

Model Name: GA-H81M-S2PH

Revision 2.0

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
08	DDR III CHANNEL B
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	ITE 8620 LPC IO
16	COM,KB_MS,USB PWR
17	IT8892E
18	PCI SLOT 1,2
19	PCI EXPRESS*1 SLOT.LPT
20	HWM,FAN CTRL,OV,-PROCHOT
21	DUAL BIOS
22	FP,F_USB,SPK,SATALED
23	Realtek ALC887-VD2
24	REAR AUDIO JACK
25	REALTEK RTL8111F
26	DISCRETE POWER
27	ATX,DUMMY LOAD

SHEET

TITLE

28	RT8120_DDR POWER
29	VCORE ISL95812_1
30	VCORE ISL95812_2
31	HDMI

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Title			Cover Sheet
Size	Document Number	GA-H81M-S2PH	
Custom			Rev 2.0
Date:	Wednesday, April 09, 2014	Sheet	1 of 31

Revision 2.0

Component value change history

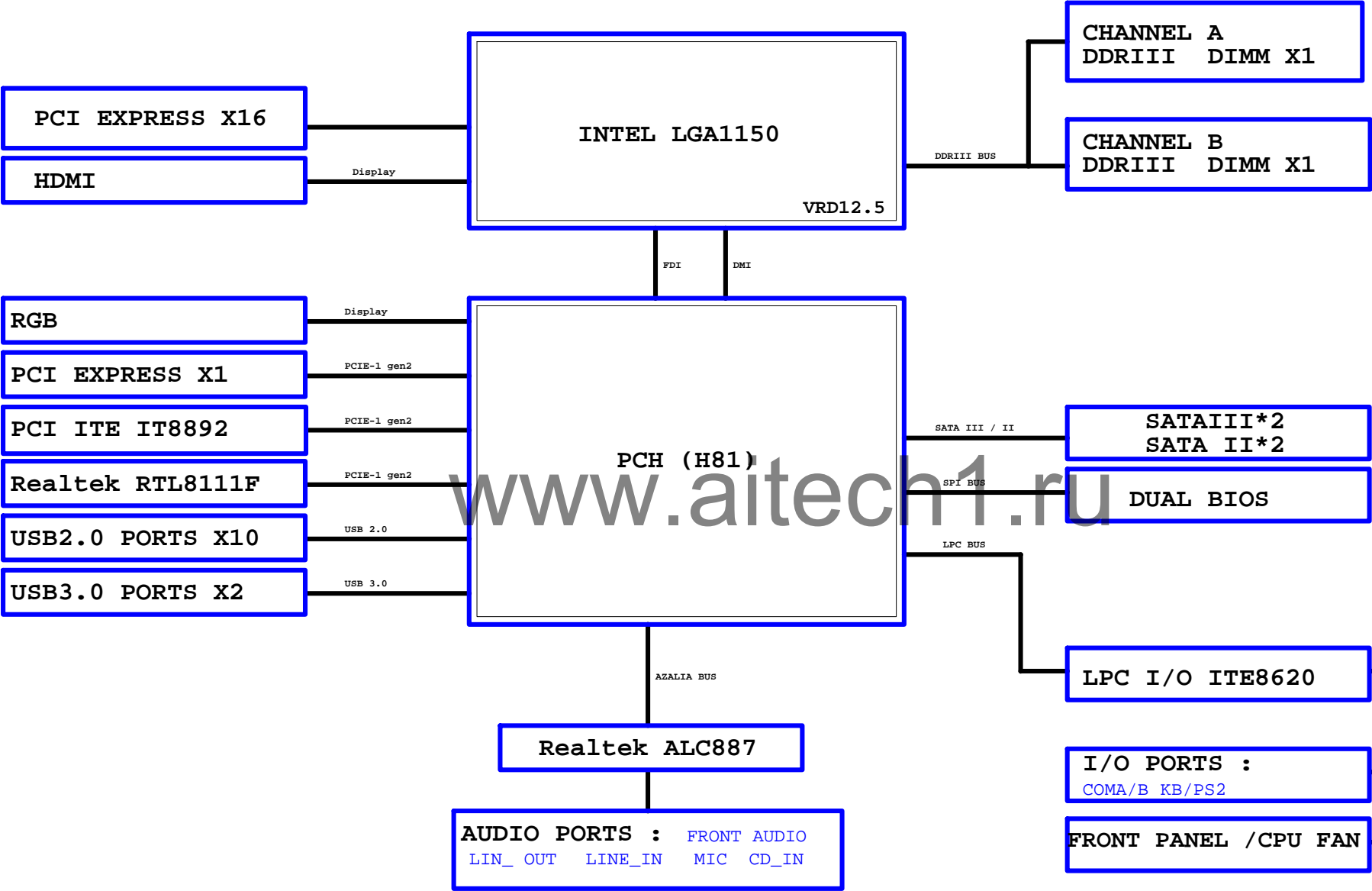
2014/04/08

[illegible]

Circuit or PCB layout change

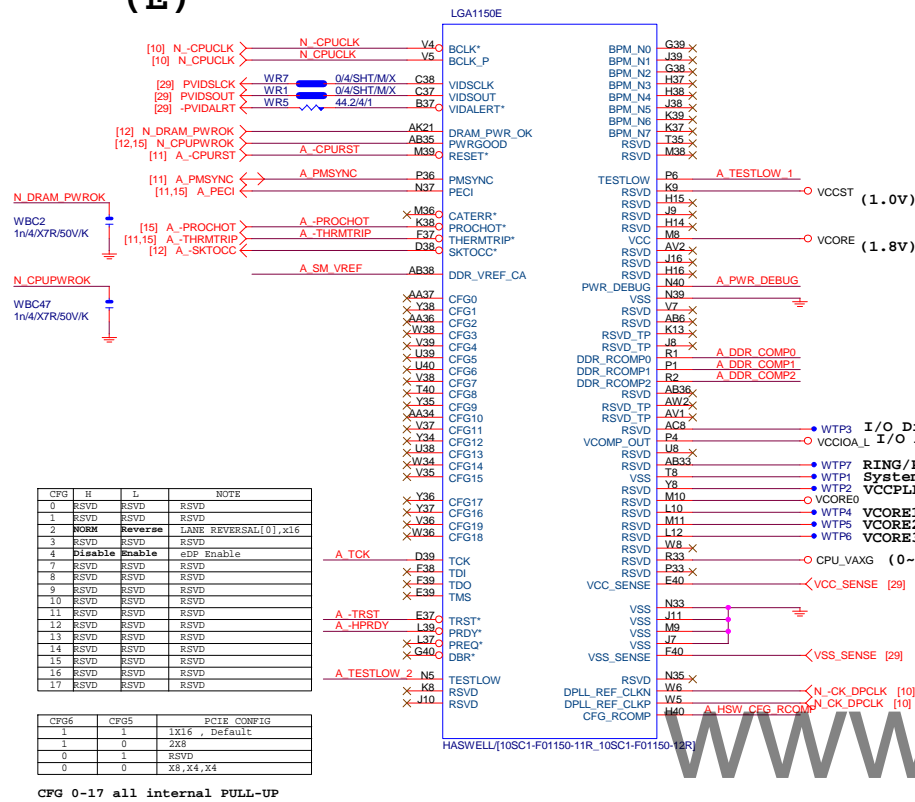
[illegible]

BLOCK DIAGRAM



LGA1150

(E)



LGA1155

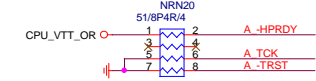
(C)

PCIEX16:16/5/5/5/16(breakout min 10/4/4/4/10)
Impedance=80 +- 17.5%

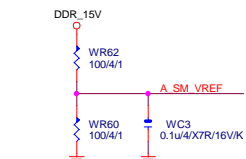
CPU SVID



CPU PU/PD

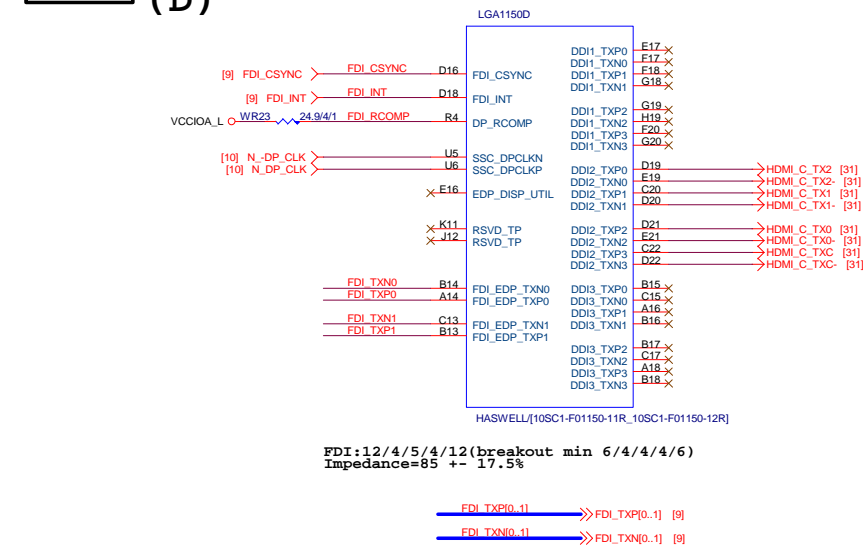


SM REF

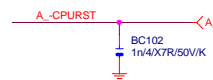


LGA1150

(D)



-CPURST



THRMTRIP DISABLE

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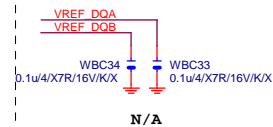
CPU LGA1150-A

Title	Document Number	Rev
Size	Custom	GA-H81M-S2PH
Date	Wednesday, April 09, 2014	2.0

LGA1150A			
MAAA0	AU13	DDR0_M0	DDR0_D00
MAAA1	AV16	DDR0_M1	DDR0_D01
MAAA2	AU16	DDR0_M2	DDR0_D02
MAAA3	AW17	DDR0_M3	DDR0_D03
MAAA4	AU17	DDR0_M4	DDR0_D04
MAAA5	AU18	DDR0_M5	DDR0_D05
MAAA6	AV17	DDR0_M6	DDR0_D06
MAAA7	AT18	DDR0_M7	DDR0_D07
MAAA8	AU18	DDR0_M8	DDR0_D08
MAAA9	AT19	DDR0_M9	DDR0_D09
MAAA10	AW11	DDR0_M10	DDR0_D10
MAAA11	AV19	DDR0_M11	DDR0_D11
MAAA12	AU19	DDR0_M12	DDR0_D12
MAAA13	AY10	DDR0_M13	DDR0_D13
MAAA14	AT20	DDR0_M14	DDR0_D14
MAAA15	AU21	DDR0_M15	DDR0_D15
MODT_A0	AW10	DDR0_ODT0	DDR0_ODT0
MODT_A1	AY8	DDR0_ODT1	DDR0_ODT1
AW9	AW9	DDR0_ODT2	DDR0_ODT2
AW8	AW8	DDR0_ODT3	DDR0_ODT3
AW33	AW33	DDR0_ECC0	DDR0_ECC0
AW33	AW33	DDR0_ECC1	DDR0_ECC1
AW33	AW33	DDR0_ECC2	DDR0_ECC2
AW33	AW33	DDR0_ECC3	DDR0_ECC3
AW33	AW33	DDR0_ECC4	DDR0_ECC4
AW33	AW33	DDR0_ECC5	DDR0_ECC5
AW33	AW33	DDR0_ECC6	DDR0_ECC6
AW33	AW33	DDR0_ECC7	DDR0_ECC7
SBAA0	SBAA0	DDR0_BA0	DDR0_BA0
SBAA1	SBAA1	DDR0_BA1	DDR0_BA1
SBAA2	SBAA2	DDR0_BA2	DDR0_BA2
CKEA0	CKEA0	DDR0_CKE0	DDR0_CKE0
CKEA1	CKEA1	DDR0_CKE1	DDR0_CKE1
CSA0	CSA0	DDR0_CS_N0	DDR0_CS_N0
CSA1	CSA1	DDR0_CS_N1	DDR0_CS_N1
DCLKA0	DCLKA0	DDR0_CLK_P0	DDR0_CLK_P0
DCLKA1	DCLKA1	DDR0_CLK_P1	DDR0_CLK_P1
DCLKA2	DCLKA2	DDR0_CLK_P2	DDR0_CLK_P2
DCLKA3	DCLKA3	DDR0_CLK_P3	DDR0_CLK_P3
DCLKA4	DCLKA4	DDR0_CLK_P4	DDR0_CLK_P4
DCLKA5	DCLKA5	DDR0_CLK_P5	DDR0_CLK_P5
DCLKA6	DCLKA6	DDR0_CLK_P6	DDR0_CLK_P6
DCLKA7	DCLKA7	DDR0_CLK_P7	DDR0_CLK_P7
DCLKA8	DCLKA8	DDR0_CLK_P8	DDR0_CLK_P8
DCLKA9	DCLKA9	DDR0_CLK_P9	DDR0_CLK_P9
DCLKA10	DCLKA10	DDR0_CLK_P10	DDR0_CLK_P10
DCLKA11	DCLKA11	DDR0_CLK_P11	DDR0_CLK_P11
DCLKA12	DCLKA12	DDR0_CLK_P12	DDR0_CLK_P12
DCLKA13	DCLKA13	DDR0_CLK_P13	DDR0_CLK_P13
DCLKA14	DCLKA14	DDR0_CLK_P14	DDR0_CLK_P14
DCLKA15	DCLKA15	DDR0_CLK_P15	DDR0_CLK_P15
RSVD	RSVD	DDR0_RSVD	DDR0_RSVD
SRASA	SRASA	DDR0_RAS*	DDR0_RAS*
SWEA	SWEA	DDR0_WE*	DDR0_WE*
SCASA	SCASA	DDR0_CAS*	DDR0_CAS*
DDR3_RST	DDR3_RST	DDR0_RESET*	DDR0_RESET*

