

Model Name: GA-H110M-Gaming 3

SHEET TITLE

01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	CPU_LGA1151-A
05	CPU_LGA1151-B-DDR4
06	CPU_LGA1151-C
07	CPU_LGA1151-D
08	DDR4 CHANNEL A
09	DDR4 CHANNEL B
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
20	PCI EXPRESS*1 SLOT
21	SATA EXPRESS
22	ISL95858_856 PWM
23	ISL95858_856 MOS_VCORE
24	ISL95858_856 MOS_VCCGT
25	VCCSA_VCCIO_VCCPLL
26	RT8237_DDR_VDDQ
27	RT8068_VPP

rev1.0

SHEET TITLE

28	RT8237_PCH_VCC1_0_PCH
29	DISCRETE POWER
30	ATX POWER , A_-PROCHOT
31	KB_MS_USB
32	RTD2168 - DP to VGA - IC
33	RTD2168 - DP to VGA - Conn
34	R_USB30
35	REALTEK - RTL8111G
36	USB20_LAN CONNECTOR-RTL8111G
37	Realtek ALC887
38	REAR AUDIO JACK
39	F_USB30
40	F_USB20
41	COM , LPT , TPM
42	F_PANEL
43	HDMI
44	EMI/ESD
45	POWER MAP
46	TABLE LIST
47	NTC MAP
48	
49	
50	
51	

Gigabyte Technology

Title			
Cover Sheet			
Size	Document Number	GA-H110M-Gaming 3	Rev
Custom			1.0
Date:	Thursday, July 07, 2016	Sheet	1 of 47

rev:1.0

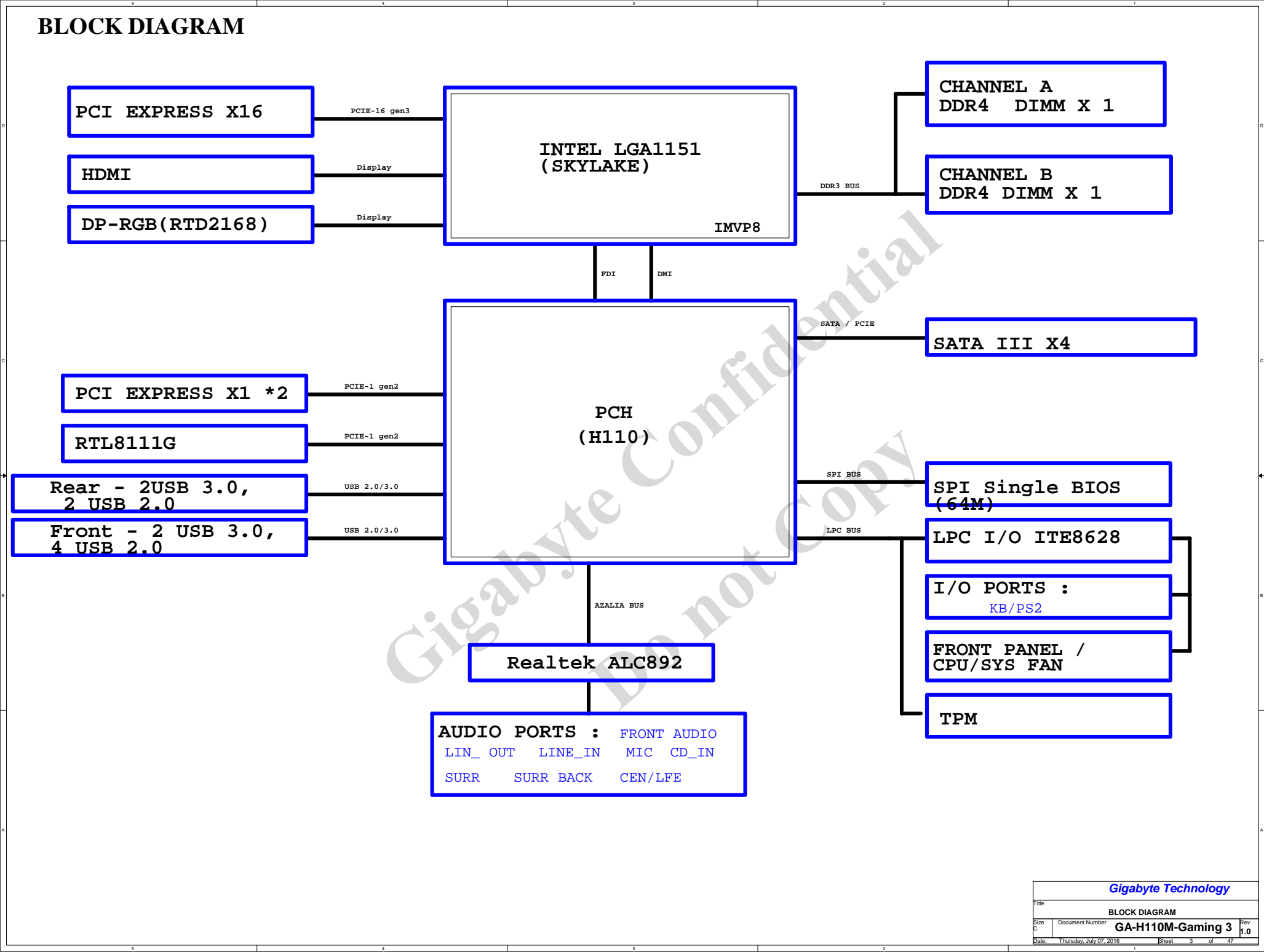
Circuit or PCB layout change

Component value change history

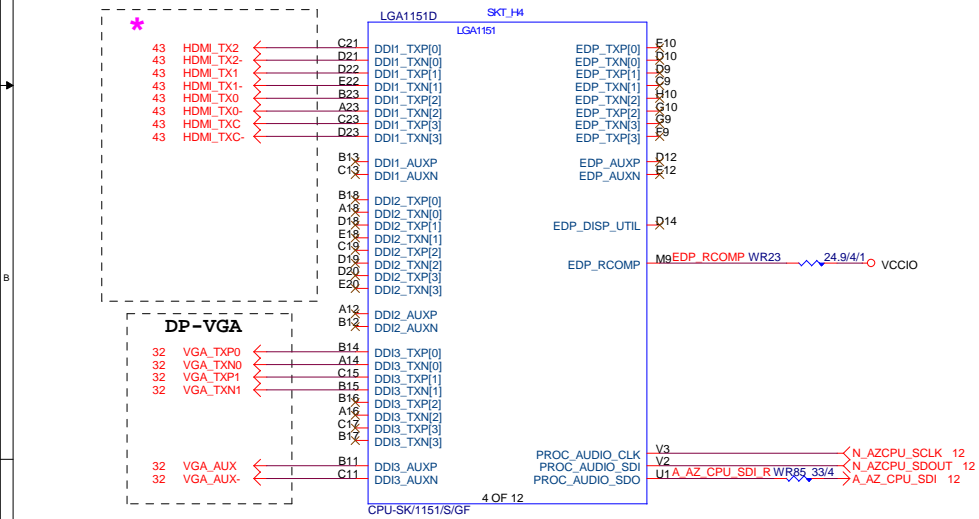
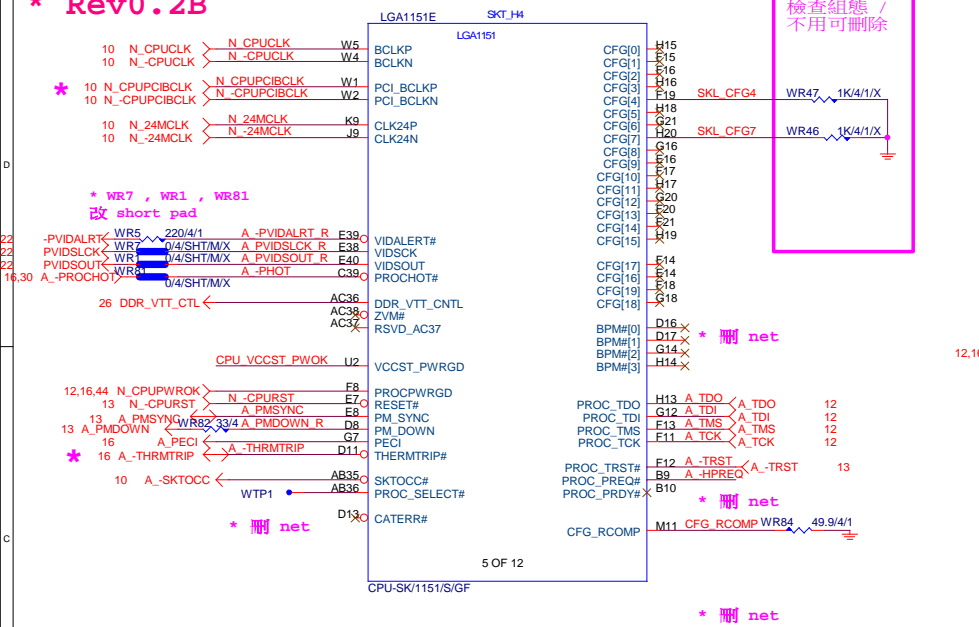
2016/07/04

[illegible][illegible]

BLOCK DIAGRAM



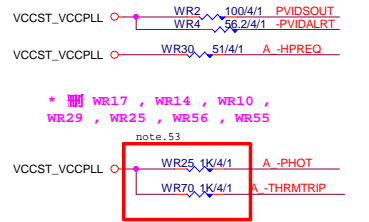
*** Rev0.2B**



```
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%



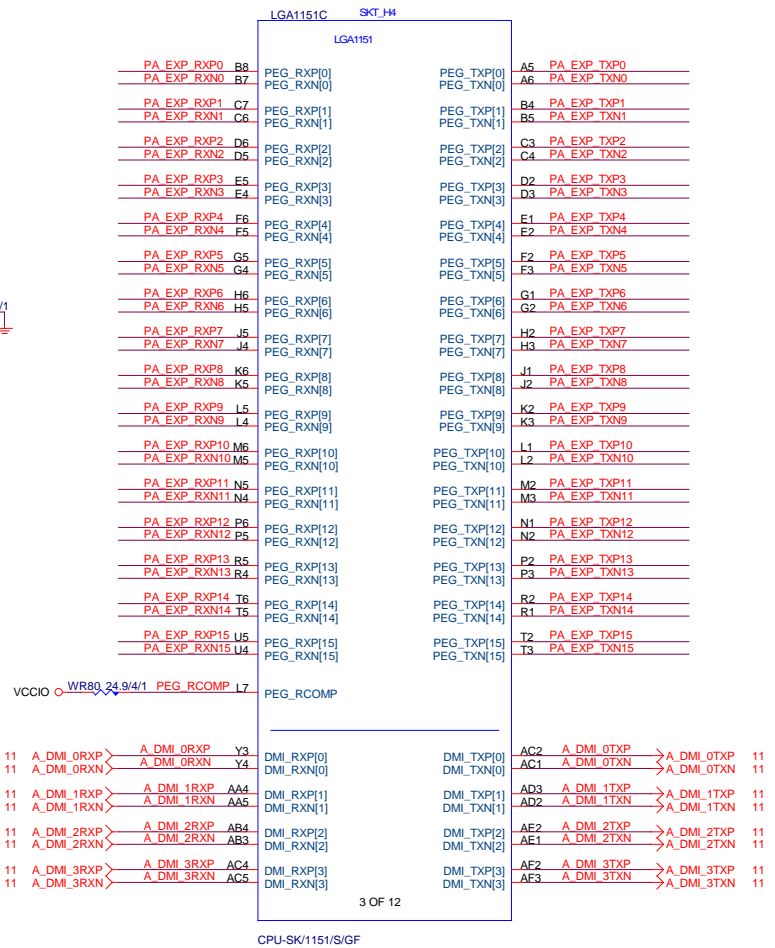
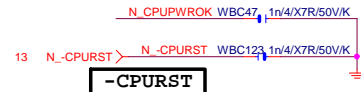
* 删 WR91

CPU_VCCST_PWOK

12,16 N_PCH_VRMPWRGD

WR34 6.04K/4 WR3 2.8K/4

* 删 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
```

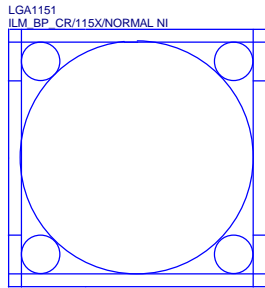
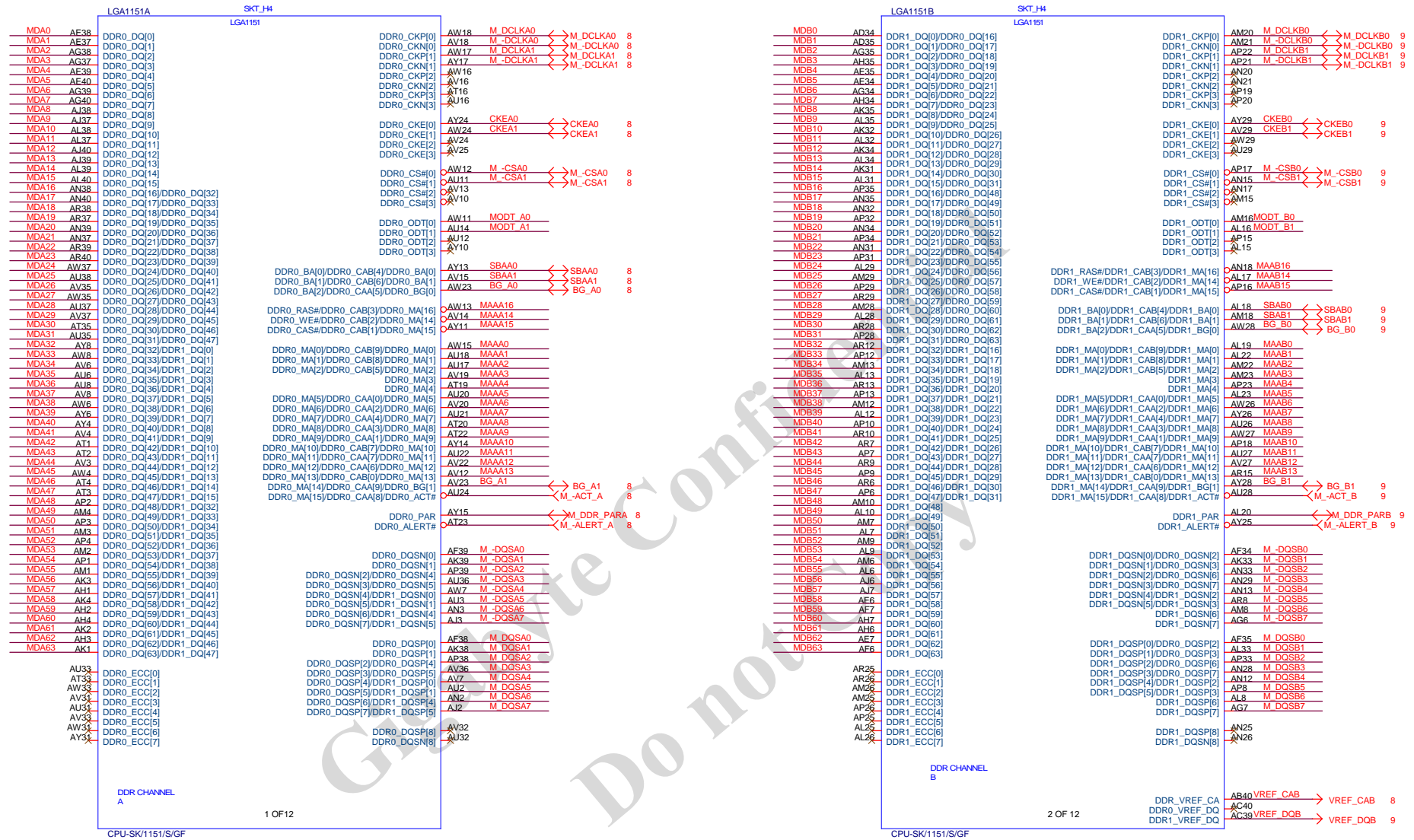
Impedance=85 +- 15%

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

<i>Gigabyte Technology</i>			
Title			
CPU LGA1151-A			
Size Custom	Document Number		Rev
	GA-H110M-Gaming 3		1.0
Date:	Thursday, July 07, 2016	Sheet	4 of 47

* 改DDR4 net

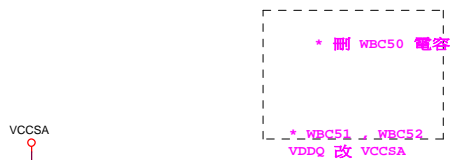


Need check the new CPU ME

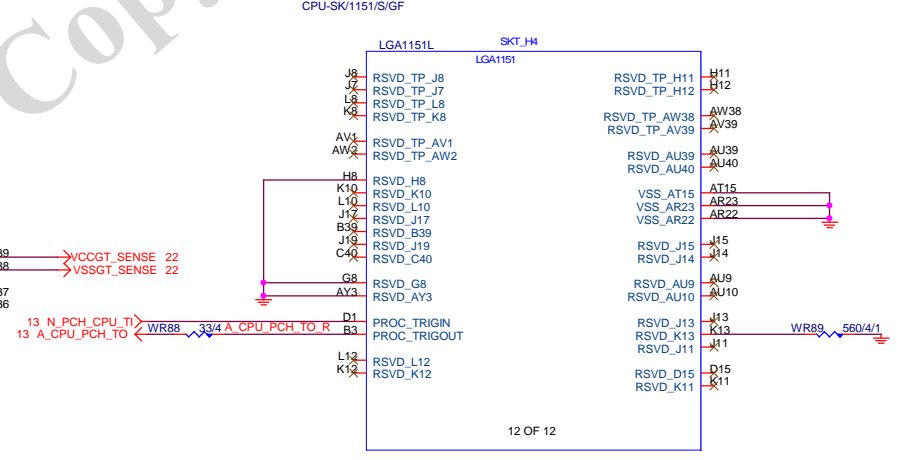
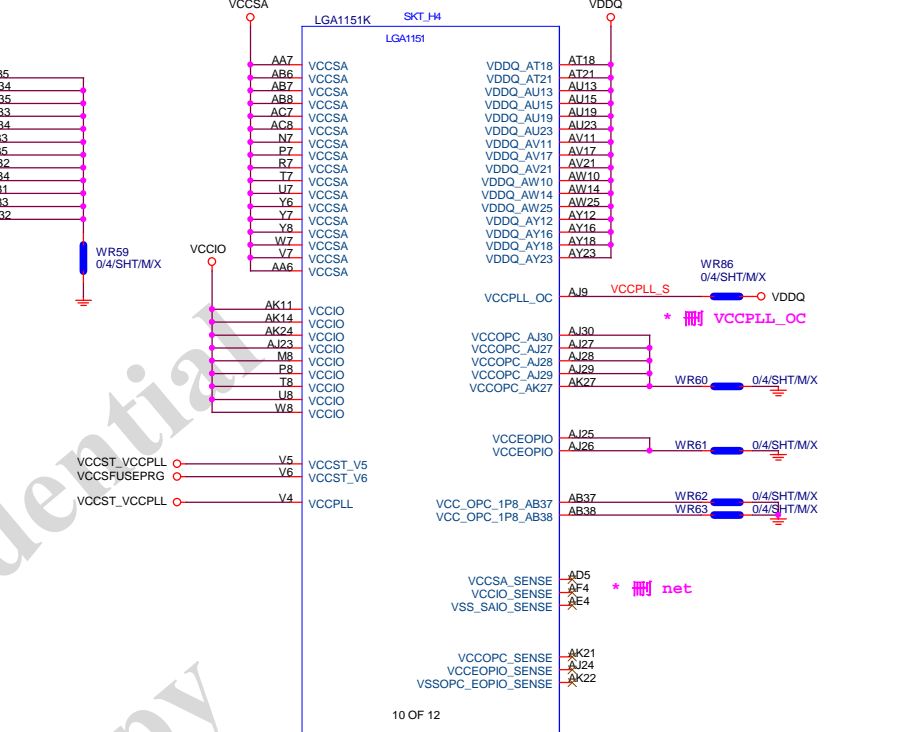
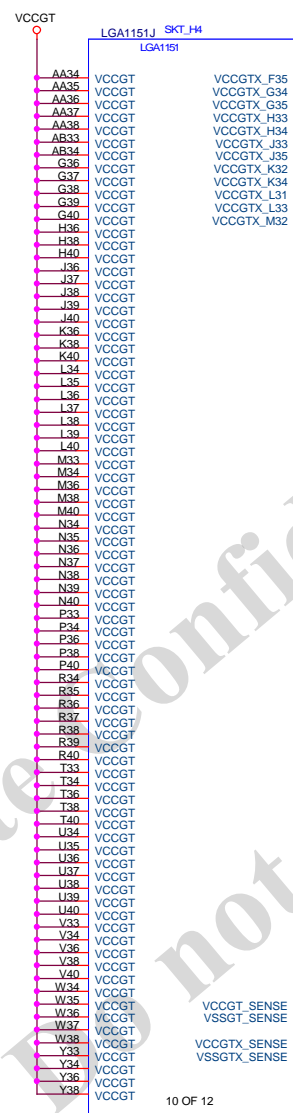
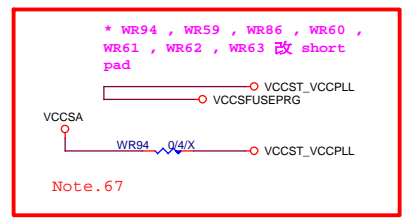
BLACK NI

