

BLOCK DIAGRAM

INTEL Pentium4 (478)

VCCORE = 1.75V / SLEEP : 1.3V
VCC3

PAGE 4, 5, 6

CLOCK GENERATOR

CKVDD = 3.3V

PAGE 17

PWM/OTHER POWER

VCCORE = 1.75V (650-1100MHZ) / SLEEP : 1.3V
5VSB = 12V + 12V, VCC, VCC3, 3VDDUAL
VTT_DDR = 2.5VSTR

PAGE 30, 31, 32

GMCH BROOKDALE-G-DDR

VCCORE = 1.75V / SLEEP : 1.3V
2.5VSTR = 2.5V(MEMORY) / SLEEP : 1.3V
VDDQ = 1.5V (AGP POWER 4X), HUBLINK

PAGE 7, 8, 9

DDR SDRAM DIMM X 3

2.5VSTR = 2.5V(MEMORY) / SLEEP : 1.3V
VTT_DDR = 1.25V

PAGE 10, 11, 12

AGP SLOT 4X

VDDQ = 1.5V (AGP POWER 4X)
VCC3 = 3.3V
+12V = 12V
3VDDUAL = 3.3V
VCC = 5V

PAGE 13

GAD0-31
ADSTB0, ADSTB0-
ADSTB1, ADSTB1-
SBA0-7
SBSTB, SBSTB-
GCB0-3-
ST0-2

AGP BUS

MAA0-14
MAA_CPC1-5
MAB_CPC1-5
MDD0-63
-DQSD0-7
DM0-7

HLO-10
CONTROL BUS

HUB LINK

ICH4

VCC25 = 2.5V(I/O MEMORY) / VLINK
3VDDUAL = 3.3V(SUSPEND POWER)
VCC3 = 3.3V
RTCVDD = 3.3V

PAGE 14, 15

FRONT USB CONN.

PAGE 22

IDE Primary and Secondary

VCC = 5V

PAGE 24

FWH

VCC = 5V
VCC3 = 3V

PAGE 16

REAR USB PORTS

VCC = 5V
5VSB = 5V
5VUSB = 5V

PAGE 33

PCI SLOT 1,2,3,4,5

+12 = 12V
-12 = -12V
VCC = 5V
VCC3 = 3V
3VDDUAL = 3V

PAGE 18, 19, 20

REALTEK 8100C LAN

+12 = 12V
-12 = -12V
VCC = 5V
VCC3 = 3V
3VDDUAL = 3V

PAGE 18, 19, 20

LPC I/O ITE8712
FDD IR/CIR S_IRQ GAME

VCC = 5V
VCC3 = 3V

PAGE 21

AC97 CODEC 9761A

+12V = 12V
VCC3 = 3.3V
VCC = 5V
AVDD = 5V

PAGE 27

AUDIO PORTS : FRONT AUDIO
LIN_OUT LINE_IN MIC
TELE CD_IN

PAGE 28

I/O PORTS :
COMA COMB LPT PS2

PAGE 26

FRONT PANEL /FANS

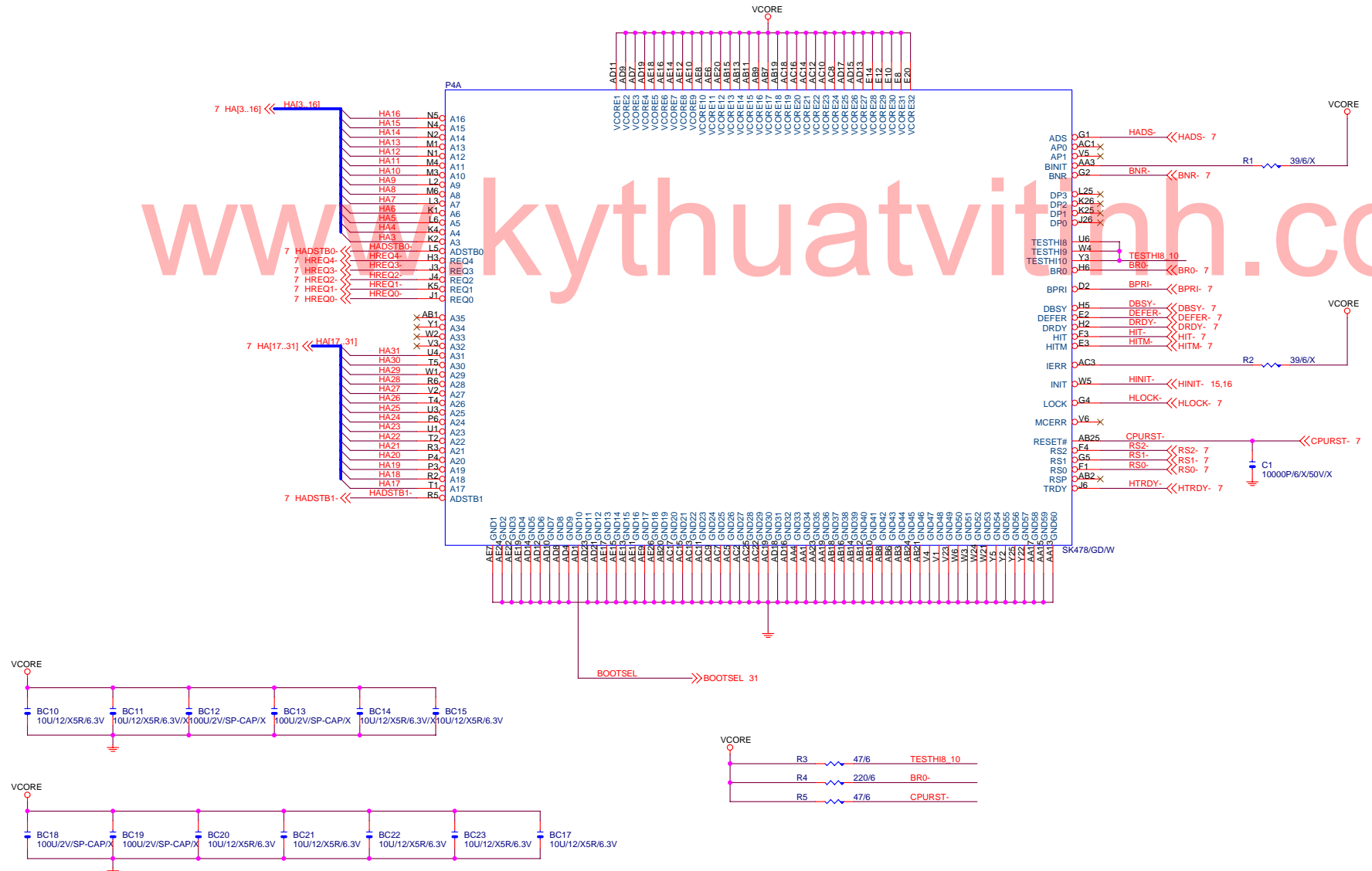
VCC = 5V
5VSB = 5V
+12 = 12V
AVCC = 5V

PAGE 23

www.kythuathitinh.com

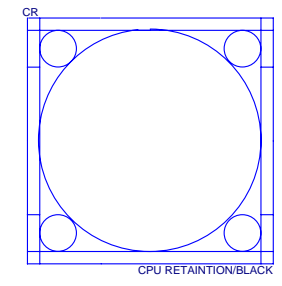
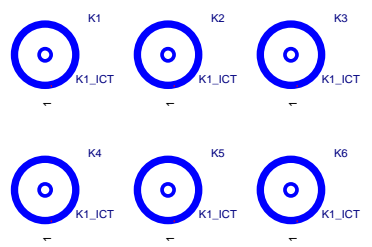
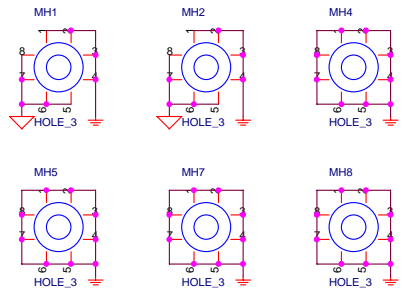
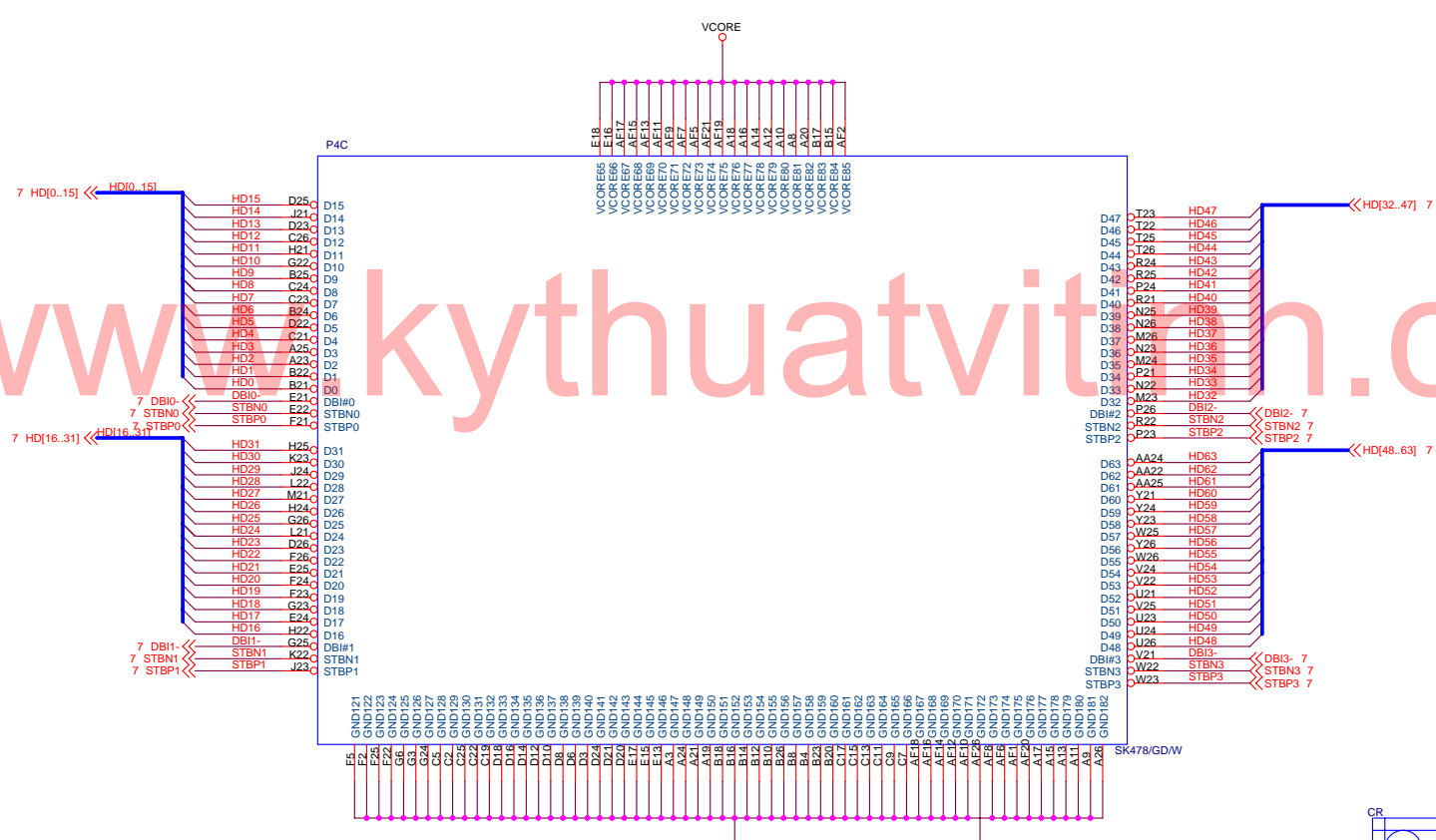
GIGABYTE			
BOM & PCB MODIFY HISTORY			
File			Rev
Size	Document Number		
Customer	81845GE-RZ		1.02
Date	Monday, January 03, 2005	Page	3 of 35

www.kythuatvitnh.com



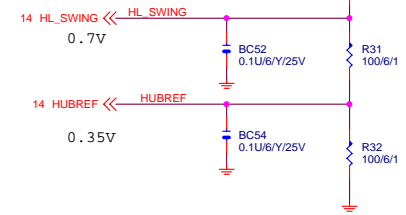
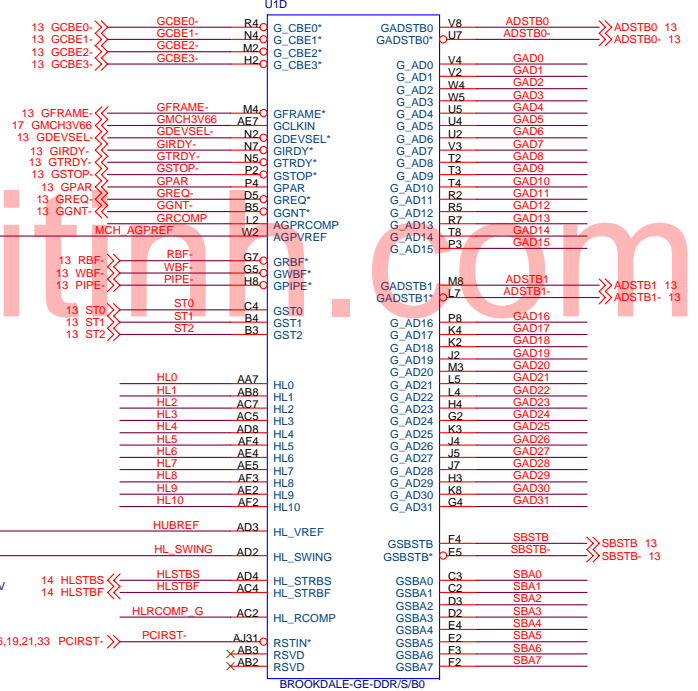
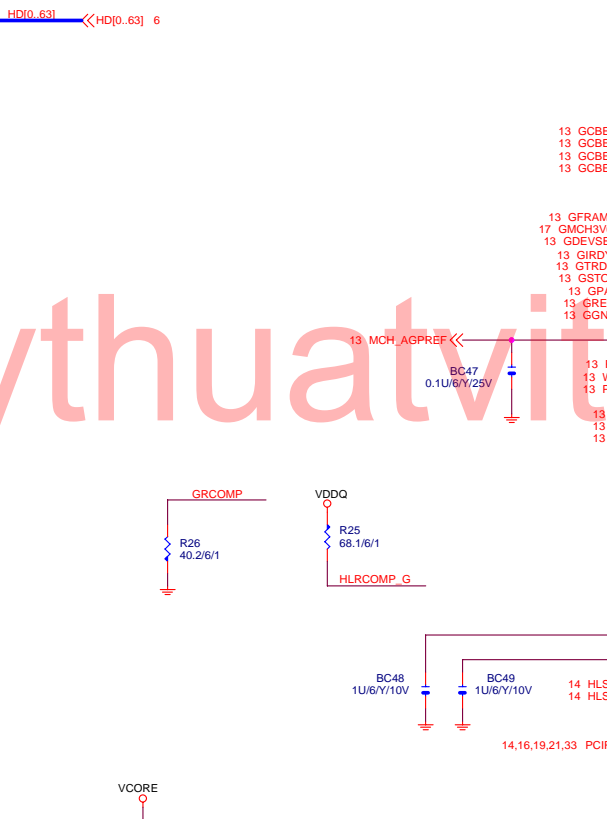
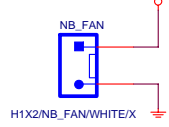
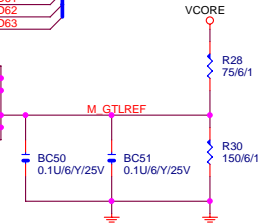
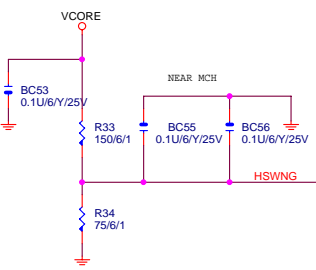
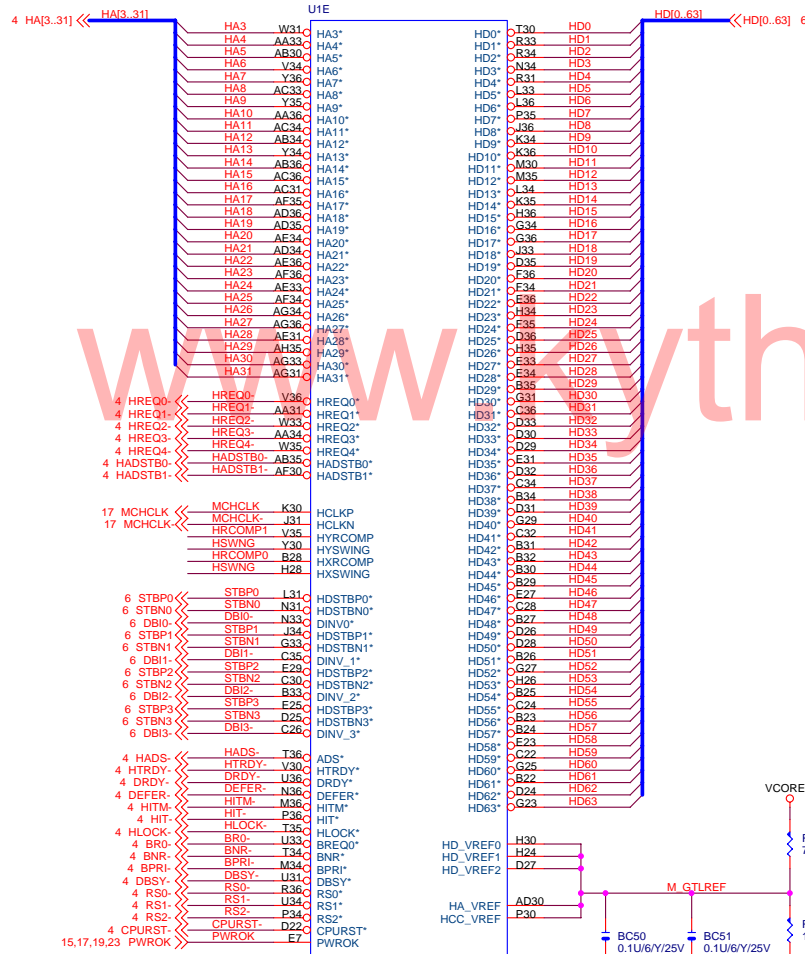
Title		
P4 478A		
Size	Document Number	Rev
Custom	81845GE-RZ	1.02
Date:	Monday, January 03, 2005	Sheet 4 of 35

www.kythuatvit.com



Title		P4 478C	
Size	Document Number	81845GE-RZ	
Custom			Rev 1.02
Date:	Monday, January 03, 2005	Sheet	6 of 35

13 GAD[0..31] <<====
 13 SBA[0..7] <<====
 14 HL[0..10] <<====



Title		
BROOKDALE-G_A		
Size	Document Number	Rev
Custom	81845GE-RZ	1.02
Date:	Monday, January 03, 2005	Sheet 7 of 35

- 11.12 MAA[0..12] >> MAA0..12I
- 11.12 MAA_CPC[1..5] >> MAA_CPC1..5I
- 11.12 MAB_CPC[1..5] >> MAB_CPC1..5I
- 10 DM[0..7] >> DM0..7I
- 10 MD[0..63] >> MD0..63I
- 10 -DQS[0..7] >> -DQS0..7I

