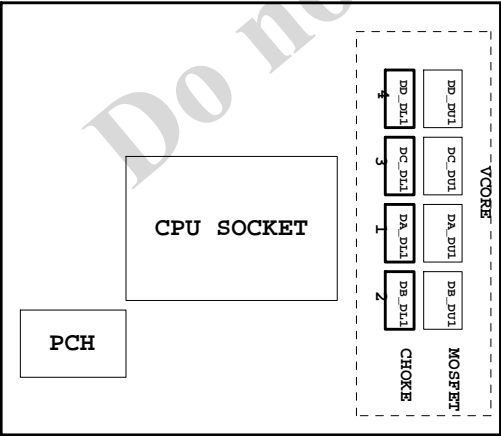


01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	CPU_LGA1151-A
05	CPU_LGA1151-B-DDR4
06	CPU_LGA1151-C
07	CPU_LGA1151-D
08	DDR 4 CHANNEL A (REV0.4)
09	DDR 4 CHANNEL B
10	PCH CLOCK BUFFER
11	PCH DMI,USB,PCIE
12	PCH MISC
13	PCH SATA,PCIE,SATA_EXPRESS
14	PCH_PWR,GND
15	Dual BIOS
16	I/O ITE8628
17	HWM
18	FAN CTRL-SIO
19	PCIEX16 SLOT
20	PCIEX4 SLOT (REV0.4)
21	PCIEX1*2 SLOT / switch
22	M.2 x4 (REV0.5)
23	SATA EXPRESS
24	switch for M.2 / SATA EXPRESS & PCI
25	VCORE_ ISL95856(PWM) (REV0.95)
26	VCORE_ ISL95856(Vcore)
27	VCORE_ ISL95856(VccGT)
28	VCCSA_VCCIO_VCCPLL
29	RT8237_DDR_CHOKE (REV0.2)
30	RT9018_VPP (REV0.2)
31	RT8237_PCH-CHOKE (REV0.2)
32	DISCRETE POWER
33	ATX POWER , -PROCHOT
34	KB_MS_USB

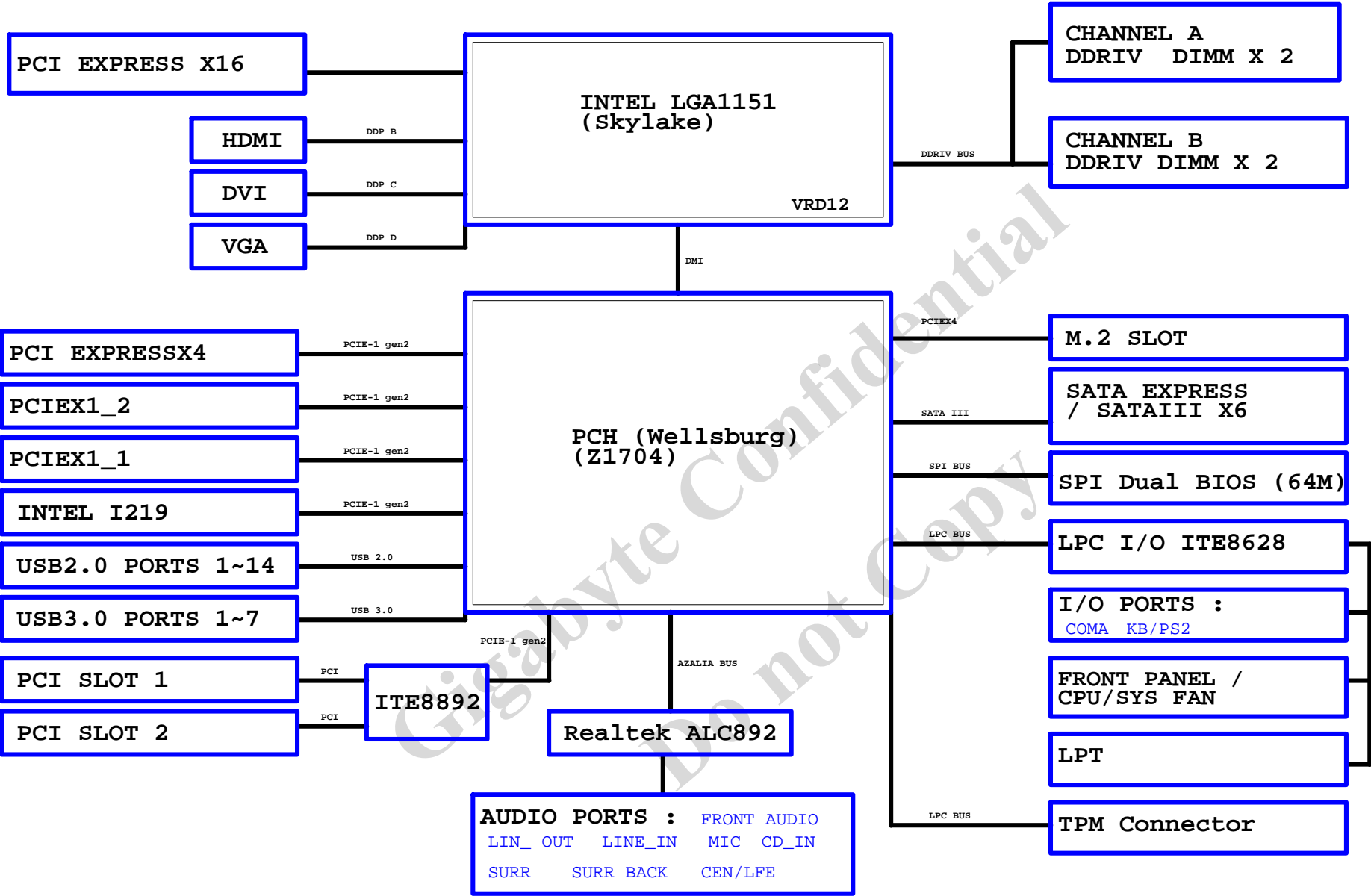
35	DVI
36	RTD2168 - DP to VGA - IC
37	RTD2168 - DP to VGA - Conn
38	HDMI
39	R_USB30
40	INTEL I219 (REV1.07)
41	USB30_LAN CONNECTOR-I219
42	Realtek ALC892 (REV0.2)
43	REAR AUDIO JACK
44	F_USB30
45	F_USB20
46	COM , LPT , TPM , THB
47	F_PANEL (REV0.53)
48	IT8892E/JX (REV0.1)
49	PCI SLOT 1&2
50	IT8892 POWER
51	EMI-ESD (REV0.1)
52	TABLE LIST
53	
54	
55	

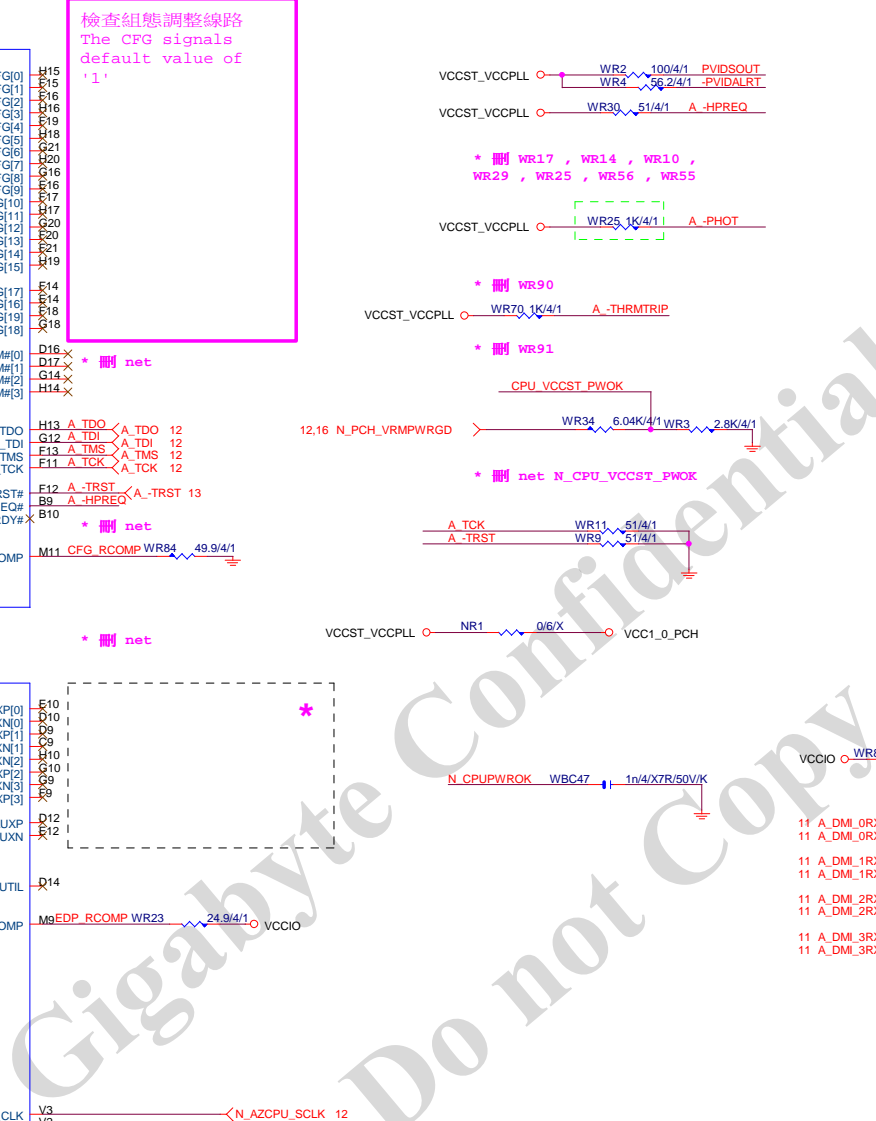


Component value change history

[illegible][illegible]

BLOCK DIAGRAM





* 改DDR4 net

LGA1151A SKT_H4		
LGA1151		
MDA0 AE38	DDR0_DQ[0]	DDR0_CK[0]
MDA1 AE37	DDR0_DQ[1]	DDR0_CK[1]
MDA2 AG38	DDR0_DQ[2]	DDR0_CK[2]
MDA3 AG37	DDR0_DQ[3]	DDR0_CK[3]
MDA4 AE38	DDR0_DQ[4]	DDR0_CK[4]
MDA5 AE40	DDR0_DQ[5]	DDR0_CK[5]
MDA6 AG38	DDR0_DQ[6]	DDR0_CK[6]
MDA7 AG40	DDR0_DQ[7]	DDR0_CK[7]
MDA8 AJ38	DDR0_DQ[8]	DDR0_CK[8]
MDA9 AJ37	DDR0_DQ[9]	DDR0_CK[9]
MDA10 AL38	DDR0_DQ[10]	DDR0_CK[10]
MDA11 AL37	DDR0_DQ[11]	DDR0_CK[11]
MDA12 AL40	DDR0_DQ[12]	DDR0_CK[12]
MDA13 AL39	DDR0_DQ[13]	DDR0_CK[13]
MDA14 AL39	DDR0_DQ[14]	DDR0_CK[14]
MDA15 AL40	DDR0_DQ[15]	DDR0_CK[15]
MDA16 AX38	DDR0_DQ[16]	DDR0_CK[16]
MDA17 AN40	DDR0_DQ[17]	DDR0_CK[17]
MDA18 AR38	DDR0_DQ[18]	DDR0_CK[18]
MDA19 AR37	DDR0_DQ[19]	DDR0_CK[19]
MDA20 AN39	DDR0_DQ[20]	DDR0_CK[20]
MDA21 AN37	DDR0_DQ[21]	DDR0_CK[21]
MDA22 AR39	DDR0_DQ[22]	DDR0_CK[22]
MDA23 AR40	DDR0_DQ[23]	DDR0_CK[23]
MDA24 AW37	DDR0_DQ[24]	DDR0_CK[24]
MDA25 AL38	DDR0_DQ[25]	DDR0_CK[25]
MDA26 AV38	DDR0_DQ[26]	DDR0_CK[26]
MDA27 AW36	DDR0_DQ[27]	DDR0_CK[27]
MDA28 AL37	DDR0_DQ[28]	DDR0_CK[28]
MDA29 AV37	DDR0_DQ[29]	DDR0_CK[29]
MDA30 AT36	DDR0_DQ[30]	DDR0_CK[30]
MDA31 AU38	DDR0_DQ[31]	DDR0_CK[31]
MDA32 AY38	DDR0_DQ[32]	DDR0_CK[32]
MDA33 AW8	DDR0_DQ[33]	DDR0_CK[33]
MDA34 AV6	DDR0_DQ[34]	DDR0_CK[34]
MDA35 AU6	DDR0_DQ[35]	DDR0_CK[35]
MDA36 AU8	DDR0_DQ[36]	DDR0_CK[36]
MDA37 AV8	DDR0_DQ[37]	DDR0_CK[37]
MDA38 AW6	DDR0_DQ[38]	DDR0_CK[38]
MDA39 AV6	DDR0_DQ[39]	DDR0_CK[39]
MDA40 AY4	DDR0_DQ[40]	DDR0_CK[40]
MDA41 AV4	DDR0_DQ[41]	DDR0_CK[41]
MDA42 AT4	DDR0_DQ[42]	DDR0_CK[42]
MDA43 AT2	DDR0_DQ[43]	DDR0_CK[43]
MDA44 AV3	DDR0_DQ[44]	DDR0_CK[44]
MDA45 AW4	DDR0_DQ[45]	DDR0_CK[45]
MDA46 AT4	DDR0_DQ[46]	DDR0_CK[46]
MDA47 AT3	DDR0_DQ[47]	DDR0_CK[47]
MDA48 AP2	DDR0_DQ[48]	DDR0_CK[48]
MDA49 AM4	DDR0_DQ[49]	DDR0_CK[49]
MDA50 AP3	DDR0_DQ[50]	DDR0_CK[50]
MDA51 AM3	DDR0_DQ[51]	DDR0_CK[51]
MDA52 AP4	DDR0_DQ[52]	DDR0_CK[52]
MDA53 AM2	DDR0_DQ[53]	DDR0_CK[53]
MDA54 AP1	DDR0_DQ[54]	DDR0_CK[54]
MDA55 AM1	DDR0_DQ[55]	DDR0_CK[55]
MDA56 AK3	DDR0_DQ[56]	DDR0_CK[56]
MDA57 AH1	DDR0_DQ[57]	DDR0_CK[57]
MDA58 AK4	DDR0_DQ[58]	DDR0_CK[58]
MDA59 AH2	DDR0_DQ[59]	DDR0_CK[59]
MDA60 AH4	DDR0_DQ[60]	DDR0_CK[60]
MDA61 AK2	DDR0_DQ[61]	DDR0_CK[61]
MDA62 AH3	DDR0_DQ[62]	DDR0_CK[62]
MDA63 AK1	DDR0_DQ[63]	DDR0_CK[63]
AU33	DDR0_ECC[0]	
AT33	DDR0_ECC[1]	
AW33	DDR0_ECC[2]	
AV32	DDR0_ECC[3]	
AU31	DDR0_ECC[4]	
AV33	DDR0_ECC[5]	
AW31	DDR0_ECC[6]	
AV31	DDR0_ECC[7]	

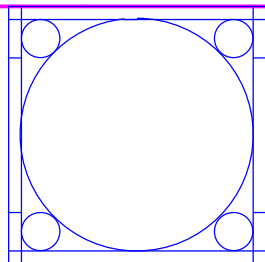
DDR CHANNEL
A

1 OF 12

LGA1151

ILM_BP/1156/CSP/12KRC-0F0001-61R]

CPU-SK/1151/S/15[10SC1-F01151-11R]



Need check the new CPU MB

AW18 M_DCLKA0	M_DCLKA0 8
AV18 M_DCLKA1	M_DCLKA1 8
AW17 M_DCLKA1	M_DCLKA1 8
AY17 M_DCLKA2	M_DCLKA2 8
AW16 M_DCLKA2	M_DCLKA2 8
AW16 M_DCLKA2	M_DCLKA2 8
AT18 M_DCLKA3	M_DCLKA3 8
AU16 M_DCLKA3	M_DCLKA3 8
AY24 CKEA0	CKEA0 8
AW24 CKEA1	CKEA1 8
AY24 CKEA2	CKEA2 8
AV25 CKEA3	CKEA3 8
AW12 M_CSA0	M_CSA0 8
AU11 M_CSA1	M_CSA1 8
AV13 M_CSA2	M_CSA2 8
AV10 M_CSA3	M_CSA3 8
AW11 M_ODT A0	
AU14 M_ODT A1	
AU12 M_ODT A2	
AY10 M_ODT A3	
AY13 SBAA0	SBAA0 8
AV15 SBAA1	SBAA1 8
AW23 BG A0	BG A0 8
AW13 MAAA16	
AV14 MAAA14	
AY11 MAAA15	
AW15 MAAA0	
AU18 MAAA1	
AU17 MAAA2	
AV19 MAAA3	
AT19 MAAA4	
AU20 MAAA5	
AW20 MAAA6	
AT21 MAAA7	
AT20 MAAA8	
AT22 MAAA9	
AU22 MAAA11	
AV22 MAAA12	
AV12 MAAA13	
AV23 BG A1	BG A1 8
AU24 M_ACT A 8	M_ACT A 8
AY15 M_DDR PARA 8	M_DDR PARA 8
AT23 M_ALERT A 8	M_ALERT A 8
AF39 M_DQSA0	
AK39 M_DQSA2	
AP39 M_DQSA2	
AW36 M_DQSA3	
UW7 M_DQSA4	
AU3 M_DQSA5	
AN3 M_DQSA6	
AJ3 M_DQSA7	
AF38 M_DQSA0	
AK38 M_DQSA1	
AP38 M_DQSA2	
AV36 M_DQSA3	
UW7 M_DQSA4	
AU2 M_DQSA5	
AJ2 M_DQSA7	
AV32	
AJ32	

LGA1151B SKT_H4		
LGA1151		
MDB0 AD34	DDR1_DQ[0]/DDR0_DQ[16]	DDR1_CK[0]
MDB1 AD35	DDR1_DQ[1]/DDR0_DQ[17]	DDR1_CK[1]
MDB2 AG35	DDR1_DQ[2]/DDR0_DQ[18]	DDR1_CK[2]
MDB3 AH35	DDR1_DQ[3]/DDR0_DQ[19]	DDR1_CK[3]
MDB4 AE35	DDR1_DQ[4]/DDR0_DQ[20]	DDR1_CK[4]
MDB5 AE34	DDR1_DQ[5]/DDR0_DQ[21]	DDR1_CK[5]
MDB6 AG34	DDR1_DQ[6]/DDR0_DQ[22]	DDR1_CK[6]
MDB7 AH34	DDR1_DQ[7]/DDR0_DQ[23]	DDR1_CK[7]
MDB8 AK35	DDR1_DQ[8]/DDR0_DQ[24]	DDR1_CK[8]
MDB9 AL35	DDR1_DQ[9]/DDR0_DQ[25]	DDR1_CK[9]
MDB10 AL32	DDR1_DQ[10]/DDR0_DQ[26]	DDR1_CK[10]
MDB11 AL32	DDR1_DQ[11]/DDR0_DQ[27]	DDR1_CK[11]
MDB12 AK34	DDR1_DQ[12]/DDR0_DQ[28]	DDR1_CK[12]
MDB13 AL34	DDR1_DQ[13]/DDR0_DQ[29]	DDR1_CK[13]
MDB14 AK31	DDR1_DQ[14]/DDR0_DQ[30]	DDR1_CK[14]
MDB15 AL31	DDR1_DQ[15]/DDR0_DQ[31]	DDR1_CK[15]
MDB16 AP35	DDR1_DQ[16]/DDR0_DQ[32]	DDR1_CK[16]
MDB17 AN35	DDR1_DQ[17]/DDR0_DQ[33]	DDR1_CK[17]
MDB18 AN32	DDR1_DQ[18]/DDR0_DQ[34]	DDR1_CK[18]
MDB19 AP32	DDR1_DQ[19]/DDR0_DQ[35]	DDR1_CK[19]
MDB20 AN34	DDR1_DQ[20]/DDR0_DQ[36]	DDR1_CK[20]
MDB21 AP34	DDR1_DQ[21]/DDR0_DQ[37]	DDR1_CK[21]
MDB22 AN31	DDR1_DQ[22]/DDR0_DQ[38]	DDR1_CK[22]
MDB23 AP31	DDR1_DQ[23]/DDR0_DQ[39]	DDR1_CK[23]
MDB24 AL29	DDR1_DQ[24]/DDR0_DQ[40]	DDR1_CK[24]
MDB25 AM29	DDR1_DQ[25]/DDR0_DQ[41]	DDR1_CK[25]
MDB26 AP29	DDR1_DQ[26]/DDR0_DQ[42]	DDR1_CK[26]
MDB27 AR29	DDR1_DQ[27]/DDR0_DQ[43]	DDR1_CK[27]
MDB28 AM28	DDR1_DQ[28]/DDR0_DQ[44]	DDR1_CK[28]
MDB29 AL28	DDR1_DQ[29]/DDR0_DQ[45]	DDR1_CK[29]
MDB30 AR28	DDR1_DQ[30]/DDR0_DQ[46]	DDR1_CK[30]
MDB31 AP28	DDR1_DQ[31]/DDR0_DQ[47]	DDR1_CK[31]
MDB32 AR12	DDR1_DQ[32]/DDR0_DQ[48]	DDR1_CK[32]
MDB33 AP12	DDR1_DQ[33]/DDR0_DQ[49]	DDR1_CK[33]
MDB34 AM13	DDR1_DQ[34]/DDR0_DQ[50]	DDR1_CK[34]
MDB35 AL13	DDR1_DQ[35]/DDR0_DQ[51]	DDR1_CK[35]
MDB36 AR13	DDR1_DQ[36]/DDR0_DQ[52]	DDR1_CK[36]
MDB37 AP13	DDR1_DQ[37]/DDR0_DQ[53]	DDR1_CK[37]
MDB38 AM12	DDR1_DQ[38]/DDR0_DQ[54]	DDR1_CK[38]
MDB39 AL12	DDR1_DQ[39]/DDR0_DQ[55]	DDR1_CK[39]
MDB40 AP10	DDR1_DQ[40]/DDR0_DQ[56]	DDR1_CK[40]
MDB41 AR10	DDR1_DQ[41]/DDR0_DQ[57]	DDR1_CK[41]
MDB42 AR7	DDR1_DQ[42]/DDR0_DQ[58]	DDR1_CK[42]
MDB43 AP7	DDR1_DQ[43]/DDR0_DQ[59]	DDR1_CK[43]
MDB44 AR9	DDR1_DQ[44]/DDR0_DQ[60]	DDR1_CK[44]
MDB45 AP9	DDR1_DQ[45]/DDR0_DQ[61]	DDR1_CK[45]
MDB46 AR6	DDR1_DQ[46]/DDR0_DQ[62]	DDR1_CK[46]
MDB47 AP6	DDR1_DQ[47]/DDR0_DQ[63]	DDR1_CK[47]
MDB48 AM10	DDR1_DQ[48]	
MDB49 AL10	DDR1_DQ[49]	
MDB50 AM7	DDR1_DQ[50]	
MDB51 AL7	DDR1_DQ[51]	
MDB52 AM8	DDR1_DQ[52]	
MDB53 AL9	DDR1_DQ[53]	
MDB54 AM6	DDR1_DQ[54]	
MDB55 AL6	DDR1_DQ[55]	
MDB56 AL6	DDR1_DQ[56]	
MDB57 AJ7	DDR1_DQ[57]	
MDB58 AE6	DDR1_DQ[58]	
MDB59 AF7	DDR1_DQ[59]	
MDB60 AH7	DDR1_DQ[60]	
MDB61 AH6	DDR1_DQ[61]	
MDB62 AE7	DDR1_DQ[62]	
MDB63 AE6	DDR1_DQ[63]	
AR25	DDR1_ECC[0]	
AR26	DDR1_ECC[1]	
AM26	DDR1_ECC[2]	
AM25	DDR1_ECC[3]	
AP25	DDR1_ECC[4]	
AL25	DDR1_ECC[5]	
AL26	DDR1_ECC[6]	
AL26	DDR1_ECC[7]	
AM20 M_DCLKB0	M_DCLKB0 9	
AM21 M_DCLKB1	M_DCLKB1 9	
AP22 M_DCLKB1	M_DCLKB1 9	
AP21 M_DCLKB2	M_DCLKB2 9	
AN20 M_DCLKB2	M_DCLKB2 9	
AN21 M_DCLKB3	M_DCLKB3 9	
AP19 M_DCLKB3	M_DCLKB3 9	
AP20 M_DCLKB3	M_DCLKB3 9	
AY29 CKEB0	CKEB0 9	
AV29 CKEB1	CKEB1 9	
AV29 CKEB2	CKEB2 9	
AU29 CKEB3	CKEB3 9	
AP17 M_CSB0	M_CSB0 9	
AN15 M_CSB1	M_CSB1 9	
AM17 M_CSB2	M_CSB2 9	
AM15 M_CSB3	M_CSB3 9	
AM16 M_ODT B0		
AL16 M_ODT B1		
AL17 M_ODT B2		
AL15 M_ODT B3		
AN18 MAAB16		
AL17 MAAB16		
AL16 MAAB15		
AL18 SBAB0	SBAB0 9	
AM18 SBAB1	SBAB1 9	
AW28 BG B0	BG B0 9	
AL19 MAAB0		
AL22 MAAB1		
AM22 MAAB2		
AM23 MAAB3		
AP23 MAAB4		
AL23 MAAB5		
AW26 MAAB6		
AY26 MAAB7		
AU26 MAAB8		
AW27 MAAB9		
AE18 MAAB10		
AU27 MAAB11		
AV27 MAAB12		
AL15 MAAB13		
AY28 BG B1	BG B1 9	
AU28 M_ACT B 9	M_ACT B 9	
AL20		
AY25 M_DDR PARB 9	M_DDR PARB 9	
AY25 M_ALERT B 9	M_ALERT B 9	
AF34 M_DQSB0		
AK33 M_DQSB1		
AN33 M_DQSB2		
AN29 M_DQSB3		
AN13 M_DQSB4		
AM8 M_DQSB5		
AG6 M_DQSB7		
AF35 M_DQSB0		
AL33 M_DQSB1		
AN33 M_DQSB2		
AN28 M_DQSB3		
AN12 M_DQSB4		
AP8 M_DQSB5		
AL8 M_DQSB6		
AG7 M_DQSB7		
AN25		
AN26		
DDR_VREF_CA		
DDR0_VREF_DQ		
DDR1_VREF_DQ		
AB40 VREF CAB	VREF CAB 8	
AC40 VREF DOB	VREF DOB 9	

