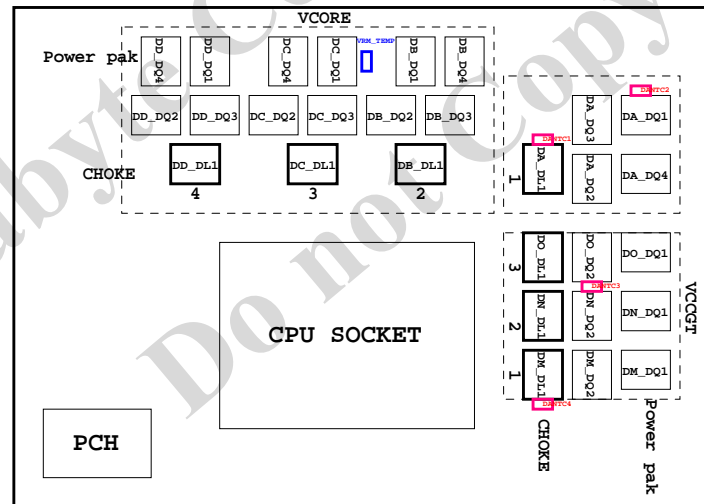


01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	CPU_LGA1151-A (CFL_R0.4)
05	CPU_LGA1151-B-DDR4 (CFL_R0.4)
06	CPU_LGA1151-C-Z系列 (CFL_R0.4)
07	CPU_LGA1151-D (CFL_R0.4)
08	DDR 4 CHANNEL A (CFL_R0.1)
09	DDR 4 CHANNEL B (CFL_R0.1)
10	PCH CLOCK BUFFER (REV0.6)
11	PCH DMI,USB,PCIE
12	PCH MISC
13	PCH SATA,PCIE,SATA_EXPRESS
14	PCH PWR
15	PCH GND
16	Dual BIOS (CFL_R0.4)
17	I/O ITE8628 (CFL_R0.4)
18	HWM (CFL_R0.4)
19	FAN CTRL-CFL-SIO_4 FAN (CFL_R0.2)
20	PCIEX16 SLOT (REV0.2)
21	PCIEX4 SLOT1 (REV0.51)
22	PCIEX4 SLOT2 (REV0.51)
23	PCIEX1*2 SLOT (REV0.51)
24	M.2 x4 (REV0.6)
25	SATA
26	VCORE_ ISL95866(PWM) (CFL_R0.32)
27	VCORE_ ISL95866(Vcore) (CFL_R0.32)
28	VCORE_ ISL95866(VccGT) (CFL_R0.32)
29	VCCSA_VCCIO-合金-Z系列 (CFL_R0.41)
30	RT8120_DDR_CHOKE-IRON-2L (CFL_R0.4)
31	RT8120_VPP_CHOKE-合金 (CFL_R0.4)
32	RT8120_PCH (CFL_R0.4)
33	DISCRETE POWER (REV0.51)
34	CPU POWER-Z系列 (CFL_R0.42)
35	NCP3933 OVER VOLTAGE
36	ATX POWER , -PROCHOT

37	KB_MS_USB (CFL_R0.2)
38	DVI (CFL_R0.2)
39	R_USB30 (CFL_R0.2)
40	INETL I219V (CFL_R2.01)
41	USB30_LAN CONNECTOR-I219V (CFL_R2.01)
42	ALC892-GR CODEC (CFL_R2.04)
43	REAR AUDIO JACK (CFL_R2.04)
44	F_USB30 (CFL_R0.2)
45	F_USB20 (CFL_R0.2)
46	COM , LPT , TPM (CFL_R0.2)
47	F_PANEL (CFL_R0.2)
48	HDMI (CFL_R0.2)
49	IDT6V41630_CLK BUFFER (REV0.1)
50	Audio / DEBUG / XMP LED (CFL_R2.01)
51	EMI-ESD (CFL_R0.1)
52	POWER MAP
53	TABLE LIST



Z370 HD3

rev 1.0

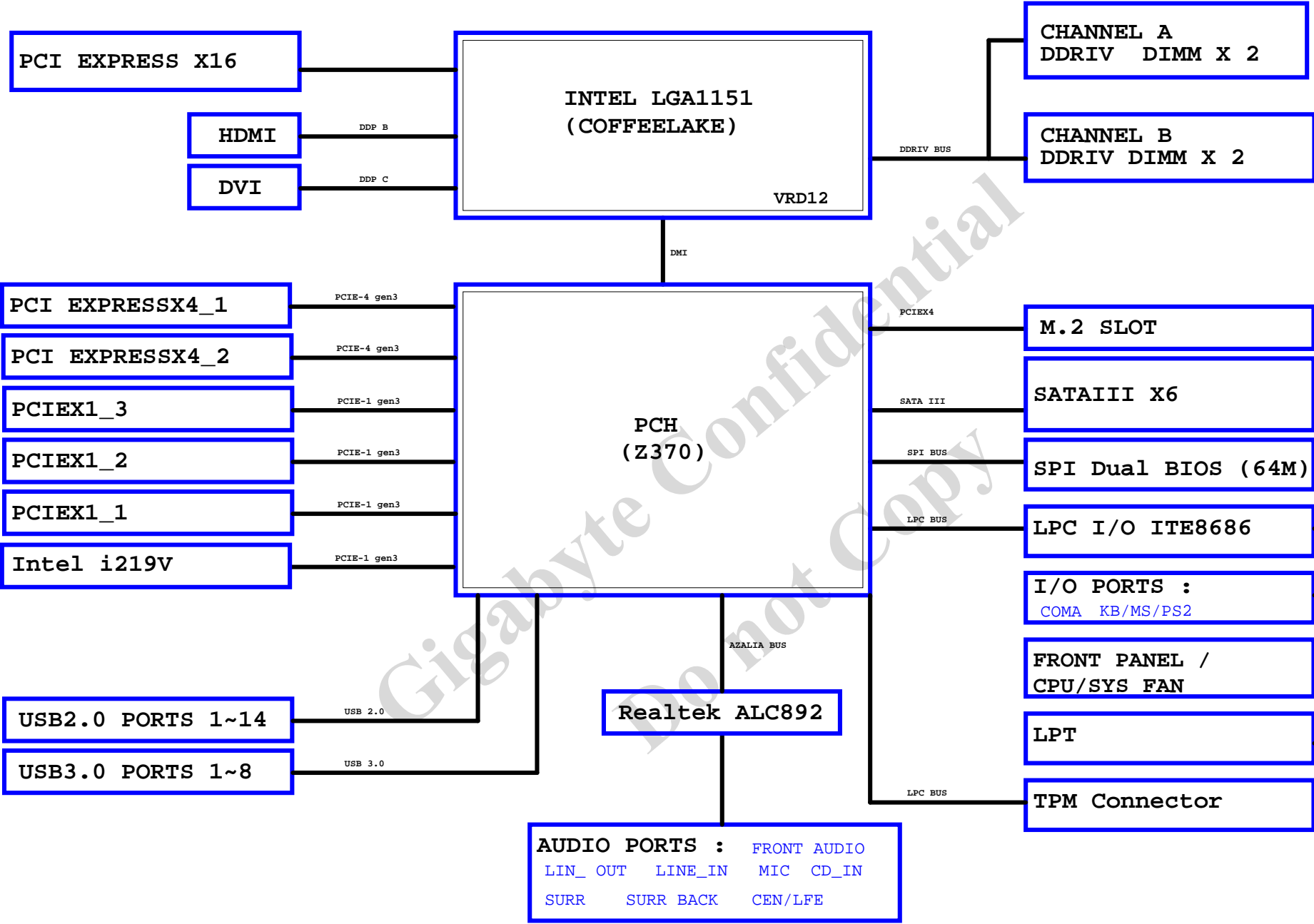
Component value change history

Data	Change Item	Reason
2017/06/08	first release	
	9MZ370HD3-00-01 BOM	
2017/07/28	9MZ370HD3-00-02 BOM	
	1.Add OR20,OR21,OR19,OQ15,OQ14 , OR205->00hm	
	2.OR33->X , OR35上件 3.BSR1,BSR5->330/4 4.DA_DC7,DA_DC8,DB_DC7, DB_DC8,DC_DC7,DC_DC8,DD_DC7,DD_DC8->33p 5.PCIEX16->11AC1-023164-G1R	
	6.PCIEX4_1,PCIEX4_2->11AC1-023065-51R 7. BSR1,BSR5->330/4	
	8.DA_DC7,DA_DC8,DB_DC7,DB_DC8,DC_DC7,DC_DC8,DD_DC7,DD_DC8,DM_DC1,DN_DC1,DO_DC1->X	
	9.PCIEX16->11AC1-023164-G1R,PCIEX4_1,PCIEX4_2->PCI-E/4X-66P/GY/LONG DOUBLE/HK*2	
	10.DAR37->2K,DAR35->6.2K,DAC14->100P,DAC23->1.5n,DAR63->3.65K,	
	,DAR52->100K,DAR44->576,DAC12->X,DAC43->0.22u,DAR72->46.4K,	
	,DAC34->X,DAR41->6.98K,DAR71->267,DAC44->0.22u 11.DA_DL1,DB_DL1,DC_DL1,	
	,DD_DL1,DM_DL1,DN_DL1,DO_DL1,DAL1-> 11LC5-M5300C-01R Footprint:CHOKE0U3-R30M-JJ3W	
	12.DAC22->8.2n 13.CR67,CR68,CR69,CR70,CR43,CR27->X 14.OR17,OR5,OQ10->X	
	15.M_BIOS->10HP4-112564-50R, B_BIOS->10HP4-112564-51R	
	16.DAC43->0.1u,DAC34->0.047u,DAC44->0.1u,DAC23->1.2n	
	17.DAR47->15.4K , DAR67->13.3K ,18.PCH->10HB1-03Z370-20R	
	19.PCH_HS->12SP2-S08607-01R/02R/03R,TMOS->12SP2-S09426-11R/12R/13R,	
	RMOS->12SP2-S08026-11R/12R/13R 20.PCIEX16->PCI-E/16X-164P/GY/LONG DOUBLE/HK*2	
	21.DDR4_4,DDR4_3->DDR4/288/BK/VA/D/GF/TWO LATCH/C7025	
	DDR4_1,DDR4_2->DDR4/288/GY/VA/D/GF/TWO LATCH/C7025	
2017/08/14	9MZ370HD3-00-10A BOM	
	1.M_BIOS , B_BIOS->64M/Q/SPI/S08/S,BSR21,BSR22->X 2.OR1,OR18,OR4,OR16	
	,OR2,OQ9,OQ13,OR6,OR13,OQ11,OQ12->X,WR8->X 3.10SL2-000008-31R/X	
	4.Q9->EMF30N02J/SOT23/627pF/30m 5.CEC7,CEC9,CEC10,CEC11->X	
	6.DAR47->14.3K,TMOS->12SP2-S09426-21R/22R/23R,RMOS->12SP2-S08026-21R/22R/23R	
2017/08/15	9MZ370HD3-00-10B BOM	
	1. M_BIOS,B_BIOS-> 128M/Q/SPI/S08/S	
2017/08/17	9MZ370HD3-00-10C BOM	
	1. DAR47->13.3K	

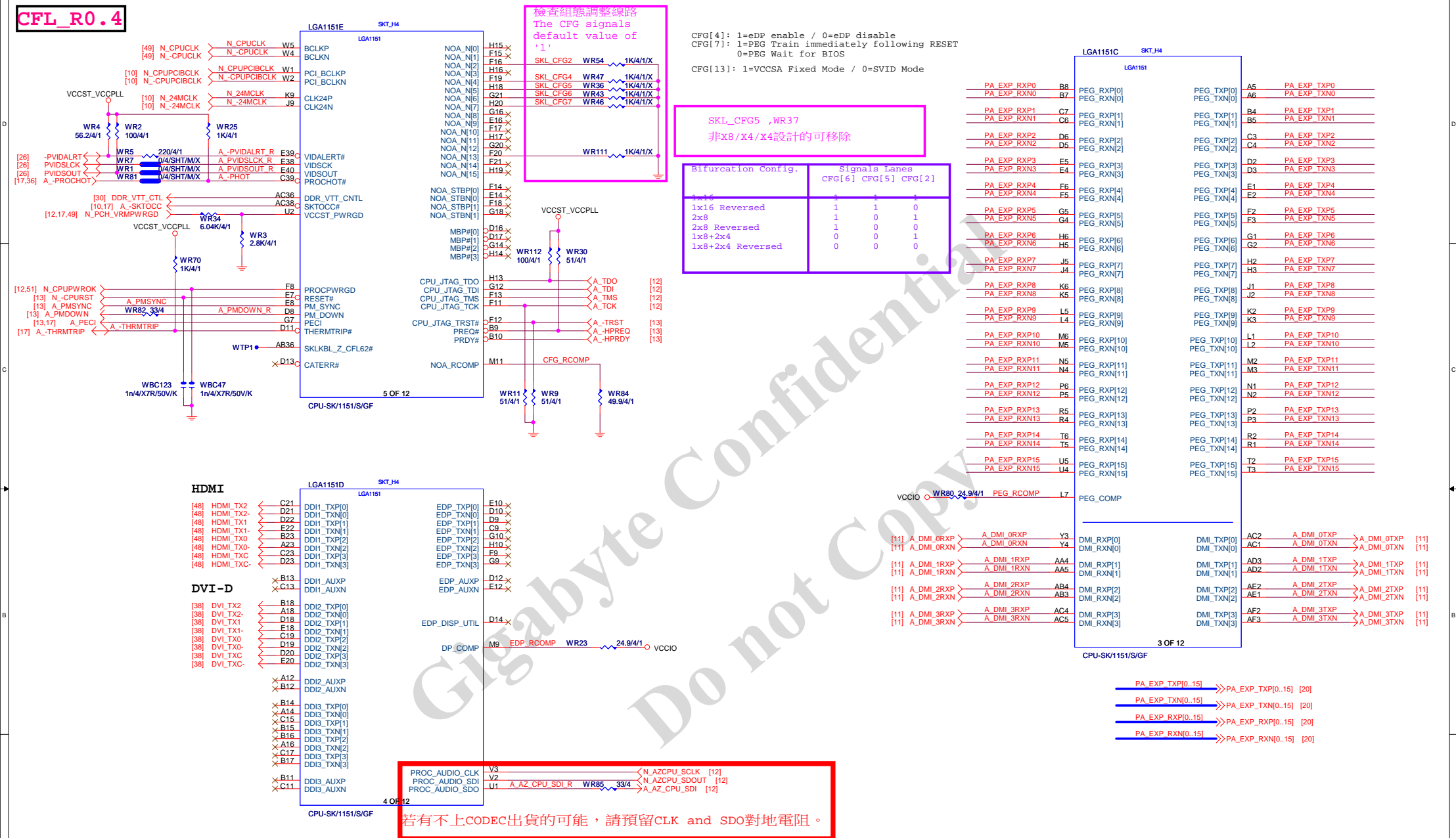
Circuit or PCB layout change

DATE	Change Item	Reason
2017/06/01 PCB:0.1	1.PCB first release	
	2.線路由Z270-HD3 Rev1.01修改	
2017/07/27 PCB:0.2	1.footprint ->SPDIF_O-1X4-CUT2 2.Add OR14,OR11 Rename to OR17	
	ORQ2 Rename to OQ10,ORQ3 Rename to OQ11,ORQ4 Rename to OQ12,	
	BSR20 Rename to BSR21,BSR21 Rename to BSR22 3.Add OR20,OR21	
	,OR19,OQ15,OQ14 , OR205->00hm 4.Add LEDRN4 Net Name	
	5.NX1 Footprint->XTALD-PCH 6.Add IO_GP15, Del IO_GP95,OR233,OR177,OR178 ,	
	,OR26 Change to 3VDUAL 7.PCH_HS Fottprint->BGAHSINK-Z370_HD3P,	
	,TMOS Footprint->MOSHSINK-Z370_HD3P-T , RMOS Footprint->MOSHSINK-Z370_HD3P-R	
	8.Del OC BUTTON,Net N_GPP_D4,N_GPP_D6 9.Add WR122,WR123	
	,WR123,WQ2,WQ1,WR121,Net N_GPP_D19 10.CE7,CE9,CE10,CE11 Footprint->C2700PF-DIP	
	11.Add DAR144,DAR143,DAQ9,DAQ8,DAR145,DAR146 , Net IMON_A_1,Add Net IMON_GPIO(GPP_G22)	
2017/08/10 PCB:1.0	1.W_OVR2改接3VDUAL, W_OVC2改接3VDUAL , W_OVR1改接5VDUAL	
	2.Add DAC45 3.DAR71->316,DAR72->56K,DAR63->4.42K,DAR55->3.9K	
	4.OR205,TR2,DAR136,MOATR4->Short Pad 5.Add RN14,RN15,RN16,RN17,RN18,RN19	
	6.CEC7,CEC9,CEC10,CEC11 Footprint-> C2700PF-DIP-MASK	

BLOCK DIAGRAM



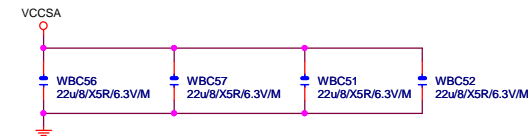
CFL_R0.4



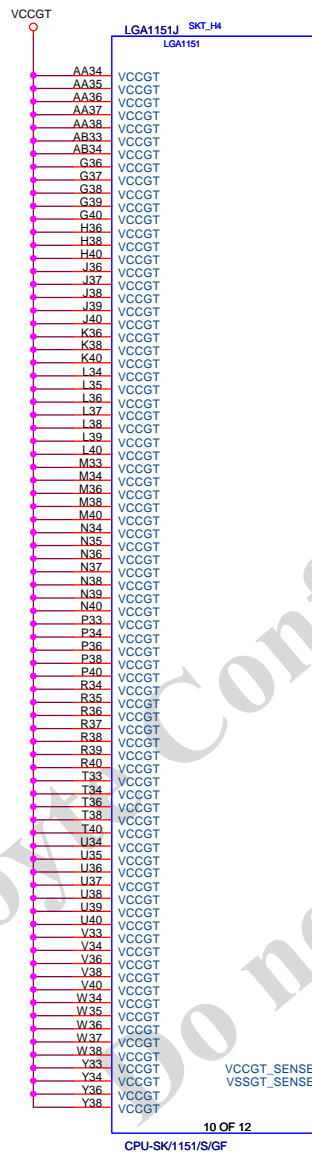
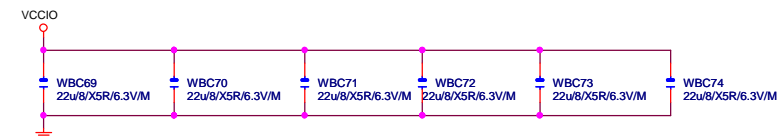
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G-15u : (CPU-SK/1151/S/15)
10SC1-F01151-11R / 10SC1-F01151-12R
G-FL : (CPU-SK/1151/S/GF)
10SC1-F01151-21R / 10SC1-F01151-22R
```

若有不上CODEC出貨的可能，請預留CLK and SDO對地電阻。

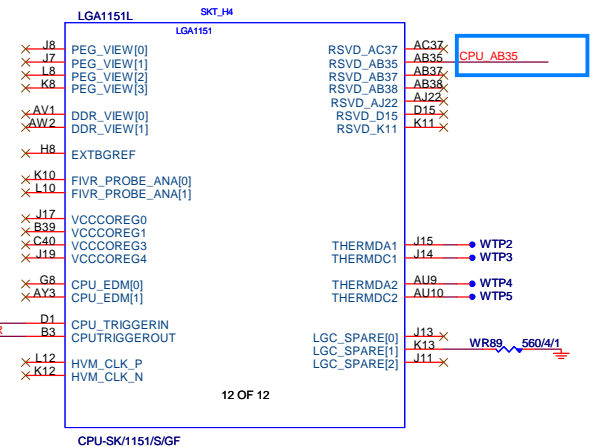
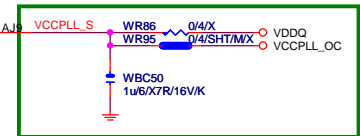
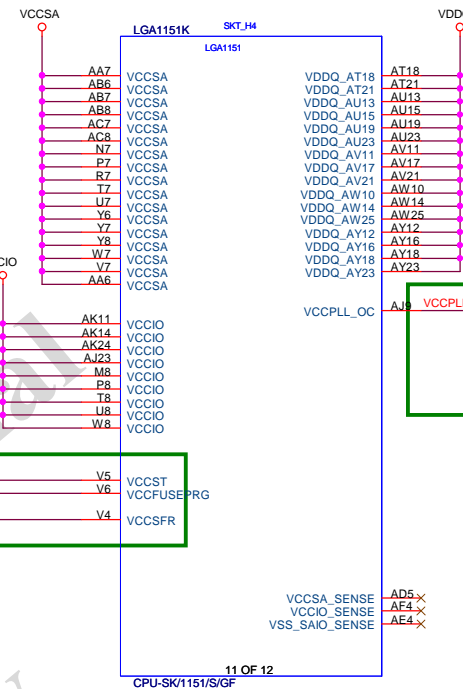
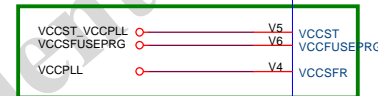
LGA1151A										LGA1151B									
SKT_H4										SKT_H4									
LGA1151A										LGA1151B									
MDA0	AE38	DDR0_DQ[0]	DDR0_CK[0]	AW18	M_DCLKA0	DDR1_DQ[0]	DDR1_CK[0]	AW20	M_DCLKB0	MD80	AD34	DDR1_DQ[0]	DDR1_CK[0]	AW20	M_DCLKB0	MD80	AD34	DDR1_DQ[0]	DDR1_CK[0]
