

Model Name: GA-Z97M-D3H

Revision 1.0

SHEET

TITLE

01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	CPU LGA1150-A
05	CPU LGA1150-B
06	CPU LGA1150-C
07	DDR III CHANNEL A 1,2
08	DDR III CHANNEL B 1,2
09	PCH FDI,DMI,USB,PCIE,NVRAM
10	PCH DP,CLK BUFFER
11	PCH HOST,SATA,PCI
12	PCH GPIO,CTRL,AUDIO
13	PCH PWR,GND
14	PCI EXPRESS*16 SLOT
15	PCI EXPRESS*4 SLOT
16	PCI SLOT1,2
17	ITE 8620 LPC IO
18	COM,KB MS USB,USB30 20
19	HWM,FAN CTRL,OV,-PROCHOT
20	DUAL BIOS
21	FP,FUSB,SPK,SATALED
22	Realtek ALC892-GR
23	REAR AUDIO JACK
24	REALTEK RTL8111F
25	DISCRETE POWER
26	ATX ,TPM
27	VCORE ISL95820 1

SHEET

TITLE

28	VCORE ISL95820 2
29	RT8120 DDR POWER
30	LPT, M3 POWER
31	DVI, HDMI
32	IT8892E

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Gigabyte Technology

Cover Sheet

Size Custom	Document Number	GA-Z97M-D3H	Rev 1.0
Date:	Monday, April 28, 2014	Sheet 1 of 32	

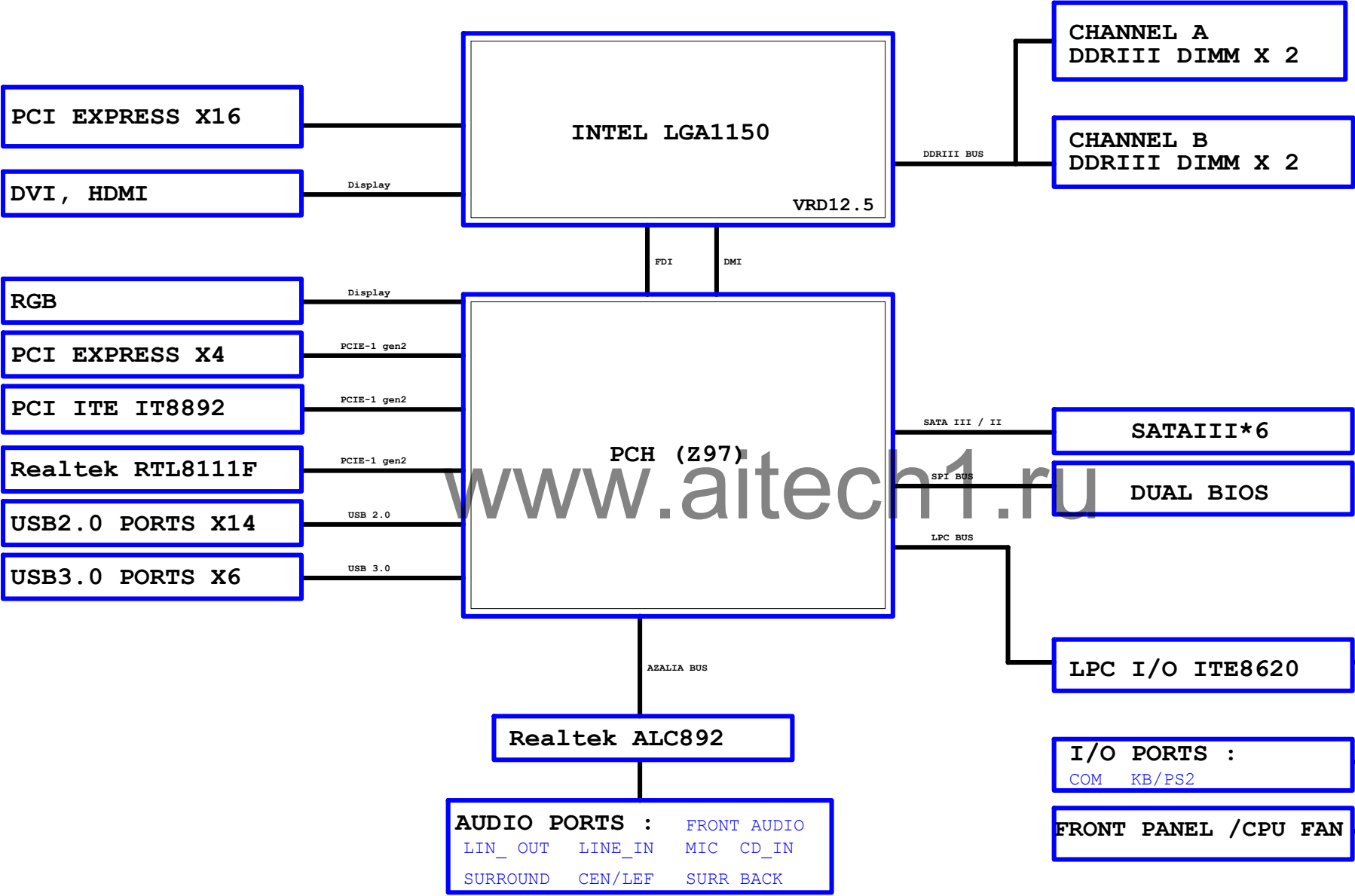
Revision 1.0

Component value change history

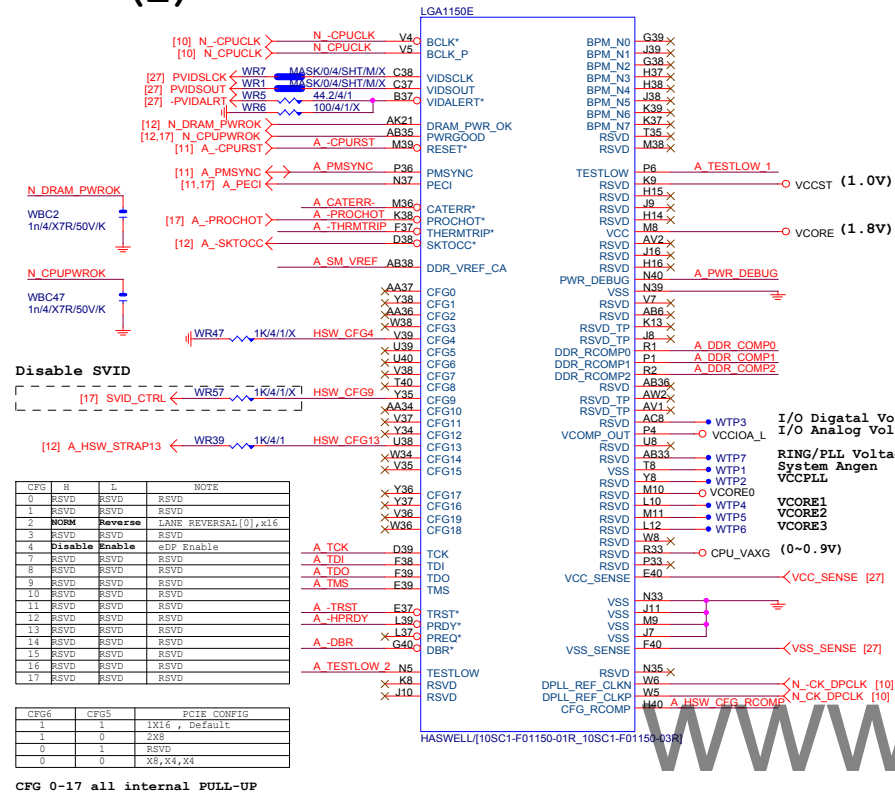
Data	Change Item	Reason
2013/12/09	機構變更MOS_HS尺寸:長度大小由89修改為79mm,孔大小由D3mm修改為D4mm	
2013/12/11	MR.LIN:移除1 PORT 1 FUSE規格	
2013/12/12	MR.LIN:移除DVI LEVEL SHIFTER改成COSTDOWN設計方式	
2013/12/20	HDD LED/FUSB3.0 ESD PROTECTOR	
2013/12/24	MODIFY AP NOTE	
2013/12/26	MODIFY AP NOTE:USB防燒,IT8620斜插ISSUE	
2013/12/27	R0.1 GERBER OUT	
2014/1/13	AP NOTE:DVI LEVEL SHIFTER改回	
	PCH_HS,MOS_HS:9 SERIES	
	加回AP431 BOM VCC1_5_PCH_OV	
2014/1/16	AP NOTE(UATX):DVI LEVEL SHIFTER移除,BIOS DRIVING 800mV 2dB	
	BIOS_PH移除	
2014/1/27	COSTDOWN:5VDUAL-->FUSEVCC_R2,DEL UD7 BAT54A	
2014/1/28	AP NOTE:移除F_USB保護線路及AP431	
2014/2/10	CPU FAN PIN2增加C319 0.1U/4/X7R/16V/K	
	Q47,Q48:2N7002 GATE~VCC3	
	FOOT MASK:ME PWROK,USB2.0 PROTECT,2_5LEVEL,VCC1_05_ME,VCC3_ME	
2014/2/18	NR177:SHT PAD;C136:0.1u/6/X7R/25V/K	
	Z97 Vcore High /low side Vishay: 10IF9-050014-01R SiRA14DP-T1	
	Non-Vcore High /low side Vishay: 10IF9-070018-01R SiRA18DP-T1	
2014/2/19	R1.0 GERBER OUT	
2014/04/11	Update Z97 Chipset 料號 [10HB1-030Z97-20R]	
2014/04/25	Update DDR RC	PBOM: 9MZ97MD3H-00-10C
	R396: 27K -> 20K	
	R657: 487 -> 680	
	R380: 2.26K -> 2.15K	

[illegible]

BLOCK DIAGRAM



LGA1150 (E)



LGA1150A			
MAAA0	AU13	DDR0_MA0	DDR0_D00
MAAA1	AV16	DDR0_MA1	DDR0_D01
MAAA2	AU16	DDR0_MA2	DDR0_D02
MAAA3	AW17	DDR0_MA3	DDR0_D03
MAAA4	AU17	DDR0_MA4	DDR0_D04
MAAA5	AW18	DDR0_MA5	DDR0_D05
MAAA6	AW17	DDR0_MA6	DDR0_D06
MAAA7	AT18	DDR0_MA7	DDR0_D07
MAAA8	AU18	DDR0_MA8	DDR0_D08
MAAA9	AT19	DDR0_MA9	DDR0_D09
MAAA10	AW11	DDR0_MA10	DDR0_D10
MAAA11	AV19	DDR0_MA11	DDR0_D11
MAAA12	AU19	DDR0_MA12	DDR0_D12
MAAA13	AT20	DDR0_MA13	DDR0_D13
MAAA14	AT20	DDR0_MA14	DDR0_D14
MAAA15	AU21	DDR0_MA15	DDR0_D15
MODT_A0	AW10	DDR0_ODT0	DDR0_D16
MODT_A1	AV3	DDR0_ODT1	DDR0_D17
MODT_A2	AW9	DDR0_ODT2	DDR0_D18
MODT_A3	AU8	DDR0_ODT3	DDR0_D19
			DDR0_D20
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(F, J)



(G, H, I)



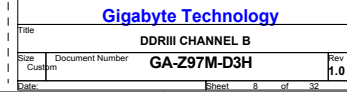
(X18)



(x9)



(B)



PCH

(B)

DMI:12/4/4/4/12(breakout min 8/4/4/4/8)
Impedance=85 +- 17.5%

[4] A DMI_0TXN A DMI_0TXN L24
[4] A DMI_0TXP A DMI_0TXP K24
[4] A DMI_0RXN A DMI_0RXN C20
[4] A DMI_0RXP A DMI_0RXP B20
[4] A DMI_1TXN A DMI_1TXN G24
[4] A DMI_1TXP A DMI_1TXP H24
[4] A DMI_1RXN A DMI_1RXN D21
[4] A DMI_1RXP A DMI_1RXP B21
[4] A DMI_2TXN A DMI_2TXN F26
[4] A DMI_2TXP A DMI_2TXP G26
[4] A DMI_2RXN A DMI_2RXN B22
[4] A DMI_2RXP A DMI_2RXP C22
[4] A DMI_3TXN A DMI_3TXN K26
[4] A DMI_3TXP A DMI_3TXP L26
[4] A DMI_3RXN A DMI_3RXN A24
[4] A DMI_3RXP A DMI_3RXP B24

W=4 mil out of PCH
S=15 mil out of PCH

VCC1_5_PCH NR50 7.5K/4/1 DMI_COMP B19
NR40 7.5K/4/1 PCIE_COMP C13
CK_SRCCLK_PCH G22
CK_SRCCLK_PCH F22

USB3.0 [24] PCH_USB3_RXN2 K14
[24] PCH_USB3_RXP2 B12
[24] PCH_USB3_TXN2 B11
[24] PCH_USB3_TXP2 B11
[24] PCH_USB3_RXN3 G14
[24] PCH_USB3_RXP3 G14
[24] PCH_USB3_TXN3 D11
[24] PCH_USB3_TXP3 D11
[24] LA_ML_IN H11
[24] LA_ML_IP B9
[24] LA_ML_ON A9
[32] G_PCIEBIN J11
[32] G_PCIEBIP L11
[32] G_PCIEBON B8
[32] G_PCIEBOP C8
[15] PP_EXP_RXN0 G9
[15] PP_EXP_RXP0 B7
[15] PP_EXP_TXN0 F7
[15] PP_EXP_TXN1 H7
[15] PP_EXP_TXP1 E1
[15] PP_EXP_RXN2 D2
[15] PP_EXP_RXP2 K6
[15] PP_EXP_TXN2 G5
[15] PP_EXP_TXP2 J2
[15] PP_EXP_RXN3 J3
[15] PP_EXP_RXP3 H2
[15] PP_EXP_TXN3 H1
[15] PP_EXP_TXP3 H1

電容放靠近 Device & PCI-E Slot

PCIEX1:15/4/4/4/15 (breakout min 8/4/4/4/8)
Impedance=85 +- 17.5%

PCH

(J)

PCH PCIE ,DMI 15/4/4/4//15

usb2.0 12/5/7/5//12
usb3.0 20/5/7/5//20

AT1 VSS_NCTF TP22 U11
AT41 VSS_NCTF TP23 U10
AU1 VSS_NCTF TP21 A14
AV1 VSS_NCTF TP20 K14
AV2 VSS_NCTF TP14 K34
AV40 VSS_NCTF TP15 K33
AV41 VSS_NCTF TP12 AH2
AW2 VSS_NCTF TP10 L16
AW40 VSS_NCTF TP11 K16
B40 VSS_NCTF TP9 AM34
B41 VSS_NCTF TP3 R12
C41 VSS_NCTF TP4 N12
D1 VSS_NCTF TP1 L22
D41 VSS_NCTF TP2 K22
TP6 R4
TP8 K5
TP7 P5
TP8 L5
VSS AC31
VSS AF3
VSS AV21

DH82297/S/[10HB1-030297-20R]

PORT1,PORT9[DEBUG PORT]FOR WHQL一定要拉出PORT

B85: Port 6/7 N/A

H81: Port 6/7/12/13 N/A

USBN_0 AV10 N-USBP0
USBP_0 AU10 N-USBP0
USBN_1 AV11 N-USBP1
USBP_1 AU11 N-USBP1
USBN_2 AV14 N-USBP2
USBP_2 AU14 N-USBP2
USBN_3 AV16 N-USBP3
USBP_3 AU16 N-USBP3
USBN_4 AV15 N-USBP4
USBP_4 AU15 N-USBP4
USBN_5 AV12 N-USBP5
USBP_5 AU12 N-USBP5
USBN_6 AV14 N-USBP6
USBP_6 AU14 N-USBP6
USBN_7 AV17 N-USBP7
USBP_7 AU17 N-USBP7
USBN_8 AV16 N-USBP8
USBP_8 AU16 N-USBP8
USBN_9 AV16 N-USBP9
USBP_9 AU16 N-USBP9
USBN_10 AV18 N-USBP10
USBP_10 AU18 N-USBP10
USBN_11 AV18 N-USBP11
USBP_11 AU18 N-USBP11
USBN_12 AV18 N-USBP12
USBP_12 AU18 N-USBP12
USBN_13 AV20 N-USBP13
USBP_13 AU20 N-USBP13

OC0B_GP59 AE40
OC1B_GP40 AE37
OC2B_GP41 AD39
OC3B_GP42 AD40
OC4B_GP43 AE39
OC5B_GP9 AC41
OC6B_GP10 AF40
OC7B_GP14 AG40

USBRBIASB NR47 22.6/4/1
USBRBIASB AU20

AP11 CK_DOTCLK
AM11 CK_DOTCLK

NR130 8.2K/4
NBC82 0.1u/4/X7R/16V/K
NBC83 0.1u/4/X7R/16V/K

NR130 8.2K/4
NBC82 0.1u/4/X7R/16V/K
NBC83 0.1u/4/X7R/16V/K

NR130 8.2K/4
NBC82 0.1u/4/X7R/16V/K
NBC83 0.1u/4/X7R/16V/K

NR130 8.2K/4
NBC82 0.1u/4/X7R/16V/K
NBC83 0.1u/4/X7R/16V/K

NR130 8.2K/4
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NBC83 0.1u/4/X7R/16V/K

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NBC83 0.1u/4/X7R/16V/K

NR130 8.2K/4
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NBC83 0.1u/4/X7R/16V/K

NR130 8.2K/4
NBC82 0.1u/4/X7R/16V/K
NBC83 0.1u/4/X7R/16V/K

NR130 8.2K/4
NBC82 0.1u/4/X7R/16V/K
NBC83 0.1u/4/X7R/16V/K

NR130 8.2K/4
NBC82 0.1u/4/X7R/16V/K
NBC83 0.1u/4/X7R/16V/K

NR130 8.2K/4
NBC82 0.1u/4/X7R/16V/K
NBC83 0.1u/4/X7R/16V/K

NR130 8.2K/4
NBC82 0.1u/4/X7R/16V/K
NBC83 0.1u/4/X7R/16V/K

NR130 8.2K/4
NBC82 0.1u/4/X7R/16V/K
NBC83 0.1u/4/X7R/16V/K

NR130 8.2K/4
NBC82 0.1u/4/X7R/16V/K
NBC83 0.1u/4/X7R/16V/K

NR130 8.2K/4
NBC82 0.1u/4/X7R/16V/K
NBC83 0.1u/4/X7R/16V/K

NR130 8.2K/4
NBC82 0.1u/4/X7R/16V/K
NBC83 0.1u/4/X7R/16V/K

NR130 8.2K/4
NBC82 0.1u/4/X7R/16V/K
NBC83 0.1u/4/X7R/16V/K

NR130 8.2K/4
NBC82 0.1u/4/X7R/16V/K
NBC83 0.1u/4/X7R/16V/K

NR130 8.2K/4
NBC82 0.1u/4/X7R/16V/K
NBC83 0.1u/4/X7R/16V/K

PCH

(F)

