

Model Name: GA-Z170M-D3H rev 1.0

SHEET TITLE

01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	CPU_LGA1151-A
05	CPU_LGA1151-B-DDR4
06	CPU_LGA1151-C
07	CPU_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

SHEET TITLE

28	ISL95858_856 MOS_VCCGT
29	VCCSA_VCCIO_VCCPLL
30	RT8120_DDR_VDDQ
31	RT8068A_VPP_25V
32	RT8120_PCH_VCC1_0_PCH
33	DISCRETE POWER
34	NCT3933
35	ATX POWER , A_-PROCHOT
36	KB_MS_USB
37	DVI CONN
38	PTN3356 - DP to VGA - IC
39	PTN3356 - DP to VGA - Conn
40	HDMI CONN
41	R_USB30
42	INTEL I219
43	USB30_LAN CONNECTOR-I219
44	Realtek ALC892
45	REAR AUDIO JACK
46	F_USB30
47	F_USB
48	COM , LPT , TPM , THB
49	F_PANEL
50	TABLE LIST
51	POWER MAP

Gigabyte Technology			
Title			
Cover Sheet			
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Custom			1.0
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Model Name: GA-Z170M-D3H

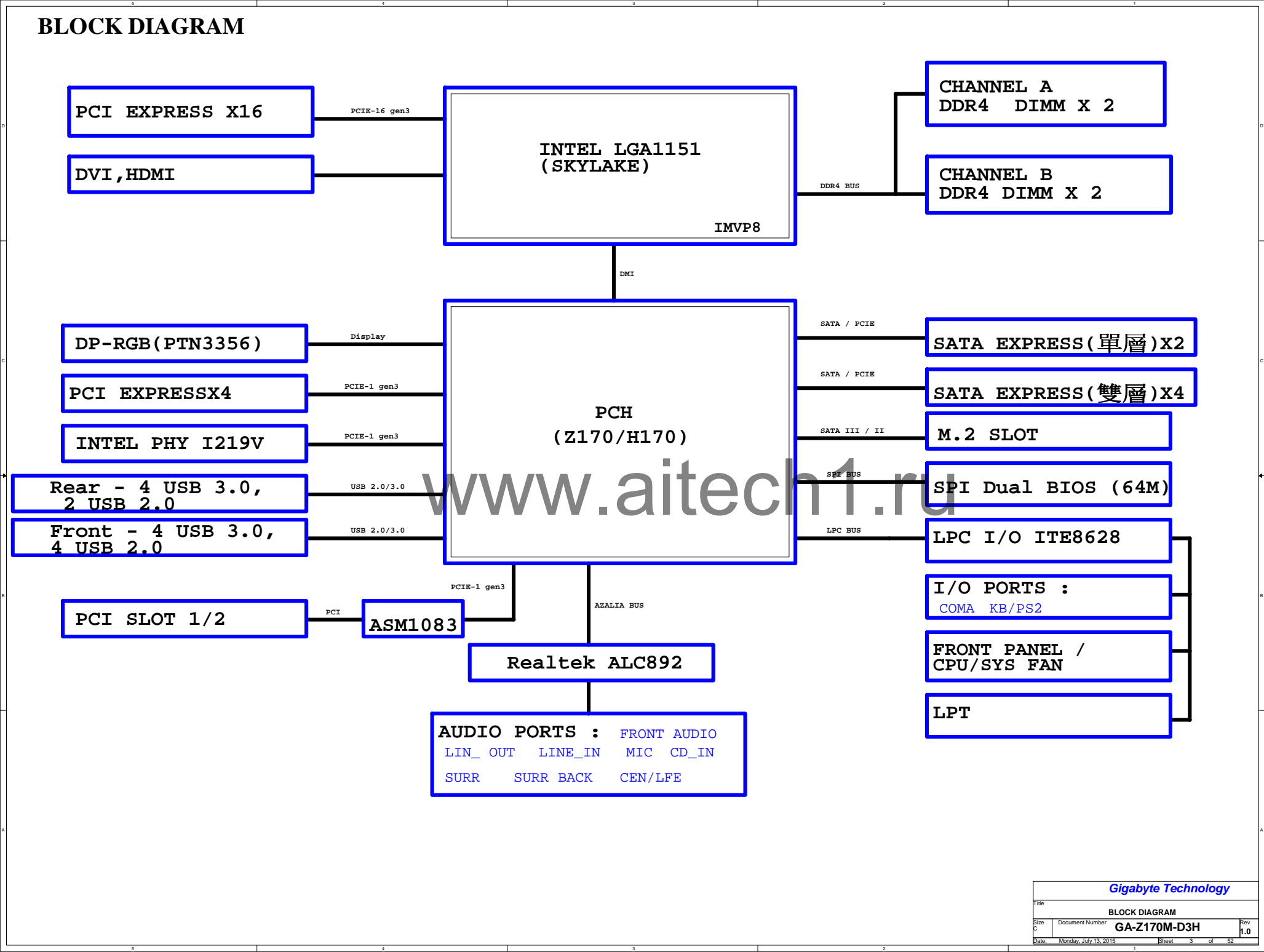
rev 1.0 Circuit or PCB layout change

Component value change history

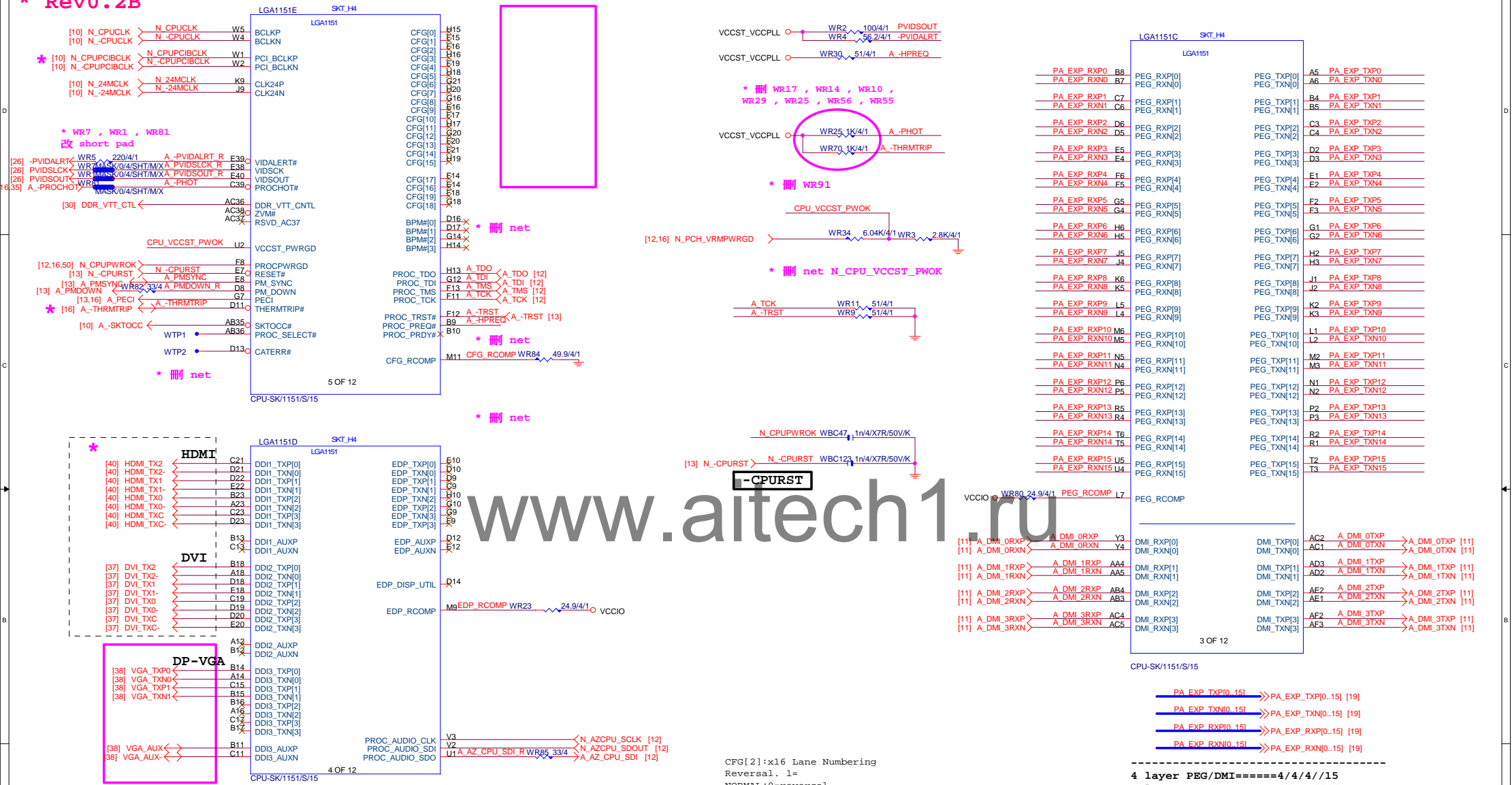
2015/07/09

[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
```

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

Impedance=85 +- 15%

