

Crimea, LL1 BLOCK DIAGRAM

01

PCB STACK UP

8L HDI

Top-GND-IN1-IN2-SVCC-IN3-GND-Bot

Battery Charger
ISL88731A

Page 29

3V/5V
RT8206

Page 30

CPU CORE
RT8152B

Page 31

DDR3, VTT
RT8207AGQW

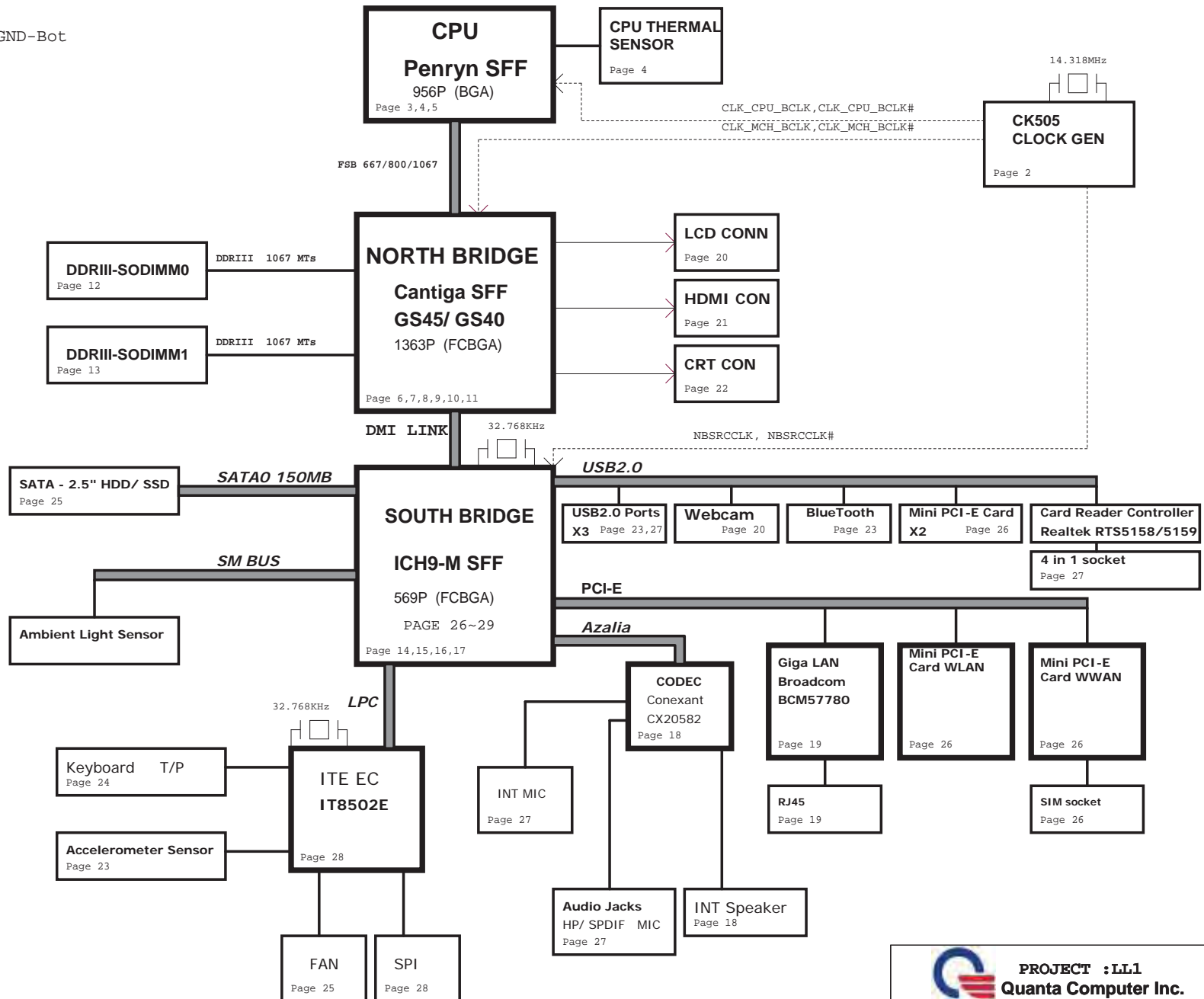
Page 32

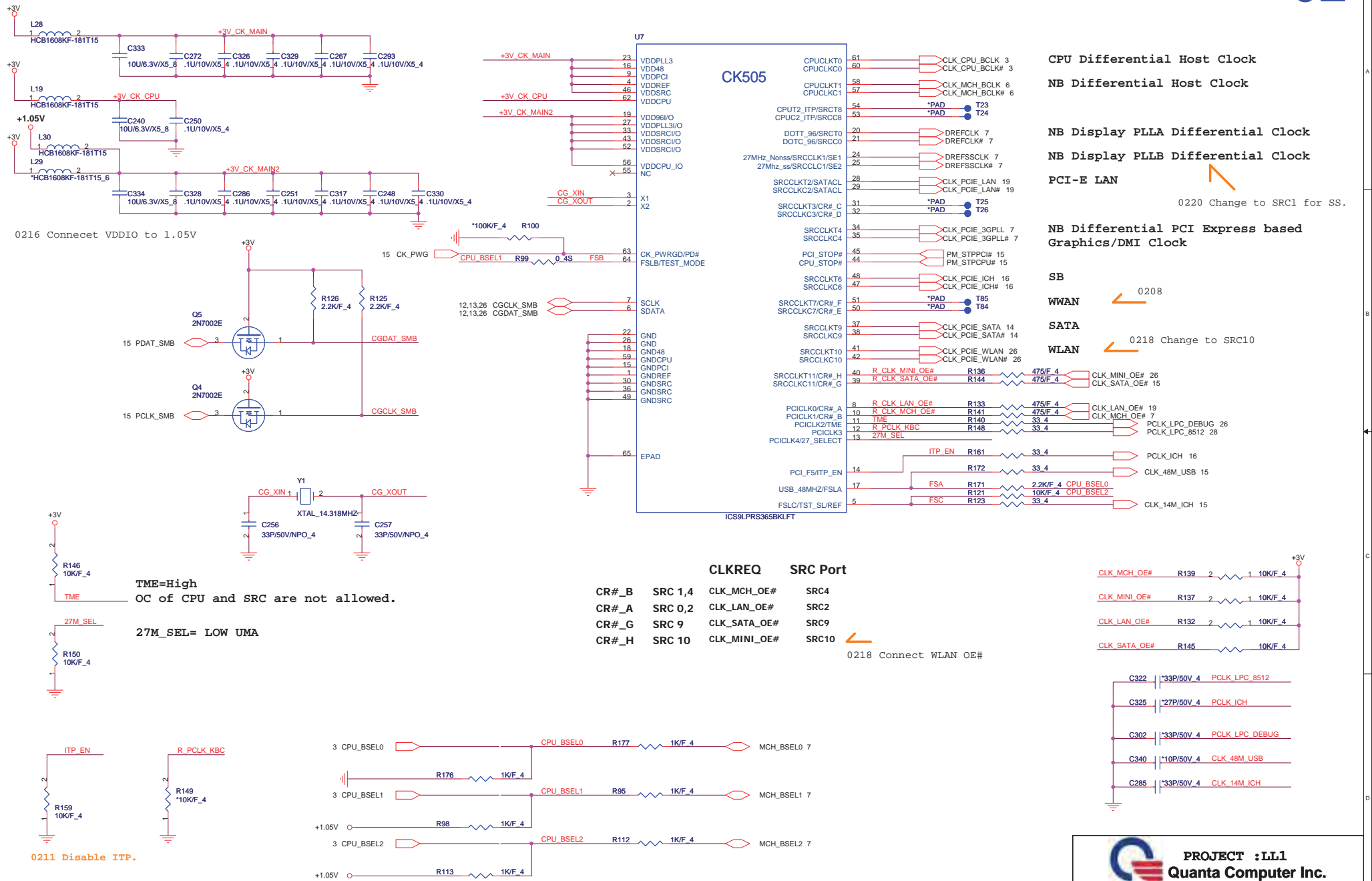
1.05V/ 1.5V
RT8204

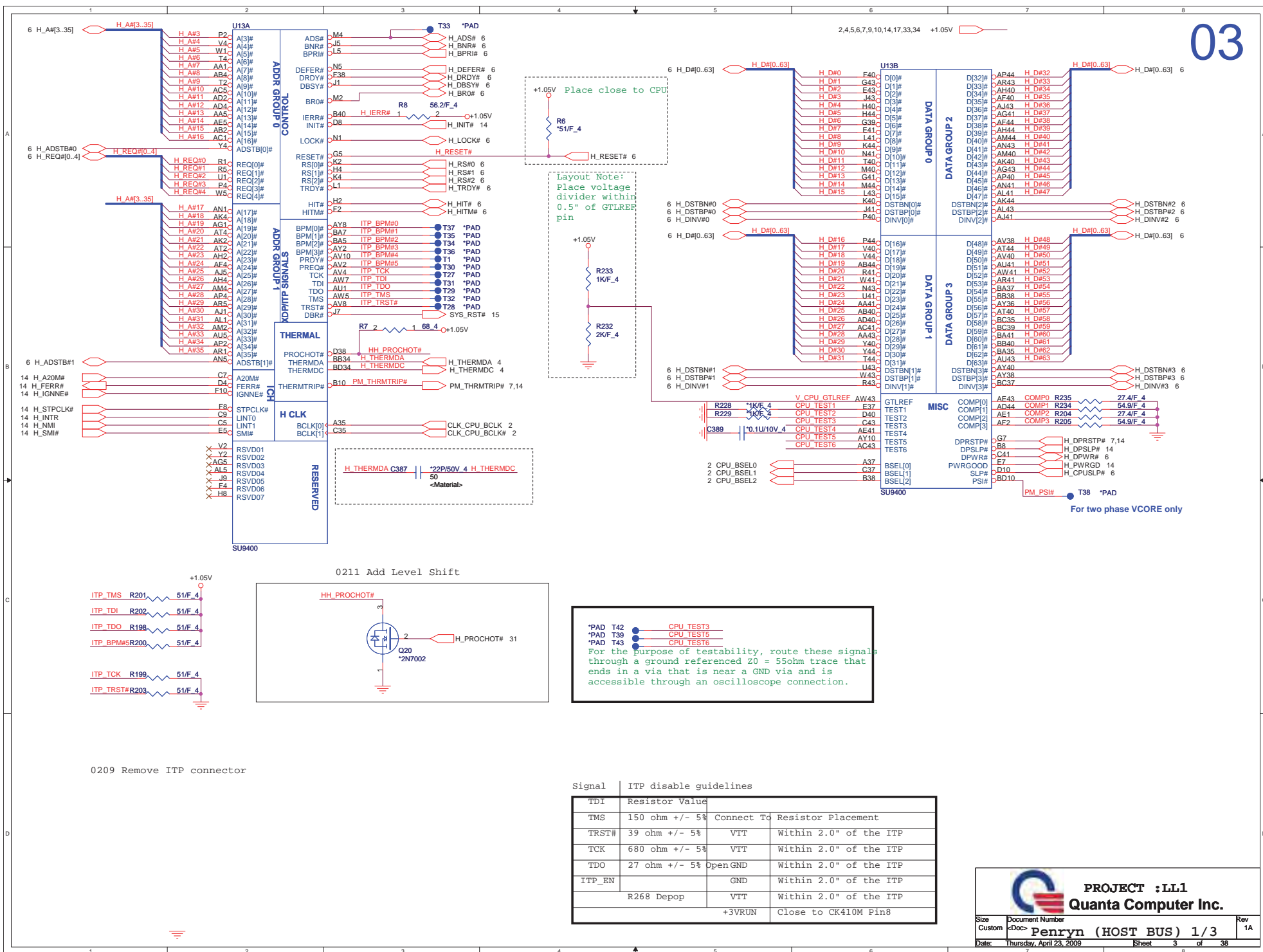
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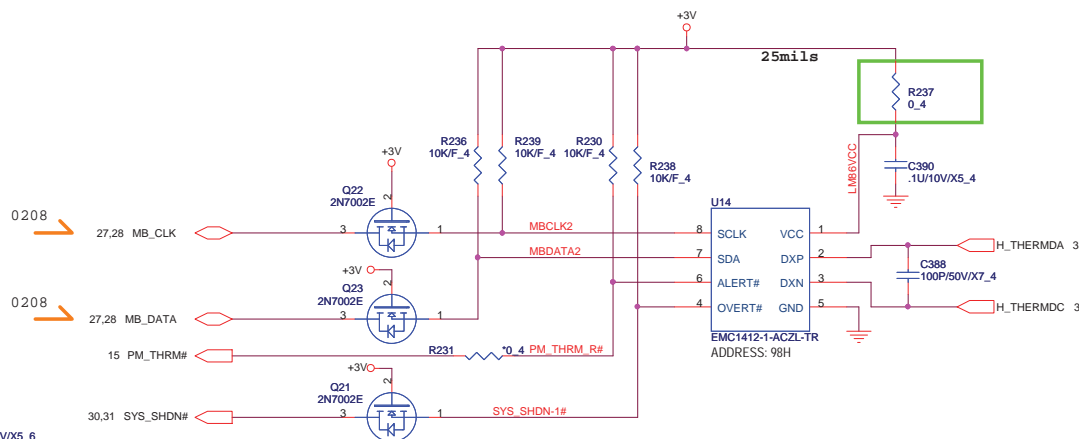
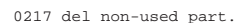
S5 power, LDO


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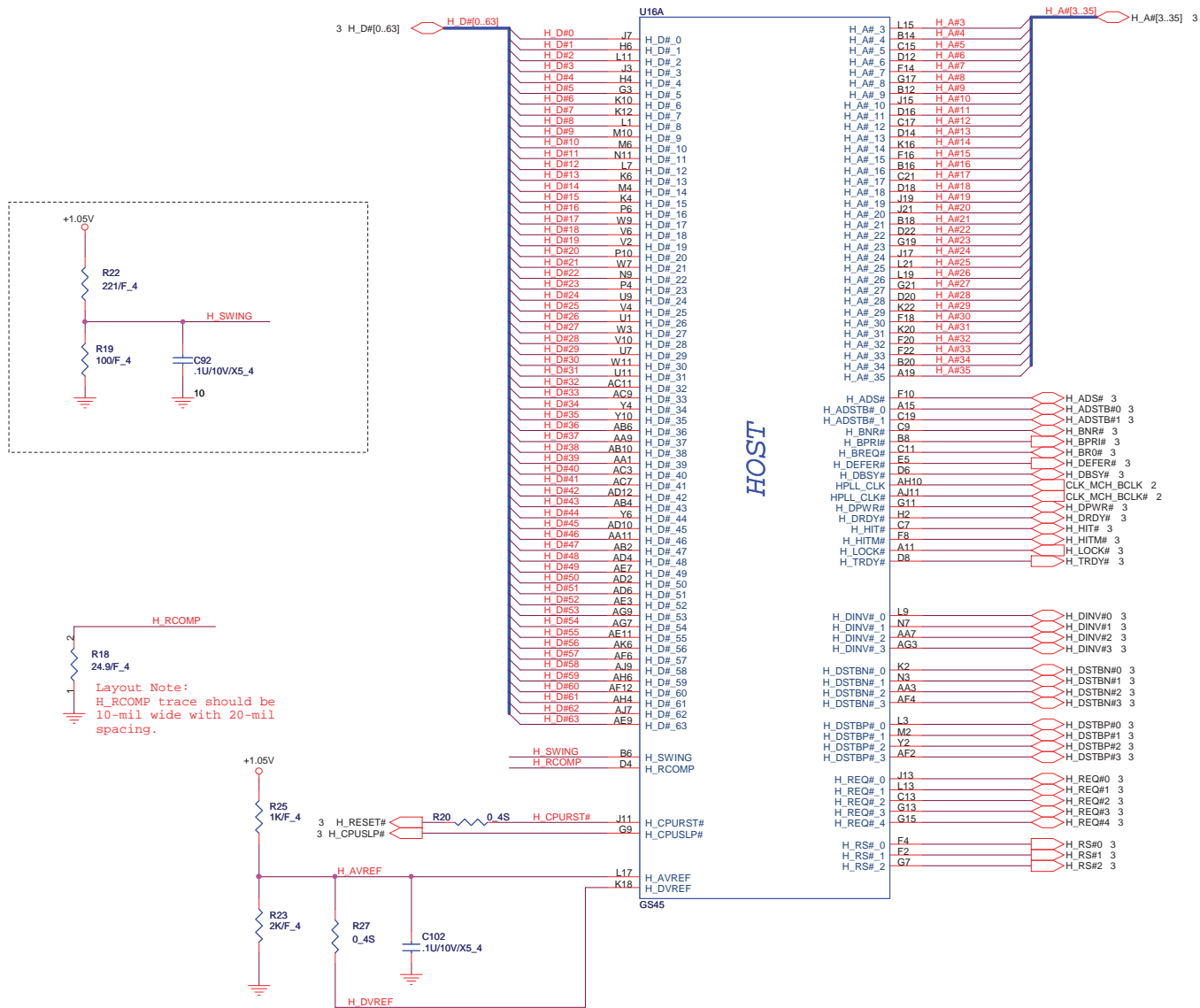


