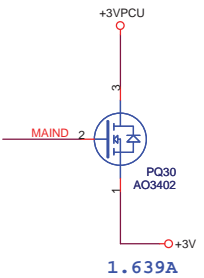
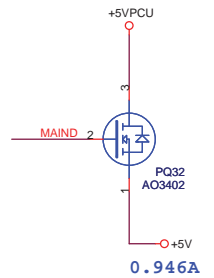
Quanta Computer Inc.
PROJECT : ZA3
CHARGER (ISL88731)
 Size: Document Number Rev 1A
 Date: Sunday, March 08, 2009 Sheet 23 of 34



OCP: 4A

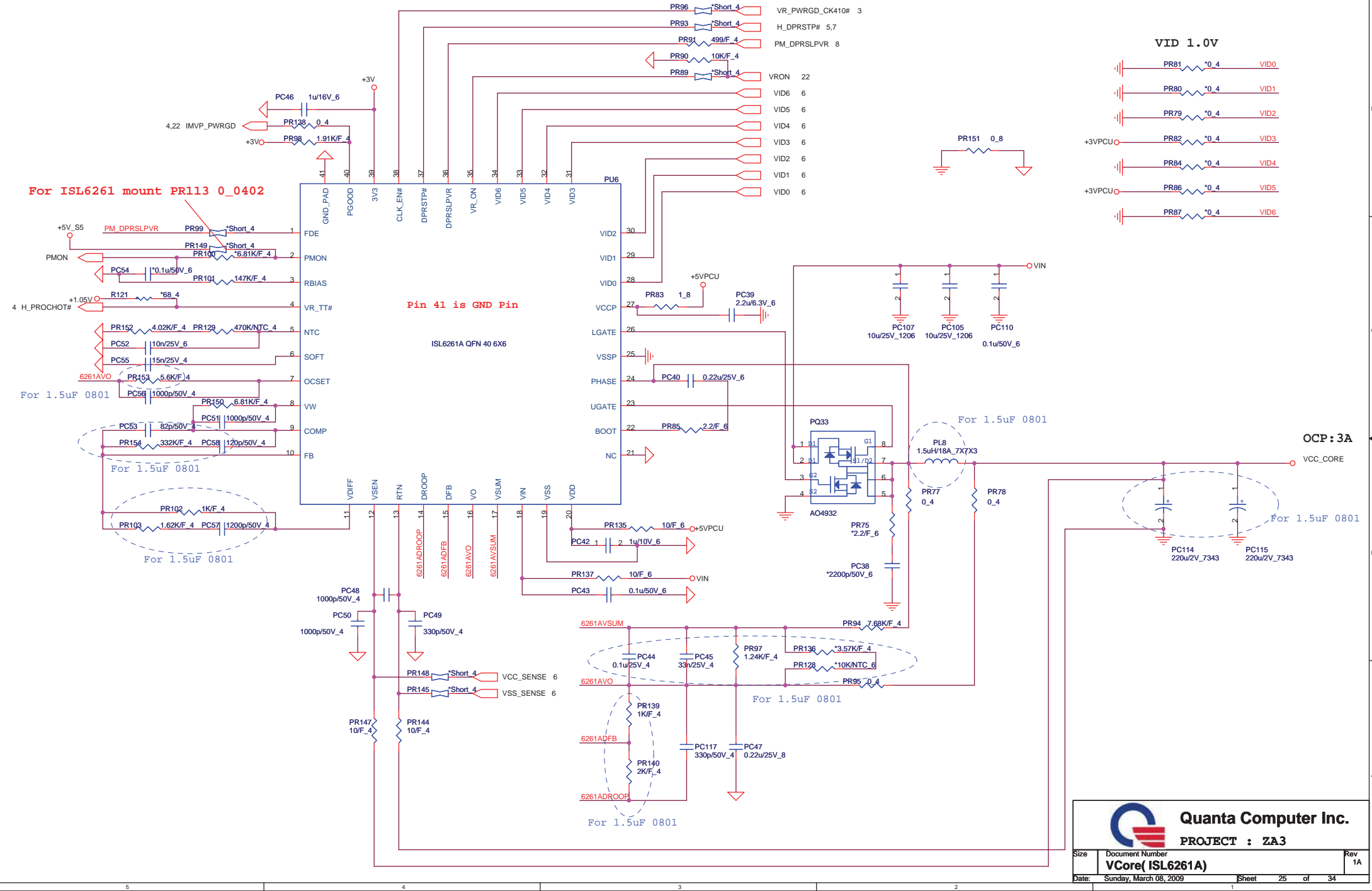
AO4932 Rds=15.8~19.6mOhm
 +5VPCU OCP:4A 400K
 $L(\text{ripple current}) = (19-5) * 5 / (3.3u * 400k * 19) \sim 2.791A$
 $I_{ocp} = 4 - (2.791 / 2) \sim 2.6045A$
 $V_{th} = 2.6045A * 19.6mOhm = 51.0482mV$
 $R(I_{lim}) = (51.0482mV * 10) / 5uA \sim 102K$

AO4932 Rds=15.8~19.6mOhm
 +3VPCU OCP:4.5A 500K
 $L(\text{ripple current}) = (19-3.3) * 3.3 / (3.3u * 500k * 19) \sim 1.653A$
 $I_{ocp} = 4.5 - (1.653 / 2) \sim 3.6735A$
 $V_{th} = 3.6735A * 19.6mOhm = 72mV$
 $R(I_{lim}) = (72mV * 10) / 5uA \sim 143K$



Quanta Computer Inc.
 PROJECT : ZA3

Size	Document Number	Rev
	SYSTEM 5V/3V (ISL6237)	1A
Date	Sunday, March 08, 2009	Sheet 24 of 34



