

Model Name: GA-Z170M-D3H DDR3

SHEET TITLE

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_LGA1150-D
08	DDR4 CHANNEL A
09	DDR4 CHANNEL B
10	PCH_CLK BUFFER
11	PCH_DMI,USB,PCIE
12	PCH_MISC
13	PCH SATA,PCIE,SATA_EXPRESS
14	PCH_PWR,GND
15	Dual BIOS
16	ITE 8628 LPC IO
17	HWM
18	FAN CTRL--SIO
19	PCI EXPRESS*16 SLOT
20	PCI EXPRESS*4 SLOT
21	M.2X4
22	SATA EXPRESS
23	ASM1083 PCI BRIDGE
24	ASM1083 POWER
25	PCI SLOT 1&2
26	ISL95858_856 PWM
27	ISL95858_856 MOS_VCORE

rev 1.0

SHEET TITLE

28	ISL95858_856 MOS_VCCGT
29	VCCSA_VCCIO_VCCPLL
30	RT8120_DDR_VDDQ
31	RT8120_PCH_VCC1_0_PCH
32	DISCRETE POWER
33	NCT3933
34	ATX POWER , A_-PROCHOT
35	KB_MS_USB
36	DVI CONN
37	PTN3356 - DP to VGA - IC
38	PTN3356 - DP to VGA - Conn
39	HDMI CONN
40	R_USB30
41	INTEL I219
42	USB30_LAN CONNECTOR-I219
43	Realtek ALC892
44	REAR AUDIO JACK
45	F_USB30
46	F_USB
47	COM , LPT , TPM , THB
48	F_PANEL
49	TABLE LIST
50	POWER MAP
51	NTC MAP

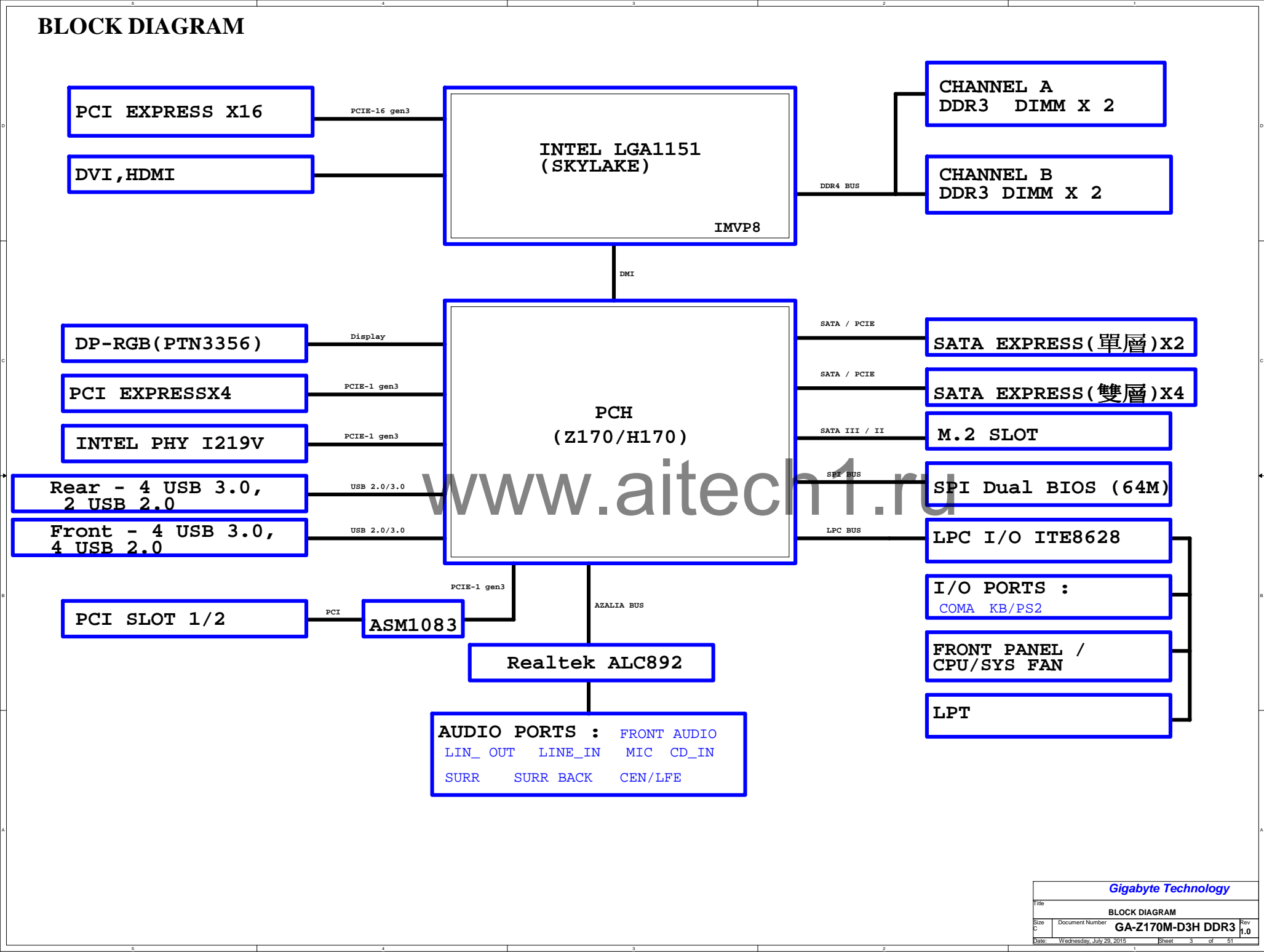
www.aitech1.ru

Circuit or PCB layout change

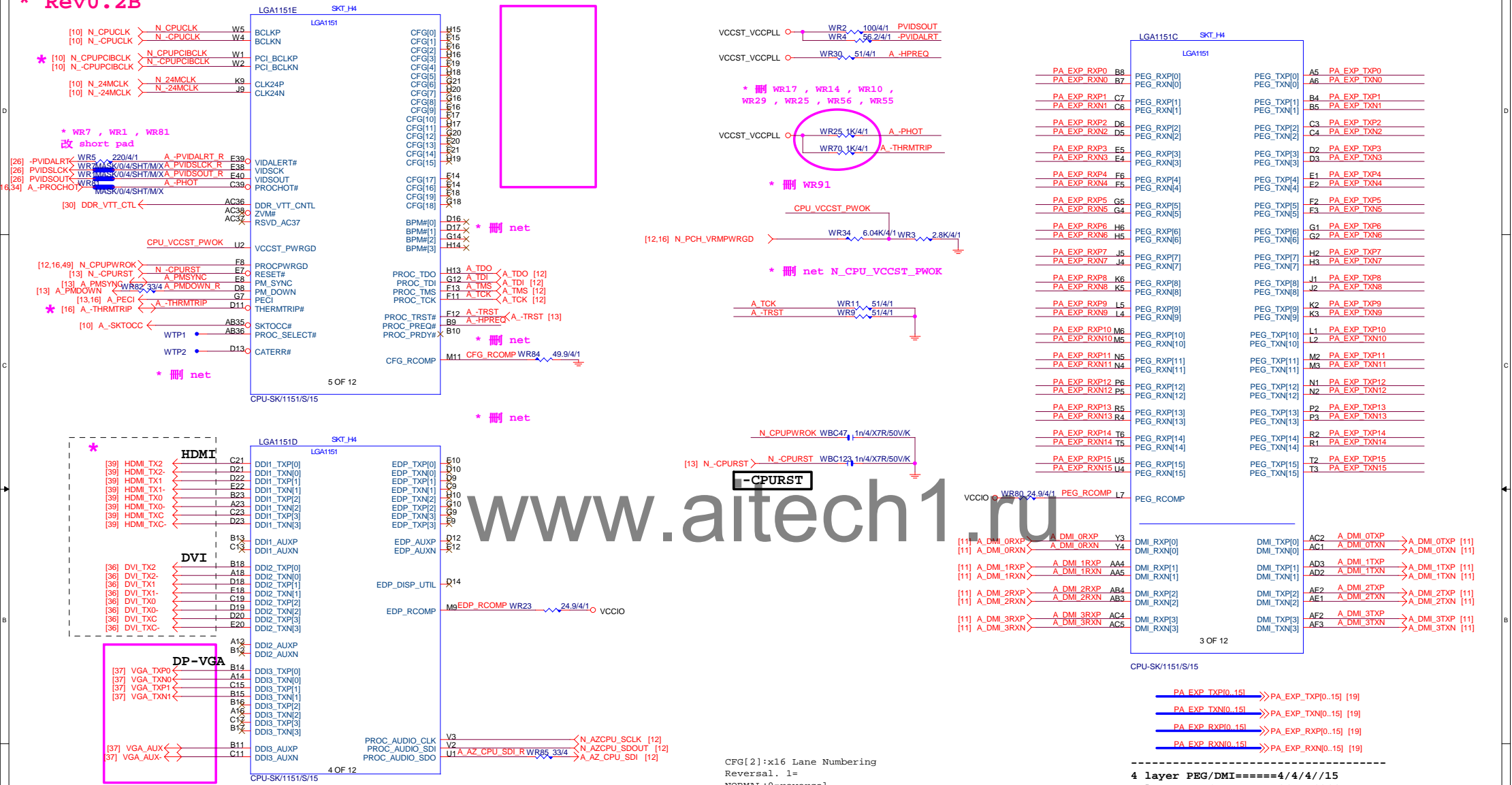
2015/07/23

[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
```

```
4 layer HDMI/DP/eDP/====4/4/4//15
6 layer HDMI/DP/eDP/====4/5.5/4//15
```

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

			
Title			
CPU LGA1151-A			
Size	Document Number		Rev
Custom		GA-Z170M-D3H DDR3	1.0
Date:	Wednesday, July 29, 2015	Sheet	4 of 51

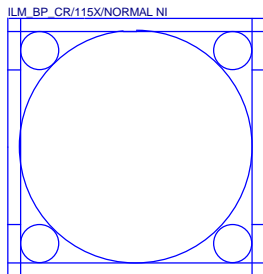
LGA1151A SKT_H4 LGA1151			
MDA0 AE38	DDR0_DQ[0]	DDR0_CKP[0]	AW18 M_DCLKA0 <M_DCLKA0 [8]
MDA1 AE37	DDR0_DQ[1]	DDR0_CKP[0]	AV18 M_DCLKA0 <M_DCLKA0 [8]
MDA2 AG38	DDR0_DQ[2]	DDR0_CKP[1]	AW17 M_DCLKA1 <M_DCLKA1 [8]
MDA3 AG37	DDR0_DQ[3]	DDR0_CKP[1]	AY17 M_DCLKA1 <M_DCLKA1 [8]
MDA4 AE38	DDR0_DQ[4]	DDR0_CKP[2]	AW16 M_DCLKA2 <M_DCLKA2 [8]
MDA5 AE40	DDR0_DQ[5]	DDR0_CKP[2]	AV16 M_DCLKA2 <M_DCLKA2 [8]
MDA6 AG38	DDR0_DQ[6]	DDR0_CKP[3]	AT18 M_DCLKA3 <M_DCLKA3 [8]
MDA7 AG40	DDR0_DQ[7]	DDR0_CKP[3]	AW16 M_DCLKA3 <M_DCLKA3 [8]
MDA8 AJ38	DDR0_DQ[8]		
MDA9 AJ37	DDR0_DQ[9]	DDR0_CKE[0]	AY24 CKEA0 <CKEA0 [8]
MDA10 AL38	DDR0_DQ[10]	DDR0_CKE[1]	AV24 CKEA1 <CKEA1 [8]
MDA11 AL37	DDR0_DQ[11]	DDR0_CKE[2]	AY25 CKEA2 <CKEA2 [8]
MDA12 AL40	DDR0_DQ[12]	DDR0_CKE[3]	AV25 CKEA3 <CKEA3 [8]
MDA13 AJ38	DDR0_DQ[13]		
MDA14 AL39	DDR0_DQ[14]	DDR0_CS[0]	AW12 M-CSA0 <M-CSA0 [8]
MDA15 AL40	DDR0_DQ[15]	DDR0_CS[1]	AV12 M-CSA1 <M-CSA1 [8]
MDA16 AX38	DDR0_DQ[16]	DDR0_CS[2]	AV13 M-CSA2 <M-CSA2 [8]
MDA17 AN40	DDR0_DQ[17]	DDR0_CS[3]	AV10 M-CSA3 <M-CSA3 [8]
MDA18 AR38	DDR0_DQ[18]		
MDA19 AR37	DDR0_DQ[19]	DDR0_ODT[0]	AW11 MODT_A0
MDA20 AN39	DDR0_DQ[20]	DDR0_ODT[1]	AU14 MODT_A1
MDA21 AN37	DDR0_DQ[21]	DDR0_ODT[2]	AU12 MODT_A2
MDA22 AR39	DDR0_DQ[22]	DDR0_ODT[3]	AY10 MODT_A3
MDA23 AR40	DDR0_DQ[23]		
MDA24 AW37	DDR0_DQ[24]	DDR0_BA[0]/DDR0_CAB[4]/DDR0_BA[0]	AY13 SBAA0 <SBAA0 [8]
MDA25 AL38	DDR0_DQ[25]	DDR0_BA[1]/DDR0_CAB[6]/DDR0_BA[1]	AV15 SBAA1 <SBAA1 [8]
MDA26 AV35	DDR0_DQ[26]	DDR0_BA[2]/DDR0_CAB[5]/DDR0_BG[0]	AW23 SBAA2 <SBAA2 [8]
MDA27 AW35	DDR0_DQ[27]		
MDA28 AL37	DDR0_DQ[28]	DDR0_RAS#/DDR0_CAB[3]/DDR0_MA[16]	AW13 M-SRASA <M-SRASA [8]
MDA29 AV37	DDR0_DQ[29]	DDR0_WE#/DDR0_CAB[2]/DDR0_MA[14]	AV14 M-SWEA <M-SWEA [8]
MDA30 AT36	DDR0_DQ[30]	DDR0_CAS#/DDR0_CAB[1]/DDR0_MA[15]	AV11 M-SCASA <M-SCASA [8]
MDA31 AU35	DDR0_DQ[31]		
MDA32 AY38	DDR0_DQ[32]	DDR0_MA[0]/DDR0_CAB[9]/DDR0_MA[0]	AW15 MAA0
MDA33 AW38	DDR0_DQ[33]	DDR0_MA[1]/DDR0_CAB[8]/DDR0_MA[1]	AU18 MAA1
MDA34 AV6	DDR0_DQ[34]	DDR0_MA[2]/DDR0_CAB[5]/DDR0_MA[2]	AU17 MAA2
MDA35 AU6	DDR0_DQ[35]	DDR0_MA[3]	AU19 MAA3
MDA36 AU8	DDR0_DQ[36]	DDR0_MA[4]	AT19 MAA4
MDA37 AV8	DDR0_DQ[37]	DDR0_MA[5]	AU20 MAA5
MDA38 AW6	DDR0_DQ[38]	DDR0_MA[6]	AU21 MAA6
MDA39 AV6	DDR0_DQ[39]	DDR0_MA[7]	AT20 MAA7
MDA40 AY4	DDR0_DQ[40]	DDR0_MA[8]	AU14 MAA8
MDA41 AV4	DDR0_DQ[41]	DDR0_MA[9]	AT22 MAA9
MDA42 AT2	DDR0_DQ[42]	DDR0_MA[10]	AU22 MAA10
MDA43 AT2	DDR0_DQ[43]	DDR0_MA[11]	AV22 MAA11
MDA44 AV3	DDR0_DQ[44]	DDR0_MA[12]	AV12 MAA12
MDA45 AW4	DDR0_DQ[45]	DDR0_MA[13]	AV23 MAA13
MDA46 AT4	DDR0_DQ[46]	DDR0_MA[14]	AV23 MAA14
MDA47 AT3	DDR0_DQ[47]	DDR0_MA[15]	AU24 MAA15
MDA48 AP2	DDR0_DQ[48]		
MDA49 AM4	DDR0_DQ[49]	DDR0_PAR	AY15
MDA50 AP3	DDR0_DQ[50]	DDR0_ALERT#	AT23
MDA51 AM3	DDR0_DQ[51]		
MDA52 AP4	DDR0_DQ[52]	DDR0_DQS[0]	AF38 M-DQSA0
MDA53 AM2	DDR0_DQ[53]	DDR0_DQS[1]	AK38 M-DQSA1
MDA54 AP1	DDR0_DQ[54]	DDR0_DQS[2]	AP38 M-DQSA2
MDA55 AM1	DDR0_DQ[55]	DDR0_DQS[3]	AV38 M-DQSA3
MDA56 AK3	DDR0_DQ[56]	DDR0_DQS[4]	AV7 M-DQSA4
MDA57 AH1	DDR0_DQ[57]	DDR0_DQS[5]	AU2 M-DQSA5
MDA58 AK4	DDR0_DQ[58]	DDR0_DQS[6]	AN2 M-DQSA6
MDA59 AH2	DDR0_DQ[59]	DDR0_DQS[7]	AJ2 M-DQSA7
MDA60 AH4	DDR0_DQ[60]		
MDA61 AK2	DDR0_DQ[61]	DDR0_DQSP[0]	AF38 M-DQSA0
MDA62 AH3	DDR0_DQ[62]	DDR0_DQSP[1]	AK38 M-DQSA1
MDA63 AK1	DDR0_DQ[63]	DDR0_DQSP[2]	AP38 M-DQSA2
		DDR0_DQSP[3]	AV38 M-DQSA3
		DDR0_DQSP[4]	AV7 M-DQSA4
		DDR0_DQSP[5]	AU2 M-DQSA5
		DDR0_DQSP[6]	AN2 M-DQSA6
		DDR0_DQSP[7]	AJ2 M-DQSA7
		DDR0_DQSP[8]	AV32
		DDR0_DQSP[9]	AJ32

DDR CHANNEL
A

1 OF 12

CPU-SK/1151/S/15

LGA1151



Need check the new CPU MB

LGA1151B SKT_H4 LGA1151			