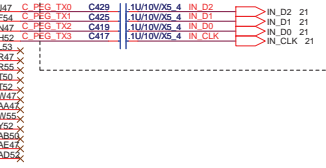
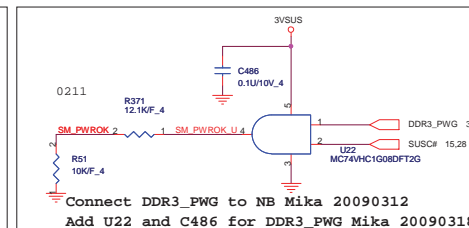
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Size Custom	Document Number Doc# Penryn (TH Monitor) 2/3
Date: Thursday, April 23, 2009	Sheet 4 of 38



U13F
SU940

Rev
1A





Ext. GbX Tx Differential Pairs	HDMI Signals	HDMI Signals Description
EXP_T0M[5]	TMD66_DATA2B	HDMI data and clock lines for Port B
EXP_T0P[0]	TMD66_DATA2A	
EXP_T0M[4]	TMD66_DATA1B	
EXP_T0P[1]	TMD66_DATA1A	
EXP_T0M[2]	TMD66_DATA0B	
EXP_T0P[2]	TMD66_DATA0A	
EXP_T0M[3]	TMD66_CLKB	
EXP_T0P[3]	TMD66_CLKA	
Ext. GbX Rx Differential Pairs	HDMI Signals	HDMI Signals Description
EXP_R0P[3]	Hot B_4Doe	Hot plug detect used by HDMI Port B. Exp. R3M[31]: not used.
IOCC multiplexed lines	HDMI Signals	HDMI Signals Description
SWD0_CTRL_CLK	HDMI0B_CTRL_CLK	HDMI IOCC lines for Port B
SWD0_CTRL_DATA	HDMI0B_CTRL_DATA	

12 DDR_A_D[0..63]

U16D
 DDR_A_D0 AP46
 DDR_A_D1 AU47
 DDR_A_D2 AT46
 DDR_A_D3 AU49
 DDR_A_D4 AR45
 DDR_A_D5 AN49
 DDR_A_D6 AV50
 DDR_A_D7 AF50
 DDR_A_D8 AW47
 DDR_A_D9 BD50
 DDR_A_D10 AW49
 DDR_A_D11 BA49
 DDR_A_D12 BC49
 DDR_A_D13 AV42
 DDR_A_D14 BA47
 DDR_A_D15 AY50
 DDR_A_D16 BF46
 DDR_A_D17 BC47
 DDR_A_D18 BF50
 DDR_A_D19 BF48
 DDR_A_D20 BC43
 DDR_A_D21 BE49
 DDR_A_D22 BA43
 DDR_A_D23 BE47
 DDR_A_D24 BF42
 DDR_A_D25 BC38
 DDR_A_D26 BE44
 DDR_A_D27 BF40
 DDR_A_D28 BB40
 DDR_A_D29 BE43
 DDR_A_D30 BF38
 DDR_A_D31 BE41
 DDR_A_D32 BA15
 DDR_A_D33 BE11
 DDR_A_D34 BE15
 DDR_A_D35 BF14
 DDR_A_D36 BB14
 DDR_A_D37 BC15
 DDR_A_D38 BE13
 DDR_A_D39 BF16
 DDR_A_D40 BF10
 DDR_A_D41 BC11
 DDR_A_D42 BF8
 DDR_A_D43 BG7
 DDR_A_D44 BC7
 DDR_A_D45 BC9
 DDR_A_D46 BD6
 DDR_A_D47 BF12
 DDR_A_D48 AV6
 DDR_A_D49 BB6
 DDR_A_D50 AW7
 DDR_A_D51 AY6
 DDR_A_D52 AT10
 DDR_A_D53 AW11
 DDR_A_D54 AU11
 DDR_A_D55 AW9
 DDR_A_D56 AR11
 DDR_A_D57 AT6
 DDR_A_D58 AP6
 DDR_A_D59 AL7
 DDR_A_D60 AR7
 DDR_A_D61 AT12
 DDR_A_D62 AM6
 DDR_A_D63 AU7

GS45

DDR SYSTEM MEMORY A

SA_BS_0
 SA_BS_1
 SA_BS_2

SA_RAS#
 BK20 DDR_A_CAS#
 SA_WE#

SA_DM_0
 SA_DM_1
 SA_DM_2
 SA_DM_3
 SA_DM_4
 SA_DM_5
 SA_DM_6
 SA_DM_7

SA_DQS_0
 SA_DQS_1
 SA_DQS_2
 SA_DQS_3
 SA_DQS_4
 SA_DQS_5
 SA_DQS_6
 SA_DQS_7

SA_MA_0
 SA_MA_1
 SA_MA_2
 SA_MA_3
 SA_MA_4
 SA_MA_5
 SA_MA_6
 SA_MA_7
 SA_MA_8
 SA_MA_9
 SA_MA_10
 SA_MA_11
 SA_MA_12
 SA_MA_13
 SA_MA_14

BC21 DDR_A_BS0
 BJ21 DDR_A_BS1
 BJ41 DDR_A_BS2
 BH22 DDR_A_RAS#
 BK20 DDR_A_CAS#
 BL15 DDR_A_WE#

AT50 DDR_A_DM0
 BB50 DDR_A_DM1
 BE46 DDR_A_DM2
 BE39 DDR_A_DM3
 BB12 DDR_A_DM4
 BE7 DDR_A_DM5
 AV10 DDR_A_DM6
 AR9 DDR_A_DM7

AR47 DDR_A_DQS0
 BA45 DDR_A_DQS1
 BE45 DDR_A_DQS2
 BC41 DDR_A_DQS3
 BC13 DDR_A_DQS4
 BB10 DDR_A_DQS5
 BA7 DDR_A_DQS6
 AN7 DDR_A_DQS7

AR49 DDR_A_DQS#0
 AW45 DDR_A_DQS#1
 BC45 DDR_A_DQS#2
 BA41 DDR_A_DQS#3
 BA13 DDR_A_DQS#4
 BA11 DDR_A_DQS#5
 BA9 DDR_A_DQS#6
 AN9 DDR_A_DQS#7

BC23 DDR_A_MA0
 BE22 DDR_A_MA1
 BE31 DDR_A_MA2
 BC31 DDR_A_MA3
 BH26 DDR_A_MA4
 BJ35 DDR_A_MA5
 BB34 DDR_A_MA6
 BH32 DDR_A_MA7
 BB26 DDR_A_MA8
 BF32 DDR_A_MA9
 BA21 DDR_A_MA10
 BG25 DDR_A_MA11
 BH34 DDR_A_MA12
 BH18 DDR_A_MA13
 BE25 DDR_A_MA14

13 DDR_B_D[0..63]

U16E
 DDR_B_D0 AP54
 DDR_B_D1 AM52
 DDR_B_D2 AR55
 DDR_B_D3 AV54
 DDR_B_D4 AM54
 DDR_B_D5 AN53
 DDR_B_D6 AT52
 DDR_B_D7 AU53
 DDR_B_D8 AW53
 DDR_B_D9 AY52
 DDR_B_D10 BB52
 DDR_B_D11 BC53
 DDR_B_D12 AV52
 DDR_B_D13 AR52
 DDR_B_D14 BD52
 DDR_B_D15 BC55
 DDR_B_D16 BF54
 DDR_B_D17 BE51
 DDR_B_D18 BH48
 DDR_B_D19 BK48
 DDR_B_D20 BE53
 DDR_B_D21 BH52
 DDR_B_D22 BK46
 DDR_B_D23 BJ47
 DDR_B_D24 BL45
 DDR_B_D25 BL45
 DDR_B_D26 BL41
 DDR_B_D27 BH44
 DDR_B_D28 BH46
 DDR_B_D29 BK44
 DDR_B_D30 BK40
 DDR_B_D31 BJ39
 DDR_B_D32 BK10
 DDR_B_D33 BH10
 DDR_B_D34 BK6
 DDR_B_D35 BH6
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 DDR_B_D41 BF4
 DDR_B_D42 BD4
 DDR_B_D43 BA3
 DDR_B_D44 BE5
 DDR_B_D45 BF2
 DDR_B_D46 BB4
 DDR_B_D47 AY4
 DDR_B_D48 BA1
 DDR_B_D49 AF2
 DDR_B_D50 AU11
 DDR_B_D51 AT2
 DDR_B_D52 AT4
 DDR_B_D53 AV4
 DDR_B_D54 AU3
 DDR_B_D55 AR3
 DDR_B_D56 AN1
 DDR_B_D57 AP4
 DDR_B_D58 AL3
 DDR_B_D59 AI1
 DDR_B_D60 AK4
 DDR_B_D61 AM4
 DDR_B_D62 AH2
 DDR_B_D63 AK2

GS45

DDR SYSTEM MEMORY B

SB_BS_0
 SB_BS_1
 SB_BS_2

SB_RAS#
 SB_CAS#
 SB_WE#

SB_DM_0
 SB_DM_1
 SB_DM_2
 SB_DM_3
 SB_DM_4
 SB_DM_5
 SB_DM_6
 SB_DM_7

SB_DQS_0
 SB_DQS_1
 SB_DQS_2
 SB_DQS_3
 SB_DQS_4
 SB_DQS_5
 SB_DQS_6
 SB_DQS_7

SB_MA_0
 SB_MA_1
 SB_MA_2
 SB_MA_3
 SB_MA_4
 SB_MA_5
 SB_MA_6
 SB_MA_7
 SB_MA_8
 SB_MA_9
 SB_MA_10
 SB_MA_11
 SB_MA_12
 SB_MA_13
 SB_MA_14

BJ13 DDR_B_BS0
 BK12 DDR_B_BS1
 BK38 DDR_B_BS2
 BE21 DDR_B_RAS#
 BH14 DDR_B_CAS#
 BK14 DDR_B_WE#

AP52 DDR_B_DM0
 AY54 DDR_B_DM1
 BJ49 DDR_B_DM2
 BJ43 DDR_B_DM3
 BH12 DDR_B_DM4
 BD2 DDR_B_DM5
 AY2 DDR_B_DM6
 AJ3 DDR_B_DM7

AR53 DDR_B_DQS0
 BA53 DDR_B_DQS1
 BH50 DDR_B_DQS2
 BK42 DDR_B_DQS3
 BH6 DDR_B_DQS4
 BE2 DDR_B_DQS5
 AV2 DDR_B_DQS6
 AM2 DDR_B_DQS7

AT54 DDR_B_DQS#0
 BB54 DDR_B_DQS#1
 BJ51 DDR_B_DQS#2
 BH42 DDR_B_DQS#3
 BK8 DDR_B_DQS#4
 BC3 DDR_B_DQS#5
 AW3 DDR_B_DQS#6
 AN3 DDR_B_DQS#7

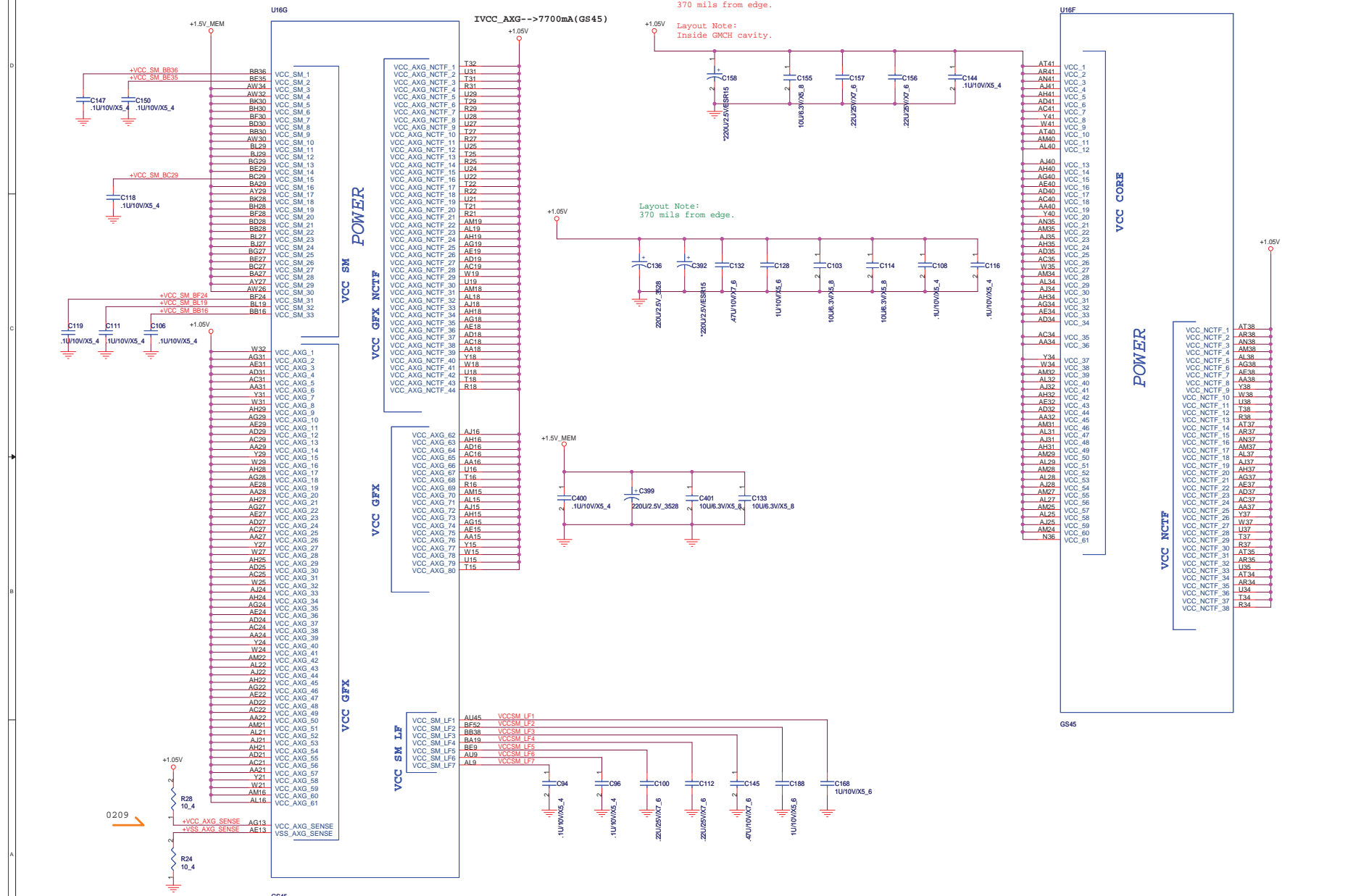
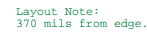
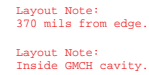
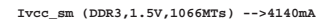
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 BJ33 DDR_B_MA1
 BH24 DDR_B_MA2
 BA17 DDR_B_MA3
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 BH36 DDR_B_MA5
 BF34 DDR_B_MA6
 BK34 DDR_B_MA7
 BJ37 DDR_B_MA8
 BH40 DDR_B_MA9
 BH16 DDR_B_MA10
 BK36 DDR_B_MA11
 BH38 DDR_B_MA12
 BJ11 DDR_B_MA13
 BL37 DDR_B_MA14



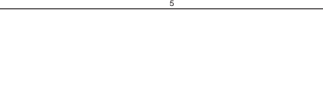
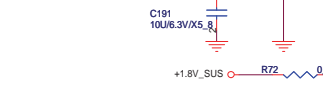
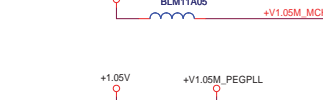
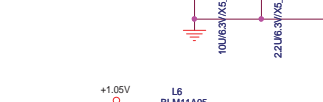
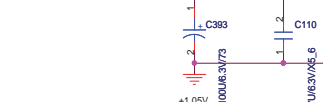
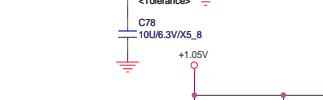
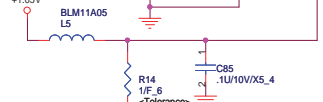
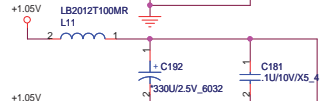
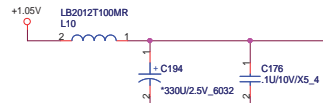
PROJECT :LL1
 Quanta Computer Inc.