For ISL6261 mount PR113 0_0402

Pin 41 is GND Pin

For 1.5uF 0801

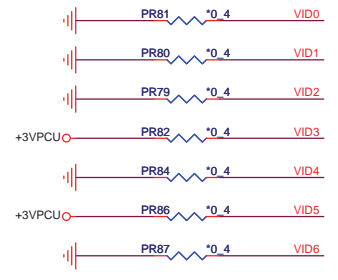
For 1.5uF 0801

For 1.5uF 0801

For 1.5uF 0801

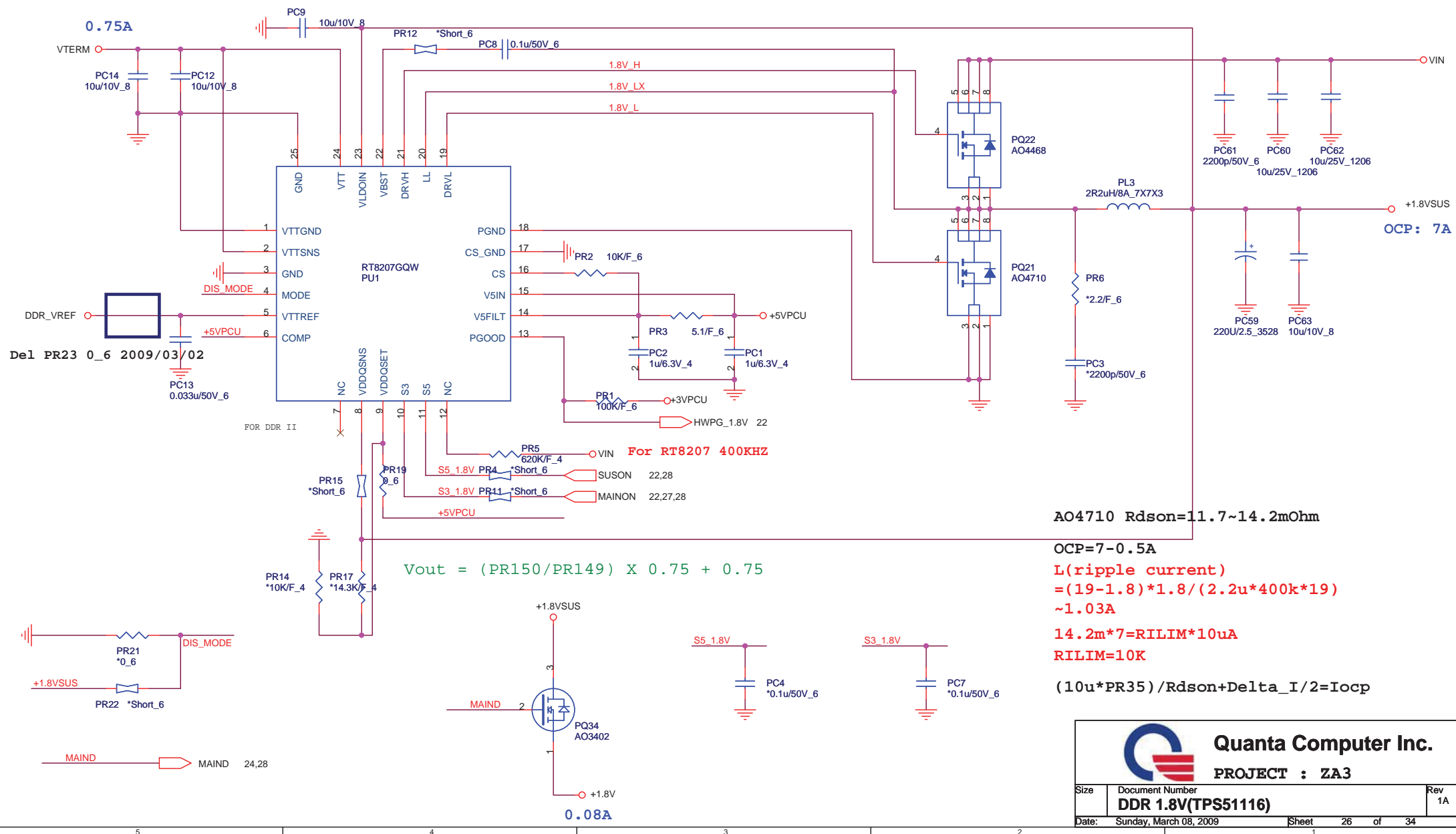
For 1.5uF 0801

VID 1.0V



OCP: 3A

		Quanta Computer Inc. PROJECT : ZA3	
		Size Document Number VCore (ISL6261A)	Rev 1A
Date: Sunday, March 08, 2009		Sheet 25 of 34	




