

# Model Name: GA-Z170M-D3H DDR3

SHEET TITLE

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02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	CPU_LGA1151-A
05	CPU_LGA1151-B-DDR3
06	CPU_LGA1151-C
07	CPU_LGA1150-D
08	DDR4 CHANNEL A
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10	PCH_CLK BUFFER
11	PCH_DMI,USB,PCIE
12	PCH_MISC
13	PCH SATA,PCIE,SATA_EXPRESS
14	PCH_PWR,GND
15	Dual BIOS
16	ITE 8628 LPC IO
17	HWM
18	FAN CTRL--SIO
19	PCI EXPRESS*16 SLOT
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21	M.2X4
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24	ASM1083 POWER
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26	ISL95858_856 PWM
27	ISL95858_856 MOS_VCORE

rev 1.0  
SHEET

TITLE

28	ISL95858_856 MOS_VCCGT
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32	DISCRETE POWER
33	NCT3933
34	ATX POWER , A_-PROCHOT
35	KB_MS_USB
36	DVI CONN
37	PTN3356 - DP to VGA - IC
38	PTN3356 - DP to VGA - Conn
39	HDMI CONN
40	R_USB30
41	INTEL I219
42	USB30_LAN CONNECTOR-I219
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46	F_USB
47	COM , LPT , TPM , THB
48	F_PANEL
49	TABLE LIST
50	POWER MAP
51	NTC MAP

Gigabyte Technology

Cover Sheet

GA-Z170M-D3H DDR3 1.0

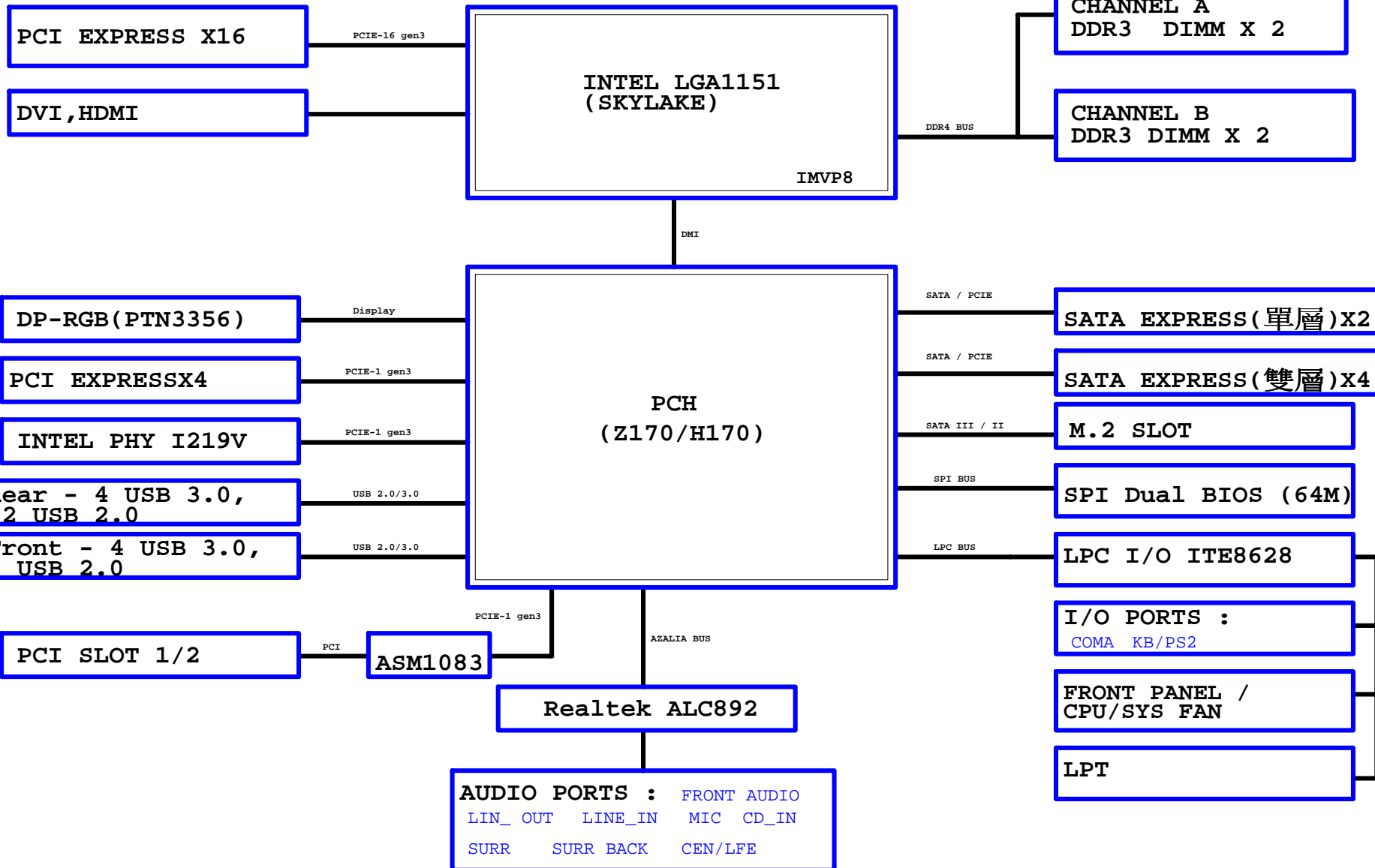
Date: Wednesday, July 29, 2015 Sheet 1 of 51

## Circuit or PCB layout change

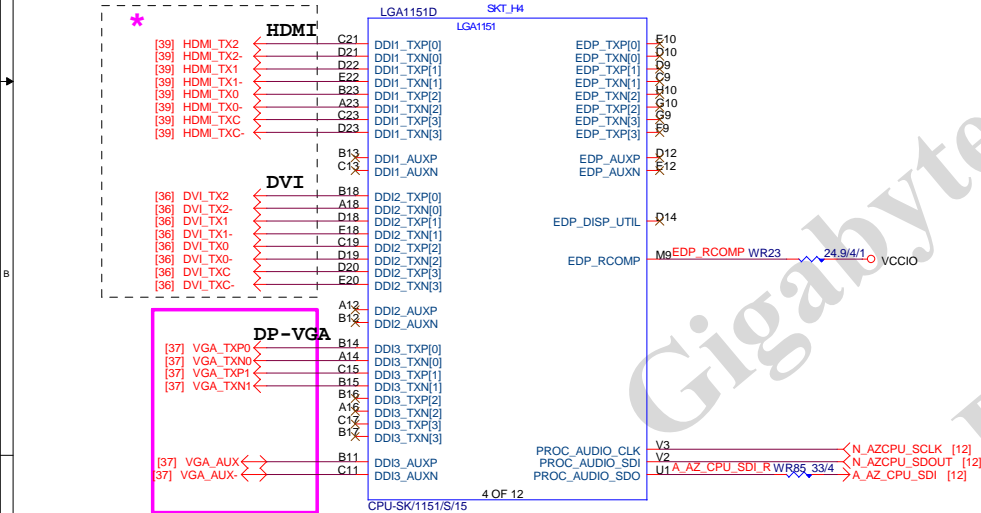
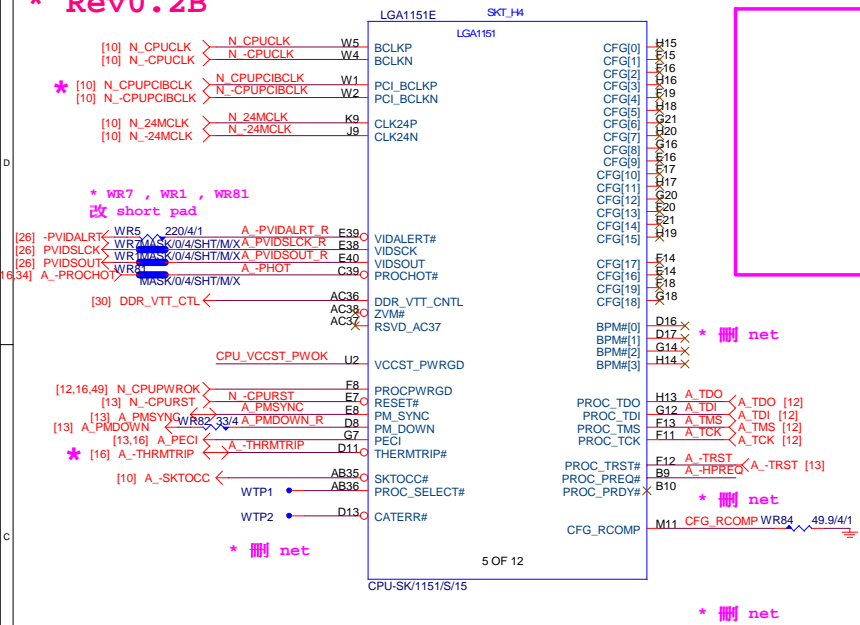
## 2015/07/23

[illegible]

# BLOCK DIAGRAM



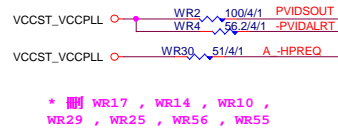
\* Rev0.2B



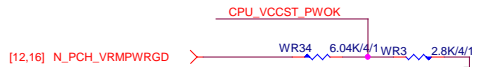
```
G-15u : (CPU-SK/1151/S/15)
10SC1-F01151-11R / 10SC1-F01151-12R
G-FL : (CPU-SK/1151/S/GF)
10SC1-F01151-21R / 10SC1-F01151-22R
```

```
4 layer HDMI/DP/eDP/=====4/4/4//15
6 layer HDMI/DP/eDP/=====4/5.5/4//15
```

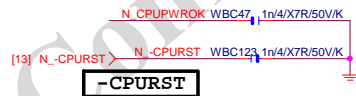
Impedance=85 +- 15%



\* 删除 WR91



```
* 删除 net N_CPU_VCCST_PWOK
```



PA\_EXP\_TXP[0..15] >> PA\_EXP\_TXP[0..15] [19]  
PA\_EXP\_TXN[0..15] >> PA\_EXP\_TXN[0..15] [19]  
PA\_EXP\_RXP[0..15] >> PA\_EXP\_RXP[0..15] [19]  
PA\_EXP\_RXN[0..15] >> PA\_EXP\_RXN[0..15] [19]

```
4 layer PEG/DMI=====4/4/4//15
6 layer PEG/DMI=====4/5.5/4//15
```

Impedance=85 +- 15%

W=12 mil out of CPU  
S=15 mil out of CPU

FOR BIOS				
Bifurcation Config.		Signals Lanes		
		CFG[6]	CFG[5]	CFG[2]
1x16		1	1	1
1x16 Reversed		1	1	0
2x8		1	0	1
2x8 Reversed		1	0	0
1x8+2x4		0	0	1
1x8+2x4 Reversed		0	0	0

<b><i>Gigabyte Technology</i></b>			
Title			
<b>CPU LGA1151-A</b>			
Size Custom	Document Number		Rev
	<b>GA-Z170M-D3H DDR3</b>		<b>1.0</b>
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Rev:0.3

DDR3\_3

DDR3\_3

DDR3\_3

[R] VREF\_D0B8 &gt; VREF\_D0B8

VDDQ

MR8

1K/4/1

VREF\_D0DDB8

MR9

1K/4/1

CPU

黑色

灰色

黑色

灰色

DTMM4

DTMM2

DTMM3

DTMM1

CHA

CHB

Gigabyte Technology

Title			DDR3L CHANNEL B
Size	Document Number	GA-Z170M-D3H DDR3	
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DDR3240/BK/VAD

