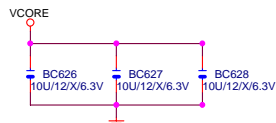
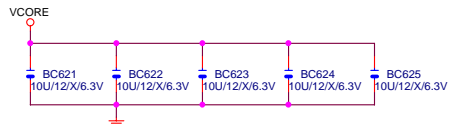
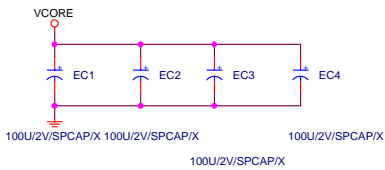
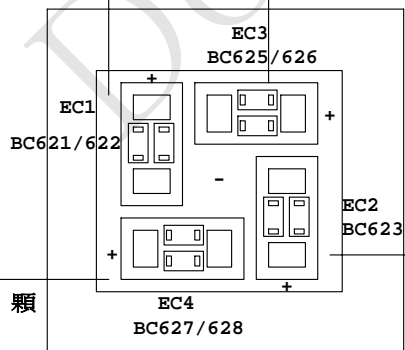


SP-CAP X 4PCS

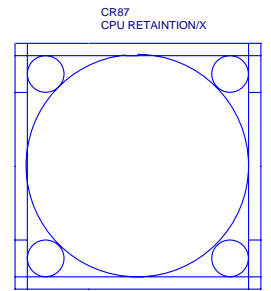


上100U/2V/SPCAP 上10U/12X/6.3V X2 顆



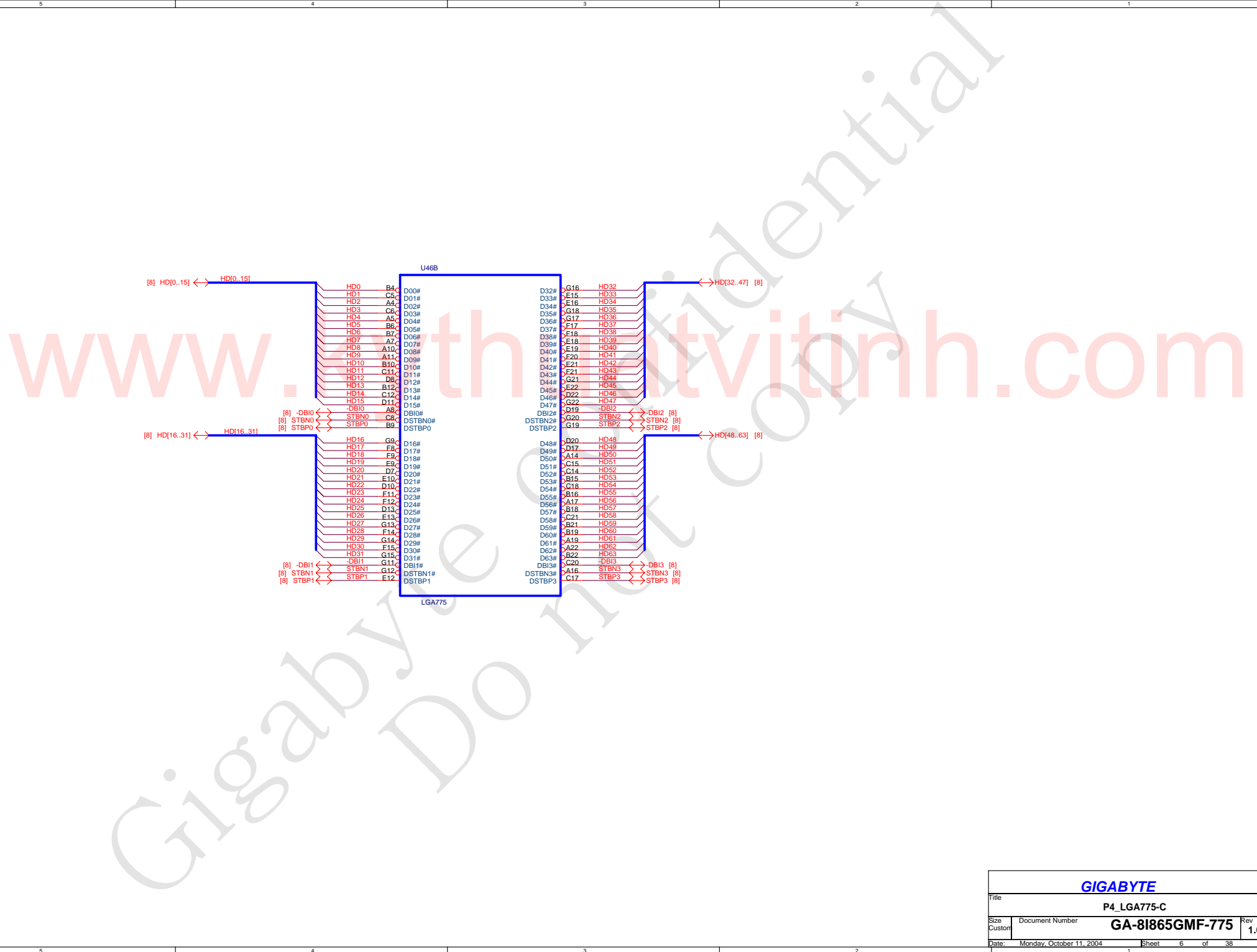
上10U/12X/6.3V X2 顆

上100U/2V/SPCAP

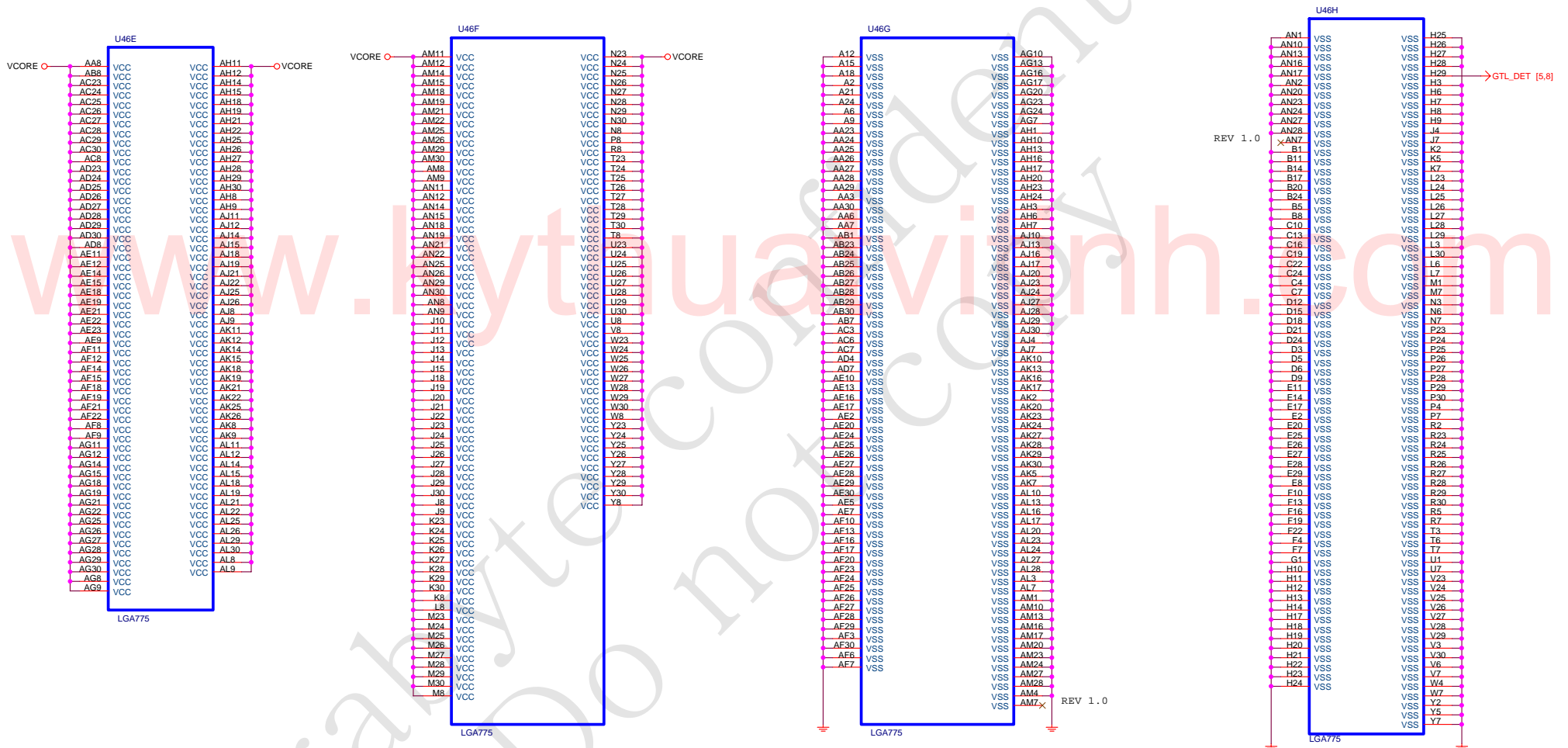


<b>GIGABYTE</b>			
Title <b>P4_LGA775-A</b>			
Size Custom	Document Number	<b>GA-8I865GMF-775</b>	Rev <b>1.0</b>
Date:	Monday, October 11, 2004	Sheet	4 of 38





<b>GIGABYTE</b>			
Title <b>P4_LGA775-C</b>			
Size	Document Number	<b>GA-8I865GMF-775</b>	Rev
Custom			<b>1.0</b>
Date:	Monday, October 11, 2004	Sheet	6 of 38

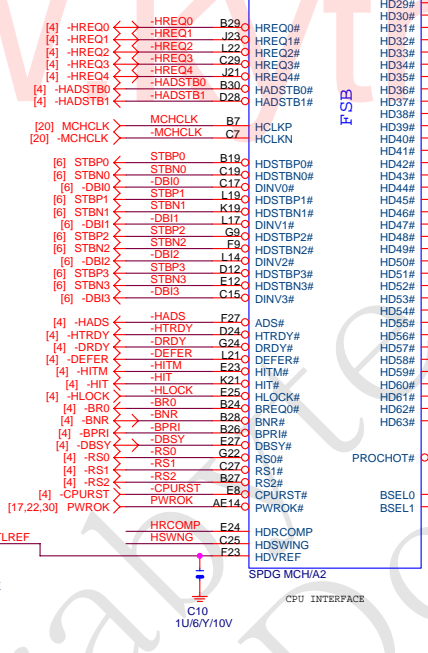
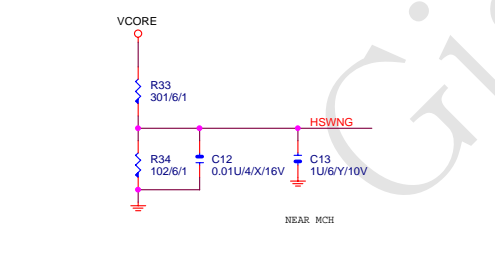
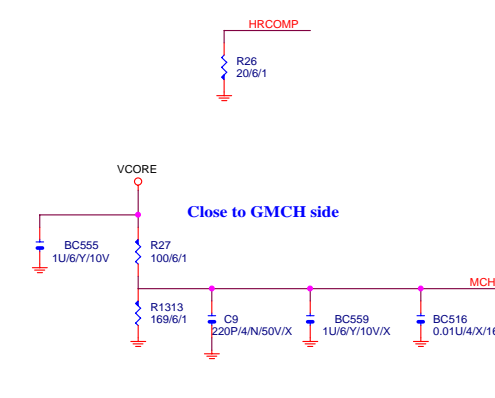
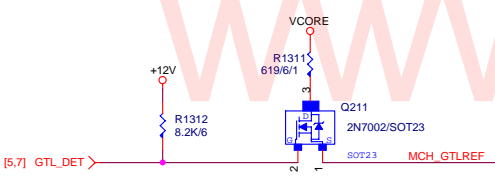
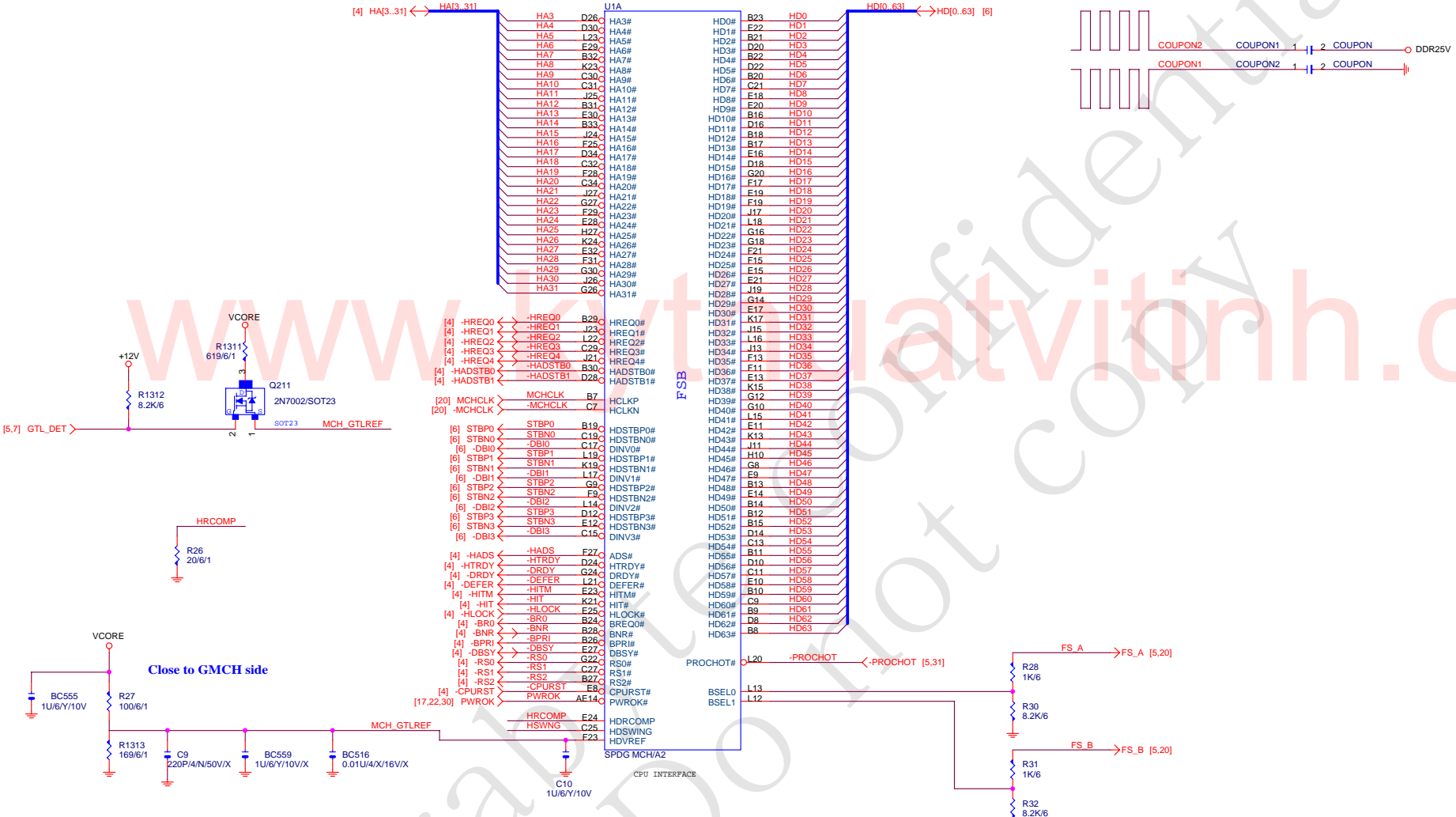


REV 1.0

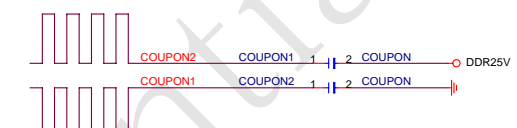
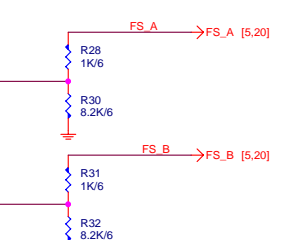
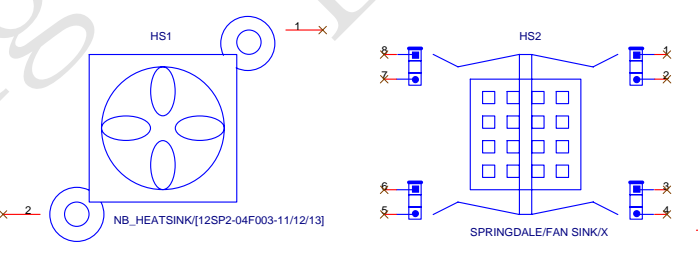
REV 1.0

→GTL\_DET [5,8]

