

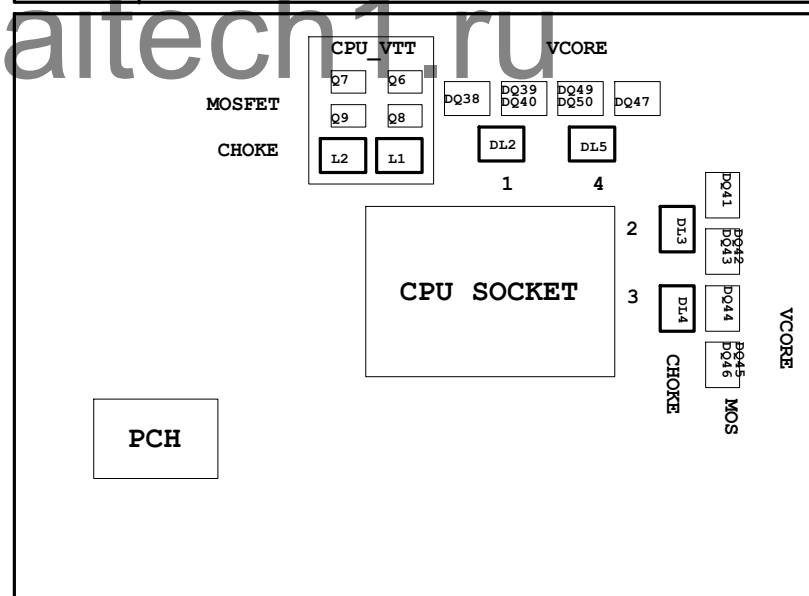
Model Name: GA-PH67-DS3-B3 1.0

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
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 EXPRESSX4 SLOT / PCIE X1 SLOT
16	IT8892
17	PCI SLOT 1&2&3
18	I/O ITE8728
19	COM, LPT, TPM
20	Dual BIOS
21	ALC889
22	REAR AUDIO JACK
23	VCORE PWM ISL6364CRZ-1
24	VCORE PWM ISL6364CRZ-2
25	DISCRETE POWER
26	DDR 15V & VCC1 05 PCH PWM ISL6545CBZ
27	CPU VTT PWM ISL95870

SHEET TITLE

28	VCCSA POWER
29	F PANEL , F USB
30	ATX POWER, CLOCK GEN
31	HWM,KB/MS , FAN CTRL
32	REALTEK RTL8111E
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Gigabyte Technology			
Title	Cover Sheet		
Size	Document Number	GA-PH67-DS3-B3	Rev 1.0
Date:	Thursday, May 05, 2011	Sheet 1 of 33	

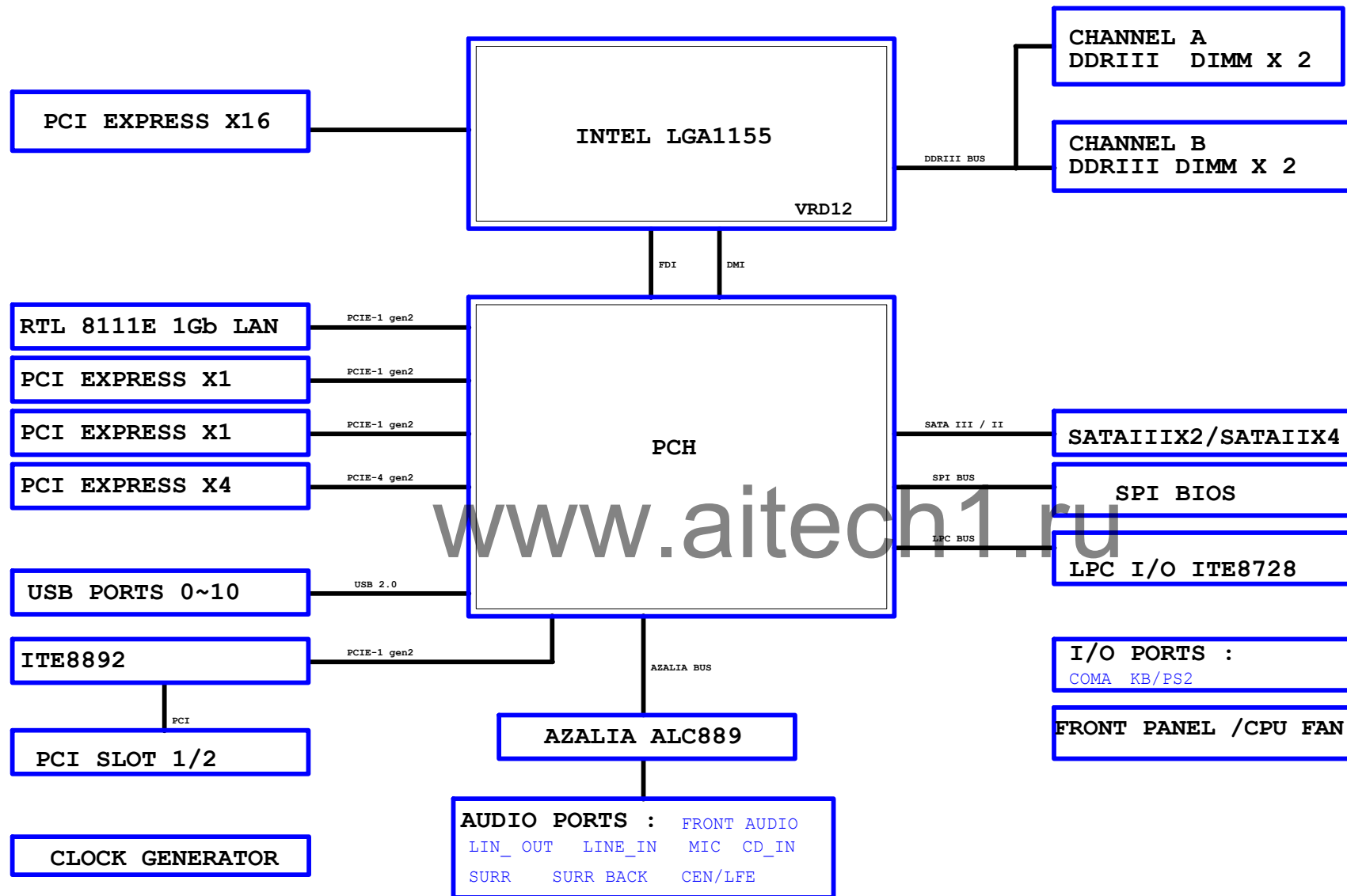
**GA-PH67-DS3-B3**  
Component value change history

[illegible]

## Circuit or PCB layout change

[illegible]

# BLOCK DIAGRAM





LGA1155A

MAAA0 AV27  
MAAA1 AV24  
MAAA2 AW24  
MAAA3 AW23  
MAAA4 AV23  
MAAA5 AT24  
MAAA6 AT24  
MAAA7 AU22  
MAAA8 AV22  
MAAA9 AT22  
MAAA10 AV28  
MAAA11 AU21  
MAAA12 AT21  
MAAA13 AW32  
MAAA14 AU20  
MAAA15 AT20

7 -SWEA <- -SWEA AV29  
7 -SCASA <- -SCASA AV30  
7 -SRASA <- -SRASA AU28  
7 SBAA0 <- SBAA0 AY29  
7 SBAA1 <- SBAA1 AW28  
7 SBAA2 <- SBAA2 AV20  
7 -CSA0 <- -CSA0 AU29  
7 -CSA1 <- -CSA1 AV32  
7 -CSA2 <- -CSA2 AW30  
7 -CSA3 <- -CSA3 AU33  
7 CKEA0 <- CKEA0 AV19  
7 CKEA1 <- CKEA1 AT19  
7 CKEA2 <- CKEA2 AU18  
7 CKEA3 <- CKEA3 AV18  
MODT\_A0 AV31  
MODT\_A1 AU32  
MODT\_A2 AU30  
MODT\_A3 AW33

7 DCLKA0 <- DCLKA0 AY25  
7 -DCLKA0 <- -DCLKA0 AW25  
7 DCLKA1 <- DCLKA1 AU24  
7 -DCLKA1 <- -DCLKA1 AU25  
7 DCLKA2 <- DCLKA2 AW27  
7 -DCLKA2 <- -DCLKA2 AY27  
7 DCLKA3 <- DCLKA3 AV26  
7 -DCLKA3 <- -DCLKA3 AW26

