

**Model Name : GA-G31M-ES2L****Revision 1.12****SHEET****TITLE**

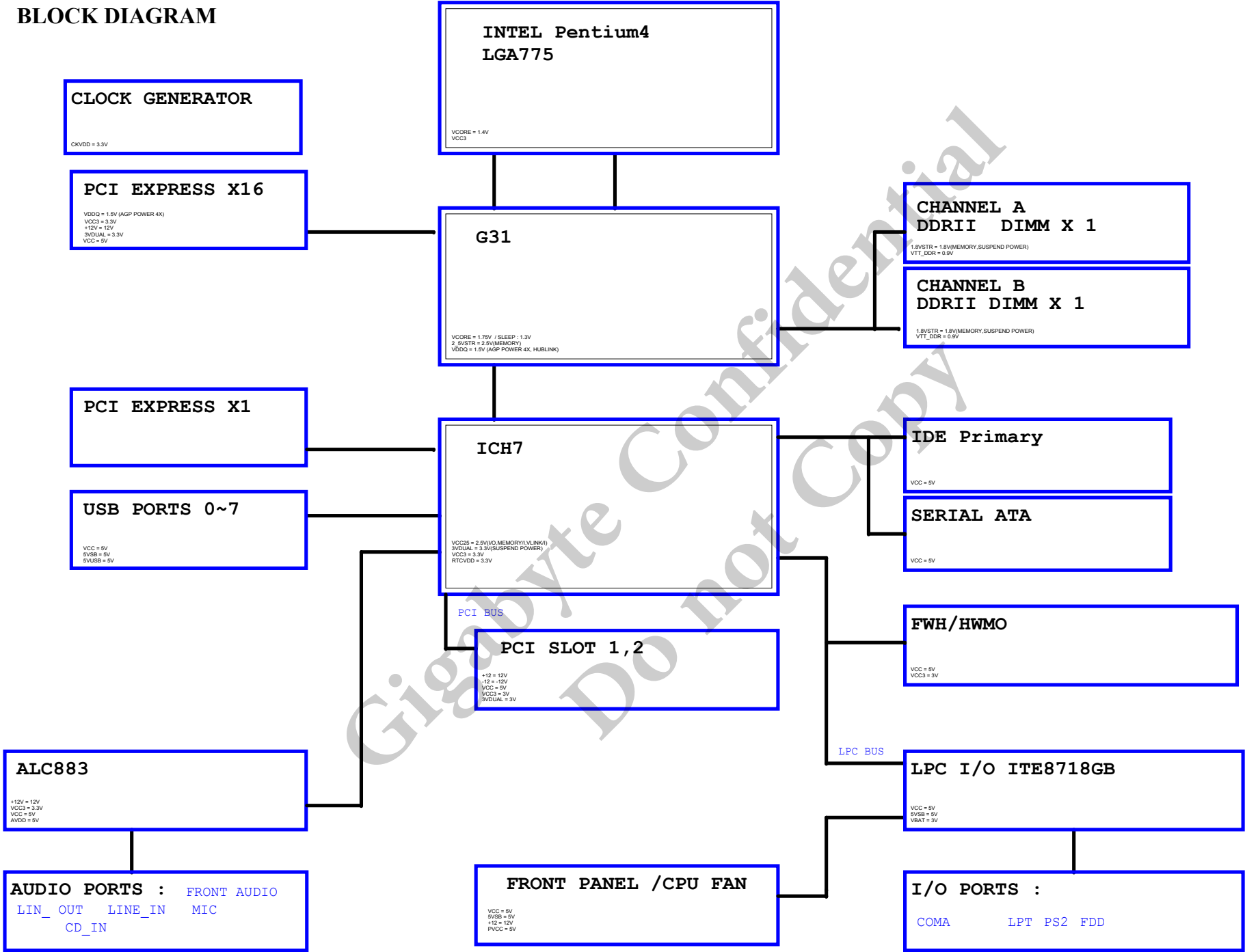
01	COVER SHEET
02	BLOCK DIAGRAM
03	BOM & PCB MODIFY HISTORY
04	P4 LGA775 A
05	P4 LGA775 B,D
06	P4 LGA775 C
07	P4 LGA775 E,F,G,H
08	G31 HOST
09	G31 DDRII
10	G31 PCI E, DMI
11	G31 VGA
12	G31 GND
13	G31 PWR
14	PCI EXPRESS*16 SLOT
15	DDRII CHANNEL A
16	DDRII CHANNEL B
17	DDRII TERMINATION
18	ICH7 PCI, USB, DMI, LAN
19	ICH7 IDE, GPIO, SATA, CTRL
20	ICH7 VCC, GND
21	CK505 CLOCK.
22	PCI SLOT 1,2,PCIE*1
23	IDE/FLOPPY
24	ITE 8718 GB/HX
25	COM LPT
26	CI, HWM, KB/MS, DUALBIOS
27	ALC883

**SHEET****TITLE**

28	REAR AUDIO JACK
29	DISCRETE POWER
30	VCORE PWM RT9214
31	ATX, OTHERS POWER
32	FRONT PANEL
33	REALTEK RTL8111C/8102E

<b>Gigabyte Technology</b>			
Title			
Cover Sheet			
Size	Document Number	Rev	
Custom	<b>GA-G31M-ES2L</b>	<b>1.12</b>	
Date:	Friday, November 21, 2008	Sheet	1 of 33

BLOCK DIAGRAM

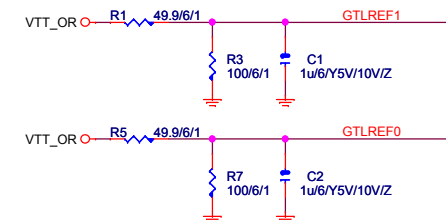
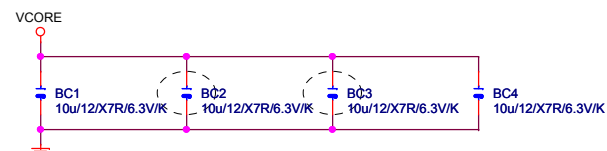


**Version: 1.12**

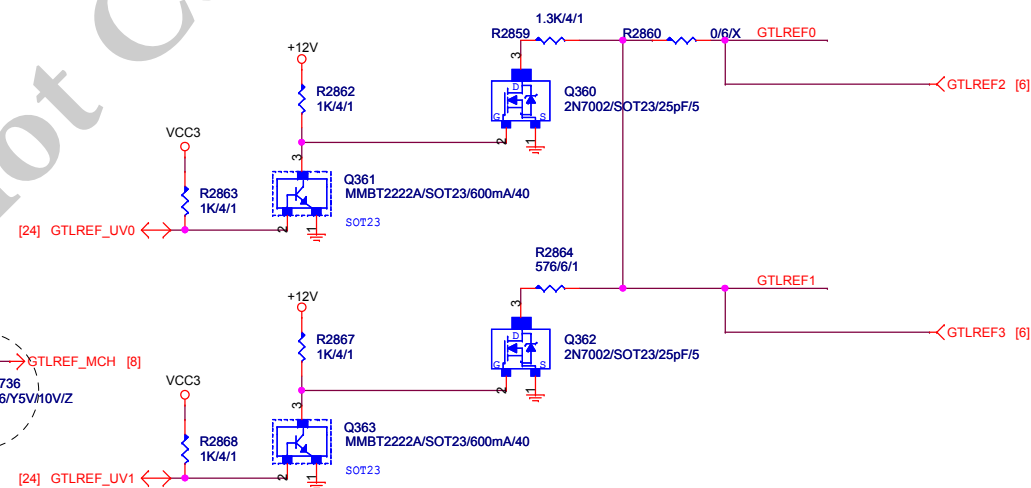
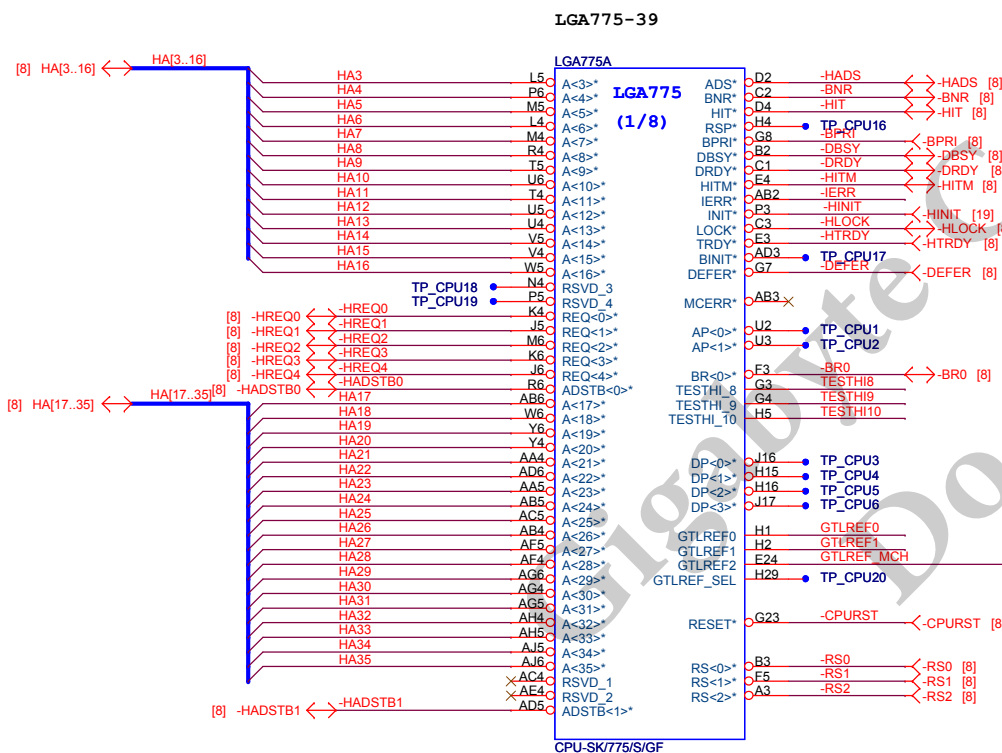
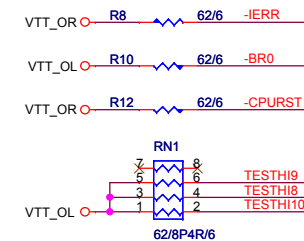
## 2008/11/25

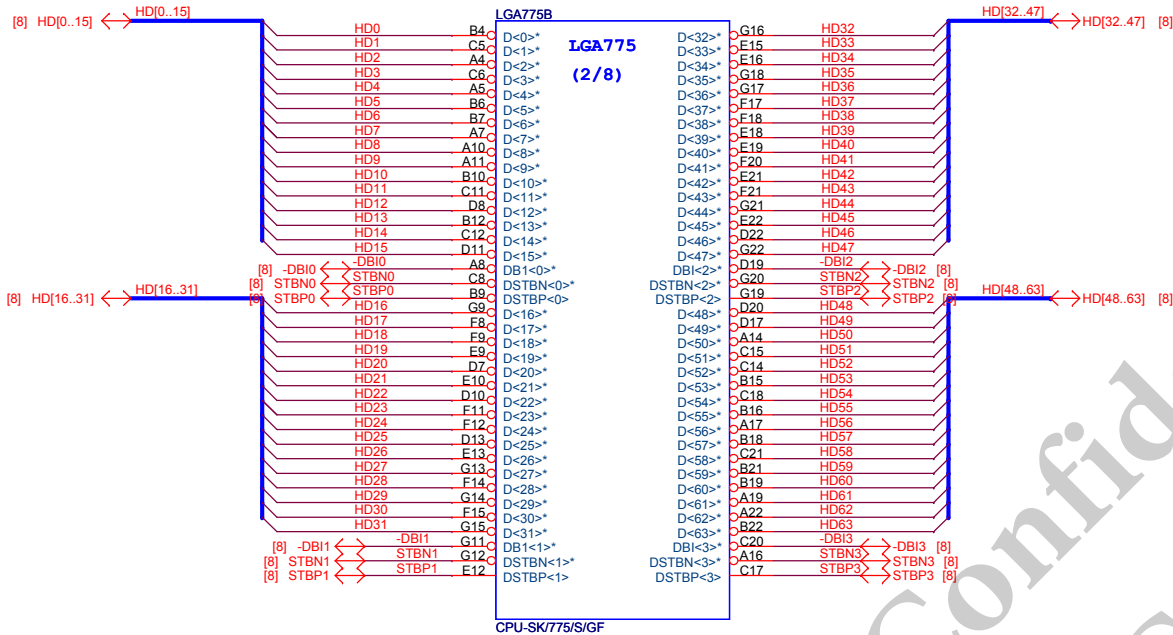
[illegible][illegible]

<b><i>Gigabyte Technology</i></b>				
<b>BOM &amp; PCB MODIFY HISTORY</b>				
Size Custom	Document Number	<b>GA-G31M-ES2L</b>		Rev <b>1.12</b>
Date:	Tuesday, November 25, 2008	Sheet	3 of 33	

