

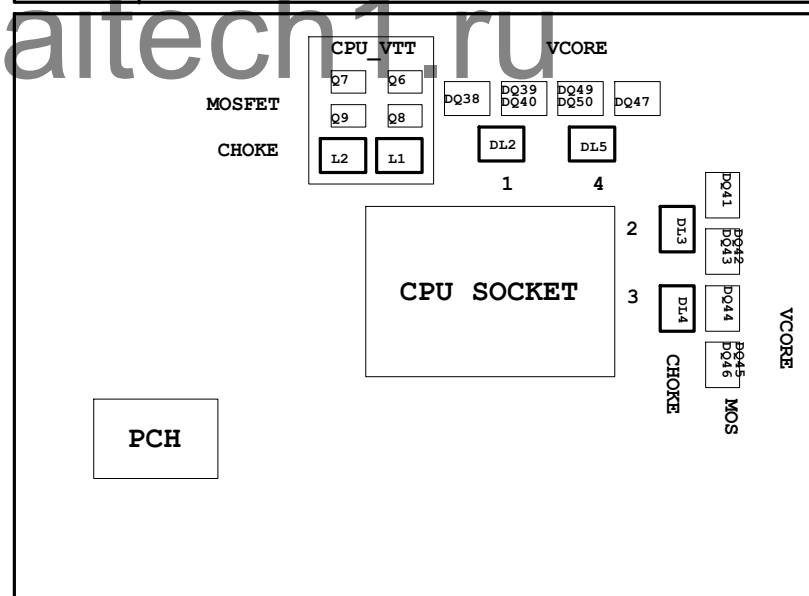
Model Name: GA-PH67A-D3-B3 1.0

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
33	ETRON 168A
34	
35	
36	
37	
38	
39	
40	



Gigabyte Technology			
Title	Cover Sheet		
Size	Document Number	GA-PH67A-D3-B3	Rev 1.0
Date	Thursday, March 31, 2011	Sheet 1 of 33	

GA-PH67A-D3-B3

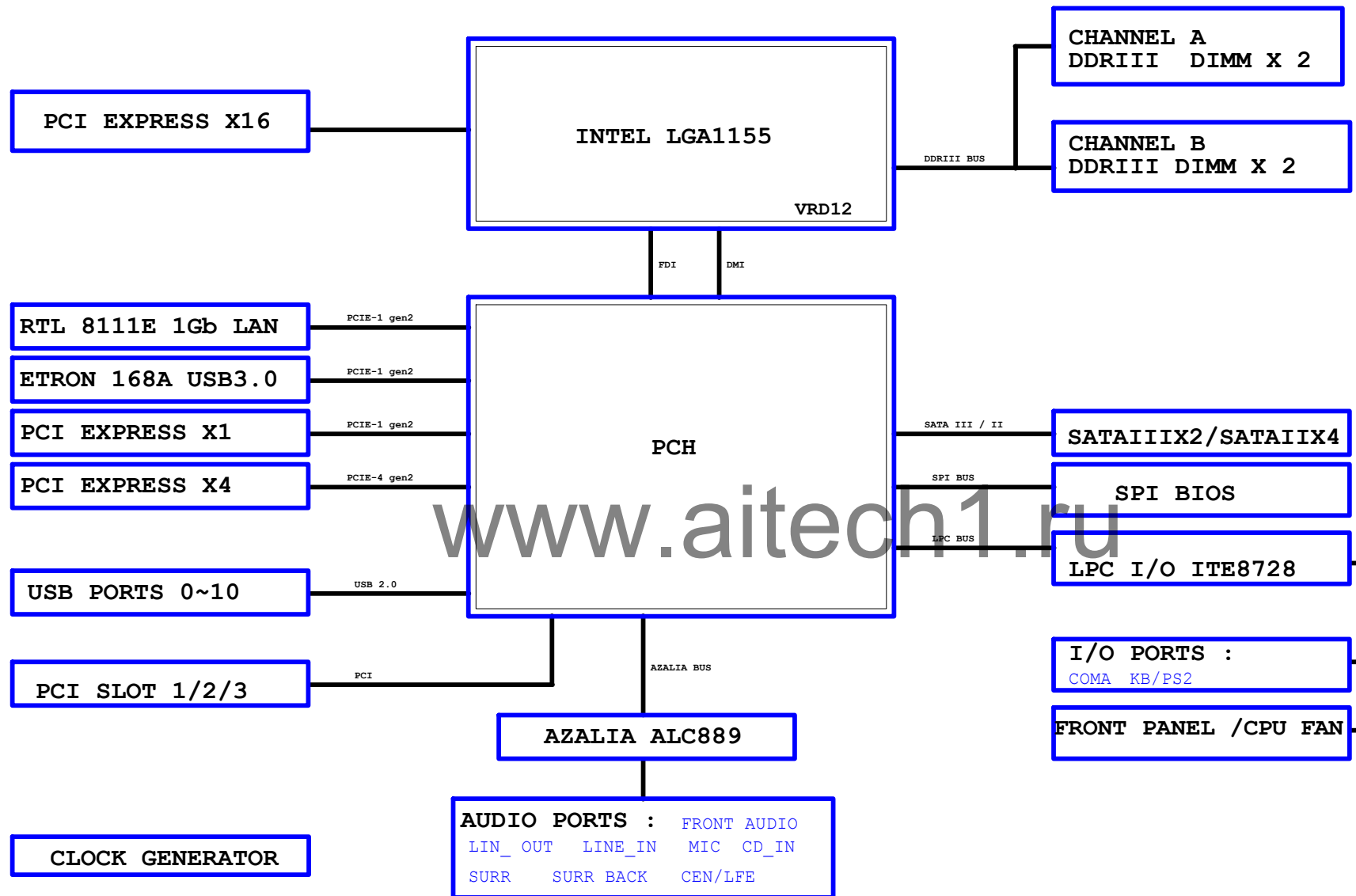
Component value change history

[illegible]