```
CFG[2]:x16 Lane Numbering
Reversal_1=
NORMAL;0=reversal
CFG[4]: eDP
enable:1:disable/0=enable
CFG[6:5]:PCI Express* Bifurcation; 11=
1 x16 PCI Express;10=2x8 PCI Express
CFG[7]: PEG Training;1=(default) PEG Train
immediately following RESET#;0=PEG Wait
for BIOS
```

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

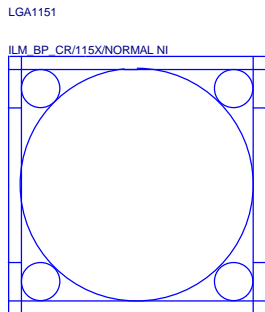
```
4 layer PEG/DMI=====4/4/4//15
6 layer PEG/DMI=====4/5.5/4//15
```

Impedance=85 +- 15%

```
W=12 mil out of CPU
S=15 mil out of CPU
```

<p align="center"><i>Gigabyte Technology</i></p>			
<p>Title: CPU LGA1151-A</p>			
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* 改DDR4 net



Need check the new CPU ME

[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]

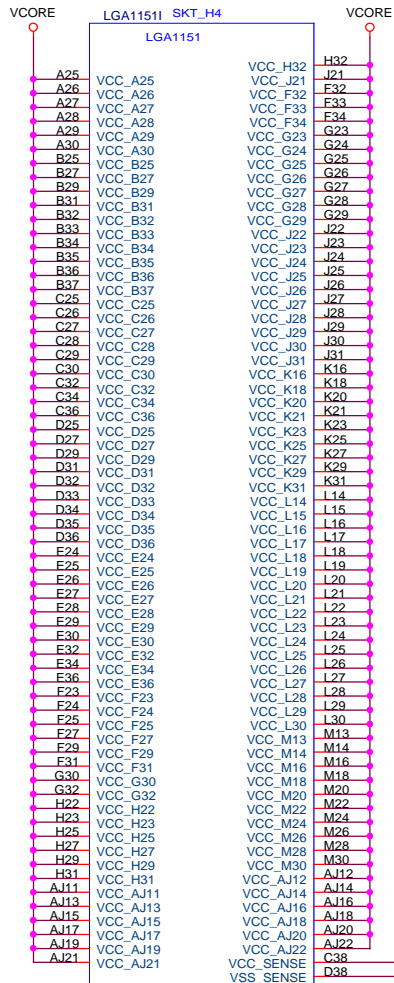
[8] M_DQSA[0..7] \longleftrightarrow M_DQSA[0..7]
[8] M_-DQSA[0..7] \longleftrightarrow M_-DQSA[0..7]

[8] MAAA[0..16] \longleftrightarrow MAAA[0..16]
[9] MAAB[0..16] \longleftrightarrow MAAB[0..16]

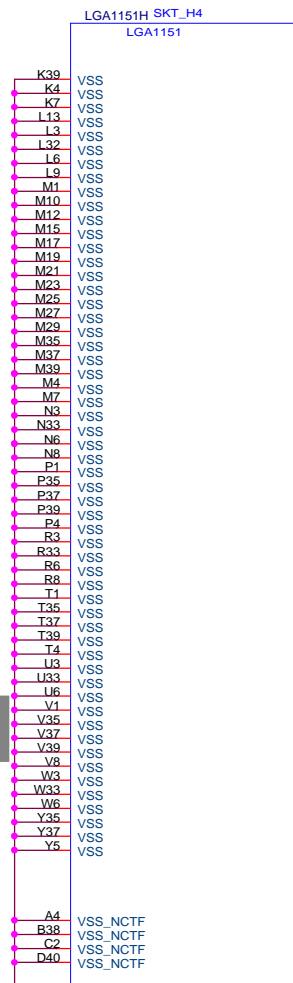
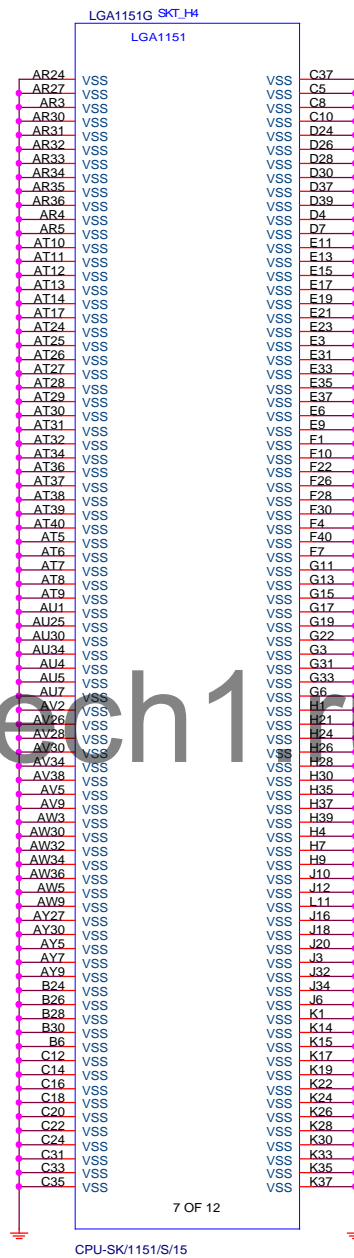
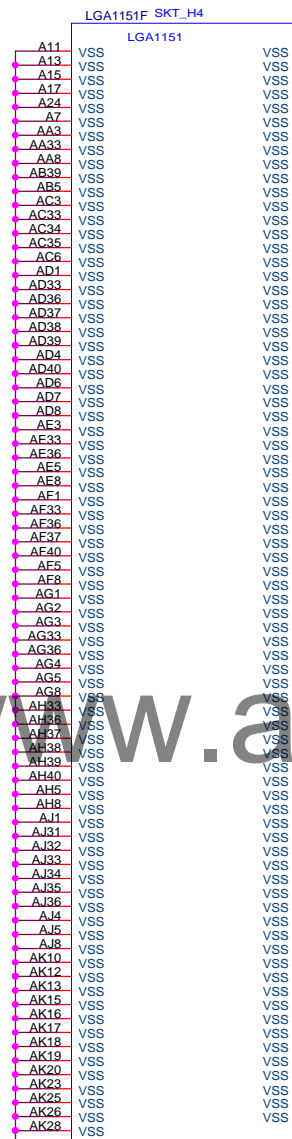
[9] M_DQSB[0..7] \longleftrightarrow M_DQSB[0..7]
[9] M_-DQSB[0..7] \longleftrightarrow M_-DQSB[0..7]

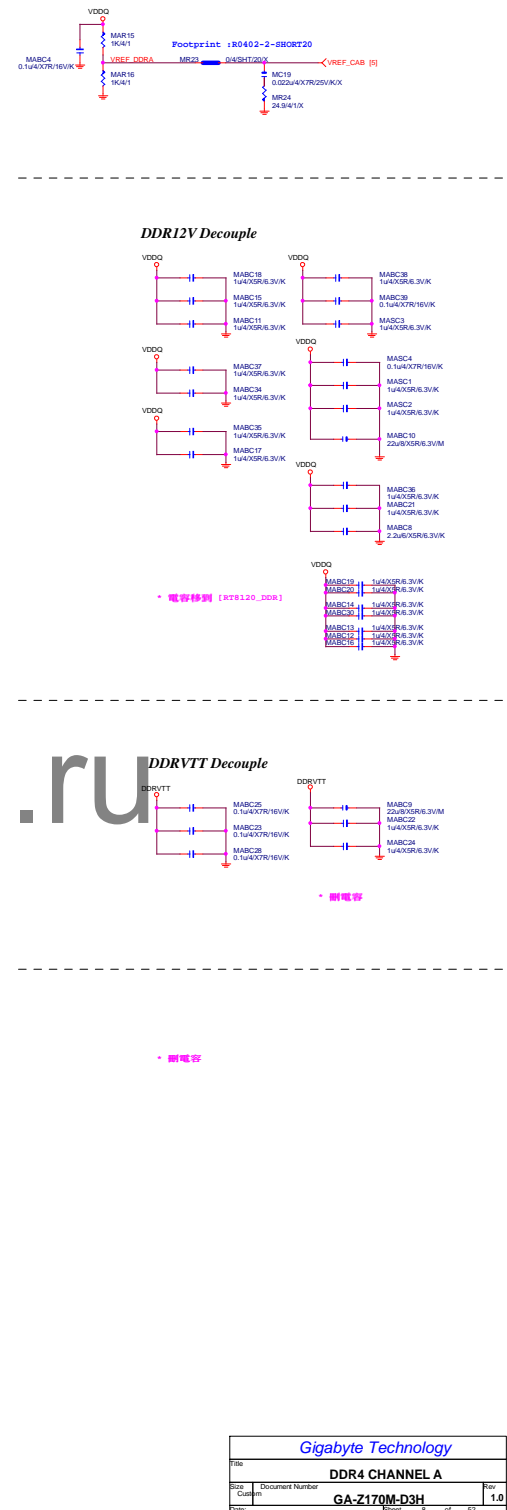
Gigabyte Technology

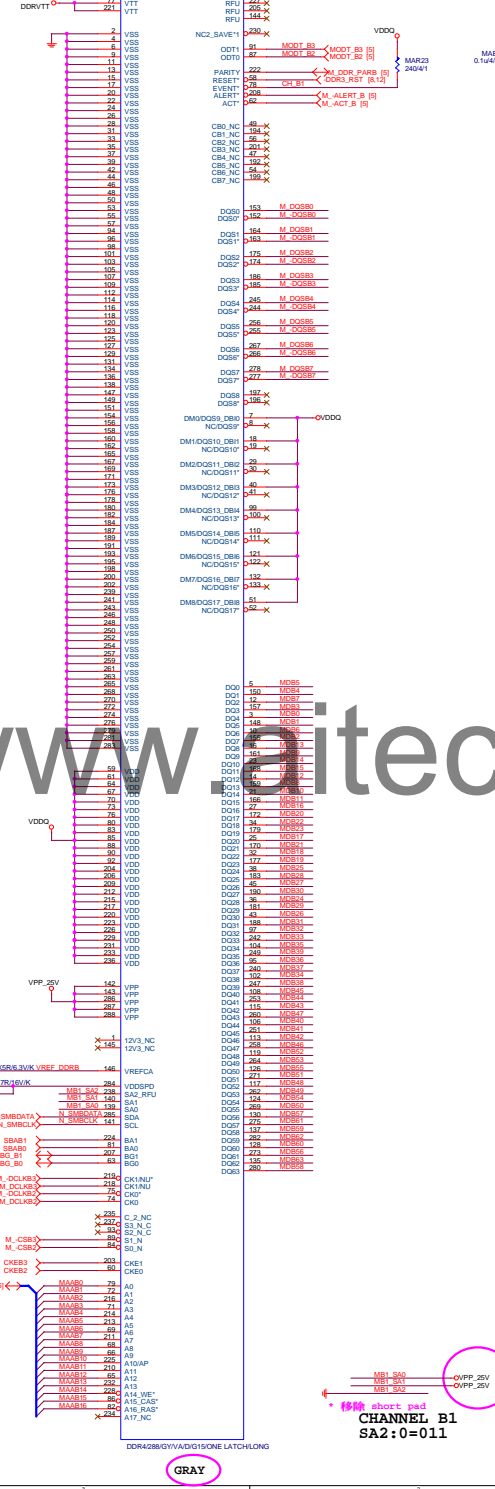
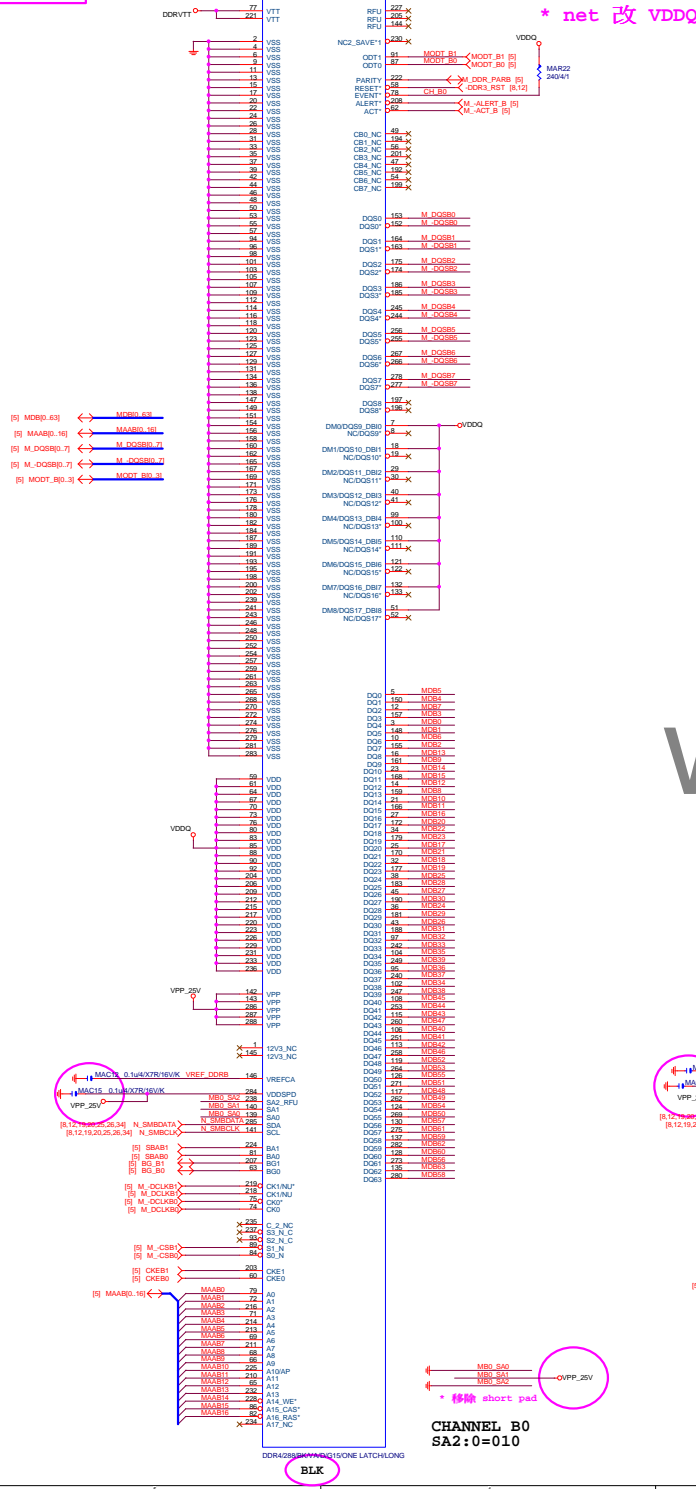
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CPU LGA1151-B			
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* 刪 Vcore 電容









Ans 3822568		Gigabyte Technology	
Title			
PCH DMI,USB,PCIE			
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Rev 0.7

