

Model Name: GA-B150M-D3VX-SI

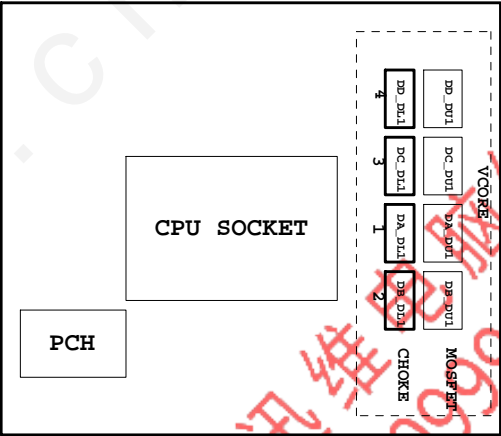
SHEET TITLE Rev 1.0

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 4 CHANNEL A
09	DDR 4 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	M.2 x4
22	
23	IT8892
24	IT8892 POWER
25	PCI SLOT
26	ISL95858_856 PWM
27	ISL95858_856 MOS_VCORE
28	ISL95858_856 MOS_VCCGT
29	VCCSA_VCCIO_VCCPLL
30	RT8237_DDR_BEAD
31	
32	RT8237_PCH-BEAD
33	DISCRETE POWER
34	NCP3933 OVER VOLTAGE

www.xinxunwei.com 400-800-9990

SHEET TITLE

35	ATX POWER , -PROCHOT
36	KB_MS_USB
37	DVI
38	RTD2168 - DP to VGA - IC
39	RTD2168 - DP to VGA - Conn
40	HDMI
41	R_USB30
42	Realtek 8111HS
43	USB30_LAN CONNECTOR-8111HS
44	ALC887-VD2 CODEC
45	REAR AUDIO JACK
46	F_USB30
47	F_USB20
48	COM , LPT , TPM
49	F_PANEL
50	TABLE LIST



Gigabyte Technology

Cover Sheet	
Size	Document Number
Custom	GA-B150M-D3VX-SI
Date	Friday, September 18, 2015
Sheet	1 of 52



Rev 1.0

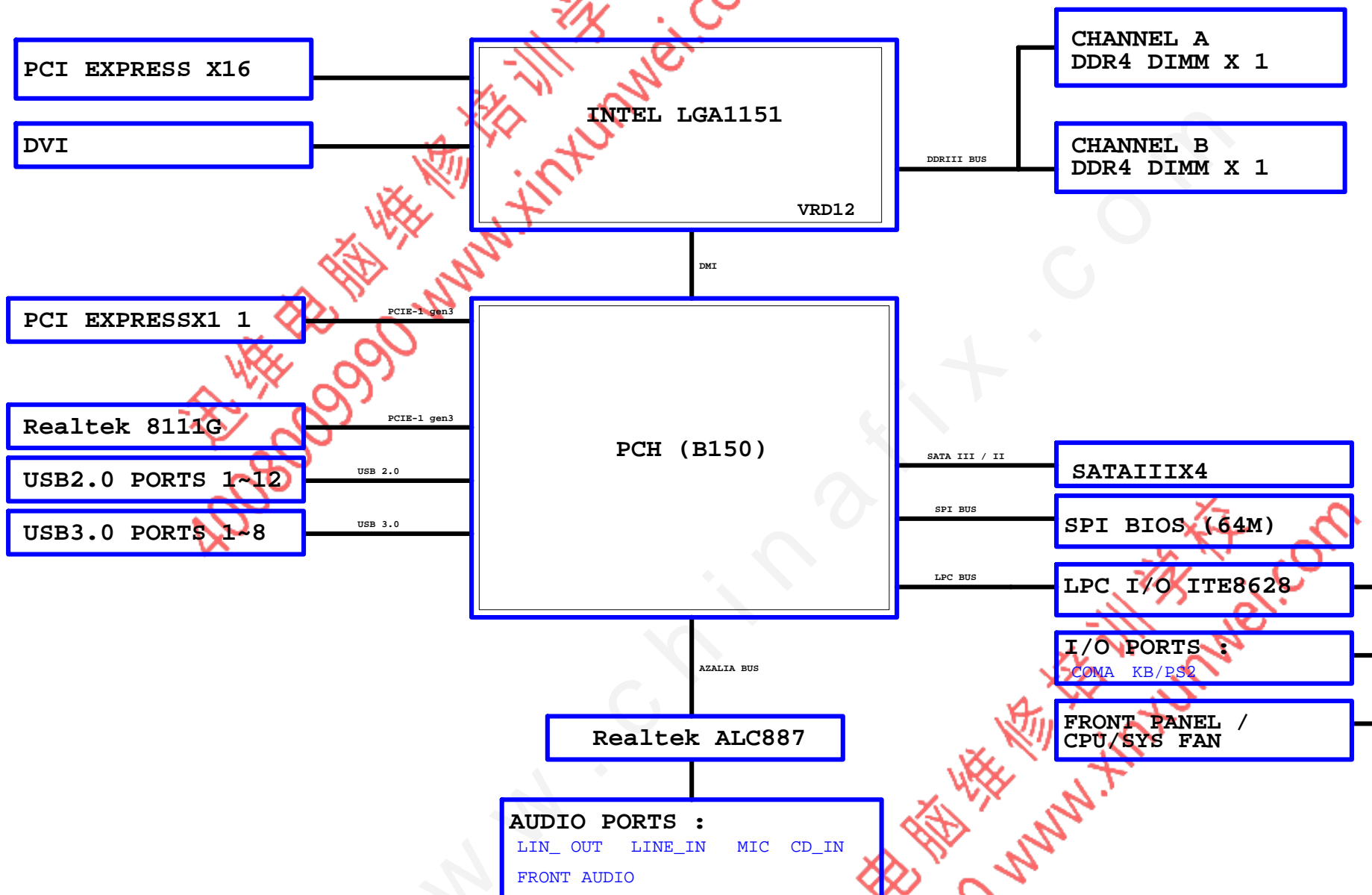
CHINA FDX

2015/09/14

[illegible]

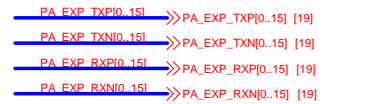
BLOCK DIAGRAM

www.xinxunwei.com 400-800-9990



Gigabyte Technology			
BLOCK DIAGRAM			
Size	Document Number	GA-B150M-D3VX-S	
C		Rev	1.0
Date:	Friday, September 18, 2015	Sheet	3 of 52

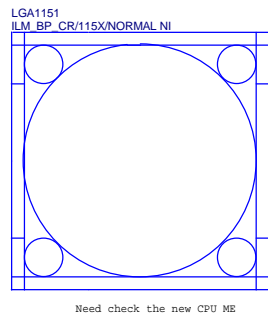
www.xinxunwei.com 400-800-9990

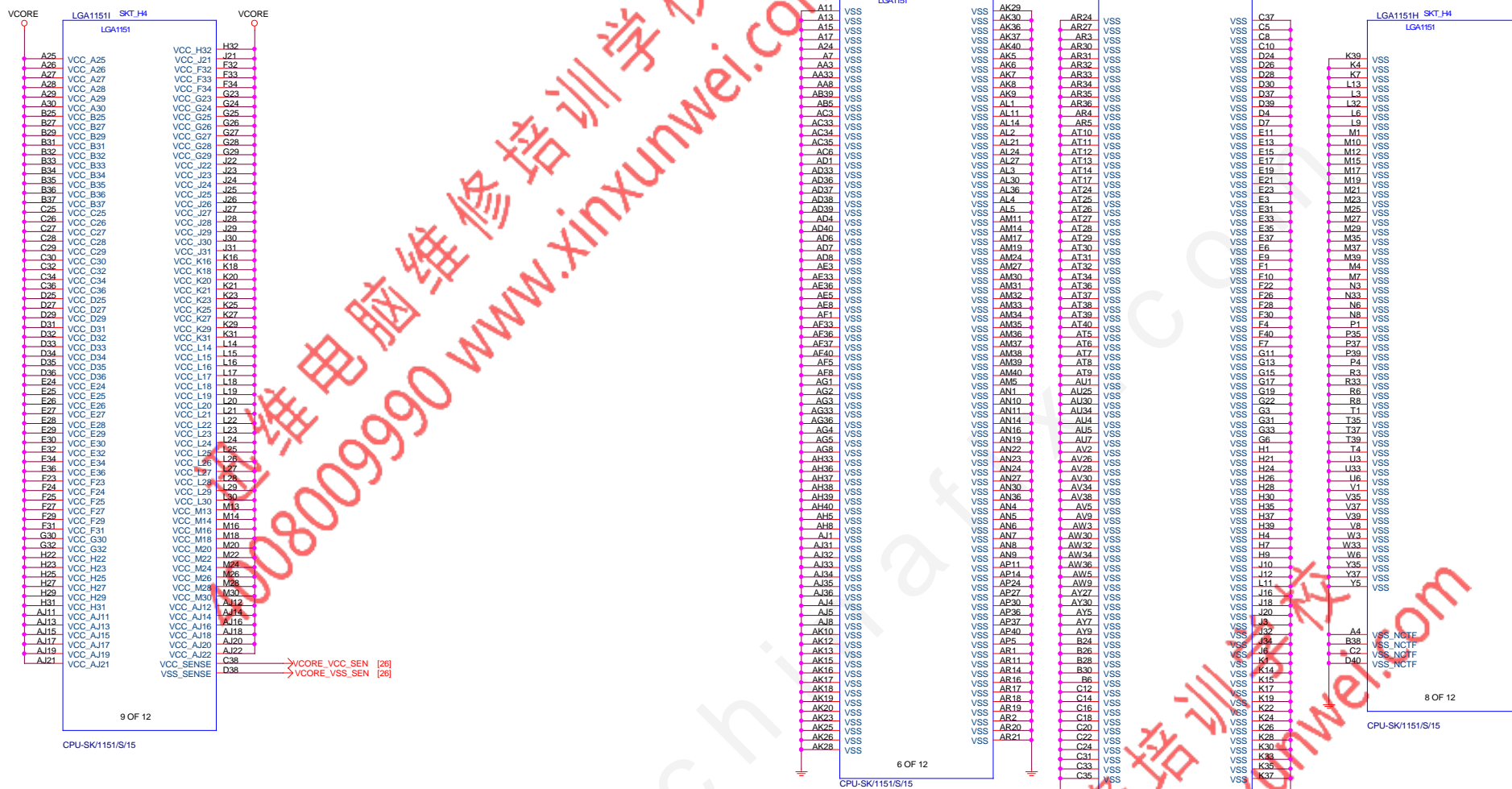


Impedance=85 +/- 15%
W=12 mil out of CPU
S=15 mil out of CPU

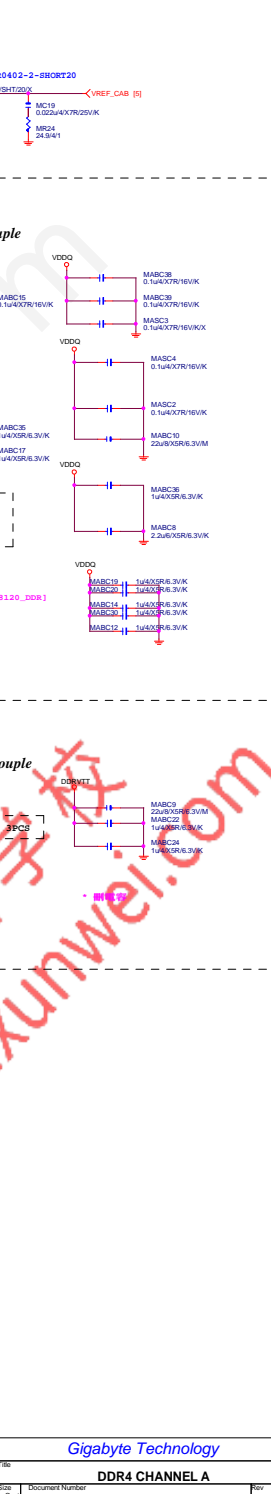
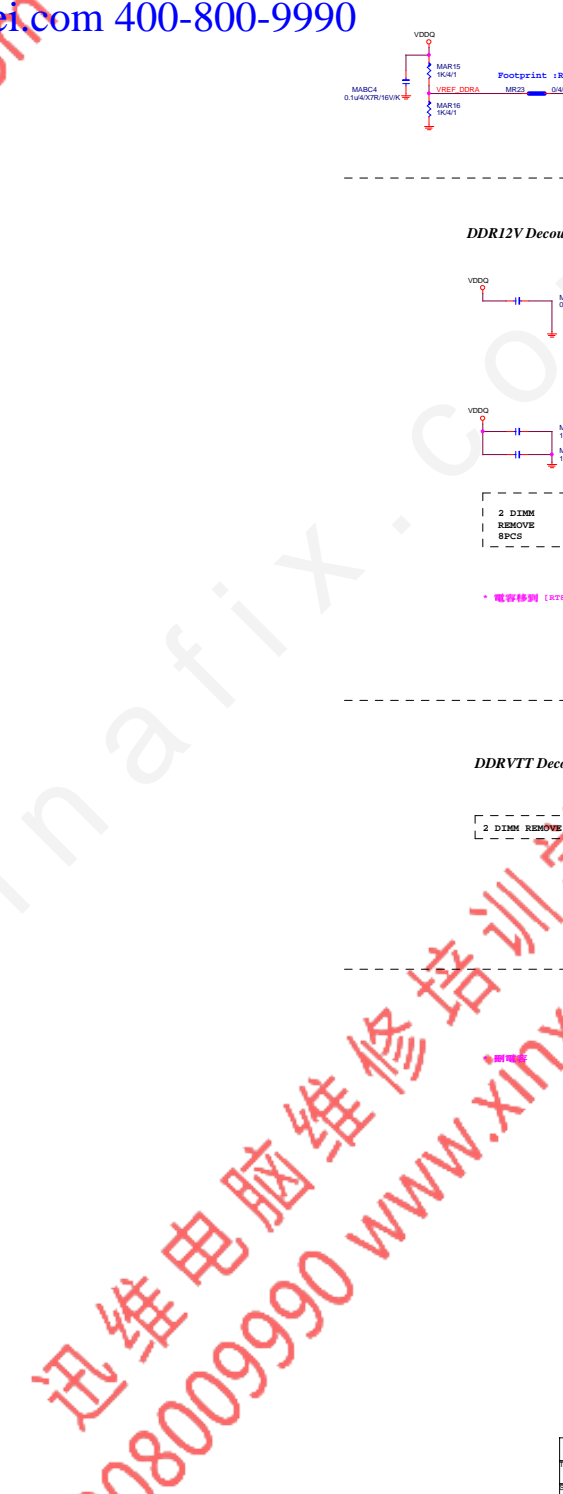
Bifurcation Config.	CFG[6]	CFG[5]	CFG[4]
1x16	1	1	1
1x16 Reversed	1	1	0
2x8	1	0	1
2x8 Reversed	1	0	0
1x8+2x4	0	0	1
1x8+2x4 Reversed	0	0	0

<p align="center">Gigabyte Technology</p>			
<p>Title</p>			
<p align="center">CPU LGA1151-A</p>			
Size	Document Number	Rev	
Custom	GA-B150M-D3VX-SI	1.0	
Date:	Friday, September 18, 2015	Sheet	4 of 52

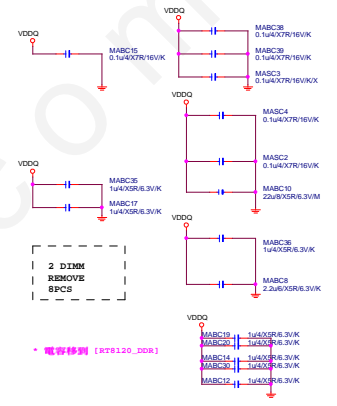




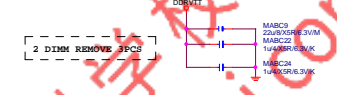
* 刪 Vcore 電容



DDR12V Decouple



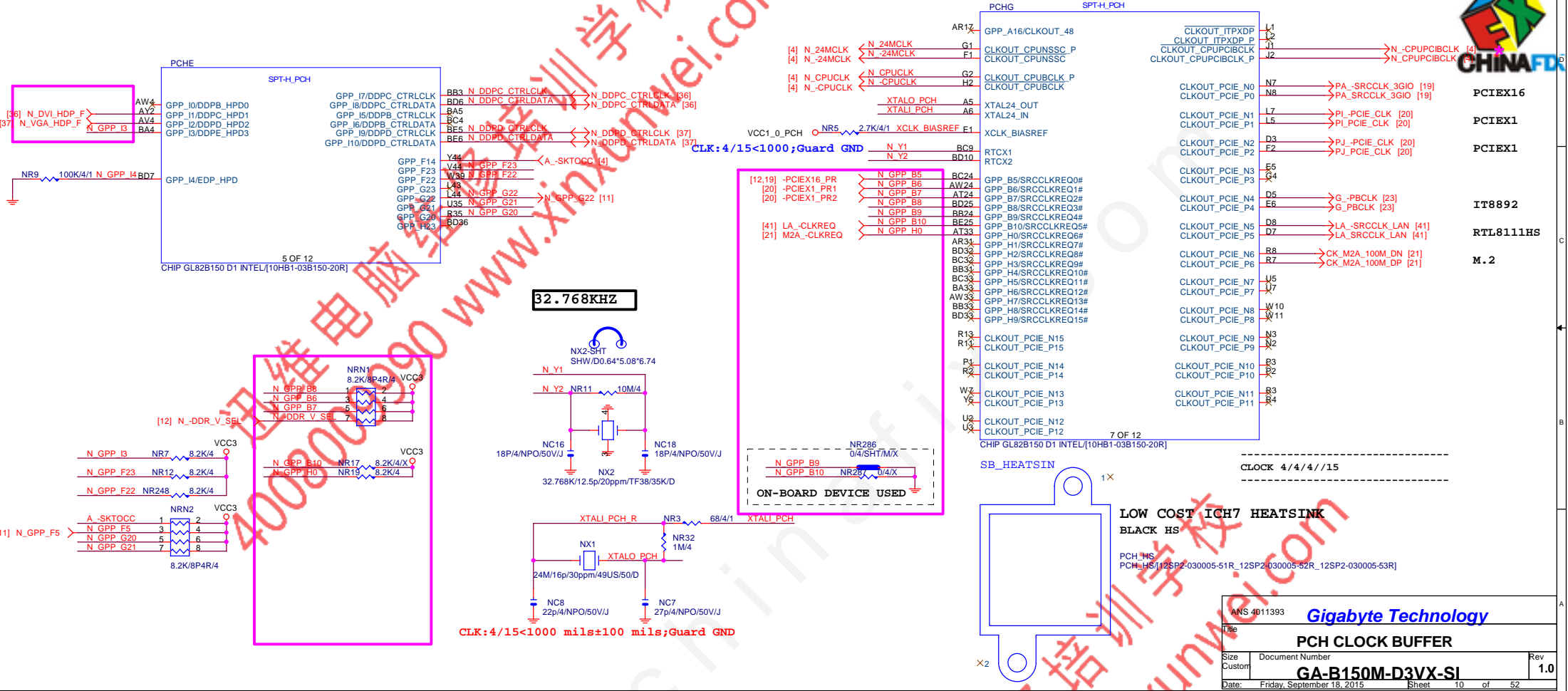
DDRVTT Decouple



Gigabyte Technology			
File	DDR4 CHANNEL A		
Size	Document Number	GA-B150M-D3VX-SI	Rev
1.0			



