

Model Name:G31M-S2L

Revision 1.02

SHEET

TITLE

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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
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09	G31 DDRII
10	G31 PCI E, DMI
11	G31 VGA
12	G31 GND
13	G31 PWR
14	PCI EXPRESS*16 SLOT
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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/GX
25	COM LPT
26	CI ,HWM,KB/MS ,BIOS
27	ALC662

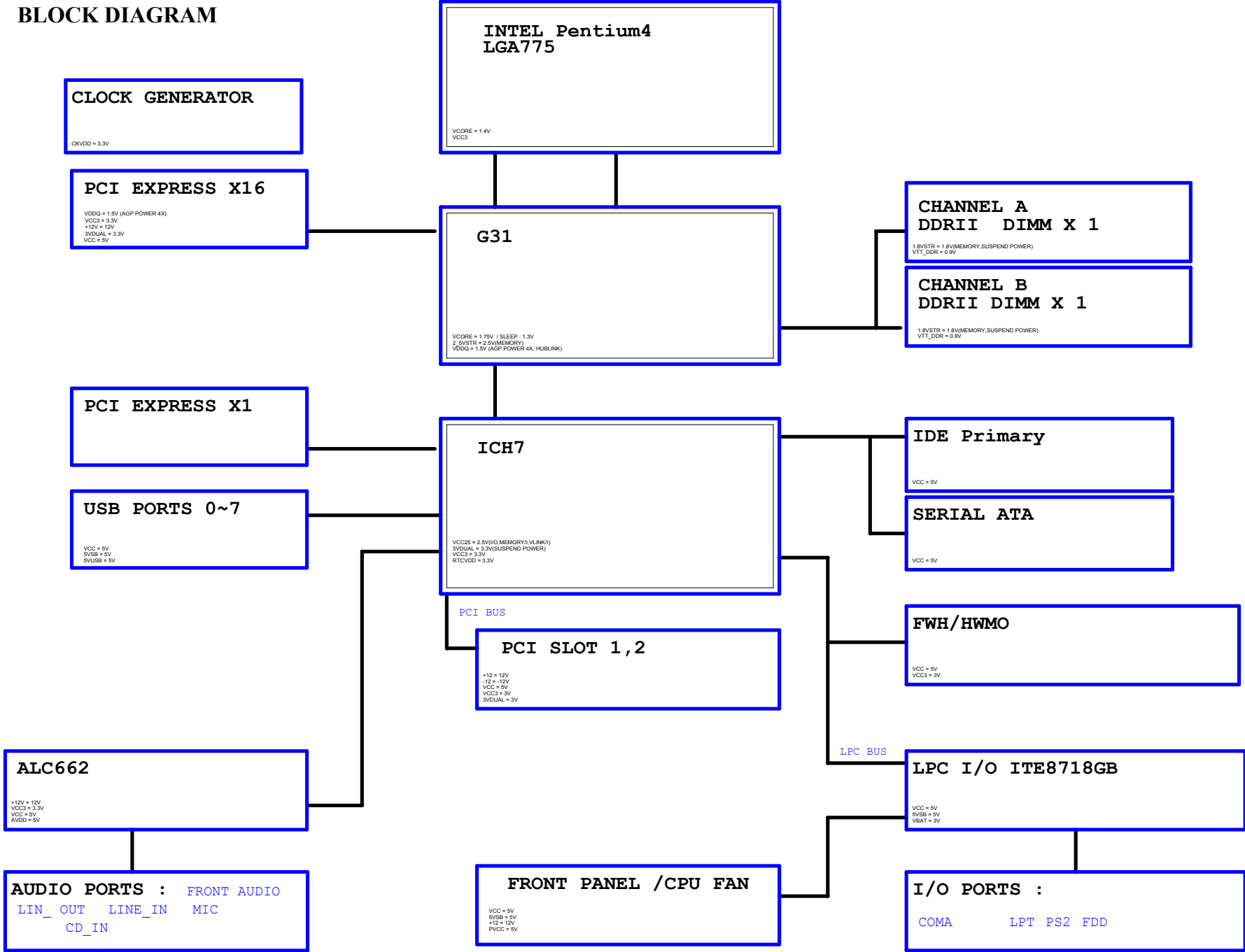
SHEET

TITLE

28	REAR AUDIO JACK
29	DISCRETE POWER
30	VCORE PWM ISL6312
31	ATX, OTHERS POWER
32	FRONT PANEL
33	REALTEK RTL8111C/8101E

Gigabyte Technology		
Cover Sheet		
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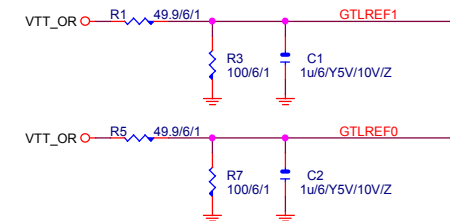
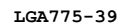
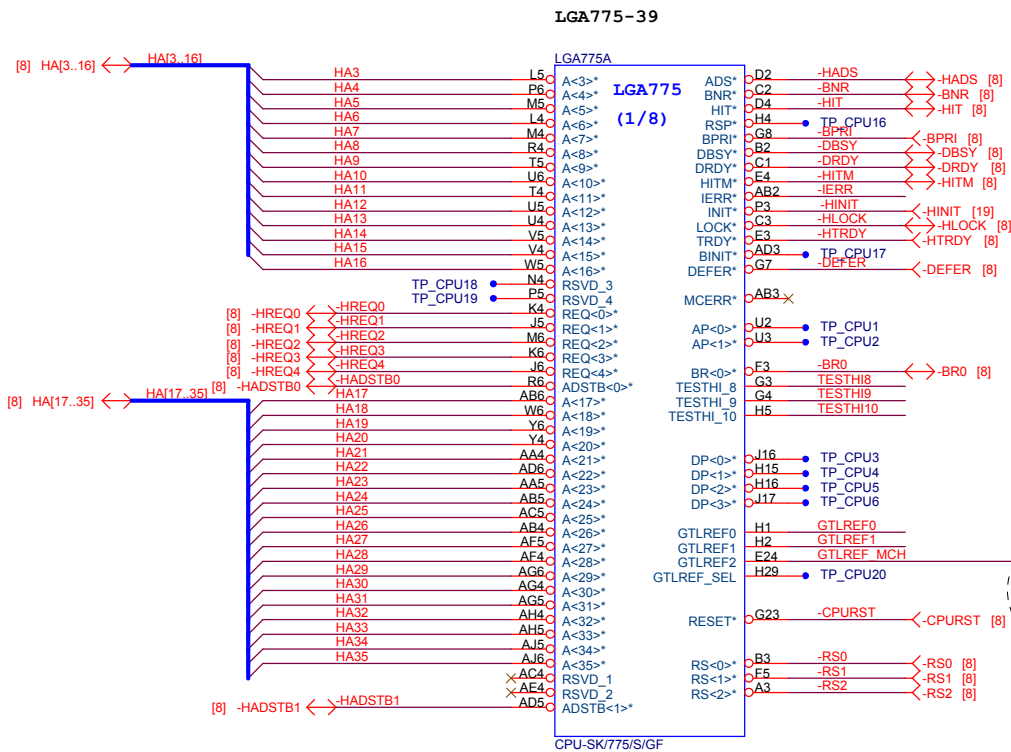
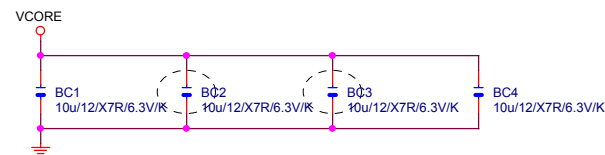
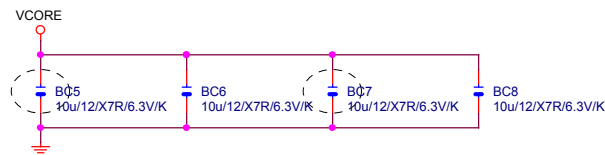
BLOCK DIAGRAM



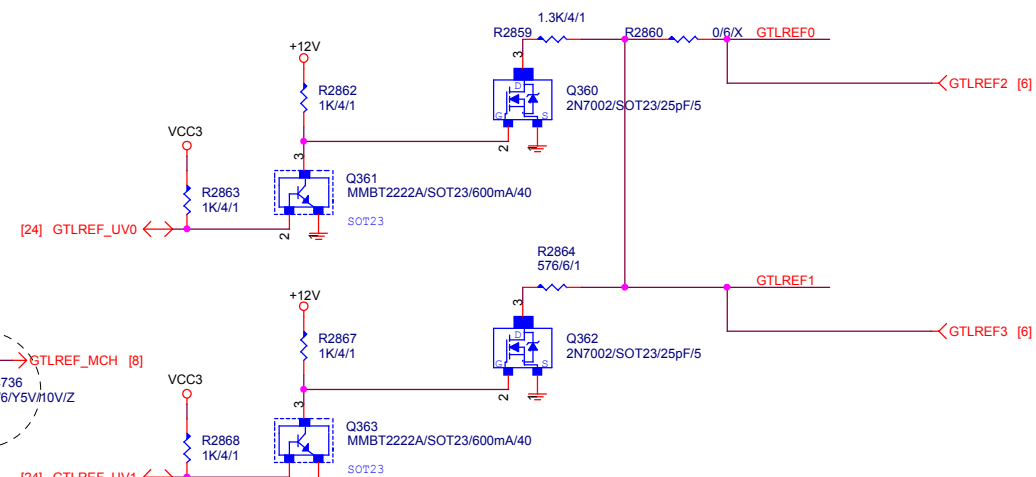
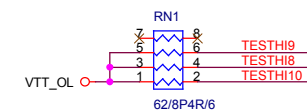
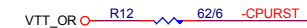
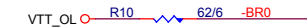
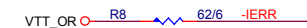
Version: 1.02

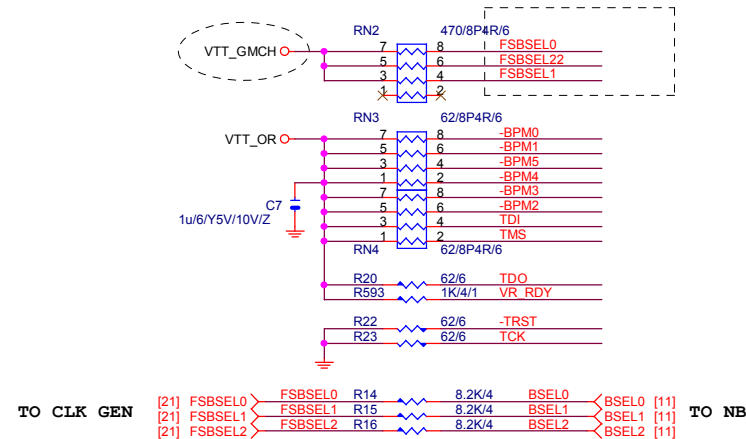
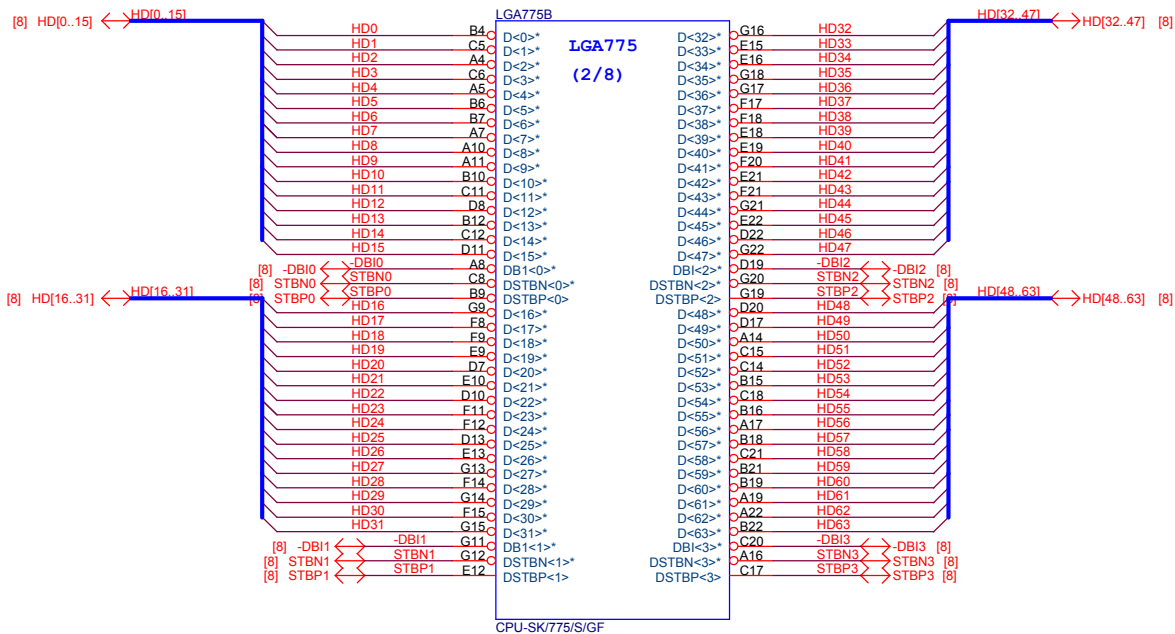
2007/08/20