<b>GIGABYTE</b>			
Title <b>P4_LGA775-D</b>			
Size	Document Number	Rev	
Custom	<b>GA-8I865GMF-775</b>	<b>1.0</b>	
Date:	Monday, October 11, 2004	Sheet	7 of 38

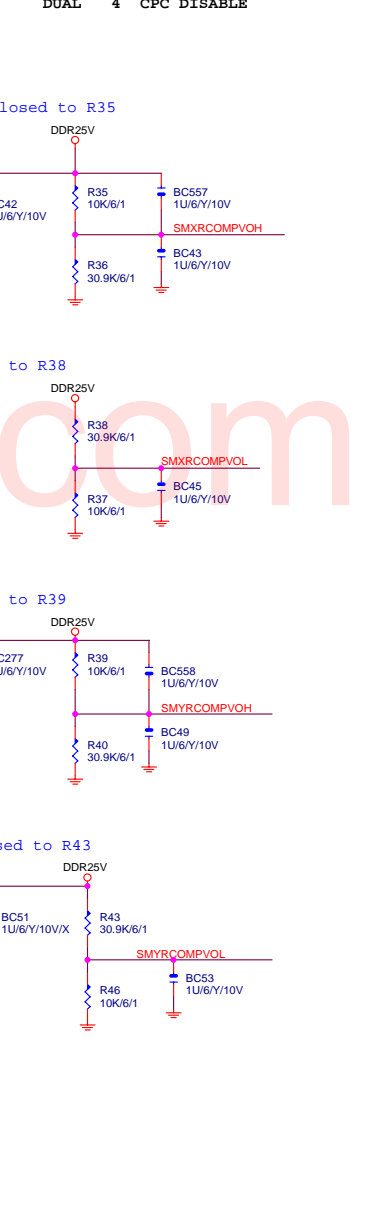
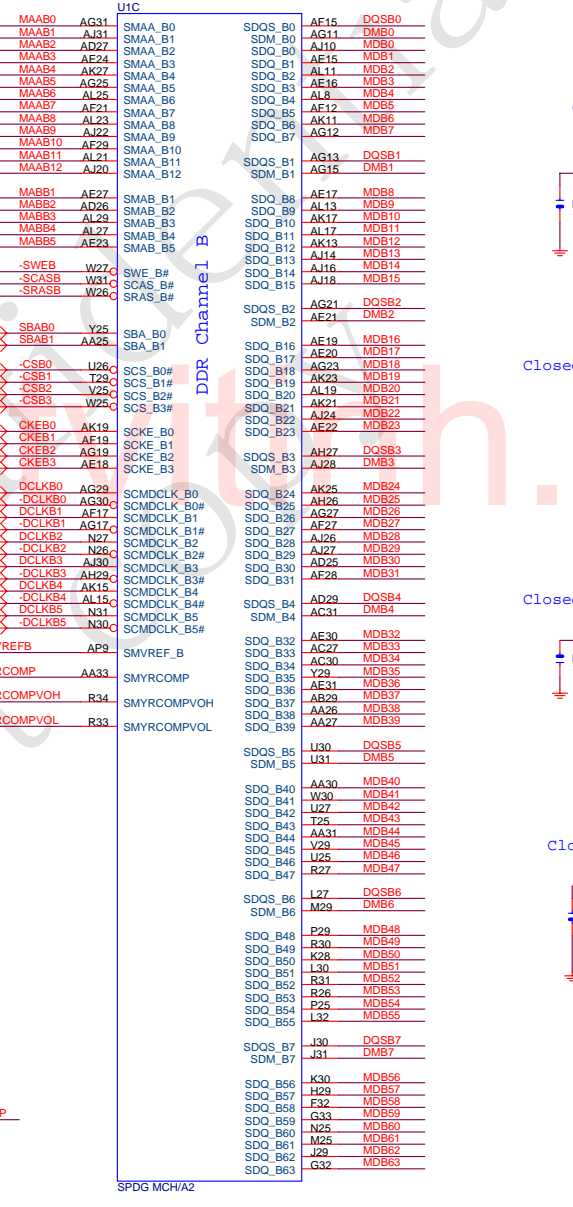
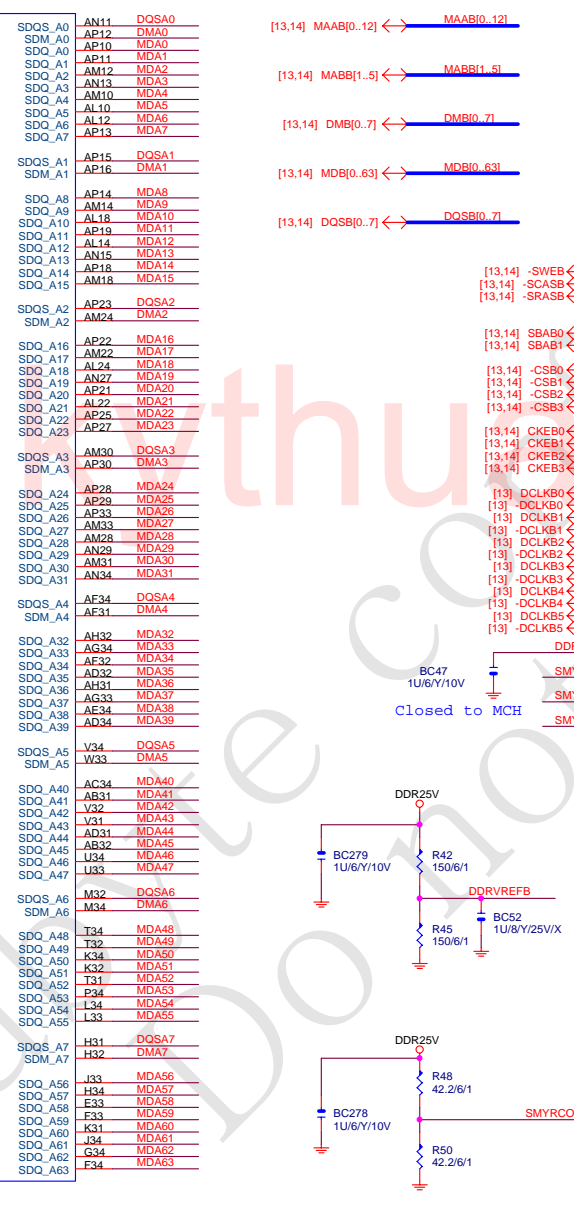
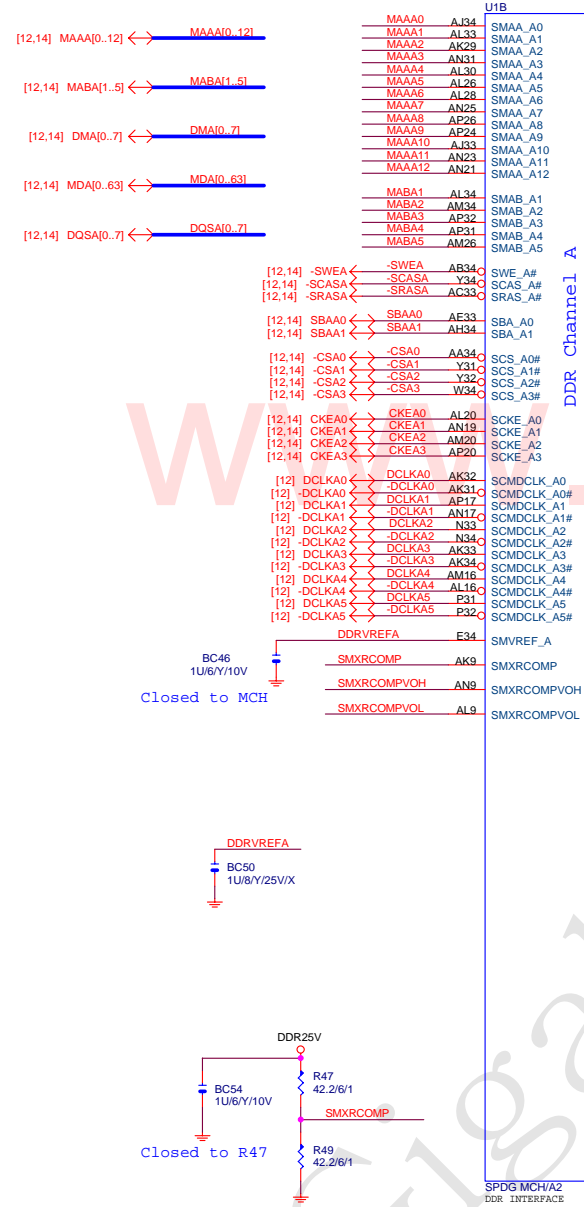


**N. B HEATSINK**



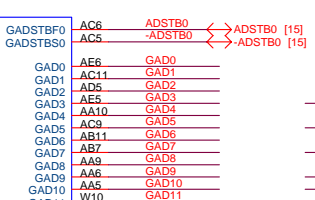
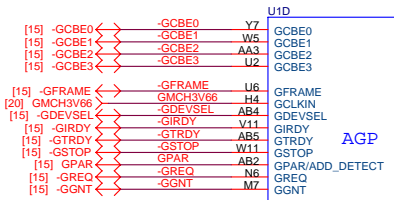
Title			SPRINGDALE HOST		
Size	Document Number	Rev			
Custom	GA-81865GMF-775	1.0			
Date:	Sheet	8	of	38	

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

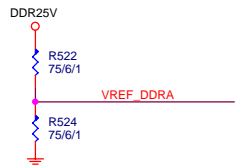
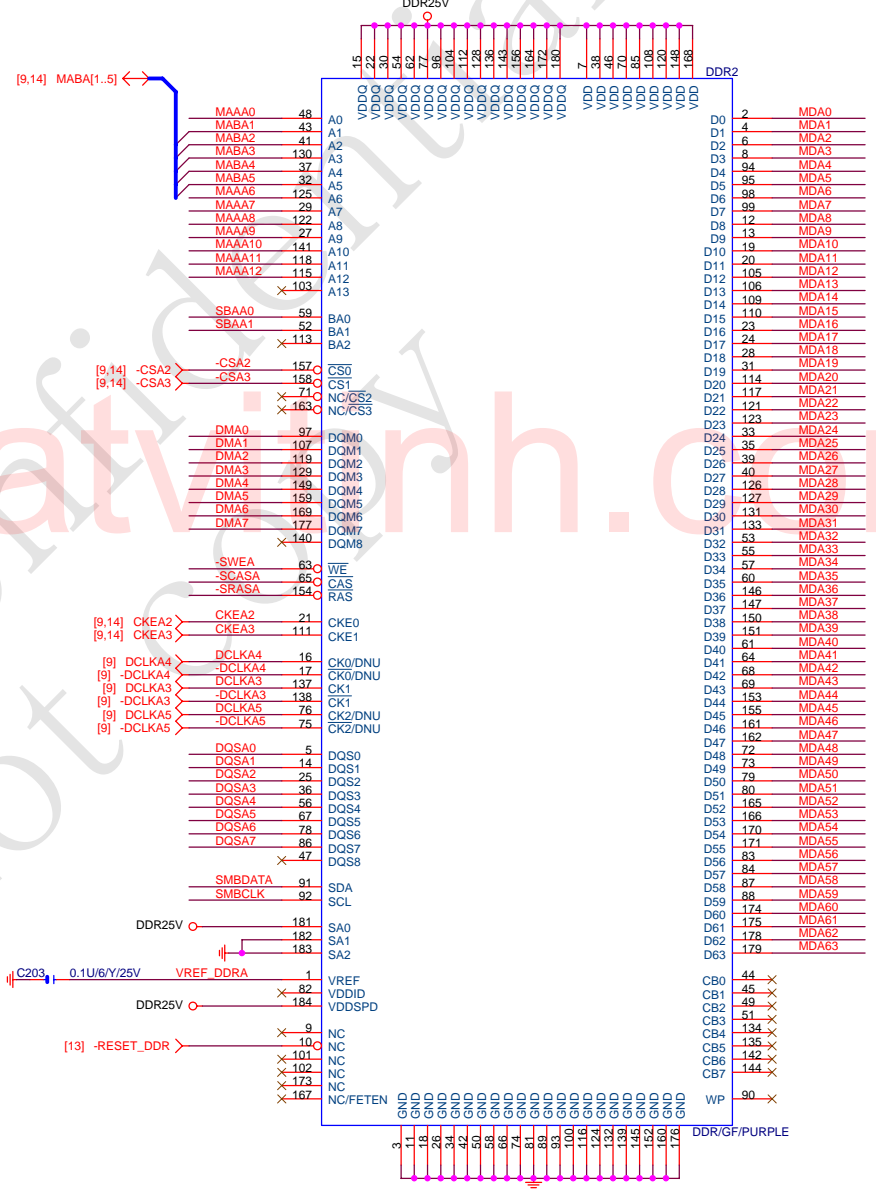
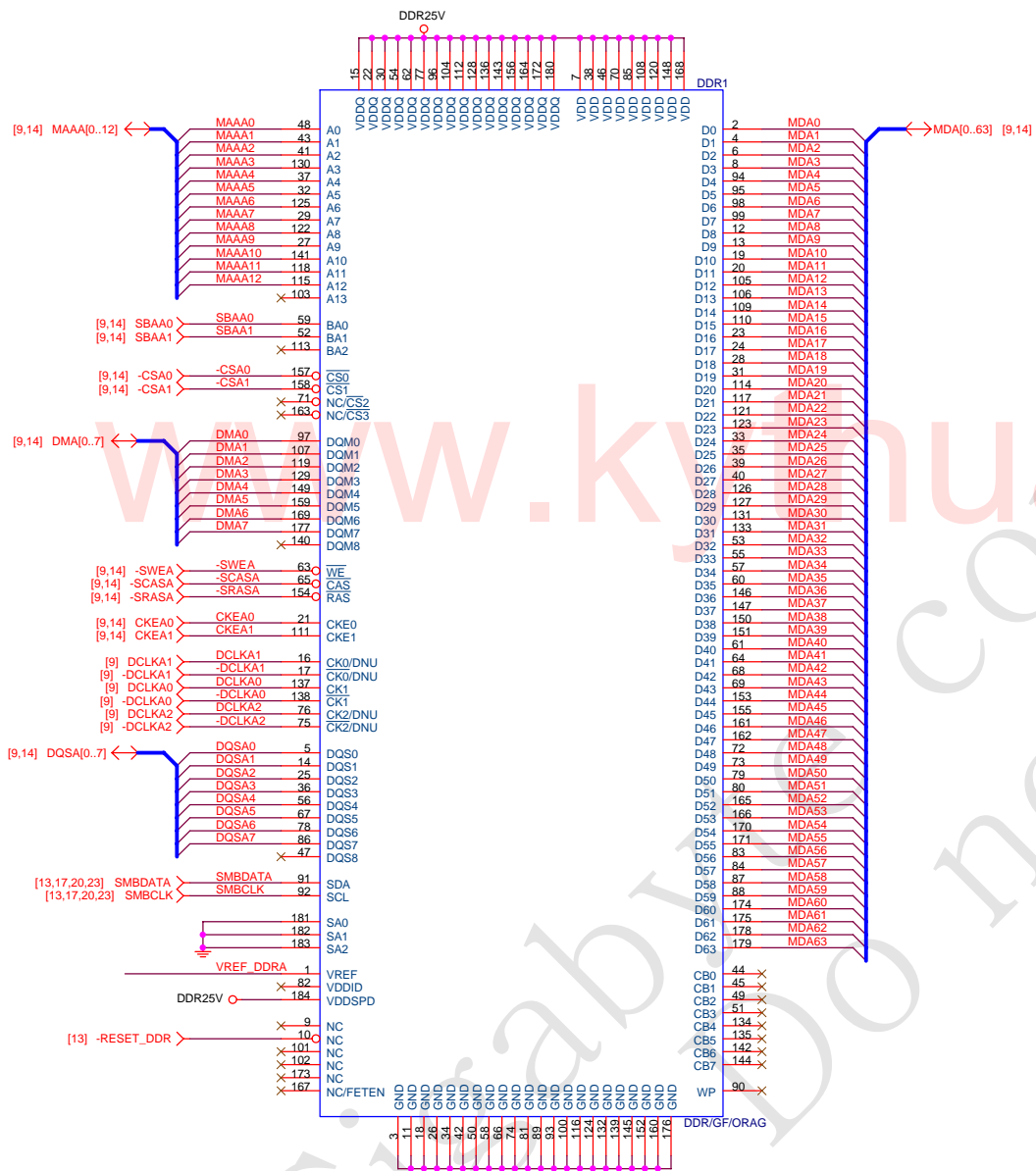


Title			SPRINGDALE DDR		
Size	Document Number		Rev		
Custom	GA-81865GMF-775		1.0		
Date:		Sheet	9	of	38