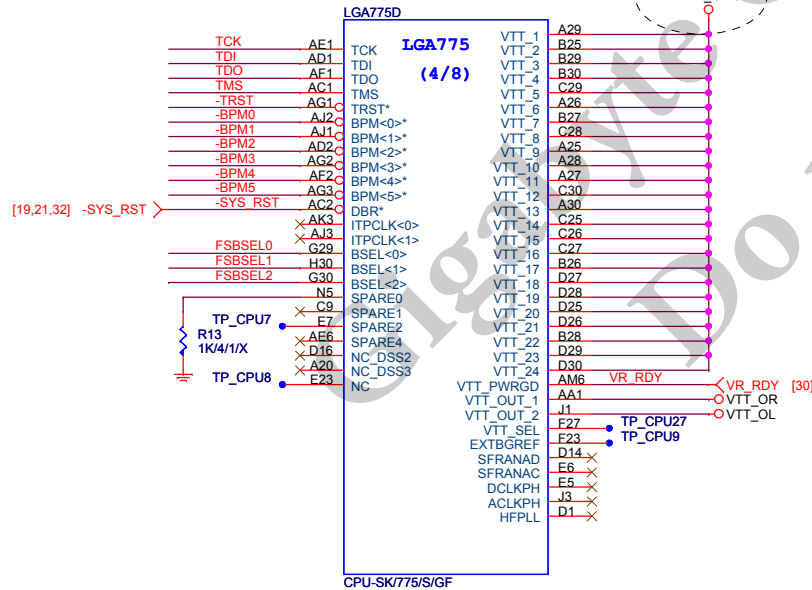


中間値0.9V

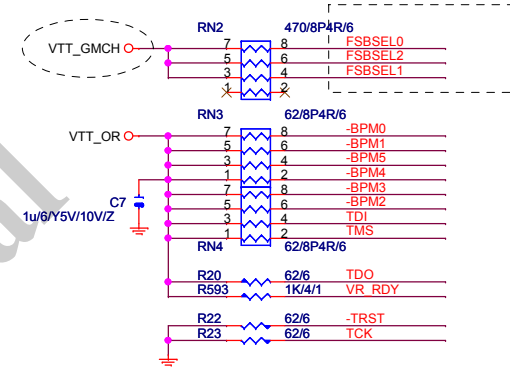




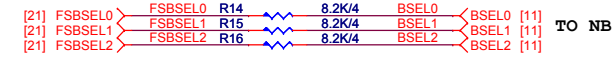
CPU-SK775/S/GF



CPU-SK775/S/GF



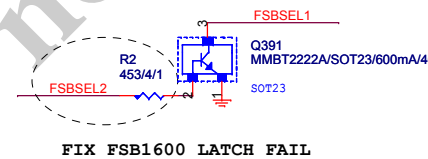
TO CLK GEN



CPU

NA	FSB	FSA	Clock
FSBSEL3	FSBSEL1	FSBSEL0	
1	0	1	100MHz
0	0	1	133MHz
0	1	1	166MHz
0	1	0	200MHz
0	0	0	266MHz

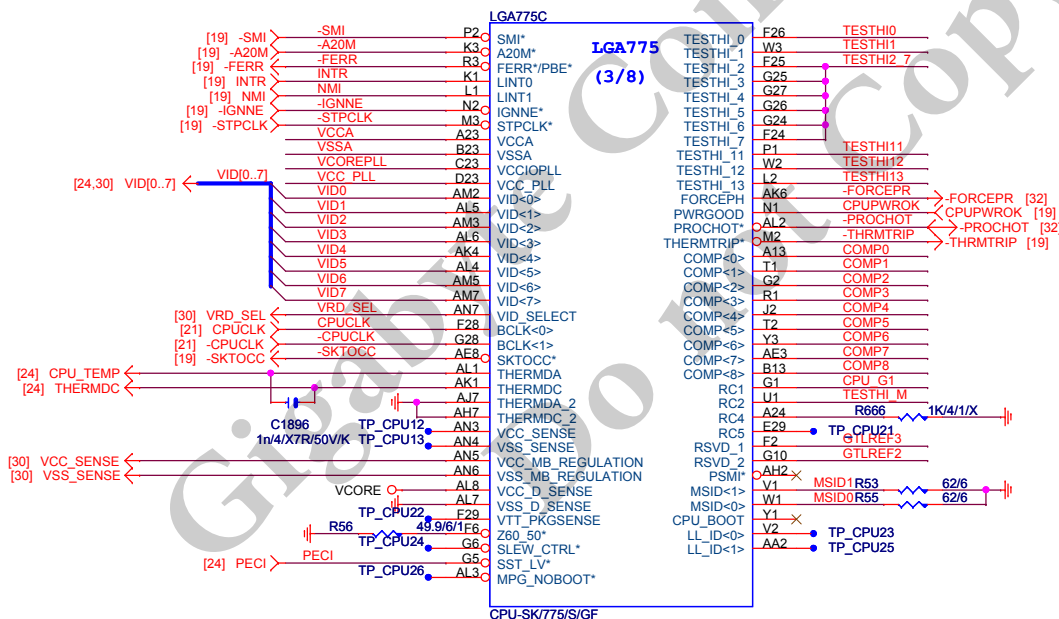
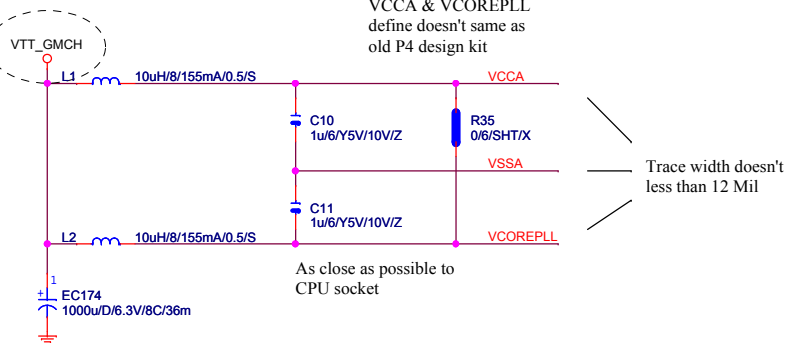
X



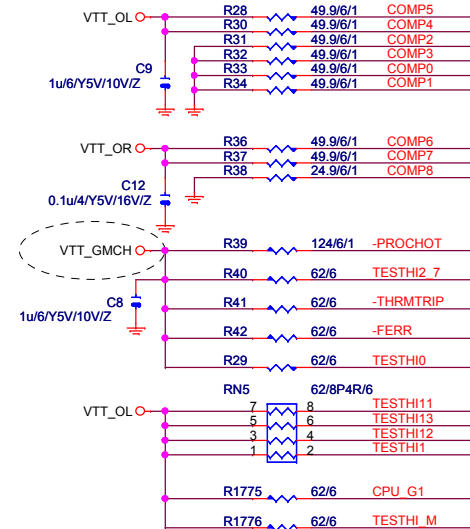
FIX FSB1600 LATCH FAIL

Gigabyte Technology			
Title			
P4_LGA775-B,D			
Size	Document Number	GA-G31M-ES2L	
3		Rev 1.12	
Date:	Friday, November 21, 2008	Sheet	5 of 33

Note:  
VCCA & VCOREPLL  
define doesn't same as  
old P4 design kit



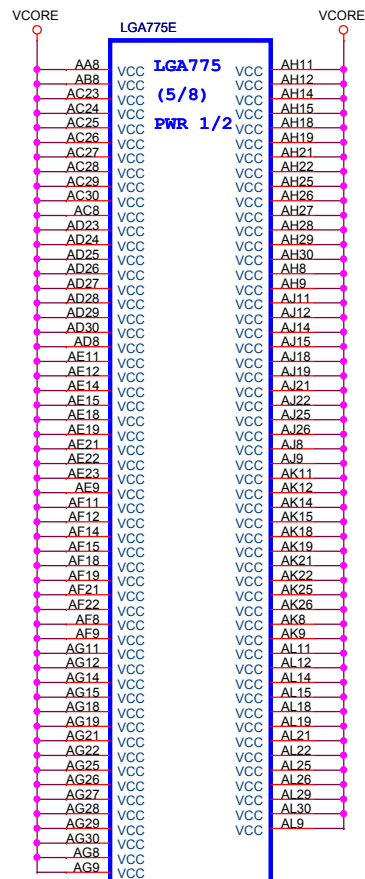
Place outside of CPU socket



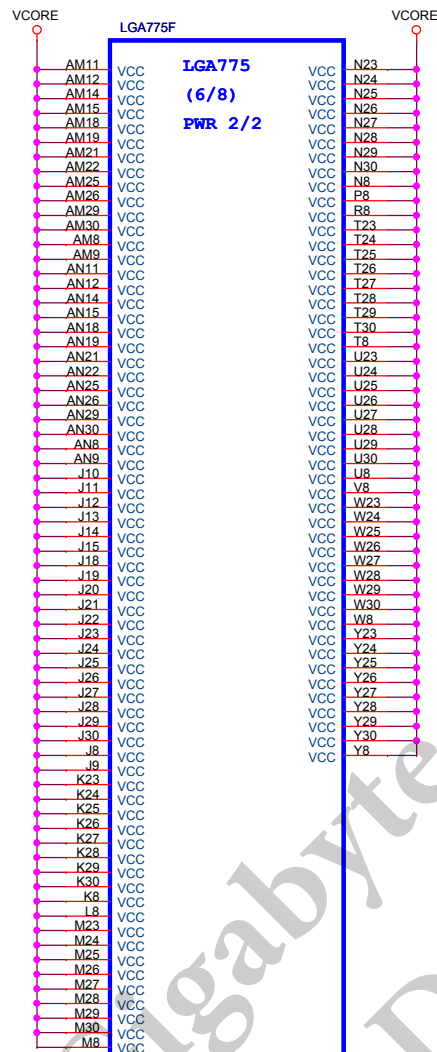
Gigabyte Technology

Title			
P4_LGA775-C			
Size	Document Number	GA-G31M-ES2L	
B		Rev 1.12	
Date:	Friday, November 21, 2008	Sheet	6 of 33

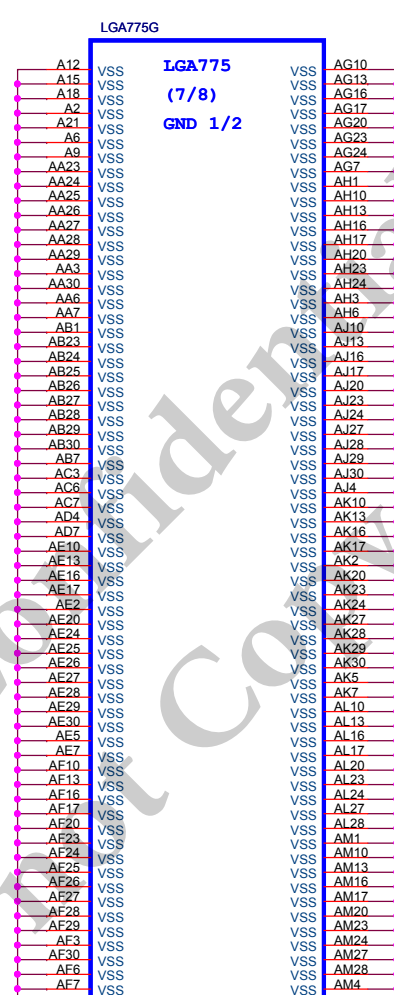
PECI:Platform Environment Control Interface



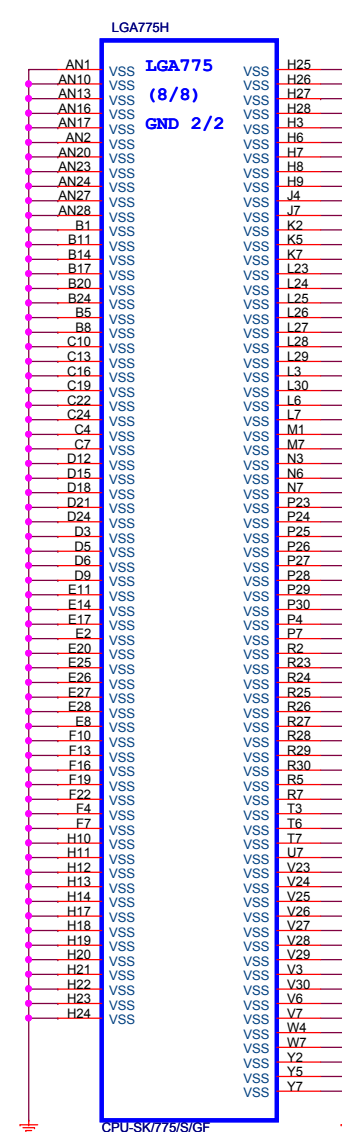
CPU-SK/775/S/GF



CPU-SK/775/S/GF



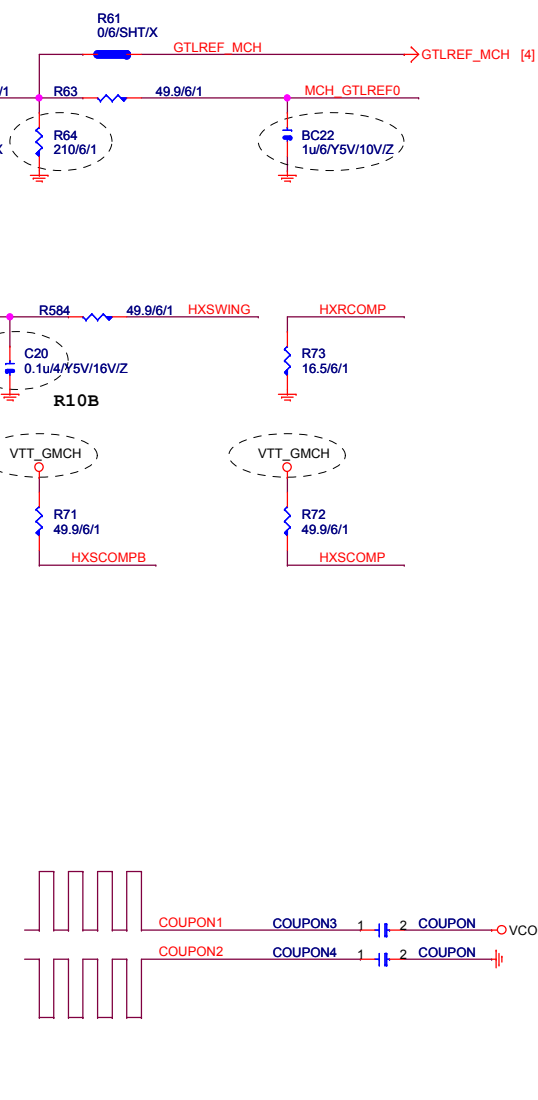
CPU-SK/775/S/GF



CPU-SK/775/S/GF

Gigabyte Technology

Title			P4_LGA775-E,F,G,H	
Size	Document Number	GA-G31M-ES2L		Rev
B				1.12
Date:	Friday, November 21, 2008	Sheet	7	of 33





U2C

BW

(3/9)

MAAA0	BA31	SMA_A0	SDQS_A0	AI44	DQSA0
MAAA1	BB25	SMA_A1	SDQS_A1	AI45	DQSA1
MAAA2	BA26	SMA_A2	SDM_A0	AI46	DMA0
MAAA3	BA25	SMA_A3			
MAAA4	AV25	SMA_A4	SDQ_A0	AI47	MDA0
MAAA5	BA23	SMA_A5	SDQ_A1	AI48	MDA1
MAAA6	AV24	SMA_A6	SDQ_A2	AI49	MDA2
MAAA7	AV23	SMA_A7	SDQ_A3	AI50	MDA3
MAAA8	BB23	SMA_A8	SDQ_A4	AI51	MDA4
MAAA9	BA22	SMA_A9	SDQ_A5	AI52	MDA5
MAAA10	AV33	SMA_A10	SDQ_A6	AI53	MDA6
MAAA11	BB22	SMA_A11	SDQ_A7	AI54	MDA7
MAAA12	AV38	SMA_A12			
MAAA13	AV38	SMA_A13			
MAAA14	BA21	SMA_A14			
[15.17] -SWEA	BB34C	SWE_A#	SDQ_A8	AI55	MDA8
[15.17] -SCASA	AY35C	SCAS_A#	SDQ_A9	AI56	MDA9
[15.17] -SRASA	BB33C	SRAA_A#	SDQ_A10	AI57	MDA10
[15.17] SBA00	BA33	SBS_A0	SDQ_A11	AI58	MDA11
[15.17] SBA01	BB32	SBS_A1	SDQ_A12	AI59	MDA12
[15.17] SBA02	BB31	SBS_A2	SDQ_A13	AI60	MDA13
[15.17] CSA0	AW35C	SCS_A0#	SDQ_A14	AI61	MDA14
[15.17] CSA1	BA35C	SCS_A1#	SDQ_A15	AI62	MDA15
[17] -CSA2	BA34C	SCS_A2#			
[17] -CSA3	BB33C	SCS_A3#			
[15.17] CKEA0	BC20	SCKE_A0	SDQ_A16	AI63	MDA16
[15.17] CKEA1	AY20	SCKE_A1	SDQ_A17	AI64	MDA17
[17] CKEA2	AY21	SCKE_A2	SDQ_A18	AI65	MDA18
[17] CKEA3	BA19	SCKE_A3	SDQ_A19	AI66	MDA19
MODT_A0	AY37	SODT_A0	SDQ_A20	AI67	MDA20
MODT_A1	BA38	SODT_A1	SDQ_A21	AI68	MDA21
	BB38	SODT_A2	SDQ_A22	AI69	MDA22
	BA39	SODT_A3	SDQ_A23	AI70	MDA23
[15] DCLKA0	AR31	SCLK_A0	SDQS_A3	AI71	DQSA3
[15] DCLKA0	AR31C	SCLK_A0#	SDQS_A3#	AI72	DQSA3#
[15] DCLKA1	AP27	SCLK_A1	SDM_A3	AI73	DMA3
[15] DCLKA1	AN27	SCLK_A1#			
[15] DCLKA2	AV33C	SCLK_A2	SDQ_A34	AI74	MDA24
[15] DCLKA2	AV33C	SCLK_A2#	SDQ_A35	AI75	MDA25
	AP29	SCLK_A3	SDQ_A36	AI76	MDA26
	AP31	SCLK_A3#	SDQ_A37	AI77	MDA27
	AM26	SCLK_A4	SDQ_A38	AI78	MDA28
	AM27	SCLK_A5	SDQ_A39	AI79	MDA29
	AT33C	SCLK_A6	SDQ_A40	AI80	MDA30
	AV33C	SCLK_A5#	SDQ_A41	AI81	MDA31
SDQS_A4	DQSA4				
SDQS_A4#	DQSA4#				
SDM_A4	DMA4				
SDQ_A32	AV42	MDA32			
SDQ_A33	AV40	MDA33			
SDQ_A34	AP42	MDA34			
SDQ_A35	AN39	MDA35			
SDQ_A36	AV40	MDA36			
SDQ_A37	AV41	MDA37			
SDQ_A38	AR42	MDA38			
SDQ_A39	AP32	MDA39			
SDQS_A5	AI41	DQSA5			
SDQS_A5#	AI40	DQSA5#			
SDM_A5	AM43	DMA5			
SDQ_A40	AN41	MDA40			
SDQ_A41	AK43	MDA41			
SDQ_A42	AK42	MDA42			
SDQ_A43	AK41	MDA43			
SDQ_A44	AN40	MDA44			
SDQ_A45	AN42	MDA45			
SDQ_A46	AL42	MDA46			
SDQ_A47	AL39	MDA47			
SDQS_A6	AG42	DQSA6			
SDQS_A6#	AG41	DQSA6#			
SDM_A6	AG40	DMA6			
SDQ_A48	AJ40	MDA48			
SDQ_A49	AH43	MDA49			
SDQ_A50	AF39	MDA50			
SDQ_A51	AE40	MDA51			
SDQ_A52	AJ42	MDA52			
SDQ_A53	AJ41	MDA53			
SDQ_A54	AF41	MDA54			
SDQ_A55	AF42	MDA55			
SDQS_A7	AC42	DQSA7			
SDQS_A7#	AC41	DQSA7#			
SDM_A7	AC40	DMA7			
SDQ_A56	AD40	MDA56			
SDQ_A57	AD43	MDA57			
SDQ_A58	AB41	MDA58			
SDQ_A59	AA40	MDA59			
SDQ_A60	AE42	MDA60			
SDQ_A61	AE41	MDA61			
SDQ_A62	AC39	MDA62			
SDQ_A63	AB42	MDA63			