Size Document Number
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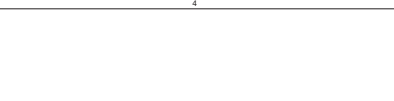
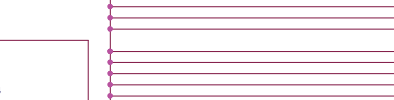
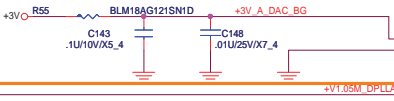
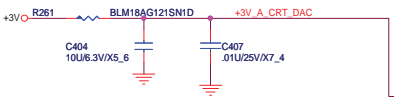
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VCCA_DPLLA+VCCA_DPLLB=64.8mA



0218 Correct as Design Guide



U16H

VCCA_CRT_DAC

VCCA_DAC_BG

VCCA_DPLLA

VCCA_DPLLB

VCCA_HPLL

VCCA_MPLL

VCCA_LVDS1

VCCA_LVDS2

VCCA_PEG_BG

VCCA_PEG_PLL

VCCA_SM_1

VCCA_SM_2

VCCA_SM_3

VCCA_SM_4

VCCA_SM_5

VCCA_SM_6

VCCA_SM_7

VCCA_SM_8

VCCA_SM_9

VCCA_SM_10

VCCA_SM_11

VCCA_SM_12

VCCA_SM_13

VCCA_SM_14

VCCA_SM_15

VCCA_SM_16

VCCA_SM_17

VCCA_SM_NCTF_1

VCCA_SM_NCTF_2

VCCA_SM_NCTF_3

VCCA_SM_NCTF_4

VCCA_SM_NCTF_5

VCCA_SM_NCTF_6

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VCCA_SM_NCTF_179

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VCCA_SM_NCTF_200

VCCA_SM_NCTF_201

VCCA_SM_NCTF_202

VCCA_SM_NCTF_203

VCCA_SM_NCTF_204

VCCA_SM_NCTF_205

VCCA_SM_NCTF_206

VCCA_SM_NCTF_207

VCCA_SM_NCTF_208

VCCA_SM_NCTF_209

VCCA_SM_NCTF_210

VCCA_SM_NCTF_211

VCCA_SM_NCTF_212

VCCA_SM_NCTF_213

VCCA_SM_NCTF_214

VCCA_SM_NCTF_215

VCCA_SM_NCTF_216

VCCA_SM_NCTF_217

VCCA_SM_NCTF_218

VCCA_SM_NCTF_219

VCCA_SM_NCTF_220

VCCA_SM_NCTF_221

VCCA_SM_NCTF_222

VCCA_SM_NCTF_223

VCCA_SM_NCTF_224

VCCA_SM_NCTF_

U16I		
BA55	VSS_1	VSS_100
AU55	VSS_2	C43
AN55	VSS_3	A43
AJ55	VSS_4	BD42
AE55	VSS_5	H42
AA55	VSS_6	BG41
U55	VSS_7	E41
N55	VSS_8	AM41
BD54	VSS_9	AL41
BG53	VSS_10	AG41
AJ53	VSS_11	AE41
AE53	VSS_12	AA41
AA53	VSS_13	R41
U53	VSS_14	M41
N53	VSS_15	E41
J53	VSS_16	BD40
G53	VSS_17	U40
E53	VSS_18	AR40
K52	VSS_19	AN40
BG51	VSS_20	W40
BA51	VSS_21	U40
AW51	VSS_22	T40
AJ51	VSS_23	R40
AR51	VSS_24	K40
AN51	VSS_25	H40
AL51	VSS_26	BL39
AJ51	VSS_27	BG39
AG51	VSS_28	BA39
AE51	VSS_29	E39
AC51	VSS_30	C39
AA51	VSS_31	A39
W51	VSS_32	BD38
U51	VSS_33	U38
R51	VSS_34	H38
N51	VSS_35	BG37
L51	VSS_36	AJ37
G51	VSS_37	M37
C51	VSS_38	E37
BK50	VSS_39	BD36
AM50	VSS_40	AW36
K50	VSS_41	H36
BG49	VSS_42	BL35
E49	VSS_43	BG35
C49	VSS_44	AY35
BD48	VSS_45	AJ35
BB48	VSS_46	AL35
AY48	VSS_47	AG35
AT48	VSS_48	AE35
AP48	VSS_49	AA35
AM48	VSS_50	Y35
AK48	VSS_51	M35
AH48	VSS_52	E35
AF48	VSS_53	A35
AD48	VSS_54	BD34
AB48	VSS_55	U34
Y48	VSS_56	AN34
T48	VSS_57	H34
P48	VSS_58	BL33
M48	VSS_59	BG33
K48	VSS_60	AY33
BL47	VSS_61	E33
BG47	VSS_62	BD32
E47	VSS_63	U32
C47	VSS_64	AN32
BD46	VSS_65	AG32
AY46	VSS_66	AC32
AM46	VSS_67	Y32
AK46	VSS_68	H32
AH46	VSS_69	B32
AF46	VSS_70	BJ31
AD46	VSS_71	BG31
AB46	VSS_72	AY31
Y46	VSS_73	M31
T46	VSS_74	E31
P46	VSS_75	N30
M46	VSS_76	H30
K46	VSS_77	AN29
BL45	VSS_78	AJ29
BG45	VSS_79	M29
E45	VSS_80	W28
C45	VSS_81	AN28
BD44	VSS_82	AD28
AY44	VSS_83	AC28
AM44	VSS_84	Y28
AK44	VSS_85	W28
AH44	VSS_86	H28
AF44	VSS_87	F28
AD44	VSS_88	AJ27
AB44	VSS_89	M27
Y44	VSS_90	BF26
T44	VSS_91	BD26
P44	VSS_92	N26
M44	VSS_93	H26
K44	VSS_94	BJ25
BL43	VSS_95	AY25
BG43	VSS_96	U25
E43	VSS_97	W25
C43	VSS_98	AN25
BD42	VSS_99	AG25

GS45


U16J		
AN25	VSS_199	VSS_300
AG25	VSS_200	VSS_301
AE25	VSS_201	VSS_302
AA25	VSS_202	VSS_303
Y25	VSS_203	VSS_304
E25	VSS_204	VSS_305
AY24	VSS_205	VSS_306
BD24	VSS_206	VSS_307
AN24	VSS_207	VSS_308
AL24	VSS_208	VSS_309
H24	VSS_209	VSS_310
BG23	VSS_210	VSS_311
AY23	VSS_211	VSS_312
E23	VSS_212	VSS_313
BD22	VSS_213	VSS_314
E41	VSS_214	VSS_315
AN22	VSS_215	VSS_316
Y22	VSS_216	VSS_317
W22	VSS_217	VSS_318
H22	VSS_218	VSS_319
BL21	VSS_219	VSS_320
BG21	VSS_220	VSS_321
AY21	VSS_221	VSS_322
AN21	VSS_222	VSS_323
AG21	VSS_223	VSS_324
AE21	VSS_224	VSS_325
M21	VSS_225	VSS_326
E21	VSS_226	VSS_327
BA39	VSS_227	VSS_328
BD20	VSS_228	VSS_329
H20	VSS_229	VSS_330
BG19	VSS_230	VSS_331
AY19	VSS_231	VSS_332
M19	VSS_232	VSS_333
E19	VSS_233	VSS_334
BD18	VSS_234	VSS_335
N18	VSS_235	VSS_336
H18	VSS_236	VSS_337
BL17	VSS_237	VSS_338
BG17	VSS_238	VSS_339
AY17	VSS_239	VSS_340
M17	VSS_240	VSS_341
E17	VSS_241	VSS_342
A17	VSS_242	VSS_343
BD16	VSS_243	VSS_344
AN16	VSS_244	VSS_345
AG16	VSS_245	VSS_346
AE16	VSS_246	VSS_347
Y16	VSS_247	VSS_348
W16	VSS_248	VSS_349
N16	VSS_249	VSS_350
H16	VSS_250	VSS_351
BG15	VSS_251	VSS_352
AY15	VSS_252	VSS_353
AN15	VSS_253	VSS_354
AD15	VSS_254	VSS_355
AC15	VSS_255	VSS_356
R15	VSS_256	VSS_357
M15	VSS_257	VSS_358
E15	VSS_258	VSS_359
BD14	VSS_259	VSS_360
H14	VSS_260	VSS_361
BL13	VSS_261	VSS_362
BG13	VSS_262	VSS_363
AY13	VSS_263	VSS_364
AU13	VSS_264	VSS_365
AR13	VSS_265	VSS_366
AJ13	VSS_266	VSS_367
AC13	VSS_267	VSS_368
AA13	VSS_268	VSS_369
W13	VSS_269	VSS_370
U13	VSS_270	VSS_371
M13	VSS_271	VSS_372
E13	VSS_272	VSS_373
A13	VSS_273	VSS_374
BD12	VSS_274	VSS_375
AY12	VSS_275	VSS_376
AN12	VSS_276	VSS_377
AG12	VSS_277	VSS_378
AE12	VSS_278	VSS_379
Y12	VSS_279	VSS_380
W12	VSS_280	VSS_381
H12	VSS_281	VSS_382
BG11	VSS_283	VSS_383
AG11	VSS_284	VSS_384
E11	VSS_285	VSS_385
BD10	VSS_286	VSS_386
AY10	VSS_287	VSS_387
AP10	VSS_288	VSS_388
H10	VSS_289	VSS_389
AN27	VSS_290	VSS_390
BL9	VSS_291	VSS_391
BG9	VSS_292	VSS_392
E9	VSS_293	VSS_393
AD9	VSS_294	VSS_394
BD8	VSS_295	VSS_395
BB8	VSS_296	VSS_396
AY8	VSS_297	VSS_397
AV8	VSS_298	VSS_398
AT8	VSS_299	VSS_399
AP8	VSS_300	VSS_400

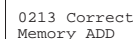
VSS

VSS NCTF

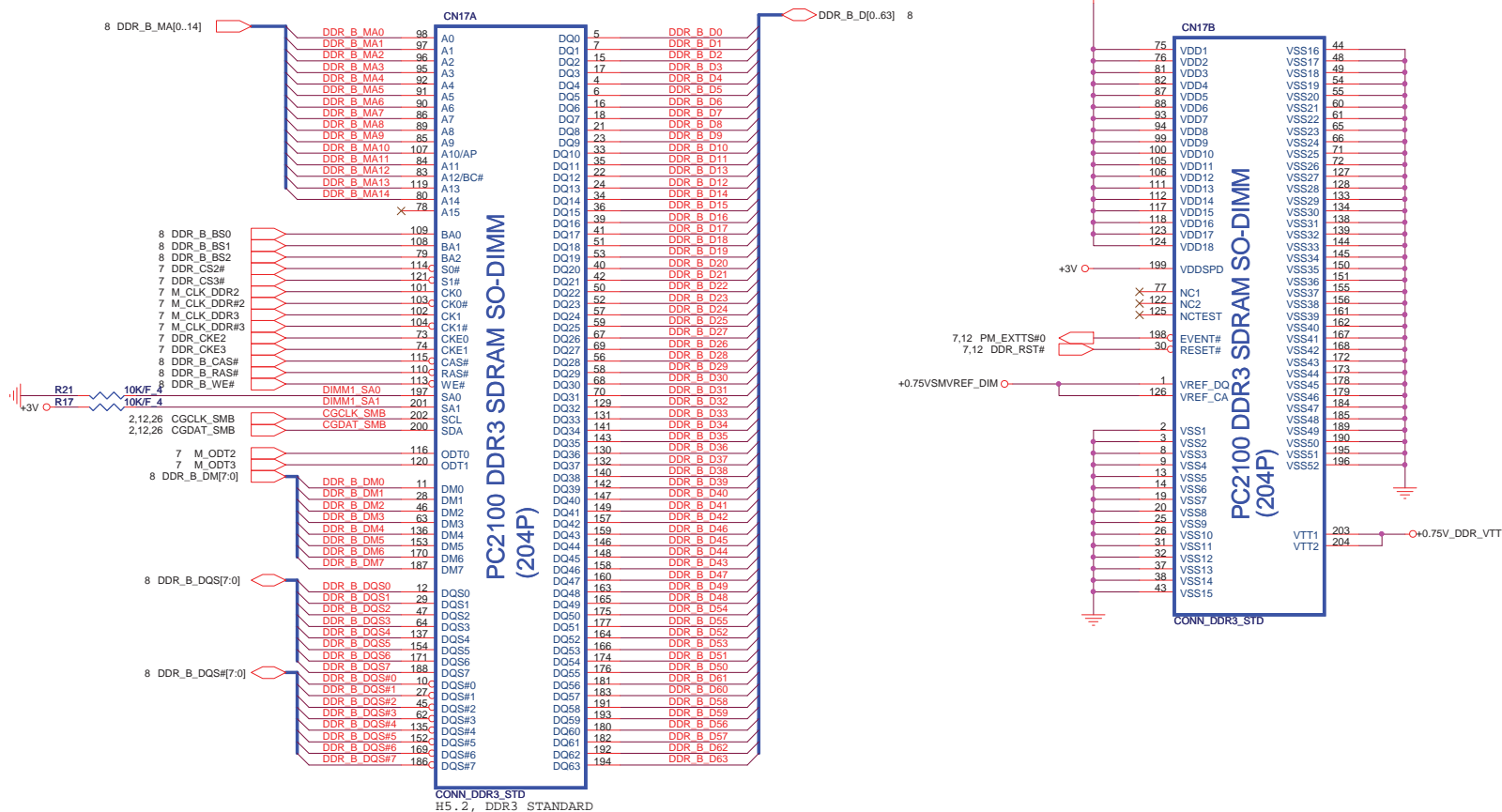
VSS SCB

GS45

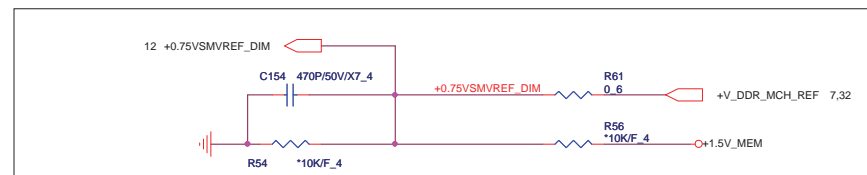
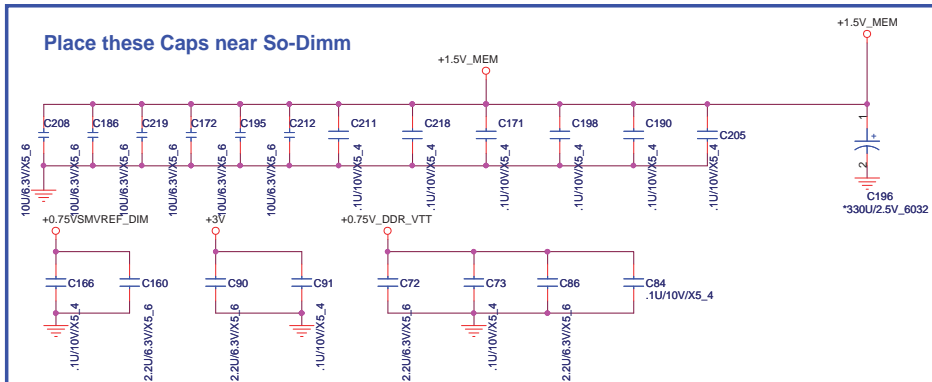
		
PROJECT :LL1		
Quanta Computer Inc.		
Size Custom	Document Number <Doc> Cantiga_F (VSS)	Rev 1A
Date: Thursday, April 23, 2009	Sheet 11 of 38	

