

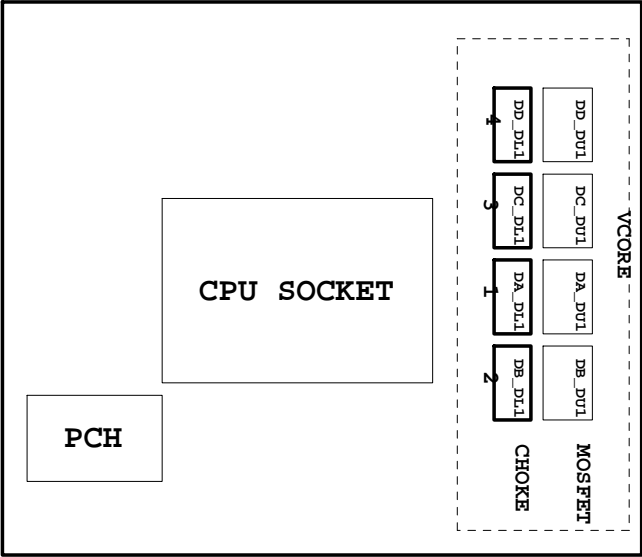
Model Name: GA-H110M-S2PH DDR3

SHEET TITLE Rev 1.0

01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	CPU_LGA1151-A
05	CPU_LGA1151-B-DDR3
06	CPU_LGA1151-C
07	CPU_LGA1151-D
08	DDR 3 CHANNEL A
09	DDR 3 CHANNEL B
10	PCH CLOCK BUFFER
11	PCH DMI,USB,PCIE
12	PCH MISC
13	PCH SATA,PCIE,SATA SATA CONN
14	PCH_PWR,GND
15	Dual BIOS
16	I/O ITE8628
17	HWM
18	FAN CTRL-SIO
19	PCIEX16 SLOT
20	PCIEX1 SLOT
21	IT8892E/FX
22	PCI SLOT 1, 2
23	ISL95858_856 PWM
24	ISL95858_856 MOS_VCORE
25	ISL95858_856 MOS_VCCGT
26	VCCSA_VCCIO_VCCPLL
27	RT8237_DDR_BEAD
28	RT8237_PCH-BEAD

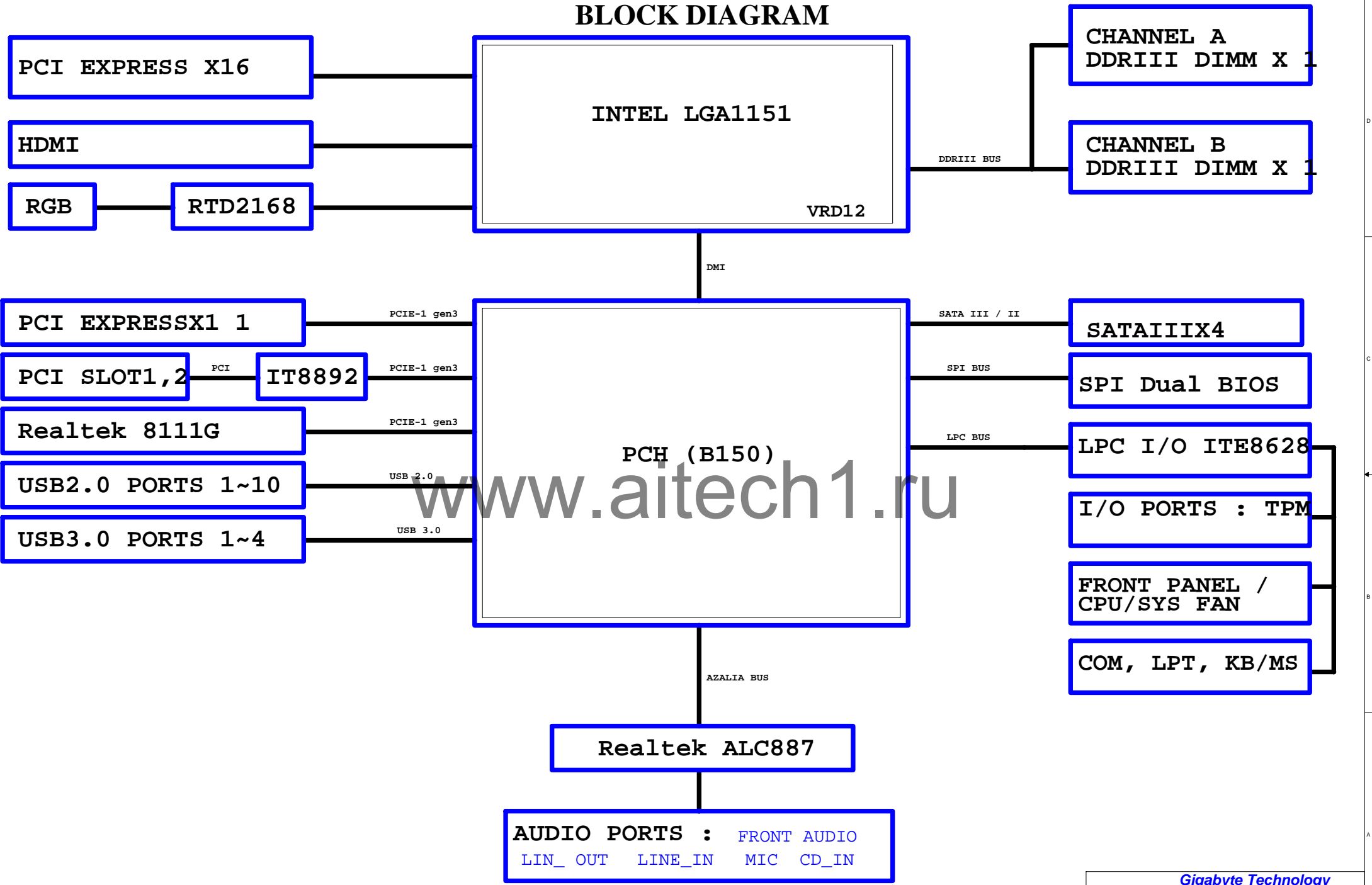
SHEET TITLE

29	DISCRETE POWER
30	ATX POWER , -PROCHOT
31	KB_MS_USB
32	HDMI CONN
33	RTD2168 - DP to VGA
34	R_USB30
35	Realtek 8111G USB 2.0
36	ALC887-VD2 CODEC
37	REAR AUDIO JACK
38	F_USB30
39	F_USB20
40	COM , LPT
41	F_PANEL, EMI
42	POWER MAP
43	POWER 零件使用表
44	TABLE LIST

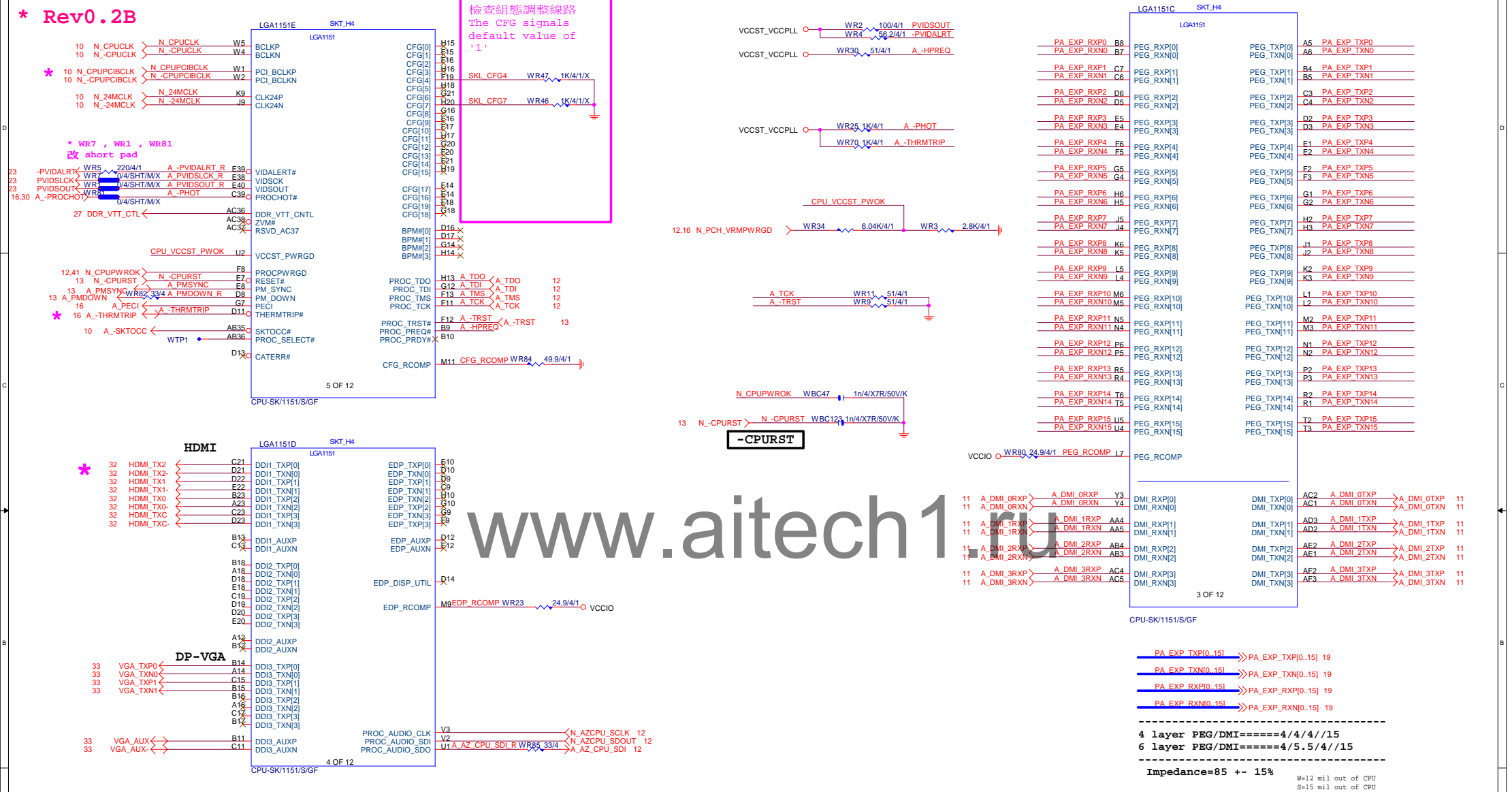


[illegible][illegible][illegible][illegible][illegible]

BLOCK DIAGRAM



* Rev0.2B



```
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
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4 layer HDMI/DP/eDP/=====4/4/4//15
6 layer HDMI/DP/eDP/=====4/5.5/4//15
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Impedance=85 +- 15%

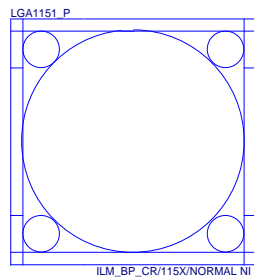
Bifurcation Config.	Signals Lanes		
	CFG[6]	CFG[5]	CFG[2]
1x16	1	1	1
1x16 Reversed	1	1	0
2x8	1	0	1
2x8 Reversed	1	0	0
1x8+2x4	0	0	1
1x8+2x4 Reversed	0	0	0

* DDR3 net

LGA1151A		SKT_H4	
LGA1151		LGA1151	
MDA0 AE38	DDR0_DQ[0]	DDR0_CK[P0]	AW18 M_DCLKA0 <=> M_DCLKA0 8
MDA1 AE37	DDR0_DQ[1]	DDR0_CKN[0]	AW18 M_DCLKA0 <=> M_DCLKA0 8
MDA2 AG38	DDR0_DQ[2]	DDR0_CK[P1]	AW17 M_DCLKA1 <=> M_DCLKA1 8
MDA3 AG37	DDR0_DQ[3]	DDR0_CKN[1]	AW17 M_DCLKA1 <=> M_DCLKA1 8
MDA4 AE39	DDR0_DQ[4]	DDR0_CK[P2]	AW16 M_DCLKA1 <=> M_DCLKA1 8
MDA5 AE40	DDR0_DQ[5]	DDR0_CKN[2]	AW16 M_DCLKA1 <=> M_DCLKA1 8
MDA6 AG39	DDR0_DQ[6]	DDR0_CK[P3]	AW16 M_DCLKA1 <=> M_DCLKA1 8
MDA7 AG40	DDR0_DQ[7]	DDR0_CKN[3]	AW16 M_DCLKA1 <=> M_DCLKA1 8
MDA8 AJ38	DDR0_DQ[8]	DDR0_CKE[0]	AW24 CKEA0 <=> CKEA0 8
MDA9 AJ37	DDR0_DQ[9]	DDR0_CKE[1]	AW24 CKEA1 <=> CKEA1 8
MDA10 AL38	DDR0_DQ[10]	DDR0_CKE[2]	AW24 CKEA1 <=> CKEA1 8
MDA11 AL37	DDR0_DQ[11]	DDR0_CKE[3]	AW24 CKEA1 <=> CKEA1 8
MDA12 AJ40	DDR0_DQ[12]	DDR0_CS#0[0]	AW12 M_-CSA0 <=> M_-CSA0 8
MDA13 AJ39	DDR0_DQ[13]	DDR0_CS#1[0]	CAU11 M_-CSA1 <=> M_-CSA1 8
MDA14 AL39	DDR0_DQ[14]	DDR0_CS#2[0]	CAU13 M_-CSA1 <=> M_-CSA1 8
MDA15 AL40	DDR0_DQ[15]	DDR0_CS#3[0]	CAU10 M_-CSA1 <=> M_-CSA1 8
MDA16 AN38	DDR0_DQ[16]/DDR0_DQ[32]	DDR0_ODT[0]	AW11 MODT_A0
MDA17 AN40	DDR0_DQ[17]/DDR0_DQ[33]	DDR0_ODT[1]	AW11 MODT_A1
MDA18 AR38	DDR0_DQ[18]/DDR0_DQ[34]	DDR0_ODT[2]	AW10 MODT_A1
MDA19 AR37	DDR0_DQ[19]/DDR0_DQ[35]	DDR0_ODT[3]	AW10 MODT_A1
MDA20 AN39	DDR0_DQ[20]/DDR0_DQ[36]	DDR0_ODT[4]	AW10 MODT_A1
MDA21 AN37	DDR0_DQ[21]/DDR0_DQ[37]	DDR0_ODT[5]	AW10 MODT_A1
MDA22 AR39	DDR0_DQ[22]/DDR0_DQ[38]	DDR0_ODT[6]	AW10 MODT_A1
MDA23 AR40	DDR0_DQ[23]/DDR0_DQ[39]	DDR0_ODT[7]	AW10 MODT_A1
MDA24 AW37	DDR0_DQ[24]/DDR0_DQ[40]	DDR0_ODT[8]	AW10 MODT_A1
MDA25 AJ38	DDR0_DQ[25]/DDR0_DQ[41]	DDR0_ODT[9]	AW10 MODT_A1
MDA26 AV35	DDR0_DQ[26]/DDR0_DQ[42]	DDR0_ODT[10]	AW10 MODT_A1
MDA27 AW35	DDR0_DQ[27]/DDR0_DQ[43]	DDR0_ODT[11]	AW10 MODT_A1
MDA28 AJ37	DDR0_DQ[28]/DDR0_DQ[44]	DDR0_ODT[12]	AW10 MODT_A1
MDA29 AV37	DDR0_DQ[29]/DDR0_DQ[45]	DDR0_ODT[13]	AW10 MODT_A1
MDA30 AT35	DDR0_DQ[30]/DDR0_DQ[46]	DDR0_ODT[14]	AW10 MODT_A1
MDA31 AU35	DDR0_DQ[31]/DDR0_DQ[47]	DDR0_ODT[15]	AW10 MODT_A1
MDA32 AY8	DDR0_DQ[32]/DDR1_DQ[0]	DDR0_ODT[16]	AW10 MODT_A1
MDA33 AW8	DDR0_DQ[33]/DDR1_DQ[1]	DDR0_ODT[17]	AW10 MODT_A1