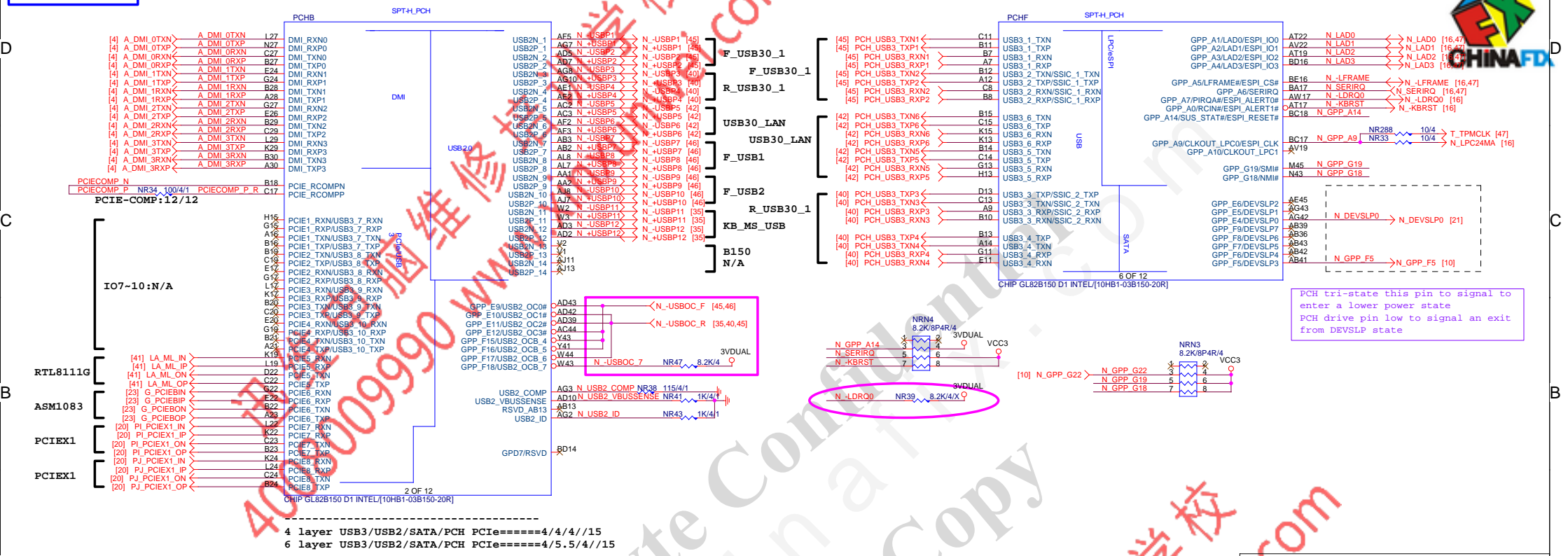
Gigabyte Technology			
Title			
DDR4 CHANNEL B			
Size	Document Number		Rev
Custom	GA-B150M-D3VX-SI		1



LOW COST ICH7 HEATSINK
BLACK HS

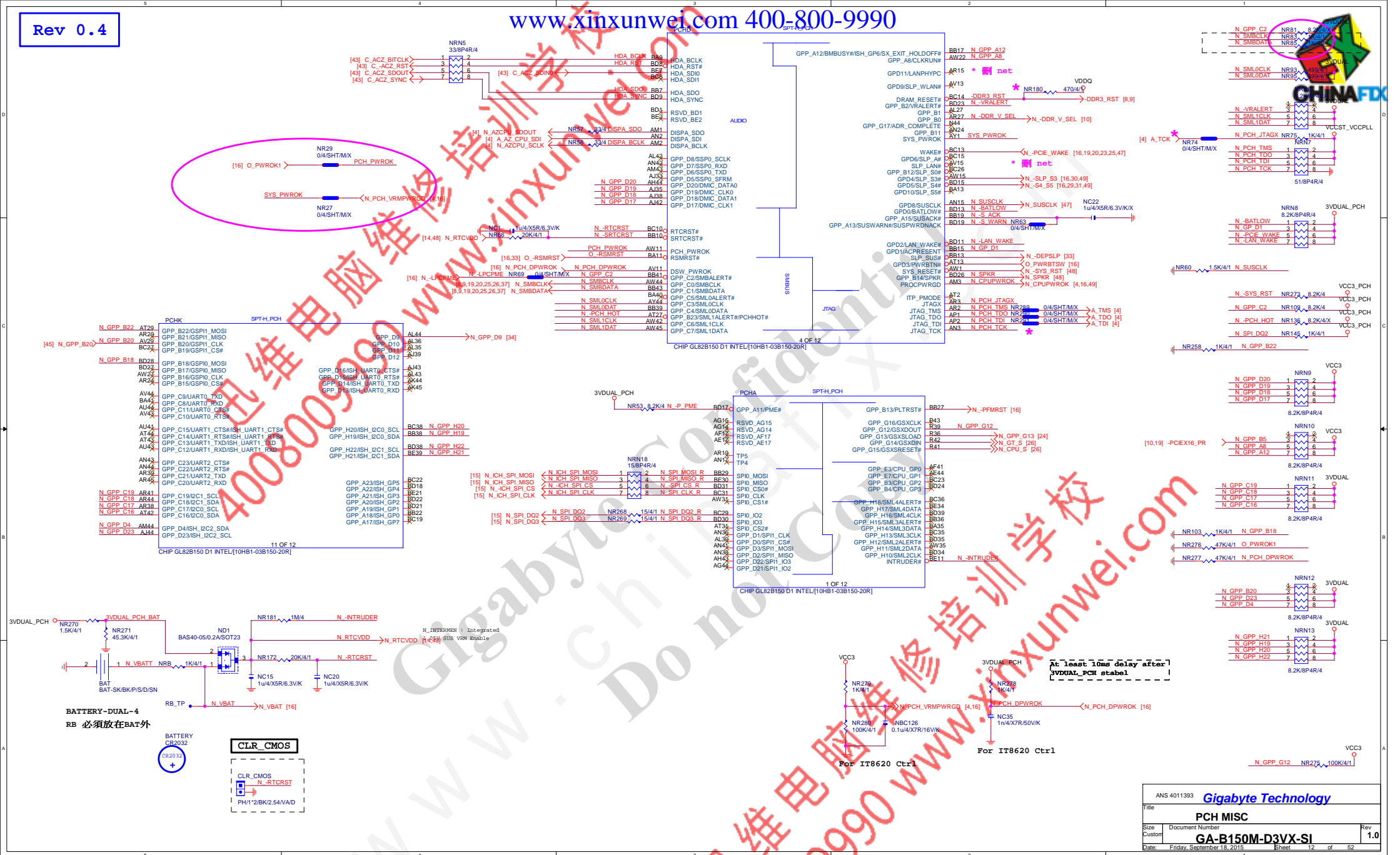
PCH HS
PCH HS [12SP2-030005-51R_12SP2-030005-52R_12SP2-030005-53R]

ANS 4011393		Gigabyte Technology	
Title		PCH CLOCK BUFFER	
Size	Document Number	Rev	
Custom	GA-B150M-D3VX-SI	1.0	
Date:	Friday, September 18, 2015	Sheet	10 of 52

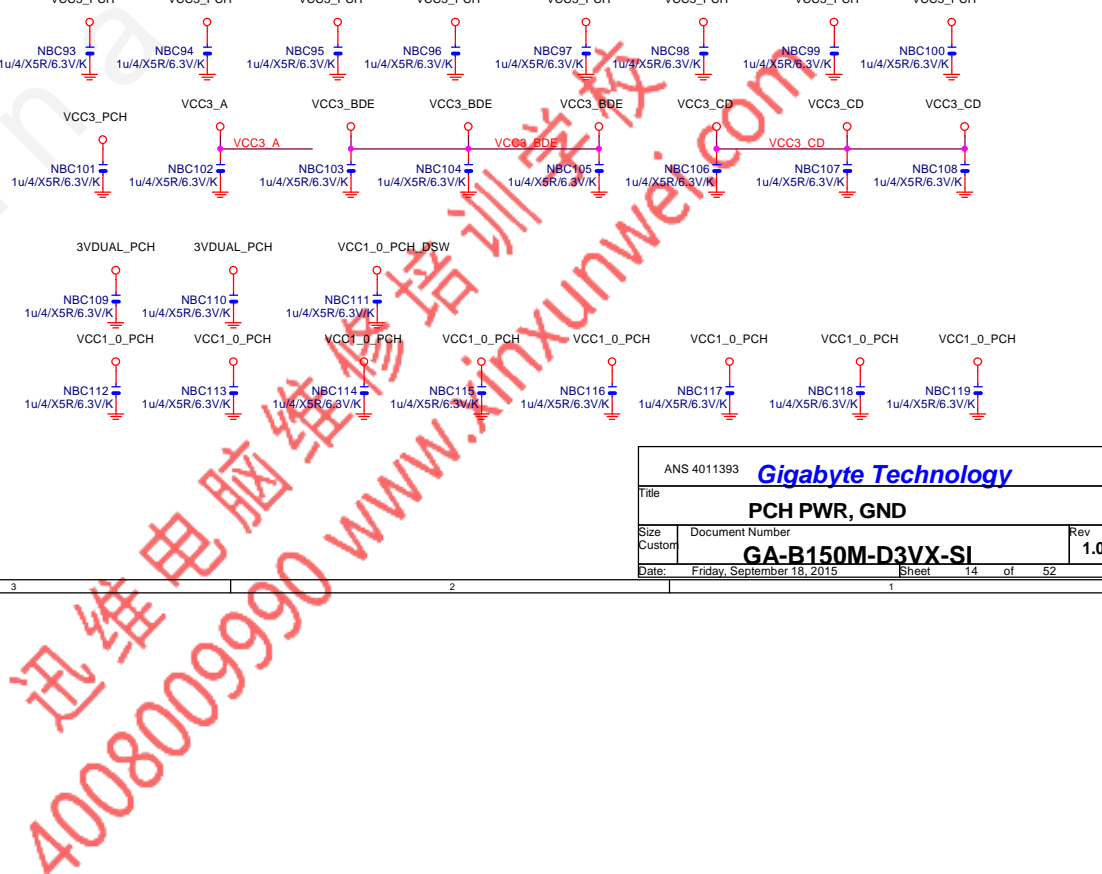


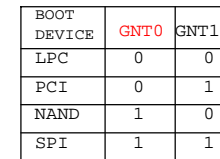
PCH tri-state this pin to signal to enter a lower power state
PCH drive pin low to signal an exit from DEVSUP state

ANS 4011393		Gigabyte Technology	
Title		PCH DMI,USB,PCIE	
Size Custom		Document Number GA-B150M-D3VX-SI	
Date: Friday, September 18, 2015		Rev 1.0	
Sheet		11 of 52	



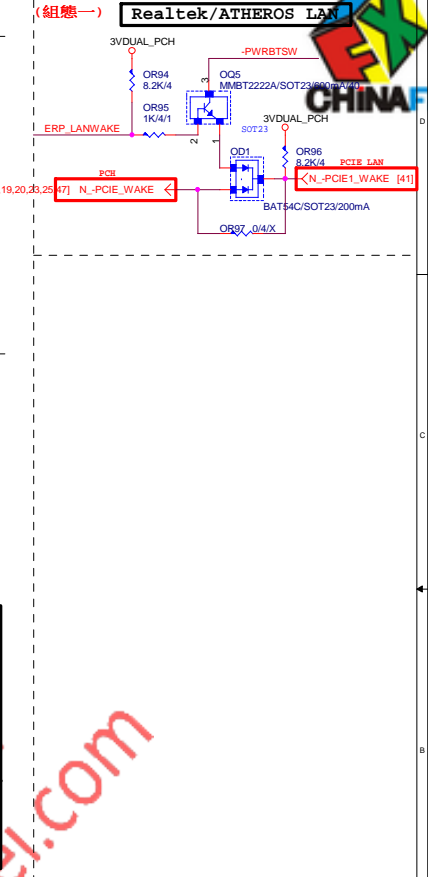
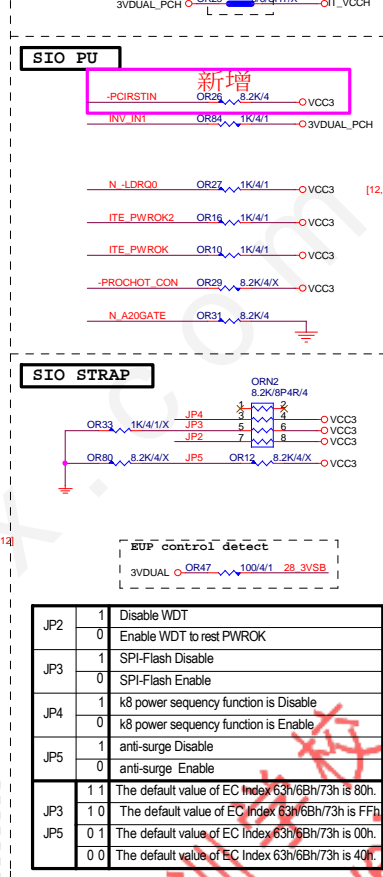






M. BIOS

* 試産先上 / PVT 移除



新增

JP5

JP3

JP5

OR51
MASK/0/4/SHT/MX
TR4 SY'S TEMP

SIO_18V

internal power pin, max 22nF cap

SIO 18V

OBC4
0.1u4/X7R/16V/K

OBC5
0.1u4/X7R/16V/K

VC03

OR7
8.2K/4/K

OR15
8.2K/4/K

MB ID2

2.5LEVEL

OBC16
22u8/X5R/6.3V/M

OBC17
1u4/X5R/6.3V/K

CLOSE SIO PIN4 2.5LEVEL

MB ID

Gigabyte Technology

ITE 8628 LPC IO

Size Custom

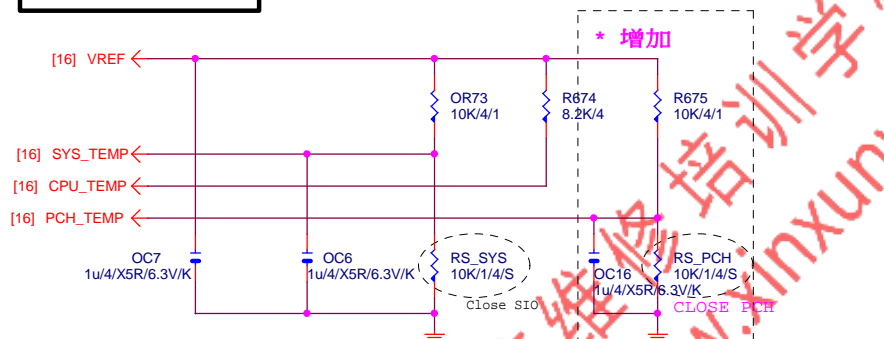
GA-B150M-D3VX-S1.0

Date: Friday, September 18, 2015

Sheet 16 of 52

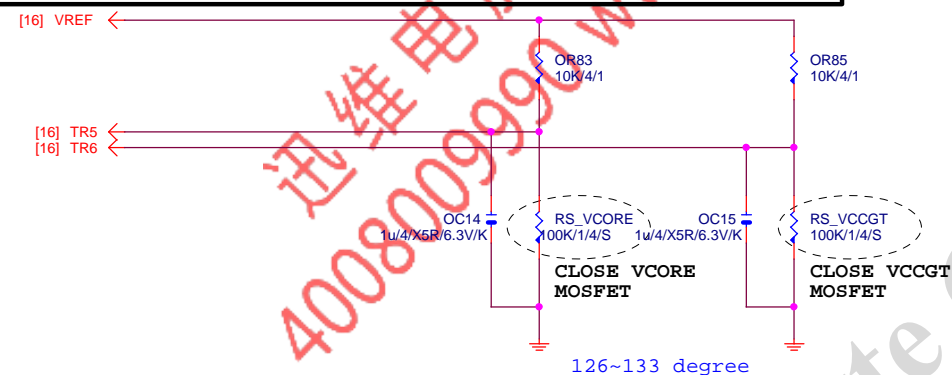
TEMP H/W MONITOR

REV 1.04



RS_VCORE ~ RS_VCCGT CLOSE CPU_VCORE & VCCGT MOSFET

-PROCHOT:有mos heartsink不用prochot function

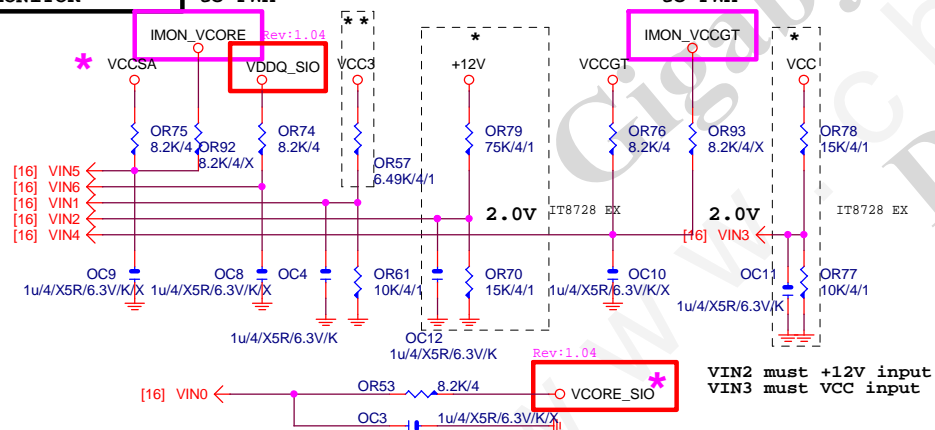


VOLTAGE-- H/W MONITOR

Connect to PWM

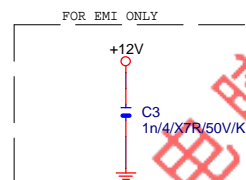
★ IT8728 BX
★★ IT8728 CX

Connect to PWM



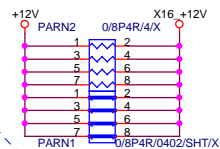
The division voltage of VIN2 & VIN3 must be around 2.9V