MDB0 AD34	DDR1_DQ[0]/DDR0_DQ[16]	DDR1_CKP[0]	AM20 M_DCLKB0 <M_DCLKB0 [9]
MDB1 AD35	DDR1_DQ[1]/DDR0_DQ[17]	DDR1_CKP[0]	AM21 M_DCLKB0 <M_DCLKB0 [9]
MDB2 AG35	DDR1_DQ[2]/DDR0_DQ[18]	DDR1_CKP[1]	AP22 M_DCLKB1 <M_DCLKB1 [9]
MDB3 AH35	DDR1_DQ[3]/DDR0_DQ[19]	DDR1_CKP[1]	AP21 M_DCLKB1 <M_DCLKB1 [9]
MDB4 AE35	DDR1_DQ[4]/DDR0_DQ[20]	DDR1_CKP[2]	AN20 M_DCLKB2 <M_DCLKB2 [9]
MDB5 AE34	DDR1_DQ[5]/DDR0_DQ[21]	DDR1_CKP[2]	AN21 M_DCLKB2 <M_DCLKB2 [9]
MDB6 AG34	DDR1_DQ[6]/DDR0_DQ[22]	DDR1_CKP[3]	AP19 M_DCLKB3 <M_DCLKB3 [9]
MDB7 AH34	DDR1_DQ[7]/DDR0_DQ[23]	DDR1_CKP[3]	AP20 M_DCLKB3 <M_DCLKB3 [9]
MDB8 AK35	DDR1_DQ[8]/DDR0_DQ[24]		
MDB9 AL35	DDR1_DQ[9]/DDR0_DQ[25]	DDR1_CKE[0]	AY29 CKEB0 <CKEB0 [9]
MDB10 AK32	DDR1_DQ[10]/DDR0_DQ[26]	DDR1_CKE[1]	AV29 CKEB1 <CKEB1 [9]
MDB11 AL32	DDR1_DQ[11]/DDR0_DQ[27]	DDR1_CKE[2]	AW29 CKEB2 <CKEB2 [9]
MDB12 AK34	DDR1_DQ[12]/DDR0_DQ[28]	DDR1_CKE[3]	AU29 CKEB3 <CKEB3 [9]
MDB13 AL34	DDR1_DQ[13]/DDR0_DQ[29]		
MDB14 AK31	DDR1_DQ[14]/DDR0_DQ[30]	DDR1_CS[0]	AP17 M-CSB0 <M-CSB0 [9]
MDB15 AL31	DDR1_DQ[15]/DDR0_DQ[31]	DDR1_CS[1]	AN15 M-CSB1 <M-CSB1 [9]
MDB16 AP35	DDR1_DQ[16]/DDR0_DQ[32]	DDR1_CS[2]	AP17 M-CSB2 <M-CSB2 [9]
MDB17 AN35	DDR1_DQ[17]/DDR0_DQ[33]	DDR1_CS[3]	AM15 M-CSB3 <M-CSB3 [9]
MDB18 AN32	DDR1_DQ[18]/DDR0_DQ[34]		
MDB19 AP32	DDR1_DQ[19]/DDR0_DQ[35]	DDR1_ODT[0]	AM16 MODT_B0
MDB20 AN34	DDR1_DQ[20]/DDR0_DQ[36]	DDR1_ODT[1]	AL16 MODT_B1
MDB21 AP34	DDR1_DQ[21]/DDR0_DQ[37]	DDR1_ODT[2]	AL15 MODT_B2
MDB22 AN31	DDR1_DQ[22]/DDR0_DQ[38]	DDR1_ODT[3]	AL15 MODT_B3
MDB23 AP31	DDR1_DQ[23]/DDR0_DQ[39]		
MDB24 AL29	DDR1_DQ[24]/DDR0_DQ[40]	DDR1_RAS#/DDR1_CAB[3]/DDR1_MA[16]	AN18 M-SRASB <M-SRASB [9]
MDB25 AM29	DDR1_DQ[25]/DDR0_DQ[41]	DDR1_WE#/DDR1_CAB[2]/DDR1_MA[14]	AL17 M-SWEB <M-SWEB [9]
MDB26 AP29	DDR1_DQ[26]/DDR0_DQ[42]	DDR1_CAS#/DDR1_CAB[1]/DDR1_MA[15]	AP16 M-SCASB <M-SCASB [9]
MDB27 AR29	DDR1_DQ[27]/DDR0_DQ[43]		
MDB28 AM28	DDR1_DQ[28]/DDR0_DQ[44]	DDR1_BA[0]/DDR1_CAB[4]/DDR1_BA[0]	AL18 SBAB0 <SBAB0 [9]
MDB29 AL28	DDR1_DQ[29]/DDR0_DQ[45]	DDR1_BA[1]/DDR1_CAB[6]/DDR1_BA[1]	AM18 SBAB1 <SBAB1 [9]
MDB30 AR28	DDR1_DQ[30]/DDR0_DQ[46]	DDR1_BA[2]/DDR1_CAB[5]/DDR1_BG[0]	AW28 SBAB2 <SBAB2 [9]
MDB31 AR28	DDR1_DQ[31]/DDR0_DQ[47]		
MDB32 AR12	DDR1_DQ[32]/DDR1_DQ[16]	DDR1_MA[0]/DDR1_CAB[9]/DDR1_MA[0]	AL19 MAAB0
MDB33 AP12	DDR1_DQ[33]/DDR1_DQ[17]	DDR1_MA[1]/DDR1_CAB[8]/DDR1_MA[1]	AL22 MAAB1
MDB34 AM13	DDR1_DQ[34]/DDR1_DQ[18]	DDR1_MA[2]/DDR1_CAB[5]/DDR1_MA[2]	AM22 MAAB2
MDB35 AL13	DDR1_DQ[35]/DDR1_DQ[19]	DDR1_MA[3]	AM23 MAAB3
MDB36 AR13	DDR1_DQ[36]/DDR1_DQ[20]	DDR1_MA[4]	AP23 MAAB4
MDB37 AP13	DDR1_DQ[37]/DDR1_DQ[21]	DDR1_MA[5]	AL23 MAAB5
MDB38 AM12	DDR1_DQ[38]/DDR1_DQ[22]	DDR1_MA[6]	AW26 MAAB6
MDB39 AL12	DDR1_DQ[39]/DDR1_DQ[23]	DDR1_MA[7]	AY26 MAAB7
MDB40 AP10	DDR1_DQ[40]/DDR1_DQ[24]	DDR1_MA[8]	AW26 MAAB8
MDB41 AR10	DDR1_DQ[41]/DDR1_DQ[25]	DDR1_MA[9]	AW27 MAAB9
MDB42 AR7	DDR1_DQ[42]/DDR1_DQ[26]	DDR1_MA[10]	AW27 MAAB10
MDB43 AF7	DDR1_DQ[43]/DDR1_DQ[27]	DDR1_MA[11]	AV27 MAAB11
MDB44 AR9	DDR1_DQ[44]/DDR1_DQ[28]	DDR1_MA[12]	AR15 MAAB12
MDB45 AP9	DDR1_DQ[45]/DDR1_DQ[29]	DDR1_MA[13]	AR15 MAAB13
MDB46 AR6	DDR1_DQ[46]/DDR1_DQ[30]	DDR1_MA[14]	AY28 MAAB14
MDB47 AP6	DDR1_DQ[47]/DDR1_DQ[31]	DDR1_MA[15]	AU28 MAAB15
MDB48 AM10	DDR1_DQ[48]		
MDB49 AL10	DDR1_DQ[49]	DDR1_PAR	AL20
MDB50 AM7	DDR1_DQ[50]	DDR1_ALERT#	AY25
MDB51 AL7	DDR1_DQ[51]		
MDB52 AM9	DDR1_DQ[52]	DDR1_DQS[0]	AF34 M-DQSB0
MDB53 AM9	DDR1_DQ[53]	DDR1_DQS[1]	AK33 M-DQSB1
MDB54 AL9	DDR1_DQ[54]	DDR1_DQS[2]	AN33 M-DQSB2
MDB55 AL6	DDR1_DQ[55]	DDR1_DQS[3]	AN28 M-DQSB3
MDB56 AJ6	DDR1_DQ[56]	DDR1_DQS[4]	AN13 M-DQSB4
MDB57 AJ7	DDR1_DQ[57]	DDR1_DQS[5]	AR8 M-DQSB5
MDB58 AF6	DDR1_DQ[58]	DDR1_DQS[6]	AG6 M-DQSB6
MDB59 AF7	DDR1_DQ[59]	DDR1_DQS[7]	AG6 M-DQSB7
MDB60 AH7	DDR1_DQ[60]		
MDB61 AH6	DDR1_DQ[61]	DDR1_DQSP[0]	AF35 M-DQSB0
MDB62 AF7	DDR1_DQ[62]	DDR1_DQSP[1]	AL33 M-DQSB1
MDB63 AF6	DDR1_DQ[63]	DDR1_DQSP[2]	AP33 M-DQSB2
		DDR1_DQSP[3]	AN28 M-DQSB3
		DDR1_DQSP[4]	AN12 M-DQSB4
		DDR1_DQSP[5]	AP8 M-DQSB5
		DDR1_DQSP[6]	AL8 M-DQSB6
		DDR1_DQSP[7]	AG7 M-DQSB7
		DDR1_DQSP[8]	AN25
		DDR1_DQSP[9]	AN26

DDR CHANNEL
B

2 OF 12

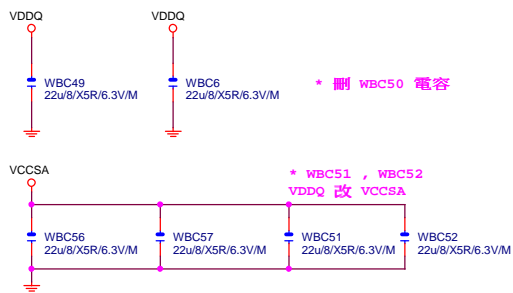
- [8] MODT_A[0..3] <MODT_A[0..3]
- [9] MODT_B[0..3] <MODT_B[0..3]
- [8] MDA[0..63] <MDA[0..63]
- [9] MDB[0..63] <MDB[0..63]
- [8] M_DQSA[0..7] <M_DQSA[0..7]
- [8] M_DQSA[0..7] <M_DQSA[0..7]
- [8] MAA[0..15] <MAA[0..15]
- [9] MAAB[0..15] <MAAB[0..15]
- [9] M_DQSB[0..7] <M_DQSB[0..7]
- [9] M_DQSB[0..7] <M_DQSB[0..7]

Gigabyte Technology		
CPU LGA1151-B		
Title	Document Number	Rev
	GA-Z170M-D3H DDR3	1.0
Date:	Wednesday, July 29, 2015	Sheet 5 of 51

DDR_VREF_CA <VREF_CAB [8]

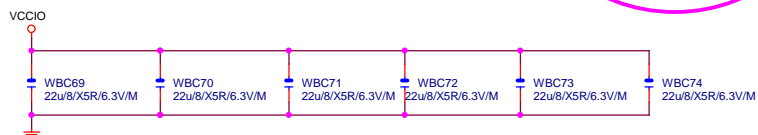
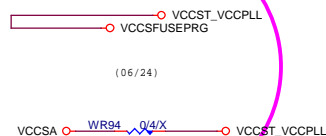
DDR0_VREF_DQ <VREF_DQA [8]

DDR1_VREF_DQ <VREF_DQB [8]

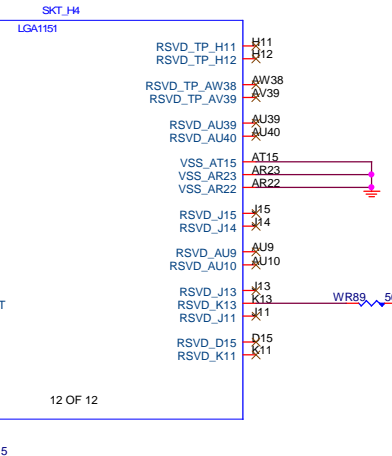
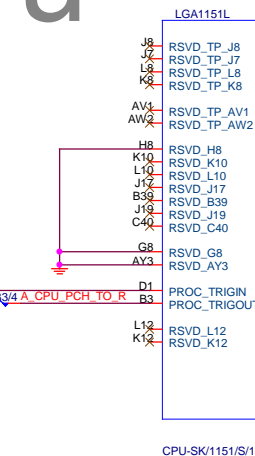
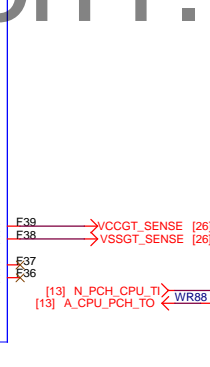
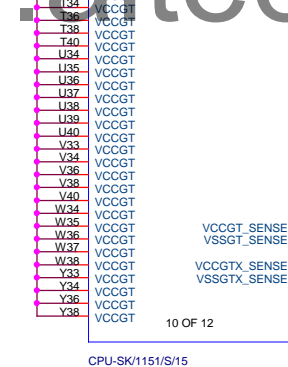
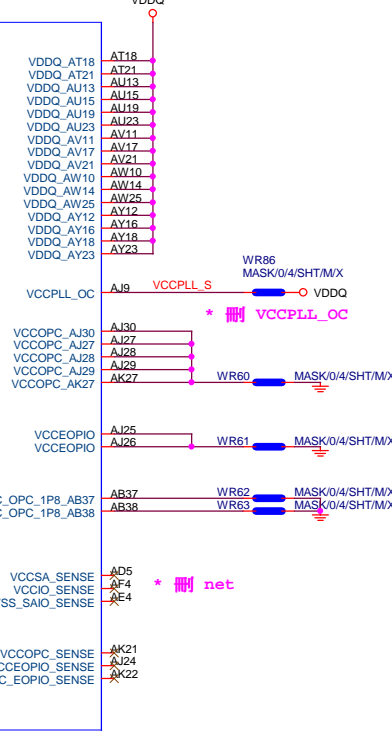
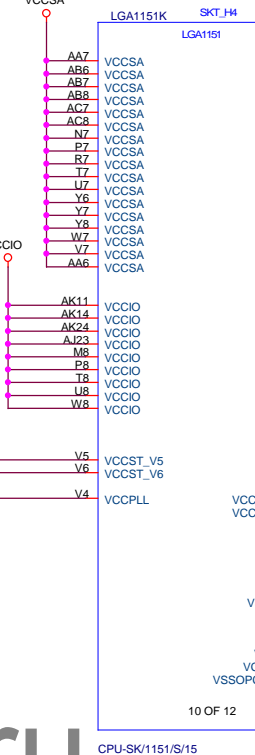