MDA34 AV6	DDR0_DQ[34]/DDR1_DQ[2]	DDR0_ODT[18]	AW10 MODT_A1
MDA35 AV8	DDR0_DQ[35]/DDR1_DQ[3]	DDR0_ODT[19]	AW10 MODT_A1
MDA36 AV8	DDR0_DQ[36]/DDR1_DQ[4]	DDR0_ODT[20]	AW10 MODT_A1
MDA37 AV8	DDR0_DQ[37]/DDR1_DQ[5]	DDR0_ODT[21]	AW10 MODT_A1
MDA38 AV6	DDR0_DQ[38]/DDR1_DQ[6]	DDR0_ODT[22]	AW10 MODT_A1
MDA39 AY6	DDR0_DQ[39]/DDR1_DQ[7]	DDR0_ODT[23]	AW10 MODT_A1
MDA40 AV4	DDR0_DQ[40]/DDR1_DQ[8]	DDR0_ODT[24]	AW10 MODT_A1
MDA41 AV4	DDR0_DQ[41]/DDR1_DQ[9]	DDR0_ODT[25]	AW10 MODT_A1
MDA42 AT1	DDR0_DQ[42]/DDR1_DQ[10]	DDR0_ODT[26]	AW10 MODT_A1
MDA43 AT2	DDR0_DQ[43]/DDR1_DQ[11]	DDR0_ODT[27]	AW10 MODT_A1
MDA44 AV3	DDR0_DQ[44]/DDR1_DQ[12]	DDR0_ODT[28]	AW10 MODT_A1
MDA45 AW4	DDR0_DQ[45]/DDR1_DQ[13]	DDR0_ODT[29]	AW10 MODT_A1
MDA46 AT4	DDR0_DQ[46]/DDR1_DQ[14]	DDR0_ODT[30]	AW10 MODT_A1
MDA47 AT3	DDR0_DQ[47]/DDR1_DQ[15]	DDR0_ODT[31]	AW10 MODT_A1
MDA48 AP2	DDR0_DQ[48]/DDR1_DQ[16]	DDR0_ODT[32]	AW10 MODT_A1
MDA49 AM4	DDR0_DQ[49]/DDR1_DQ[17]	DDR0_ODT[33]	AW10 MODT_A1
MDA50 AP3	DDR0_DQ[50]/DDR1_DQ[18]	DDR0_ODT[34]	AW10 MODT_A1
MDA51 AM3	DDR0_DQ[51]/DDR1_DQ[19]	DDR0_ODT[35]	AW10 MODT_A1
MDA52 AP4	DDR0_DQ[52]/DDR1_DQ[20]	DDR0_ODT[36]	AW10 MODT_A1
MDA53 AM2	DDR0_DQ[53]/DDR1_DQ[21]	DDR0_ODT[37]	AW10 MODT_A1
MDA54 AP1	DDR0_DQ[54]/DDR1_DQ[22]	DDR0_ODT[38]	AW10 MODT_A1
MDA55 AM1	DDR0_DQ[55]/DDR1_DQ[23]	DDR0_ODT[39]	AW10 MODT_A1
MDA56 AK3	DDR0_DQ[56]/DDR1_DQ[24]	DDR0_ODT[40]	AW10 MODT_A1
MDA57 AH1	DDR0_DQ[57]/DDR1_DQ[25]	DDR0_ODT[41]	AW10 MODT_A1
MDA58 AH2	DDR0_DQ[58]/DDR1_DQ[26]	DDR0_ODT[42]	AW10 MODT_A1
MDA59 AH2	DDR0_DQ[59]/DDR1_DQ[27]	DDR0_ODT[43]	AW10 MODT_A1
MDA60 AH4	DDR0_DQ[60]/DDR1_DQ[28]	DDR0_ODT[44]	AW10 MODT_A1
MDA61 AK2	DDR0_DQ[61]/DDR1_DQ[29]	DDR0_ODT[45]	AW10 MODT_A1
MDA62 AH3	DDR0_DQ[62]/DDR1_DQ[30]	DDR0_ODT[46]	AW10 MODT_A1
MDA63 AK1	DDR0_DQ[63]/DDR1_DQ[31]	DDR0_ODT[47]	AW10 MODT_A1
AU33	DDR0_ECC[0]	DDR0_DQSP[0]	AF38 M_DQSA0
AT33	DDR0_ECC[1]	DDR0_DQSP[1]	AK38 M_DQSA1
AW33	DDR0_ECC[2]	DDR0_DQSP[2]	AP38 M_DQSA2
AV33	DDR0_ECC[3]	DDR0_DQSP[3]	AV38 M_DQSA3
AU33	DDR0_ECC[4]	DDR0_DQSP[4]	AV38 M_DQSA4
AV33	DDR0_ECC[5]	DDR0_DQSP[5]	AV38 M_DQSA5
AW33	DDR0_ECC[6]	DDR0_DQSP[6]	AV38 M_DQSA6
AY33	DDR0_ECC[7]	DDR0_DQSP[7]	AV38 M_DQSA7

DDR CHANNEL A
CPU-SK/1151/S/GF

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ILM_BP_CR/115X/NORMAL NI

LGA1151B		SKT_H4	
LGA1151		LGA1151	
MDB0 AD34	DDR1_DQ[0]/DDR0_DQ[16]	DDR1_CK[P0]	AM20 M_DCLKB0 <=> M_DCLKB0 9
MDB1 AD35	DDR1_DQ[1]/DDR0_DQ[17]	DDR1_CKN[0]	AM21 M_DCLKB0 <=> M_DCLKB0 9
MDB2 AG35	DDR1_DQ[2]/DDR0_DQ[18]	DDR1_CK[P1]	AP22 M_DCLKB1 <=> M_DCLKB1 9
MDB3 AH35	DDR1_DQ[3]/DDR0_DQ[19]	DDR1_CKN[1]	AP22 M_DCLKB1 <=> M_DCLKB1 9
MDB4 AE35	DDR1_DQ[4]/DDR0_DQ[20]	DDR1_CK[P2]	AN20 M_DCLKB1 <=> M_DCLKB1 9
MDB5 AE34	DDR1_DQ[5]/DDR0_DQ[21]	DDR1_CKN[2]	AN21 M_DCLKB1 <=> M_DCLKB1 9
MDB6 AG34	DDR1_DQ[6]/DDR0_DQ[22]	DDR1_CK[P3]	AP19 M_DCLKB1 <=> M_DCLKB1 9
MDB7 AH34	DDR1_DQ[7]/DDR0_DQ[23]	DDR1_CKN[3]	AP20 M_DCLKB1 <=> M_DCLKB1 9
MDB8 AK35	DDR1_DQ[8]/DDR0_DQ[24]	DDR1_CKE[0]	AY29 CKEB0 <=> CKEB0 9
MDB9 AL35	DDR1_DQ[9]/DDR0_DQ[25]	DDR1_CKE[1]	AY29 CKEB1 <=> CKEB1 9
MDB10 AK32	DDR1_DQ[10]/DDR0_DQ[26]	DDR1_CKE[2]	AY29 CKEB1 <=> CKEB1 9
MDB11 AL32	DDR1_DQ[11]/DDR0_DQ[27]	DDR1_CKE[3]	AY29 CKEB1 <=> CKEB1 9
MDB12 AK34	DDR1_DQ[12]/DDR0_DQ[28]	DDR1_CS#0[0]	AP17 M_-CSB0 <=> M_-CSB0 9
MDB13 AL34	DDR1_DQ[13]/DDR0_DQ[29]	DDR1_CS#1[0]	AN15 M_-CSB1 <=> M_-CSB1 9
MDB14 AK31	DDR1_DQ[14]/DDR0_DQ[30]	DDR1_CS#2[0]	AN17 M_-CSB1 <=> M_-CSB1 9
MDB15 AL31	DDR1_DQ[15]/DDR0_DQ[31]	DDR1_CS#3[0]	AN15 M_-CSB1 <=> M_-CSB1 9
MDB16 AP35	DDR1_DQ[16]/DDR0_DQ[32]	DDR1_ODT[0]	AM16 MODT_B0
MDB17 AN35	DDR1_DQ[17]/DDR0_DQ[33]	DDR1_ODT[1]	AM16 MODT_B1
MDB18 AN32	DDR1_DQ[18]/DDR0_DQ[34]	DDR1_ODT[2]	AM16 MODT_B1
MDB19 AP32	DDR1_DQ[19]/DDR0_DQ[35]	DDR1_ODT[3]	AM16 MODT_B1