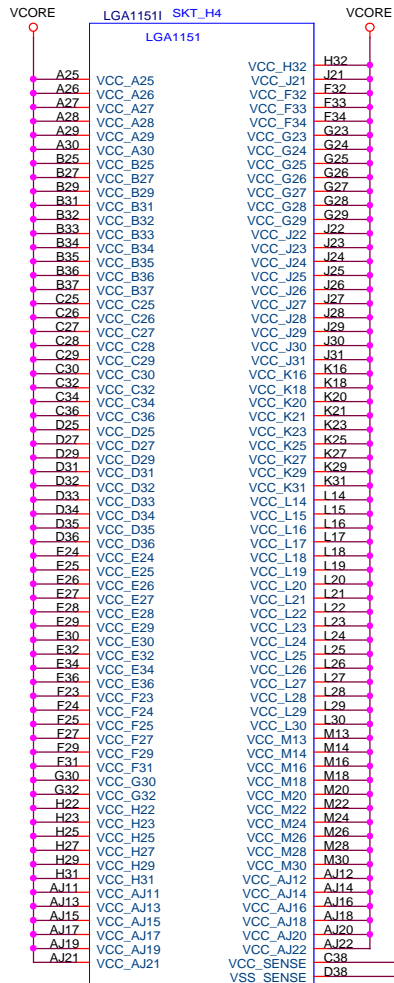
8 MODT_A[0..1] ↔ MODT_A[0..1]
 9 MODT_B[0..1] ↔ MODT_B[0..1]
 8 MDA[0..63] ↔ MDA[0..63]
 9 MDB[0..63] ↔ MDB[0..63]
 8 M_DQSA[0..7] ↔ M_DQSA[0..7]
 8 M_-DQSA[0..7] ↔ M_-DQSA[0..7]
 8 MAAA[0..16] ↔ MAAA[0..16]
 9 MAAB[0..16] ↔ MAAB[0..16]
 9 M_DQSB[0..7] ↔ M_DQSB[0..7]
 9 M_-DQSB[0..7] ↔ M_-DQSB[0..7]

<i>Gigabyte Technology</i>			
Title			
CPU LGA1151-B			
Size	Document Number	Rev	
Custom	GA-H110M-Gaming 3	1.0	
Date:	Thursday, July 07, 2016	Sheet	5 of 47



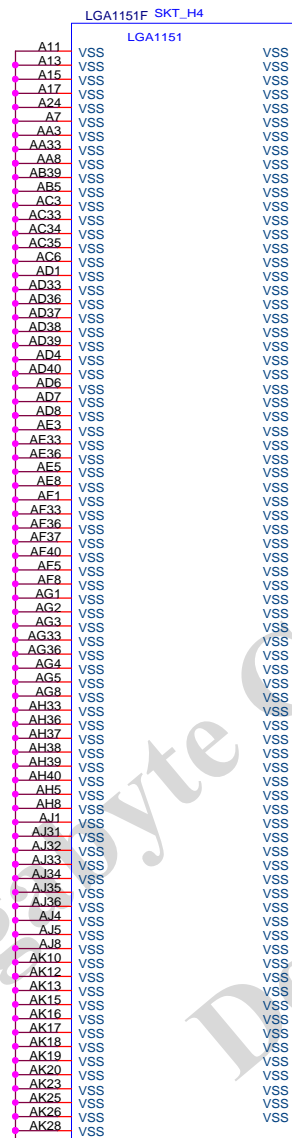
* 刪 WBC124 , WBC125 , WBC126 , WBC127 電容



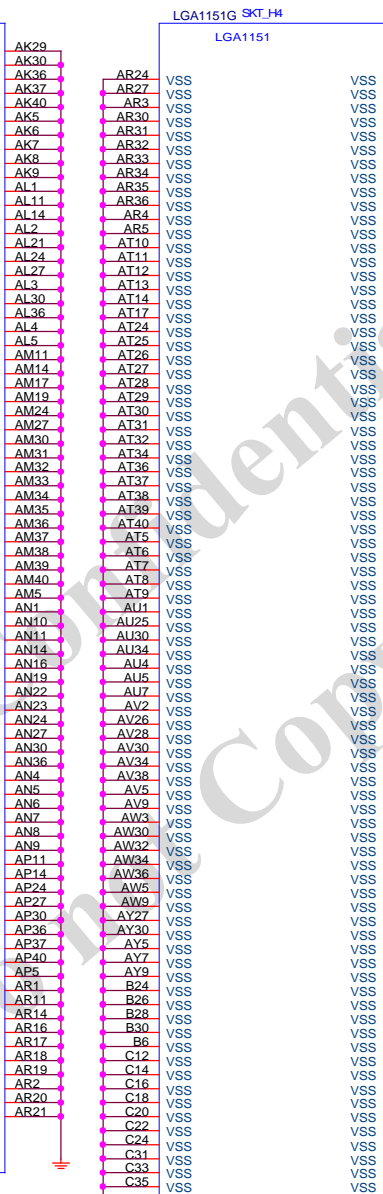


CPU-SK/1151/S/GF

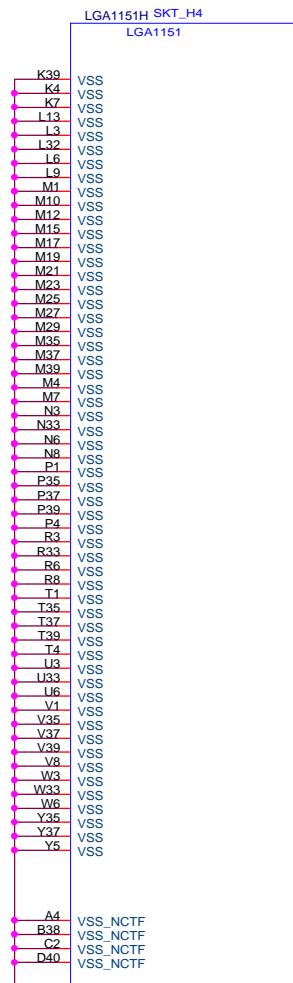
* 刪 Vcore 電容



CPU-SK/1151/S/GF

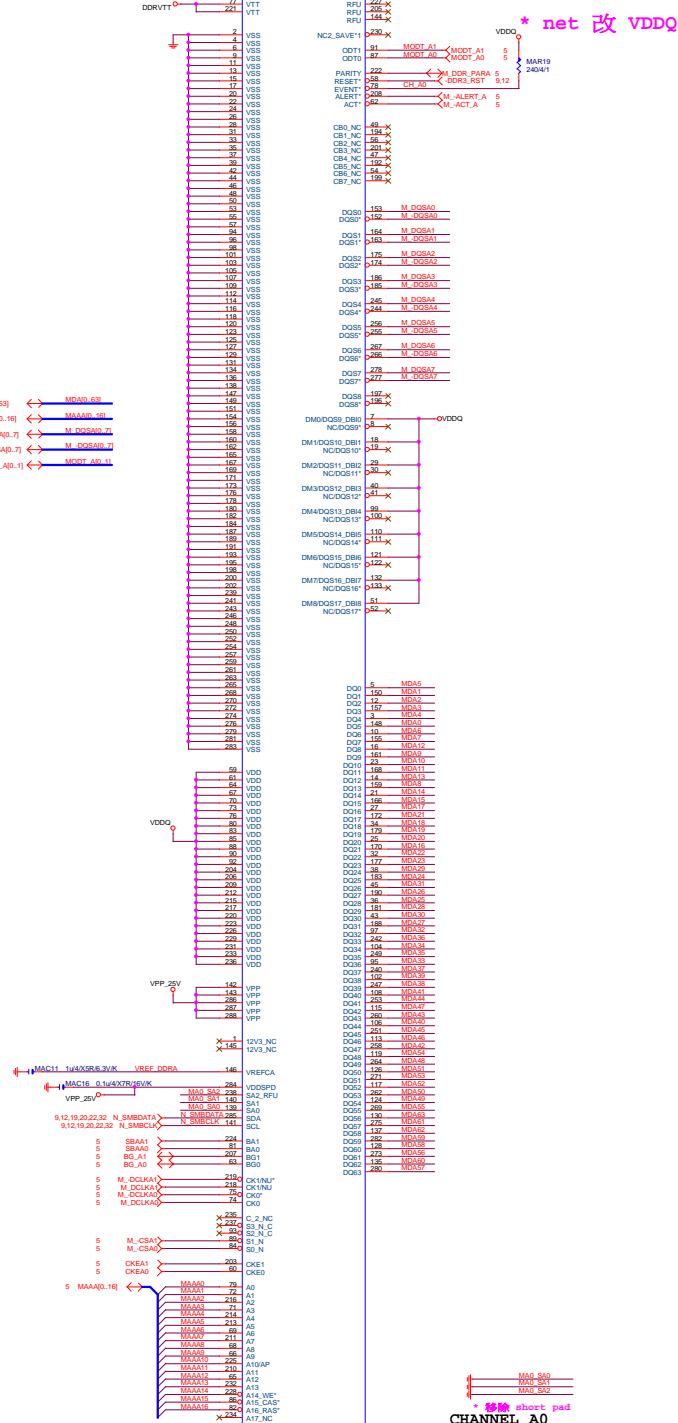


CPU-SK/1151/S/GF

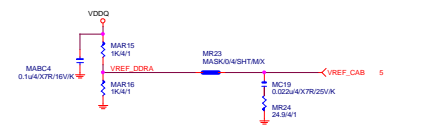


CPU-SK/1151/S/GF

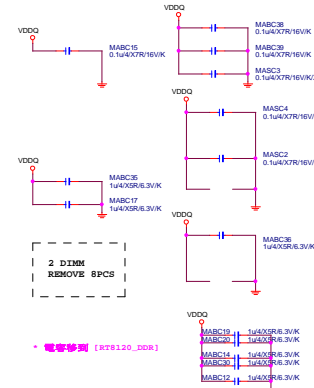
5 MDAI[0..63] ↔ MDAI0_63
5 MAAA[0..16] ↔ MAAA0_16
5 M_DQSA[0..7] ↔ M_DQSA0_7
5 M_-DQSA[0..7] ↔ M_-DQSA0_7
5 MODT_A[0..1] ↔ MODT_A0_1



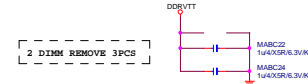
* 移除 short pad
CHANNEL A0
SA2:0=000



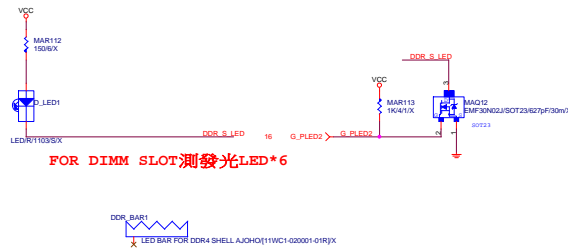
DDR12V Decouple



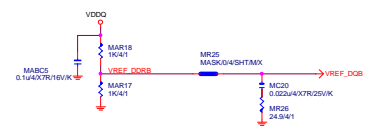
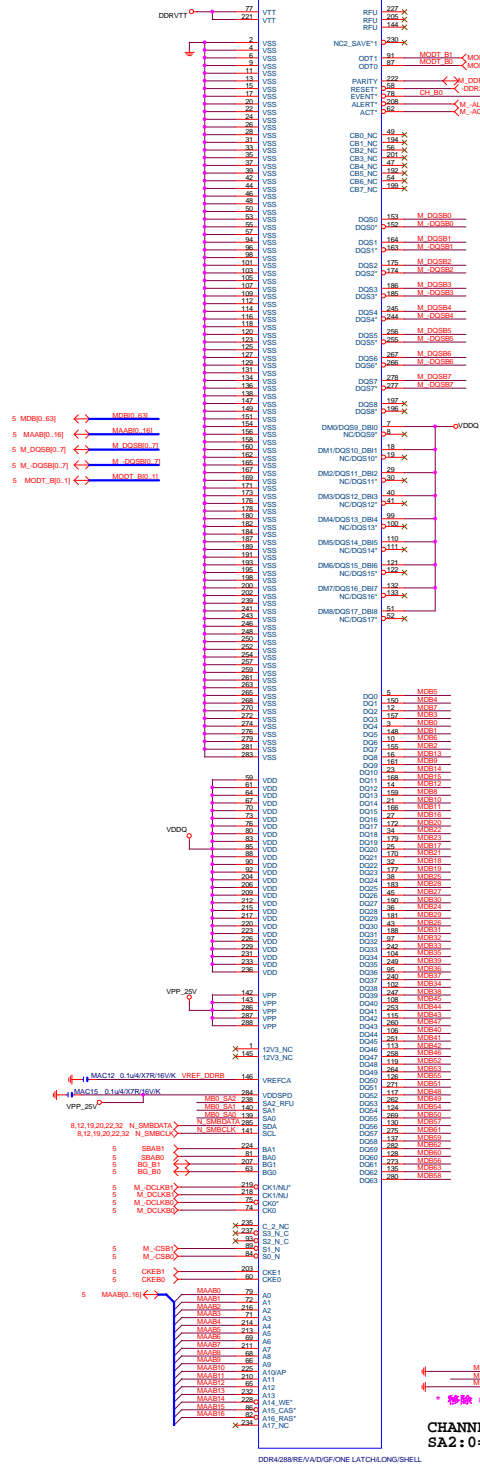
DDRVTT Decouple



- 副電容

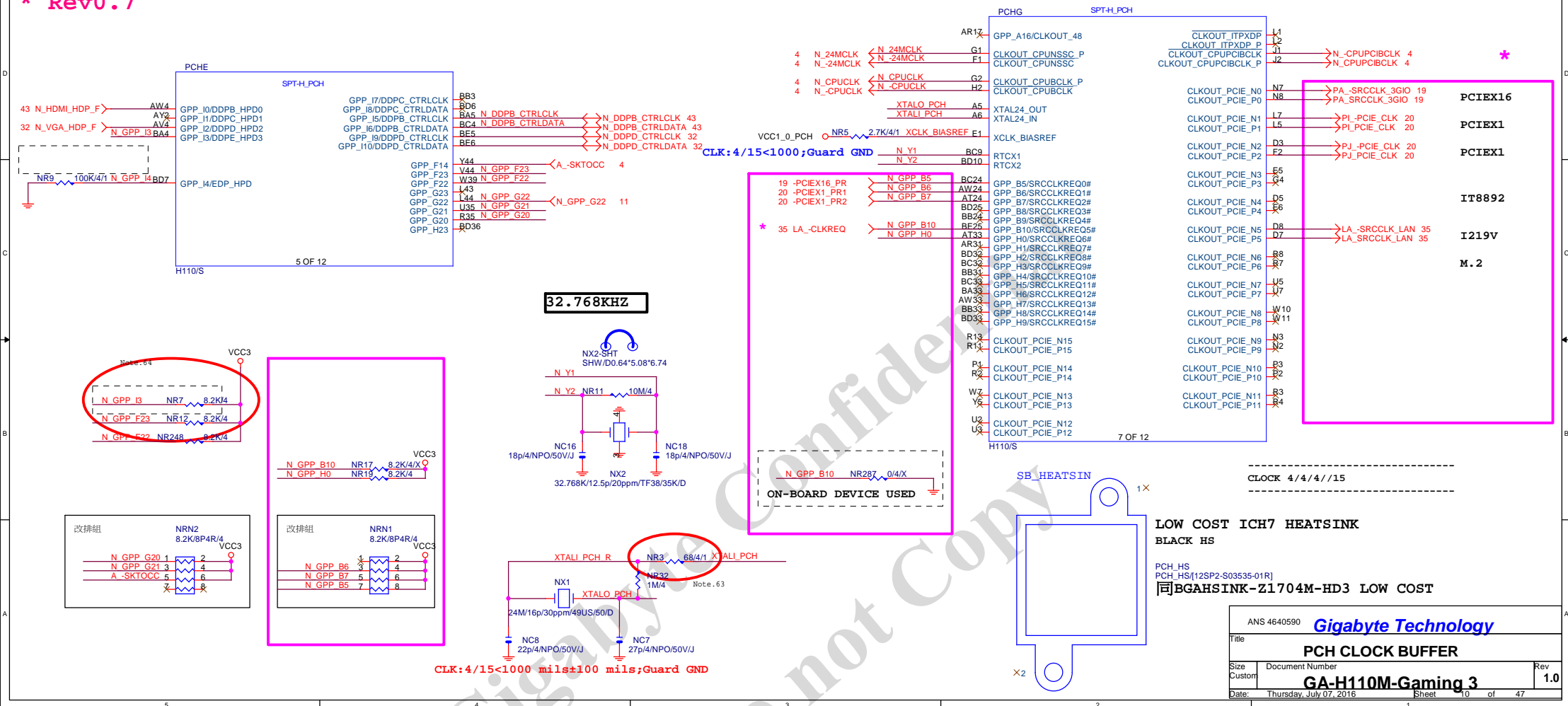


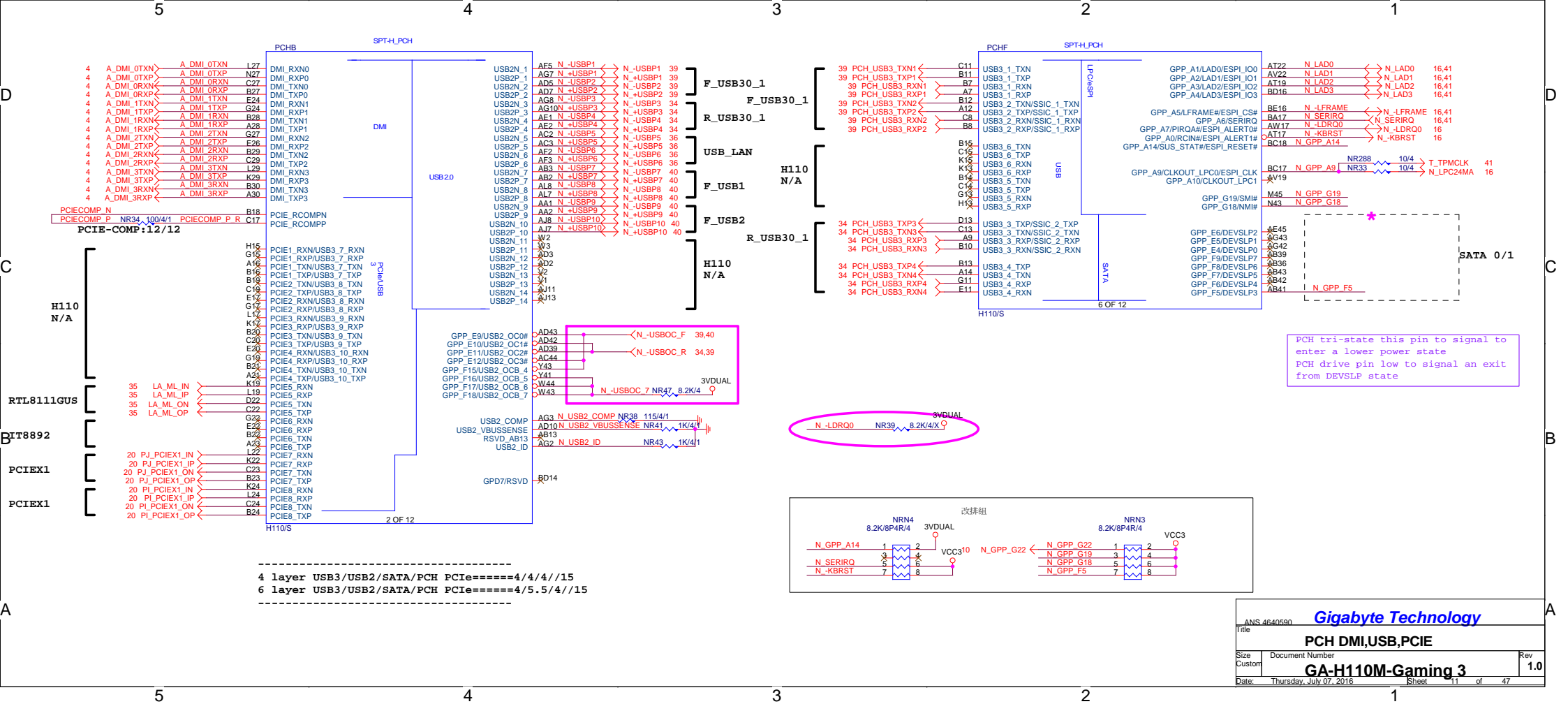
Gigabyte Technology			
Title DDR4 CHANNEL A			
Size Custom	Document Number GA-H110M-Gaming 3		Rev 1.0
Date:	Sheet	8	of 47