20141107

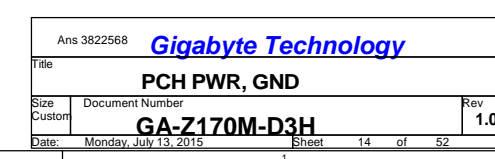
IO20:N/A

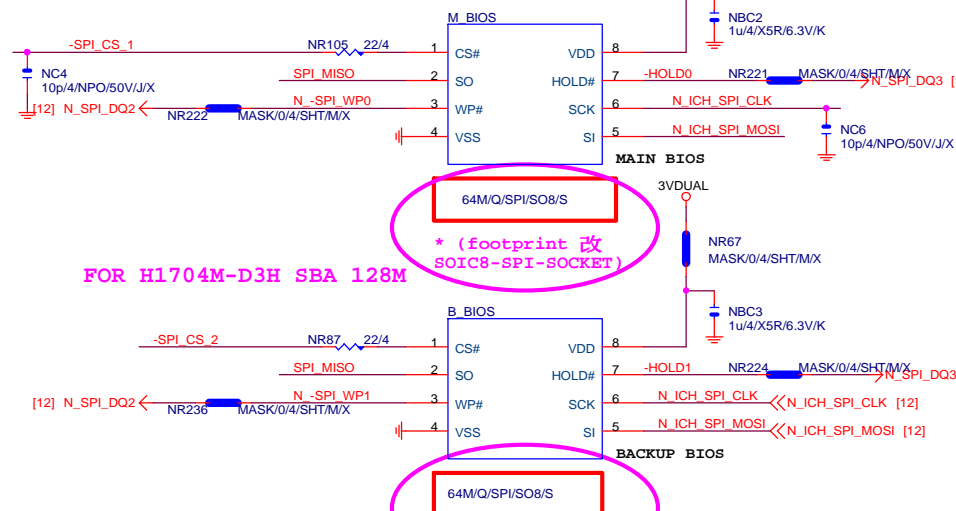
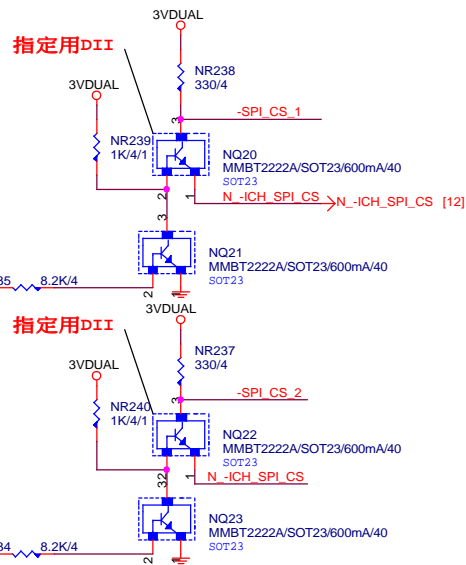
1: SATA (Standard)
0: SATA EXPRESS

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GA-Z170M-D3H

1.0



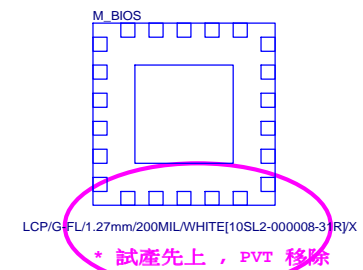


BOOT DEVICE	GNT0	GNT1
LPC	0	0
PCI	0	1
NAND	1	0
SPI	1	1

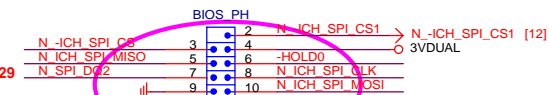
1 means floating
0 means PD 1K

FOR H1704M-D3H SBA 128M (footprint 改 IC8-BIOS)

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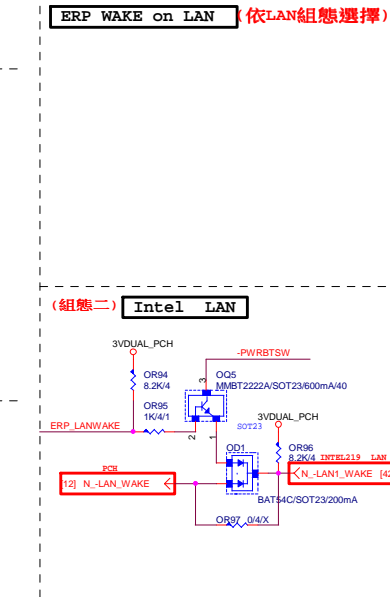
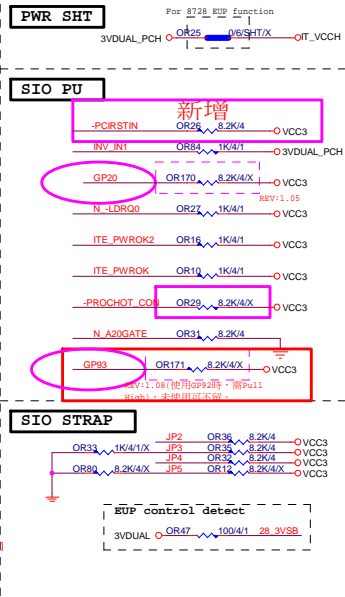
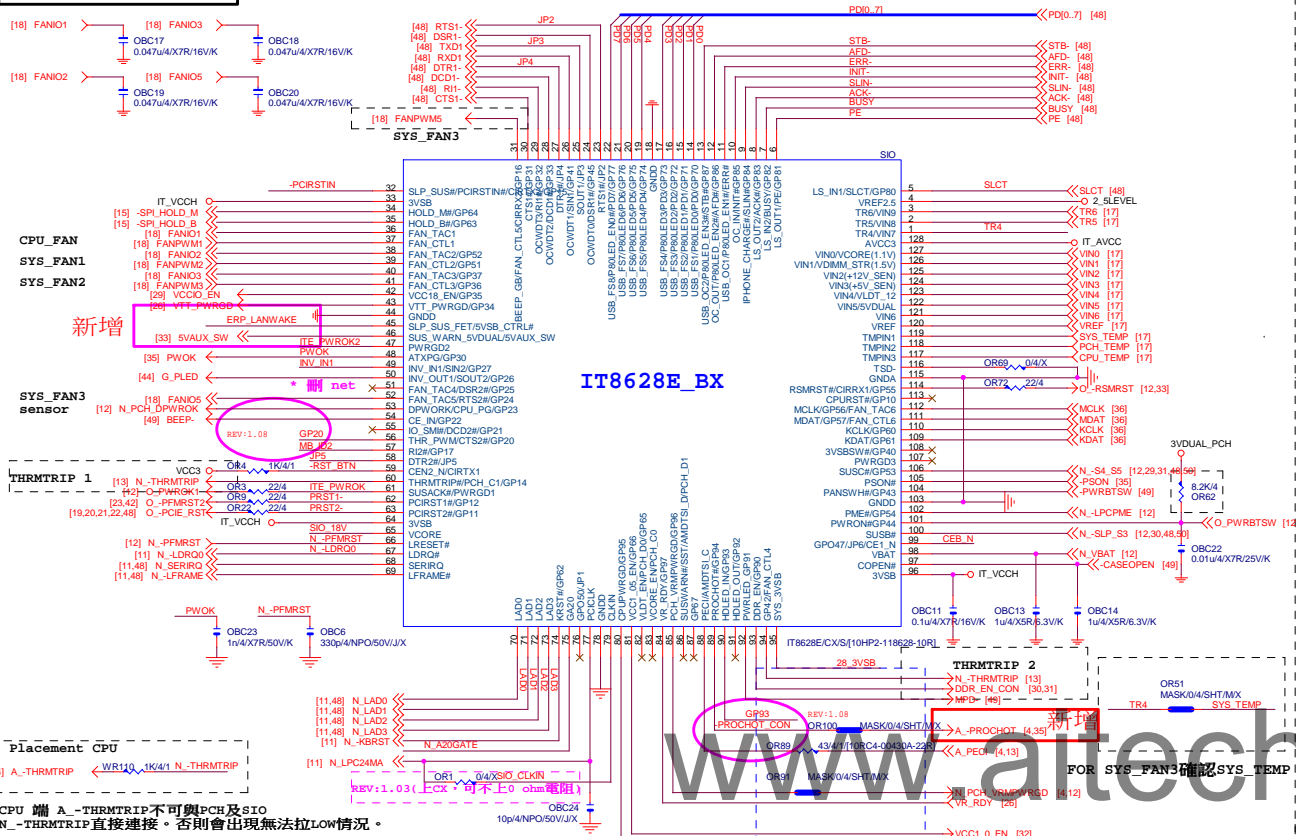


BIOS_PH MASK



★Update 2015-01.29

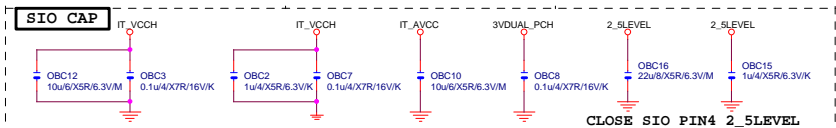
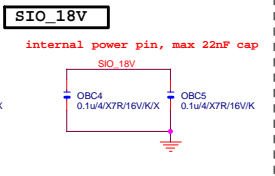
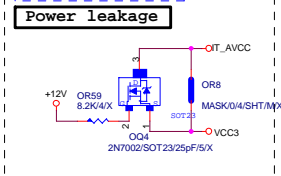
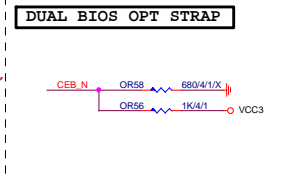
Footprint the same, confirmed by Graceing.
Use COM port pin header part.



JP2	1	Disable WDT
	0	Enable WDT to rest PWROK
JP3	1	Dual BIOS CS PIN Disable
	0	Dual BIOS CS PIN Enable
JP4	1	k8 power sequence function is Disable
	0	k8 power sequence function is Enable
JP5	1	anti-surge Disable
	0	anti-surge Enable
JP3	1 1	The default value of EC Index 63h6Bh/73h is 80h
	1 0	The default value of EC Index 63h6Bh/73h is FF
JP5	0 1	The default value of EC Index 63h6Bh/73h is 00h
	0 0	The default value of EC Index 63h6Bh/73h is 40h

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

IT62602E GPIO問題匯整	
PIN 50	GP26-第一次撥上POWER時 會拉 LO
PIN 90/91	DEFAULT為HIDLED 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 使用FANG FUNCTION 一樣，不然會互相干擾