MDB20 AN34	DDR1_DQ[20]/DDR0_DQ[36]	DDR1_ODT[4]	AM16 MODT_B1
MDB21 AP34	DDR1_DQ[21]/DDR0_DQ[37]	DDR1_ODT[5]	AM16 MODT_B1
MDB22 AN31	DDR1_DQ[22]/DDR0_DQ[38]	DDR1_ODT[6]	AM16 MODT_B1
MDB23 AP31	DDR1_DQ[23]/DDR0_DQ[39]	DDR1_ODT[7]	AM16 MODT_B1
MDB24 AL29	DDR1_DQ[24]/DDR0_DQ[40]	DDR1_ODT[8]	AM16 MODT_B1
MDB25 AM29	DDR1_DQ[25]/DDR0_DQ[41]	DDR1_ODT[9]	AM16 MODT_B1
MDB26 AP29	DDR1_DQ[26]/DDR0_DQ[42]	DDR1_ODT[10]	AM16 MODT_B1
MDB27 AR29	DDR1_DQ[27]/DDR0_DQ[43]	DDR1_ODT[11]	AM16 MODT_B1
MDB28 AM28	DDR1_DQ[28]/DDR0_DQ[44]	DDR1_ODT[12]	AM16 MODT_B1
MDB29 AL28	DDR1_DQ[29]/DDR0_DQ[45]	DDR1_ODT[13]	AM16 MODT_B1
MDB30 AP28	DDR1_DQ[30]/DDR0_DQ[46]	DDR1_ODT[14]	AM16 MODT_B1
MDB31 AP28	DDR1_DQ[31]/DDR0_DQ[47]	DDR1_ODT[15]	AM16 MODT_B1
MDB32 AR12	DDR1_DQ[32]/DDR1_DQ[16]	DDR1_ODT[16]	AM16 MODT_B1
MDB33 AP12	DDR1_DQ[33]/DDR1_DQ[17]	DDR1_ODT[17]	AM16 MODT_B1
MDB34 AM13	DDR1_DQ[34]/DDR1_DQ[18]	DDR1_ODT[18]	AM16 MODT_B1
MDB35 AL13	DDR1_DQ[35]/DDR1_DQ[19]	DDR1_ODT[19]	AM16 MODT_B1
MDB36 AR13	DDR1_DQ[36]/DDR1_DQ[20]	DDR1_ODT[20]	AM16 MODT_B1
MDB37 AP13	DDR1_DQ[37]/DDR1_DQ[21]	DDR1_ODT[21]	AM16 MODT_B1
MDB38 AM12	DDR1_DQ[38]/DDR1_DQ[22]	DDR1_ODT[22]	AM16 MODT_B1
MDB39 AL12	DDR1_DQ[39]/DDR1_DQ[23]	DDR1_ODT[23]	AM16 MODT_B1
MDB40 AP10	DDR1_DQ[40]/DDR1_DQ[24]	DDR1_ODT[24]	AM16 MODT_B1
MDB41 AR10	DDR1_DQ[41]/DDR1_DQ[25]	DDR1_ODT[25]	AM16 MODT_B1
MDB42 AR7	DDR1_DQ[42]/DDR1_DQ[26]	DDR1_ODT[26]	AM16 MODT_B1
MDB43 AP7	DDR1_DQ[43]/DDR1_DQ[27]	DDR1_ODT[27]	AM16 MODT_B1
MDB44 AR9	DDR1_DQ[44]/DDR1_DQ[28]	DDR1_ODT[28]	AM16 MODT_B1
MDB45 AP9	DDR1_DQ[45]/DDR1_DQ[29]	DDR1_ODT[29]	AM16 MODT_B1
MDB46 AR6	DDR1_DQ[46]/DDR1_DQ[30]	DDR1_ODT[30]	AM16 MODT_B1
MDB47 AP6	DDR1_DQ[47]/DDR1_DQ[31]	DDR1_ODT[31]	AM16 MODT_B1
MDB48 AM10	DDR1_DQ[48]/DDR1_DQ[32]	DDR1_ODT[32]	AM16 MODT_B1
MDB49 AL10	DDR1_DQ[49]/DDR1_DQ[33]	DDR1_ODT[33]	AM16 MODT_B1
MDB50 AM7	DDR1_DQ[50]/DDR1_DQ[34]	DDR1_ODT[34]	AM16 MODT_B1
MDB51 AL7	DDR1_DQ[51]/DDR1_DQ[35]	DDR1_ODT[35]	AM16 MODT_B1
MDB52 AM9	DDR1_DQ[52]/DDR1_DQ[36]	DDR1_ODT[36]	AM16 MODT_B1
MDB53 AM9	DDR1_DQ[53]/DDR1_DQ[37]	DDR1_ODT[37]	AM16 MODT_B1
MDB54 AM6	DDR1_DQ[54]/DDR1_DQ[38]	DDR1_ODT[38]	AM16 MODT_B1
MDB55 AL6	DDR1_DQ[55]/DDR1_DQ[39]	DDR1_ODT[39]	AM16 MODT_B1
MDB56 AL6	DDR1_DQ[56]/DDR1_DQ[40]	DDR1_ODT[40]	AM16 MODT_B1
MDB57 AL6	DDR1_DQ[57]/DDR1_DQ[41]	DDR1_ODT[41]	AM16 MODT_B1
MDB58 AE6	DDR1_DQ[58]/DDR1_DQ[42]	DDR1_ODT[42]	AM16 MODT_B1
MDB59 AE7	DDR1_DQ[59]/DDR1_DQ[43]	DDR1_ODT[43]	AM16 MODT_B1
MDB60 AH7	DDR1_DQ[60]/DDR1_DQ[44]	DDR1_ODT[44]	AM16 MODT_B1
MDB61 AH6	DDR1_DQ[61]/DDR1_DQ[45]	DDR1_ODT[45]	AM16 MODT_B1
MDB62 AE7	DDR1_DQ[62]/DDR1_DQ[46]	DDR1_ODT[46]	AM16 MODT_B1
MDB63 AF6	DDR1_DQ[63]/DDR1_DQ[47]	DDR1_ODT[47]	AM16 MODT_B1
AR25	DDR1_ECC[0]	DDR1_DQSP[0]	AF34 M_DQSB0
AR26	DDR1_ECC[1]	DDR1_DQSP[1]	AK33 M_DQSB1
AM26	DDR1_ECC[2]	DDR1_DQSP[2]	AN33 M_DQSB2
AM26	DDR1_ECC[3]	DDR1_DQSP[3]	AN33 M_DQSB3
AP26	DDR1_ECC[4]	DDR1_DQSP[4]	AN33 M_DQSB4
AP26	DDR1_ECC[5]	DDR1_DQSP[5]	AN33 M_DQSB5
AP26	DDR1_ECC[6]	DDR1_DQSP[6]	AN33 M_DQSB6
AL26	DDR1_ECC[7]	DDR1_DQSP[7]	AN33 M_DQSB7

DDR CHANNEL B

2 OF 12

8	MODT_A[0..1]	MODT_A10..11
9	MODT_B[0..1]	MODT_B10..11
8	MDA[0..63]	MDA10..63
9	MDB[0..63]	MDB10..63
8	M_DQSA[0..7]	M_DQSA10..71
9	M_-DQSA[0..7]	M_-DQSA10..71
8	MAAA[0..15]	MAAA10..151
9	MAAB[0..15]	MAAB10..151
9	M_DQSB[0..7]	M_DQSB10..71
9	M_-DQSB[0..7]	M_-DQSB10..71

DDR_VREF_CA
DDR_VREF_DQ
DDR_VREF_DQ

AB40 VREF_CAB <=> VREF_CAB 8
AC40 VREF_DQA <=> VREF_DQA 8
AC39 VREF_DQB <=> VREF_DQB 9

Gigabyte Technology		
CPU LGA1151-B		
Size	Document Number	Rev
Custom	GA-H110M-S2PH DDR3	1.0
Date:	Thursday, October 15, 2015	Sheet 5 of 44

VCCSA

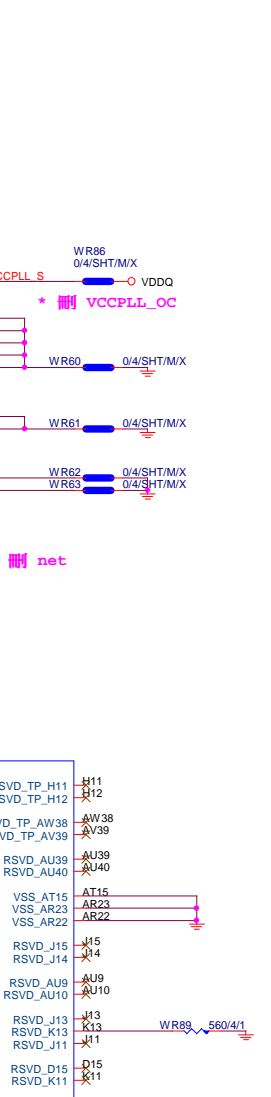
