

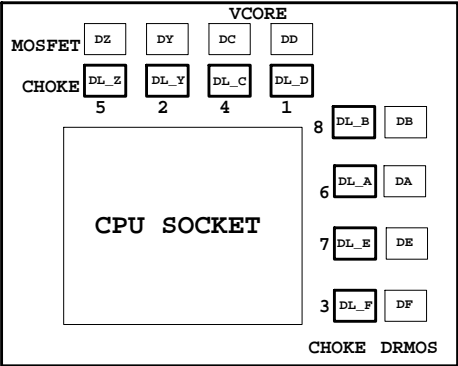
Model Name: GA-Z97X-Gaming G1 WIFI-BK Rev 1.0

SHEET TITLE

01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	CPU_LGA1155-A
05	CPU_LGA1155-B
06	CPU_LGA1155-C
07	DDR III CHANNEL A
08	DDR III CHANNEL B
09	PCH_FDI,DMI,USB,PCIE
10	PCH_DP,CLK BUFFER
11	PCH_HOST,SATA,PCI
12	PCH_GPIO,CTRL,AUDIO
13	PCH_PWR,GND
14	DVI / DP
15	R_USB3 / HDMI
16	PLX8605
17	PCI EXPRESS*1 SLOTS X3
18	Dual BIOS
19	CT9570 Audio
20	Audio Connect
21	Audio Power
22	IR3580 PWM
23	IR3598-VCORE
24	IR3570_DDR PWM
25	IR3598-DDR
26	DISCRETE POWER I
27	DISCRETE POWER II
28	I/O ITE8620
29	FP,F_USB,BZ
30	USB DAC-UP , PS2
31	ATX POWER
32	RST, PWR, CLR_CMOS, 80 PORT
33	LAN E2201
34	INTEL I217

SHEET TITLE

35	RENESAS USB3 HUB-1
36	RENESAS USB3 HUB-1
37	F_USB3.0 , SATA EXPRESS
38	IT8790
39	FAN CTRL
40	PCIEx16(x8) REFCLK
41	PCI EXPRESS*16_2 SLOT
42	PCI EXPRESS X16 SWITCH_2
43	PCI EXPRESS*8_2 SLOT
44	PCI EXPRESS*16_1 SLOT
45	PCI EXPRESS X16 SWITCH_1
46	PCI EXPRESS*8_1 SLOT
47	PEX8747S UPSTREAM & MISC
48	PEX8747S DOWNSTREAM SLOTS
49	PEX8747S STRAP & CPLD INTF
50	PEX8747S POWER
51	PEX8747 POWER DESIGN
52	Marvell 9172 1
53	Marvell 9172 2
54	TABLE LIST



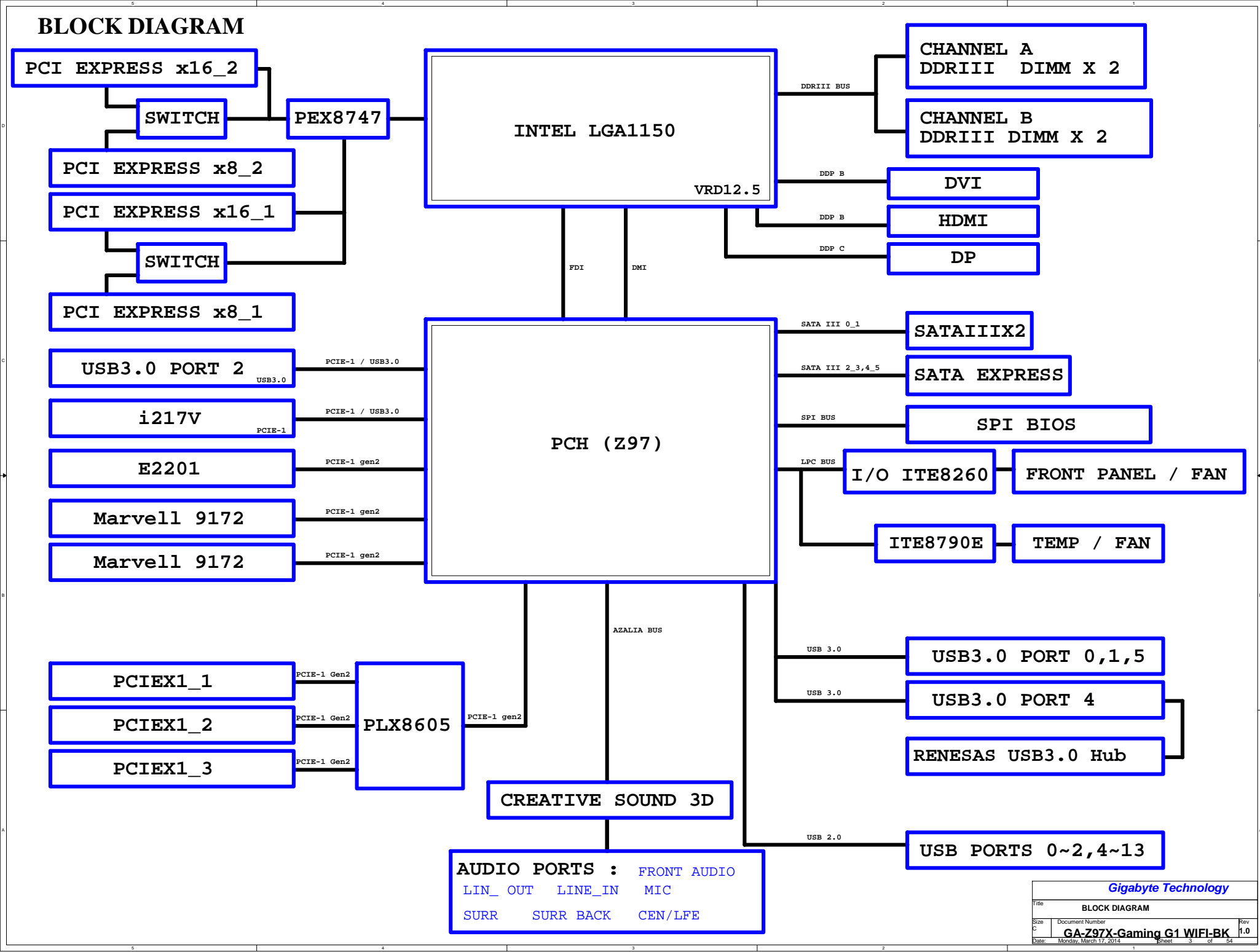
Component value change history

[illegible][illegible]

Circuit or PCB layout change

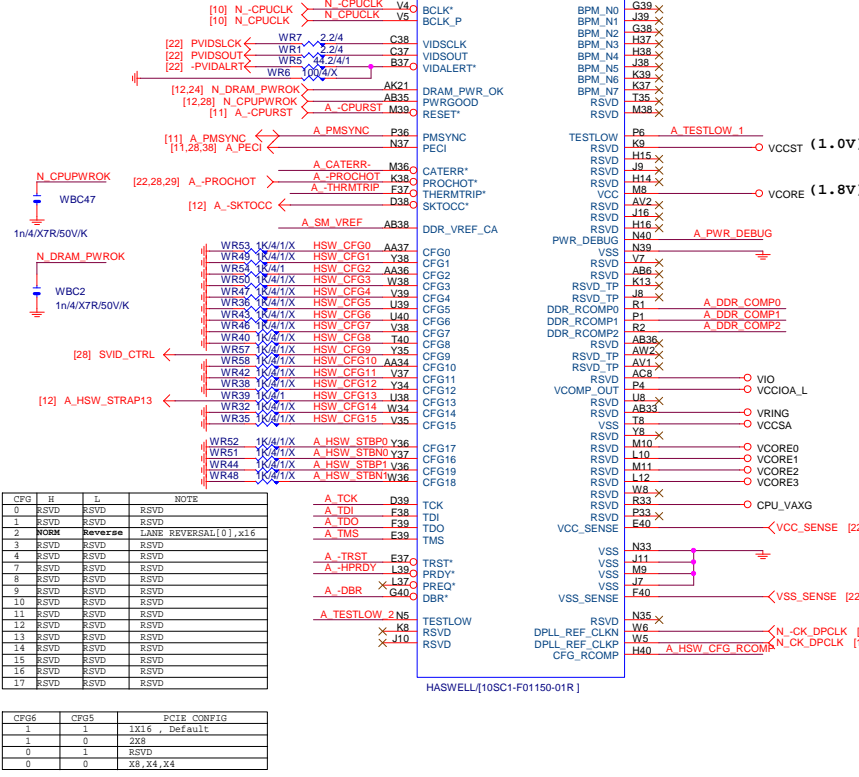
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BLOCK DIAGRAM



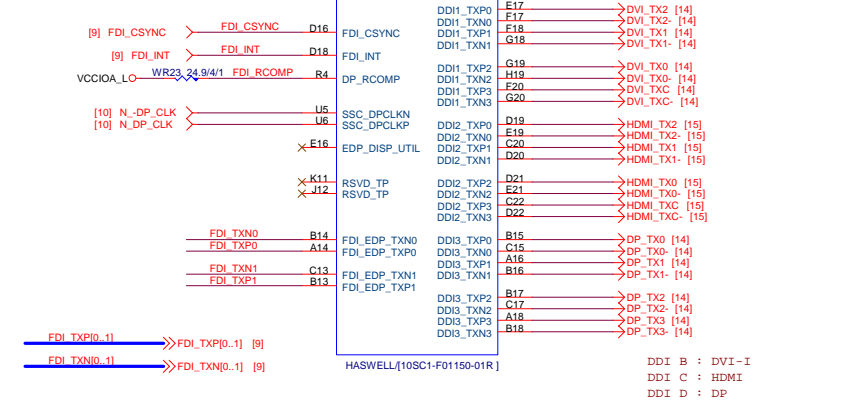
LGA1150

(E)



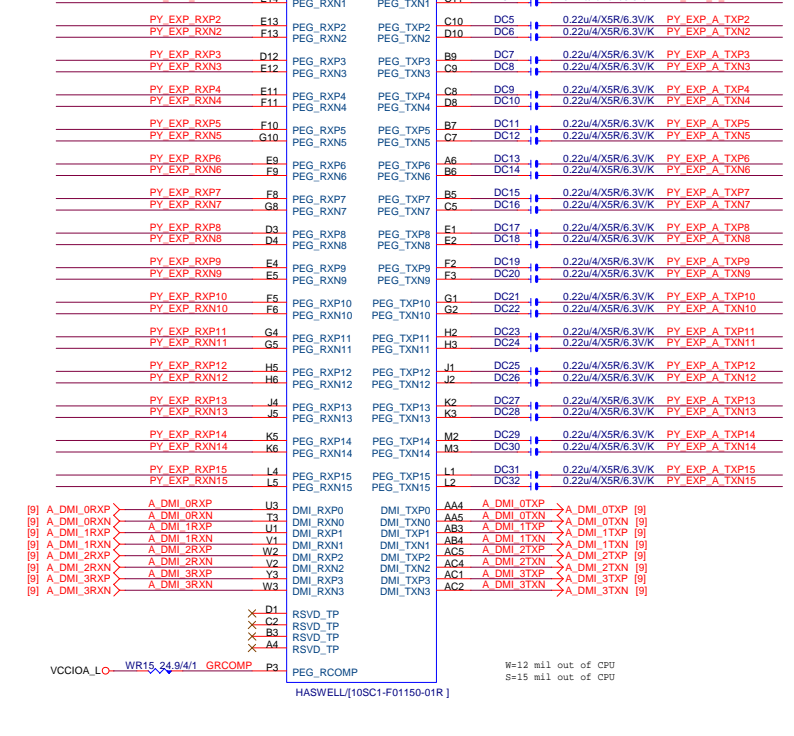
LGA1150

(D)

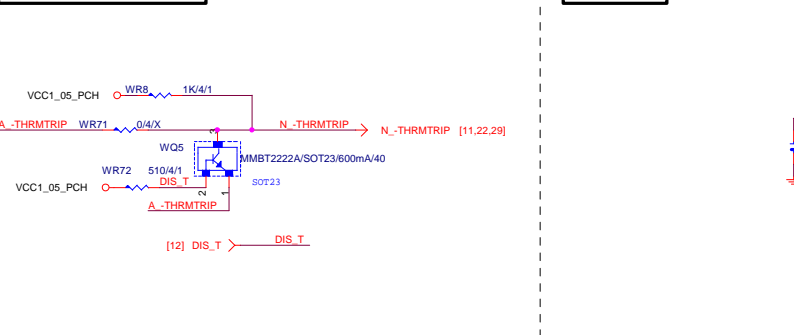


LGA1150

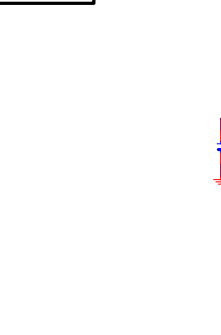
(C)



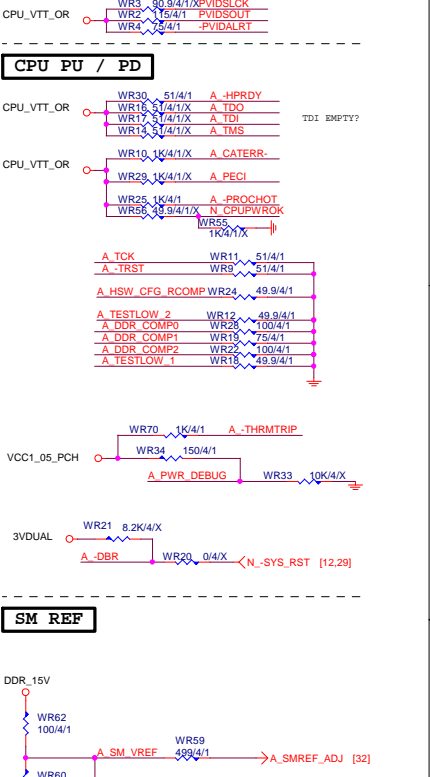
THRMTRIP DISABLE



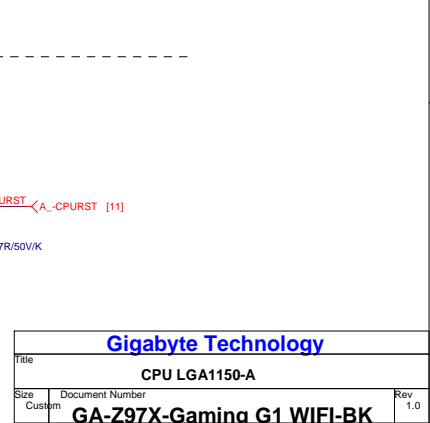
-CPURST



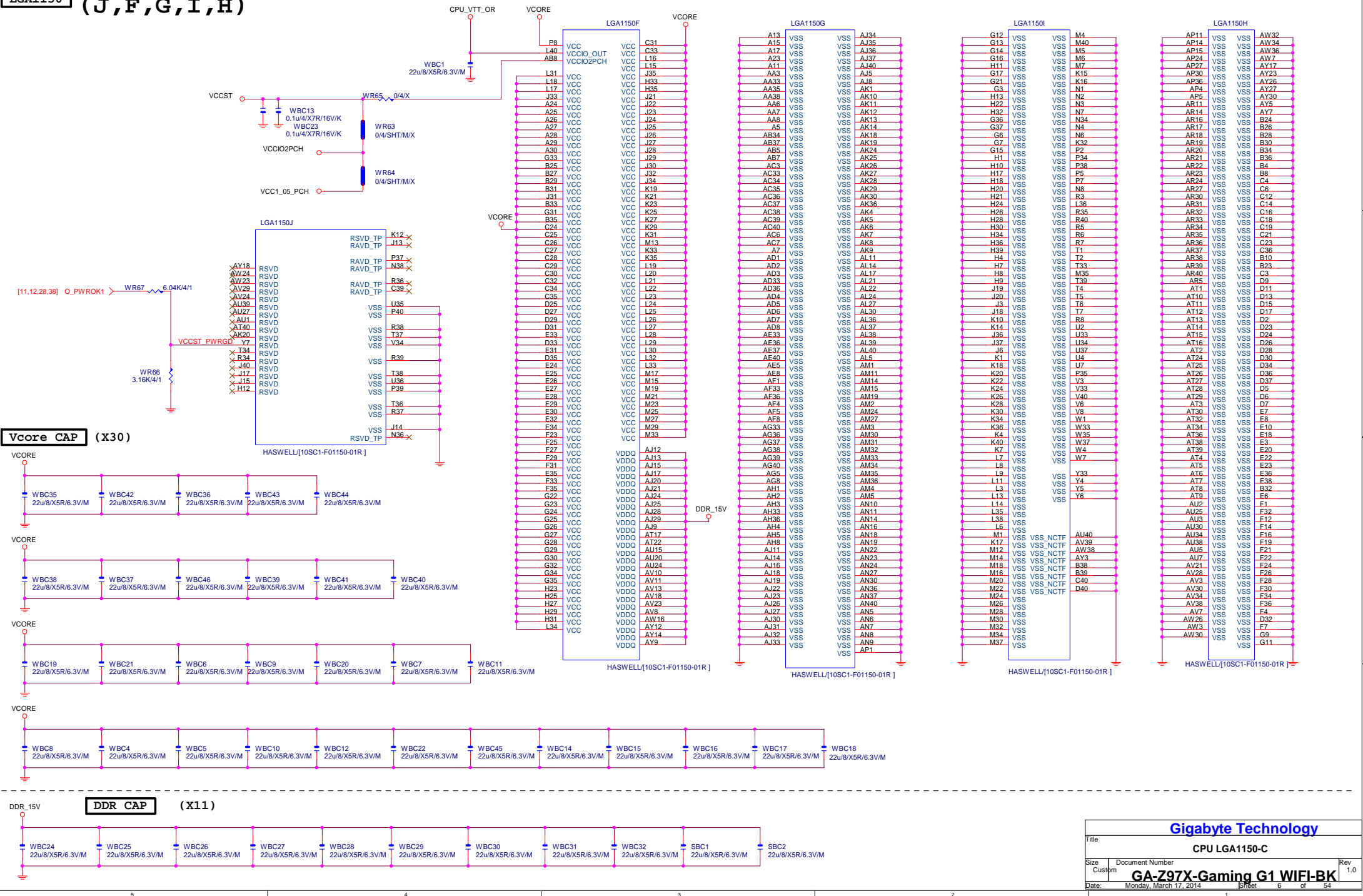
CPU SVID



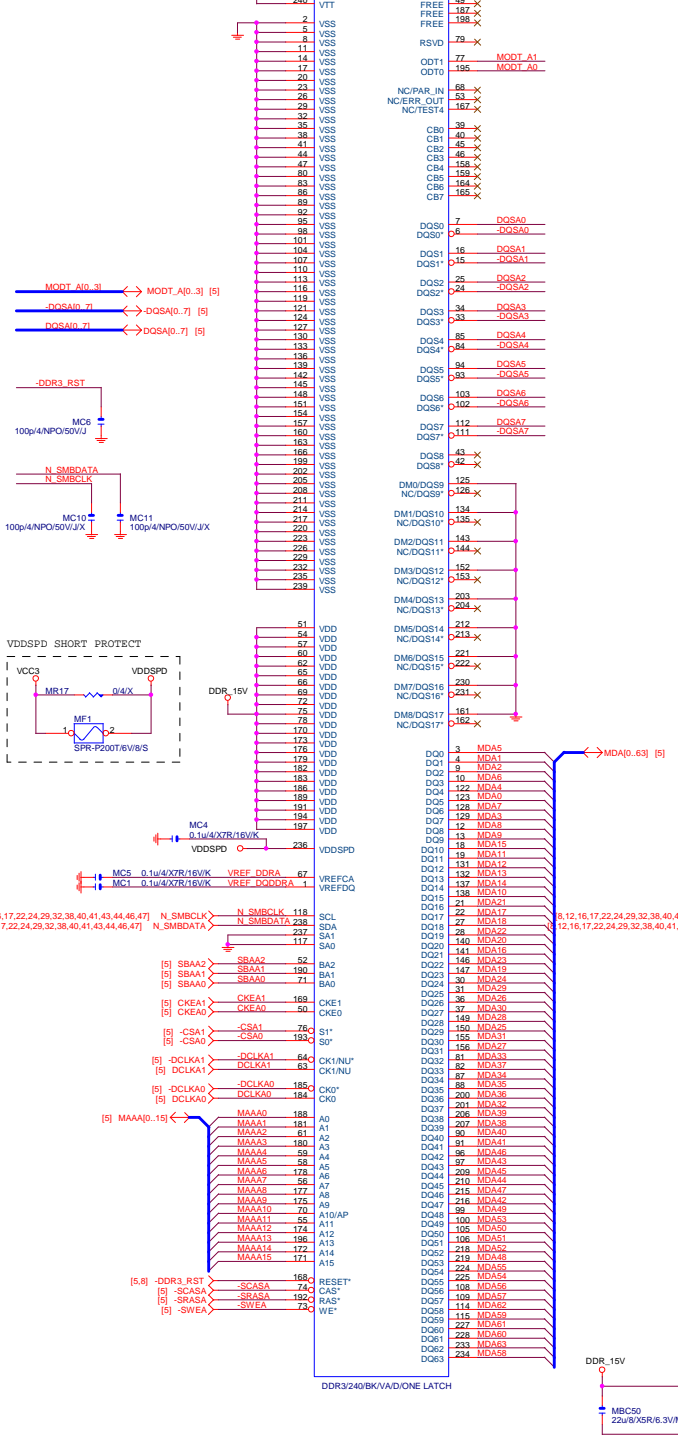
SM REF



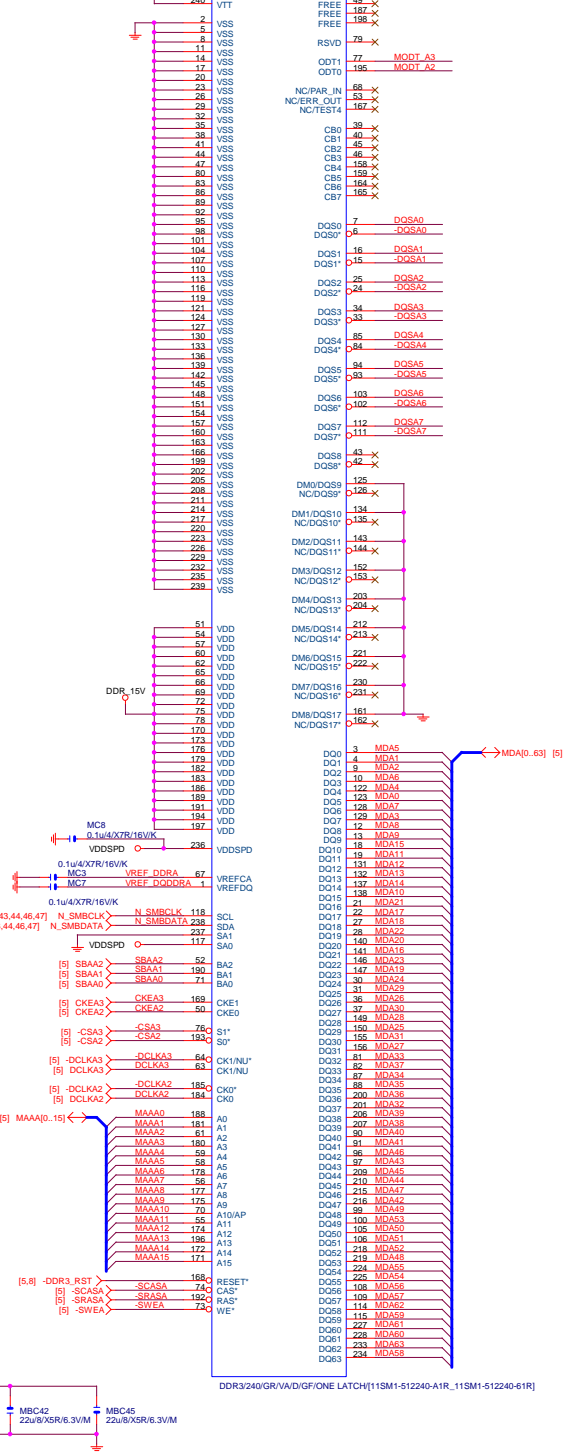
LGA1150 (J,F,G,I,H)