DDR\_0

AN21

LE82G31B0/S[10HB1-038231-30R]

CHANNEL A

U2D

BW

(4/9)

MAAB0	BB17	SMA_B0	SDQS_B0	AI86	DQSB0
MAAB1	AY17	SMA_B1	SDQS_B1	AI87	DQSB1
MAAB2	BA17	SMA_B2	SDM_B0	AI88	DMB0
MAAB3	BC16	SMA_B3			
MAAB4	AW15	SMA_B4	SDQ_B0	AI89	MDB0
MAAB5	BA15	SMA_B5	SDQ_B1	AI90	MDB1
MAAB6	BB15	SMA_B6	SDQ_B2	AI91	MDB2
MAAB7	BA14	SMA_B7	SDQ_B3	AI92	MDB3
MAAB8	AY15	SMA_B8	SDQ_B4	AI93	MDB4
MAAB9	AW14	SMA_B9	SDQ_B5	AI94	MDB5
MAAB10	AW13	SMA_B10	SDQ_B6	AI95	MDB6
MAAB11	BB13	SMA_B11	SDQ_B7	AI96	MDB7
MAAB12	BA13	SMA_B12			
MAAB13	AY12	SMA_B13			
MAAB14	AY13	SMA_B14			
[16.17] -SWEB	BA27C	SWE_B#	SDQ_B8	AI97	MDB8
[16.17] -SCASB	AW29C	SCAS_B#	SDQ_B9	AI98	MDB9
[16.17] -SRASB	AW28C	SRAA_B#	SDQ_B10	AI99	MDB10
[16.17] SBA80	AY19	SBS_B0	SDQ_B11	AI100	MDB11
[16.17] SBA81	BA18	SBS_B1	SDQ_B12	AI101	MDB12
[16.17] SBA82	BC12	SBS_B2	SDQ_B13	AI102	MDB13
[16.17] CSB0	BB27C	SCS_B0#	SDQ_B14	AI103	MDB14
[16.17] CSB1	BB30C	SCS_B1#	SDQ_B15	AI104	MDB15
[17] CSB2	AY27C	SCS_B2#			
[17] CSB3	AY31C	SCS_B3#			
[16.17] CKEB0	AY12	SCKE_B0	SDQ_B16	AI105	MDB16
[17] CKEB1	AW12	SCKE_B1	SDQ_B17	AI106	MDB17
[17] CKEB2	BB11	SCKE_B2	SDQ_B18	AI107	MDB18
[17] CKEB3	BA11	SCKE_B3	SDQ_B19	AI108	MDB19
MODT_B0	BA29	SODT_B0	SDQ_B20	AI109	MDB20
MODT_B1	BA30	SODT_B1	SDQ_B21	AI110	MDB21
	BB29	SODT_B2	SDQ_B22	AI111	MDB22
	BB31	SODT_B3	SDQ_B23	AI112	MDB23
[16] DCLKB0	AV31	SCLK_B0	SDQS_B3	AI113	DQSB3
[16] DCLKB0	AV31C	SCLK_B0#	SDQS_B3#	AI114	DQSB3#
[16] DCLKB1	AT27	SCLK_B1	SDM_B3	AI115	DMB3
[16] DCLKB1	AT27C	SCLK_B1#			
[16] DCLKB2	AT32	SCLK_B2	SDQ_B24	AI116	MDB24
[16] DCLKB2	AT32C	SCLK_B2#	SDQ_B25	AI117	MDB25
	AV29	SCLK_B3	SDQ_B26	AI118	MDB26
	AV29C	SCLK_B3#	SDQ_B27	AI119	MDB27
	AV27C	SCLK_B4	SDQ_B28	AI120	MDB28
	AV27C	SCLK_B4#	SDQ_B29	AI121	MDB29
	AV32	SCLK_B5	SDQ_B30	AI122	MDB30
	AV32C	SCLK_B5#	SDQ_B31	AI123	MDB31
SDQS_B4	DQSB4				
SDQS_B4#	DQSB4#				
SDM_B4	DMB4				
SDQ_B32	AV37	MDB32			
SDQ_B33	AV38	MDB33			
SDQ_B34	AN38	MDB34			
SDQ_B35	AN37	MDB35			
SDQ_B36	AV38	MDB36			
SDQ_B37	AR35	MDB37			
SDQ_B38	AN36	MDB38			
SDQ_B39	AR37	MDB39			
SDQS_B5	AI35	DQSB5			
SDQS_B5#	AI34	DQSB5#			
SDM_B5	AM37	DMB5			
SDQ_B40	AM35	MDB40			
SDQ_B41	AM38	MDB41			
SDQ_B42	AI34	MDB42			
SDQ_B43	AI38	MDB43			
SDQ_B44	AR39	MDB44			
SDQ_B45	AM34	MDB45			
SDQ_B46	AL37	MDB46			
SDQ_B47	AL32	MDB47			
SDQS_B6	AG35	DQSB6			
SDQS_B6#	AG36	DQSB6#			
SDM_B6	AG39	DMB6			
SDQ_B48	AG38	MDB48			
SDQ_B49	AI38	MDB49			
SDQ_B50	AF38	MDB50			
SDQ_B51	AE33	MDB51			
SDQ_B52	AI37	MDB52			
SDQ_B53	AN35	MDB53			
SDQ_B54	AG33	MDB54			
SDQ_B55	AF34	MDB55			
SDQS_B7	AC38	DQSB7			
SDQS_B7#	AC37	DQSB7#			
SDM_B7	AC38	DMB7			
SDQ_B56	AD38	MDB56			
SDQ_B57	AC37	MDB57			
SDQ_B58	AA34	MDB58			
SDQ_B59	AA36	MDB59			
SDQ_B60	AD34	MDB60			
SDQ_B61	AF38	MDB61			
SDQ_B62	AC36	MDB62			
SDQ_B63	AA33	MDB63			

DDR\_1

RESERVED\_7

MCH\_VREF

SMRCOMP0

SMRCOMP1

SMRCOMP2

SMRCOMP3

SMRCOMPVOL

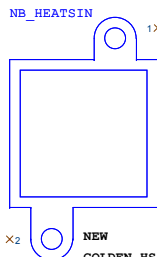
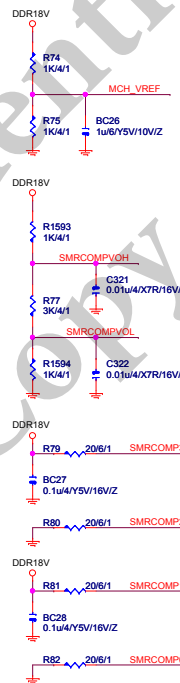
SMRCOMPVOH

RESERVED

LE82G31B0/S[10HB1-038231-30R]

CHANNEL B

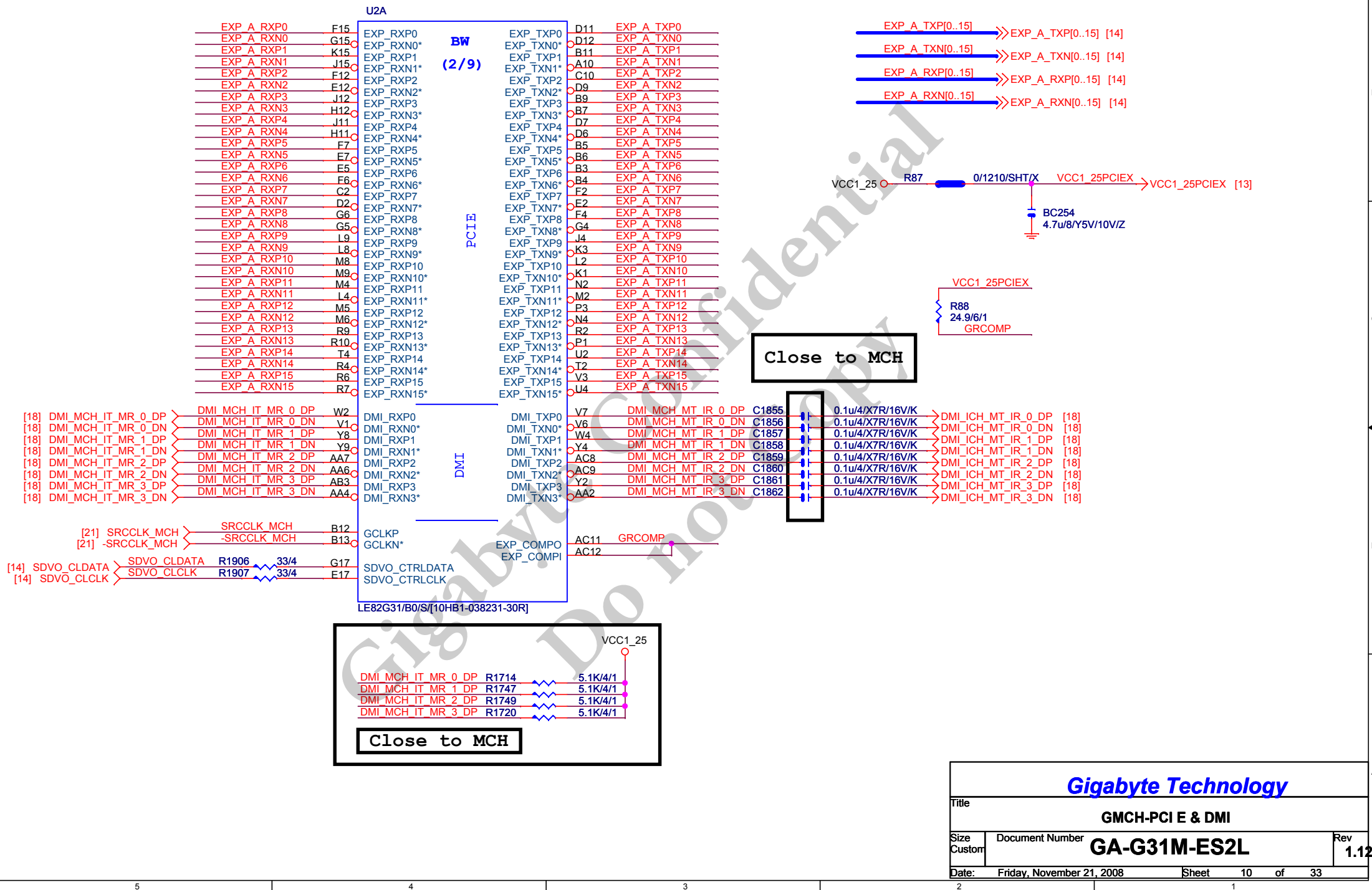
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[16.17] MODT_B0[0..1]	MODT_B0[0..1]
[16] -DQSB0[0..7]	-DQSB0[0..7]
[16.17] MAAB0[0..14]	MAAB0[0..14]
[16] DMB0[0..7]	DMB0[0..7]
[16] MDB0[0..63]	MDB0[0..63]
[16] DQSB0[0..7]	DQSB0[0..7]
[15.17] MAAA0[0..14]	MAAA0[0..14]
[15] DMA0[0..7]	DMA0[0..7]
[15] MDA0[0..63]	MDA0[0..63]
[15] DQSA0[0..7]	DQSA0[0..7]
[15] -DQSA0[0..7]	-DQSA0[0..7]



NB\_HS[12SP2-04A004-31R\_12SP2-04A004-32R\_12SP2-04A004-33R]

Gigabyte Technology

Title			GMCH-DDRII
Size			Document Number
Custom			GA-G





U2G			
BC37	VSS_1	BW	VSS_181
BC32	VSS_2	(7/9)	VSS_182
BC28	VSS_3		VSS_183
BC24	VSS_4		VSS_184
BC10	VSS_5		VSS_185
BC5	VSS_6	GND 1/2	VSS_186
BB7	VSS_7		VSS_187
AY41	VSS_8		VSS_188
AY4	VSS_9		VSS_189
AW43	VSS_10		VSS_190
AW41	VSS_11		VSS_191
AW1	VSS_12		VSS_192
AV37	VSS_13		VSS_193
AV35	VSS_14		VSS_194
AV27	VSS_15		VSS_195
AV23	VSS_16		VSS_196
AV21	VSS_17		VSS_197
AV17	VSS_18		VSS_198
AV11	VSS_19		VSS_199
AV9	VSS_20		VSS_200
AV7	VSS_21		VSS_201
AU42	VSS_22		VSS_202
AU38	VSS_23		VSS_203
AU32	VSS_24		VSS_204
AU24	VSS_25		VSS_205
AU20	VSS_26		VSS_206
AU6	VSS_27		VSS_207
AU2	VSS_28		VSS_208
AT31	VSS_29		VSS_209
AT29	VSS_30		VSS_210
AT15	VSS_31		VSS_211
AT13	VSS_32		VSS_212
AT12	VSS_33		VSS_213
AR38	VSS_34		VSS_214
AR33	VSS_35		VSS_215
AR32	VSS_36		VSS_216
AR27	VSS_37		VSS_217
AR26	VSS_38		VSS_218
AR23	VSS_39		VSS_219
AR21	VSS_40		VSS_220
AR20	VSS_41		VSS_221
AR17	VSS_42		VSS_222
AR9	VSS_43		VSS_223
AR6	VSS_44		VSS_224
AP43	VSS_45		VSS_225
AP24	VSS_46		VSS_226
AP18	VSS_47		VSS_227
AP1	VSS_48		VSS_228
AN38	VSS_49		VSS_229
AN31	VSS_50		VSS_230
AN29	VSS_51		VSS_231
AN24	VSS_52		VSS_232
AN23	VSS_53		VSS_233
AN20	VSS_54		VSS_234
AN15	VSS_55		VSS_235
AN13	VSS_56		VSS_236
AN12	VSS_57		VSS_237
AN11	VSS_58		VSS_238
AN4	VSS_59		VSS_239
AM42	VSS_60		VSS_240
AM40	VSS_61		VSS_241
AM36	VSS_62		VSS_242
AM33	VSS_63		VSS_243
AM29	VSS_64		VSS_244
AM24	VSS_65		VSS_245
AM23	VSS_66		VSS_246
AM20	VSS_67		VSS_247
AM11	VSS_68		VSS_248
AM9	VSS_69		VSS_249
AM7	VSS_70		VSS_250
AM4	VSS_71		VSS_251
AM2	VSS_72		VSS_252
AM1	VSS_73		VSS_253
AL36	VSS_74		VSS_254
AL33	VSS_75		VSS_255
AK43	VSS_76		VSS_256
AJ39	VSS_77		VSS_257
AJ38	VSS_78		VSS_258
AJ33	VSS_79		VSS_259
AH42	VSS_80		VSS_260
AG37	VSS_81		VSS_261
AG34	VSS_82		VSS_262
AF43	VSS_83		VSS_263
AF37	VSS_84		VSS_264
AF36	VSS_85		VSS_265
AF10	VSS_86		VSS_266
AF9	VSS_87		VSS_267
AF8	VSS_88		VSS_268
AF7	VSS_89		VSS_269
AF6	VSS_90		VSS_270

LE82G31/B0/S/[10HB1-038231-30R]

