

**Model Name: GA-H61M-S2-B3****Revision 1.0****SHEET****TITLE****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
08	DDR III CHANNEL B
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
16	PCI EXPRESS*1x2 SLOT / CLOCK GEN.
17	ITE 8728 LPC IO
18	COMA,KB_MS,R_USB,-PROCHOT
19	HWM,FAN CTRL,OV
20	DUAL BIOS
21	FP,FUSB,SPK,SATALED
22	ALC888B-VD2
23	REAR AUDIO JACK
24	ATHEROS AR8151/USB_LAN
25	DISCRETE POWER
26	ATX,-S_WARN,-S_ACK,5VDUAL1
27	ISL95870_CPU_VTT

28	VCORE ISL6364_1
29	VCORE ISL6364_2
30	VCORE ISL6364_3
31	TPM
32	LPT

www.aitech1.ru

**Gigabyte Technology**

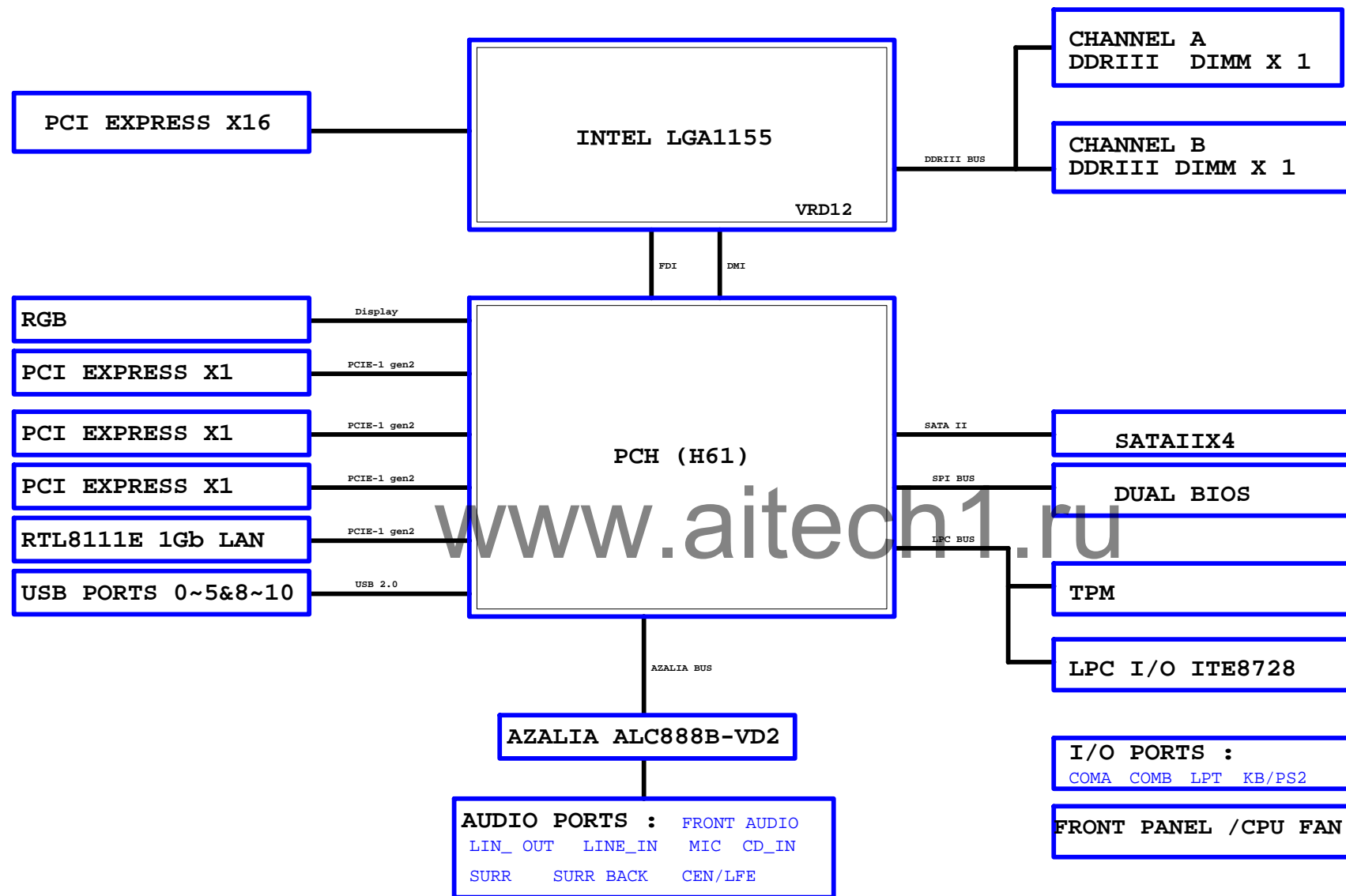
Title			Cover Sheet
Size	Document Number	GA-H61M-S2-B3	Rev
Custom			1.0
Date:	Wednesday, May 25, 2011	Sheet	1 of 31

*Revision 1.0*

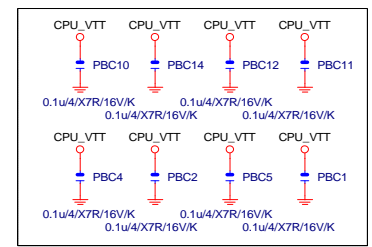
## 2011/03/11

[illegible][illegible]

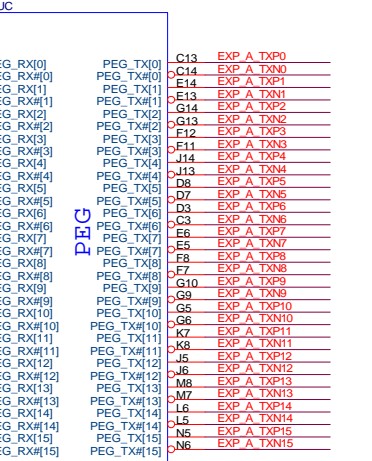
# BLOCK DIAGRAM



Gigabyte Technology			
BLOCK DIAGRAM			
Size	Document Number	GA-H61M-S2-B3	Rev
2"			1.0
Date	Wednesday, May 25, 2011	Sheet	3 of 31

[illegible]

		LGA1155[10SC1-F011155-01R_10SC1-F011155-02R]	
[FDI_TXN[0..7]	9		
[EXP_A_TXP[0..15]	14		
[EXP_A_TXN[0..15]	14	EXP_A_RXP0	B1
		EXP_A_RXN0	B1
		EXP_A_RXP1	D1
		EXP_A_RXN1	D1
		EXP_A_RXP2	C0
		EXP_A_RXN2	C0



9	DMI_0RXP	DMI_0RXP	W0
9	DMI_0RXN	DMI_0RXN	W0
9	DMI_1RXP	DMI_1RXP	V0
9	DMI_1RXN	DMI_1RXN	V0
9	DMI_2RXP	DMI_2RXP	Y0
9	DMI_2RXN	DMI_2RXN	Y0
9	DMI_3RXP	DMI_3RXP	AA0
9	DMI_3RXN	DMI_3RXN	AA0