VIN2 must +12V input
VIN3 must VCC input



Gigabyte Technology

Title		
HWM,KB/MS, FAN CTRL		
Size	Document Number	Rev
Custom	GA-B150M-D3VX-SI	1.0
Date:	Friday, September 18, 2015	Sheet 17 of 52

* +12 protect
short-wire test

PA_EXP_RXP0_15] >> PA_EXP_RXP[0..15] [4]
PA_EXP_RXN0_15] >> PA_EXP_RXN[0..15] [4]
PA_EXP_TXP0_15] >> PA_EXP_TXP[0..15] [4]
PA_EXP_TXN0_15] >> PA_EXP_TXN[0..15] [4]

PA_EXP_TXP0	PAC5	0.22u/4/X5R/6.3V/K	PA_EXP_TXP0_C
PA_EXP_TXN0	PAC4	0.22u/4/X5R/6.3V/K	PA_EXP_TXN0_C
PA_EXP_TXP1	PAC6	0.22u/4/X5R/6.3V/K	PA_EXP_TXP1_C
PA_EXP_TXN1	PAC7	0.22u/4/X5R/6.3V/K	PA_EXP_TXN1_C
PA_EXP_TXP2	PAC8	0.22u/4/X5R/6.3V/K	PA_EXP_TXP2_C
PA_EXP_TXN2	PAC9	0.22u/4/X5R/6.3V/K	PA_EXP_TXN2_C
PA_EXP_TXP3	PAC10	0.22u/4/X5R/6.3V/K	PA_EXP_TXP3_C
PA_EXP_TXN3	PAC11	0.22u/4/X5R/6.3V/K	PA_EXP_TXN3_C
PA_EXP_TXP4	PAC12	0.22u/4/X5R/6.3V/K	PA_EXP_TXP4_C
PA_EXP_TXN4	PAC13	0.22u/4/X5R/6.3V/K	PA_EXP_TXN4_C
PA_EXP_TXP5	PAC14	0.22u/4/X5R/6.3V/K	PA_EXP_TXP5_C
PA_EXP_TXN5	PAC15	0.22u/4/X5R/6.3V/K	PA_EXP_TXN5_C
PA_EXP_TXP6	PAC16	0.22u/4/X5R/6.3V/K	PA_EXP_TXP6_C
PA_EXP_TXN6	PAC17	0.22u/4/X5R/6.3V/K	PA_EXP_TXN6_C
PA_EXP_TXP7	PAC18	0.22u/4/X5R/6.3V/K	PA_EXP_TXP7_C
PA_EXP_TXN7	PAC19	0.22u/4/X5R/6.3V/K	PA_EXP_TXN7_C
PA_EXP_TXP8	PAC20	0.22u/4/X5R/6.3V/K	PA_EXP_TXP8_C
PA_EXP_TXN8	PAC21	0.22u/4/X5R/6.3V/K	PA_EXP_TXN8_C
PA_EXP_TXP9	PAC22	0.22u/4/X5R/6.3V/K	PA_EXP_TXP9_C
PA_EXP_TXN9	PAC23	0.22u/4/X5R/6.3V/K	PA_EXP_TXN9_C
PA_EXP_TXP10	PAC24	0.22u/4/X5R/6.3V/K	PA_EXP_TXP10_C
PA_EXP_TXN10	PAC25	0.22u/4/X5R/6.3V/K	PA_EXP_TXN10_C
PA_EXP_TXP11	PAC26	0.22u/4/X5R/6.3V/K	PA_EXP_TXP11_C
PA_EXP_TXN11	PAC27	0.22u/4/X5R/6.3V/K	PA_EXP_TXN11_C
PA_EXP_TXP12	PAC28	0.22u/4/X5R/6.3V/K	PA_EXP_TXP12_C
PA_EXP_TXN12	PAC29	0.22u/4/X5R/6.3V/K	PA_EXP_TXN12_C
PA_EXP_TXP13	PAC30	0.22u/4/X5R/6.3V/K	PA_EXP_TXP13_C
PA_EXP_TXN13	PAC31	0.22u/4/X5R/6.3V/K	PA_EXP_TXN13_C
PA_EXP_TXP14	PAC32	0.22u/4/X5R/6.3V/K	PA_EXP_TXP14_C
PA_EXP_TXN14	PAC33	0.22u/4/X5R/6.3V/K	PA_EXP_TXN14_C
PA_EXP_TXP15	PAC34	0.22u/4/X5R/6.3V/K	PA_EXP_TXP15_C
PA_EXP_TXN15	PAC35	0.22u/4/X5R/6.3V/K	PA_EXP_TXN15_C

PCIEX16:16/5/5/5/16

PCI-E REV:1.1--> 2.5GHZ

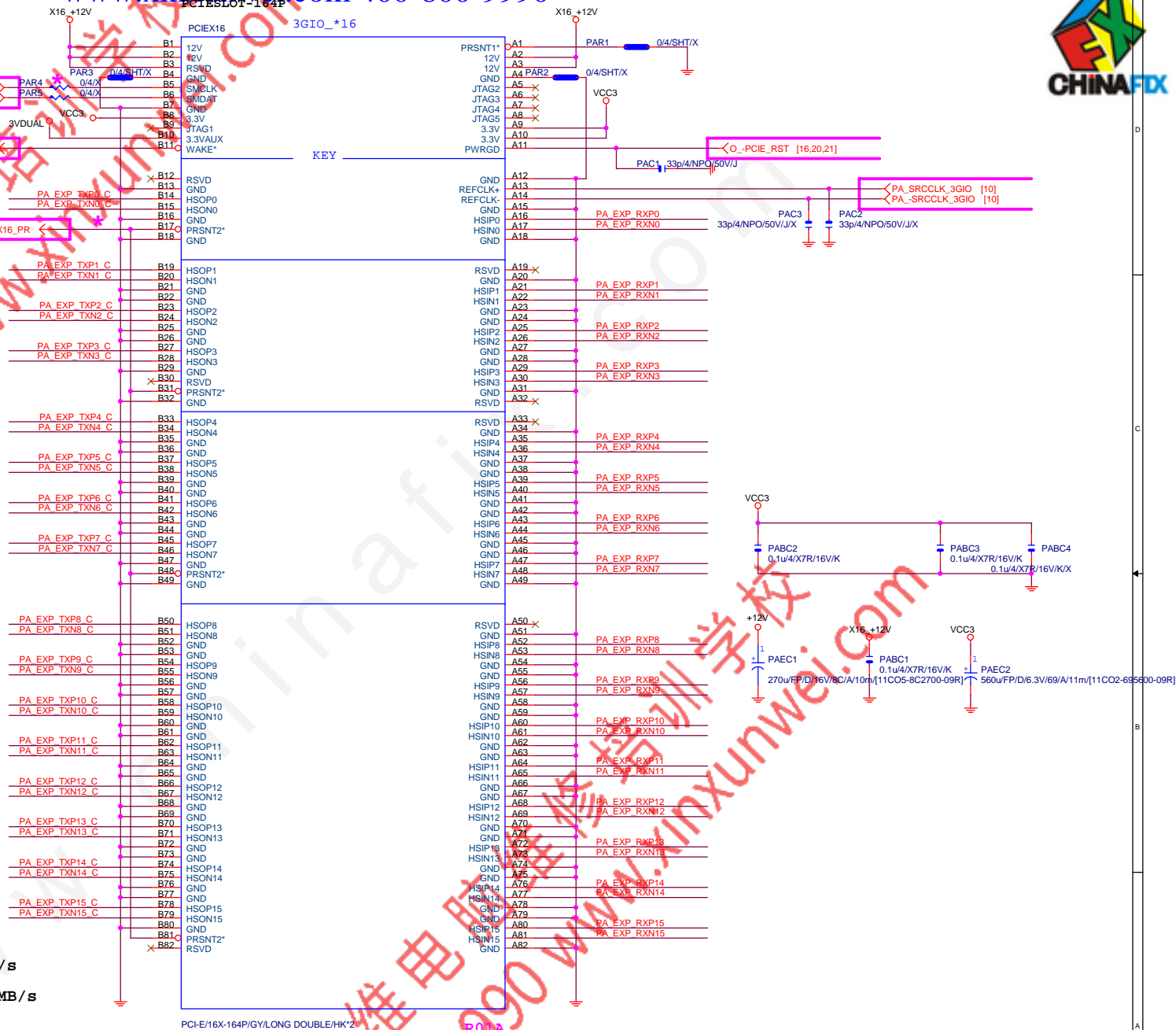
PCE-E X1(單向) BANDWIDTH=2.5GHz*(8b/10b)=2Gb/s=250MB/s

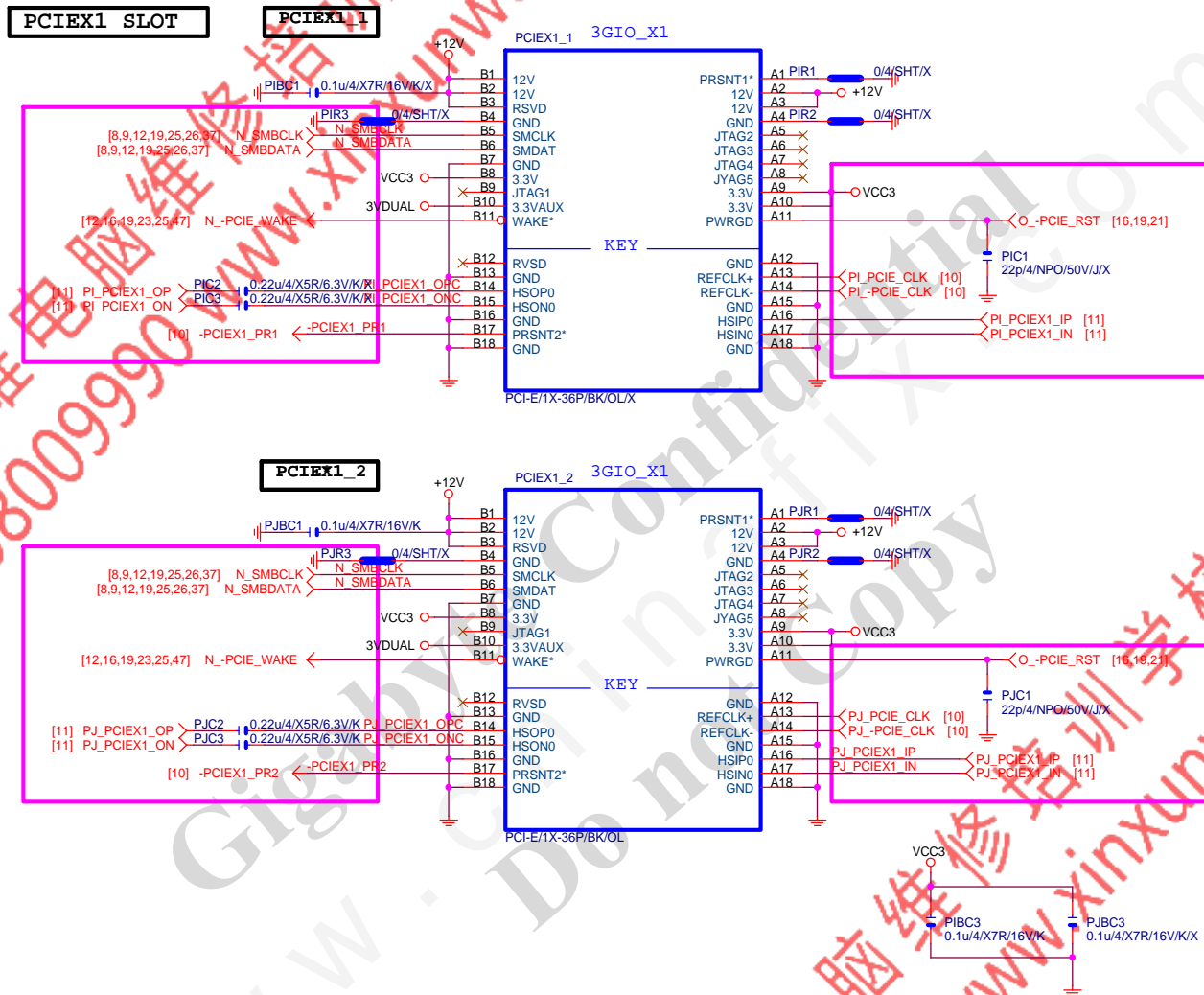
PCE-E X1(雙向) BANDWIDTH=2.5GHz*(8b/10b)X2=4Gb/s=500MB/s

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

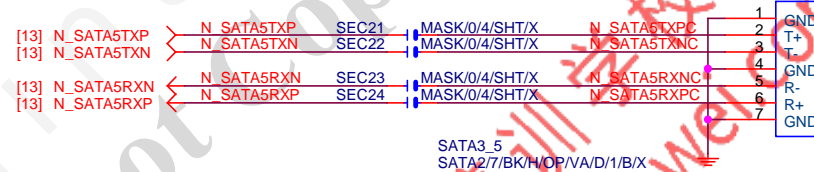
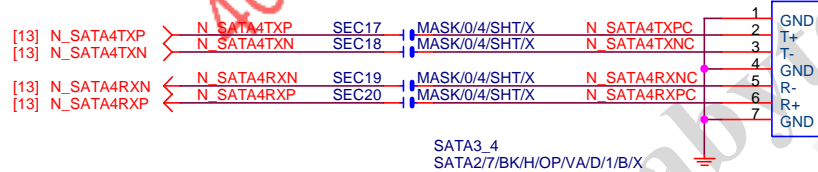
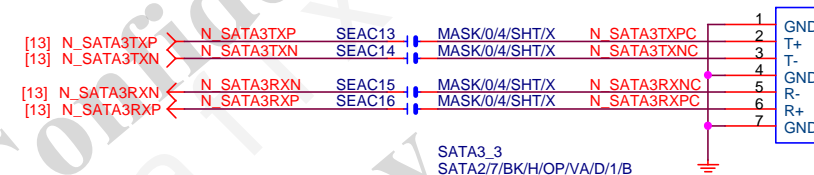
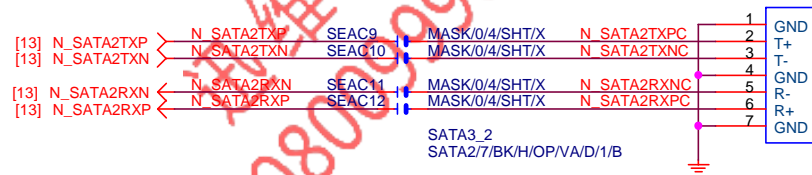
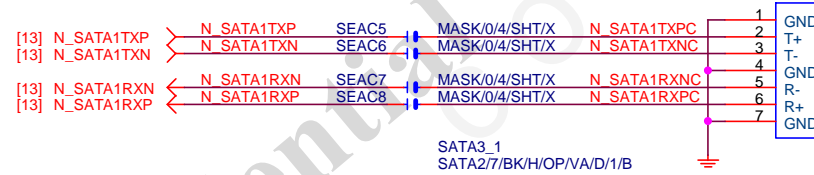
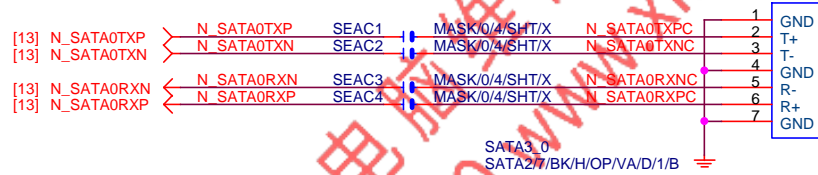
PCI-E REV:2.0--> 5GHZ



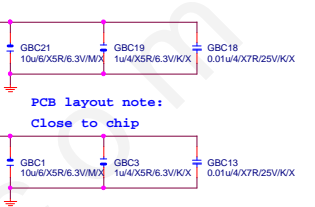


Gigabyte Technology

Title		PCIE_X1 1,2	Rev 1.0
Size	Document Number	GA-B150M-D3VX-SI	
Date:	Friday, September 18, 2015	Sheet 20 of 52	

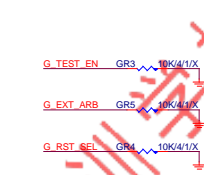
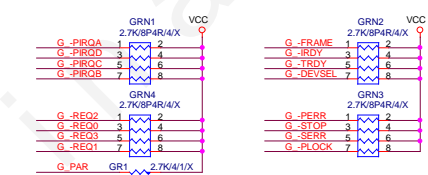
**MASK****Gigabyte Technology**

Title		
SATA EXPRESS		
Size	Document Number	Rev
Custom	GA-B150M-D3VX-SI	1.0
Date:	Friday, September 18, 2015	Sheet 1 of 52

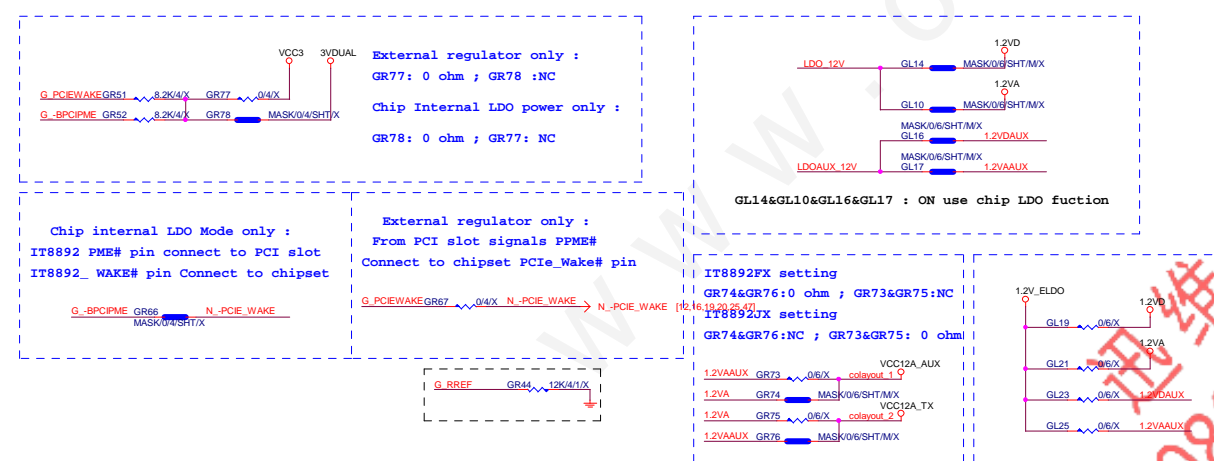


```
High: Enable PCI CLK 66MHz
Low: Disable PCI CLK 66MHz
```