[illegible][illegible]



中間値0.9V





CPU

NA	FSB	FSA	
FSBSEL3	FSBSEL1	FSBSEL0	Clock
1	0	1	100MHz
0	0	1	133MHz
0	1	1	166MHz
0	1	0	200MHz
0	0	0	266MHz

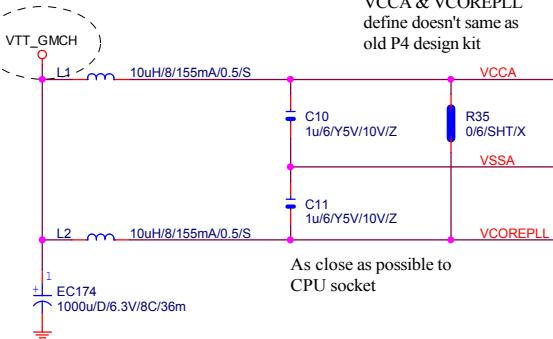
X

Gigabyte Technology			
Title			
P4_LGA775-B,D			
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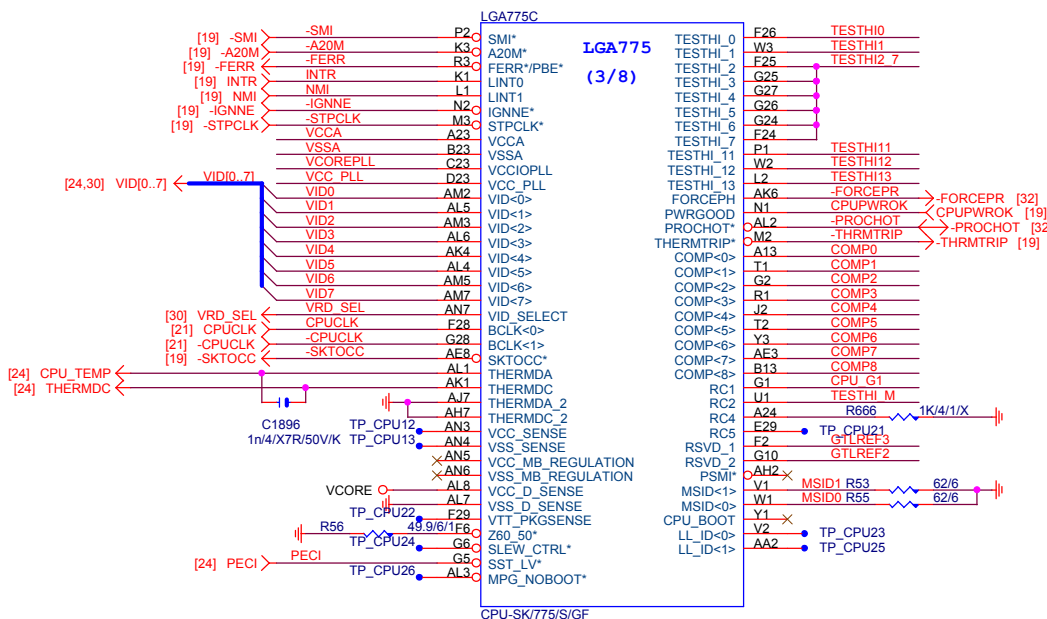
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Note:

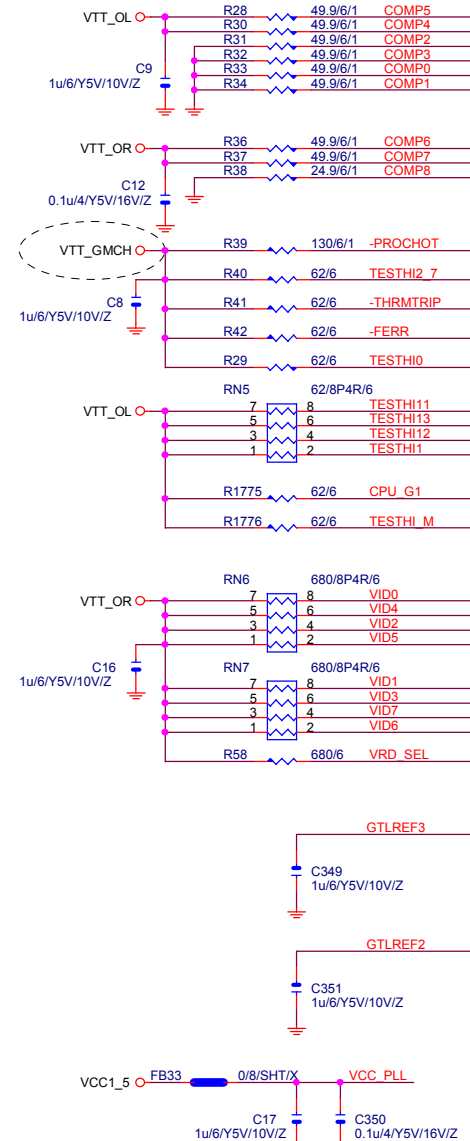
VCCA & VCOREPLL
define doesn't same as
old P4 design kit



Trace width doesn't
less than 12 Mil



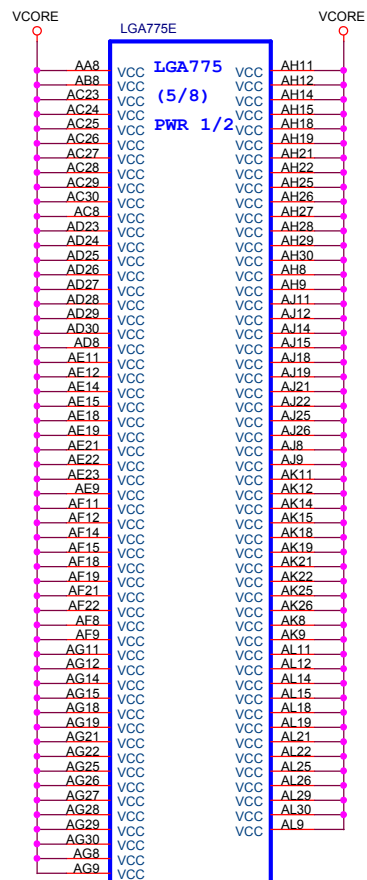
Place outside of CPU socket



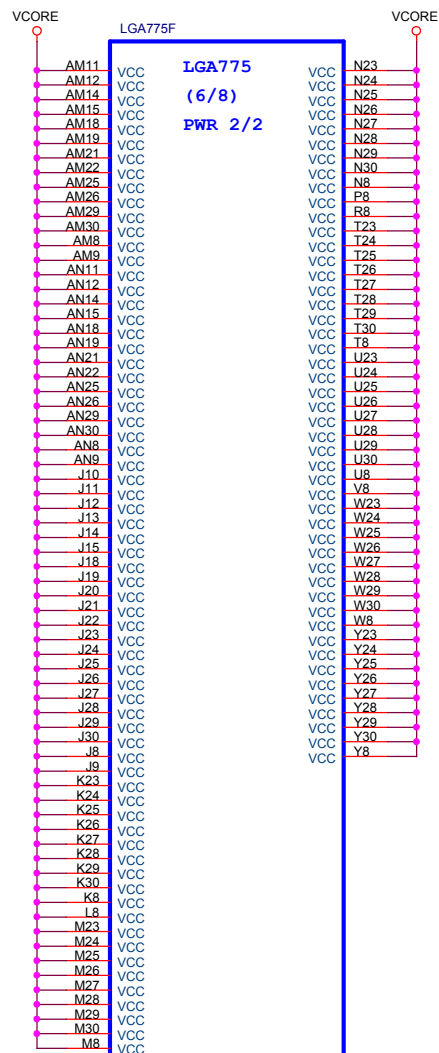
PECI:Platform Environment Control Interface

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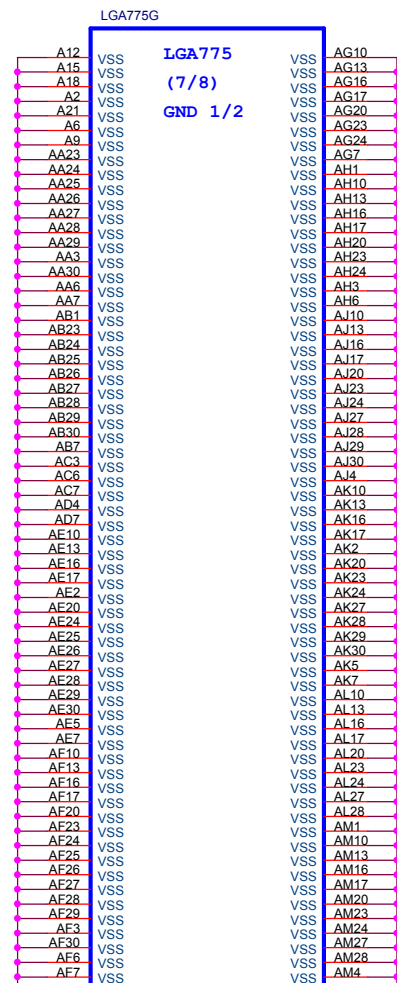
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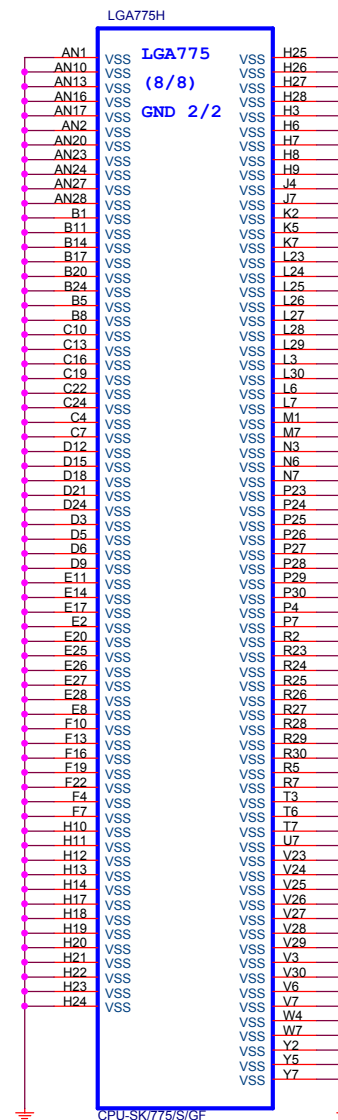
CPU-SK/775/S/GF