	X	P
	X	P
	X	R
	X	R

CFG6	CFG5	PCIE CONFIG
1	1	1x16 , Default
1	0	2x8
0	1	RSVD
0	0	X8,X4,X4

建議用料

3VDUAL

VCC3

R225 1K/4/1

R222 200k/4/1

1.1V分壓

R224 8.2K/4

R223 100k/4/1

BC102 1n4/X7R/50V/K

CPURST

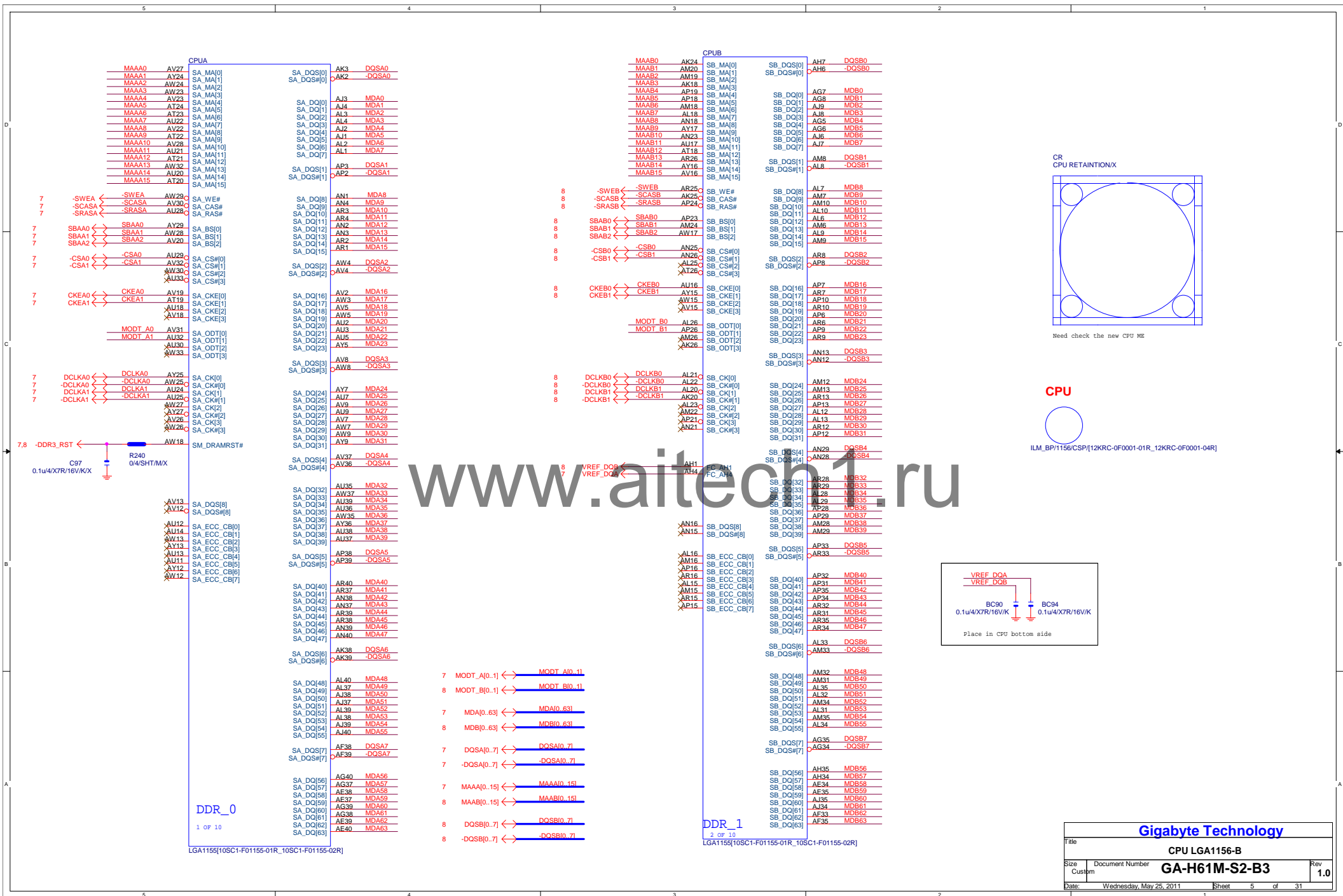
SOT23

Q29 MMBT2222A/SOT23/600mA/40

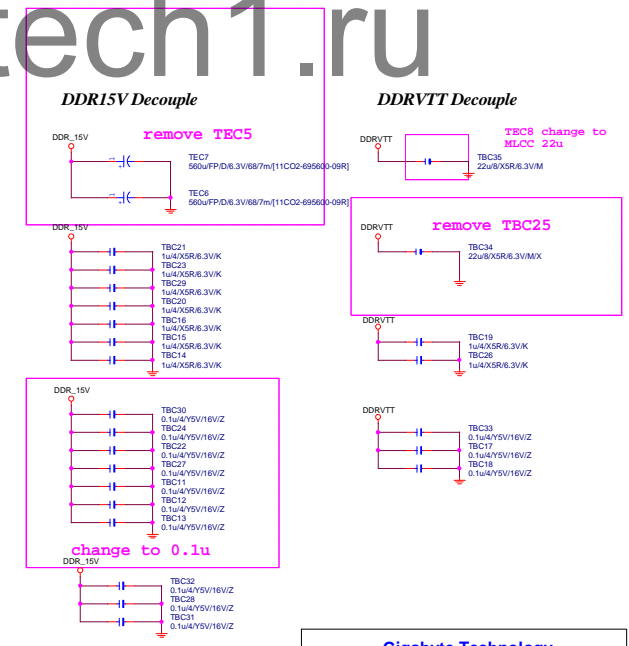
Q28 MMBT2222A/SOT23/600mA/40

PMFRST1

Title				CPU LGA1155-A			
Size	Document Number					Rev	
Custom	GA-H61M-S2-B3					1.0	
Date:	Wednesday, May 25, 2011			Sheet	4	of	31







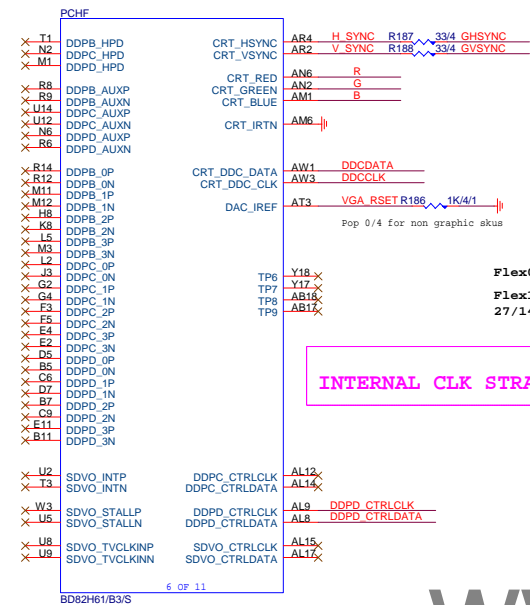
PDF created with pdfFactory Pro trial version [www.pdffactory.com](http://www.pdffactory.com)







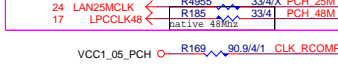




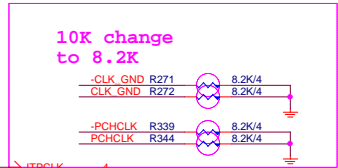
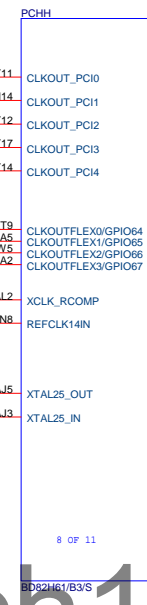
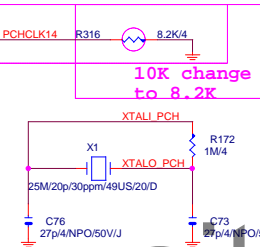
ADD TPM CLK



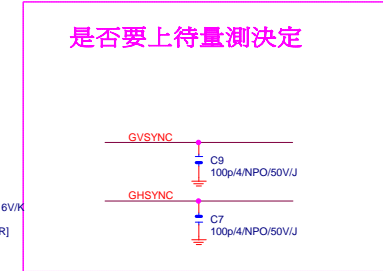
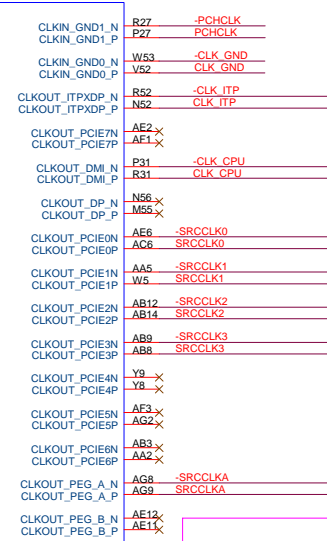
remove 33M



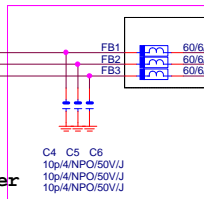
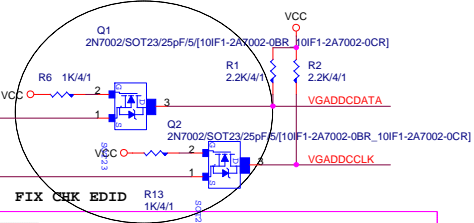
INTERNAL CLK STRAPPING



