

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*4 SLOT
16	PCI SLOT1,2
17	ITE 8728 LPC IO
18	COM,KB_MS_USB,USB30_20
19	HWM,FAN CTRL,OV,-PROCHOT
20	DUAL BIOS
21	FP,FUSB,SPK,SATALED
22	Realtek ALC887-VD2
23	REAR AUDIO JACK
24	REALTEK RTL8111F-VL
25	DISCRETE POWER
26	ATX,CLK GEN
27	RT8120_CPU_VTT

SHEET

TITLE

28	VCORE ISL95836_1
29	VCORE ISL95836_2
30	RT8120_DDR POWER
31	LPT,TPM,M3 POWER
32	HDMI,DVI

Gigabyte Technology

Title			
Cover Sheet			
Size	Document Number	Rev	
Custom	GA-B75M-D3H	1.1	
Date:	Friday, June 08, 2012	Sheet	1 of 33

Model Name: GA-B75M-D3H

Revision 1.1

Circuit or PCB layout change

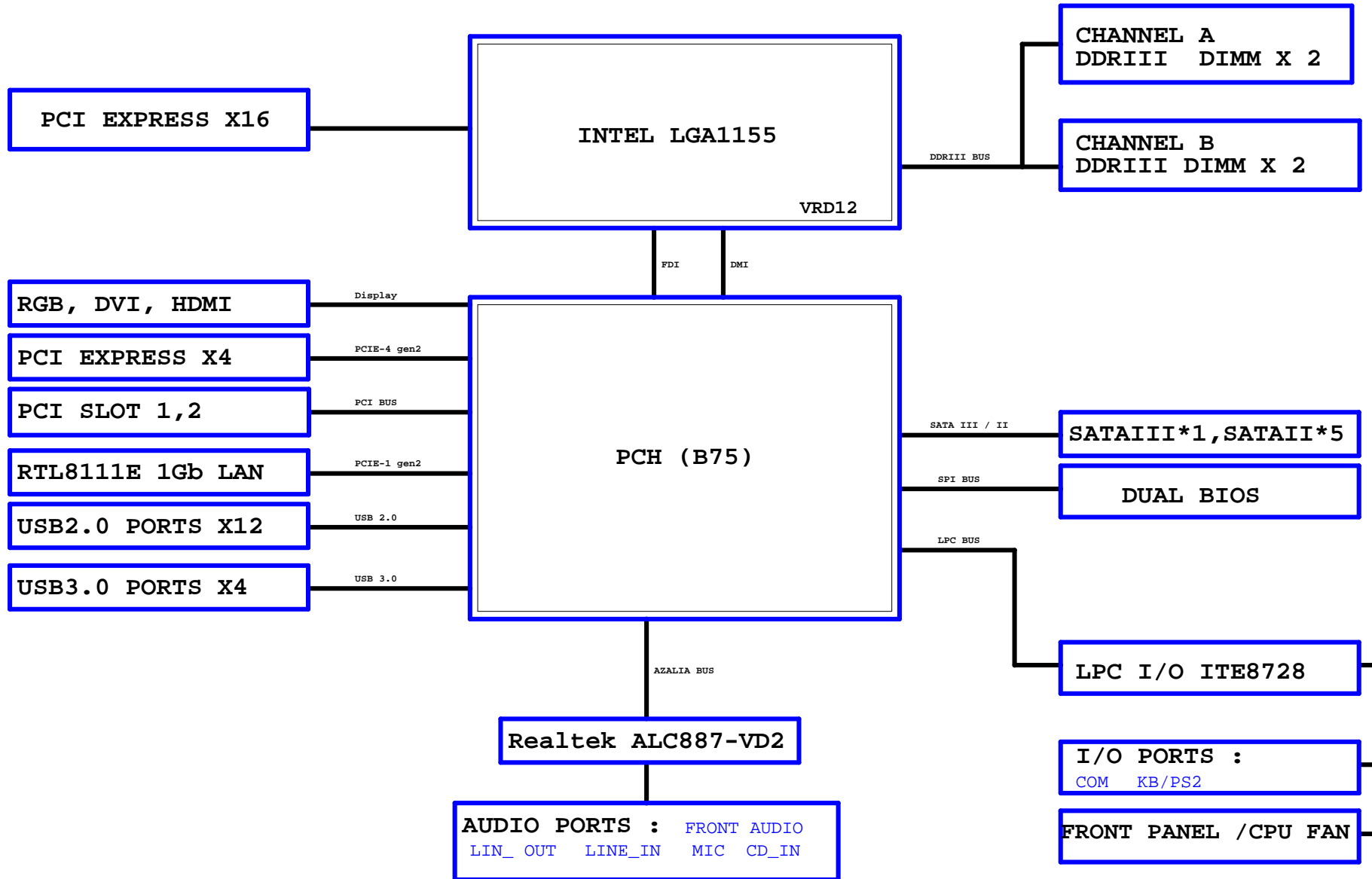
Component value change history

2012/06/01

Data	Change Item	Reason
2011/12/05	LAN Change Realtek RTL8111E	
2011/12/22	Modify to R0.2	
	ADD M3 Power	
2012/01/16	Modify to R1.0	
2012/04/26	FIX ISL95836 OVP ISSUE	9MB75MD3H-00-10C
	Modify R23, R22 (75K/15K)	
2012/05/28	Update to Rev1.1	
	F.B. 60 Ohm 0603 down size to 0402	
	ATX12V 2x2 -> 2x4	
	PWOK ADD 4.7u MLCC	
2012/05/31	PWOK ADD 0ohm Resistance	
2012/06/01	Update ATX Footprint "ATXPWR_24-6"	

DATE	Change Item	Reason

# BLOCK DIAGRAM



LGA1155 (E)

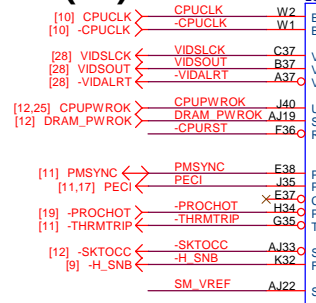
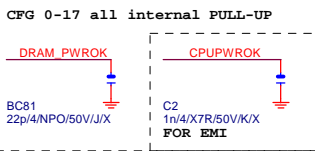
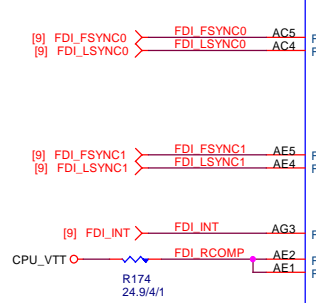


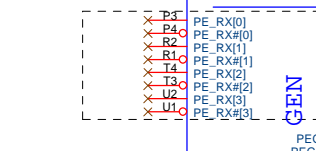
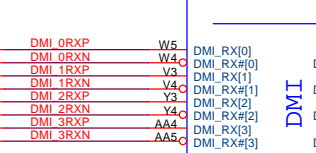
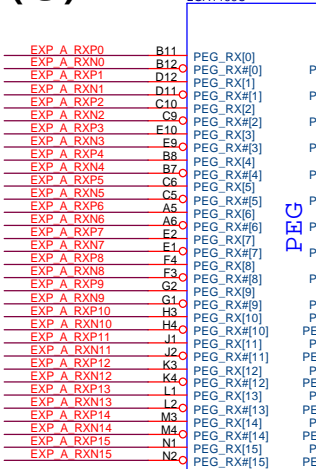
Table with columns CFG#, H, L, and NOTE. It lists configurations for RSV, NOR, and PCIE. Includes a section for PCIE CONFIG with values for 1X16, 2X8, and X8, X4, X4.



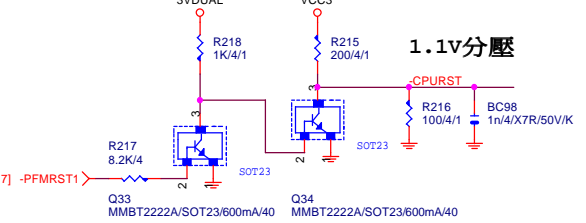
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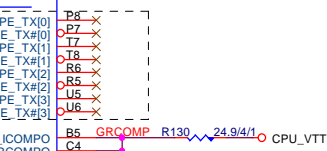
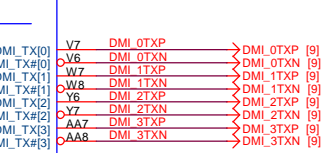
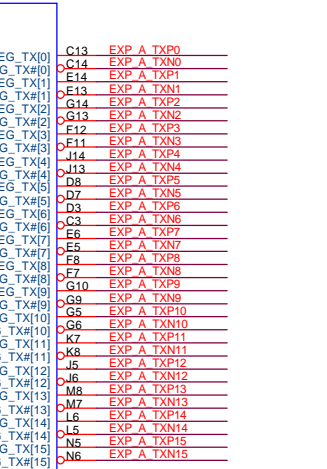
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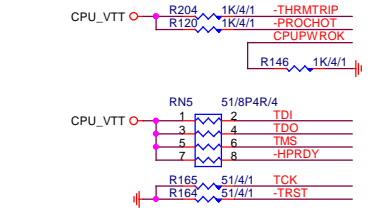
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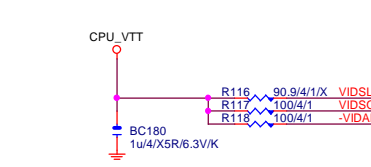
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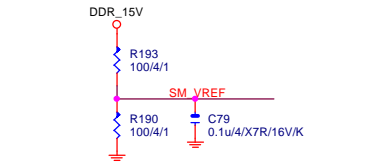
CPU PU/PD



CPU SVID



SM REF



LGA1155 (A)

LGA1155A

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MAAA1	AY24	SA_MA[1]	SA_DQS#0	AK2	-DQSA0	
MAAA2	AW24	SA_MA[2]				
MAAA3	AW23	SA_MA[3]				
MAAA4	AV23	SA_MA[4]	SA_DQ[0]	AJ3	MDA0	
MAAA5	AT24	SA_MA[5]	SA_DQ[1]	AL3	MDA1	
MAAA6	AT24	SA_MA[5]	SA_DQ[1]	AL3	MDA2	
MAAA7	AU22	SA_MA[6]	SA_DQ[2]	AL4	MDA3	
MAAA8	AV22	SA_MA[8]	SA_DQ[3]	AJ2	MDA4	
MAAA9	AT22	SA_MA[9]	SA_DQ[5]	AL1	MDA5	
MAAA10	AV28	SA_MA[10]	SA_DQ[6]	AL2	MDA6	
MAAA11	AU21	SA_MA[11]	SA_DQ[7]	AL1	MDA7	
MAAA12	AT21	SA_MA[11]				
MAAA13	AW32	SA_MA[12]	SA_DQS[1]	AP3	DQSA1	
MAAA14	AU20	SA_MA[14]	SA_DQS#1	AP2	-DQSA1	
MAAA15	AT20	SA_MA[15]				
[7]	-SWEA	AW29	SA_WE#	AN1	MDA8	
[7]	-SCASA	AV30	SA_CAS#	AN4	MDA9	
[7]	-SRASA	AU28	SA_RAS#	AR3	MDA10	
[7]	SBA0	AV29	SA_BS[0]	AN2	MDA11	
[7]	SBA1	AW28	SA_BS[1]	AN3	MDA12	
[7]	SBA2	AV20	SA_BS[2]	AN2	MDA13	
[7]	-CSA0	AU29	SA_CS#0	AN2	MDA14	
[7]	-CSA1	AV24	SA_CS#1	AN3	MDA15	
[7]	-CSA2	AW30	SA_CS#2	AR1	MDA15	
[7]	-CSA3	AU33	SA_CS#3	AW4	DQSA2	
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[7]	CKEA0	AV19	SA_CKE[0]	AV2	MDA16	
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[7]	CKEA3	AV18	SA_CKE[3]	AW5	MDA19	
[7]	CKEA3	AV18	SA_CKE[3]	AU2	MDA20	
[7]	CKEA3	AV18	SA_CKE[3]	AU2	MDA21	
[7]	CKEA3	AV18	SA_CKE[3]	AU5	MDA22	
[7]	CKEA3	AV18	SA_CKE[3]	AY5	MDA23	
[7]	CKEA3	AV18	SA_CKE[3]	AV8	DQSA3	
[7]	CKEA3	AV18	SA_CKE[3]	AW8	-DQSA3	
[7]	DCLKA0	AY25	SA_CK[0]	AY7	MDA24	
[7]	-DCLKA0	AW25	SA_CK#0	AU7	MDA25	
[7]	DCLKA1	AU24	SA_CK[1]	AV9	MDA26	
[7]	-DCLKA1	AU25	SA_CK#1	AU9	MDA27	
[7]	DCLKA2	AW27	SA_CK[2]	AV7	MDA28	
[7]	-DCLKA2	AY27	SA_CK#2	AW7	MDA29	
[7]	DCLKA3	AV26	SA_CK[3]	AW9	MDA30	
[7]	-DCLKA3	AW26	SA_CK#3	AY9	MDA31	
[7]	-DCLKA3	AW26	SA_CK#3	AV37	DQSA4	
[7]	-DCLKA3	AW26	SA_CK#3	AV36	-DQSA4	
[7,8]	-DDR3_RST	AW18	SM_DRAMRST#	SA_DQ[32]	AU35	MDA32
[7]	DCLKA0	AY25	SA_CK[0]	SA_DQ[33]	AW37	MDA33
[7]	-DCLKA0	AW25	SA_CK#0	AU39	MDA34	
[7]	DCLKA1	AU24	SA_CK[1]	SA_DQ[34]	AU36	MDA35
[7]	-DCLKA1	AU25	SA_CK#1	SA_DQ[35]	AW35	MDA36
[7]	DCLKA2	AW27	SA_CK[2]	SA_DQ[36]	AW35	MDA36
[7]	-DCLKA2	AY27	SA_CK#2	SA_DQ[37]	AY36	MDA37
[7]	DCLKA3	AV26	SA_CK[3]	SA_DQ[38]	AU38	MDA38
[7]	-DCLKA3	AW26	SA_CK#3	SA_DQ[39]	AU37	MDA39
[7]	-DCLKA3	AW26	SA_CK#3	SA_DQS[5]	AP38	DQSA5
[7]	-DCLKA3	AW26	SA_CK#3	SA_DQS#5	AP39	-DQSA5
[7]	-DCLKA3	AW26	SA_CK#3	SA_DQ[40]	AR40	MDA40
[7]	-DCLKA3	AW26	SA_CK#3	SA_DQ[41]	AR37	MDA41
[7]	-DCLKA3	AW26	SA_CK#3	SA_DQ[42]	AN38	MDA42
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[7]	-DCLKA3	AW26	SA_CK#3	SA_DQ[44]	AR39	MDA44
[7]	-DCLKA3	AW26	SA_CK#3	SA_DQ[45]	AR38	MDA45
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[7]	-DCLKA3	AW26	SA_CK#3	SA_DQ[62]	AE39	MDA62
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DDR\_0

1 OF 10

LGA1155[10SC1-F01155-21R\_10SC1-F01155-22R]

LGA1155 (B)

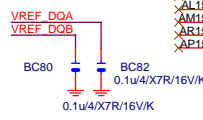
LGA1155B

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MAA3	AK18	SB_MA[3]				
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MAA5	AM18	SB_MA[5]	SB_DQ[1]	AG8	MDB1	
MAA6	AM18	SB_MA[5]	SB_DQ[1]	AG8	MDB2	
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MAA10	AN23	SB_MA[10]	SB_DQ[6]	AJ6	MDB7	
MAA11	AU17	SB_MA[11]	SB_DQ[7]	AJ7	MDB7	
MAA12	AT18	SB_MA[11]				
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MAA14	AY16	SB_MA[14]	SB_DQS#1	AL8	-DQSB1	
MAA15	AV16	SB_MA[15]				
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[8]	-SCASB	-SCASB	SB_CAS#	AM7	MDB9	
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[8]	SBA2	SBA2	SB_BS[2]	SB_DQ[12]	AM6	MDB13
[8]	-CSB0	-CSB0	SB_CS#0	SB_DQ[13]	AL9	MDB14
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DDR\_1

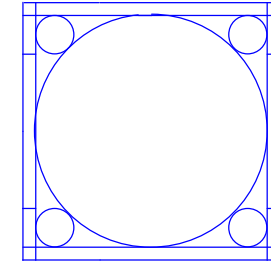
2 OF 10

LGA1155[10SC1-F01155-21R\_10SC1-F01155-22R]



LGA1155 (CR)

CR CPU RETENTION X



LGA1155\_P

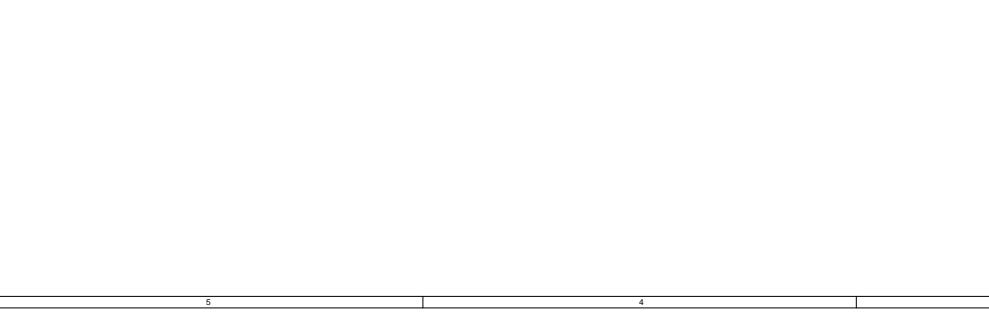
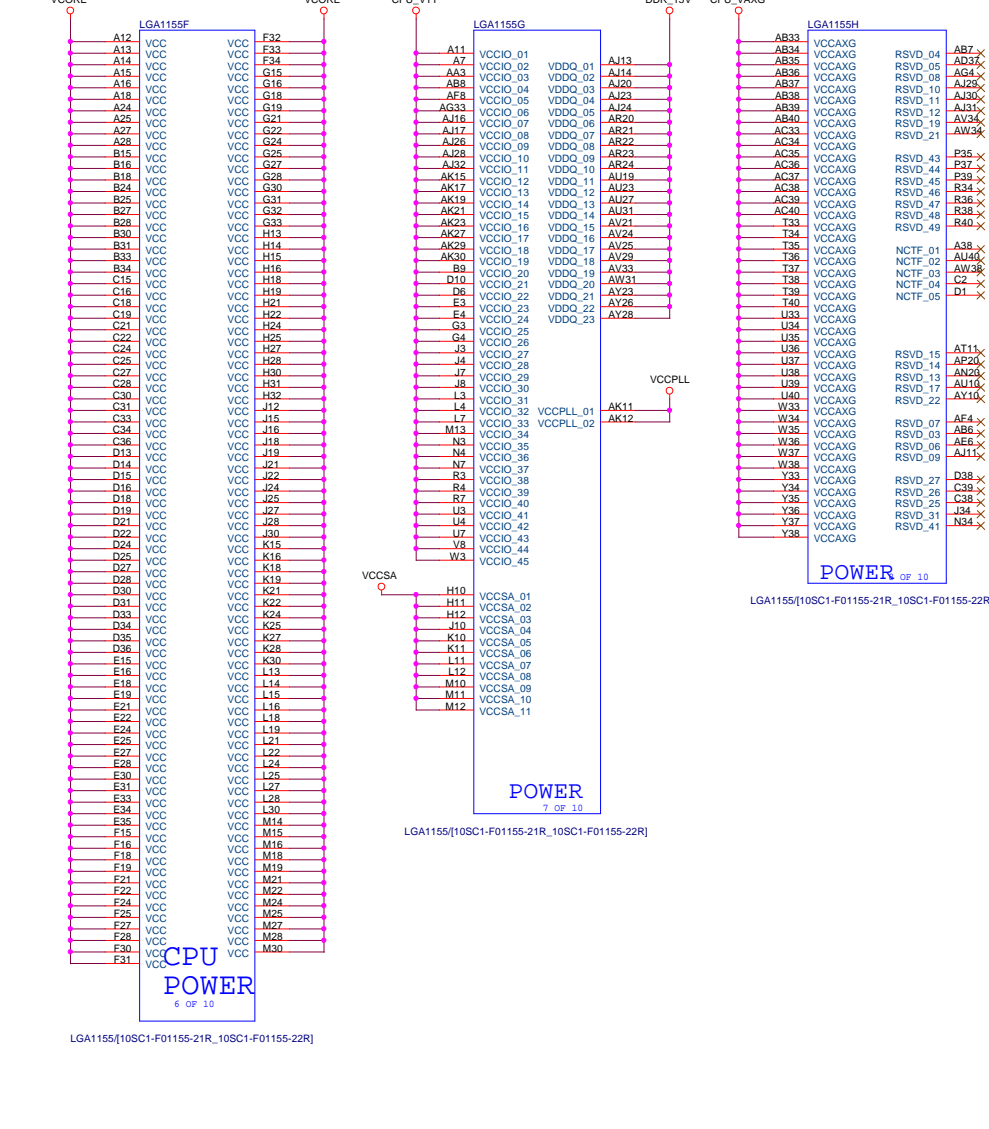


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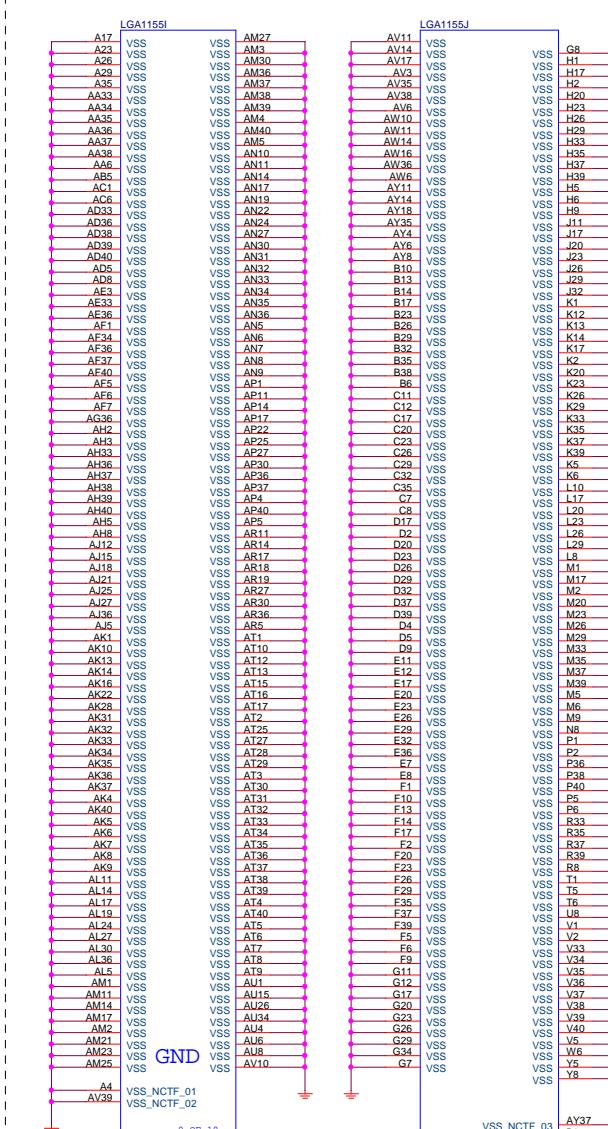
**Gigabyte Technology**

Title		
CPU LGA1156-B		
Size	Document Number	Rev
Custom	<b>GA-B75M-D3H</b>	<b>1.1</b>
Date:	Friday, June 08, 2012	Sheet 5 of 33