DDR CHANNEL
B

2 OF 12

CPU-SK/1151/S/15[10SC1-F01151-11R]

8 MODT_A[0..3]	MODT A0..3
9 MODT_B[0..3]	MODT B0..3
8 MDA[0..63]	MDA0..63
9 MDB[0..63]	MDB0..63
8 M_DQSA[0..7]	M_DQSA0..7
8 M_-DQSA[0..7]	M_-DQSA0..7
8 MAAA[0..16]	MAAA0..16
9 MAAB[0..16]	MAAB0..16
9 M_DQSB[0..7]	M_DQSB0..7
9 M_-DQSB[0..7]	M_-DQSB0..7

Gigabyte Technology

Title

CPU LGA1151-B

Size

Document Number

Rev

1.0

Date

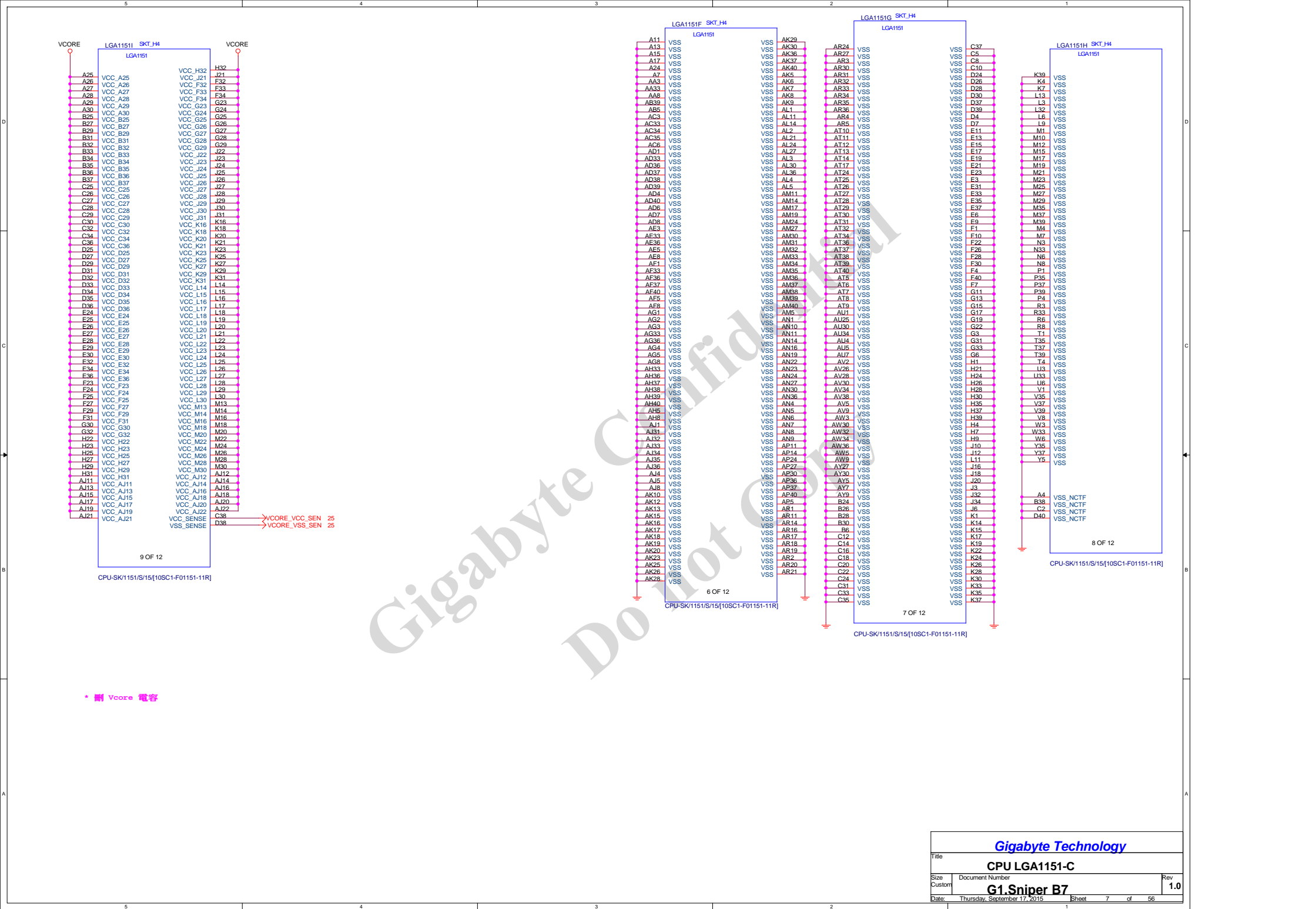
Thursday, September 17, 2015

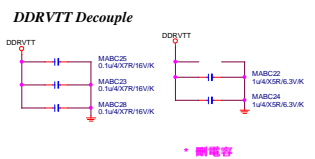
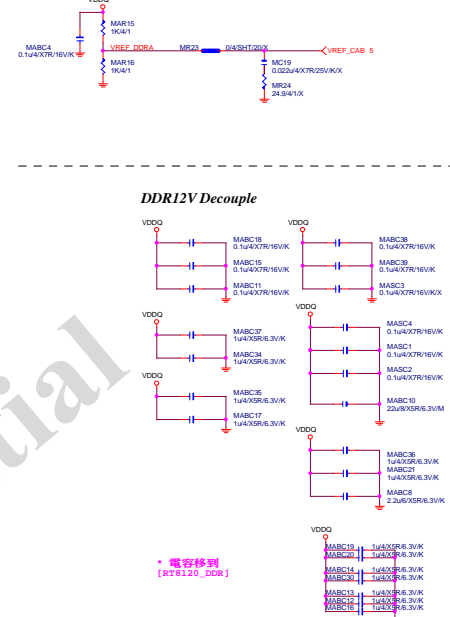
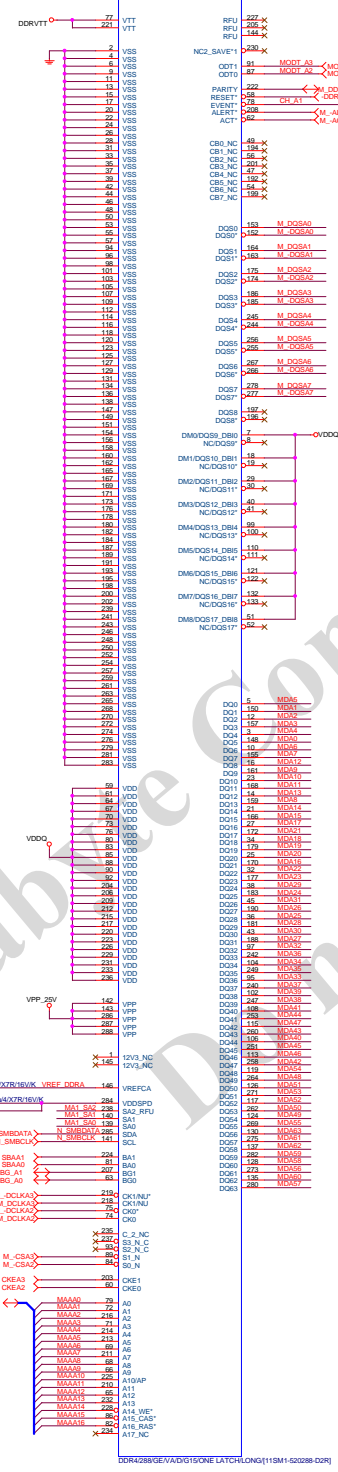
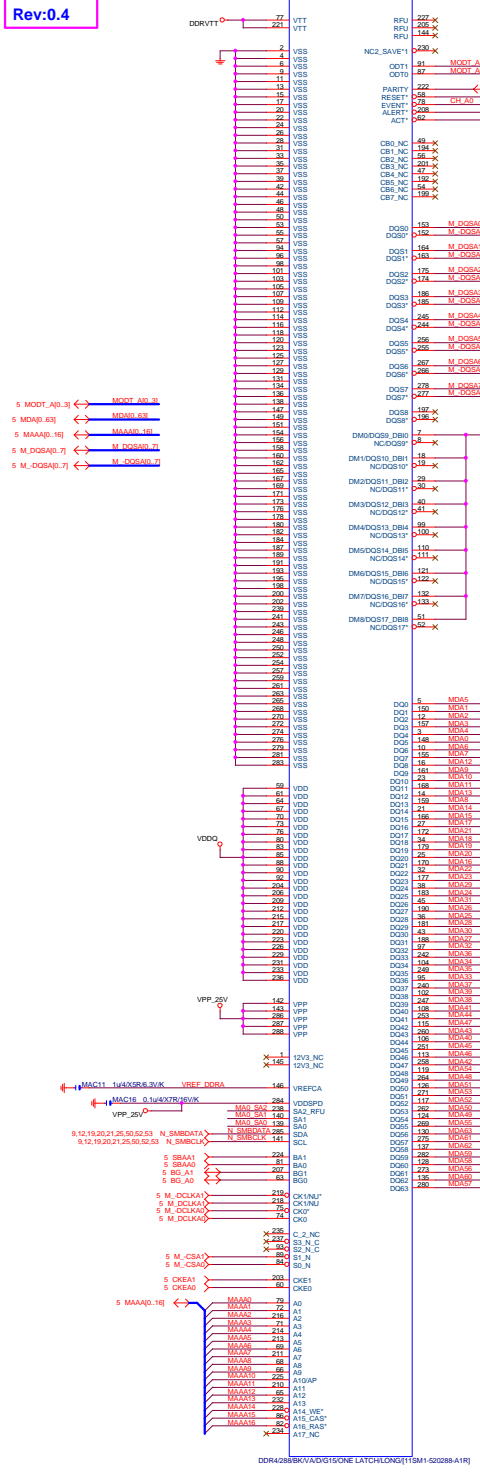
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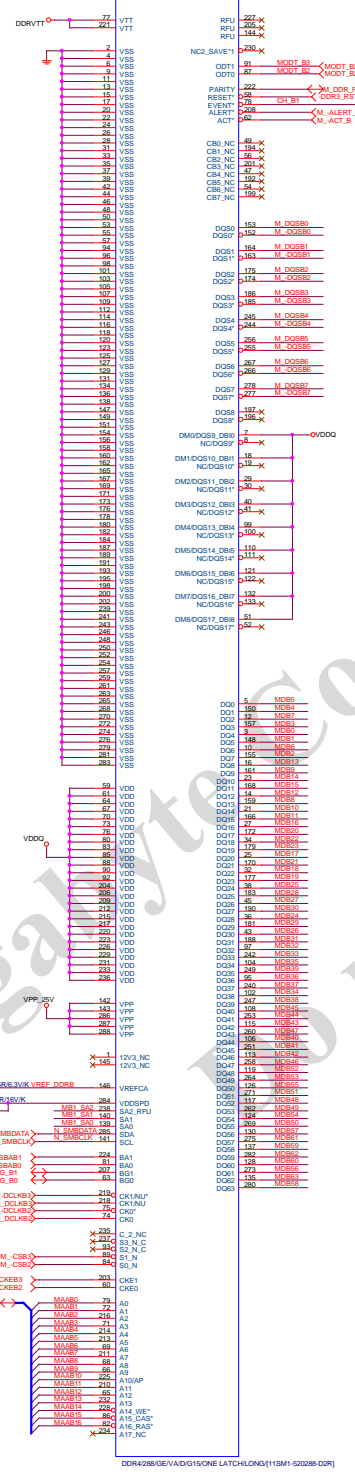
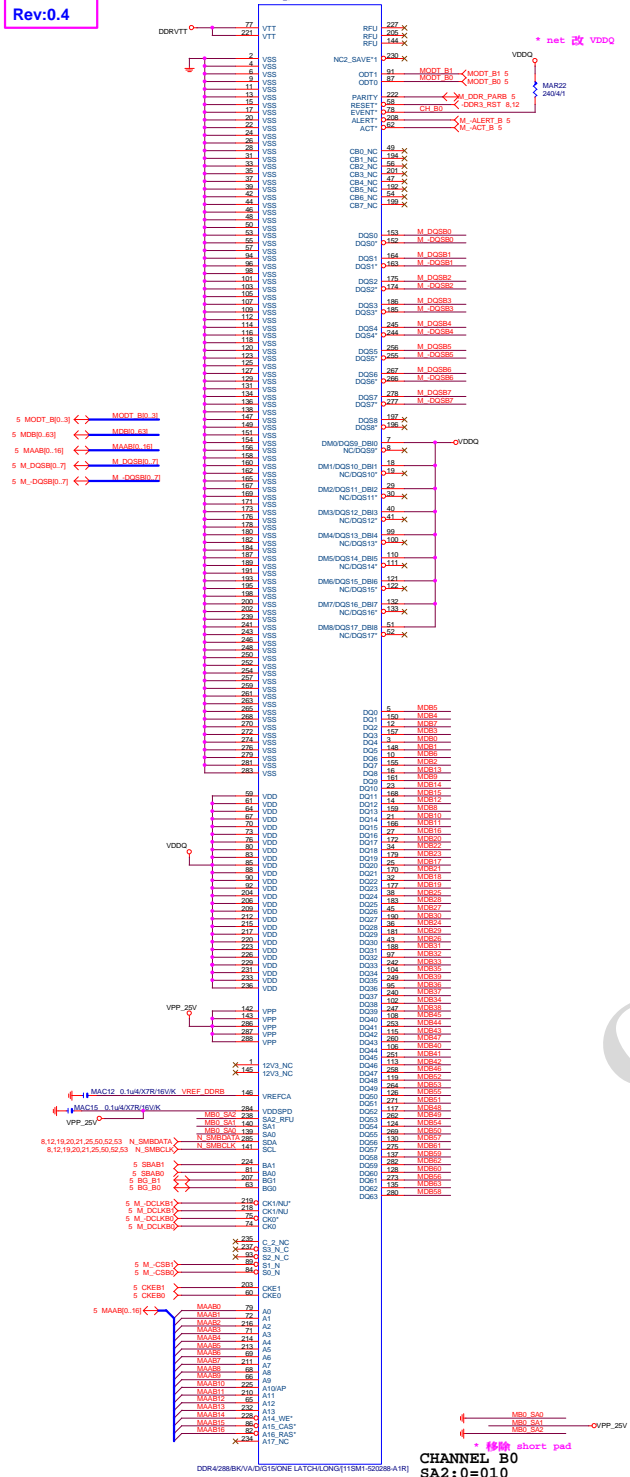
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of

56



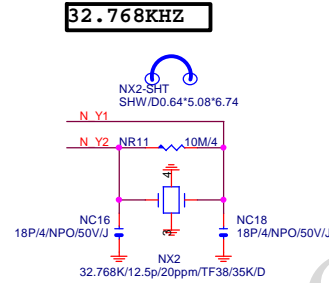
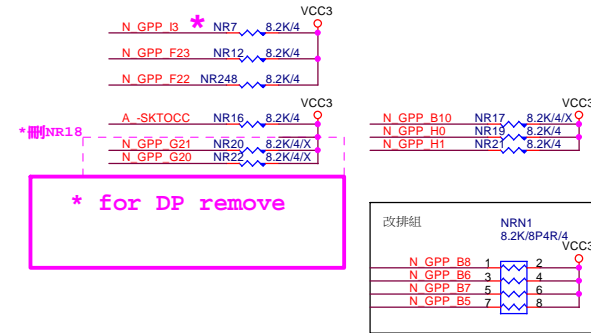
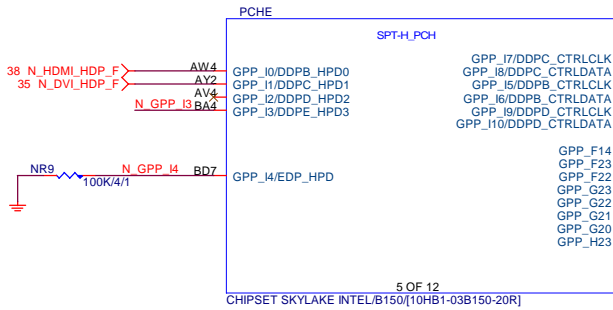




Rev 0.4

放置PCH端

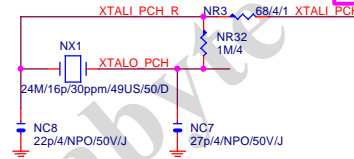
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N_DDPD_CTRLDATA NR4 2.2K/4/1/X



CLK:4/15<1000;Guard GND

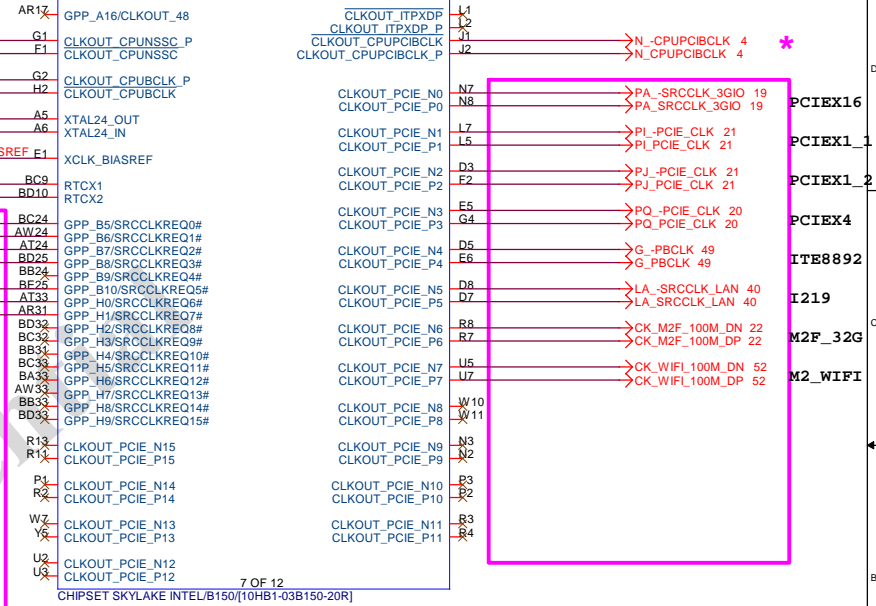


CLK:4/15<1000 mils±100 mils;Guard GND

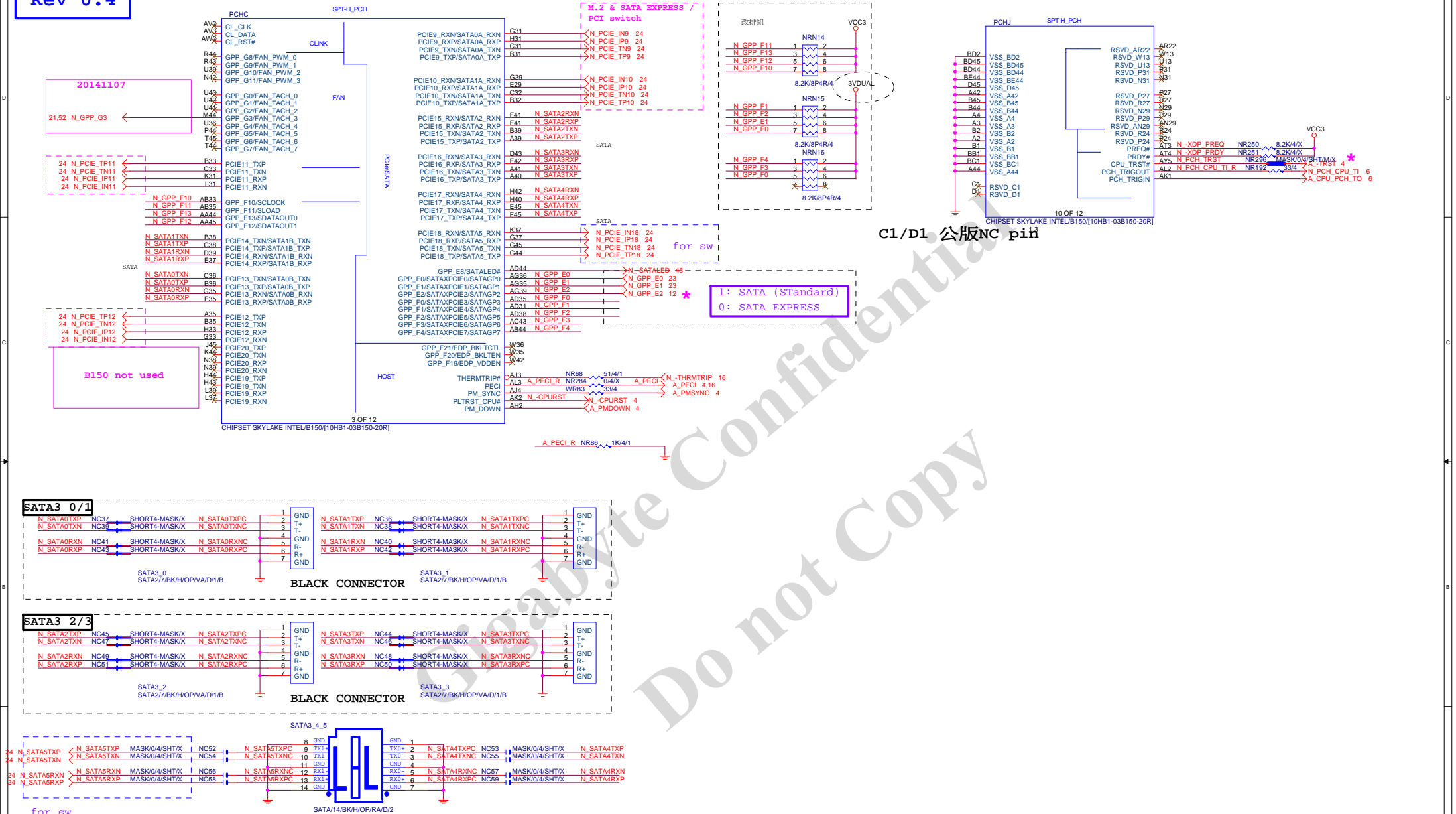


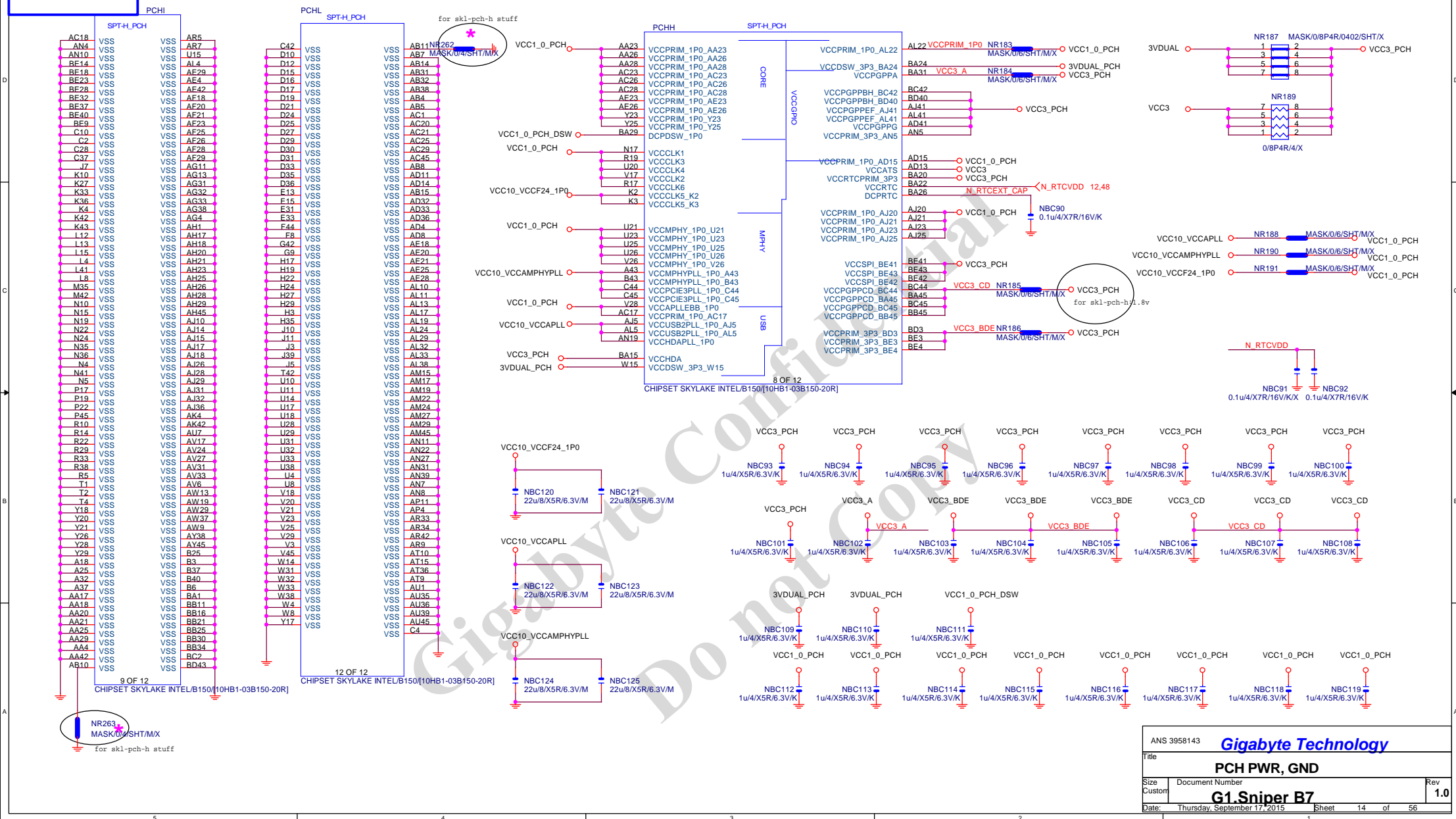
HEAT SINK[12SP2-PTZ17S-01R/12SP2-PTZ17S-02R]

