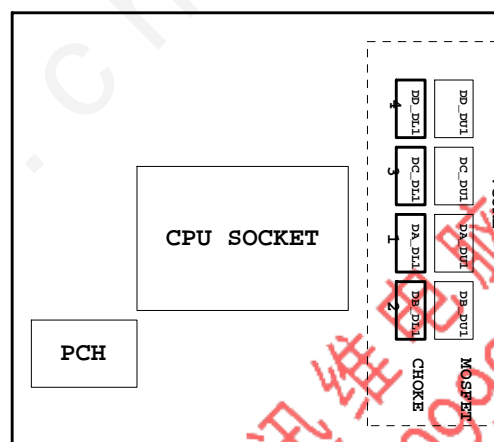


01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	CPU_LGA1151-A
05	CPU_LGA1151-B-DDR3
06	CPU_LGA1151-C
07	CPU_LGA1151-D
08	DDR 3 CHANNEL A
09	DDR 3 CHANNEL B
10	PCH CLOCK BUFFER
11	PCH DMI,USB,PCIE
12	PCH MISC
13	PCH SATA,PCIE,SATA EXPRESS
14	PCH_PWR,GND
15	Dual BIOS
16	I/O ITE8628
17	HWM
18	FAN CTRL-SIO
19	PCIEX16 SLOT
20	PCIEX1*2 SLOT
21	SATA
22	IT8892E/FX
23	PCI SLOT
24	ISL95858_856 PWM
25	ISL95858_856 MOS_VCORE
26	ISL95858_856 MOS_VCCGT
27	VCCSA_VCCIO_VCCPLL
28	RT8237_DDR_BEAD
29	RT8237_PCH-BEAD
30	DISCRETE POWER
31	ATX POWER , -PROCHOT
32	KB_MS_USB
33	DVI
34	RTD2168 - DP to VGA - IC

35	RTD2168 - DP to VGA - Conn
36	R_USB30
37	Realtek 8111G
38	USB30_LAN CONNECTOR-8111HS
39	ALC887-VD2 CODEC
40	REAR AUDIO JACK
41	F_USB30
42	F_USB20
43	COM , LPT
44	F_PANEL
45	USB20 HUB , ESD
46	POWER MAP
47	POWER 零件使用表
48	TABLE LIST



Gigabyte Technology

Cover Sheet		
Size	Document Number	Rev
Custom	GA-H110M-S2PV DDR3-WP	1.01
Date	Wednesday, November 18, 2015	Sheet 1 of 48

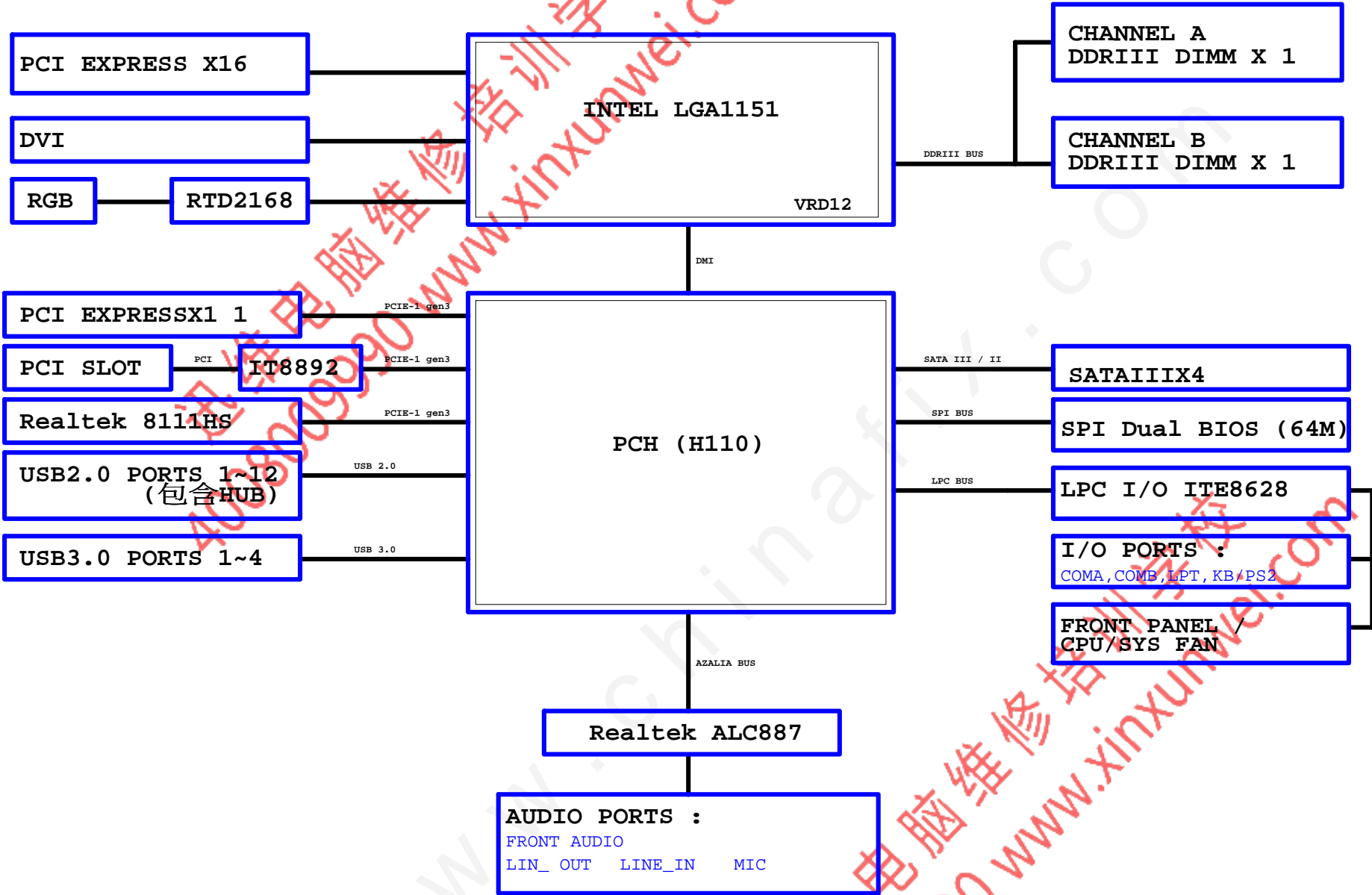
2015/10/08

Data	Change Item	Reason
2014/10/13		
2015/01/23	R01A BOM	
2015/03/12	CPU Power Choke Change to IRON CHOKE	
2015/04/15	Update net	
	SATA EXPRESS新增Power for USB3.1小卡, 每個CONNECT都要留一顆0603 0 OHM (Page 22)	
	DDRVTI改用NCT3103S (Page 30)	
	PCI 線路GBRN1 改為R8P4R-0402-SHORT-MASK (Page 25)	
2015/05/26	R01 E-BOM release. PCB:0.1	Modify From B150M-HD3 DDR3 R01
2015/07/28	R10A D-BOM release. PCB:1.0	1. PWM BOM DAR4-->680/4/1 DAR52-->91K/4/1 DAR41-->4.87K/4/1 DAR126-->3.01K/4/1 2. DDR POWER MA_DC15.MA_DR19不上件 MA_R9.MAR10.MAR11.MAQ5.MAQ6.MAC9.MA_DR45上件.MA_DR9 2/2/6 MA_DR13 to 2K/4/1, MA_DR12 to 2.15K/4/1 3. PCH POWER NPR12 to 280k/4/1. NPR21 to 471k/4/1. add NPC10 4. ADD DFR4(8.2K/4),DFC3 (22u) 5. NC7 22P change to 27P 6. DDR OV CHOOSE GPIO PIN (GP95/GP93/GP67) G_PLED CHOOSE TO GP37 7. REMOVE FPD2 (-HDLED) 8. EMIC2 change to VDDQ (for EMI, but 不上件) 9. MOS 用料 10. PCI Bridge 0ohm change to short-pad 11. DVFB1/DVFB2/DVFB3 change to "30/4/4A/S" DVC4/DVC5/DVC6 上件
2015/08/14	R10B P-BOM release. PCB:1.01	1. DDR POWER CHANGE TO 1H1L(mask MA_DQ3) 2. MA_DR15 95.3K/4/1 change to 182K/4/1 3. Remove M_BIOS SOCKET 4. OR84 N/A 5. LGA1151 H110統一使用G/F用料(10SC1-F01151-21R/22R) 8/17
2015/08/21	R10C P-BOM release. PCB:1.01	1. DANTC2 remove (NOTE 71)
2015/10/08	R10A P-BOM release. PCB:1.01 9MH112PV3-WP-10A	1. DAR67 18K/4 change to 16.2K/4 2. AD1 上件 (ATX power 5VSB anti surge IC) 3. 抗磁電阻 4. 不銹鋼後窗IO connectors(PS2+USB/DUAL U3/LAN+USB2.0/AUDIO(3孔)/HIGH RISE VGA/DVI/COMA)
2015/11/13	R10B A-BOM release. PCB:1.01 MH112PV3-WP-10B	工廠DIP場自動插件機, BOM更換Tapping電容料號 100uf 6.3V 6.3*6 11CO2-661000-09R->11CO2-661000-12R 100uf 16V APAQ 6.3*9 11CO5-691000-09R->11CO5-691000-11R 270uf 16V 8*12 11CO5-8C2700-09R->11CO5-8C2700-11R 560uf 6.3V 6.3*8 11CO2-695600-09R->11CO2-695600-21R Audio 100uF 10V 6.3*5 11CE2-651000-05R->11CE2-651000-21R

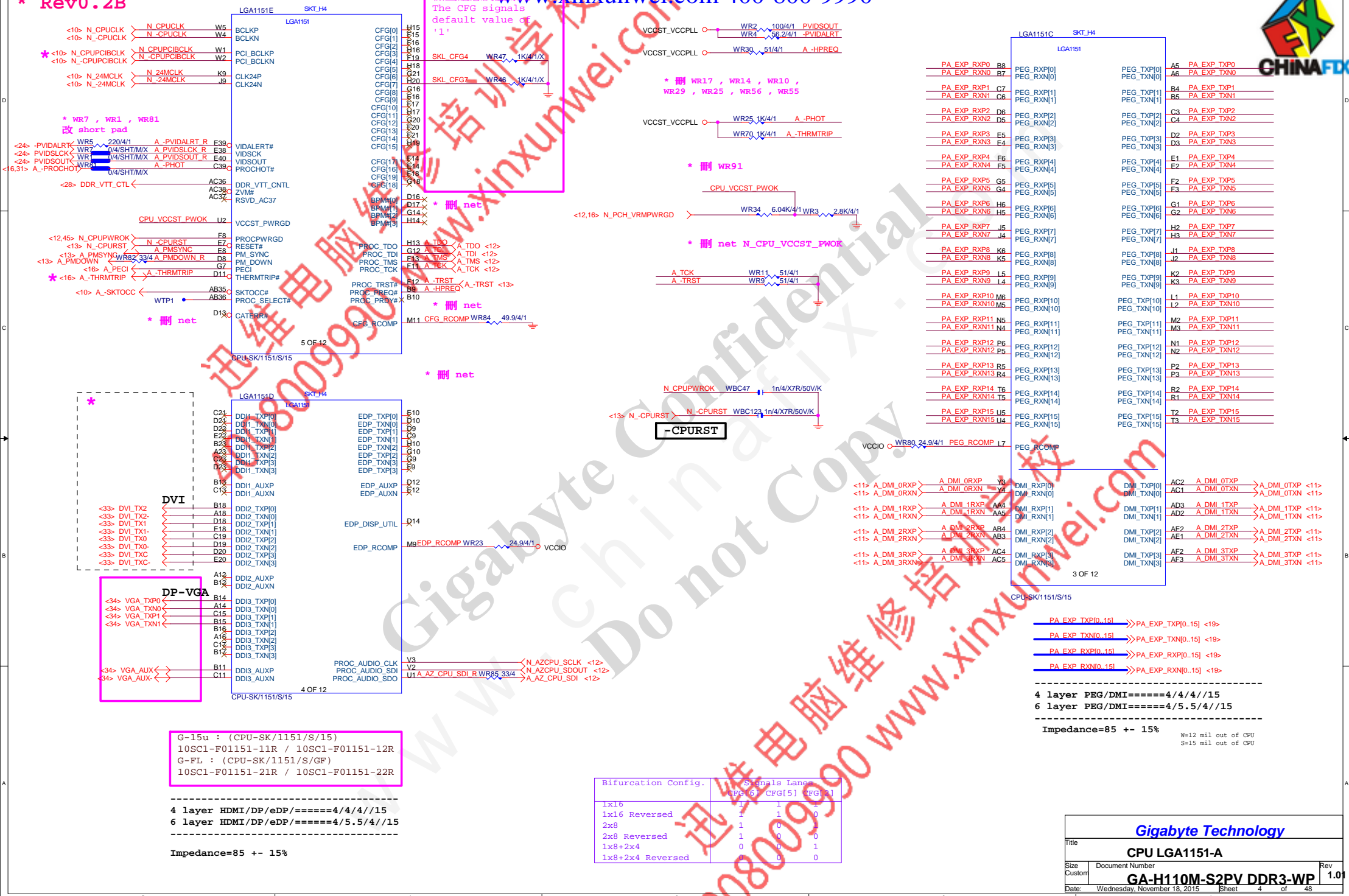
## Circuit or PCB layout change

[illegible]

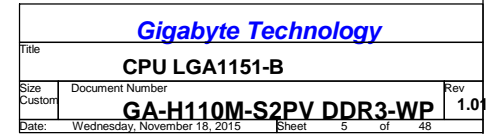
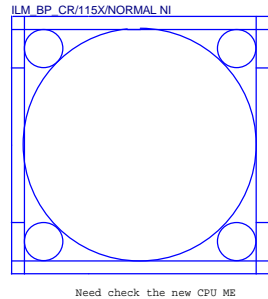
BLOCK DIAGRAM

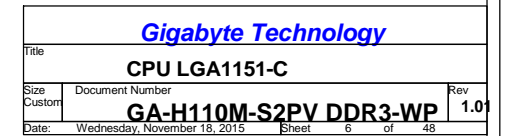


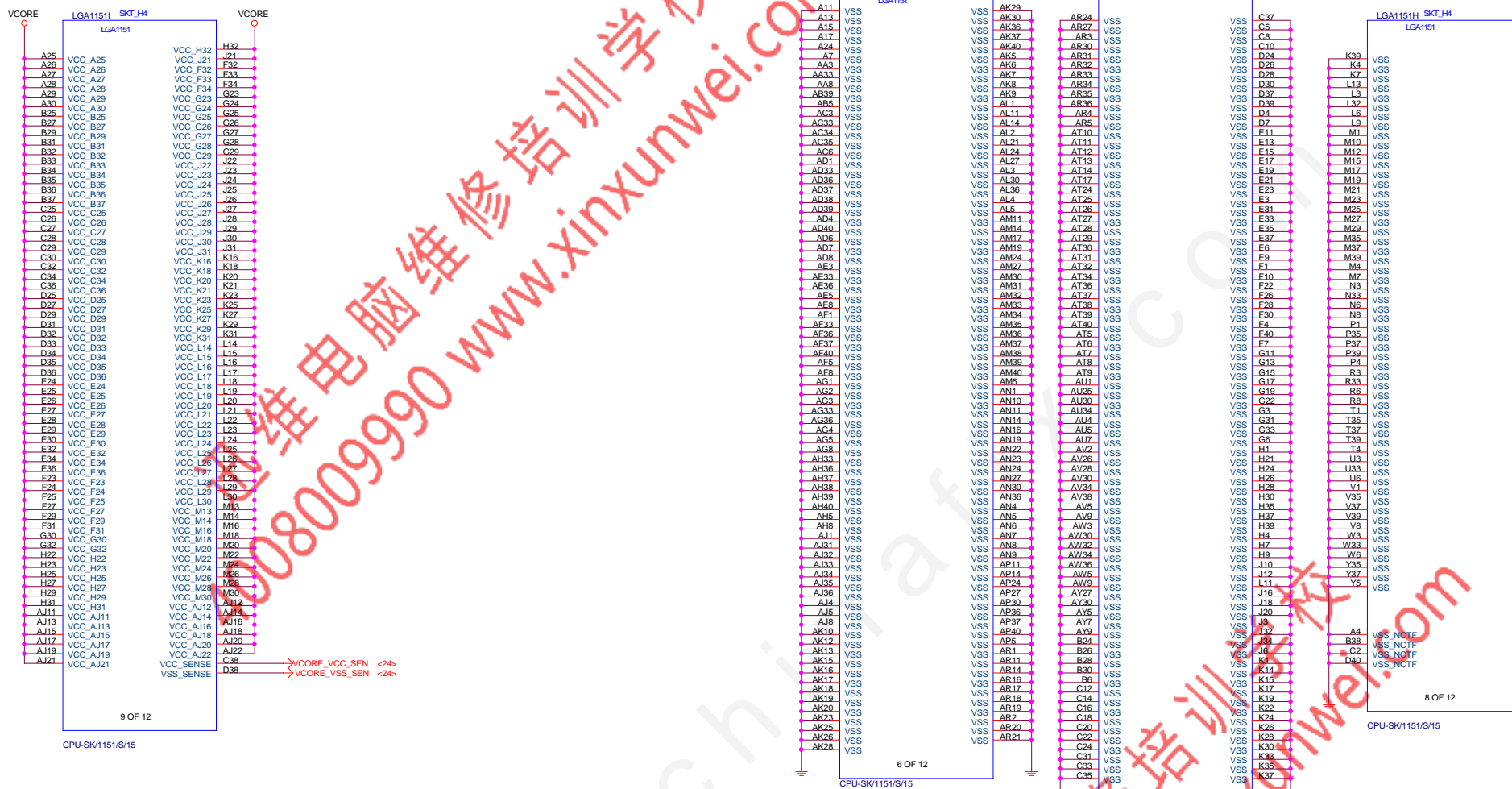
www.xinxunwei.com 400-800-9990











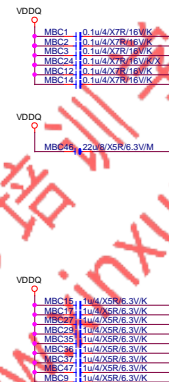
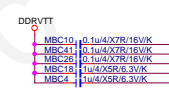
\* 刪 Vcore 電容