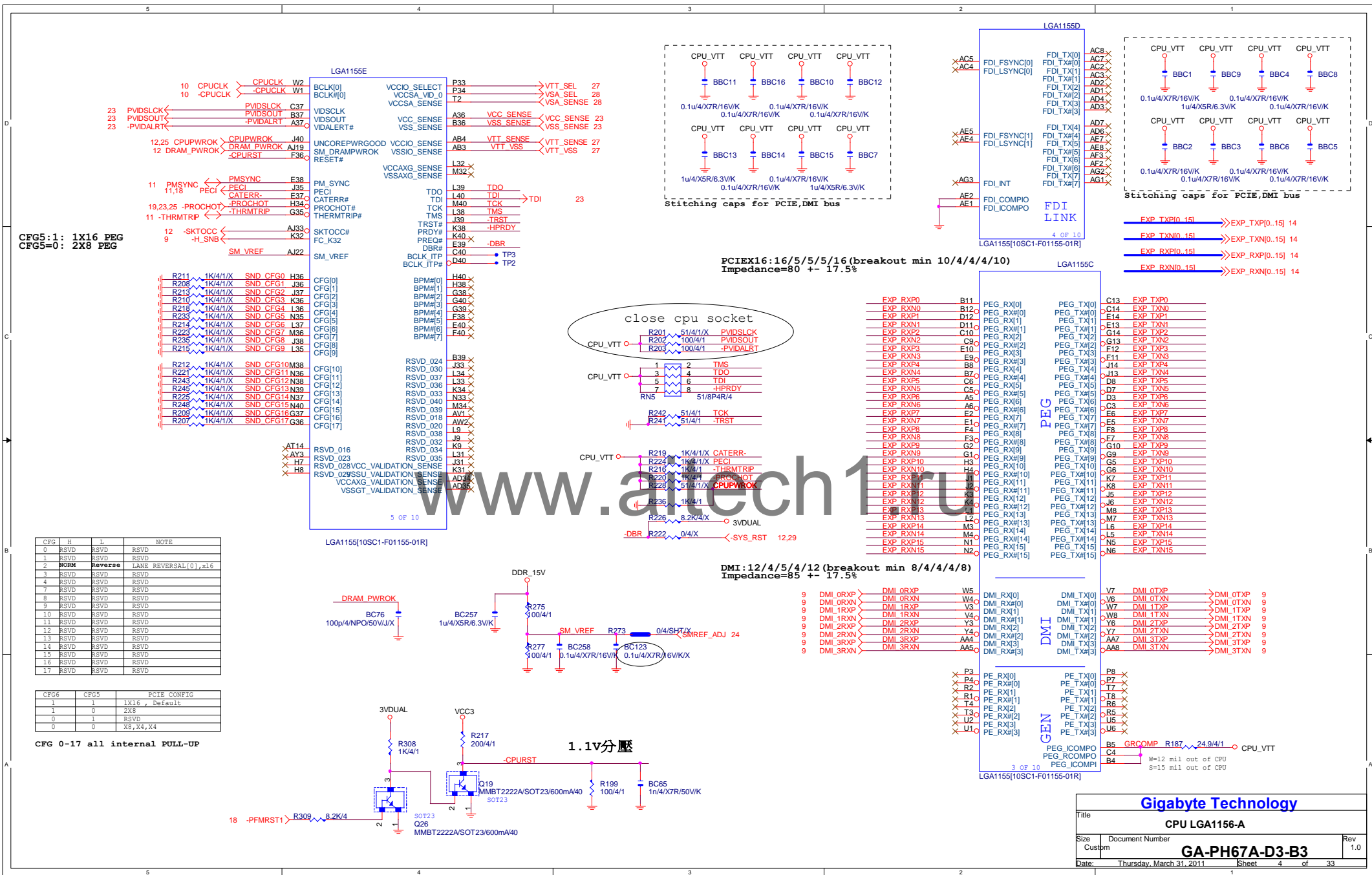
Circuit or PCB layout change

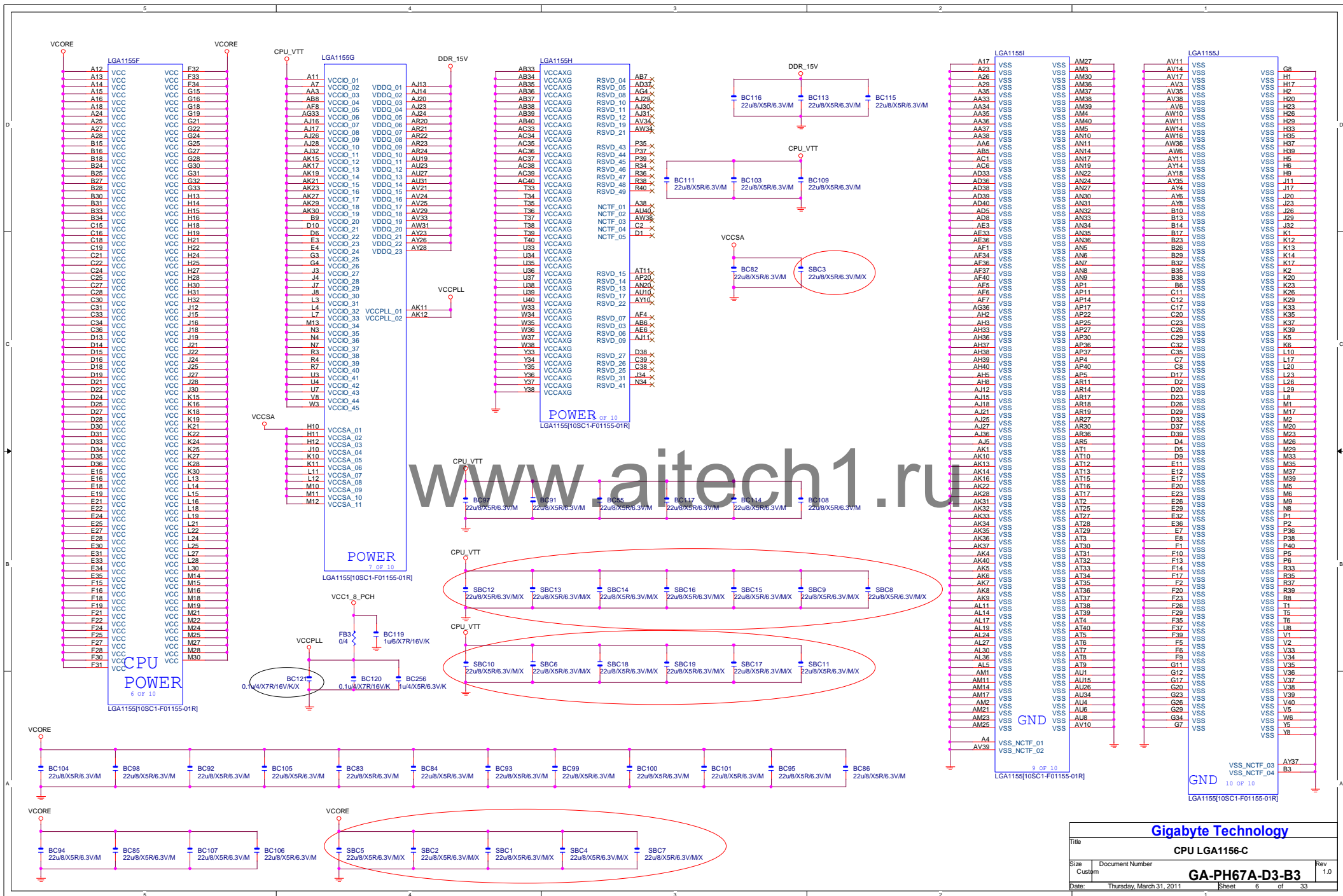
[illegible]

BLOCK DIAGRAM



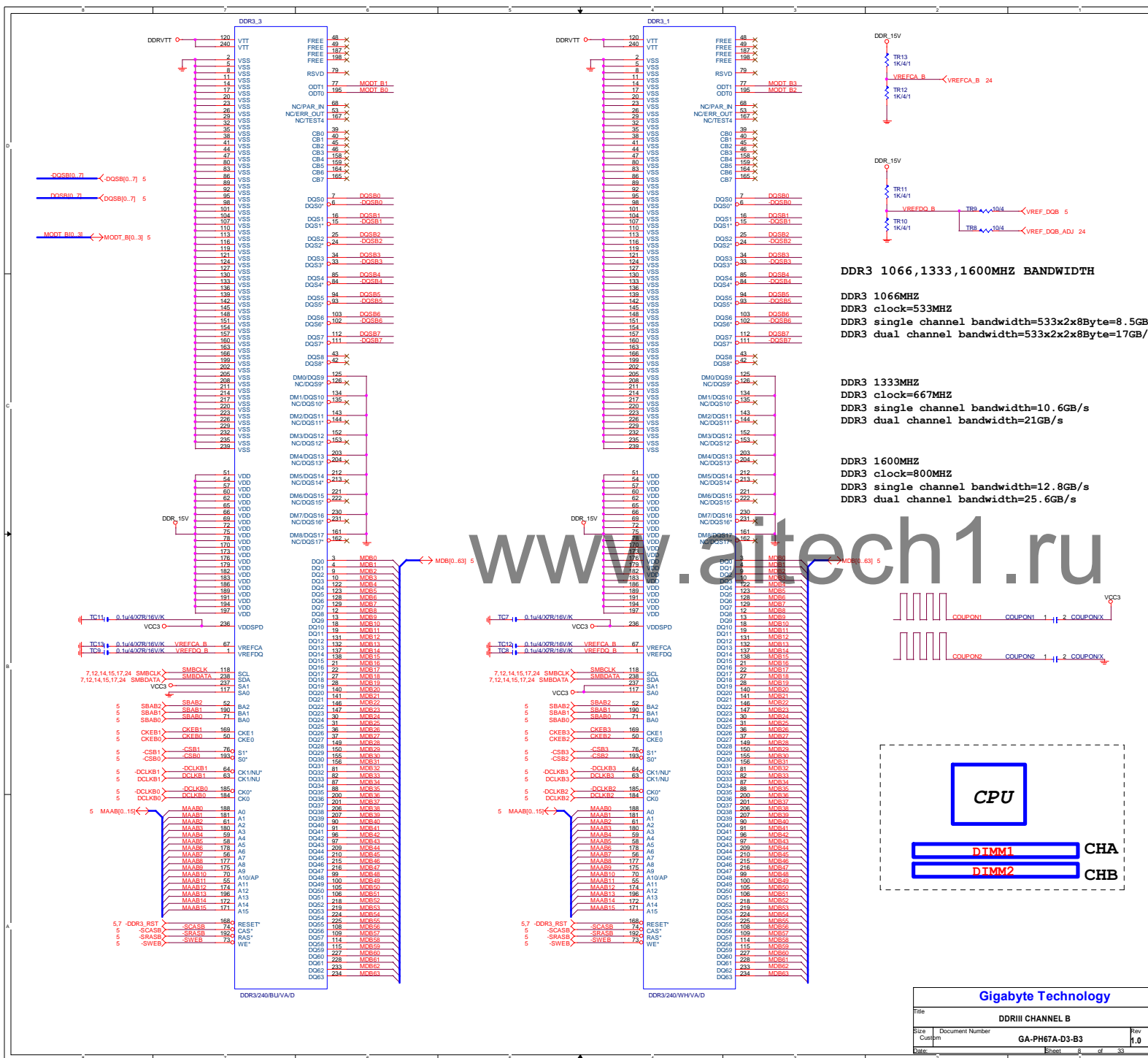
Gigabyte Technology			
Title BLOCK DIAGRAM			
Size C	Document Number	GA-PH67A-D3-B3	Rev 1.0
Date: Thursday, March 31, 2011	Sheet	3	of 33