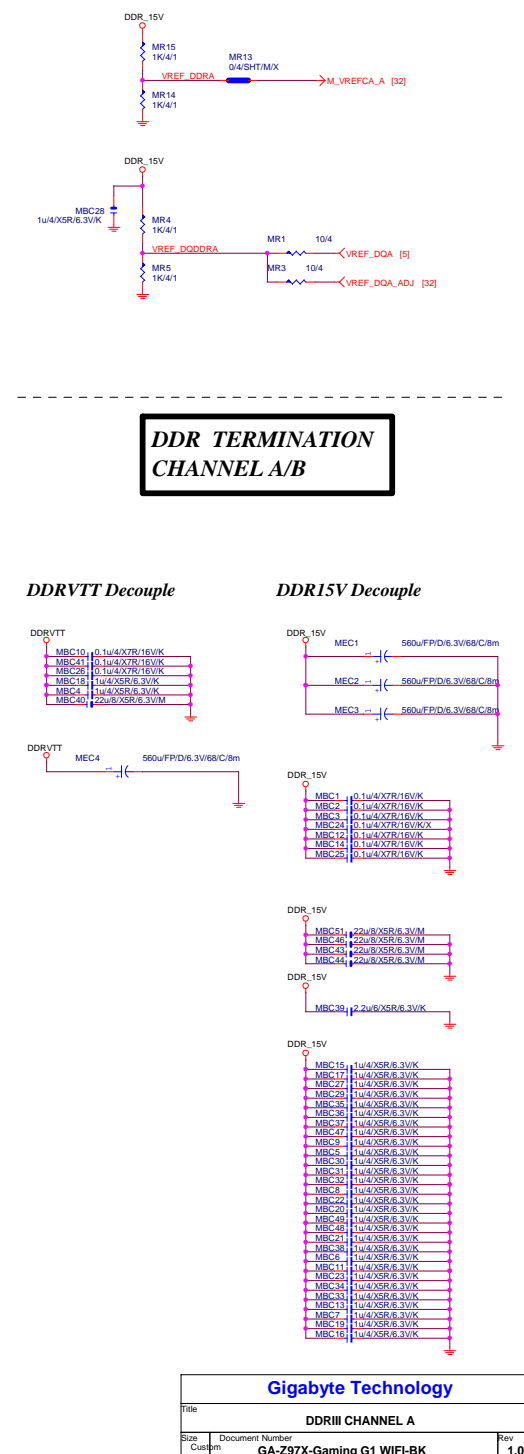
DDR3 (A)



DDR3

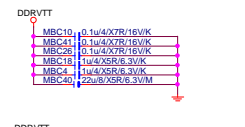


DDR3 VREF

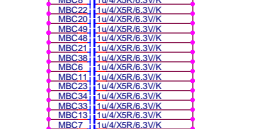
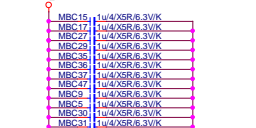
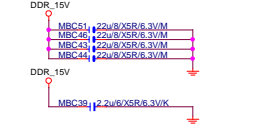
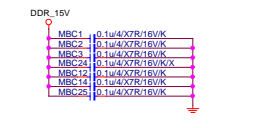
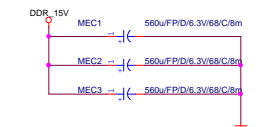


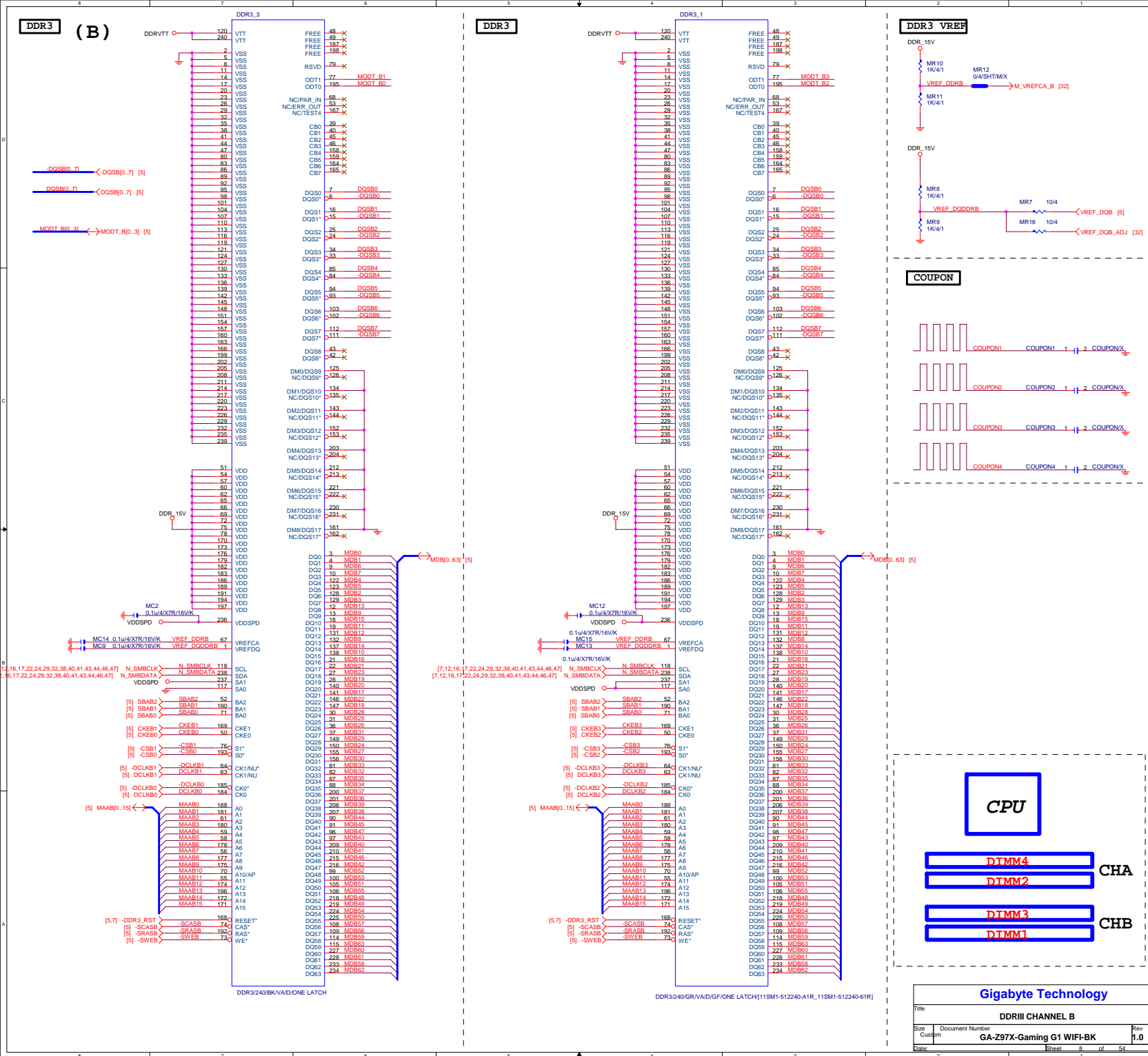
DDR TERMINATION CHANNEL A/B

DDRVT Decouple

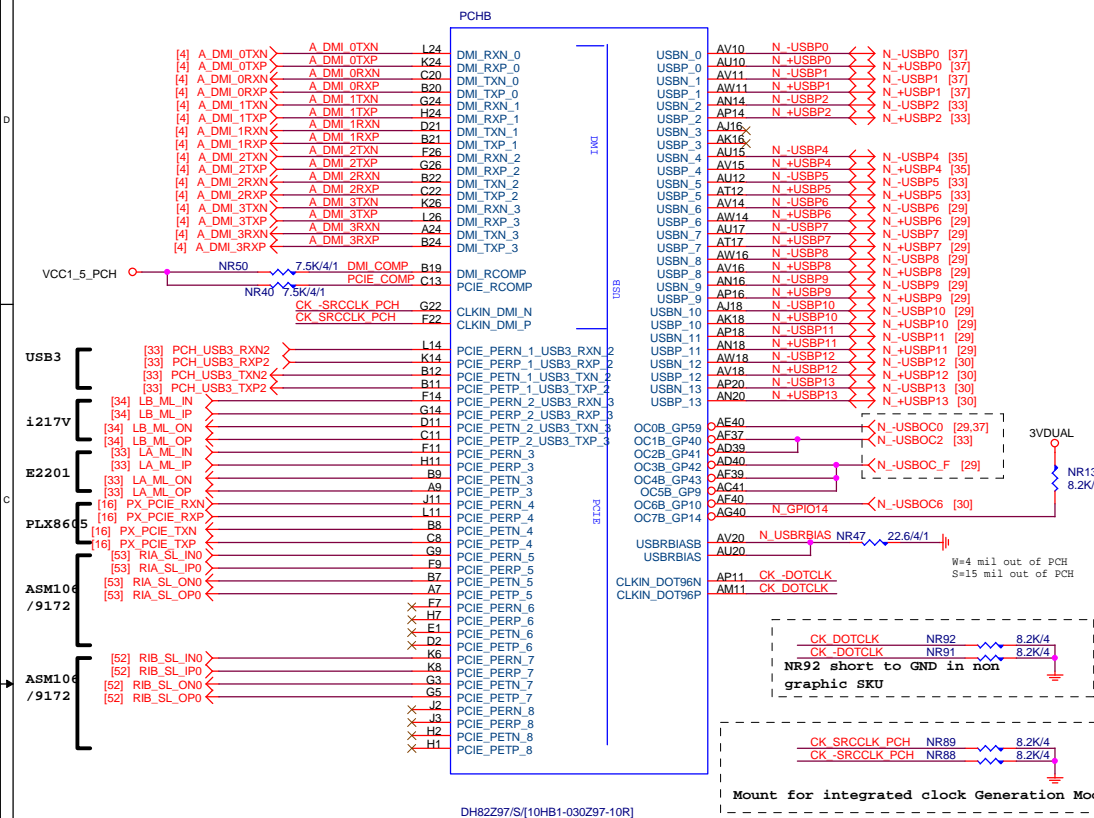


DDR15V Decouple

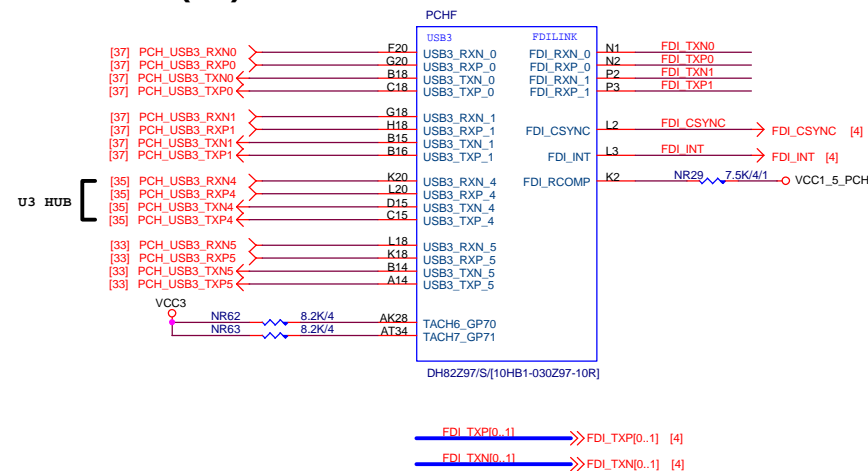




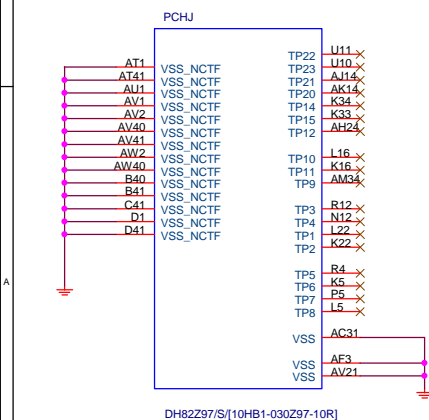
PCH (B)



PCH (F)



PCH (J)

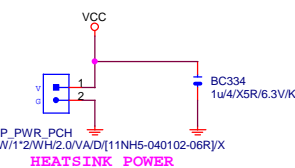
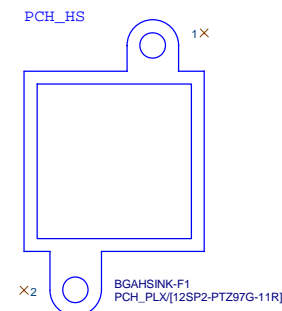


USB TABLE

```
OC[3:0]# for Device 29 (ports 0-7)
OC[7:4]# for Device 26 (ports 8-13)
```

USB3	00 01	04	05	F_USB1	F_USB2
USB2	00 01	04	05	02 03	06 07
OC	OC0	D720210_Hub	D720210_Hub	OC_F	

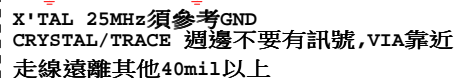
PCH Heatsink



(E)



PCH (G)

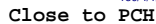


避免此 2 PIN, 訊號容易被 25MHz 干擾

VGA ESD



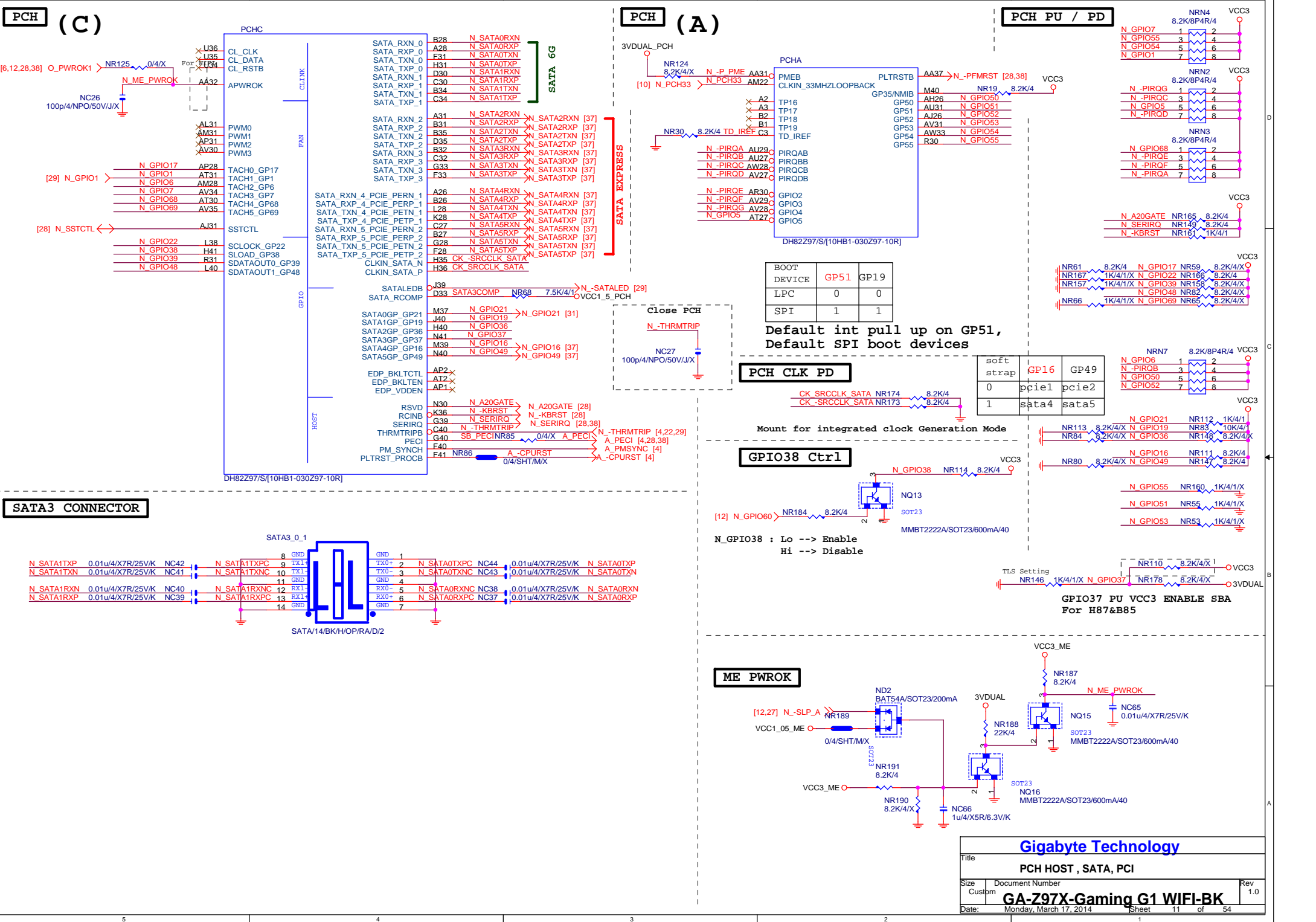
VGA DDC



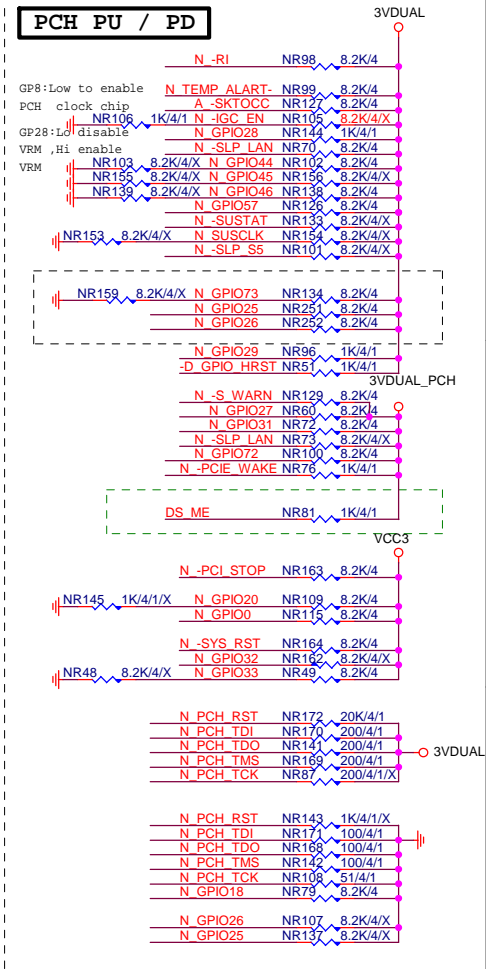
Close to Filter



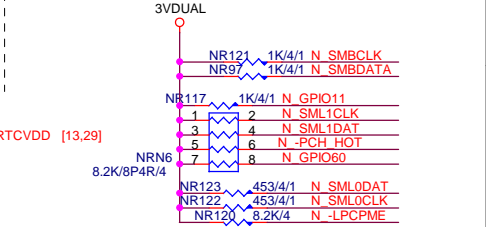
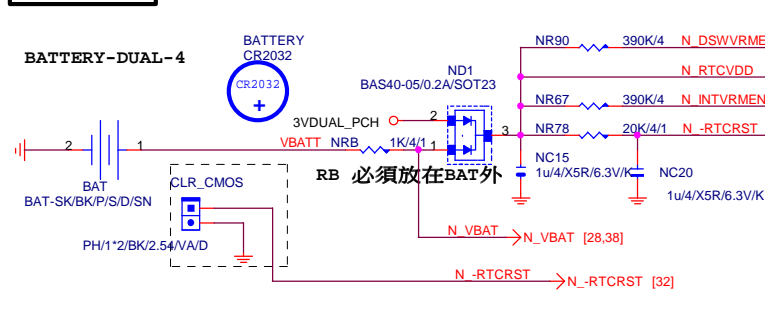
Gigabyte Technology			
Title			
PCH DISPLAY ,CLK BUFFER			
Size	Document Number		Rev
Custom	GA-Z97X-Gaming G1 WIFI-BK		1.0
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(D)

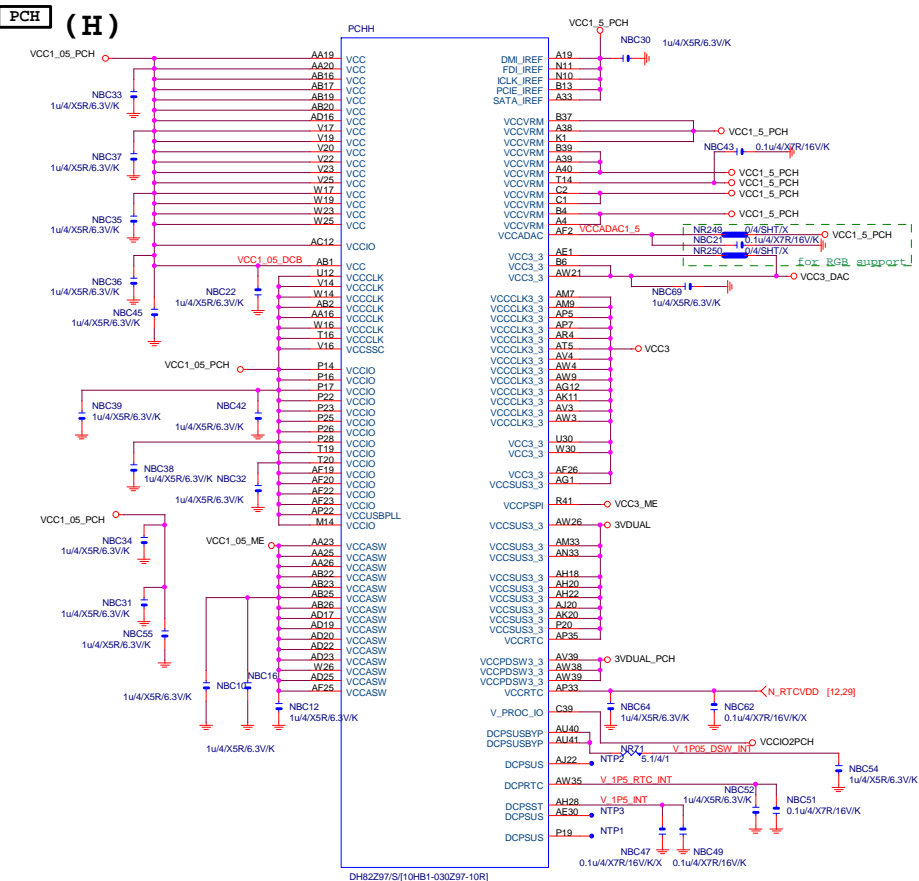


CLR CMOS

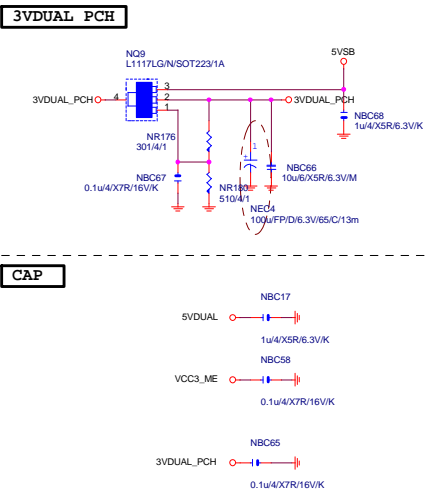


Title			
PCH GPIO , CTRL , AUDIO			
Size B	Document Number		Rev 1.0
GA-Z97X-Gaming G1 WIFI-BK			
Date:	Monday, March 17, 2014	Sheet	12 of 54

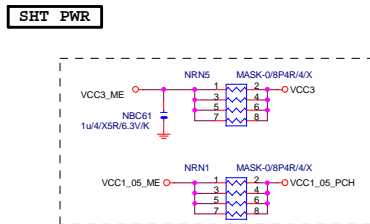
PCH (H)