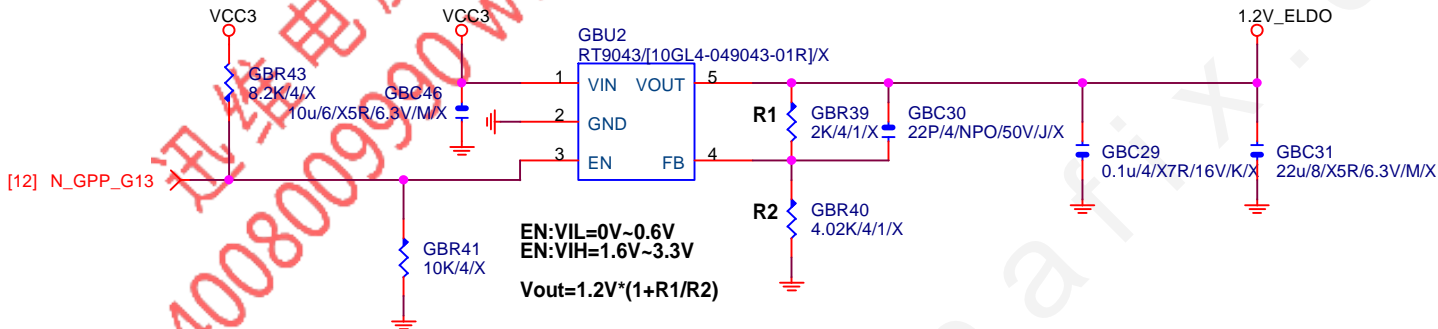
High: PCICLK INPUT form CLK Gen
Low: PCICLK OUTPUT form IT8893 chip



	Component change note
IT8892FX	GR70,GR74,GR76,GR78,GR66 : ON GR69,GR73,GR75,GR77,GR67 : NC GR44 resistor is 12k ohm GL14,GL10,GL16,GL17 : ON GL19,GL21,GL23,GL25: NC
IT8892JX	GR70,GR73,GR75,GR78,GR66 : ON GR69,GR74,GR76,GR77,GR67 : NC GR44 resistor is 18k ohm GL14,GL10,GL16,GL17 : ON GL19,GL21,GL23,GL25: NC
External LDO Power (IT8892JX)	GR69,GR73,GR75,GR77,GR67 : ON GR70,GR78,GR66 : NC GR44 resistor is 18k ohm GL19,GL21,GL23,GL25 : ON GL14,GL10,GL16,GL17 : ON

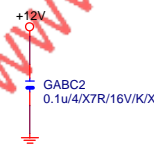



Rev 0.1

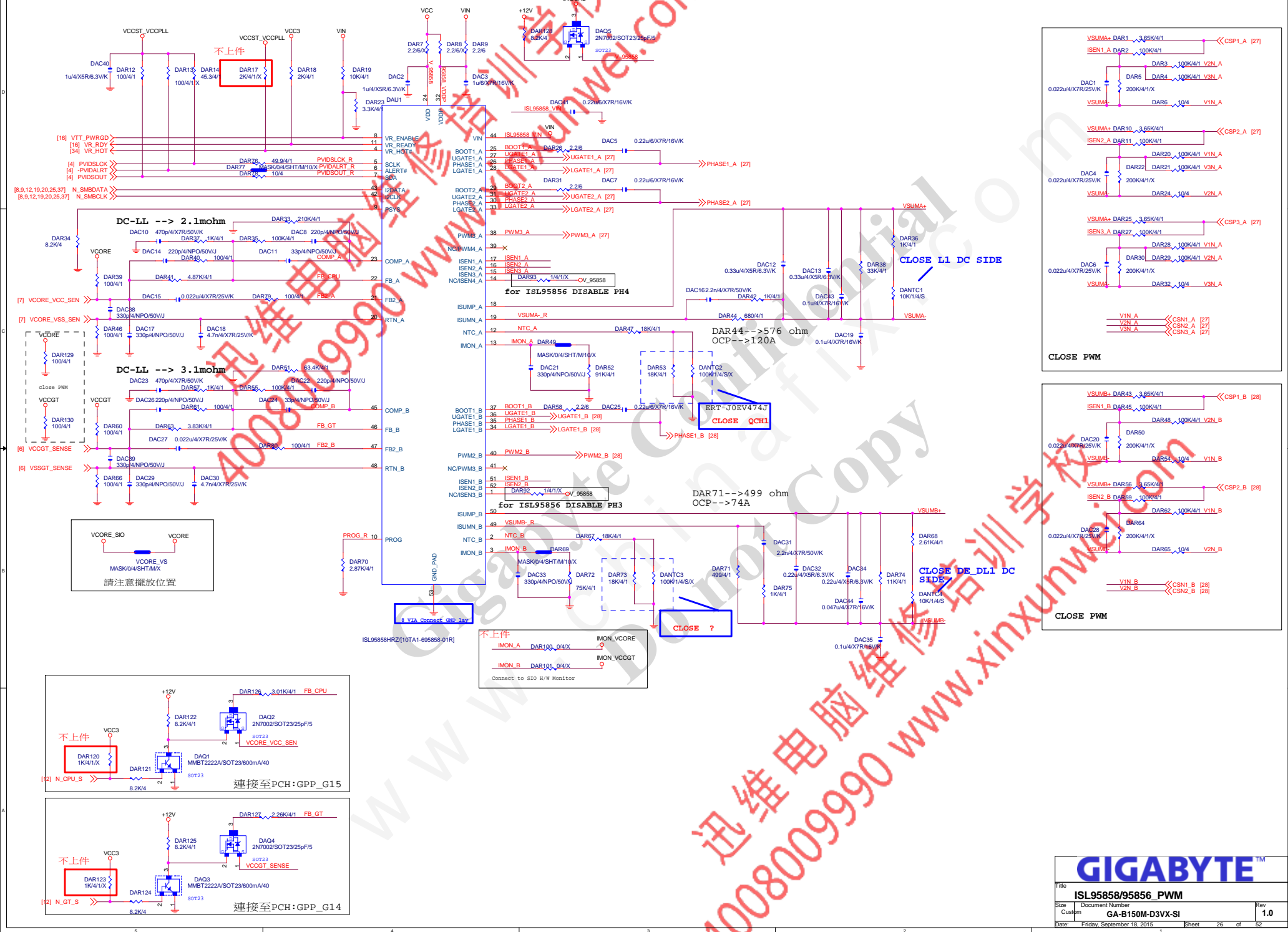


Gigabyte Technology

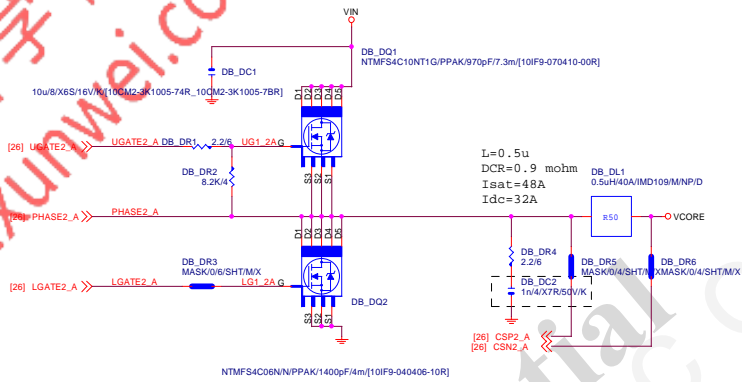
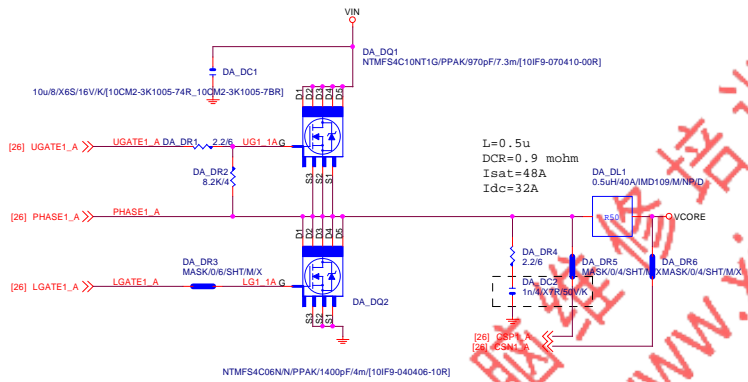
Title			ASM1085 POWER	
Size	Document Number		GA-B150M-D3VX-SI	
Custom			Rev 1.0	
Date:	Friday, September 18, 2015		Sheet 24 of 52	



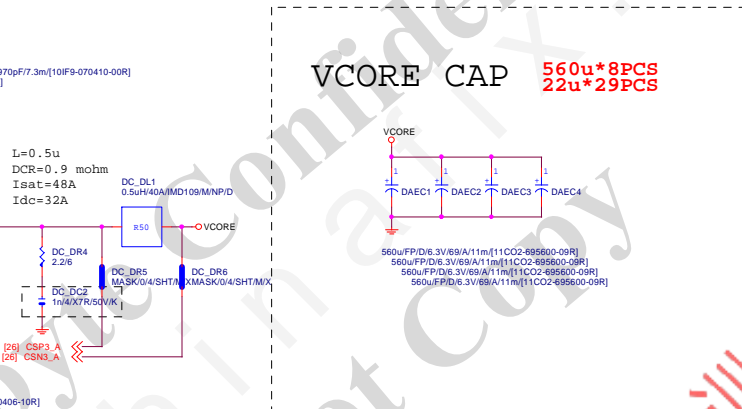
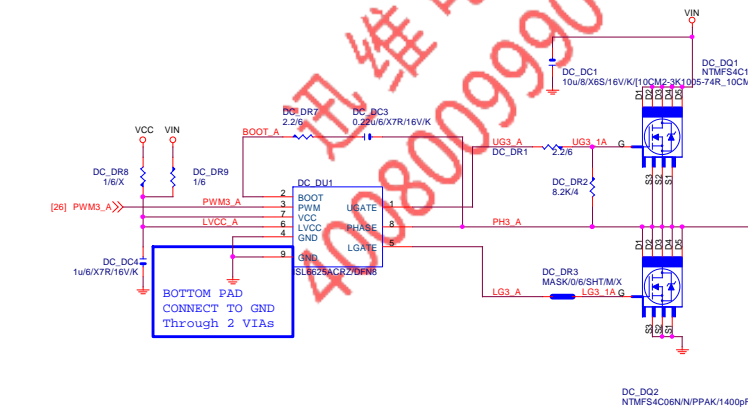
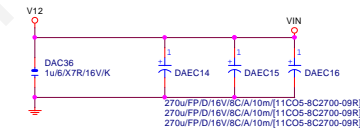
			
Title			
PCI SLOT 1			
Size	Document Number	Rev	
Custom	GA-B150M-D3VX-SI	1.0	
Date:	Friday, September 18, 2015	Sheet	25 of 52



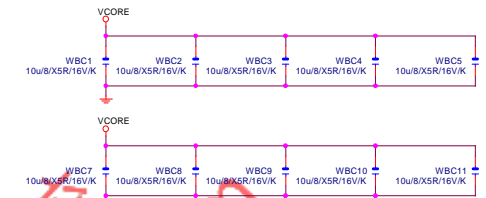
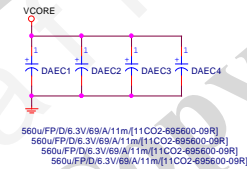
VCORE



VIN CAP 270u*3PCS

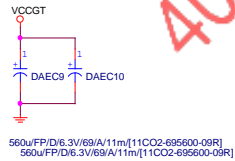
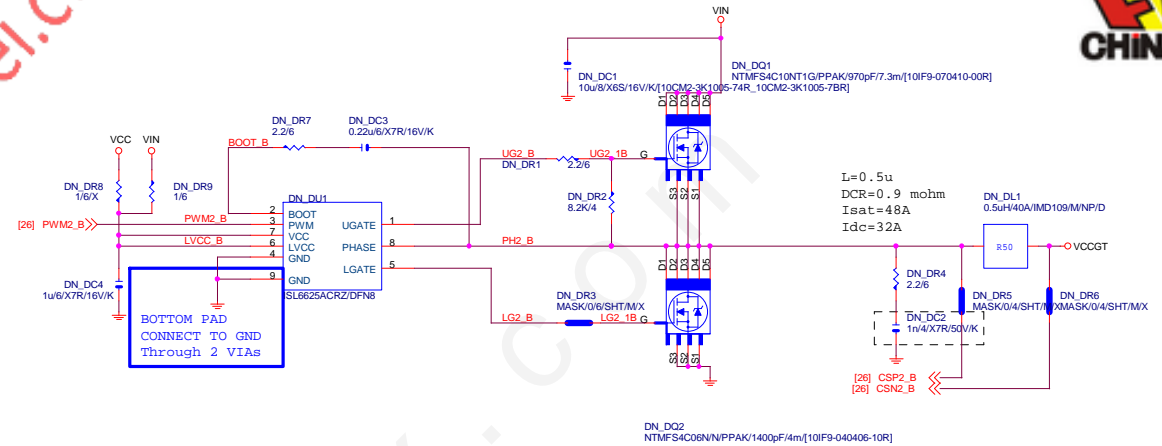



VCORE CAP 560u*8PCS
22u*29PCS

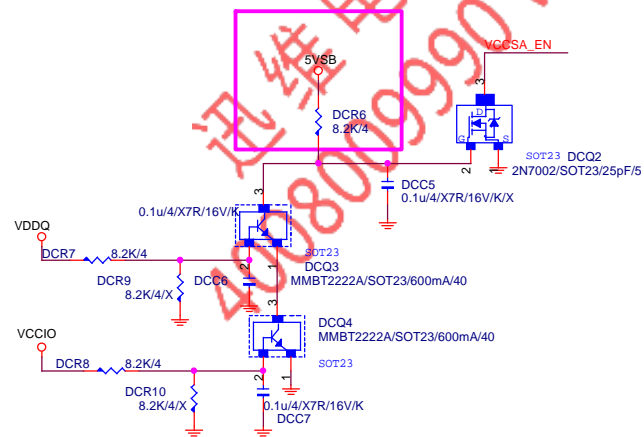
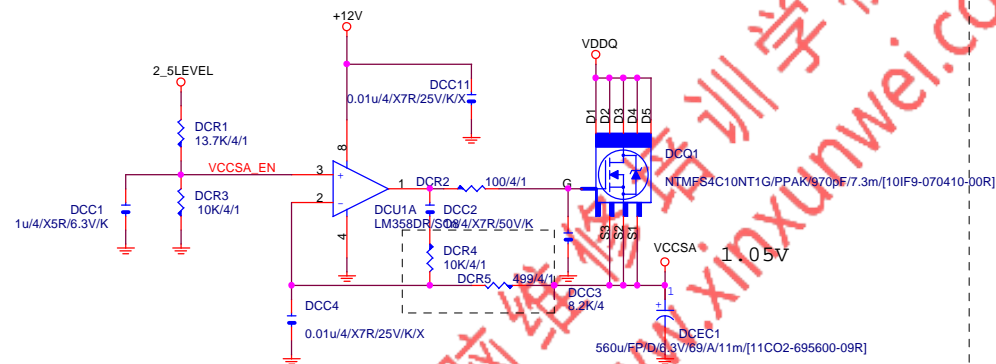


GIGABYTE™

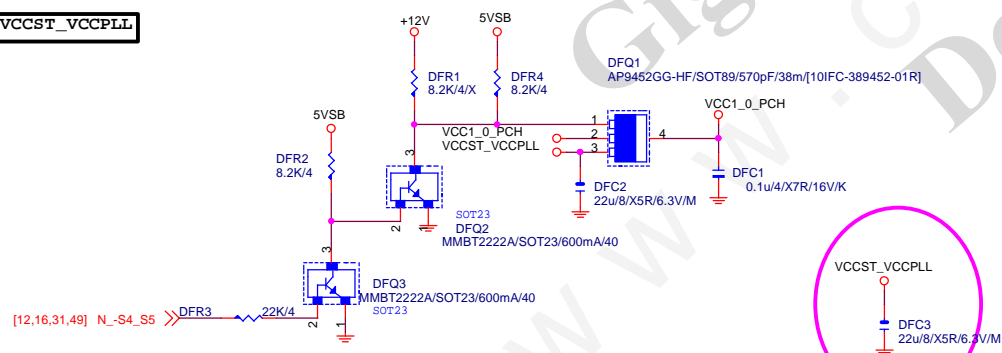
Title			ISL95858_MOS
Size	Document Number	GA-B150M-D3VX-SI	
	Custm	Rev 1.0	
Date	Friday, September 18, 2015	Sheet 27	of 52



			
Title			
ISL95858_MOS			
Size	Document Number		Rev
Custom	GA-B150M-D3VX-SI		1.0
Date:	Friday, September 18, 2015	Sheet	28 of 52



VCCST_VCCPLL



GIGABYTE™			
Title			
VCCSA_VCCIO			
Size			
Custom			
Document Number			
GA-B150M-D3VX-SI			
Rev			
1.0			
Date:			
Friday, September 18, 2015			
Sheet			
29 of 52			

