

Model Name: GA-H61M-D2H

Revision 1.0

SHEET

TITLE

01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	CPU_LGA1155-A
05	CPU_LGA1155-B
06	CPU_LGA1155-C
07	DDR III CHANNEL A 1,2
08	DDR III CHANNEL B 1,2
09	PCH_FDI,DMI,USB,PCIE,NVRAM
10	PCH_DP,CLK BUFFER
11	PCH_HOST,SATA,PCI
12	PCH_GPIO,CTRL,AUDIO
13	PCH_PWR,GND
14	PCI EXPRESS*16 SLOT
15	PCI EXPRESS*1 SLOT/CLK GEN
16	ITE 8728
17	KB_MS,R_USB,-PROCHOT,RI
18	HWM,FAN CTRL,OV,COMB,LPT
19	DUAL BIOS
20	FP,F_USB,SPKR,SATA LED
21	AUDIO ALC889
22	REAR AUDIO JACK
23	ATHEROS AR8151/USB_LAN
24	HDMI/DVI
25	DISCRETE POWER
26	ATX
27	ISL95870_CPU_VTT

SHEET

TITLE

28	VCORE ISL6364_1
29	VCORE ISL6364_2,VAXG
30	VCORE ISL6364_3,VCORE
31	Etron USB3.0
32	IT8892E
33	PCI SLOT 1.2

**Gigabyte Technology**

Cover Sheet

Size Custom	Document Number <b>GA-H61M-D2H</b>	Rev <b>1.0</b>
Date: Thursday, August 25, 2011	Sheet 1	of 33



*Revision 1.0*

## Component value change history

2011/03/25

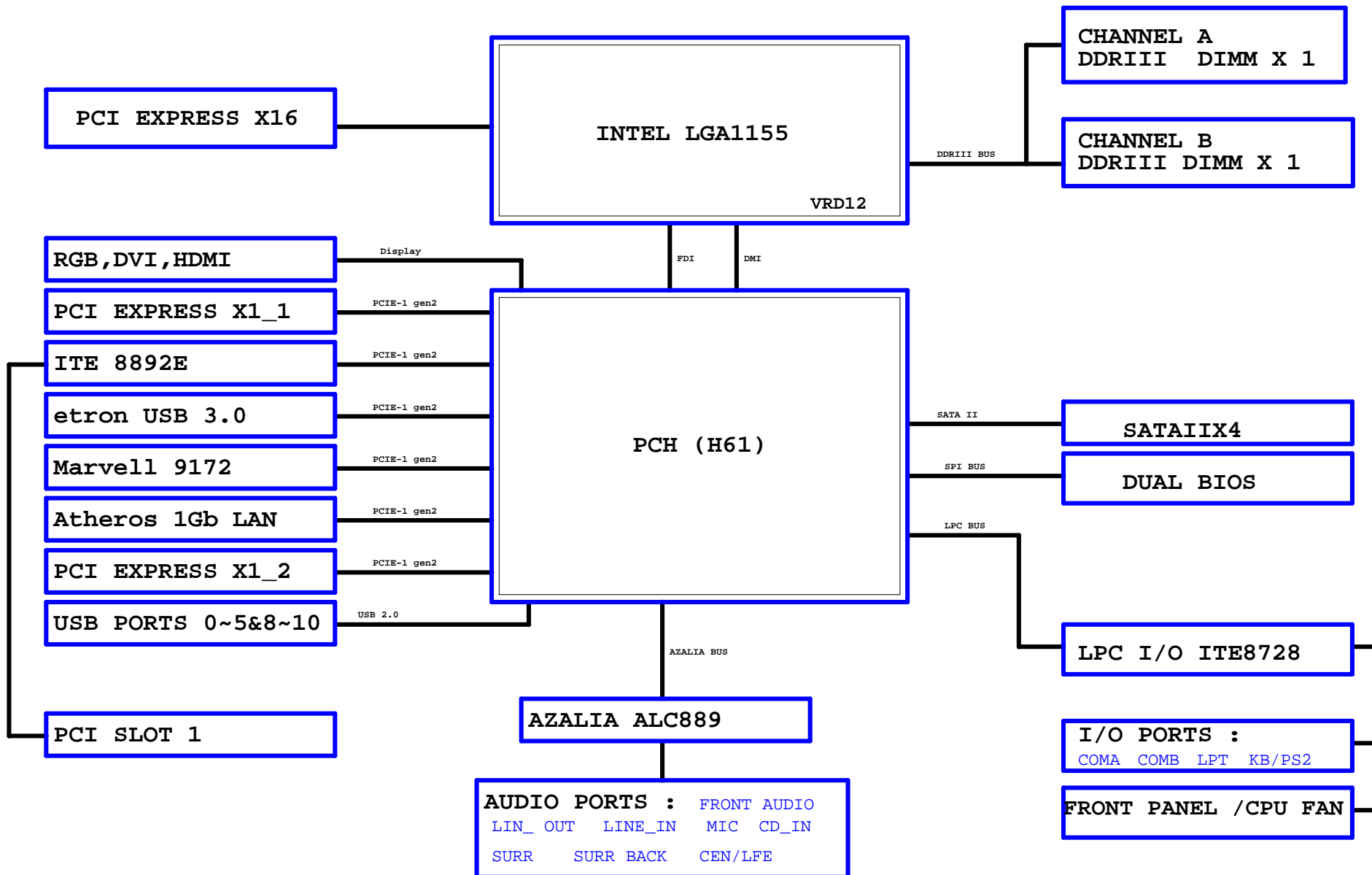
[illegible]

## Circuit or PCB layout change

[illegible]



# BLOCK DIAGRAM



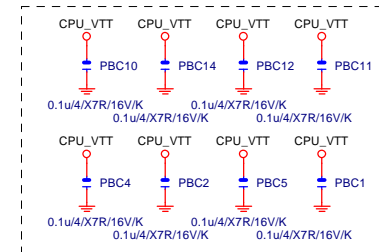
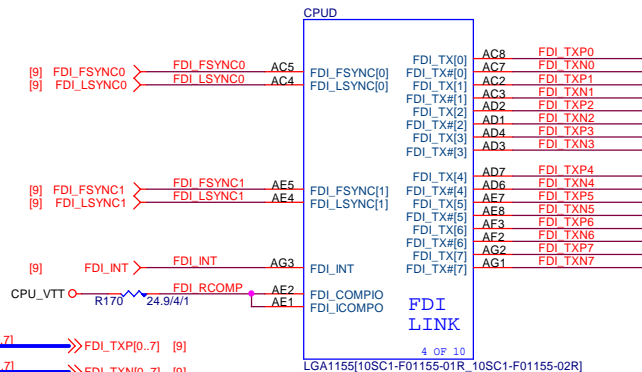
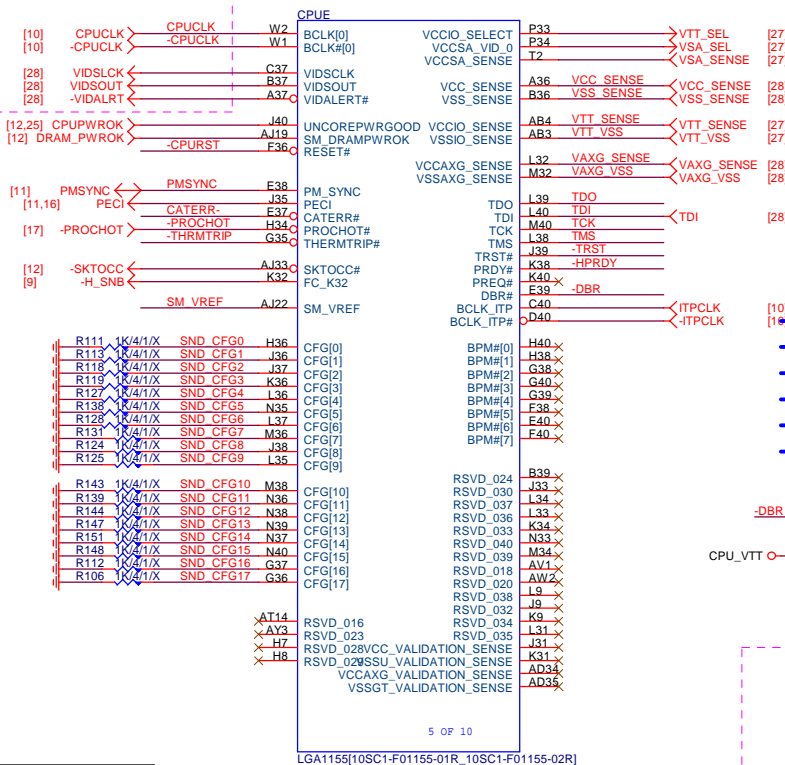