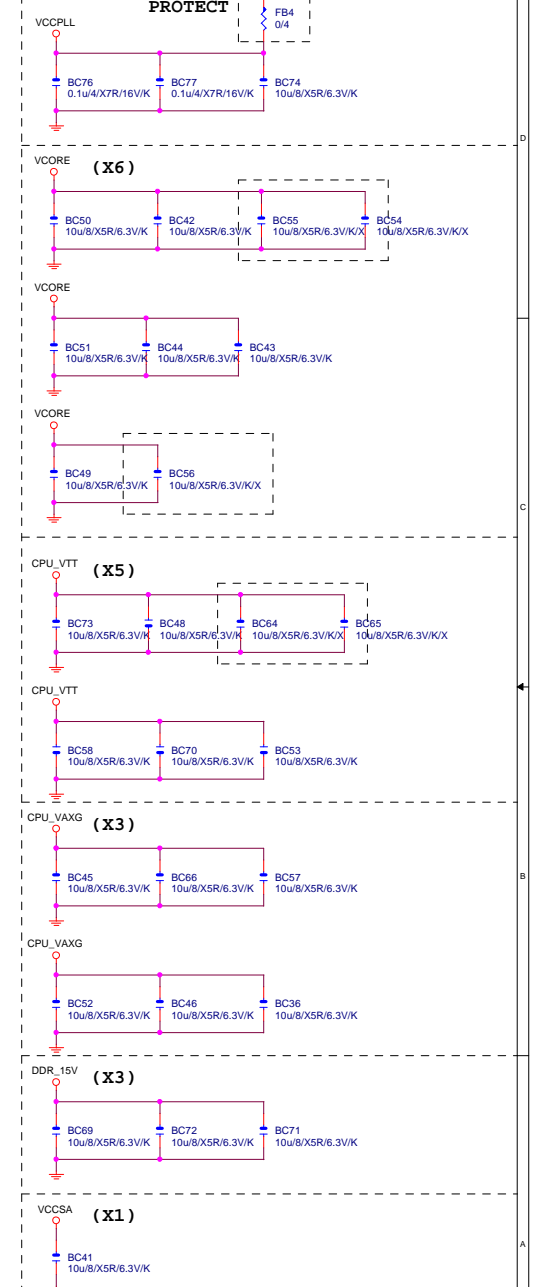
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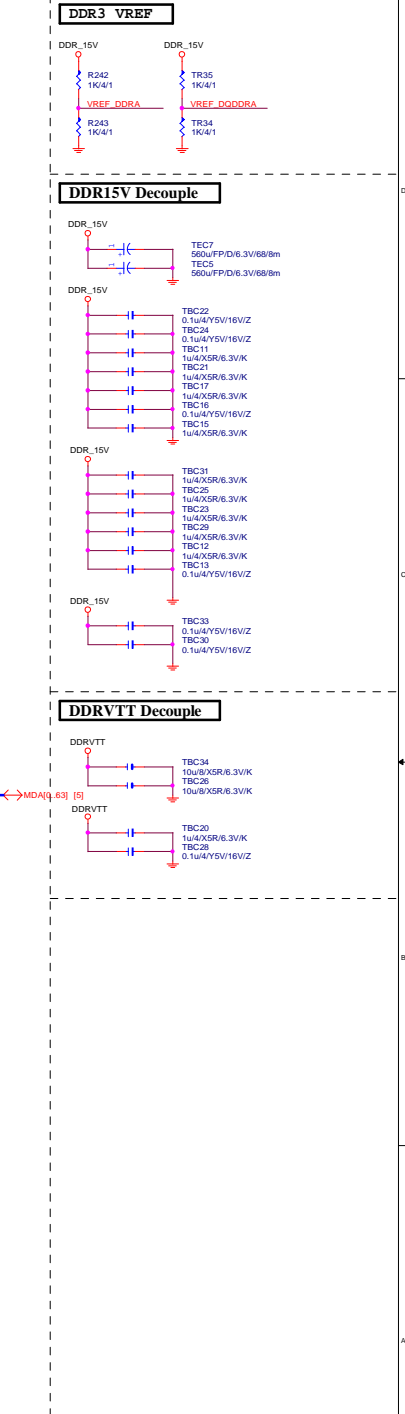
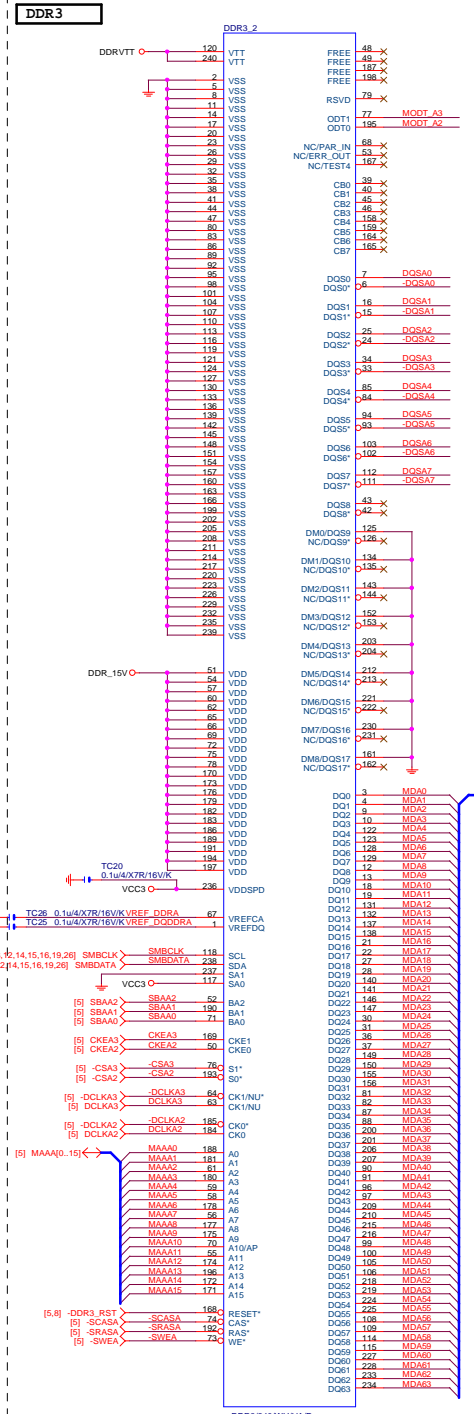
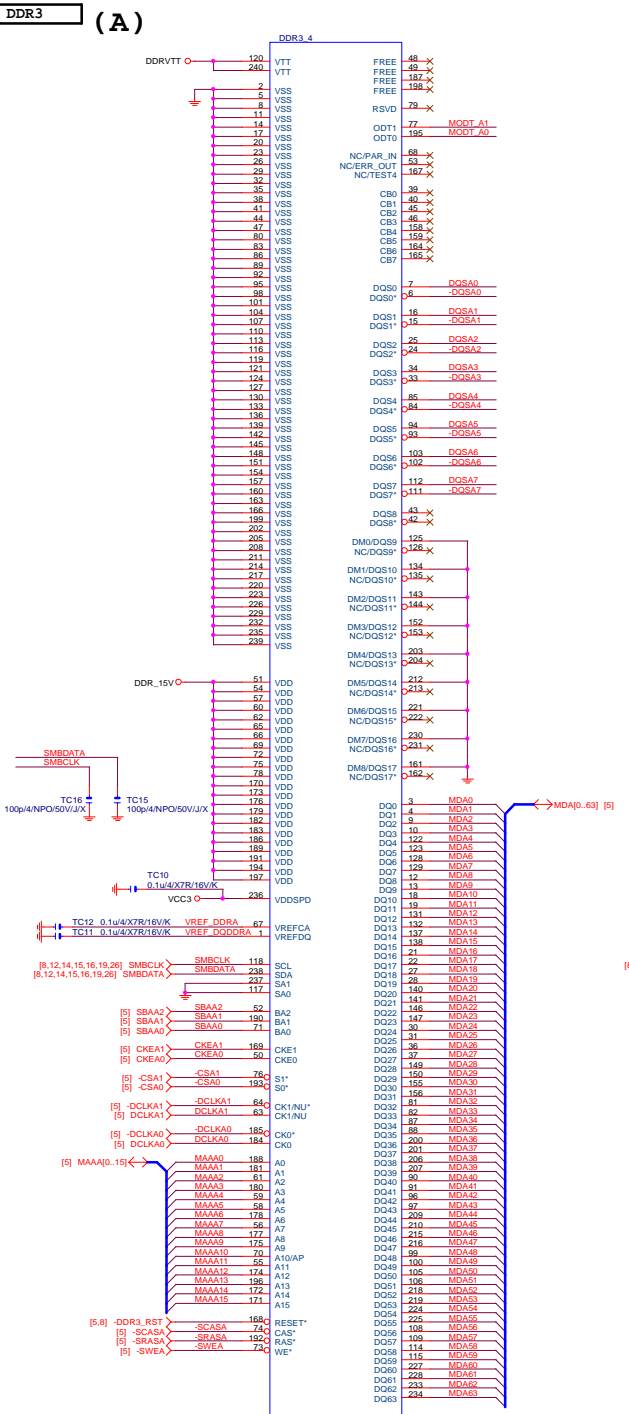


**LGA1155 (I, J)**

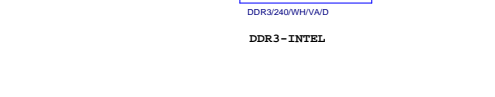
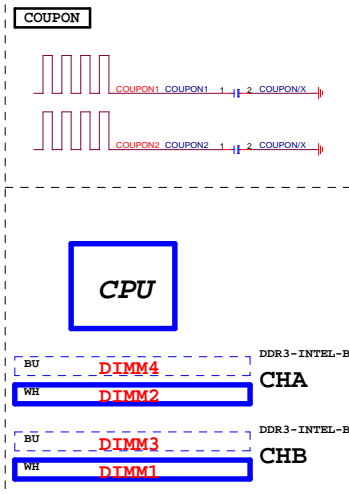
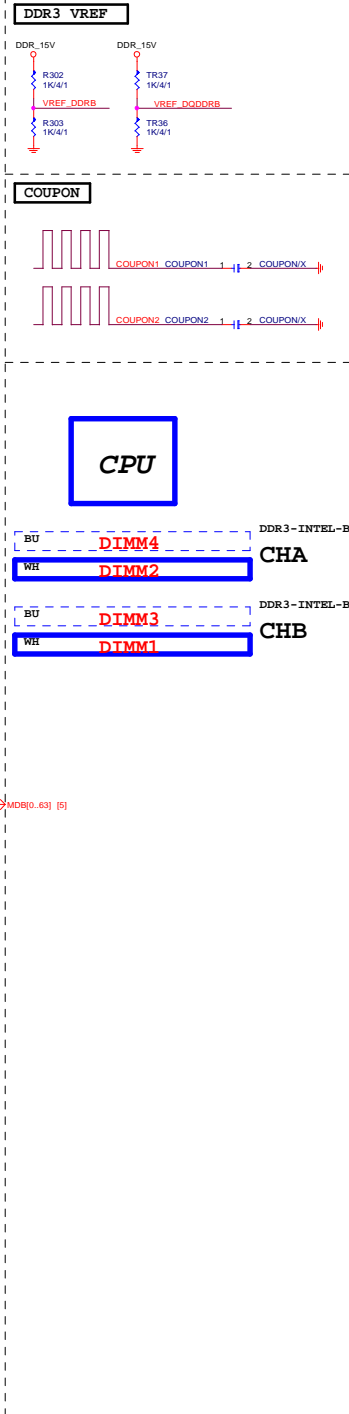
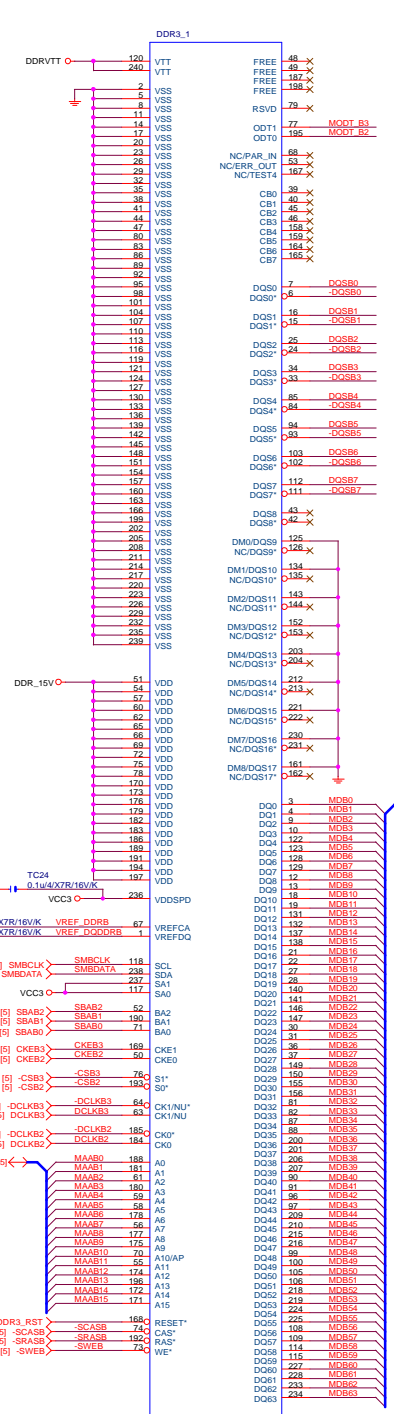
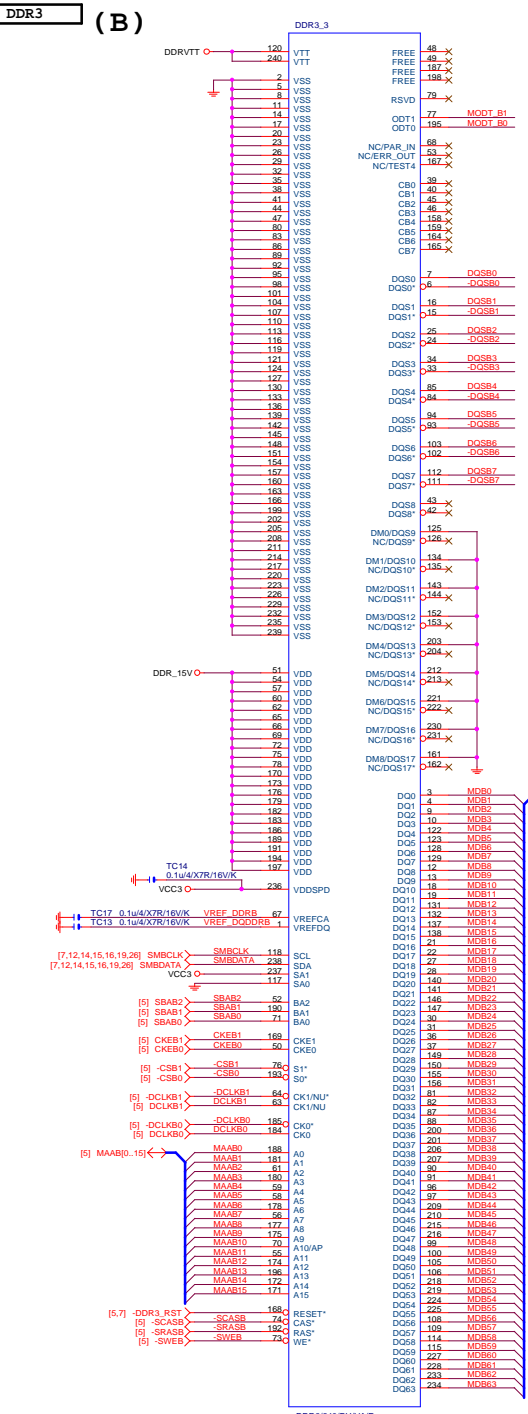


**CAP**









**Gigabyte Technology**

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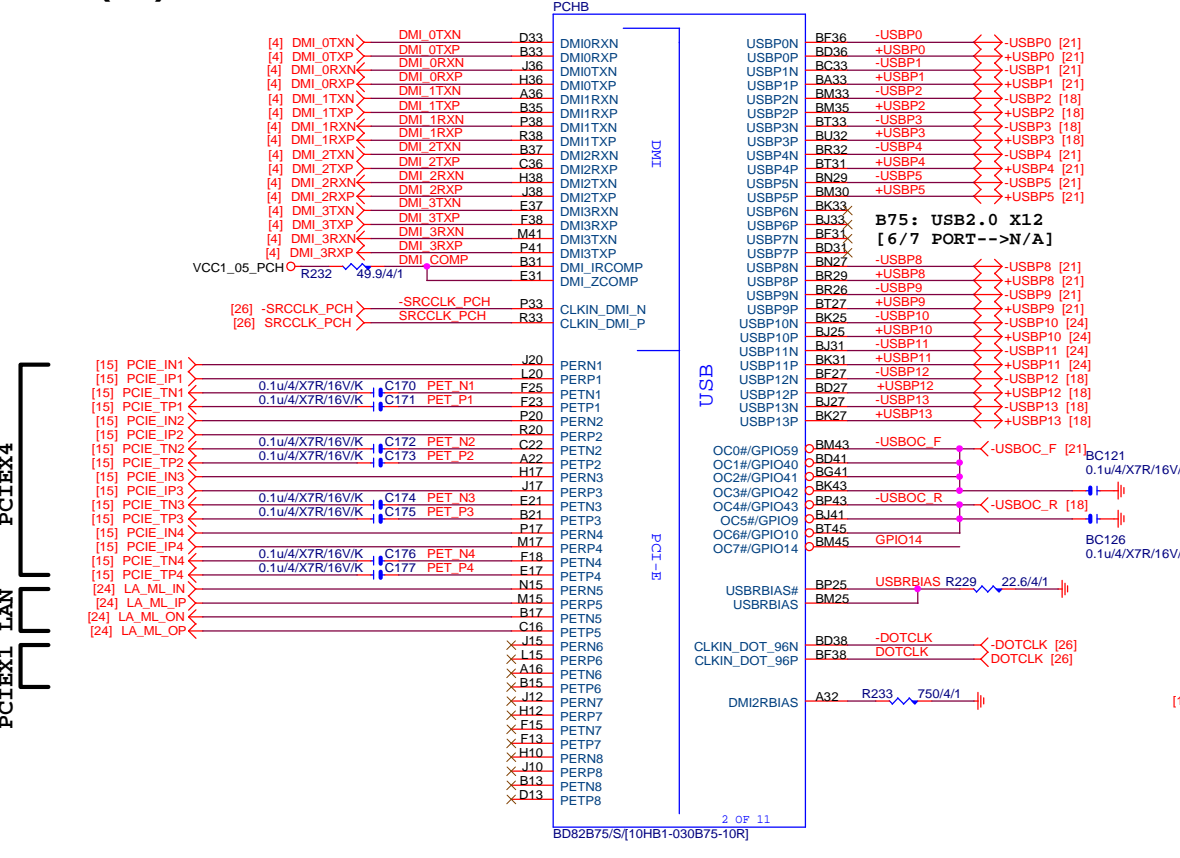
Size: **GA-B75M-D3H**

Rev: **1.1**

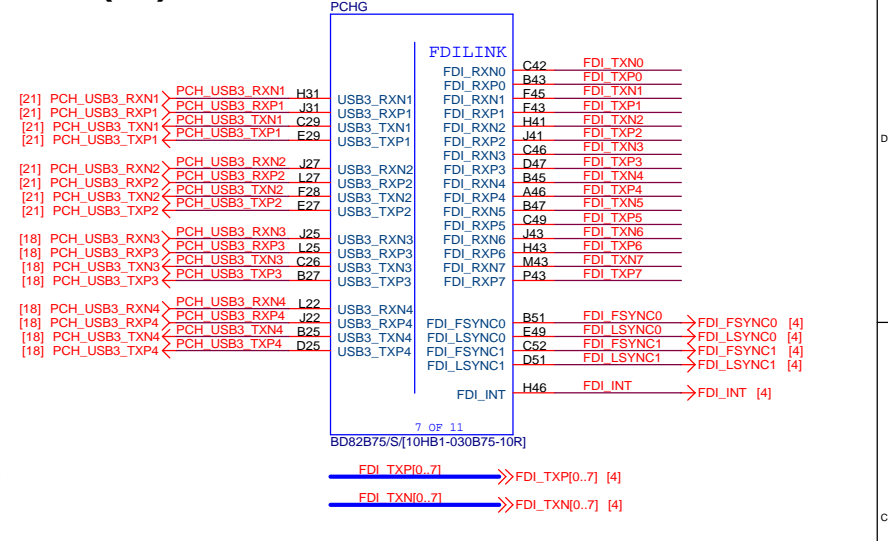
Date: Sheet: 1 of 33



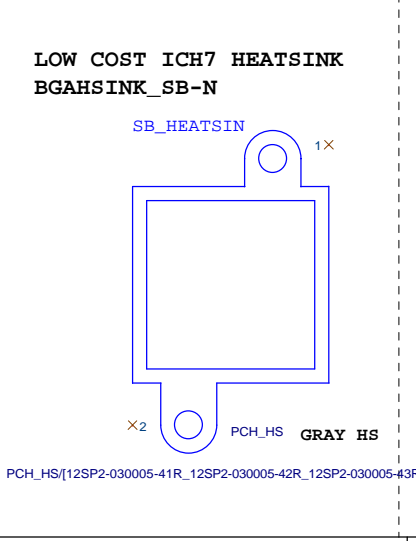
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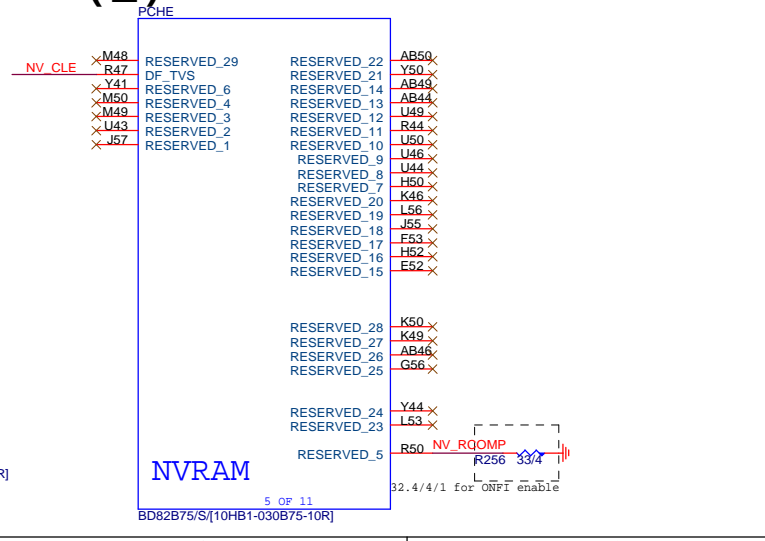
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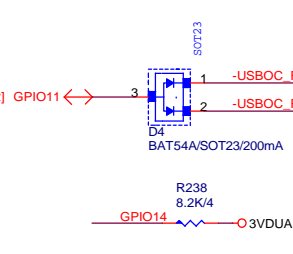
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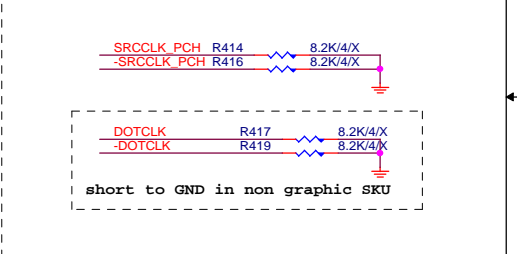
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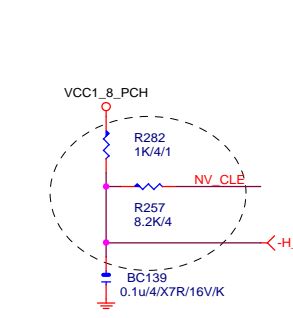
**-USBOC F/R PROTECT**



**PCH CLK PD**



**NVRAM PU**



**USB TABLE**

USB OC#	Configure
OC0#	USB0_1 (F_USB30)
OC1#	USB2_3 (USB30_20)
OC2#	USB4_5 (F_USB1)
OC3#	USB6_7 (B75:N/A)
OC4#	USB8_9 (F_USB2)
OC5#	USB10_11 (USB_LAN)
OC6#	USB12_13 (KB_USB)
OC7#	N/A

**Gigabyte Technology**

File: PCH FDI,DMI,USB ,PCIE,NVRAM

Size: Custom

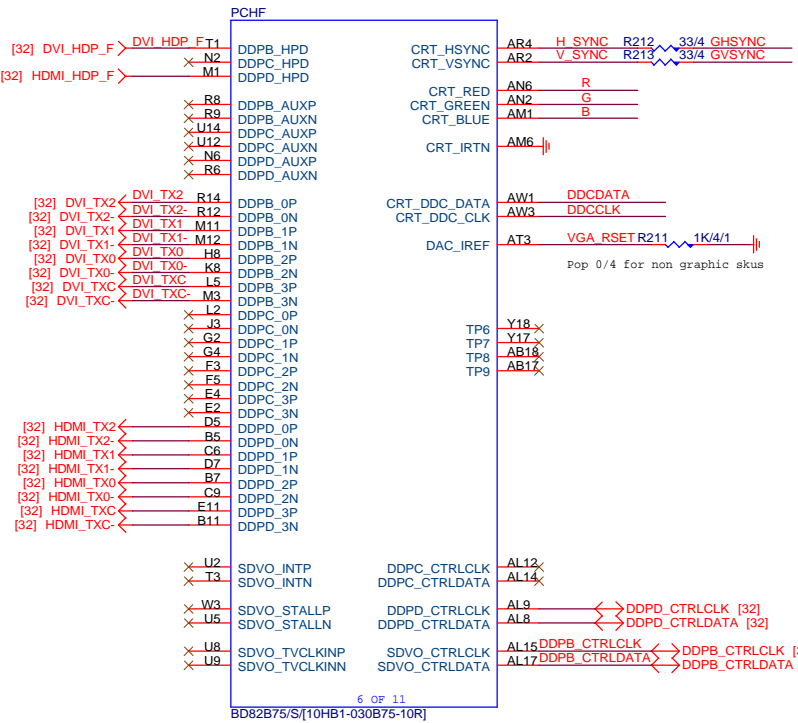
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Date: Friday, June 08, 2012