黑色

DDR3240/GY/VAD

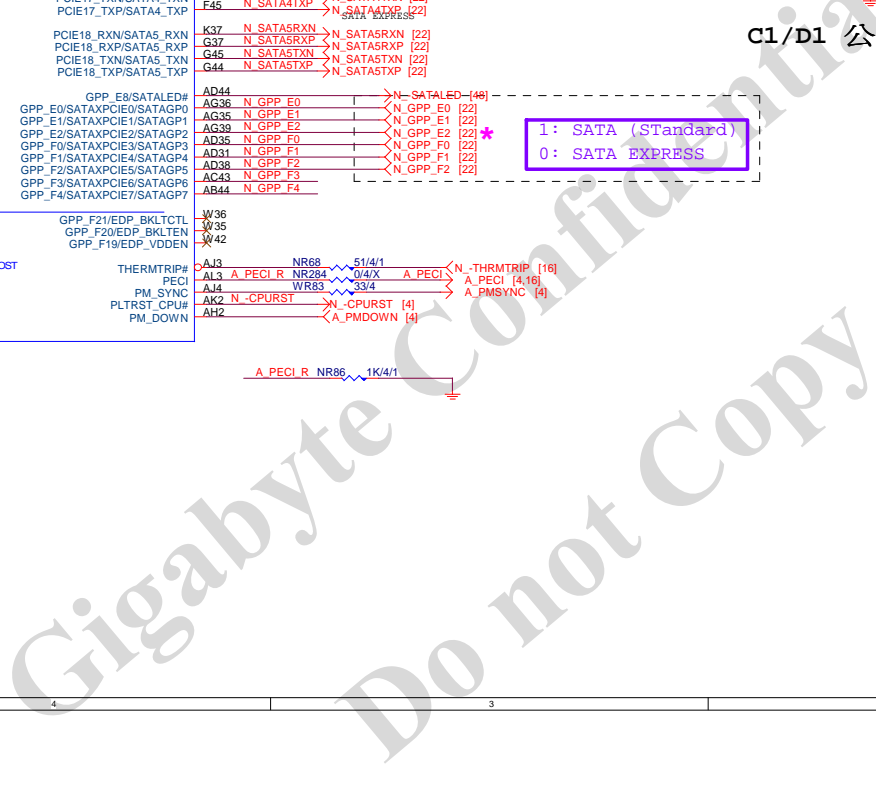
灰色

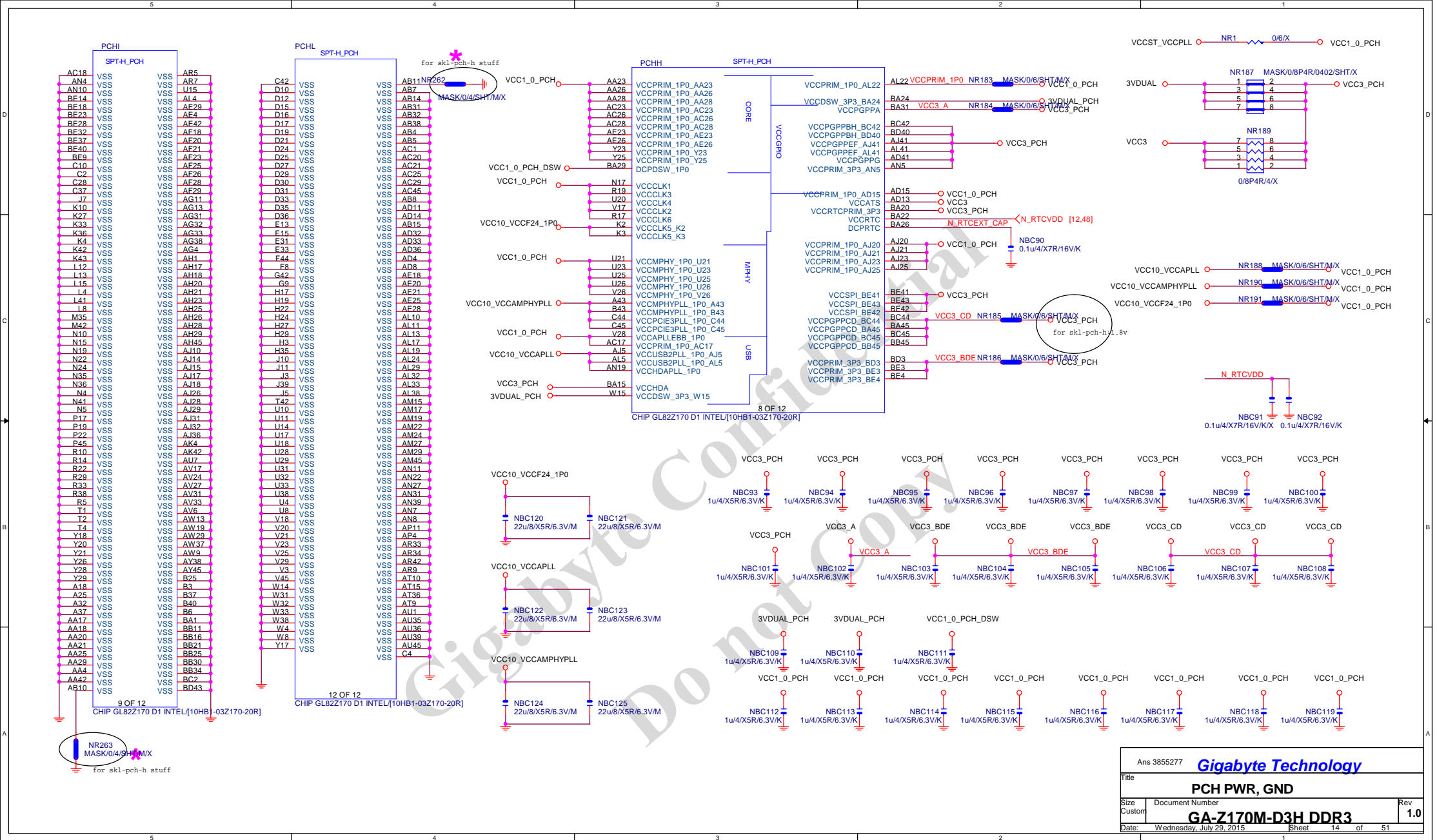




A

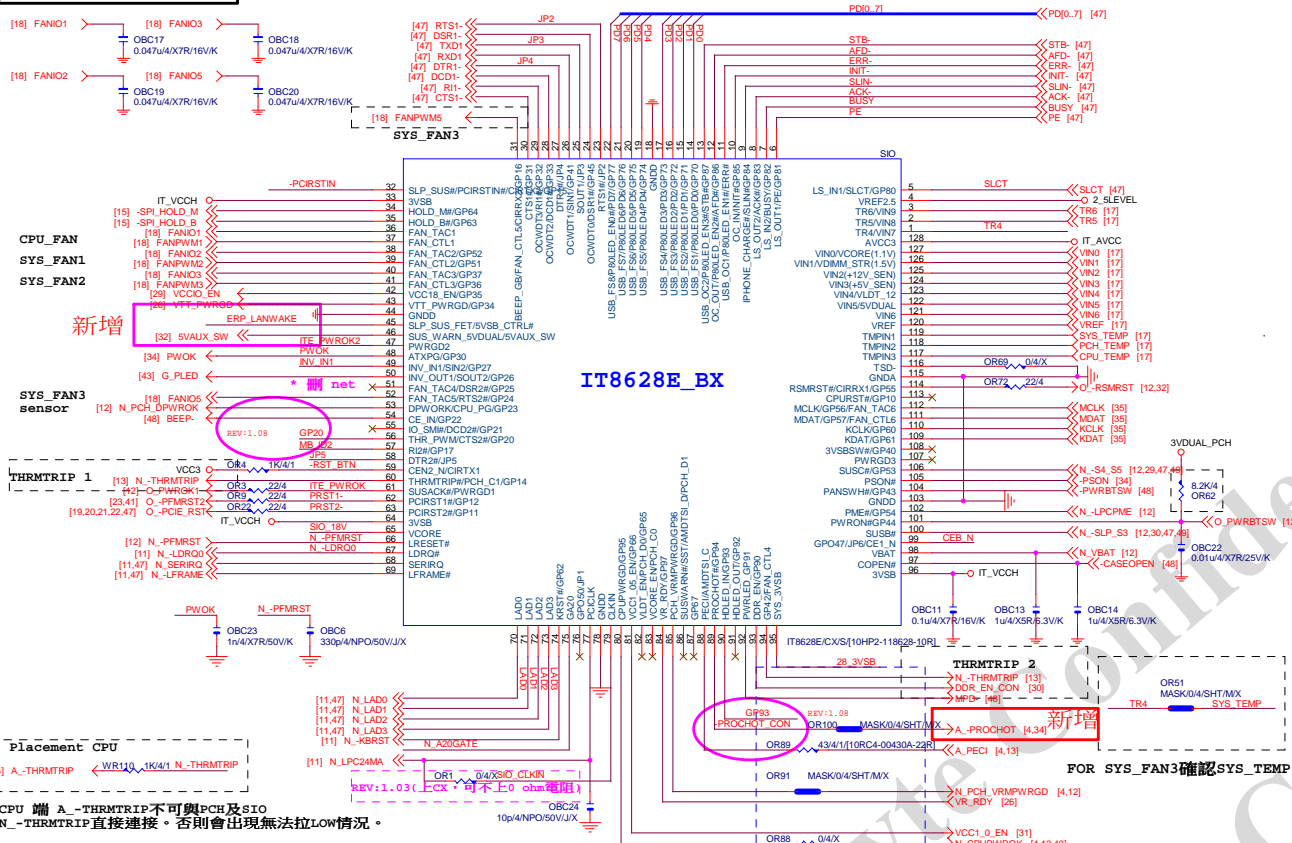






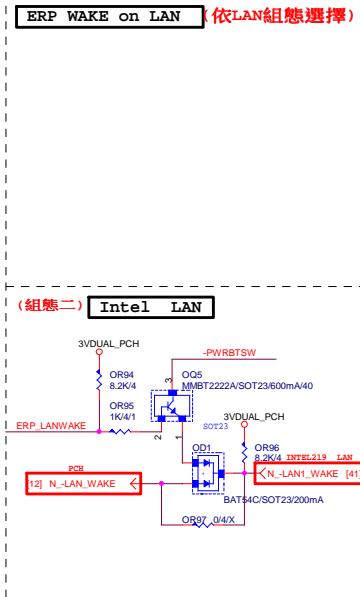
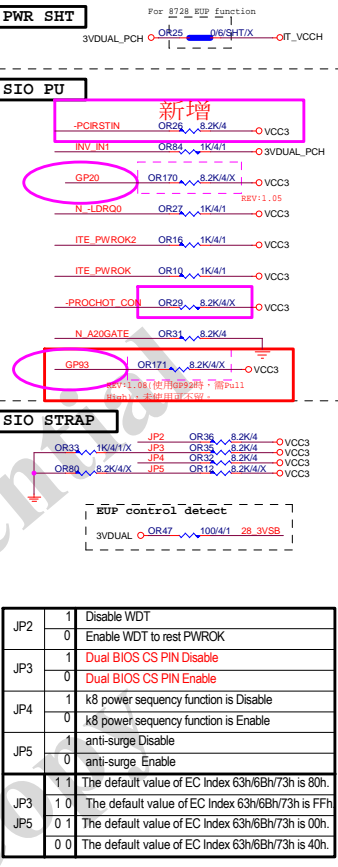
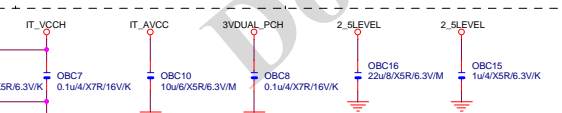
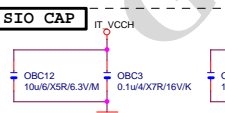
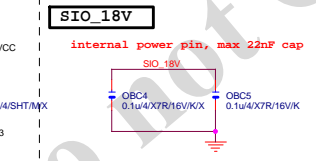
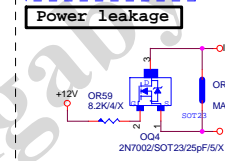
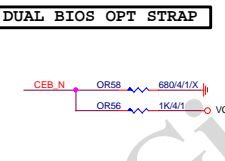


SIO IT8628CX REV:1.08



FAN TABLE	
CPU_FAN	FAN_CTL1 FAN_TAC1
SYS_FAN1	FAN_CTL2 FAN_TAC2
SYS_FAN2	FAN_CTL3 FAN_TAC3
SYS_FAN3	FAN_CTL5 FAN_TAC5
OPT_FAN or SYS_FAN4	N/A
THRMTrip1	YES PIN60
THRMTrip2	YES PIN94

IT8628E_GPIO問題匯整	
PIN 50	GP25-第一次接上POWER時 會拉 LO
PIN 90/91	DEFAULT為HDLLED FUNCTION GP93 BYPASS TO GP92 高溫時 GP92 會被拉LO(ITE BUG)
PIN 108	GP40--- POWER ON 時會拉 LO
PIN 111/112	MOUSE 跟FAN6 FUNCTION 擇一使用, 不然會互相干擾
PIN 22	PIN22, 需高於3V, 若低於 該部分COM_PORT及LPT裝置 蜂鳴器會異常動作。

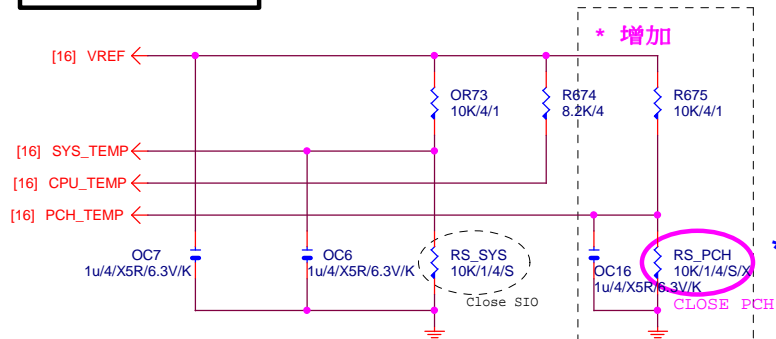


JP2	1	Disable WDT
	0	Enable WDT to rest PWROK
JP3	1	Dual BIOS CS PIN Disable
	0	Dual BIOS CS PIN Enable
JP4	1	k8 power sequency function is Disable
	0	k8 power sequency function is Enable
JP5	1	anti-surge Disable
	0	anti-surge Enable
JP3	1 1	The default value of EC Index 63h/6Bh/73h is 80h.
	1 0	The default value of EC Index 63h/6Bh/73h is FFh
JP5	0 1	The default value of EC Index 63h/6Bh/73h is 00h.
	0 0	The default value of EC Index 63h/6Bh/73h is 40h.

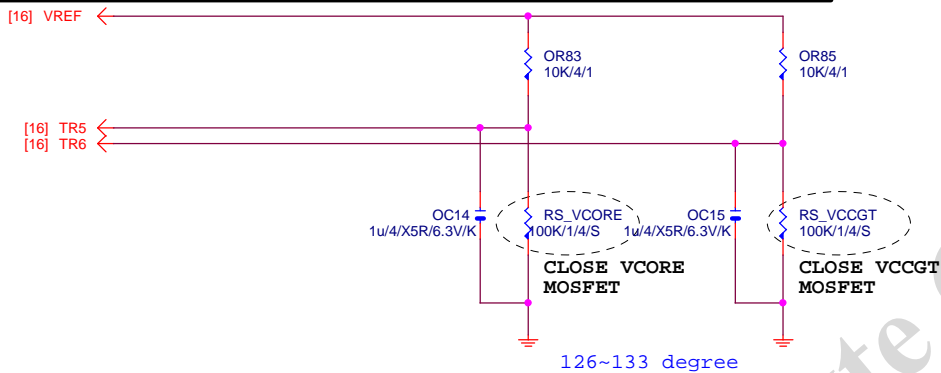
ERP Wake on LAN		
Single LAN	Realtek	組態一
	Atheros	
	Intel 219	組態二
Dual LAN	Atheros+Atheros	組態一
	Intel 219+Atheros	
	Intel 219+Intel 210	組態三
No Support ERP	BOM不上	N/A

## TEMP H/W MONITOR

REV 1.08



## RS\_VCORE, RS\_VCCGT, CLOSE CPU\_VCORE &amp; VCCGT MOSFET

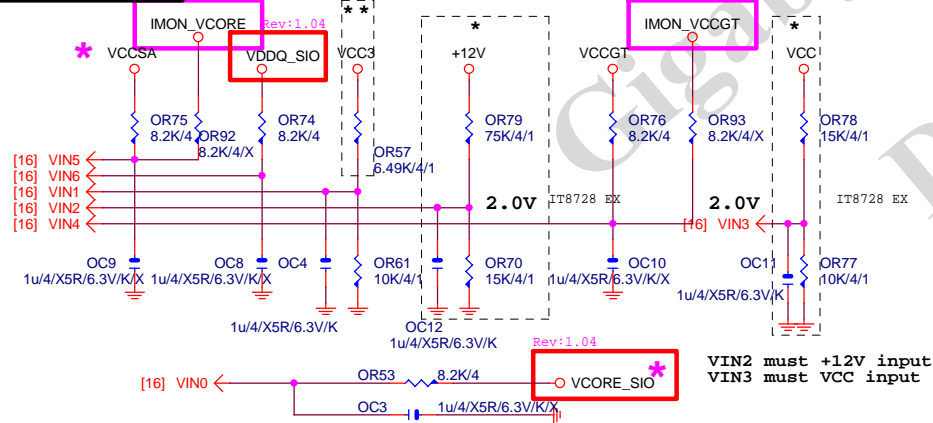
~~PROCHOT: 有mos heartsink不用prochot function~~

## VOLTAGE-- H/W MONITOR

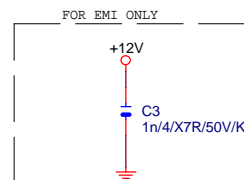
Connect to PWM

\* IT8728 BX  
\*\* IT8728 CX

Connect to PWM



The division voltage of VIN2 &amp; VIN3 must be around 2.9V

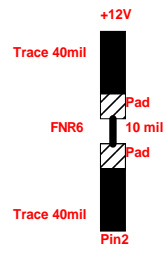
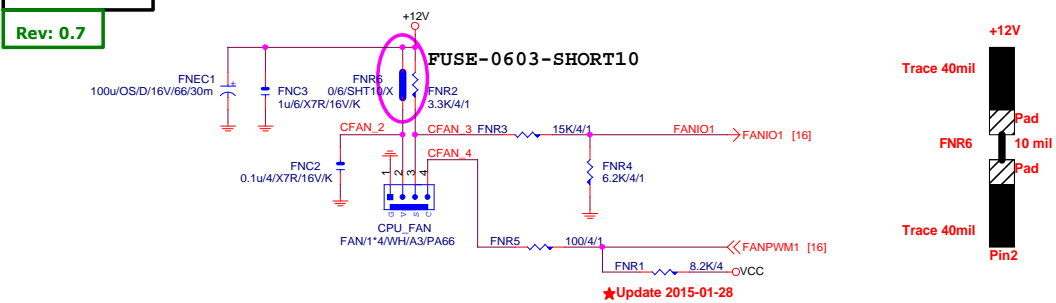


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Title					<b>HWM,KB/MS, FAN CTRL</b>				
Size	Document Number	<b>GA-Z170M-D3H DDR3</b>			Rev	1.0			
Custom									
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# CPU SMART FAN

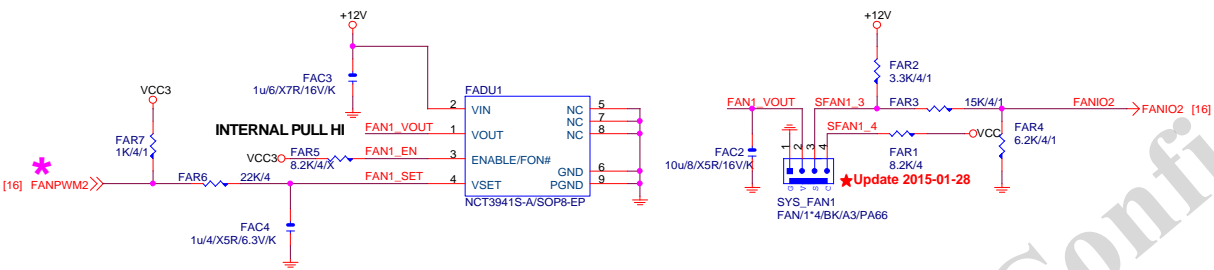
Rev: 0.7



# SYSTEM FAN1

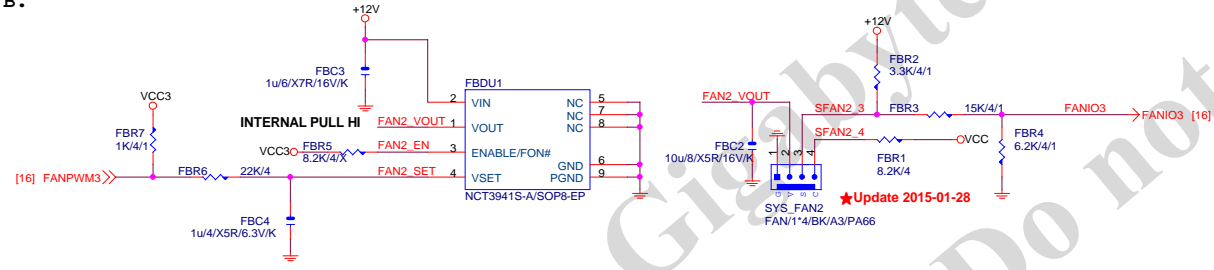
Linear SYS\_FAN  
Enable Function (NCT3941S)  
Full Turn On Function (NCT3941S-A)

A.



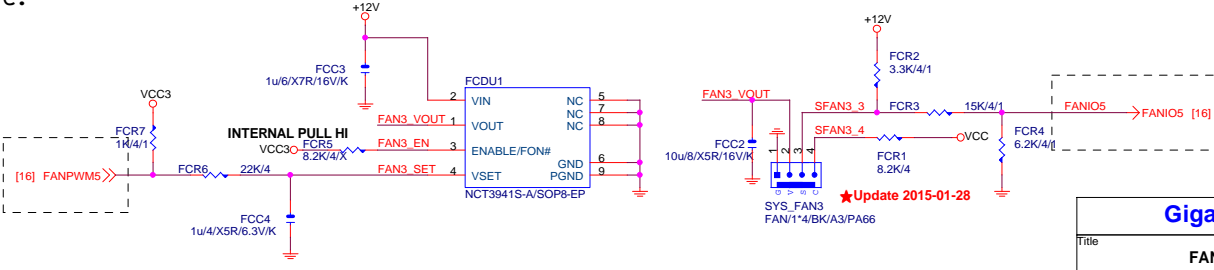
# SYSTEM FAN2

B.



# SYSTEM FAN3

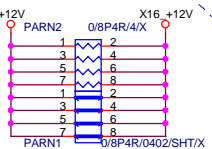
C.



Gigabyte Technology

Title			FAN CTRL
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Rev 0.2

+12V\_protect  
short-wire test

PA\_EXP\_RXP0..15] >> PA\_EXP\_RXP0..15] [4]  
PA\_EXP\_RXN0..15] >> PA\_EXP\_RXN0..15] [4]  
PA\_EXP\_TXP0..15] >> PA\_EXP\_TXP0..15] [4]  
PA\_EXP\_TXN0..15] >> PA\_EXP\_TXN0..15] [4]

PA_EXP_TXP0	PAC5	0.22u4/X5R/6.3V/K	PA_EXP_TXP0 C
PA_EXP_TXN0	PAC4	0.22u4/X5R/6.3V/K	PA_EXP_TXN0 C
PA_EXP_TXP1	PAC6	0.22u4/X5R/6.3V/K	PA_EXP_TXP1 C
PA_EXP_TXN1	PAC7	0.22u4/X5R/6.3V/K	PA_EXP_TXN1 C
PA_EXP_TXP2	PAC8	0.22u4/X5R/6.3V/K	PA_EXP_TXP2 C
PA_EXP_TXN2	PAC9	0.22u4/X5R/6.3V/K	PA_EXP_TXN2 C
PA_EXP_TXP3	PAC10	0.22u4/X5R/6.3V/K	PA_EXP_TXP3 C
PA_EXP_TXN3	PAC11	0.22u4/X5R/6.3V/K	PA_EXP_TXN3 C
PA_EXP_TXP4	PAC12	0.22u4/X5R/6.3V/K	PA_EXP_TXP4 C
PA_EXP_TXN4	PAC13	0.22u4/X5R/6.3V/K	PA_EXP_TXN4 C
PA_EXP_TXP5	PAC14	0.22u4/X5R/6.3V/K	PA_EXP_TXP5 C
PA_EXP_TXN5	PAC15	0.22u4/X5R/6.3V/K	PA_EXP_TXN5 C
PA_EXP_TXP6	PAC16	0.22u4/X5R/6.3V/K	PA_EXP_TXP6 C
PA_EXP_TXN6	PAC17	0.22u4/X5R/6.3V/K	PA_EXP_TXN6 C
PA_EXP_TXP7	PAC18	0.22u4/X5R/6.3V/K	PA_EXP_TXP7 C
PA_EXP_TXN7	PAC19	0.22u4/X5R/6.3V/K	PA_EXP_TXN7 C
PA_EXP_TXP8	PAC21	0.22u4/X5R/6.3V/K	PA_EXP_TXP8 C
PA_EXP_TXN8	PAC20	0.22u4/X5R/6.3V/K	PA_EXP_TXN8 C
PA_EXP_TXP9	PAC22	0.22u4/X5R/6.3V/K	PA_EXP_TXP9 C
PA_EXP_TXN9	PAC23	0.22u4/X5R/6.3V/K	PA_EXP_TXN9 C
PA_EXP_TXP10	PAC24	0.22u4/X5R/6.3V/K	PA_EXP_TXP10 C
PA_EXP_TXN10	PAC25	0.22u4/X5R/6.3V/K	PA_EXP_TXN10 C
PA_EXP_TXP11	PAC26	0.22u4/X5R/6.3V/K	PA_EXP_TXP11 C
PA_EXP_TXN11	PAC27	0.22u4/X5R/6.3V/K	PA_EXP_TXN11 C
PA_EXP_TXP12	PAC28	0.22u4/X5R/6.3V/K	PA_EXP_TXP12 C
PA_EXP_TXN12	PAC29	0.22u4/X5R/6.3V/K	PA_EXP_TXN12 C
PA_EXP_TXP13	PAC30	0.22u4/X5R/6.3V/K	PA_EXP_TXP13 C
PA_EXP_TXN13	PAC31	0.22u4/X5R/6.3V/K	PA_EXP_TXN13 C
PA_EXP_TXP14	PAC32	0.22u4/X5R/6.3V/K	PA_EXP_TXP14 C
PA_EXP_TXN14	PAC33	0.22u4/X5R/6.3V/K	PA_EXP_TXN14 C
PA_EXP_TXP15	PAC34	0.22u4/X5R/6.3V/K	PA_EXP_TXP15 C
PA_EXP_TXN15	PAC35	0.22u4/X5R/6.3V/K	PA_EXP_TXN15 C

PCIEX16:16/5/5/5/16

PCI-E REV:1.1--&gt; 2.5GHZ

PCE-E X1(單向) BANDWIDTH=2.5GHz\*(8b/10b)=2Gb/s=250MB/s

PCE-E X1(雙向) BANDWIDTH=2.5GHz\*(8b/10b)X2=4Gb/s=500MB/s

PCE-E X16(單向) BANDWIDTH=2.5GHz\*(8b/10b)X16=32Gb/s=4GB/s

PCE-E X16(雙向) BANDWIDTH=2.5GHz\*(8b/10b)X16X2=64Gb/s=8GB/s

PCI-E REV:2.0--&gt; 5GHZ

PCIESLOT-164P

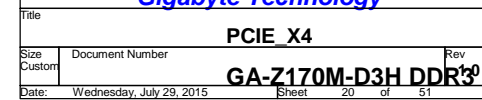
[8,9,12,20,25,26,33] N\_SMBCLK  
[8,9,12,20,25,26,33] N\_SMBDATA

[12,20,23,47] N\_-PCIE\_WAKE

[10] -PCIEX16\_PR

PCI-E/16X164P/GY/LONG/DOUBLE/HK\*2

Gigabyte Technology		
Title		
PCI EXPRESS * 16		
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## M.2 Lane4 from PCH port18

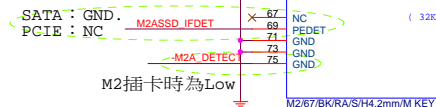
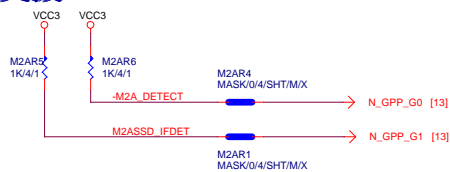
## M.2 Lane3 from PCH port17