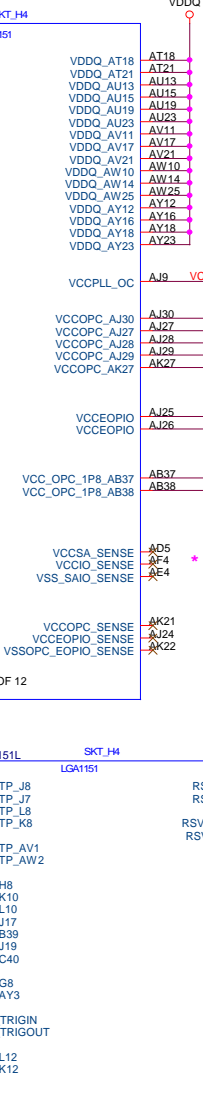
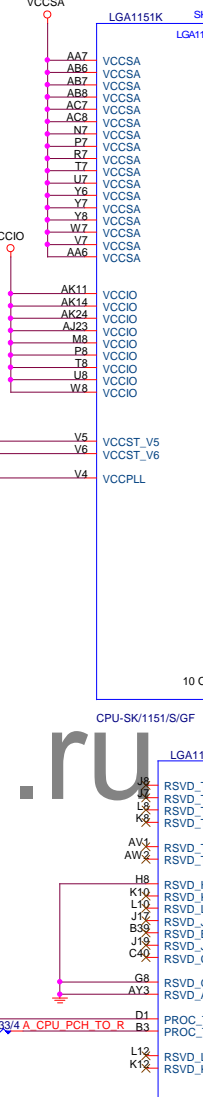
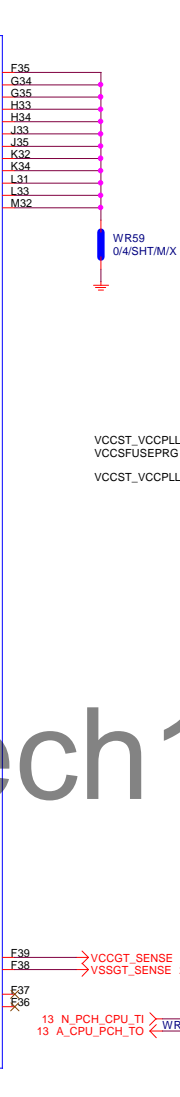
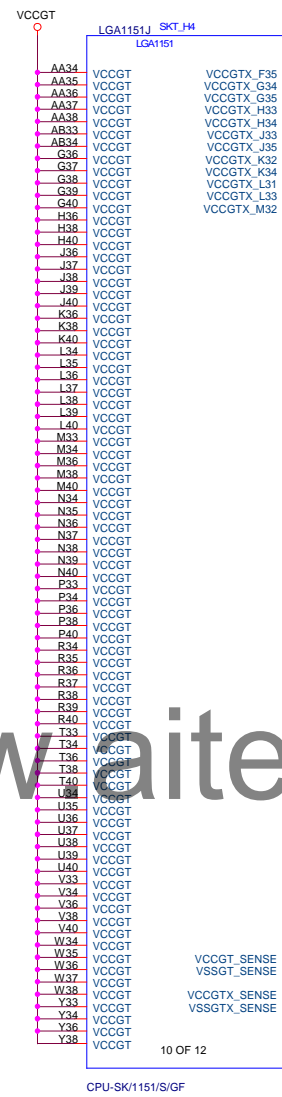
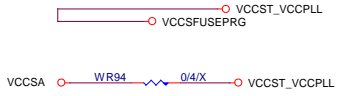
WBC56
10u/8/X5R/6.3V/K

* 刪 WBC124 , WBC125 , WBC126 , WBC127 電容

VCCIO

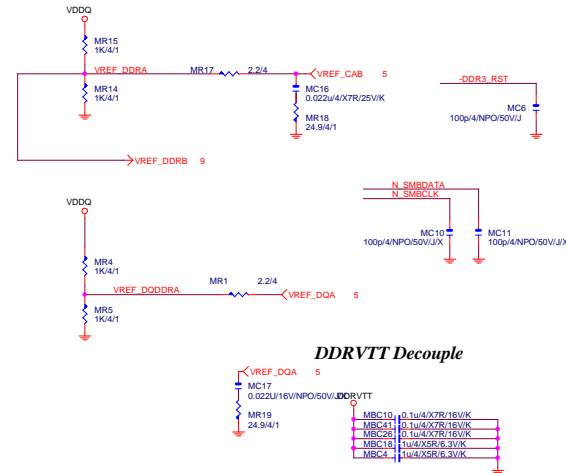
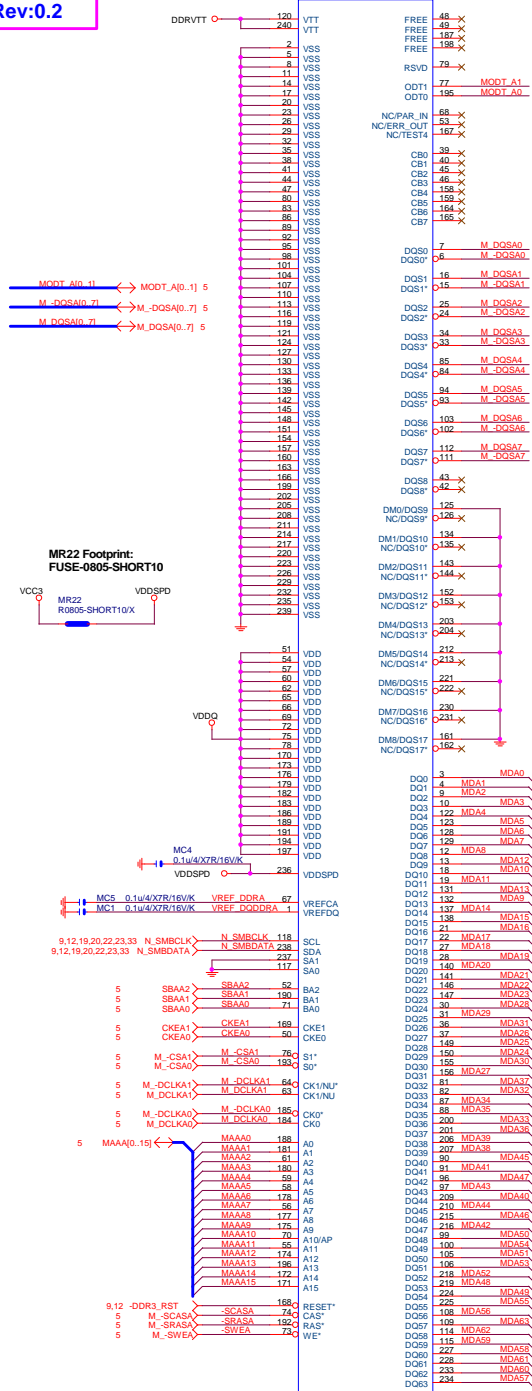
WBC69
10u/8/X5R/6.3V/K

* 刪 VCCGT 電容



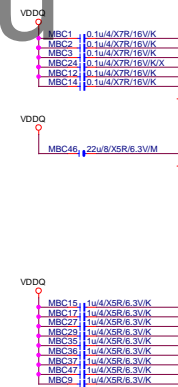
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Rev:0.2



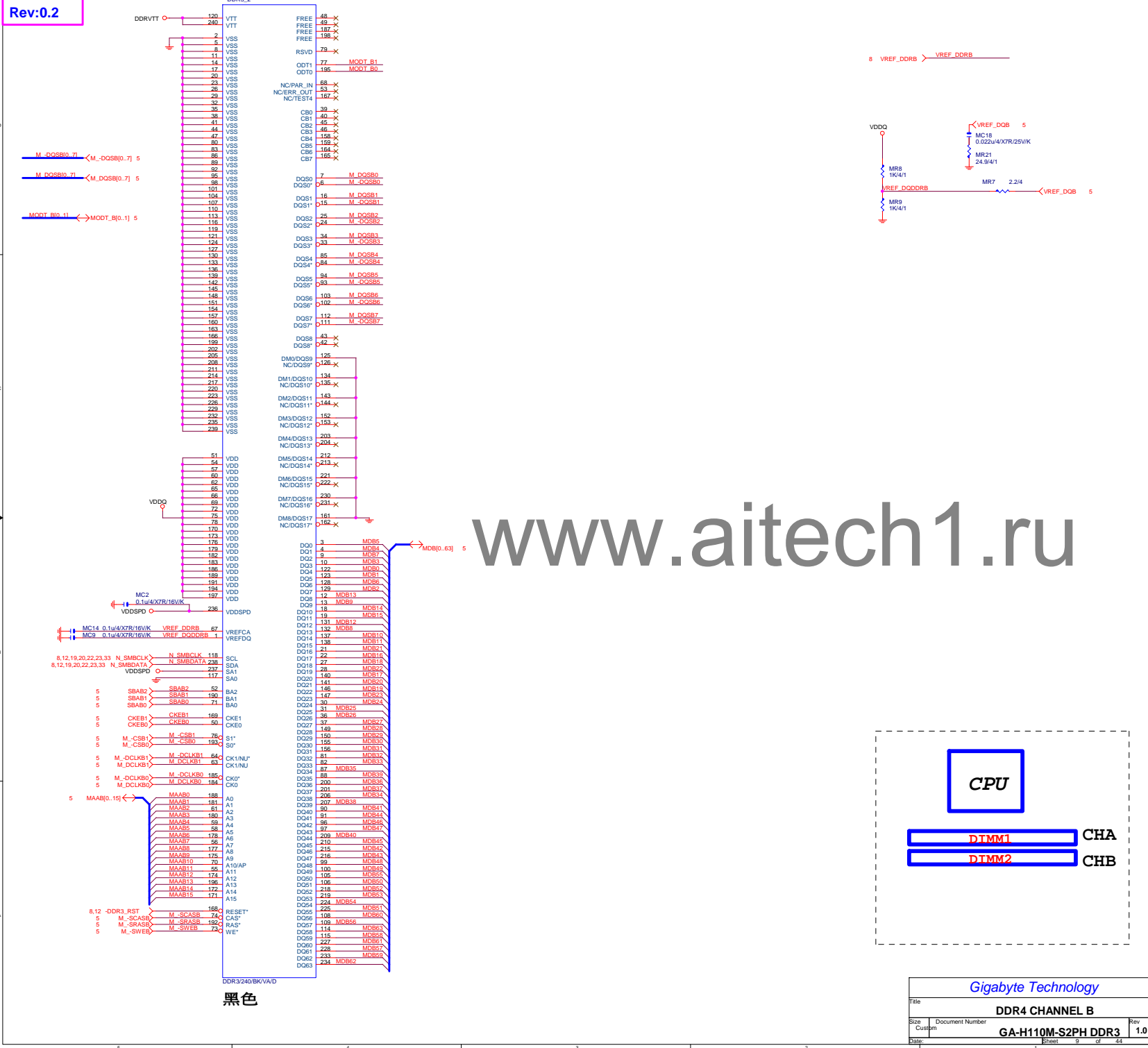
DDR TERMINATION CHANNEL A/B

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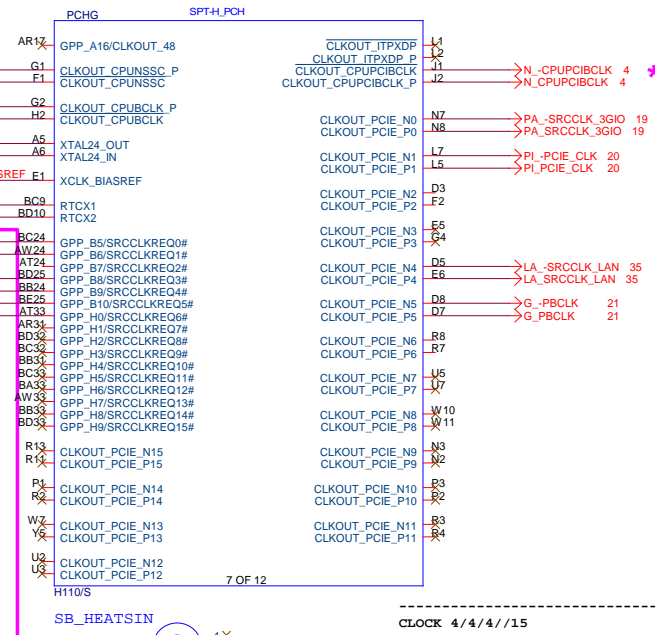
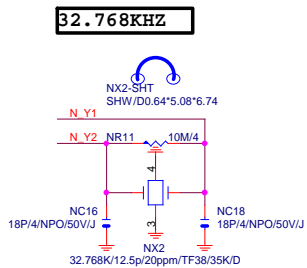
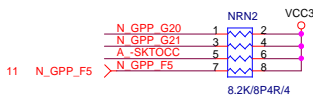
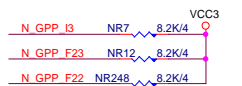
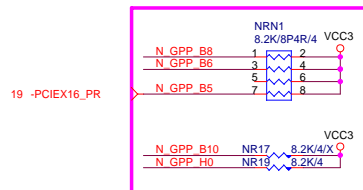
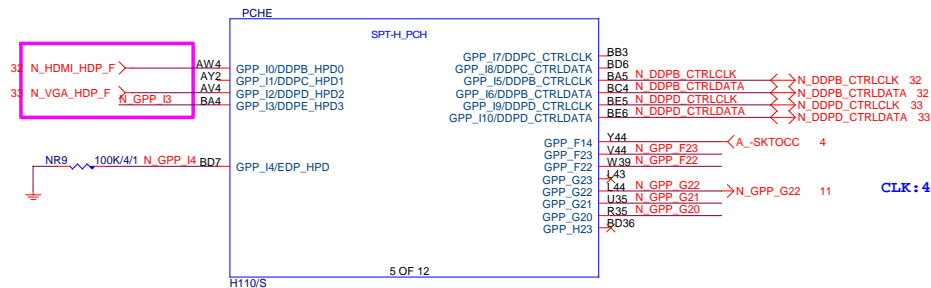


黑色

Rev:0.2



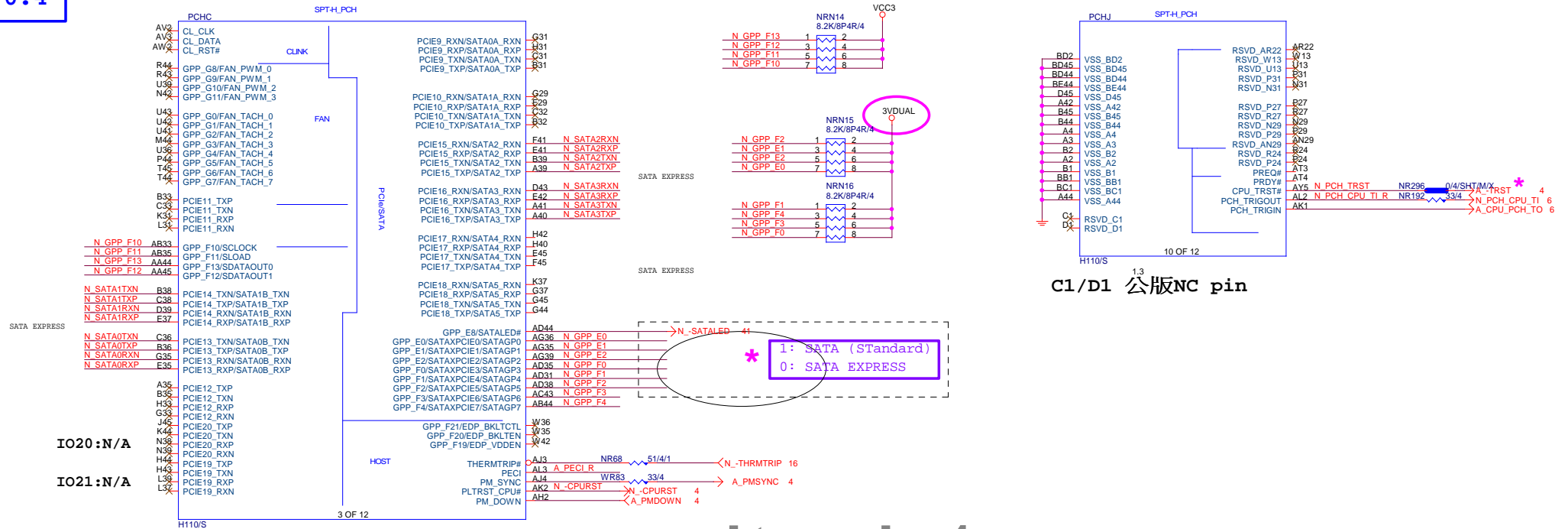
* Rev0.2



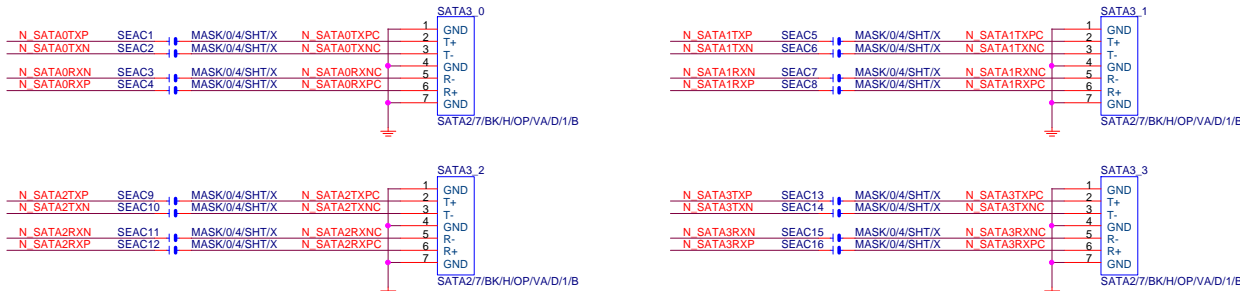
LOW COST ICH7 HEATSINK
BLACK HS

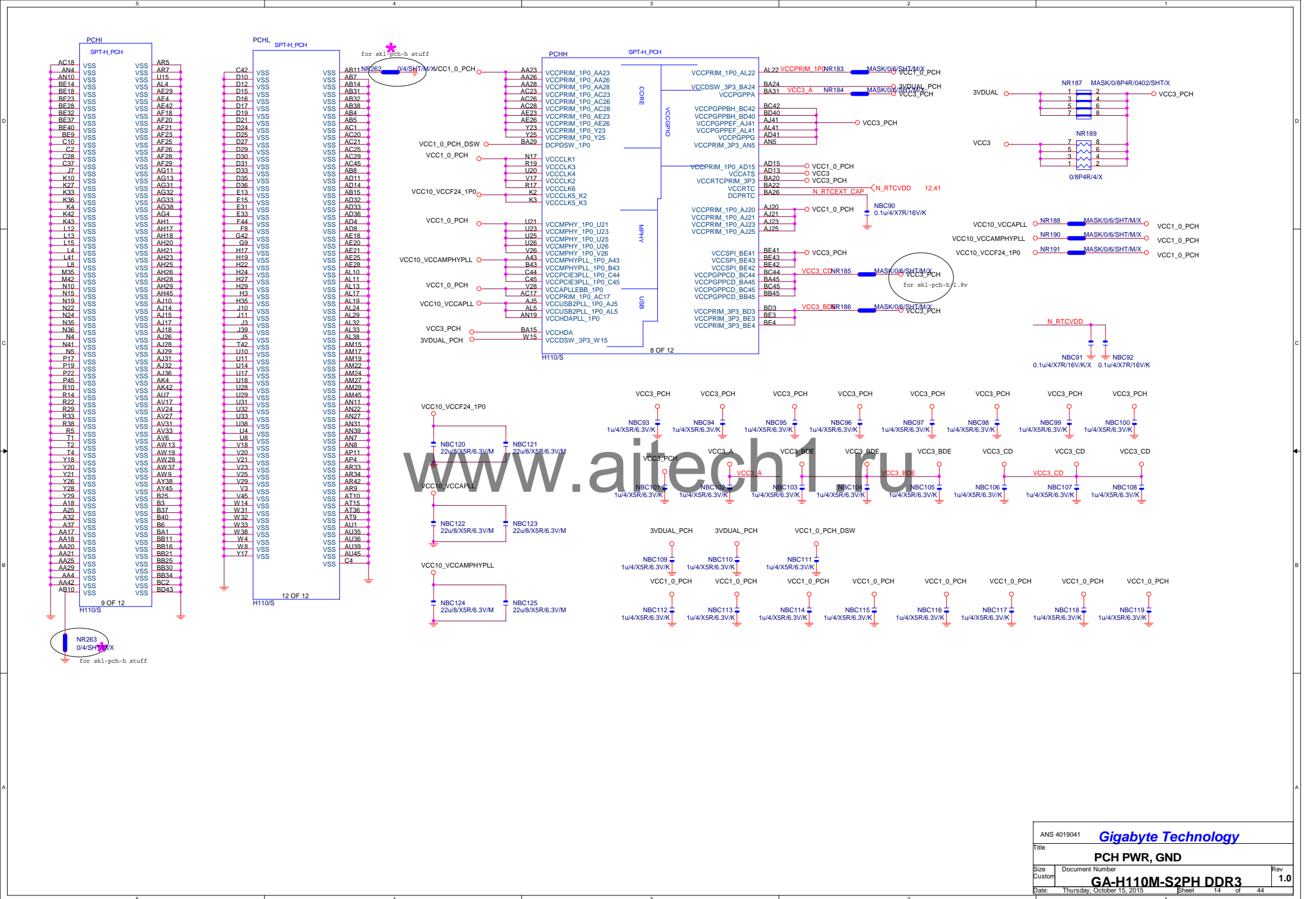
PCH_HS
PCH_HS[12SP2-030005-51R_12SP2-030005-52R_12SP2-030005-53R]

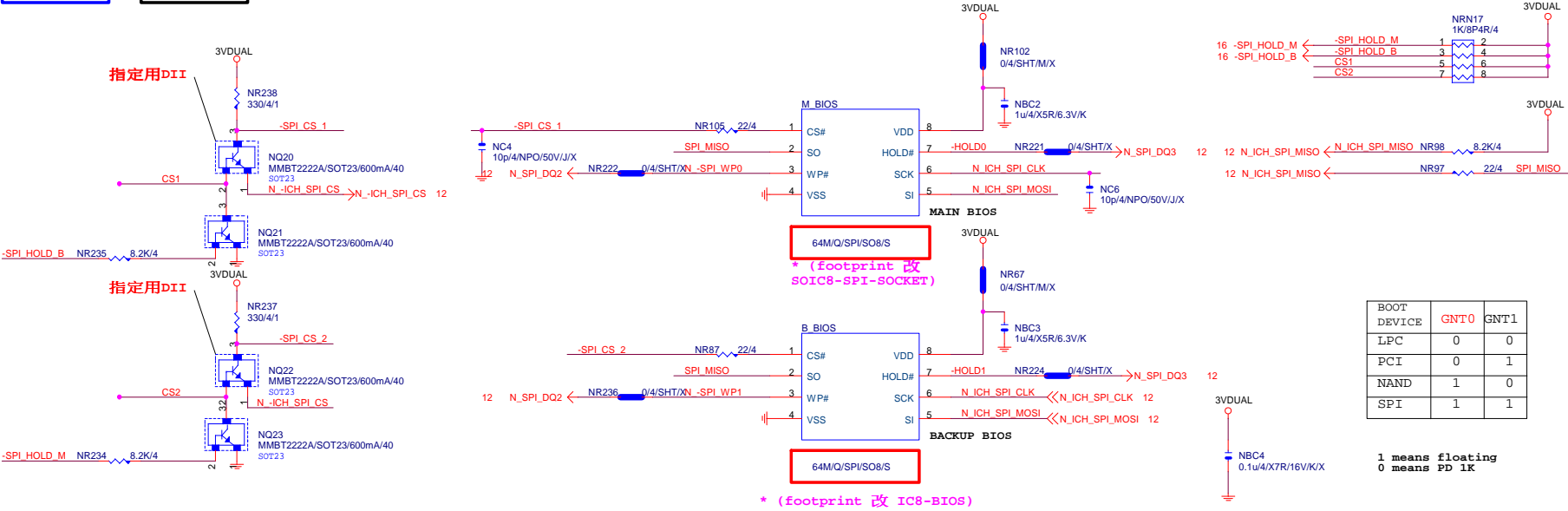
CLK:4/15<1000 mils±100 mils;Guard GND



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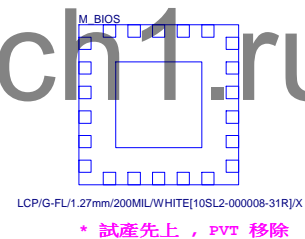


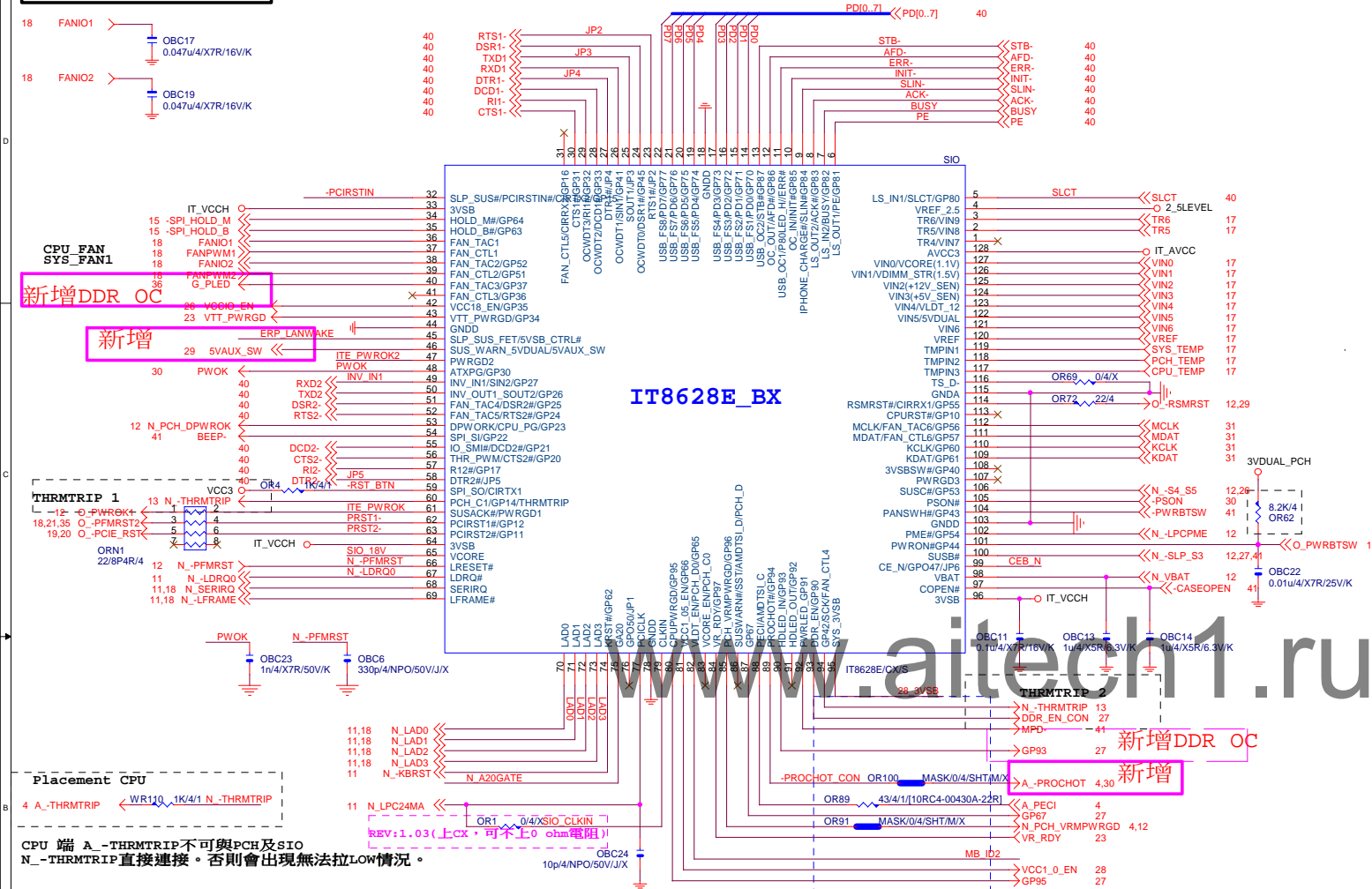


BOOT DEVICE	GNT0	GNT1
LPC	0	0
PCI	0	1
NAND	1	0
SPI	1	1

1 means floating
0 means PD 1K

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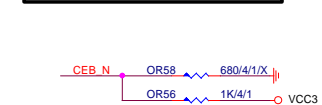




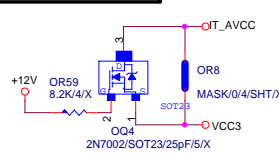
FAN TABLE	
CPU_FAN	FAN_CTL1 FAN_TAC1
SYS_FAN1	FAN_CTL2 FAN_TAC2
SYS_FAN2	FAN_CTL3 FAN_TAC3
SYS_FAN3	FAN_CTL5 FAN_TAC5
OPT_FAN or SYS_FAN4	N/A
THRMTRIP1	YES PIN60
THRMTRIP2	YES PIN94

IT8620E GPIO問題匯整	
PIN 50	GP26-第一次接上POWER時 會拉 Lo
PIN 90/91	DEFAULT為HDLED FUNCTION, GP93 BYPASS TO GP92 高溫時 GP92 會被拉Lo(ITE BUG)
PIN 108	GP40--- POWER ON 時會拉 Lo
PIN 111/112	MOUSE 跟FAN6 FUNCTION 擇一使用,不然會互相干擾
PIN 22	PIN22, 需高於3V, 若低於 將部分COM PORT及LPT裝置 蜂鳴器會異常動作。

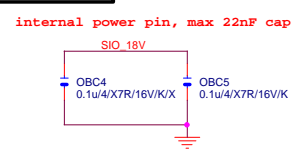
DUAL BIOS OPT STRAP



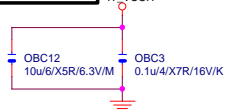
Power leakage



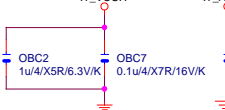
SIO 1.8V



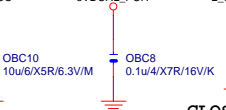
SIO CAP



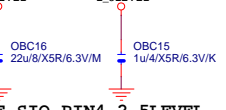
IT_VCCH



IT_AVCC



3VDUAL_PCH

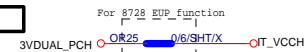


2_5LEVEL

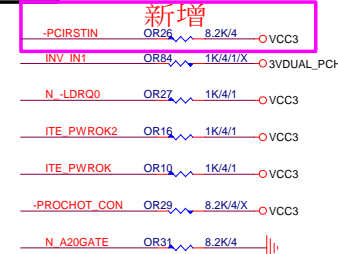


CLOSE SIO PIN4 2_5LEVEL

PWR SHT

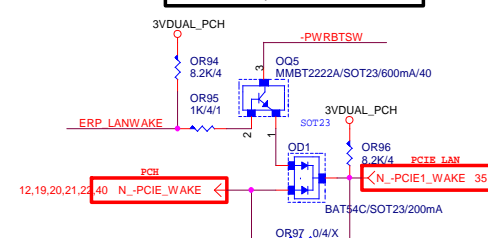


SIO PU



ERP WAKE on LAN (依LAN組態選擇)

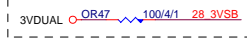
(組態一) Realtek/ATHEROS LAN



SIO STRAP

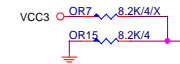


EUP control detect



JP2	1	Disable WDT
	0	Enable WDT to rest PWROK
JP3	1	SPI-Flash Disable
	0	SPI-Flash Enable
JP4	1	k8 power sequency function is Disable
	0	k8 power sequency function is Enable
JP5	1	anti-surge Disable
	0	anti-surge Enable
	1 1	The default value of EC Index 63h/6Bh/73h is 80h.
	1 0	The default value of EC Index 63h/6Bh/73h is FFh.
	0 1	The default value of EC Index 63h/6Bh/73h is 00h.
	0 0	The default value of EC Index 63h/6Bh/73h is 40h.

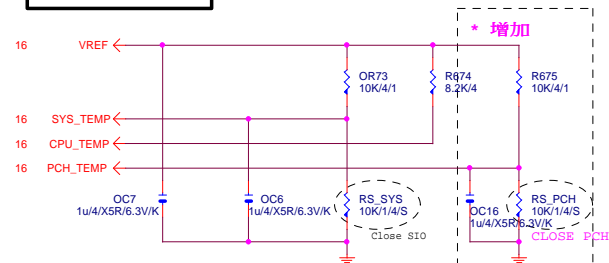
MB ID



Gigabyte Technology

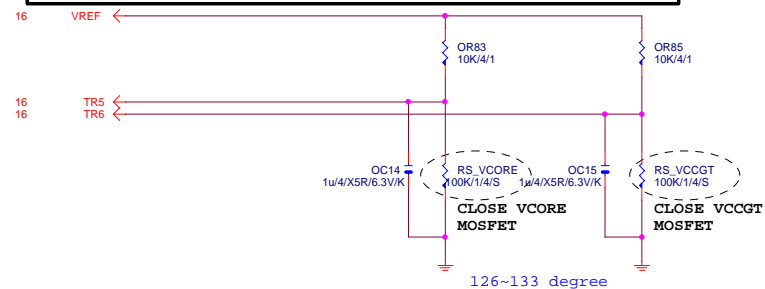
Title		ITE 8628 LPC IO	
Size	Document Number	Rev	
Custm		GA-H110M-S2PH DDR3	
Date:	Thursday, October 15, 2015	Sheet	16 of 44

TEMP H/W MONITOR REV 1.04



RS_VCORE, RS_VCCGT, CLOSE CPU_VCORE & VCCGT MOSFET

~~Prochot: 有mos heatsink不用prochot function~~

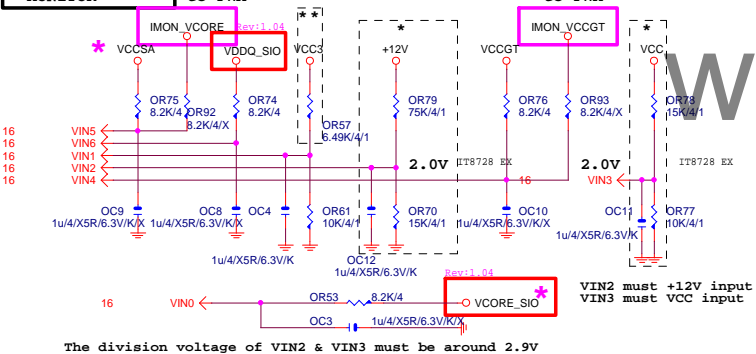


VOLTAGE-- H/W MONITOR

Connect to PWM

* IT8728 BX
** IT8728 CX

Connect to PWM

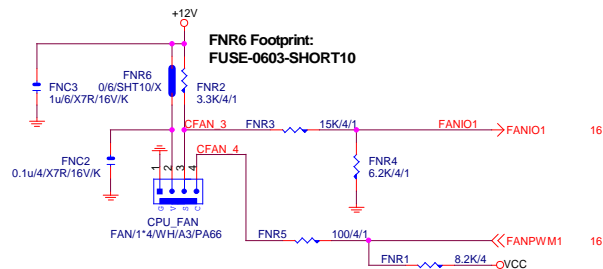