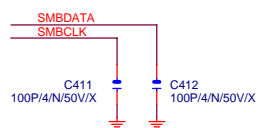
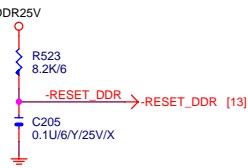
- [15] GAD[0..31] <-> GAD[0..31]
- [15] SBA[0..7] <-> SBA[0..7]
- [16] HL[0..10] <-> HL[0..10]



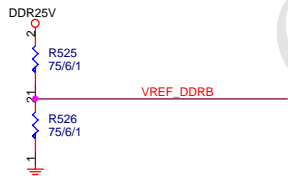
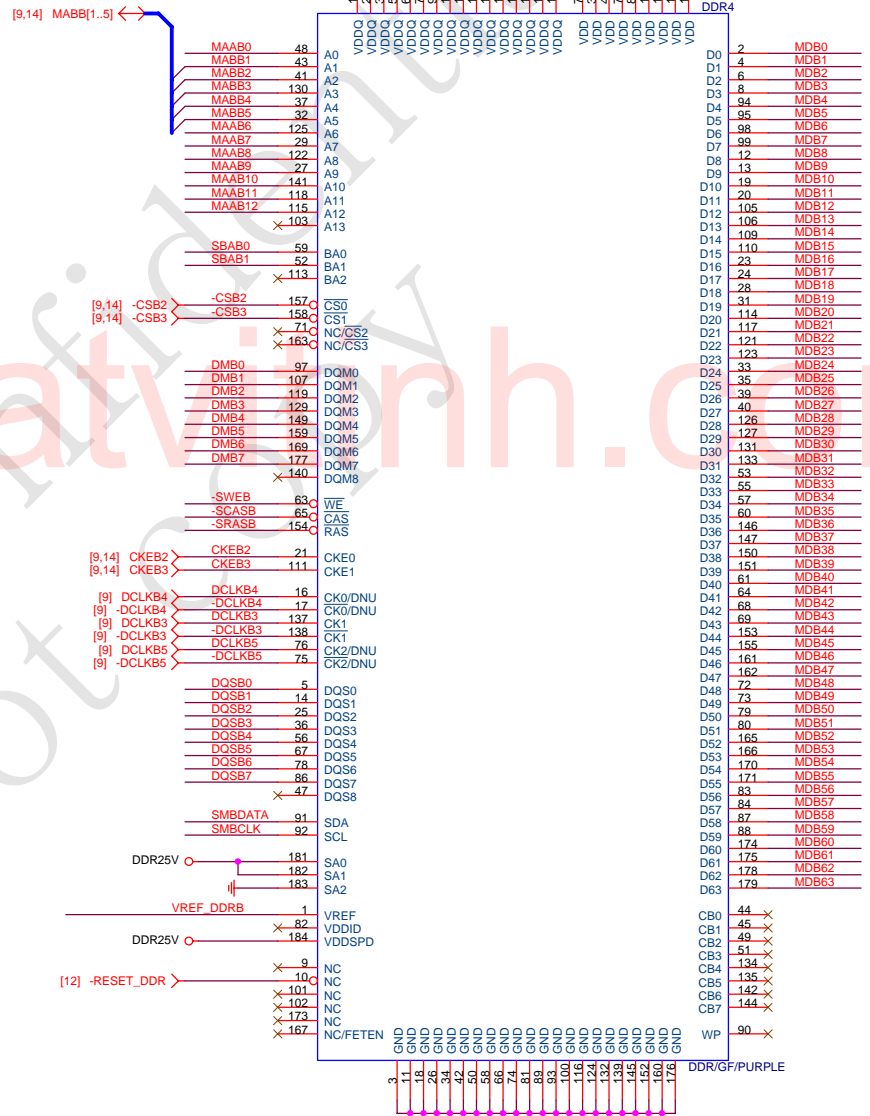
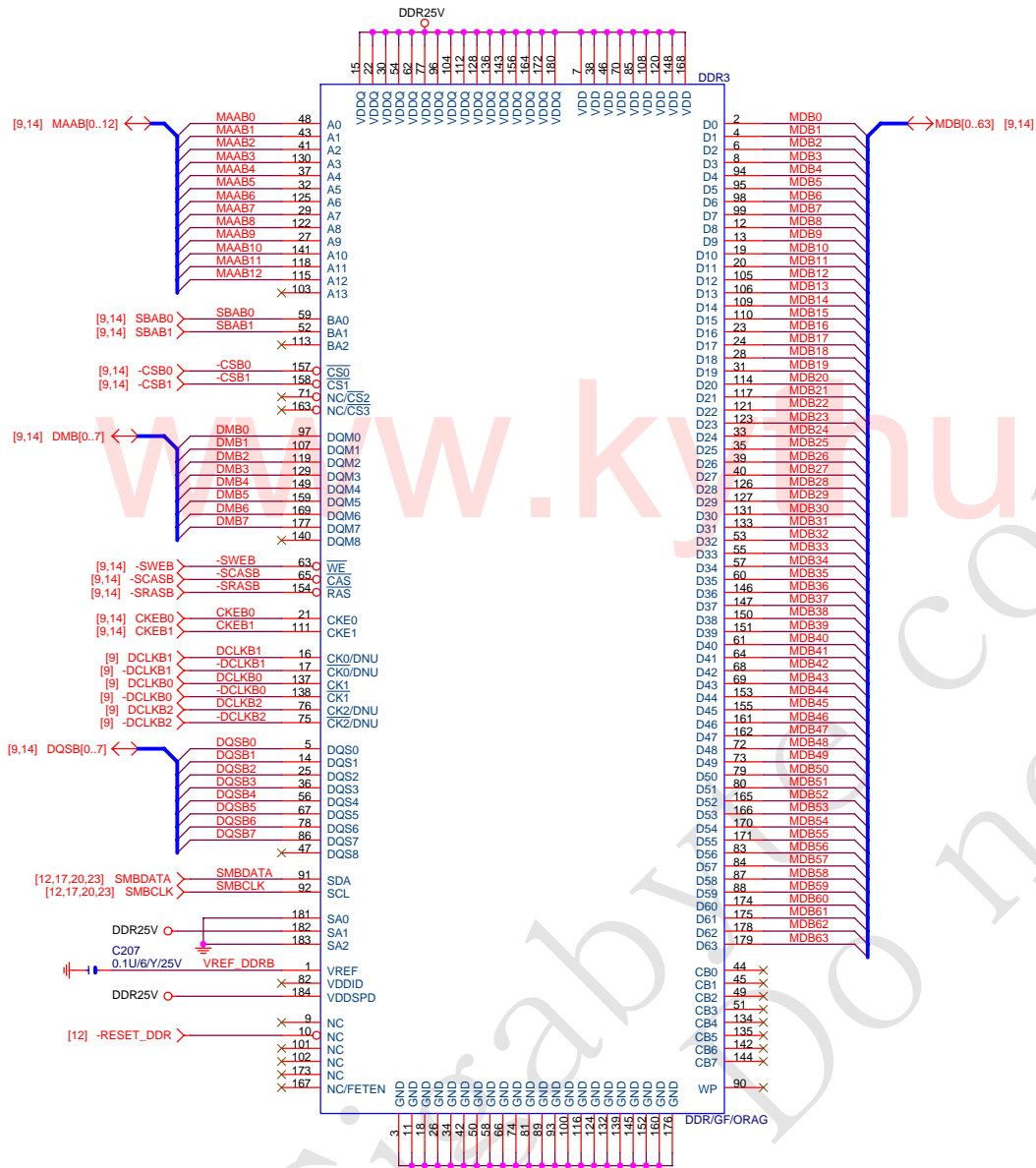




For Register DDR Support



GIGABYTE		
Title <b>DDR1,2 CHANNEL A</b>		
Size B	Document Number <b>GA-81865GMF-775</b>	Rev <b>1.0</b>
Date:	Sheet 12 of 38	

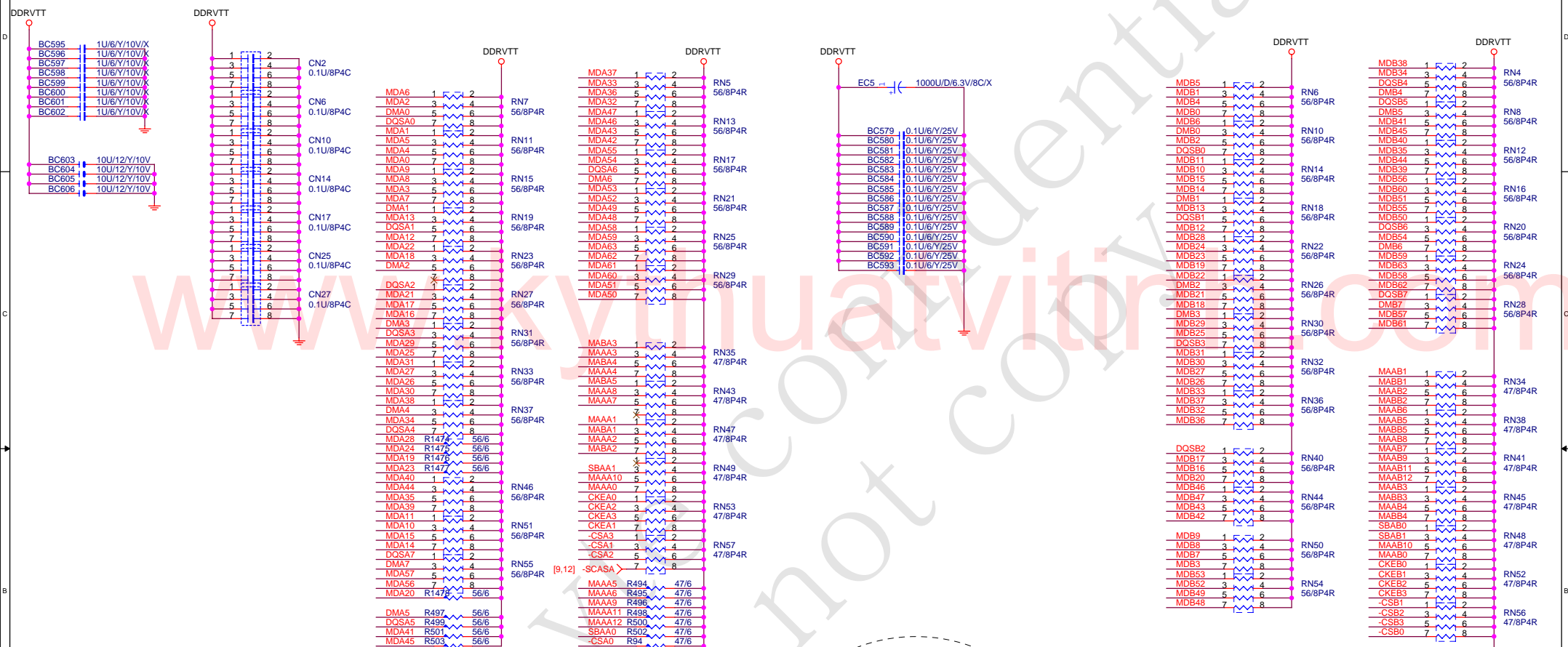


**DDRVTT Decouple**

**DDR TERMINATION CHANNEL A**

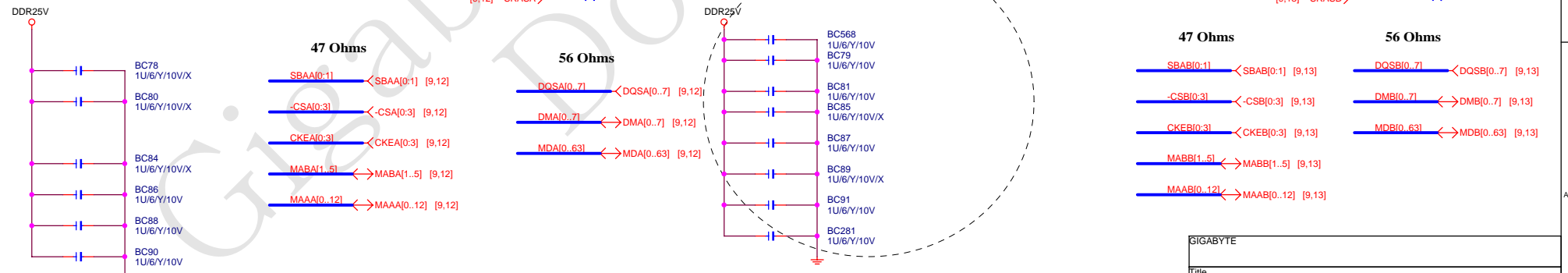
**DDRVTT Decouple**

**CHANNEL B**



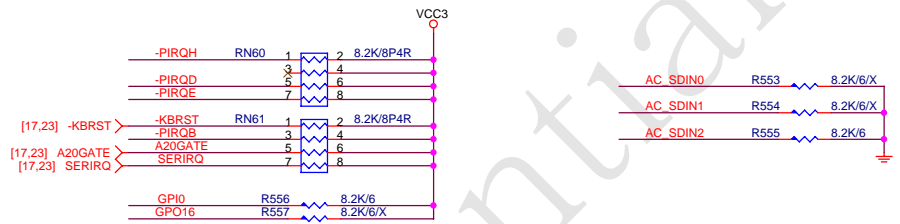
**DDR25V Decouple**

**DDR25V Decouple**

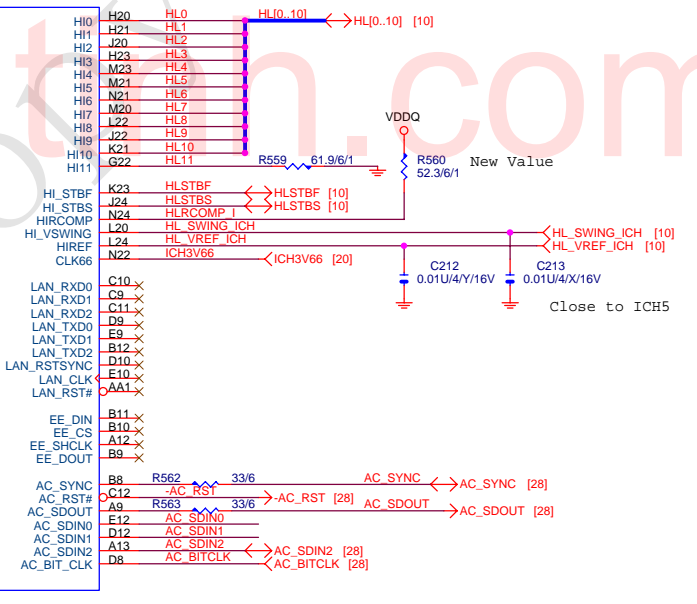
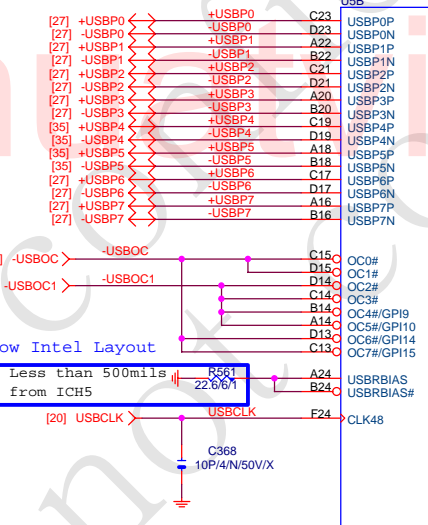
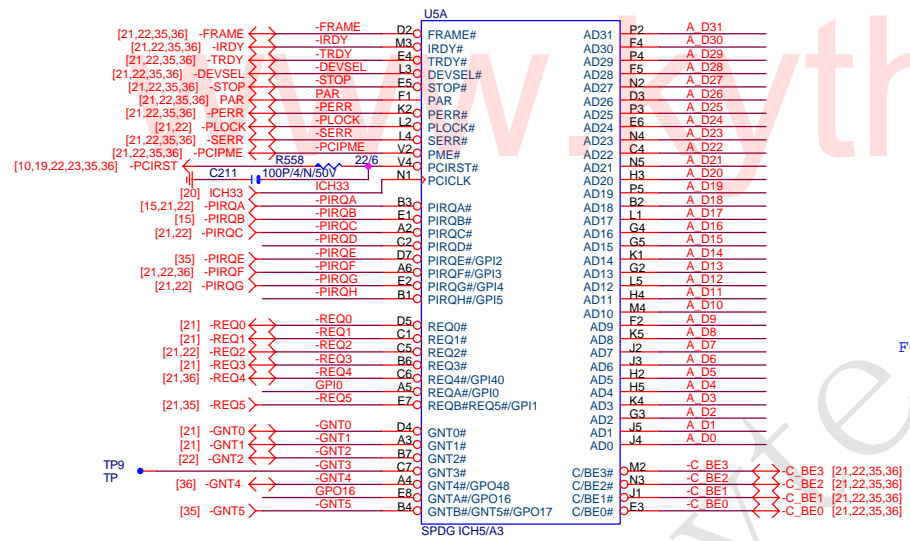