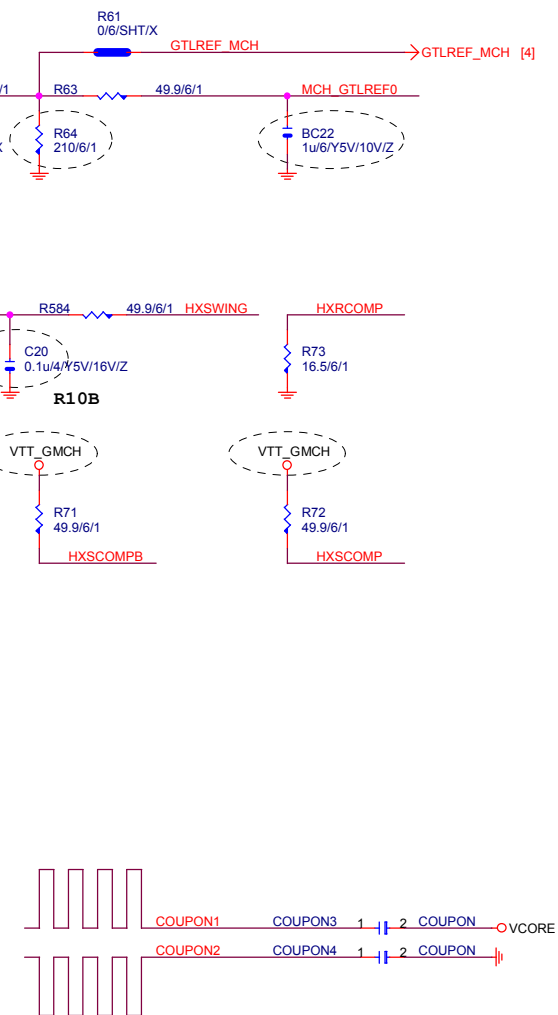
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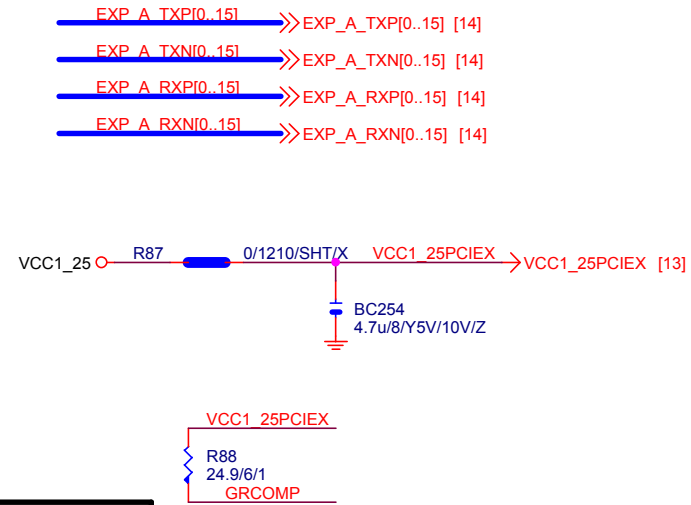
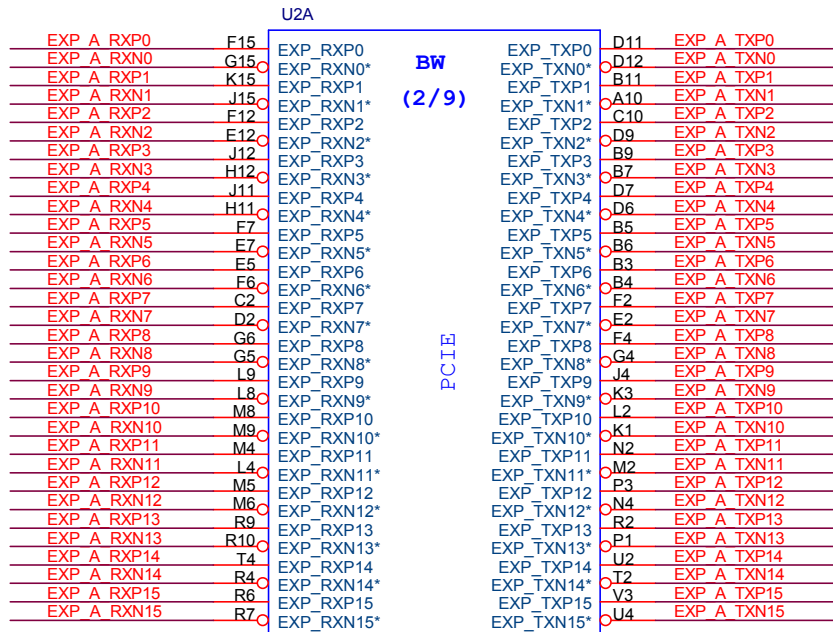


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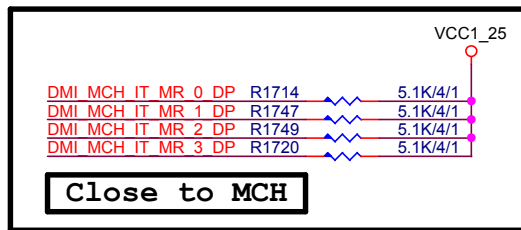
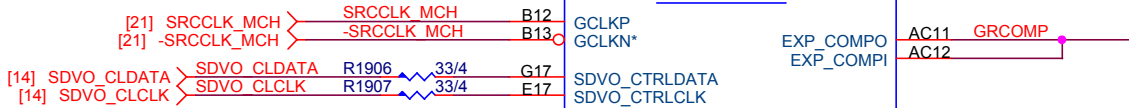


CPU-SK/775/S/GP

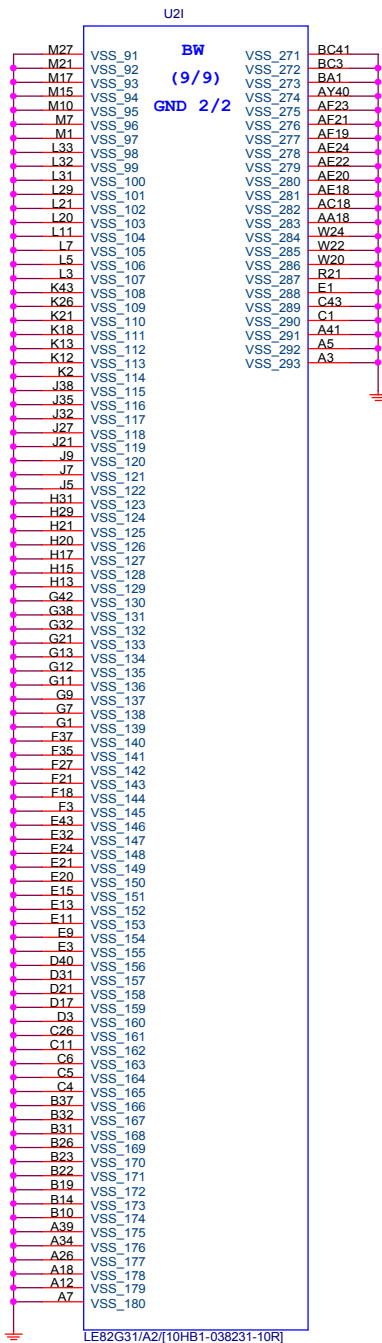
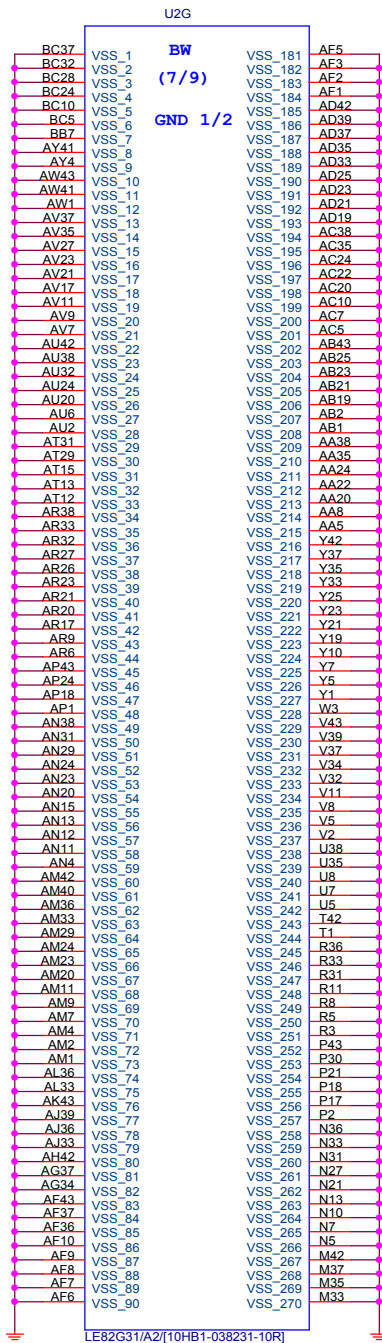