Gigabyte Technology

CPU LGA1151-C

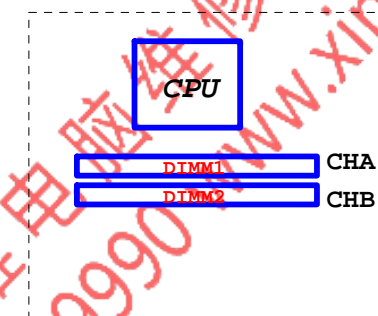
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Size	GA-H110M-S2PV DDR3-WP			1.01
Custom				
Date	Wednesday, November 18, 2015	Sheet	7	of 48





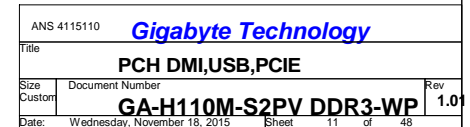
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<b>DDR4 CHANNEL A</b>			
Size	Document Number		Rev
Custom	<b>GA-H110M-S2PV DDR3-WP</b>		1.
Date:	Sheet 8 of 48		

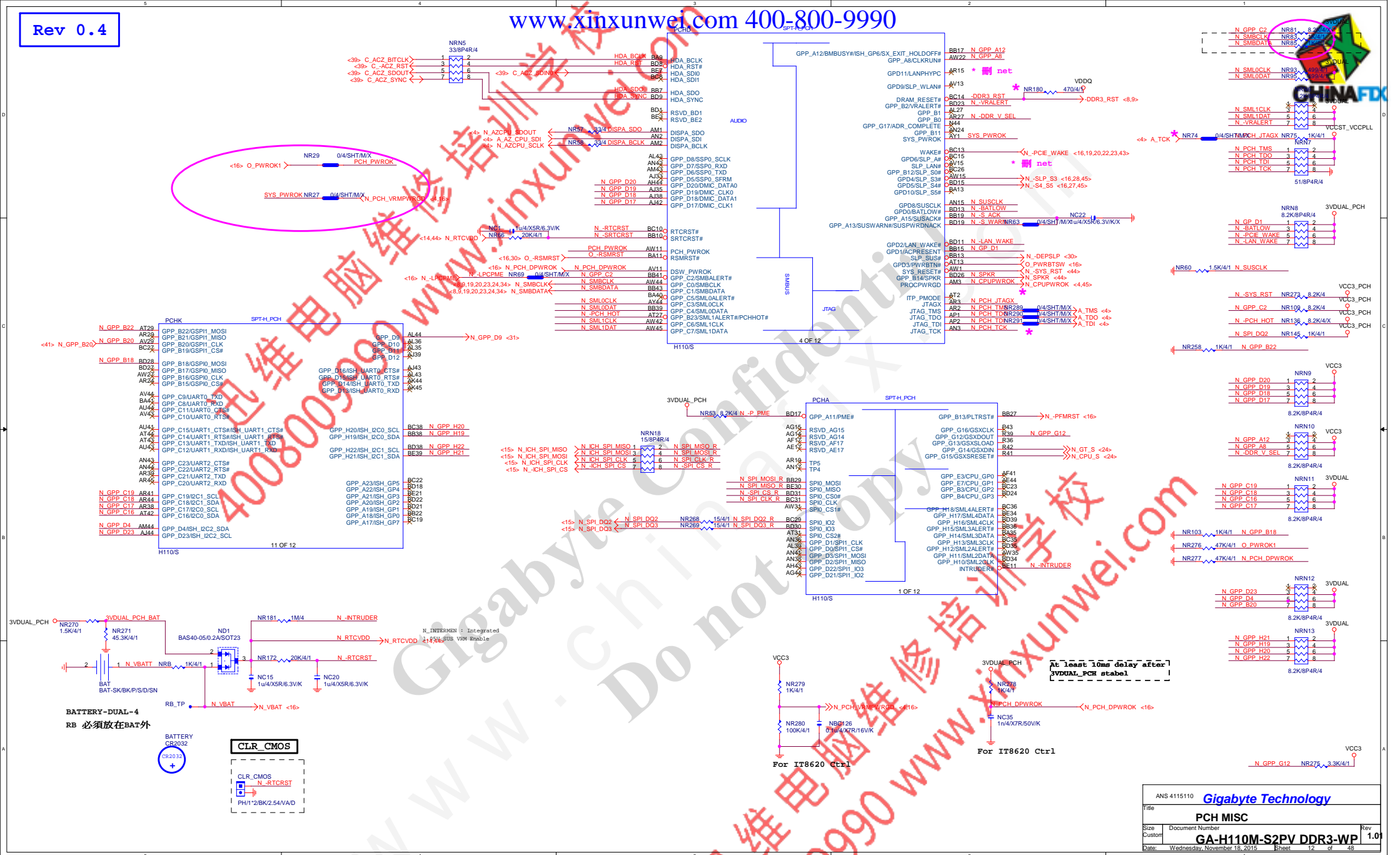




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Size	Document Number						Rev
Custom	GA-H110M-S2PV DDR3-WP						1.
Date:				Sheet	9	of	48

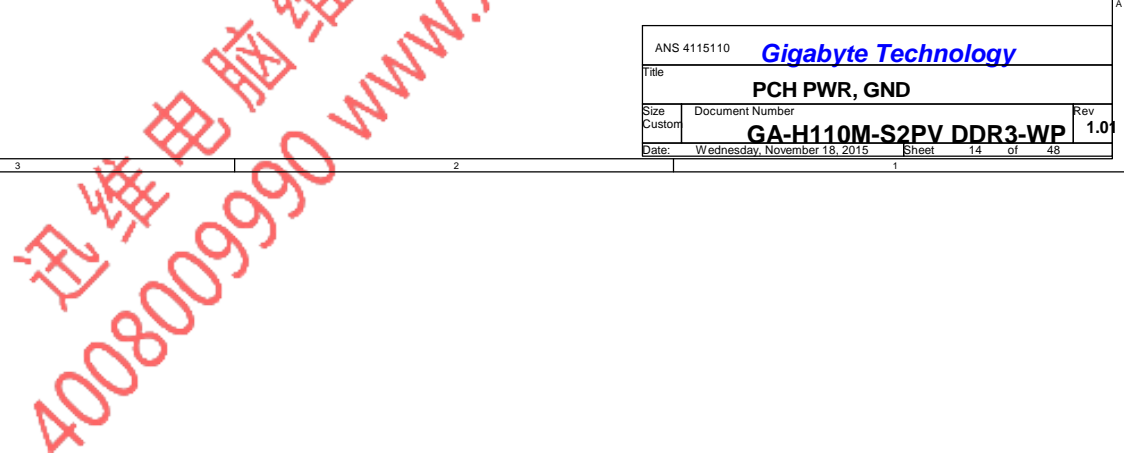


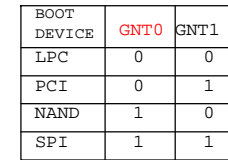










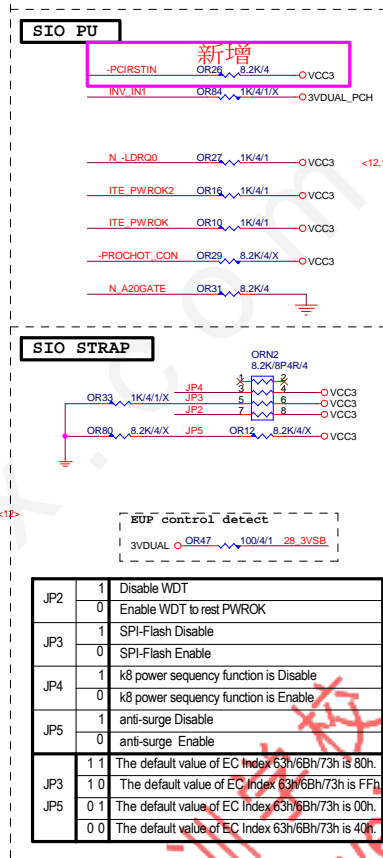
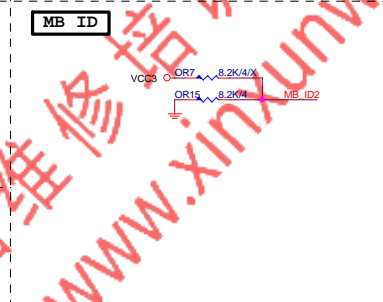
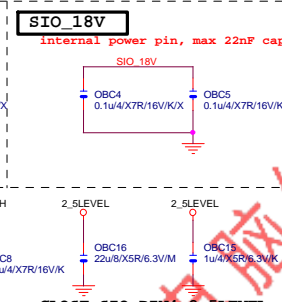
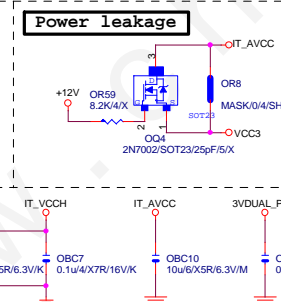
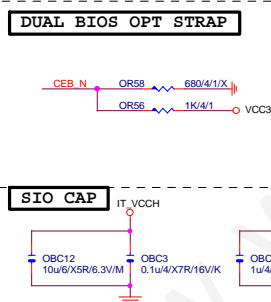


\* 試產先上，PVT 移除



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	GP26-第一次接上POWER時 會拉 Lo
PIN 90/91	DEFAULT為HDLed 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	PIN23, 需高於3V, 若低於 該部分COM PORT及LPT裝置 蜂鳴器會異常動作。



**Realtek/ATHEROS LAN**

**Gigabyte Technology**

ITE 8628 LPC IO

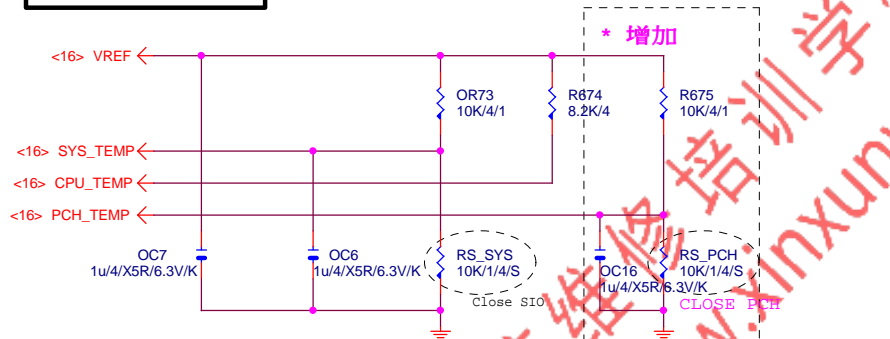
GA-H110M-S2PV DDR3-WP

Rev 1.01



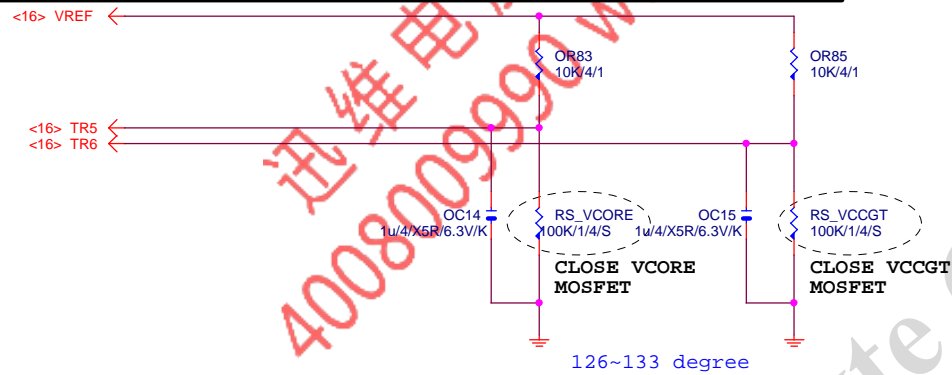
## TEMP H/W MONITOR

REV 1.04



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

-PROCHOT:有mos heartsink不用prochot function

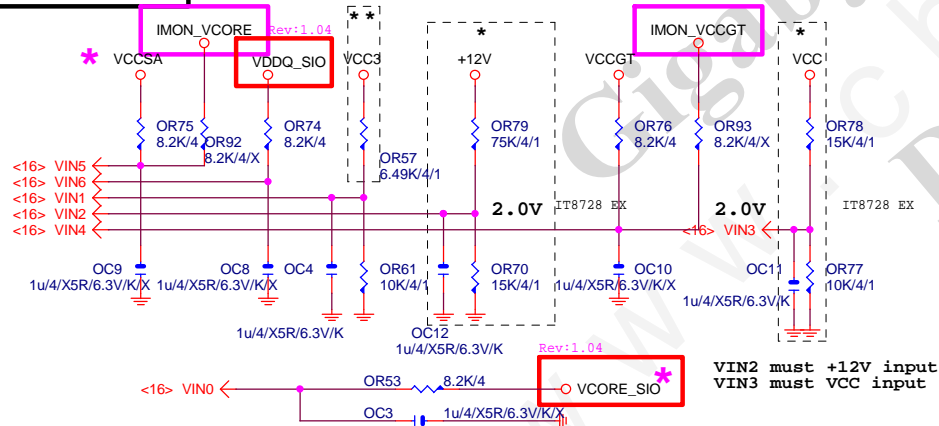


## VOLTAGE-- H/W MONITOR

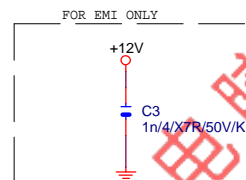
Connect to PWM

\* IT8728 BX  
\*\* IT8728 CX

Connect to PWM



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

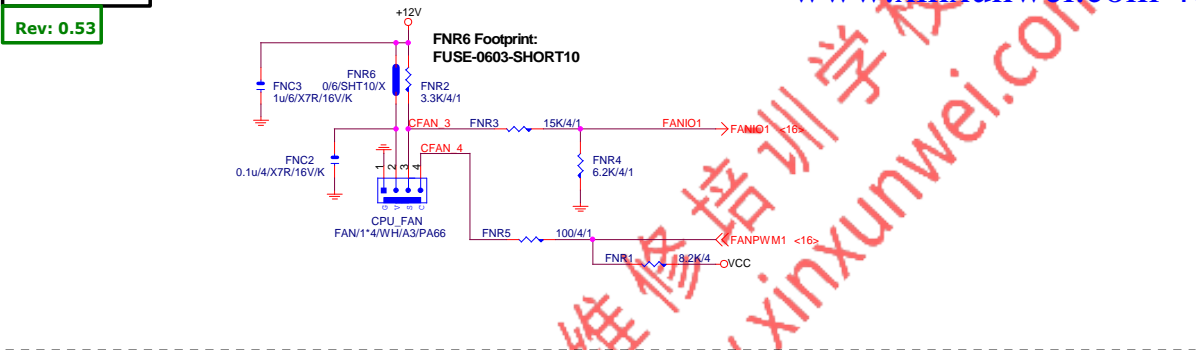
VIN2 must +12V input  
VIN3 must VCC input

Gigabyte Technology

Title			HWM,KB/MS, FAN CTRL	
Size	Document Number	Rev		
Custom	GA-H110M-S2PV DDR3-WP	1.01		
Date:	Wednesday, November 18, 2015	Sheet	17	of 48

