

GIGABYTE GA-8IPE1000 Pro2 Schematics

Revision
2.03

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

SHEET TITLE

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	KINNERETH-R LAN(CSA-1)
36	KINNERETH-R LAN(CSA-2)
37	KINNERETH-R LAN(CSA-3)
38	TI TSB43AB23(1394)
39	PCI ROUNTIONG
40	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 Pro2	Rev: 2.03	
Date:	Sheet 1 of 40		

Model Name: GA-8IPE1000 Pro2

Circuit or PCB layout history

Component history

[illegible][illegible]

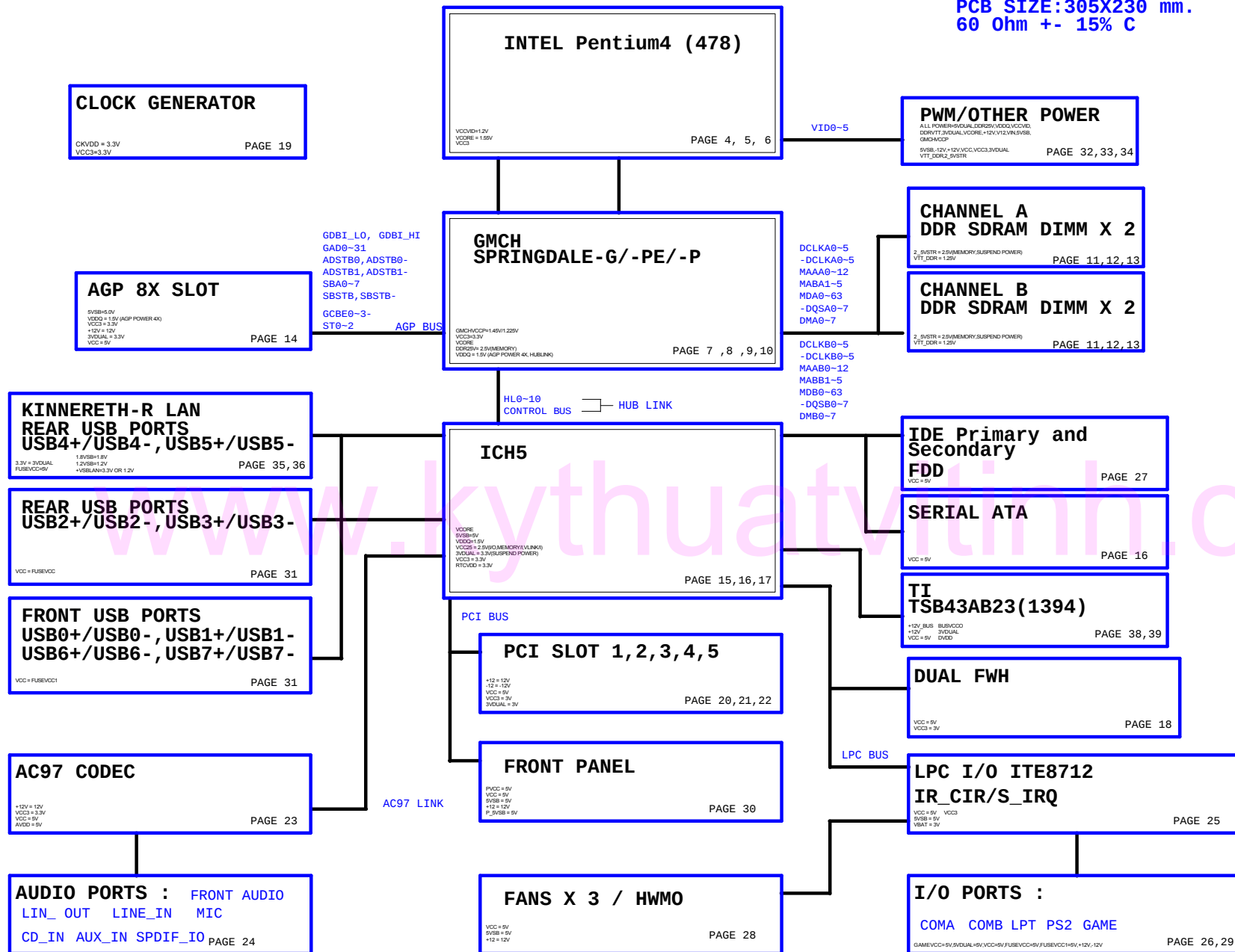
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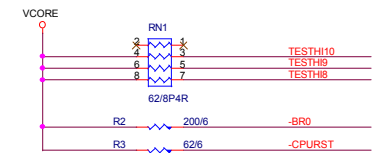
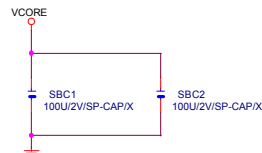
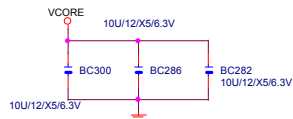
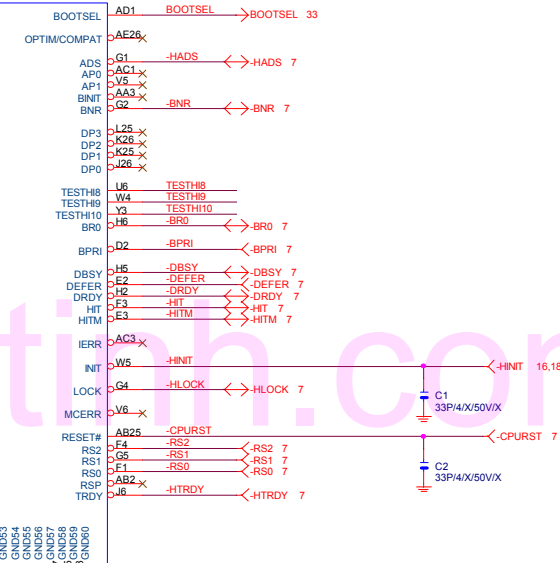
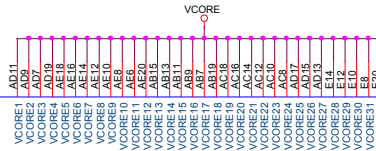
Title	BOM & PCB MODIFY HISTORY
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BLOCK DIAGRAM

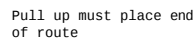
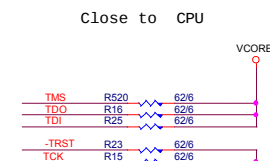
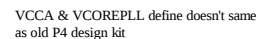
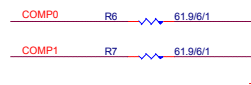
PCB SIZE: 305X230 mm.
60 Ohm +/- 15% C



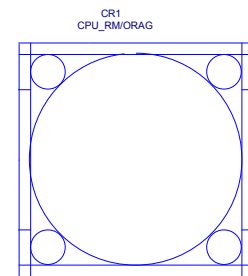
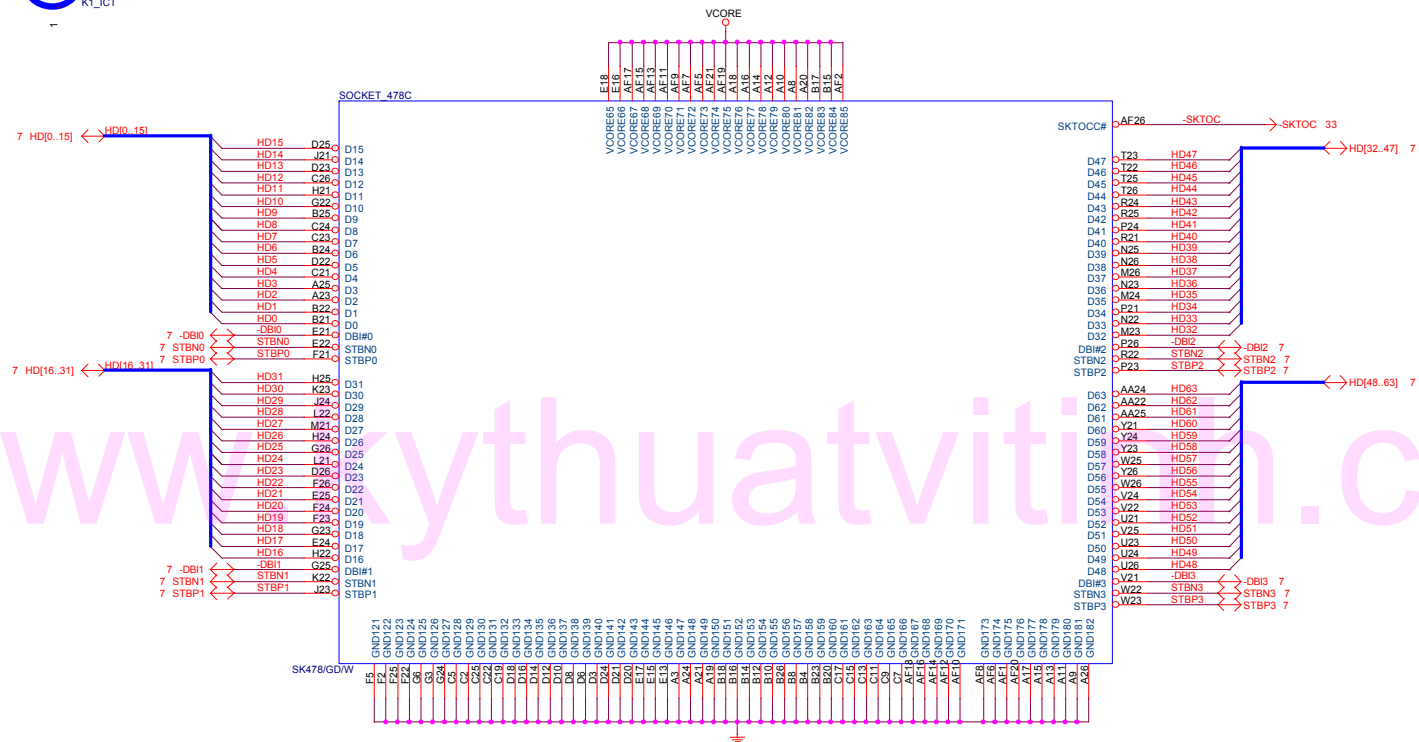
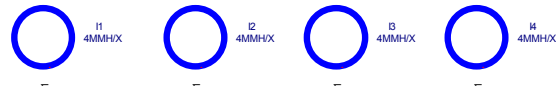
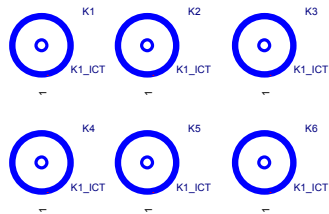


CAP place at (D14,D15) solder side

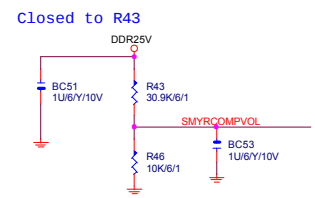
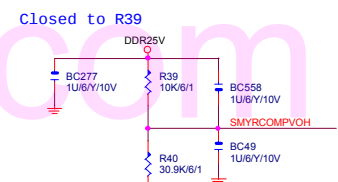
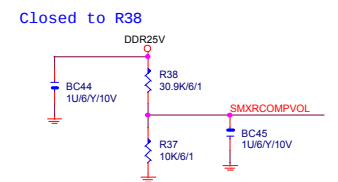
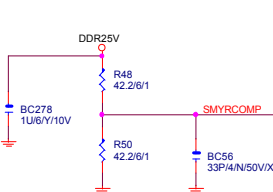
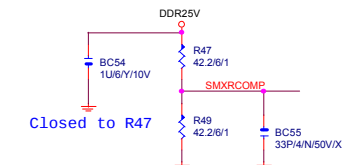
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Size	Document Number		Rev
Custom	GA-8IPE1000 Pro2		2.08
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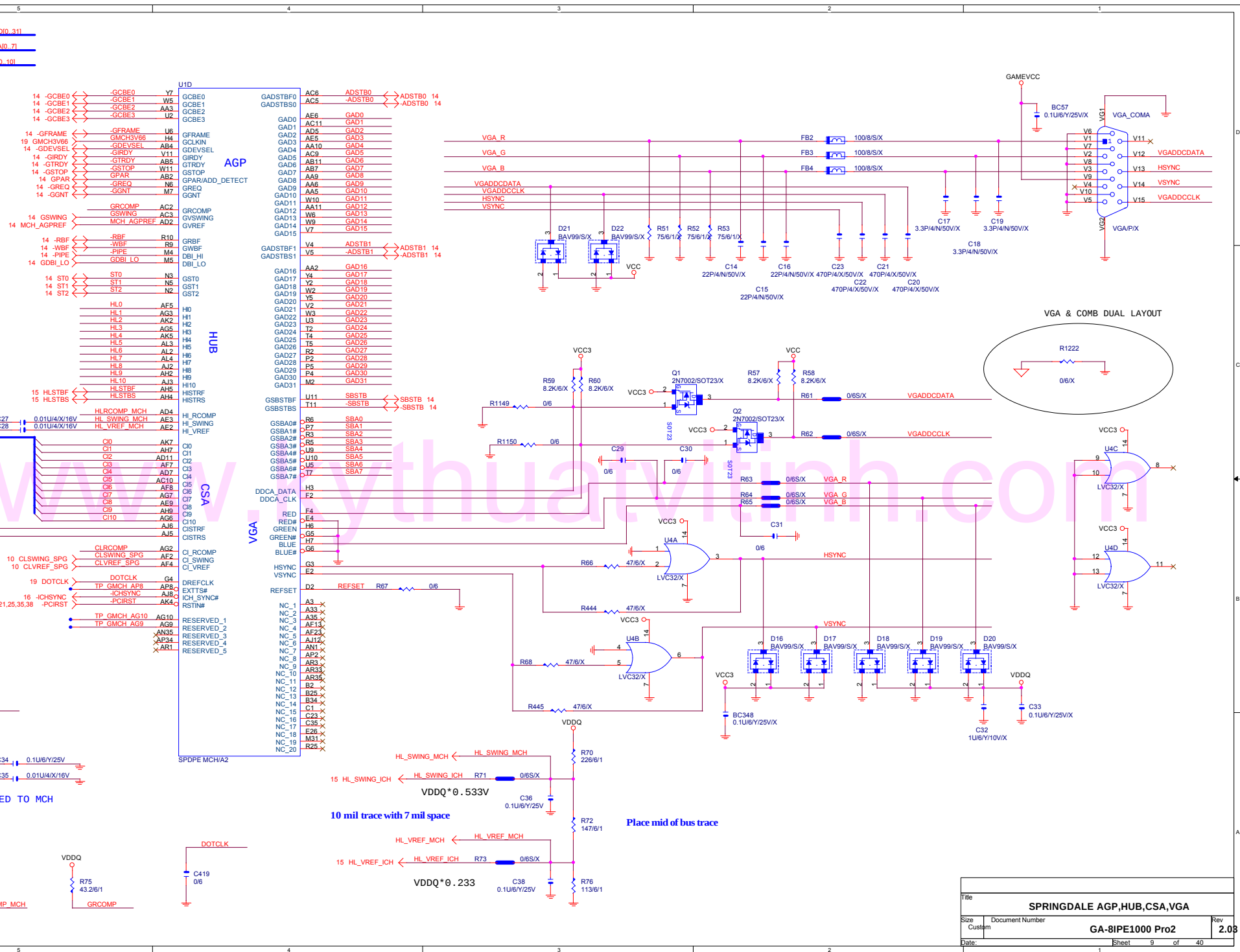