PCHG SPT-H_PCH

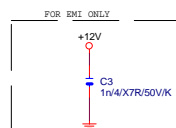
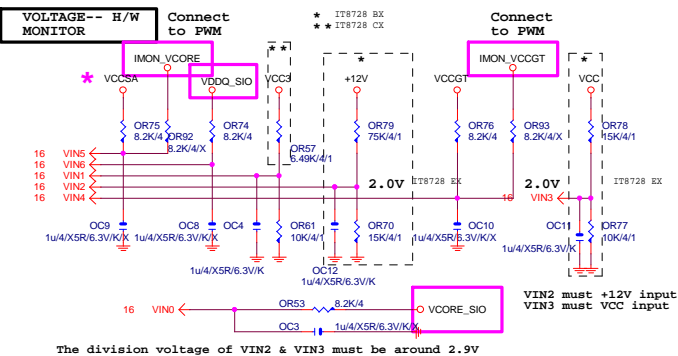
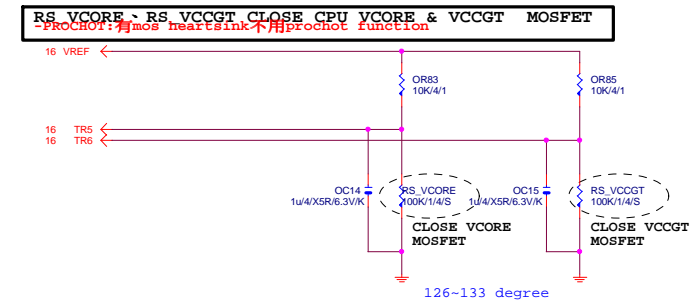
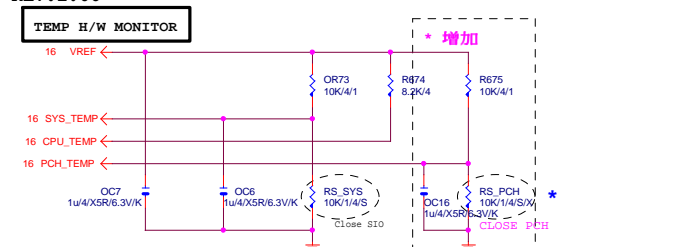


ANS 3958143		Gigabyte Technology	
Title			
PCH CLOCK BUFFER			
Size	Document Number		Rev
Custom	G1.Sniper B7		1.0
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REV:1.06



Gigabyte Technology

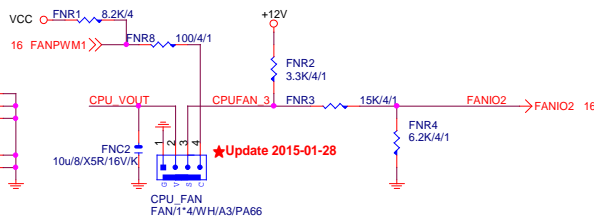
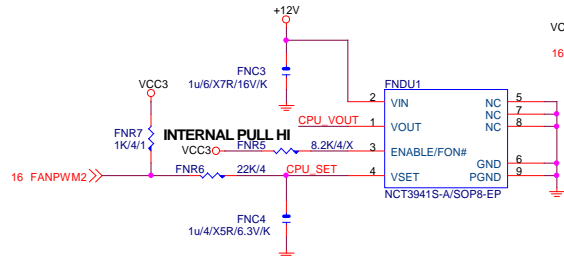
Title			HWM,KB/MS, FAN CTRL
Size	Document Number	Rev	
Custom	G1.Sniper B7	1.0	
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CPU_FAN

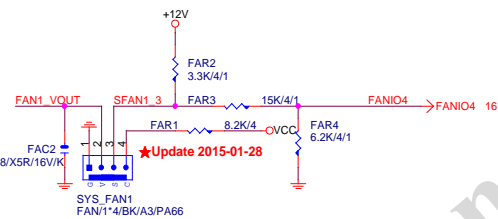
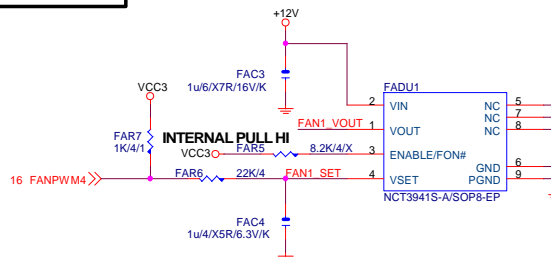
Linear CPU_FAN

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

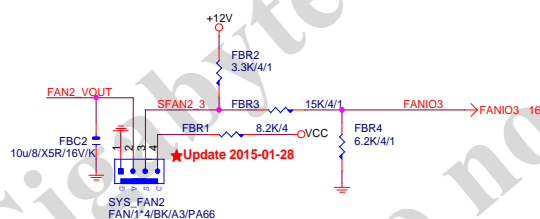
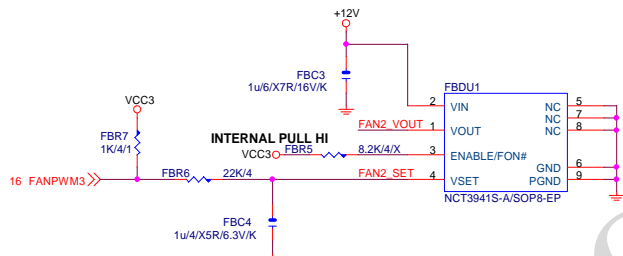
PWM CPU_FAN



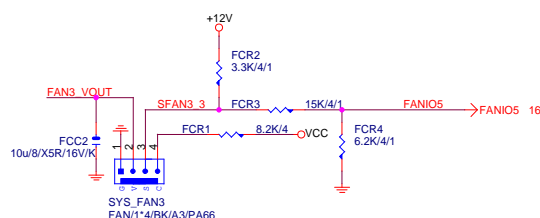
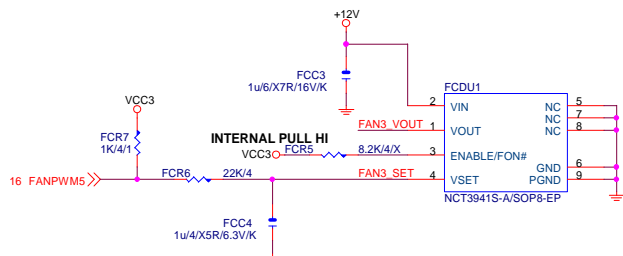
SYSTEM FAN1



SYSTEM FAN2



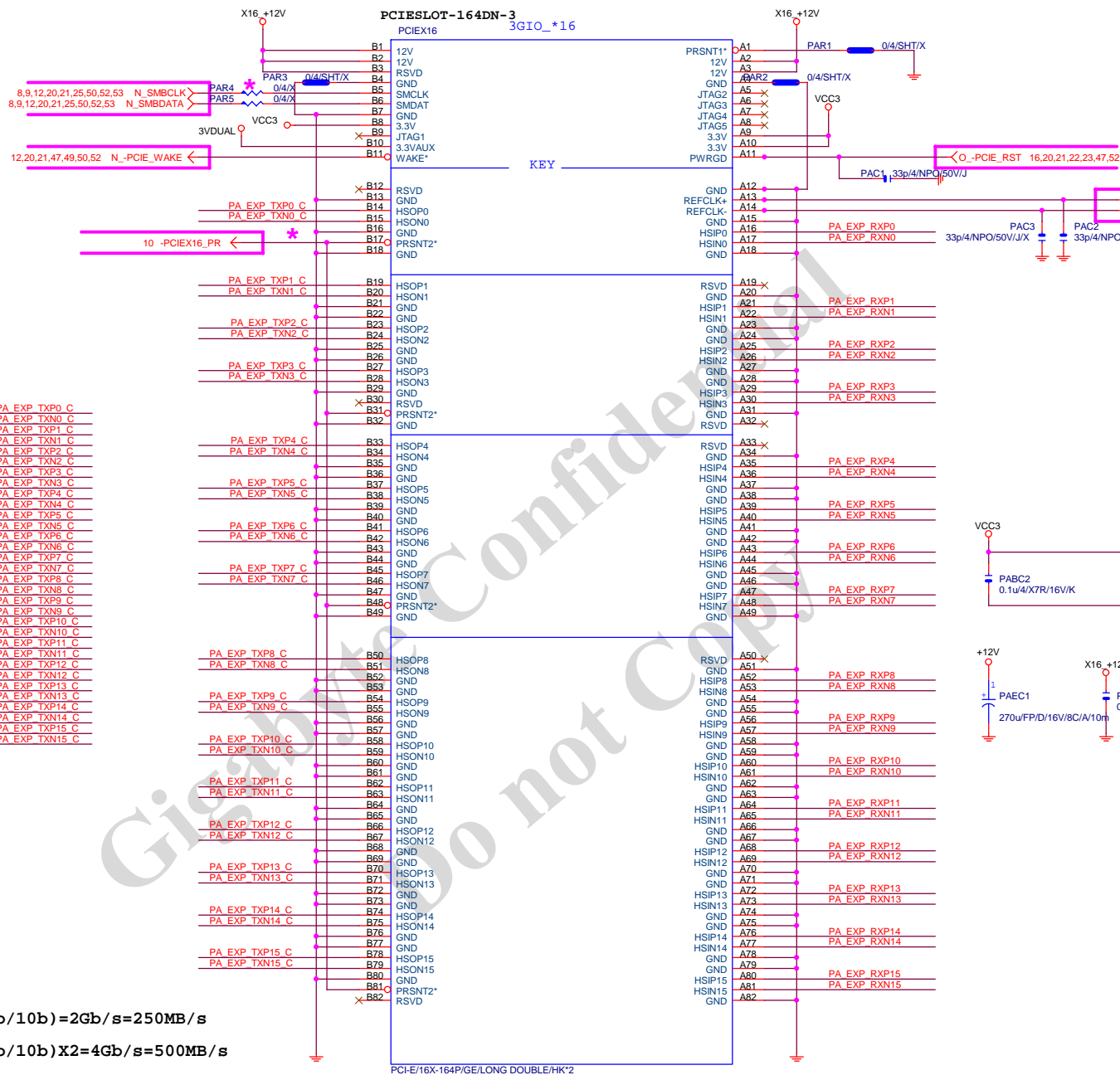
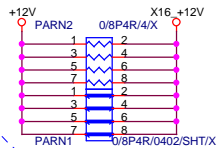
SYSTEM FAN3



GIGABYTE

Title			HWM,KB/MS, FAN CTRL		
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Rev
1.0

* +12 protect
short-wire test

PCI-E/16X-164P/GE/LONG DOUBLE/HK*2

* footprint : PCIESLOT-164STH

PCIE16:16/5/5/5/16

PCI-E REV:1.1--> 2.5GHZ

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

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

PCE-E X16(單向) BANDWITH=2.5GHz*(8b/10b)X16=32Gb/s=4GB/s

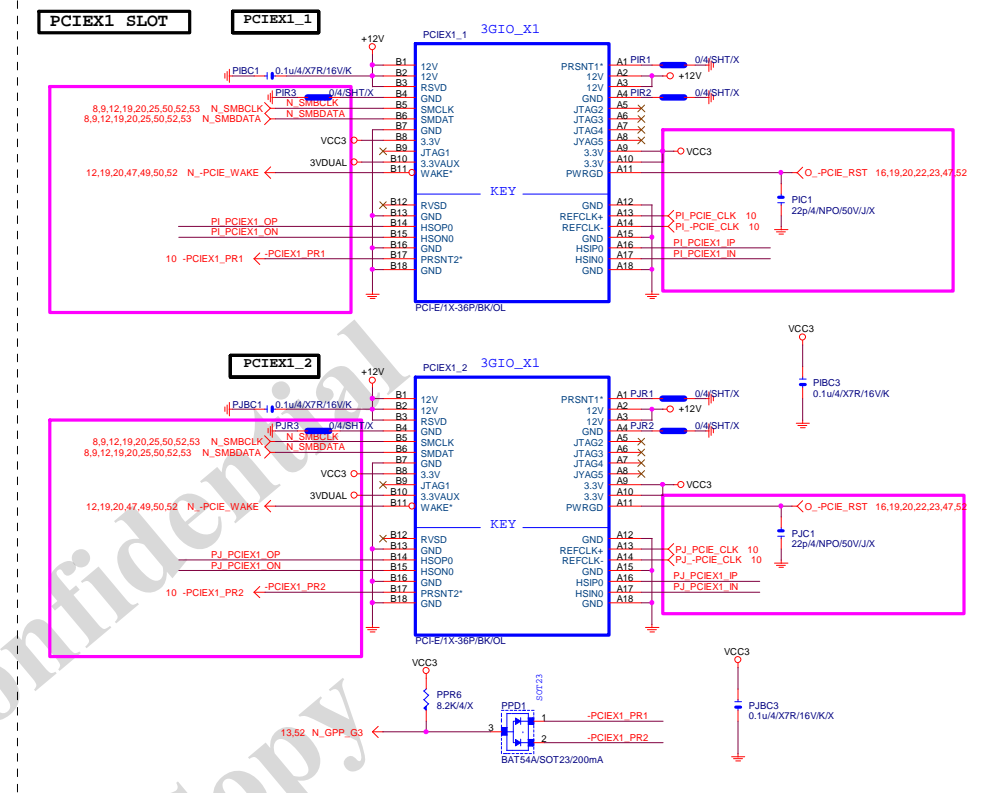
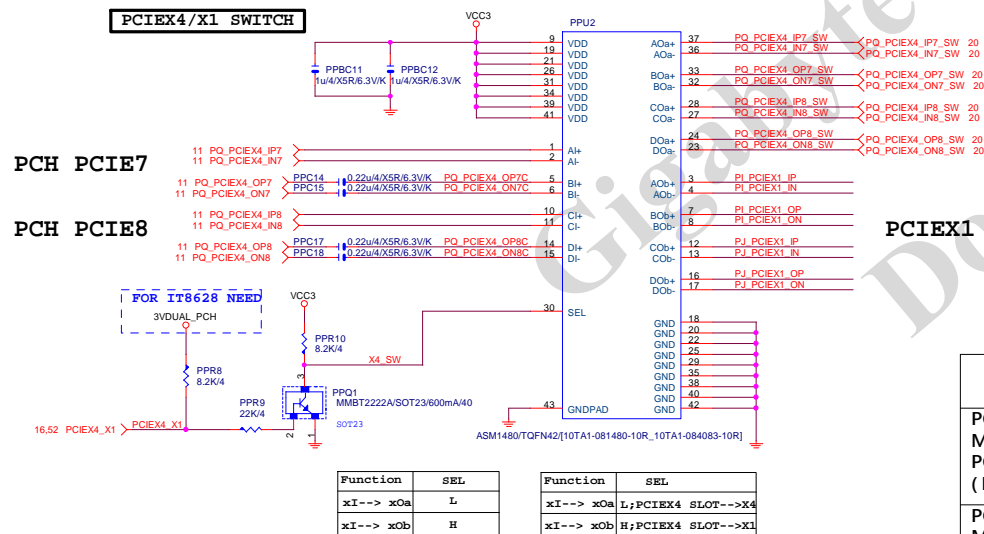
PCE-E X16(雙向) BANDWITH=2.5GHz*(8b/10b)X16X2=64Gb/s=8GB/s

PCI-E REV:2.0--> 5GHZ

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Title			PCI EXPRESS * 16	
Size	Document Number	Rev		1.0
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PCIEX4

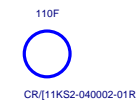
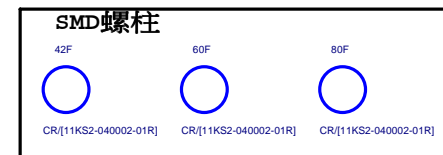
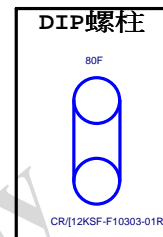
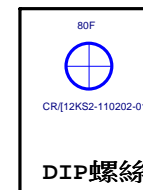
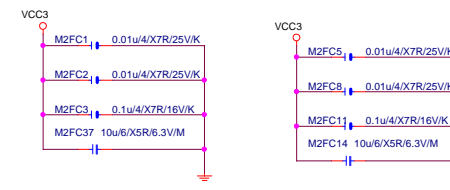
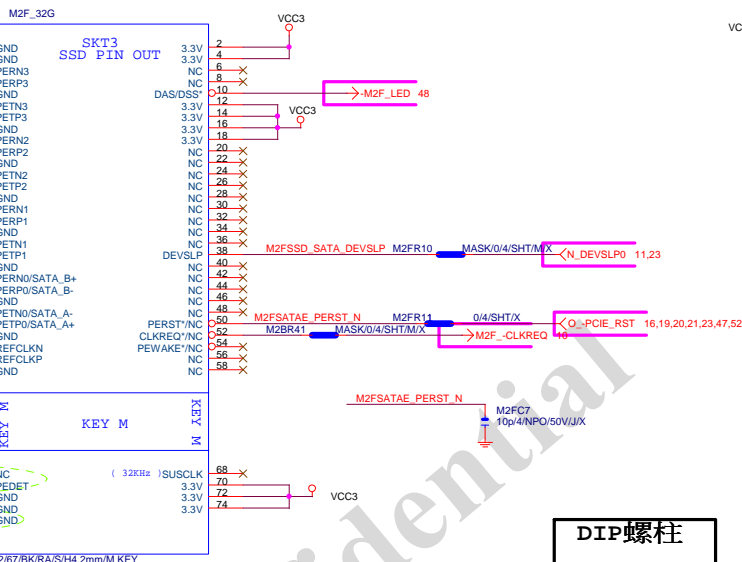
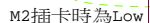
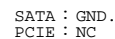
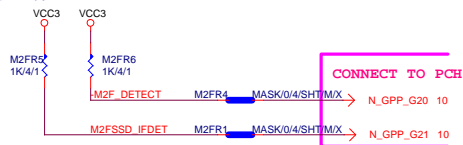
PCIEX1

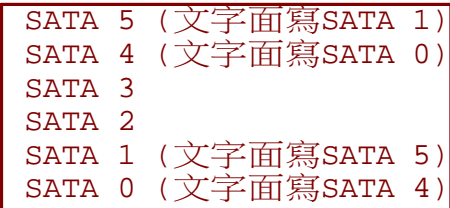
當偵測到此組態

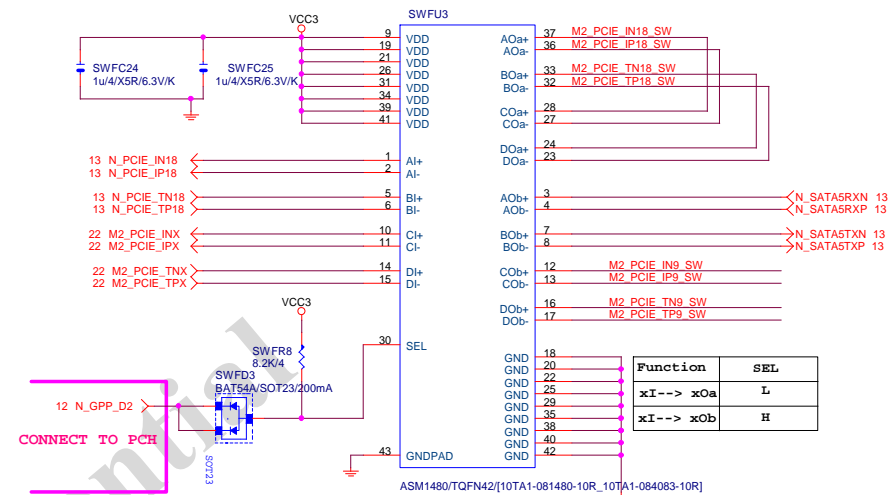
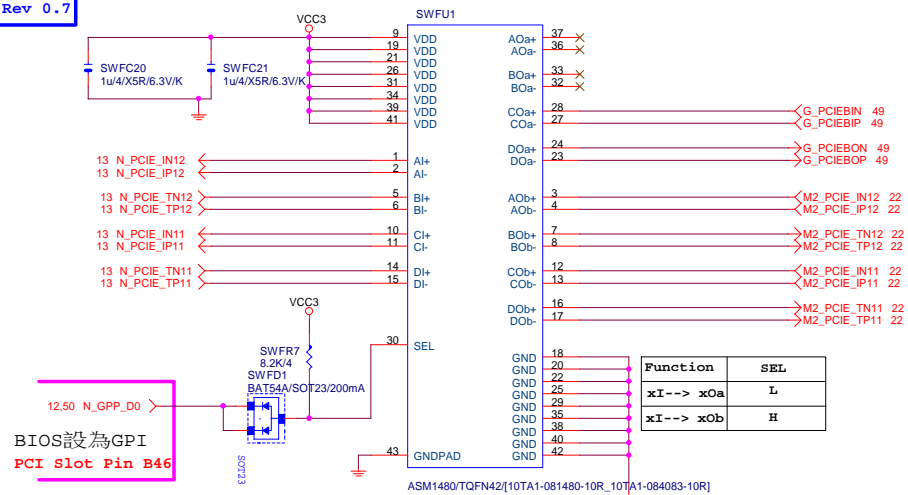
➤ 設定為此組態