U2I			
M27	VSS_91	BW	VSS_271
M21	VSS_92	(9/9)	VSS_272
M17	VSS_93		VSS_273
M15	VSS_94		VSS_274
M10	VSS_95	GND 2/2	VSS_275
M7	VSS_96		VSS_276
M1	VSS_97		VSS_277
L33	VSS_98		VSS_278
L32	VSS_99		VSS_279
L31	VSS_100		VSS_280
L29	VSS_101		VSS_281
L21	VSS_102		VSS_282
L20	VSS_103		VSS_283
L11	VSS_104		VSS_284
L7	VSS_105		VSS_285
L5	VSS_106		VSS_286
L3	VSS_107		VSS_287
K43	VSS_108		VSS_288
K26	VSS_109		VSS_289
K21	VSS_110		VSS_290
K18	VSS_111		VSS_291
K13	VSS_112		VSS_292
K12	VSS_113		VSS_293
K2	VSS_114		
J38	VSS_115		
J35	VSS_116		
J32	VSS_117		
J27	VSS_118		
J21	VSS_119		
J9	VSS_120		
J7	VSS_121		
J5	VSS_122		
H31	VSS_123		
H29	VSS_124		
H21	VSS_125		
H20	VSS_126		
H17	VSS_127		
H15	VSS_128		
H13	VSS_129		
G42	VSS_130		
G38	VSS_131		
G32	VSS_132		
G21	VSS_133		
G13	VSS_134		
G12	VSS_135		
G11	VSS_136		
G9	VSS_137		
G7	VSS_138		
G1	VSS_139		
F37	VSS_140		
F35	VSS_141		
F27	VSS_142		
F21	VSS_143		
F18	VSS_144		
F3	VSS_145		
E43	VSS_146		
E32	VSS_147		
E24	VSS_148		
E21	VSS_149		
E20	VSS_150		
E15	VSS_151		
E13	VSS_152		
E11	VSS_153		
E9	VSS_154		
E3	VSS_155		
D40	VSS_156		
D31	VSS_157		
D21	VSS_158		
D17	VSS_159		
D3	VSS_160		
C26	VSS_161		
C11	VSS_162		
C6	VSS_163		
C5	VSS_164		
C4	VSS_165		
B37	VSS_166		
B32	VSS_167		
B31	VSS_168		
B26	VSS_169		
B23	VSS_170		
B22	VSS_171		
B19	VSS_172		
B14	VSS_173		
B10	VSS_174		
N7	VSS_175		
A34	VSS_176		
A26	VSS_177		
A18	VSS_178		
A12	VSS_179		
A7	VSS_180		

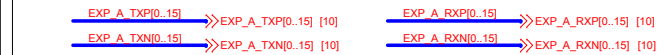
LE82G31/B0/S/[10HB1-038231-30R]

BC41	
BC3	
BA1	
AY40	
AE23	
AE21	
AE19	
AE24	
AE22	
AE20	
AE18	
AC18	
AA18	
W24	
W22	
W20	
R21	
E1	
C43	
C1	
A41	
A5	
A3	

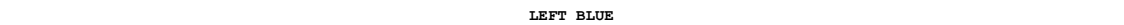
Gigabyte Technology

Title		
GMCH-GND		
Size	Document Number	Rev
Custom	GA-G31M-ES2L	1.12
Date:	Friday, November 21, 2008	Sheet 12 of 33

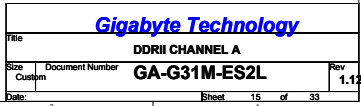




EXP A TPX0	C92	1.01u4/XTR/16V/K	EXP A TPX0C
EXP A TXN0	C93	1.01u4/XTR/16V/K	EXP A TXN0C
EXP A TXP1	C94	1.01u4/XTR/16V/K	EXP A TXP1C
EXP A TXN1	C95	1.01u4/XTR/16V/K	EXP A TXN1C
EXP A TPX2	C96	1.01u4/XTR/16V/K	EXP A TPX2C
EXP A TXN2	C97	1.01u4/XTR/16V/K	EXP A TXN2C
EXP A TPX3	C98	1.01u4/XTR/16V/K	EXP A TPX3C
EXP A TXN3	C99	1.01u4/XTR/16V/K	EXP A TXN3C
EXP A TPX4	C100	1.01u4/XTR/16V/K	EXP A TPX4C
EXP A TXN4	C101	1.01u4/XTR/16V/K	EXP A TXN4C
EXP A TPX5	C102	1.01u4/XTR/16V/K	EXP A TPX5C
EXP A TXN5	C103	1.01u4/XTR/16V/K	EXP A TXN5C
EXP A TPX6	C104	1.01u4/XTR/16V/K	EXP A TPX6C
EXP A TXN6	C105	1.01u4/XTR/16V/K	EXP A TXN6C
EXP A TPX7	C106	1.01u4/XTR/16V/K	EXP A TPX7C
EXP A TXN7	C107	1.01u4/XTR/16V/K	EXP A TXN7C
EXP A TPX8	C108	1.01u4/XTR/16V/K	EXP A TPX8C
EXP A TXN8	C109	1.01u4/XTR/16V/K	EXP A TXN8C
EXP A TPX9	C110	1.01u4/XTR/16V/K	EXP A TPX9C
EXP A TXN9	C111	1.01u4/XTR/16V/K	EXP A TXN9C
EXP A TPX10	C112	1.01u4/XTR/16V/K	EXP A TPX10C
EXP A TXN10	C113	1.01u4/XTR/16V/K	EXP A TXN10C
EXP A TPX11	C114	1.01u4/XTR/16V/K	EXP A TPX11C
EXP A TXN11	C115	1.01u4/XTR/16V/K	EXP A TXN11C
EXP A TPX12	C116	1.01u4/XTR/16V/K	EXP A TPX12C
EXP A TXN12	C117	1.01u4/XTR/16V/K	EXP A TXN12C
EXP A TPX13	C118	1.01u4/XTR/16V/K	EXP A TPX13C
EXP A TXN13	C119	1.01u4/XTR/16V/K	EXP A TXN13C
EXP A TPX14	C120	1.01u4/XTR/16V/K	EXP A TPX14C
EXP A TXN14	C121	1.01u4/XTR/16V/K	EXP A TXN14C
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EXP A TXN15	C123	1.01u4/XTR/16V/K	EXP A TXN15C





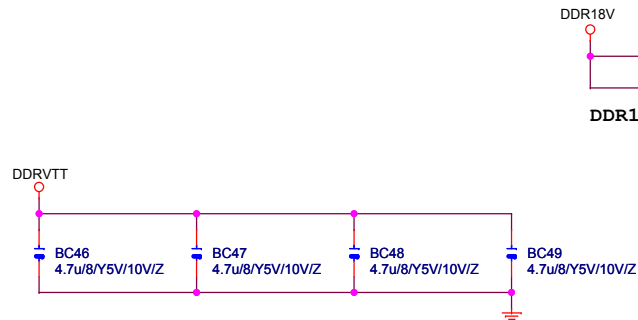




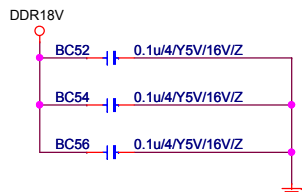


# DDR TERMINATION CHANNEL A

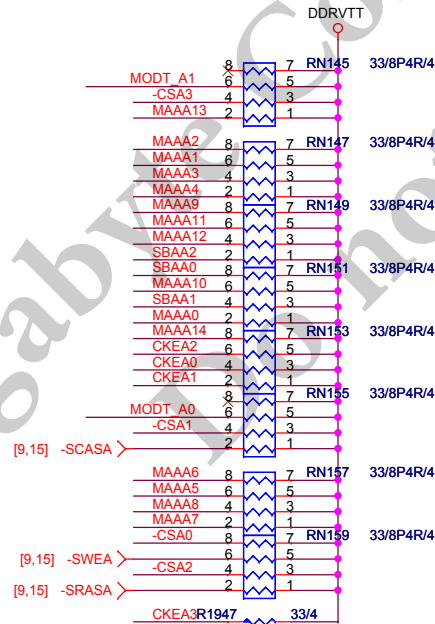
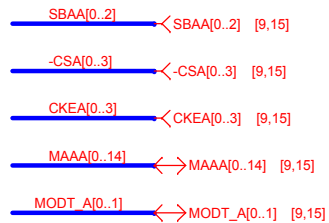
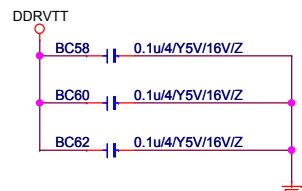
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## DDR18V Decouple

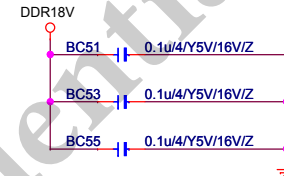


## DDRVTT Decouple

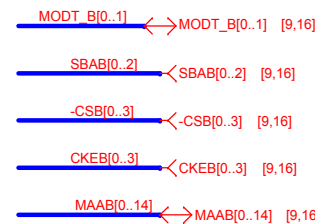
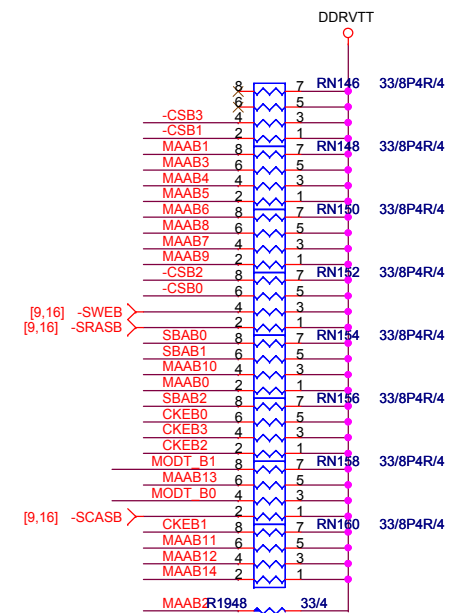
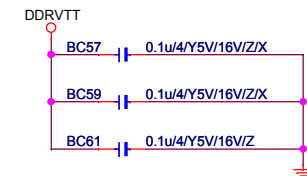


# DDR TERMINATION CHANNEL B

## DDR18V Decouple



## DDRVTT Decouple

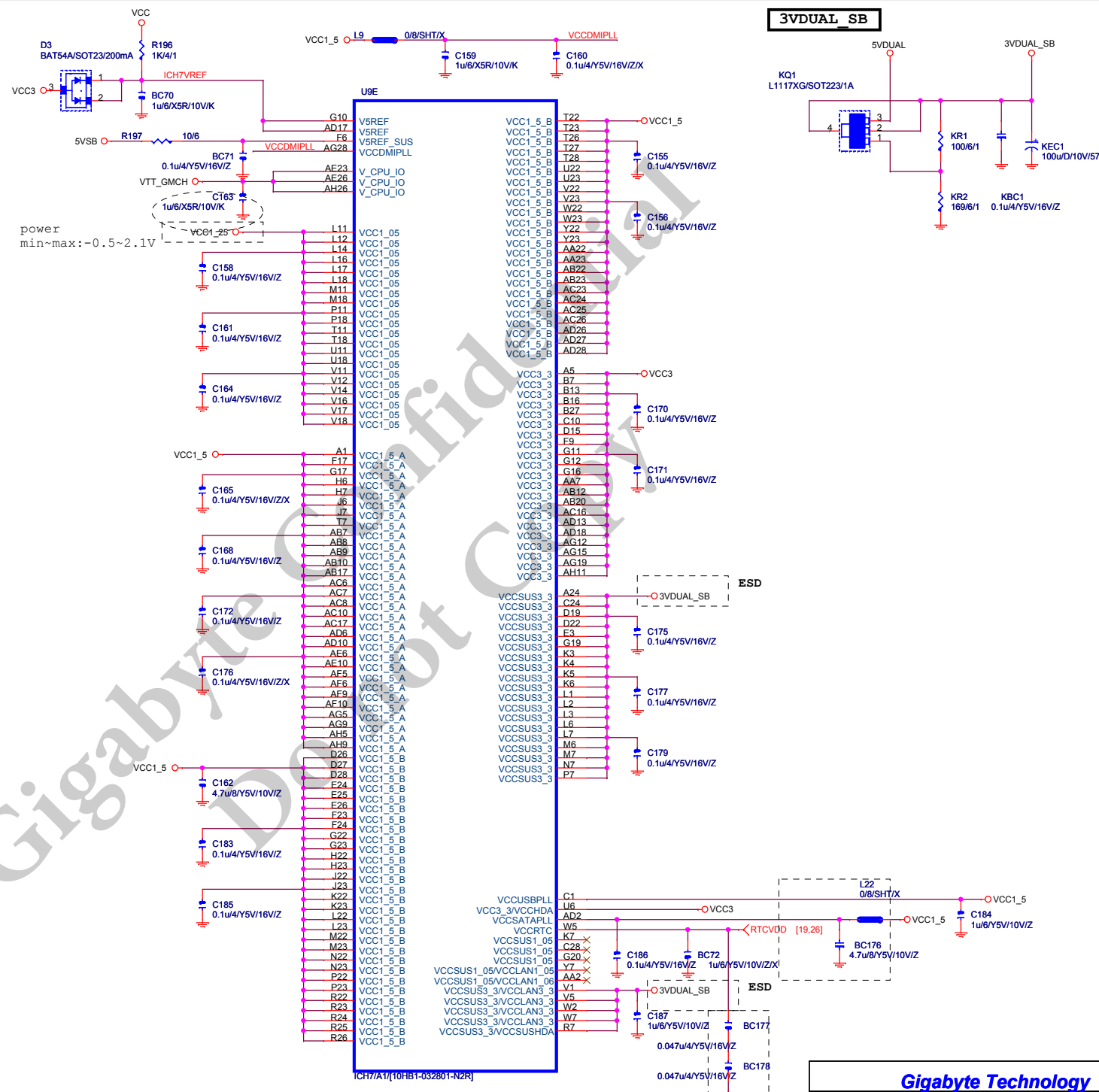


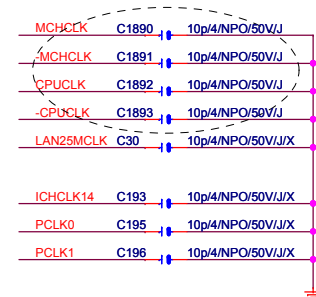
Gigabyte Technology



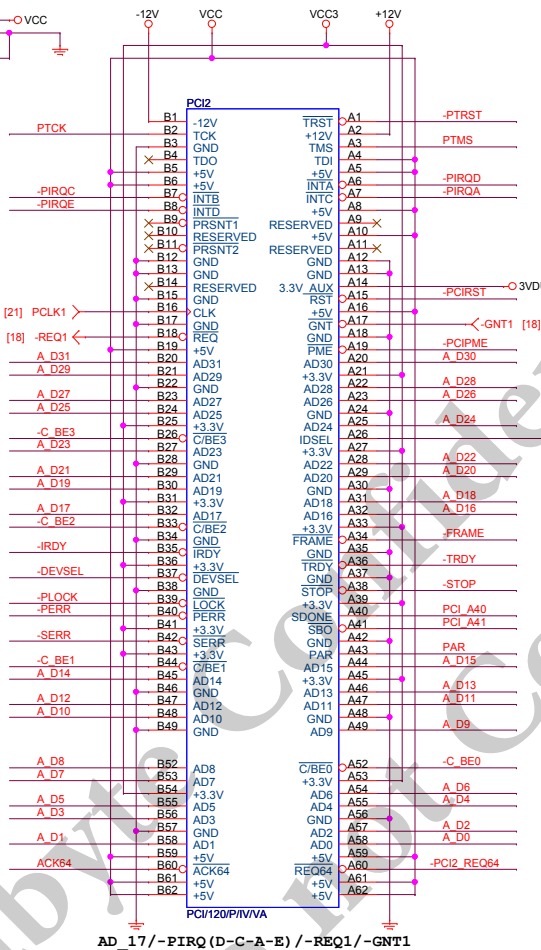
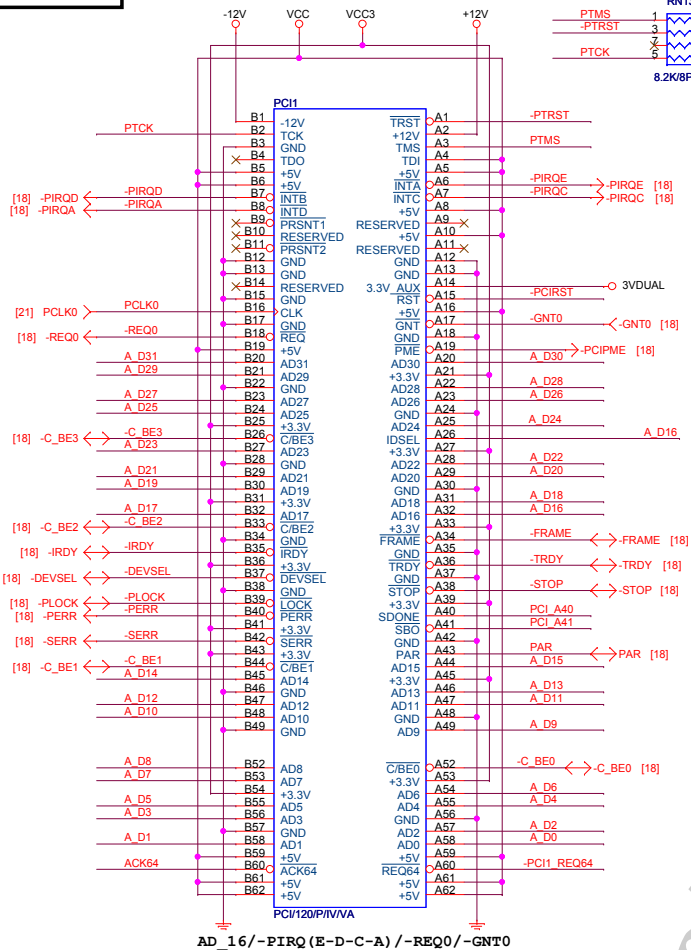