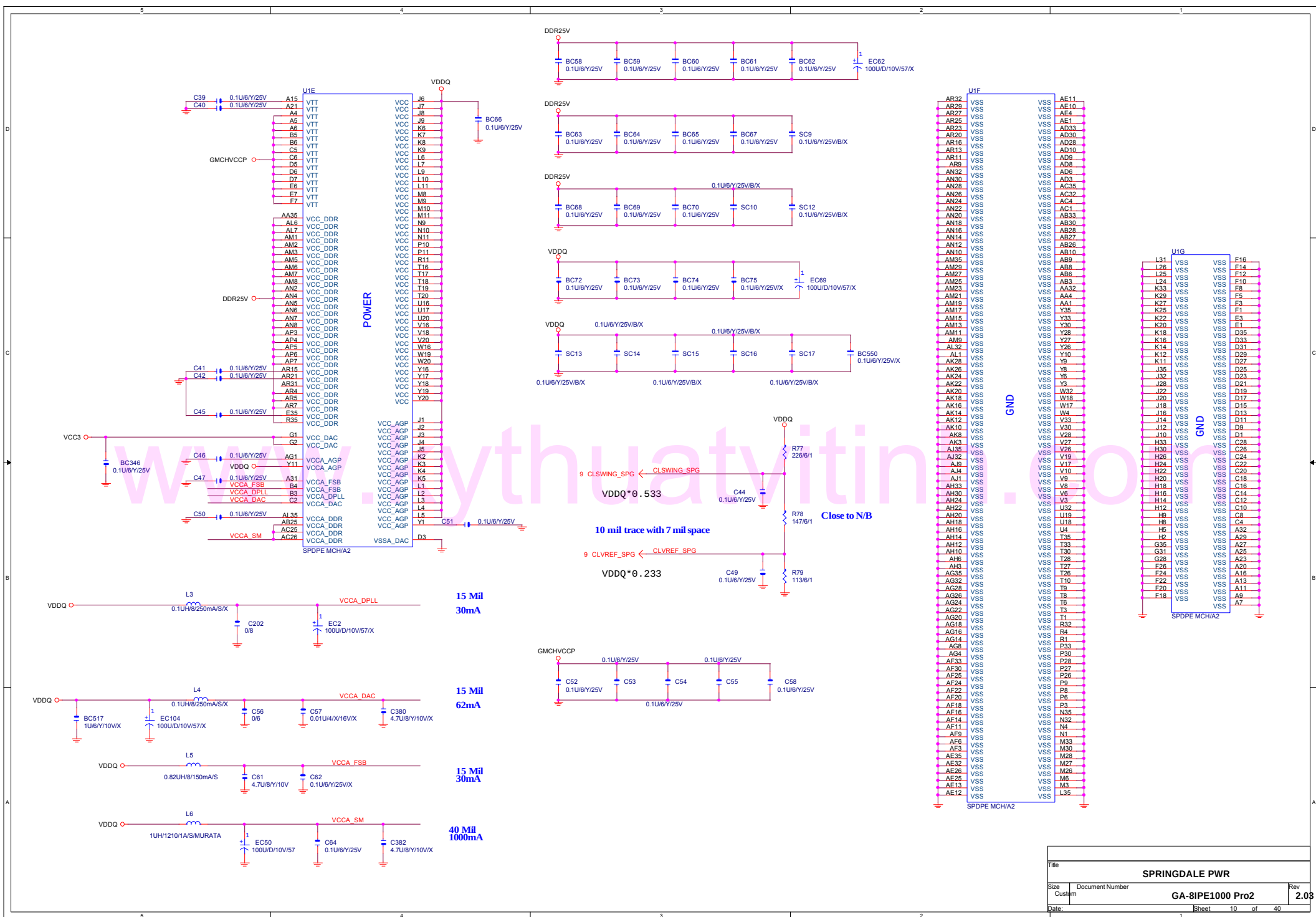
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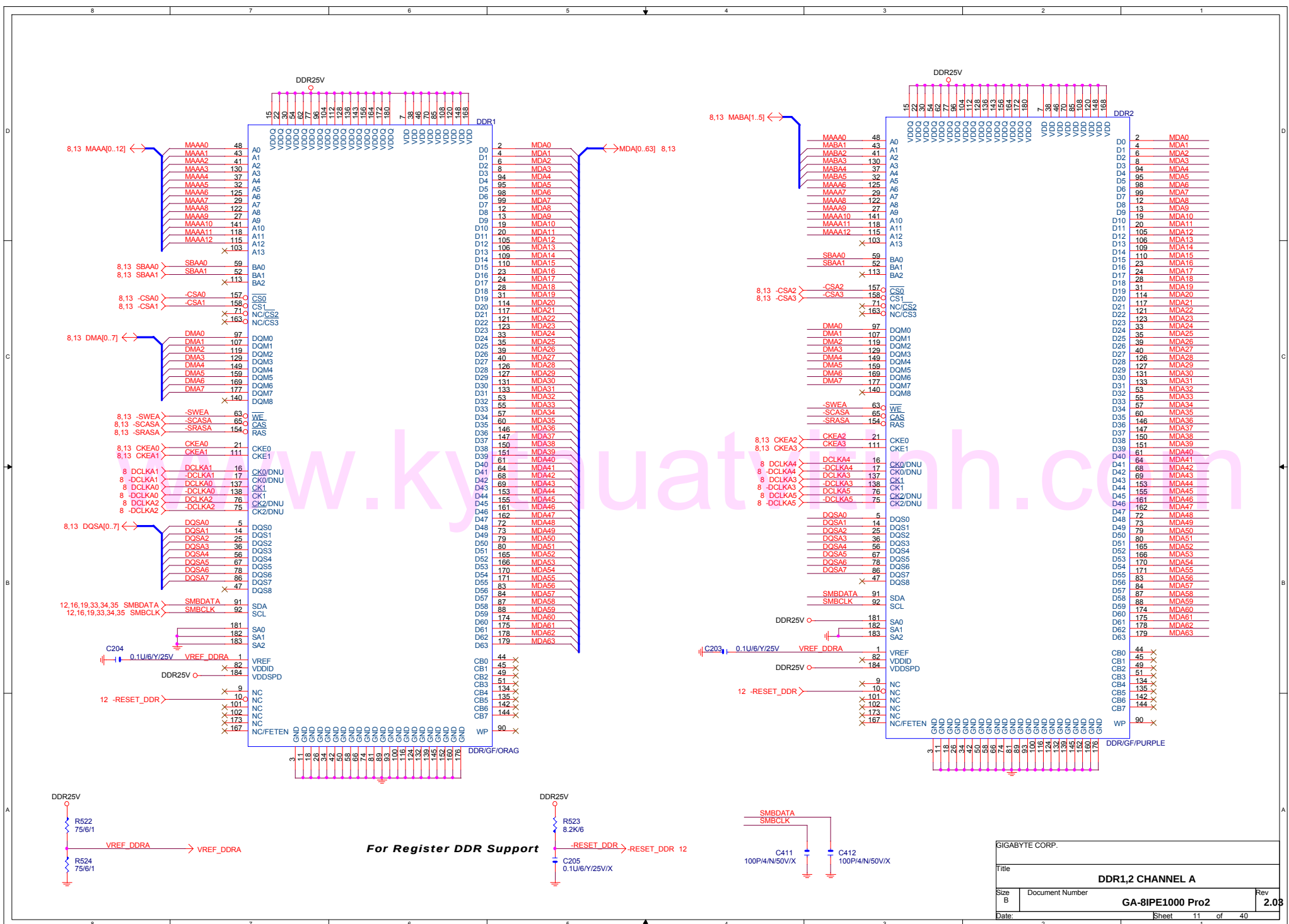


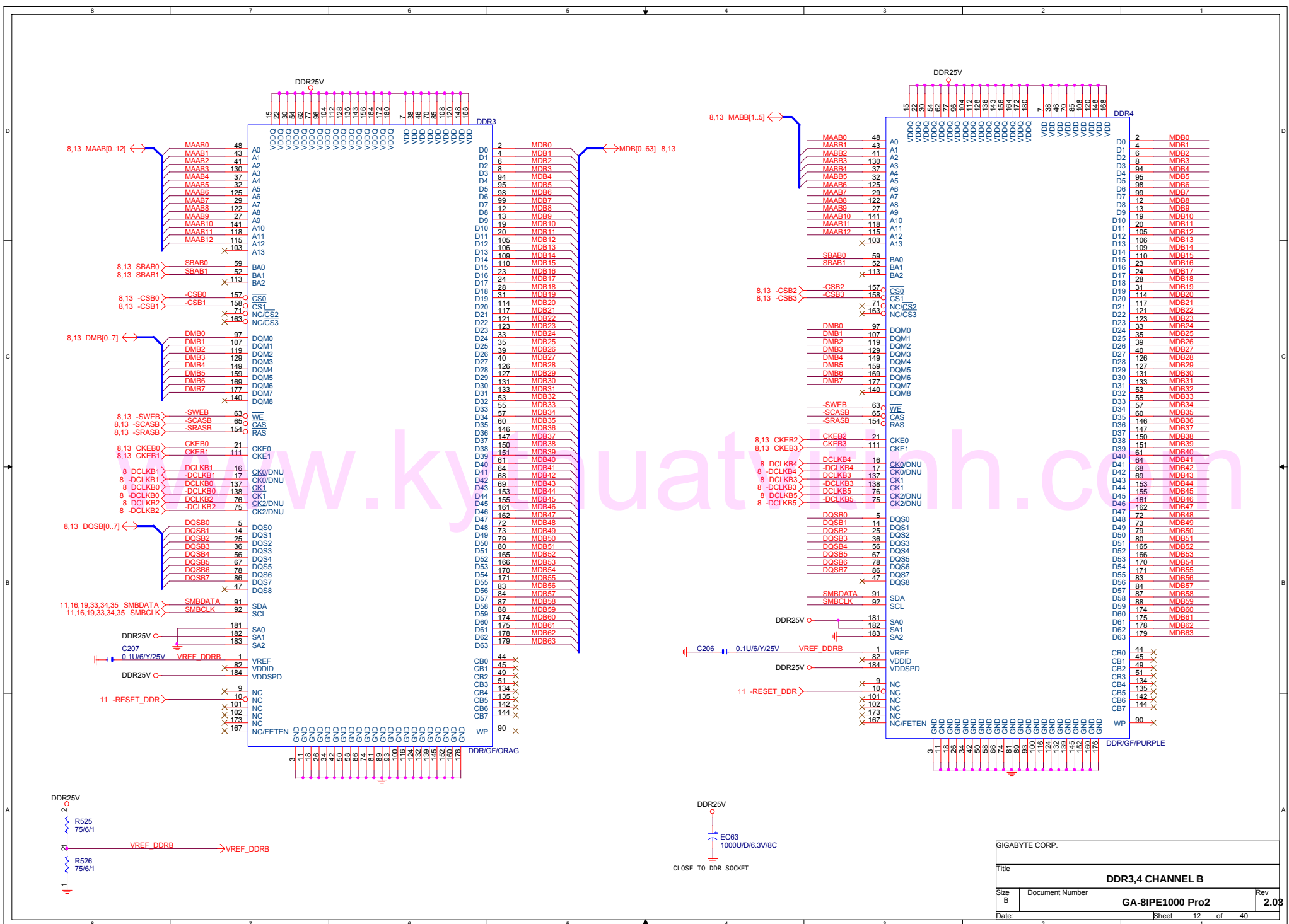
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Size	Document Number	GA-8IPE1000 Pro2		Rev
Custom				2.03
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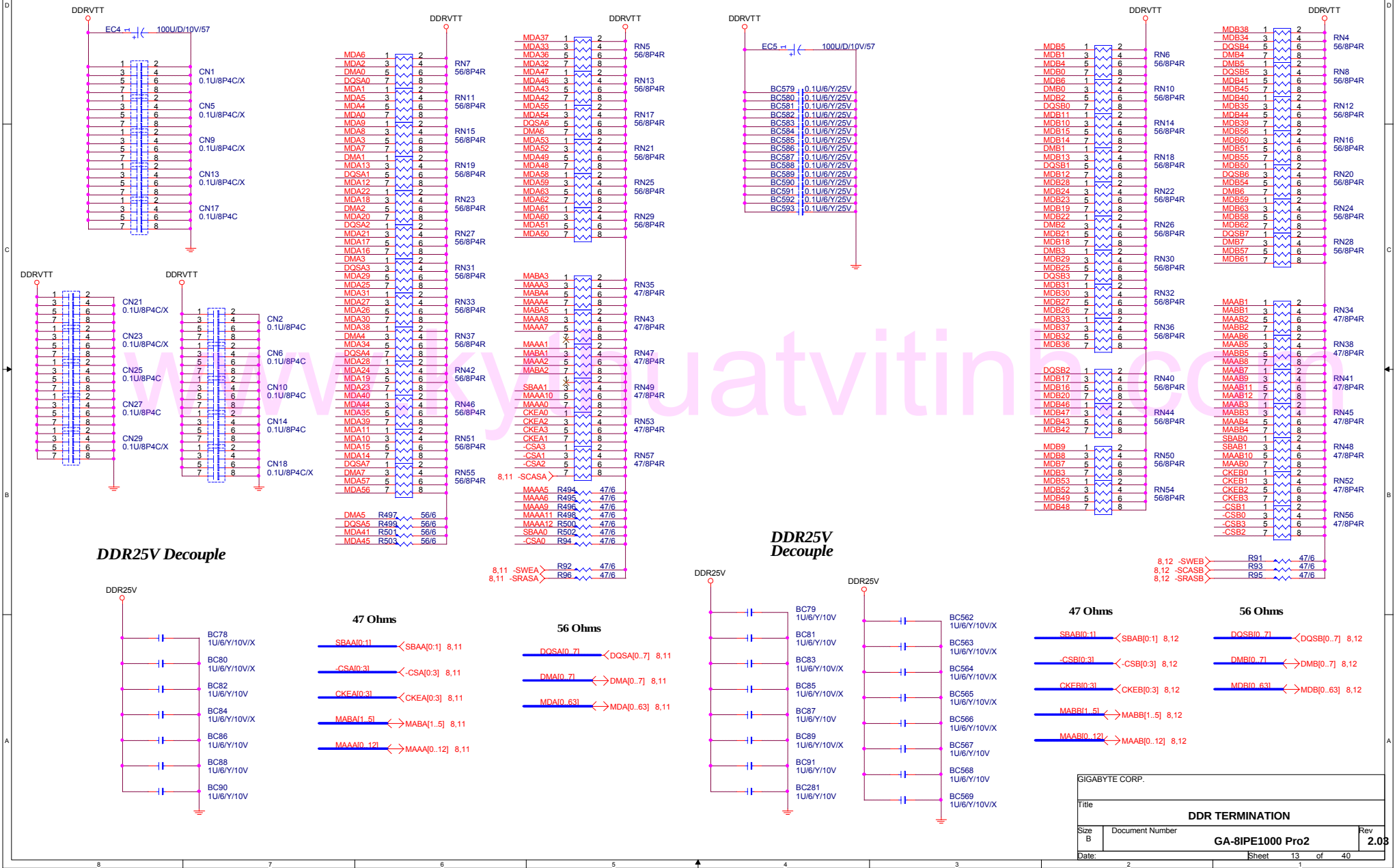


