

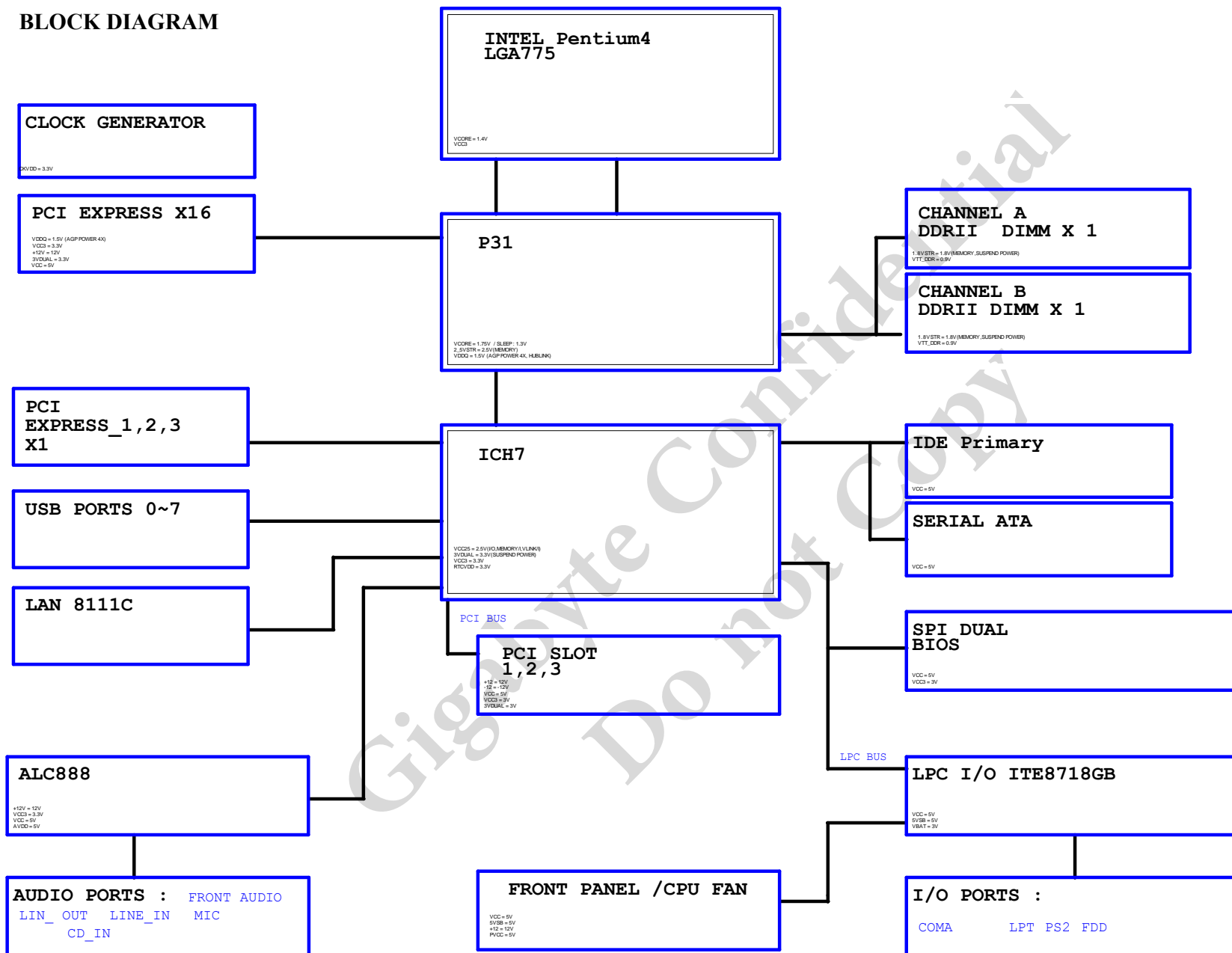
Model Name: GA-P41-ES3G Revision 1.1

SHEET	TITLE
01	COVER SHEET
02	BLOCK DIAGRAM
03	BOM & PCB MODIFY HISTORY
04	P4 LGA775 A
05	P4 LGA775 B,D
06	P4 LGA775 C
07	P4 LGA775 E,F,G,H
08	Eaglelake HOST
09	Eaglelake DDR
10	Eaglelake PCI EXP 16,DMI
11	Eaglelake VGA
12	Eaglelake GND
13	Eaglelake PWR
14	PCI EXPRESS*16 SLOT
15	DDRII CHANNEL A
16	DDRII CHANNEL B
17	DDRII TERMINATION
18	ICH7 PCI, USB, DMI, LAN
19	ICH7 IDE, GPIO, SATA, CTRL
20	ICH7 VCC, GND
21	CK505 CLOCK.
22	PCI SLOT 1,2,PCIE*1
23	IDE/FLOPPY
24	ITE 8718 GB/HX
25	COM LPT
26	CI,HWM,KB/MS,DUAL BIOS
27	ALC888

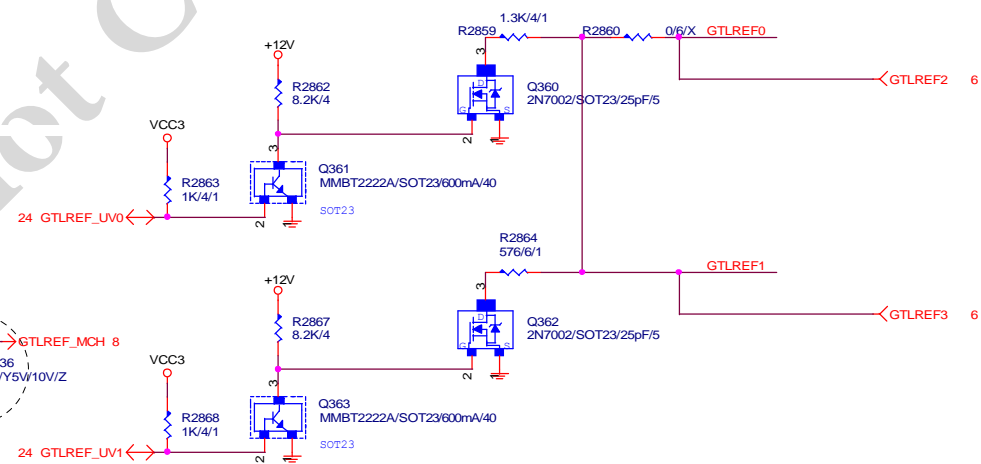
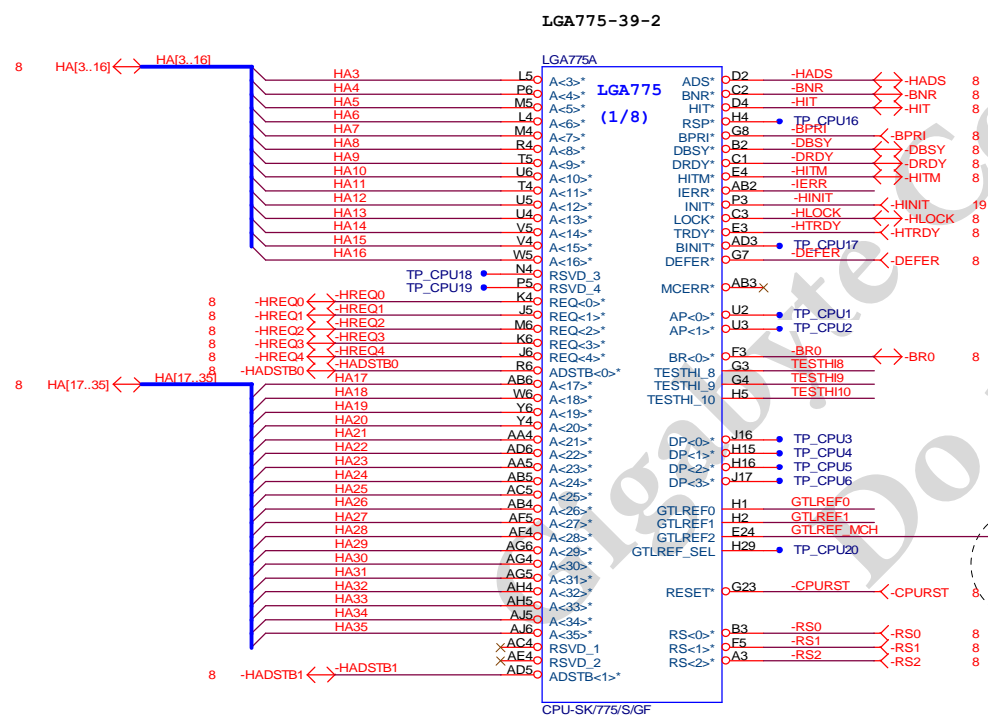
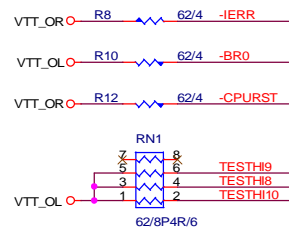
SHEET	TITLE
28	REAR AUDIO JACK
29	DISCRETE POWER
30	VCORE PWM ISL6312
31	ATX, OTHERS POWER
32	FRONT PANEL
33	REALTEK RTL8111D
34	PCI SLOT3,PCIE*2,3