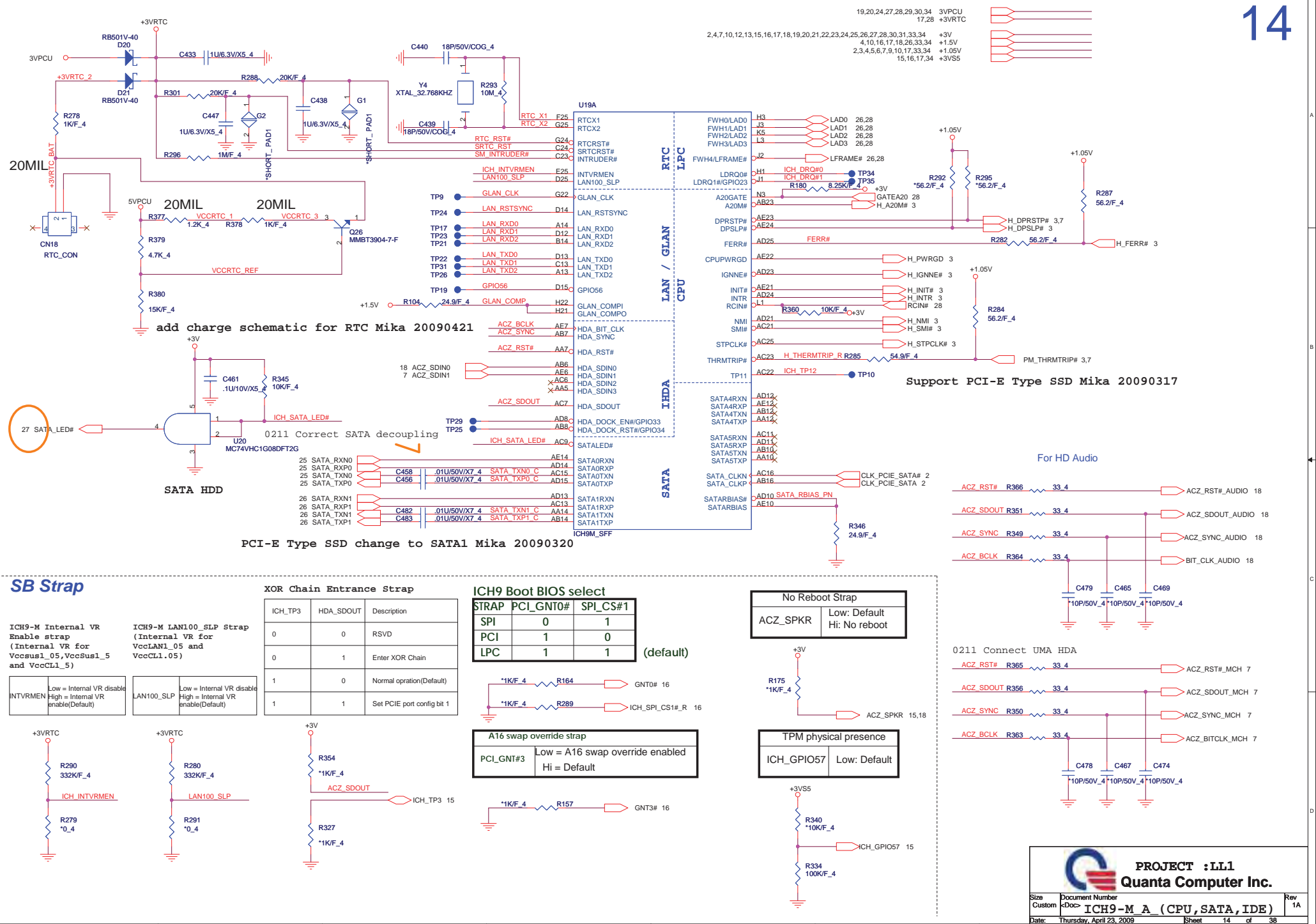


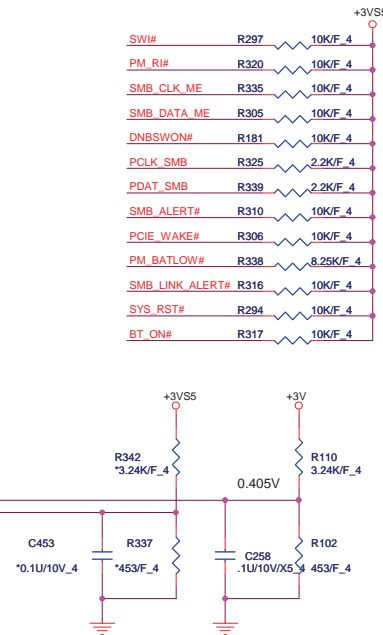
7,9,10,12,32,33,34 +1.5V_MEM
2,4,7,10,12,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,30,31,33,34 +3V
12,32,34 +0.75V_DDR_VTT
7,32 +V_DDR_MCH_REF



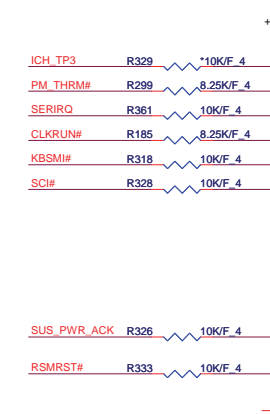
Place these Caps near So-Dimm



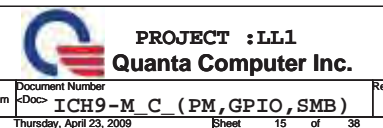




```
Swap SIM_DET & CLK_SATA_OE# Mika 20090312
Connect SIM_DET to GPIO49 Mika 20090317
Connect SIM_DET to GPIO1 Mika 20090319
```



RESERVED BOARD ID



Place TX DC blocking caps close ICH9.

WLAN

0207
WWAN26 PCIE_RXN1
26 PCIE_RXP1
26 PCIE_TXN1
26 PCIE_TXP1C443 1 2 .1U/10V/X5 40 PCIE_TXN1 C
C444 1 2 .1U/10V/X5 40 PCIE_TXP1 C

Del PCI-E interface (WWAN use USB type) Mika 20090317

Change WLAN to PCI-E-2 Mika 20090318

LAN

19 PCIE_RXN6_LAN
19 PCIE_RXP6_LAN
19 PCIE_TXN6_LAN
19 PCIE_TXP6_LANC446 .1U/10V/X5 4 PCIE_TXN6 C
C445 .1U/10V/X5 4 PCIE_TXP6 CT68
T72
T69
T67*PAD
*PAD
*PAD
*PAD

ICH_SPI_CS1#_R

0219

23 USB_OC#0
27 USB_OC#1USB_OC#0 P4
USB_OC#1 M4
USB_OC#2 N4
USB_OC#3 P5
USB_OC#4 P1
USB_OC#5 P2
USB_OC#6 M5
USB_OC#7 M2
USB_OC#8 P3
USB_OC#9 R1
USB_OC#10 R4
USB_OC#11 R2

USB_RBIAS_PN

AE5

AD5

ICH9M_SFF

R367

22.6F

U19B

PCI

REQ0#

GNT0#

REQ1#

GNT1#

REQ2#

GNT2#

REQ3#

GNT3#

C/BE0#

C/BE1#

C/BE2#

C/BE3#

IRDY#

PAR

PCIRST#

DEVSEL#

PERR#

PLOCK#

SERR#

STOP#

TRDY#

FRAME#

PLTRST#

PCICLK#

PME#

INTA#

INTB#

INTC#

INTD#

PIROA#

PIROB#

PIROC#

PIROD#

PIROE#

PIROF#

PIROG#

PIROH#

PIROI#

PIROJ#

PIROK#

PIROL#

PIROM#

PIRON#

PIROO#

PIROP#

PIROS#

PIROT#

PIROU#

PIROV#

PIROW#

PIROX#

PIROY#

PIROZ#

PIROAA#

PIROAB#

PIROAC#

PIROAD#

PIROAE#

PIROAF#

PIROAG#

PIROAH#

PIROAI#

PIROAJ#

PIROAK#

PIROAL#

PIROAM#

PIROAN#

PIROAO#

PIROAP#

PIROAQ#

PIROAR#

PIROAS#

PIROAT#

PIROAU#

PIROAV#

PIROAW#

PIROAX#

PIROAY#

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PIROBA#

PIROBB#

PIROBC#

PIROBD#

PIROBE#

PIROBF#

PIROBG#

PIROBH#

PIROBI#

PIROBJ#

PIROBK#

PIROBL#

PIROBM#

PIROBN#

PIROBO#

PIROBP#

PIROBQ#

PIROBR#

PIROBS#

PIROBT#

PIROBU#

PIROBV#

PIROBW#

PIROBX#

PIROBY#

PIROBZ#

PIROCA#

PIROCB#

PIROCC#

PIROCD#

PIROCE#

PIROCF#

PIROCG#

PIROCH#

PIROCI#

PIROCJ#

PIROCK#

PIROCL#

PIROCM#

PIROCN#

PIROCO#

PIROCP#

PIROCQ#

PIROCR#

PIROCS#

PIROCT#

PIROCU#

PIROCV#

PIROCW#

PIROCX#

PIROCY#

PIROCZ#

PIRODA#

PIRODB#

PIRODC#

PIRODD#

PIRODE#

PIRODF#

PIRODG#

PIRODH#

PIRODI#

PIRODJ#

PIRODK#

PIRODL#

PIRODM#

PIRODN#

PIRODO#

PIRODP#

PIRODQ#

PIRODR#

PIRODS#

PIRODT#

PIRODU#

PIRODV#

PIRODW#

PIRODX#

PIRODY#

PIRODZ#

PIROEA#

PIROEB#

PIROEC#

PIROED#

PIROEE#

PIROEF#

PIROEG#

PIROEH#

PIROEI#

PIROEJ#

PIROEK#

PIROEL#

PIROEM#

PIROEN#

PIROEO#

PIROEP#

PIROEQ#

PIROER#

PIROES#

PIROET#

PIROEU#

PIROEV#

PIROEW#

PIROEX#

PIROEY#

PIROEZ#

PIROFA#

PIROFB#

PIROFC#

PIROFD#

PIROFE#

PIROFF#

PIROFG#

PIROFH#

PIROFI#

PIROFJ#

PIROFK#

PIROFL#

PIROFM#

PIROFN#

PIROFO#

PIROFP#

PIROFQ#

PIROFR#

PIROFS#

PIROFT#

PIROFU#

PIROFV#

PIROFW#

PIROFX#

PIROFY#

PIROFZ#

PIROGA#

PIROGB#

PIROGC#

PIROGD#

PIROGE#

PIROGF#

PIROGG#

PIROGH#

PIROGI#

PIROGJ#

PIROGK#

PIROGL#

PIROGM#

PIROGN#

PIROGO#

PIROGP#

PIROGQ#

PIROGR#

PIROGS#

PIROGT#

PIROGU#

PIROGV#

PIROGW#

PIROGX#

PIROGY#

PIROGZ#

PIROHA#

PIROHB#

PIROHC#

PIROHD#

PIROHE#

PIROHF#

PIROHG#

PIROHH#

PIROHI#

PIROHJ#

PIROHK#

PIROHL#

PIROHM#

PIROHN#

PIROHO#

PIROHP#

PIROHQ#

PIROHR#

PIROHS#

PIROHT#

PIROHU#

PIROHV#

PIROHW#

PIROHX#

PIROHY#

PIROHZ#

PIROIA#

PIROIB#

PIROIC#

PIROID#

PIROIE#

PIROIF#

PIROIG#

PIROIH#

PIROIJ#

PIROIK#

PIROIL#

PIROIM#

PIROIN#

PIRIOO#

PIRIO1#

PIRIO2#

PIRIO3#

PIRIO4#

PIRIO5#

PIRIO6#

PIRIO7#

PIRIO8#

PIRIO9#

PIRIOA#

PIRIOB#

PIRIOC#

PIRIOD#

PIRIOE#

PIRIOF#

PIRIOG#

PIRIOH#

PIRIOI#

PIRIOJ#

PIRIOK#

PIRIO1#

PIRIO2#

PIRIO3#

PIRIO4#

PIRIO5#

PIRIO6#

PIRIO7#

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PIRIOC#

PIRIOD#

PIRIOE#

PIRIOF#

PIRIOG#

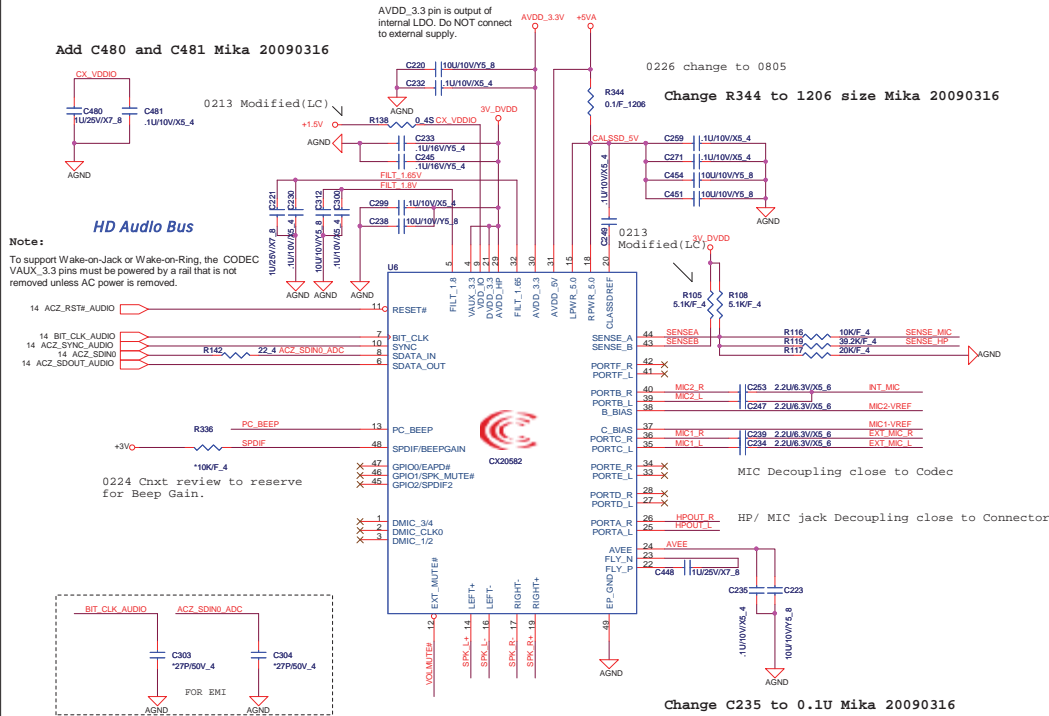
PIRIOH#

PIRIOI#

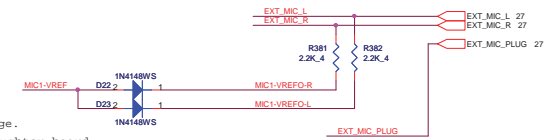
PIRIOJ#



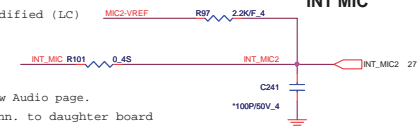
Add C480 and C481 Mika 20090316



Connect to Function Board

HEADPHONE
Normal OpenMIC-IN JACK
Normal Close

INT MIC



Del R156 and Q8 then short Volmute# directly Mika 20090318

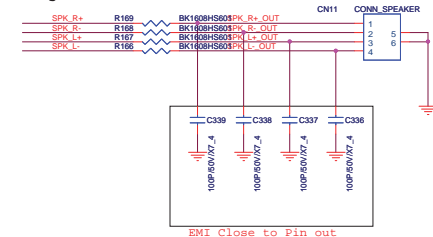
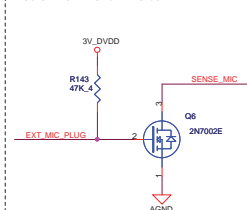
Change PC_BEEP voltage level to 1/10 Mika 20090319
Change PC_BEEP voltage level to 2/3 Mika 20090421

INT Speaker

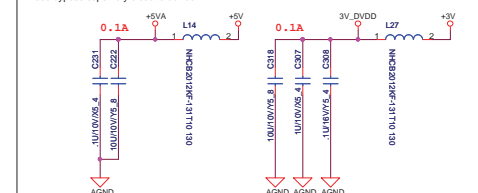
HP Sense

MIC Sense

EMI Reserved

Change R166-R169 to 0603 size Mika 20090316
Change R166-R169 from 0ohm to BK1608HS601 Mika 20090320EXT_MIC_PLUG+H --- EXTERNAL MIC
EXT_MIC_PLUG+L --- INTERNAL MIC
MIC JACK DETECT PIN IS NORMAL CODE TYPE

Del R94,R163 to short AGND and GND directly Mika 20090316

Layout Note: Path from +5V to LPWR_5.0 and RPWR_5.0 must be very low resistance (<0.01 ohms).
Place bypass caps very close to device.

