

Model Name:GA-P41T-ES3G Revision 1.0

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 |

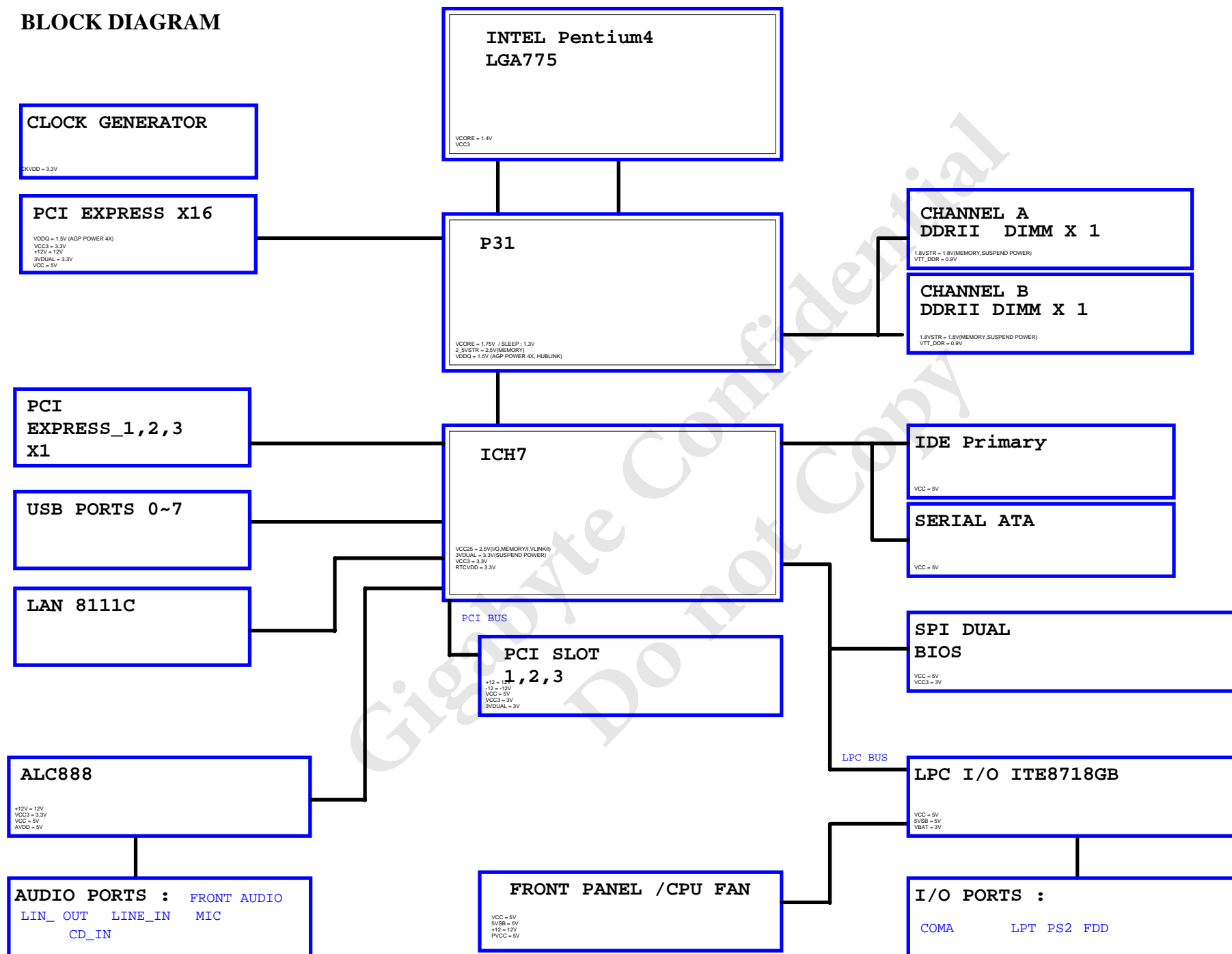
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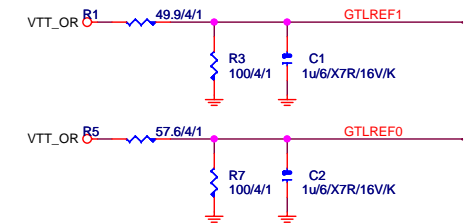
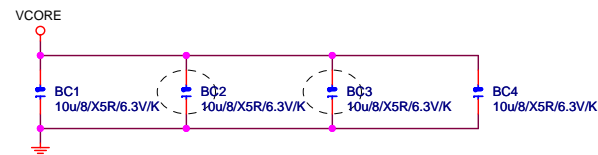
| | |
|----|--------------------|
| 28 | REAR AUDIO JACK |
| 29 | DISCRETE POWER |
| 30 | VCORE PWM_ISL6312 |
| 31 | ATX, OTHERS POWER |
| 32 | FRONT PANEL |
| 33 | REALTEK RTL8111D |
| 34 | PCI SLOT3,PCIE*2,3 |

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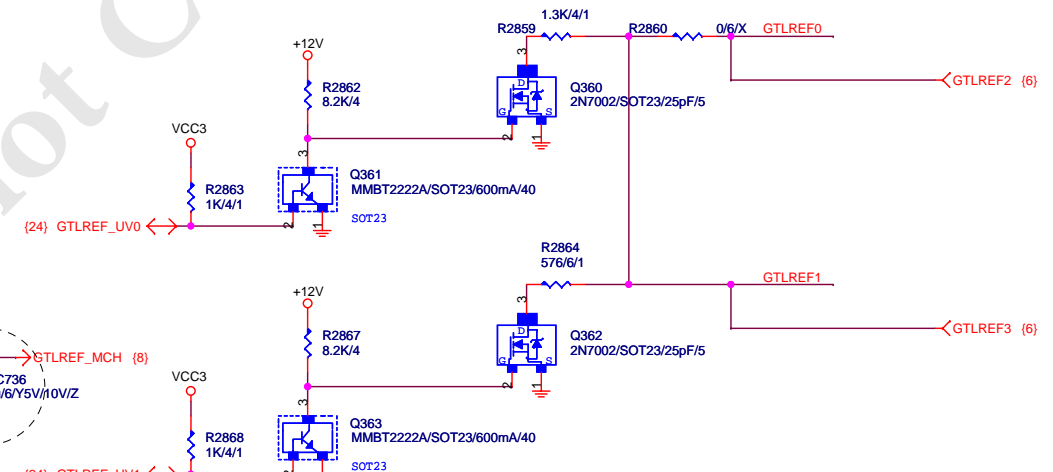
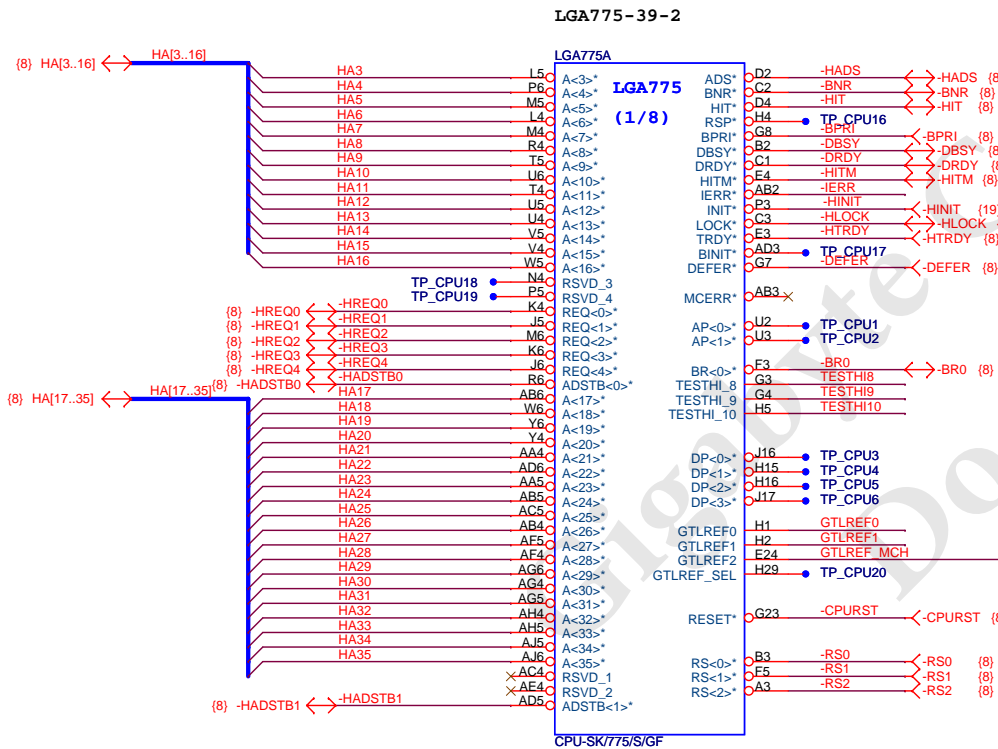
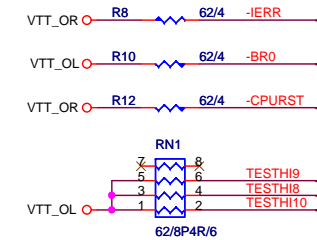
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| Title | | | |
| Cover Sheet | | | |
| Size | Document Number | Rev | |
| Custom | GA-P41T-ES3G | 1.0 | |
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BLOCK DIAGRAM