Gigabyte Technology			
Title Cover Sheet			
Size Custom	Document Number GA-P41-ES3G	Rev 1.1	
Date: Thursday, November 05, 2009	Sheet 1 of 34		

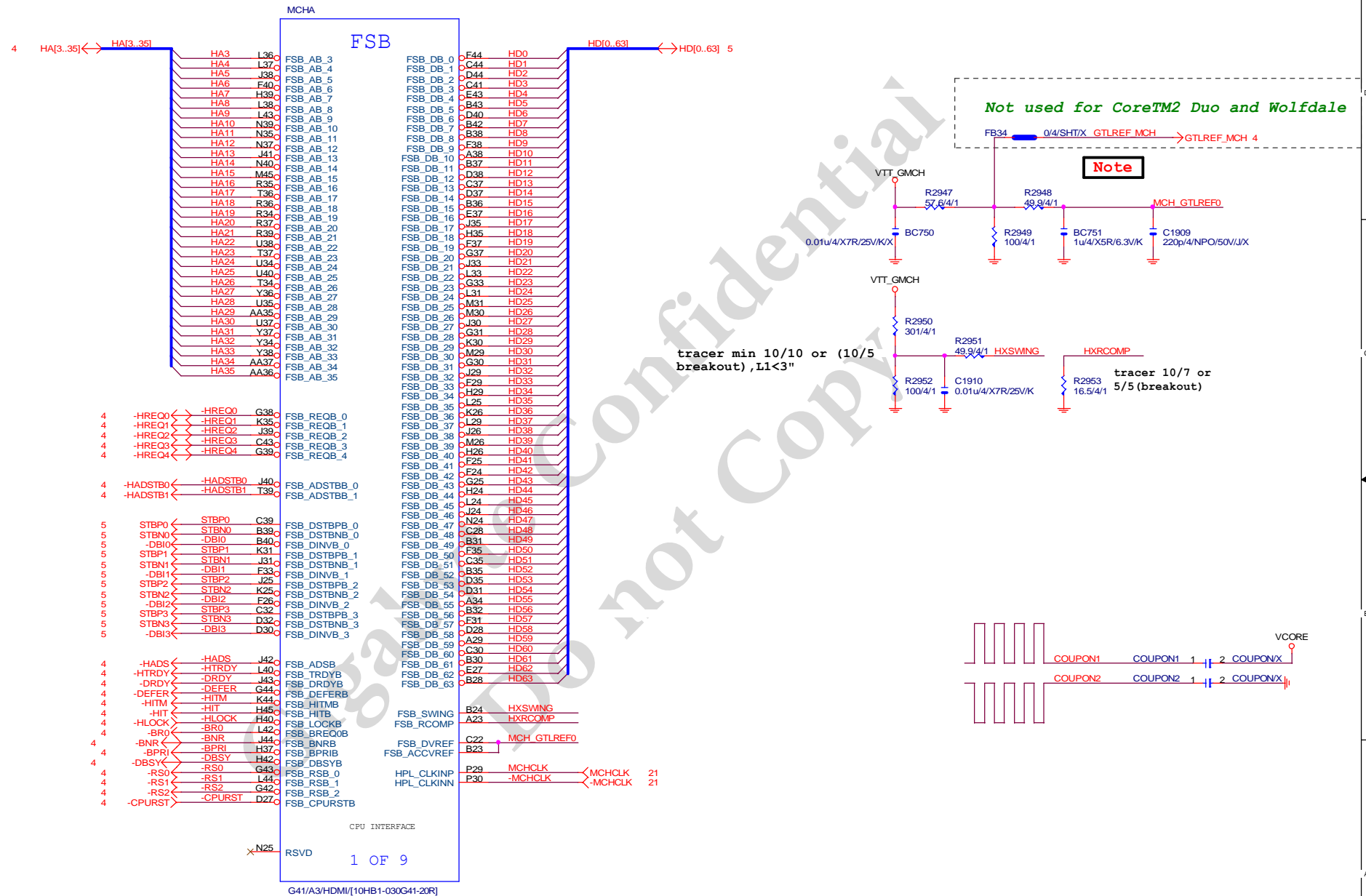
BLOCK DIAGRAM



Gigabyte Technology			
BOM & PCB MODIFY HISTORY			
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<i>Gigabyte Technology</i>				
Title				
P4_LGA775-A				
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Gigabyte Technology			
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MCHC

MCHD

DDR_A

DDR_B

NB_HEATSIN

NB_HS

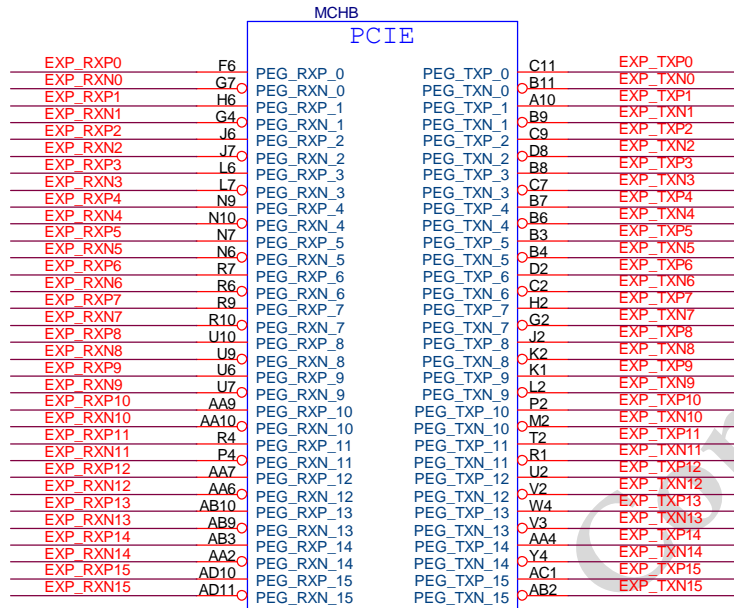
NB_HEATSINK[12SP2-04A004-51R_12SP2-04A004-52R]

Gigabyte Technology

File	GMCH-DDRII	
Size	Document Number	GA-P41-ES3G
Customer		
Date	Thursday, November 05, 2009	Sheet 9 of 34

PCIEX16:16/5/5/5/16(breakout min 8/4/5/4/8)

Impedance=85 +- 17.5%

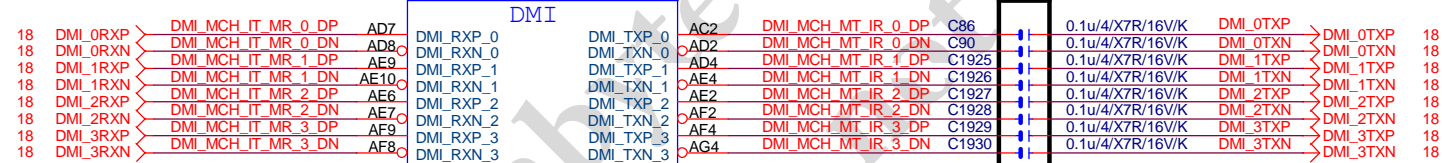


EXP_TXP[0..15] >> EXP_TXP[0..15] 14

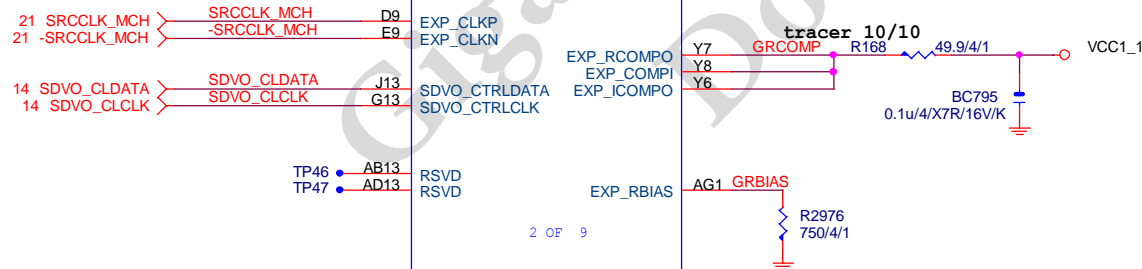
EXP_TXN[0..15] >> EXP_TXN[0..15] 14

EXP_RXP[0..15] >> EXP_RXP[0..15] 14

EXP_RXN[0..15] >> EXP_RXN[0..15] 14

DMI:12/4/8/4/12
Impedance=95 +- 17.5%

Close to MCH



G41/A3/HDMI[10HB1-030G41-20R]