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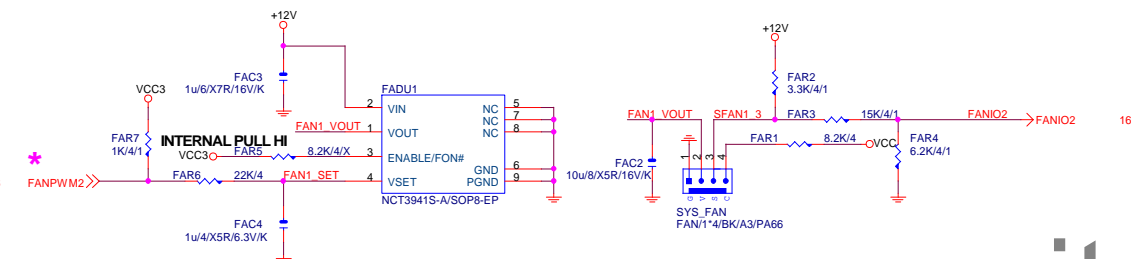
Gigabyte Technology

Title			HWM,KB/MS, FAN CTRL
Size	Document Number	Rev	
Custom	GA-H110M-S2PH DDR3	1.0	
Date:	Thursday, October 15, 2015	Sheet	17 of 44

Rev: 0.53

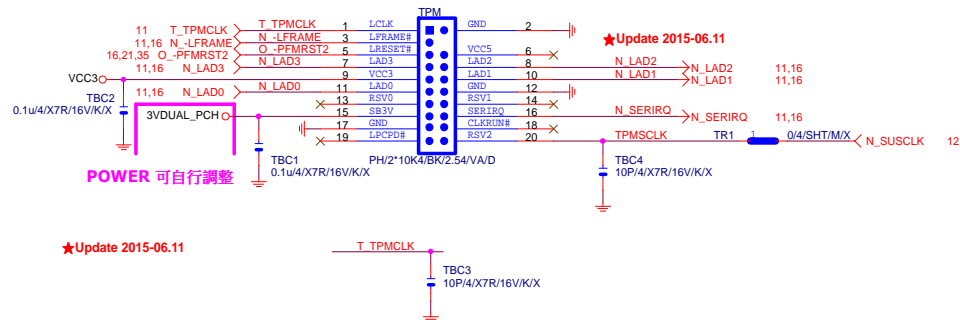


Enable Function (NCT3941S)
Full Turn On Function
(NCT3941S-A)



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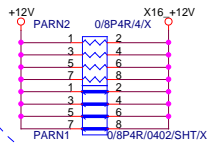
TPM CONNECTOR



Gigabyte Technology

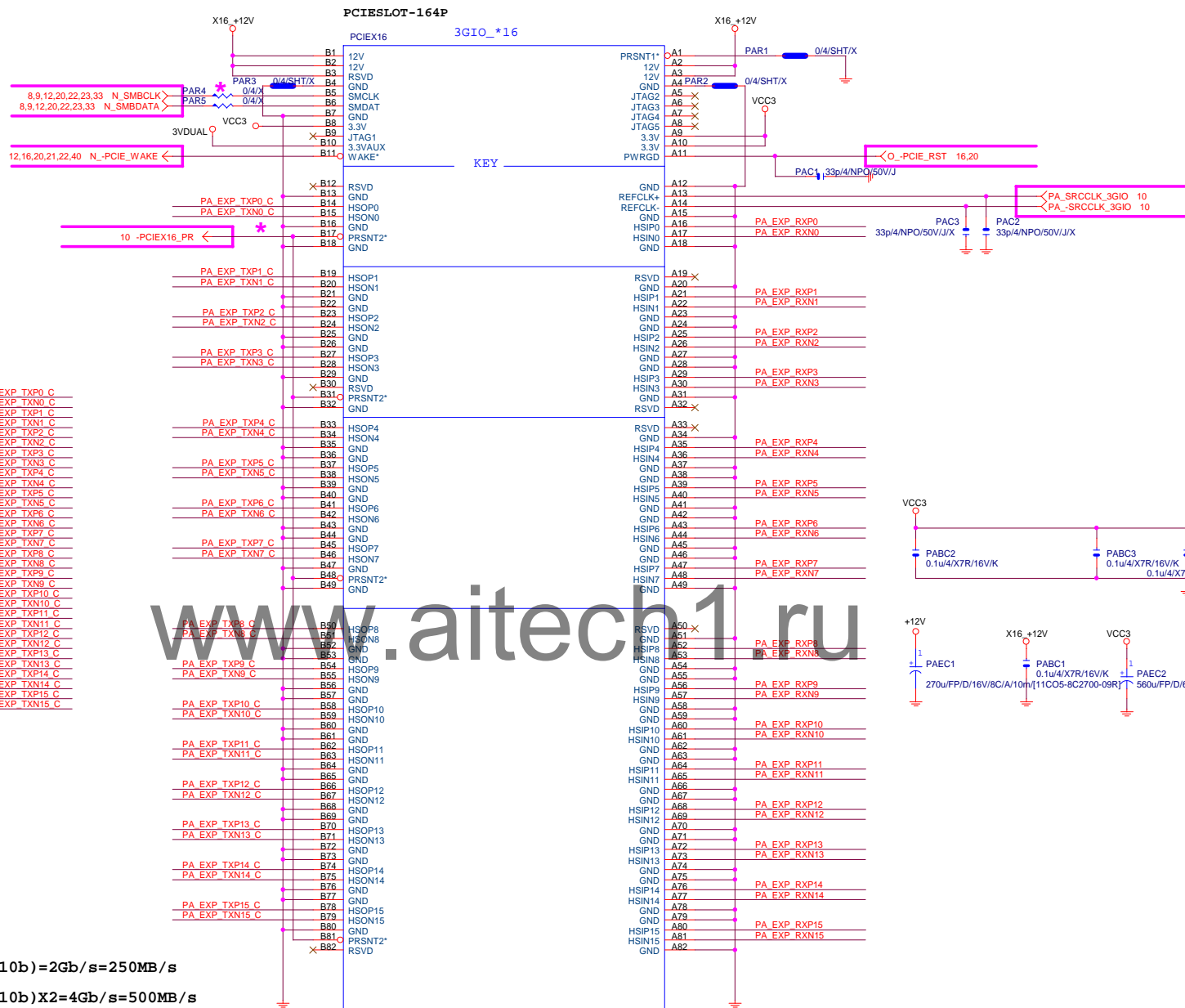
Title			
HWM,KB/MS, FAN CTRL			
Size	Document Number	Rev	
Custom	GA-H110M-S2PH DDR3	1.0	
Date:	Thursday, October 15, 2015	Sheet	18 of 44

* +12 protect short-wire test



PA EXP RXP0_15] >> PA_EXP_RXP[0.15] 4
 PA EXP RXN0_15] >> PA_EXP_RXN[0.15] 4
 PA EXP TXP0_15] >> PA_EXP_TXP[0.15] 4
 PA EXP TXN0_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



PCI-E/16x-164P/BK/LONG DOUBLE[11AC1-023164-D1R]

R01A

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

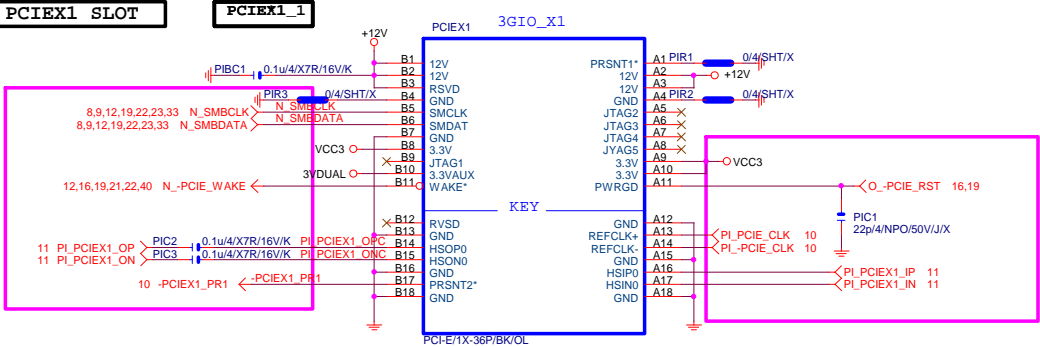
PCE-E X16(單向) BANDWIDTH=2.5GHz*(8b/10b)X16=32Gb/s=4GB/s

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

PCI-E REV:2.0--> 5GHZ

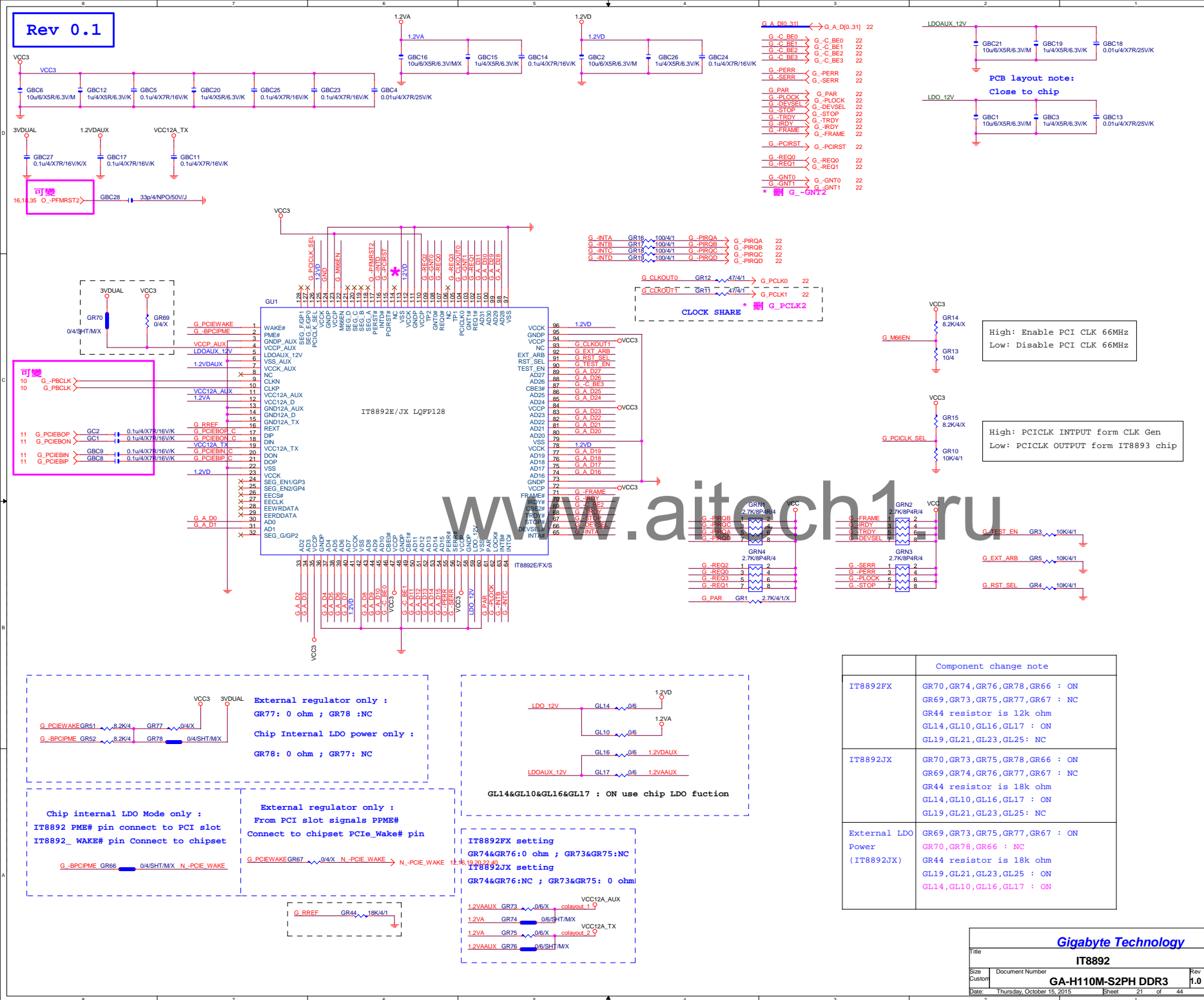
Gigabyte Technology

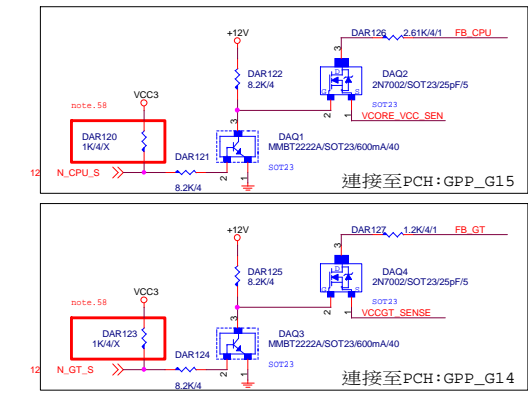
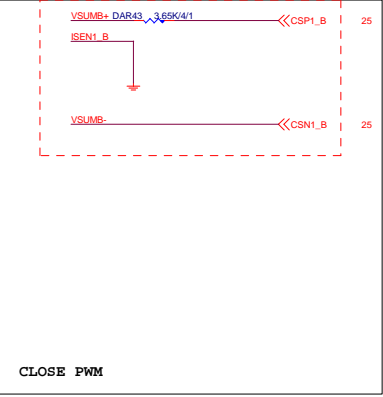
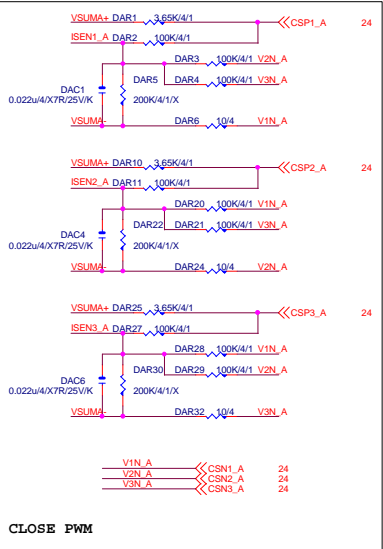
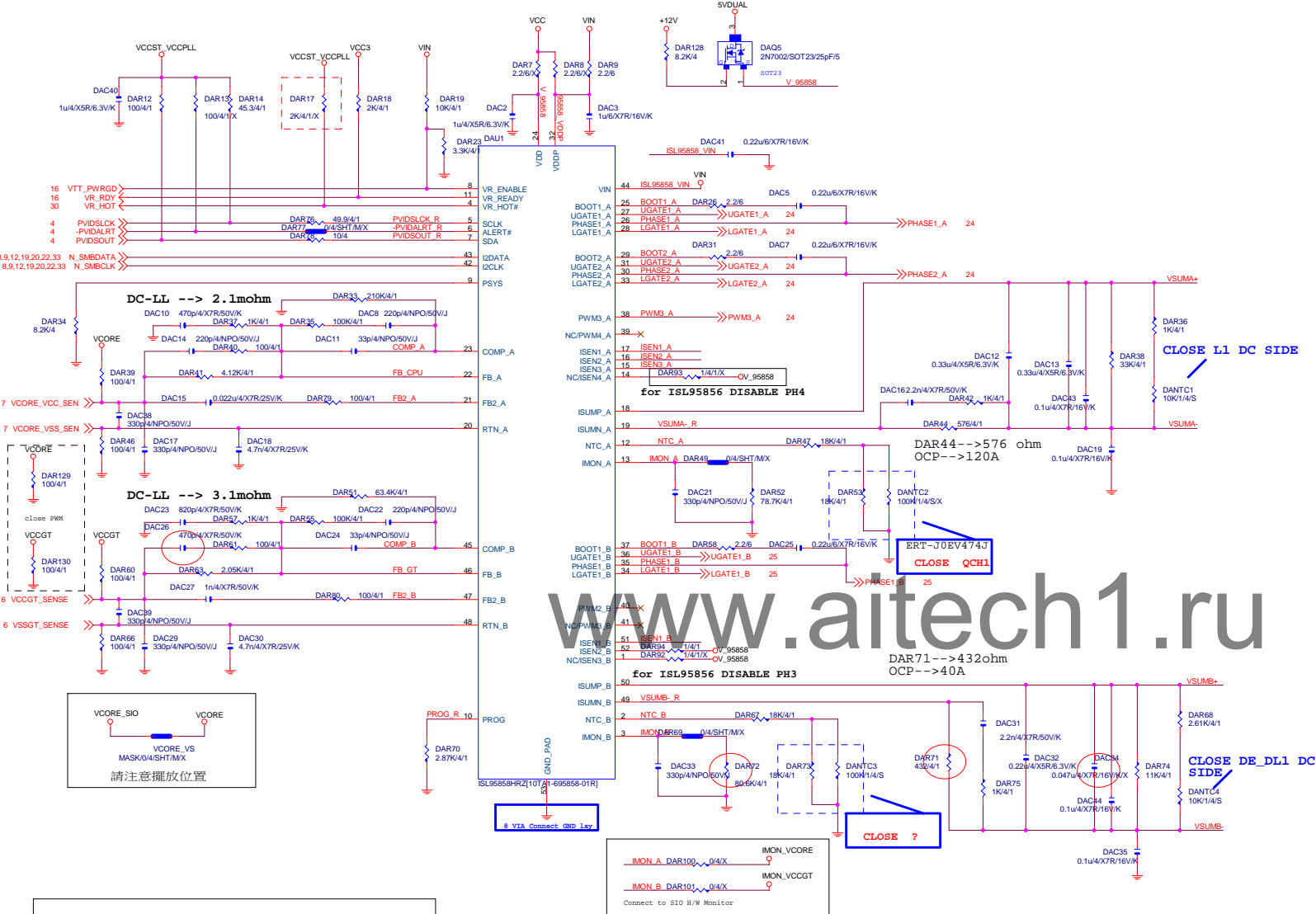
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Size	Document Number	GA-H110M-S2PH DDR3	
Custom			1.0
Date:	Thursday, October 15, 2015	Sheet	19 of 44



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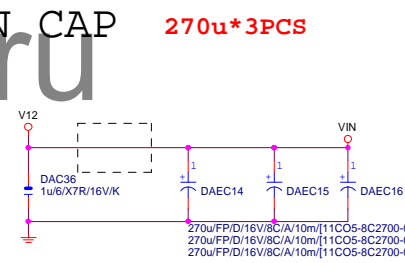
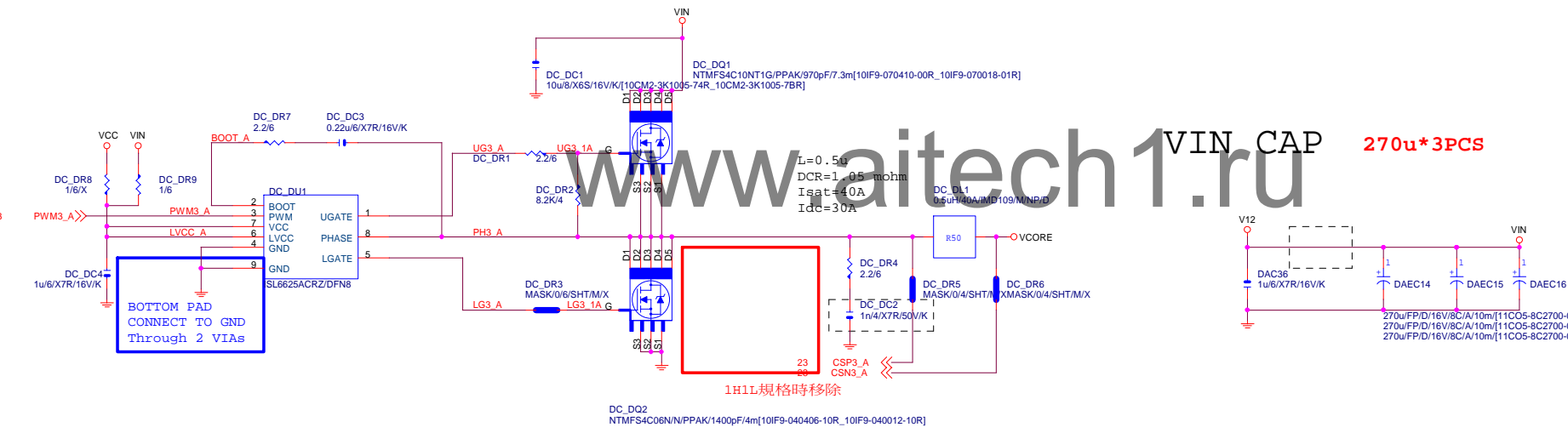
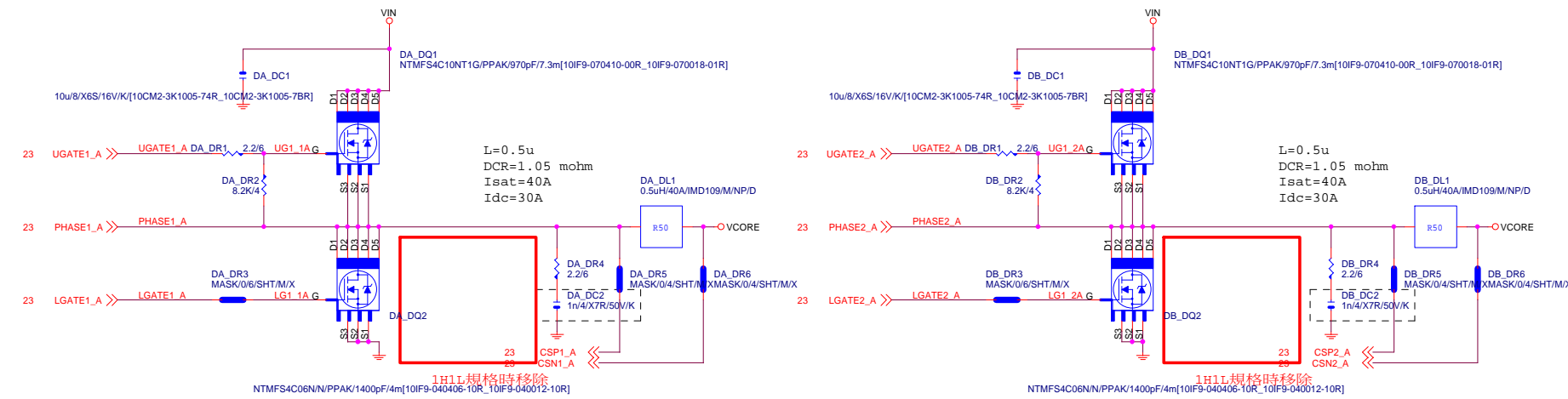
Rev 0.1





REV:0.91

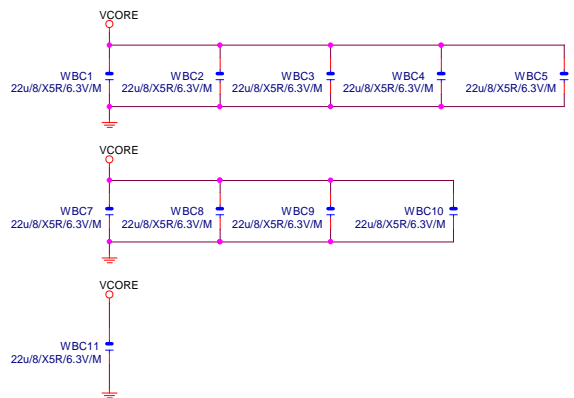
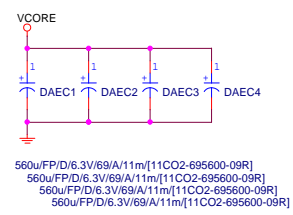
VCORE



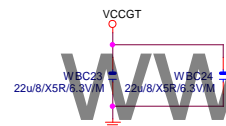
Vcore CAP

560u*4PCS

22u*10PCS



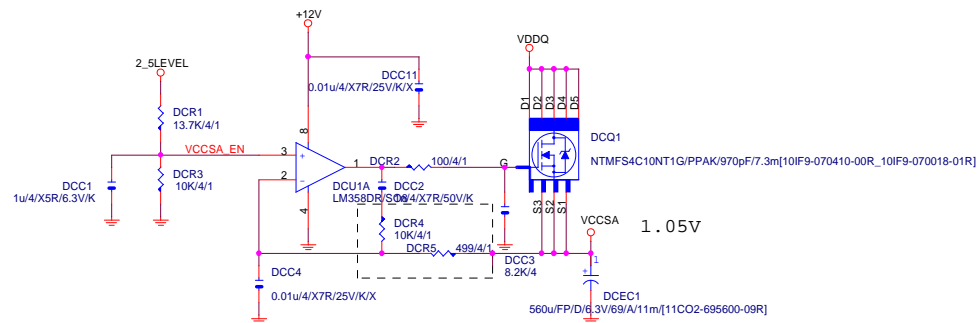
VCCGT



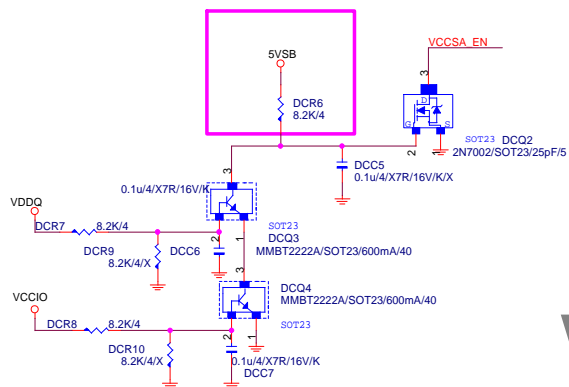
VCCSA

REV:0.4

VCCIO

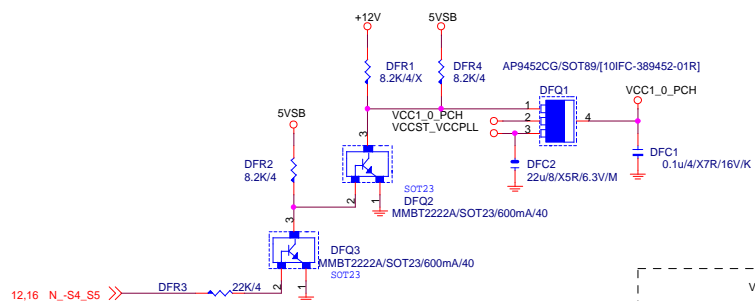


Connect to IT8620



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VCCST_VCCPLL



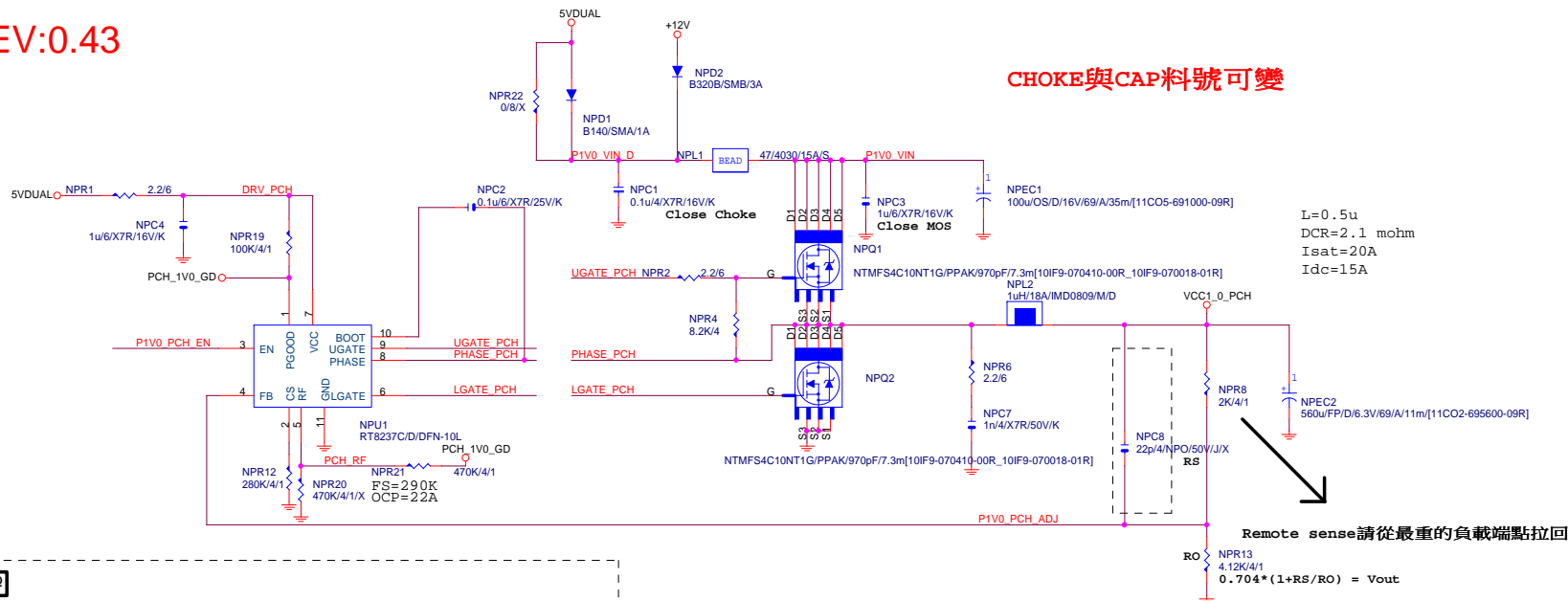
close to CPU

GIGABYTE

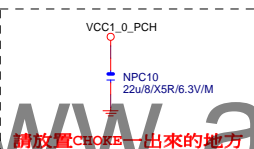
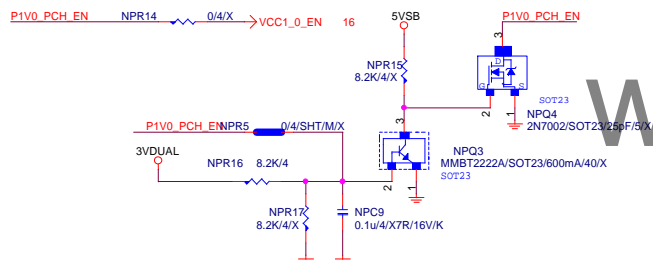
Title		VCCSA_VCCIO
Size	Document Number	GA-H110M-S2PH DDR3
Custom	Rev	1.0
Date:	Thursday, October 15, 2015	Sheet 26 of 44

REV:0.43

CHOKE與CAP料號可變



PWR SEQ

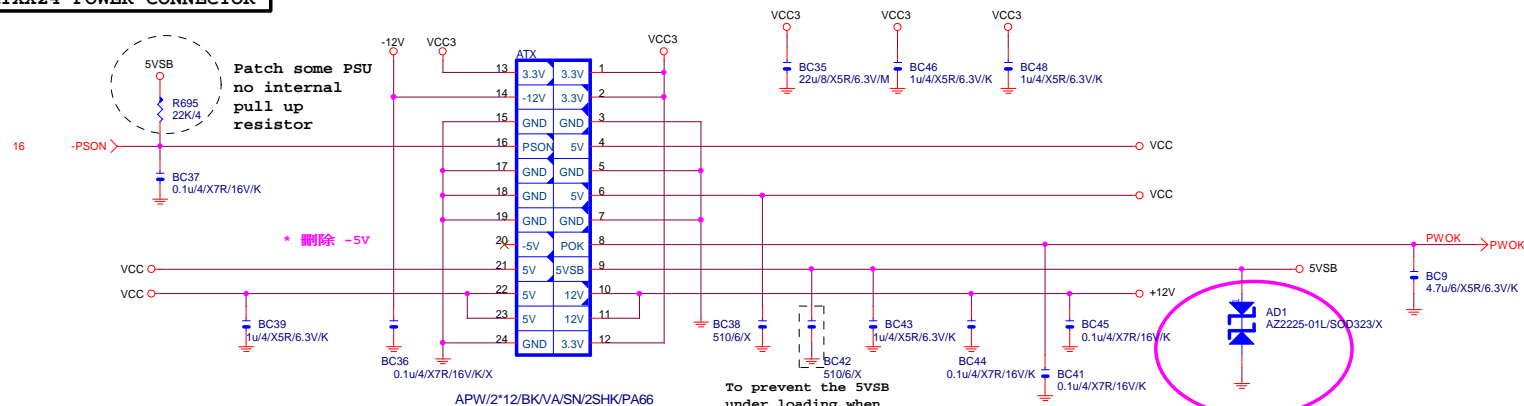


請放置CHOKEB一出來的地方

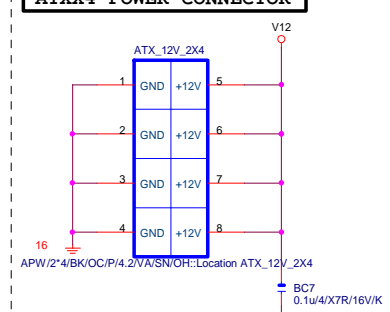
GIGABYTE

Title		RT8237_PCH POWER	
Size	Document Number	Rev	
Custom	GA-H110M-S2PH DDR3	1.0	
Date:	Thursday, October 15, 2015	Sheet	28 of 44

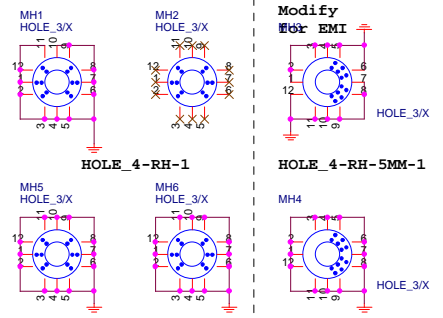
ATXX24 POWER CONNECTOR



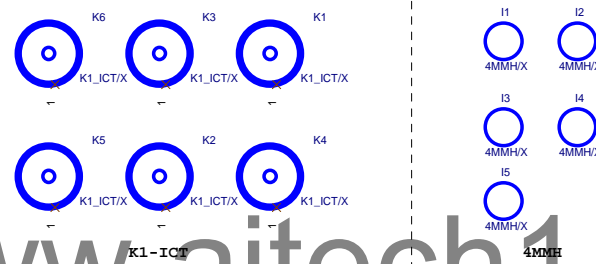
ATXX4 POWER CONNECTOR



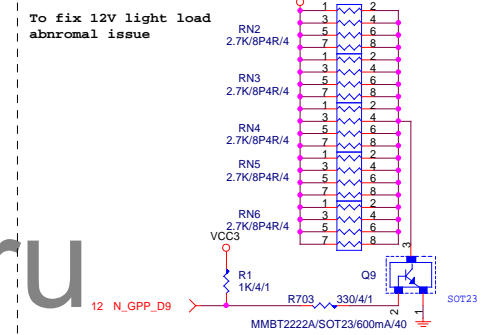
螺絲孔



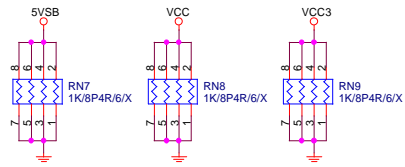
固定孔/光學點



+12V DUMMY LOAD



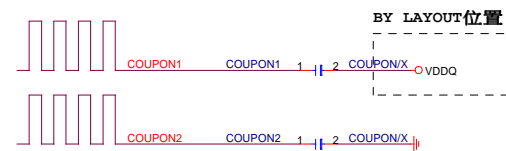
DUMMY LOAD



-PROHOT * 保留 ?



COUPON

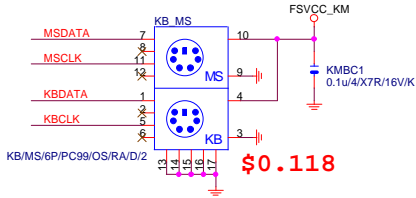


【技術通報R&D技術通報153】

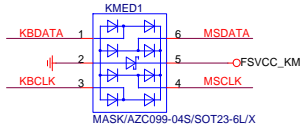
Gigabyte Technology

Title			
ATX POWER CONNECTOR			
Size	Document No.	CA-H110M-S2PH DDR3	Rev
Custom			1.0
Date:	Thursday, October 15, 2015	Sheet	30 of 44

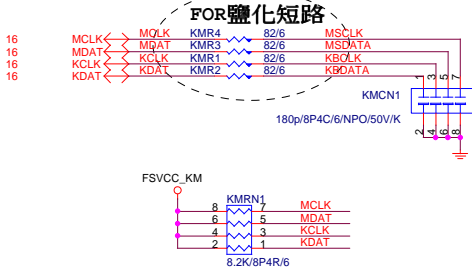
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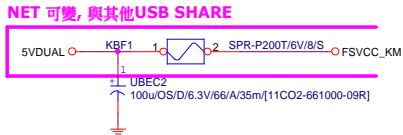
ESD



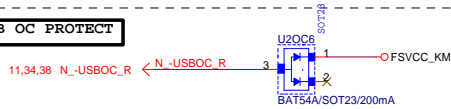
KB_MS_USB DAMPING/PU



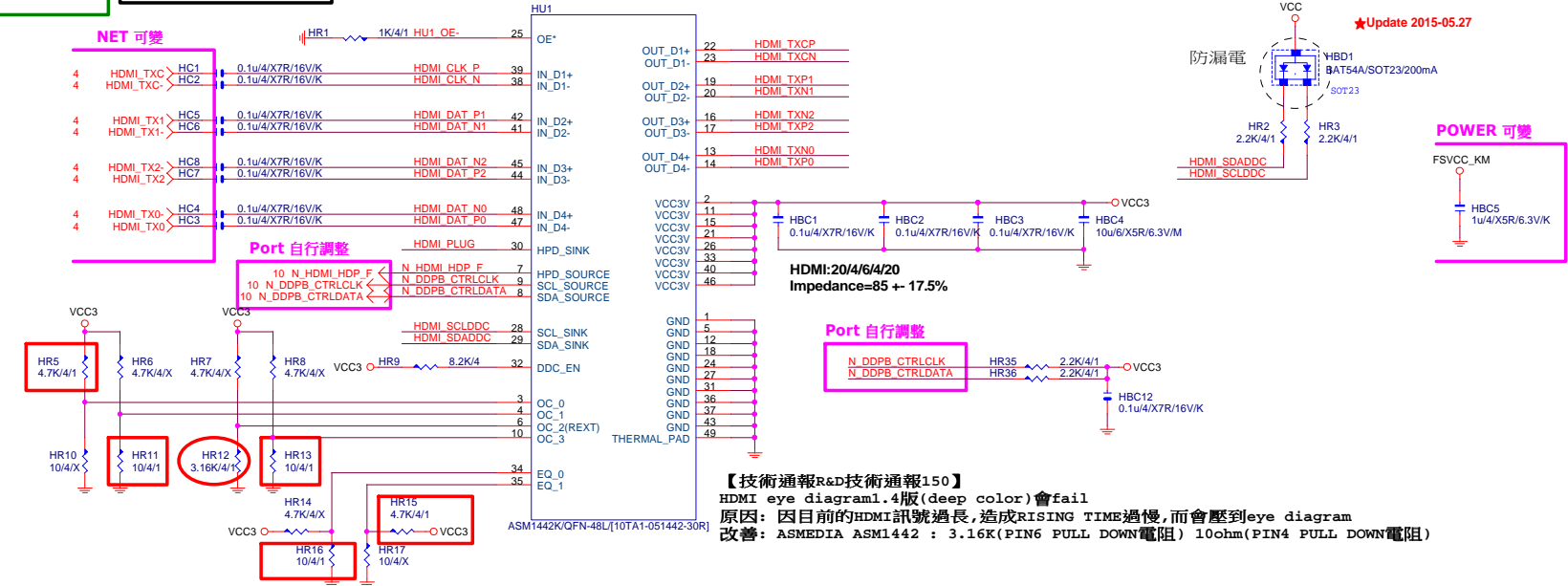
KB_MS_USB PWR



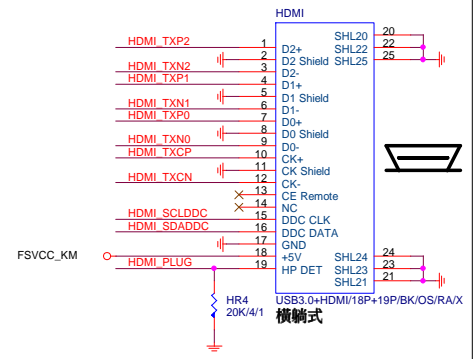
USB OC PROTECT