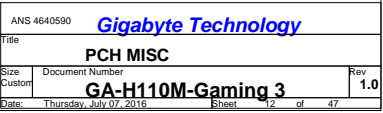


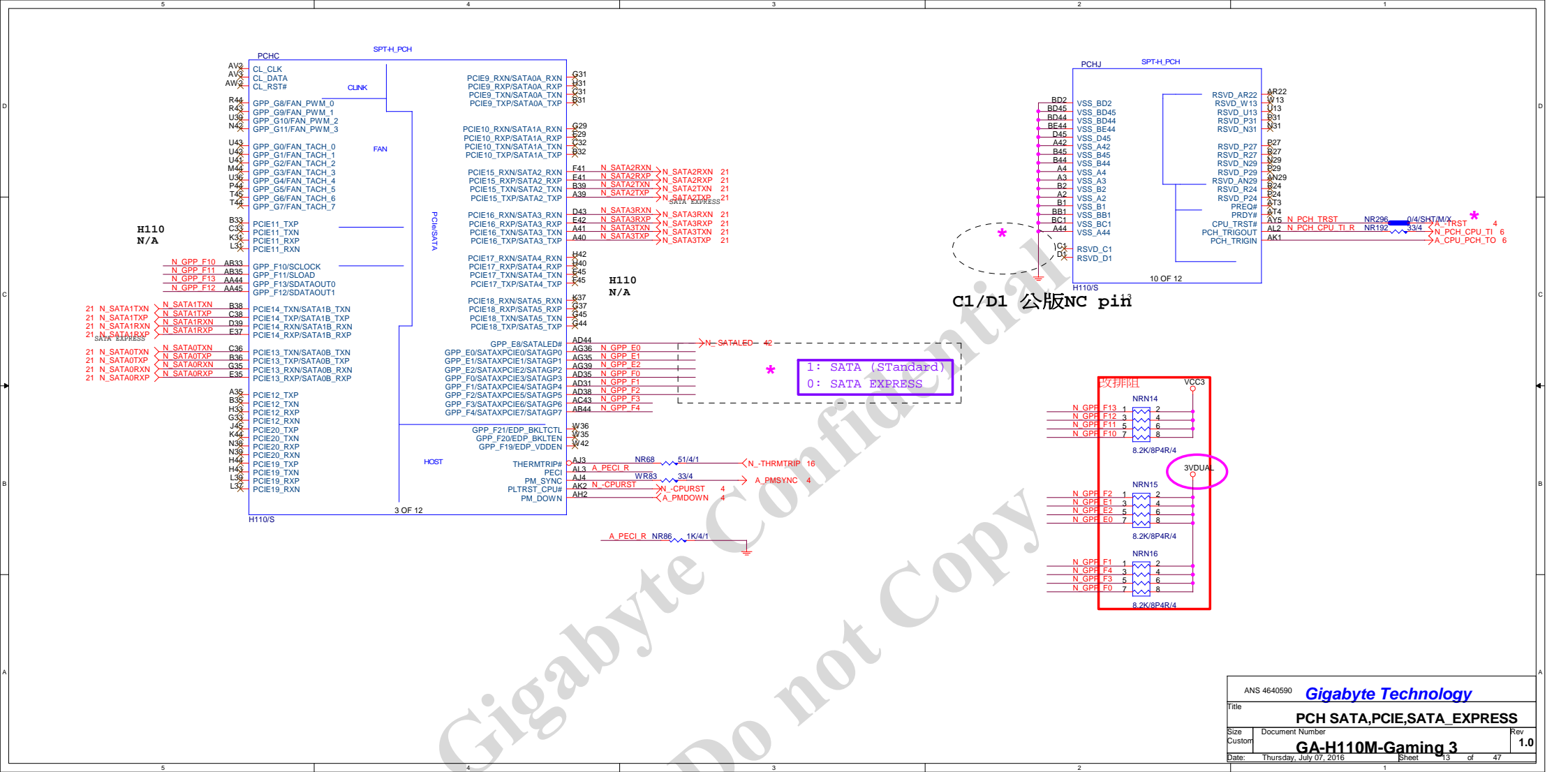
CHANNEL B0
SA2:0=010

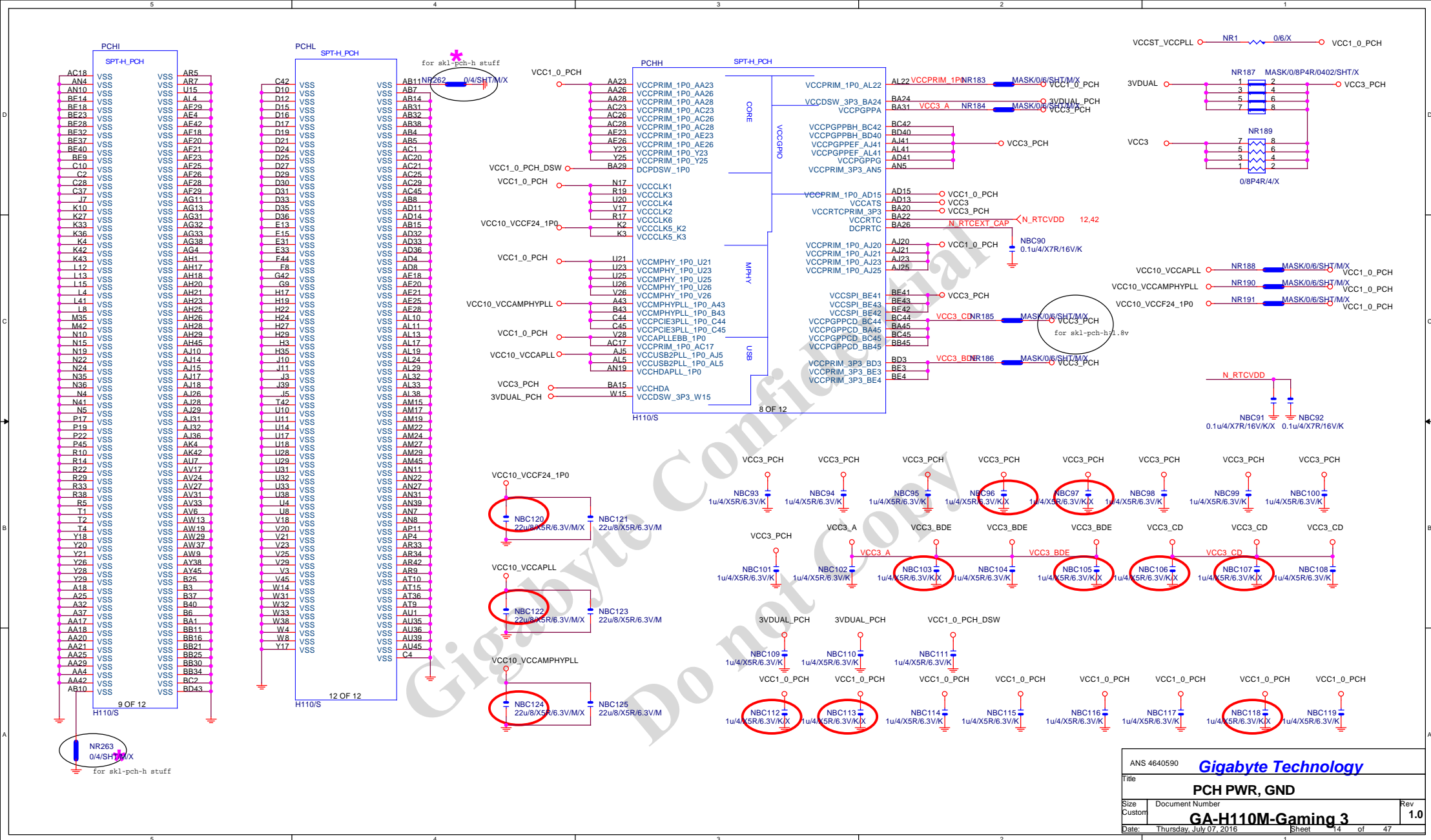
* Rev0.7







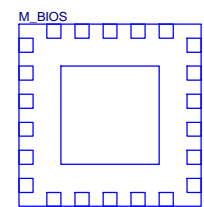
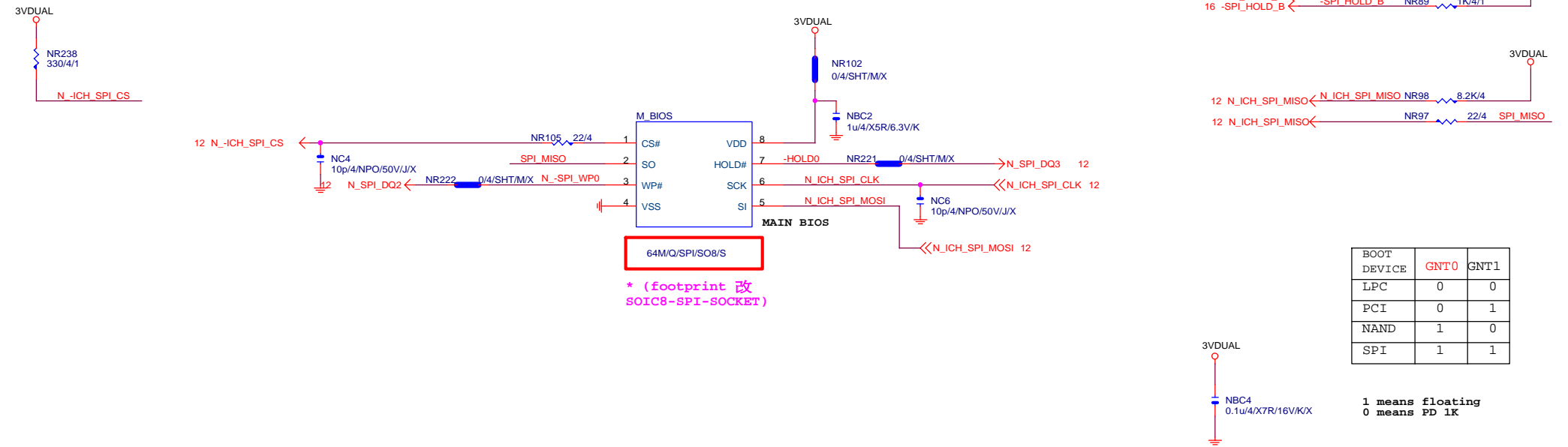




Rev 0.1

BIOS

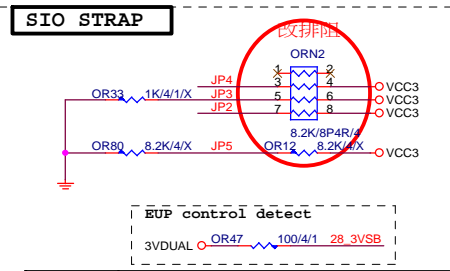
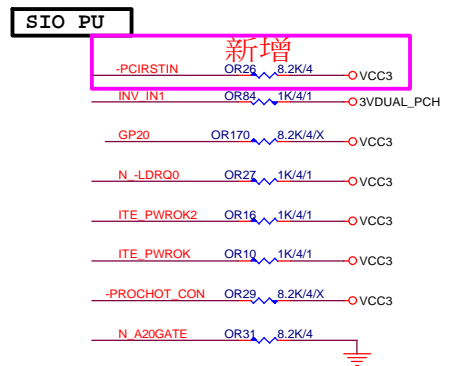
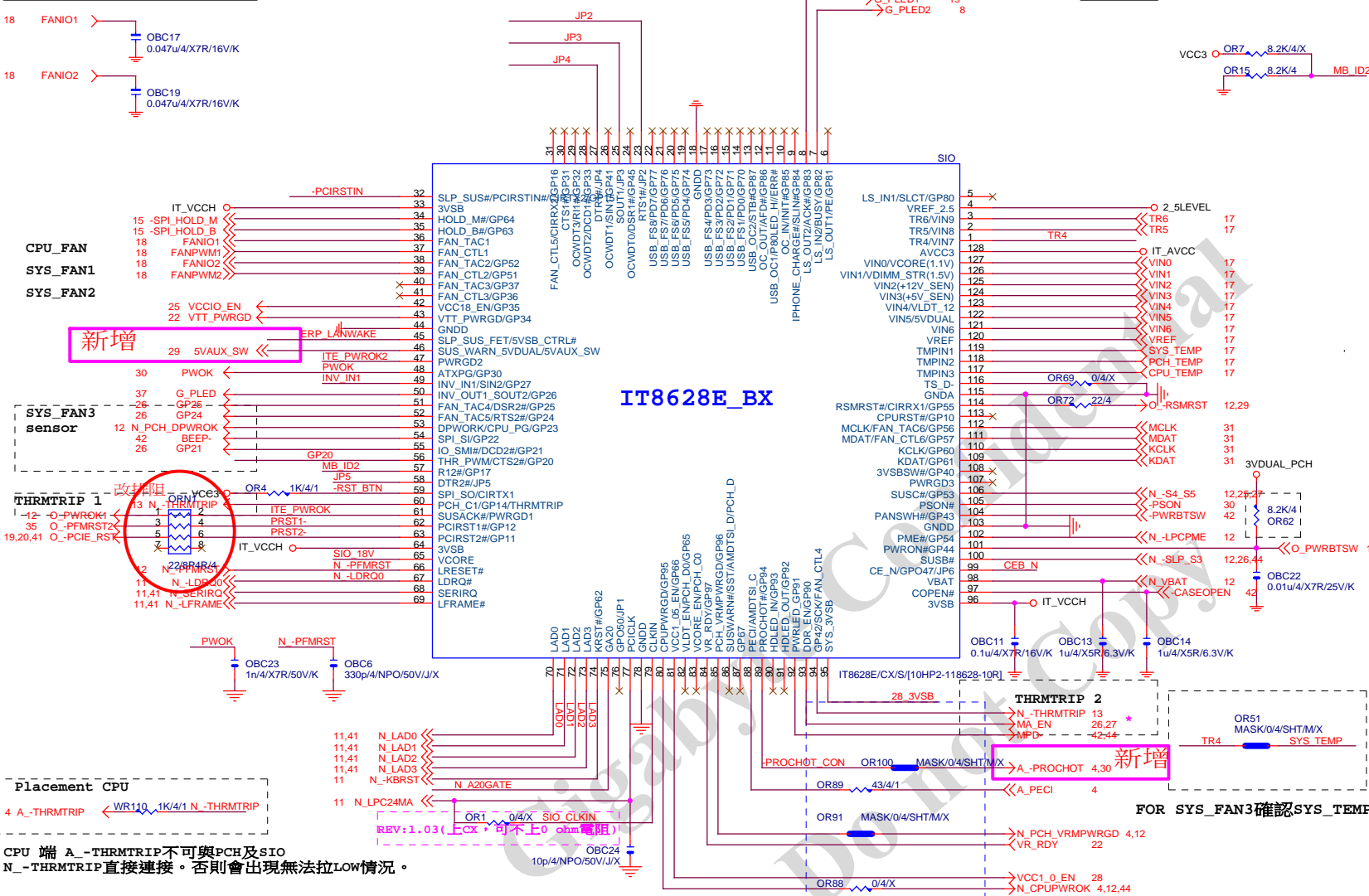
MOSI For DMI RX Termination Voltage



LCP/G-FL/1.27mm/200MIL/WHITE[10SL2-000008-31R]X

* 試産先上, PVT 移除

BIOS_PH

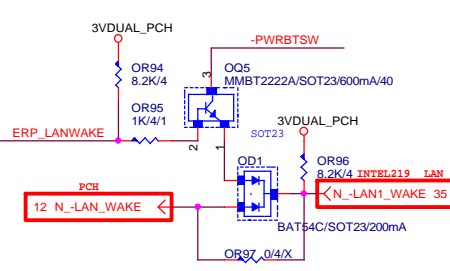
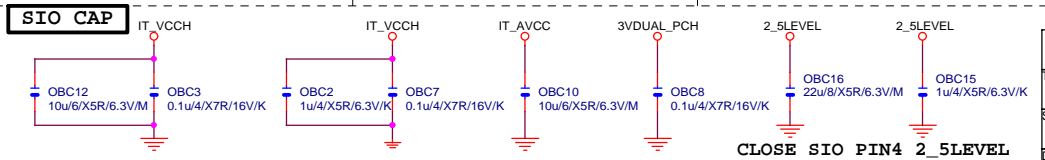
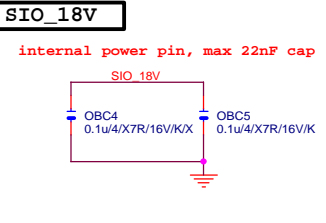
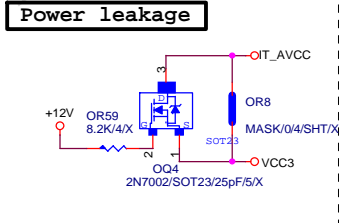
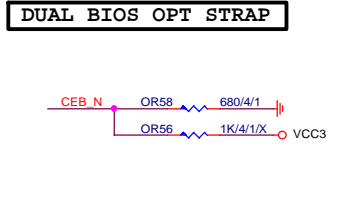


JP2	1	Disable WDT
JP2	0	Enable WDT to rest PWROK
JP3	0	SPI-Flash Disable
JP3	0	SPI-Flash Enable
JP4	1	k8 power sequency function is Disable
JP4	0	k8 power sequency function is Enable
JP5	1	anti-surge Disable
JP5	0	anti-surge Enable
JP3	1 1	The default value of EC Index 63h/6Bh/73h is 80h.
JP3	1 0	The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

(組態二) Intel LAN (依LAN組態選擇)

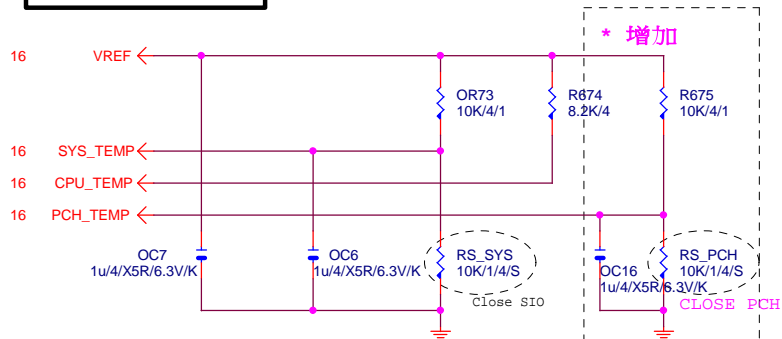
FAN TABLE	
CPU_FAN	FAN_CTL1 FAN_TAC1
SYS_FAN1	FAN_CTL2 FAN_TAC2
SYS_FAN2	FAN_CTL3 FAN_TAC3
SYS_FAN3	FAN_CTL5 FAN_TAC5
OPT FAN or SYS_FAN4	N/A
THRMTRIP1	YES PIN60
THRMTRIP2	YES PIN94

IT8620E GPIO問題匯整	
PIN 50	GP26-第一次接上POWER時 會拉 Lo
PIN 90/91	DEFAULT為HDLCD 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 該電壓,COM PORT及FET裝置 端線路會異常動作。

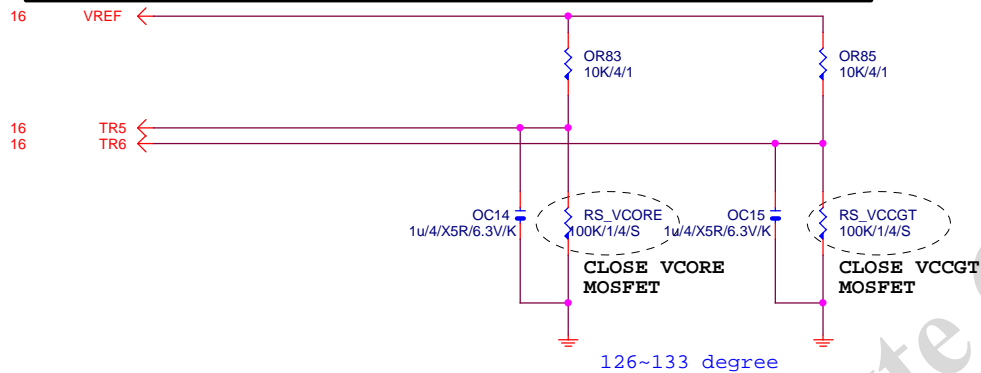


TEMP H/W MONITOR

REV 1.08



RS_VCORE, RS_VCCGT, CLOSE CPU_VCORE & VCCGT MOSFET

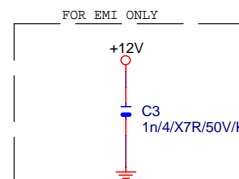
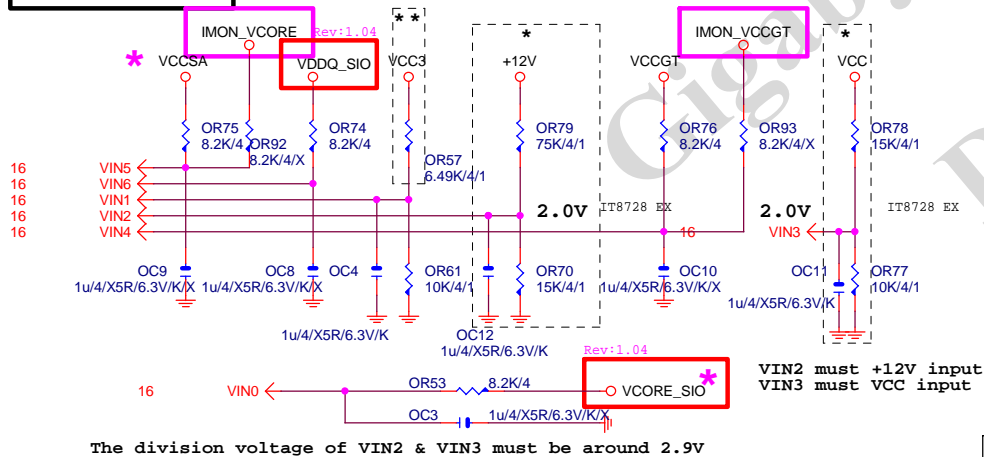
~~PROCHOT: 有mos heartsink 不用prochot function~~

VOLTAGE-- H/W MONITOR

Connect to PWM

* IT8728 BX
** IT8728 CX

Connect to PWM

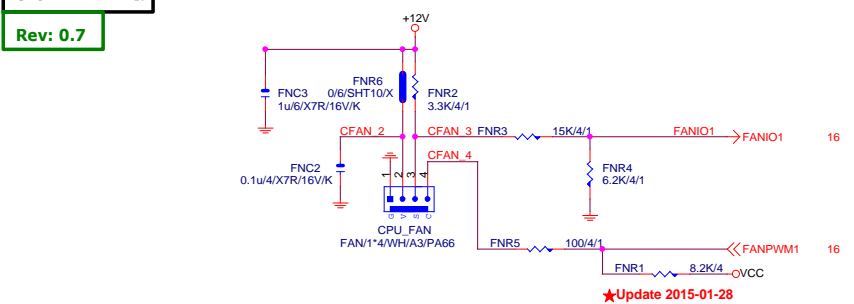


Gigabyte Technology

Title				
HWM,KB/MS, FAN CTRL				
Size	Document Number			Rev
Custom	GA-H110M-Gaming 3			1.0
Date:	Thursday, July 07, 2016	Sheet	17	of 47