7,8 -DDR3\_RST <- TR1  
0.1u4/4X7R/16V/K/X  
TBC9  
0.1u4/4X7R/16V/K/X

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AU14  
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1 OF 10

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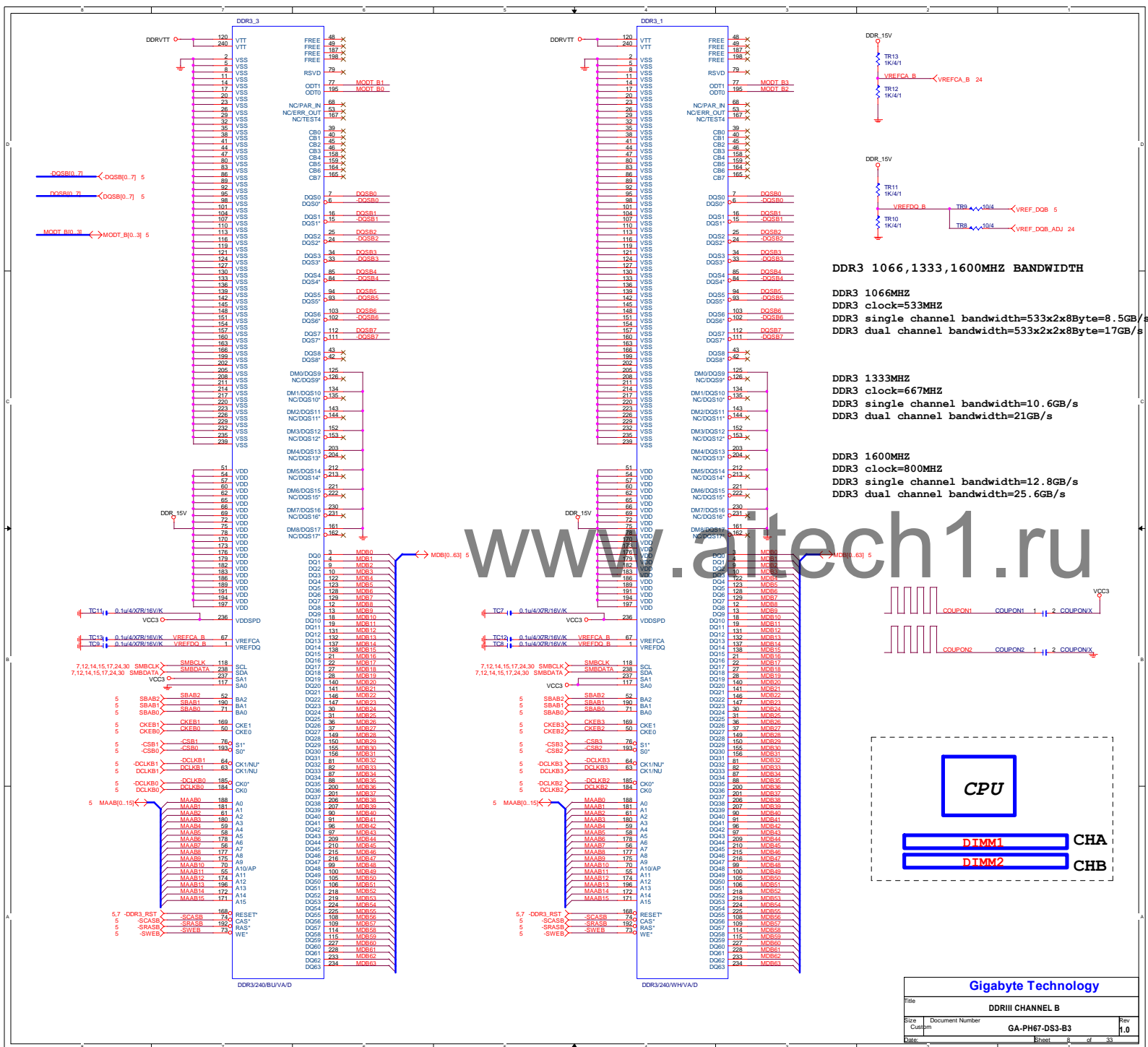
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SRCCLK\_PCH R267 8.2K/4/X  
-SRCCLK\_PCH R268 8.2K/4/X

USB:12/7.5/4/5/7/5/12 (breakout min 8/4/4/4/8)  
Impedance=90 +- 17.5%

PCHB

PCHG

FDILINK

FDI\_RXN0

FDI\_RXP0

FDI\_RXN1

FDI\_RXP1

FDI\_RXN2

FDI\_RXP2

FDI\_RXN3

FDI\_RXP3

FDI\_RXN4

FDI\_RXP4

FDI\_RXN5

FDI\_RXP5

FDI\_RXN6

FDI\_RXP6

FDI\_RXN7

FDI\_RXP7

FDI\_INT

7 OF 11

BD82H67/B3/S

OC[3:0]# for

Device 29

(ports 0-7)

OC[7:4]# for

Device 26

(ports 8-13)