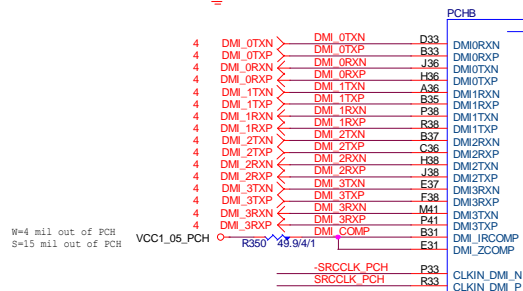
Gigabyte Technology			
CPU LGA1156-C			
Size	Document Number	Rev	
Custom	GA-PH67A-D3-B3	1.0	
Date:	Thursday, March 31, 2011	Sheet	6 of 33



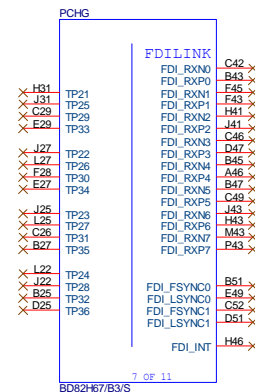




USB:12/7.5/4.5/7.5/12 (breakout min 8/4/4/4/8)
Impedance=90 +- 17.5%

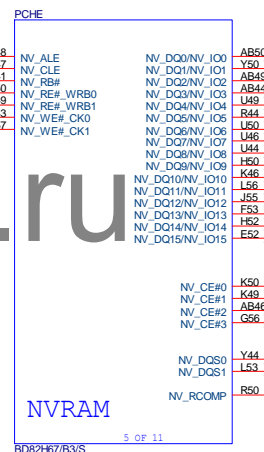


H61 CHIP USB PORT 6/7
are Disable



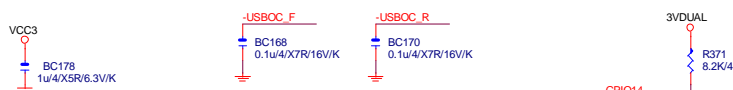
OC[3:0]# for
Device 29
(ports 0-7)
OC[7:4]# for
Device 26
(ports 8-13)

USB OC# Configure	
OC0#	USB0,1
OC1#	USB2,3
OC2#	USB4,5
OC3#	USB6,7
OC4#	USB8,9
OC5#	USB10,11
OC6#	USB12,13
OC7#	Not Use



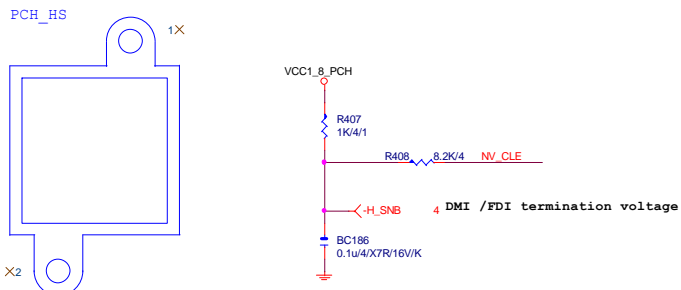
放靠近 Device & PCI-E Slot

PCIEEX1:16/5/5/16 (breakout min 8/4/4/4/8)
Impedance=80 +- 17.5%



VCC1_05_PCH R244 8.2K/4/X DOTCLK
Mount for non-graphics skus

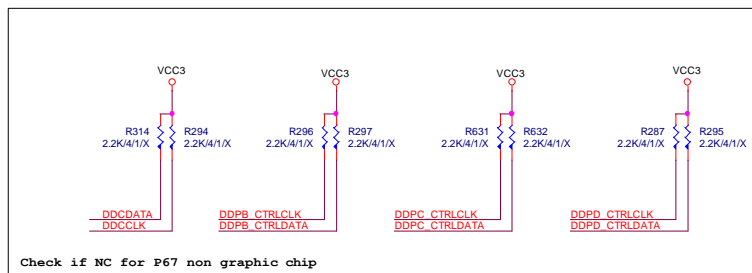
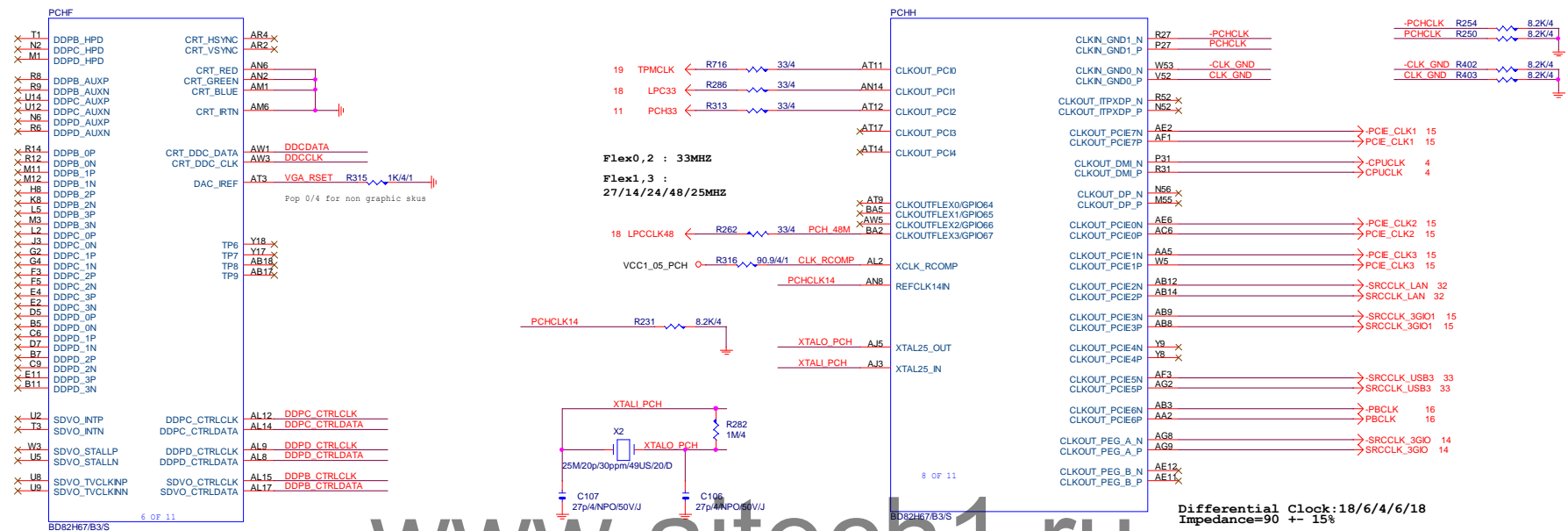
DOTCLK R246 8.2K/4
-DOTCLK R251 8.2K/4
R102 short to GND in non graphic SKU



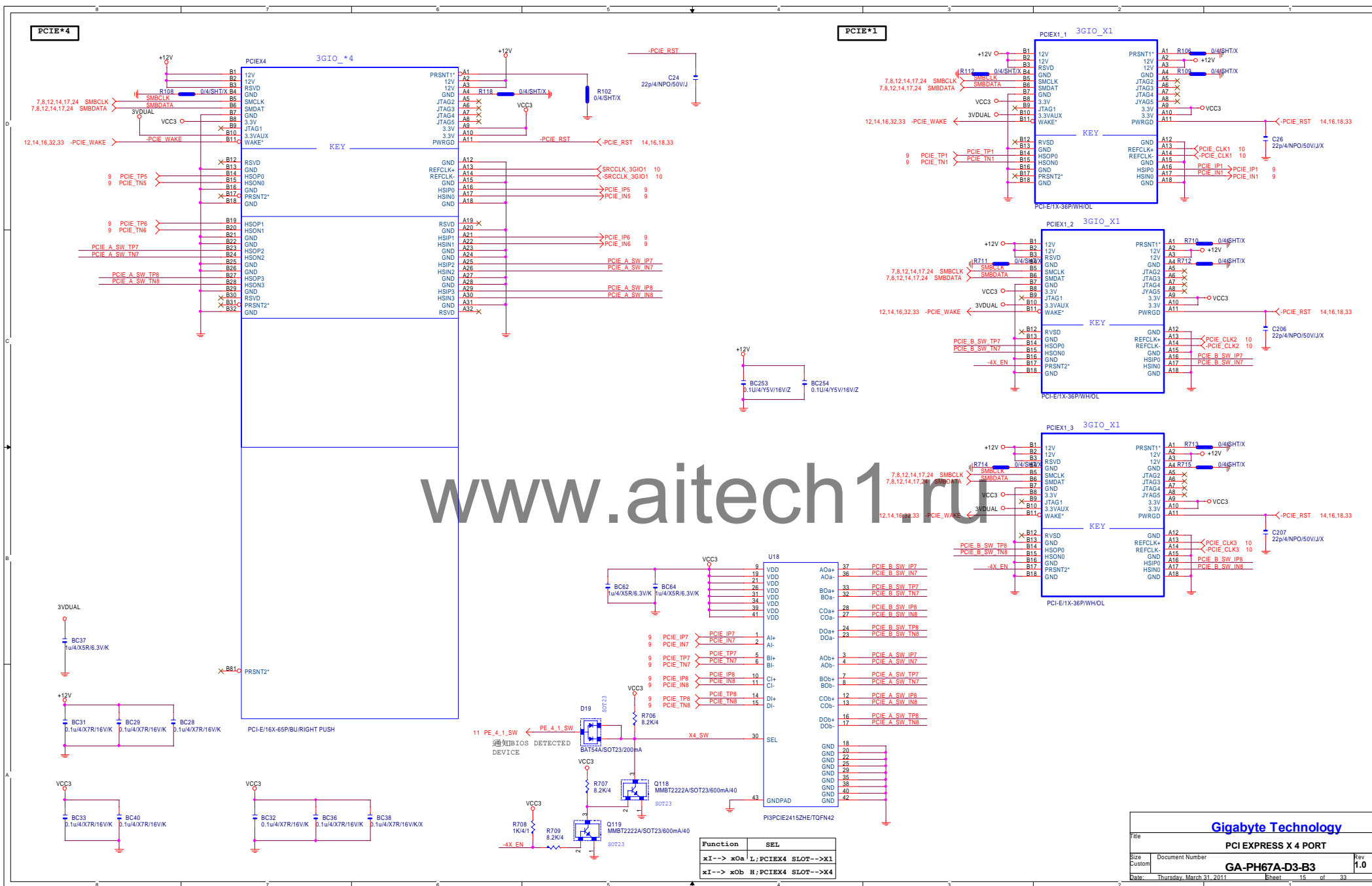
HEAT SINK/H67MA-D2H/PCH/KW/GER[12SP2-050072-11R_12SP2-050072-12R_12SP2-050072-13R]