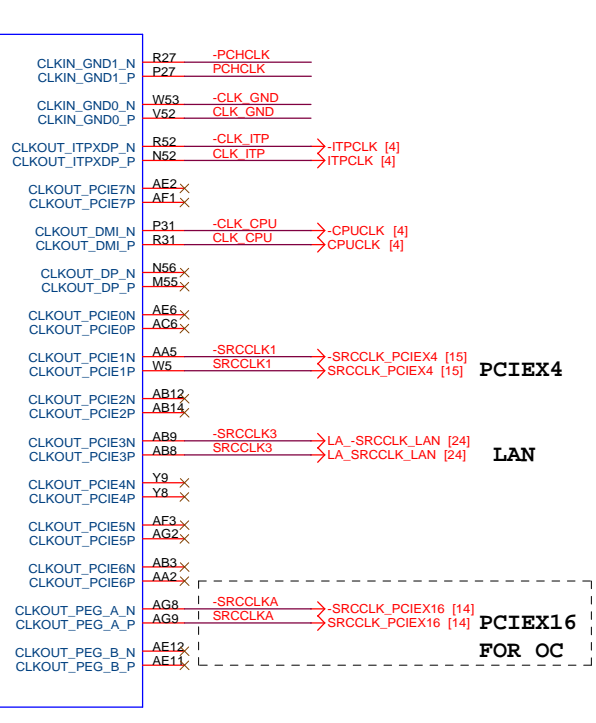
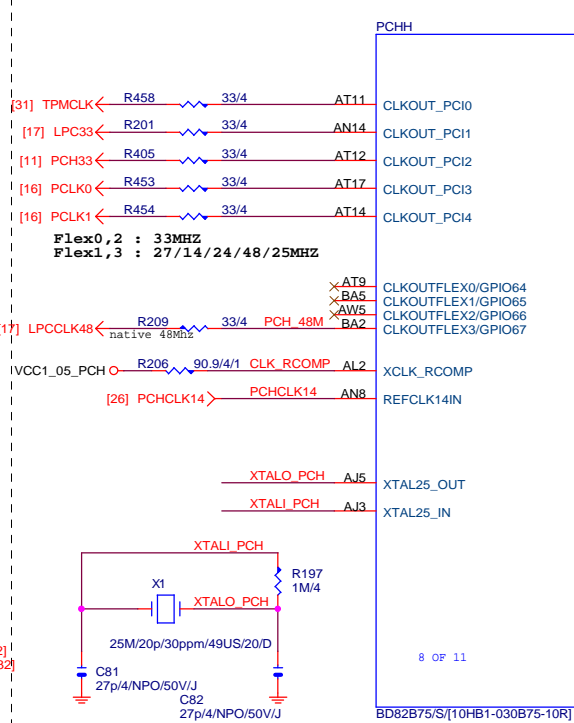
Sheet: 9 of 33

Rev: 1.1

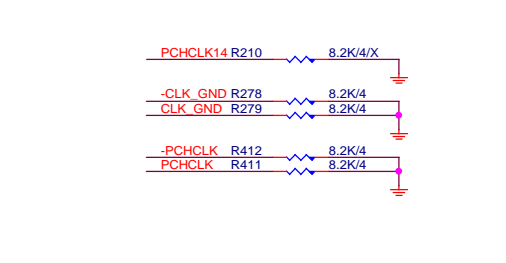
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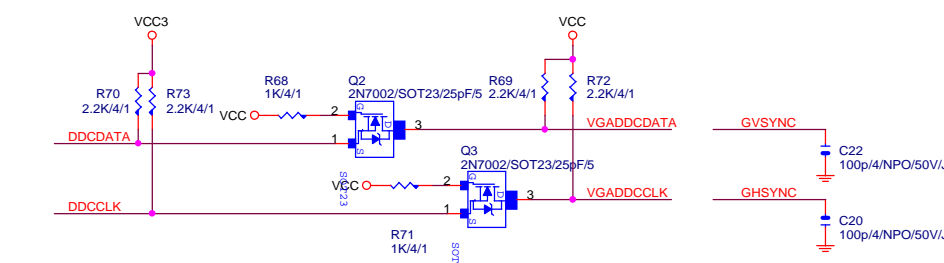
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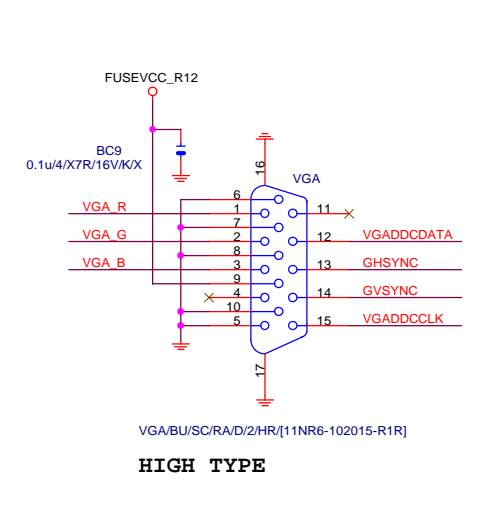
**PCH CLK PD**



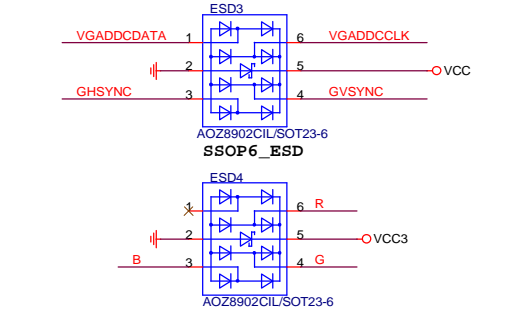
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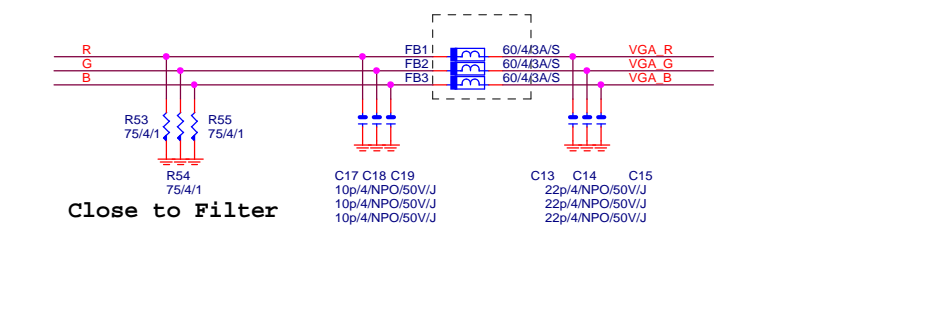
**VGA CONNECTOR**



**VGA ESD**



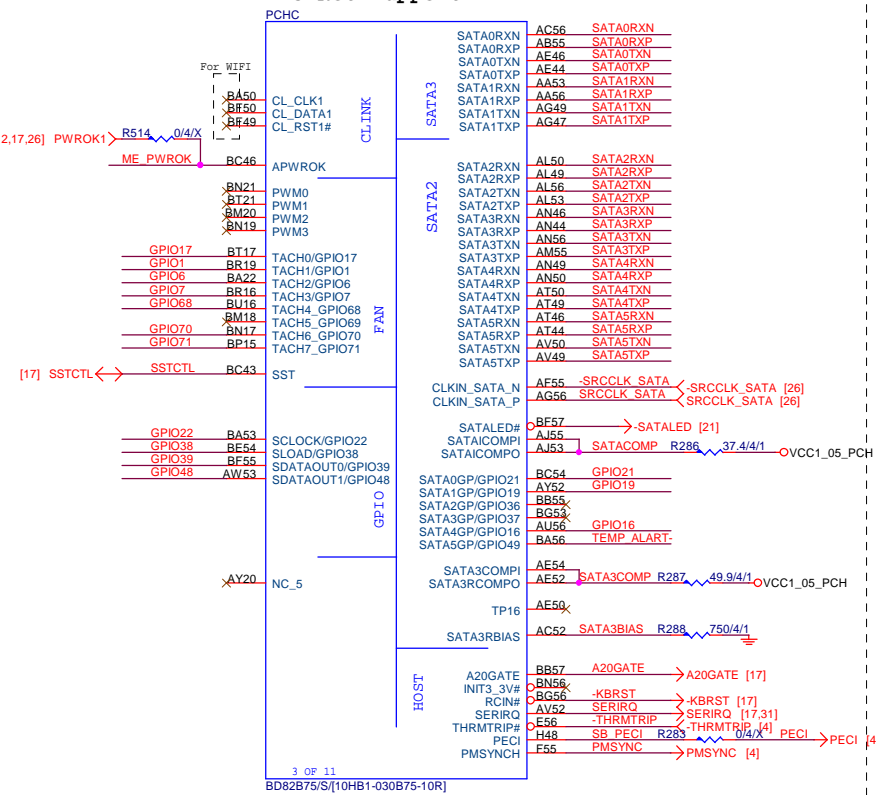
**VGA DDC**



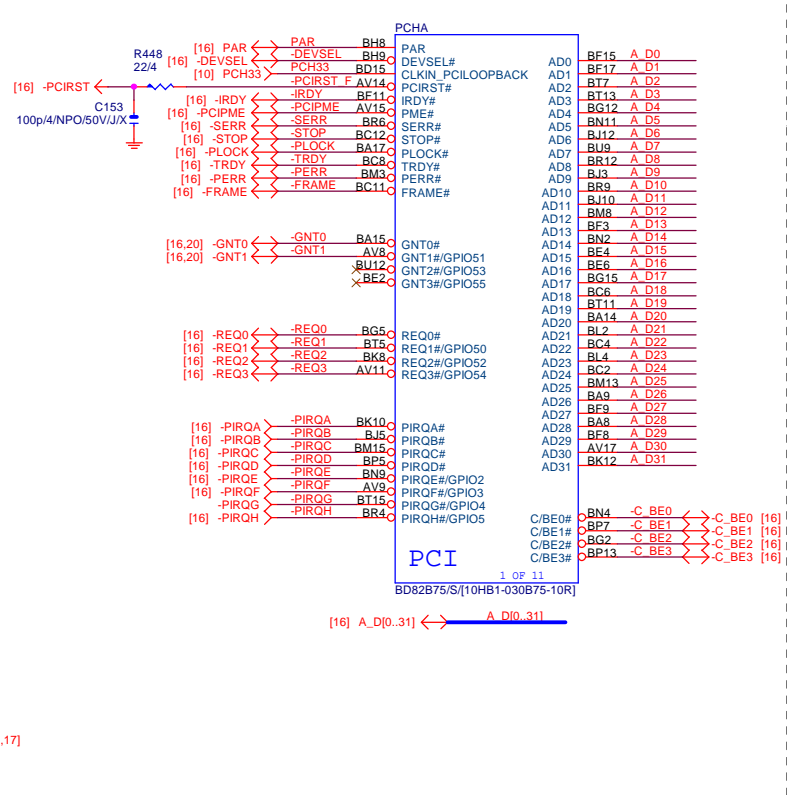
<b>Gigabyte Technology</b>	
Title <b>PCH DISPLAY , CLK BUFFER</b>	
Size Custom	Document Number <b>GA-B75M-D3H</b>
Date: Friday, June 08, 2012	Rev 1.1

**PCH (C)**

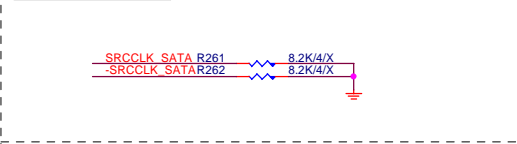
**B75 SATA3.0 ONLY PORT0**  
**B75 Not Support RAID**



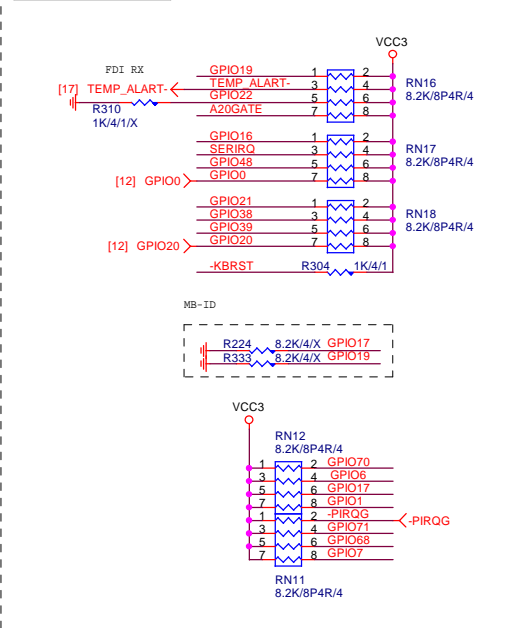
**PCH (A)**



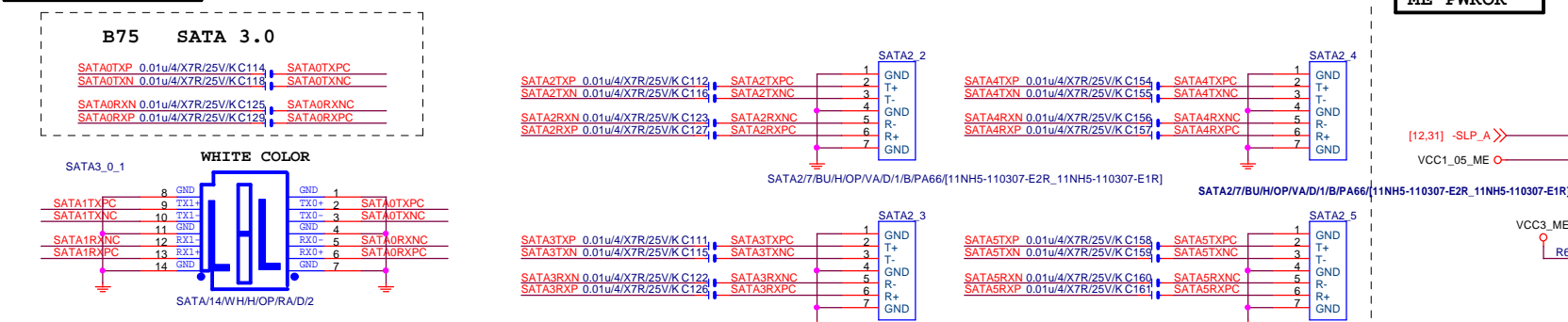
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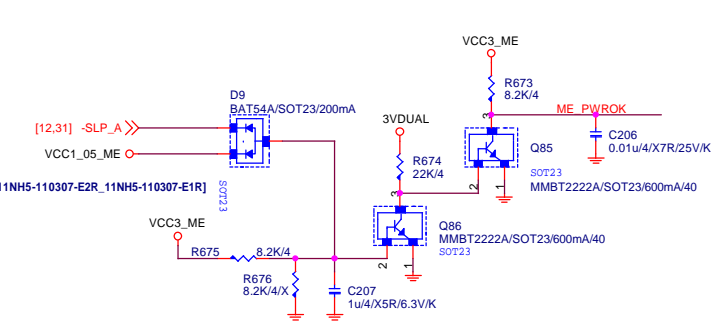
**PCH PU/PD**



**SATA CONNECTOR H1X7-SATA2-HS-MASK**



**ME PWROK**

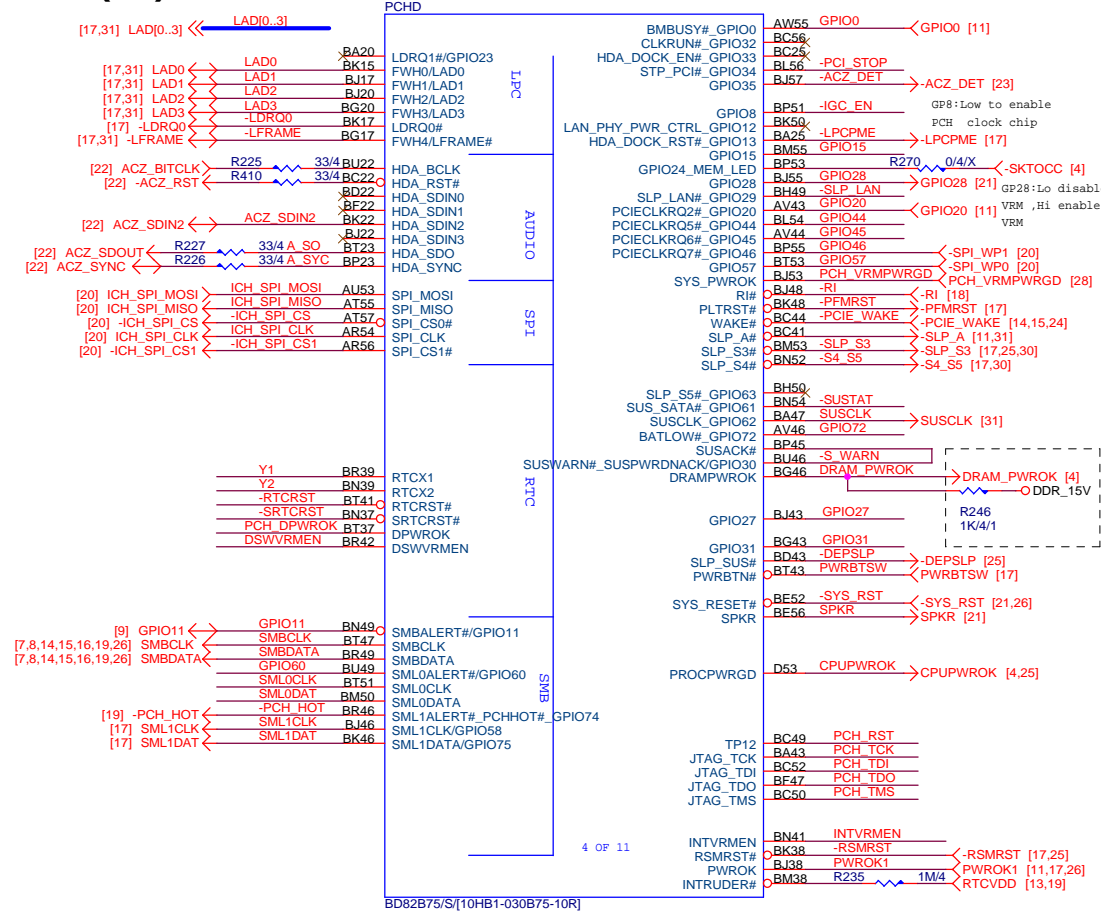


**Gigabyte Technology**

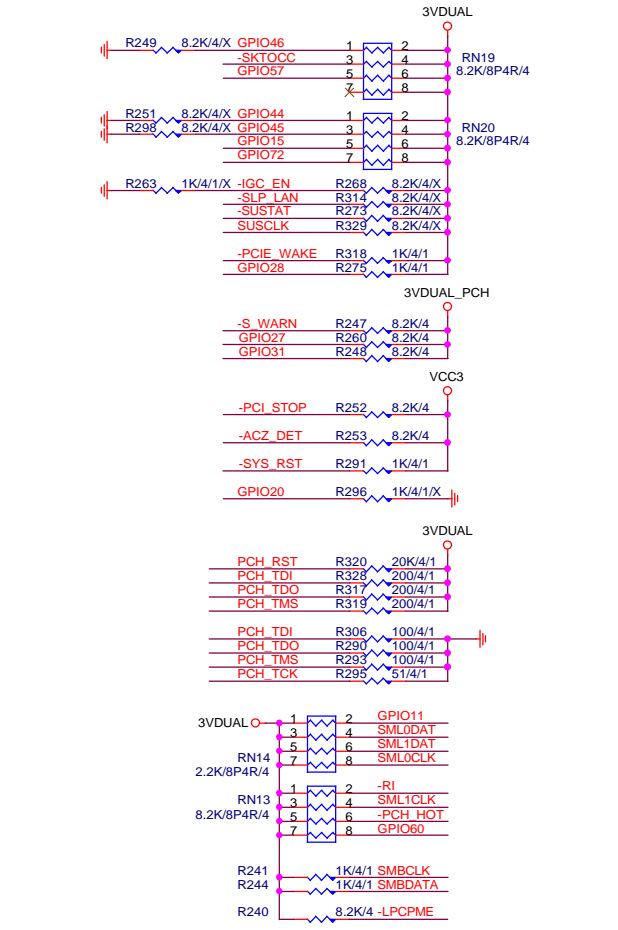
**PCH HOST , SATA, PCI**  
**GA-B75M-D3H**

Title	PCH HOST , SATA, PCI		
Size	Document Number	<b>GA-B75M-D3H</b>	
Custpm		Rev	1.1
Date:	Friday, June 08, 2012	Sheet	11 of 33

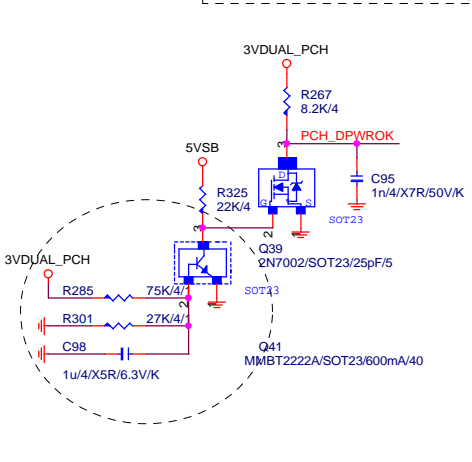
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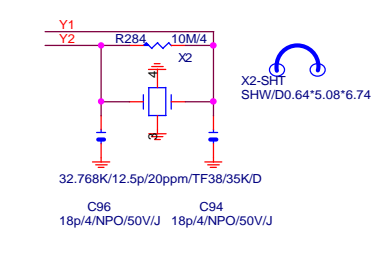
# PCH PU/PD



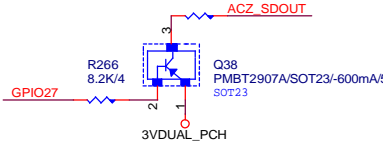
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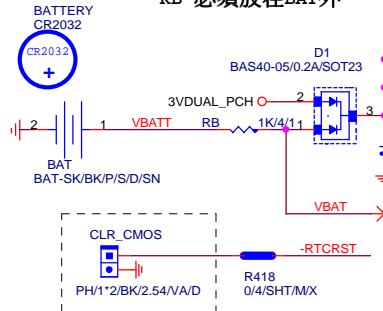
## 32.768KHZ



## ACZ\_SDOUT

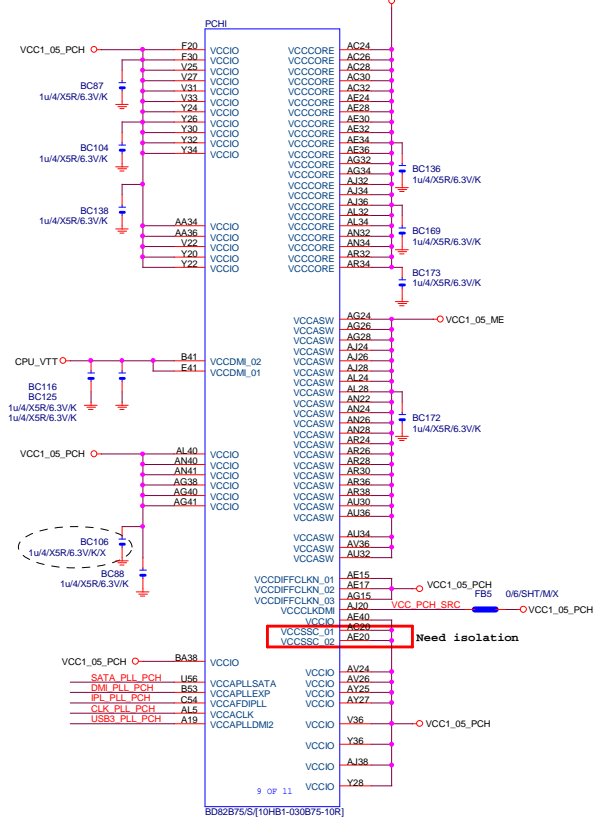


## CLR\_CMOS

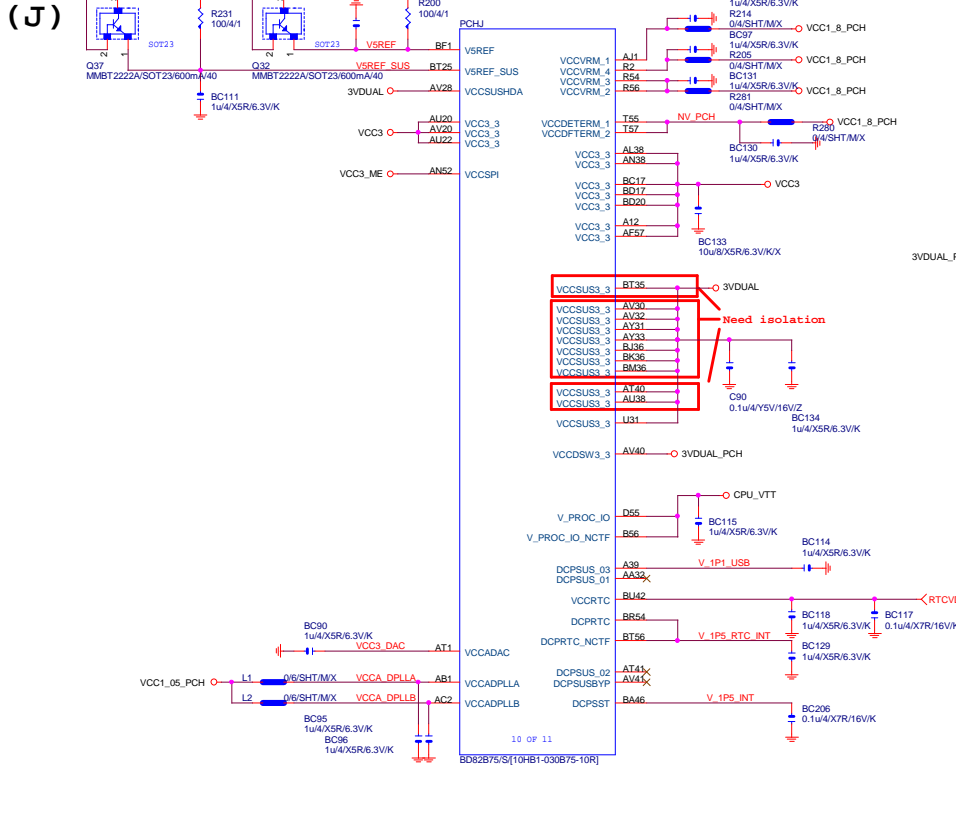


Gigabyte Technology		
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Size	Document Number	Rev
Custpm	<b>GA-B75M-D3H</b>	<b>1.1</b>
Date:	Friday, June 08, 2012	Sheet 12 of 33