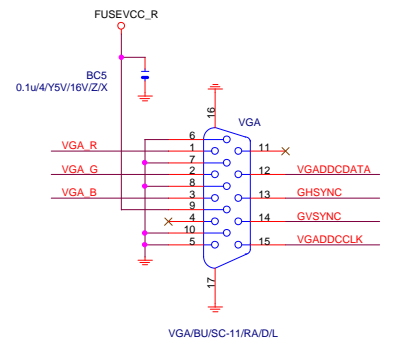
change to PCIEX1\_3



建議用料



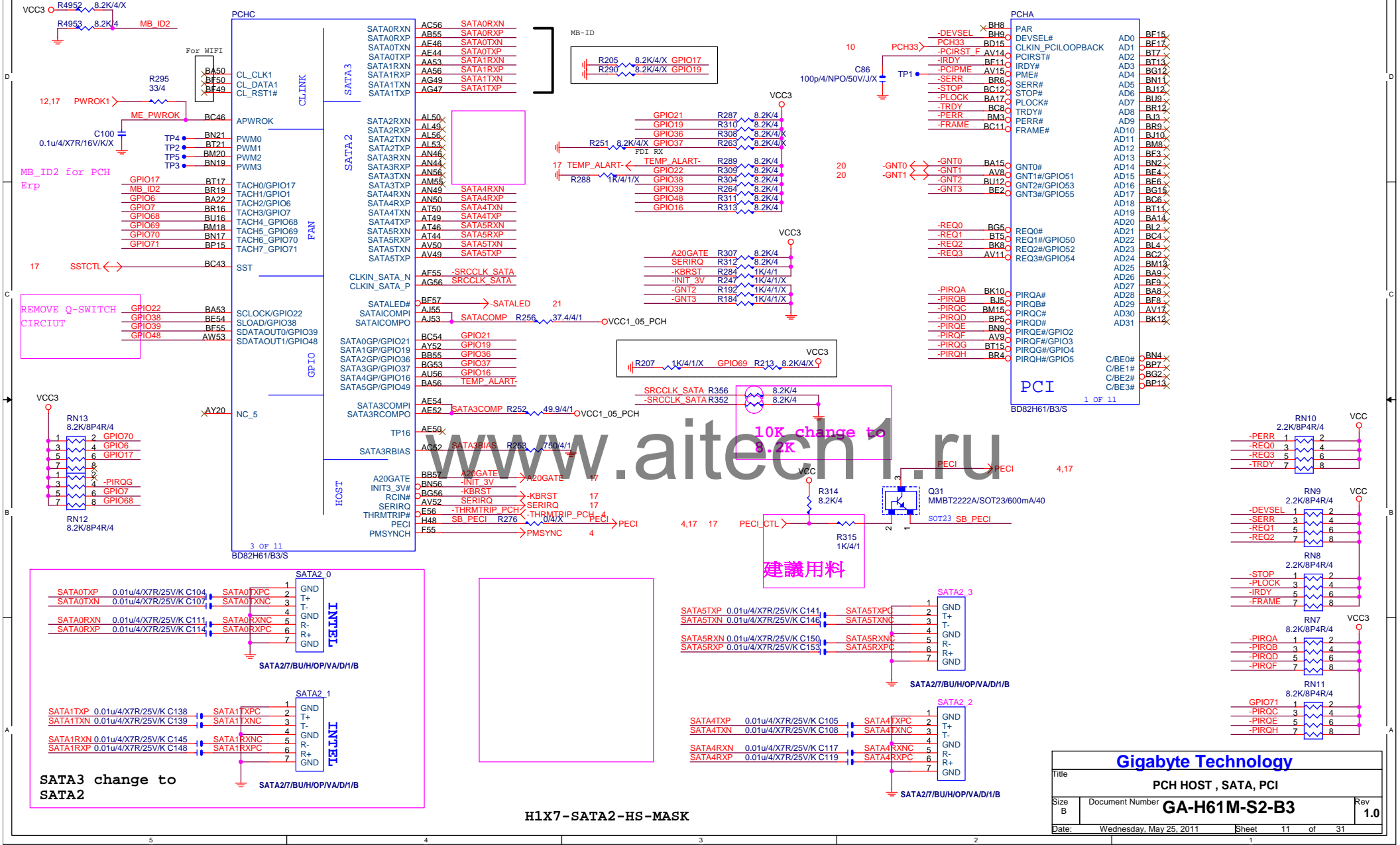
是否要上待量测决定



Gigabyte Technology			
PCH DISPLAY, CLK BUFFER			
Title	Document Number	Rev	
Size	Custom	1.0	
Date:	Wednesday, May 25, 2011	Sheet	10 of 31

www.aitech1.ru

# H61 SATA3.0 Disable

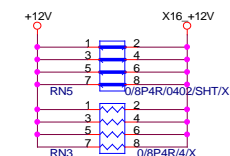
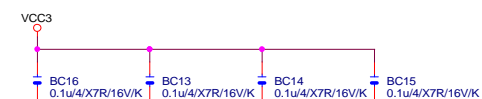
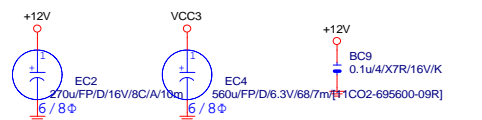


Gigabyte Technology			
PCH HOST , SATA, PCI			
Size B	Document Number	GA-H61M-S2-B3	Rev 1.0
Date:	Wednesday, May 25, 2011	Sheet 11	of 31





# EC6D\_8D10MM-RH



EXP\_A\_RXP0\_15] >>> EXP\_A\_RXP0\_15] 4  
EXP\_A\_RXN0\_15] >>> EXP\_A\_RXN0\_15] 4  
EXP\_A\_TXP0\_15] >>> EXP\_A\_TXP0\_15] 4  
EXP\_A\_TXN0\_15] >>> EXP\_A\_TXN0\_15] 4

EXP_A_TXP0	C22	0.22u/4/X5R/6.3V/K	EXP_A_TXP0C
EXP_A_TXN0	C26	0.22u/4/X5R/6.3V/K	EXP_A_TXN0C
EXP_A_TXP1	C29	0.22u/4/X5R/6.3V/K	EXP_A_TXP1C
EXP_A_TXN1	C31	0.22u/4/X5R/6.3V/K	EXP_A_TXN1C
EXP_A_TXP2	C33	0.22u/4/X5R/6.3V/K	EXP_A_TXP2C
EXP_A_TXN2	C35	0.22u/4/X5R/6.3V/K	EXP_A_TXN2C
EXP_A_TXP3	C37	0.22u/4/X5R/6.3V/K	EXP_A_TXP3C
EXP_A_TXN3	C40	0.22u/4/X5R/6.3V/K	EXP_A_TXN3C
EXP_A_TXP4	C48	0.22u/4/X5R/6.3V/K	EXP_A_TXP4C
EXP_A_TXN4	C49	0.22u/4/X5R/6.3V/K	EXP_A_TXN4C
EXP_A_TXP5	C52	0.22u/4/X5R/6.3V/K	EXP_A_TXP5C
EXP_A_TXN5	C54	0.22u/4/X5R/6.3V/K	EXP_A_TXN5C
EXP_A_TXP6	C56	0.22u/4/X5R/6.3V/K	EXP_A_TXP6C
EXP_A_TXN6	C58	0.22u/4/X5R/6.3V/K	EXP_A_TXN6C
EXP_A_TXP7	C60	0.22u/4/X5R/6.3V/K	EXP_A_TXP7C
EXP_A_TXN7	C61	0.22u/4/X5R/6.3V/K	EXP_A_TXN7C
EXP_A_TXP8	C63	0.22u/4/X5R/6.3V/K	EXP_A_TXP8C
EXP_A_TXN8	C64	0.22u/4/X5R/6.3V/K	EXP_A_TXN8C
EXP_A_TXP9	C66	0.22u/4/X5R/6.3V/K	EXP_A_TXP9C
EXP_A_TXN9	C67	0.22u/4/X5R/6.3V/K	EXP_A_TXN9C
EXP_A_TXP10	C69	0.22u/4/X5R/6.3V/K	EXP_A_TXP10C
EXP_A_TXN10	C70	0.22u/4/X5R/6.3V/K	EXP_A_TXN10C
EXP_A_TXP11	C71	0.22u/4/X5R/6.3V/K	EXP_A_TXP11C
EXP_A_TXN11	C72	0.22u/4/X5R/6.3V/K	EXP_A_TXN11C
EXP_A_TXP12	C74	0.22u/4/X5R/6.3V/K	EXP_A_TXP12C
EXP_A_TXN12	C75	0.22u/4/X5R/6.3V/K	EXP_A_TXN12C
EXP_A_TXP13	C77	0.22u/4/X5R/6.3V/K	EXP_A_TXP13C
EXP_A_TXN13	C78	0.22u/4/X5R/6.3V/K	EXP_A_TXN13C
EXP_A_TXP14	C79	0.22u/4/X5R/6.3V/K	EXP_A_TXP14C
EXP_A_TXN14	C80	0.22u/4/X5R/6.3V/K	EXP_A_TXN14C
EXP_A_TXP15	C82	0.22u/4/X5R/6.3V/K	EXP_A_TXP15C
EXP_A_TXN15	C83	0.22u/4/X5R/6.3V/K	EXP_A_TXN15C