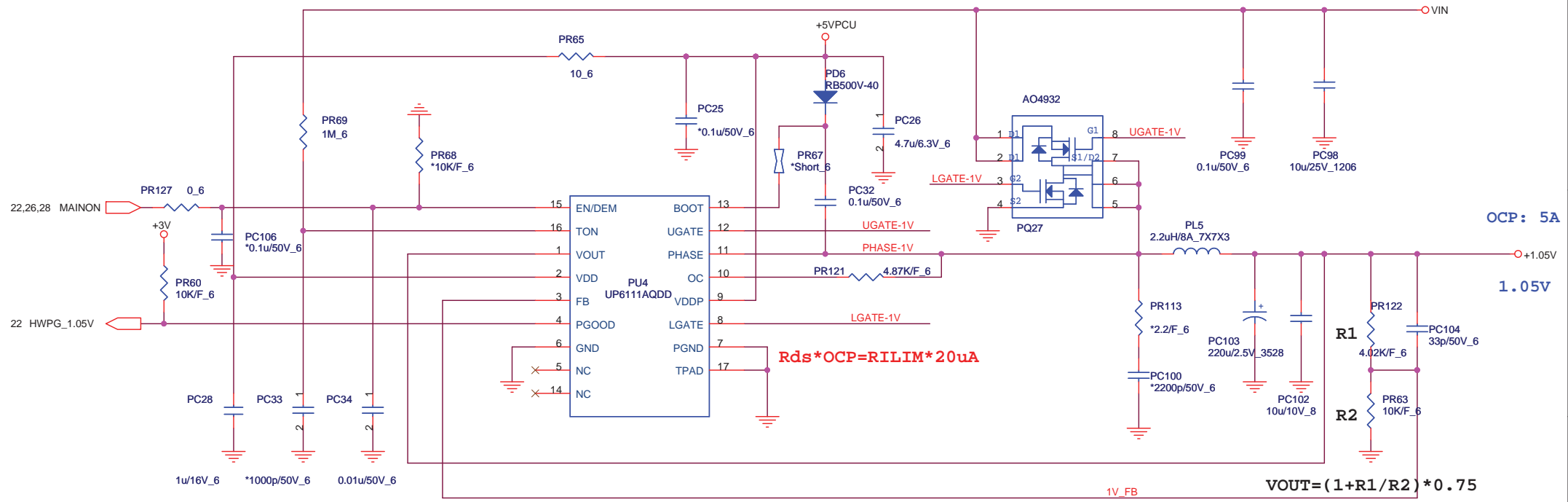
Del PR23 0_6 2009/03/02

$$V_{out} = (PR150/PR149) \times 0.75 + 0.75$$

AO4710 $R_{dson} = 11.7 \sim 14.2 m\Omega$


OCP = 7 - 0.5A
 $L(\text{ripple current}) = (19 - 1.8) \times 1.8 / (2.2 \mu \times 400k \times 19) \sim 1.03A$
 $14.2m \times 7 = RILIM \times 10\mu A$
RILIM = 10K
 $(10\mu \times PR35) / R_{dson} + \Delta I / 2 = I_{ocp}$

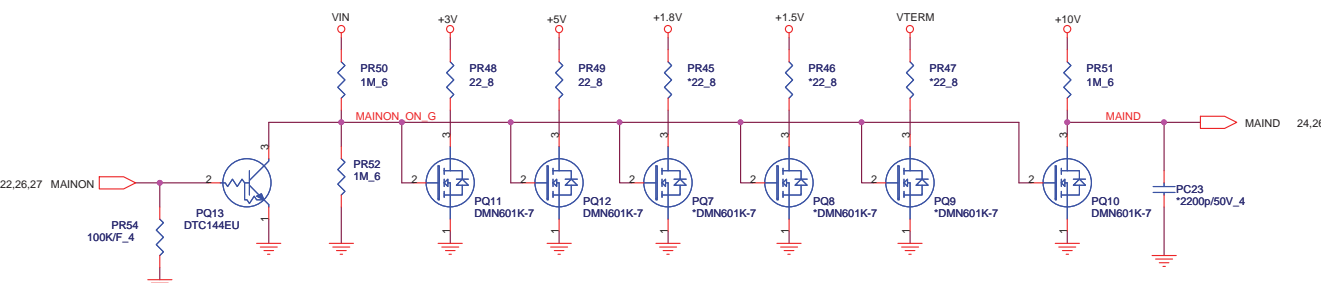
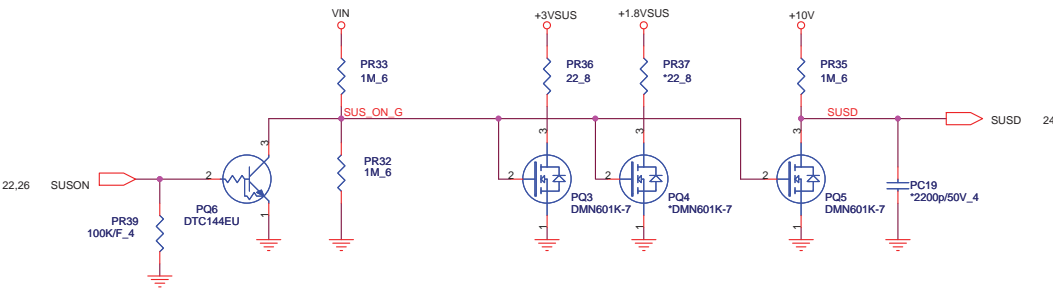
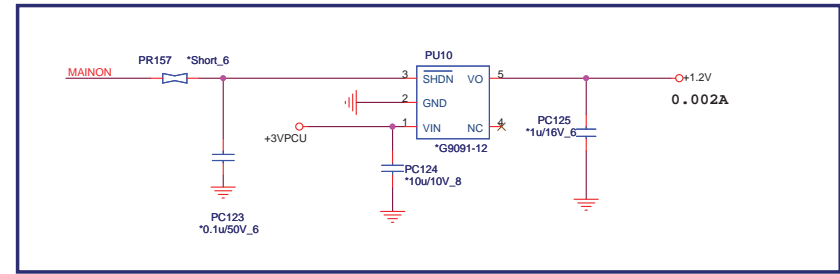
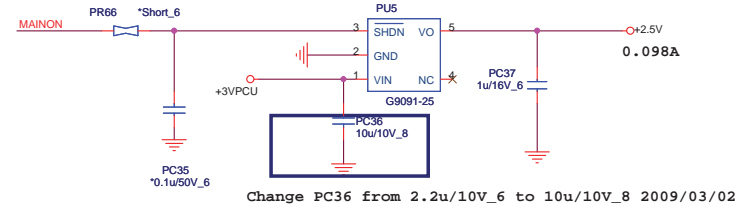
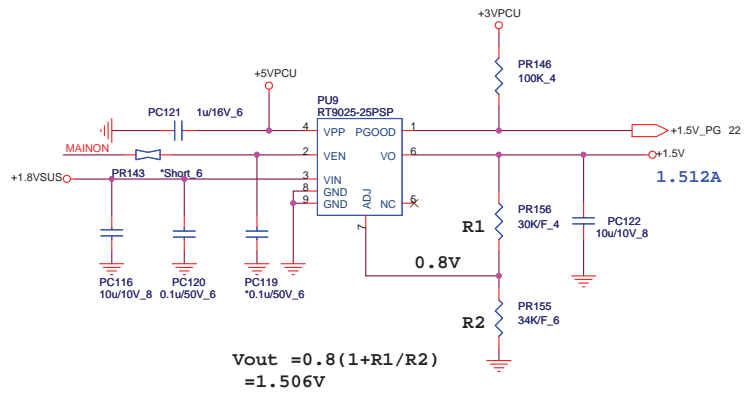
 Quanta Computer Inc. PROJECT : ZA3		Size	Document Number	Rev
			DDR 1.8V(TPS51116)	1A
Date:	Sunday, March 08, 2009	Sheet	26	of 34