CPU SMART FAN

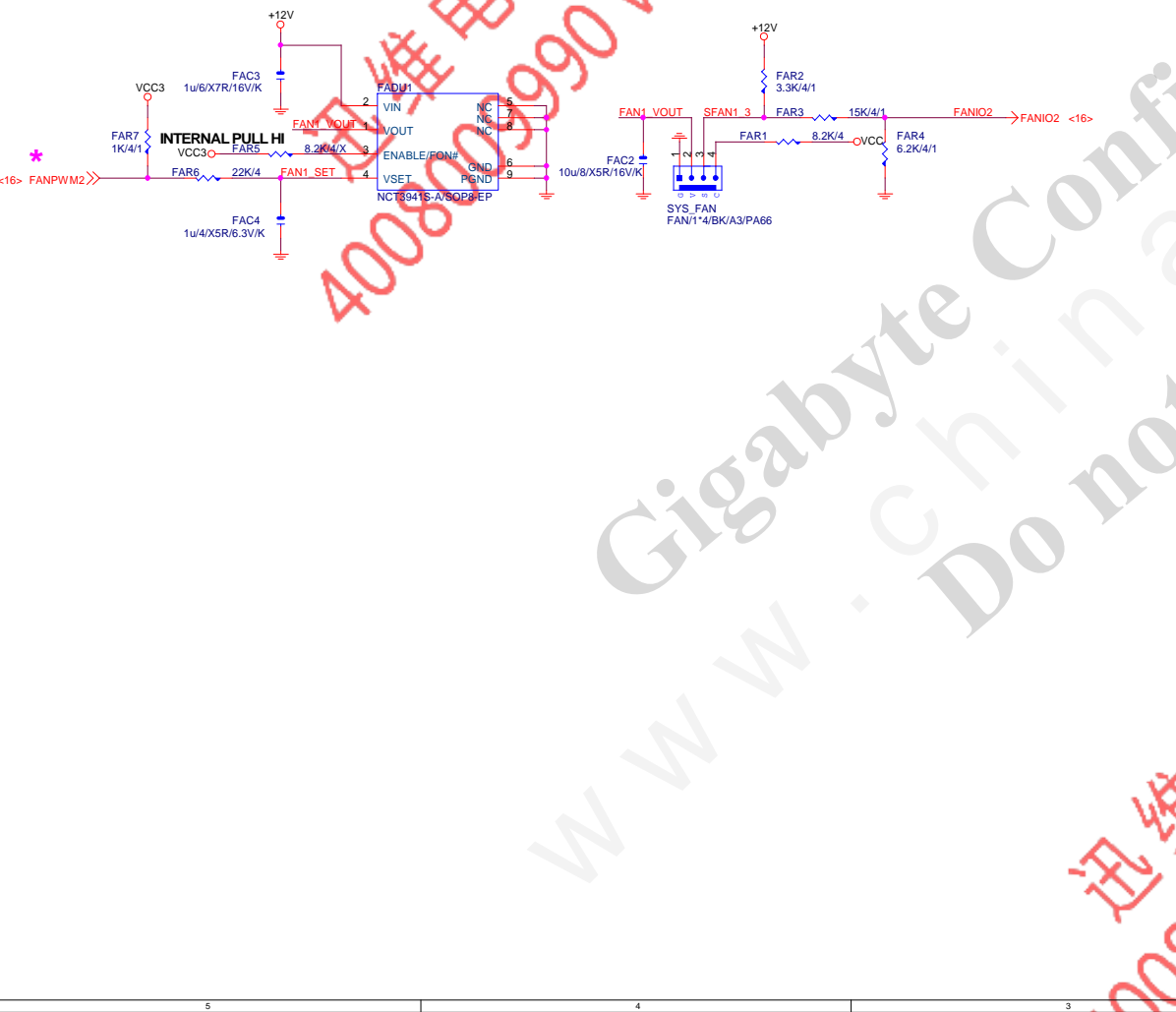
Rev: 0.53



SYSTEM FAN1

Linear SYS\_FAN

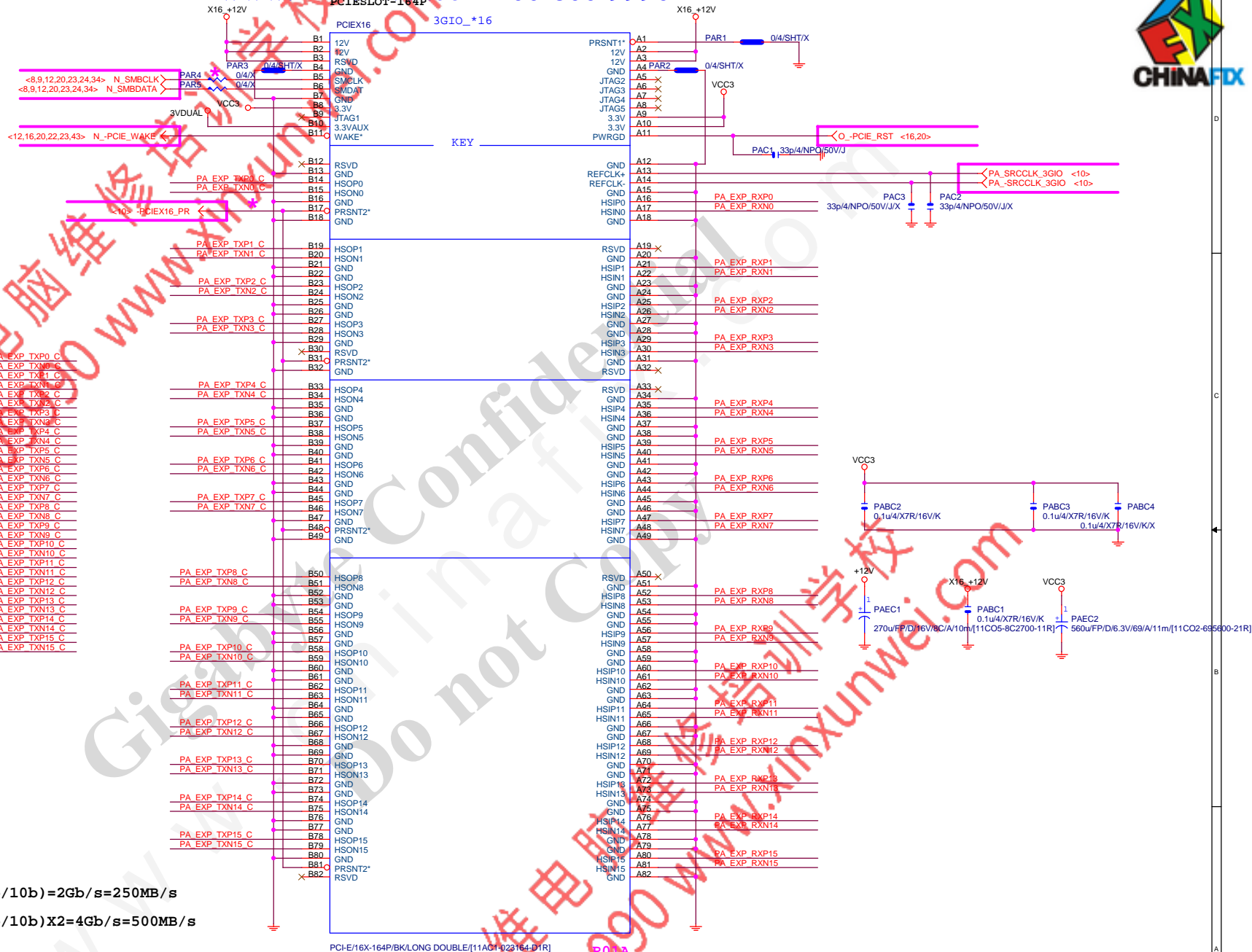
Enable Function (NCT3941S)  
Full Turn On Function  
(NCT3941S-A)



Gigabyte Technology			
Title			
HWM,KB/MS, FAN CTRL			
Size	Document Number	Rev	
Custom	GA-H110M-S2PV DDR3-WP	1.01	
Date:	Wednesday, November 18, 2015	Sheet	18 of 48

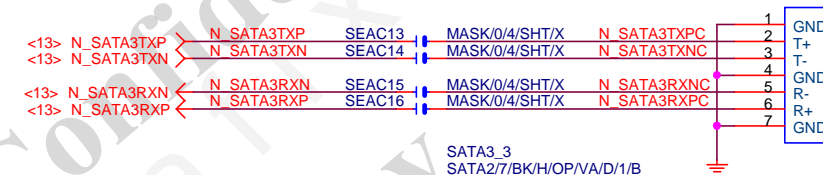
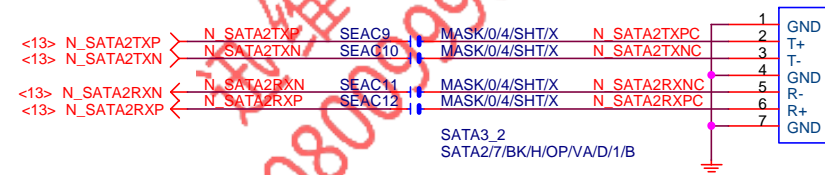
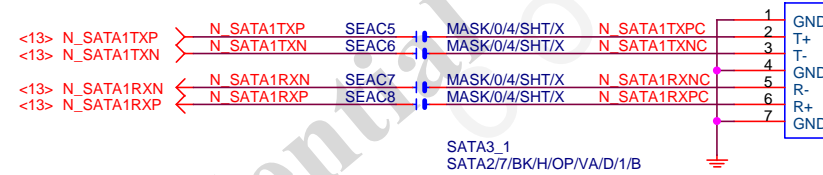
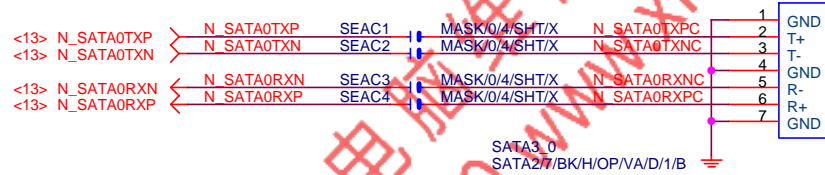
PA EXP TXP0	PAC5	0.22u/4/5XR/6.3V/K	PA EXP TXP0 C
PA EXP TXN0	PAC4	0.22u/4/5XR/6.3V/K	PA EXP TXN0 C
PA EXP TXP1	PAC6	0.22u/4/5XR/6.3V/K	PA EXP TXP1 C
PA EXP TXN1	PAC7	0.22u/4/5XR/6.3V/K	PA EXP TXN1 C
PA EXP TXP2	PAC8	0.22u/4/5XR/6.3V/K	PA EXP TXP2 C
PA EXP TXN2	PAC9	0.22u/4/5XR/6.3V/K	PA EXP TXN2 C
PA EXP TXP3	PAC10	0.22u/4/5XR/6.3V/K	PA EXP TXP3 C
PA EXP TXN3	PAC11	0.22u/4/5XR/6.3V/K	PA EXP TXN3 C
PA EXP TXP4	PAC12	0.22u/4/5XR/6.3V/K	PA EXP TXP4 C
PA EXP TXN4	PAC13	0.22u/4/5XR/6.3V/K	PA EXP TXN4 C
PA EXP TXP5	PAC14	0.22u/4/5XR/6.3V/K	PA EXP TXP5 C
PA EXP TXN5	PAC15	0.22u/4/5XR/6.3V/K	PA EXP TXN5 C
PA EXP TXP6	PAC16	0.22u/4/5XR/6.3V/K	PA EXP TXP6 C
PA EXP TXN6	PAC17	0.22u/4/5XR/6.3V/K	PA EXP TXN6 C
PA EXP TXP7	PAC18	0.22u/4/5XR/6.3V/K	PA EXP TXP7 C
PA EXP TXN7	PAC19	0.22u/4/5XR/6.3V/K	PA EXP TXN7 C
PA EXP TXP8	PAC21	0.22u/4/5XR/6.3V/K	PA EXP TXP8 C
PA EXP TXN8	PAC20	0.22u/4/5XR/6.3V/K	PA EXP TXN8 C
PA EXP TXP9	PAC22	0.22u/4/5XR/6.3V/K	PA EXP TXP9 C
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PA EXP TXP10	PAC24	0.22u/4/5XR/6.3V/K	PA EXP TXP10 C
PA EXP TXN10	PAC25	0.22u/4/5XR/6.3V/K	PA EXP TXN10 C
PA EXP TXP11	PAC26	0.22u/4/5XR/6.3V/K	PA EXP TXP11 C
PA EXP TXN11	PAC27	0.22u/4/5XR/6.3V/K	PA EXP TXN11 C
PA EXP TXP12	PAC28	0.22u/4/5XR/6.3V/K	PA EXP TXP12 C
PA EXP TXN12	PAC29	0.22u/4/5XR/6.3V/K	PA EXP TXN12 C
PA EXP TXP13	PAC30	0.22u/4/5XR/6.3V/K	PA EXP TXP13 C
PA EXP TXN13	PAC31	0.22u/4/5XR/6.3V/K	PA EXP TXN13 C
PA EXP TXP14	PAC32	0.22u/4/5XR/6.3V/K	PA EXP TXP14 C
PA EXP TXN14	PAC33	0.22u/4/5XR/6.3V/K	PA EXP TXN14 C
PA EXP TXP15	PAC34	0.22u/4/5XR/6.3V/K	PA EXP TXP15 C
PA EXP TXN15	PAC35	0.22u/4/5XR/6.3V/K	PA EXP TXN15 C

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



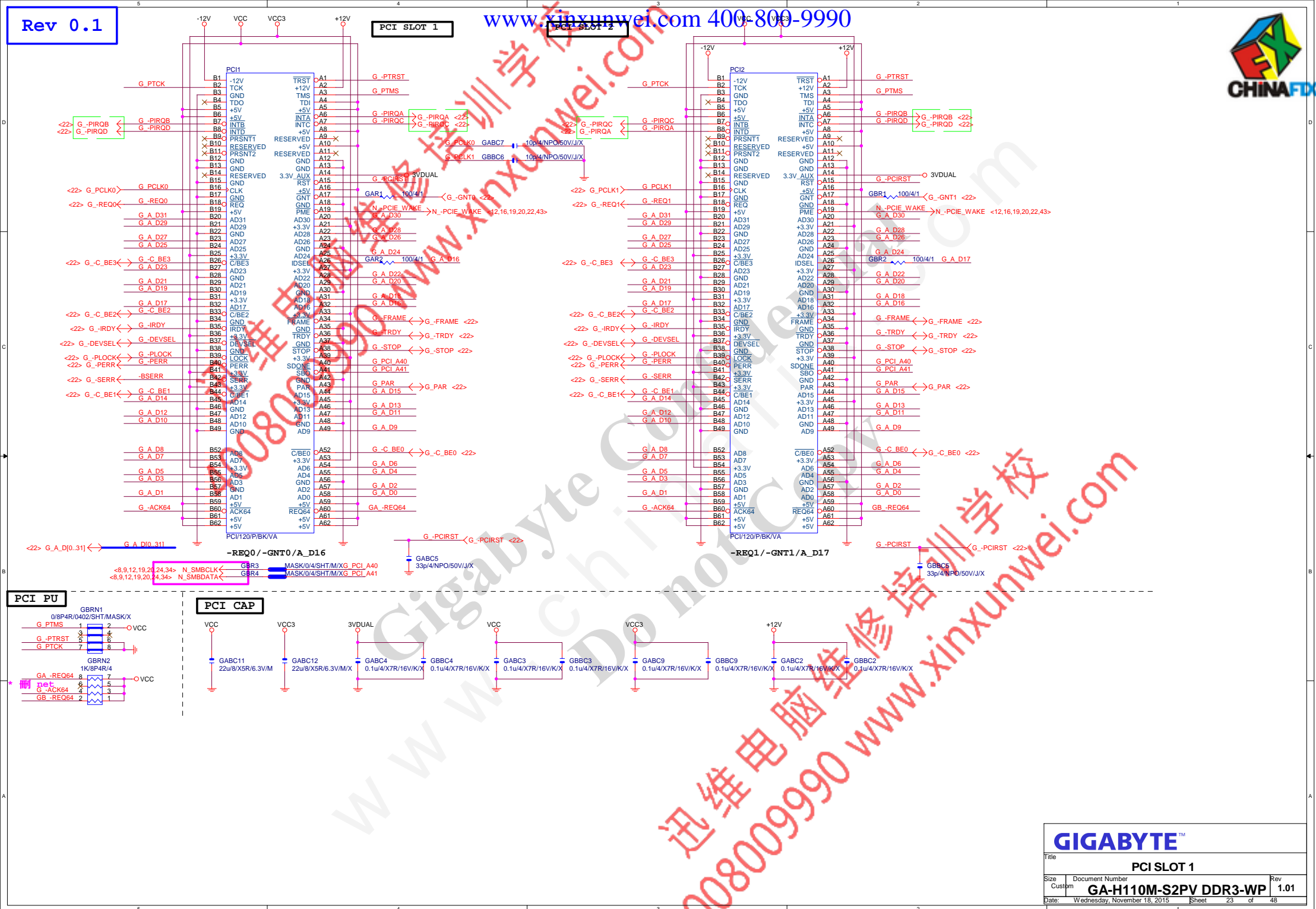




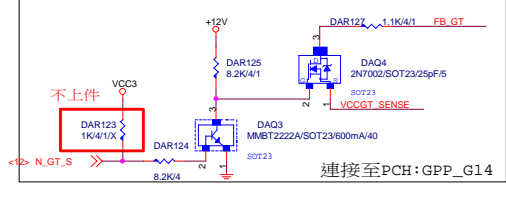
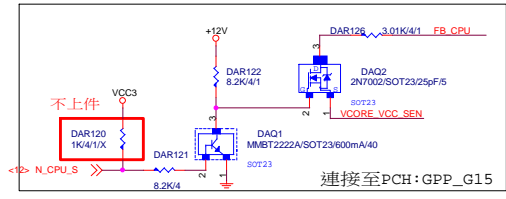
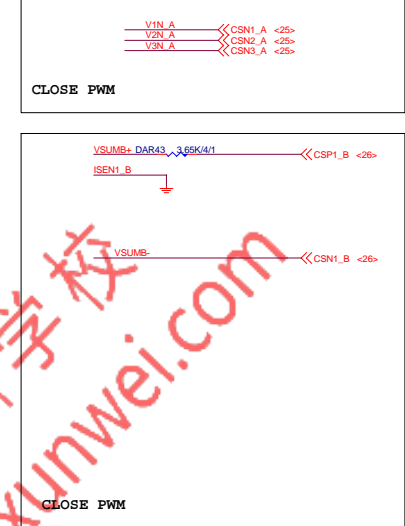
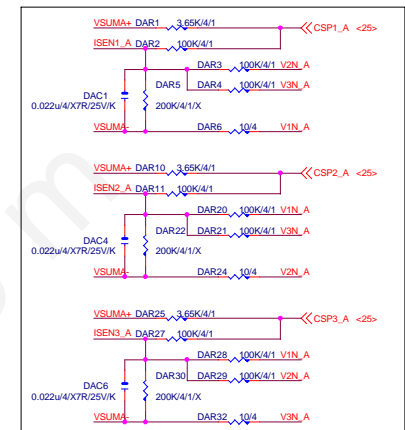
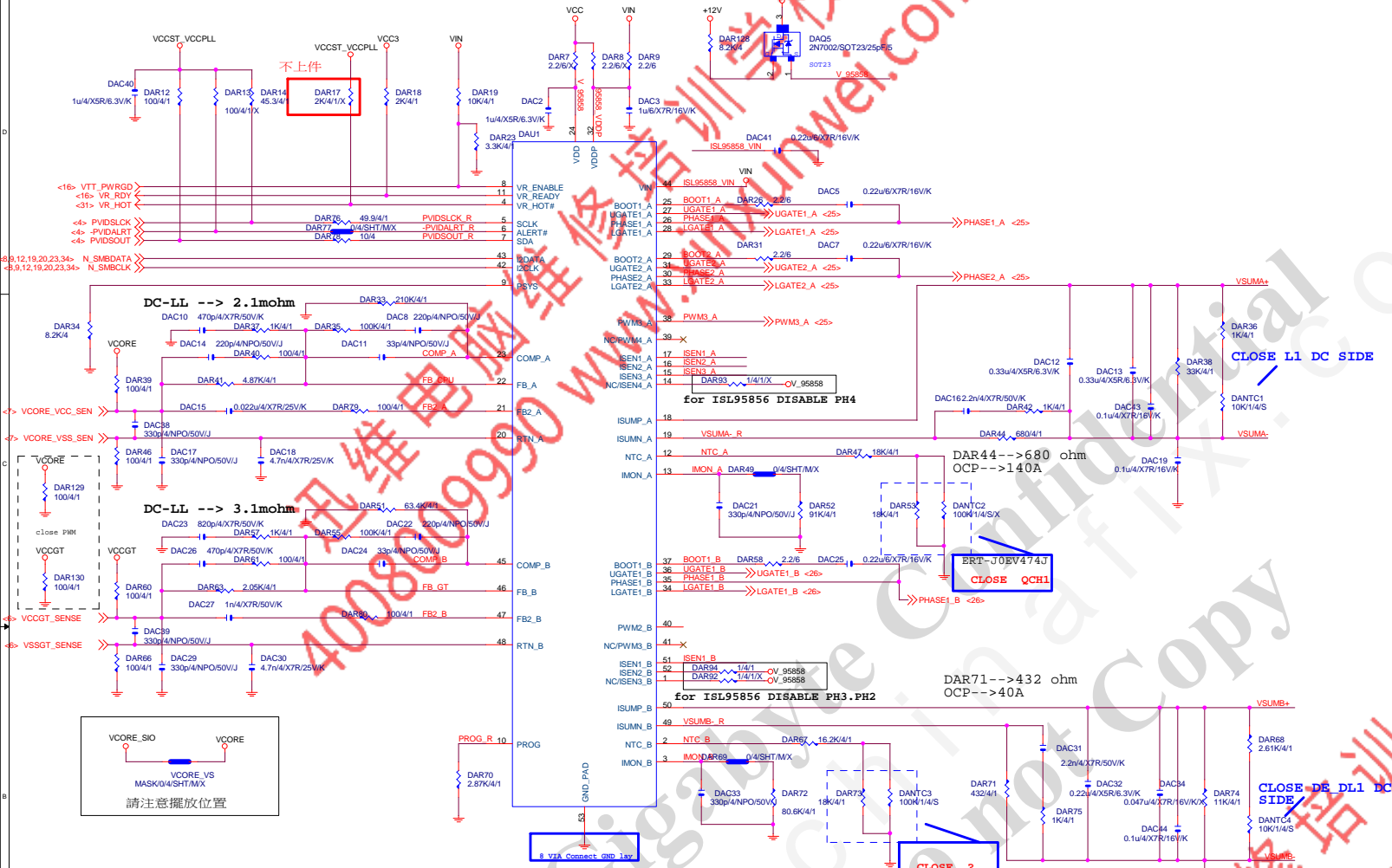
**Gigabyte Technology**Title  
**SATA EXPRESS**Size Custom Document Number  
**GA-H110M-S2PV DDR3-WP** Rev 1.01