The schematic diagram illustrates a LAN transformer circuit. On the left, a 1U10VXS_4 transformer is connected to pins 1 through 12. The primary side includes capacitors C207 and C199. The secondary side, labeled LAN TRANSFORMER GS7009B LF, has pins 14 through 19 connected to the primary. This side includes capacitors C187 and C170, and resistors R92, R273, R272, R270, and R91. The output is labeled LAN_1. The circuit is powered by a 1U10VXS_4 transformer on the right, which includes capacitors C193 and C187, and a resistor R91. The output is labeled LAN_1.

Diagram of the LAN connector footprint for the Mika 20090305. The connector is a 9-pin D-sub connector. The pins are labeled as follows:

- Pin 8: RX2-
- Pin 7: RX2+
- Pin 6: RX1-
- Pin 5: TX2-
- Pin 4: TX2+
- Pin 3: RX1+
- Pin 2: TX1-
- Pin 1: TX1+

The connector is shown in a perspective view with a blue outline. A label "Down" is placed above the connector, indicating the orientation of the pins. The pins are connected to ground (GND) through a series of resistors.

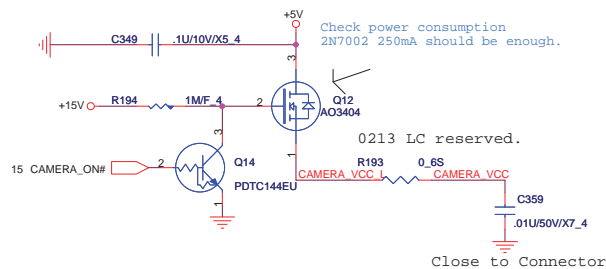
H=9.6

Change LAN CONN footprint Mika 20090305

[illegible]

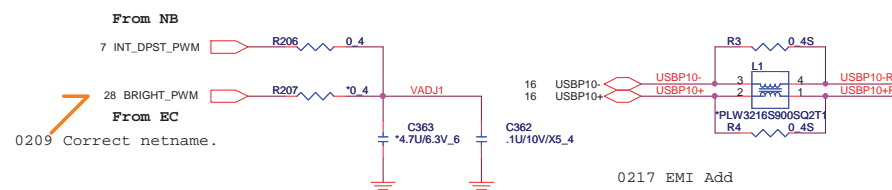
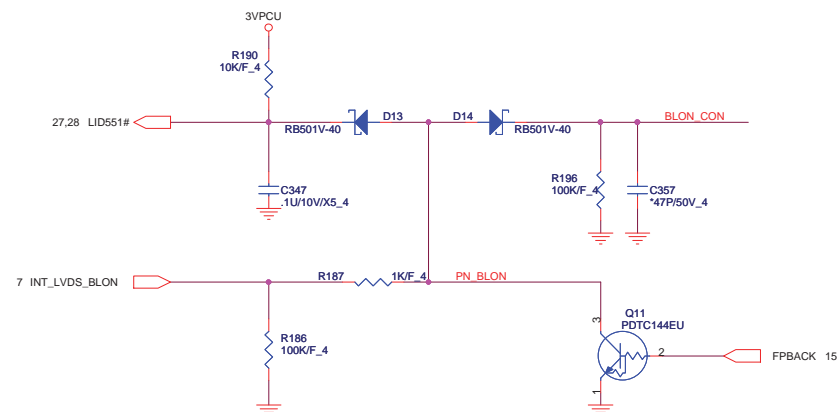
The schematic diagram illustrates the LAN_VCC_R power plane. It features a network of capacitors (C342, C335, C332) and a resistor (R170) connected to the LAN_VCC_R net. The net is also connected to the LAN_REGCTL2 net through a diode (Q10).

CCD POWER CONTROL

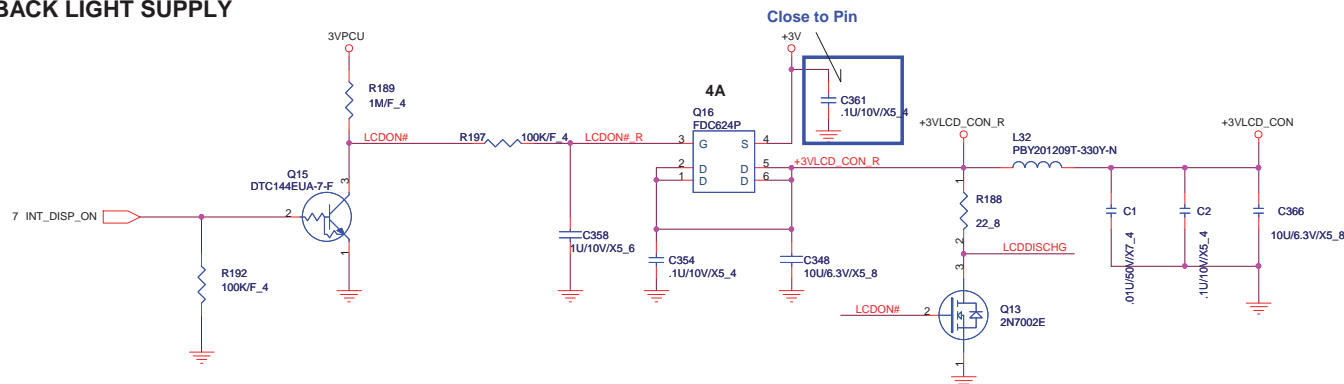


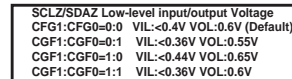
SUPPORT 13.3" LED TYPE LCD

BACK LIGHT CONTROL



BACK LIGHT SUPPLY





EQUALIZATION SETTING	
PC1:PC0=0:0	8dB
PC1:PC0=0:1	4dB Recommended
PC1:PC0=1:0	12dB
PC1:PC0=1:1	0dB

```
0213 EMT reserved
```

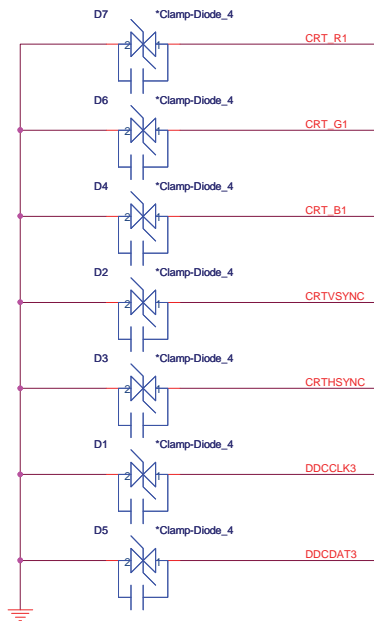


Swap CN5 Pin1,2,3,4,5 & Pin11,12,13,14,15 Mika 20090312
Change CN5 footprint Mika 20090318

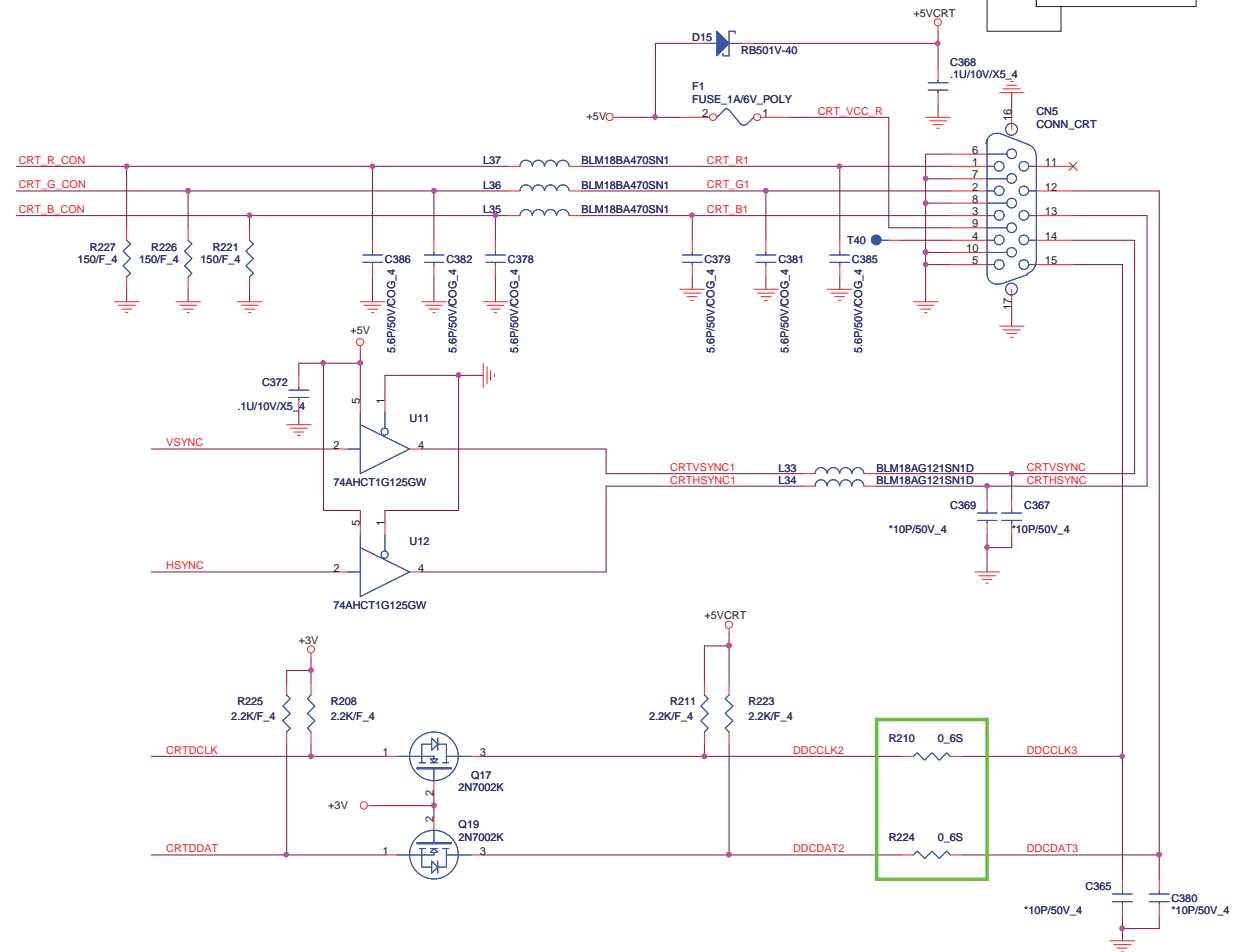
22


CRT PORT

- 7 CRT_R_CON CRT_R_CON
- 7 CRT_G_CON CRT_G_CON
- 7 CRT_B_CON CRT_B_CON
- 7 HSYNC HSYNC
- 7 VSYNC VSYNC
- 7 CRTDCLK CRTDCLK
- 7 CRTDDAT CRTDDAT



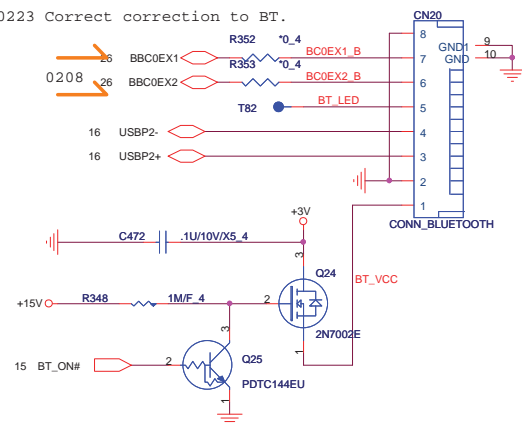
0218 Change by ESD suggestion



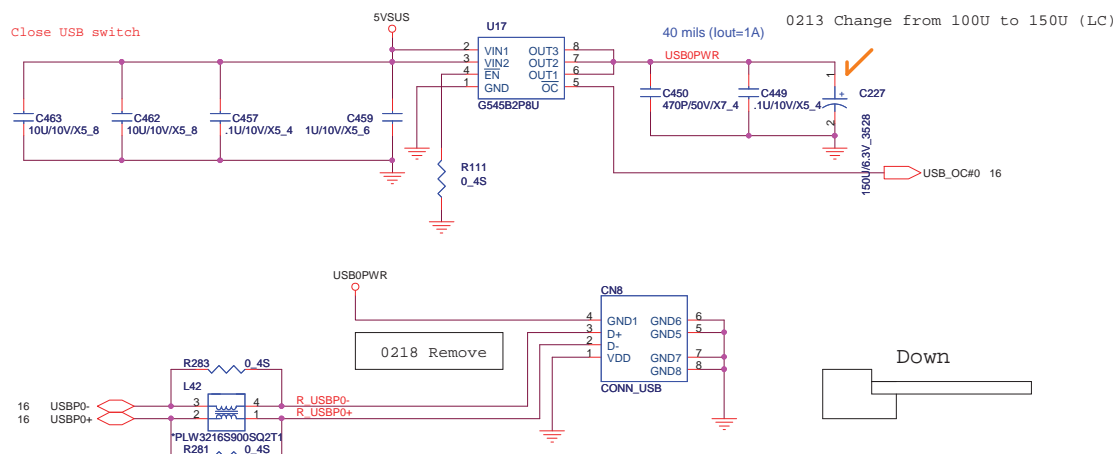
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Blue Tooth control

0223 Correct correction to BT.



USB port X1



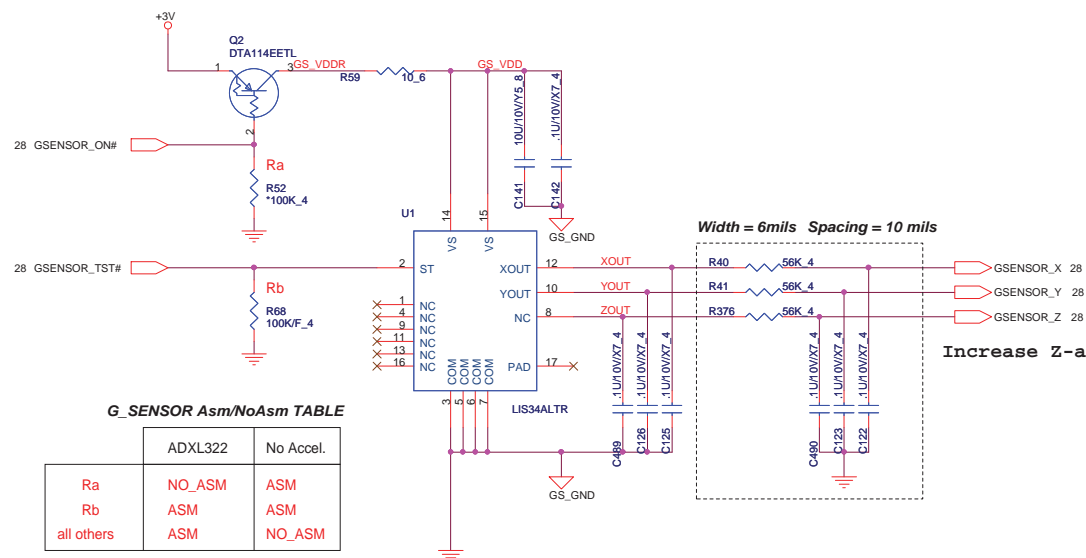
0207 update footprint.

0224 SWAP USB Net

Change USB CONN footprint Mika 20090305

Change USB CONN footprint Mika 20090318

Accelerometer Sensor



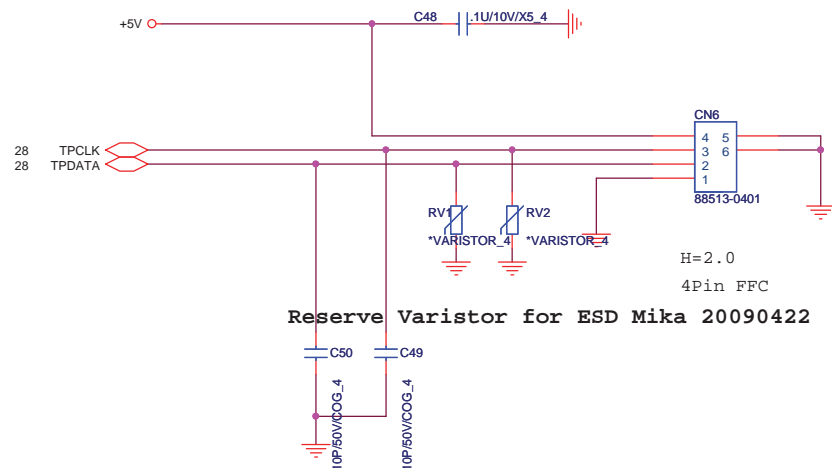
G_SENSOR Asm/NoAsm TABLE

	ADXL322	No Accel.
Ra	NO_ASM	ASM
Rb	ASM	ASM
all others	ASM	NO_ASM

0209 update footprint.