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Gigabyte Technology

Title			GMCH-PCI E & DMI	
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EXP_SM
0:SDVO OR PCIE
1:BOTH SDVO AND
EXP_SLR:
0:BTX PCIE are reversed
1:ATX PCIE normal

MCHE

4/10//15<500 MILS

1th RGB:7.5/6 < 300 MILS

2th RGB:4/20 <5"~8" inch

VGA

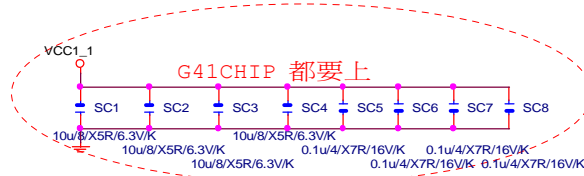
ON-BOARD VGA 75ohm
non-ON-BOARD VGA 0ohmON-BOARD VGA 1.02k
non-ON-BOARD VGA 0ohm

MISC

BW+ICH8 不要上 (SAMPLE)
BW+ICH7 要上

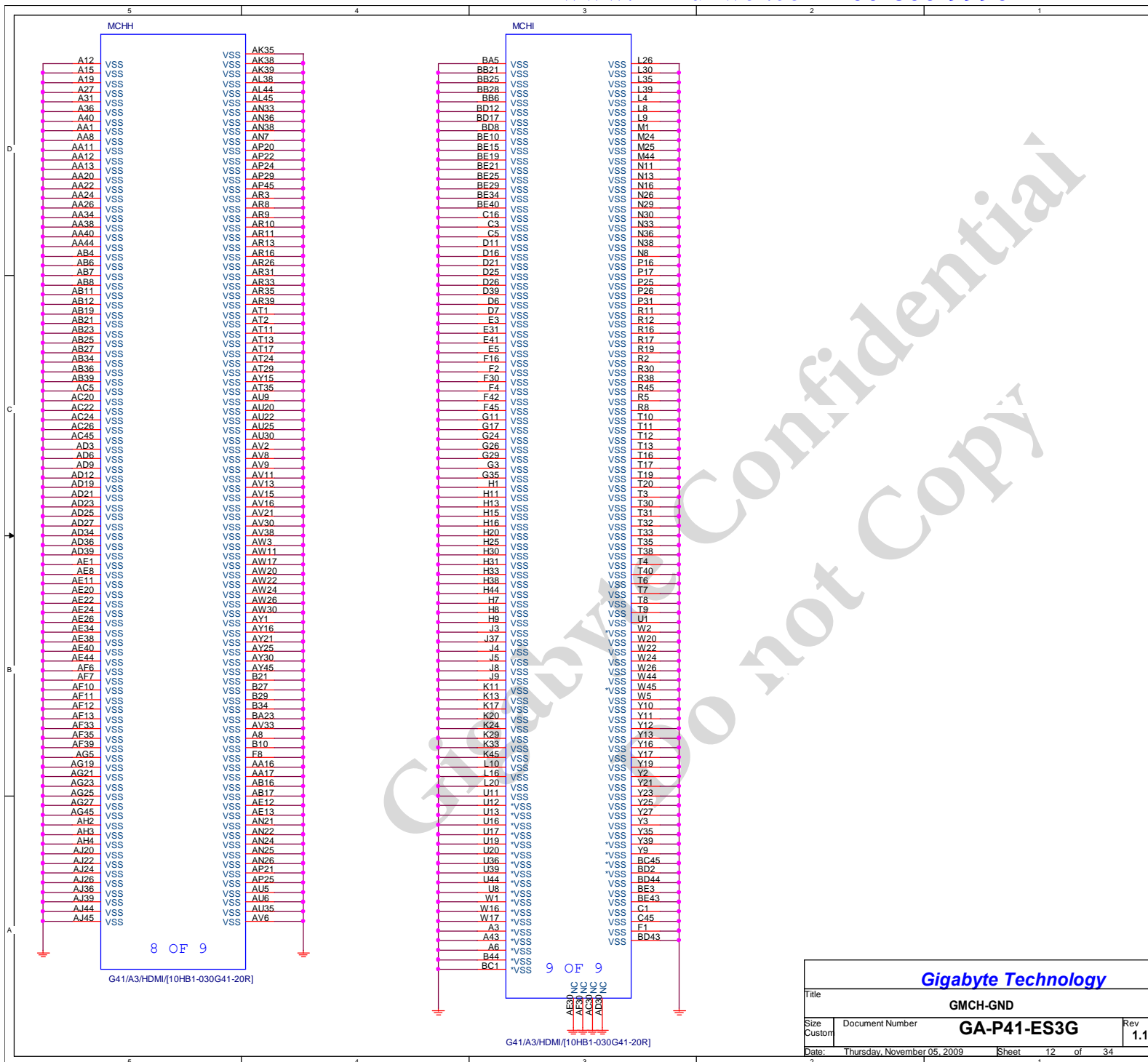
5 OF 9

G41/A3/HDMI/[10HB1-030G41-20R]