CFG	H	L	NOTE
0	RSVD	RSVD	RSVD
1	RSVD	RSVD	RSVD
2	NON	Reverse	LANE REVERSAL[0],x16
3	RSVD	RSVD	RSVD
4	RSVD	RSVD	RSVD
7	RSVD	RSVD	RSVD
8	RSVD	RSVD	RSVD
9	RSVD	RSVD	RSVD
10	RSVD	RSVD	RSVD
11	RSVD	RSVD	RSVD
12	RSVD	RSVD	RSVD
13	RSVD	RSVD	RSVD
14	RSVD	RSVD	RSVD
15	RSVD	RSVD	RSVD
16	RSVD	RSVD	RSVD
17	RSVD	RSVD	RSVD

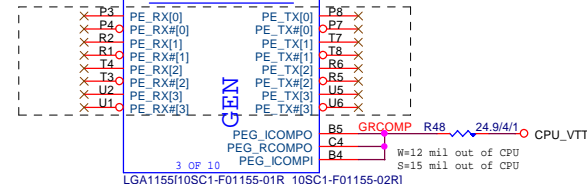
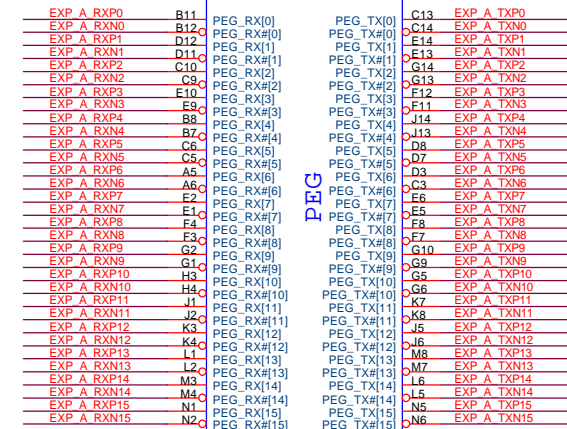
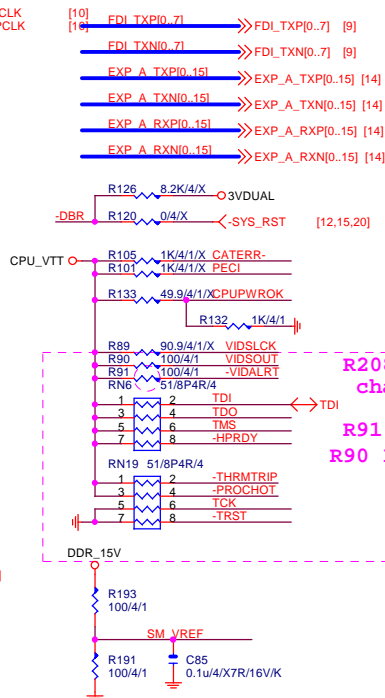
CFG6	CFG5	PCIE CONFIG
1	1	1x16 , Default
1	0	2X8
0	1	RSVD
0	0	X8,X4,X4

DRAM\_PWROK

BC93  
22p/4/NPO/50V/J/X



### Stitching caps for PCIE,DMI,FDI bus



## Gigabyte Technology

Title				CPU LGA1155-A			
Size	Custom	Document Number				Rev	
		GA-H61M-D2H				1.0	
Date:	Thursday, August 25, 2011			Sheet	4	of	33





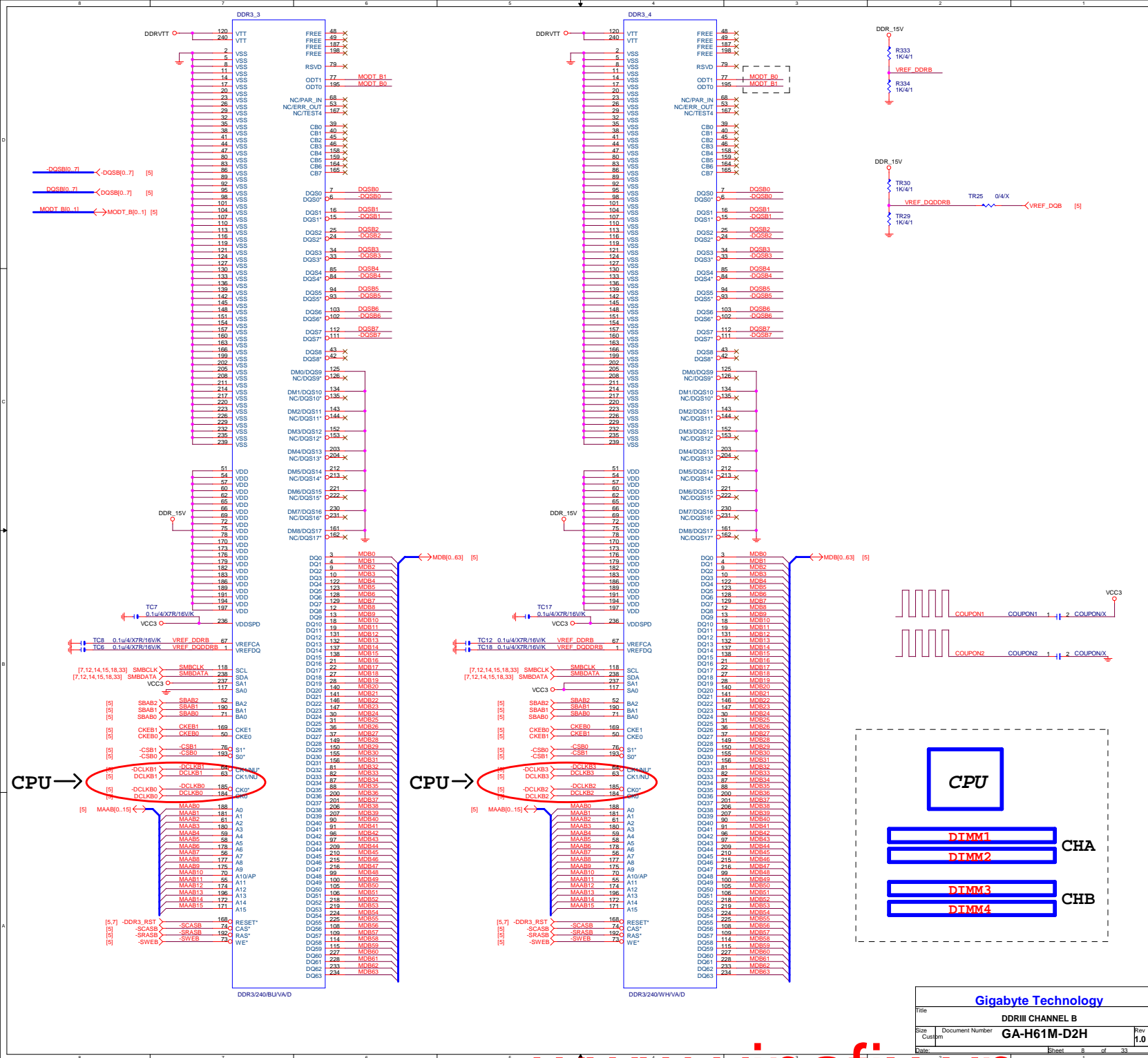






















## X7-SATA2-HS-MASK









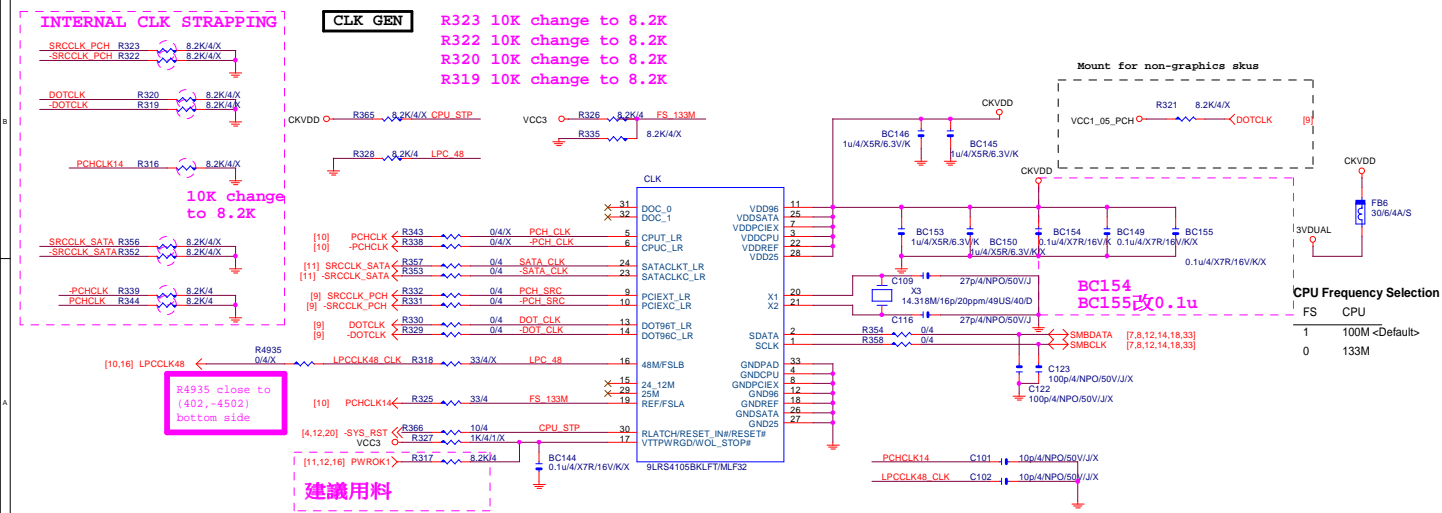
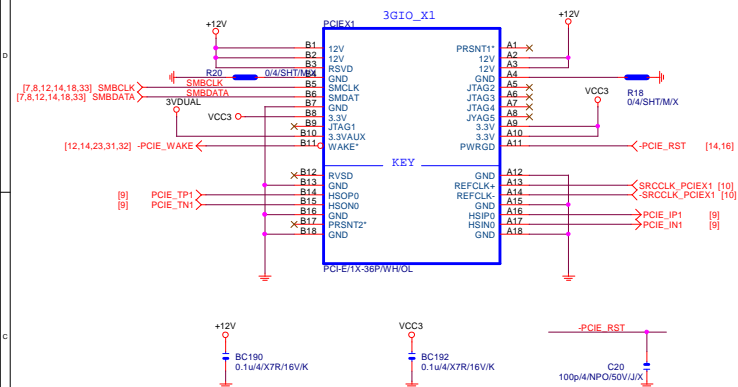