PIN 22	PIN22，需高於3V，若低於 該部分COM PORT及LPT裝置 驅動器會異常動作。



VCC3

OR7

8.2K/4/X

OR15

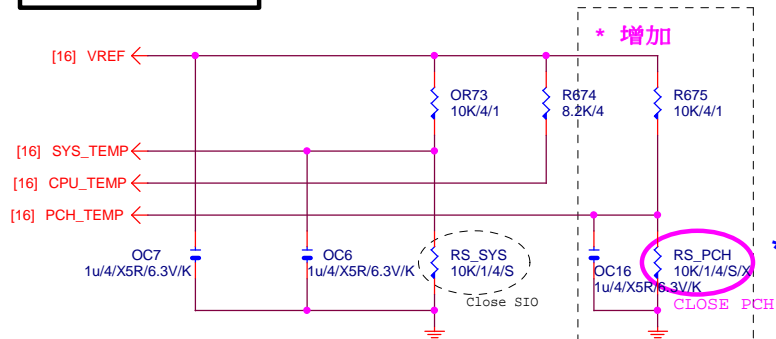
8.2K/4

MB_ID2

ERP Wake on LAN		
Single LAN	Realtek	組態一
	Atheros	
	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

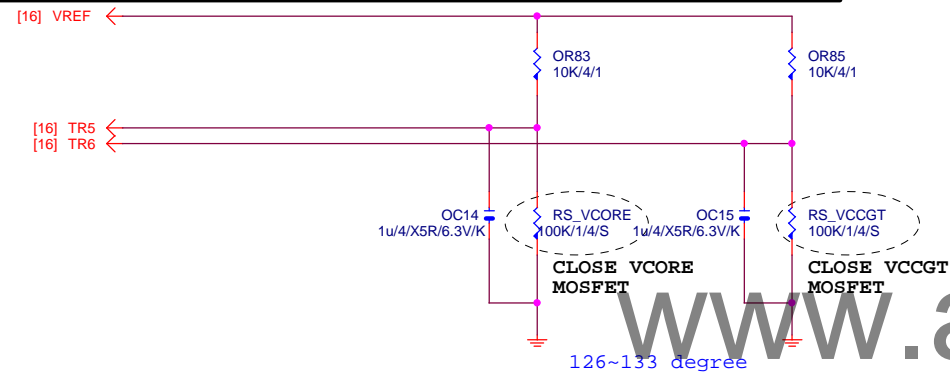
TEMP H/W MONITOR

REV 1.08



RS_VCORE ~ RS_VCCGT CLOSE CPU_VCORE & VCCGT MOSFET

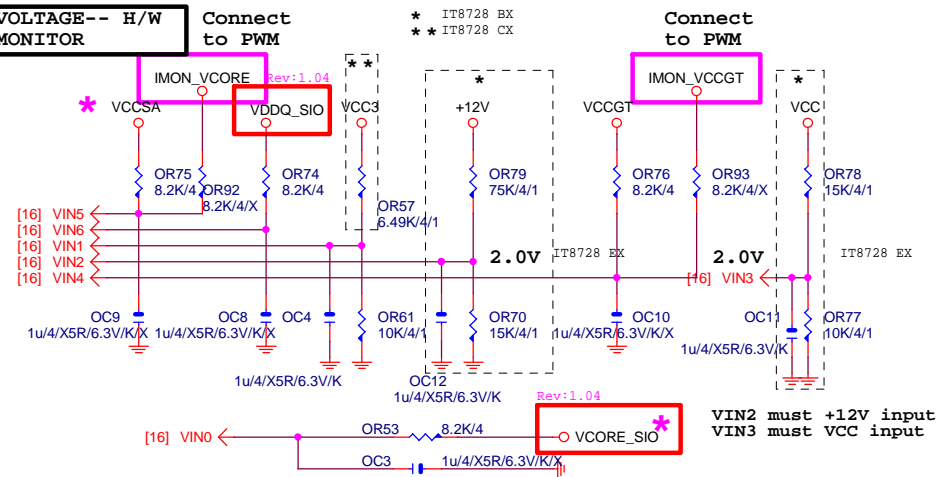
-PROCHOT:有mos heartsink不用prochot function



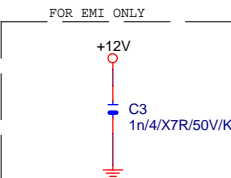
VOLTAGE-- H/W MONITOR

Connect to PWM

Connect to PWM



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

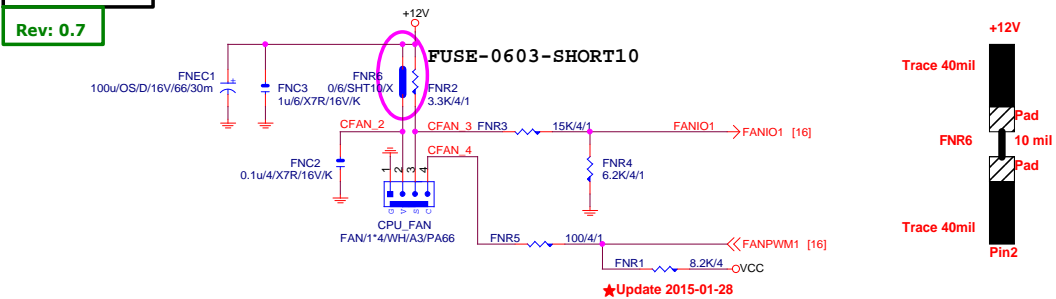
VIN2 must +12V input
VIN3 must VCC input

Gigabyte Technology

Title			HWM,KB/MS, FAN CTRL		
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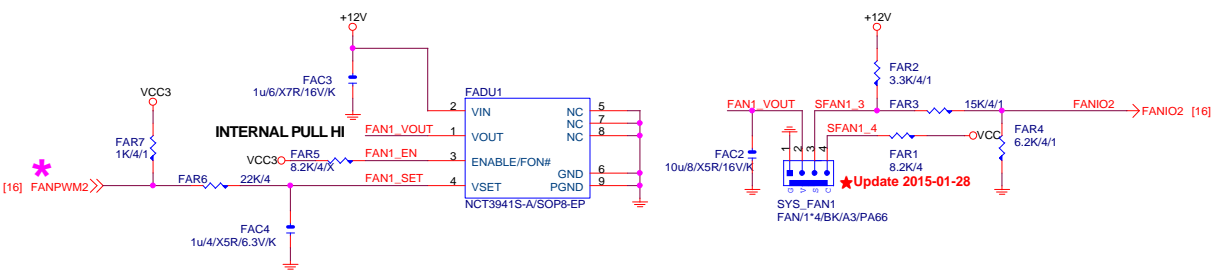
CPU SMART FAN

Rev: 0.7



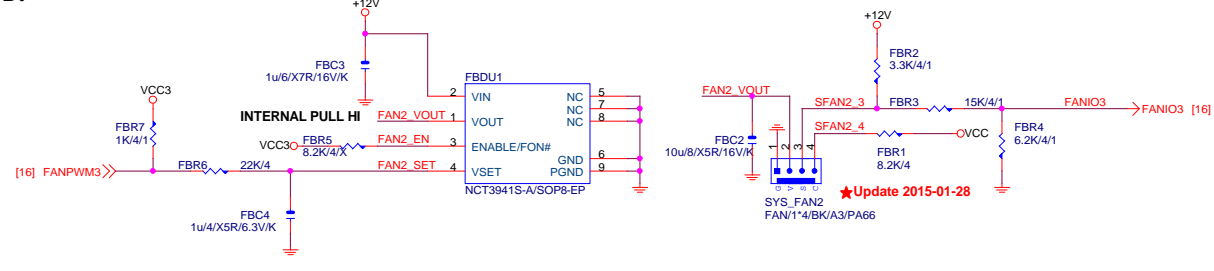
SYSTEM FAN1

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



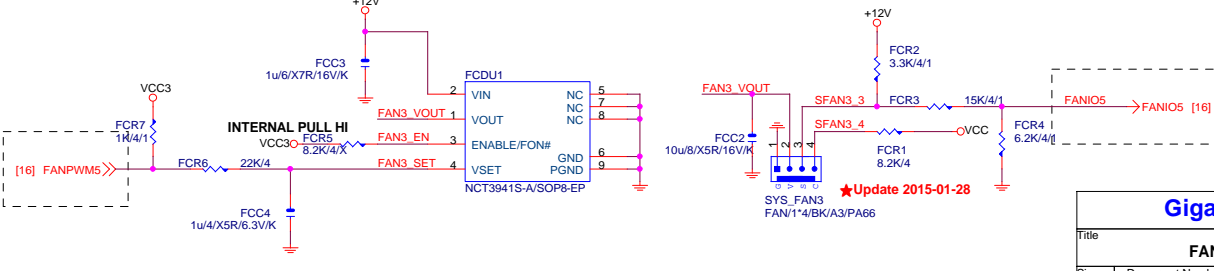
SYSTEM FAN2

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



SYSTEM FAN3

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



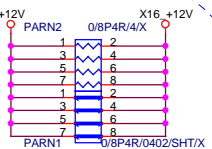
Gigabyte Technology

TitleFAN CTRL

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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	PAC21	0.22u4/X5R/6.3V/K	PA_EXP_TXP8 C
PA_EXP_TXN8	PAC20	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

[8,9,12,20,25,26,34] N_SMBCLK
[8,9,12,20,25,26,34] N_SMBDATA

[12,20,23,48] N_-PCIE_WAKE

[10] -PCIE16_PR

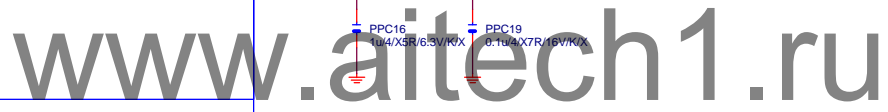