[21] PCH_USB3_RXN0 F20
[21] PCH_USB3_RXP0 G20
[21] PCH_USB3_TXN0 B18
[21] PCH_USB3_TXP0 C18

[21] PCH_USB3_RXN1 G18
[21] PCH_USB3_RXP1 H18
[21] PCH_USB3_TXN1 B16
[21] PCH_USB3_TXP1 C16

[18] PCH_USB3_RXN4 K20
[18] PCH_USB3_RXP4 L20
[18] PCH_USB3_TXN4 D15
[18] PCH_USB3_TXP4 C15

[18] PCH_USB3_RXN5 L18
[18] PCH_USB3_RXP5 K18
[18] PCH_USB3_TXN5 B14
[18] PCH_USB3_TXP5 A14

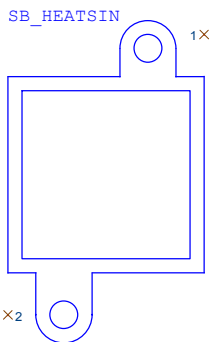
VCC3 NR62 8.2K/4
NR63 8.2K/4 AK28
AT34

PCH CLK PD

CK_SRCCLK_PCH NR89 8.2K/4
CK_SRCCLK_PCH NR88 8.2K/4
Mount for integrated clock Generation Mode
CK_DOTCLK NR92 8.2K/4
CK_DOTCLK NR91 8.2K/4
NR225 short to GND in non graphic SKU

PCH H/S

9 Series PCH Heatsink



PCH_HS
9 SERIES PCH_HS/[12SP2-S04242-01R_12SP2-S04242-02R_12SP2-S04242-03R]

USB TABLE

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

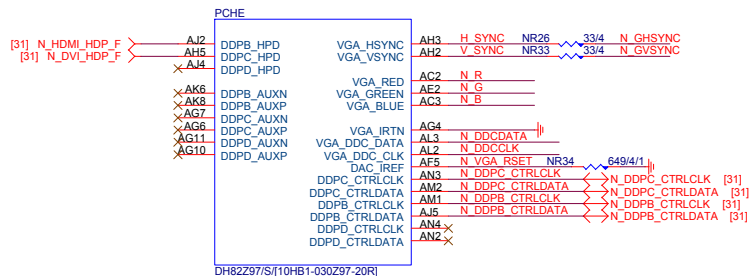
USB OC#	Configure
OC0#	F_USB30
OC1#	R_USB30
OC2#	USB30_LAN
OC3#	F_USB3
OC4#	F_USB2
OC5#	KB_MS_USB
OC6#	F_USB1
OC7#	Not Use

Gigabyte Technology

Title	PCH FDI,DMI,USB ,PCIE,NVRAM	Rev	1.0
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PCH

(E)



VGA DISABLE

R, G, B NC OR GND

IRTN / IREF GND

VGA_HSYNC, VGA_VSYNC, DDC_CLK, DDC_DATA NC

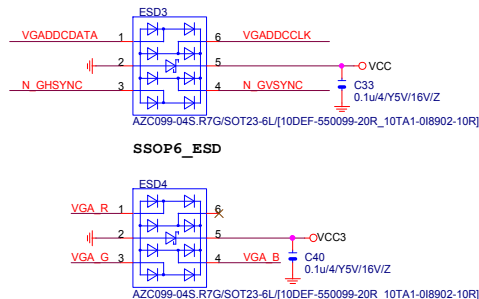
POWER VCCADAC (AF2), VCCADACBG (AE1) GND

PCH CLK PD

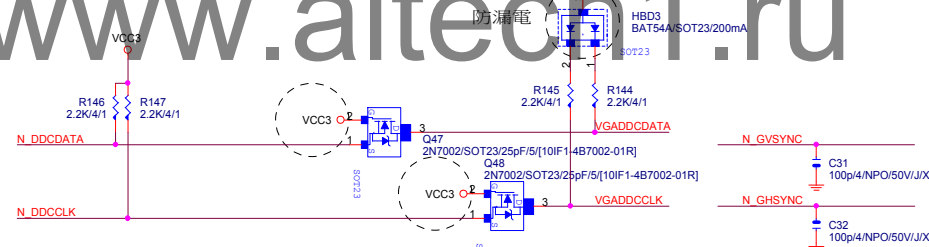


Mount for integrated clock Generation Mode

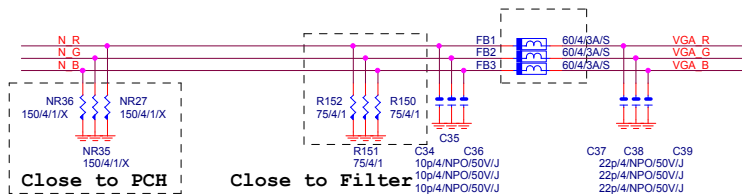
VGA ESD



VGA DDC

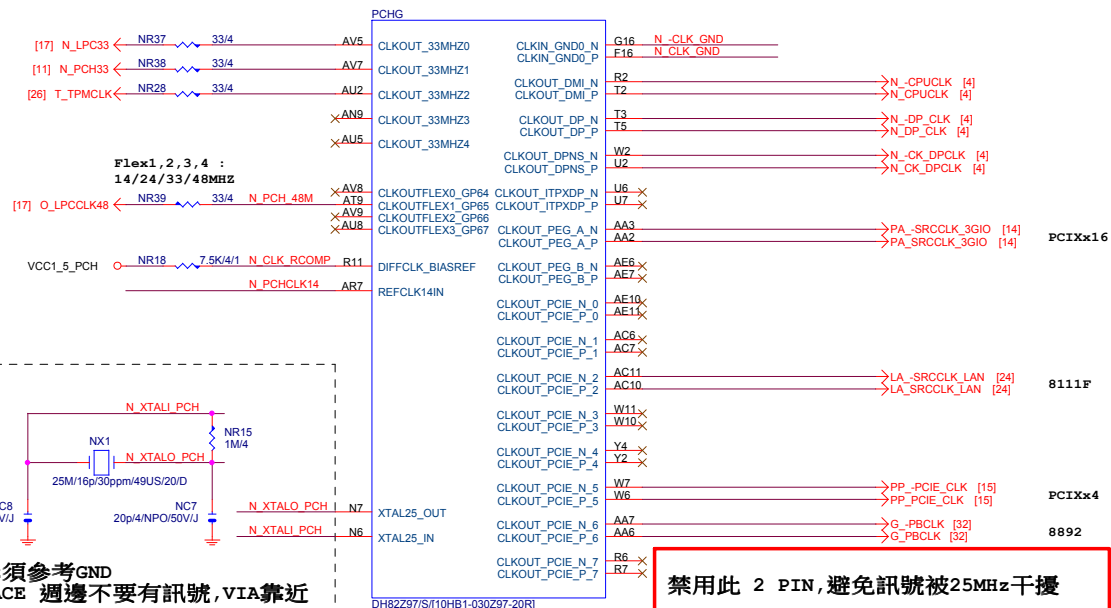


VGA DDC



PCH

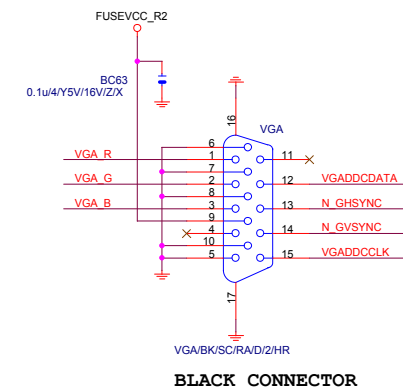
(G)



禁用此 2 PIN, 避免訊號被25MHz干擾

Differential Clock: 18/4/6/4/18
Impedance=90 +- 15%

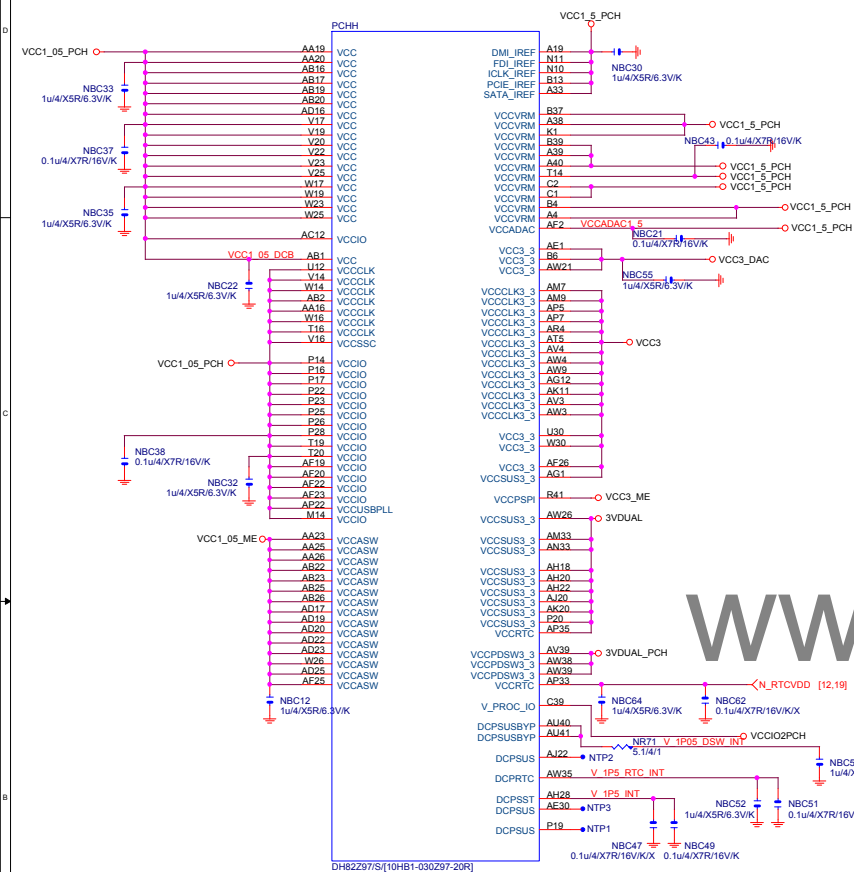
VGA CONNECTOR



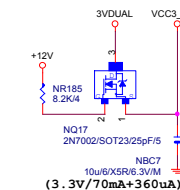
Gigabyte Technology

Title			PCH DISPLAY, CLK BUFFER		
Size			Rev		
Custom			1.0		
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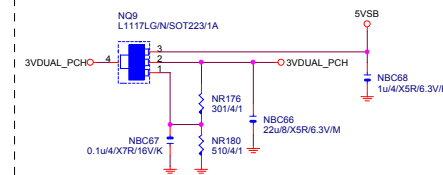
PCH (H)



VCC3_DAC



3VDUAL_PCH



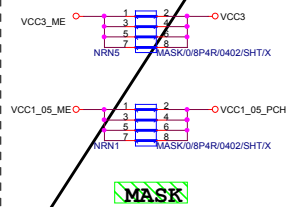
SHT PWR

H97 N/A

MASK

R1.0

SHORT WIRE
[Z97]

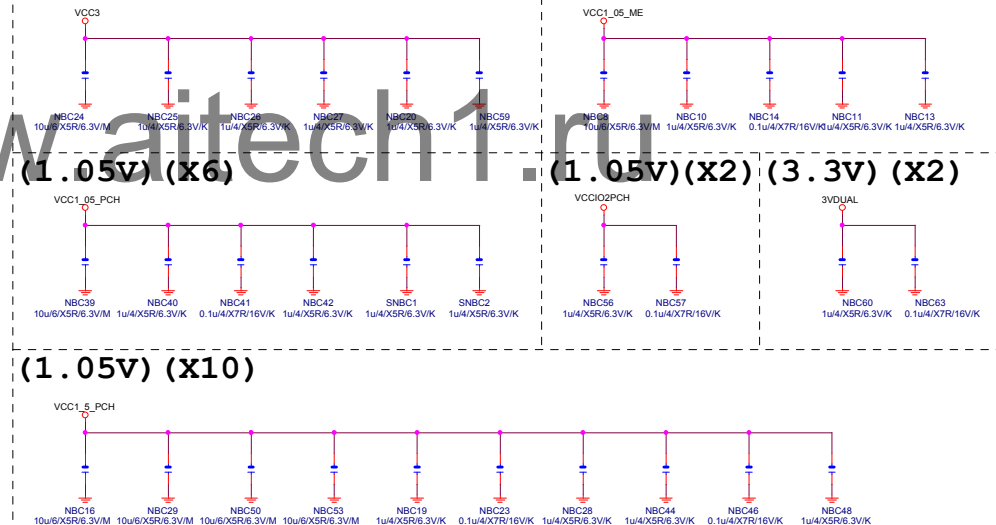


CAP

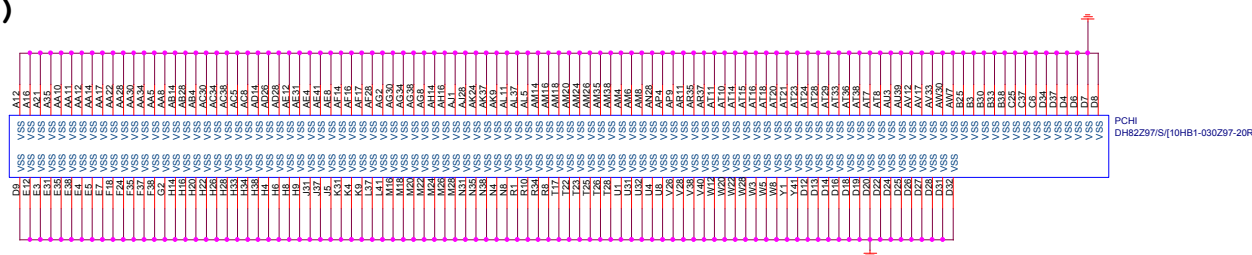


(3.3V) (x6)

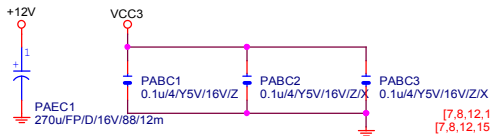
(1.05V) (x5)



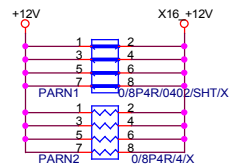
PCH (I)