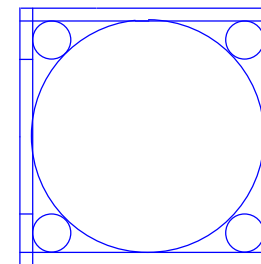
HASWELL(10SC1-F01150-11R_10SC1-F01150-12R)

Place in CPU bottom side



LGA1150B			
MAAB0	AL19	DDR1_M0	DDR1_D00
MAAB1	AK23	DDR1_M1	DDR1_D01
MAAB2	AK23	DDR1_M2	DDR1_D02
MAAB3	AK23	DDR1_M3	DDR1_D03
MAAB4	AP23	DDR1_M4	DDR1_D04
MAAB5	AL23	DDR1_M5	DDR1_D05
MAAB6	AL24	DDR1_M6	DDR1_D06
MAAB7	AV25	DDR1_M7	DDR1_D07
MAAB8	AL26	DDR1_M8	DDR1_D08
MAAB9	AW25	DDR1_M9	DDR1_D09
MAAB10	AP18	DDR1_M10	DDR1_D10
MAAB11	AV26	DDR1_M11	DDR1_D11
MAAB12	AV26	DDR1_M12	DDR1_D12
MAAB13	AL15	DDR1_M13	DDR1_D13
MAAB14	AV27	DDR1_M14	DDR1_D14
MAAB15	AY28	DDR1_M15	DDR1_D15
MODT_B0	AM17	DDR1_ODT0	DDR1_ODT0
MODT_B1	AL16	DDR1_ODT1	DDR1_ODT1
AM16	AM16	DDR1_ODT2	DDR1_ODT2
AK15	AK15	DDR1_ODT3	DDR1_ODT3
AM26	AM26	DDR1_ECC0	DDR1_ECC0
AM25	AM25	DDR1_ECC1	DDR1_ECC1
AP26	AP26	DDR1_ECC2	DDR1_ECC2
AL26	AL26	DDR1_ECC3	DDR1_ECC3
AL25	AL25	DDR1_ECC4	DDR1_ECC4
AR26	AR26	DDR1_ECC5	DDR1_ECC5
AR25	AR25	DDR1_ECC6	DDR1_ECC6
AR25	AR25	DDR1_ECC7	DDR1_ECC7
SBAB0	SBAB0	DDR1_BA0	DDR1_BA0
SBAB1	SBAB1	DDR1_BA1	DDR1_BA1
SBAB2	SBAB2	DDR1_BA2	DDR1_BA2
CKEB0	CKEB0	DDR1_CKE0	DDR1_CKE0
CKEB1	CKEB1	DDR1_CKE1	DDR1_CKE1
CSB0	CSB0	DDR1_CS_N0	DDR1_CS_N0
CSB1	CSB1	DDR1_CS_N1	DDR1_CS_N1
DCLKB0	DCLKB0	DDR1_CLK_P0	DDR1_CLK_P0
DCLKB1	DCLKB1	DDR1_CLK_P1	DDR1_CLK_P1
DCLKB2	DCLKB2	DDR1_CLK_P2	DDR1_CLK_P2
DCLKB3	DCLKB3	DDR1_CLK_P3	DDR1_CLK_P3
DCLKB4	DCLKB4	DDR1_CLK_P4	DDR1_CLK_P4
DCLKB5	DCLKB5	DDR1_CLK_P5	DDR1_CLK_P5
DCLKB6	DCLKB6	DDR1_CLK_P6	DDR1_CLK_P6
DCLKB7	DCLKB7	DDR1_CLK_P7	DDR1_CLK_P7
DCLKB8	DCLKB8	DDR1_CLK_P8	DDR1_CLK_P8
DCLKB9	DCLKB9	DDR1_CLK_P9	DDR1_CLK_P9
DCLKB10	DCLKB10	DDR1_CLK_P10	DDR1_CLK_P10
DCLKB11	DCLKB11	DDR1_CLK_P11	DDR1_CLK_P11
DCLKB12	DCLKB12	DDR1_CLK_P12	DDR1_CLK_P12
DCLKB13	DCLKB13	DDR1_CLK_P13	DDR1_CLK_P13
DCLKB14	DCLKB14	DDR1_CLK_P14	DDR1_CLK_P14
DCLKB15	DCLKB15	DDR1_CLK_P15	DDR1_CLK_P15
RSVD	RSVD	DDR1_RSVD	DDR1_RSVD
SRASB	SRASB	DDR1_RAS*	DDR1_RAS*
SWEB	SWEB	DDR1_WE*	DDR1_WE*
VREF_DQA	VREF_DQA	DDR1_VREF_DQA	DDR1_VREF_DQA
VREF_DQB	VREF_DQB	DDR1_VREF_DQB	DDR1_VREF_DQB
DQSB0	DQSB0	DDR1_DQS_P0	DDR1_DQS_P0
DQSB1	DQSB1	DDR1_DQS_P1	DDR1_DQS_P1
DQSB2	DQSB2	DDR1_DQS_P2	DDR1_DQS_P2
DQSB3	DQSB3	DDR1_DQS_P3	DDR1_DQS_P3
DQSB4	DQSB4	DDR1_DQS_P4	DDR1_DQS_P4
DQSB5	DQSB5	DDR1_DQS_P5	DDR1_DQS_P5
DQSB6	DQSB6	DDR1_DQS_P6	DDR1_DQS_P6
DQSB7	DQSB7	DDR1_DQS_P7	DDR1_DQS_P7
DQSB8	DQSB8	DDR1_DQS_P8	DDR1_DQS_P8
DQSB9	DQSB9	DDR1_DQS_P9	DDR1_DQS_P9
DQSB10	DQSB10	DDR1_DQS_P10	DDR1_DQS_P10
DQSB11	DQSB11	DDR1_DQS_P11	DDR1_DQS_P11
DQSB12	DQSB12	DDR1_DQS_P12	DDR1_DQS_P12
DQSB13	DQSB13	DDR1_DQS_P13	DDR1_DQS_P13
DQSB14	DQSB14	DDR1_DQS_P14	DDR1_DQS_P14
DQSB15	DQSB15	DDR1_DQS_P15	DDR1_DQS_P15

HASWELL(10SC1-F01150-11R_10SC1-F01150-12R)

CR
CPU RETENTION/X

LGA1150_P



ILM_BP/1156/CSP/ILM_BP/1156/CSP(12KRC-0F0001-52R_12KRC-0F0001-51R)

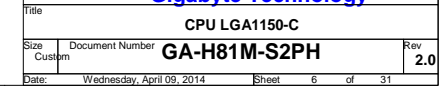
DDR BUS

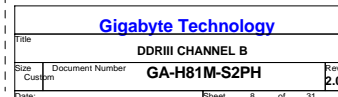
[7] MODT_A0[0..1]	MODT_A0_11
[8] MODT_B0[0..1]	MODT_B0_11
[7] MDA[0..63]	MDA[0..63]
[8] MDB[0..63]	MDB[0..63]
[7] DQSA[0..7]	DQSA[0..7]
[7] -DQSA[0..7]	-DQSA[0..7]
[7] MAAA[0..15]	MAAA[0..15]
[8] MAAB[0..15]	MAAB[0..15]
[8] DQSB[0..7]	DQSB[0..7]
[8] -DQSB[0..7]	-DQSB[0..7]

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CPU LGA1156-B			
Title		GA-H81M-S2PH	
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(F, J)

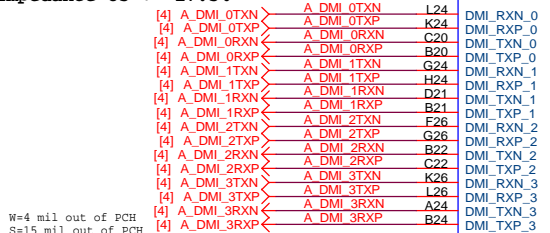




PCH

(B)

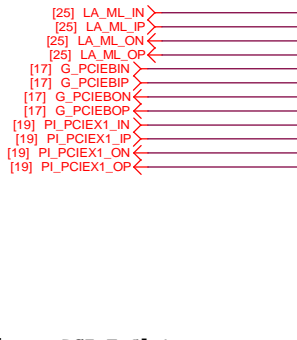
DMI:12/4/4/4/12(breakout min 8/4/4/4/8)
Impedance=85 +- 17.5%



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

H81: USB3 only Port 0/1

PCIEx1 8892 LAN



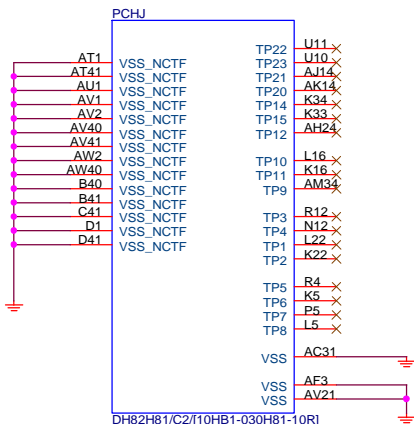
放靠近 Device & PCI-E Slot

Impedance=80 +- 17.5%

PCIEx1:16/5/5/5/16 (breakout min 8/4/4/4/8)

PCH

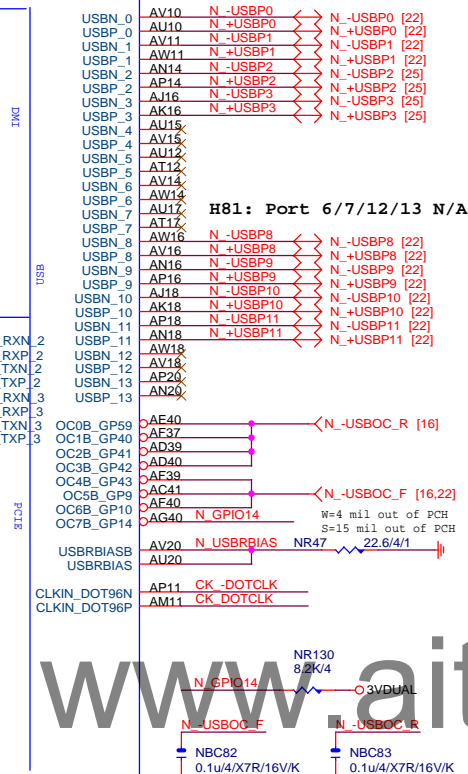
(J)



DH82H81/C2/[10HB1-030H81-10R]

USB2.0 : 12/4.5/7.5/4.5/12 (breakout min 8/4/4/4/8)
Impedance=90 +- 17.5%

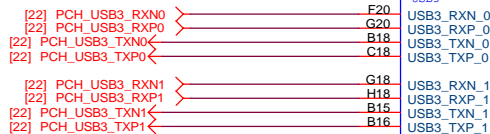
PCHB



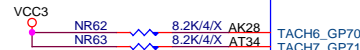
H81: Port 6/7/12/13 N/A

PCH

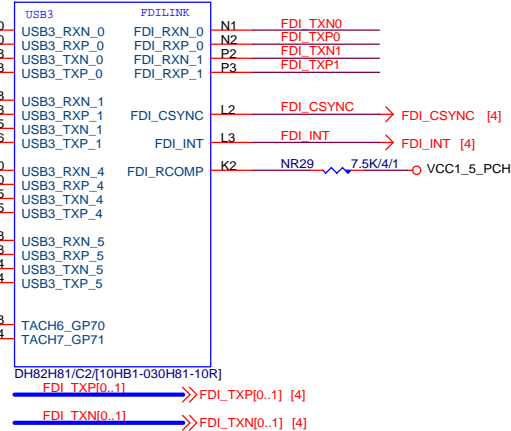
(F)



H81: USB3 only Port 0/1

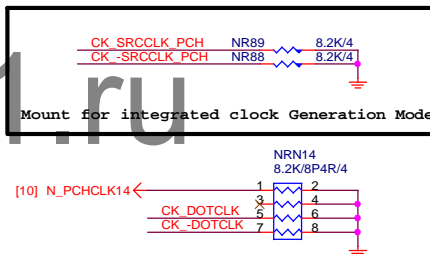


PCHF

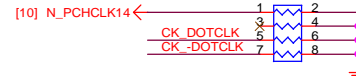


USB3.0:20/5/7/5/20 (breakout min 8/4/4/4/8) ; ONLY 3 VIAS
Impedance=85 +- 17.5%
Back Panel < 10000 MILS
Front Panel < 6000 MILS

PCH CLK PD

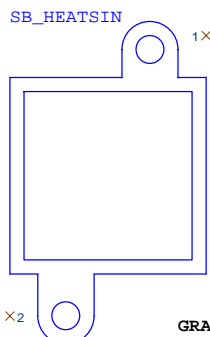


Mount for integrated clock Generation Mode



PCH H/S

LOW COST ICH7 HEATSINK



PCH_HS
PCH_HS/[12SP2-030005-43R_12SP2-030005-41R_12SP2-030005-42R]

USB TABLE

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

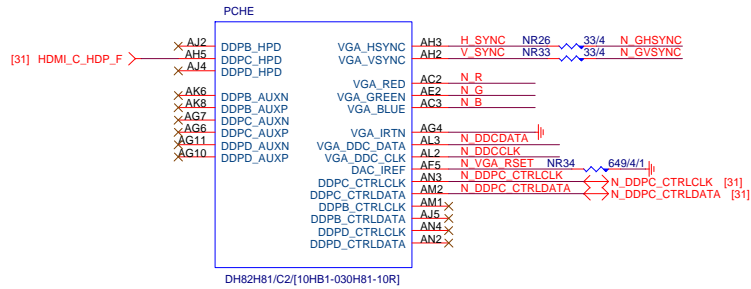
USB OC#	Configure
OC0#	USB30_HDMI
OC1#	R_USB
OC2#	N/A
OC3#	N/A
OC4#	F_USB1
OC5#	F_USB2
OC6#	N/A
OC7#	Not Use