Date: Wednesday, November 18, 2015 Sheet 21 of 48



**GIGABYTE™**

Title			PCI SLOT 1
Size	Document Number	Rev	1.01
Custom	GA-H110M-S2PV DDR3-WP		
Date:	Wednesday, November 18, 2015	Sheet	23 of 48

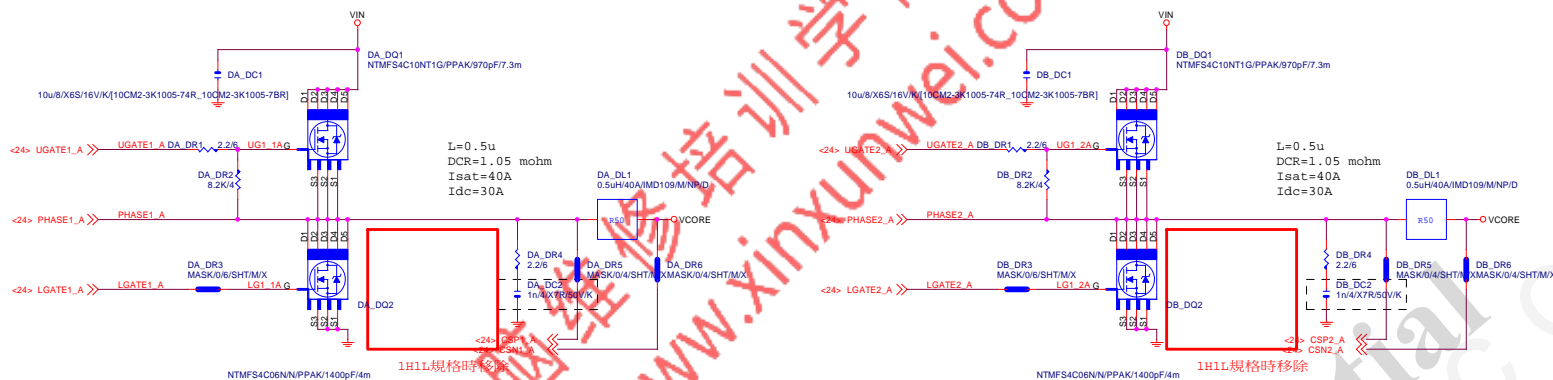


GIGABYTE™		
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Size	Document Number	Rev
Custom	GA-H110M-S2PV DDR3-WP	1.01
Date:	Wednesday, November 18, 2015	Sheet 24 of 48

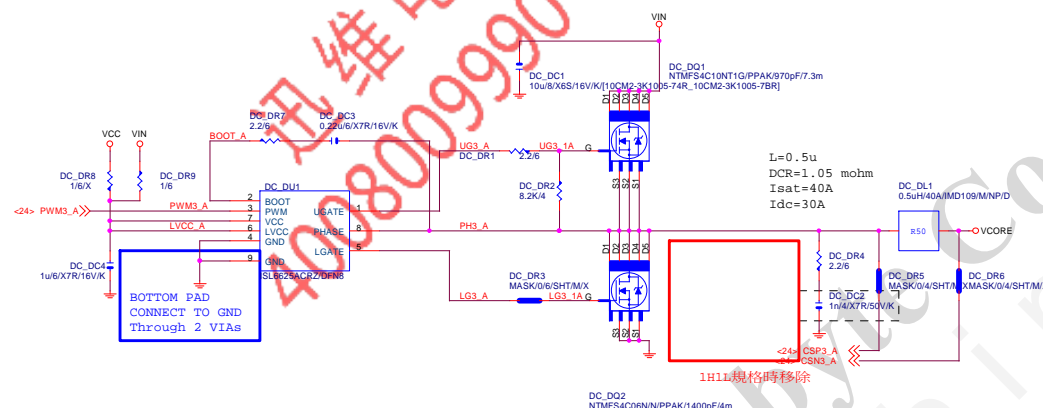
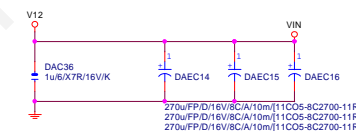
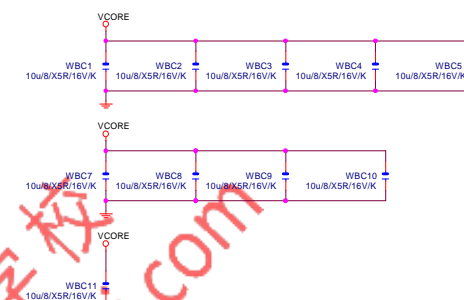
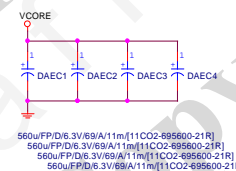




## VCORE



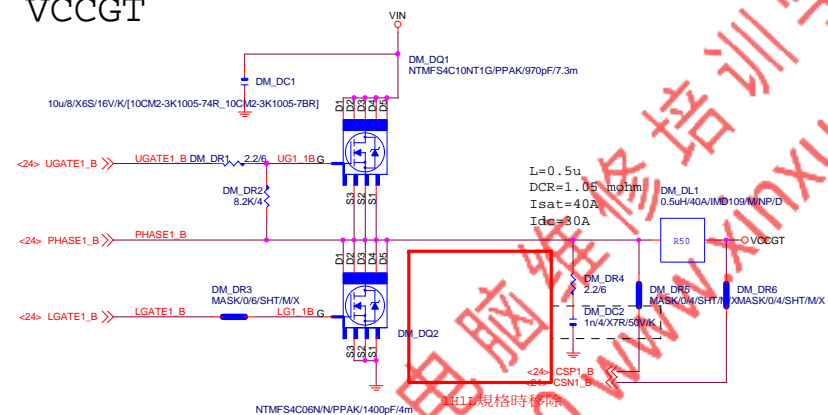
VIN CAP 270u\*3PCS

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

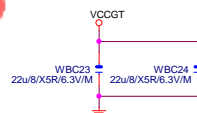
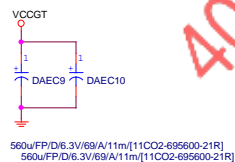
# GIGABYTE

Title			
ISL95858_MOS			
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Custom	GA-H110M-S2PV DDR3-WP	1.01	
Date:	Wednesday, November 18, 2015	Sheet	25 of 48

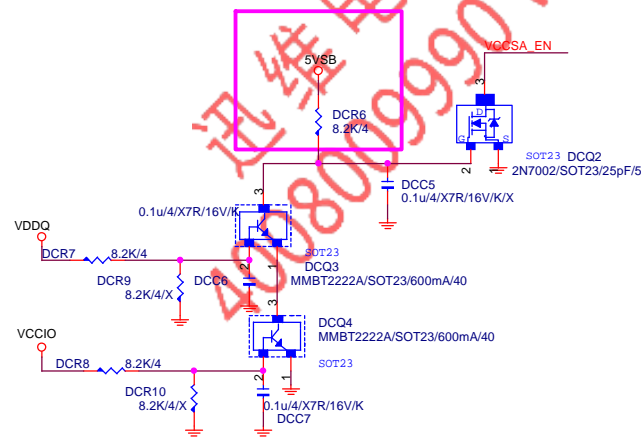
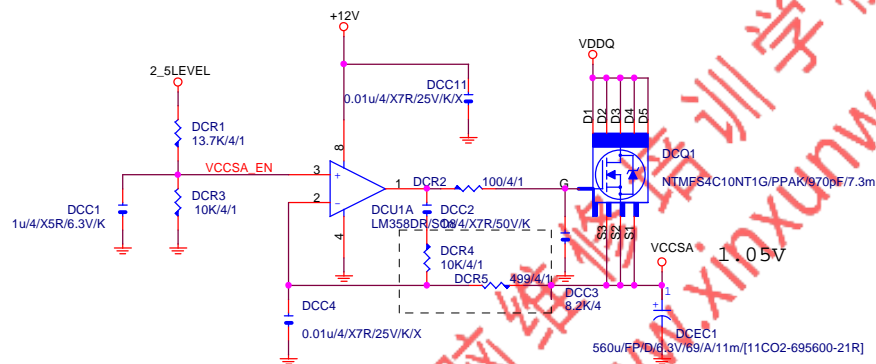
## VCCGT



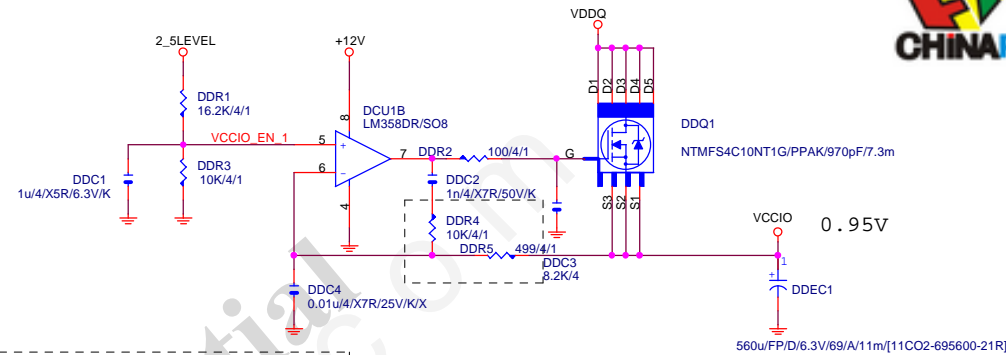
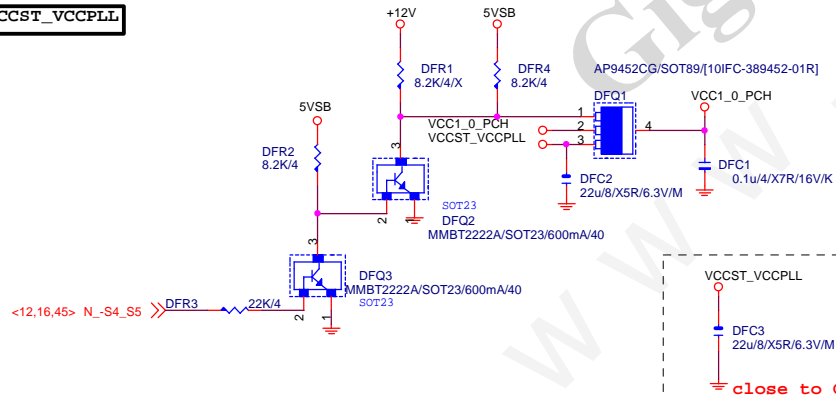
## VCCGT CAP

560u\*2PCS  
22u\*2PCS**GIGABYTE™**

Title		
ISL95858_MOS		
Size	Document Number	Rev
Custom	GA-H110M-S2PV DDR3-WP	1.01
Date:	Wednesday, November 18, 2015	Sheet 26 of 49



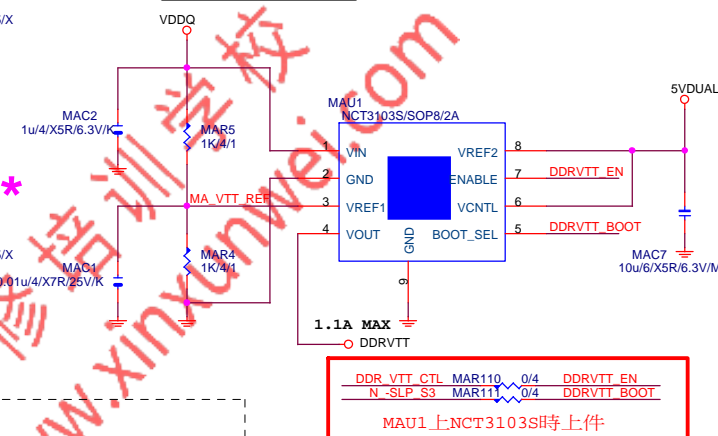
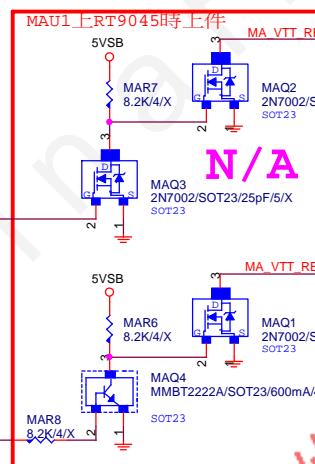
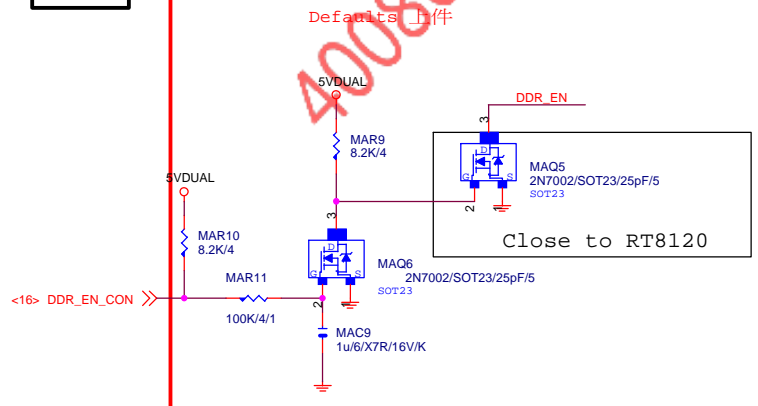
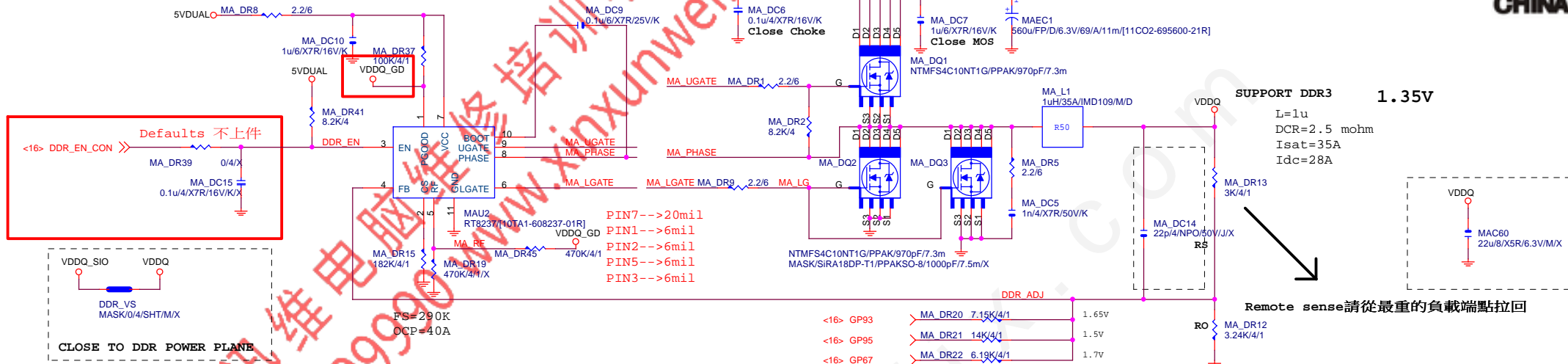
## VCCST\_VCCPLL



VCCIO\_EN 1 DDR10 0/4/SHT/M/X VCCIO\_EN <16>  
Connect to IT8620

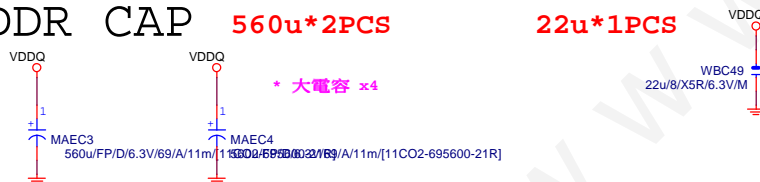
**GIGABYTE™**

Title			VCCSA_VCCIO
Size	Document Number	Rev	1.01
Custom	GA-H110M-S2PV DDR3-WP		
Date:	Wednesday, November 18, 2015	Sheet	27 of 48



