

GIGABYTE GA-8IPE1000-G

Schematics

Revision 3.1

SHEET

TITLE

SHEET

TITLE

01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	P4_478A
05	P4_478B
06	P4_478C
07	SPRINGDALE HOST
08	SPRINGDALE DDR
09	SPRINGDALE AGP, HUB, CSA, VGA
10	SPRINGDALE PWR
11	DDR1,2 CHANNEL A
12	DDR3,4 CHANNEL B
13	DDR TERMINATION
14	AGP 8X SLOT
15	ICH5 PCI, USB, HUB, LAN
16	ICH5 IDE, GPIO, SATA, CTRL
17	ICH5 VCC, GND
18	DUAL FWH
19	ICS952635 CLOCK GENERATOR
20	PCI SLOT1/SLOT2
21	PCI SLOT3/SLOT4/RESET BUFFER
22	PCI SLOT5/SLOT6

23	AC '97 CODEC
24	AUDIO JACK, L_OUT, F_AUDIO
25	ITE 8712/IR_CIR/SCR/S_IRQ
26	COMA/VGA_COMB/LPT
27	IDE1/IDE2/FDD
28	FAN/HW MONITOR
29	KB_MS/GAME/FUSEVCC
30	FRONT PANEL
31	R_USB/F_USB1/F_USB2
32	DDR/VDDQ/5VDUAL/VCCVID POWER
33	VCORE POWER
34	ATX/ATX_12V/FAN1655M
35	MARVELL 88E8001
36	TI TSB43AB23(1394)
37	PCI ROUNTIONG
38	GPIO PIN LIST

PROCESS:C

COMPONENT SIDE (0.5 oz. Copper)
VCC SIDE (1 oz. Copper)
GND SIDE (1 oz. Copper)
SOLDER SIDE (0.5 oz. Copper)

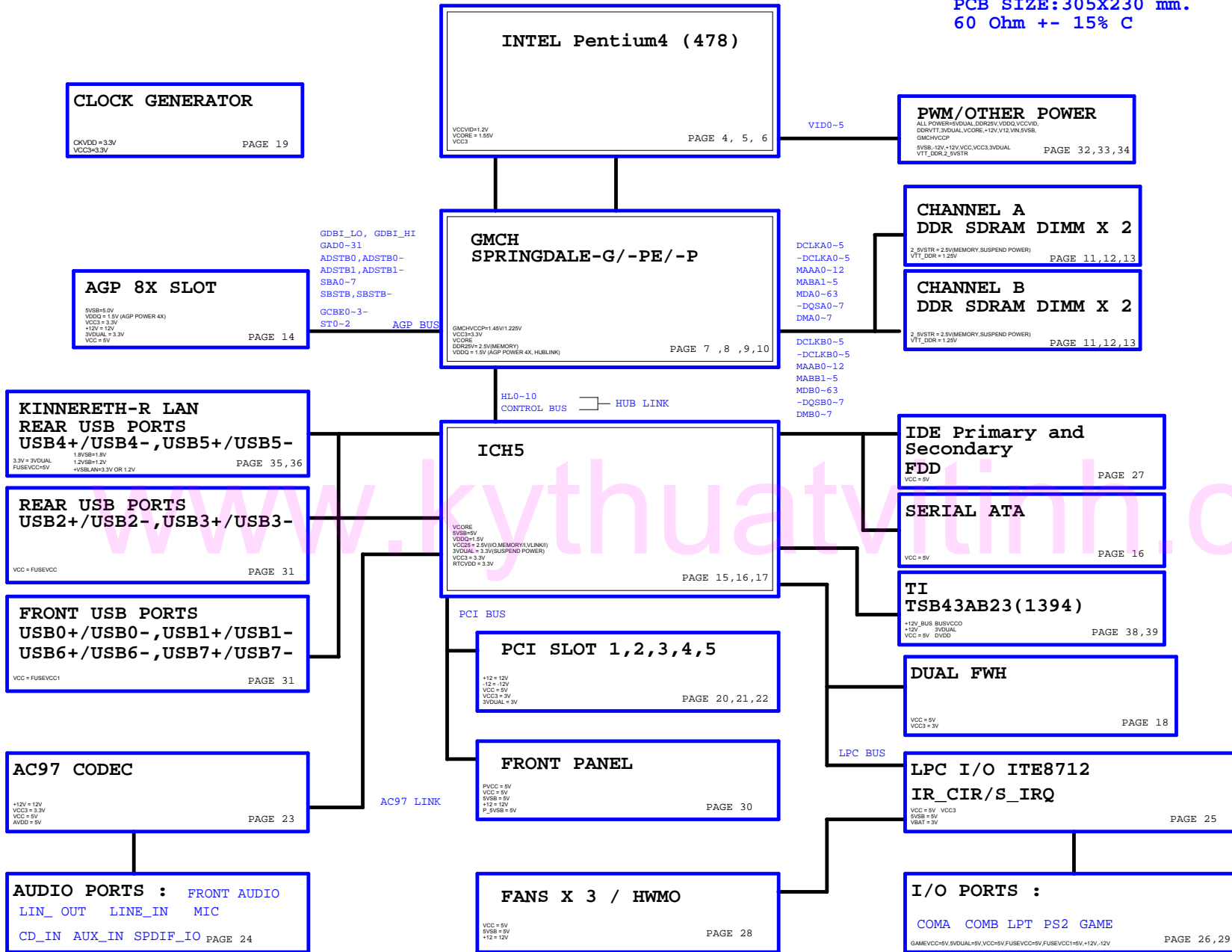
GIGABYTE CORP.

Title: COVER SHEET

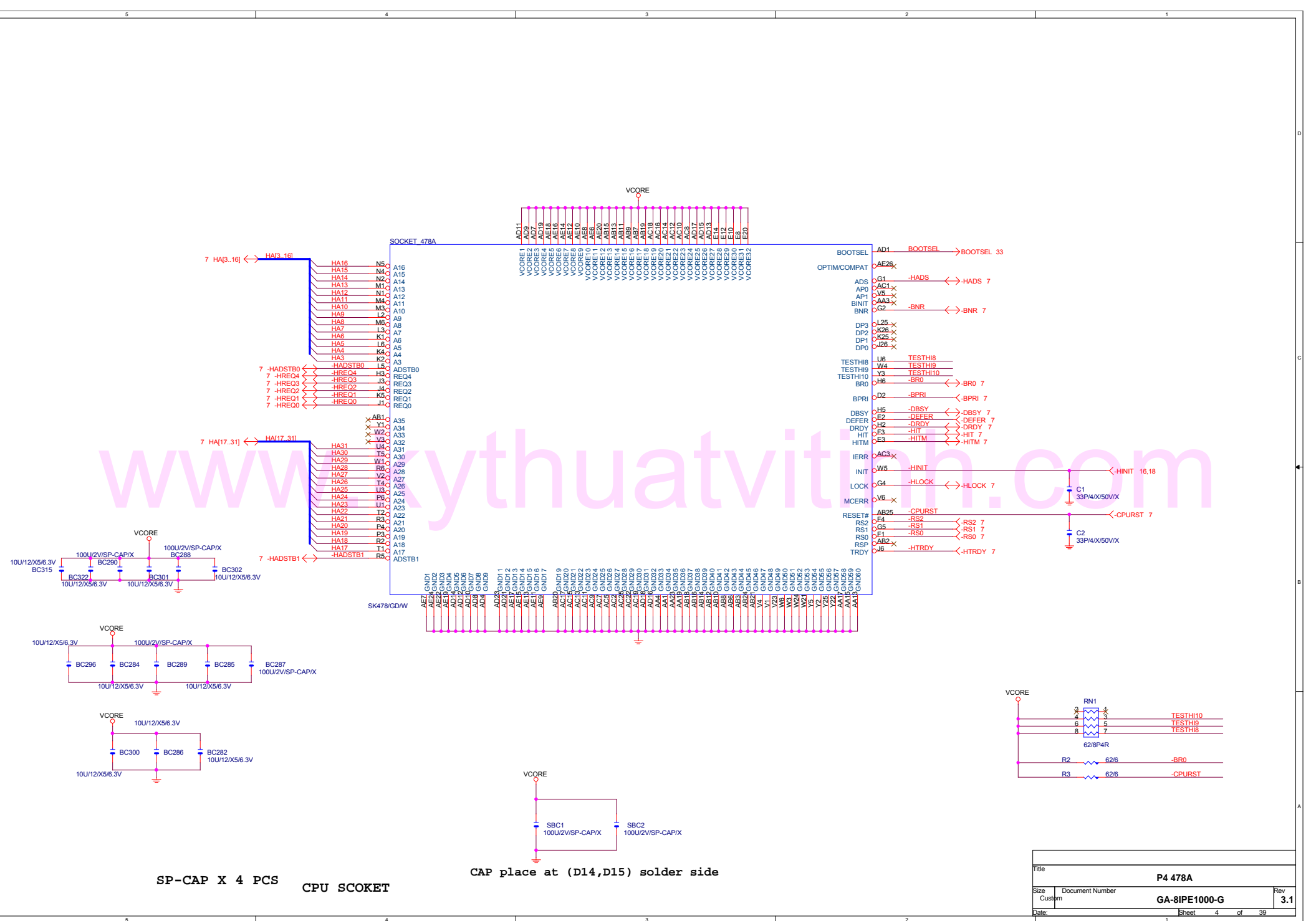
Size Custom	Document Number	GA-8IPE1000-G	Rev	3.1
Date:	Sheet 1 of 39			

BLOCK DIAGRAM

PCB SIZE: 305X230 mm.
60 Ohm +/- 15% C



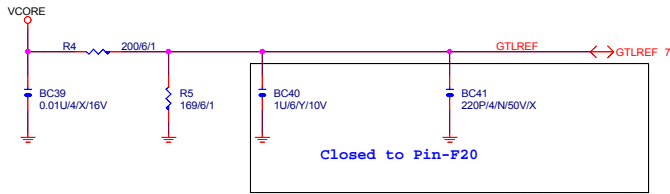
GIGABYTE CORP.			
BOM & PCB MODIFY HISTORY			
File	Document Number	Rev	
Custom	GA-BIPE1000-G	3.1	
Date	Sheet	3	of 33



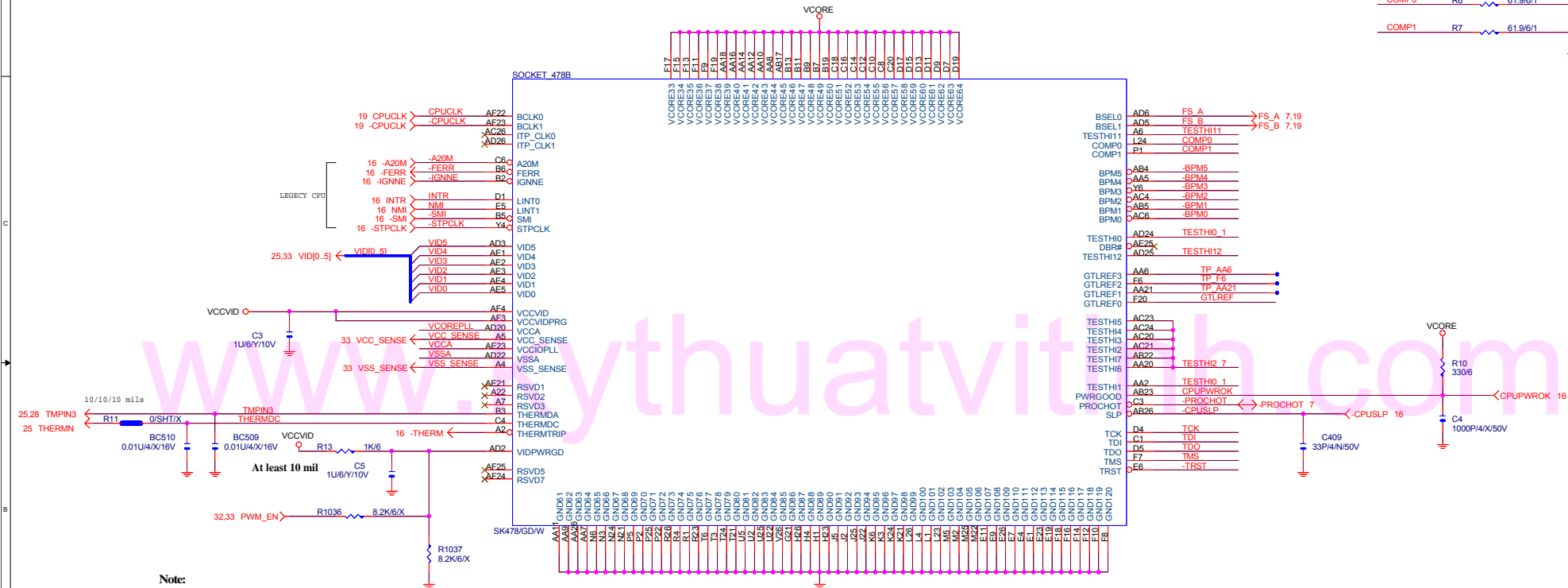
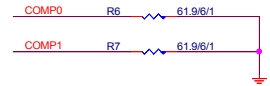
SP-CAP X 4 PCS
CPU SCKET

CAP place at (D14,D15) solder side

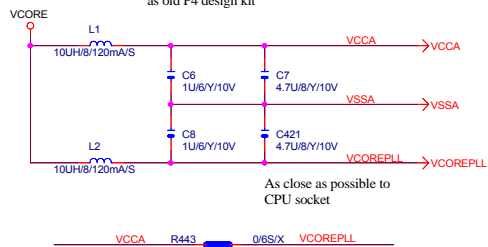
Title		
P4 478A		
Size	Document Number	Rev
Custom	GA-8IPE1000-G	3.1
Date:	Sheet	4 of 39



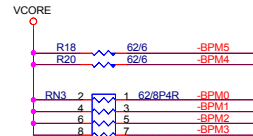
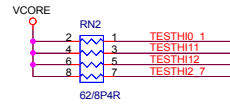
Place outside of CPU socket



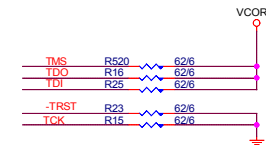
Note:
VCCA & VCCOREPLL define doesn't same as old P4 design kit



As close as possible to CPU socket



Close to CPU

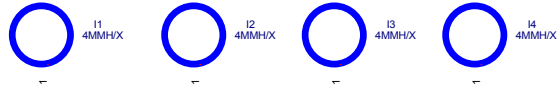
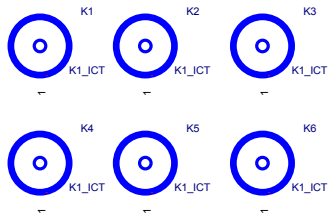


Close to CPU

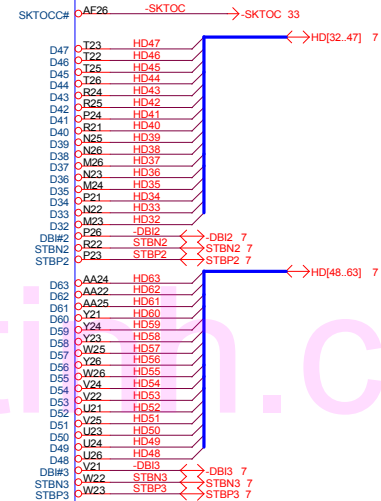
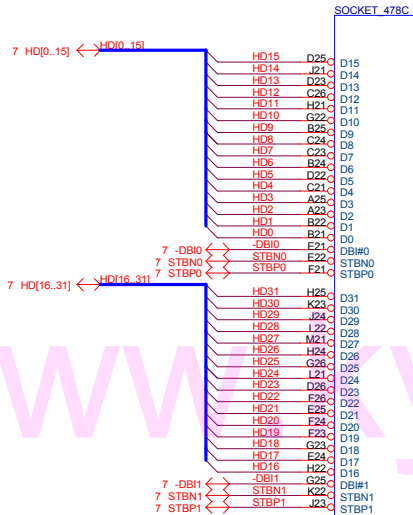
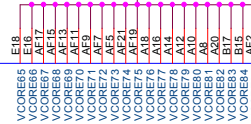


Pull up must place end of route

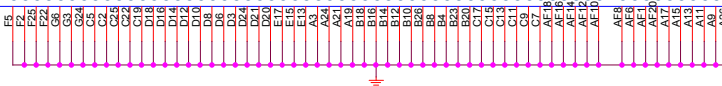
Title		
P4 478B		
Size	Document Number	Rev
Custom	GA-8IPE1000-G	3.1
Date:	Sheet	5 of 39