PCIEX16 CAP



PCIEX16 PROTECT SHT

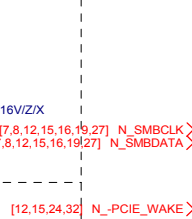


PCIEX16 AC CAP

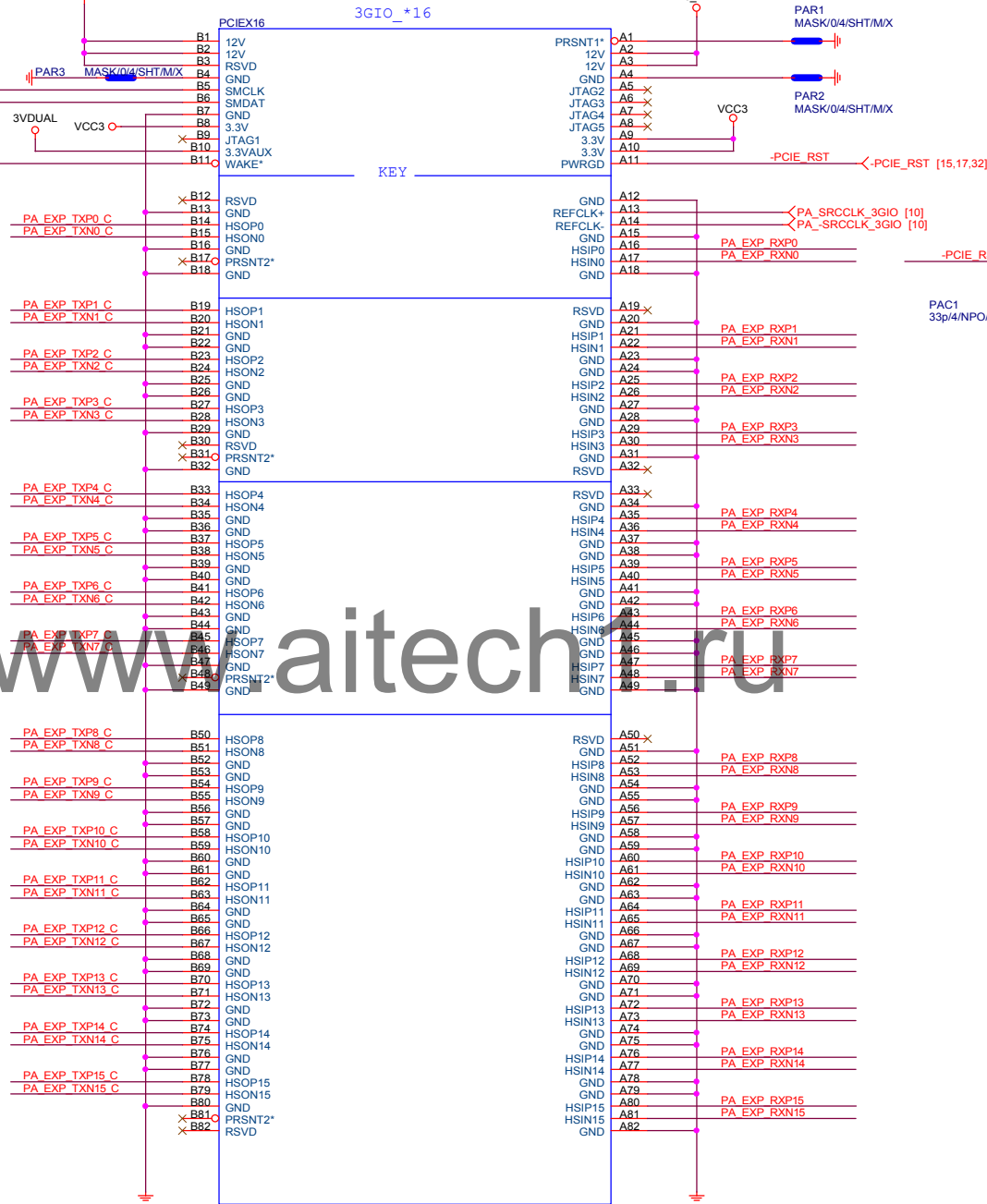
PA EXP TXP0	PAC5	0.22u4/X5R6.3V/K	PA EXP TXP0 C
PA EXP TXN0	PAC4	0.22u4/X5R6.3V/K	PA EXP TXN0 C
PA EXP TXP1	PAC6	0.22u4/X5R6.3V/K	PA EXP TXP1 C
PA EXP TXN1	PAC7	0.22u4/X5R6.3V/K	PA EXP TXN1 C
PA EXP TXP2	PAC8	0.22u4/X5R6.3V/K	PA EXP TXP2 C
PA EXP TXN2	PAC9	0.22u4/X5R6.3V/K	PA EXP TXN2 C
PA EXP TXP3	PAC10	0.22u4/X5R6.3V/K	PA EXP TXP3 C
PA EXP TXN3	PAC11	0.22u4/X5R6.3V/K	PA EXP TXN3 C
PA EXP TXP4	PAC12	0.22u4/X5R6.3V/K	PA EXP TXP4 C
PA EXP TXN4	PAC13	0.22u4/X5R6.3V/K	PA EXP TXN4 C
PA EXP TXP5	PAC14	0.22u4/X5R6.3V/K	PA EXP TXP5 C
PA EXP TXN5	PAC15	0.22u4/X5R6.3V/K	PA EXP TXN5 C
PA EXP TXP6	PAC16	0.22u4/X5R6.3V/K	PA EXP TXP6 C
PA EXP TXN6	PAC17	0.22u4/X5R6.3V/K	PA EXP TXN6 C
PA EXP TXP7	PAC18	0.22u4/X5R6.3V/K	PA EXP TXP7 C
PA EXP TXN7	PAC19	0.22u4/X5R6.3V/K	PA EXP TXN7 C
PA EXP TXP8	PAC20	0.22u4/X5R6.3V/K	PA EXP TXP8 C
PA EXP TXN8	PAC21	0.22u4/X5R6.3V/K	PA EXP TXN8 C
PA EXP TXP9	PAC22	0.22u4/X5R6.3V/K	PA EXP TXP9 C
PA EXP TXN9	PAC23	0.22u4/X5R6.3V/K	PA EXP TXN9 C
PA EXP TXP10	PAC24	0.22u4/X5R6.3V/K	PA EXP TXP10 C
PA EXP TXN10	PAC25	0.22u4/X5R6.3V/K	PA EXP TXN10 C
PA EXP TXP11	PAC26	0.22u4/X5R6.3V/K	PA EXP TXP11 C
PA EXP TXN11	PAC27	0.22u4/X5R6.3V/K	PA EXP TXN11 C
PA EXP TXP12	PAC28	0.22u4/X5R6.3V/K	PA EXP TXP12 C
PA EXP TXN12	PAC29	0.22u4/X5R6.3V/K	PA EXP TXN12 C
PA EXP TXP13	PAC30	0.22u4/X5R6.3V/K	PA EXP TXP13 C
PA EXP TXN13	PAC31	0.22u4/X5R6.3V/K	PA EXP TXN13 C
PA EXP TXP14	PAC32	0.22u4/X5R6.3V/K	PA EXP TXP14 C
PA EXP TXN14	PAC33	0.22u4/X5R6.3V/K	PA EXP TXN14 C
PA EXP TXP15	PAC34	0.22u4/X5R6.3V/K	PA EXP TXP15 C
PA EXP TXN15	PAC35	0.22u4/X5R6.3V/K	PA EXP TXN15 C

PA EXP RXP0.15] >>> PA_EXP_RXP0.15] [4]
 PA EXP RXN0.15] >>> PA_EXP_RXN0.15] [4]
 PA EXP TXP0.15] >>> PA_EXP_TXP0.15] [4]
 PA EXP TXN0.15] >>> PA_EXP_TXN0.15] [4]

PCIEX16 SLOT



PCIESLOT-164DN-Q-1

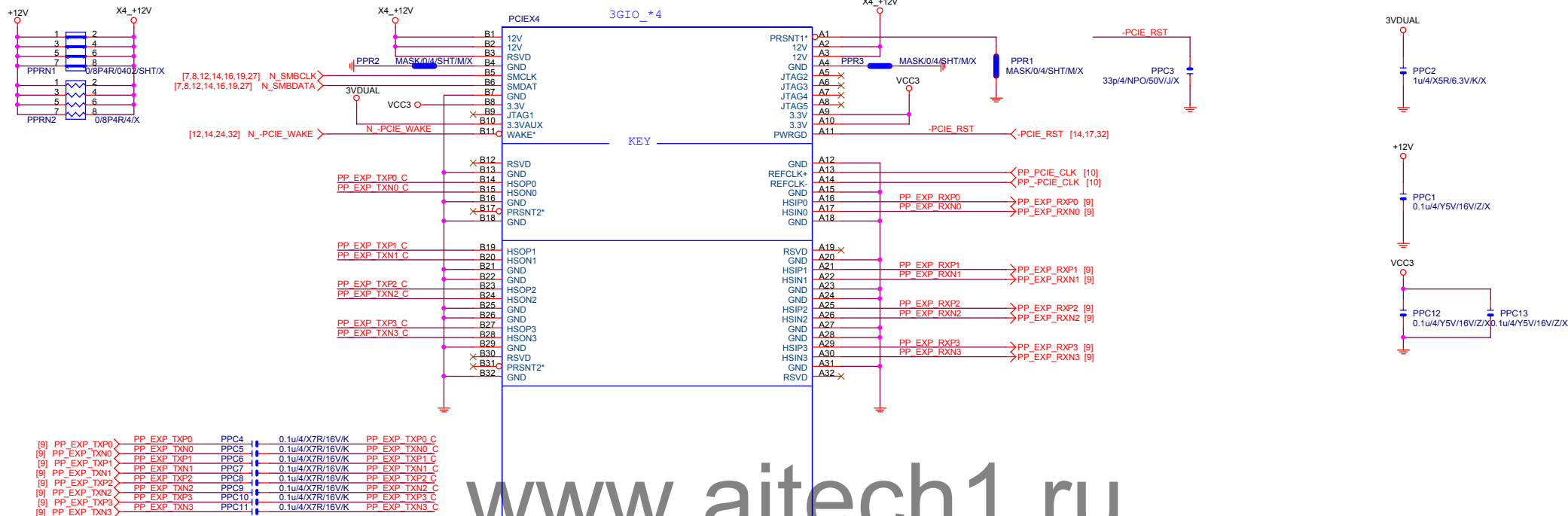
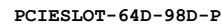


BLACK CONNECTOR

Gigabyte Technology

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Size			Document Number		
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PCIEX4 SLOT



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PCI-E/4X-65P/BK/LONG DOUBLE

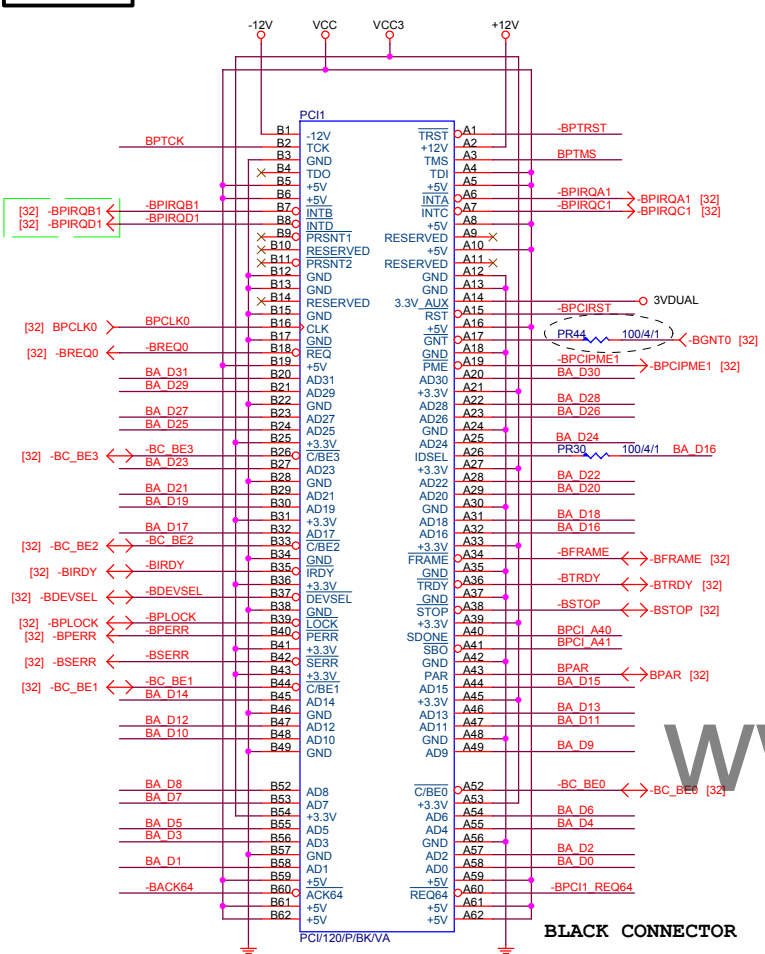
BLACK CONNECTOR

Gigabyte Technology

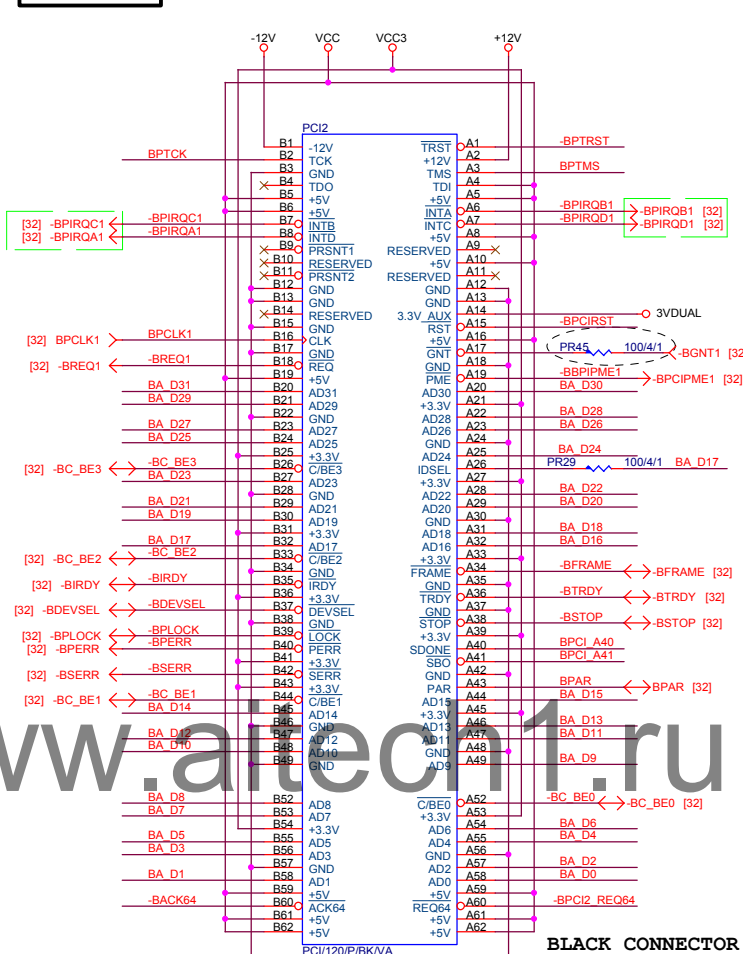
Title	PCI EXPRESS X 1 PORT
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Size Custom	Document Number GA-Z97M-D3H	Rev 1.0
Date:	Monday, April 28, 2014	Sheet 15 of 32

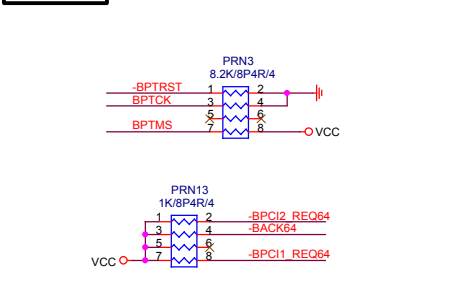
PCI SLOT 1



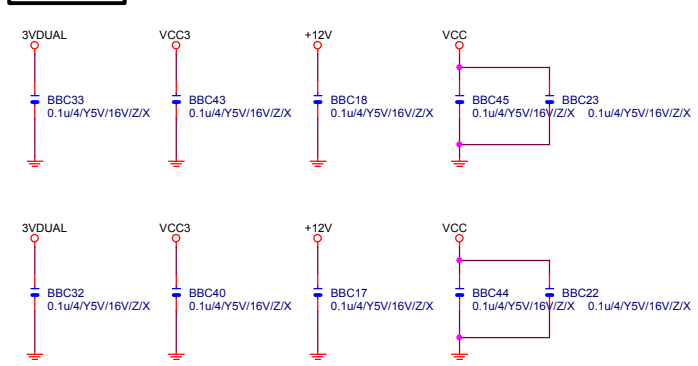
PCI SLOT 2



PCI PU

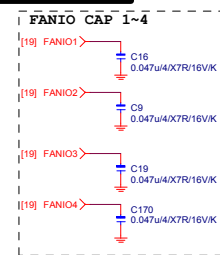


PCI CAP

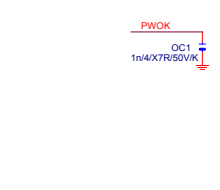
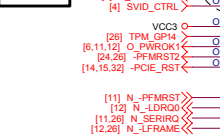


Gigabyte Technology			
Title			
PCI SLOT 1&2			
Size Custom			
Document Number			
GA-Z97M-D3H			
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Rev 1.0			

SIO IT8620



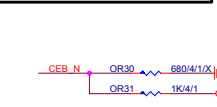
PROCHOT



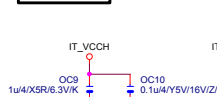
IT8620E GPIO問題調整

PIN 50	第一次接上POWER時會拉 LO
PIN 90/91	DEFAULT為HOLD FUNCTION, GP93 BYPASS TO GP92
PIN 108	高溫時 GP92 會被拉 Lo (15V) 會拉 Lo POWER ON 時會拉 Lo
PIN 111/112	MOUSE 與FANS FUNCTION 擇一使用, 不然會互相干擾