DDR CAP 560u\*2PCS

22u\*1PCS



DDRVTT CAP



# GIGABYTE™

Title			
<b>RT8120_DDR POWER</b>			
Size	Document Number	Rev	
Custom	<b>GA-H110M-S2PV DDR3-WP</b>	<b>1.01</b>	
Date:	Wednesday, November 18, 2015	Sheet	28 of 48

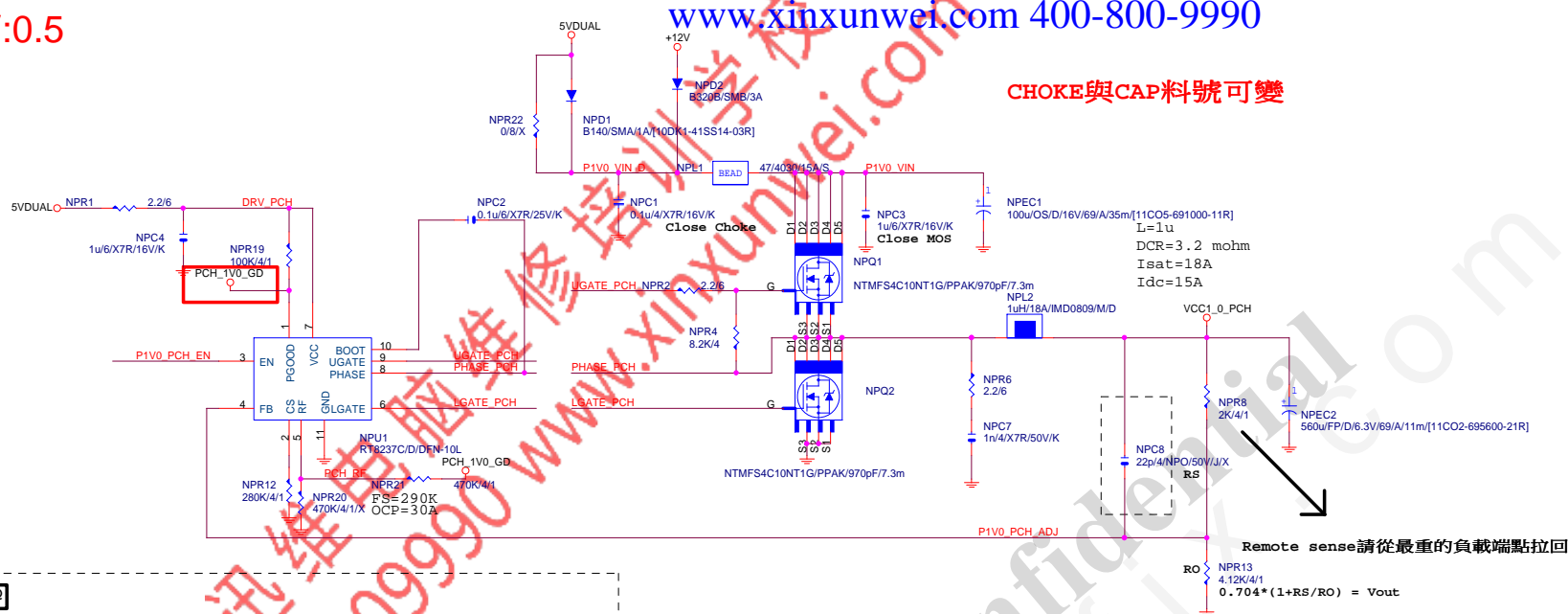


REV:0.5

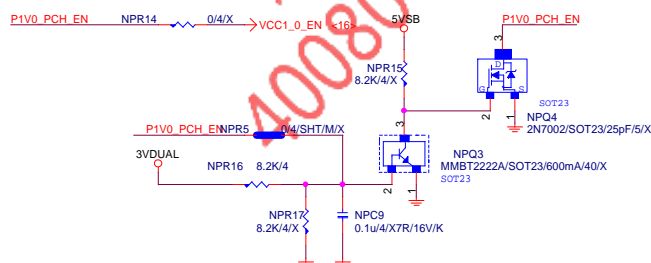
www.xinxunwei.com 400-800-9990



CHOKE與CAP料號可變



PWR SEQ



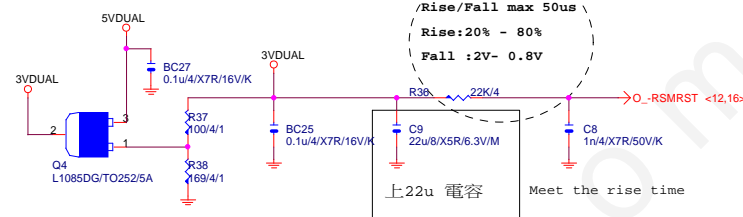
請放置CHOKE一出來的地方

GIGABYTE™

Title  
RT8237\_PCH POWERSize  
Custom  
Document Number  
GA-H110M-S2PV DDR3-WPRev  
1.01

Date: Wednesday, November 18, 2015 Sheet 29 of 48

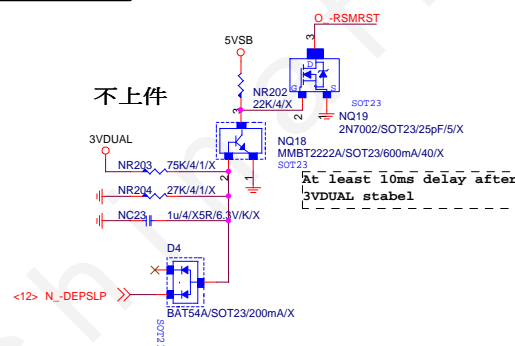
```
* 5Vdual , update
from SKL 0.2B
```



## 3VDUAL PCH



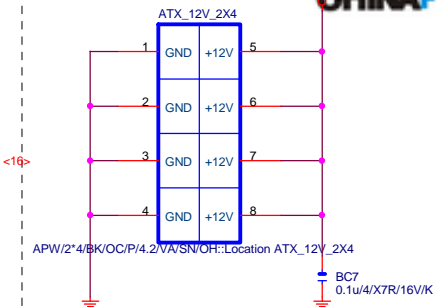
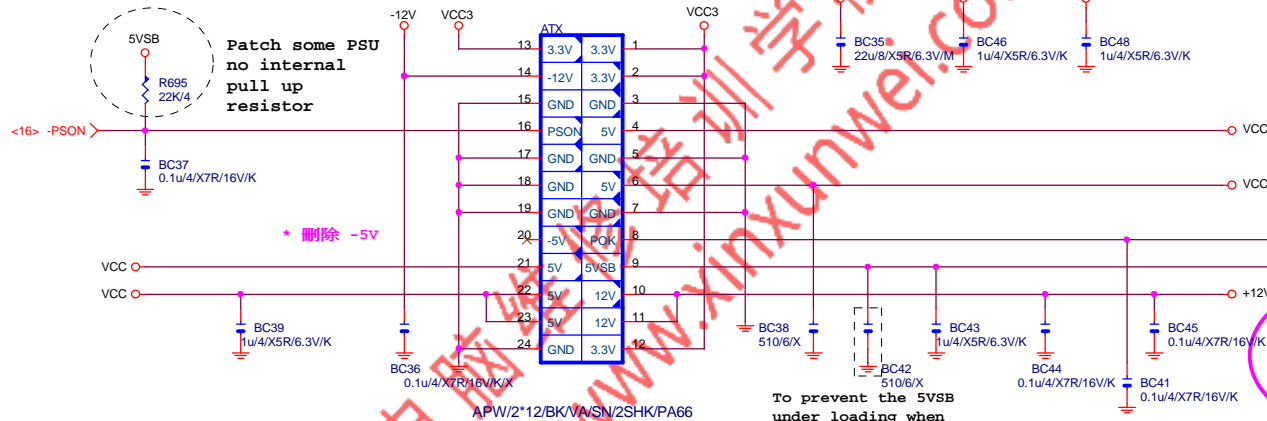
不上件



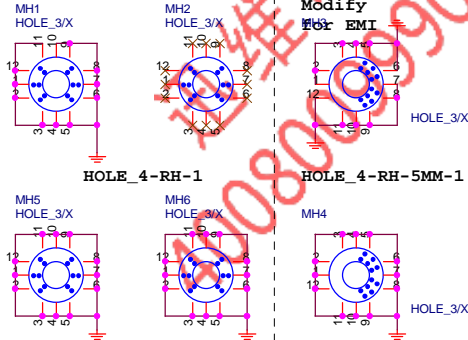
# ATXX24 POWER CONNECTOR

www.xinxunwei.com 400-800-9990

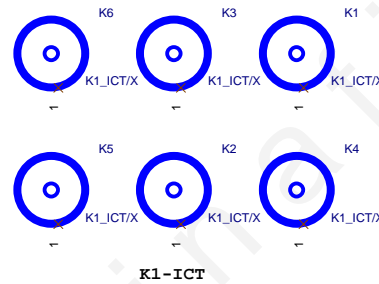
# ATXX4 POWER CONNECTOR



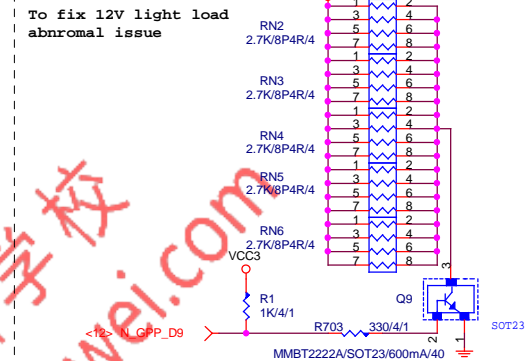
## 螺絲孔



## 固定孔/光學點

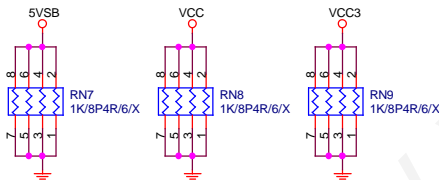


## +12V DUMMY LOAD



【技術通報R&D技術通報153】

## DUMMY LOAD



## -PROHOT

\* 保留 ?

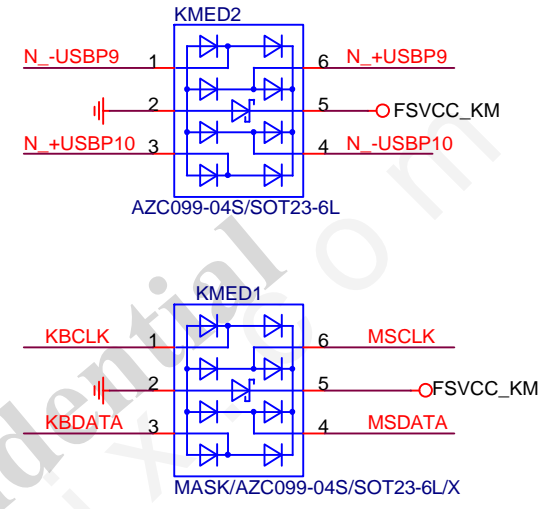
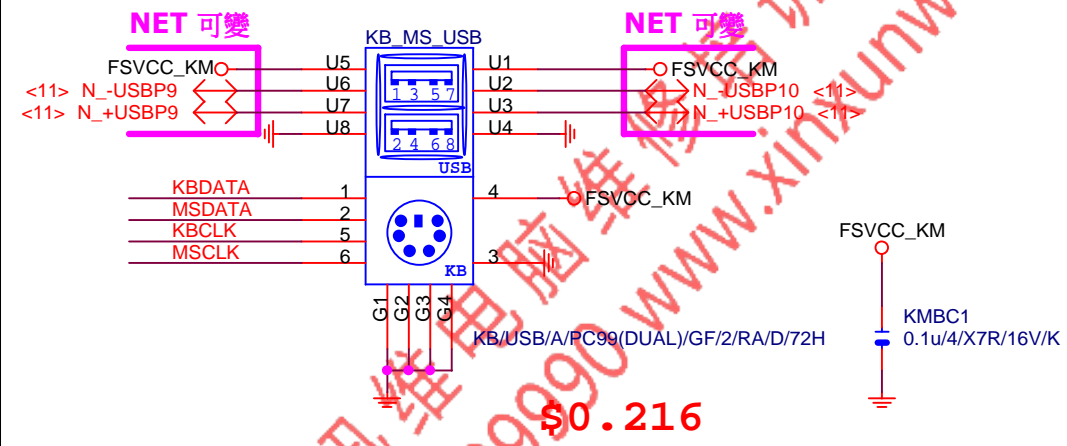
<4,16> A\_-PROHOT <-> A\_-PROHOT R2 0/4/SHT/M/X >VR\_HOT <24>

## COUPON

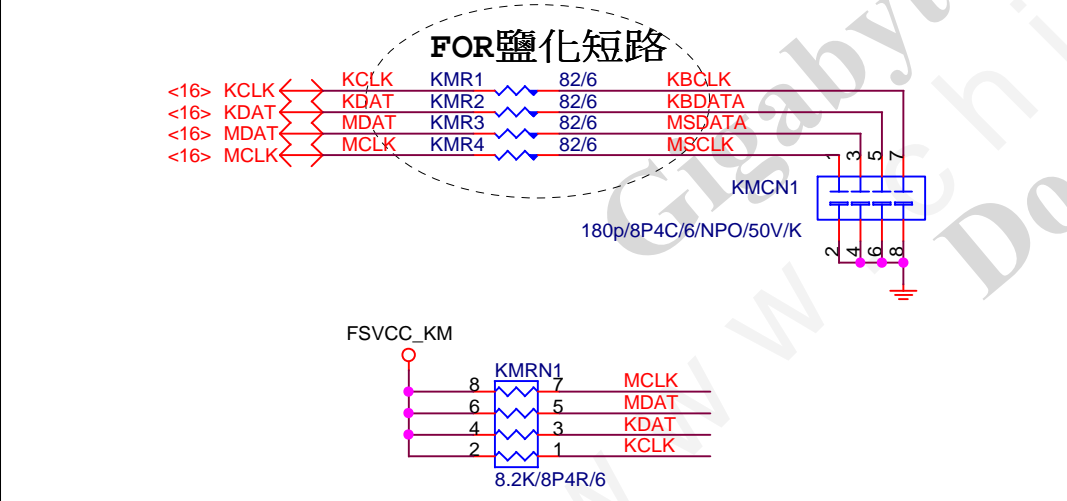


## Gigabyte Technology

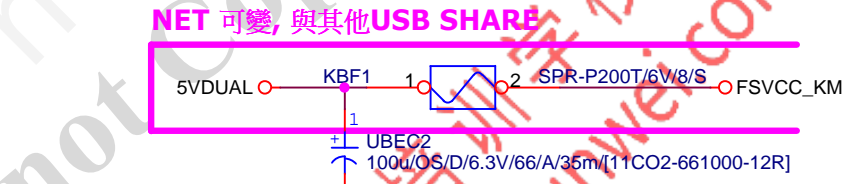
ATX POWER CONNECTOR			
Title	Document Number	Rev	1.01
Size	GA-H110M-S2PV DDR3-WP		
Date:	Wednesday, November 18, 2015	Sheet	31 of 48



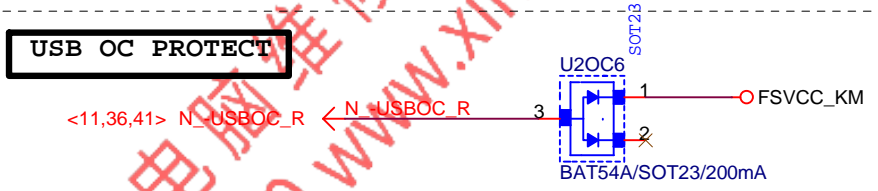
KB\_MS\_USB DAMPING/PU



KB\_MS\_USB PWR



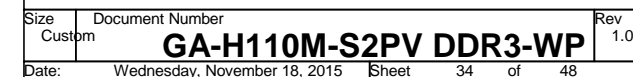
USB OC PROTECT



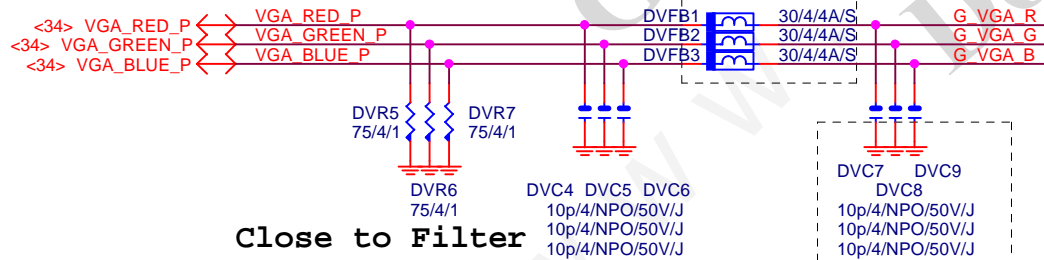
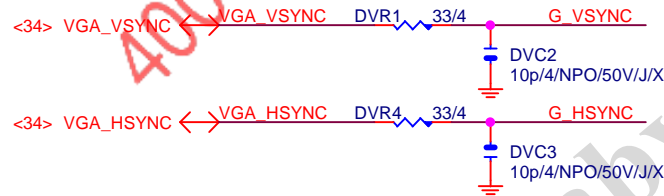
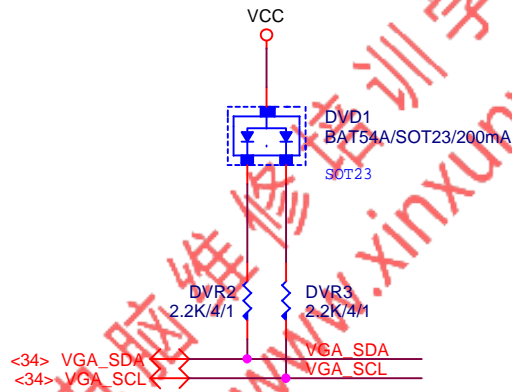
Gigabyte Technology			
Title			
AUDIO JACK			
Size	Document Number		Rev
A	GA-H110M-S2PV DDR3-WP		1.01
Date:	Wednesday, November 18, 2015	Sheet	32 of 48