	N_GPP_G3 (PCH GPP_G3)
PCIEX4 -> X4 M2_WIFI -> N/A PCIEX1_1/2 --> N/A (Default)	H
PCIEX4 -> X1 M2_WIFI -> X1 PCIEX1_1/2 --> X1	L

PCIEX4_X1 (SIO_GPIO27)	
→	H
→	L







當偵測到此組態

	PCI S.E. M.2 (SATA)	PCI S.E. SATA S5	PCI M.2 (PCIEX2) SATA S5	M.2 (PCIEX4) SATA S5	S.E. M.2 (SATA)	M.2 (SATA)	PCI
N_GPP_D0	L	NA	L	H	H	H	L
N_GPP_G20	L	H	L	L	L	L	H
N_GPP_G21	L	H	H	H	L	L	H
N_GPP_E0	NA	L	NA	NA	L	H	H

設定為此組態

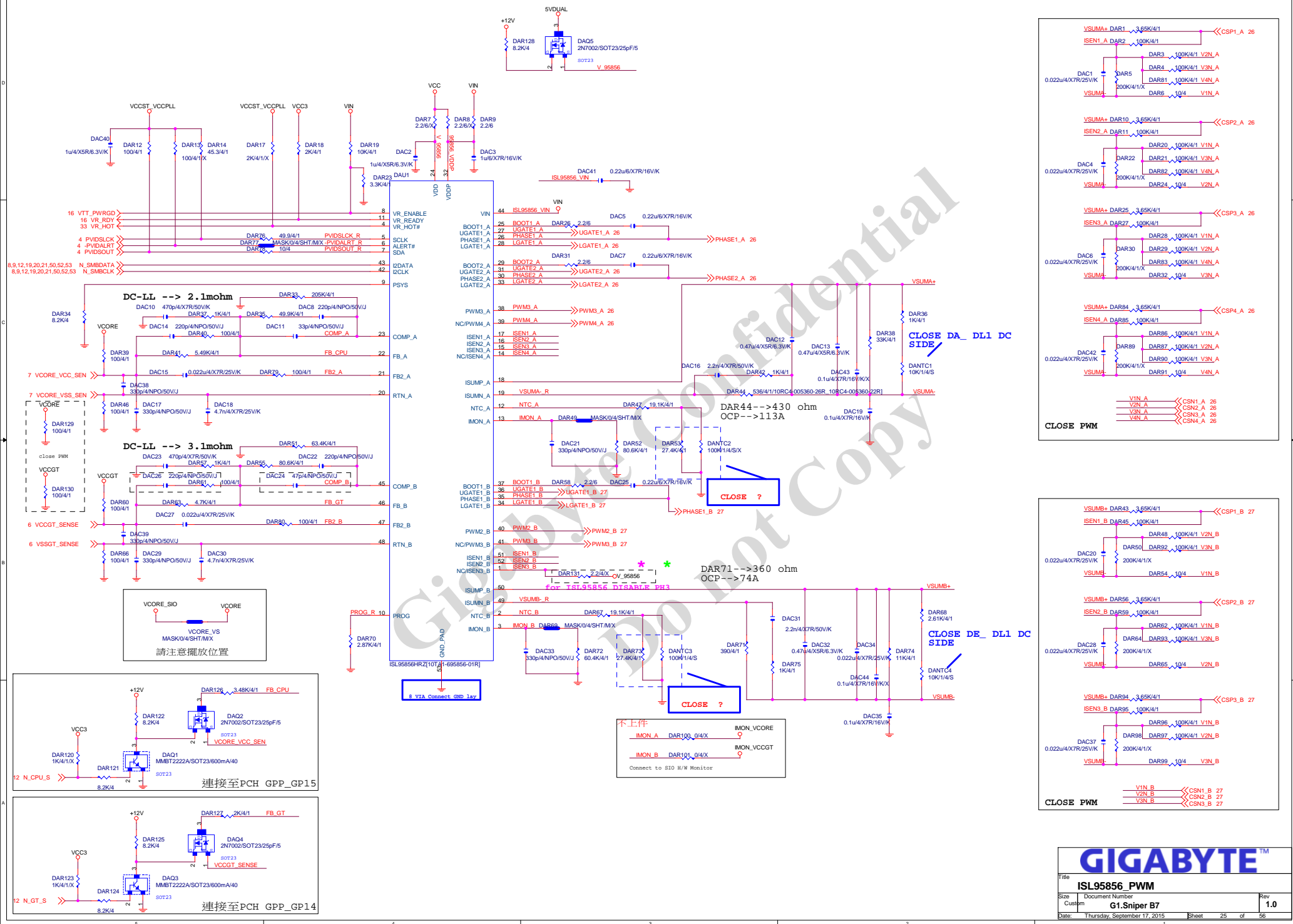
	PCI S.E. M.2 (SATA)	PCI S.E. SATA S5	PCI M.2 (PCIEX2) SATA S5	M.2 (PCIEX4) SATA S5	S.E. M.2 (SATA)	M.2 (SATA)	PCI
N_GPP_D1	L	L	H	H	L	H	NA
N_GPP_D2	L	H	H	H	L	L	NA

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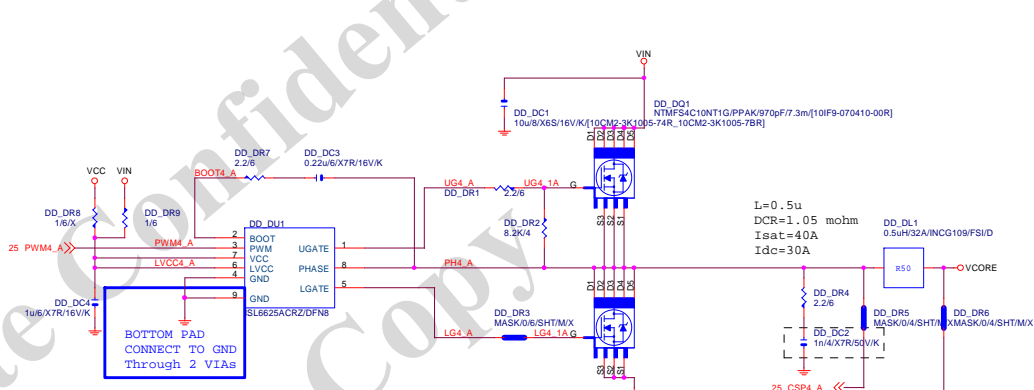
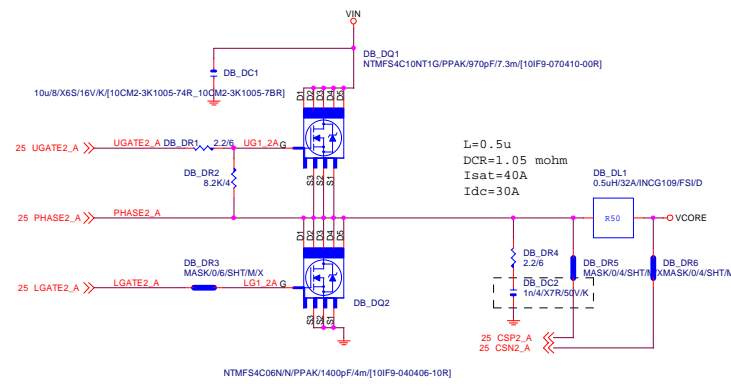
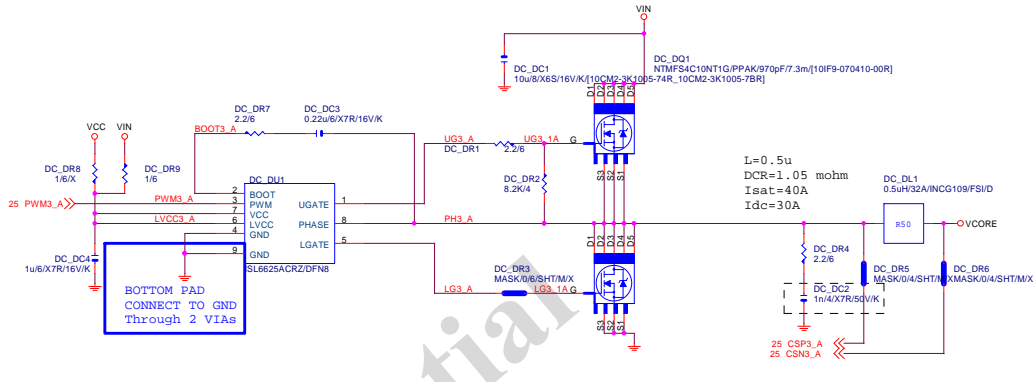
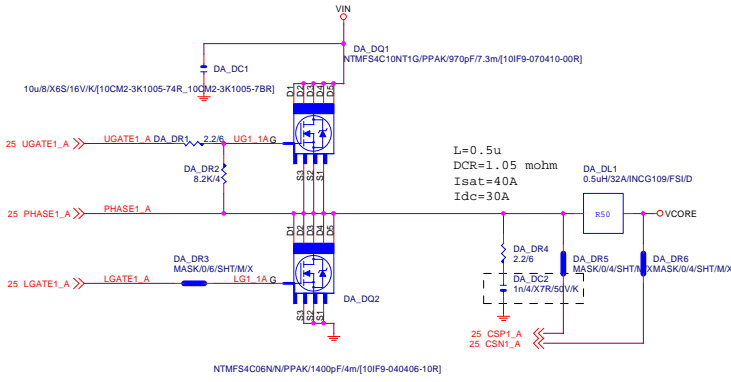
PCI EXPRESS X16 SWITCH

Size Custom	Document Number G1.Sniper B7	Rev 1.0
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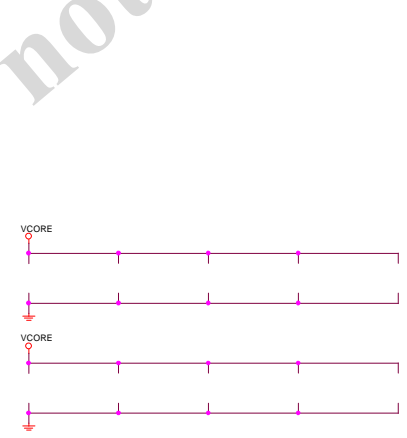
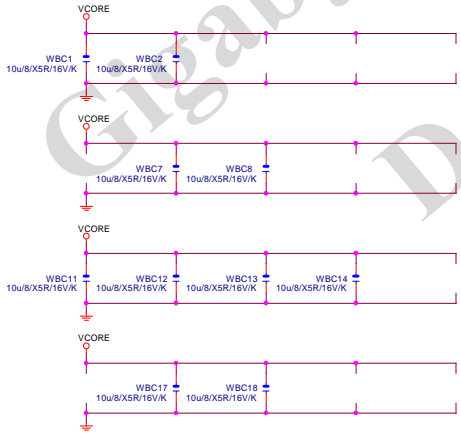
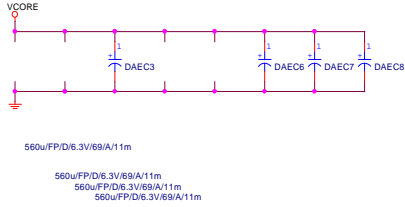
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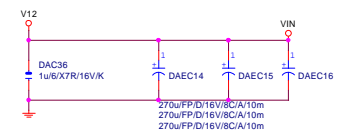
VCORE



VCORE CAP 560u*4PCS
22u*10PCS

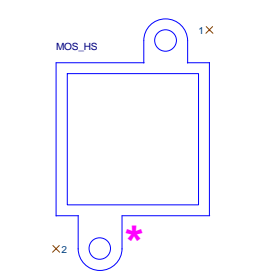
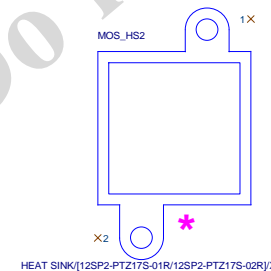
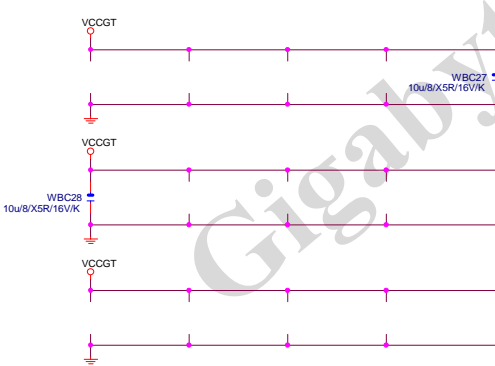
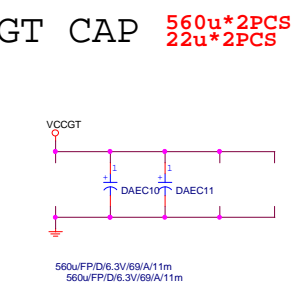
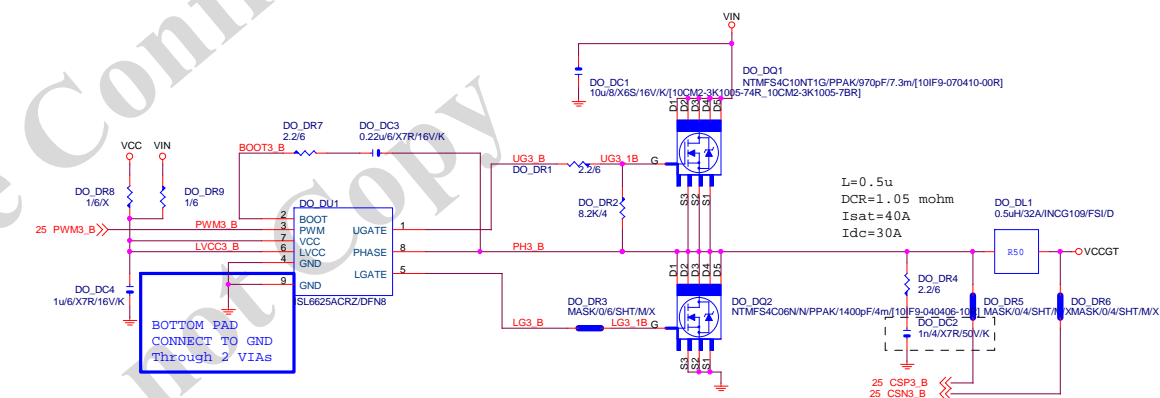
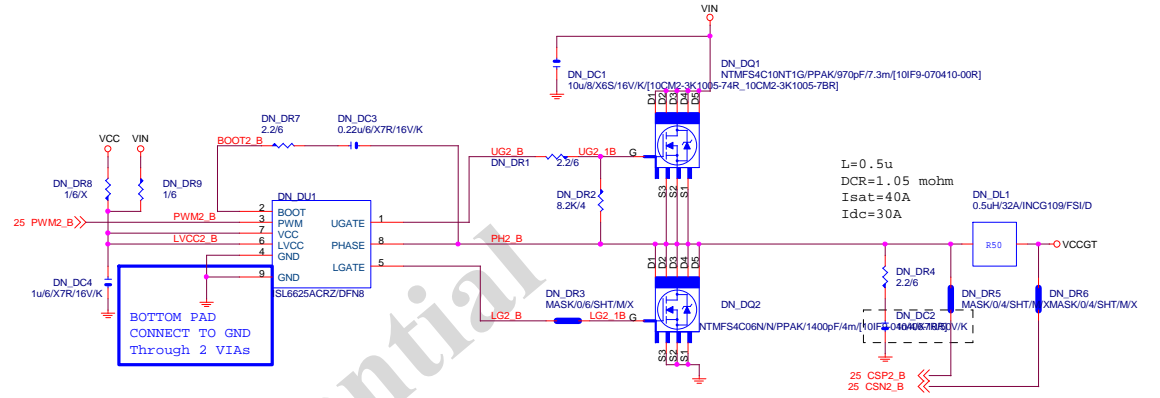
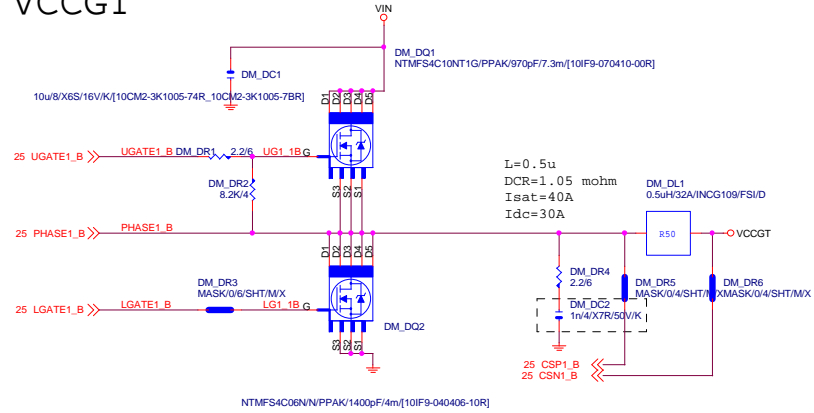


VIN CAP 270u*3PCS



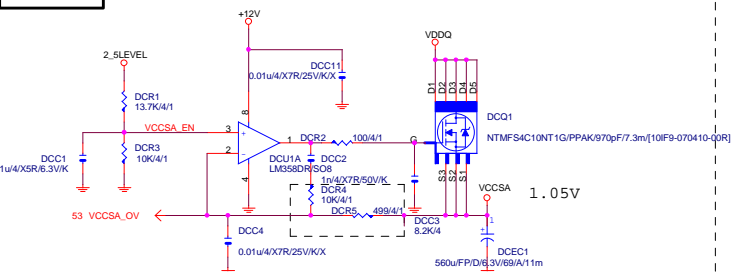
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Size	Custom	Document Number	G1.Sniper B7
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VCCGT

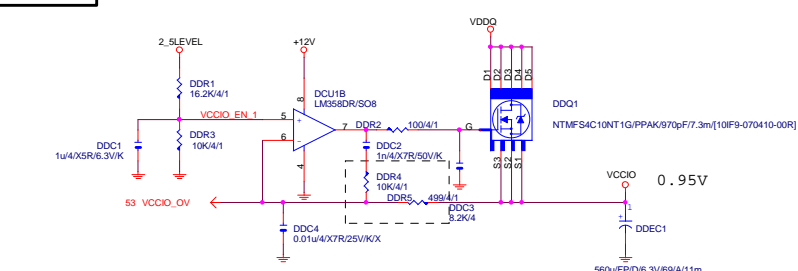


GIGABYTE™			
Title			
ISL95856 MOS			
Size	Document Number	Rev	
Custom	G1.Sniper B7	1.0	
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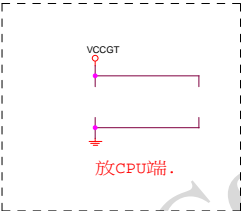
VCCSA



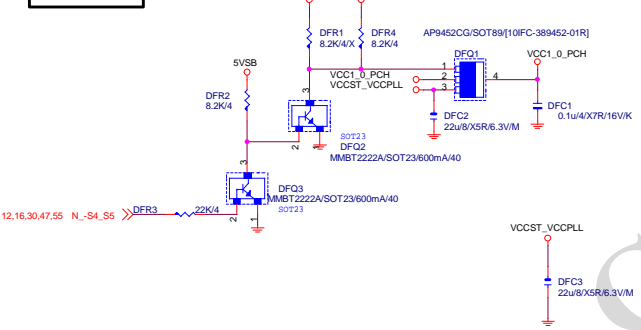
VCCIO



VCCIO_EN 1 DDR10 MASK/D4/SHT/MX → VCCIO_EN 16
Connect to IT8620



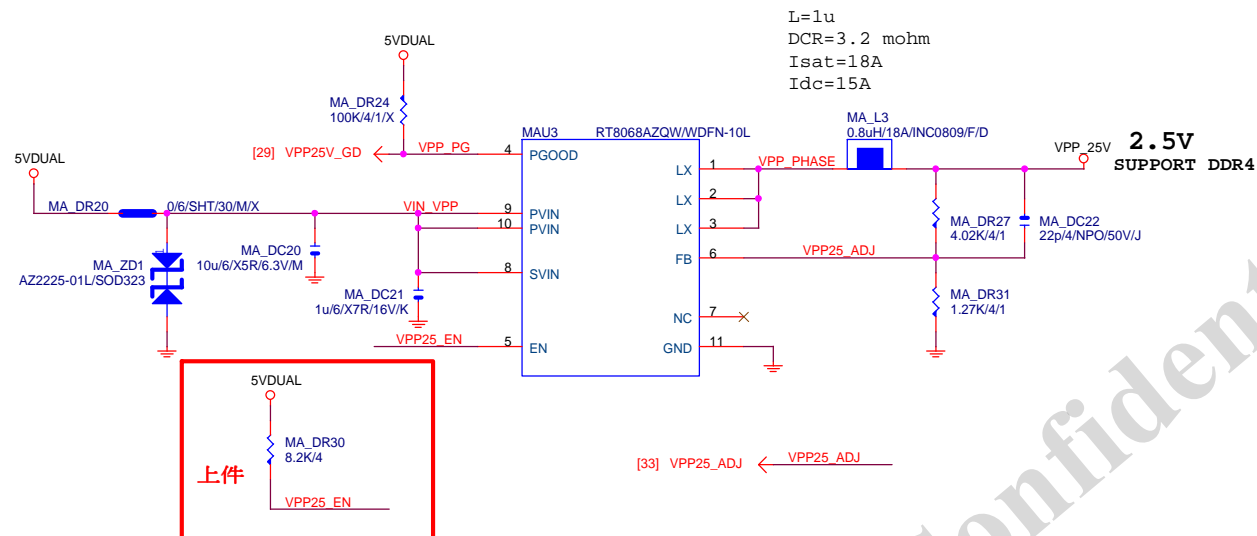
VCCST_VCCPLL



REV:0.39

VPP_25V

CHOKE與CAP料號可變



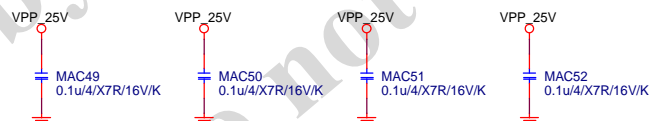
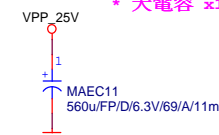
PWR_SEQ

* 刪 MA_DR32

REV0.3

VPP CAP 560u*1PCS

* 大電容 x1



GIGABYTE™

Title			
RT8120_VPP25 POWER			
Size	Document Number		Rev
Custom	G1.Sniper B7		1.0
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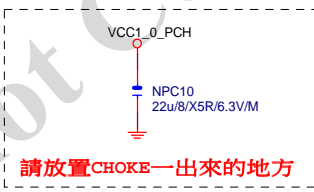
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1
+
NPEC1
100u/OS/D/16V/69/A/35m

Remote sense請從最重的負載端點拉回

PWR SEQ

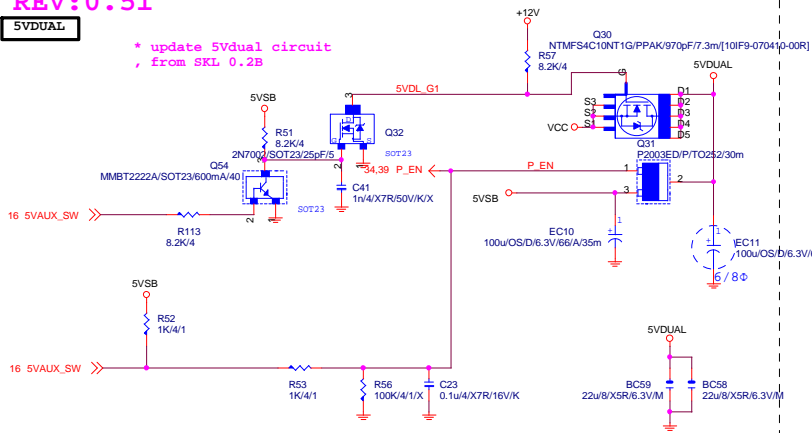


			
Title RT8120_PCH POWER			
Size Custom	Document Number G1.Sniper B7		Rev 1.0
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2		1	