## M.2 Lane2 from PCH port16

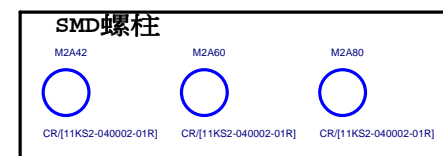
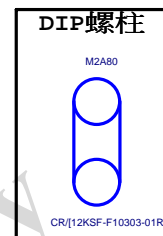
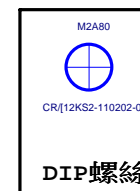
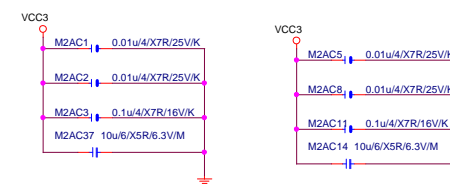
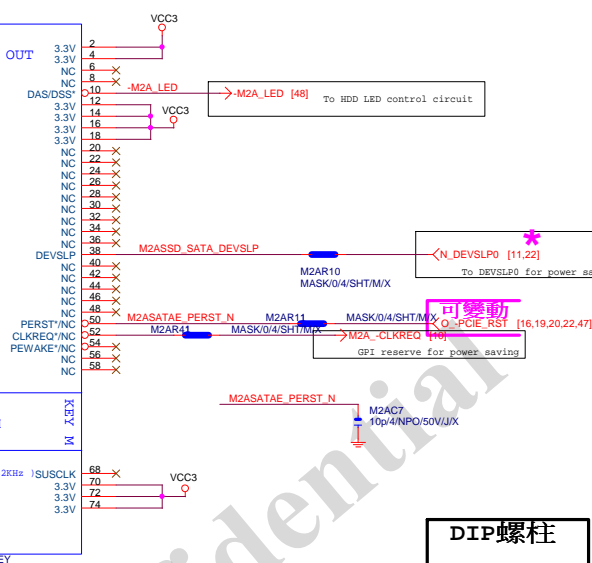
## M.2 Lane2 from PCH port15

需與M2\_-CLKREQ對應

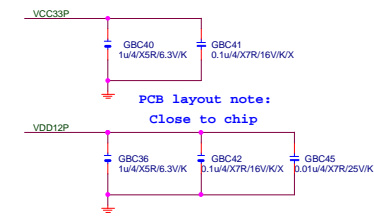
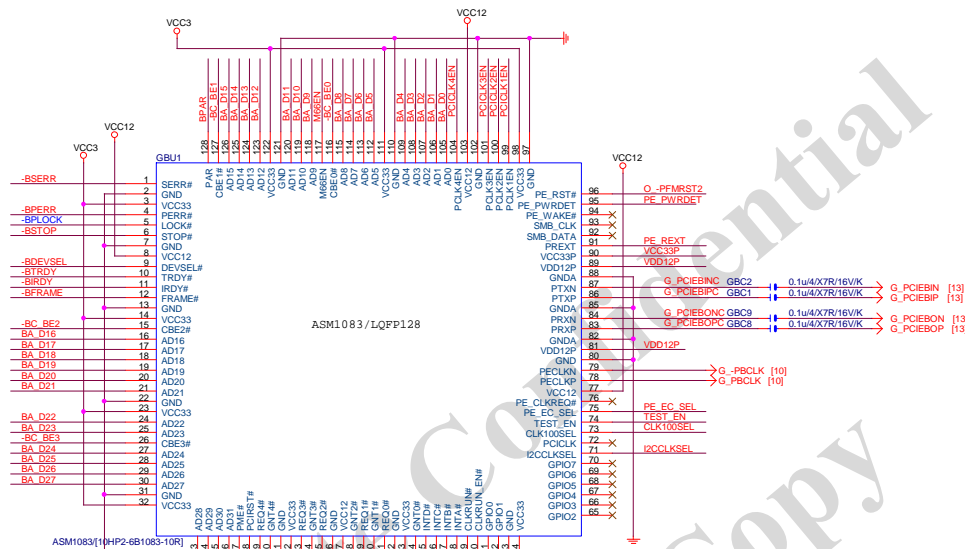
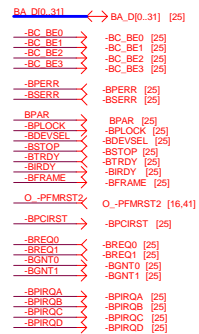
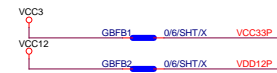
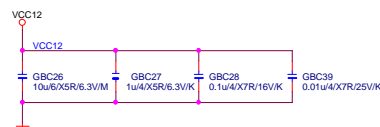
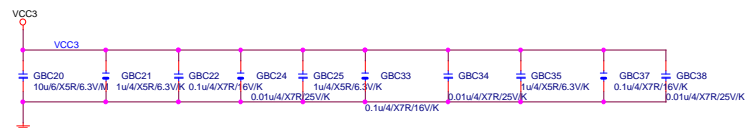
## 支援SATA and M.2 function



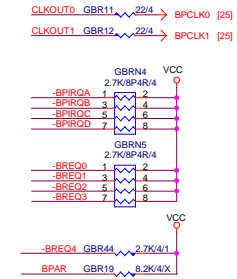
M.2 有插卡 /沒插卡 GPP_G0	M.2插何種卡? GPP_G1	SATA Express 插何種硬碟? GPP_E0/E2/F1	IO15 (S0)	IO16 (S1)	IO17	IO18	IO19 (S0)	IP20 (S1)
有插卡 (Low)	SATA Mode (Low)	SATA (Hi)	SATA (M.2)	PCIE x1	PCIE x1	PCIE x1	PCIE x1	SATA
		SATA Express (Low)	SATA (M.2)	PCIE x1	PCIE x1	PCIE x1	SATA Express	
	PCIE Mode (Hi)	SATA (Hi)	PCIE x4 (For M.2)				SATA	SATA
		SATA Express (Low)	PCIE x4 (For M.2)				SATA Express	
沒插卡 (Hi)	Don't Care (Hi)	SATA (Hi)	PCIE x4				SATA	SATA
		SATA Express (Low)	PCIE x4				SATA Express	







PCB layout note:  
Close to chip



### CLK100SEL Strapping Set

CLK100SEL	H	L
PCIe CLK	100M +/-N%	100M +/-N%
PCICLK_IN	X	33M
PCICLKO	33M +/-N%	33M

```
PE_EC_SEL-
"H" for Express Card mode
"L" for PCIe Riser Card
mode
```

CLK100SEL-  
 "H" for PECLK input only  
 "L" for PECLK & PCICLK  
 input

TEST\_EN-  
"H" for Test Mode Enable

"L" for Test Mode

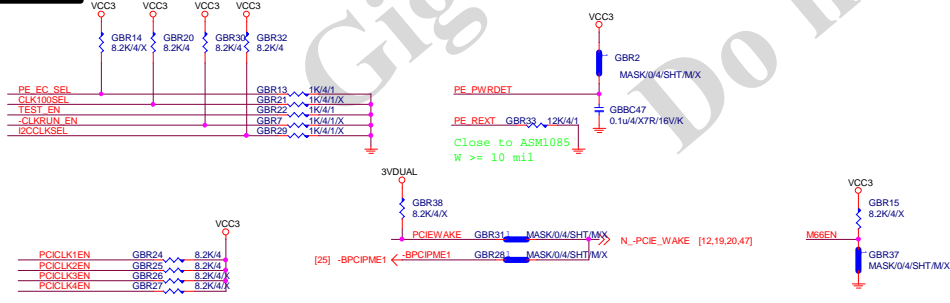
```
Disable
-CLKRUN_EN-
```

"H" for CLKRUN Mode Disab  
"L" for CLKRUN Mode Enabl

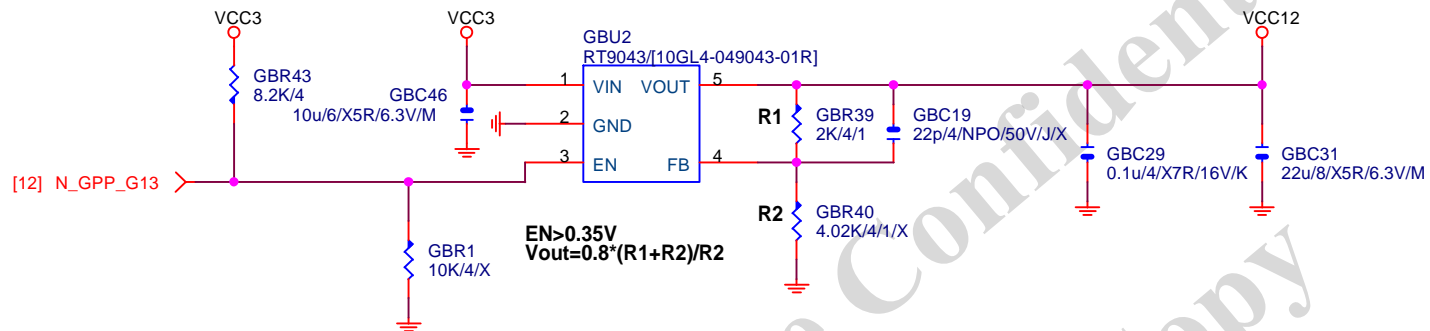
I2CCLKSEL-  
"H" is 135KHz I2CCLK

```
"L" is 67.5KHz I2CCLK
```

---



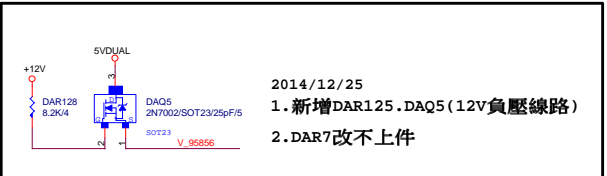
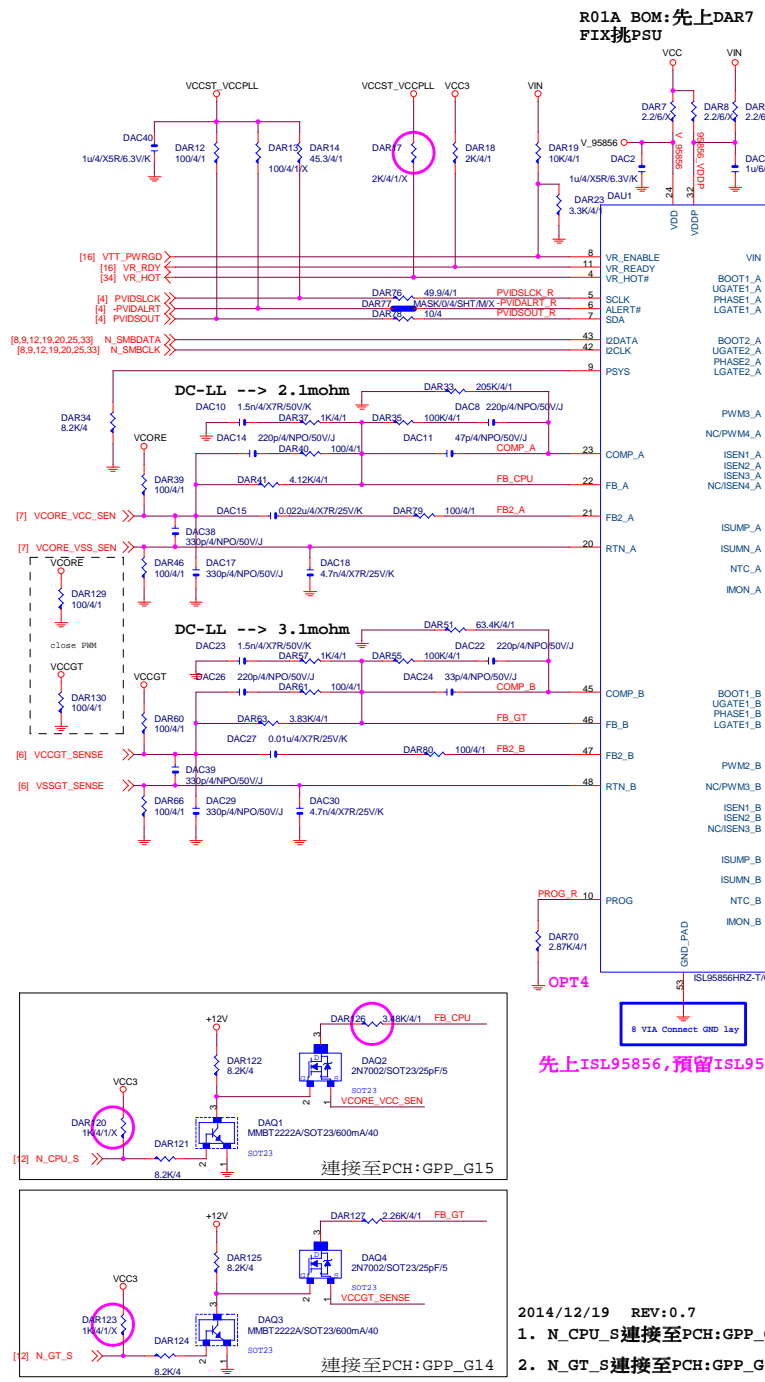
Rev 0.9



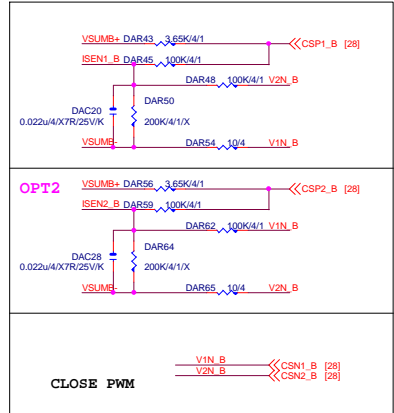
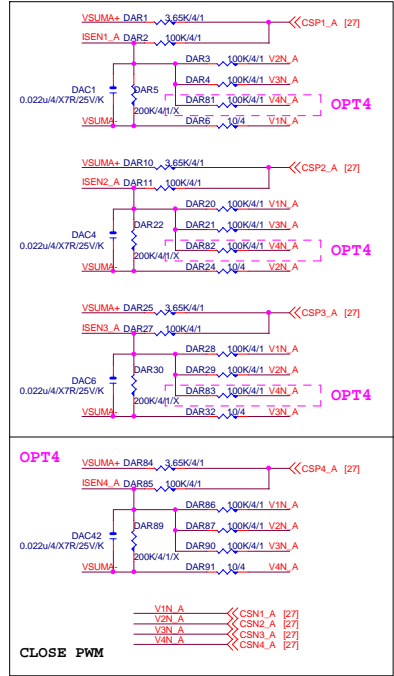
Gigabyte Technology

Title			
ASM1085 POWER			
Size	Document Number		Rev
Custom	GA-Z170M-D3H DDR3		1.0
Date:	Wednesday, July 29, 2015		Sheet 24 of 51



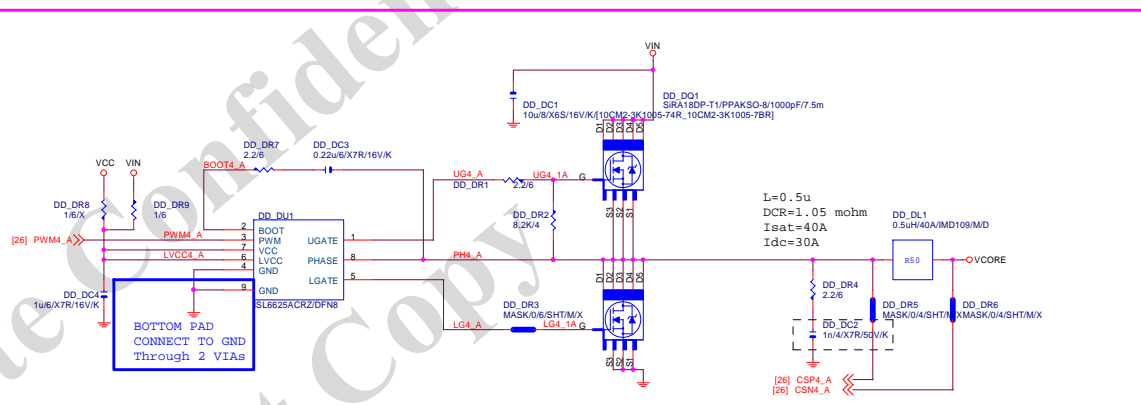
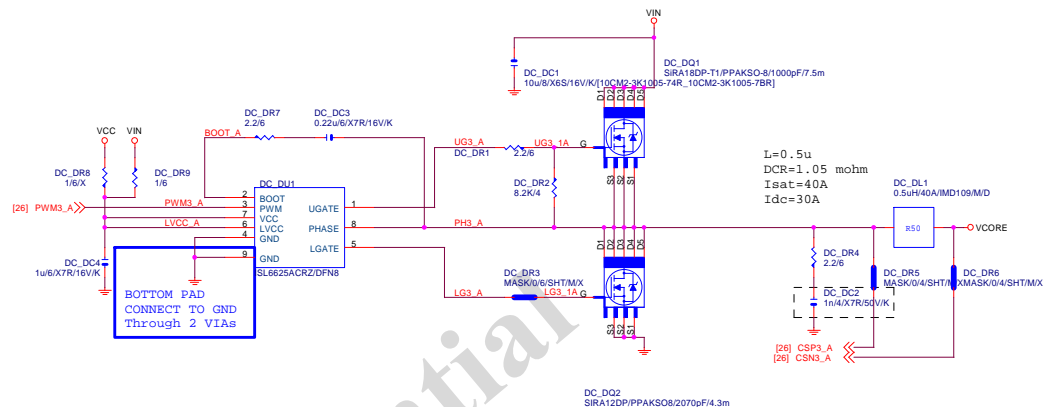


2014/12/25  
1. 新增DAR125, DAQ5 (12V負壓線路)  
2. DAR7改不上件



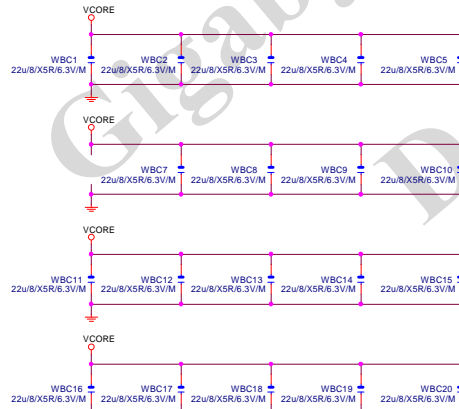
2014/12/19 REV:0.7  
1. N\_CPU\_S連接至PCH:GPP\_G15  
2. N\_GT\_S連接至PCH:GPP\_G14

## REV:1.0 (IRON CHOKE)



## VCORE CAP

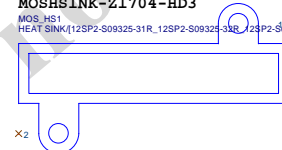
560u\*8PCS  
22u\*29PCS



## MOSHSINK

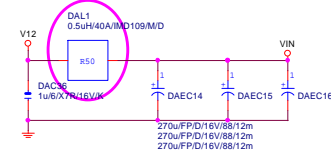
MOSHSINK-Z1704-HD3

MOS\_HS1  
HEAT SINK/12SP2-S09325-31R\_12SP2-S09325-33R\_12SP2-S09325-33R

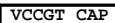


## VIN CAP

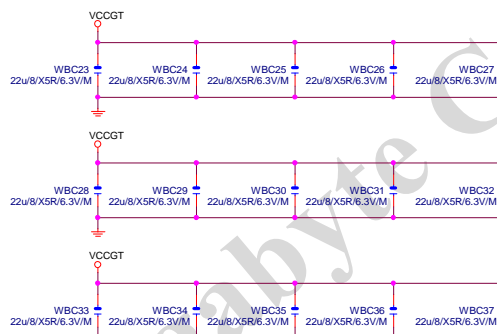
270u\*3PCS



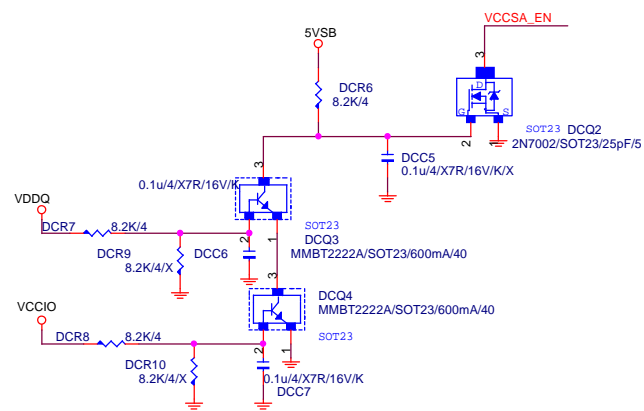
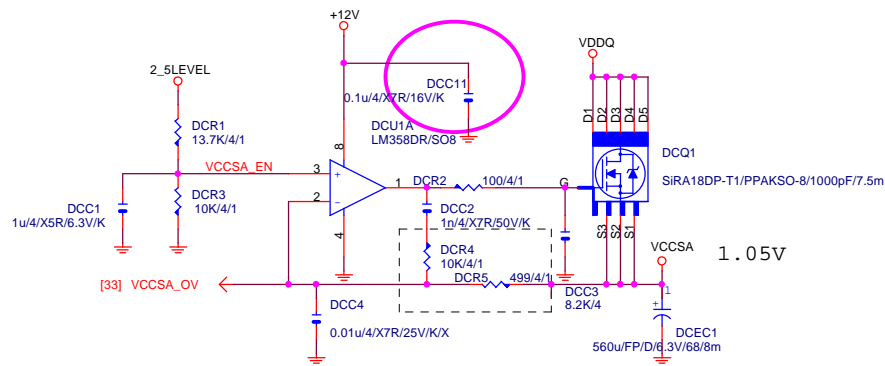
REV:1.0 (IRON CHOKE)