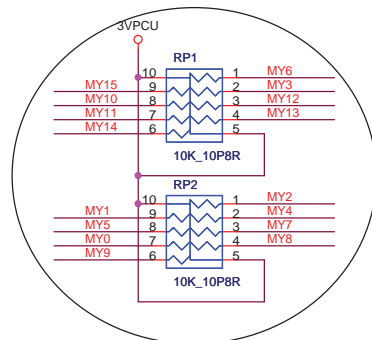
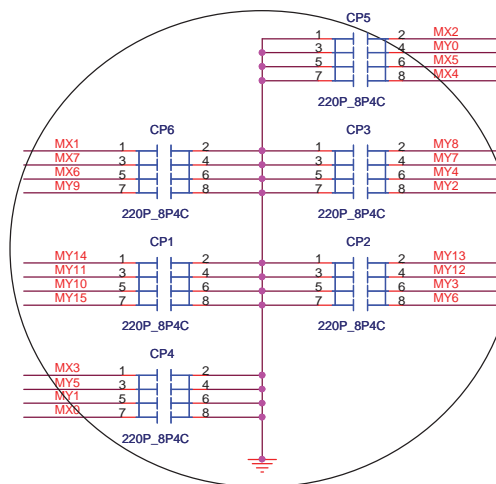
0213 Follow HengshanII (LE8)

TOUCH PAD CONNECTOR



0212 Swap Pin definition
0216 Change TP conn. to 6P.
Change TP CONN to 4P Mika 20090305
Swap TP CONN Mika 20090312

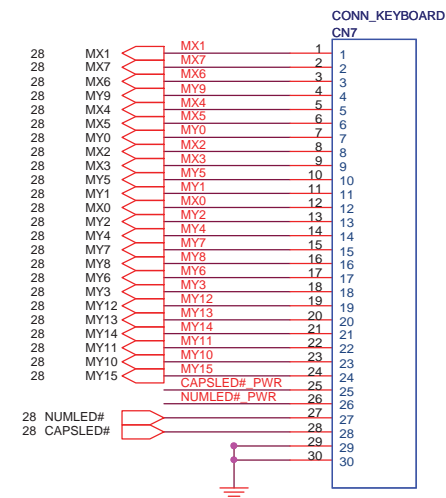
KEYBOARD CONNECTOR



0223 Swap Keyboard Matrix for Routing

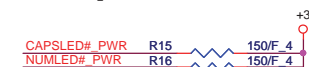
<-- Swap signal Mika 20090306

Swap pin definition Mika 20090305



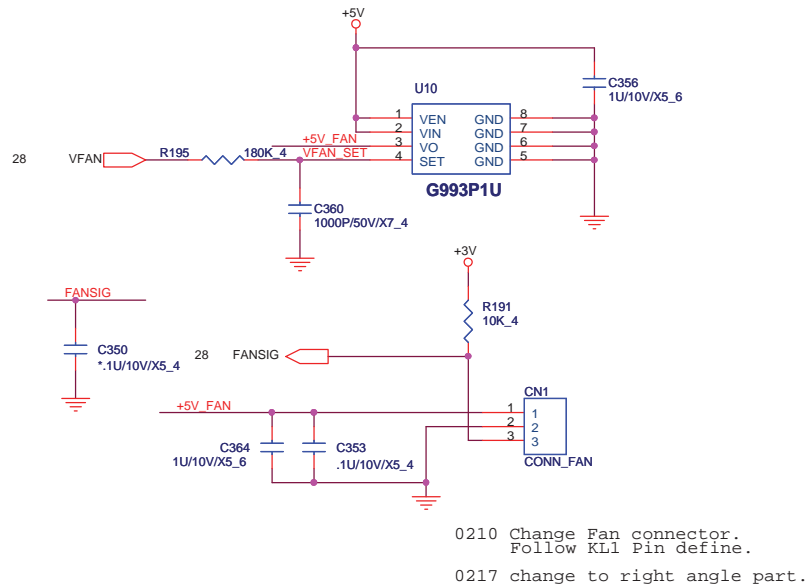
88513-3008-30P-L

0212 Swap Pin definition

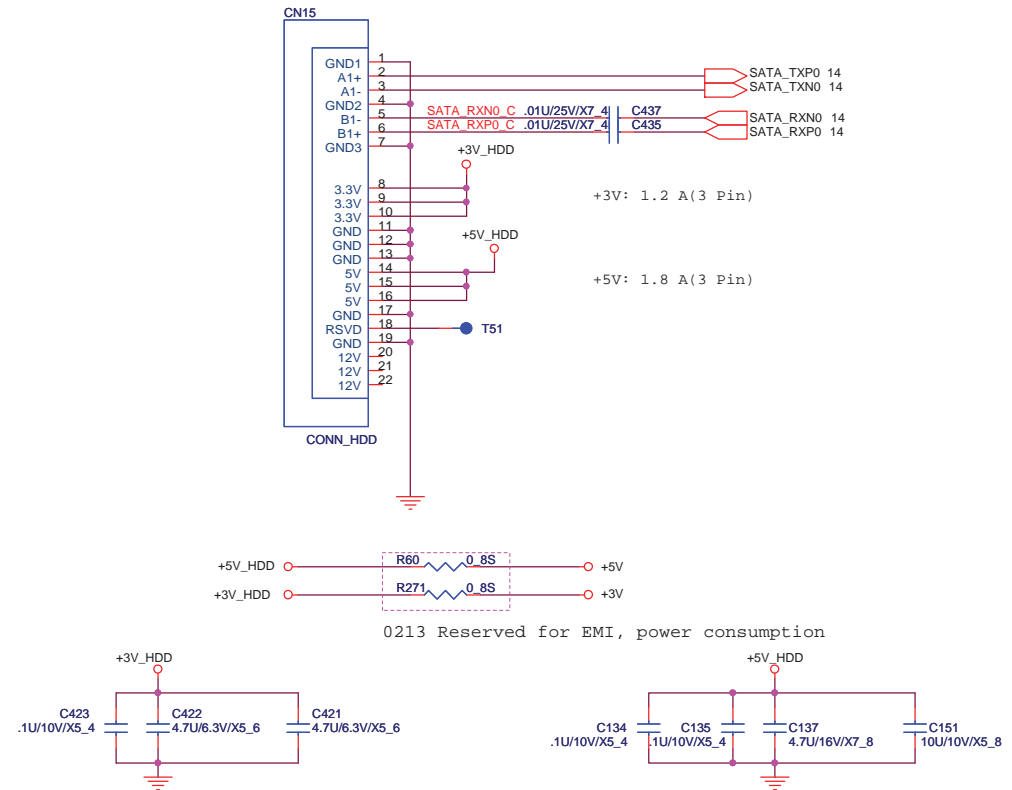


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FAN CONTROL

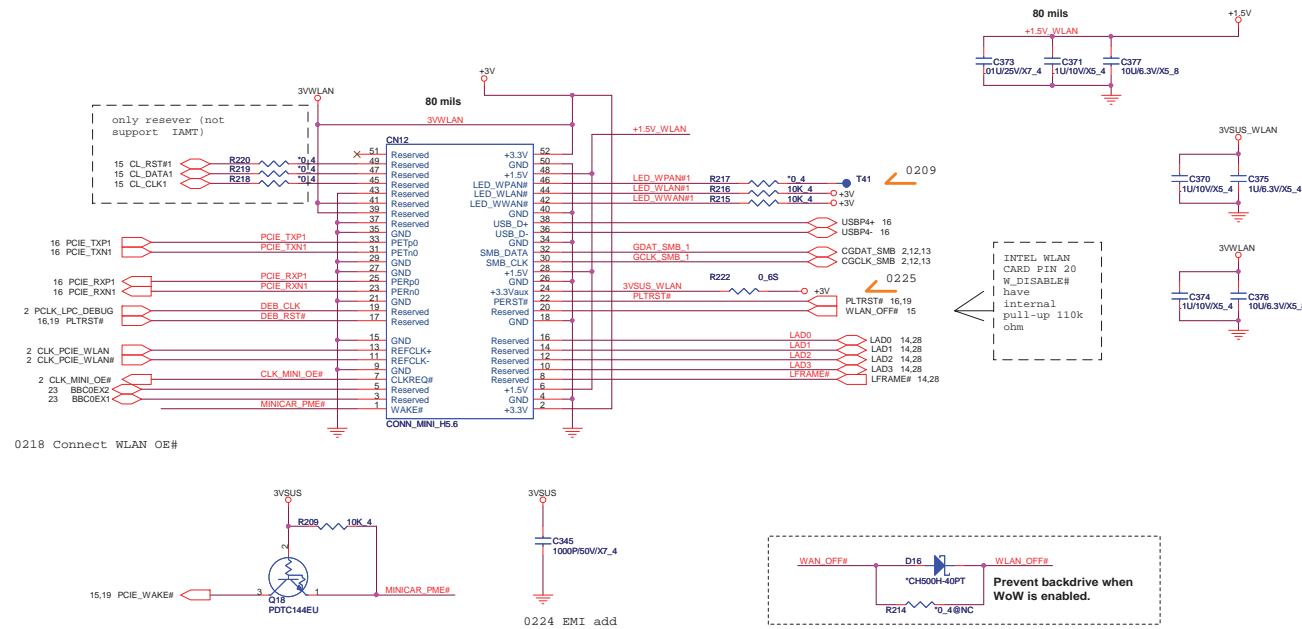


SATA-HDD CONNECTOR

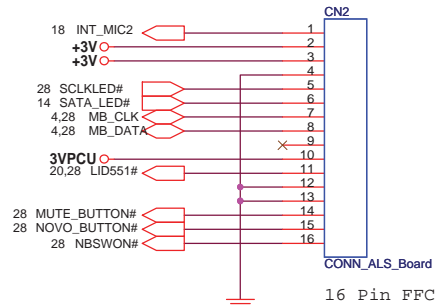


Mini PCI-E Card 1 WLAN

26

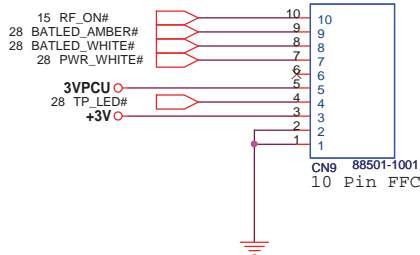


ALS/ Button Board



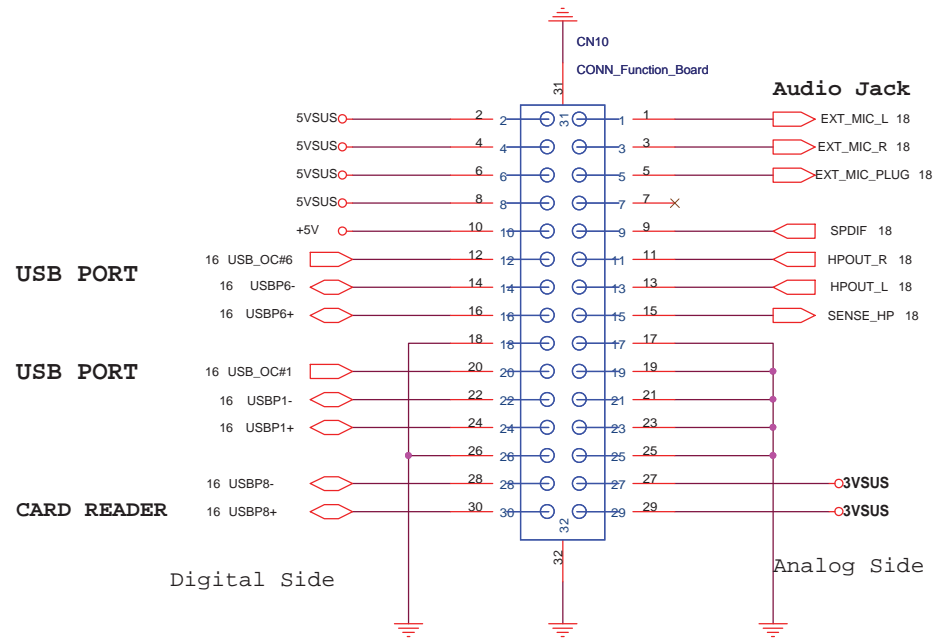
Change ALS smb to MB_CLK/MB_DATA Mika 20090421

Front LED indicator Board



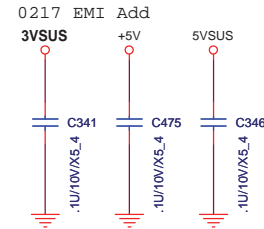
Change Front LED CONN to 10P Mika 20090306

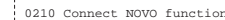
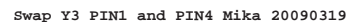
Function Board

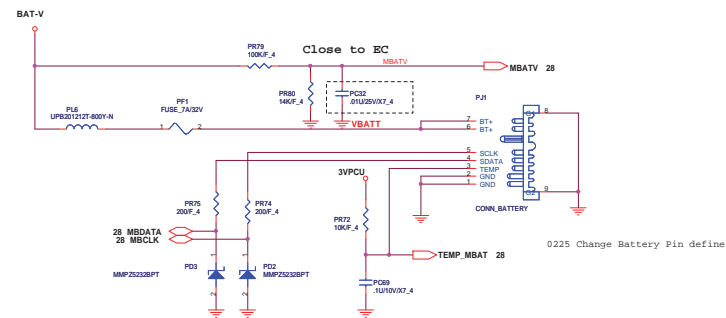
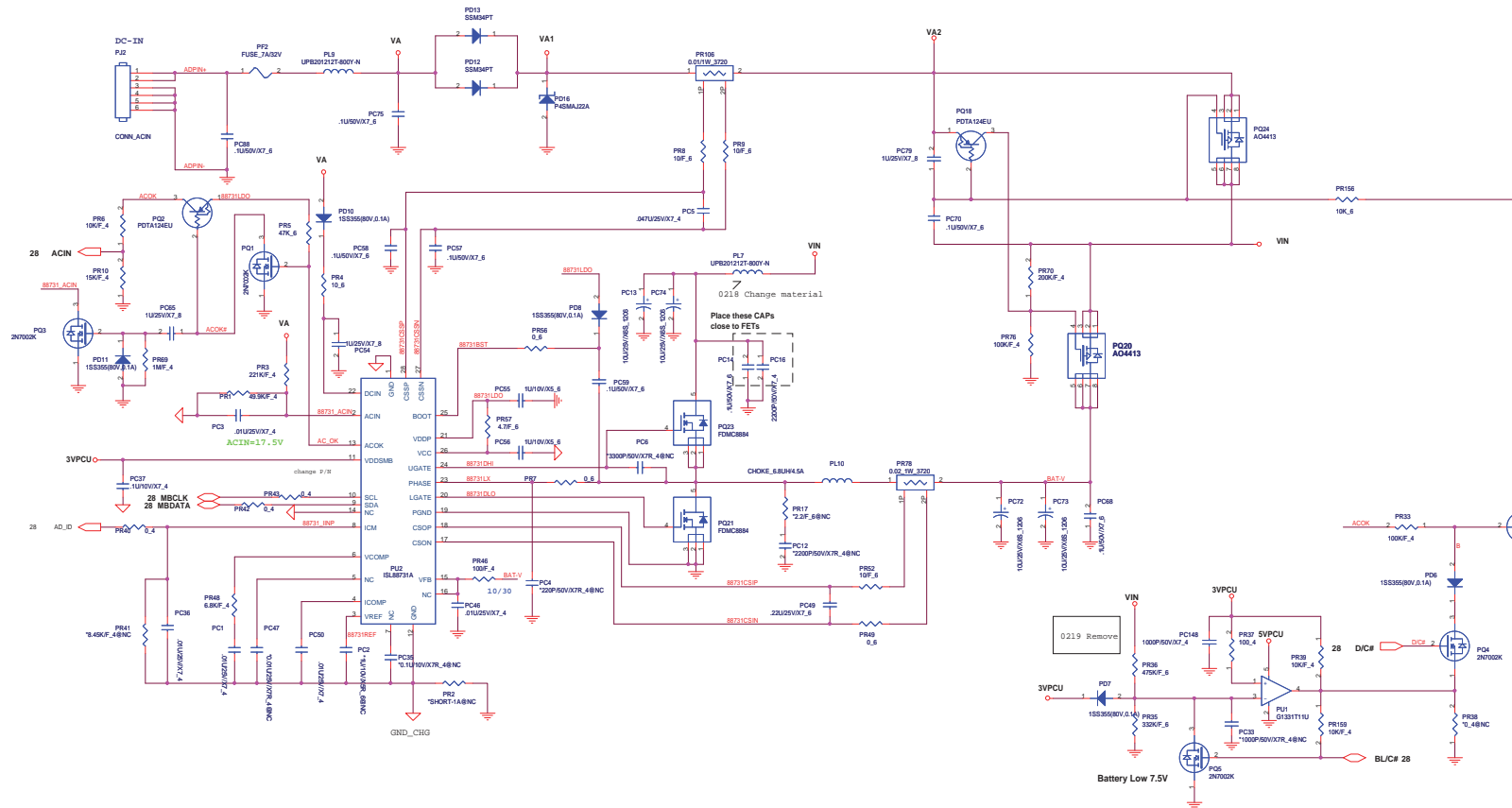