中間値0.9V

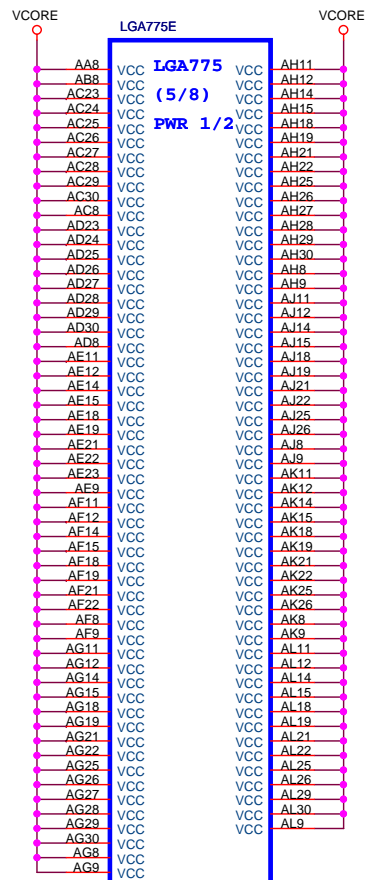




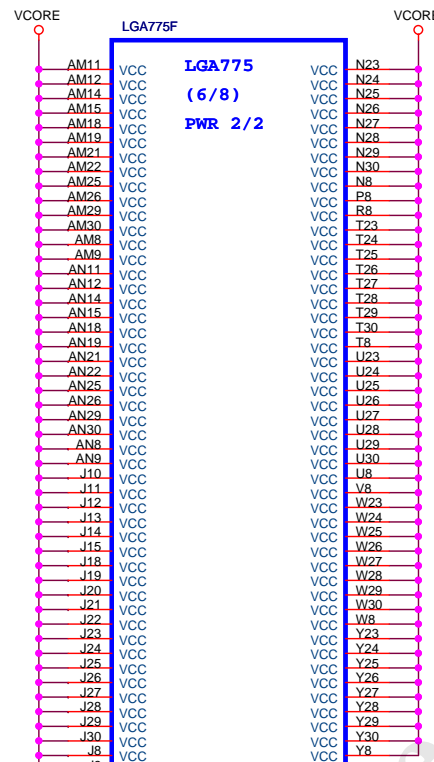
CHECK BSEL0/1-ITE8712 POWER ON 時電壓是否會高於1.2V

| | | | |
|-----------------------------------|---------------------------|---------------------|----------------|
| <i>Gigabyte Technology</i> | | | |
| Title P4_LGA775-B,D | | | |
| Size Custom | Document Number | GA-P41T-ES3G | Rev 1.0 |
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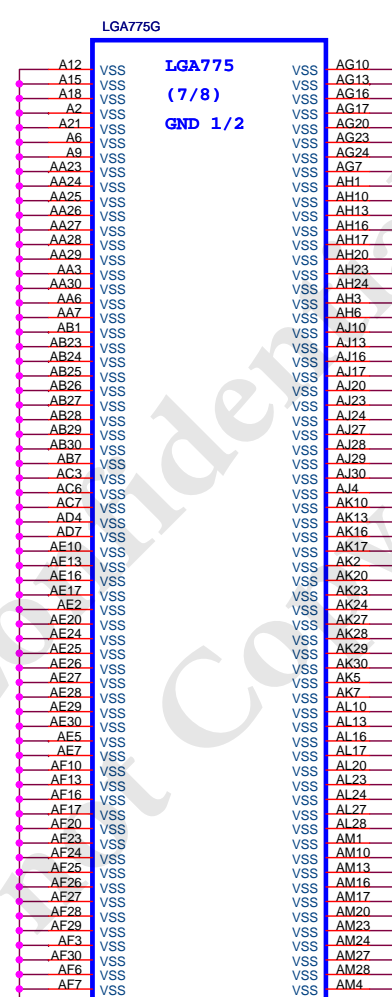
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| Size B | Document Number GA-P41T-ES3G | Rev 1.0 |
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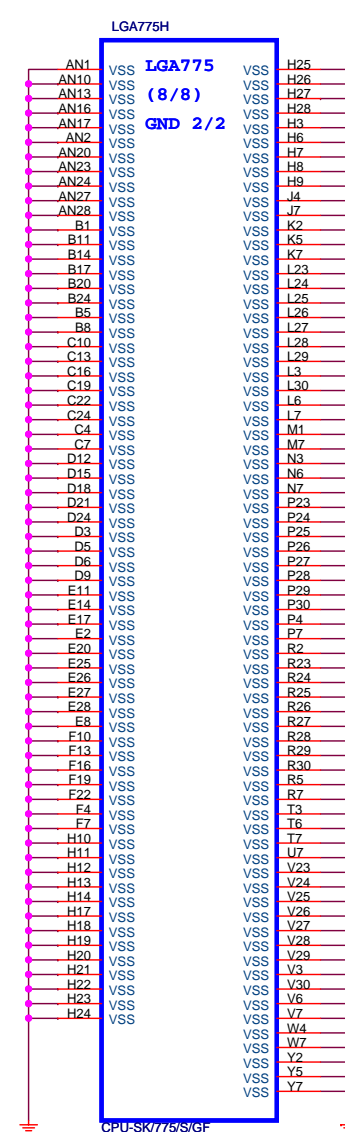
CPU-SK/775/S/GF



CPU-SK/775/S/GF



CPU-SK/775/S/GF



CPU-SK/775/S/GF

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|-------|---------------------------|--------------|-------------------|-------|
| Title | | | P4_LGA775-E,F,G,H | |
| Size | Document Number | GA-P41T-ES3G | | Rev |
| B | | | | 1.0 |
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Note

tracer min 10/10 or (10/5
breakout), L1<3"

tracer 10/7 or
5/5(breakout)

MCHC

MAAA1 B0C41
MAAA2 B0C35
MAAA3 B0C32
MAAA4 B0C32
MAAA5 B0B31
MAAA6 B0A31
MAAA7 B0A31
MAAA8 B0D31
MAAA9 B0D31
MAAA10 B0A31
MAAA11 B0C30
MAAA12 B0B30
MAAA13 B0A31
MAAA14 B0D28

(15) -SCASA -SCASA
(15) -SRASA -SRASA

(15) SBAA0 -SBAA0
(15) SBAA1 -SBAA1
(15) SBAA2 -SBAA2

(15) -CSA0 -CSA0
(15) -CSB0 -CSB0
(15) -CSA1 -CSA1
(15) -CSB1 -CSB1

(15) CKEA0 -CKEA0
(15) CKEA1 -CKEA1

(16) MODT_A0 -MODT_A0
(16) MODT_A1 -MODT_A1

(15) DCLKA0 -DCLKA0
(15) DCLKA1 -DCLKA1
(15) DCLKA2 -DCLKA2

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DDR_A

6.5/5/6.5 Length max=5.0"

MCH die to DIMM0/1 pin =6" max
FOR channel A

DDR_B

6.5/5/6.5 Length max=5.0"

MCH die to DIMM2/3 pin =7" max
FOR channel B

MCHD

MAAB0 B0D24
MAAB1 B0B23
MAAB2 B0B23
MAAB3 B0B23
MAAB4 B0B23
MAAB5 B0D22
MAAB6 B0D22
MAAB7 B0D22
MAAB8 B0D22
MAAB9 B0D22
MAAB10 B0D22
MAAB11 B0D22
MAAB12 B0D22
MAAB13 B0D22
MAAB14 B0D22

(16) -SWEB -SWEB
(16) -SCASB -SCASB
(16) -SRASB -SRASB

(16) SBAB0 -SBAB0
(16) SBAB1 -SBAB1
(16) SBAB2 -SBAB2

(16) -CSB0 -CSB0
(16) -CSB1 -CSB1

(16) CKEB0 -CKEB0
(16) CKEB1 -CKEB1

(16) MODT_B0 -MODT_B0
(16) MODT_B1 -MODT_B1

(16) DCLKB0 -DCLKB0
(16) DCLKB1 -DCLKB1
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(16) DCLKB2 -DCLKB2

AWA8 DQSB0
AWA9 DQSB0
AWA6 DQSB0
AWA7 DQSB0
AWA4 DQSB0
AWA5 DQSB0
AWA3 DQSB0
AWA2 DQSB0
AWA1 DQSB0
AWA0 DQSB0
AWA9 DQSB0
AWA8 DQSB0
AWA7 DQSB0
AWA6 DQSB0
AWA5 DQSB0
AWA4 DQSB0
AWA3 DQSB0
AWA2 DQSB0
AWA1 DQSB0
AWA0 DQSB0

(16) -SWEB -SWEB
(16) -SCASB -SCASB
(16) -SRASB -SRASB

(16) SBAB0 -SBAB0
(16) SBAB1 -SBAB1
(16) SBAB2 -SBAB2

(16) -CSB0 -CSB0
(16) -CSB1 -CSB1

(16) CKEB0 -CKEB0
(16) CKEB1 -CKEB1

(16) MODT_B0 -MODT_B0
(16) MODT_B1 -MODT_B1

(16) DCLKB0 -DCLKB0
(16) DCLKB1 -DCLKB1
(16) DCLKB2 -DCLKB2

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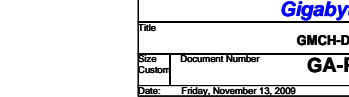
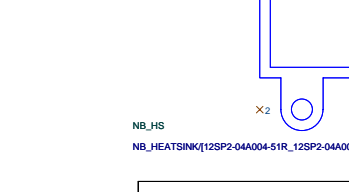
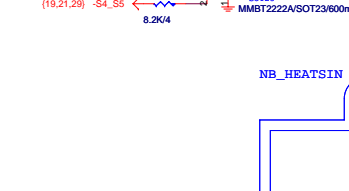
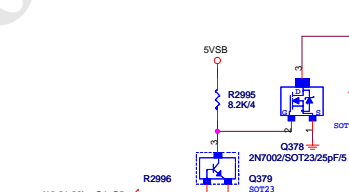
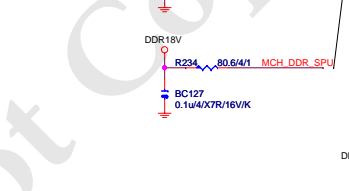
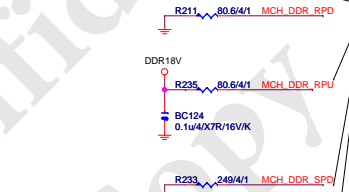
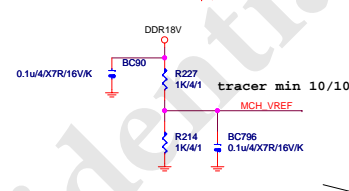
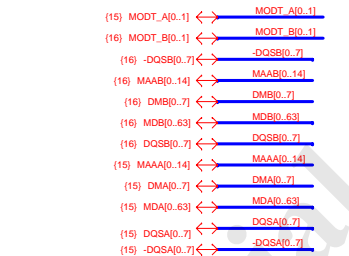
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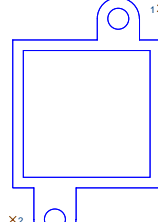
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NB_HEATSIN