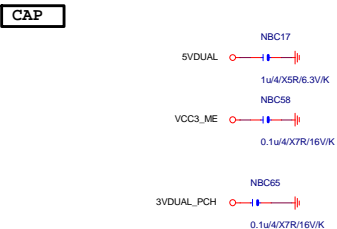
3VDUAL PCH



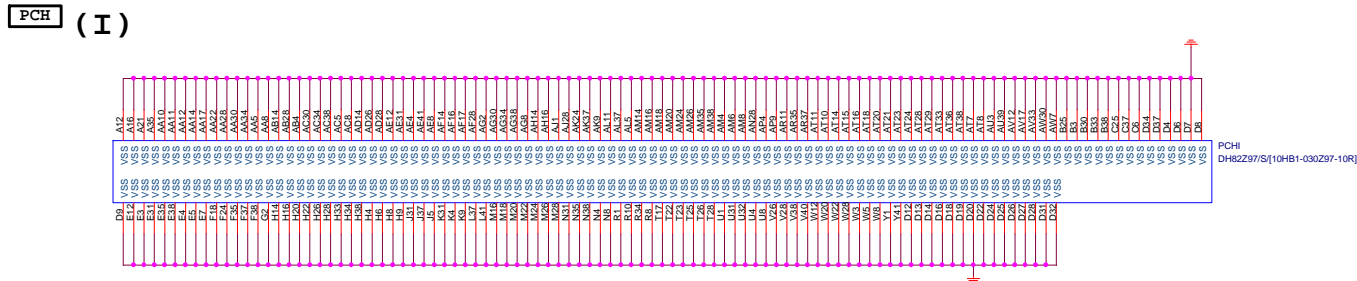
SHT PWR

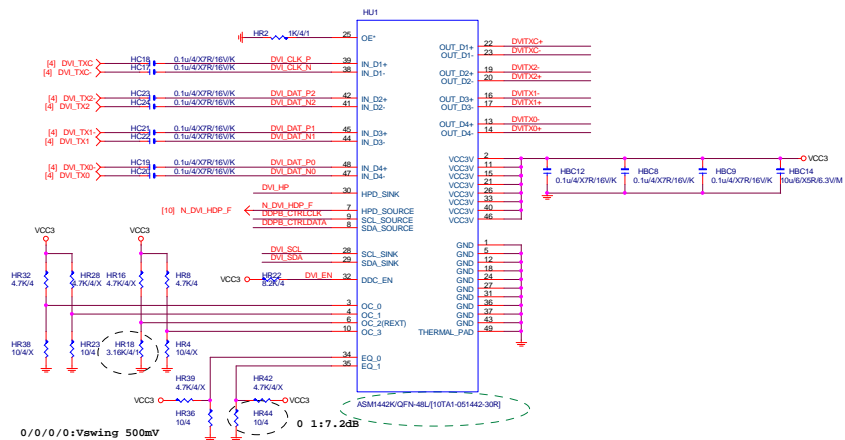


CAP

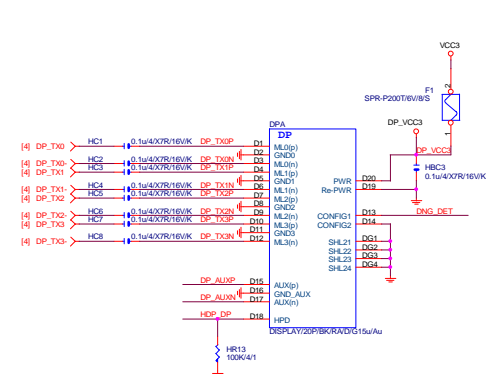
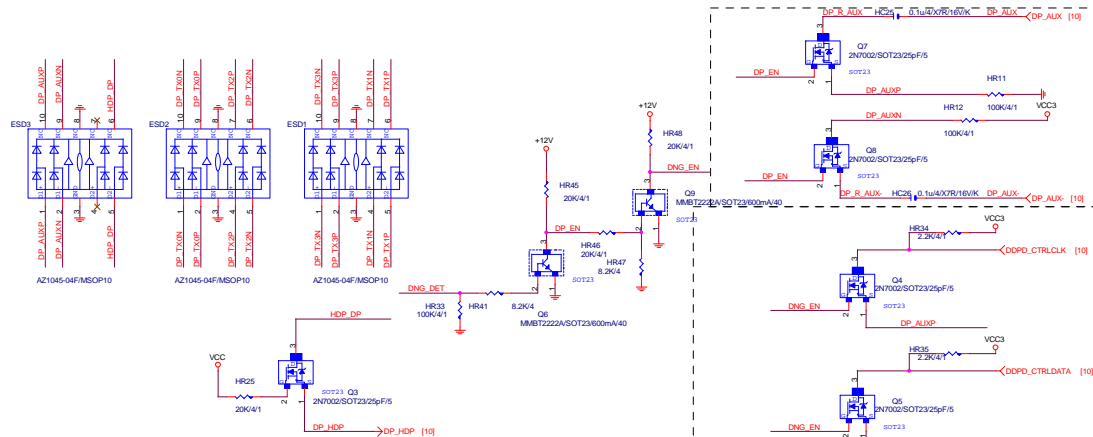
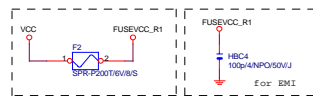
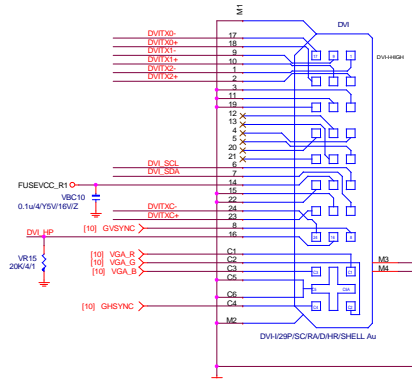
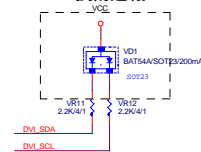


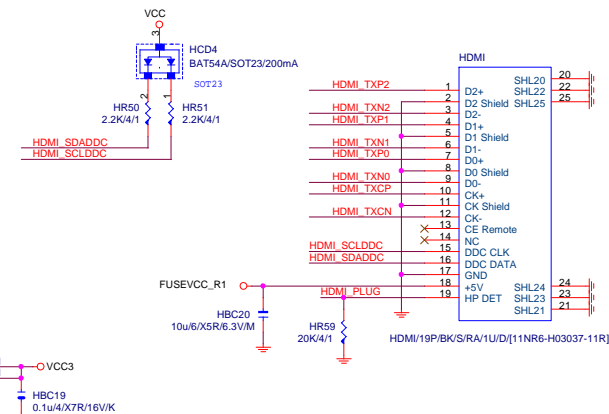
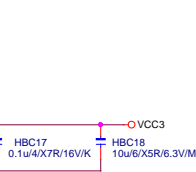
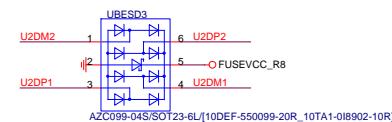
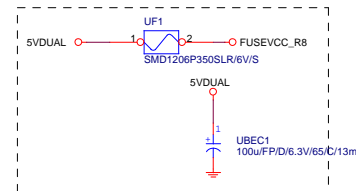
PCH (I)



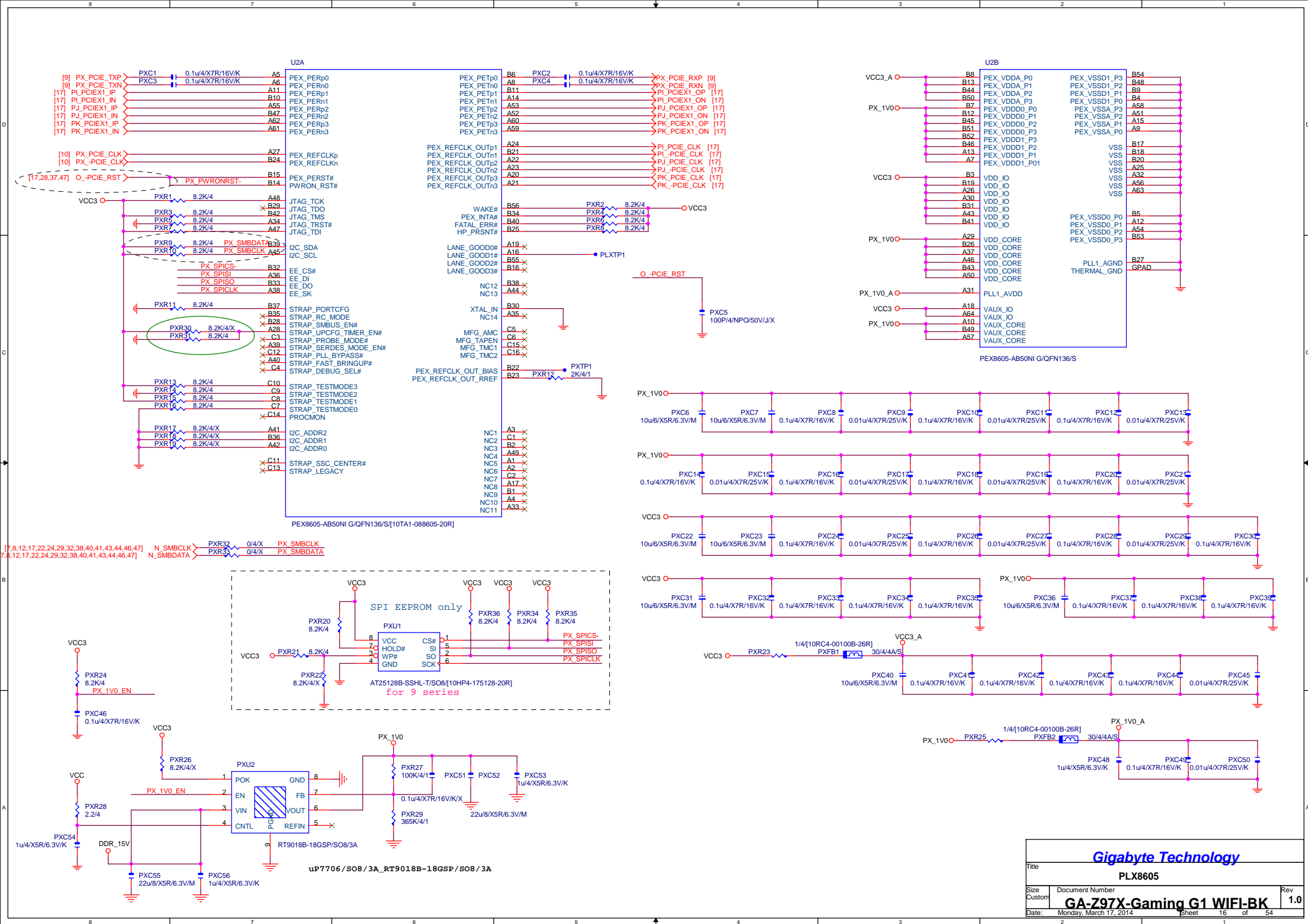


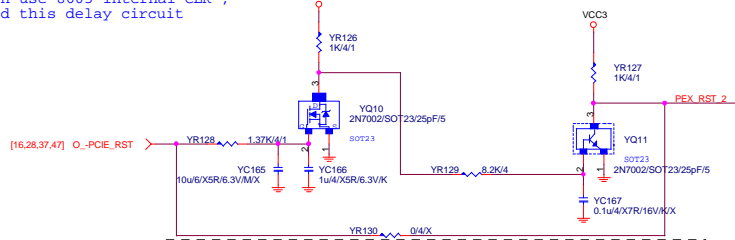
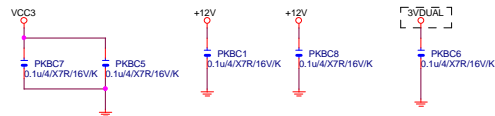
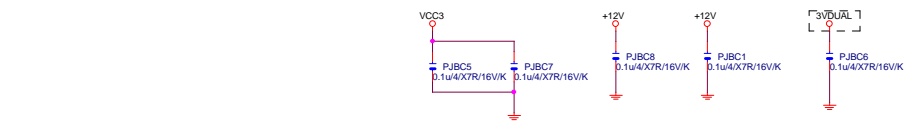
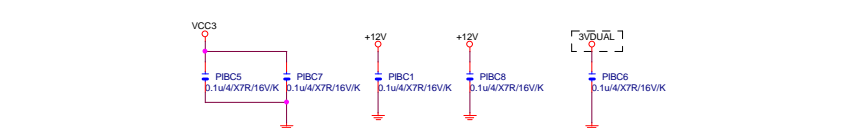
R&D技術通報 162



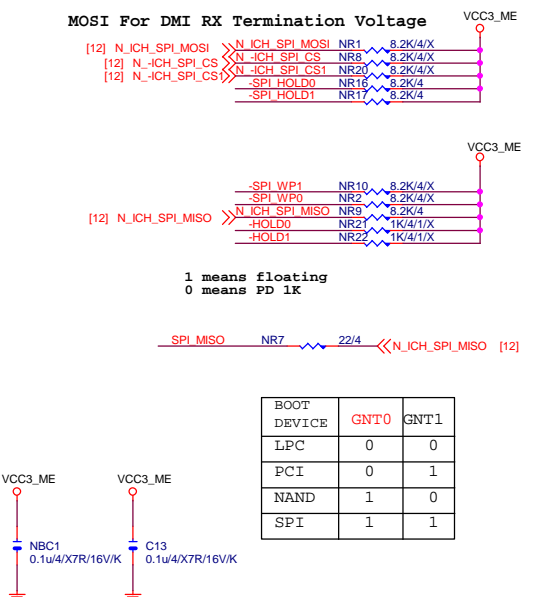
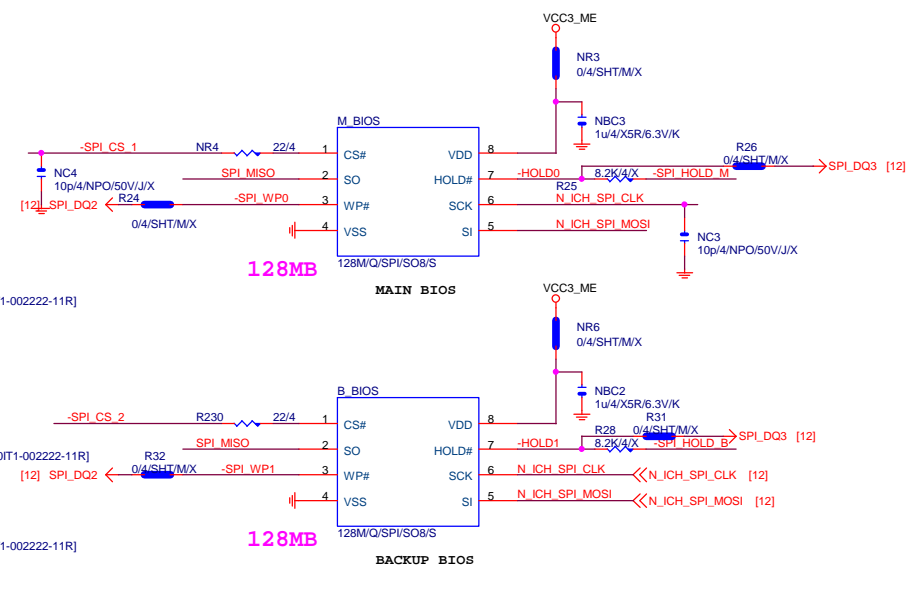
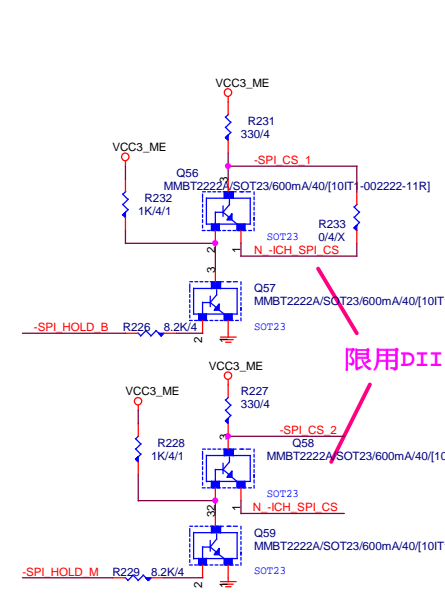


改善: ASMEDIA ASM1442 : 3.16K(PIN6 PULL DOWN電阻) 10ohm(PIN4 PULL DOWN電阻)

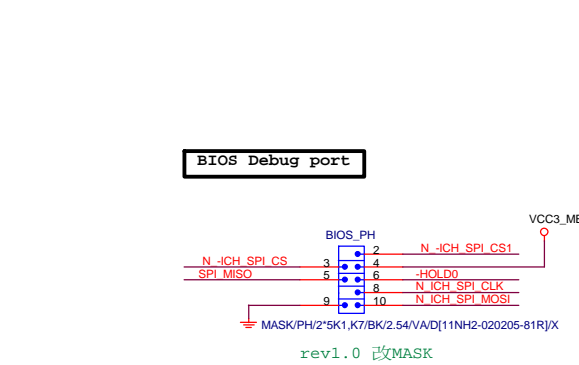
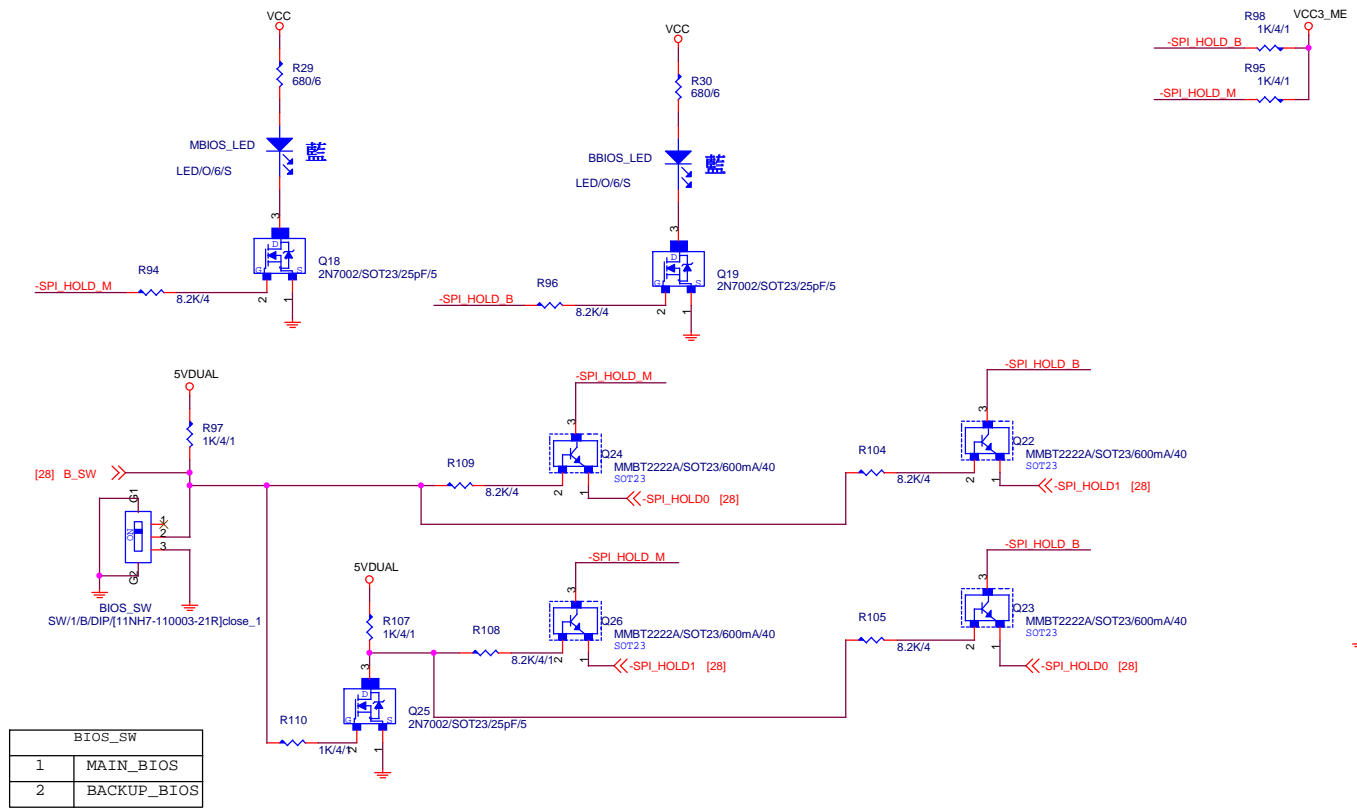




<p align="center">Gigabyte Technology</p>			
<p align="center">PCI EXPRESS X1 SLOT</p>			
Size C	Document Number		Rev
Date	<p align="center">GA-Z97X-Gaming G1 WIFI-BK</p>		1.0
	Monday, March 17, 2014	Sheet 17 of 54	

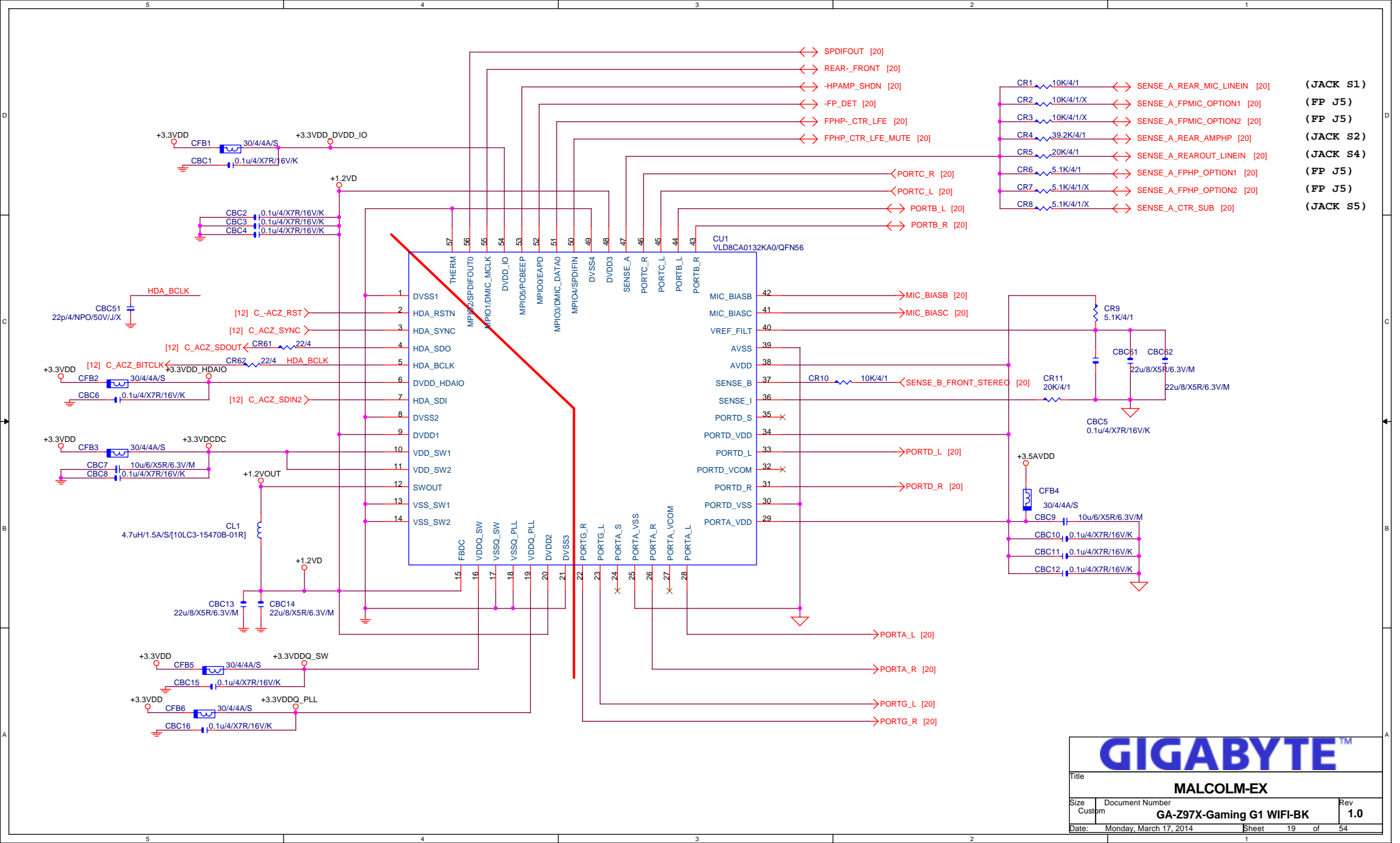


BOOT DEVICE	GNT0	GNT1
LPC	0	0
PCI	0	1
NAND	1	0
SPI	1	1



BIOS_SW	
1	MAIN_BIOS
2	BACKUP_BIOS

SB: SINGLE BIOS	
1	DISABLE
2	ENABLE





Title

MALCOLM-EX

Size

Custom

Document Number

GA-Z97X-Gaming G1 WIFI-BK

Rev

1.0

Date:

Monday, March 17, 2014

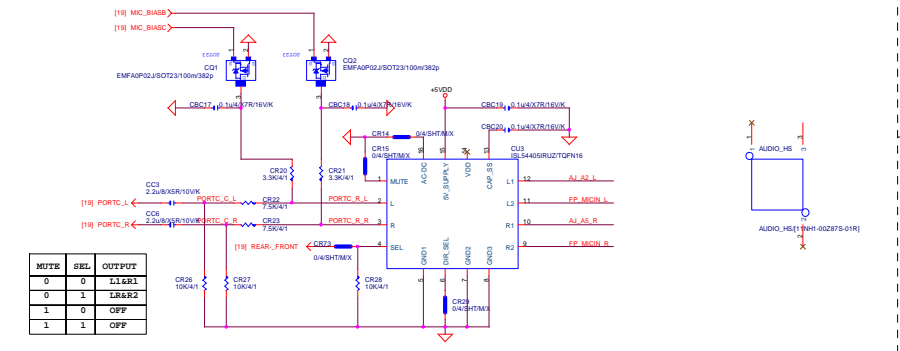
Sheet

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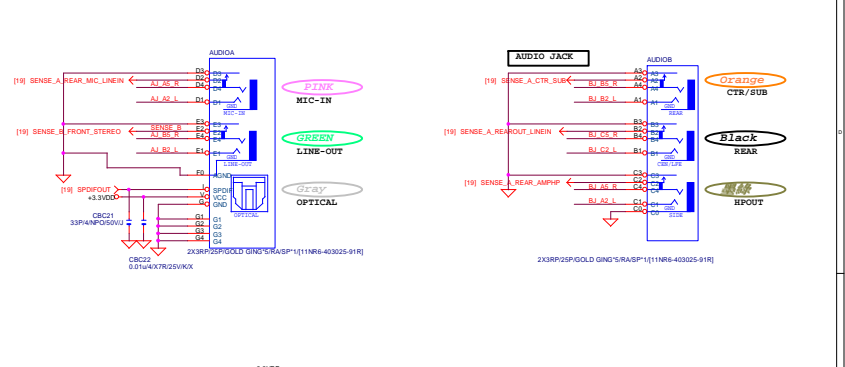
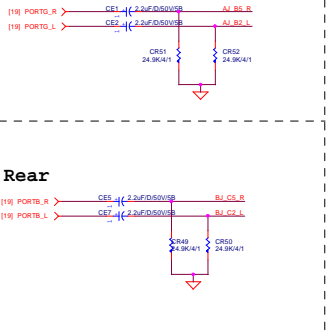
of

54

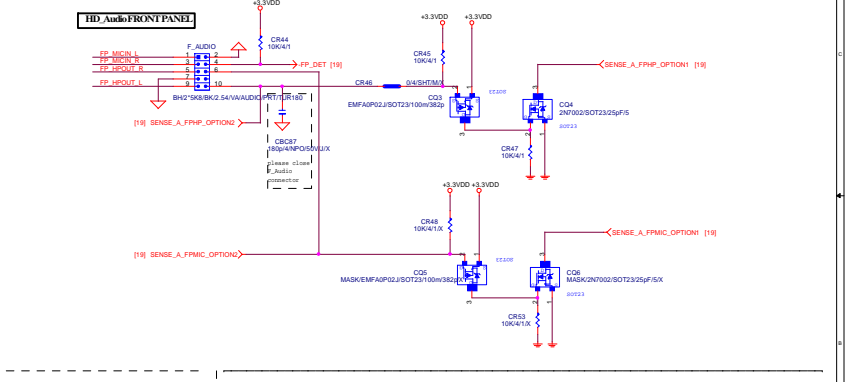
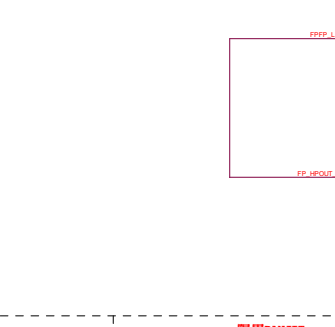
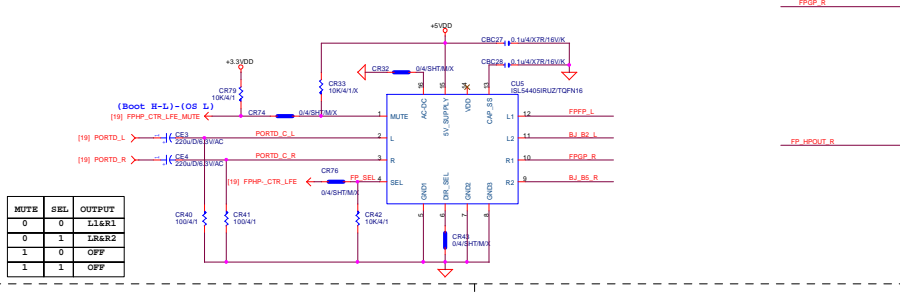
Rear MIC & FP MIC



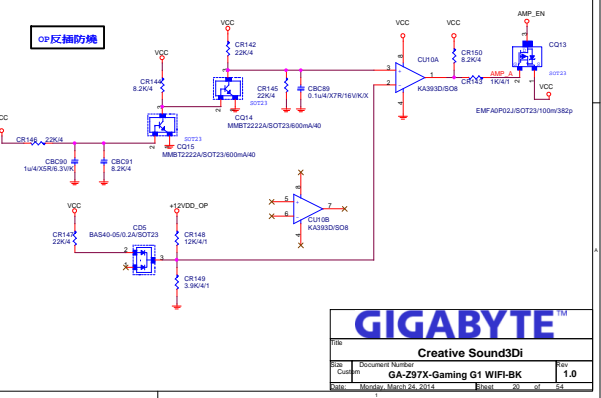
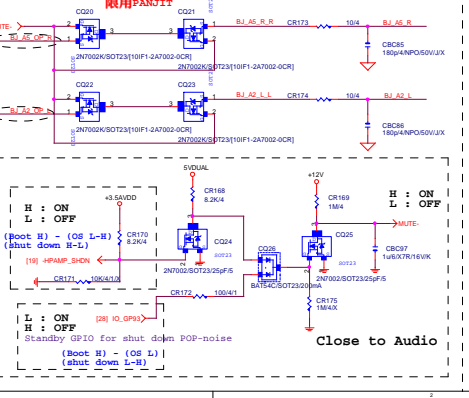
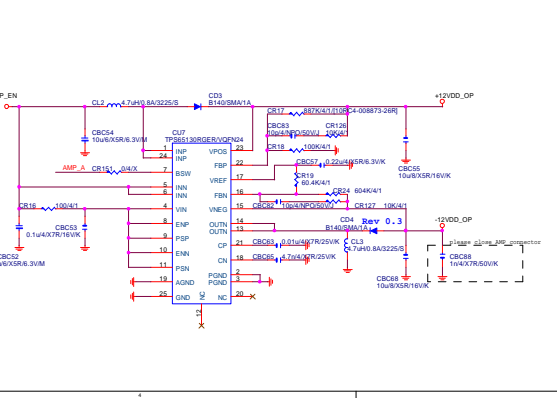
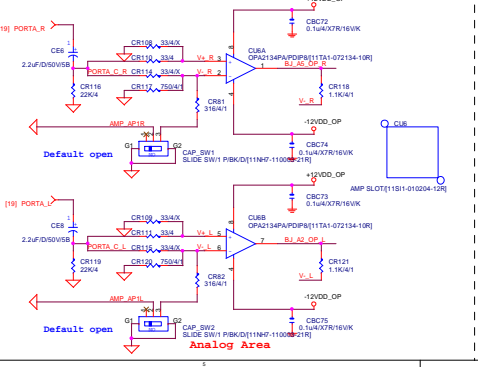
Line-Out

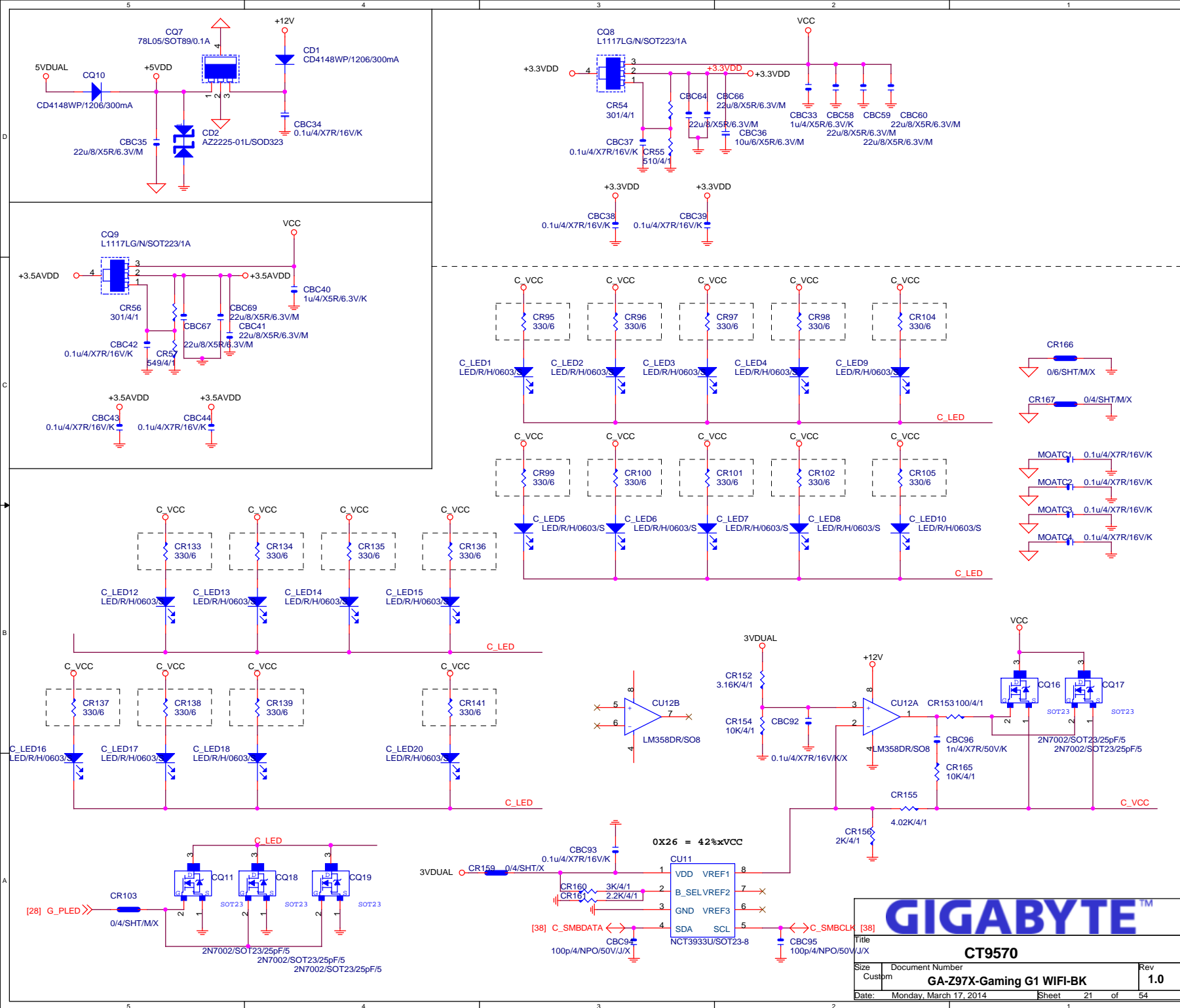


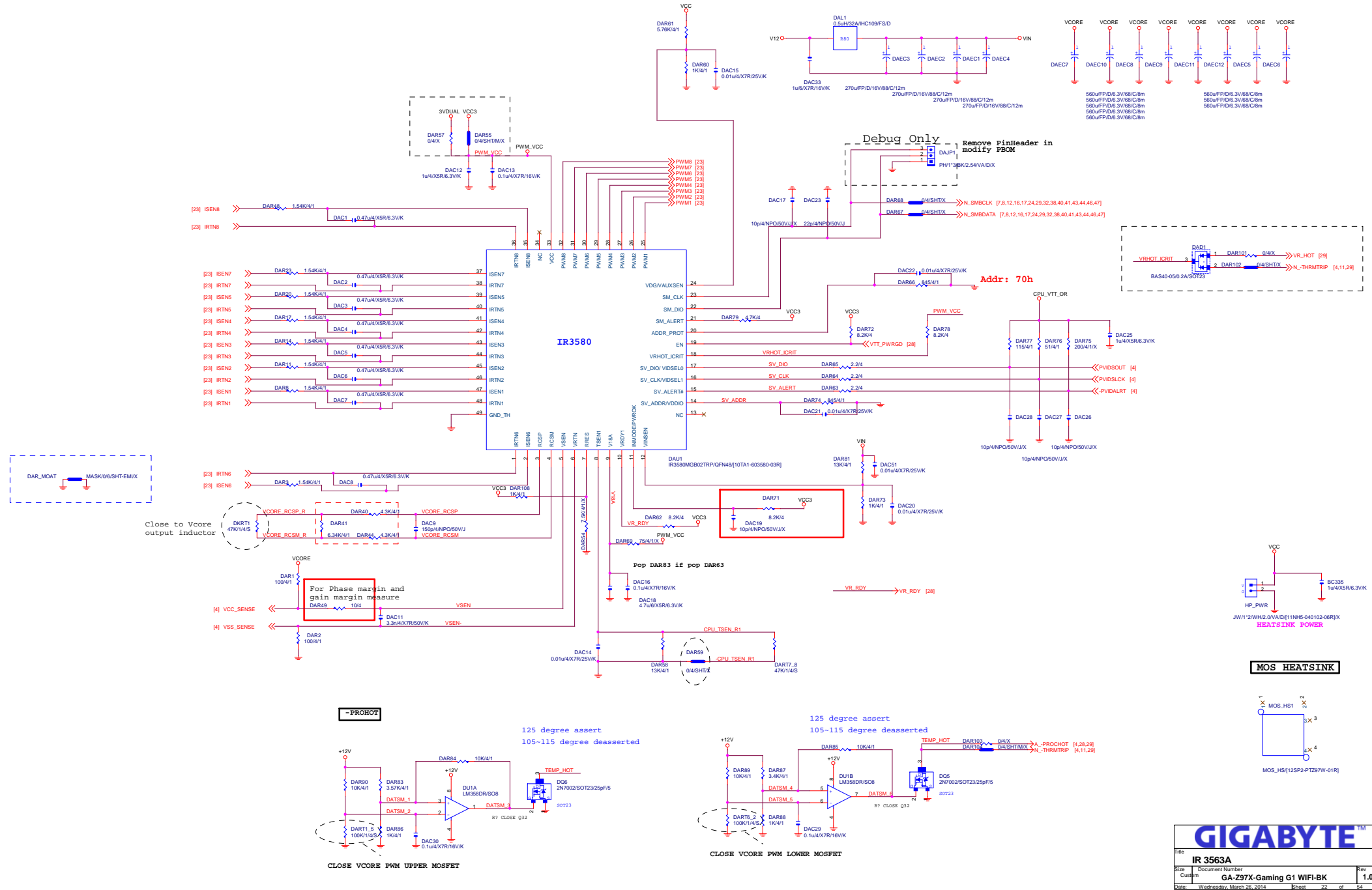
Rear CTR/SUB & FP HP-Out

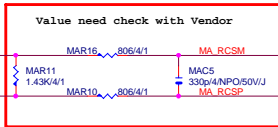
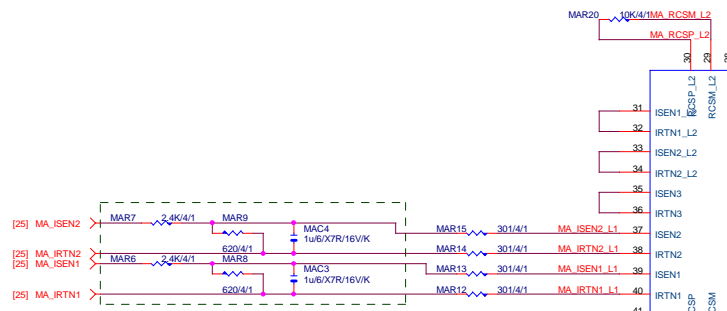
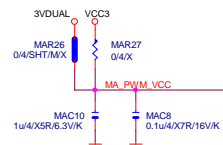


AMPLIFIED







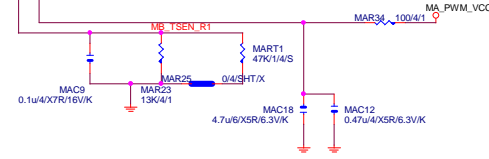
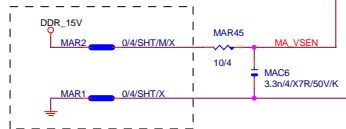
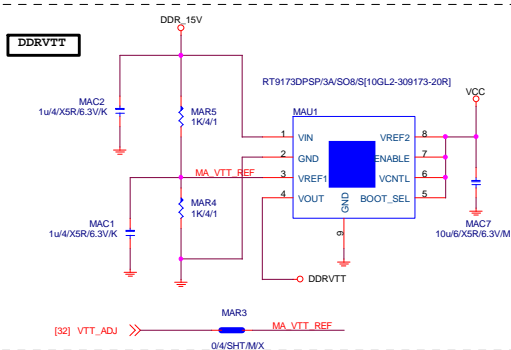
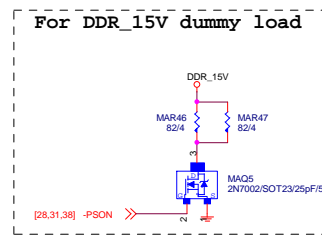
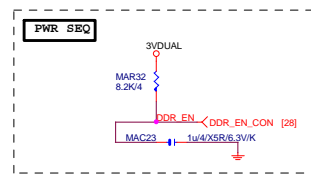
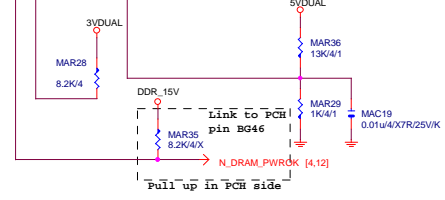


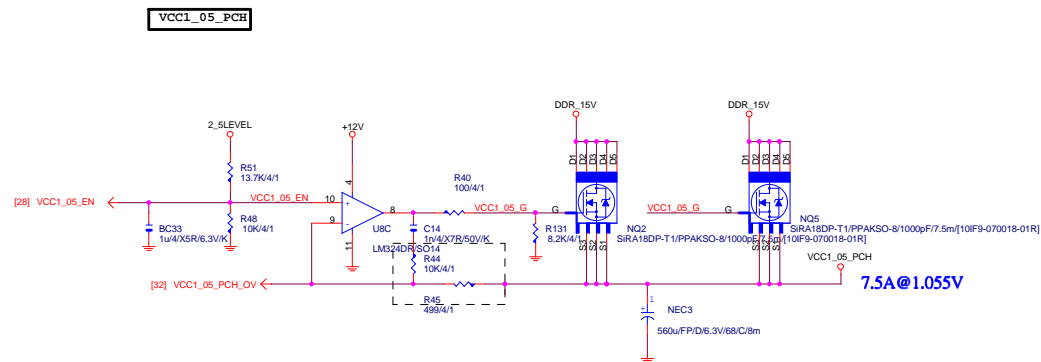
Close to DDR output inductor
should be routed as differential pair, 7mil width, 8mil spacing

IR3570

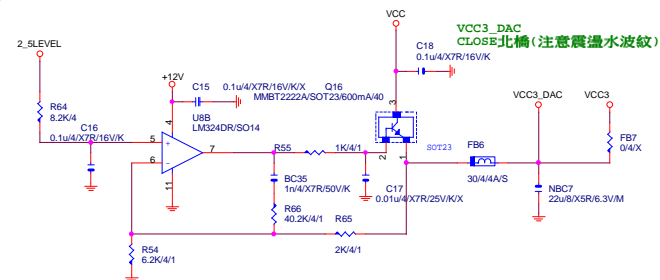
MA_PWM2 [25]
MA_PWM1 [25]

Addr: 72h



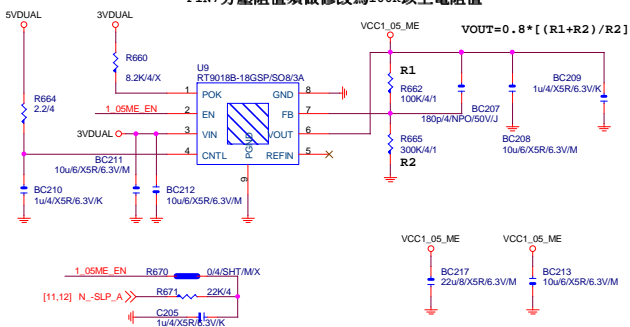


VCC3_DAC
(3.3V/70mA+360uA)

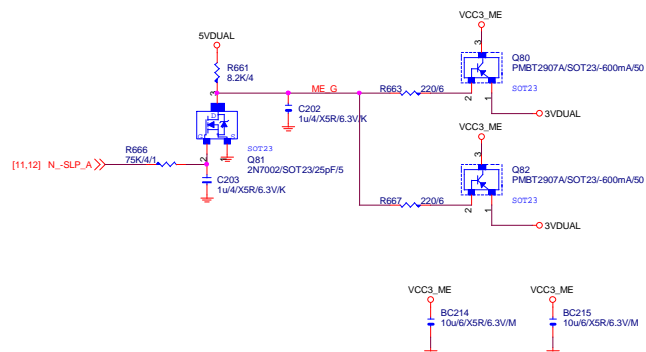


VCC1_05_ME

【技術通報R&D技術通報156】
(RICHTER), (NUVOTON), (EMC) 做共用
PIN7分壓阻值須做修改為100K以上電阻值

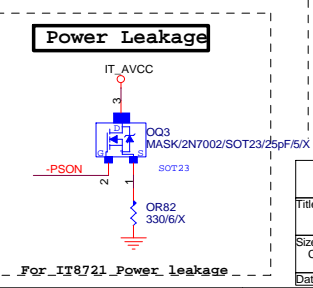
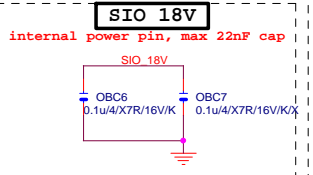
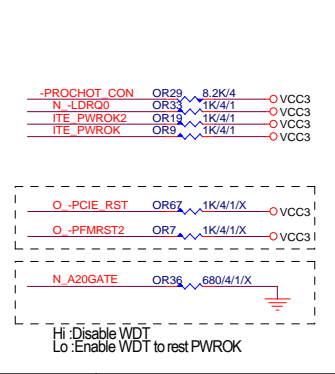
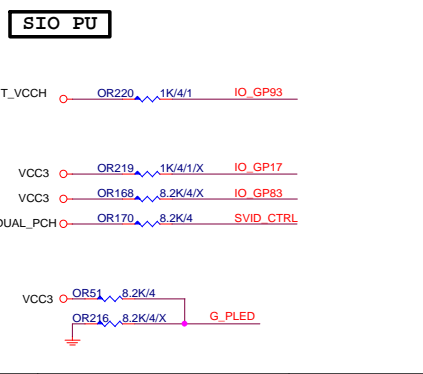
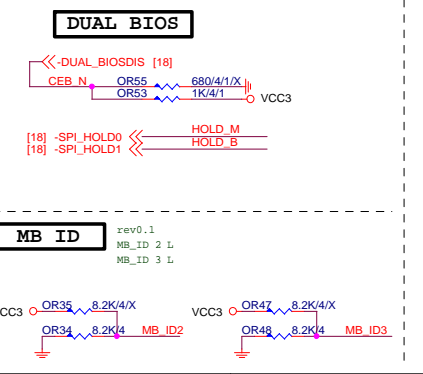
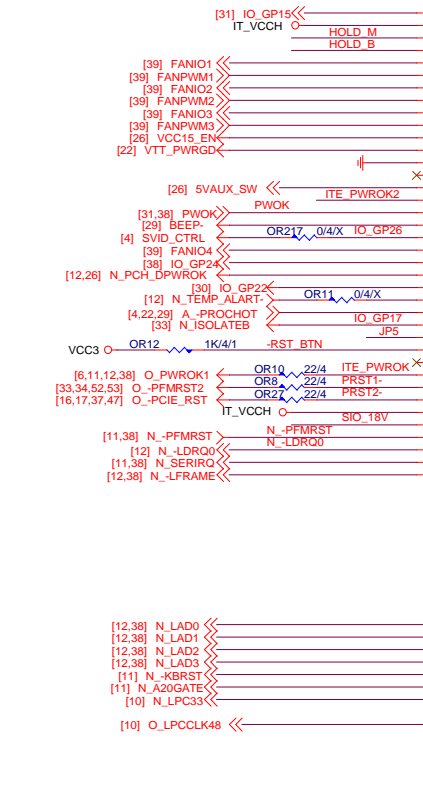
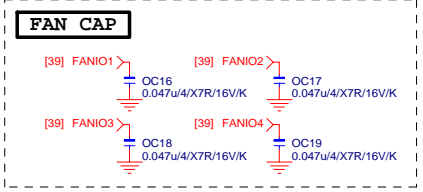


VCC3_ME



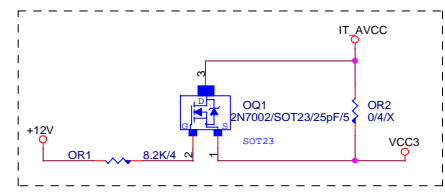
Gigabyte Technology

Title		DISCRETE POWER 2	
Size	Document Number	GA-Z97X-Gaming G1 WIFI-BK	
C	Rev	1.0	
Date:	Monday, March 17, 2014	Sheet	27 of 54



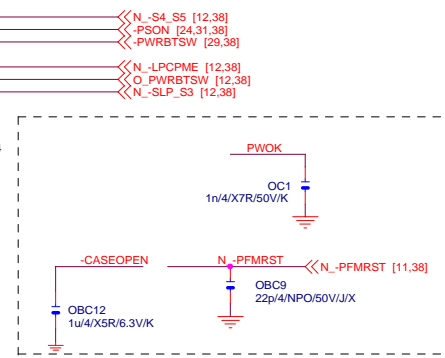
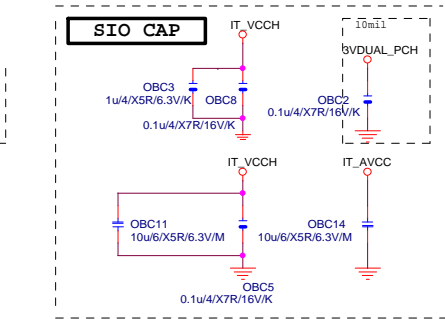
IT8620E GPIO問題調整

PIN 50	第一次接上POWER時會拉 LO
PIN 90/91	DEFAULT 為HIDLED FUNCTION, GP93 BYPASS TO GP92
PIN 108	高溫時 GP92 會被拉Lo(ITE)
PIN 111/112	跟FAN6 FUNCTION 擇一使用,不然會互相干擾



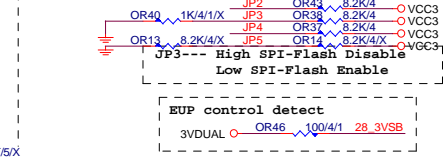
PWR SHT

電源若改成3VDUAL
可省略-RSMRST At least 10ms delay after
3VDUAL stable
For 8728 EUP Function



SIO STRAP

JP4	1	k8 power sequency function is Disable
	0	k8 power sequency function is Enable
JP3	1 1	The default value of EC Index 63h/6Bh/73h is 80h.
	1 0	The default value of EC Index 63h/6Bh/73h is FFh
JP5	0 1	The default value of EC Index 63h/6Bh/73h is 00h.
	0 0	The default value of EC Index 63h/6Bh/73h is 40h.