PCI-E/16X164P/GY/LONG/DOUBLE/HK*2

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Gigabyte Technology		
Title		
PCI EXPRESS * 16		
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PCIE*4

3GIO_*4



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PCIE X4			
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M.2 Lane4 from PCH port18

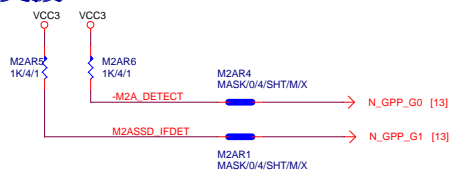
M.2 Lane3 from PCH port17

M.2 Lane2 from PCH port16

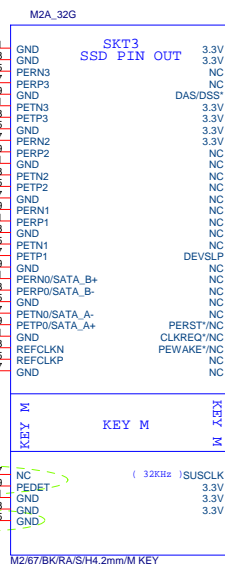
M.2 Lane2 from PCH port15

需與M2_-CLKREQ對應

支援SATA and M.2 function

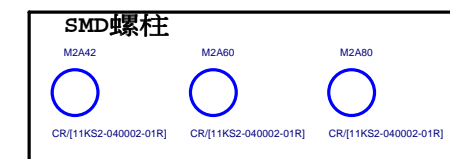
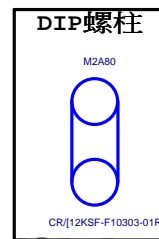
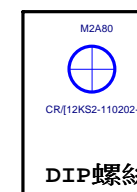
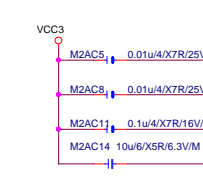
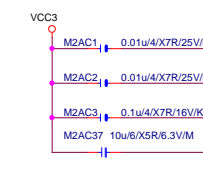
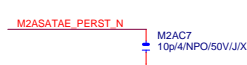
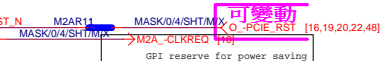
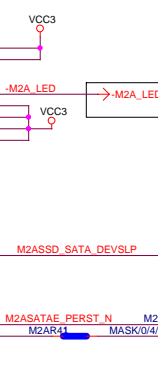
SATA : GND
PCIE : NC

M2插卡時為Low

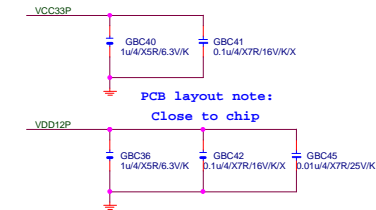
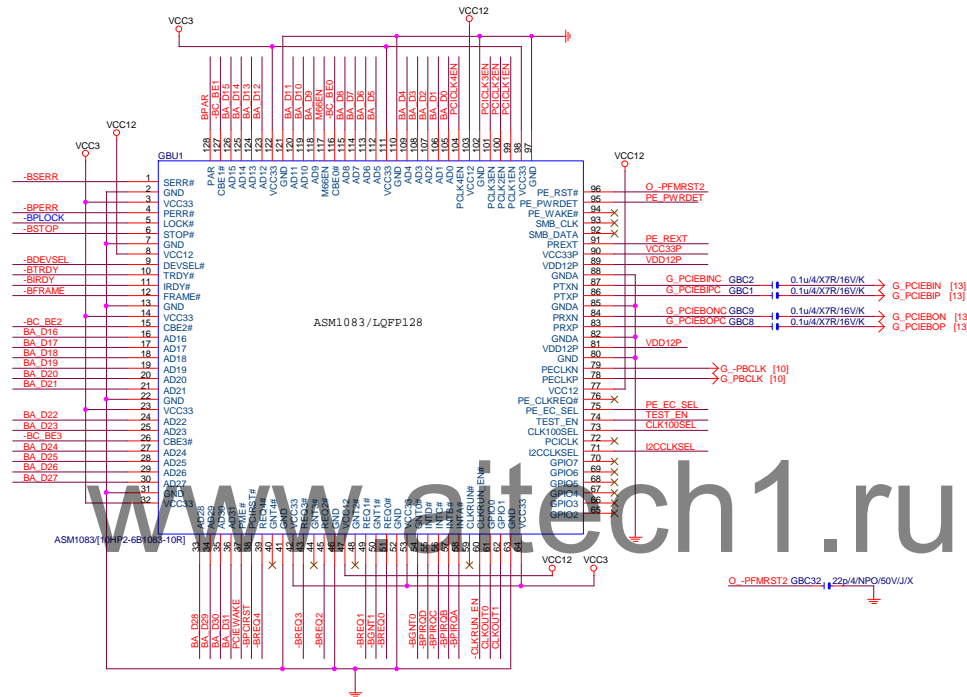
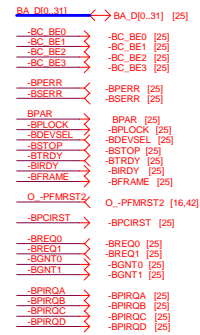
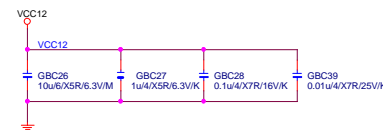
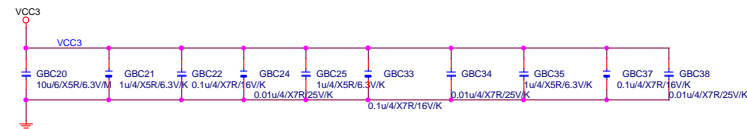


KEY M

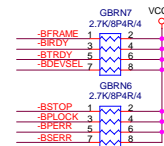
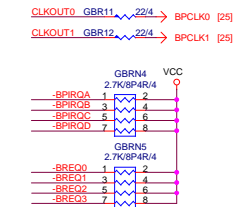
M2/67/BK/RA/S/H4.2mm/M KEY



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

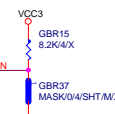
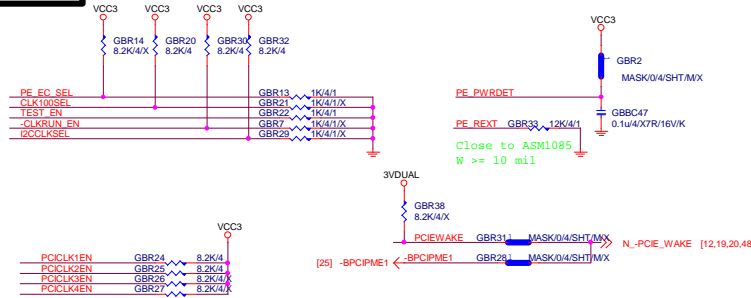
PE_EC_SEL-
 "H" for Express Card mode
 "L" for PCIe Riser Card
 mode

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

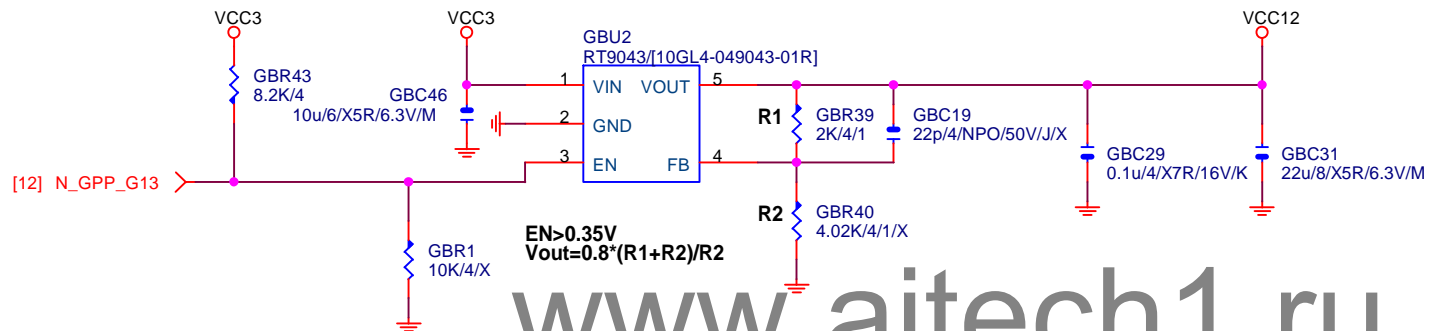
TEST_EN-
"H" for Test Mode Enable
"L" for Test Mode