U1C		U1F	
MAA0	AL25	SMAA0	SDQS0
MAA_CPC1	AN25	SMAA1	SDM0
MAA_CPC2	AP23	SMAA2	AN4
MAA3	AK20	SMAA3	MD0
MAA_CPC4	AL19	SMAA4	MD1
MAA_CPC5	AL17	SMAA5	MD2
MAA6	AP19	SMAA6	MD3
MAA7	AP17	SMAA7	MD4
MAA8	AN17	SMAA8	MD5
MAA9	AK16	SMAA9	MD6
MAA10	AK26	SMAA10	MD7
MAA11	AL15	SMAA11	AT7
MAA12	AN15	SMAA12	DM1
MAB_CPC1	AP25	SMAB1	-DQS1
MAB_CPC2	AN23	SMAB2	SDM1
MAB_CPC4	AN19	SMAB4	AT5
MAB_CPC5	AK18	SMAB5	MD8
-SWEA	AP29	SWE*	MD9
-SCASA	AN29	SCAS*	MD10
-SRASA	AK28	SRAS*	MD11
SBS0	AN27	SBA0	MD12
SBS1	AP27	SBA1	MD13
-CS0	AL29	SCS0*	MD14
-CS1	AP31	SCS1*	MD15
-CS2	AK30	SCS2*	AT12
-CS3	AN31	SCS3*	DM2
CKE0	AP13	SCKE0	AT15
CKE1	AN13	SCKE1	MD24
CKE2	AK14	SCKE2	MD25
CKE3	AK13	SCKE3	MD26
DCLK0	AL21	SCMD_CLK0	MD27
-DCLK0	AK22	SCMD_CLK1*	MD28
DCLK1	AN11	SCMD_CLK1*	MD29
-DCLK1	AP11	SCMD_CLK2*	MD30
DCLK2	AK34	SCMD_CLK2*	MD31
-DCLK2	AL33	SCMD_CLK3*	AT24
DCLK3	AP21	SCMD_CLK3*	DM4
-DCLK3	AN21	SCMD_CLK4*	MD32
DCLK4	AP9	SCMD_CLK4*	MD33
-DCLK4	AN9	SCMD_CLK5*	MD34
DCLK5	AP33	SCMD_CLK5*	MD35
-DCLK5	AN34	SCMD_CLK5*	MD36
DCLK6	AK22	SCMD_CLK6*	MD37
-DCLK6	AL22	SCMD_CLK7*	MD38
DCLK7	AP22	SCMD_CLK7*	MD39
-DCLK7	AN22	SCMD_CLK8*	MD40
DCLK8	AP32	SCMD_CLK8*	MD41
-DCLK8	AN32	SCMD_CLK9*	MD42
DCLK9	AP42	SCMD_CLK9*	MD43
-DCLK9	AN42	SCMD_CLK10*	MD44
DCLK10	AP52	SCMD_CLK10*	MD45
-DCLK10	AN52	SCMD_CLK11*	MD46
DCLK11	AP62	SCMD_CLK11*	MD47
-DCLK11	AN62	SCMD_CLK12*	MD48
DCLK12	AP72	SCMD_CLK12*	MD49
-DCLK12	AN72	SCMD_CLK13*	MD50
DCLK13	AP82	SCMD_CLK13*	MD51
-DCLK13	AN82	SCMD_CLK14*	MD52
DCLK14	AP92	SCMD_CLK14*	MD53
-DCLK14	AN92	SCMD_CLK15*	MD54
DCLK15	AP02	SCMD_CLK15*	MD55
-DCLK15	AN02	SCMD_CLK16*	MD56
DCLK16	AP12	SCMD_CLK16*	MD57
-DCLK16	AN12	SCMD_CLK17*	MD58
DCLK17	AP22	SCMD_CLK17*	MD59
-DCLK17	AN22	SCMD_CLK18*	MD60
DCLK18	AP32	SCMD_CLK18*	MD61
-DCLK18	AN32	SCMD_CLK19*	MD62
DCLK19	AP42	SCMD_CLK19*	MD63
-DCLK19	AN42	SCMD_CLK20*	MD64
DCLK20	AP52	SCMD_CLK20*	MD65
-DCLK20	AN52	SCMD_CLK21*	MD66
DCLK21	AP62	SCMD_CLK21*	MD67
-DCLK21	AN62	SCMD_CLK22*	MD68
DCLK22	AP72	SCMD_CLK22*	MD69
-DCLK22	AN72	SCMD_CLK23*	MD70
DCLK23	AP82	SCMD_CLK23*	MD71
-DCLK23	AN82	SCMD_CLK24*	MD72
DCLK24	AP92	SCMD_CLK24*	MD73
-DCLK24	AN92	SCMD_CLK25*	MD74
DCLK25	AP02	SCMD_CLK25*	MD75
-DCLK25	AN02	SCMD_CLK26*	MD76
DCLK26	AP12	SCMD_CLK26*	MD77
-DCLK26	AN12	SCMD_CLK27*	MD78
DCLK27	AP22	SCMD_CLK27*	MD79
-DCLK27	AN22	SCMD_CLK28*	MD80
DCLK28	AP32	SCMD_CLK28*	MD81
-DCLK28	AN32	SCMD_CLK29*	MD82
DCLK29	AP42	SCMD_CLK29*	MD83
-DCLK29	AN42	SCMD_CLK30*	MD84
DCLK30	AP52	SCMD_CLK30*	MD85
-DCLK30	AN52	SCMD_CLK31*	MD86
DCLK31	AP62	SCMD_CLK31*	MD87
-DCLK31	AN62	SCMD_CLK32*	MD88
DCLK32	AP72	SCMD_CLK32*	MD89
-DCLK32	AN72	SCMD_CLK33*	MD90
DCLK33	AP82	SCMD_CLK33*	MD91
-DCLK33	AN82	SCMD_CLK34*	MD92
DCLK34	AP92	SCMD_CLK34*	MD93
-DCLK34	AN92	SCMD_CLK35*	MD94
DCLK35	AP02	SCMD_CLK35*	MD95
-DCLK35	AN02	SCMD_CLK36*	MD96
DCLK36	AP12	SCMD_CLK36*	MD97
-DCLK36	AN12	SCMD_CLK37*	MD98
DCLK37	AP22	SCMD_CLK37*	MD99
-DCLK37	AN22	SCMD_CLK38*	MD100
DCLK38	AP32	SCMD_CLK38*	MD101
-DCLK38	AN32	SCMD_CLK39*	MD102
DCLK39	AP42	SCMD_CLK39*	MD103
-DCLK39	AN42	SCMD_CLK40*	MD104
DCLK40	AP52	SCMD_CLK40*	MD105
-DCLK40	AN52	SCMD_CLK41*	MD106
DCLK41	AP62	SCMD_CLK41*	MD107
-DCLK41	AN62	SCMD_CLK42*	MD108
DCLK42	AP72	SCMD_CLK42*	MD109
-DCLK42	AN72	SCMD_CLK43*	MD110
DCLK43	AP82	SCMD_CLK43*	MD111
-DCLK43	AN82	SCMD_CLK44*	MD112
DCLK44	AP92	SCMD_CLK44*	MD113
-DCLK44	AN92	SCMD_CLK45*	MD114
DCLK45	AP02	SCMD_CLK45*	MD115
-DCLK45	AN02	SCMD_CLK46*	MD116
DCLK46	AP12	SCMD_CLK46*	MD117
-DCLK46	AN12	SCMD_CLK47*	MD118
DCLK47	AP22	SCMD_CLK47*	MD119
-DCLK47	AN22	SCMD_CLK48*	MD120
DCLK48	AP32	SCMD_CLK48*	MD121
-DCLK48	AN32	SCMD_CLK49*	MD122
DCLK49	AP42	SCMD_CLK49*	MD123
-DCLK49	AN42	SCMD_CLK50*	MD124
DCLK50	AP52	SCMD_CLK50*	MD125
-DCLK50	AN52	SCMD_CLK51*	MD126
DCLK51	AP62	SCMD_CLK51*	MD127
-DCLK51	AN62	SCMD_CLK52*	MD128
DCLK52	AP72	SCMD_CLK52*	MD129
-DCLK52	AN72	SCMD_CLK53*	MD130
DCLK53	AP82	SCMD_CLK53*	MD131
-DCLK53	AN82	SCMD_CLK54*	MD132
DCLK54	AP92	SCMD_CLK54*	MD133
-DCLK54	AN92	SCMD_CLK55*	MD134
DCLK55	AP02	SCMD_CLK55*	MD135
-DCLK55	AN02	SCMD_CLK56*	MD136
DCLK56	AP12	SCMD_CLK56*	MD137
-DCLK56	AN12	SCMD_CLK57*	MD138
DCLK57	AP22	SCMD_CLK57*	MD139
-DCLK57	AN22	SCMD_CLK58*	MD140
DCLK58	AP32	SCMD_CLK58*	MD141
-DCLK58	AN32	SCMD_CLK59*	MD142
DCLK59	AP42	SCMD_CLK59*	MD143
-DCLK59	AN42	SCMD_CLK60*	MD144
DCLK60	AP52	SCMD_CLK60*	MD145
-DCLK60	AN52	SCMD_CLK61*	MD146
DCLK61	AP62	SCMD_CLK61*	MD147
-DCLK61	AN62	SCMD_CLK62*	MD148
DCLK62	AP72	SCMD_CLK62*	MD149
-DCLK62	AN72	SCMD_CLK63*	MD150
DCLK63	AP82	SCMD_CLK63*	MD151
-DCLK63	AN82	SCMD_CLK64*	MD152
DCLK64	AP92	SCMD_CLK64*	MD153
-DCLK64	AN92	SCMD_CLK65*	MD154
DCLK65	AP02	SCMD_CLK65*	MD155
-DCLK65	AN02	SCMD_CLK66*	MD156
DCLK66	AP12	SCMD_CLK66*	MD157
-DCLK66	AN12	SCMD_CLK67*	MD158
DCLK67	AP22	SCMD_CLK67*	MD159
-DCLK67	AN22	SCMD_CLK68*	MD160
DCLK68	AP32	SCMD_CLK68*	MD161
-DCLK68	AN32	SCMD_CLK69*	MD162
DCLK69	AP42	SCMD_CLK69*	MD163
-DCLK69	AN42	SCMD_CLK70*	MD164
DCLK70	AP52	SCMD_CLK70*	MD165
-DCLK70	AN52	SCMD_CLK71*	MD166
DCLK71	AP62	SCMD_CLK71*	MD167
-DCLK71	AN62	SCMD_CLK72*	MD168
DCLK72	AP72	SCMD_CLK72*	MD169
-DCLK72	AN72	SCMD_CLK73*	MD170
DCLK73	AP82	SCMD_CLK73*	MD171
-DCLK73	AN82	SCMD_CLK74*	MD172
DCLK74	AP92	SCMD_CLK74*	MD173
-DCLK74	AN92	SCMD_CLK75*	MD174
DCLK75	AP02	SCMD_CLK75*	MD175
-DCLK75	AN02	SCMD_CLK76*	MD176
DCLK76	AP12	SCMD_CLK76*	MD177
-DCLK76	AN12	SCMD_CLK77*	MD178
DCLK77	AP22	SCMD_CLK77*	MD179
-DCLK77	AN22	SCMD_CLK78*	MD180
DCLK78	AP32	SCMD_CLK78*	MD181
-DCLK78	AN32	SCMD_CLK79*	MD182
DCLK79	AP42	SCMD_CLK79*	MD183
-DCLK79	AN42	SCMD_CLK80*	MD184
DCLK80	AP52	SCMD_CLK80*	MD185
-DCLK80	AN52	SCMD_CLK81*	MD186
DCLK81	AP62	SCMD_CLK81*	MD187
-DCLK81	AN62	SCMD_CLK82*	MD188
DCLK82	AP72	SCMD_CLK82*	MD189
-DCLK82	AN72	SCMD_CLK83*	MD190
DCLK83	AP82	SCMD_CLK83*	MD191
-DCLK83	AN82	SCMD_CLK84*	MD192
DCLK84	AP92	SCMD_CLK84*	MD193
-DCLK84	AN92	SCMD_CLK85*	MD194
DCLK85	AP02	SCMD_CLK85*	MD195
-DCLK85	AN02	SCMD_CLK86*	MD196
DCLK86	AP12	SCMD_CLK86*	MD197
-DCLK86	AN12	SCMD_CLK87*	MD198
DCLK87	AP22	SCMD_CLK87*	MD199
-DCLK87	AN22	SCMD_CLK88*	MD200
DCLK88	AP32	SCMD_CLK88*	MD201
-DCLK88	AN32	SCMD_CLK89*	MD202
DCLK89	AP42	SCMD_CLK89*	MD203
-DCLK89	AN42	SCMD_CLK90*	MD204
DCLK90	AP52	SCMD_CLK90*	MD205
-DCLK90	AN52	SCMD_CLK91*	MD206
DCLK91	AP62	SCMD_CLK91*	MD207
-DCLK91	AN62	SCMD_CLK92*	MD208
DCLK92	AP72	SCMD_CLK92*	MD209
-DCLK92	AN72	SCMD_CLK93*	MD210
DCLK93	AP82	SCMD_CLK93*	MD211
-DCLK93	AN82	SCMD_CLK94*	MD212
DCLK94	AP92	SCMD_CLK94*	MD213
-DCLK94	AN92	SCMD_CLK95*	MD214
DCLK95	AP02	SCMD_CLK95*	MD215
-DCLK95	AN02	SCMD_CLK96*	MD216
DCLK96	AP12	SCMD_CLK96*	MD217
-DCLK96	AN12	SCMD_CLK97*	MD218
DCLK97	AP22	SCMD_CLK97*	MD219
-DCLK97	AN22	SCMD_CLK98*	MD220
DCLK98	AP32	SCMD_CLK98*	MD221
-DCLK98	AN32	SCMD_CLK99*	MD222
DCLK99	AP42	SCMD_CLK99*	MD223
-DCLK99	AN42	SCMD_CLK100*	MD224
DCLK100	AP52	SCMD_CLK100*	MD225
-DCLK100	AN52	SCMD_CLK101*	MD226
DCLK101	AP62	SCMD_CLK101*	MD227
-DCLK101	AN62	SCMD_CLK102*	MD228
DCLK102	AP72	SCMD_CLK102*	MD229
-DCLK102	AN72	SCMD_CLK103*	MD230
DCLK103	AP82	SCMD_CLK103*	MD231
-DCLK103	AN82	SCMD_CLK104*	MD232
DCLK104	AP92	SCMD_CLK104*	MD233
-DCLK104	AN92	SCMD_CLK105*	MD234
DCLK105	AP02	SCMD_CLK105*	MD235
-DCLK105	AN02	SCMD_CLK106*	MD236
DCLK106	AP12	SCMD_CLK106*	MD237
-DCLK106	AN12	SCMD_CLK107*	MD238
DCLK107	AP22	SCMD_CLK107*	MD239
-DCLK107	AN22	SCMD_CLK108*	MD240
DCLK108	AP32	SCMD_CLK108*	MD241
-DCLK108	AN32	SCMD_CLK109*	MD242
DCLK109	AP42	SCMD_CLK109*	MD243
-DCLK109	AN42	SCMD_CLK110*	MD244
DCLK110	AP52	SCMD_CLK110*	MD245
-DCLK110	AN52	SCMD_CLK111*	MD246
DCLK111	AP62	SCMD_CLK111*	MD247
-DCLK111	AN62	SCMD_CLK112*	MD248
DCLK112	AP72	SCMD_CLK112*	MD249
-DCLK112	AN72	SCMD_CLK113*	MD250
DCLK113	AP82	SCMD_CLK113*	MD251
-DCLK113	AN82	SCMD_CLK114*	MD252
DCLK114	AP92	SCMD_CLK114*	MD253
-DCLK114	AN92	SCMD_CLK115*	MD254
DCLK115	AP02	SCMD_CLK115*	MD255
-DCLK115	AN02	SCMD_CLK116*	MD256
DCLK116	AP12	SCMD_CLK116*	MD257
-DCLK116	AN12	SCMD_CLK117*	MD258
DCLK117	AP22	SCMD_CLK117*	MD259
-DCLK117	AN22	SCMD_CLK118*	MD260
DCLK118	AP32	SCMD_CLK118*	MD261
-DCLK118	AN32	SCMD_CLK119*	MD262
DCLK119	AP42	SCMD_CLK119*	MD263
-DCLK119	AN42	SCMD_CLK120*	MD264
DCLK120	AP52	SCMD_CLK120*	MD265
-DCLK120	AN52	SCMD_CLK121*	MD266
DCLK121	AP62	SCMD_CLK121*	MD267
-DCLK121	AN62	SCMD_CLK122*	MD268
DCLK122	AP72	SCMD_CLK122*	MD269
-DCLK122	AN72	SCMD_CLK123*	MD270
DCLK123	AP82	SCMD_CLK123*	MD271
-DCLK123	AN82	SCMD_CLK124*	MD272
DCLK124	AP92	SCMD_CLK124*	MD273
-DCLK124	AN92	SCMD_CLK125*	MD274
DCLK125	AP02	SCMD_CLK125*	MD275
-DCLK125	AN02	SCMD_CLK126*	MD276
DCLK126	AP12	SCMD_CLK126*	MD277
-DCLK126	AN12	SCMD_CLK127*	MD278
DCLK127	AP22	SCMD_CLK127*	MD279
-DCLK127	AN22	SCMD_CLK128*	MD280
DCLK128	AP32	SCMD_CLK128*	MD281
-DCLK128	AN32	SCMD_CLK129*	MD282
DCLK129	AP42	SCMD_CLK129*	MD283
-DCLK129	AN42	SCMD_CLK130*	MD284
DCLK130	AP52	SCMD_CLK130*	MD285
-DCLK130	AN52	SCMD_CLK131*	MD286
DCLK131	AP62	SCMD_CLK131*	MD287
-DCLK131	AN62	SCMD_CLK132*	MD288
DCLK132	AP72	SCMD_CLK132*	MD289
-DCLK132	AN72	SCMD_CLK133*	MD290
DCLK133	AP82	SCMD_CLK133*	MD291
-DCLK133	AN82	SCMD_CLK134*	MD292
DCLK134	AP92	SCMD_CLK134*	MD293
-DCLK134	AN92	SCMD_CLK135*	MD294
DCLK135	AP02	SCMD_CLK135*	MD295

11,12 MD[0..63] << <<MD[0..63] 8

11,12 DM[0..7] >> >>DM[0..7] 8

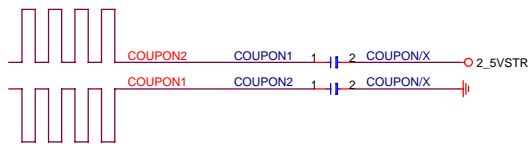
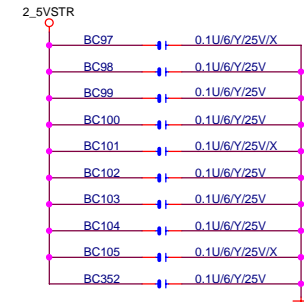
11,12 -DQS[0..7] << <<-DQS[0..7] 8