GIGABYTE			
Title <b>DDR TERMINATION</b>			
Size B	Document Number <b>GA-81865GMF-775</b>	Rev <b>1.0</b>	
Date:	Sheet 14 of 38		





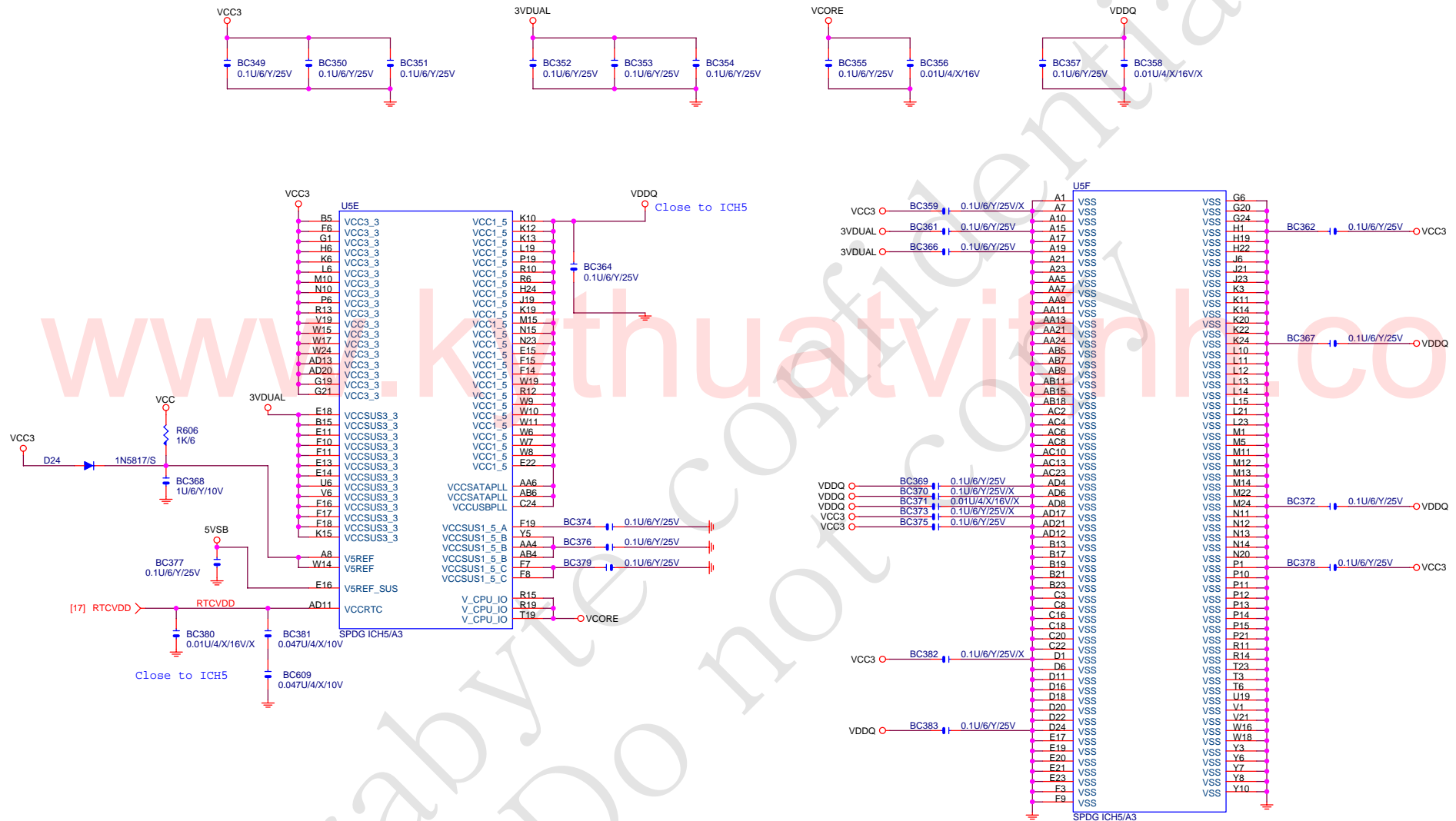
A\_D[0..31] ↔ A\_D[0..31] [21,22,35,36]



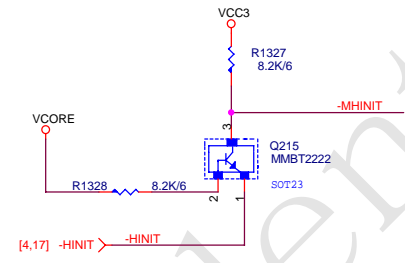
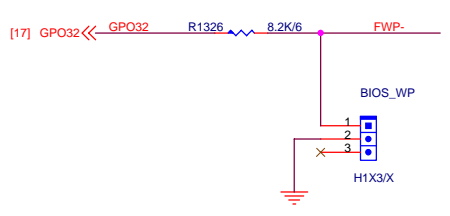
Follow Intel Layout

Less than 500mils from ICH5

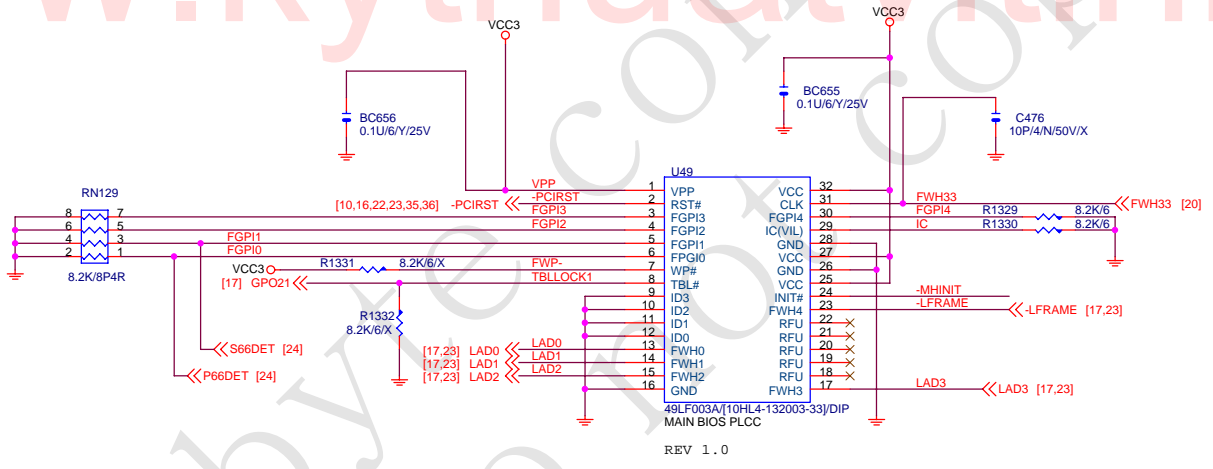




GIGABYTE		
Title		
<b>ICH5 VCC, GND</b>		
Size	Document Number	Rev
B	<b>GA-81865GMF-775</b>	<b>1.0</b>
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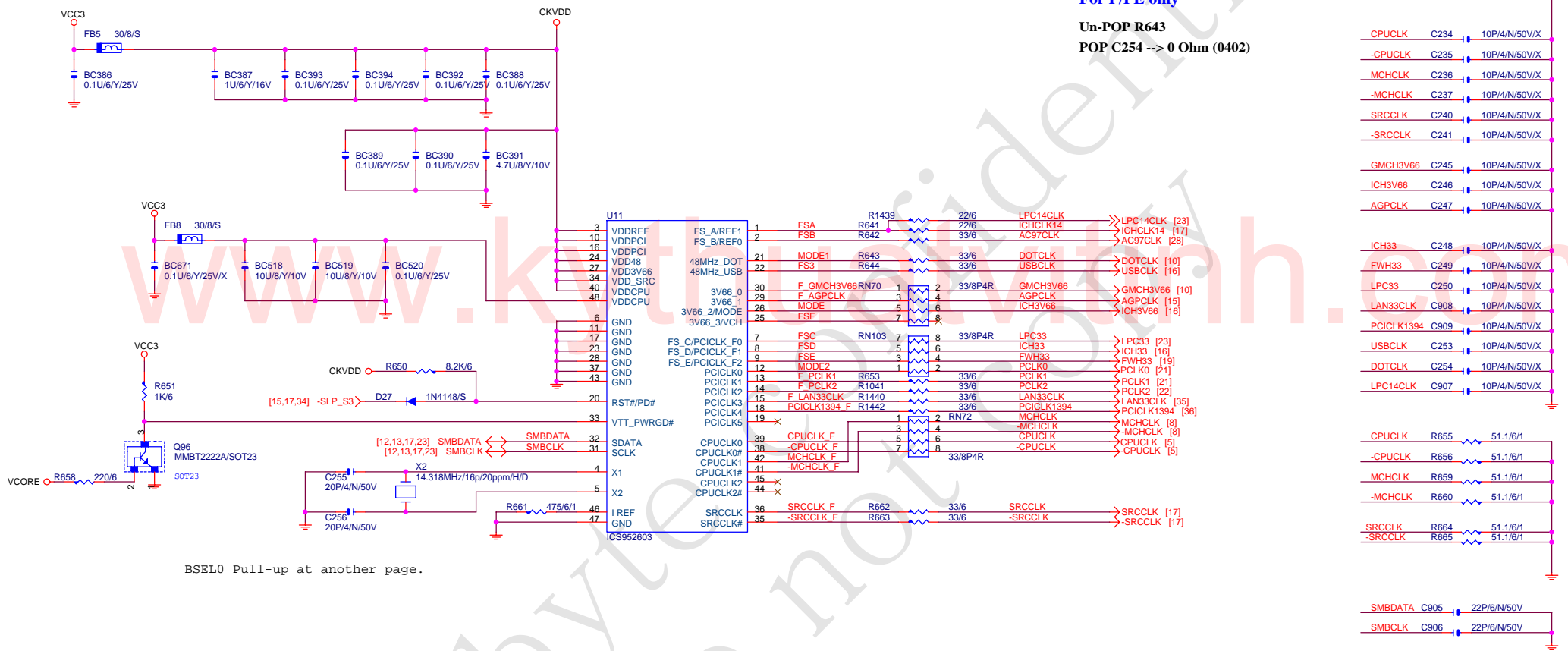
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ADD WINBOUD FWH SEC. SOURCE



GIGABYTE			
Title			
<b>FWH</b>			
Size B	Document Number	Rev	
	<b>GA-81865GMF-775</b>	<b>1.0</b>	
Date:	Monday, October 11, 2004	Sheet	19 of 38



**For P/PE only**  
**Un-POP R643**  
**POP C254 --> 0 Ohm (0402)**

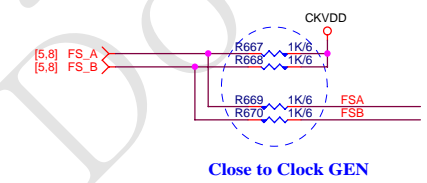
BSEL0 Pull-up at another page.

**CYPRESS CY28405**

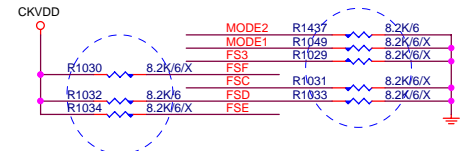
FS_E	FS_D	FS_C	FS_B	FS_A	Clock
1	1	0	0	0	100.9MHz
1	1	0	0	1	133.9MHz
1	1	0	1	1	166.9MHz
1	1	0	1	0	200.9MHz

**ICS952603**

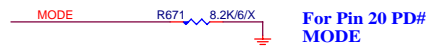
FS_E	FS_3	FS_C	FS_B	FS_A	Clock
1	0	0	0	0	100MHz
1	0	0	0	1	133MHz
1	0	0	1	1	166MHz
1	0	0	1	0	200MHz