EXP_A_TXP8C	B50
EXP_A_TXN8C	B51
EXP_A_TXP9C	B52
EXP_A_TXN9C	B53
EXP_A_TXP10C	B54
EXP_A_TXN10C	B55
EXP_A_TXP11C	B56
EXP_A_TXN11C	B57
EXP_A_TXP12C	B58
EXP_A_TXN12C	B59
EXP_A_TXP13C	B60
EXP_A_TXN13C	B61
EXP_A_TXP14C	B62
EXP_A_TXN14C	B63
EXP_A_TXP15C	B64
EXP_A_TXN15C	B65
EXP_A_TXP16C	B66
EXP_A_TXN16C	B67
EXP_A_TXP17C	B68
EXP_A_TXN17C	B69
EXP_A_TXP18C	B70
EXP_A_TXN18C	B71
EXP_A_TXP19C	B72
EXP_A_TXN19C	B73
EXP_A_TXP20C	B74
EXP_A_TXN20C	B75
EXP_A_TXP21C	B76
EXP_A_TXN21C	B77
EXP_A_TXP22C	B78
EXP_A_TXN22C	B79
EXP_A_TXP23C	B80
EXP_A_TXN23C	B81
EXP_A_TXP24C	B82
EXP_A_TXN24C	B83

## PCIESLOT-164DN-P

3GIO\_\*16

PCIE16

KEY

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

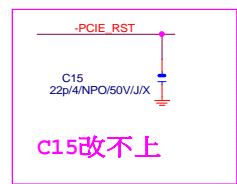
PCIE16

PCIE16

PCIE16

PCIE16

PCIE16

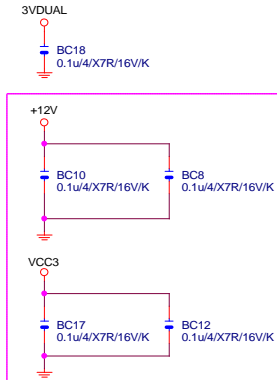


Gigabyte Technology

Title			PCI EXPRESS * 16
Size	Document Number	GA-H61M-S2-B3	
Custom		Rev	1.0
Date:	Wednesday, May 25, 2011	Sheet	14 of 31