Gigabyte Technology

Title			PCH FDI,DMI,USB ,PCIE,NVRAM		
Size			Custom		
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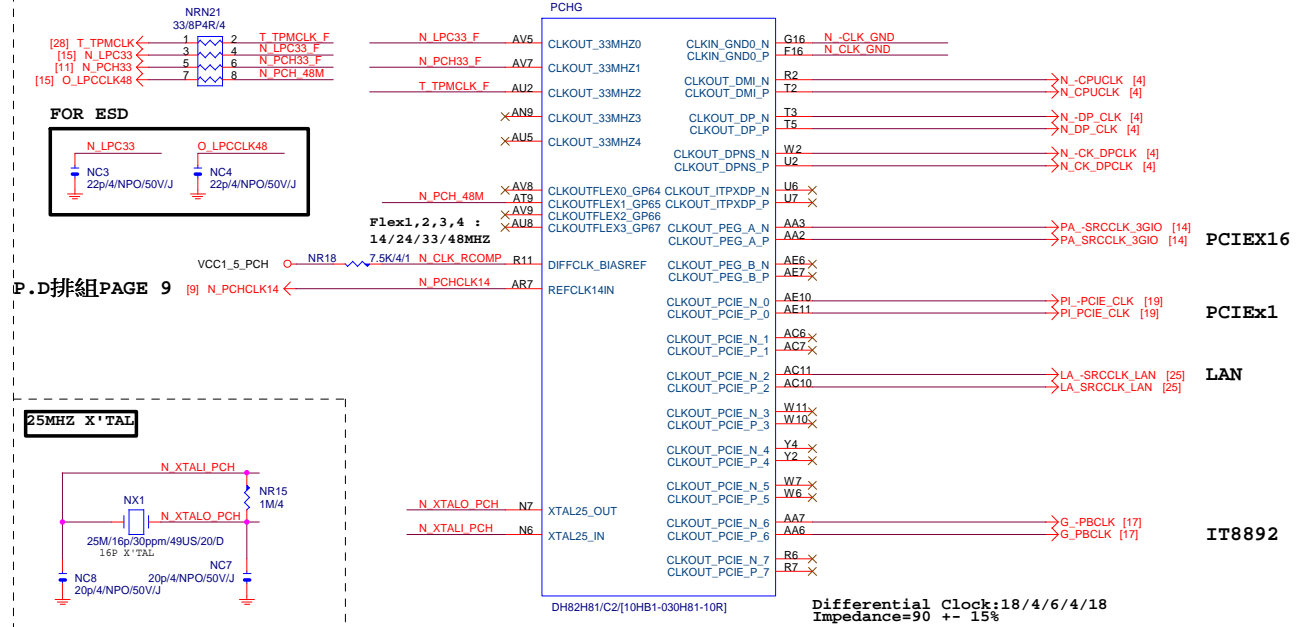
PCH

(E)

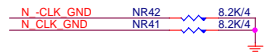


PCH

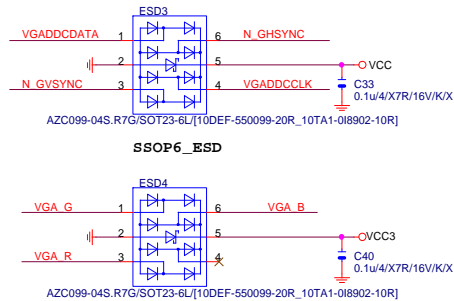
(G)



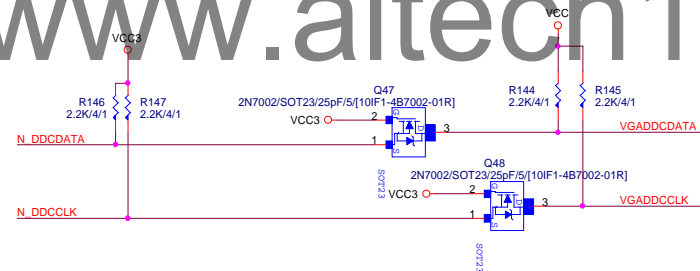
PCH CLK PD



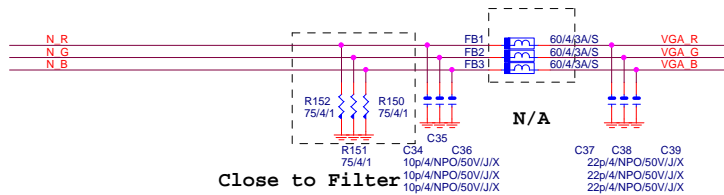
VGA ESD



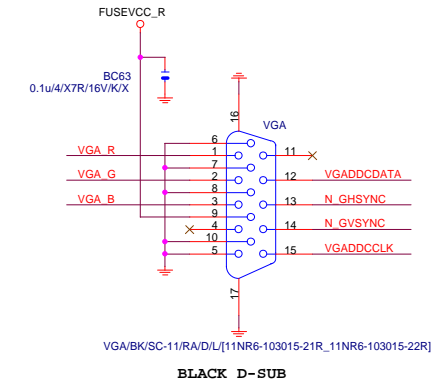
VGA DDC



VGA DDC



VGA CONNECTOR

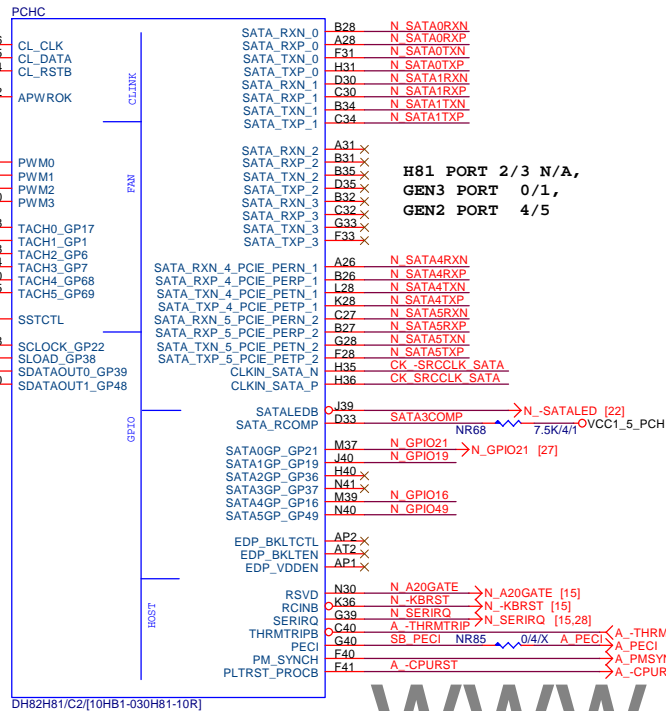


Gigabyte Technology

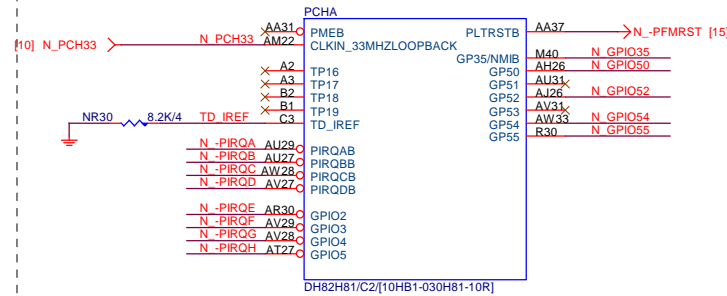
Title			
PCH DISPLAY,CLK BUFFER			
Size Custom			
Document Number			
GA-H81M-S2PH			
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PCH (C)

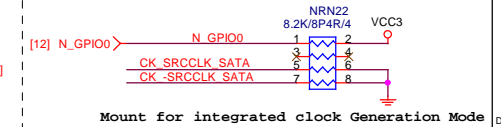
SATA3 : 20/7.5/4.5/7.5/20 (breakout min 8/4/4/4/8)
Impedance=90 +- 17.5%
SATA2 : 15/7.5/4.5/7.5/15 (breakout min 8/4/4/4/8)
Impedance=90 +- 17.5%



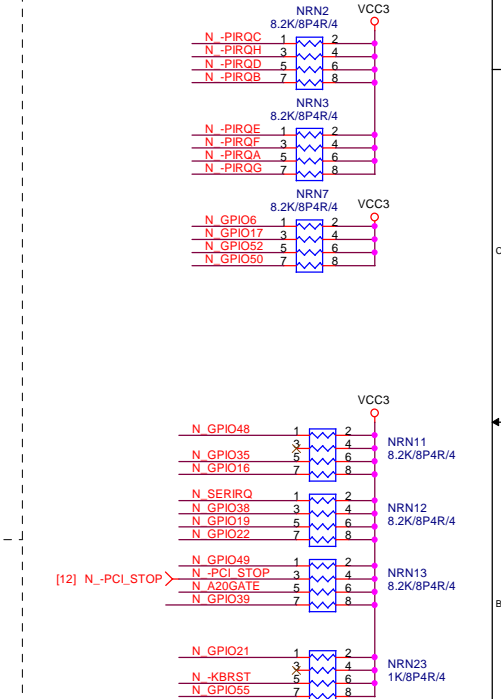
PCH (A)



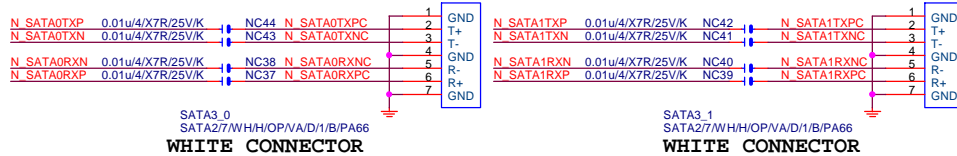
PCH CLK PD



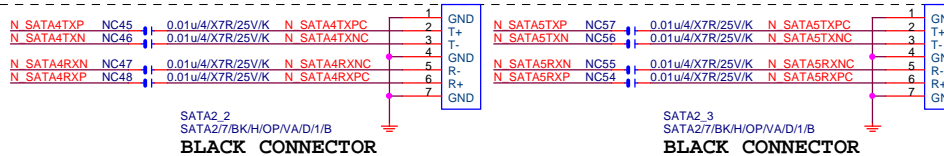
PCH PU/PD



SATA CONNECTOR



** Z87/H87 Port 4&5 SATA3.0
** B85 Port 4&5 SATA2.0

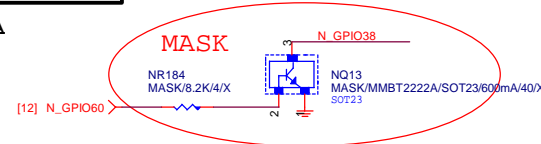


ME PWROK

H81 N/A

GPIO38 Ctrl

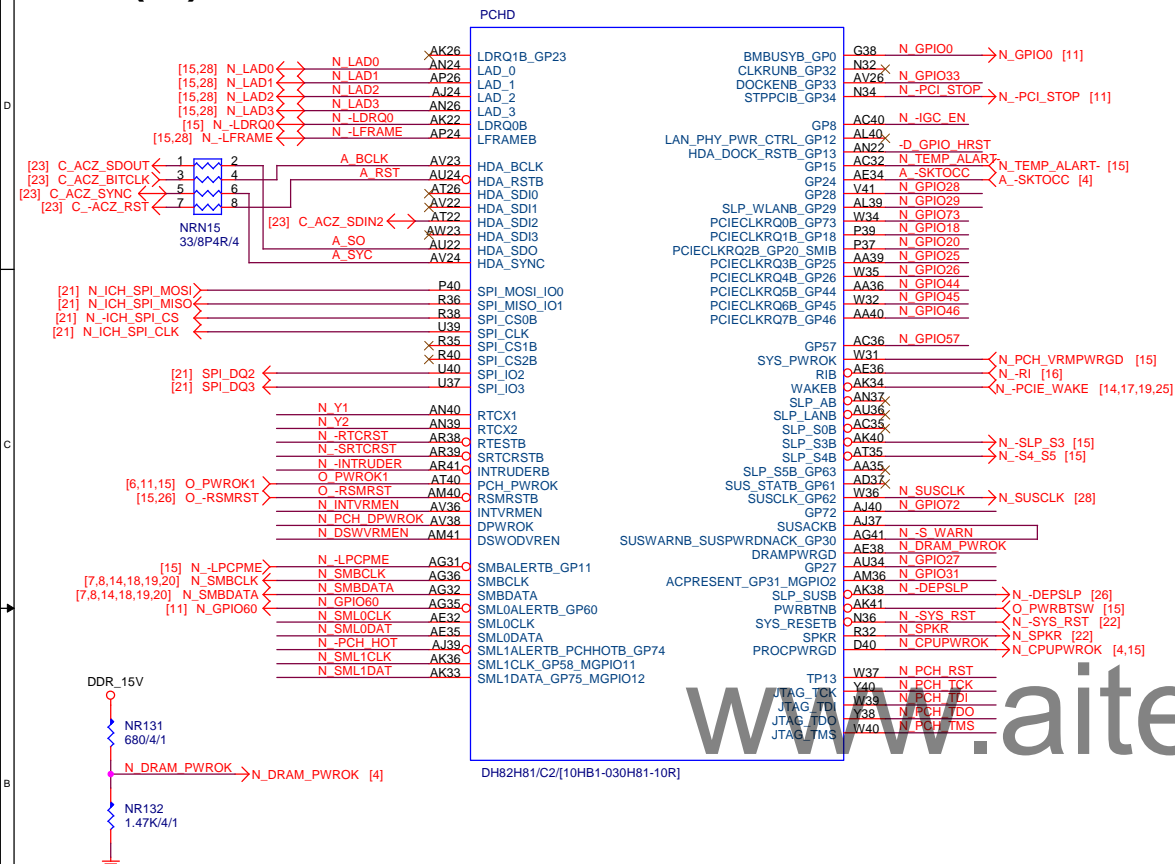
N/A



Gigabyte Technology

Title		PCH HOST , SATA, PCI	
Size	Document Number	GA-H81M-S2PH	
Custom		Rev 2.0	
Date:	Wednesday, April 09, 2014	Sheet	11 of 31