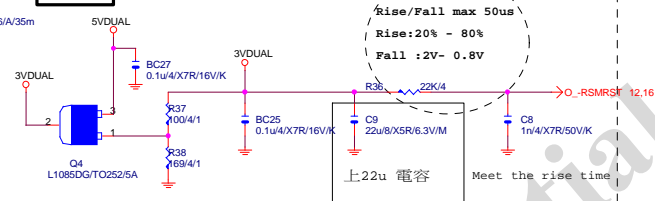
REV:0.51

5VDUAL

* update 5Vdual circuit
from SKL 0.2B



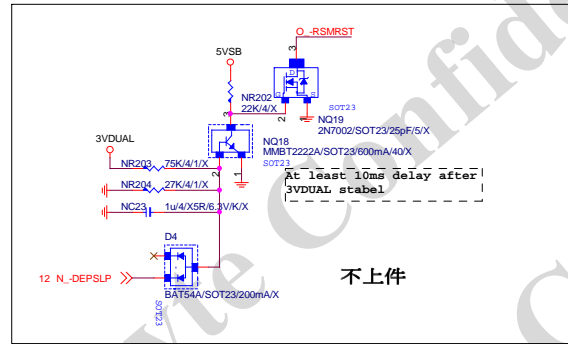
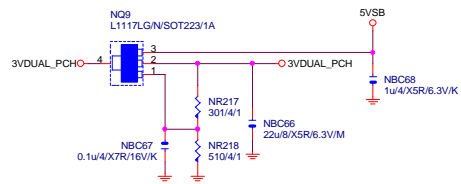
3VDUAL



Rise/Fall max 50us
Rise:20% - 80%
Fall :2V- 0.8V

上22u 电容
Meet the rise time

3VDUAL_PCH

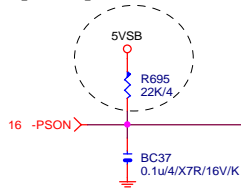


不上件

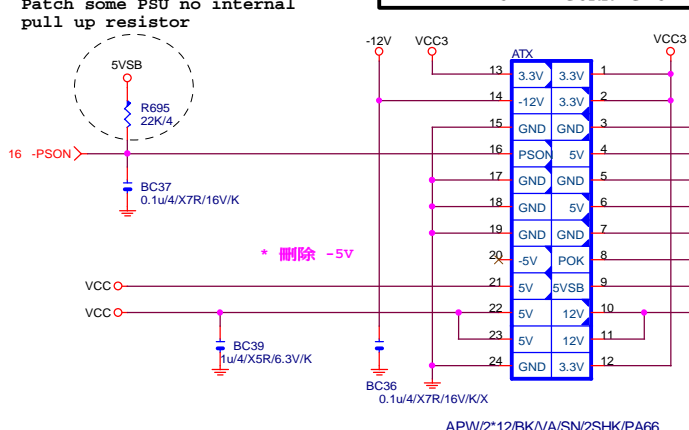
Gigabyte Technology

Title		
DISCRETE POWER		
Size	Document Number	Rev
Custom	G1.Sniper B7	1.0
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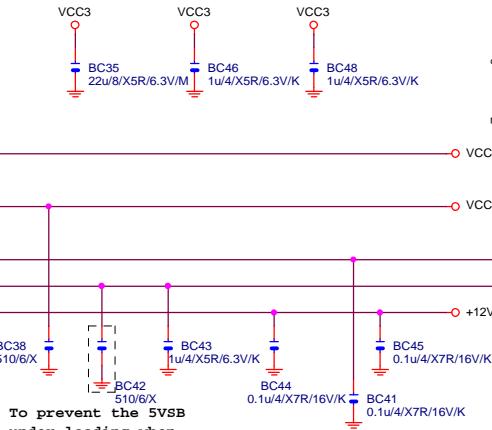
Patch some PSU no internal pull up resistor



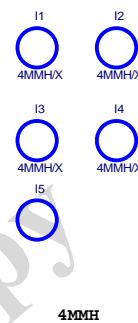
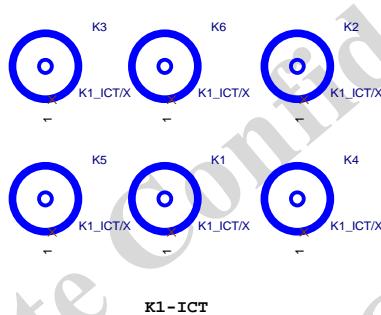
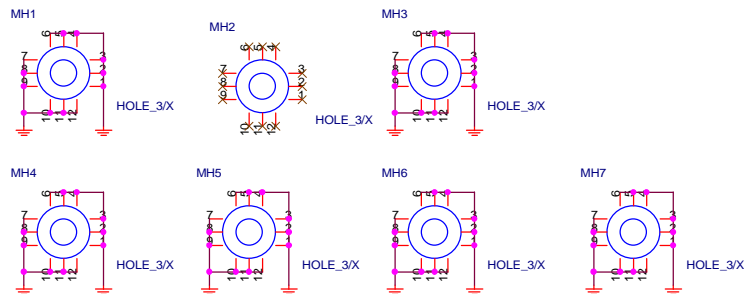
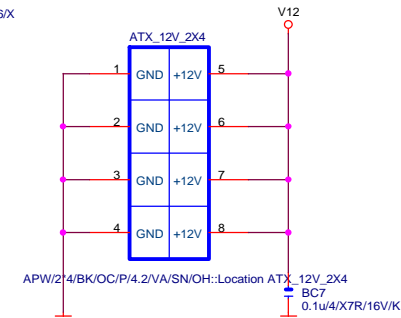
ATXX24 POWER CONNECTOR



To prevent the 5VSB under loading when boot

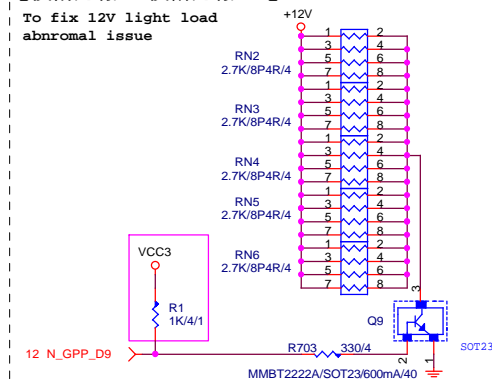


ATXX4 POWER CONNECTOR

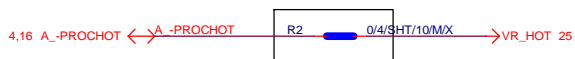


【技術通報R&D技術通報153】

To fix 12V light load abnormal issue



-PROHOT

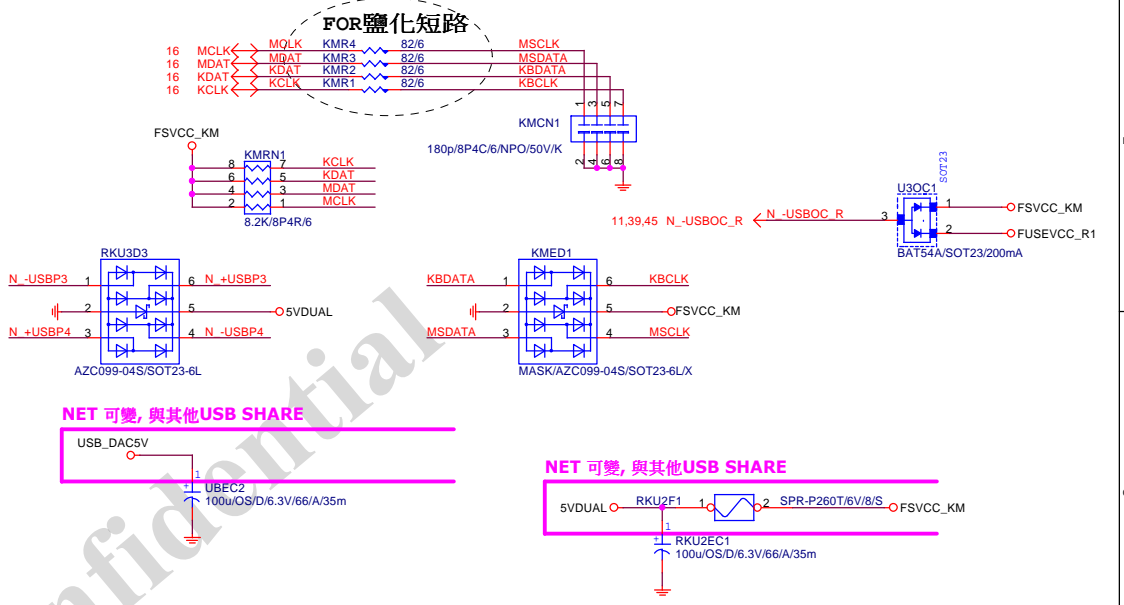
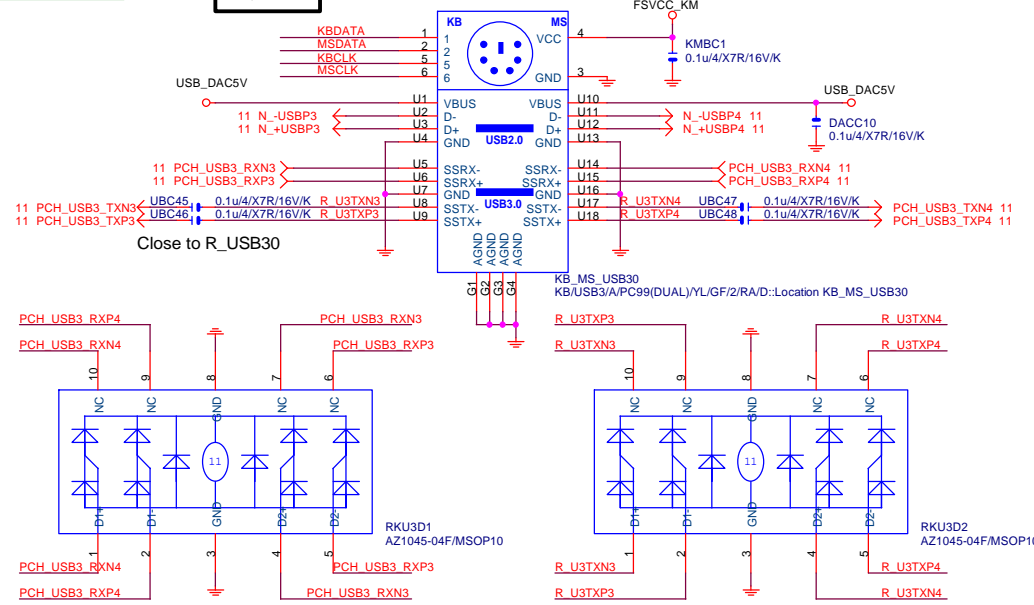


COUPON

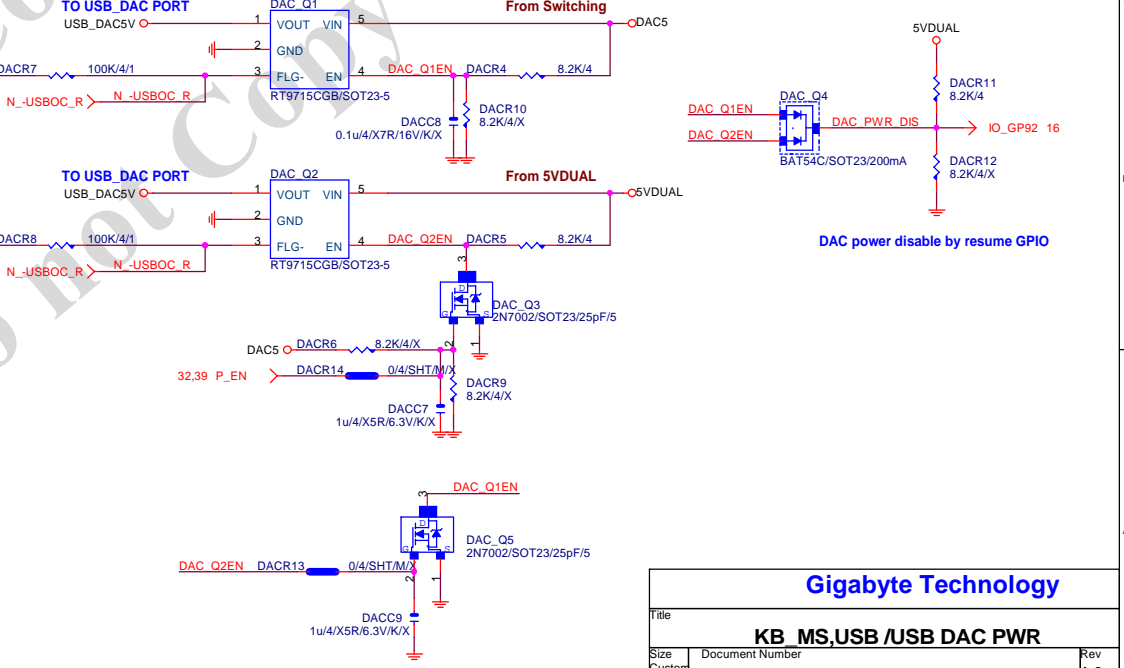
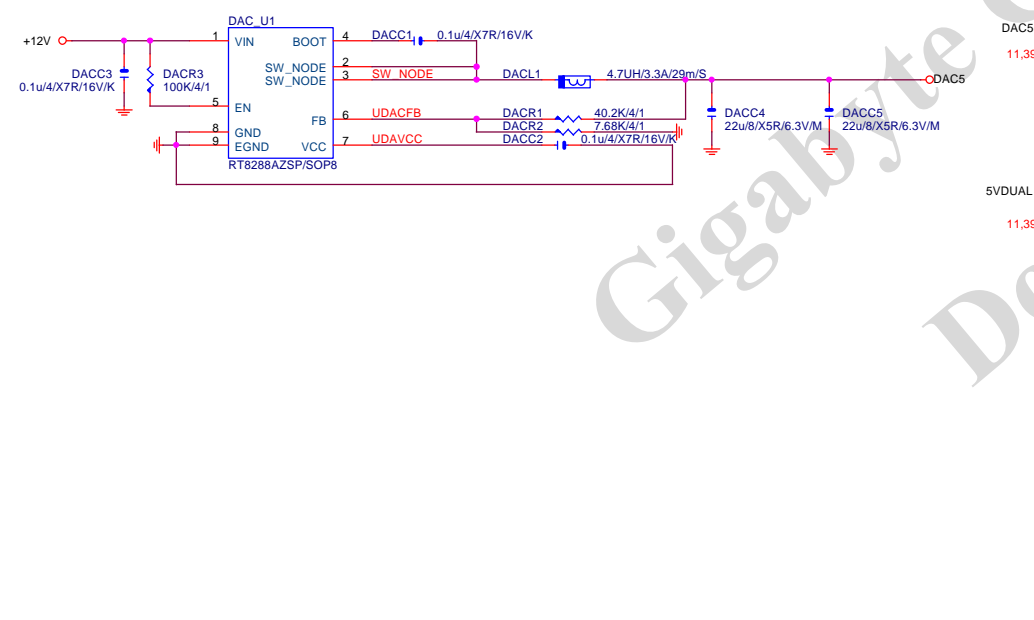


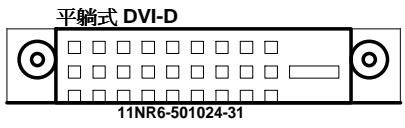
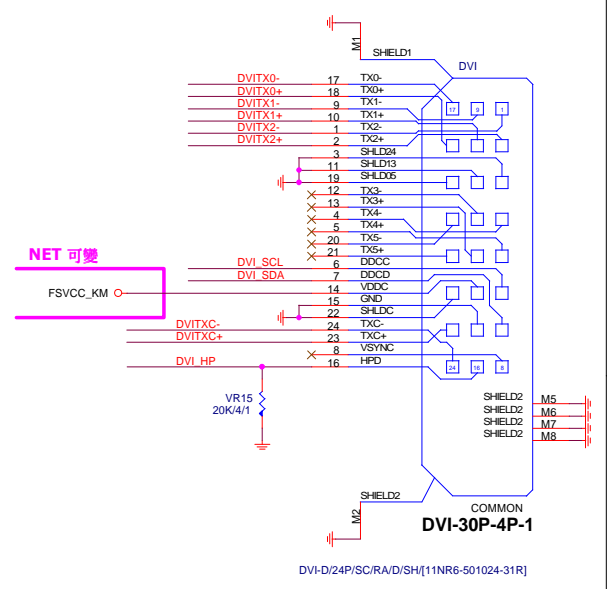
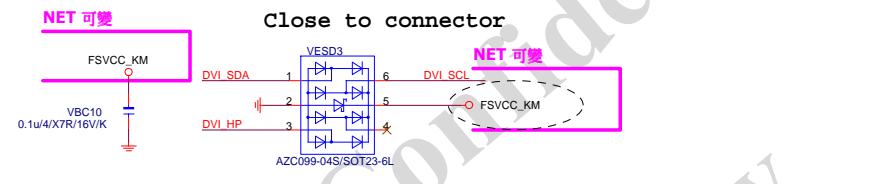
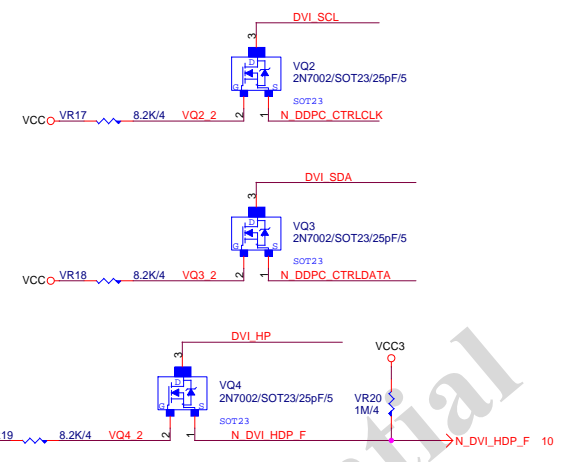
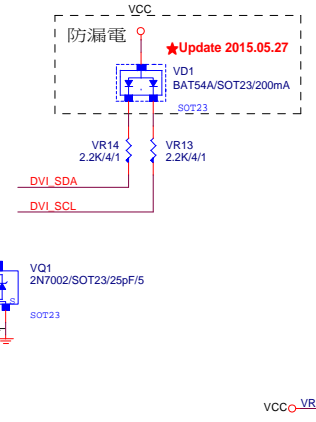
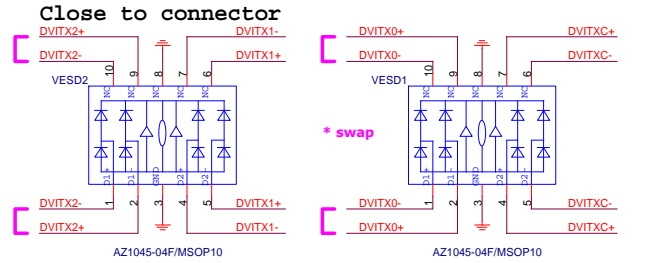
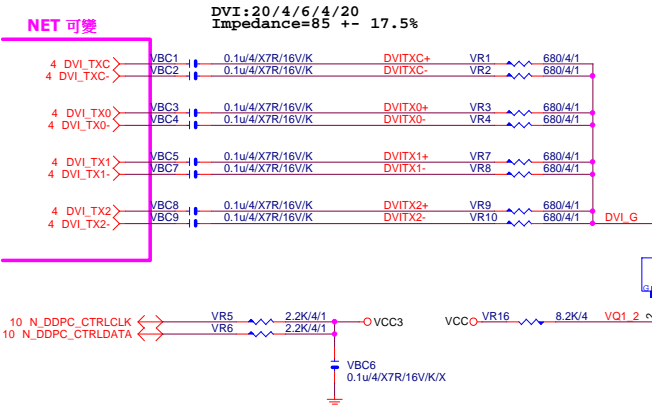
Gigabyte Technology

Title			ATX POWER CONNECTOR	
Size	Document Number	G1.Sniper B7		Rev
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USB_DAC





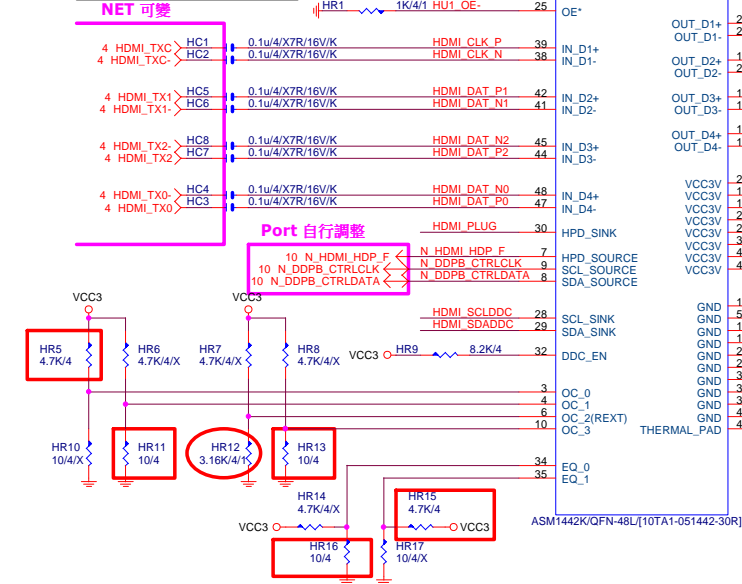
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Do not Copy

Gigabyte Technology			
DP-VGA RTD2168			
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Do not Copy

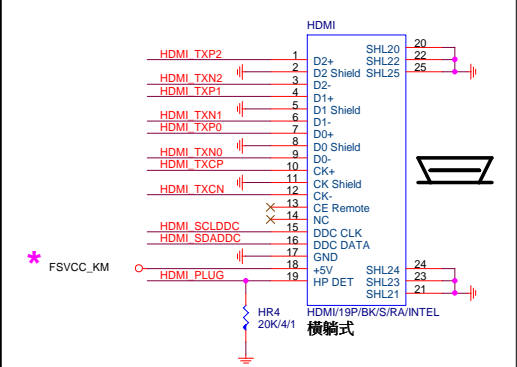
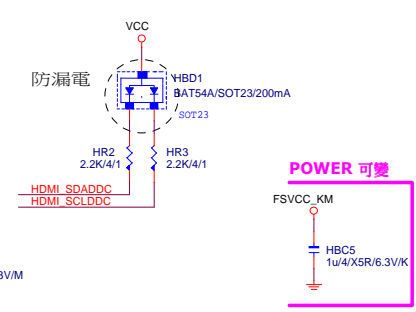
Gigabyte Technology		
Title DP-VGA RTD2168		
Size Custom	Document Number G1.Sniper B7	Rev 1.0
Date:	Thursday, September 17, 2015	Sheet 37 of 56