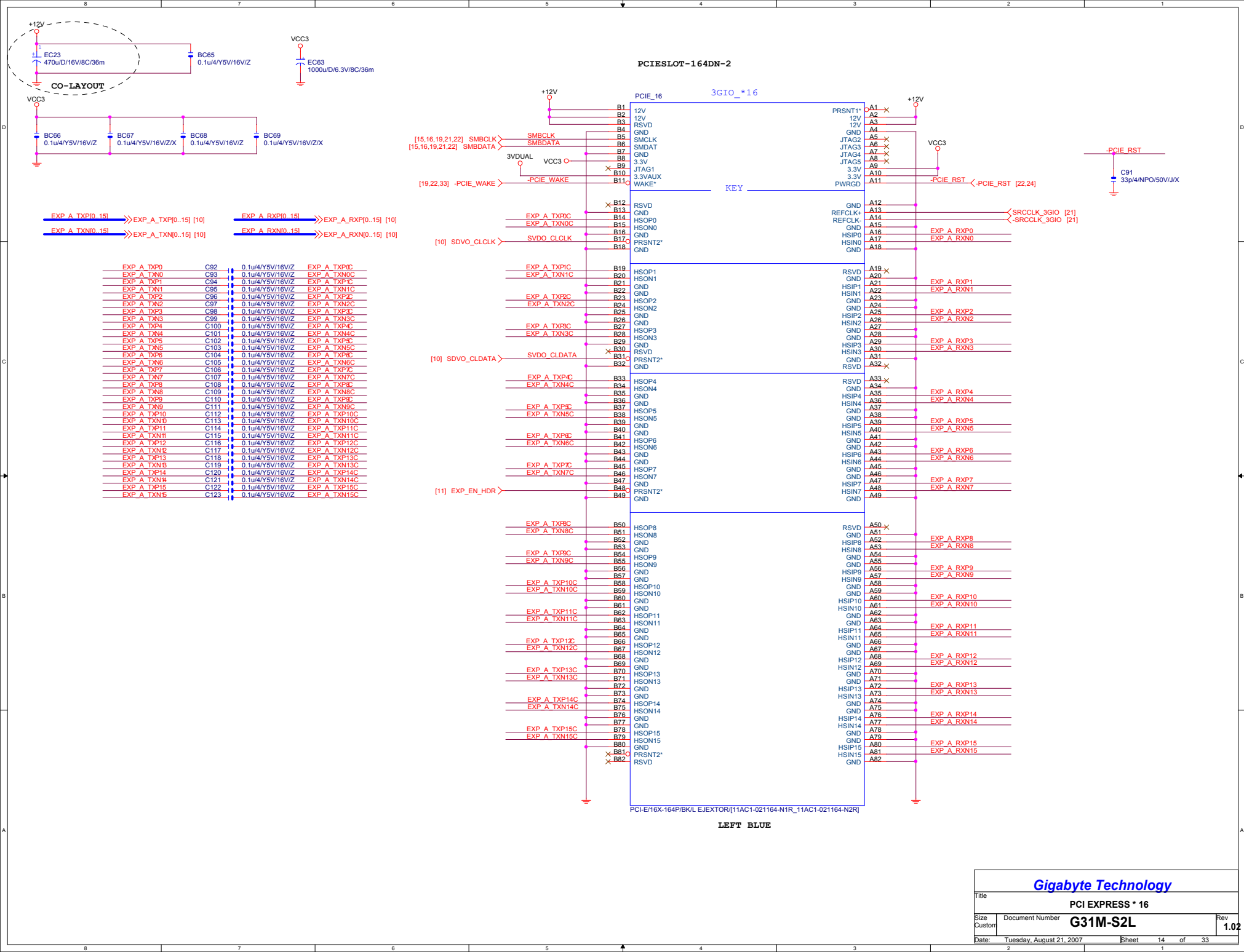


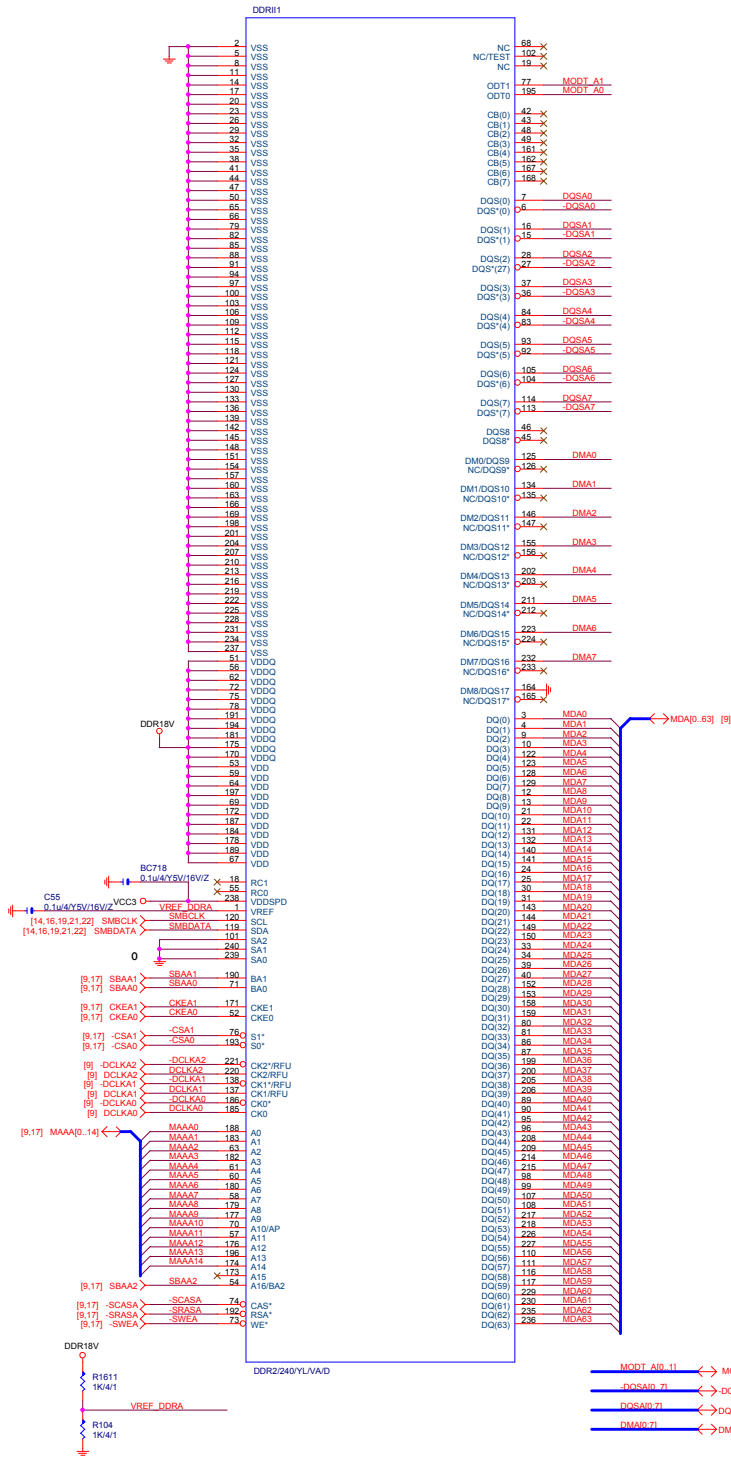
Close to MCH



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Title			
GMCH-PCI E & DMI			
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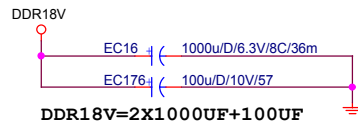
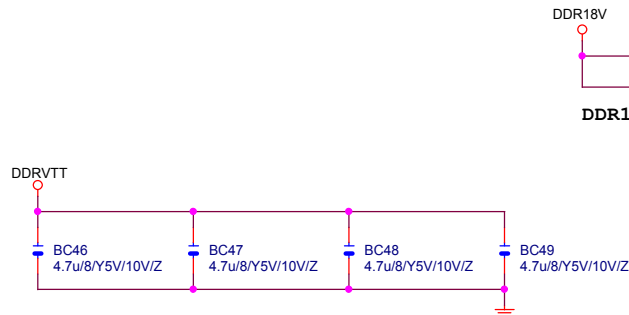




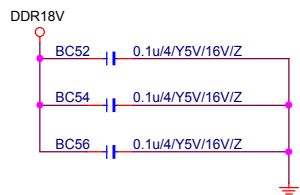


DDR TERMINATION CHANNEL A

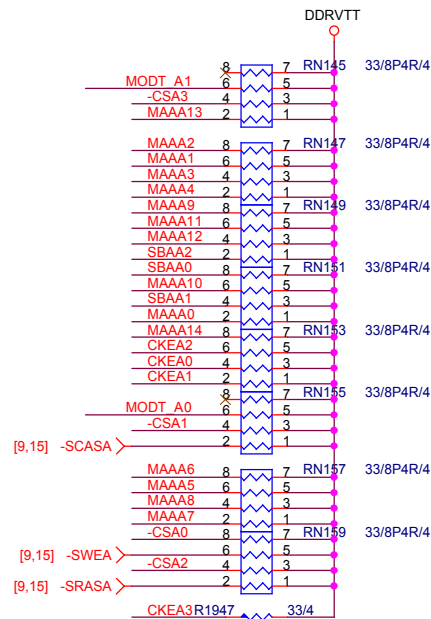
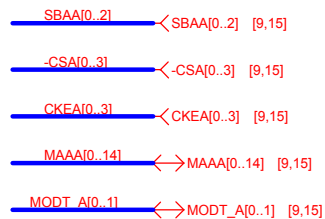
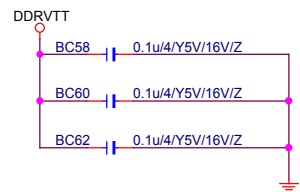
DDRVTT Decouple



DDR18V Decouple

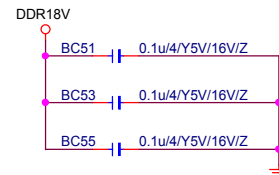


DDRVTT Decouple

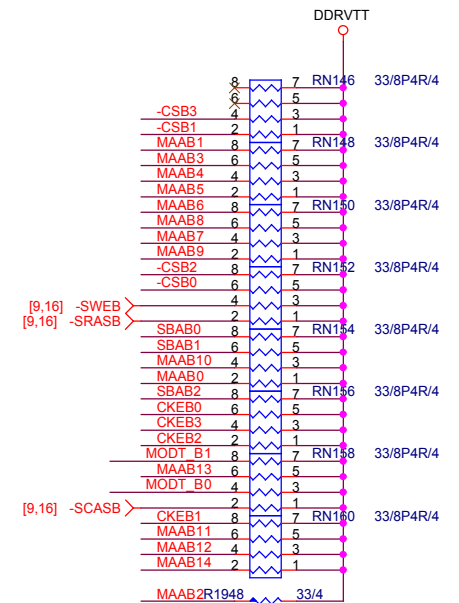
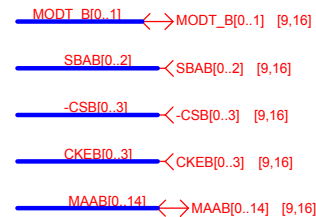
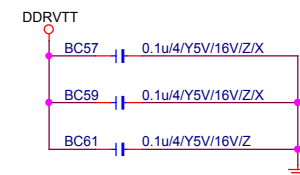


DDR TERMINATION CHANNEL B

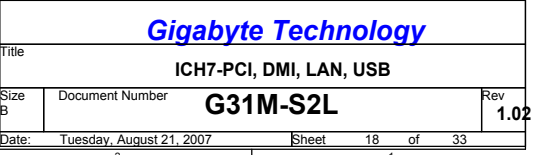
DDR18V Decouple

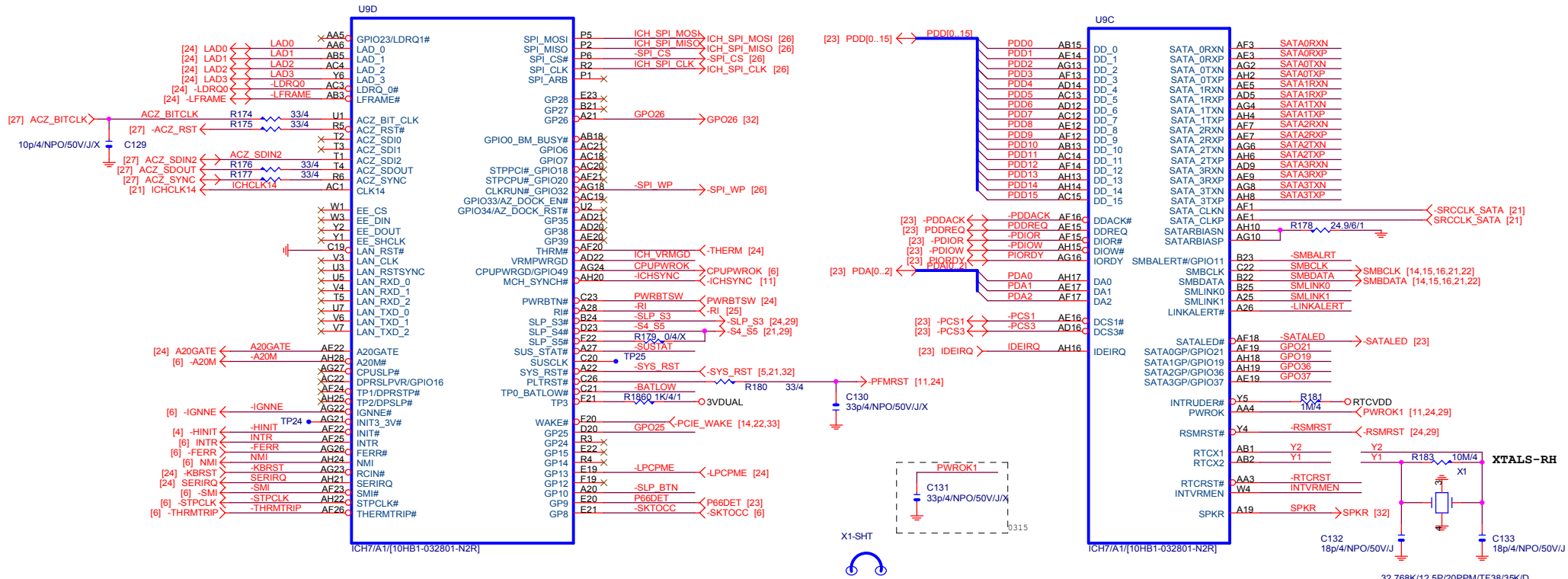


DDRVTT Decouple



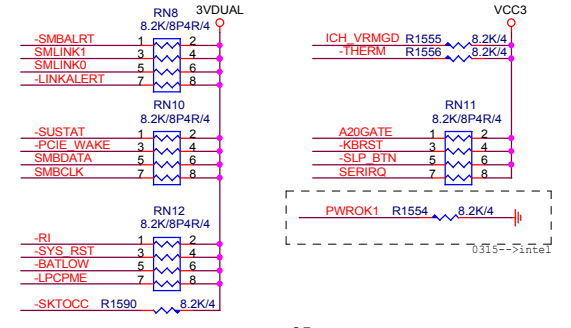
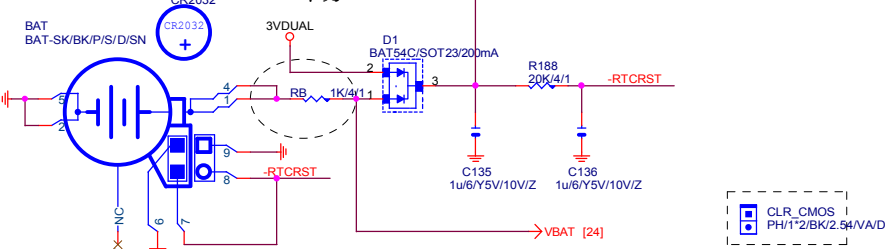
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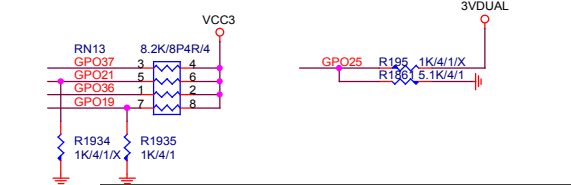