U9F			
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A23	VSS2	VSS102	R15
B1	VSS3	VSS103	R16
B8	VSS4	VSS104	R17
B11	VSS5	VSS105	R18
B14	VSS6	VSS106	T8
B17	VSS7	VSS107	T12
B20	VSS8	VSS108	T13
B26	VSS9	VSS109	T14
B28	VSS10	VSS110	T15
C2	VSS11	VSS111	T16
C6	VSS12	VSS112	T17
D10	VSS13	VSS113	U4
D13	VSS14	VSS114	U13
D18	VSS15	VSS115	U14
D21	VSS16	VSS116	U15
D24	VSS17	VSS117	U16
E1	VSS18	VSS118	U17
E2	VSS19	VSS119	U24
E8	VSS20	VSS120	U25
E15	VSS21	VSS121	U26
F3	VSS22	VSS122	U2
F4	VSS23	VSS123	V2
F5	VSS24	VSS124	V13
F12	VSS25	VSS125	V15
F27	VSS26	VSS126	V27
F28	VSS27	VSS127	V28
G1	VSS28	VSS128	V28
G2	VSS29	VSS129	W6
G5	VSS30	VSS130	W24
G6	VSS31	VSS131	W25
G9	VSS32	VSS132	W26
G14	VSS33	VSS133	Y3
G18	VSS34	VSS134	Y24
G21	VSS35	VSS135	Y27
G24	VSS36	VSS136	Y28
G25	VSS37	VSS137	AA1
G26	VSS38	VSS138	AA24
H3	VSS39	VSS139	AA25
H4	VSS40	VSS140	AA26
H5	VSS41	VSS141	AB4
H24	VSS42	VSS142	AB6
H27	VSS43	VSS143	AB11
H28	VSS44	VSS144	AB14
J1	VSS45	VSS145	AB16
J2	VSS46	VSS146	AB19
J5	VSS47	VSS147	AB21
J24	VSS48	VSS148	AB24
J25	VSS49	VSS149	AB27
J26	VSS50	VSS150	AB28
K24	VSS51	VSS151	AC2
K27	VSS52	VSS152	AC5
K28	VSS53	VSS153	AC9
L13	VSS54	VSS154	AC11
L15	VSS55	VSS155	AD1
L24	VSS56	VSS156	AD3
L25	VSS57	VSS157	AD4
L26	VSS58	VSS158	AD7
M3	VSS59	VSS159	AD8
M4	VSS60	VSS160	AD11
M5	VSS61	VSS161	AD15
M12	VSS62	VSS162	AD19
M13	VSS63	VSS163	AD23
M14	VSS64	VSS164	AE2
M15	VSS65	VSS165	AE4
M16	VSS66	VSS166	AE8
M17	VSS67	VSS167	AE11
M24	VSS68	VSS168	AE13
M27	VSS69	VSS169	AE18
M28	VSS70	VSS170	AE21
N1	VSS71	VSS171	AE24
N2	VSS72	VSS172	AE2
N5	VSS73	VSS173	AF4
N6	VSS74	VSS174	AF8
N11	VSS75	VSS175	AF11
N12	VSS76	VSS176	AF11
N13	VSS77	VSS177	AF27
N14	VSS78	VSS178	AF28
N15	VSS79	VSS179	AG1
N16	VSS80	VSS180	AG3
N17	VSS81	VSS181	AG7
N18	VSS82	VSS182	AG14
N24	VSS83	VSS183	AG17
N25	VSS84	VSS184	AG20
N26	VSS85	VSS185	AG24
P3	VSS86	VSS186	AH1
P4	VSS87	VSS187	AH3
P12	VSS88	VSS188	AH7
P13	VSS89	VSS189	AH12
P14	VSS90	VSS190	AH23
P15	VSS91	VSS191	AH27
P16	VSS92	VSS192	C27
P17	VSS93	VSS193	E4
P24	VSS94	VSS194	AG11
P27	VSS95		
P28	VSS96		
R1	VSS97		
R11	VSS98		
R12	VSS99		
R13	VSS100		

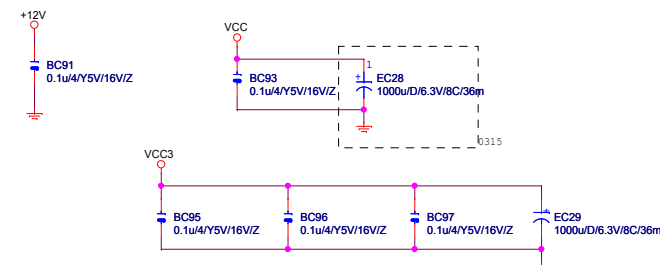
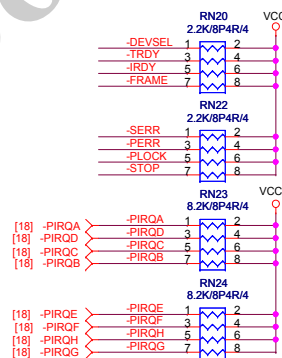
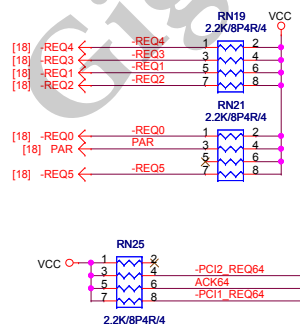
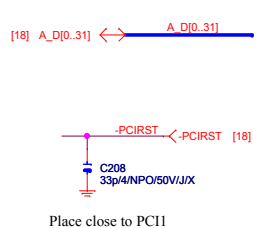
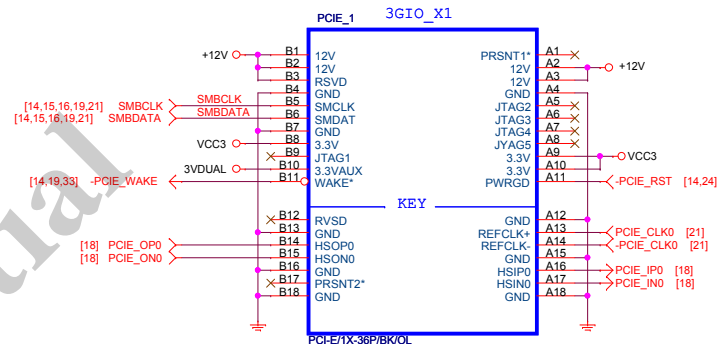




PCI1,2 SLOT
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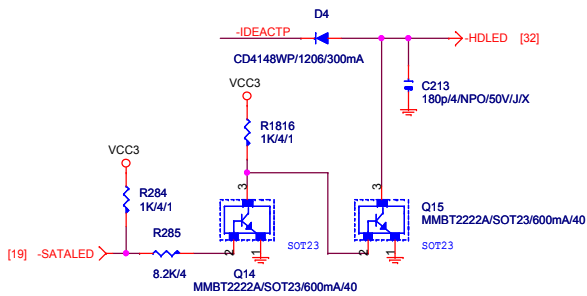


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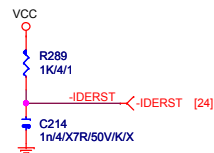




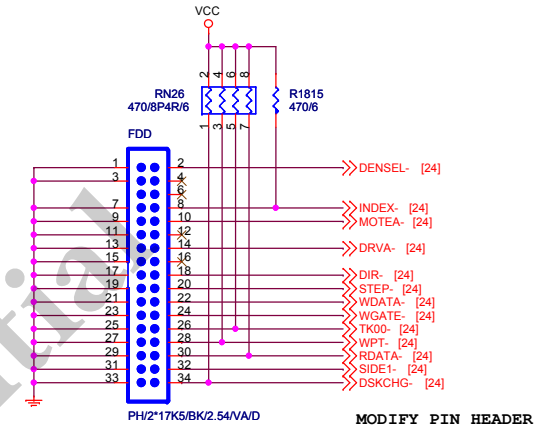
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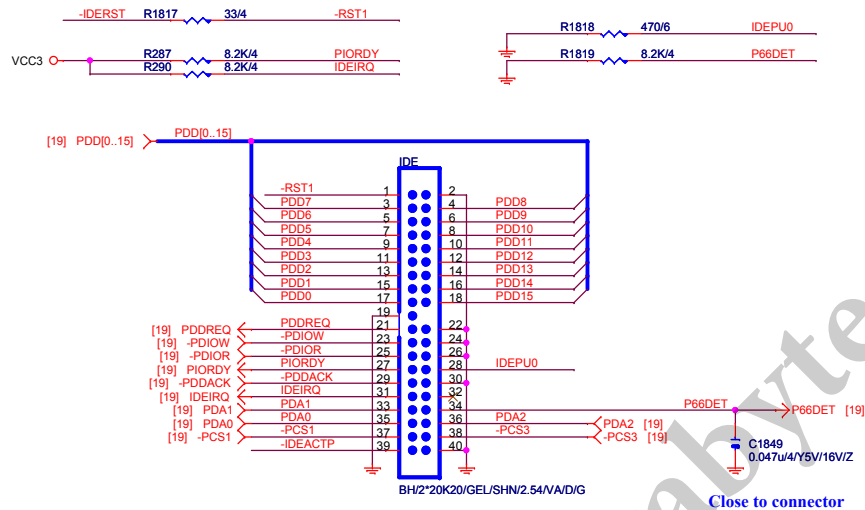
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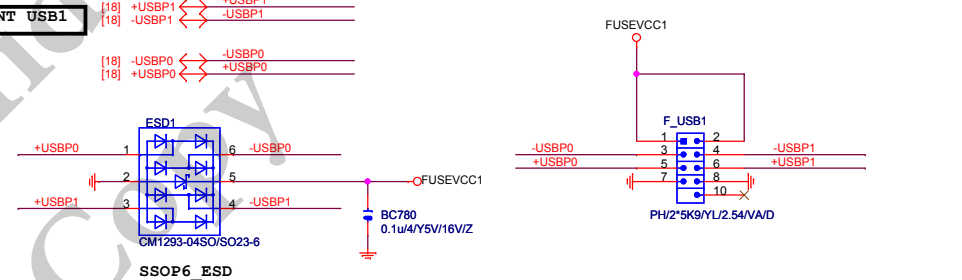
# FLOPPY



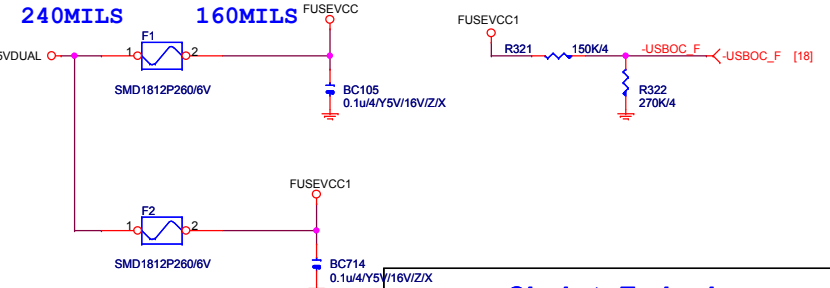
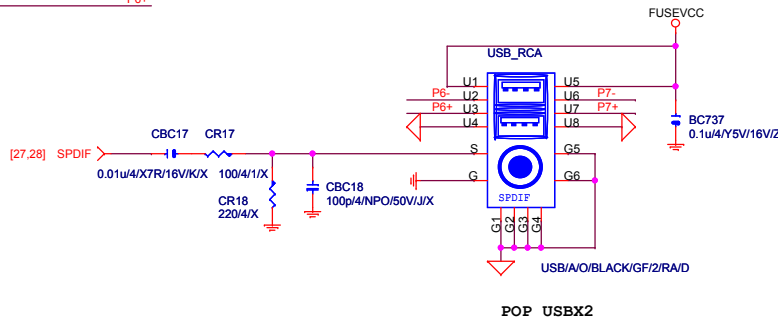
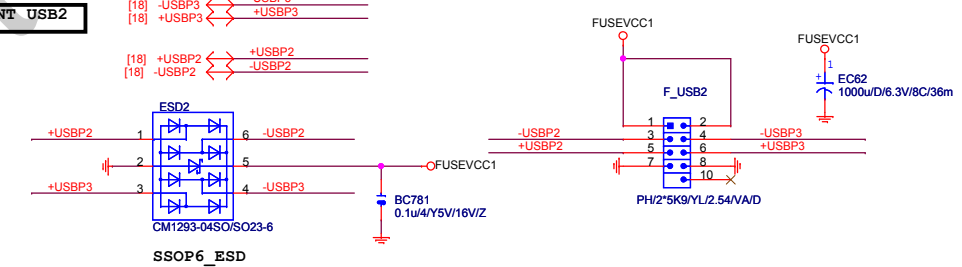
# IDE



# FRONT USB1



# FRONT USB2

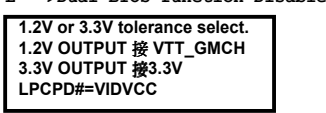
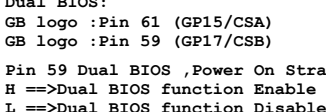
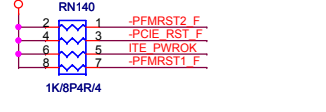
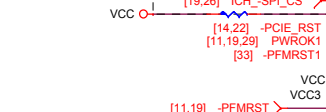
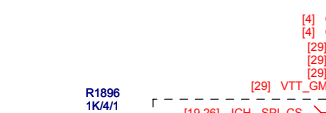
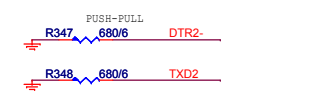


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Size	Document Number	GA-G31M-ES2L	
Date:	Friday, November 21, 2008	Sheet	23 of 33

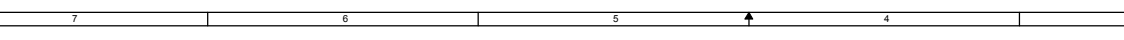
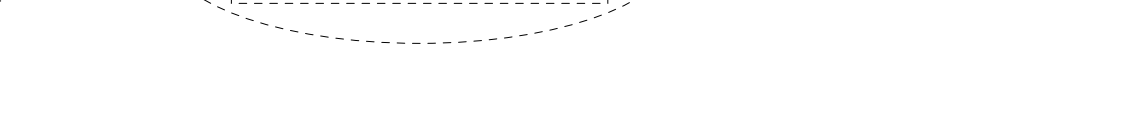
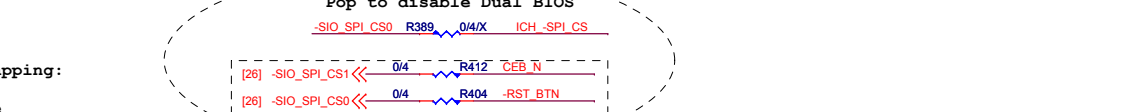
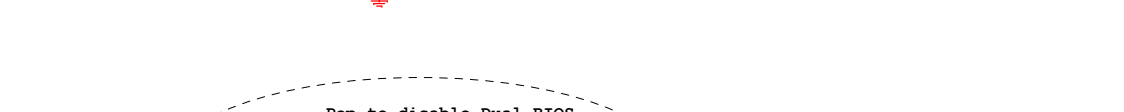
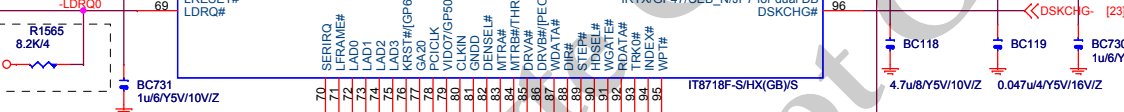
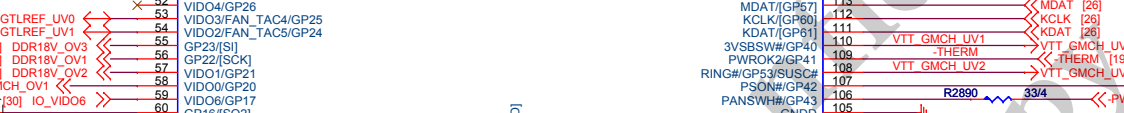
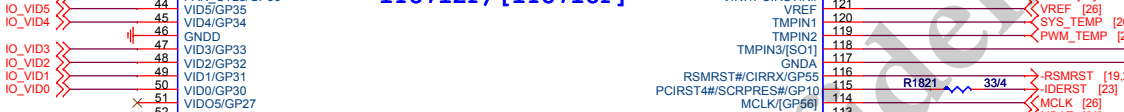
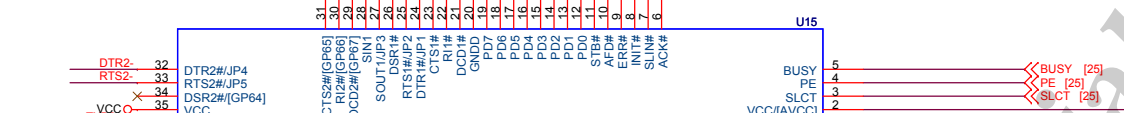
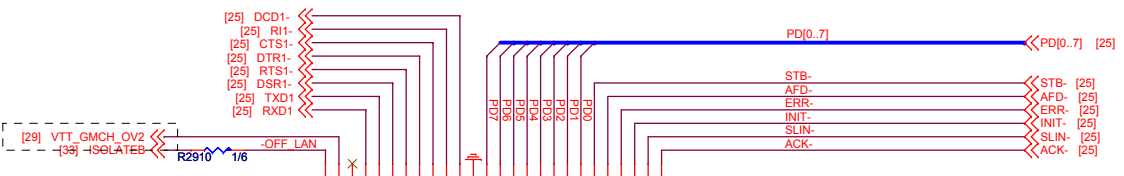
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==HIGH 100%