MDA1	AE37	DDR0_DQ[1]	DDR0_CK[1]	AW18	M_DCLKA0	DDR1_DQ[1]	DDR1_CK[1]	AW21	M_DCLKB0	MD81	AD35	DDR1_DQ[1]	DDR1_CK[1]	AW21	M_DCLKB0	MD81	AD35	DDR1_DQ[1]	DDR1_CK[1]
MDA2	AG38	DDR0_DQ[2]	DDR0_CK[2]	AW17	M_DCLKA1	DDR1_DQ[2]	DDR1_CK[2]	AP22	M_DCLKB1	MD82	AG35	DDR1_DQ[2]	DDR1_CK[2]	AP22	M_DCLKB1	MD82	AG35	DDR1_DQ[2]	DDR1_CK[2]
MDA3	AG37	DDR0_DQ[3]	DDR0_CK[3]	AW17	M_DCLKA1	DDR1_DQ[3]	DDR1_CK[3]	AP21	M_DCLKB1	MD83	AH35	DDR1_DQ[3]	DDR1_CK[3]	AP21	M_DCLKB1	MD83	AH35	DDR1_DQ[3]	DDR1_CK[3]
MDA4	AE39	DDR0_DQ[4]	DDR0_CK[4]	AW16	M_DCLKA2	DDR1_DQ[4]	DDR1_CK[4]	AN20	M_DCLKB2	MD84	AE35	DDR1_DQ[4]	DDR1_CK[4]	AN20	M_DCLKB2	MD84	AE35	DDR1_DQ[4]	DDR1_CK[4]
MDA5	AE40	DDR0_DQ[5]	DDR0_CK[5]	AW16	M_DCLKA2	DDR1_DQ[5]	DDR1_CK[5]	AN21	M_DCLKB2	MD85	AE34	DDR1_DQ[5]	DDR1_CK[5]	AN21	M_DCLKB2	MD85	AE34	DDR1_DQ[5]	DDR1_CK[5]
MDA6	AG39	DDR0_DQ[6]	DDR0_CK[6]	AT16	M_DCLKA3	DDR1_DQ[6]	DDR1_CK[6]	AP19	M_DCLKB3	MD86	AG34	DDR1_DQ[6]	DDR1_CK[6]	AP19	M_DCLKB3	MD86	AG34	DDR1_DQ[6]	DDR1_CK[6]
MDA7	AG40	DDR0_DQ[7]	DDR0_CK[7]	AT16	M_DCLKA3	DDR1_DQ[7]	DDR1_CK[7]	AP20	M_DCLKB3	MD87	AH34	DDR1_DQ[7]	DDR1_CK[7]	AP20	M_DCLKB3	MD87	AH34	DDR1_DQ[7]	DDR1_CK[7]
MDA8	AJ38	DDR0_DQ[8]	DDR0_CK[8]	AY24	CKEA0	DDR1_DQ[8]	DDR1_CK[8]	AY29	CKEB0	MD88	AK35	DDR1_DQ[8]	DDR1_CK[8]	AY29	CKEB0	MD88	AK35	DDR1_DQ[8]	DDR1_CK[8]
MDA9	AJ37	DDR0_DQ[9]	DDR0_CK[9]	AW24	CKEA1	DDR1_DQ[9]	DDR1_CK[9]	AV29	CKEB1	MD89	AL35	DDR1_DQ[9]	DDR1_CK[9]	AV29	CKEB1	MD89	AL35	DDR1_DQ[9]	DDR1_CK[9]
MDA10	AL38	DDR0_DQ[10]	DDR0_CK[10]	AW24	CKEA1	DDR1_DQ[10]	DDR1_CK[10]	AW29	CKEB1	MD90	AL32	DDR1_DQ[10]	DDR1_CK[10]	AW29	CKEB1	MD90	AL32	DDR1_DQ[10]	DDR1_CK[10]
MDA11	AL37	DDR0_DQ[11]	DDR0_CK[11]	AV25	CKEA2	DDR1_DQ[11]	DDR1_CK[11]	AU29	CKEB2	MD91	AK34	DDR1_DQ[11]	DDR1_CK[11]	AU29	CKEB2	MD91	AK34	DDR1_DQ[11]	DDR1_CK[11]
MDA12	AJ40	DDR0_DQ[12]	DDR0_CK[12]	AW12	M_CSA0	DDR1_DQ[12]	DDR1_CK[12]	AP17	M_CSB0	MD92	AL34	DDR1_DQ[12]	DDR1_CK[12]	AP17	M_CSB0	MD92	AL34	DDR1_DQ[12]	DDR1_CK[12]
MDA13	AJ39	DDR0_DQ[13]	DDR0_CK[13]	AU11	M_CSA1	DDR1_DQ[13]	DDR1_CK[13]	AN15	M_CSB1	MD93	AL31	DDR1_DQ[13]	DDR1_CK[13]	AN15	M_CSB1	MD93	AL31	DDR1_DQ[13]	DDR1_CK[13]
MDA14	AL39	DDR0_DQ[14]	DDR0_CK[14]	AV13	M_CSA2	DDR1_DQ[14]	DDR1_CK[14]	AN15	M_CSB2	MD94	AP35	DDR1_DQ[14]	DDR1_CK[14]	AN15	M_CSB2	MD94	AP35	DDR1_DQ[14]	DDR1_CK[14]
MDA15	AL40	DDR0_DQ[15]	DDR0_CK[15]	AY10	M_CSA3	DDR1_DQ[15]	DDR1_CK[15]	AN17	M_CSB2	MD95	AK35	DDR1_DQ[15]	DDR1_CK[15]	AN17	M_CSB2	MD95	AK35	DDR1_DQ[15]	DDR1_CK[15]
MDA16	AN38	DDR0_DQ[16]	DDR0_CK[16]	AW11	MODT_A0	DDR1_DQ[16]	DDR1_CK[16]	AM16	MODT_B0	MD96	AP32	DDR1_DQ[16]	DDR1_CK[16]	AM16	MODT_B0	MD96	AP32	DDR1_DQ[16]	DDR1_CK[16]
MDA17	AN40	DDR0_DQ[17]	DDR0_CK[17]	AU14	MODT_A1	DDR1_DQ[17]	DDR1_CK[17]	AL16	MODT_B1	MD97	AN34	DDR1_DQ[17]	DDR1_CK[17]	AL16	MODT_B1	MD97	AN34	DDR1_DQ[17]	DDR1_CK[17]
MDA18	AR38	DDR0_DQ[18]	DDR0_CK[18]	AY10	MODT_A2	DDR1_DQ[18]	DDR1_CK[18]	AP15	MODT_B2	MD98	MD21	DDR1_DQ[18]	DDR1_CK[18]	AP15	MODT_B2	MD98	MD21	DDR1_DQ[18]	DDR1_CK[18]
MDA19	AR37	DDR0_DQ[19]	DDR0_CK[19]	AY12	MODT_A3	DDR1_DQ[19]	DDR1_CK[19]	AL15	MODT_B3	MD99	AK31	DDR1_DQ[19]	DDR1_CK[19]	AL15	MODT_B3	MD99	AK31	DDR1_DQ[19]	DDR1_CK[19]
MDA20	AN39	DDR0_DQ[20]	DDR0_CK[20]	AY13	SBA00	DDR1_DQ[20]	DDR1_CK[20]	AN18	MAAB16	MD00	MD22	DDR1_DQ[20]	DDR1_CK[20]	AN18	MAAB16	MD00	MD22	DDR1_DQ[20]	DDR1_CK[20]
MDA21	AN37	DDR0_DQ[21]	DDR0_CK[21]	AW23	BG_A0	DDR1_DQ[21]	DDR1_CK[21]	AW28	BG_B0	MD01	AP34	DDR1_DQ[21]	DDR1_CK[21]	AW28	BG_B0	MD01	AP34	DDR1_DQ[21]	DDR1_CK[21]
MDA22	AR39	DDR0_DQ[22]	DDR0_CK[22]	AW13	MAAA16	DDR1_DQ[22]	DDR1_CK[22]	AL19	MAAB0	MD02	AK31	DDR1_DQ[22]	DDR1_CK[22]	AL19	MAAB0	MD02	AK31	DDR1_DQ[22]	DDR1_CK[22]
MDA23	AR40	DDR0_DQ[23]	DDR0_CK[23]	AW14	MAAA17	DDR1_DQ[23]	DDR1_CK[23]	AL22	MAAB1	MD03	MD23	DDR1_DQ[23]	DDR1_CK[23]	AL22	MAAB1	MD03	MD23	DDR1_DQ[23]	DDR1_CK[23]
MDA24	AW37	DDR0_DQ[24]	DDR0_CK[24]	AW15	MAAA18	DDR1_DQ[24]	DDR1_CK[24]	AM22	MAAB2	MD04	MD24	DDR1_DQ[24]	DDR1_CK[24]	AM22	MAAB2	MD04	MD24	DDR1_DQ[24]	DDR1_CK[24]
MDA25	AW38	DDR0_DQ[25]	DDR0_CK[25]	AW16	MAAA19	DDR1_DQ[25]	DDR1_CK[25]	AP23	MAAB3	MD05	MD25	DDR1_DQ[25]	DDR1_CK[25]	AP23	MAAB3	MD05	MD25	DDR1_DQ[25]	DDR1_CK[25]
MDA26	AW35	DDR0_DQ[26]	DDR0_CK[26]	AW17	MAAA20	DDR1_DQ[26]	DDR1_CK[26]	AL23	MAAB5	MD06	MD26	DDR1_DQ[26]	DDR1_CK[26]	AL23	MAAB5	MD06	MD26	DDR1_DQ[26]	DDR1_CK[26]
MDA27	AW35	DDR0_DQ[27]	DDR0_CK[27]	AW18	MAAA21	DDR1_DQ[27]	DDR1_CK[27]	AW26	MAAB6	MD07	MD27	DDR1_DQ[27]	DDR1_CK[27]	AW26	MAAB6	MD07	MD27	DDR1_DQ[27]	DDR1_CK[27]
MDA28	AW37	DDR0_DQ[28]	DDR0_CK[28]	AW19	MAAA22	DDR1_DQ[28]	DDR1_CK[28]	AU26	MAAB7	MD08	MD28	DDR1_DQ[28]	DDR1_CK[28]	AU26	MAAB7	MD08	MD28	DDR1_DQ[28]	DDR1_CK[28]
MDA29	AW37	DDR0_DQ[29]	DDR0_CK[29]	AW20	MAAA23	DDR1_DQ[29]	DDR1_CK[29]	AP18	MAAB10	MD09	MD29	DDR1_DQ[29]	DDR1_CK[29]	AP18	MAAB10	MD09	MD29	DDR1_DQ[29]	DDR1_CK[29]
MDA30	AT35	DDR0_DQ[30]	DDR0_CK[30]	AW21	MAAA24	DDR1_DQ[30]	DDR1_CK[30]	AU27	MAAB11	MD10	MD30	DDR1_DQ[30]	DDR1_CK[30]	AU27	MAAB11	MD10	MD30	DDR1_DQ[30]	DDR1_CK[30]
MDA31	AU35	DDR0_DQ[31]	DDR0_CK[31]	AW22	MAAA25	DDR1_DQ[31]	DDR1_CK[31]	AL25	MAAB13	MD11	MD31	DDR1_DQ[31]	DDR1_CK[31]	AL25	MAAB13	MD11	MD31	DDR1_DQ[31]	DDR1_CK[31]
MDA32	AY38	DDR0_DQ[32]	DDR0_CK[32]	AW23	MAAA26	DDR1_DQ[32]	DDR1_CK[32]	AU28	MAAB12	MD12	MD32	DDR1_DQ[32]	DDR1_CK[32]	AU28	MAAB12	MD12	MD32	DDR1_DQ[32]	DDR1_CK[32]
MDA33	AW8	DDR0_DQ[33]	DDR0_CK[33]	AW24	MAAA27	DDR1_DQ[33]	DDR1_CK[33]	AG7	MAAB13	MD13	MD33	DDR1_DQ[33]	DDR1_CK[33]	AG7	MAAB13	MD13	MD33	DDR1_DQ[33]	DDR1_CK[33]