Close to Clock GEN

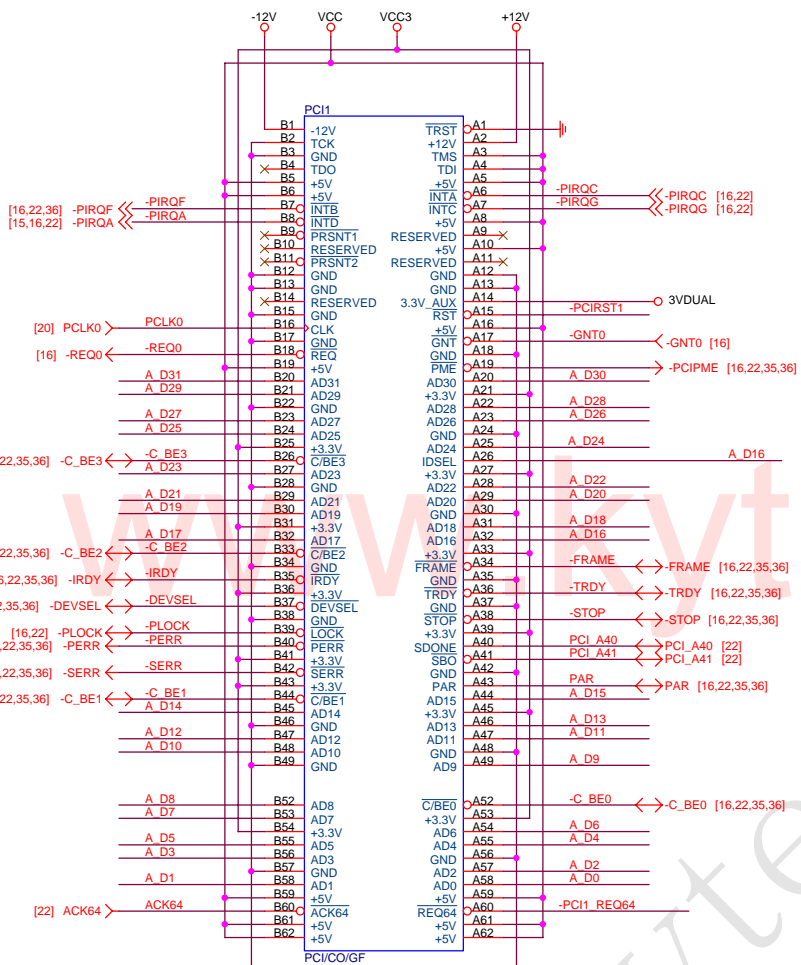


Close to Clock GEN

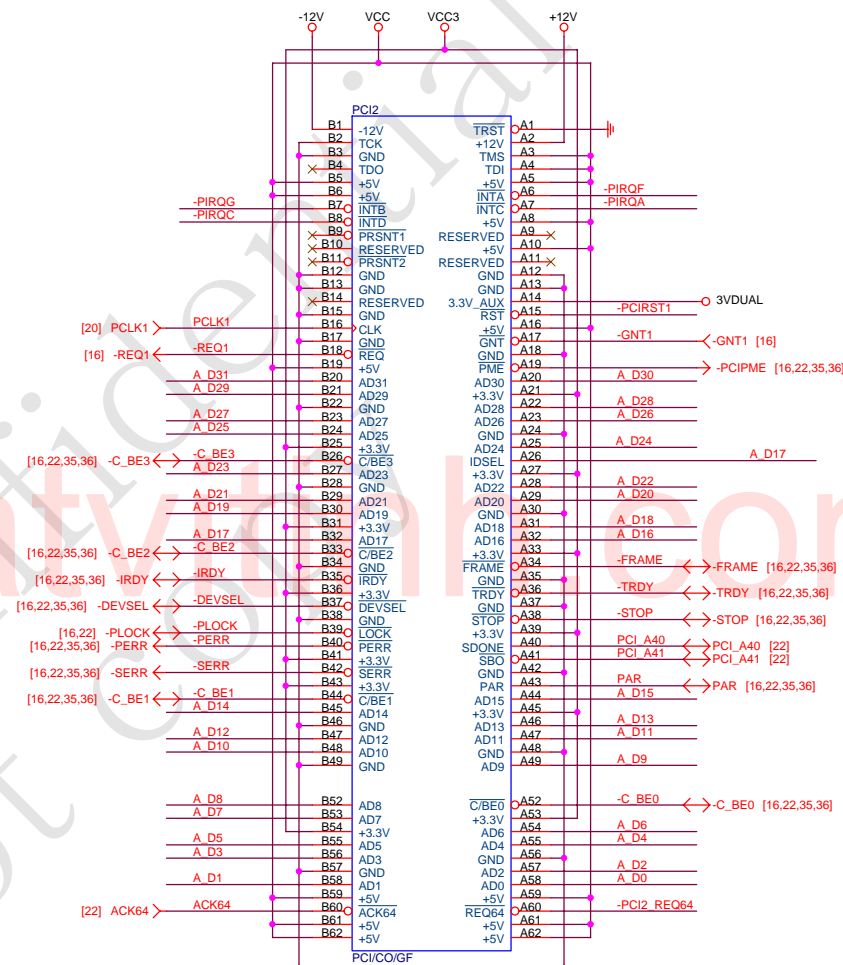


For Pin 20 PD#  
MODE

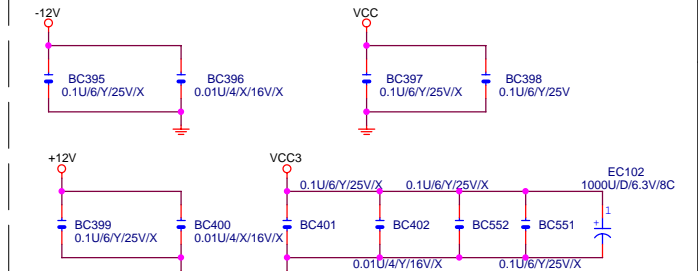
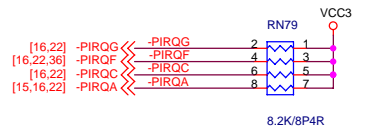
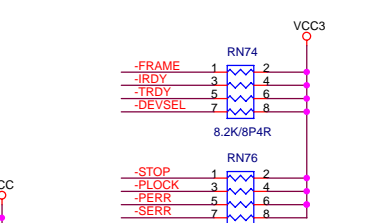
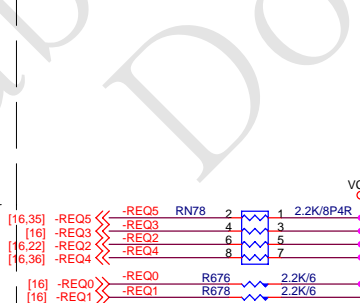
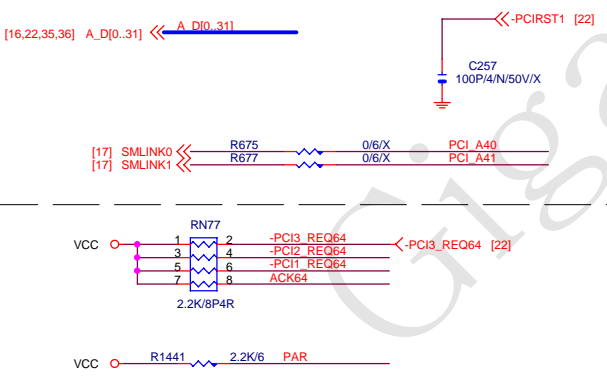
GIGABYTE		
Title <b>CLOCK GENERATOR</b>		
Size Custom	Document Number <b>GA-81865GMF-775</b>	Rev <b>1.0</b>
Date: Monday, October 11, 2004	Sheet 20	of 38



AD\_16/-REQ0,-GNT0/-PIRQC,F,G,A

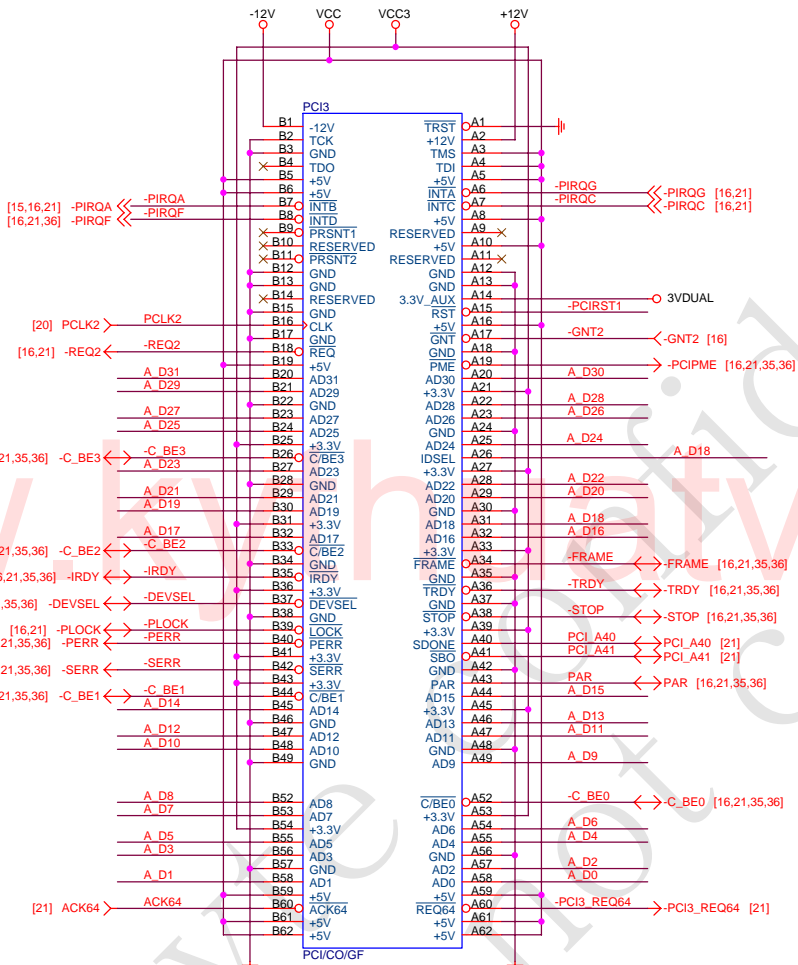


AD\_17/-REQ1,-GNT1/-PIRQF,G,A,C

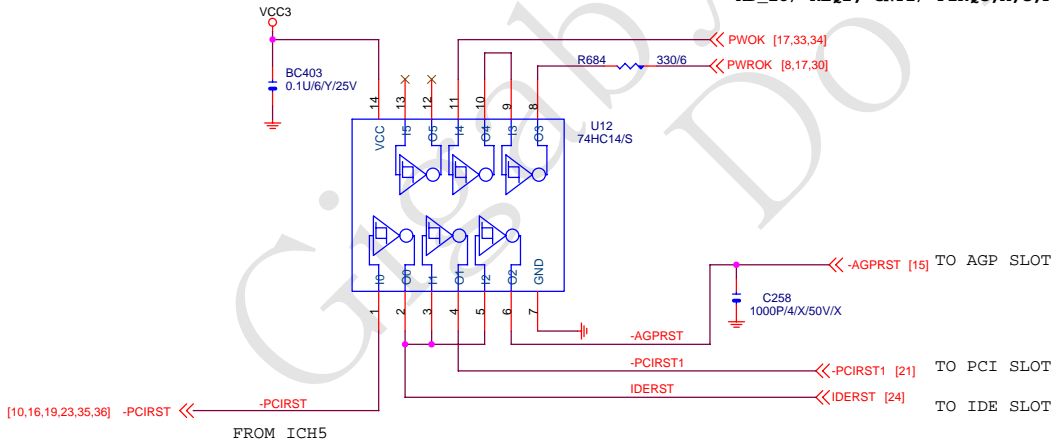


GIGABYTE	
Title	PCI SLOT 1/2
Size B	Document Number
<b>GA-81865GMF-775</b>	
Date: Monday, October 11, 2004	Rev 1.0
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[16,21,35,36] A\_D[0..31] << A\_D[0..31]

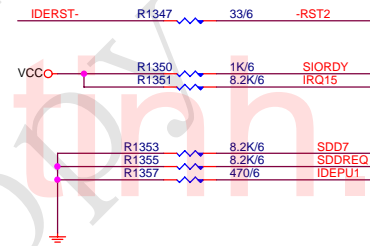
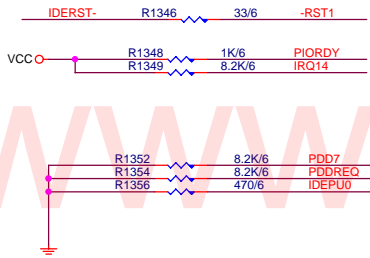
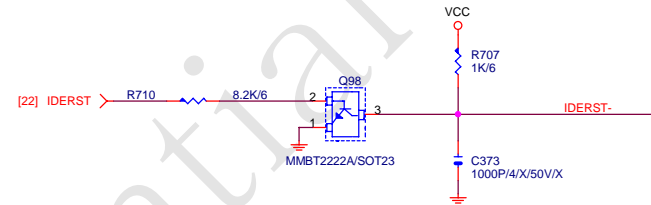
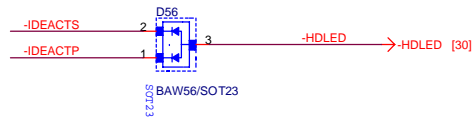


AD\_18/-REQ2, -GNT2/-PIRQG, A, C, F

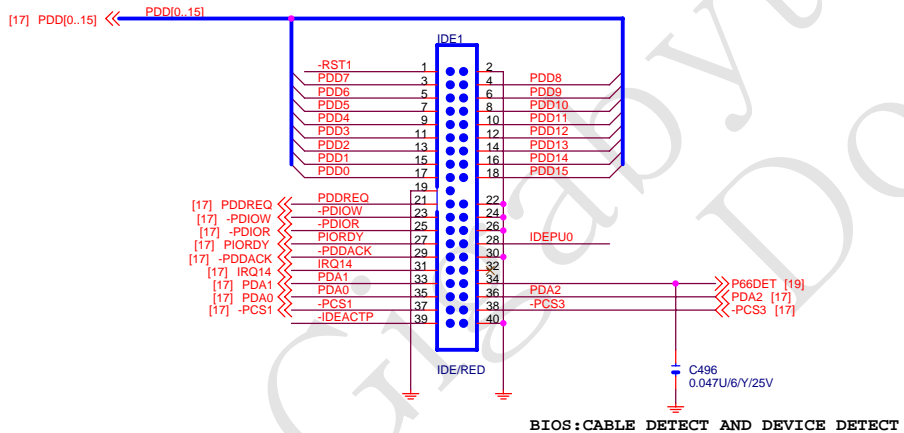


GIGABYTE		
Title <b>PCI SLOT 3</b>		
Size B	Document Number <b>GA-81865GMF-775</b>	Rev <b>1.0</b>
Date: Monday, October 11, 2004	Sheet 22	of 38



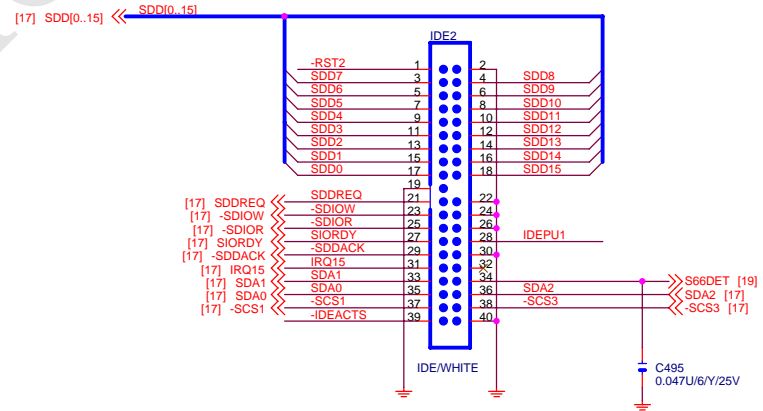


PRIMARY IDE CONNECTOR



BIOS:CABLE DETECT AND DEVICE DETECT

SECONDARY IDE CONNECTOR

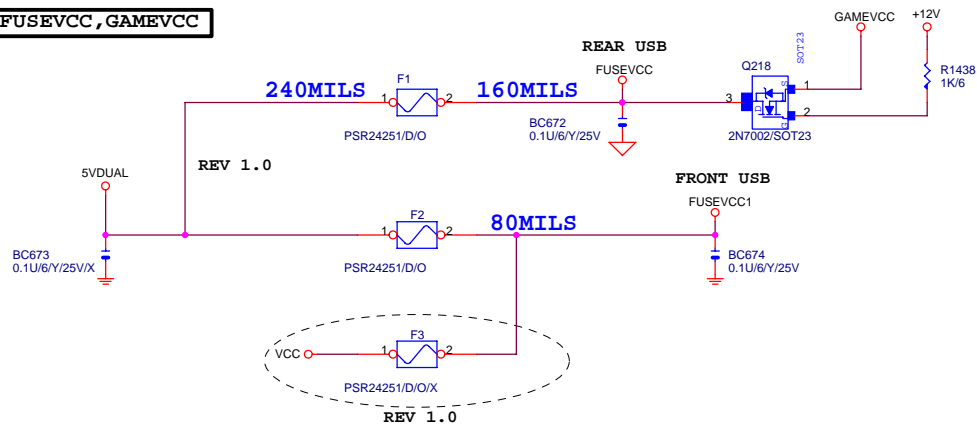


GIGABYTE

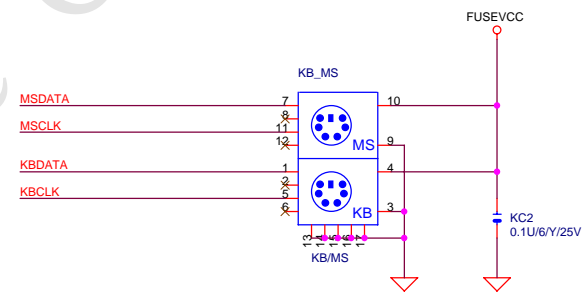
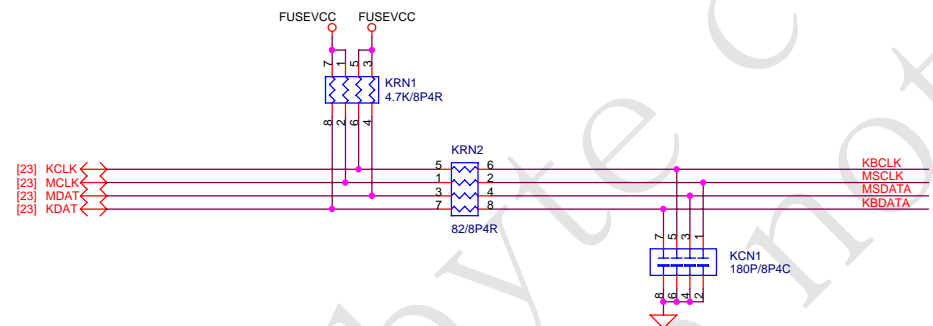
Title			IDE CONNECTOR		
Size	Document Number		Rev		
B	GA-81865GMF-775		1.0		
Date:	Monday, October 11, 2004	Sheet	24	of	38



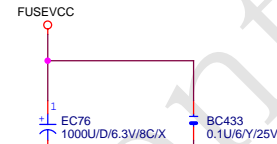
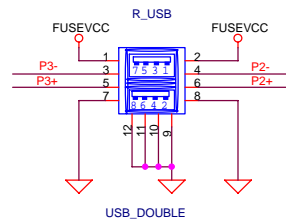
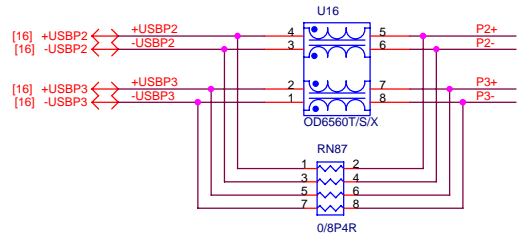
**FUSEVCC, GAMEVCC**



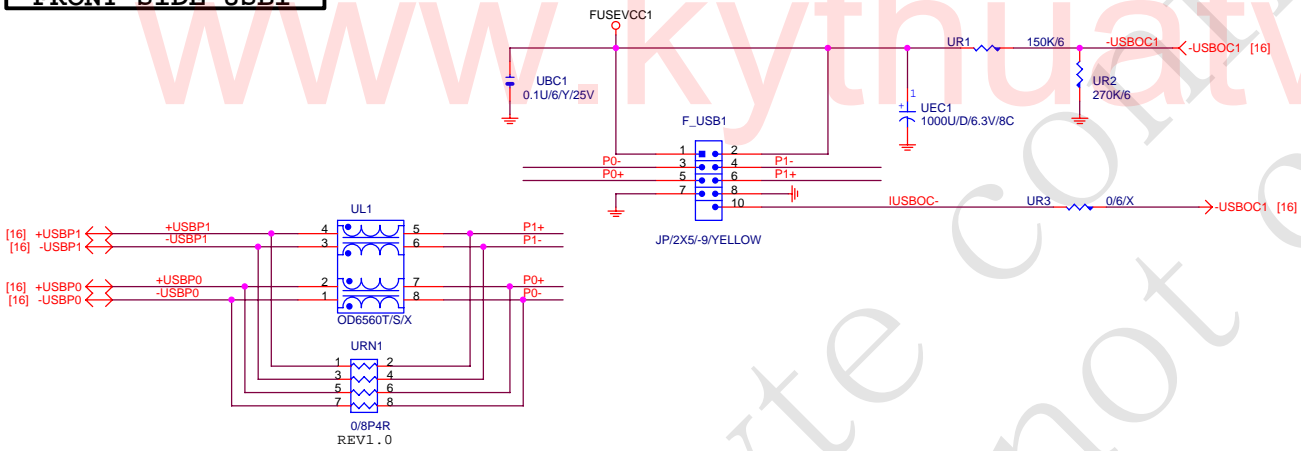
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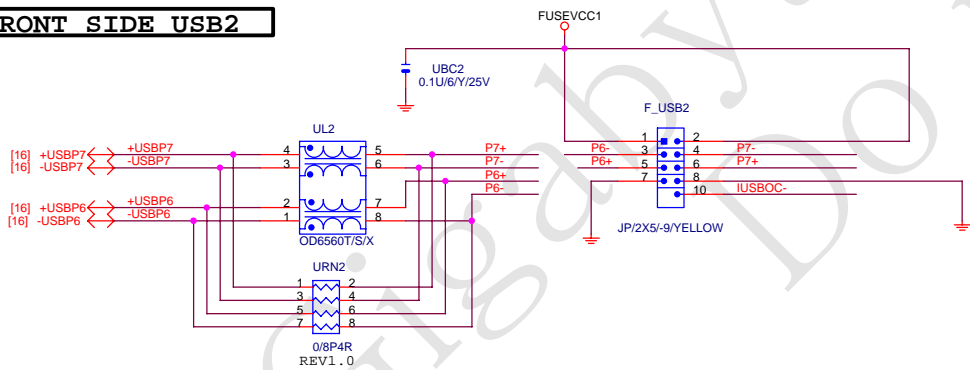
# REAR USB