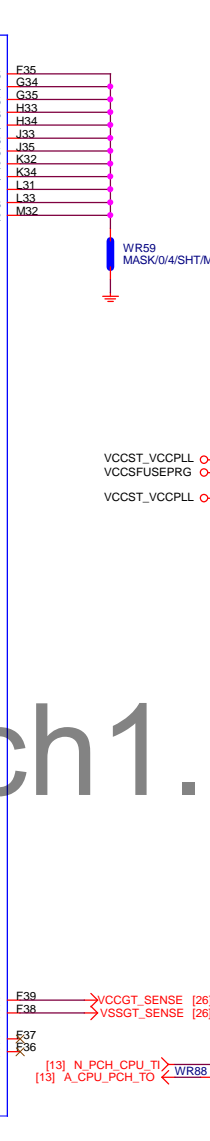
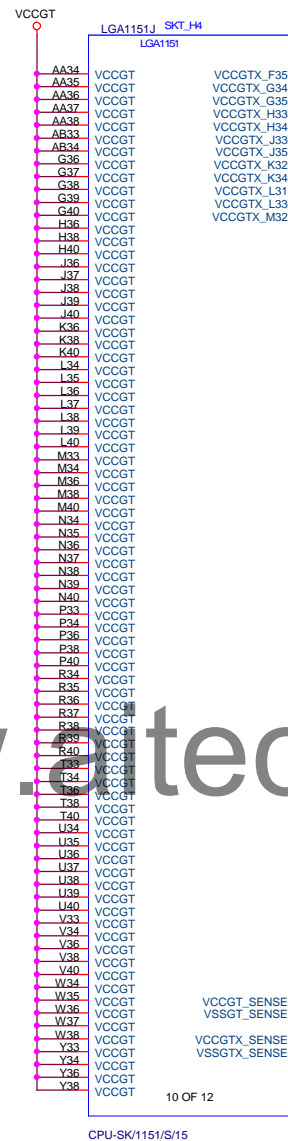


* 删 WBC124, WBC125, WBC126, WBC127 电容

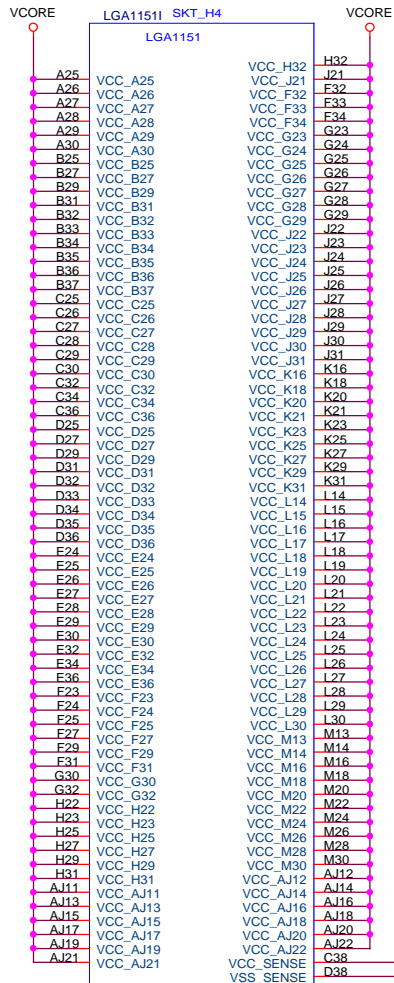
* WR94, WR59, WR86, WR60, WR61, WR62, WR63 改 short pad



* 删 VCCGT 电容



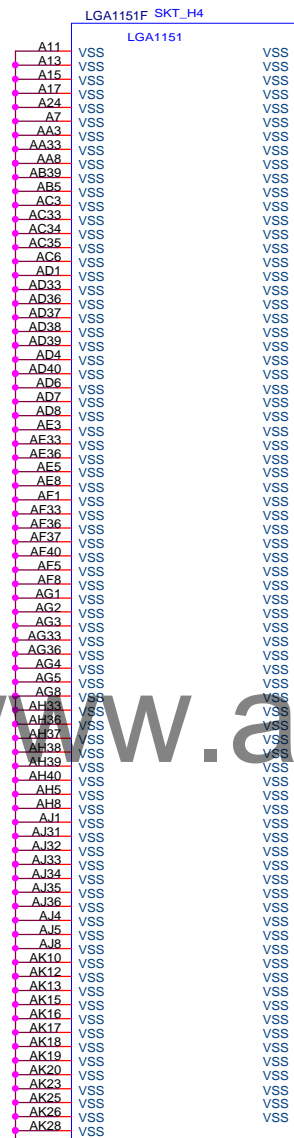
www.tech1.ru



9 OF 12

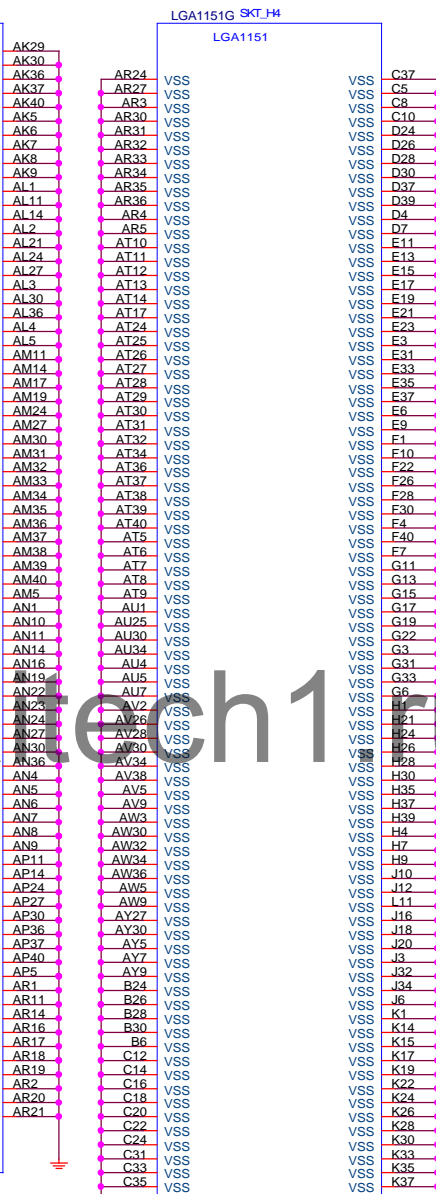
CPU-SK/1151/S/15

* 刪 Vcore 電容



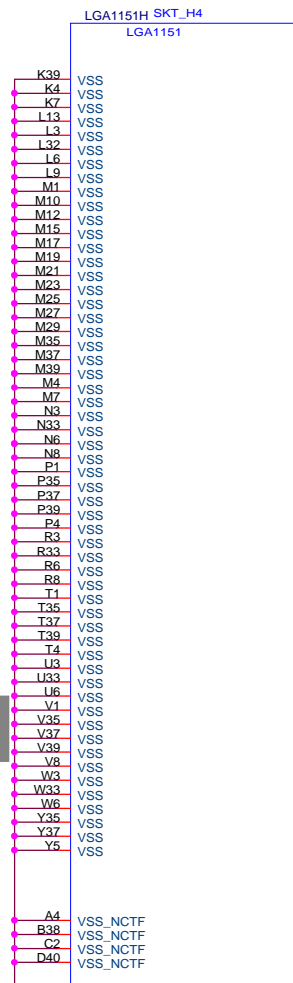
6 OF 12

CPU-SK/1151/S/15



7 OF 12

CPU-SK/1151/S/15



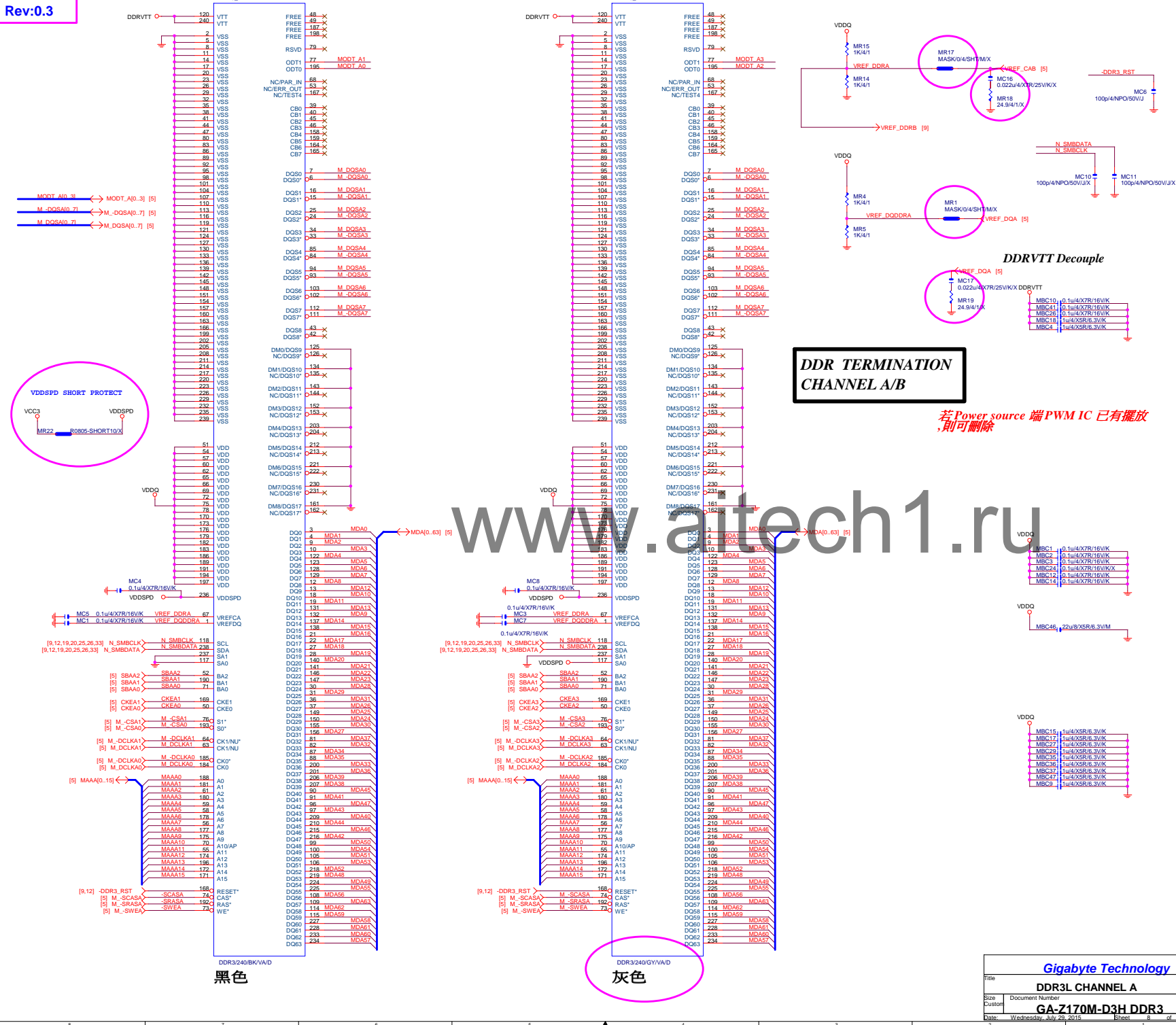
8 OF 12

CPU-SK/1151/S/15

Gigabyte Technology

Title			CPU LGA1151-C	
Size	Document Number		Rev	
Custom	GA-Z170M-D3H DDR3		1.0	
Date:	Wednesday, July 29, 2015	Sheet	7	of 51

Rev:0.3



Rev:0.3

DDR3_3

DDR3_3

DDR3_3

M_DQS80_71 <M_DQS80[0..7] [5]

M_DQS80_71 <M_DQS80[0..7] [5]

MOOT_B0_31 <MOOT_B0[0..3] [5]

MC2 0.1u/4/X7R/16V/K

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

MC14 0.1u/4/X7R/16V/K VREF_DDRB 67 VREFCA VREFDQ

MC3 0.1u/4/X7R/16V/K VREF_DDRB 67 VREFCA VREFDQ

[R,12,18,20,25,26,33] N_SMBCLK N_SMBCLK 118 SCL

[R,12,19,20,25,26,33] N_SMBDATA N_SMBDATA 238 SDA

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

[5] SBAB2 SBAB2 52 BA2

[5] SBAB1 SBAB1 190 BA1

[5] SBAB0 SBAB0 71 BA0

[5] CKEB1 CKEB1 169 CKE1

[5] CKEB0 CKEB0 50 CKE0

[5] M_CS81 M_CS81 76 S1*

[5] M_CS80 M_CS80 190 S0*

[5] M_DCLKB1 M_DCLKB1 64 CK1/NU*

[5] M_DCLKB0 M_DCLKB0 63 CK1/NU*

[5] M_DCLKB0 M_DCLKB0 185 CK0

[5] M_DCLKB0 M_DCLKB0 184 CK0

[5] MAA8[0..15] <M_AAB0[0..15] [5]

[R,12] <DDR3_RST M_SCASB 74 RESET*

[5] M_SCASB M_SCASB 192 CAS*

[5] M_SRASB M_SRASB 192 RAS*

[5] M_SWIB M_SWIB 74 WE*

DDR3240/BK/VAD

黑色

DDR3240/GY/VAD

灰色

[R] VREF_DDRB >VREF_DDRB

VDDQ

MR8 1K/4/1

VREF_DQDDR8

MR9 1K/4/1

VREF_DQDDR8

MR8 1K/4/1

MR9 1K/4/1

VREF_DQDDR8

MR8 1K/4/1

MR9 1K/4/1

VREF_DQDDR8

MR8 1K/4/1

MR9 1K/4/1

VREF_DQDDR8

MR8 1K/4/1

MR9 1K/4/1

VREF_DQDDR8

MR8 1K/4/1

MR9 1K/4/1

VREF_DQDDR8

MR8 1K/4/1

MR9 1K/4/1

VREF_DQDDR8

MR8 1K/4/1

MR9 1K/4/1

VREF_DQDDR8

MR8 1K/4/1

MR9 1K/4/1

VREF_DQDDR8

MR8 1K/4/1

MR9 1K/4/1

VREF_DQDDR8

MR8 1K/4/1

MR9 1K/4/1

VREF_DQDDR8

MR8 1K/4/1

MR9 1K/4/1

VREF_DQDDR8

MR8 1K/4/1

MR9 1K/4/1

VREF_DQDDR8

MR8 1K/4/1

MR9 1K/4/1

VREF_DQDDR8

MR8 1K/4/1

MR9 1K/4/1

VREF_DQDDR8

MR8 1K/4/1

MR9 1K/4/1

VREF_DQDDR8

MR8 1K/4/1

MR9 1K/4/1

VREF_DQDDR8

MR8 1K/4/1

MR9 1K/4/1

VREF_DQDDR8

MR8 1K/4/1

MR9 1K/4/1

VREF_DQDDR8

MR8 1K/4/1

MR9 1K/4/1

VREF_DQDDR8

MR8 1K/4/1

CPU

黑色

灰色

黑色

灰色

黑色

灰色

黑色

灰色

黑色

灰色

黑色

灰色

黑色

灰色

黑色

灰色

黑色

DTMM4

DTMM2

DTMM3

DTMM1

CHA

CHB

CHA

CHB

CHA

CHB

CHA

CHB

CHA

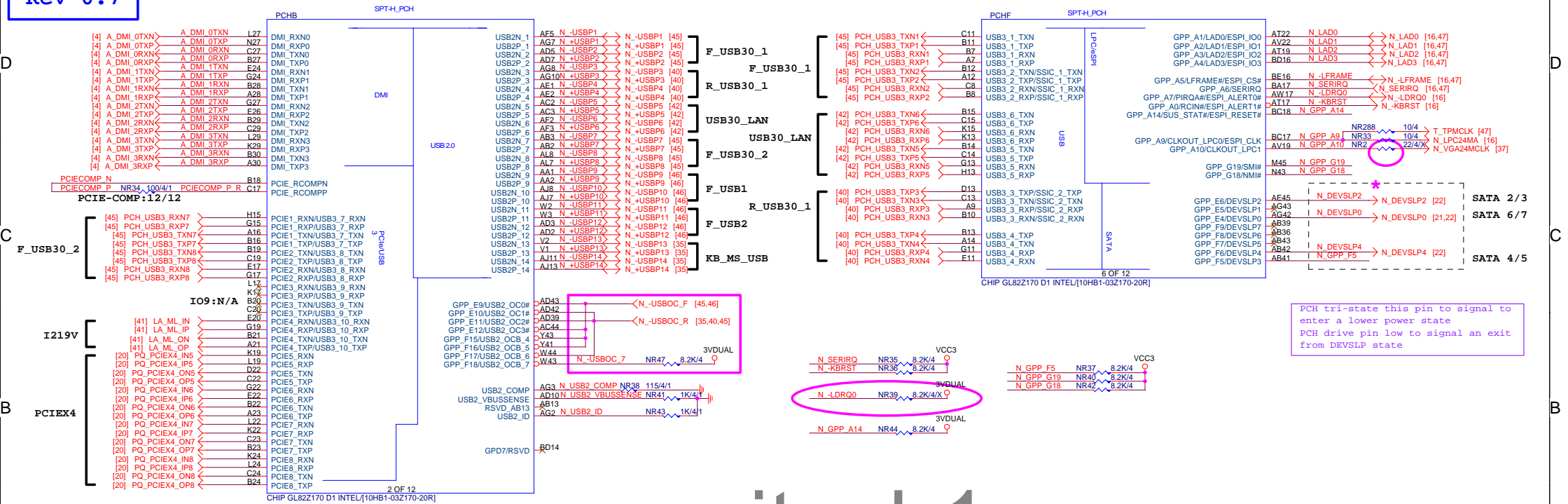
CHB

CHA

CHB

CHA

Gigabyte Technology		
Title		
DDR3L CHANNEL B		
Size		
Custom		
GA-Z170M-D3H DDR3		
Date: Wednesday, July 28, 2016		
Sheet: 3 of 51		
Rev: 1.0		



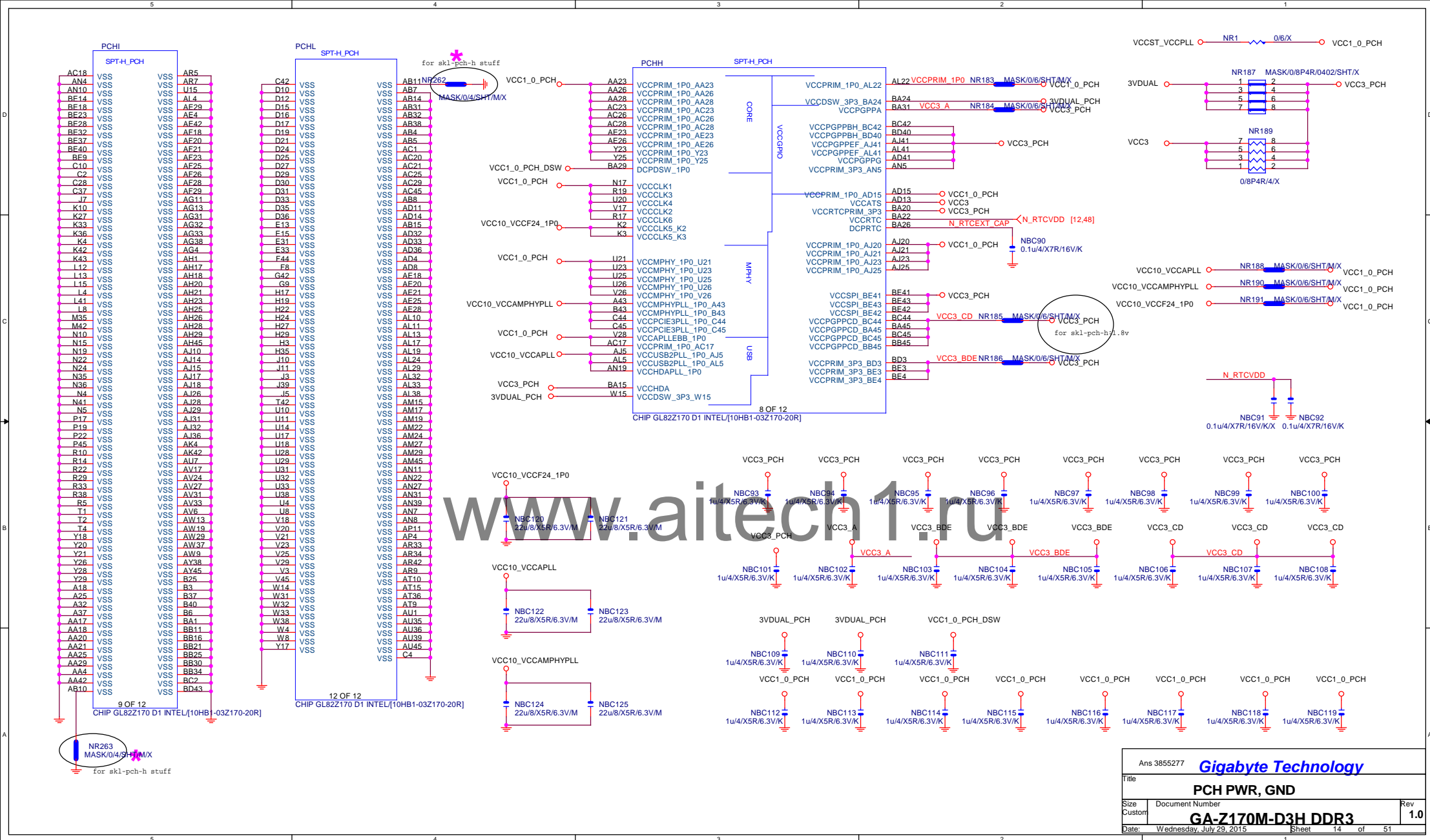
4 layer USB3/USB2/SATA/PCH PCIE=====4/4/4/15
6 layer USB3/USB2/SATA/PCH PCIE=====4/5/5/4/15

www.aitech1.ru

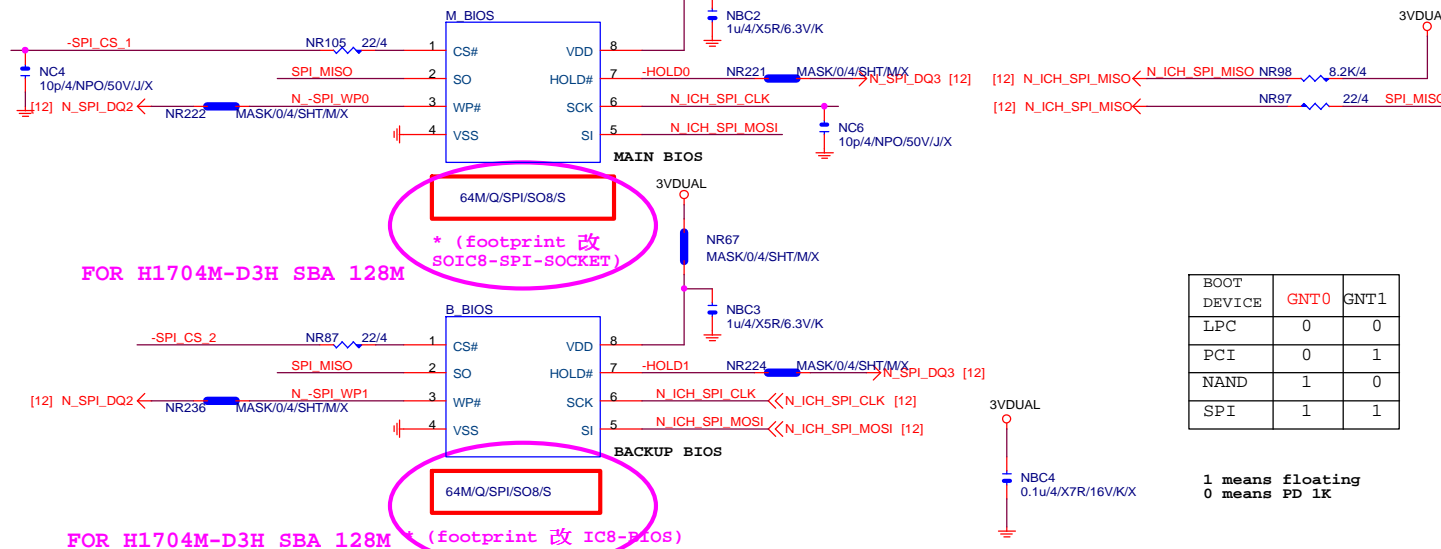
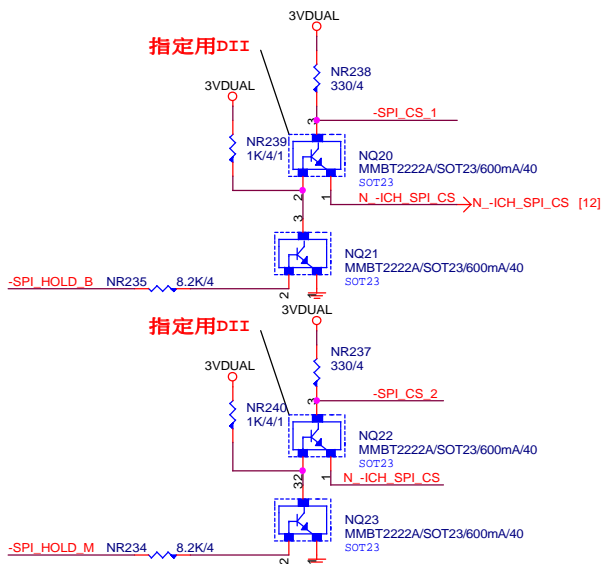
Ans 3855277		Gigabyte Technology	
Title		PCH DMI,USB,PCIE	
Size		Document Number	
Custom		GA-Z170M-D3H DDR3	
Date:		Wednesday, July 29, 2015	Sheet 11 of 51

Rev 0.7





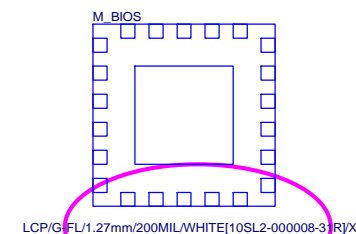
指定用DII



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

1 means floating
0 means PD 1K

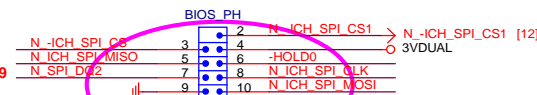
www.aitech1.ru



* 試産先上, PVT 移除

BIOS_PH MASK

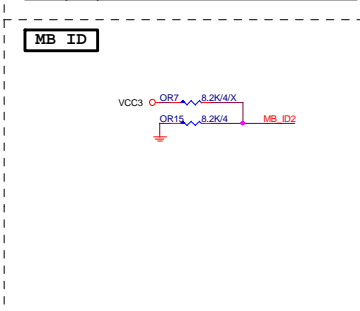
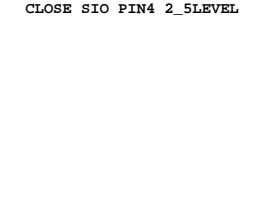
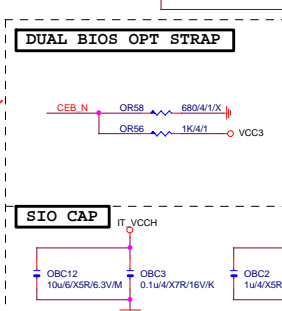
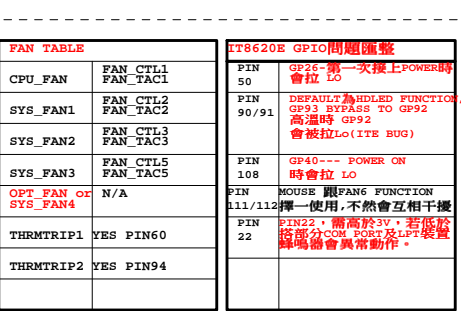
★Update 2015-01.29



Footprint the same, confirmed by Graceing.
Use COM port pin header part.

Gigabyte Technology

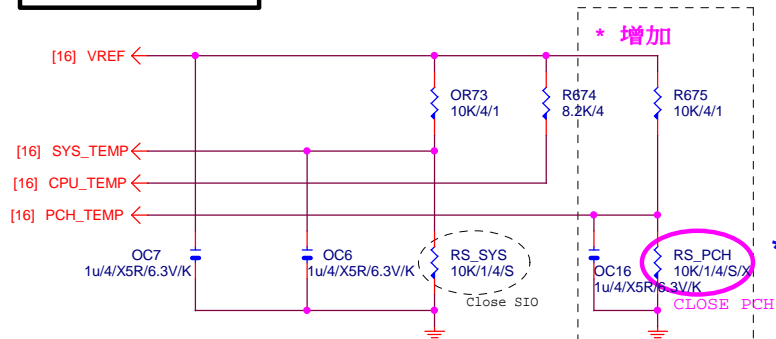
Title		BIOS	
Size	Document Number	GA-Z170M-D3H DDR3	Rev
Custom			1.0
Date:	Wednesday, July 29, 2015	Sheet	15 of 51



Single LAN	Atheros	組態一
	Intel 219	組態二
Dual LAN	Atheros+Atheros	組態一
	Intel 219+Atheros	組態三
	Intel 219+Intel 210	
No Support ERP	BOM不上	N/A

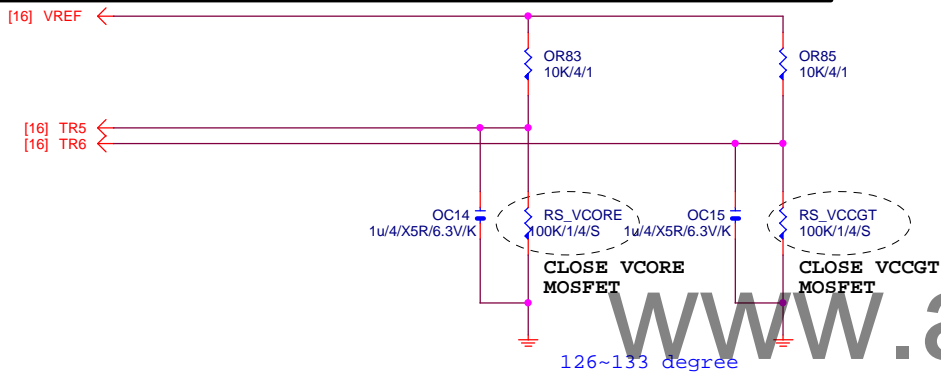
TEMP H/W MONITOR

REV 1.08



RS_VCORE, RS_VCCGT, CLOSE CPU_VCORE & VCCGT MOSFET

-PROCHOT:有mos heartsink不用prochot function

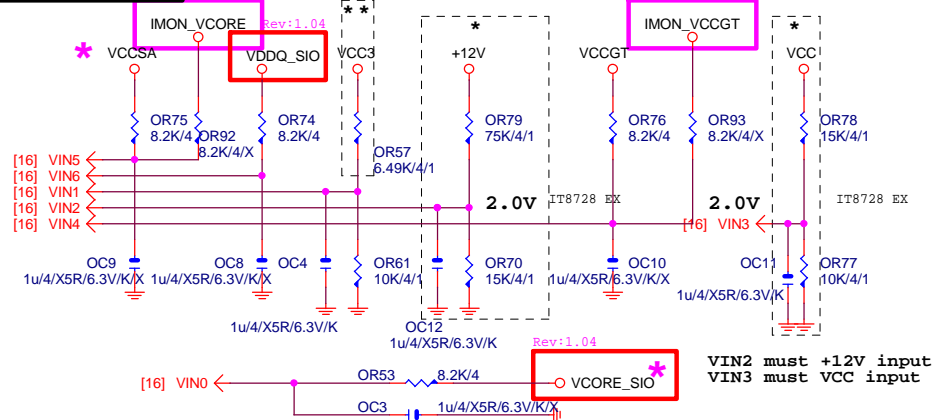


VOLTAGE-- H/W MONITOR

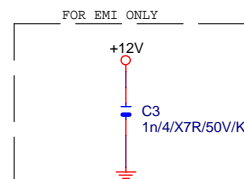
Connect to PWM

* IT8728 BX
** IT8728 CX

Connect to PWM



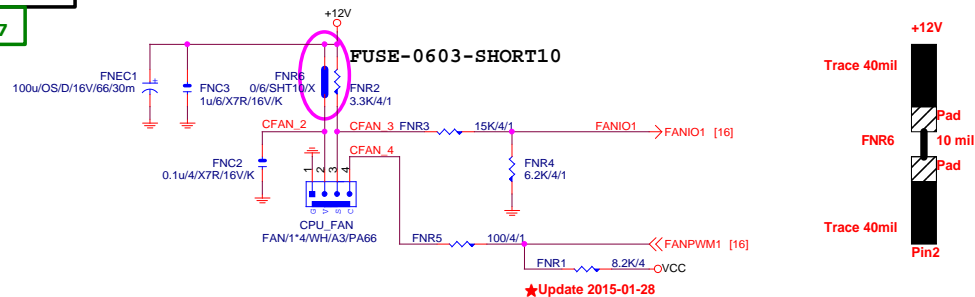
The division voltage of VIN2 & VIN3 must be around 2.9V

VIN2 must +12V input
VIN3 must VCC input

Gigabyte Technology

Title					HWM,KB/MS, FAN CTRL					
Size	Custom	Document Number			GA-Z170M-D3H DDR3					Rev
										1.0
Date:	Wednesday, July 29, 2015				Sheet	17	of	51		

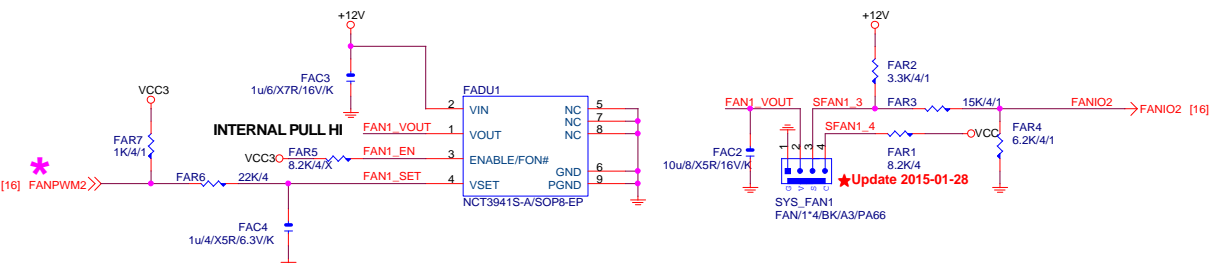
Rev: 0.7



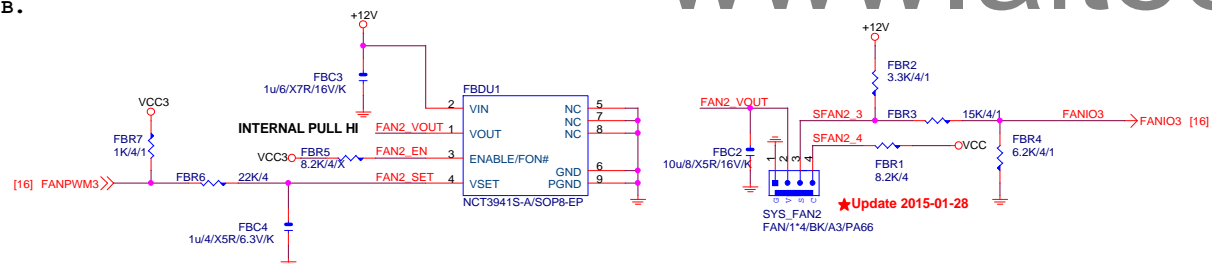
Linear SYS FAN

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

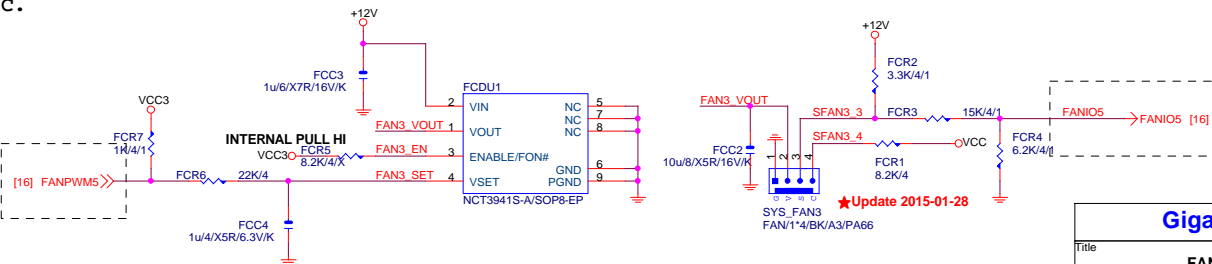
A.



B.



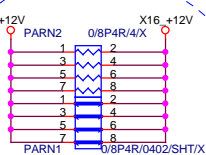
C.