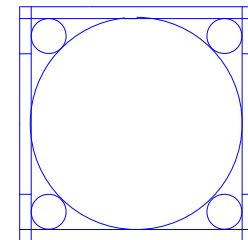
VCORE



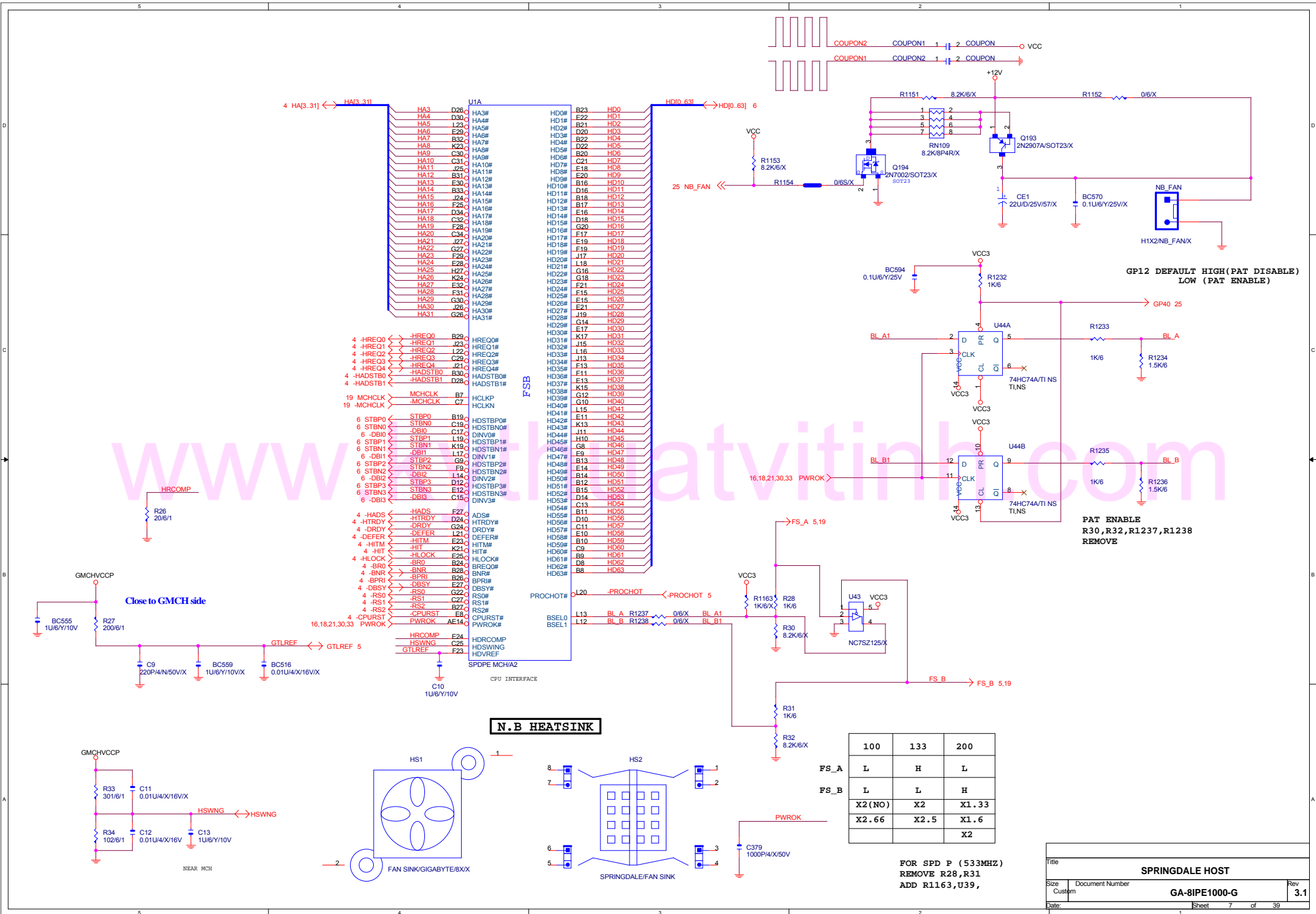
SK478/GDW



CR1
CPU_RMORAG



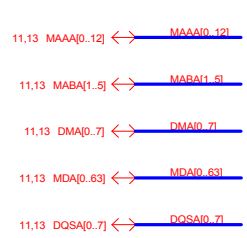
Title			P4 478C		
Size	Document Number				Rev
Custom		GA-8IPE1000-G			3.1
Date:	Sheet 6 of 39				



	100	133	200
FS_A	L	H	L
FS_B	L	L	H
X2 (NO)	X2	X2	X1.33
	X2.66	X2.5	X1.6
			X2

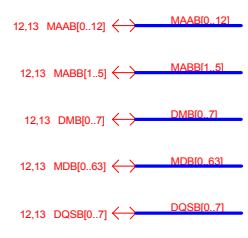
FOR SPD P (533MHZ)
REMOVE R28,R31
ADD R1163,U39,

DDR 400 1-2-3-4 CPC DISABLE
 DDR 333 SIGNAL 1 CPC ENABLE
 2 CPC DISABLE
 DUAL 2 CPC ENABLE
 DUAL 4 CPC DISABLE

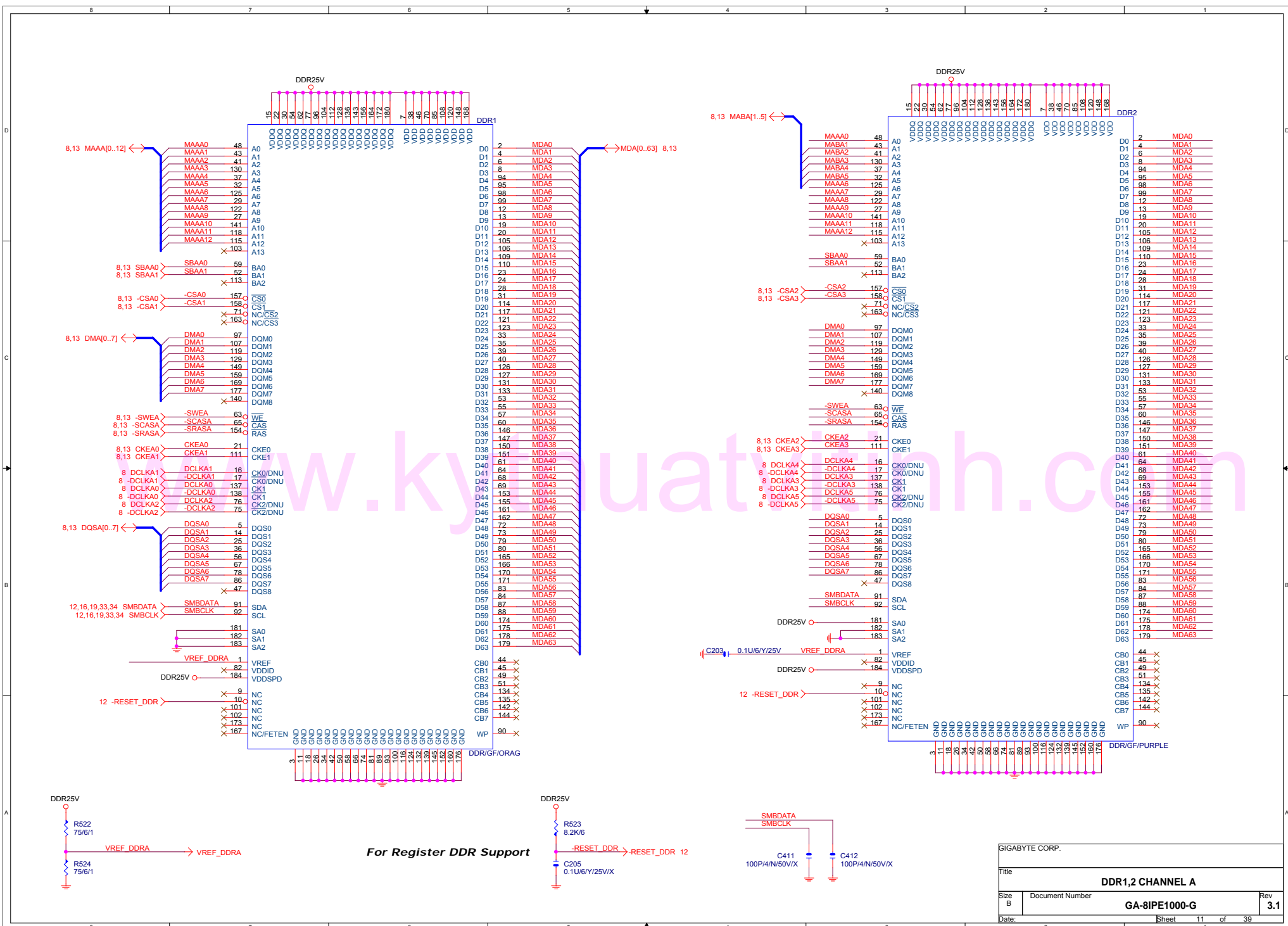


Pin	Signal	Pin	Signal	Pin	Signal
MAAA0	A134	SMAA_A0	SDQS_A0	AN11	DQSA0
MAAA1	A133	SMAA_A1	SDM_A0	AP10	MDA0
MAAA2	AK29	SMAA_A2	SDQ_A0	AP11	MDA1
MAAA3	AN31	SMAA_A3	SDQ_A1	AP12	MDA2
MAAA4	AL30	SMAA_A4	SDQ_A2	AM12	MDA3
MAAA5	AL26	SMAA_A5	SDQ_A3	AN13	MDA4
MAAA6	AL28	SMAA_A6	SDQ_A4	AM10	MDA4
MAAA7	AN25	SMAA_A7	SDQ_A4	AL10	MDA5
MAAA8	AP26	SMAA_A8	SDQ_A5	AL12	MDA6
MAAA9	AP24	SMAA_A9	SDQ_A6	AP13	MDA7
MAAA10	A133	SMAA_A10	SDQ_A7	AP15	DQSA1
MAAA11	AN23	SMAA_A11	SDQS_A1	AP16	DMA1
MAAA12	AN21	SMAA_A12	SDM_A1	AP14	MDA8
MABA1	AL34	SMAB_A1	SDQ_A8	AM14	MDA9
MABA2	AM34	SMAB_A2	SDQ_A9	AL18	MDA10
MABA3	AP32	SMAB_A3	SDQ_A10	AL18	MDA11
MABA4	AP31	SMAB_A4	SDQ_A11	AL14	MDA12
MABA5	AM26	SMAB_A5	SDQ_A12	AL14	MDA12
			SDQ_A13	AN15	MDA13
			SDQ_A14	AP18	MDA14
			SDQ_A15	AM18	MDA15
11.13 -SWEA	AB34	SWE_A#	SDQS_A2	AP23	DQSA2
11.13 -SCASA	Y34	SCAS_A#	SDM_A2	AM24	DMA2
11.13 -SRASA	AC33	SRA5_A#			
11.13 SBA00	AE33	SBA_A0	SDQ_A16	AP22	MDA16
11.13 SBA01	AH34	SBA_A1	SDQ_A17	AM22	MDA17
			SDQ_A18	AL24	MDA18
			SDQ_A19	AN27	MDA19
11.13 -CSA0	AA34	SCS_A0#	SDQ_A20	AP21	MDA20
11.13 -CSA1	Y32	SCS_A1#	SDQ_A21	AL22	MDA21
11.13 -CSA2	Y32	SCS_A2#	SDQ_A22	AP25	MDA22
11.13 -CSA3	W34	SCS_A3#	SDQ_A23	AP27	MDA23
			SDQ_A24	AP25	MDA22
11.13 CKEA0	AL20	SCKE_A0	SDQ_A25	AP30	DQSA3
11.13 CKEA1	AN19	SCKE_A1	SDM_A3	AM30	DMA3
11.13 CKEA2	AM20	SCKE_A2			
11.13 CKEA3	AP20	SCKE_A3			
			SDQ_A24	AP28	MDA24
			SDQ_A25	AP29	MDA25
			SDQ_A26	AP33	MDA26
			SDQ_A27	AM33	MDA27
			SDQ_A28	AM28	MDA28
			SDQ_A29	AN29	MDA29
			SDQ_A30	AM31	MDA30
			SDQ_A31	AN34	MDA31
			SDQ_A32	AF34	DQSA4
			SDQ_A33	AF31	DMA4
			SDQ_A34	AH32	MDA32
			SDQ_A35	AS34	MDA33
			SDQ_A36	AF32	MDA34
			SDQ_A37	AD32	MDA35
			SDQ_A38	AH31	MDA36
			SDQ_A39	AC33	MDA37
			SDQ_A40	U34	MDA40
			SDQ_A41	U33	MDA41
			SDQ_A42	V32	MDA42
			SDQ_A43	V31	MDA43
			SDQ_A44	AD31	MDA44
			SDQ_A45	AB32	MDA45
			SDQ_A46	U34	MDA46
			SDQ_A47	U33	MDA47
			SDQS_A6	M32	DQSA6
			SDM_A6	M34	DMA6
			SDQ_A48	T34	MDA48
			SDQ_A49	T32	MDA49
			SDQ_A50	K34	MDA50
			SDQ_A51	K32	MDA51
			SDQ_A52	T31	MDA52
			SDQ_A53	P34	MDA53
			SDQ_A54	L34	MDA54
			SDQ_A55	L33	MDA55
			SDQS_A7	H31	DQSA7
			SDM_A7	H32	DMA7
			SDQ_A56	J33	MDA56
			SDQ_A57	H34	MDA57
			SDQ_A58	E33	MDA58
			SDQ_A59	F33	MDA59
			SDQ_A60	K31	MDA60
			SDQ_A61	J34	MDA61
			SDQ_A62	G34	MDA62
			SDQ_A63	F34	MDA63

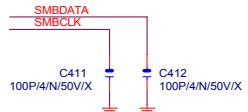
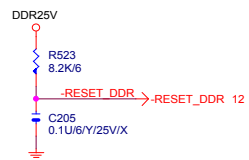
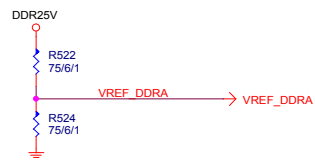
Pin	Signal	Pin	Signal	Pin	Signal
AN11	DQSA0	SDQS_A0	SDQS_A0	AN11	DQSA0
AP10	MDA0	SDM_A0	SDM_A0	AP10	MDA0
AP11	MDA1	SDQ_A0	SDQ_A0	AP11	MDA1
AP12	MDA2	SDQ_A1	SDQ_A1	AP12	MDA2
AM12	MDA3	SDQ_A2	SDQ_A2	AM12	MDA3
AN13	MDA4	SDQ_A3	SDQ_A3	AN13	MDA4
AM10	MDA4	SDQ_A4	SDQ_A4	AM10	MDA4
AL10	MDA5	SDQ_A4	SDQ_A4	AL10	MDA5
AL12	MDA6	SDQ_A5	SDQ_A5	AL12	MDA6
AP13	MDA7	SDQ_A6	SDQ_A6	AP13	MDA7
AP15	DQSA1	SDQ_A7	SDQ_A7	AP15	DQSA1
AP16	DMA1	SDQS_A1	SDQS_A1	AP16	DMA1
SDM_A1		SDM_A1	SDM_A1	SDM_A1	
AP14	MDA8	SDQ_A8	SDQ_A8	AP14	MDA8
AM14	MDA9	SDQ_A9	SDQ_A9	AM14	MDA9
AL18	MDA10	SDQ_A10	SDQ_A10	AL18	MDA10
AL18	MDA11	SDQ_A11	SDQ_A11	AL18	MDA11
AL14	MDA12	SDQ_A12	SDQ_A12	AL14	MDA12
AN15	MDA13	SDQ_A13	SDQ_A13	AN15	MDA13
AP18	MDA14	SDQ_A14	SDQ_A14	AP18	MDA14
AM18	MDA15	SDQ_A15	SDQ_A15	AM18	MDA15
AP23	DQSA2	SDQS_A2	SDQS_A2	AP23	DQSA2
AM24	DMA2	SDM_A2	SDM_A2	AM24	DMA2
SDQ_A16		SDQ_A16	SDQ_A16	SDQ_A16	
SDQ_A17		SDQ_A17	SDQ_A17	SDQ_A17	
SDQ_A18		SDQ_A18	SDQ_A18	SDQ_A18	
SDQ_A19		SDQ_A19	SDQ_A19	SDQ_A19	
SDQ_A20		SDQ_A20	SDQ_A20	SDQ_A20	
SDQ_A21		SDQ_A21	SDQ_A21	SDQ_A21	
SDQ_A22		SDQ_A22	SDQ_A22	SDQ_A22	
SDQ_A23		SDQ_A23	SDQ_A23	SDQ_A23	
SDQ_A24		SDQ_A24	SDQ_A24	SDQ_A24	
SDQ_A25		SDQ_A25	SDQ_A25	SDQ_A25	
SDQ_A26		SDQ_A26	SDQ_A26	SDQ_A26	
SDQ_A27		SDQ_A27	SDQ_A27	SDQ_A27	
SDQ_A28		SDQ_A28	SDQ_A28	SDQ_A28	
SDQ_A29		SDQ_A29	SDQ_A29	SDQ_A29	
SDQ_A30		SDQ_A30	SDQ_A30	SDQ_A30	
SDQ_A31		SDQ_A31	SDQ_A31	SDQ_A31	
SDQ_A32		SDQ_A32	SDQ_A32	SDQ_A32	
SDQ_A33		SDQ_A33	SDQ_A33	SDQ_A33	
SDQ_A34		SDQ_A34	SDQ_A34	SDQ_A34	
SDQ_A35		SDQ_A35	SDQ_A35	SDQ_A35	
SDQ_A36		SDQ_A36	SDQ_A36	SDQ_A36	
SDQ_A37		SDQ_A37	SDQ_A37	SDQ_A37	
SDQ_A38		SDQ_A38	SDQ_A38	SDQ_A38	
SDQ_A39		SDQ_A39	SDQ_A39	SDQ_A39	
SDQS_A5		SDQS_A5	SDQS_A5	SDQS_A5	
SDM_A5		SDM_A5	SDM_A5	SDM_A5	
SDQ_A40		SDQ_A40	SDQ_A40	SDQ_A40	
SDQ_A41		SDQ_A41	SDQ_A41	SDQ_A41	
SDQ_A42		SDQ_A42	SDQ_A42	SDQ_A42	
SDQ_A43		SDQ_A43	SDQ_A43	SDQ_A43	
SDQ_A44		SDQ_A44	SDQ_A44	SDQ_A44	
SDQ_A45		SDQ_A45	SDQ_A45	SDQ_A45	
SDQ_A46		SDQ_A46	SDQ_A46	SDQ_A46	
SDQ_A47		SDQ_A47	SDQ_A47	SDQ_A47	
SDQS_A6		SDQS_A6	SDQS_A6	SDQS_A6	
SDM_A6		SDM_A6	SDM_A6	SDM_A6	
SDQ_A48		SDQ_A48	SDQ_A48	SDQ_A48	
SDQ_A49		SDQ_A49	SDQ_A49	SDQ_A49	
SDQ_A50		SDQ_A50	SDQ_A50	SDQ_A50	
SDQ_A51		SDQ_A51	SDQ_A51	SDQ_A51	
SDQ_A52		SDQ_A52	SDQ_A52	SDQ_A52	
SDQ_A53		SDQ_A53	SDQ_A53	SDQ_A53	
SDQ_A54		SDQ_A54	SDQ_A54	SDQ_A54	
SDQ_A55		SDQ_A55	SDQ_A55	SDQ_A55	
SDQS_A7		SDQS_A7	SDQS_A7	SDQS_A7	
SDM_A7		SDM_A7	SDM_A7	SDM_A7	
SDQ_A56		SDQ_A56	SDQ_A56	SDQ_A56	
SDQ_A57		SDQ_A57	SDQ_A57	SDQ_A57	
SDQ_A58		SDQ_A58	SDQ_A58	SDQ_A58	
SDQ_A59		SDQ_A59	SDQ_A59	SDQ_A59	
SDQ_A60		SDQ_A60	SDQ_A60	SDQ_A60	
SDQ_A61		SDQ_A61	SDQ_A61	SDQ_A61	
SDQ_A62		SDQ_A62	SDQ_A62	SDQ_A62	
SDQ_A63		SDQ_A63	SDQ_A63	SDQ_A63	