OC#

OC0#

OC1#

OC2#

OC3#

OC4#

OC5#

OC6#

OC7#

USB0,1

USB2,3

USB4,5

USB6,7

USB8,9

USB10,11

USB12,13

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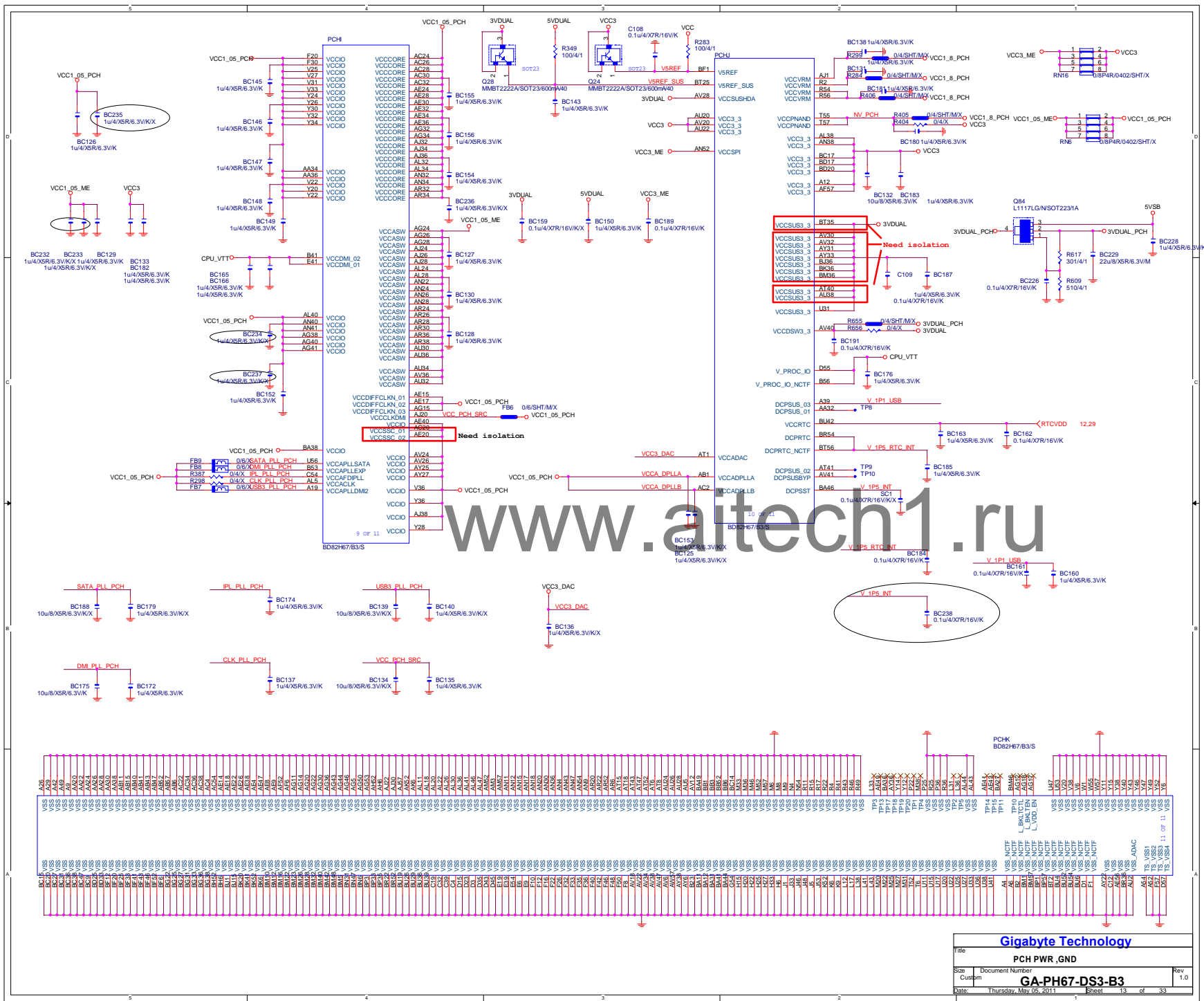
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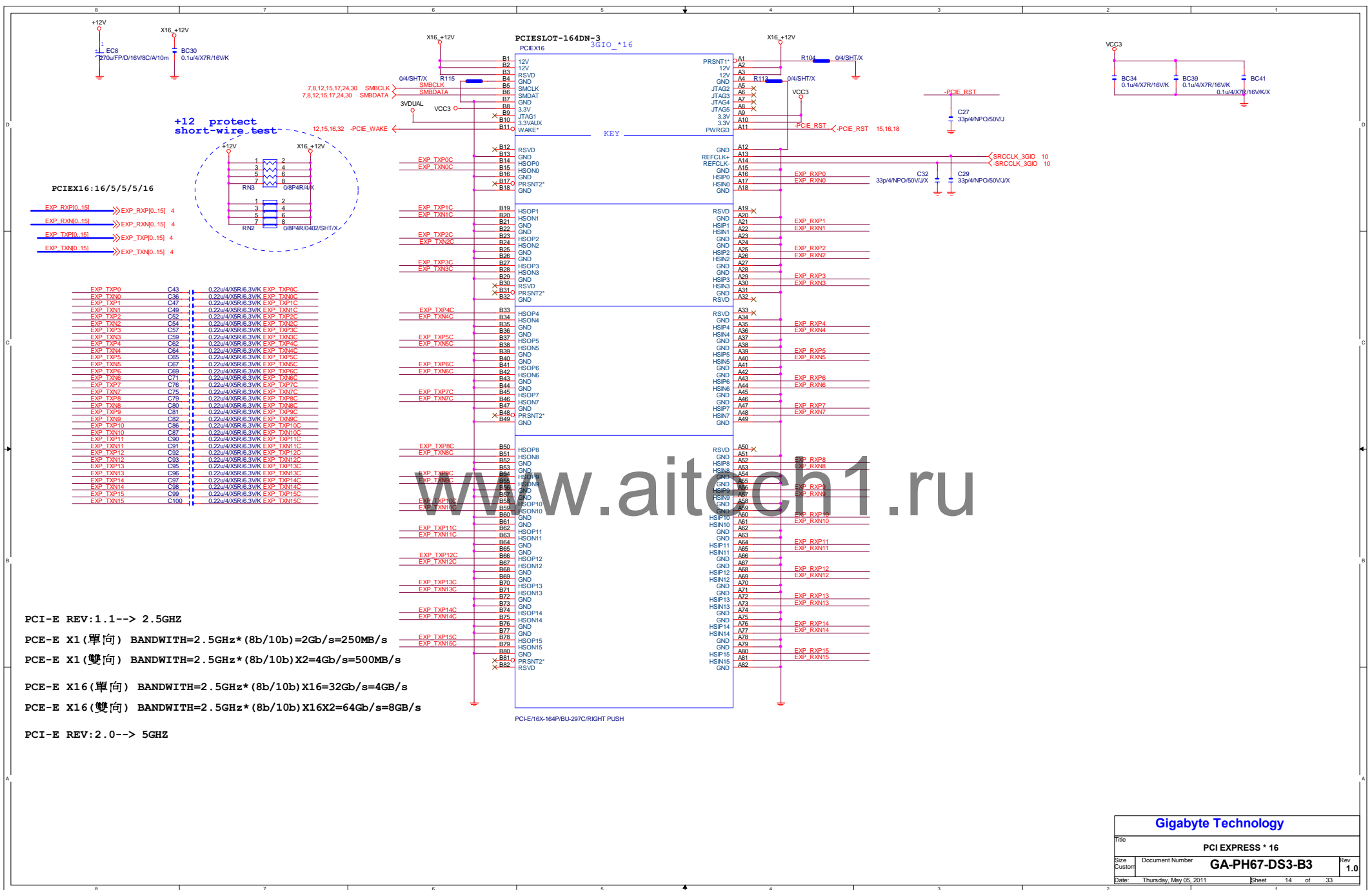
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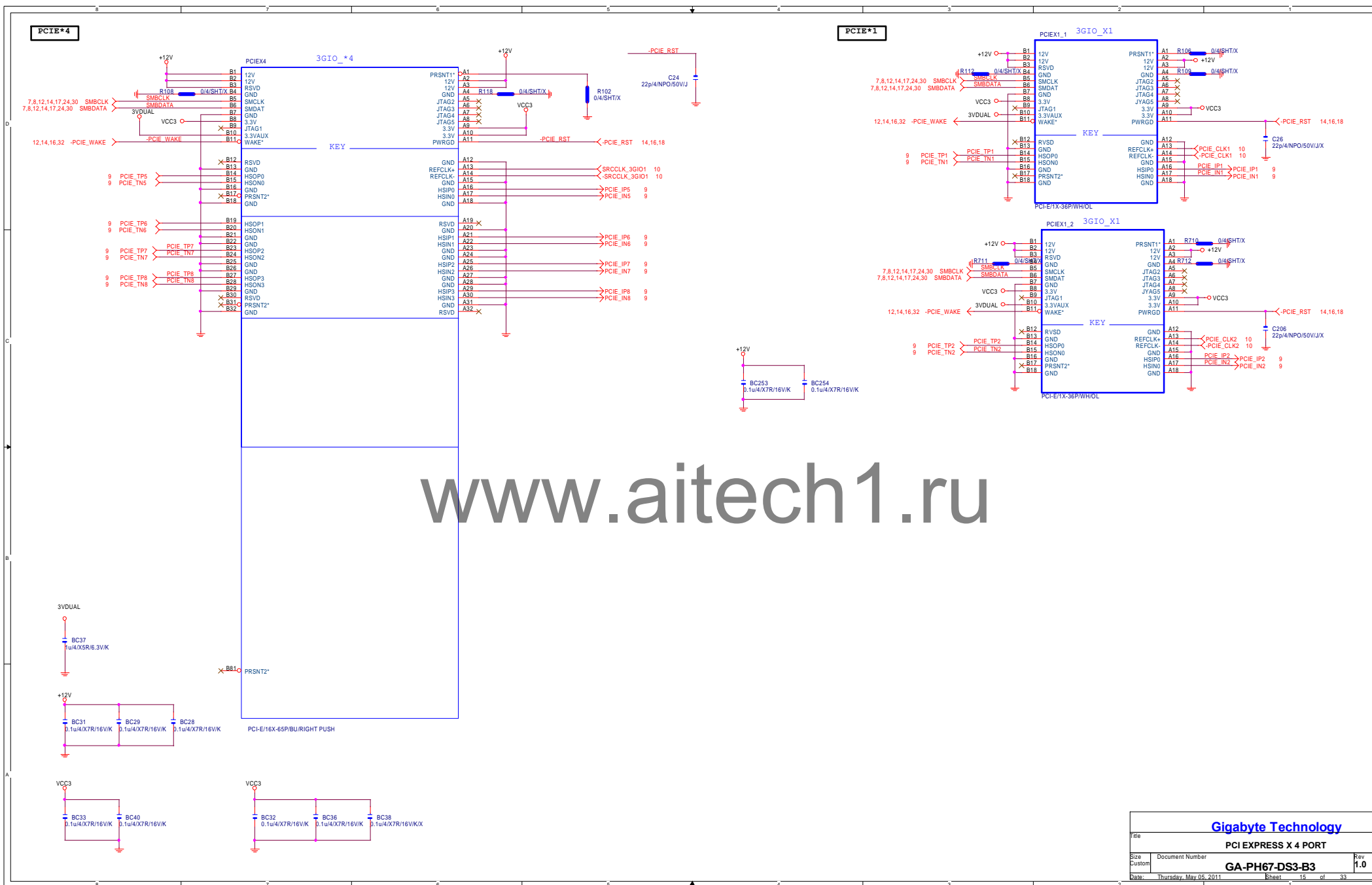