MDA34	AW8	DDR0_DQ[34]	DDR0_CK[34]	AW25	MAAA28	DDR1_DQ[34]	DDR1_CK[34]	AG7	MAAB13	MD14	MD34	DDR1_DQ[34]	DDR1_CK[34]	AG7	MAAB13	MD14	MD34	DDR1_DQ[34]	DDR1_CK[34]
MDA35	AW8	DDR0_DQ[35]	DDR0_CK[35]	AW26	MAAA29	DDR1_DQ[35]	DDR1_CK[35]	AG7	MAAB13	MD15	MD35	DDR1_DQ[35]	DDR1_CK[35]	AG7	MAAB13	MD15	MD35	DDR1_DQ[35]	DDR1_CK[35]
MDA36	AW8	DDR0_DQ[36]	DDR0_CK[36]	AW27	MAAA30	DDR1_DQ[36]	DDR1_CK[36]	AG7	MAAB13	MD16	MD36	DDR1_DQ[36]	DDR1_CK[36]	AG7	MAAB13	MD16	MD36	DDR1_DQ[36]	DDR1_CK[36]
MDA37	AW8	DDR0_DQ[37]	DDR0_CK[37]	AW28	MAAA31	DDR1_DQ[37]	DDR1_CK[37]	AG7	MAAB13	MD17	MD37	DDR1_DQ[37]	DDR1_CK[37]	AG7	MAAB13	MD17	MD37	DDR1_DQ[37]	DDR1_CK[37]
MDA38	AW6	DDR0_DQ[38]	DDR0_CK[38]	AW29	MAAA32	DDR1_DQ[38]	DDR1_CK[38]	AG7	MAAB13	MD18	MD38	DDR1_DQ[38]	DDR1_CK[38]	AG7	MAAB13	MD18	MD38	DDR1_DQ[38]	DDR1_CK[38]
MDA39	AW6	DDR0_DQ[39]	DDR0_CK[39]	AW30	MAAA33	DDR1_DQ[39]	DDR1_CK[39]	AG7	MAAB13	MD19	MD39	DDR1_DQ[39]	DDR1_CK[39]	AG7	MAAB13	MD19	MD39	DDR1_DQ[39]	DDR1_CK[39]
MDA40	AW4	DDR0_DQ[40]	DDR0_CK[40]	AW31	MAAA34	DDR1_DQ[40]	DDR1_CK[40]	AG7	MAAB13	MD20	MD40	DDR1_DQ[40]	DDR1_CK[40]	AG7	MAAB13	MD20	MD40	DDR1_DQ[40]	DDR1_CK[40]
MDA41	AW4	DDR0_DQ[41]	DDR0_CK[41]	AW32	MAAA35	DDR1_DQ[41]	DDR1_CK[41]	AG7	MAAB13	MD21	MD41	DDR1_DQ[41]	DDR1_CK[41]	AG7	MAAB13	MD21	MD41	DDR1_DQ[41]	DDR1_CK[41]
MDA42	AT1	DDR0_DQ[42]	DDR0_CK[42]	AW33	MAAA36	DDR1_DQ[42]	DDR1_CK[42]	AG7	MAAB13	MD22	MD42	DDR1_DQ[42]	DDR1_CK[42]	AG7	MAAB13	MD22	MD42	DDR1_DQ[42]	DDR1_CK[42]
MDA43	AT2	DDR0_DQ[43]	DDR0_CK[43]	AW34	MAAA37	DDR1_DQ[43]	DDR1_CK[43]	AG7	MAAB13	MD23	MD43	DDR1_DQ[43]	DDR1_CK[43]	AG7	MAAB13	MD23	MD43	DDR1_DQ[43]	DDR1_CK[43]
MDA44	AW3	DDR0_DQ[44]	DDR0_CK[44]	AW35	MAAA38	DDR1_DQ[44]	DDR1_CK[44]	AG7	MAAB13	MD24	MD44	DDR1_DQ[44]	DDR1_CK[44]	AG7	MAAB13	MD24	MD44	DDR1_DQ[44]	DDR1_CK[44]
MDA45	AW4	DDR0_DQ[45]	DDR0_CK[45]	AW36	MAAA39	DDR1_DQ[45]	DDR1_CK[45]	AG7	MAAB13	MD25	MD45	DDR1_DQ[45]	DDR1_CK[45]	AG7	MAAB13	MD25	MD45	DDR1_DQ[45]	DDR1_CK[45]
MDA46	AT4	DDR0_DQ[46]	DDR0_CK[46]	AW37	MAAA40	DDR1_DQ[46]	DDR1_CK[46]	AG7	MAAB13	MD26	MD46	DDR1_DQ[46]	DDR1_CK[46]	AG7	MAAB13	MD26	MD46	DDR1_DQ[46]	DDR1_CK[46]
MDA47	AT3	DDR0_DQ[47]	DDR0_CK[47]	AW38	MAAA41	DDR1_DQ[47]	DDR1_CK[47]	AG7	MAAB13	MD27	MD47	DDR1_DQ[47]	DDR1_CK[47]	AG7	MAAB13	MD27	MD47	DDR1_DQ[47]	DDR1_CK[47]
MDA48	AP2	DDR0_DQ[48]	DDR0_CK[48]	AW39	MAAA42	DDR1_DQ[48]	DDR1_CK[48]	AG7	MAAB13	MD28	MD48	DDR1_DQ[48]	DDR1_CK[48]	AG7	MAAB13	MD28	MD48	DDR1_DQ[48]	DDR1_CK[48]
MDA49	AM4	DDR0_DQ[49]	DDR0_CK[49]	AW40	MAAA43	DDR1_DQ[49]	DDR1_CK[49]	AG7	MAAB13	MD29	MD49	DDR1_DQ[49]	DDR1_CK[49]	AG7	MAAB13	MD29	MD49	DDR1_DQ[49]	DDR1_CK[49]
MDA50	AP3	DDR0_DQ[50]	DDR0_CK[50]	AW41	MAAA44	DDR1_DQ[50]	DDR1_CK[50]	AG7	MAAB13	MD30	MD50	DDR1_DQ[50]	DDR1_CK[50]	AG7	MAAB13	MD30	MD50	DDR1_DQ[50]	DDR1_CK[50]
MDA51	AM3	DDR0_DQ[51]	DDR0_CK[51]	AW42	MAAA45	DDR1_DQ[51]	DDR1_CK[51]	AG7	MAAB13	MD31	MD51	DDR1_DQ[51							

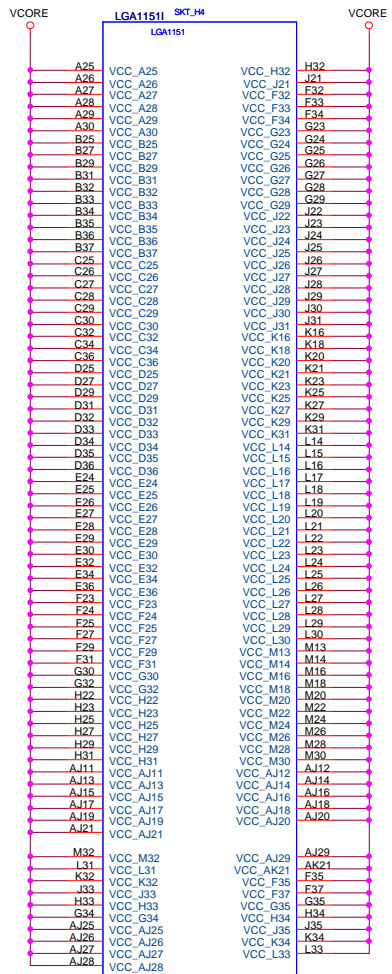


CPU POWER



CPU POWER

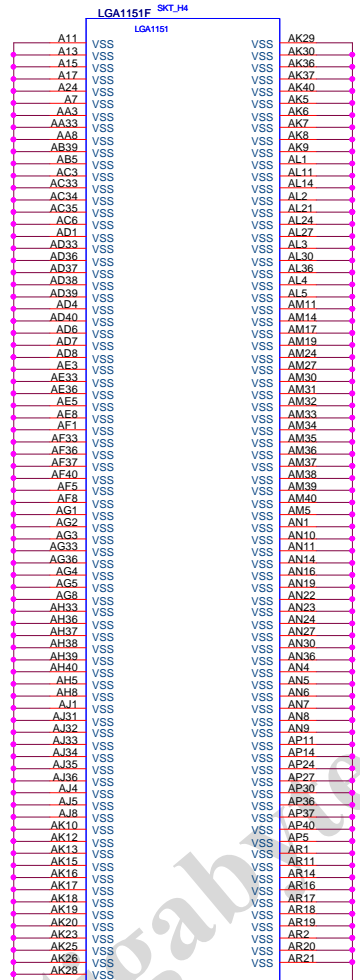




VCC_SENSE	C38	→	VCORE_VCC_SEN	[26]
VSS_SENSE	D38	→	VCORE_VSS_SEN	[26]

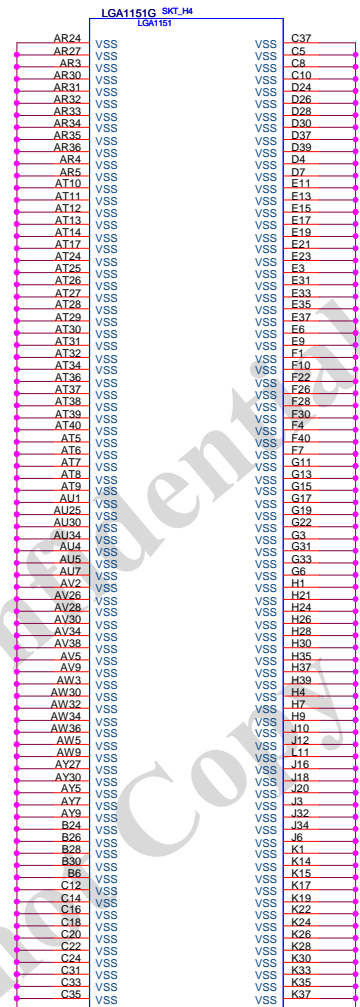
9 OF 12

CPU-SK/1151/S/GF

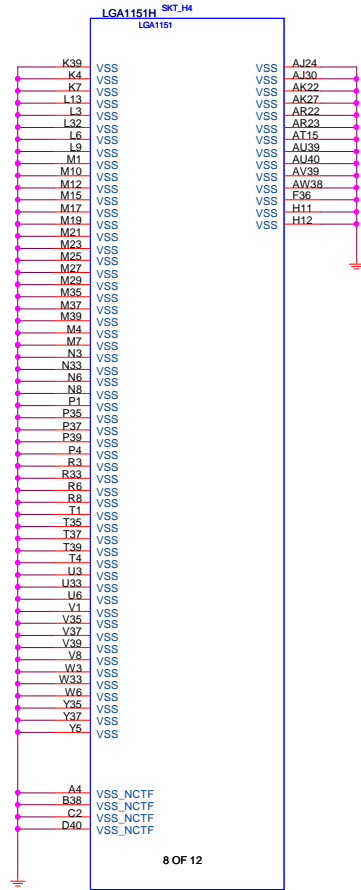


6 OF 10

CPU-SK/1151/S/GF



CPU-SK/1151/S/GF



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CPU-SK/1151/S/GF

[R] MD40_03 <-> MD40_03
[R] MAA40_16 <-> MAA40_16
[R] M_D0A0_7 <-> M_D0A0_7
[R] M_D0A0_7 <-> M_D0A0_7

請將22 6VDSFP SHORT PROTECT

[R] 12,20,21,22,23,24,35,48
[R] 12,20,21,22,23,24,35,48

[R] MAA40_16 <-> MAA40_16

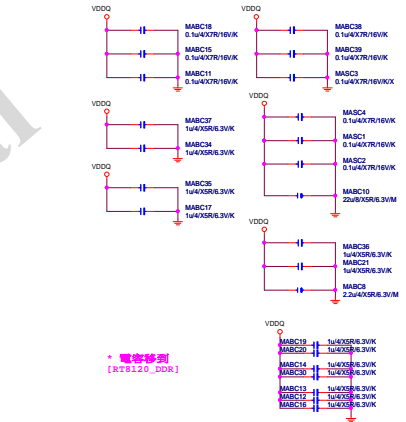
* net 改 VDDQ

* 移 short pad
CHANNEL A0
SA2:0=000

* net 改 VDDQ

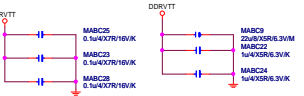
* 移 short pad
CHANNEL A1
SA2:0=001

DDR12V Decouple



* 電容移到
(RT9120_DDR)

DDRVT Decouple

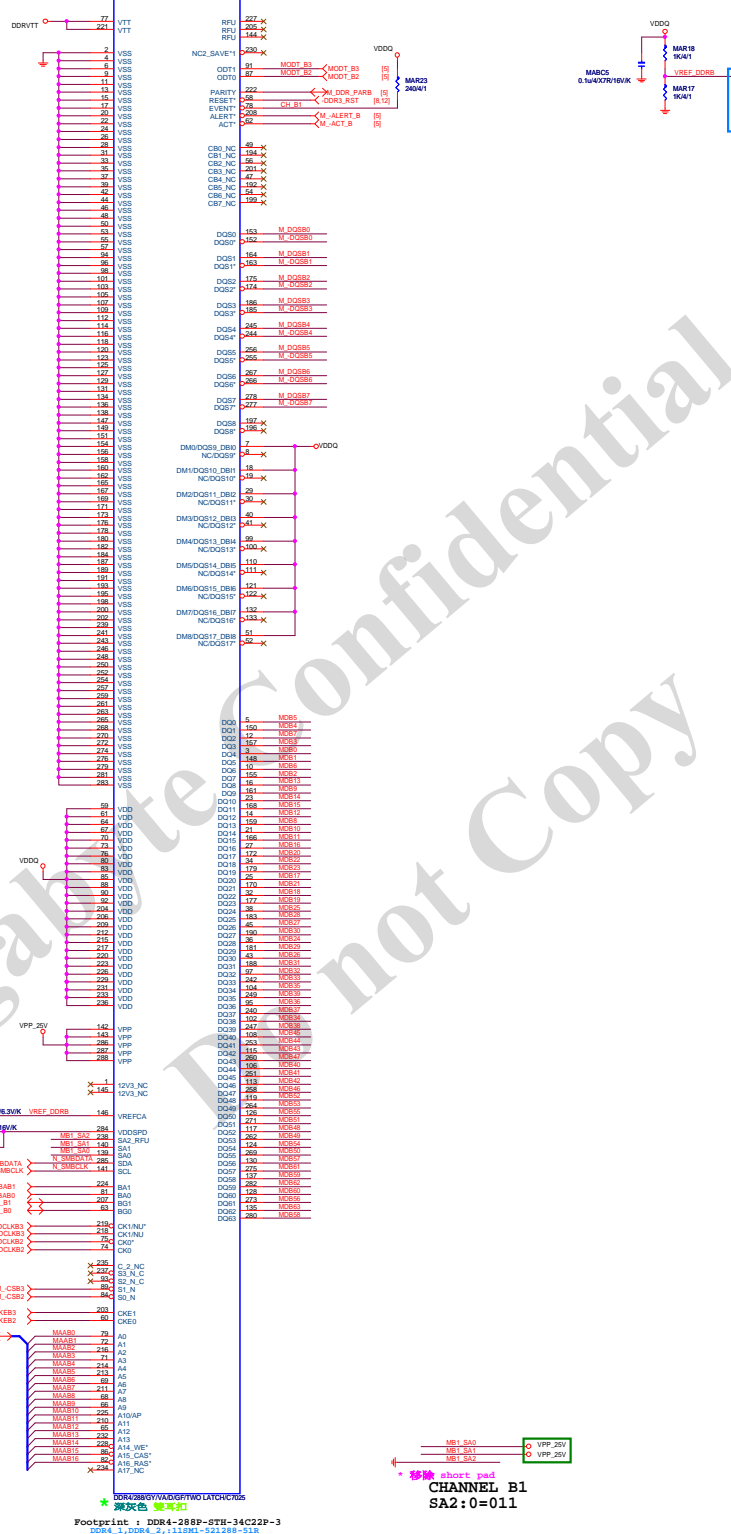
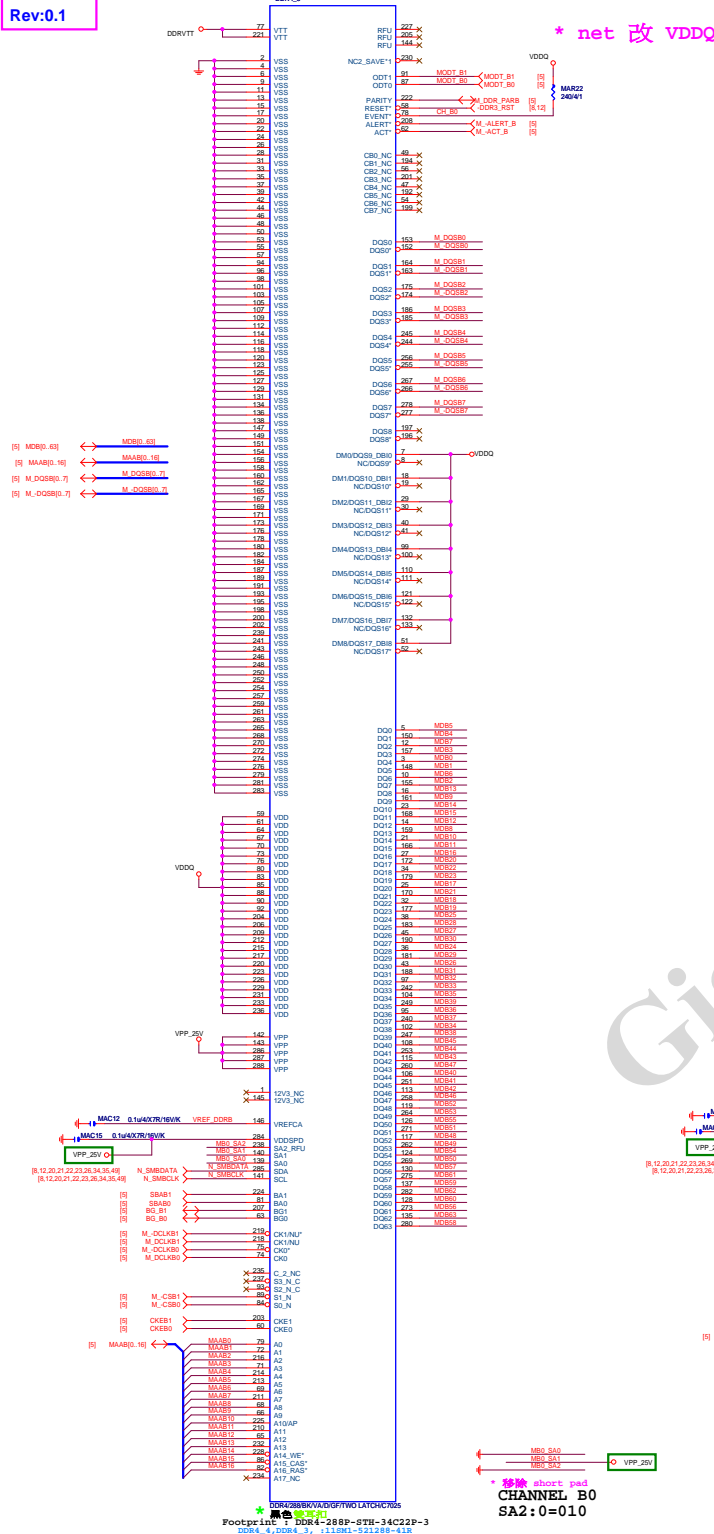


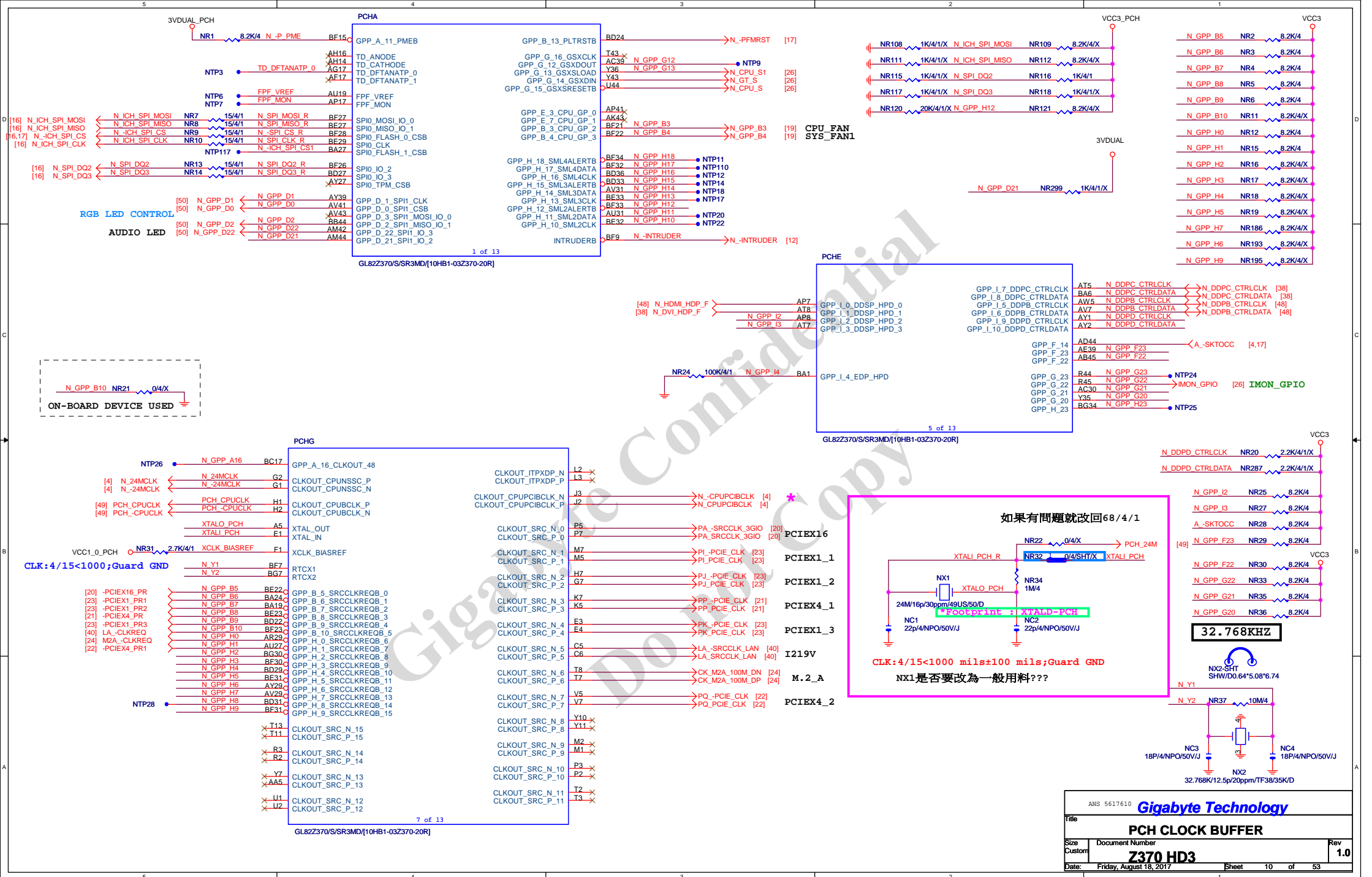
若 Power source 端 PWM IC 已有灌放
，則可刪除

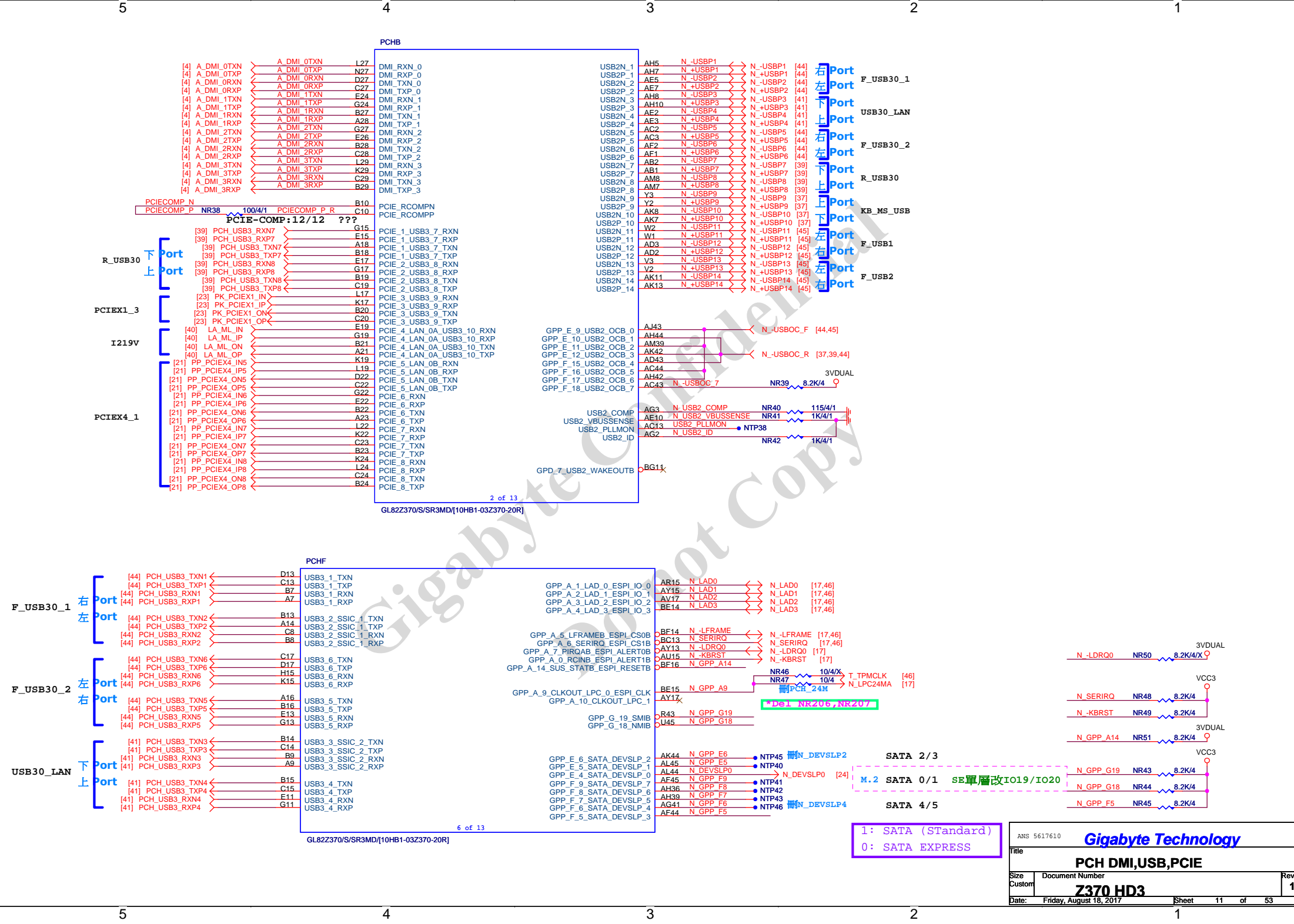
* 刪電容

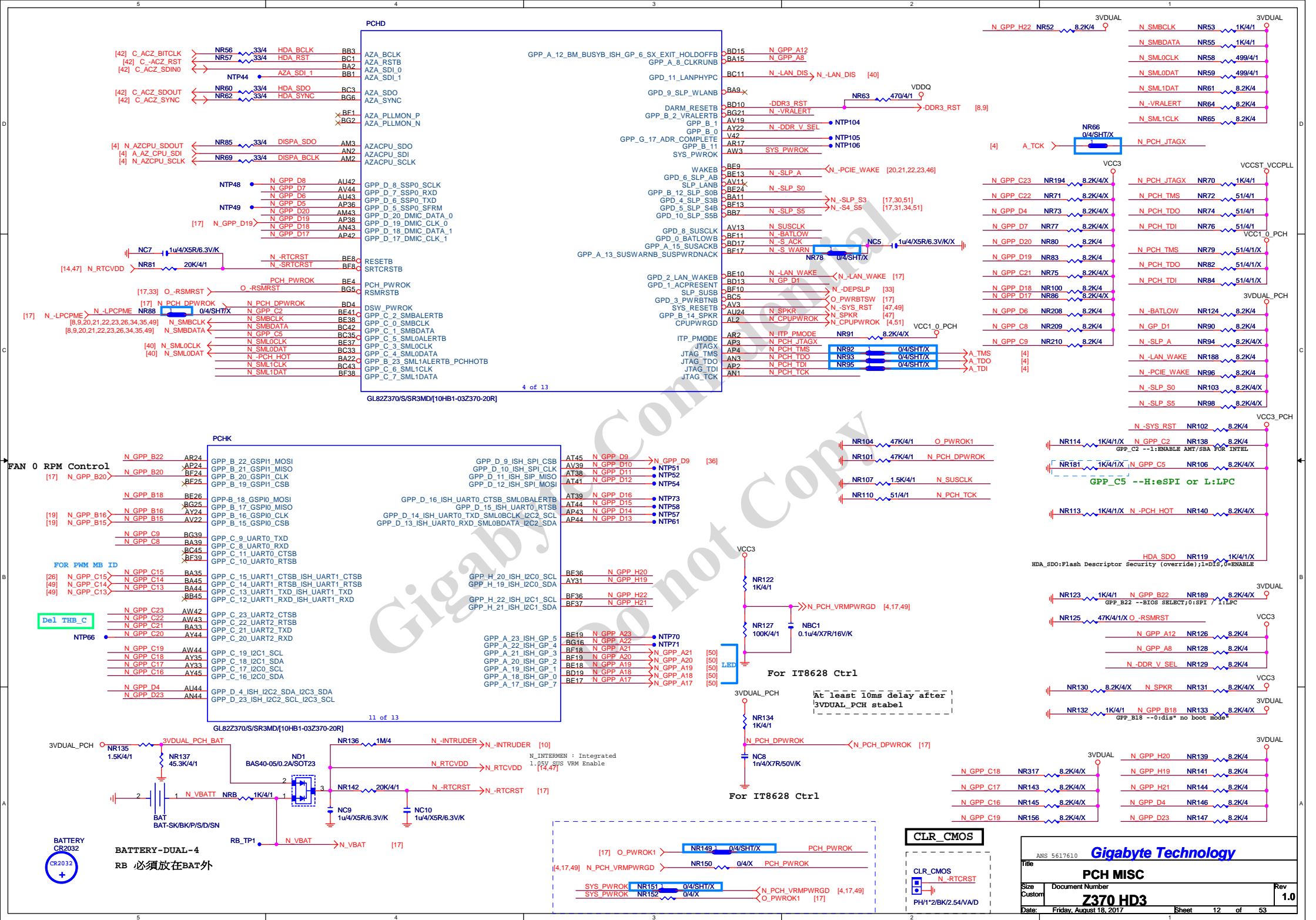
若 Power source 端 PWM IC 已有灌放
，則可刪除

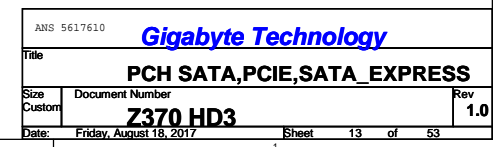
* 刪電容

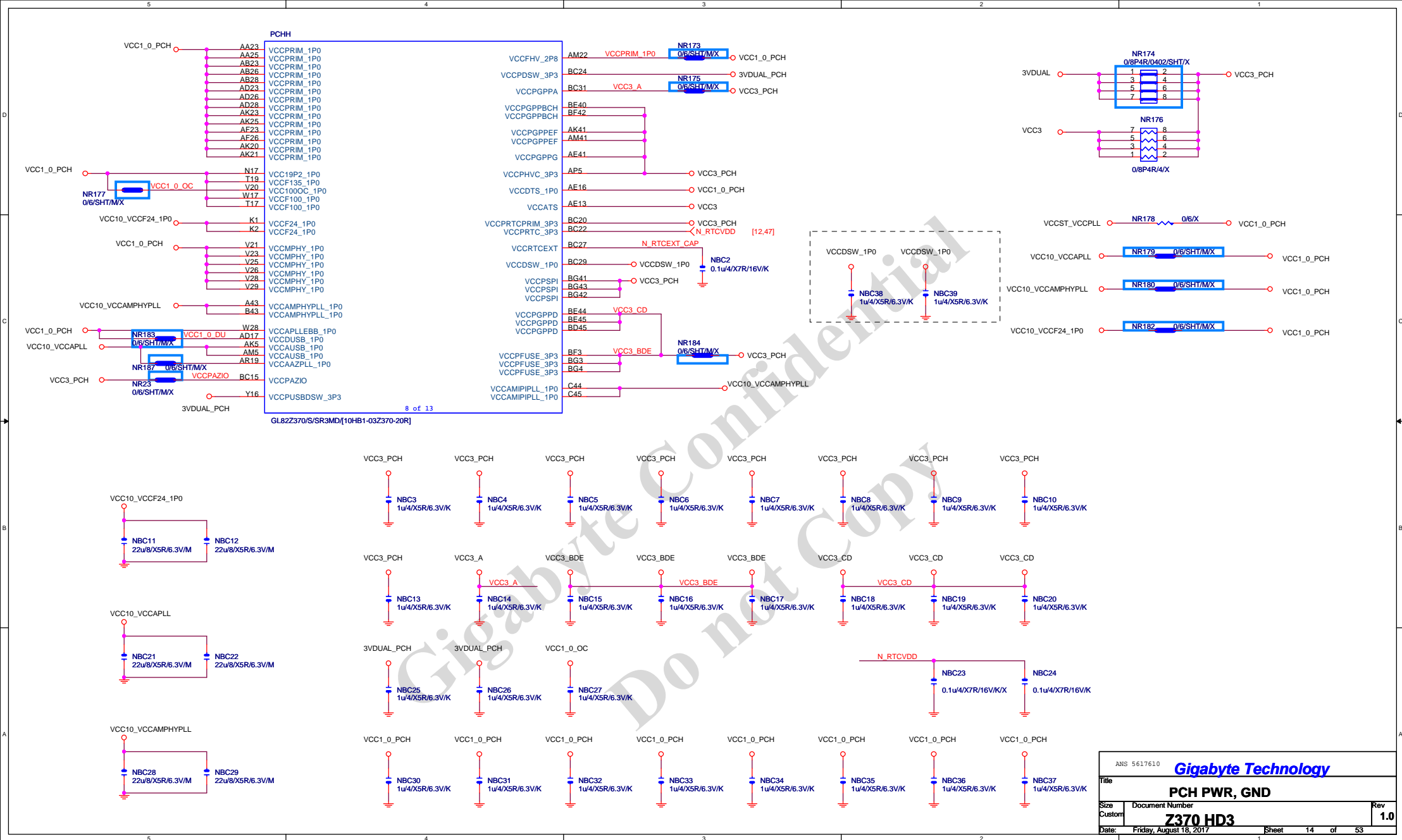












裝甲HEATSINK 分成四大部份

PCHL		
A25	VSS	A42
A30	VSS	A45
P22	VSS	BG44
AV38	VSS	BF44
AV45	VSS	BF45
AV8	VSS	BF2
AY11	VSS	W29
AY19	VSS	A35
AY37	VSS	A40
AY4	VSS	A41
AY42	VSS	AA17
AY8	VSS	AA18
B25	VSS	AA20
B3	VSS	AA21
B30	VSS	AA26
B35	VSS	AA28
B4	VSS	AA29
B41	VSS	AB17
BA13	VSS	AC32
BA17	VSS	AE
BA29	VSS	AE4
BA31	VSS	AE8
BA37	VSS	AE18
BA4	VSS	AF20
BA42	VSS	AF21
BB40	VSS	AF25
BC38	VSS	AF28
BC40	VSS	AF29
BC9	VSS	AF4
BD11	VSS	AF42
BD16	VSS	AG18
BD2	VSS	AG20
BD21	VSS	AG21
BD25	VSS	AG23
F2	VSS	AG25
F31	VSS	AG26
E6	VSS	AG28
E8	VSS	AG29
F38	VSS	AH11
F43	VSS	AH13
G4	VSS	AH30
G40	VSS	AH32
G42	VSS	AH33
F6	VSS	AH38
G9	VSS	AJ1
H11	VSS	AJ17
H13	VSS	AJ18
H17	VSS	AJ20
H19	VSS	AJ21
H22	VSS	AJ23
H24	VSS	AJ25
H27	VSS	AJ26
H29	VSS	AJ28
H33	VSS	AJ29
H35	VSS	AJ45
H38	VSS	AK10
H4	VSS	AK14
H42	VSS	AK16
H9	VSS	AK17
J4	VSS	AK18
M36	VSS	AK26
M38	VSS	AK28
M4	VSS	AM14
M8	VSS	AN14
M9	VSS	AP19
N13	VSS	AR22
N15	VSS	AR27
N19	VSS	AU29
N22	VSS	AU33
N24	VSS	AV1
N31	VSS	AV10
N42	VSS	AV15
P10	VSS	AV24
P12	VSS	AV27
AV35	VSS	AV33

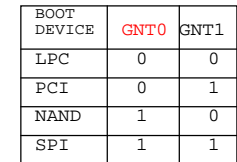
9 of 13

GL82Z370/S/SR3MD[10HB1-03Z370-20R]