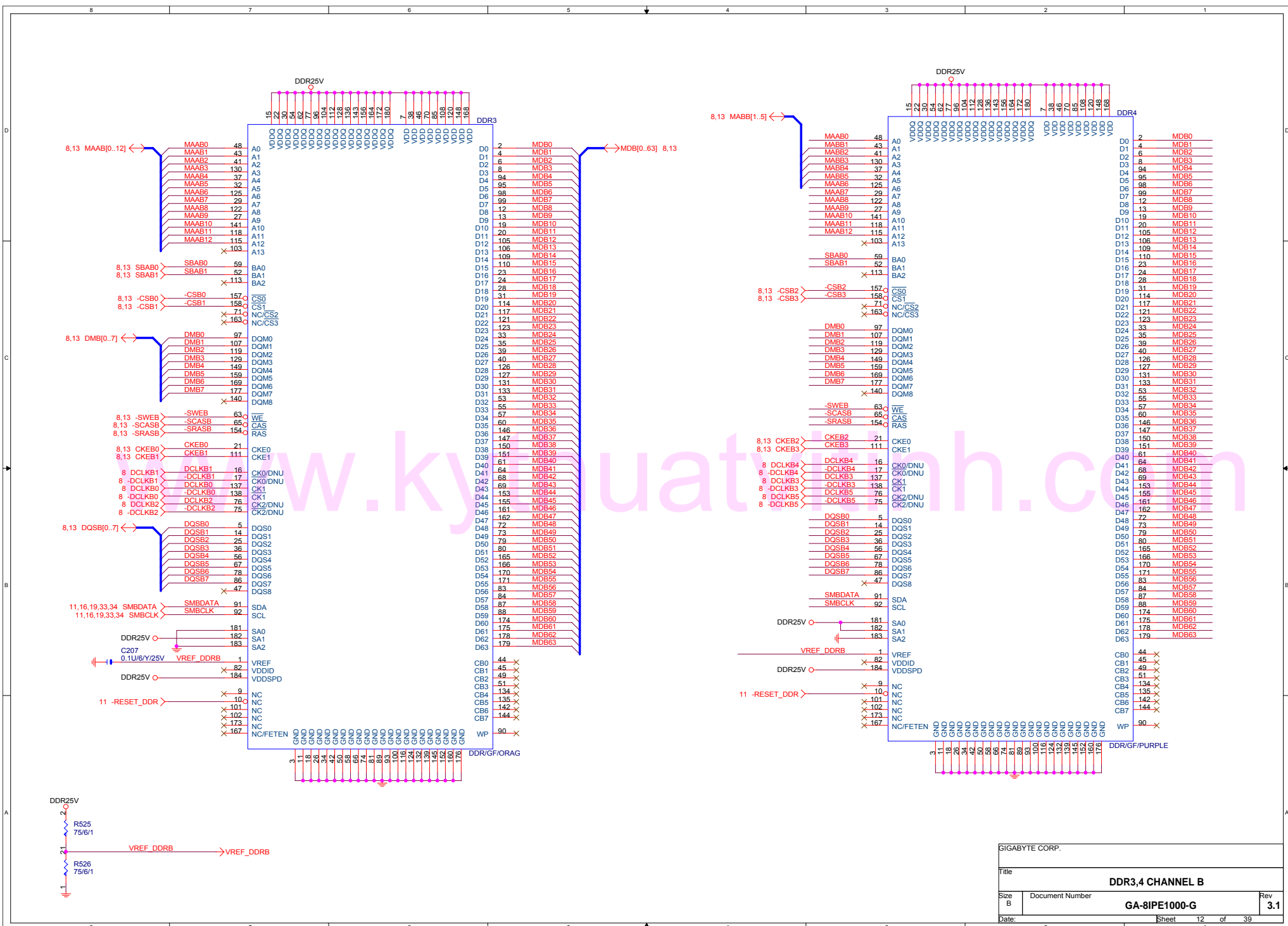
Pin	Signal	Pin	Signal	Pin	Signal
MAAB0	AG31	SMAA_B0	SDQS_B0	AE15	DQSB0
MAAB1	AJ31	SMAA_B1	SDM_B0	AG11	DMB0
MAAB2	AD27	SMAA_B2	SDQ_B0	AL10	MDB0
MAAB3	AE24	SMAA_B3	SDQ_B1	AE15	MDB1
MAAB4	AK27	SMAA_B4	SDQ_B1	AL11	MDB2
MAAB5	AG25	SMAA_B5	SDQ_B2	AE16	MDB3
MAAB6	AL25	SMAA_B6	SDQ_B3	AL8	MDB4
MAAB7	AF21	SMAA_B7	SDQ_B4	AE16	MDB5
MAAB8	AL23	SMAA_B8	SDQ_B5	AE12	MDB5
MAAB9	AJ22	SMAA_B9	SDQ_B6	AK11	MDB6
MAAB10	AE26	SMAA_B10	SDQ_B7	AG12	MDB7
MAAB11	AL21	SMAA_B11	SDQS_B1	AG13	DQSB1
MAAB12	AJ20	SMAA_B12	SDM_B1	AG15	DMB1
MABB1	AE27	SMAB_B1	SDQ_B8	AE17	MDB8
MABB2	AD26	SMAB_B2	SDQ_B9	AL13	MDB9
MABB3	AL29	SMAB_B3	SDQ_B10	AK17	MDB10
MABB4	AL27	SMAB_B4	SDQ_B11	AL17	MDB10
MABB5	AE23	SMAB_B5	SDQ_B12	AK13	MDB12
			SDQ_B13	AL14	MDB13
			SDQ_B14	AL16	MDB14
			SDQ_B15	AL18	MDB15
			SDQS_B2	AG21	DQSB2
			SDM_B2	AE21	DMB2
			SDQ_B16	AE19	MDB16
			SDQ_B17	AE20	MDB17
			SDQ_B18	AG23	MDB18
			SDQ_B19	AK23	MDB19
			SDQ_B20	AL19	MDB20
			SDQ_B21	AK21	MDB21
			SDQ_B22	AJ24	MDB22
			SDQ_B23	AE22	MDB23
			SDQ_B24	AK25	MDB24
			SDQ_B25	AH26	MDB25
			SDQ_B26	AG27	MDB26
			SDQ_B27	AF27	MDB27
			SDQ_B28	AJ26	MDB28
			SDQ_B29	AJ27	MDB29
			SDQ_B30	AD25	MDB30
			SDQ_B31	AF28	MDB31
			SDQS_B3	AH27	DQSB3
			SDM_B3	AJ28	DMB3
			SDQ_B32	AE30	MDB32
			SDQ_B33	AC27	MDB33
			SDQ_B34	AC30	MDB34
			SDQ_B35	Y29	MDB35
			SDQ_B36	AE31	MDB36
			SDQ_B37	AG29	MDB37
			SDQ_B38	AA26	MDB38
			SDQ_B39	AA27	MDB39
			SDQS_B5	U30	DQSB5
			SDM_B5	U31	DMB5
			SDQ_B40	AA30	MDB40
			SDQ_B41	U30	MDB41
			SDQ_B42	U27	MDB42
			SDQ_B43	T25	MDB43
			SDQ_B44	AA31	MDB44
			SDQ_B45	V29	MDB45
			SDQ_B46	U25	MDB46
			SDQ_B47	R27	MDB47
			SDQS_B6	L27	DQSB6
			SDM_B6	M29	DMB6
			SDQ_B48	P29	MDB48
			SDQ_B49	R30	MDB49
			SDQ_B50	K28	MDB50
			SDQ_B51	L30	MDB51
			SDQ_B52	R31	MDB52
			SDQ_B53	R26	MDB53
			SDQ_B54	P25	MDB54
			SDQ_B55	L32	MDB55
			SDQS_B7	J30	DQSB7
			SDM_B7	J31	DMB7
			SDQ_B56	K30	MDB56
			SDQ_B57	H29	MDB57
			SDQ_B58	F32	MDB58
			SDQ_B59	C3	



For Register DDR Support



SIGABYTE CORP.		
Title		
DDR1,2 CHANNEL A		
Size	Document Number	Rev
B	GA-8IPE1000-G	3.1
Date:	Sheet 11	of 39

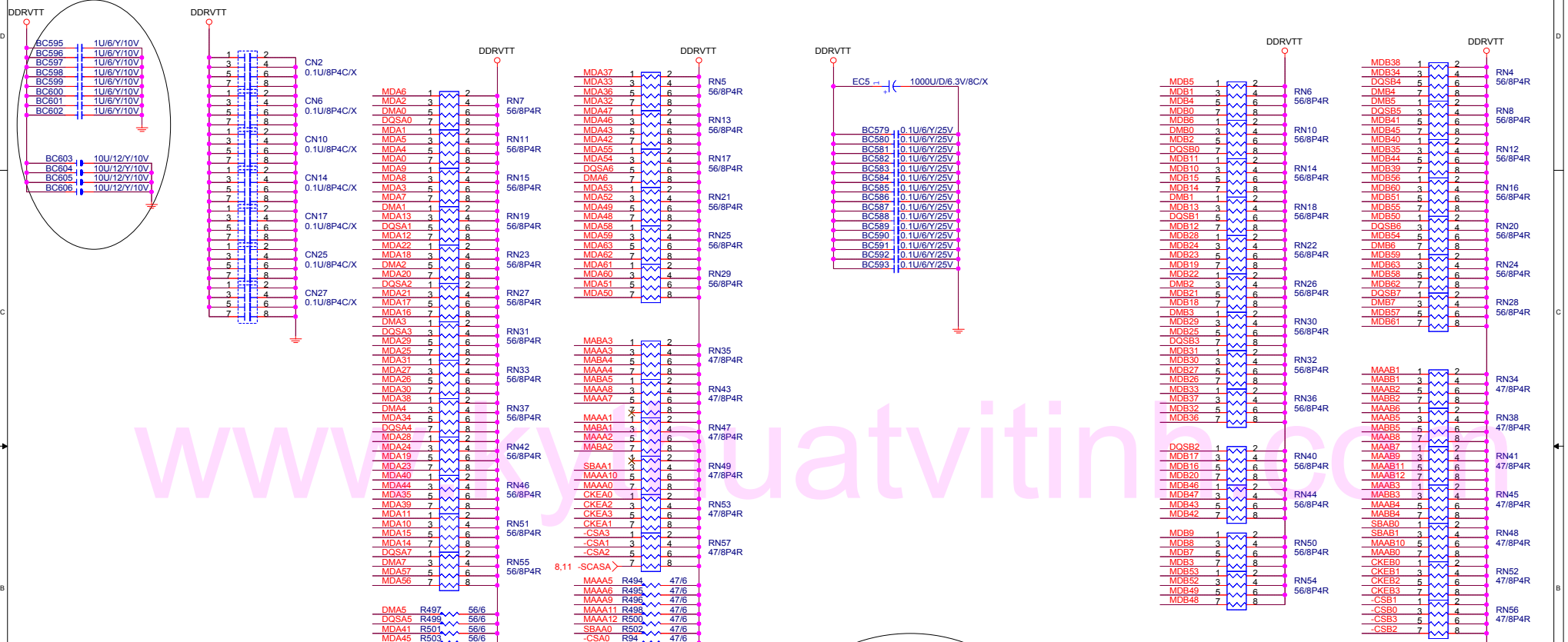


DDRVTT Decouple

DDR TERMINATION CHANNEL A

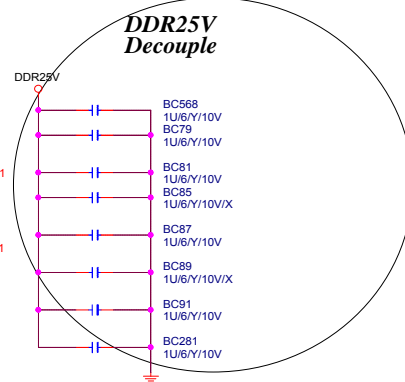
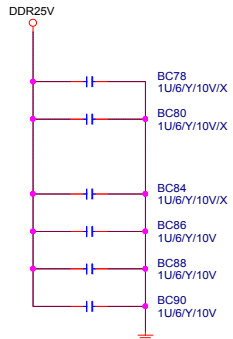
DDRVTT Decouple

CHANNEL B



DDR25V Decouple

DDR25V Decouple



- 47 Ohms**
- SBA[0:1] <- SBA[0:1] 8,11
 - CSA[0:3] <- -CSA[0:3] 8,11
 - CKEA[0:3] <- CKEA[0:3] 8,11
 - MABA[1..5] <-> MABA[1..5] 8,11
 - MAAA[0..12] <-> MAAA[0..12] 8,11

- 56 Ohms**
- DQSA[0..7] <-> DQSA[0..7] 8,11
 - DMA[0..7] <-> DMA[0..7] 8,11
 - MDA[0..63] <-> MDA[0..63] 8,11

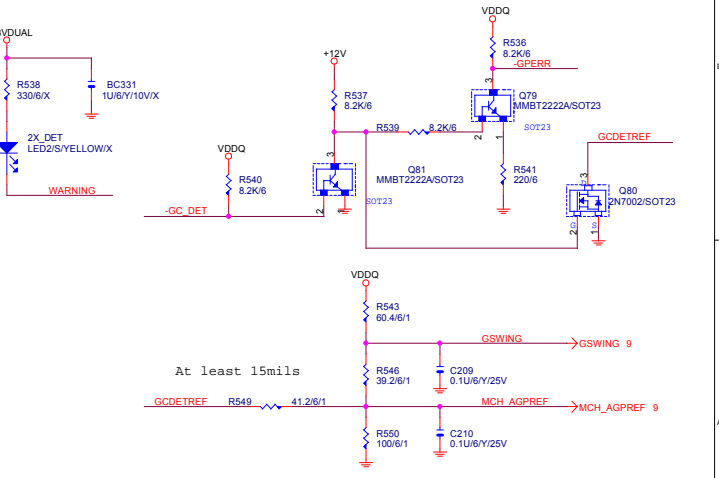
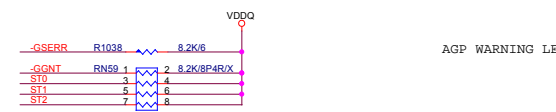
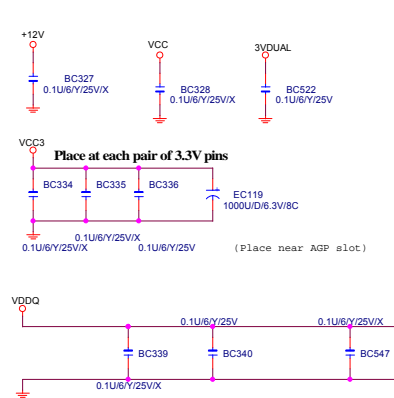
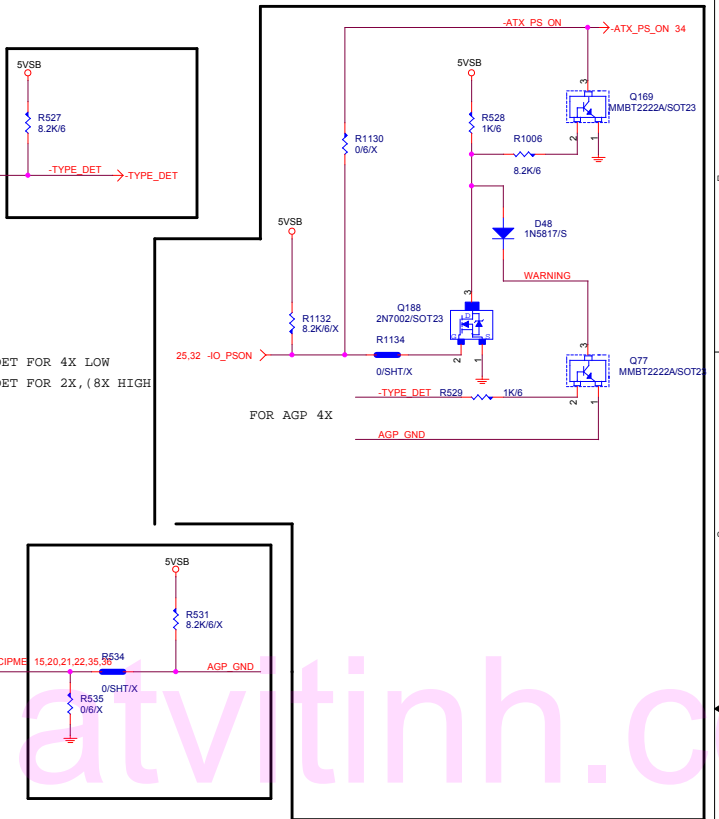
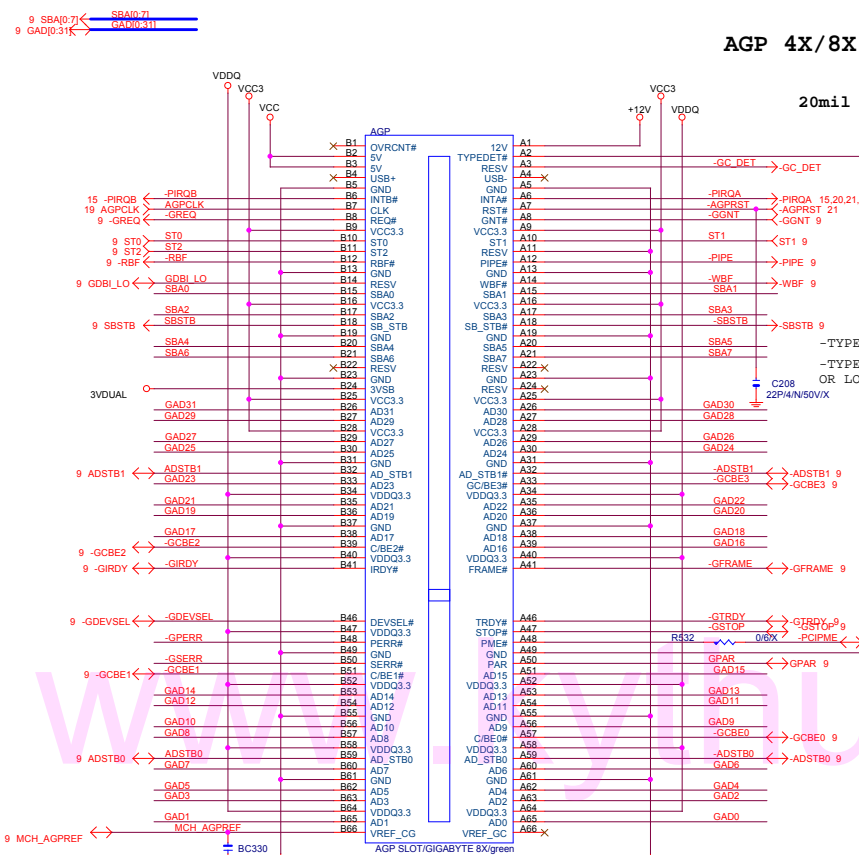
- 47 Ohms**
- SBAB[0:1] <- SBAB[0:1] 8,12
 - CSB[0:3] <- -CSB[0:3] 8,12
 - CKEB[0:3] <- CKEB[0:3] 8,12
 - MABB[1..5] <-> MABB[1..5] 8,12
 - MAAB[0..12] <-> MAAB[0..12] 8,12