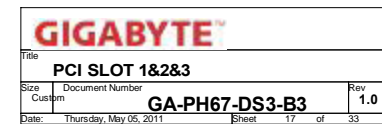




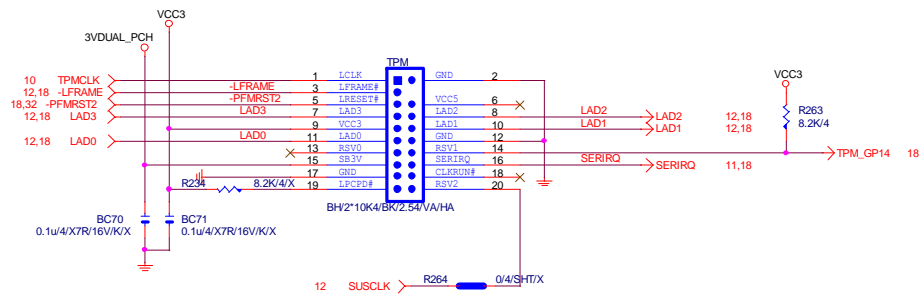
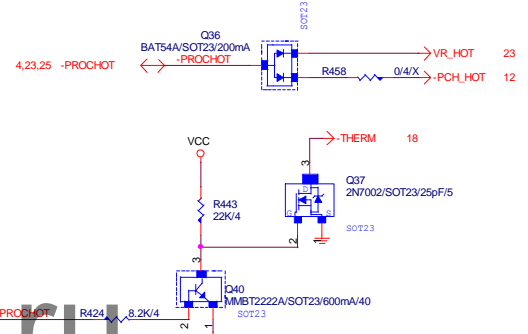
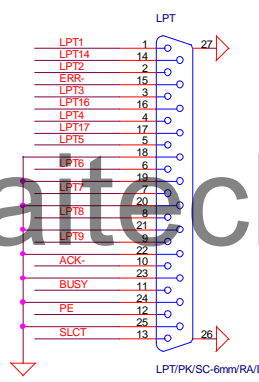
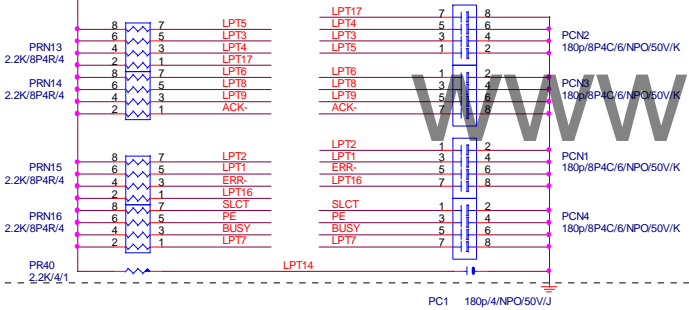
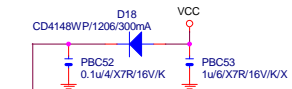
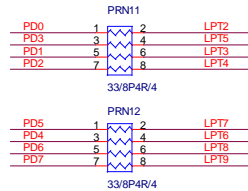
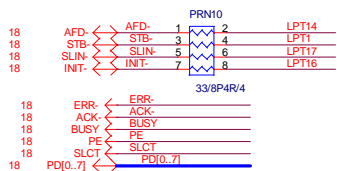
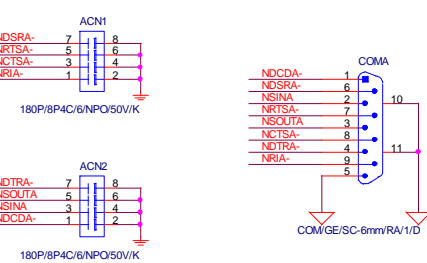
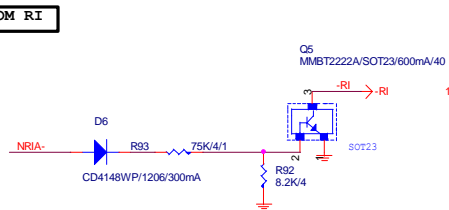