(D)



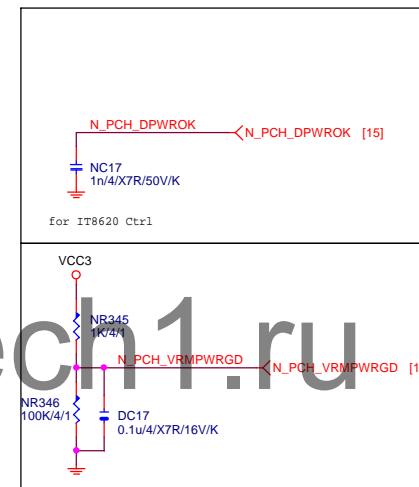
ACZ SDOUT

N/A

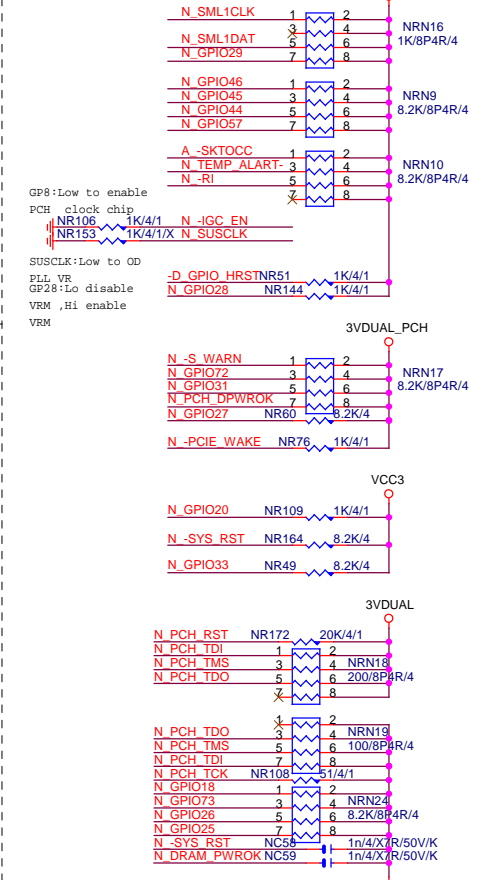
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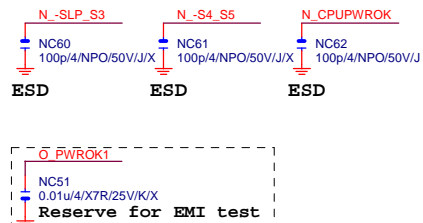
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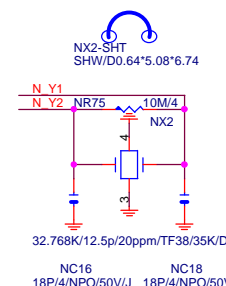
PCH	PU/PD
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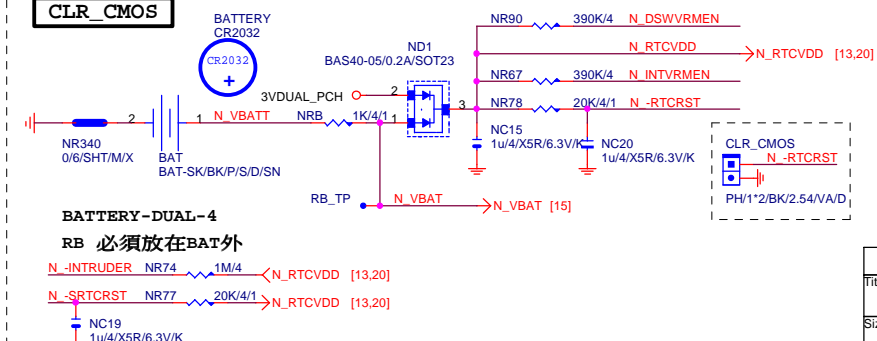
FOR ESD



32.768KHZ



CLR	CMOS
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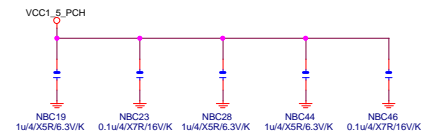
Gigabyte Technology

Title			
PCH GPIO , CTRL , AUDIO			
Size	Document Number		Rev
Custom	GA-H81M-S2PH		2.0
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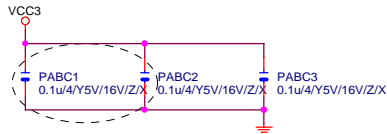
PCH (I)



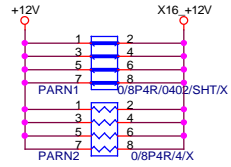
M3 POWER



PCIEX16 CAP



PCIEX16 PROTECT SHT

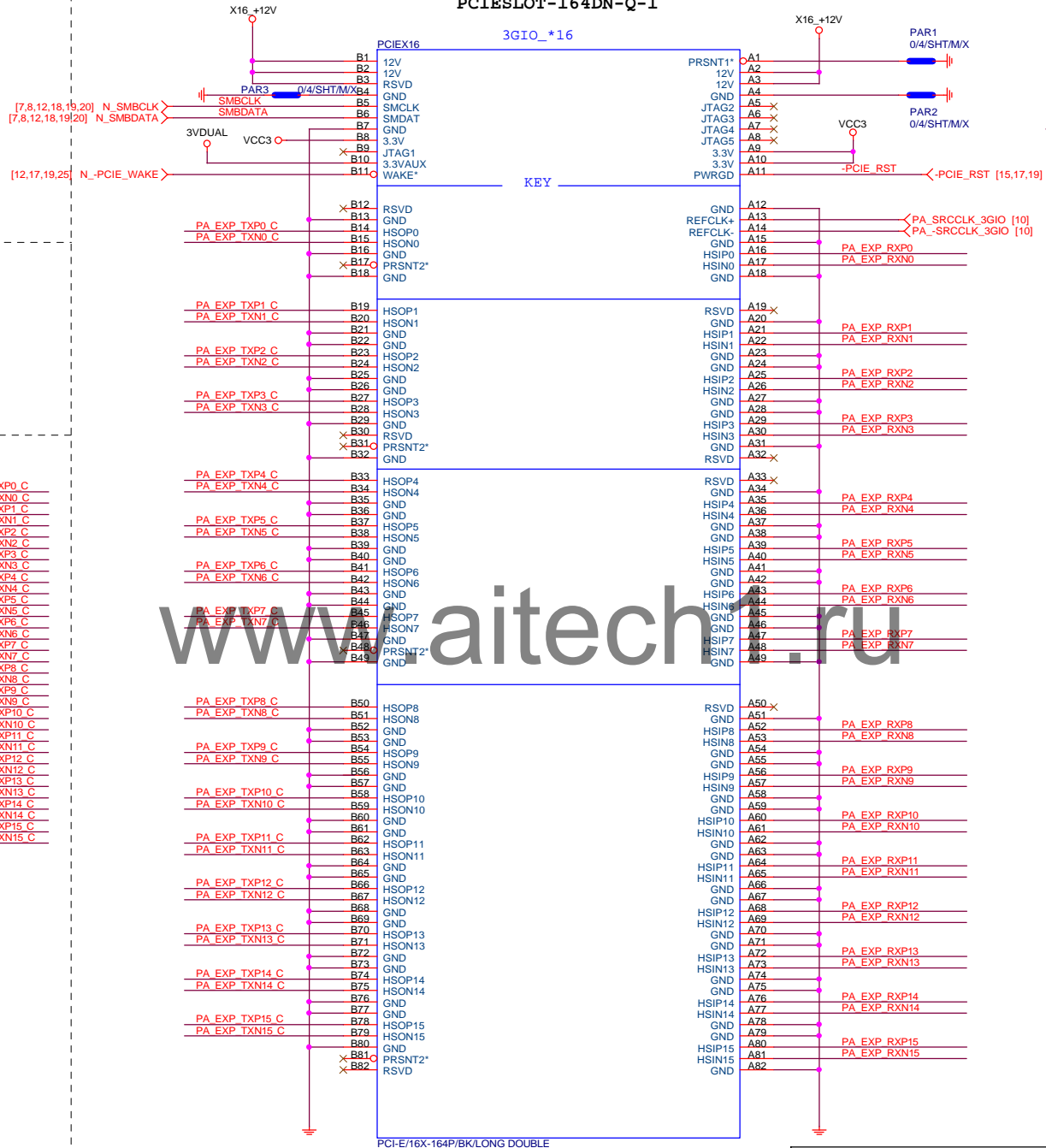


PCIEX16 AC CAP

PA EXP TXP0	PAC5	0.22u/4/X5R/6.3V/K	PA EXP TXP0 C
PA EXP TXN0	PAC4	0.22u/4/X5R/6.3V/K	PA EXP TXN0 C
PA EXP TXP1	PAC6	0.22u/4/X5R/6.3V/K	PA EXP TXP1 C
PA EXP TXN1	PAC7	0.22u/4/X5R/6.3V/K	PA EXP TXN1 C
PA EXP TXP2	PAC8	0.22u/4/X5R/6.3V/K	PA EXP TXP2 C
PA EXP TXN2	PAC9	0.22u/4/X5R/6.3V/K	PA EXP TXN2 C
PA EXP TXP3	PAC10	0.22u/4/X5R/6.3V/K	PA EXP TXP3 C
PA EXP TXN3	PAC11	0.22u/4/X5R/6.3V/K	PA EXP TXN3 C
PA EXP TXP4	PAC12	0.22u/4/X5R/6.3V/K	PA EXP TXP4 C
PA EXP TXN4	PAC13	0.22u/4/X5R/6.3V/K	PA EXP TXN4 C
PA EXP TXP5	PAC14	0.22u/4/X5R/6.3V/K	PA EXP TXP5 C
PA EXP TXN5	PAC15	0.22u/4/X5R/6.3V/K	PA EXP TXN5 C
PA EXP TXP6	PAC16	0.22u/4/X5R/6.3V/K	PA EXP TXP6 C
PA EXP TXN6	PAC17	0.22u/4/X5R/6.3V/K	PA EXP TXN6 C
PA EXP TXP7	PAC19	0.22u/4/X5R/6.3V/K	PA EXP TXP7 C
PA EXP TXN7	PAC18	0.22u/4/X5R/6.3V/K	PA EXP TXN7 C
PA EXP TXP8	PAC20	0.22u/4/X5R/6.3V/K	PA EXP TXP8 C
PA EXP TXN8	PAC21	0.22u/4/X5R/6.3V/K	PA EXP TXN8 C
PA EXP TXP9	PAC22	0.22u/4/X5R/6.3V/K	PA EXP TXP9 C
PA EXP TXN9	PAC23	0.22u/4/X5R/6.3V/K	PA EXP TXN9 C
PA EXP TXP10	PAC24	0.22u/4/X5R/6.3V/K	PA EXP TXP10 C
PA EXP TXN10	PAC25	0.22u/4/X5R/6.3V/K	PA EXP TXN10 C
PA EXP TXP11	PAC26	0.22u/4/X5R/6.3V/K	PA EXP TXP11 C
PA EXP TXN11	PAC27	0.22u/4/X5R/6.3V/K	PA EXP TXN11 C
PA EXP TXP12	PAC28	0.22u/4/X5R/6.3V/K	PA EXP TXP12 C
PA EXP TXN12	PAC29	0.22u/4/X5R/6.3V/K	PA EXP TXN12 C
PA EXP TXP13	PAC30	0.22u/4/X5R/6.3V/K	PA EXP TXP13 C
PA EXP TXN13	PAC31	0.22u/4/X5R/6.3V/K	PA EXP TXN13 C
PA EXP TXP14	PAC32	0.22u/4/X5R/6.3V/K	PA EXP TXP14 C
PA EXP TXN14	PAC33	0.22u/4/X5R/6.3V/K	PA EXP TXN14 C
PA EXP TXP15	PAC34	0.22u/4/X5R/6.3V/K	PA EXP TXP15 C
PA EXP TXN15	PAC35	0.22u/4/X5R/6.3V/K	PA EXP TXN15 C

PA EXP RXP0[0..15] >>> PA_EXP_RXP[0..15] [4]
 PA EXP RXN0[0..15] >>> PA_EXP_RXN[0..15] [4]
 PA EXP TXP0[0..15] >>> PA_EXP_TXP[0..15] [4]
 PA EXP TXN0[0..15] >>> PA_EXP_TXN[0..15] [4]