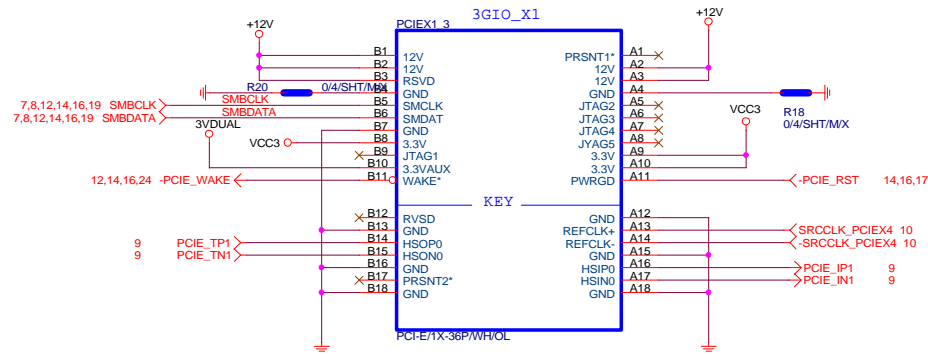


# PCIESLOT-64D-98D-P



BC8 BC12改不上

REMOVE RN



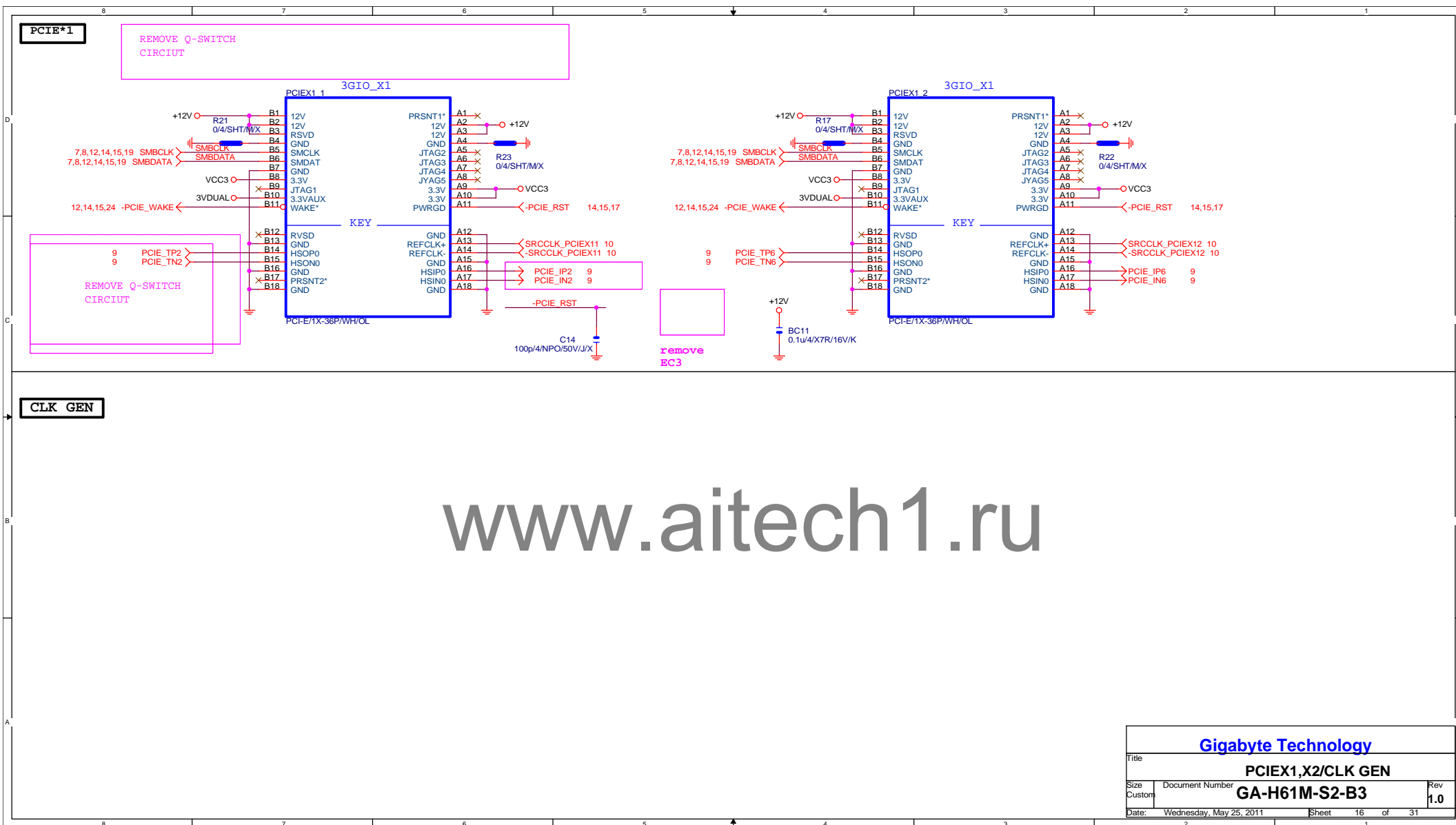
PCIEX4 change to PCIE1

www.aitech1.ru

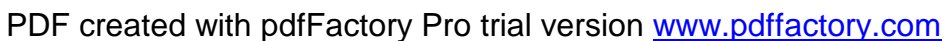
Gigabyte Technology

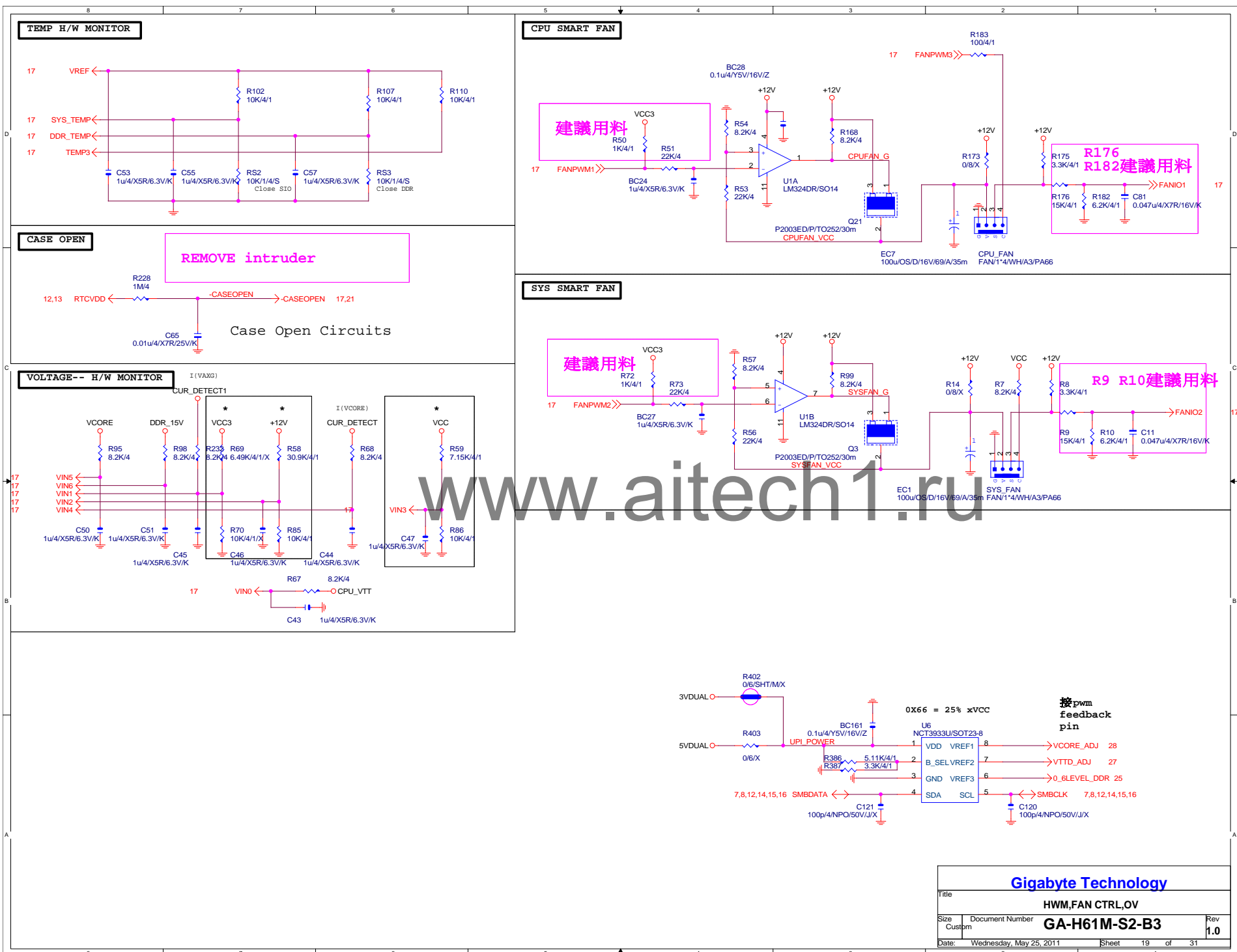
Title		
PCI EXPRESS X 4 PORT		
Size	Document Number	Rev
Custom	GA-H61M-S2-B3	1.0
Date:	Wednesday, May 25, 2011	Sheet 15 of 31