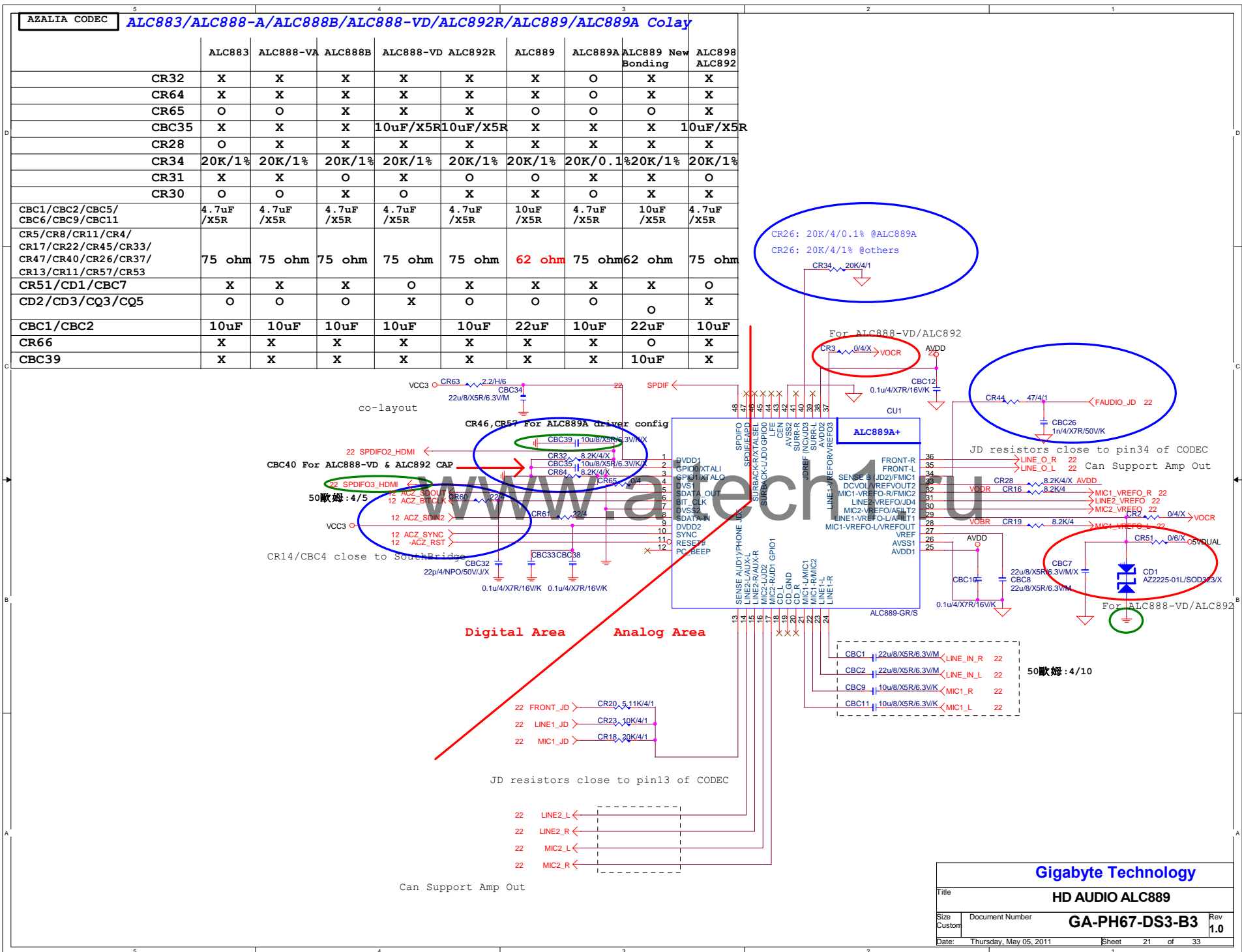




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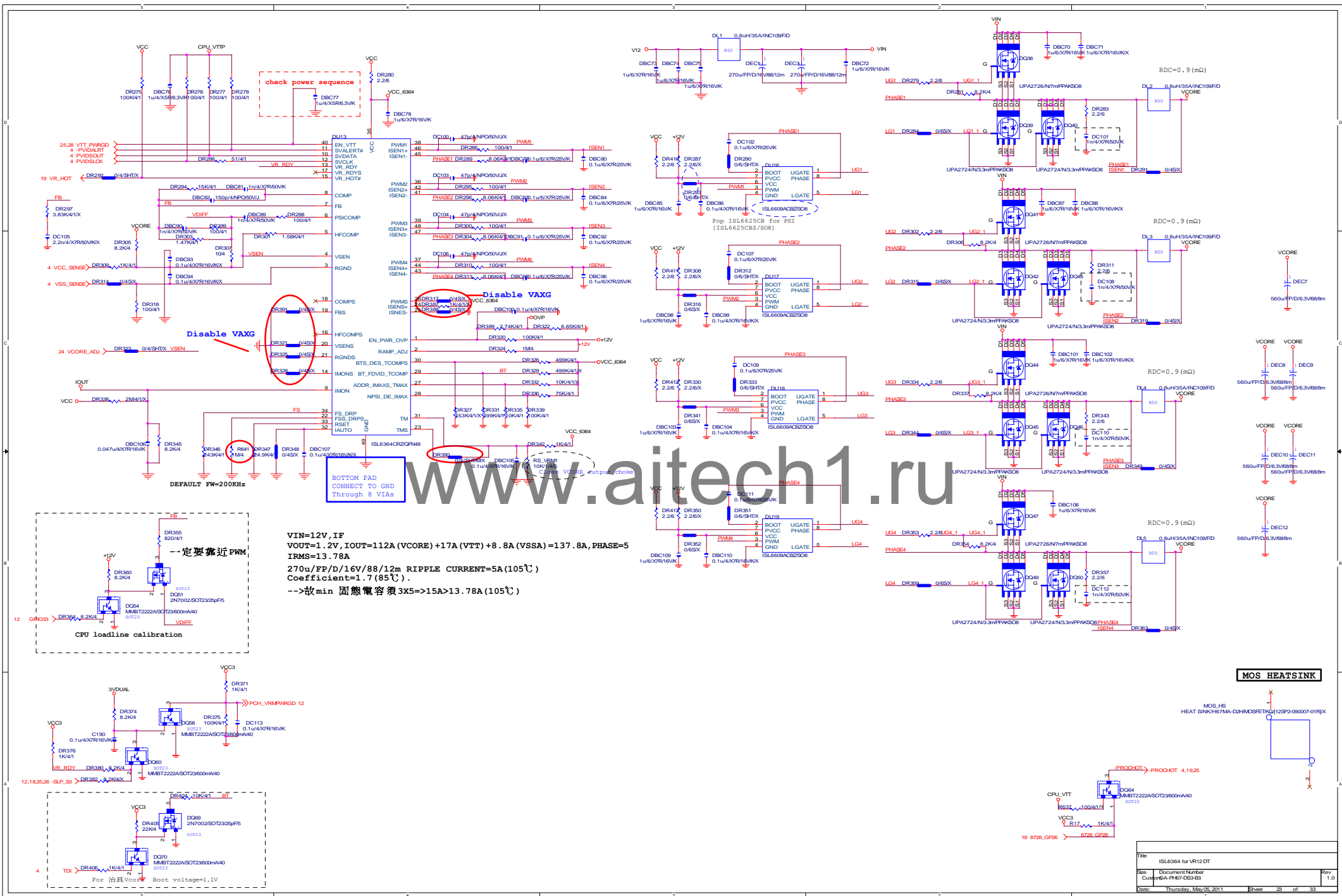
Gigabyte Technology			
Title		BIOS	
Size	Document Number	GA-PH67-DS3-B3	Rev
Custom			1.0
Date:	Thursday, May 05, 2011	Sheet	20 of 33

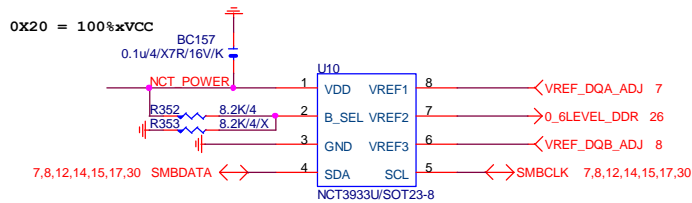
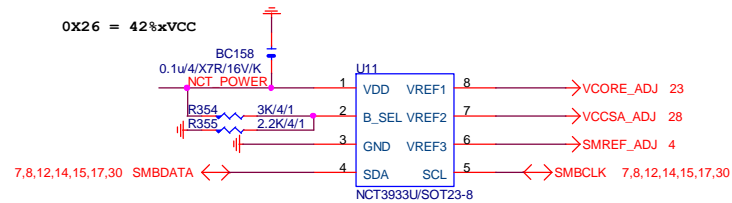
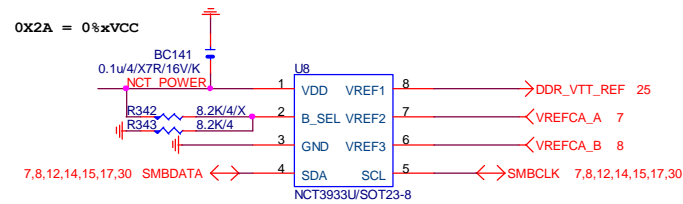
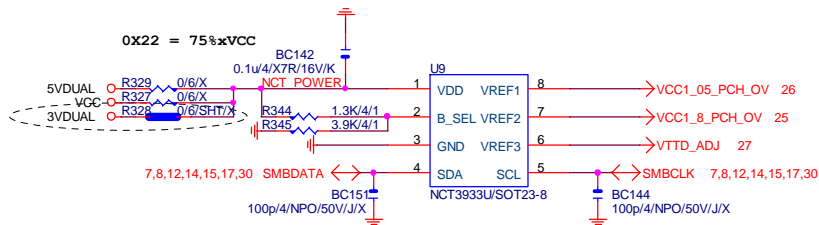




Gigabyte Technology			
Title HD AUDIO ALC889			
Size Custom	Document Number	GA-PH67-DS3-B3	
Date: Thursday, May 05, 2011	Sheet	21	of 33
			Rev 1.0







up6262	0X2A	0X20	0X22	0X26
VREF1	DDRVTT	VREF_DDRA_DQ	VCC1_05_PCH	VCORE
VREF2	VREF_DDRA_CA	DDR15V	VCC1_8_PCH	VCCSA
VREF3	VREF_DDRA_CAVREF_DDRB_DQ	CPU_VTT	SMREF	

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Gigabyte Technology			
Title CPU CORE VR-2			
Size Custom	Document Number	GA-PH67-DS3-B3	Rev 1.0
Date: Thursday, May 05, 2011	Sheet 24 of 33		