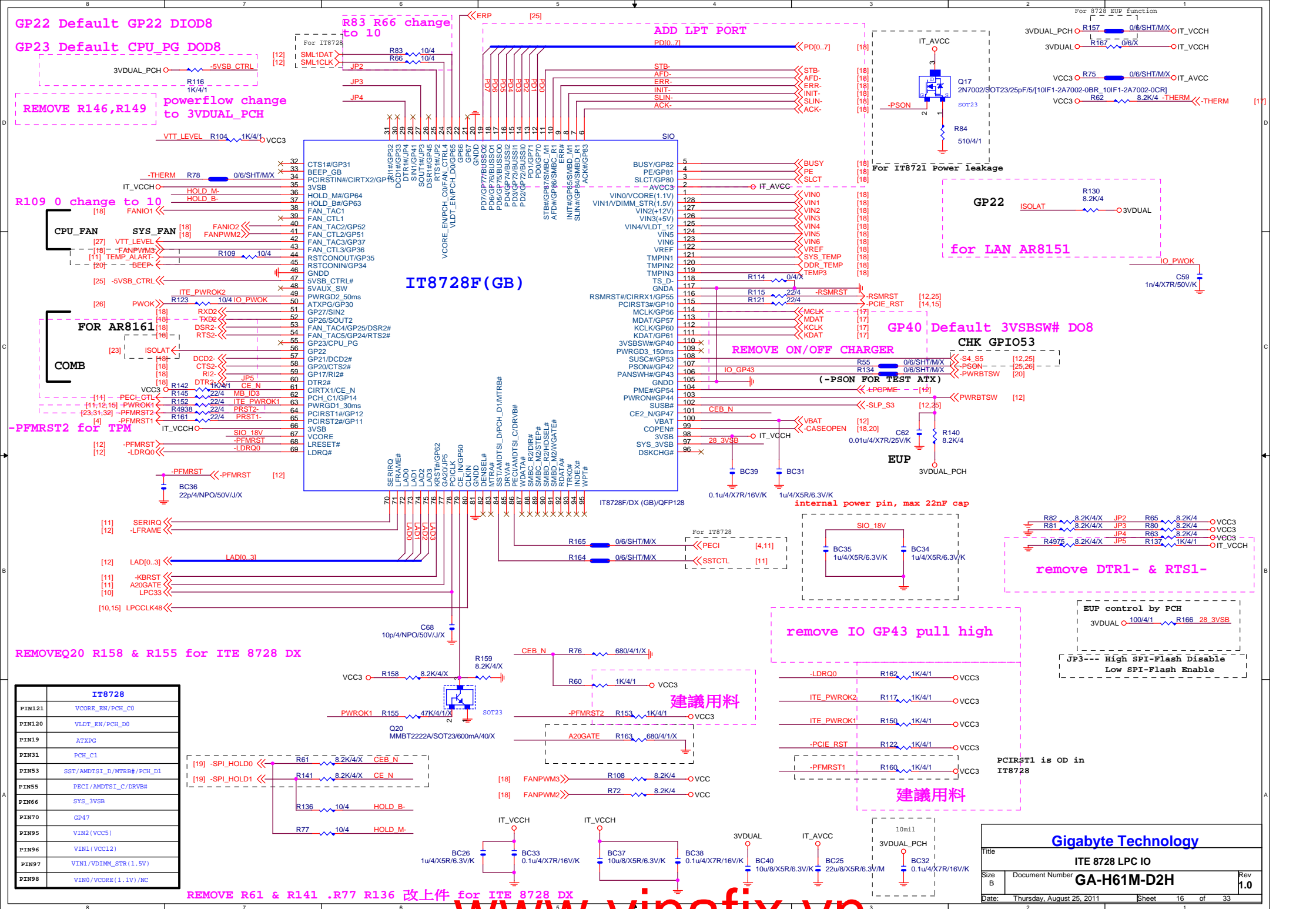


## PCIEX1



			
Title			
PCIE X 1/CLK GEN			
Size	Document Number	Rev	
Custom	GA-H61M-D2H	1.0	
Date:	Thursday, August 25, 2011	Sheet	15 of 33



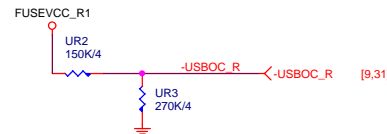
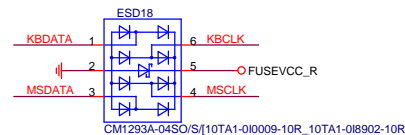
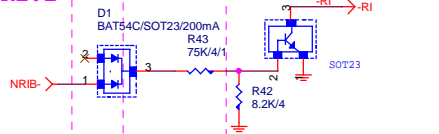




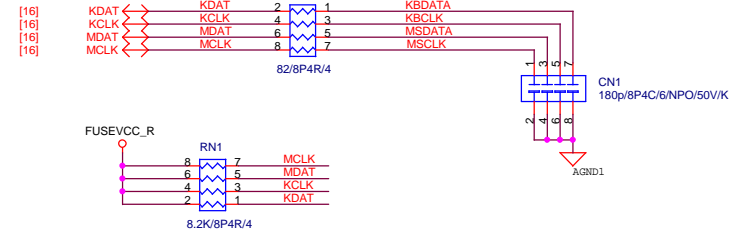
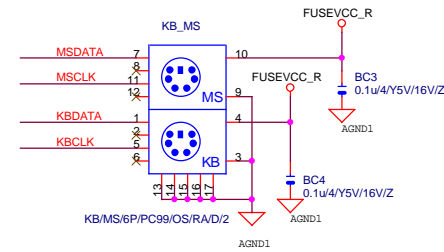
REMOVE NR1A- in R1.1

建議用料

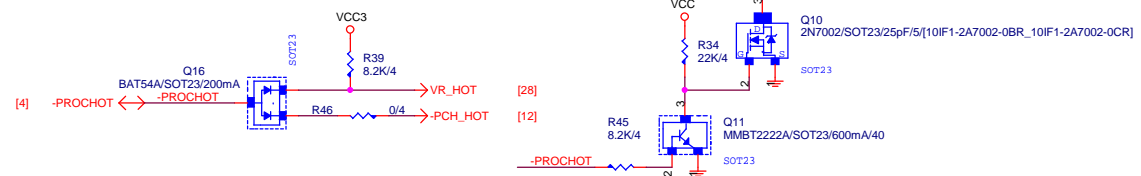
[18]