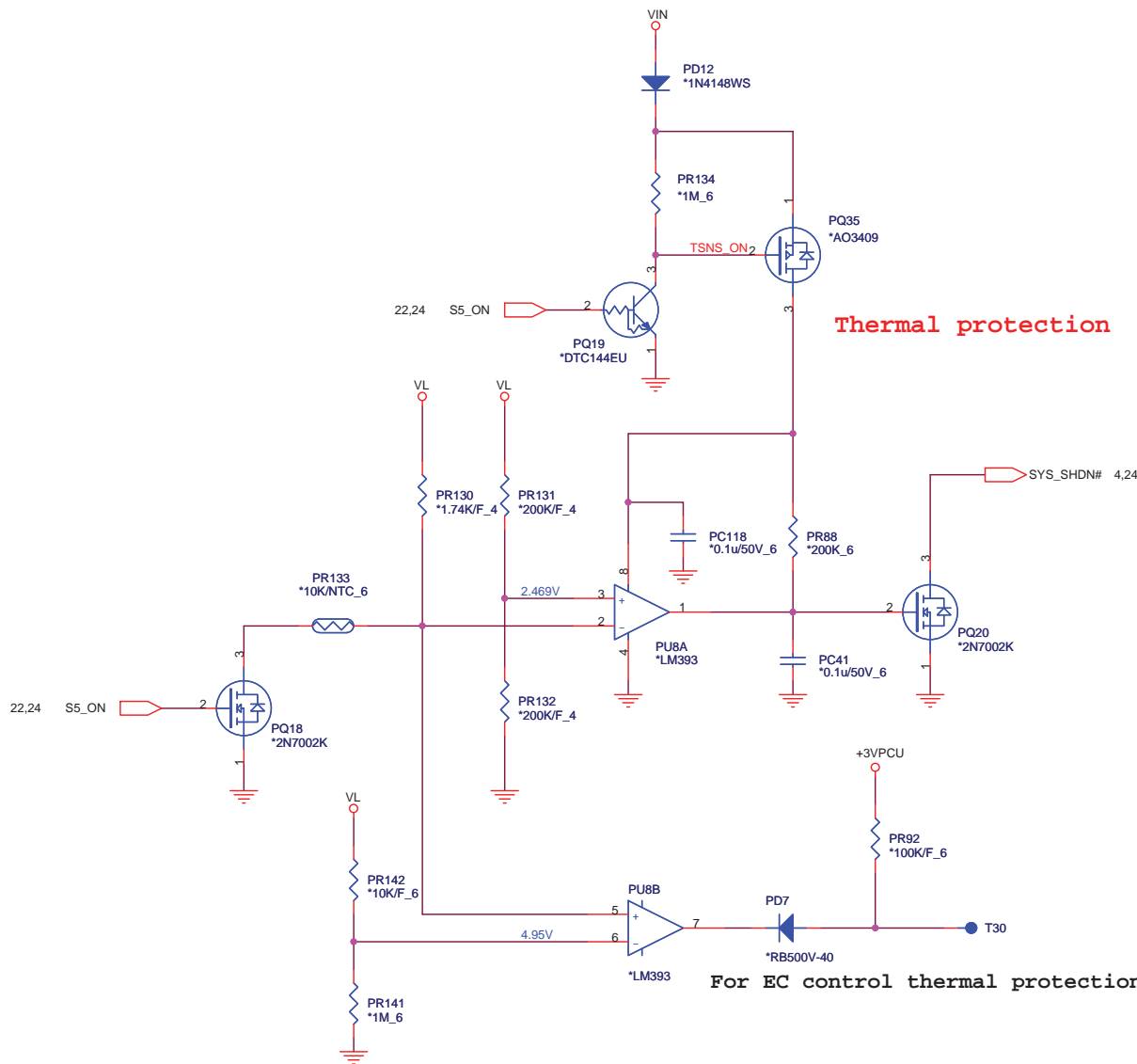


$TON = 3.85p * RTON * Vout / (Vin - 0.5)$
 $Frequency = Vout / (Vin * TON)$
 $TON = 3.85p * 1M * 1 / (Vin - 0.5)$
 $Frequency = 1 / (0.0036767) = 272K$

AO4932 $R_{ds(on)} = 15.8 \sim 19.6m\Omega$
 $OCP = 7.2 - 0.8A$
 $L(\text{ripple current}) = (19 - 1.05) * 1.05 / (3.3u * 272k * 19)$
 $\sim 1.105A$
 $19.6m * 5 = RILIM * 20uA$
 $RILIM = 4.9K (4.87K)$


 Quanta Computer Inc. PROJECT : ZA3		Size	Document Number	Rev
			VCCP 1.05V(UP6111AQDD)	1A
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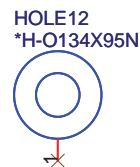
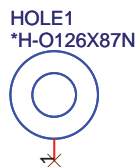
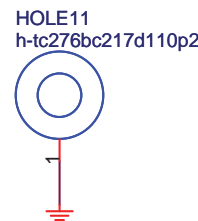
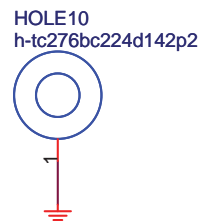
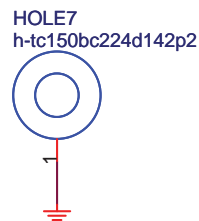
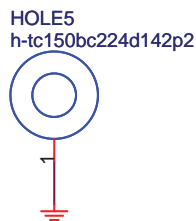
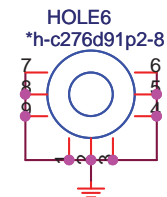
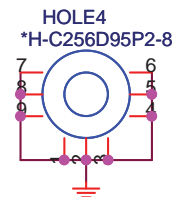
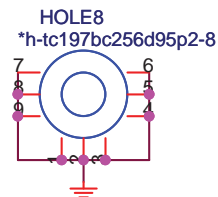
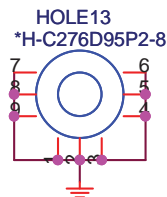
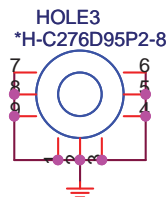
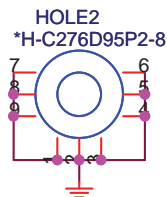