```
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



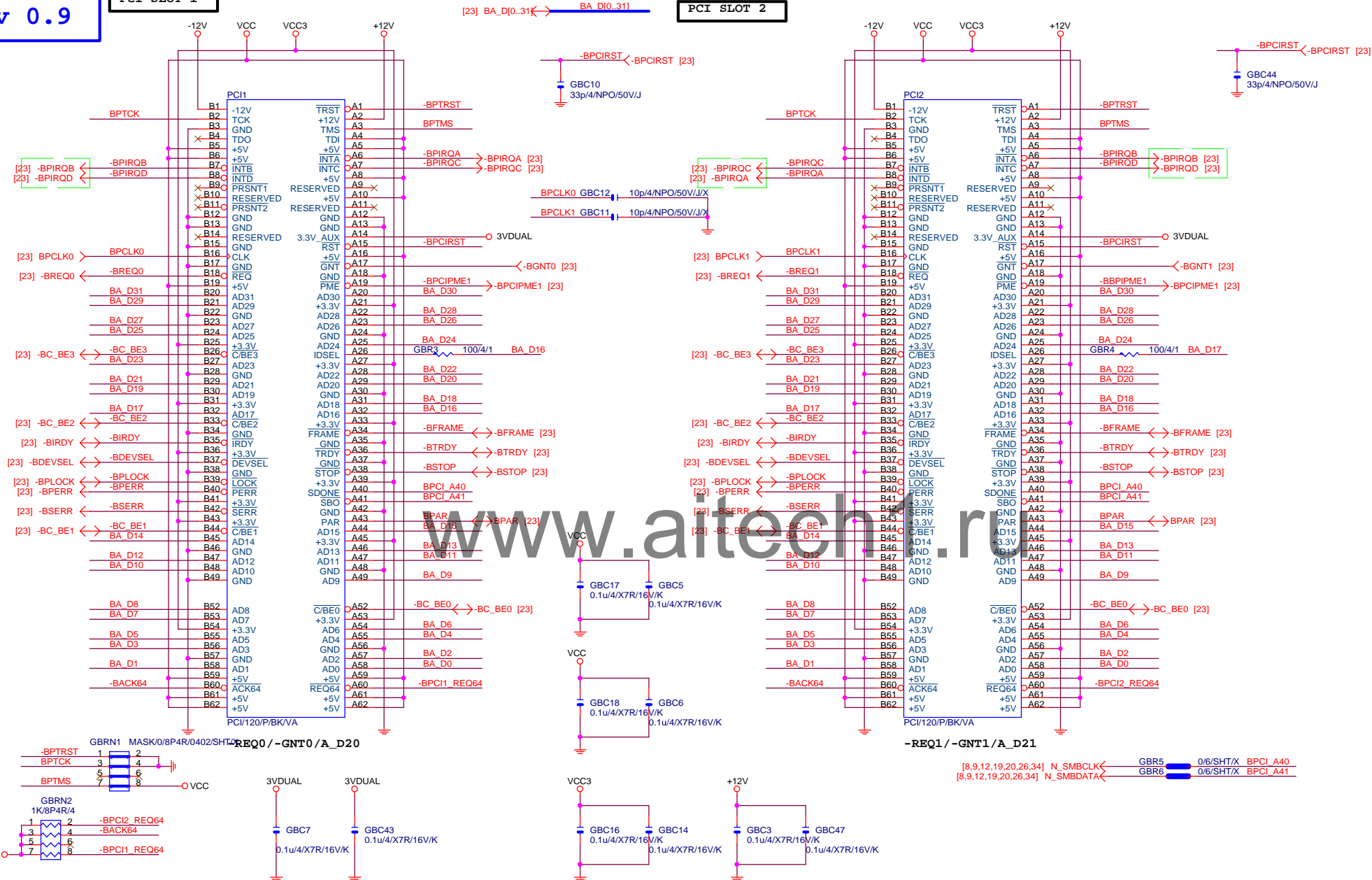
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Gigabyte Technology