KB/MS

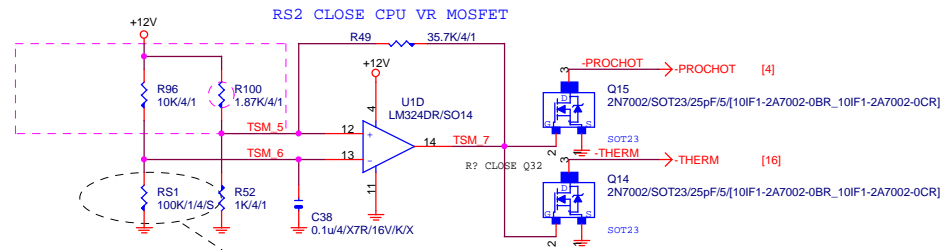


-PROHOT



for proshot  
R100 1.2K change to 1.87K

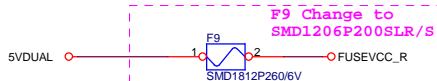
deasserted at 116 degree



CLOSE PWM HOT MOSFET

R\_USB

EMI request

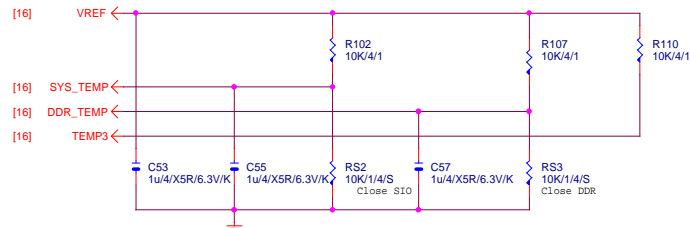


Gigabyte Technology

Title			
KB_MS,R_USB,-PROHOT,RI			
Size	Document Number	Rev	
Custom	GA-H61M-D2H	1.0	
Date:	Thursday, August 25, 2011	Sheet	17 of 33