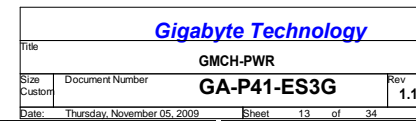


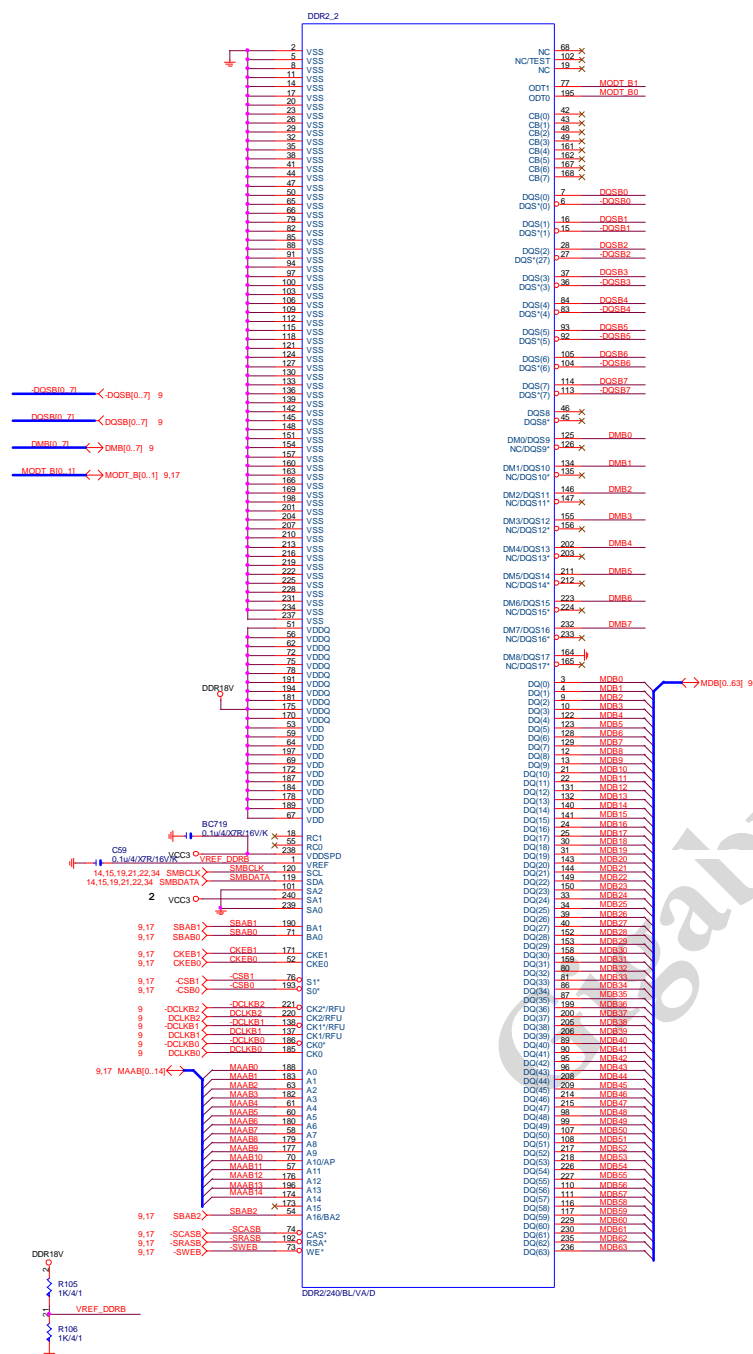
Gigabyte Technology

Title			GMCH-INTERNAL VGA	
Size	Document Number	GA-P41-ES3G		Rev
B				1.1
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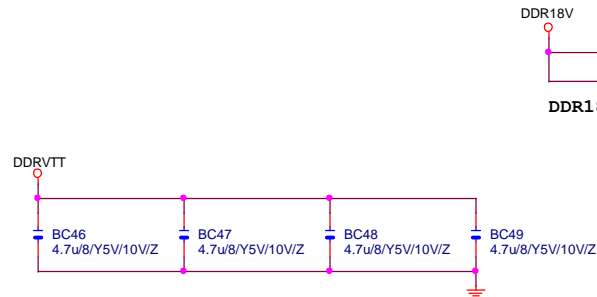
Gigabyte Technology		
Title: GMCH-GND		
Size: Custom	Document Number: GA-P41-ES3G	Rev: 1.1
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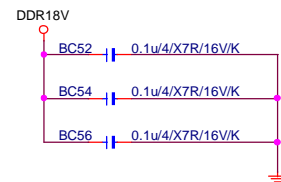


DDR TERMINATION CHANNEL A

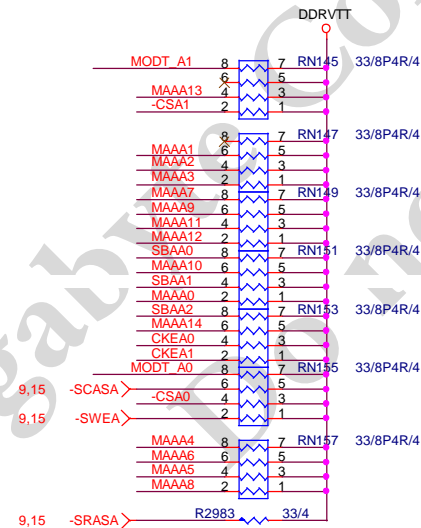
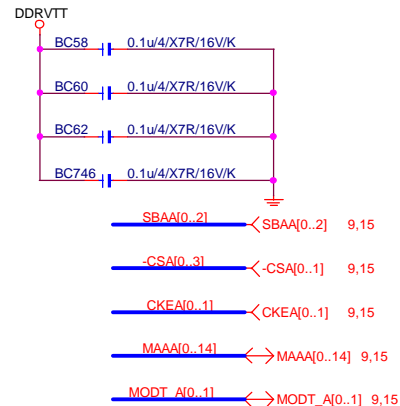
DDRVTT Decouple



DDR18V Decouple

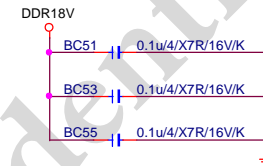


DDRVTT Decouple

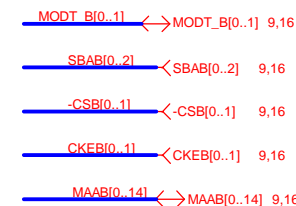
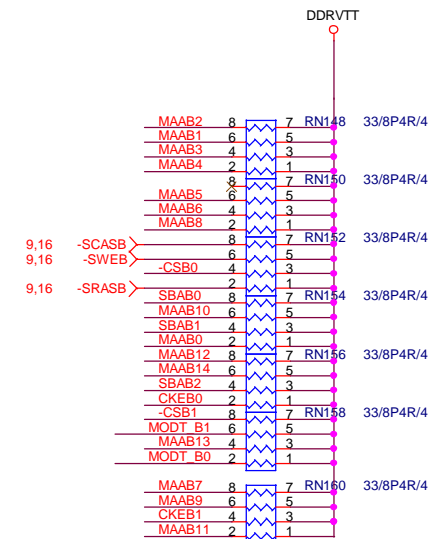
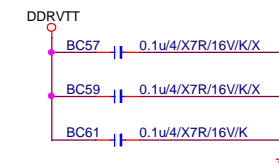


DDR TERMINATION CHANNEL B

DDR18V Decouple



DDRVTT Decouple

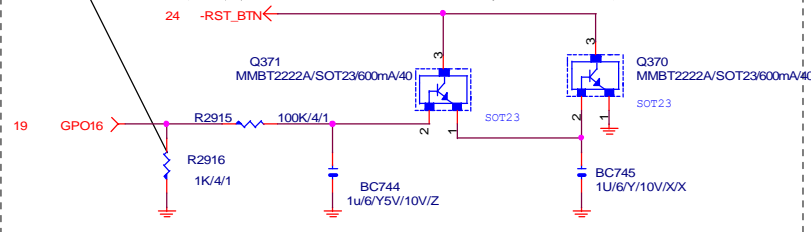


Gigabyte Technology

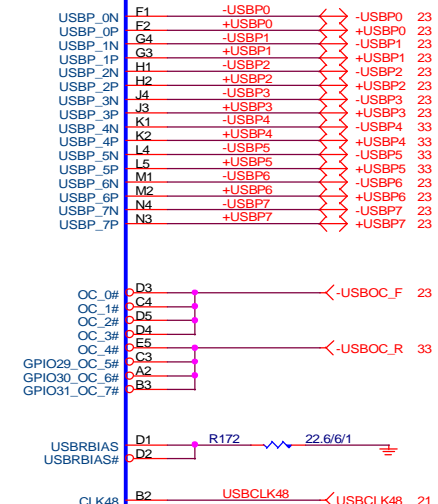
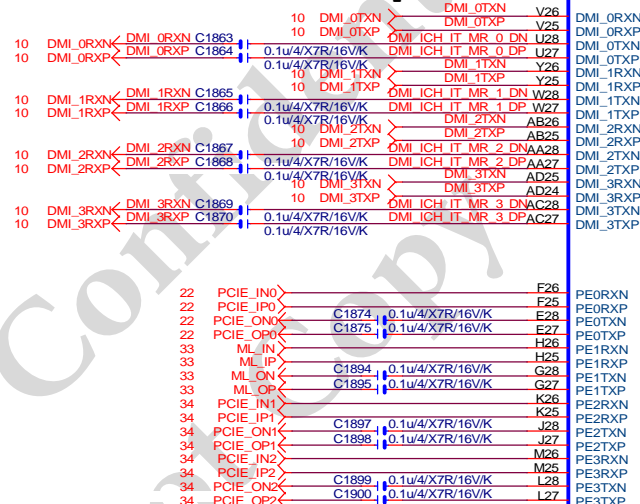
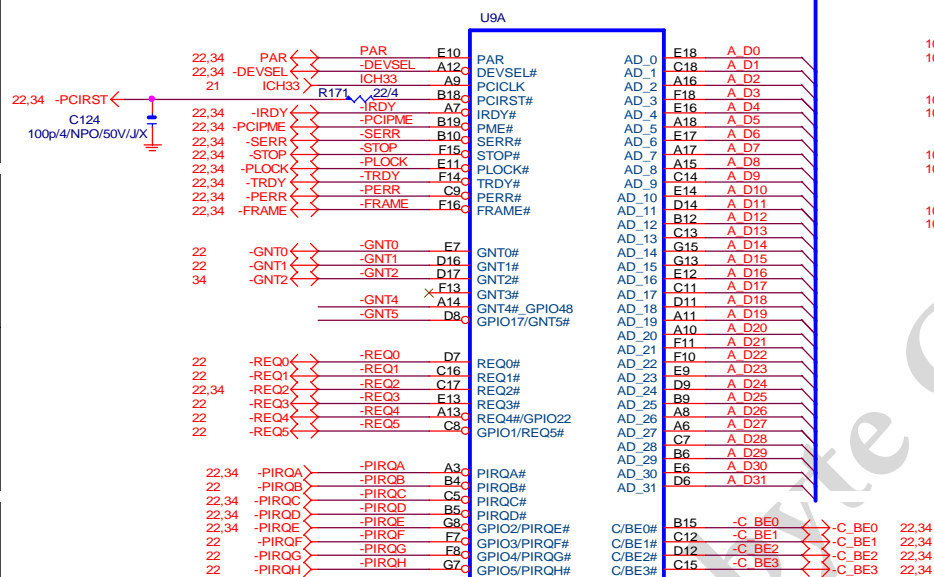
Title			DDRII TERMINATOR
Size	Document Number	GA-P41-ES3G	
Custom		Rev	1.1
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FOR ICH7R POWER ON 瞬間會HIGH 到1.8V 之後0V,必須PULL DOWN 1K/6