NB_HS

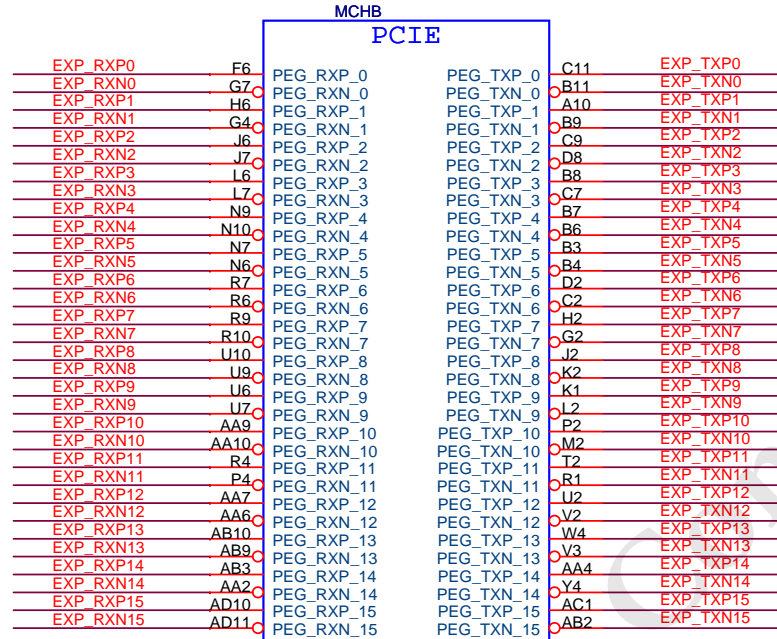
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|--------|---------------------------|---------------|
| Title | | GMCH-DDRII |
| Size | Document Number | GA-P41T-ES3G |
| Custom | | Rev 1.0 |
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PCIEX16:16/5/5/5/16(breakout min 8/4/5/4/8)

Impedance=85 +- 17.5%

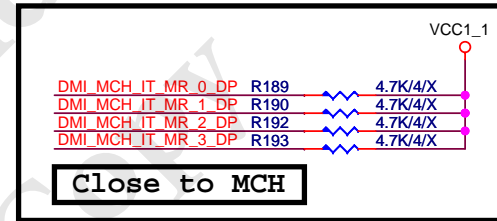
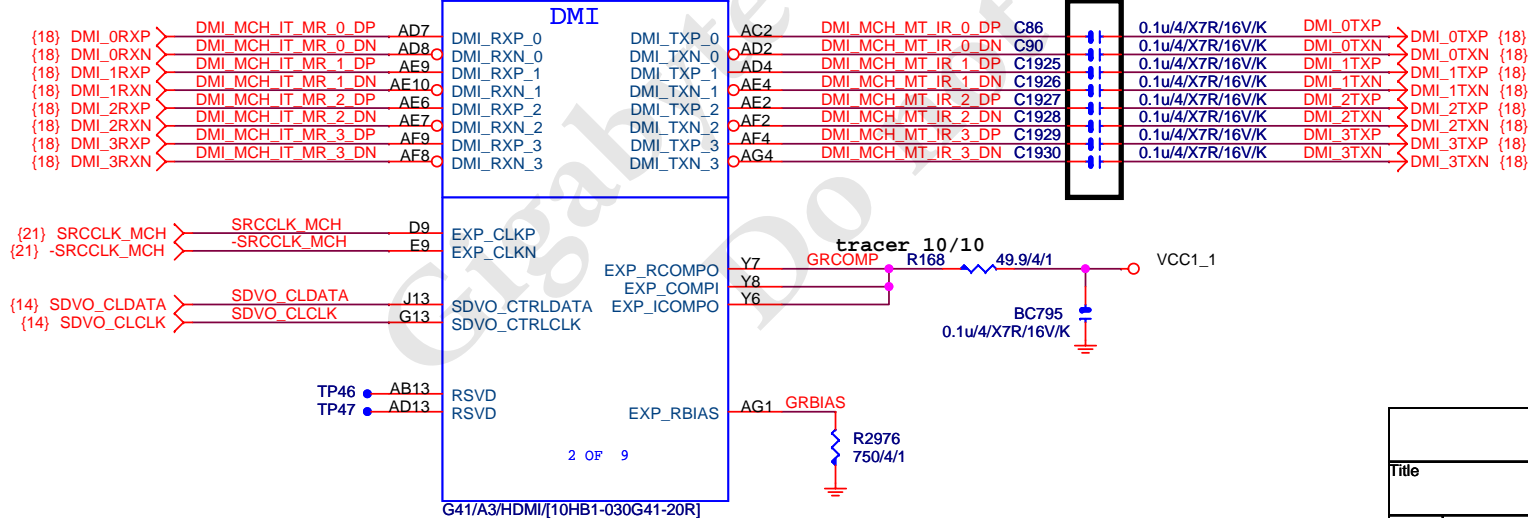


EXP_TXP[0..15] >> EXP_TXP[0..15] {14}

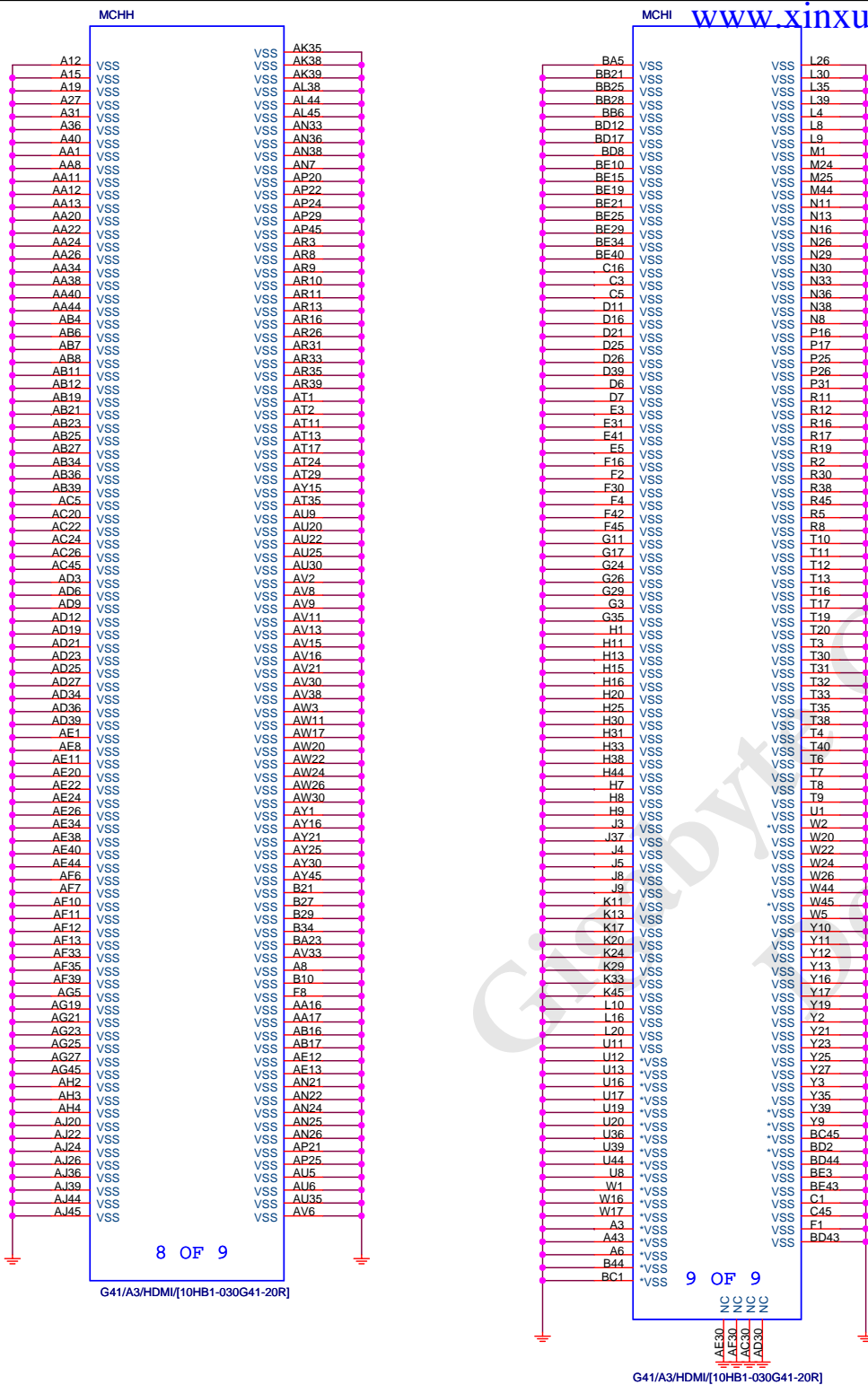
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EXP_RXP[0..15] >> EXP_RXP[0..15] {14}

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

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

| | | | |
|------------------|---------------------------|--------------|---------|
| Title | | | |
| GMCH-PCI E & DMI | | | |
| Size | Document Number | GA-P41T-ES3G | |
| Custom | | | Rev 1.0 |
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GMCH-GND