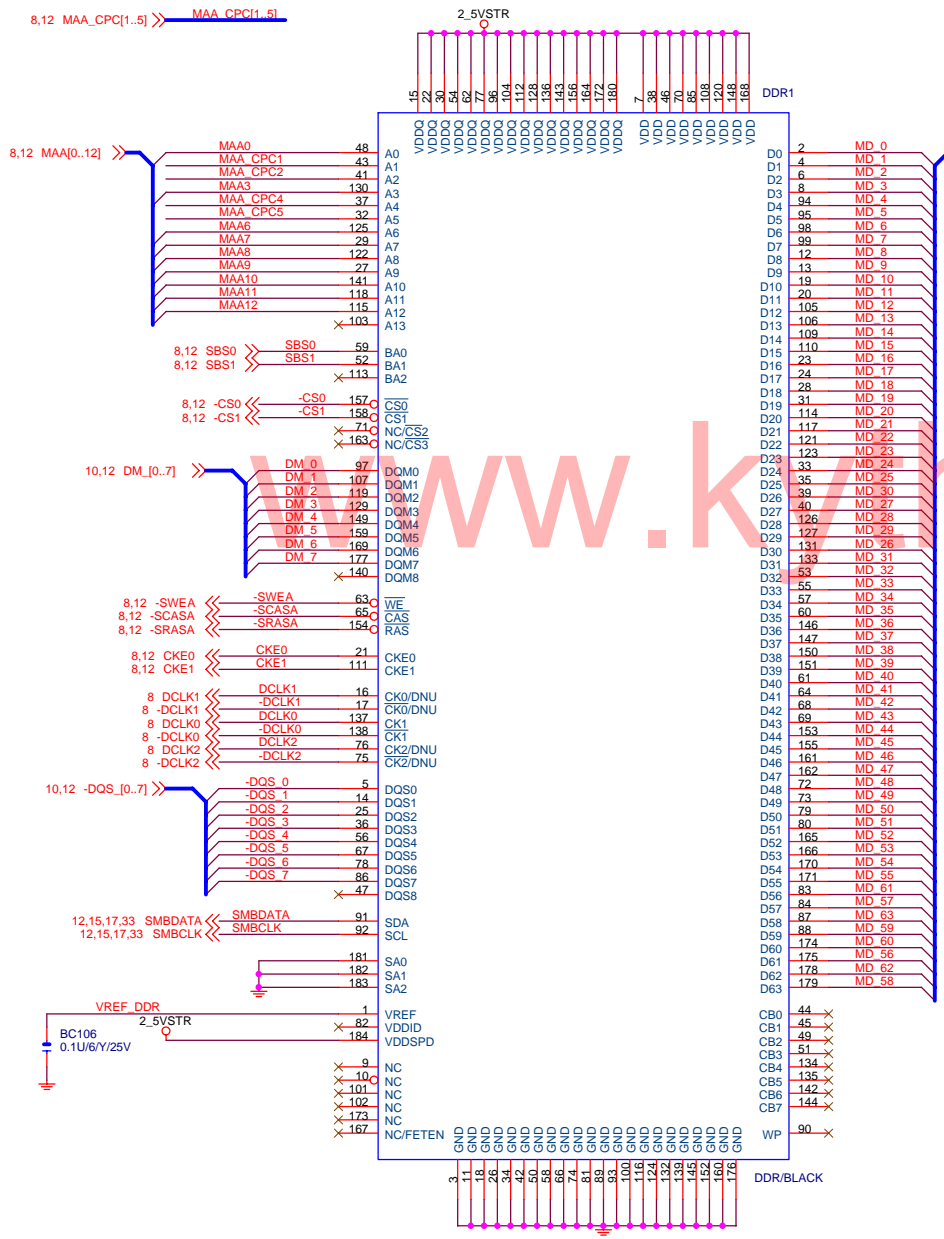
DM 0	RN3	1	2 10/8P4R	DM0
-DQS 0		3	4	-DQS0
MD 2		5	6	MD2
MD 6		7	8	MD6
MD 0	RN5	1	2 10/8P4R	MD0
MD 4		3	4	MD4
MD 5		5	6	MD5
MD 1		7	8	MD1
MD 12	RN6	1	2 10/8P4R	MD12
MD 13		3	4	MD13
-DQS 1		5	6	-DQS1
DM 1		7	8	DM1
MD 14	RN7	1	2 10/8P4R	MD14
MD 15		3	4	MD15
MD 10		5	6	MD10
MD 11		7	8	MD11
-DQS 2	RN9	1	2 10/8P4R	-DQS2
DM 2		3	4	DM2
MD 18		5	6	MD18
MD 22		7	8	MD22
MD 29	RN11	1	2 10/8P4R	MD29
MD 25		3	4	MD25
-DQS 3		5	6	-DQS3
DM 3		7	8	DM3
MD 26	RN12	1	2 10/8P4R	MD26
MD 30		3	4	MD30
MD 27		5	6	MD27
MD 31		7	8	MD31
MD 32	RN13	1	2 10/8P4R	MD32
MD 36		3	4	MD36
MD 33		5	6	MD33
MD 37		7	8	MD37
MD 39	RN14	1	2 10/8P4R	MD39
MD 35		3	4	MD35
MD 40		5	6	MD40
MD 44		7	8	MD44
-DQS 4	RN15	1	2 10/8P4R	-DQS4
DM 4		3	4	DM4
MD 34		5	6	MD34
MD 38		7	8	MD38
MD 45	RN16	1	2 10/8P4R	MD45
MD 41		3	4	MD41
DM 5		5	6	DM5
-DQS 5		7	8	-DQS5
MD 48	RN17	1	2 10/8P4R	MD48
MD 49		3	4	MD49
MD 52		5	6	MD52
MD 53		7	8	MD53
MD 50	RN18	1	2 10/8P4R	MD50
MD 51		3	4	MD51
MD 60		5	6	MD60
MD 61		7	8	MD61
DM 6	RN19	1	2 10/8P4R	DM6
-DQS 6		3	4	-DQS6
MD 54		5	6	MD54
MD 55		7	8	MD55
MD 56	RN20	1	2 10/8P4R	MD56
MD 57		3	4	MD57
DM 7		5	6	DM7
-DQS 7		7	8	-DQS7
MD 59	RN21	1	2 10/8P4R	MD59
MD 63		3	4	MD63
MD 58		5	6	MD58
MD 62		7	8	MD62

MD 20	RN2	1	2 10/8P4R	MD20
MD 16		3	4	MD16
MD 17		5	6	MD17
MD 21		7	8	MD21
MD 42	RN4	1	2 10/8P4R	MD42
MD 46		3	4	MD46
MD 43		5	6	MD43
MD 47		7	8	MD47

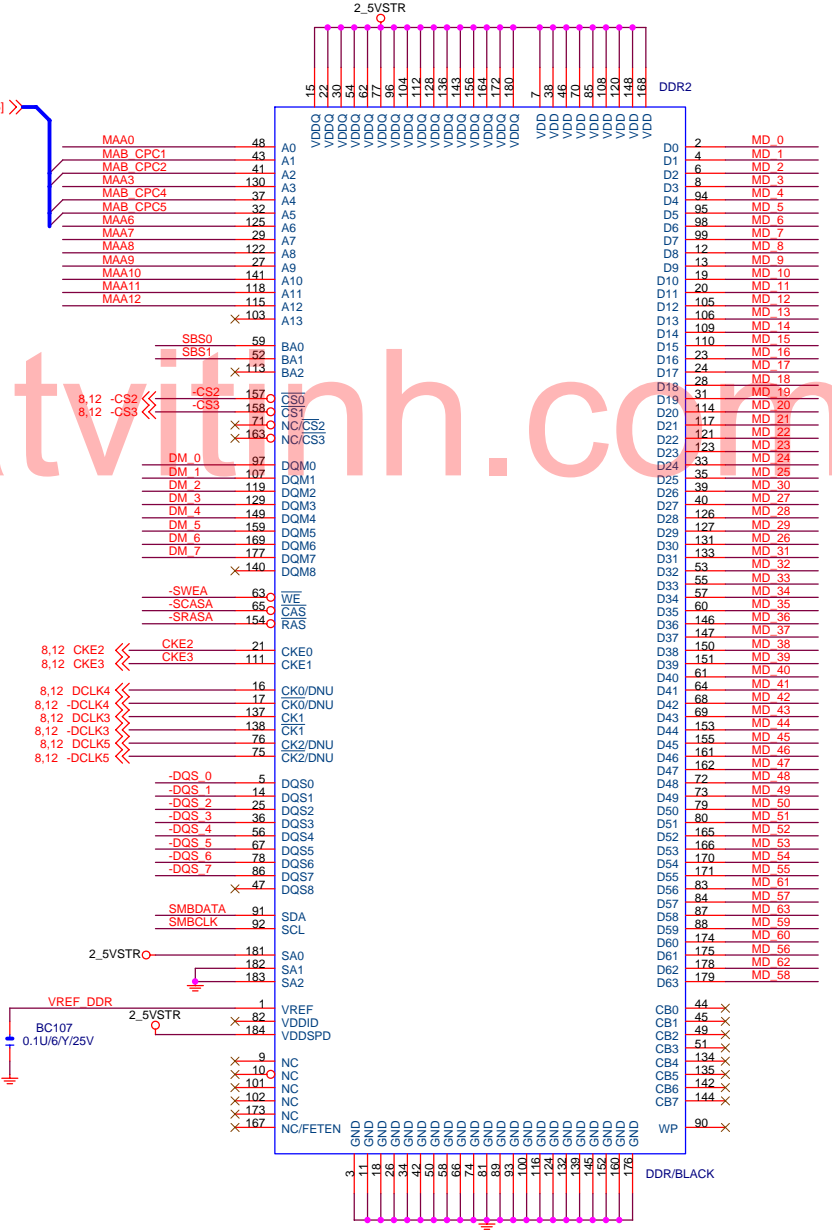
MD 7	RN8	1	2 10/8P4R	MD7
MD 3		3	4	MD3
MD 8		5	6	MD8
MD 9		7	8	MD9
MD 19	RN10	1	2 10/8P4R	MD19
MD 23		3	4	MD23
MD 24		5	6	MD24
MD 28		7	8	MD28

www.kythuathinh.com

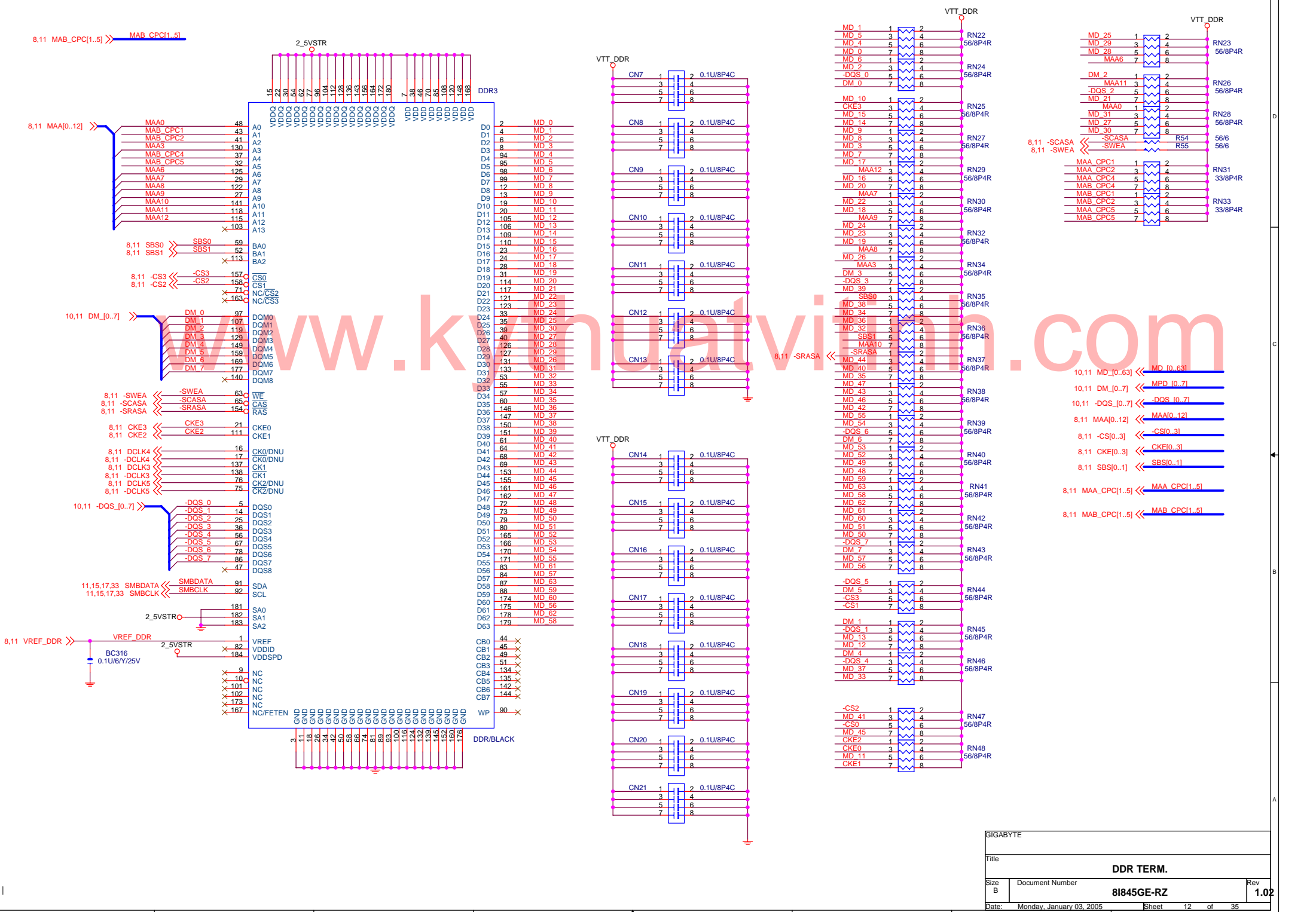


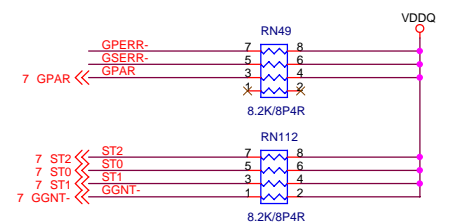
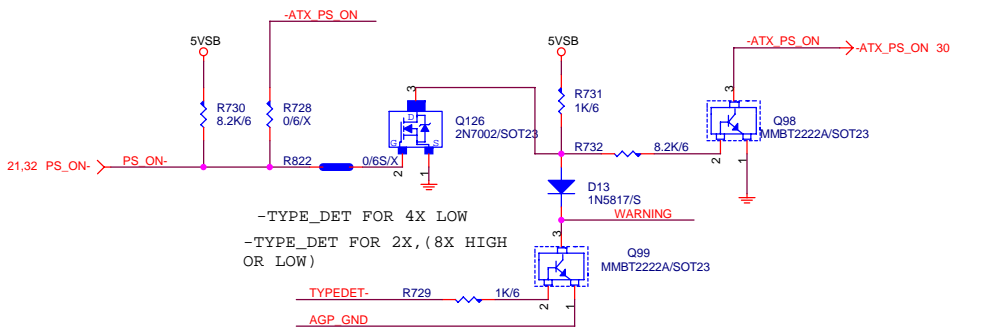
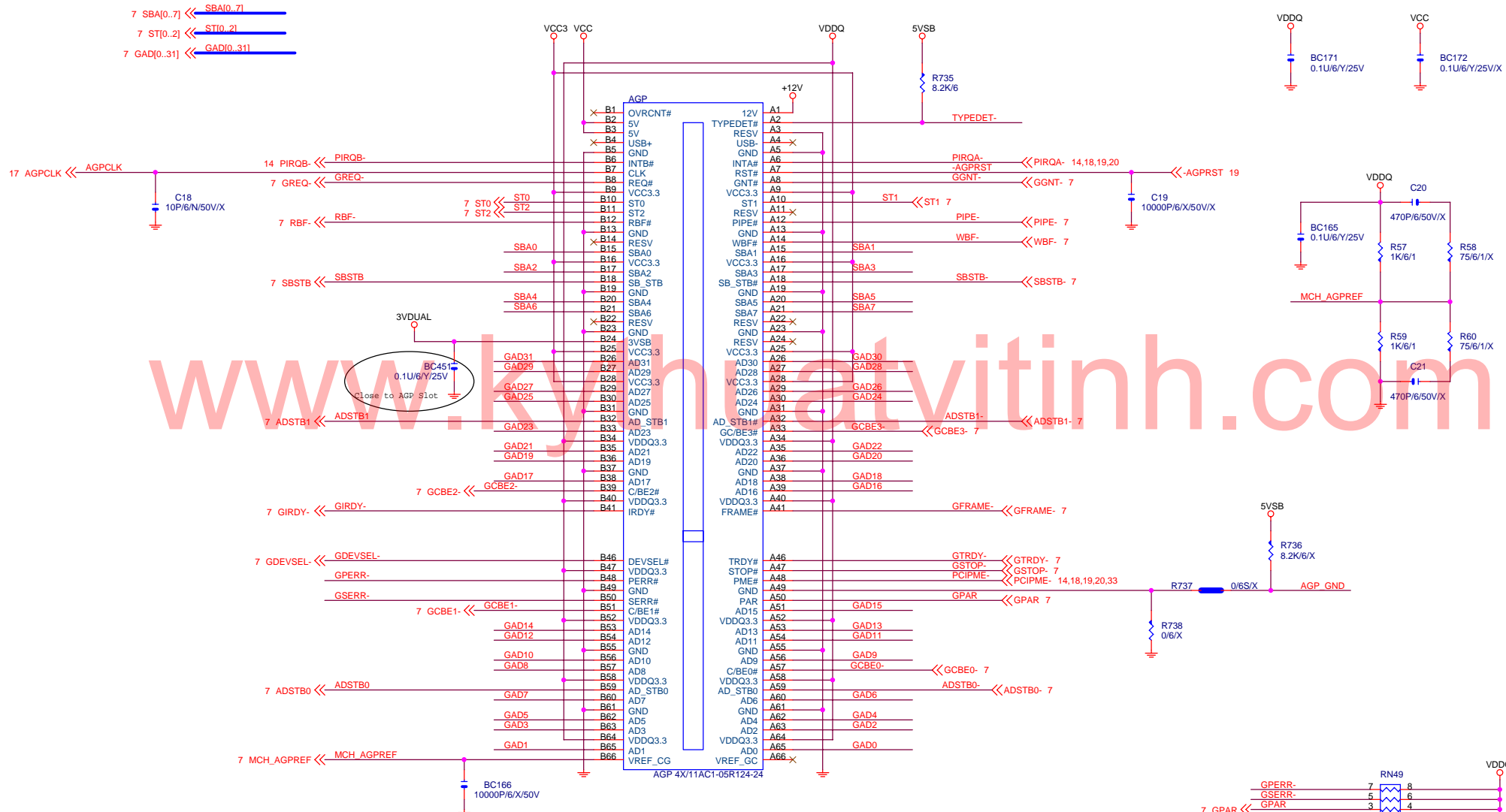