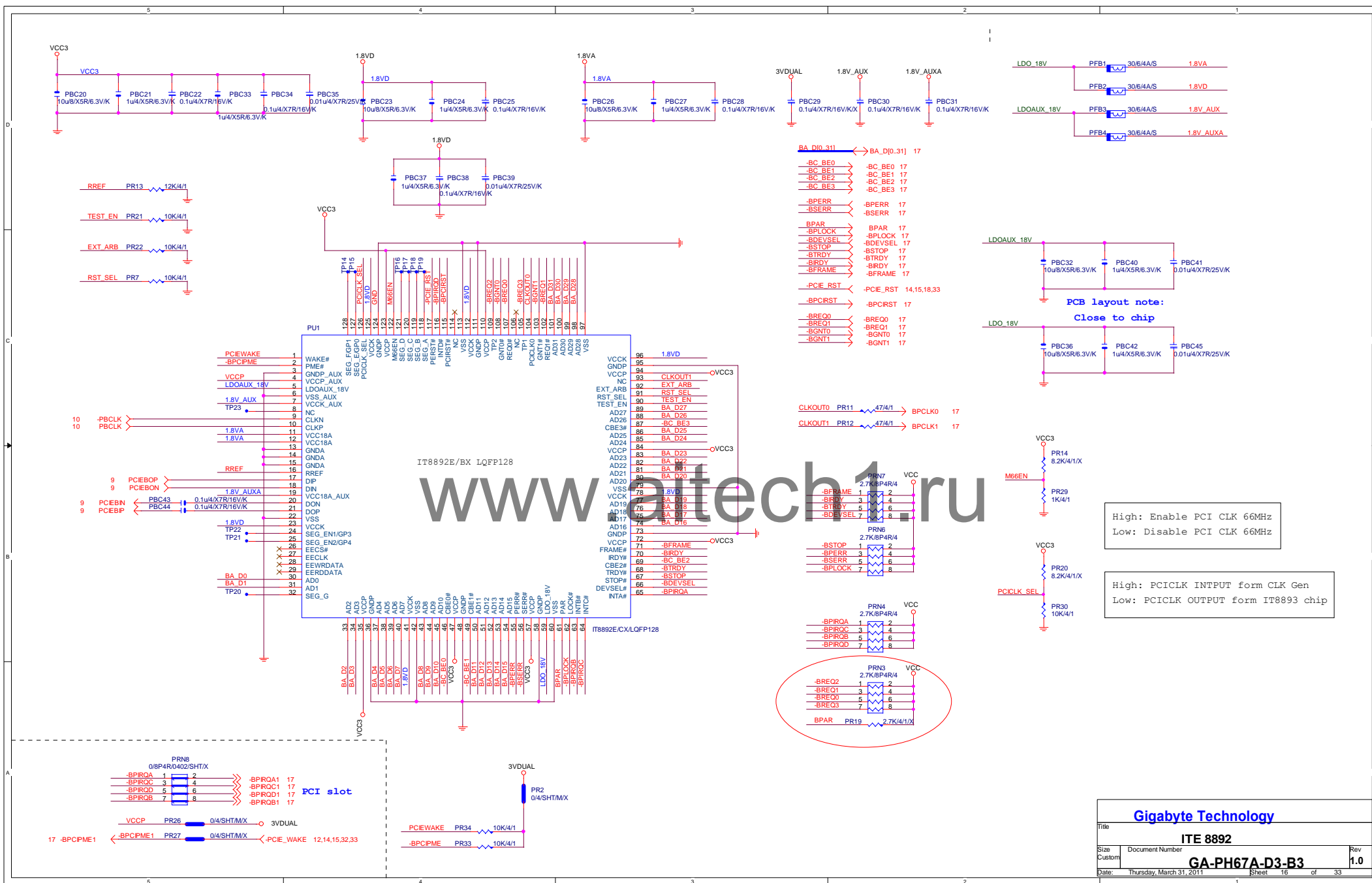
Gigabyte Technology

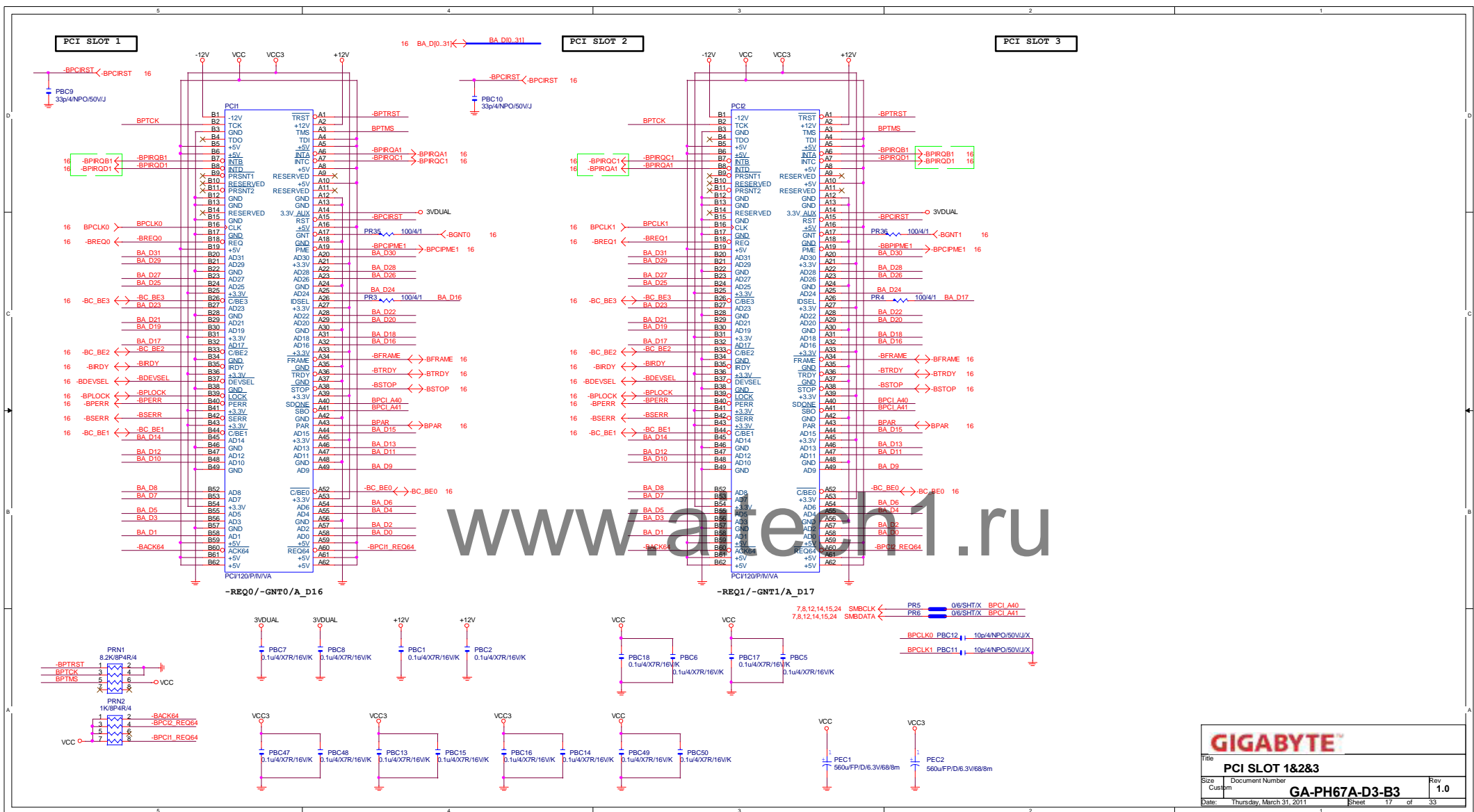
Title			PCH FDI,DMI,USB,PCIE
Size	Document Number	Rev	1.0
Custom	GA-PH67A-D3-B3		
Date:	Thursday, March 31, 2011	Sheet	9 of 33