NEW TYPE: BATTERY-DUAL-4

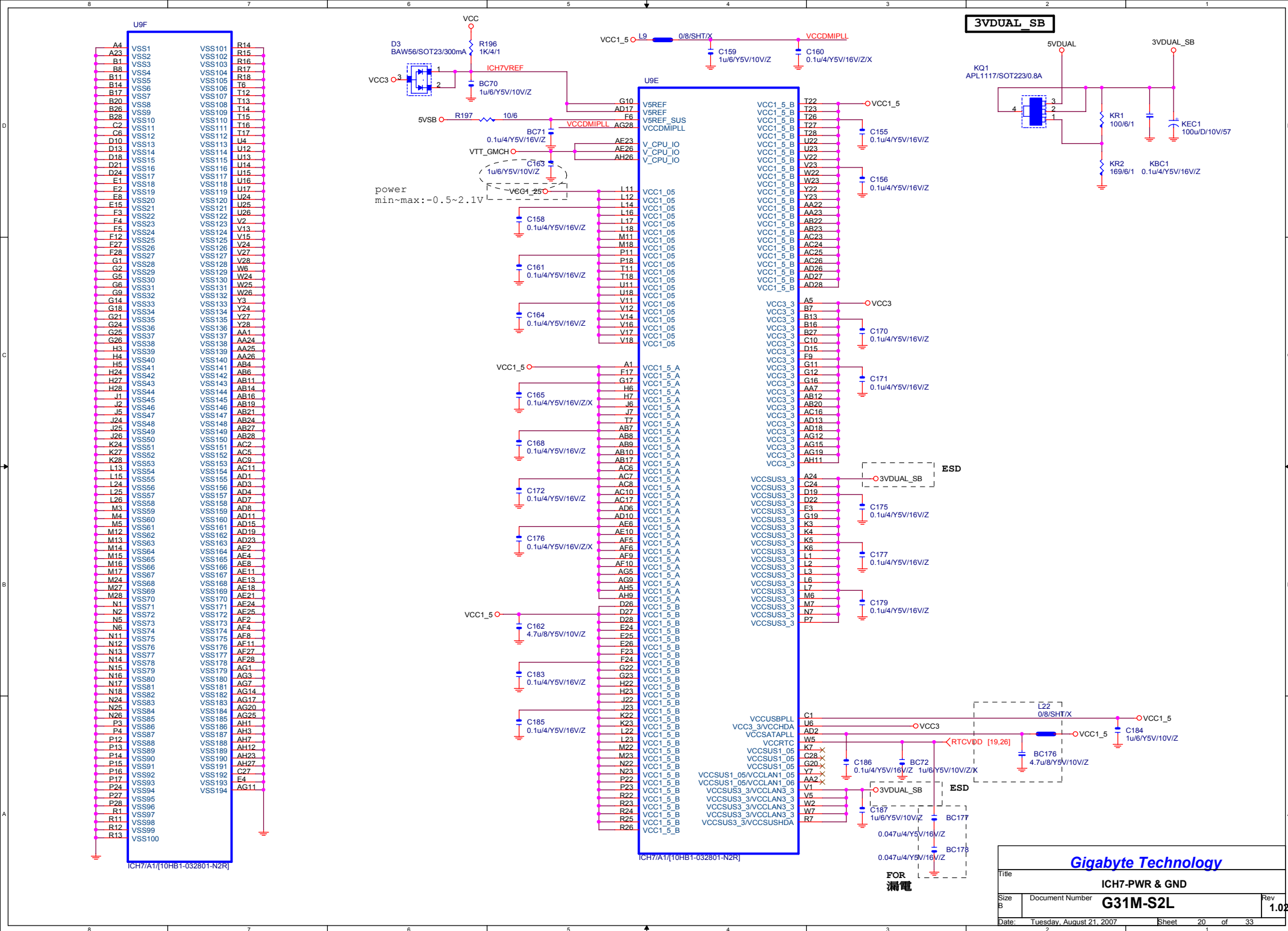
RB 不可放在 BATTERY SOCKET 下方



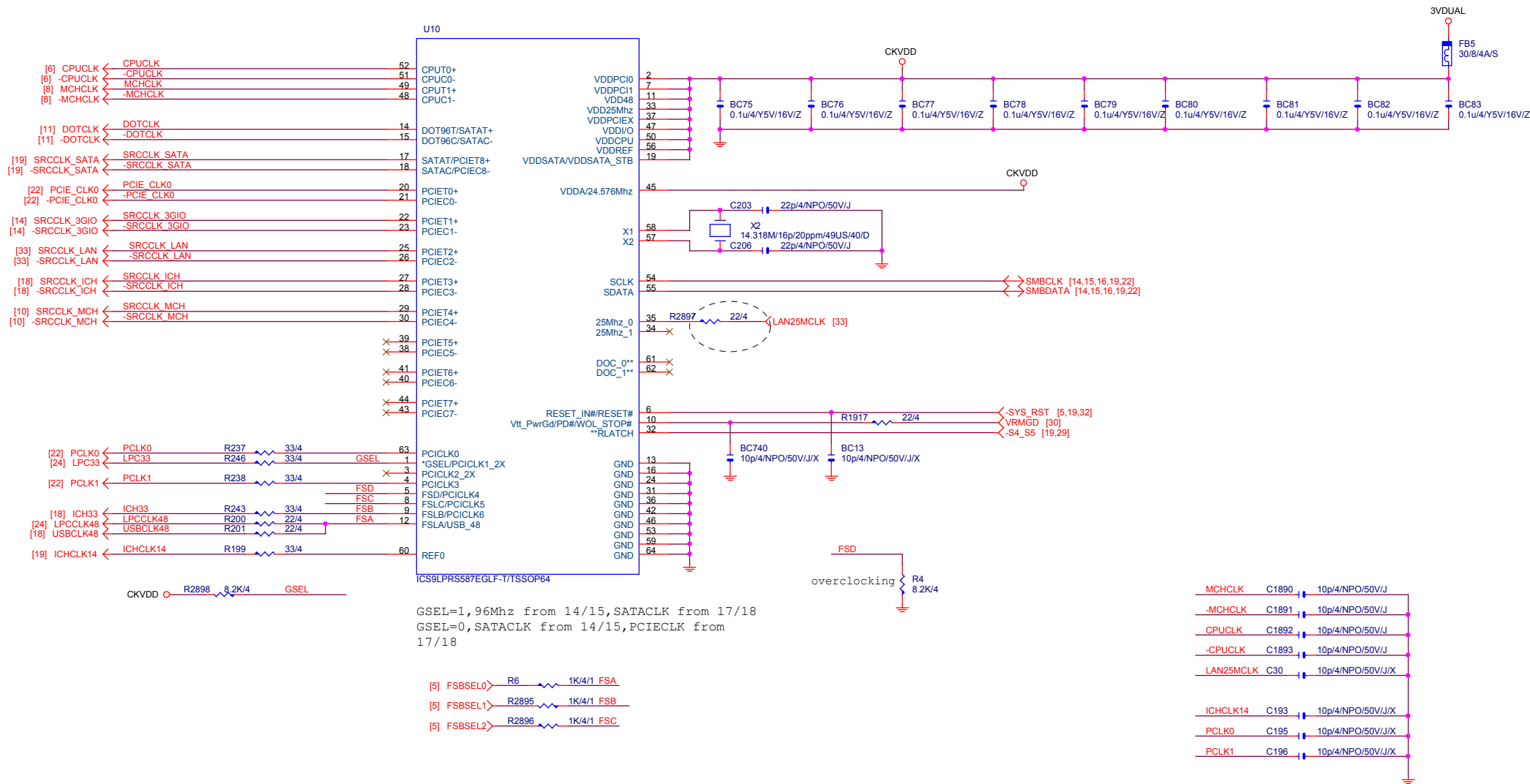
GPO25 PULL-DOWN CHECK
GPO25 (-RSMRST LATCH時不可為LOW, 否則不開機)



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ICH7-IDE, SATA, GPIO, CTRL			
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CLK GEN CK505



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CK505 CLK GEN

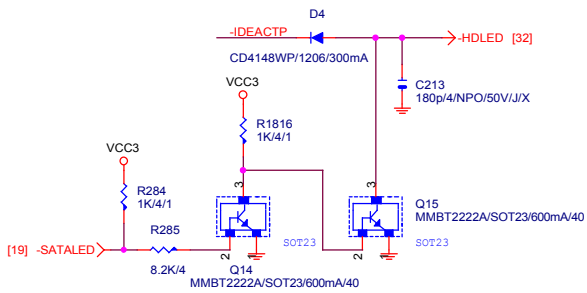
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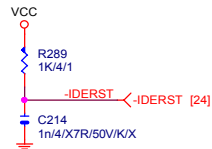
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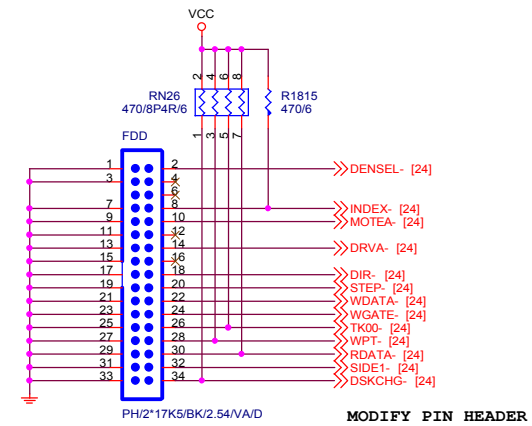
IDE/SATA LED



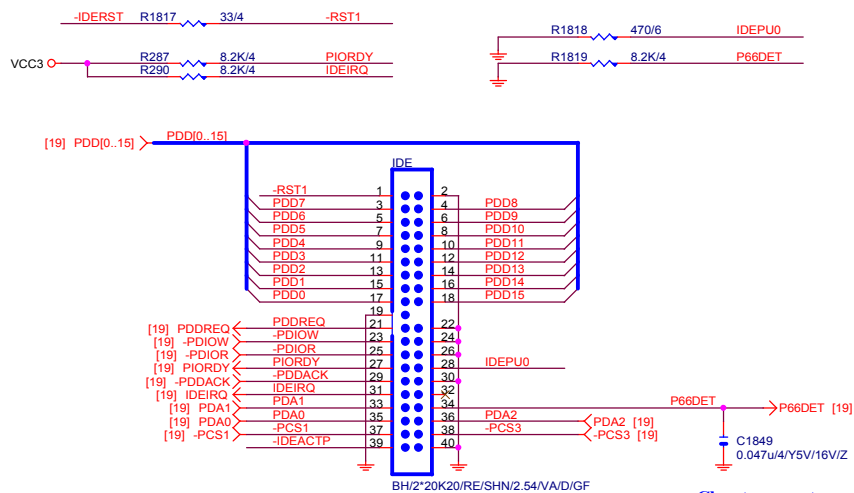
IDE RESET



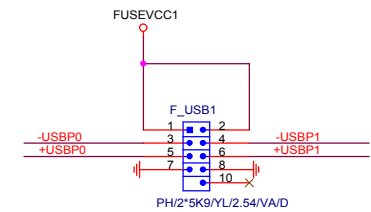
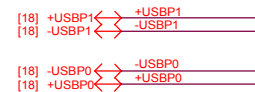
FLOPPY



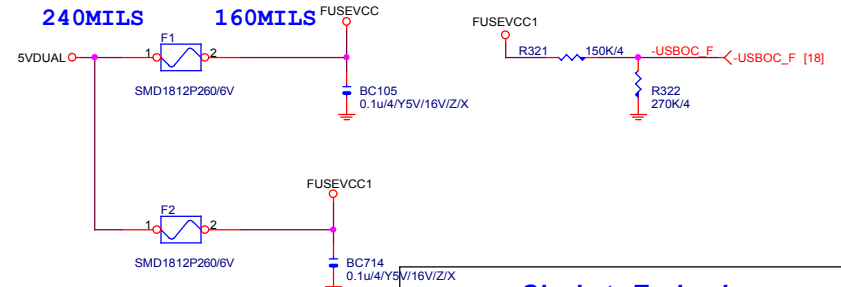
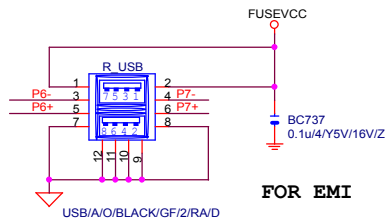
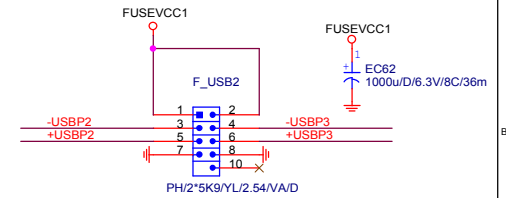
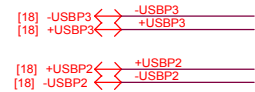
IDE



FRONT USB1



FRONT USB2



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IDE,FDD,F USB

G31M-S2L

Title	IDE,FDD,F USB	Rev	1.02
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RTS2- ==LOW CPU FAN 50%
==HIGH 100%
DEFAULT 50%