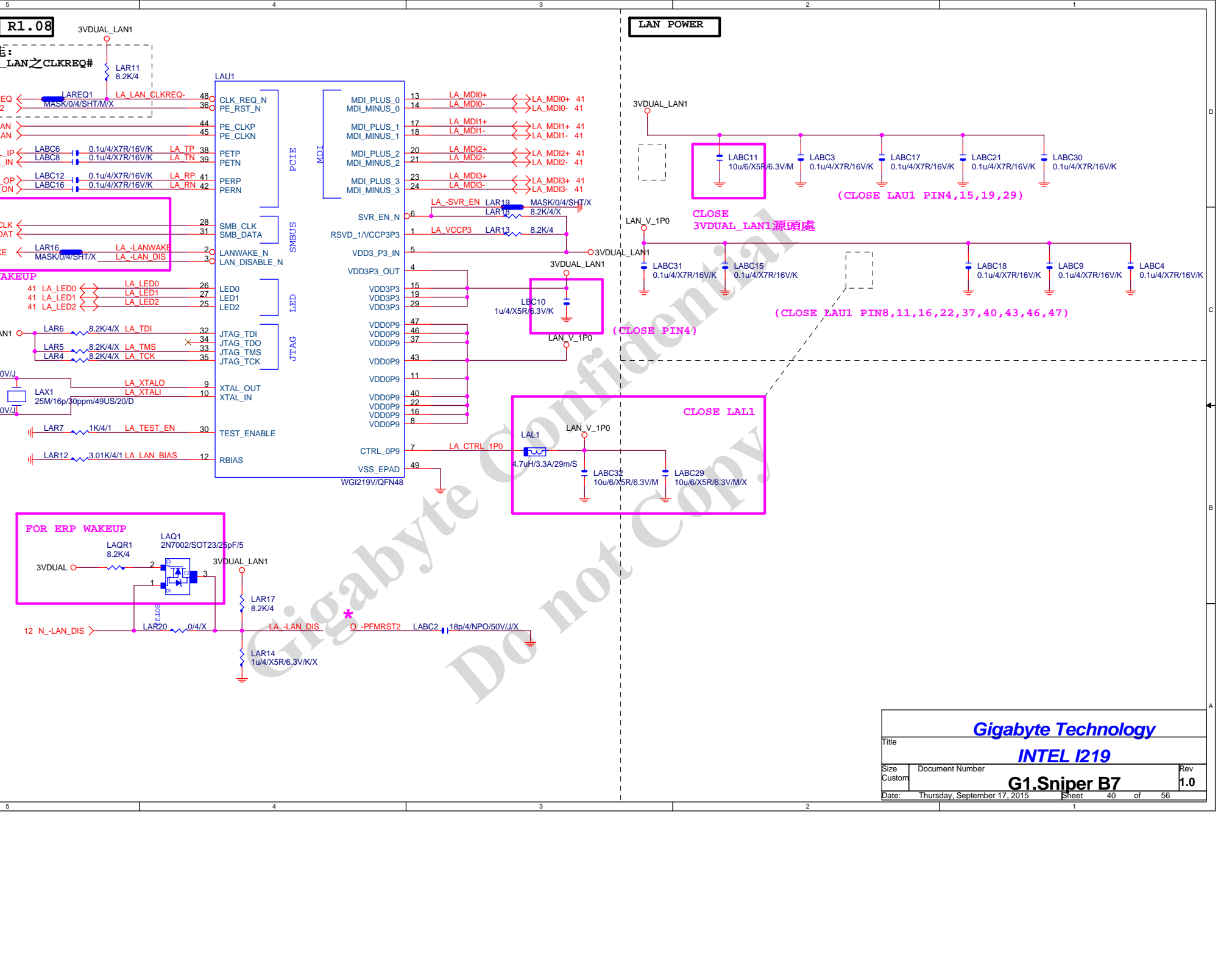
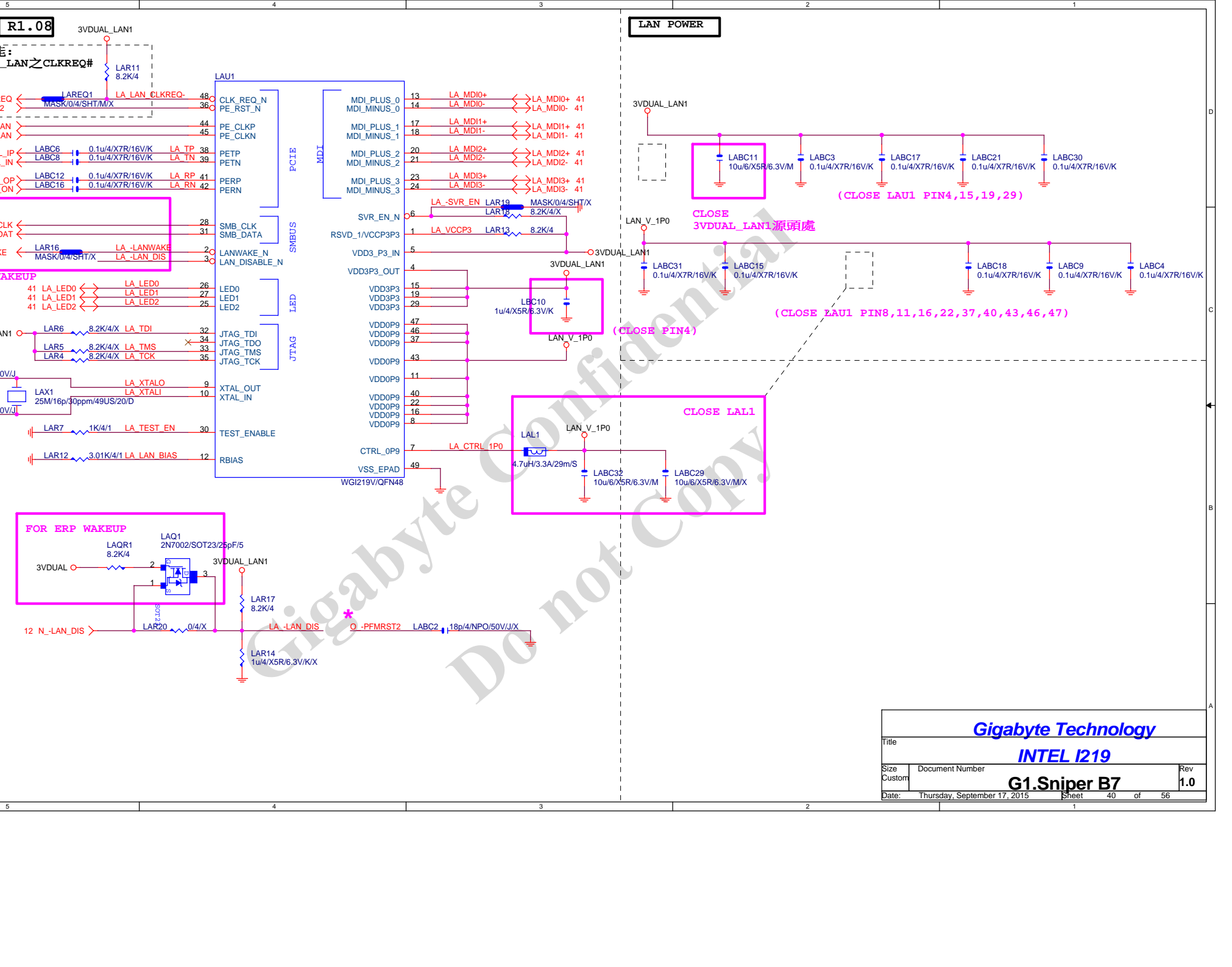
HDMI LEVEL SHIFT



PTN3360:PIN 4/10/34/35 NC PIN,都不上值;只上HR12:10K
ASM1442:紅色框要上,HR12:3.16K

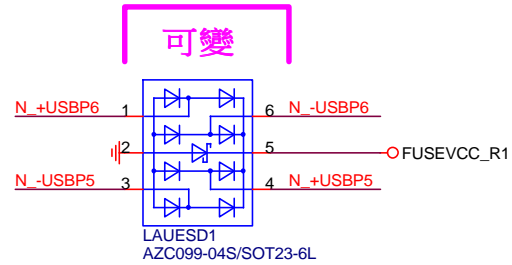
【技術通報R&D技術通報150】
HDMI eye diagram 1.4版(deep color)會fail
原因: 因目前的HDMI訊號過長,造成RISING TIME過慢,而會壓到eye diagram
改善: ASMEDIA ASM1442 : 3.16K(PIN6 PULL DOWN電阻) 10ohm(PIN4 PULL DOWN電阻)



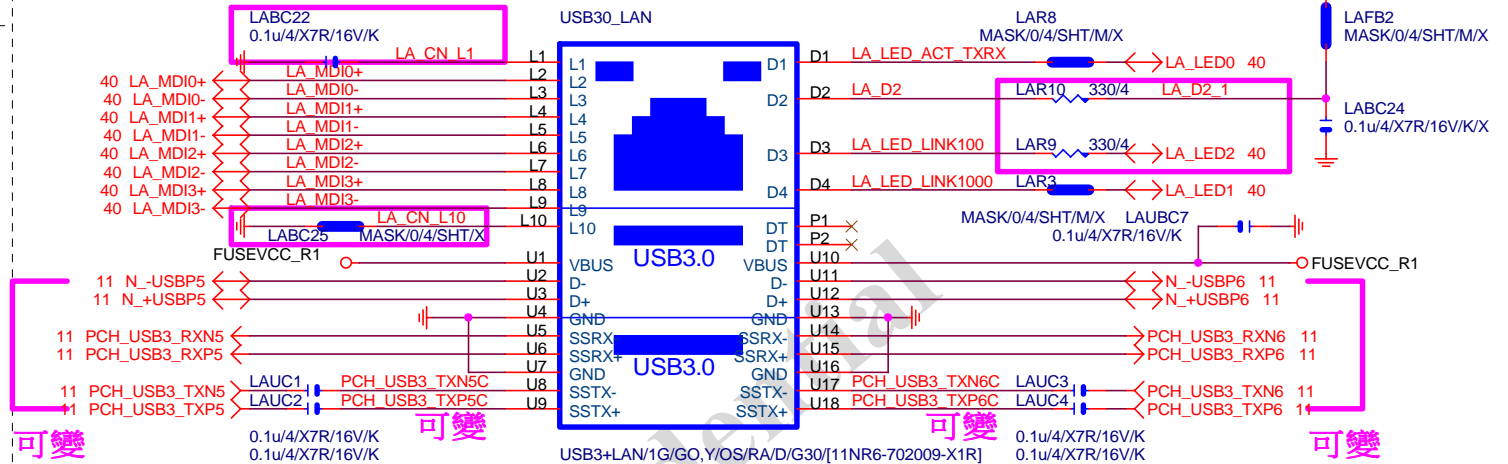


USB_LAN CONNECTOR R1.07

RMA ESD PROTECT note:可變更USB NAME

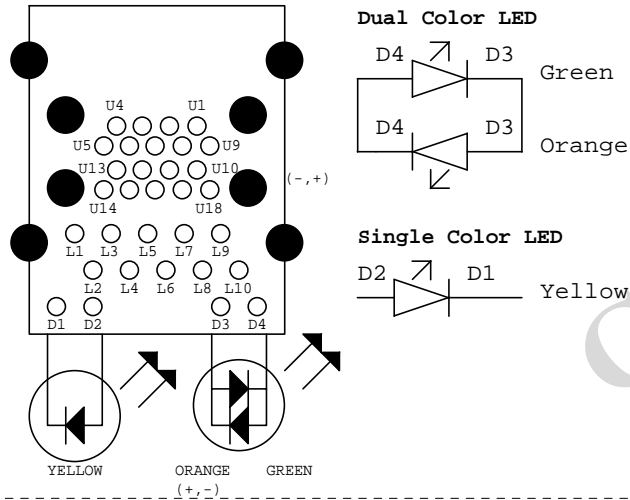


USB_LAN CONNECTOR [I219] note:可變更USB NAME



LA MDI--->100歐姆:[20/4/8/4/20]

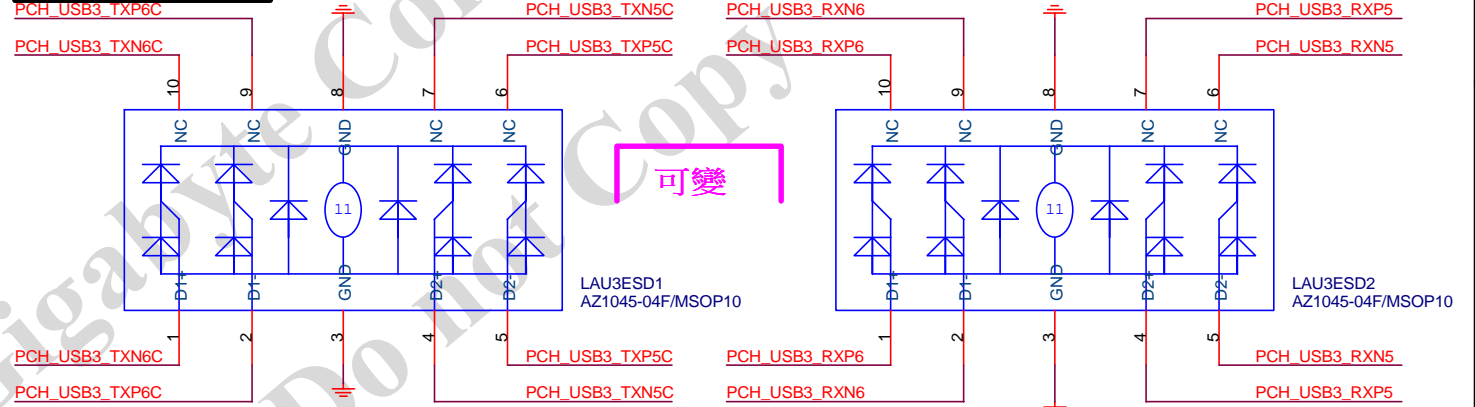
USB30 LAN LAYOUT示意圖



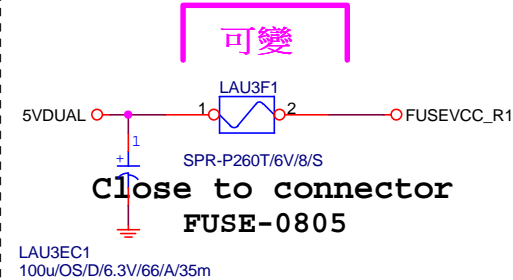
LAN_COVER FOOT PRINT:LAN_COVER

可變
[視SPEC需求]

RMA ESD PROTECT note:可變更USB NAME



USB POWER note:可變更FUSE

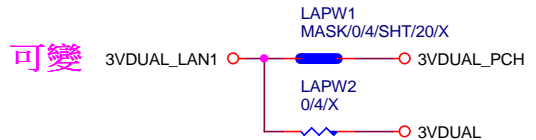


EMI SHORT PAD

PS:視EMI需求



LAN POWER note:lan power連接及電流



Gigabyte Technology			
Title			
LAN CONNECTOR-I219			
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ALC1150 五孔+SPDIF
AUDIO JACK

<input type="radio"/> MH1 DGND	<input type="radio"/> MH2 Isolate
--	---



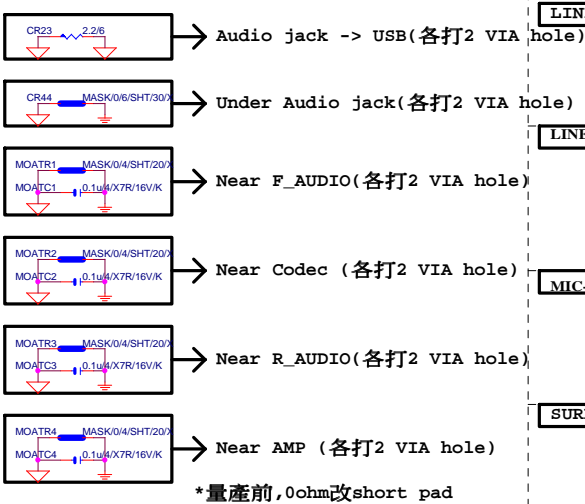
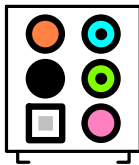
Close to ALC1150



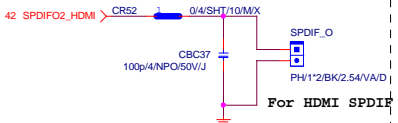
Title			
ALC1150			
Size Custom	Document Number	G1.Sniper B7	Rev 1.0
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Rev 0.92

AZALIA JACK

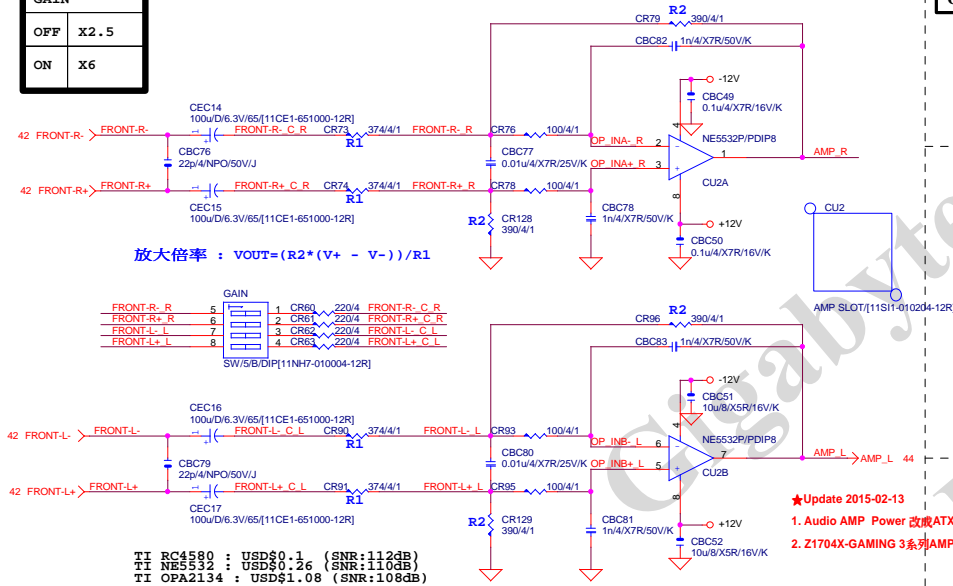


SPDIF OUT

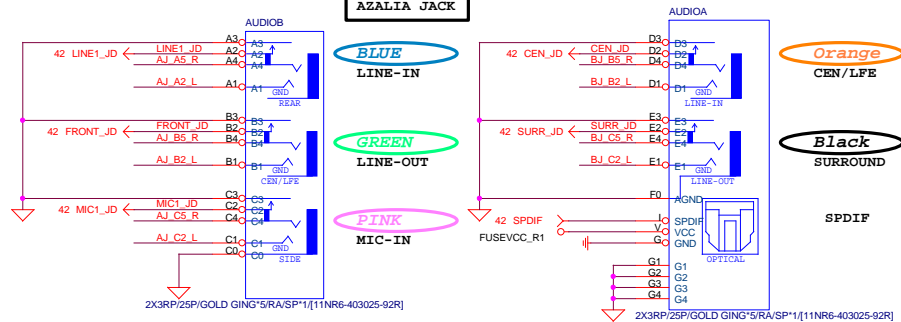


GAIN	
OFF	X2.5
ON	X6

Differential to Single-End AMPLIFIED



AZALIA JACK



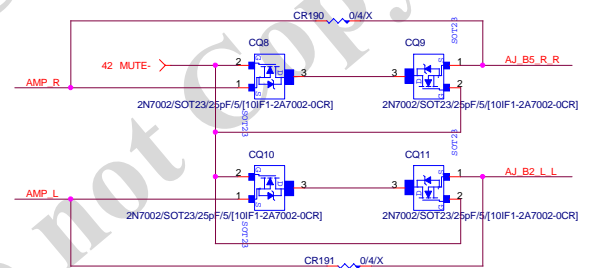
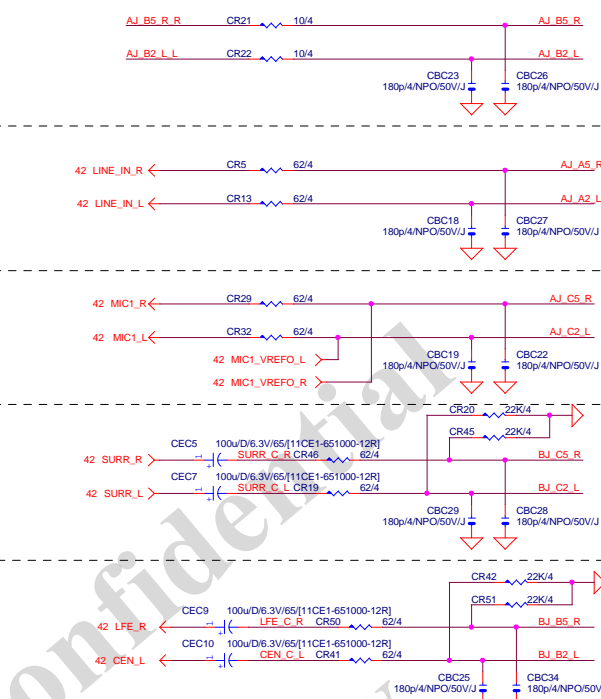
LINE-OUT

LINE-IN

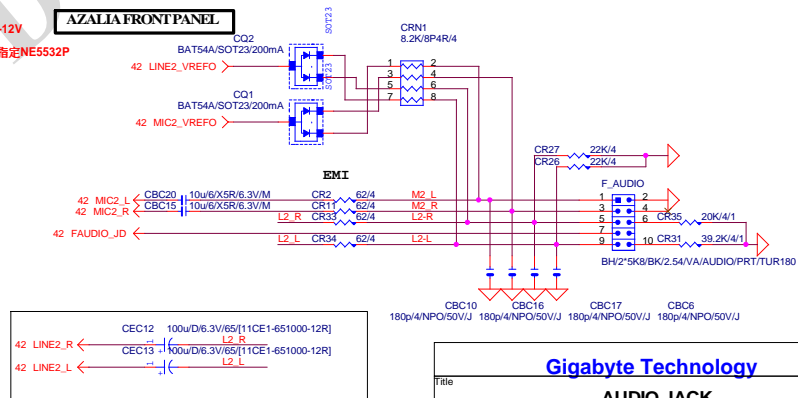
MIC-IN

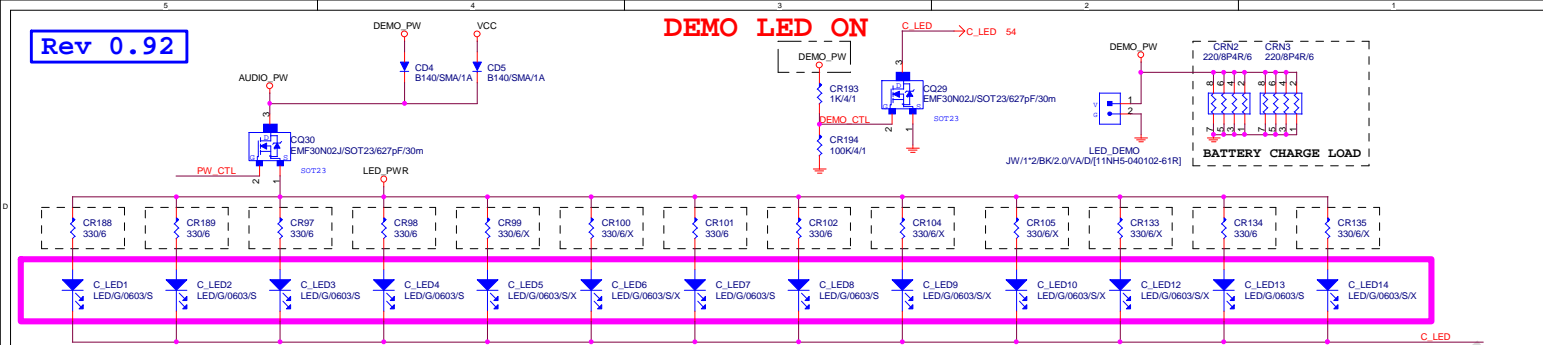
SURROUND

CEN/LFE



AZALIA FRONT PANEL

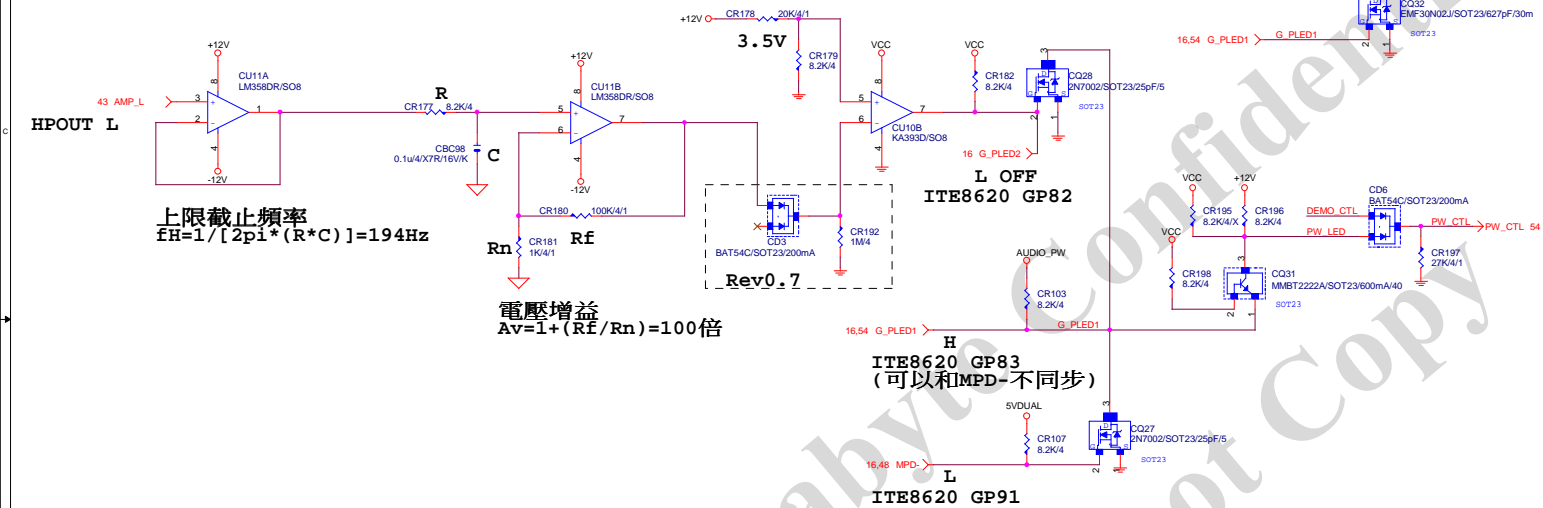




VALUE可變, LED顏色請自行修改

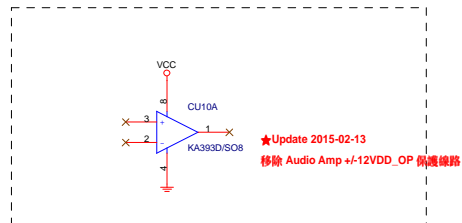
[UD/SOC系列--> 白光LED(黃色):LED/W/6/S]