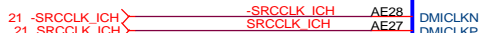
H/W
RESET



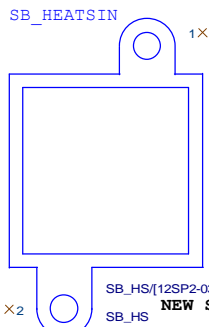
Close to ICH
as short as possible



ICH7 ONLY 4 LANE



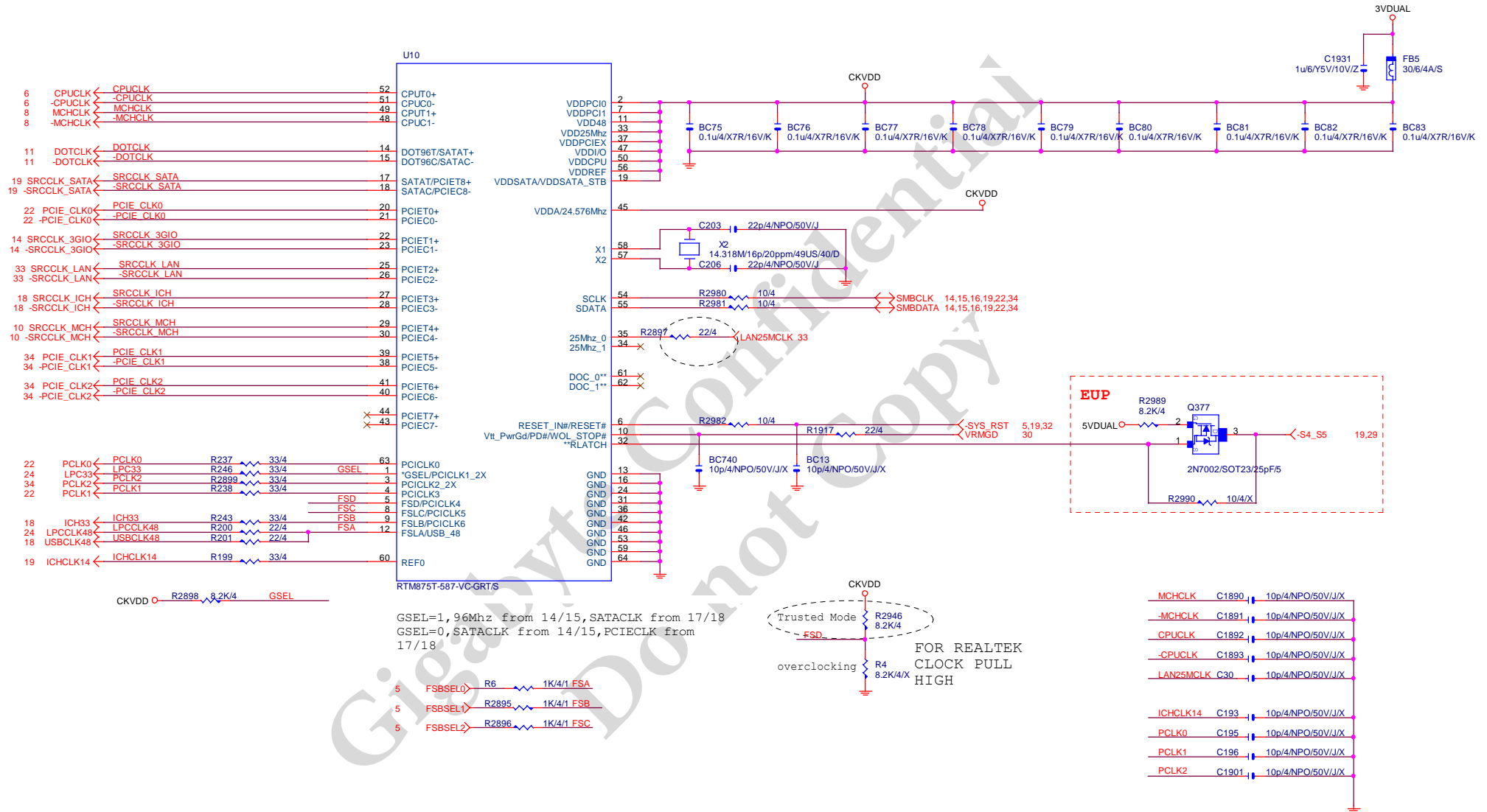
ICH7/A1[10HB1-032B01-N2R]



Gigabyte Technology

Title			
ICH7-PCI, DMI, LAN, USB			
Size	Document Number	Rev	
B	GA-P41-ES3G	1.1	
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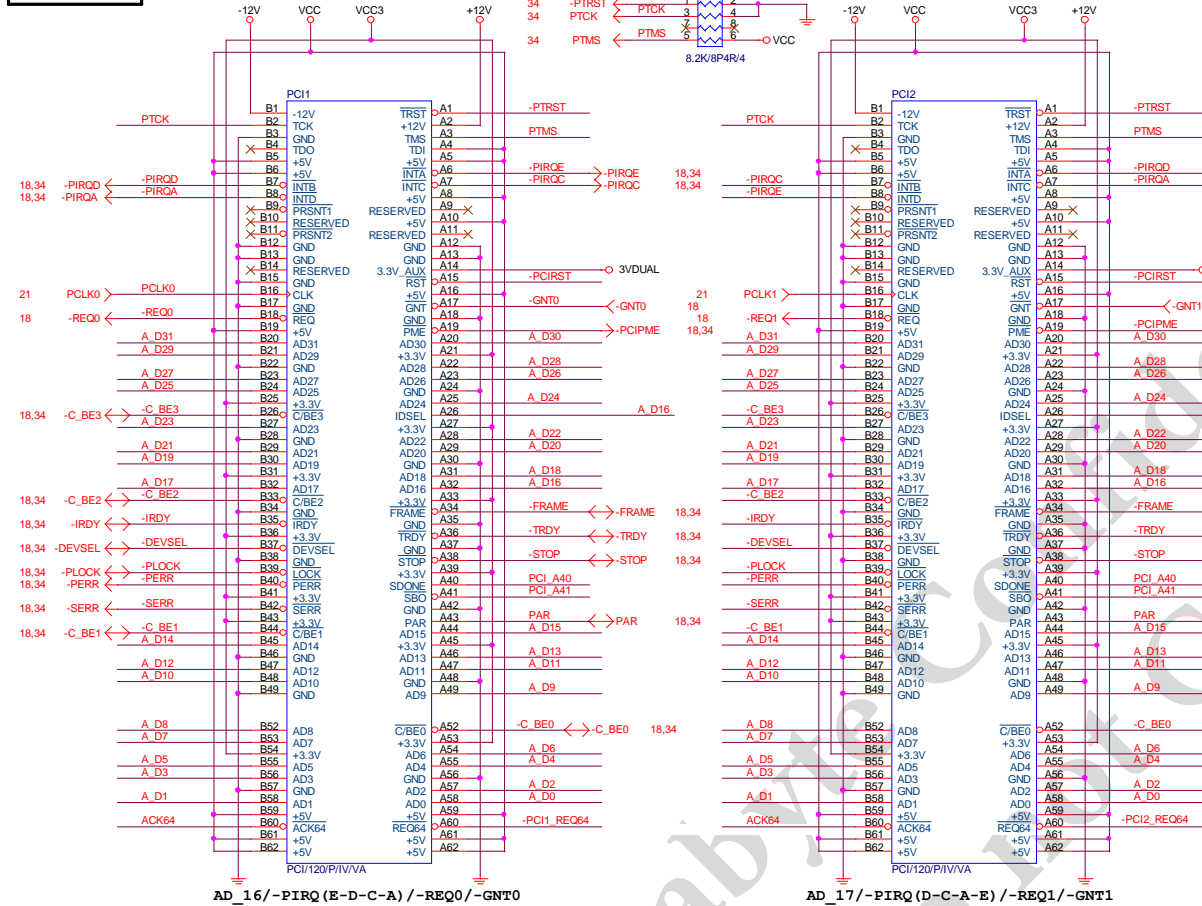
CLK GEN CK505