CHOKES與CAP料號可變

DDRVTT CAP

* 大電容 x(

GIGABYTE™

REV:0.33

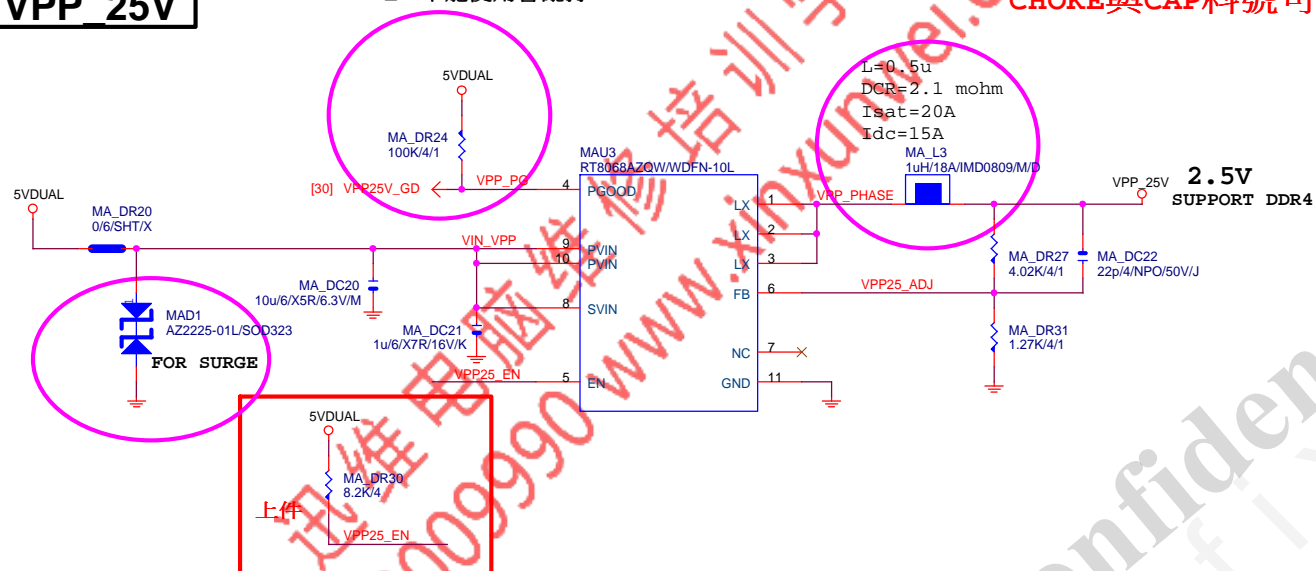
www.xinxunwei.com 400-800-9990



VPP_25V

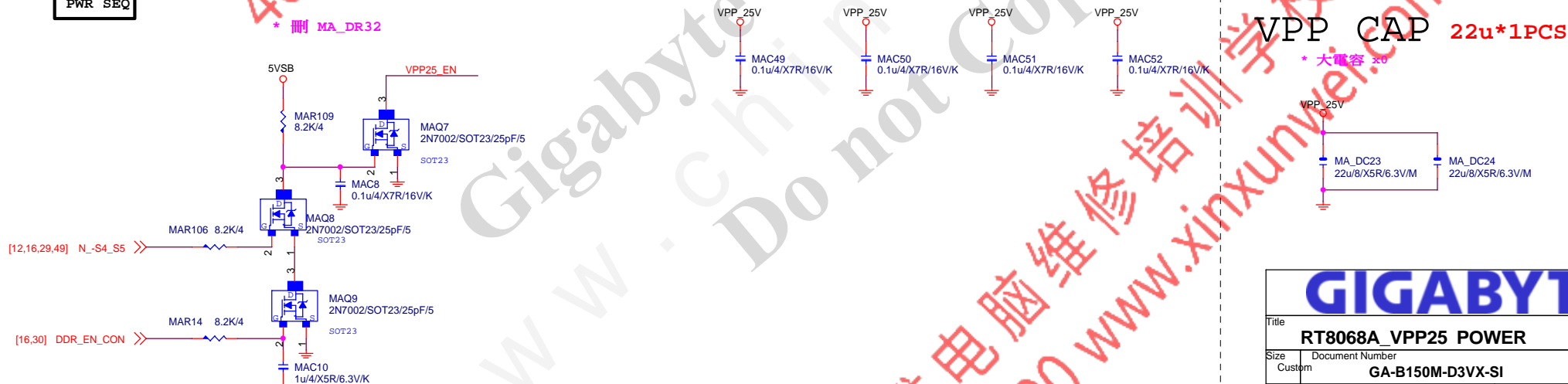
VPP25V_GD不能使用會亂打

CHOKER與CAP料號可變



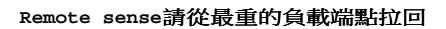
PWR_SEQ

* 删除 MA_DR32



GIGABYTE™

Title		
RT8068A_VPP25 POWER		
Size	Document Number	Rev
Custom	GA-B150M-D3VX-SI	1.0
Date:	Friday, September 18, 2015	Sheet 31 of 52


$$.704 * (1 + R_S / R_O) = V_{out}$$


RT8237_PCH POWER

Size	Document Number
------	-----------------

GA-B150M-D3VX-SI

Rev	1.0
-----	-----

Date: Friday, September 18, 2015

Sheet 32 of 52

* 5Vdual , update
from SKL 0.2B

[16] 5VAUX_SW >>

[16] 5VAUX_SW >>

3VDUAL_PCH

O_-RSMRST

不上件

[12] N_DEPSLP >>

Rise/Fall max 50us

Rise:20% - 80%

Fall :2V- 0.8V

上22u 电容

Meet the rise time

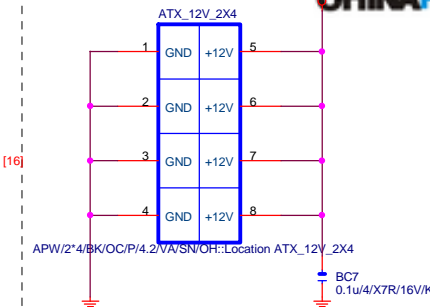
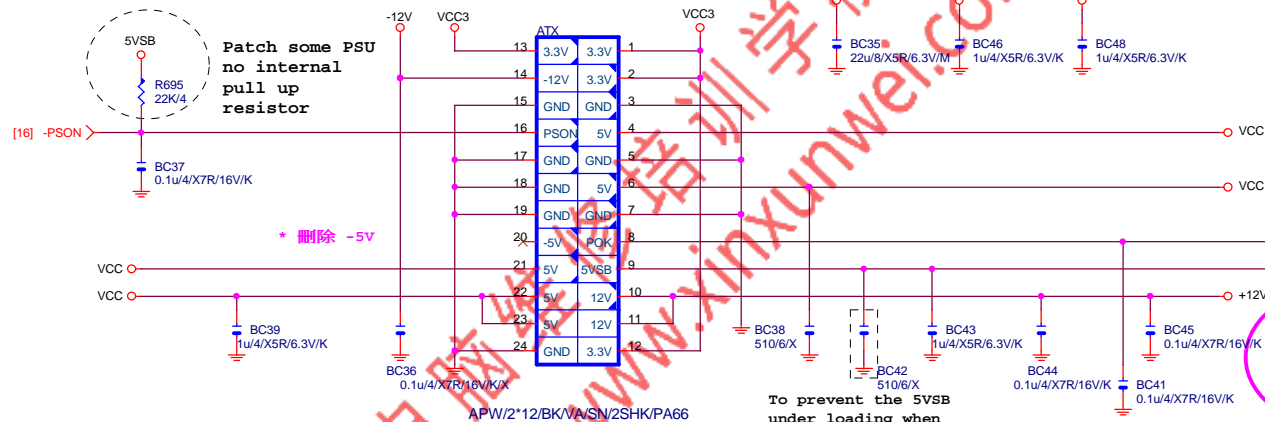
Gigabyte Technology

Title			
DISCRETE POWER			
Size	Document Number	GA-B150M-D3VX-SI	
Custom			Rev 1.0
Date:	Friday, September 18, 2015	Sheet	33 of 52

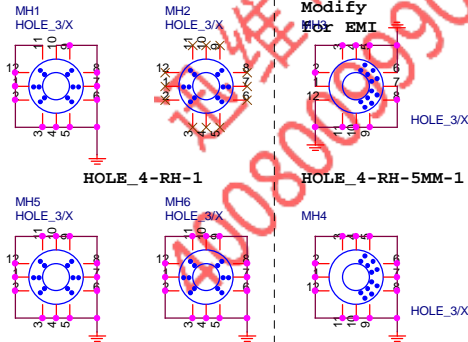
ATXX24 POWER CONNECTOR

www.xinxunwei.com 400-800-9990

ATXX4 POWER CONNECTOR

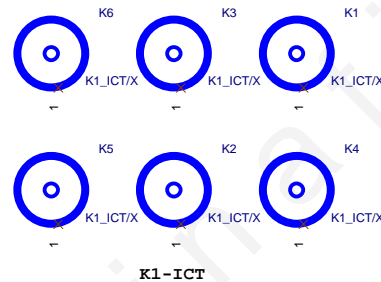


螺絲孔

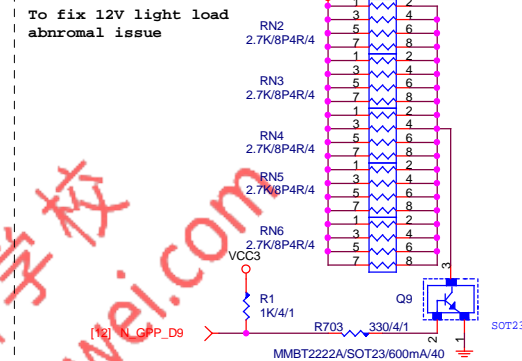


14/12/24 Modify For EMI

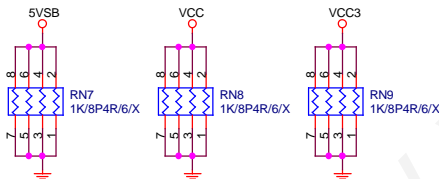
固定孔/光學點



+12V DUMMY LOAD



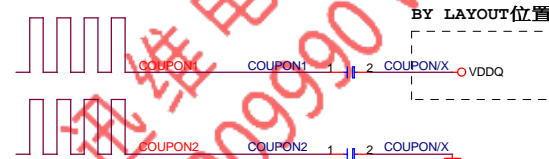
DUMMY LOAD



-PROHOT

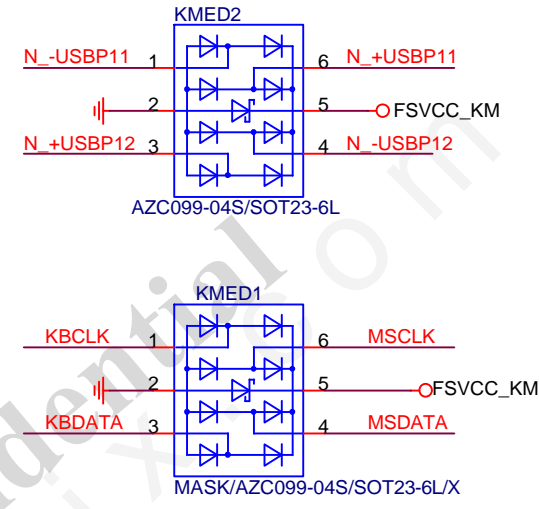
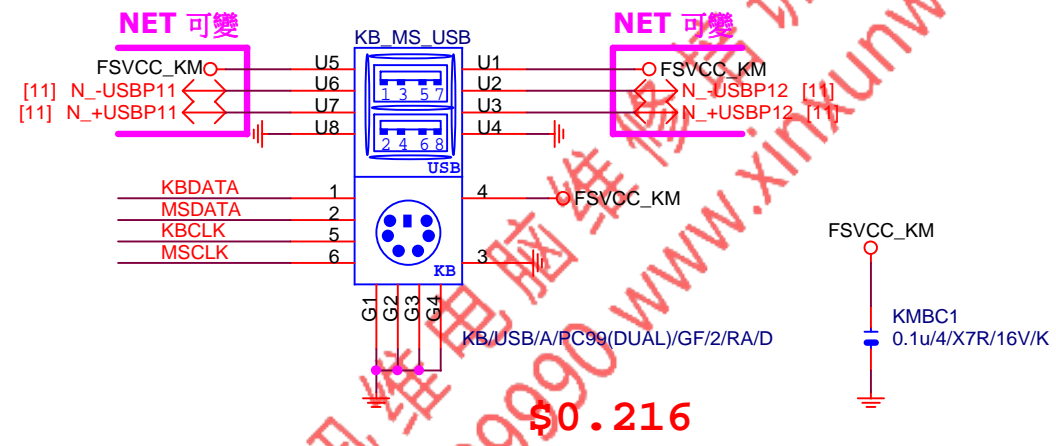


COUPON

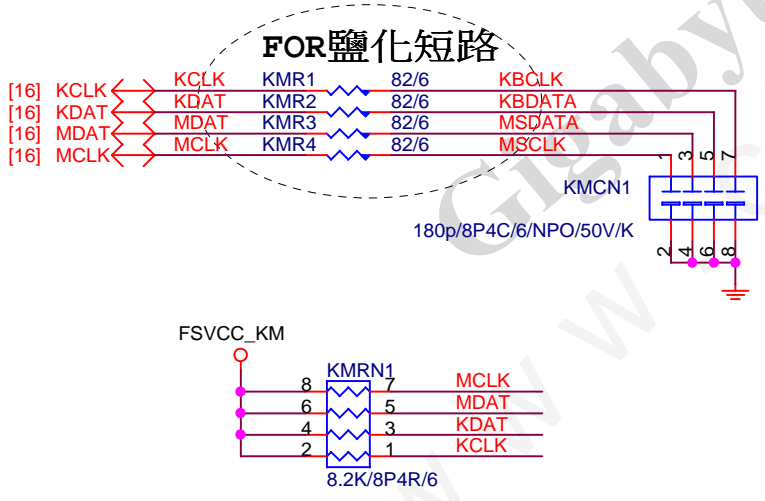


Gigabyte Technology

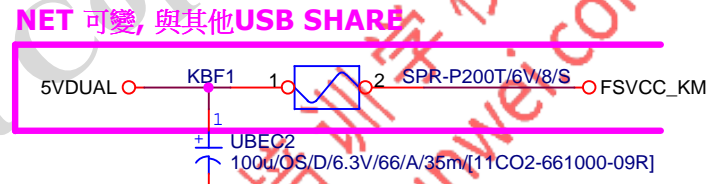
Title		
ATX POWER CONNECTOR		
Size	Document Number	Rev
Custom	GA-B150M-D3VX-SI	1.0
Date:	Friday, September 18, 2015	Sheet 34 of 52



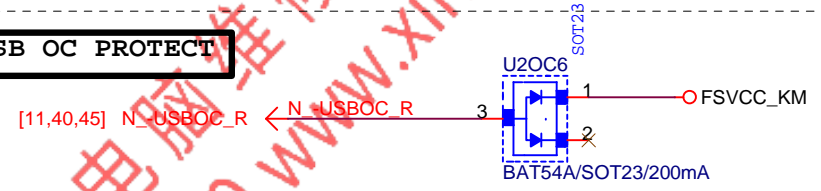
KB_MS_USB DAMPING/PU



KB_MS_USB PWR



USB OC PROTECT



Gigabyte Technology

Title

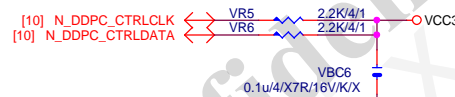
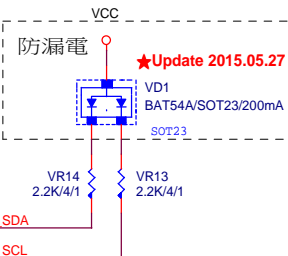
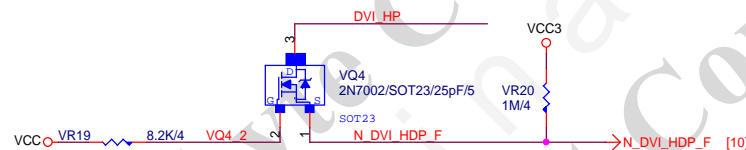
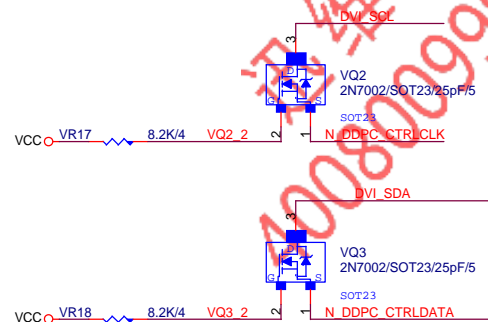
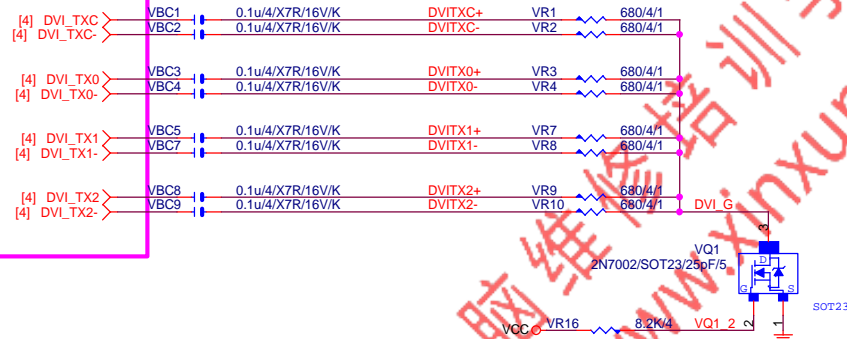
AUDIO JACK

Size A Document Number **GA-B150M-D3VX-SI** Rev 1.0

Date: Friday, September 18, 2015 Sheet 35 of 52

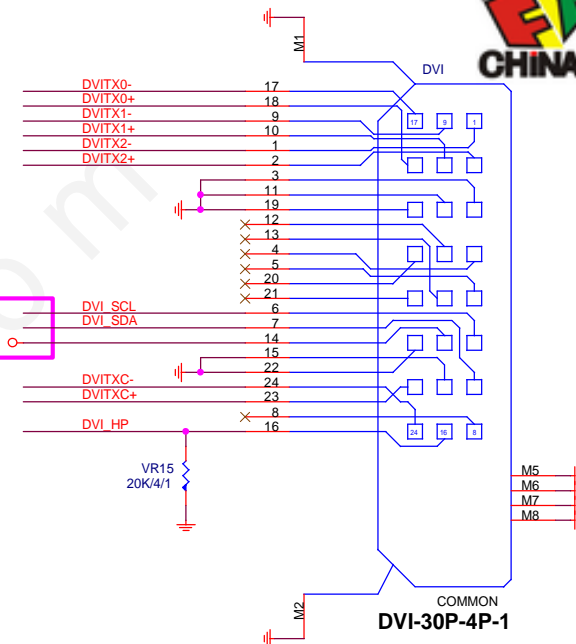


NET 可變

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

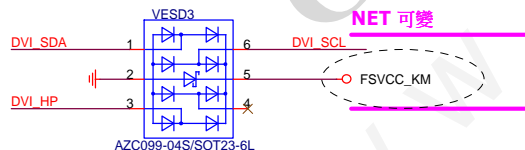
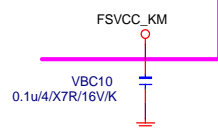
NET 可變