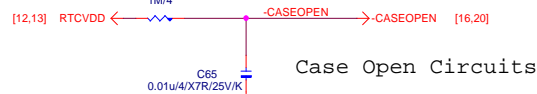


## TEMP H/W MONITOR

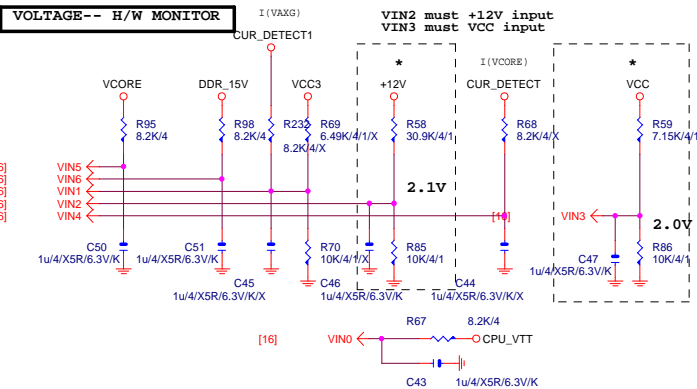


## CASE OPEN

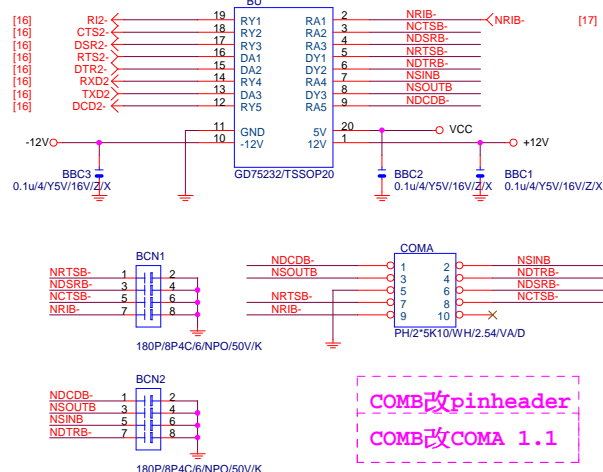
REMOVE intruder



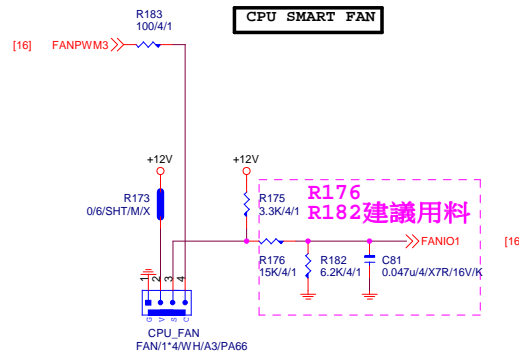
## VOLTAGE-- H/W MONITOR



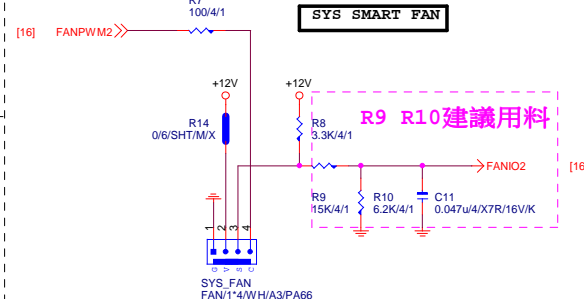
COMB



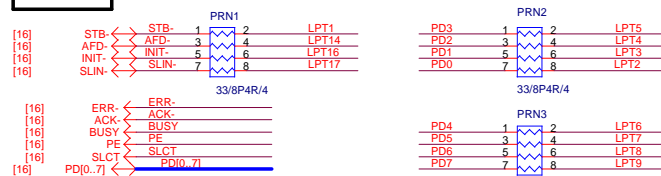
## CPU SMART FAN



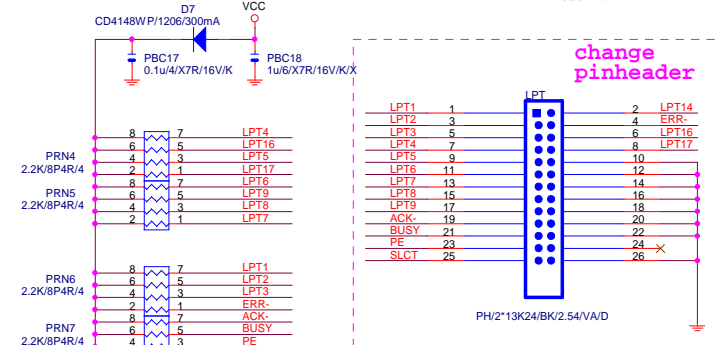
## SYS SMART FAN



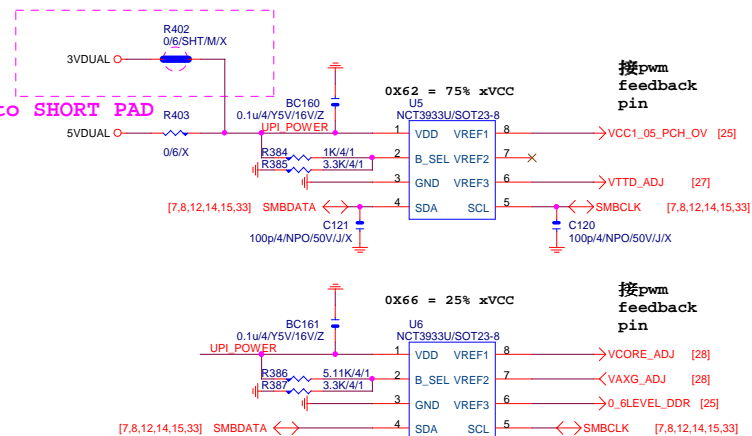
## LPT PORT



```
change
pinheader
```



R402 change to SHORT PAD



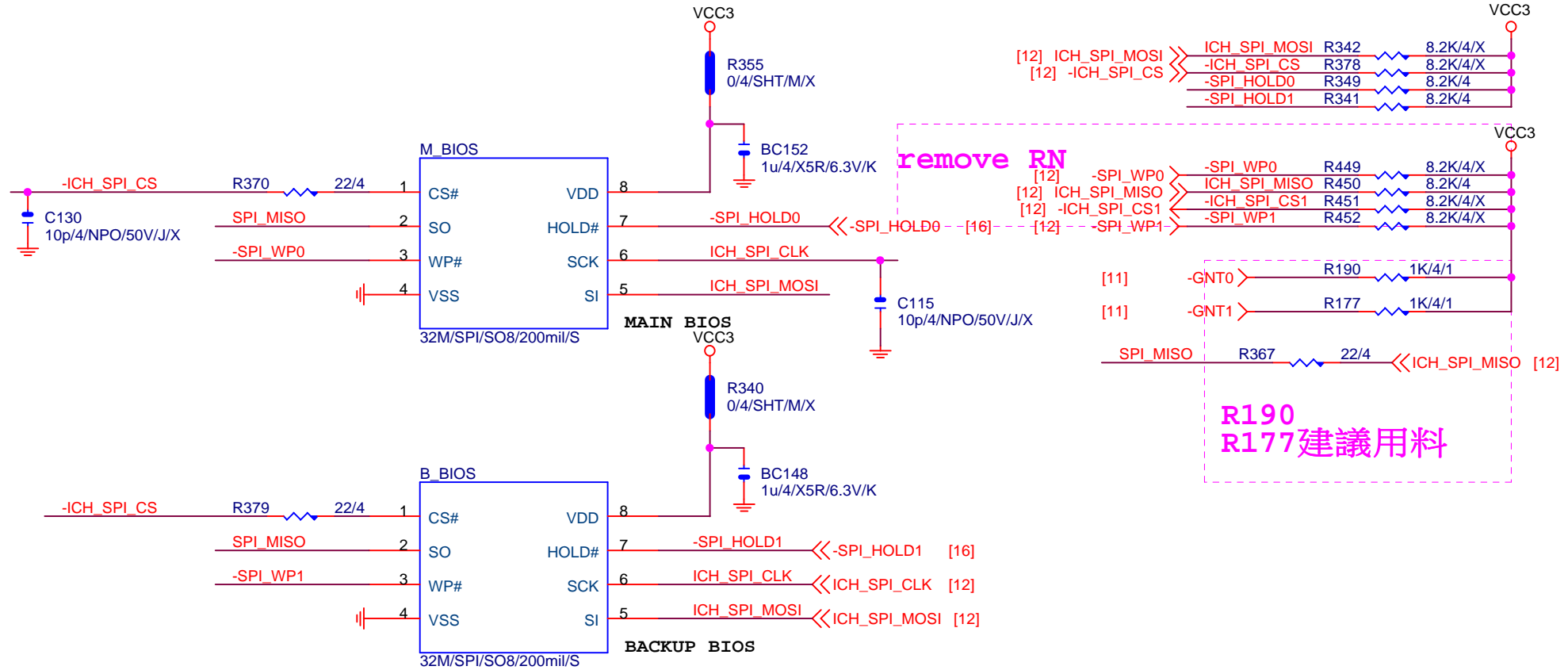
## Gigabyte Technology

Title				HWM,FAN CTRL,OV,COMB,LPT			
Size	Document Number	GA-H61M-D2H				Rev	1.0
Custom							
Date:	Thursday, August 25, 2011	Sheet	18	of	33		



# DUAL BIOS

R349 R341 改上件 for ITE 8728 DX



BOOT DEVICE	GNT1	GNT0
LPC	0	0
PCI	0	1
SPI	1	1

1 means floating  
0 means PD 1K

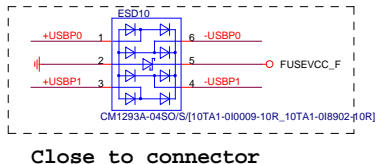
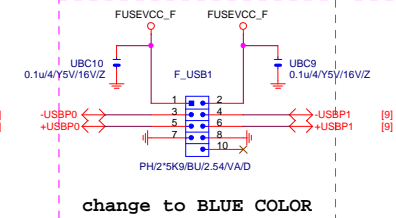
**Gigabyte Technology**

Title		
DUAL BIOS		
Size A	Document Number	Rev
	GA-H61M-D2H	1.0
Date:	Thursday, August 25, 2011	Sheet 19 of 33



# FRONT USB1

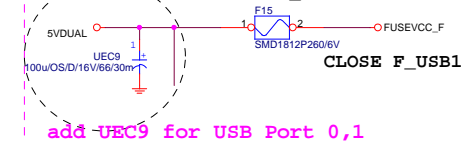
# FU改pinheader



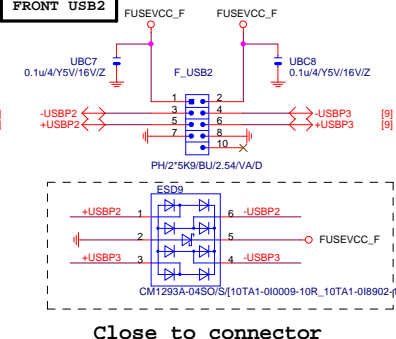
# SATA LED

[11] -SATALED -HDLED

# CLOSE R\_USB

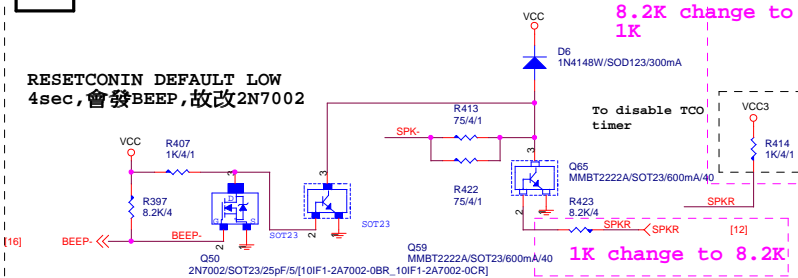


# FRONT USB2

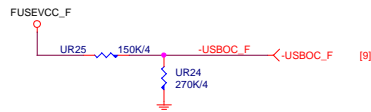
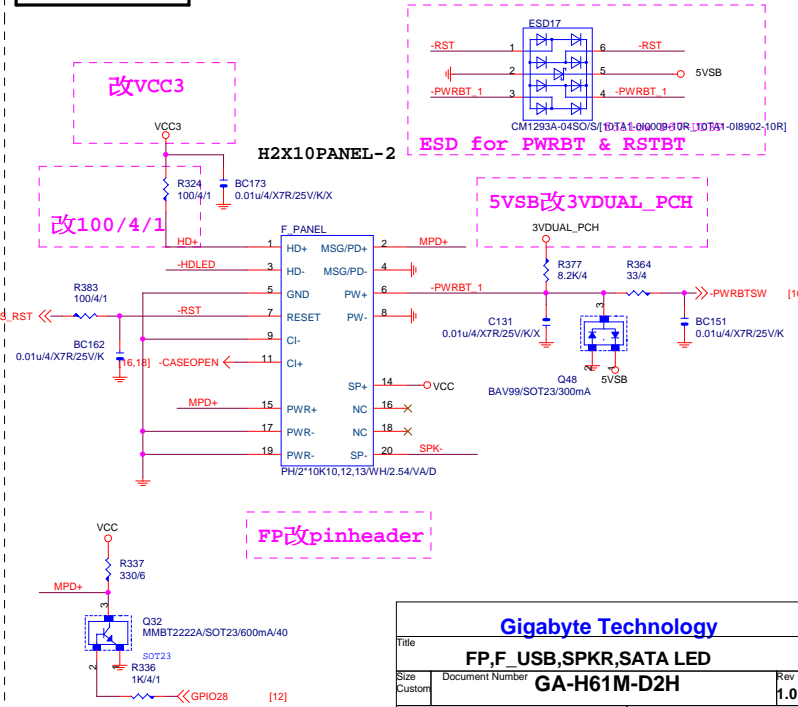


# SPKR

RESETCONIN DEFAULT LOW  
4sec, 會發BEEP, 故改2N7002



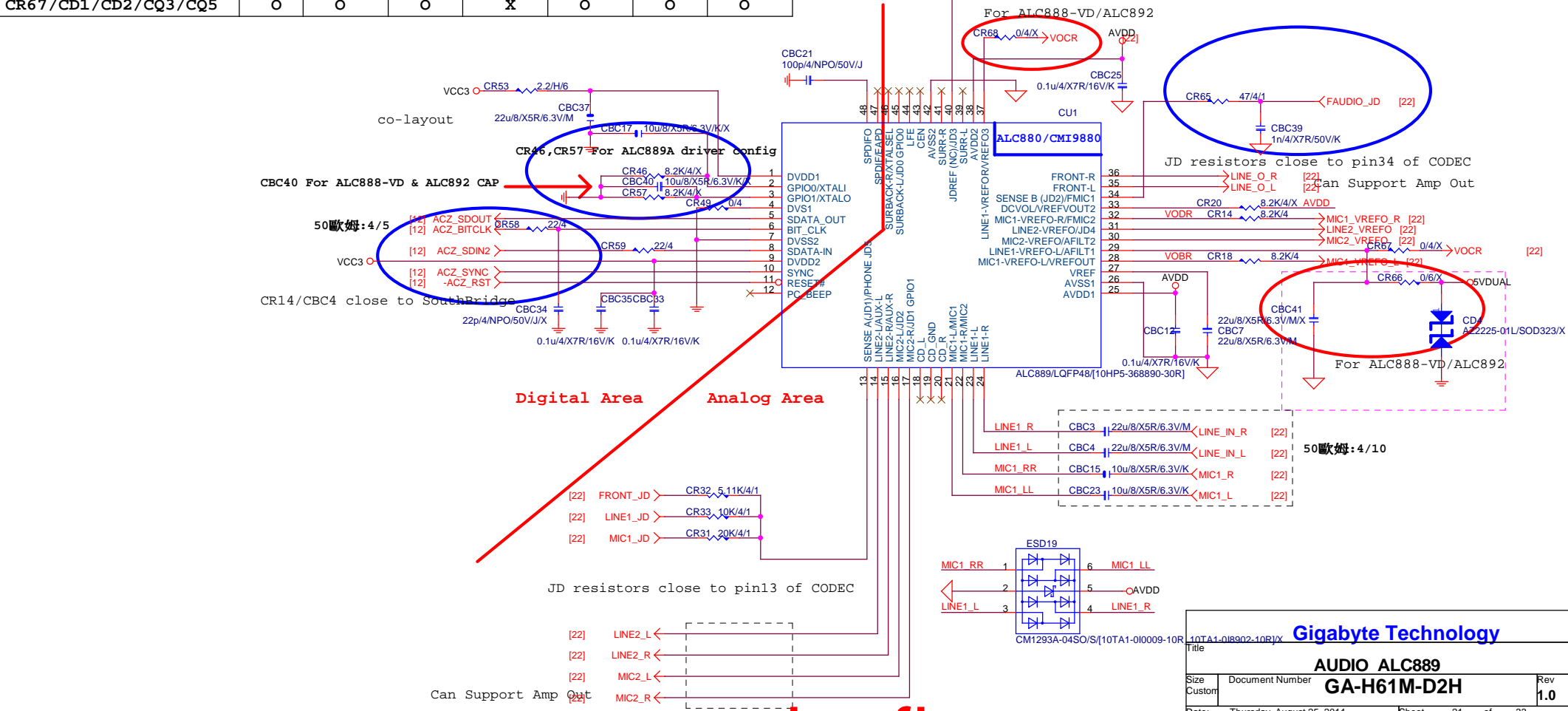
# INTEL FRONT PANEL



Gigabyte Technology			
Title	FP,F_USB,SPKR,SATA LED		
Size	Document Number	GA-H61M-D2H	
Custom			Rev 1.0
Date:	Thursday, August 25, 2011	Sheet 20 of 33	