DEFAULT 50%

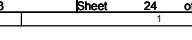
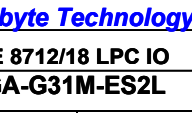
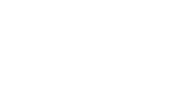
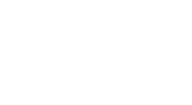
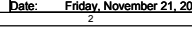
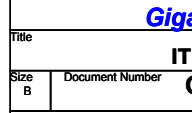
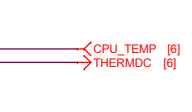
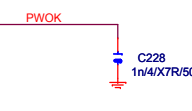
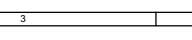
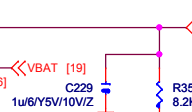
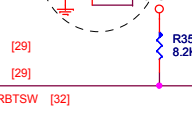
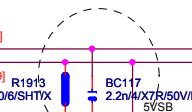
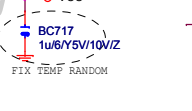
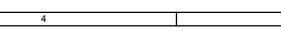
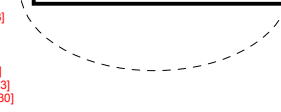
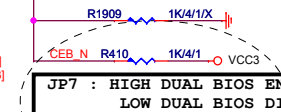
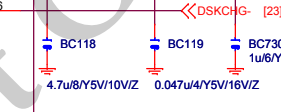
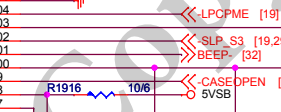
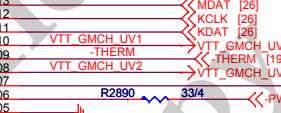
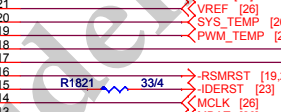
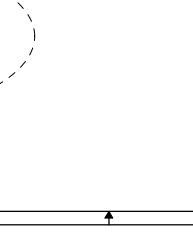
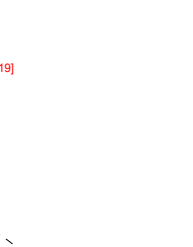
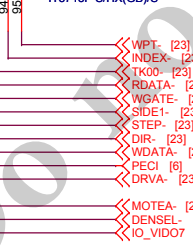
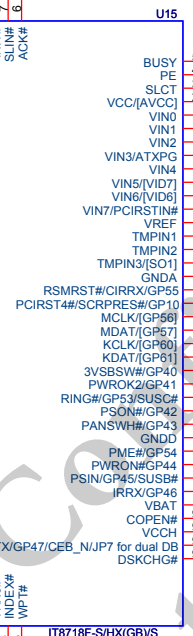


Dual BIOS:  
GB logo :Pin 61 (GP15/CSA)  
GB logo :Pin 59 (GP17/CSB)  
Pin 59 Dual BIOS ,Power On Strapping:  
H ==>Dual BIOS function Enable  
L ==>Dual BIOS function Disable

1.2V or 3.3V tolerance select.  
1.2V OUTPUT 接 VTT\_GMCH  
3.3V OUTPUT 接 3.3V  
LPCPD# =VIDVCC



IT8712F/[IT8718F]



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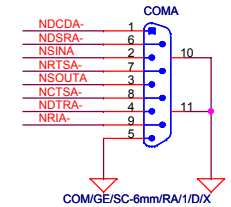
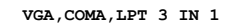
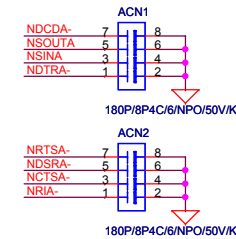
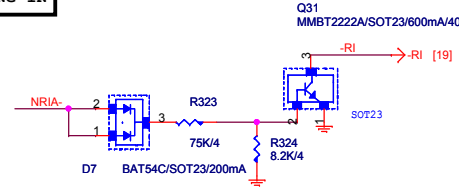
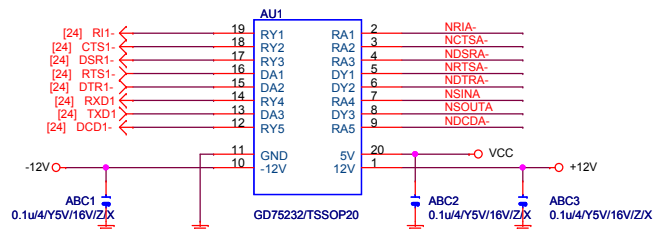
ITE 8712/18 LPC IO

GA-G31M-ES2L

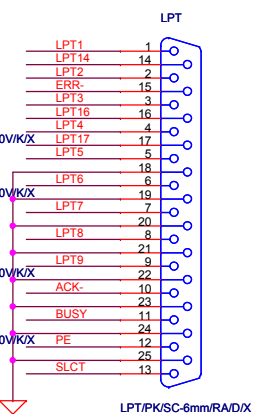
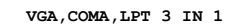
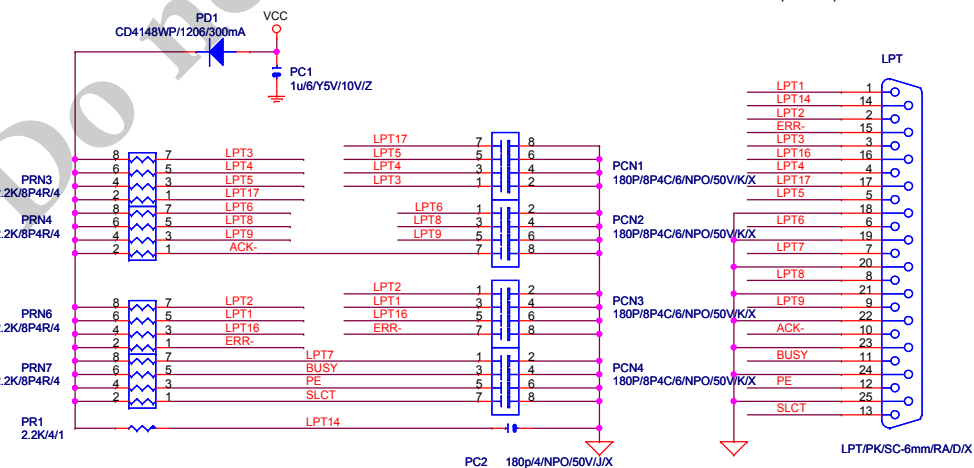
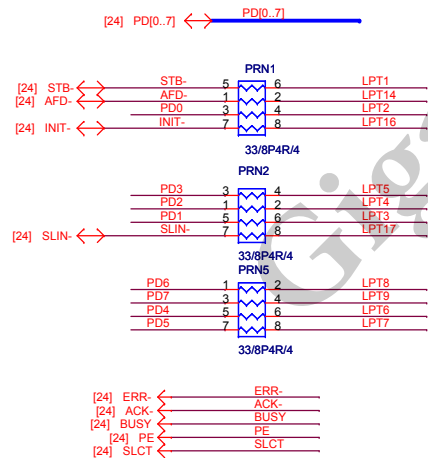
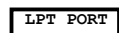
Rev 1.12

Title	ITE 8712/18 LPC IO
Size B	Document Number
Date:	Friday, November 21, 2008
Sheet	24 of 33