DUAL BIOS OPT STRAP



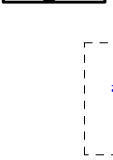
SIO CAP



Power leakage N/A



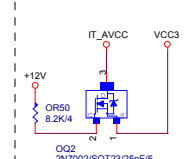
SIO 18V



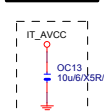
MB ID



FIX ATX 插拔漏電



PWR SHT



SIO PU

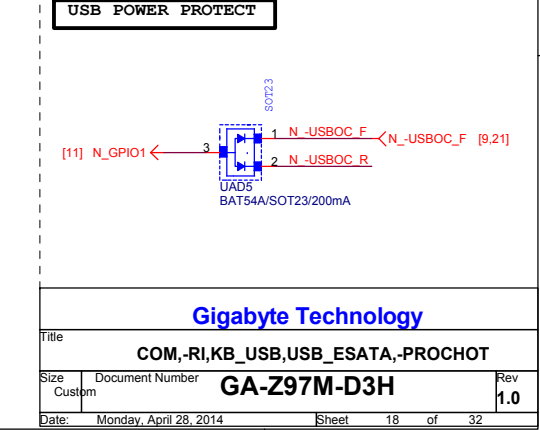
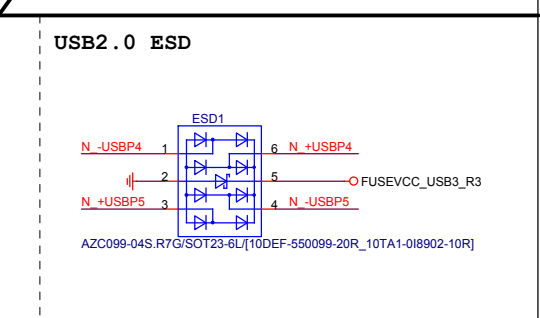
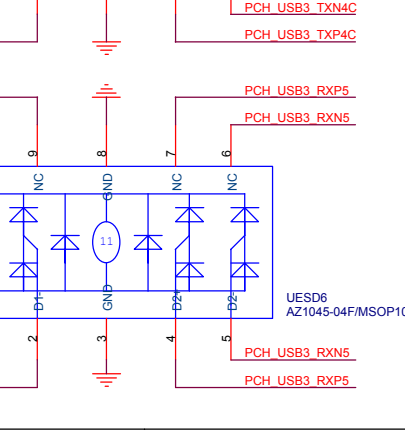
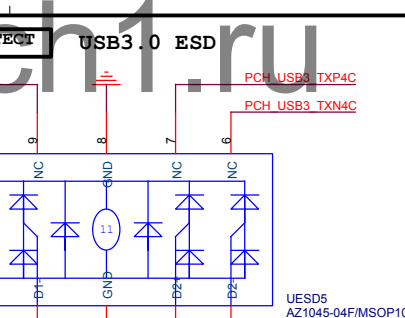
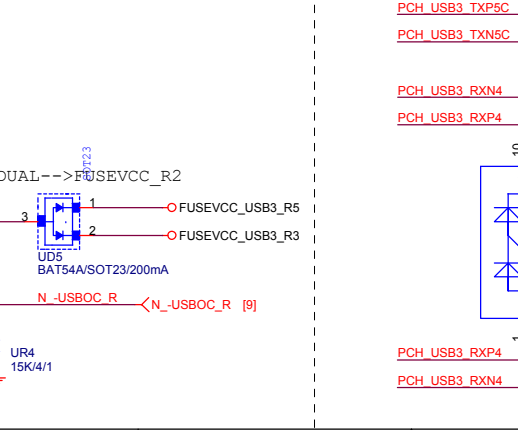
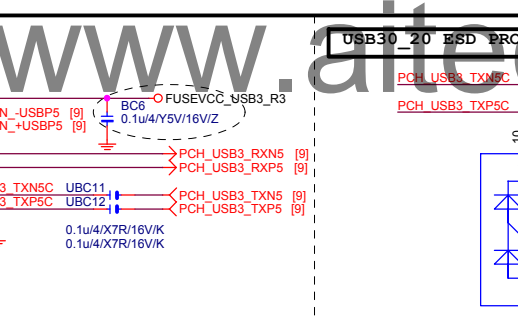
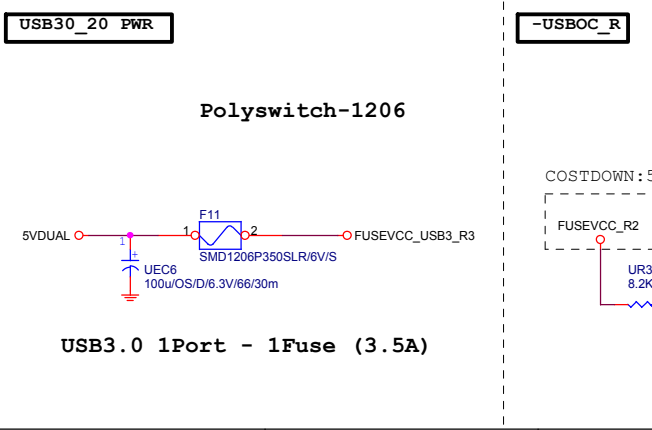
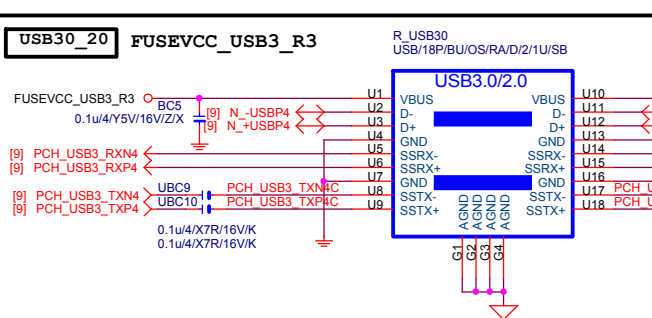
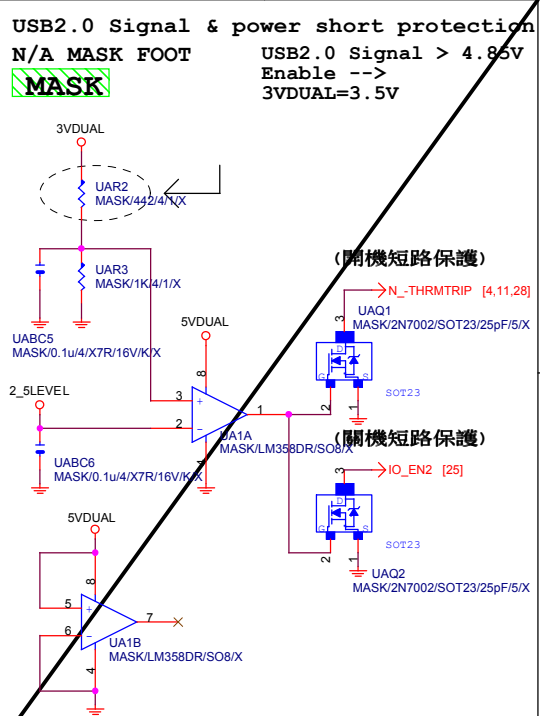
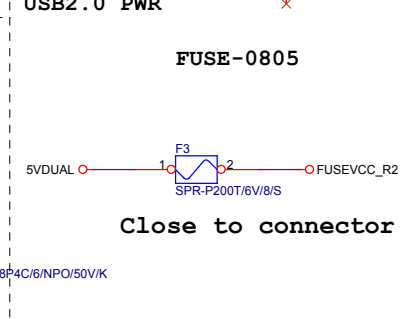
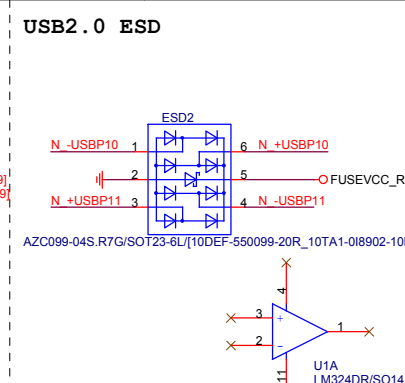
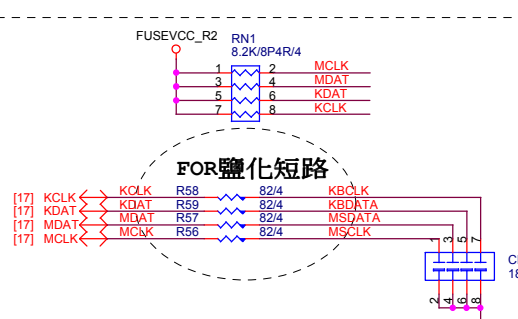
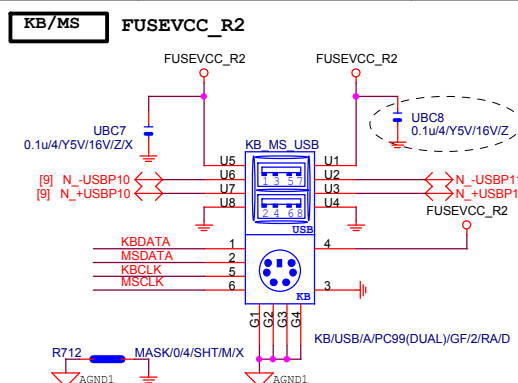
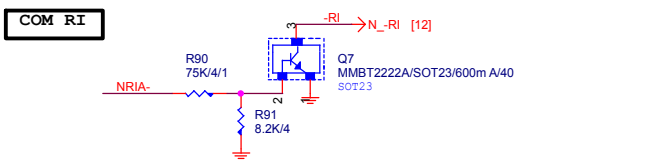
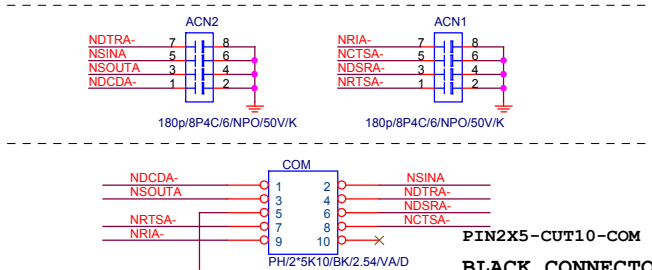
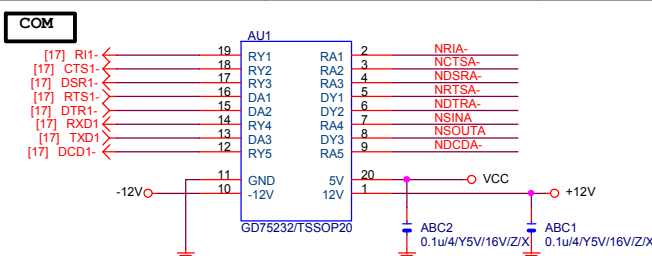


DO8:N/A

SIO STRAP

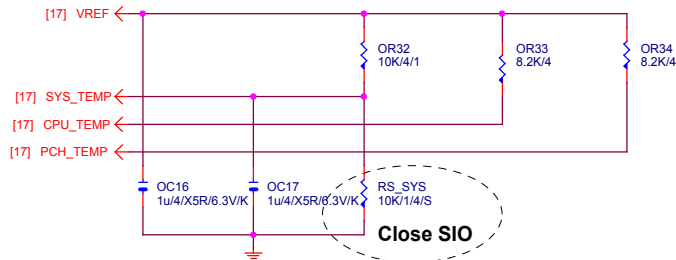


JP4	1	k8 power sequency function is Disable
JP4	0	k8 power sequency function is Enable
JP3	1/1	The default value of EC Index 63h/6Bh/73h is 80h.
JP3	1/0	The default value of EC Index 63h/6Bh/73h is FFh.
JP5	0/1	The default value of EC Index 63h/6Bh/73h is 00h.
JP5	0/0	The default value of EC Index 63h/6Bh/73h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

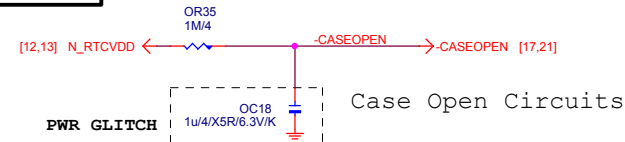


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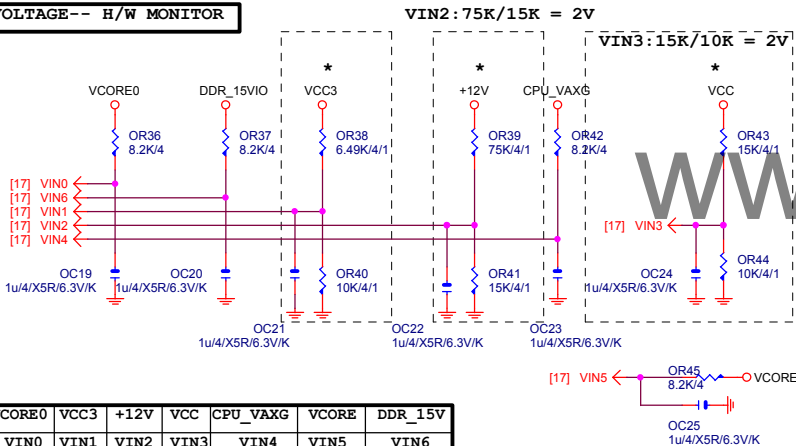
TEMP H/W MONITOR



CASE OPEN



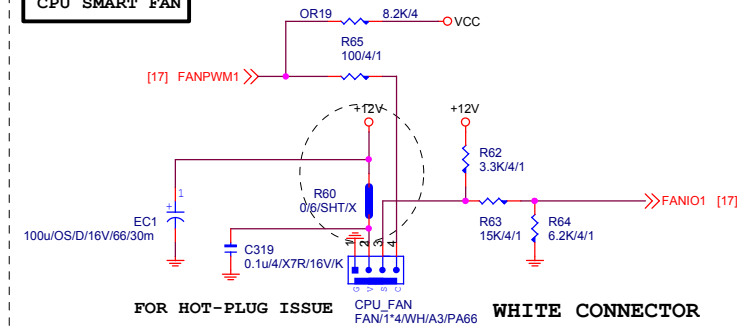
VOLTAGE-- H/W MONITOR



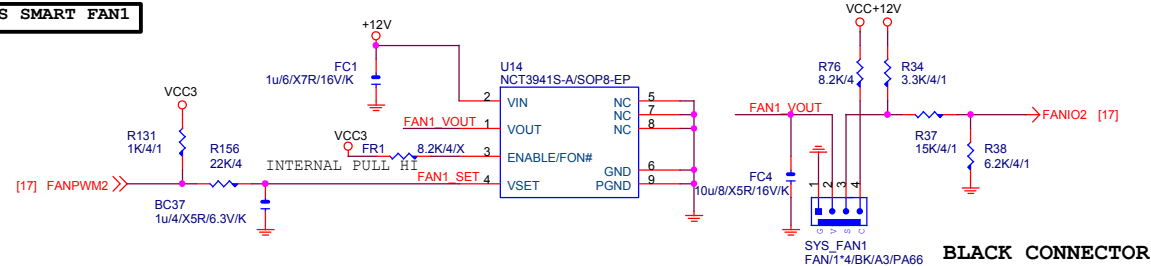
VCORE0	VCC3	+12V	VCC	CPU_VAXG	VCORE	DDR_15V
VIN0	VIN1	VIN2	VIN3	VIN4	VIN5	VIN6

RS2 CLOSE CPU VR MOSFET
RS2 CLOSE MOSFET (VIN) : DCQ1

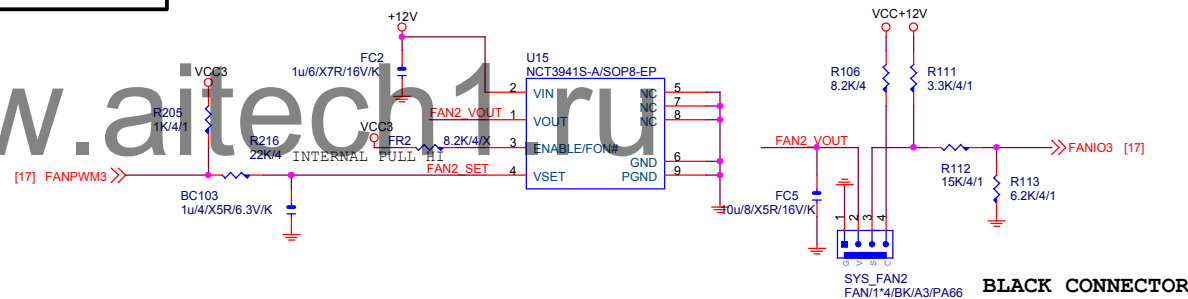
CPU SMART FAN



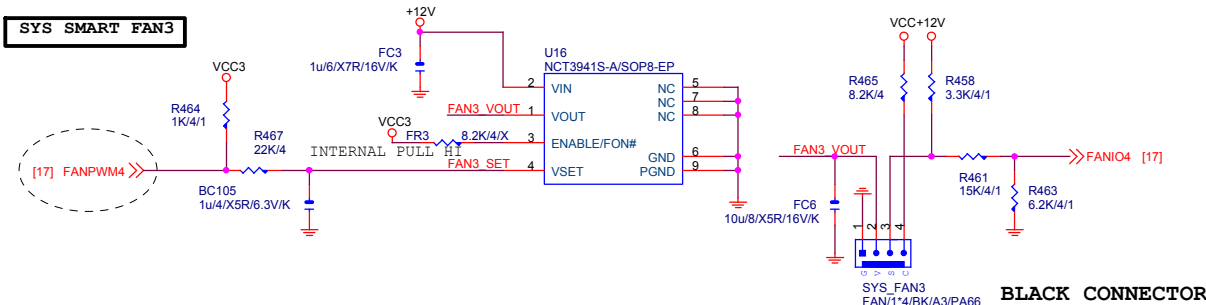
SYS SMART FAN1



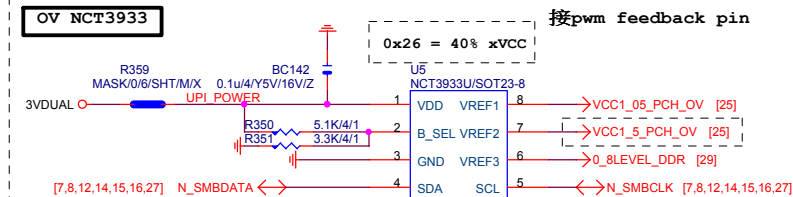
SYS SMART FAN2



SYS SMART FAN3

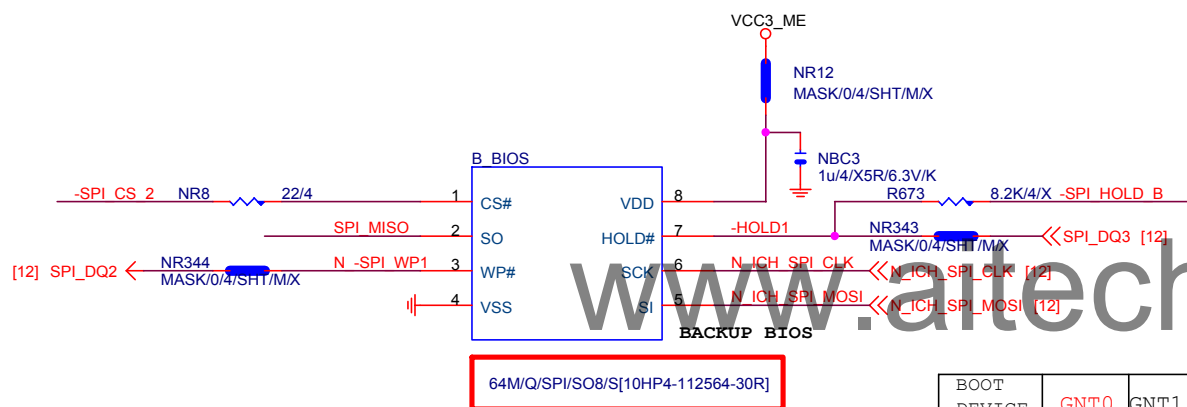
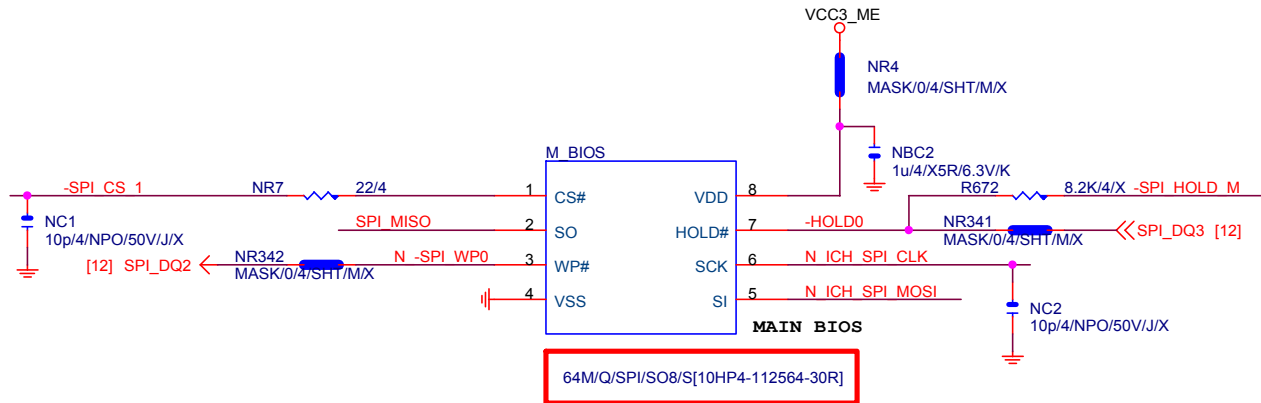