- 56 Ohms**
- DQSB[0..7] <-> DQSB[0..7] 8,12
 - DMB[0..7] <-> DMB[0..7] 8,12
 - MDB[0..63] <-> MDB[0..63] 8,12

SIGABYTE CORP.		
Title		
DDR TERMINATION		
Size	Document Number	Rev
B	GA-8IPE1000-G	3.1
Date:	Sheet 13	of 39

AGP 4X/8X

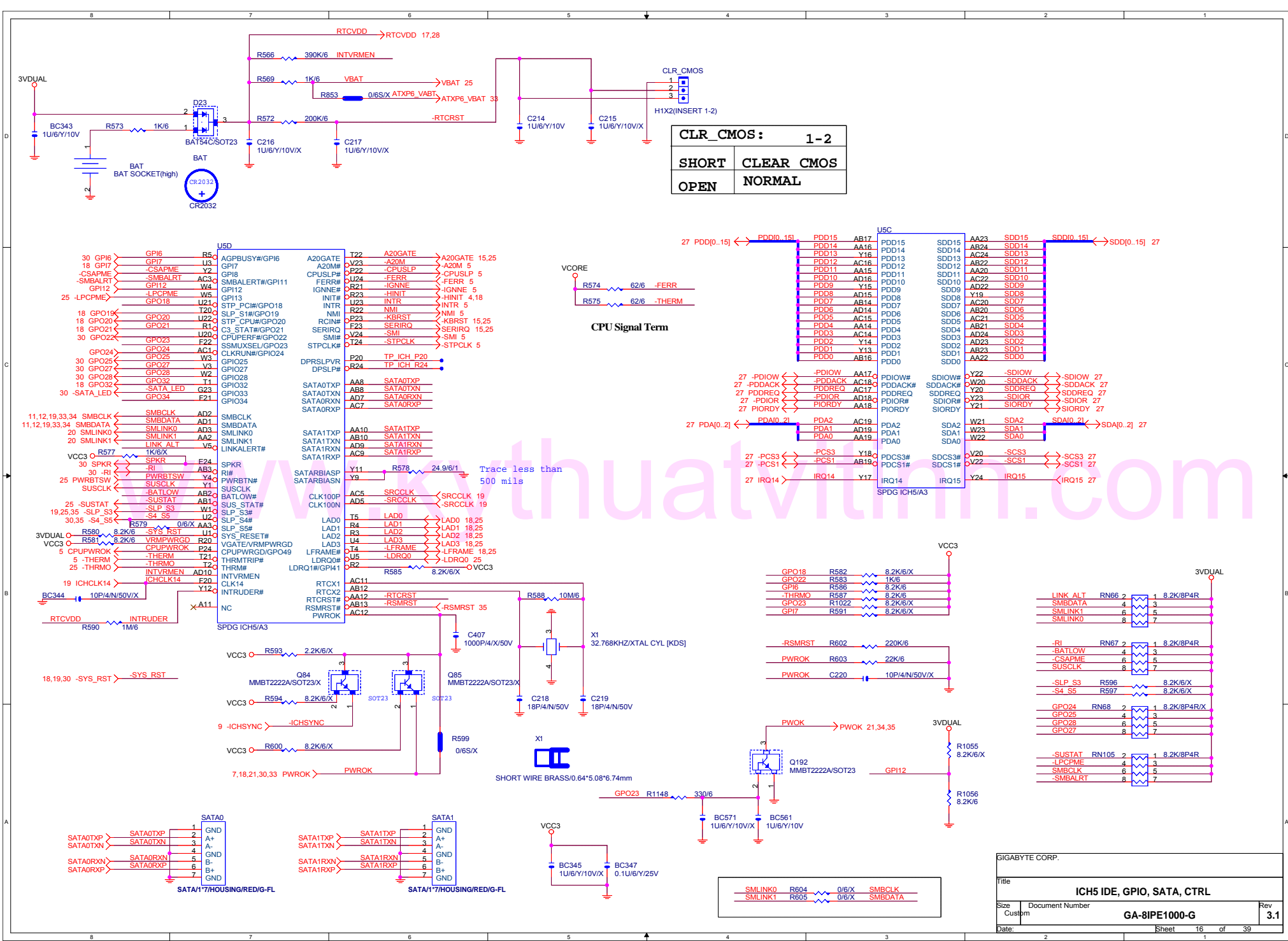
20mil



Place 1 at each pair of VDDQ pins
Place an additional for spread from A14 - A33

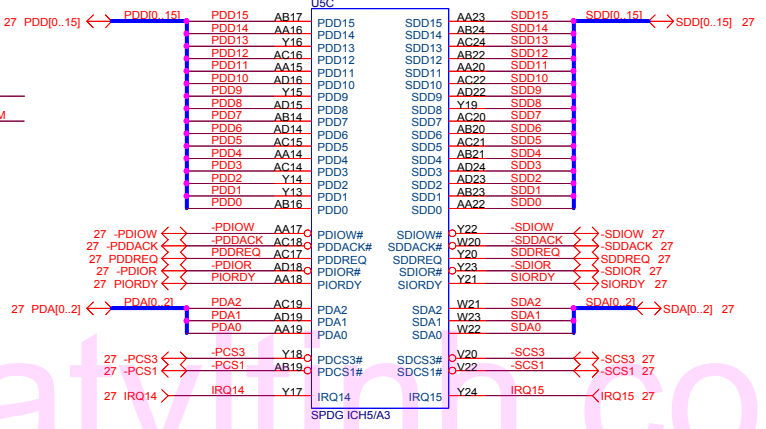
GIGABYTE CORP.

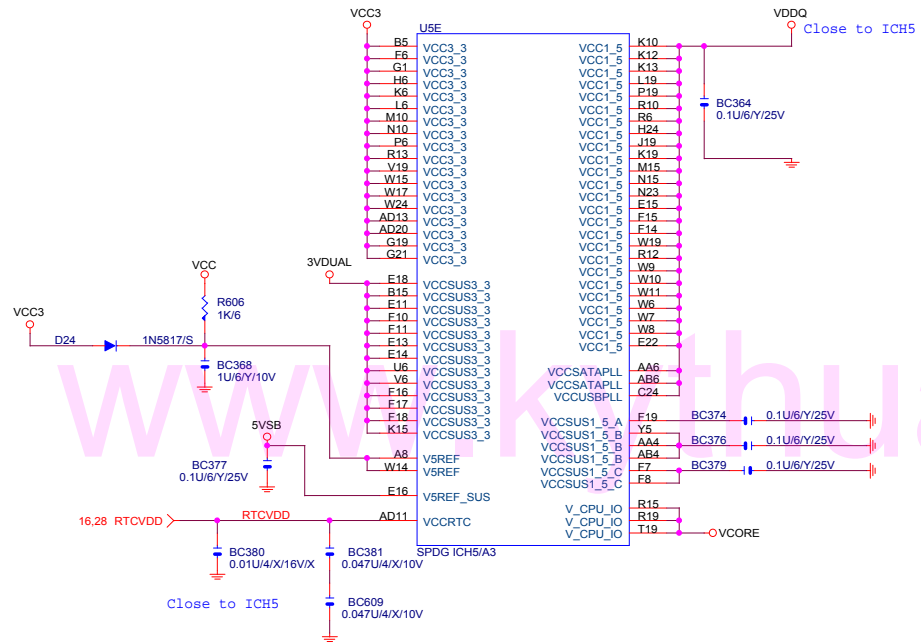
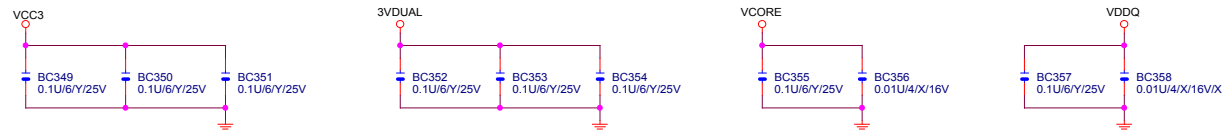
Title			AGP SLOT
Customer			GA-8IPE1000-G
Size	Document Number	Rev	3.1
Date	星期五, 三月 19, 2004	Sheet	14 of 39



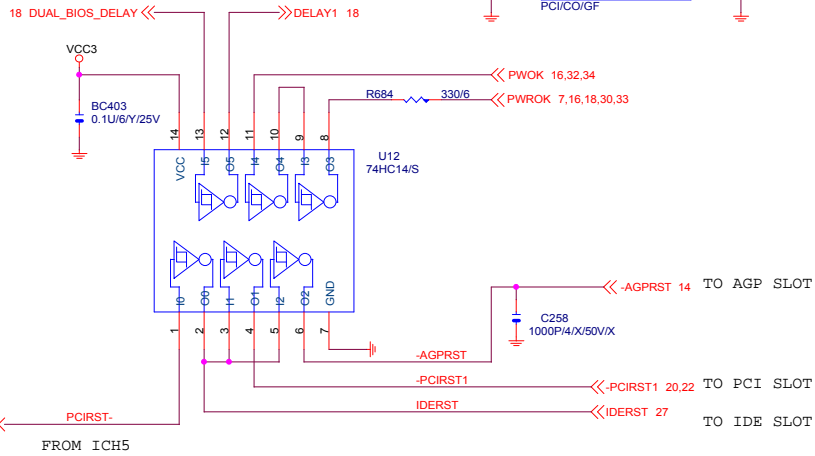
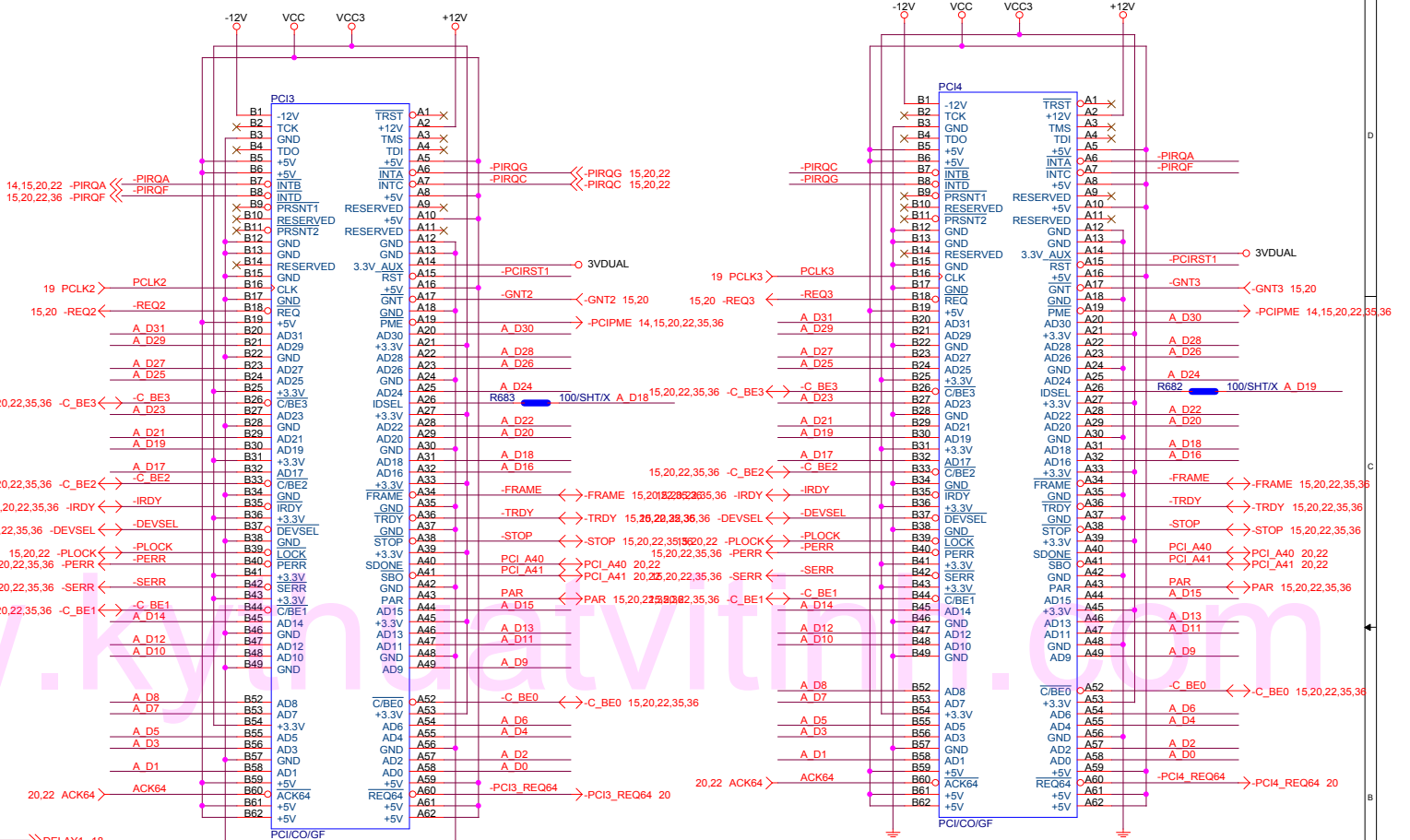
CLR_CMOS: 1-2	
SHORT	CLEAR CMOS
OPEN	NORMAL

CPU Signal Term



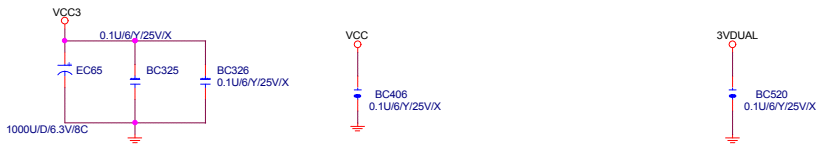
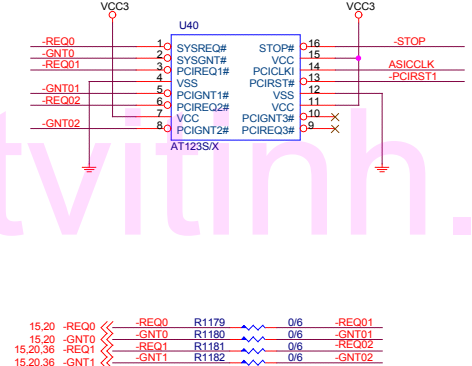
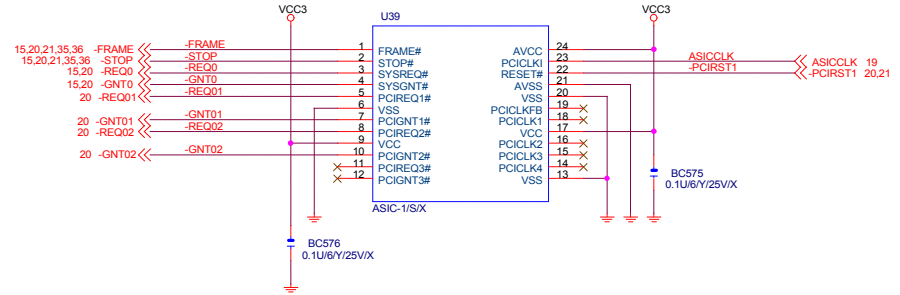
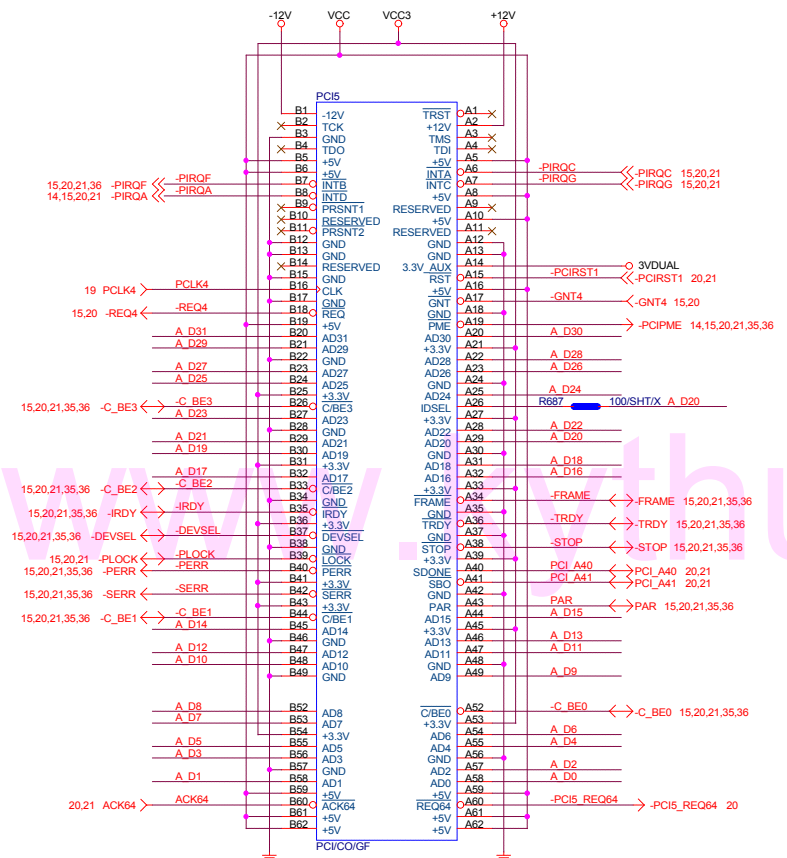


15,20,22,35,36 A_D[0..31] << A_D[0..31]



GIGABYTE CORP.		
Title		
PCI SLOT 3/4		
Size	Document Number	Rev
B	GA-8IPE1000-G	3.1
Date:	星期五, 三月 19, 2004	Sheet 21 of 39