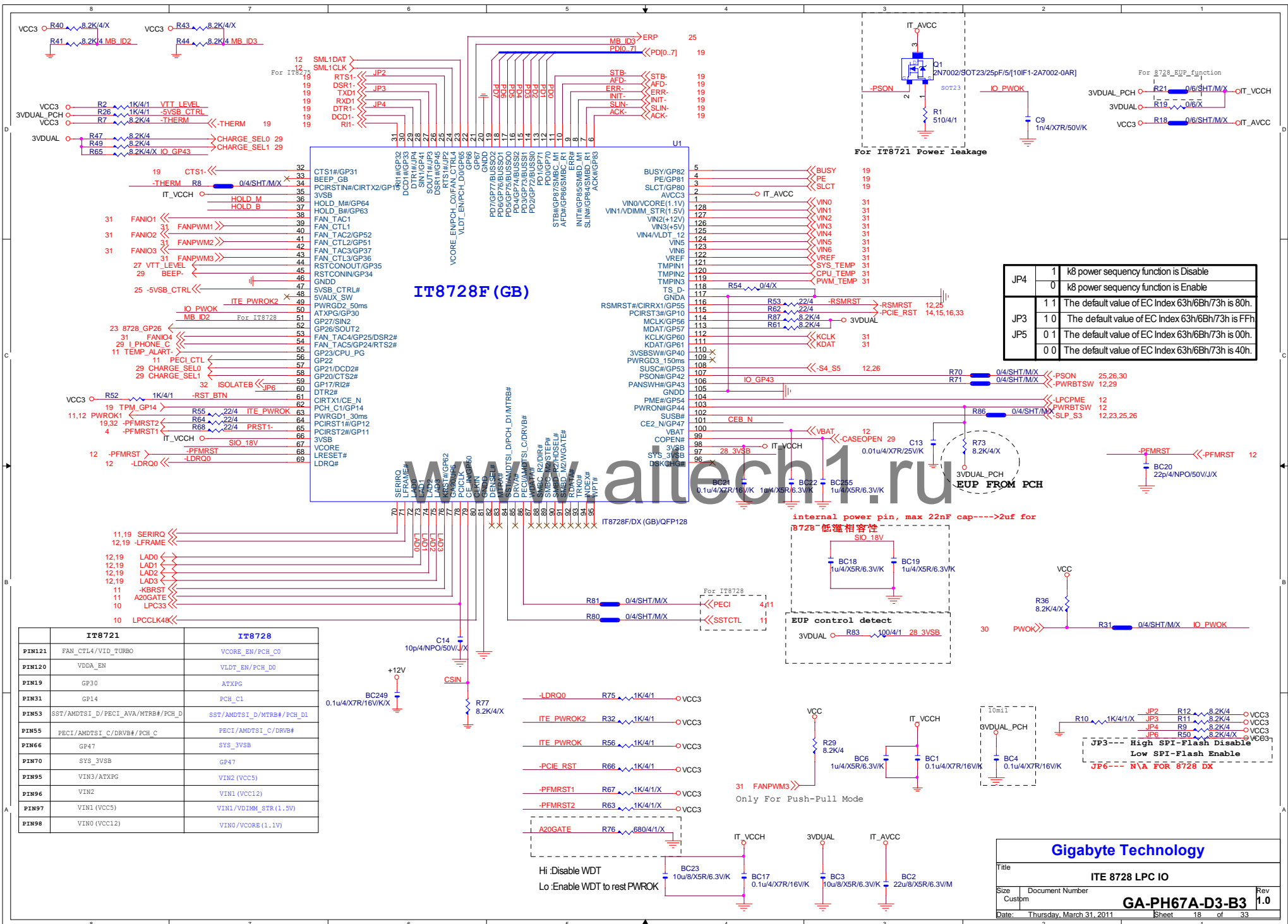
Gigabyte Technology			
Title			
PCH DISPLAY ,CLK BUFFER			
Size	Document Number	Rev	
Custom	GA-PH67A-D3-B3	1.0	
Date:	Thursday, March 31, 2011	Sheet	10 of 33

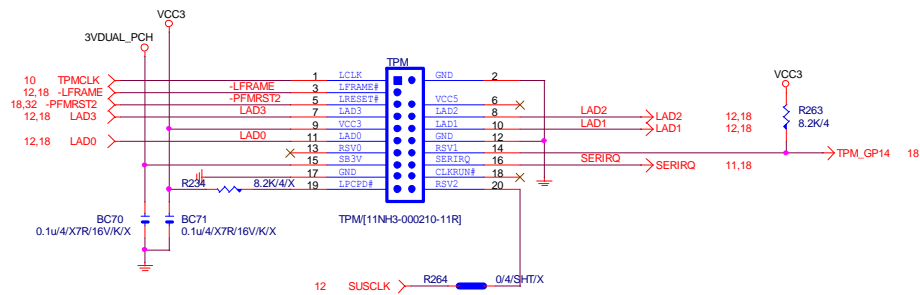
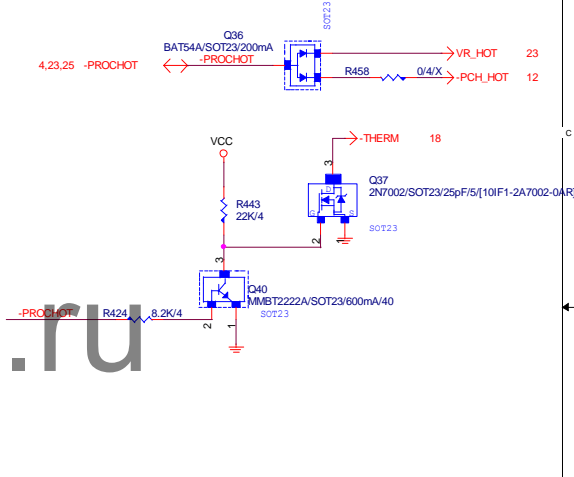
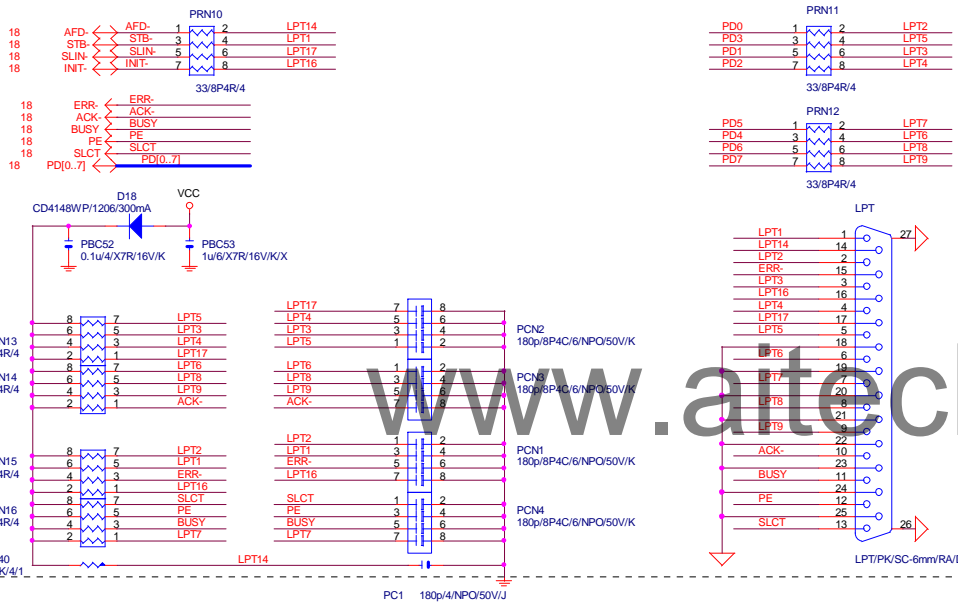
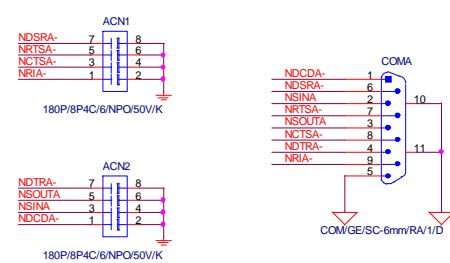
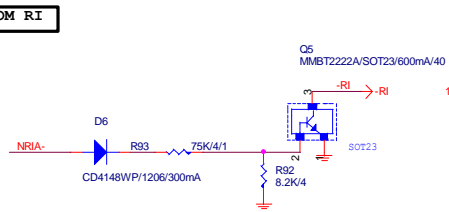