MD[0..63] 10,12



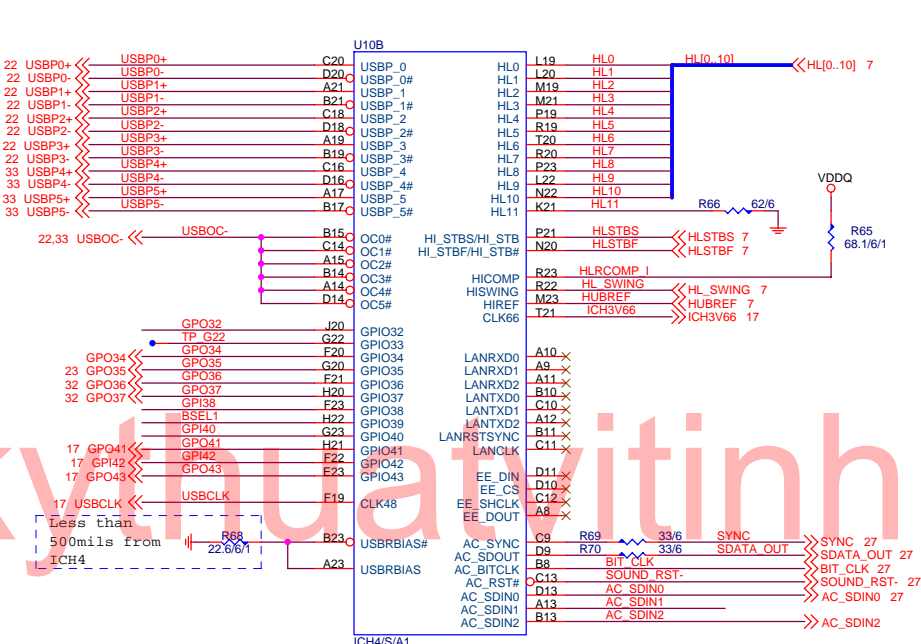
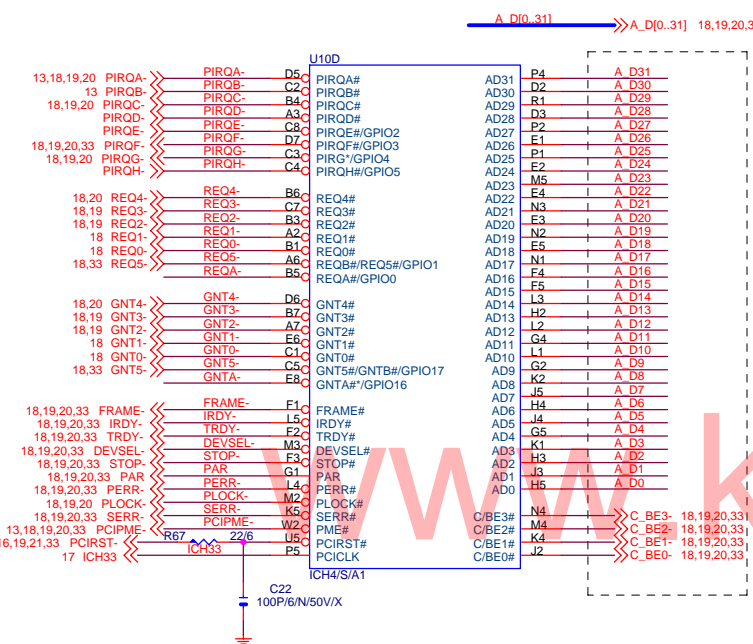
GIGABYTE		
Title		
DDR1,2		
Size	Document Number	Rev
B	81845GE-RZ	1.02
Date:	Monday, January 03, 2005	Sheet 11 of 35

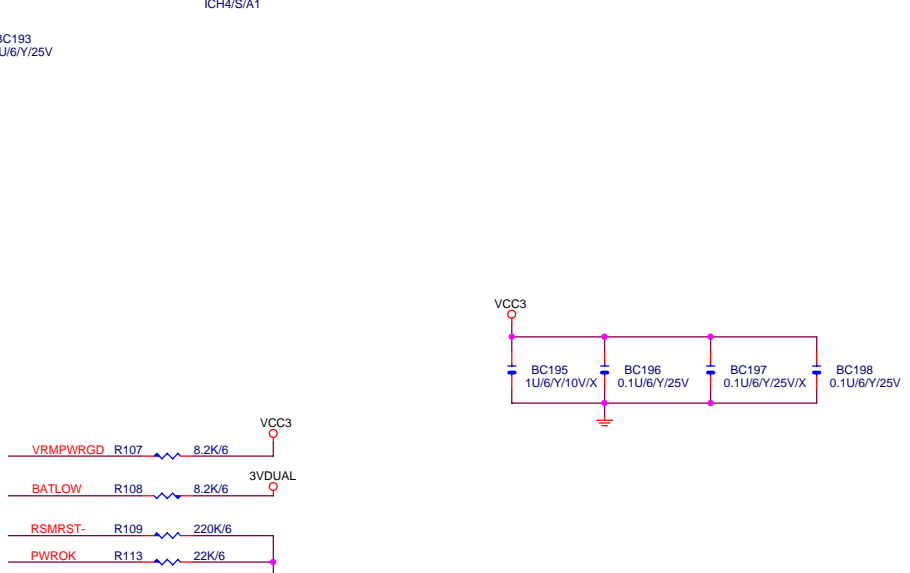
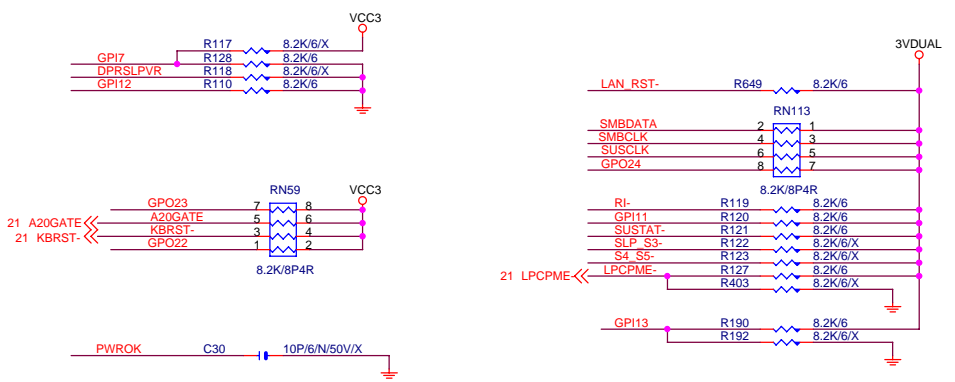
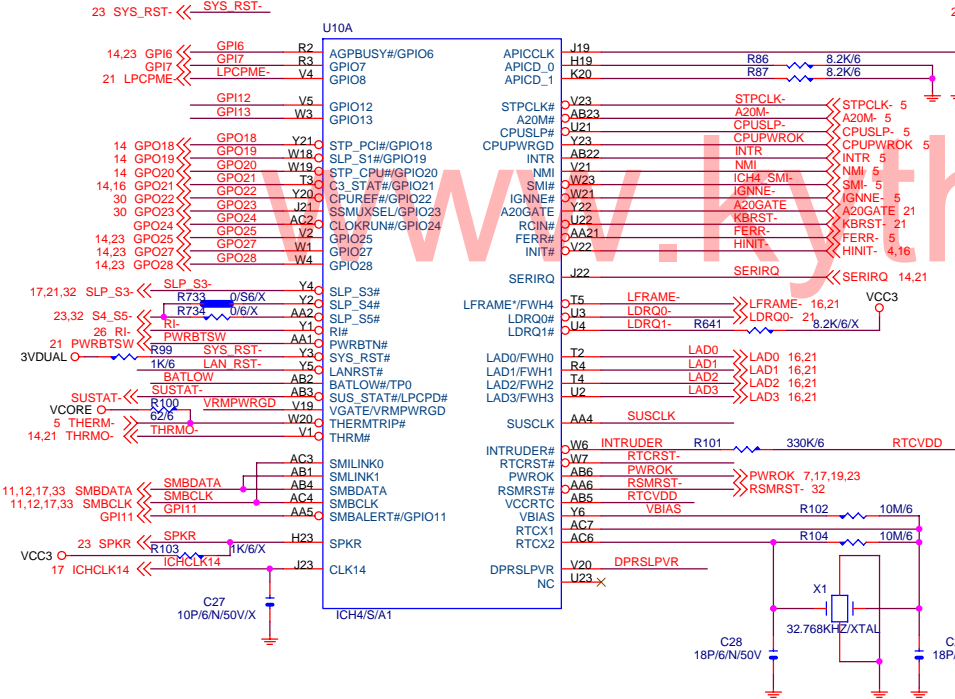
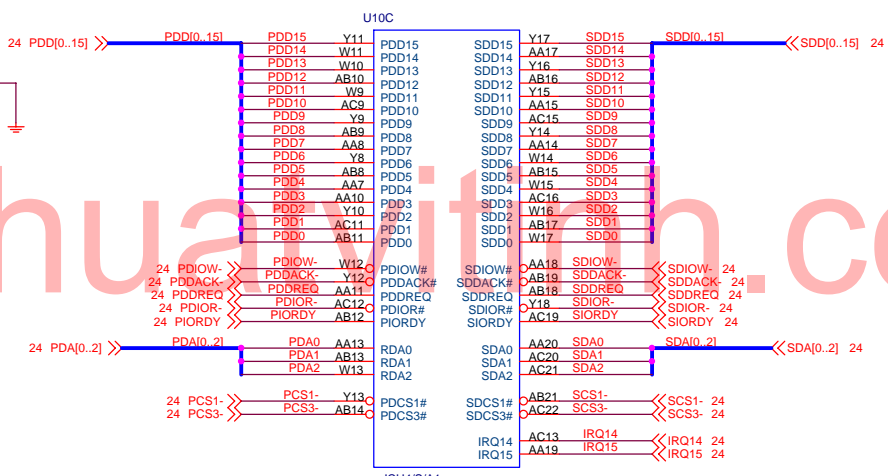
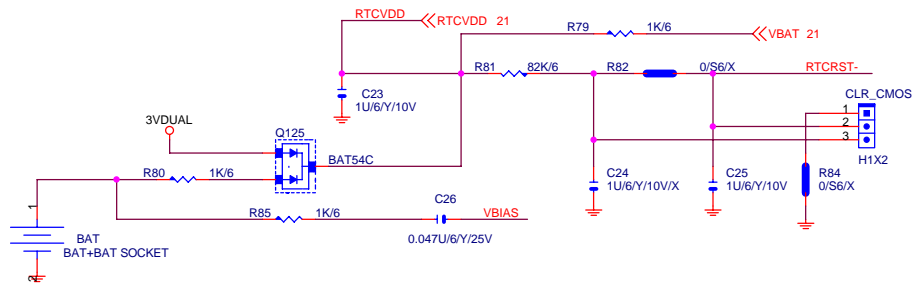




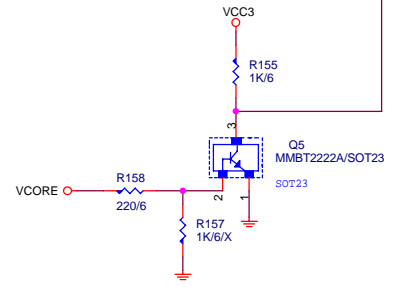
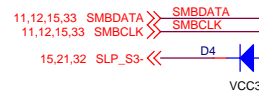
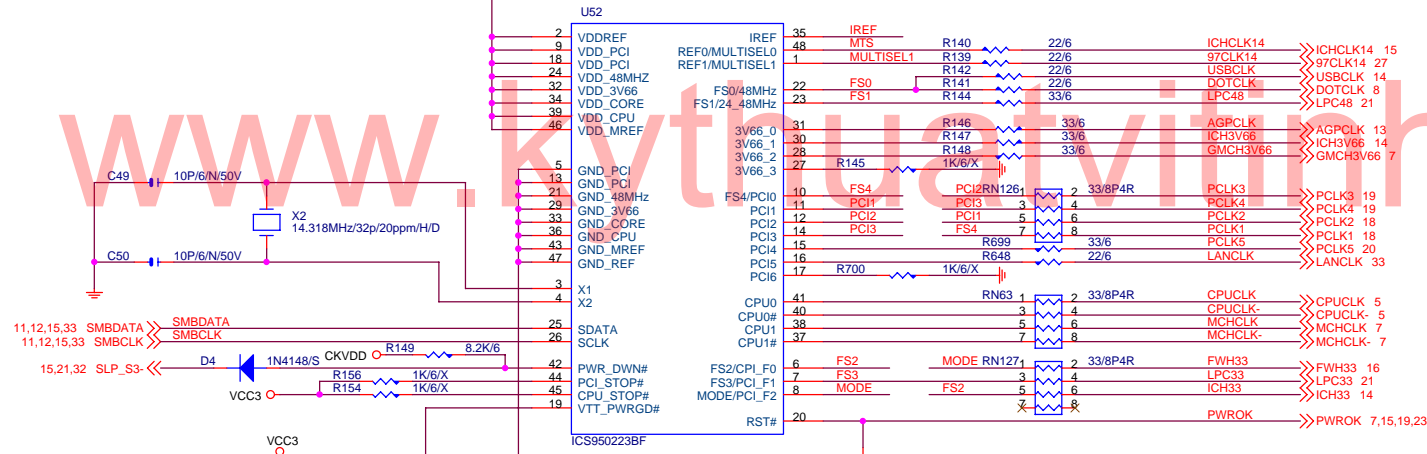
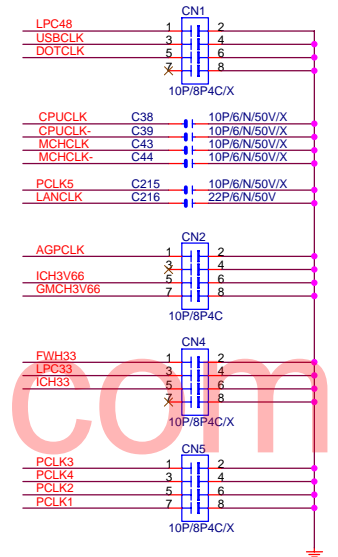
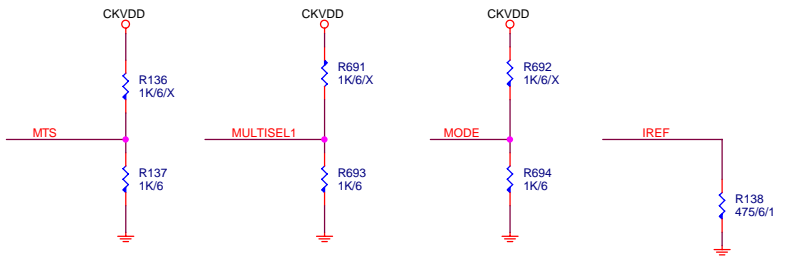
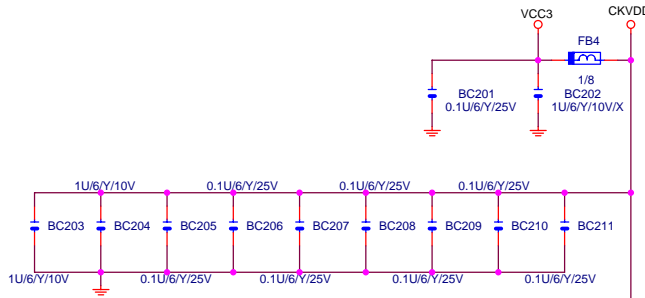
Layout 時整組線路均需靠近 AGP SLOT

GIGABYTE			
Title			
AGP SLOT			
Size	Document Number	Rev	
Custom	81845GE-RZ	1.02	
Date:	Monday, January 03, 2005	Sheet	13 of 35
	2	1	

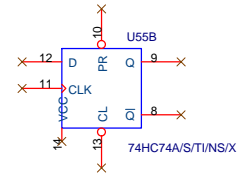
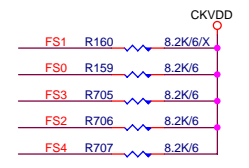
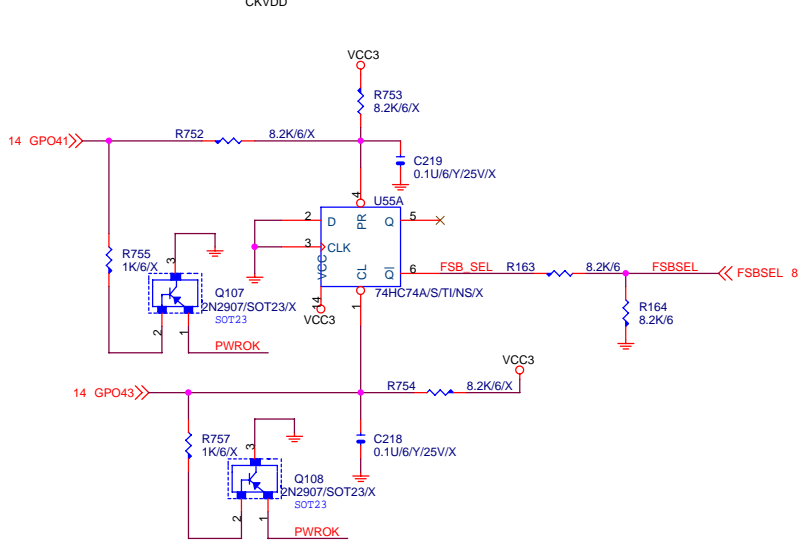
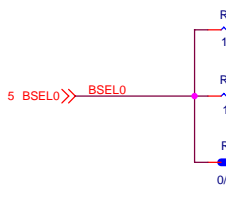