OV NCT3933



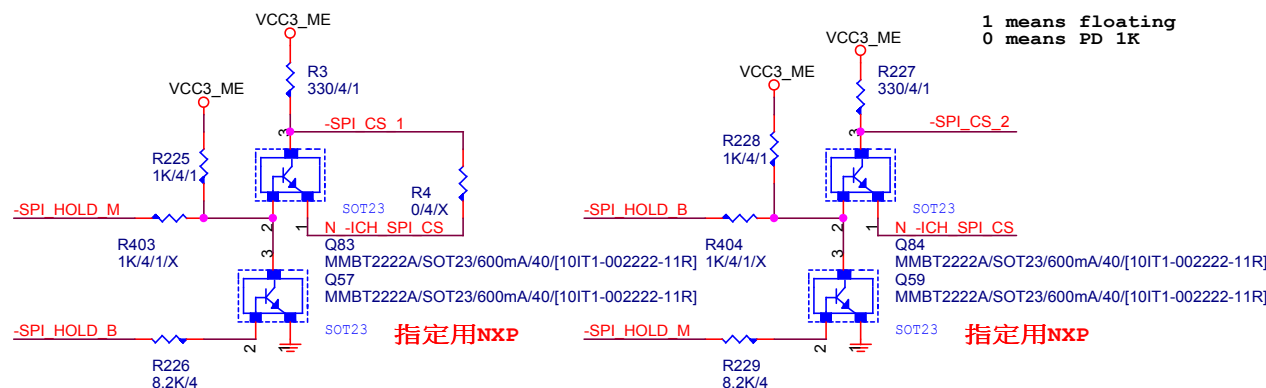
Gigabyte Technology

Title		HWM,FAN CTRL,OV	
Size	Document Number	GA-Z97M-D3H	
Custom		Rev 1.0	
Date:	Monday, April 28, 2014	Sheet	19 of 32



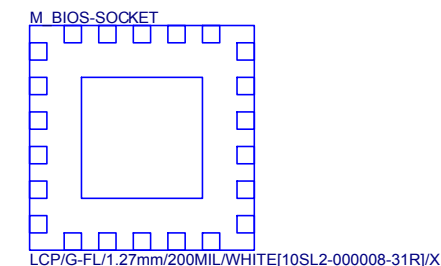
BOOT DEVICE	GNT0	GNT1
LPC	0	0
PCI	0	1
NAND	1	0
SPI	1	1

1 means floating
0 means PD 1K

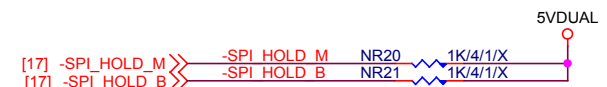
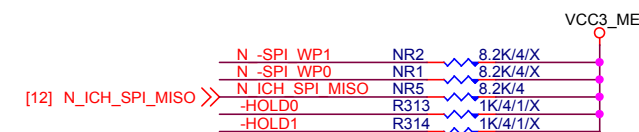
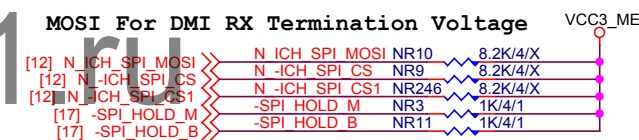


BIOS DEBUG PORT

BIOS_PH R1.0 移除



MOSI For DMI RX Termination Voltage

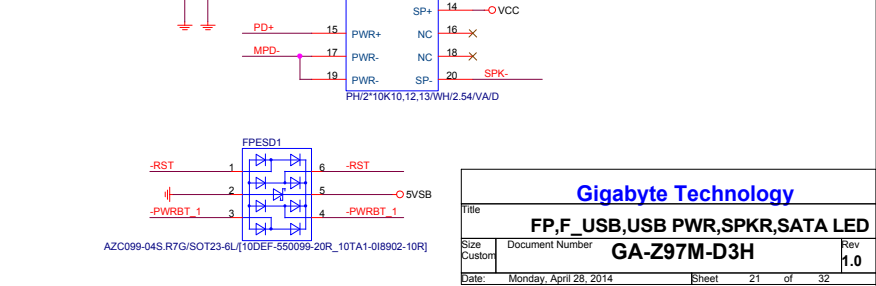
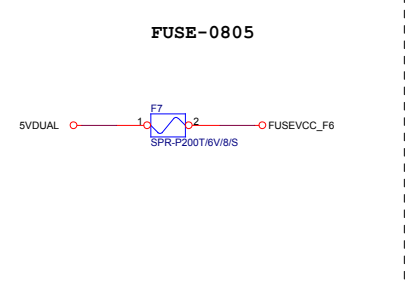
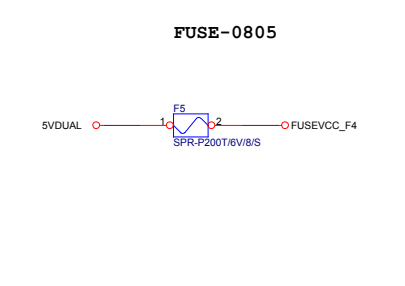
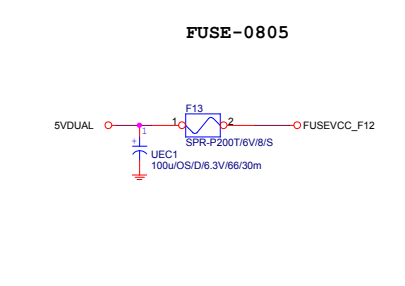
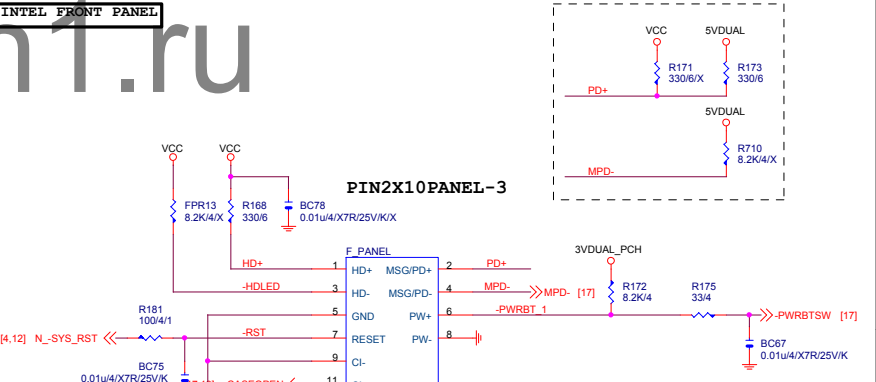
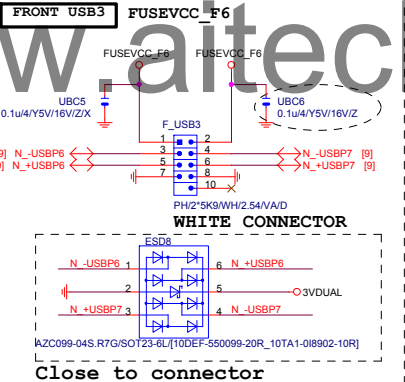
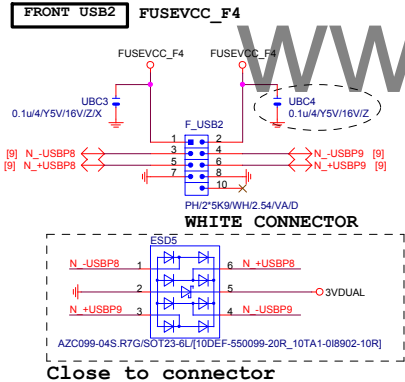
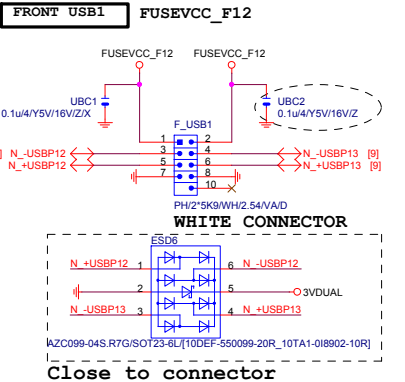
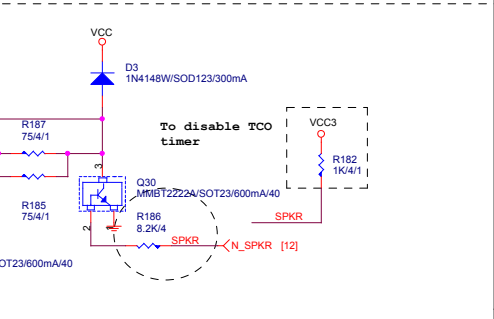
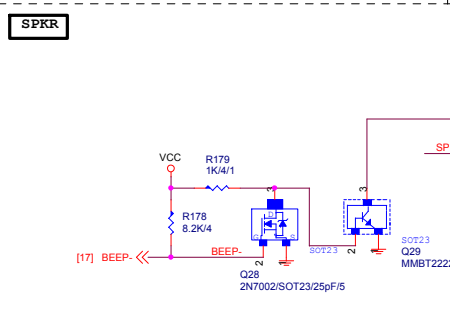
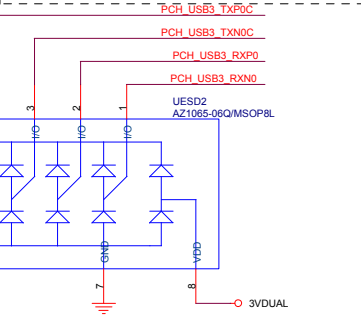
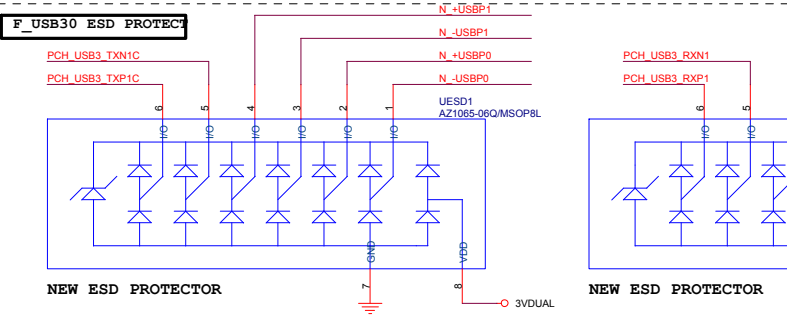
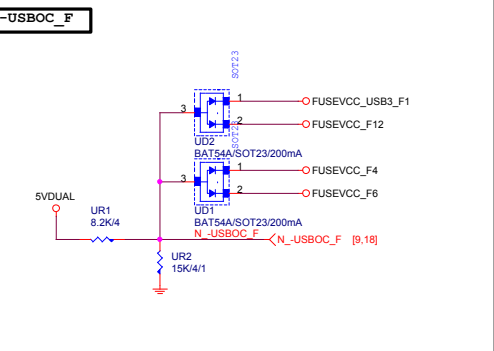
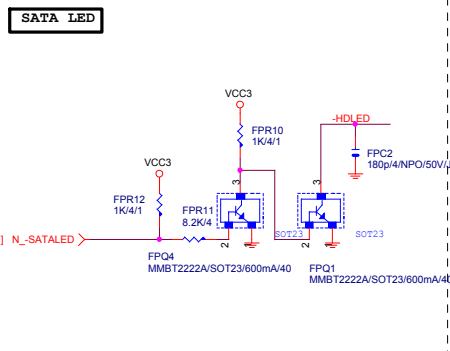
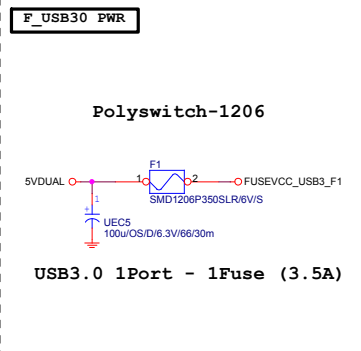
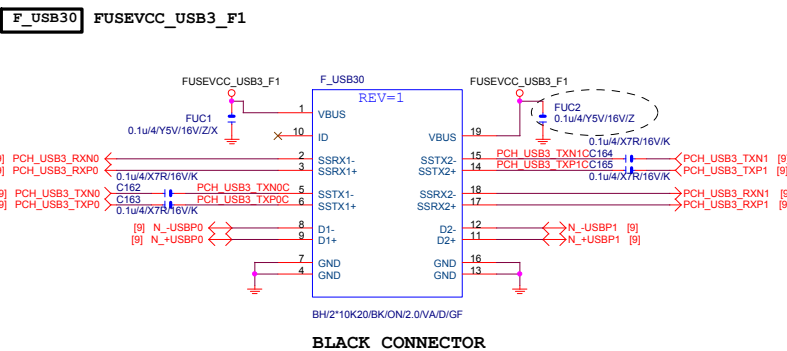


Gigabyte Technology

DUAL BIOS

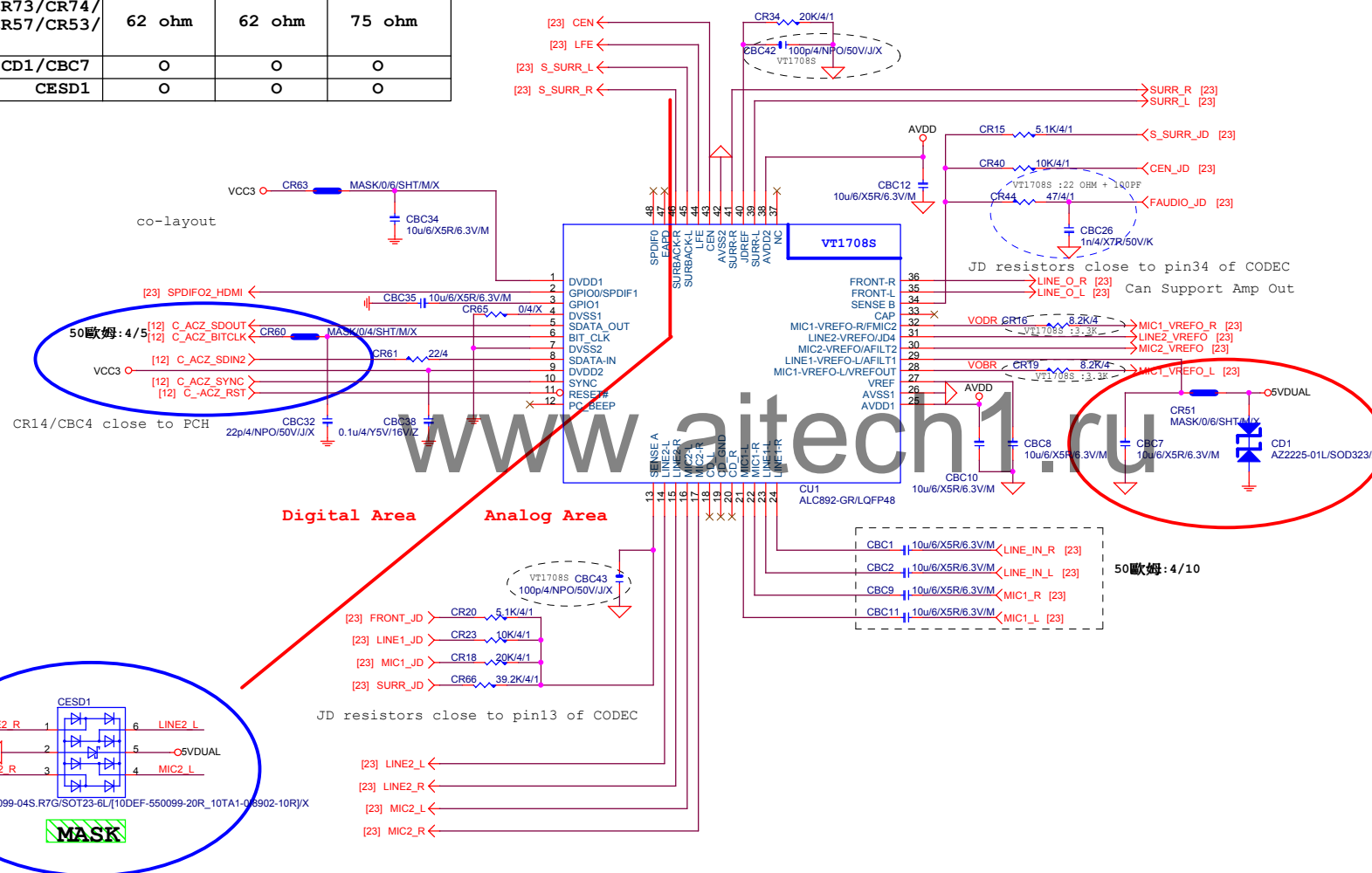
GA-Z97M-D3H

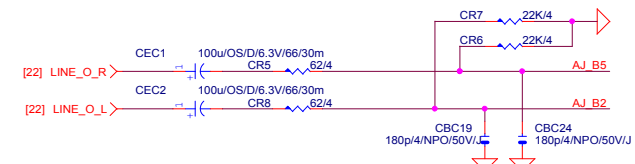
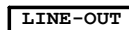
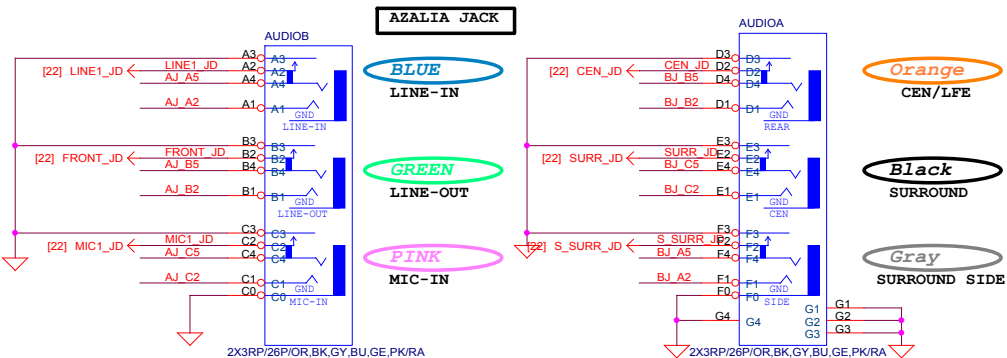
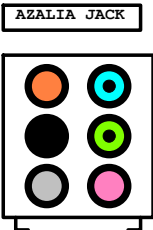
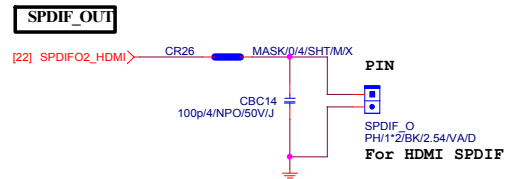
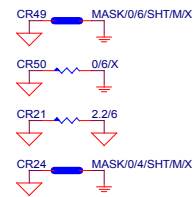
Title	Document Number	Rev
Size Custom	GA-Z97M-D3H	1.0
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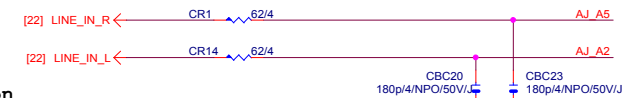
Gigabyte Technology			
FP,F_USB,USB PWR,SPKR,SATA LED			
Size	Document Number	GA-Z97M-D3H	
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	ALC892	ALC887-VD2	VT1708S-CE
CR44/CBC26	47ohm+1nF	47ohm+1nF	22ohm+100P
CBC42/CBC43	X	X	100P/4
CR6/CR7/CR58/CR54/ CR67/CR68/CR69/CR70	22K/4	22K/4	10K/4/1
CR5/CR8/CR1/CR14/ CR17/CR22/CR73/CR74/ CR13/CR11/CR57/CR53/ CR75/CR76	62 ohm	62 ohm	75 ohm
CR51/CD1/CBC7	O	O	O
CESD1	O	O	O