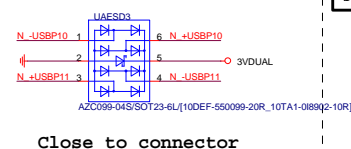
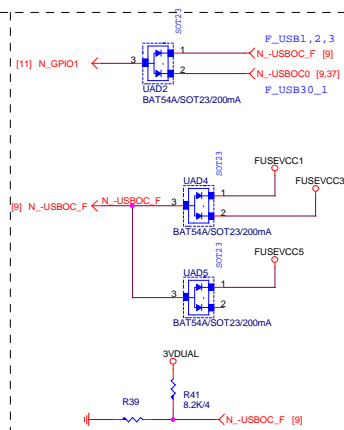
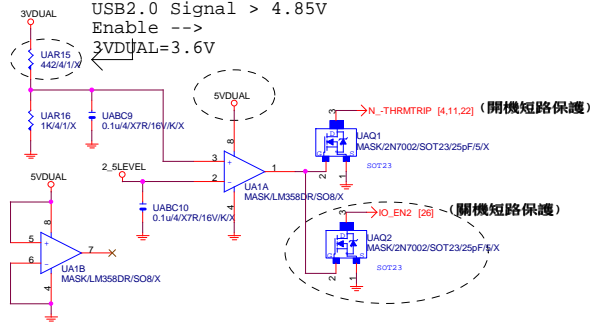


USB2.0 Signal & power short protection

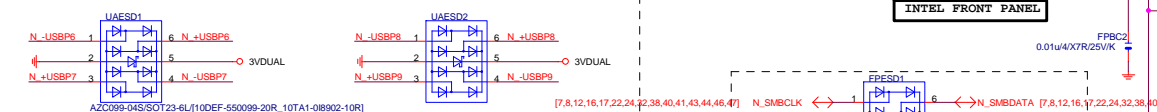
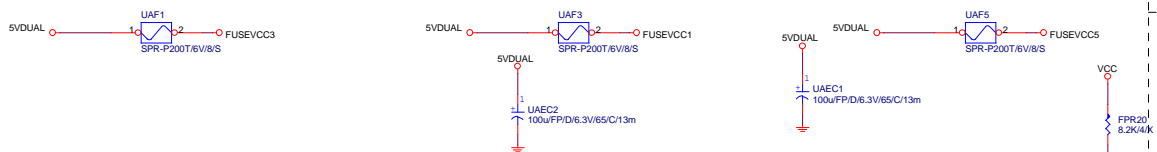
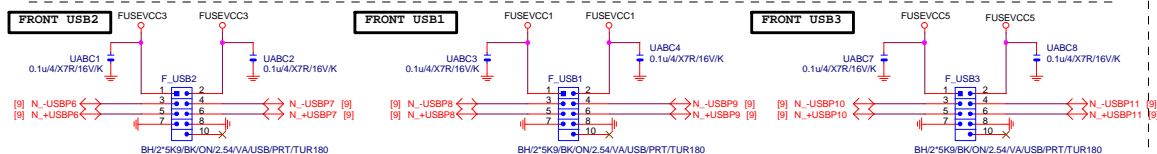
USB2.0 Signal > 4.85V

Enable -->

3VDUAL=3.6V

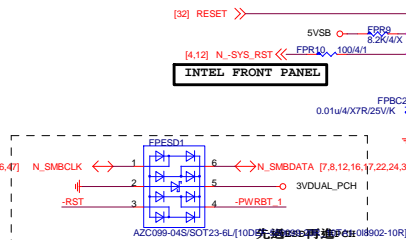


Close to connector

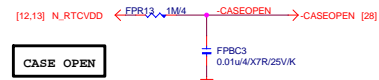


Close to connector

Close to connector

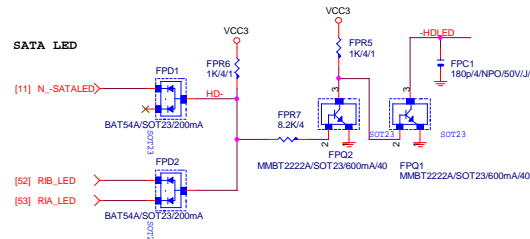


Close to connector

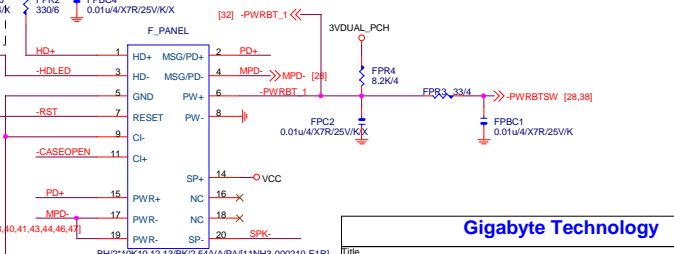
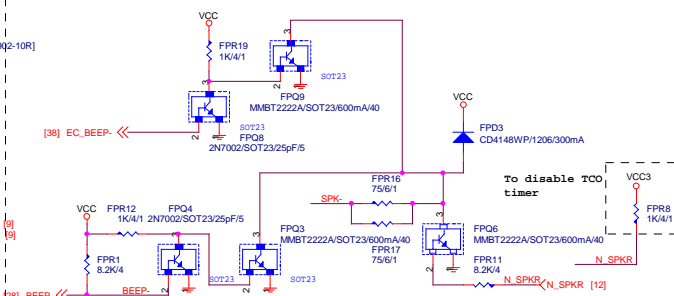


CASE OPEN

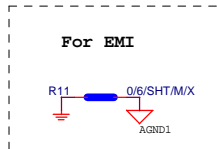
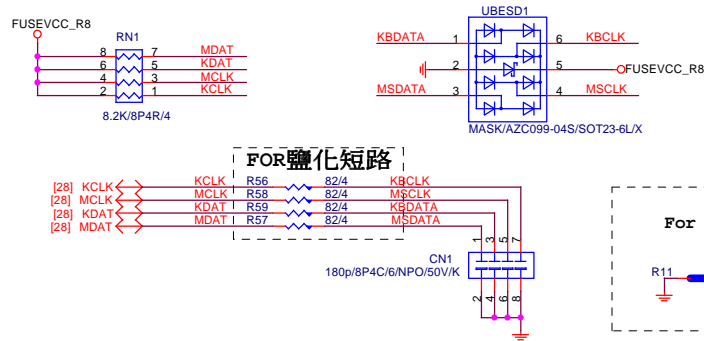
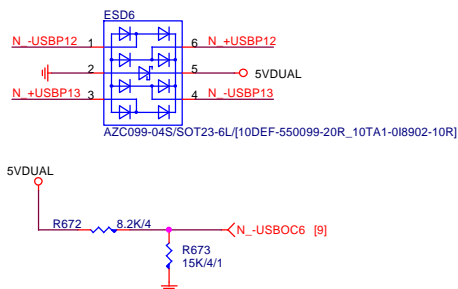
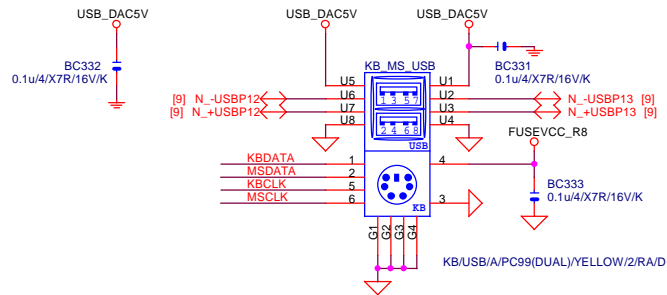
SATA LED



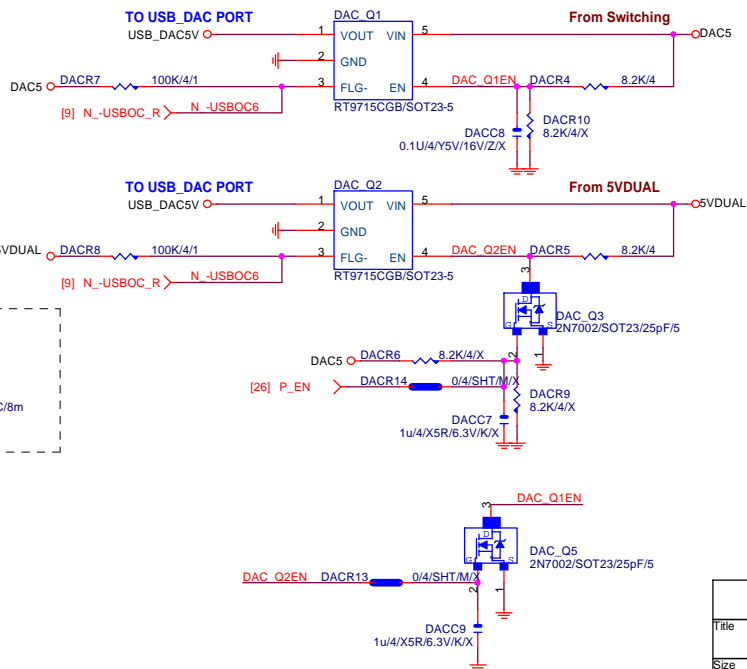
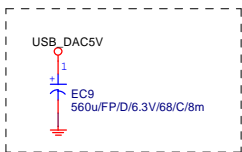
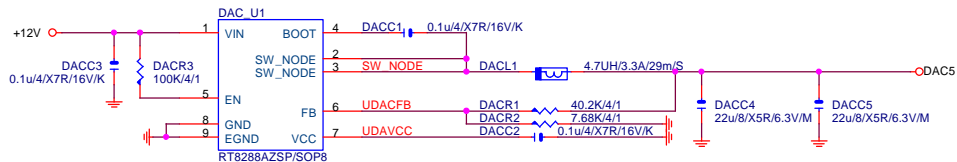
SPEAKER



Gigabyte Technology		
Title		
FP, FP_USB, USB PWR, FDD, BZ, TB C		
Size	Document Number	Rev
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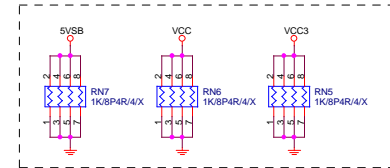
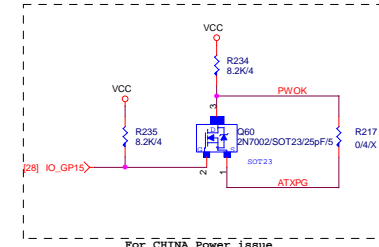
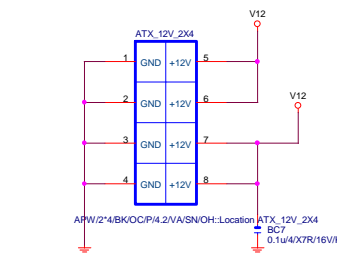
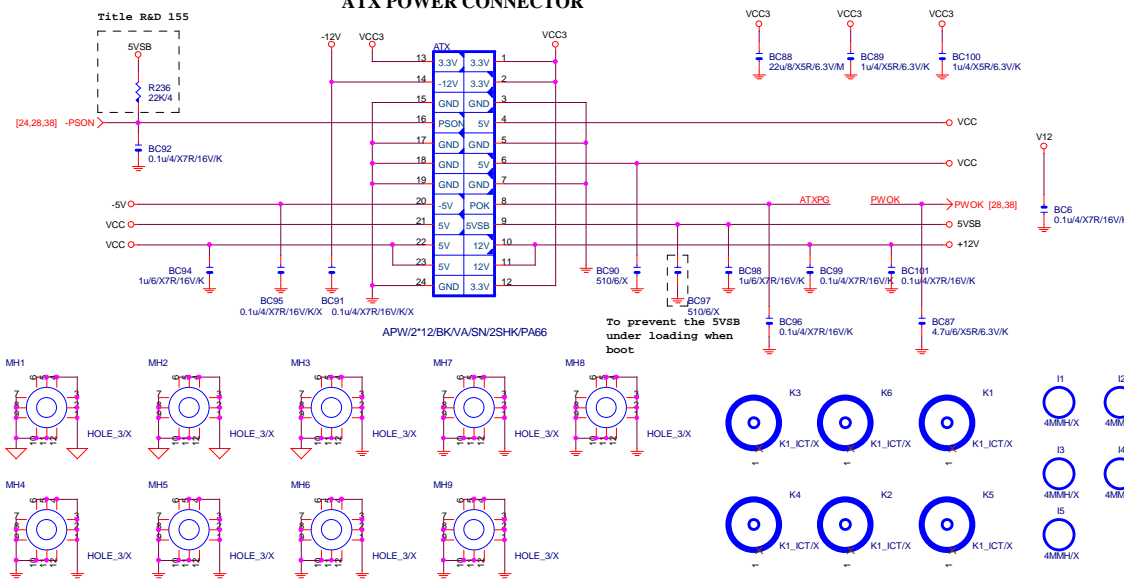


USB_DAC

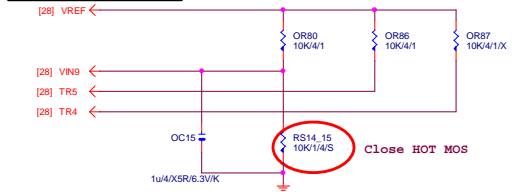


Gigabyte Technology			
Title			
FP,F_USB,USB PWR,FDD,BZ			
Size	Document Number	Rev	
Custom	GA-Z97X-Gaming G1 WIFI-BK	1.0	
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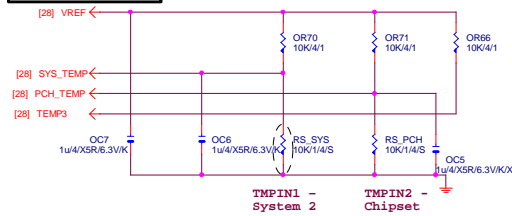
ATX POWER CONNECTOR



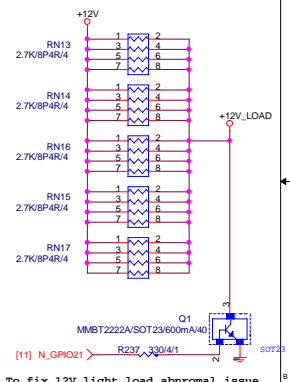
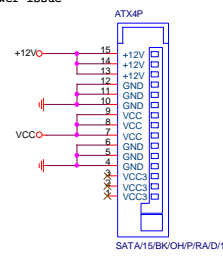
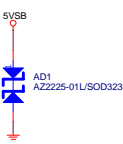
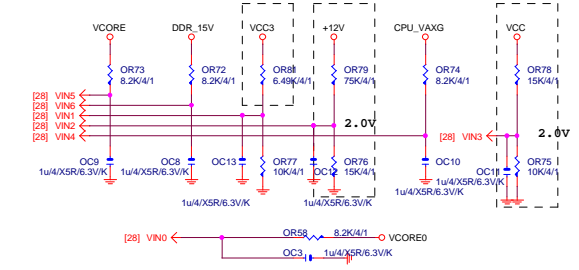
HOT MOS H/W MONITOR

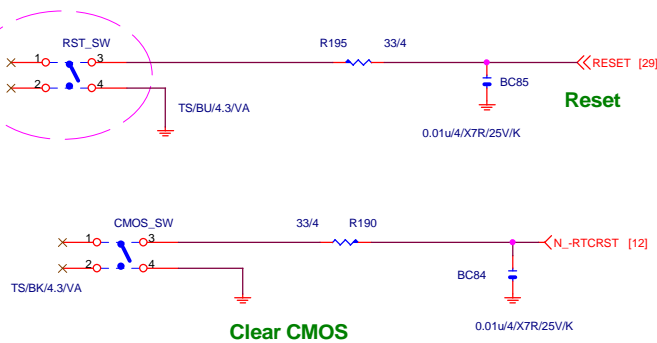
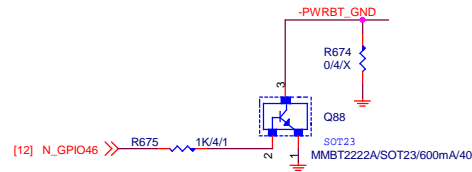
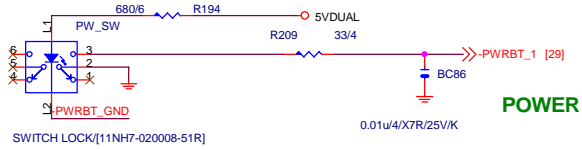
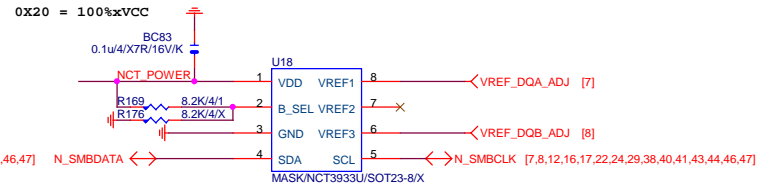
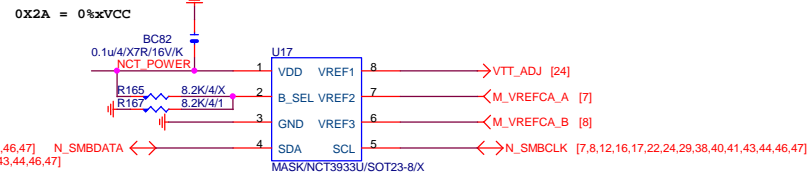
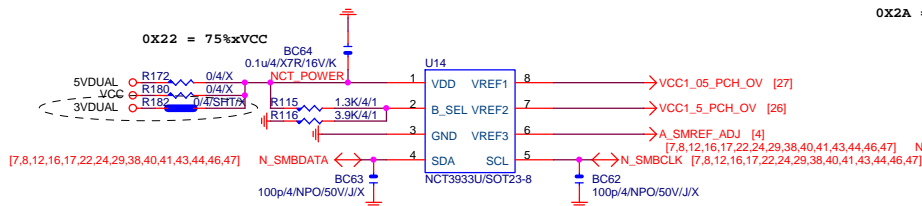


TEMP H/W MONITOR

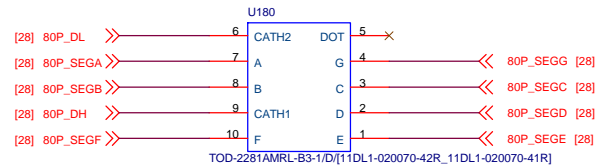
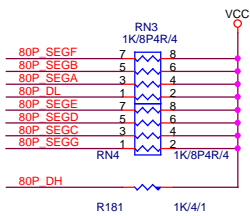


VOLTAGE-- H/W MONITOR



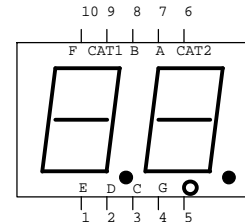


80 PORT

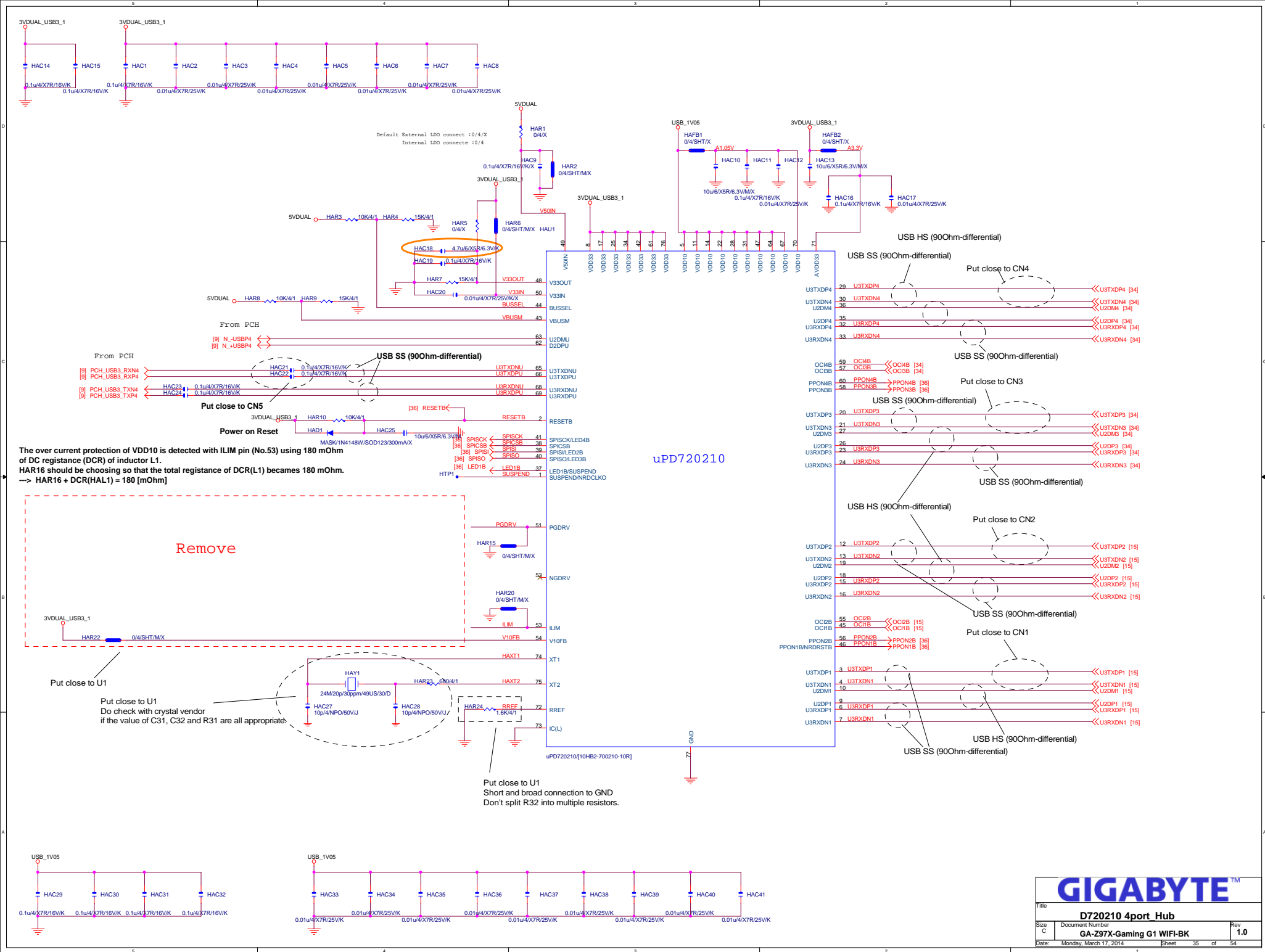


COMMON CATHODE

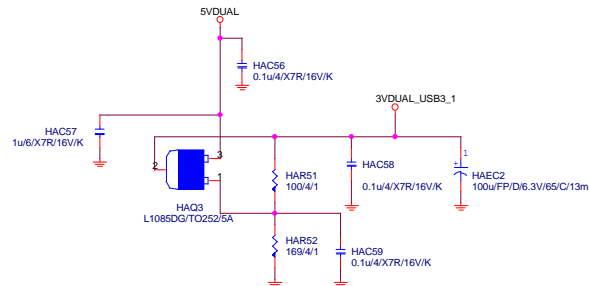
Physical Package (TOP VIEW)