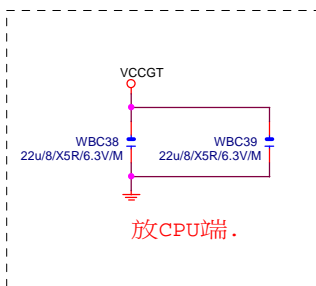
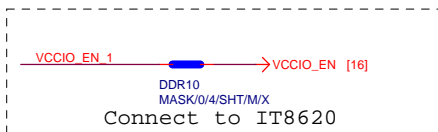
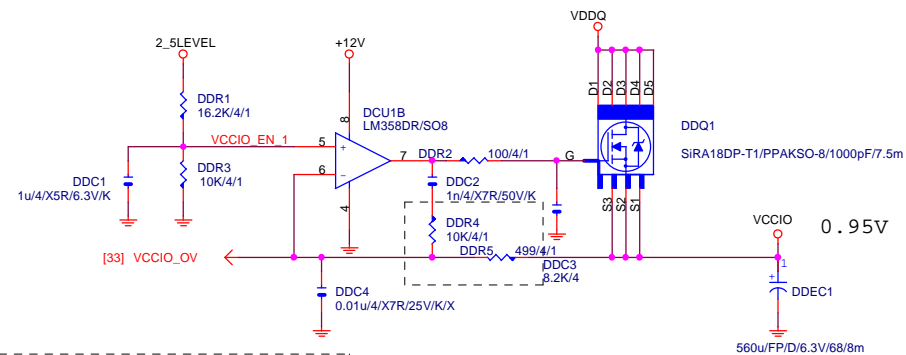
560u/FP/D/6.3V/68/8m  
560u/FP/D/6.3V/68/8m  
560u/FP/D/6.3V/68/8m  
560u/FP/D/6.3V/68/8m  
560u/FP/D/6.3V/68/8m



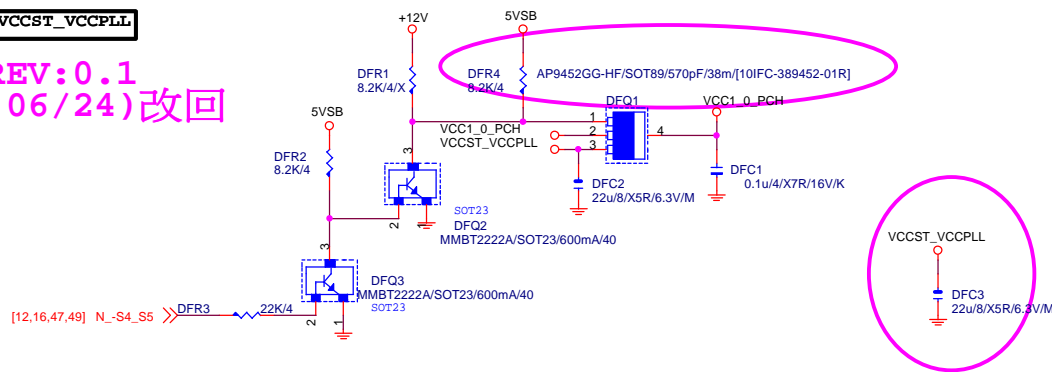
VCCSA REV:0.4

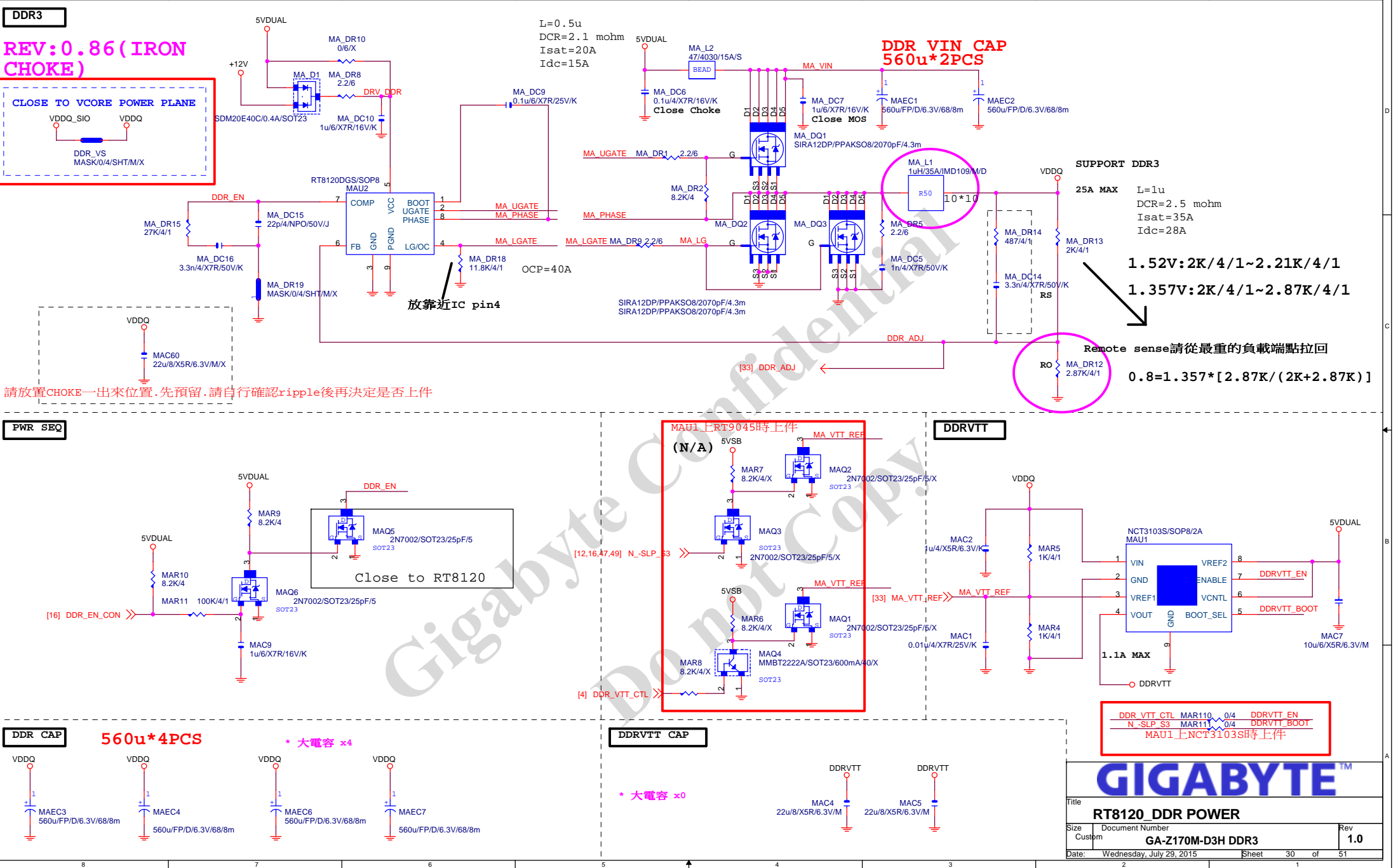


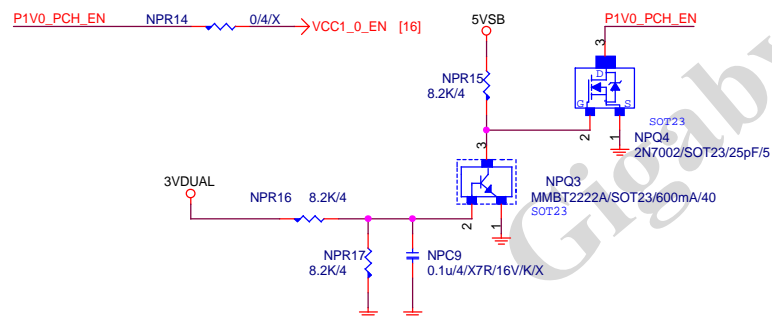
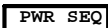
VCCIO



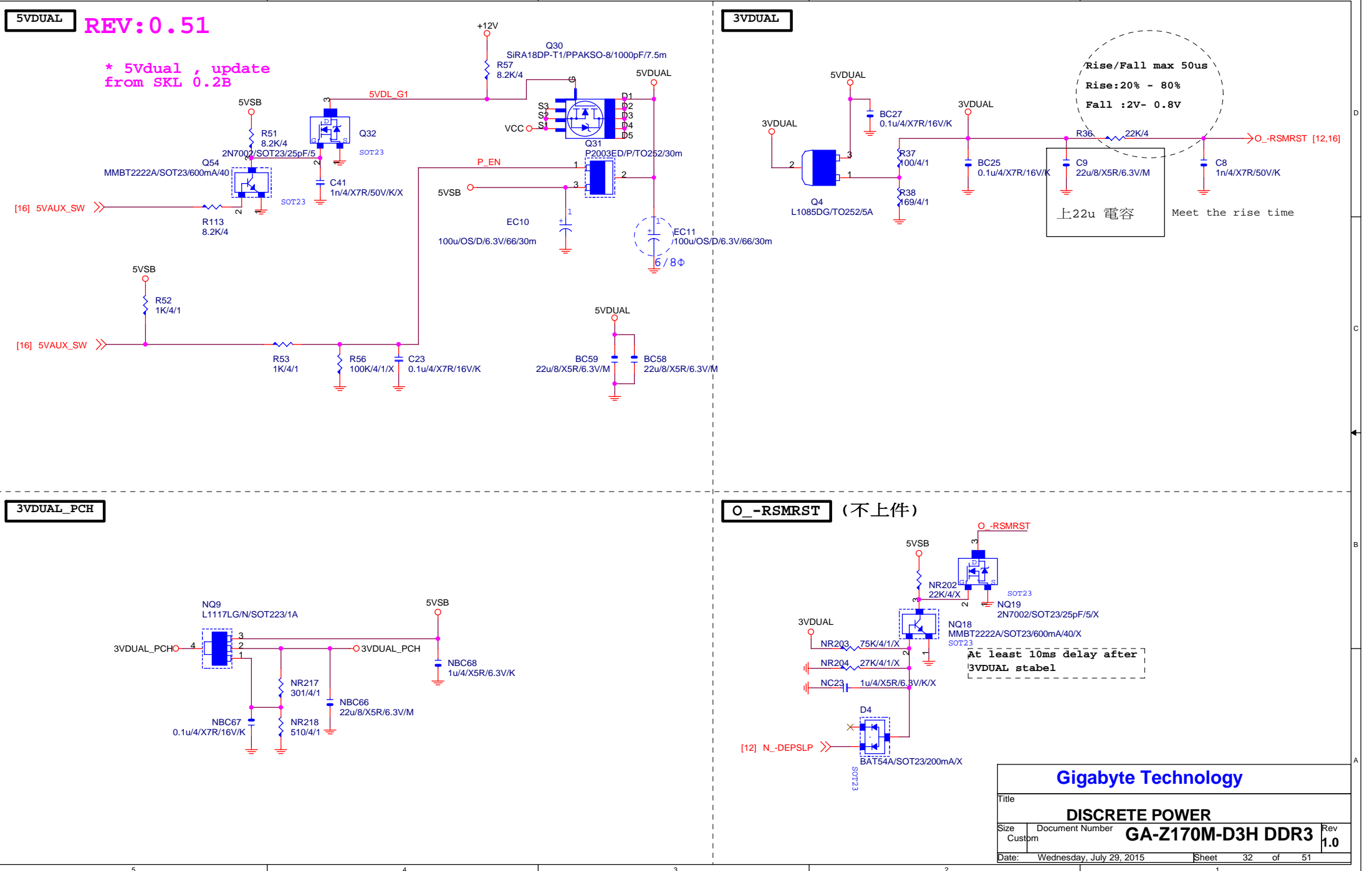
VCCST\_VCCPLL REV:0.1 (06/24)改回



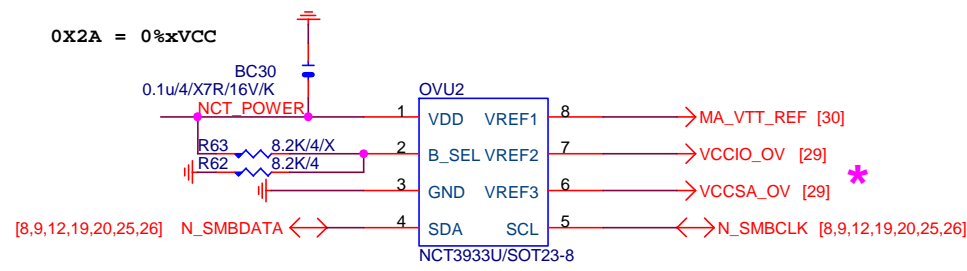
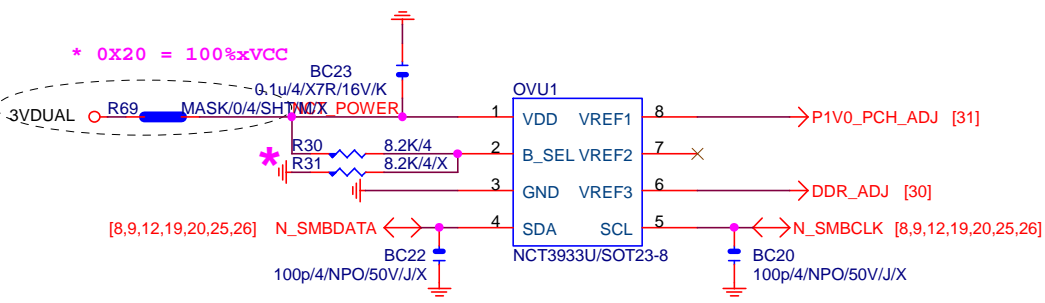


**GIGABYTE™**

Title			
RT8120_PCH POWER			
Size	Document Number	Rev	
Custom	GA-Z170M-D3H DDR3	1.0	
Date:	Wednesday, July 29, 2015	Sheet	31 of 51



OVER VOLTAGE



0X22 = 75%xVCC

\* 删除 OVU3

NCT3933	0X2A	0X20	0X22
VREF1	DDRVTT	VREF_DDRA_DQ	PCH Core
VREF2	VREF_DDRA_CA	N/A	VCC1_5_PCH
VREF3	VREF_DDRA_CA	VREF_DDRB_DQ	SMREF

**Gigabyte Technology**

TitleCPU CORE VR-2

Size Custom

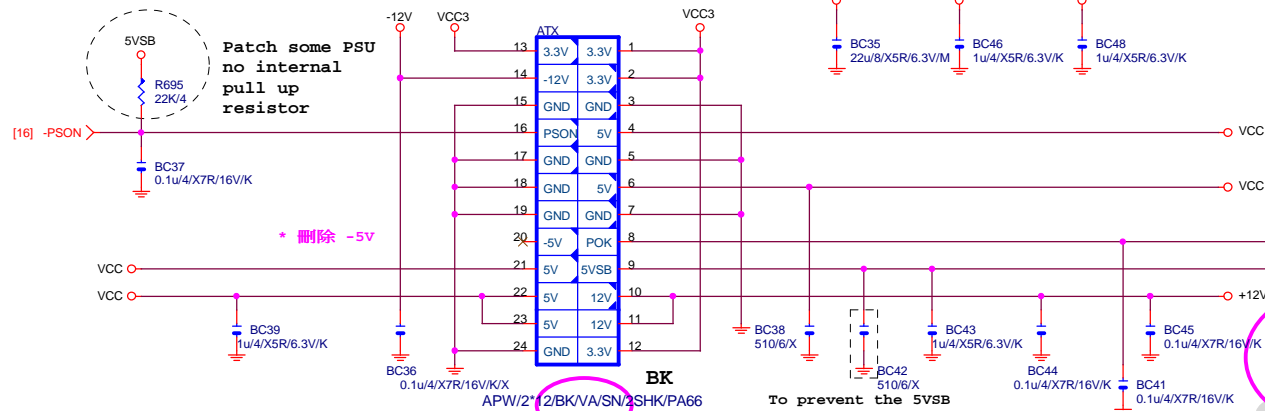
Document Number

**GA-Z170M-D3H DDR3**

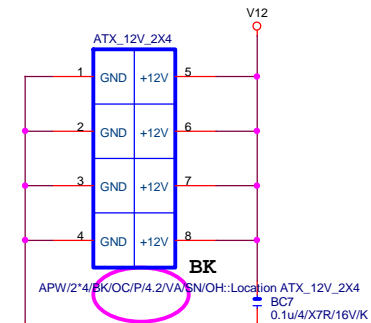
Rev1.0

Date: Wednesday, July 29, 2015Sheet 33 of 51

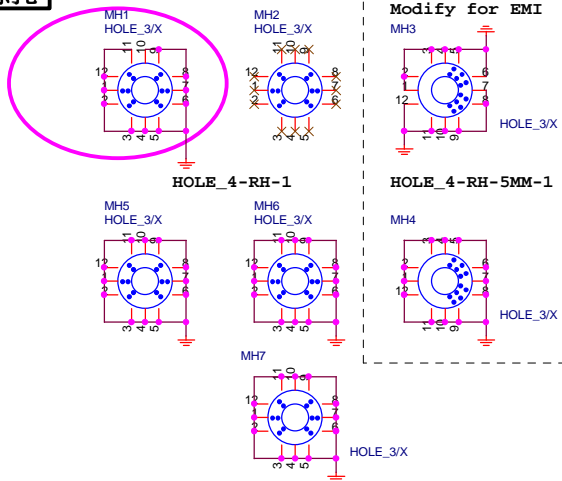
## ATXX24 POWER CONNECTOR



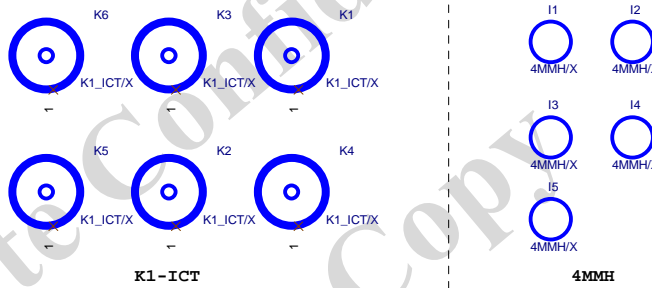
## ATXX4 POWER CONNECTOR



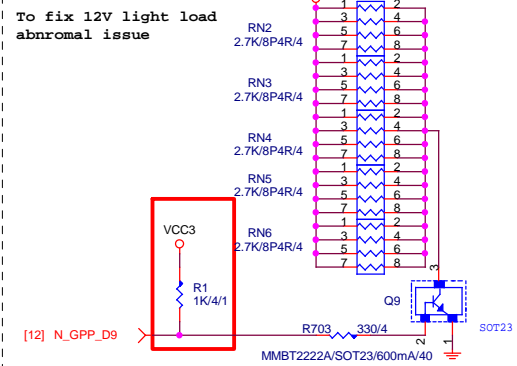
## 螺絲孔



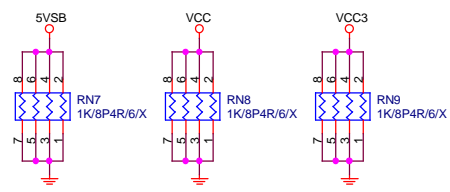
## 固定孔/光學點



## +12V DUMMY LOAD



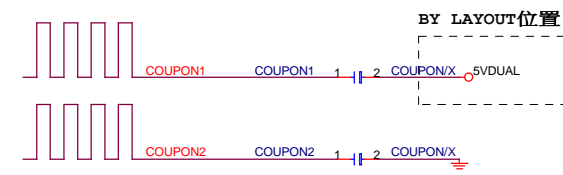
## DUMMY LOAD



## -PROHOT



## COUPON



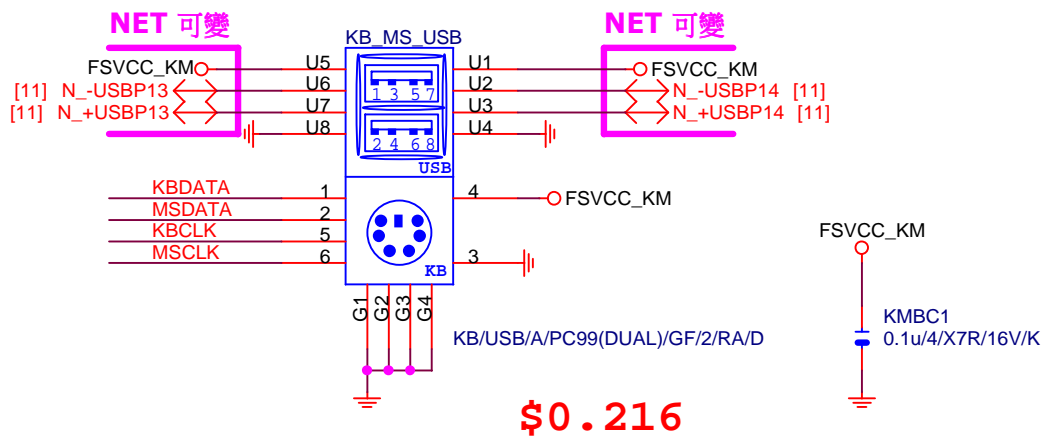
## Gigabyte Technology

Title			
ATX POWER CONNECTOR			
Size	Document Number	GA-Z170M-D3H DDR3	
Custom		Rev	1.0
Date:	Wednesday, July 29, 2015	Sheet	34 of 51