DDRVTT Decouple

DDR TERMINATION CHANNEL A

DDRVTT Decouple

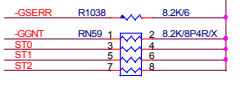
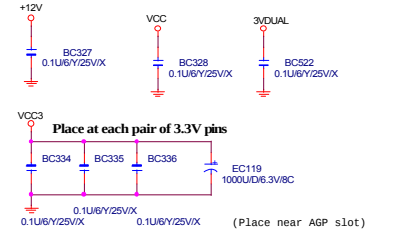
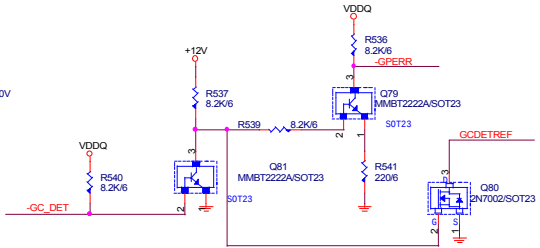
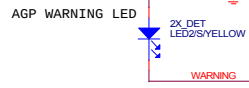
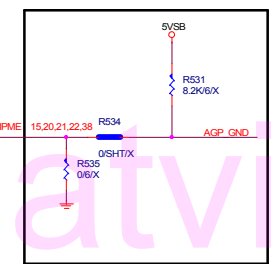
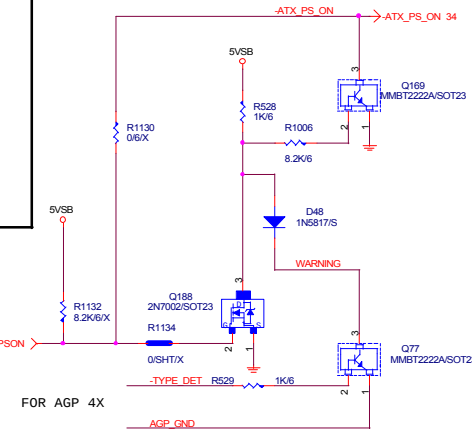
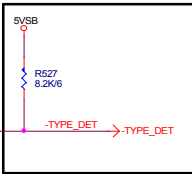
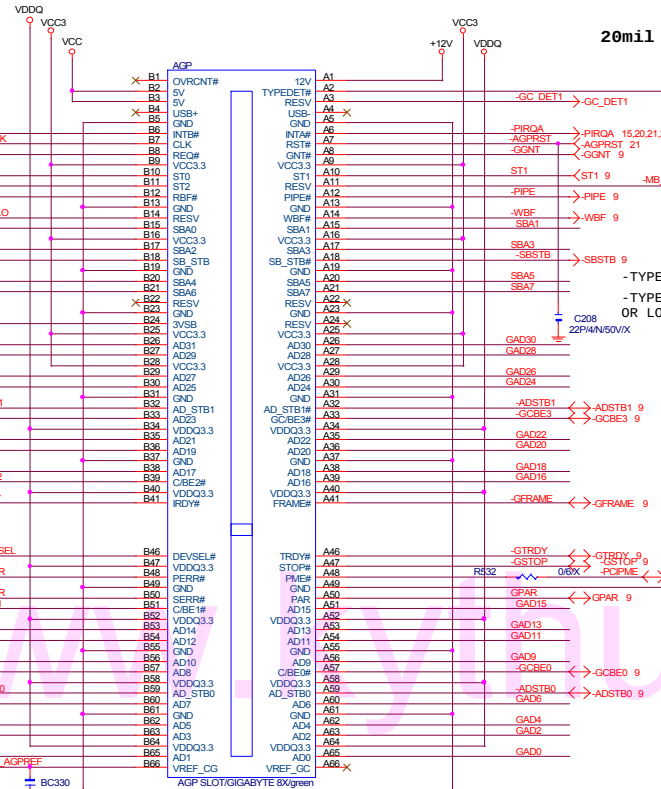
CHANNEL B



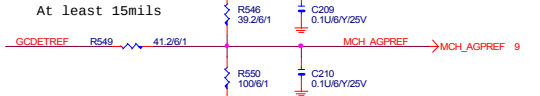
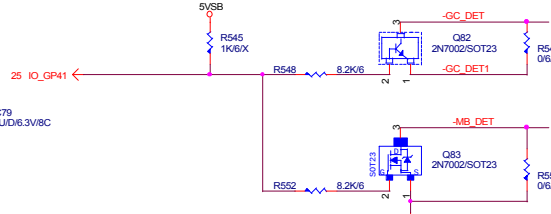
AGP 4X/8X

20mil

9 SBA0/71
9 GAD0/310

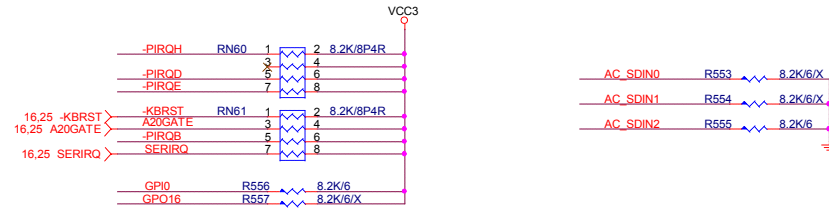


GPO pin must power on default High

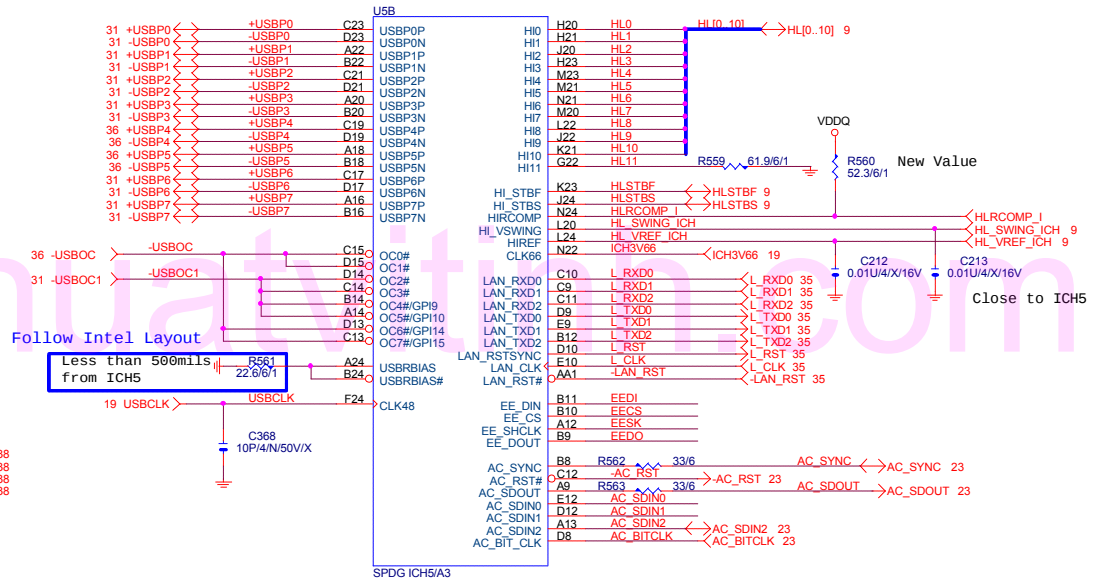
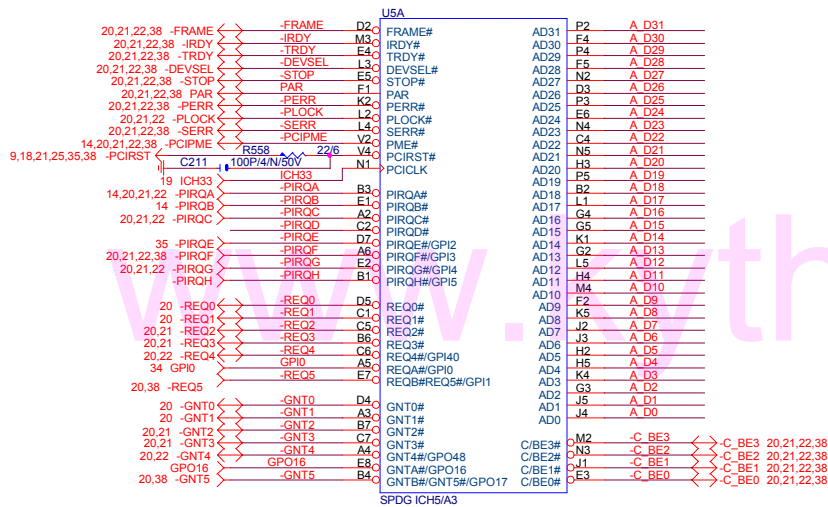


Place 1 at each pair of VDDQ pins
Place an additional for spread from A14 - A33

GIGABYTE CORP.			
AGP SLOT			
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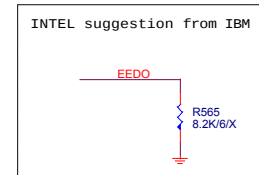
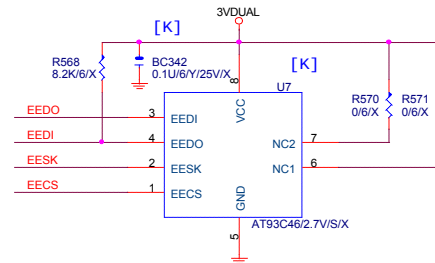