Title		
ASM1085 POWER		
Size	Document Number	Rev
Custom	GA-Z170M-D3H	1.0
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PCI SLOT 1

PCI SLOT 2



Title	PCI SLOT 1&2
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Size	Document Number
Custom	

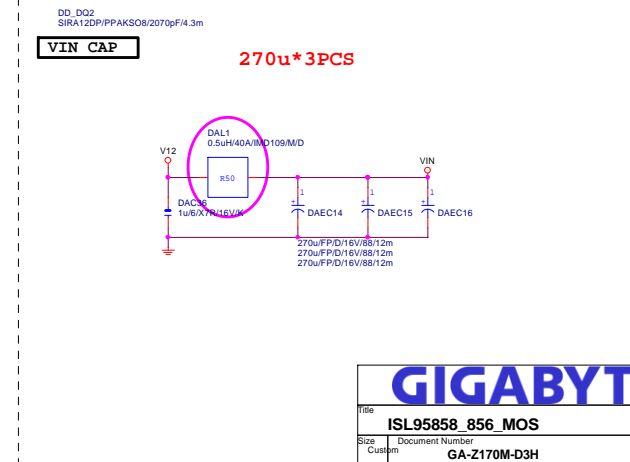
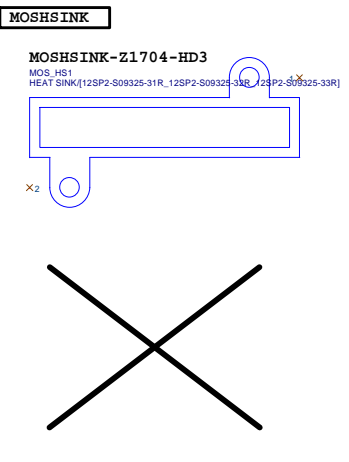
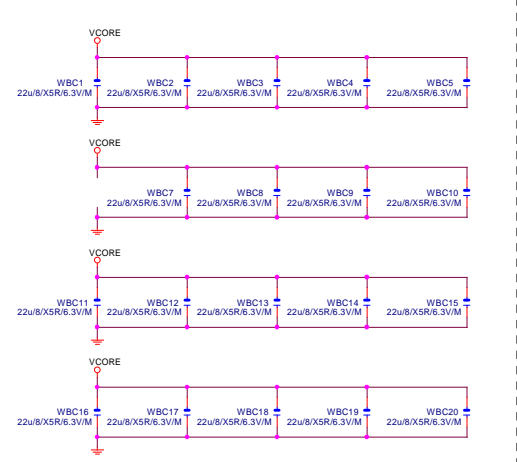
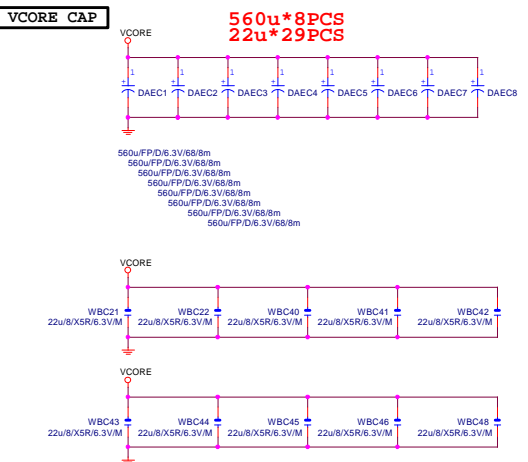
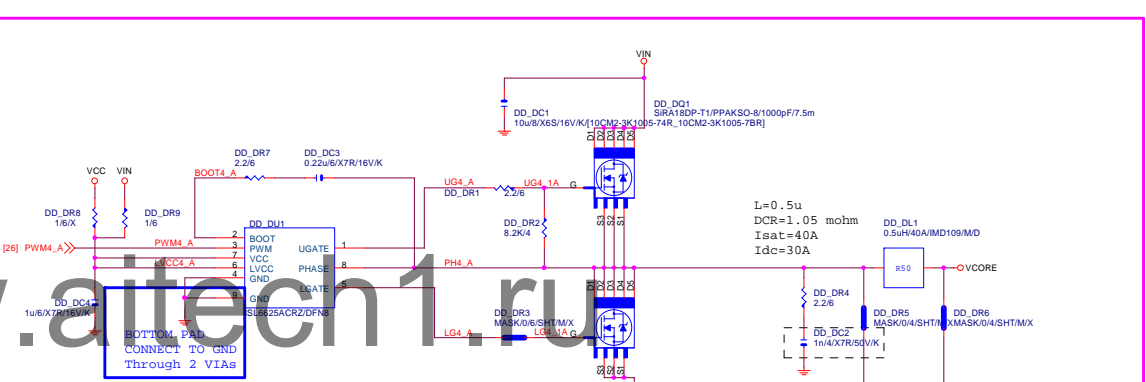
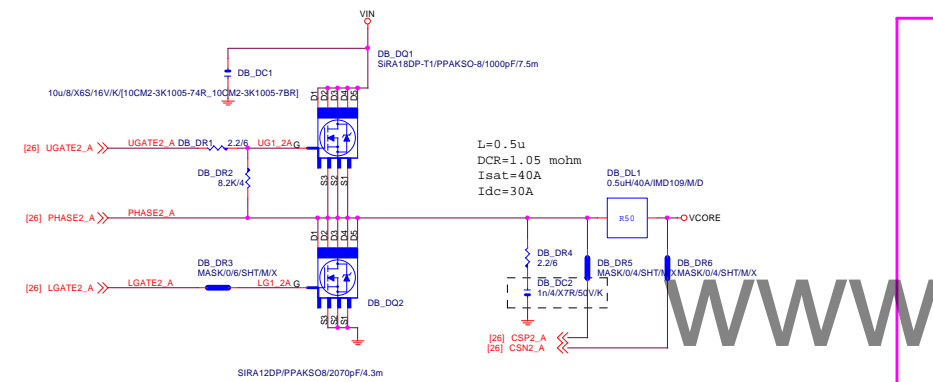
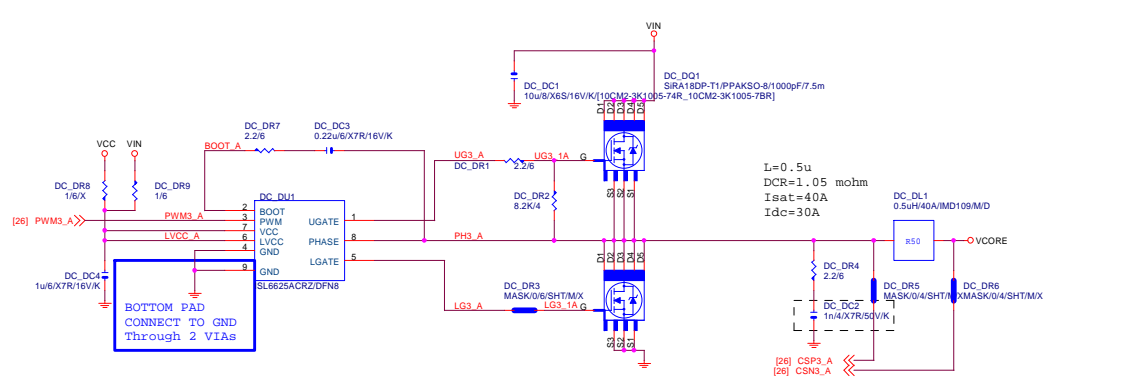
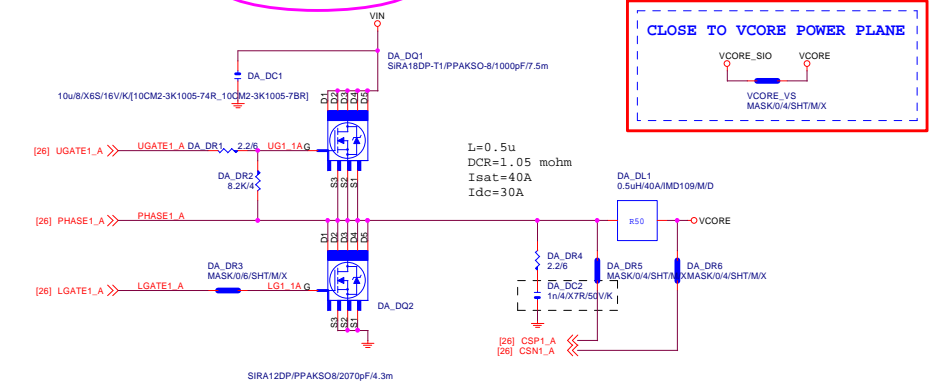
GA-Z170M-D3H