Gigabyte Technology

Title			
FAN CTRL			
Size	Document Number	Rev	
Custom	GA-Z170M-D3H DDR3	1.0	
Date:	Wednesday, July 29, 2015	Sheet	18 of 51

Rev 0.2

+12V_protect
short-wire test

PA_EXP_RXP0..15] >> PA_EXP_RXP0..15] [4]
 PA_EXP_RXN0..15] >> PA_EXP_RXN0..15] [4]
 PA_EXP_TXP0..15] >> PA_EXP_TXP0..15] [4]
 PA_EXP_TXN0..15] >> PA_EXP_TXN0..15] [4]

PA_EXP_TXP0	PAC5	0.22u4/X5R/6.3V/K	PA_EXP_TXP0 C
PA_EXP_TXN0	PAC4	0.22u4/X5R/6.3V/K	PA_EXP_TXN0 C
PA_EXP_TXP1	PAC6	0.22u4/X5R/6.3V/K	PA_EXP_TXP1 C
PA_EXP_TXN1	PAC7	0.22u4/X5R/6.3V/K	PA_EXP_TXN1 C
PA_EXP_TXP2	PAC8	0.22u4/X5R/6.3V/K	PA_EXP_TXP2 C
PA_EXP_TXN2	PAC9	0.22u4/X5R/6.3V/K	PA_EXP_TXN2 C
PA_EXP_TXP3	PAC10	0.22u4/X5R/6.3V/K	PA_EXP_TXP3 C
PA_EXP_TXN3	PAC11	0.22u4/X5R/6.3V/K	PA_EXP_TXN3 C
PA_EXP_TXP4	PAC12	0.22u4/X5R/6.3V/K	PA_EXP_TXP4 C
PA_EXP_TXN4	PAC13	0.22u4/X5R/6.3V/K	PA_EXP_TXN4 C
PA_EXP_TXP5	PAC14	0.22u4/X5R/6.3V/K	PA_EXP_TXP5 C
PA_EXP_TXN5	PAC15	0.22u4/X5R/6.3V/K	PA_EXP_TXN5 C
PA_EXP_TXP6	PAC16	0.22u4/X5R/6.3V/K	PA_EXP_TXP6 C
PA_EXP_TXN6	PAC17	0.22u4/X5R/6.3V/K	PA_EXP_TXN6 C
PA_EXP_TXP7	PAC18	0.22u4/X5R/6.3V/K	PA_EXP_TXP7 C
PA_EXP_TXN7	PAC19	0.22u4/X5R/6.3V/K	PA_EXP_TXN7 C
PA_EXP_TXP8	PAC20	0.22u4/X5R/6.3V/K	PA_EXP_TXP8 C
PA_EXP_TXN8	PAC21	0.22u4/X5R/6.3V/K	PA_EXP_TXN8 C
PA_EXP_TXP9	PAC22	0.22u4/X5R/6.3V/K	PA_EXP_TXP9 C
PA_EXP_TXN9	PAC23	0.22u4/X5R/6.3V/K	PA_EXP_TXN9 C
PA_EXP_TXP10	PAC24	0.22u4/X5R/6.3V/K	PA_EXP_TXP10 C
PA_EXP_TXN10	PAC25	0.22u4/X5R/6.3V/K	PA_EXP_TXN10 C
PA_EXP_TXP11	PAC26	0.22u4/X5R/6.3V/K	PA_EXP_TXP11 C
PA_EXP_TXN11	PAC27	0.22u4/X5R/6.3V/K	PA_EXP_TXN11 C
PA_EXP_TXP12	PAC28	0.22u4/X5R/6.3V/K	PA_EXP_TXP12 C
PA_EXP_TXN12	PAC29	0.22u4/X5R/6.3V/K	PA_EXP_TXN12 C
PA_EXP_TXP13	PAC30	0.22u4/X5R/6.3V/K	PA_EXP_TXP13 C
PA_EXP_TXN13	PAC31	0.22u4/X5R/6.3V/K	PA_EXP_TXN13 C
PA_EXP_TXP14	PAC32	0.22u4/X5R/6.3V/K	PA_EXP_TXP14 C
PA_EXP_TXN14	PAC33	0.22u4/X5R/6.3V/K	PA_EXP_TXN14 C
PA_EXP_TXP15	PAC34	0.22u4/X5R/6.3V/K	PA_EXP_TXP15 C
PA_EXP_TXN15	PAC35	0.22u4/X5R/6.3V/K	PA_EXP_TXN15 C

PCIE16:16/5/5/5/16

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

PCIESLOT-164P

3GIO_*16

[8,9,12,20,25,26,33] N_SMBCLK
 [8,9,12,20,25,26,33] N_SMBDATA

[12,20,23,47] N_-PCIE_WAKE

[10] -PCIE16_PR

PCI-E/16X164P/GY/LONG DOUBLE/HK*2

www.aitech.ru

Gigabyte Technology		
Title		
PCI EXPRESS * 16		
Size	Document Number	Rev
Custom	GA-Z170M-D3H DDR3	1.0
Date:	Wednesday, July 29, 2015	Sheet 19 of 51

PCIE*4

3GIO_*4



M.2 Lane4 from PCH port18

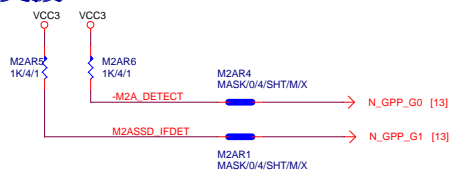
M.2 Lane3 from PCH port17

M.2 Lane2 from PCH port16

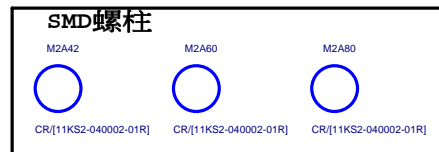
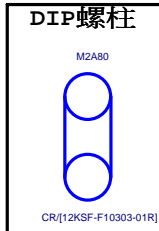
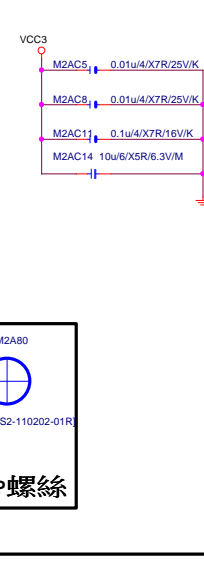
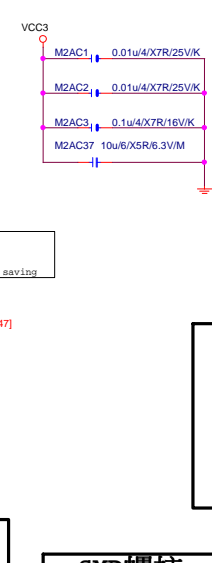
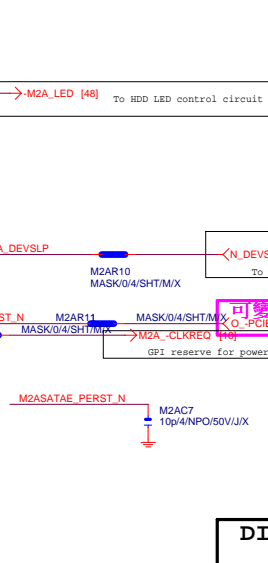
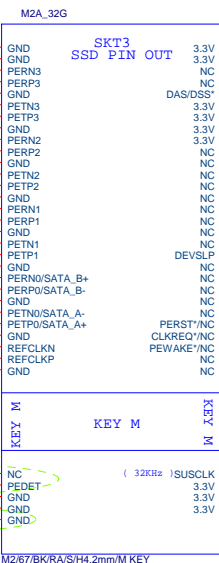
M.2 Lane2 from PCH port15

需與M2_-CLKREQ對應