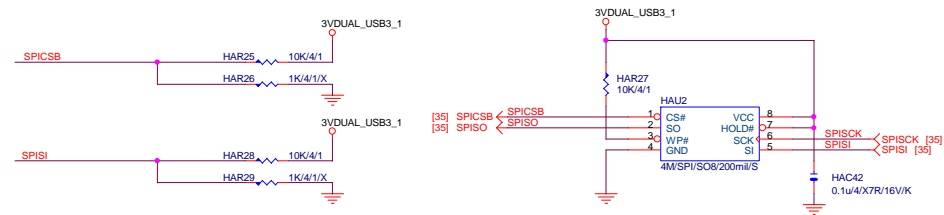
GIGABYTE			
Title: RST, PWR, CLR_CMOS			
Size: Custom	Document Number: GA-Z97X-Gaming G1 WIFI-BK		Rev: 1.0
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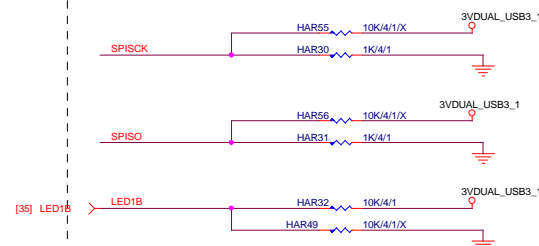
3VDUAL_USB



External SPI ROM ; SPI ROM attached mode

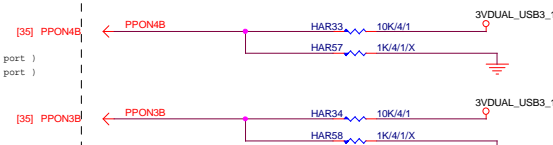


Battery Charging



Number of Ports ; 4Ports mode

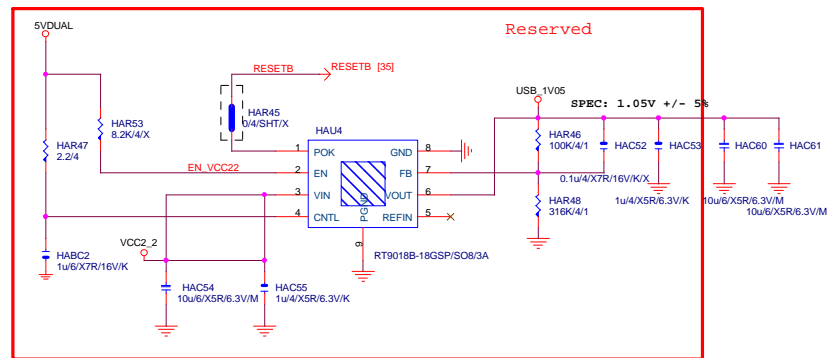
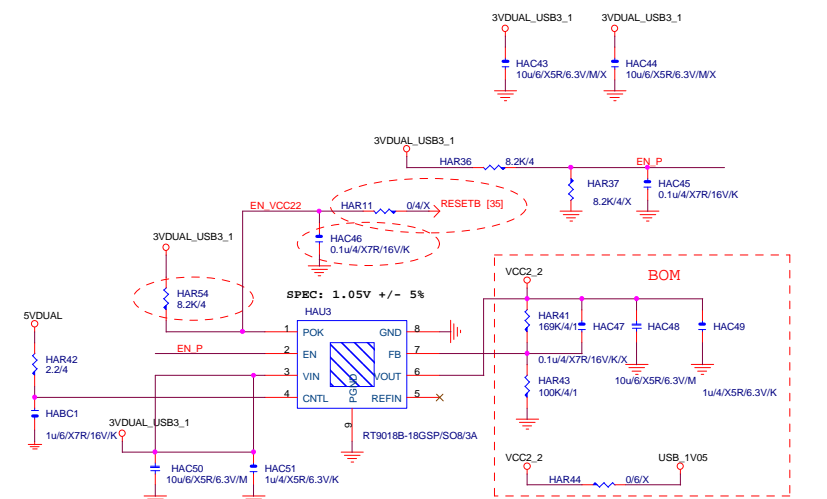
PPON3B / PPON4B : H / H (4 port)
PPON3B / PPON4B : L / L (2 port)



VBUS Power Control ; Individual mode

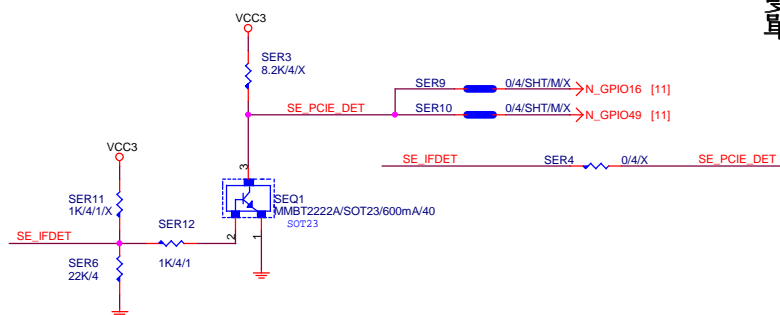
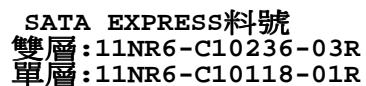
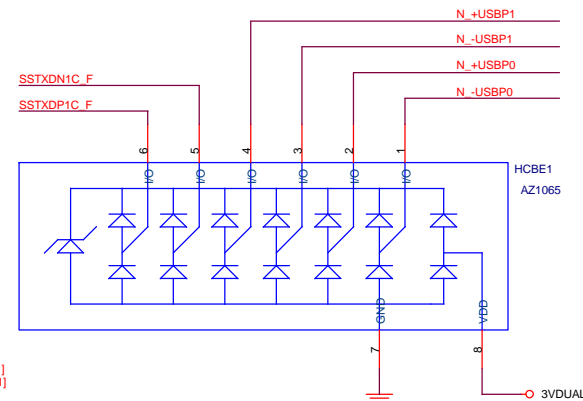
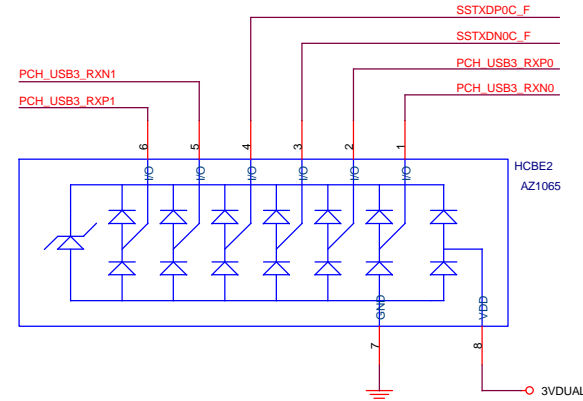
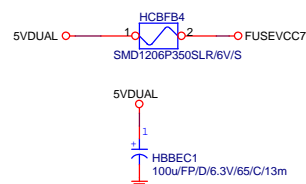
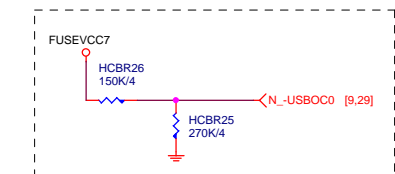


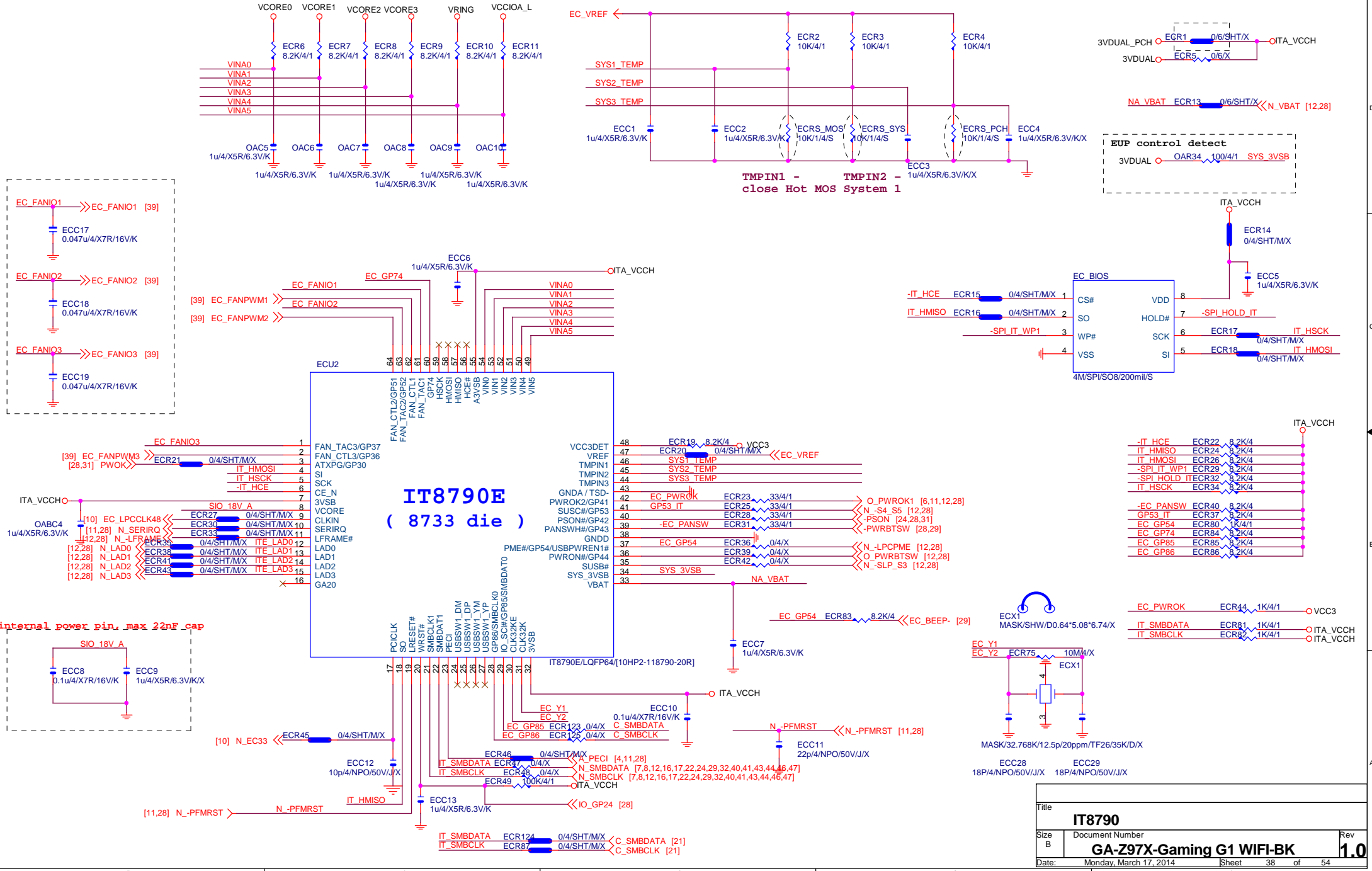
PPON1B Pin Function ; Port1 PPONB mode



GIGABYTE™

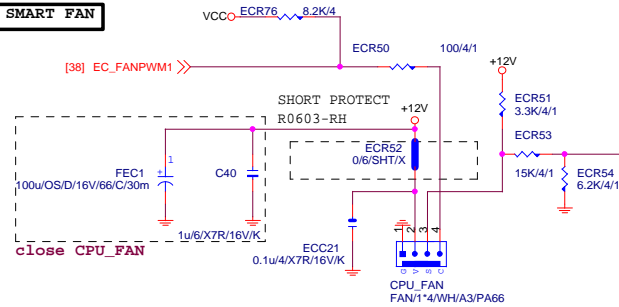
Title	D720210 4port Hub		
Size	Custom	Document Number	GA-Z97X-Gaming G1 WIFI-BK
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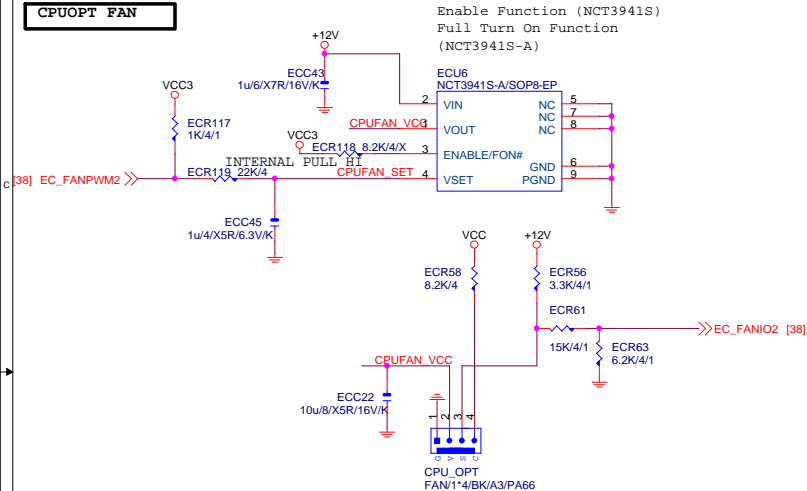


Title			IT8790
Size	Document Number		Rev
	GA-Z97X-Gaming G1 WIFI-BK		1.0
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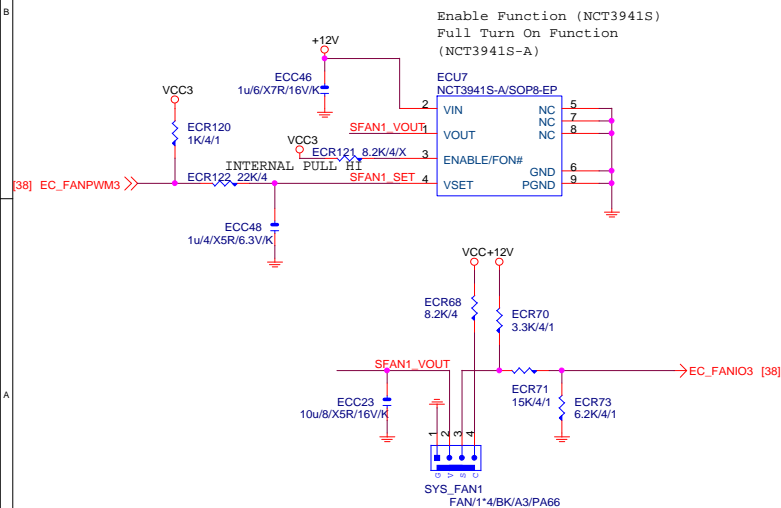
CPU SMART FAN



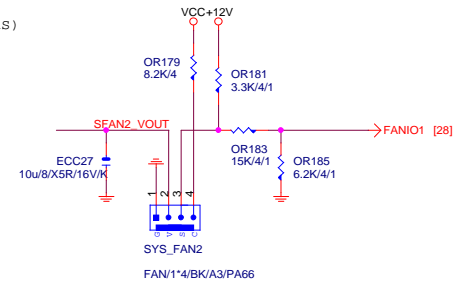
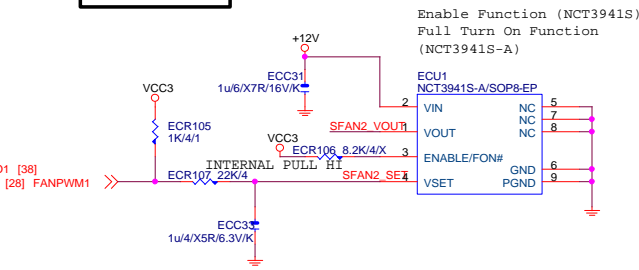
CPUOPT FAN



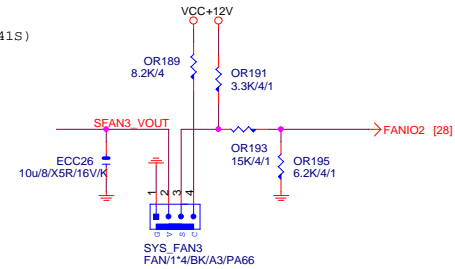
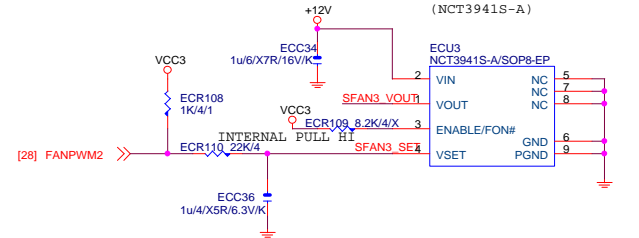
SYS FAN1



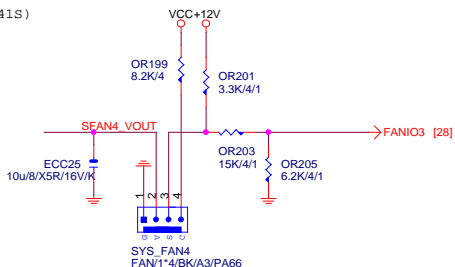
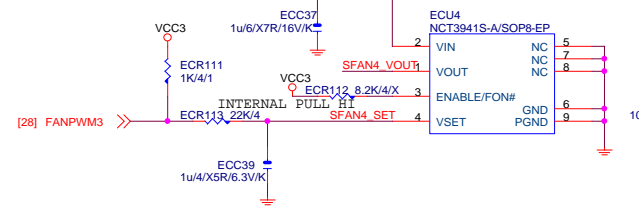
SYS FAN2



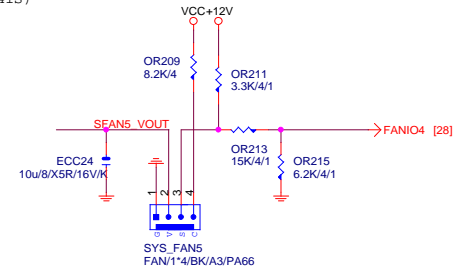
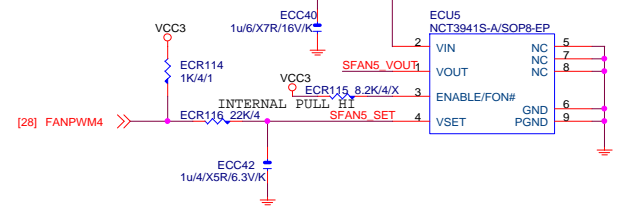
SYS FAN3



SYS FAN4

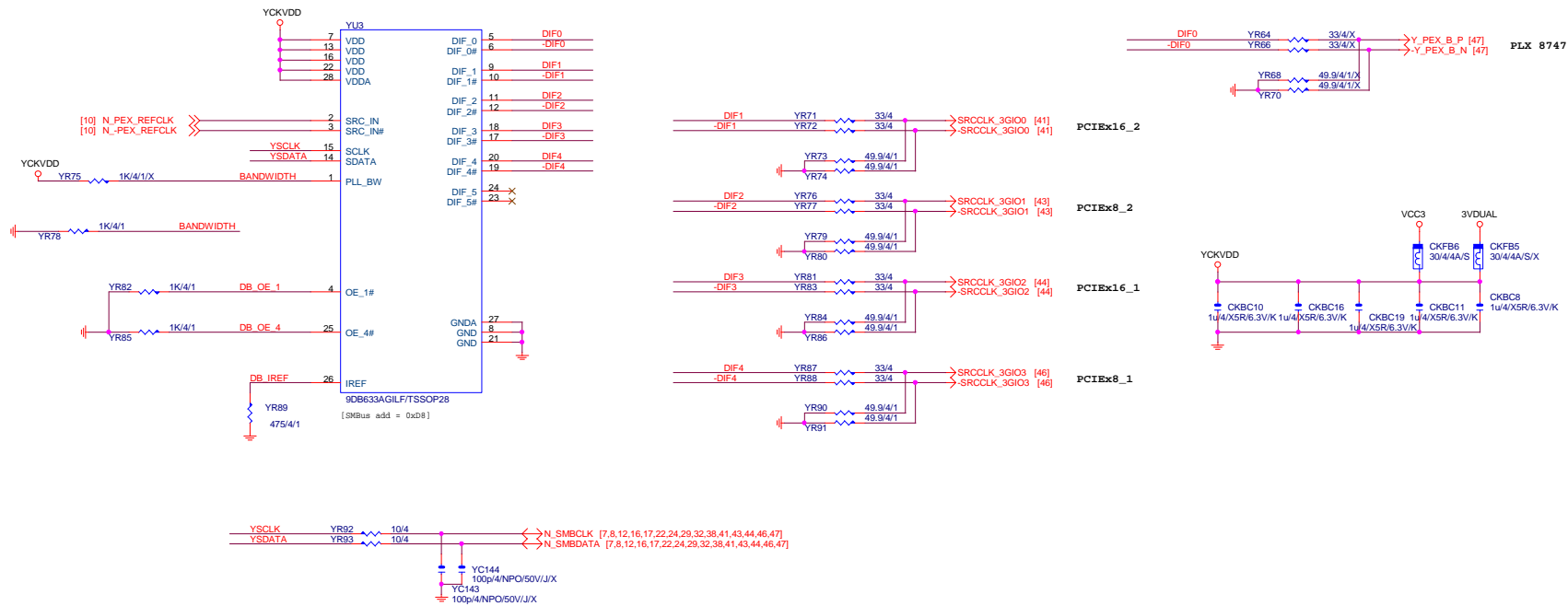


SYS FAN5



Gigabyte Technology

Title			HWM,KB/MS, FAN CTRL
Size	Document Number	Rev	
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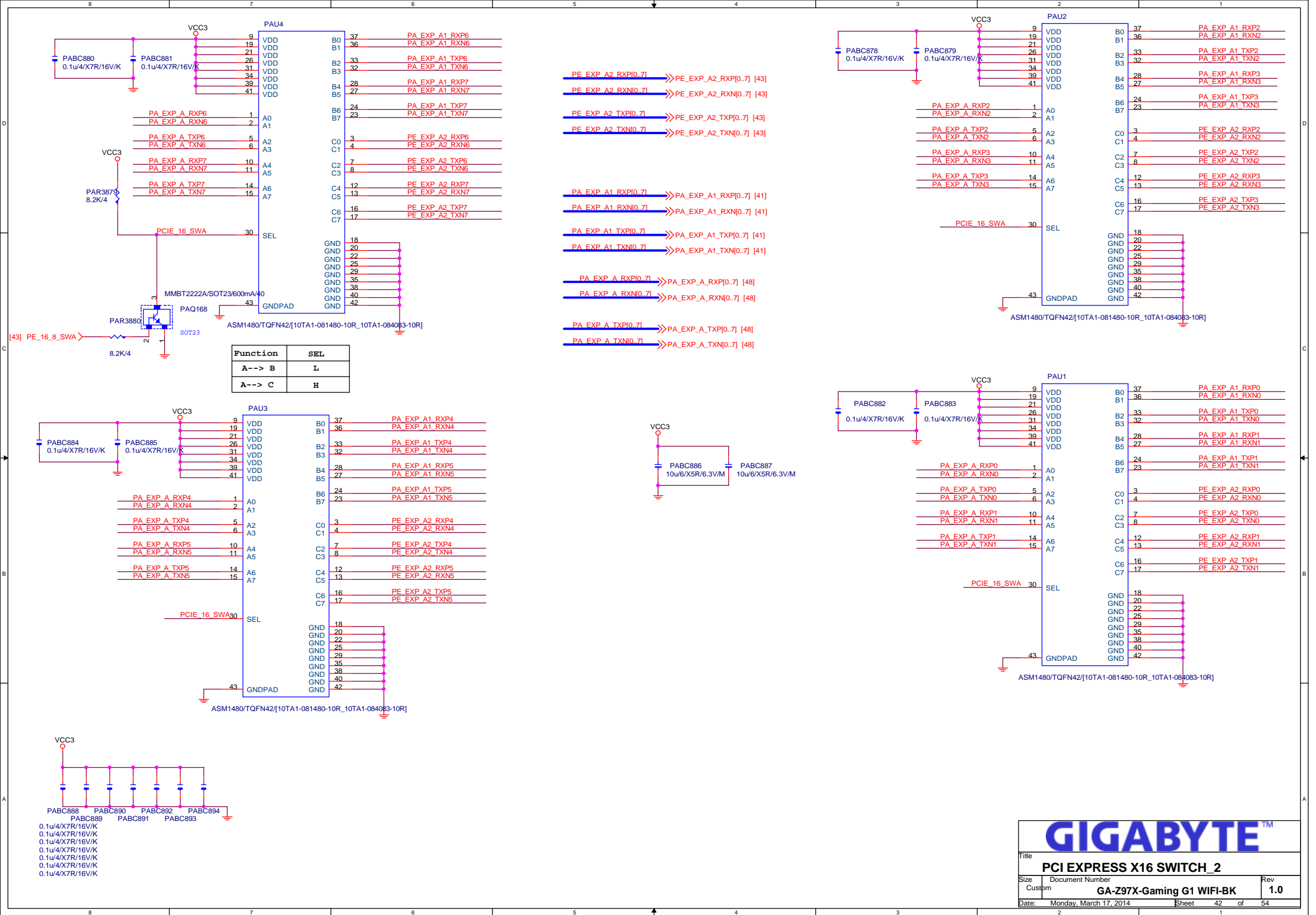
GIGABYTE™