PCHL		
BD34	VSS[70]	AB18
BD39	VSS[71]	AB20
BD7	VSS[72]	AB21
BE2	VSS[73]	AB25
BF43	VSS[74]	AB29
BF5	VSS[75]	AB4
BG18	VSS[76]	AB42
BG23	VSS[77]	AC10
BG28	VSS[78]	AC11
BG32	VSS[79]	AC14
BG37	VSS[80]	AC16
BG40	VSS[81]	AC38
BG9	VSS[83]	AC4
C1	VSS[84]	AC5
A12	VSS[85]	AC7
C2	VSS[86]	AC8
A37	VSS[87]	AD1
C9	VSS[88]	AD18
D1	VSS[89]	AD20
D10	VSS[90]	AD21
D12	VSS[91]	AD25
D15	VSS[92]	AD29
D16	VSS[93]	AD45
R12	VSS[94]	AE11
D19	VSS[95]	AE14
D21	VSS[96]	AE32
D24	VSS[97]	AE38
D25	VSS[98]	AK29
D29	VSS[99]	AK30
D30	VSS[100]	AK32
D33	VSS[101]	AK35
D35	VSS[102]	AK39
D36	VSS[103]	AL4
D39	VSS[104]	AL42
D44	VSS[105]	AM10
D7	VSS[106]	AM11
P13	VSS[107]	AM13
P15	VSS[108]	AM17
P17	VSS[109]	AM19
P19	VSS[110]	AM24
P31	VSS[111]	AM27
P33	VSS[112]	AM29
P35	VSS[113]	AM32
P36	VSS[114]	AM33
P4	VSS[115]	AM4
P42	VSS[116]	AN45
P8	VSS[117]	AP10
R1	VSS[118]	AP11
R32	VSS[119]	AP13
T10	VSS[120]	AP15
T14	VSS[121]	AP22
T22	VSS[122]	AP27
T29	VSS[123]	AP31
T32	VSS[124]	AP33
T36	VSS[125]	AP34
T38	VSS[126]	AP39
Y38	VSS[127]	T4
Y4	VSS[128]	W26
Y8	VSS[129]	V16
T42	VSS[130]	V17
T5	VSS[131]	V18
U4	VSS[132]	V30
U42	VSS[133]	V32
V10	VSS[134]	V33
V14	VSS[135]	V38
W3	VSS[136]	V4
AR13	VSS[137]	V8
AR31	VSS[138]	W18
AR33	VSS[139]	W20
AT4	VSS[140]	W21
AT10	VSS[141]	W23
AT13	VSS[142]	W25
AT35	VSS[143]	
AT37	VSS[144]	
AT42	VSS[145]	
AU11	VSS[146]	
AU17	VSS[147]	
BD30	VSS[148]	
W45	VSS[149]	
Y13	VSS[150]	
Y14	VSS[151]	
Y30	VSS[152]	
Y32	VSS[153]	
Y33	VSS[154]	
Y34	VSS[155]	
Y35	VSS[156]	
Y36	VSS[157]	
Y37	VSS[158]	
Y38	VSS[159]	
Y39	VSS[160]	
BG14	VSS_BG14	

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GLB22370/SR3MD[10HB1-032370-20R]



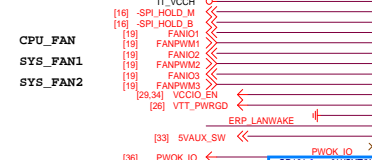
删除BIOS_SW



SIO IT8686 REV:0.5

IT8686 LPT+COMA

FAN 0 RPM Control



CPU_FAN



SYS_FAN1



SYS_FAN2



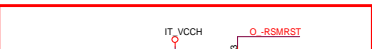
SYS_FAN3 sensor



THRMTRIP



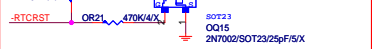
IT8686



IT8686



IT8686



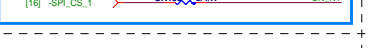
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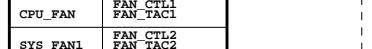
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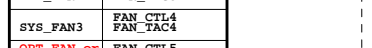
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IT8686



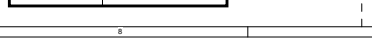
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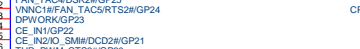
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FAN 0 RPM Control



CPU_FAN



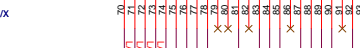
SYS_FAN1



SYS_FAN2



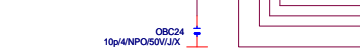
SYS_FAN3 sensor



THRMTRIP



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IT8686



IT8686



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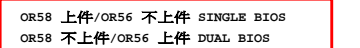
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IT8686



IT8686



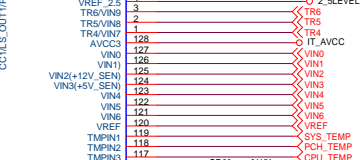
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IT8686



FAN 0 RPM Control



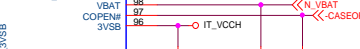
CPU_FAN



SYS_FAN1



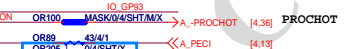
SYS_FAN2



SYS_FAN3 sensor



THRMTRIP



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IT8686



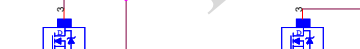
IT8686



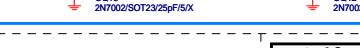
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IT8686



IT8686



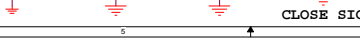
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IT8686



IT8686



FAN 0 RPM Control



CPU_FAN



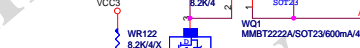
SYS_FAN1



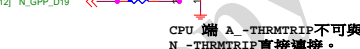
SYS_FAN2



SYS_FAN3 sensor



THRMTRIP



IT8686



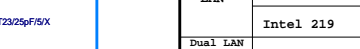
IT8686



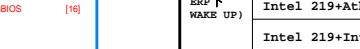
IT8686



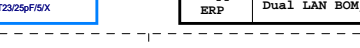
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IT8686



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IT8686



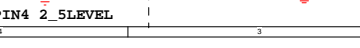
IT8686



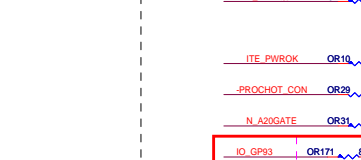
IT8686



IT8686



FAN 0 RPM Control



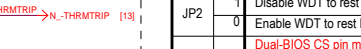
CPU_FAN



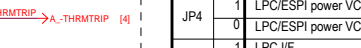
SYS_FAN1



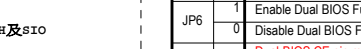
SYS_FAN2



SYS_FAN3 sensor



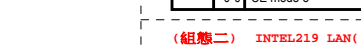
THRMTRIP



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IT8686



IT8686



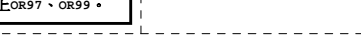
IT8686



IT8686



IT8686



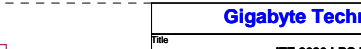
IT8686



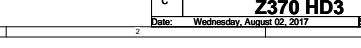
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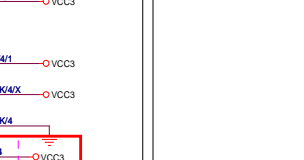
IT8686



IT8686



FAN 0 RPM Control



CPU_FAN



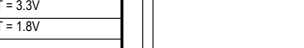
SYS_FAN1



SYS_FAN2



SYS_FAN3 sensor



THRMTRIP



IT8686



IT8686



IT8686



IT8686



IT8686



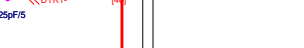
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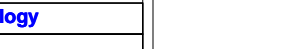
IT8686



IT8686



IT8686

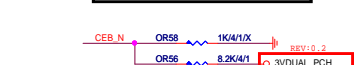


IT8686



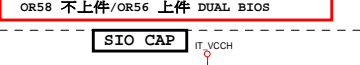
FAN TABLE	
CPU_FAN	FAN_CTL1 FAN_TAC1
SYS_FAN1	FAN_CTL2 FAN_TAC2
SYS_FAN2	FAN_CTL3 FAN_TAC3
SYS_FAN3	FAN_CTL4 FAN_TAC4
OPT_FAN OR SYS_FAN4	FAN_CTL5 FAN_TAC5
THRMTRIP	PIN56
PROCHOT	PIN89

DUAL BIOS OPT STRAP