PCIEX16 SLOT

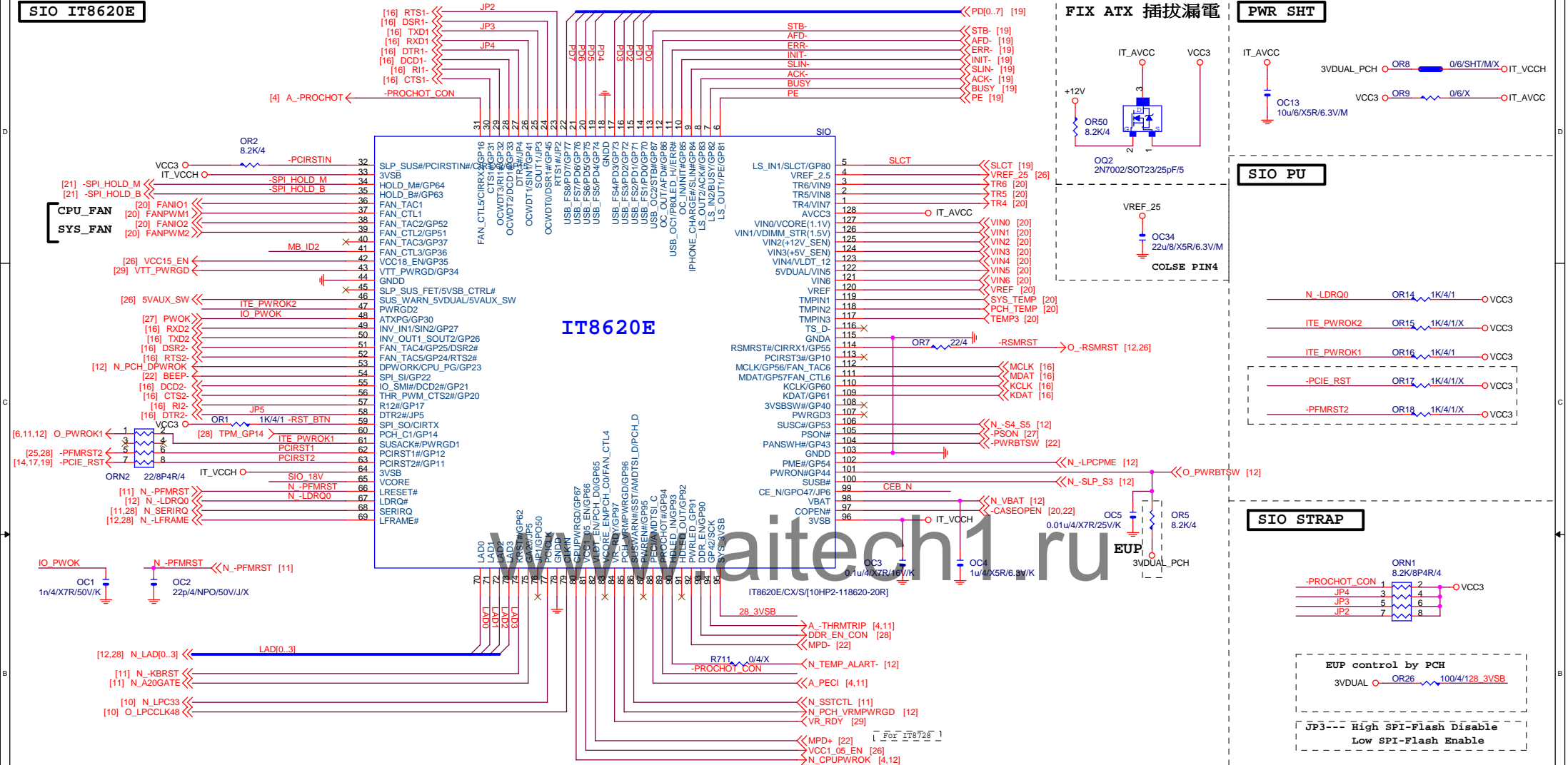


BLACK CONNECTOR

Gigabyte Technology

Title			PCI EXPRESS * 16	
Size			GA-H81M-S2PH	
Custom			Rev 2.0	
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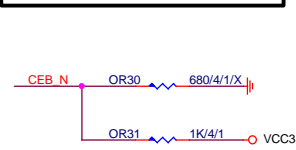
SIO IT8620E



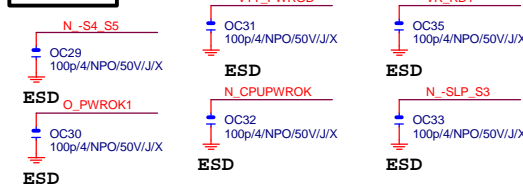
IT8620 NOTE

	IT8728
PIN121	VCORE_EN/PCH_C0
PIN120	VLDI_EN/PCH_D0
PIN19	ATXPG
PIN31	PCH_C1
PIN53	SST/AMDS1_D/MTRB/PCH_D1
PIN55	PEC1/AMDS1_C/DRV#
PIN66	SYS_3VSB
PIN70	GP47
PIN95	VIN2(VCC5)
PIN96	VIN1(VCC12)
PIN97	VIN1/VDIMM_STR(1.5V)
PIN98	VIN0/VCORE(1.1V)/NC

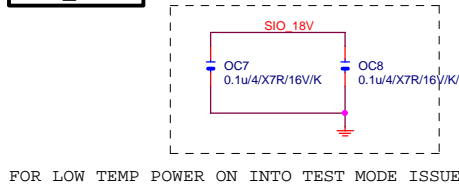
DUAL BIOS OPT STRAP



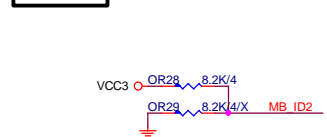
FOR ESD



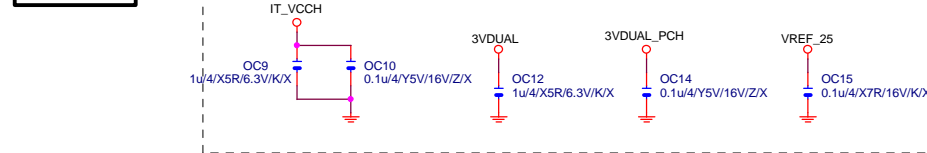
SIO 18V



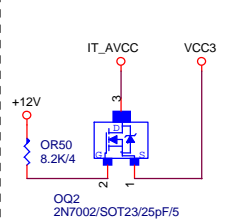
MB ID



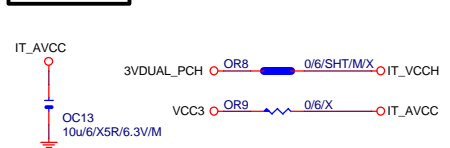
SIO CAP



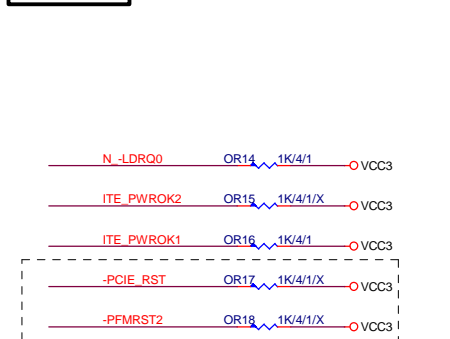
FIX ATX 插拔漏電



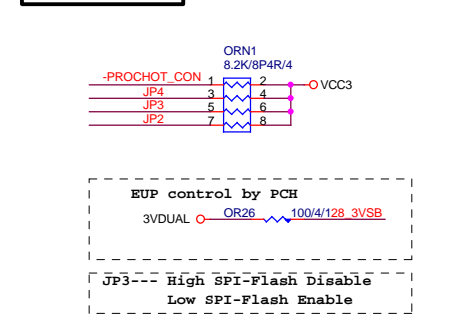
PWR SHT



SIO PU



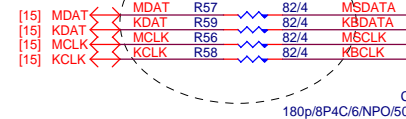
SIO STRAP



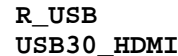
Gigabyte Technology

Title			ITE 8620 LPC IO
Size	Document Number	Rev	2.0
Custom	GA-H81M-S2PH		
Date:	Wednesday, April 09, 2014	Sheet	15 of 31

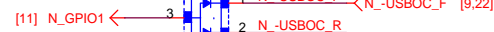
KB/MS



-USBOC_R



USB POWER PROTECT



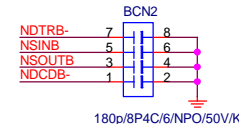
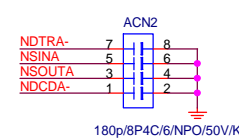
N/A

R_USB PWR

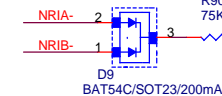


Close to connector
KB_MS_USB 2-Port 2.0A

COMA



COM RI



WHITE CONNECTOR PIN2X5-CUT10-COM

Gigabyte Technology

Title	COM,-RI,KB MS
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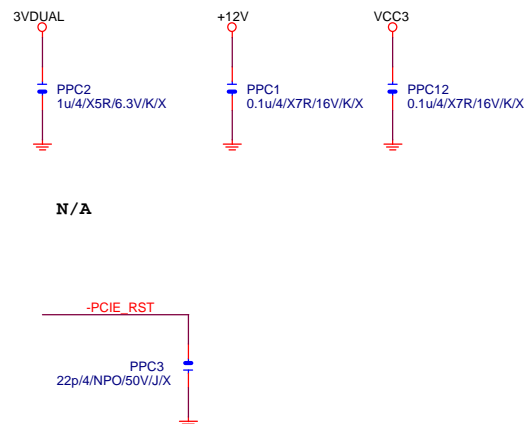
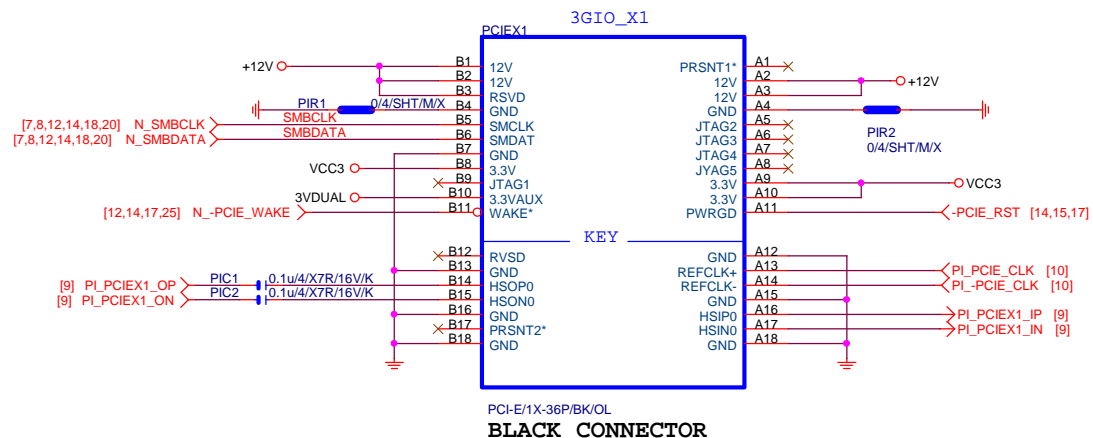
Size	Document Number	GA-H81M-S2PH
Custom		

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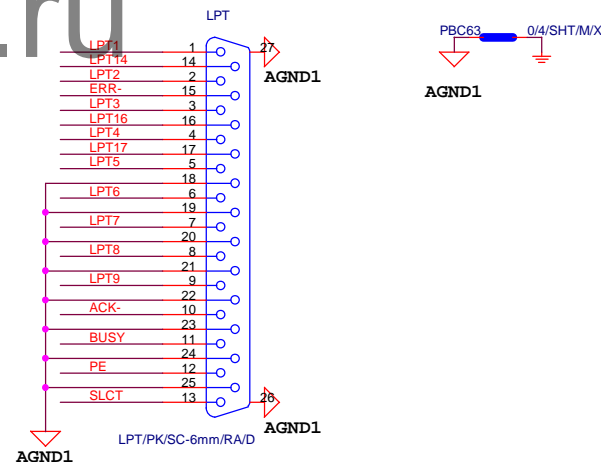
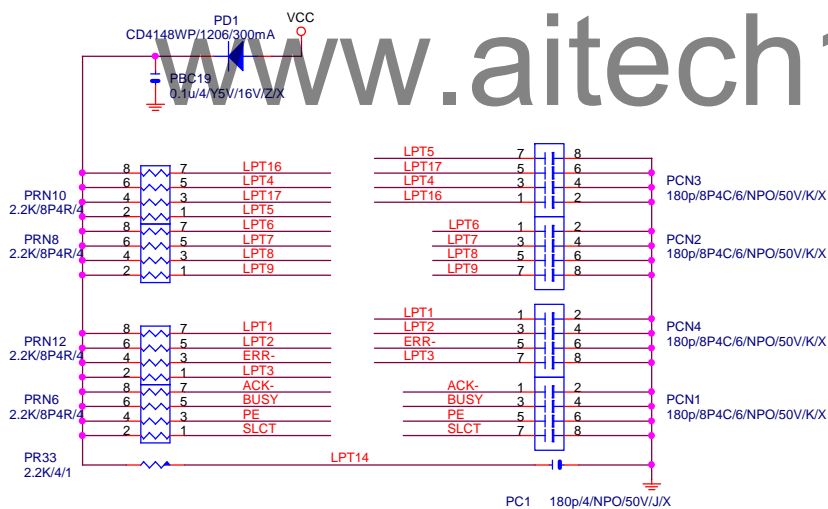
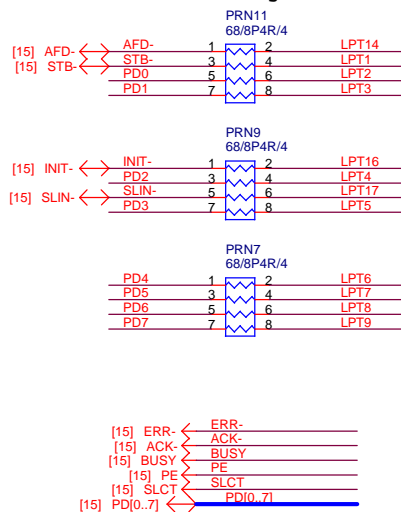
Rev	
2.0	