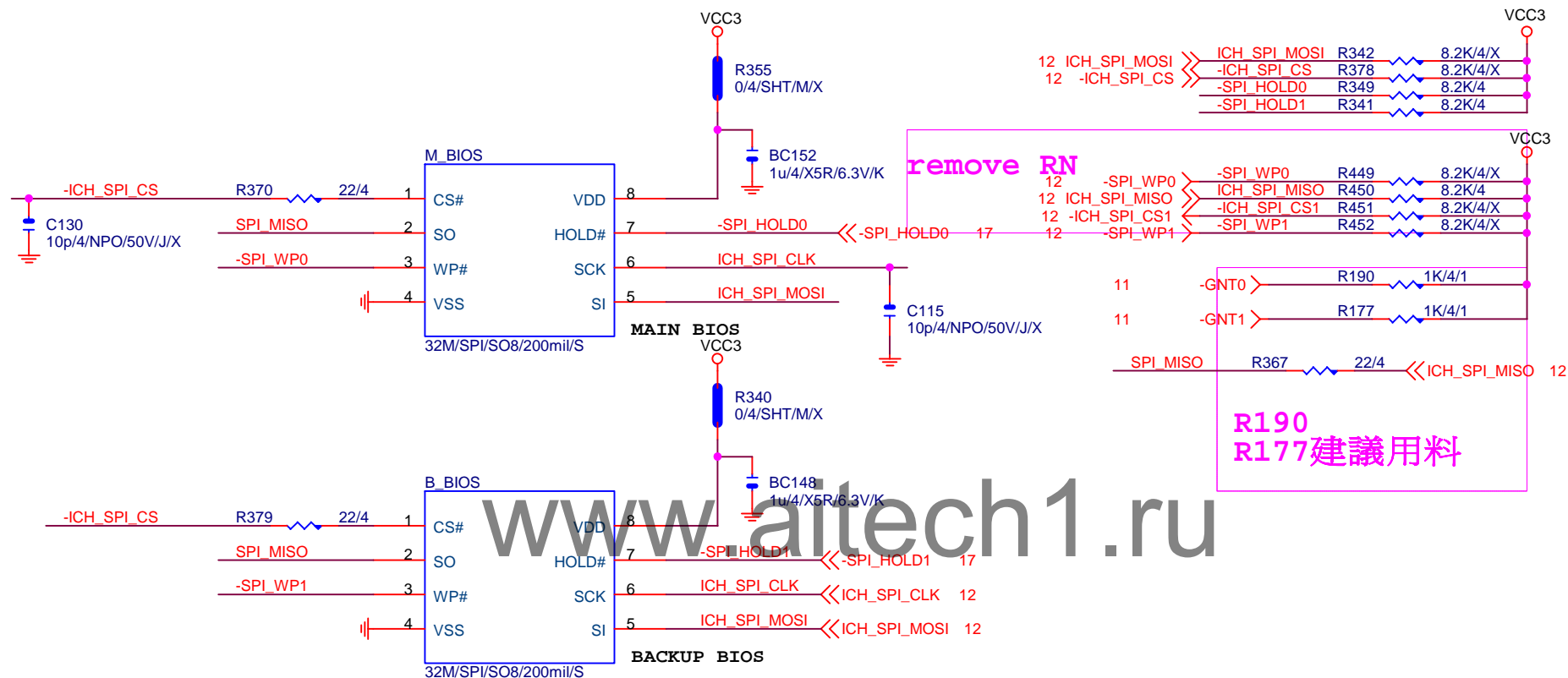






# DUAL BIOS

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

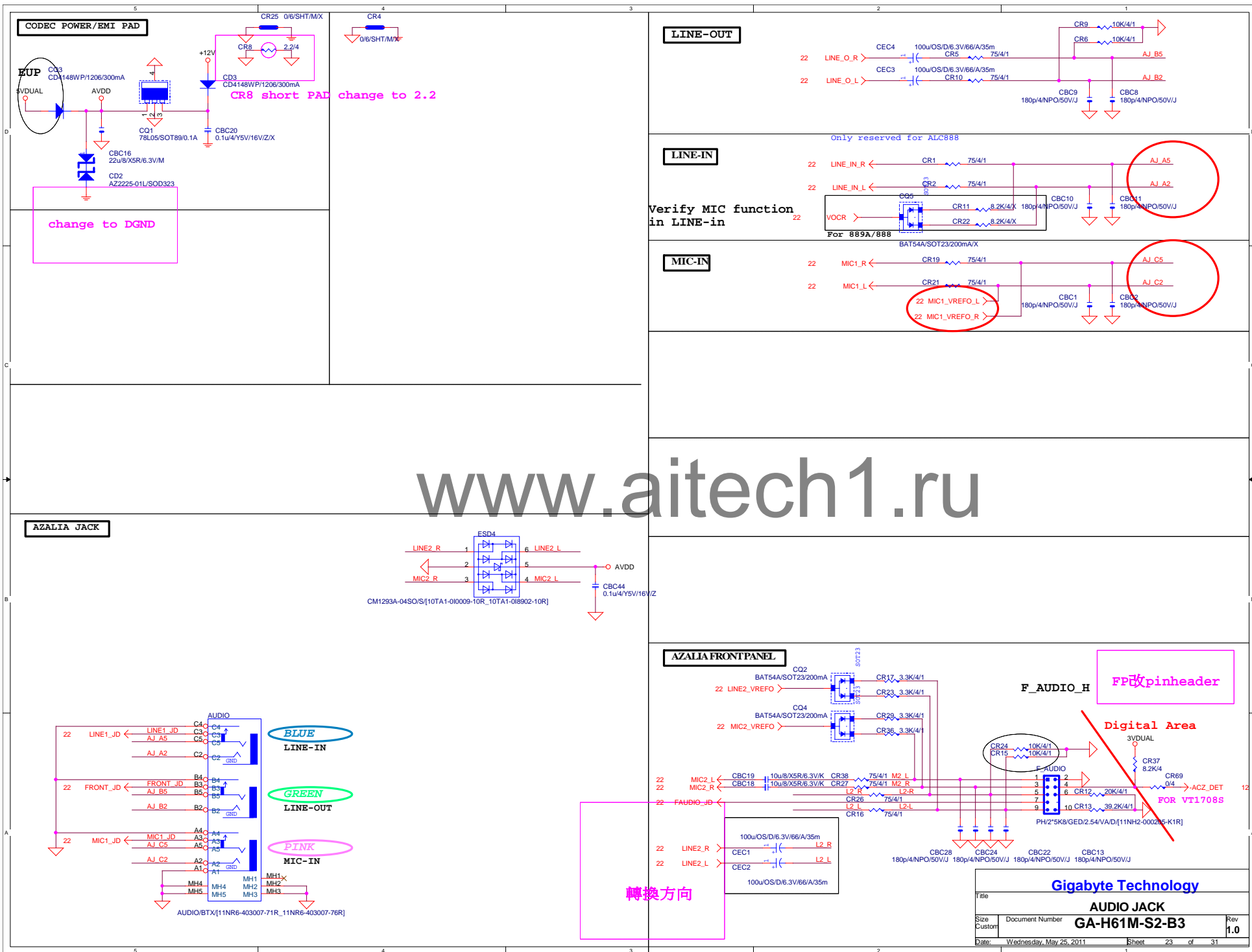
**Gigabyte Technology**

Title		
DUAL BIOS		
Size A	Document Number	Rev
	GA-H61M-USB3-B3	1.0
Date:	Wednesday, May 25, 2011	Sheet 20 of 31