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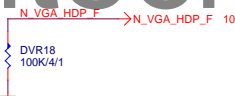
PTN3360: PIN 4/10/34/35 NC PIN, 都不上值; 只上HR12: 10K
ASM1442: 紅色框要上, HR12: 3.16K



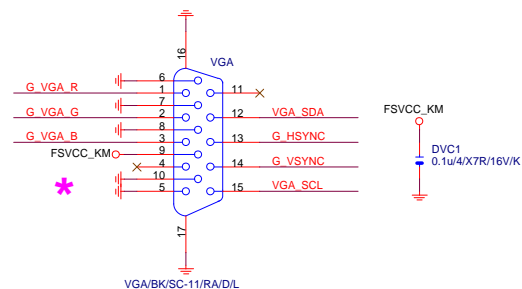
www.aitech1.ru



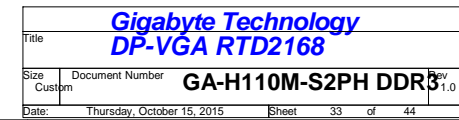
POWER



VGA SIGNAL	R1.02
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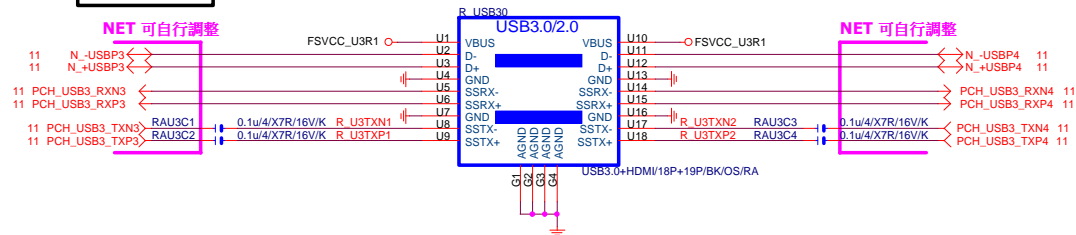


VGA ESD

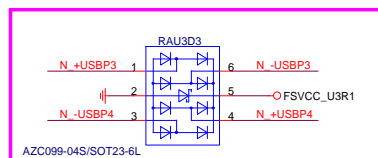
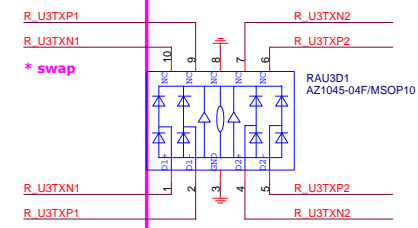
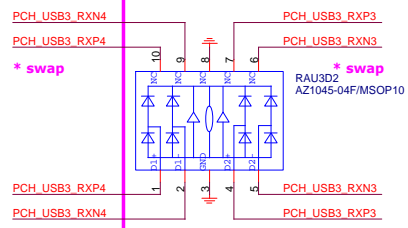


R_USB30_1

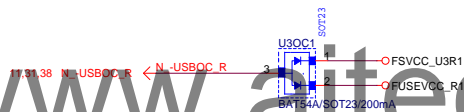
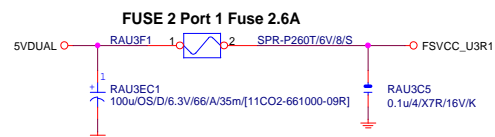
ESD 可自行SWAP PIN ,CONN端 NET 名稱 不可



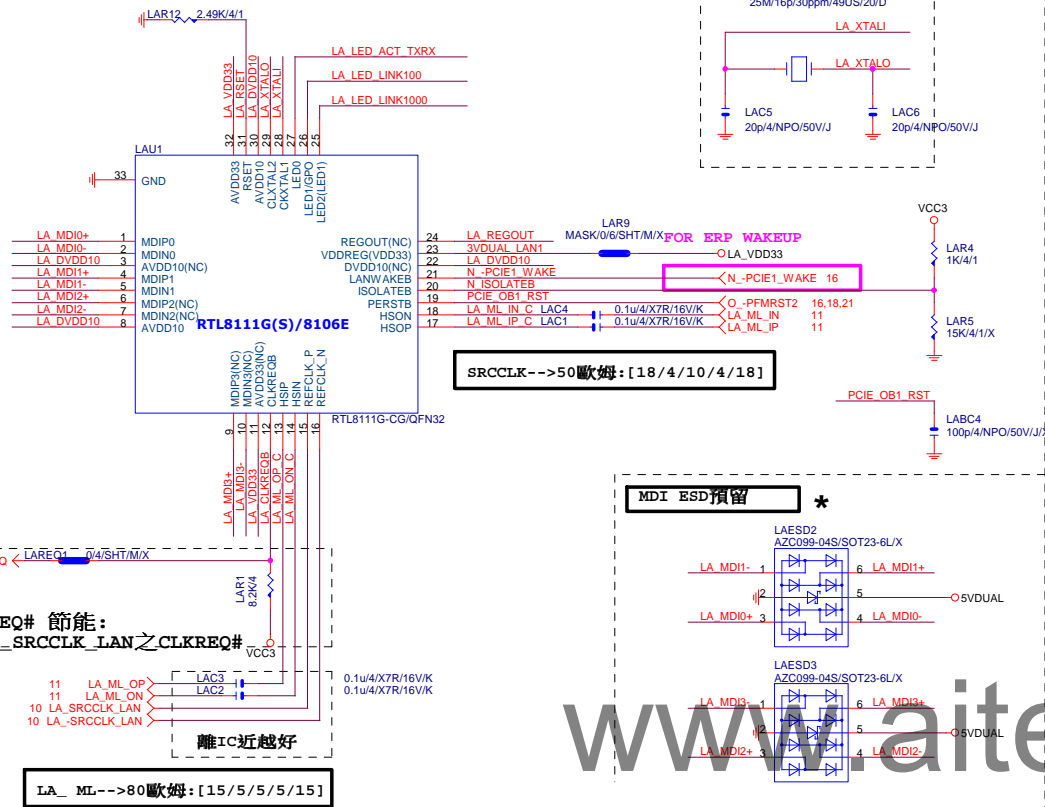
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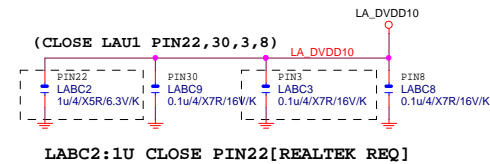
FUSE



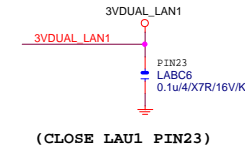
LAN:RTL8111G	R1.06
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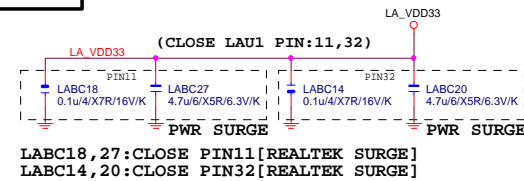
LAN POWER



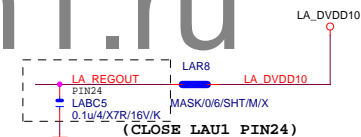
LAN POWER



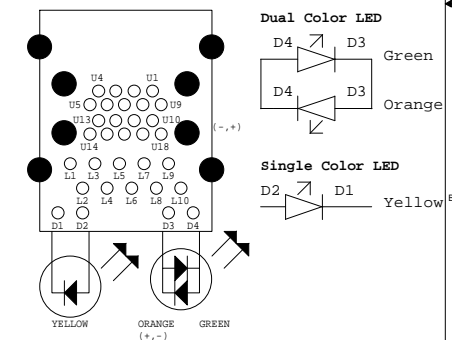
LAN POWER



LAN POWER

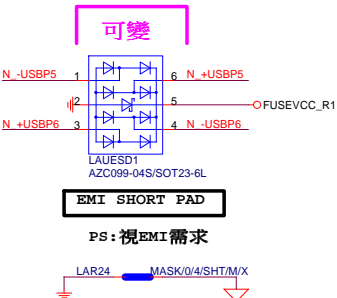


USB30_LAN LAYOUT示意圖



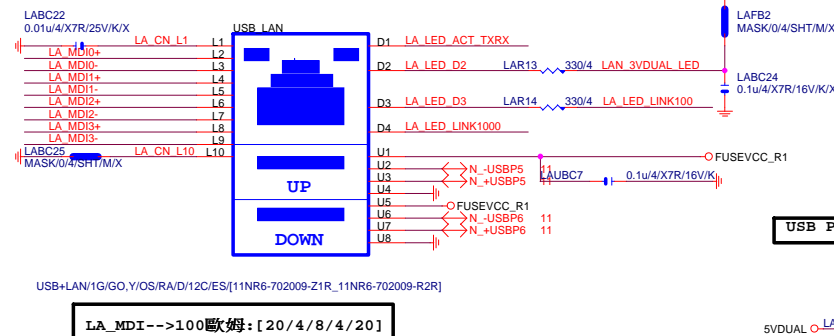
USB_LAN CONNECTOR	R1.06
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RMA ESD PROTECT



USB_LAN CONNECTOR

[RTL8111G]



USB POWER

可變

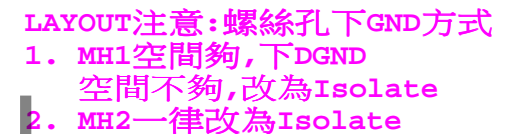
5VDUAL LAU3F1 1 2 SPR-P260T/6V/8/S FUSEVCC_R1

Close to connector FUSE-0805

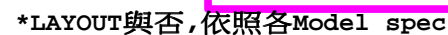
Gigabyte Technology

Realtek RTL8111GUS

Title			
Realtek RTL8111GUS			
Size	Document Number		Rev
	GA-H110M-S2PH DDR3		
Date:	Thursday, October 15, 2015	Sheet	35 of 44




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

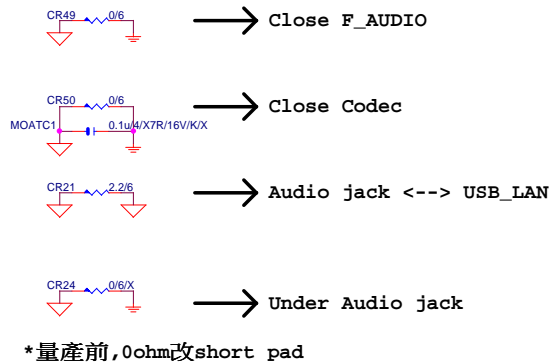


LAYOUT注意:要加
GND切割線

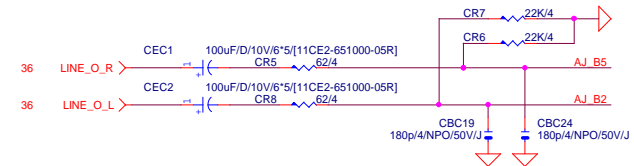
音效區域印刷

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Size	Document Number	Rev	
Custom	GA-H110M-S2PH DDR3	1.0	
Date:	Thursday, October 15, 2015	Sheet	36 of 44

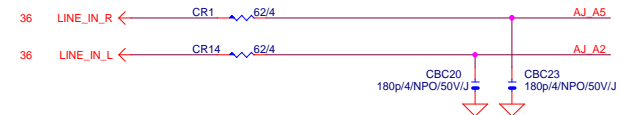
Rev 0.4



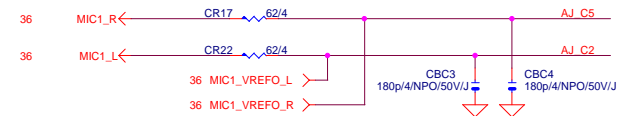
LINE-OUT



LINE-IN

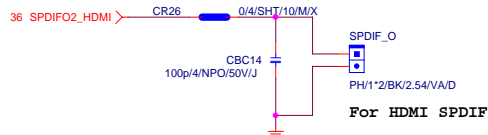


MIC-IN



SURROUND

SPDIF_OUT

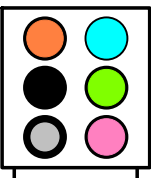


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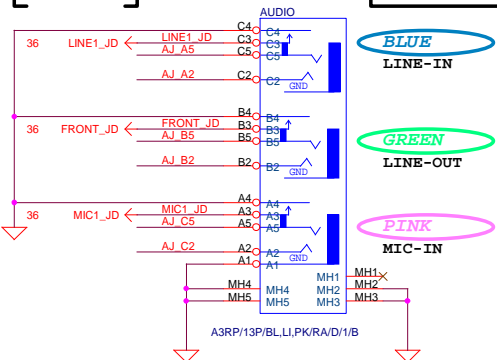
CEN/LFB

SURRBACK

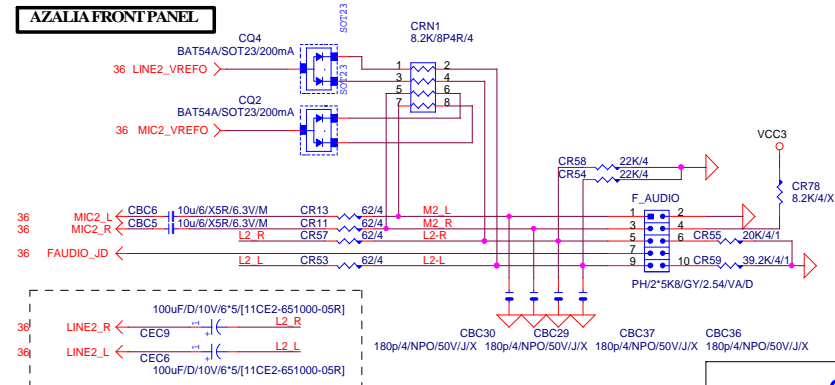
AZALIA JACK



AZALIA JACK



AZALIA FRONT PANEL



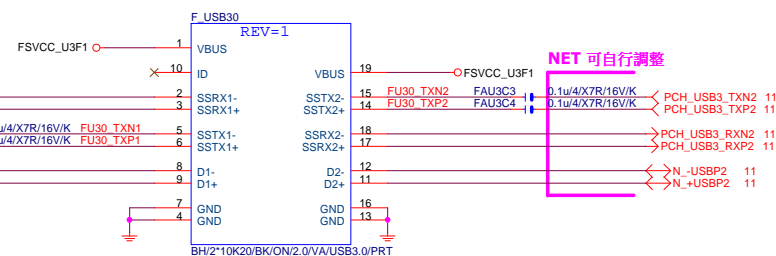
Gigabyte Technology

AUDIO JACK

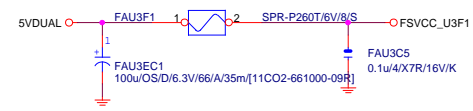
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Size	Custom			
Date	Thursday, October 15, 2015	Sheet	37	of 44

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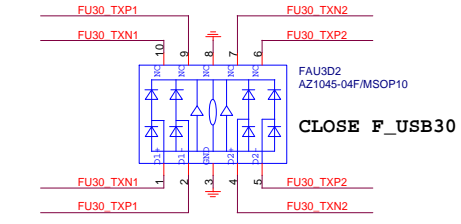
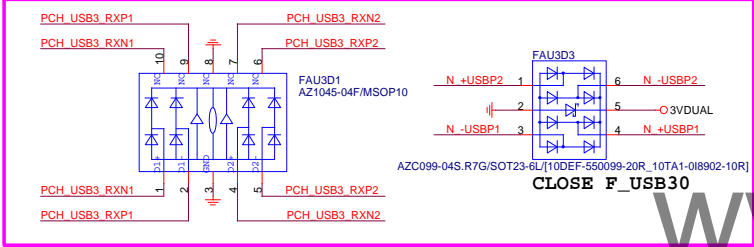
Front USB3.0



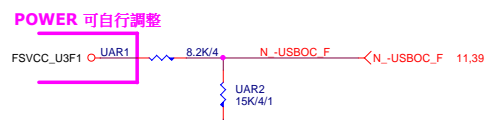
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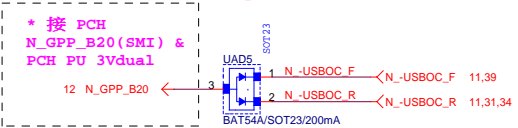
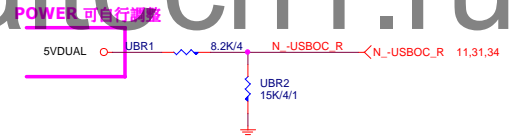
NET 可自行調整



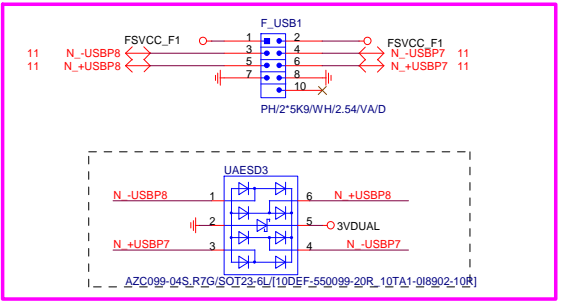
-USB0C_F



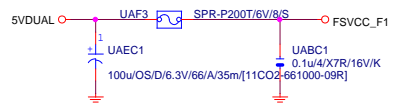
-USB0C_R



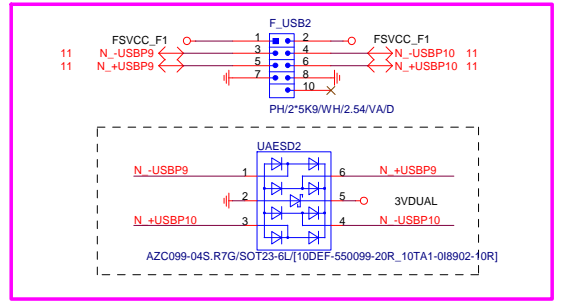
NET 可變



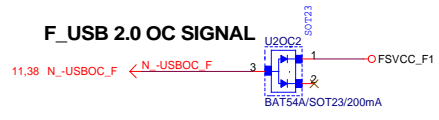
Close to connector
FUSE 2 Port 1 Fuse 2A



NET 可變



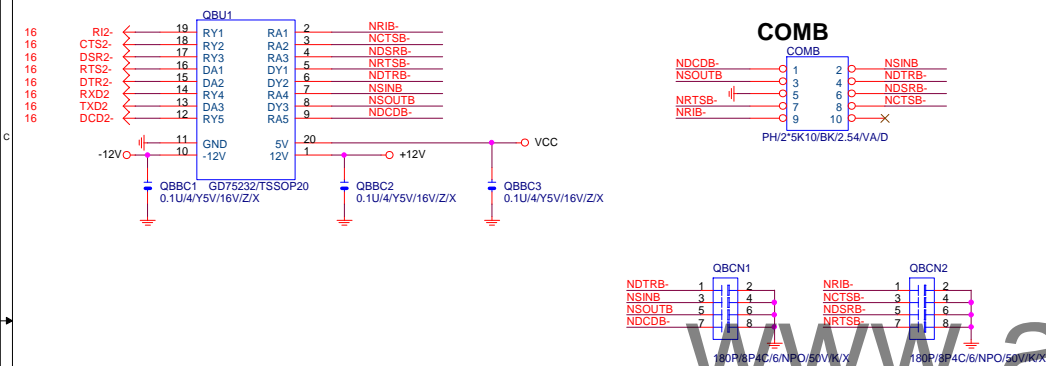
F_USB 2.0 OC SIGNAL



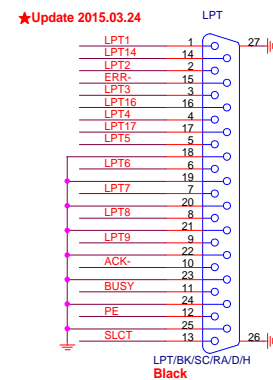
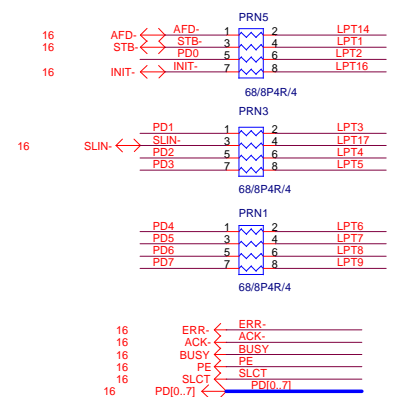
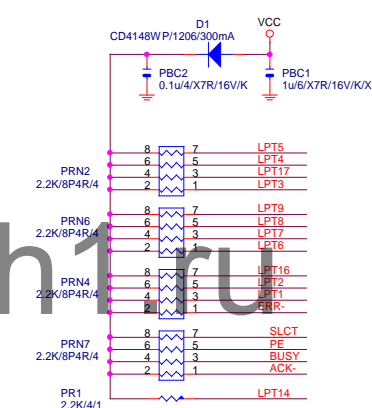
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Gigabyte Technology

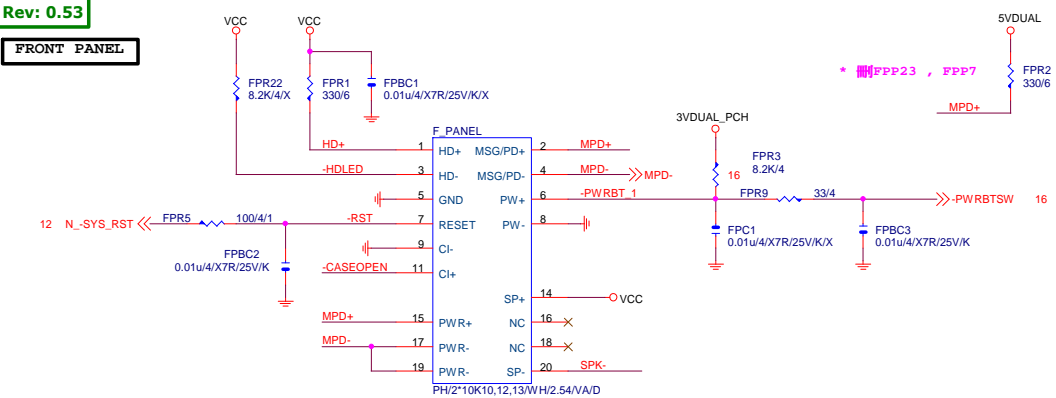
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Size	Document Number	GA-H110M-S2PH DDR3	Rev 1.0