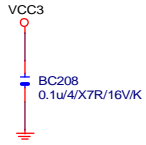




GIGABYTE			
Title			
PCI SLOT 1&2&3			
Size			
Custom			
Date			
Thursday, March 31, 2011			
Sheet			
17 of 33			

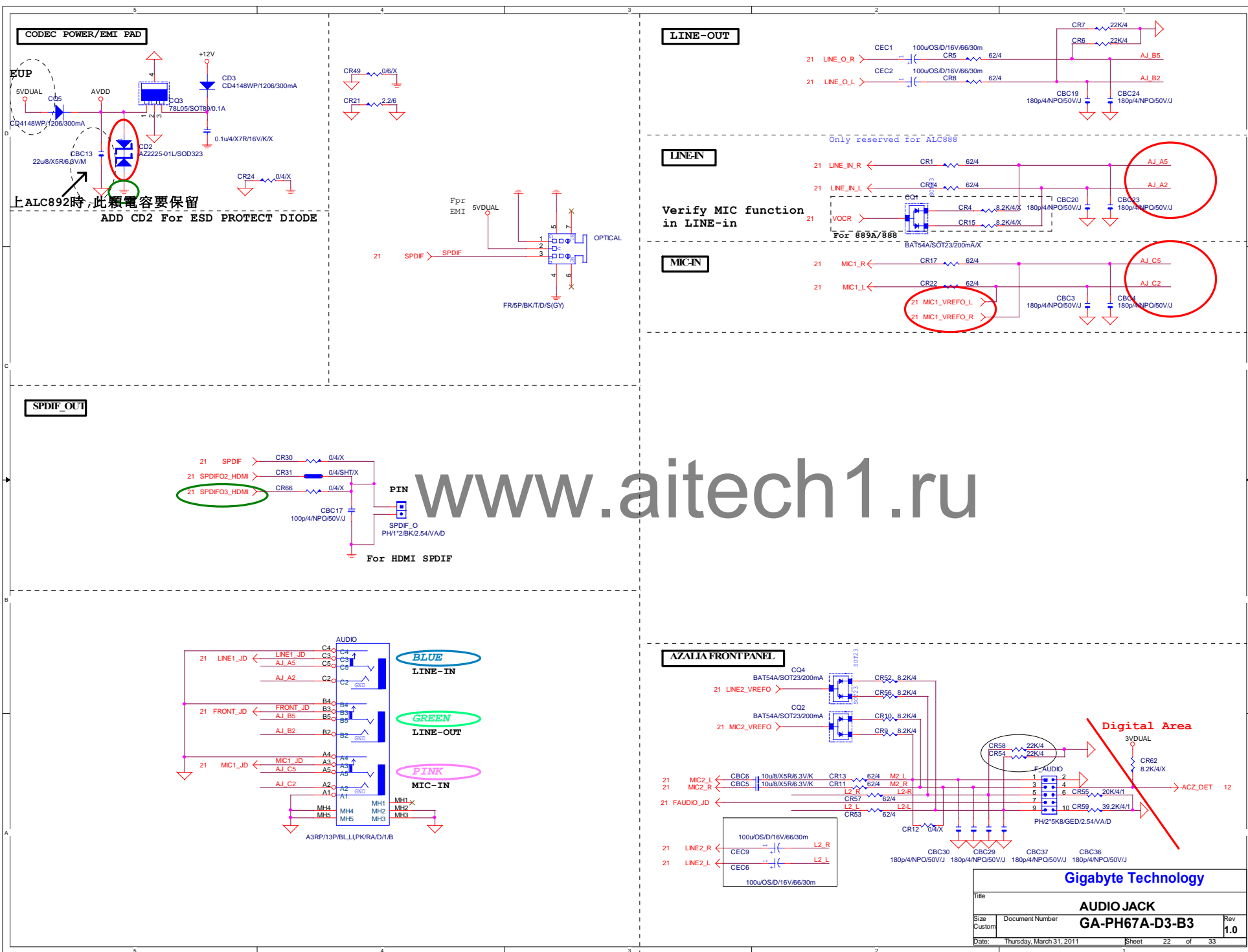


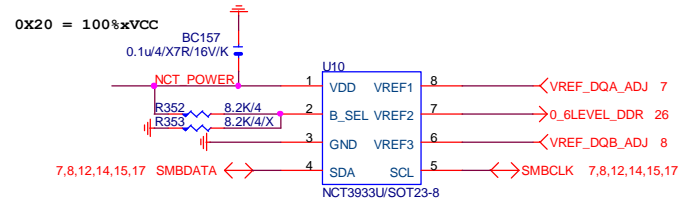
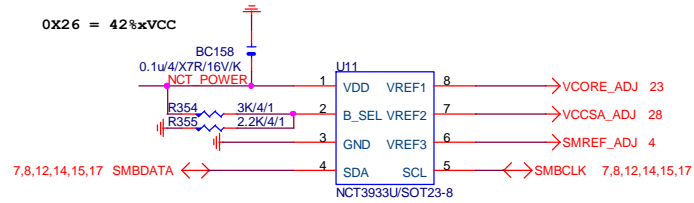
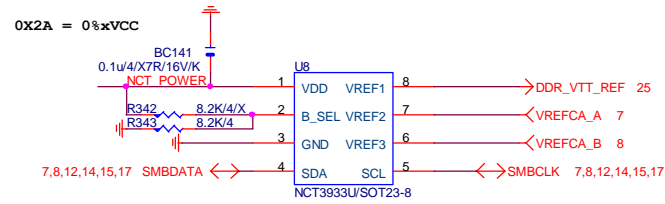
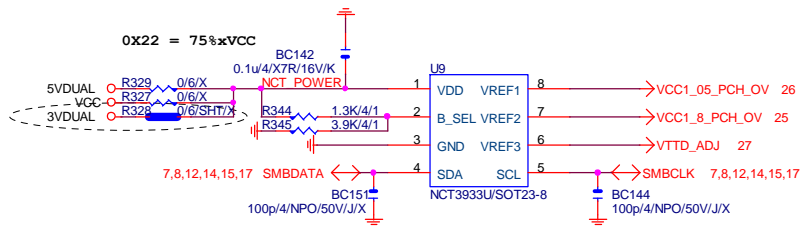




www.aitech1.ru

Gigabyte Technology			
Title		BIOS	
Size	Document Number	GA-PH67A-D3-B3	Rev
Custom			1.0
Date:	Thursday, March 31, 2011	Sheet	20 of 33



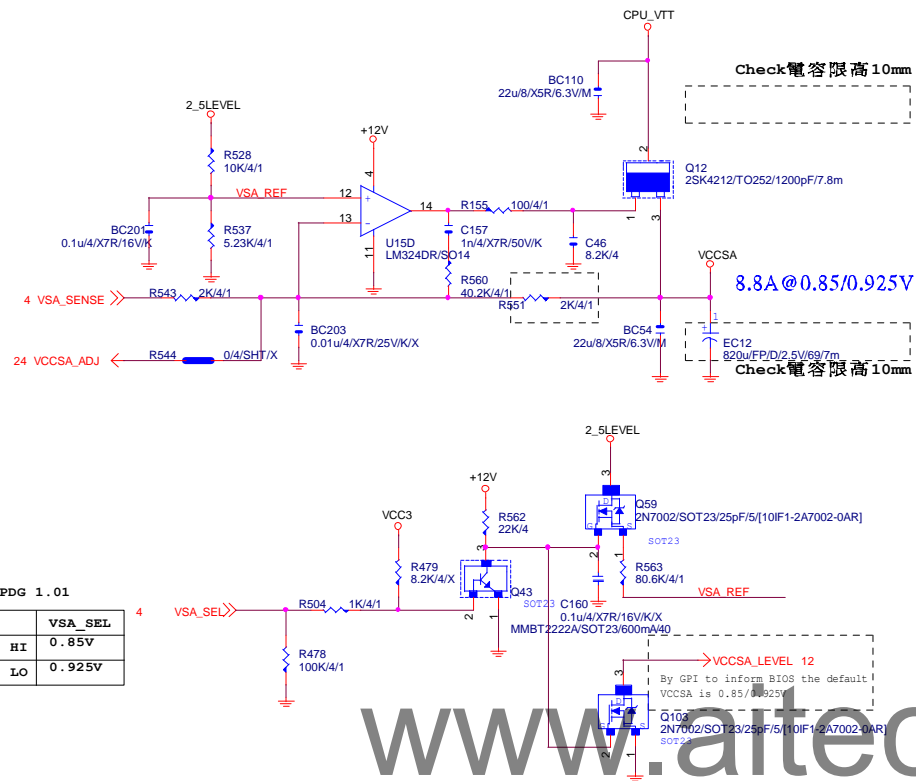


up6262	0X2A	0X20	0X22	0X26
VREF1	DDRVTT	VREF_DDRA_DQ	VCC1_05_PCH	VCORE
VREF2	VREF_DDRA_CA	DDR15V	VCC1_8_PCH	VCCSA
VREF3	VREF_DDRA_CAV	VREF_DDRB_DQ	CPU_VTT	SMREF

www.aitech1.ru

Gigabyte Technology			
Title			
CPU CORE VR-2			
Size	Document Number	Rev	
Custom		GA-PH67A-D3-B3 1.0	
Date:	Thursday, March 31, 2011	Sheet	24 of 33