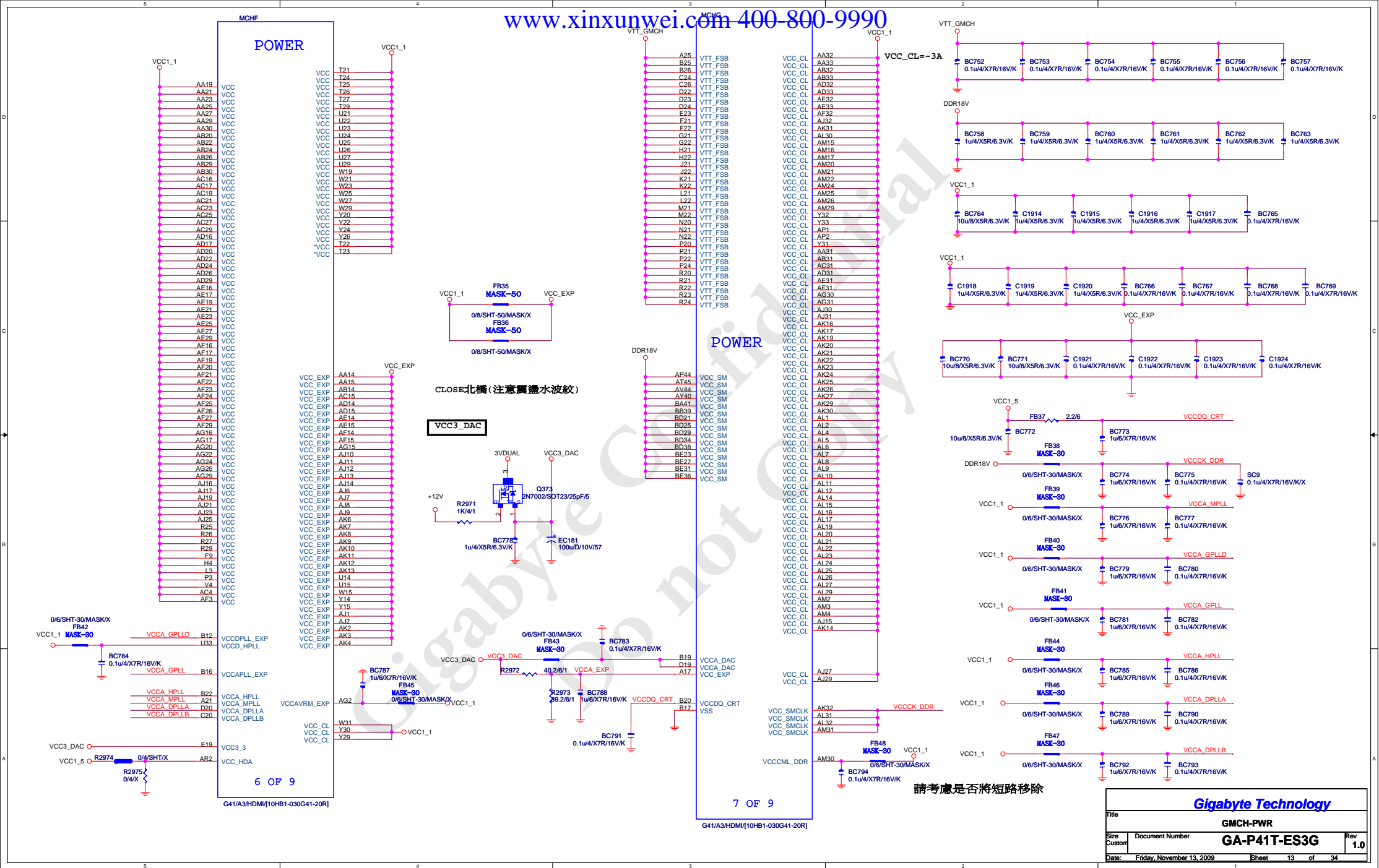
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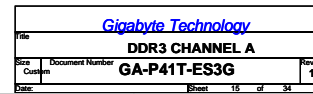
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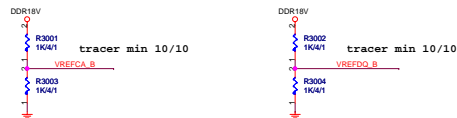
Document Number

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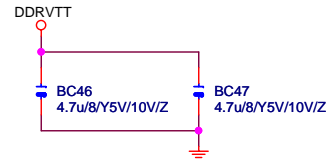




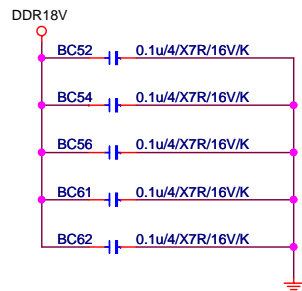


DDR TERMINATION CHANNEL A

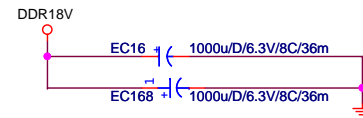
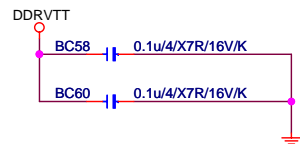
DDRVTT Decouple



DDR18V Decouple

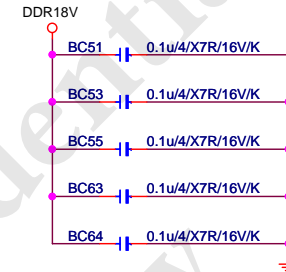


DDRVTT Decouple

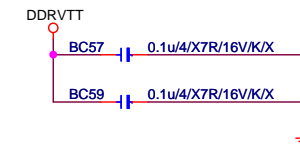


DDR TERMINATION CHANNEL B

DDR18V Decouple



DDRVTT Decouple

**Gigabyte Technology**

Title

DDRII TERMINATOR

Size
Custom

Document Number

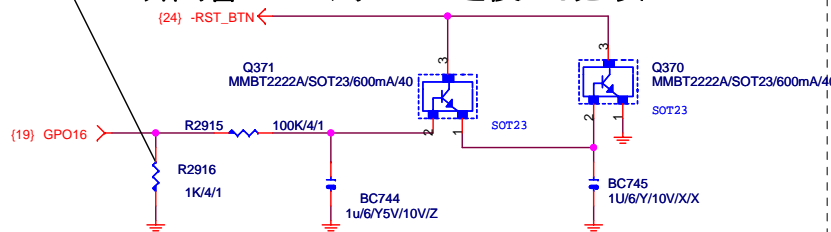
GA-P41T-ES3G

Rev
1.0

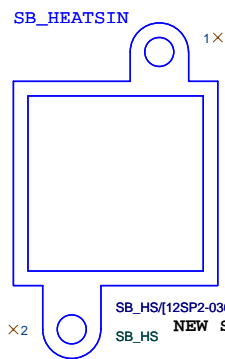
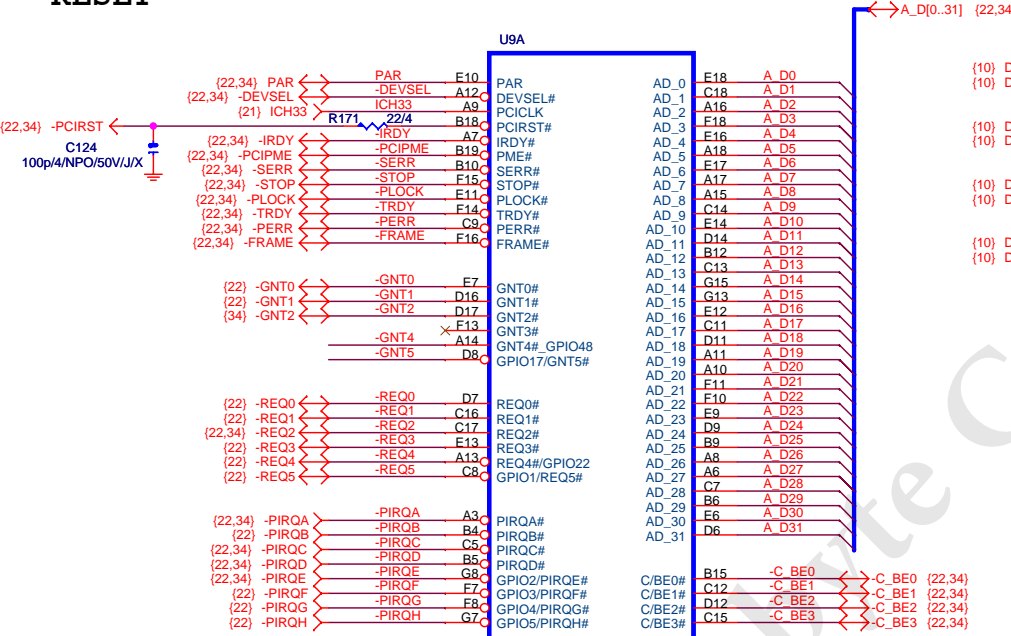
Date: Friday, November 13, 2009

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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~~



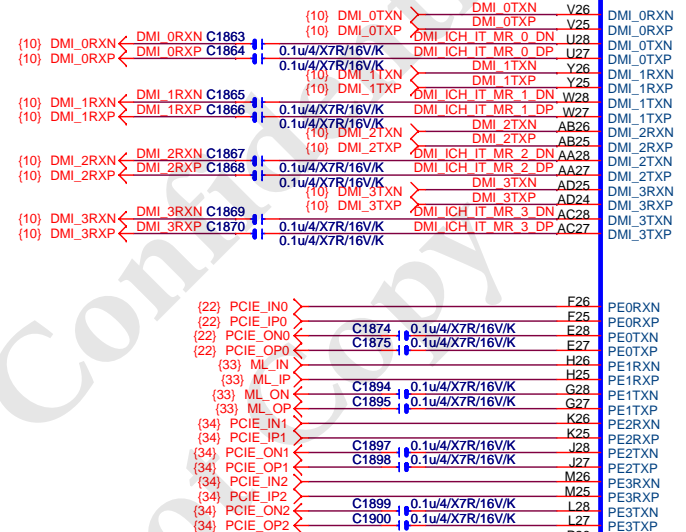
SB_HS/[12SP2-030005-42R_12SP2-030005-43R]
NEW SB_HS 對邊
SB_HS

01=SPI
10=PCI
11=LPC (DEFAULT)

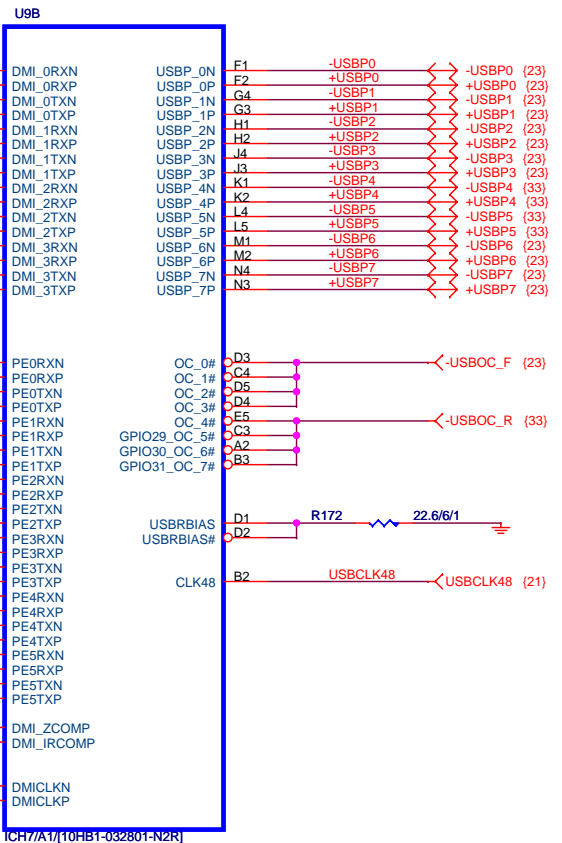
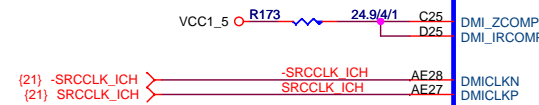