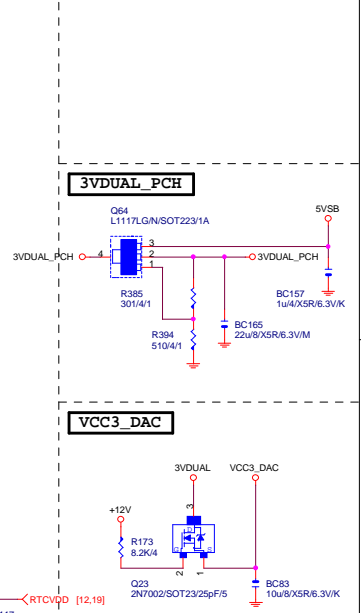
# PCH (I)



# PCH (J)



# SHT PWR

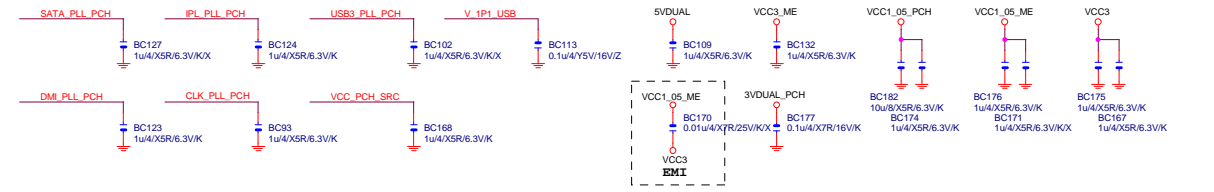


3VDUAL\_PCH

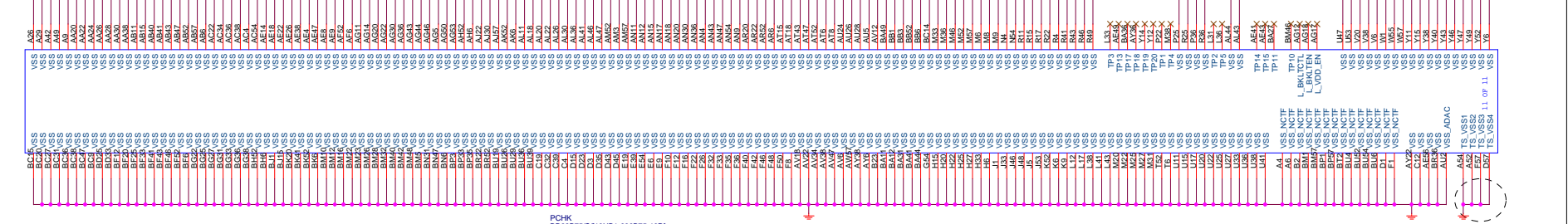
VCC3\_DAC



# CAP



# PCH (I)

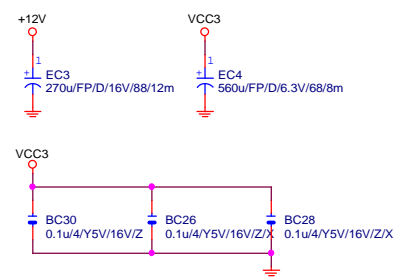


Gigabyte Technology

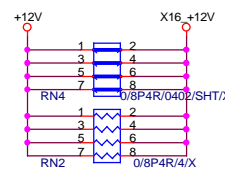
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Document Number		Rev
GA-B75M-D3H		1.1
Date	Sheet	of
Friday, June 08, 2012	13	33



**PCIEX16 CAP**



**PCIEX16 PROTECT SHT**

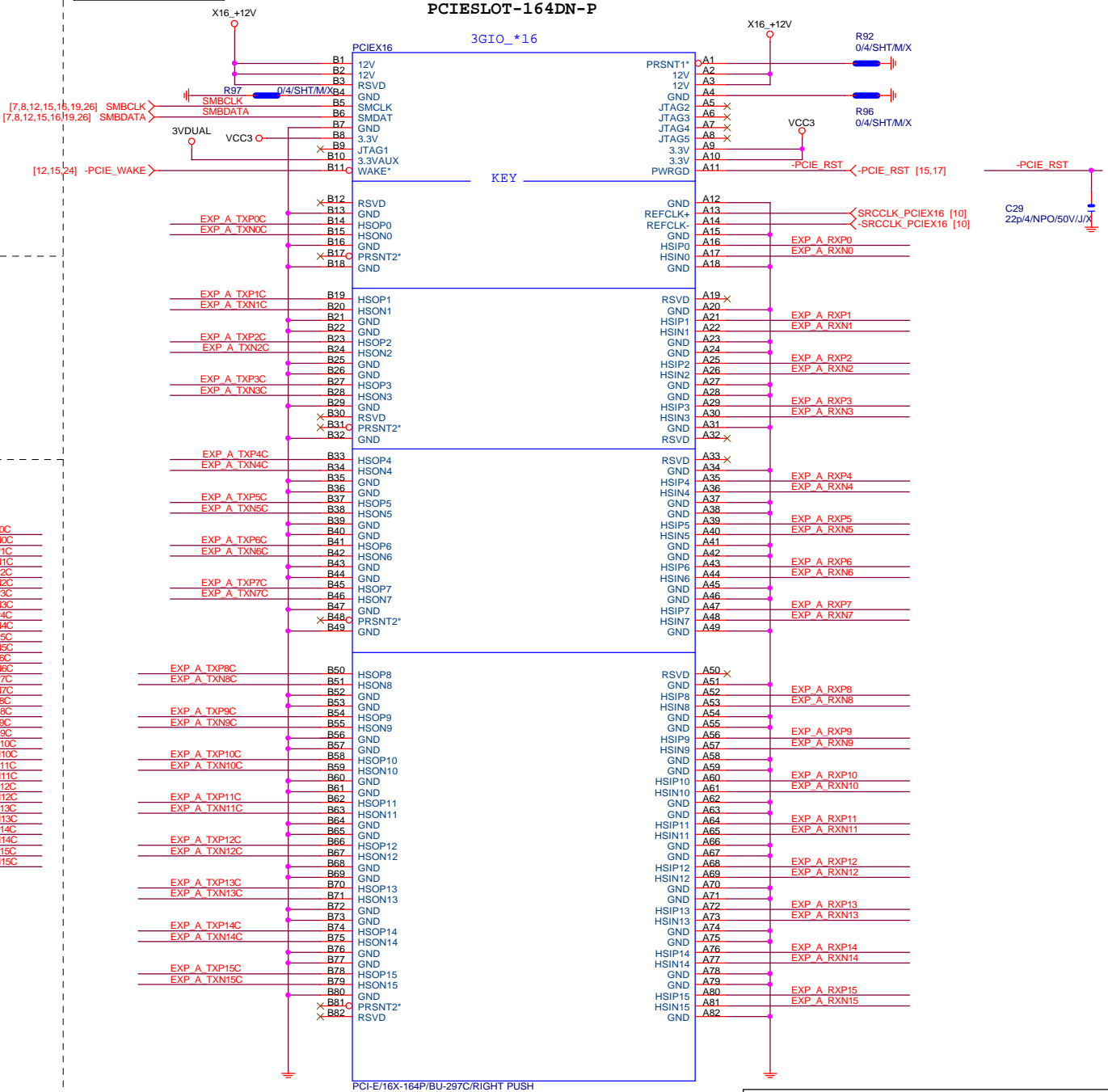


**PCIEX16 AC CAP**

EXP_A_TXP0	C32	0.22u/4X5R/6.3V/K	EXP_A_TXP0C
EXP_A_TXN0	C30	0.22u/4X5R/6.3V/K	EXP_A_TXN0C
EXP_A_TXP1	C35	0.22u/4X5R/6.3V/K	EXP_A_TXP1C
EXP_A_TXN1	C37	0.22u/4X5R/6.3V/K	EXP_A_TXN1C
EXP_A_TXP2	C39	0.22u/4X5R/6.3V/K	EXP_A_TXP2C
EXP_A_TXN2	C41	0.22u/4X5R/6.3V/K	EXP_A_TXN2C
EXP_A_TXP3	C43	0.22u/4X5R/6.3V/K	EXP_A_TXP3C
EXP_A_TXN3	C45	0.22u/4X5R/6.3V/K	EXP_A_TXN3C
EXP_A_TXP4	C46	0.22u/4X5R/6.3V/K	EXP_A_TXP4C
EXP_A_TXN4	C49	0.22u/4X5R/6.3V/K	EXP_A_TXN4C
EXP_A_TXP5	C50	0.22u/4X5R/6.3V/K	EXP_A_TXP5C
EXP_A_TXN5	C51	0.22u/4X5R/6.3V/K	EXP_A_TXN5C
EXP_A_TXP6	C52	0.22u/4X5R/6.3V/K	EXP_A_TXP6C
EXP_A_TXN6	C54	0.22u/4X5R/6.3V/K	EXP_A_TXN6C
EXP_A_TXP7	C57	0.22u/4X5R/6.3V/K	EXP_A_TXP7C
EXP_A_TXN7	C58	0.22u/4X5R/6.3V/K	EXP_A_TXN7C
EXP_A_TXP8	C60	0.22u/4X5R/6.3V/K	EXP_A_TXP8C
EXP_A_TXN8	C61	0.22u/4X5R/6.3V/K	EXP_A_TXN8C
EXP_A_TXP9	C62	0.22u/4X5R/6.3V/K	EXP_A_TXP9C
EXP_A_TXN9	C63	0.22u/4X5R/6.3V/K	EXP_A_TXN9C
EXP_A_TXP10	C64	0.22u/4X5R/6.3V/K	EXP_A_TXP10C
EXP_A_TXN10	C65	0.22u/4X5R/6.3V/K	EXP_A_TXN10C
EXP_A_TXP11	C66	0.22u/4X5R/6.3V/K	EXP_A_TXP11C
EXP_A_TXN11	C67	0.22u/4X5R/6.3V/K	EXP_A_TXN11C
EXP_A_TXP12	C68	0.22u/4X5R/6.3V/K	EXP_A_TXP12C
EXP_A_TXN12	C70	0.22u/4X5R/6.3V/K	EXP_A_TXN12C
EXP_A_TXP13	C72	0.22u/4X5R/6.3V/K	EXP_A_TXP13C
EXP_A_TXN13	C73	0.22u/4X5R/6.3V/K	EXP_A_TXN13C
EXP_A_TXP14	C74	0.22u/4X5R/6.3V/K	EXP_A_TXP14C
EXP_A_TXN14	C75	0.22u/4X5R/6.3V/K	EXP_A_TXN14C
EXP_A_TXP15	C77	0.22u/4X5R/6.3V/K	EXP_A_TXP15C
EXP_A_TXN15	C78	0.22u/4X5R/6.3V/K	EXP_A_TXN15C

EXP\_A\_RXP0[.15] >>> EXP\_A\_RXP[0..15] [4]  
 EXP\_A\_RXN0[.15] >>> EXP\_A\_RXN[0..15] [4]  
 EXP\_A\_TXP0[.15] >>> EXP\_A\_TXP[0..15] [4]  
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**PCIEX16 SLOT**

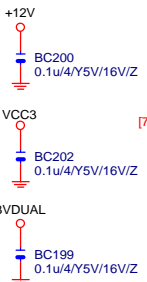


**PCIESLOT-164DN-P**

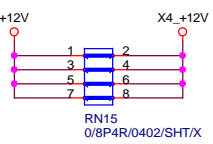
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PCI EXPRESS * 16		
Size	Document Number	Rev
Custom	<b>GA-B75M-D3H</b>	<b>1.1</b>
Date:	Friday, June 08, 2012	Sheet 14 of 33

**PCIEX4 CAP**

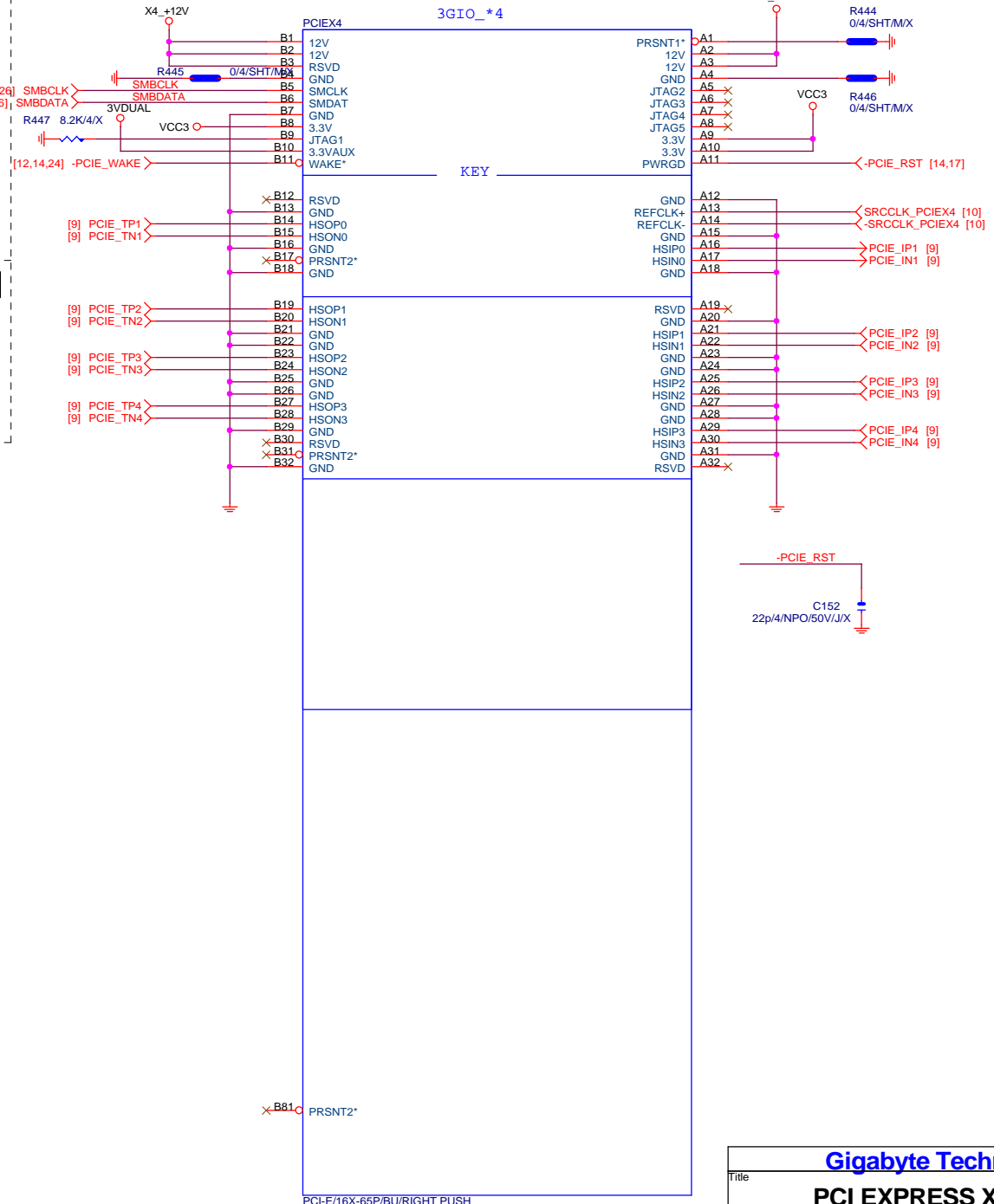


**PCIEX16 PROTECT SHT**



**PCIEX4 SLOT**

**PCIESLOT-64D-98D-P**



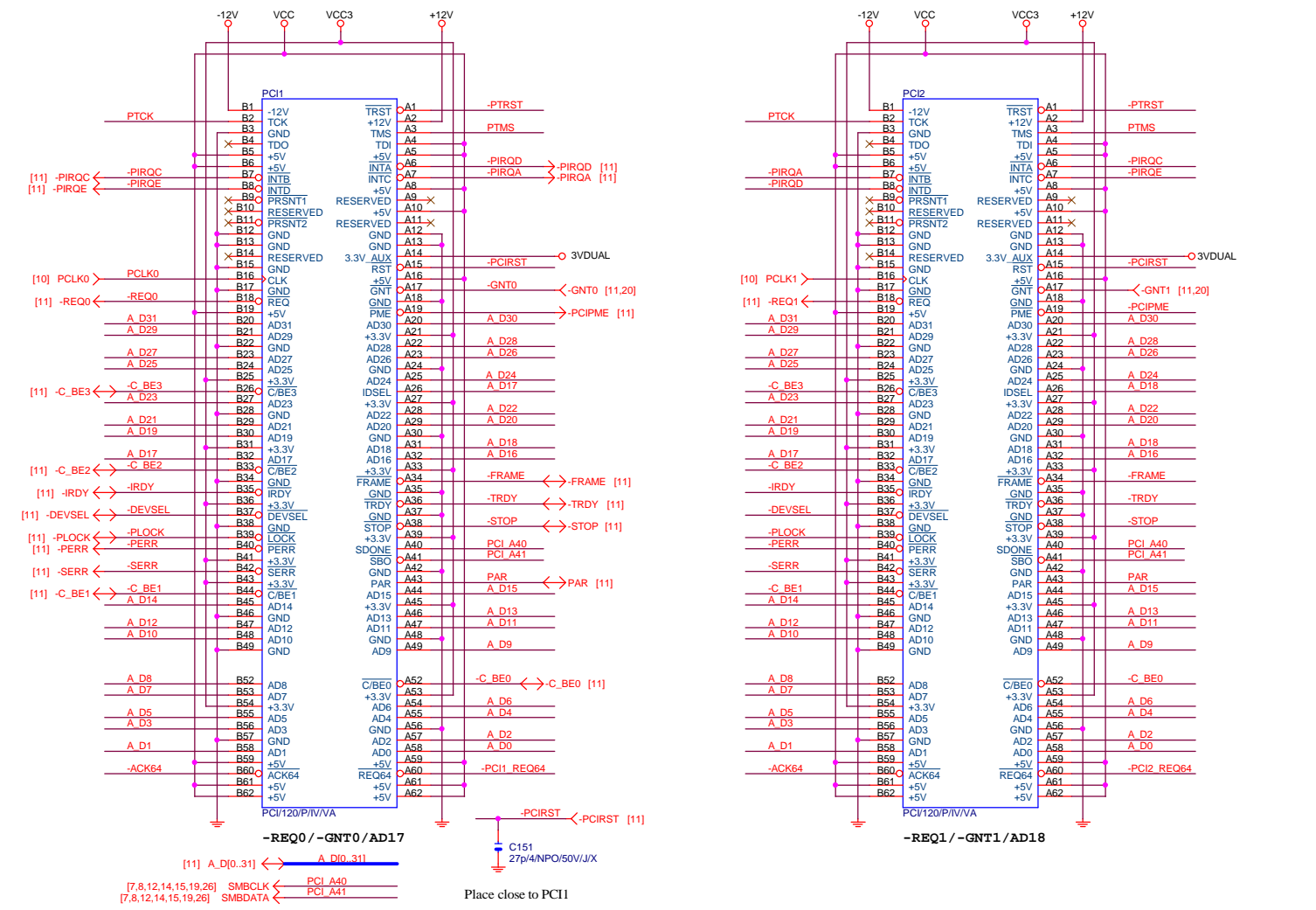
× B81 PRSNT2\*

PCI-E/16X-65P/BU/RIGHT PUSH

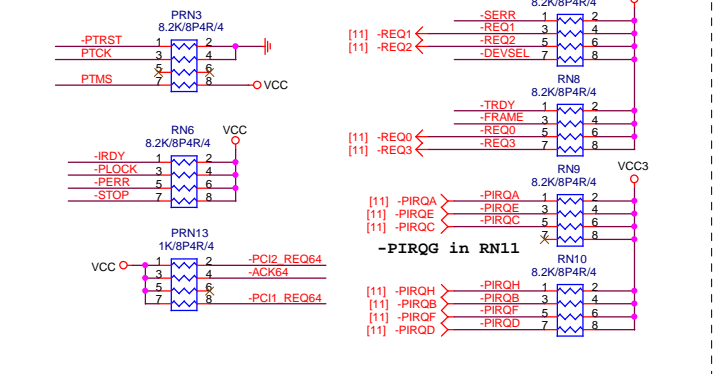
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<b>PCI EXPRESS X 4 PORT</b>		
Size Custom	Document Number <b>GA-B75M-D3H</b>	Rev <b>1.1</b>
Date: Friday, June 08, 2012	Sheet 15 of 33	



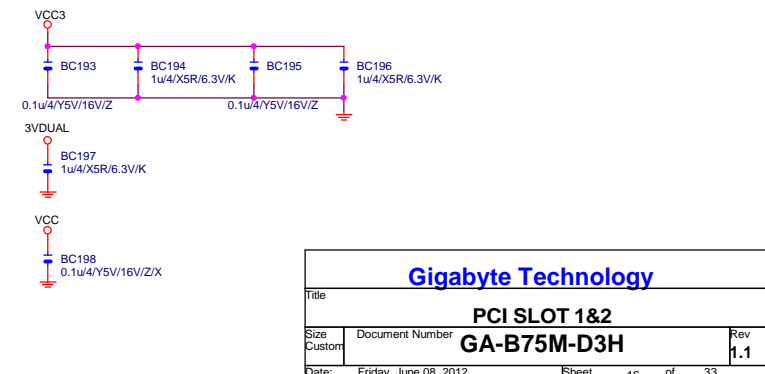
**PCI SLOT**



**PCI PU**



**PCI CAP**



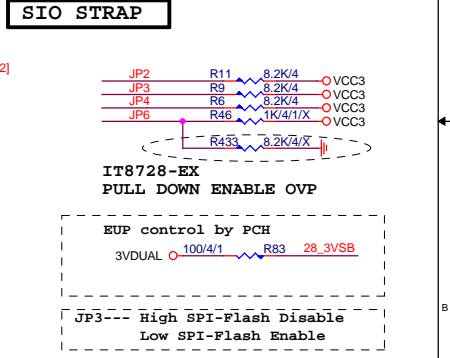
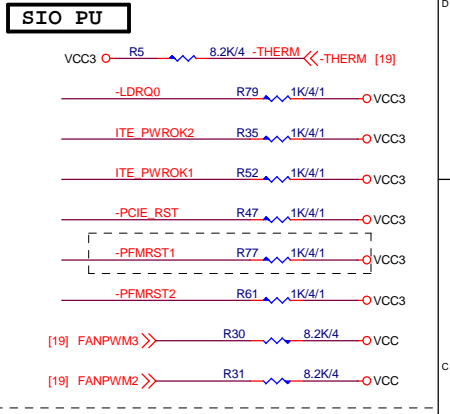
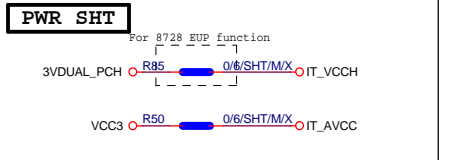
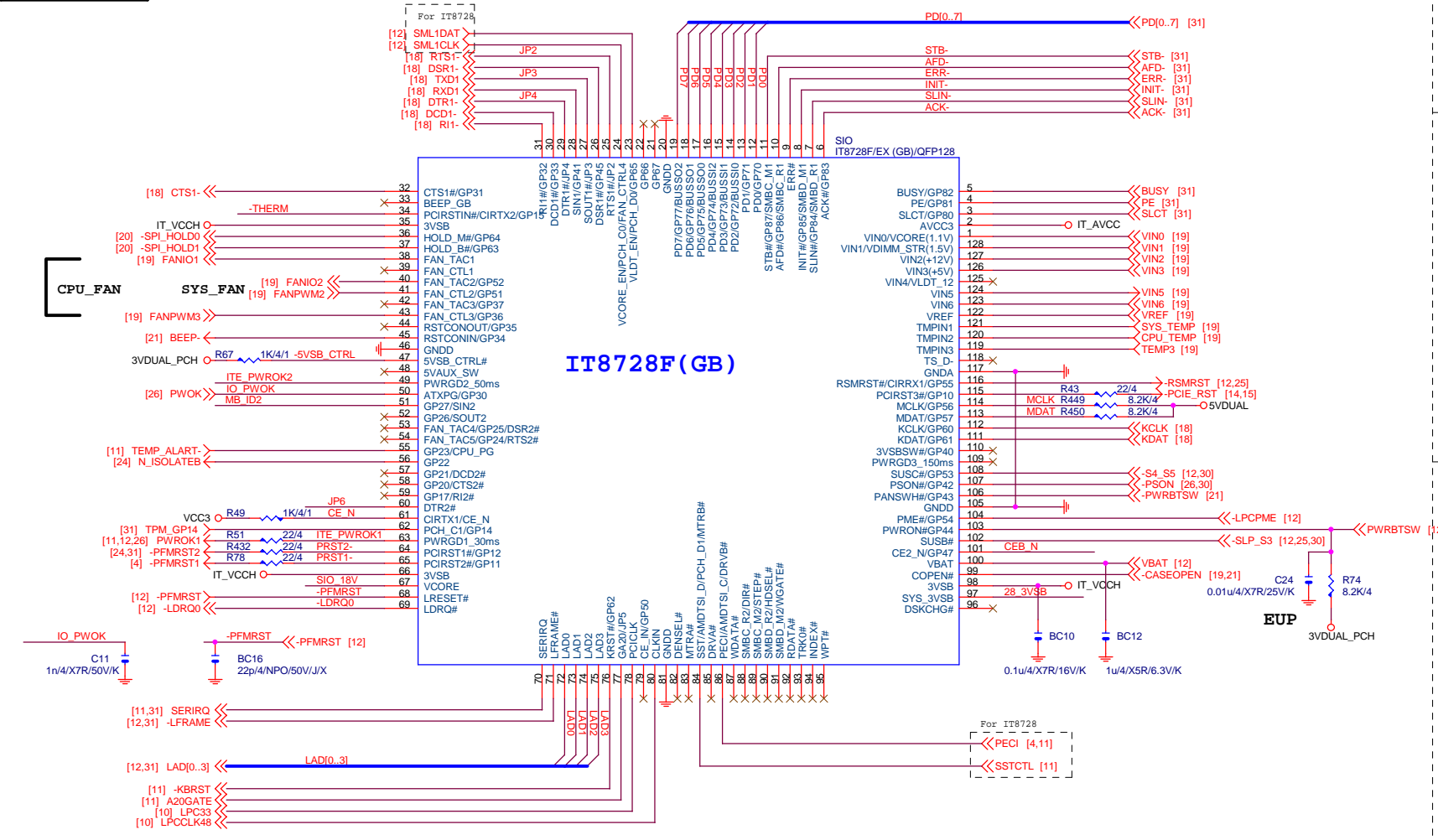
**Gigabyte Technology**