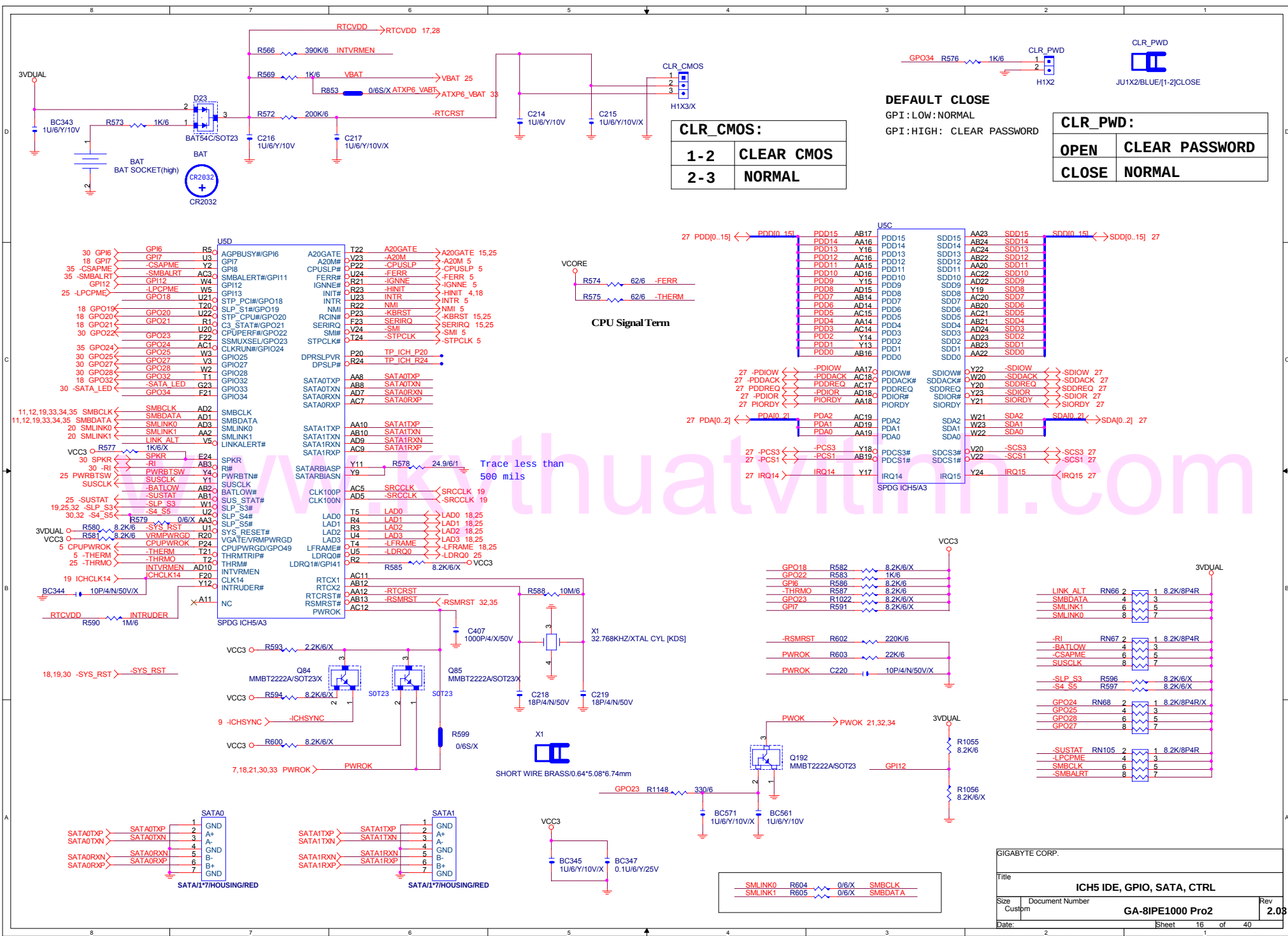
A_DIO_311 <-> A_DIO[0..31] 20,21,22,38



Follow Intel Layout

Less than 500mils from ICH5

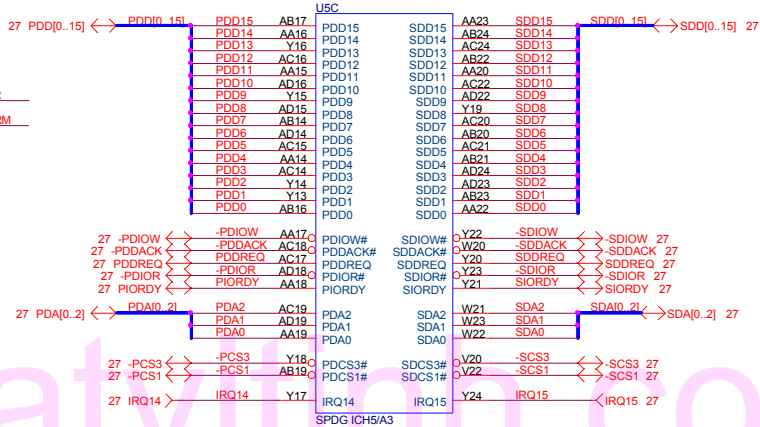


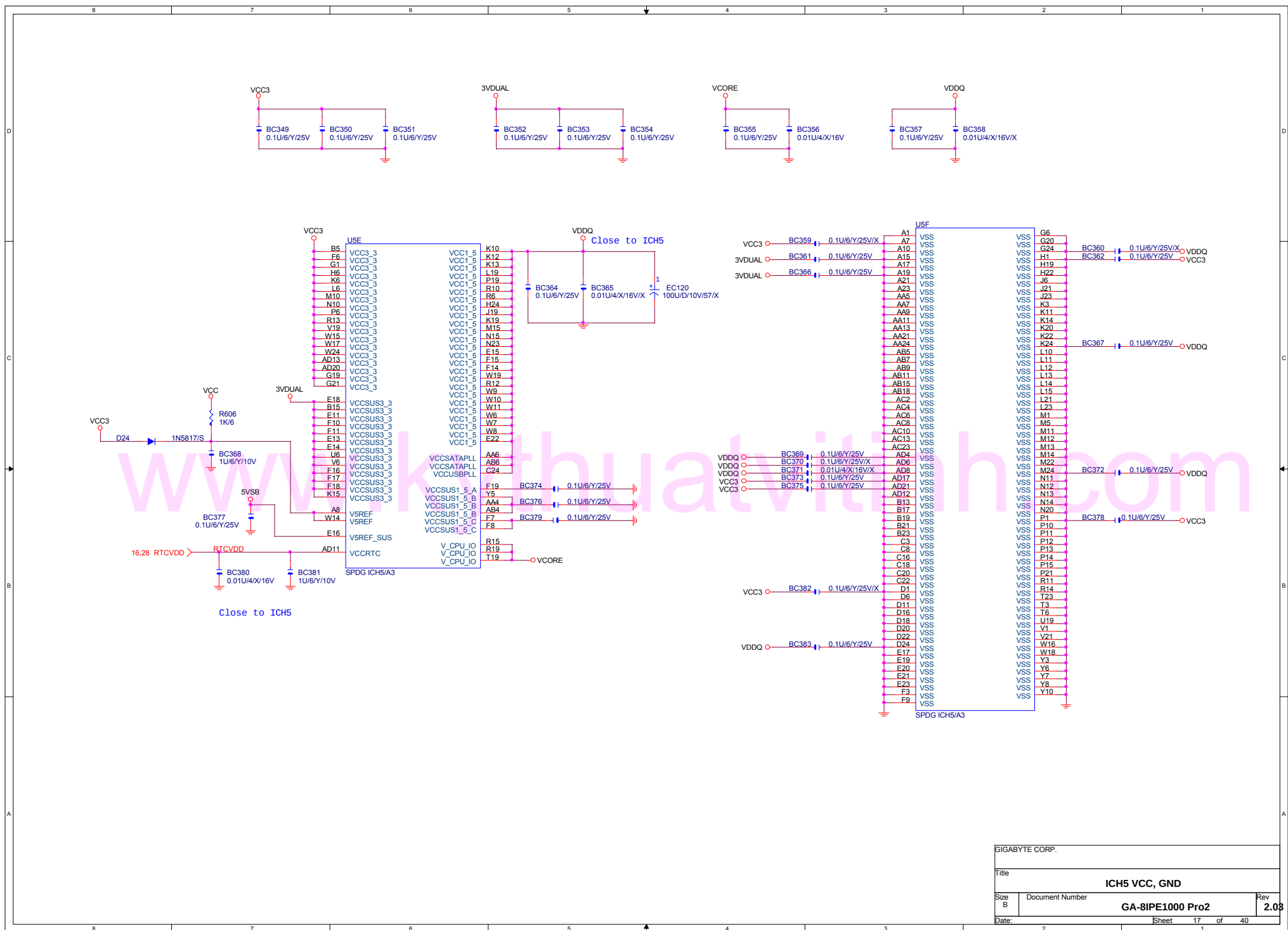


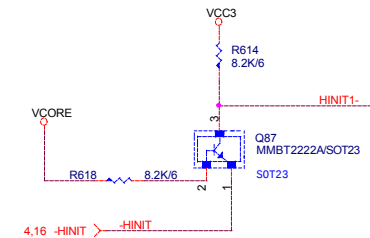
CLR_CMOS:	
1-2	CLEAR CMOS
2-3	NORMAL

DEFAULT CLOSE
GPI: LOW: NORMAL
GPI: HIGH: CLEAR PASSWORD

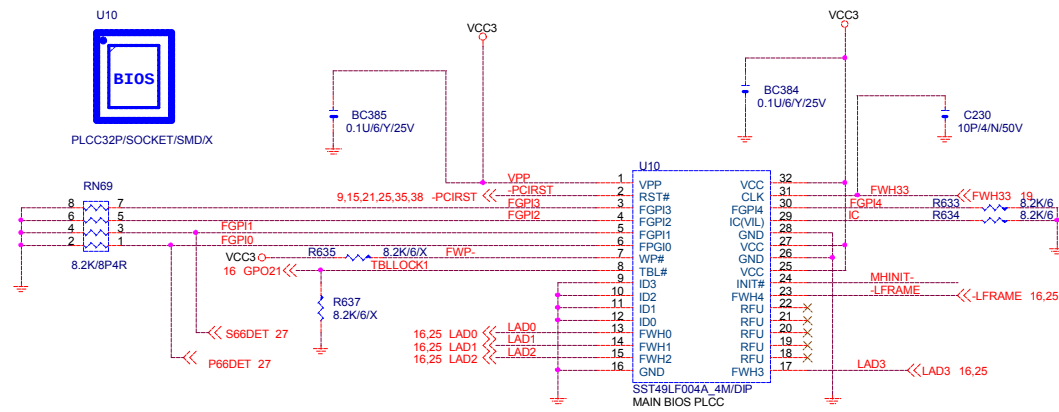
CLR_PWD:	
OPEN	CLEAR PASSWORD
CLOSE	NORMAL





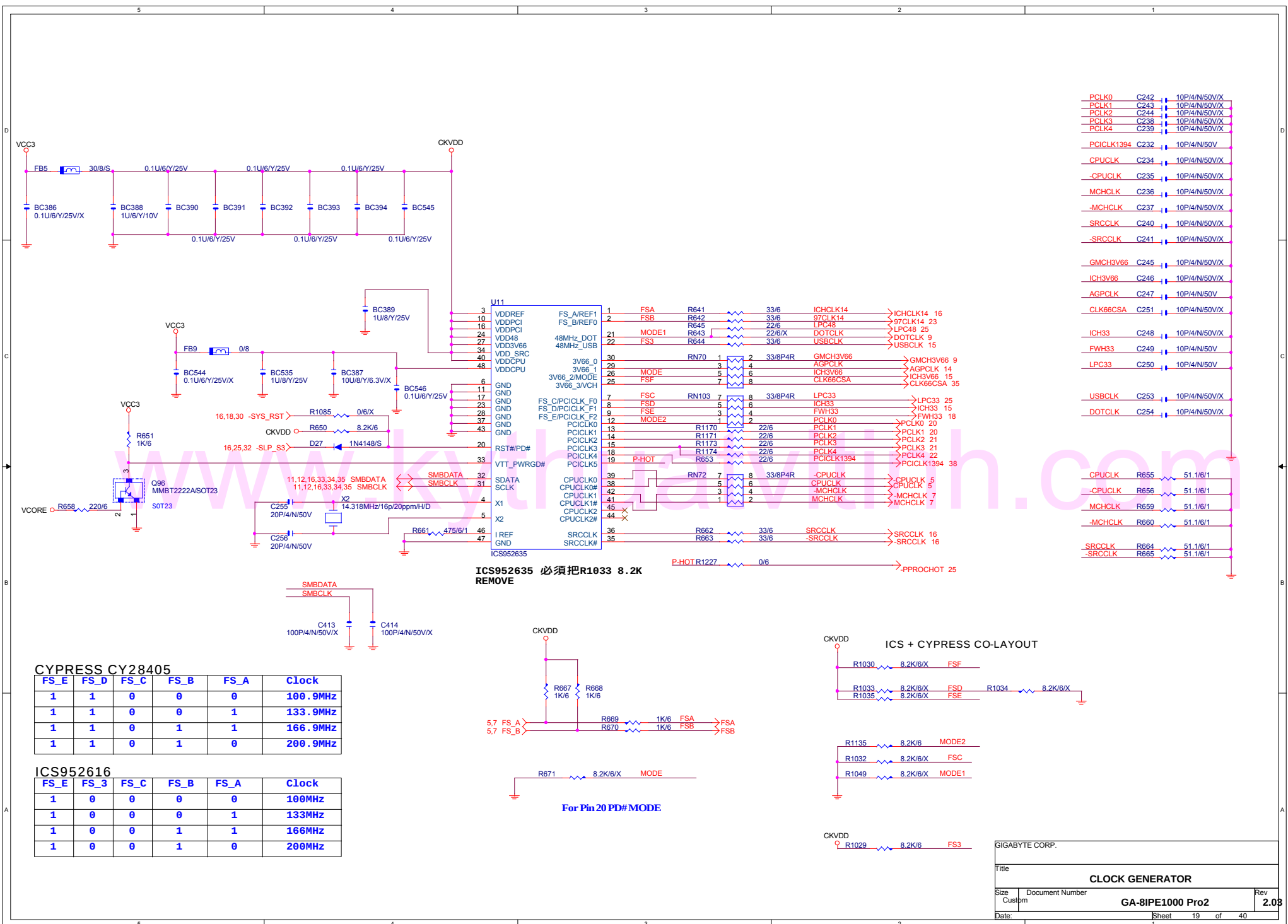


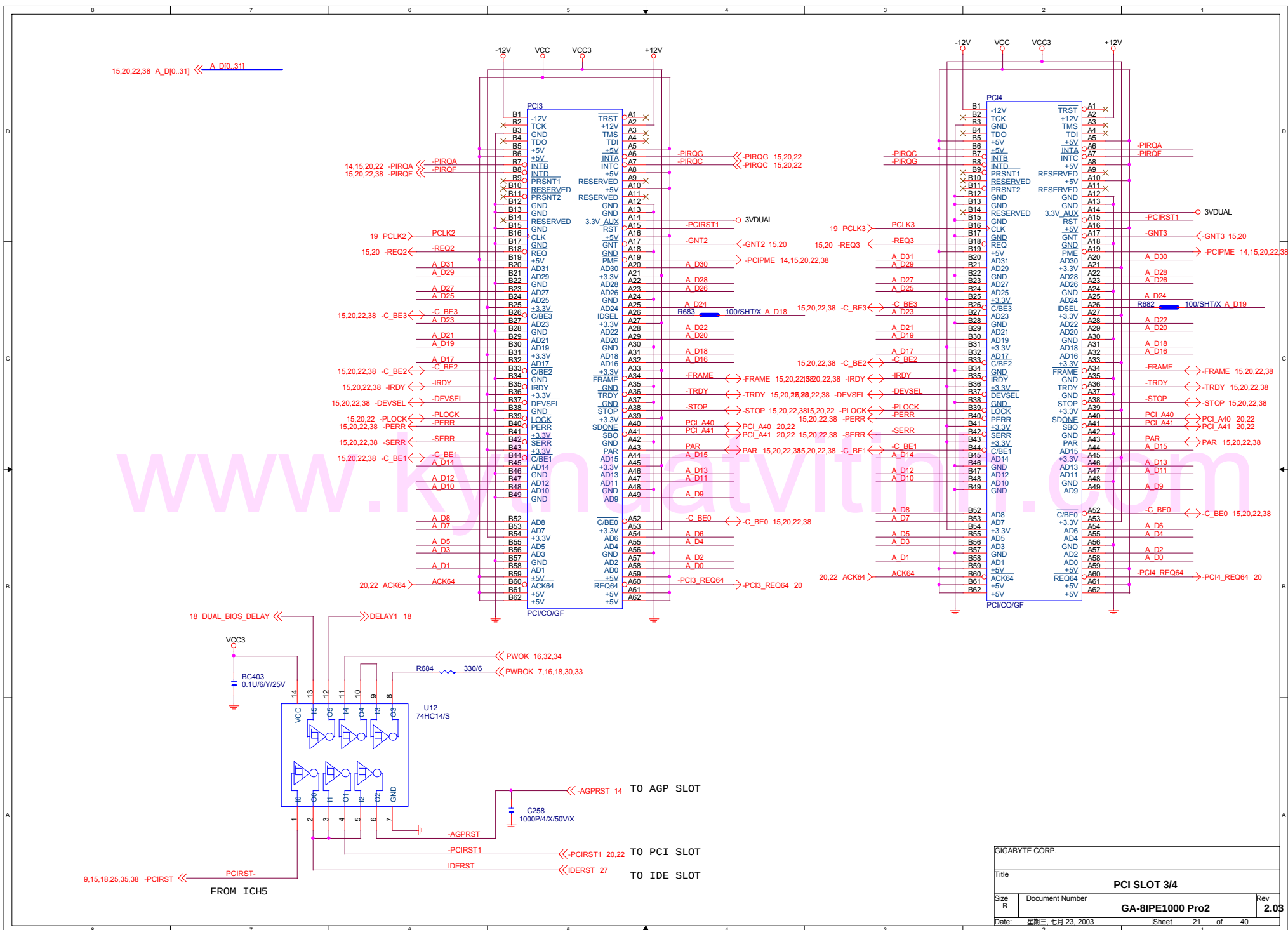
1-2	WRITE PROTECT
2-3	DISABLE



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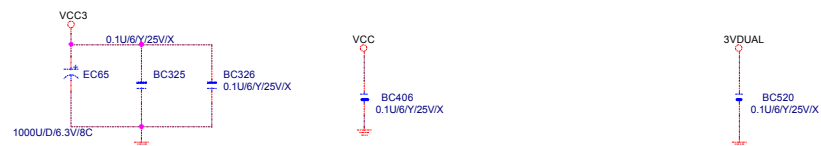
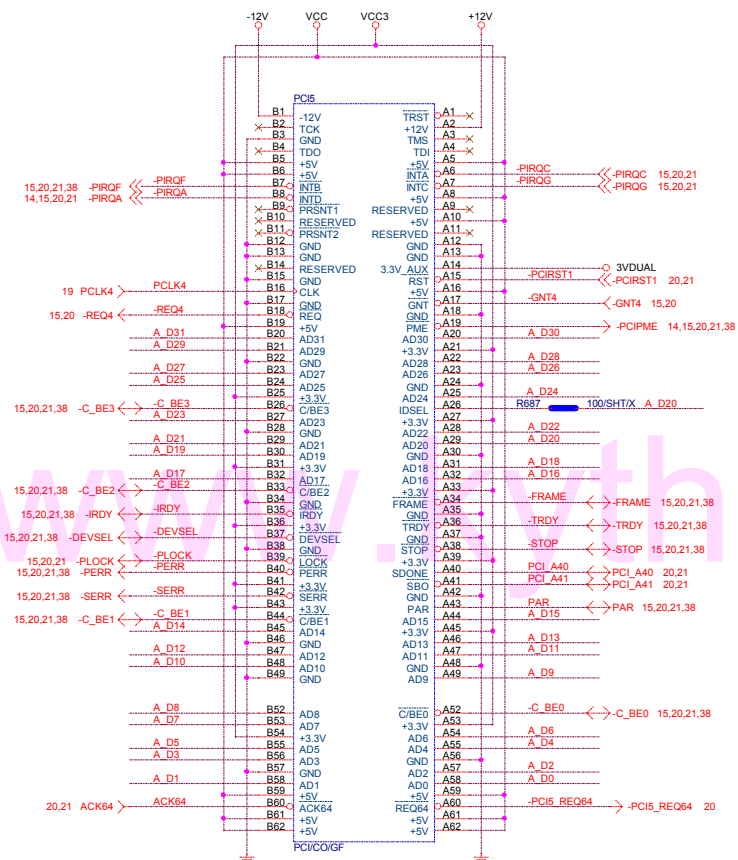
ADD WINBOUD FWH SEC. SOURCE





5 4 3 2 1

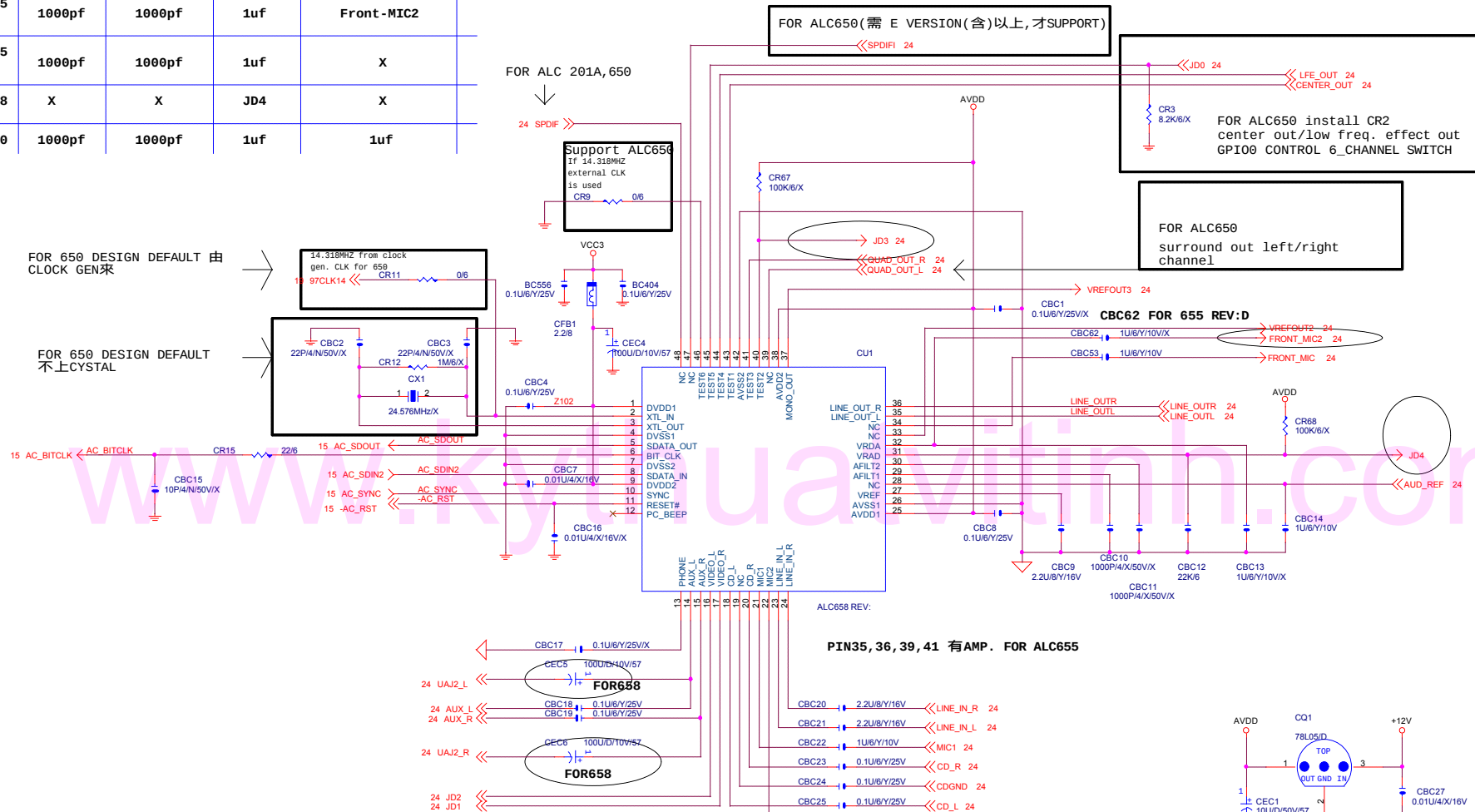
15,20,21,38 A_D[0..31] << A_D[0..31]