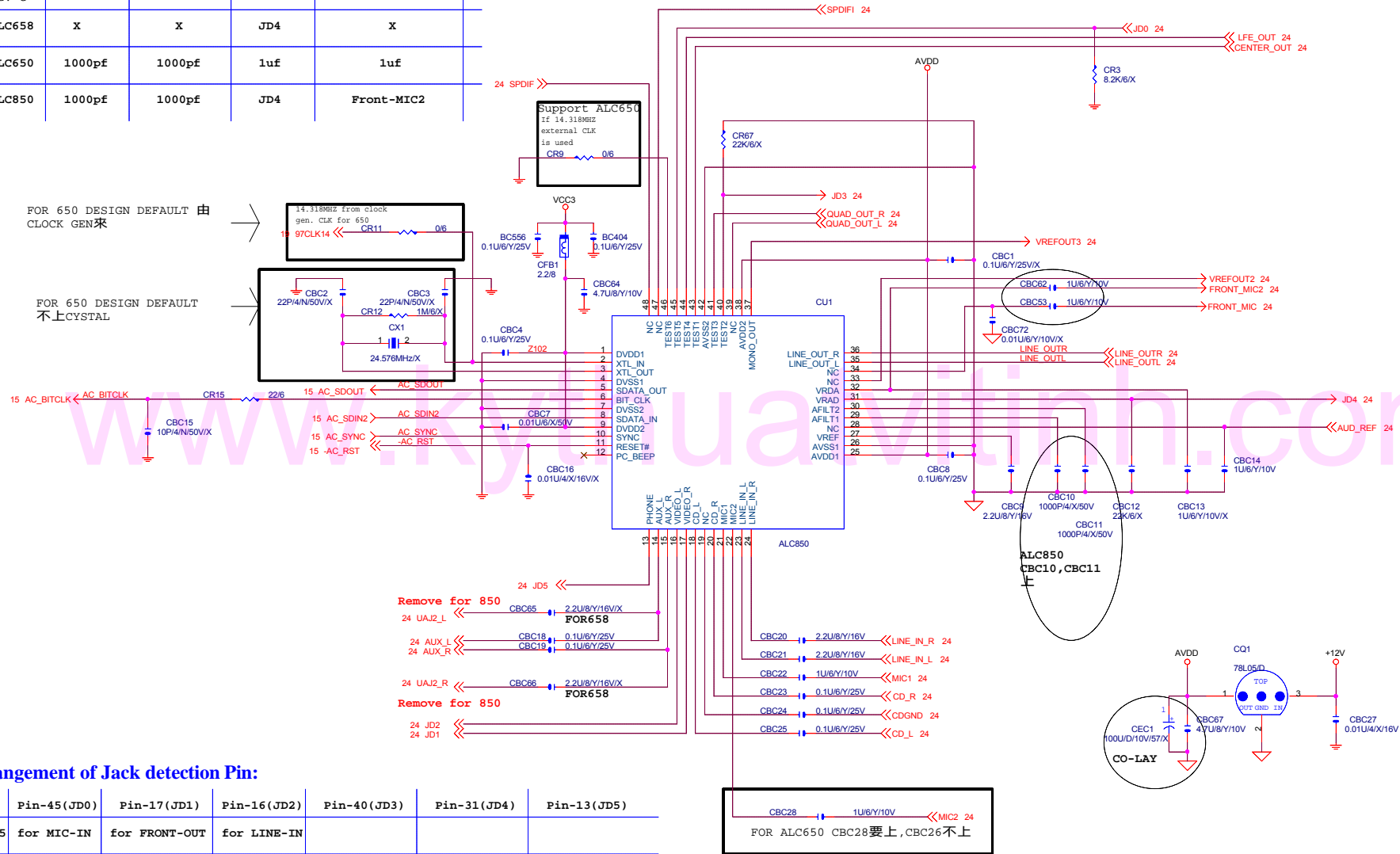
15,20,21,35,36_A_D[0..31] << A_D[0..31]



GIGABYTE CORP.			
Title			
PCI SLOT 5			
Size	Document Number	Rev	
Custom	GA-8IPE1000-G	3.1	
Date:	華曆年 三月 19, 2004	Sheet	22 of 39

Filter Cap design:

	Pin-29	Pin-30	Pin-31	Pin-32
ALC655 Rev D	1000pf	1000pf	1uf	Front-MIC2
ALC655 Rev C	1000pf	1000pf	1uf	X
ALC658	X	X	JD4	X
ALC650	1000pf	1000pf	1uf	1uf
ALC850	1000pf	1000pf	JD4	Front-MIC2

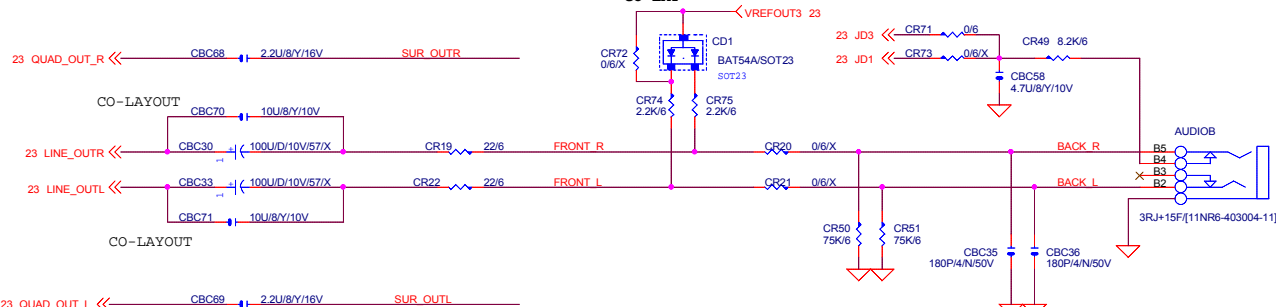


Arrangement of Jack detection Pin:

	Pin-45(JD0)	Pin-17(JD1)	Pin-16(JD2)	Pin-40(JD3)	Pin-31(JD4)	Pin-13(JD5)
ALC655	for MIC-IN	for FRONT-OUT	for LINE-IN			
ALC658	for MIC-IN	for UAJ1	for UAJ2	for FRONT-OUT External pull high is needed	for LINE-IN External pull high is needed	
ALC850	for MIC-IN	for Front Pannel OUT	for Front Pannel IN	for FRONT-OUT	for LINE-IN	for SurrBack Out

LINE OUT

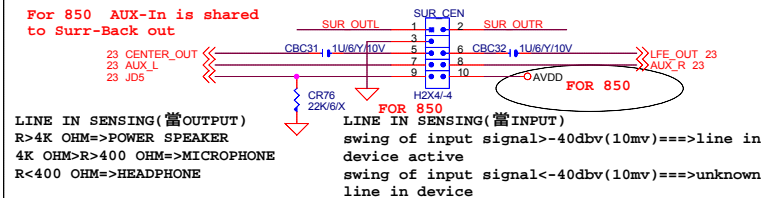
JDO,JD2,GPIO0 為偵測DEVICE INPUT 時由LOW TO HIGH Edge trigger(pop manual) 1/2(3.14)RC=1/2(3.14)8.2K*4.7U=4.3HZ以上AC 信號全部衰減 TO 0V 不會造成JDO 誤動作(無device 時play wav)



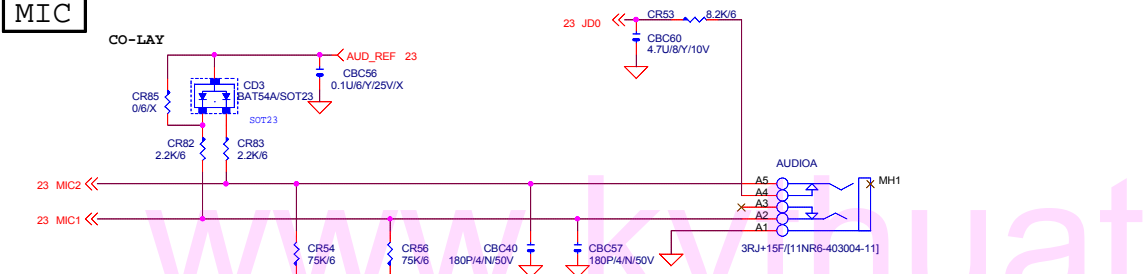
LINE OUT SENSING
 R>4K OHM=>POWER SPEAKER
 4K OHM>R>400 OHM=>MICROPHONE
 R<400 OHM=>HEADPHONE

2x5 header for 850
 For 850 if JD5 = low AUX-In is configured as input
 For 850 if JD5 = high AUX-In is configured as output, Surr-Back out

For 850 AUX-In is shared to Surr-Back out



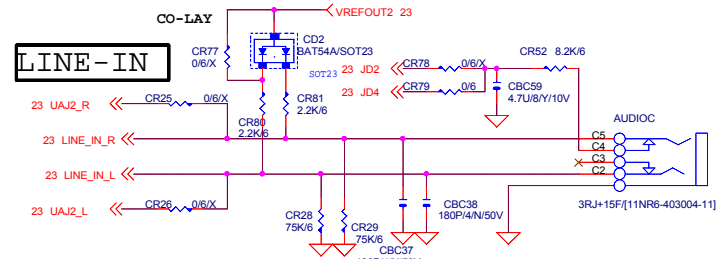
MIC



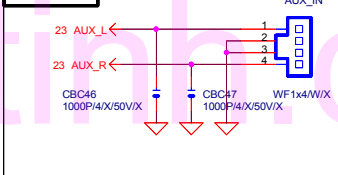
MICROPHONE IN SENSING(當INPUT) (利用vref 偏壓 與CR43,CR32 並聯求出阻抗)
 7.1k ohm>R>2.3k ohm==>microphone in
 R<2.3k ohm or R>7.1k ohm==>unknown device

MICROPHONE IN SENSING(當OUTPUT)
 R>4K OHM=>POWER SPEAKER
 4K OHM>R>400 OHM=>MICROPHONE
 R<400 OHM=>HEADPHONE

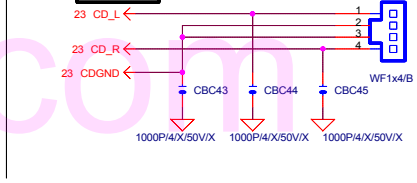
LINE-IN



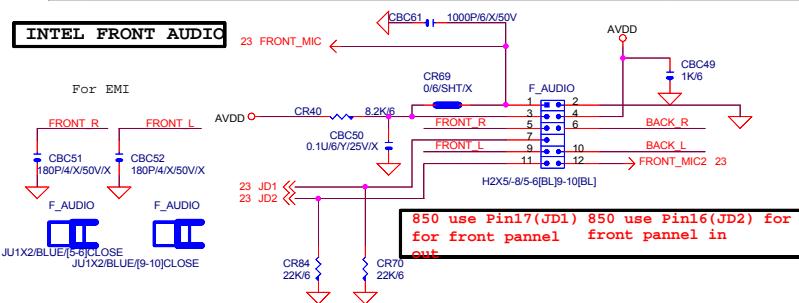
AUX IN DEFAULT NO POP



CD IN

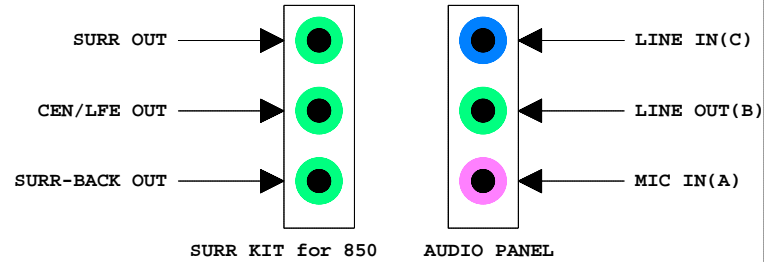
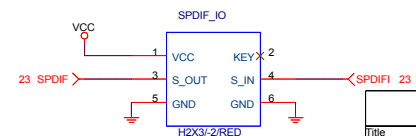


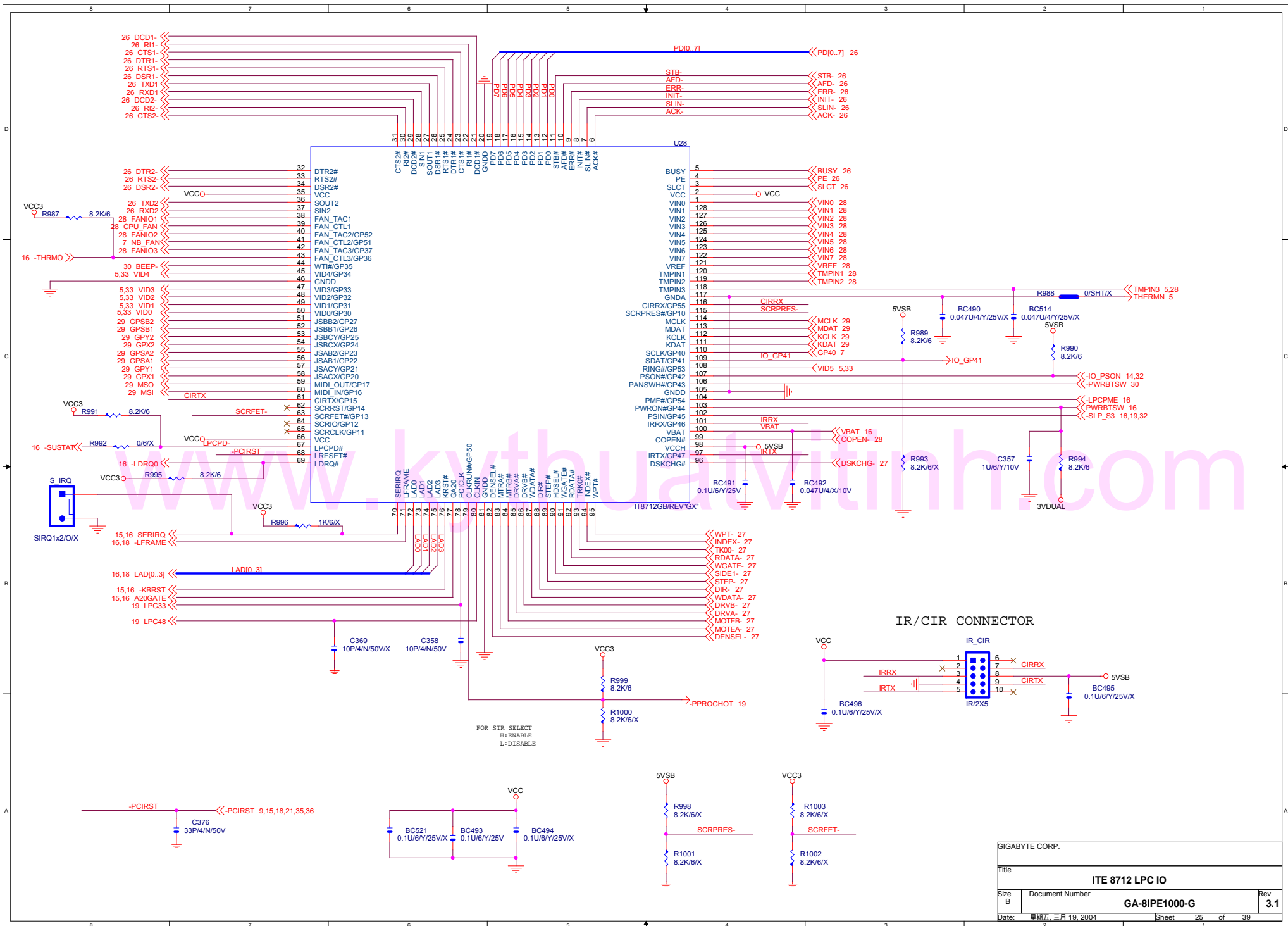
INTEL FRONT AUDIO

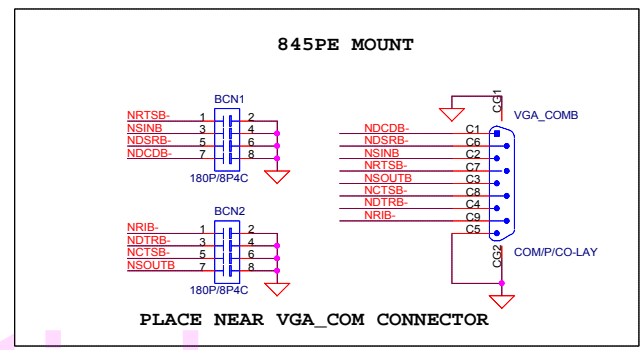
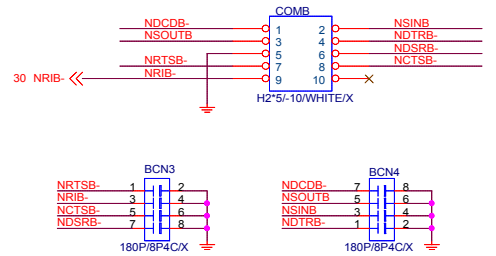
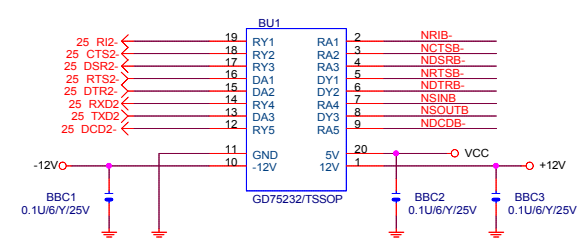
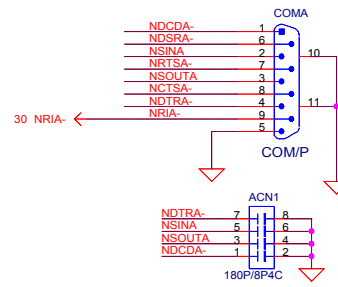
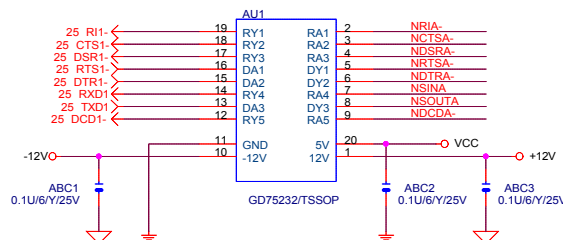


850 use Pin17(JD1) 850 use Pin16(JD2) For front panel front panel in out

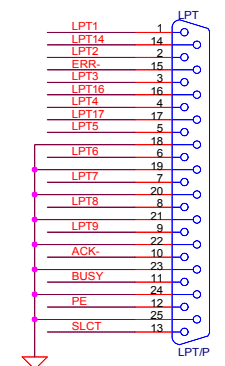
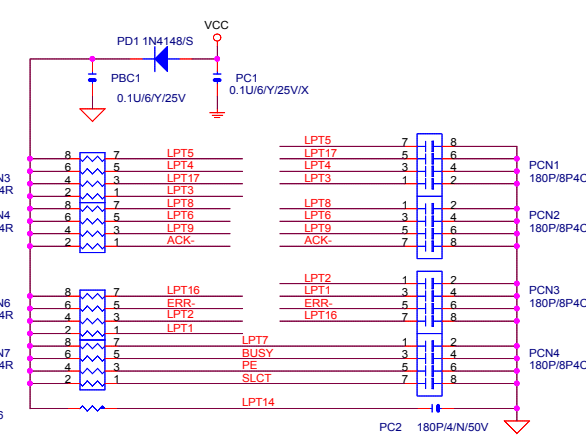
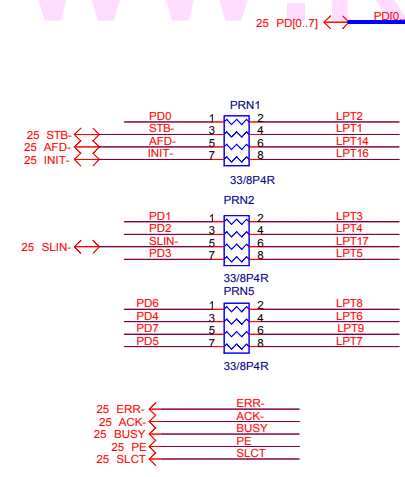
SPDIF_IO