**PCI SLOT 1&2**

**GA-B75M-D3H**

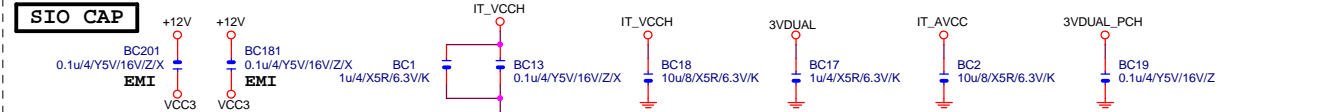
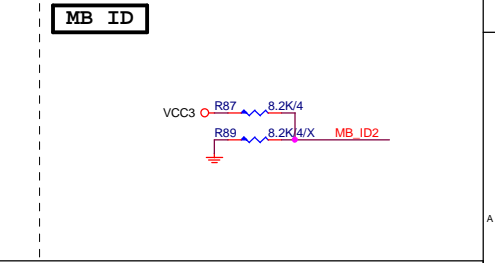
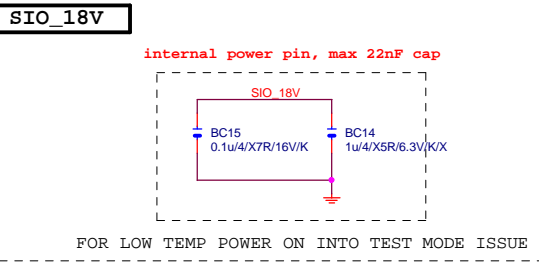
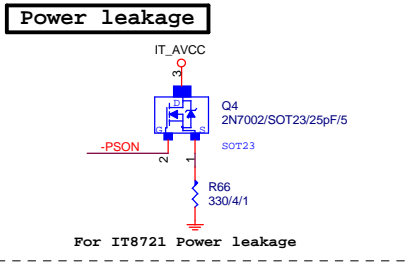
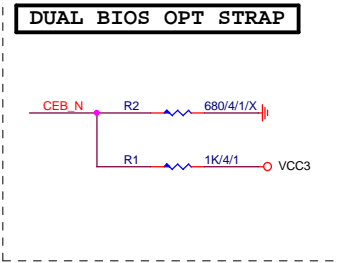
Title	PCI SLOT 1&2	
Size	Document Number	Rev
Custom	GA-B75M-D3H	1.1
Date:	Friday, June 08, 2012	Sheet 16 of 33

**SIO IT8728F**



**IT8728F NOTE**

IT8728	
PIN121	VCORE_EN/PCH_C0
PIN120	VLDT_EN/PCH_D0
PIN19	ATXPG
PIN31	PCH_C1
PIN53	SST/AMDTSI_D/MTRB#/PCH_D1
PIN55	PECl/AMDTSI_C/DRVB#
PIN66	SYS_3VSB
PIN70	GP47
PIN95	VIN2 (VCC5)
PIN96	VIN1 (VCC12)
PIN97	VIN1/VDIMM_STR(1.5V)
PIN98	VINO/VCORE(1.1V)/NC



**Gigabyte Technology**

Title: **ITE 8728 LPC IO**

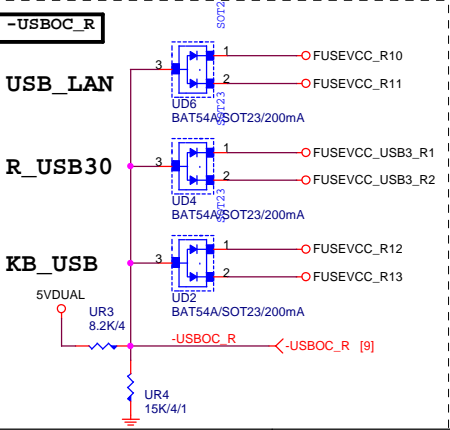
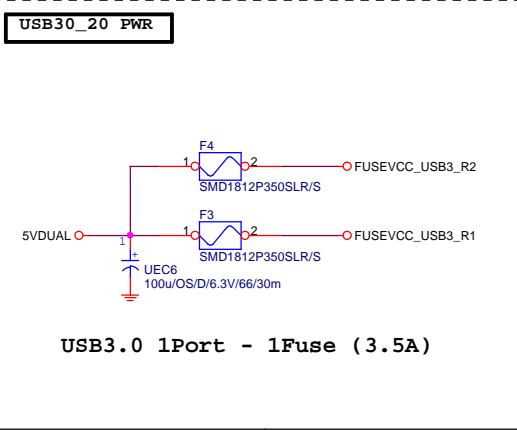
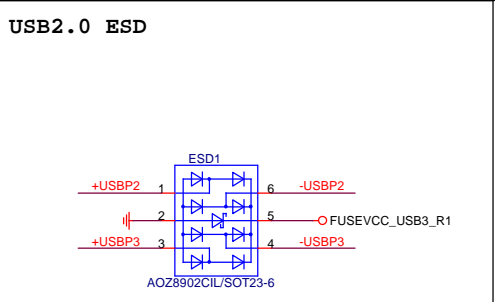
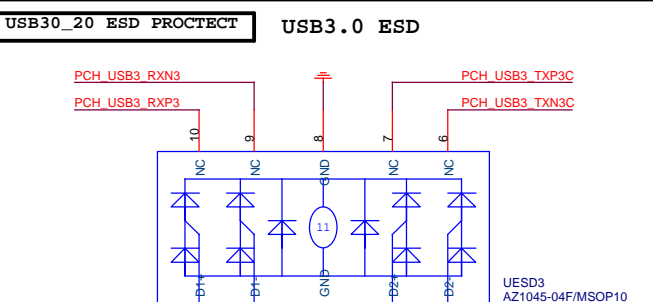
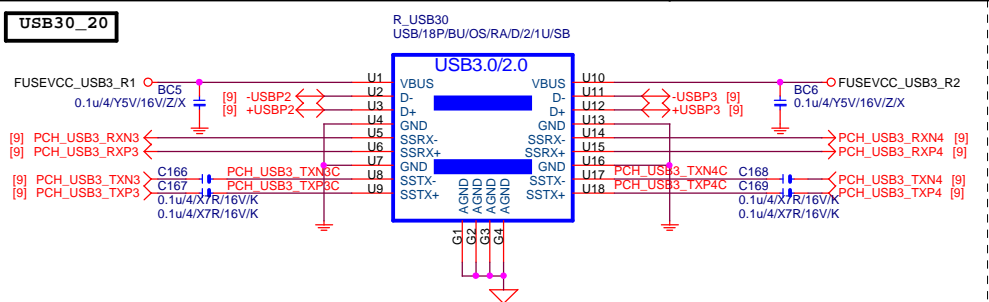
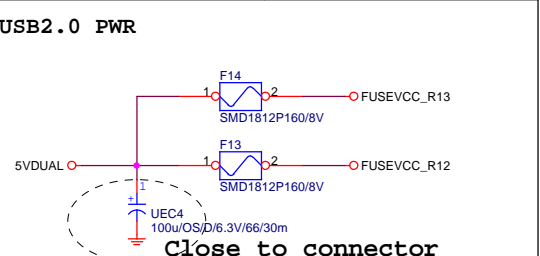
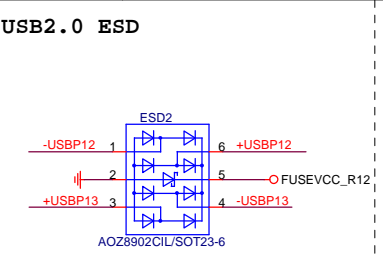
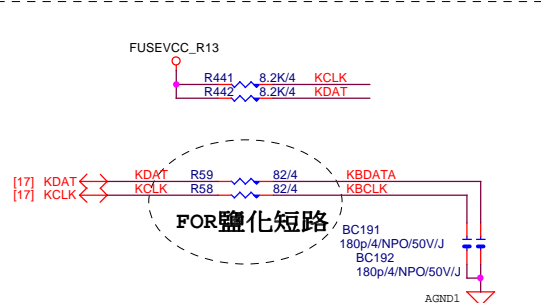
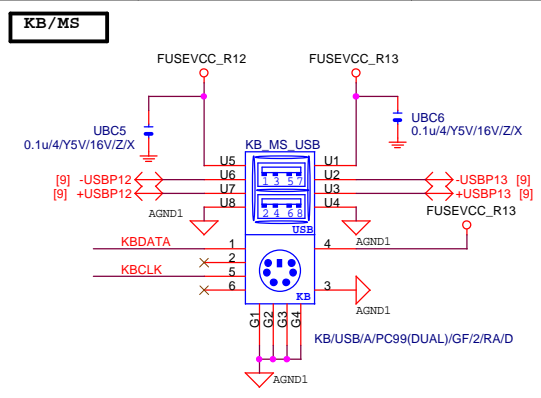
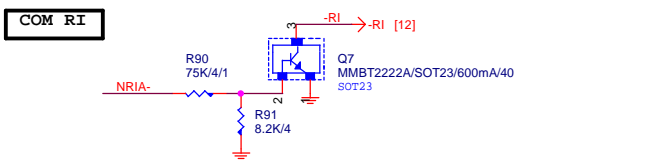
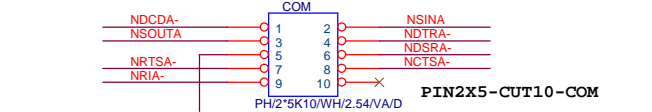
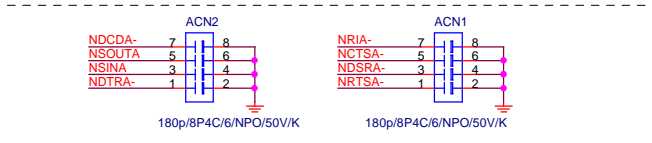
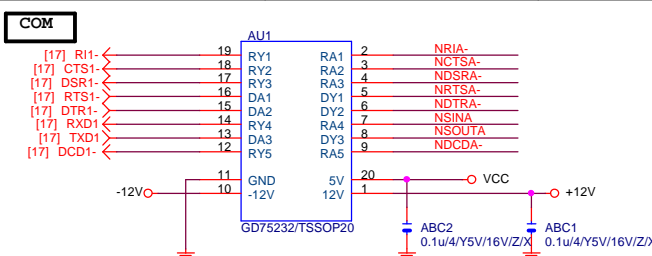
Size: Custom

Document Number: **GA-B75M-D3H**

Date: Friday, June 08, 2012

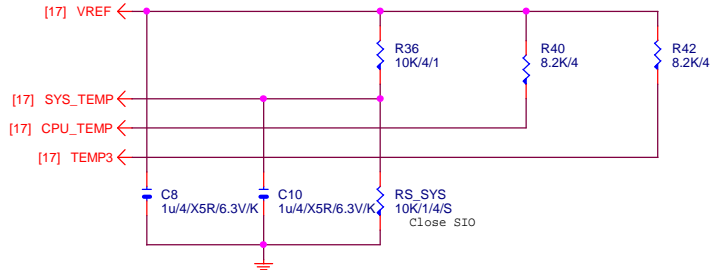
Rev: **1.1**

Sheet: 17 of 33

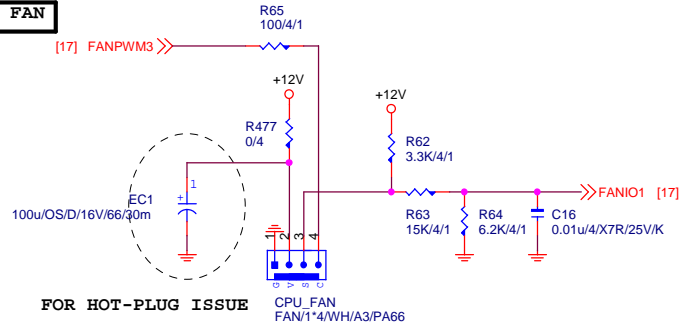


<b>Gigabyte Technology</b>			
Title: <b>COM,-RI,KB_USB,USB_ESATA,-PROCHOT</b>			
Size	Document Number	Rev	
Custom	<b>GA-B75M-D3H</b>	<b>1.1</b>	
Date:	Friday, June 08, 2012	Sheet	18 of 33

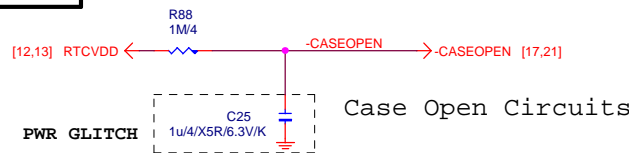
**TEMP H/W MONITOR**



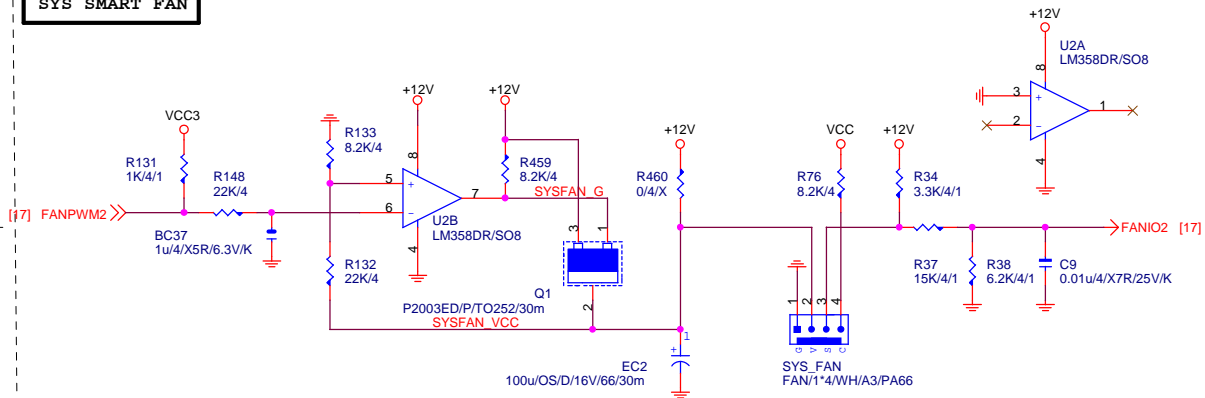
**CPU SMART FAN**



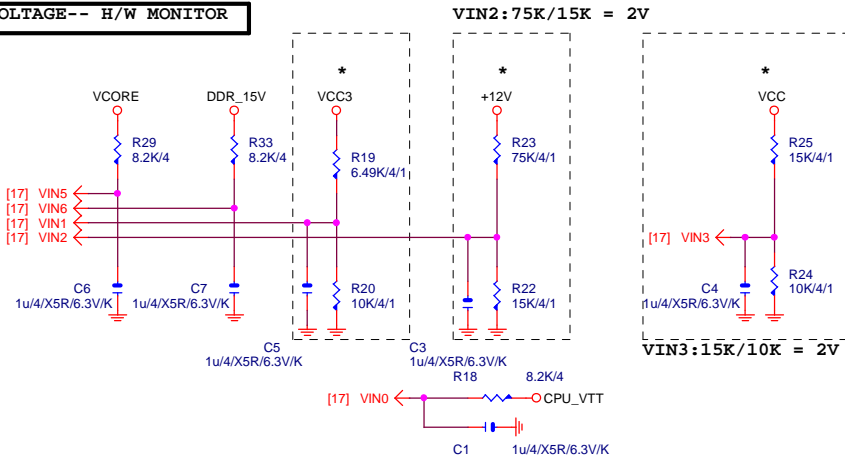
**CASE OPEN**



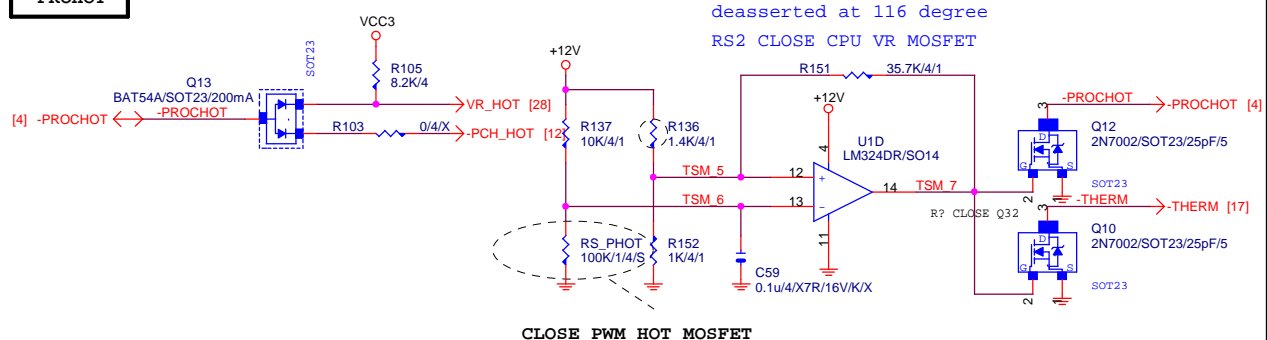
**SYS SMART FAN**



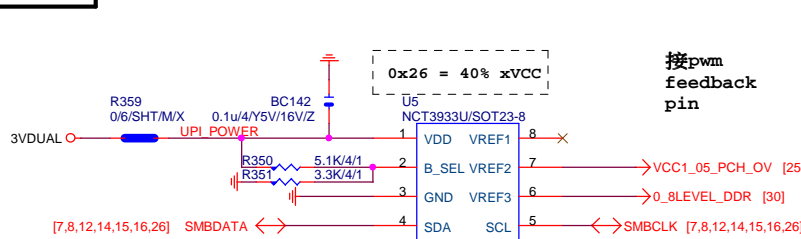
**VOLTAGE-- H/W MONITOR**



**-PROHOT**



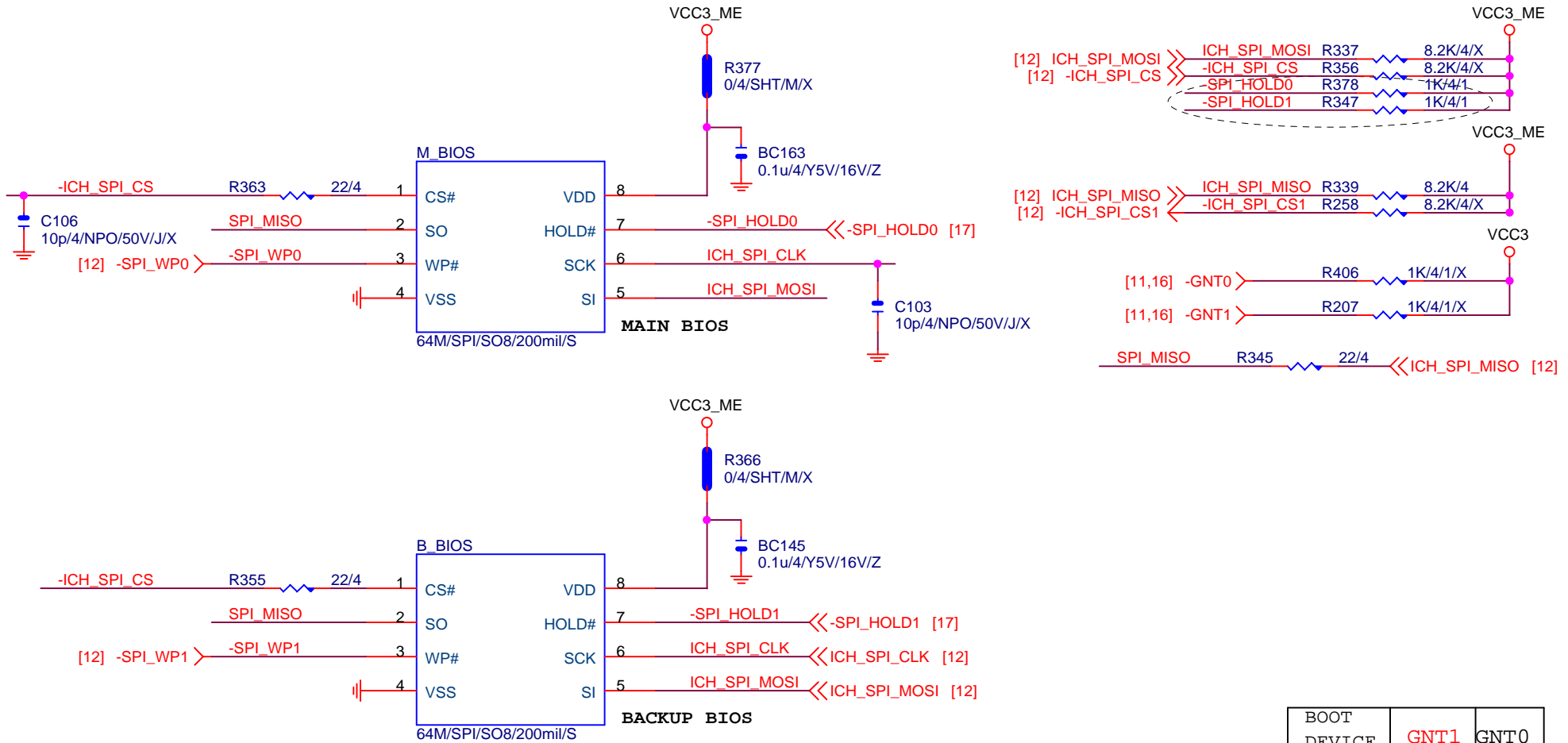
**OV NCT3933**



**Gigabyte Technology**

Title			HWM,FAN CTRL,OV		
Size	Document Number	Rev			
Custom	<b>GA-B75M-D3H</b>	1.1			
Date:	Friday, June 08, 2012	Sheet	19	of	33

# DUAL BIOS



B65使用64M BIOS  
 使用H67暫用32M  
 H61使用32M BIOS

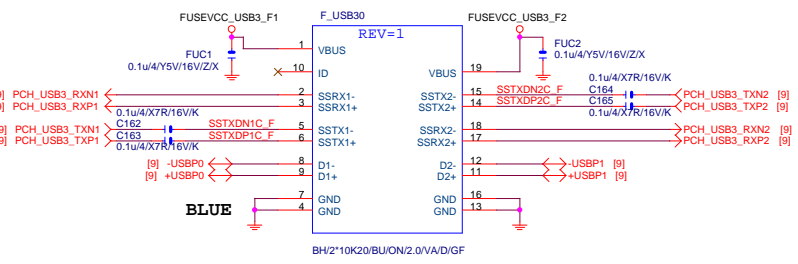
BOOT DEVICE	GNT1	GNT0
LPC	0	0
PCI	0	1
SPI	1	1