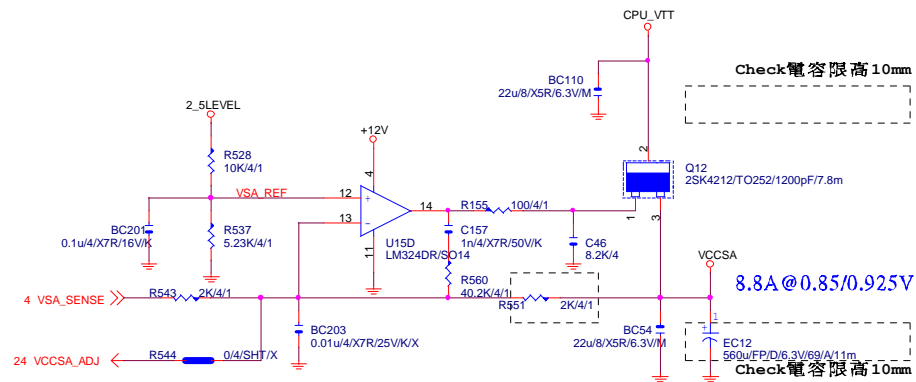






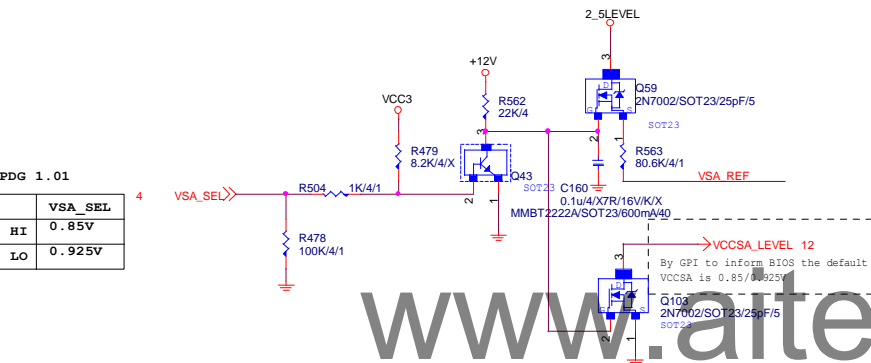


# VCC\_SA

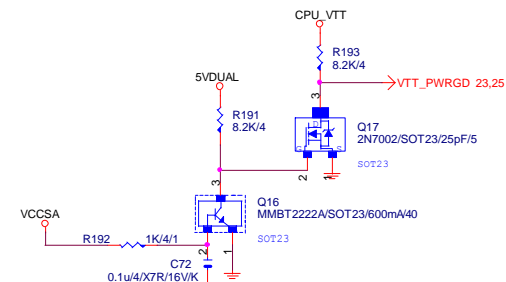
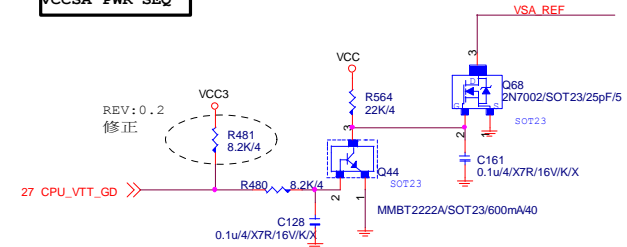


PDG 1.01

VSA_SEL	
HI	0.85V
LO	0.925V



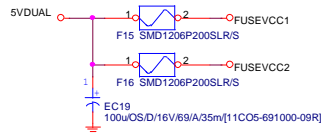
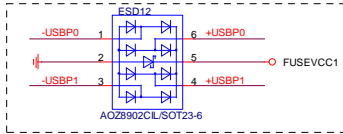
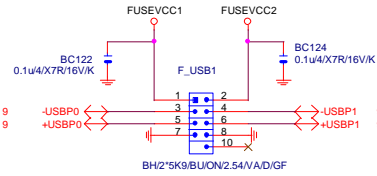
# VCCSA PWR SEQ



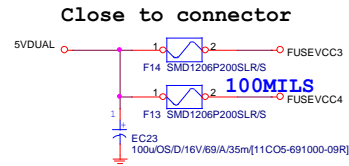
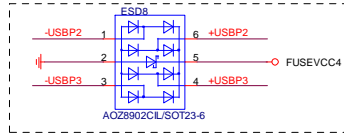
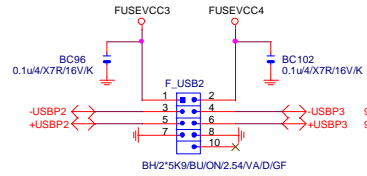
Gigabyte Technology

Title	CPU VTT PWM_ISL6312		
Size	Document Number	GA-PH67-DS3-B3	Rev 1.0
Date:	Thursday, May 05, 2011	Sheet 28 of 33	

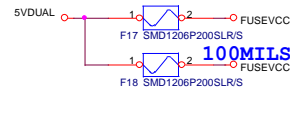
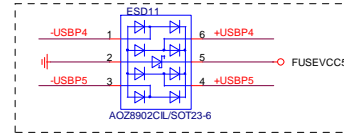
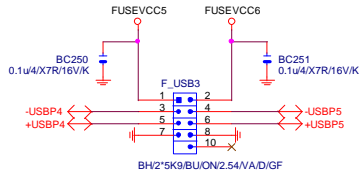
# FRONT USB1



# FRONT USB2



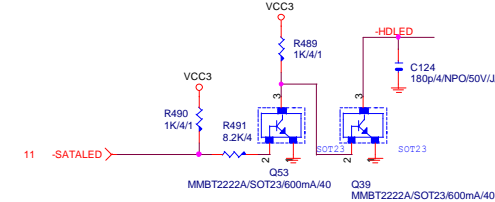
# FRONT USB3



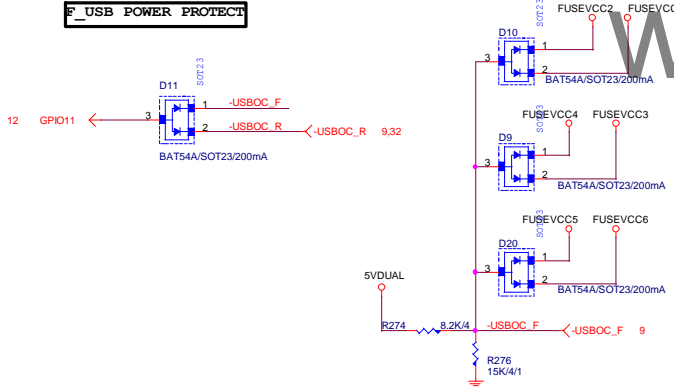
# CASE OPEN



# SATA LED

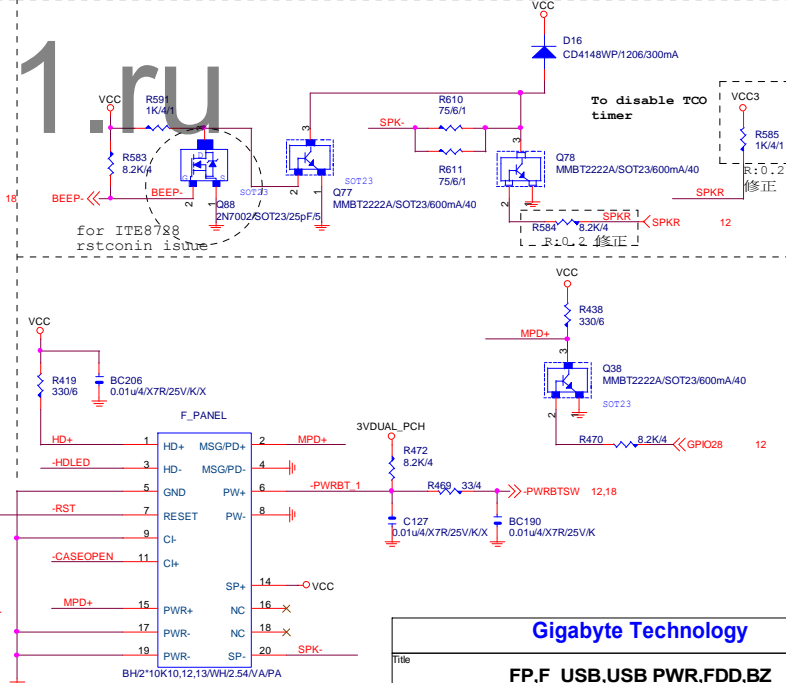
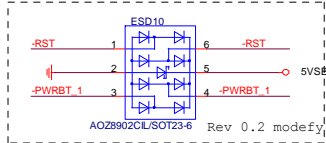