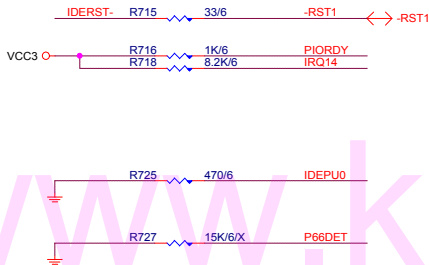
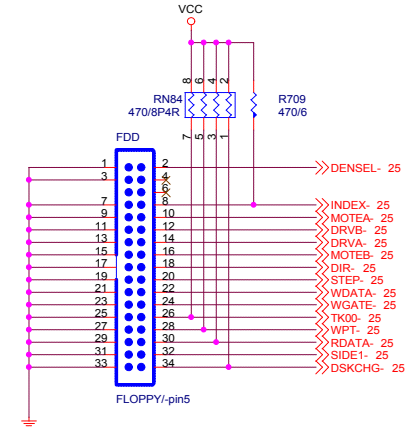
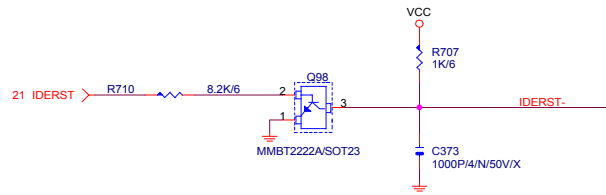




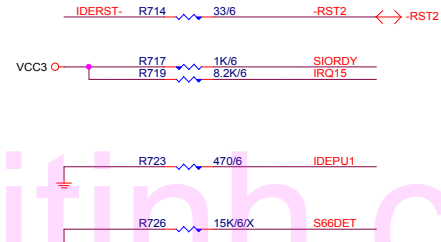
www.kythuatvithinh.com



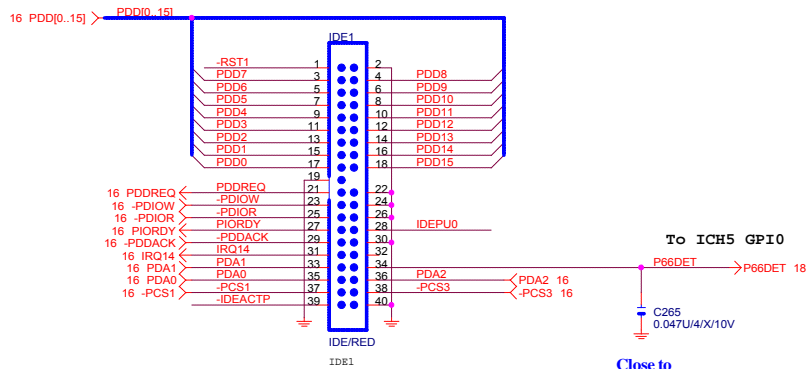
SIGABYTE CORP.		
Title		
COM & IR & LPT PORT & FLOOPY		
Size	Document Number	Rev
B	GA-8IPE1000-G	3.1
Date:	星期五, 三月 19, 2004	Sheet 26 of 39



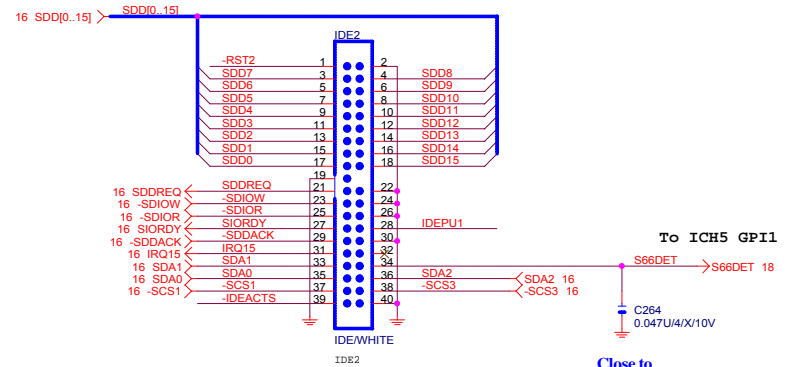
PRIMARY IDE CONNECTOR



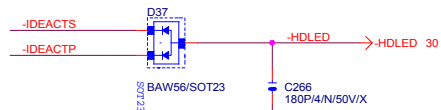
SECONDARY IDE CONNECTOR



Close to connector

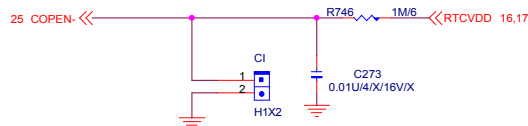
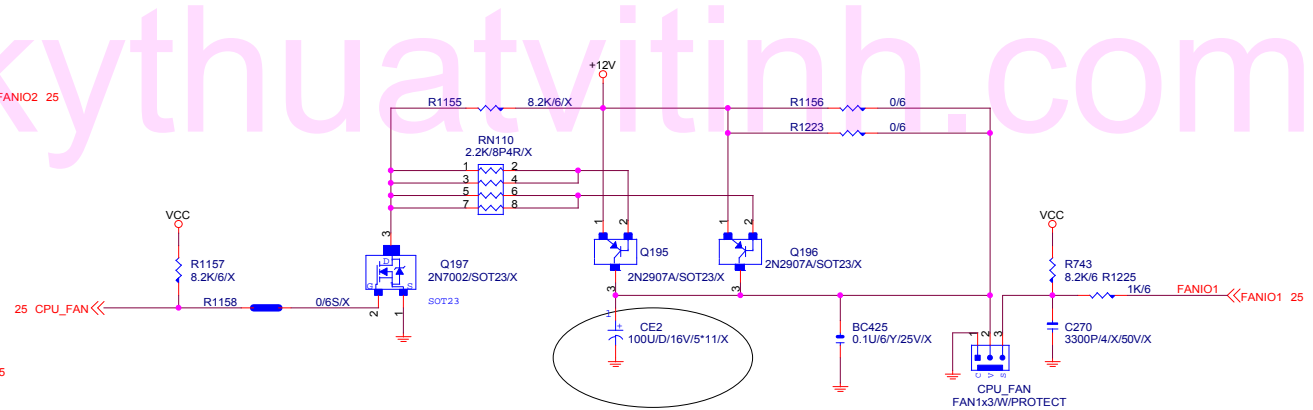
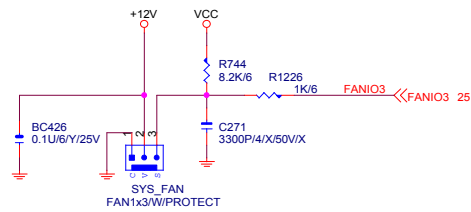
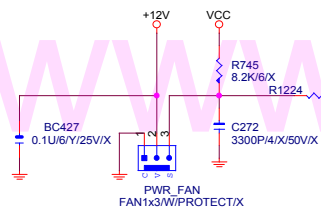
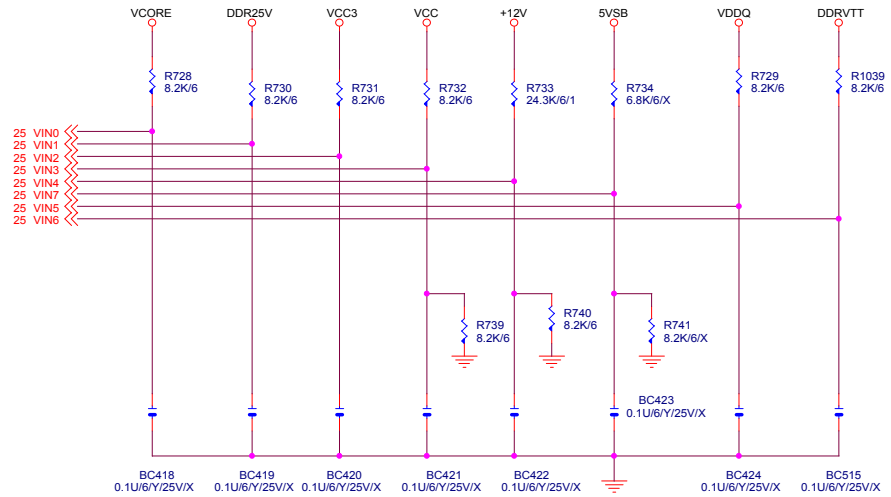
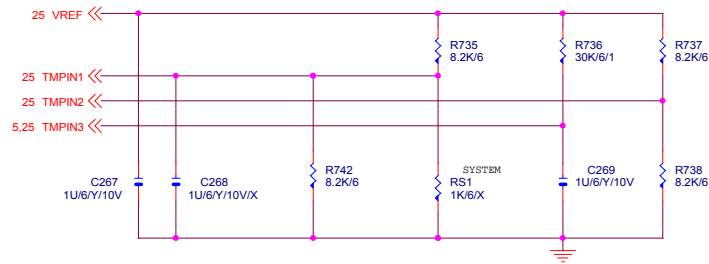


Close to connector

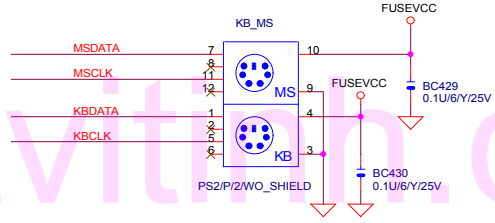
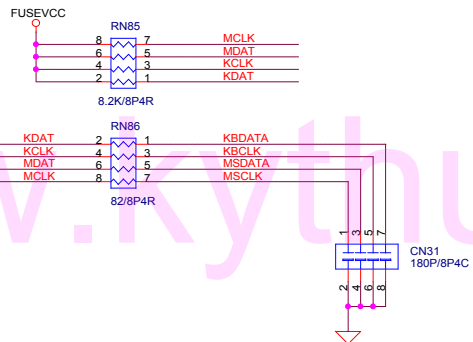
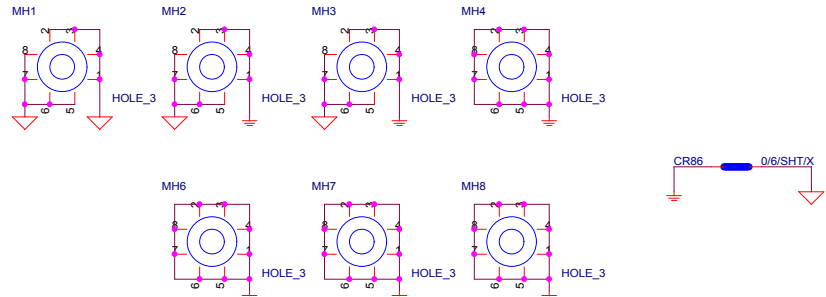
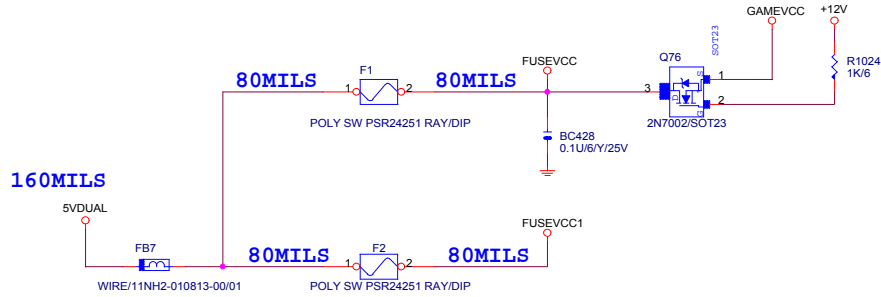


GIGABYTE CORP.		
Title		
IDE CONNECTOR		
Size	Document Number	Rev
B	GA-8IPE1000-G	3.1
Date:	Sheet	of
	27	39

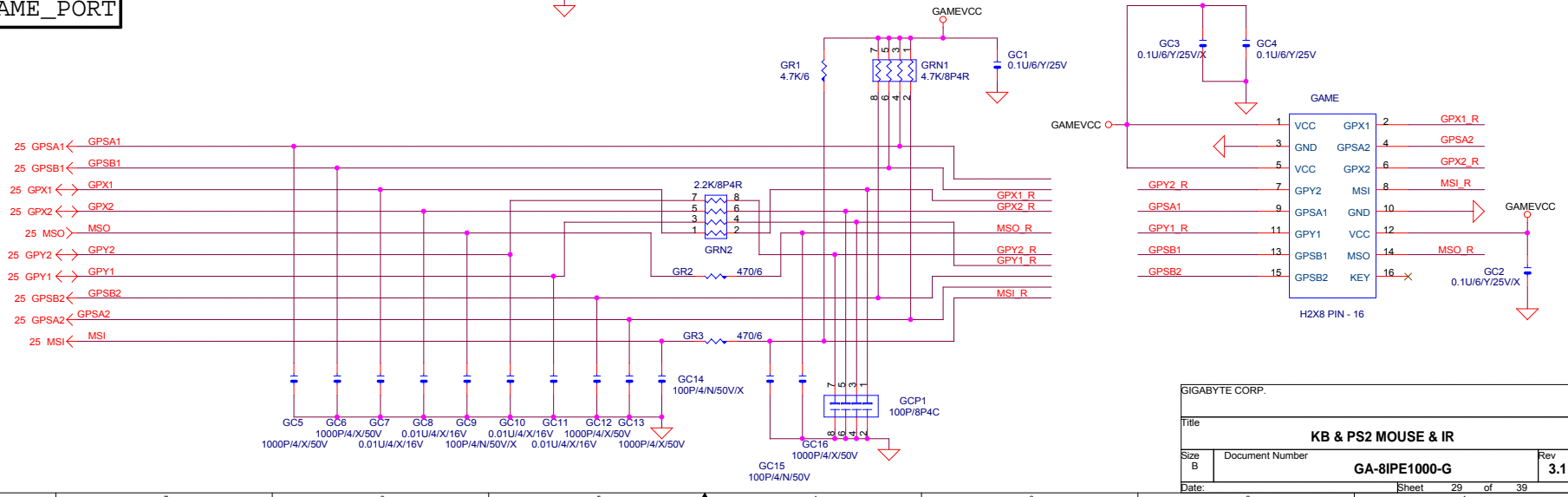
Hardware Monitor circuits



SIGABYTE CORP.		
Title		
FAN/HWMO		
Size B	Document Number	Rev
	GA-8IPE1000-G	3.1
Date:	星期五, 三月 19, 2004	Sheet 28 of 39

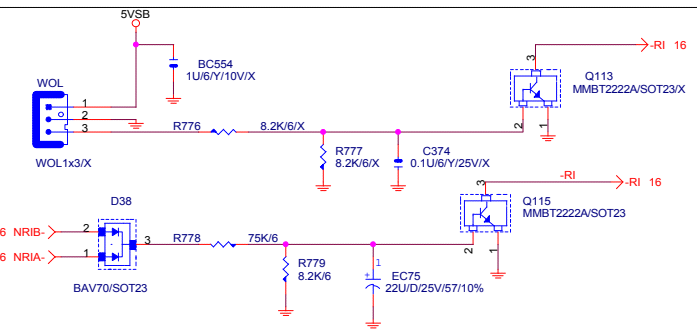
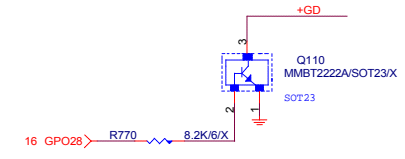
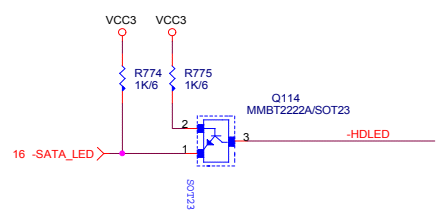
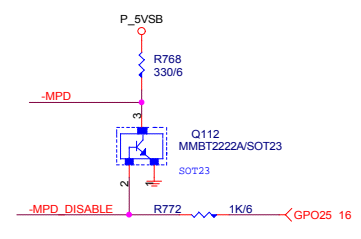
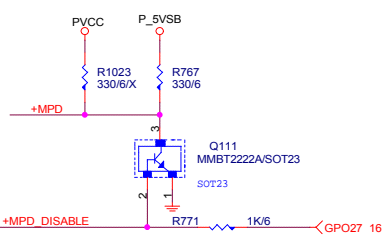
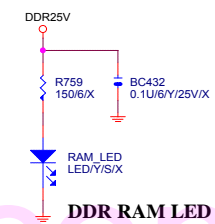
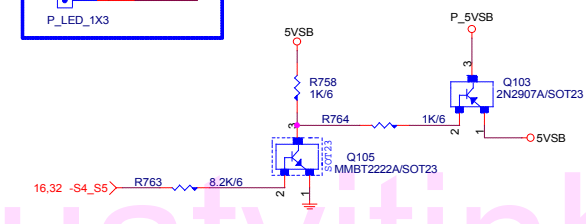
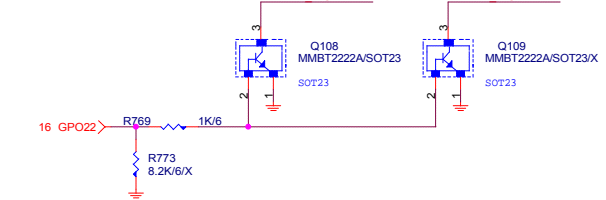
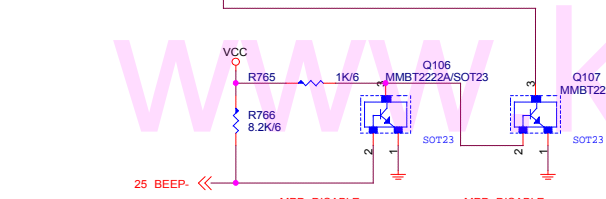
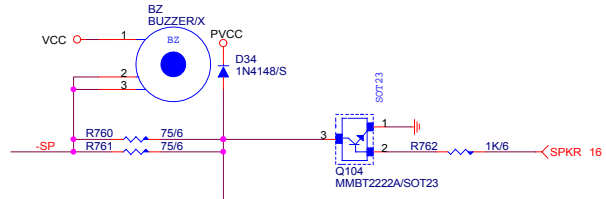
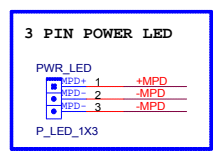
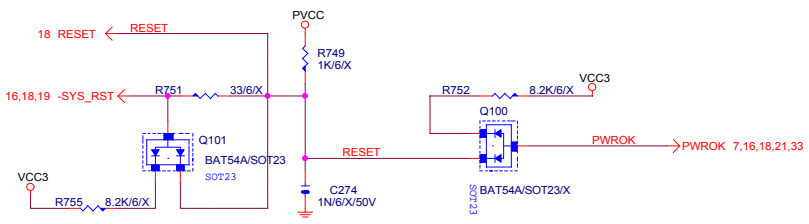
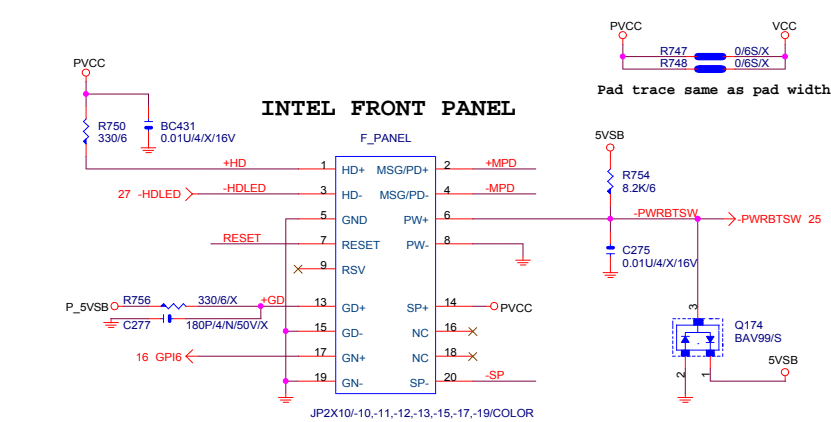