Thermal protection

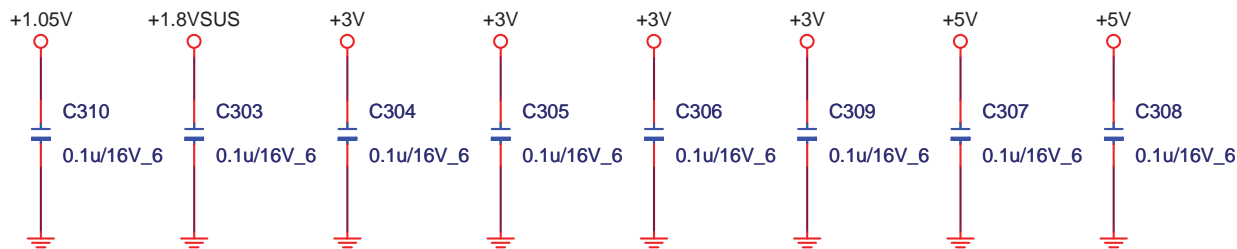
For EC control thermal protection (output 3.3V)

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Thermal protect		
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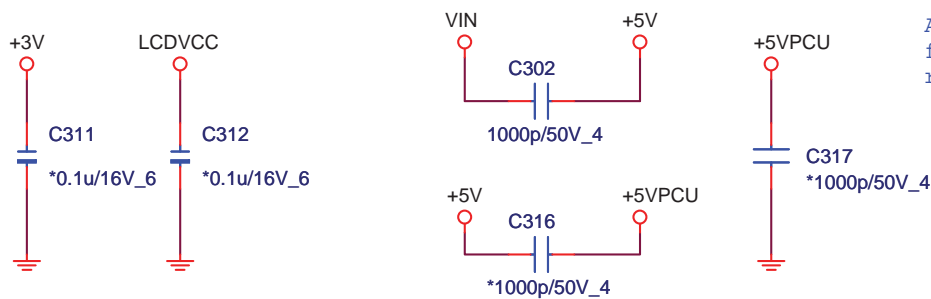
HOLES



EMI



Add C303 C304 C305 C306 C307
C308 for EMI request rev.b
20090206 Add C309 C310 for
EMI request rev.b 20090207



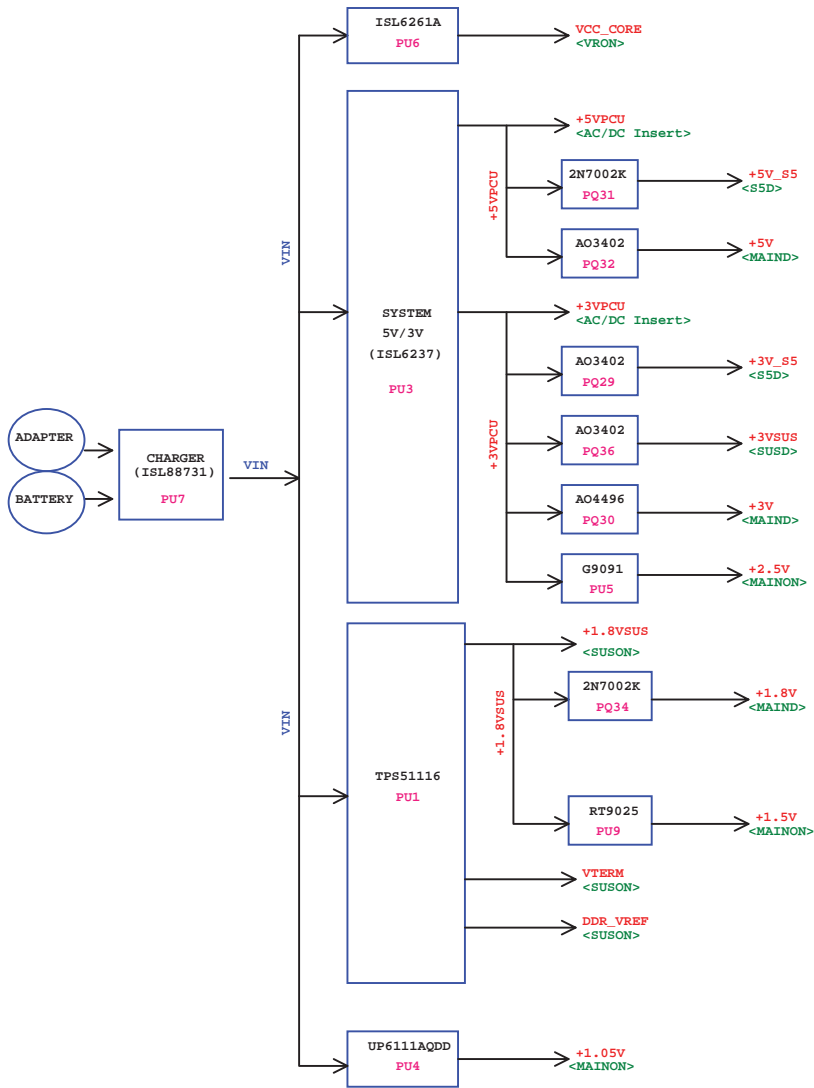
Add C302 C316 C317
for EMI issues
rev.c 20090303