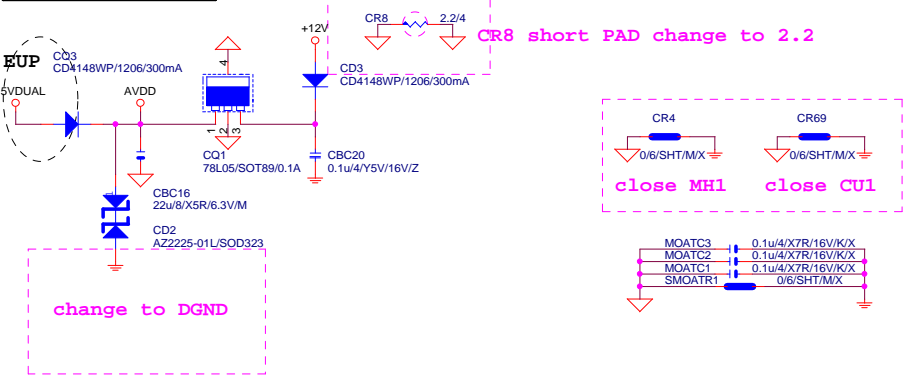


	ALC883	ALC888-VA	ALC888B	ALC888-VD	ALC892R	ALC889	ALC889A
CR46	X	X	X	X	X	X	O
CR57	X	X	X	X	X	X	O
CR49	O	O	X	X	X	O	O
CBC40	X	X	X	10uF/X5R	10uF/X5R	X	X
CR20	O	X	X	X	X	X	X
CR28	20K/1%	20K/1%	20K/1%	20K/1%	20K/1%	20K/1%	20K/0.1%
CR47	X	X	O	X	O	O	X
CR48	O	O	X	O	X	X	O
CBC2/CBC4/CBC5/ CBC6/CBC10/CBC11	4.7uF /X5R	4.7uF /X5R	4.7uF /X5R	4.7uF /X5R	4.7uF /X5R	10uF /X5R	4.7uF /X5R
CR1/CR3/CR10/CR12/ CR15/CR19/CR56/CR27/ CR55/CR37/CR28/CR34/ CR6/CR9/CR51/CR61	75 ohm	75 ohm	75 ohm	75 ohm	75 ohm	66 ohm or lower	75 ohm
CR66/CR68/CD3/CBC41	X	X	X	O	X	X	X
CR67/CD1/CD2/CQ3/CQ5	O	O	O	X	O	O	O

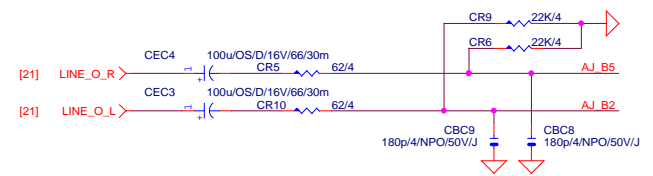




CODEC POWER/EMI PAD

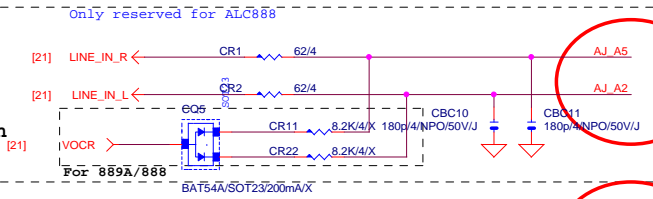


LINE-OUT

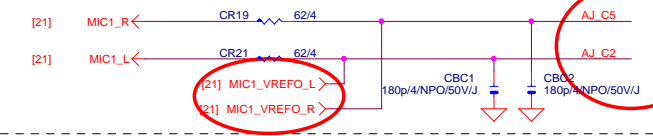


LINE-IN

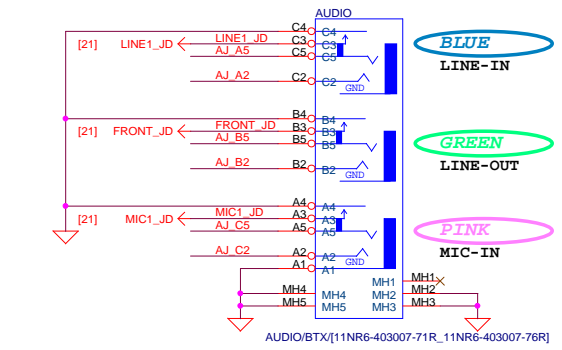
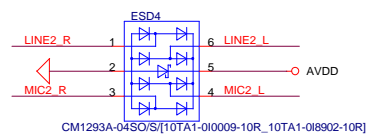
Verify MIC function in LINE-in