Date:	Thursday, October 15, 2015	Sheet 39	of 44



LPT PORT



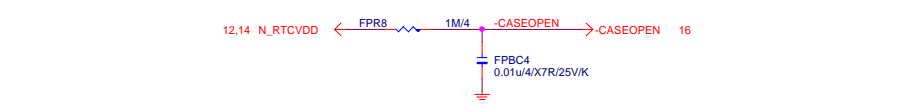
FRONT PANEL



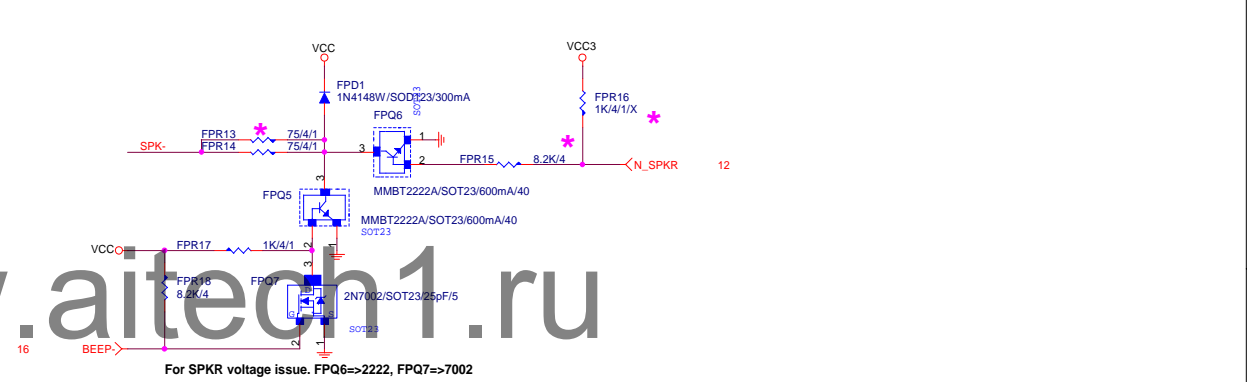
ESD



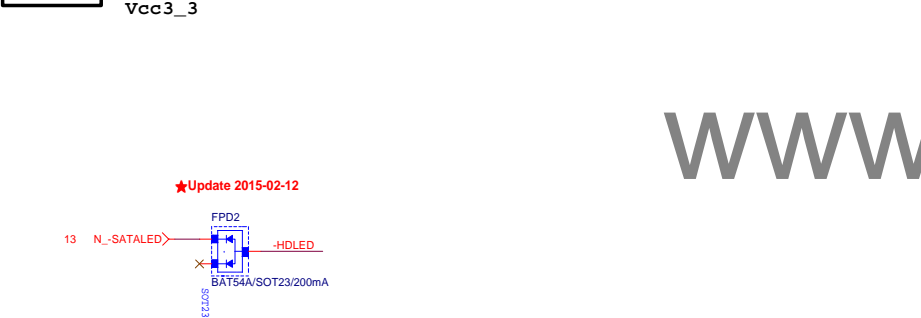
CASE OPEN



SPKR

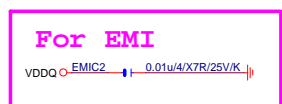
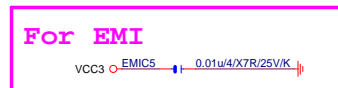
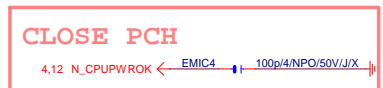


SATA LED

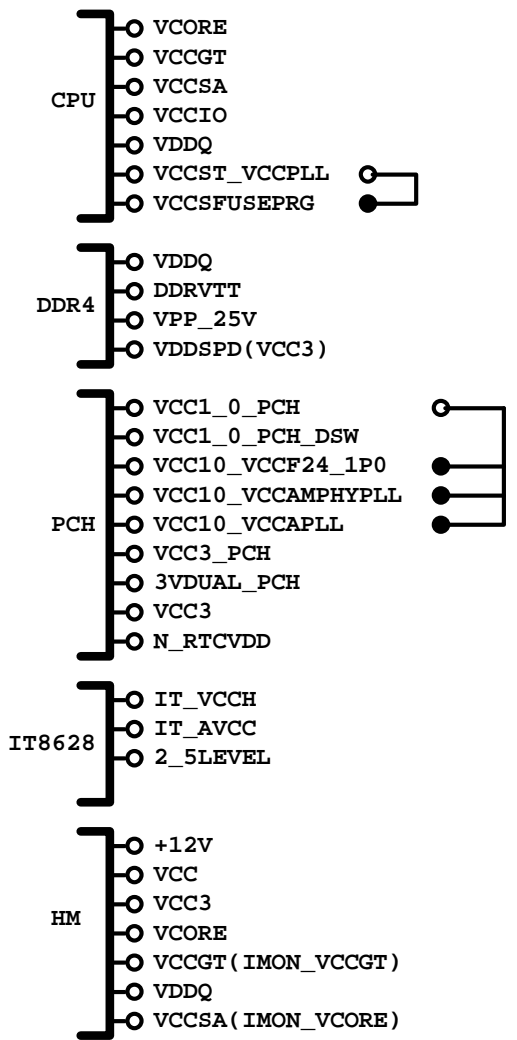


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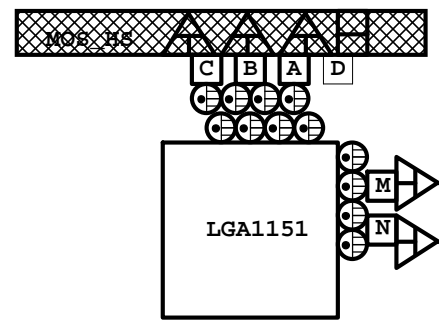
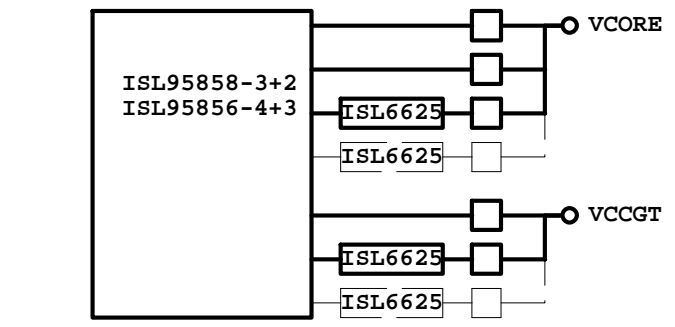
EMI/ESD R0.1



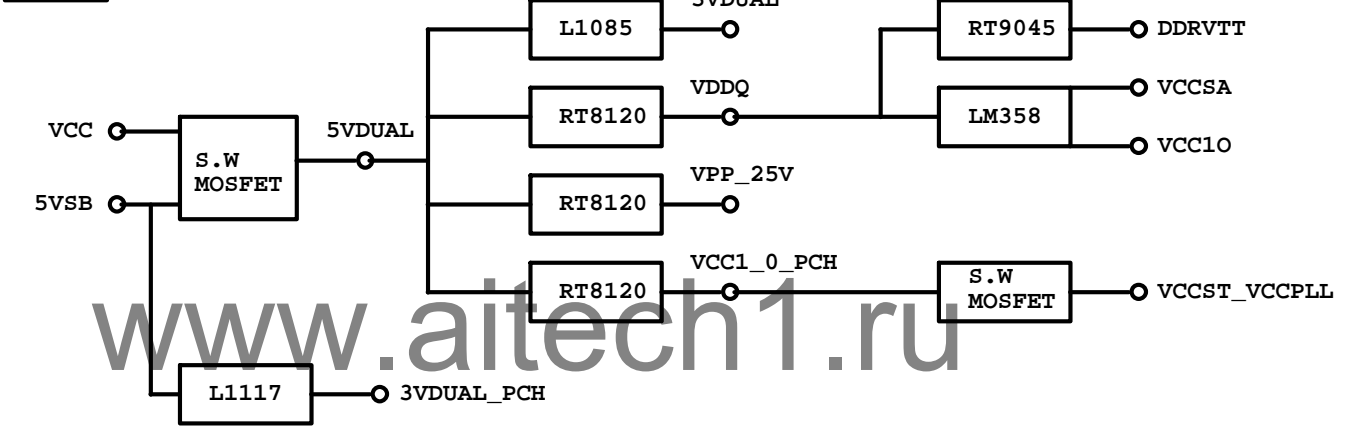
POWER BLOCK MAP



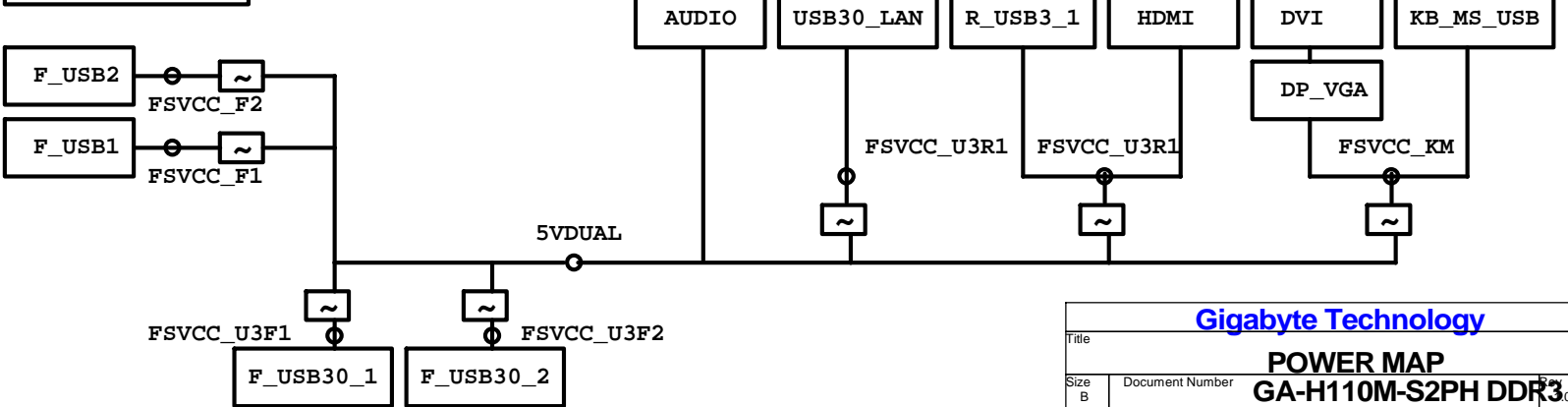
VCORE/VCCGT



POWER



FUSE POWER F/R



固態電容料號.請自行修改

日系黑色固態	Capture Value
11C02-C85600-01R	560u/FP/D/6.3V/68/C/8m
11C05-C82700-01R	270u/FP/D/16V/88/C/12m
11C05-C61000-01R	100u/OS/D/16V/66/C/30m
11C02-C51000-01R	100u/FP/D/6.3V/65/C/13m

日系一般固態	Capture Value
11C02-685600-01R	560u/FP/D/6.3V/68/8m
11C05-882700-01R	270u/FP/D/16V/88/12m
11C05-661000-03R	100u/OS/D/16V/66/30m
11C02-651000-02R	100u/OS/D/6.3V/66/30m

台系固態	Capture Value
11C02-661000-09R	100u/OS/D/6.3V/66/A/35m
11C05-691000-09R	100u/OS/D/16V/69/A/35m
11C05-8C2700-09R	270u/FP/D/16V/8C/A/10m
11C02-695600-09R	560u/FP/D/6.3V/69/A/11m

IRON CHOKE

	料號	Capture Value	SIZE	Footprint
DIP	11LC5-M4500C-01R	0.5uH/40A/IMD109/M/D	10*10	CHOKE05U-40A-1PQ-3
DIP	11LC5-M2500C-01R	0.5uH/20A/IMD0809/M/D	8*8	CHOKE1U-R50M-IF

Ferrite


	料號	Capture Value	SIZE	Footprint
DIP	11LC5-F3500C-11R	0.5uH/32A/INCG109/FSI/D	10*10	CHOKE05U-40A-1PQ-3
DIP	11LC5-F2500C-11R	0.5uH/25A/INC0809/F/D	8*8	CHOKE1U-R50M-IF
SMD	未建(SIUC1007-R30M-JJ1W)		10*7	CHOKE11X8MM-SMD

BEAD

	料號	Capture Value	SIZE	Footprint
DIP	10LFB-15470A-01R	47/4030/15A/S	4*3	BEADC8B-BPH_SMD

PWM料號

	料號	Capture Value	Footprint
PWM	ISL95856	10TA1-695856-01R	IC52QFN-6x6-G
PWM	ISL95858	10TA1-695858-01R	IC52QFN-6x6-G
PWM	IR35201	10TA1-635201-00R	IC56QFN-9VRS4339
PWM	IR3570	10TA1-603570-00R	IC40MLFP-ISL95835



Title

POWER零件使用表

Size

Custom

Document Number

GA-H110M-S2PH DDR3

Rev

1.0

Date:

Thursday, October 15, 2015

Sheet

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of

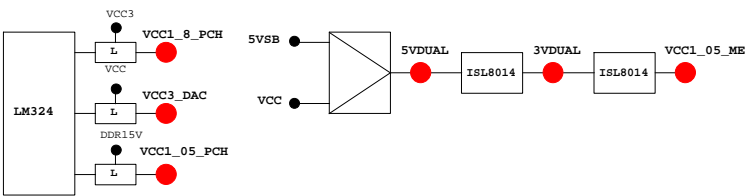
44

PCH GPIO LIST TABLE					
PIN NAME	PWR	Default	USAGE	NOTE	
GP0	MAIN	H-Z	GPI	GPIO0	N/A
GP1/TACH1	MAIN		GPI	GPIO1	N/A
GP2/PIRQE#	MAIN		GPI	-PIRQE	P/U 8.2K VCC3
GP3/PIRQF#	MAIN		GPI	-PIRQF	P/U 8.2K VCC3
GP4/PIRQG#	MAIN		GPI	-PIRQG	P/U 8.2K VCC3
GP5/PIRQH#	MAIN		GPI	-PIRQH	P/U 8.2K VCC3
GP6/TACH2	MAIN		GPI	PCIEX1 Detect	P/U 8.2K VCC3
GP7/TACH3	MAIN		GPI	GPIO7	P/U 8.2K VCC3
GP8	STBY	H	GPI	GPIO8	N/A
GP9/OC5#	STBY		NATIVE	USB OC5#	N/A
GP10/OC6#	STBY		NATIVE	USB OC6#	N/A
GP11/SMBALERT#	STBY		NATIVE	USB PWR protect	P/U 8.2K 3VDUAL
GP12	STBY	L	GPI	GPIO12	N/A
GP13	STBY	L	GPI	LPCPME#	P/U 8.2K 3VDUAL
GP14/OC7#	STBY		NATIVE	USB OC7#	N/A
GP15	STBY	L	GPI	GPIO15(TLS Enable)	P/U 8.2K 3VDUAL
GP16	MAIN		GPI	GPIO16	P/U 8.2K VCC3
GP17/TACH0	MAIN		GPI	GPIO17	P/U 8.2K VCC3
GP18	MAIN		GPI	Mobile Only	N/A
GP19	MAIN		GPI	GPIO19	P/U 8.2K VCC3
GP20	MAIN		GPI	GPIO20	P/U 8.2K VCC3
GP21	MAIN		GPI	GPIO21	P/U 8.2K VCC3
GP22	MAIN	H-Z	GPI	GPIO22	P/U 8.2K VCC3
GP23	MAIN		GPI	GPIO23	N/A
GP24	STBY	L	GPI	SKTOCC#	N/A
GP25	STBY			Mobile Only	N/A
GP26	STBY			Mobile Only	N/A
GP27	STBY	H	GPO	GPIO27	P/U 8.2K 3VDUAL
GP28	STBY	H	GPO	PWR LED	P/U 8.2K 3VDUAL
GP29	STBY	L	GPI	GPIO29	N/A
GP30	STBY	H-Z	GPI	Mobile Only	N/A
GP31	STBY	H-Z	GPI	Mobile Only	N/A
GP32	MAIN	H	GPO	N/A	N/A
GP33	MAIN	H	GPO	N/A	N/A
GP34	MAIN	H-Z	GPI	-PCI_STOP	P/U 8.2K VCC3
GP35	MAIN	L	GPO	-ACZ_DET	P/U 8.2K VCC3
GP36	MAIN		GPI	N/A	N/A
GP37	MAIN		GPI	N/A	N/A
GP38	MAIN	H-Z	GPI	PCIEX4 Detect	P/U 8.2K VCC3