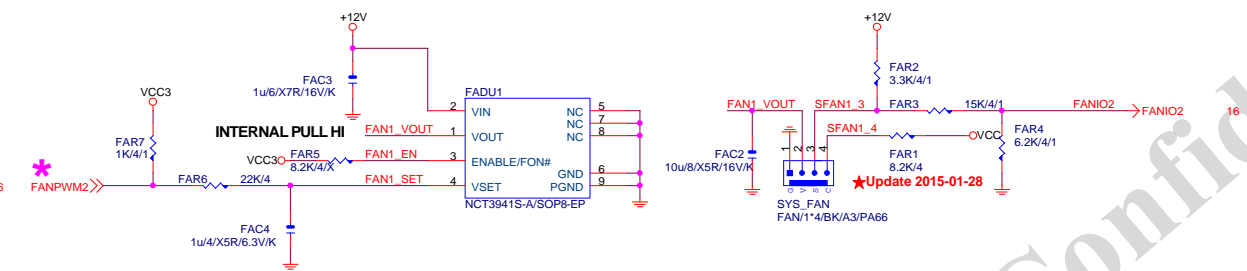
CPU SMART FAN

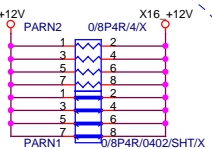
Rev: 0.7



SYSTEM FAN1

A. Linear SYS_FAN
Enable Function (NCT3941S)
Full Turn On Function (NCT3941S-A)



+12V_protect
short-wire test

PA_EXP_RXP0_15I >> PA_EXP_RXP[0..15] 4
PA_EXP_RXN0_15I >> PA_EXP_RXN[0..15] 4
PA_EXP_TXP0_15I >> PA_EXP_TXP[0..15] 4
PA_EXP_TXN0_15I >> PA_EXP_TXN[0..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

PCIE16:16/5/5/5/16

PCI-E REV:1.1--> 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

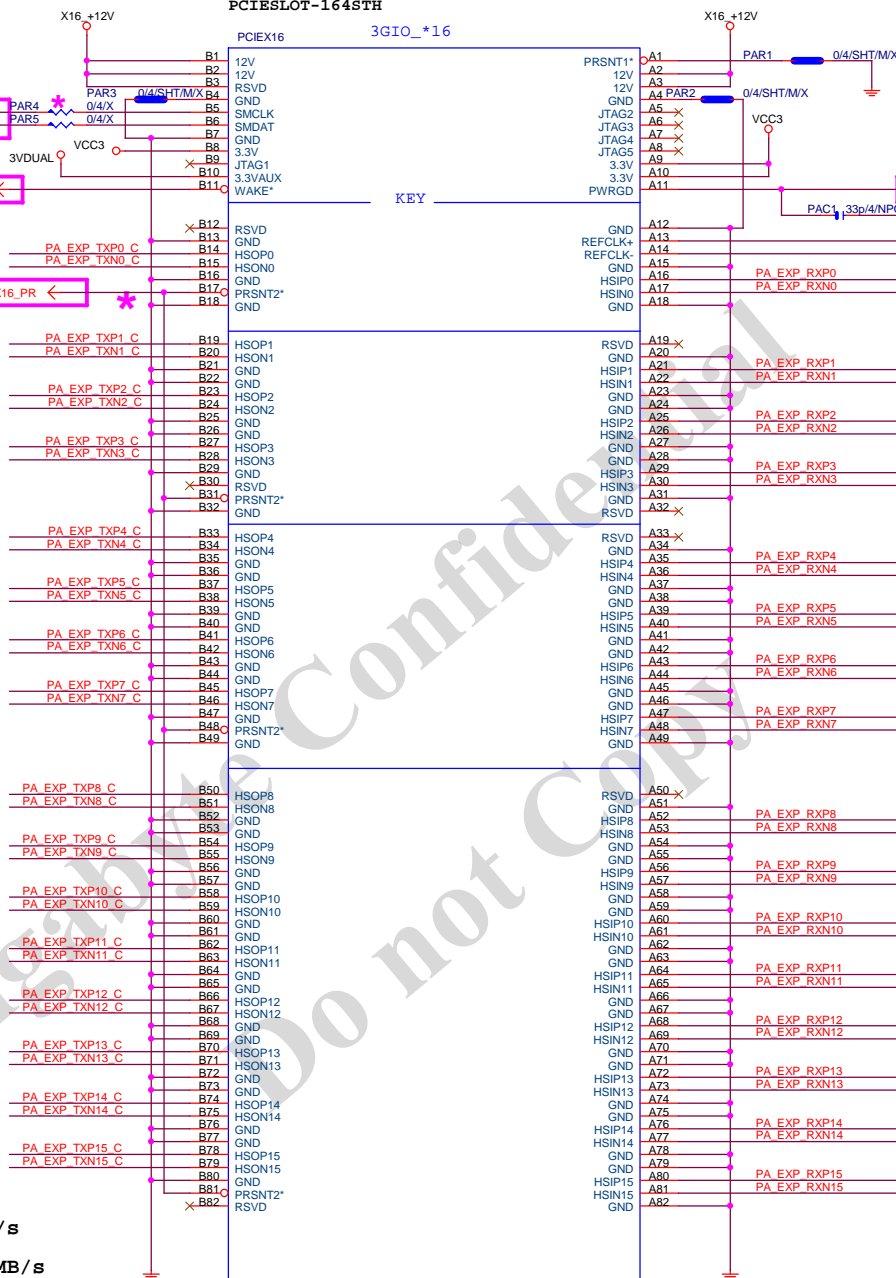
PCE-E X16(單向) BANDWIDTH=2.5GHz*(8b/10b)X16=32Gb/s=4GB/s

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

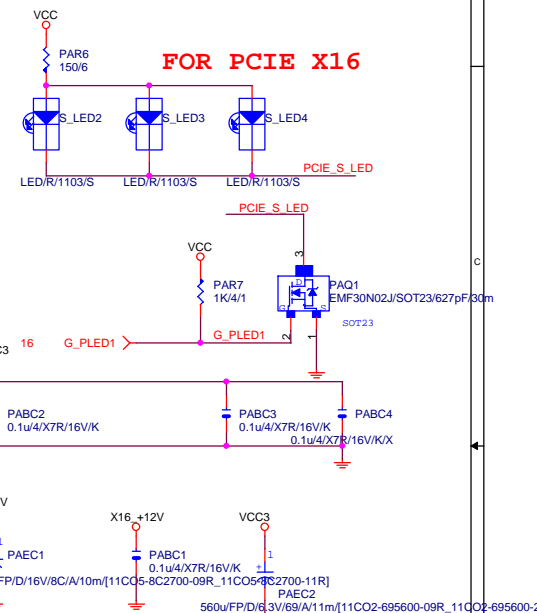
PCI-E REV:2.0--> 5GHZ

PCIESLOT-1648TH

3GIO_*16

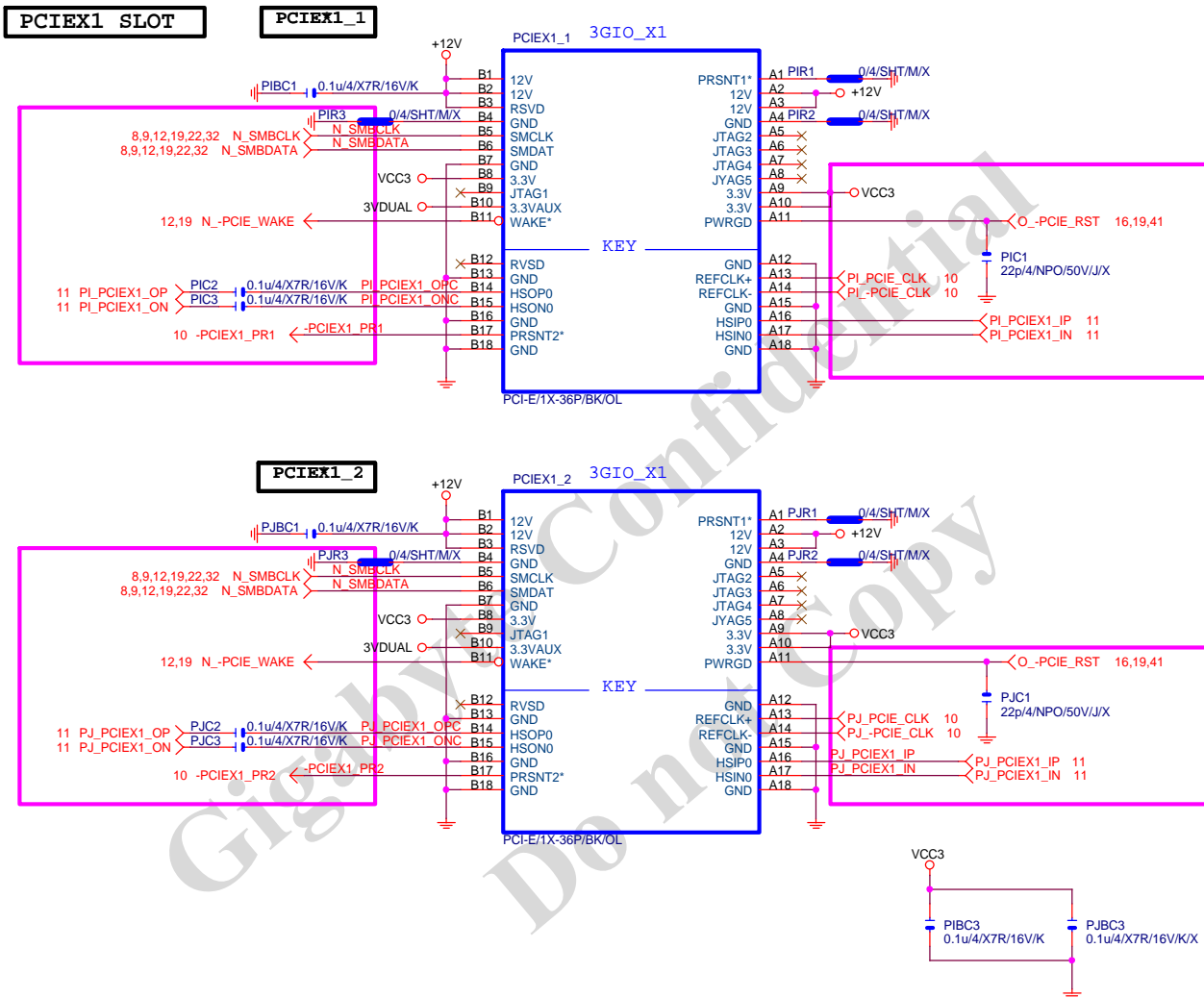


PCI-E/16X-164P/RE/LONG DOUBLE/HK*2(11AC1-023164-E1R)



Gigabyte Technology

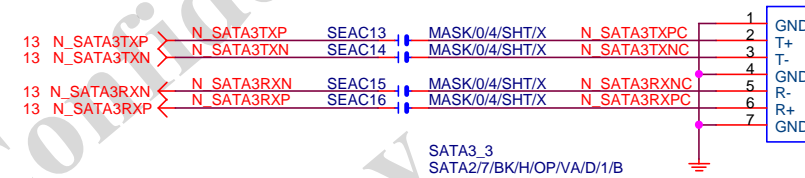
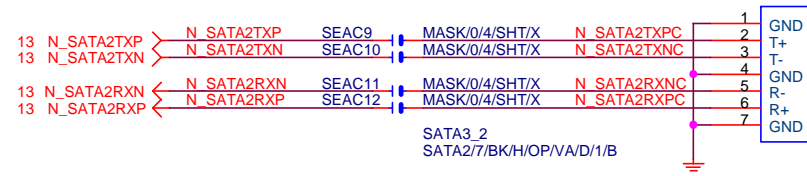
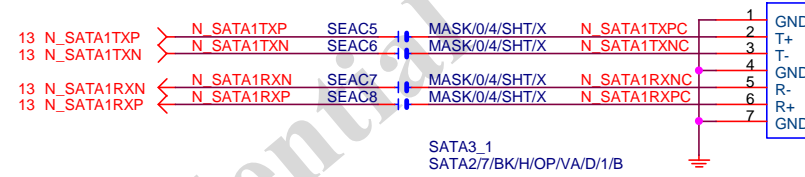
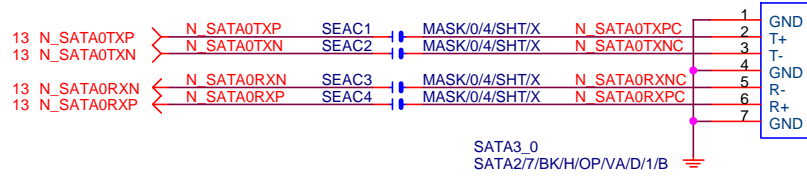
Title			PCI EXPRESS * 16	
Size	Custom	Document Number	GA-H110M-Gaming 3	
Date:	Thursday, July 07, 2016	Sheet	19	of 47



Gigabyte Technology

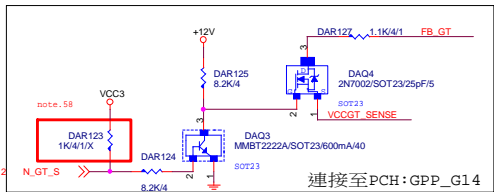
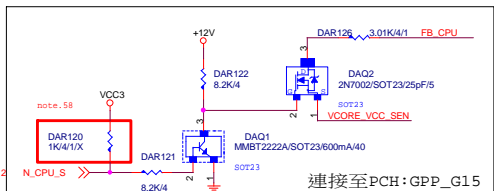
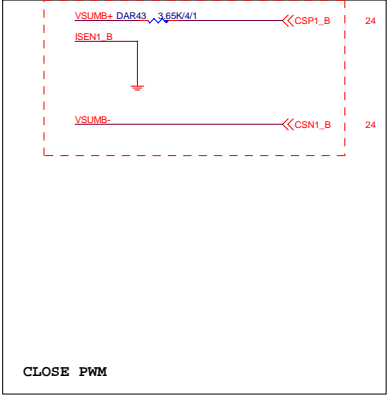
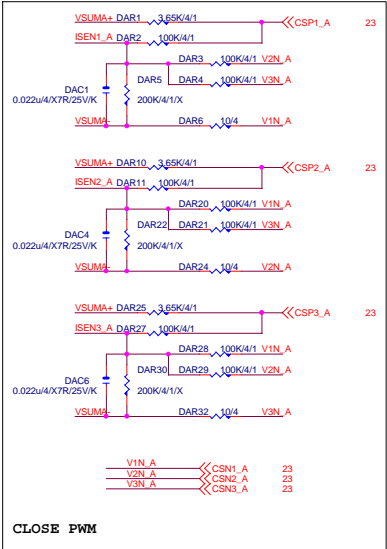
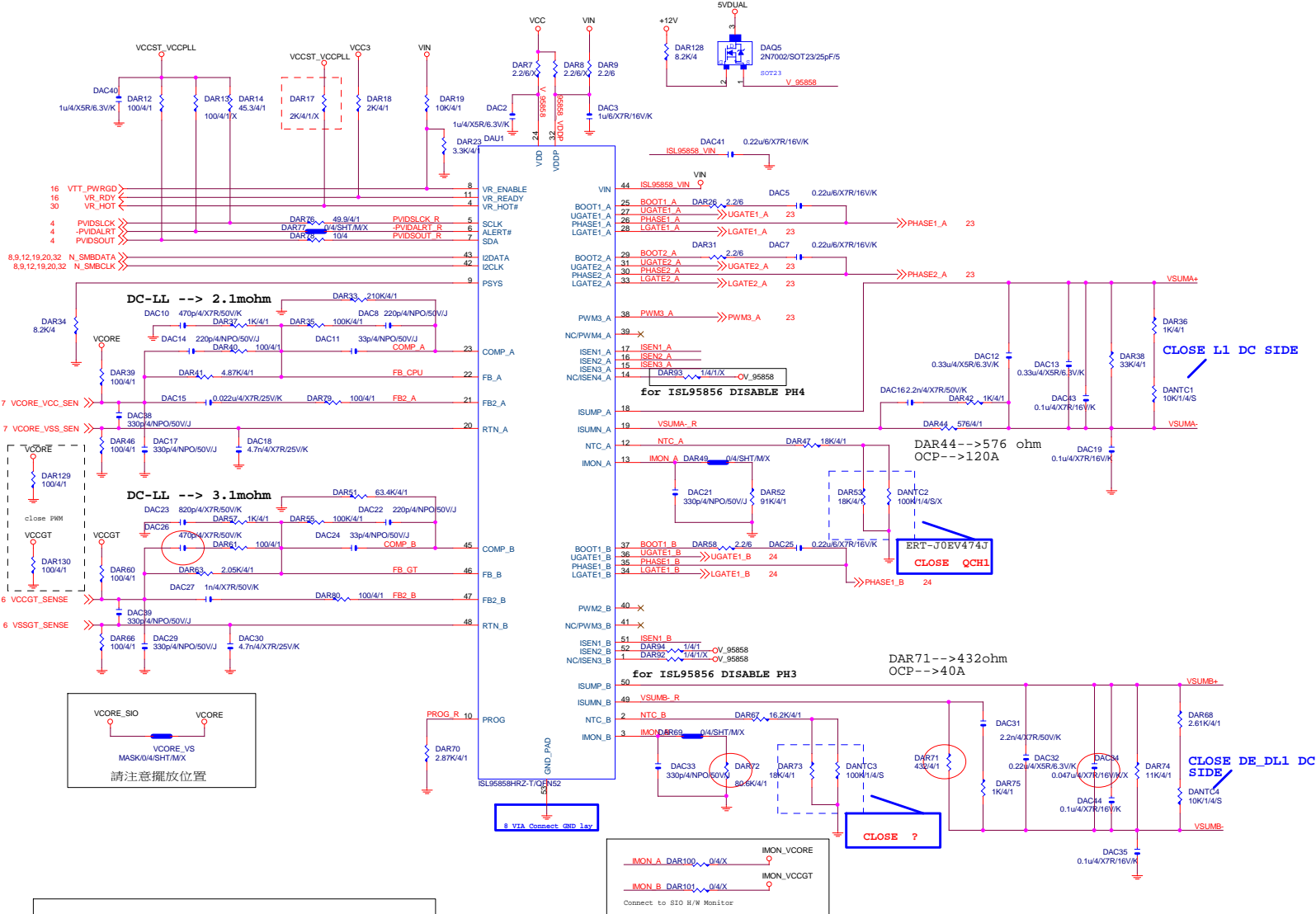
Title				
PCIE_X1 1,2				
Size	Document Number			Rev
Custom	GA-H110M-Gaming 3			1.0
Date:	Thursday, July 07, 2016	Sheet	20	of 47

Rev 0.6

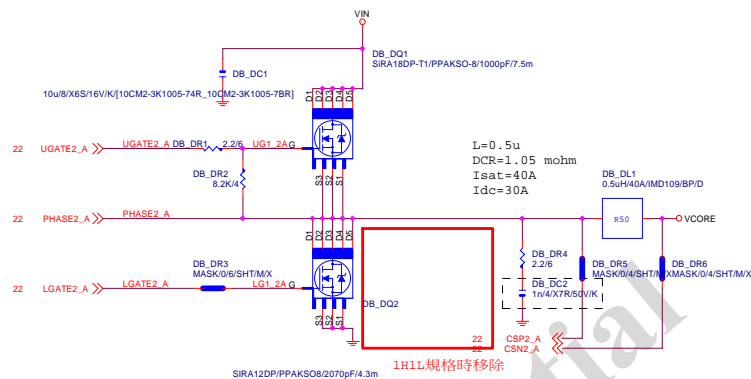


Gigabyte Technology

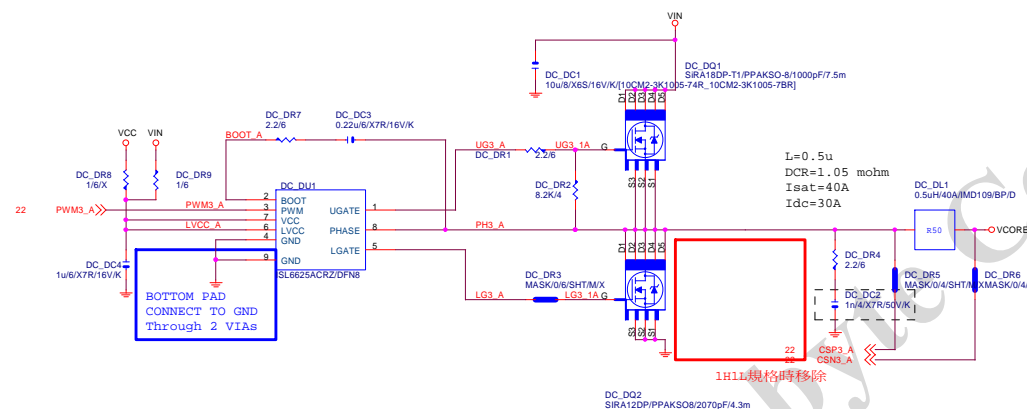
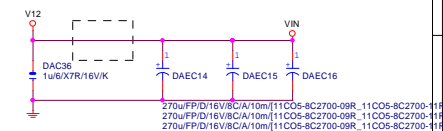
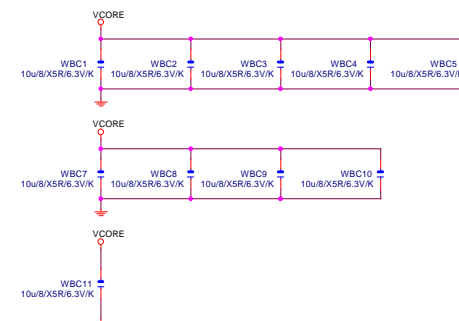
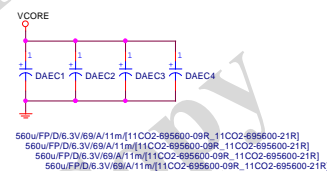
Title		
SATA EXPRESS		
Size	Document Number	Rev
Custom	GA-H110M-Gaming 3	1.0
Date: Thursday, July 07, 2016		
Sheet 21 of 47		



VCORE



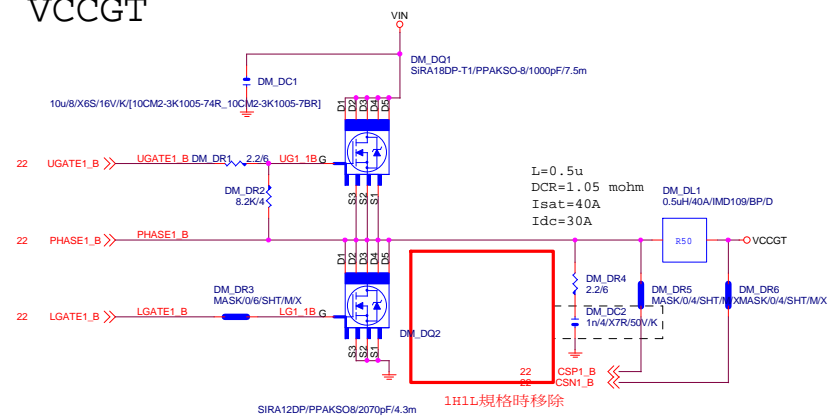
VIN CAP 270u*3PCS

VCORE CAP 560u*4PCS
22u*10PCS

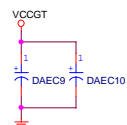
GIGABYTE™

Title			
ISL95858_MOS			
Size	Document Number	Rev	
Custom	GA-H110M-Gaming 3	1.0	
Date:	Thursday, July 07, 2016	Sheet	23 of 47