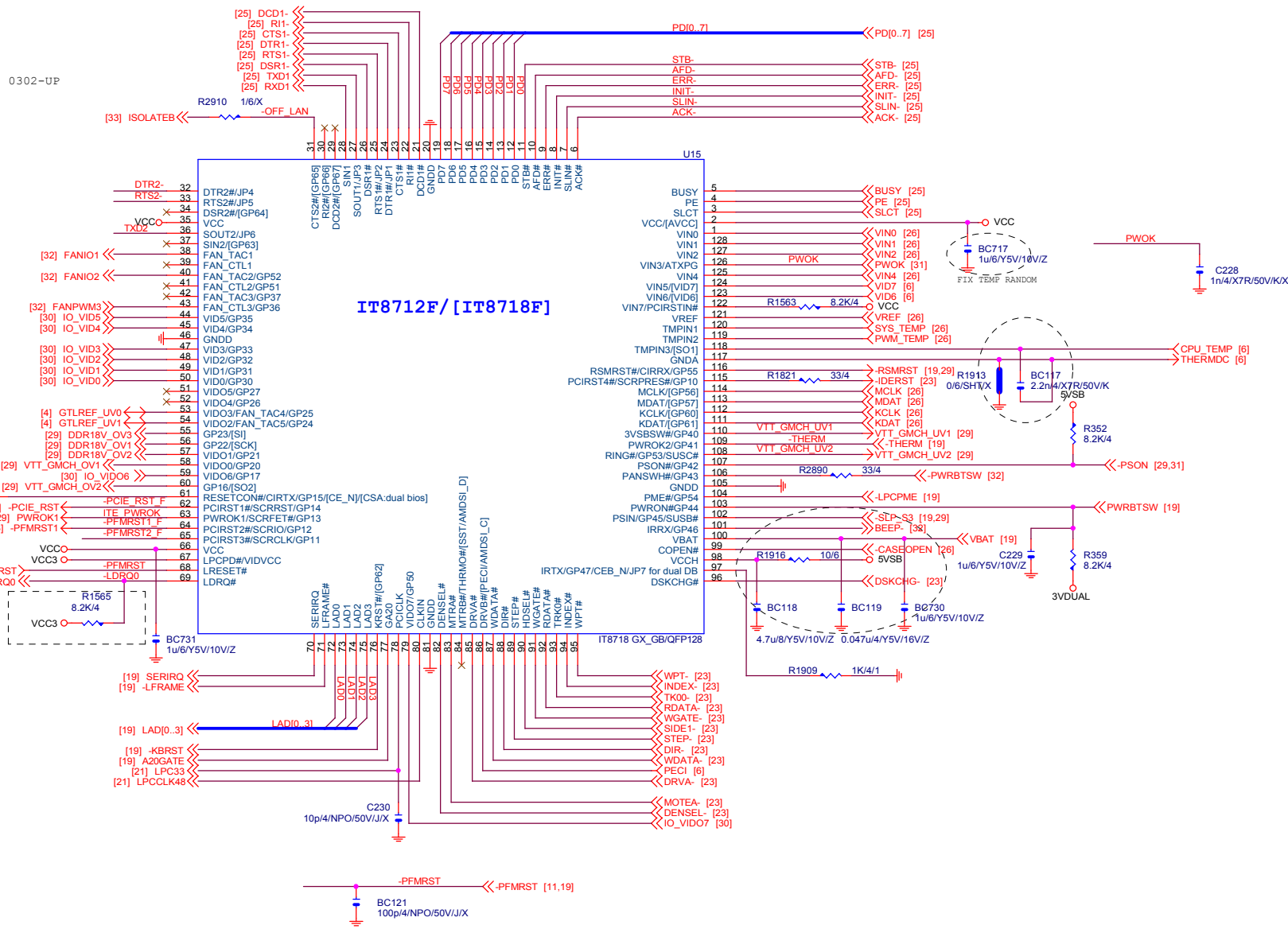
VCC
R1561 8.2K/4/X DTR2-
R1562 8.2K/4/X RTS2- 0302-UP
R1587 680/6

PUSH-PULL
R347 680/6 DTR2-
R348 680/6 TXD2

VCC3
RN140
1 1 -PFMRST2 F
2 2 -PCIE_RST F
3 3 -ITE PWROK
4 4 -PFMRST1 F
5 5 -PFMRST2 F
6 6 -PFMRST1 F
7 7 -PFMRST2 F
8 8 -PFMRST1 F
1K/8P4R/4

Dual BIOS:
GB logo :Pin 61 (GP15/CSA)
GB logo :Pin 59 (GP17/CSB)
Pin 59 Dual BIOS ,Power On Strapping:
H ==>Dual BIOS function Enable
L ==>Dual BIOS function Disable

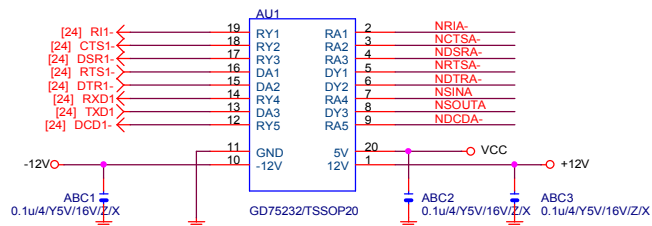
1.2V or 3.3V tolerance select.
1.2V OUTPUT 接 VTT_GMCH
3.3V OUTPUT 接3.3V
LPCPD# =VIDVCC



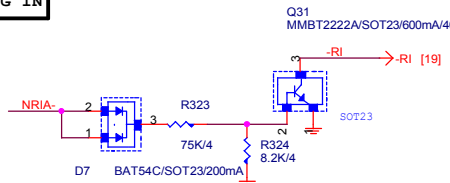
Dual BIOS:
GB logo :Pin 61 (GP15/CSA)
GB logo :Pin 59 (GP17/CSB)
Pin 59 Dual BIOS ,Power On Strapping:
H ==>Dual BIOS function Enable
L ==>Dual BIOS function Disable

1.2V or 3.3V tolerance select.
1.2V OUTPUT 接 VTT_GMCH
3.3V OUTPUT 接3.3V
LPCPD# =VIDVCC

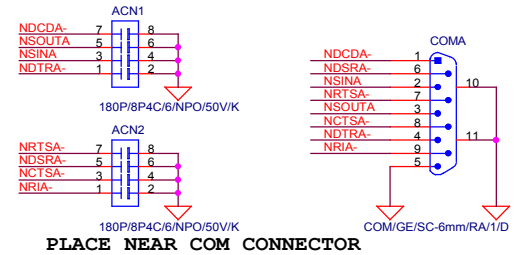
COMA



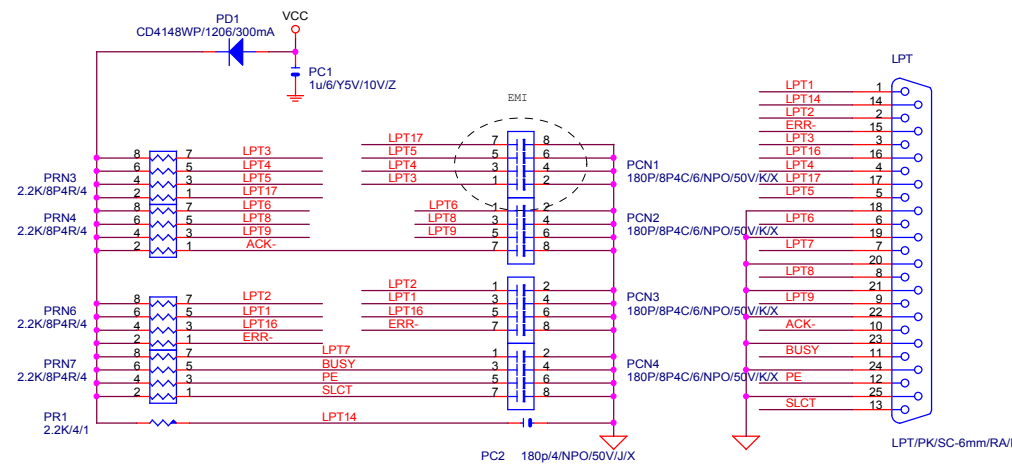
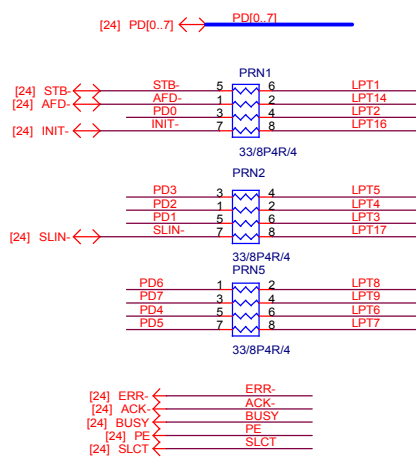
RING IN



EXTERNAL COMA



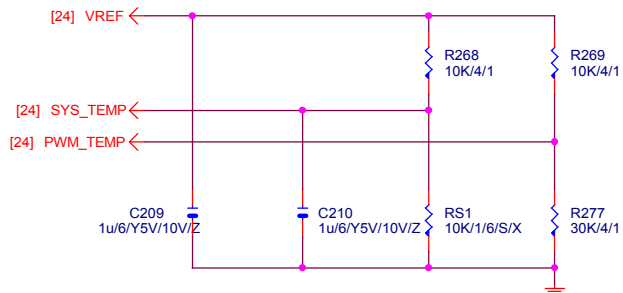
LPT PORT



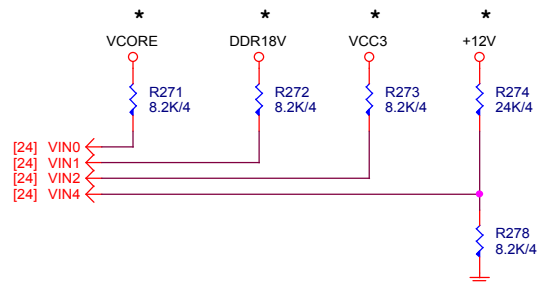
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COM & LPT PORT			
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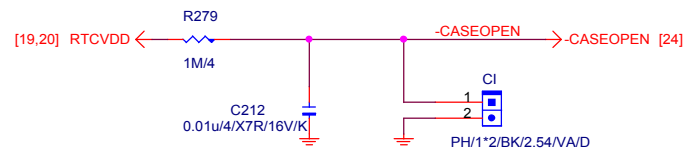
TEMP H/W MONITOR



VOLTAGE-- H/W MONITOR

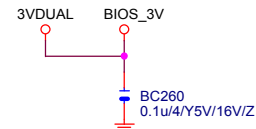


CASE OPEN

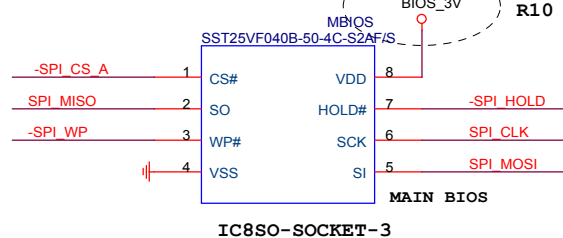
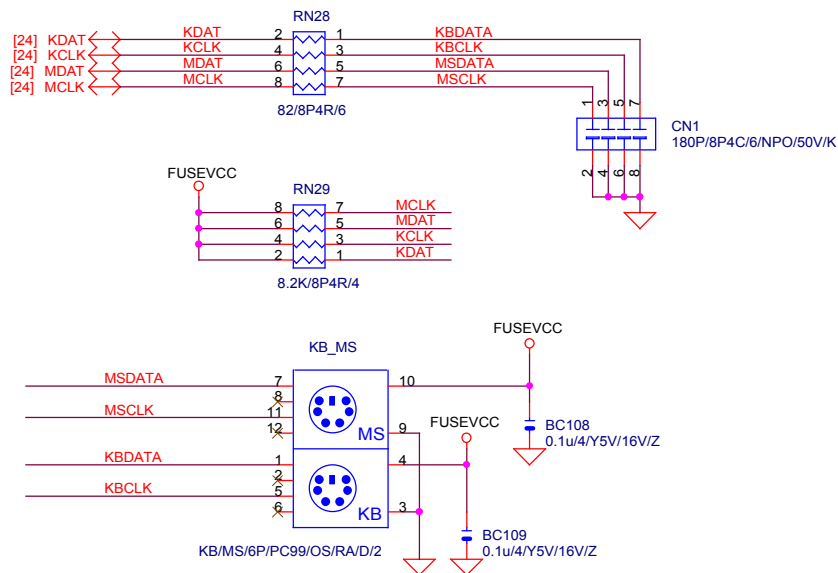