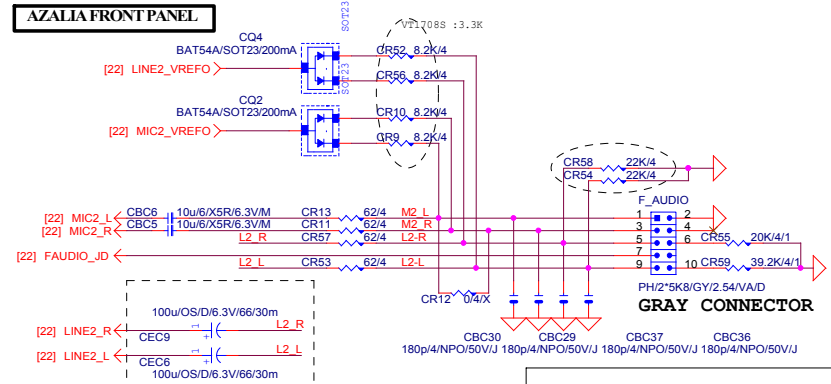
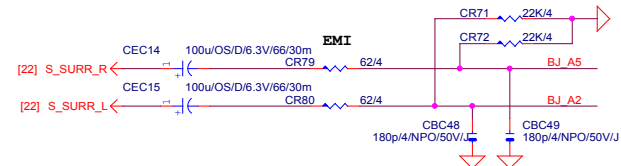
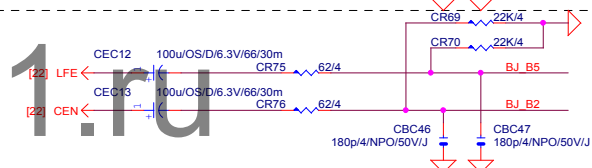
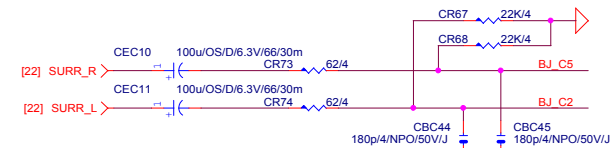
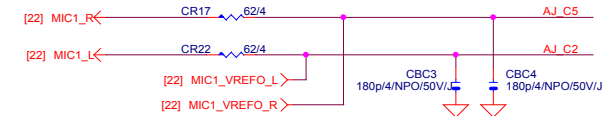


Only reserved for ALC888



Verify MIC function
in LINE-in

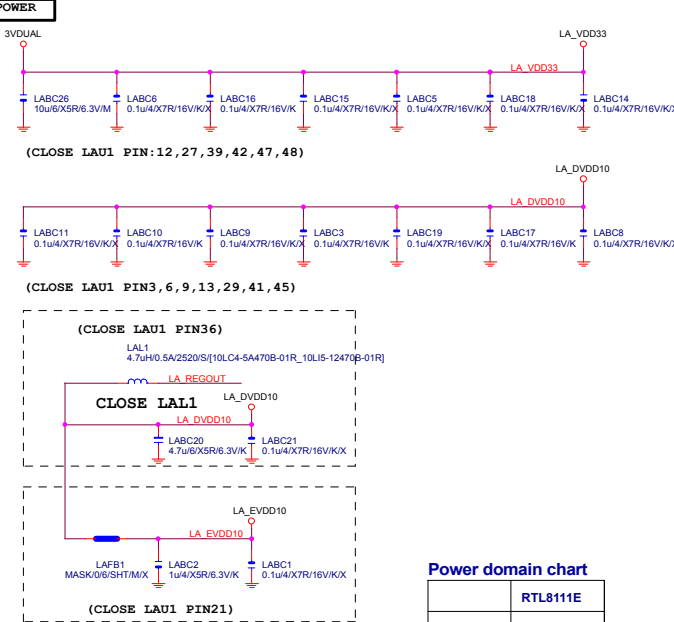
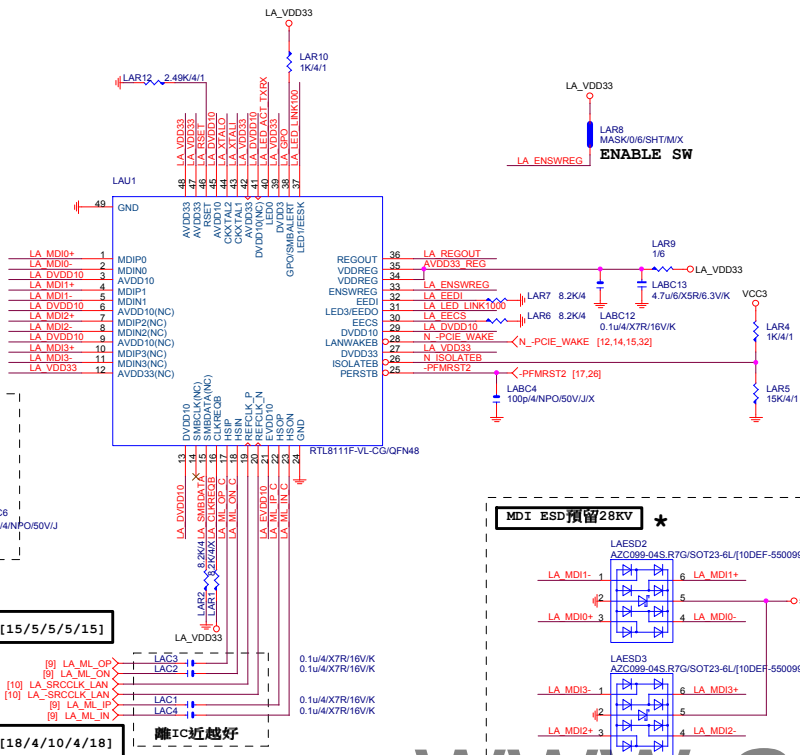
For 889A/888



Gigabyte Technology

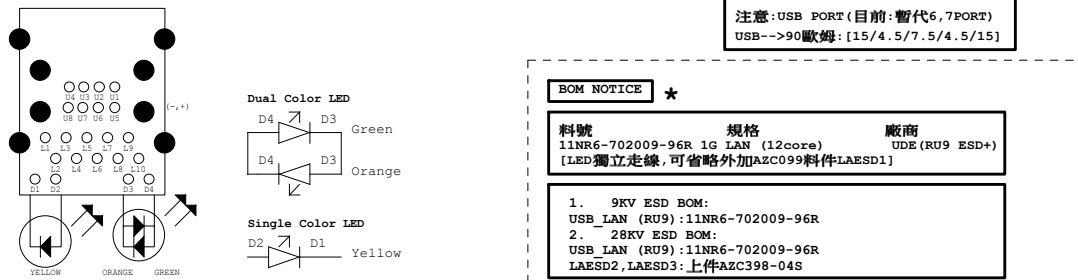
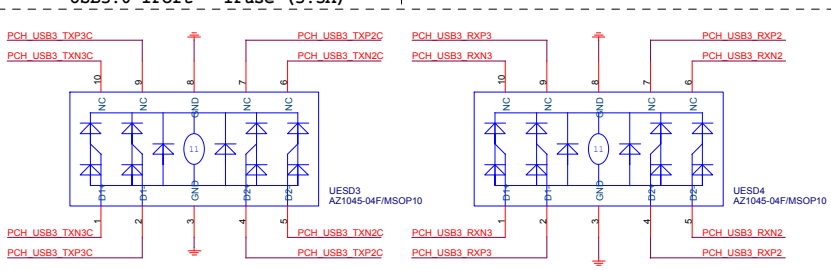
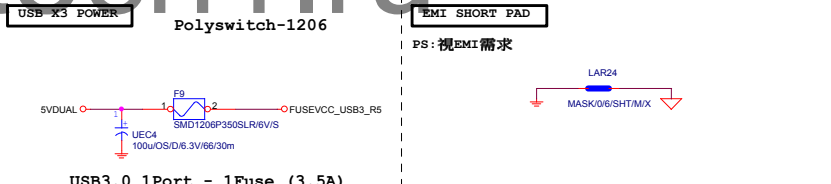
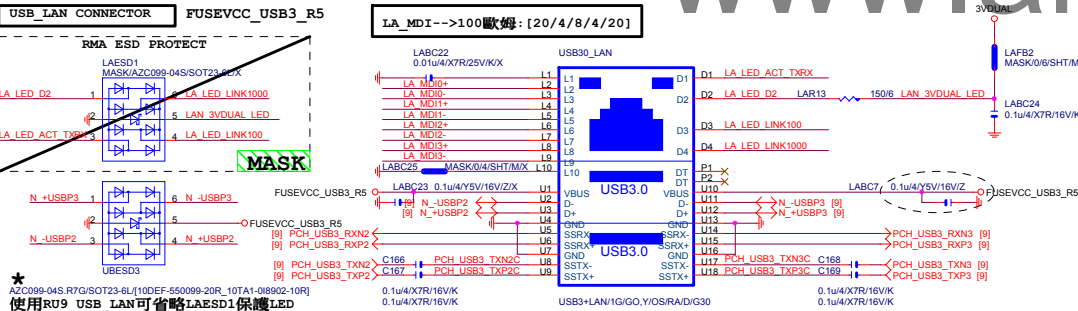
Title			
AUDIO JACK			
Size	Document Number		Rev
Custom	GA-Z97M-D3H		1.0
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LAN: RTL8111F/VB/VL

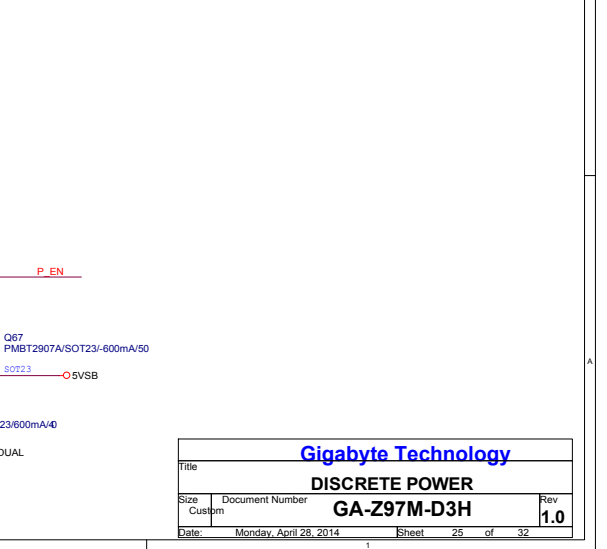
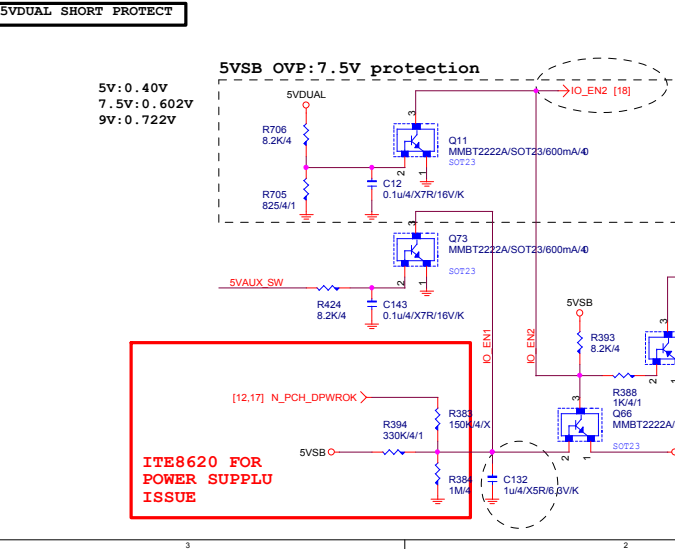
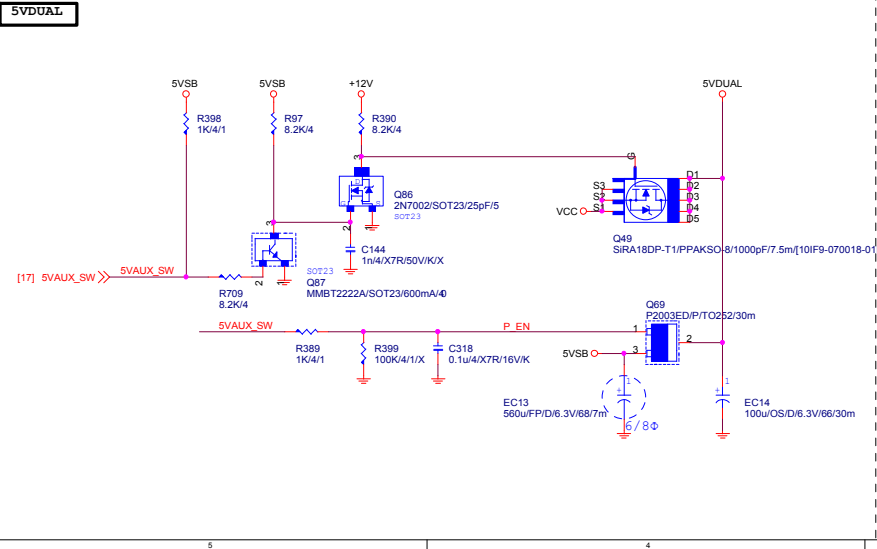
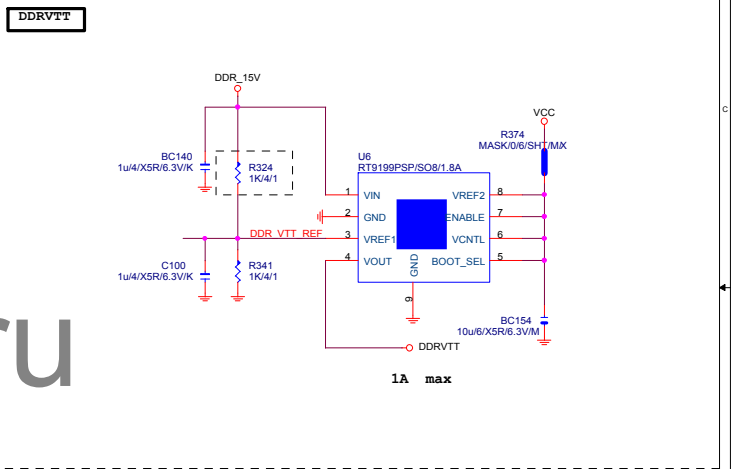
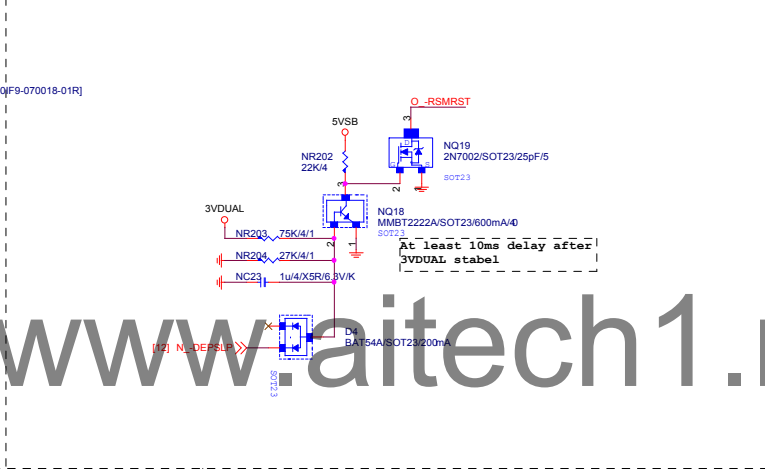
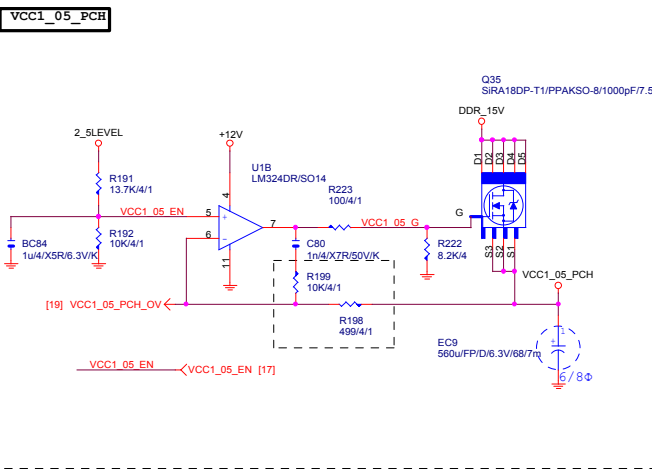
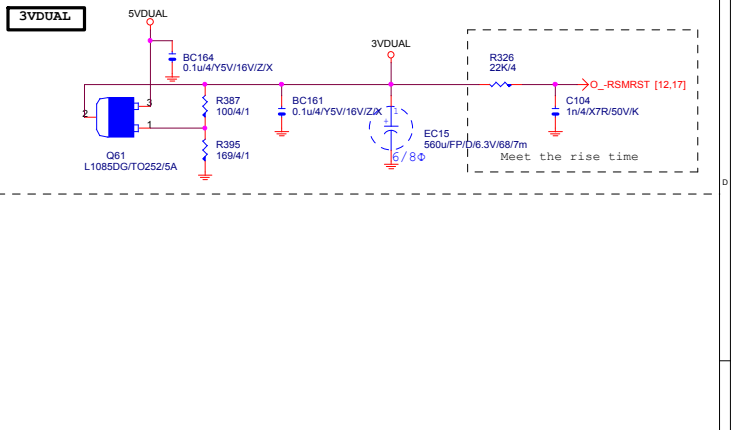
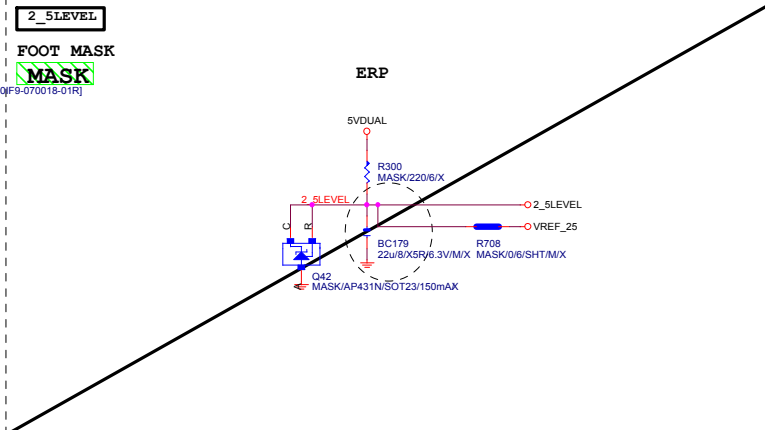
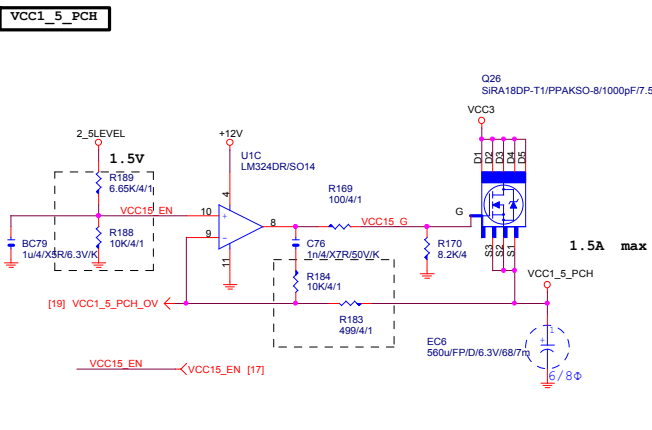