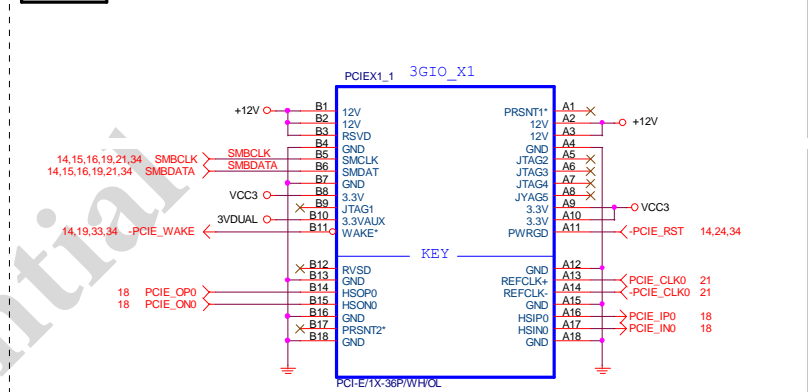
Gigabyte Technology

Title		CK505 CLK GEN	
Size	Document Number	GA-P41-ES3G	
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PCI1,2 SLOT



PCIE*1



18,34 A_D0..31

Place close to PC11

14,15,16,19,21,34 SMBCLK PCI_A40
14,15,16,19,21,34 SMBDATA PCI_A41

2.2K/8P4R/4

PCIE1,2 SLOT Schematic Diagram Details:

- Power Connections:** +12V, VCC, VCC3, -12V.
- Signal Connections:** PTCK, PTRST, PTMS, PIRQ, REQ, GNT, etc.
- Component Locations:** RN134, RN19, RN21, RN23, RN24, RN25.
- Pin Connections:** A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A13, A14, A15, A16, A17, A18, A19, A20, A21, A22, A23, A24, A25, A26, A27, A28, A29, A30, A31, A32, A33, A34, A35, A36, A37, A38, A39, A40, A41, A42, A43, A44, A45, A46, A47, A48, A49, A50, A51, A52, A53, A54, A55, A56, A57, A58, A59, A60, A61, A62.

BC91 0.1u/4/X7R/16V/K

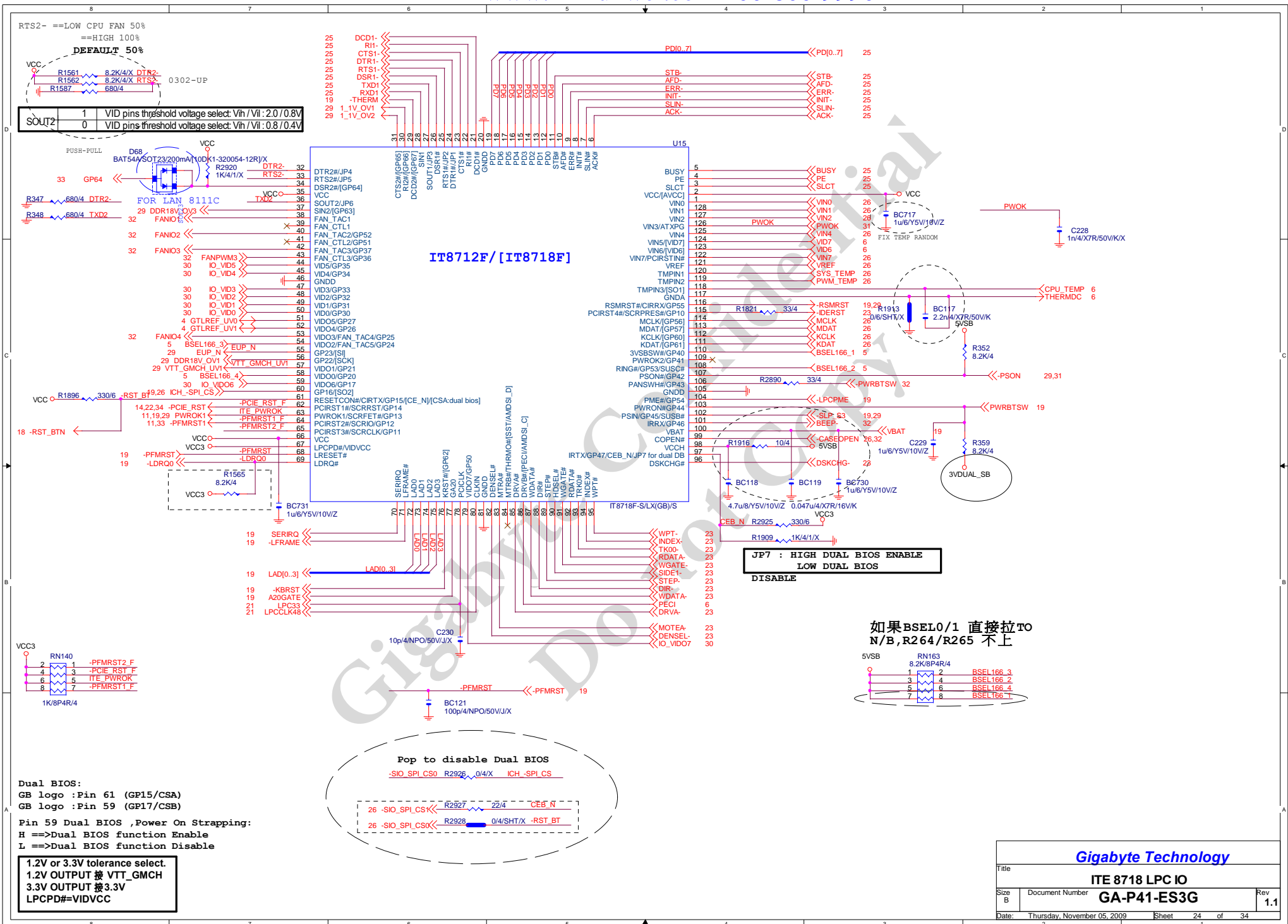
BC93 0.1u/4/X7R/16V/K

BC95 0.1u/4/X7R/16V/K
BC96 0.1u/4/X7R/16V/K
BC97 0.1u/4/X7R/16V/K
EC29 1000u/6.3V/8C/36m

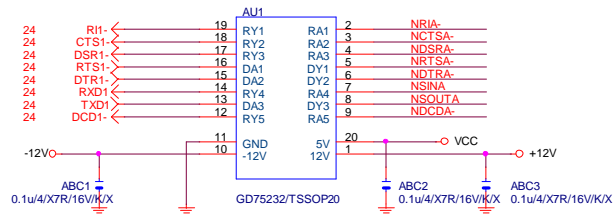
Gigabyte Technology

Title			PCI SLOT 1, 2/PCIE*1
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Custom		Rev	1.1
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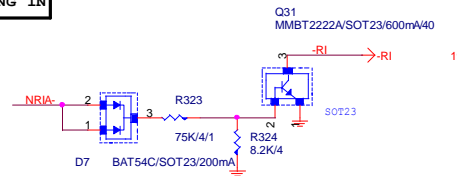
Title			
IDE,FDD,F_USB			
Size B	Document Number	GA-P41-ES3G	Rev 1.1
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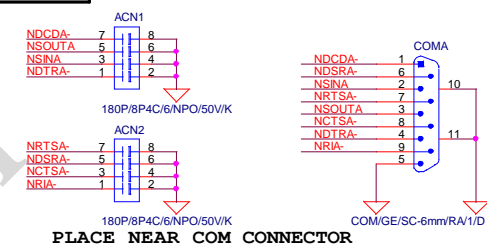
COMA



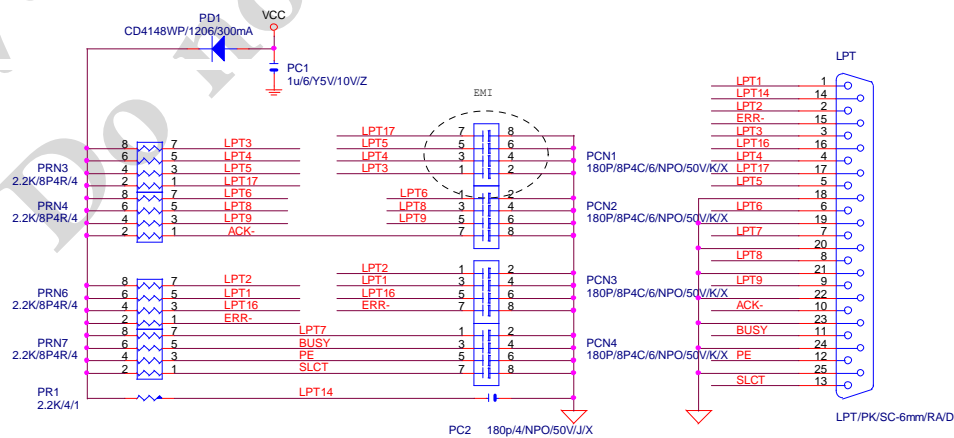
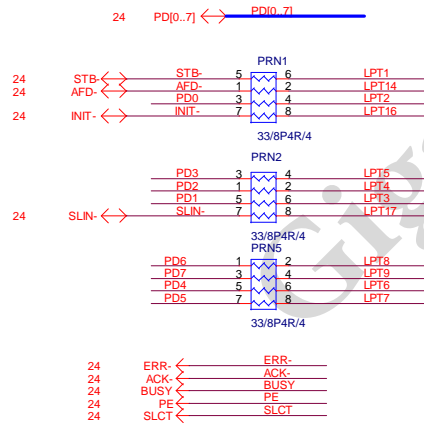
RING IN