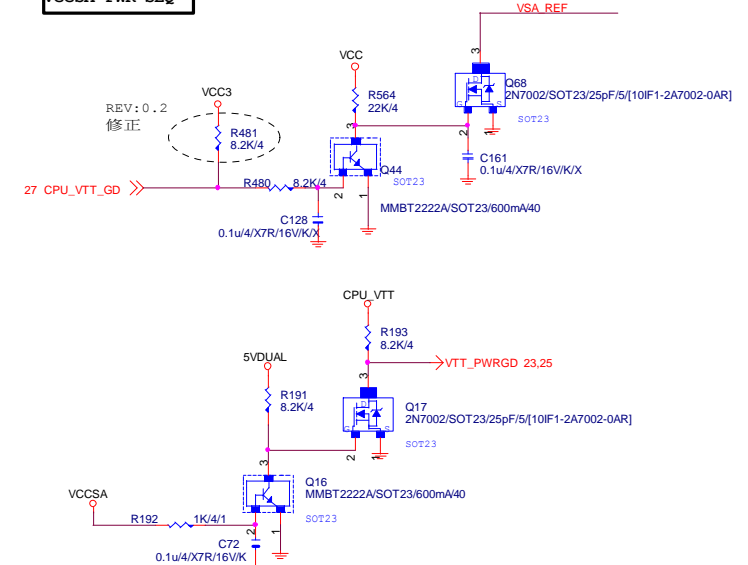
VCC_SA



PDG 1.01

VSA_SEL	
HI	0.85V
LO	0.925V

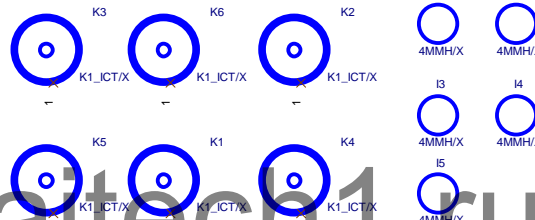
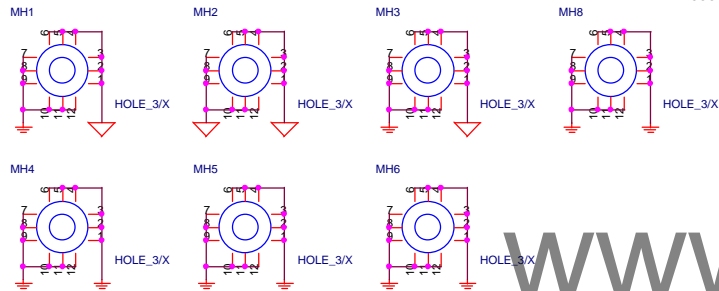
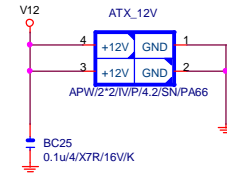
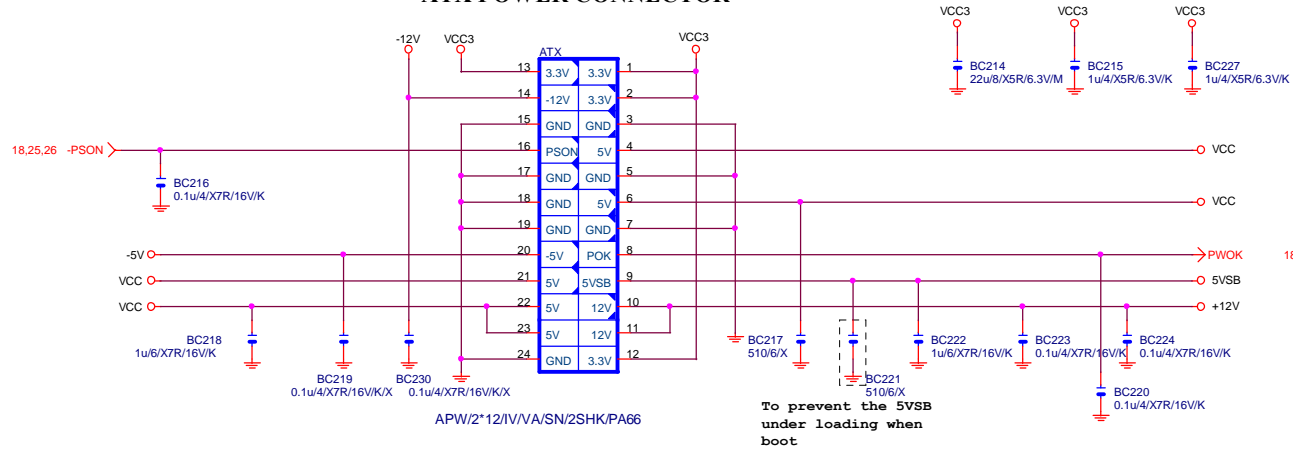
VCCSA_PWR_SEQ



Gigabyte Technology

Title			CPU VTT PWM_ISL6312
Size	Document Number	Rev	1.0
Custom	GA-PH67A-D3-B3		
Date:	Thursday, March 31, 2011	Sheet	28 of 33

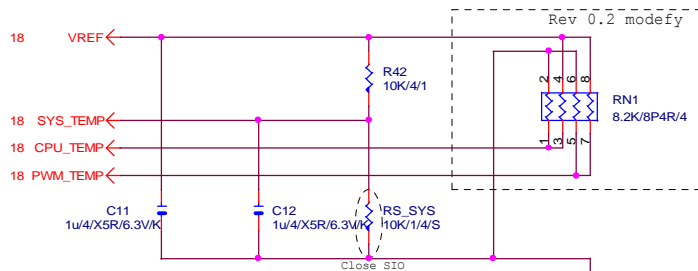
ATX POWER CONNECTOR



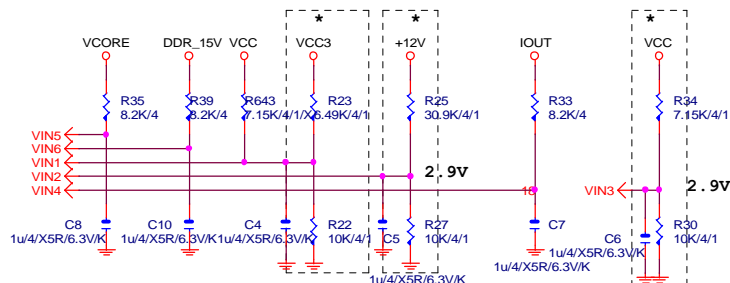
Gigabyte Technology

Title		
ATX POWER CONNECTOR		
Size	Document Number	Rev
Custom	GA-PH67A-D3-B3	1.0
Date:	Thursday, March 31, 2011	Sheet 30 of 33

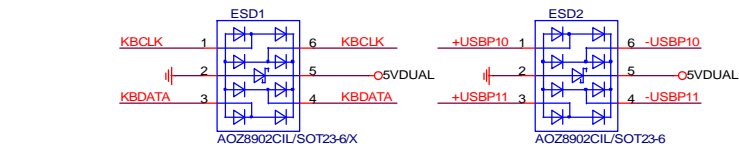
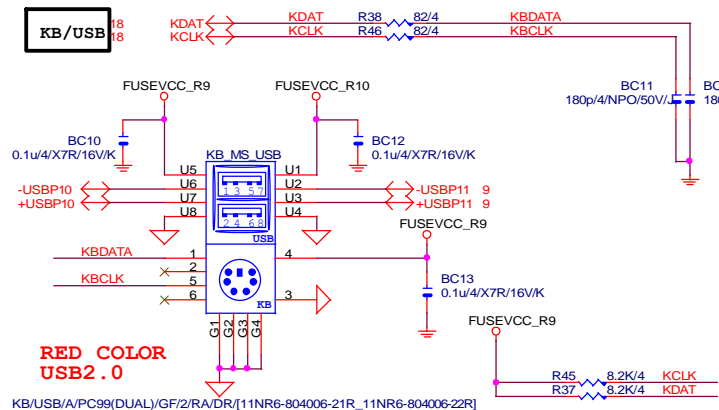
TEMP H/W MONITOR