-GNT4R1744 1K/4/1/X
-GNT5R1745 1K/4/1

Close to ICH
as short as possible



ICH7 ONLY 4 LANE

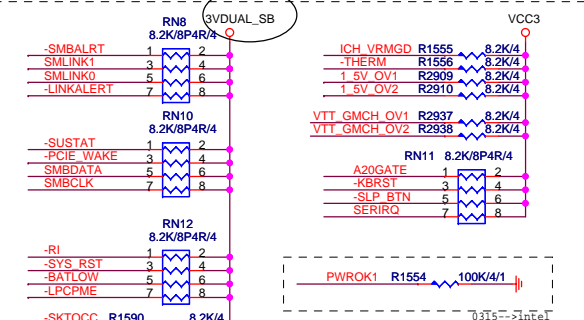


Gigabyte Technology

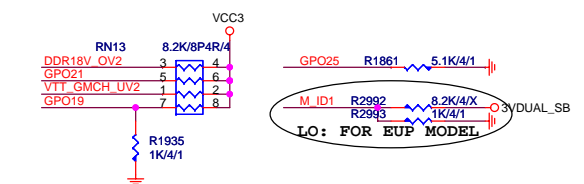
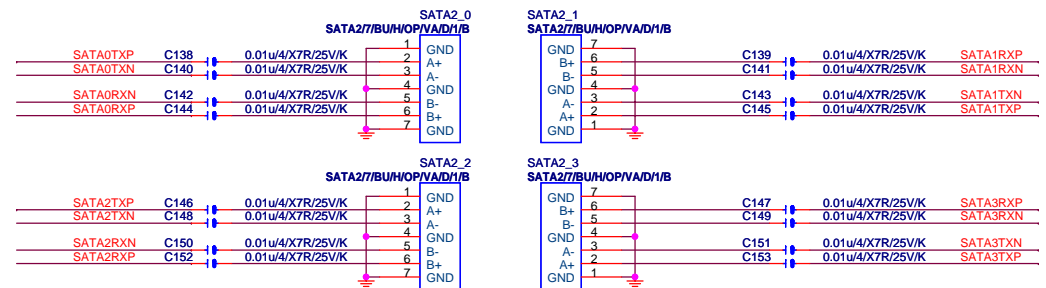
ICH7-PCI, DMI, LAN, USB

| | | |
|-----------|--|-------------------|
| Size B | Document Number GA-P41T-ES3G | Rev 1.0 |
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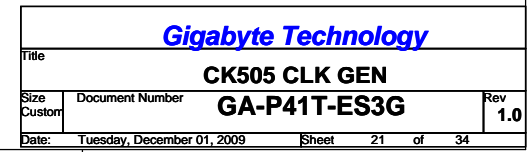


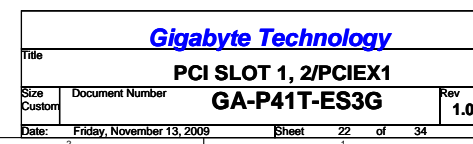
GPO25 PULL-DOWN CHECK
GPO25(-RSMRST
LATCH時不可為LOW,否則不開機)



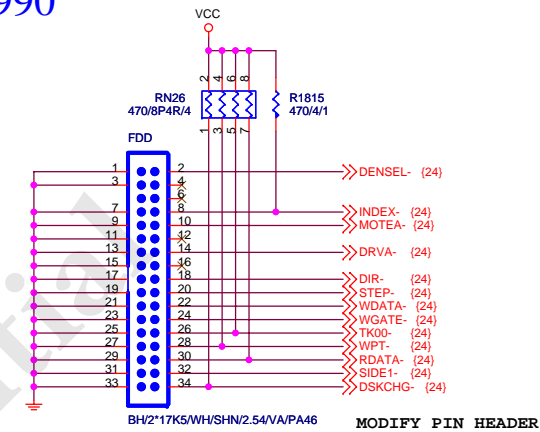
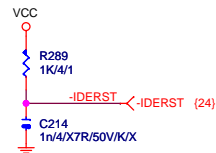
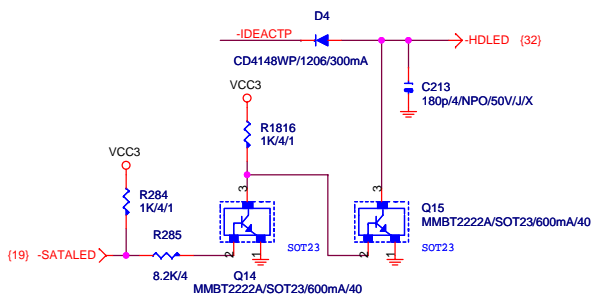


FOR
漏電

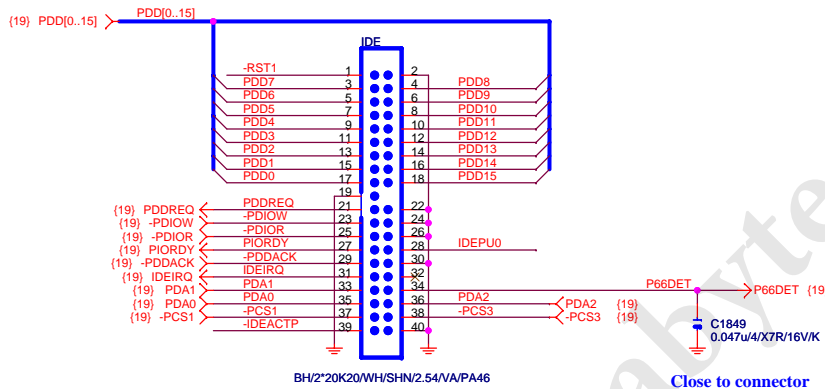
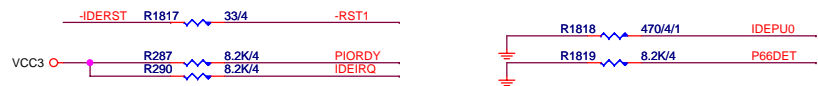




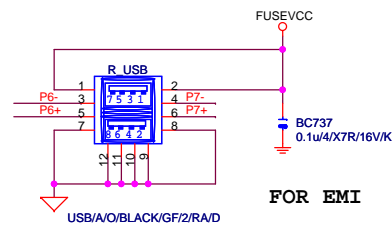
FLOPPY



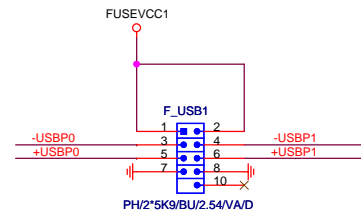
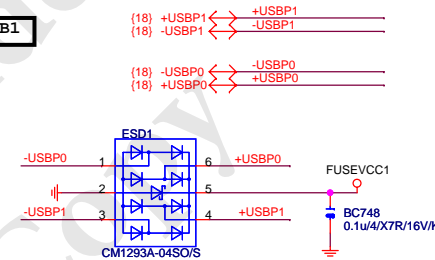
IDE



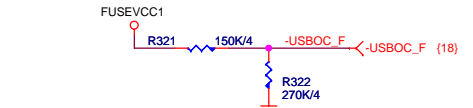
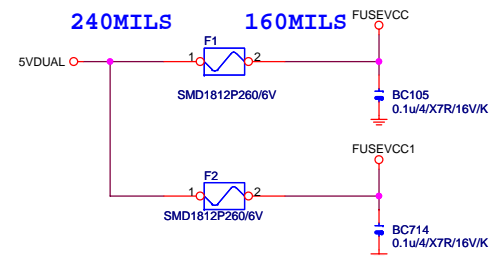
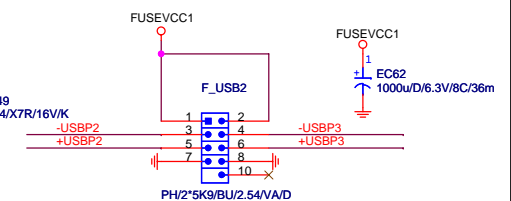
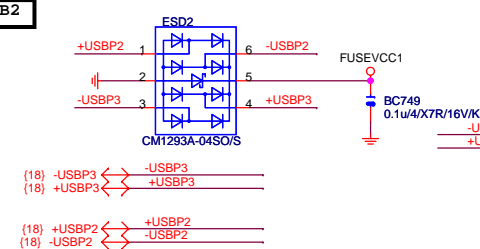
Close to connector

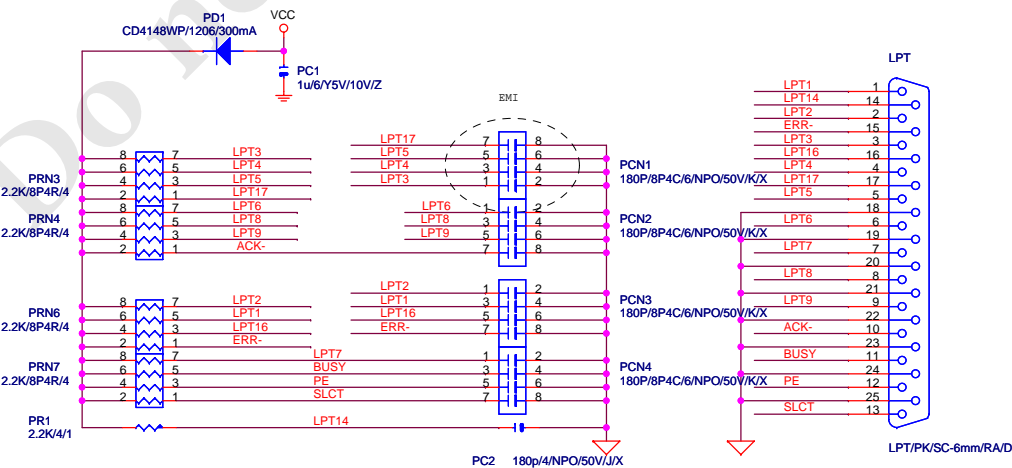
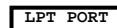
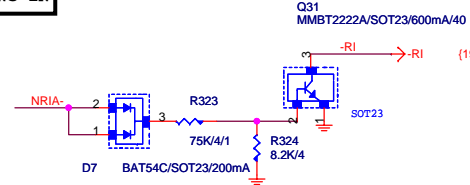