GAME_PORT



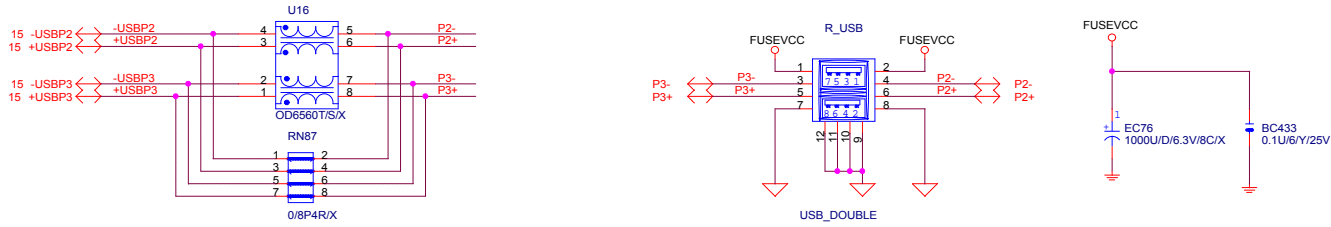
GIGABYTE CORP.		
Title		
KB & PS2 MOUSE & IR		
Size	Document Number	Rev
B	GA-8IPE1000-G	3.1
Date:	Sheet 29 of 39	

INTEL FRONT PANEL

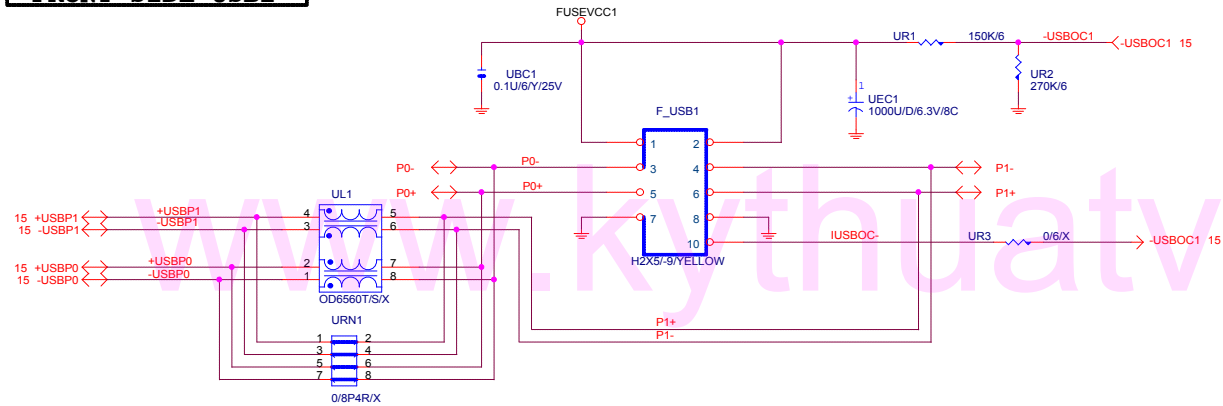


GIGABYTE CORP.		
Title		
PANEL & STR LED & RI		
Size B	Document Number	Rev
	GA-8IPE1000-G	3.1
Date:	Sheet	30 of 39

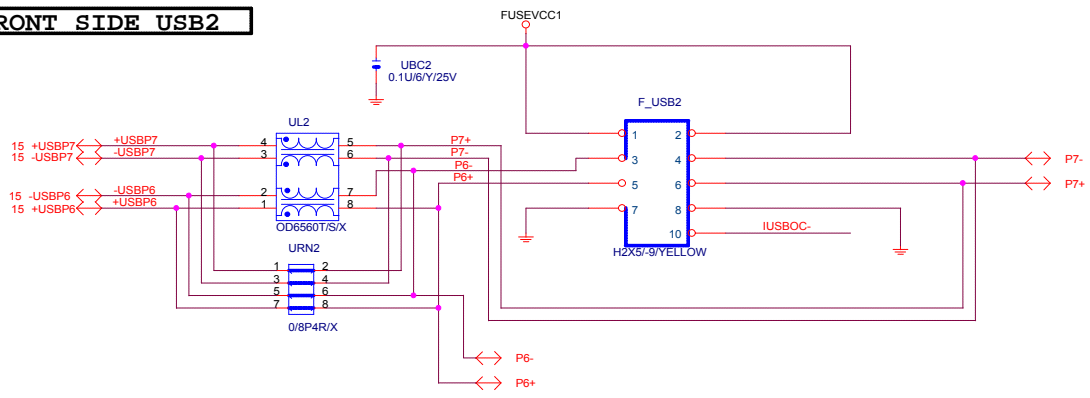
REAR USB



FRONT SIDE USB1



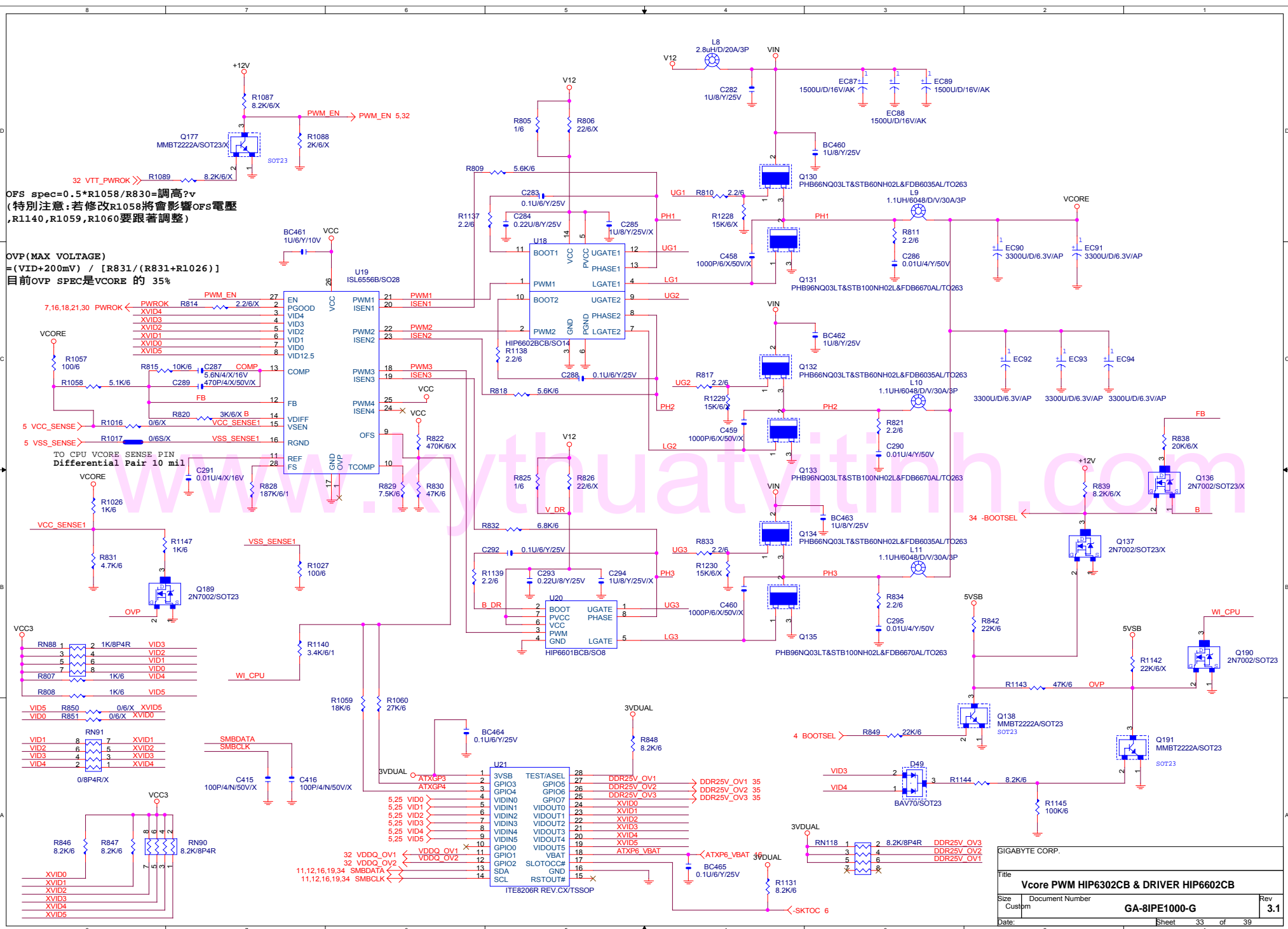
FRONT SIDE USB2



GIGABYTE CORP.		
Title ICH USB PORT		
Size B	Document Number GA-8IPE1000-G	Rev 3.1
Date:	Sheet 31	of 39

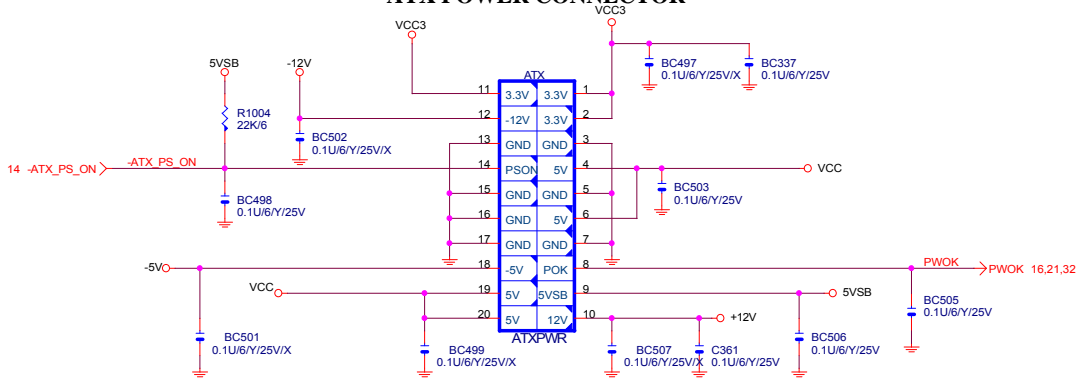
OFS spec=0.5*R1058/R830=調高?v
 (特別注意:若修改R1058將會影響OFS電壓
 ,R1140,R1059,R1060要跟著調整)

OVP(MAX VOLTAGE)
 =(VID+200mV) / [R831/(R831+R1026)]
 目前OVP SPEC是VCCORE 的 35%

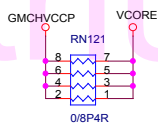
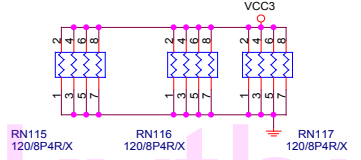
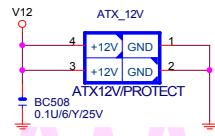
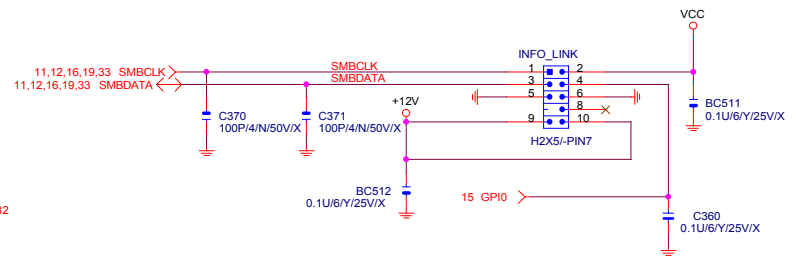


SIGNALYTE CORP.		
Title	Vcore PWM HIP6302CB & DRIVER HIP6602CB	
Size	Document Number	Rev
Custom	GA-8IPE1000-G	3.1
Date:	Sheet 33	of 39

ATX POWER CONNECTOR

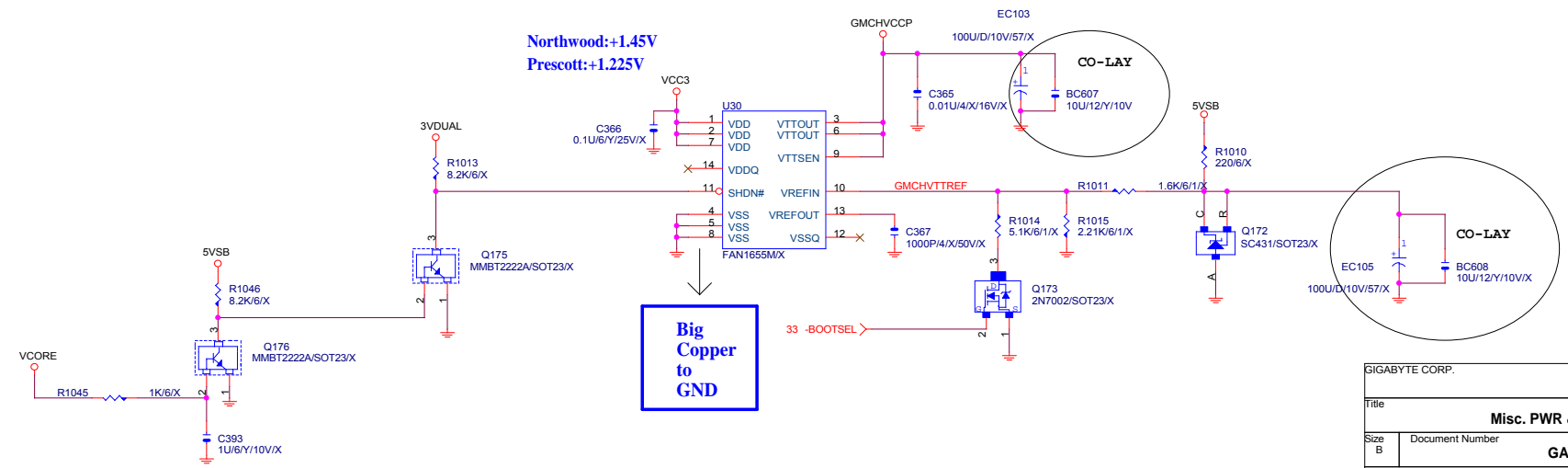


SMBUS CONN.