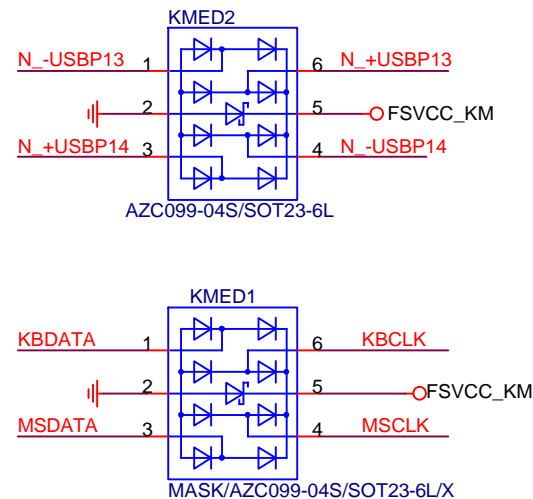
【技術通報R&D技術通報153】

## KB\_MS\_USB

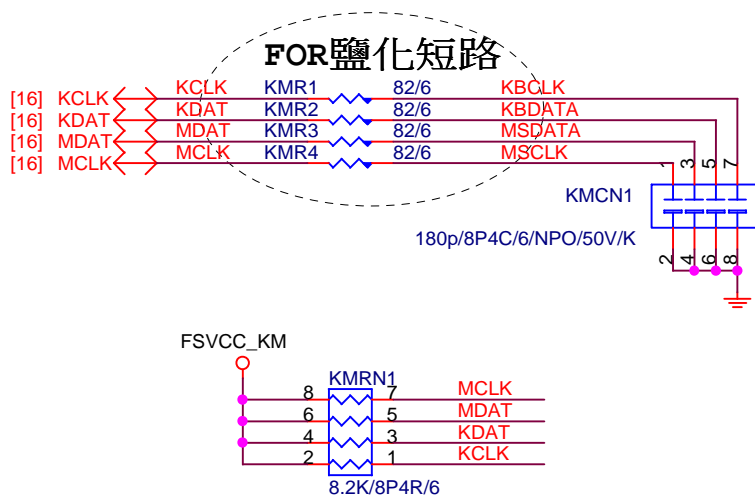
Rev: 0.7



## ESD

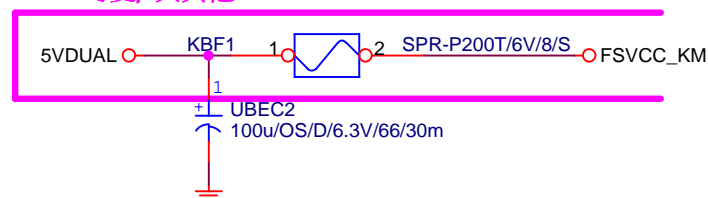


## KB\_MS\_USB DAMPING/PU

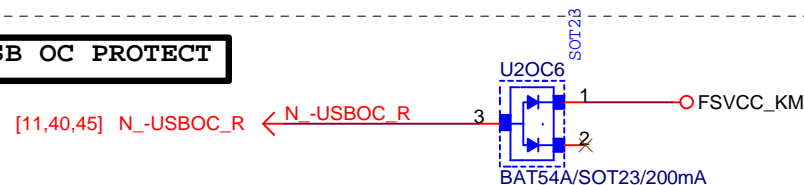


## KB\_MS\_USB PWR

## NET 可變, 與其他USB SHARE



## USB OC PROTECT



Gigabyte Technology

Title

KB\_MS\_USB

Size

Document Number

GA-Z170M-D3H DDR3

Rev

1.0

Date:

Wednesday, July 29, 2015

Sheet

35

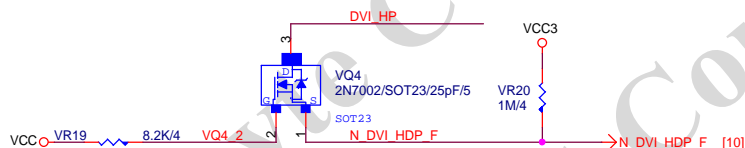
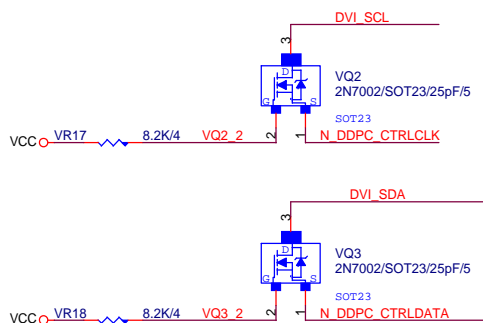
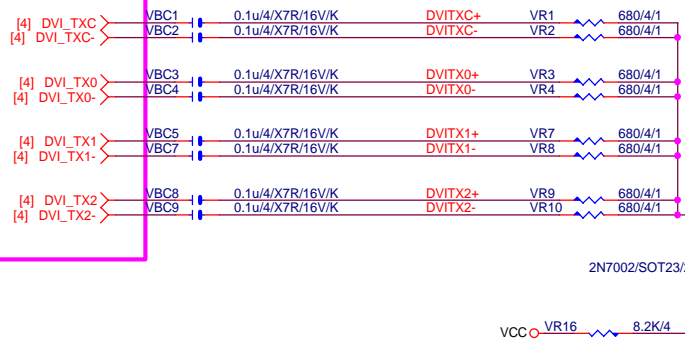
of 51

DVI

Rev: 0.7

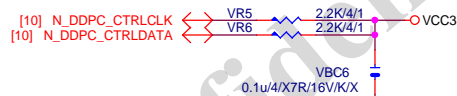
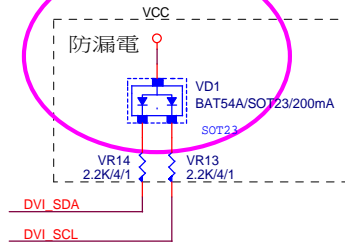
DVI: 20/4/6/4/20  
Impedance=85 +- 17.5%

NET 可變



DVI PU

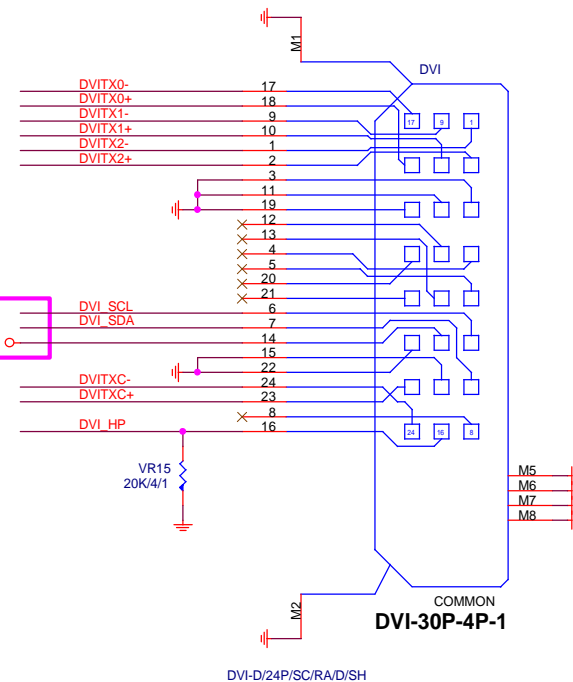
R&amp;D技術通報 162



DVI CONN

NET 可變

\* FSVCC\_KM

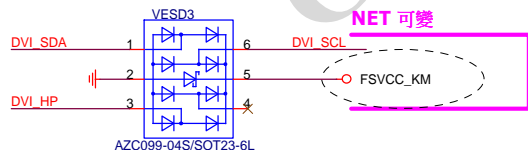
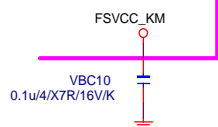


平躺式 DVI-D

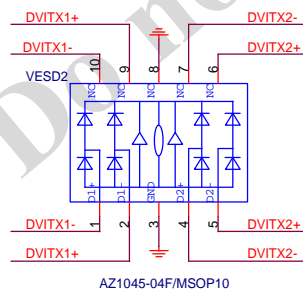
11NR6-501024-31

ESD

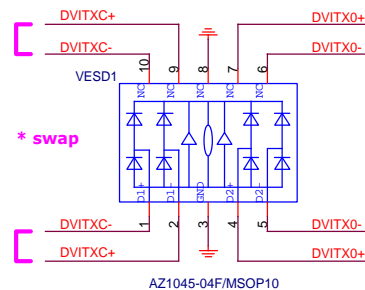
NET 可變



Close to connector



Close to connector



Close to connector

Gigabyte Technology

Title		DVI	
Size	Document Number	GA-Z170M-D3H DDR3	
Custom		1.0	
Date:	Wednesday, July 29, 2015	Sheet	36 of 51

ROM PART: PTN3356R1BS/[10HQ5-A23356-10R]  
FLASH PART: PTN3356F1BS/[10HQ5-A23356-20R]

省X'TAL COST DOWN:

1. 上件:

DVC28 [10p/4/NPO/50V/J]

DVC11 [10p/4/NPO/50V/J]~修改值  
DVR10 [8.2K/4]

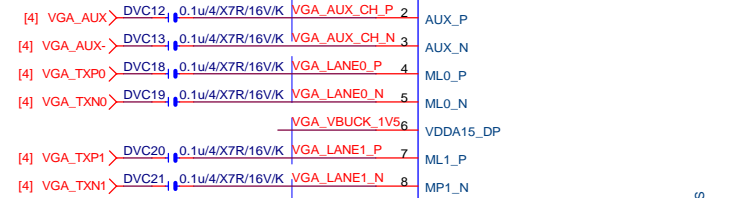
2. 删除:

DVX1 [25M/16p/30ppm/49US/20/D]

DVC10 [20p/4/NPO/50V/J]

DVR9 [8.2K/4]

## \* CPU DP端

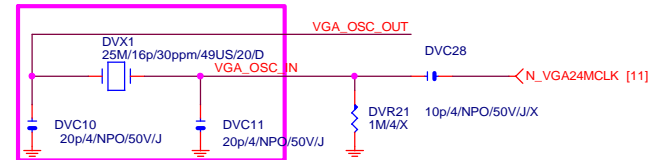


## 放置PCH端



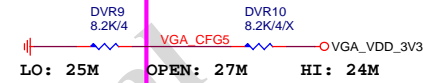
## 25M Crystal

FROM PCH 24MHZ ISSUE

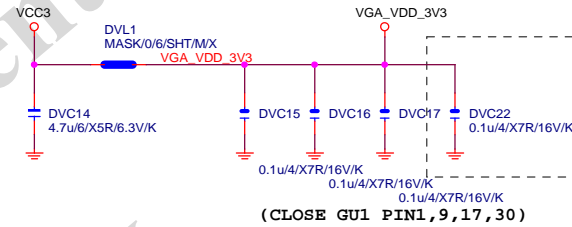


## CFG5

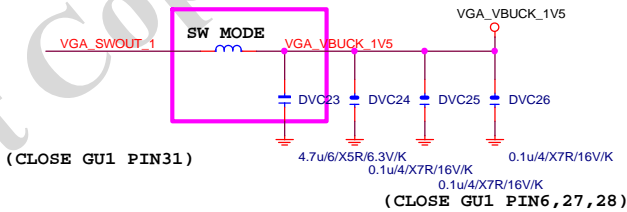
For Crystal Less



## ADAPTER POWER

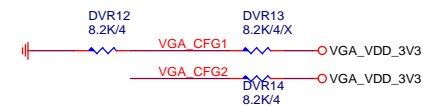


LDO MODE: DVL2, DVC23-->X  
S.W MODE: DVL2, DVC23-->O



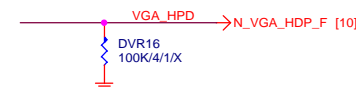
## CFG1&2

Non-Compliant



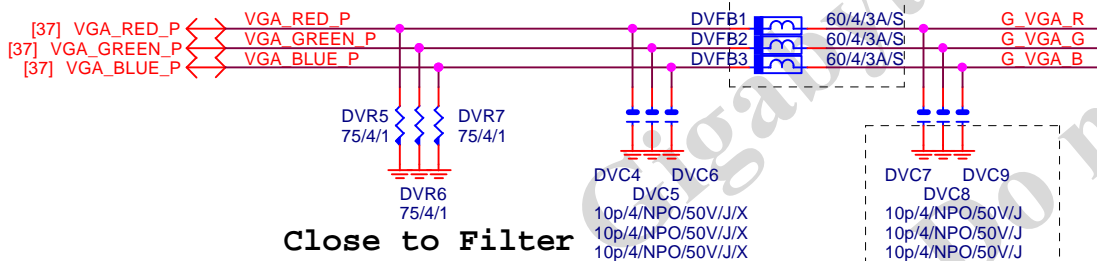
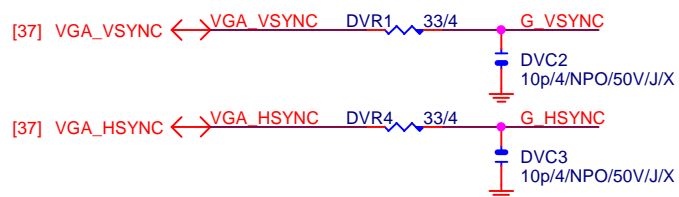
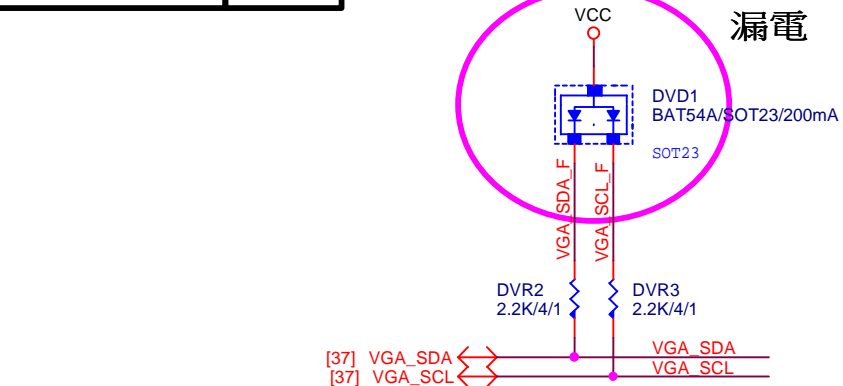
## HPD

PCH端 \*



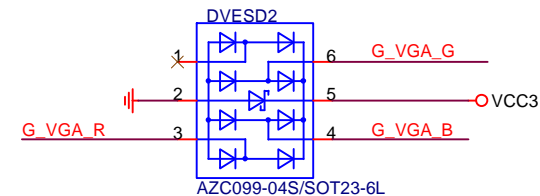
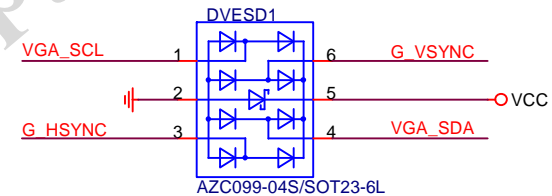
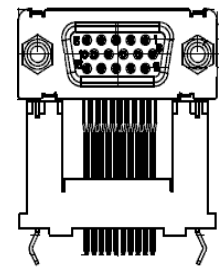
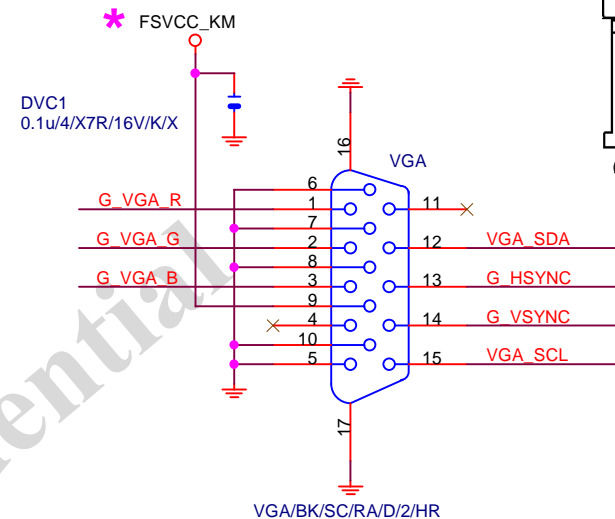
Gigabyte Technology  
NXP-PTN3356

Title	GA-Z170M-D3H DDR3	Rev	1.0
Size	Document Number		
Custom			
Date:	Wednesday, July 29, 2015	Sheet	37 of 51



Close to Filter

FOR EMI

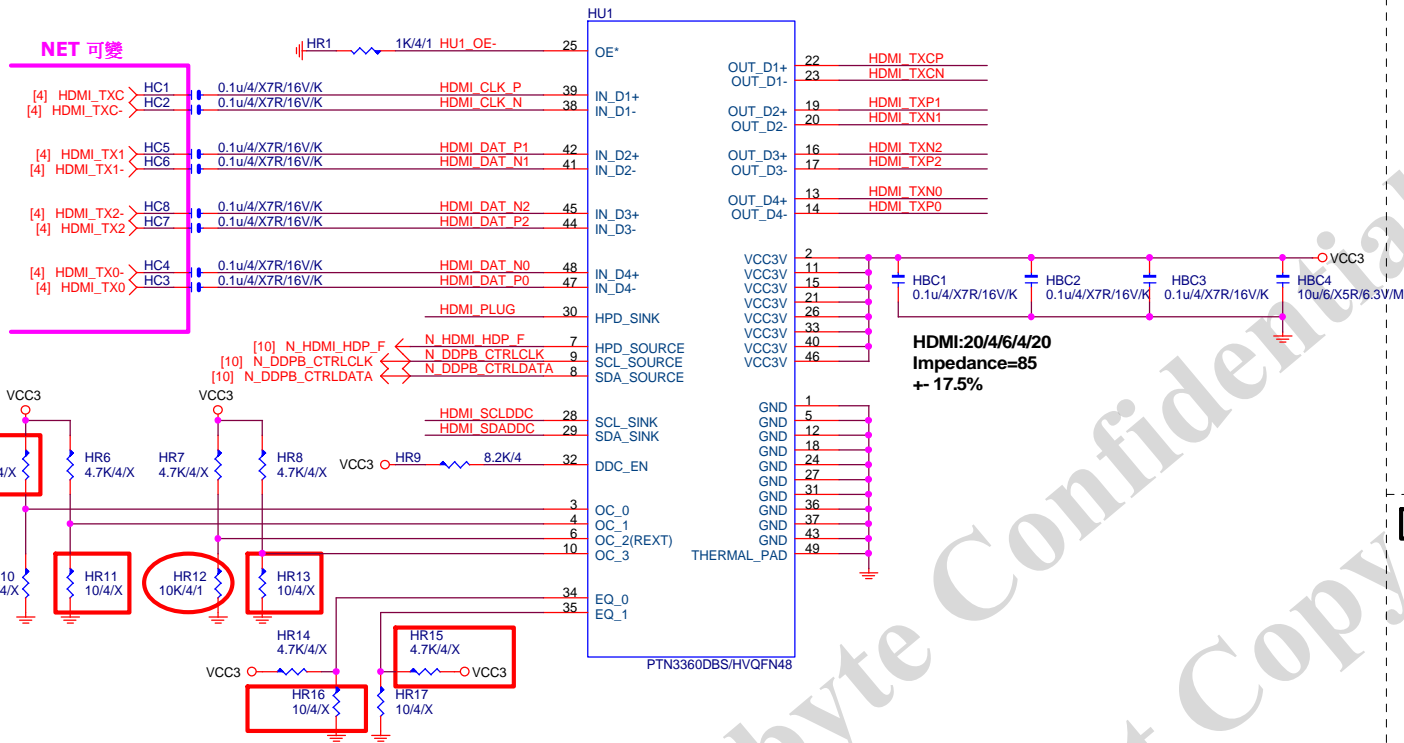


Gigabyte Technology  
NXP-PTN3356

Title					<b>NXP-PTN3356</b>					
Size		Document Number			<b>GA-Z170M-D3H DDR3</b>			Rev		
Custom								1.0		
Date:		Wednesday, July 29, 2015			Sheet		38		of 51	