* FSVCC_KM



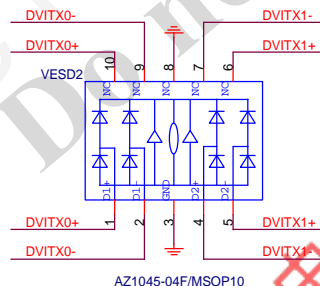
ESD

NET 可變



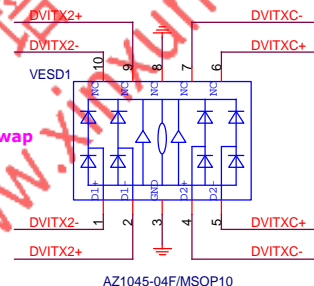
Close to connector

NET 可變



Close to connector

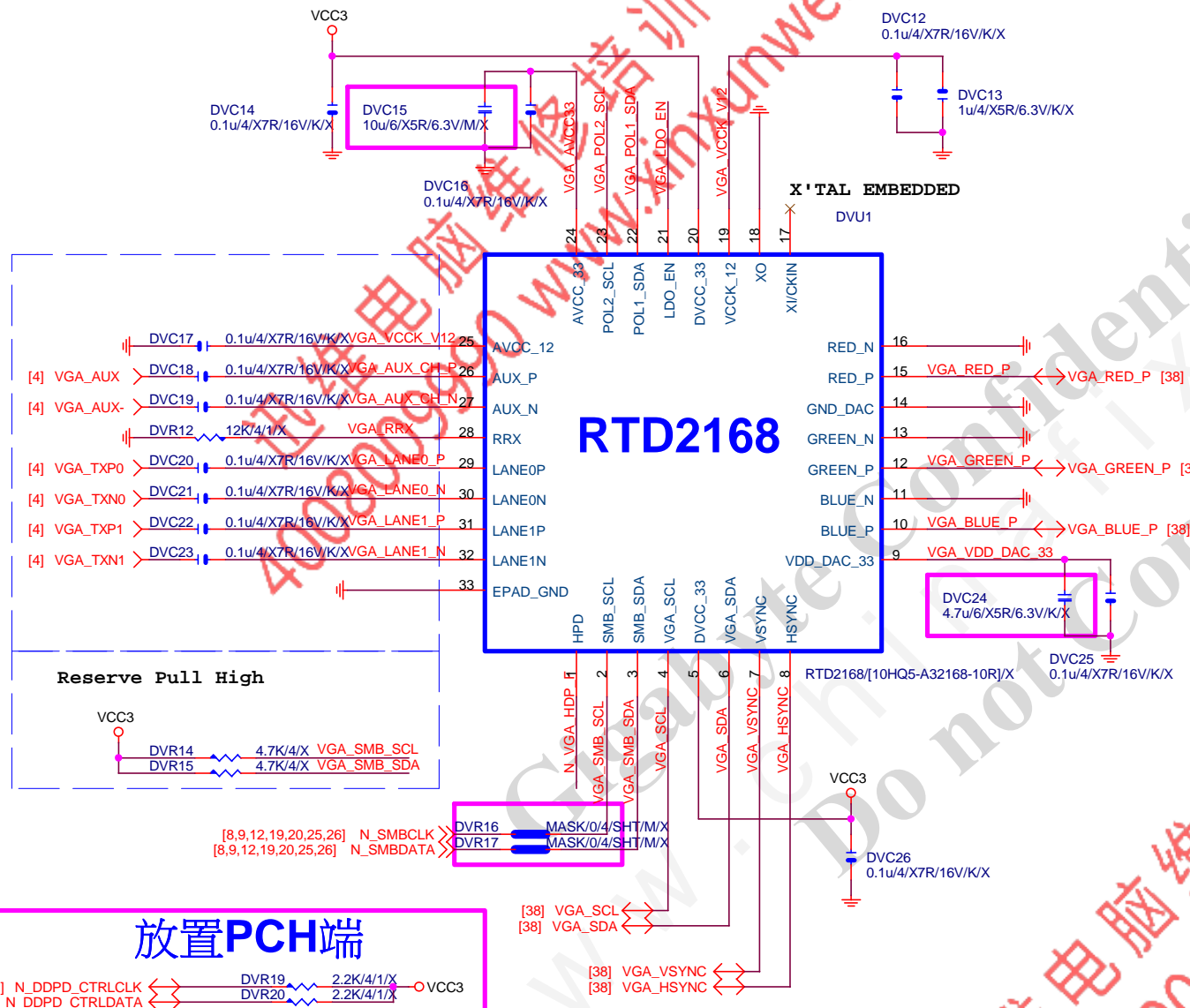
* swap



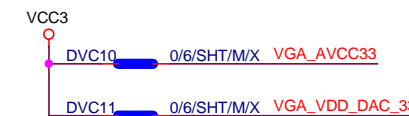
Close to connector

Gigabyte Technology

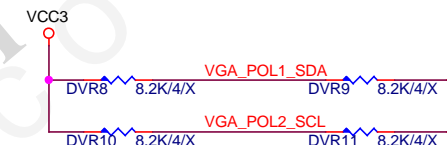
Title		FP,F_USB,USB PWR,BZ	
Size		GA-B150M-D3VX-S1.0	
Document Number		Rev 1.0	
Date:		Friday, September 18, 2015	
Sheet		36 of 52	



POWER

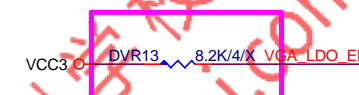


Power on latch



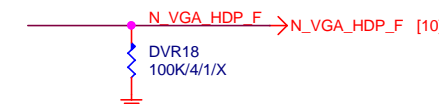
		POL1_SDA(PIN22)	
		0	1
POL2_SCL (PIN23)	0	X	EP MODE
	1	ROM ONLY MODE	EEPROM MODE

Embedded LDC



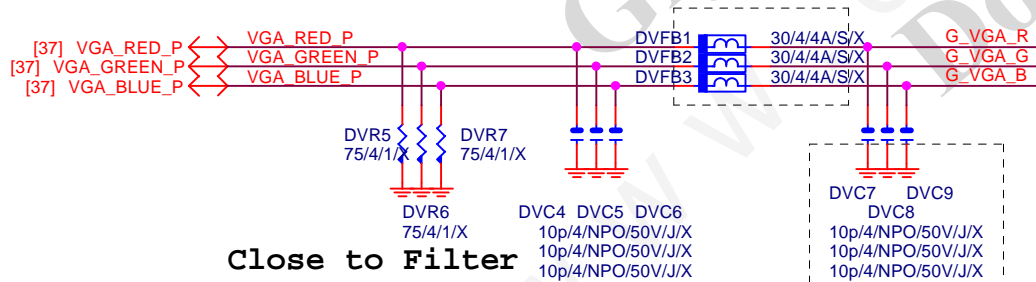
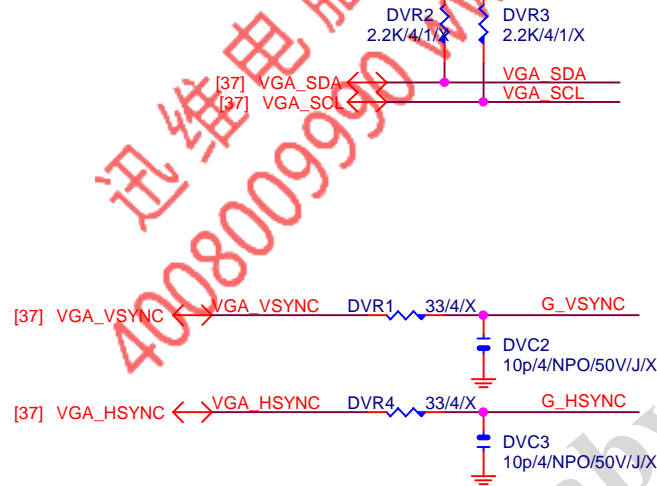
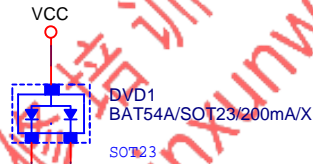
LDO_EN(PIN21)	
0	1
VCCCK_V12 from External 1.2V	VCCCK_V12 from Embedded LDO

DP HPD



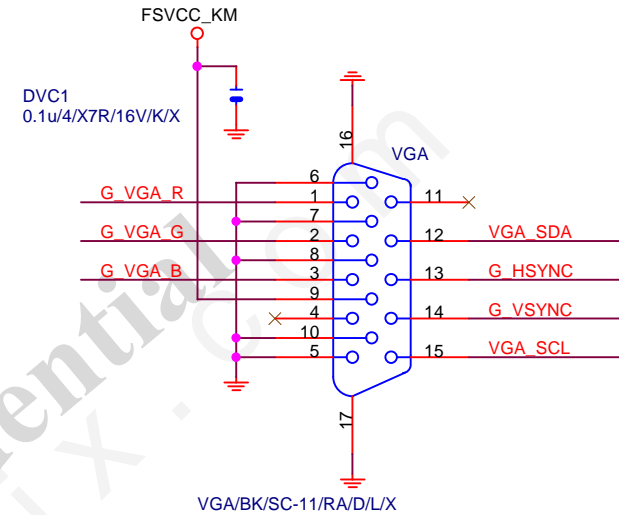
Gigabyte Technology
DP-VGA RTD2168

Size Custom	Document Number GA-B150M-D3VX-SI	Rev 1.
Date:	Friday, September 18, 2015	Sheet 37 of 52

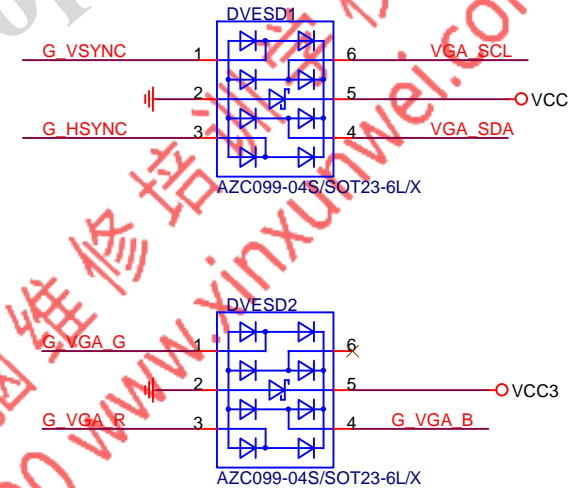


Close to Filter

FOR EMI



VGA ESD



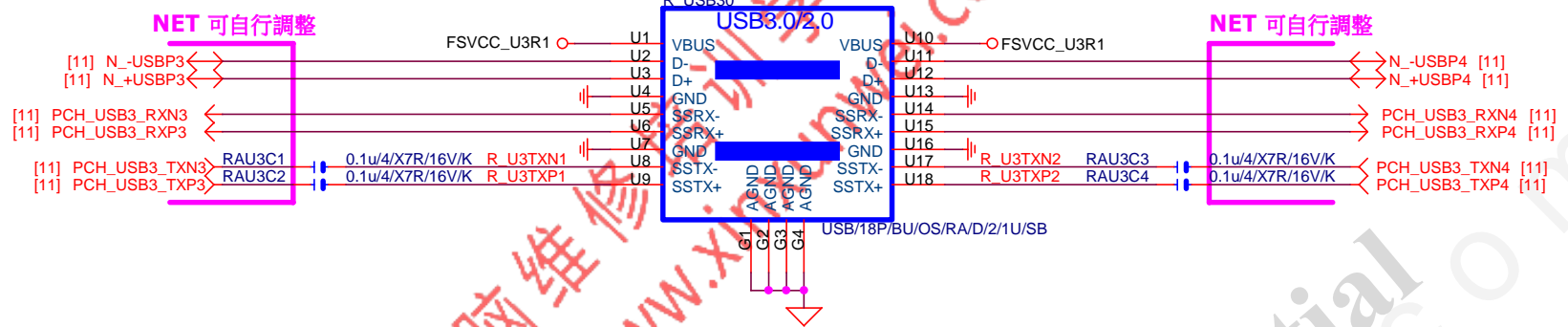
Gigabyte Technology

DP-VGA RTD2168

Size	Document Number	GA-B150M-D3VX-SI	Rev
Custom			1.0
Date:	Friday, September 18, 2015	Sheet 38 of 52	

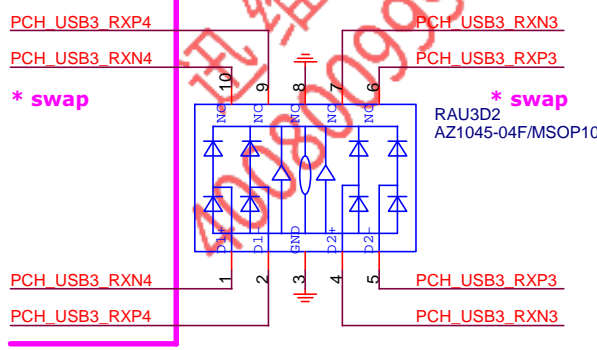


ESD 可自行SWAP PIN, 端 NET 名稱 不可

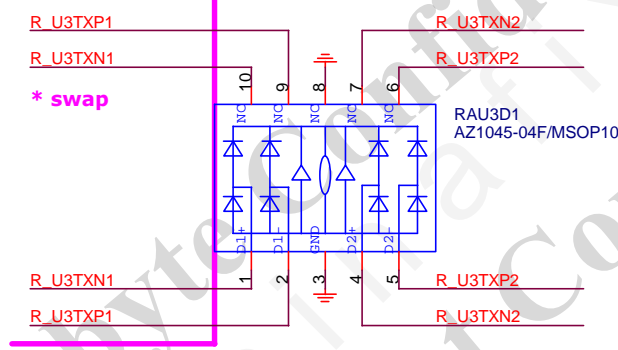


ESD

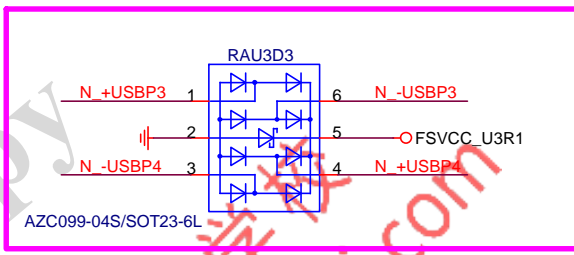
NET 可自行調整



NET 可自行調整

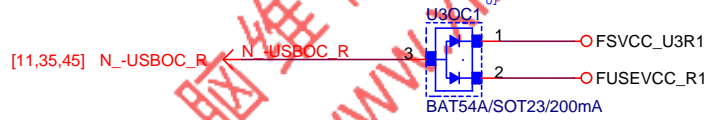
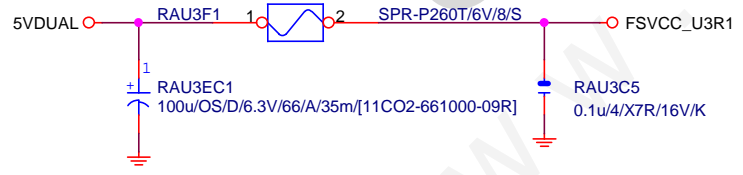


NET 可自行調整

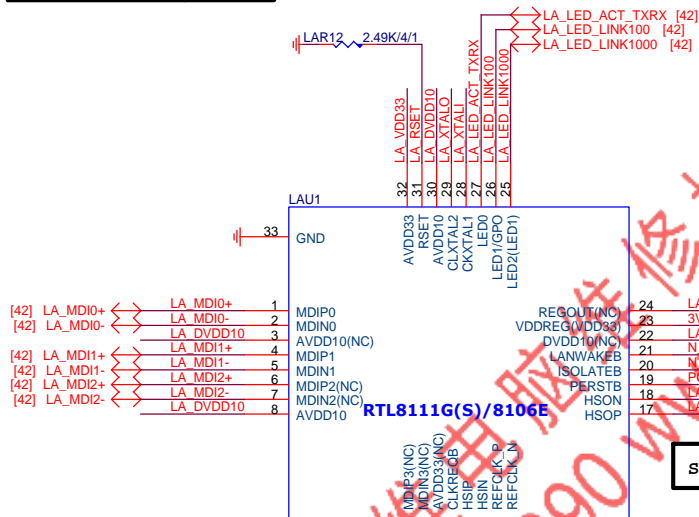


FUSE

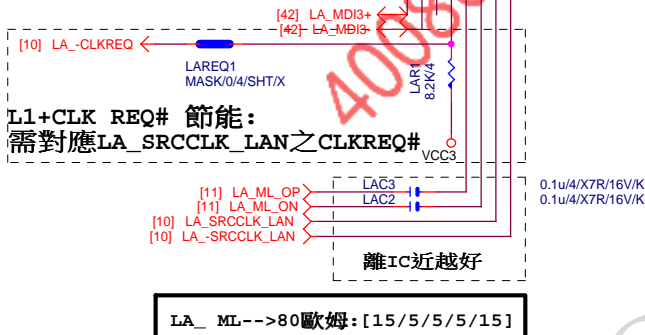
FUSE 2 Port 1 Fuse 2.6A



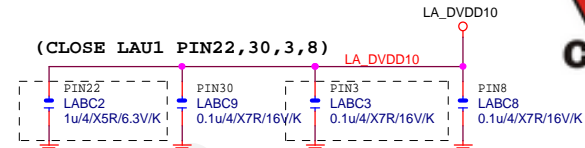
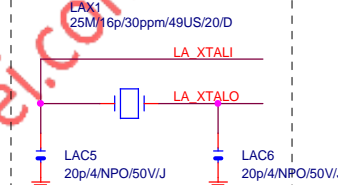
Gigabyte Technology			
Title			
R_USB30,F_USB30, USB_OC			
Size	Document Number		
Custom	GA-B150M-D3VX-S1.0		
Date:	Friday, September 18, 2015	Sheet	40 of 52