1 means floating  
 0 means PD 1K

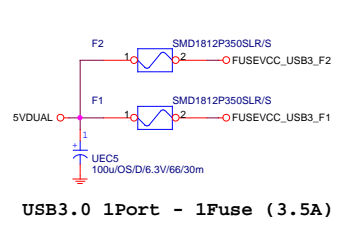
**Gigabyte Technology**

Title		
<b>DUAL BIOS</b>		
Size A	Document Number	Rev
	<b>GA-B75M-D3H</b>	<b>1.1</b>
Date:	Friday, June 08, 2012	Sheet 20 of 33

**F\_USB30**

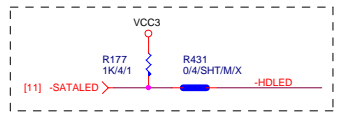


**F\_USB30 PWR**

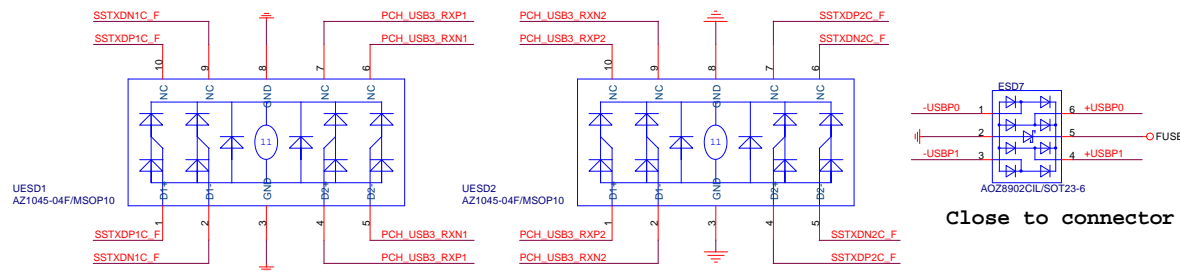


USB3.0 1Port - 1Fuse (3.5A)

**SATA LED**

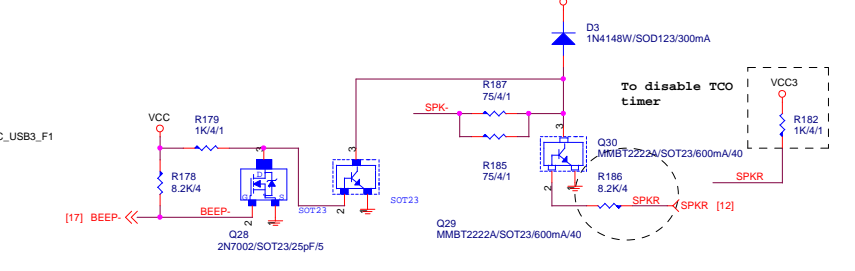


**F\_USB30 ESD PROTECT**

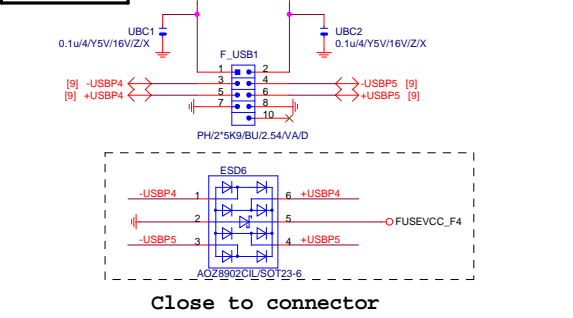


Close to connector

**SPKR**

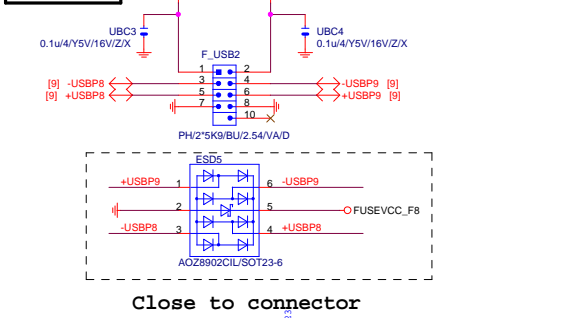


**FRONT USB1**



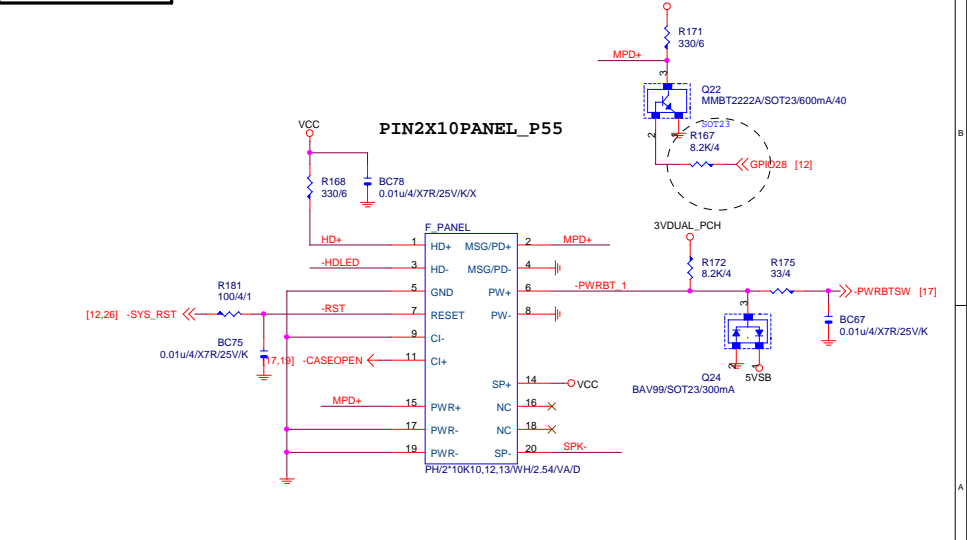
Close to connector

**FRONT USB2**

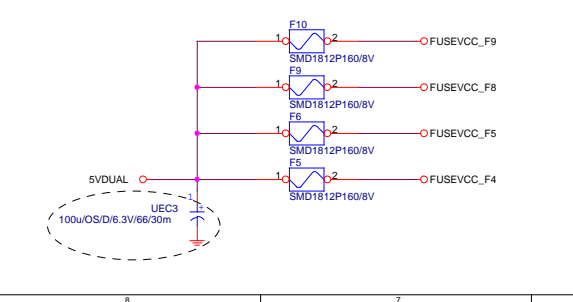


Close to connector

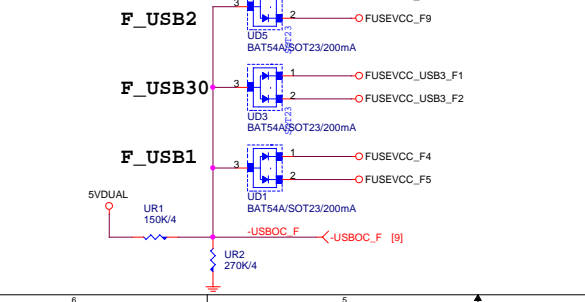
**INTEL FRONT PANEL**



**FUSEVCC\_F**



**-USBOC\_F**



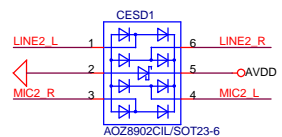
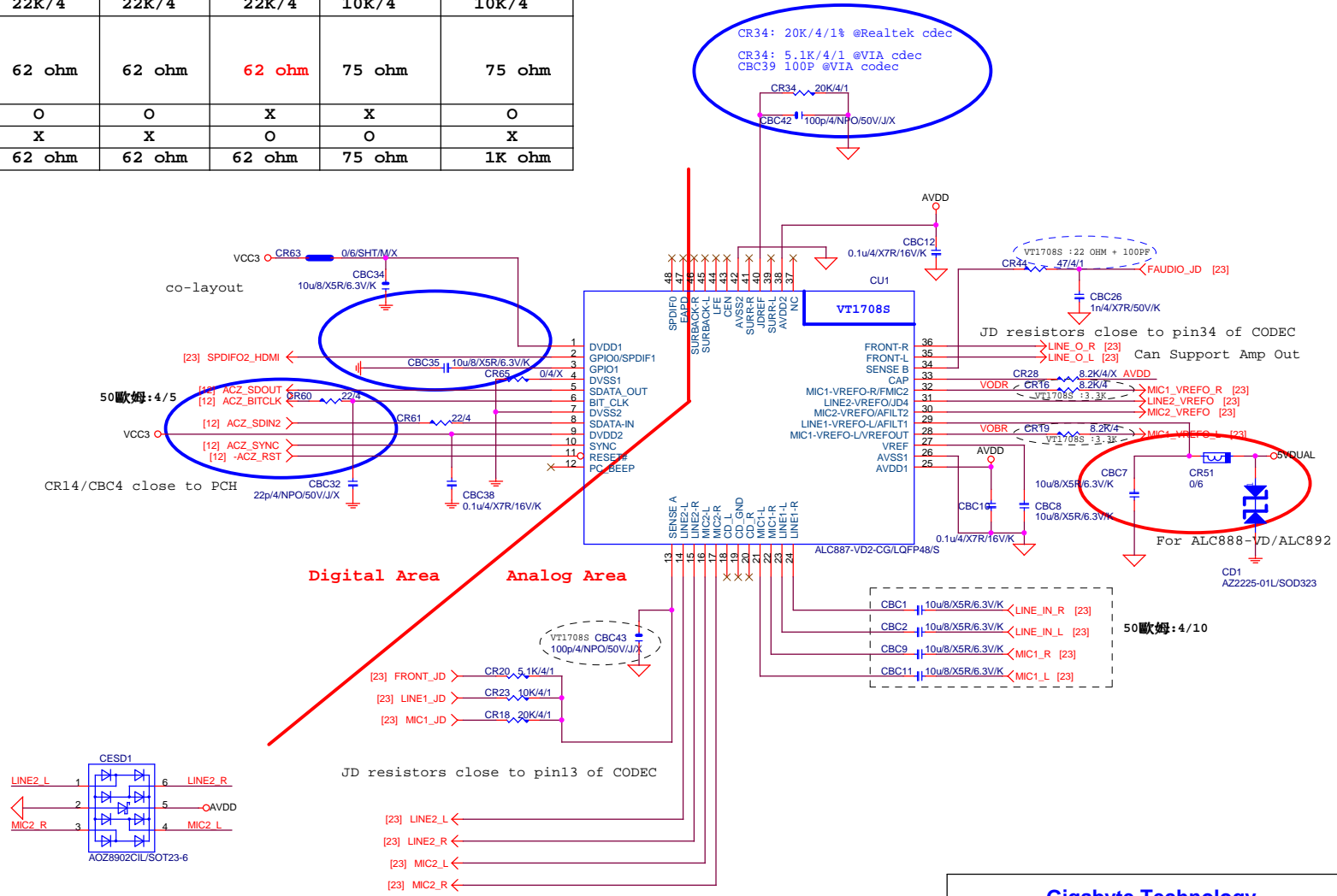
**Gigabyte Technology**

**FP,F\_USB,USB PWR,SPKR,SATA LED**

**GA-B75M-D3H**

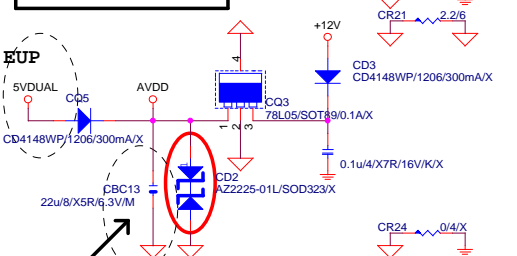
Title	FP,F_USB,USB PWR,SPKR,SATA LED		Rev	1.1
Size	Custom	Document Number		
Date	Friday, June 08, 2012	Sheet	21	of 33

	ALC662	ALC887-VD2	ALC889	VT1708S	VT1708SCE
CR65	X	X	O	O	X
CR64	X	X	X	X	0.1u/4
CBC35	O	O	X	X	O
CR44/CBC6	47ohm+1nF	47ohm+1nF	47ohm+1nF	22ohm+100P	22ohm+100P
CR31	X	O	O	O	O
CR30	O	X	X	X	X
CBC1/CBC2	22uF/X5R	22uF/X5R	22uF/X5R	22uF/X5R	22uF/X5R
CR20	5.11K/4/1	5.11K/4/1	5.11K/4/1	5.1K/4/1	5.1K/4/1
CR34	20K/4/1	20K/4/1	20K/4/1	5.1K/4/1	20K/4/1
CBC39/CBC40	N/A	N/A	N/A	100P/4	100P/4
CR6/CR7/CR54/CR58	22K/4	22K/4	22K/4	10K/4	10K/4
CR5/CR8/CR11/CR4/ CR17/CR22/CR45/CR33/ CR47/CR40/CR26/CR37/ CR13/CR11/CR57/CR53	62 ohm	62 ohm	62 ohm	75 ohm	75 ohm
CR51/CD1/CBC7	O	O	X	X	O
CD2/CD3/CQ3/CQ5	X	X	O	O	X
CR1/CR14/CR17/CR22	62 ohm	62 ohm	62 ohm	75 ohm	1K ohm



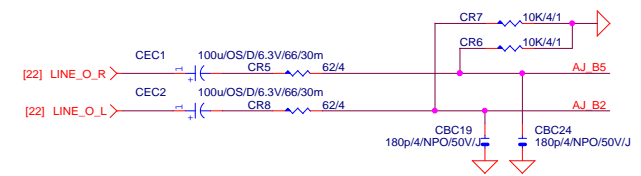


**CODEC POWER/EMI PAD**



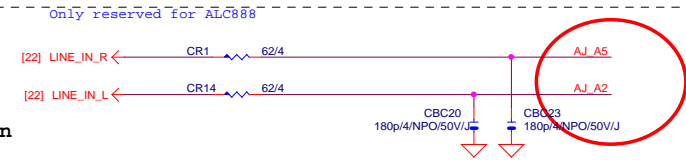
上ALC892時,此顆電容要保留  
ADD CD2 For ESD PROTECT DIODE

**LINE-OUT**

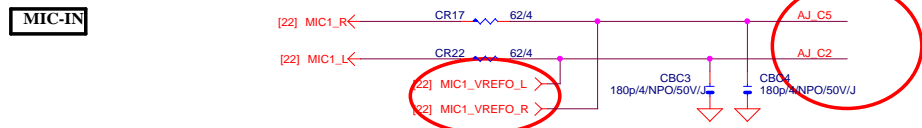


**LINE-IN**

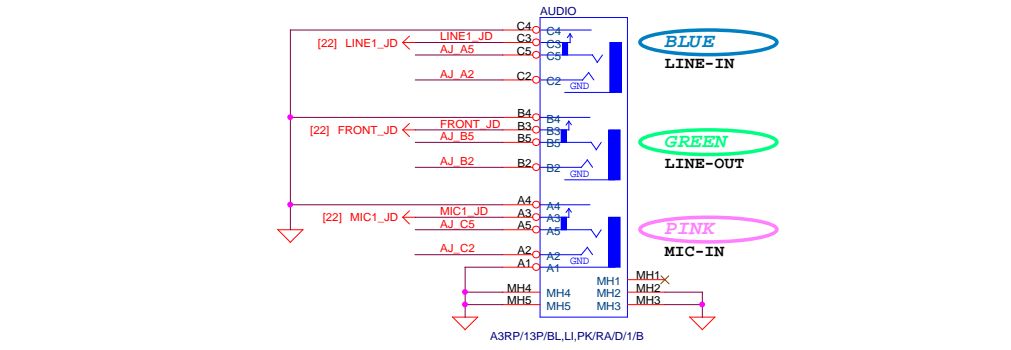
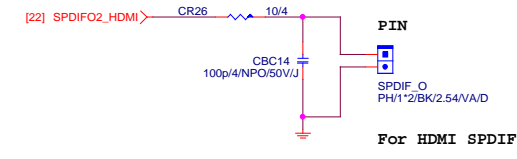
Verify MIC function in LINE-in



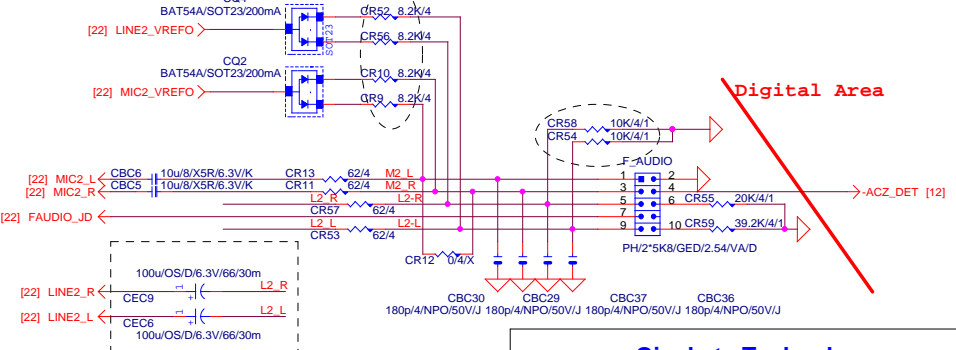
**MIC-IN**



**SPDIF\_OUT**

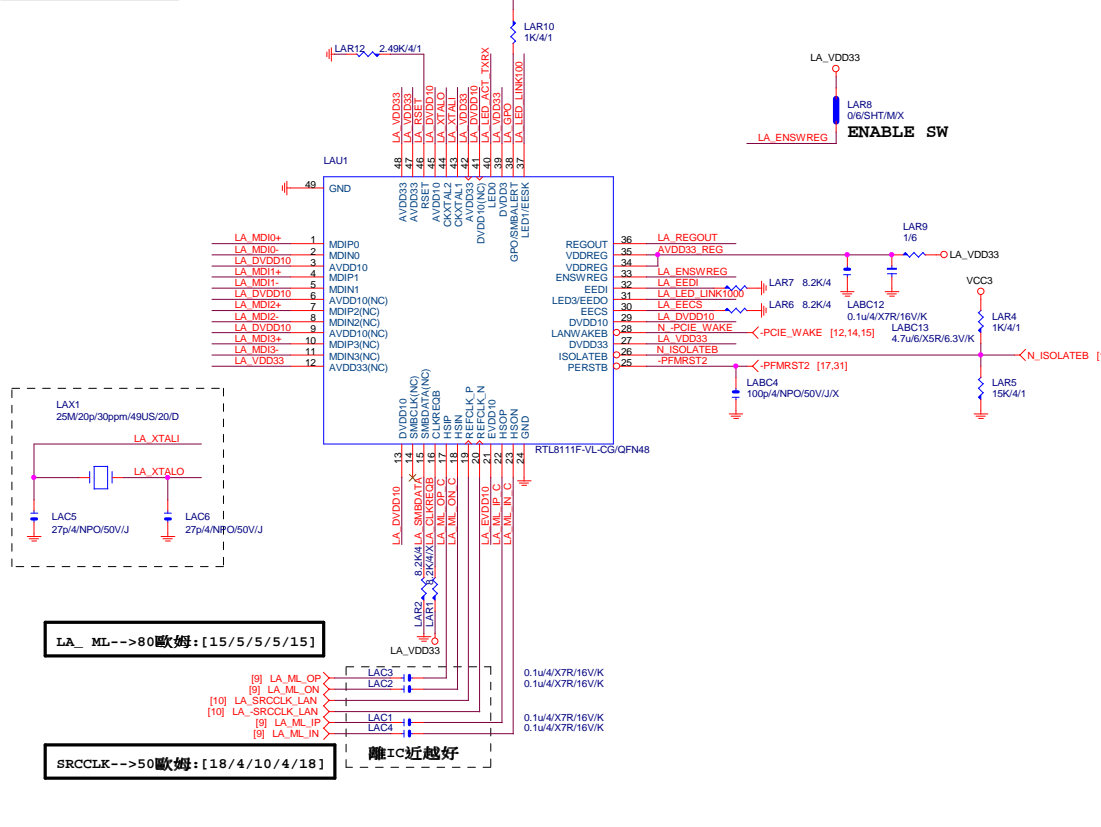


**AZALIA FRONT PANEL**



<b>Gigabyte Technology</b>			
<b>AUDIO JACK</b>			
Title		<b>GA-B75M-D3H</b>	
Size	Document Number	<b>GA-B75M-D3H</b>	
Custom			Rev <b>1.1</b>
Date:	Friday, June 08, 2012	Sheet	23 of 33

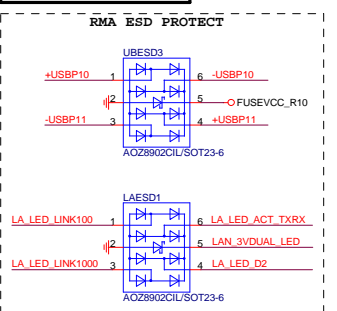
**LAN:RTL8111E/VB/VL**



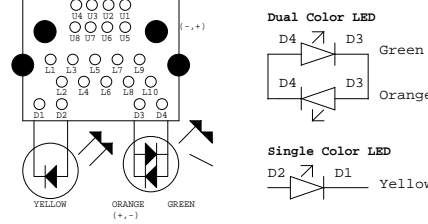
LA\_ML-->80歐姆:[15/5/5/15]

SRCCLK-->50歐姆:[18/4/10/4/18]

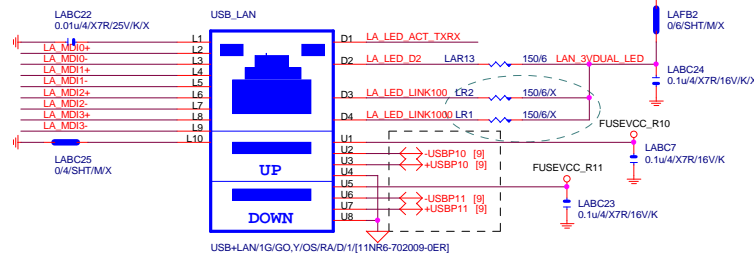
**USB\_LAN CONNECTOR**



**注意:LAN LED PROTECT:(CO-LAYOUT)**  
 1.ESD(6PIN):AOZ8902CIL/SOT23-6(DEFAULT)  
 2.SURGE(5PIN):AZ2025-04S/SOT23-5L



LA\_MDI-->100歐姆:[20/4/8/4/20]

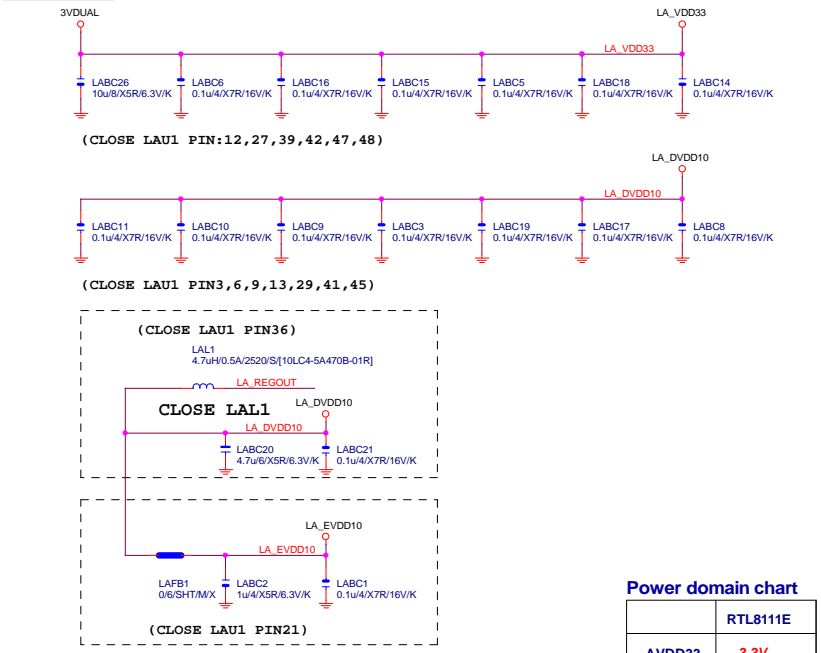


**注意:USB PORT(目前:暫代6,7PORT)**  
 USB-->90歐姆:[15/4.5/7.5/4.5/15]

料號	規格	廠商
11NR6-702009-0ER	1G LAN(12core)	UDE
11NR6-702009-91R	1G LAN(8 core)	FOXCONN
11NR6-702009-92R	1G LAN(8 core)	UDE
11NR6-702009-11R	1G LAN(12core/RED)	UDE
11NR6-702009-12R	1G LAN(8 core/RED)	FOXCONN

**USB\_LAN BOM區分:**  
 1.(紅色/12CORE/三倍):USB+LAN/1G/GO,Y/OS/RA/D/1/RED  
 2.(黑色/12CORE):USB+LAN/1G/GO,Y/OS/RA/D/1  
 3.(黑色/8CORE):USB+LAN/1G/GO,Y/OS/RA/D/8C