## HDMI LEVEL SHIFT

Rev: 0.7



PTN3360:PIN 4/10/34/35 NC PIN,都不上值;只上HR12:10K

ASM1442:紅色框要上,HR12:3.16K

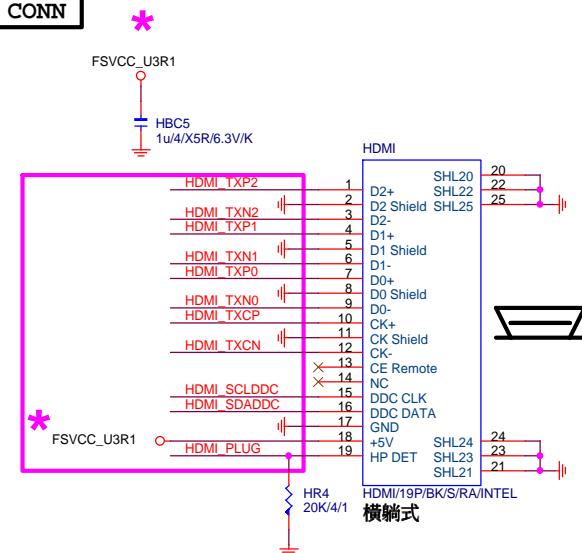
## 【技術通報R&amp;D技術通報150】

HDMI eye diagram 1.4版(deep color)會fail

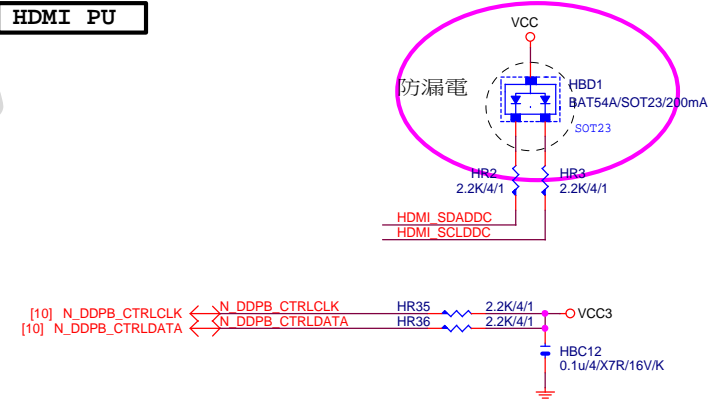
原因: 因目前的HDMI訊號過長,造成RISING TIME過慢,而會壓到eye diagram

改善: ASMEDIA ASM1442 : 3.16K(PIN6 PULL DOWN電阻) 10ohm(PIN4 PULL DOWN電阻)

## HDMI CONN



## HDMI PU

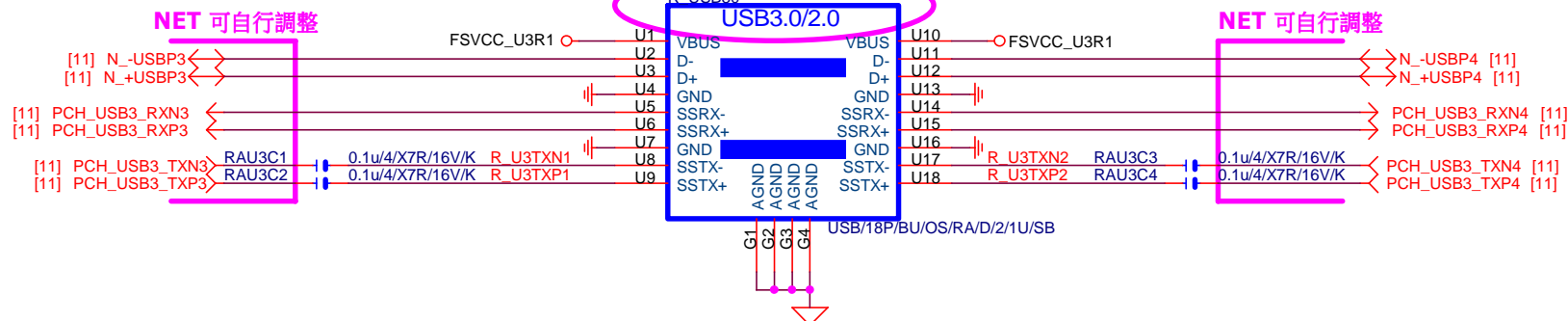


Gigabyte Technology

Title		HDMI	
Size	Document Number	GA-Z170M-D3H DDR3	
Custom		1.0	
Date:	Wednesday, July 29, 2015	Sheet	39 of 51

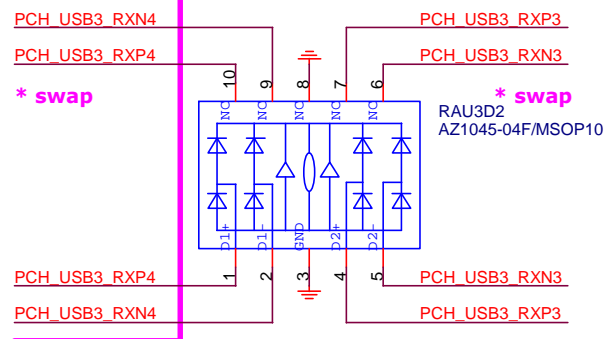
Rev: 0.7

ESD 可自行SWAP PIN ,CONN端 NET 名稱 不可

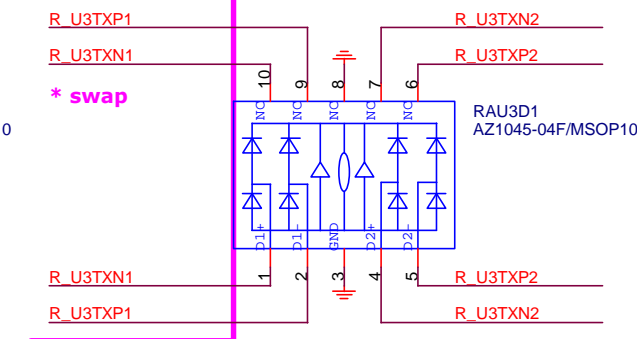


ESD

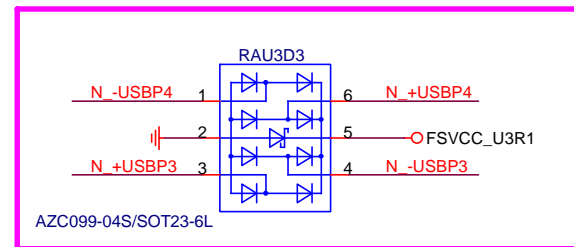
**NET 可自行調整**



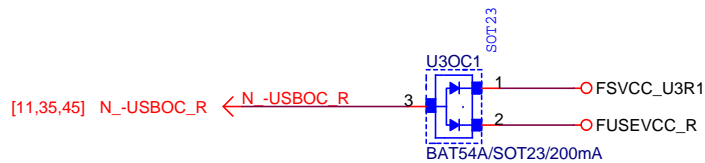
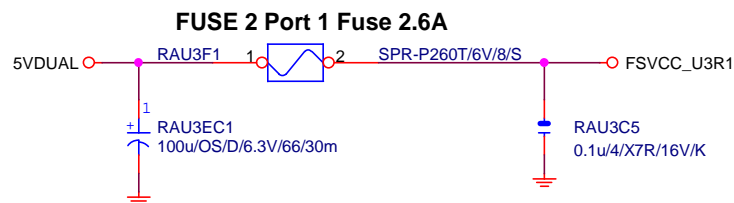
**NET 可自行調整**



**NET 可自行調整**



FUSE



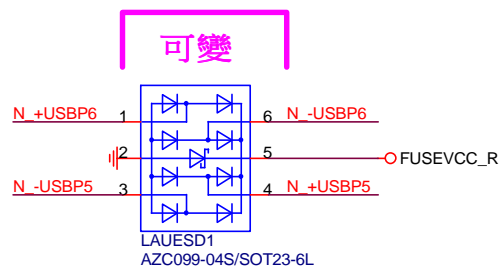
Gigabyte Technology

Title			R_USB30,USB_OC	
Size			Document Number	
Custom			GA-Z170M-D3H DDR3	
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				Rev 1.0



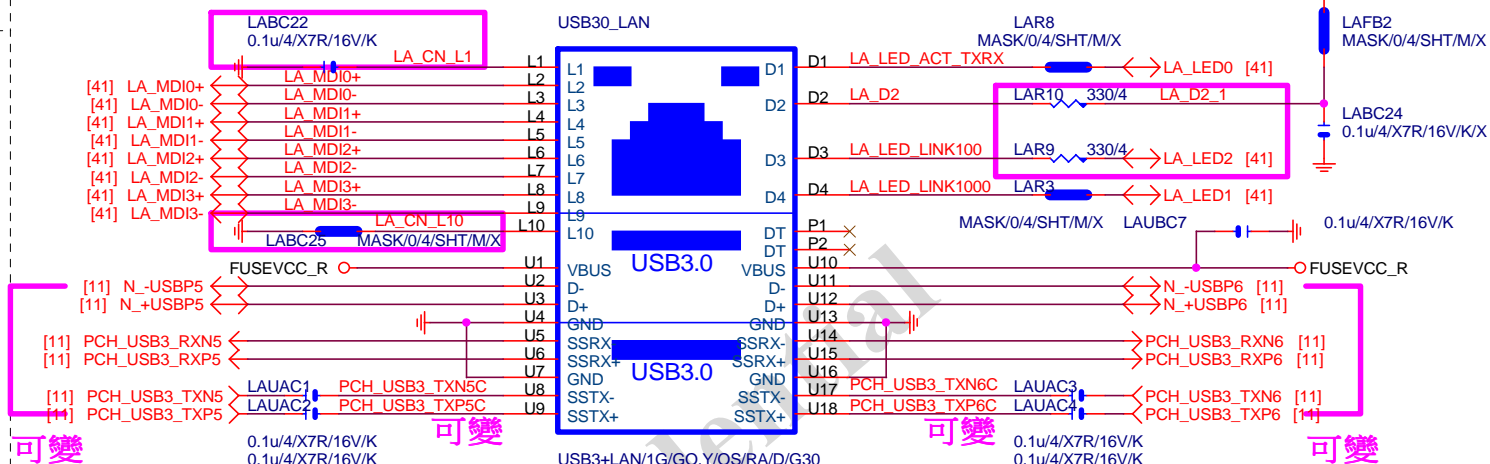
## R1.1

note:可變更USB NAME



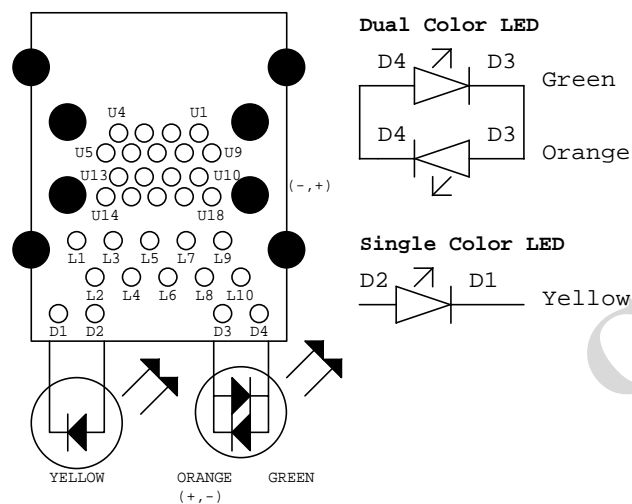
note:可變更USB NAME

[ I219 ]



LA MDI-->100歐姆:[20/4/8/4/20]

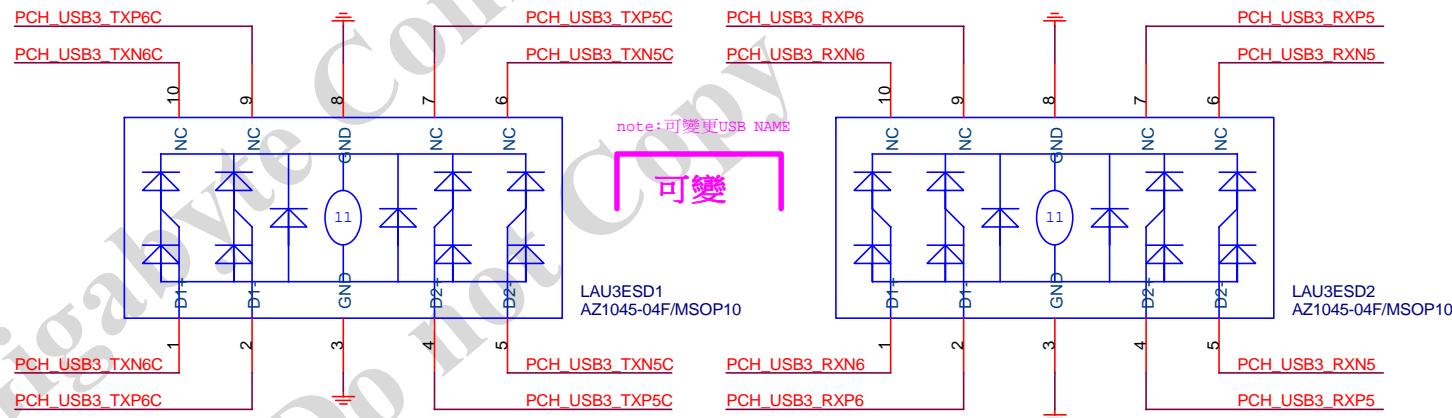
### USB30\_LAN LAYOUT示意圖



FOOT PRINT:LAN COVER

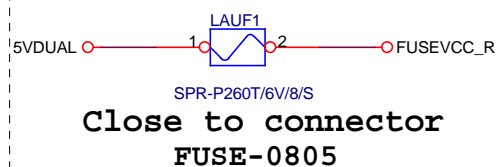
可變  
[視SPEC需求]

[-D3H不加蓋]



note:可變更FUSE

## 可變

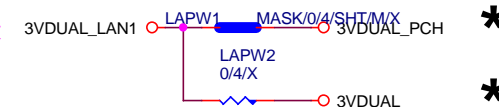


PS:視EMI需求

LAR24 MASK/0/4/SHT/M/X

note: lan power連接及電流

可變



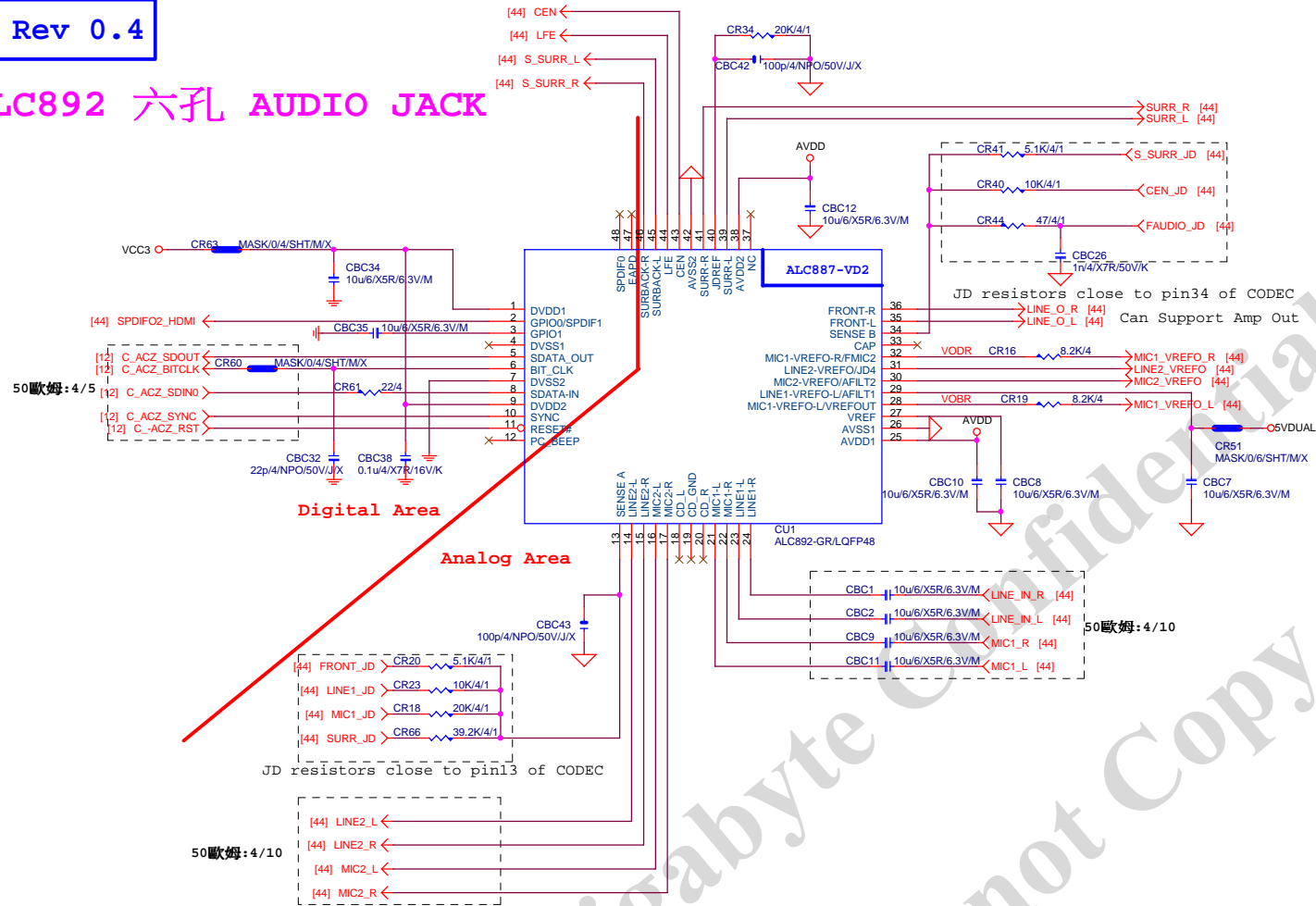
## Gigabyte Technology

## LAN CONNECTOR-I219

**GA-Z170M-D3H DDR3**

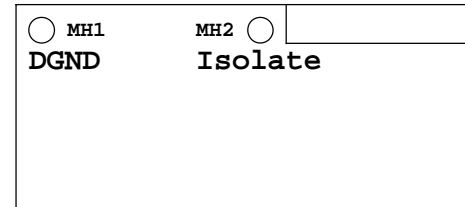
Rev	1.0
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## ALC892 六孔 AUDIO JACK

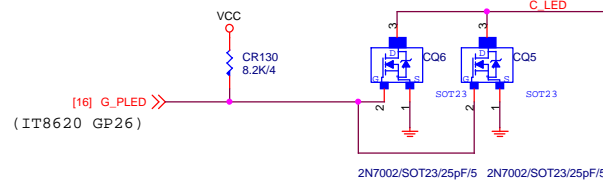
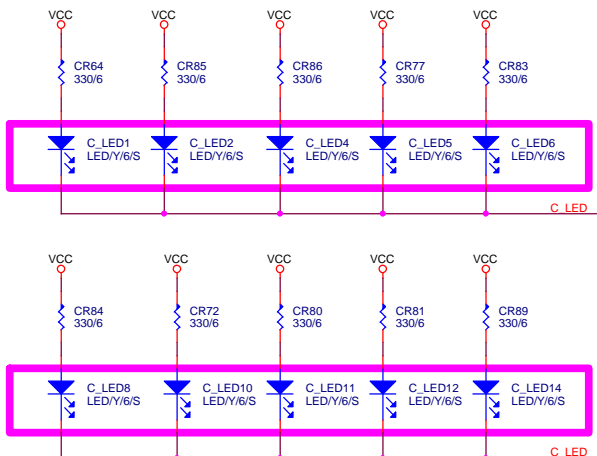