SRCCLK-->50歐姆:[18/4/10/4/18]



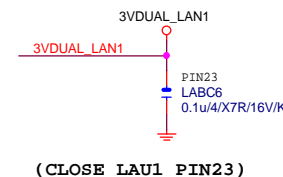
LA_ML-->80歐姆:[15/5/5/5/15]



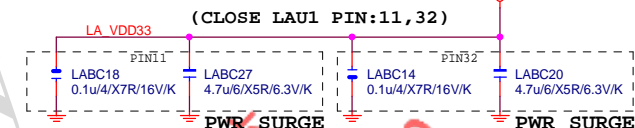
LABC2:1U CLOSE PIN22[REALTEK REQ]

LAN POWER

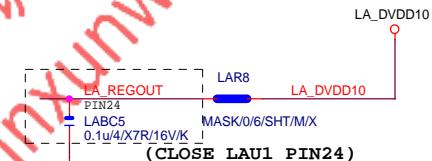
note: lan power連接及電流



LAN POWER

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

LAN POWER

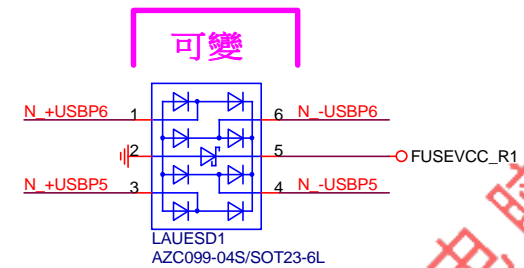


Gigabyte Technology

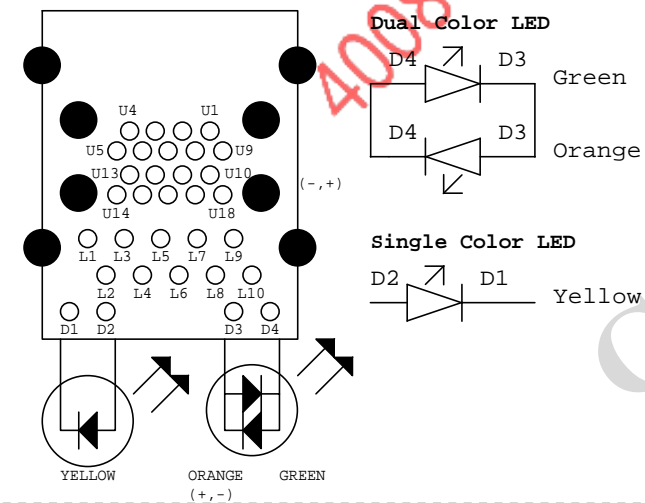
Title			
Realtek RTL8111GUS			
Size	Document Number	Rev	
Custom	GA-B150M-D3VX-SI	1.0	
Date:	Friday, September 18, 2015	Sheet	41 of 52

USB_LAN CONNECTOR R1.06

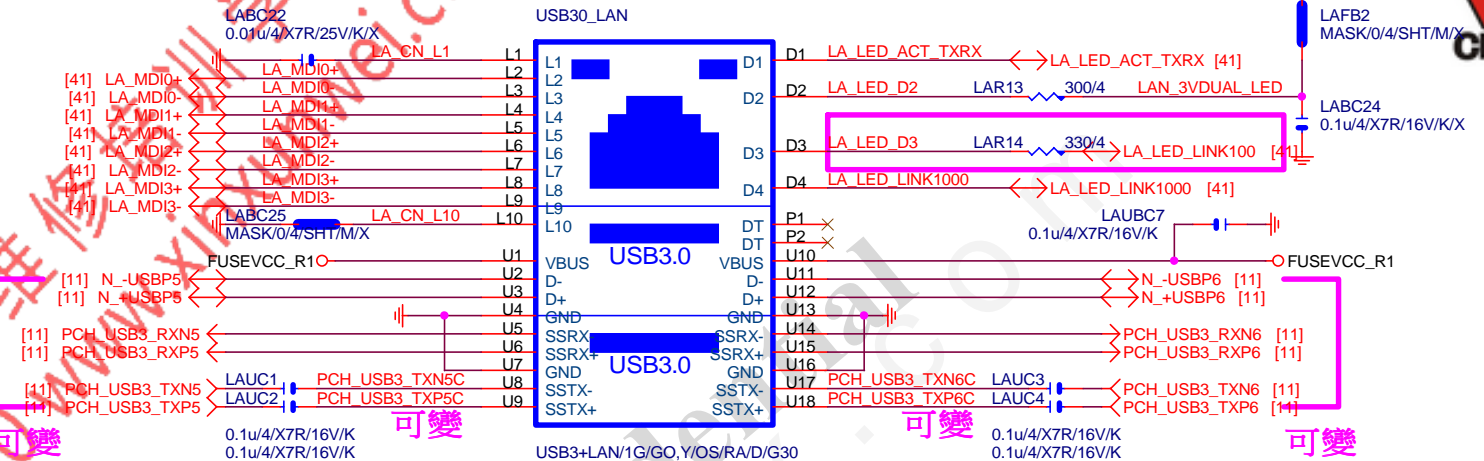
RMA ESD PROTECT note:可變更USB NAME



USB30 LAN LAYOUT示意圖

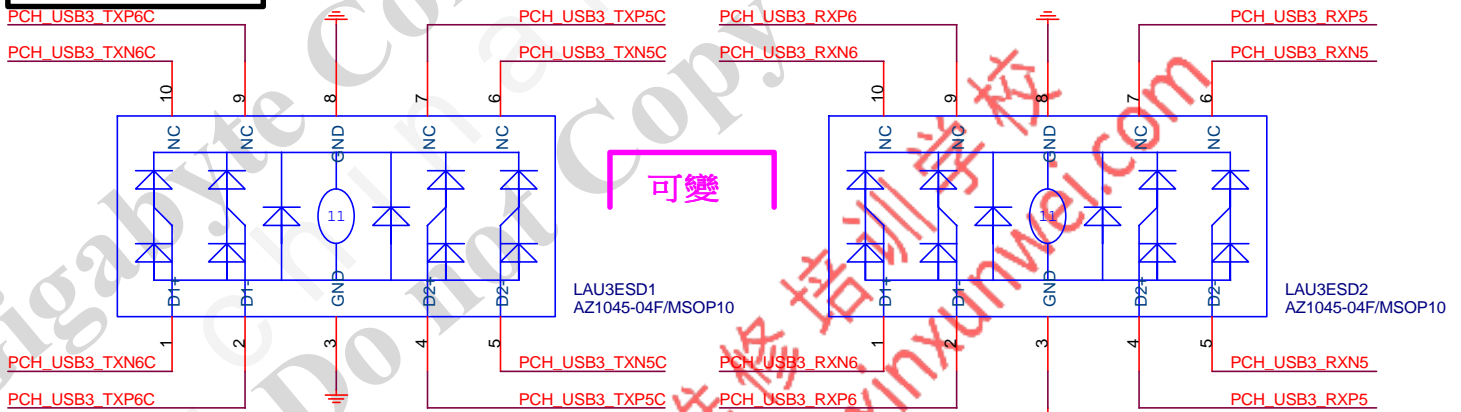


USB_LAN CONNECTOR [RTL8111G]

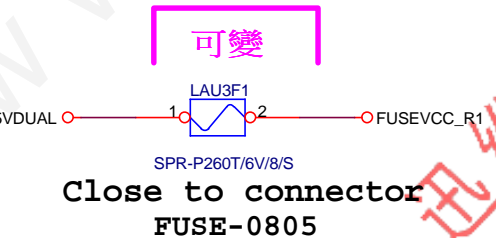


LA_MDI-->100歐姆:[20/4/8/4/20]

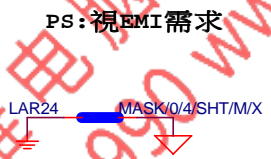
RMA ESD PROTECT note:可變更USB NAME



USB POWER note:可變更FUSE



EMI SHORT PAD PS:視EMI需求

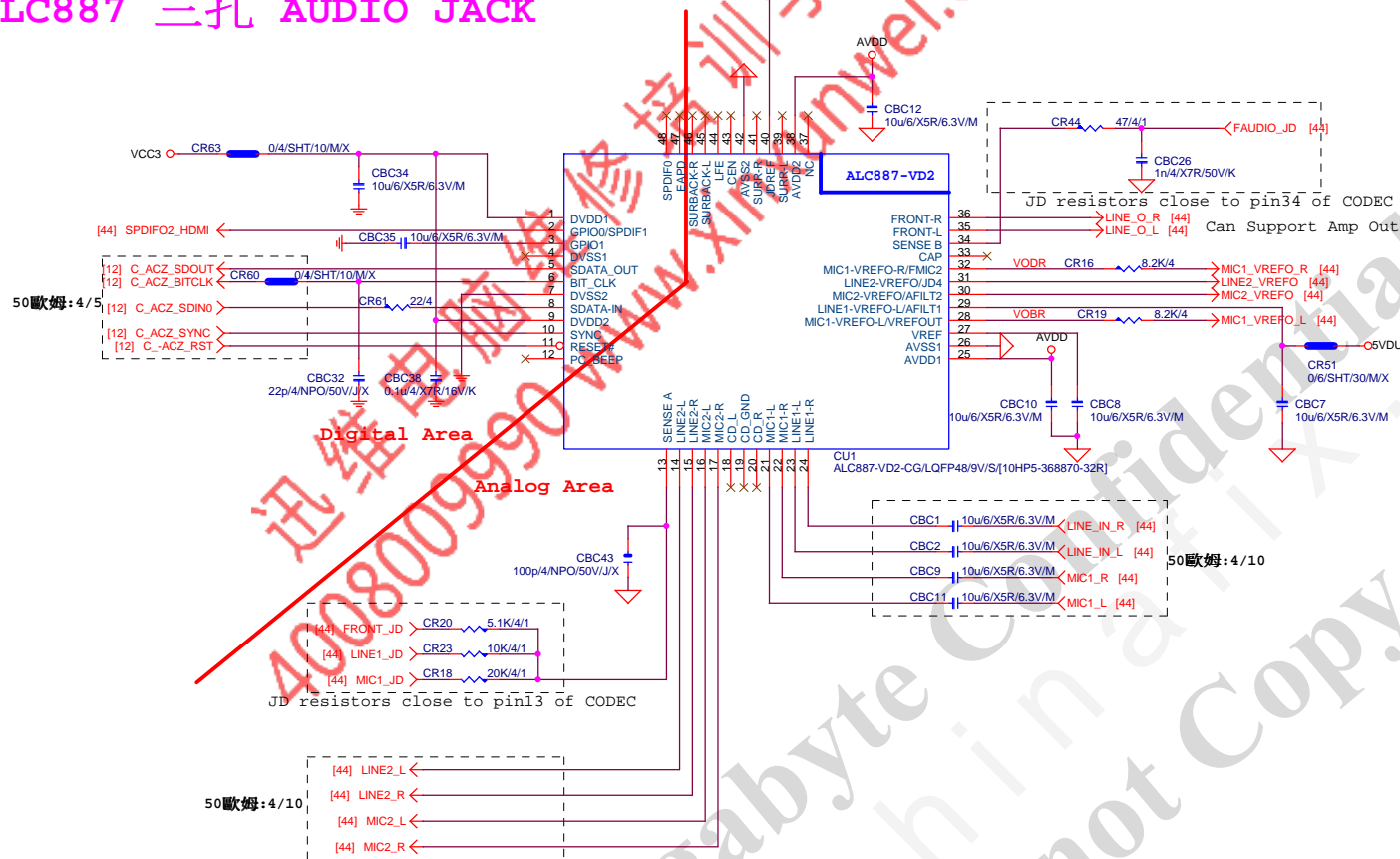


LAN POWER note:lan power連接及電流



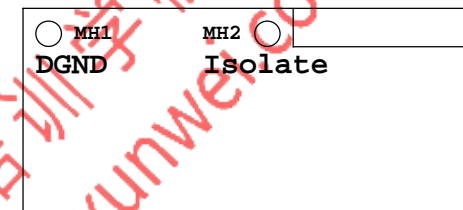
Gigabyte Technology			
LAN CONNECTOR-RTL8111G			
Title	Document Number	Rev	1.0
Size	Custom	GA-B150M-D3VX-SI	
Date:	Friday, September 18, 2015	Sheet	42 of 52

ALC887 三孔 AUDIO JACK

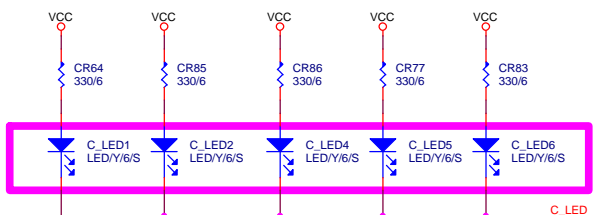


LAYOUT注意:螺絲孔下GND方式

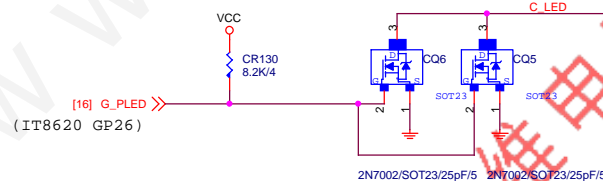
1. MH1空間夠,下DGND
空間不夠,改為Isolate
2. MH2一律改為Isolate



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



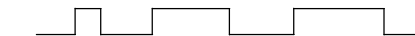
GREEN (綠色)



*LAYOUT與否,依照各Model spec

LAYOUT注意:要加

GND切割線



音效區域印刷



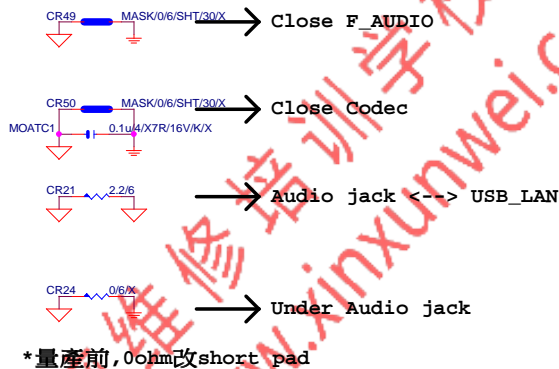
BOM OPTION : 1. Chemicon 音效電容
2. 金屬外罩 Reserve (上件與否, 依照各Model spec)
3. LED Reserve (上件與否和LED顏色, 依照各Model spec)

Gigabyte Technology

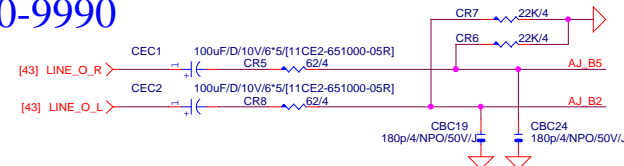
Title			
HD AUDIO ALC887			
Size	Document Number	Rev	
Custom	GA-B150M-D3VX-SI	1.0	
Date:	Friday, September 18, 2015	Sheet	43 of 52

Rev 0.5

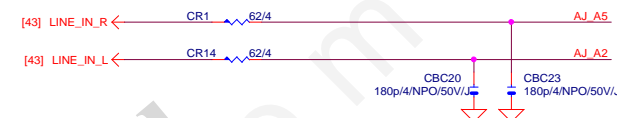
www.xinxunwei.com 400-800-9990



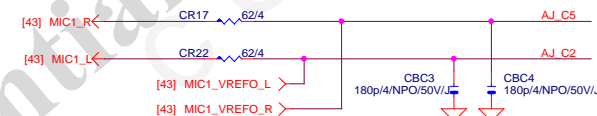
LINE-OUT



LINE-IN



MIC-IN

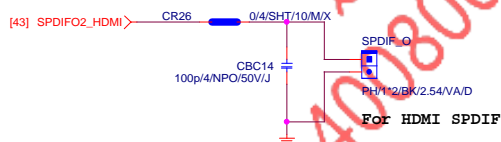


SURROUND

CEN/LFE

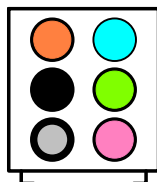
SURRBACK

SPDIF_OUT

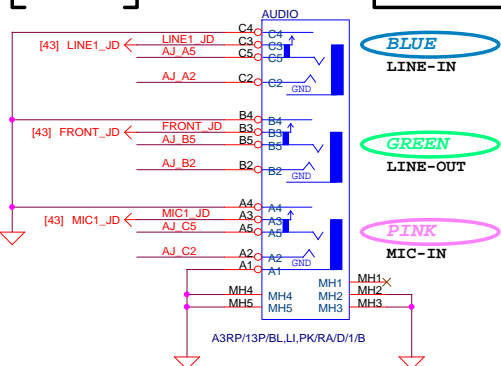


SPDIF_IN

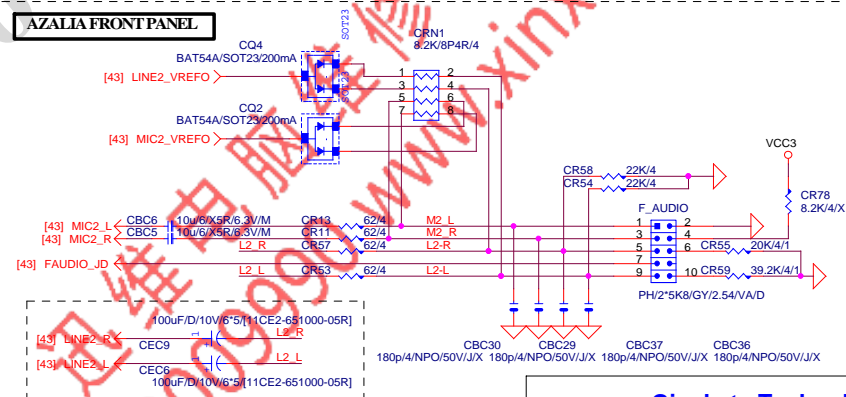
AZALIA JACK



AZALIA JACK



AZALIA FRONT PANEL



Gigabyte Technology

AUDIO JACK

Title	Document Number	GA-B150M-D3VX-SI	Rev	1.0
Size	Custom			
Date:	Friday, September 18, 2015	Sheet	44	of 52