OR58 上件/OR56 不上件 SINGLE BIOS
OR58 不上件/OR56 上件 DUAL BIOS

SIO CAP

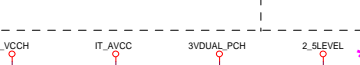


SIO 18V



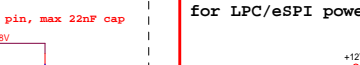
internal power pin, max 22nF cap

SIO 18V



CLOSE SIO PIN4 2.5LEVEL

SIO 18V

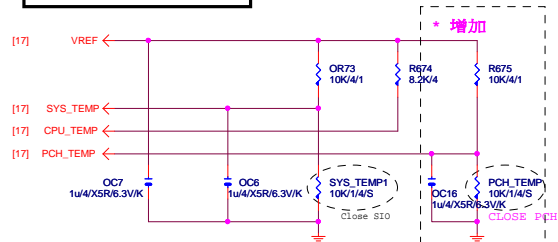


internal power pin, max 22nF cap

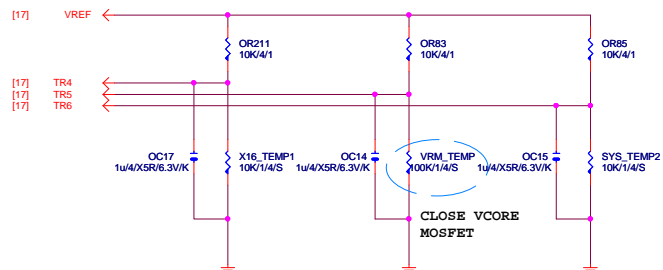
SIO 18V



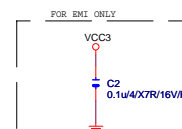
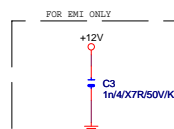
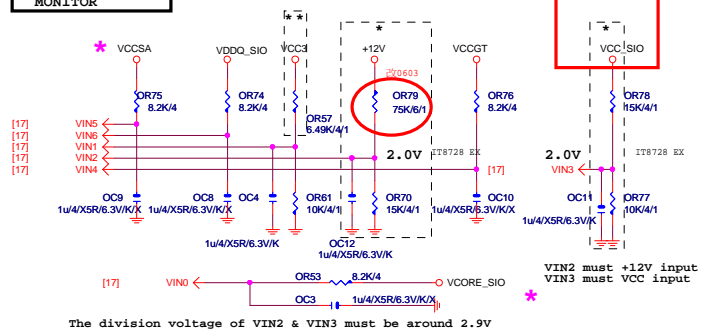
TEMP H/W MONITOR Rev0.5



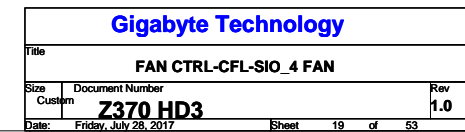
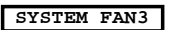
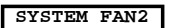
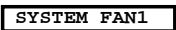
5個FAN時使用



VOLTAGE-- H/W
MONITOR

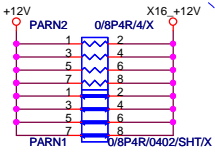


★Update 2015-04.24



Rev 0.2

Footprint : PCIESLOT-164STH

+12V - protect
short-wire test

PA_EXP_RXP[0..15] >> PA_EXP_RXP[0..15] [4]
PA_EXP_RXN[0..15] >> PA_EXP_RXN[0..15] [4]
PA_EXP_TXP[0..15] >> PA_EXP_TXP[0..15] [4]
PA_EXP_TXN[0..15] >> PA_EXP_TXN[0..15] [4]

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

PCIEX16:16/5/5/5/16

PCI-E REV:1.1--> 2.5GHZ

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

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

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

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

PCI-E REV:2.0--> 5GHZ

PCE-E X1(單向) BANDWIDTH=5GHz*(8b/10b)=4Gb/s=500MB/s

PCI-E REV:3.0--> 8GHZ

PCE-E X1(單向) BANDWIDTH=8GHz*(128b/130b)=8Gb/s=1GB/s

PCI-E16:164P/GYLONG DOUBLE/HK*2

深灰色 (預留金屬加強,不上)

Gigabyte Technology		
PCI EXPRESS * 16		
Size	Document Number	Rev
Custom	Z370 HD3	1.0
Date:	Friday, July 28, 2017	Sheet 20 of 53

*
Footprint "PCIESLOT-64STH-1"



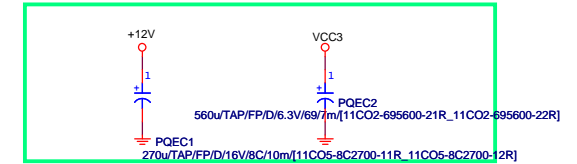
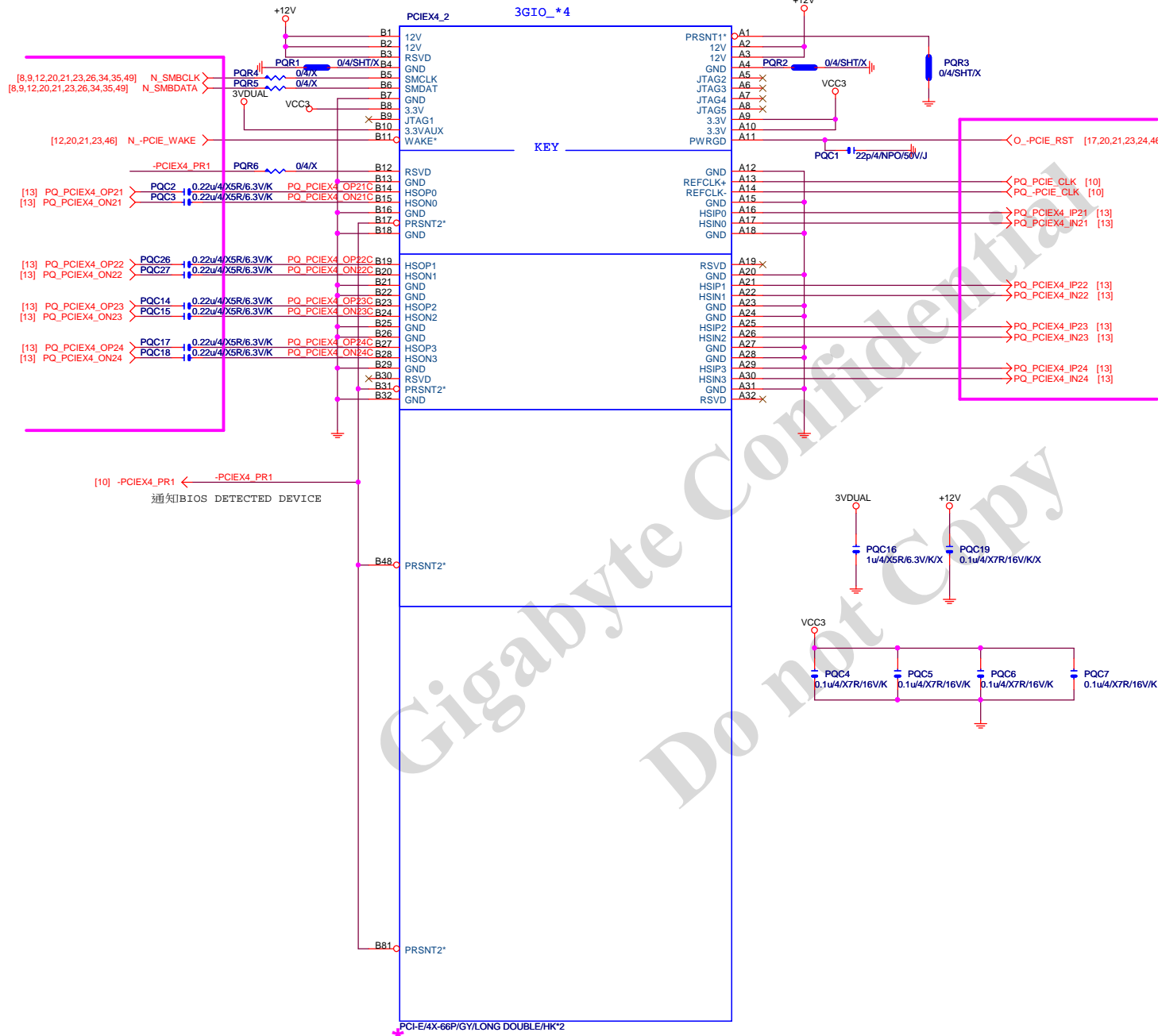
Title			
ASM1142 & ASM2142 co-lay			
Size	Document Number	Rev	
Custom	Z370 HD3	1.0	
Date:	Friday, July 28, 2017	Sheet	21 of 53

Rev 0.51

PCIE*4

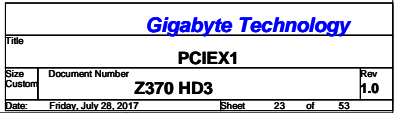
* Footprint "PCIESLOT-64P-1"

Add PQEC1,PQEC2

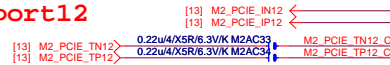


深灰色 (不留金屬加強,也不上)

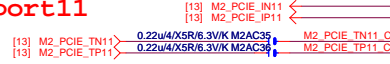
Gigabyte Technology			
Title	PCIE_X4		
Size	Document Number	Rev	
Custom	Z370 HD3	1.0	
Date:	Friday, July 28, 2017	Sheet	22 of 53

[illegible]

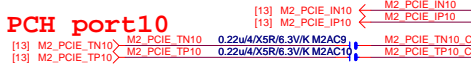
M.2 Lane3 from PCH port12



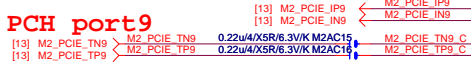
M.2 Lane2 from PCH port11



M.2 Lane1 from PCH port10

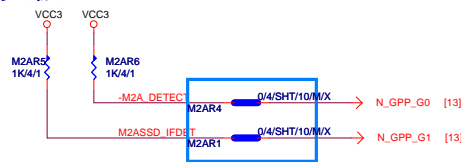


M.2 Lane0 from PCH port9



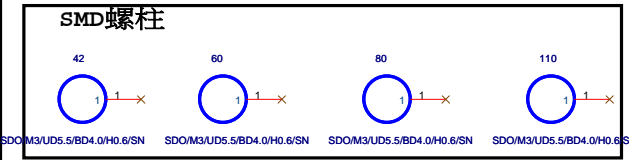
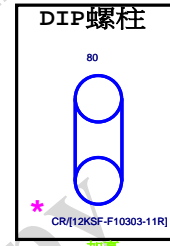
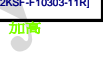
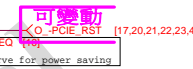
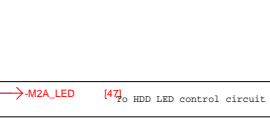
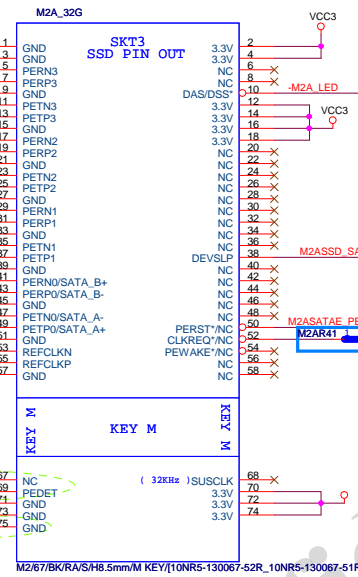
需與M2_-CLKREQ對應

支援SATA and M.2 function

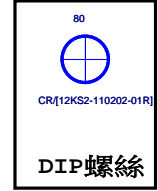


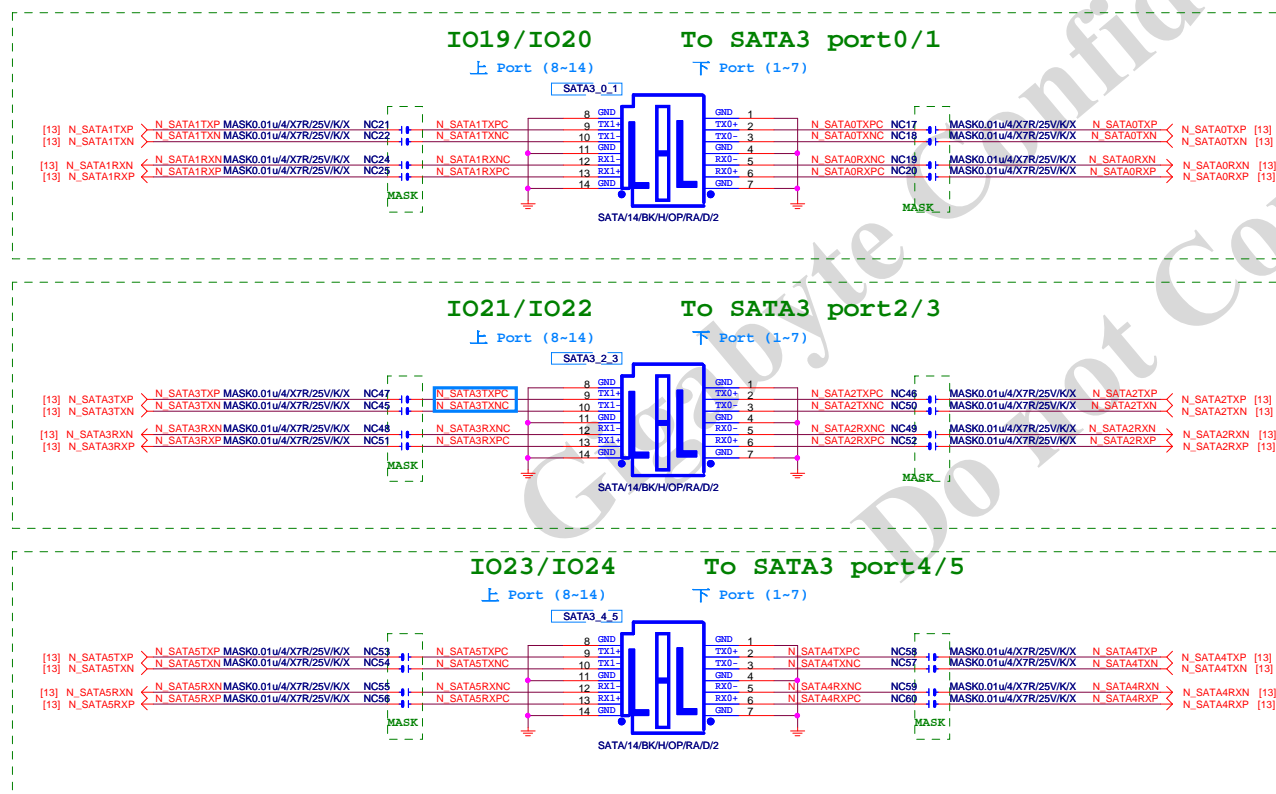
Footprint : NGFF-M-75P-11CM-3-SMD

M.2 有插卡 /沒插卡 GPP_G0	M.2插何種卡? GPP_G1	SATA Express 插何種硬碟? GPP_E0/E2/F1	IO15 (S0)	IO16 (S1)	IO17	IO18	IO19 (S0)	IP20 (S1)
有插卡 (Low)	SATA Mode (Low)	SATA (Hi)	SATA (M.2)	PCIE x1	PCIE x1	PCIE x1	PCIE x1	SATA
		SATA Express (Low)	SATA (M.2)	PCIE x1	PCIE x1	PCIE x1	SATA Express	
	PCIE Mode (Hi)	SATA (Hi)		PCIE x4 (For M.2)			SATA	SATA
		SATA Express (Low)		PCIE x4 (For M.2)			SATA Express	
沒插卡 (Hi)	Don't Care (Hi)	SATA (Hi)		PCIE x4			SATA	SATA
		SATA Express (Low)		PCIE x4			SATA Express	

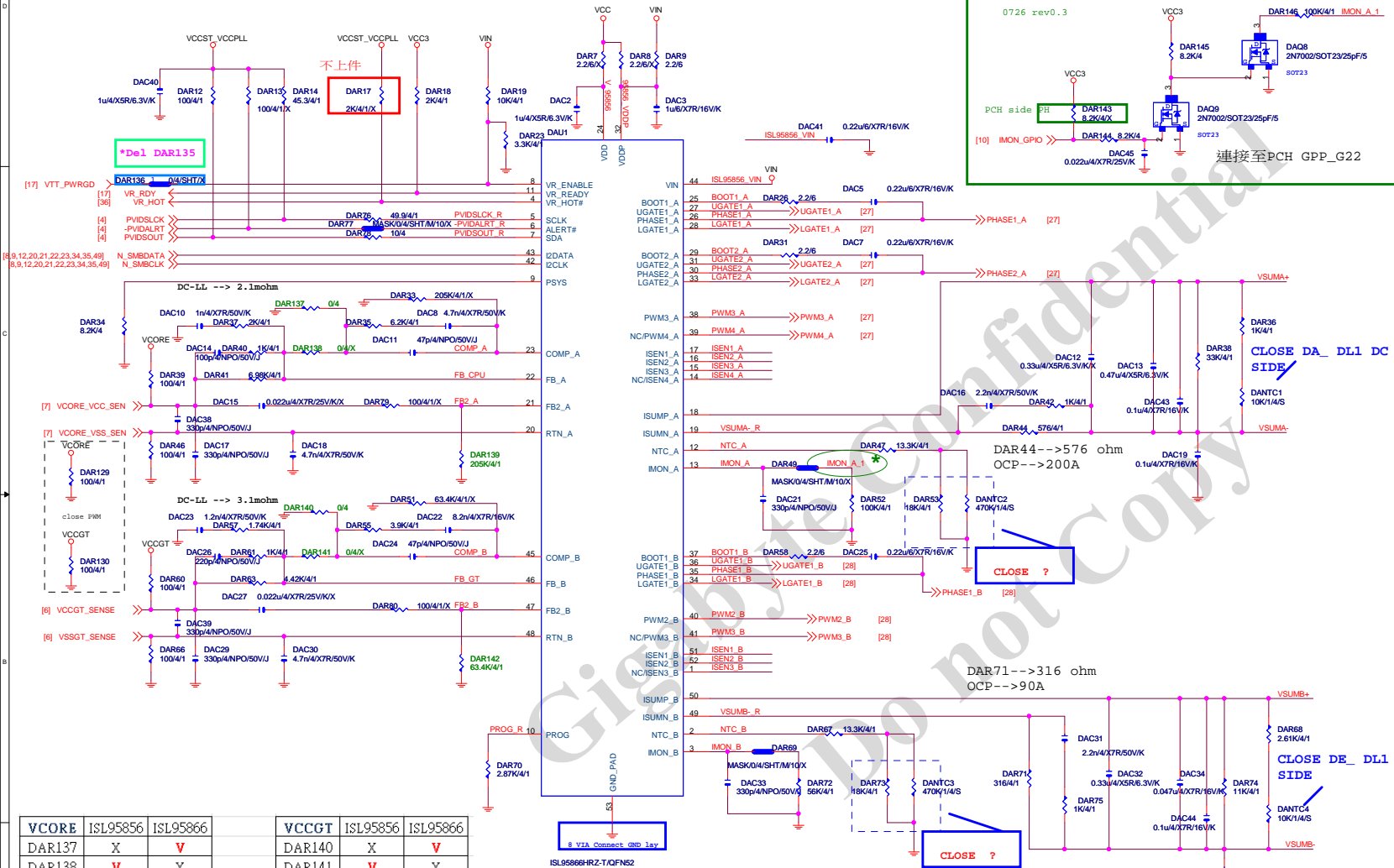
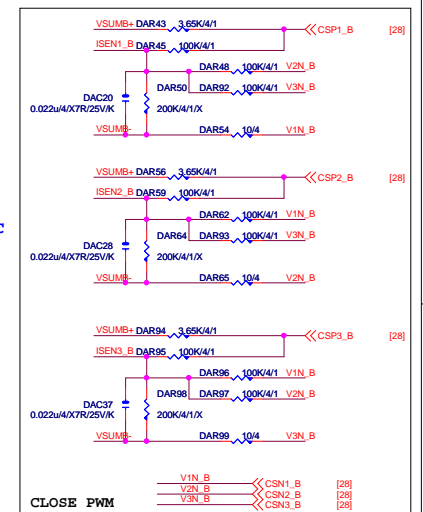
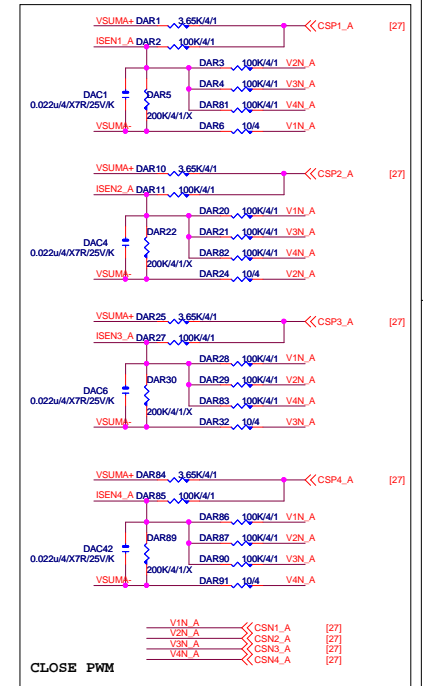
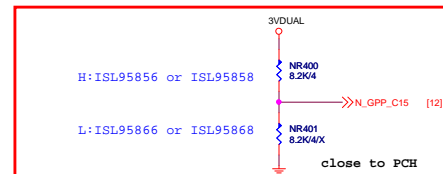
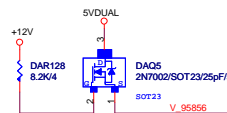


Footprint : HOLE_C236D165-A

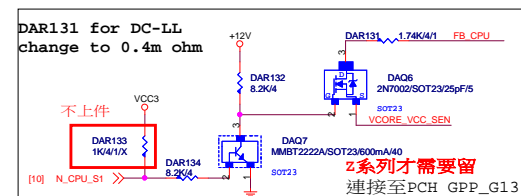
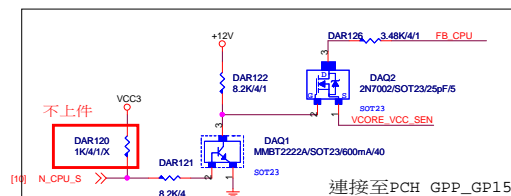
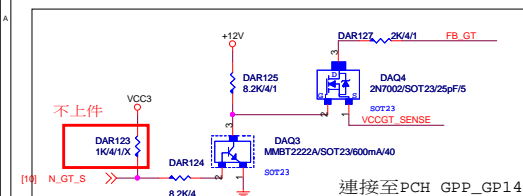




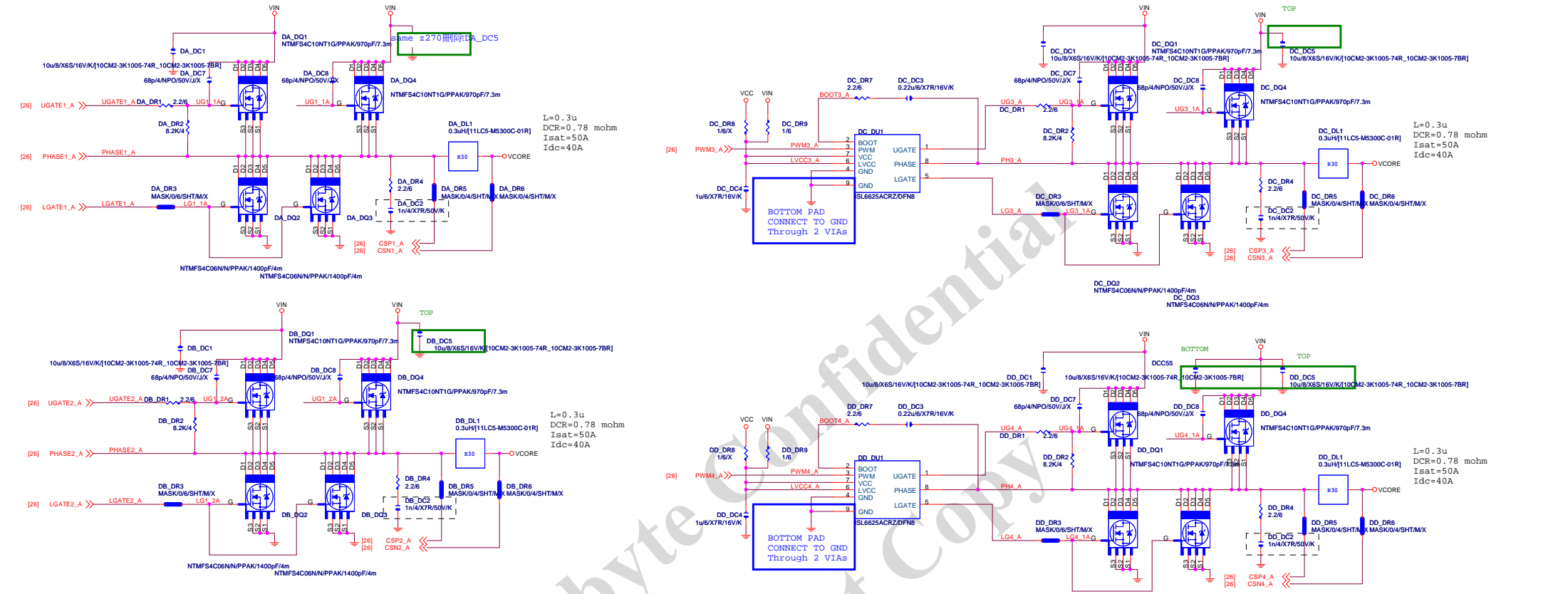
SATA 5 (文字面寫SATA 1)
SATA 4 (文字面寫SATA 0)
SATA 3
SATA 2
SATA 1 (文字面寫SATA 5)
SATA 0 (文字面寫SATA 4)



VSCORE	ISL95856	ISL95866	VCCGT	ISL95856	ISL95866
DAR137	X	V	DAR140	X	V
DAR138	V	X	DAR141	V	X
DAR139	X	V	DAR142	X	V
DAC15	V	X	DAC27	V	X
DAR79	V	X	DAR80	V	X
DAR33	V	X	DAR51	V	X



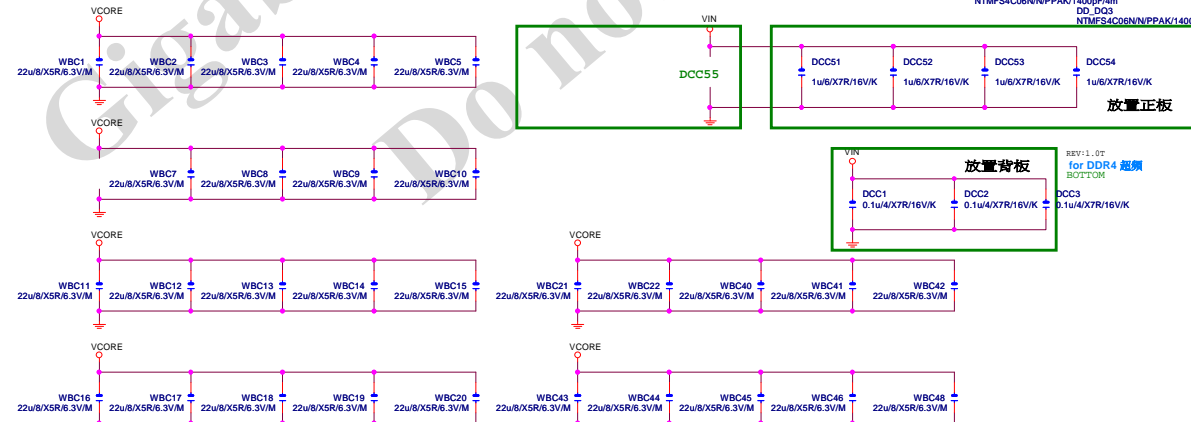
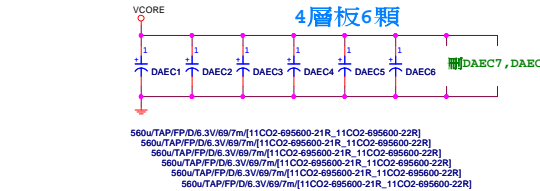
VCORE



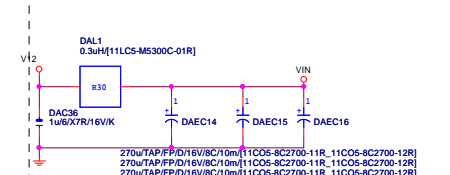
VCORE CAP

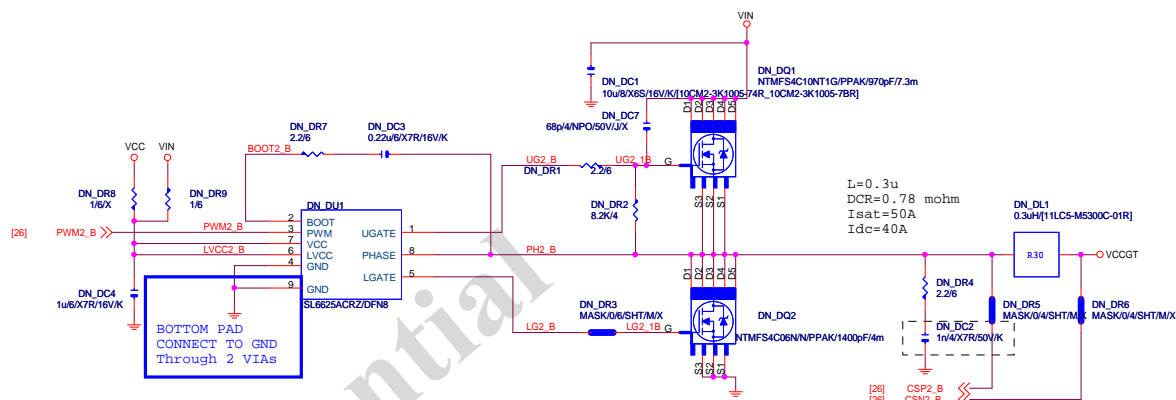
560u*6PCS
22u*29PCS

4層板6類



VIN CAP 270u*3PCS



[illegible]

4層板3顆

VCCG

4層板3顆

DAEC9

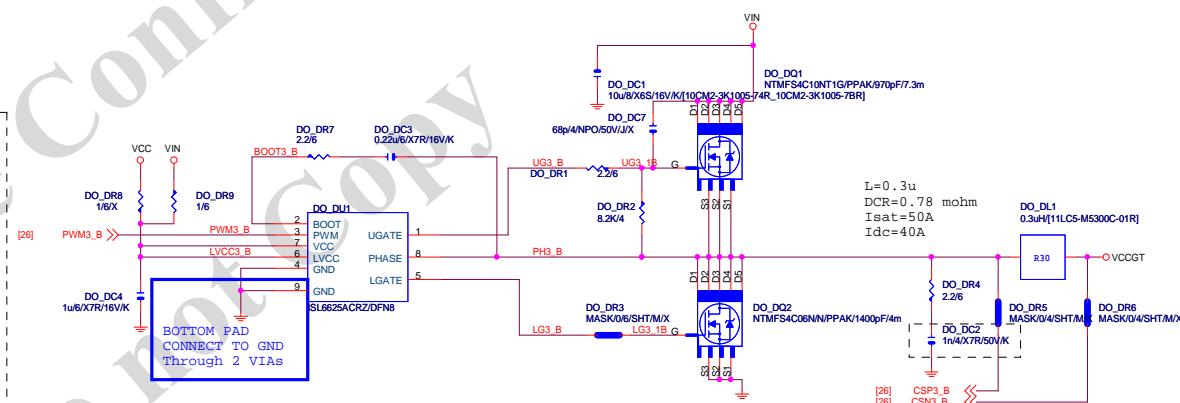
DAEC10


DAEC12

DAEC13

GND

560uTAP/FP/DI3.3V/897m(11C02-895600-21R, 11C02-895600-22R)
560uTAP/FP/DI3.3V/897m(11C02-895600-21R, 11C02-895600-22R)
560uTAP/FP/DI3.3V/897m(11C02-895600-21R, 11C02-895600-22R)



			
Title			
ISL95866_MOS			
Size	Document Number		Rev
Custom	Z370 HD3		1.0
Date:	Tuesday, August 01, 2017	Sheet	28 of 53

REV:0.41

$L=1\mu$
 $DCR=6.7\text{ mohm}$
 $I_{sat}=15A$
 $I_{dc}=12A$

CHOKE與CAP料號可變

合金CHOKE

注意耐壓

合金CHOKE

$L=1\mu$
 $DCR=6.7\text{ mohm}$
 $I_{sat}=15A$
 $I_{dc}=12A$

Remote sense請從最重的負載端點拉回

$$0.8 \cdot (1 + R_S / R_O) = V_{out}$$

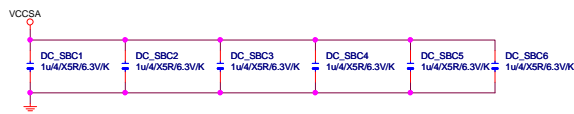
$$0.8 \cdot [1 + 2K / 8K] = 1.0V$$

VCCGT
 WBC38 22u8/X5R/6.3V/M
 WBC39 22u8/X5R/6.3V/M
 放CPU端.

有使用CPU POWER時DCR22不上件

*Del DCR34

Connect to IT8686

*Del DCR36
Connect to PCH

for DDR4 超頻