[GAMING系列--> 紅光LED(紅色):LED/R/H/0603/S]

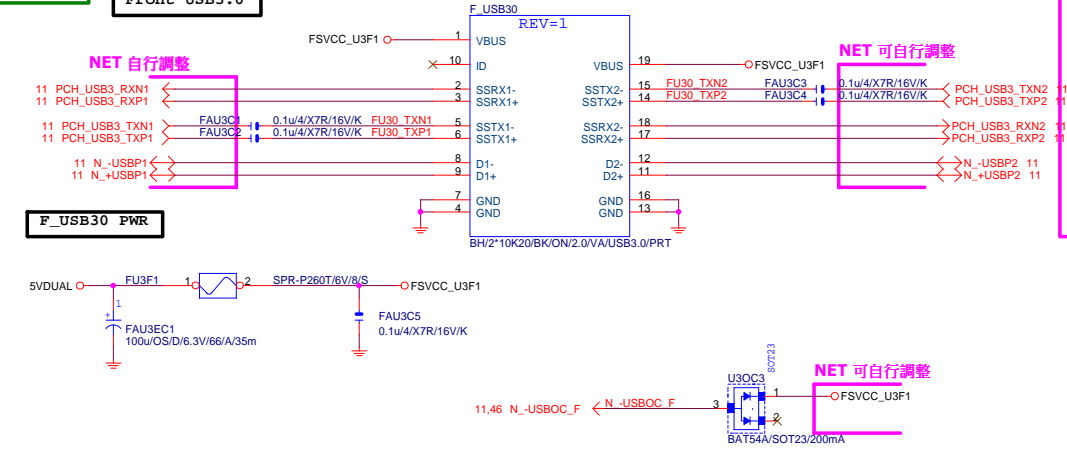


AUDIO LED Control

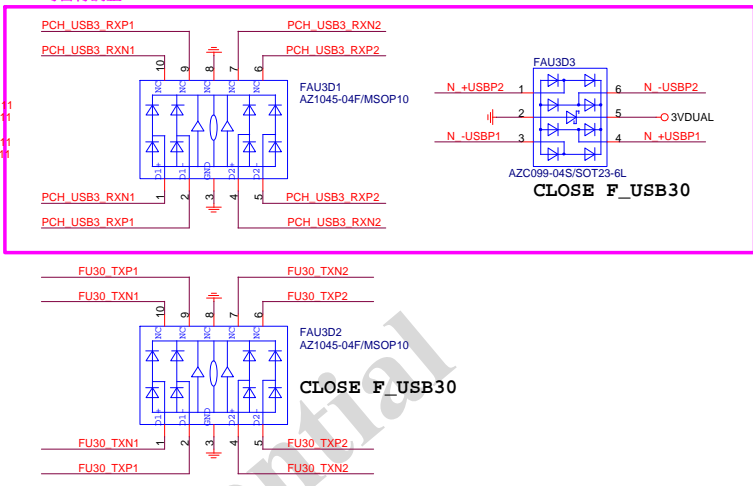
	IO_GP82	IO_GP83	IO_GP91
Full Mode	L	H	L
OFF Mode	L	L	L
Pulse Mode	L	H	BREATH
Beat Mode	OD	H	L



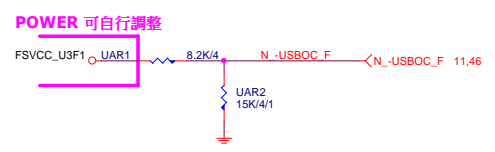
Front USB3.0



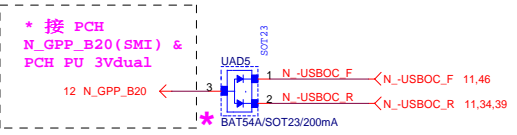
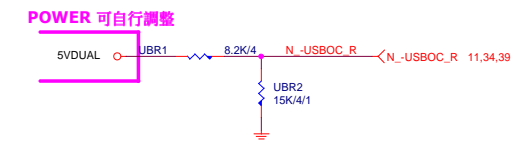
NET 可自行調整



-USBOC_F

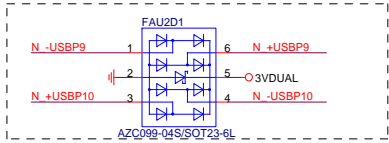
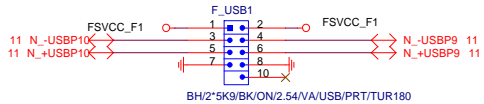


-USBOC_R

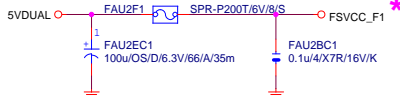


FRONT USB1

NET 可變

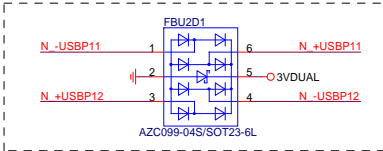
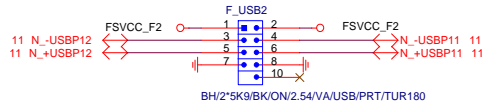


Close to connector
FUSE 2 Port 1 Fuse 2A

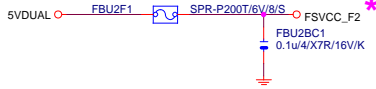


FRONT USB2

NET 可變



Close to connector
FUSE 2 Port 1 Fuse 2A



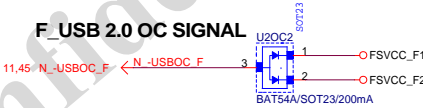
FRONT USB3

FRONT USB4

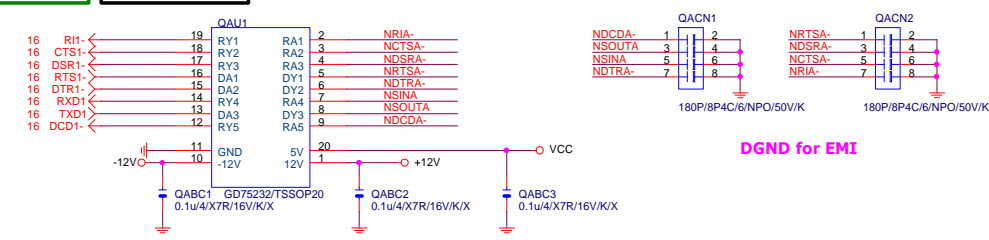
REAR USB1

REAR USB2

F_USB 2.0 OC SIGNAL



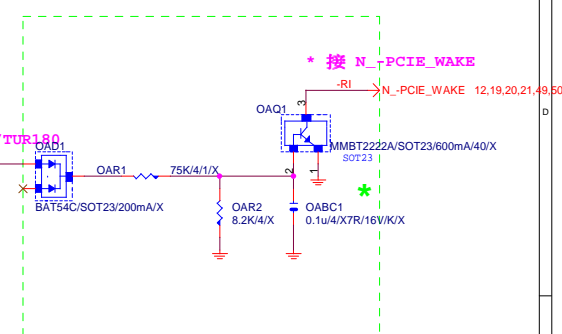
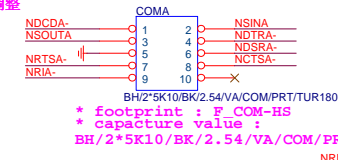
COM PORT



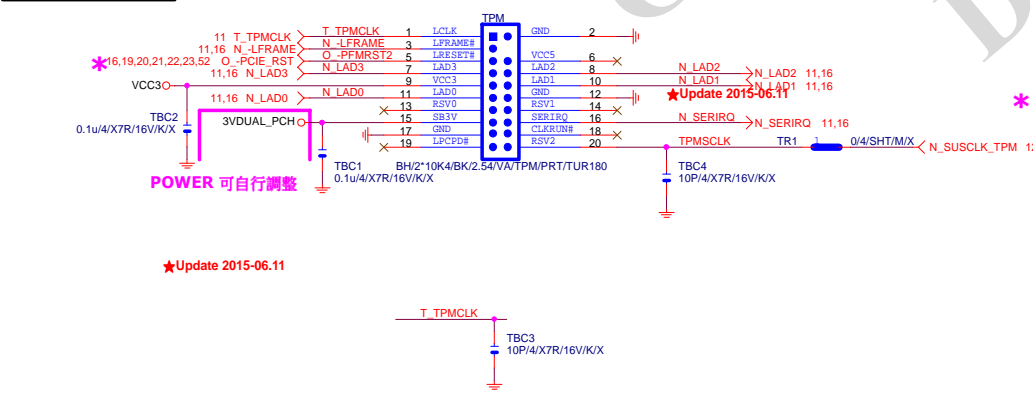
COMA

COMA 自行調整

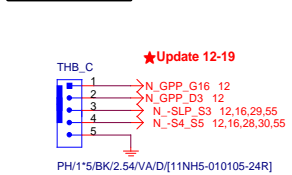
OR



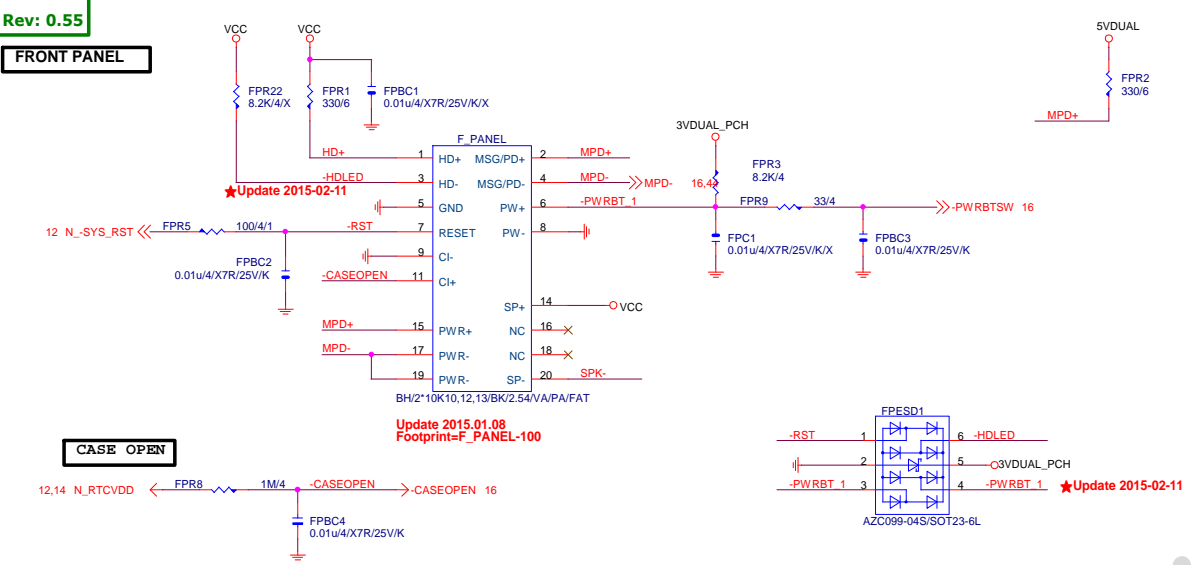
TPM CONNECTOR



Thunderbolt

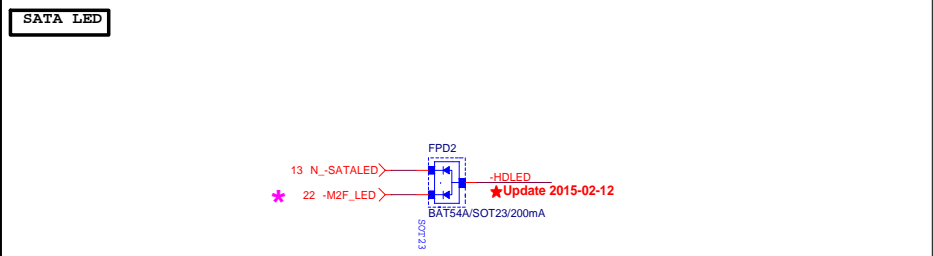


FRONT PANEL

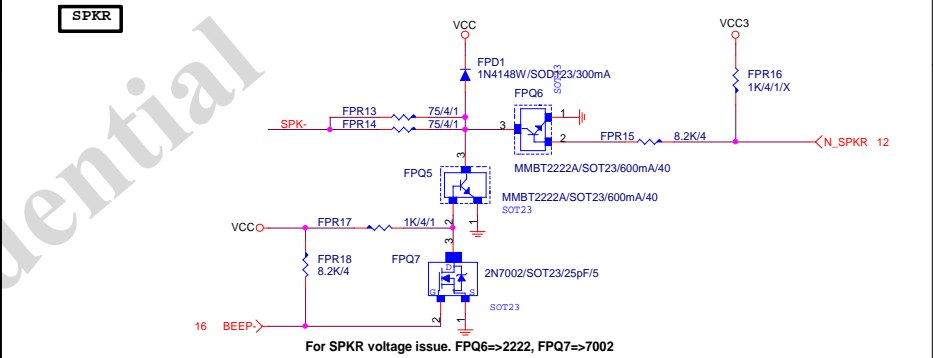


FRONT PANEL SHORT

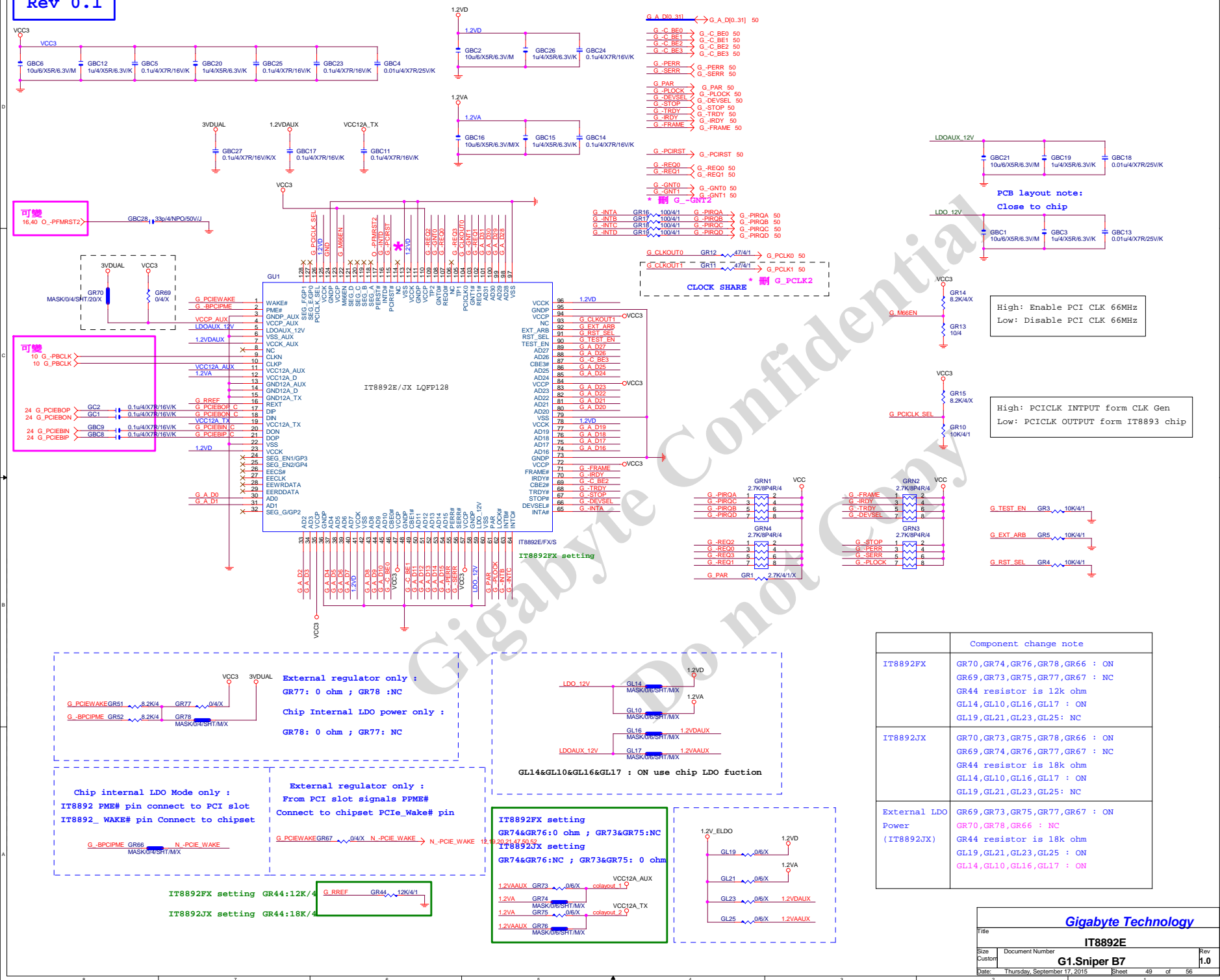
SATA LED



SPKR



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Rev 0.1

B3 for sw gpio

B46 for sw gpio

PCI SLOT 1

PCI SLOT 2

GIGABYTE™

PCI SLOT 1&2

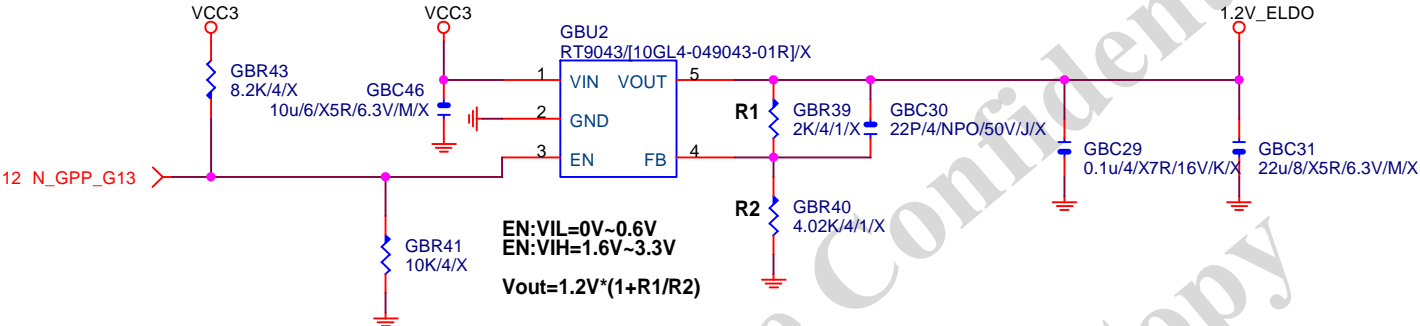
Size Document Number
Custom

G1.Sniper B7

Rev
1.0

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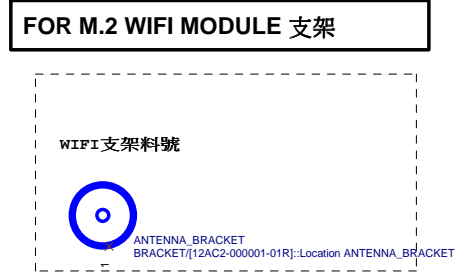
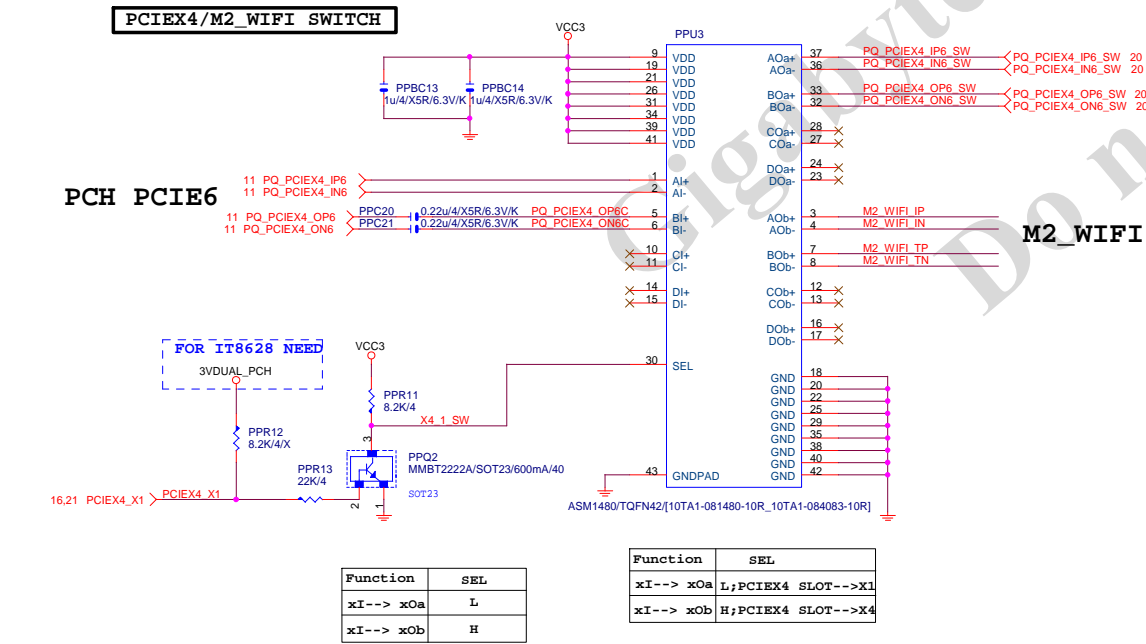
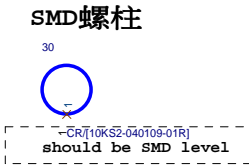
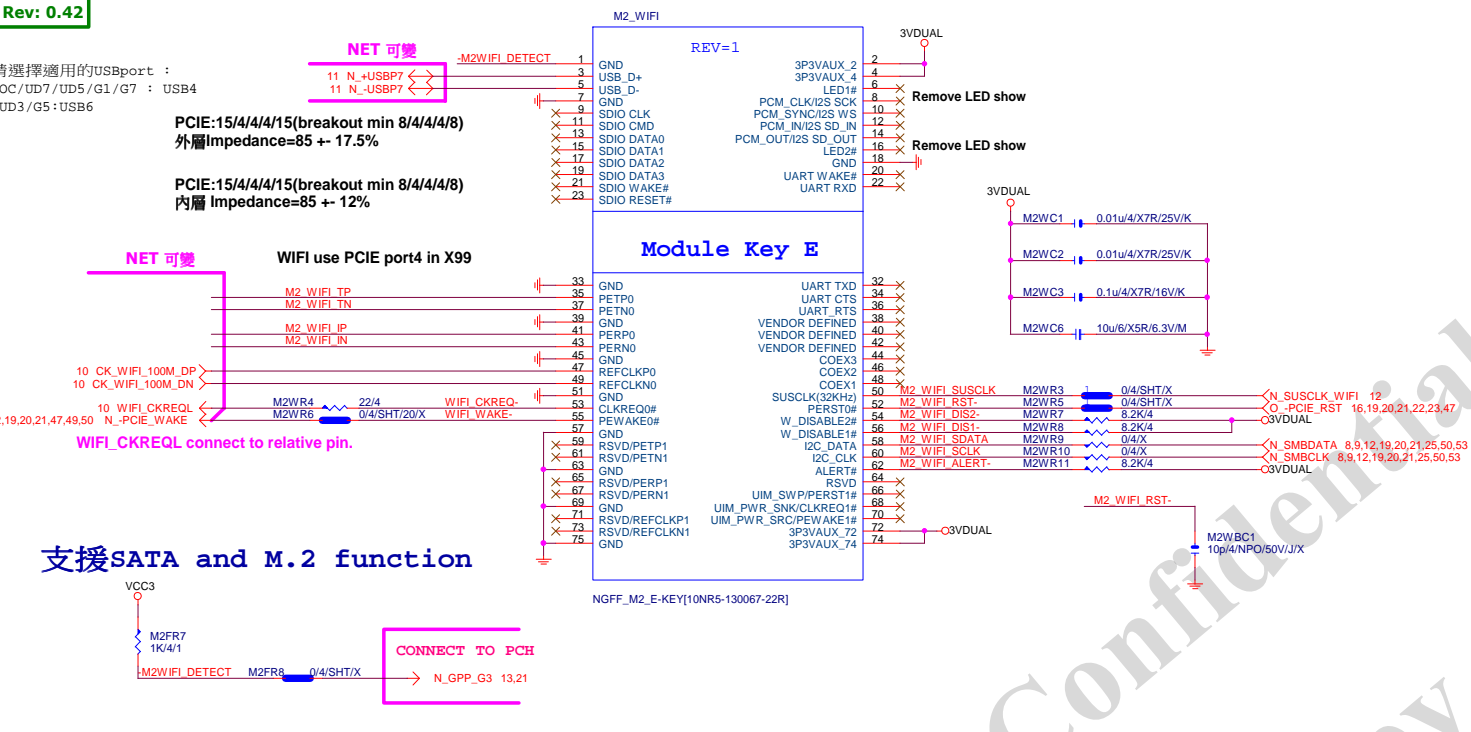
Rev 0.1