GP39	MAIN	H-Z	GPI	GPIO39	P/U 8.2K VCC3
GP40	STBY		NATIVE	USB OC1#	N/A
GP41	STBY		NATIVE	USB OC2#	N/A
GP42	STBY		NATIVE	USB OC3#	N/A
GP43	STBY		NATIVE	USB OC4#	N/A
GP44	STBY	L	NATIVE	GPIO44	P/U 8.2K 3VDUAL
GP45	STBY		NATIVE	GPIO45	P/U 8.2K 3VDUAL
GP46	STBY	L	NATIVE	GPIO46	P/U 8.2K 3VDUAL
GP47	STBY			Mobile Only	N/A
GP48	MAIN	H-Z	IN	GPIO48	P/U 8.2K 3VDUAL
GP49	MAIN	H-Z	IN	GPIO49	P/U 8.2K 3VDUAL
GP50	MAIN		NATIVE	-REQ1	P/U 2.2K VCC
GP51	MAIN	H	NATIVE	-GNT1	N/A
GP52	MAIN		NATIVE	-REQ2	P/U 2.2K VCC
GP53	MAIN	H	NATIVE	-GNT2	N/A
GP54	MAIN		NATIVE	-REQ3	P/U 2.2K VCC
GP55	MAIN	H	NATIVE	-GNT3	N/A
GP56	STBY		NATIVE	Mobile Only	N/A
GP57	STBY	H-Z	IN	VCORE_OV1	P/U 8.2K 3VDUAL
GP58	STBY	H-Z	NATIVE	F_USB_OC	P/U 8.2K 3VDUAL
GP59	STBY		NATIVE	USB_OC0#	N/A
GP60	STBY	H-Z	NATIVE	N/A(Reverse)	P/U 8.2K 3VDUAL
GP61	STBY	L	NATIVE	-SUSTAT	N/A
GP62	STBY	L	NATIVE	SUSCLK	N/A
GP63	STBY	L	NATIVE	GPIO63	N/A
GP64	MAIN	L	NATIVE	CLKOUTFLEX0	N/A
GP65	MAIN	L	NATIVE	CLKOUTFLEX1	N/A
GP66	MAIN	L	NATIVE	CLKOUTFLEX2	N/A
GP67	MAIN	L	NATIVE	CLKOUTFLEX3	N/A
GP72	STBY	H-Z	NATIVE	VCORE_OV4	P/U 8.2K 3VDUAL
GP73	STBY			Mobile Only	N/A
GP74	STBY	H-Z	NATIVE	1_05V_OV2	P/U 8.2K 3VDUAL
GP75	STBY	H-Z	NATIVE	N/A(Reverse)	P/U 8.2K 3VDUAL

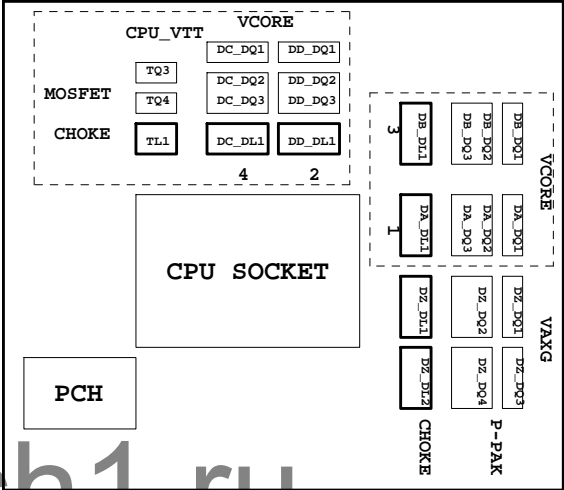
Super I/O ITE8720 GPIO Table

PIN NAME	USAGE	NOTE
SVC/PECI_RQT/GP14	-PECI_REQ	
PWROK1/GP13	PWROK1/ITE_PWROK	
KRST#/GP62	-KBRST	
SO/GP50	-ICH_SPI_CS	
IRTX/GP47/CE2_N/JP7	CEB_N	
GP46/IRRX	-LAN2_DSM	
PSION#/GP42	-PSON	
PWROK2#/GP41	PECI_CTL	
PCIRST3#/GP10/VDIMM_STR_EN	-PCIE_RST	
RSMRST#CIRRXL/GP55	-RSMRST	
PME#/GP54	-LPCPME	
PD5/GP75/BUSS00	N/A	

PIN NAME	USAGE	NOTE
FAN_TAC2/GP52	FANIO2	
FAN_TAC3/GP37	FANIO3	
VIDO3/FAN_TAC4/GP25/DSR2#	FANIO4	
FAN_CTL2/GP51	FANPWM2	
FAN_CTL3/GP36	FANPWM3	
VID4/GP34	BEEP-	
VID3/GP33	TURBO1	
VID2/GP32	TURBO0	
VCORE_GOOD/VID6/GP63	CPUT_LED1_C	
VID5/GP35	CPUT_LED2_C	
VID1/GP31	CPUT_LED3_C	
VID0/GP30	-LAN1_DSM	NBT_LED1_C
SLCT/GP80	CPU_LED1_C	
PE/GP81	CPU_LED2_C	
BUSY/GP82	CPU_LED3_C	
PD3/GP73/BUSSI1	SB_LED1_C	
PD4/GP74/BUSSI2	SB_LED2_C	
VCORE_EN/VID7/GP64	IT_GP64	SB_LED3_C
PD0/GP70	NB_LED1_C	
PD1/GP71	NB_LED2_C	
PD2/GP72/BUSSI0	NB_LED3_C	
GP22/SCK	LOW_PWR_1	
VID05/GP27/SIN2	LOW_PWR_2	
PCIRST2#/GP11	-PWRST1	
PCIRST1#/GP12	-PWRST2	
3VBSBW#/GP40	CSI_F0	BSEL166_1
SUSC#/GP53	CSI_F1	BSEL166_2
GP23/SI	BSEL166_3/CSISBSL	
VID00/GP20/CTS2#	CPUT_LED1_C	BSEL166_4
GP65/VDDA_EN/GB_01	MB_ID2	
PD6/GP76/BUSS01	MB_ID3	
PD7/GP77/BUSS02	MB_ID4	
AFD#/GP86/SMB_C_R	SEC_PIN	FST_2X8
INIT#/GP85/SMB_D_M	SEC_2x8	GTLREF_AD2
ACK#/GP83	DDR_LED1_C	
VID01/GP21/DCD2#	DDR_LED2_C	
STB#/GP87/SMB_C_M	DDR_LED3_C	
PWRON#/GP44	VCORE_OV1	
PANSWH#/GP43	PWRBTSW	
KDAT/GP61	-PWRBTSW	
KCLK/GP60	KDAT	
MDAT/GP57	KCLK	
MACL/GP56	MDAT	
GP66/VLDT_EN/GB_02	NBT_LED1_C	MCLK
SVD/PCIRSTIN#/CIRTX/GP15	PWM2_CR	
KDAT/GP61	PWM2_CR	
GP67/CPU_PG/GB_03	EN_LOADLINE	IT_GP67/-EN_PWM2
SLIN#/GP84/SMB_D_R	-EN_PWM2	
PSI_L/FAN_CLT5/CIRRXL2/GP16	-THERM	
VID04/GP26/SOUT2	DDR18V_PH2_EN	
VID02/FAN_TAC5/GP24/DSR2#	DDR18V_LED	
VID06/GP17/RI2#	1_1V_PH_EN	
VID07/JP6/DTR2#	JP6	
PD5/GP75/BUSS00	SB_LED3_C	



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
CPU_VTT	CPU Termination
CPU_VAXG	CPU Graphic Core
VCC1_8_PCH	CPU PLL
VCC1_05_PCH	PCH core
3VDUAL	3VDUAL
DDR15V	DRAM voltage
DDRVTT	DRAM Terminatio
VREF_CA_A/VREF_CA_B	DRAM Address Ref
VREF_DQ_A/VREF_DQ_B	DRAM Data Ref

散熱模組料號：

Z77-D3H :
PCH :
12SP2-S05511-01R/02R/03R
MOSFET :
12SP2-S08924-01R/02R/03R

	3 pin FAN control	4 pin FAN control	FAN speed	Controller
CPU FAN	FANPWM1	FANPWM3	FANIO1	IT8720
	ICH_FAN_PWM2	ICH_FAN_PWM0	ICH_FAN_TACH0	PCH
SYS FAN	FANPWM2	N/A	FANIO2	IT8720
	ICH_FAN_PWM1	N/A	ICH_FAN_TACH1	PCH
PWR FAN	N/A	N/A	FANIO3	IT8720
			ICH_FAN_TACH2	PCH