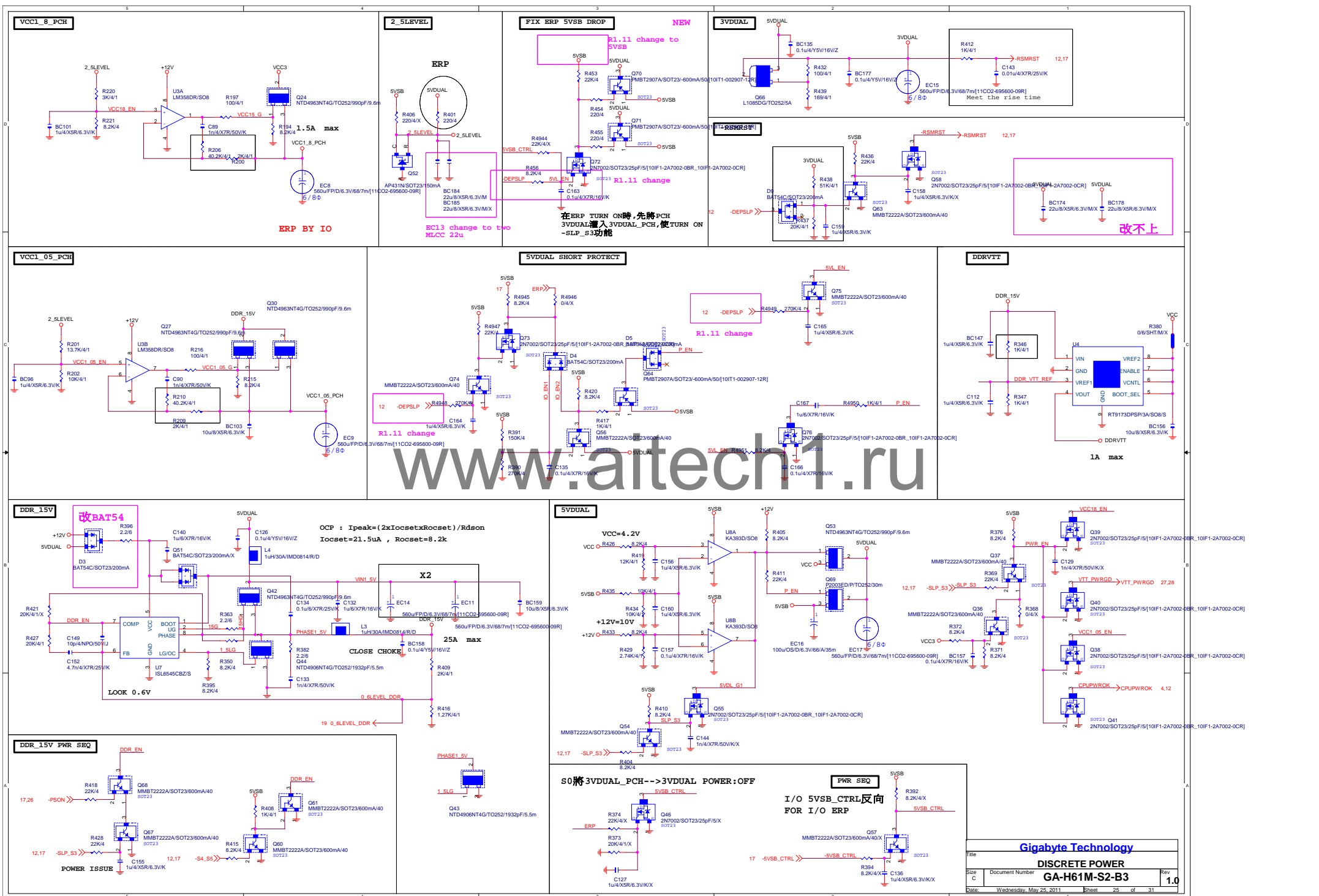


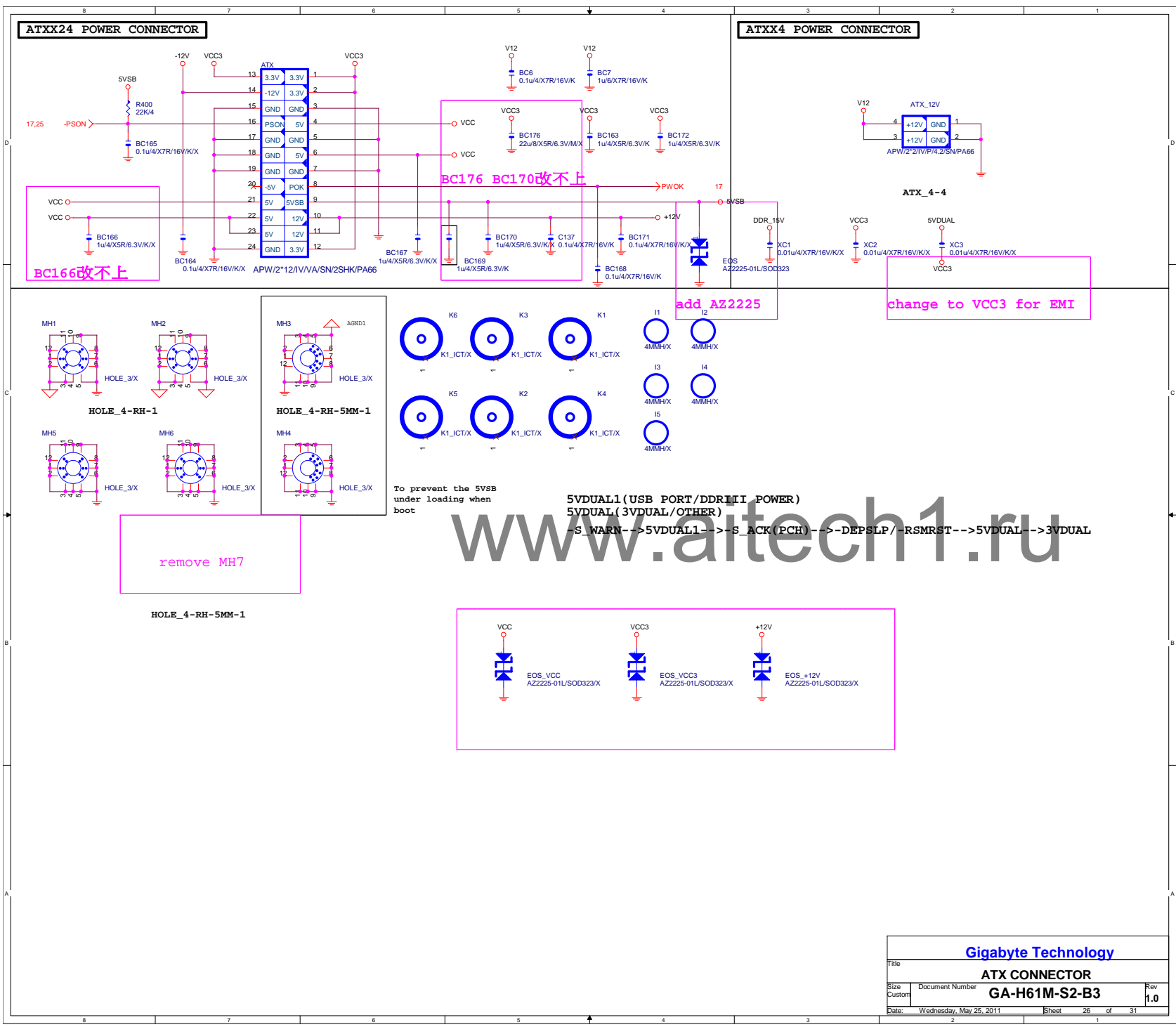




www.aitech1.ru







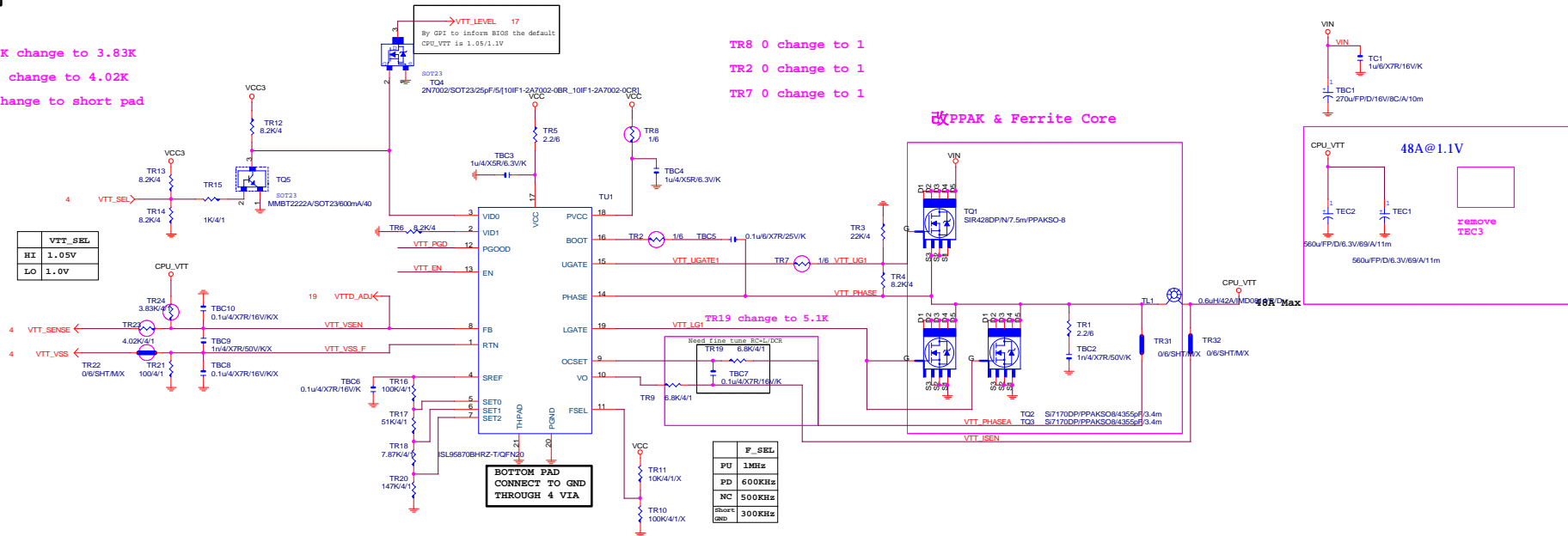
www.aitech1.ru

Gigabyte Technology		
File		
ATX CONNECTOR		
Size	Document Number	Rev
Custom	GA-H61M-S2-B3	1.0
Date	Wednesday, May 25, 2011	Sheet 26 of 31