Power domain chart

	RTL8111E
AVDD33	3.3V
DVDD33	3.3V
VDDREG	3.3V
DVDD10	1.05V

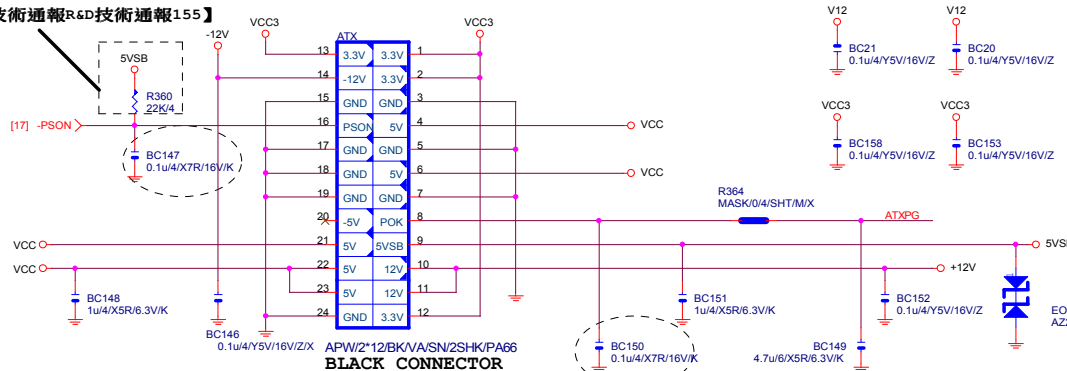


Gigabyte Technology		
Title		
Realtek RTL8111G		
Size	Document Number	Rev
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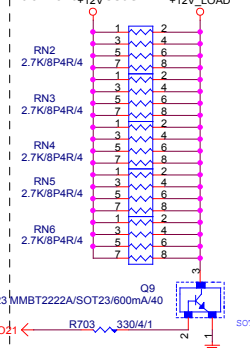
ATXX24 POWER CONNECTOR

【技術通報R&D技術通報155】

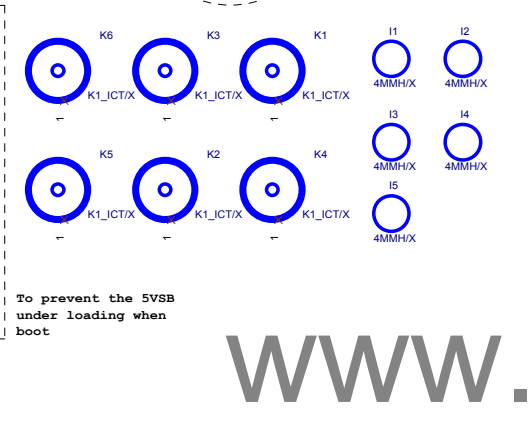
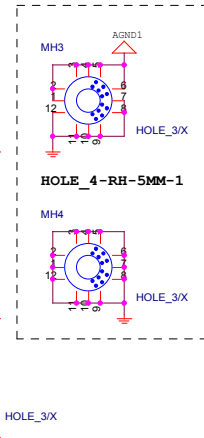
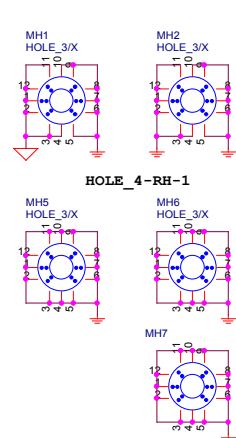
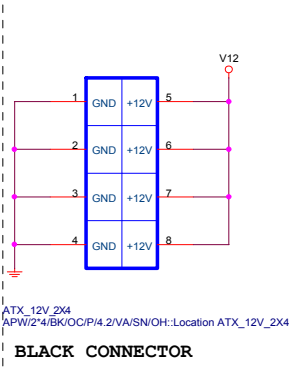


【技術通報R&D技術通報153】

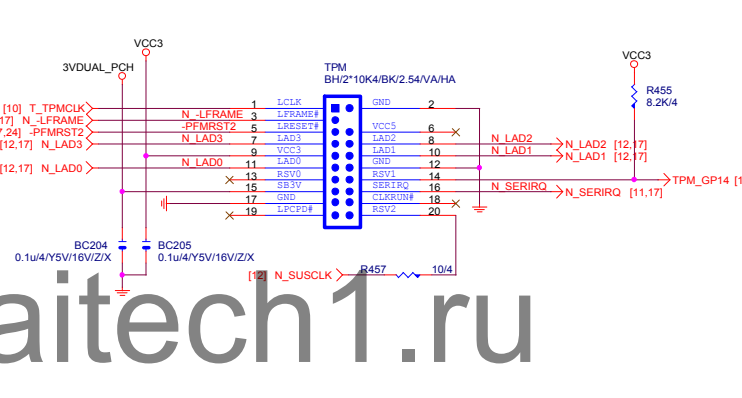
To fix 12V light load abnormal issue



ATXX4 POWER CONNECTOR

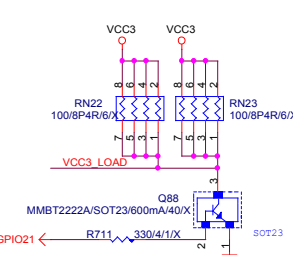


TPM



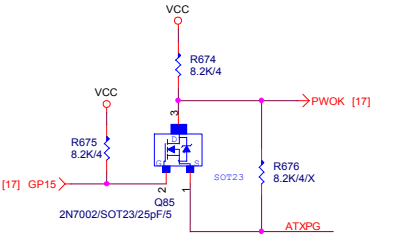
www.aitech1.ru

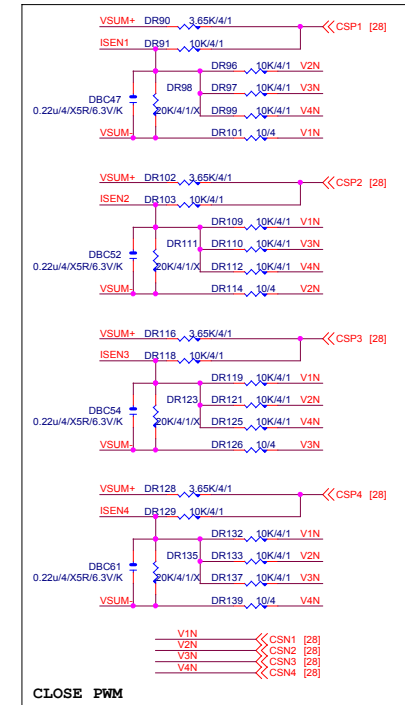
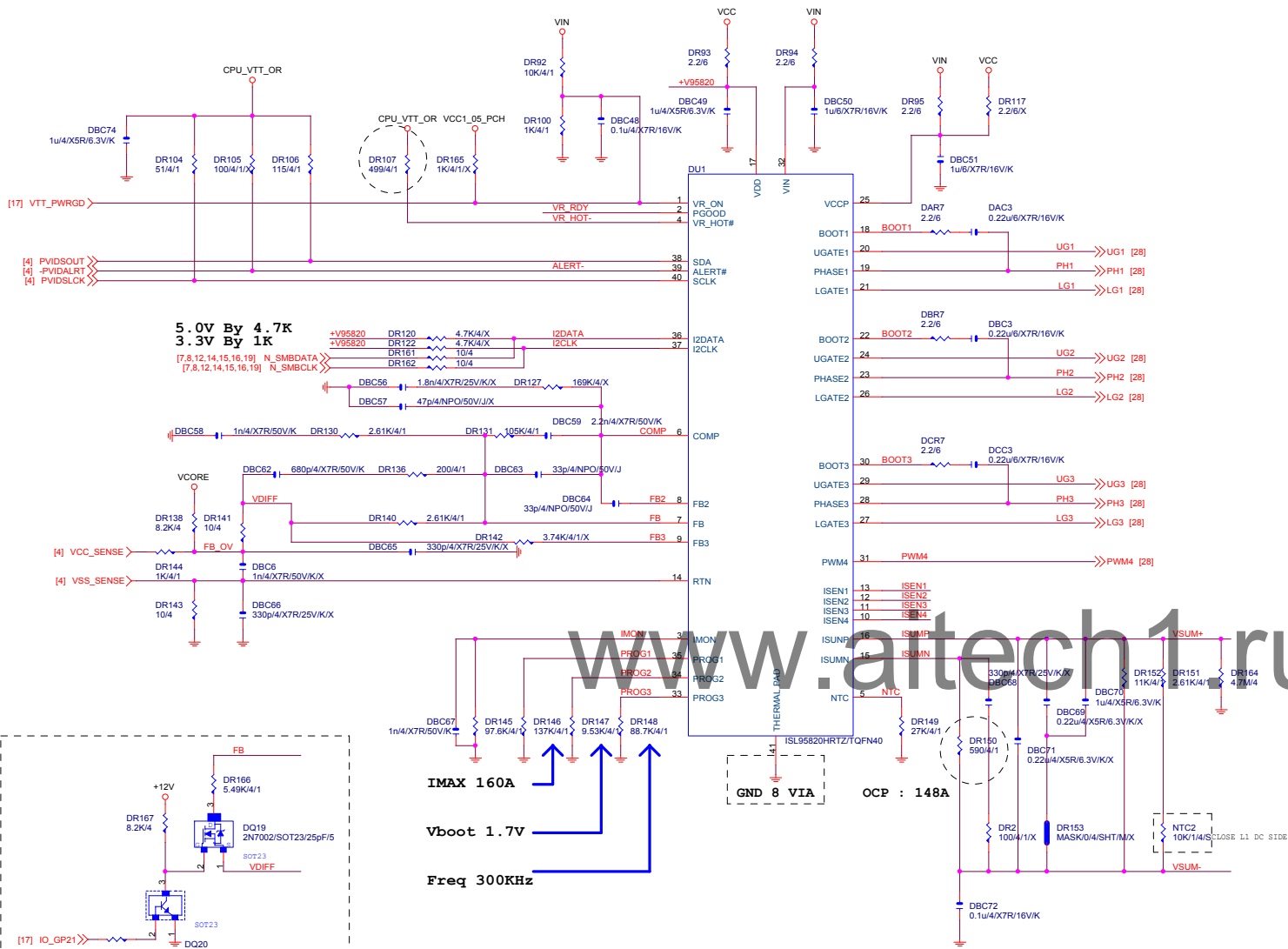
FIX PWR MINMUN LOAD

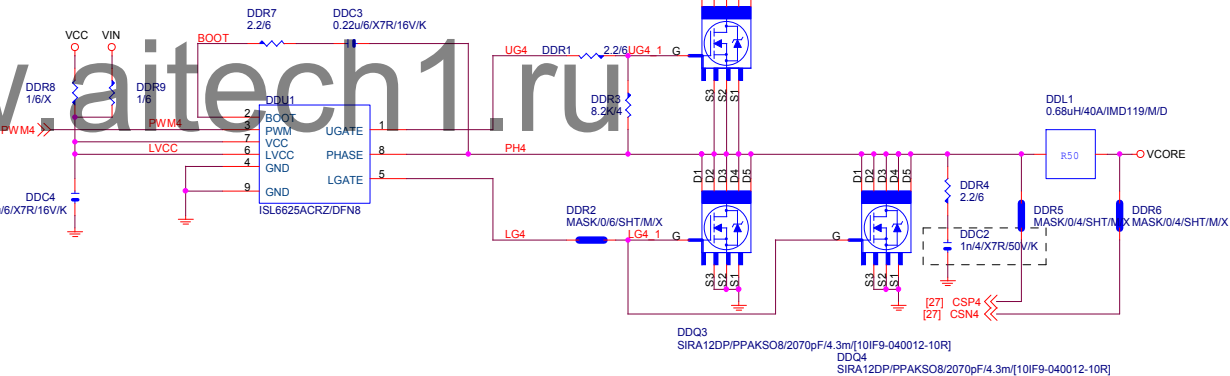
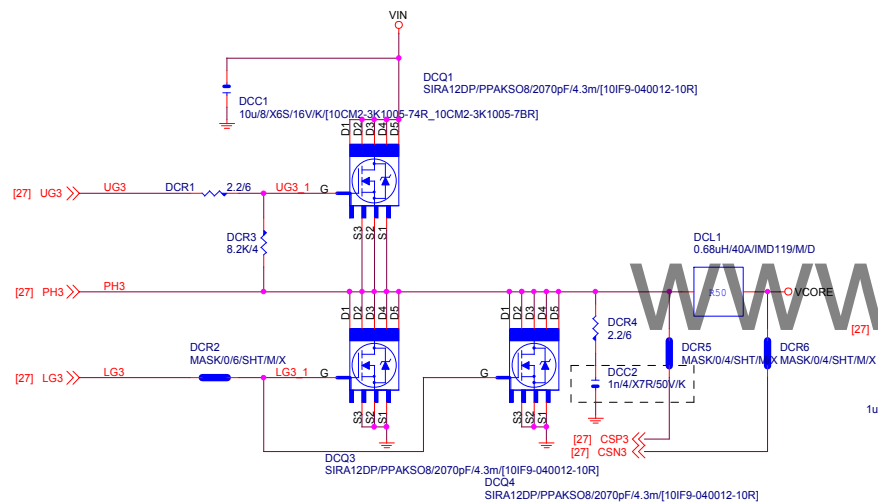
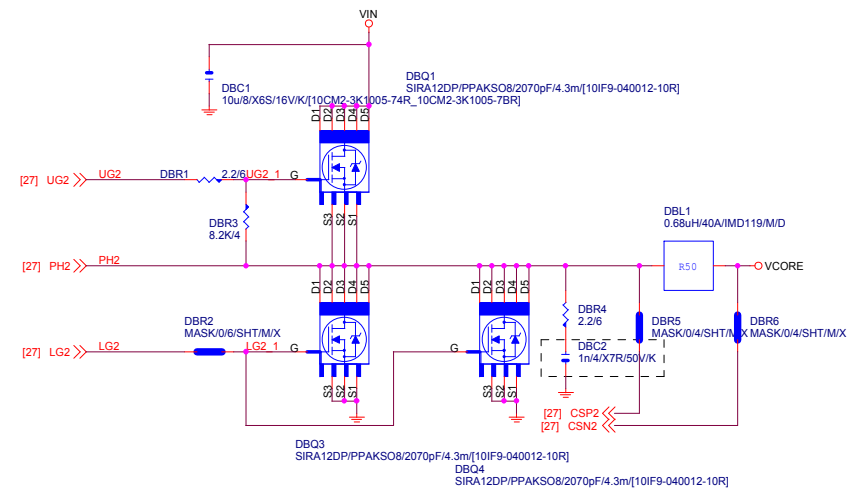
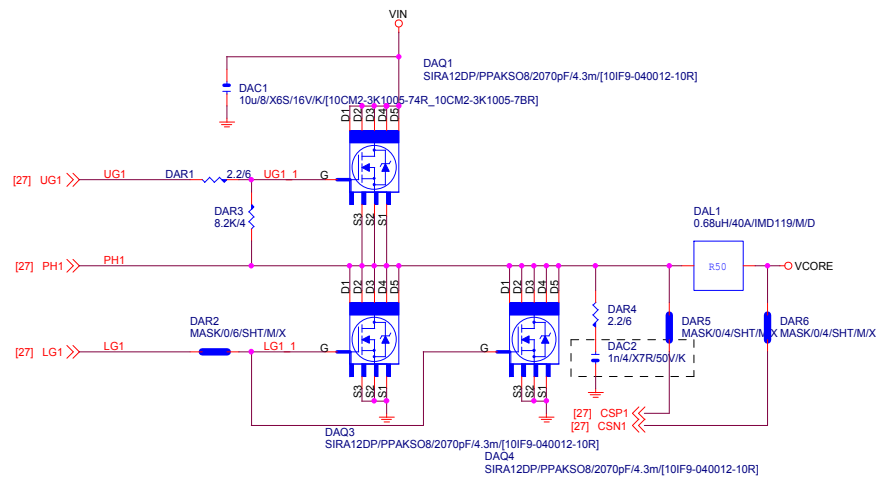