PCIEX1 SLOT



LPT PORT

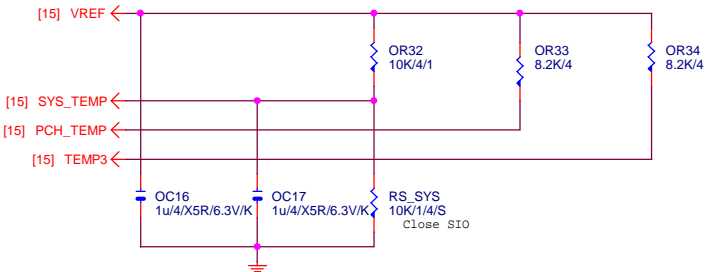
【技術通報R&D技術通報151】
33ohm Change to 68ohm



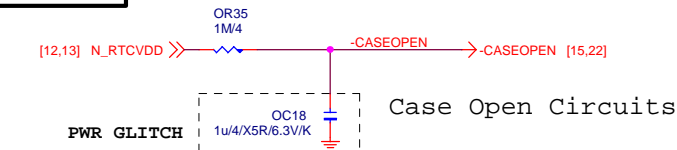
Gigabyte Technology

Title			
LPT			
Size B	Document Number	GA-H81M-S2PH	Rev 2.0
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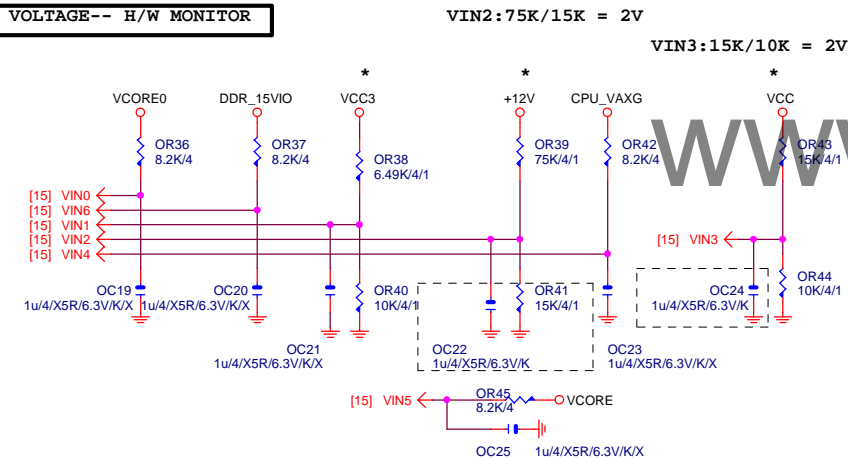
TEMP H/W MONITOR



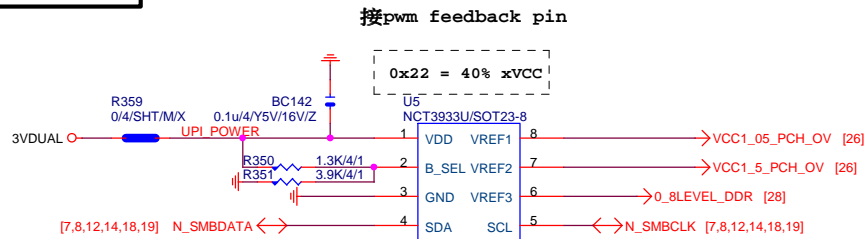
CASE OPEN



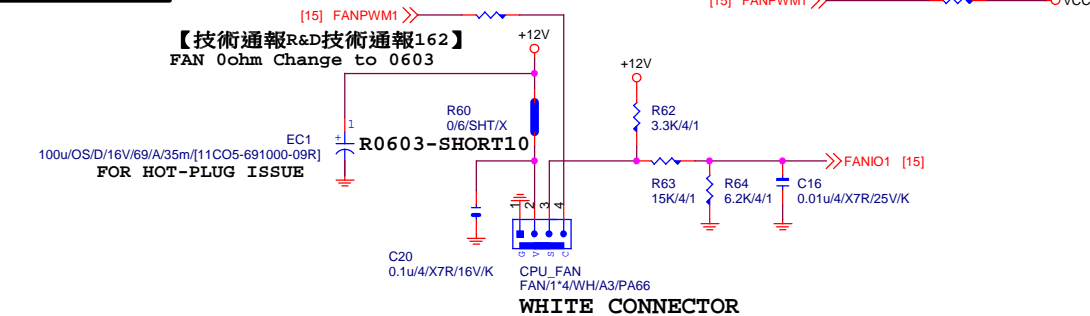
VOLTAGE-- H/W MONITOR



OV NCT3933

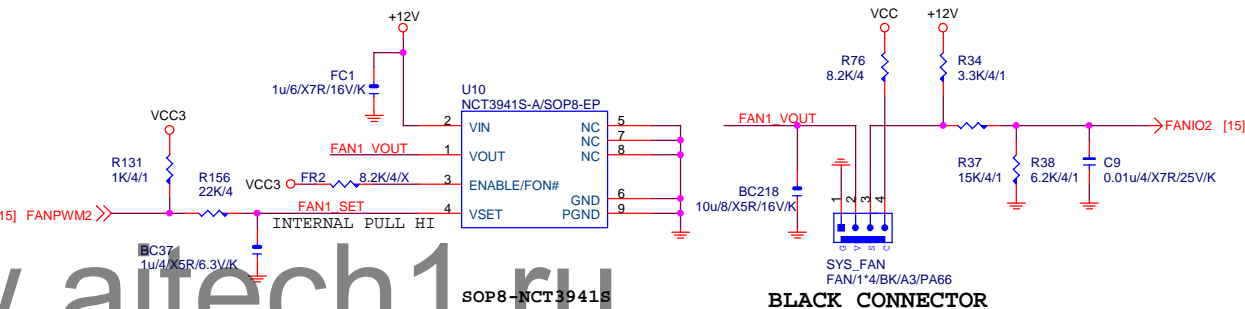


CPU SMART FAN

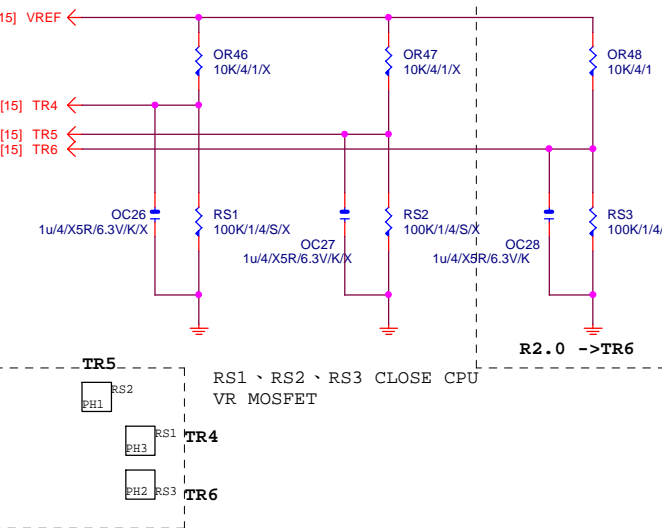


SYS SMART FAN

Linear SYS_FAN



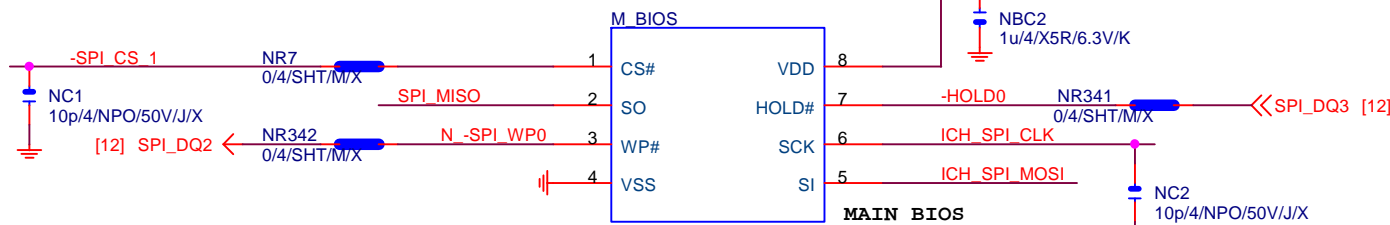
THERMISTOR MONITOR



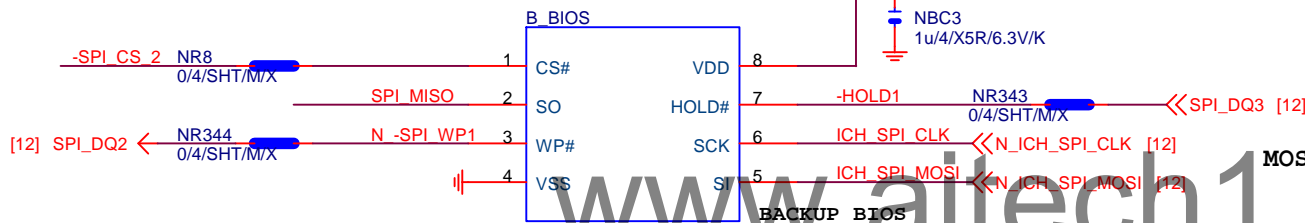
-PROHOT



Gigabyte Technology			
Title			
HWM,FAN CTRL,OV			
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32M/SPI/SO8/200mil/S/[10HP4-112532-20R]

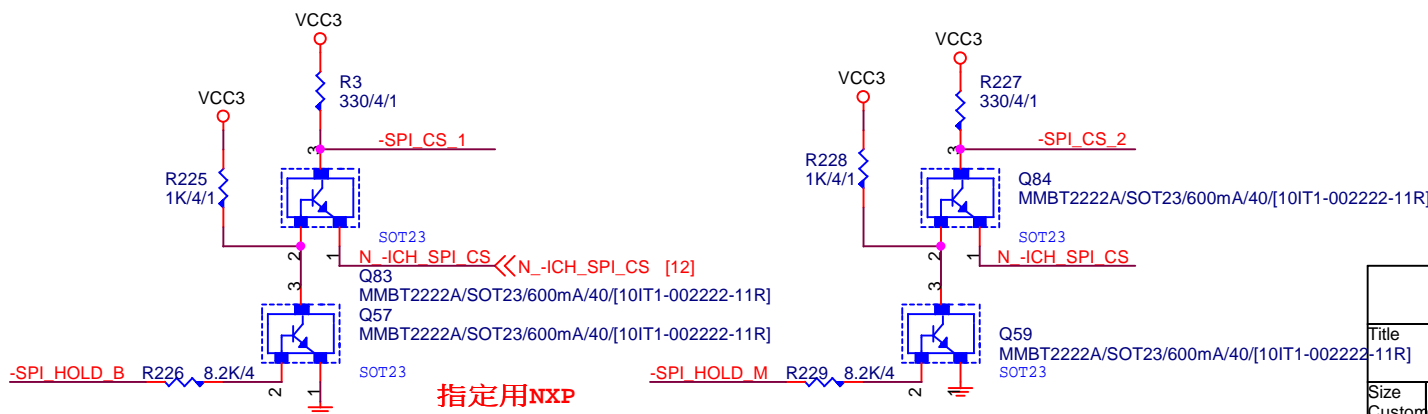
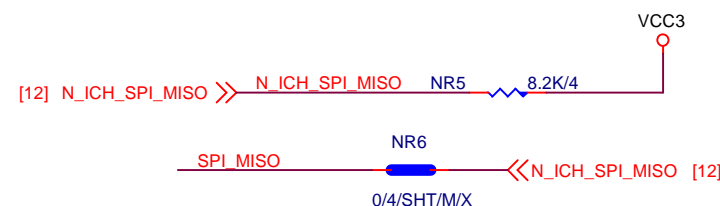
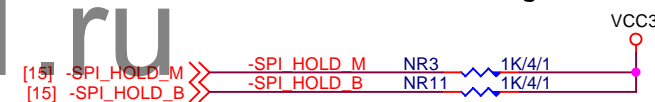


32M/SPI/SO8/200mil/S/[10HP4-112532-20R]

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

1 means floating
0 means PD 1K

MOSI For DMI RX Termination Voltage



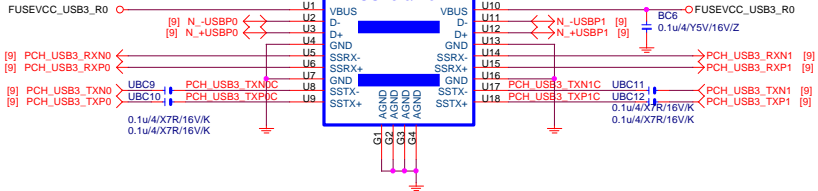
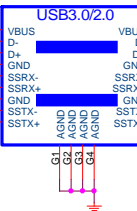
指定用NXP

Gigabyte Technology		
Title		
DUAL BIOS		
Size	Document Number	Rev
Custom	GA-H81M-S2PH	2.0
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R_USB30

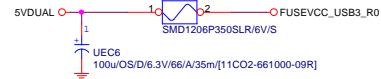
USB30+HDMI 一體式

R_USB30
USB3.0+HDMI/18P+19P/BK/OS/RA[11NR6-H03037-01R]