EXTERNAL COMA



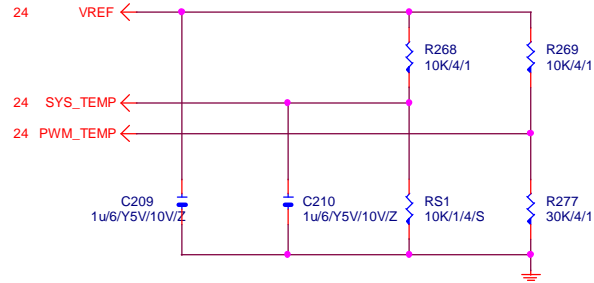
LPT PORT



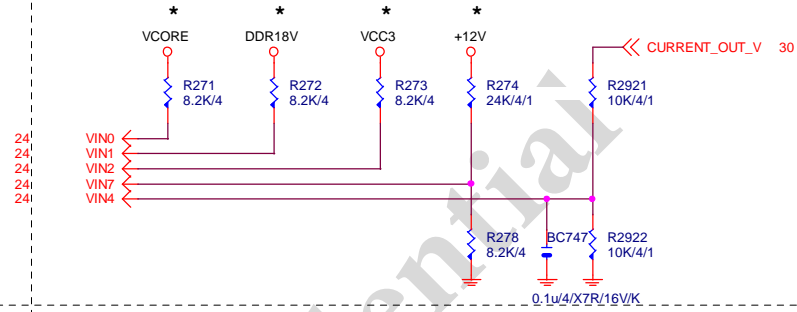
Gigabyte Technology

Title		
COM & LPT PORT		
Size	Document Number	Rev
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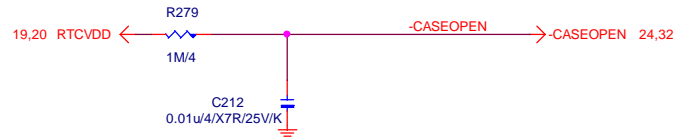
TEMP H/W MONITOR



VOLTAGE-- H/W MONITOR

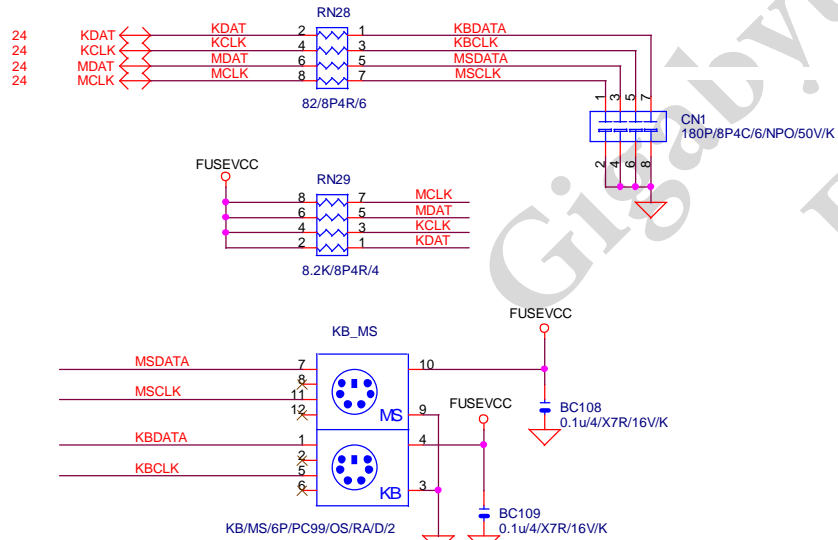


CASE OPEN



Case Open Circuits

KB/MS

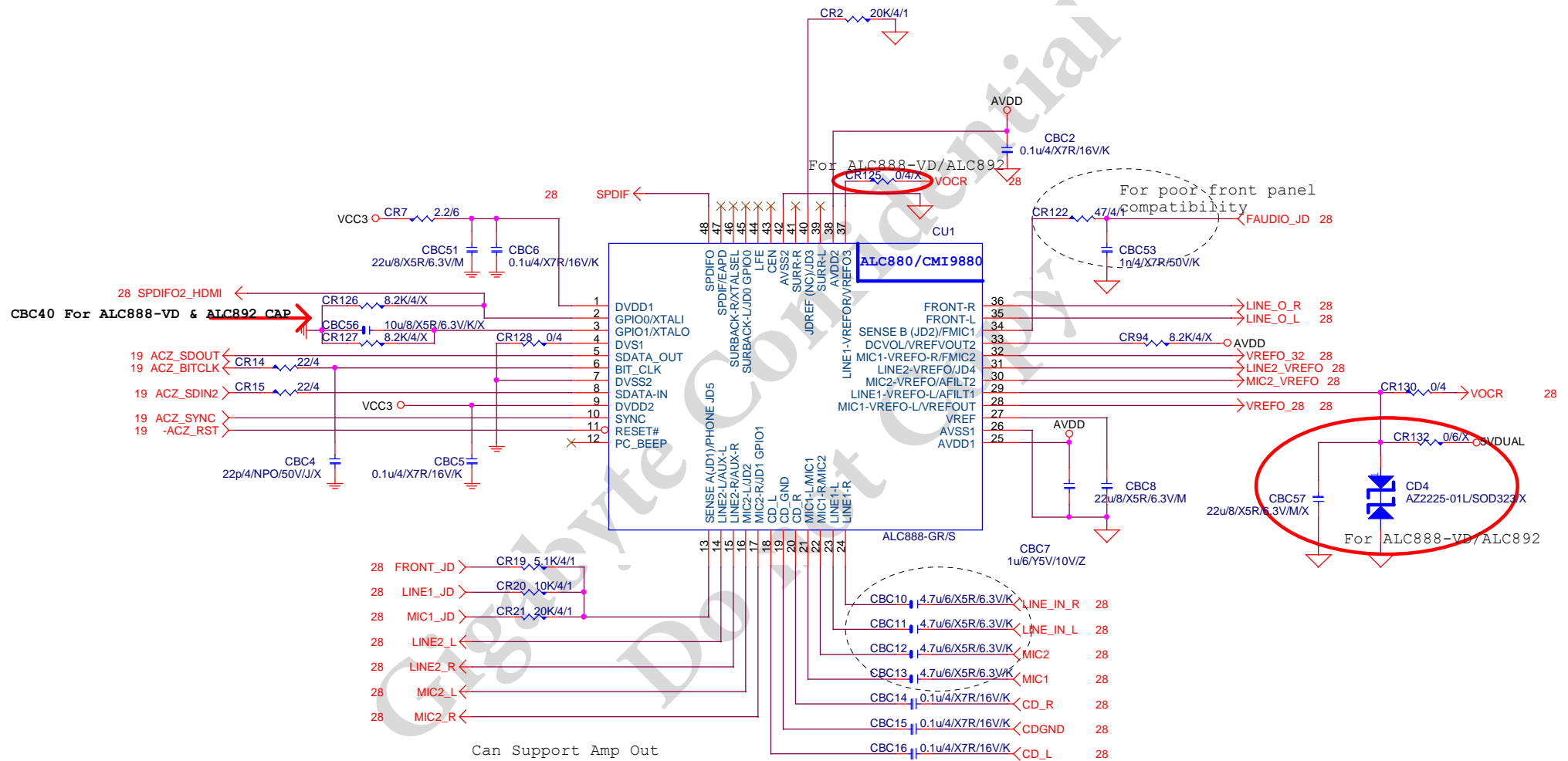


BACKUP BIOS

Gigabyte Technology

Title			HW-MONITOR/CI/KB/MS/BIOS	
Size	Document Number	GA-P41-ES3G		Rev
Custom				1.1
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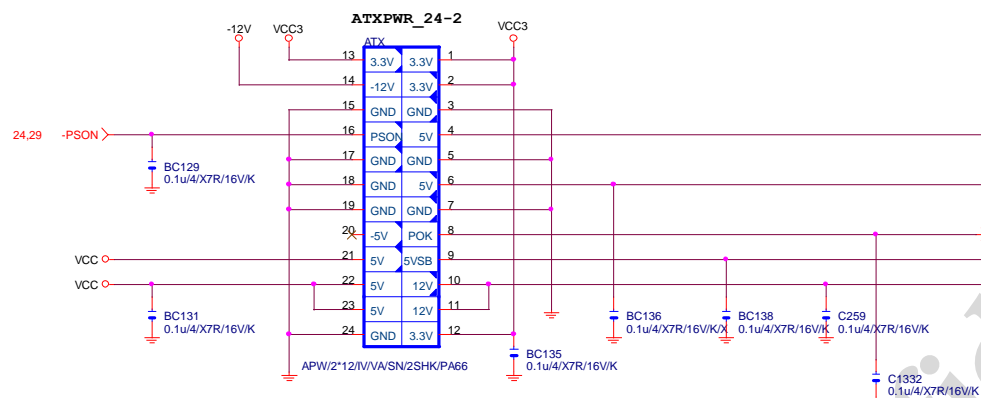
AZALIA CODEC