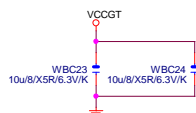
VCCGT



VCCGT CAP 560u*2PCS
22u*2PCS

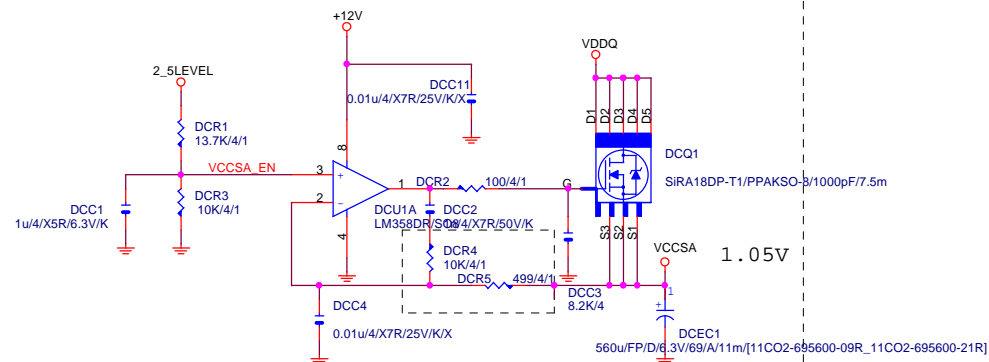


560u/FP/D/6.3V/69/A/11m/[11CO2-695600-09R_11CO2-695600-21R]
560u/FP/D/6.3V/69/A/11m/[11CO2-695600-09R_11CO2-695600-21R]

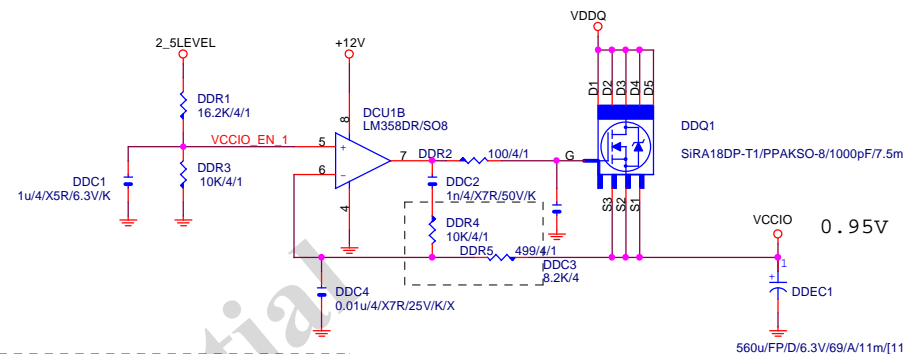


VCCSA

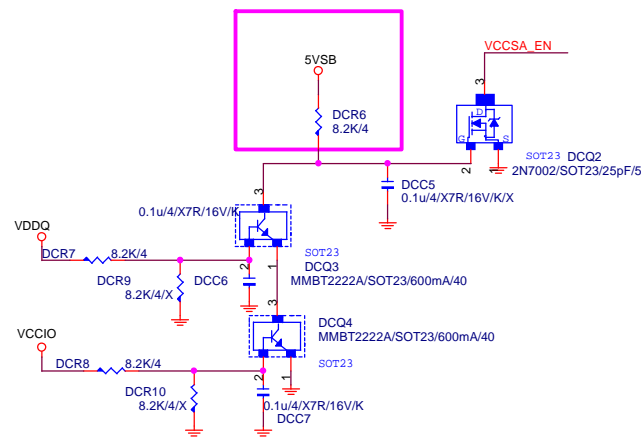
REV:0.4



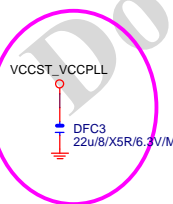
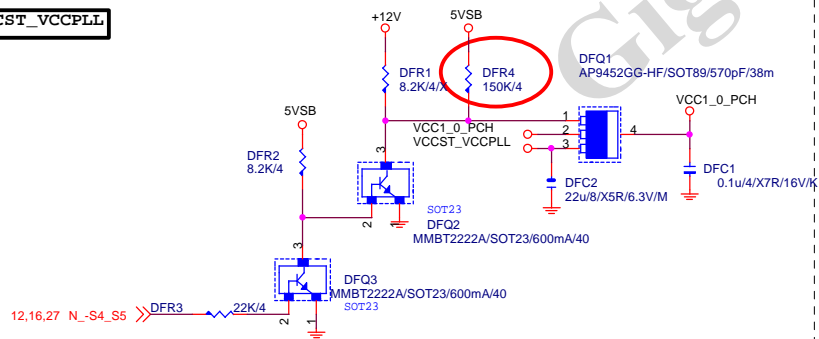
VCCIO



VCCIO_EN_1 DDR10 0/4/SHT/M/X VCCIO_EN 16
Connect to IT8620



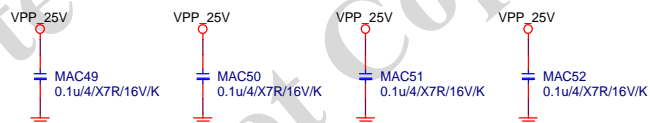
VCCST_VCCPLL

**GIGABYTE™**

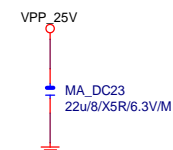
Title		VCCSA_VCCIO	
Size	Document Number	Rev	
Custom	GA-H110M-Gaming 3	1.0	
Date:	Thursday, July 07, 2016	Sheet	25 of 47

VPP 25V

L=1u
DCR=3.2 mohm
Isat=18A
Idc=15A

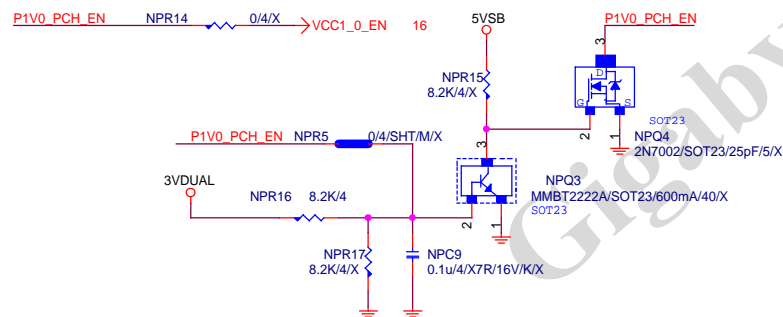


* 大電容 x0

**GIGABYTE™**

Title			
RT9018_VPP25 POWER			
Size	Document Number	Rev	
Custom	GA-H110M-Gaming 3	1.0	
Date:	Thursday, July 07, 2016	Sheet	27 of 47

1
+
NPEC1
100u/OS/D/16V/69/A/35m/[110



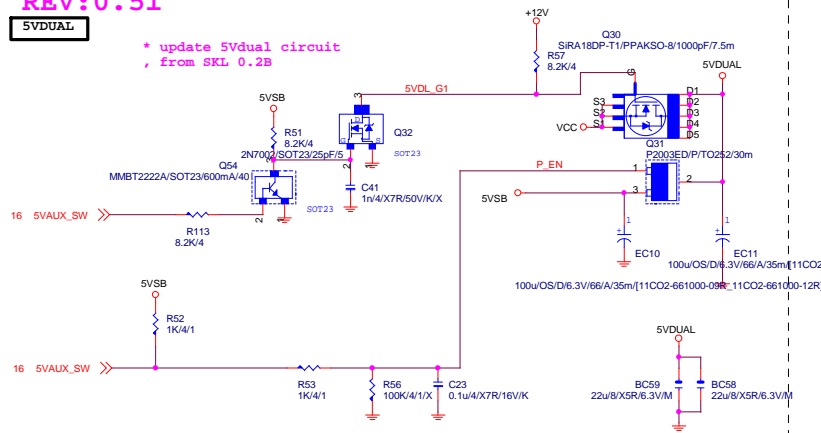
請放置CHOKE一出來的地方

GIGABYTE™

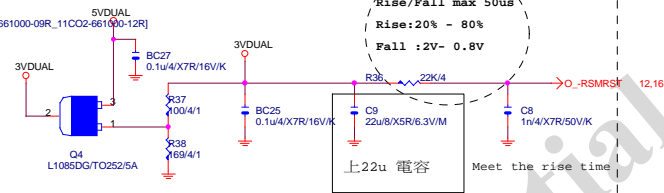
Title			
RT8237_PCH POWER			
Size	Document Number	Rev	
Custom	GA-H110M-Gaming 3	1.0	
Date:	Thursday, July 07, 2016	Sheet	28 of 47

5VDUAL

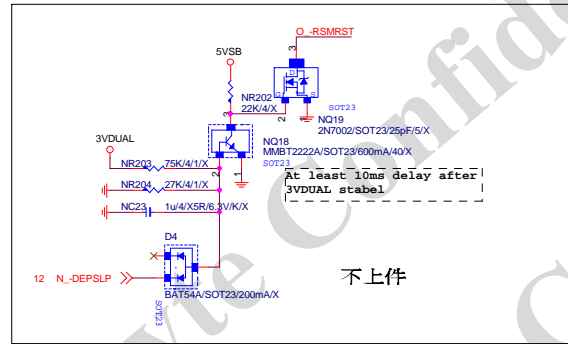
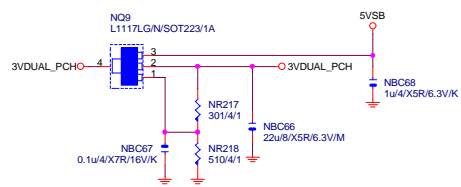
```
* update 5Vdual circuit
, from SKL 0.2B
```



3VDUAL

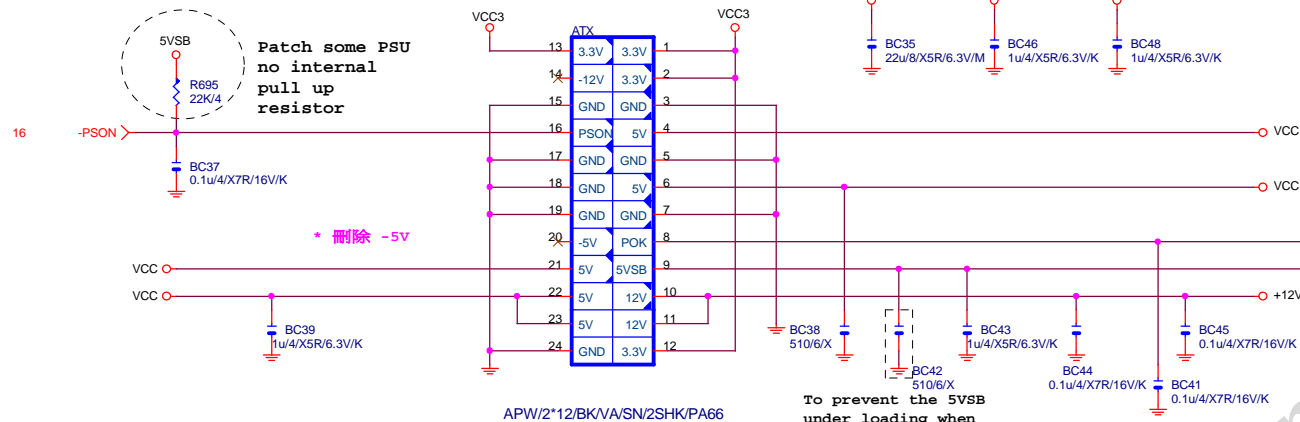


3VDUAL_PCH

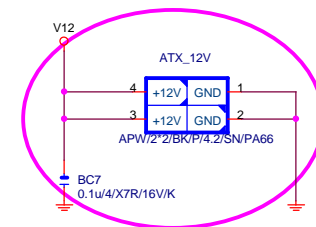


不上件

ATXX24 POWER CONNECTOR

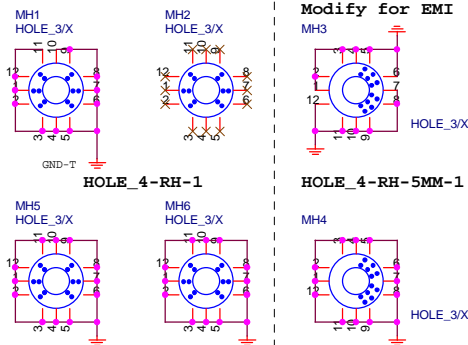


ATXX4 POWER CONNECTOR

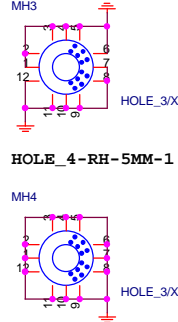


螺絲孔

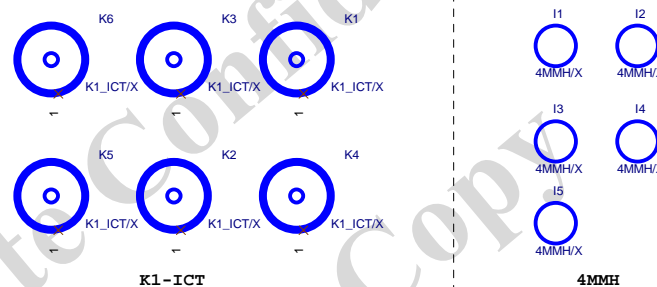
MH1:GND-T
FOR EMI
TEST驗證



14/12/24
Modify for EMI



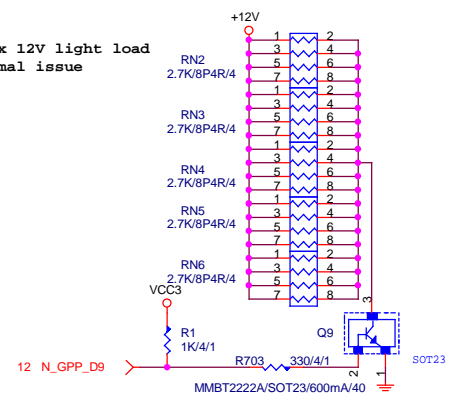
固定孔/光學點



To prevent the 5VSB
under loading when
boot

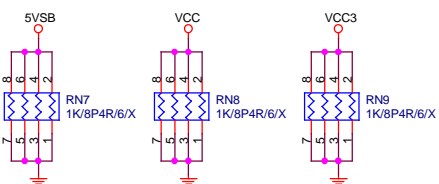
+12V DUMMY LOAD

To fix 12V light load
abnormal issue

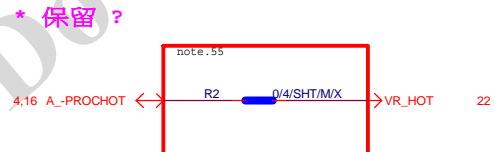


【技術通報R&D技術通報153】

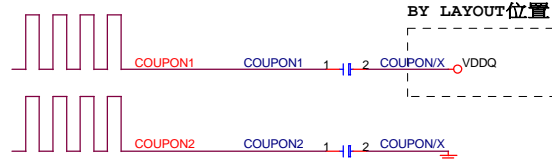
DUMMY LOAD



-PROHOT

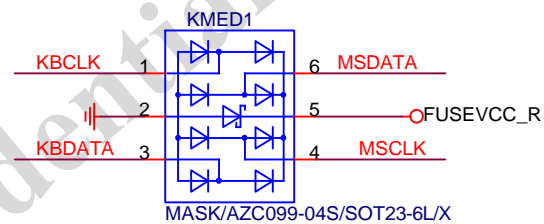
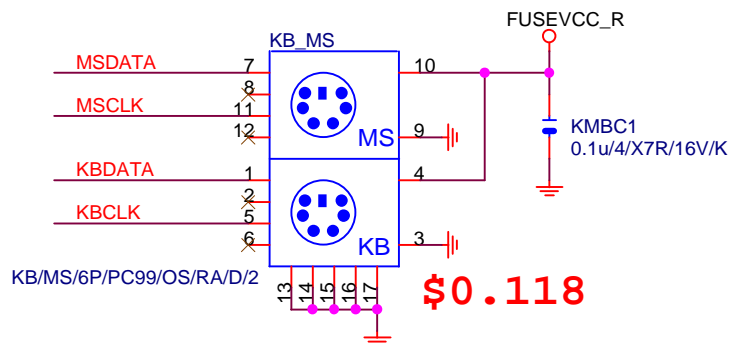


COUPON

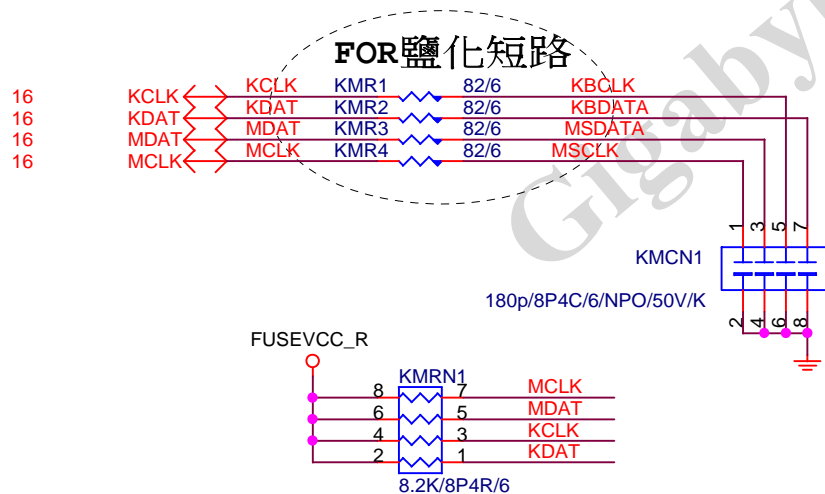


Gigabyte Technology

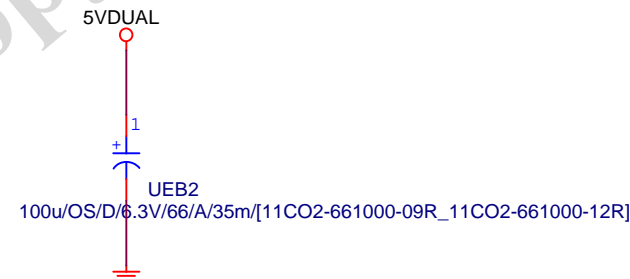
ATX POWER CONNECTOR			
Title	Document Number	GA-H110M-Gaming 3	
Size	Custom	Rev	1.0
Date:	Thursday, July 07, 2016	Sheet	30 of 47



KB_MS_USB DAMPING/PU



KB_MS_USB PWR



Gigabyte Technology

Title

KB_MS_USB

Size
A

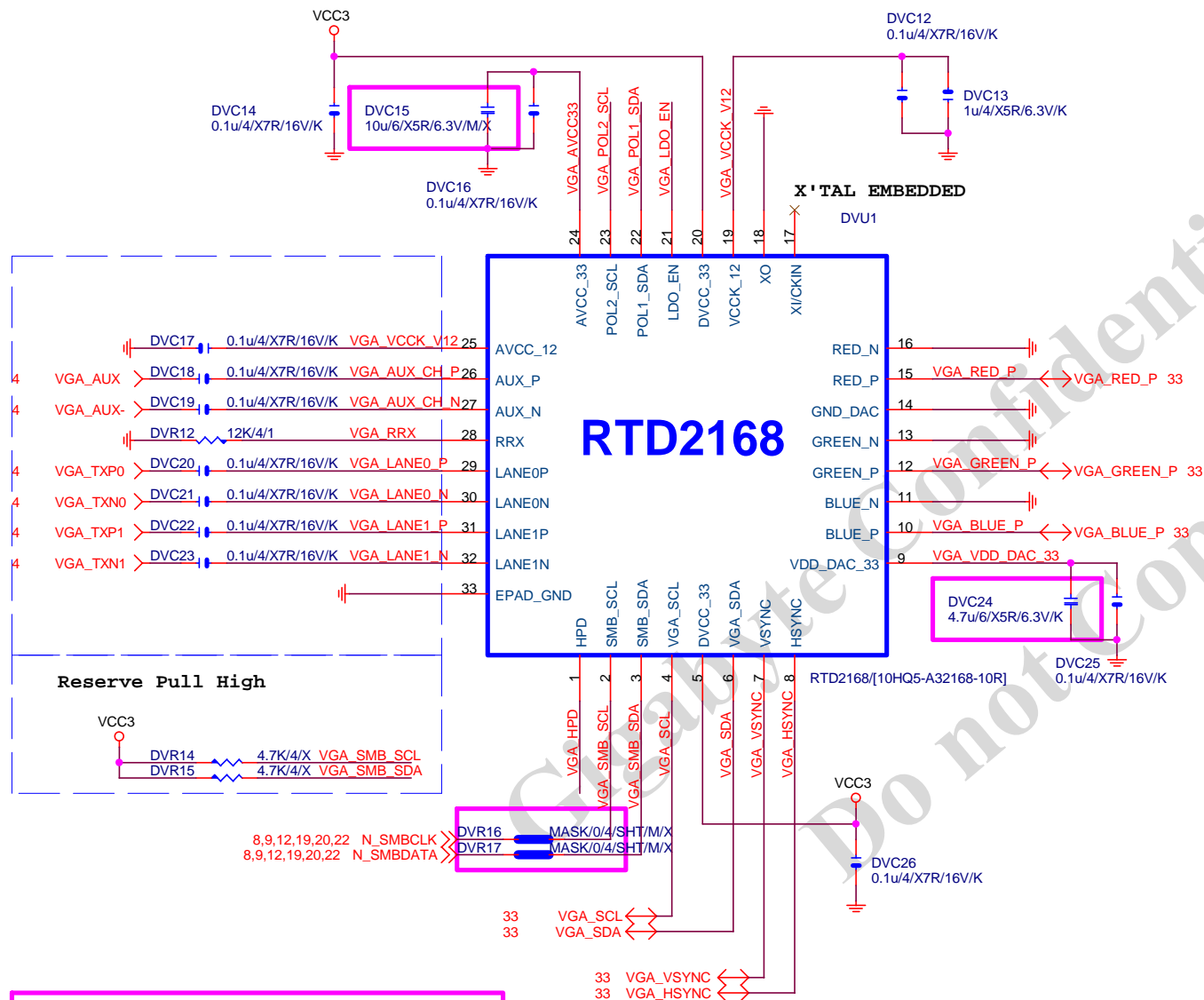
Document Number

GA-H110M-Gaming 3

Rev
1.0

Date: Thursday, July 07, 2016

Sheet 31 of 47



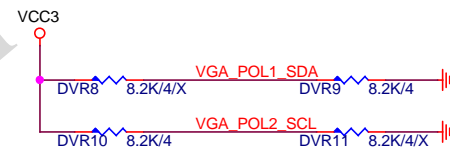
放置PCH端

10 N_DDPD_CTRLCLK \longleftrightarrow DVR19 $\xrightarrow{2.2K/4/1}$ VCC3
10 N_DDPD_CTRLDATA \longleftrightarrow DVR20 $\xrightarrow{2.2K/4/1}$ VCC3