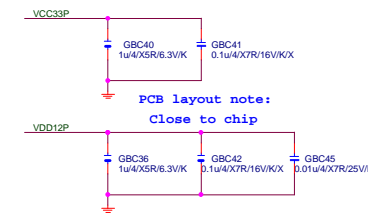
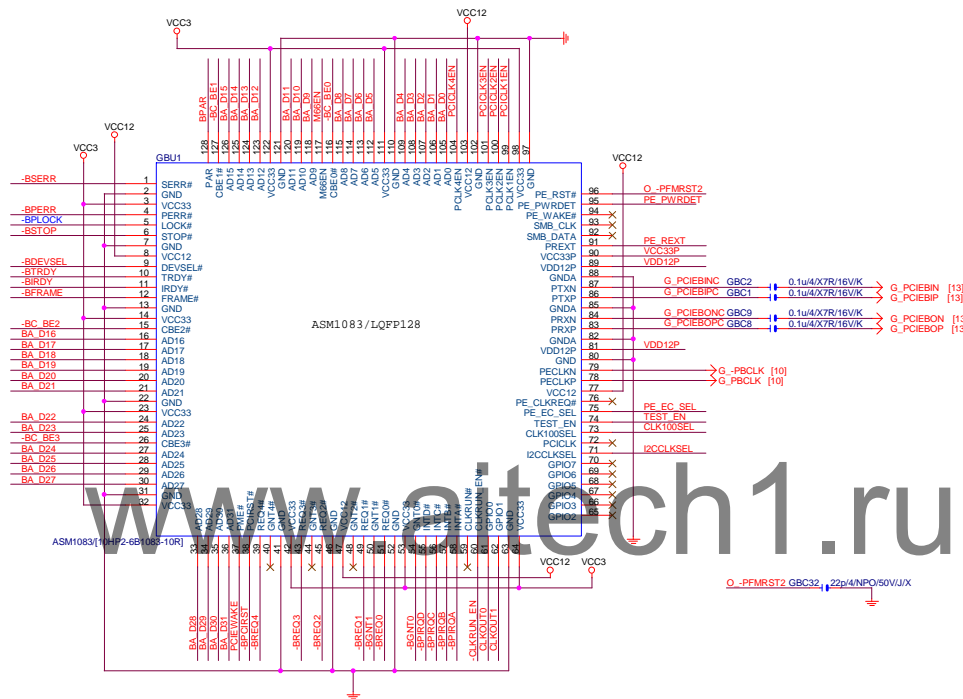
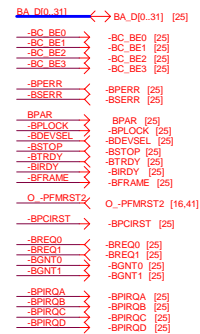
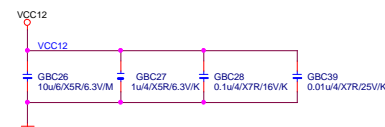
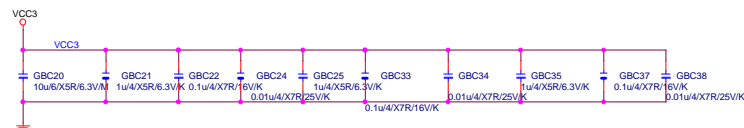
支援SATA and M.2 function

SATA : GND
PCIE : NC

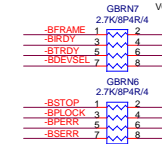
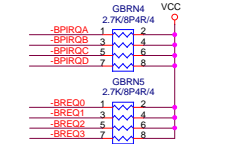
M2插卡時為Low



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	



PCB layout note:
Close to chip



CLK100SEL Strapping Set

CLK100SEL	H	L
PCIE CLK	100M +/-N%	100M +/-N%
PCICLK_IN	X	33M
PCICLK_O	33M +/-N%	33M

PE_EC_SEL-
 "H" for Express Card mode
 "L" for PCIe Riser Card
 mode

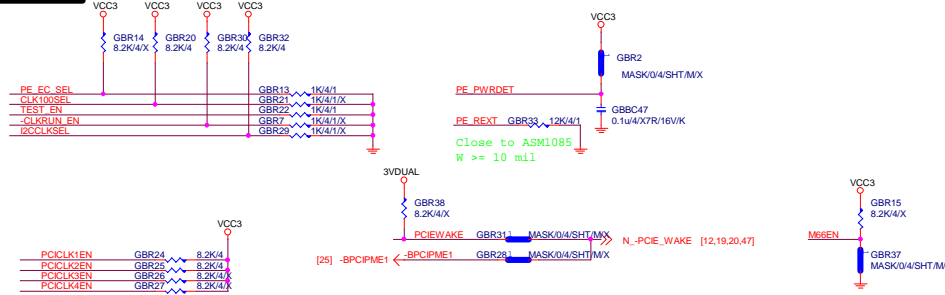
CLK100SEL-
"H" for PECLK input only
"L" for PECLK & PCICLK
input

TEST_EN-
 "H" for Test Mode Enable
 "L" for Test Mode

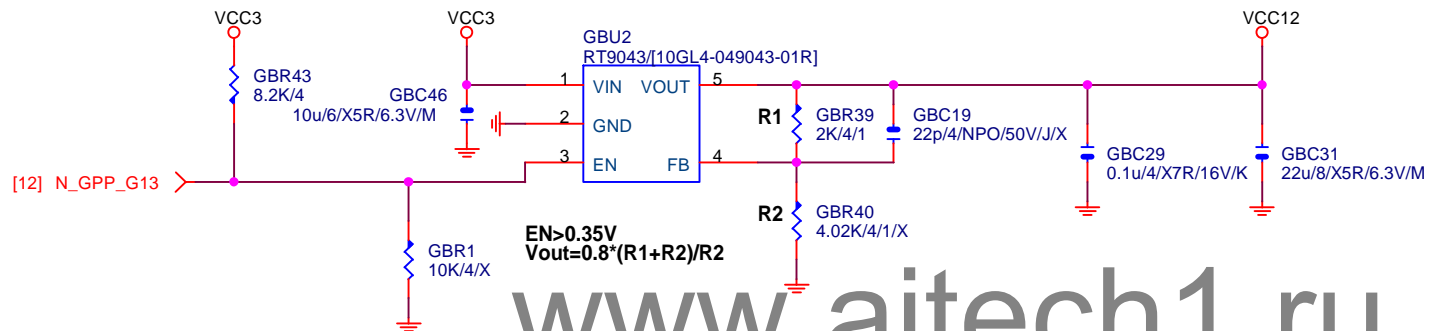
Disable
-CLKRUN_EN-
"H" for CLKRUN Mode Disable

"L" for CLKRUN Mode Enable
I2CCLKSEL-
"H" is 135KHz I2CCLK

"L" is 67.5KHz I2CCLK



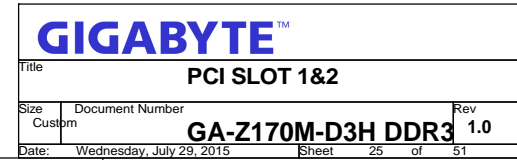
Rev 0.9

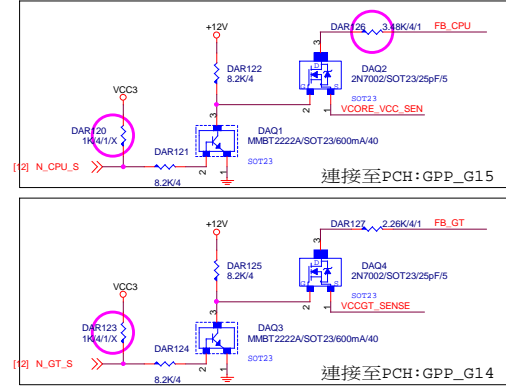
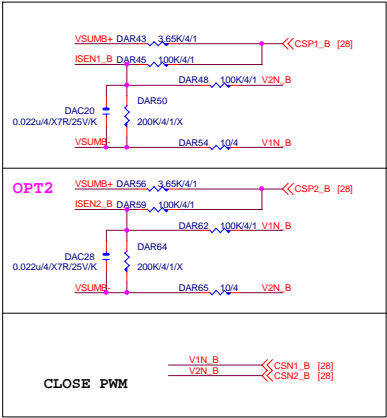
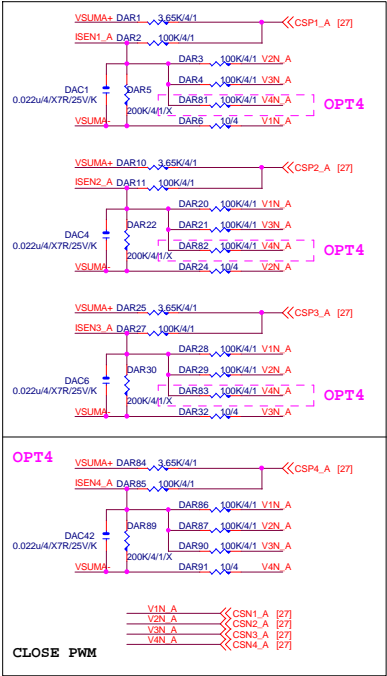
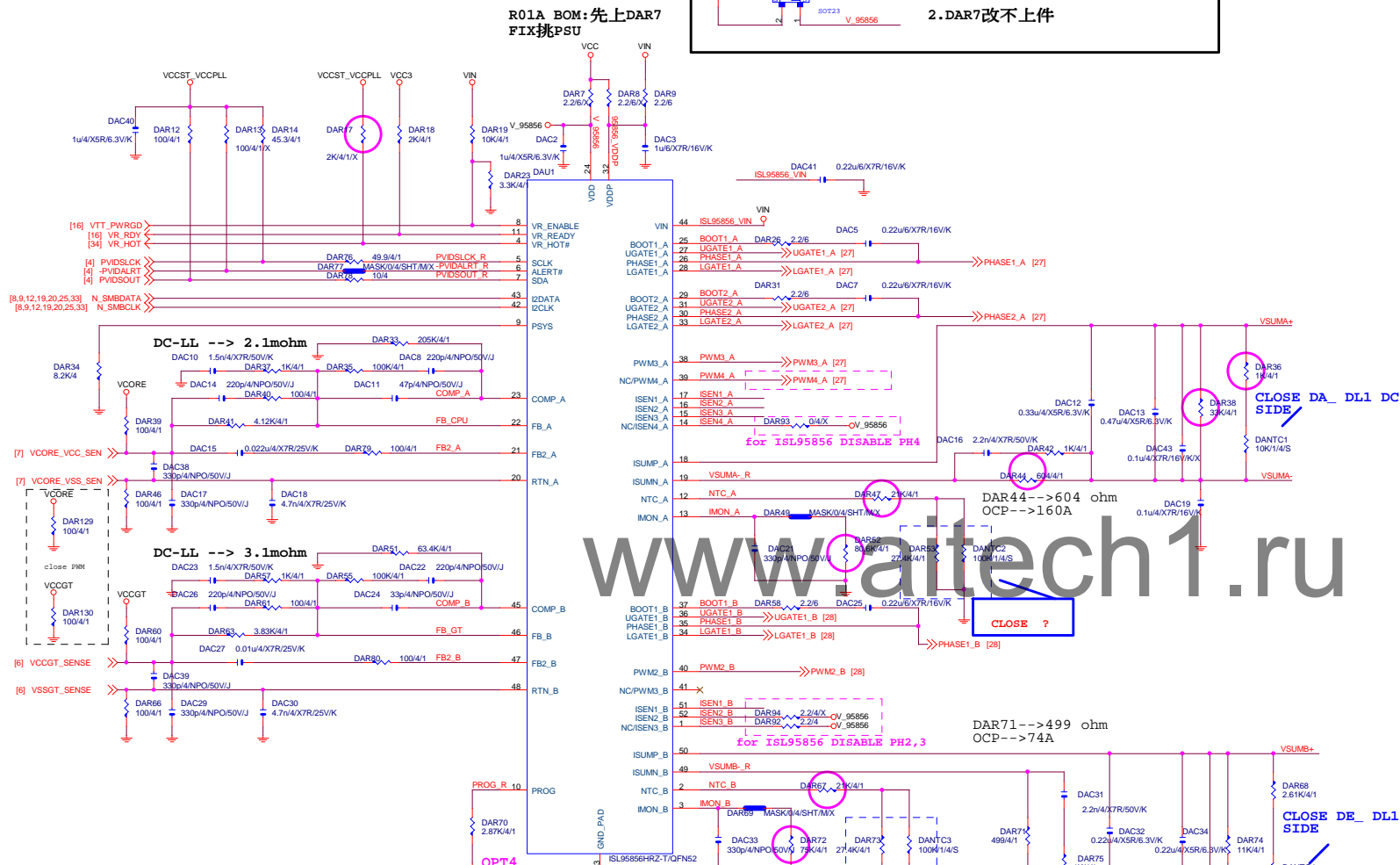


www.aitech1.ru

Gigabyte Technology

Title			
ASM1085 POWER			
Size	Document Number		Rev
Custom	GA-Z170M-D3H DDR3		1.0
Date:	Wednesday, July 29, 2015	Sheet	24 of 51

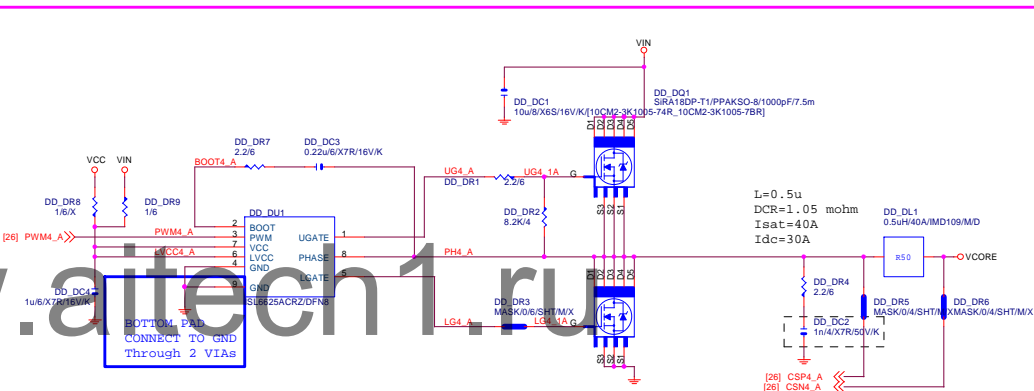
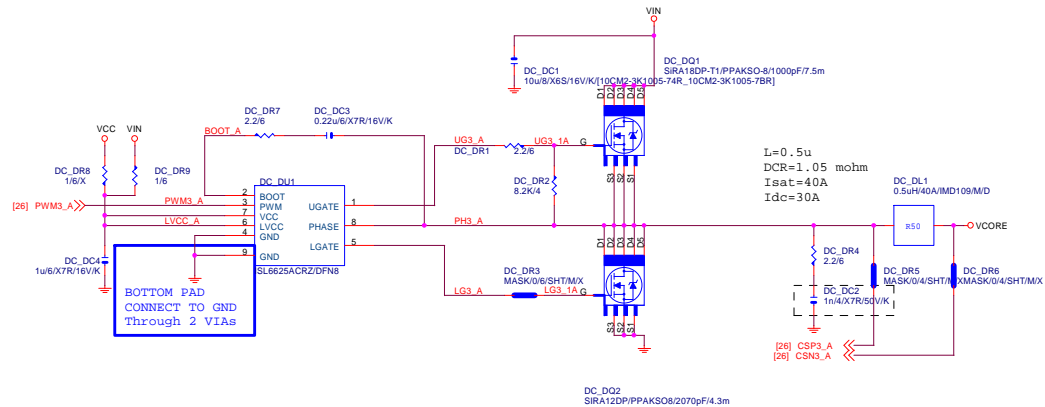




2014/12/19 REV:0.7

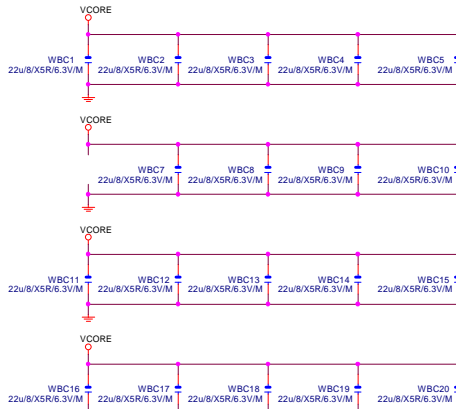
1. N_CPU_S連接至PCH:GPP_G15
2. N_GT_S連接至PCH:GPP_G14

REV:1.0 (IRON CHOKE)



VCORE CAP

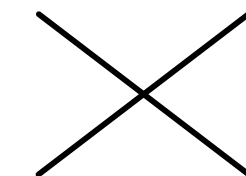
560u*8PCS
22u*29PCS



MOSHSINK

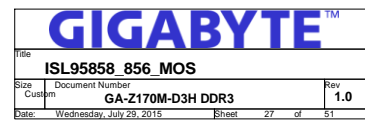
MOSHSINK-Z1704-HD3

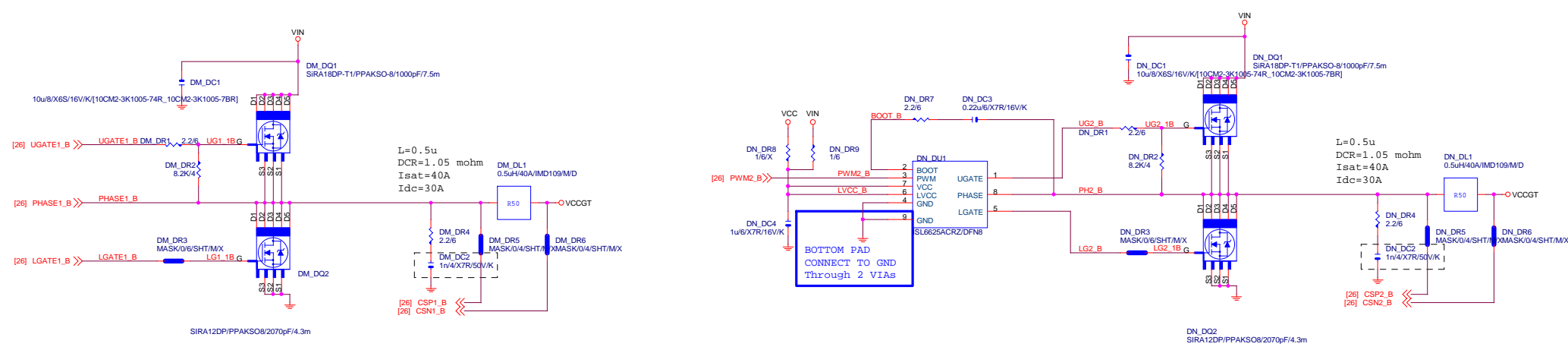
MOS_HS1
HEAT SINK/12SP2-S09325-31R_12SP2-S09325-32R_12SP2-S09325-33R



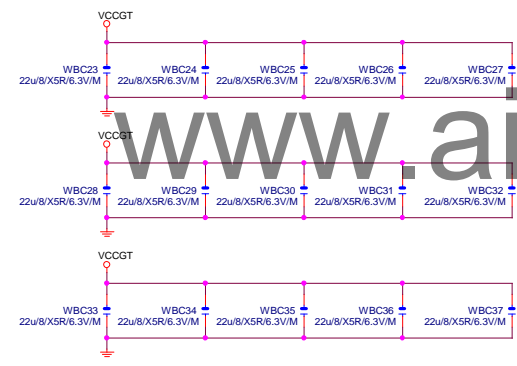
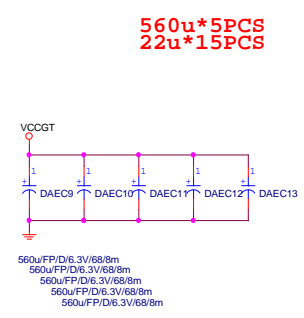
VIN CAP

270u*3PCS





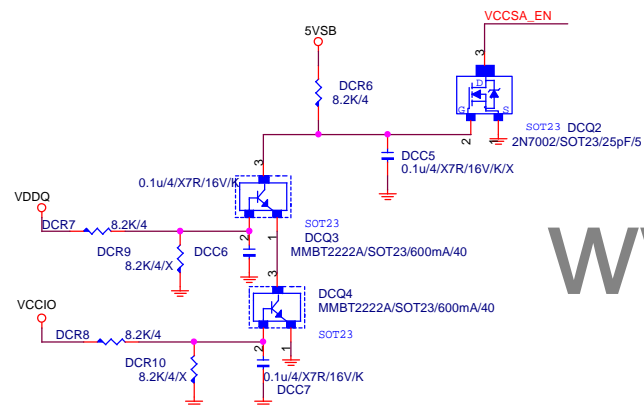
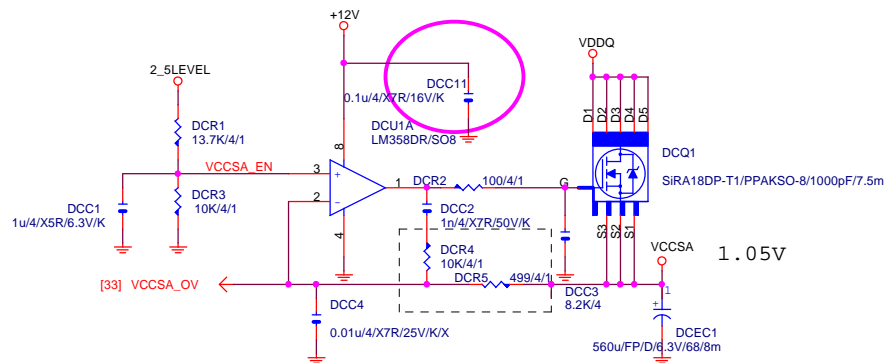
VCCGT CAP



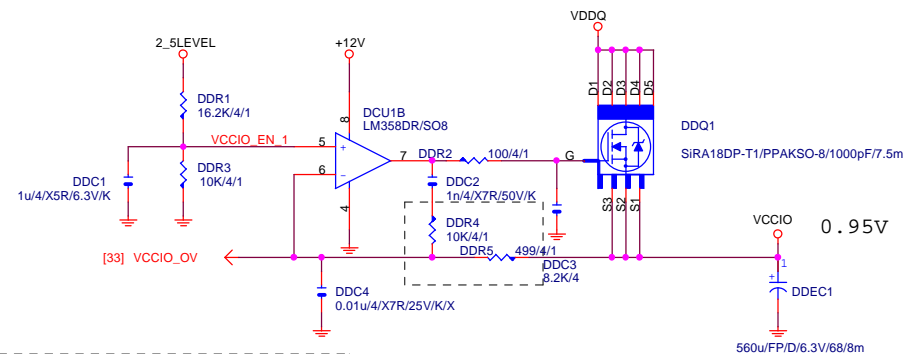
www.aitech1.ru

VCCSA

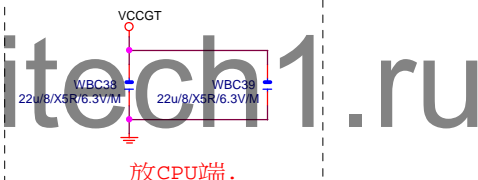
REV:0.4



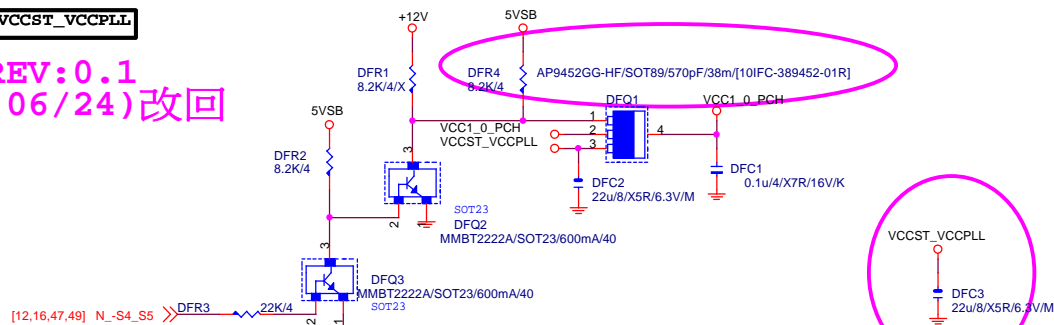
VCCIO



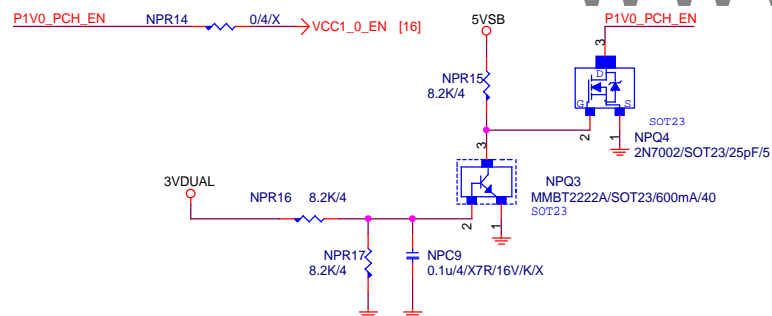
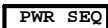
VCCIO_EN 1 → VCCIO_EN [16]
DDR10 MASK/0/4/SHT/M/X
Connect to IT8620



VCCST_VCCPLL

REV:0.1
(06/24)改回

GIGABYTE™			
Title	VCCSA_VCCIO		
Size	Document Number	Rev	
Custom	GA-Z170M-D3H DDR3	1.0	
Date:	Wednesday, July 29, 2015	Sheet	29 of 51



www.aitech1.ru

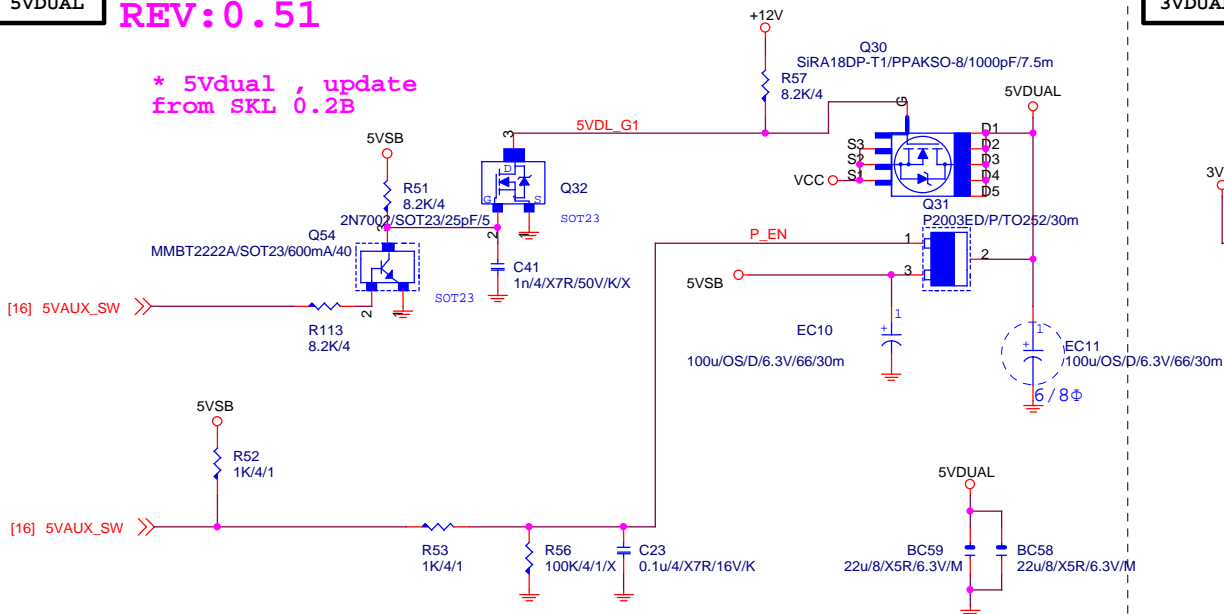
請放置CHOKE一出來的地方

GIGABYTE™

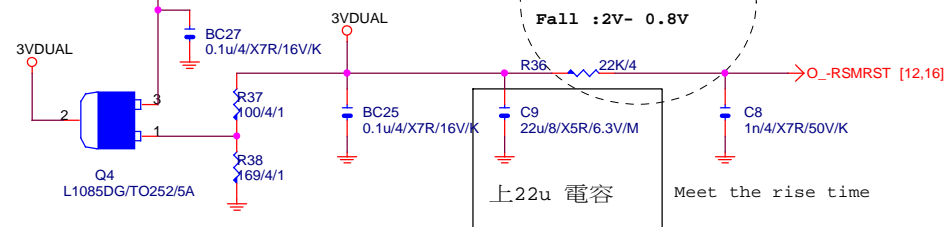
Title			
RT8120_PCH POWER			
Size	Document Number	Rev	
Custom	GA-Z170M-D3H DDR3	1.0	
Date:	Wednesday, July 29, 2015	Sheet	31 of 51

REV: 0.51

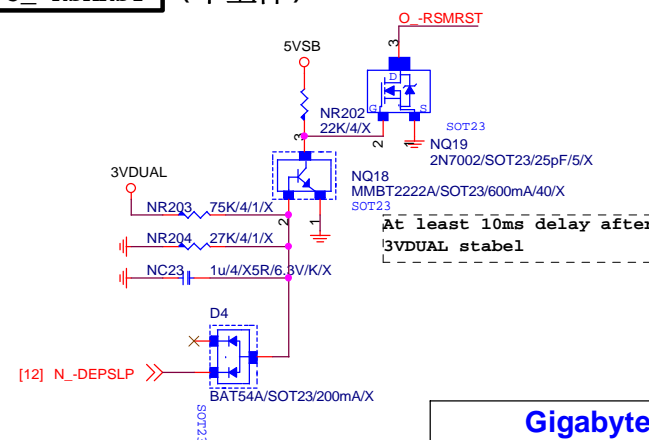