LAYOUT注意: 螺絲孔下GND方式

- MH1空間夠, 下DGND  
空間不夠, 改為Isolate
- MH2一律改為Isolate



VALUE可變, LED顏色請自行修改  
(預設: 低亮度黃色LED: LED/Y/6/S)



\*料號後補

BOM OPTION :

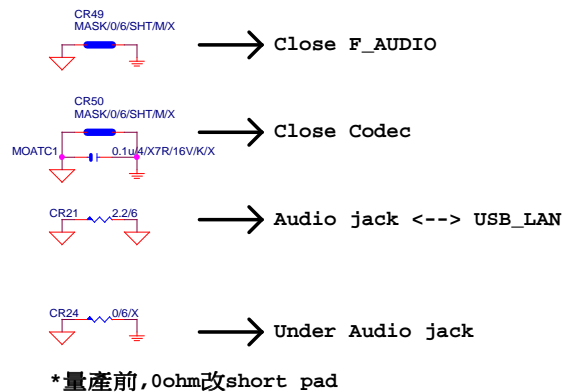
- Chemicon音效電容
- 金屬外罩 Reserve (上件與否, 依照各Model spec)
- LED Reserve (上件與否和LED顏色, 依照各Model spec)

LAYOUT注意: 要加  
GND切割線

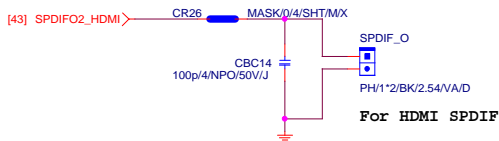
音效區域印刷



Gigabyte Technology			
Title HD AUDIO ALC887			
Size Custom	Document Number	GA-Z170M-D3H DDR3	Rev 1.0
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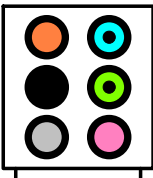


## SPDIF\_OUT

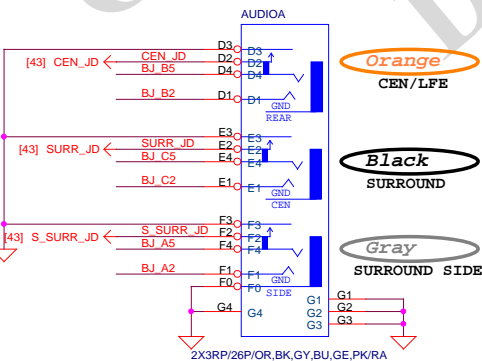
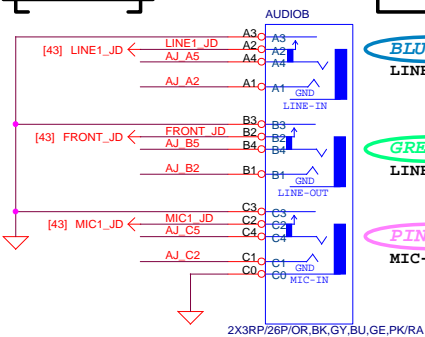


## SPDIF\_IN

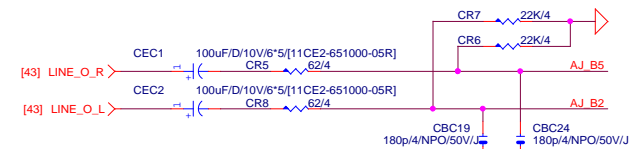
## AZALIA JACK



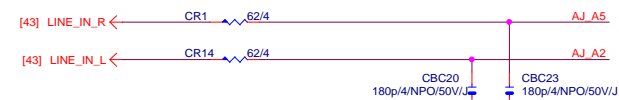
## AZALIA JACK

BLUE  
LINE-INGREEN  
LINE-OUTPINK  
MIC-IN

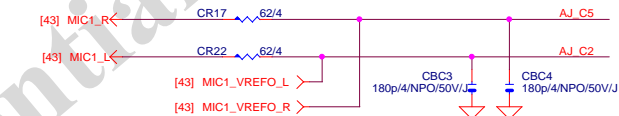
## LINE-OUT



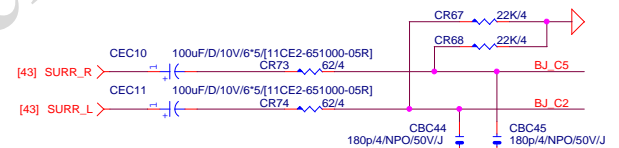
## LINE-IN



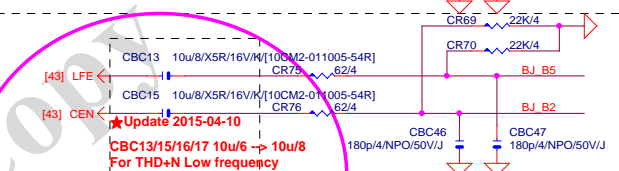
## MIC-IN



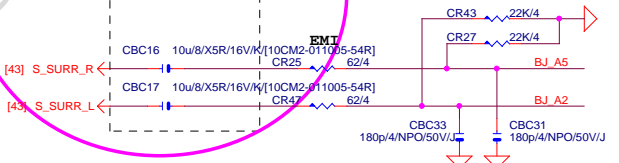
## SURROUND



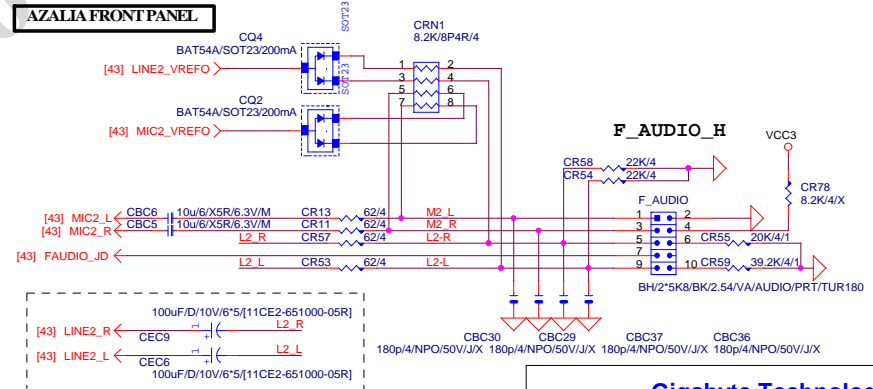
## CEN/LFE



## SURRBACK



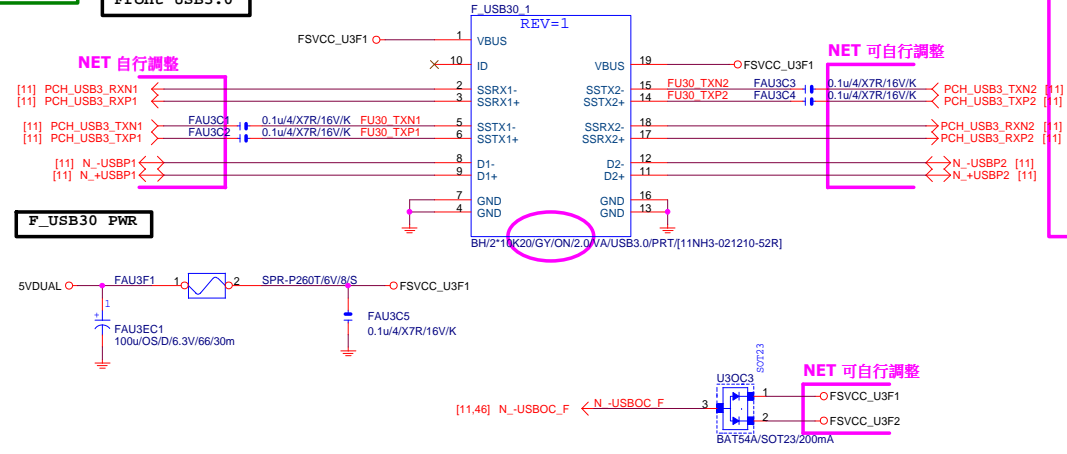
## AZALIA FRONT PANEL



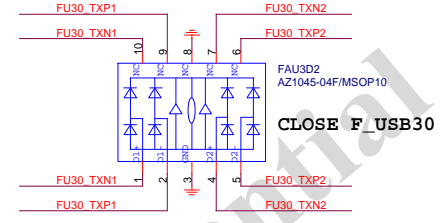
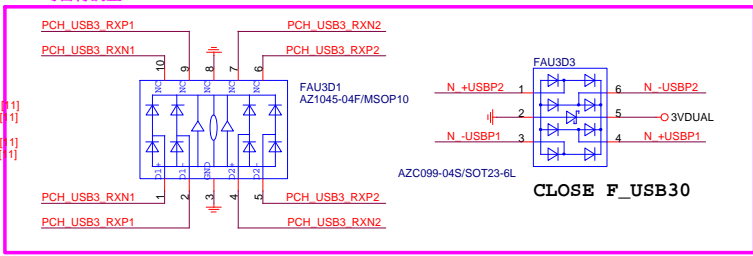
Gigabyte Technology

Title				Rev 1.0
AUDIO JACK				
Size Custom	Document Number GA-Z170M-D3H DDR3			
Date: Wednesday, July 29, 2015				
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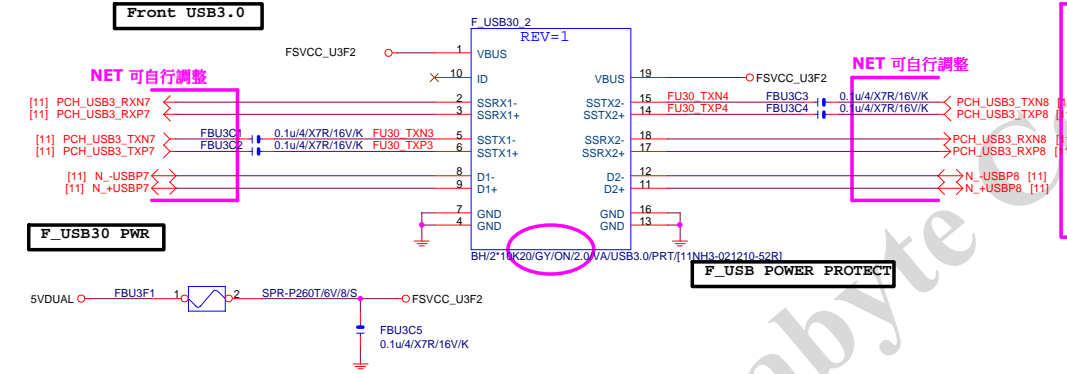
Front USB3.0



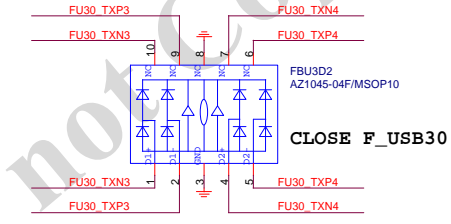
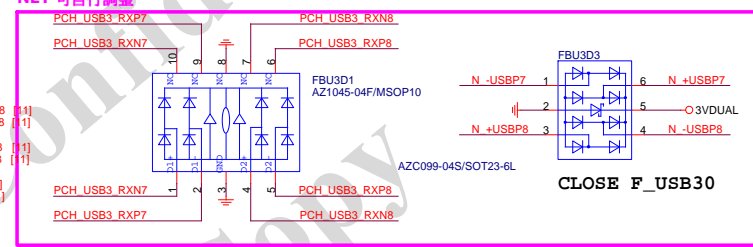
NET 可自行調整



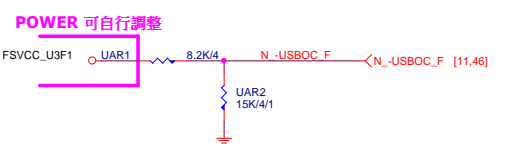
Front USB3.0



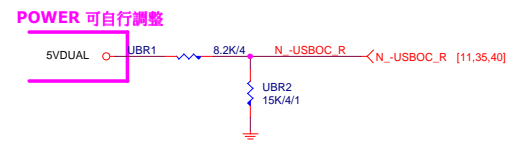
NET 可自行調整



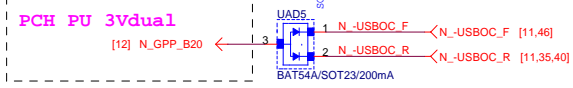
-USBOC\_F



-USBOC\_R

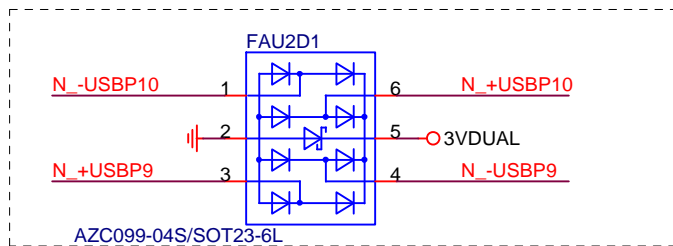
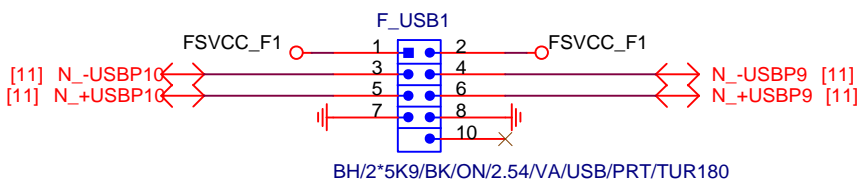


\* 接 PCH N\_GPP\_B21



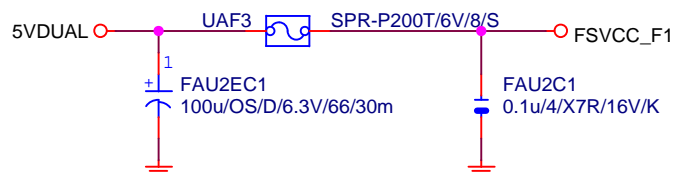
NET 可變

## FUSB2X5-HS



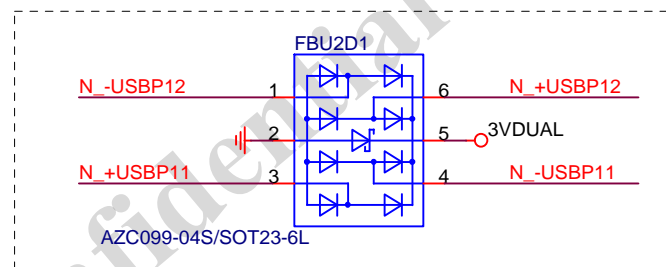
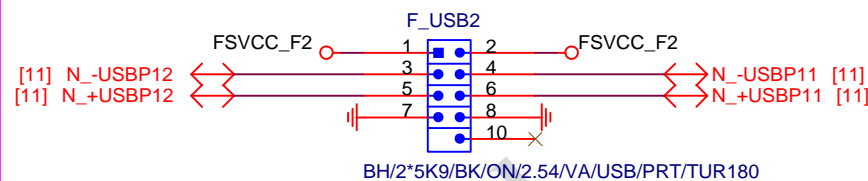
## Close to connector

## FUSE 2 Port 1 Fuse 2A



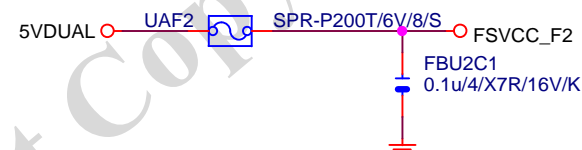
NET 可變

## FUSB2X5-HS

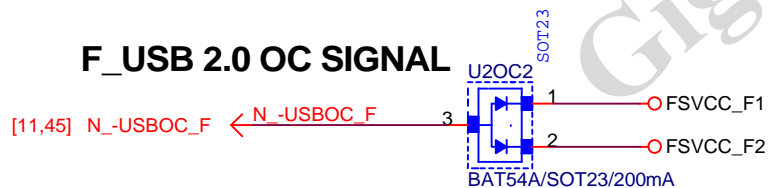


## Close to connector

## FUSE 2 Port 1 Fuse 2A



## F\_USB 2.0 OC SIGNAL



Gigabyte Technology

Title

USB2.0

Size  
A

Document Number

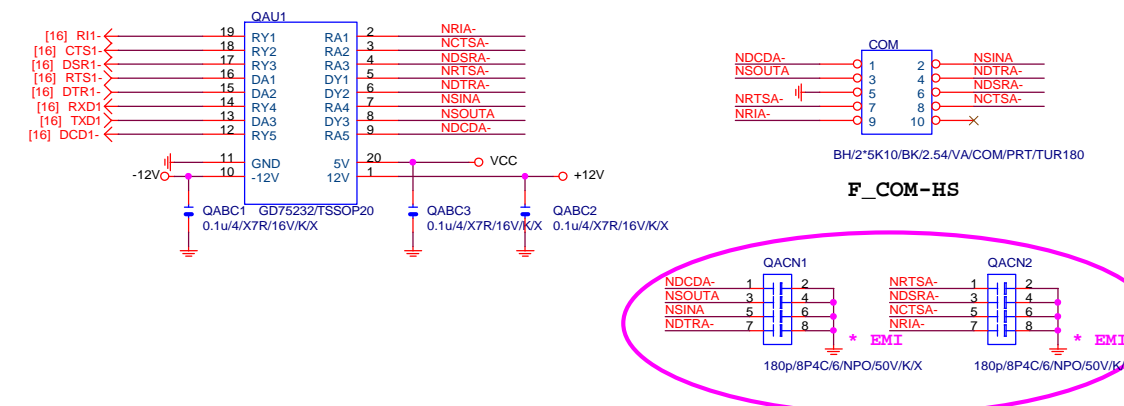
GA-Z170M-D3H DDR3

Rev.  
1.0

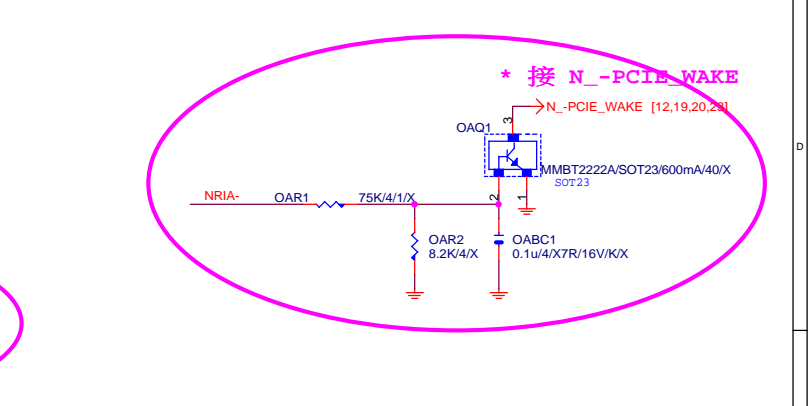
Date: Wednesday, July 29, 2015

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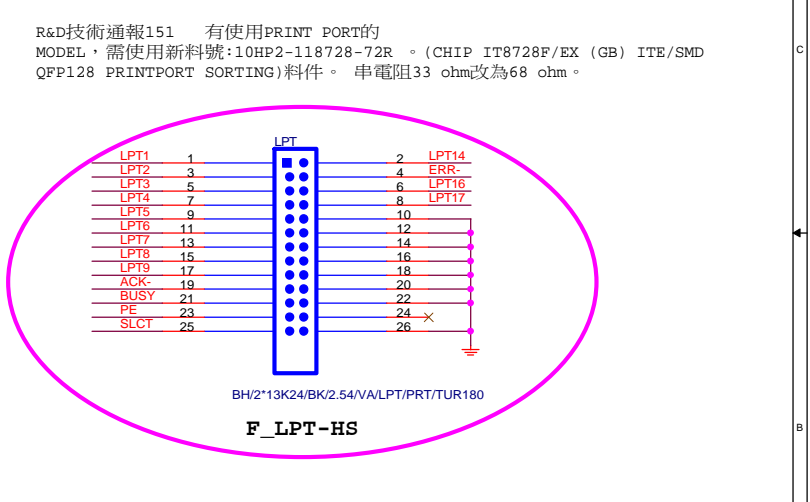
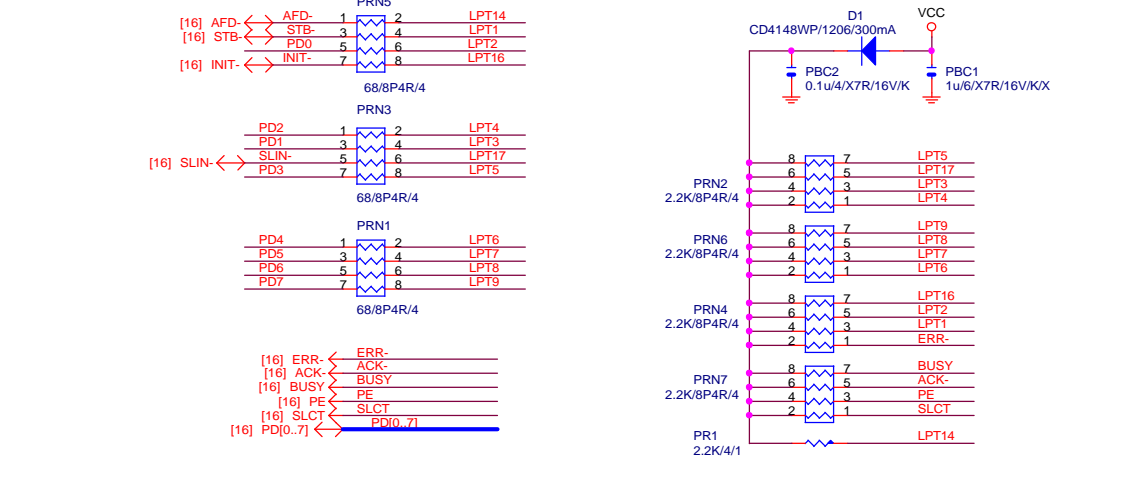
COM PORT Rev: 0.7