POWER

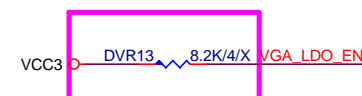


Power on latch



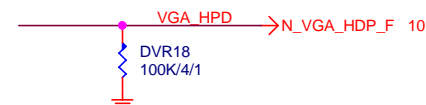
		POL1_SDA(PIN22)	
		0	1
POL2_SCL (PIN23)	0	X	EP MODE
	1	ROM ONLY MODE	EEPROM MODE

Embedded LDO

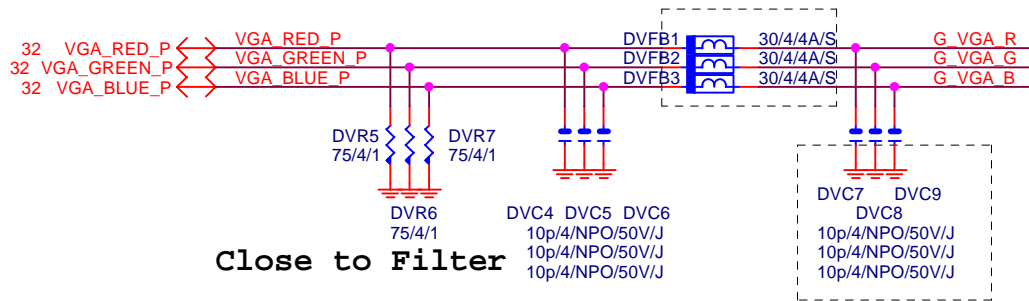
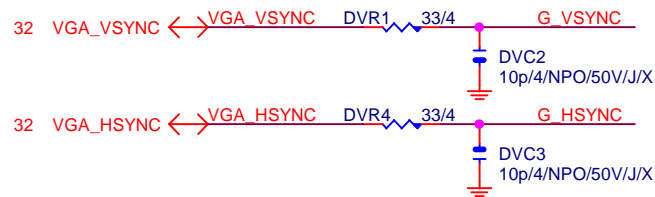
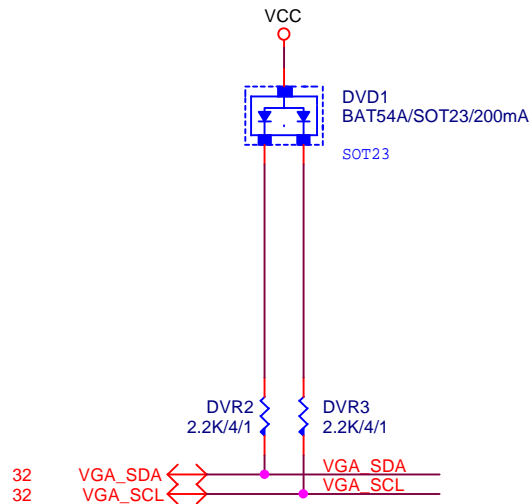


LDO_EN(PIN21)	
0	1
VCCK_V12 from External 1.2V	VCCK_V12 from Embedded LDO

DP HPD



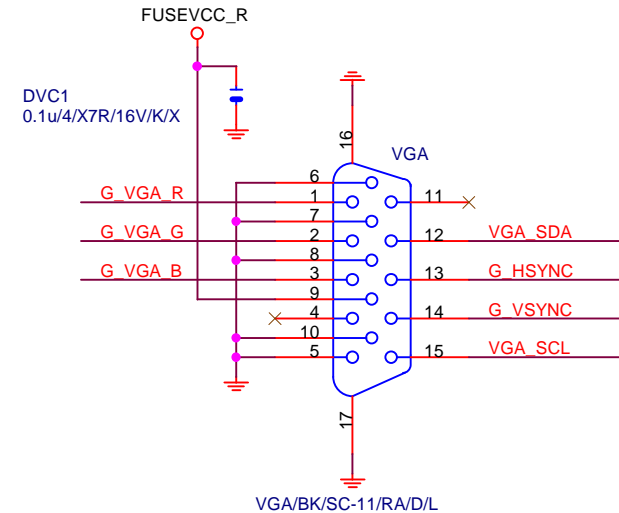
VGA SIGNAL R1.03



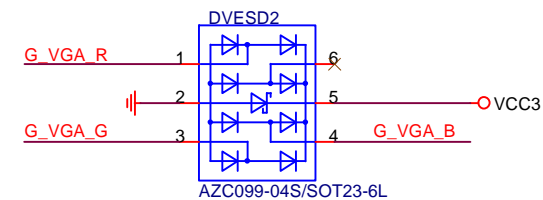
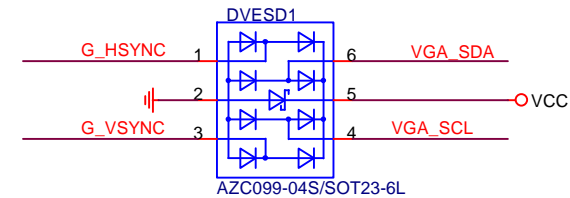
Close to Filter

FOR EMI

VGA CONN.



VGA ESD

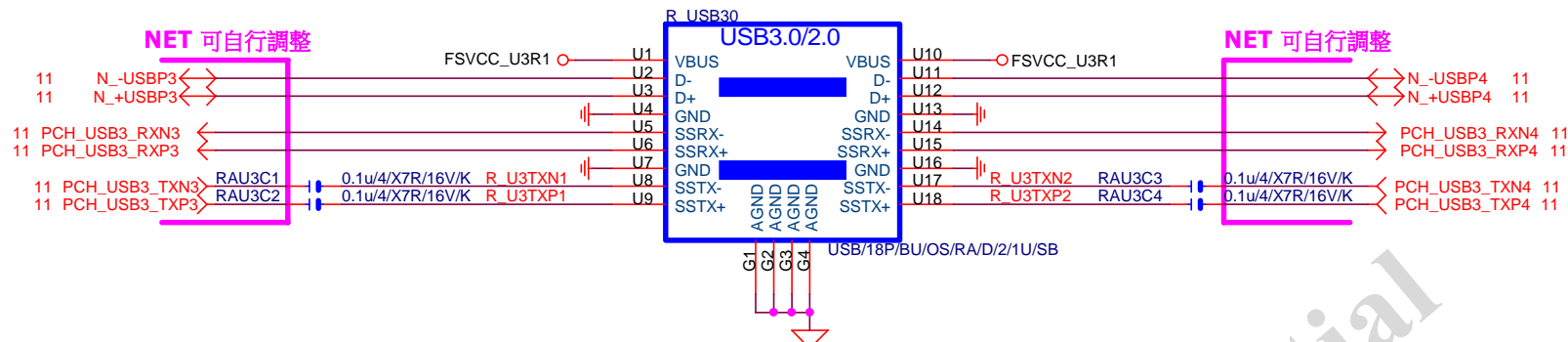


Gigabyte Technology
NXP-PTN3356

Title		
Size	Document Number	Rev
Custom	GA-H110M-Gaming 3	1.0
Date:	Thursday, July 07, 2016	Sheet 33 of 47

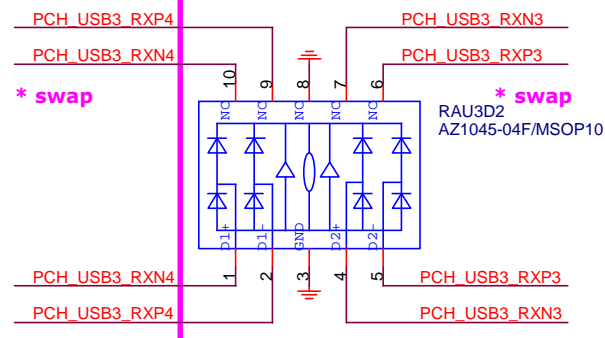
Rev: 0.7

ESD 可自行SWAP PIN ,CONN端 NET 名稱 不可

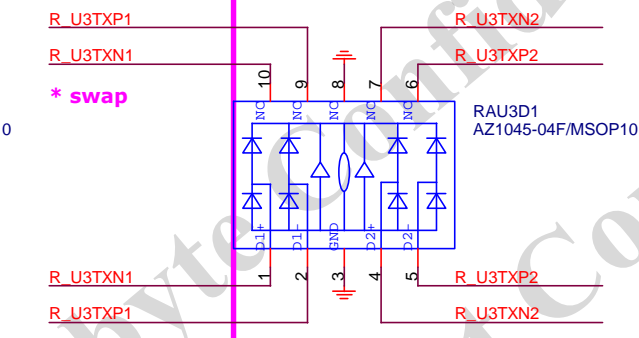


ESD

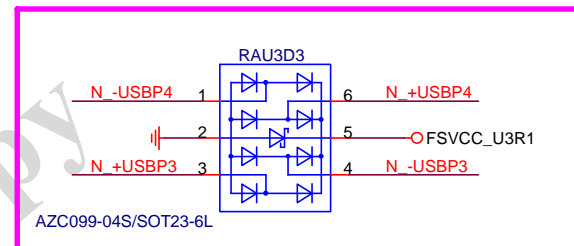
NET 可自行調整



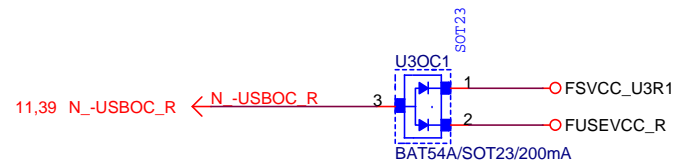
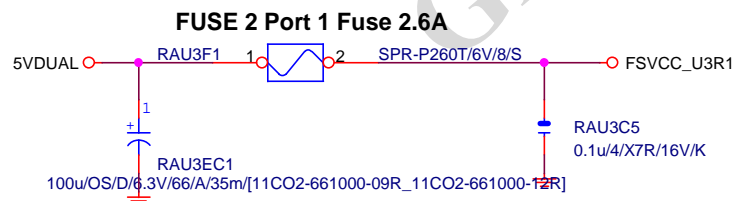
NET 可自行調整



NET 可自行調整

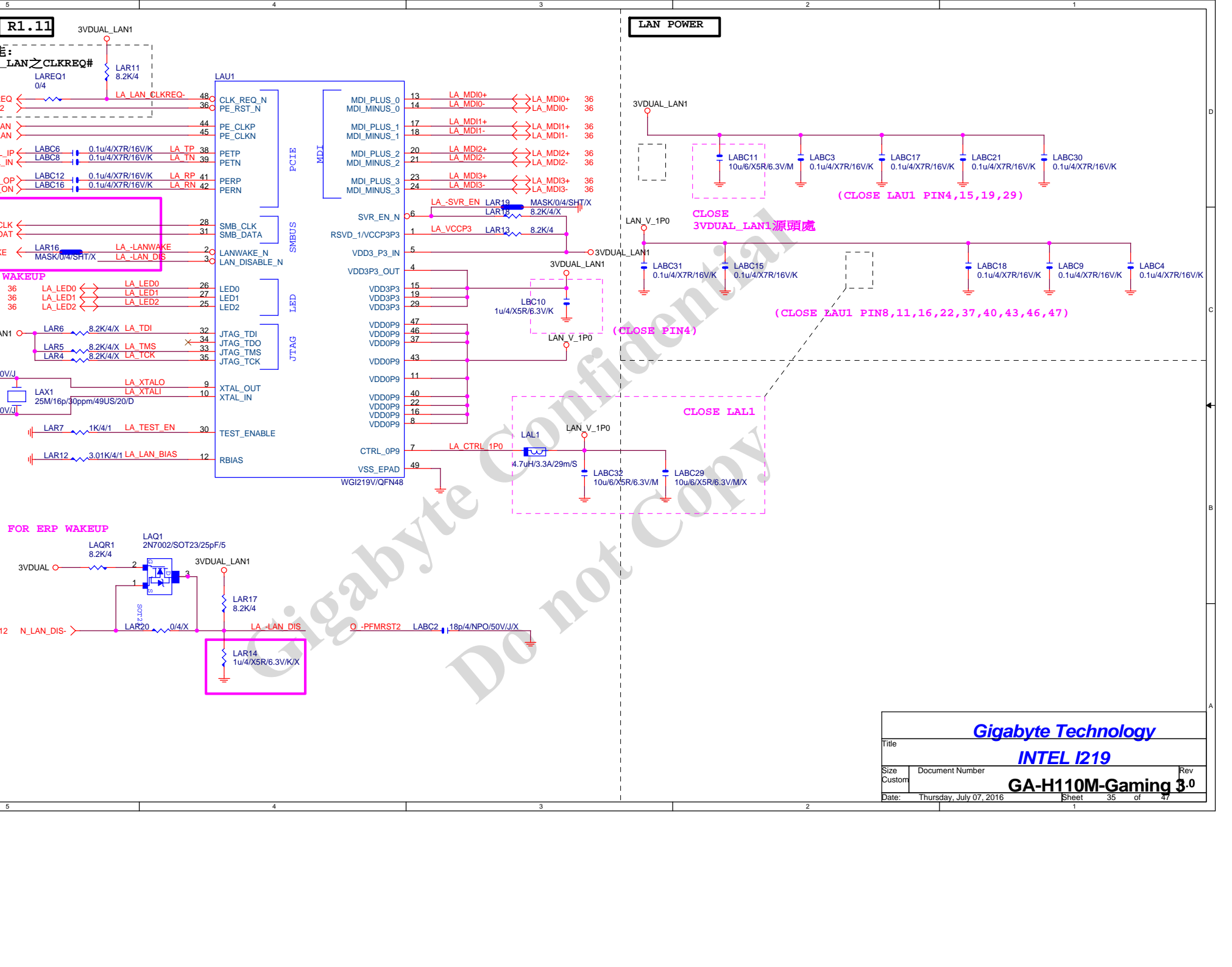
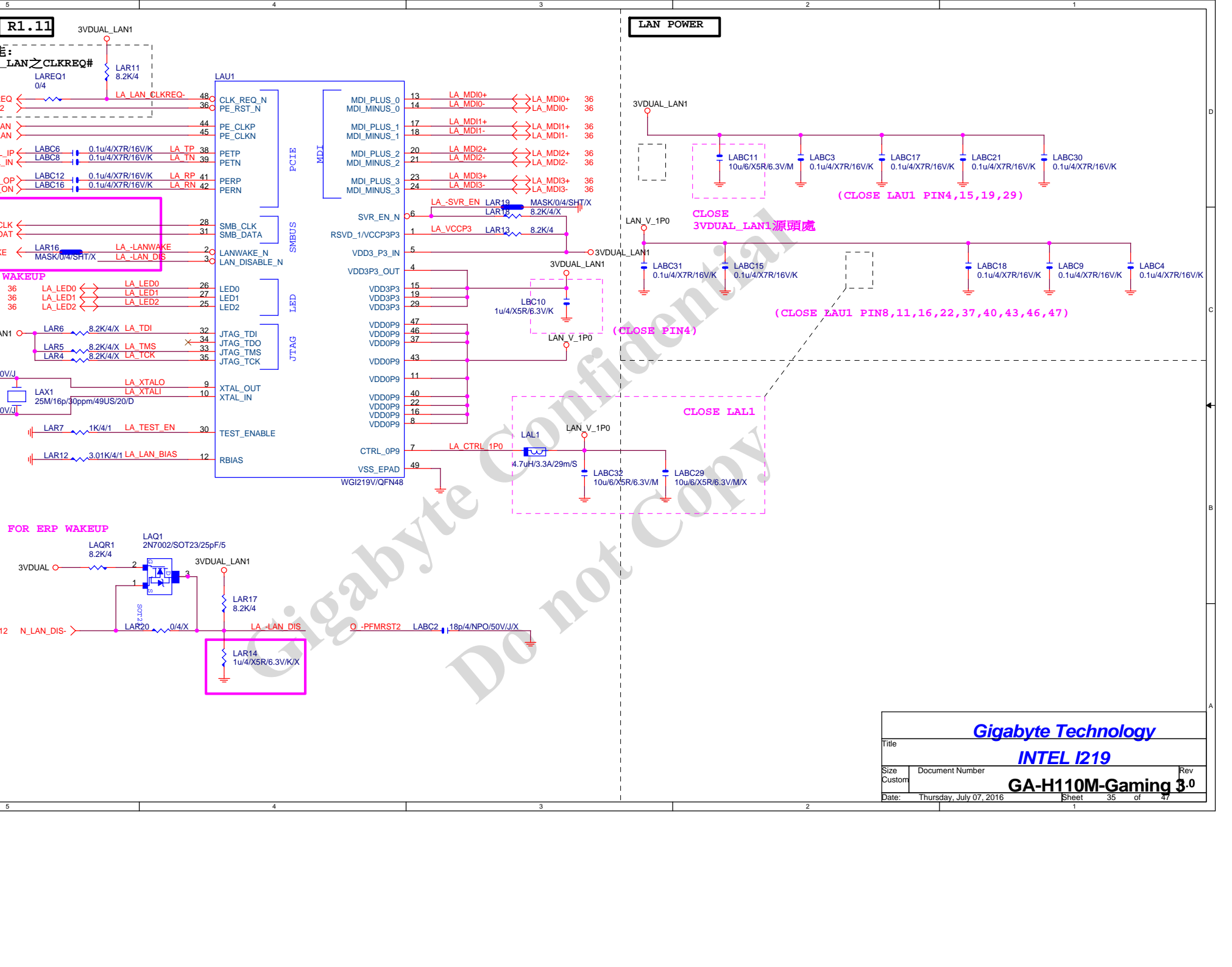


FUSE



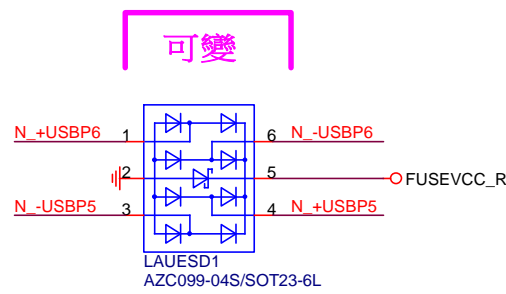
Gigabyte Technology

Title		R_USB30,USB_OC	
Size	Document Number	GA-H110M-Gaming	
Custom		Rev 1.0	
Date:	Thursday, July 07, 2016	Sheet	34 of 47

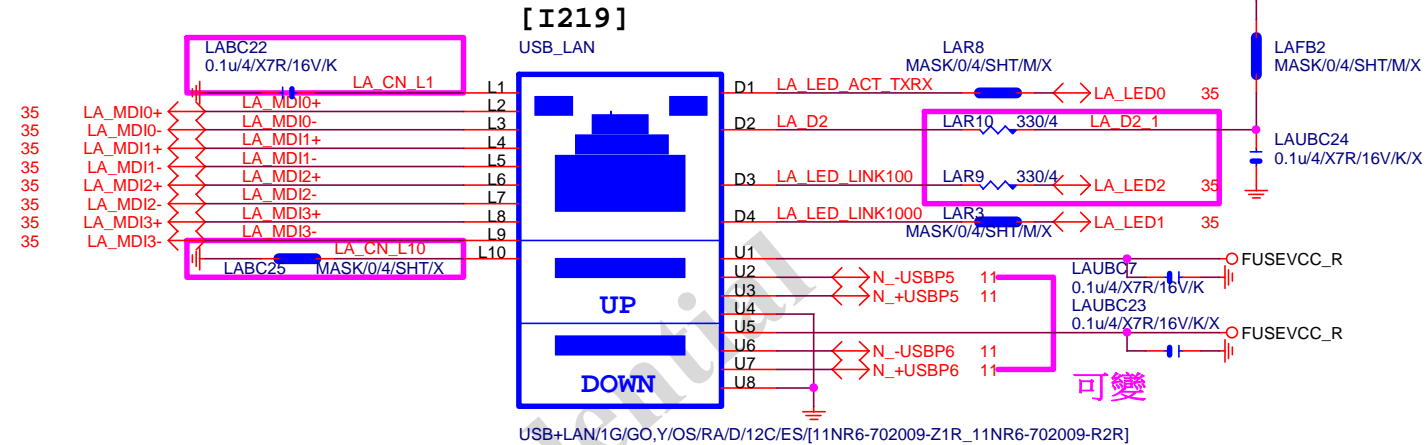


USB_LAN CONNECTOR R1.11

RMA ESD PROTECT note:可變更USB NAME

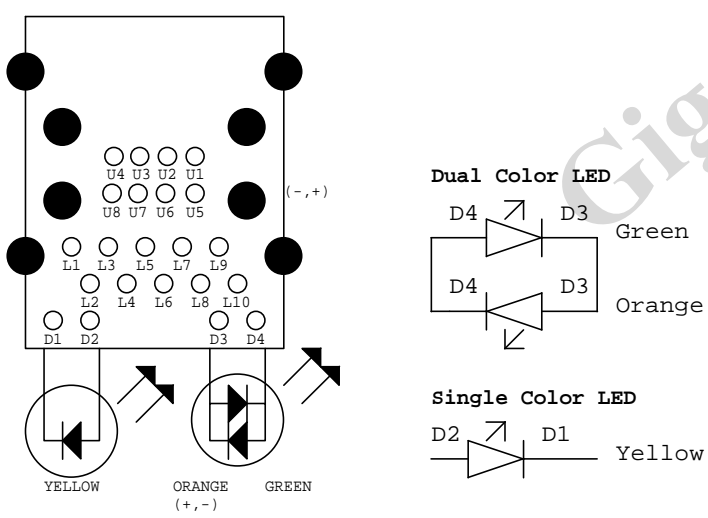


USB_LAN CONNECTOR note:可變更USB NAME

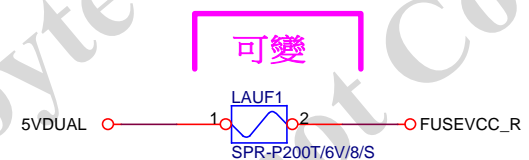


LA_MDI-->100歐姆:[20/4/8/4/20]