GIGABYTE CORP.			
Title			
PCI SLOT 5			
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Custom	GA-8IPE1000 Pro2	2.03	
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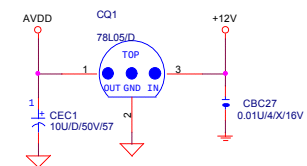
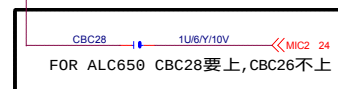
Filter Cap design:

	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	

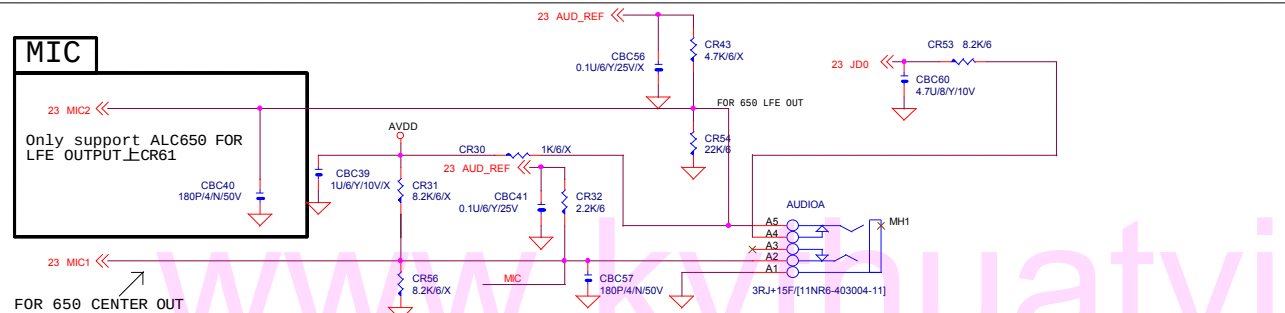


Arrangement of Jack detection Pin:

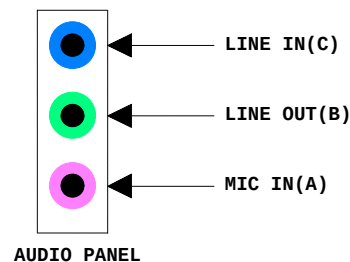
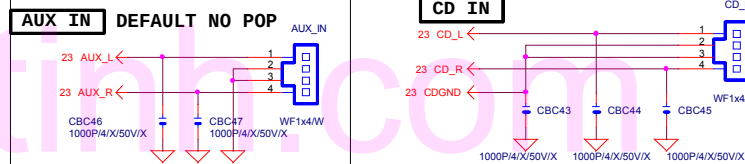
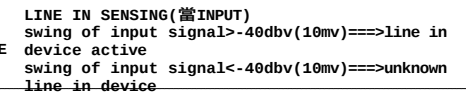
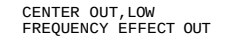
	Pin-45(JD0)	Pin-17(JD1)	Pin-16(JD2)	Pin-40(JD3)	Pin-31(JD4)
ALC655	for MIC-IN	for FRONT-OUT	for LINE-IN		
ALC658	for MIC-IN	for UAJ1	for UAJ2	for FRONT-OUT Exernal pull high is needed	for LINE-IN Exernal pull high is needed



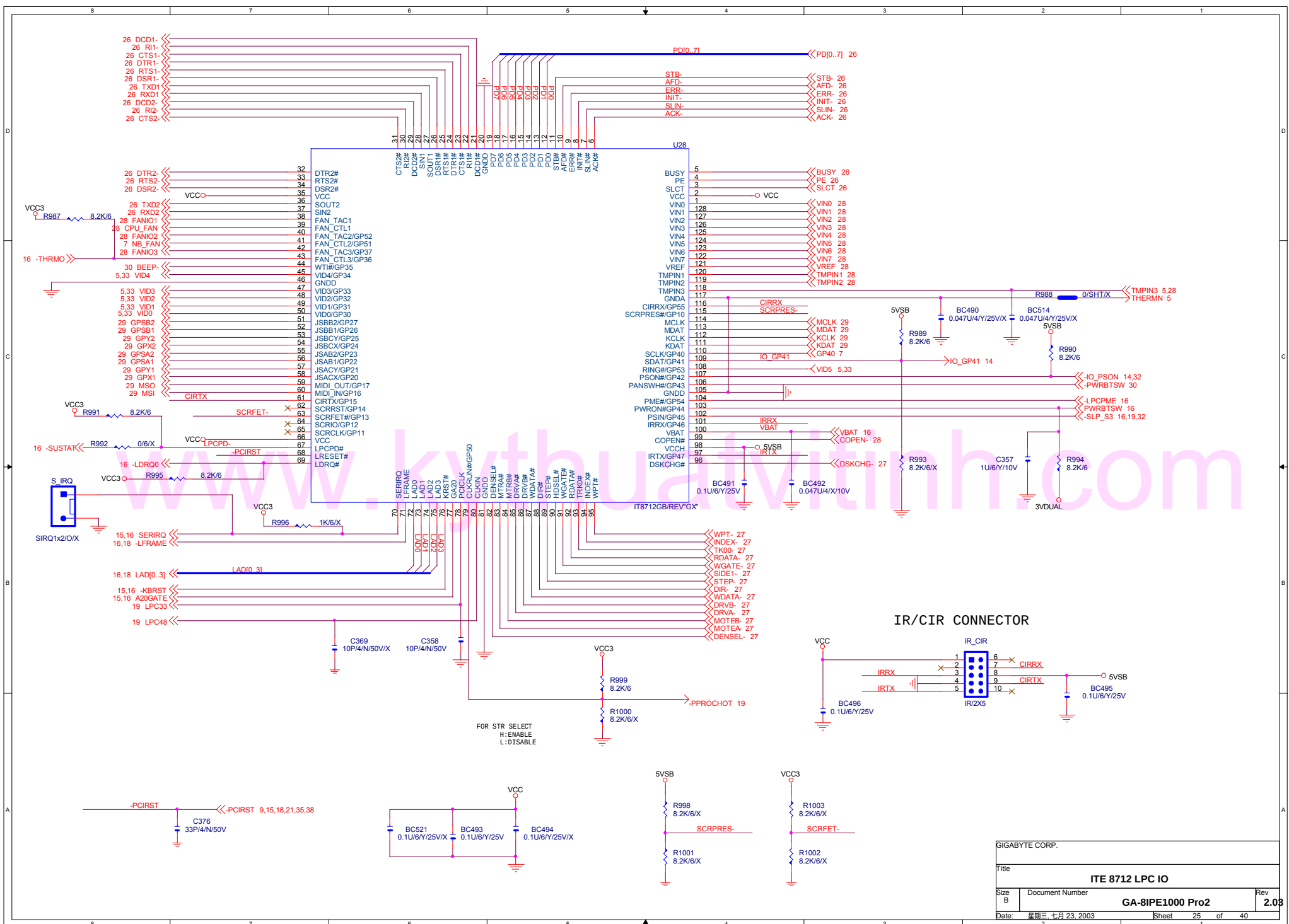
1/2(3.14)RC=1/2(3.14)8.2K*4.7U=4.3HZ以上AC 信號全部衰減 TO 0V
不會造成JDO 誤動作(無device 時play wav)

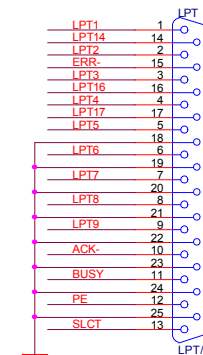
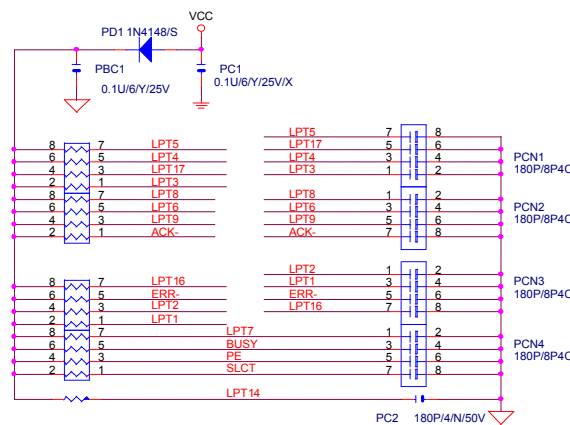
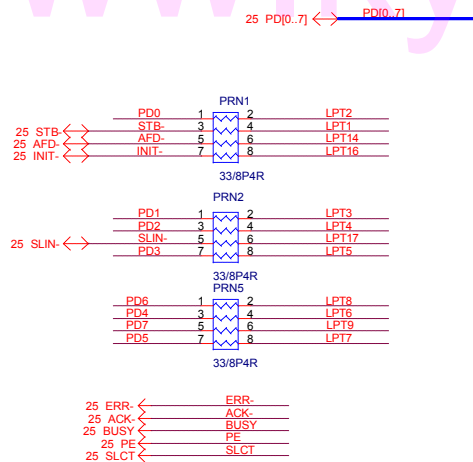
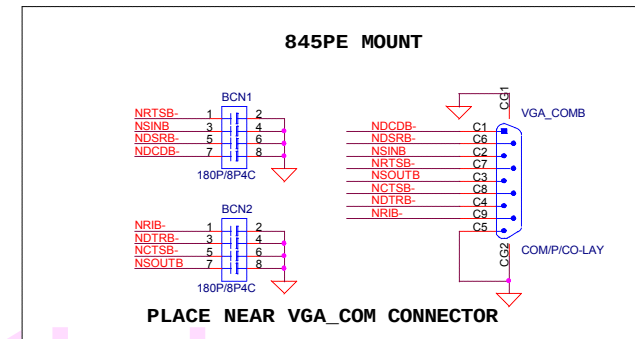
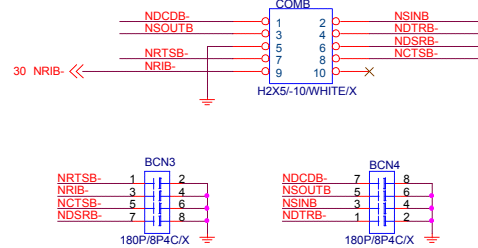
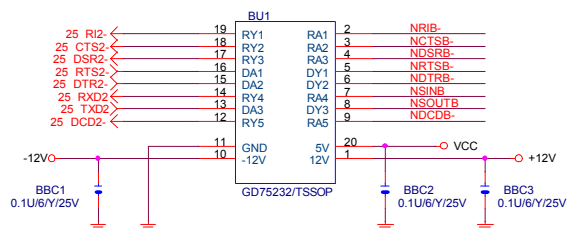
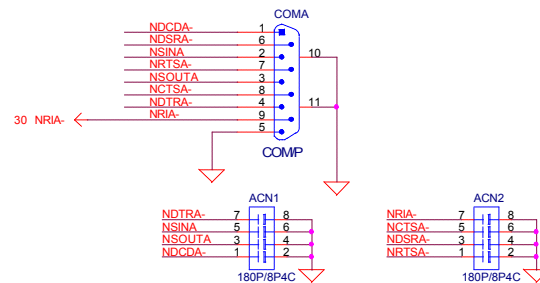
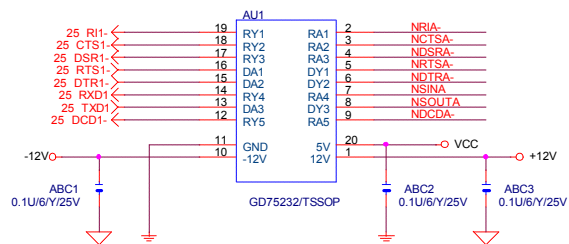


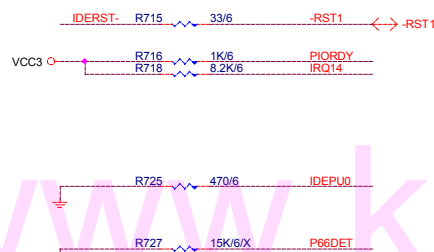
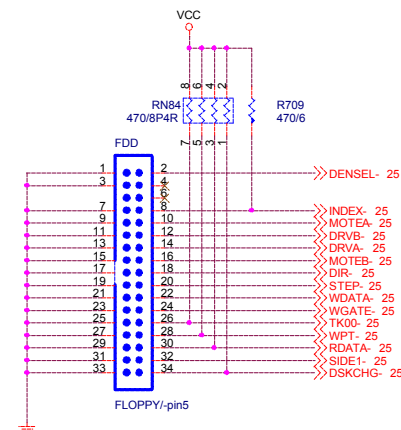
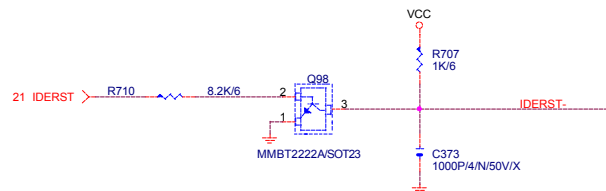
MICROPHONE IN SENSING(當OUTPUT)
R>4K OHM=>POWER SPEAKER
4K OHM>R>400 OHM=>MICROPHONE
R<400 OHM=>HEADPHONE



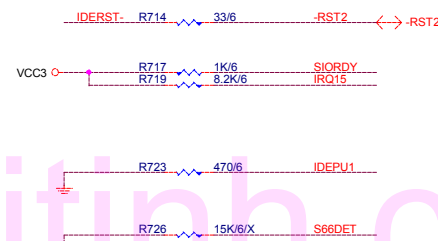
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AUDIO OUTPUT, GAME PORT			
Size Custom	Document Number	GA-8IPE1000 Pro2	Rev 2.03
Date: 星期三 七月 23, 2003	Sheet 24 of 40		