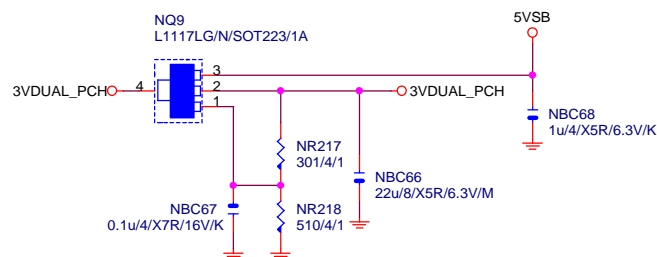
[16] 5VAUX_SW >>



3VDUAL



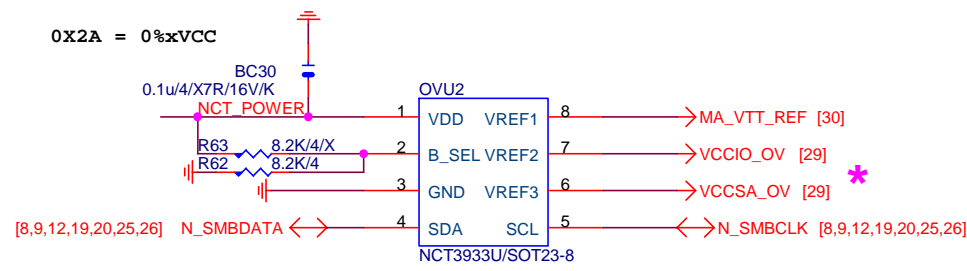
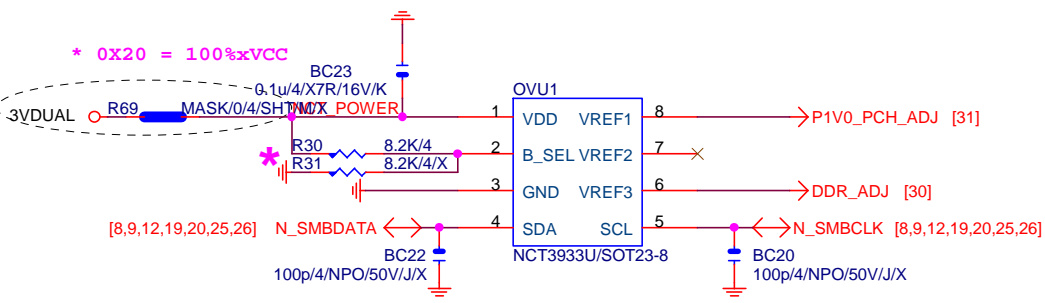
0-RSMRST (不上件)



Gigabyte Technology

Title			
DISCRETE POWER			
Size	Document Number		Rev
Custom	GA-Z170M-D3H DDR3		1.0
Date:	Wednesday, July 29, 2015	Sheet	32 of 51

OVER VOLTAGE



0X22 = 75%xVCC

* 删除 OVU3

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

Gigabyte Technology

Title: CPU CORE VR-2

Size: Custom

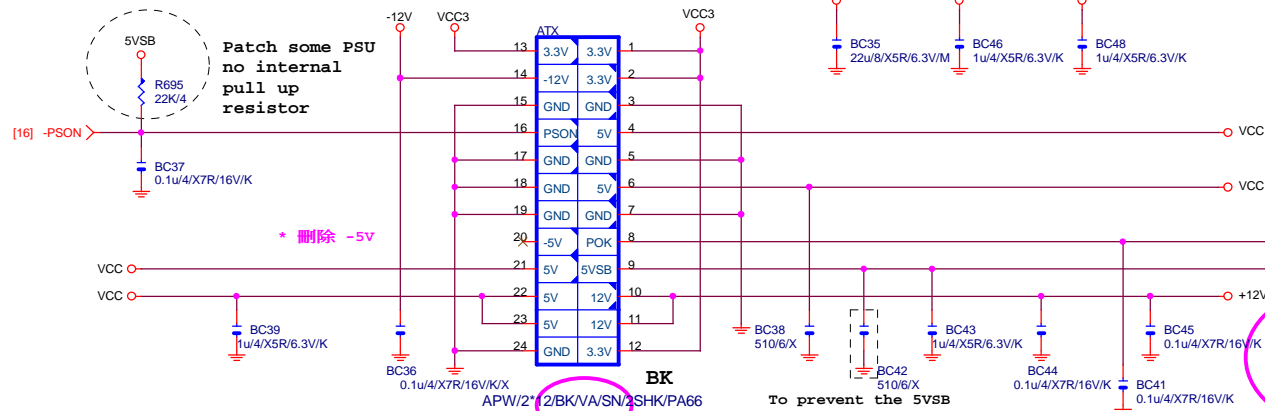
Document Number: GA-Z170M-D3H DDR3

Date: Wednesday, July 29, 2015

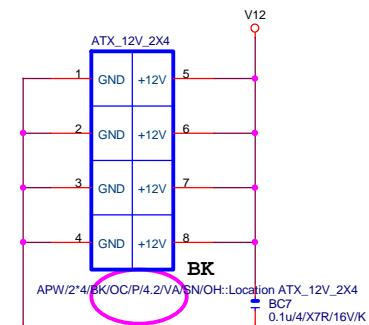
Sheet 33 of 51

Rev 1.0

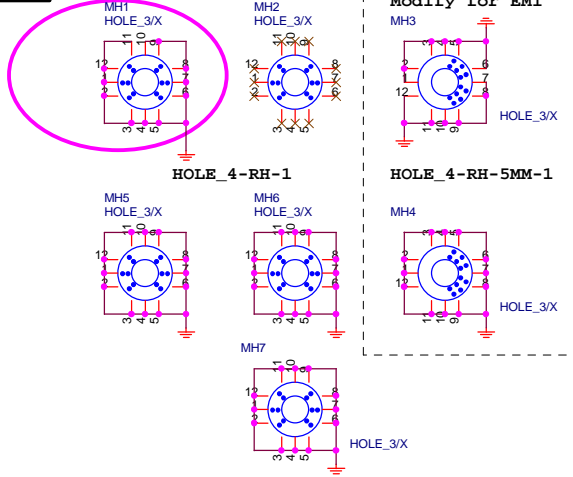
ATXX24 POWER CONNECTOR



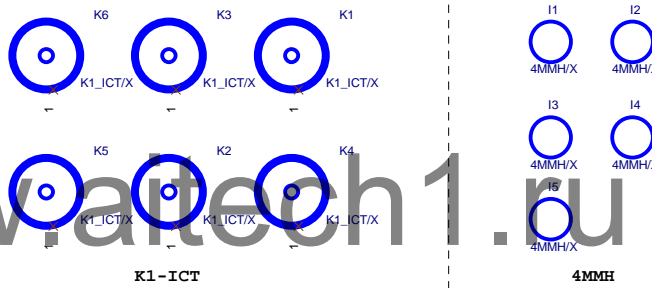
ATXX4 POWER CONNECTOR



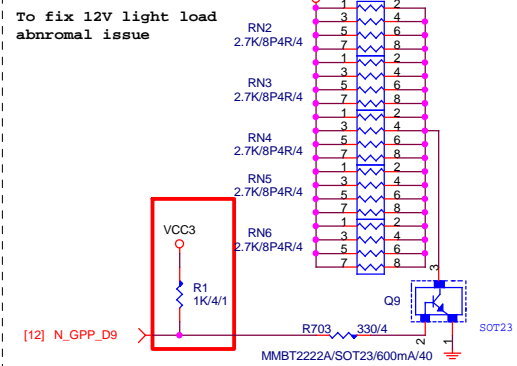
螺絲孔



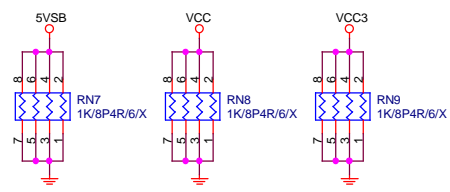
固定孔/光學點



+12V DUMMY LOAD



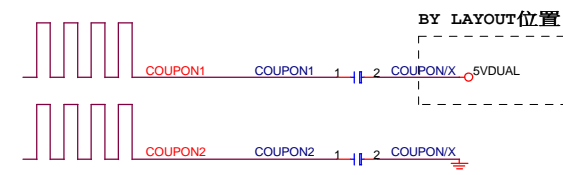
DUMMY LOAD



-PROHOT



COUPON

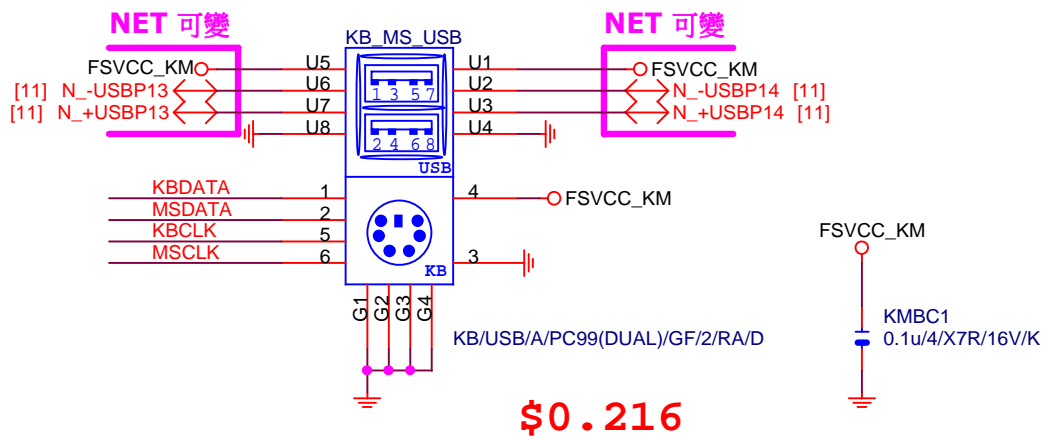


Gigabyte Technology

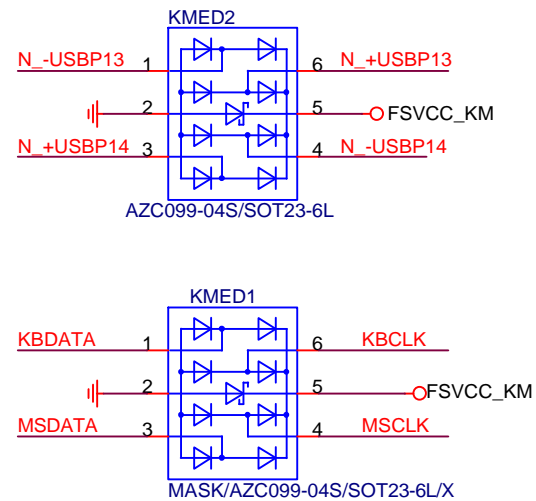
Title		
ATX POWER CONNECTOR		
Size	Document Number	Rev
Custom	GA-Z170M-D3H DDR3	1.0
Date:	Wednesday, July 29, 2015	Sheet 34 of 51

KB_MS_USB

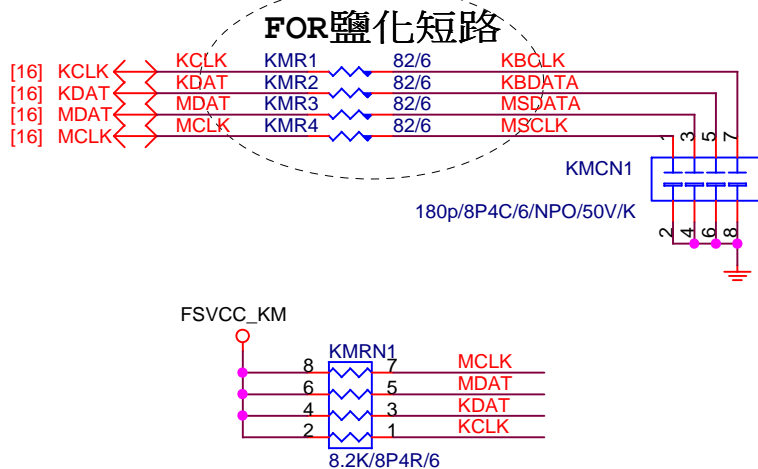
Rev: 0.7



ESD

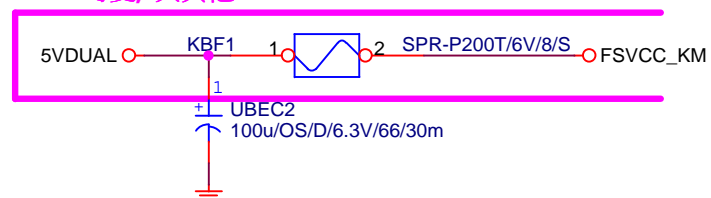


KB_MS_USB DAMPING/PU

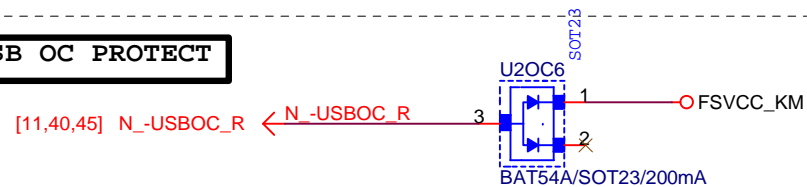


KB_MS_USB PWR

NET 可變, 與其他 USB SHARE



USB OC PROTECT



Gigabyte Technology

Title

KB_MS_USB

Size

Document Number

GA-Z170M-D3H DDR3 1.0

Date:

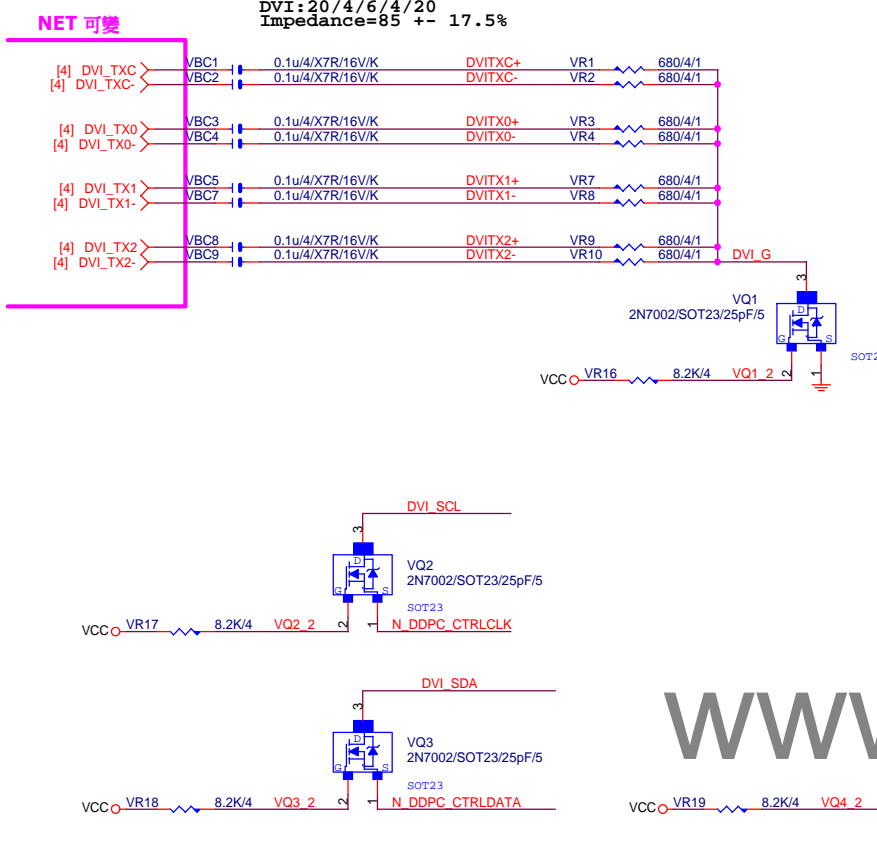
Wednesday, July 29, 2015

Sheet

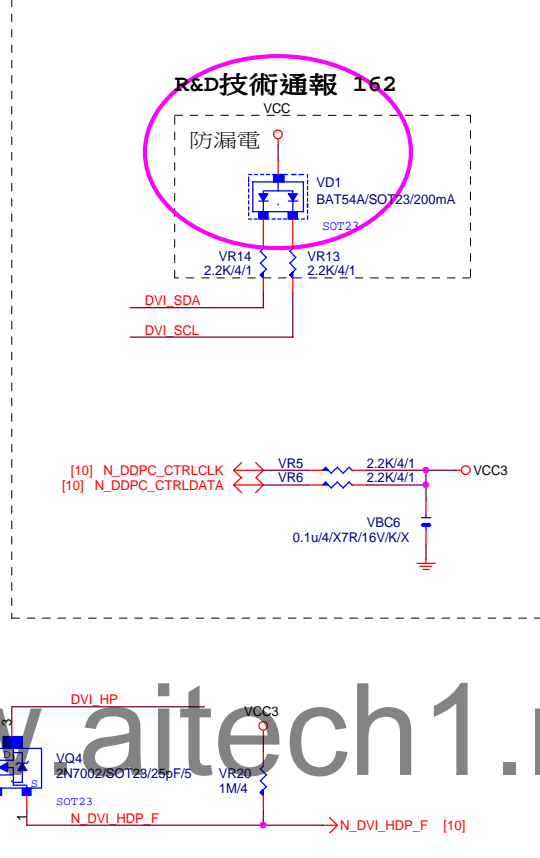
35

of 51

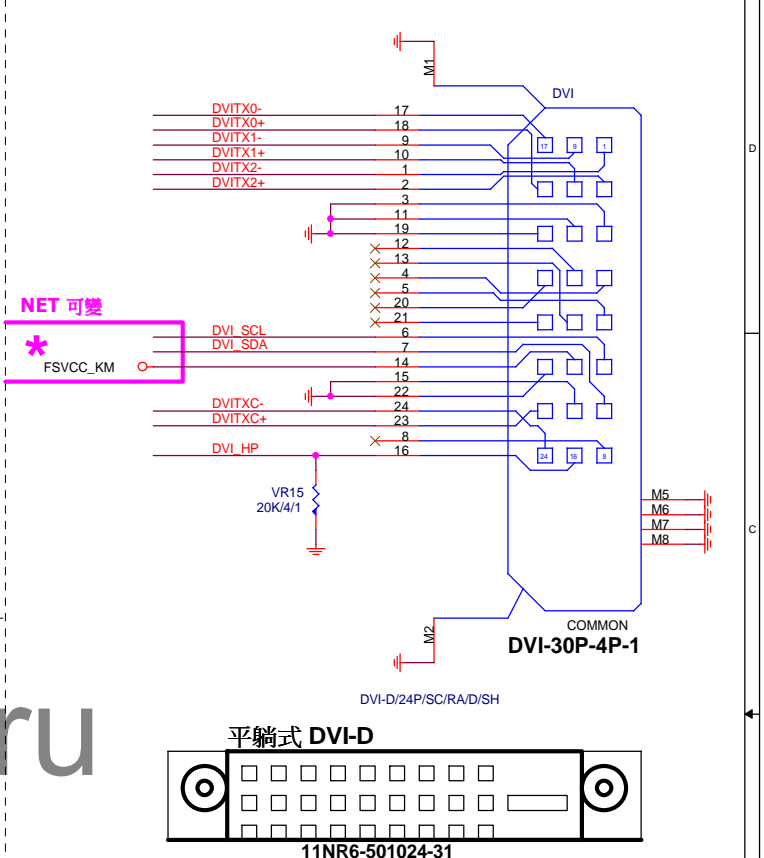
DVI Rev: 0.7



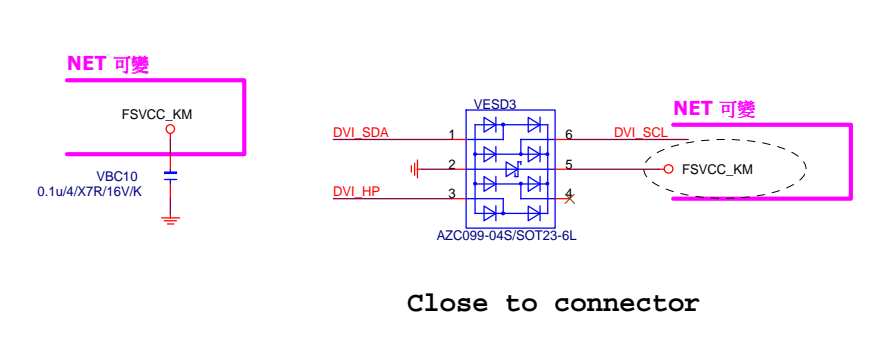
DVI PU



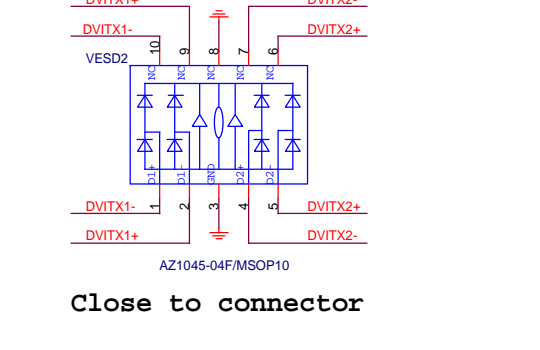
DVI CONN



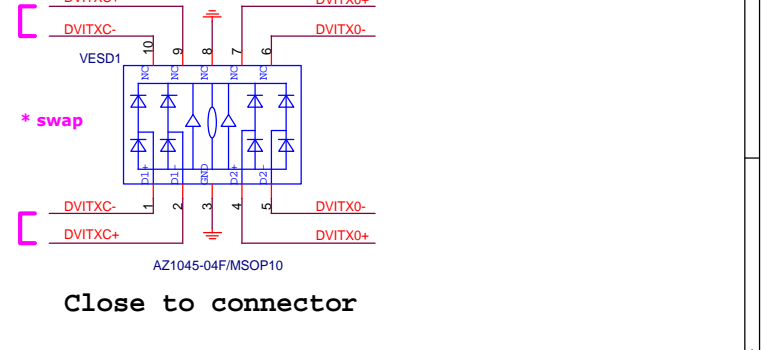
ESD



Close to connector



Close to connector



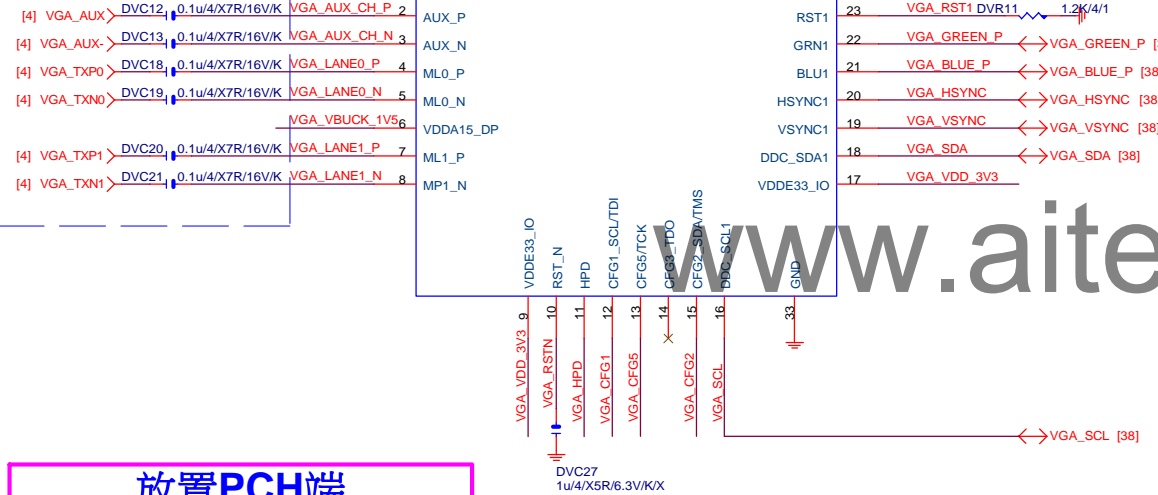
Close to connector

ROM PART: PTN3356R1BS/[10HQ5-A23356-10R]
FLASH PART: PTN3356F1BS/[10HQ5-A23356-20R]

省X'TAL COST DOWN:

1. 上件:
DVC28 [10p/4/NPO/50V/J]
DVC11 [10p/4/NPO/50V/J]~修改值
DVR10 [8.2K/4]
2. 删除:
DVX1 [25M/16p/30ppm/49US/20/D]
DVC10 [20p/4/NPO/50V/J]
DVR9 [8.2K/4]

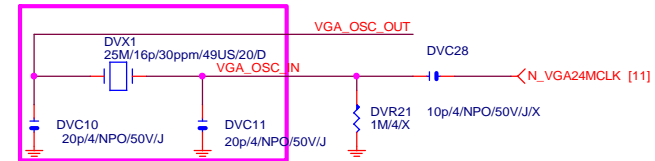
* CPU DP端



放置PCH端



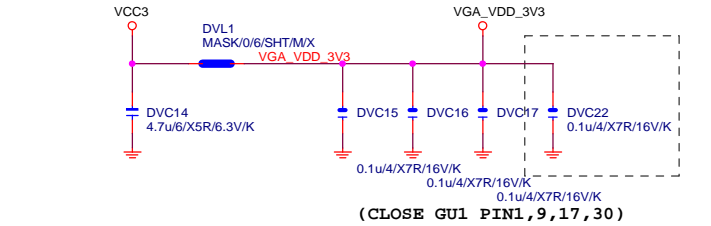
25M Crystal FROM PCH 24MHZ ISSUE



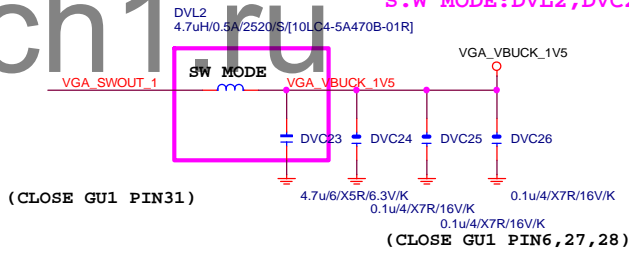
CFG5 For Crystal Less



ADAPTER POWER

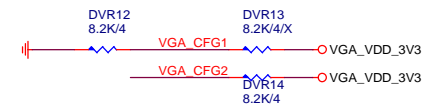


LDO MODE: DVL2, DVC23-->X
S.W MODE: DVL2, DVC23-->O

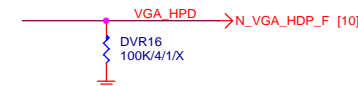


CFG1&2

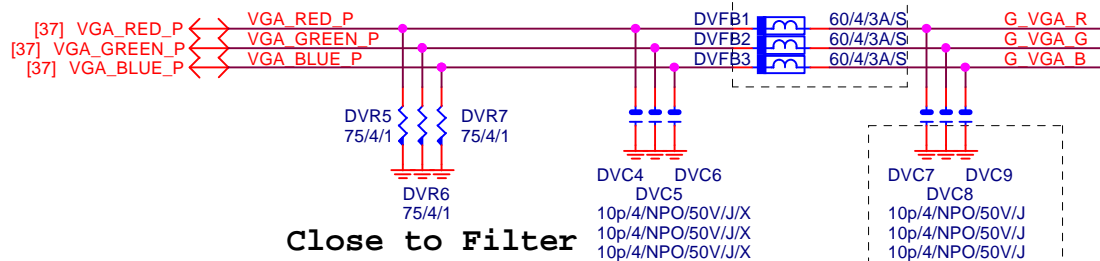
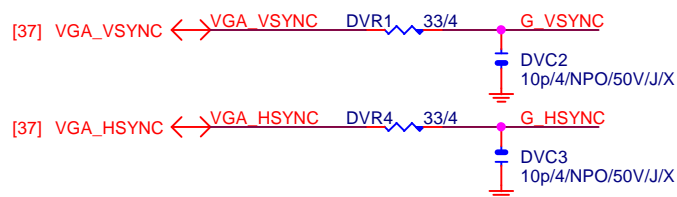
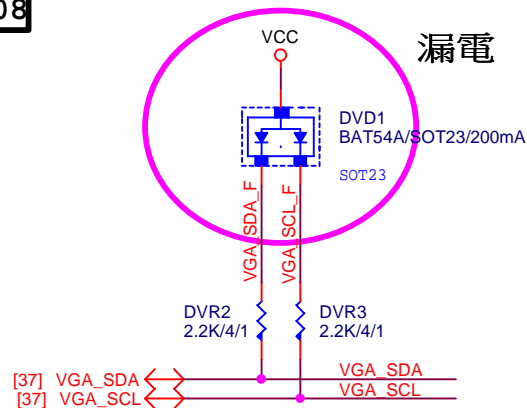
Non-Compliant



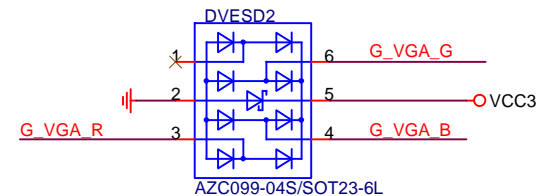