Gigabyte Technology

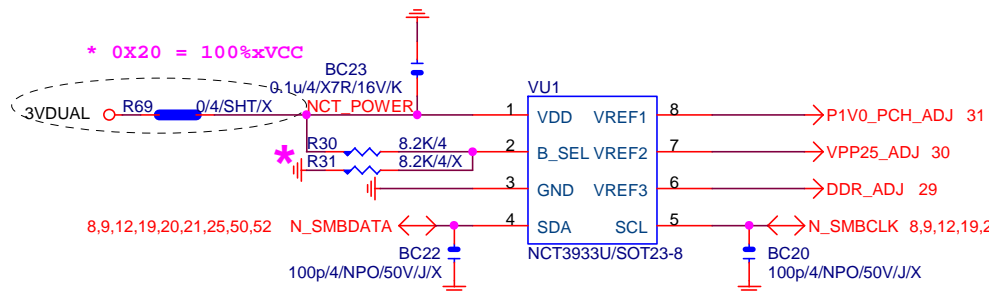
Title			
ASM1085 POWER			
Size	Document Number		Rev
Custom	G1.Sniper B7		1.0
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請選擇適用的USBport：
OC/UD7/UD5/G1/G7：USB4
UD3/G5:USB6

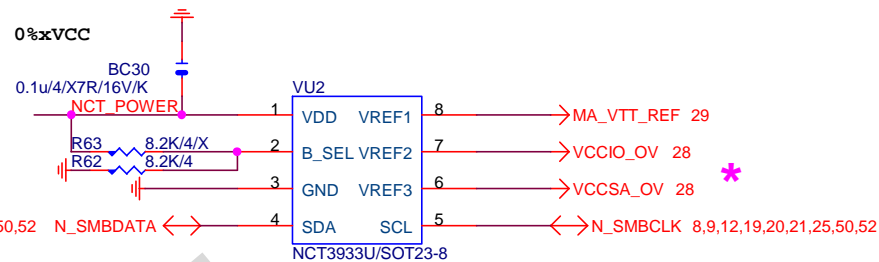


Function	SEL
xI--> xOa	L
xI--> xOb	H

OVER VOLTAGE



0X2A = 0%xVCC

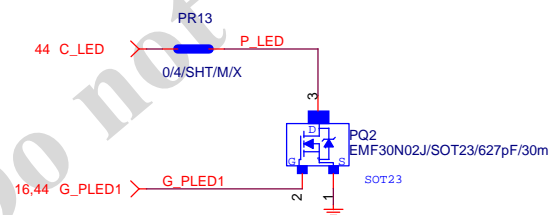
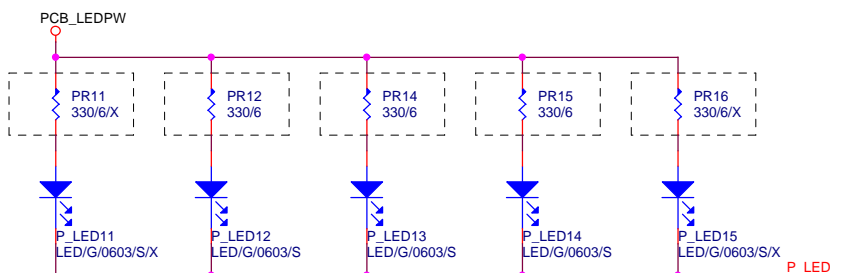
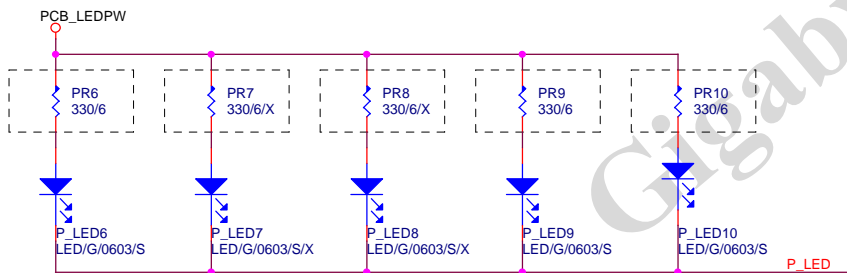
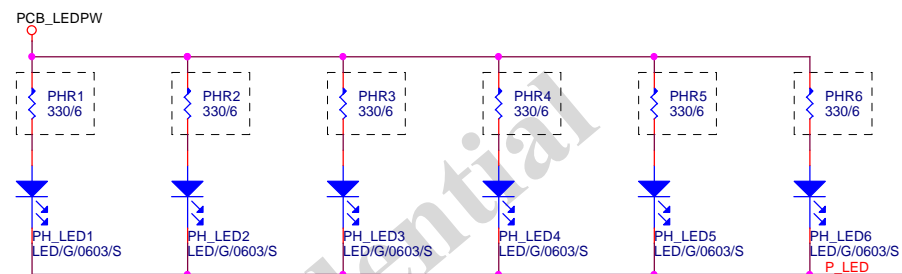
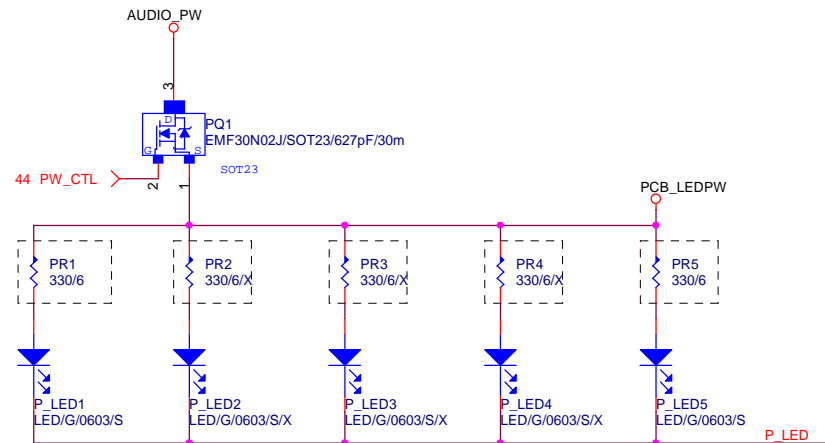


0X22 = 75%xVCC

* 删除 OVU3

NCT3933	0X2A	0X20	0X22
VREF1	DDRVTT	VREF_DDRA_DQ	PCH Core
VREF2	VREF_DDRA_CA	N/A	VCC1_5_PCH
VREF3	VREF_DDRA_CA	VREF_DDRB_DQ	SMREF

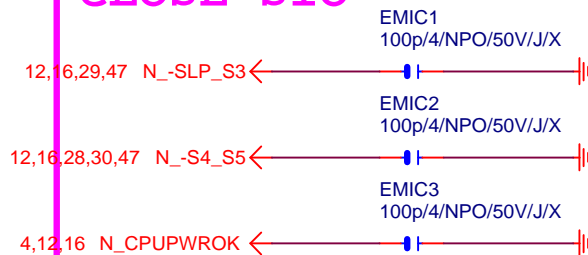
Gigabyte Technology			
Title CPU CORE VR-2			
Size Custom	Document Number	G1.Sniper B7	Rev 1.0
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GIGABYTE™

Title		
MODEL NAME LED		
Size	Document Number	Rev
Custom	G1.Sniper B7	1.0
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CLOSE SIO



CLOSE PCH



GIGABYTE™

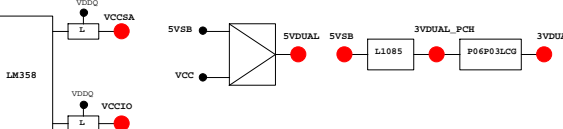
Title		
EM/ESD		
Size A	Document Number G1.Sniper B7	Rev 1.0
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FIN NAME	PWR	USER	USAGE	NOTE	
GPP_A0	MAIN	DEFAULT	N_KBRST	P/U 8.2K VCC3	
GPP_A1	MAIN	NATIVE	N_LAD0	N/A	
GPP_A2	MAIN	NATIVE	N_LAD1	N/A	
GPP_A3	MAIN	NATIVE	N_LAD2	N/A	
GPP_A4	MAIN	NATIVE	N_LAD3	N/A	
GPP_A5	MAIN	NATIVE	N_LPFRAME	N/A	
GPP_A6	MAIN	NATIVE	N_SBRIOQ	P/U 8.2K VCC3	
GPP_A7	MAIN	NATIVE	N_LDRQ0	P/U 8.2K VCC3	
GPP_A8	MAIN	NATIVE	N_GPP_A8	P/U 8.2K VCC3	
GPP_A9	MAIN	NATIVE	N_LPC24MB	N/A	
GPP_A10	MAIN	NATIVE	N_LPC24M	N/A	
GPP_A11	MAIN	NATIVE	N_-P_PME	P/U 8.2K 3VDDUAL_PC	
GPP_A12	MAIN	GPI	N_GPP_A12	P/U 8.2K VCC3	
GPP_A13	MAIN	NATIVE	N_-P_WARN	N/A	
GPP_A14	MAIN	NATIVE	N_GPP_A14	P/U 8.2K 3VDDUAL	
GPP_A15	MAIN	NATIVE	N_-P_ACK	N/A	
GPP_B0	MAIN	CORE_VT10	N_DRA_V_SEL	P/U 8.2K VCC3	
GPP_B1	MAIN	CORE_VT10	N_VORLET	N/A	
GPP_B2	MAIN	GPI	N_-P_PME	P/U 8.2K 3VDDUAL	
GPP_B5	MAIN	GPI	N_PCIEX16_PR	P/U 8.2K VCC3	
GPP_B6	MAIN	GPI	N_PCIEX1_PR1	P/U 8.2K VCC3	
GPP_B7	MAIN	GPI	N_PCIEX1_PR2	P/U 8.2K VCC3	
GPP_B8	MAIN	GPI	N_PCIEX4_FR	P/U 8.2K VCC3	
GPP_B9	MAIN	GPI	N/A	N/A	
GPP_R10	MAIN	GPI	N/A	N/A	
GPP_R11	MAIN	GPO	N/A	N/A	
GPP_R12	MAIN	SLP_S0	N_SLP_S0	N/A	
GPP_R13	MAIN	SLTRES	N_PPHRST	N/A	
GPP_R14	MAIN	N_-Z	GPI	N/A	
GPP_R18	MAIN	N_-Z	GPI	N/A	
GPP_R19	MAIN	N_-Z	GPI	P/U 1K GND	
GPP_R20	MAIN	GPI	N_GPP_R20	P/U 8.2K 3VDDUAL	
GPP_R22	MAIN	GPI	N_GPP_R22	P/U 1K GND	
GPP_C0	MAIN	SMIOCLK	N/A	N/A	
GPP_C1	MAIN	SMIOGATA	N/A	N/A	
GPP_C2	MAIN	N_-Z	GPO	N/A	
GPP_C3	MAIN	SMIOCLK	N_SMIOCLK	P/U 499 3VDDUAL	
GPP_C4	MAIN	SMIOGATA	N_SMIOGATA	P/U 499 3VDDUAL	
GPP_C5	MAIN	N_-Z	GPO	N/A	
GPP_C6	MAIN	GPI	N_SMIOCLK	P/U 8.2K 3VDDUAL	
GPP_C7	MAIN	GPI	N_SMIOGATA	P/U 8.2K 3VDDUAL	
GPP_D4	MAIN	GPI	N_GPP_D4	P/U 8.2K 3VDDUAL	
GPP_D7	MAIN	GPI	N_GPP_D7	N/A	
GPP_D9	MAIN	GPI	N_GPP_D9	N/A	
GPP_D17	MAIN	GPI	N_GPP_D17	P/U 8.2K VCC3	
GPP_D18	MAIN	GPI	N_GPP_D18	P/U 8.2K VCC3	
GPP_D19	MAIN	GPI	N_GPP_D19	P/U 8.2K VCC3	
GPP_D20	MAIN	GPI	N_GPP_D20	P/U 8.2K VCC3	
GPP_D23	MAIN	GPI	N_GPP_D23	P/U 8.2K 3VDDUAL	
GPP_E0	MAIN	NATIVE	N_GPP_E0	P/U 8.2K VCC3	
GPP_E1	MAIN	NATIVE	N_GPP_E1	P/U 8.2K VCC3	
GPP_E2	MAIN	NATIVE	N_GPP_E2	P/U 8.2K VCC3	
GPP_E3	MAIN	GPI	N_CPU_F	P/U 8.2K VCC3	
GPP_E4	MAIN	GPI	N_DEVSLP0	P/U 8.2K VCC3	
GPP_E6	MAIN	GPI	N_DEVSLP2	P/U 8.2K VCC3	
GPP_E7	MAIN	GPI	N_GT_S	P/U 8.2K VCC3	
GPP_E8	MAIN	GPI	N_-SATYLED	N/A	
GPP_E9	MAIN	N_-Z	GPI	N_-USBOC_F	N/A
GPP_E10	MAIN	N_-Z	GPI	N_-USBOC_R	N/A
GPP_E11	MAIN	N_-Z	GPI	N_-USBOC_R	N/A
GPP_E12	MAIN	N_-Z	GPI	N_-USBOC_F	N/A
GPP_F0	MAIN	NATIVE	N_GPP_F0	P/U 8.2K VCC3	
GPP_F1	MAIN	NATIVE	N_GPP_F1	P/U 8.2K VCC3	
GPP_F2	MAIN	NATIVE	N_GPP_F2	P/U 8.2K VCC3	
GPP_F3	MAIN	GPI	N_GPP_F3	P/U 8.2K VCC3	
GPP_F4	MAIN	GPI	N_GPP_F4	P/U 8.2K VCC3	
GPP_F5	MAIN	GPI	N_GPP_F5	P/U 8.2K VCC3	
GPP_F6	MAIN	GPI	N_DEVSLP4	P/U 8.2K VCC3	
GPP_F10	MAIN	GPI	N_GPP_F10	P/U 8.2K VCC3	
GPP_F11	MAIN	GPI	N_GPP_F11	P/U 8.2K VCC3	
GPP_F12	MAIN	GPI	N_GPP_F12	P/U 8.2K VCC3	
GPP_F13	MAIN	GPI	N_GPP_F13	P/U 8.2K VCC3	
GPP_F14	MAIN	GPI	A_-SKT00C	P/U 8.2K VCC3	
GPP_F15	MAIN	GPI	N_-USBOC_F	N/A	
GPP_F16	MAIN	GPI	N_-USBOC_F	N/A	
GPP_F17	MAIN	GPI	N_-USBOC_R	N/A	
GPP_F18	MAIN	GPI	N_-USBOC_F	P/U 8.2K 3VDDUAL	
GPP_F22	MAIN	GPI	N_GPP_F22	P/U 8.2K VCC3	
GPP_F23	MAIN	GPI	N_GPP_F23	P/U 8.2K VCC3	
GPP_G0	MAIN	GPI	N_GPP_G0	P/U 1K VCC3	
GPP_G1	MAIN	GPI	N_GPP_G1	P/U 1K VCC3	
GPP_G12	MAIN	GPI	N_GPP_G12	P/U 3.3K VCC3	
GPP_G16	MAIN	GPI	N_GPP_G16	N/A	
GPP_G18	MAIN	GPI	N_GPP_G18	P/U 8.2K VCC3	
GPP_G19	MAIN	GPI	N_GPP_G19	P/U 8.2K VCC3	
GPP_G20	MAIN	GPI	N_GPP_G20	P/U 8.2K VCC3	
GPP_G21	MAIN	GPI	N_GPP_G21	P/U 8.2K VCC3	
GPP_G22	MAIN	GPI	N_GPP_G22	P/U 8.2K VCC3	
GPP_H0	MAIN	GPI	M2_-CLKREQ	P/U 8.2K VCC3	
GPP_H12	MAIN	GPO	N_GPP_H12	P/U 8.2K VCC3	
GPP_H19	MAIN	GPI	N_GPP_H19	P/U 8.2K 3VDDUAL	
GPP_H20	MAIN	GPI	N_GPP_H20	P/U 8.2K 3VDDUAL	
GPP_H21	MAIN	GPI	N_GPP_H21	P/U 8.2K 3VDDUAL	
GPP_H22	MAIN	GPI	N_GPP_H22	P/U 8.2K 3VDDUAL	
GPP_I0	MAIN	GPI	N_HDMI_HDP_F	N/A	
GPP_I1	MAIN	GPI	N_DVI_HDP_F	P/U 1M VCC3	

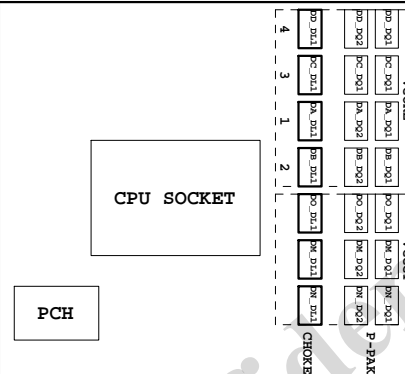
PIN NAME	PWR	FUNCTION	USAGE	NOTE
GFP_13	MAIN	GPI	N_GPP_13	F/U 8.2K VCC3
GFP_14	MAIN	GPI	N_GPP_14	F/U 100K GND
GFP_15	MAIN	GPI	N_DOPB_CTRLCLK	F/U 2.2K VCC
GFP_16	MAIN	GPO	N_DOPB_CTRLDATA	F/U 2.2K VCC3
GFP_17	MAIN	GPI	N_DOPC_CTRLCLK	F/U 2.2K VCC3
GFP_18	MAIN	GPI	N_DOPC_CTRLDATA	F/U 2.2K VCC3
GFP_19	MAIN	GPI	N_DOPD_CTRLCLK	F/U 2.2K VCC3
GFP_110	MAIN	GPI	N_DOPD_CTRLDATA	F/U 2.2K VCC3
GPD0	STBY	BATLOW	N_BATLOW	F/U 8.2K 3VDDA0_PC
GPD1	STBY	APRESNTE	N_GP_D1	F/U 8.2K 3VDDA0_PC
GPD2	STBY	LAN_WAKE	N_LAN_WAKE	N/A
GPD3	STBY	PWRSTEN	O_PWRSTEN	F/U 8.2K 3VDDA0_PC
GPD4	STBY	SLP_S3	N_SLP_S3	N/A
GPD5	STBY	SLP_S4	N_SLP_S4	N/A
GPD6	STBY	SLP_A	N_SLP_A	F/U 8.2K 3VDDA0_PC
GPD7	STBY	NATIVE	N_AACK	N/A
GPD8	STBY	SUSCLK	N_SUSCLK	N/A

Super I/O ITE8720 GPIO Table

PIN NAME	USAGE	NOTE
PCIRST38/GP10/VDIMM_STR_BN	N/A	
PCIRST28/GP11	O -PCIRST_RST	
PCIRST18/GP12	O -PPMRST2	
SVP/PCECT_RQT/GP14	TMF_GP14	
SUP_SUS08/PCIRST08N/CIRTX2/GP15	-PCIRSTIN	
F81_L/FAN_CTL5/CIRRX2/GP16	N-THERMTRIP	
R128/GP17	MB_ID2	
THR_PWM_CTL28/GP20	N-THERMTRIP	
IO_SM18DCD28/GP21	PIN	
SPI_S1/GP22	BEEP-	
DPWROK/CPU_PG/GP23	N_PCH_DPWROK	
FAN_TAC5/RTS28/GP24	PIN	
FAN_TAC4/DSR28/GP25	FANIO4	
INV_OUT1_SOUT2/GP26	G_PLD2	
INV_IN1_SIN2/GP27	INV_IN1	
ATXPG/GP30	FWOK	
CTL1/GP31	CEA1	
OCMDT1/R118/GP32	R11-	
OCMDT3/DCD18/GP33	DCD1-	
VTT_PWBGD/GP34	VTT_PWBGD	
VCCIO_BN/GP35	VCCIO_BN	
FAN_CTL3/GP36	FANPWM3	
FAN_TAC3/GP37	FANIO3	
3VSBW8/GP40	PIN	
OCMDT1_S1/GP41	RXD1	
GP42/SCK/FAN_CTL4	PIN	
FANSM8H/GP43	-PWRBTSW	
PWRON8/GP44	O_PWRBTSW	
OCMDT0/DSR18/GP45	DSR1-	
CE2_N/GP47/JP6	CEB_N	
GP50/JP1	PIN	
FAN_CTL2/GP51	FANPWM2	
FAN_TAC2/GP52	FANIO2	
SUS08/GP53	N-S4_S5	
PME8/GP54	N-LPCPME	
RSMRST8/CIRRX1/GP55	O-RSMRST	
NCLK/FAN_TAC6/GP56	NCLK	
MDAT/FAN_CTL6/GP57	MDAT	
KCLK/GP60	KCLK	
KDAT/GP61	KDAT	
KRST8/GP62	N-KRST	
HOLD_B8/GP63	-SPT_HOLD_B	
HOLD_B8/GP64	-SPT_HOLD_M	
VLDPT_EN/PCH_D6/GP65	PIN	
VCCI_05_EN/GP66	VCCI_0_BN	
GP71	PIN	
USB_F81/P06/GP70	P06	
USB_F82/P01/GP71	P01	
USB_F83/P02/GP72	P02	
USB_F83/P03/GP73	P03	
USB_F85/P04/GP74	P04	
USB_F86/P05/GP75	P05	
USB_F87/P07/GP76	P06	
USB_F88/P08/GP77	P07	
LS_IN1/SLCT/GP80	SLCT	
LS_OUT1/PE/GP81	PE	
LS_IN2/BUSY/GP82	BUSY	
LS_OUT2/ACK8/GP83	ACK-	
IPHONE_CHARGER/SLIN8/GP84	SLIN-	
OC_IN/INIT8/GP85	INIT-	
OC_OUT/AFD8/GP86	AFD-	
USB_OC2/STB8/GP87	STB-	
DDR_BN/GP90	MA_BN	
PWMLD/GP91	MPD-	
HOLD_OUT/GP92	PIN	
HDLED_IN/GP93	PIN	
PROCROT8/GP94	-PROCROT_CON	
CPUPWRGD/GP95	保留_CPU_PWRGD	
PCH_VRMPWRGD/GP96	N_PCH_VRMPWRGD	



PWM各相位的擺法如下



RTOS 招電廠對應表:

散熱組織試驗

線路圖名稱	BIOS選項
Vcore	CPU Vcore
VCCGT	CPU Graphic Voltage
VCCSA	CPU System Agent Voltage
VCCIO	CPU I/O Voltage
VCC1_0_PCH	PCH core
VDDQ	DRAM voltage
VPP_25V	DRAM VPP voltage
DDRVT	DRAM Termination
DDR0_0_VDDQ	DRAM Data Bus

Z1704-HD3

PCH :
MOSFET :

	3 pin FAN control	4 pin FAN control	FAN speed	Controller
CPU FAN	+12V	FANPWM1	FANIO1	IT8628
SYS FAN1	FANPWM2	VCC	FANIO2	IT8628
	FAN1_VOUT	N/A	N/A	NC13941
SYS FAN2	FANPWM3	VCC	FANIO3	IT8628
	FAN2_VOUT	N/A	N/A	NC13941
SYS FAN3	+12V	N/A	FANIO4	IT8628