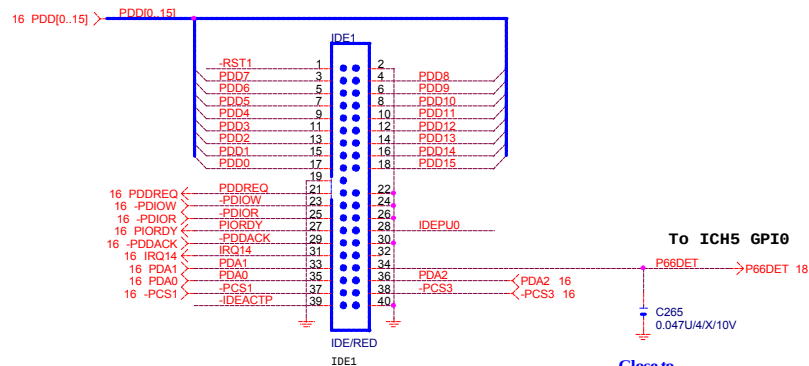




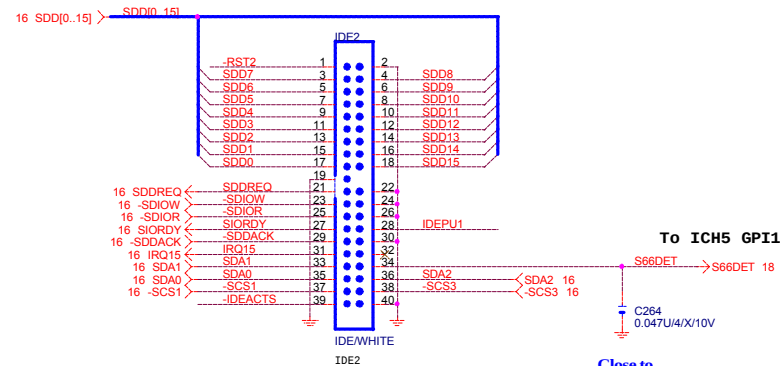
PRIMARY IDE CONNECTOR



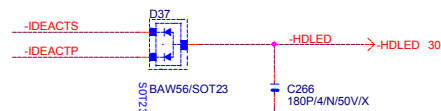
SECONDARY IDE CONNECTOR



Close to connector

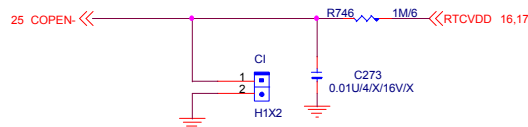
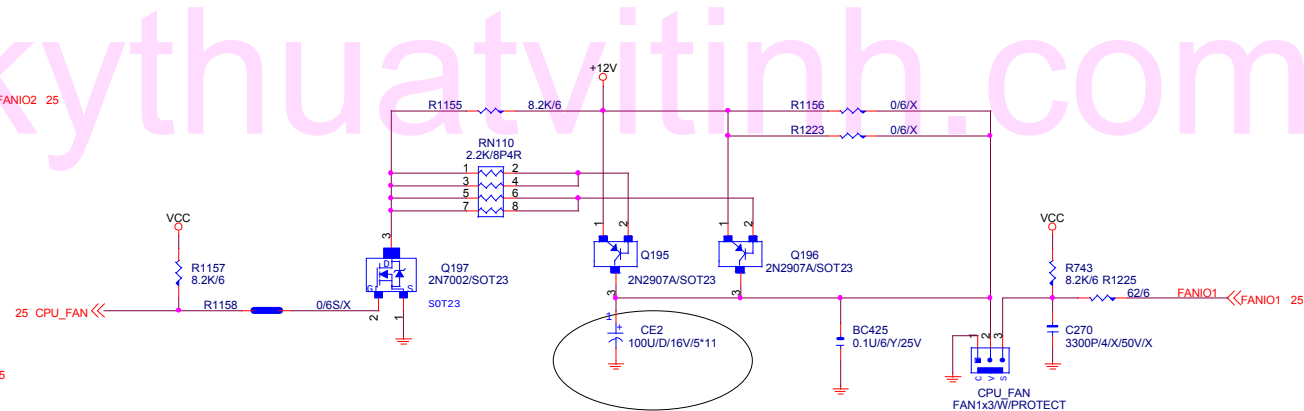
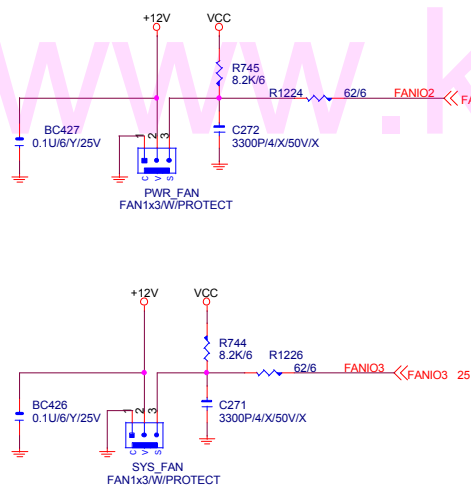
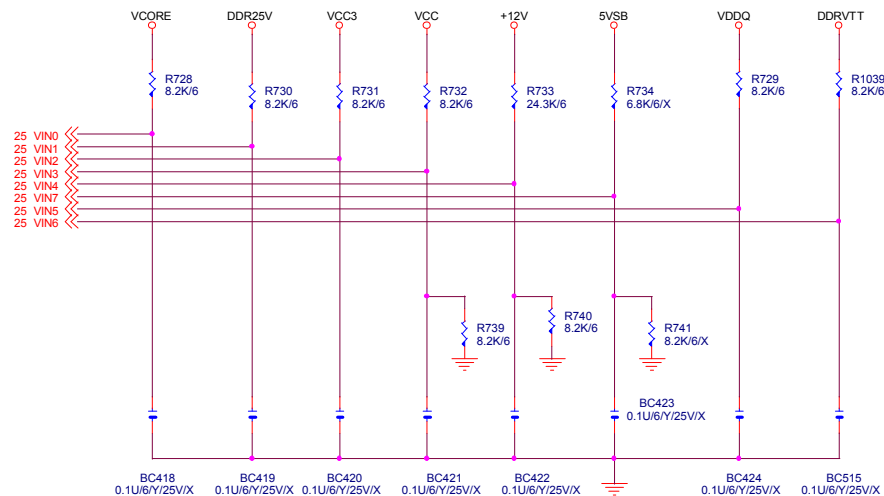
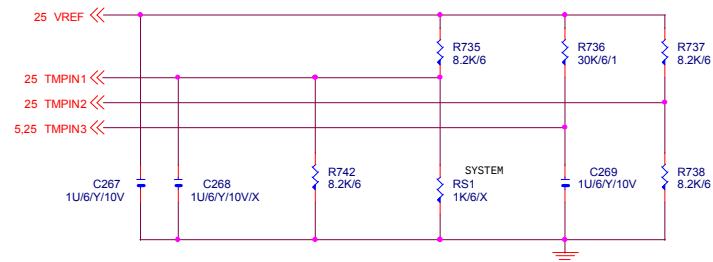


Close to connector

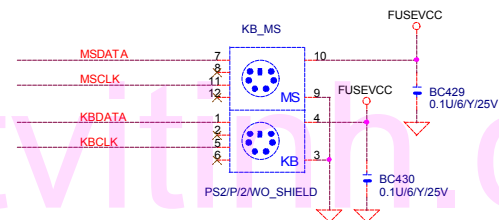
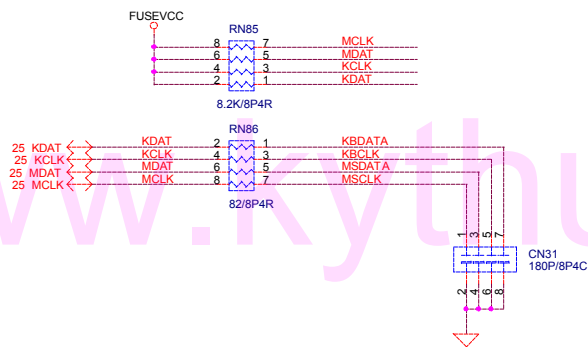
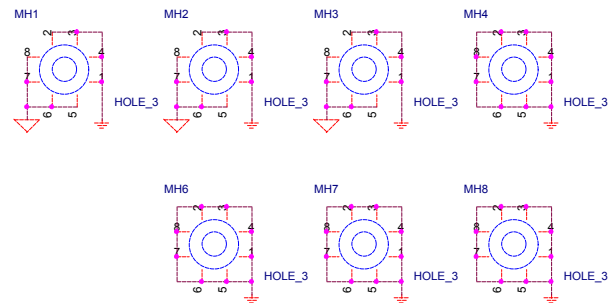
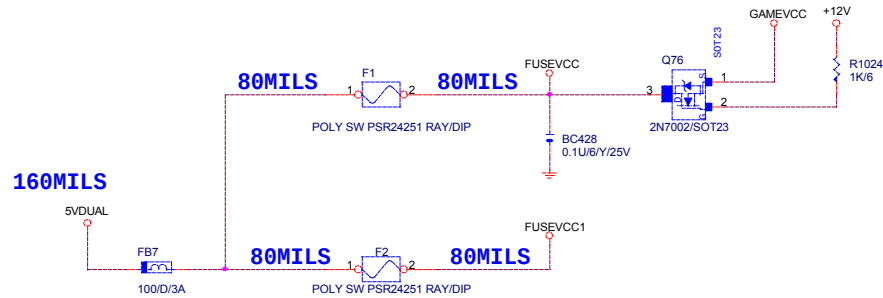


GIGABYTE CORP.			
Title			
IDE CONNECTOR			
Size	Document Number	Rev	
B	GA-8IPE1000 Pro2	2.03	
Date:	Sheet	27	of 40

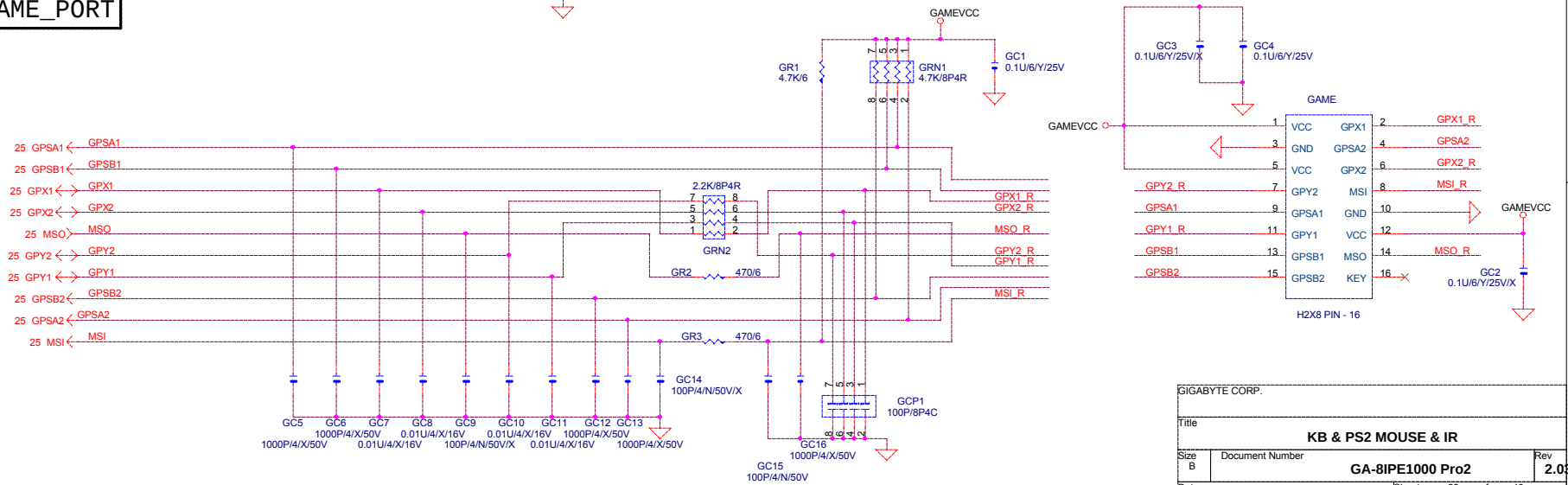
Hardware Monitor circuits



GIGABYTE CORP.			
Title		FAN/HWMO	
Size B	Document Number	GA-8IPE1000 Pro2	Rev 2.03
Date: 星期三, 七月 23, 2003	Sheet 28	of 40	



GAME_PORT



GIGABYTE CORP.			
Title			
KB & PS2 MOUSE & IR			
Size	Document Number	Rev	
B		2.03	
Date:	Sheet	29	of 40

INTEL FRONT PANEL

Pad trace same as pad width

18 RESET ← RESET

16,18,19 -SYS_RST ←

3 PIN POWER LED

PWR_LED
P_LED_1X3

DDR RAM LED

GIGABYTE CORP.