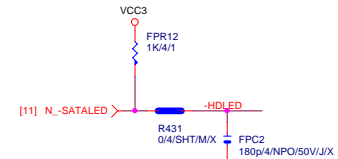
R_USB30 PWR

POLYSWITCH-1206-1

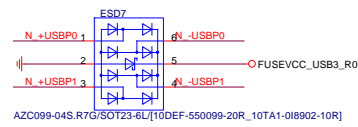
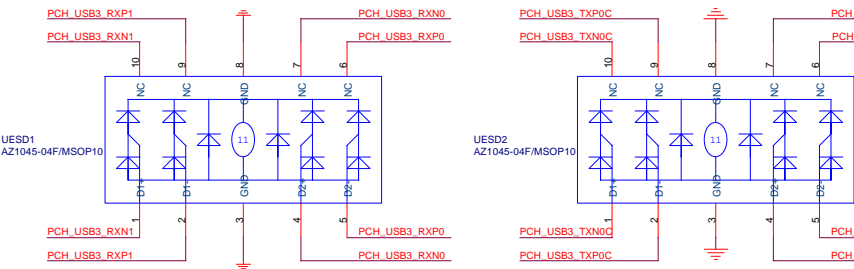


USB3.0 2Port - 1Fuse (3.5A)

SATA LED

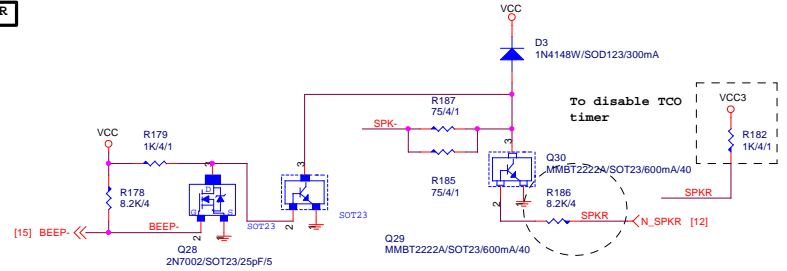


USB30_HDMI ESD PROTECT

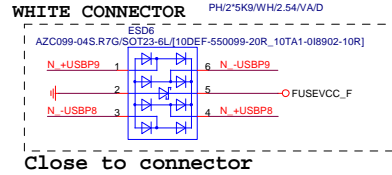
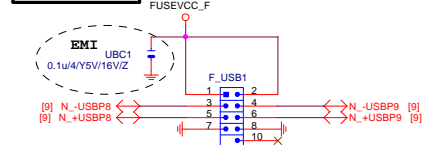


Close to connector

SPKR

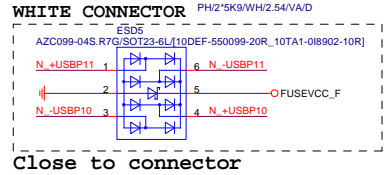
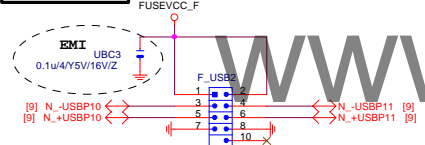


FRONT USB1



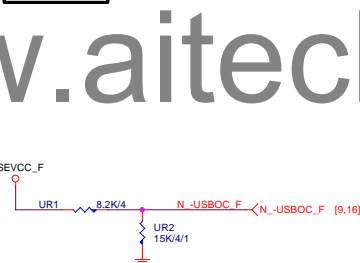
Close to connector

FRONT USB2

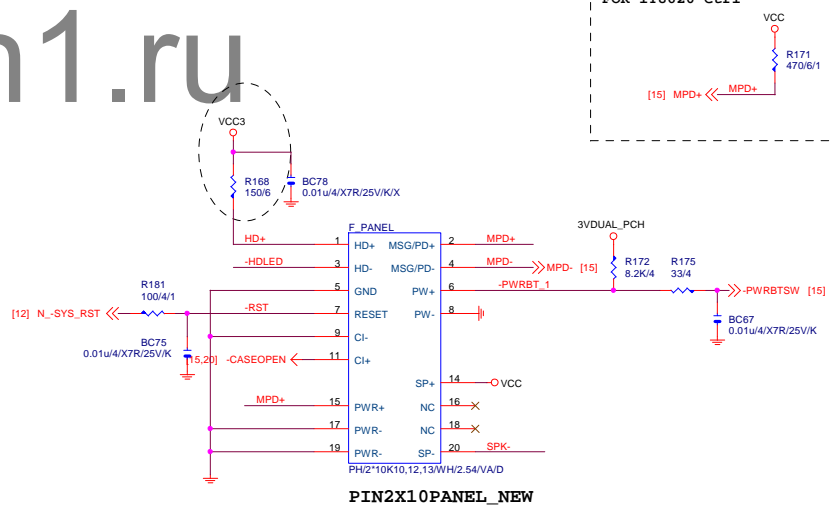


Close to connector

-USB0C_F

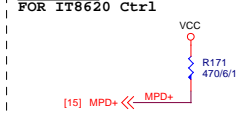


INTEL FRONT PANEL



PIN2X10PANEL_NEW

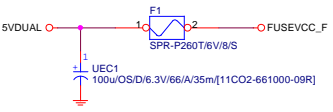
PWR LED



FUSEVCC_F

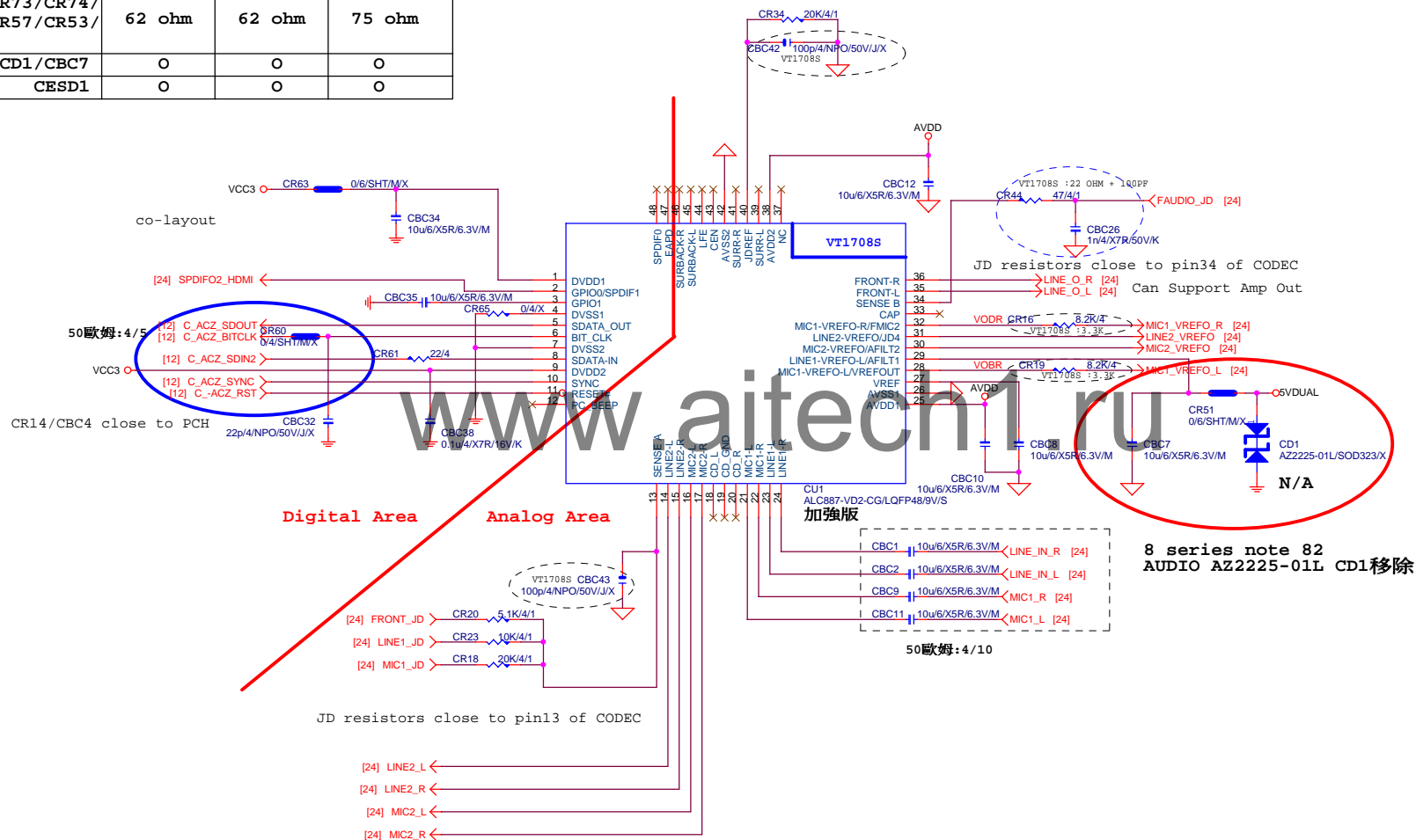
FUSE-0805

F_USB1, F_USB2 4-Port 2.6A

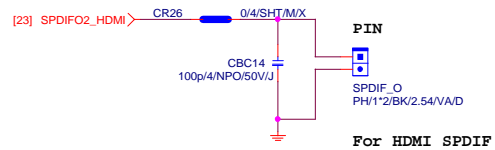


Gigabyte Technology			
FP,F_USB,USB PWR,SPKR,SATA LED			
GA-H81M-S2PH			
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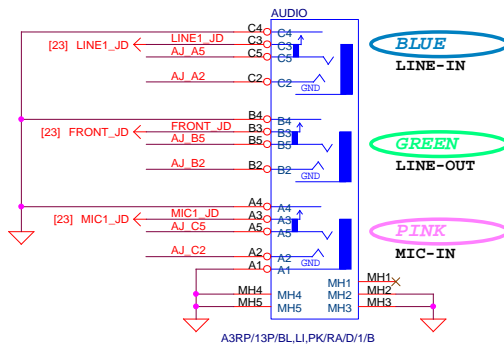
	ALC892	ALC887-VD2	VT1708S-CE
CR44/CBC26	47ohm+1nF	47ohm+1nF	22ohm+100P
CBC42/CBC43	X	X	100P/4
CR6/CR7/CR58/CR54/ CR67/CR68/CR69/CR70	22K/4	22K/4	10K/4/1
CR5/CR8/CR1/CR14/ CR17/CR22/CR73/CR74/ CR13/CR11/CR57/CR53/ CR75/CR76	62 ohm	62 ohm	75 ohm
CR51/CD1/CBC7	O	O	O
CESD1	O	O	O



SPDIF_OUT



SPDIF_OUT

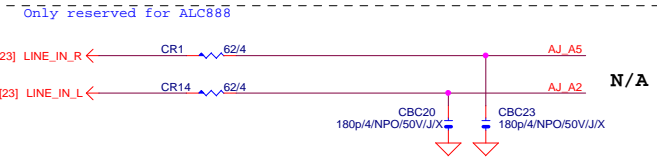


LINE-OUT

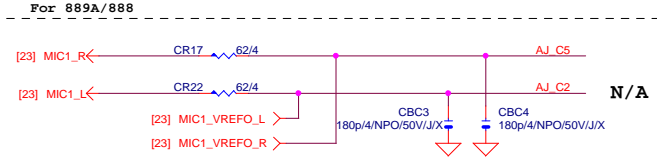


LINE-IN

Verify MIC function
in LINE-in

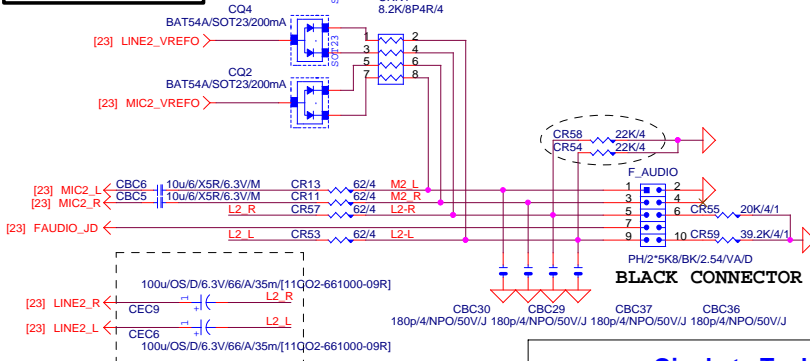


MIC-IN



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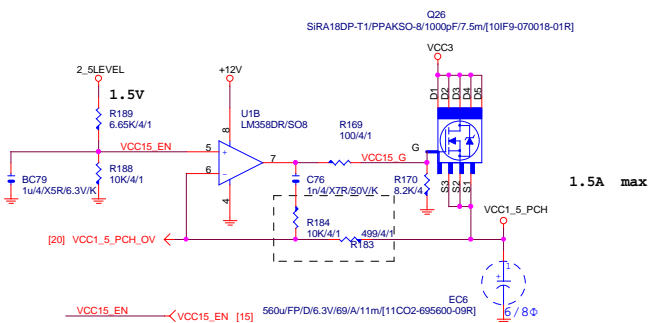
AZALIA FRONT PANEL



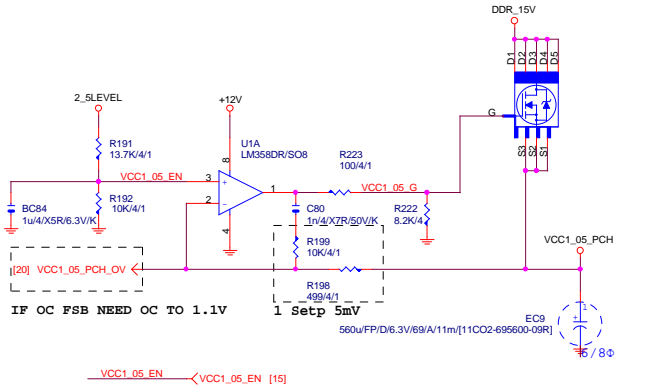
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Title			
AUDIO JACK			
Size	Document Number	GA-H81M-S2PH	
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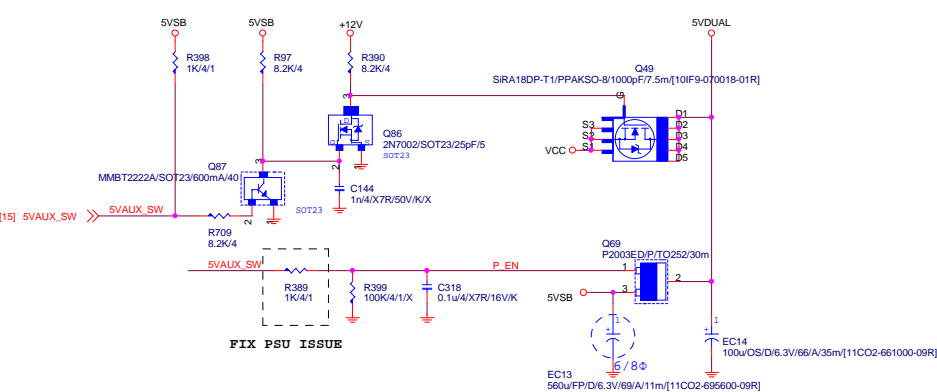
VCC1_5_PCH