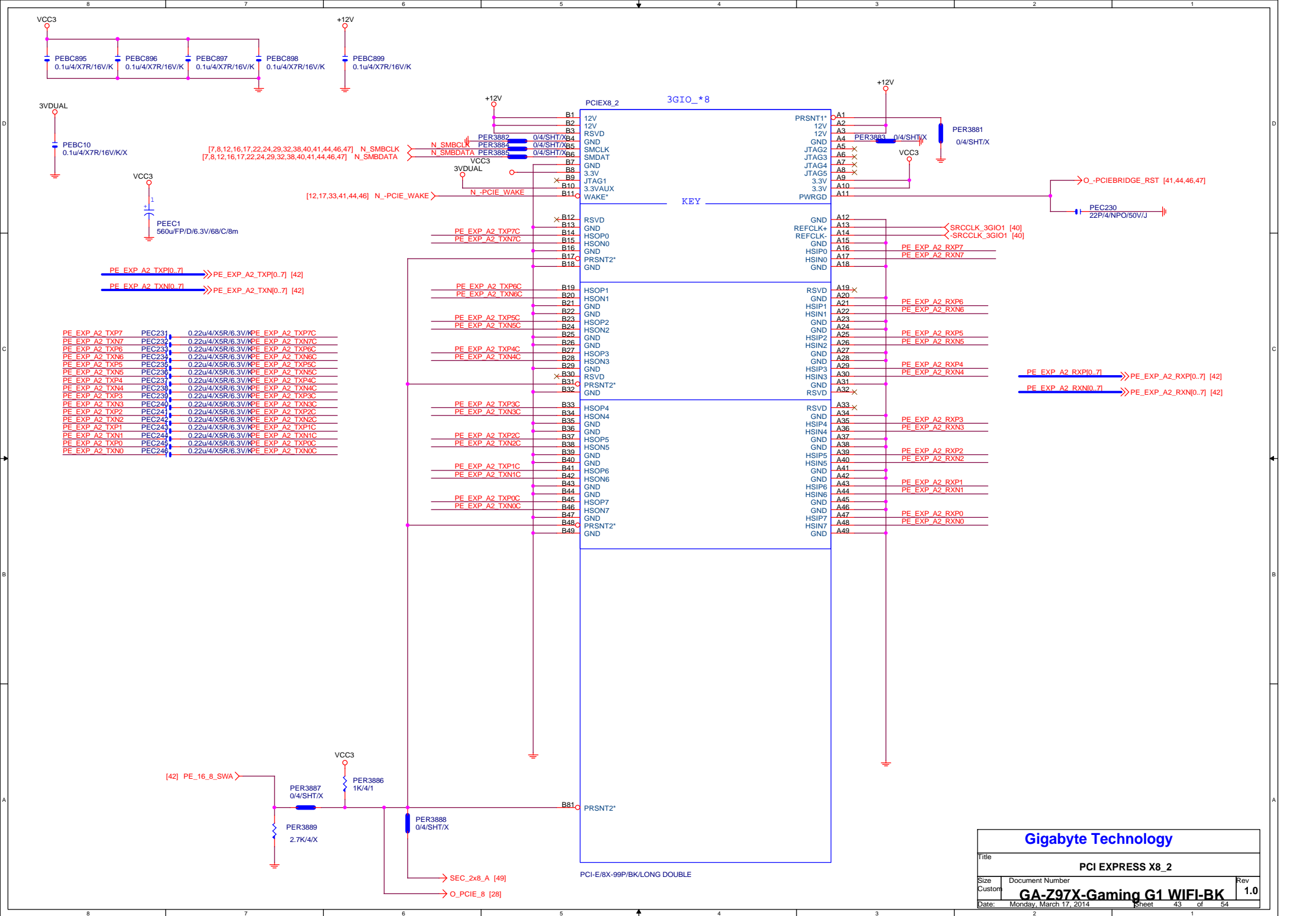
REFCLK

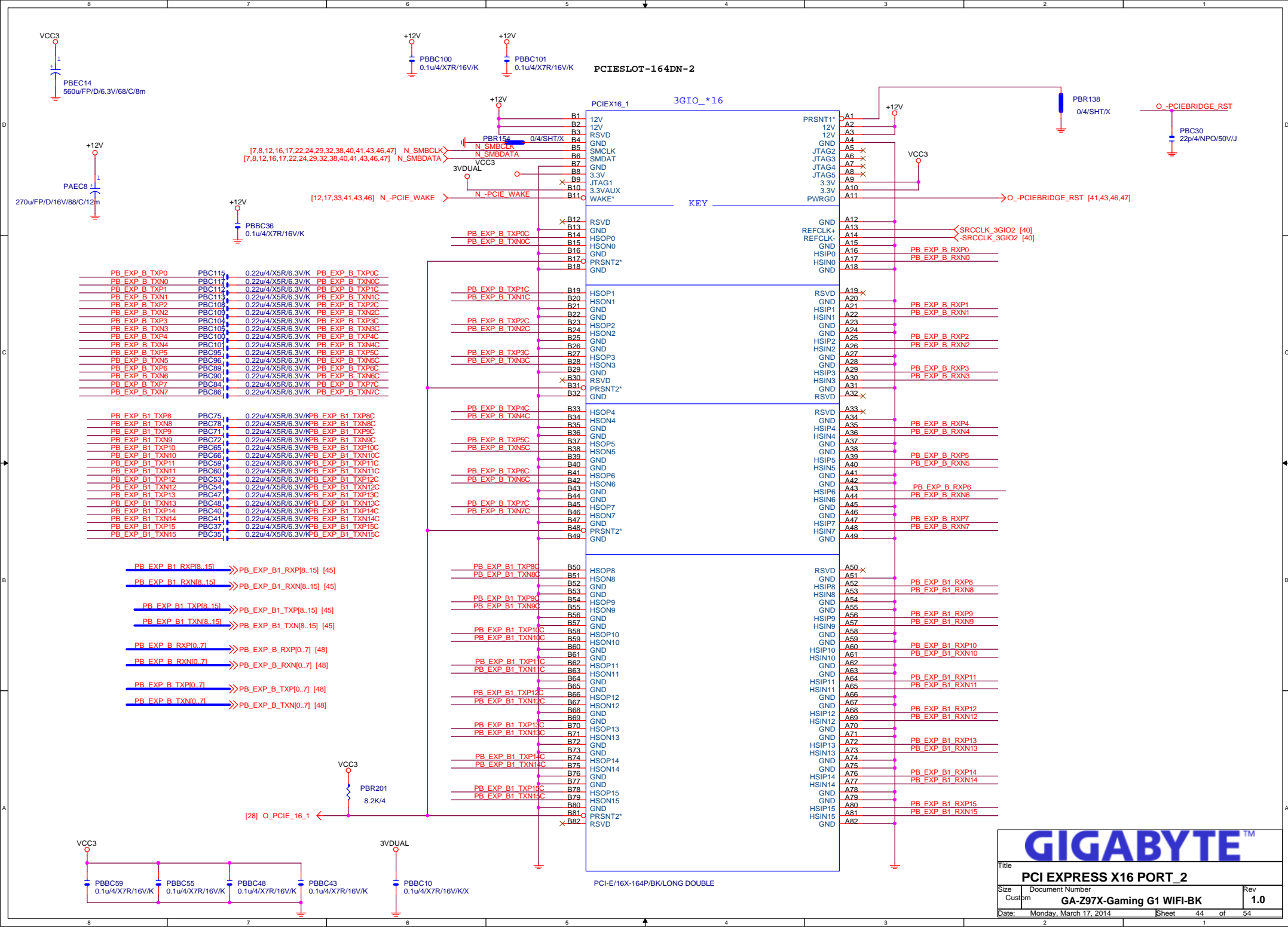
GA-Z97X-Gaming G1 WIFI-BK

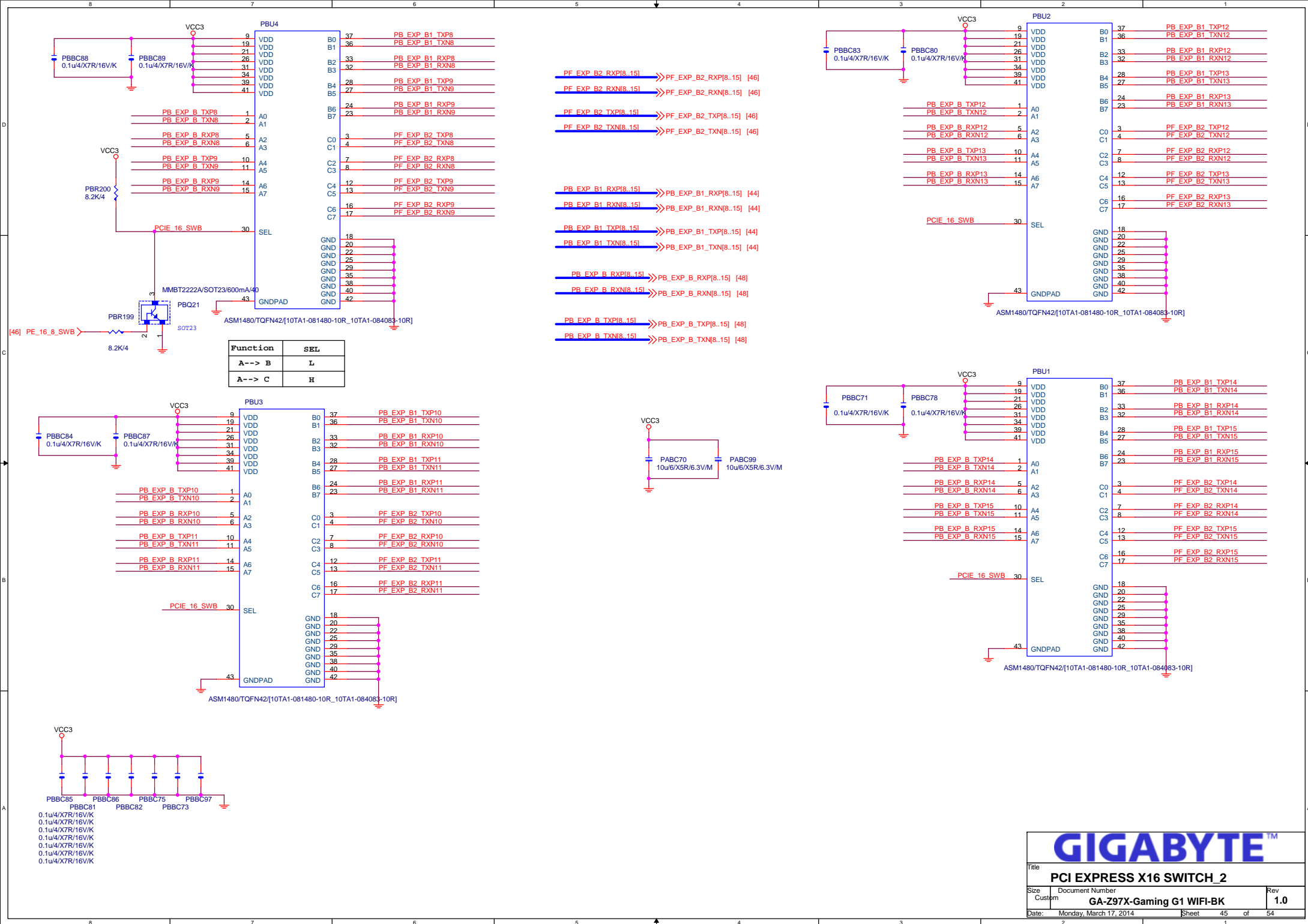
Rev 1.0

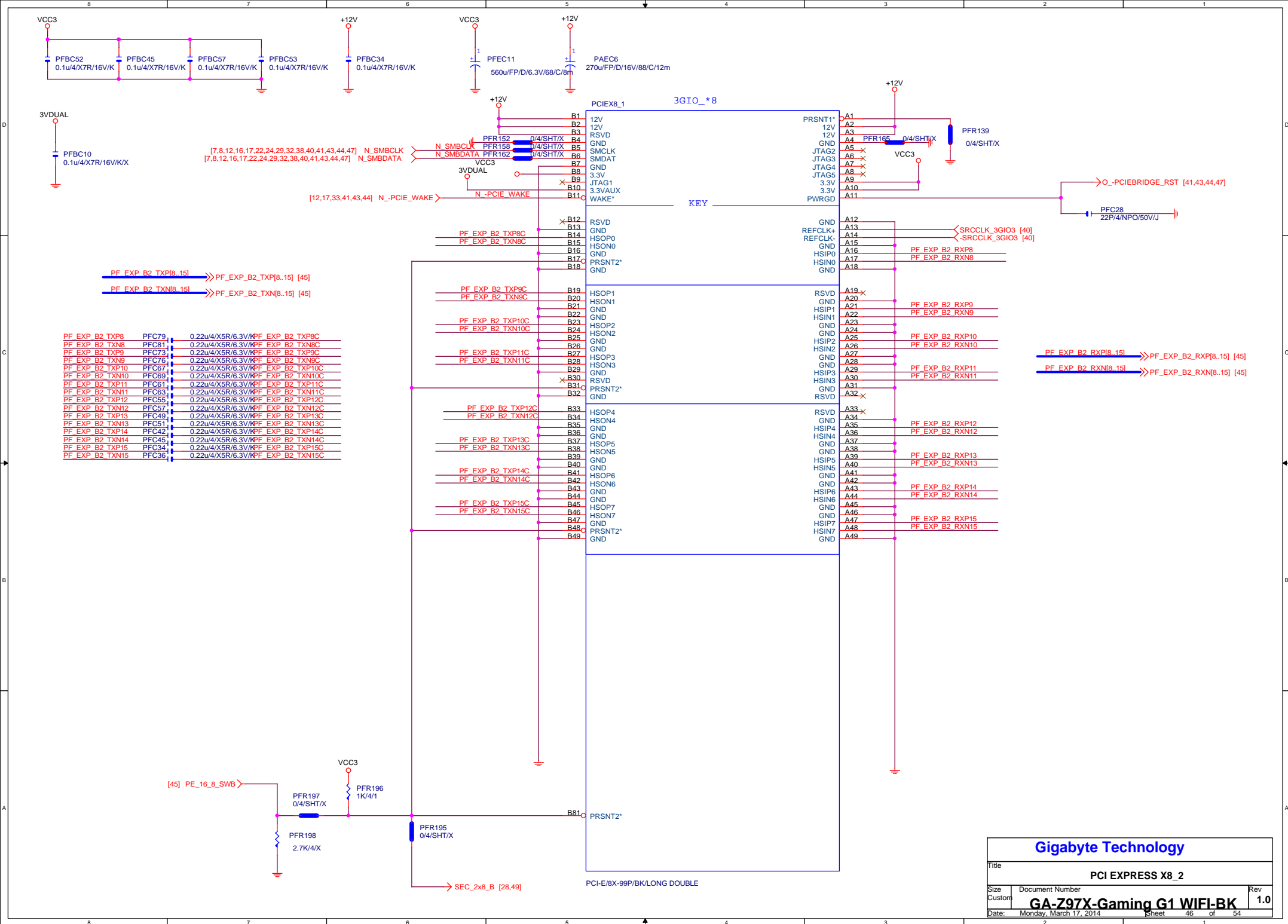
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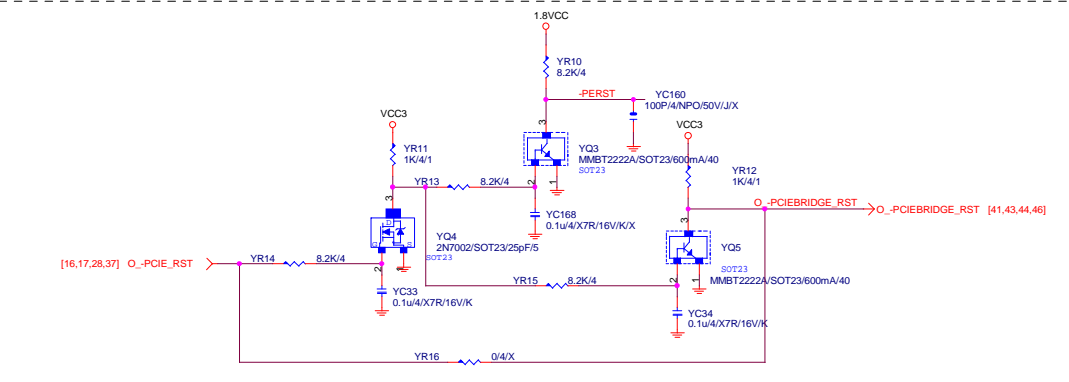
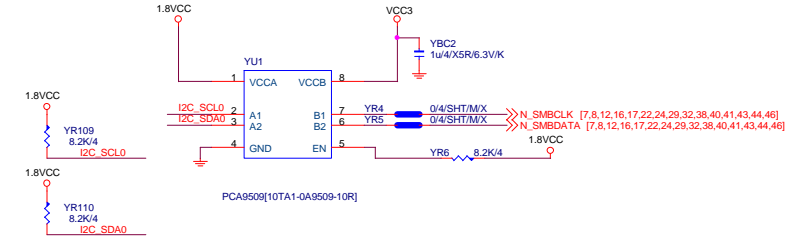
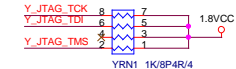
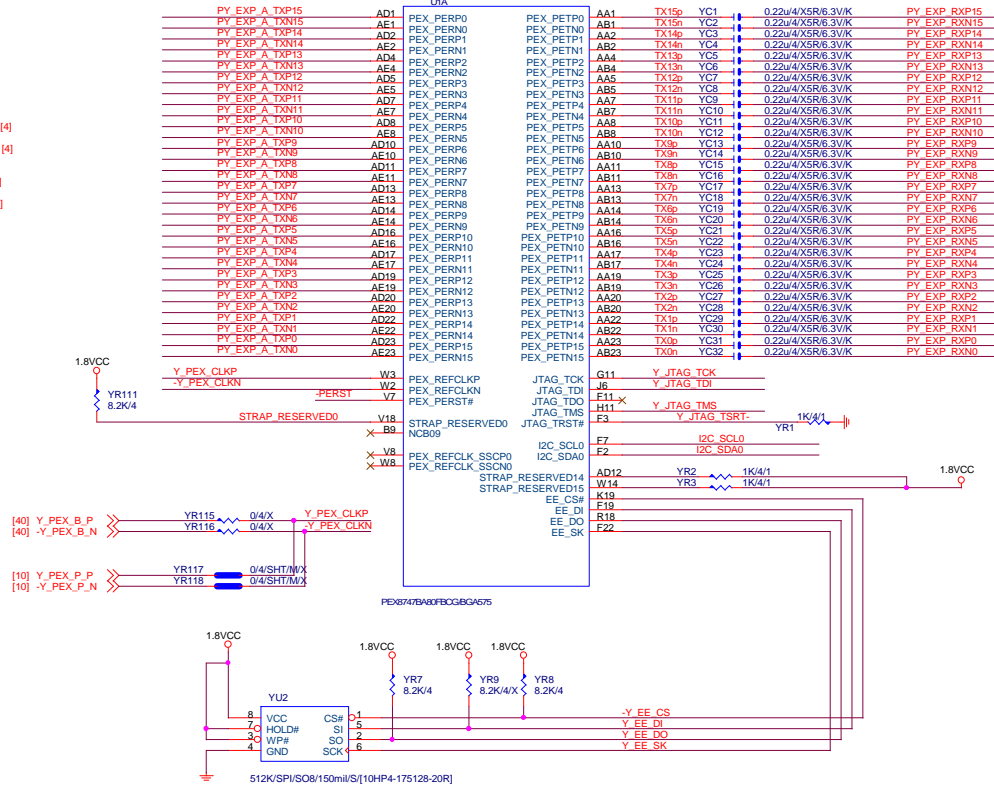
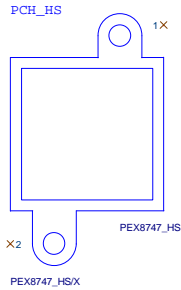