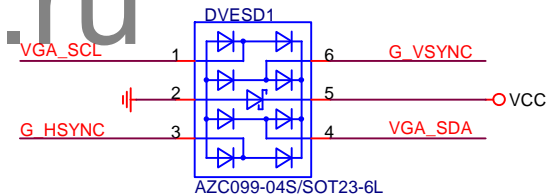
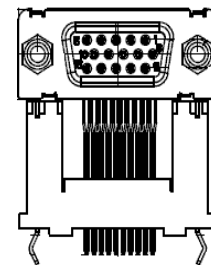
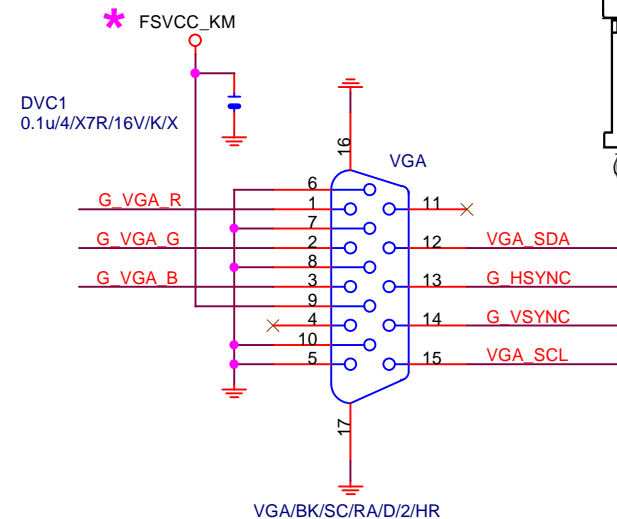
HPD PCH端 *



Gigabyte Technology
NXP-PTN3356



FOR EMI

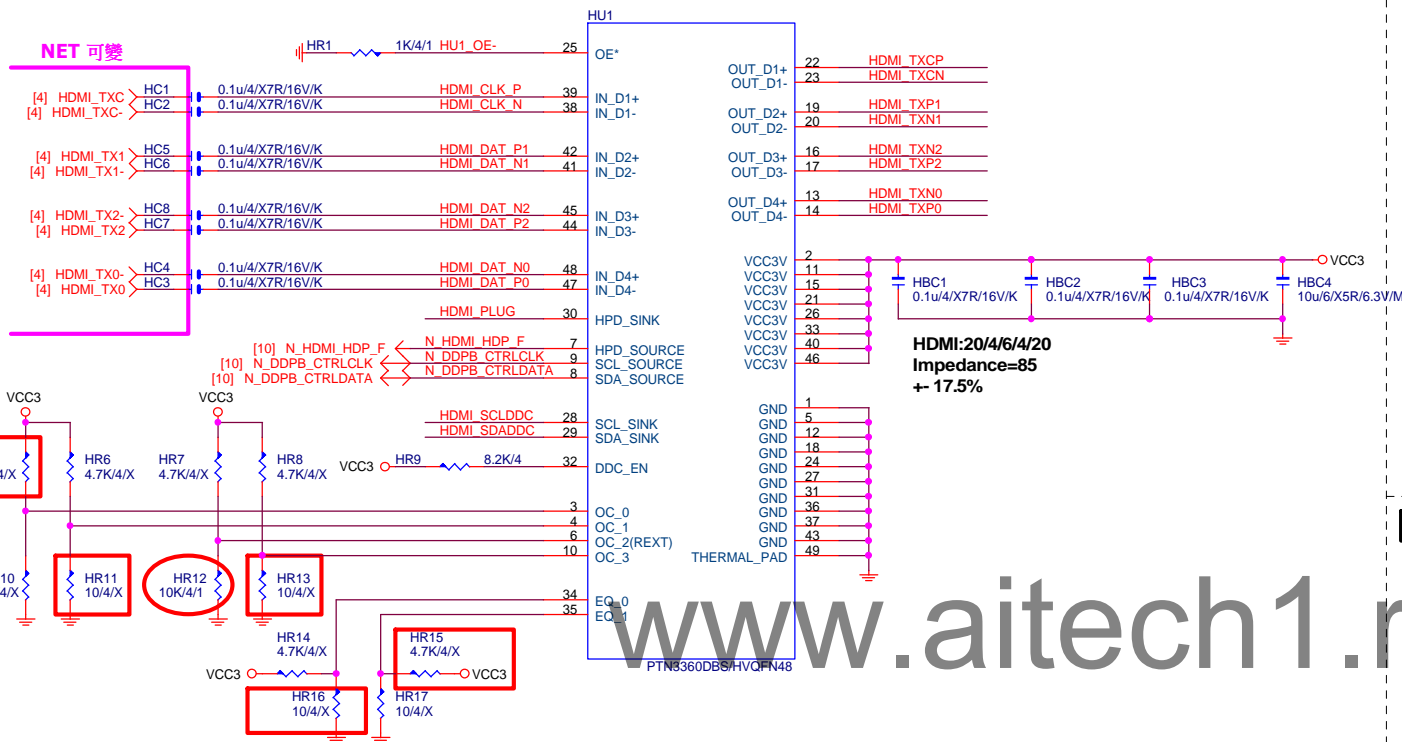


Gigabyte Technology
NXP-PTN3356

Title					NXP-PTN3356					
Size		Document Number			GA-Z170M-D3H DDR3			Rev		
Custom								1.0		
Date:		Wednesday, July 29, 2015			Sheet		38		of 51	

HDMI LEVEL SHIFT

Rev: 0.7



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

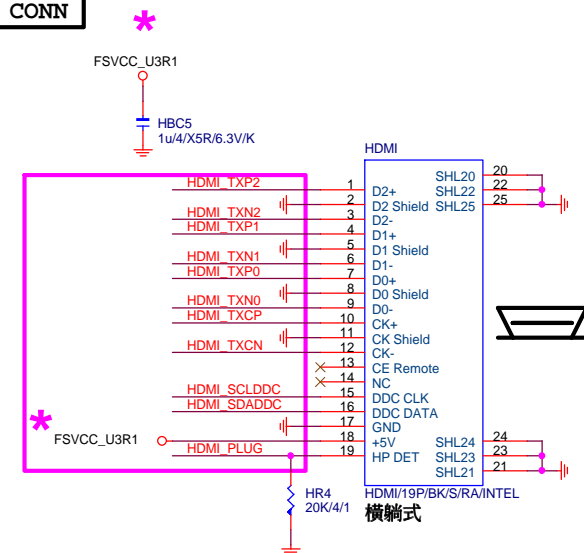
【技術通報R&D技術通報150】

HDMI eye diagram1.4版(deep color)會fail

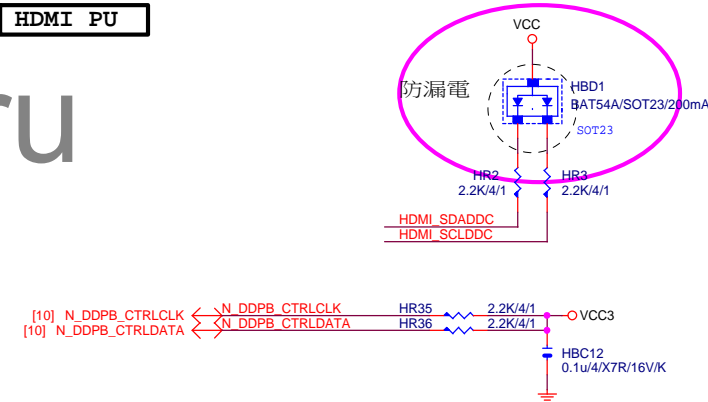
原因: 因目前的HDMI訊號過長,造成RISING TIME過慢,而會壓到eye diagram

改善: ASMEDIA ASM1442 : 3.16K(PIN6 PULL DOWN電阻) 10ohm(PIN4 PULL DOWN電阻)

HDMI CONN



HDMI PU

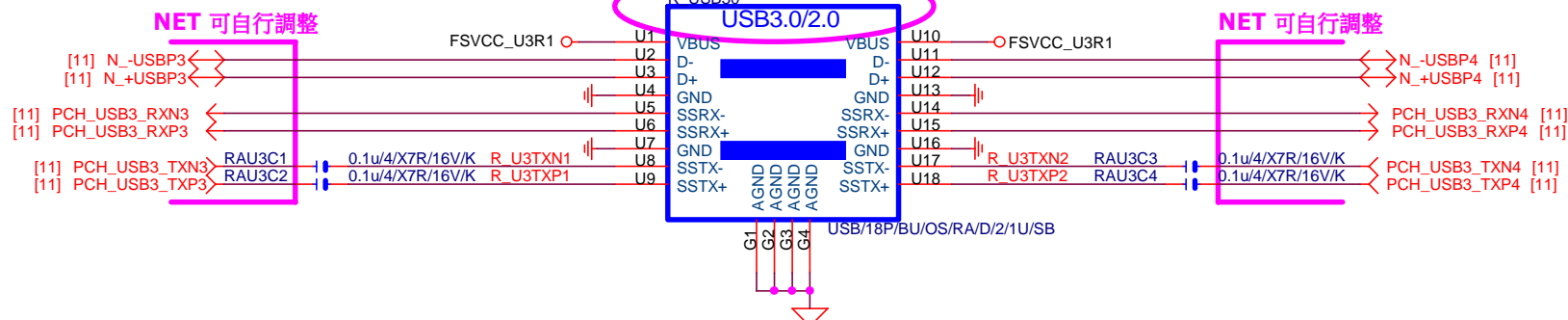


Gigabyte Technology

Title		HDMI	
Size	Document Number	GA-Z170M-D3H DDR3	
Custom		1.0	
Date:	Wednesday, July 29, 2015	Sheet	39 of 51

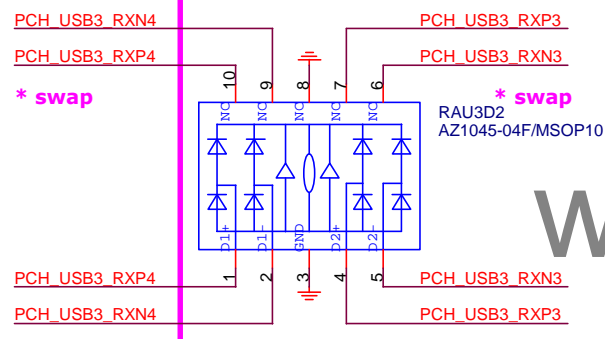
Rev: 0.7

ESD 可自行SWAP PIN ,CONN端 NET 名稱 不可

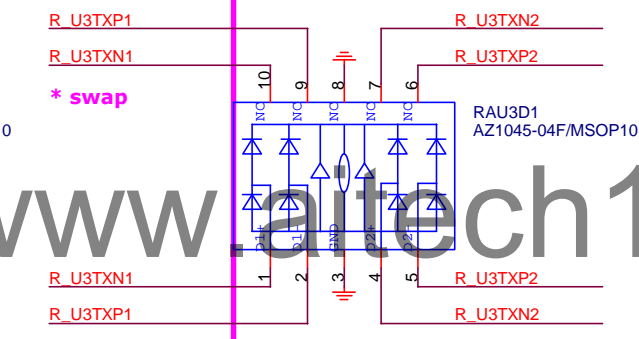


ESD

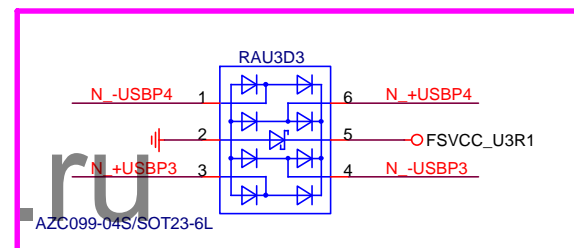
NET 可自行調整



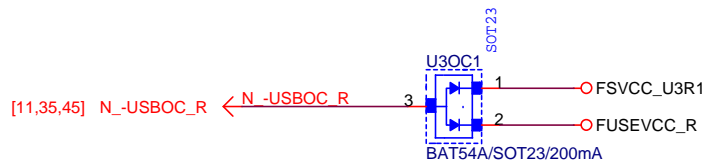
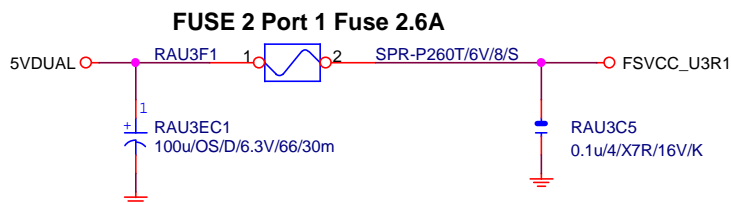
NET 可自行調整



NET 可自行調整



FUSE



Gigabyte Technology

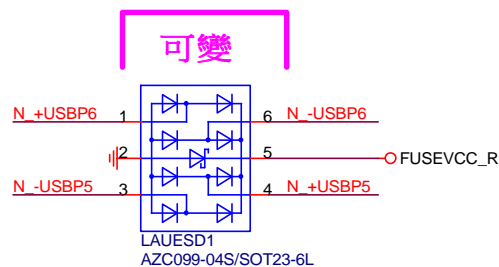
Title			R_USB30,USB_OC
Size	Document Number	GA-Z170M-D3H DDR3	
Custom		Date: Wednesday, July 29, 2015	Sheet 40 of 51
			Rev 1.0



R1.1

RMA ESD PROTECT

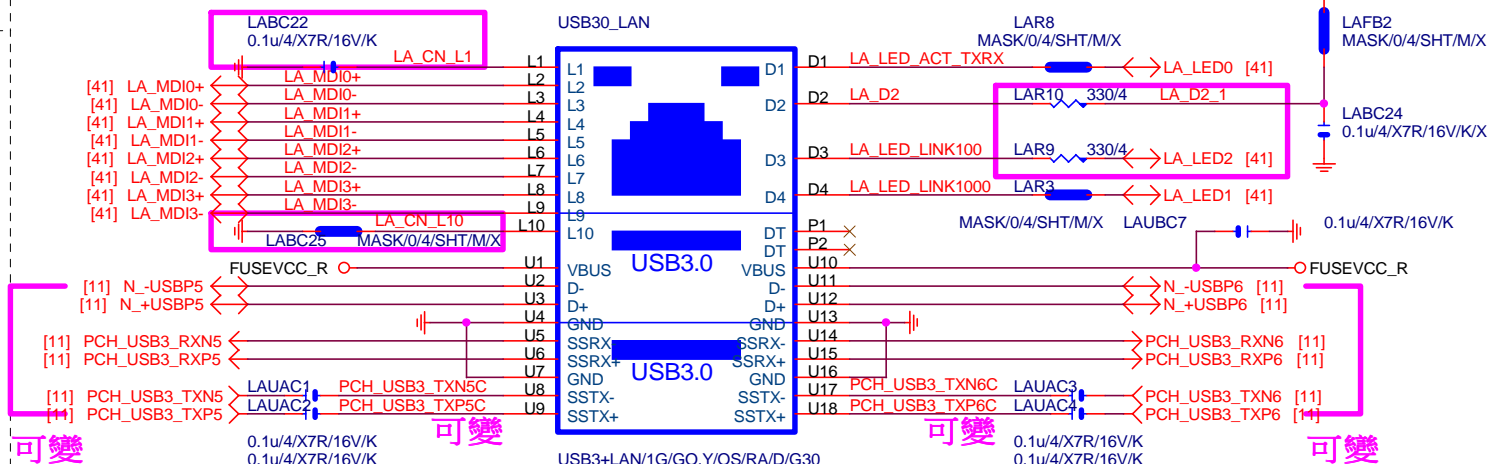
note:可變更USB NAME



USB_LAN CONNECTOR

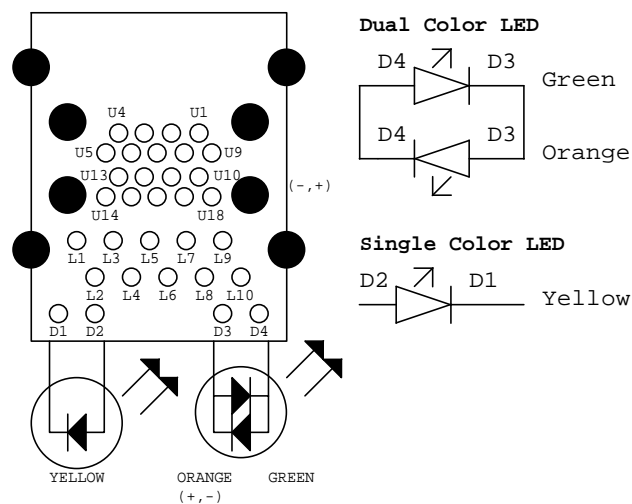
note:可變更USB NAME

[I219]



LA MDI-->100歐姆:[20/4/8/4/20]

USB30 LAN LAYOUT示意圖



LAN COVER

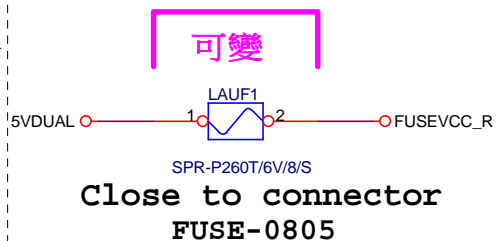
FOOT PRINT:LAN COVER

可變 [視SPEC需求]

[-D3H不加蓋]

USB POWER

note:可變更FUSE



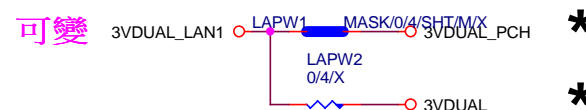
EMI SHORT PAD

PS:視EMI需求



LAN POWER

note: lan power連接及電流



Gigabyte Technology

LAN CONNECTOR-I219

Size	Document Number
Custom	

GA-Z170M-D3H DDR3

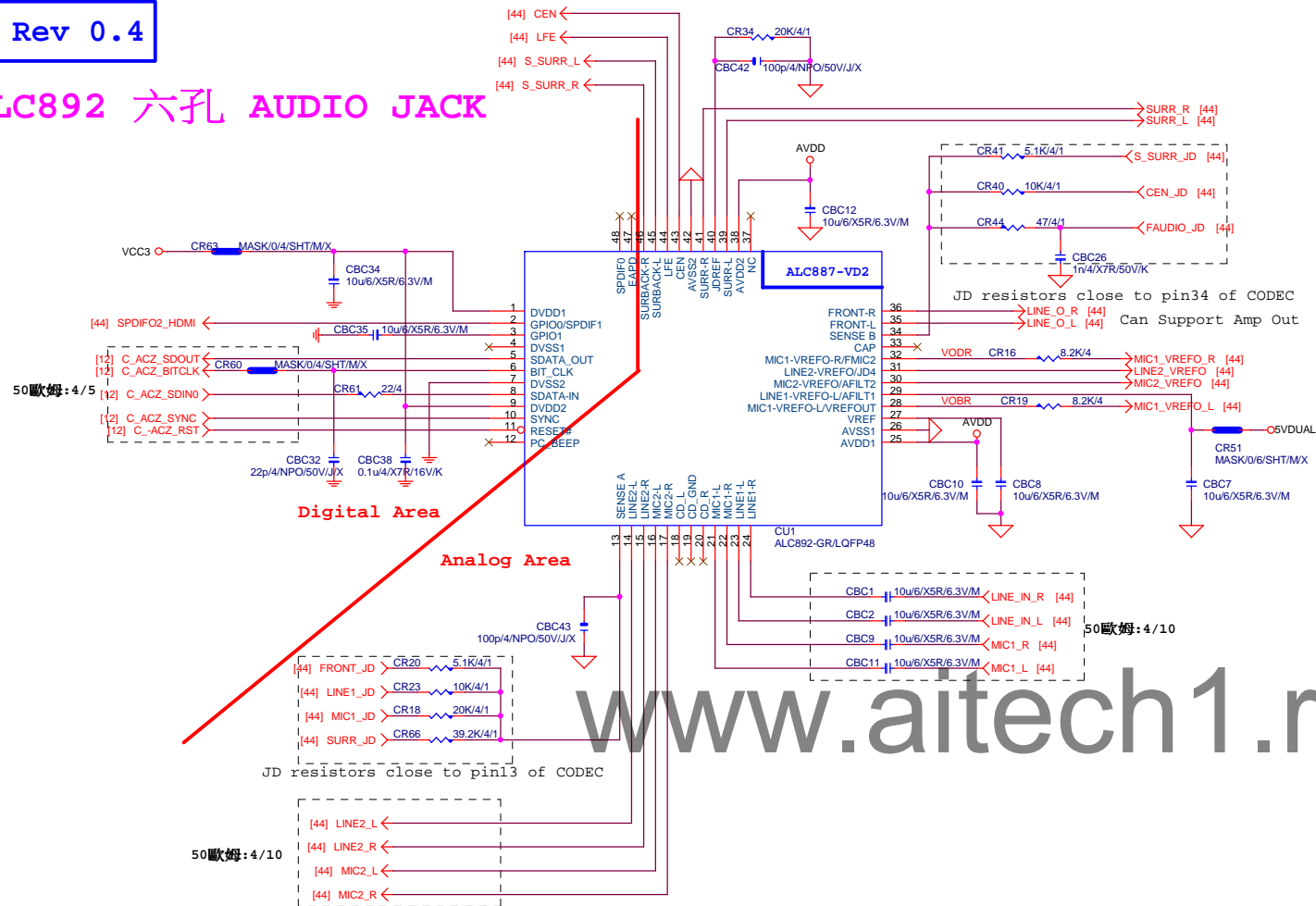
Rev

Date: Wednesday, July 29, 2015

Sheet 42 of 51

7

ALC892 六孔 AUDIO JACK

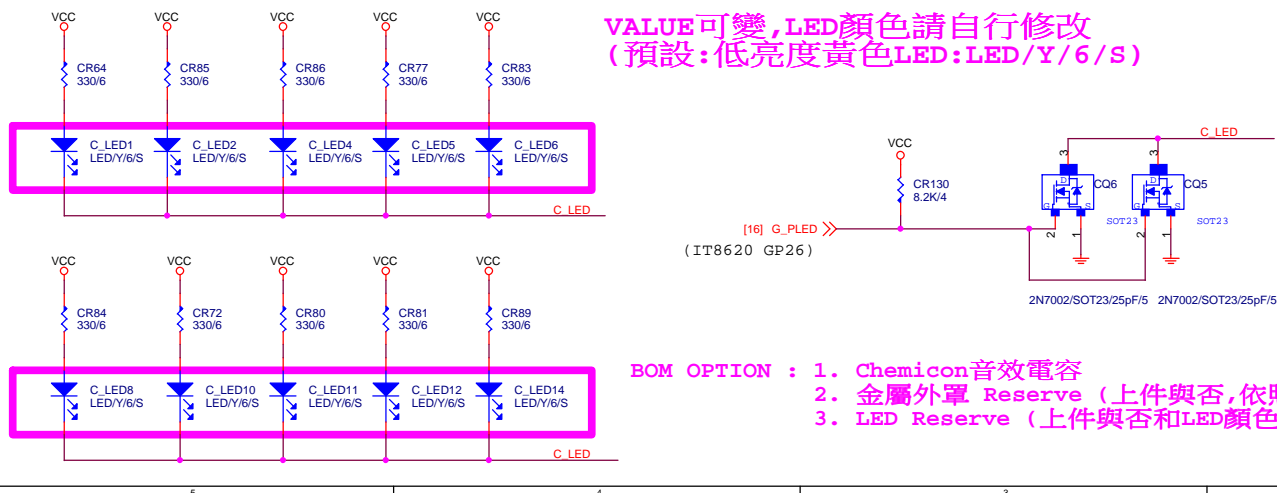


LAYOUT注意:螺絲孔下GND方式

1. MH1空間夠,下DGND
空間不夠,改為Isolate
2. MH2一律改為Isolate

☐ MH1 MH2 ☐
 DGND Isolate

VALUE可變,LED顏色請自行修改
(預設:低亮度黃色LED:LED/Y/6/S)

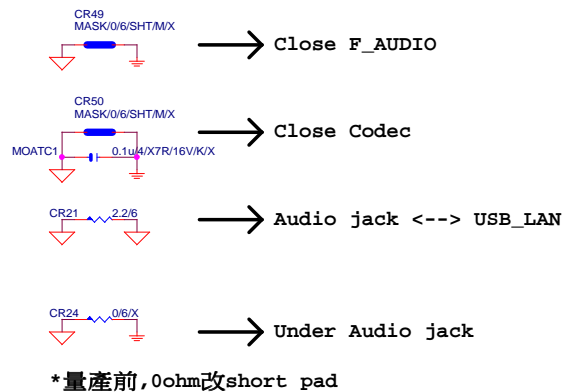


*料號後補

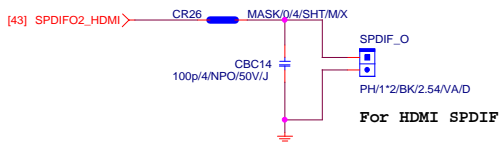
BOM OPTION : 1. Chemicon 音效電容
2. 金屬外罩 Reserve (上件與否, 依照各Model spec)
3. LED Reserve (上件與否和LED顏色, 依照各Model spec)

LAYOUT注意:要加
GND切割線

音效區域印刷

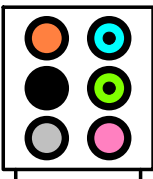


SPDIF_OUT

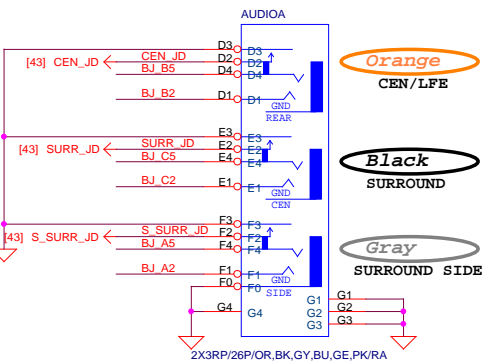
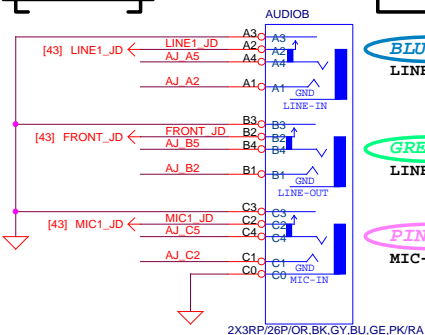


SPDIF_IN

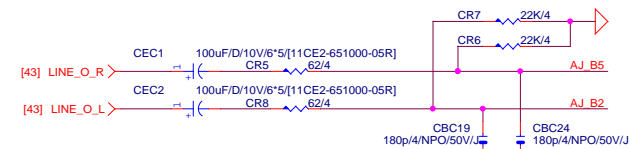
AZALIA JACK



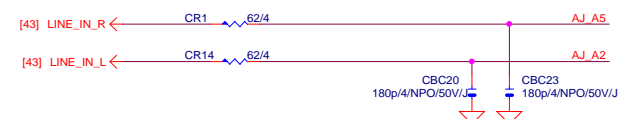
AZALIA JACK

BLUE
LINE-INGREEN
LINE-OUTPINK
MIC-IN