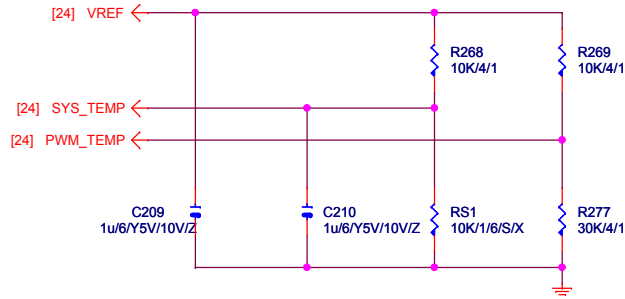




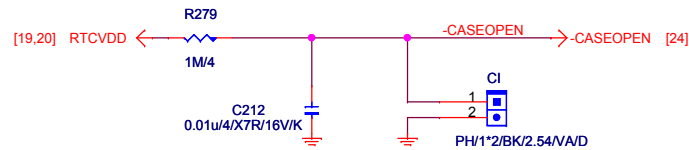
PLACE NEAR COM CONNECTOR



## TEMP H/W MONITOR

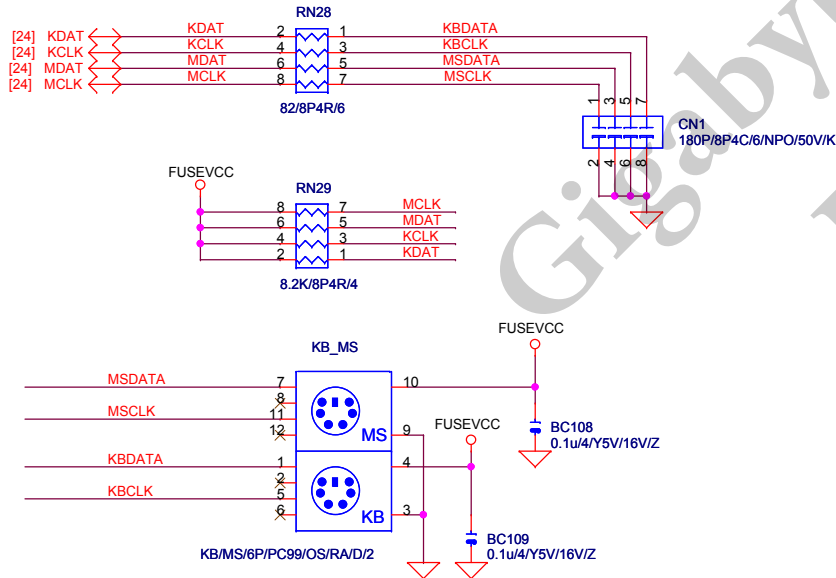


## CASE OPEN

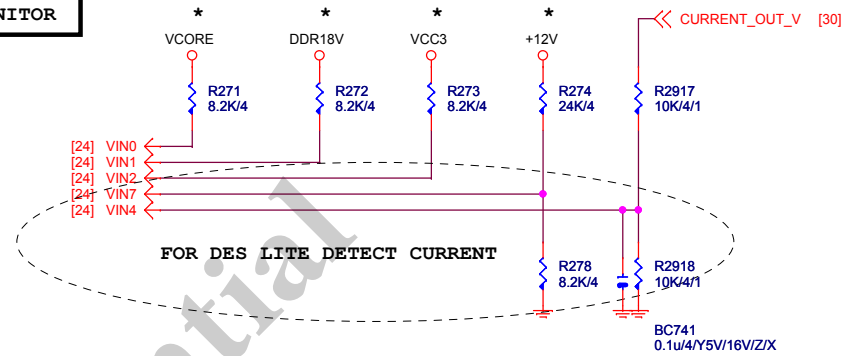


Case Open Circuits

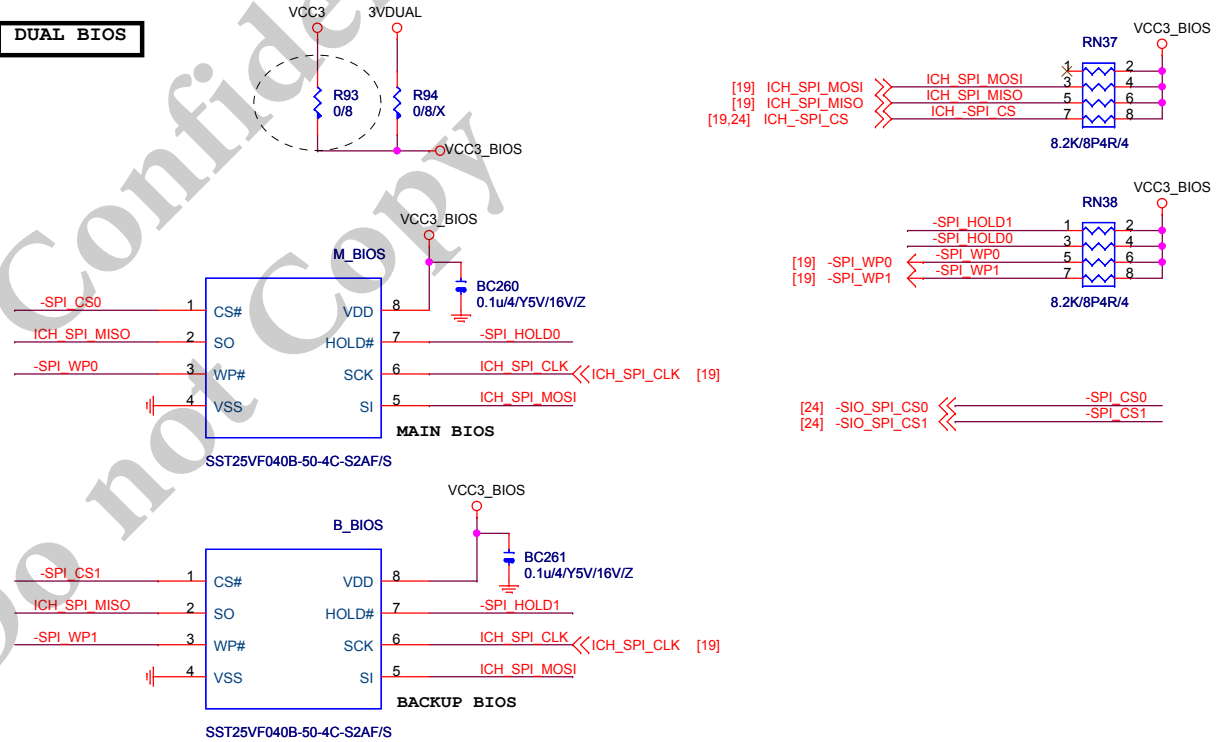
## KB/MS



## VOLTAGE-- H/W MONITOR

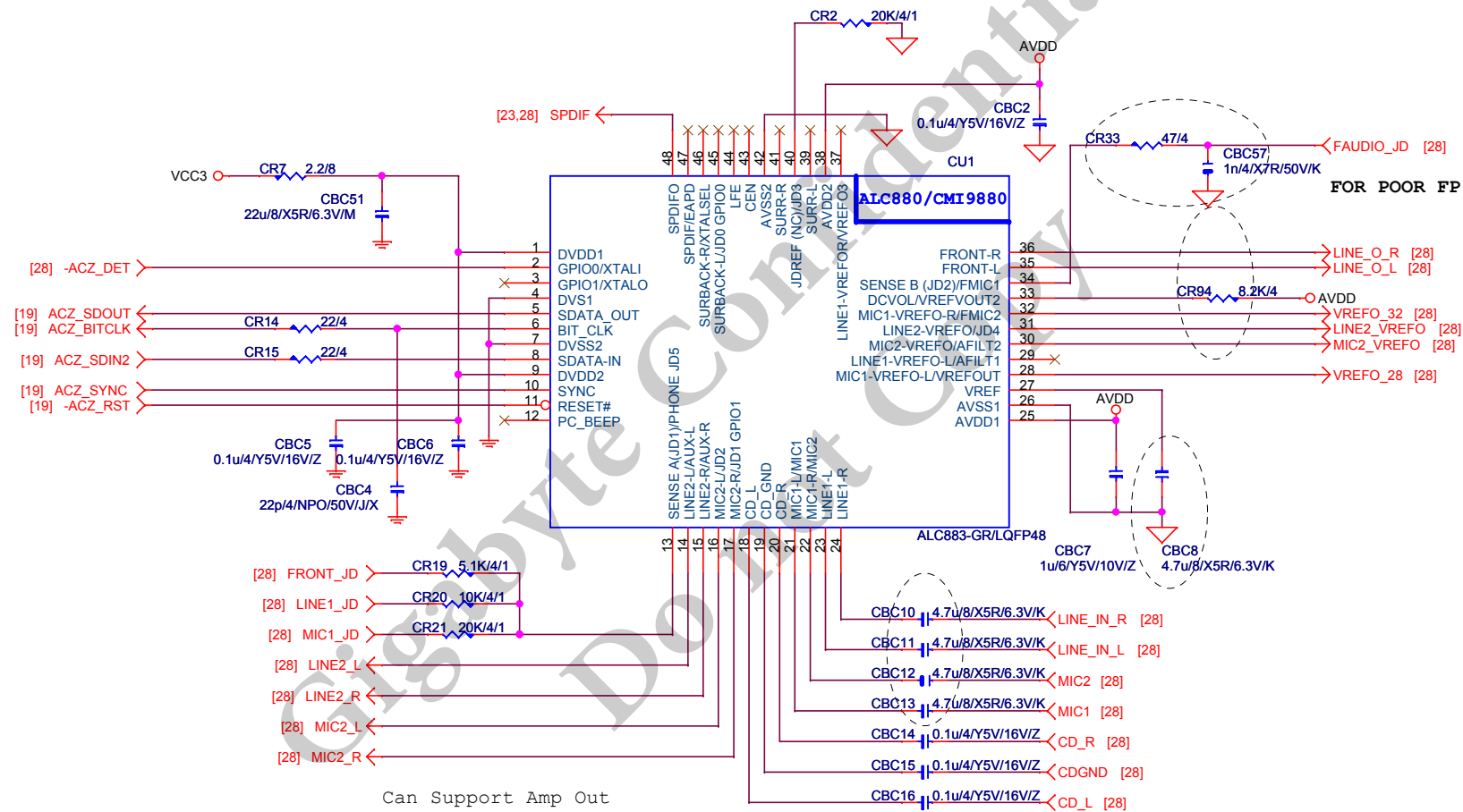


## DUAL BIOS



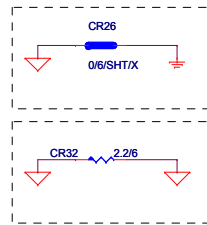
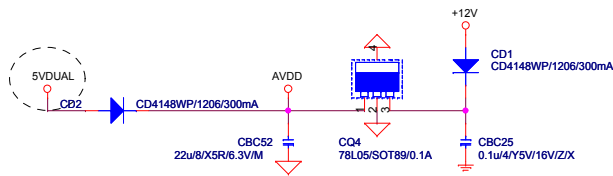
**Gigabyte Technology**

Title			HW-MONITOR/CI/KB/MS/BIOS	
Size	Custom	Document Number	GA-G31M-ES2L	
Date:	Friday, November 21, 2008	Sheet	26	of 33
Rev			1.12	

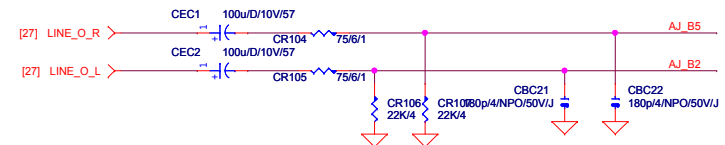
**Gigabyte Technology**

Title			AZALIA ALC883	
Size			Document Number	
Custom			GA-G31M-ES2L	
Date:			Friday, November 21, 2008	Rev 1.12
Sheet			27	of 33

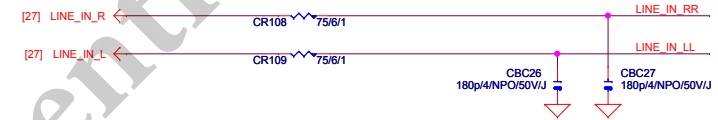
## CODEC POWER/EMI PAD



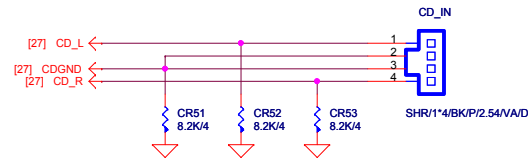
## LINE-OUT



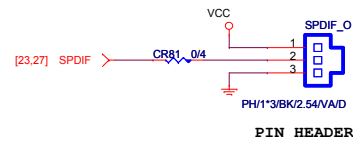
## LINE-IN



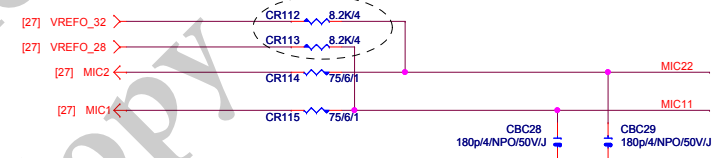
## CD IN



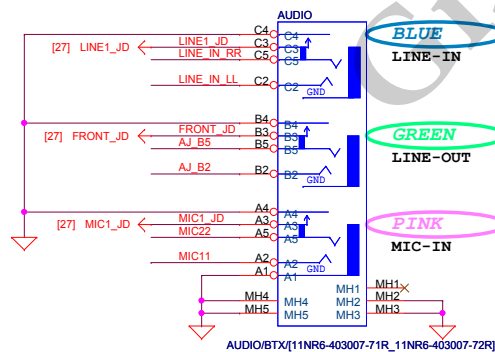
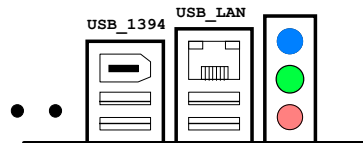
## SPDIF IN



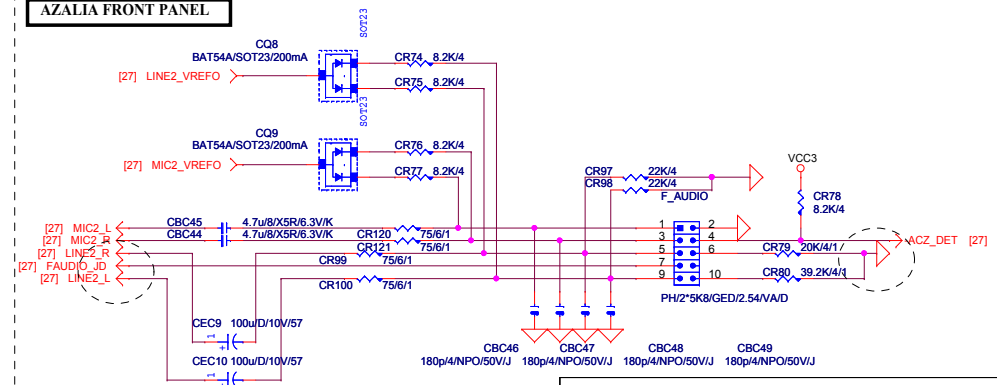
## MIC-IN



## AZALIA JACK



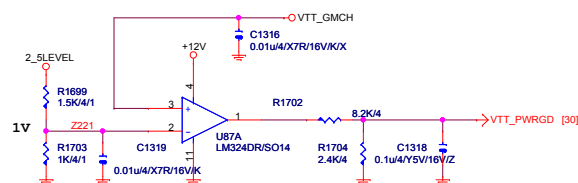
## AZALIA FRONT PANEL



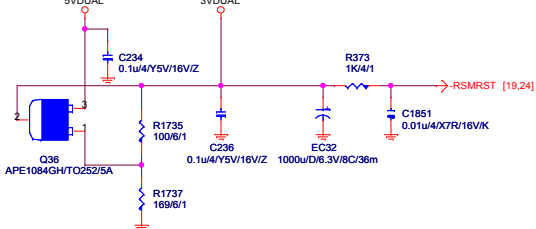
Gigabyte Technology

Title			AUDIO JACK	
Size			GA-G31M-ES2L	
Date:			Friday, November 21, 2008	Sheet 28 of 33