## FRONT SIDE USB1



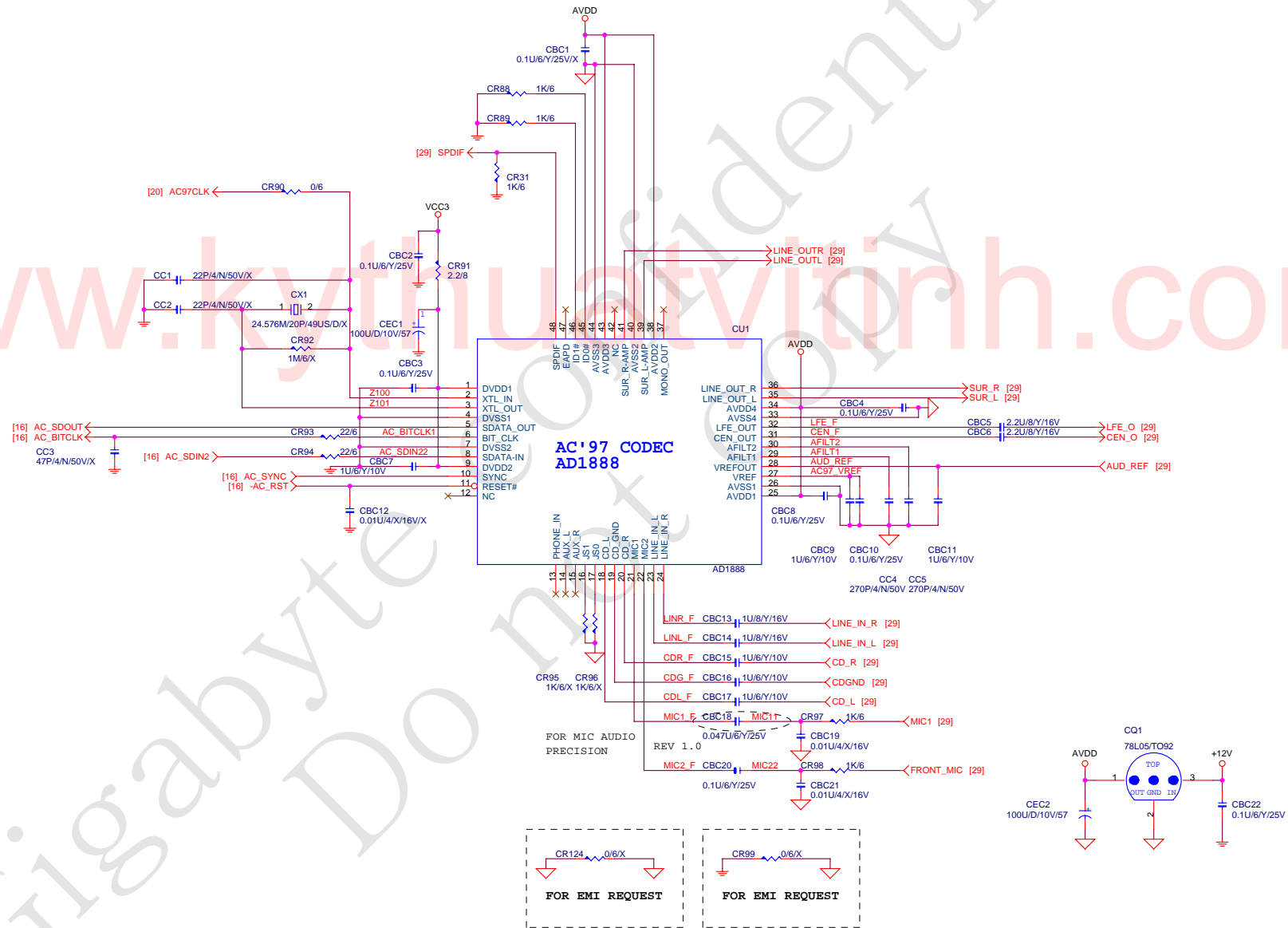
## FRONT SIDE USB2



GIGABYTE		
Title		
<b>ICH USB PORT</b>		
Size B	Document Number	Rev 1.0
<b>GA-81865GMF-775</b>		
Date:	Sheet 27	of 38

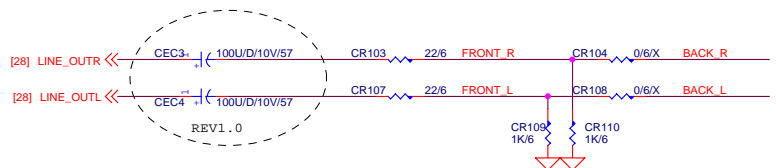
Gigabyte Do not Distribute

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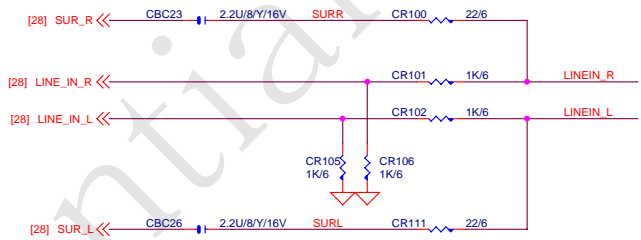


<b>GIGABYTE</b>		
Title <b>AC97-ADI1888</b>		
Size	Document Number	Rev
Custom	<b>GA-81865GMF-775</b>	<b>1.0</b>
Date:	Monday, October 11, 2004	Sheet 28 of 38

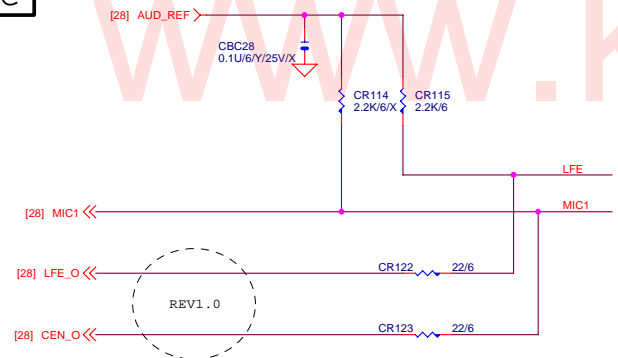
**LINE OUT**



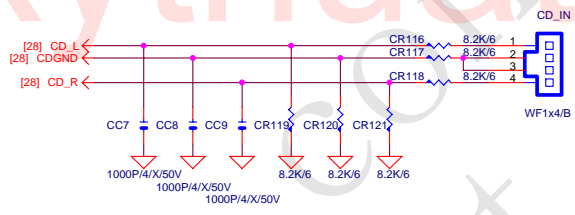
**LINE-IN**



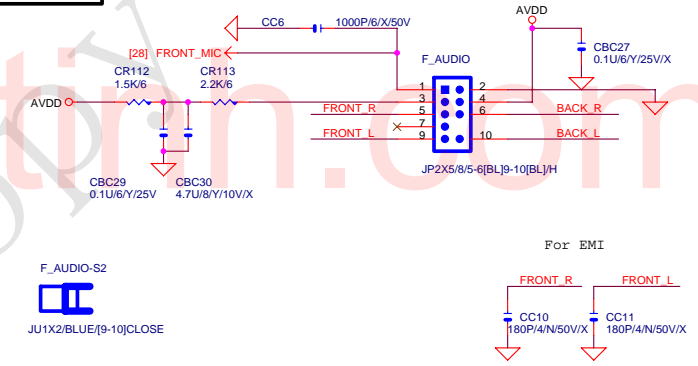
**MIC**



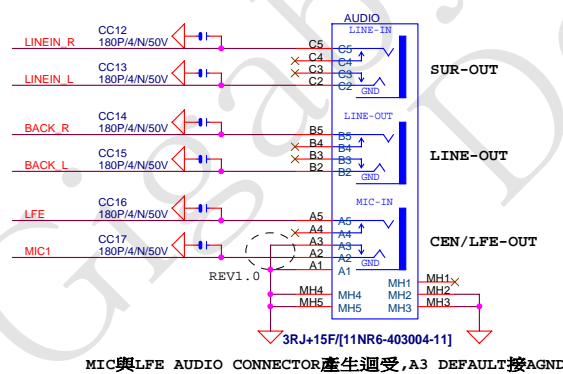
**CD IN**



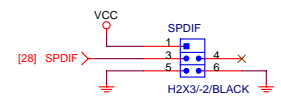
**INTEL FRONT AUDIO**



**AC97 JACK**

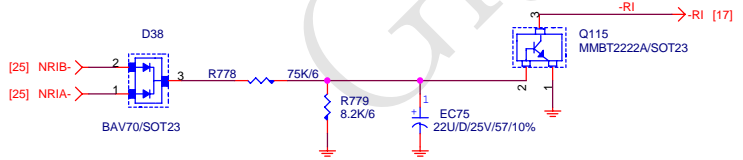
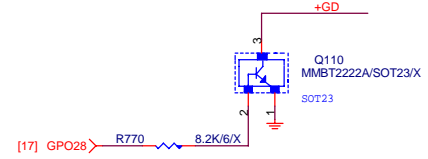
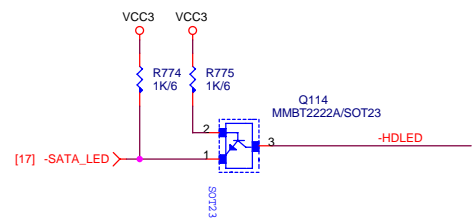
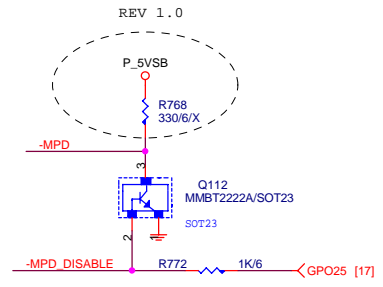
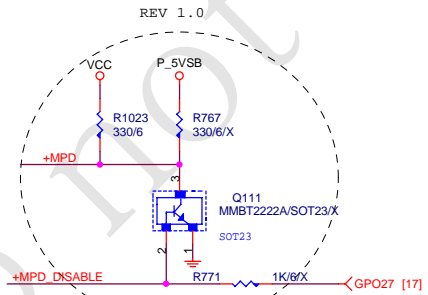
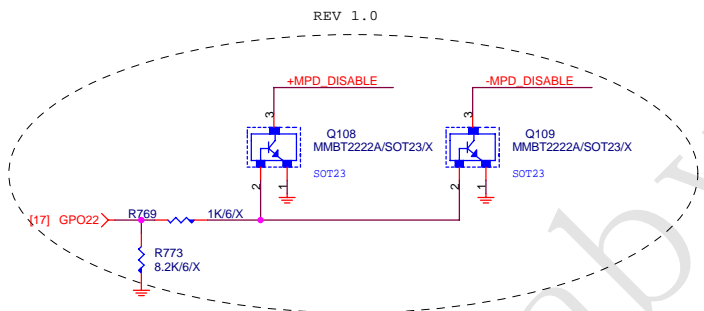
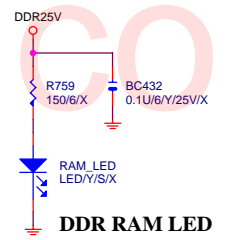
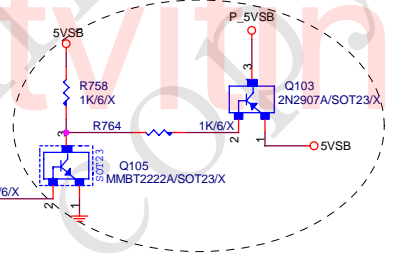
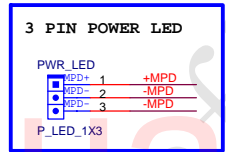
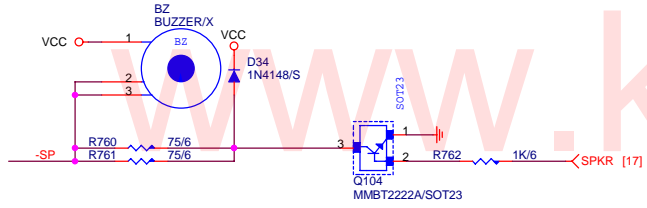
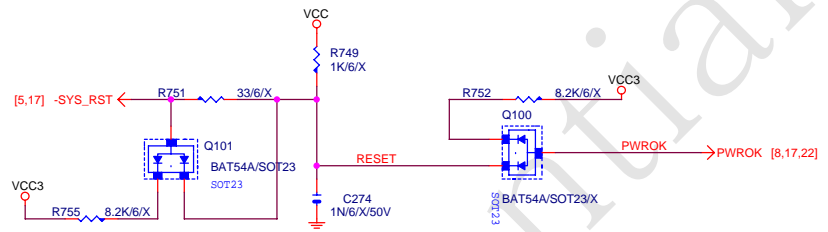
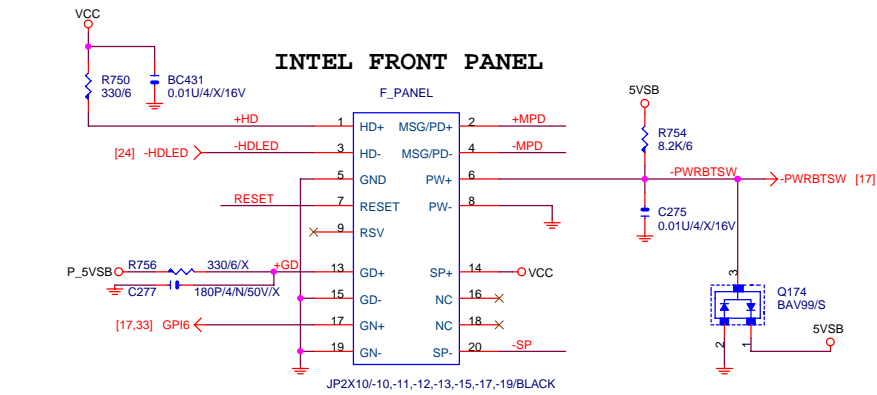


**SPDIF**



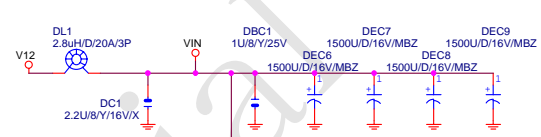
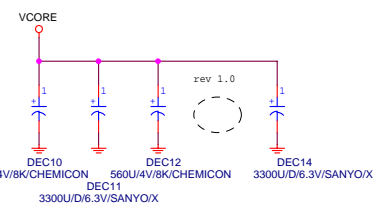
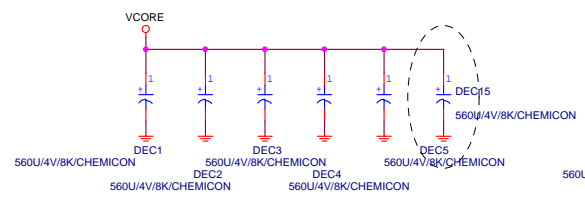
MIC與LFE AUDIO CONNECTOR 產生迴受, A3 DEFAULT接AGND