FRONT USB1

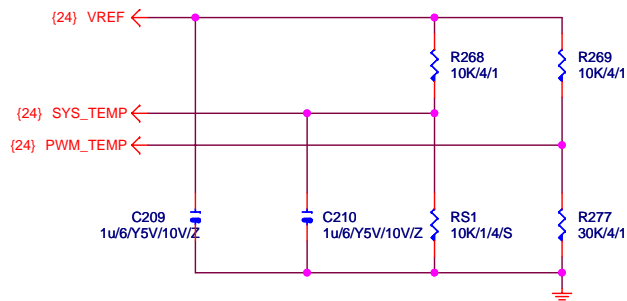


FRONT USB2

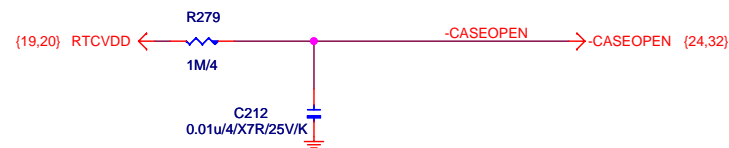




TEMP H/W MONITOR

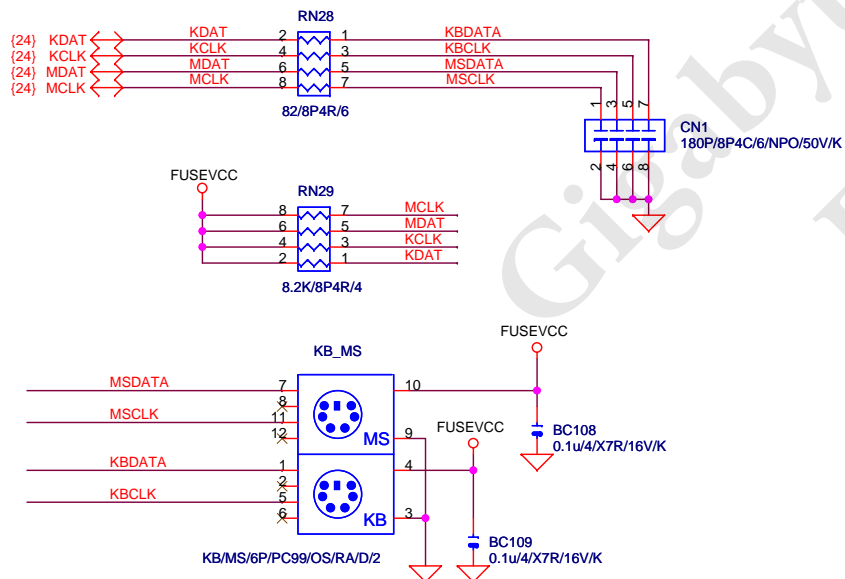


CASE OPEN

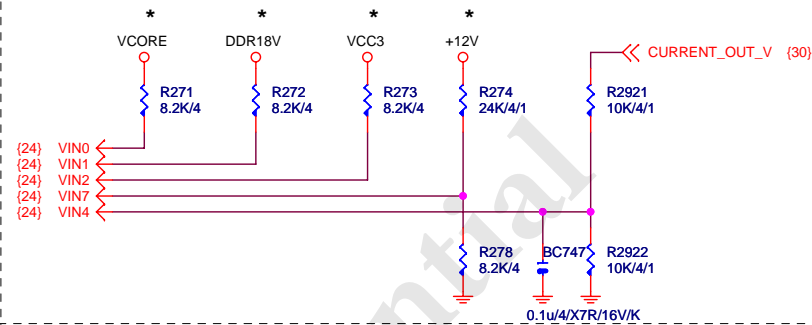


Case Open Circuits

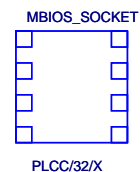
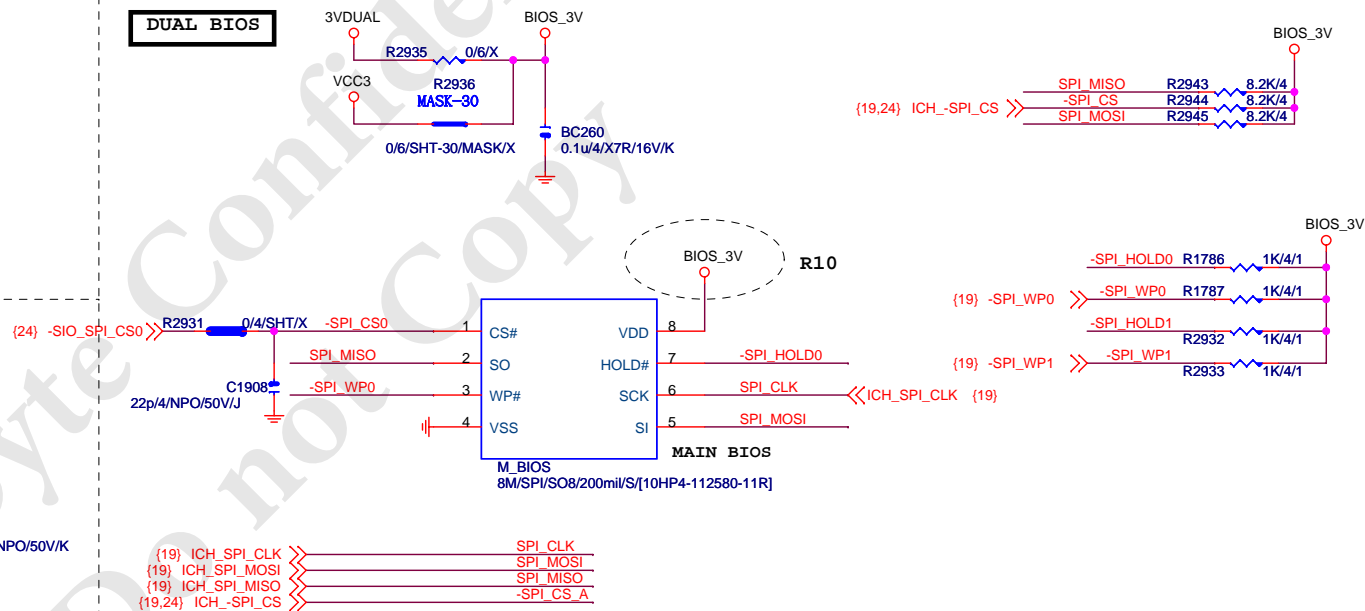
KB/MS

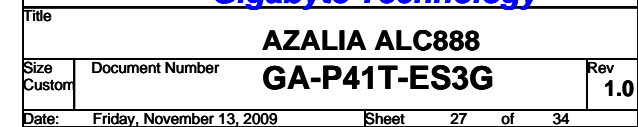


VOLTAGE-- H/W MONITOR

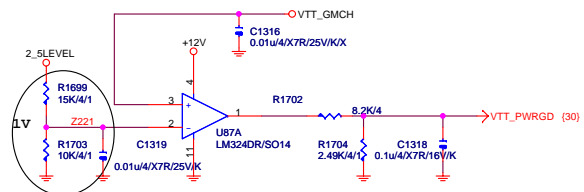


DUAL BIOS

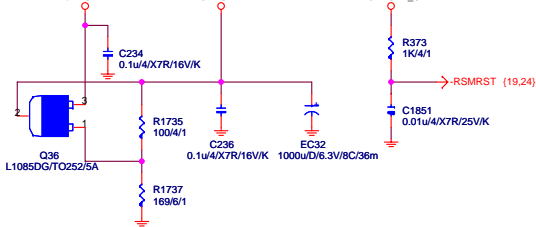




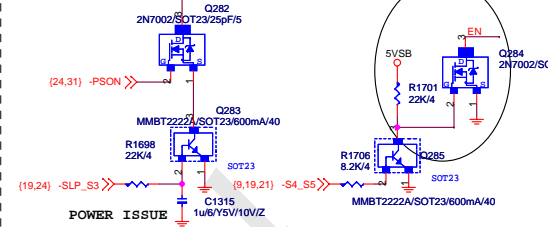
VTT_PWRGD



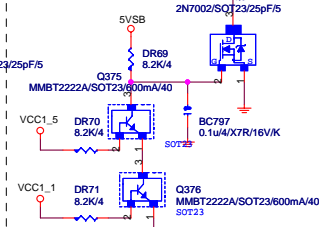
3VDUAL



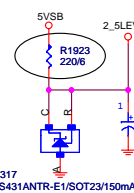
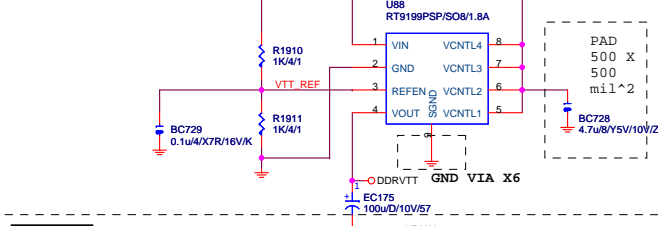
POWER ISSUE