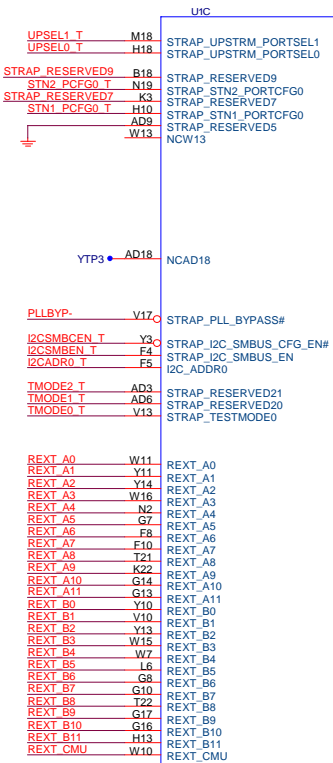




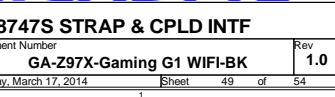
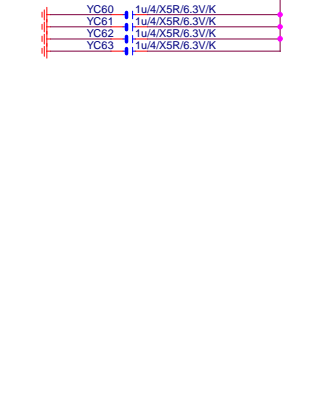
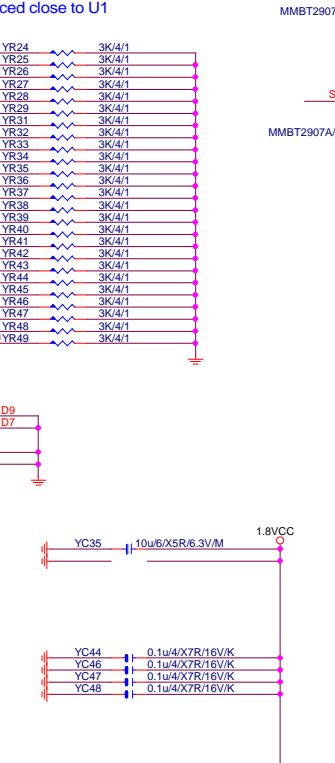
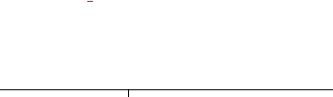
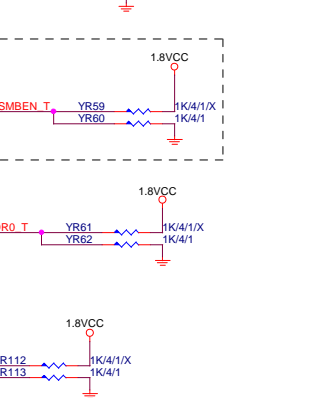
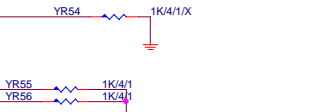
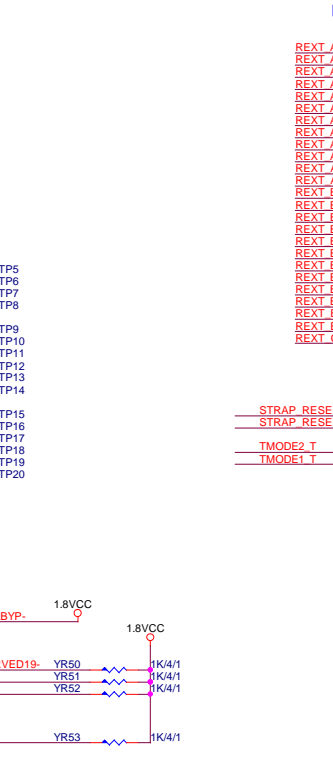
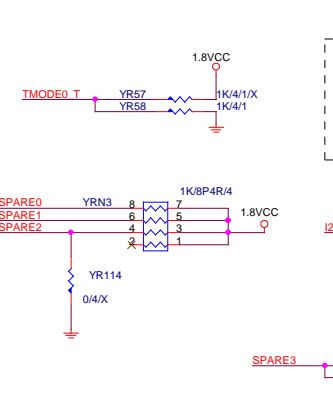
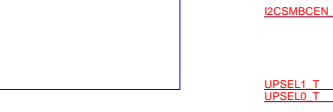
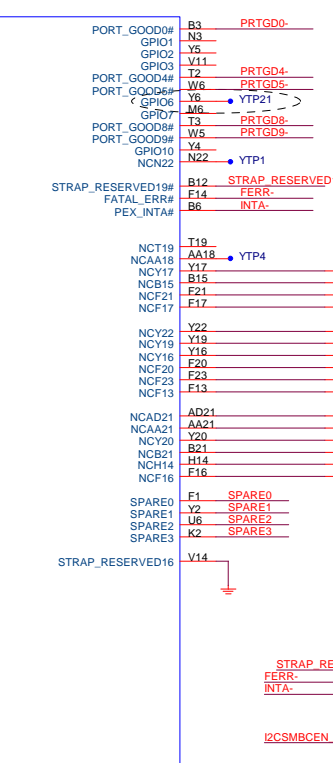
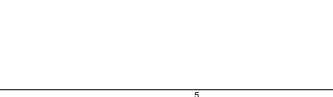


PY EXP A TXP0_15I >>>PY_EXP_A_TXP0_15I [4]
PY EXP A TXN0_15I >>>PY_EXP_A_TXN0_15I [4]
PY EXP RXPI0_15I >>>PY_EXP_RXPI0_15I [4]
PY EXP RXNI0_15I >>>PY_EXP_RXNI0_15I [4]

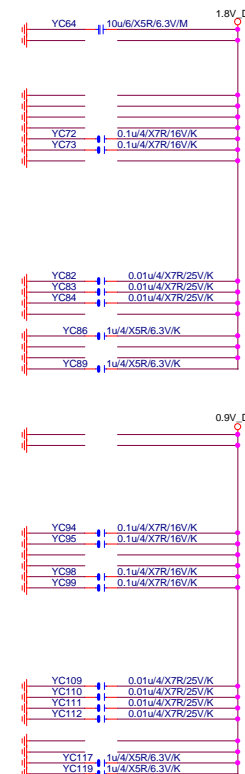
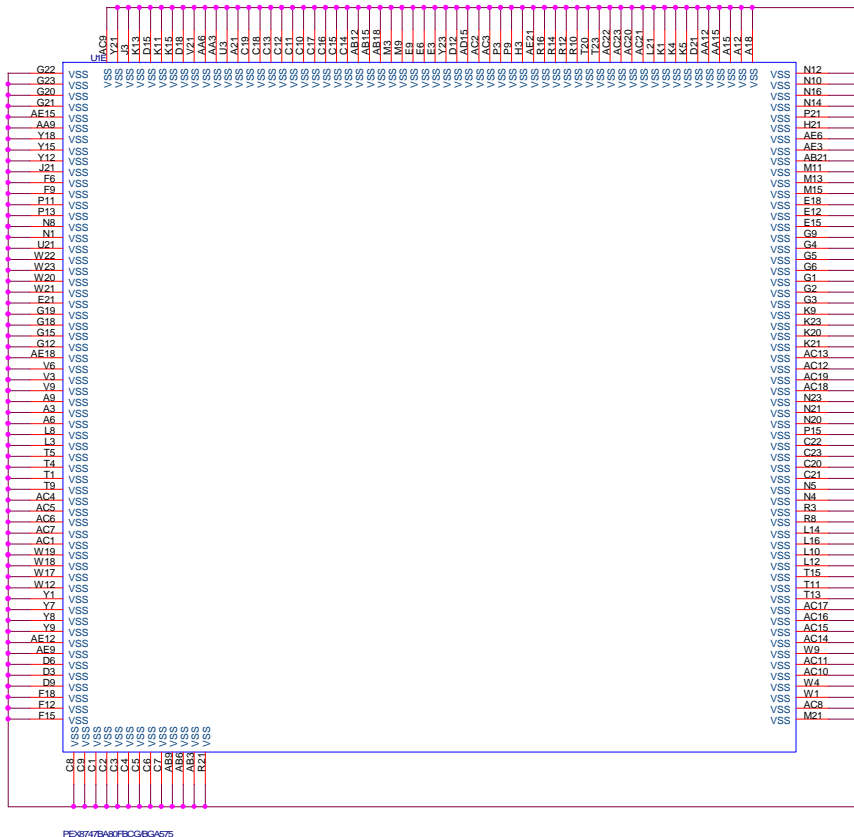
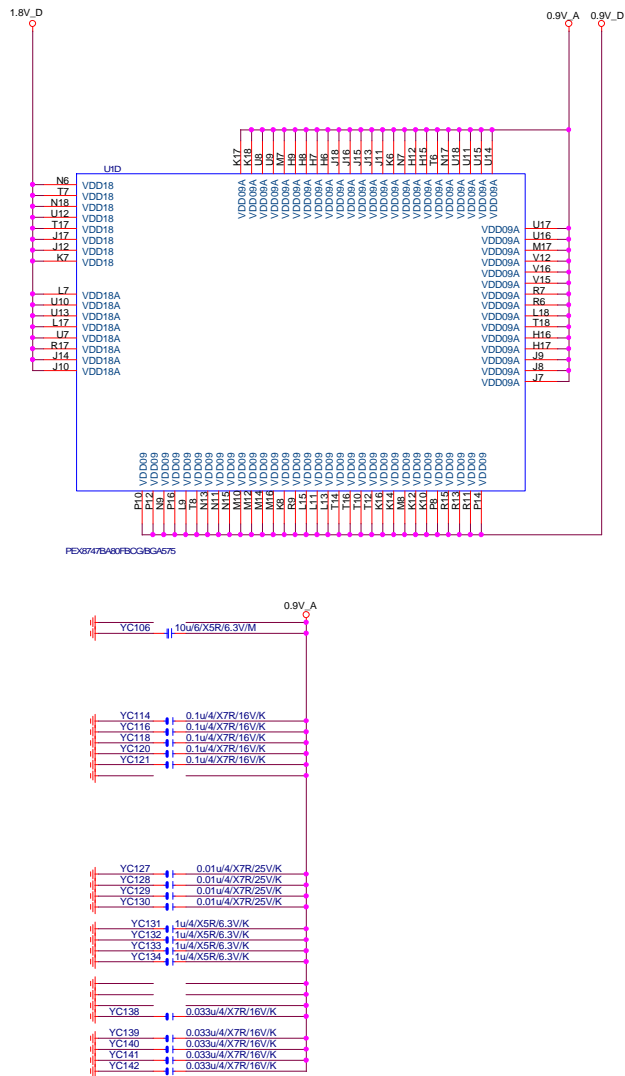


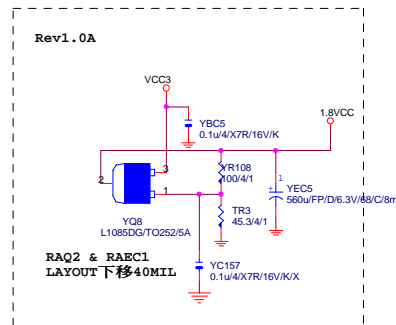
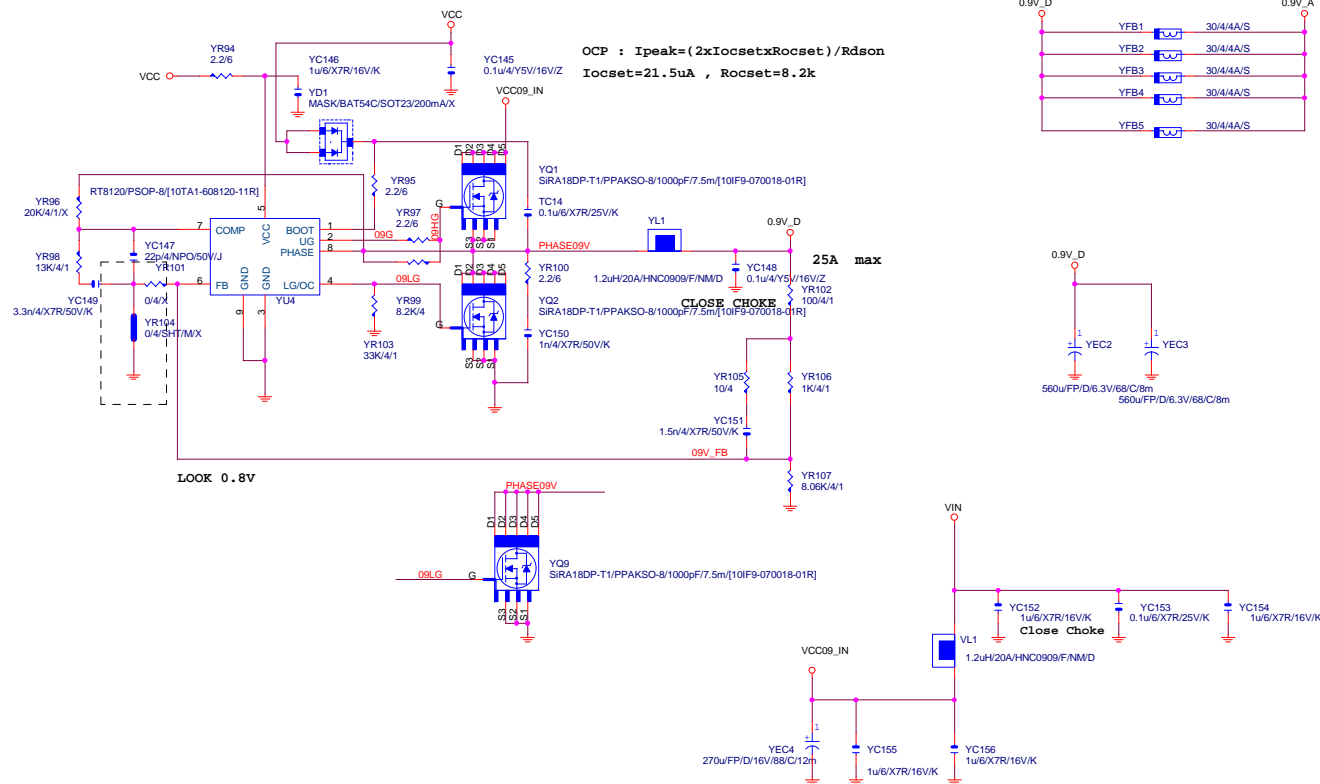


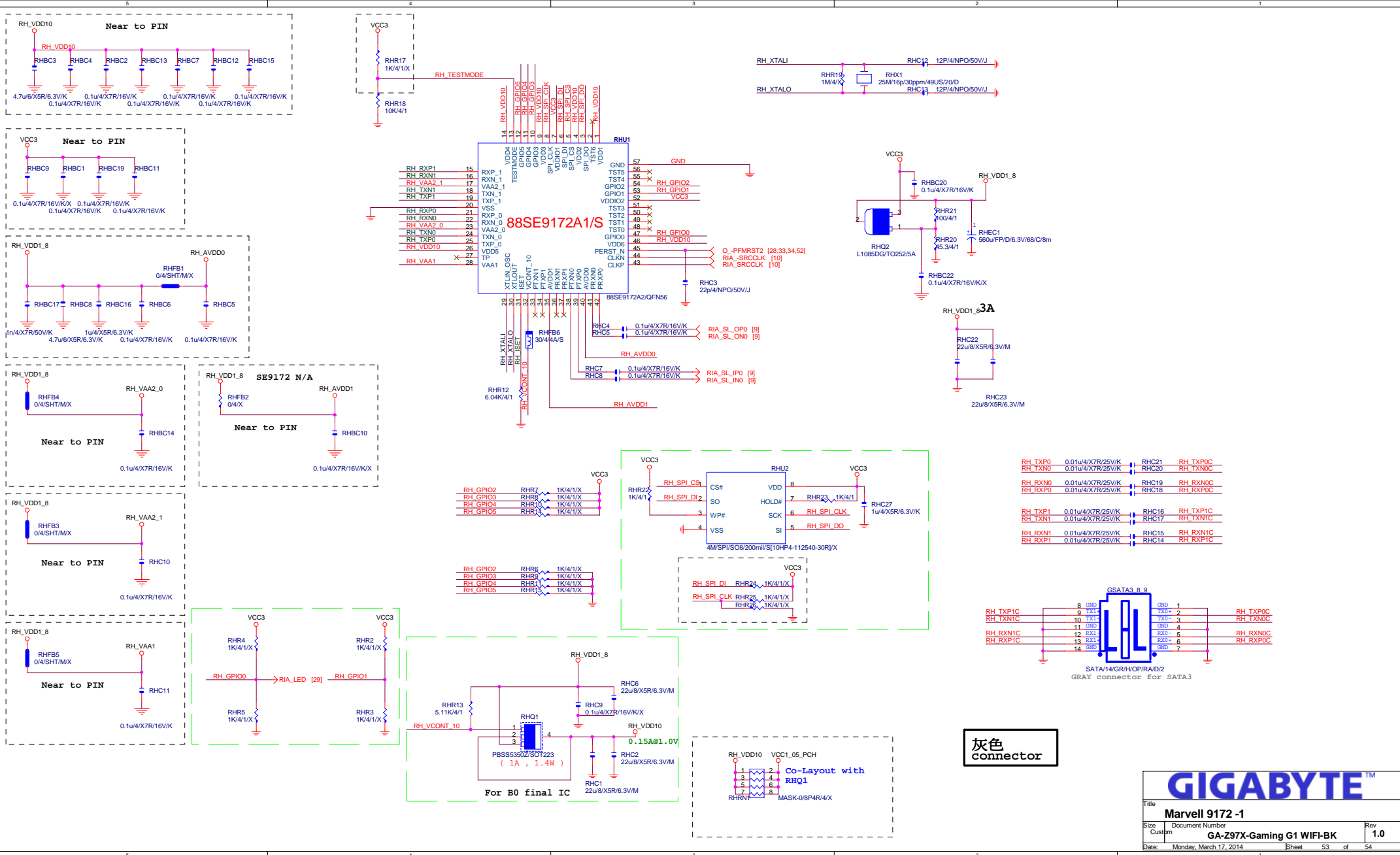
PEX8747BAX0FBC0GBA575



Resistors should be placed close to U1



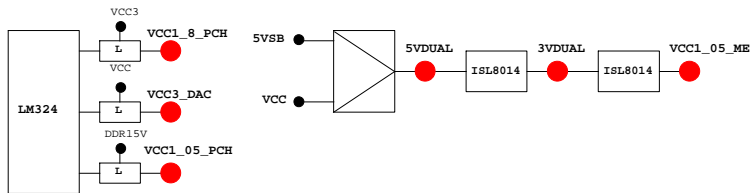




PIN NAME	PWR	ALTER MODE	Default	USAGE	NOTE
GP0	MAIN	H-Z	GPI	-PECI_REQ	N/A
GP1/TACH1	MAIN		GPI	ICH_FAN_TACH1	N/A
GP2/PIRQE#	MAIN		GPI	-PIRQE	F/U 8.2K VCC3
GP3/PIRQF#	MAIN		GPI	-PIRQF	F/U 8.2K VCC3
GP4/PIRQG#	MAIN		GPI	-PIRQG	F/U 8.2K VCC3
GP5/PIRQH#	MAIN		GPI	-PIRQH	F/U 8.2K VCC3
GP6/TACH2	MAIN		GPI	ICH_FAN_TACH2	N/A
GP7/TACH3	MAIN		GPI	ICH_FAN_TACH3	N/A
GP8	STBY	H	GPO	GPIO8	F/U 8.2K 3VDUAL
GP9/OC5#	STBY		NATIVE	OC5#	N/A
GP10/OC6#	STBY		NATIVE	OC6#	N/A
GP11/SMBALERT#	STBY		NATIVE	-SMBALERT	F/U 8.2K 3VDUAL
GP12	STBY	L	GPI	LAN_PHY_PWR_CTRL	F/U 8.2K 3VDUAL
GP13	STBY	L	GPI	GPIO13	F/U 8.2K 3VDUAL
GP14/OC7#	STBY		NATIVE	OC7#	N/A
GP15	STBY	L	GPO	GPIO15	N/A
GP16	MAIN		GPI	-SKTOCC	F/U 8.2K VCC3
GP17/TACH0	MAIN		GPI	ICH_FAN_TACH0	N/A
GP18	MAIN		NATIVE	MB_ID0	F/D 8.2K GND
GP19	MAIN		GPI	-LAN1_ISO	F/U 8.2K VCC3
GP20	MAIN		NATIVE	LED_CTL	F/U 1K VCC3
GP21	MAIN		GPI	VCC18_PCH_OV2	F/U 8.2K VCC3
GP22	MAIN	H-Z	GPI	VCORE_OV1	F/U 8.2K VCC3
GP23	MAIN		NATIVE	-LDRQ1	F/U 8.2K VCC3
GP24	STBY	L	GPO	TLS	F/U 8.2K 3VDUAL
GP25	STBY		NATIVE	-CPU_STOP	F/U 8.2K 3VDUAL
GP26	STBY		NATIVE	-ACZ_DET	F/U 8.2K 3VDUAL
GP27	STBY	H	GPO	GPIO27	F/U 8.2K 3VDUAL
GP28	STBY	H	GPO	GPIO28	F/U 8.2K 3VDUAL
GP29	STBY	L	GPI	GPIO29	N/A
GP30	STBY	H-Z	GPI	S_PWR_ACK	F/U 100K 3VDUAL
GP31	STBY	H-Z	GPI	N/A(Reverse)	F/U 8.2K VCC3
GP32	MAIN	H	GPO	MB_ID1	F/D 8.2K GND
GP33	MAIN	H	GPO	LOAD-LINE	F/U 1K VCC3
GP34	MAIN	H-Z	GPI	-PCI_STOP	F/U 8.2K VCC3
GP35	MAIN	L	GPO	GPIO35	F/U 8.2K VCC3
GP36	MAIN		GPI	-LAN1_DSM	F/U 8.2K VCC3
GP37	MAIN		GPI	N/A	F/U 8.2K VCC3
GP38	MAIN	H-Z	GPI	VCORE_OV2	F/U 8.2K VCC3
GP39	MAIN	H-Z	GPI	-LAN_DSM	F/U 8.2K VCC3
GP40	STBY		NATIVE	OC1#	N/A
GP41	STBY		NATIVE	OC2#	N/A
GP42	STBY		NATIVE	OC3#	N/A
GP43	STBY		NATIVE	OC4#	N/A
GP44	STBY	L	NATIVE	N/A	F/U 8.2K 3VDUAL
GP45	STBY		NATIVE	-LPCPME	F/U 8.2K 3VDUAL
GP46	STBY	L	NATIVE	PWR_LED	F/U 8.2K 3VDUAL
GP47	STBY		NATIVE	FS1_LED	F/U 8.2K 3VDUAL
GP48	MAIN	H-Z	IN	EN_PWM	F/U 8.2K VCC3
GP49	MAIN	H-Z	IN	VCC18_OV1	F/U 8.2K VCC3
GP50	MAIN		NATIVE	-REQ1	F/U 2.2K VCC
GP51	MAIN	H	NATIVE	-GNT1	N/A
GP52	MAIN		NATIVE	-REQ2	F/U 2.2K VCC
GP53	MAIN	H	NATIVE	-GNT2	N/A
GP54	MAIN		NATIVE	-REQ3	F/U 2.2K VCC
GP55	MAIN	H	NATIVE	-GNT3	N/A
GP56	STBY		NATIVE	N/A(Reverse)	F/U 8.2K 3VDUAL
GP57	STBY	H-Z	IN	VCORE_OV1	F/U 8.2K 3VDUAL
GP58	STBY	H-Z	NATIVE	F_USB_OC	F/U 8.2K 3VDUAL
GP59	STBY		NATIVE	USB_OC0#	N/A
GP60	STBY	H-Z	NATIVE	N/A(Reverse)	F/U 8.2K 3VDUAL
GP61	STBY	L	NATIVE	-SUSTAT	N/A
GP62	STBY	L	NATIVE	SUSCLK	N/A
GP63	STBY	L	NATIVE	GPIO63	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_OV2	F/U 8.2K 3VDUAL
GP73	STBY		NATIVE	1_05V_OV1	F/U 8.2K 3VDUAL
GP74	STBY	H-Z	NATIVE	1_05V_OV2	F/U 8.2K 3VDUAL
GP75	STBY	H-Z	NATIVE	N/A(Reverse)	F/U 8.2K 3VDUAL

PIN NAME	USAGE	NOTE
SVC/PECI_RQT/GP14	~PECI_REQ	
PWROK1/GP13	PWROK1/ITE_PWROK	
KRST#/GP62	~KBRST	
SO/GP50	~ICH_SPI_CS	
IRTX/GP47/CE2_N/JF7	CEB_N	
GP46/IRRX	~LAN2_DS0M	
PSION#/GP42	~PS0N	
PWROK2#/GP41	PECI_CTL	
PCIRST3#/GP10/VDIMM_STR_EN	~PCIE_RST	
RSMRST#CIRRXL/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	
3VBSW#/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/SMB_C_R	FS PIN	FST_2X8
INIT#/GP85/SMBD_M	SEC_2x8	GTLREF_AD2
ACK#/GP83	DDR_LED1_C	
VIDO1/GP21/DCD2#	DDR_LED2_C	
STB#/GP87/SMB_C_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#	JF6	
PD5/GP75/BUSS00	SB_LED3_C	



The diagram illustrates a system architecture with a central CPU connected to a PCH (Platform Controller Hub). The PCH is connected to several I/O and storage controllers, which are further connected to various processors (PH1-PH9) and storage devices (DL1-DL9). The controllers are labeled VTT, VTCORE, and VTCORE. The processors are arranged in a grid-like fashion around the central CPU and PCH.

```

graph TD
    CPU[CPU] --- PCH[PCH]
    PCH --- VTT[VTT]
    PCH --- VTCORE1[VTCORE]
    PCH --- VTCORE2[VTCORE]
    VTT --- PH1[PH1]
    VTT --- PH2[PH2]
    VTT --- L4[L4]
    VTT --- L3[L3]
    VTCORE1 --- PH3[PH3]
    VTCORE1 --- PH4[PH4]
    VTCORE1 --- DL6[DL6]
    VTCORE1 --- DL8[DL8]
    VTCORE2 --- PH5[PH5]
    VTCORE2 --- PH6[PH6]
    VTCORE2 --- DL3[DL3]
    VTCORE2 --- DL5[DL5]
    VTCORE2 --- PH7[PH7]
    VTCORE2 --- PH8[PH8]
    VTCORE2 --- DL9[DL9]
    VTCORE2 --- DL4[DL4]
    
```

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

8IBP:
1.12SP2-01A001-Y1R/Y2R
2.12SP2-01A001-Z1R/Z2R
(HIBRID模組)包材階

	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