 VCCSA 刪掉DC_SBC7,DC_SBC8,
 3.兩端,CPU底部銅箔 & VIA 無能本站

$L=1\mu$
 $DCR=6.7\text{ mohm}$
 $I_{sat}=15A$
 $I_{dc}=12A$

合金CHOKE

CHOKE與CAP料號可變

注意耐壓

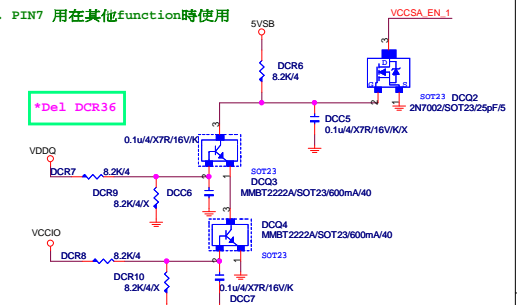
合金CHOKE

Remote sense請從最重的負載端點拉回

$$0.8 \cdot (1 + R_S / R_O) = V_{out}$$

$$0.8 \cdot [1 + 2K / 8K] = 1.0V$$

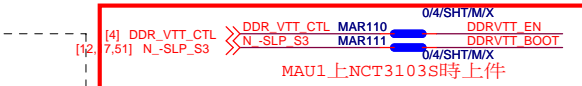
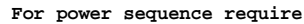
SIO PIN5 . PIN7 用在其他function時使用



GIGABYTE™

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DDR4

**GIGABYTE™**

RT8120_DDR4 POWER

Size Custom	Document Number Z370 HD3	Rev 1.0
Date:	Friday, July 28, 2017	Sheet 30 of 53

Date:	Friday, July 28, 2017	Sheet	30	of	53
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REV:0.4

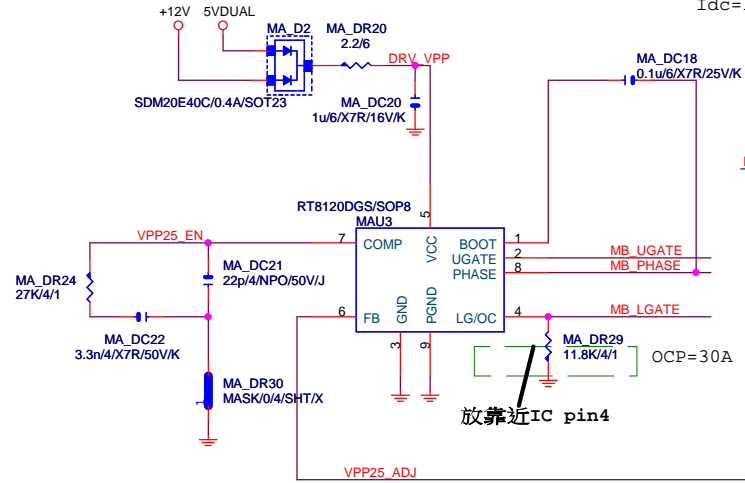
VPP_25V

L=1u
DCR=6.7 mohm
Isat=15A
Idc=12A

4. VPP_25V CHOKe footprint 改CHOKE6X6mm_SMD-1

合金CHOKe

CHOKe與CAP料號可變



放靠近IC pin4

NTTFS4C06NTAG/WDFN8/3366pF/4.2m

DDR_VPP VIN CAP
560u*1PCS

L=1u
DCR=6.7 mohm
Isat=15A
Idc=12A

$V_{(BR)DSS}$	$R_{DS(on) MAX}$	$I_D MAX$
30 V	4.2 mΩ @ 10 V	67 A
	6.1 mΩ @ 4.5 V	

SUPPORT DDR4 2.5V

VPP_25V

25A MAX

MA_D27

4.02K/4/1

MA_D26

487/4/1

MA_D24

3.3n/4/X7R/50V/K

RS

MA_D23

1n/4/X7R/50V/K

RO

MA_D31

1.87K/4/1

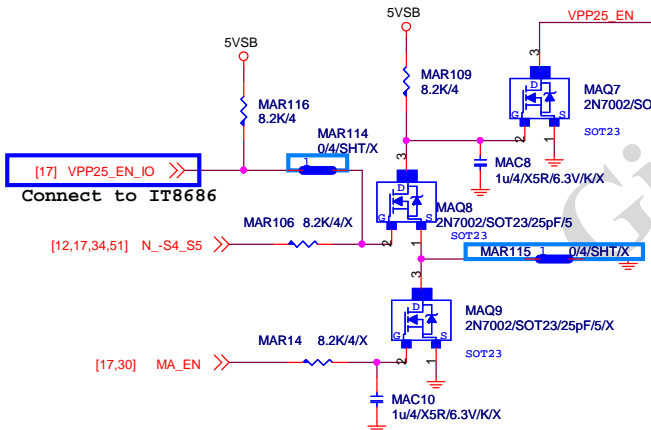
請放置CHOKe一出來位置. 先預留.
請自行確認ripple後再決定是否上件

Remote sense請從最重的負載端點拉回

[35] VPP25_ADJ ← VPP25_ADJ

PWR SEQ

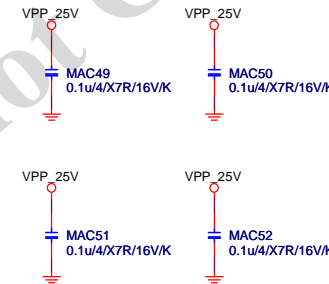
* 刪 MA_DR32



Connect to IT8686

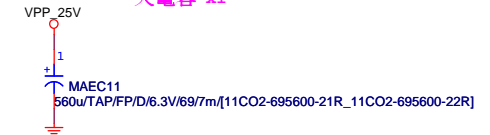
[12,17,34,51] N_S4_S5

[17,30] MA_EN



VPP CAP 560u*1PCS

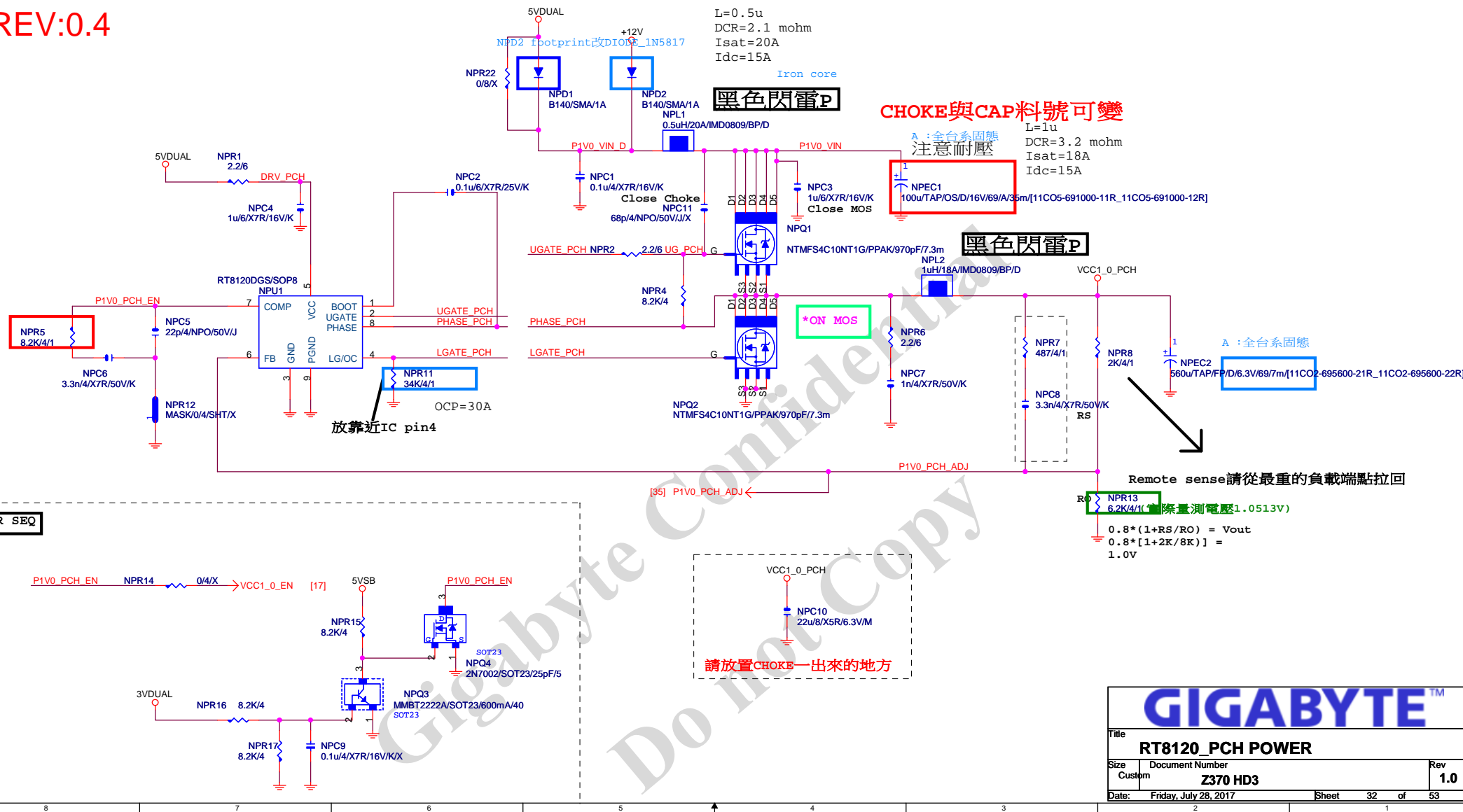
* 大電容 x1

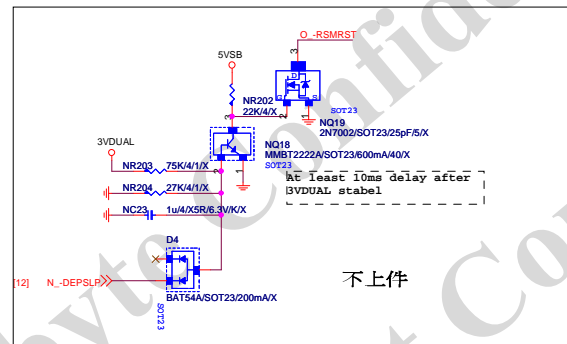
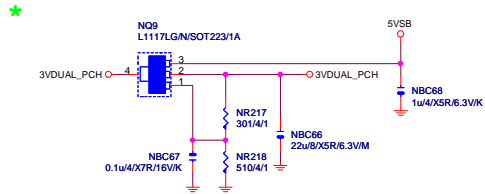
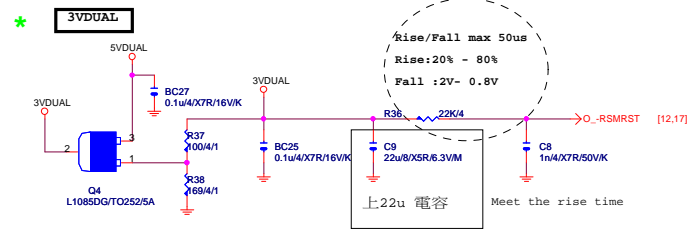
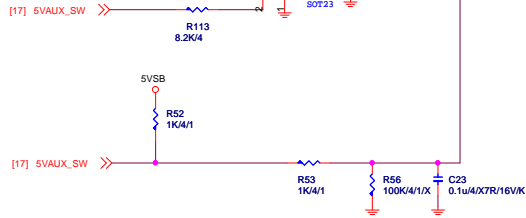


GIGABYTE™

Title	RT8120_VPP25 POWER	
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Custom	Z370 HD3	1.0
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REV:0.4

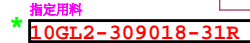




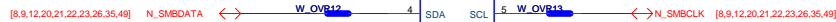
替換原先MOS開關線路



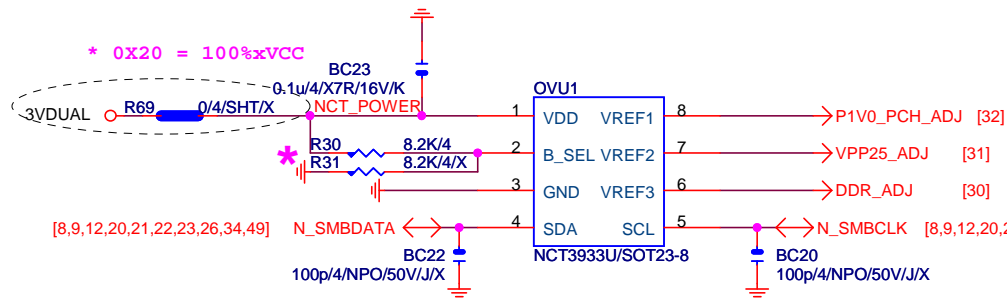
VCCPLL



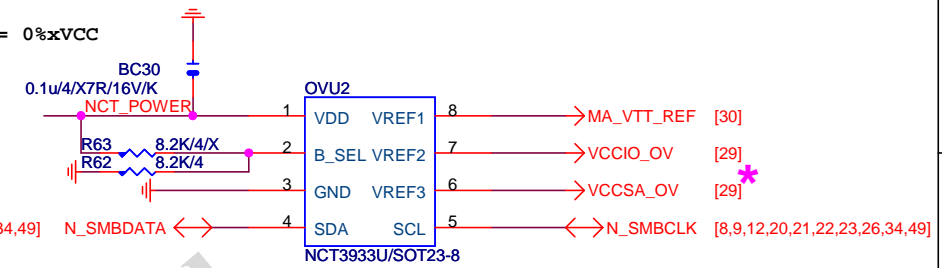
VCCPLL_OC



OVER VOLTAGE



0X2A = 0%xVCC



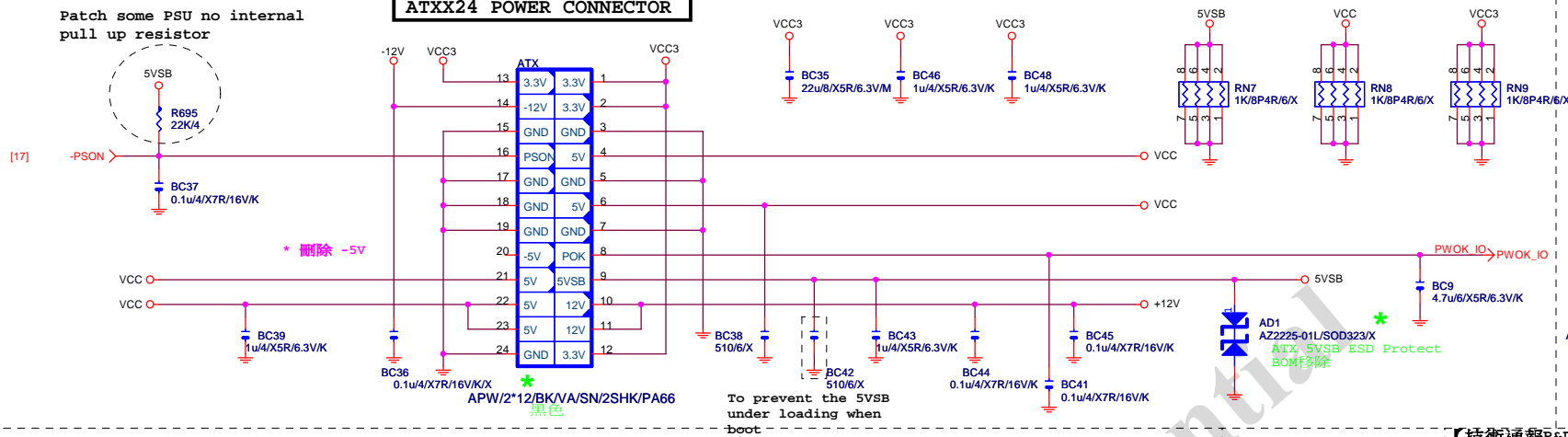
0X22 = 75%xVCC

* 删除 OVU3

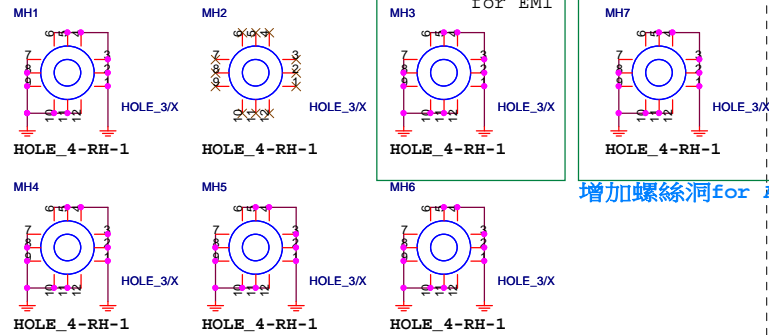
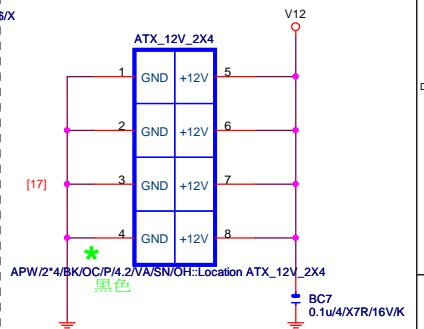
NCT3933	0X20	0X2A
VREF1	VCC1_0_PCH	DDR_VTT
VREF2	VPP_25V	VCCIO
VREF3	VDDQ	VCCSA

Gigabyte Technology		
CPU CORE VR-2		
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ATXX24 POWER CONNECTOR

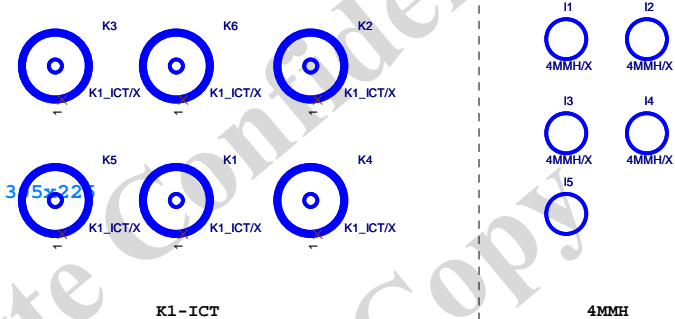


ATXX4 POWER CONNECTOR



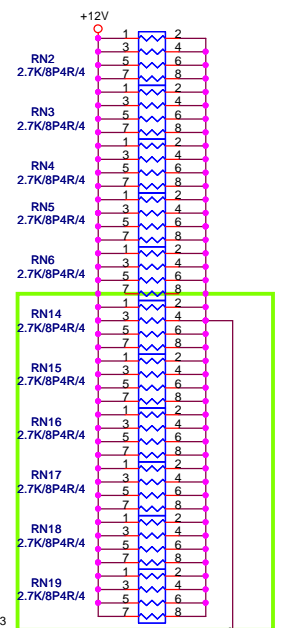
增加螺絲洞for ATX 3 5x22

有TYPE-C螺絲洞改半圈, footprint :HOLE_4-RH-5MM-2



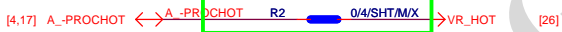
【技術通報R&D技術通報153】

To fix 12V light load abnormal issue



* For China POWER

-PROHOT



COUPON

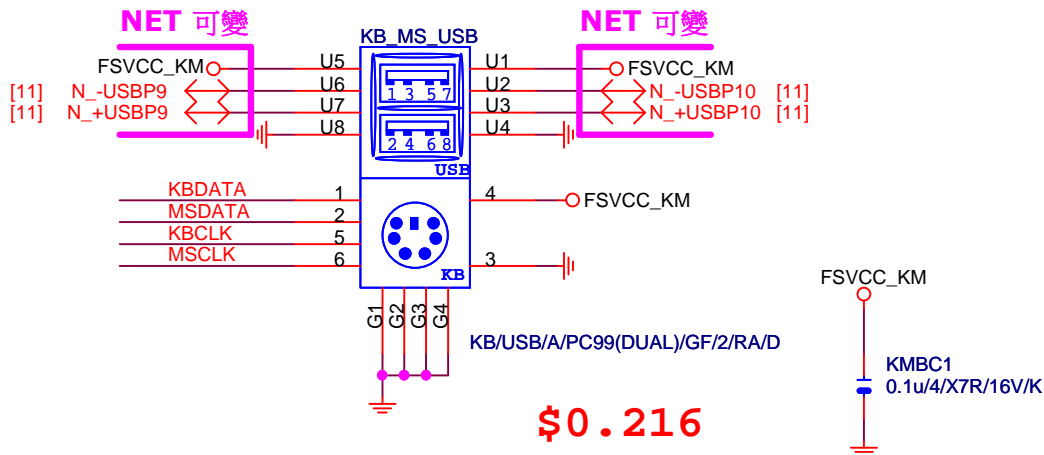


Gigabyte Technology

Title		
ATX POWER CONNECTOR		
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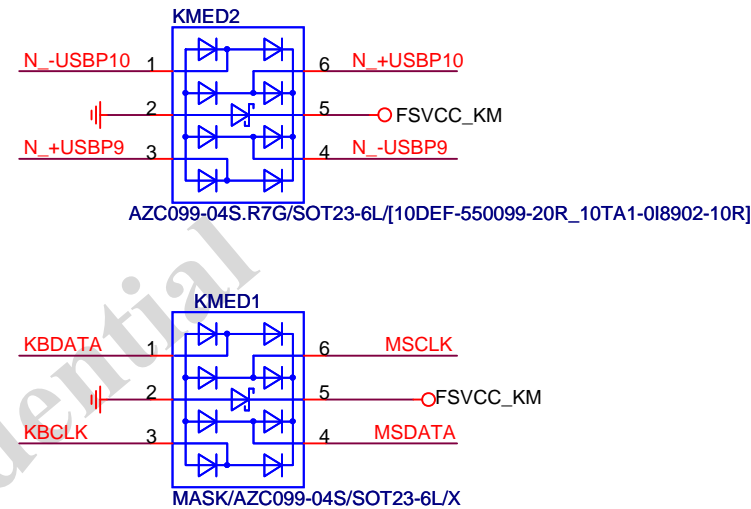
KB_MS_USB

Rev: 0.2



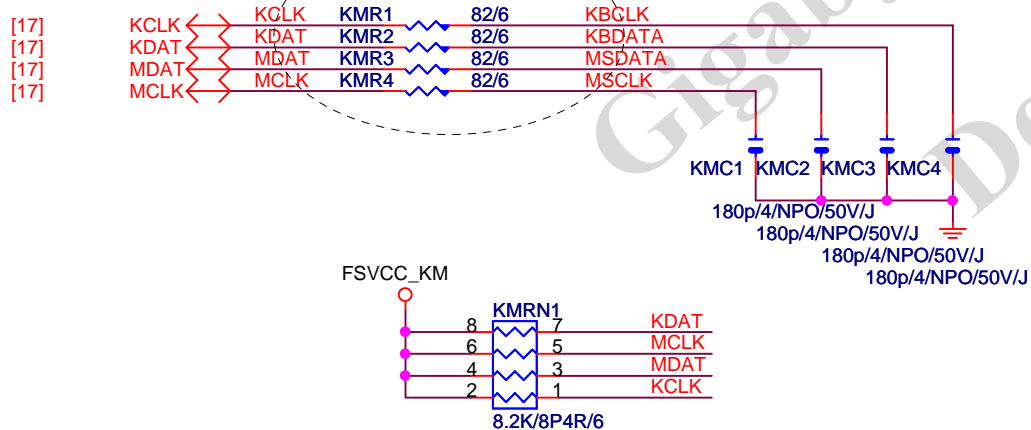
ESD

*SWAP KMED2



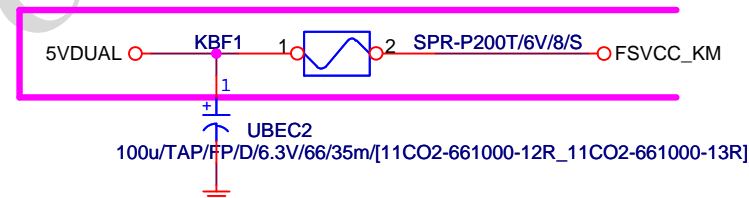
KB_MS_USB DAMPING/PU

FOR 鹽化短路

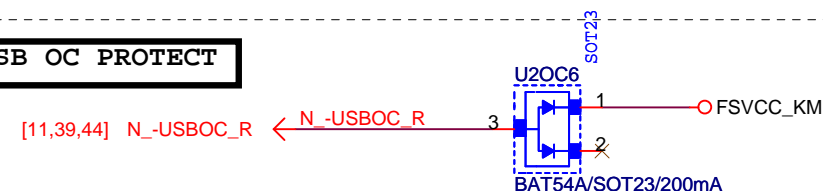


KB_MS_USB PWR

NET 可變, 與其他USB SHARE



USB OC PROTECT



Gigabyte Technology

Title

AUDIO JACK

Size

Document Number

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Rev

1.0

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Impedance=85 \pm 17.5%

NET 可變

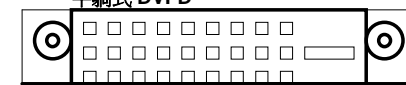
DVI_SCL

FSVCC_KM

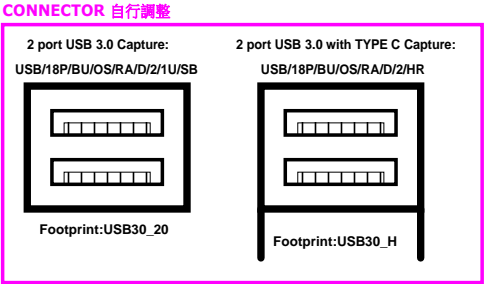
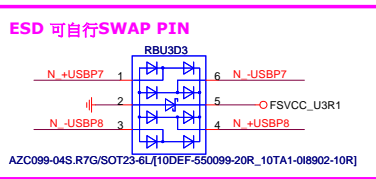
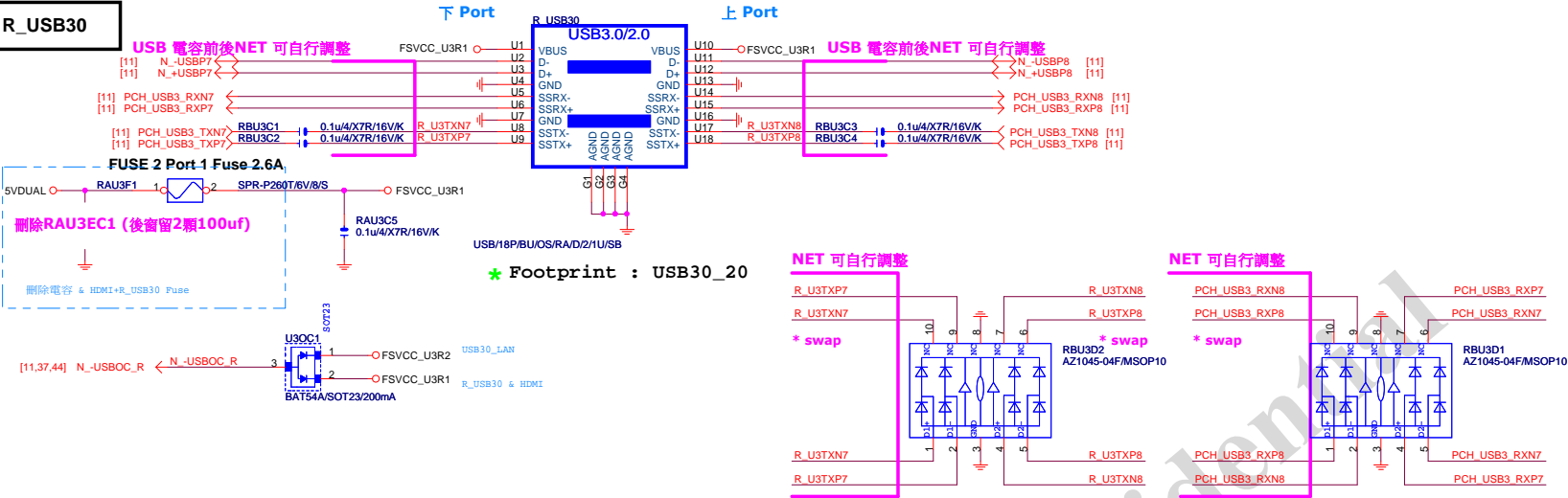
DVI_SDA

DVI_HP

AZC099-04S.R7/G/SOT23-6L(10DEF-55009S-20R_10TA1-018902-10F)



R_USB30



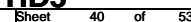
R_USB30_2

KB_MS_USB3

LAREQ1
MASK/0/4/SHT.

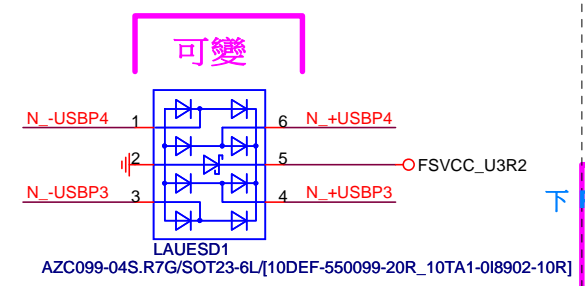


3VDUAL_LAN1



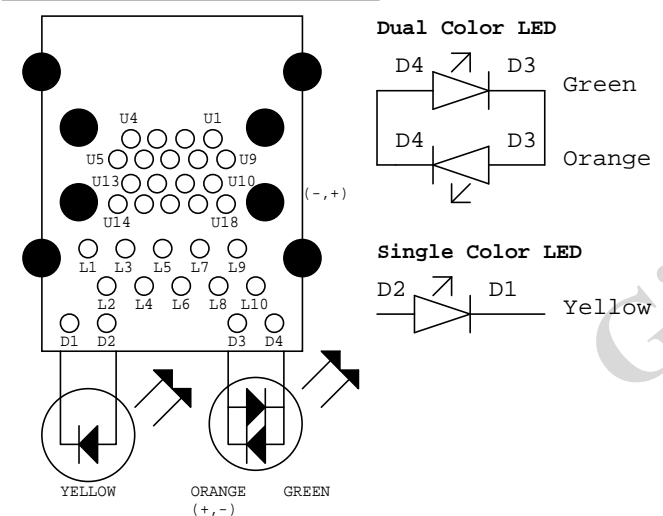
USB30_LAN CONNECTOR R2.01

RMA ESD PROTECT note:可變更USB NAME



USB上藍下藍:USB3+LAN/1G/GO,Y/OS/RA/D/G30
USB上白下藍:USB3+LAN/1G/GO,Y/OS/RA/D/G30/15KV/Q FLASH

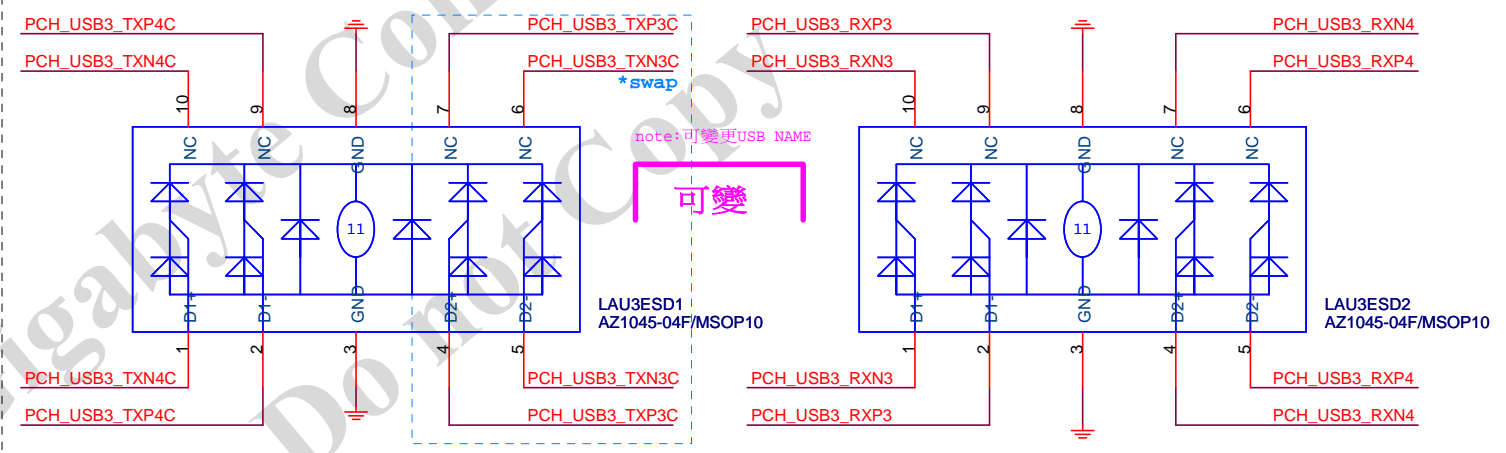
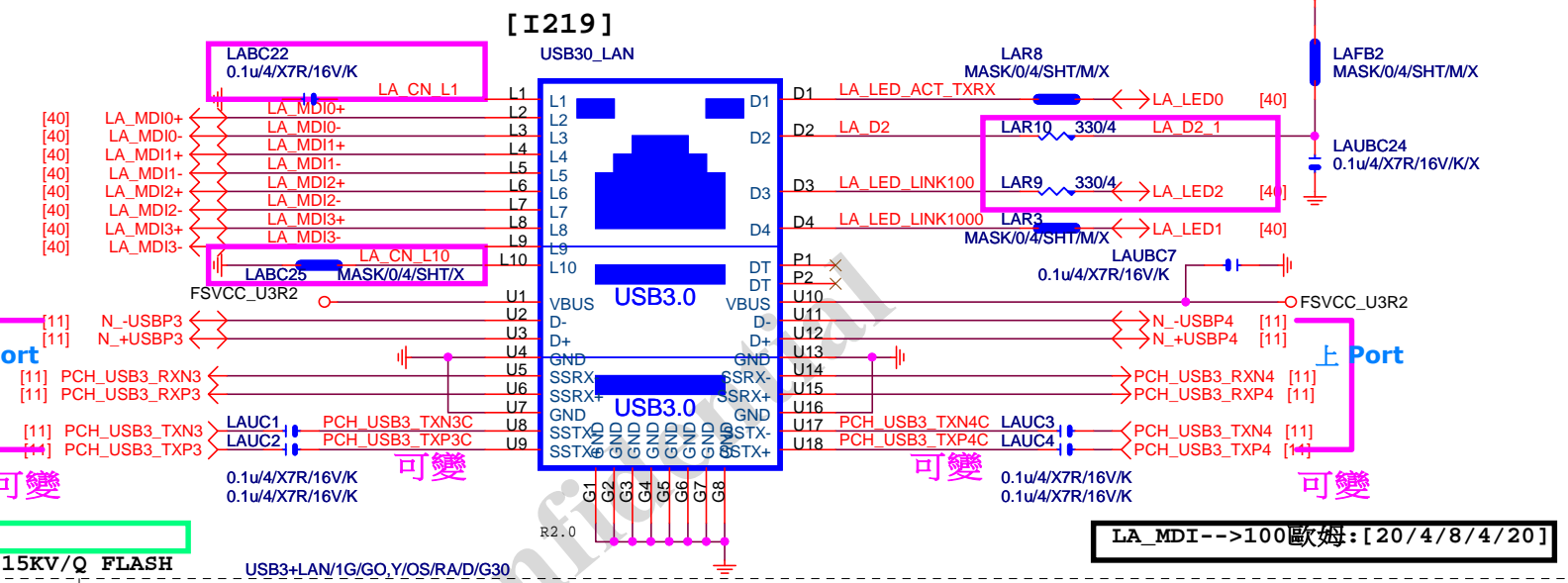
USB30_LAN LAYOUT示意圖



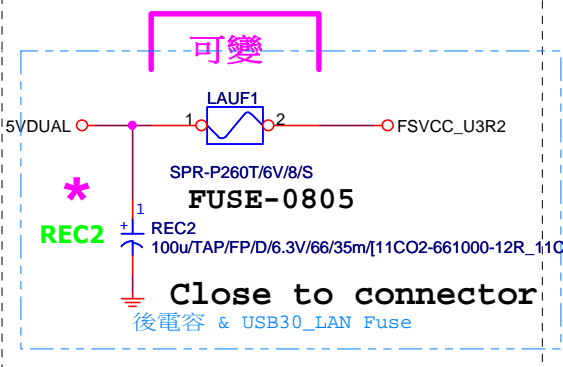
LAN_COVER FOOT PRINT:LAN_COVER



USB_LAN CONNECTOR note:可變更USB NAME

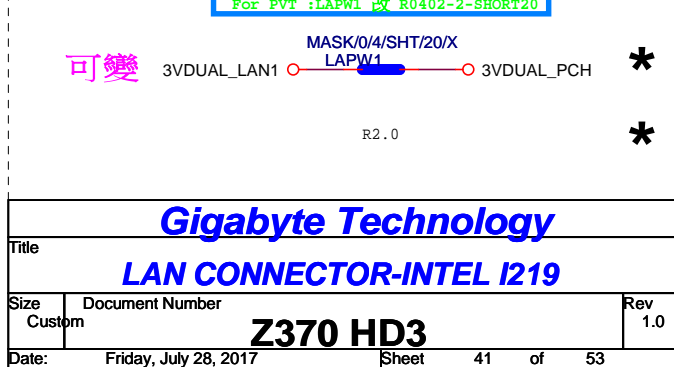


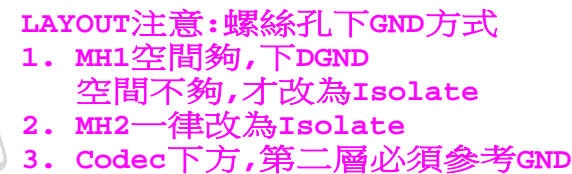
USB POWER note:可變更FUSE



EMI SHORT PAD

LAN POWER note: lan power連接及電流



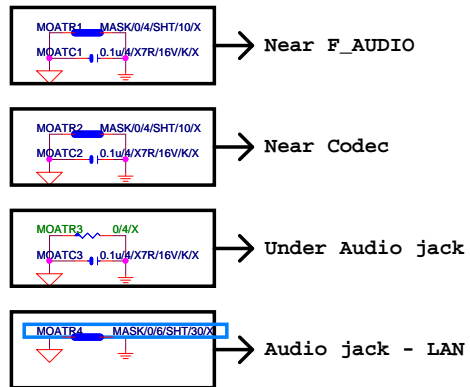


音效區域印刷



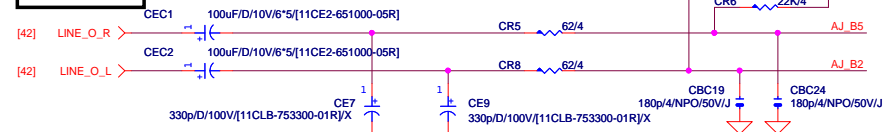
*料號後補

<p style="text-align: center;">Gigabyte Technology</p>			
<p style="text-align: center;">HD AUDIO ALC892</p>			
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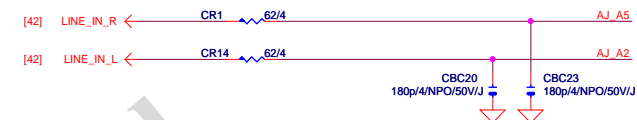
*量産前, 0ohm改short pad

LINE-OUT

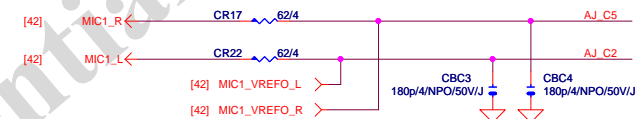


LINE-IN

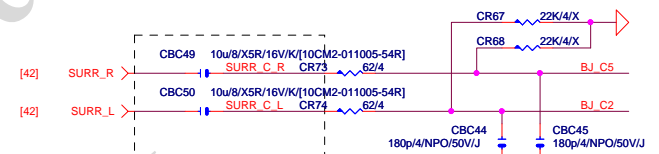
WIMA FOOTPRINT C2700PF-DIP-MASK



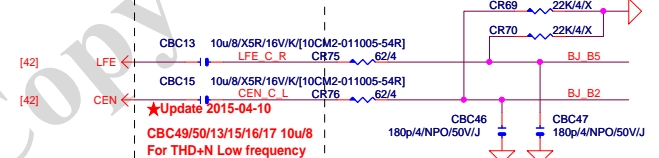
MIC-IN



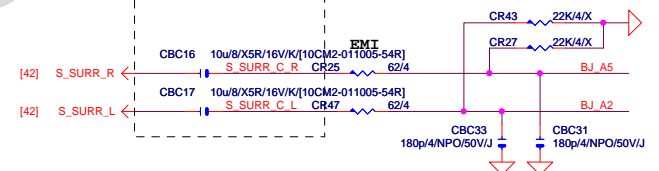
SURROUND



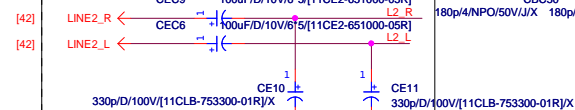
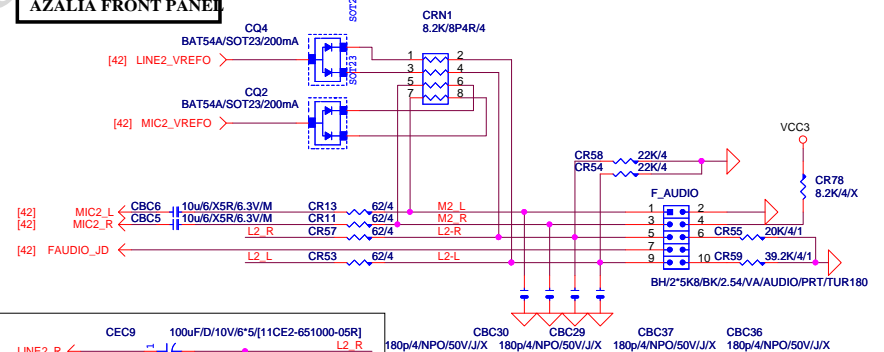
CEN/LFE



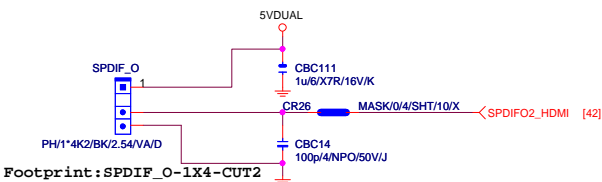
SURR BACK



AZALIA FRONT PANEL

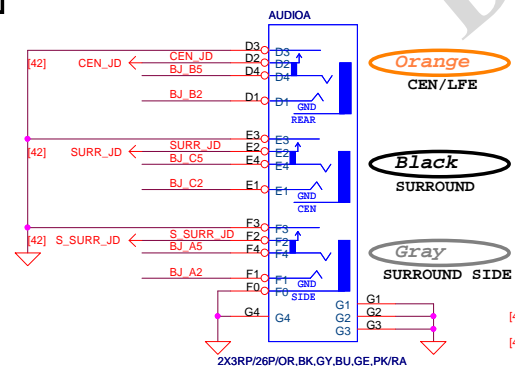