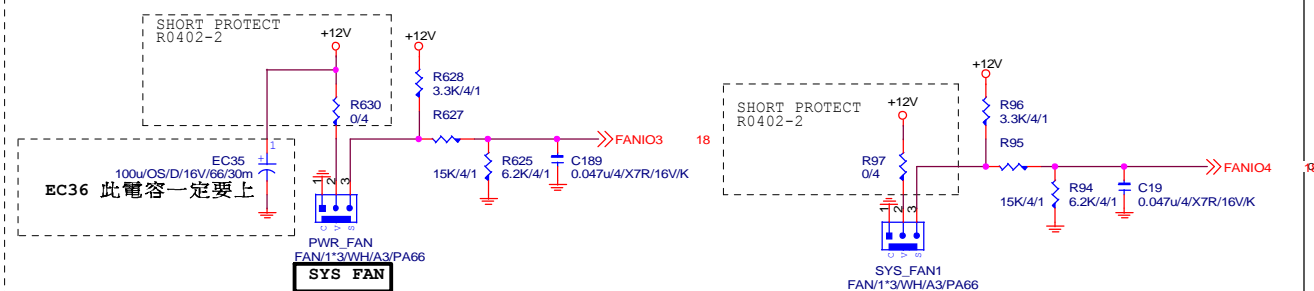
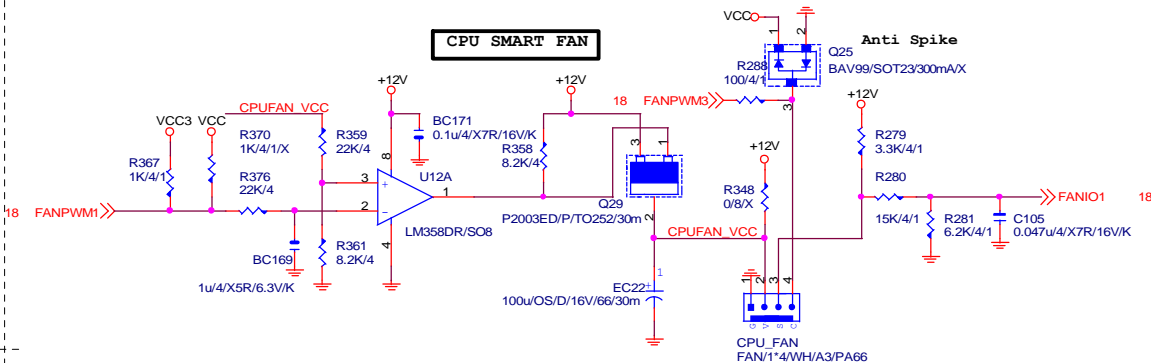
VOLTAGE-- H/W MONITOR



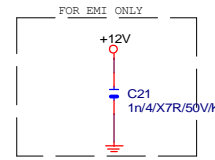
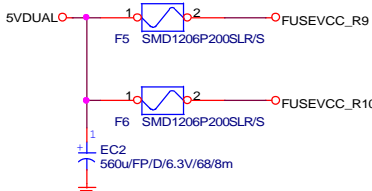
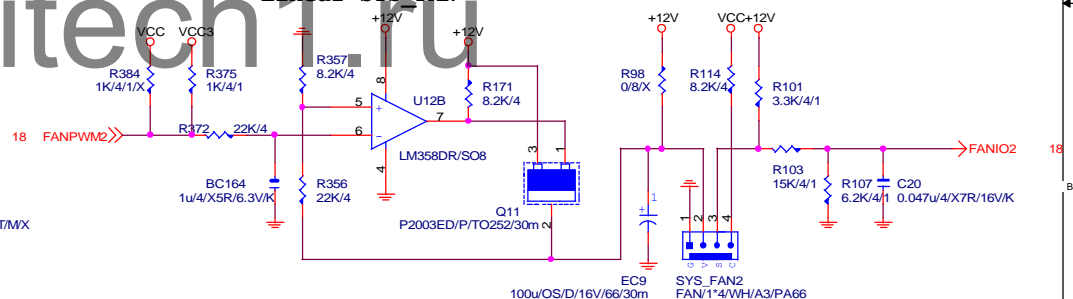
KB/USB



CPU SMART FAN

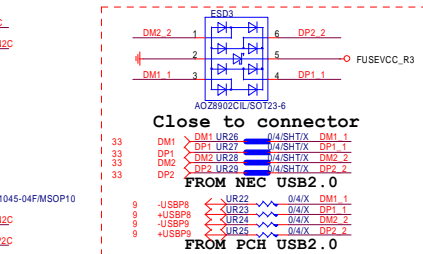
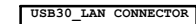
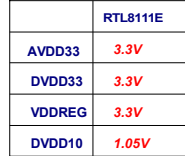


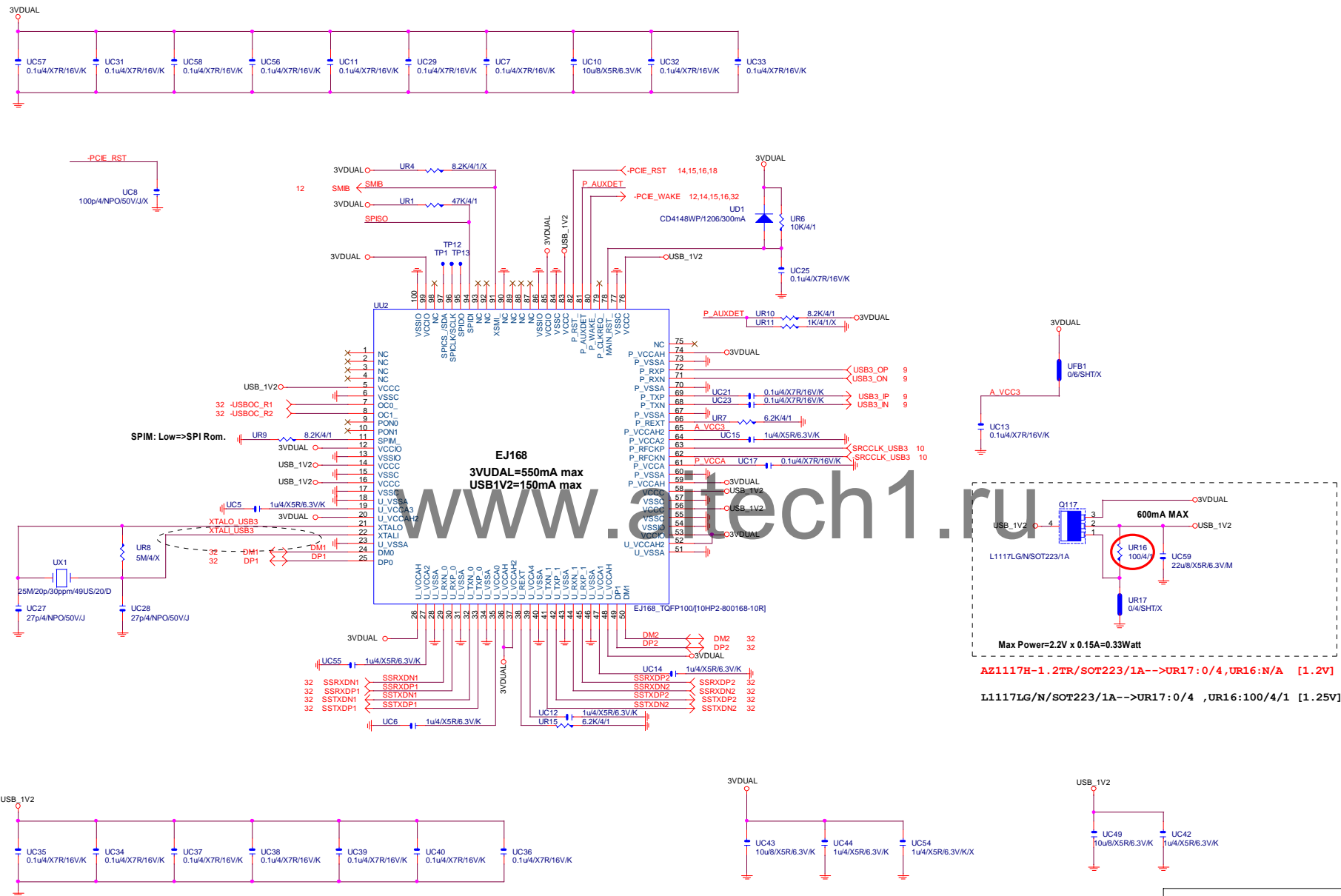
Linear SYS FAN



Gigabyte Technology

Title			HWM,KB/MS, FAN CTRL
Size	Document Number	Rev	
Custm	GA-PH67A-D3-B3	1.0	
Date:	Thursday, March 31, 2011	Sheet	31 of 33





GIGABYTE™		
Title EJ168		
Size Custom	Document Number GA-PH67A-D3-B3	Rev 1.0
Date: Thursday, March 31, 2011	Sheet 33	of 33