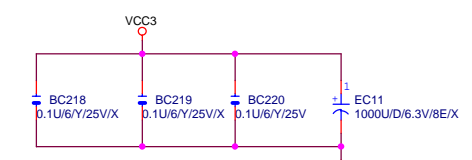
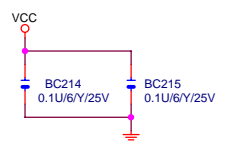
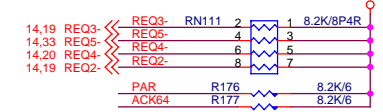
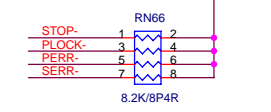
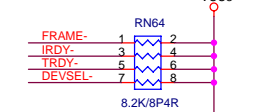
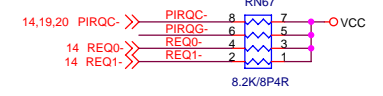
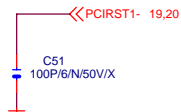
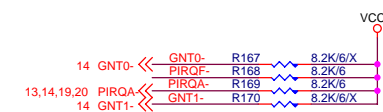
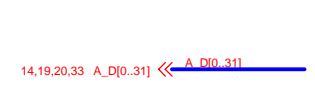
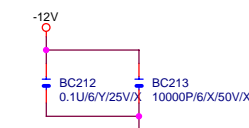
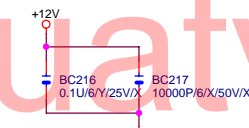
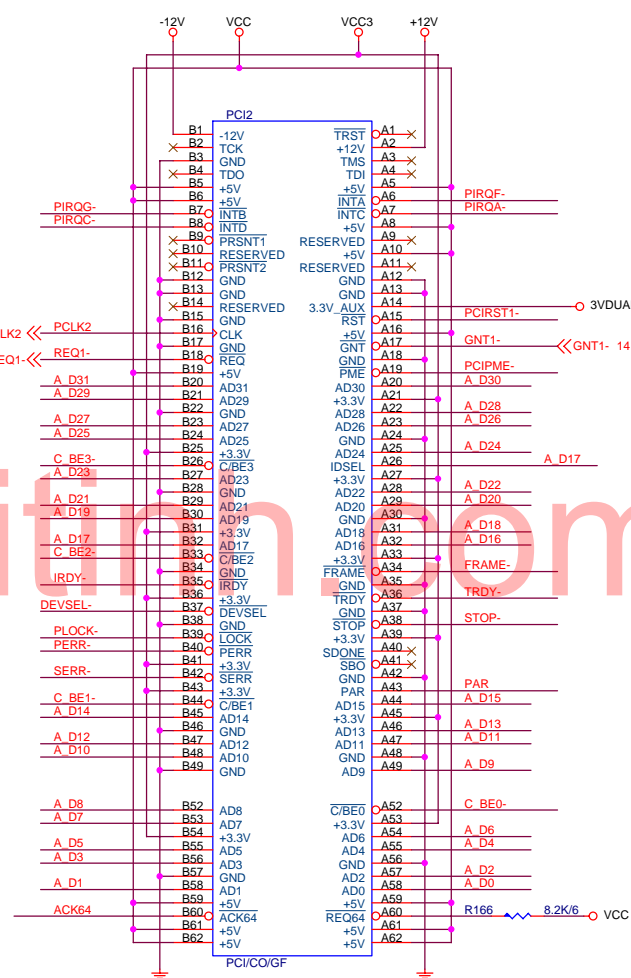
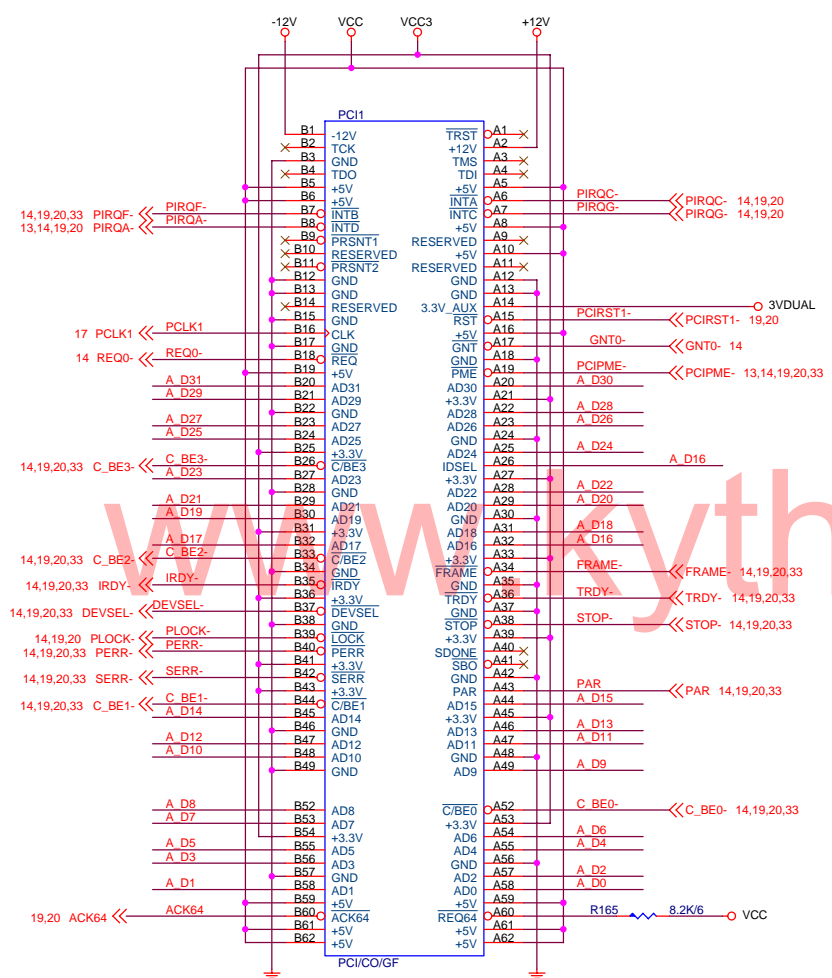
GIGABYTE		
Title		
ICH4 2/2		
Size	Document Number	Rev
Custom	81845GE-RZ	1.02
Date:	Monday, January 03, 2005	Sheet 15 of 35



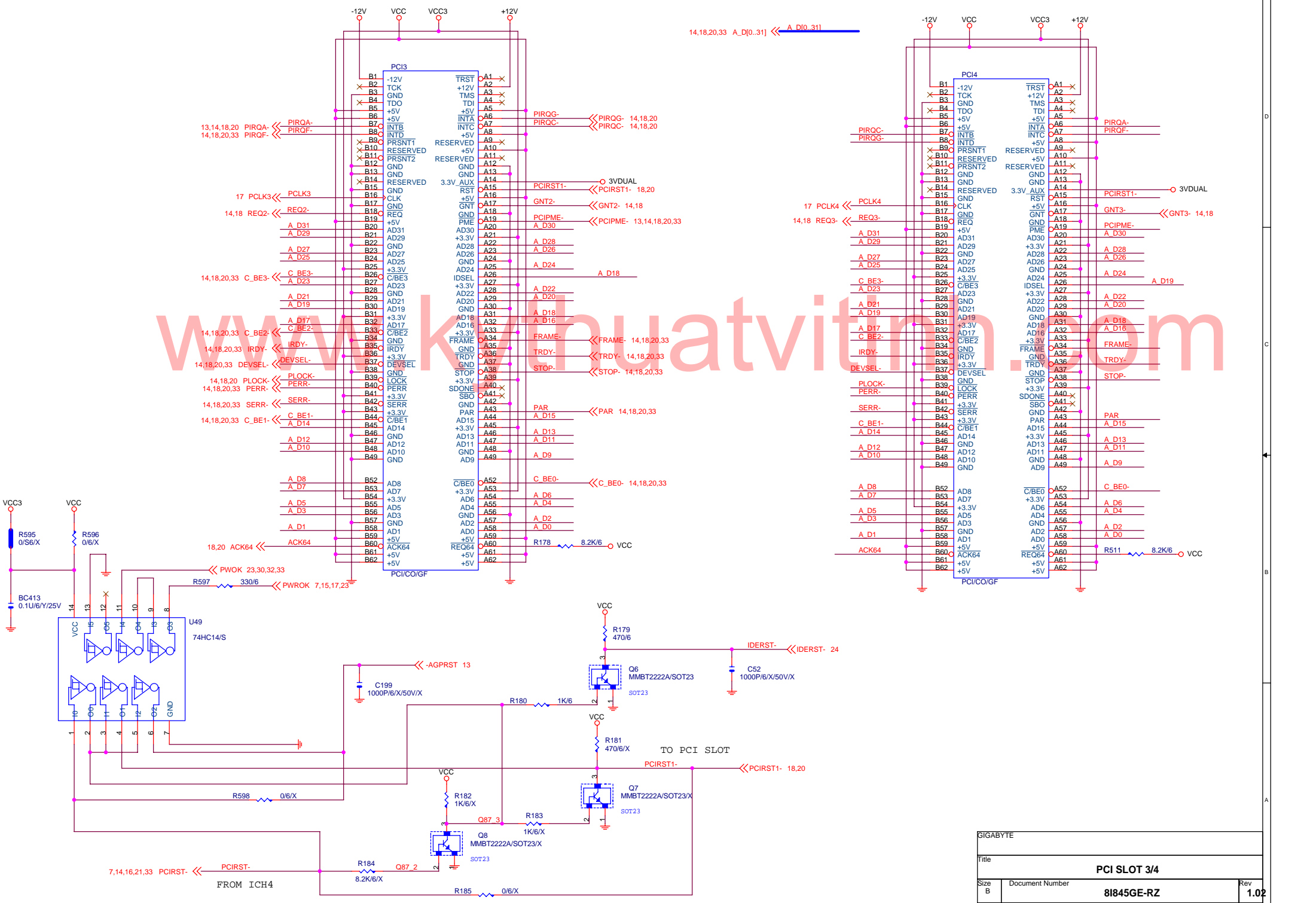
BSEL0 Pull-up at another page.



GIGABYTE		
Title		
CLOCK GENERATOR		
Size	Document Number	Rev
Custom	81845GE-RZ	1.02
Date:	Monday, January 03, 2005	Sheet 17 of 35

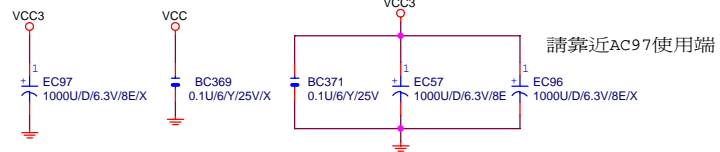
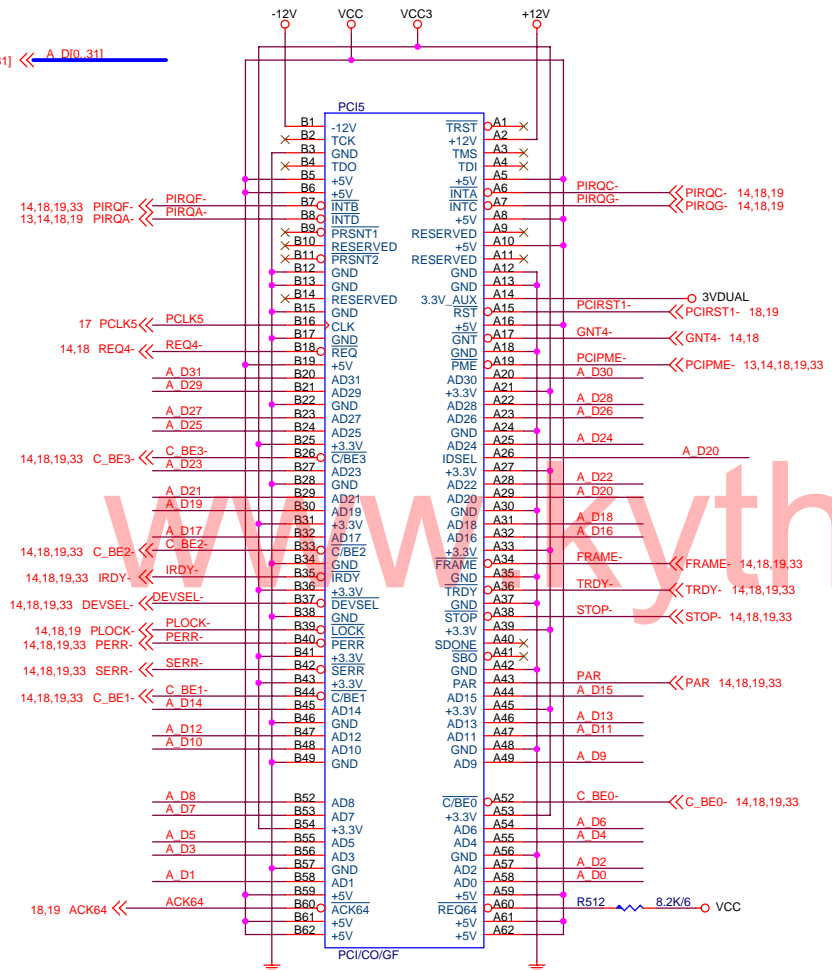


GIGABYTE	
Title PCI SLOT 1/2	
Size B	Document Number 8I845GE-RZ
Date: Monday, January 03, 2005	Rev 1.02
Sheet 18 of 35	

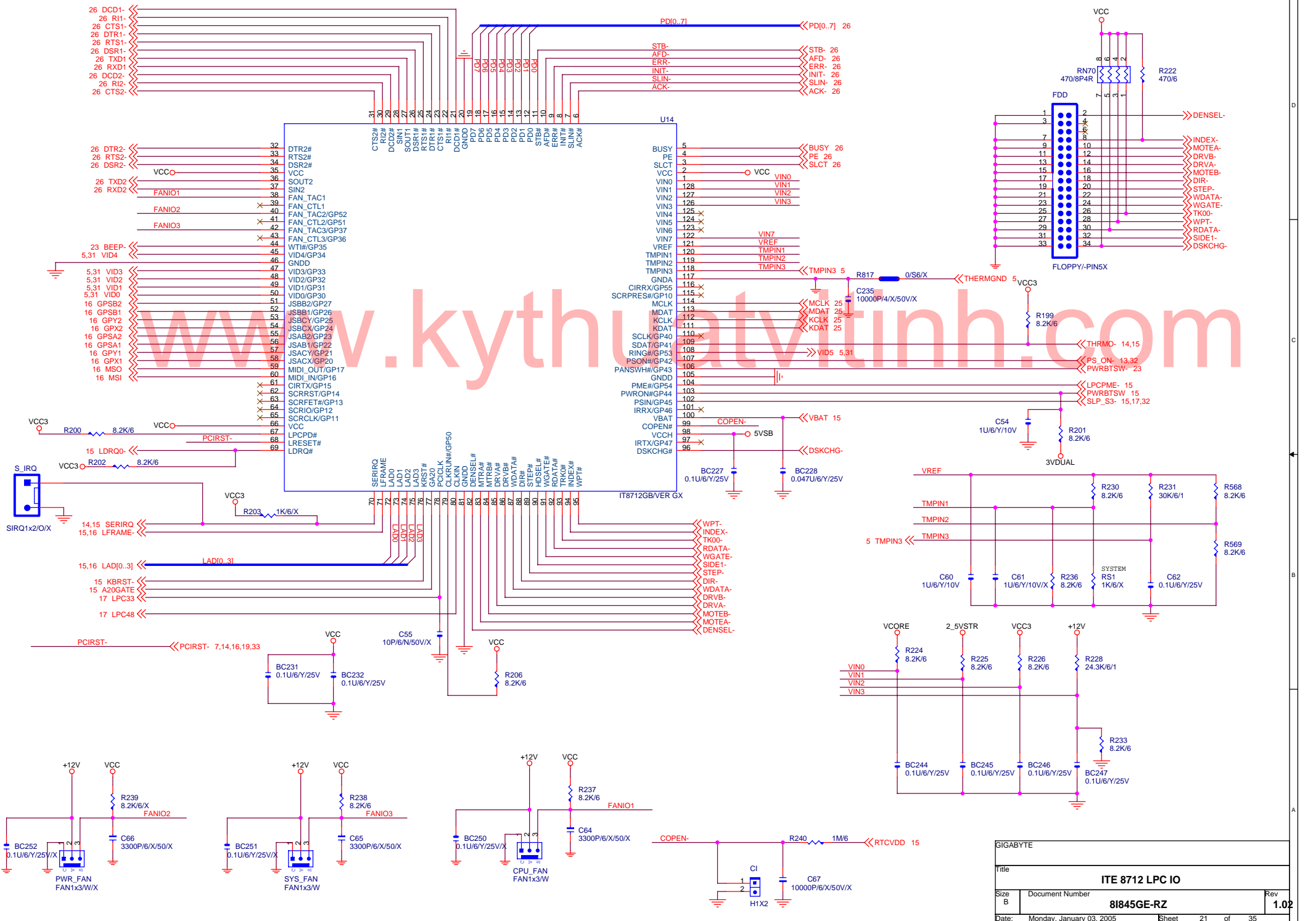


GIGABYTE		
Title		
PCI SLOT 3/4		
Size B	Document Number	Rev
	81845GE-RZ	1.02
Date:	Monday, January 03, 2005	Sheet 19 of 35

14,18,19,33 A_D[0..31] << A_D[0..31]



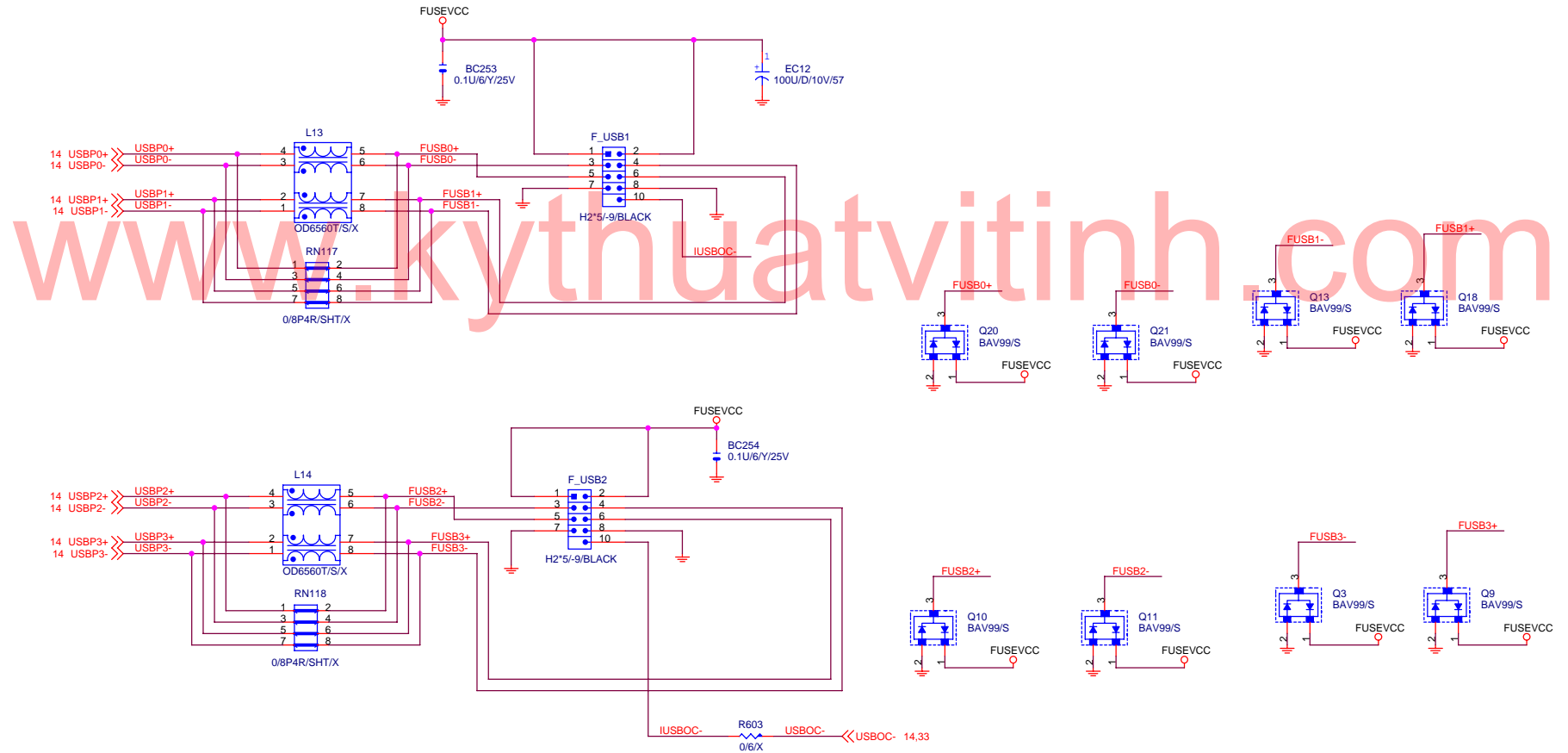
GIGABYTE			
Title			
PCI SLOT 5			
Size	Document Number	Rev	
B	8I845GE-RZ	1.02	
Date:	Monday, January 03, 2005	Sheet	20 of 35