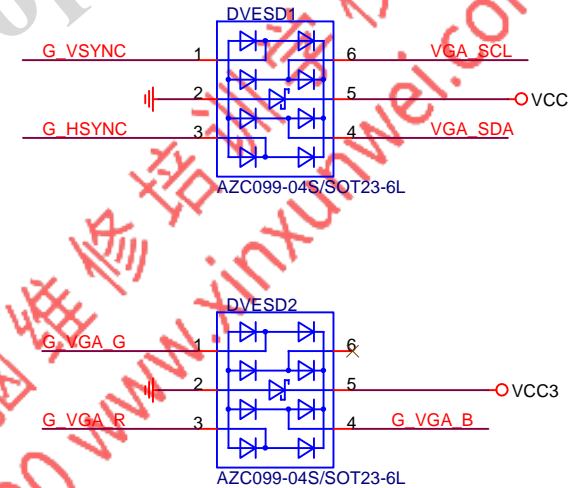
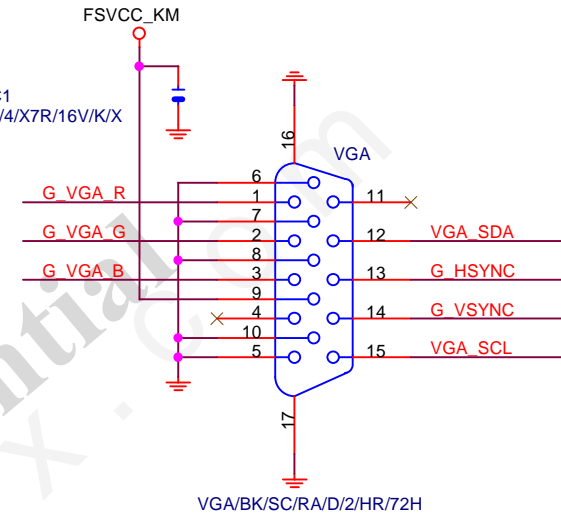
## 放置PCH端



Close to Filter

FOR EMI

## VGA ESD

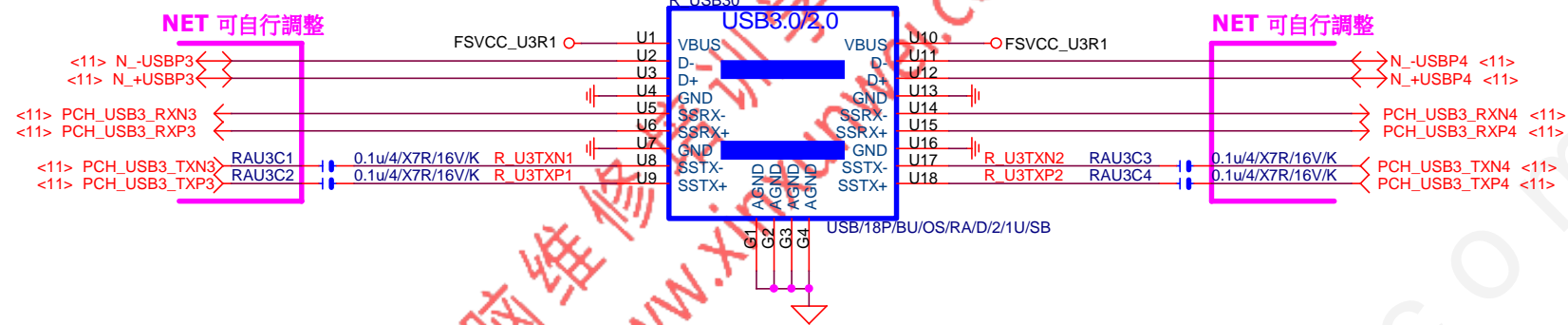


Gigabyte Technology  
DP-VGA RTD2168

Title				Rev 1.01
DP-VGA RTD2168				
Size Custom	Document Number GA-H110M-S2PV DDR3-WP			1.01
Date:	Wednesday, November 18, 2015	Sheet	35 of 48	

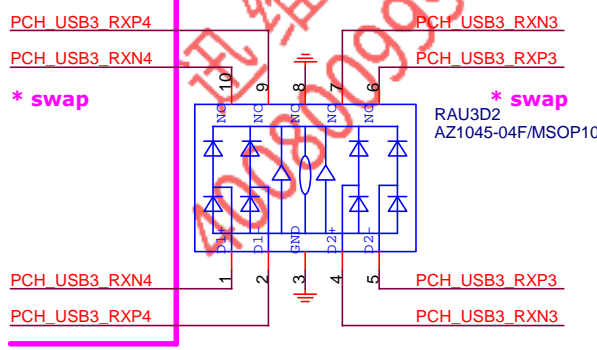


ESD 可自行SWAP PIN, 端 NET 名稱 不可

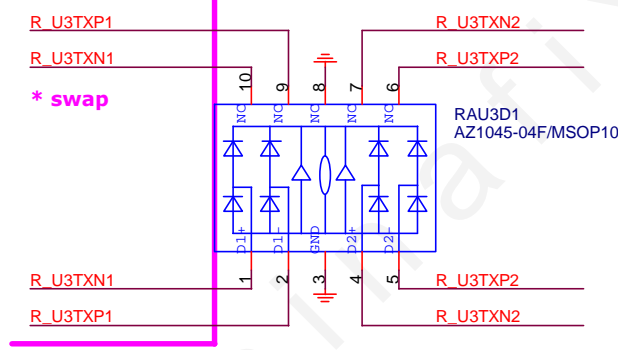


ESD

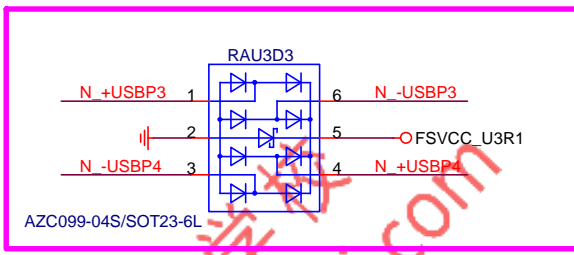
NET 可自行調整



NET 可自行調整

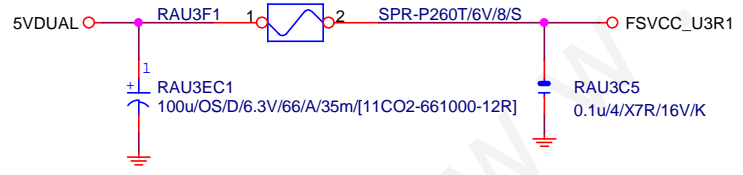


NET 可自行調整



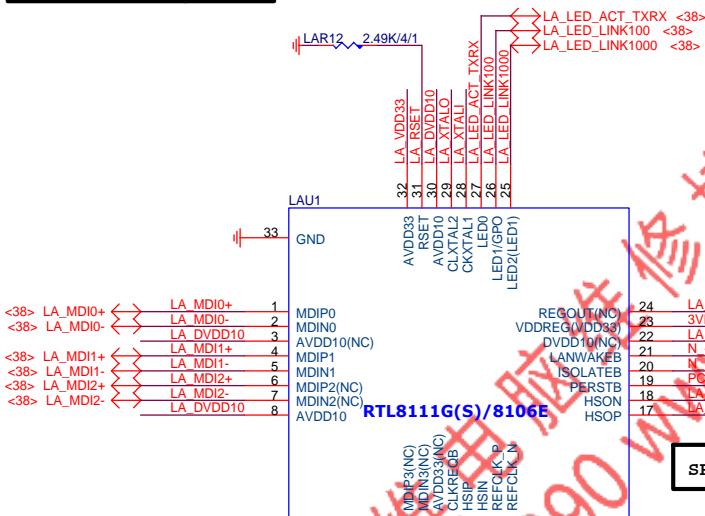
FUSE

FUSE 2 Port 1 Fuse 2.6A



Gigabyte Technology			
Title			
R_USB30,F_USB30, USB_OC			
Size	Document Number		Rev
Custom	GA-H110M-S2PV DDR3-WP		1.01
Date:	Wednesday, November 18, 2015	Sheet	36 of 48





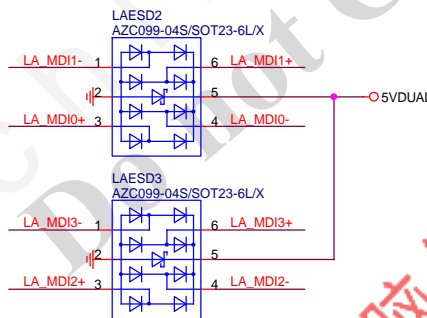
SRCCLK--&gt;50歐姆:[18/4/10/4/18]

L1+CLK REQ# 節能:  
需對應LA\_SRCCLK\_LAN之CLKREQ#

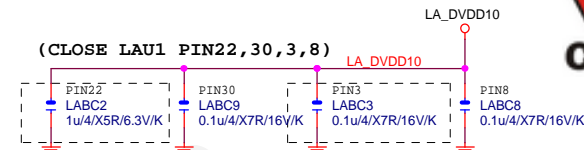
離IC近越好

LA\_ML--&gt;80歐姆:[15/5/5/5/15]

MDI ESD預留 \*



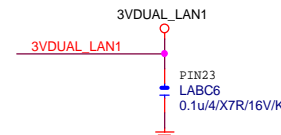
LAN POWER



LABC2:1U CLOSE PIN22[REALTEK REQ]

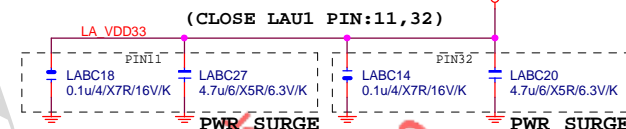
LAN POWER

note: lan power連接及電流

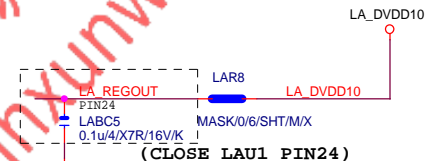


(CLOSE LAU1 PIN23)

LAN POWER

LABC18,27:CLOSE PIN11[REALTEK SURGE]  
LABC14,20:CLOSE PIN32[REALTEK SURGE]

LAN POWER



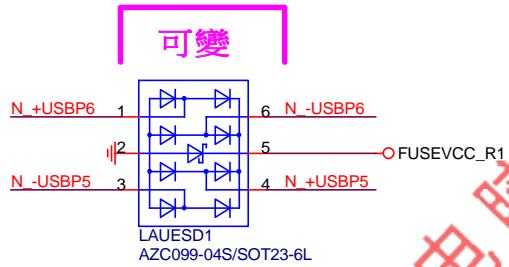
Gigabyte Technology

Title			
Realtek RTL8111GUS			
Size	Document Number	Rev	
Custom	GA-H110M-S2PV DDR3-WP	1.01	
Date:	Wednesday, November 18, 2015	Sheet	37 of 48

# USB\_LAN CONNECTOR R1.06

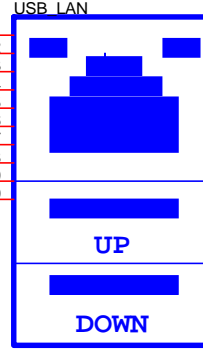
## RMA ESD PROTECT

note:可變更USB NAME



# USB\_LAN CONNECTOR

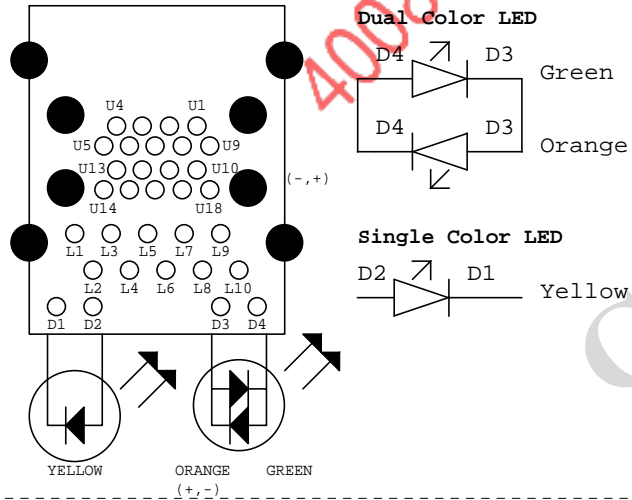
[RTL8111G]



USB+LAN/1G/GO,Y/OS/RA/D/1/15KV/[11NR6-702009-Z1R\_11NR6-702009-R2R]

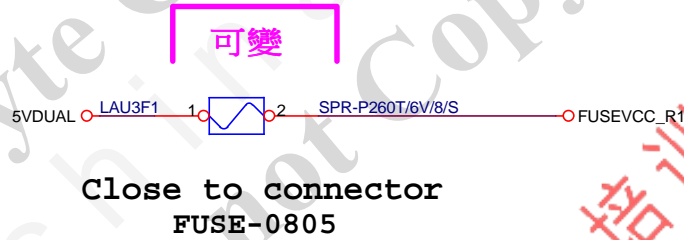
LA\_MDI-->100歐姆:[20/4/8/4/20]

## USB30 LAN LAYOUT示意圖



## USB POWER

note:可變更FUSE



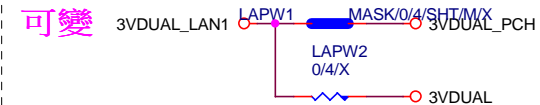
## EMI SHORT PAD

PS:視EMI需求



## LAN POWER

note: lan power連接及電流

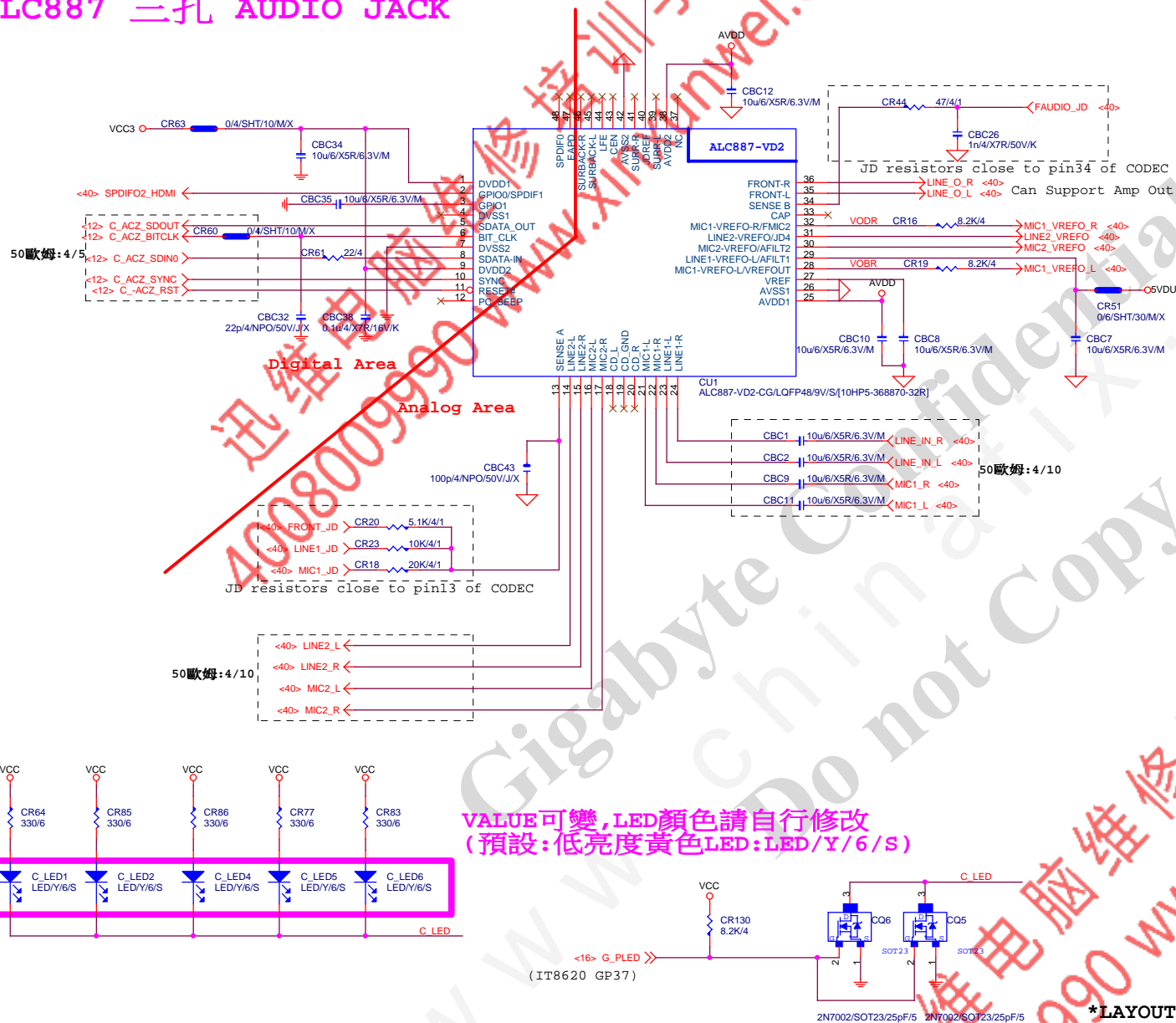


Gigabyte Technology

LAN CONNECTOR-RTL8111G

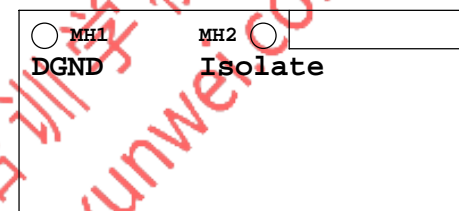
Title	Document Number	Rev
	GA-H110M-S2PV DDR3-WP	1.01
Date:	Wednesday, November 18, 2015	Sheet 38 of 48