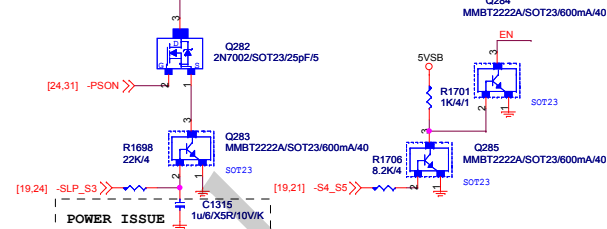
## VTT\_PWRGD



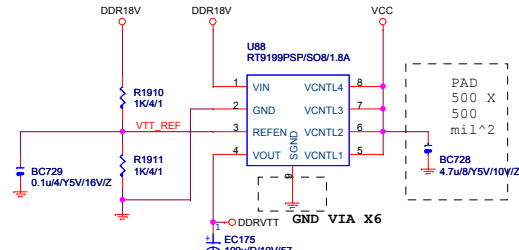
## 3VDUAL



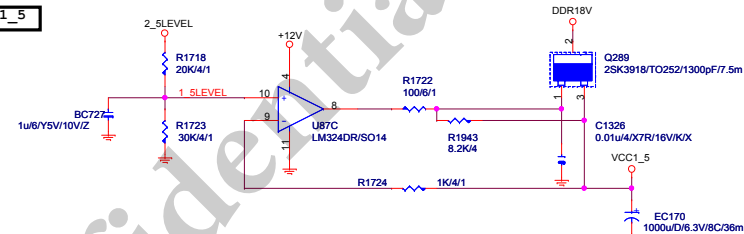
PWR SEQ
---------



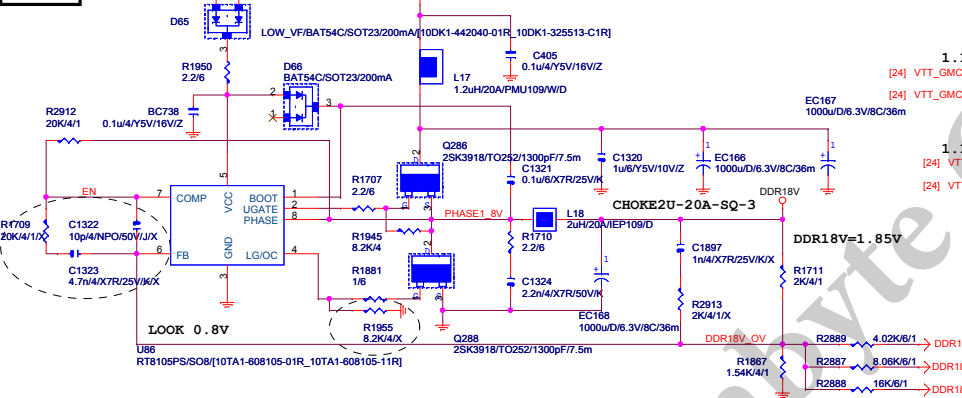
## DDRVTT



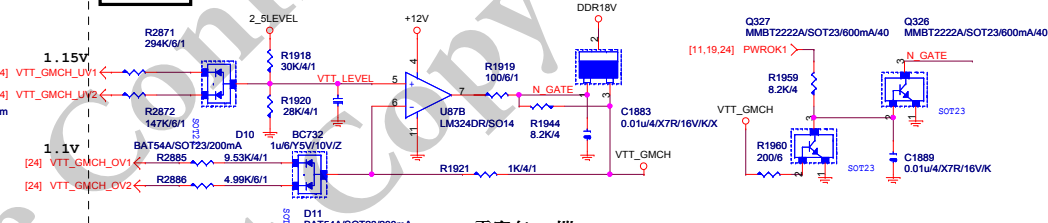
VCC1\_5



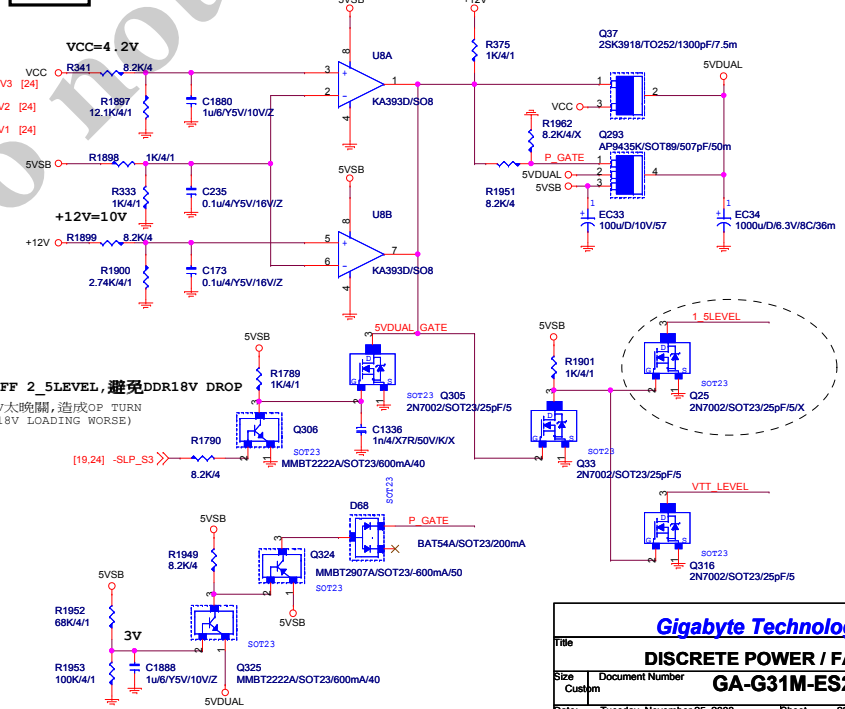
DDR18V



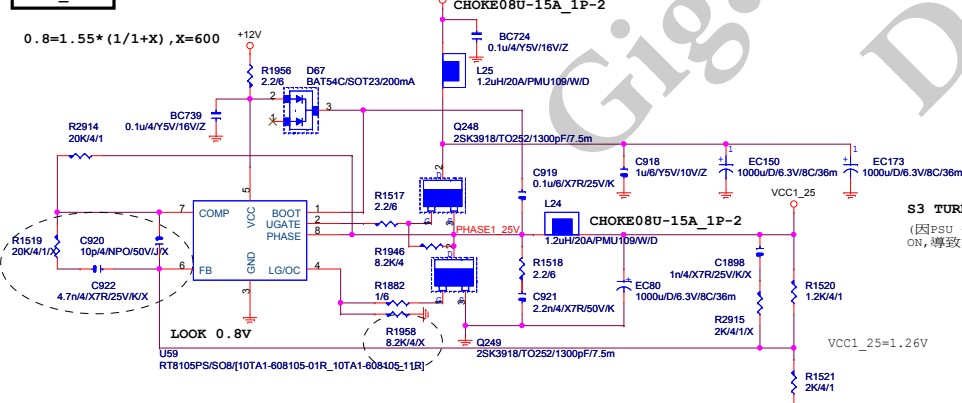
## VTT\_GMCH



## 5VDUAL



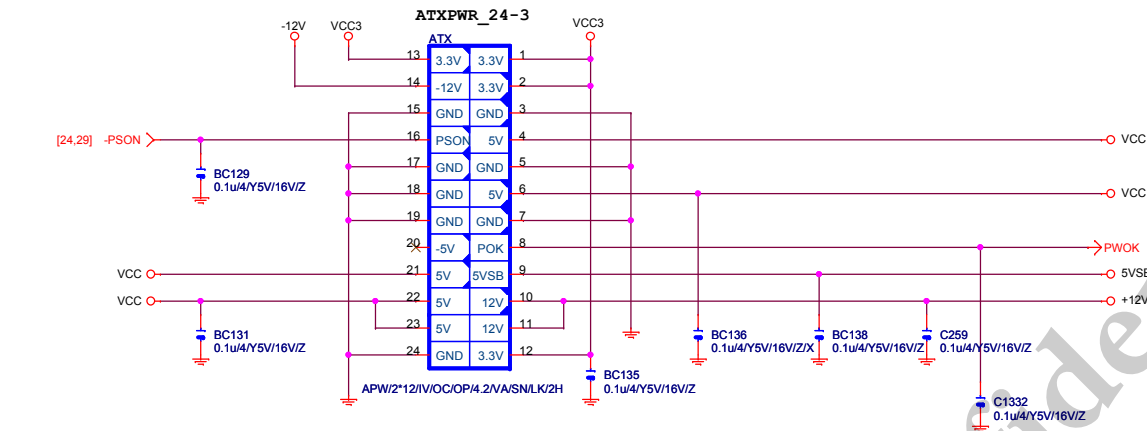
VCC1 25



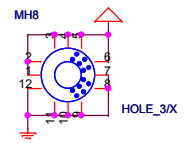
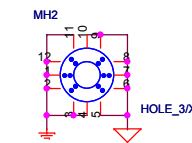
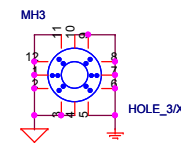
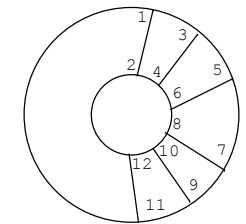
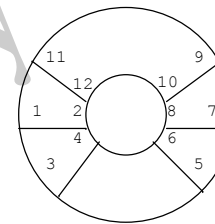
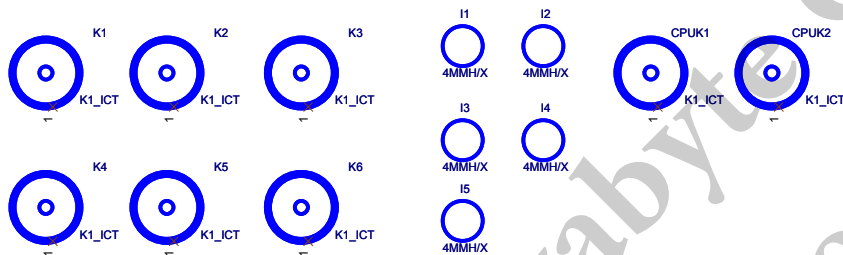
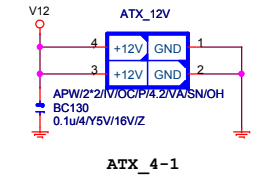
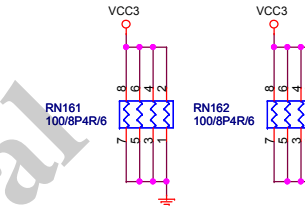
S3 TURN OFF 2\_5LEVEL, 避免DDR18V DR  
(因PSU +12V太晚關,造成OP TURN  
ON,導致DDR18V LOADING WORSE)



# ATX POWER CONNECTOR

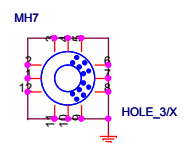
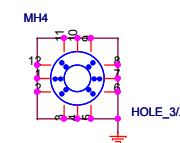
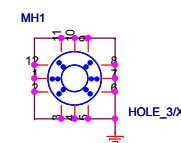


## FIX PWR AcBel (ATX-400C-A2ADB)



HOLE\_4-RH

HOLE\_4-RH-5MM



**Gigabyte Technology**

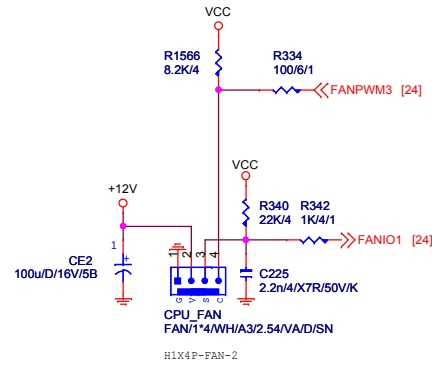
**ATX POWER CONNECTOR**

**GA-G31M-ES2L**

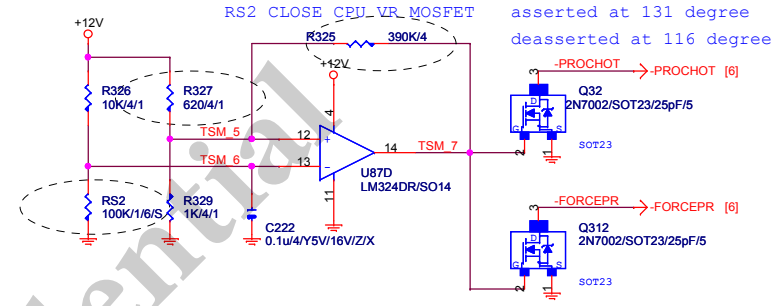
Rev 1.12

Date: Friday, November 21, 2008 Sheet 31 of 33

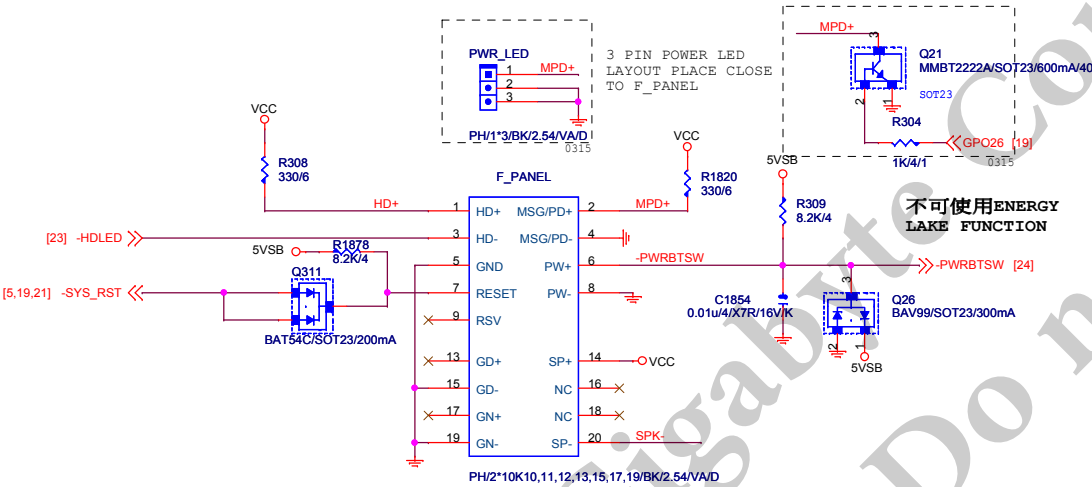
# CPU SMART FAN SMART FAN



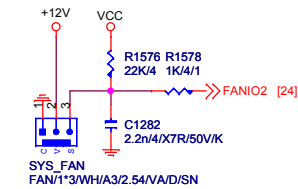
# PROCESSOR HOT



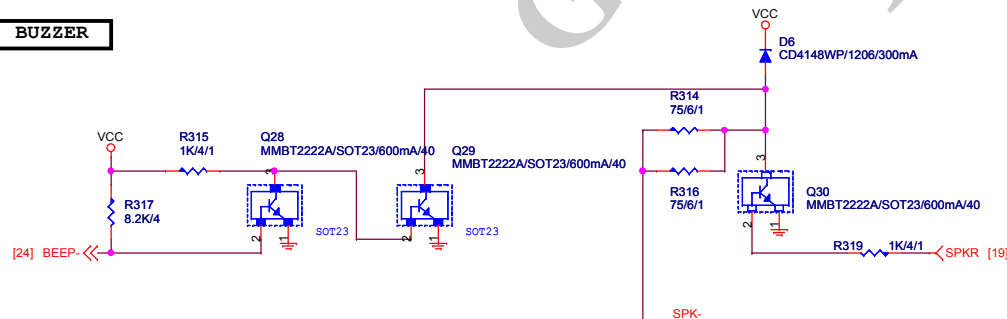
# INTEL FRONT PANEL



# SYS\_FAN



# BUZZER

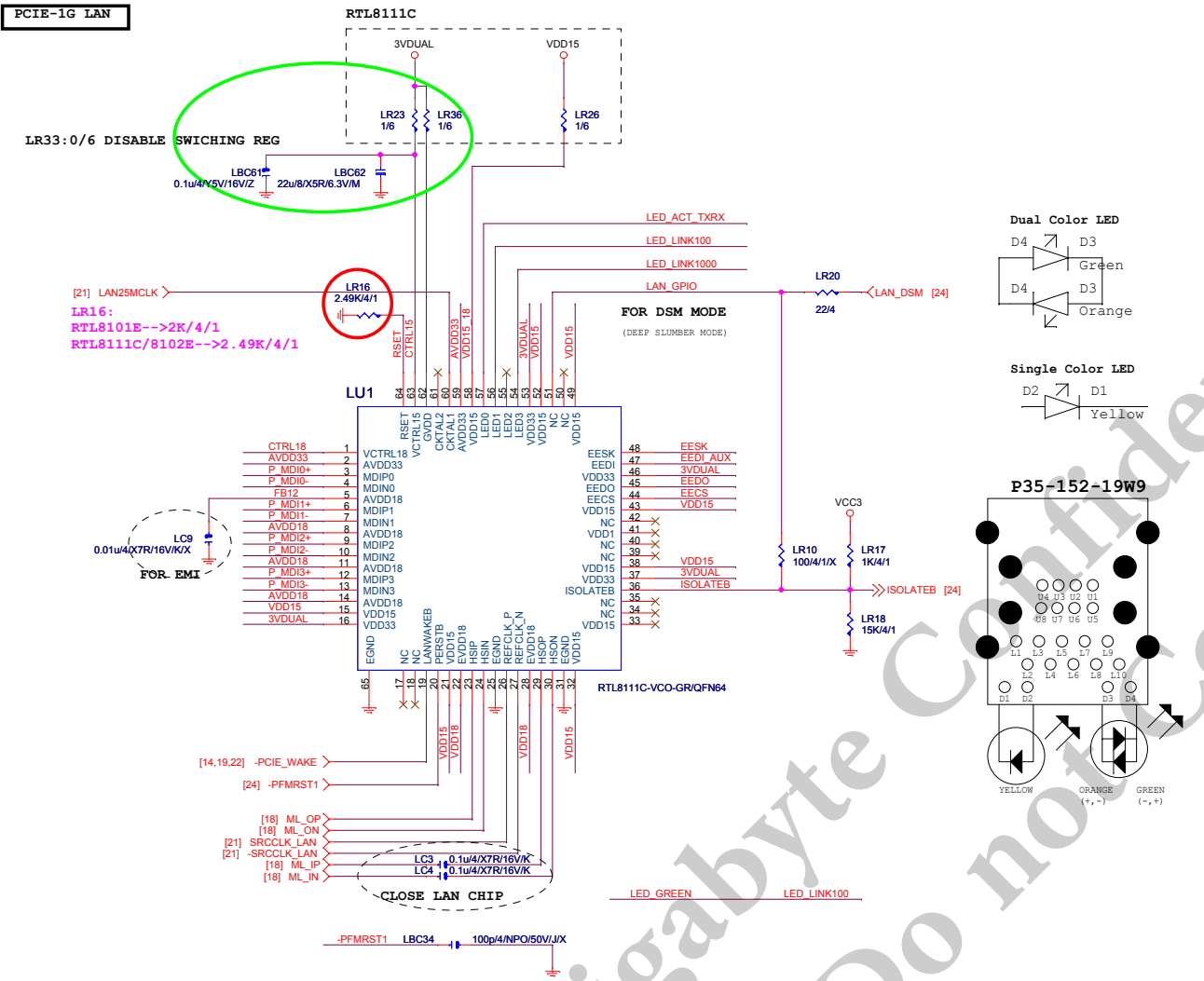


Gigabyte Technology

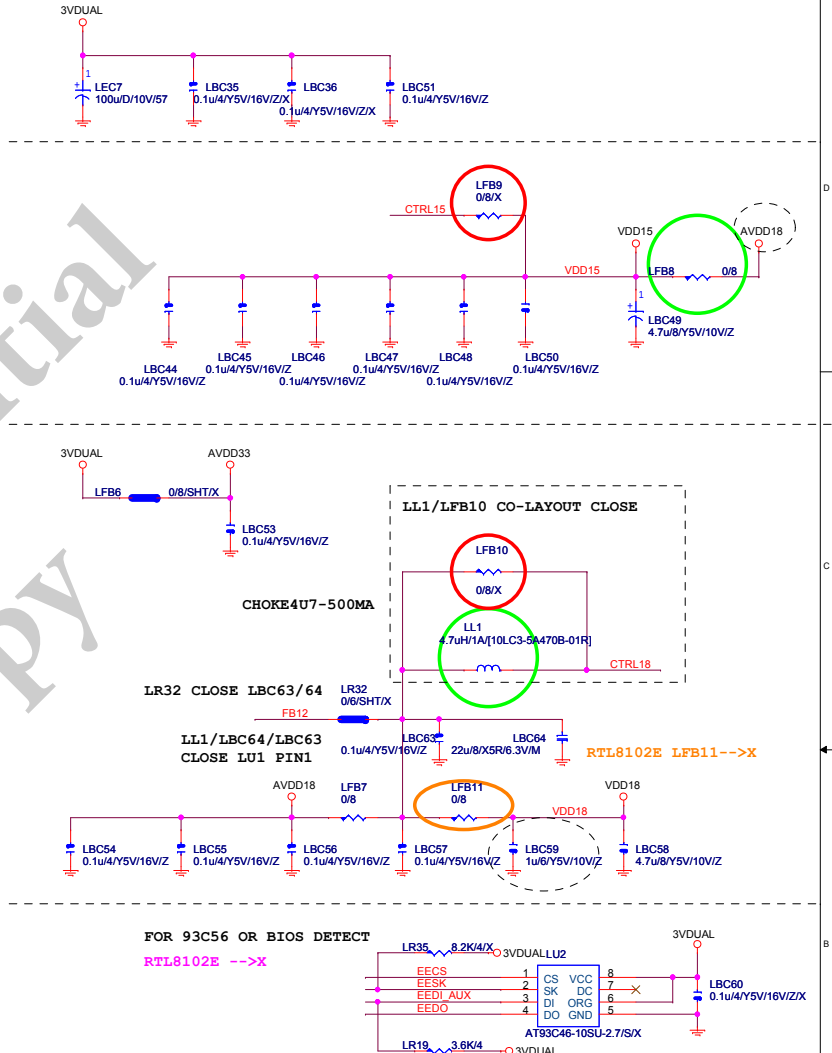
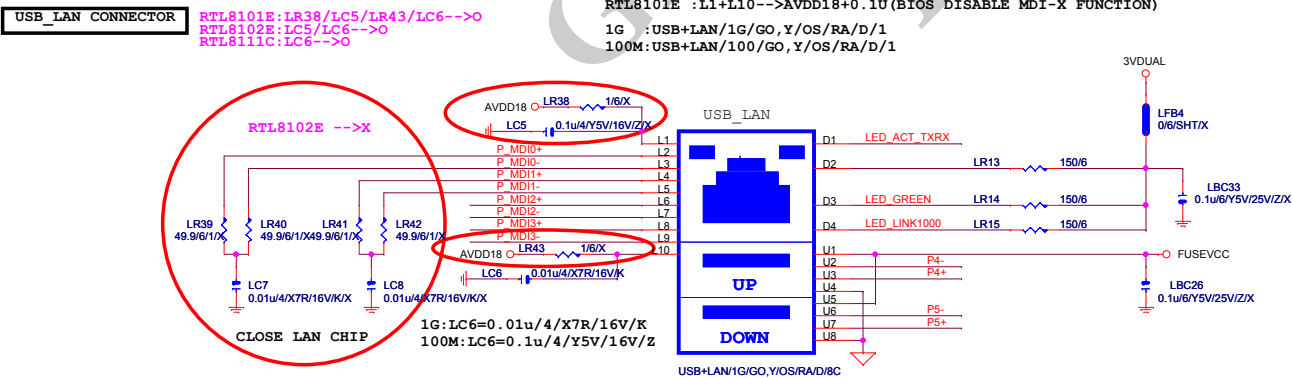
Title	FRONT PANEL		Rev
Size	Custom	Document Number	1.12
Date:	Friday, November 21, 2008	Sheet	32 of 33
GA-G31M-ES2L			



# PCIE-1G LAN



# USB\_LAN CONNECTOR



# USB\_LAN