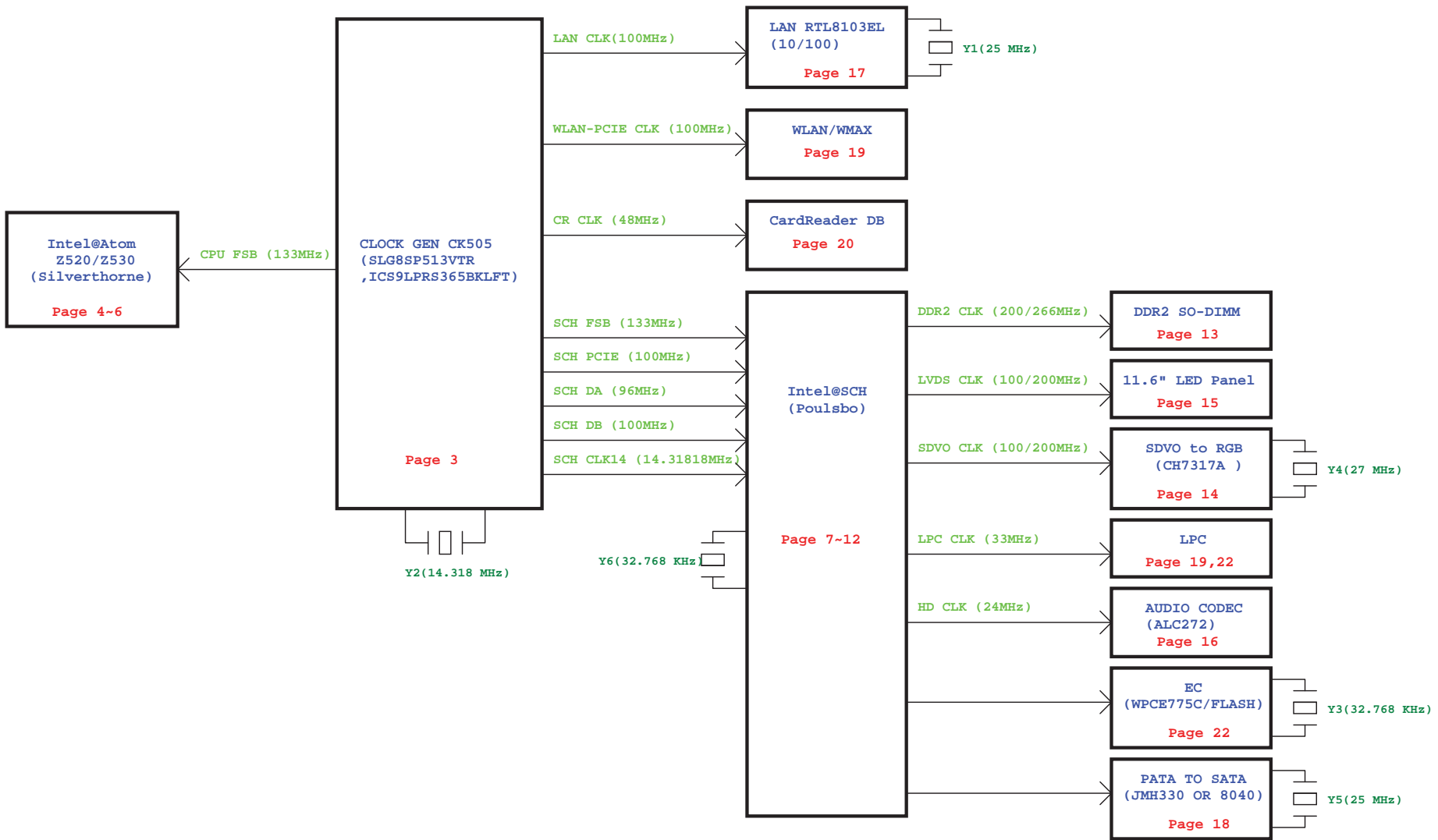
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POWER	Distribution
VCC_CORE	CPU
+5VPCU	RTC, USB Connector
+5V_S5	SCH Power
+5V	CPU C6-Power Circuit, SCH Power, CRT, LCD, CAMERA ,Audio Code, INT SPK AMP, SATA HDD,Touch Pad
+3VPCU	RTC, LED Power, HALL SENSOR, EC, ID , SPI Flash ,
+3V_S5	SCH USB Power, LAN, ID
+3VSUS	WLAN/WMAX, 3G
+3V	CLK_GEN Power, Thermal Sensor Power, CPU Pull Up Power, SCH Pull Up Power, SCH Power, DDRII Power, SDVO to CRT Power, LCD Power, INT SPK AMP, PATA To SATA Bridge, SATA, WLAN/WMAX, 3G, Card Reader, BT, EC,
+2.5V	SDVO to CRT
+1.8VSUS	SCH Power, DDRII SO-DIMM
+1.8V	PATA To SATA Bridge
+1.5V	CPU, SCH, WLAN/WMAX, 3G
VTERM	DDRII SO-DIMM
DDR_VREF	DDRII SO-DIMM
+1.05V	CLK_GEN, CPU, SCH,