VCC1_05_PCH

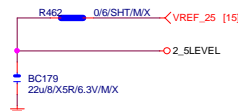


5VDUAL



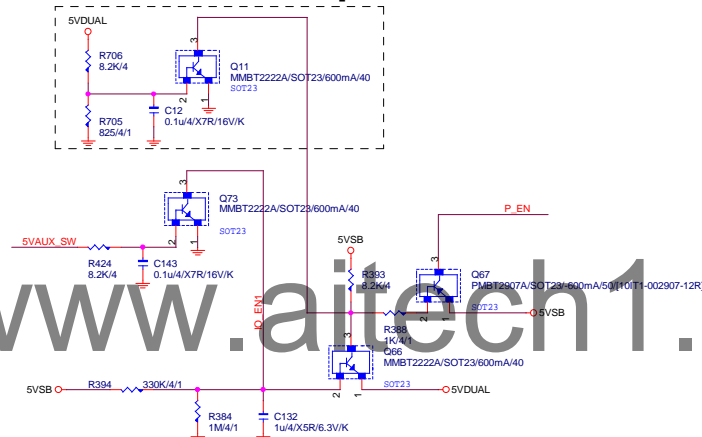
2_5LEVEL

FROM I/O

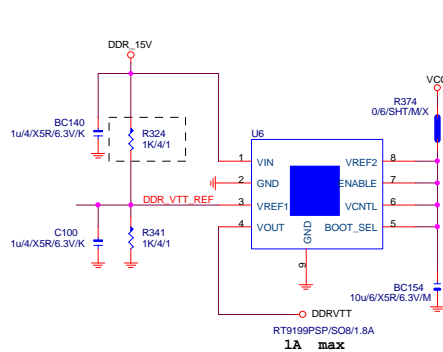


5VDUAL SHORT PROTECT

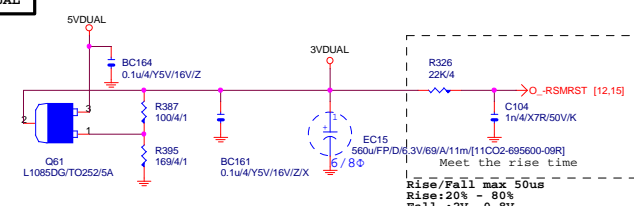
5VSB OVP:7.5V protection



DDRVTT

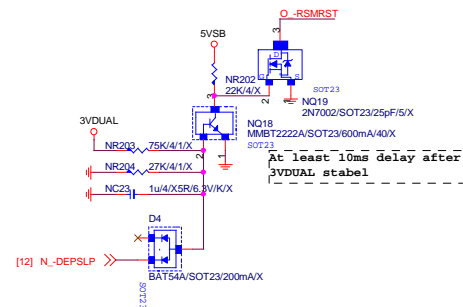


3VDUAL

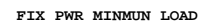
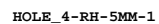
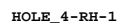
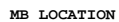


-RSMRST

N/A



【技術通報R&D技術通報155】



N/A



N/A

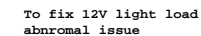


BLACK CONNECTOR

【技術通報R&D技術通報154】

N/A

Table 1



[illegible]

PWR_SEQ

DDR_EN ————> DDR_EN_CON [15]

From DDR_15V source
10 mils trace to SIO

DDR_15V

MR20

DDR_15VIO

Q4/SHT/M/X

VCC3_ME

VCC1_05_ME

H81 N/A

TPM2X10-HS
BH/2*10K4/BK/2.54VA/HA

TPM
SLB9635/9655


TPM 1.2
SLB9635/9655

TPM Pinout Table:

	SLB9635	SLB9655
TPR2, TPR4, TPR5, TPR6, TPR7, TPR9	MOUNT	N/A
TPR1, TPR10	N/A	MOUNT

Gigabyte Technology
DDR & M3 POWER & TPM
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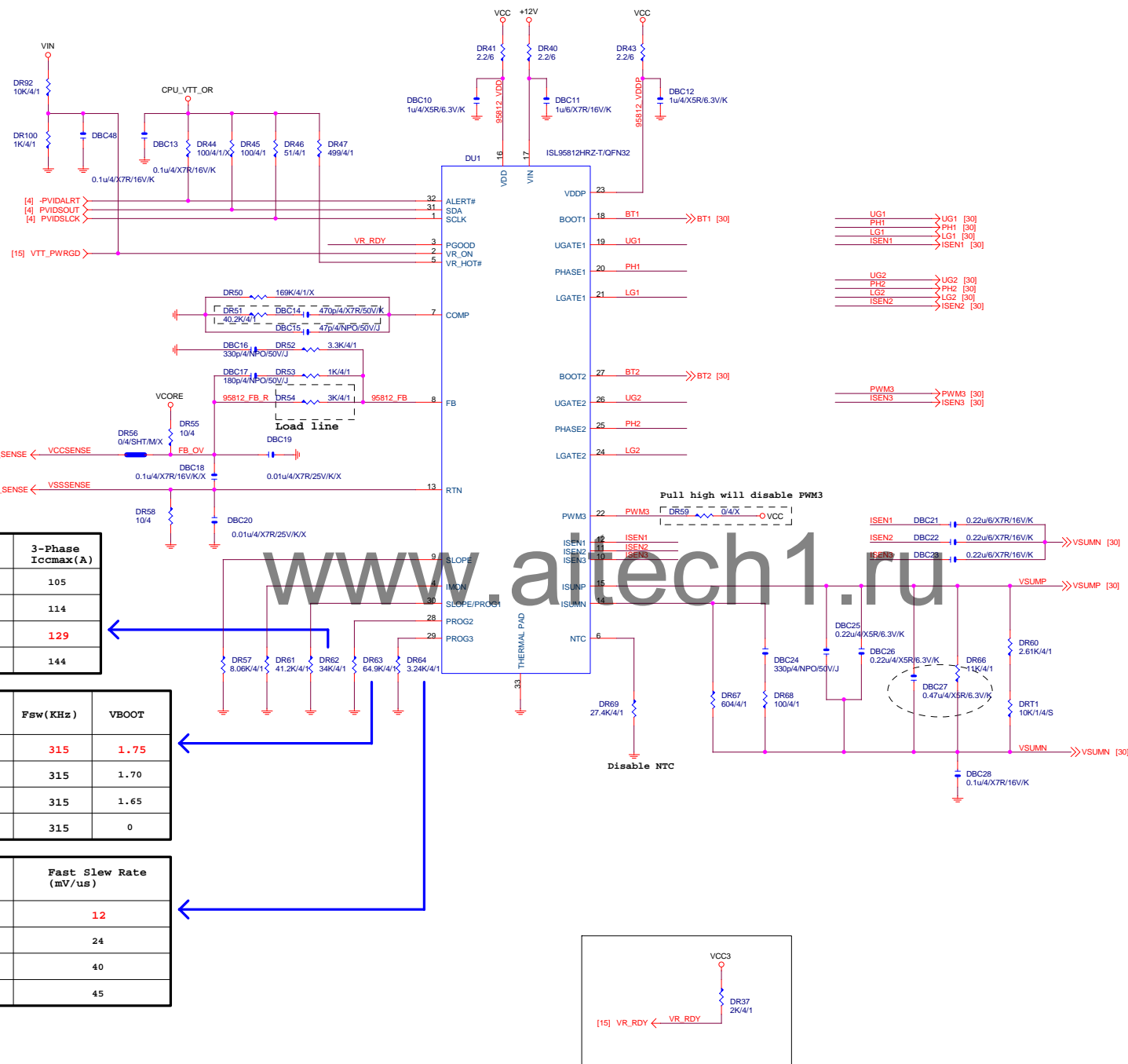
	SLB9635	SLB9655
TPR2, TPR4, TPR5, TPR6, TPR7, TPR9	MOUNT	N/A
TPR1, TPR10	N/A	MOUNT

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Title			
DDR & M3 POWER & TPM			
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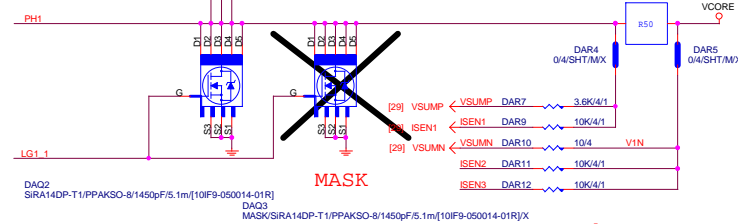
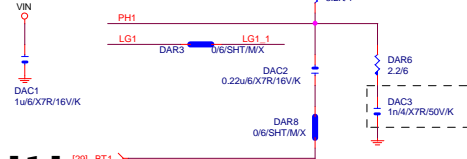
R_PROG1 (Kohm)	3-Phase Iccmax(A)
24.9	105
28.7	114
34.0	129
42.2	144

R_PROG2 (Kohm)	Fsw(KHz)	VBOOT
64.9	315	1.75
73.2	315	1.70
80.6	315	1.65
90.9	315	0

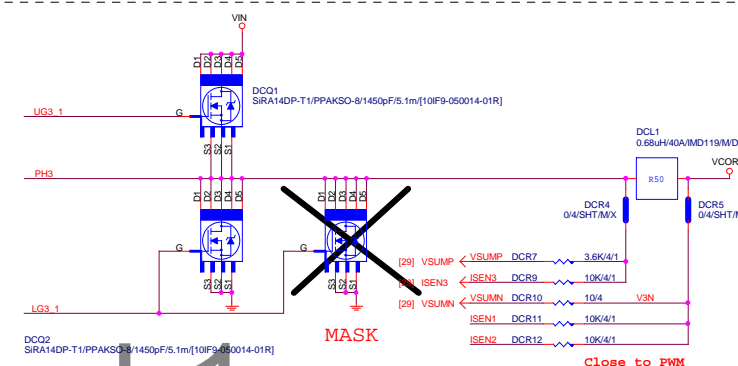
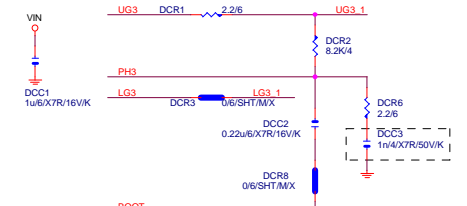
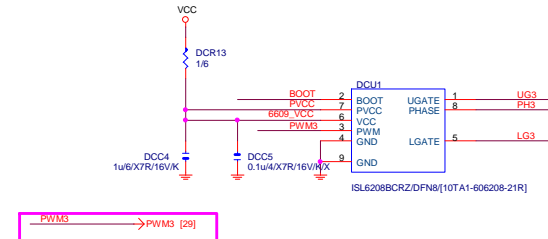
R_PROG3 (Kohm)	Fast Slew Rate (mV/us)
3.24	12
5.76	24
9.31	40
13.3	45



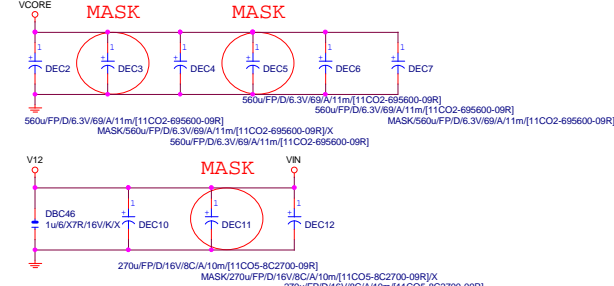
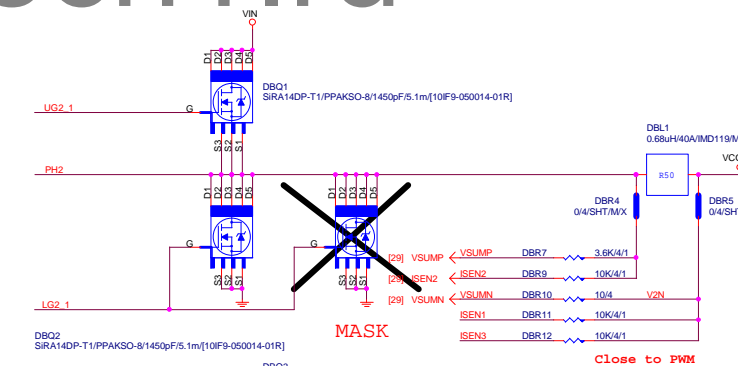
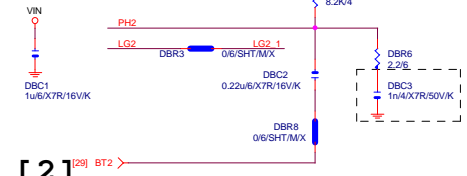
PHASE 1



PHASE 3



PHASE 2



```
ASM1442
Default [0,1,0]
450mv,-3dB
```



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