## 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
```

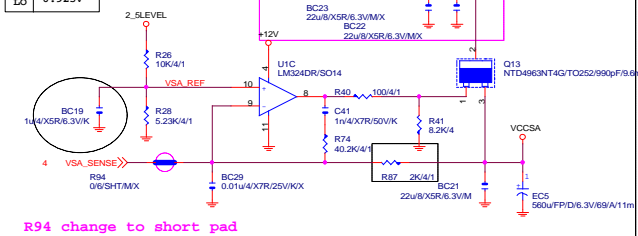


[www.aitech1.ru](http://www.aitech1.ru)

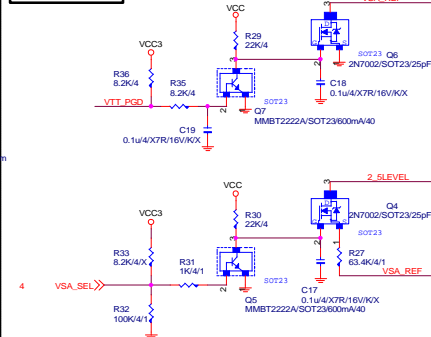
## VCCSA

PDG 0.8

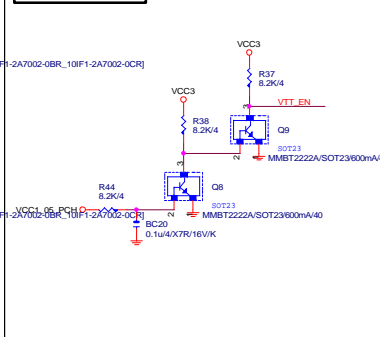
	VSA_SEL
HI	0.85V
LO	0.925V



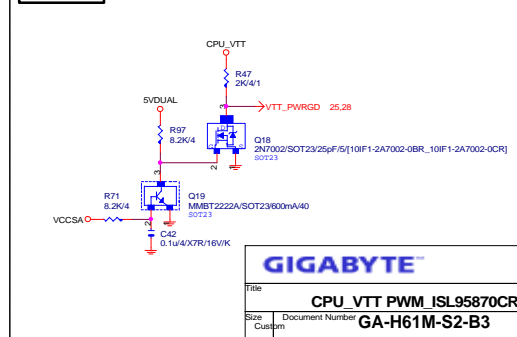
## VCCSA PWR SEQ



CPU_VTT	PWR	SEQ
---------	-----	-----



## VTT\_PWRGD



GIGABYTE™

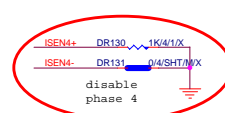
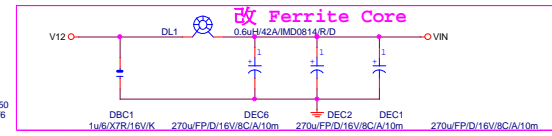
Title			
CPU_VTT_PWM_ISL95870CRZ			
Size	Document Number		Rev
Custom	GA-H61M-S2-B3		1.0
Date:	Wednesday, May 25, 2011	Sheet	27 of 31

DR85 150 change to 51  
 DR69 6.8K change to 11K  
 DR82 0 change to 10  
 DR62 2.1K change to 1.1K  
 DR65 1.6K change to 1.1K  
 DR57 100 change to 8.2K  
 DR102 100 change to 8.2K  
 DR54 short change to 750  
 DR103 short change to 1K  
 DR91 6.8K change to 10K  
 DR100 3.3K change to 1K  
 DR69 11K change to 20K  
 DR54 change to 1.2K

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

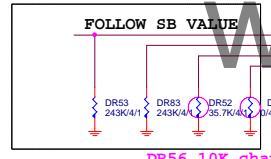
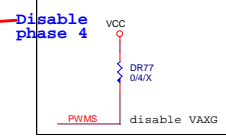
DR52 16.2K change to 24.9K

remove VAXG RDY



DR46 DR48 DR45 DR47 change to 10  
 DR86 change to 750

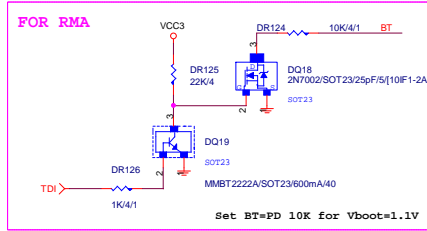
PWM1	PWM1	30
PWM2	PWM2	30
PWM3	PWM3	30
PWMS	PWMS	29
ISEN1	ISEN1	30
ISEN2	ISEN2	30
ISEN3	ISEN3	30
ISENS	ISENS	29
PHASE1	PHASE1	30
PHASE2	PHASE2	30
PHASE3	PHASE3	30
PHASES	PHASES	29



DR56 10K change to 0

BOTTOM PAD CONNECT TO GND THROUGH 10 VIA

Close VCore output choke  
 Close VxG output choke



Gigabyte Technology

CPU CORE VR-1

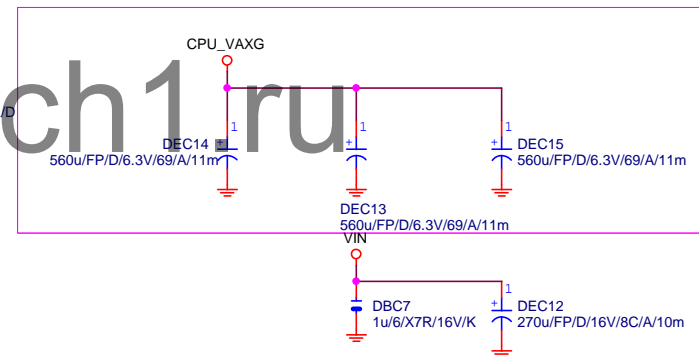
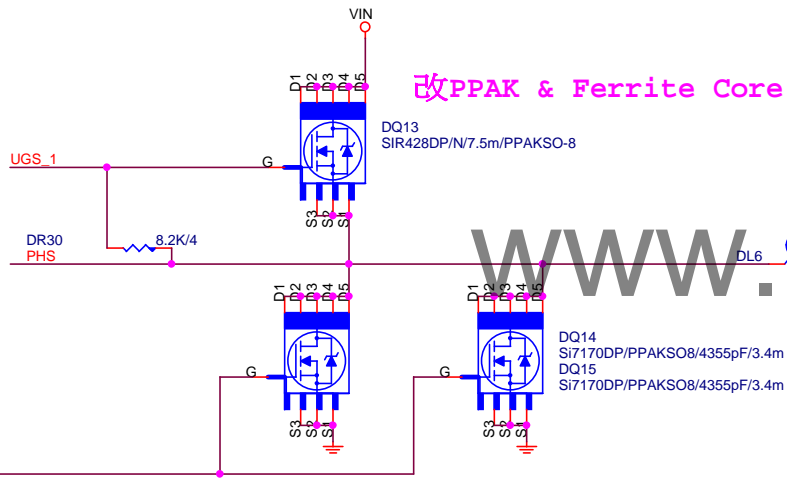
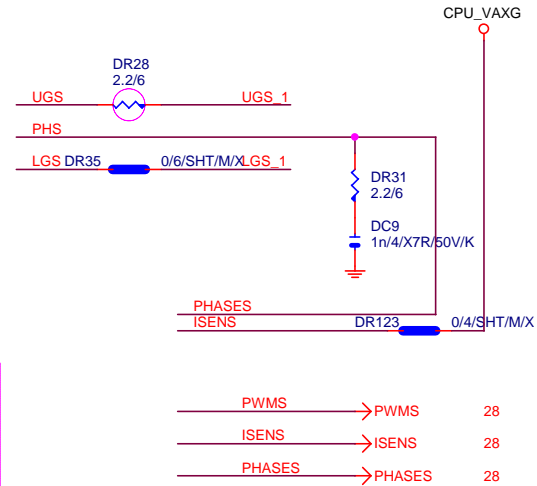
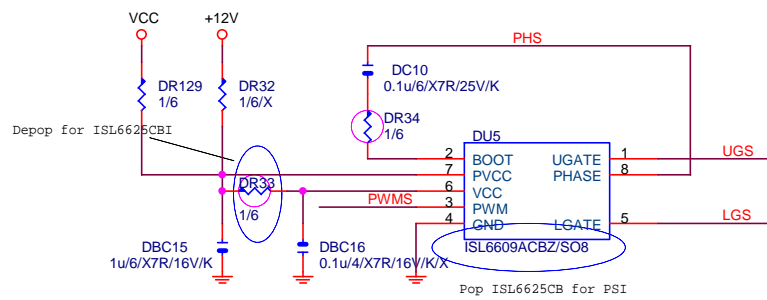
GA-H61M-S2-B3

Rev 1.0

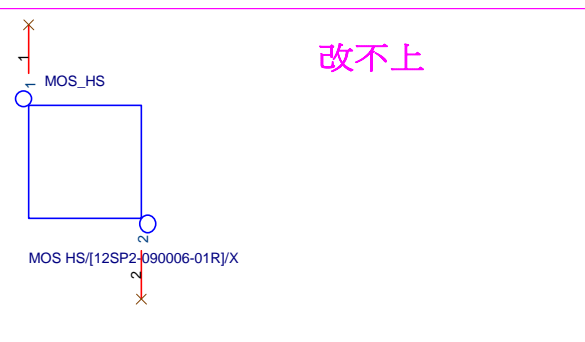
File	Document Number	Rev
		1.0
Date	Wednesday, May 25, 2011	Sheet 28 of 31

# VAXG

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



## MOS HEATSINK



Gigabyte Technology

Title		
CPU CORE VR-2		
Size	Document Number	Rev
Custom	GA-H61M-S2-B3	1.0
Date:	Wednesday, May 25, 2011	Sheet 29 of 31