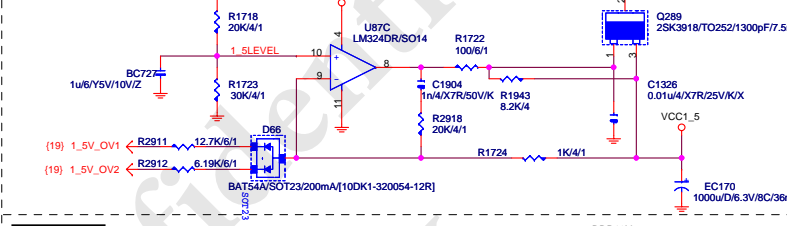
FOR NON-CPU CAN SHUT-DOWN



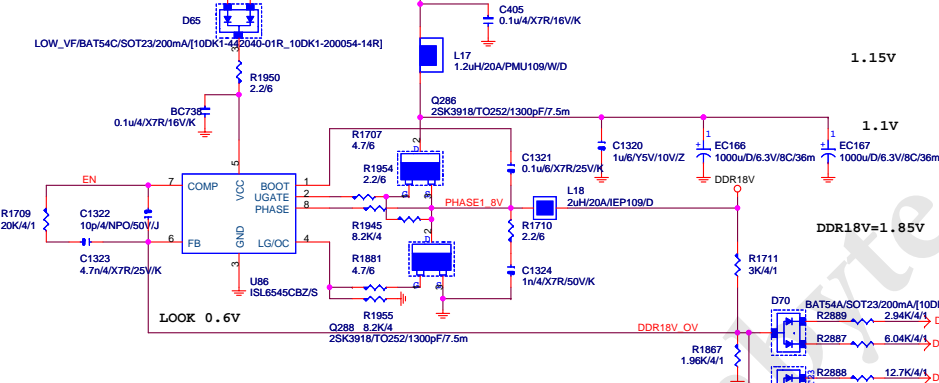
DDR_VTT



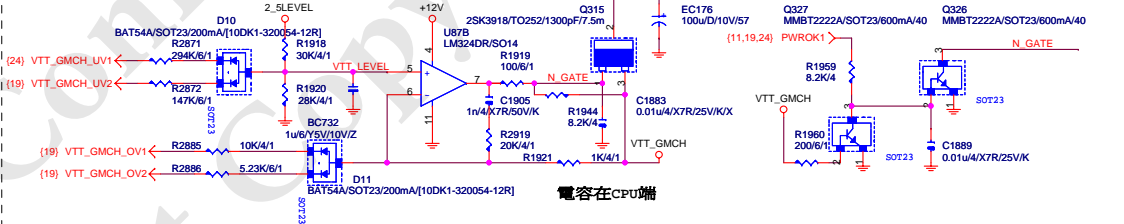
VCC1_5



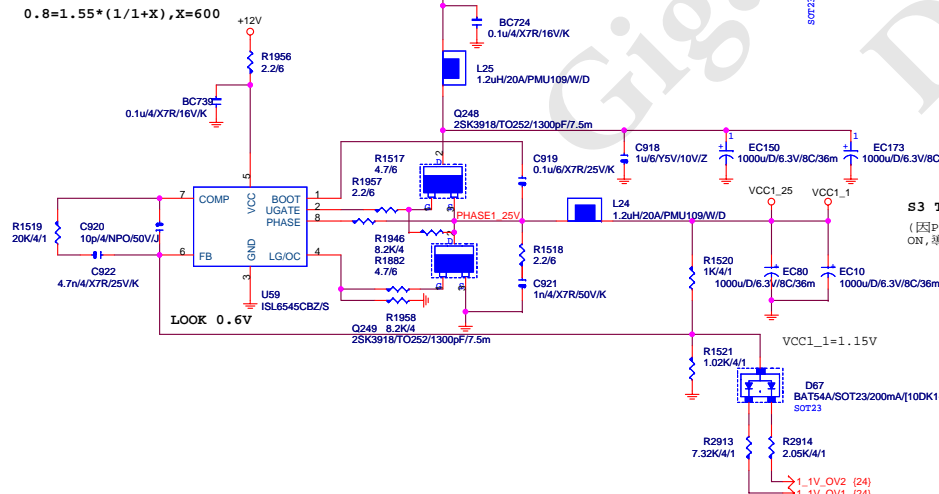
DDR18V



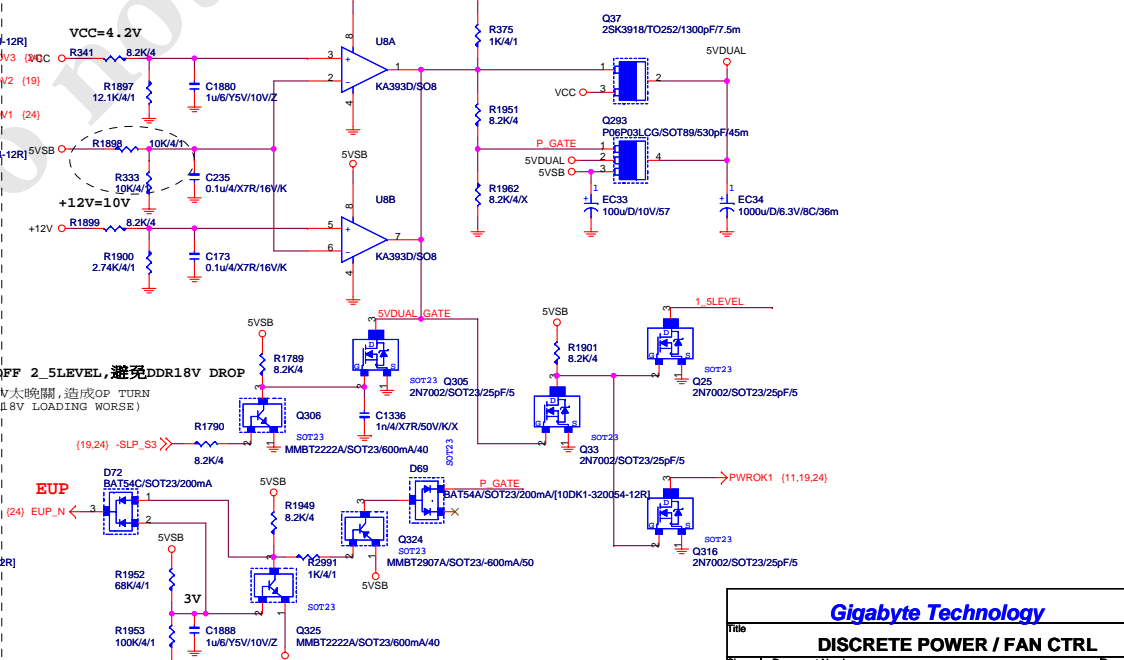
VTT_GMCH



VCC1_25



5VDUAL

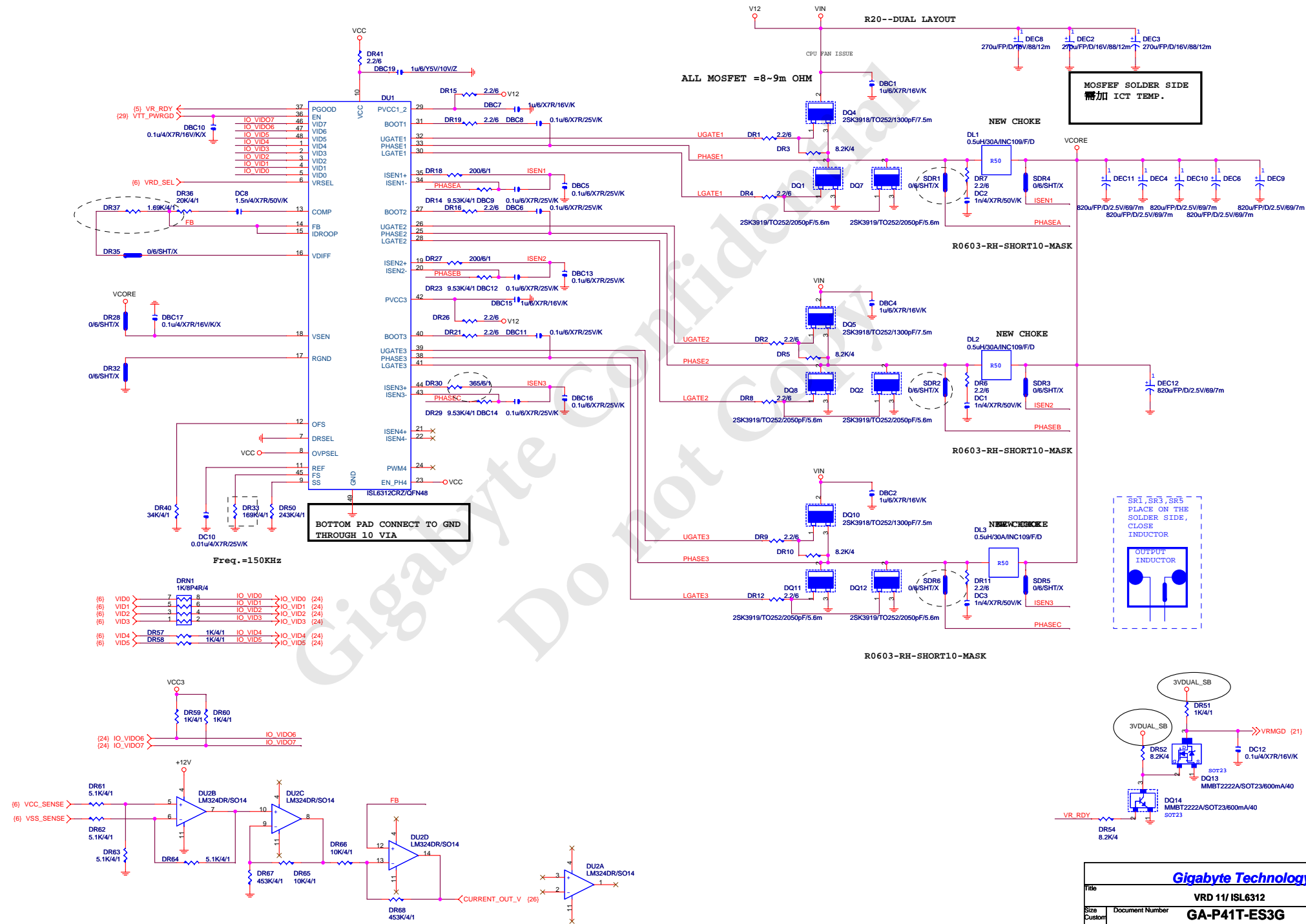


Gigabyte Technology

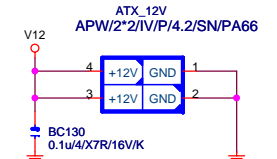
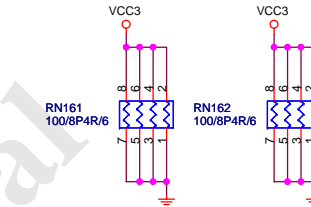
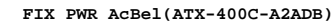
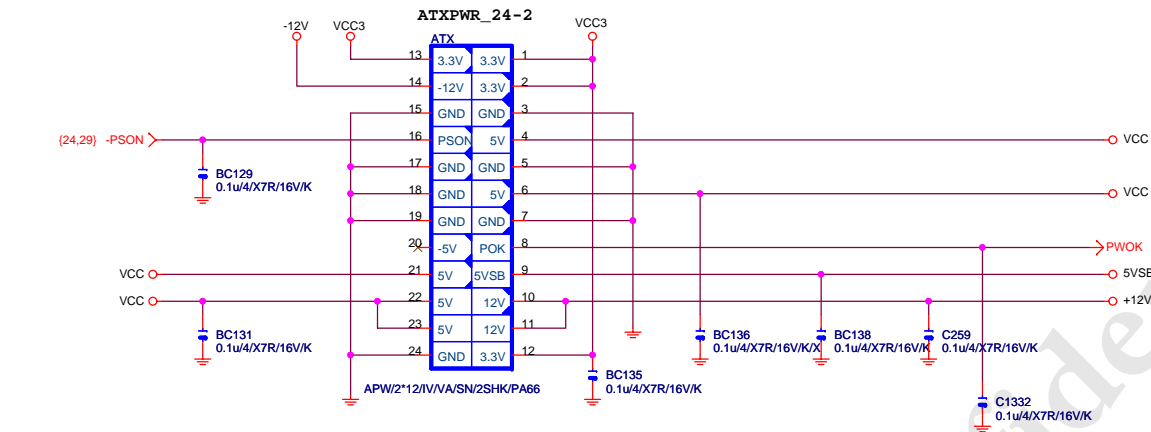
DISCRETE POWER / FAN CTRL