Case Open Circuits

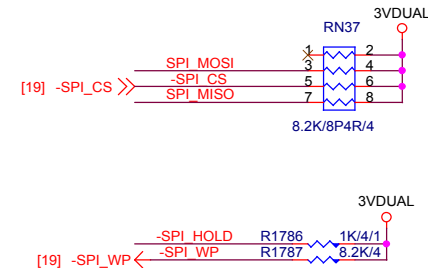
DUAL BIOS



KB/MS

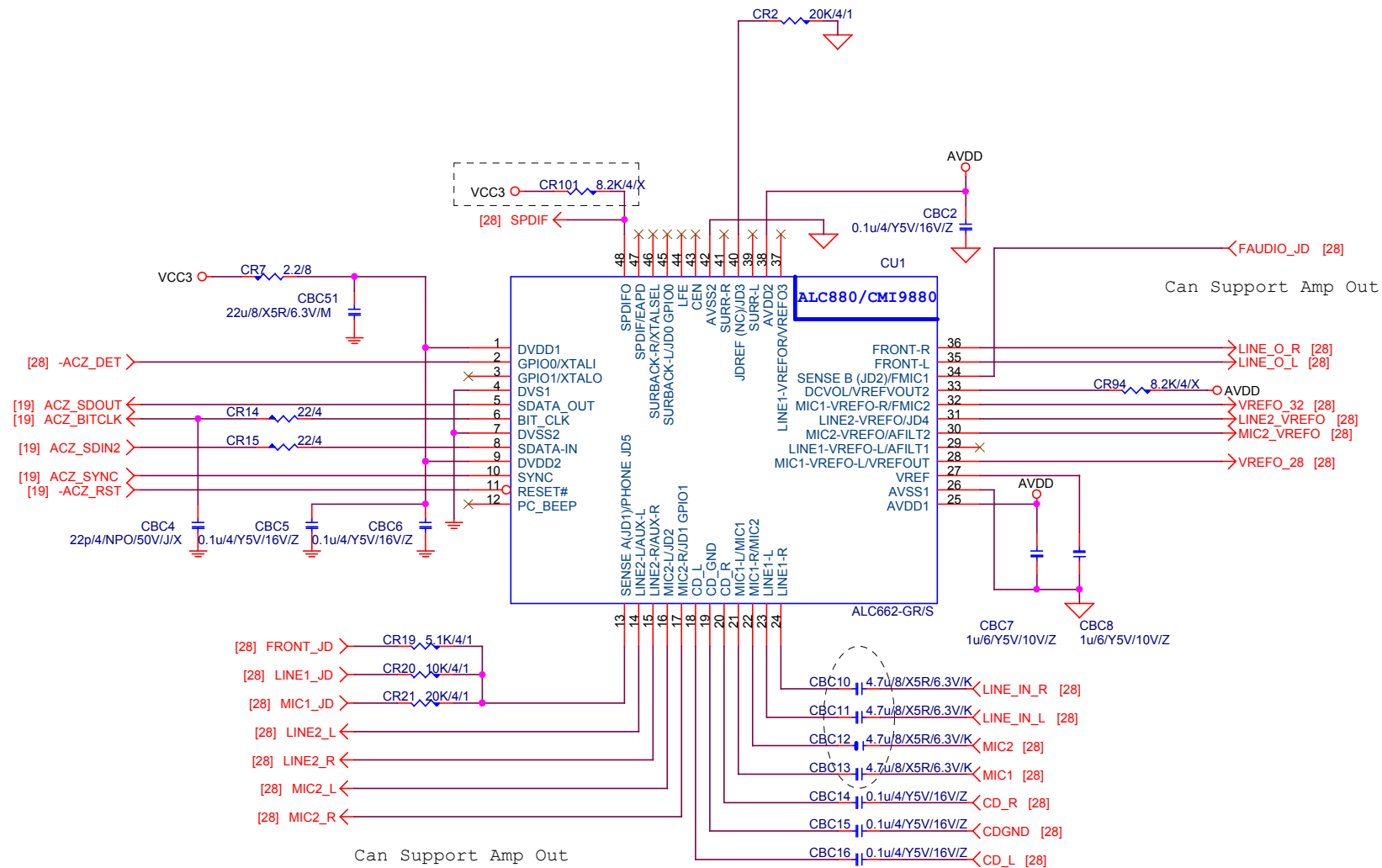


FOR ICH BIOS



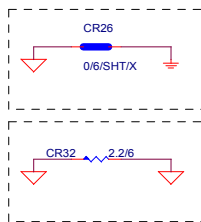
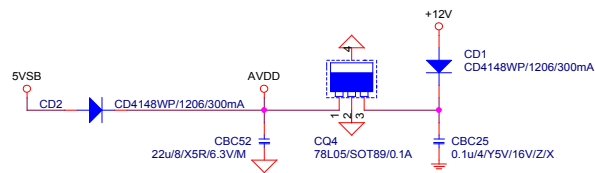
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Title			
HW-MONITOR/CI/KB/MS/BIOS			
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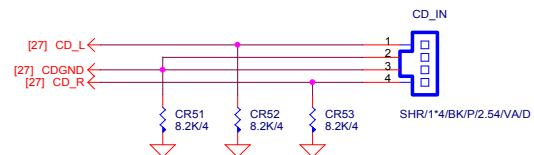
**Gigabyte Technology**

Title			AZALIA ALC662		
Size Custom			Document Number		
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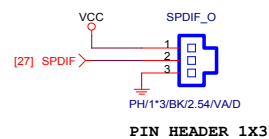
CODEC POWER/EMI PAD



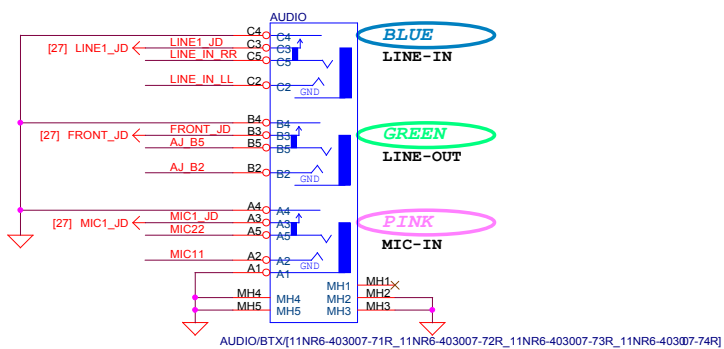
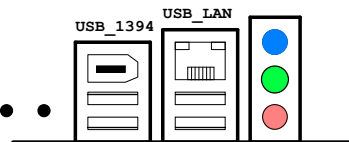
CD IN



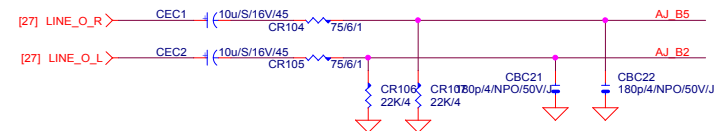
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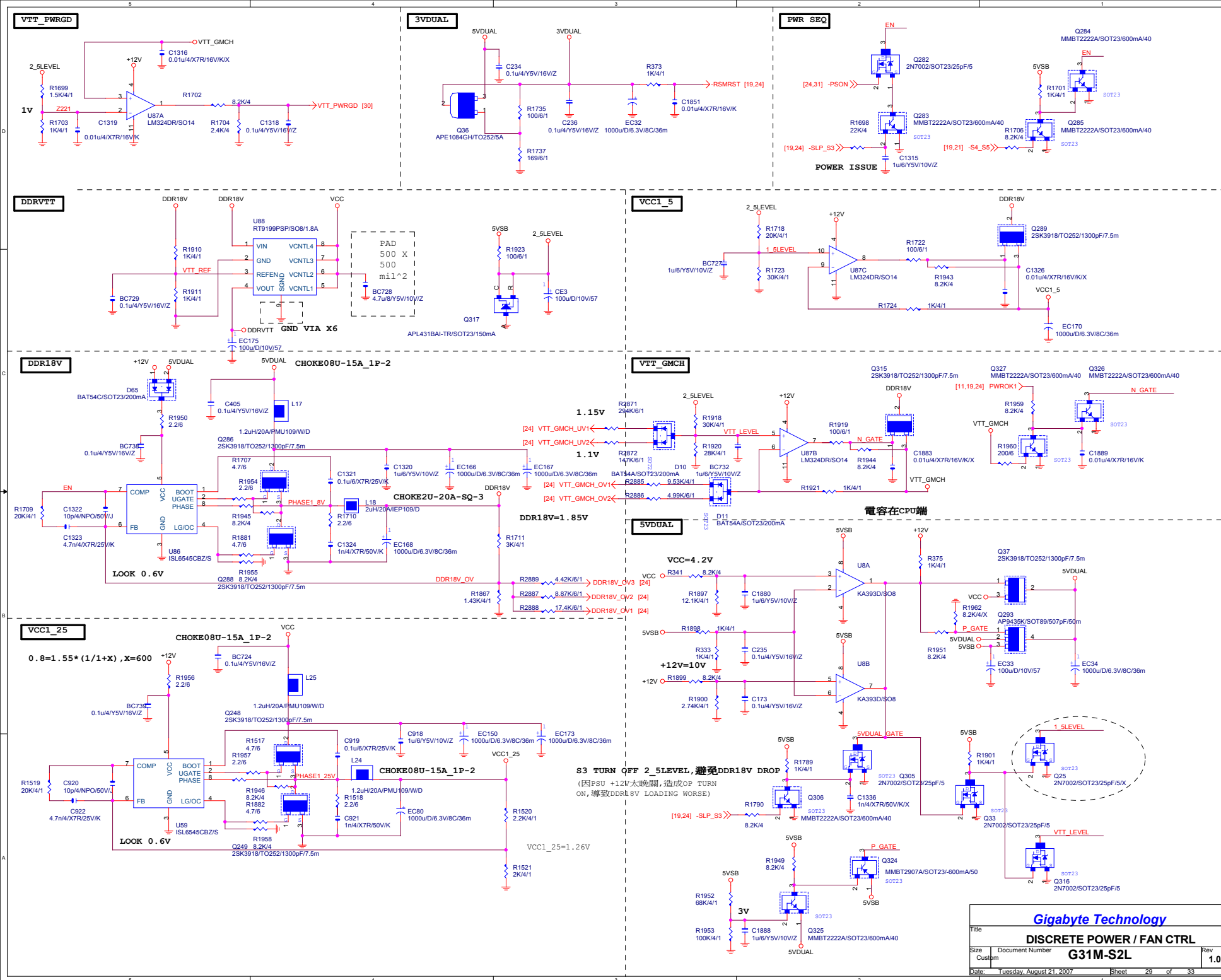


AZALIA JACK

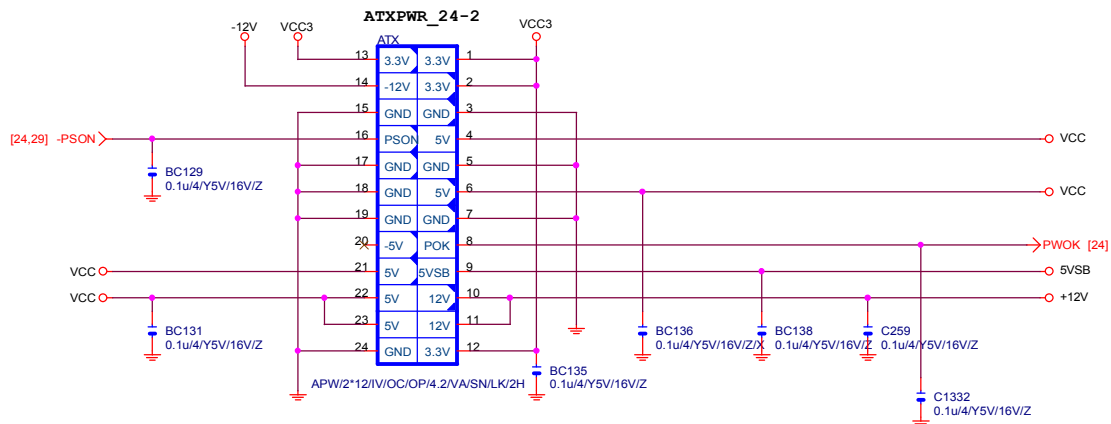


LINE-OUT

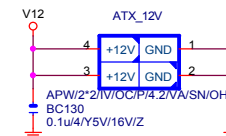
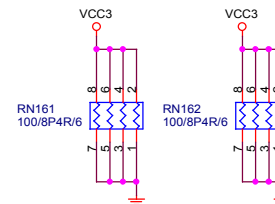