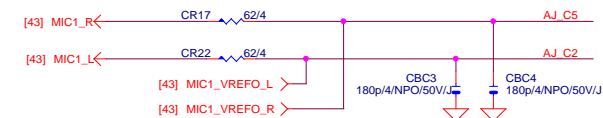
LINE-OUT



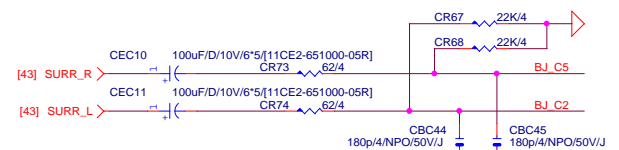
LINE-IN



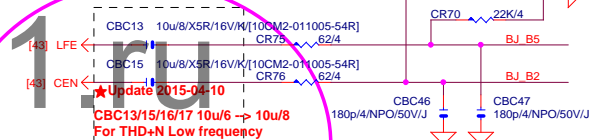
MIC-IN



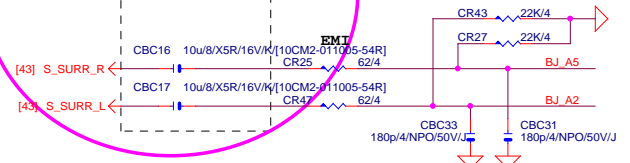
SURROUND



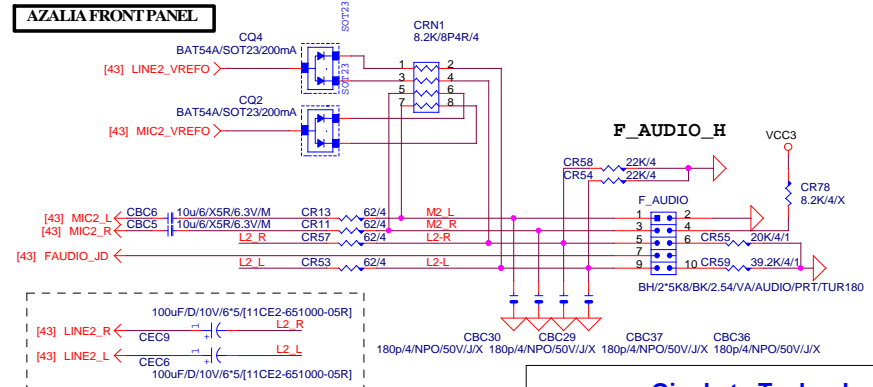
CEN/LFE



SURRBACK

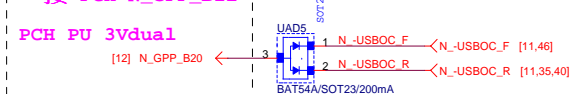
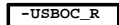


AZALIA FRONT PANEL



Gigabyte Technology

Title				Rev 1.0
AUDIO JACK				
Size Custom	Document Number GA-Z170M-D3H DDR3			
Date:	Wednesday, July 29, 2015	Sheet	44 of 51	

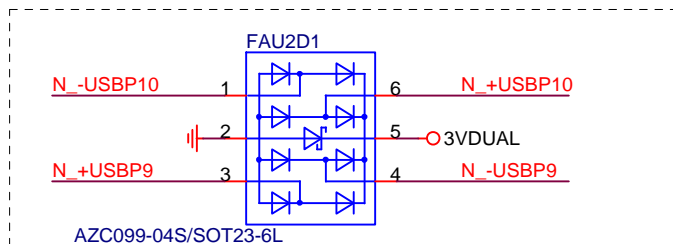
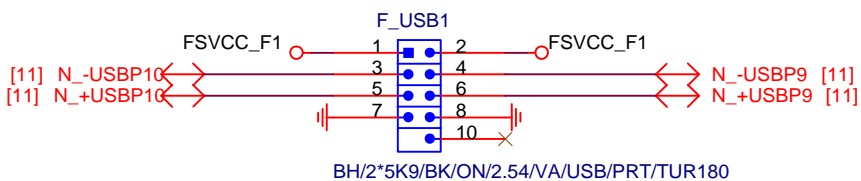


Rev: 0.7

FRONT USB1

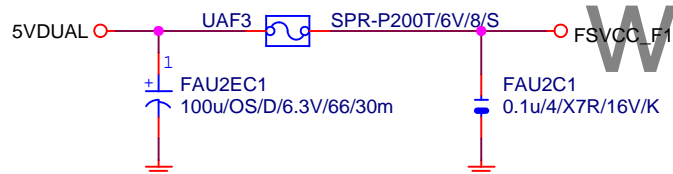
NET 可變

FUSB2X5-HS



Close to connector

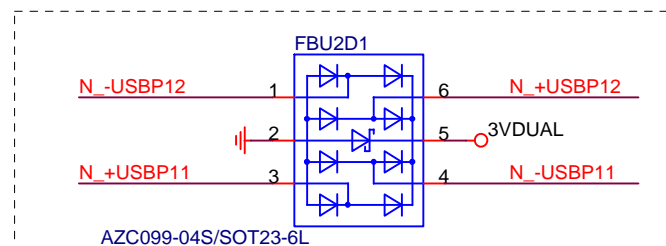
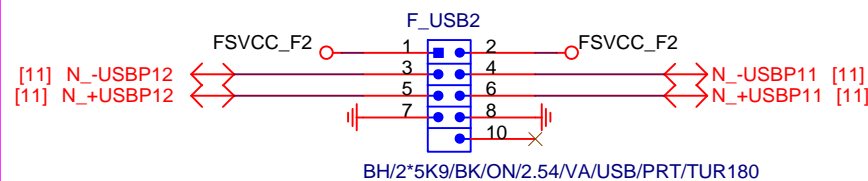
FUSE 2 Port 1 Fuse 2A



FRONT USB2

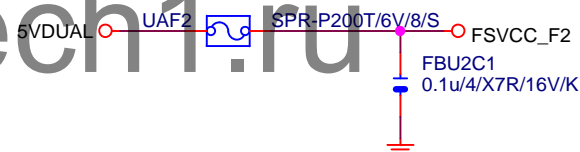
NET 可變

FUSB2X5-HS

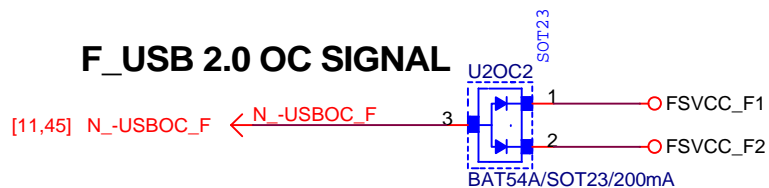


Close to connector

FUSE 2 Port 1 Fuse 2A



F_USB 2.0 OC SIGNAL



Gigabyte Technology

Title

USB2.0

Size
A

Document Number

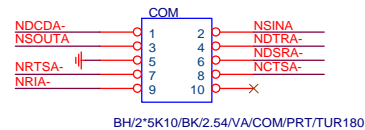
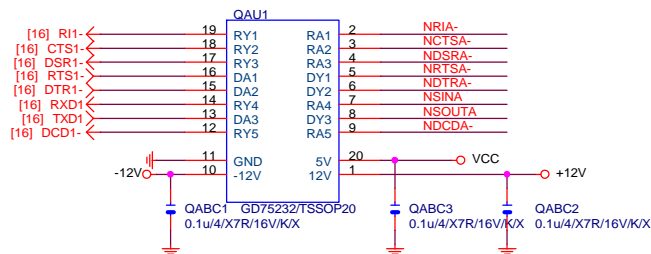
GA-Z170M-D3H DDR3

Date: Wednesday, July 29, 2015

Sheet 46 of 51

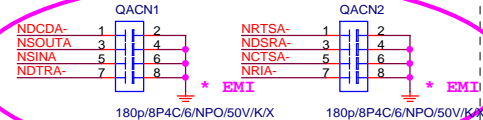
Rev
1.0

Rev: 0.7



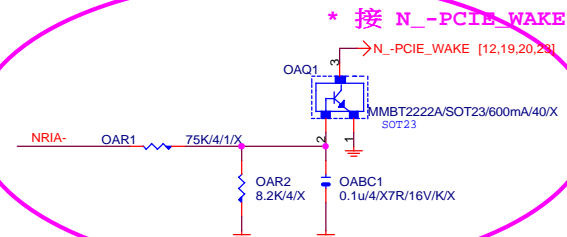
BH/2*5K10/BK/2.54/VA/COM/PRT/TUR180

F_COM-HS

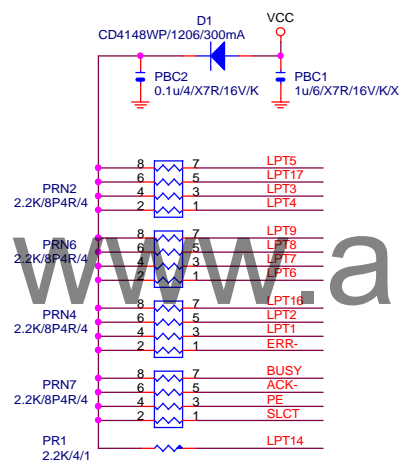
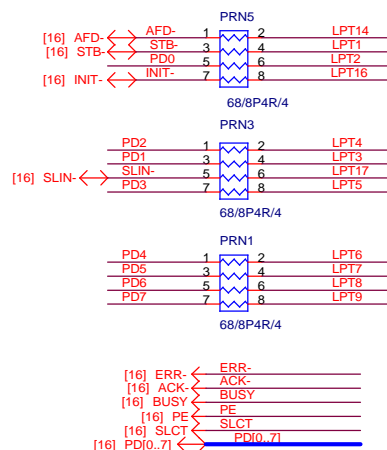


COM RI

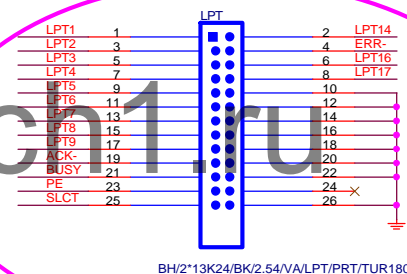
1 N/A



LPT PORT



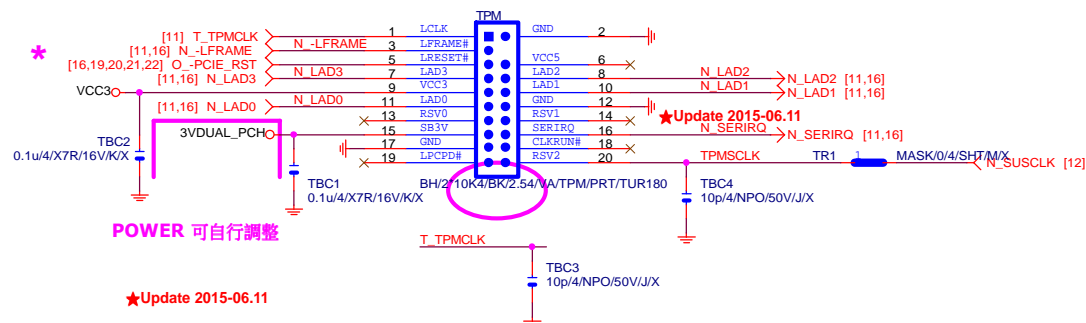
R&D技術通報151 有使用PRINT PORT的
MODEL, 需使用新料號:10HP2-118728-72R。(CHIP IT8728F/EX (GB) ITE/SMD
QFP128 PRINTPORT SORTING)料件。串電阻33 ohm改為68 ohm。



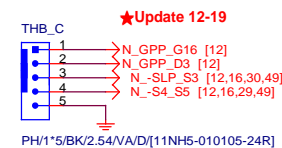
BH/2*13K24/BK/2.54/VA/LPT/PRT/TUR180

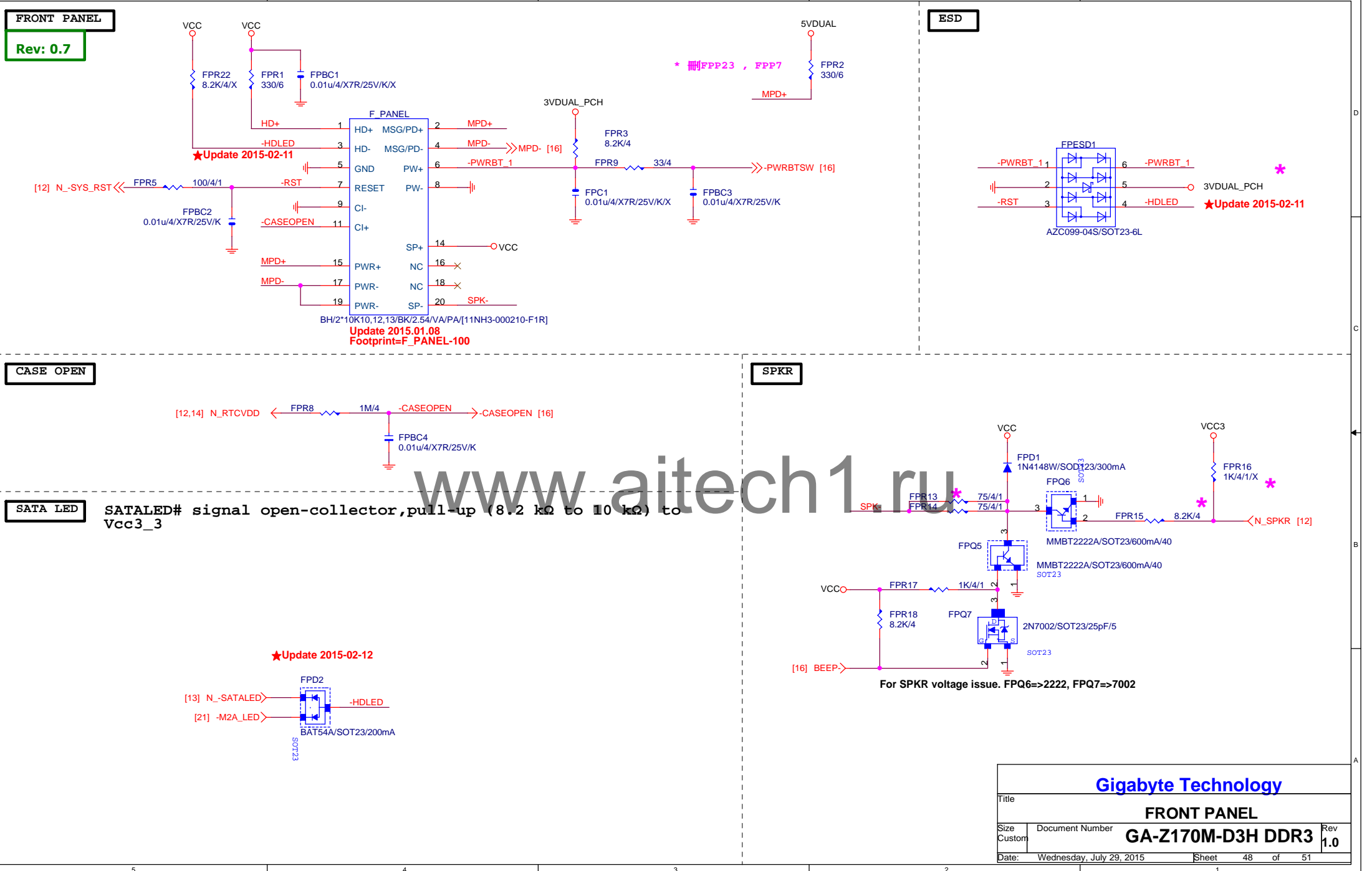
F LPT-HS

TPM CONNECT



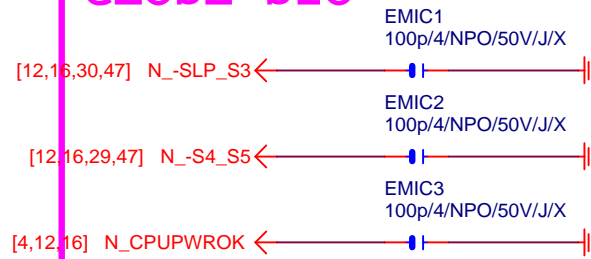
Thunderbolt





Title		Document Number		Rev
FRONT PANEL		GA-Z170M-D3H DDR3		1.0
Date:	Wednesday, July 29, 2015	Sheet	48 of 51	

CLOSE SIO



CLOSE PCH



www.aitech1.ru

GIGABYTE™

Title

EMI/ESD

Size
A

Document Number

GA-Z170M-D3H DDR3

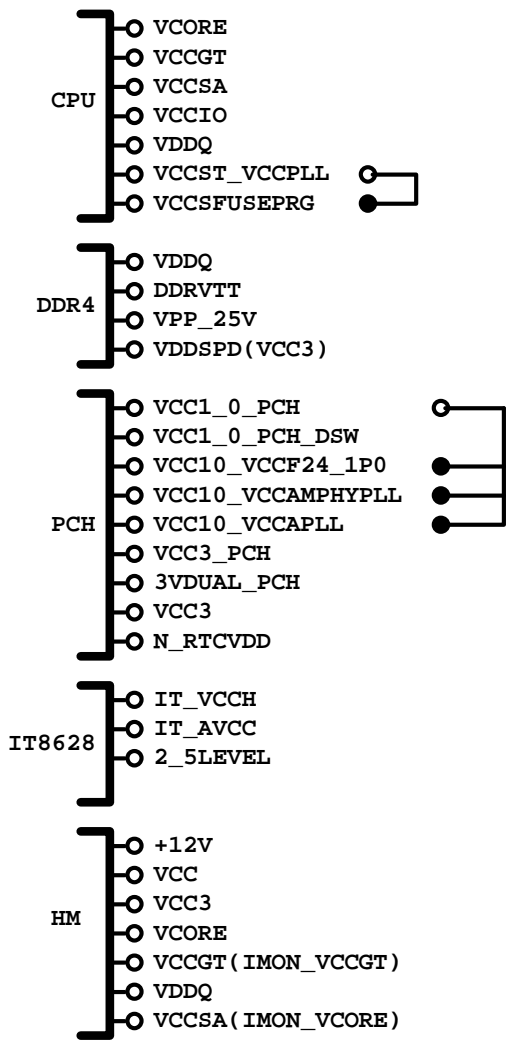
Rev

1.0

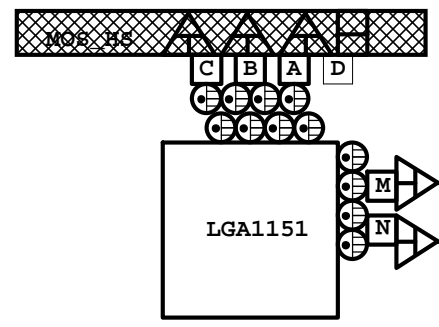
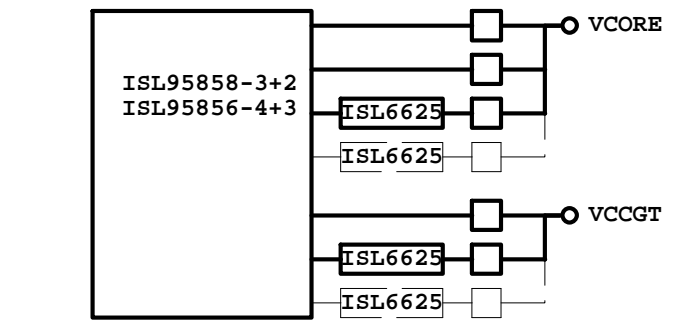
Date: Wednesday, July 29, 2015

Sheet 49 of 51

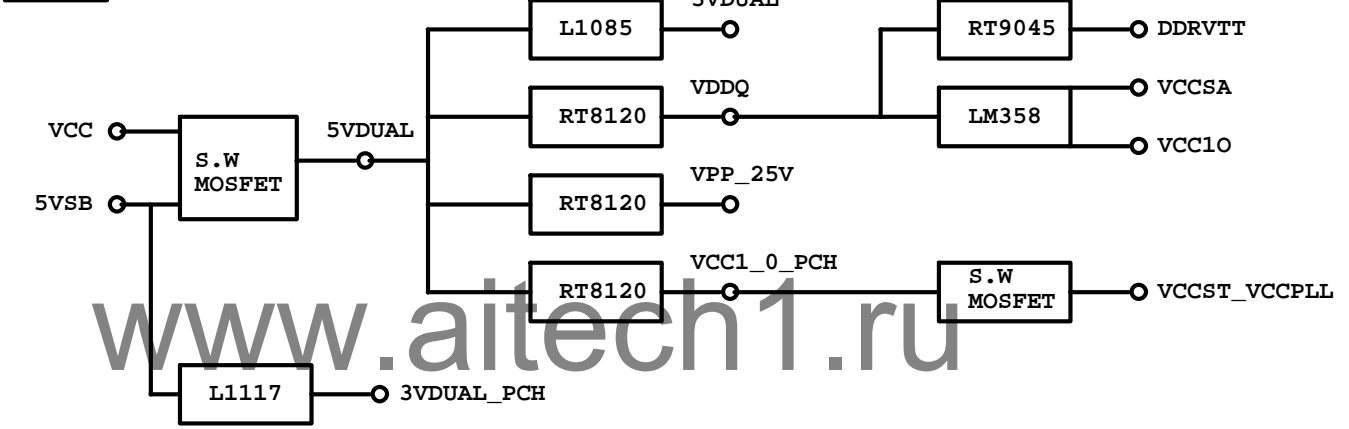
POWER BLOCK MAP



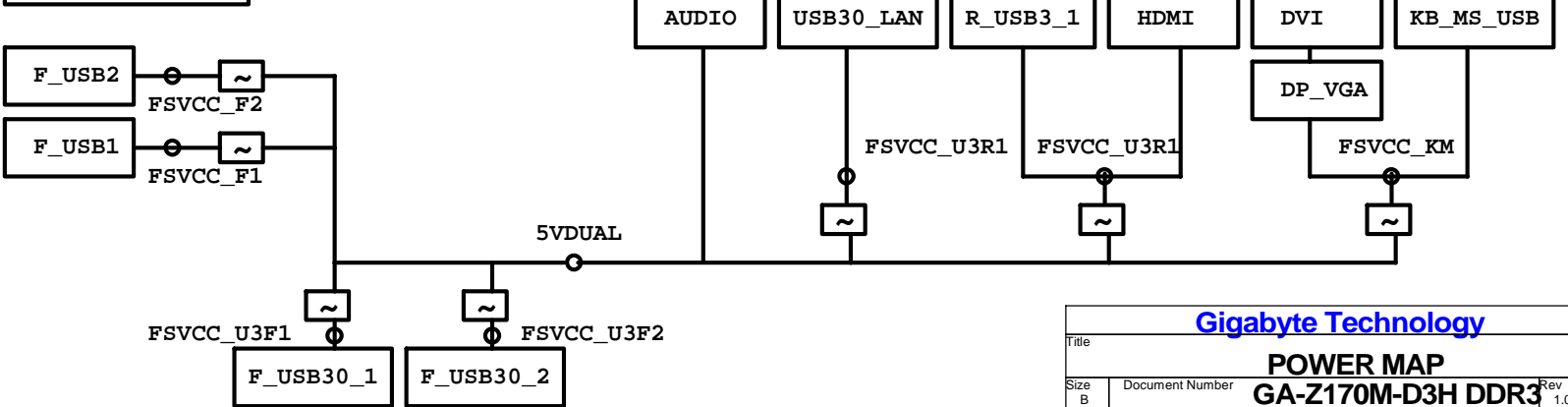
VCORE/VCCGT



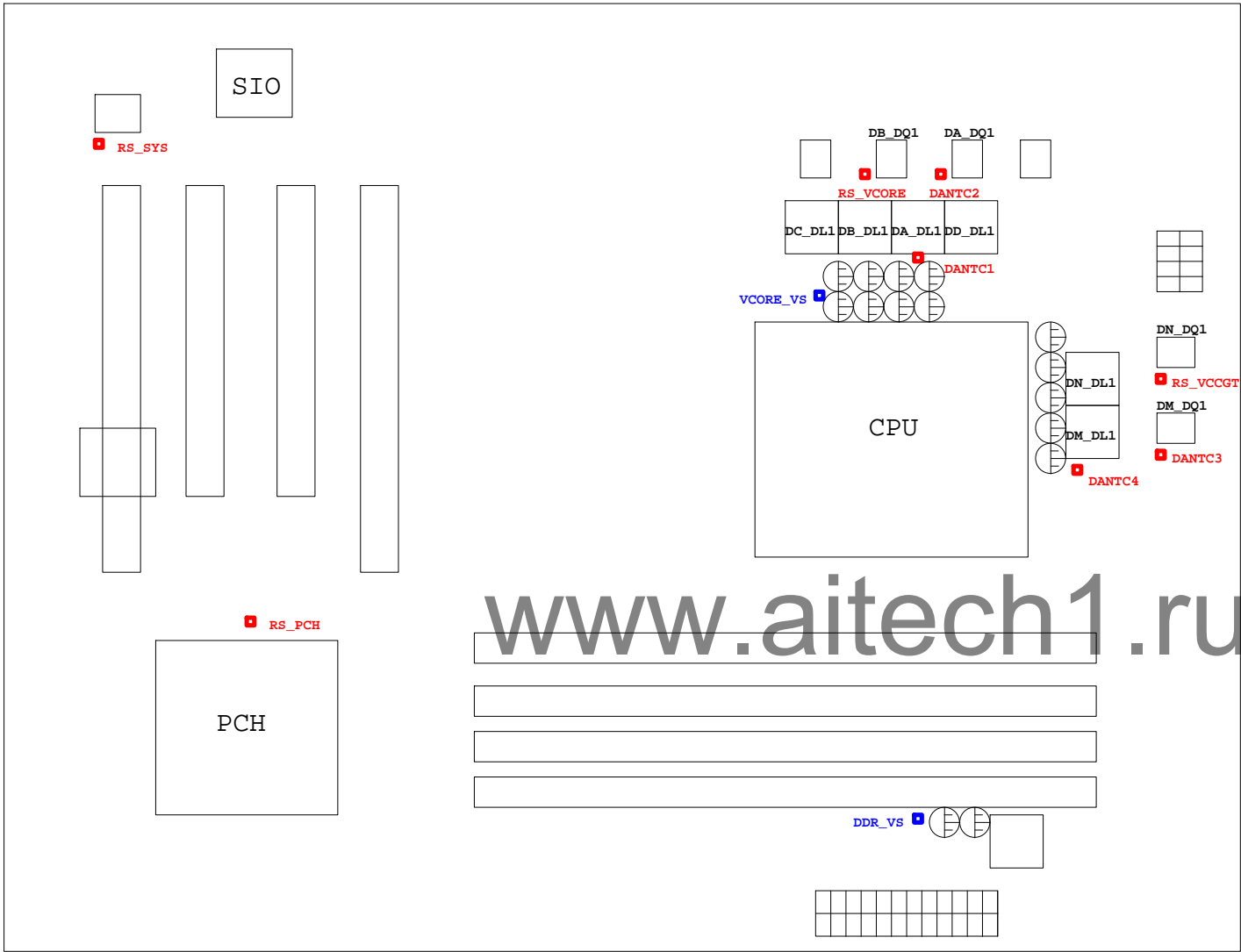
POWER



FUSE POWER F/R



Gigabyte Technology			
Title			
POWER MAP			
Size	Document Number	Rev	
B	GA-Z170M-D3H DDR3	1.0	
Date:	Wednesday, July 29, 2015	Sheet	50 of 51



熱敏電阻	擺放靠近位置	走線方式
DANTC1	DA_DL1	N/A
DANTC2	DA_DQ1	Differential
DANTC3	DM_DQ1	N/A
DANTC4	DM_DL1	Differential
RS_VCORE	DB_DQ1	N/A
RS_VCCGT	DN_DQ1	N/A
RS_PCH	PCH	N/A
RS_SYS	CU1	N/A