Digital Side

Analog Side

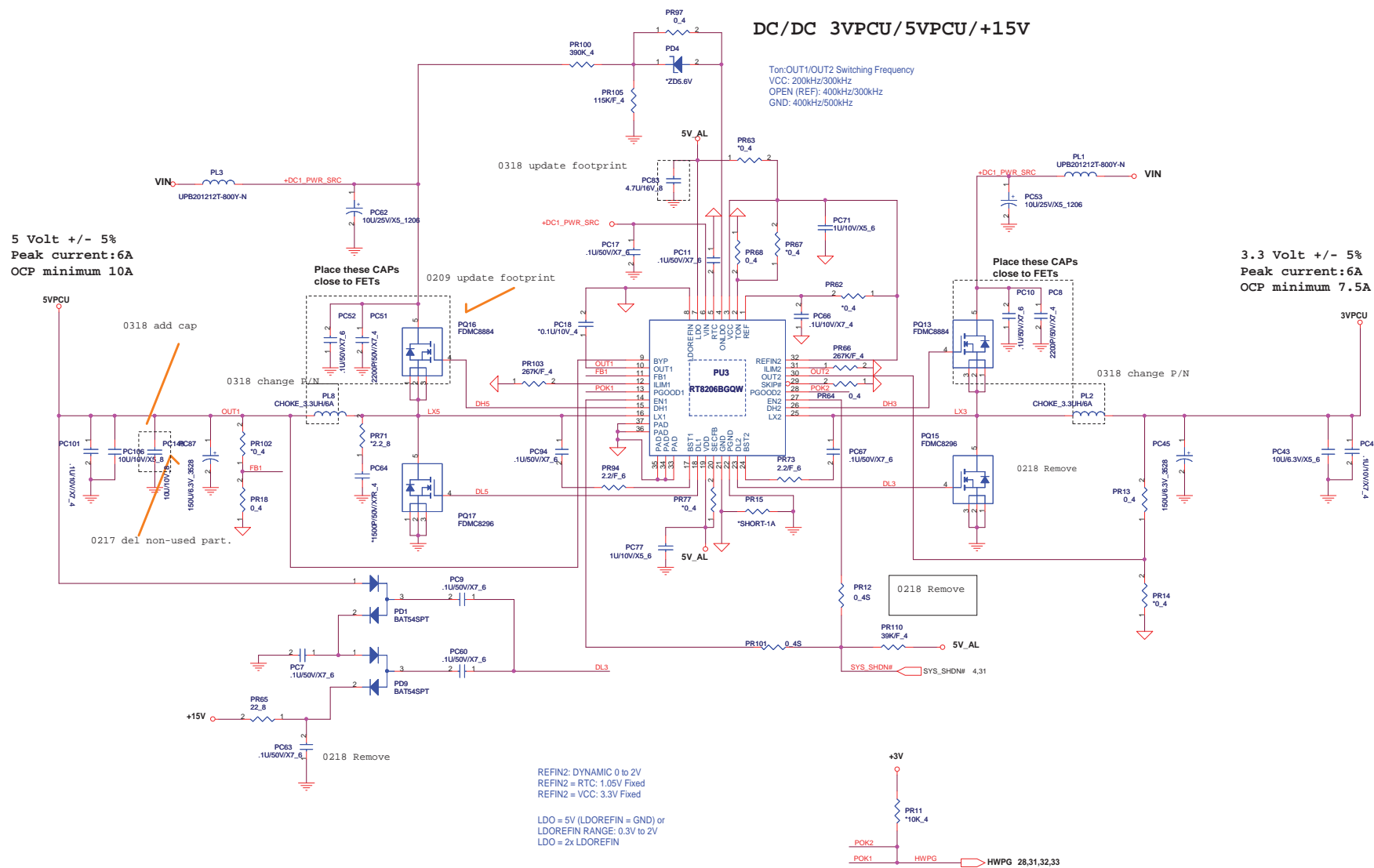


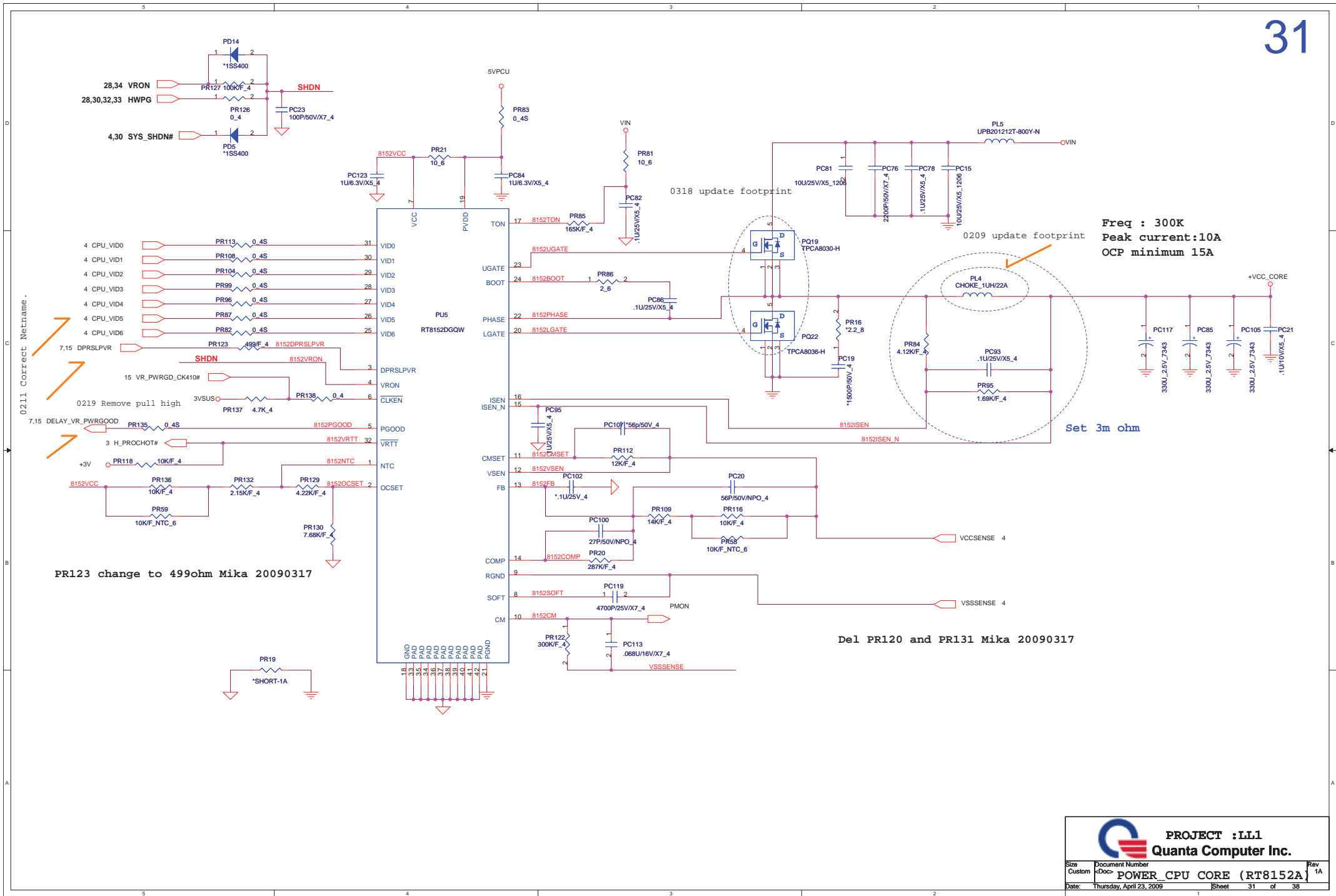


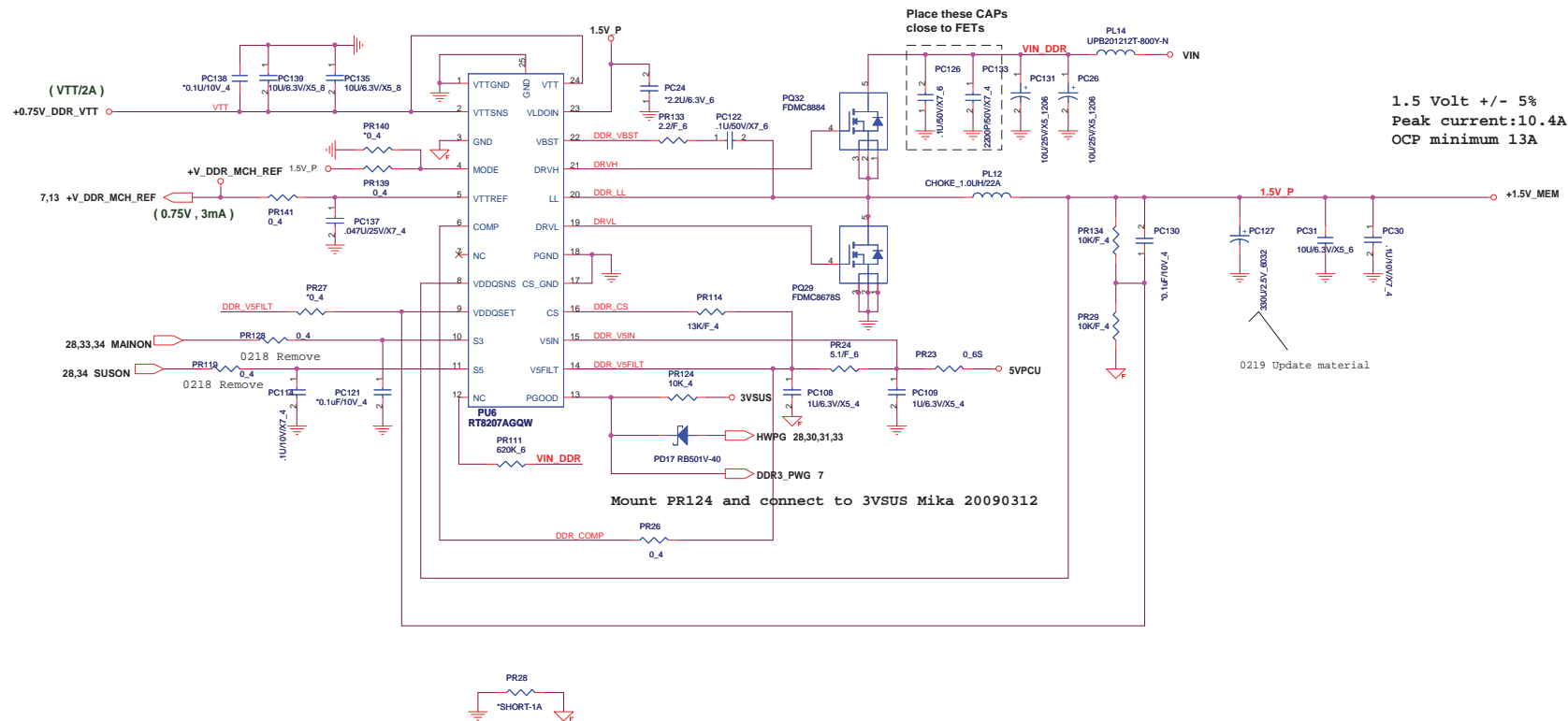


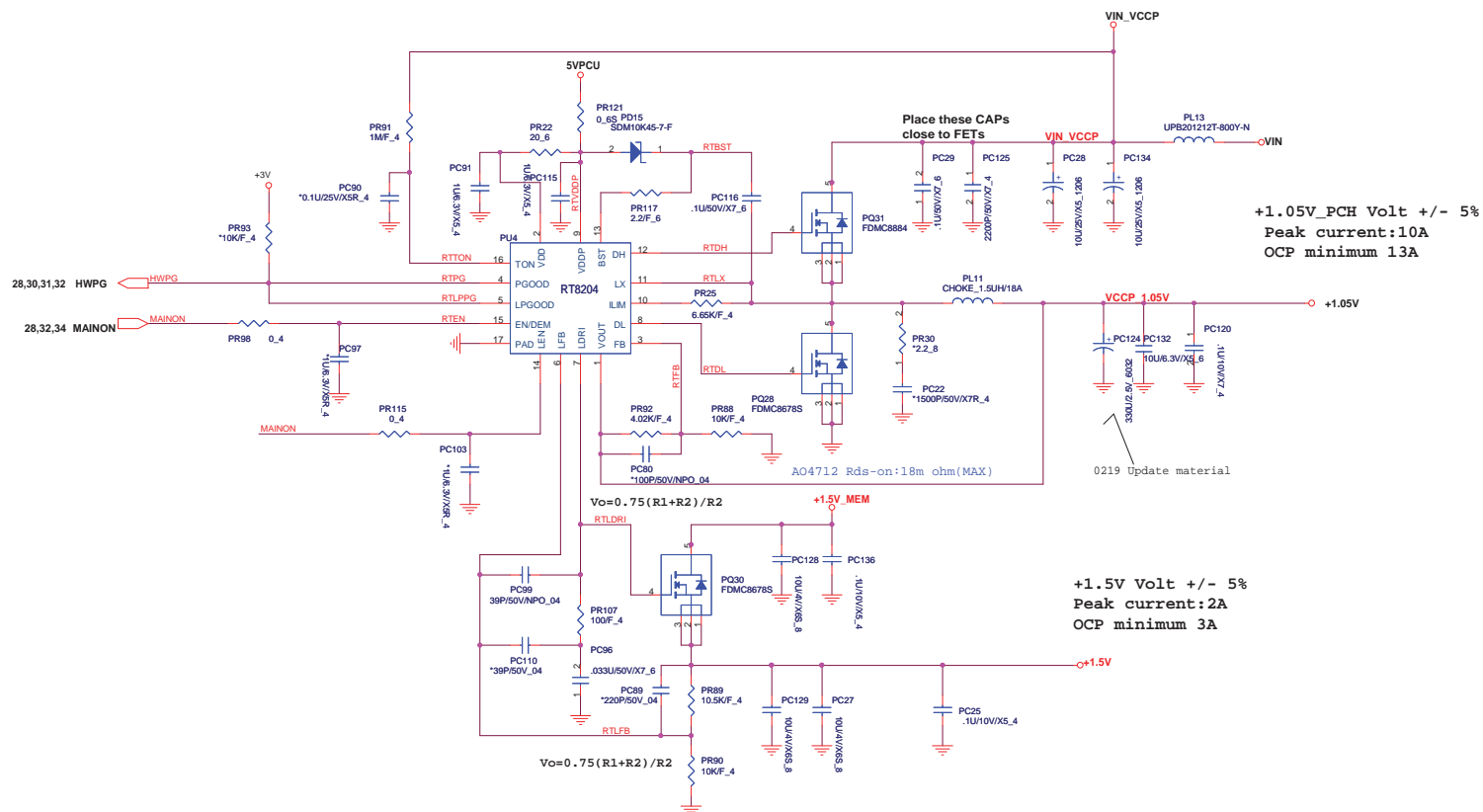
DC/DC 3VPCU/5VPCU/+15V

Ton:OUT1/OUT2 Switching Frequency
VCC: 200kHz/300kHz
OPEN (REF): 400kHz/300kHz
GND: 400kHz/500kHz