## ALC887 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



LAYOUT注意: 要加

GND切割線

音效區域印刷



\*LAYOUT與否, 依照各Model spec

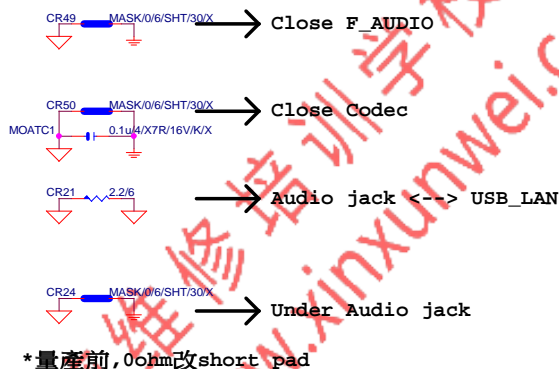
BOM OPTION : 1. Chemicon音效電容  
2. 金屬外罩 Reserve (上件與否, 依照各Model spec)  
3. LED Reserve (上件與否和LED顏色, 依照各Model spec)

Gigabyte Technology

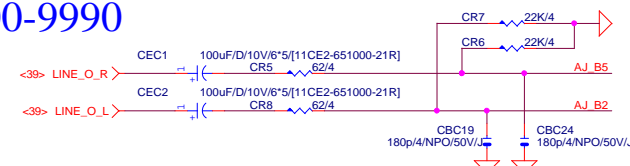
Title		
HD AUDIO ALC887		
Size	Document Number	Rev
Custom	GA-H110M-S2PV DDR3-WP	1.01
Date:	Wednesday, November 18, 2015	Sheet 39 of 48

Rev 0.4

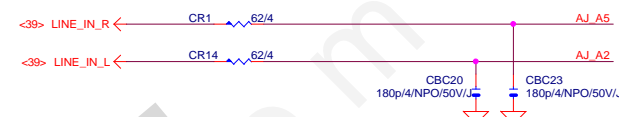
www.xinxunwei.com 400-800-9990



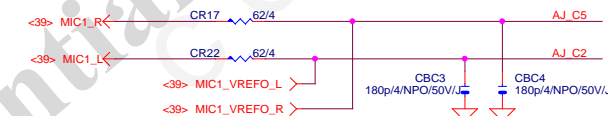
LINE-OUT



LINE-IN



MIC-IN

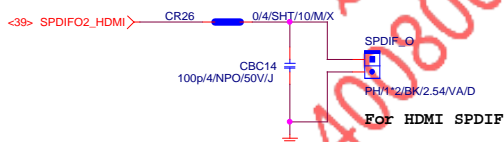


SURROUND

CEN/LFE

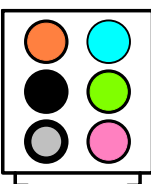
SURRBACK

SPDIF\_OUT

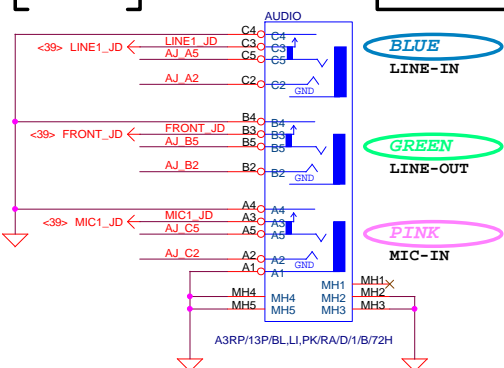


SPDIF\_IN

AZALIA JACK



AZALIA JACK

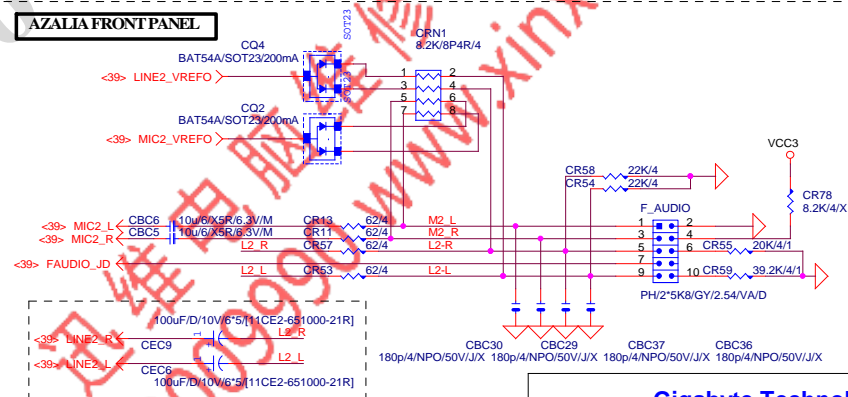


BLUE  
LINE-IN

GREEN  
LINE-OUT

PINK  
MIC-IN

AZALIA FRONT PANEL



Gigabyte Technology

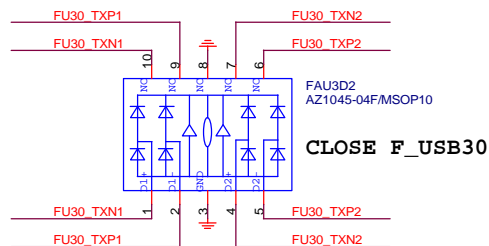
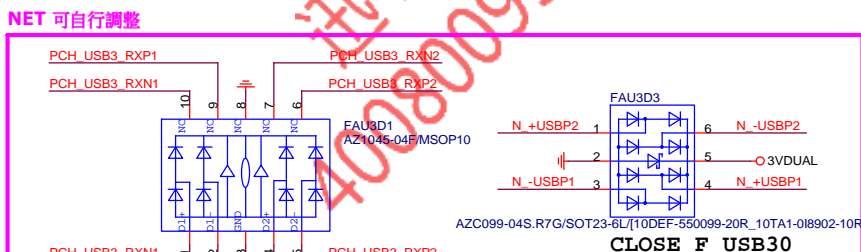
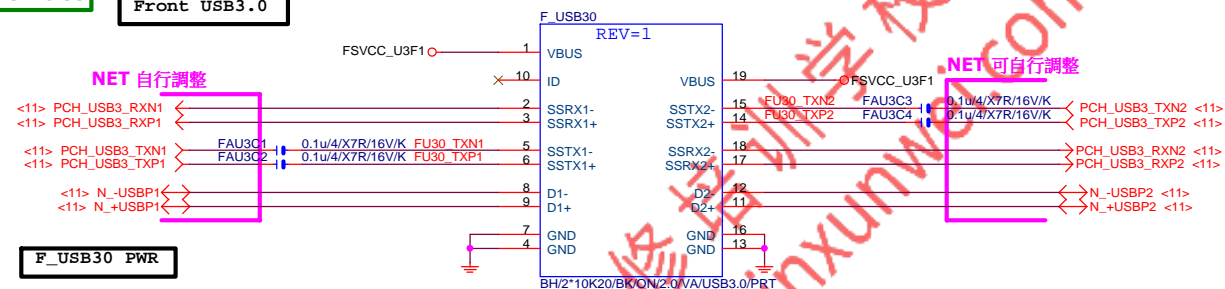
AUDIO JACK

Title	Document Number	Rev
GA-H110M-S2PV DDR3-WP	1.01	
Size Custom		
Date: Wednesday, November 18, 2015	Sheet 40 of 48	



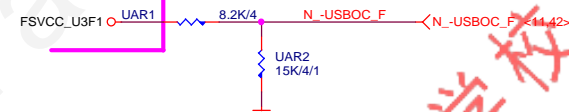
Rev: 0.53

Front USB3.0



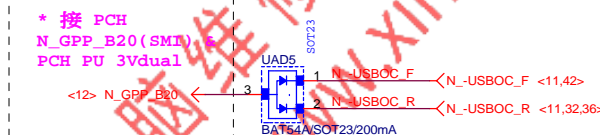
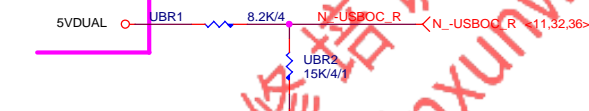
-USBOC\_F

**POWER 可自行調整**



-USBOC\_R

**POWER 可自行調整**

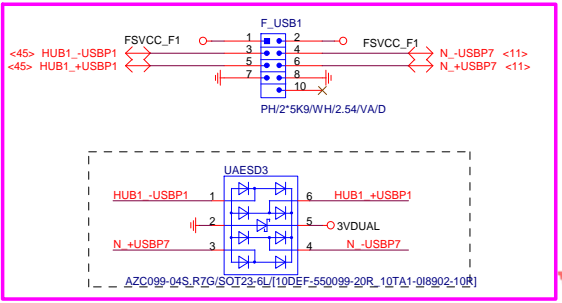


Gigabyte Technology

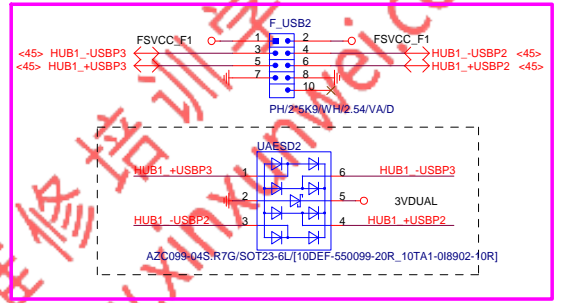
Title			R_USB30,F_USB30,USB_OC
Size	Document Number	Rev	1.01
Custom	GA-H110M-S2PV DDR3-WP		
Date:	Wednesday, November 18, 2015	Sheet	41 of 48



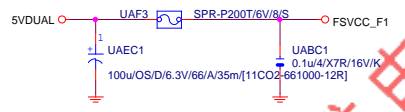
NET 可變



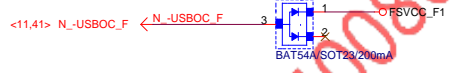
NET 可變



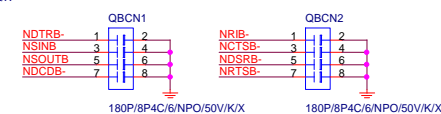
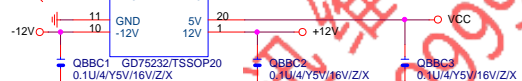
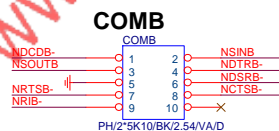
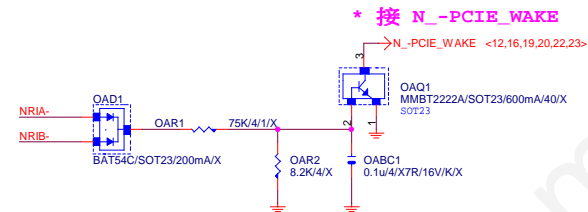
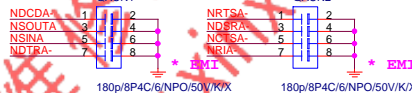
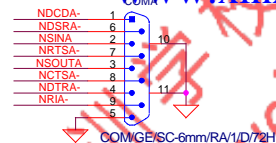
Close to connector  
FUSE 2 Port 1 Fuse 2A



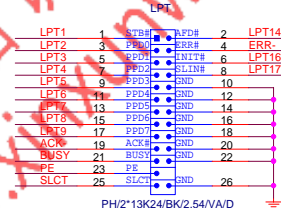
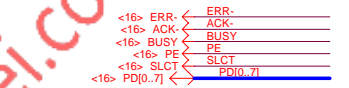
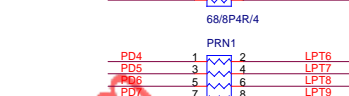
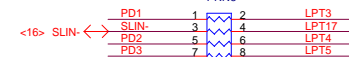
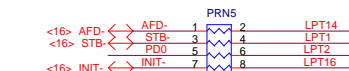
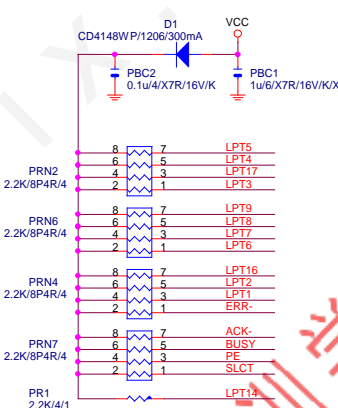
F\_USB 2.0 OC SIGNAL



Gigabyte Technology			
Title			
USB2.0			
Size Custom	Document Number		
GA-H110M-S2PV DDR3-WP			Rev 1.01
Date:	Wednesday, November 18, 2015	Sheet 42 of 48	

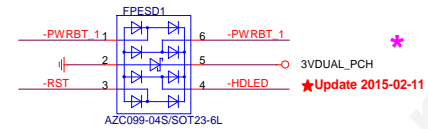
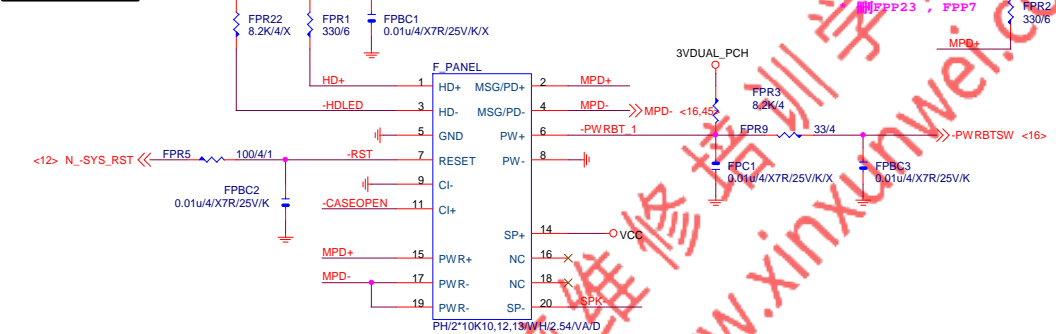


## LPT PORT



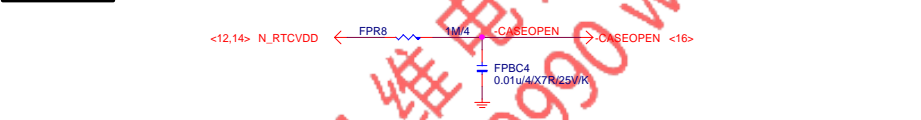


FRONT PANEL



FOOTPRINT: PIN2X10PANEL-NEW

CASE OPEN

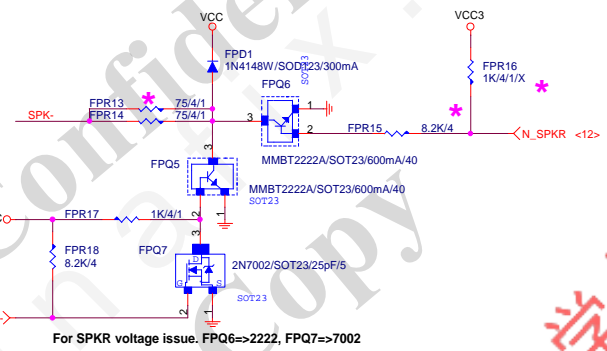


SATA LED

SATALED# signal open-collector, pull-up (8.2 kΩ to 10 kΩ) to Vcc3\_3

★Update 2015-02-12

SPKR



For SPKR voltage issue. FPQ6=>2222, FPQ7=>7002

Gigabyte Technology			
FRONT PANEL			
Size	Document Number	Rev	
Custom	GA-H110M-S2PV DDR3-WP	1.01	
Date:	Wednesday, November 18, 2015	Sheet	44 of 48

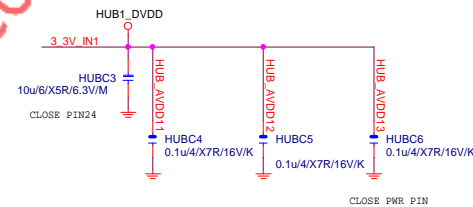


## USB20 HUB\_1

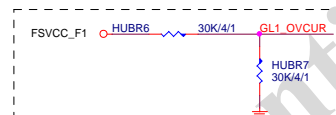
## Single USB2 HUB used

Rev 0.2

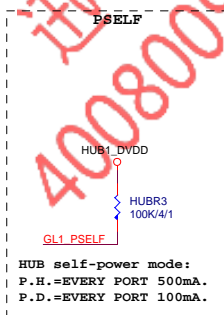
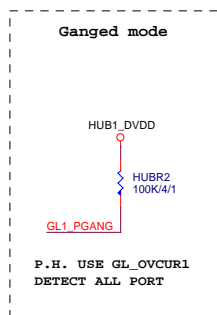
## HUB PWR



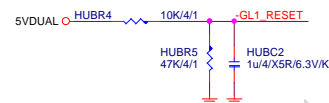
## HUB OVER CURRENT SENSE



## HUB MODE

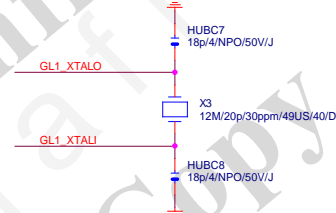


## HUB RESET



## HUB CRYSTAL

ONLY SUPPORT 12MHZ



## EMI/ESD R0.1

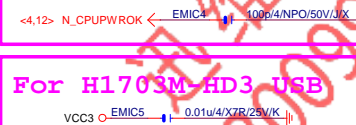
## CLOSE SIO



## close to SIO (PIN92)MPD-



## CLOSE PCH



For H1703M-HD3 USB

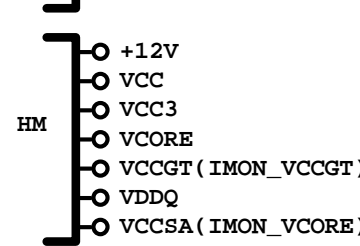
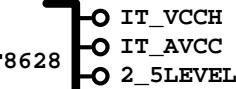
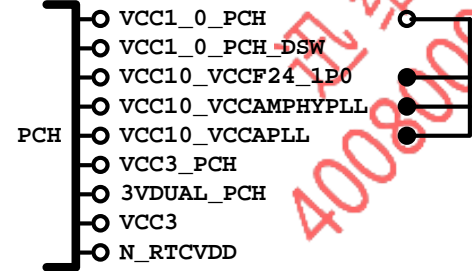
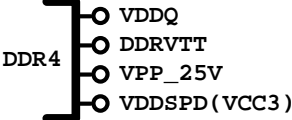
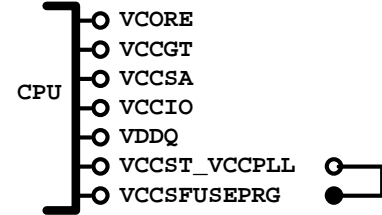
GIGABYTE™