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	Clock Distribution Diagram	1A
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Model	REV	DATE	CHANGE LIST	NOTE
ZA3	A1A	20090107	PAGE16 : Reverse C301 R322 U19 R323 R324 for SPK AMP Power	ECN Release
		20090112	PAGE23 : Change PJ1 P/N and Footprint	
		20090113	PAGE18 : Del RN20 and add RN21 RN22 for HDD issues	
			PAGE18 : Add R325 for JMH330 XTAL issues	
			PAGE21 : Change CN4 P/N from DFFC24FR023 to DFFC24FR017	
			PAGE21 : Change CN4 footprint	
			PAGE20 : Change CN5 P/N from DFFC14FR080 to DFFC14FR047	
			PAGE20 : Change CN6 P/N from DFFC12FR293 to DFFC12FR019	
			PAGE17 : Change CN2 P/N from DFFC12FR293 to DFFC12FR019	
			PAGE20 : Change CN5 footprint from BL121-14R-TAND-14P-L-BU1 to af714l-n2g1x-14p-l	
			PAGE19 : Change ESD1 value to U20	
			PAGE16 : Change CN7 P/N from DFHS04FS969 to DFHD04MRA75	
			PAGE16 : Change CN7 footprint from 88460-0401-4p-l to 88266-040xx-xxx-4p-l	
			PAGE4 : Change CN7 P/N from DFHS04FS969 to DFHD04MRA75	
			PAGE4 : Change CN7 footprint from 88460-0401-4p-l to 88266-040xx-xxx-4p-r	
			PAGE21 : Change CN8 P/N from DFHS05FS000 to DFHD05MRD98	
			PAGE21 : Change CN8 footprint from 88460-0501-5P-L to 88266-0500x-5p-l	
			PAGE6 : Del Q10 R138R139 for modify +1.05V_C6_OFF circuit	
			PAGE6 : Change R168 P/N from CS41002FB28 to CS31002JB28 for modify +1.05V_C6_OFF circuit	
			PAGE6 : Add R326 for modify +1.05V_C6_OFF circuit	
	PAGE6 : Change R148 P/N from CS41002FB28 to CS33302JB16 for modify +1.05V_C6_OFF circuit			
	PAGE6 : Add Q26 for modify +1.05V_C6_OFF circuit			
20090114	PAGE22 : Add R138 R139 R327 R328 for power sequence debug			
	PAGE5 : Add T54 T56 T57 T58 for power sequence debug			
	PAGE4 : Add T55 T59 for power sequence debug			
	PAGE14 : Change Y4 footprint from XTAL-3_2X2_5-2_3X1_9 to xtl-5x3_2-3_7 for cost down issues			
	PAGE14 : Change Y4 P/N from BG627000011 to BG627000505 for cost down issues			
20090115	PAGE17 : Change U1 P/N from AL08103EB00 to AL008103B00			
	PAGE15 : Change CN1 footprint from MSC-RB30-5-FG-30P-L to msc-rb30-5-fg-30p-l-za3 for ZA3 A-test SMT issues			
	PAGE19 : Change JSIM1 footprint from SIM-CE01X-3-14P to sim-ce01x-3-14p-za3 for ZA3 A-test SMT issues			
	PAGE19 : Change CN18 footprint from micpie-88956-5204-52p-ruv-v to micpie-88956-5204-52p-ruv-v-za3 for ZA3 A-test SMT issues			
	PAGE19 : Change CN19 footprint from micpie-88956-5204-52p-ruv-v to micpie-88956-5204-52p-ruv-v-za3 for ZA3 A-test SMT issues			
	PAGE20 : Change CN11 footprint from usb-020173mr004s555zl-4p-r-v to usb-020173mr004s555-4p-r-v-za3 for ZA3 A-test SMT issues			
	PAGE20 : Change CN14 footprint from usb-020173mr004s555zl-4p-r-v to usb-020173mr004s555-4p-r-v-za3 for ZA3 A-test SMT issues			
	PAGE23 : Change PJ2 footprint from dcjk-2dc3003-001211-5p to dcjk-2dc3003-001211-5p-v-za3 for ZA3 A-test SMT issues			
	PAGE23 : Change PR104 footprint from RC3720 to rc3720-0_8h for ZA3 A-test SMT issues			
	PAGE23 : Change PR112 footprint from RC3720 to rc3720-0_8h for ZA3 A-test SMT issues			
	PAGE14 : Change U9 footprint from QFN64-8X8-4-65P-0_85H to qfn64-8x8-4-65p-0_85h-za3 for ZA3 A-test SMT issues			
	PAGE23 : Change PU7 footprint from QFN28-5X5-5-33P to qfn28-5x5-5-33p-za3 for ZA3 A-test SMT issues			
	PAGE22 : Change U12 footprint from LQFP128-16X16-4 to lqfp128-16x16-4-za3 for ZA3 A-test SMT issues			
	PAGE23 : Change PJ1 footprint from bat-c144f8-108a1-l-8p-l-v-zg8 to bat-c144f8-108a1-l-8p-l-v-za3 for ZA3 A-test SMT issues			
	PAGE30 : Change HOLE8 HOLE9 HOLE10 footprint			
	PAGE16 : Modify SPK circuit			
20090116	PAGE21 : Add CN8 PIN6 PIN7 to GND			
	PAGE30 : Modify HOLE8 HOLE9 HOLE10 symbol			
	PAGE21 : Change CN3 footprint from BL123-04R-4P-R-BL5 to 88513-0401-4p-r			
	PAGE21 : Change CN3 P/N			
20090117	PAGE16 : Change CN7 P/N from DFHS04FS969 to DFHD04MRA75			
	PAGE4 : Change CN9 P/N from DFHS04FS969 to DFHD04MRA75			
20090119	PAGE23 : stuff PR10 for Battery issues			
20090121	PAGE22 : Modify SUSLED# from GPIO30 to GPIO40			
	PAGE27 : Change PL5 P/N from DC-33D5M000 to DC-2280M002			
20090129	PAGE15 : Change C209 P/N from CH62202Z233 to CH52202MA91			
	PAGE15 : Change C209 footprint from CC1206 to CC0805			
	PAGE19 : Change CN18 P/N from DG052000031 to DFHS52FR025 for cost issues			
	PAGE19 : Change CN19 P/N from DG052000031 to DFHS52FR025 for cost issues			
	PAGE20 : Add R329 and C302 for EMI 48MHz issues			
	PAGE19 : Change C182 P/N from CH44702K912 to CH4472K9B00			
20090205	PAGE8 : Add T60 T61 T62 T63 test point for Boundary Scan			
	PAGE4 : Modify JETC pins for Boundary Scan			
	PAGE9 : Modify JETC pins for Boundary Scan			
	PAGE16 : Modify CN7 pin5 pin6 for ESD issues			
	PAGE14 : Change CN10 P/N from DFWF20MS000 to DFWF20MS002			
	PAGE14 : Change CN10 footprint form 88442-2001-20p-luv to 87242-2001-20p-luv			
	PAGE8 : No stuff C160 for C6 issues			
20090206	PAGE15 : Add R255 for EMI request			