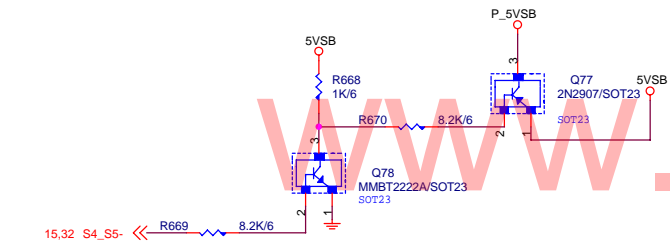
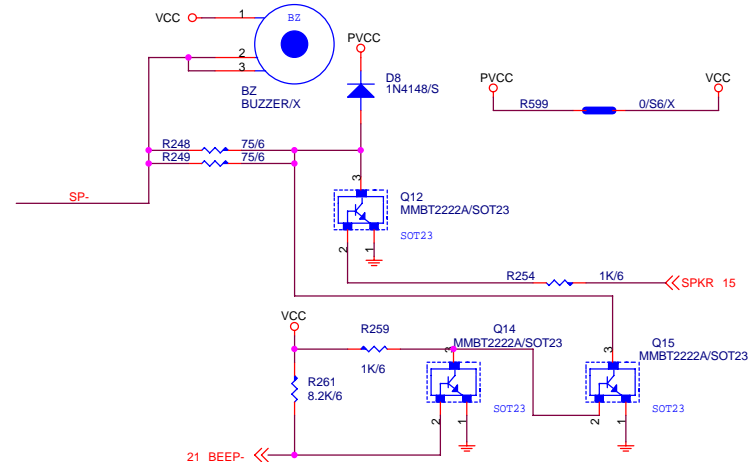
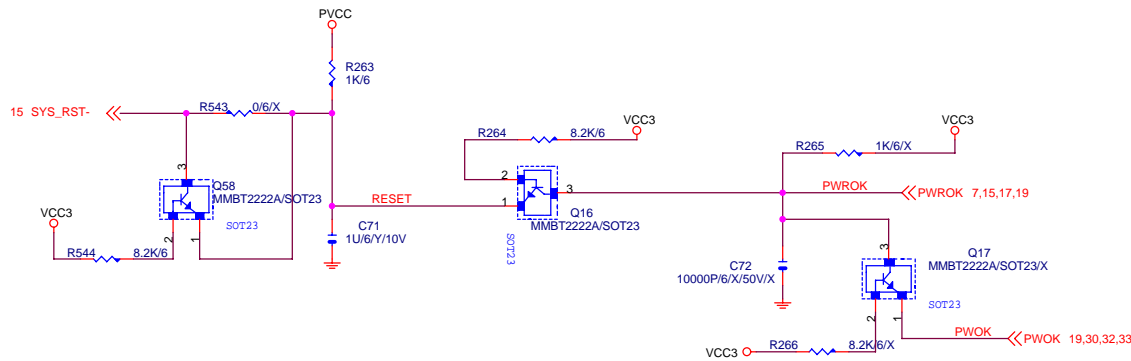
www.kythatvlinh.com

GIGABYTE		
Title		
ITE 8712 LPC IO		
Size	Document Number	Rev
B	81845GE-RZ	1.02
Date:	Monday, January 03, 2005	Sheet 21 of 35

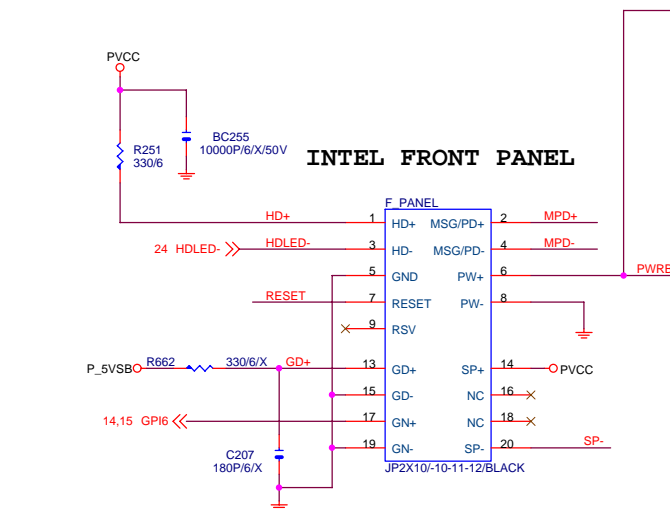
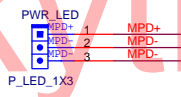
ICH4 USB2.0



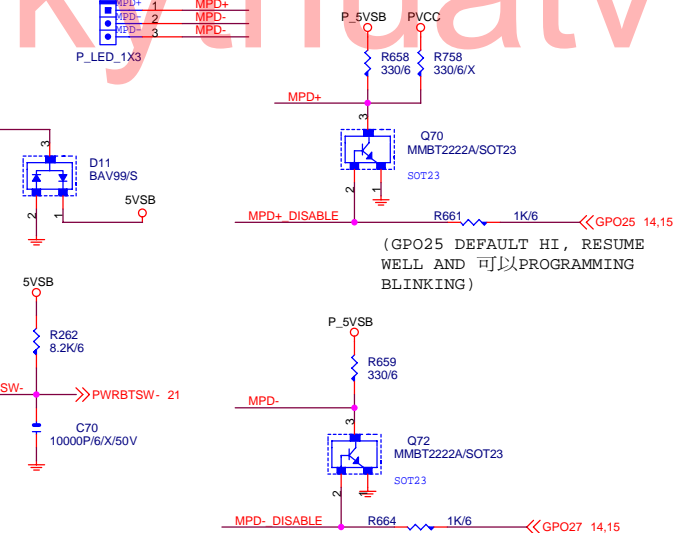
GIGABYTE			
Title			
ICH USB+LAN PORT			
Size	Document Number		Rev
B	81845GE-RZ		1.02
Date:	Monday, January 03, 2005	Sheet	22 of 35



3 PIN POWER LED



INTEL FRONT PANEL



(GPO28 DEFAULT HIGH, RESUME WELL)

States for green LED

LED States	ACPI States	GPO28
ON	S1,S3	0
OFF	S0,S5	1

(GPO25 DEFAULT HI, RESUME WELL AND 可以PROGRAMMING BLINKING)

States for a single-color power LED

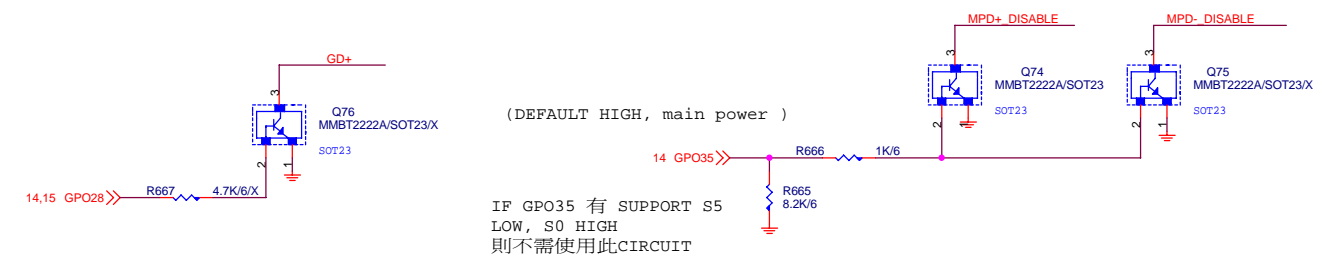
LED States	ACPI States	GPO25	GPO27	GPO35
OFF	S1,S3,S5	1	1	NO1
Steady Green	S0	0	1	0
Blinking Green	S0(message waiting)	0	B	0

NO1 GPO35 只需在 S1 PROGRAMMING LOW

(GPO27 DEFAULT HI, RESUME WELL AND 可以PROGRAMMING BLINKING)

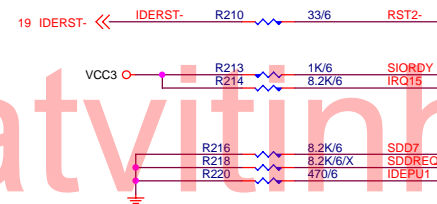
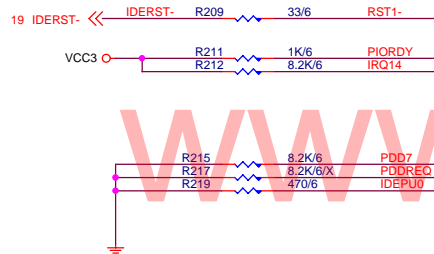
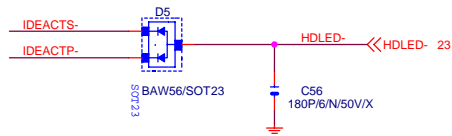
States for a dual-color power LED

LED States	ACPI States	GPO25	GPO27	GPO35
OFF	S5	1	1	X
Steady Green	S0	0	1	0
Blinking Green	S0(message waiting)	0	B	0
Steady Yellow	S1,S3	1	0	NO1
Blinking Yellow	S1,S3(message waiting)	1	B	NO1



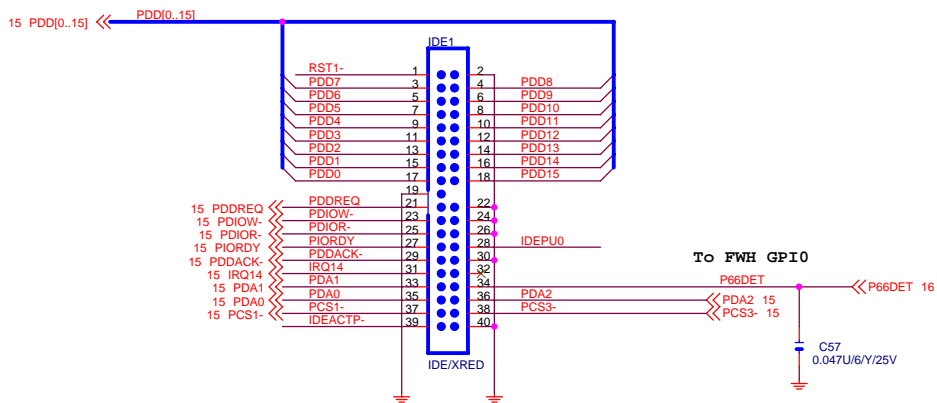
(DEFAULT HIGH, main power)

IF GPO35 有 SUPPORT S5 LOW, S0 HIGH 則不需使用此CIRCUIT

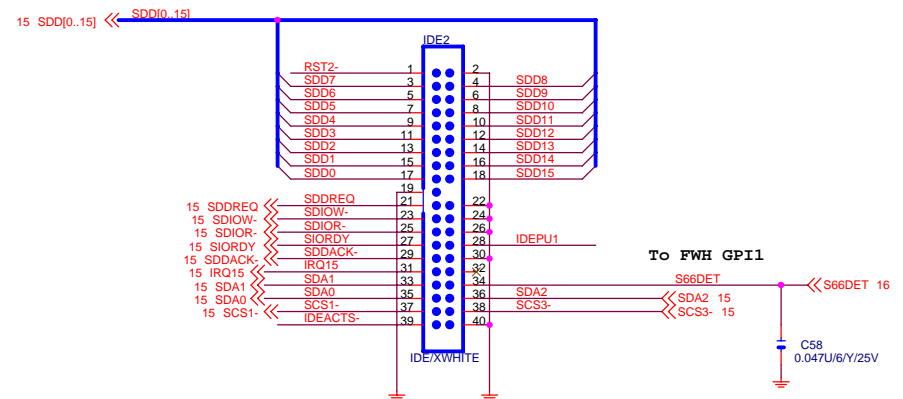


www.kythuatvithinh.com

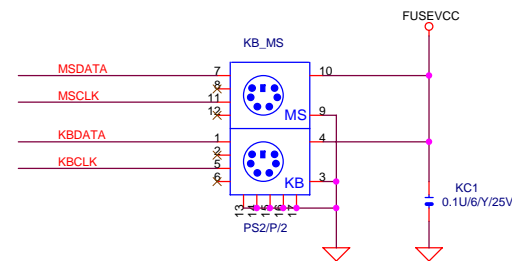
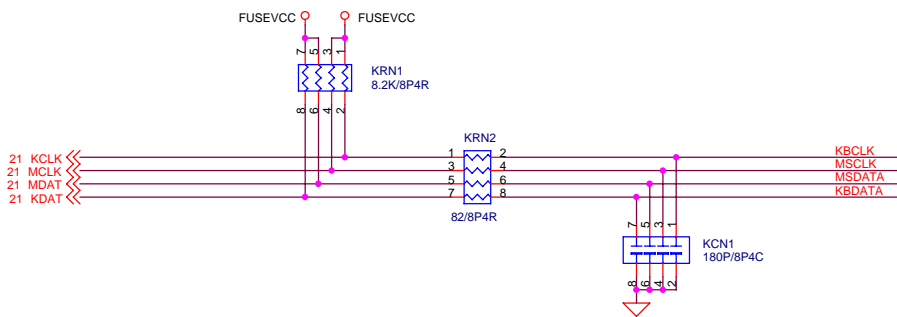
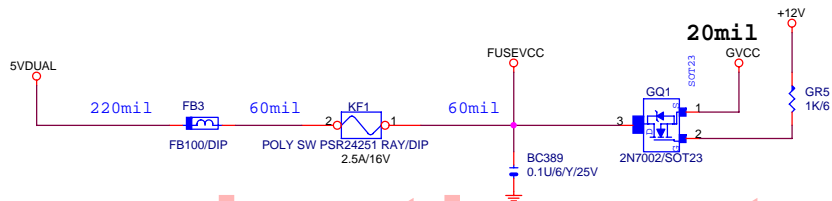
PRIMARY IDE CONNECTOR



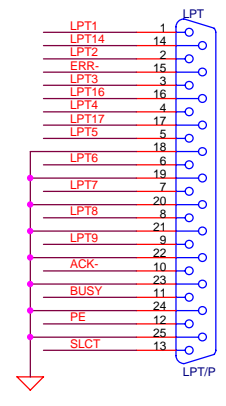
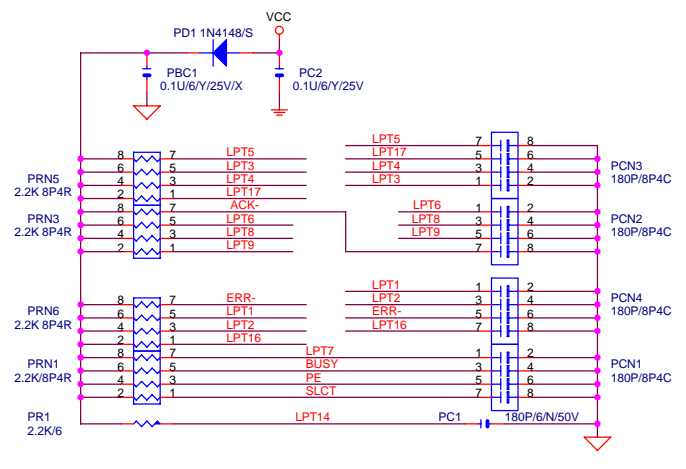
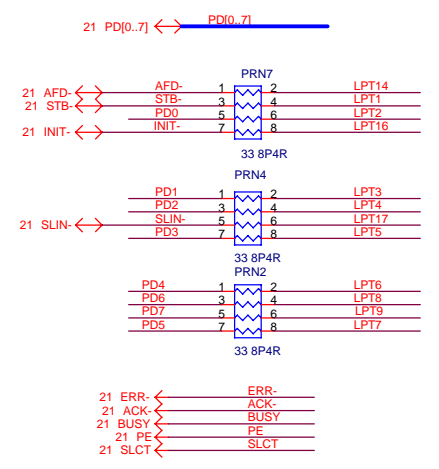
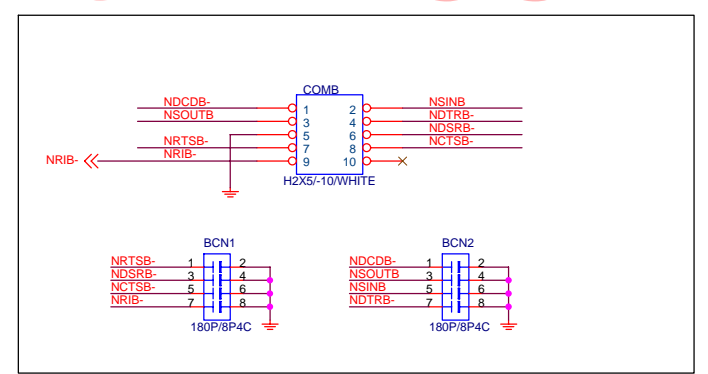
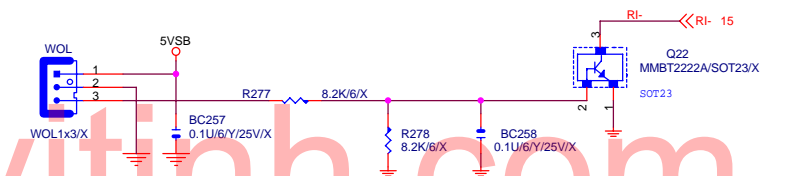
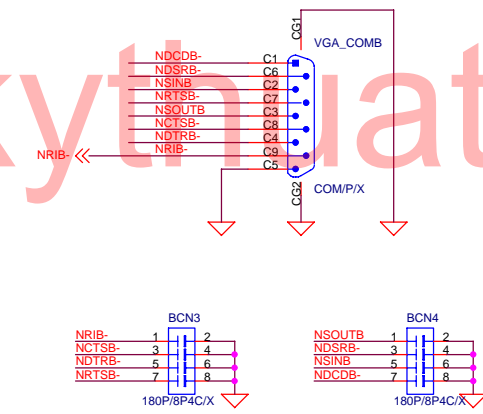
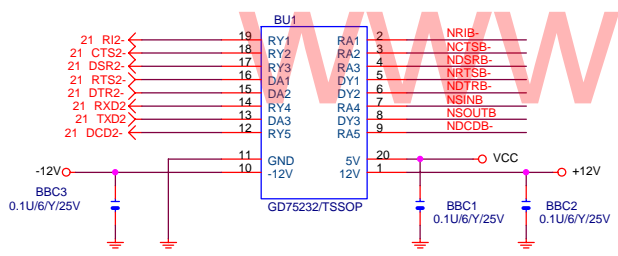
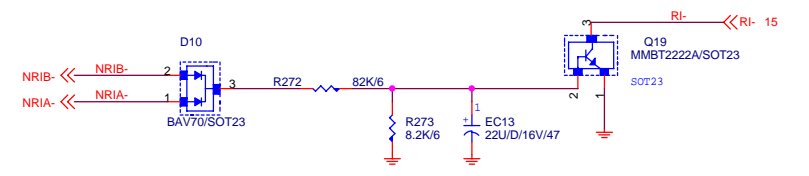
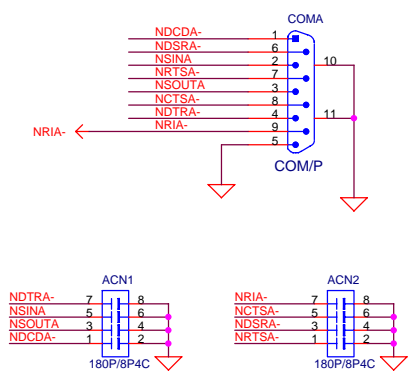
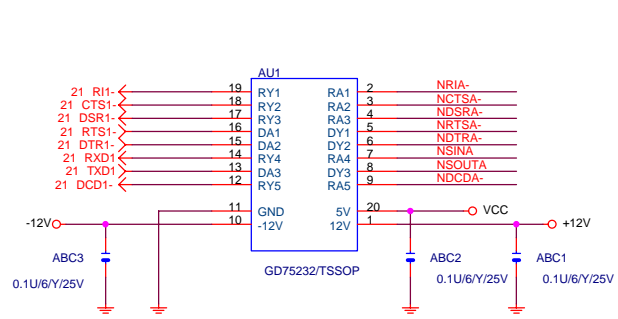
SECONDARY IDE CONNECTOR