# F\_USB POWER PROTECT



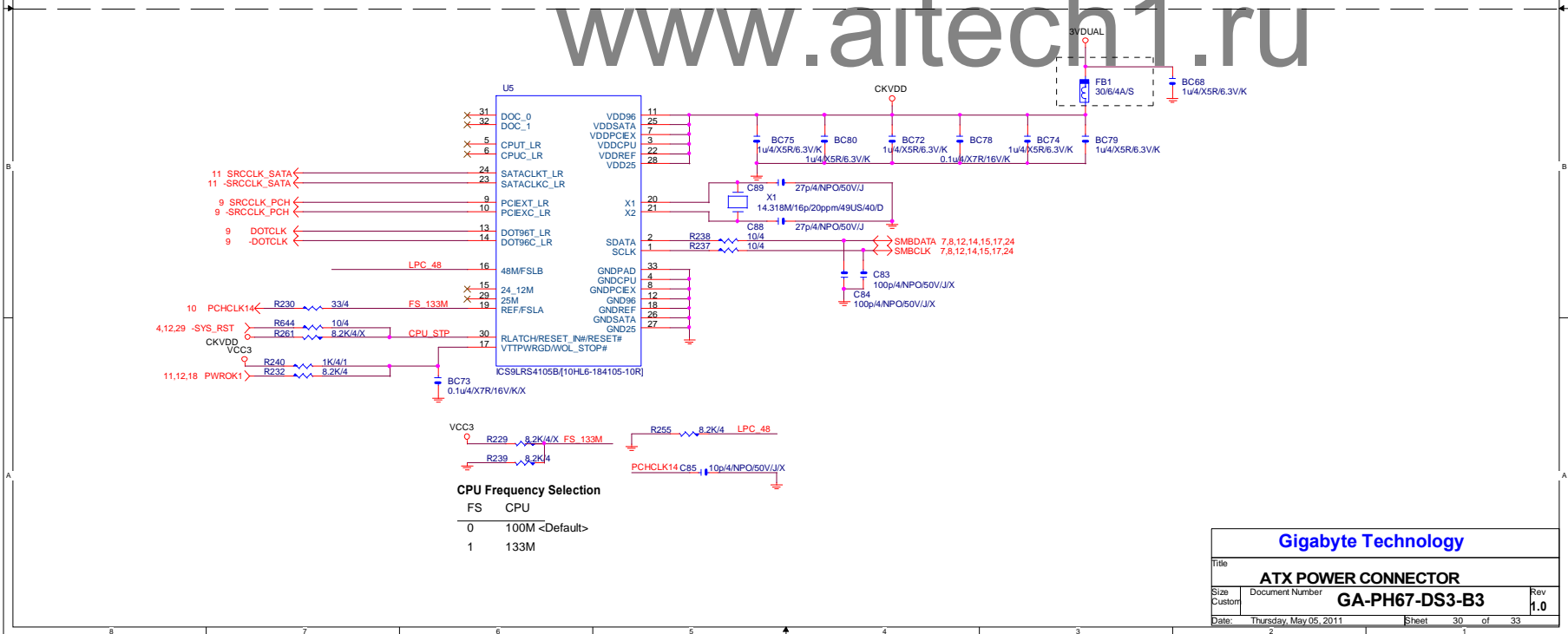
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# INTEL FRONT PANEL



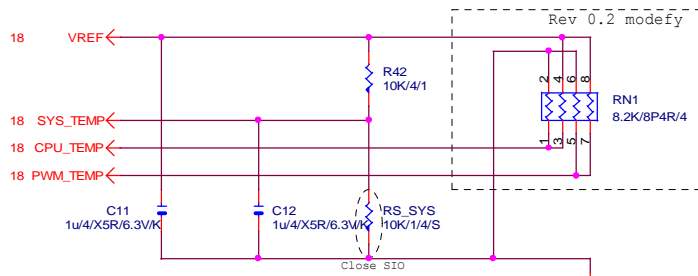
Gigabyte Technology			
Title			
FP,F_USB,USB PWR,FDD,BZ			
Size			
Custom			
Date: Thursday, May 05, 2011			
Sheet 29 of 33			
Rev 1.0			

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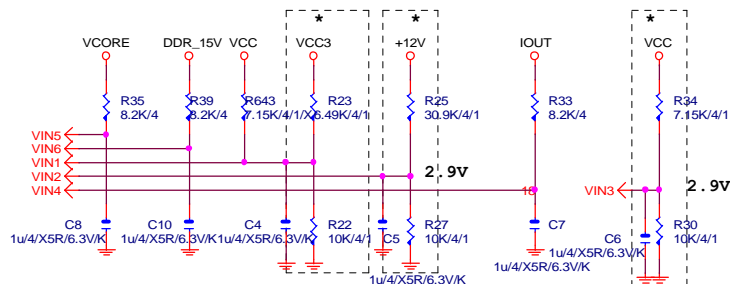


<b>Gigabyte Technology</b>			
Title			
<b>ATX POWER CONNECTOR</b>			
Size Custom	Document Number	<b>GA-PH67-DS3-B3</b>	Rev 1.0
Date:	Thursday, May 05, 2011	Sheet	30 of 33