<b>GIGABYTE</b>		
<b>AUDIO OUTPUT, GAME PORT</b>		
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GIGABYTE			
Title			
PANEL & STR LED & RI			
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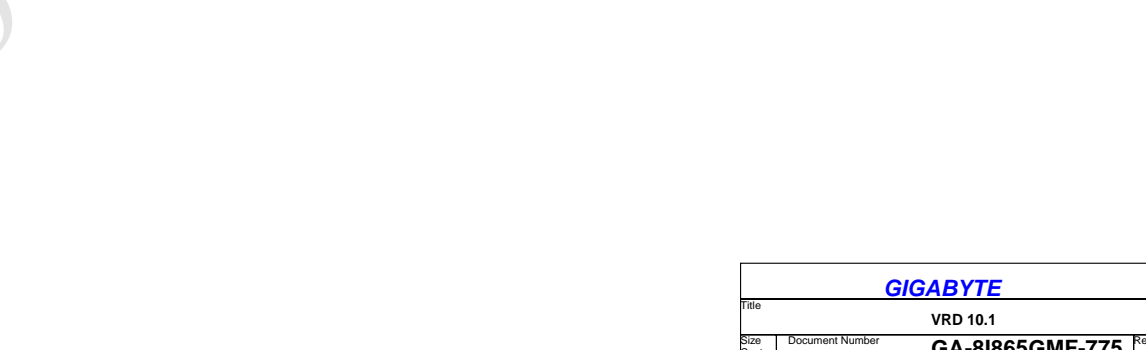
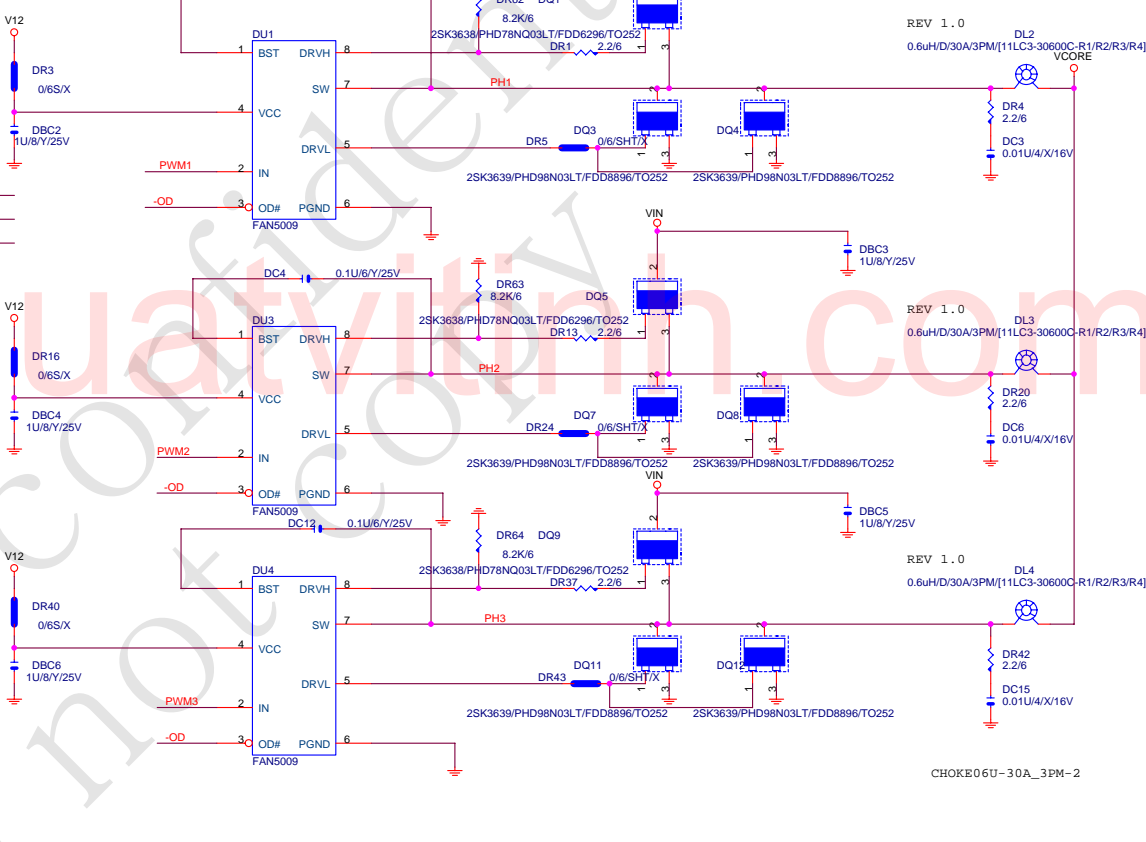
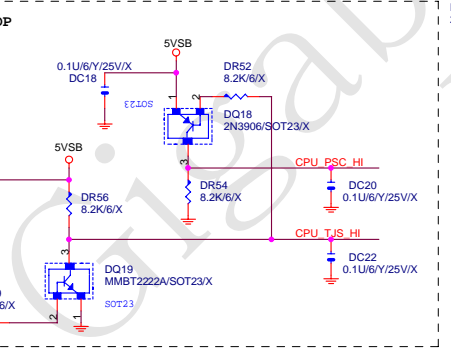
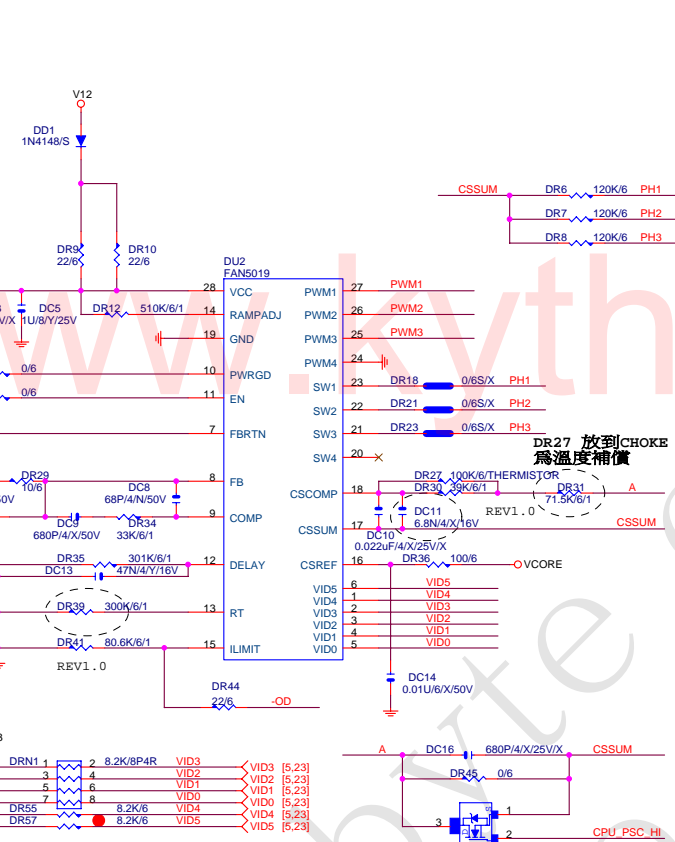
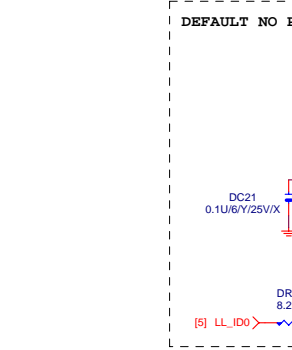




DD1 :在HIGH SIDE 發生S-D SHORT 時(OVP), LOW SIDE MOSFET TURN ON ,讓VCCORE 降壓,同時V12 也會下降6-7V以下時,造成PWM 無法提供POWER TO LOW SIDE TURN ON,所以加DD1 延長POWER 提供給LOW SIDE MOSFET TURN ON 保護CPU VOLTAGE 過高.

DR9,DC5 FOR V12 OVER 19V 以上,SPEC (18V)  
 DR12 為一個 CYCLE的DUTY(50%)  
 DELAY :讓限流時間DELAY (DR35,DC13) 才啟動.  
 DR39 : 240K  
 工作頻率=720KHZ / 4PHASE=180K(1 PHASE)

DR41: 約200A  
 DR36 : TRACER 拉到 CHOKE,算出CHOKE 兩端壓降



PRO 以上,MOSFET (1 上 2 下)

REV 1.0  
 0.6uH/D/30A/3PM(11LC3-30600C-R1/R2/R3/R4)  
 VCCORE

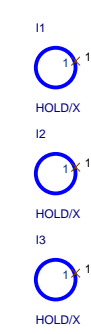
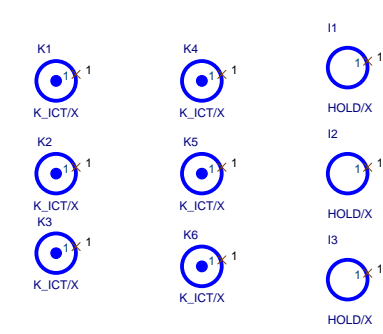
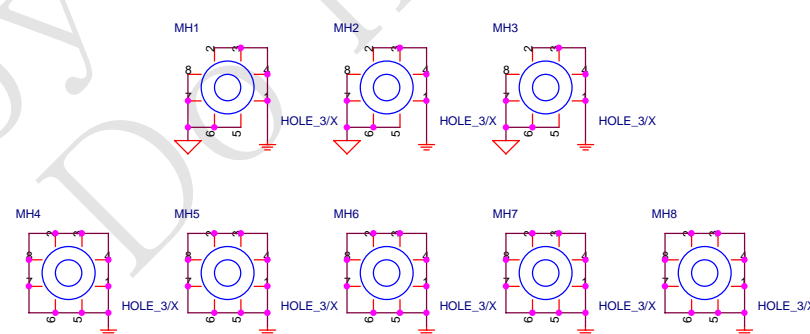
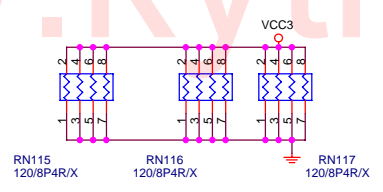
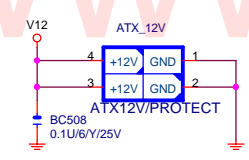
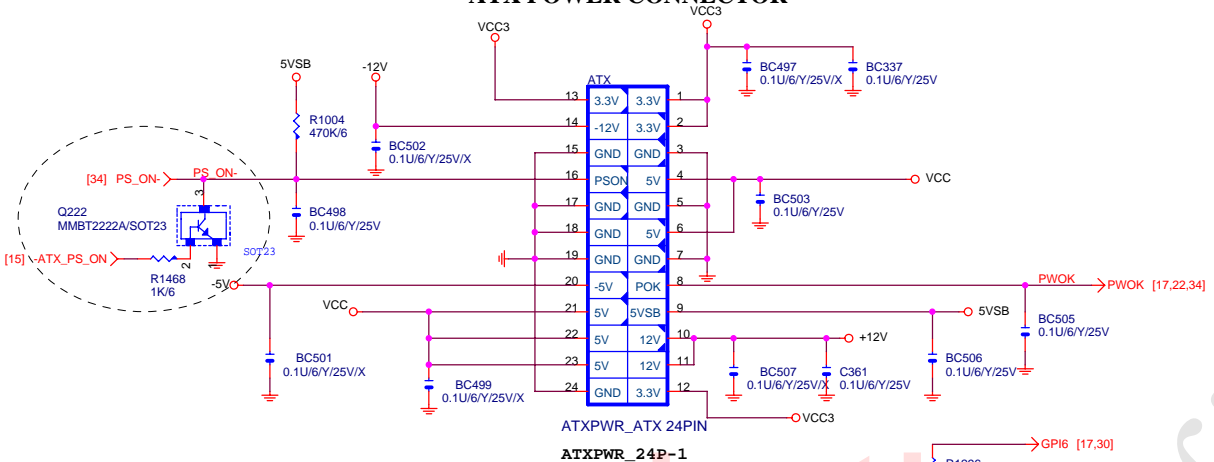
REV 1.0  
 0.6uH/D/30A/3PM(11LC3-30600C-R1/R2/R3/R4)  
 VCCORE

REV 1.0  
 0.6uH/D/30A/3PM(11LC3-30600C-R1/R2/R3/R4)  
 VCCORE

CHOKE06U-30A\_3PM-2

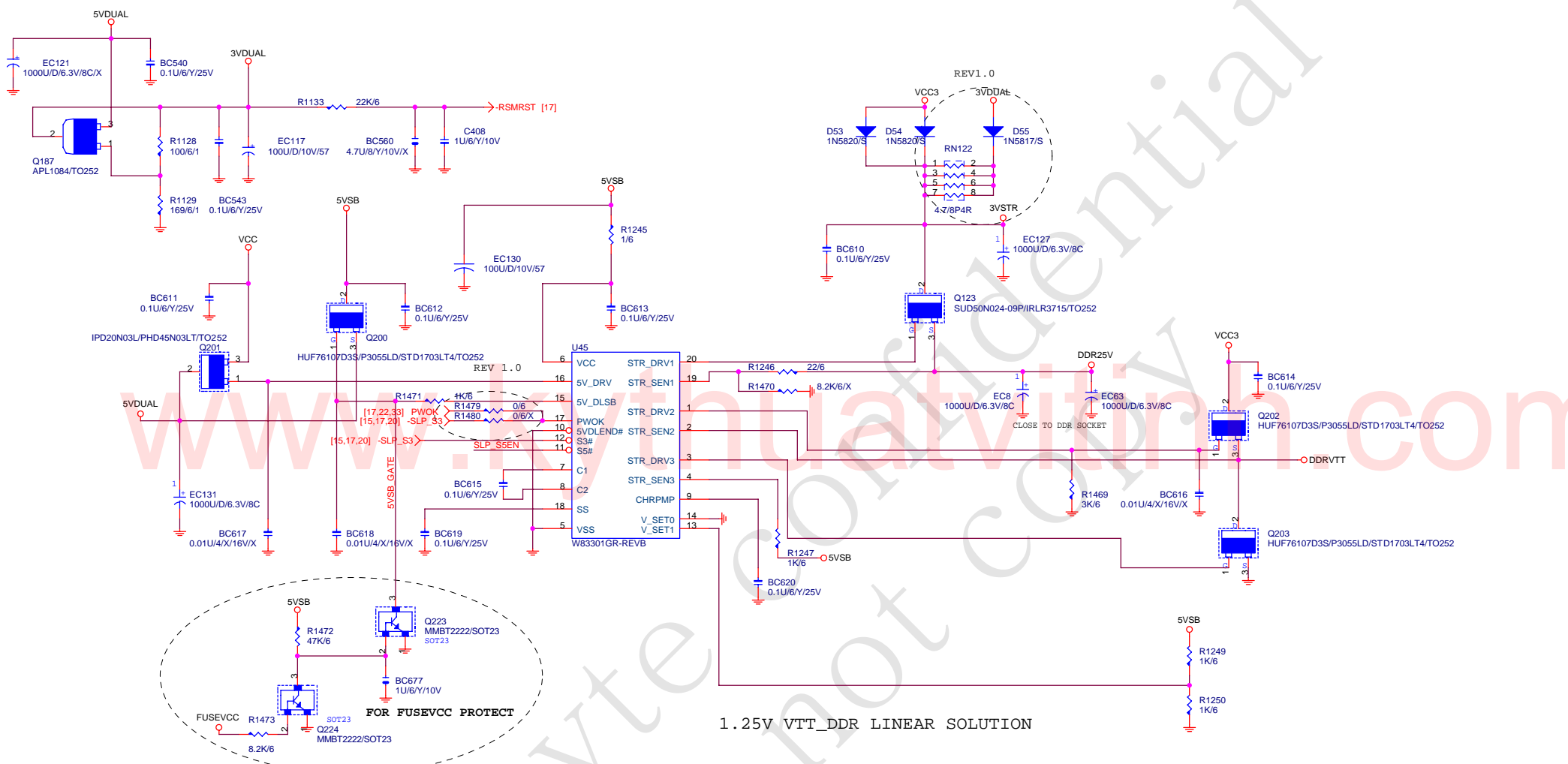
<b>GIGABYTE</b>			
Title <b>VRD 10.1</b>			
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# ATX POWER CONNECTOR



(08/12) HOLE\_3-2

GIGABYTE			
Title			
<b>Misc. PWR &amp; ATX CONN.</b>			
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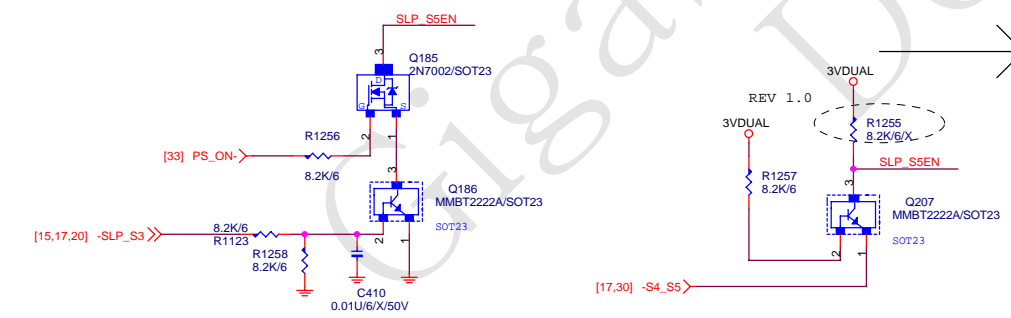