EMI/ESD		
Title	EMI/ESD	
Size	Document Number	Rev
Custom	GA-H110M-S2PV DDR3-WP	1.01
Date:	Wednesday, November 18, 2015	Sheet 45 of 48

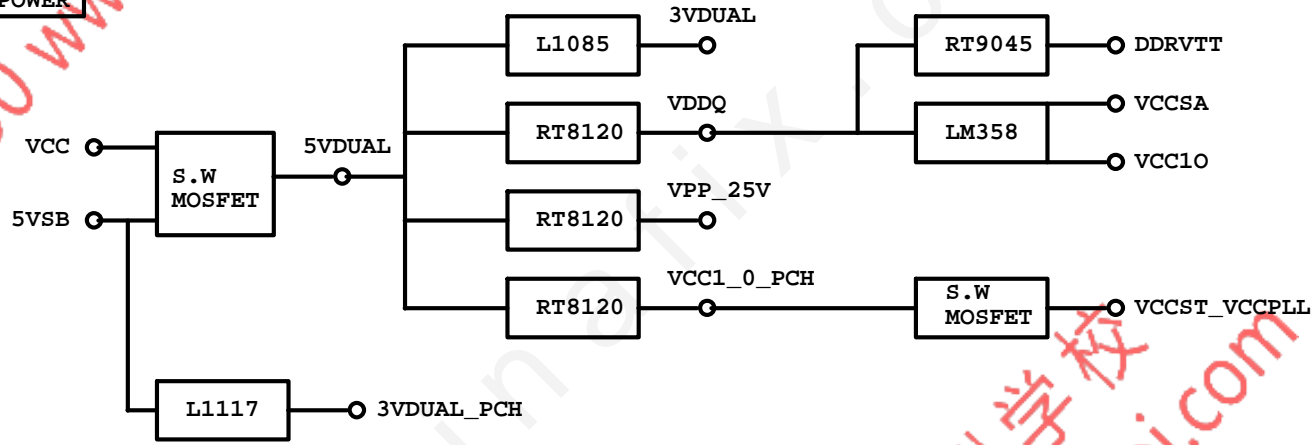
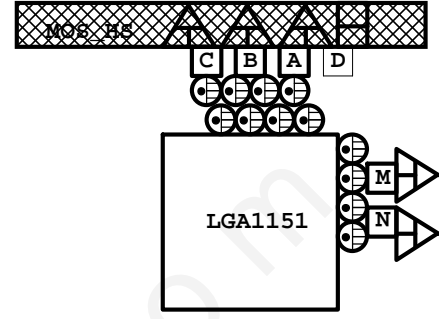
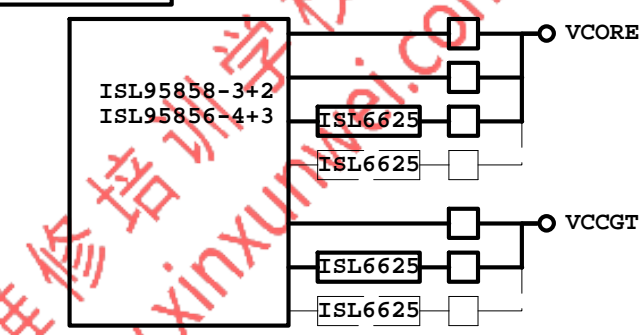
# POWER BLOCK MAP

## VCORE/VCCGT

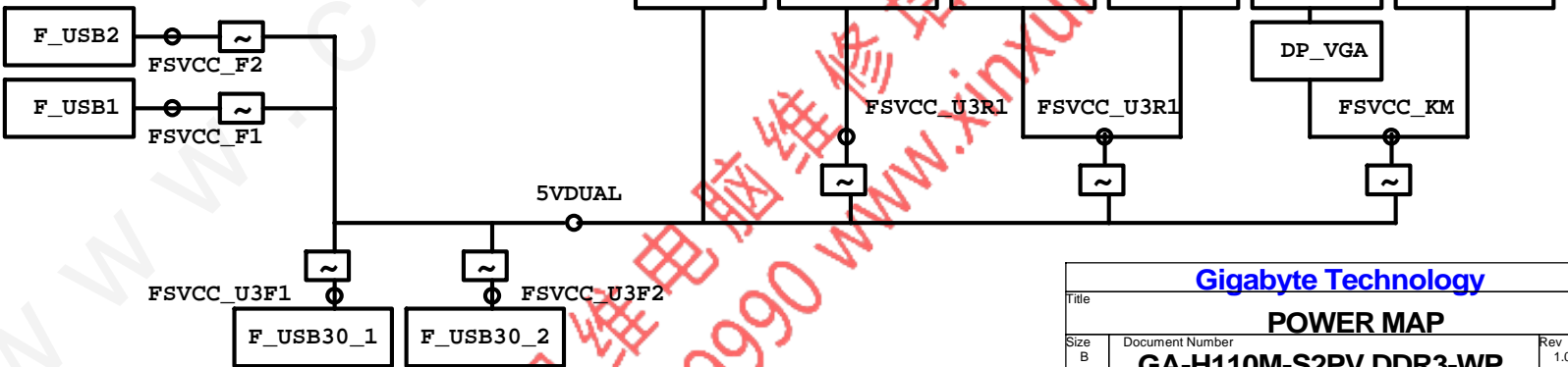
www.xinxunwei.com 400-800-9990



## POWER



## FUSE POWER F/R



Gigabyte Technology

POWER MAP			
Title			
Size	Document Number	Rev	
B	GA-H110M-S2PV DDR3-WP	1.01	
Date:	Wednesday, November 18, 2015	Sheet	46 of 48

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	POWER零件使用表		
Size	Document Number		Rev
Custom	GA-H110M-S2PV DDR3-WP		1.01
Date:	Wednesday, November 18, 2015	Sheet 47 of 48	



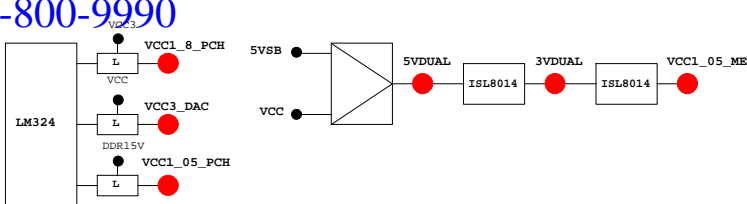


PCH GPIO LIST TABLE					
PIN NAME	PWR	Default	USAGE	NOTE	
GP0	MAIN	H-Z	GPI	GPI0	N/A
GP1/TACH1	MAIN		GPI	GPI01	N/A
GP2/PIRQE#	MAIN		GPI	-PIRQE	P/U 8.2K VCC3
GP3/PIRQF#	MAIN		GPI	-PIRQF	P/U 8.2K VCC3
GP4/PIRQG#	MAIN		GPI	-PIRQG	P/U 8.2K VCC3
GP5/PIRQH#	MAIN		GPI	-PIRQH	P/U 8.2K VCC3
GP6/TACH2	MAIN		GPI	PCIEX1 Detect	P/U 8.2K VCC3
GP7/TACH3	MAIN		GPI	GPI07	P/U 8.2K VCC3
GP8	STBY	H	GPI	GPI08	N/A
GP9/OC5#	STBY		NATIVE	USB OC5#	N/A
GP10/OC6#	STBY		NATIVE	USB OC6#	N/A
GP11/SMBALERT#	STBY		NATIVE	USB PWR protect	P/U 8.2K 3VDUAL
GP12	STBY	L	GPI	GPI012	N/A
GP13	STBY	L	GPI	LPCPME#	P/U 8.2K 3VDUAL
GP14/OC7#	STBY		NATIVE	USB OC7#	N/A
GP15	STBY	L	GPI	GPI015(TLS Enable)	P/U 8.2K 3VDUAL
GP16	MAIN		GPI	GPI016	P/U 8.2K VCC3
GP17/TACH0	MAIN		GPI	GPI017	P/U 8.2K VCC3
GP18	MAIN		GPI	Mobile Only	N/A
GP19	MAIN		GPI	GPI019	P/U 8.2K VCC3
GP20	MAIN		GPI	GPI020	P/U 8.2K VCC3
GP21	MAIN		GPI	GPI021	P/U 8.2K VCC3
GP22	MAIN	H-Z	GPI	GPI022	P/U 8.2K VCC3
GP23	MAIN		GPI	GPI023	N/A
GP24	STBY	L	GPI	SKTOCC#	N/A
GP25	STBY			Mobile Only	N/A
GP26	STBY			Mobile Only	N/A
GP27	STBY	H	GPO	GPI027	P/U 8.2K 3VDUAL
GP28	STBY	H	GPO	PWR_LED	P/U 8.2K 3VDUAL
GP29	STBY	L	GPI	GPI029	N/A
GP30	STBY	H-Z	GPI	Mobile Only	N/A
GP31	STBY	H-Z	GPI	Mobile Only	N/A
GP32	MAIN	H	GPO	N/A	N/A
GP33	MAIN	H	GPO	N/A	N/A
GP34	MAIN	H-Z	GPI	-PCI_STOP	P/U 8.2K VCC3
GP35	MAIN	L	GPO	-ACZ_DET	P/U 8.2K VCC3
GP36	MAIN		GPI	N/A	N/A
GP37	MAIN		GPI	N/A	N/A
GP38	MAIN	H-Z	GPI	PCIEX4 Detect	P/U 8.2K VCC3
GP39	MAIN	H-Z	GPI	GPI039	P/U 8.2K VCC3
GP40	STBY		NATIVE	USB OC1#	N/A
GP41	STBY		NATIVE	USB OC2#	N/A
GP42	STBY		NATIVE	USB OC3#	N/A
GP43	STBY		NATIVE	USB OC4#	N/A
GP44	STBY	L	NATIVE	GPI044	P/U 8.2K 3VDUAL
GP45	STBY		NATIVE	GPI045	P/U 8.2K 3VDUAL
GP46	STBY	L	NATIVE	GPI046	P/U 8.2K 3VDUAL
GP47	STBY			Mobile Only	N/A
GP48	MAIN	H-Z	IN	GPI048	P/U 8.2K 3VDUAL
GP49	MAIN	H-Z	IN	GPI049	P/U 8.2K 3VDUAL
GP50	MAIN		NATIVE	-REQ1	P/U 2.2K VCC
GP51	MAIN	H	NATIVE	-GNT1	N/A
GP52	MAIN		NATIVE	-REQ2	P/U 2.2K VCC
GP53	MAIN	H	NATIVE	-GNT2	N/A
GP54	MAIN		NATIVE	-REQ3	P/U 2.2K VCC
GP55	MAIN	H	NATIVE	-GNT3	N/A
GP56	STBY		NATIVE	Mobile Only	N/A
GP57	STBY	H-Z	IN	VCORE_OV1	P/U 8.2K 3VDUAL
GP58	STBY	H-Z	NATIVE	F_USB_OC	P/U 8.2K 3VDUAL
GP59	STBY		NATIVE	USB_OC0#	N/A
GP60	STBY	H-Z	NATIVE	N/A(Reverse)	P/U 8.2K 3VDUAL
GP61	STBY	L	NATIVE	-SUSTAT	N/A
GP62	STBY	L	NATIVE	SUSCLK	N/A
GP63	STBY	L	NATIVE	GPI063	N/A
GP64	MAIN	L	NATIVE	CLKOUTFLEX0	N/A
GP65	MAIN	L	NATIVE	CLKOUTFLEX1	N/A
GP66	MAIN	L	NATIVE	CLKOUTFLEX2	N/A
GP67	MAIN	L	NATIVE	CLKOUTFLEX3	N/A
GP72	STBY	H-Z	NATIVE	VCORE_OV4	P/U 8.2K 3VDUAL
GP73	STBY			Mobile Only	N/A
GP74	STBY	H-Z	NATIVE	1_05V_OV2	P/U 8.2K 3VDUAL
GP75	STBY	H-Z	NATIVE	N/A(Reverse)	P/U 8.2K 3VDUAL

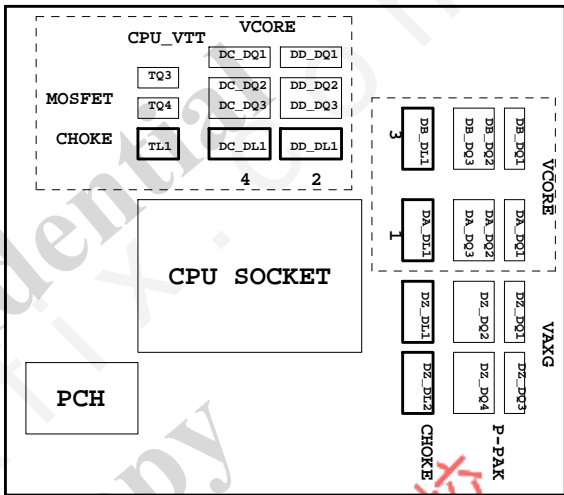
Super I/O ITE8720 GPIO Pin List

PIN NAME	USAGE	NOTE
SVC/PECI_RQT/GP14	-PECI_REQ	
PWROK1/GP13	PWROK1/ITE_PWROK	
KRST#/GP62	-KRST	
SO/GP50	-ICH_SPI_CS	
IRTX/GP47/CE2_N/JP7	CEB_N	
GP46/IRRX	-LAN2_DSM	
PSION#/GP42	-PSON	
PWROK2#/GP41	PECI_CTL	
PCIRST3#/GP10/VDIMM_STR_EN	-PCIE_RST	
RSMRST#/CIRR1X/GP55	-RSMRST	
PME#/GP54	-LPCPME	
PD5/GP75/BUSS00	N/A	

PIN NAME	USAGE	NOTE
FAN_TAC2/GP52	FANIO2	
FAN_TAC3/GP37	FANIO3	
VIDO3/FAN_TAC4/GP25/DSR2#	FANIO4	
FAN_CTL2/GP51	FANPWM2	
FAN_CTL3/GP36	FANPWM3	
VID4/GP34	BEEP-	
VID3/GP33	TURBO1	
VID2/GP32	TURBO0	
VCORE_GOOD/VID6/GP63	CPUT_LED1_C	
VID5/GP35	CPUT_LED2_C	
VID1/GP31	CPUT_LED3_C	
VID0/GP30	-LAN1_DSM	NBT_LED1_C
SLCT/GP80	CPU_LED1_C	
PE/GP81	CPU_LED2_C	
BUSY/GP82	CPU_LED3_C	
PD3/GP73/BUSSI1	SB_LED1_C	
PD4/GP74/BUSSI2	SB_LED2_C	
VCORE_EN/VID7/GP64	IT_GP64	SB_LED3_C
PD0/GP70	NB_LED1_C	
PD1/GP71	NB_LED2_C	
PD2/GP72/BUSSI0	NB_LED3_C	
GP22/SCK	LOW_PWR_1	
VIDO5/GP27/SIN2	LOW_PWR_2	
PCIRST2#/GP11	-PFMRST1	
PCIRST1#/GP12	-PFMRST2	
3VSB5W#/GP40	CSI_F0	BSEL166_1
SUSC#/GP53	CSI_F1	BSEL166_2
GP23/SI	BSEL166_3/CSISBSL	
VIDO0/GP20/CTS2#	CPUT_LED1_C	BSEL166_4
GP65/VDDA_EN/GB_01	MB_ID2	
PD6/GP76/BUSS01	MB_ID3	
PD7/GP77/BUSS02	MB_ID4	
AFD#/GP86/SMBC_R	3V PIN	FST_2X8
INIT#/GP85/SMBC_M	SEC_2x8	GTLREF_AD2
ACK#/GP83	DDR_LED1_C	
VIDO1/GP21/DCD2#	DDR_LED2_C	
STB#/GP87/SMBC_M	DDR_LED3_C	
PWRON#/GP44	VCORE_OV1	
PANSWH#/GP43	PWRBTSW	
KDAT/GP61	-PWRBTSW	
KCLK/GP60	KDAT	
MDAT/GP57	KCLK	
MACL/GP56	MDAT	
GP66/VLDT_EN/GB_02	NBT_LED1_C	MCLK
SVD/PCIRSTIN#/CIRTX/GP15	PWM2_CR	
KDAT/GP61	PWM2_CR	
GP67/CPU_PG/GB_03	EN_LOADLINE	IT_GP67/-EN_PWM2
SLIN#/GP84/SMBD_R	-EN_PWM2	
PSI_L/FAN_CLT5/CIRRX2/GP16	-THERM	
VIDO4/GP26/SOUT2	DDR18V_PH2_EN	
VIDO2/FAN_TAC5/GP24/DSR2#	DDR18V_LED	
VIDO6/GP17/RI2#	1_1V_PH_EN	
VIDO7/JP6/DTR2#	JP6	
PD5/GP75/BUSS00	SB_LED3_C	



PWM各相位的擺法如下:



BIOS超電壓對應表:

散熱模組料號:

線路圖名稱	BIOS選項
Vcore	CPU Vcore
CPU_VTT	CPU Termination
CPU_VAXG	CPU Graphic Core
VCC1_8_PCH	CPU PLL
VCC1_05_PCH	PCH core
3VDUAL	3VDUAL
DDR15V	DRAM voltage
DDRVTT	DRAM Termination
VREF_CA_A/VREF_CA_B	DRAM Address Ref
VREF_DQ_A/VREF_DQ_B	DRAM Data Ref

Z77-D3H :  
PCH :  
12SP2-S05511-01R/02R/03R  
MOSFET :  
12SP2-S08924-01R/02R/03R

	3 pin FAN control	4 pin FAN control	FAN speed	Controller
CPU FAN	FANPWM1	FANPWM3	FANIO1	IT8720
	ICH_FAN_PWM2	ICH_FAN_PWM0	ICH_FAN_TACH0	PCH
SYS FAN	FANPWM2	N/A	FANIO2	IT8720
	ICH_FAN_PWM1	N/A	ICH_FAN_TACH1	PCH
PWR FAN	N/A	N/A	FANIO3	IT8720
			ICH_FAN_TACH2	PCH

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Title	TABLE LIST		
Size C	Document Number	Rev	
	GA-H110M-S2PV DDR3-WP	1.01	
Date:	Wednesday, November 18, 2015	Sheet	48 of 48