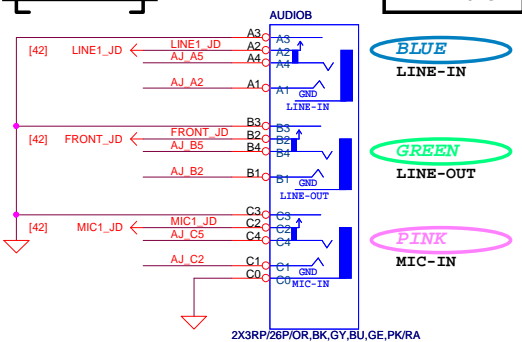
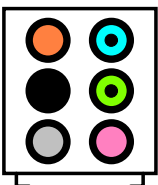


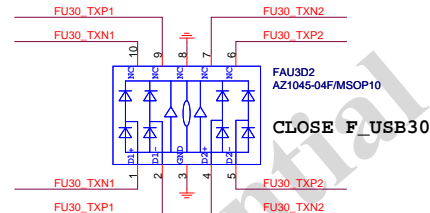
WIMA FOOTPRINT C2700PF-DIP-MASK



For HDMI SPDIF (依SPEC保留或移除)

AZALIA JACK



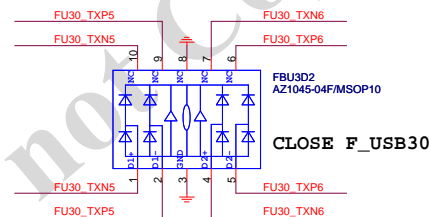


Front USB30 PIN:11NH3-02

Rear window

★Update 2015.10.01

Front USB30 P/N:11NH3-021210-51R/52R

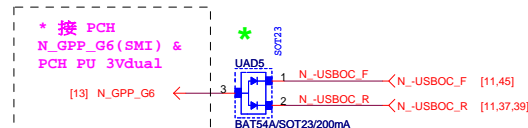


Rear window

★Update 2015.10.01

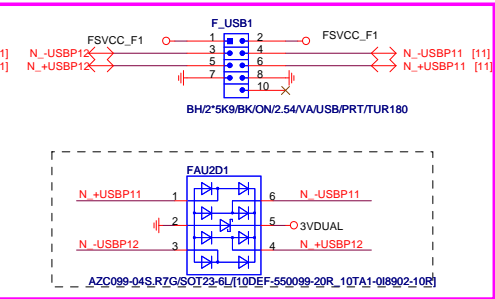
Front USB30 P/N:11NH3-02

Front USB30 P/N:11NH3-021210-51R/52R



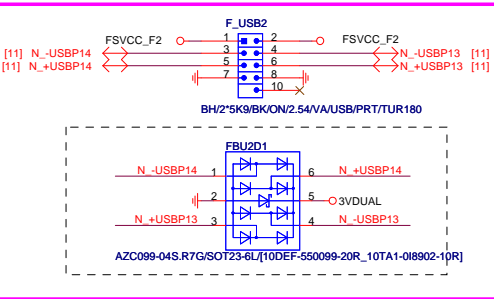
FRONT USB1

NET 可變



FRONT USB2

NET 可變



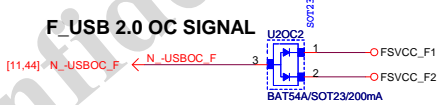
FRONT USB3

FRONT USB4

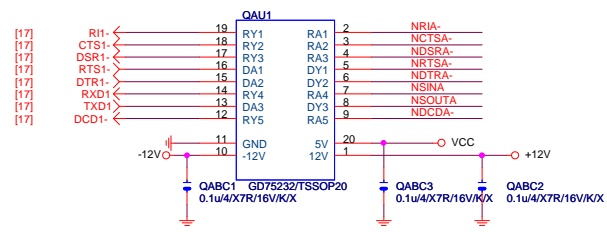
REAR USB1

REAR USB2

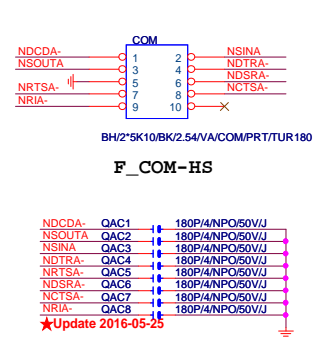
F_USB 2.0 OC SIGNAL



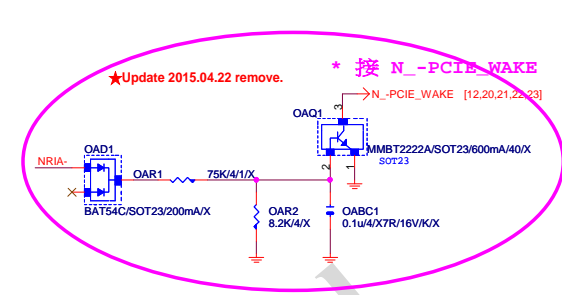
COM PORT Rev: 0.2



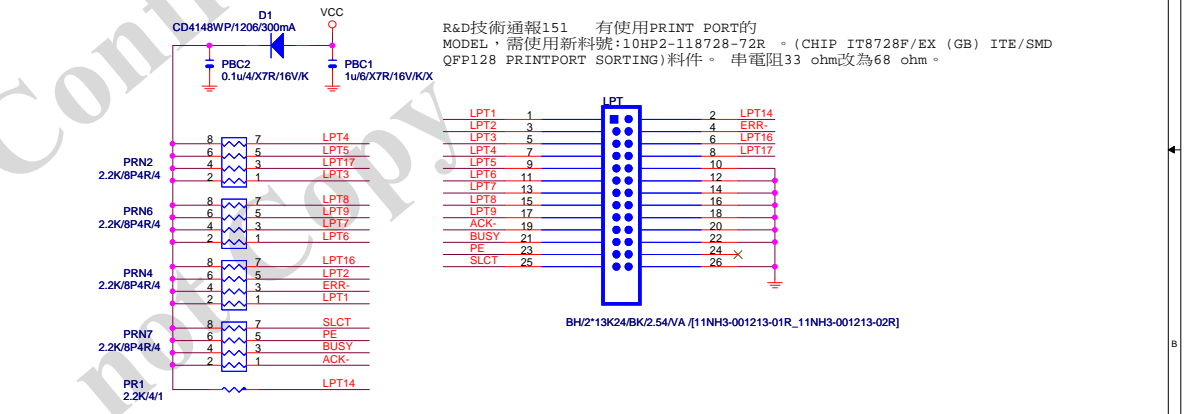
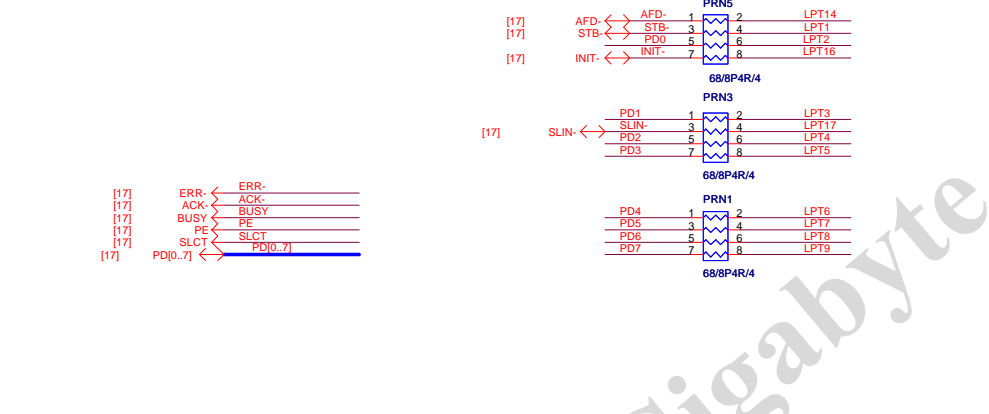
COMA



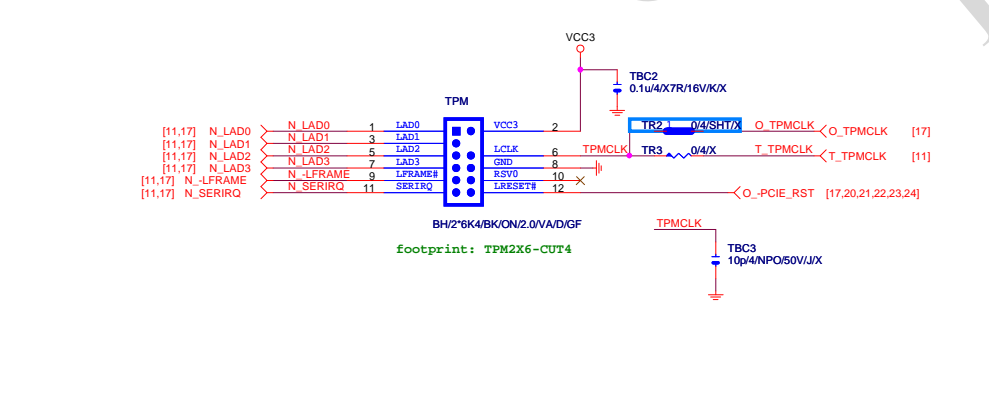
COM RI N/A



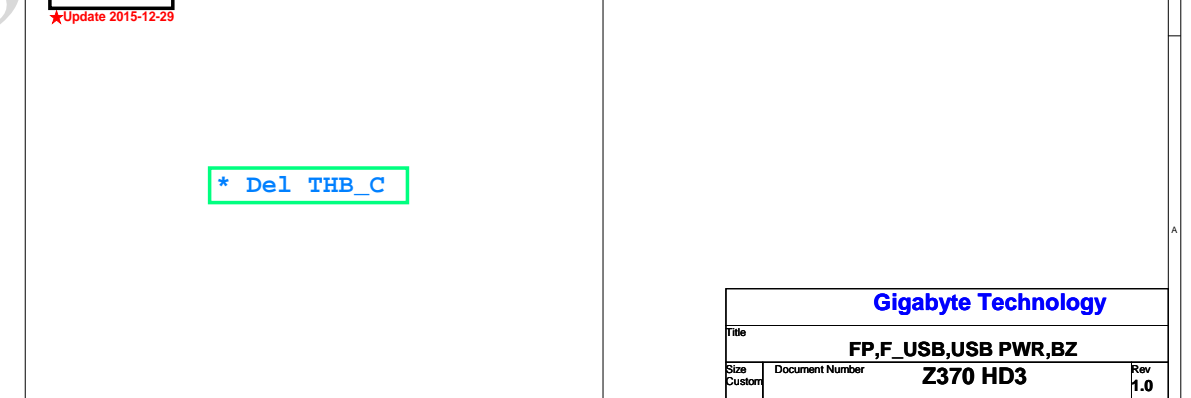
LPT PORT



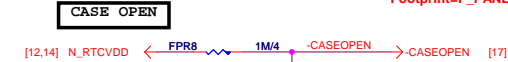
TPM CONNECT



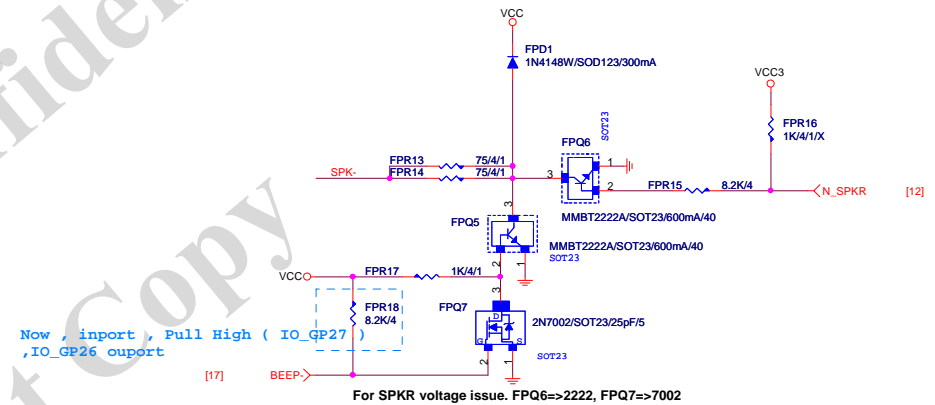
Thunderbolt

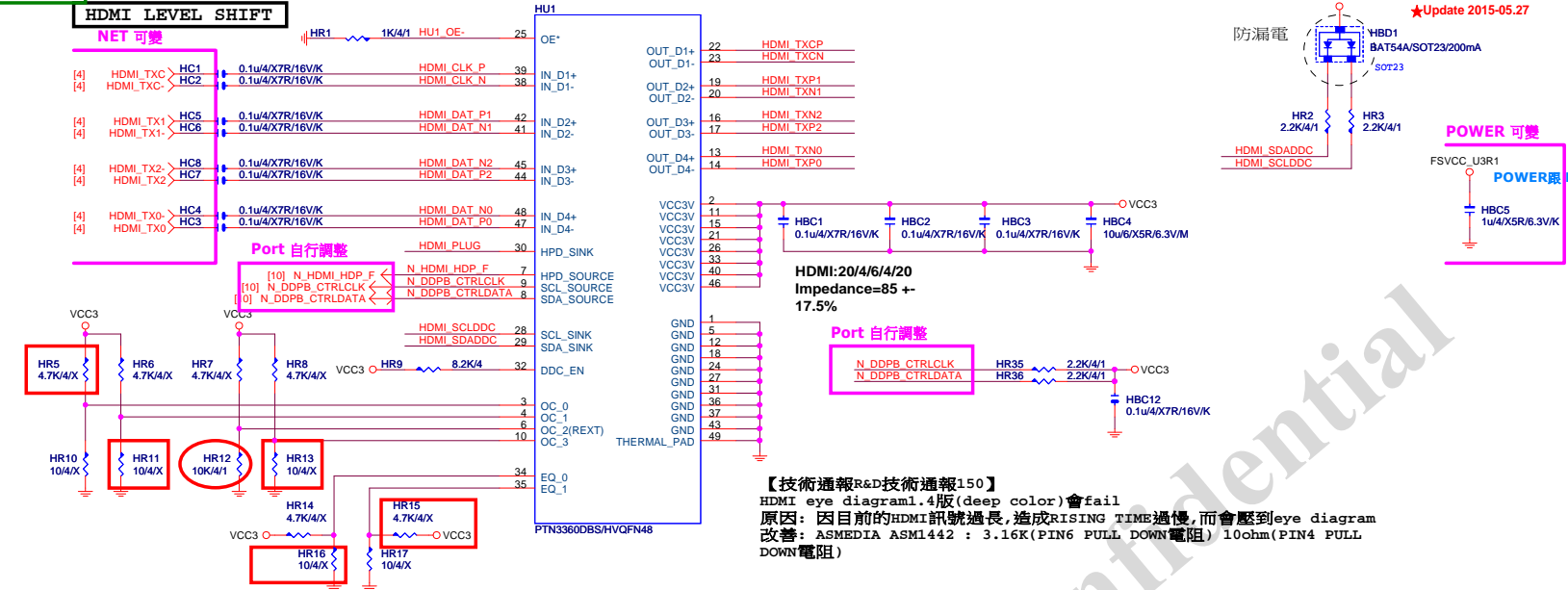


FRONT PANEL



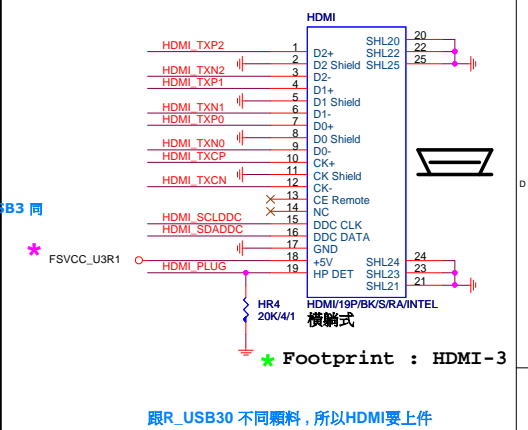
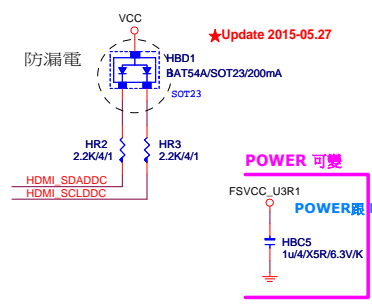
For SPKR voltage issue. FPQ6=>2222, FPQ7=>7002





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 diagram1.4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)



跟R_USB30 不同顆料, 所以HDMI要上件

* FSVCC_U3R1

模範式

★ Footprint : HDMI-3

跟R_USB30 不同顆料, 所以HDMI要上件

跟R_USB30 不同顆料, 所以HDMI要上件

跟R_USB30 不同顆料, 所以HDMI要上件

跟R_USB30 不同顆料, 所以HDMI要上件

跟R_USB30 不同顆料, 所以HDMI要上件

跟R_USB30 不同顆料, 所以HDMI要上件

跟R_USB30 不同顆料, 所以HDMI要上件

跟R_USB30 不同顆料, 所以HDMI要上件

跟R_USB30 不同顆料, 所以HDMI要上件

跟R_USB30 不同顆料, 所以HDMI要上件

跟R_USB30 不同顆料, 所以HDMI要上件

跟R_USB30 不同顆料, 所以HDMI要上件

跟R_USB30 不同顆料, 所以HDMI要上件

跟R_USB30 不同顆料, 所以HDMI要上件

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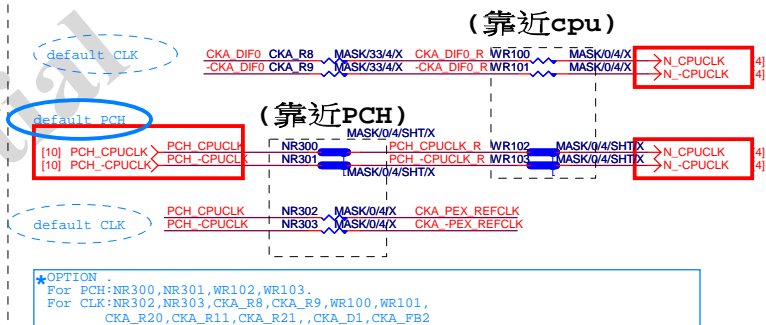
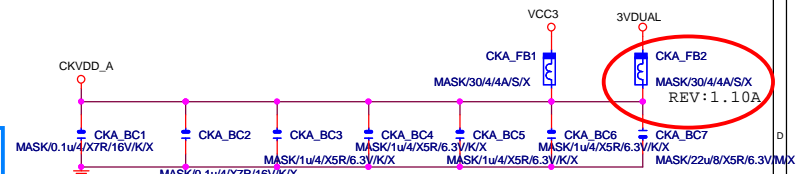
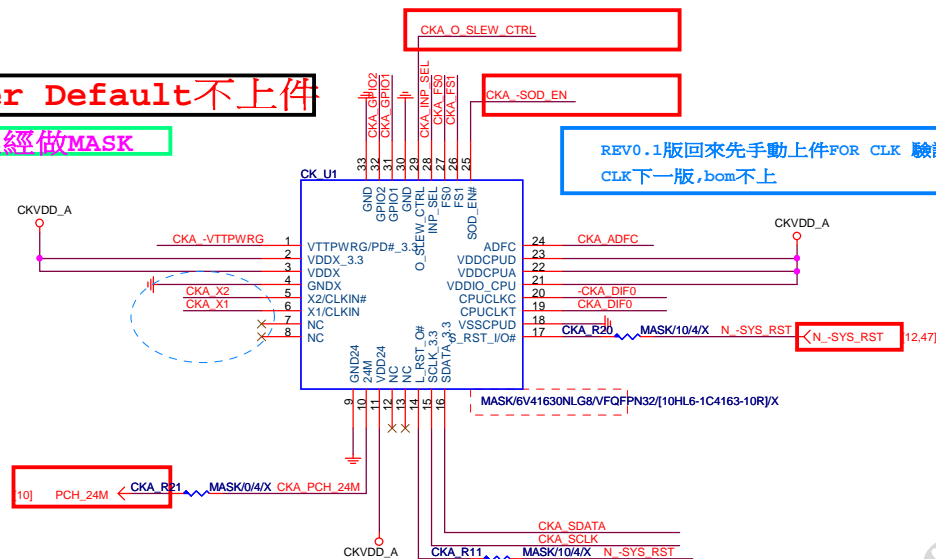
跟R_USB30 不同顆料, 所以HDMI要上件

跟R_USB30 不同顆料, 所以HDMI要上件

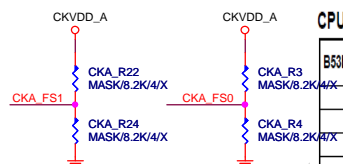
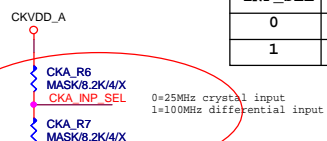
IDT6V41630

***CLK Buffer Default不上件**

不上件部分已經做MASK

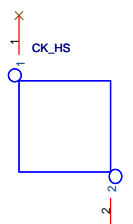
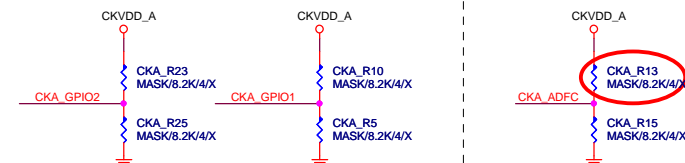


INP_SEL	Intput
0	Crystal
1	CLK_INP/M



CPU Frequency Selection and output Divider Table

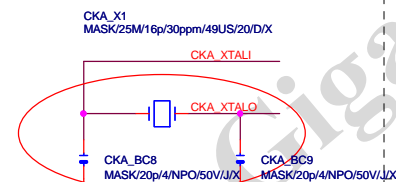
B53b1(FS1)	B53b0(FS0)	VCO (MHz)	CPU Divider	CPU (MHz)	Typ SS%	Typ SS ON/OFF
0	0	200.00	2.00	100.00	-	OFF
0	1	400.00	4.00	100.00	-	OFF
1	0	1000.00	10.00	100.00	-5.50%	ON
1	1	100.00	1.00	100.00	-	OFF



CK_HS/[11NH1-CBC001-01R]/X

Footprint : CLOCK BUFFER COVER

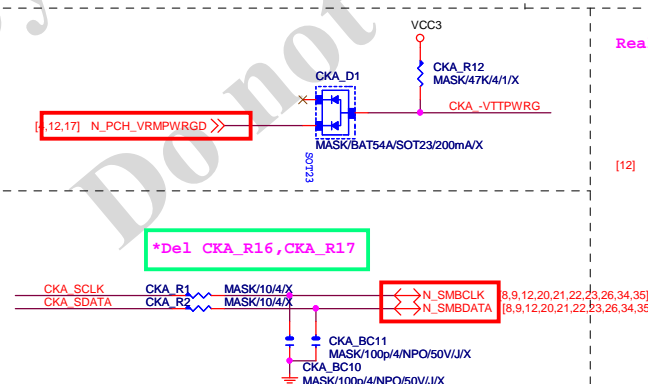
*可變，依需求上件不上件。



Defaults
CKX1.CKBC8.CKBC9.CKR18.CKR19 上件
CKR30.CKR31 不上件

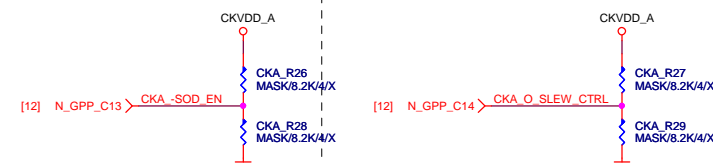


SMBUS



Real time selection function

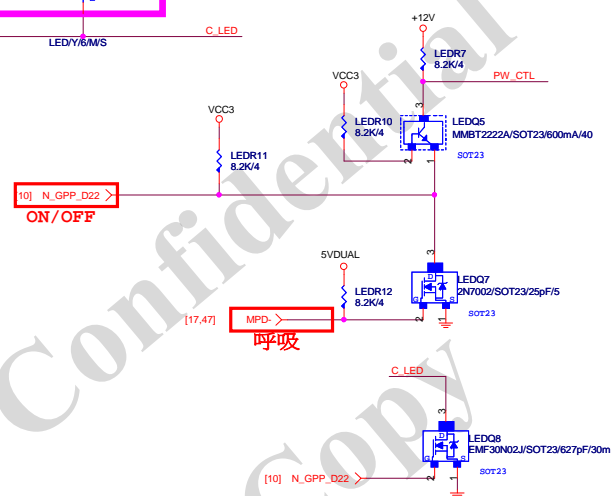
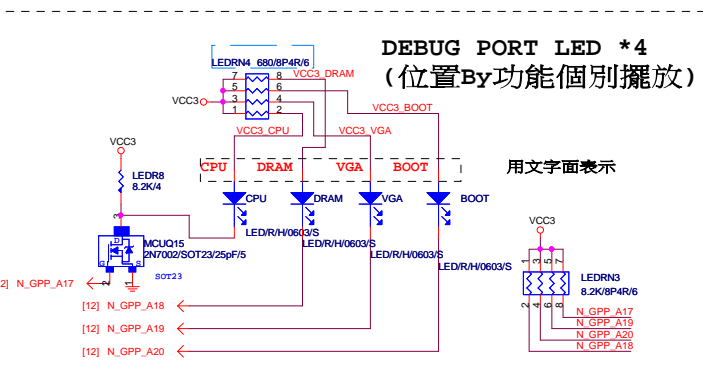
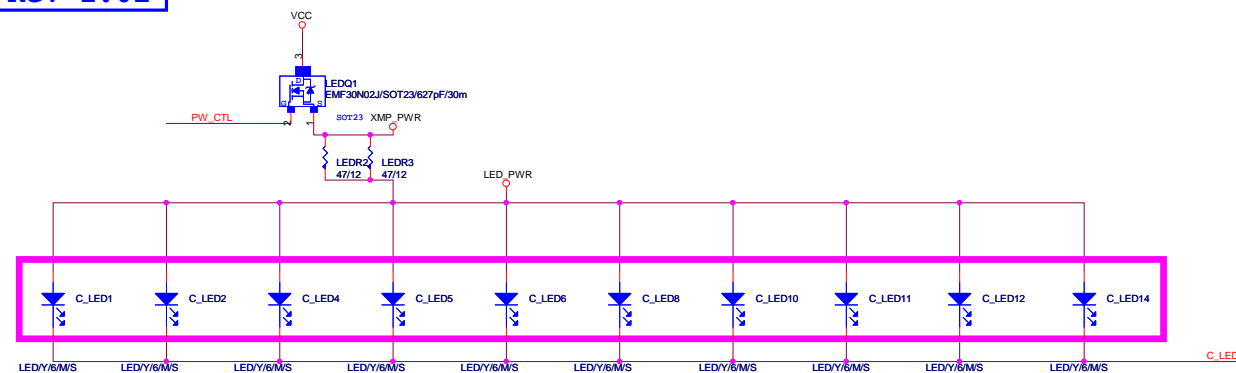
Frequency change slew rate control



GIGABYTE

Title **IDT6V41530_CLK BUFFER**

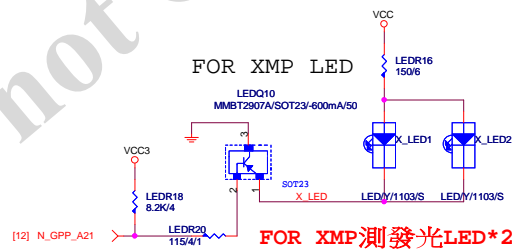
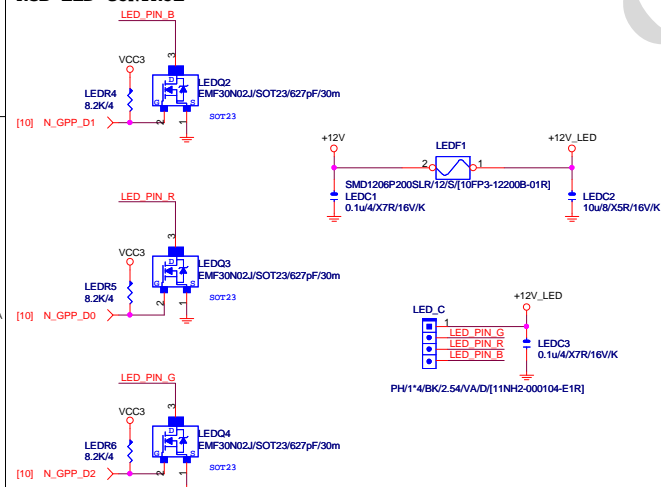
Size Custom	Document Number Z370 HD3	Rev 1.0
Date: Friday, July 28, 2017	Sheet 49 of 53	



Ambient LED Control

	N_GPP_D22	IO_GP91
Still Mode	H	L
OFF Mode	L	L
Pluse Mode	H	BREATH

RGB LED CONTROL



三色 LED Control

三色 LED Control			
	N_GPP_D0 (R)	N_GPP_D2 (G)	N_GPP_D1 (B)
藍	L	L	H
綠	L	H	L
淺綠	L	H	H
紅	H	L	L
粉紅	H	L	H
黃	H	H	L
白光	H	H	H
循環	順序: 藍-綠-淺綠- 紅-粉紅-黃-白光 切換間隔時間為 1 秒		

CLOSE SIO

EMIC1
100p/4/NPO/50V/J/X

[12,17,30] N_SLP_S3 ←

EMIC2
100p/4/NPO/50V/J/X

[12,17,31,34] N_S4_S5 ←

*Del EMIC3

CLOSE PCH

EMIC4
100p/4/NPO/50V/J/X

[4,12] N_CPUPWROK ←

GIGABYTE™

Title

EMI/ESDSize
A

Document Number

Z370 HD3

Rev

1.0

Date: Friday, July 28, 2017

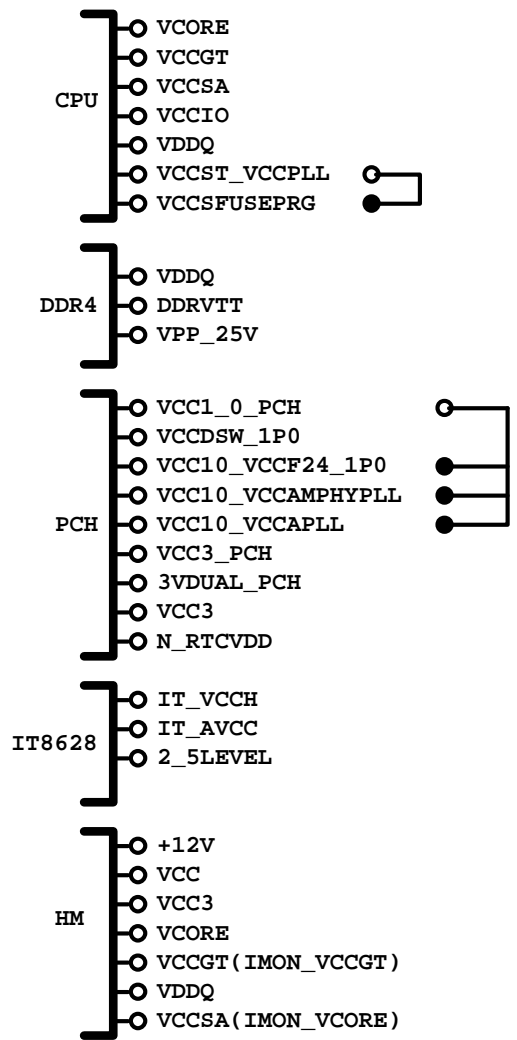
Sheet

51

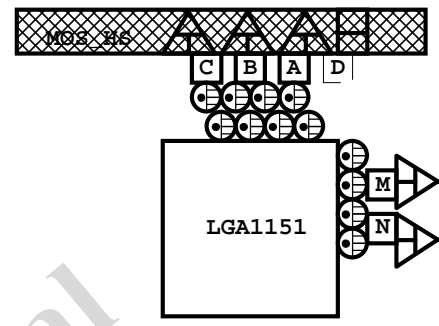
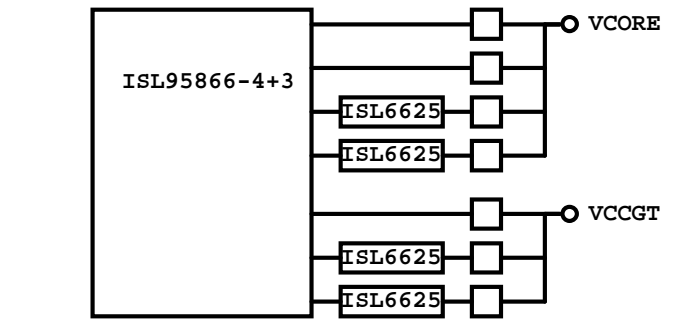
of

53

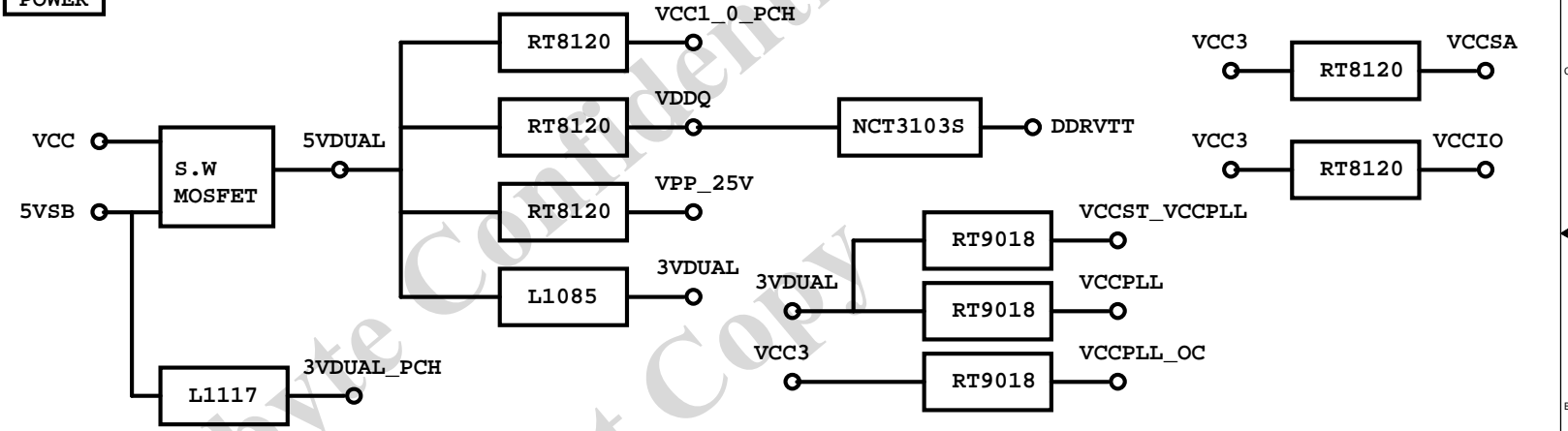
POWER BLOCK MAP



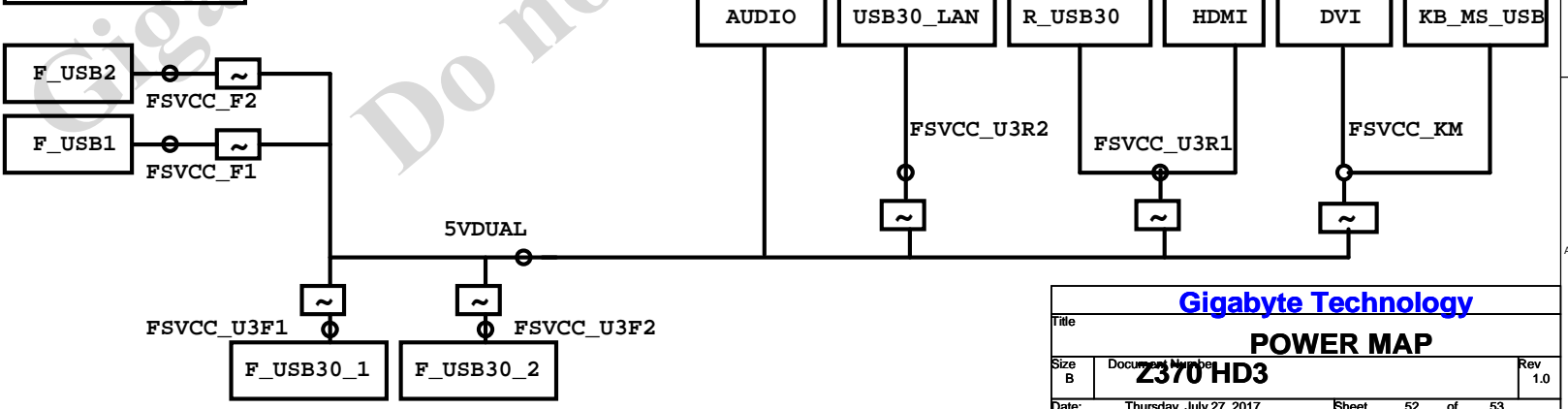
VCORE/VCCGT



POWER



FUSE POWER F/R



Gigabyte Technology			
Title			
POWER MAP			
Size B	Document Number	Rev 1.0	
Z370 HD3			
Date:	Thursday, July 27, 2017	Sheet	52 of 53

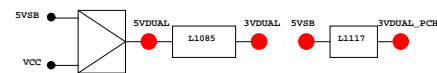
PCH GPIO LIST TABLE

PIN NAME	PWR	Default	USAGE	NOTE
GPP_A0	MAIN	H-Z	RCIN#	N_KBRST
GPP_A1	MAIN	H-Z	LAD0	N_LAD0
GPP_A2	MAIN	H-Z	LAD1	N_LAD1
GPP_A3	MAIN	H-Z	LAD2	N_LAD2
GPP_A4	MAIN	H-Z	LAD3	N_LAD3
GPP_A5	MAIN	H-Z	LFRAME	N_LFRAME
GPP_A6	MAIN	H-Z	SERIRQ	N_SERIRQ
GPP_A7	MAIN	H-Z	PIRQA#	N_LDRQ0
GPP_A8	MAIN	H-Z	CLKRUN	N_GPP_A8
GPP_A9	MAIN	H-Z	CLKOUT	T_FPMCLK/N_LPC24M
GPP_A11	MAIN	H-Z	PME#	N_P_PME
GPP_A12	MAIN	H-Z	GPI	N_GPP_A12
GPP_A13	MAIN	H-Z	MANR#	N_S_WARN
GPP_A14	MAIN	H-Z	STAT#	N_GPP_A14
GPP_A15	MAIN	H-Z	ACK#	N_S_ACK
GPP_B0	MAIN	H-Z	ZPO	N_DDR_V_SEL
GPP_B2	MAIN	H-Z	GPI	N_VHAIERT
GPP_B3	MAIN	H-Z	GPI	N_GPP_B3
GPP_B4	MAIN	H-Z	GPI	N_GPP_B4
GPP_B5	MAIN	H-Z	GPI	-PCIRX16_PR
GPP_B6	MAIN	H-Z	GPI	-PCIRX1_PK1
GPP_B7	MAIN	H-Z	GPI	-PCIRX1_PK2
GPP_B8	MAIN	H-Z	GPI	-PCIRX4_PK
GPP_B9	MAIN	H-Z	GPI	-PCIRX1_PK3
GPP_B10	MAIN	H-Z	GPI	LA_-CLKREQ