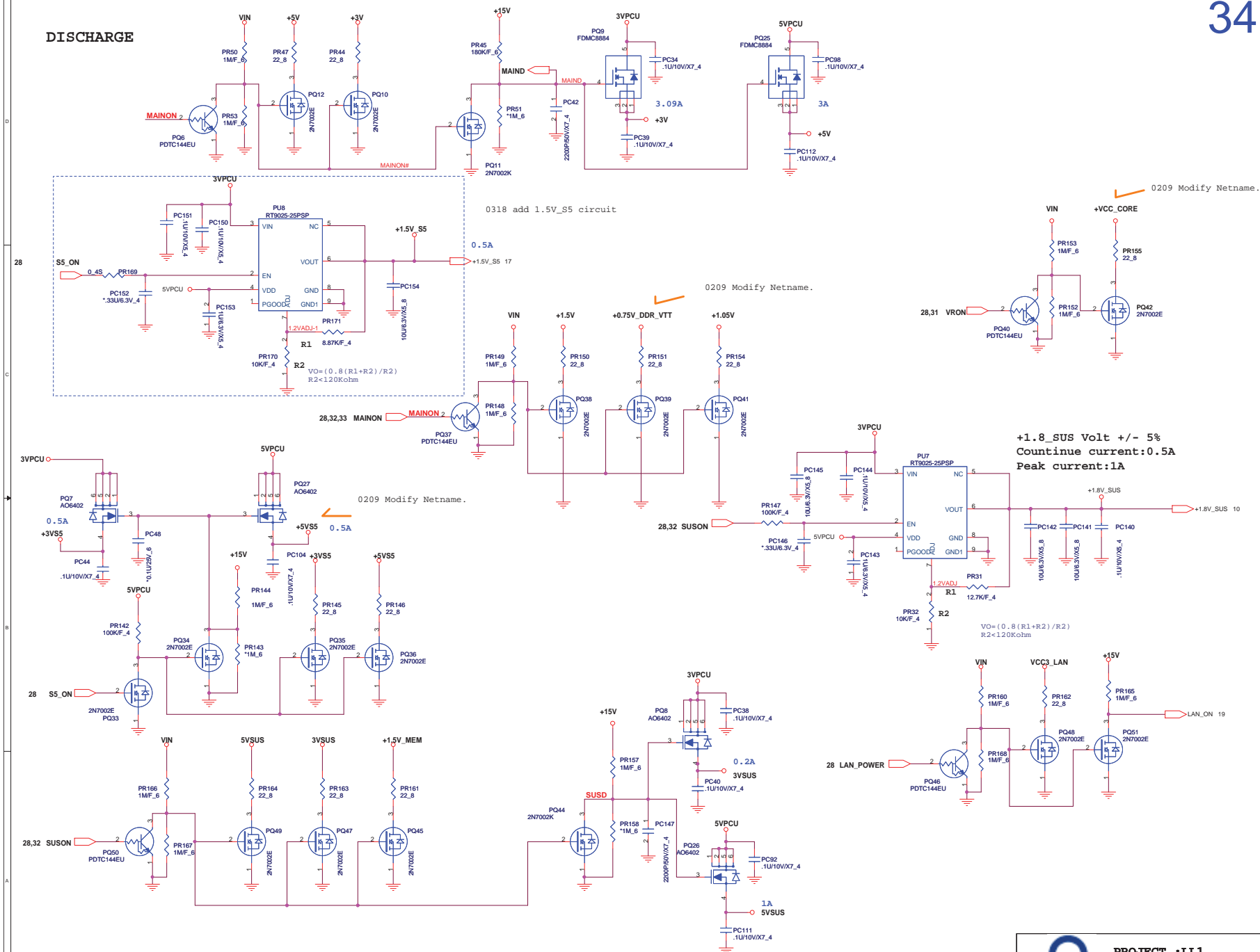


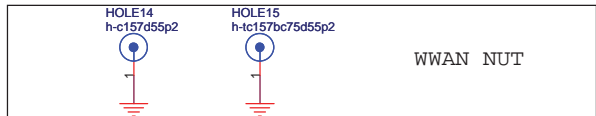
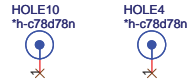
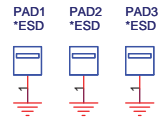
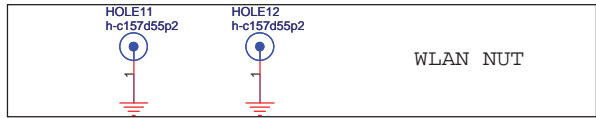
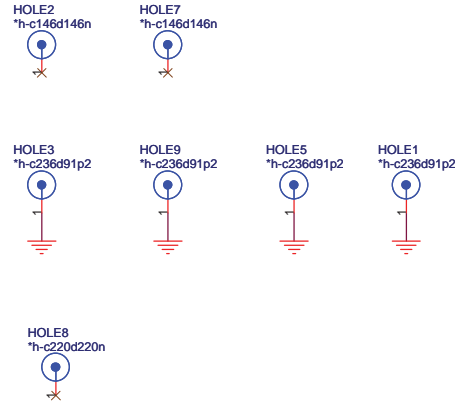







DISCHARGE





Change Hole15 footprint Mika 20090316

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<p>02 -- Clock Generator</p> <ol style="list-style-type: none"> 1) Disable ITP...0211 2) Connect VDD_IO to 1.05V...0216 3) Connect WLAN PCI-E to SRC10 contrlled by CR#_H...0218 4) Swap DREFFSSCLK pair to SRCCLK1 for spread spectrum...0220 <p>03 -- Penryn (HOST BUS) 1/3</p> <ol style="list-style-type: none"> 1) Del reserved ITP connector...0209 2) Disconnect ITP Clock...0209 3) Connect WLAN to SRC8, No clock request connect...0209 4) Add PROCHOT# level shift between 1.05V and +3V...0211 <p>07 -- Cantiga_B (VGA,DMI)</p> <ol style="list-style-type: none"> 1) Connect DDR3 CH.A (CKE1,ODT1,CS1,M_CLK_DDR1) signals...0209 2) Del SM_PWROK AND logic...0211 3) Del PM_EXTTS#1 connection due to no DDR thermal monitor...0211 4) Connect UMA HDA for HDMI support...0211 5) Correct TV DAC disable connection...0218 <p>09 -- Cantiga_D (VCC,NCTF)</p> <ol style="list-style-type: none"> 1) Mount VCC_AXG_SENSE, VSS_AXG_SENSE 100hm...0209 <p>10 -- Cantiga_E (POWER)</p> <ol style="list-style-type: none"> 1) Add CRT DAC power to enable CRT feature...0211 2) Add CRT Enable/ TV disable DAC power...0218 <p>12 -- DDR3 (A) SO-DIMM RVS</p> <ol style="list-style-type: none"> 1) Paste DDR3 socket module...0209 2) Update DDR3 conn. footprint...0211 3) Correct Dimm0 Address...0213 <p>13 -- DDR3 (B) SO-DIMM STD</p> <ol style="list-style-type: none"> 1) Del DDR thermal monitor...0209 2) Update DDR3 conn. footprint...0211 <p>14 -- ICH9-M_A_(CPU,SATA,IDE)</p> <ol style="list-style-type: none"> 1) Connect HDA to UMA for iHDMI support...0211 2) Correct SATA decoupling...0211 <p>16 -- ICH9-M_B_(USB,PCIE,DMI)</p> <ol style="list-style-type: none"> 1) Swap USB port for USB Host controller allocation...0219 <p>17 -- ICH9-M_D_(POWER,GND)</p> <ol style="list-style-type: none"> 1) Modfiy HDA BUS power plan to +1.5V(LC)...0213 2) Add decoupling on VCCL1_05 as Design Guide request...0224 <p>18 -- AUDIO (CX20582, SPK)</p> <ol style="list-style-type: none"> 1) Correct PCBEEP (EC) netname...0209 2) Update Conexant review result...0211 3) Move MIC conn. to daugter board due to ME concern...0212 4) Move Jack related components to daughter board...0213 5) Correct Mute function...0213 6) Modify MIC BIAS to net"AVDD_3.3V" (LC)...0213 7) Modify HDA BUS power to +1.5V(LC)...0213 8) Reserve PCBEEP Gain pull high for further experiment...0224. 9) Del MIC-IN decoupling Cap. and change Pull High to 2.2K...0224 10) Change MIC_IN VBIAS from Codec...0224. 11) Enlarge +5VA trace width...0226 <p>19 -- LAN (BCM57780, RJ45)</p> <ol style="list-style-type: none"> 1) Update Transformer footprint...0209 2) Update RJ45 footprint...0211 3) Reserve 00hm short in LANVCC (LC)...0213 4) Add 00hm short reserved for Energey_DET net(LC)...0213 5) Change LAN Chip to BCM57780...0216 6) Remove 1.6V single net...0216 <p>20 -- CONN (LVDS, CCD)</p> <ol style="list-style-type: none"> 1) Correct Backlight PWM netname from EC...0209 2) Update LCD conn. footprint...0212 3) Reserve LVDS +3V 00hm short for further experiment...0213 4) Reserve CAMERA VCC 00hm short for further experiment...0213 5) Reserve CCD USB port Common mode Choke...0217 <p>21 -- CONN (HDMI, level Shift)</p> <ol style="list-style-type: none"> 1) Add EMI reserved RP (0X2) in HDMI signals...0212 2) Update HDMI conn. footprint...0212 3) Add diode in +5V_HDMIC series(LC)...0213 	<p>22 -- CONN (CRT)</p> <ol style="list-style-type: none"> 1) Update CRT conn. footprint...0211 2) Change ESD solution...0218 <p>23 -- CONN (USB, BT, G sensor)</p> <ol style="list-style-type: none"> 1) Update G-sensor footprint...0209 2) Change USB port bulk from 100U to 150U(LC)...0213 3) G-sensor follow HengshanII...0213 4) Del additioanl USB power Bulk and filter...0218 5) Correct BBCPEX1,2 connection...0223 6) Swap USB net for routing...0224 <p>24 -- CONN (KB, TP)</p> <ol style="list-style-type: none"> 1) Update TP connector footprint...0209 2) Swap TP pin definition...0212 3) Swap KB pin definitoin...0212 4) Swap Keyboard matrix for routing...0223 <p>25 -- CONN (HDD,FAN)</p> <ol style="list-style-type: none"> 1) Modify Fan connector and Pin define...0210 2) Update HDD conn. footprint...0211 3) Reserve HDD 3V/5V short jump for further EMI/power consumption check(LC)...0213 4) Change FAN conn. to right angle...0217 <p>26 -- CONN (MINI PCI-E, SIM)</p> <ol style="list-style-type: none"> 1) Connect SIM socket Detect...0209 2) Modify Mini Card LED indicator connection...0209 3) Modify WWAN 470u bulk reserved to 10u...0211 4) Connect WLAN OE#...0218 5) Correct BBCPEX1,2 connection...0223 6) EMI add 1000P filter in 3VSUS trace...0224 7) Remove +3V to +3.3VAUX connection, reserve only 3VSUS...0225 <p>27 -- CONN (WIRE to BOARD, LED)</p> <ol style="list-style-type: none"> 1) Connect USB/Audio/CR function connector...0210 2) Connect ALS/ Button connector...0210 3) Connect Front LED indicator connector...0210 4) Connecet MIC on ALS board...0212 5) Update 30Pin Wire to Board conn. footprint...0212 6) EMI add reserved filter for power trace...0217 <p>28 -- EC (ITE8502E)</p> <ol style="list-style-type: none"> 1) Connect NOVO function...0210 2) NC un-used GPIO as test points...0210 3) Connect G-sensor signals...0213 4) Connect TP_LED#...0216 5) Disconnect ENERGY_DET...0216
--	---

07 -- Cantiga_B (VGA,DMI)
 1) TV_DCONSEL_0/1 connect to GND ...0312
 2) Connect DDR3_PWG to NB ...0312
 3) Add R372 in ACZ_SDIN1 ...0317
 4) Add U22 and C486 for DDR3_PWG ...0318

14 -- ICH9-M_A_(CPU,SATA,IDE)
 1) Support PCI-E Type SSD ...0317
 2) PCI-E Type SSD change to SATA1 ...0320

15 -- ICH9-M_C_(PM,GPIO,SMB)
 1) Swap SIM_DET & CLK_SATA_OE# ...0312
 2) Connect SIM_DET to GPIO49 ...0317
 3) Connect SIM_DET to GPIO1 ...0319

16 -- ICH9-M_B_(USB,PCIE,DMI)
 1) Del PCI-E interface (WWAN use USB type) ...0317
 2) Change WLAN to PCI-E-2 ...0318

18 -- AUDIO (CX20582, SPK)
 1) Del R94,R163 to short AGND and GND directly ...0316
 2) Add C480 and C481 ...0316
 3) Change R344 to 1206 size ...0316
 4) Change C235 to 0.1U ...0316
 5) Change R166~R169 to 0603 size ...0316
 6) Del R156 and Q8 then short Volmute# directly ...0318
 7) Change PC_BEEP voltage level to 1/10 ...0319
 8)Change R166~R169 from 0ohm to BK1608HS601 ...0320

19 -- LAN (BCM57780, RJ45)
 1) Change LAN CONN footprint ...0305
 2) Connect LOM_DISABLE# to EC ...0310
 3) Swap U9 pin5 pin6 ...0312

21 -- CONN (HDMI, level Shift)
 1) Remove RP4~RP6 and add R373~R375 ...0320
 2) Change RP3 from 0ohm to WCM-2012-900T ...0320

22 -- CONN (CRT)
 1) Swap CN5 Pin1,2,3,4,5 & Pin11,12,13,14,15 ...0312
 2) Change CN5 footprint ...0318

23 -- CONN (USB, BT, G sensor)
 1) Change USB CONN footprint ...0305
 1) Change USB CONN footprint ...0318

24 -- CONN (KB, TP)
 1) Swap CN7 pin definition ...0305
 2) Change TP conn to 4P ...0305
 3) Swap KB bypass capacity and resistor ...0306
 4) Swap TP CONN ...0312

26 -- CONN (MINI PCI-E, SIM)
 1) Change PCI-E interface to SATA interface ...0317
 2) R222 and R341 Connect to +3V ...0318

27 -- CONN (WIRE to BOARD, LED)
 1) Change Front LED CONN to 10P ...0306

28 -- EC (ITE8502E)
 1) Swap Y3 PIN1 and PIN4 ...0319

31 -- POWER_CPU CORE (RT8152B)
 1) PR123 change to 499ohm ...0317
 2) Del PR120 and PR131 ...0317

32 -- POWER_DDR3 (RT8207AGQW)
 1) Mount PR124 and connect to 3VSUS ...0312

35 -- HOLES, PAD, NUT
 1) Change Hole15 footprint ...0316

14 -- ICH9-M_A_(CPU,SATA,IDE)
1) Add charge schematic for RTC ...0421

18 -- AUDIO (CX20582, SPK)
1) Change PC_BEEP voltage level to 2/3 ...0421
2) By vendor suggestion "D22 and D23 close to codec" ...0421

21 -- CONN (HDMI, level Shift)
1) Reserve RP11~RP13 for EMI request ...0422

23 -- CONN (USB, BT, G sensor)
1) Increase Z-axis signal ...0415

24 -- CONN (KB, TP)
1) Reserve Varistor for ESD ...0422

27 -- CONN (WIRE to BOARD, LED)
1) Change ALS smb to MB_CLK/MB_DATA ...0421

28 -- EC (ITE8502E)
1) Change ID_PIN to pull high ...0421
2) Reserve capacity on LED signal for EMI ...0421

change 0 Ohm to short footprint:

P02: (1) Short connect R99.

P10: (1) Short connect R45, R57

P20: (1) Short connect R3, R4

P21: (1) Short connect L2, L3, L38

P22: (1) Short connect R210, R224

P23: (1) Short connect R111, R281, R283

P28: (1) Short connect R79, R274

P30: (1) Short connect PR12, PR101

P31: (1) Short connect PR82, PR83, PR87, PR96, PR99 PR104, PR108, PR113, PR135

P32: (1) Short connect PR23

P33: (1) Short connect PR121

P34: (1) Short connect PR169