Rev: 0.53

Front USB3.0

F_USB30

REV=1

FSVCC_U3F1

VBUS

ID

SSRX1-

SSRX1+

SSRX2-

SSRX2+

D1-

D1+

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

GND

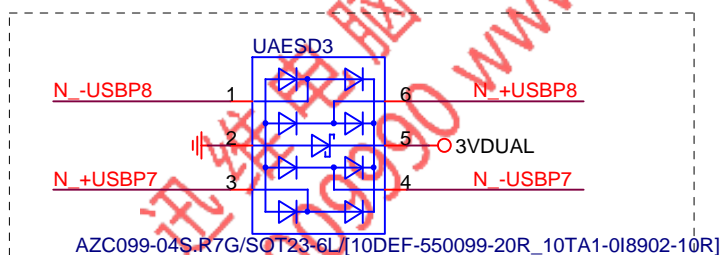
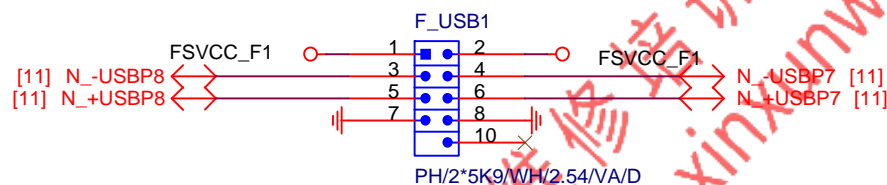
GND

GND

GND

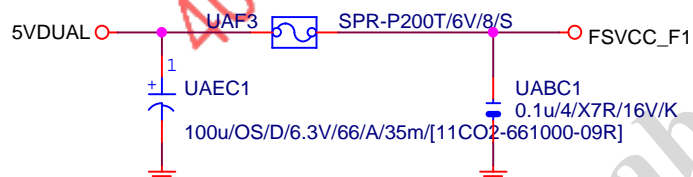
GND

NET 可變

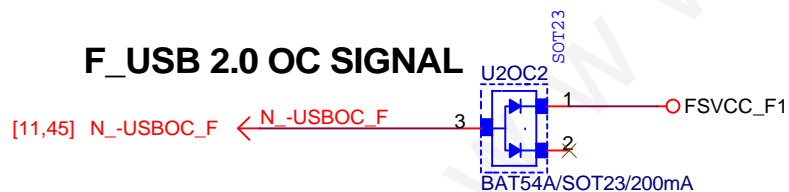


Close to connector

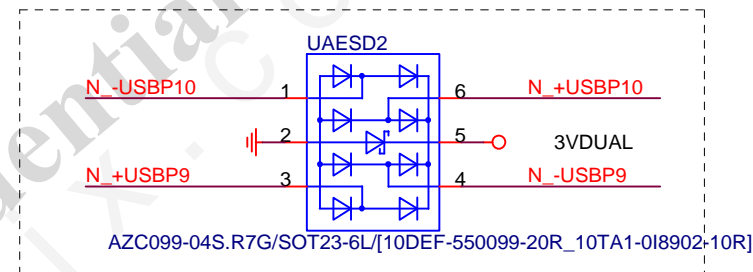
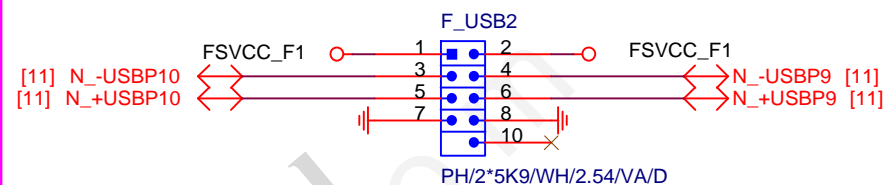
FUSE 2 Port 1 Fuse 2A



F_USB 2.0 OC SIGNAL



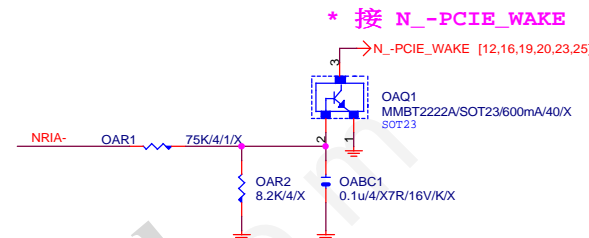
NET 可變



Gigabyte Technology

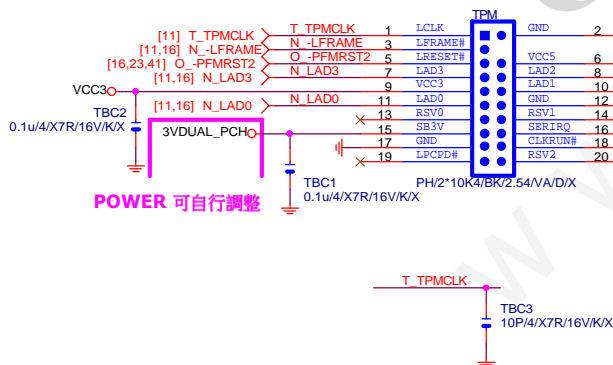
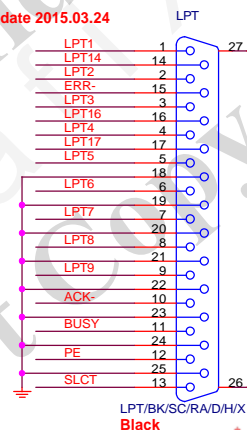
USB2.0

Size Custom	Document Number	GA-B150M-D3VX-S1.0
Date:	Friday, September 18, 2015	Sheet 46 of 52



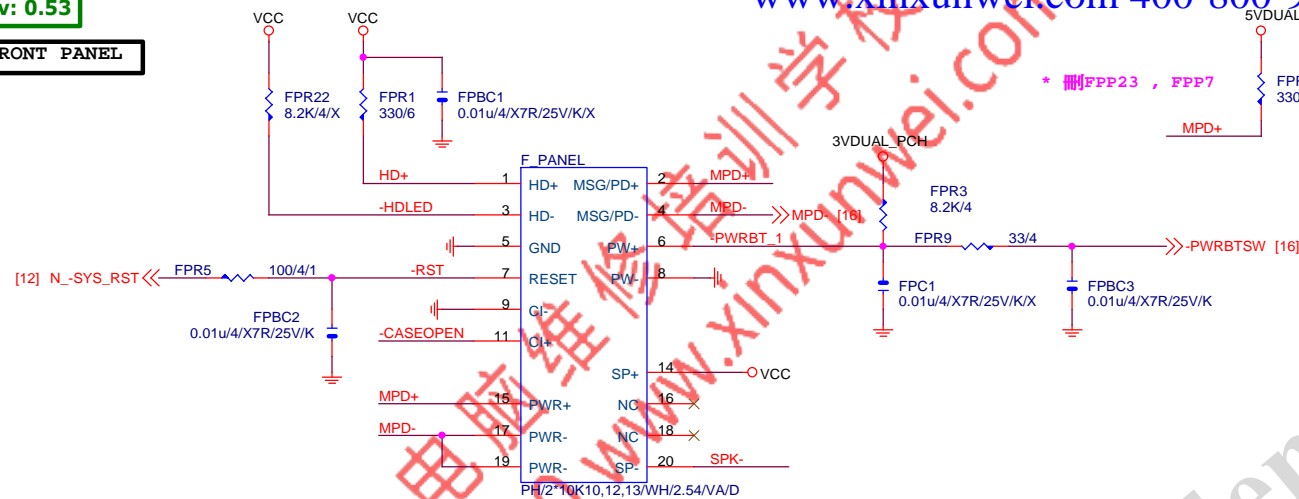
R&D技術通報151 有使用PRINT PORT的
MODEL，需使用新料號：10HP2-118728-72R。(CHIP IT8728F/EX (GB) ITE/SMD
QFP128 PRINTPORT SORTING)料件。串電阻33 ohm改為68 ohm。

★Update 2015.03.24



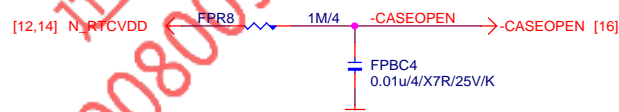


FRONT PANEL



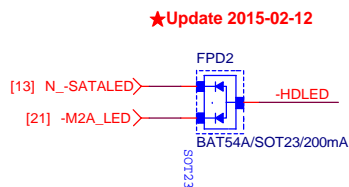
FOOTPRINT: PIN2X10PANEL-NEW

CASE OPEN

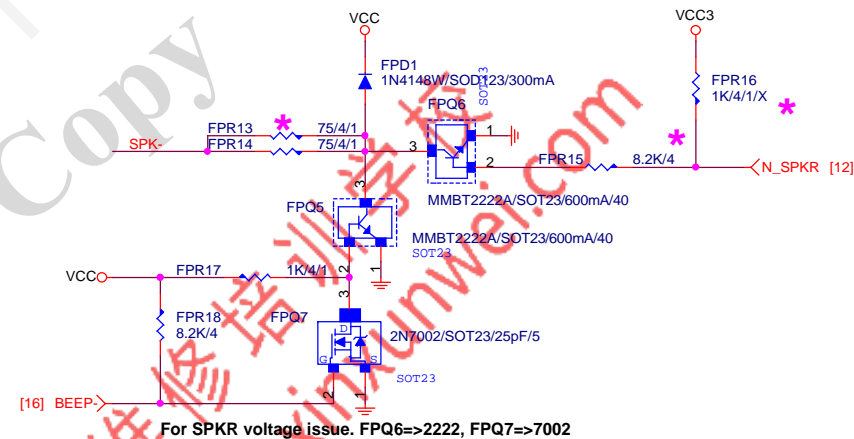


SATA LED

SATALED# signal open-collector, pull-up (8.2 kΩ to 10 kΩ) to Vcc3_3



SPKR

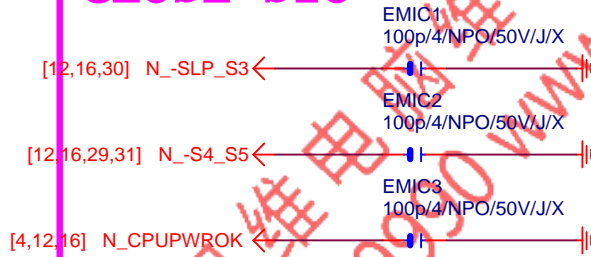


For SPKR voltage issue. FPQ6=>2222, FPQ7=>7002

Gigabyte Technology

Title			
FRONT PANEL			
Size	Document Number	Rev	
Custom	GA-B150M-D3VX-SI	1.0	
Date:	Friday, September 18, 2015	Sheet	48 of 52

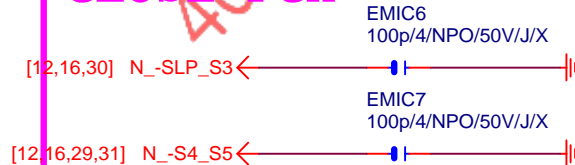
CLOSE SIO



CLOSE PCH



CLOSE PCH



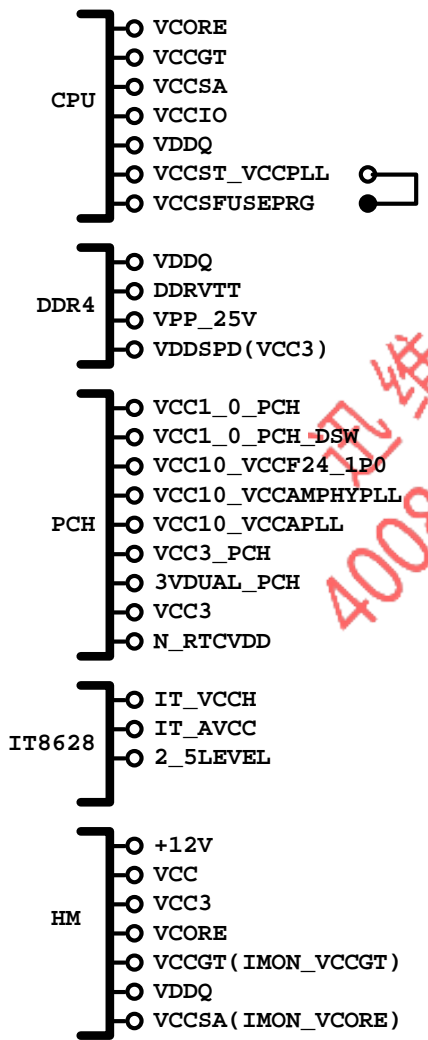
For H1703M-HD3 USB



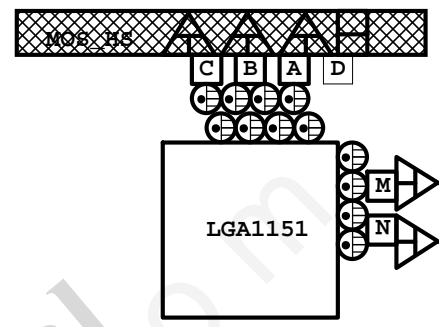
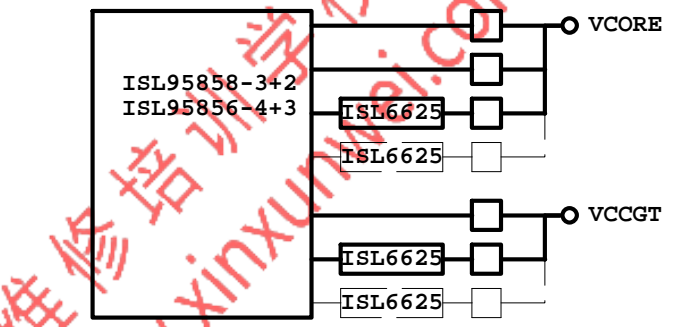
GIGABYTE™

Title EMI/ESD		
Size A	Document Number GA-B150M-D3VX-SI	Rev 1.0
Date:	Friday, September 18, 2015	Sheet 49 of 52

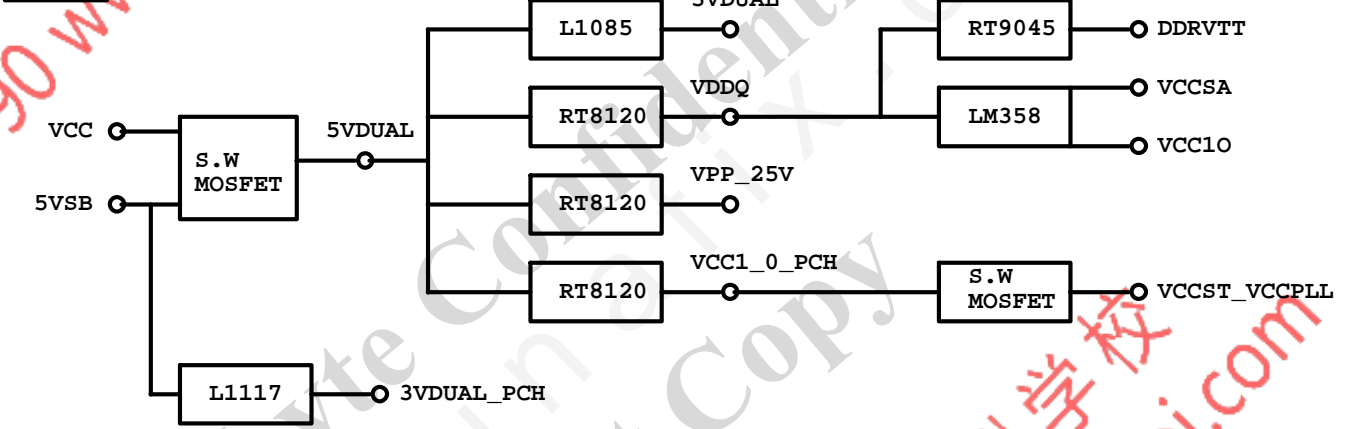
POWER BLOCK MAP



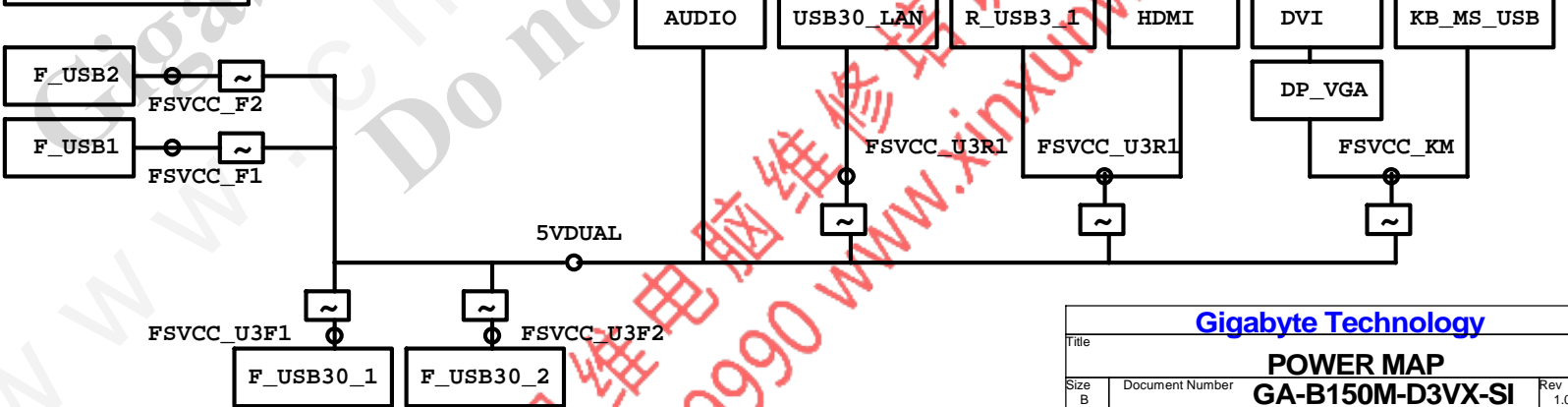
VCORE/VCCGT



POWER



FUSE POWER F/R



Gigabyte Technology			
Title			
POWER MAP			
Size	Document Number	GA-B150M-D3VX-SI	Rev
B			1.0
Date:	Friday, September 18, 2015	Sheet	50 of 52

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 Custom	Document Number GA-B150M-D3VX-SI		Rev 1.0
Date:	Friday, September 18, 2015	Sheet 1	of 52

[illegible][illegible]

散熱模組料號:

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

Gigabyte Technology			
Title			
TABLE LIST			
Size	Document Number		Rev
C	GA-B150M-D3VX-SI		1.0
Date	Friday, September 18, 2015	Sheet 52 of 52	