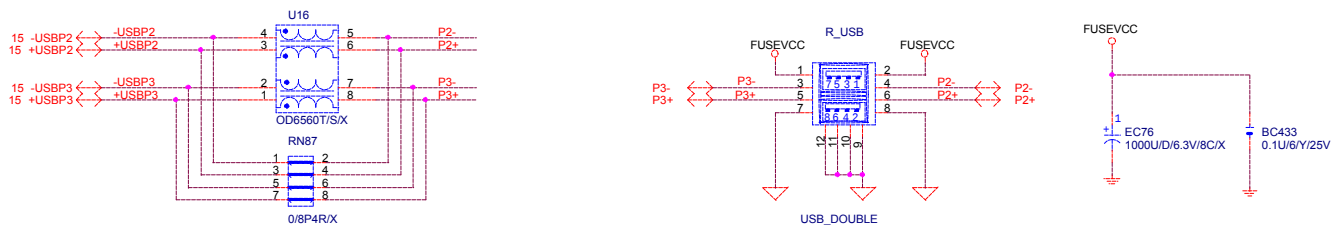
Title
PANEL & STR LED & RI

Size B Document Number
GA-8IPE1000 Pro2

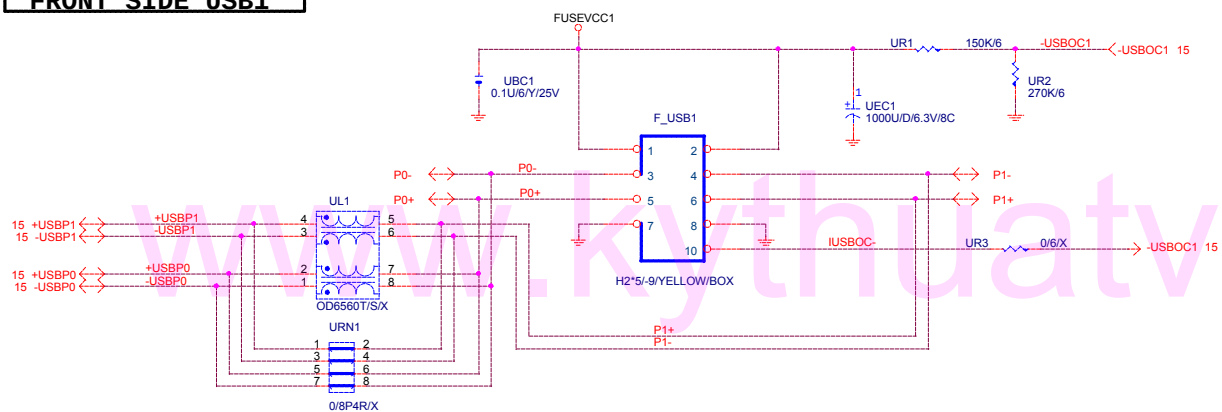
Date: Sheet 30 of 40

Rev
2.03

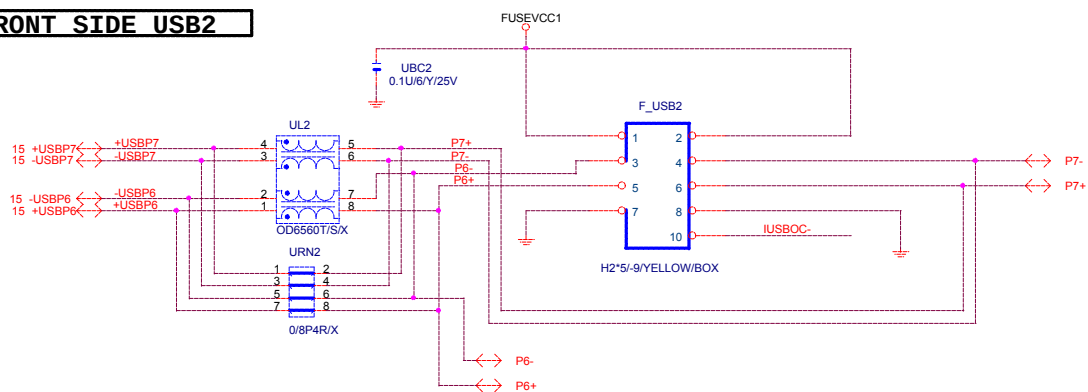
REAR USB



FRONT SIDE USB1

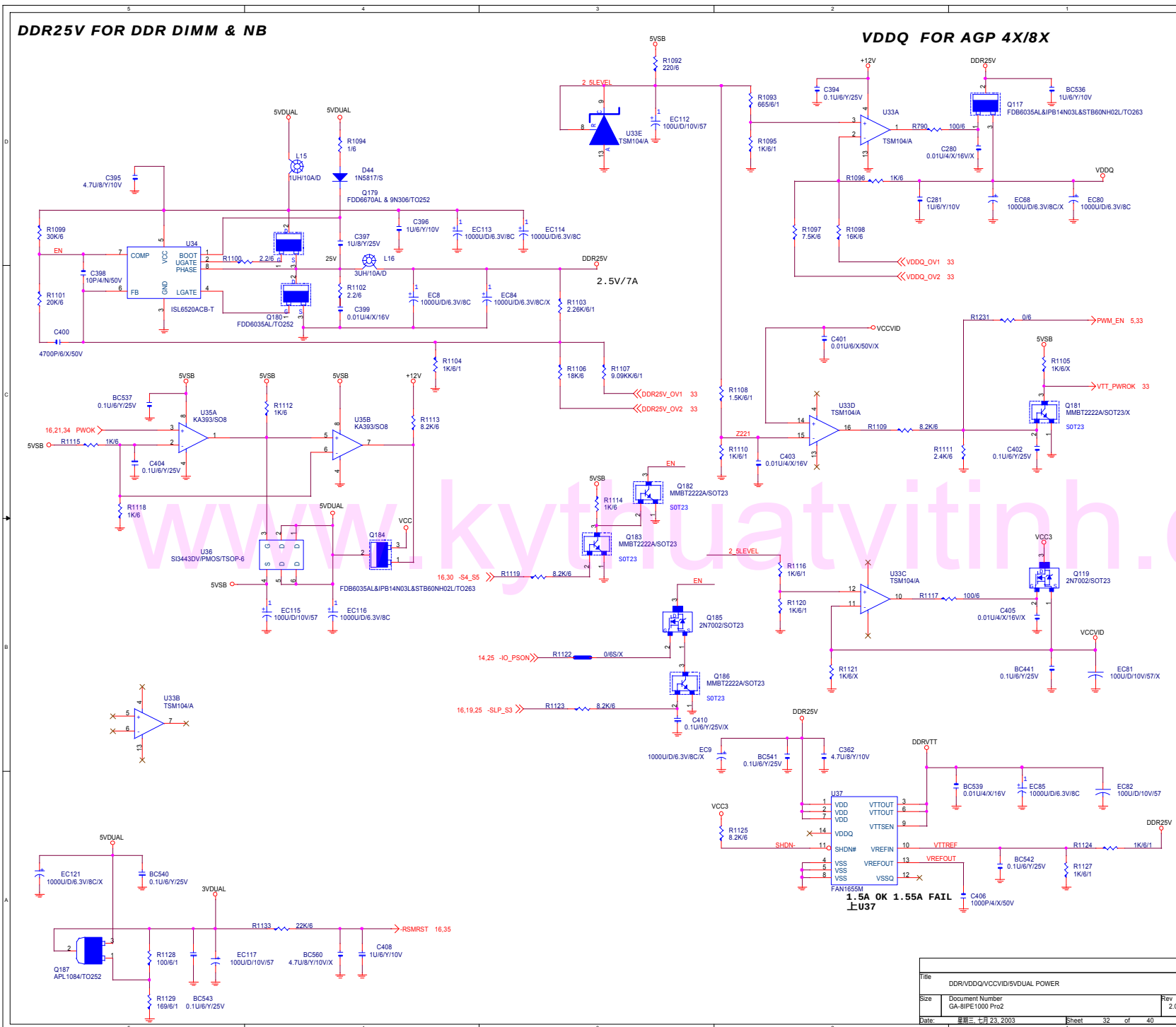


FRONT SIDE USB2

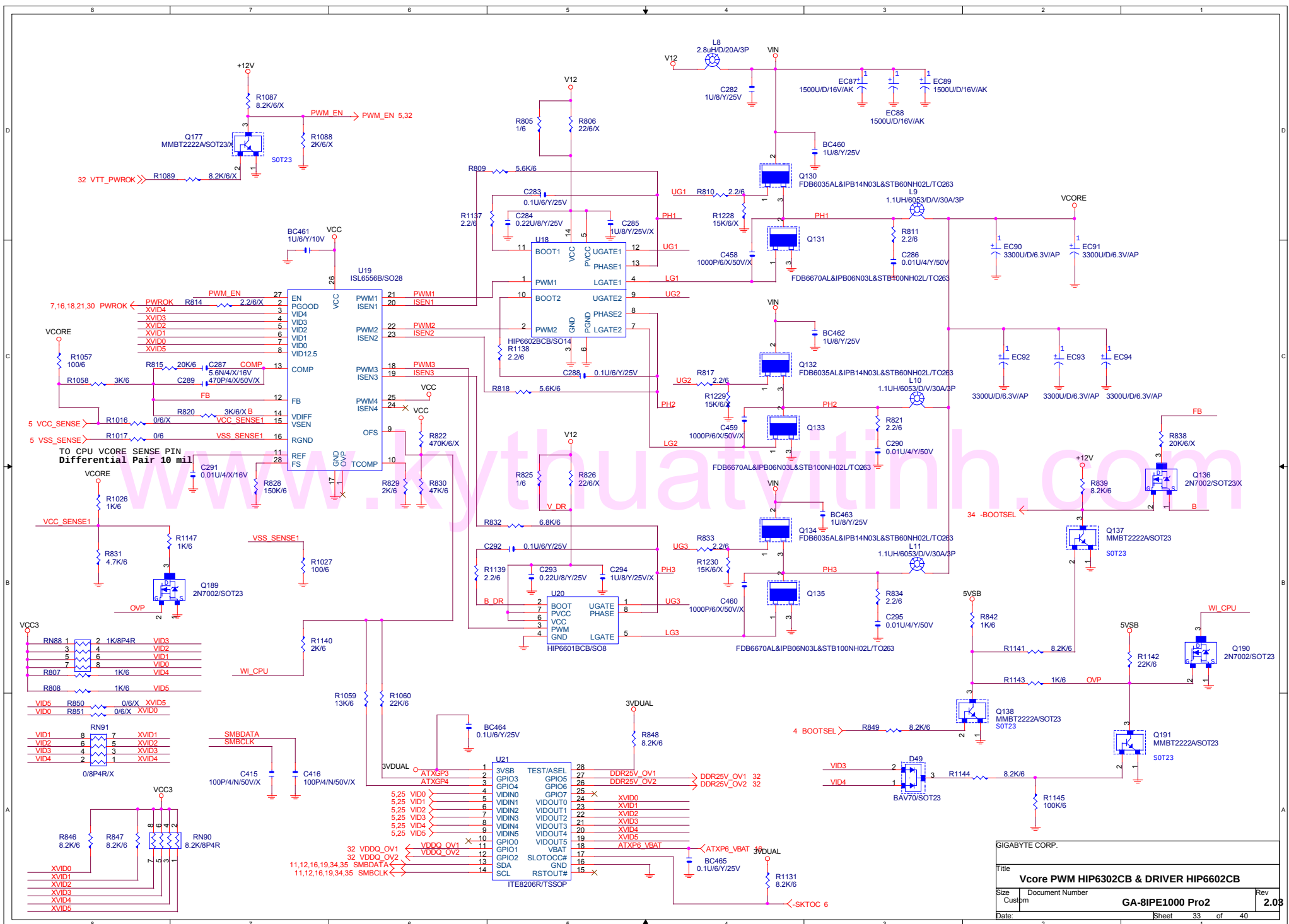


DDR25V FOR DDR DIMM & NB

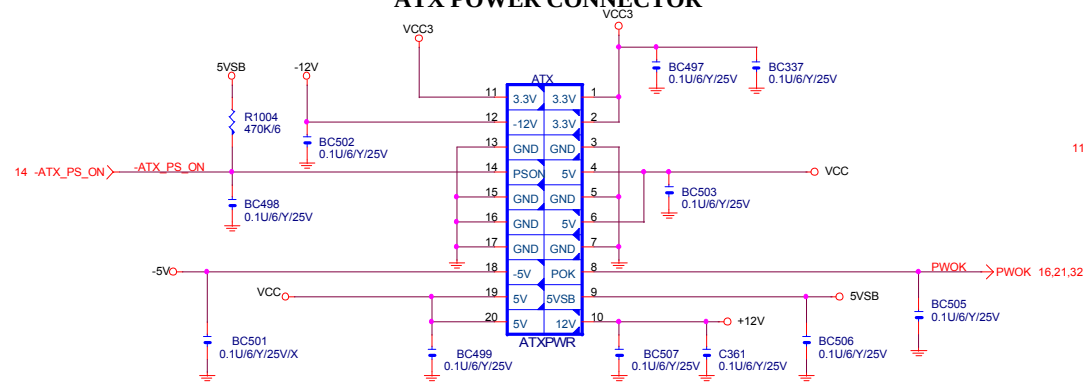
VDDQ FOR AGP 4X/8X



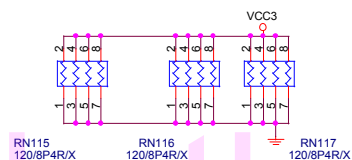
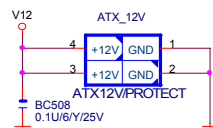
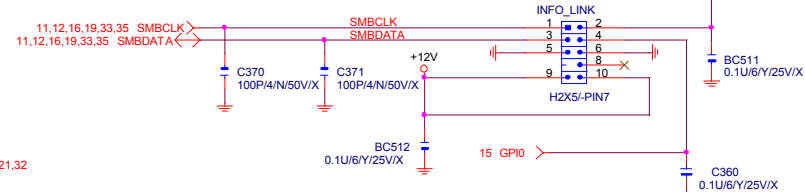
Title DDR/VDDQ/VCCVID/5VDUAL POWER				
Size	Document Number GA-8IPE1000 Pro2			Rev 2.1
Date:	星期三 七月 23 2003	Sheet	32	of 40



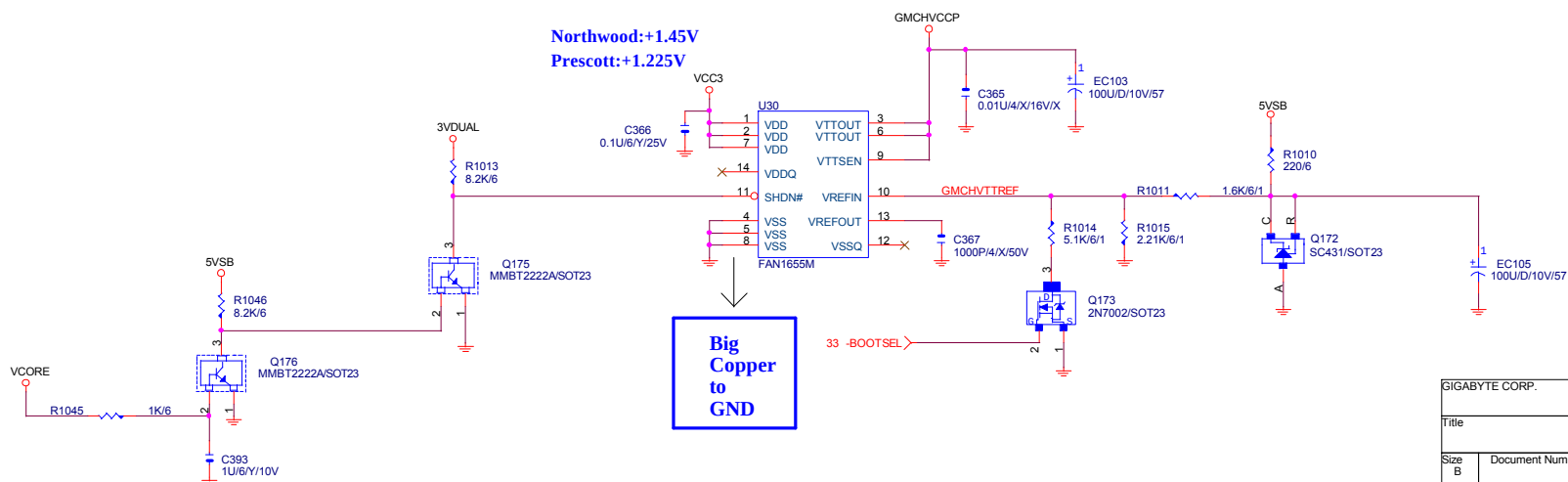
ATX POWER CONNECTOR



SMBUS CONN.