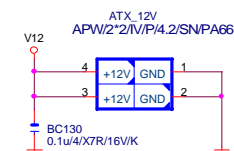
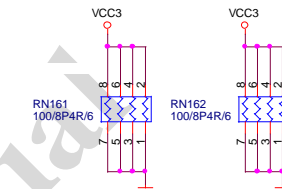
Gigabyte Technology

Title		
AZALIA ALC888		
Size	Document Number	Rev
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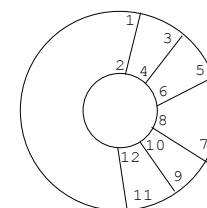
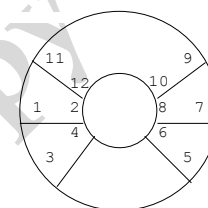
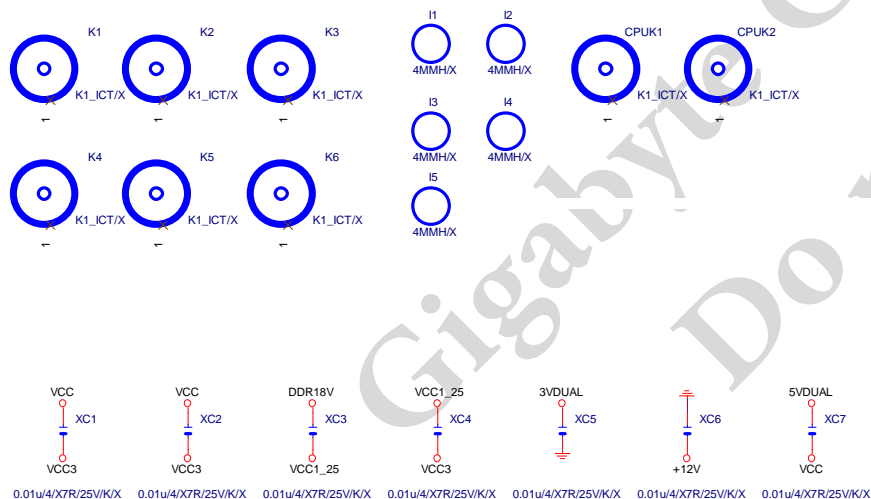
ATX POWER CONNECTOR



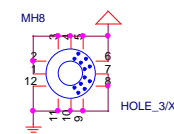
FIX PWR AcBel (ATX-400C-A2ADB)



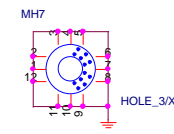
ATX_4-1



HOLE_4-RH-1



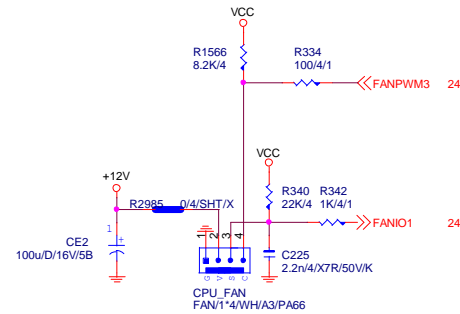
HOLE_4-RH-5MM-1



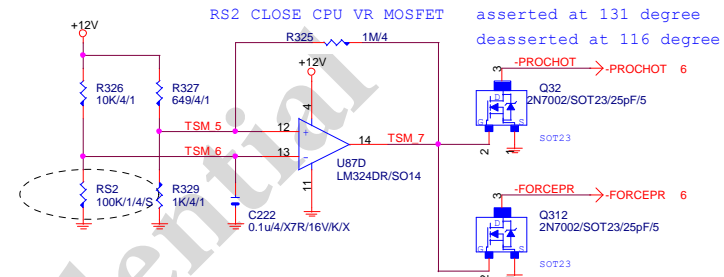
Gigabyte Technology

Title			ATX POWER CONNECTOR
Size	Document Number	GA-P41-ES3G	
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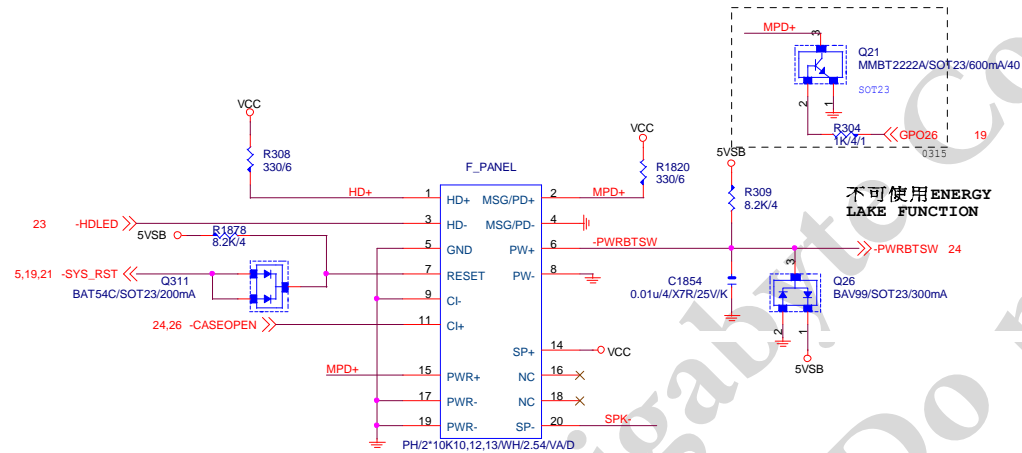
CPU SMART FAN SMART FAN



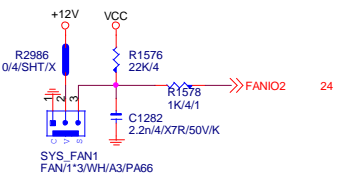
PROCESSOR HOT



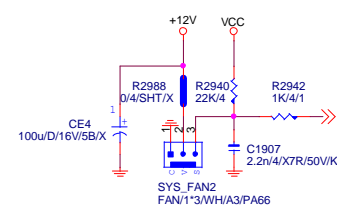
INTEL FRONT PANEL



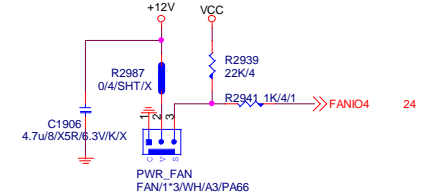
SYS_FAN1



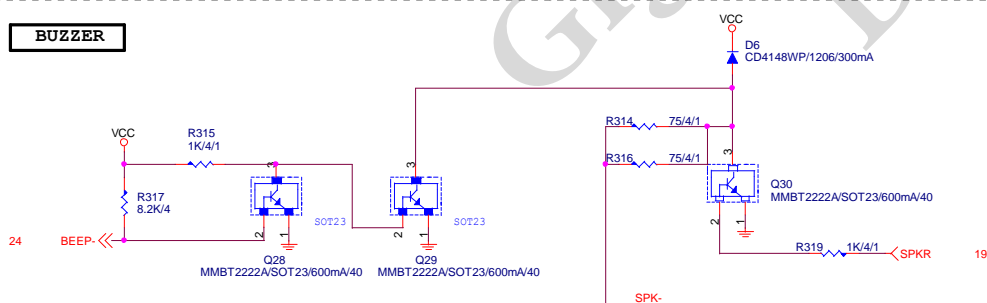
SYS_FAN2



PWR_FAN



BUZZER



Gigabyte Technology

Title			FRONT PANEL / FAN CTRL
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