www.kythuativinh.com

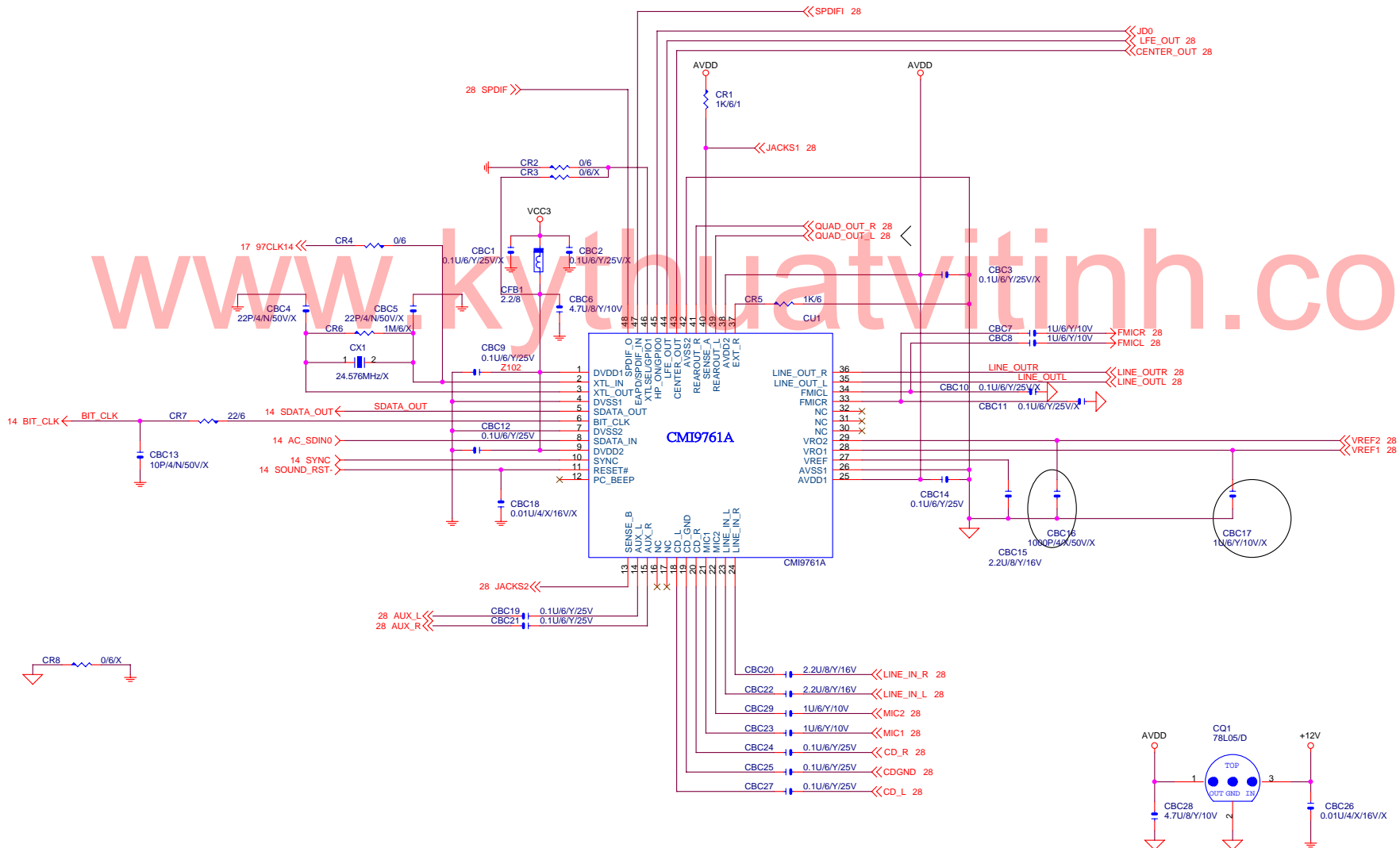


模組化線路



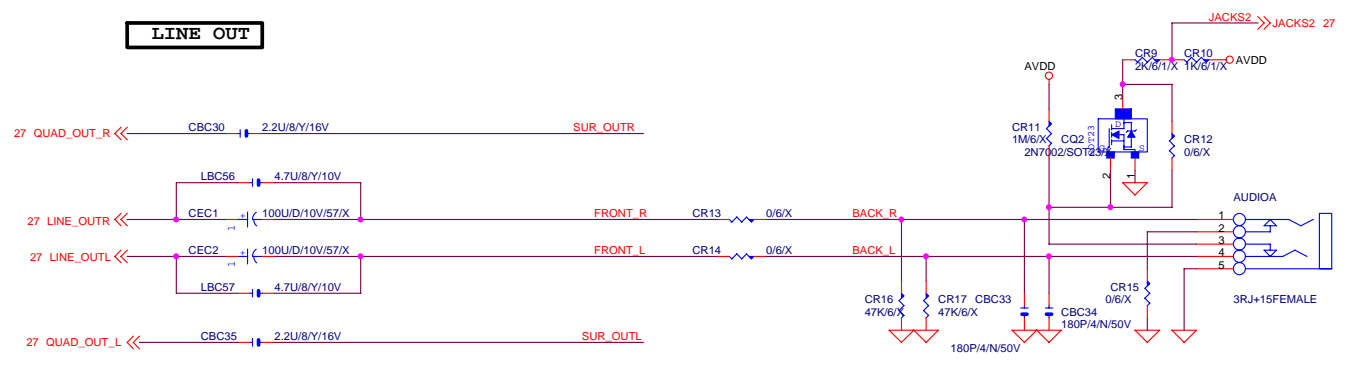
模組化線路

GIGABYTE CORP.		
Title		
COM & IR & LPT PORT & FLOOPY		
Size	Document Number	Rev
B	81845GE-RZ	1.02
Date:	Monday, January 03, 2005	Sheet 26 of 35

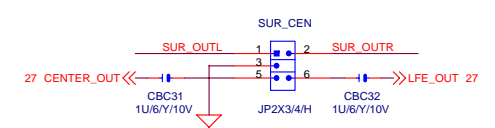


GIGABYTE		
Title		
C-MEDIA 9761A		
Size	Document Number	Rev
Custom	81845GE-RZ	1.02
Date:	Monday, January 03, 2005	Sheet 27 of 35

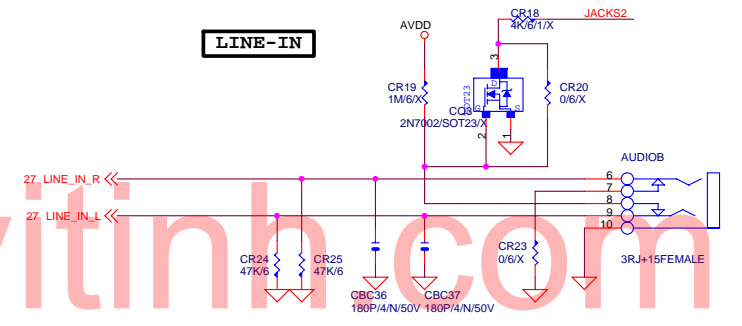
LINE OUT



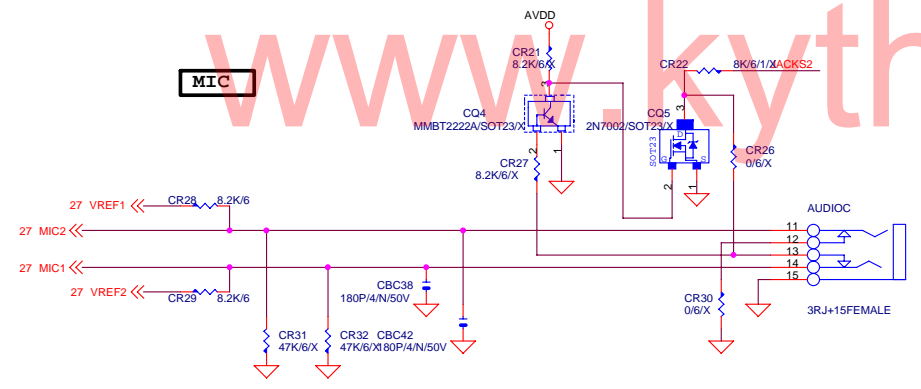
SUR_CEN



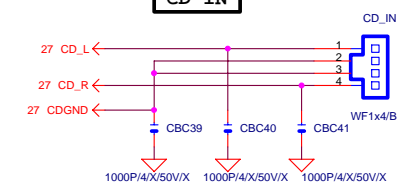
LINE-IN



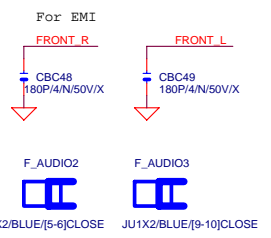
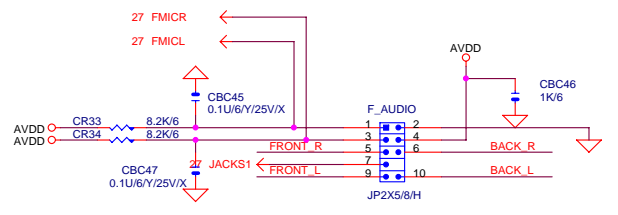
MIC



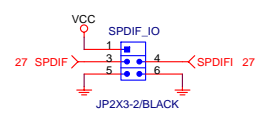
CD IN



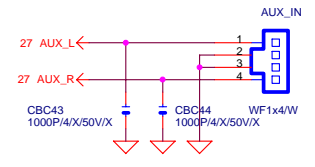
INTEL FRONT AUDIO



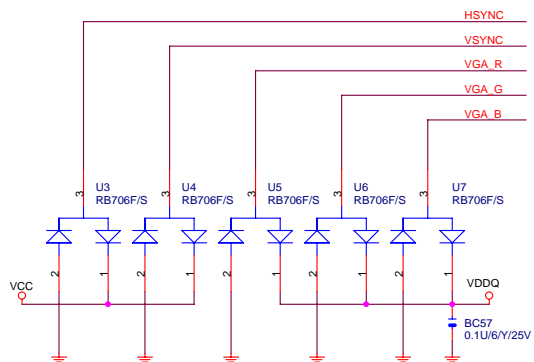
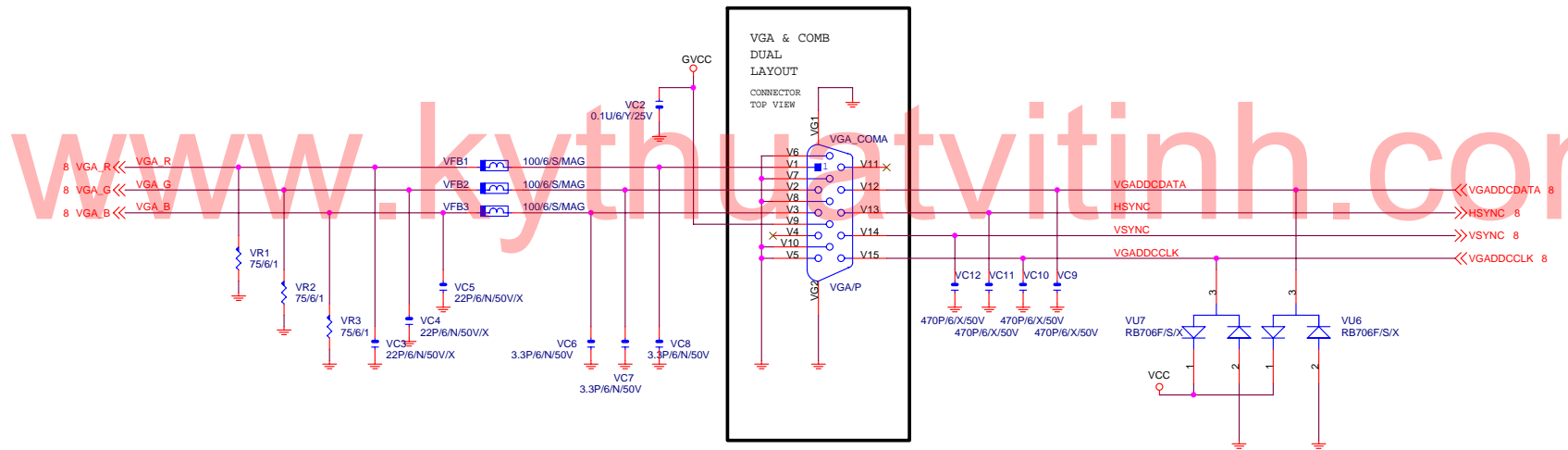
SPDIF



AUX IN DEFAULT NO POP



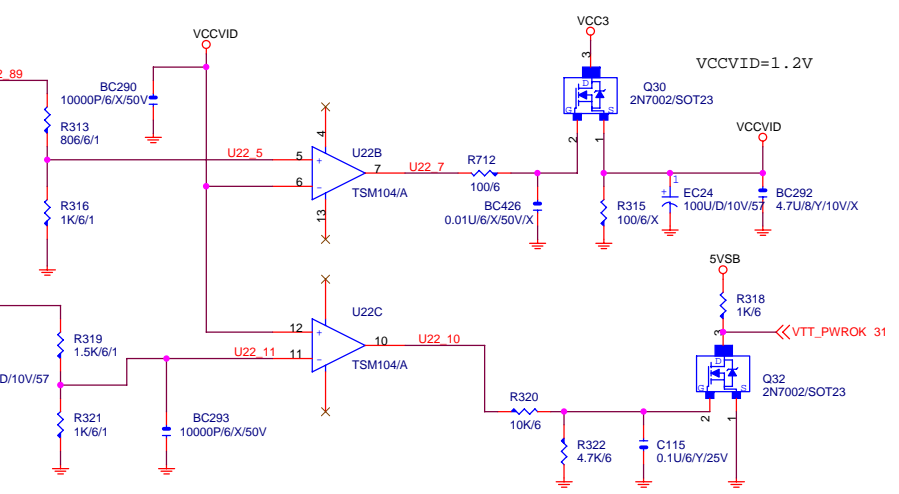
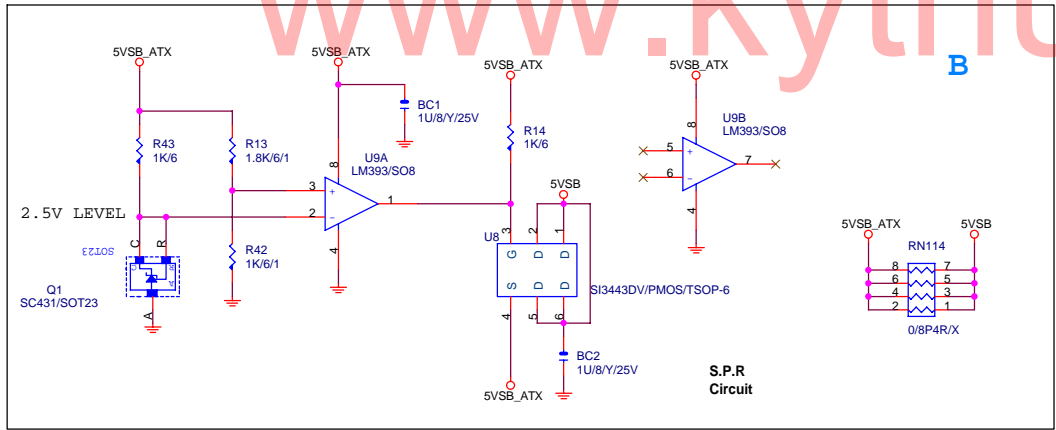
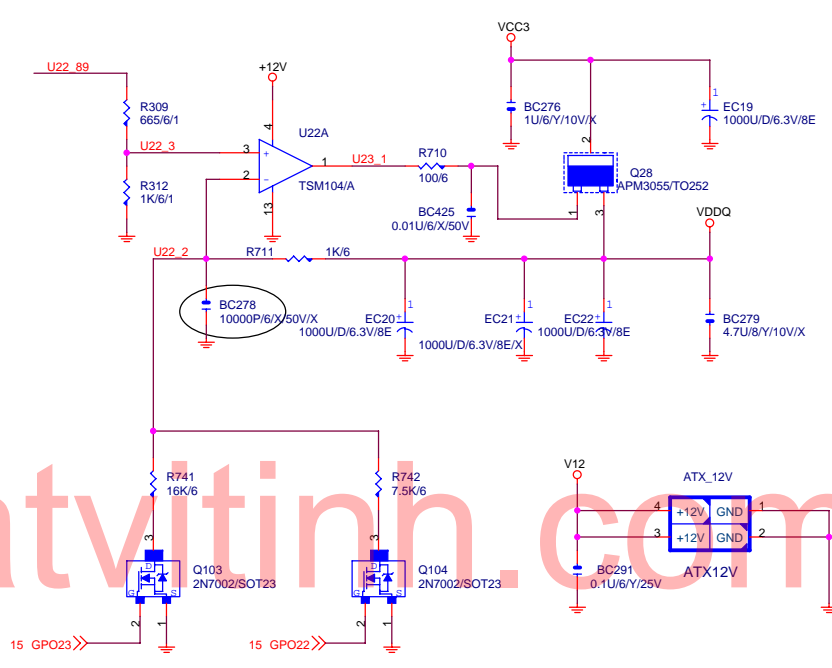
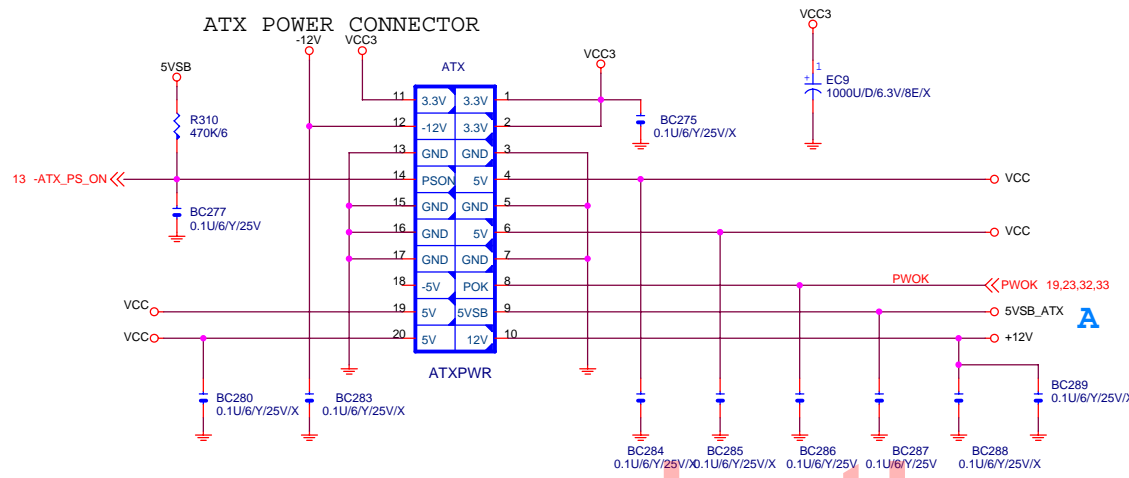
GIGABYTE			
AUDIO OUTPUT, GAME PORT			
Title	Document Number		Rev
Size	81845GE-RZ		1.02
Custom			
Date:	Monday, January 03, 2005	Sheet 28	of 35