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Model	REV	DATE	CHANGE LIST	NOTE
ZA3	B1A	20090206	PAGE16 : Reverse C301 R322 U19 R323 R324 for SPK AMP Power PAGE30 : Add C303 C304 C305 C306 C307 C308 for EMI Request	ECN Release
		20090207	PAGE15 : No stuff R208 for EC not use BL_STATE rev.b 20090207 PAGE30 : C309 C310 for EMI Request PAGE4 : Change R98 R87 R97 P/N from CS05102FB09 to CS05602JB17 rev.b 20090207 PAGE9 : Change R260 R259 R256 P/N from CS05102FB09 to CS05602JB17 PAGE9 : Change R257 P/N from CS02702JB21 to CS05602JB17 rev.b 20090207	
		20090209	PAGE8 : Change T60 T61 T62 T63 footprint from TP3075 to TP3050 PAGE8 : Modify HOLE10 HOLE5 HOLE7 footprint PAGE15 : Change U8 P/N from AL005243000 to AL005243001	
		20090210	PAGE16 : Change R181 R176 P/N from CS07502FB17 to CS05102JB35 PAGE7 ~ PAGE12 : Change U15 P/N from AJSLGFQ0T02 to AJ0QV230T01	
		20090211	PAGE30 : C311 C312 for EMI Request PAGE30 : Modify CN10 P/N and footprint for EMI request	
		20090212	PAGE16 : Change R204, R187, R313, R304 P/N from CS32003F933 to CS33603F911 PAGE17 : Change C4 C5 P/N from CH02706JB06 to CH03306JBD7 for vender suggest PAGE3 : Change C42 C43 P/N from CH02706JB06 to CH03306JBD7 for vender suggest PAGE18 : Change C250 C251 P/N from CH02206JB08 to CH02706JB06 for vender suggest	
		20090213	PAGE16 : Change R164 P/N from CS21002JB34 to CS22002JB02 for Ben check PAGE16 : Change R167 P/N from CS00002JB38 to CS33602JB17 for Ben check	
		20090213	PAGE11 : Change C163 C136 connect SCH_VCCSUS3 power net	
		20090228	PAGE22 : Change U16 Pin5 from +3VPCU to +3V_S5 PAGE22 : Stuff D17, Reserve R262, Change C267 C270 connect from 3V_VDD_EC to +3V PAGE6 : Modify R326 from 10K to 100K and pull up +3V and Change R168 from 10K to 100K	
		20090301	PAGE21 : Modify CN8 footprint and pin define PAGE18 : Modify 8040 circuit to 88SA8052 add L22 R330 R331 R99 R339 PAGE4 : Modify R150 from CPU side to SCH side PAGE4 : Change R88 P/N from CS05602JB17 to CS11202JB21 PAGE4 : Change R81 P/N from CS00002JB38 to CS02402JB11 PAGE6 : Change R100 R101 P/N from CS11002FB22 to CS11002JB32 PAGE13 : Add R112 R332 of RAM RST issues for intel suggest PAGE15 : Change R215 P/N from CS41002JB20 to CS41002FB28 PAGE8 : Add R333 R334 R335 R336 for LPC AD0-AD3 PAGE8 : Change C233 C231 C243 C240 C239 C238 C237 C235 from SDVO chip side to SCH side PAGE3 : Change R43 P/N from CS00002JB38 to CS31002JB28 PAGE9 : Change R186 R184 R309 R296 P/N from CS31002JB28 to CS21002JB34 PAGE9 : Del RN8 and Add R337 R338 to SCH SMBUS PAGE15 : Modify R210 R23 footprint from RC0402 to SHORT0402 for 0 ohm cost down PAGE16 : Modify R275 footprint from RC0402 to SHORT0402 for 0 ohm cost down PAGE22 : Modify R138 R139 R207 R327 R328 R65 R82 R83 R92 footprint from RC0402 to SHORT0402 for 0 ohm cost down PAGE10 : Modify R111 footprint from RC0402 to SHORT0402 for 0 ohm cost down PAGE19 : Modify R160 R161 R162 R178 R179 R180 footprint from RC0402 to SHORT0402 for 0 ohm cost down PAGE3 : Modify R39 R36 footprint from RC0402 to SHORT0402 for 0 ohm cost down PAGE22 : Modify R110 footprint from RC0603 to SHORT0603 for 0 ohm cost down PAGE11 : Modify R126 footprint from RC0603 to SHORT0603 for 0 ohm cost down PAGE16 : Modify R144 R149 R170 R183 R246 R251 R197 R198 R199 R200 footprint from RC0603 to SHORT0603 for 0 ohm cost down	
	20090302	PAGE16 : Modify R168 P/N from CS31002JB28 to CS41002JB20 PAGE23 : Modify PJ1 footprint from bat-c144f8-108a1-l-8p-l-v-za3 to bat-c144f8-108a1-l-8p-l-v for SMT issues PAGE14 : Add C313 C314 C315 for EMI issues		
	20090303	PAGE16 : Add R340 for EC PCBEEP PAGE3 : Del R27 for CR DB +3VSUS issues PAGE20 : Del R329 C302 for CR DB +3VSUS issues and modify CN5 pin12 to +3VSUS PAGE6 : Add and revrse Q27 R329 for C6 circuit PAGE19 : Add C318 for LPC issues PAGE30 : Add C302 C316 C317 for EMI issues PAGE13 : Del RN4 and Add R341 R342 for RAM issues PAGE9 : Stuff R297 for SMI# PAGE9 : No stuff R239 for SWI# PAGE22 : Del D6 for SWI# issues		
	20090304	PAGE9 : Change R297 from +3V_S5 to +3V for SMI# PAGE22 : Del SWI# net and Add test point T36 PAGE19 : No stuff C182 and change P/N from CH4472K9B00 to CH4471Z3B07		
	20090305	PAGE16 : Change U18 P/N from AL001453000 to AL001454001 PAGE19 : Change CN18 CN19 P/N from DFHS52FR025 to DG052000031 PAGE15 : Change CN1 P/N from DFHS30FR299 to DFHS30FR014 for SMT issues		

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