GA-P41T-ES3G

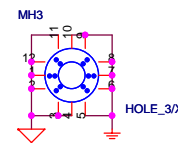
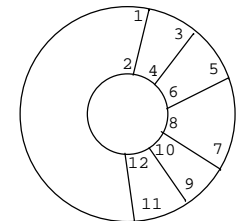
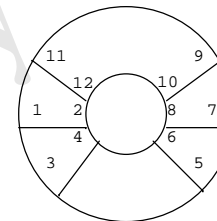
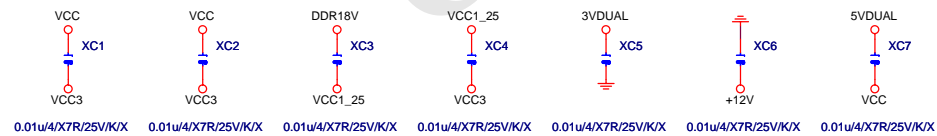
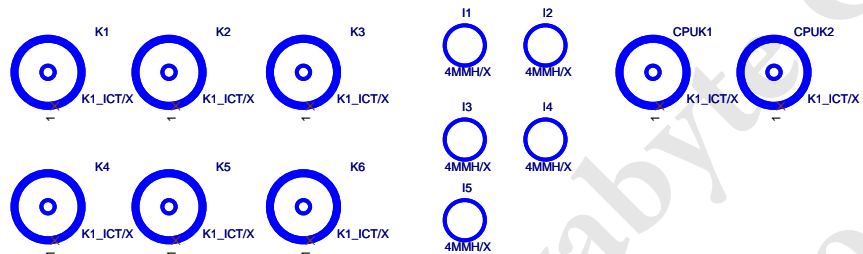
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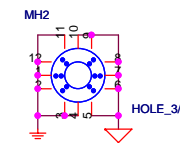
ATX POWER CONNECTOR



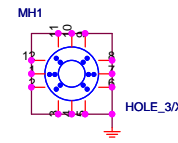
ATX_4-1




HOLE_4-RH-1



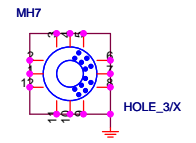
HOLE_4-RH-5MM-1

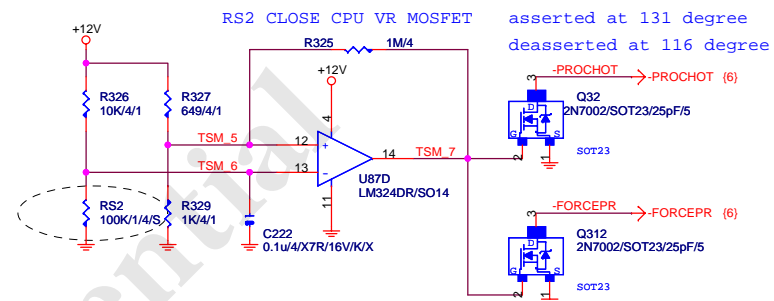


MH4

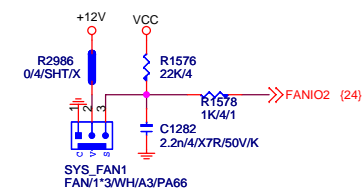


A diagram of the MH4 connector. It shows a circular connector with 12 pins. The pins are numbered 1 through 12. Pin 1 is at the top, and the numbering proceeds clockwise. The diagram shows the internal wiring connections for the pins. A ground symbol is connected to pin 12. The text "HOLE" is written next to the ground symbol.

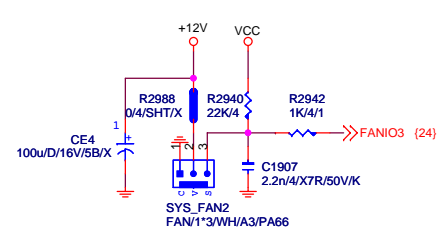




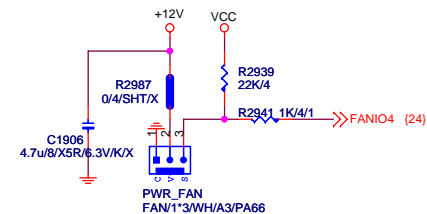
SYS_FAN1



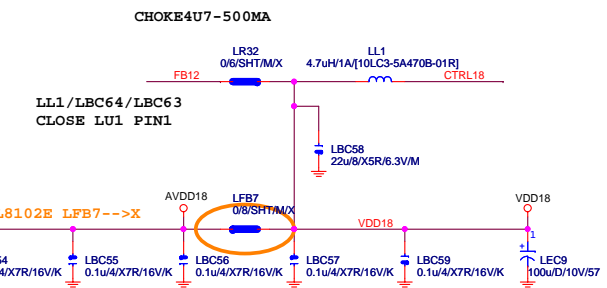
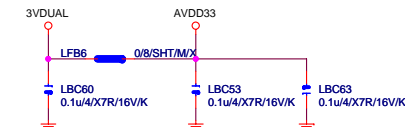
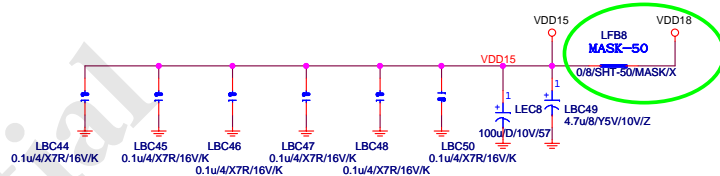
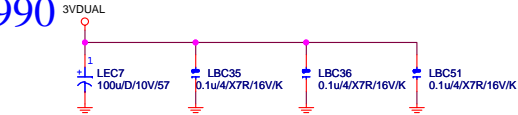
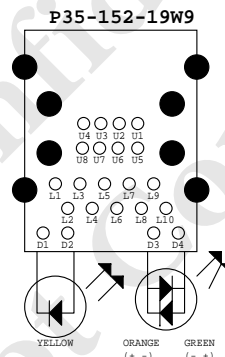
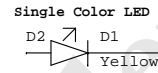
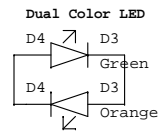
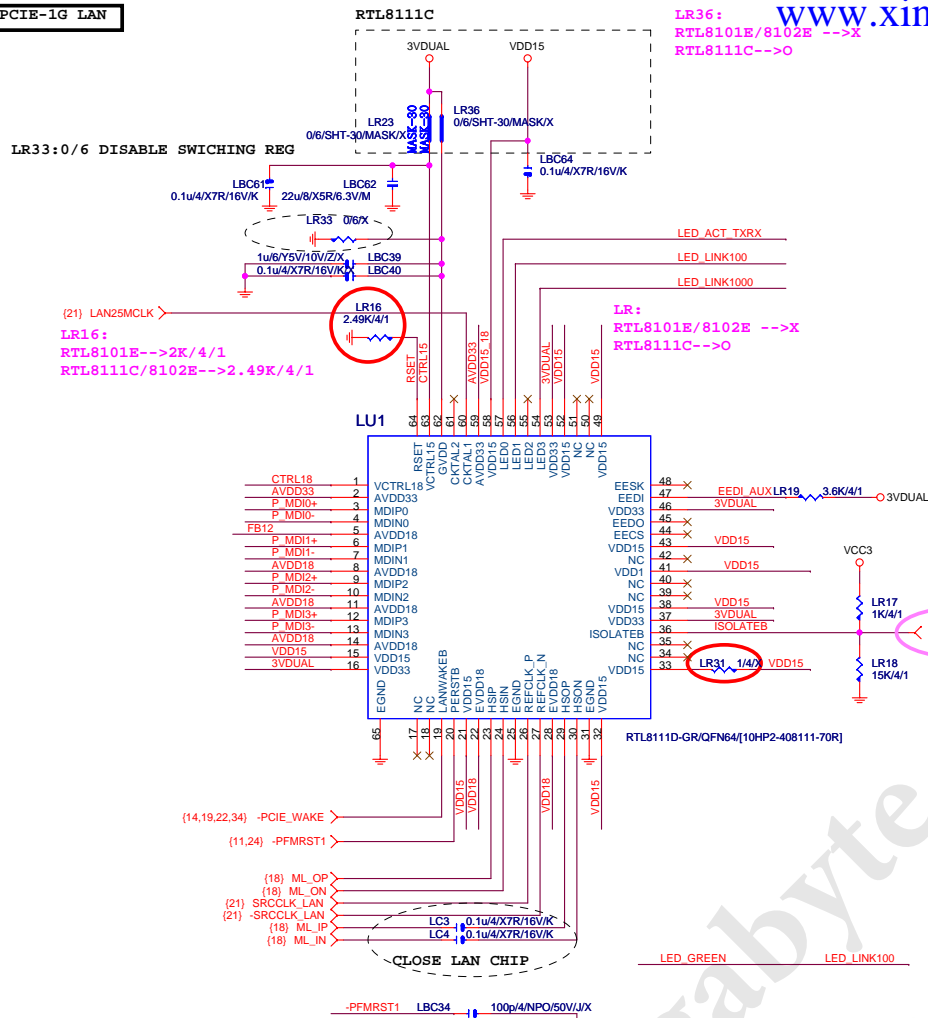
SYS_FAN2



PWR FAN



PCIE-1G LAN



USB_LAN CONNECTOR

RTL8111C:LC6-->0

```
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/1
```