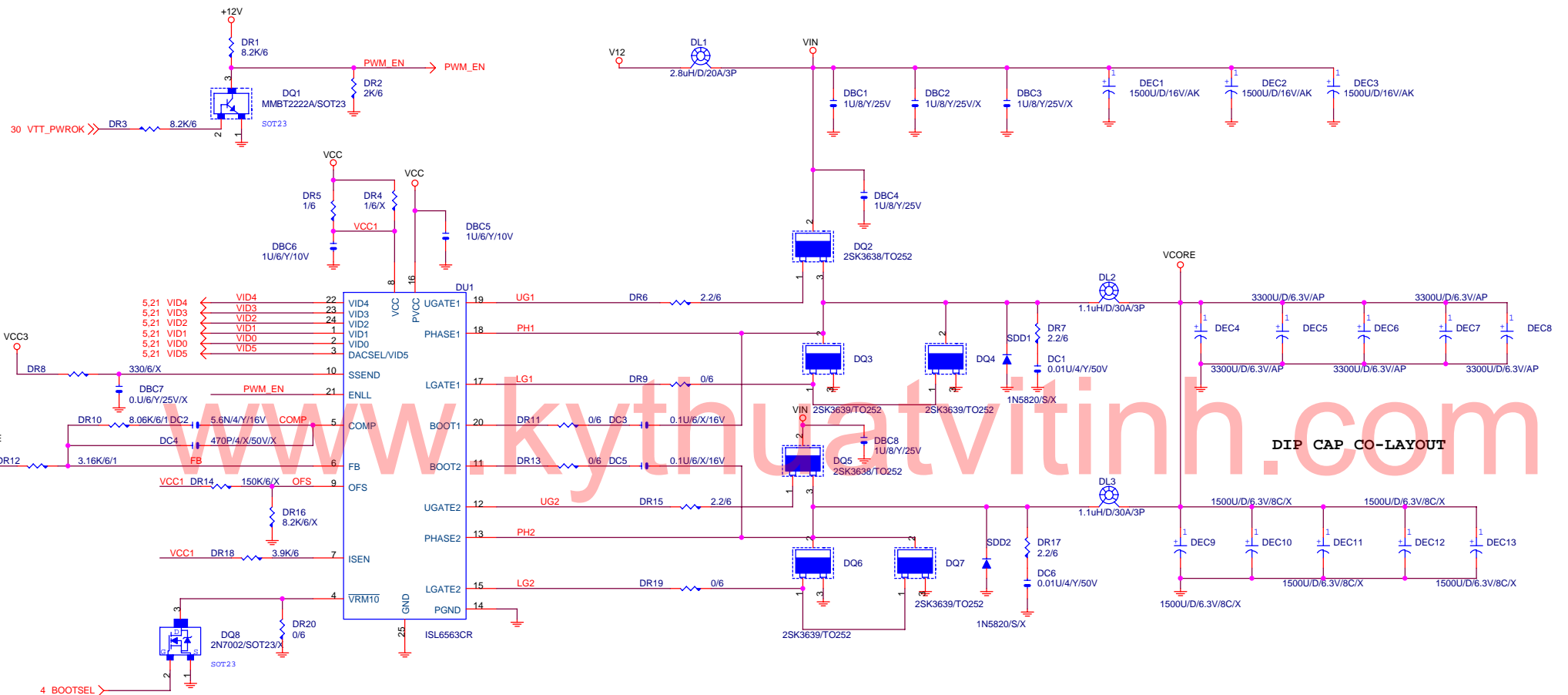
模組化線路

Title		VGA CONNECTOR	
Size	Document Number	Rev	
Custom	81845GE-RZ	1.02	
Date:	Monday, January 03, 2005	Sheet	29 of 35

ATX POWER CONNECTOR

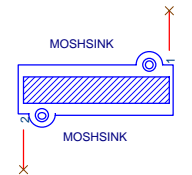
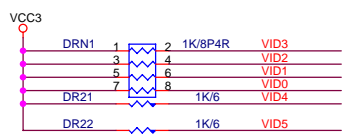


GIGABYTE			
Title			
Misc. PWR & ATX CONN.			
Size	Document Number	Rev	
B	81845GE-RZ	1.02	
Date:	Monday, January 03, 2005	Sheet	30 of 35

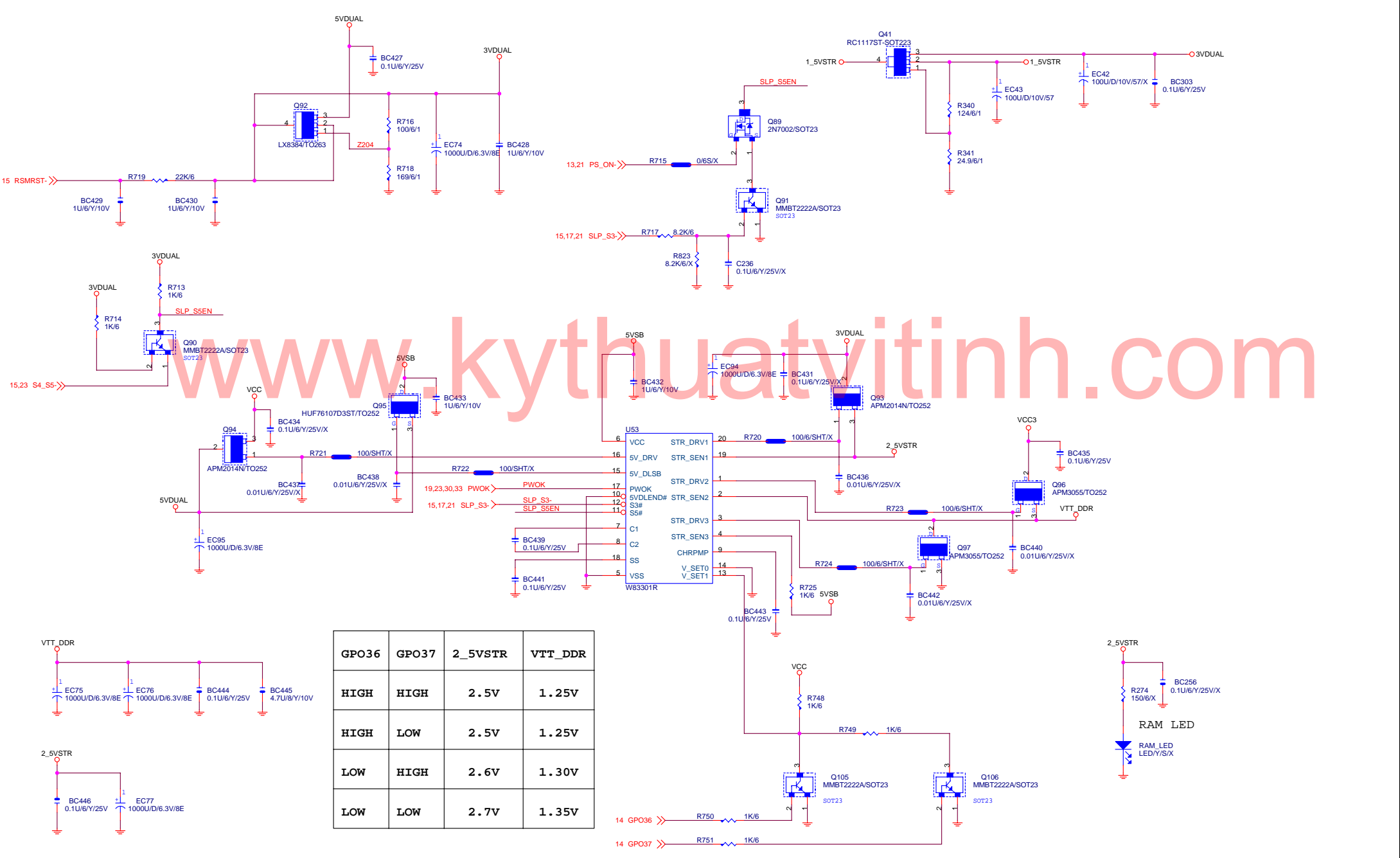


DIP CAP CO-LAYOUT

CPU Voltage ID output



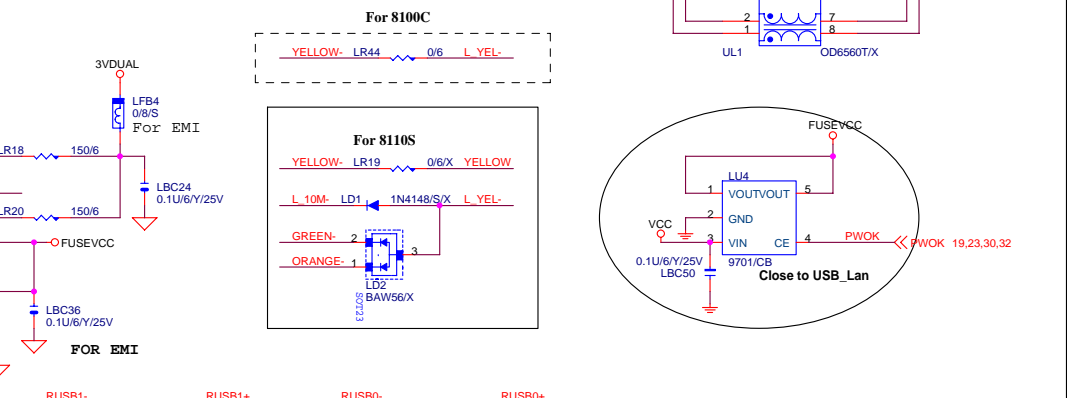
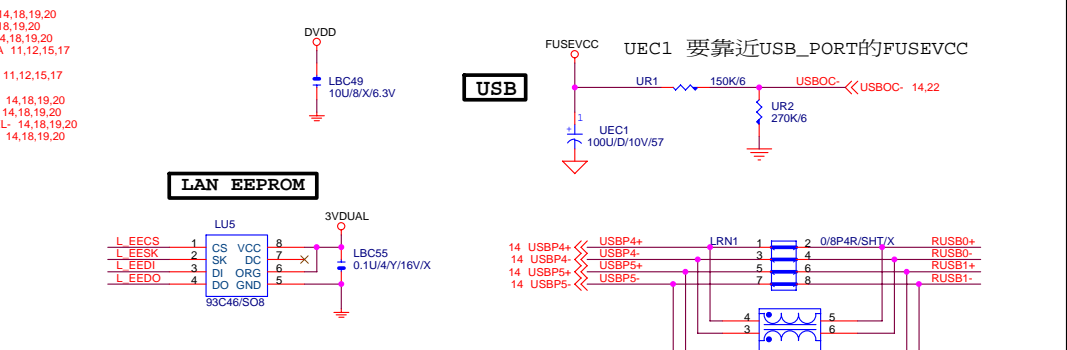
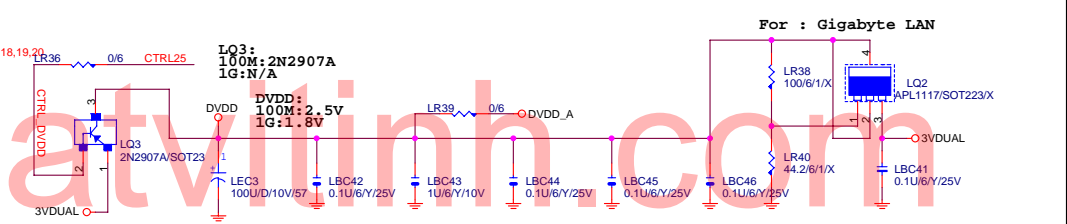
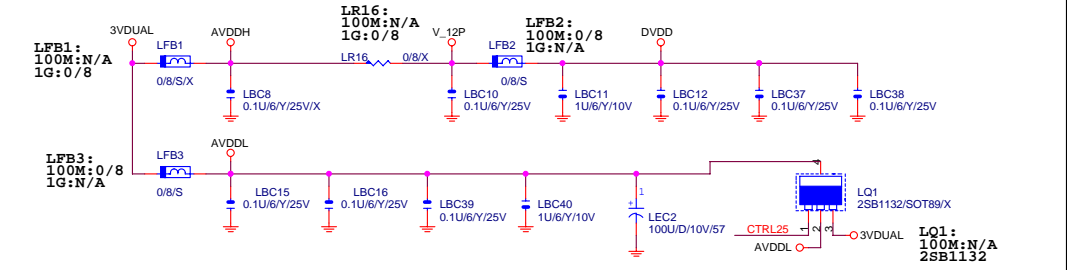
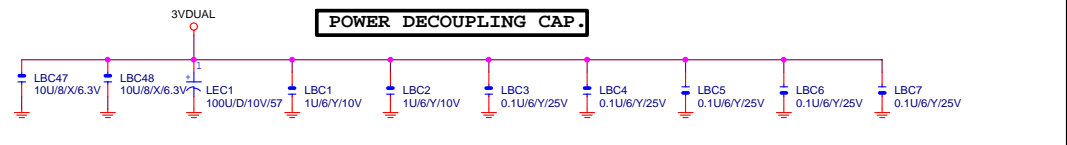
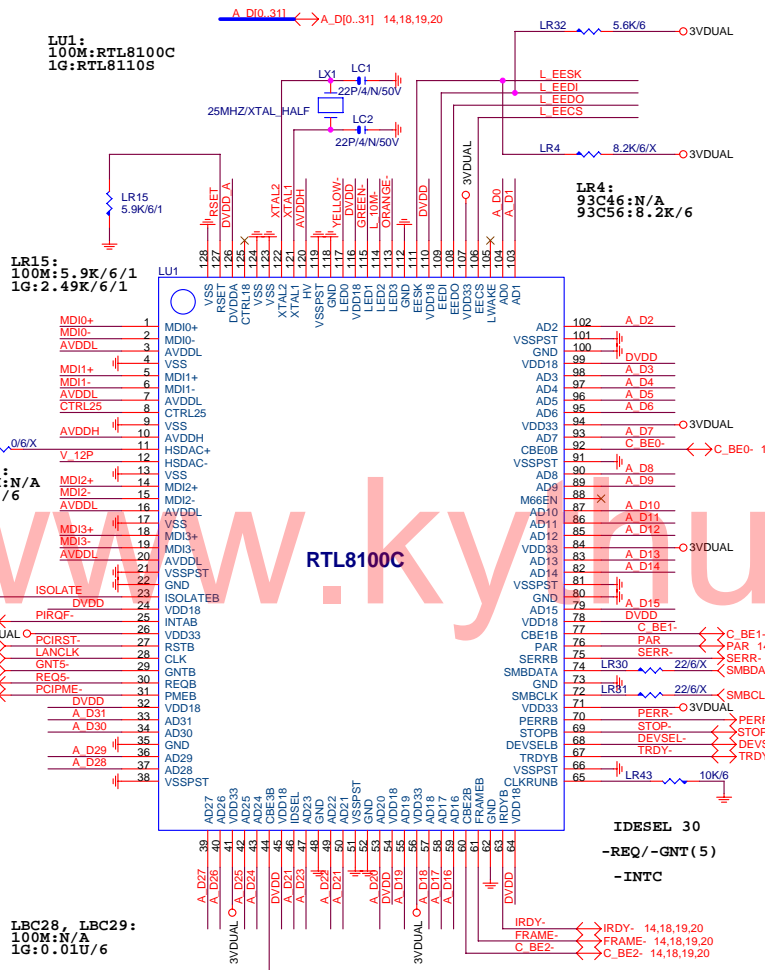
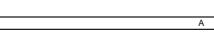
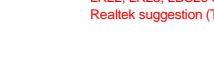
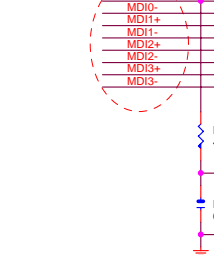
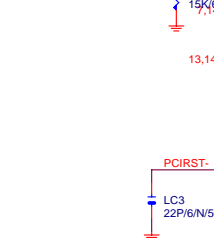
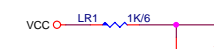
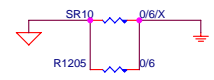
GIGABYTE CORP.			
Title			
Vcore PWM HIP6563			
Size	Document Number	Rev	
Custom	81845GE-RZ	1.02	
Date:	Sheet	31	of 35



GPO36	GPO37	2_5VSTR	VTT_DDR
HIGH	HIGH	2.5V	1.25V
HIGH	LOW	2.5V	1.25V
LOW	HIGH	2.6V	1.30V
LOW	LOW	2.7V	1.35V

	10/100	Giga	Giga
	8100C	8110S	8110SB
AVDDH	N/A	3.3V	3.3V
V_12P	2.5V	N/A	3.3V
AVDDL	3.3V	2.5V	2.5V
V_DAC	N/A	2.5V	2.5V
DVDD	2.5V	1.8V	1.3V
DVDD_A	2.5V	1.8V	1.3V

	Yellow	Dual Color LED	
		Green	Orange
10Mb	---	OFF	OFF
100Mb	---	ON	OFF
1Gb	---	OFF	ON
Link	ON	---	---
Active	Blink	---	---



GIGABYTE		
LAN RTL8100C		
Title	Document Number	Rev
	8I845GE-RZ	1.02
Size	Monday, January 03, 2005	Sheet 33 of 35

8I845GE-RZ PCI ROUNTING LIST

Revision : 1.02

PCI DEVICE	IDSEL	INT	CLOCK	REQ	GNT
PCI SLOT1	16	C,F,G,A	PCLK1	REQ0-	GNT0-
PCI SLOT2	17	F,G,A,C	PCLK2	REQ1-	GNT1-
PCI SLOT3	18	G,A,C,F	PCLK3	REQ2-	GNT2-
PCI SLOT4	19	A,C,F,G	PCLK4	REQ3-	GNT3-
PCI SLOT5	20	C,F,G,A	PCLK5	REQ4-	GNT4-
LAN	21	F	LANCLK	REQ5-	GNT5-

www.kythuatvithinh.com

8I845GE-RZ GPIO LIST

Revision 1.02

SHEET

TITLE

GPI		
GPI0/REQA-		PULL DOWN 15K, detect IDE1 connector type.
GPI1/REQ5-		PULL DOWN 15K, detect IDE2 connector type.
GPI2/PIRQE-		PULL 8.2K TO VCC3
GPI3/PIRQF-		PULL 8.2K TO VCC3
GPI4/PIRQG-		PULL 8.2K TO VCC3
GPI5/PIRQH-		PULL 8.2K TO VCC3
GPI6		PULL 8.2K TO VCC3 (GREEN_BUTTON)
GPI7		NOT IMPLEMENTED
GPI8		PULL 8.2K TO 3VDUAL, LPC PME.
GPI9	NA	NOT IMPLEMENTED
GPI10	NA	NOT IMPLEMENTED
GPI11		PULL 4.7K TO 3VDUAL (SMBALERT)
GPI12		PULL DOWN 10K.
GPI13		PULL DOWN 10K, CNR_PRIMARY
GPI14	NA	NOT IMPLEMENTED
GPI15	NA	NOT IMPLEMENTED

SHEET

TITLE

GPO		
GPO16		PULL 8.2K TO VCC3
GPO17		PULL 8.2K TO VCC3 (GNT5-)
GPO18		PULL 8.2K TO VCC3
GPO19		PULL 8.2K TO VCC3
GPO20		PULL 8.2K TO VCC3
GPO21		PULL 8.2K TO VCC3
GPO22		PULL 8.2K TO VCC3
GPO23		PULL 8.2K TO VCC3
GPO24		PULL 1K TO 3VDUAL (TOP BLOCK)
GPO25		PULL 4.7K TO 3VDUAL, POWER LED CONTROL.
GPO26		NOT IMPLEMENTED
GPO27		PULL 8.2K TO 3VDUAL, POWER LED CONTROL.
GPO28		PULL 8.2K TO 3VDUAL, GREEN LED.
GPO32		PULL 8.2K TO 3VDUAL, BIOS WRITE PROTECT.
GPO35		PULL DOWN 10K, POWER LED CONTROL.