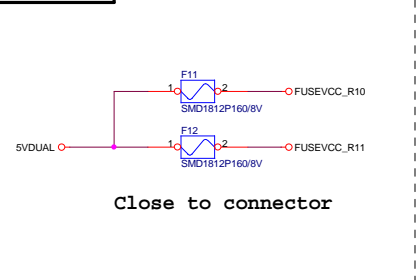
**LAN POWER**



**Power domain chart**

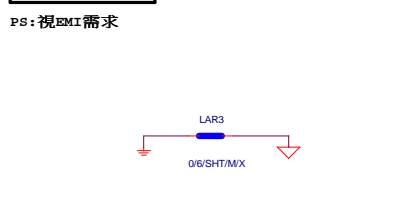
	RTL8111E
AVDD33	3.3V
DVDD33	3.3V
VDDREG	3.3V
DVDD10	1.05V

**USB X3 POWER**

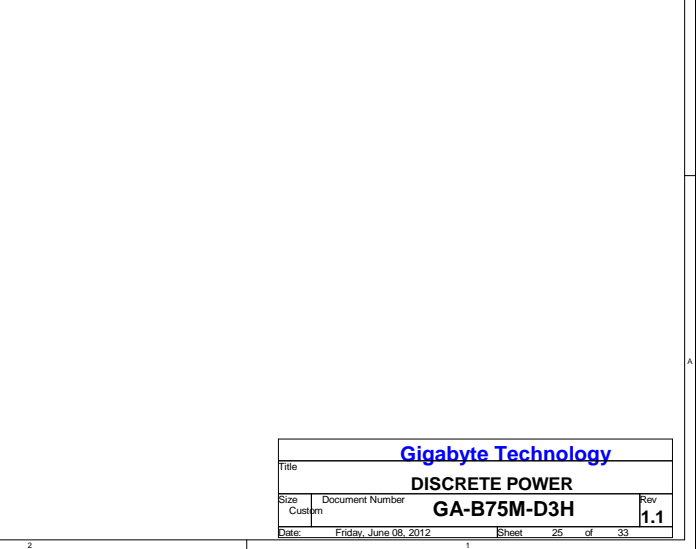
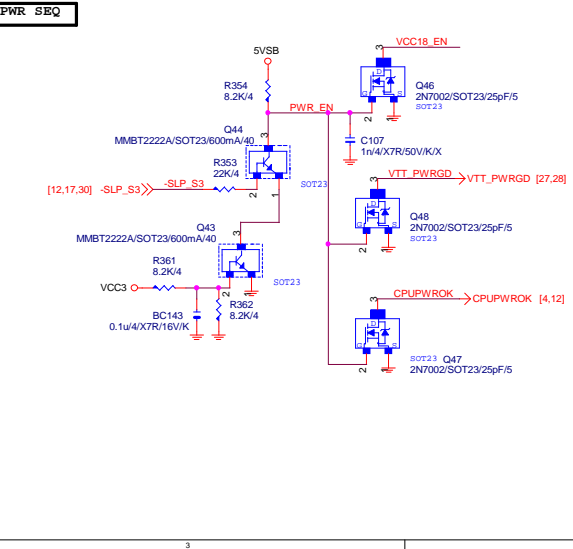
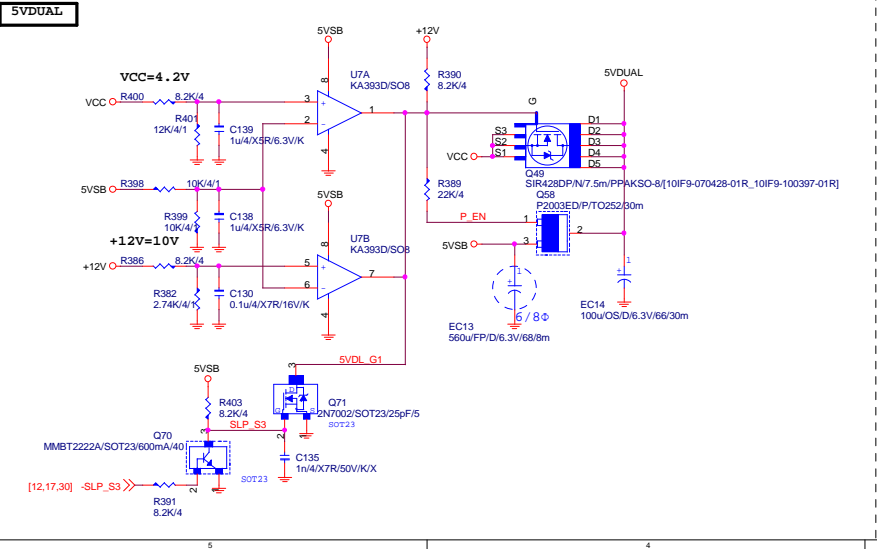
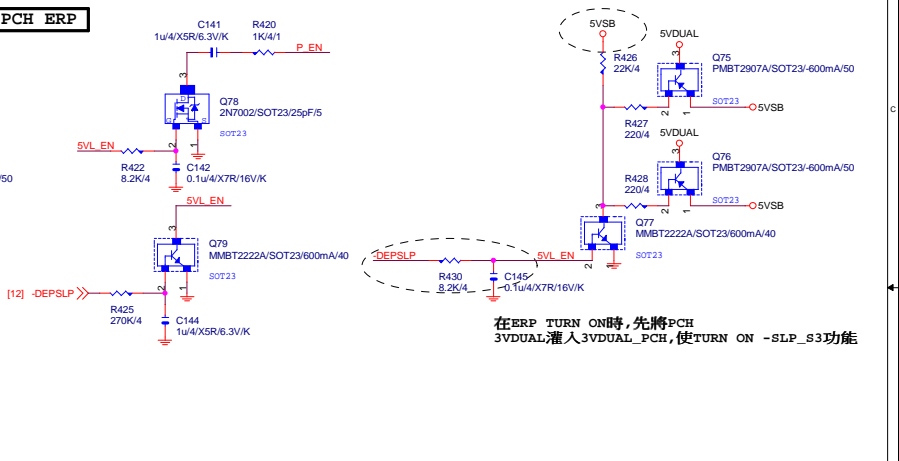
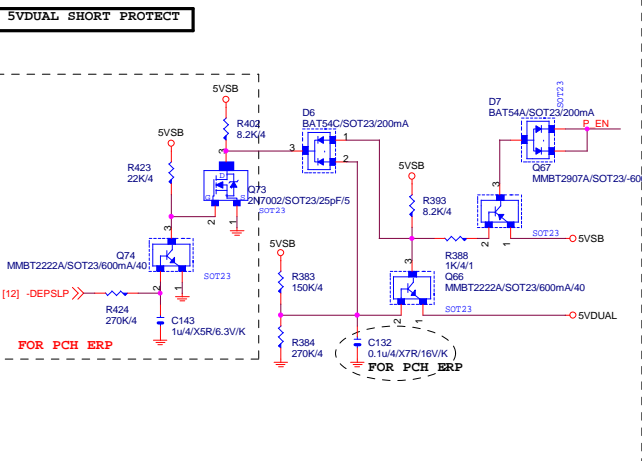
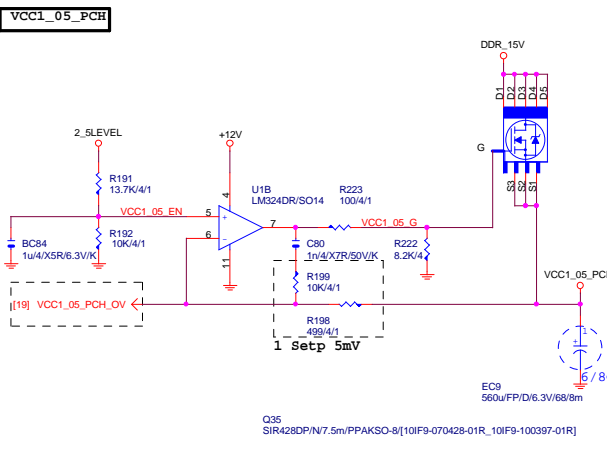
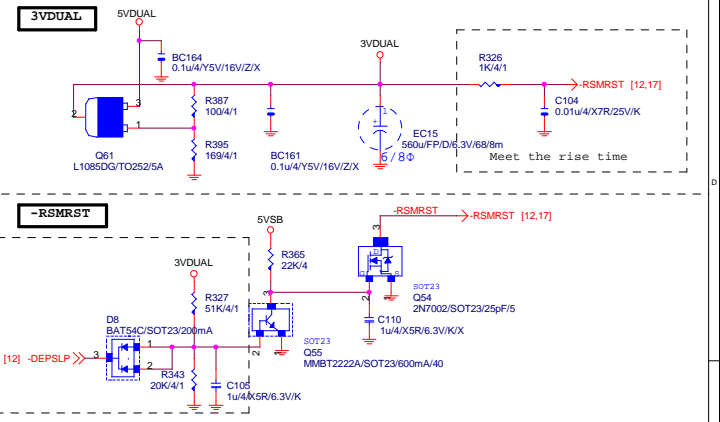
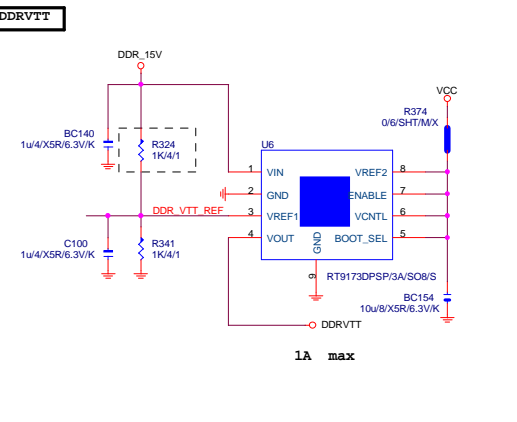
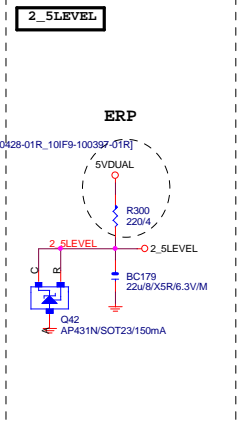
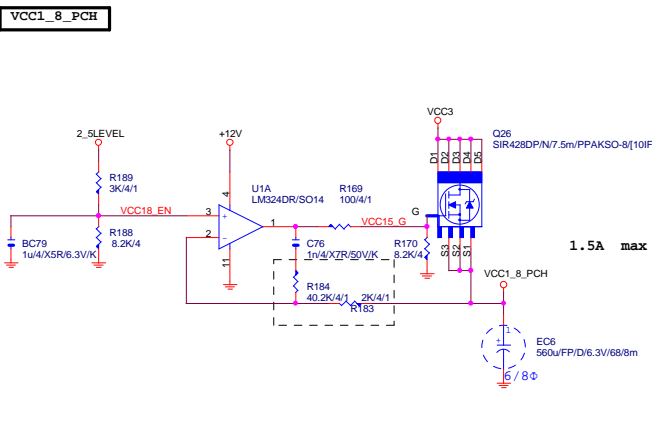


Close to connector

**EMI SHORT PAD**



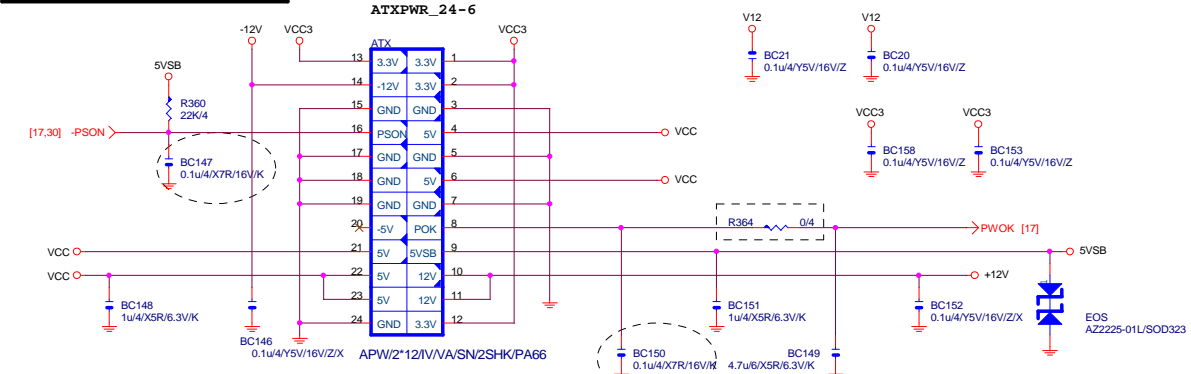
PS:視EMI需求



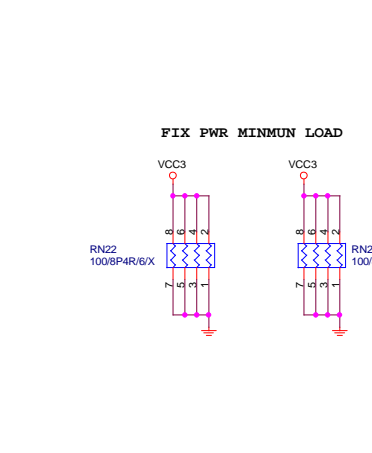
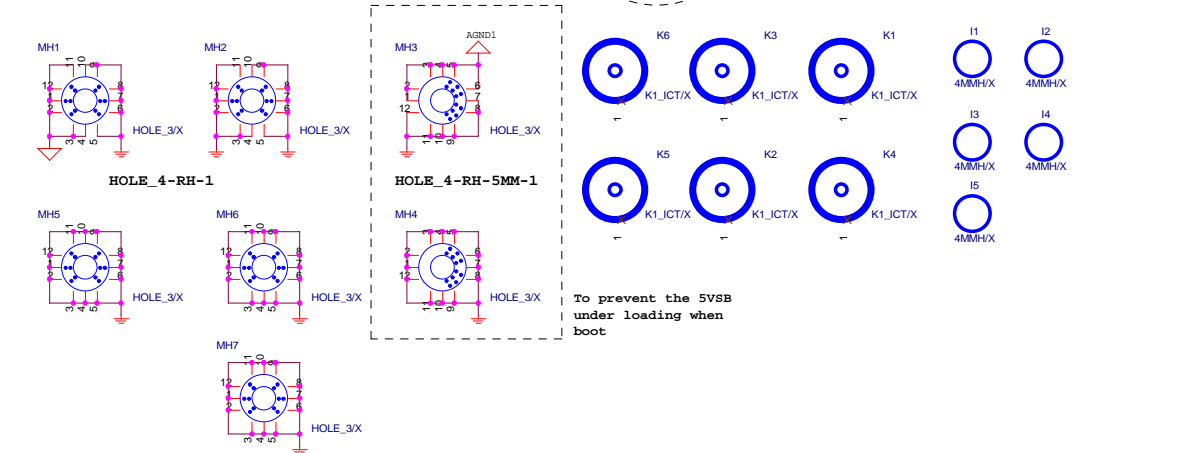
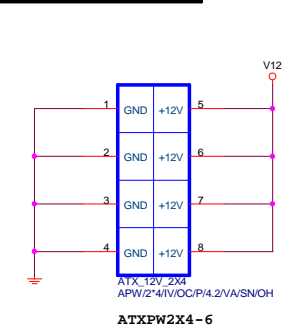
Gigabyte Technology		
DISCRETE POWER		
GA-B75M-D3H		
Rev	1.1	
Date:	Friday, June 08, 2012	Sheet 25 of 33

### ATXX24 POWER CONNECTOR

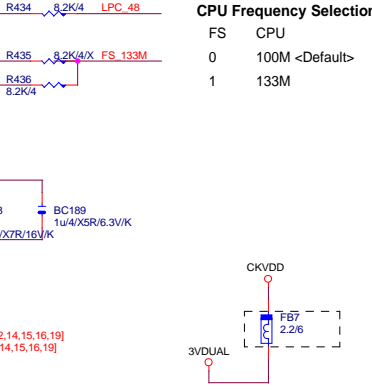
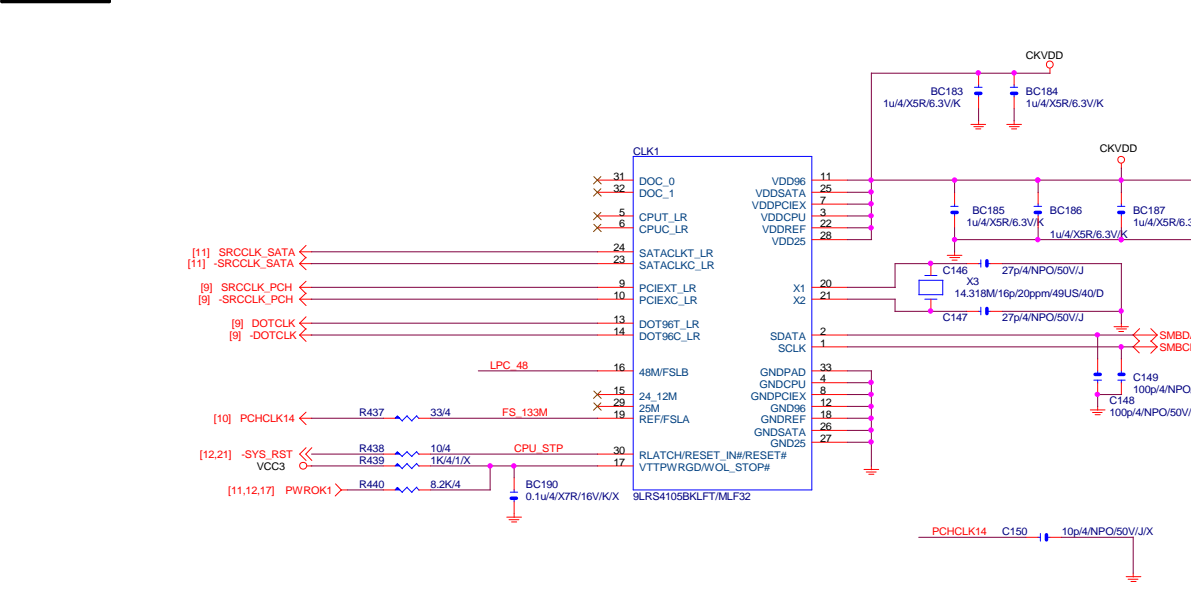
#### ATXPWR\_24-6



### ATXX4 POWER CONNECTOR



### CLK GEN



**Gigabyte Technology**

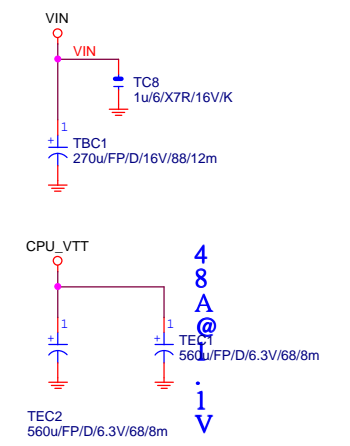
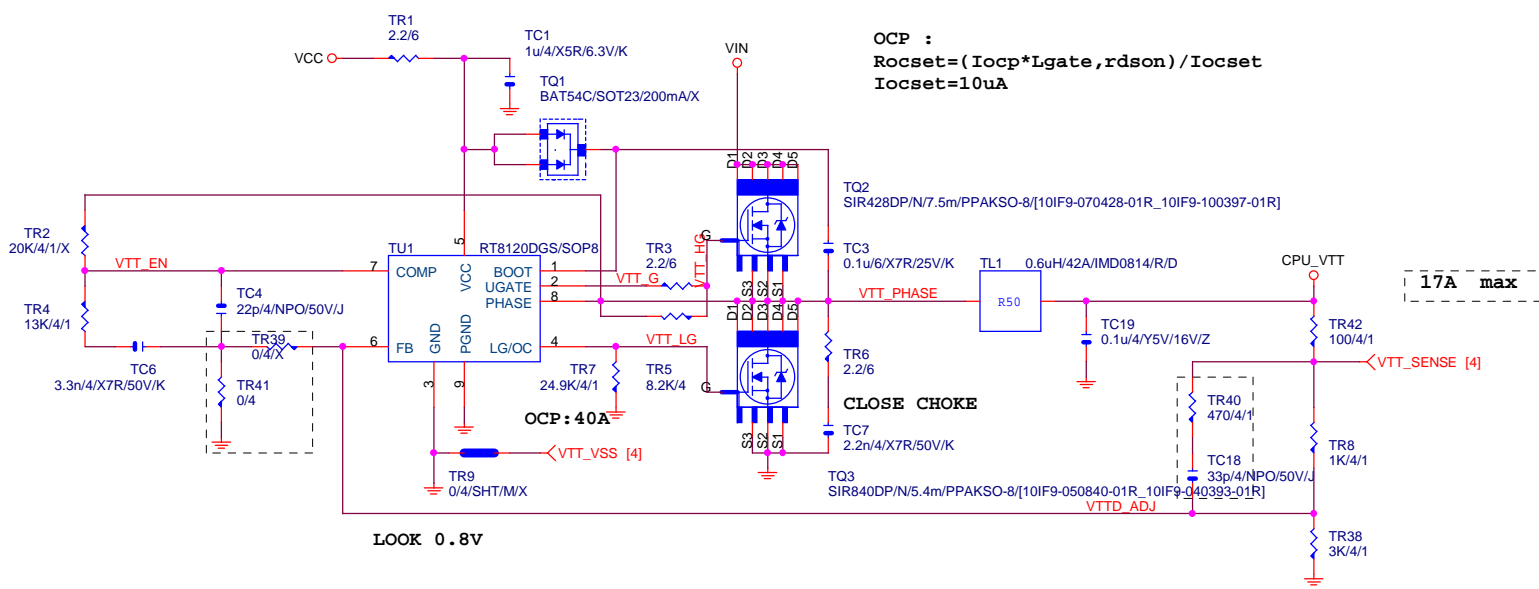
**ATX CONNECTOR**