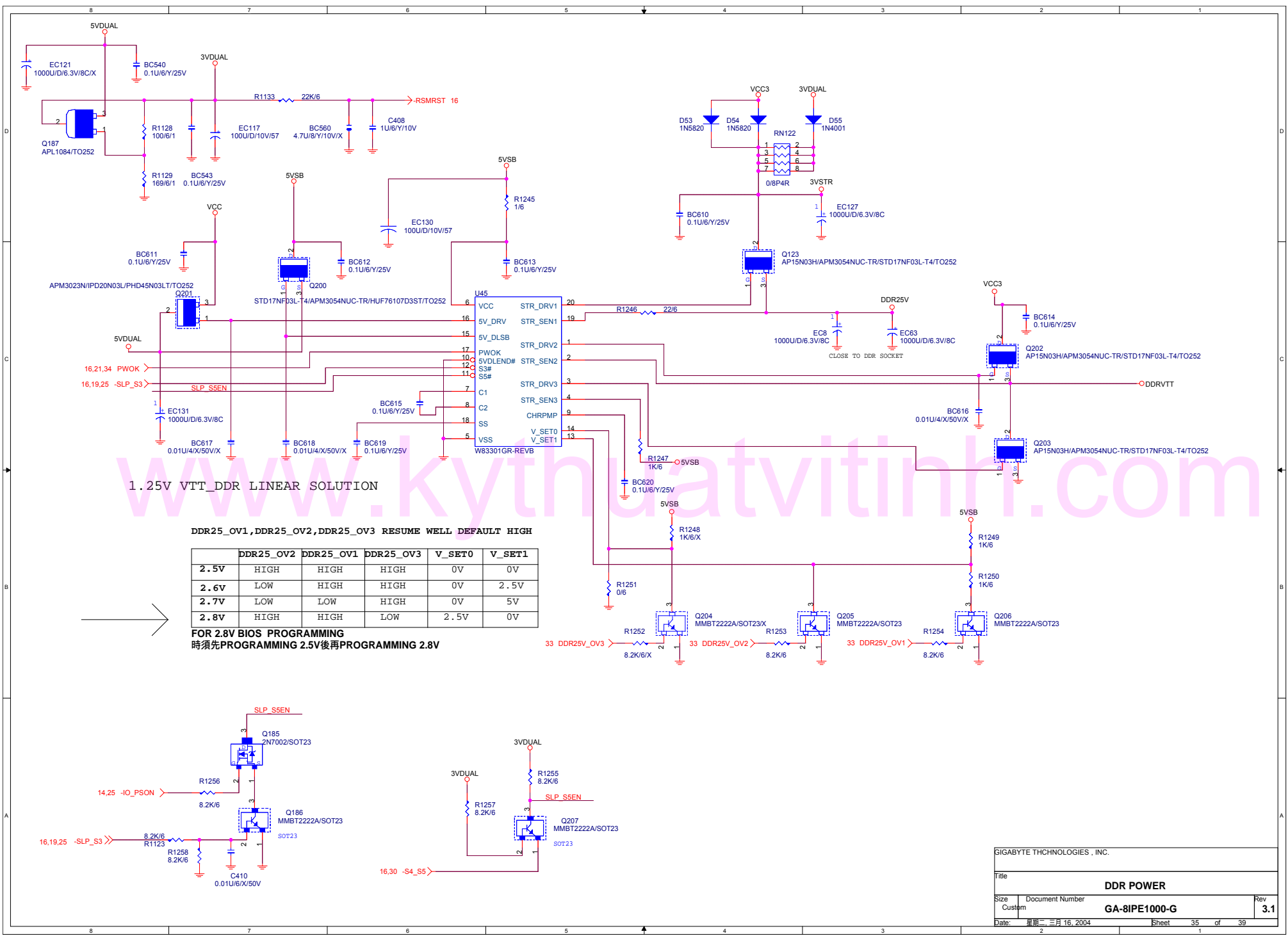


www.kythuatvithinh.com

Northwood:+1.45V
Prescott:+1.225V



GIGABYTE CORP.		
Title		
Misc. PWR & ATX CONN.		
Size B	Document Number	Rev
	GA-8IPE1000-G	3.1
Date:	Sheet 34	of 39



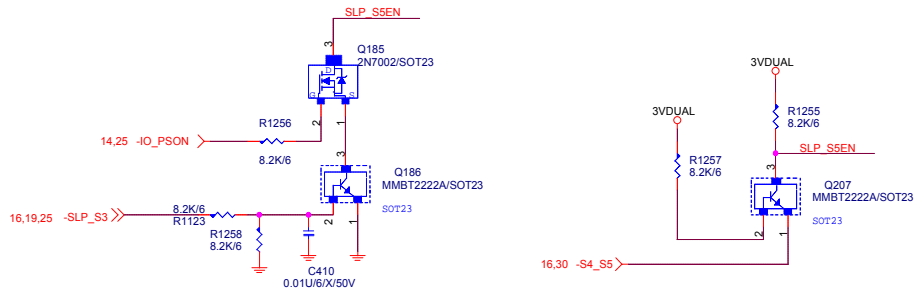
1.25V VTT_DDR LINEAR SOLUTION

DDR25_OV1,DDR25_OV2,DDR25_OV3 RESUME WELL DEFAULT HIGH

	DDR25_OV2	DDR25_OV1	DDR25_OV3	V_SET0	V_SET1
2.5V	HIGH	HIGH	HIGH	0V	0V
2.6V	LOW	HIGH	HIGH	0V	2.5V
2.7V	LOW	LOW	HIGH	0V	5V
2.8V	HIGH	HIGH	LOW	2.5V	0V

FOR 2.8V BIOS PROGRAMMING

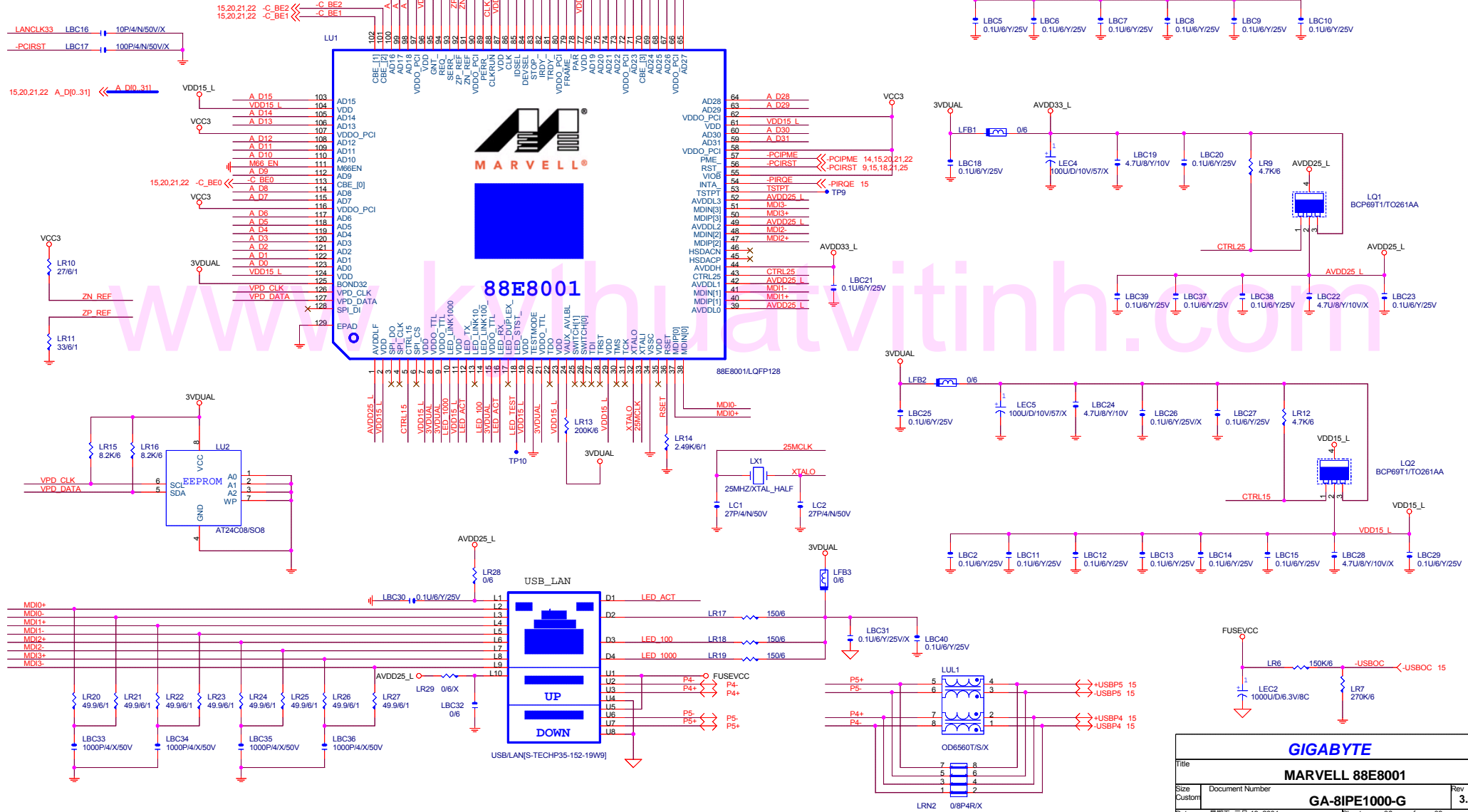
時須先PROGRAMMING 2.5V後再PROGRAMMING 2.8V



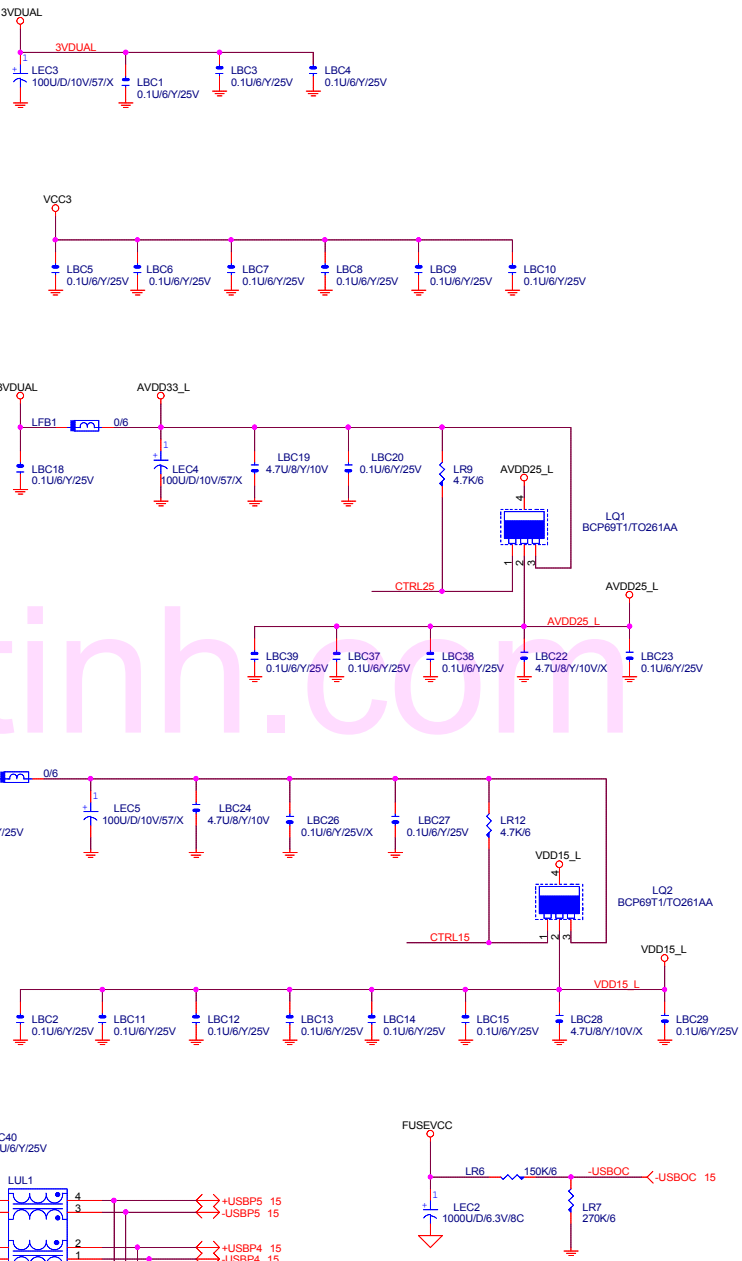
GIGABYTE THCHNOLOGIES . INC.

Title		DDR POWER	
Size	Document Number	Rev	
Custom	GA-8IPE1000-G	3.1	
Date:	星期二, 三月 16, 2004	Sheet	35 of 39

- # Layout Check 注意事項
1. LU1 PIN129 需下內層GND, 至少打 22 VIA
 2. 3VDUAL, VCC3, VDD15_L, AVDD25_L 至少走20mil寬, 並且電容擺設每兩pin至少放一顆Bypass Cap.
 3. X'TAL 25MHz 兩訊號線, TRACE 愈短愈好, 線寬12mil
 4. MDI正負0-3, TRACE 8:7:8, 每對之間保持 40mil



POWER DECOUPLING CAP.



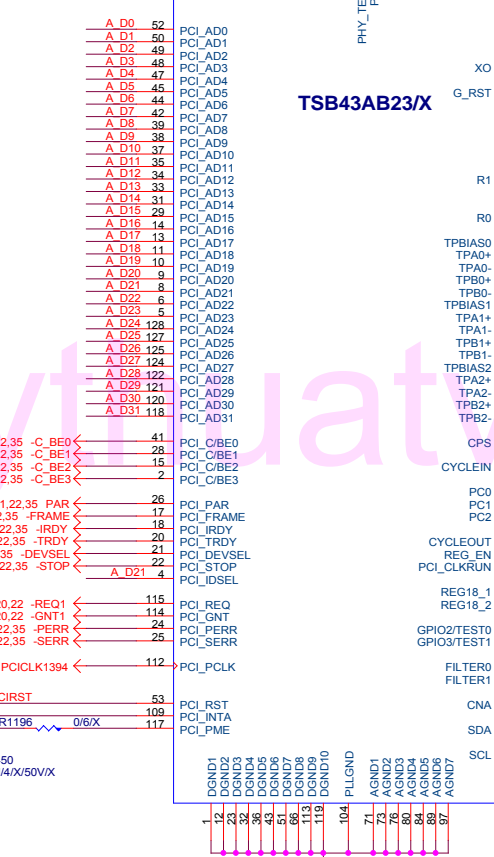
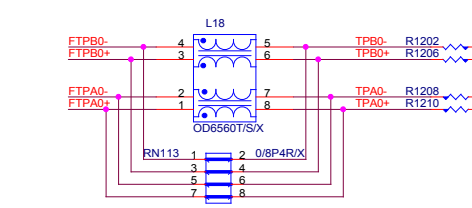
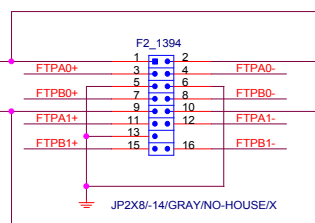
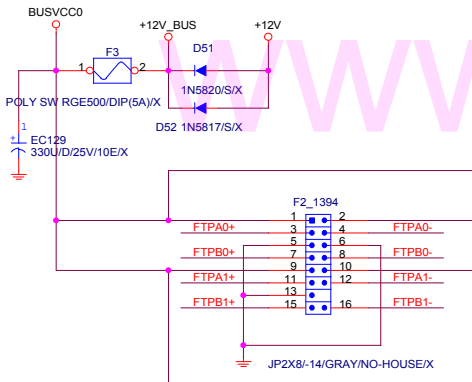
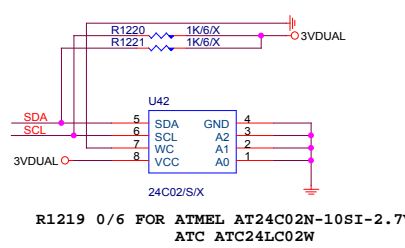
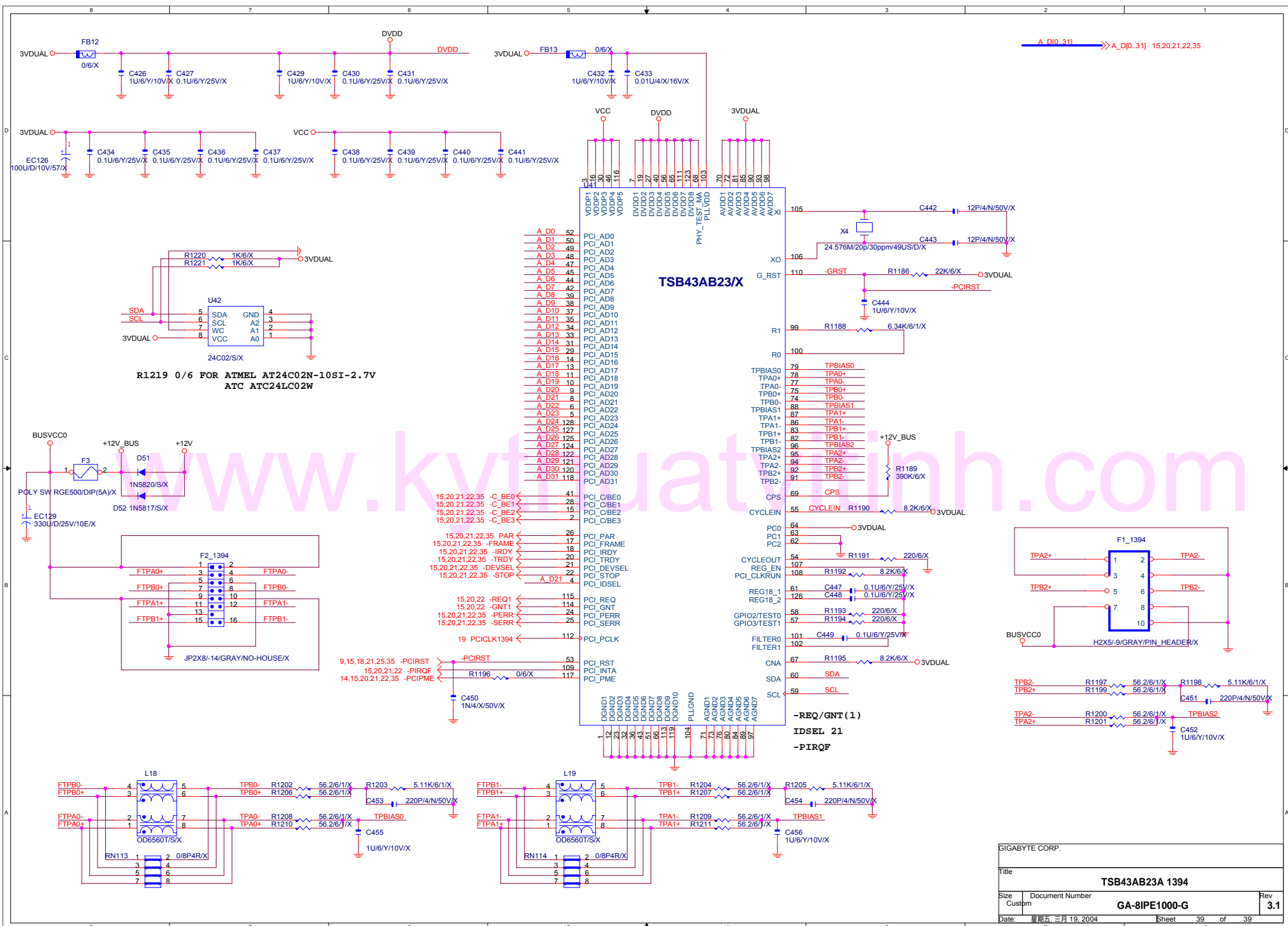
GIGABYTE		
MARVELL 88E8001		
GA-8IPE1000-G		
Rev	3.1	
Date	2004.03.19	Sheet 36 of 39

GIGABYTE GA-8IPE1000-G PCI ROUNTING LIST

PCI DEVICE	IDSEL	INT	CLOCK	REQ	GNT
PCI SLOT1	16	C,F,G,A	PCLK0	-REQ01	-GNT01
PCI SLOT2	17	F,G,A,C	PCLK1	-REQ02	-GNT02
PCI SLOT3	18	G,A,C,F	PCLK2	-REQ2	-GNT2
PCI SLOT4	19	A,C,F,G	PCLK3	-REQ3	-GNT3
PCI SLOT5	20	C,F,G,A	PCLK4	-REQ4	-GNT4
TI 1394	21	F	PCICLK1394	-REQ1	-GNT1
LAN (Marvell)	25	E	LANCLK33	-REQ5 (REQB#)	-GNT5 (GNTB#)

www.kythuatvithinh.com

GIGABYTE		
Title PCI ROUNT LIST		
Size Custom	Document Number GA-8IPE1000-G	Rev 3.1
Date: 星期六, 三月 19, 2004	Sheet 37 of 39	



GIGABYTE CORP.		
Title		
TSB43AB23A 1394		
Size	Document Number	Rev
Custom	GA-8PE1000-G	3.1
Date:	星期五, 三月 19, 2004	Sheet 39 of 39