1.25V VTT\_DDR LINEAR SOLUTION

DDR25\_OV1,DDR25\_OV2,DDR25\_OV3 RESUME WELL DEFAULT HIGH

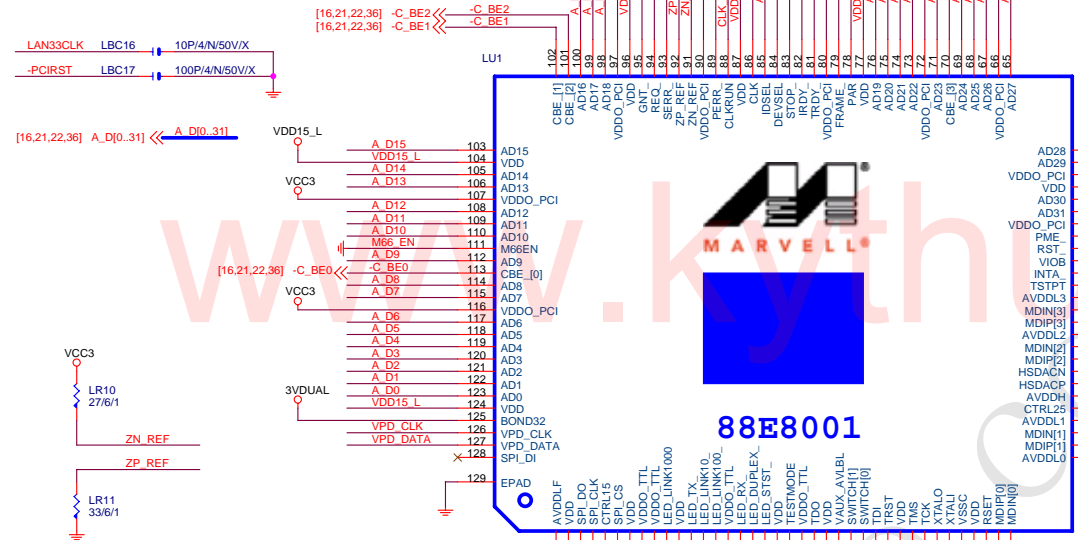
	DDR25_OV2	DDR25_OV1	DDR25_OV3	V_SET0	V_SET1
2.5V	HIGH	HIGH	HIGH	0V	0V
2.6V	LOW	HIGH	HIGH	0V	2.5V
2.7V	LOW	LOW	HIGH	0V	5V
2.8V	HIGH	HIGH	LOW	2.5V	0V

FOR 2.8V BIOS PROGRAMMING  
 時須先PROGRAMMING  
 2.5V後再PROGRAMMING 2.8V

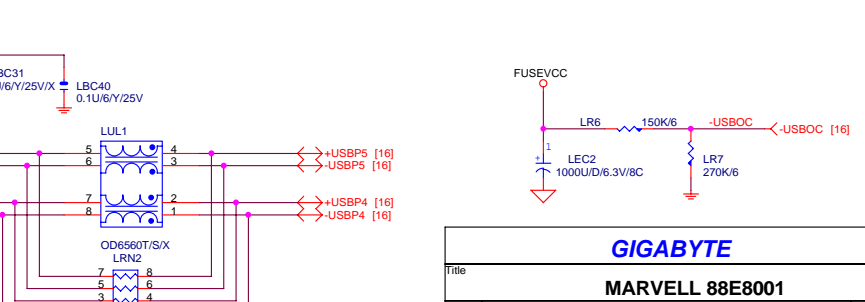
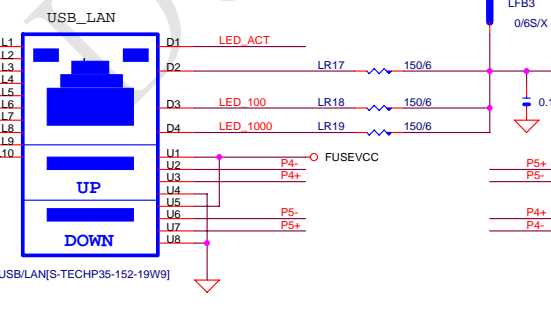
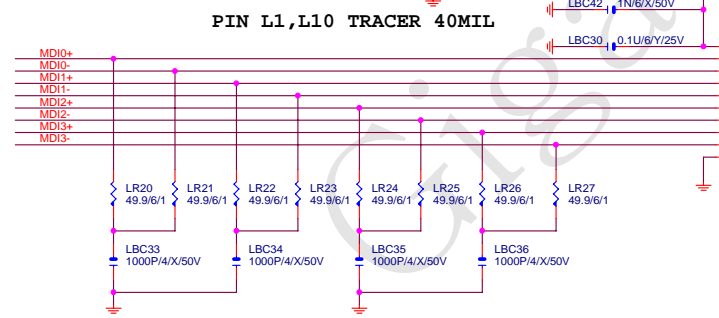
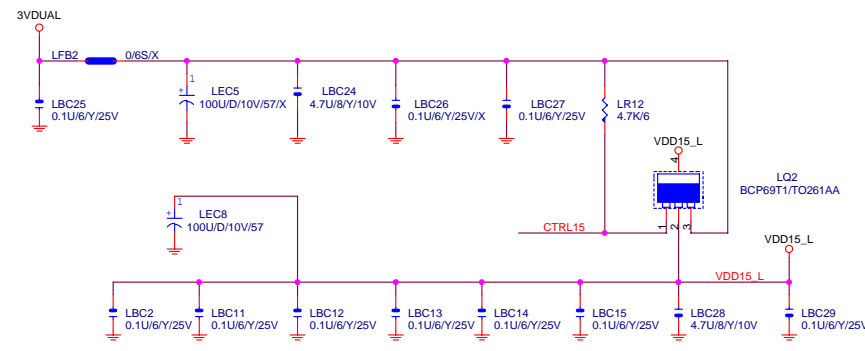
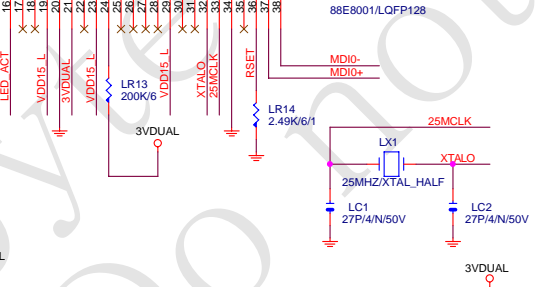
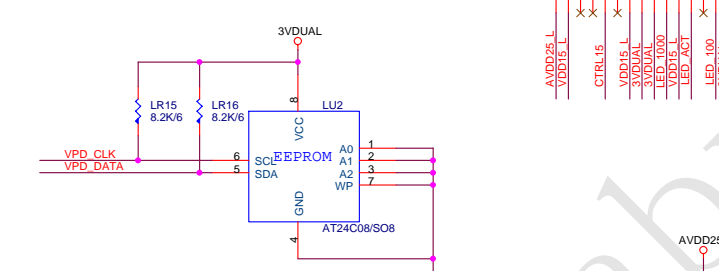
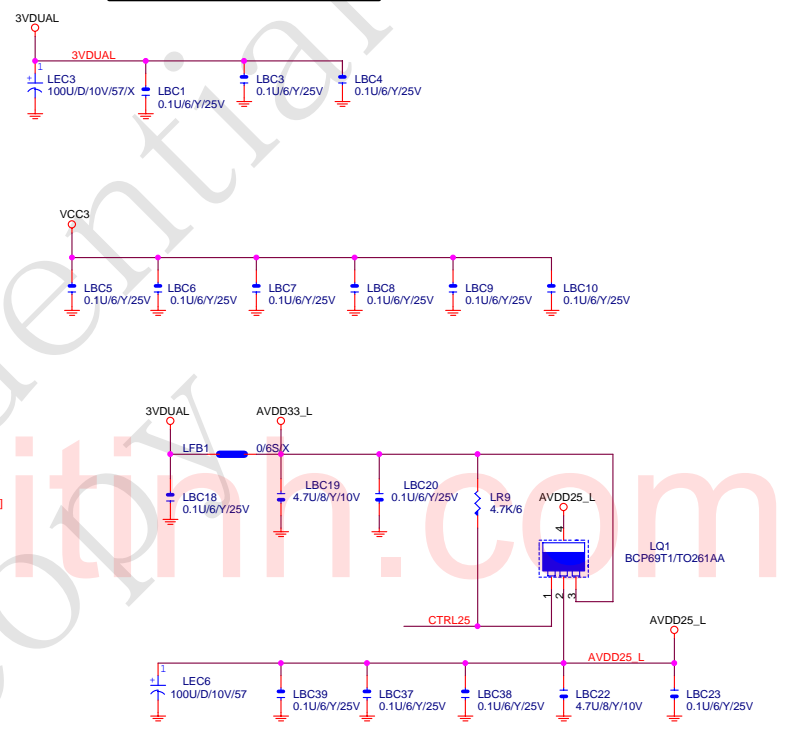


- [16,21,22,36] -C BE3 << -C BE3
- [16,21,22,36] PAR << PAR
- [16,21,22,36] -FRAME << -FRAME
- [16,21,22,36] -TRDY << -TRDY
- [16,21,22,36] -IRDY << -IRDY
- [16,21,22,36] -STOP << -STOP
- [16,21,22,36] -STOR << -STOR
- [16,21,22,36] -DEVSEL << -DEVSEL
- [20] LAN33CLK << LAN33CLK
- [16,21,22,36] -PERR << -PERR
- [16,21,22,36] -SERR << -SERR
- [16,21] -REQ0 << -REQ0
- [16] -GNT5 << -GNT5

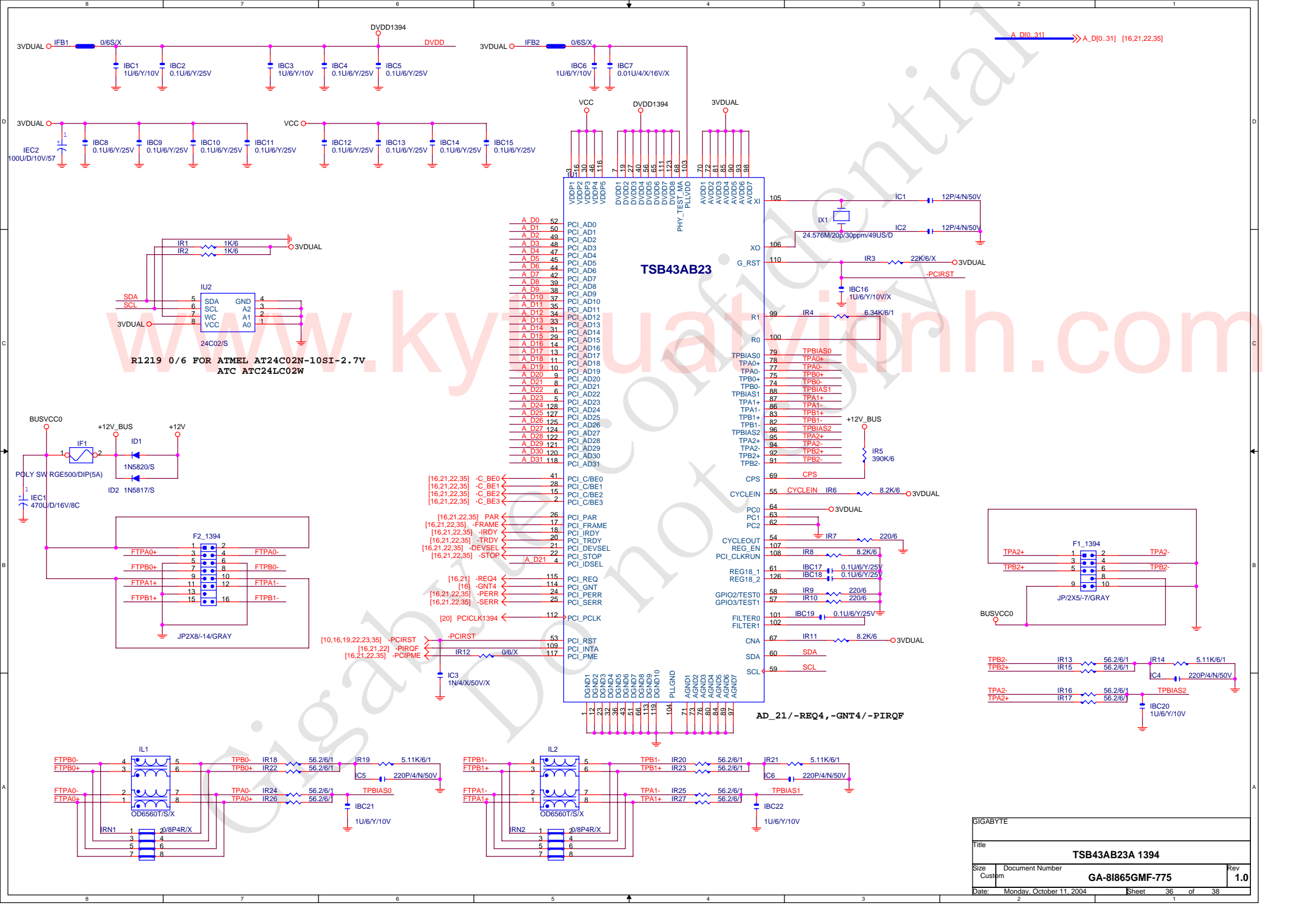
- # Layout Check 注意事項
- f. Lu1 Pin129 需下內層GND, 至少打 22 Via
  - 3VDUAL, VCC3, VDD15\_L, AVDD25\_L 至少走20mil寬, 並且電容擺設每兩pin至少放一顆Bypass Cap.
  - X'TAL 25MHz 兩訊號線, TRACE 愈短愈好, 線寬12mil
  - MDI正負0-3, TRACE 8:7:8, 每對之間保持 40mil



POWER DECOUPLING CAP.



<b>GIGABYTE</b>		
<b>MARVELL 88E8001</b>		
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**TSB43AB23**

A D0	52	PCI_AD0
A D1	50	PCI_AD1
A D2	49	PCI_AD2
A D3	48	PCI_AD3
A D4	47	PCI_AD4
A D5	45	PCI_AD5
A D6	44	PCI_AD6
A D7	42	PCI_AD7
A D8	39	PCI_AD8
A D9	38	PCI_AD9
A D10	37	PCI_AD10
A D11	35	PCI_AD11
A D12	34	PCI_AD12
A D13	33	PCI_AD13
A D14	31	PCI_AD14
A D15	29	PCI_AD15
A D16	14	PCI_AD16
A D17	13	PCI_AD17
A D18	11	PCI_AD18
A D19	10	PCI_AD19
A D20	9	PCI_AD20
A D21	8	PCI_AD21
A D22	6	PCI_AD22
A D23	5	PCI_AD23
A D24	128	PCI_AD24
A D25	127	PCI_AD25
A D26	125	PCI_AD26
A D27	124	PCI_AD27
A D28	122	PCI_AD28
A D29	121	PCI_AD29
A D30	120	PCI_AD30
A D31	118	PCI_AD31
C BE0	41	PCI_C/BE0
C BE1	28	PCI_C/BE1
C BE2	15	PCI_C/BE2
C BE3	2	PCI_C/BE3
PAR	26	PCI_PAR
-FRAME	17	PCI_FRAME
-IRDY	18	PCI_IRDY
-TRDY	20	PCI_TRDY
-DEVSEL	21	PCI_DEVSEL
-STOP	22	PCI_STOP
A D21	4	PCI_IDSEL
-REQ4	115	PCI_REQ
-GNT4	114	PCI_GNT
-PERR	24	PCI_PERR
-SERR	25	PCI_SERR
PCI_CLK1394	112	PCI_PCLK
PCI_RST	53	PCI_RST
PCI_INTA	109	PCI_INTA
PCI_PME	117	PCI_PME
DGND1	12	PLGND
DGND2	23	
DGND3	36	
DGND4	38	
DGND5	43	
DGND6	51	
DGND7	66	
DGND8	68	
DGND9	113	
DGND10	119	
AGND1	71	
AGND2	72	
AGND3	73	
AGND4	78	
AGND5	84	
AGND6	89	
AGND7	97	

GIGABYTE		
Title		
TSB43AB23A 1394		
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# GIGABYTE GA-8I865GMF-775 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
TI 1394	21	F	PCICLK1394	-REQ4	-GNT4
LAN (Marvell)	25	E	LANCLK33	-REQ5	-GNT5

<b>GIGABYTE</b>		
Title <b>PCI ROUNT LIST</b>		
Size Custom	Document Number <b>GA-8I865GMF-775</b>	Rev <b>1.0</b>
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