**GA-B75M-D3H**

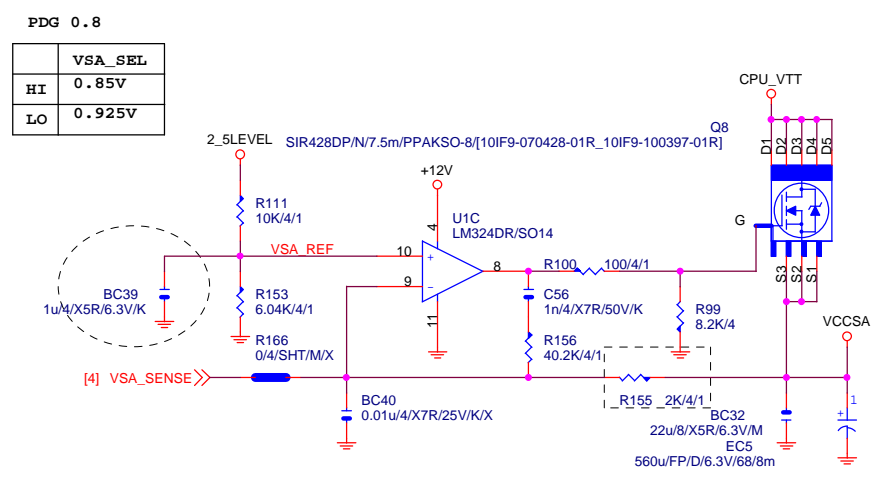
Rev 1.1

Date: Friday, June 08, 2012 Sheet 26 of 33

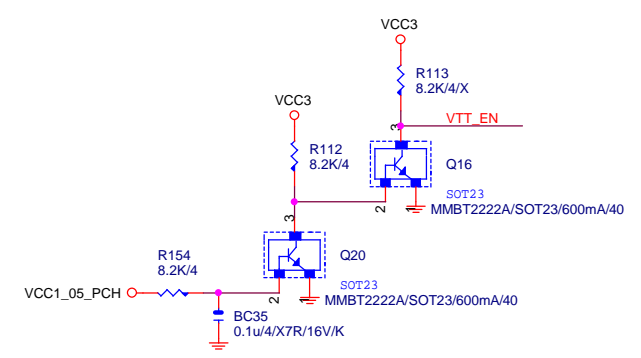
**CPU\_VTT**



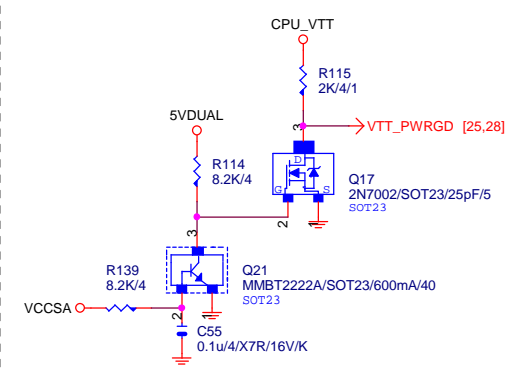
**VCCSA**



**CPU\_VTT PWR SEQ**



**VTT\_PWRGD**



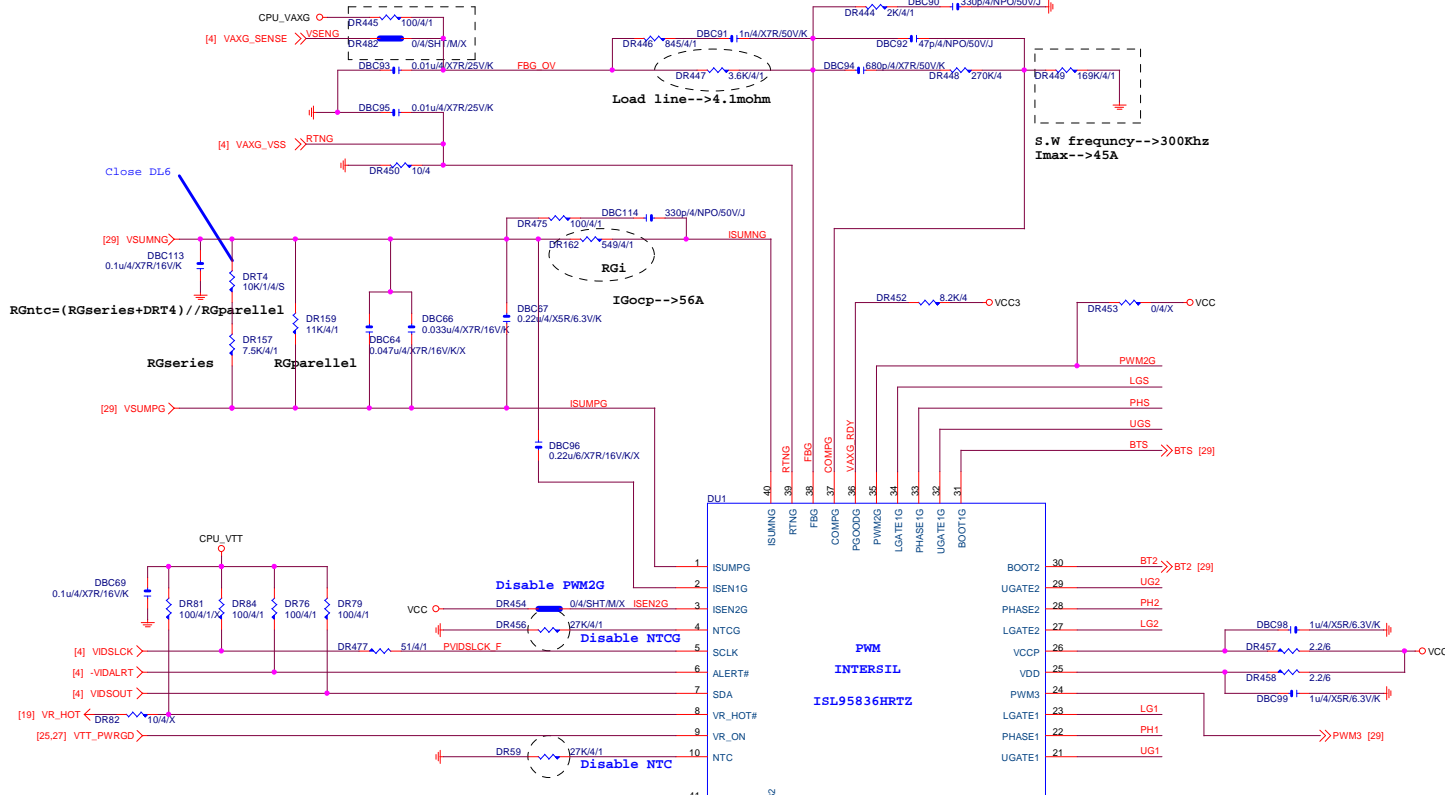
**GIGABYTE™**

Title: **CPU\_VTT PWM\_ISL95870CRZ**

Size: Custom Document Number: **GA-B75M-D3H** Rev: **1.1**

Date: Friday, June 08, 2012 Sheet 27 of 33

Intersil Original Design



Close DL6

[29] VSUMNG  
0.1u/4/X7R/16VK

$R_{Gntc} = (R_{Gseries} + DRT4) // R_{Gparallel}$

[29] VSUMPG

CPU\_VTT  
[4] VDSLCK  
[4] -VIDALRT  
[4] VIDSOUT  
[19] VR\_HOT  
[25,27] VTT\_PWRGD

BOTTOM PAD CONNECT TO GND THROUGH 10 VIA

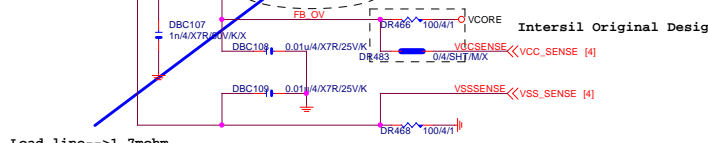
Close DL2

$R_{ntc} = (R_{series} + DRT3) // R_{parallel}$

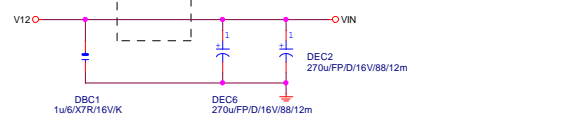
[29] VSUMN

Load line-->1.7mohm

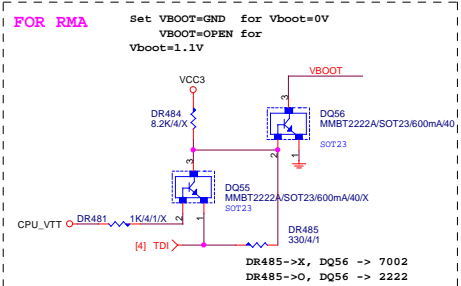
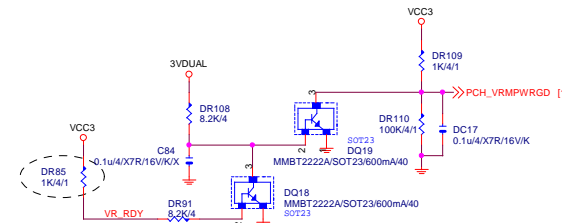
Intersil Original Design



LAYOUT RESERVE CHOKE SPACE



- UG1 → UG1 [29]
- PH1 → PH1 [29]
- LG1 → LG1 [29]
- ISEN1 → ISEN1 [29]
- UG2 → UG2 [29]
- PH2 → PH2 [29]
- LG2 → LG2 [29]
- ISEN2 → ISEN2 [29]
- UG3 → UG3 [29]
- PH3 → PH3 [29]
- LG3 → LG3 [29]
- ISEN3 → ISEN3 [29]



FOR RMA

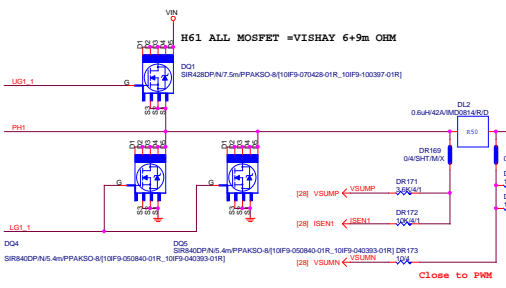
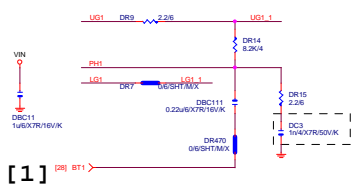
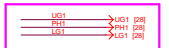
Set VBOOT=GND for Vboot=0V  
VBOOT=OPEN for Vboot=1.1V

Vboot-->0V  
Imax-->99A

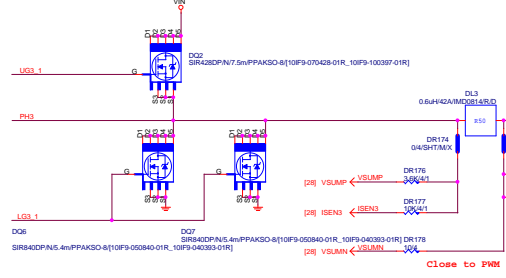
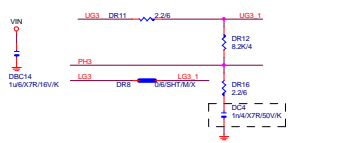
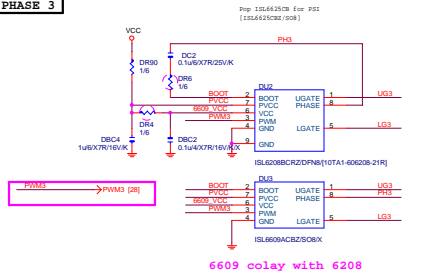
DR485->X, DQ56 -> 7002  
DR485->O, DQ56 -> 2222

Gigabyte Technology	
CPU CORE VR-1	
GA-B75M-D3H	
Size Custom	Document Number
Date Friday, June 08, 2012	Sheet 28 of 33

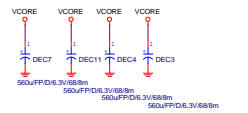
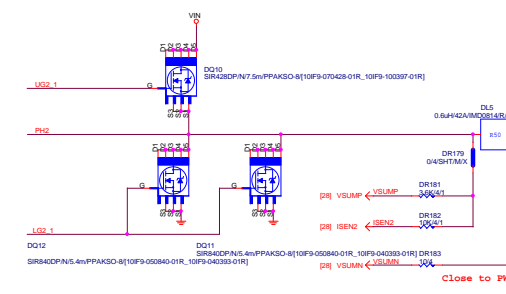
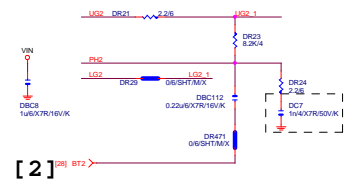
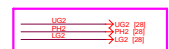
**PHASE 1**



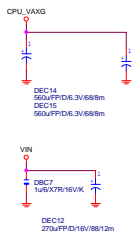
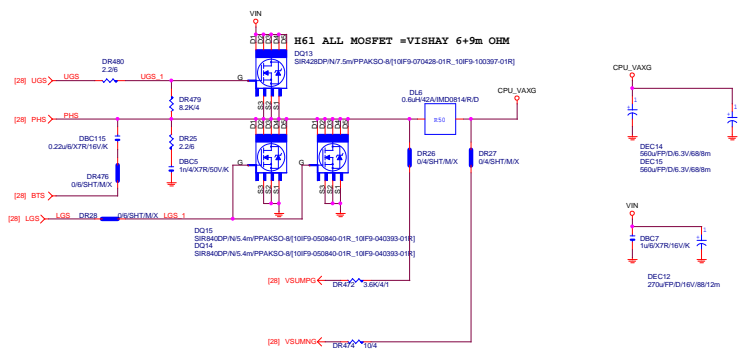
**PHASE 3**



**PHASE 2**

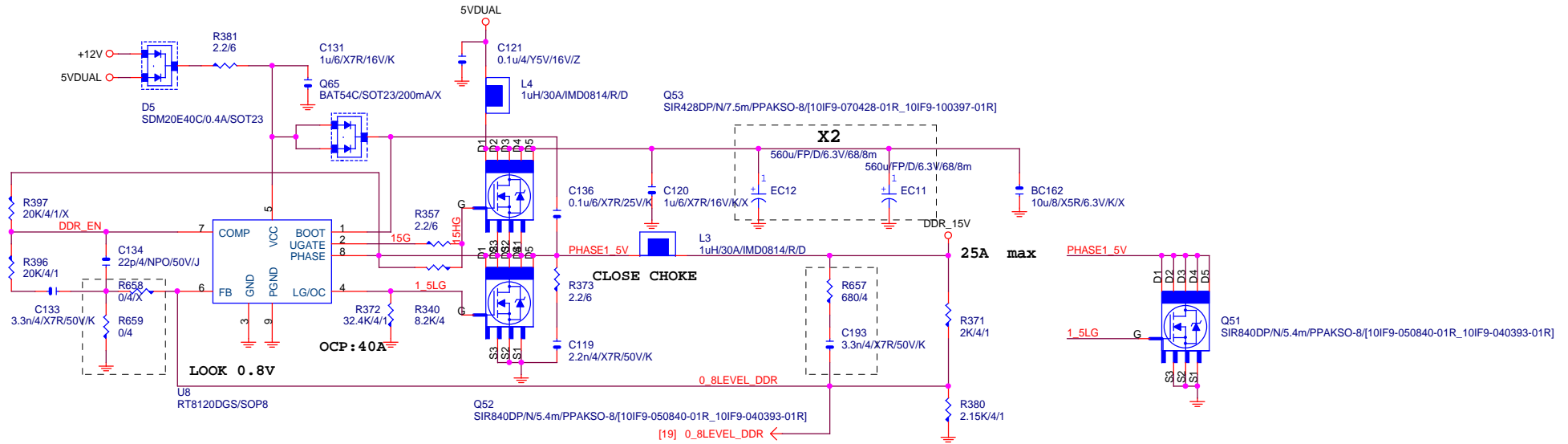


**VAXG**

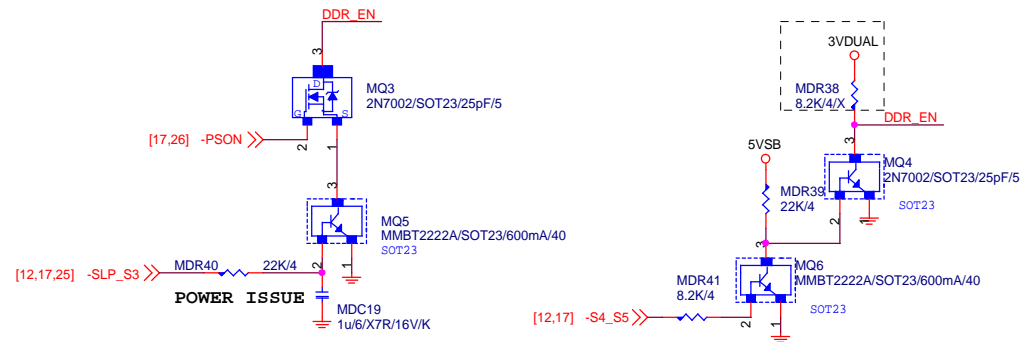




**DDR1.5V**



**PWR\_SEQ**



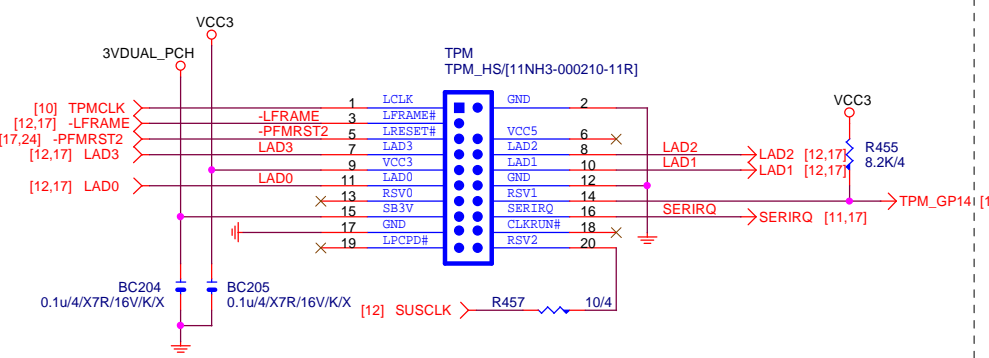
VIN=5V, VOUT=1.5V, IOU=25A, PHASE=1  
 IRMS=11.45A  
 560u/FP/D/6.3V/68/8m RIPPLE CURRENT=4.7A  
 Coefficient=1.7(85°C), 1(105°C)  
 VIN Ripple current=4.7x1.7=7.99A(85°C)  
 -->故固態電容須2x7.99=15.98>11.45A

OCp : Ipeak=(2xIocsetxRocset)/Rdson  
 typ Iocset=20uA , Rocset=4.7k  
 OCp : 53.71A=(2x20uax4.7k)/(7m//7m)

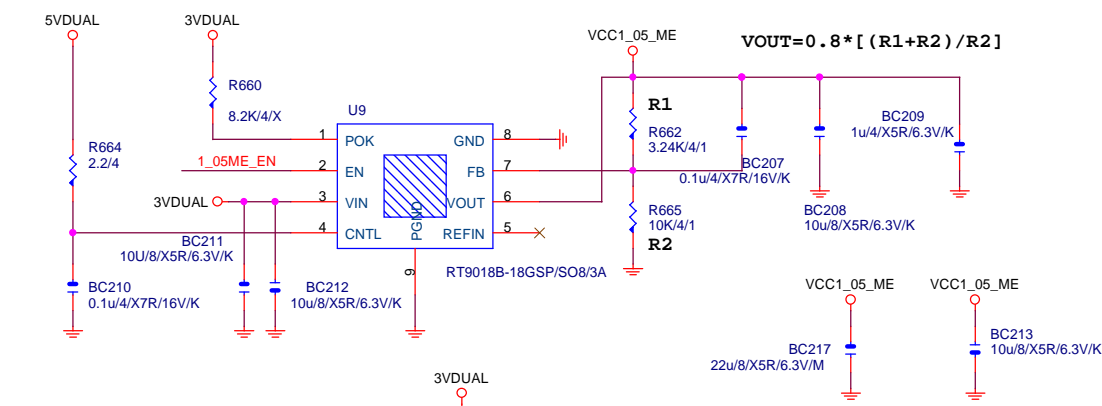
**Gigabyte Technology**

Title		
<b>DDR POWER</b>		
Size Custom	Document Number	Rev
	<b>GA-B75M-D3H</b>	<b>1.1</b>
Date:	Friday, June 08, 2012	Sheet 30 of 33

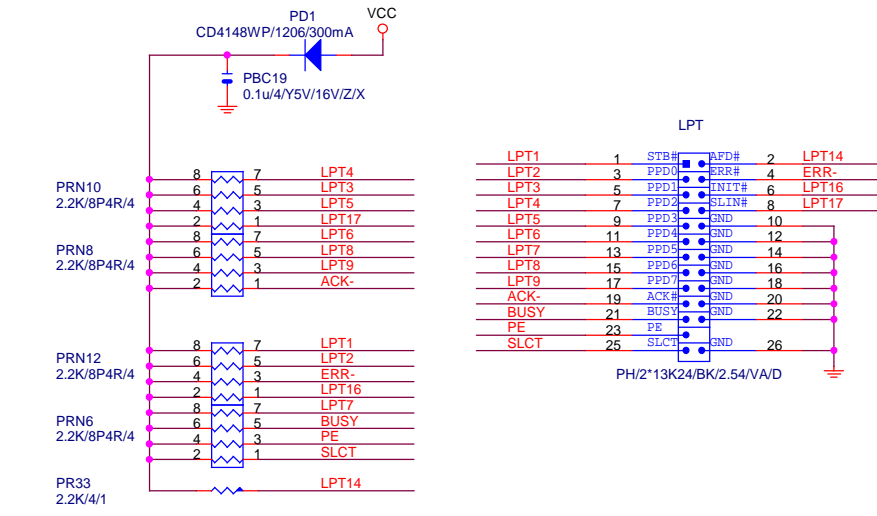
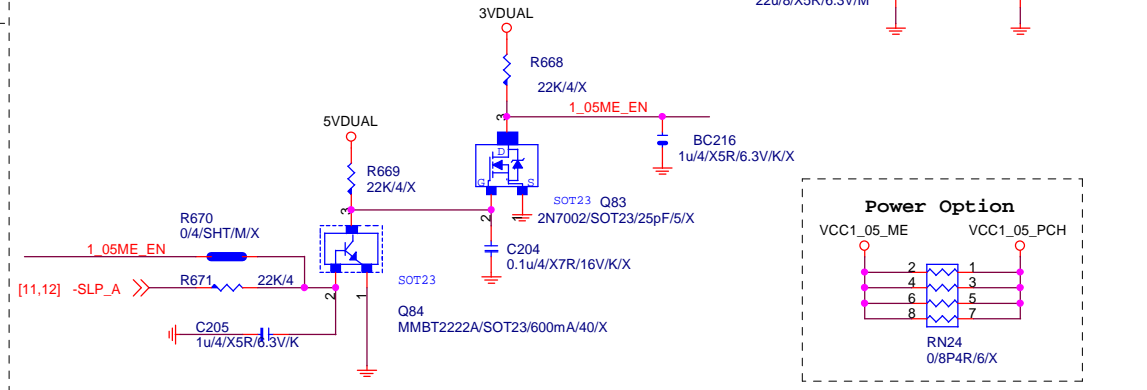
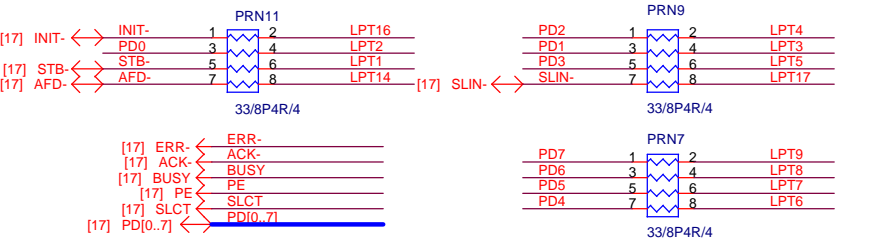
**TPM**



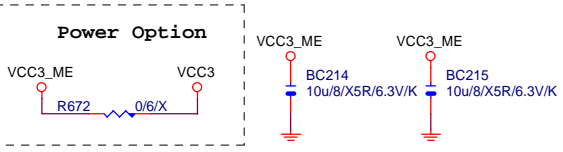
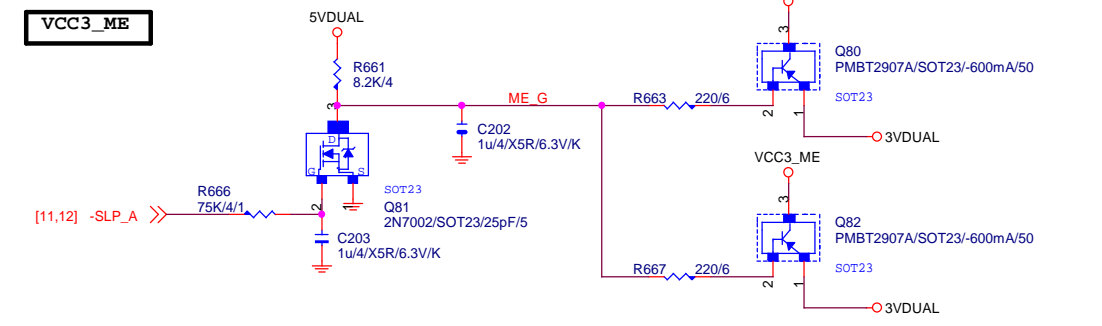
**VCC1\_05\_ME**



**LPT PORT**



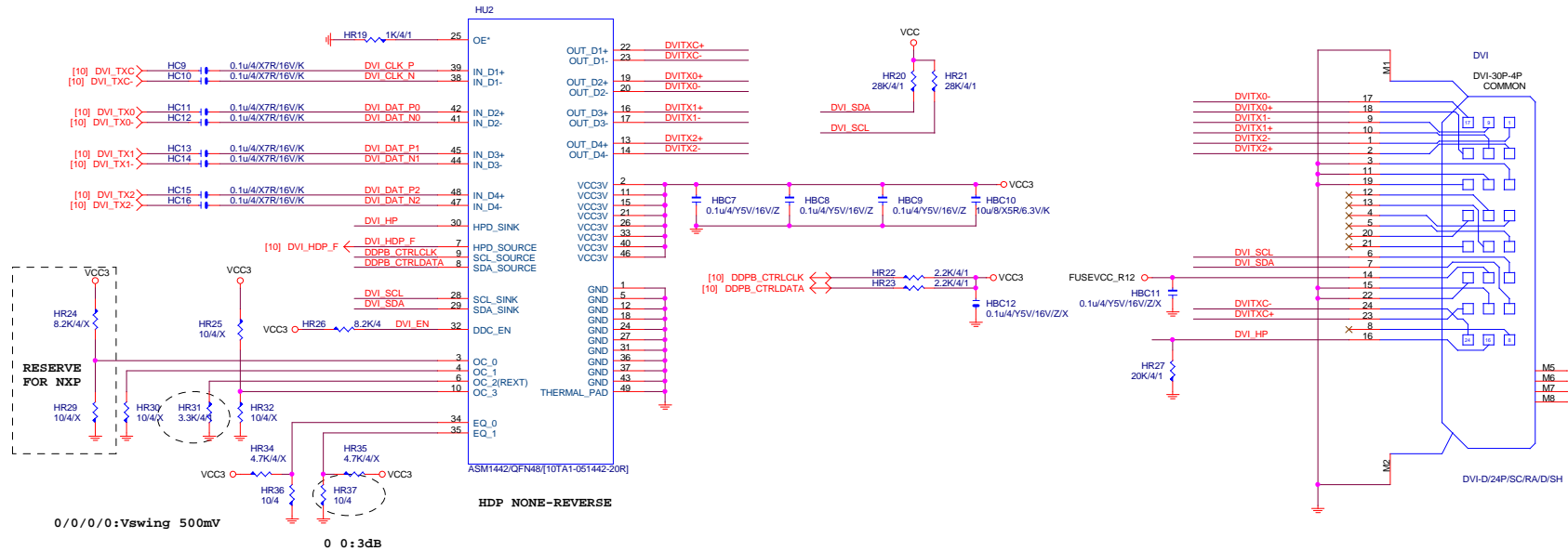
**VCC3\_ME**



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Title			<b>LPT</b>		
Size	Document Number	Rev			
Custom	<b>GA-B75M-D3H</b>	<b>1.1</b>			
Date:	Friday, June 08, 2012	Sheet	31	of	33

**DVI LEVEL SHIFT**



**HDMI LEVEL SHIFT**