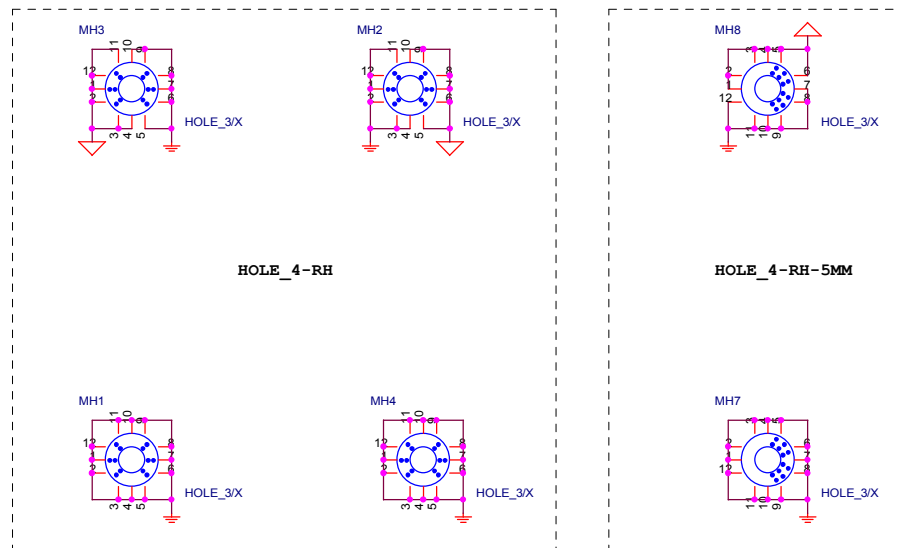
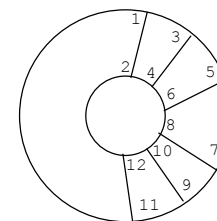
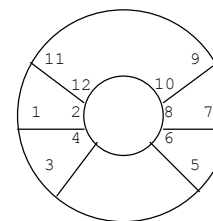
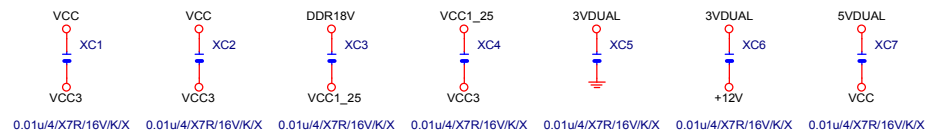
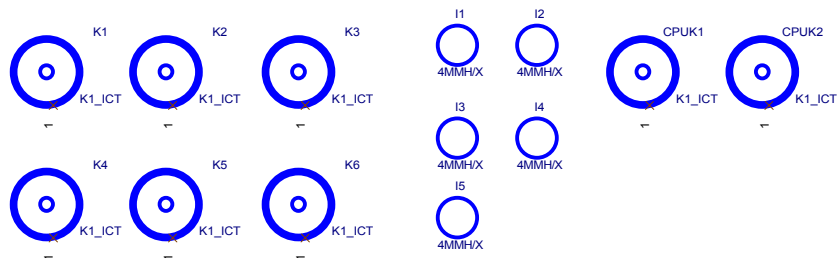
ATX POWER CONNECTOR



FIX PWR AcBel (ATX-400C-A2ADB)



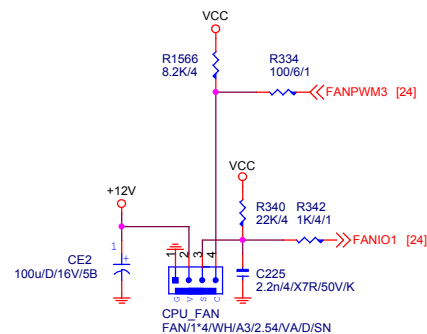
ATX_4-1



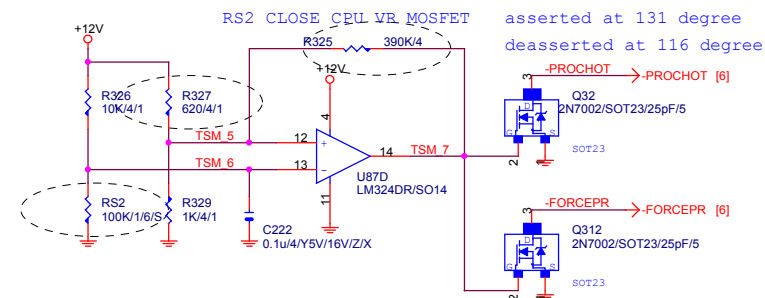
Gigabyte Technology

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ATX POWER CONNECTOR					
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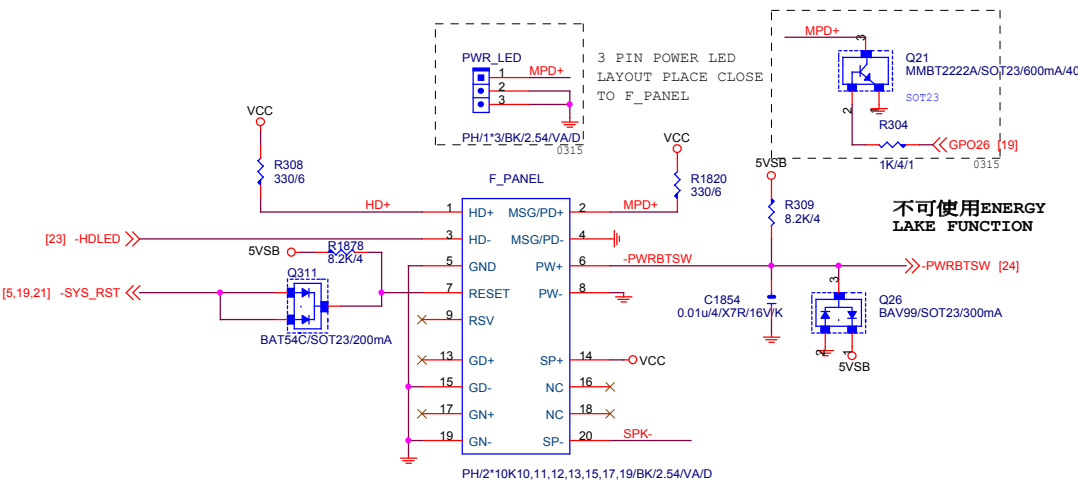
CPU SMART FAN SMART FAN



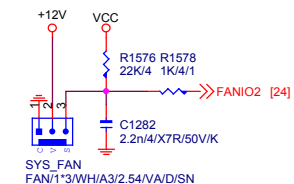
PROCESSOR HOT



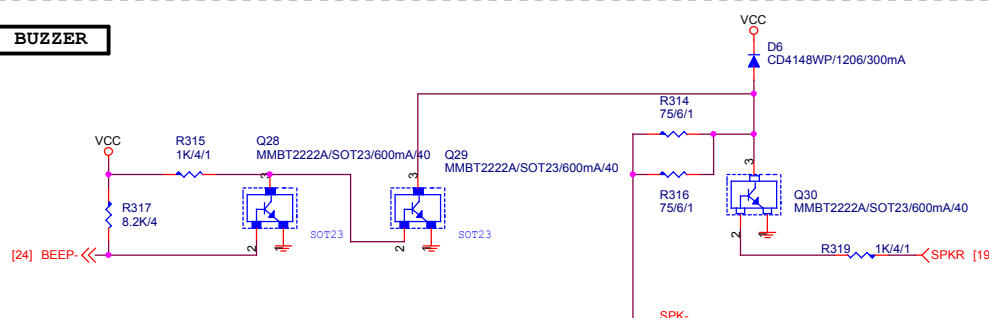
INTEL FRONT PANEL



SYS_FAN



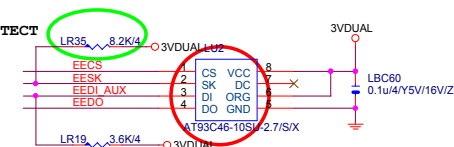
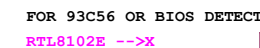
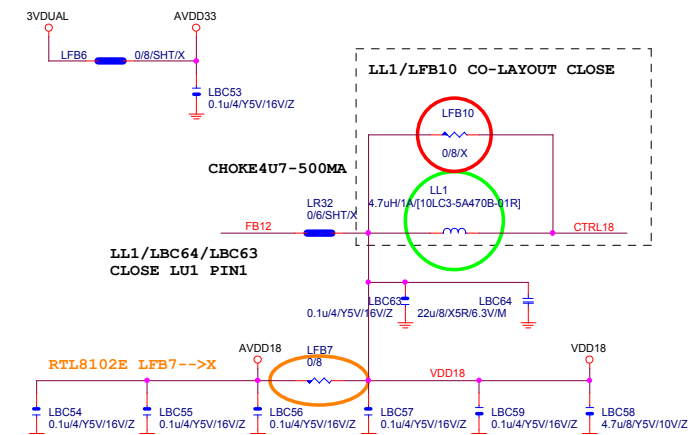
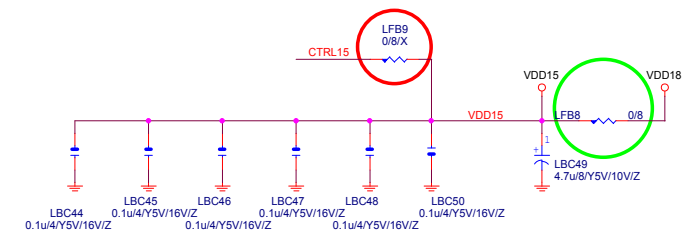
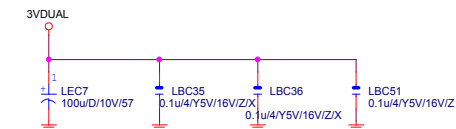
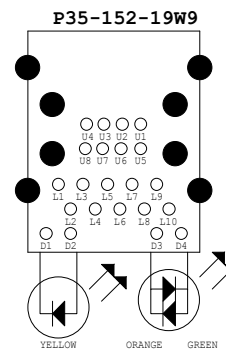
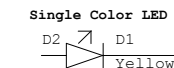
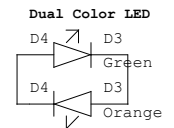
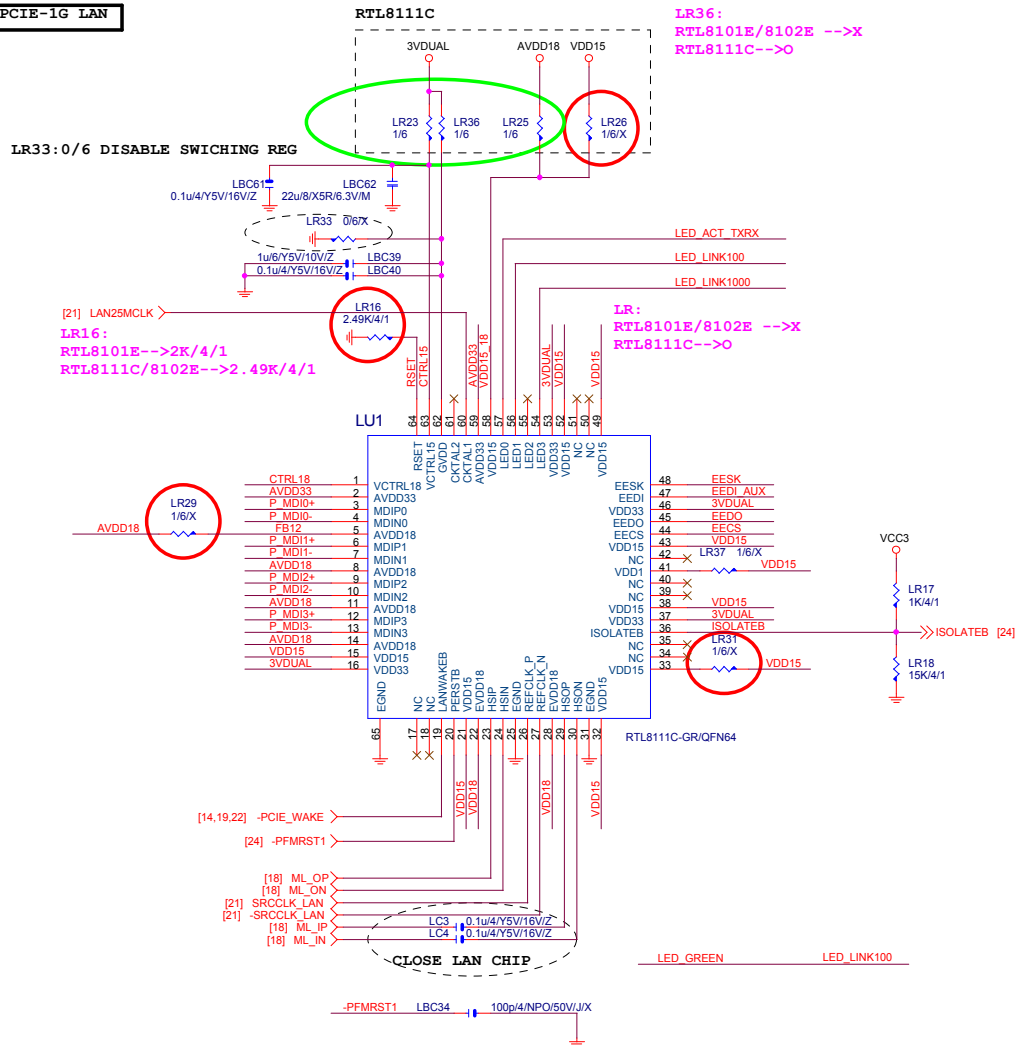
BUZZER



Gigabyte Technology

Title		
FRONT PANEL		
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PCIE-1G LAN



USB LAN CONNECTOR

```
RTL8101E:LR38/LC5/LR43/LC6-->O
RTL8102E:LC5/LC6-->O
RTL8111C:LC6-->O
```

```
RTL8101E :L1+L10-->AVDD18+0.1U(BIOS DISABLE MDI-X FUNCTION)
```

```
1G   :USB+LAN/1G/GO,Y/OS/RA/D/1
100M:USB+LAN/100/GO,Y/OS/RA/D/
```