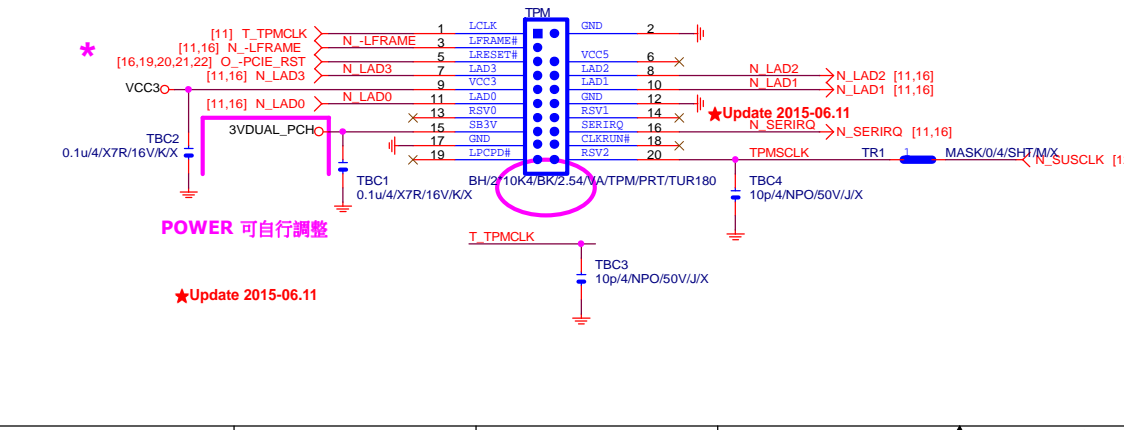
COM RI N/A



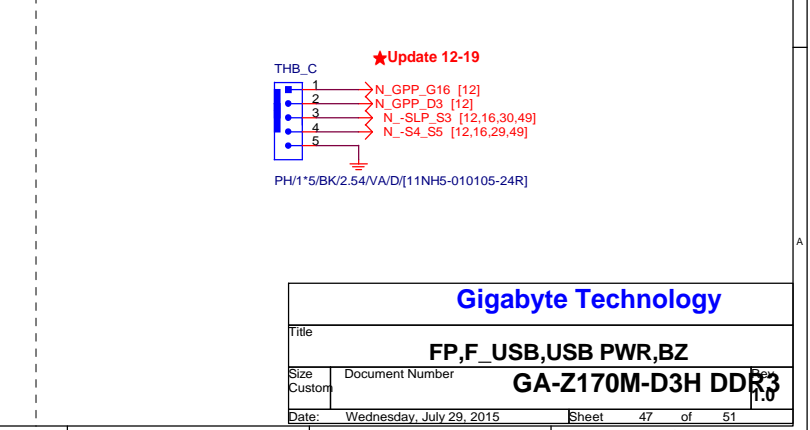
LPT PORT

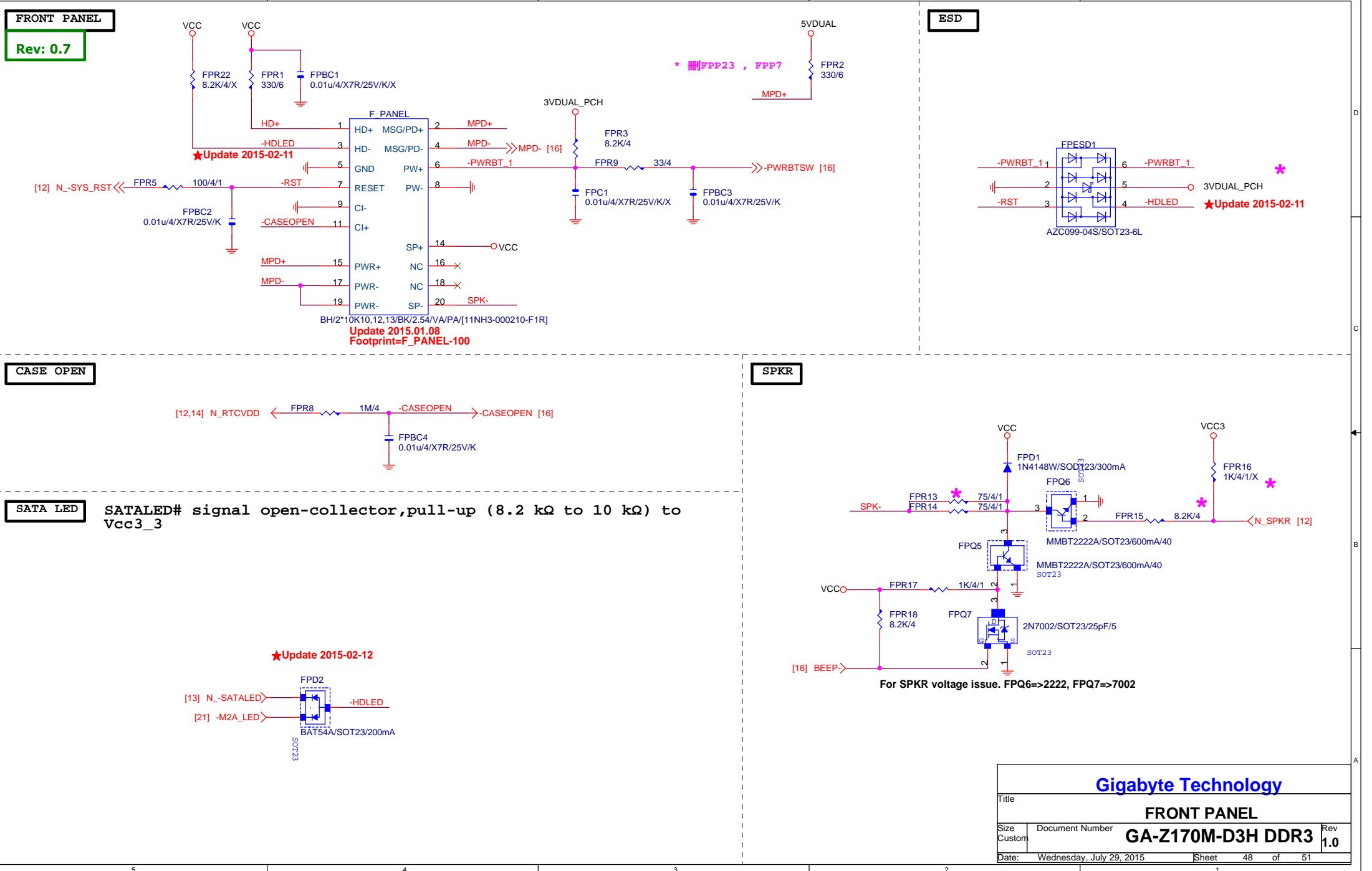


TPM CONNECT

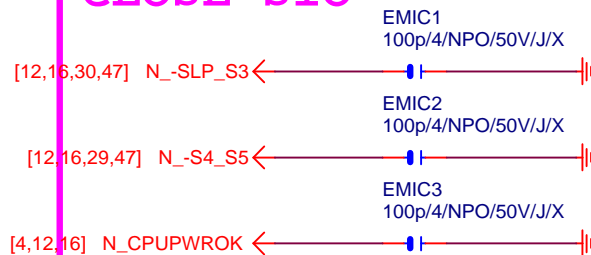


Thunderbolt





## CLOSE SIO



## CLOSE PCH



# GIGABYTE™

Title

EM/ESD

Size  
A

Document Number

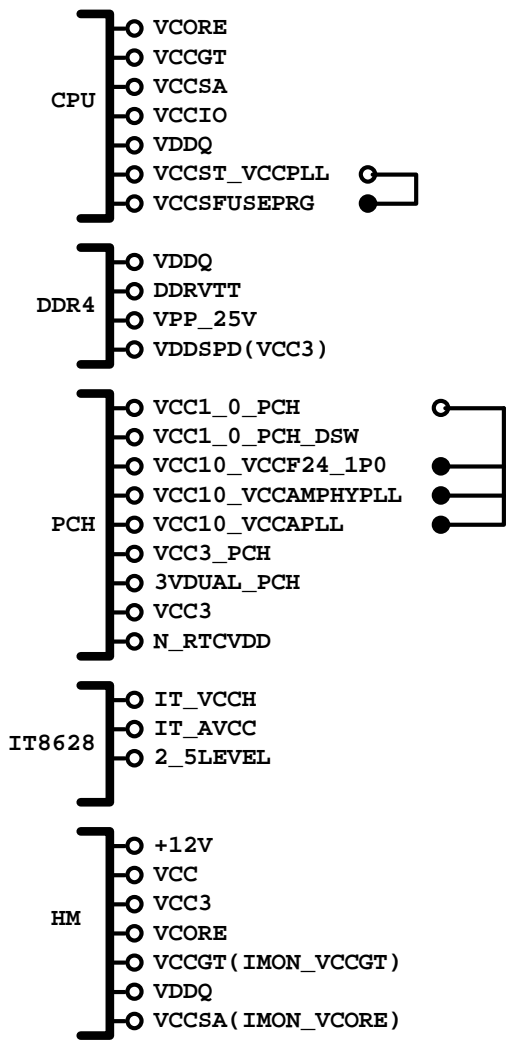
GA-Z170M-D3H DDR3

Rev  
1.0

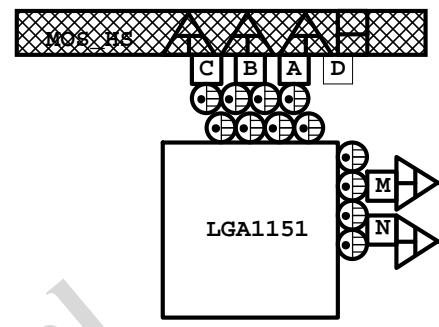
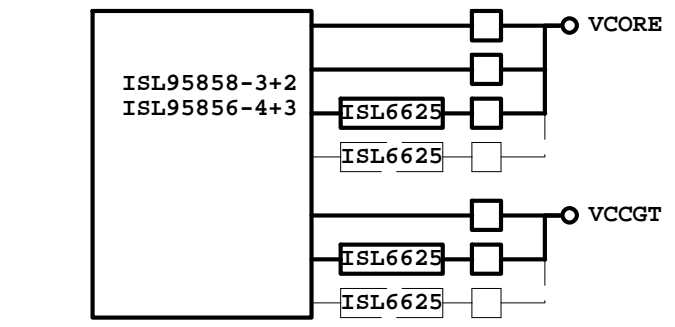
Date: Wednesday, July 29, 2015

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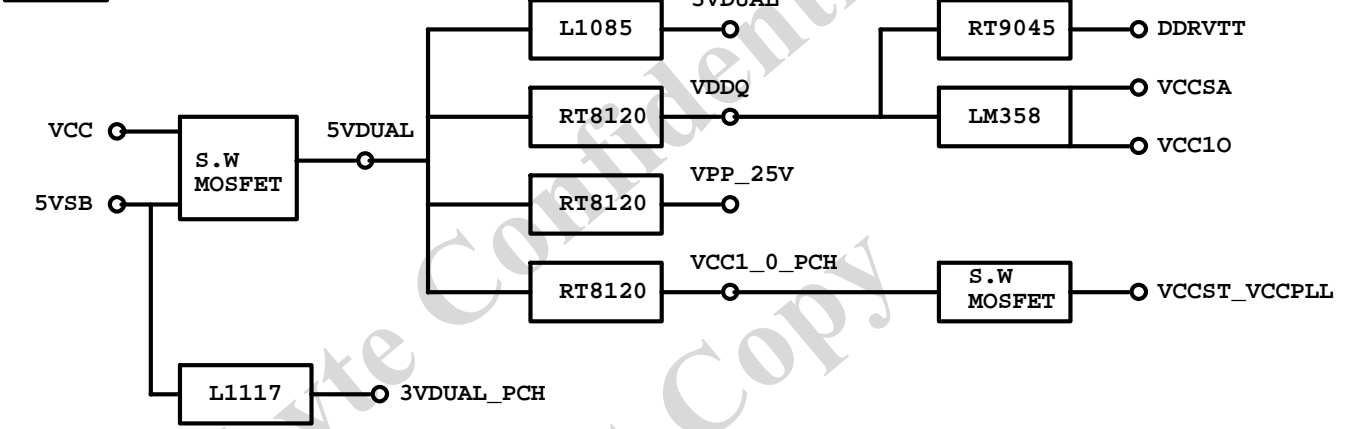
POWER BLOCK MAP



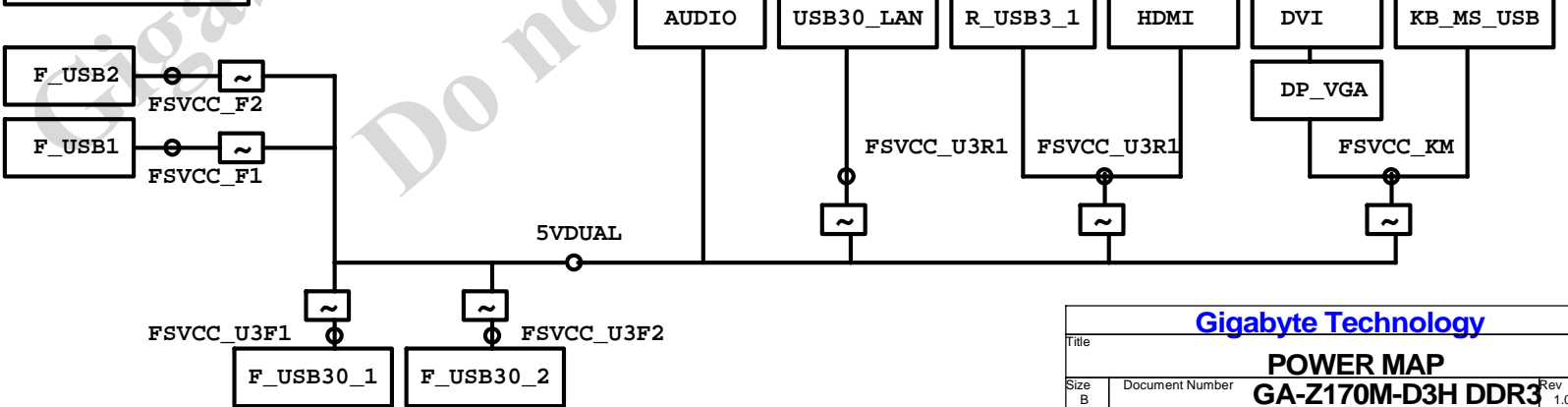
VCORE/VCCGT



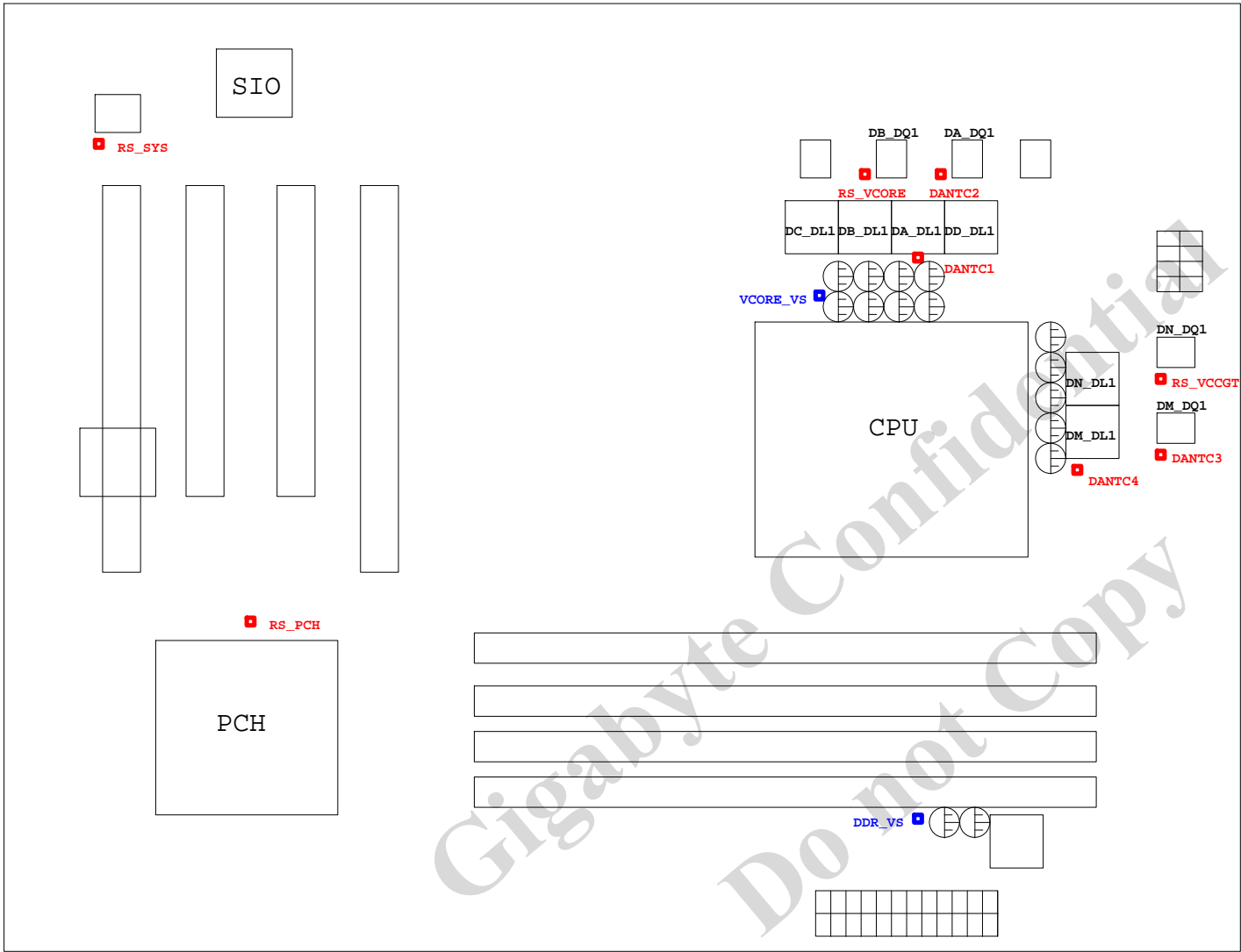
POWER



FUSE POWER F/R



Gigabyte Technology			
Title			
POWER MAP			
Size B	Document Number	GA-Z170M-D3H DDR3	
Date:	Wednesday, July 29, 2015	Sheet	50 of 51



熱敏電阻	擺放靠近位置	走線方式
DANTC1	DA_DL1	N/A
DANTC2	DA_DQ1	Differential
DANTC3	DM_DQ1	N/A
DANTC4	DM_DL1	Differential
RS_VCORE	DB_DQ1	N/A
RS_VCCGT	DN_DQ1	N/A
RS_PCH	PCH	N/A
RS_SYS	CU1	N/A