USB_LAN LAYOUT示意圖



USB POWER note:可變更FUSE



Close to connector
USB_LAN 2-Port 2.0A
FUSE-0805

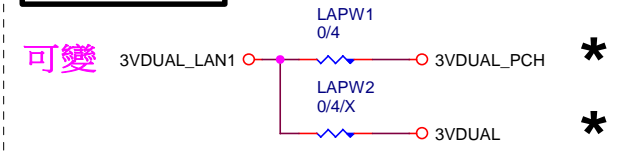
LAN_COVER FOOT PRINT:LAN_COVER

可變
[視SPEC需求]

EMI SHORT PAD

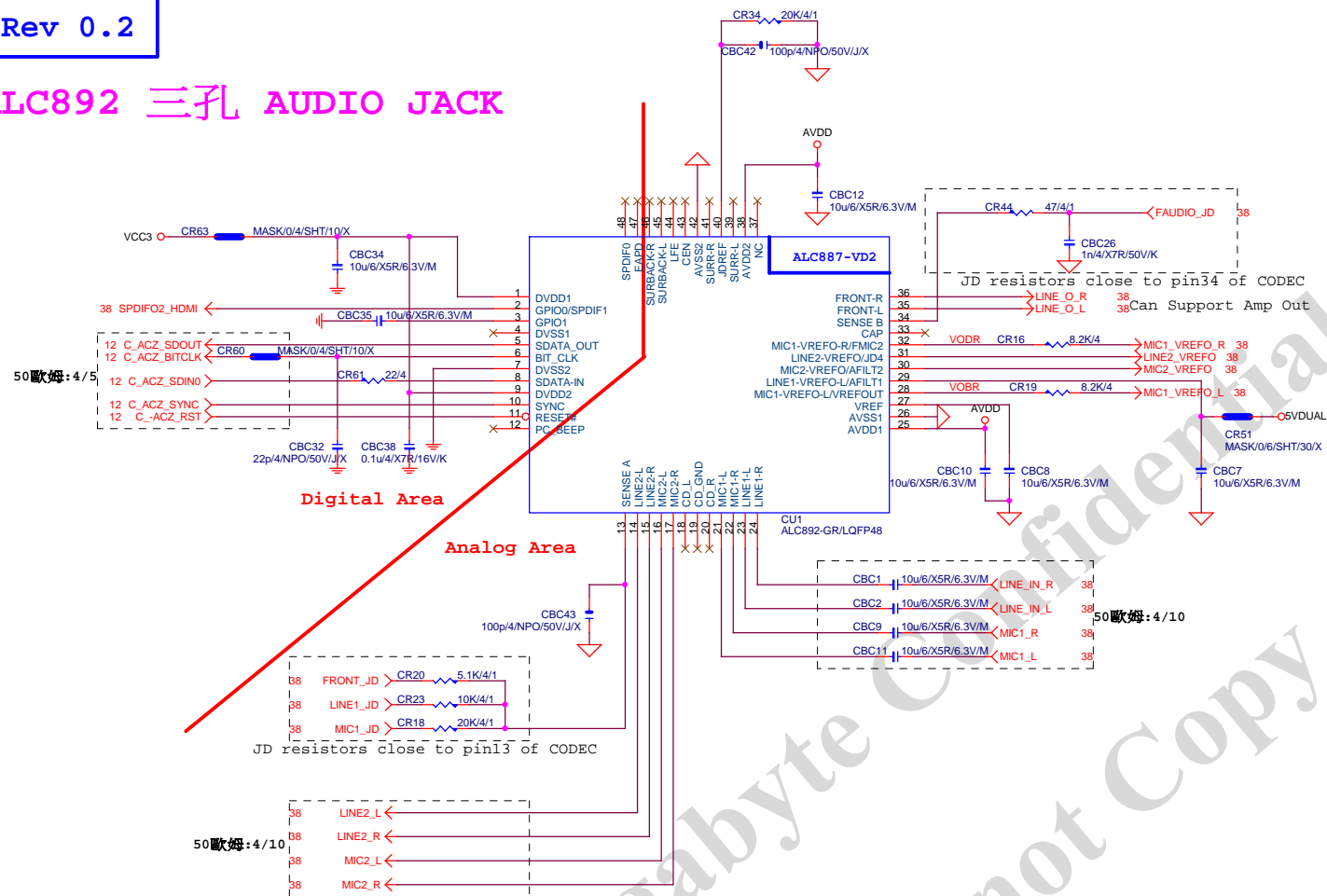


LAN POWER note: lan power連接及電流



Gigabyte Technology			
Title			
LAN CONNECTOR-I219			
Size	Document Number		Rev
Custom	GA-H110M-Gaming 3		1.0
Date:	Thursday, July 07, 2016	Sheet	36 of 47
2:		1	

ALC892 三孔 AUDIO JACK

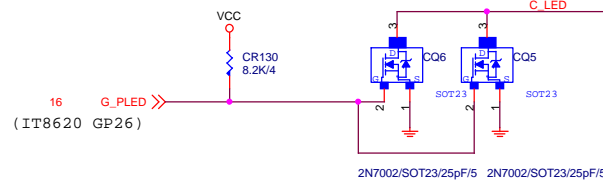
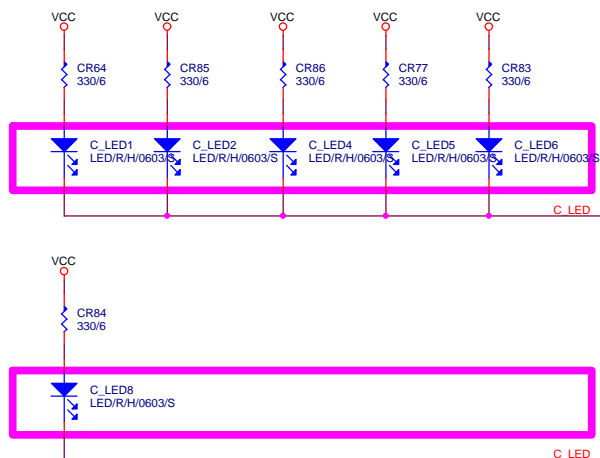


LAYOUT注意: 螺絲孔下GND方式

1. MH1空間夠, 下DGND
空間不夠, 改為Isolate
2. MH2一律改為Isolate

<input type="radio"/> MH1	<input type="radio"/> MH2
DGND	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

LAYOUT注意: 要加

GND切割線

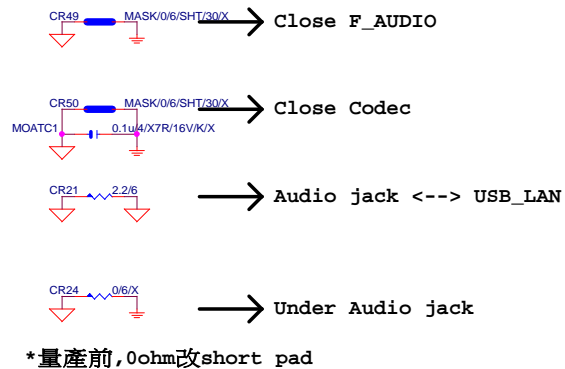
音效區域印刷

- BOM OPTION :
1. Chemicon音效電容
 2. 金屬外罩 Reserve (LAYOUT上件與否, 依照各Model spec)
 3. LED Reserve (上件與否和LED顏色, 依照各Model spec)

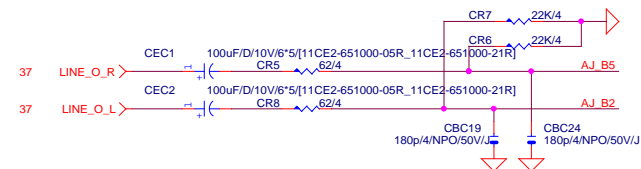
Gigabyte Technology

Title	HD AUDIO ALC887
Size	Custom
Document Number	GA-H110M-Gaming 3
Date:	Thursday, July 07, 2016
Sheet	37 of 47
Rev	1.0

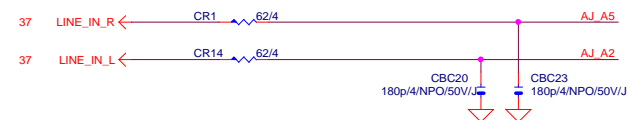
Rev 0.1



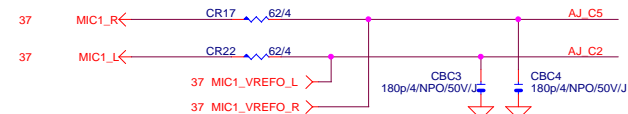
LINE-OUT



LINE-IN



MIC-IN

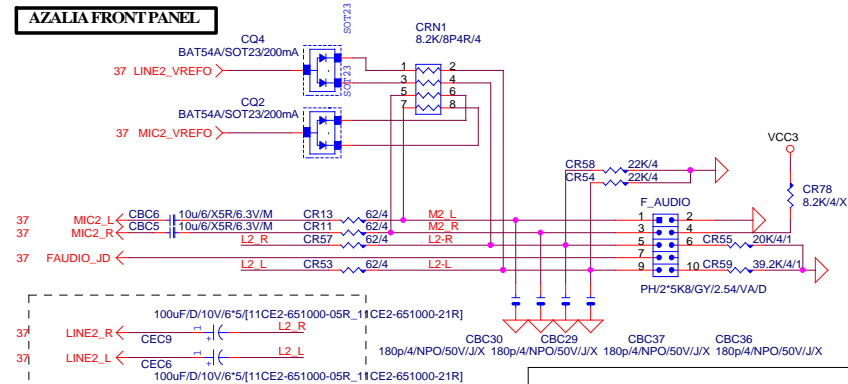


SURROUND

CEN/LFE

SURRBACK

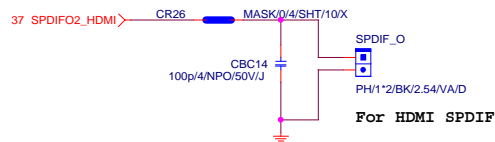
AZALIA FRONT PANEL



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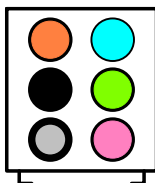
Title		AUDIO JACK	
Size		GA-H110M-Gaming 3	
Date:		Thursday, July 07, 2016	
Sheet		38 of 47	
Rev		1.0	

SPDIF_OUT



SPDIF_IN

AZALIA JACK



AZALIA JACK

BLUE

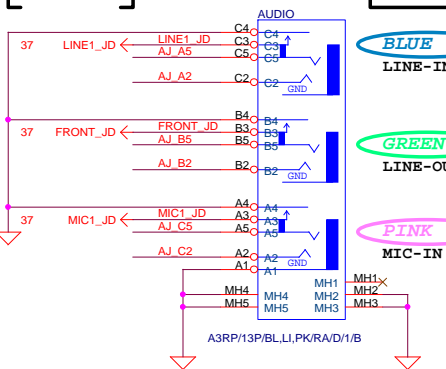
LINE-IN

GREEN

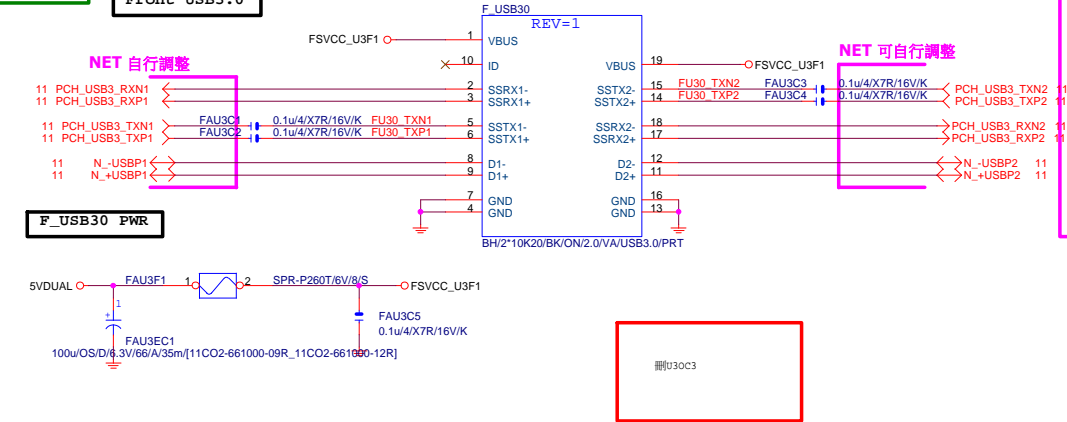
LINE-OUT

PINK

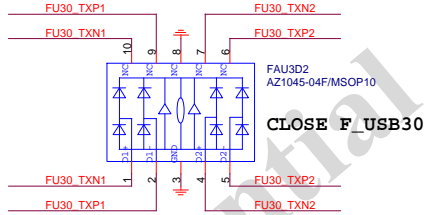
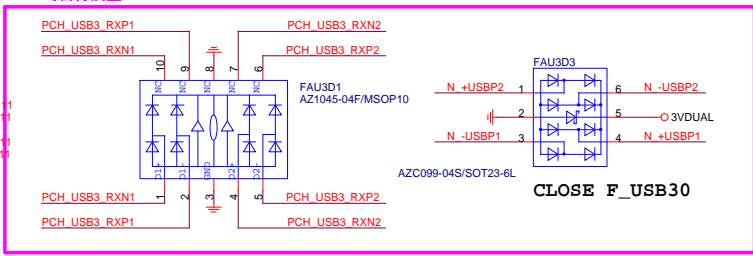
MIC-IN



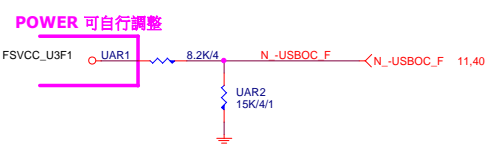
Front USB3.0



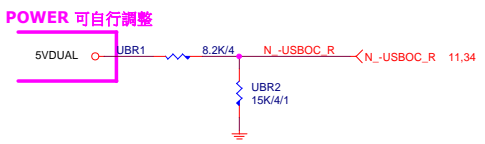
NET 可自行調整



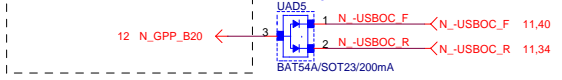
-USBOC_F



-USBOC_R

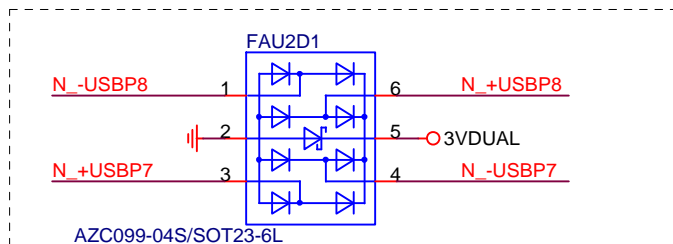
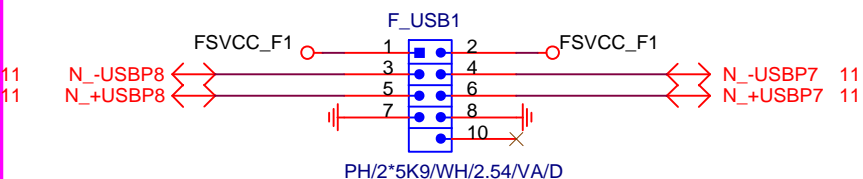


* 接 PCH N_GPP_B21
PCH PU 3vdual



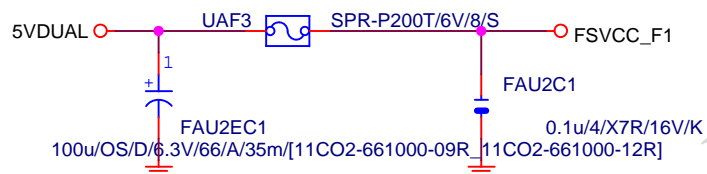
NET 可變

FUSB2X5-HS

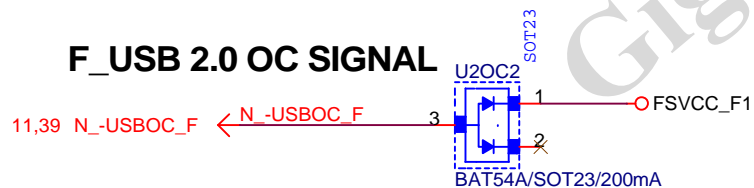


Close to connector

FUSE 2 Port 1 Fuse 2A

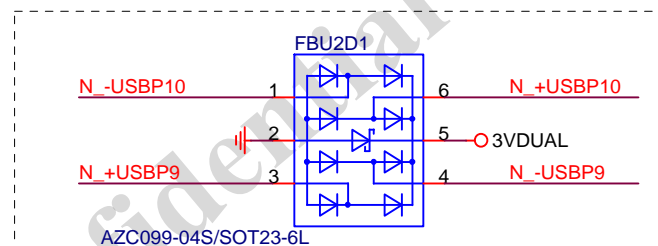
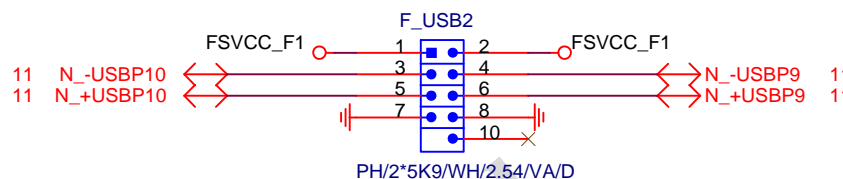