PWOK PATCH

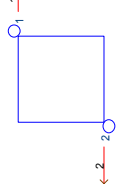
【技術通報R&D技術通報154】





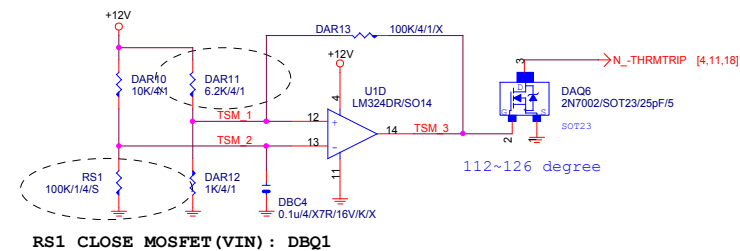
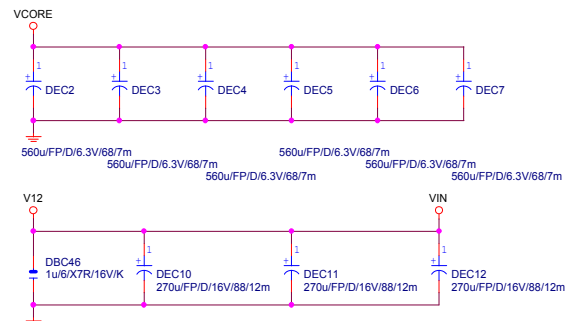


MOS_HS
9 SERIES MOS HS/[12SP2-S07920-11R_12SP2-S07920-12R_12SP2-S07920-13R]



9 Series MOS Heatsink (Screw fix)

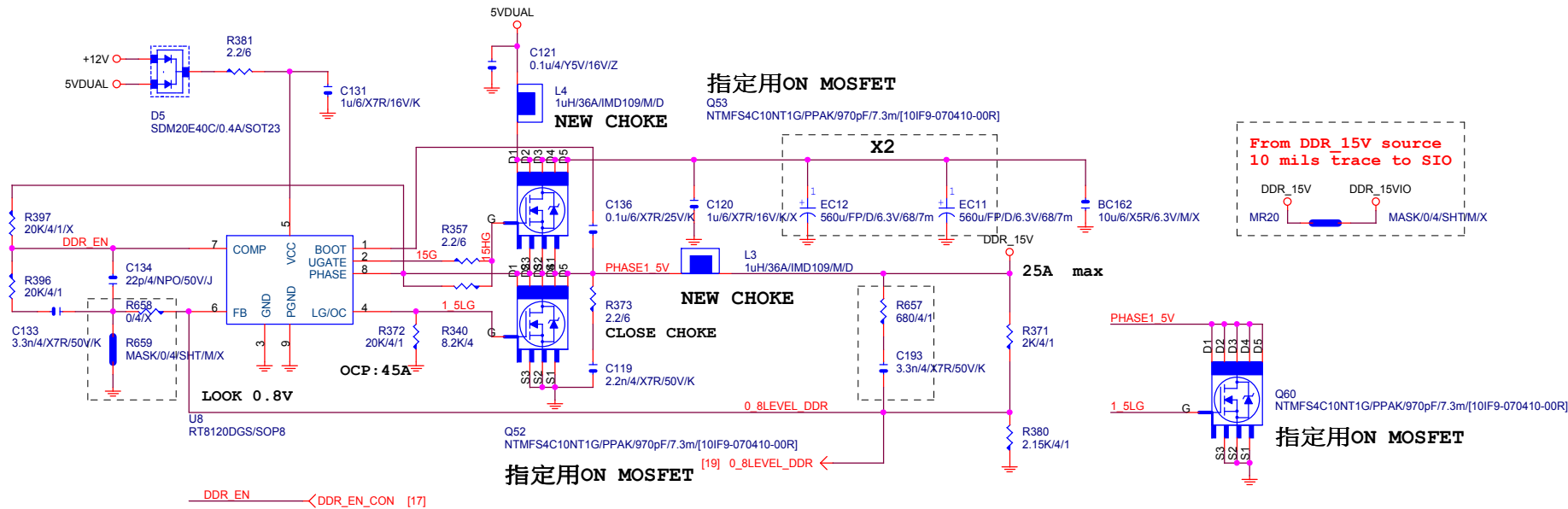
MOSHSINK-Z97X-SLI



RS1 CLOSE MOSFET (VIN) : DBQ1

Gigabyte Technology			
Title			
CPU CORE VR-2			
Size			
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DDR15V




PWR SEQ

VIN=5V, VOUT=1.5V, IOUT=25A, P
IRMS=11.45A
560uF/FP/D/6.3V/68/8m RIPPLE

VIN=5V, VOUT=1.5V, IOUT=25A, PHASE=1
IRMS=11.45A
560u/EP/D/6.3V/68/8m RIPPLE CURRENT=4.7A
Coefficient=1.7(85°C), 1(105°C)
VIN Ripple current=4.7X1.7=7.99A(85°C)
-->故固態電容須2X7.99=15.98>11.45A

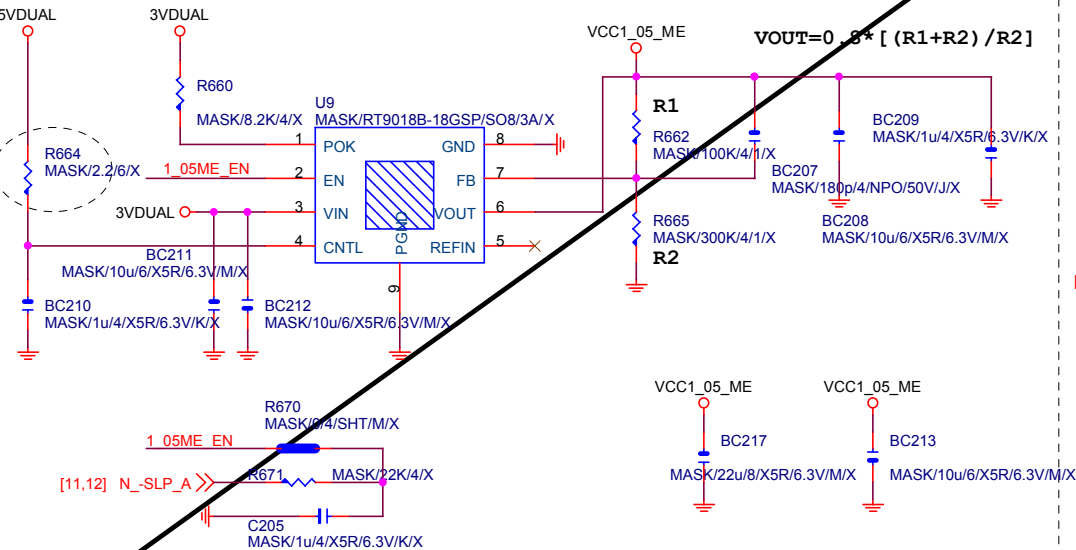
$$\begin{aligned} \text{Rocset} &= (\text{Iocp} * \text{Lgate}, \text{rdson}) / \text{Iocset} \\ \text{Rocset} &= (45\text{A} * 6.7\text{mOhm}) / 10\text{uA} = 30\text{K} \\ \text{Iocset} &= 10\text{uA} \end{aligned}$$

<div style="text-align: center;">  </div>			
Title			
DDR POWER			
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VCC1_05_ME FOOT MASK

Z97 N/A MASK

【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

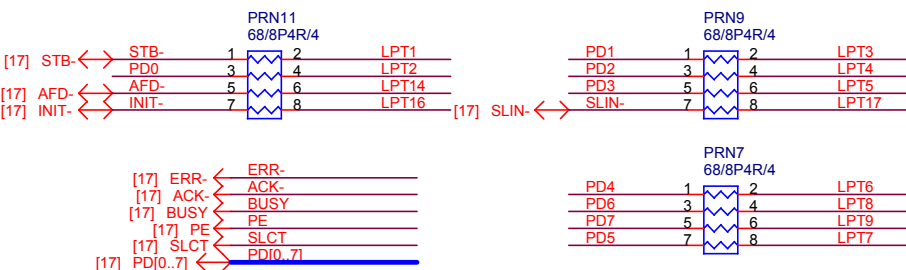
Second source

EM5103 - 10GL2-305103-01R

NCT3730S -

10GL2-303730-01R

LPT PORT

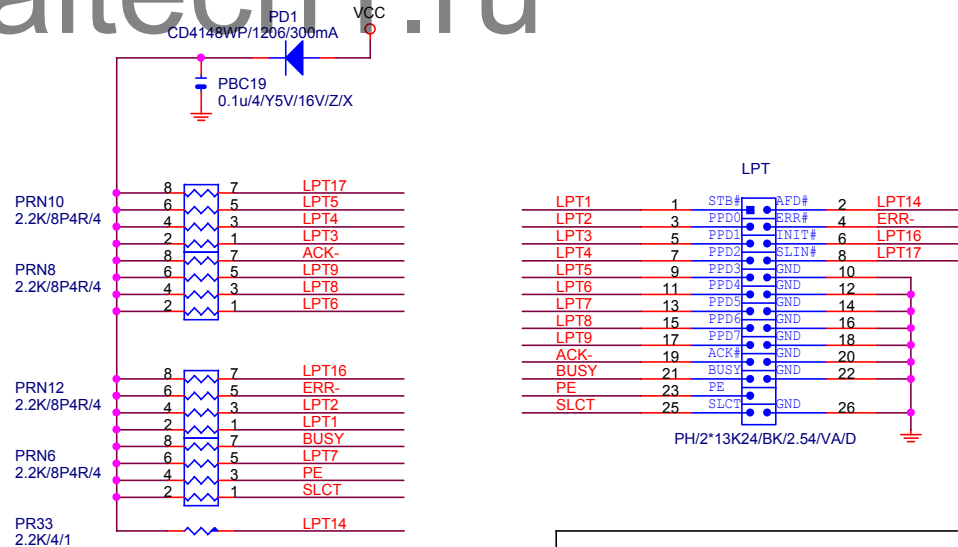
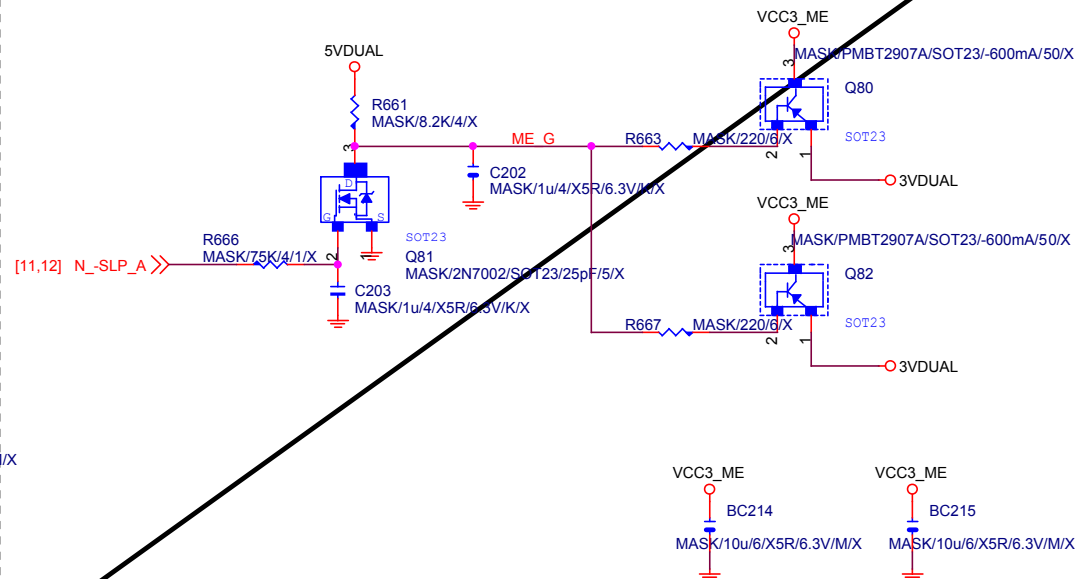


【技術通報R&D技術通報151】

33ohm Change to 68ohm

VCC3_ME FOOT MASK

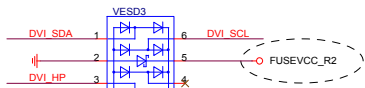
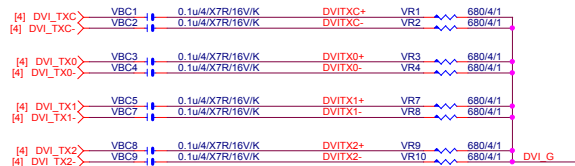
Z97 N/A MASK



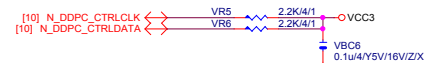
Gigabyte Technology

Title			
LPT			
Size	Document Number	Rev	
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Monday, April 28, 2014		30	32

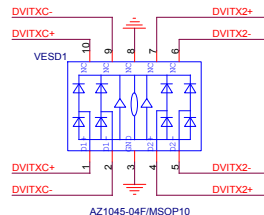
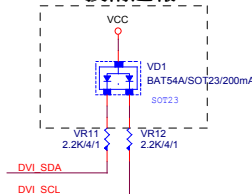
DVI LEVEL SHIFT



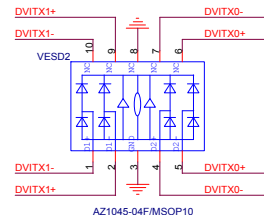
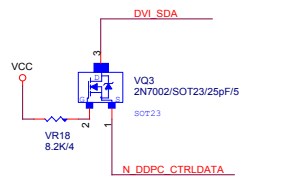
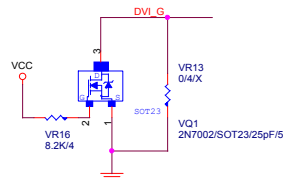
Close to connector



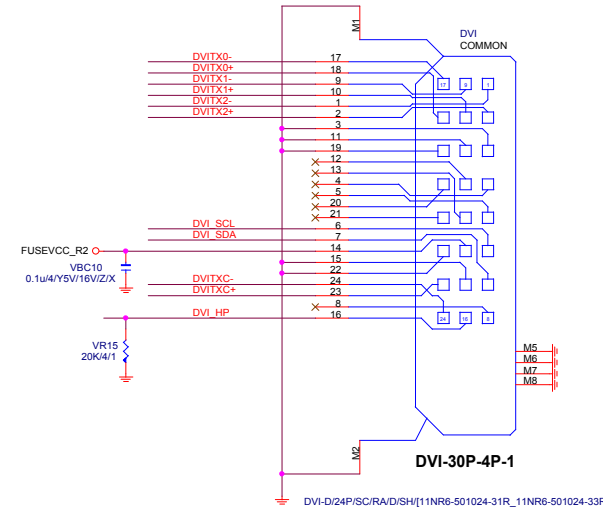
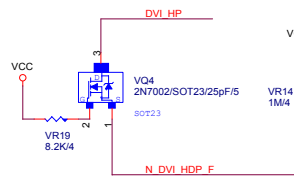
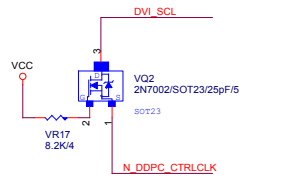
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Close to connector



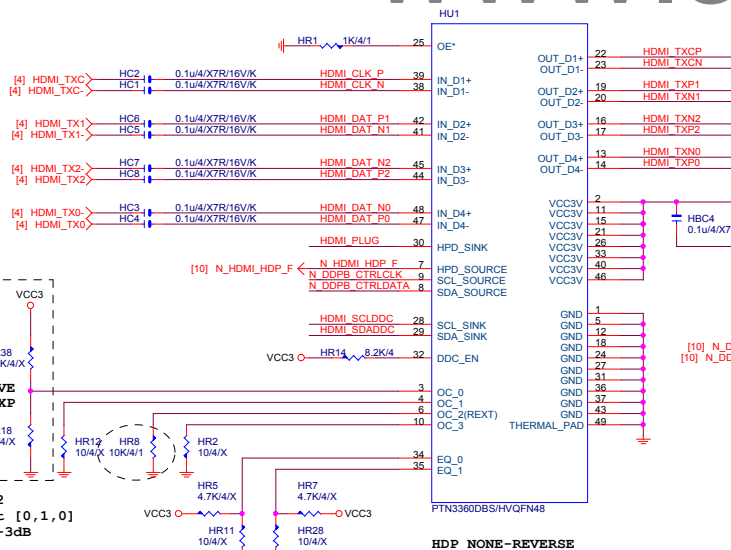
Close to connector



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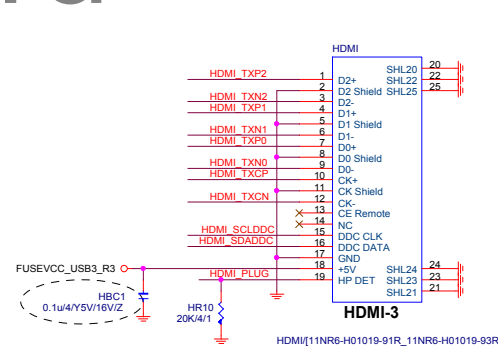
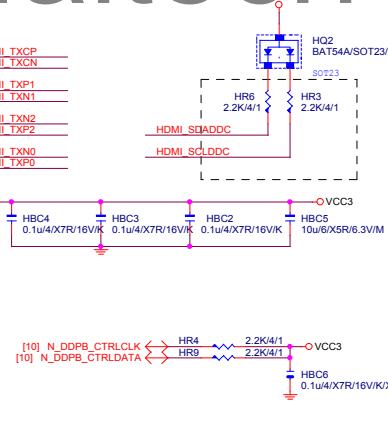
HDMI LEVEL SHIFT

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AS1442
Default [0,1,0]
450mv,-3dB

AS1442 Default [0,0] 3dB
[0,1] 6dB



HDMI-3

Gigabyte Technology		
DVI		
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