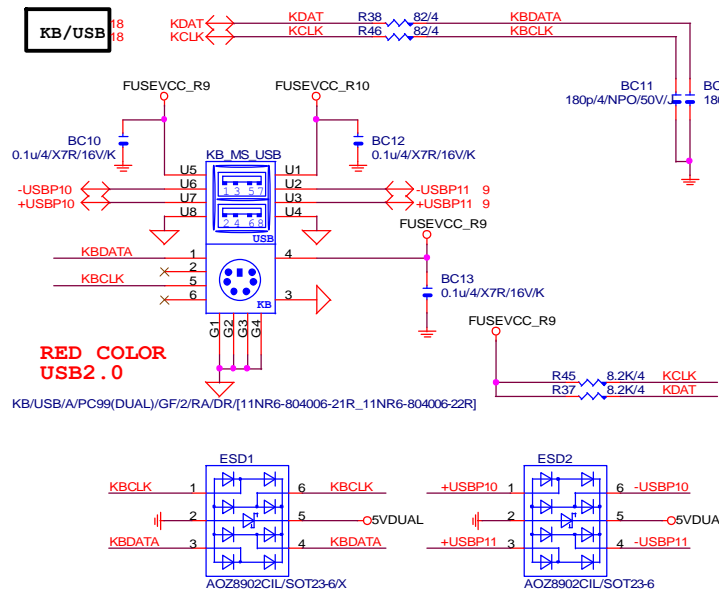
# TEMP H/W MONITOR



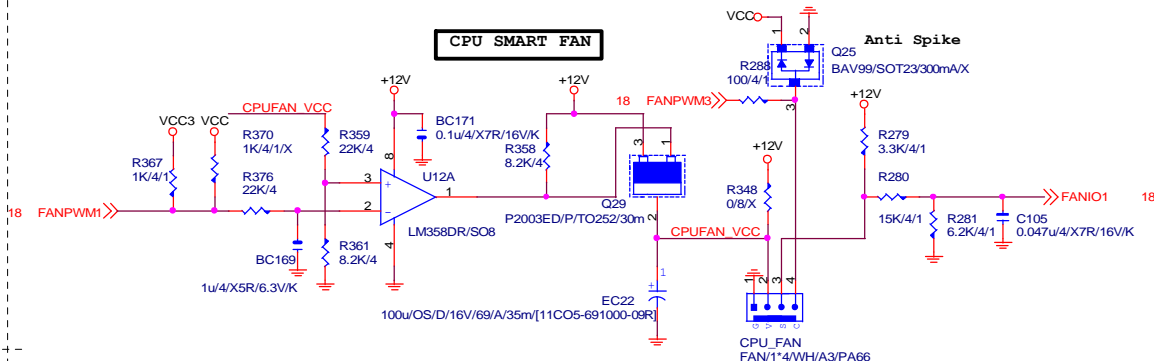
# VOLTAGE-- H/W MONITOR



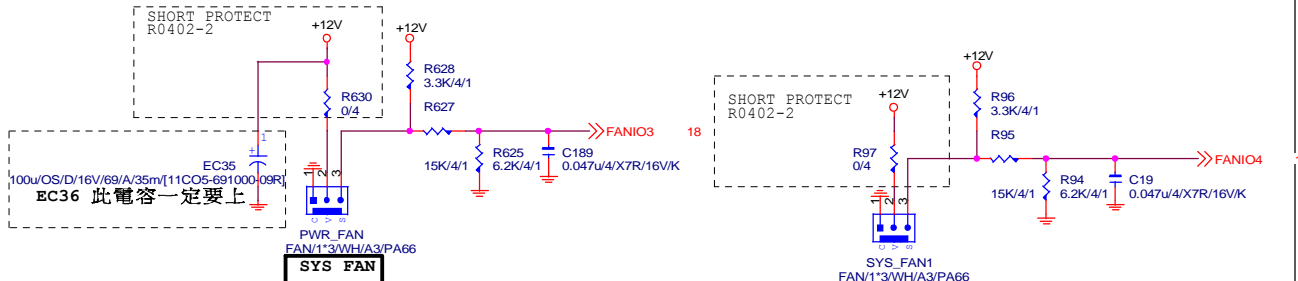
# KB/USB



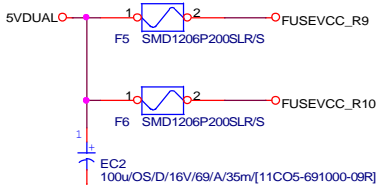
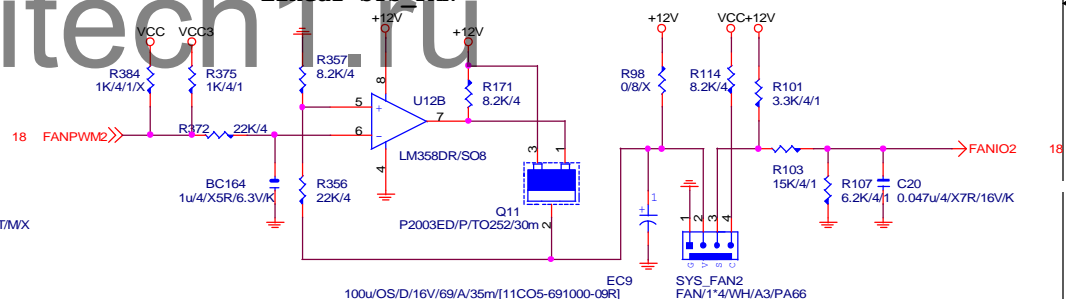
# CPU SMART FAN



# SHORT PROTECT



# Linear SYS FAN



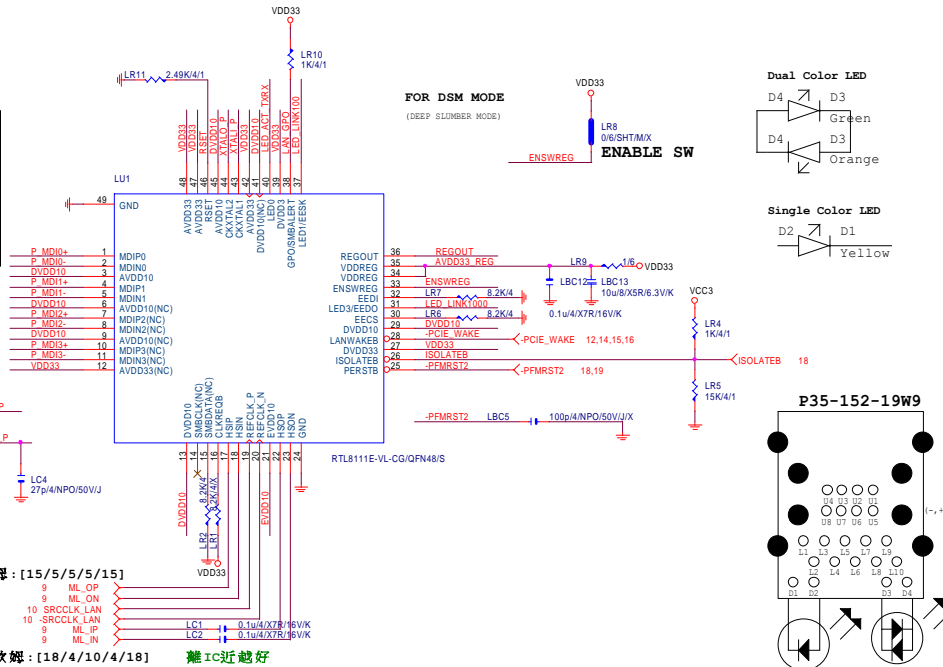
Gigabyte Technology

Title		
HWM,KB/MS, FAN CTRL		
Size	Document Number	Rev
Custm	GA-PH67-DS3-B3	1.0
Date:	Thursday, May 05, 2011	Sheet 31 of 33

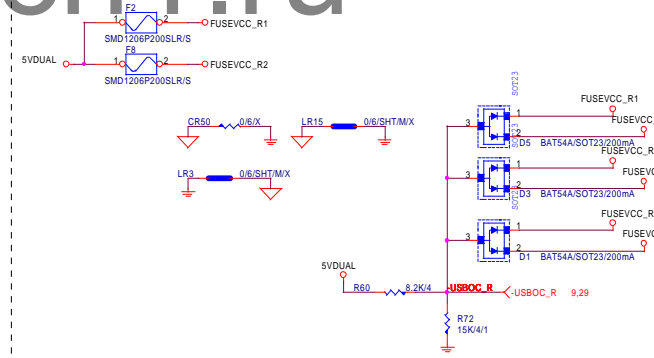
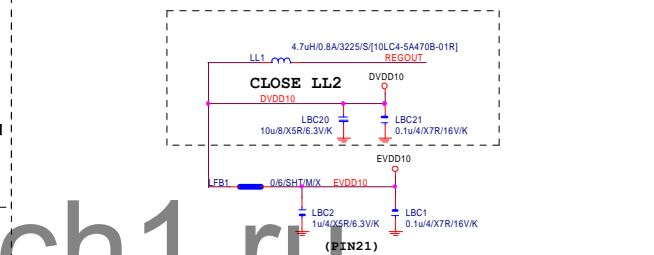
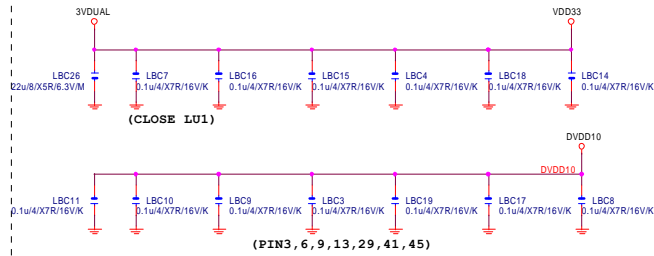
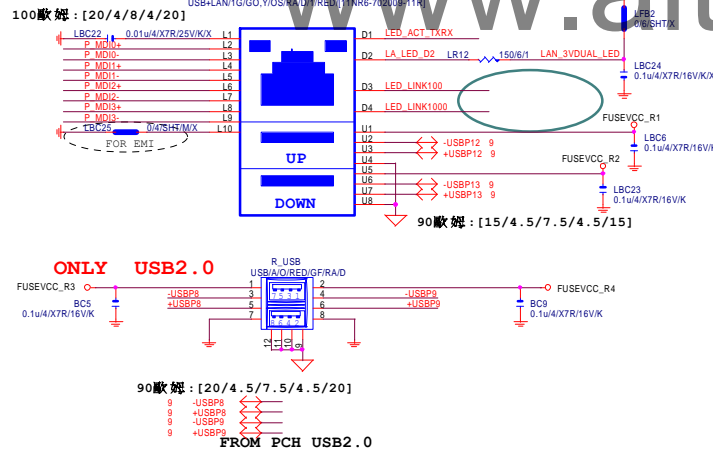
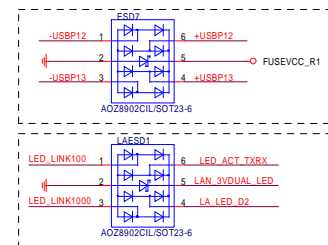
# PCIE-1G LAN

## Power domain chart

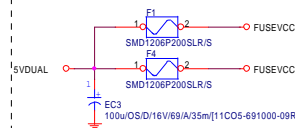
AVDD33	3.3V
DVDD33	3.3V
VDDREG	3.3V
DVDD10	1.05V



# USB30\_LAN CONNECTOR



# Close to connector



Gigabyte Technology			
REALTEK RTL8111E			
File	Document Number	Rev	1.0
Size	GA-PH67-DS3-B3		
Custom			
Date	Thursday, May 05, 2011	Sheet	32 of 33