F_USB 2.0 OC SIGNAL



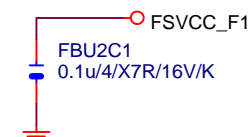
NET 可變

FUSB2X5-HS



Close to connector

FUSE 2 Port 1 Fuse 2A



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Title

USB2.0

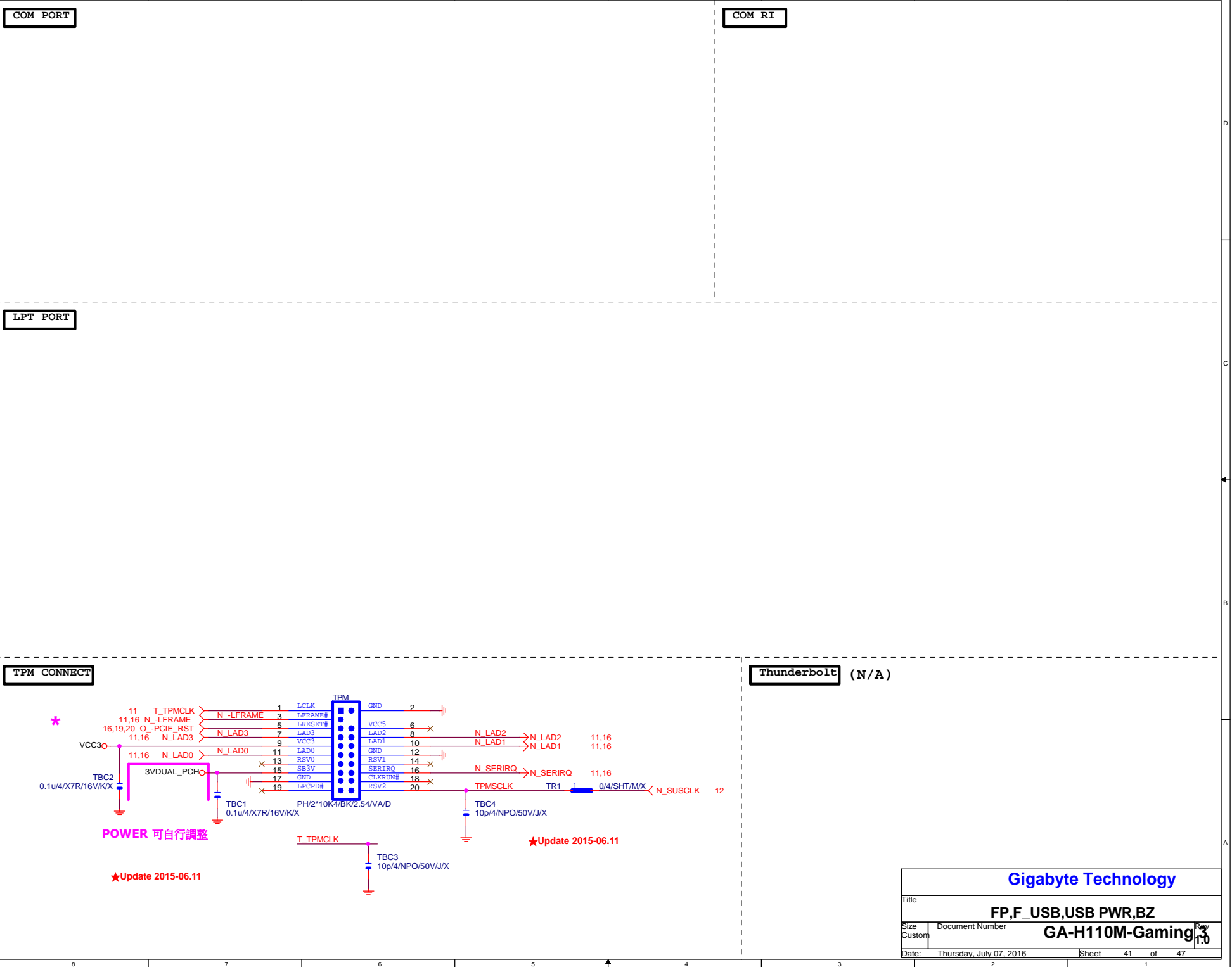
Size
A

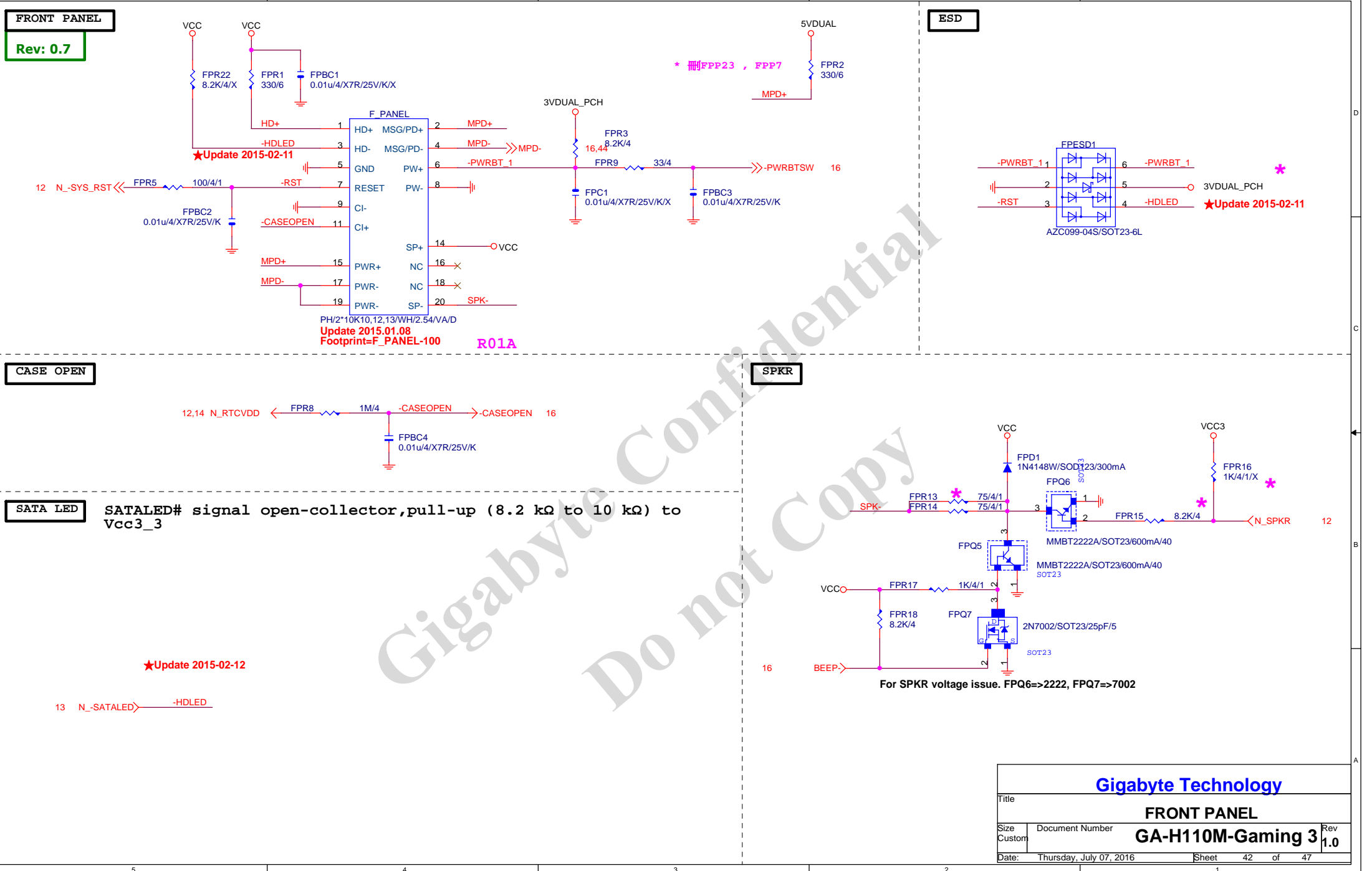
Document Number

GA-H110M-Gaming 1.3

Date: Thursday, July 07, 2016

Sheet 40 of 47





Gigabyte Technology

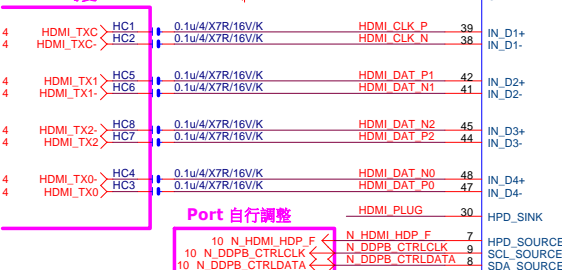
FRONT PANEL

GA-H110M-Gaming 3

Rev 1.0

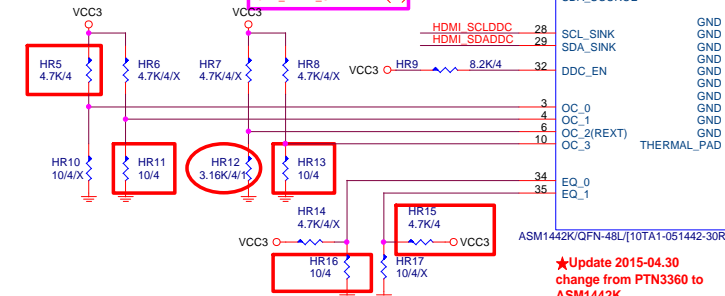
HDMI LEVEL SHIFT

NET 可變

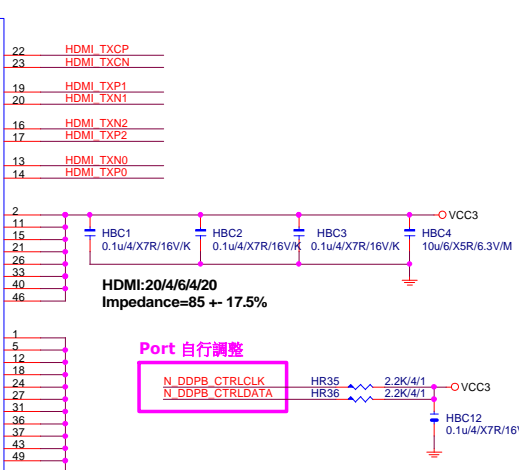


Port 自行調整

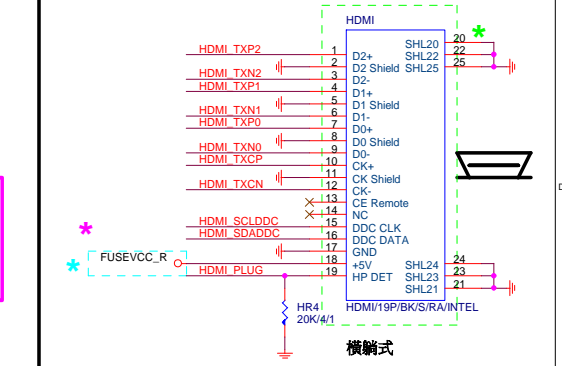
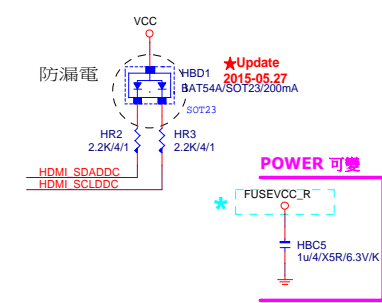
10 N_HDMI_HDP_F	N HDMI_HDP_F	7
10 N_DDPB_CTRLCLK	N DDPB_CTRLCLK	9
10 N_DDPB_CTRLDATA	N DDPB_CTRLDATA	8



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&D技術通報150】
HDMI eye diagram1.4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)



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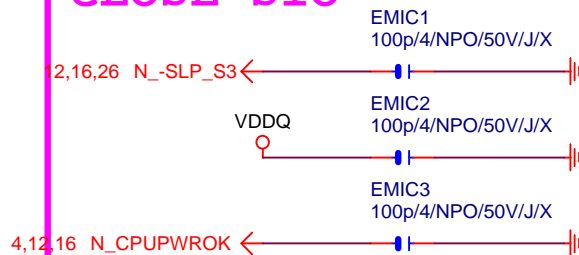
FP,F_USB,USB PWR,BZ

GA-H110M-Gaming

Thursday, July 07, 2016

Sheet 43 of 47

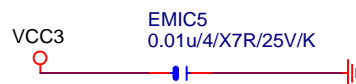
CLOSE SIO



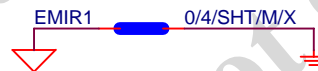
CLOSE PCH



close to PCH (NR17)



R_USB30_2 & DVI 之間

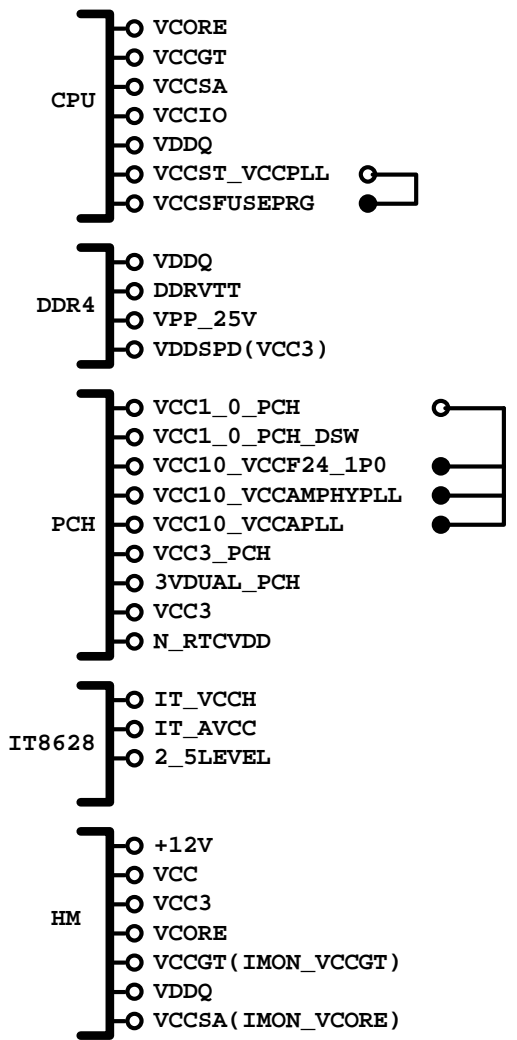


close to SIO (PIN92)MPD-

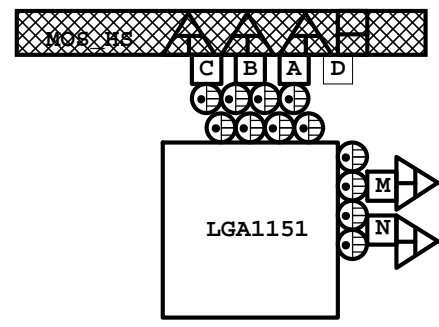
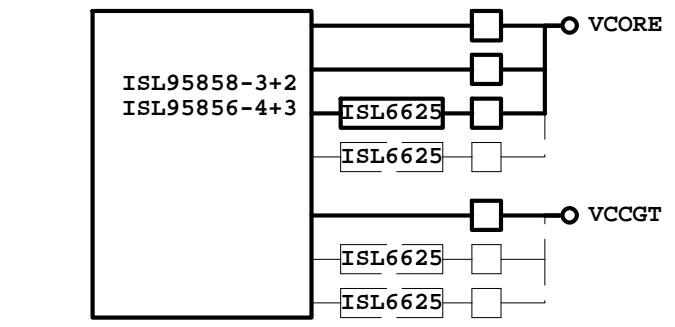
**GIGABYTE™**

Title			
EM/ESD			
Size	Document Number		Rev
A	GA-H110M-Gaming 3		1.0
Date:	Thursday, July 07, 2016	Sheet	44 of 47

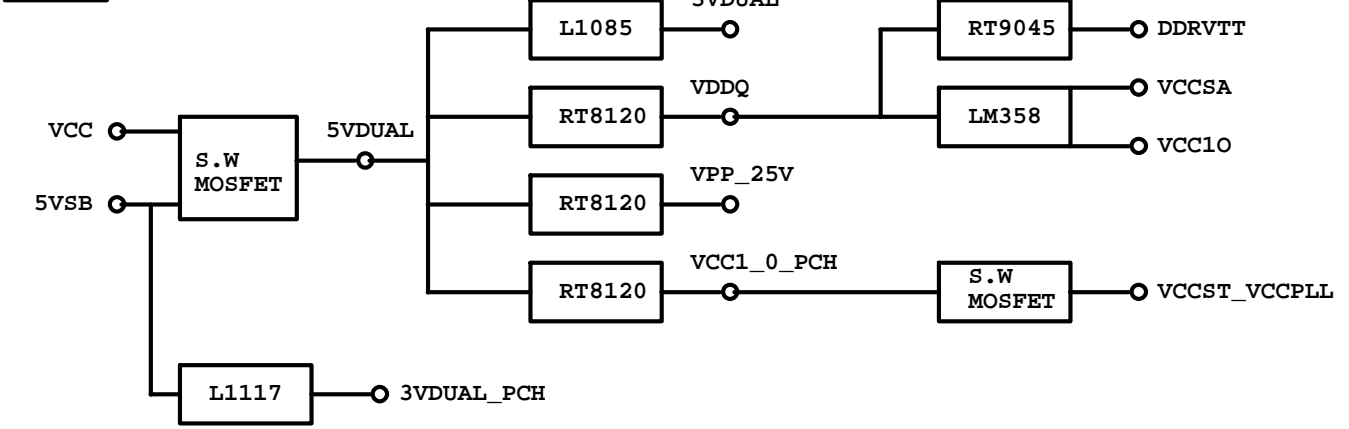
POWER BLOCK MAP



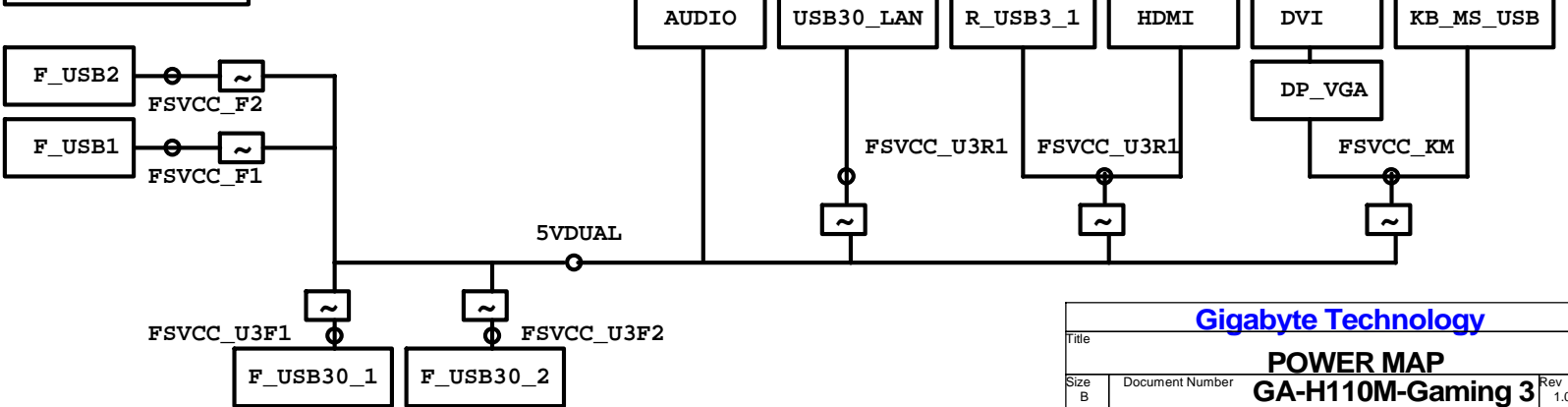
VCORE/VCCGT



POWER



FUSE POWER F/R



固態電容料號.請自行修改

日系黑色固態	Capture Value
11C02-C85600-01R	560u/FP/D/6.3V/68/C/8m
11C05-C82700-01R	270u/FP/D/16V/88/C/12m
11C05-C61000-01R	100u/OS/D/16V/66/C/30m
11C02-C51000-01R	100u/FP/D/6.3V/65/C/13m

日系一般固態	Capture Value
11C02-685600-01R	560u/FP/D/6.3V/68/8m
11C05-882700-01R	270u/FP/D/16V/88/12m
11C05-661000-03R	100u/OS/D/16V/66/30m
11C02-651000-02R	100u/OS/D/6.3V/66/30m

台系固態	Capture Value
11C02-661000-09R	100u/OS/D/6.3V/66/A/35m
11C05-691000-09R	100u/OS/D/16V/69/A/35m
11C05-8C2700-09R	270u/FP/D/16V/8C/A/10m
11C02-695600-09R	560u/FP/D/6.3V/69/A/11m

IRON CHOKE

	料號	Capture Value	SIZE	Footprint
DIP	11LC5-M4500C-01R	0.5uH/40A/IMD109/M/D	10*10	CHOKE05U-40A-1PQ-3
DIP	11LC5-M2500C-01R	0.5uH/20A/IMD0809/M/D	8*8	CHOKE1U-R50M-IF

Ferrite

	料號	Capture Value	SIZE	Footprint
DIP	11LC5-F3500C-11R	0.5uH/32A/INCG109/FSI/D	10*10	CHOKE05U-40A-1PQ-3
DIP	11LC5-F2500C-11R	0.5uH/25A/INC0809/F/D	8*8	CHOKE1U-R50M-IF
SMD	未建(SIUC1007-R30M-JJ1W)		10*7	CHOKE11X8MM-SMD

BEAD

	料號	Capture Value	SIZE	Footprint
DIP	10LFB-15470A-01R	47/4030/15A/S	4*3	BEADC8B-BPH_SMD

PWM料號

		料號	Capture Value	Footprint
PWM	ISL95856	10TA1-695856-01R		IC52QFN-6x6-G
PWM	ISL95858	10TA1-695858-01R		IC52QFN-6x6-G
PWM	IR35201	10TA1-635201-00R		IC56QFN-9VRS4339
PWM	IR3570	10TA1-603570-00R		IC40MLFP-ISL95835

GIGABYTE™

Title

RT8120_DDR4 POWER

Size

Custom

Date:

Thursday, July 07, 2016

Sheet

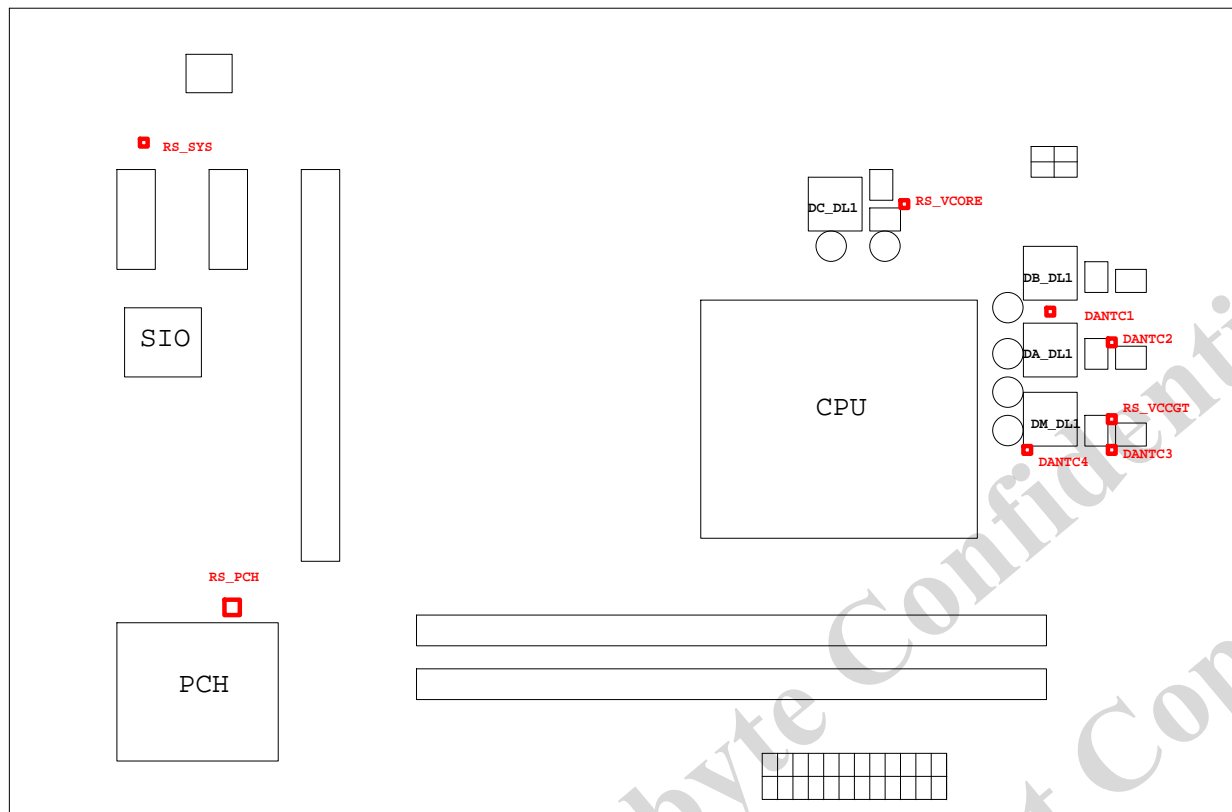
46

of

47

Rev

1.0



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