GPP_B12	MAIN	H-Z	SLP_S0	N_SLP_S0
GPP_B13	MAIN	H-Z	PLTRST	N_PPMRST
GPP_B14	MAIN	H-Z	GPO	N_SPKR
GPP_B15	MAIN	H-Z	GPI	N_GPP_B15
GPP_B16	MAIN	H-Z	GPI	N_GPP_B16
GPP_B22	MAIN	H-Z	GPO	N_GPP_B22
GPP_B23	MAIN	H-Z	GPO	N_PCH_RST
GPP_C0	MAIN	H-Z	SHBCLK	N_SHBCLK
GPP_C1	MAIN	H-Z	SHBDATA	N_SHBDATA
GPP_C2	MAIN	H-Z	GPO	N_LPCPME
GPP_C3	MAIN	H-Z	SHBCLK	N_SHBCLK
GPP_C4	MAIN	H-Z	SHBCLK	N_SHBCLK
GPP_C5	MAIN	H-Z	SHBCLK	N_SHBCLK
GPP_C6	MAIN	H-Z	SHBCLK	N_SHBCLK
GPP_C7	MAIN	H-Z	SHBCLK	N_SHBCLK
GPP_C21	MAIN	H-Z	GPI	N_GPP_C21
GPP_C23	MAIN	H-Z	GPI	N_GPP_C23
GPP_D4	MAIN	H-Z	GPI	N_GPP_D4
GPP_D7	MAIN	H-Z	GPI	N/A
GPP_D8	MAIN	H-Z	GPI	N/A
GPP_D9	MAIN	H-Z	GPI	N_GPP_D9
GPP_D10	MAIN	H-Z	GPI	N/A
GPP_D13	MAIN	H-Z	GPI	N/A
GPP_D23	MAIN	H-Z	GPI	N_GPP_D23
GPP_E0	MAIN	H-Z	GPI	N_GPP_E0
GPP_E1	MAIN	H-Z	GPI	N_GPP_E1
GPP_E2	MAIN	H-Z	GPI	N_GPP_E2
GPP_E3	MAIN	H-Z	GPI	N/A
GPP_E4	MAIN	H-Z	GPI	N_DEVSLP0
GPP_E6	MAIN	H-Z	GPI	N_GPP_E6
GPP_E8	MAIN	H-Z	GPI	N_SATALED
GPP_E9	MAIN	H-Z	GPI	N_USBOC_F
GPP_E10	MAIN	H-Z	GPI	N_USBOC_R
GPP_E11	MAIN	H-Z	GPI	N_USBOC_F
GPP_E12	MAIN	H-Z	GPI	N_USBOC_R
GPP_F0	MAIN	H-Z	GPI	N_GPP_F0
GPP_F1	MAIN	H-Z	GPI	N_GPP_F1
GPP_F2	MAIN	H-Z	GPI	N_GPP_F2
GPP_F3	MAIN	H-Z	GPI	N_GPP_F3
GPP_F4	MAIN	H-Z	GPI	N_GPP_F4
GPP_F5	MAIN	H-Z	GPI	N_GPP_F5
GPP_F6	MAIN	H-Z	GPI	N/A
GPP_F10	MAIN	H-Z	GPI	N_GPP_F10
GPP_F11	MAIN	H-Z	GPI	N_GPP_F11
GPP_F12	MAIN	H-Z	GPI	N_GPP_F12
GPP_F13	MAIN	H-Z	GPI	N_GPP_F13
GPP_F14	MAIN	H-Z	GPI	A_-SKTOCC
GPP_F15	MAIN	H-Z	GPI	N_USBOC_R
GPP_F16	MAIN	H-Z	GPI	N_USBOC_F
GPP_F17	MAIN	H-Z	GPI	N_USBOC_F
GPP_F18	MAIN	H-Z	GPI	N_USBOC_7
GPP_F22	MAIN	H-Z	GPI	N_GPP_F22
GPP_F23	MAIN	H-Z	GPI	N_GPP_F23
GPP_G11	MAIN	H-Z	FANPWM2	N/A
GPP_G12	MAIN	H-Z	GPI	N/A
GPP_G13	MAIN	H-Z	GPI	N_CPU_S1
GPP_G14	MAIN	H-Z	GPI	N_GT_S
GPP_G15	MAIN	H-Z	GPI	N_CPU_S
GPP_G18	MAIN	H-Z	GPI	N_GPP_G18
GPP_G19	MAIN	H-Z	GPI	N_GPP_G19
GPP_G20	MAIN	H-Z	GPI	N_GPP_G20
GPP_G21	MAIN	H-Z	GPI	N_GPP_G21
GPP_G22	MAIN	H-Z	GPI	IMON_GPIO
GPP_H0	MAIN	H-Z	GPI	N2A_-CLKREQ
GPP_H12	MAIN	H-Z	GPO	N/A
GPP_H19	MAIN	H-Z	GPI	N_GPP_H19
GPP_H20	MAIN	H-Z	GPI	N_GPP_H20
GPP_H21	MAIN	H-Z	GPI	N_GPP_H21
GPP_H22	MAIN	H-Z	GPI	N_GPP_H22
GPP_I0	MAIN	H-Z	GPI	N_HDMI_HDP_F
GPP_I1	MAIN	H-Z	GPI	N_DVI_HDP
GPP_I2	MAIN	H-Z	GPI	N_VGA_HDP_F

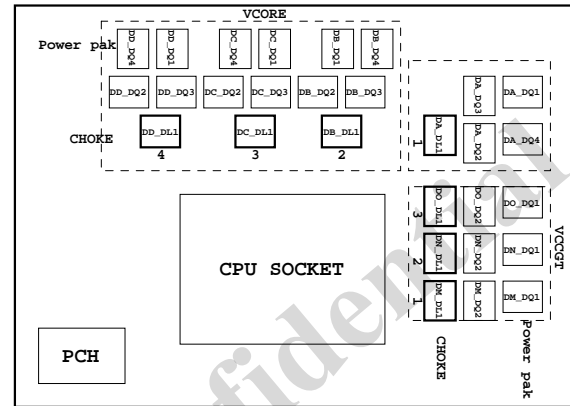
PIN NAME	PWR	Default	USAGE	NOTE
GPP_I3	MAIN	H-Z	GPI	N_GPP_I3
GPP_I4	MAIN	H-Z	GPI	N_GPP_I4
GPP_I5	MAIN	H-Z	GPI	N_DDPB_CTRLCLK
GPP_I6	MAIN	H-Z	GPO	N_DDPB_CTRLCLK
GPP_I7	MAIN	H-Z	GPI	N_DDPB_CTRLCLK
GPP_I8	MAIN	H-Z	GPO	N_DDPB_CTRLCLK
GPP_I9	MAIN	H-Z	GPI	N_DDPB_CTRLCLK
GPP_I10	MAIN	H-Z	GPO	N_DDPB_CTRLCLK
GPD0	STBY	BATLOW	N_BATLOW	P/U 8.2K 3VDUAL_PCH
GPD1	STBY	ACPRESENT	N_GP_D1	P/U 8.2K 3VDUAL_PCH
GPD2	STBY	LAM_MAKE	N_LAM_MAKE	P/U 8.2K 3VDUAL_PCH
GPD3	STBY	PWRBTN	O_PWRBTN	P/U 8.2K 3VDUAL_PCH
GPD4	STBY	SLP_S3	N_SLP_S3	N/A
GPD5	STBY	SLP_S4	N_S4_S5	N/A
GPD6	STBY	SLP_A	N_SLP_A	N/A
GPD8	STBY	SUSCLK	N_SUSCLK	P/D 1.5K GND
GPD10	STBY	SLP_S5	N_SLP_S5	N/A
GPD11	STBY	LAMPHYC	N_LAN_DIS	N/A

Super I/O ITE8686 GPIO Table

PIN NAME	USAGE	NOTE
PCIRST3#/GP10/VDIMM_STR_EN	N/A	
PCIRST2#/GP11	O_-PCIR_RST	
PCIRST1#/GP12	O_-PPMRST2	
SVC/PECI_RQT/GP14	N_-THERMTRIP	
SLP_SUS#/PCIRST1#/CIRT2/GP15	N_GPP_B20	
PS1_L/FAN_CLT5/CIRKX2/GP16	PIN	
R12#/GP17	IO_GP17	
THR_PWM_CTS2#/GP20	PIN	
IO_SM1DCD2#/GP21	PIN	
SPI_S1/GP22	-ICH_SPI_CS	
DPWRCK/CPU_PG/GP23	N_PCH_DPWRCK	
FAN_TAC5/RTS2#/GP24	PIN	
FAN_TAC4/DSR2#/GP25	FANIO4	
INV_OUT1/OUT2/GP26	MB_ID2	
INV_IN1/SIN2/GP27	BEEP-	
ATXPG/GP30	PWOK_IO	
CT81/GP31	CT81-	
OCMDT3/R11#/GP32	R11-	
OCMDT2/DCD1#/GP33	DCD1-	
VTT_PMRGD/GP34	VTT_PMRGD	
VCC18_EN/GP35	VCC18_EN	
FAN_CTL3/GP36	FANPWM3	
FAN_TAC3/GP37	FANIO3	
3VSBSEN/GP40	PIN	
OCMDT1/SIN1/GP41	RXD1	
GP42/SCK/FAN_CTL4	FANPWM4	
FANSEN#/GP43	-PPMRSTW	
PWRCKN/GP44	O_PMRSTW	
OCMDT0/DSR1#/GP45	DSR1-	
CE2_N/GP47/JP6	CEB_N	
GP50/JP1	O_TPMCLK	
FAN_CTL2/GP51	FANPWM2	
FAN_TAC2/GP52	FANIO2	
SUSC#N/GP53	N_S4_S5	
PME#/GP54	N_LPCPME	
RSMRST#/CIRKX1/GP55	O_-RSMRST	
MCLK/FAN_TAC6/GP56	MCLK	
MDAT/FAN_CTL6/GP57	MDAT	
KCLK/GP60	KCLK	
KDAT/GP61	KDAT	
KRST#/GP62	N_KBRST	
HOLD_B#/GP63	-SPI_HOLD_B	
HOLD_B#/GP64	-SPI_HOLD_M	
VLDI_EN/PCH_DO/GP65	PIN	
VCC1_05_EN/GP66	VCC1_0_EN	
GP67	N_RTRCST	
USB_F81/PD0/GP70	PD0	
USB_F82/PD1/GP71	PD1	
USB_F83/PD2/GP72	PD2	
USB_F83/PD3/GP73	PD3	
USB_F85/PD4/GP74	PD4	
USB_F86/PD5/GP75	PD5	
USB_F87/PD7/GP76	PD6	
USB_F88/PD8/GP77	PD7	
LS_IN1/SLCT/GP80	SLCT	
LS_OUT1/PE/GP81	PE	
LS_IN2/BUSY/GP82	BUSY	
LS_OUT2/ACK#/GP83	ACK-	
IPHONE_CHARGE#/SLIN#/GP84	SLIN-	
OC_IN/INIT#/GP85	INIT-	
OC_OUT/AFD#/GP86	AFD-	
USB_OC2/STB#/GP87	STB-	
DDR_EN/GP90	MA_EN	
PWRLED/GP91	MPD-	
HOLD_OUT/GP92	PIN	
HOLD_IN/GP93	IO_GP93	
PROCHOT#/GP94	-PROCHOT_CON	
CPUPMRGD/GP95	PIN	
PCH_VRMPMRGD/GP96	N_PCH_VRMPMRGD	
VR_RDY/GP97	VR_RDY	



PWM各相位的擺法如下:



BIOS超電壓對應表:

線路圖名稱	BIOS選項
Vcore	CPU Vcore
VCCGT	CPU Graphic Voltage
VCCIO	CPU VCCIO
VCCSA	CPU System Agent Voltage
VCCST_VCCPLL	VCC Substained
VCCPLL	VCCPLL
VCCPLL_OC	VCCPLL_OC
VCC1_0_PCH	PCH core
VDDQ	DRAM voltage
VPP_25V	DRAM VPP voltage
DDRVT	DRAM Termination

散熱模組料號:

Z370-HD3 :
 TMOS
 12SP2-S09426-21R/22R/23R
 RMOS
 12SP2-S08026-21R/22R/23R
 PCH_HS
 12SP2-S08607-01R/02R/03R
 12SP2-PT*表示組合料號(2合1或3合1料件)

	3 pin FAN control	4 pin FAN control	FAN speed	Controller
CPU FAN	FANPWM1	VCC	FANIO1	IT8686
SYS FAN1	FANPWM2	VCC	FANIO2	IT8686
SYS FAN2	FANPWM3	VCC	FANIO3	IT8686
SYS FAN3	FANPWM4	VCC	FANIO4	IT8686