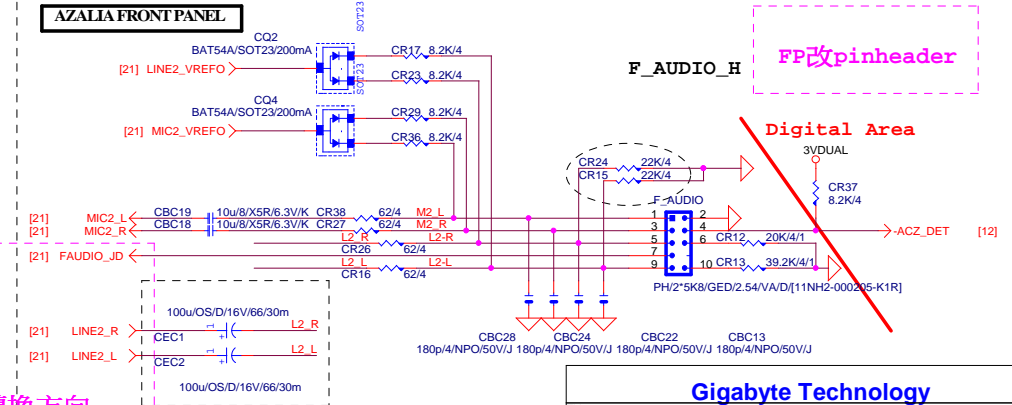
MIC-IN



AZALIA JACK



AZALIA FRONT PANEL

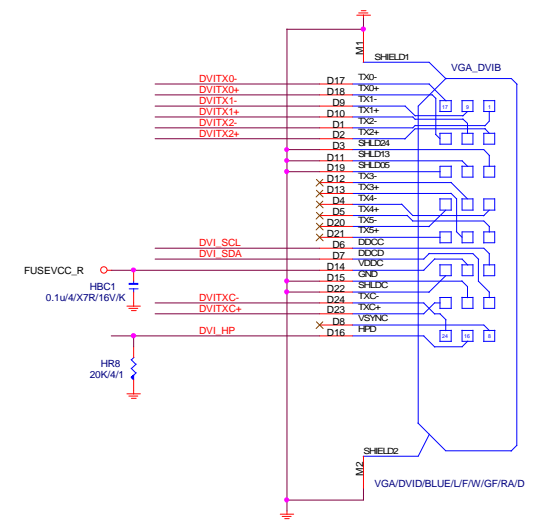
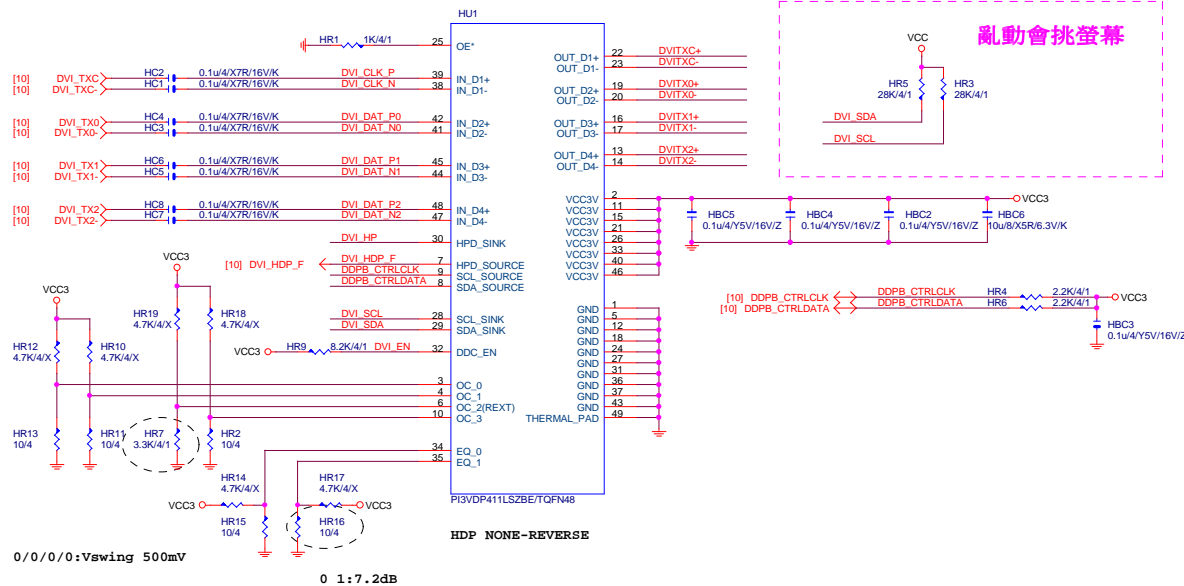
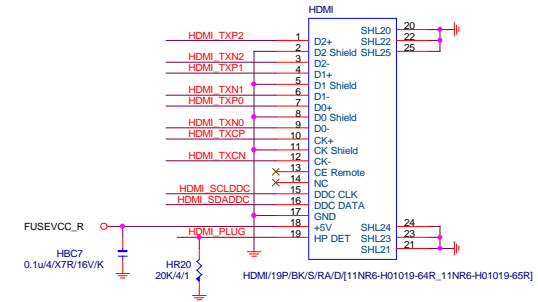
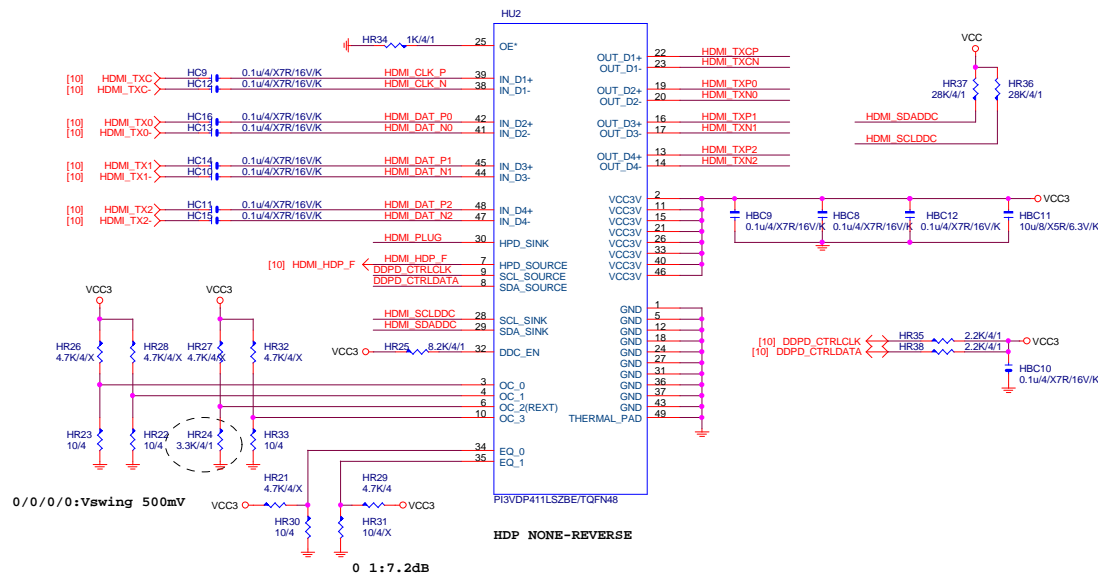


Gigabyte Technology		
Title		
AUDIO JACK		
Size	Document Number	Rev
Custom	GA-H61M-D2H	1.0
Date:	Thursday, August 25, 2011	Sheet 22 of 33









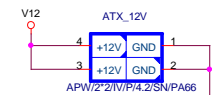
Gigabyte Technology			
Title			
HDMI / DVI			
Size	Document Number	Rev	
Custom	GA-H61M-D2H	1.0	
Date	Thursday, August 25, 2011	Sheet	24 of 33



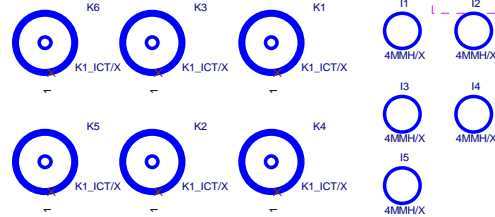




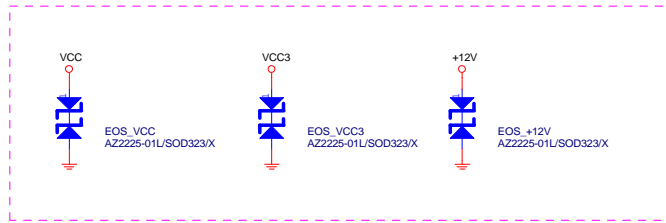
## ATXX4 POWER CONNECTOR



ATX\_4-4



```
-S_WARN-->5VDUAL1-->-S_ACK(PCH)-->-DEPSLP/-RSMRST-->5VDUAL-->3VDUAL
```





# CPU\_VTT

TR23 2K change to 3.83K  
 TR23 0 change to 4.02K  
 TR22 change to short pad

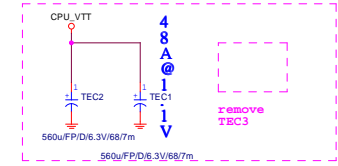
TR8 0 change to 1  
 TR2 0 change to 1  
 TR7 0 change to 1

改PPAK & Ferrite Core

VTT_SEL	
HI	1.05V
LO	1.0V

F_SEL	
PU	1MHz
PD	600KHz
NC	500KHz
Sheet GND	300KHz

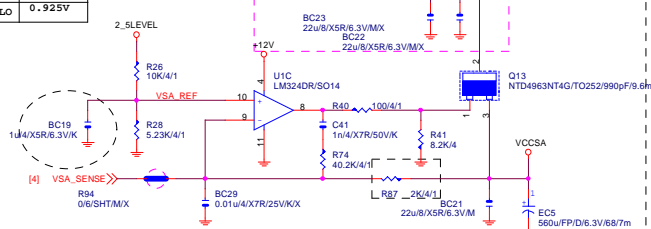
BOTTOM PAD  
 CONNECT TO GND  
 THROUGH 4 VIA



## VCCSA

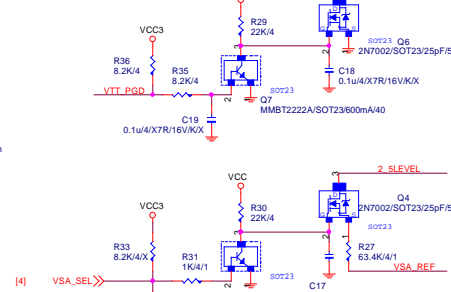
VSA_SEL	
HI	0.85V
LO	0.925V

BC22  
 BC23改不上

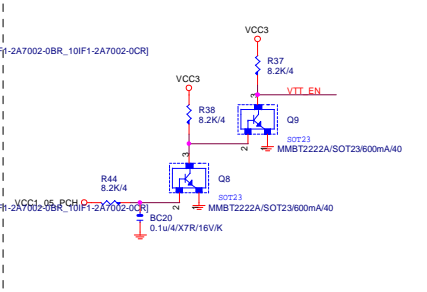


R94 change to short pad

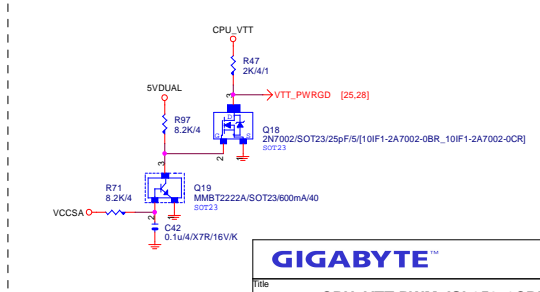
## VCCSA PWR SEQ



## CPU\_VTT PWR SEQ



## VTT\_PWRGD



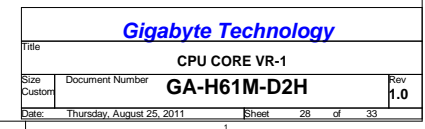
GIGABYTE			
Title			
CPU_VTT PWM ISL95870CRZ			
Size	Document Number	GA-H61M-D2H	Rev
Custom			1.0
Date:	Thursday, August 25, 2011	Sheet	27 of 33