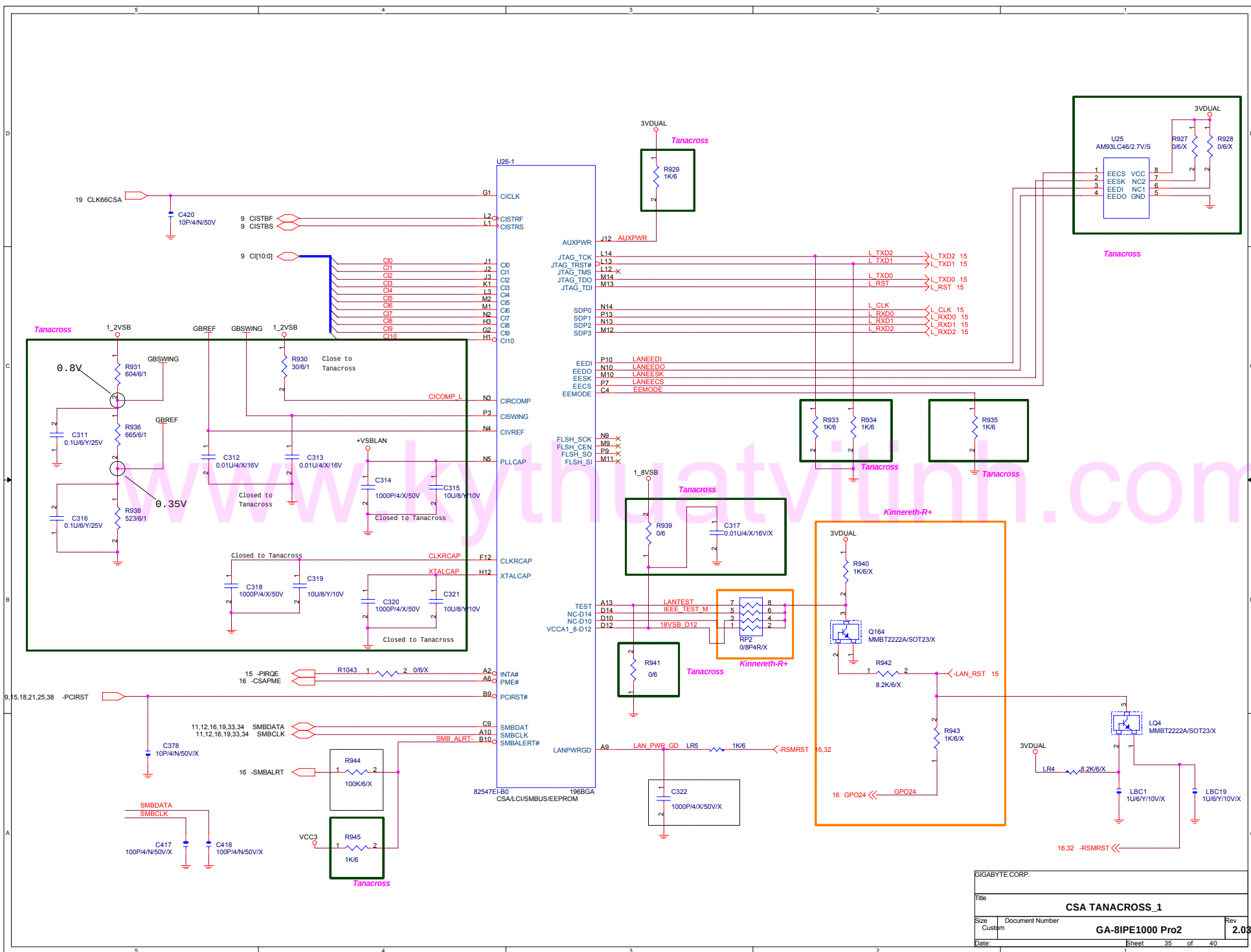


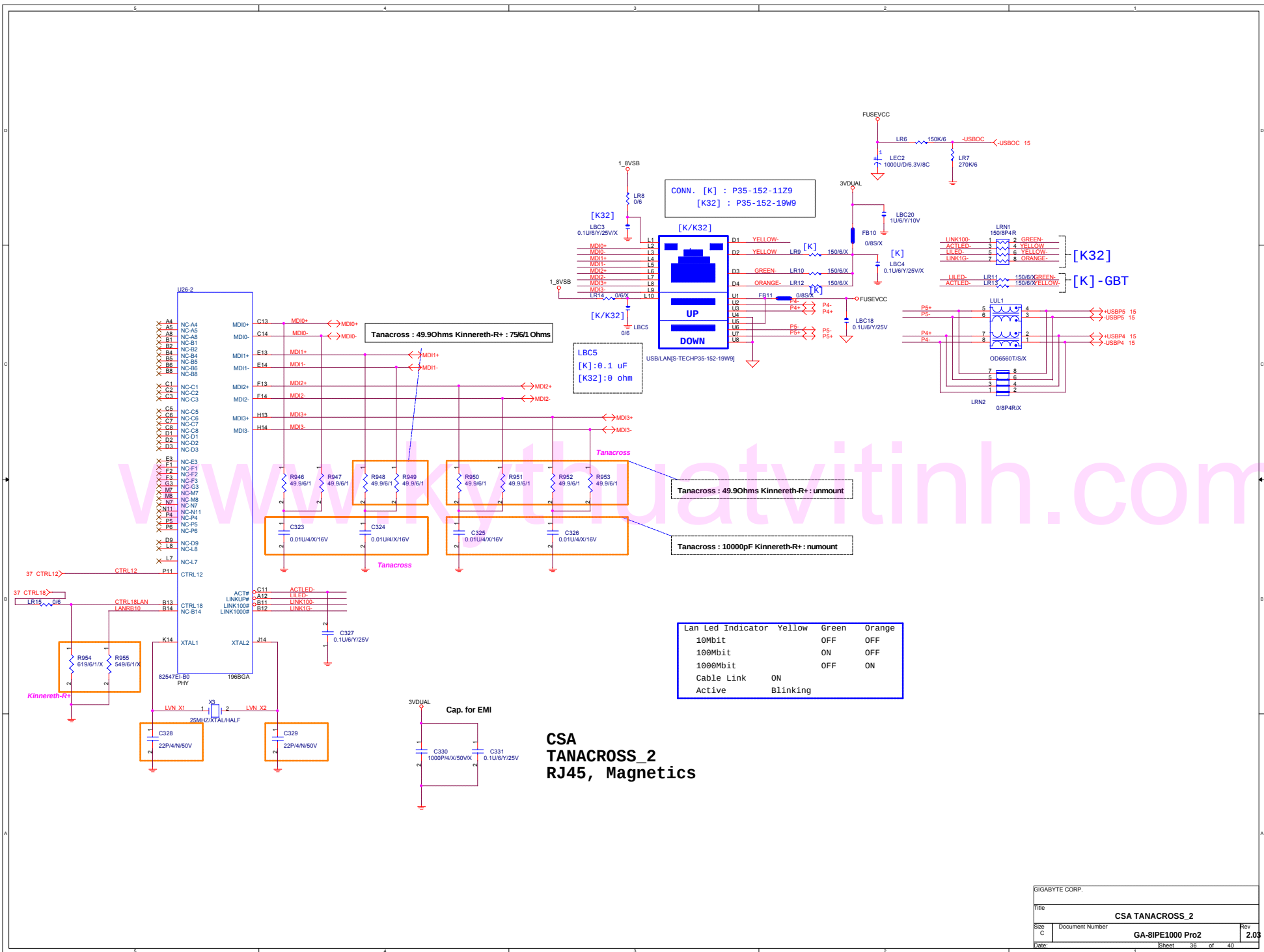
Northwood: +1.45V
Prescott: +1.225V



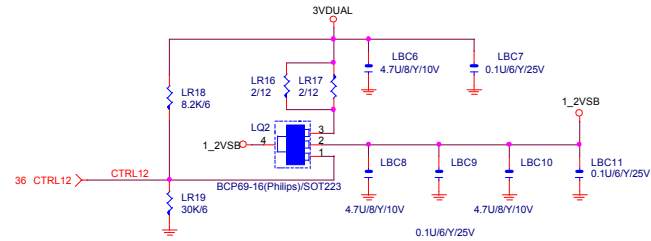
Big Copper to GND

GIGABYTE CORP.		
Title		
Misc. PWR & ATX CONN.		
Size	Document Number	Rev
B	GA-8IPE1000 Pro2	2.03
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	2	1

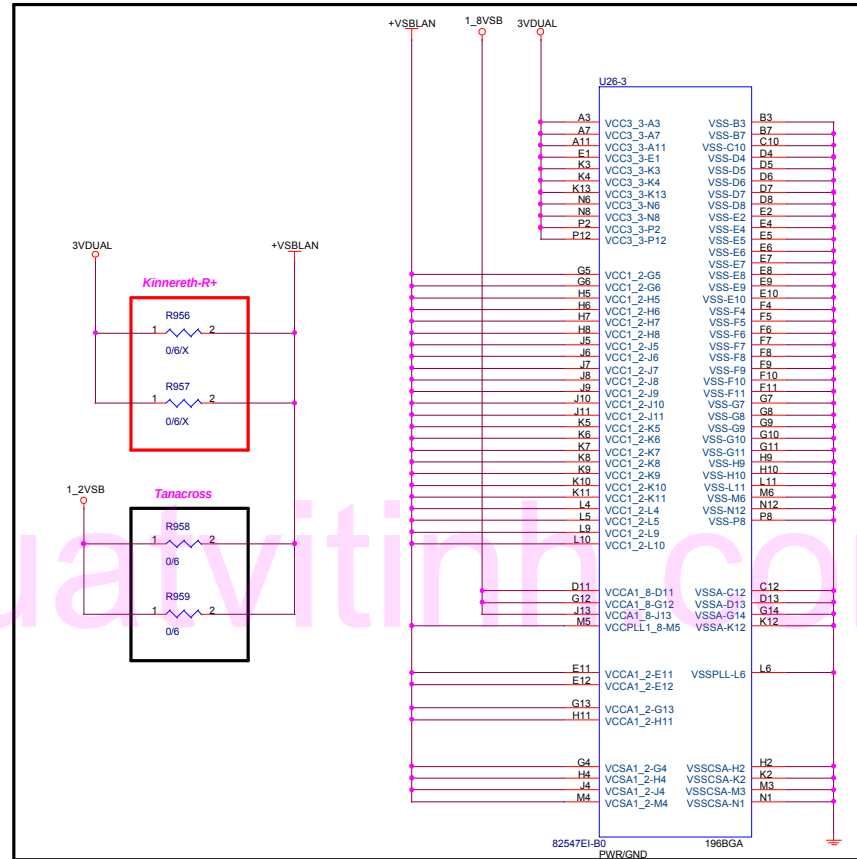
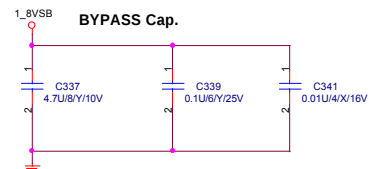
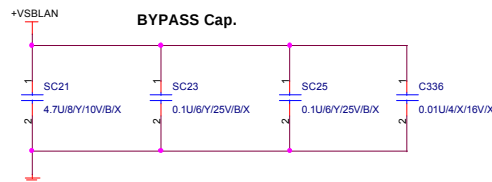
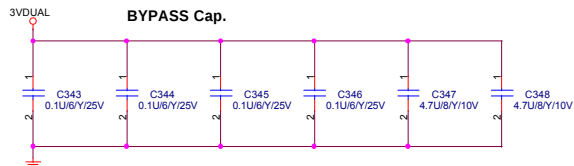
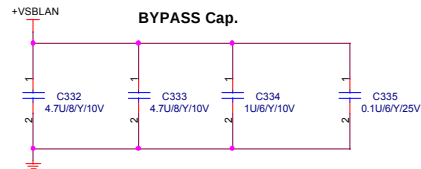
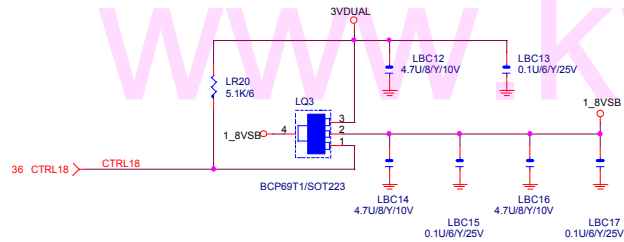


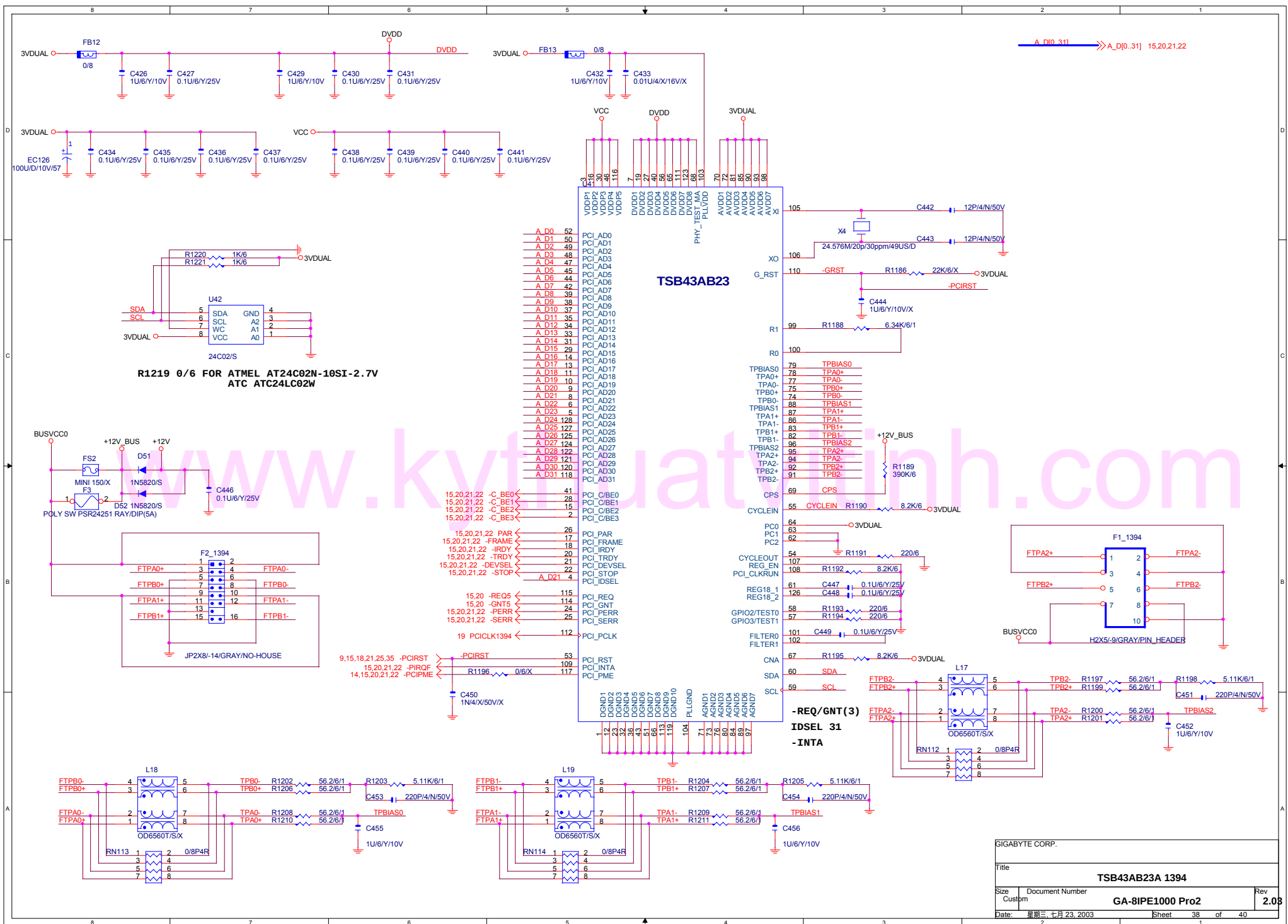


+1.2VSB **Max800mA Typ500mA**



+1.8VSB **Max500mA Typ250mA**





GIGABYTE GA-8IPE1000 Pro2 PCI ROUNTING LIST

PCI DEVICE	IDSEL	INT	CLOCK	REQ	GNT	
PCI SLOT1	16	C, F, G, A	PCLK0	-REQ0	-GNT0	
PCI SLOT2	17	F, G, A, C	PCLK1	-REQ1	-GNT1	
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	-REQ5 (REQB#)	-GNT5 (GNTB#)	

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GIGABYTE GA-8IPE1000 Pro2

GPIO LIST

SHEET

TITLE

GPIP	I/O	FUNCTION
GPI0/REQA-	I	PULL HIGH 8.2K to VCC3, SMB connector.
GPI1/REQ5-		PULL HIGH 8.2K to VCC, REQ5-.
GPI2/PIRQE-		PULL HIGH 8.2K to VCC3, PIRQE-.
GPI3/PIRQF-		PULL HIGH 8.2K to VCC3, PIRQF-.
GPI4/PIRQG-		PULL HIGH 8.2K to VCC, PIRQG-.
GPI5/PIRQH-	NA	PULL HIGH 8.2K to VCC
GPI6/AGPBUSY-	I	PULL 8.2K TO VCC3, PANEL GREEN_BUTTON
GPI7	I	DUAL BIOS FIRST BOOT SELECT.
GPI8	I	PULL 8.2K TO 3VDUAL, -CASPM.
GPI9/OC4-	NA	USB OC4-.
GPI10/OC5-	NA	USB OC5-.
GPI11/-SMBALRT	NA	PULL 8.2K TO 3VDUAL, -SMBALERT.
GPI12	I	PULL 8.2K TO VCC3,M/B REVERSION ID.
GPI13	I	LPC PME.
GPI14/OC6-	NA	USB OC6-.
GPI15/OC7-	NA	USB OC7-.
GP016/GNTA-	NA	GP016.
GP017/GNT5-		GNT5-.
GP018/STP_PCI-	NA	GP018.
GP019/SLP_S1-	0	DUAL BIOS.
GP020/SLP_CPU-	0	DUAL BIOS.
GP021/C3_SATA-	0	BLOCK TOP TABLE.
GP022/CPUPERF-	0	PULL 8.2K TO VCC3,PANEL S3 POWER LED.

SHEET

TITLE

GPIP	I/O	FUNCTION
GP023	NA	PULL 8.2K TO VCC3
GP024	0	INTEL LAN ENABLE/DISABLE.
GP025	0	FRONT PANEL -MPD.
GP027	0	FRONT PANEL +MPD.
GP028	0	GREEN LED
GP032	0	BIOS WRITE PROTECT.
GP033	0	SATA LED.
GP034	I	CLEAR PASSWORD.