DR84 56.2 change to 51  
DR92 2.1K change to 1K

DR52 16.2K change to 24.9K

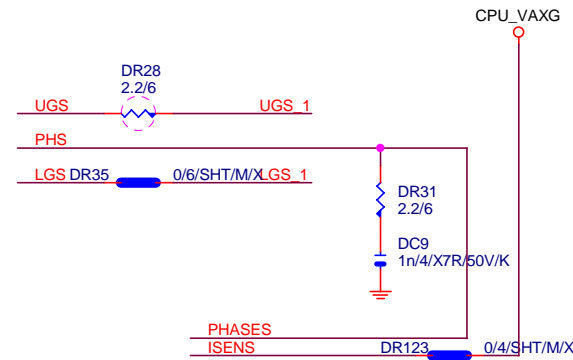
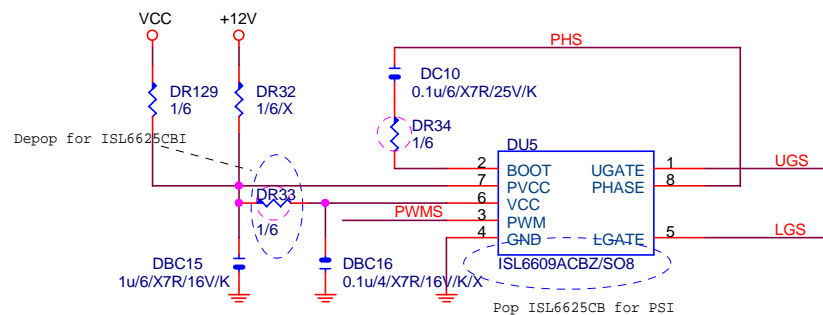
```
remove VAXG RDY
```





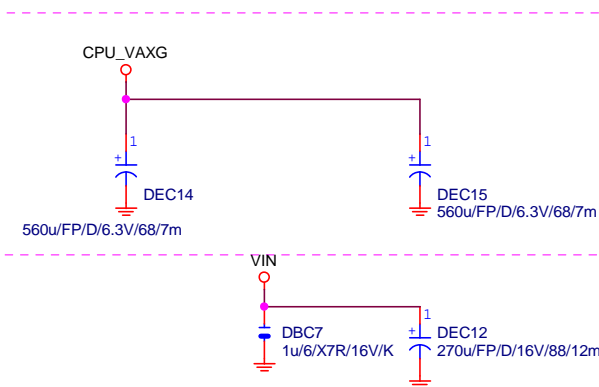
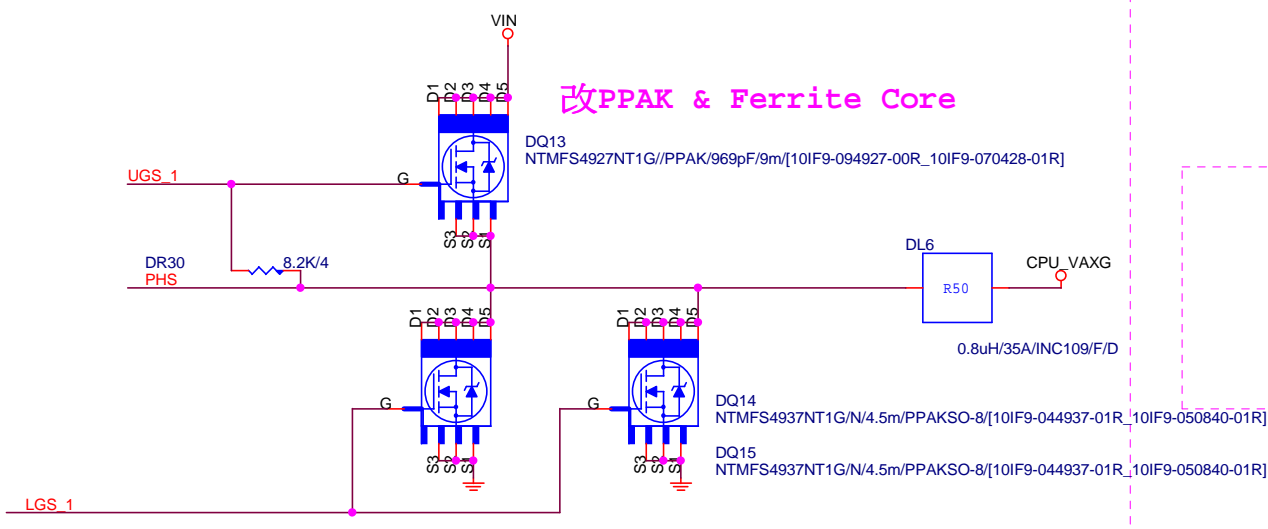
VAXG

DR33 0 change to 1  
DR34 0 change to 1  
DR28 0 change to 2.2



PWMS → PWMS [28]  
ISENS → ISENS [28]  
PHASES → PHASES [28]

改PPAK & Ferrite Core

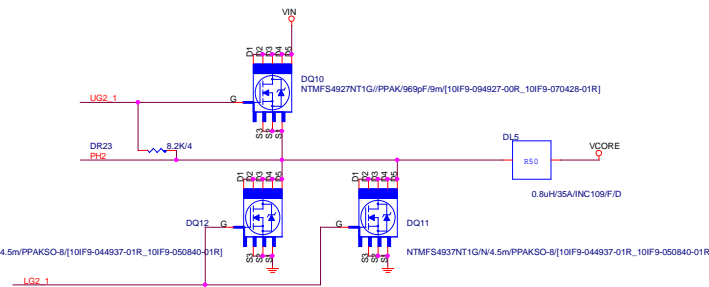
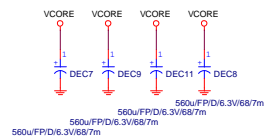
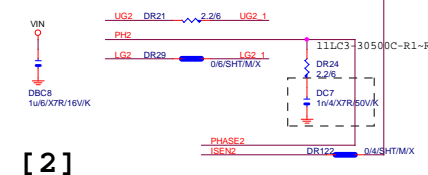
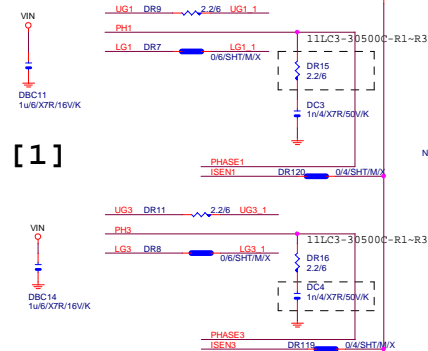
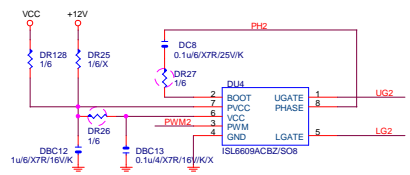
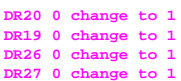
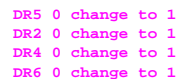



Gigabyte Technology

Title		
CPU CORE VR-2		
Size	Document Number	Rev
Custom	GA-H61M-D2H	1.0
Date:	Thursday, August 25, 2011	Sheet 29 of 33

www.vinafix.vn



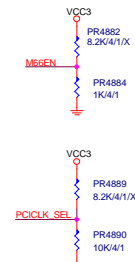
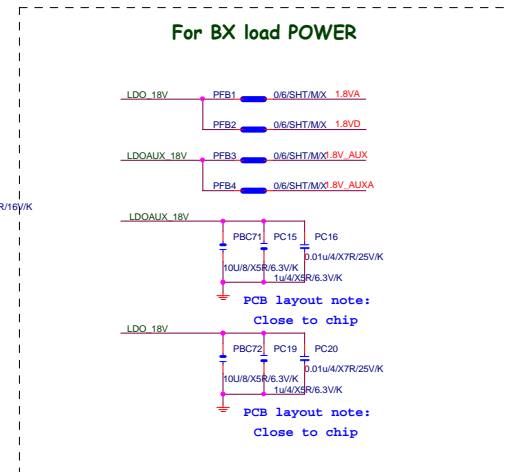


			
Title CPU CORE VR-3			
Size Custom	Document Number	GA-H61M-D2H	Rev 1.1
Date:	Thursday, August 25, 2011	Sheet	30 of 33









High: PCICLK INPUT form CLK Gen  
Low: PCICLK OUTPUT form IT8893 chip