Rev	1.0
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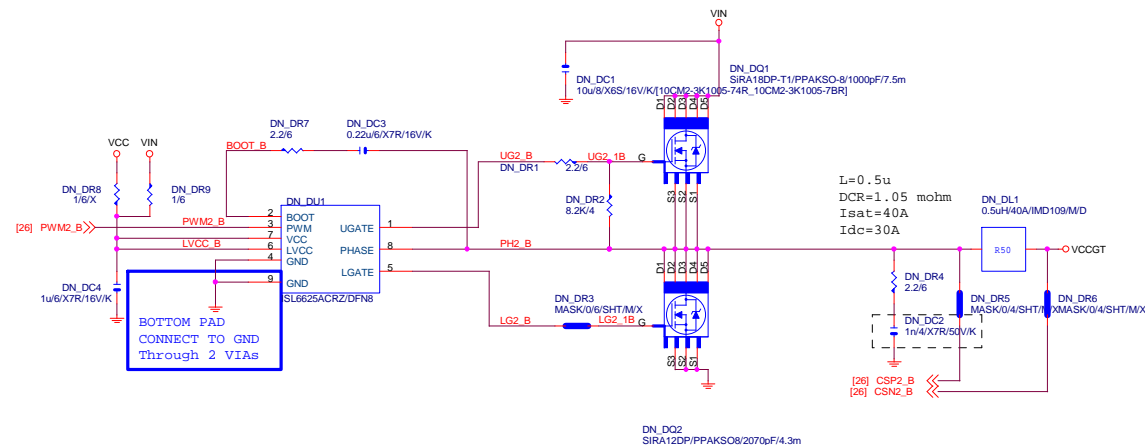
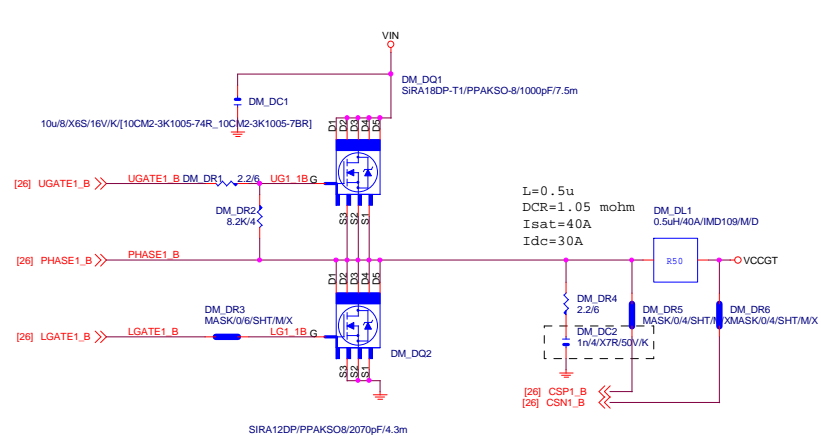
Date: Monday, July 13, 2015

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VCORE REV:1.0 (IRON CHOKE)

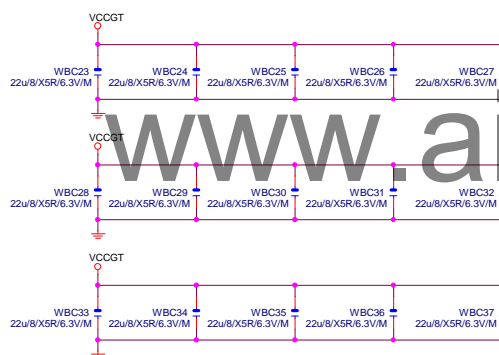
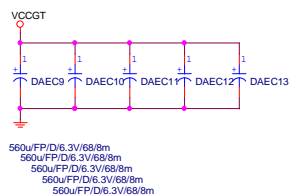


REV:1.0 (IRON CHOKE)



VCCGT CAP

560u*5PCS
22u*15PCS



22u8/X5R/6.3V/M 22u8/X5R/6.3V/M 22u8/X5R/6.3V/M 22u8/X5R/6.3V/M

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Title
ISL95858_MOS

Size	Document Number
Custom	GA-Z170M-D3H

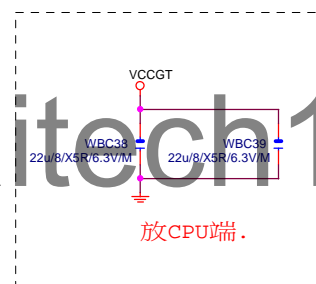
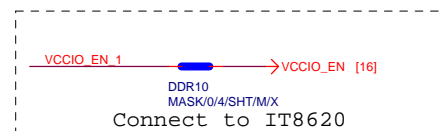
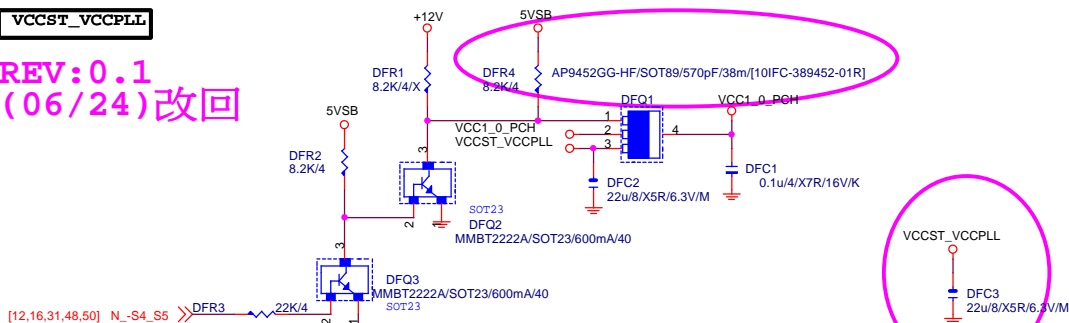
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Rev	1.0
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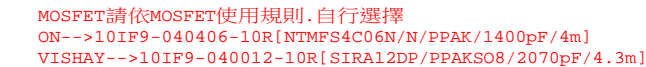
REV:0.4



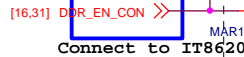
REV:0.1
(06/24)改回



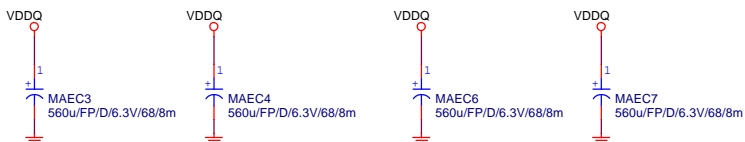
REV:0.87 (IRON CHOKE)



For power sequence require



560u*4PCS

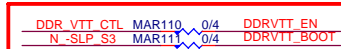


* 大電容 x4

* 大電容 x0



—○ DDRVTT MAU1上NCT3103S時上件



GIGABYTE™

Title			
RT8120_DDR POWER			
Size	Document Number	Rev	
Custom	GA-Z170M-D3H	1.0	
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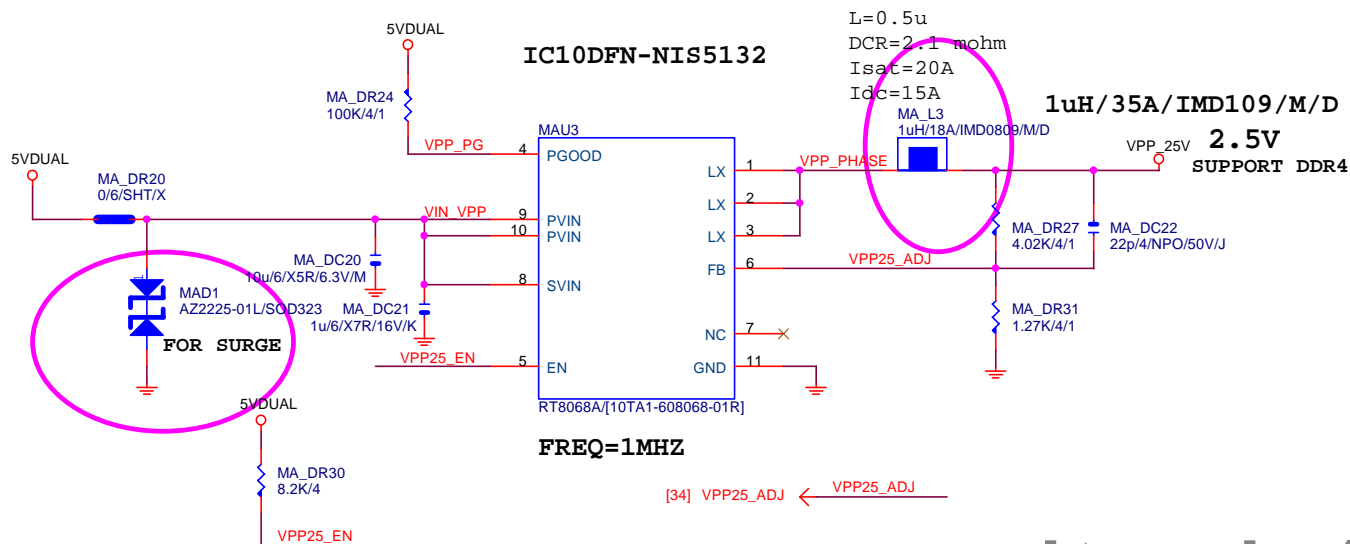
VPP_25V

REV:0.85 (IRON CHOKE)

2014/12/17 REV:0.6

1. RT8068A Footprint modify
IC10DFN-NIS5132

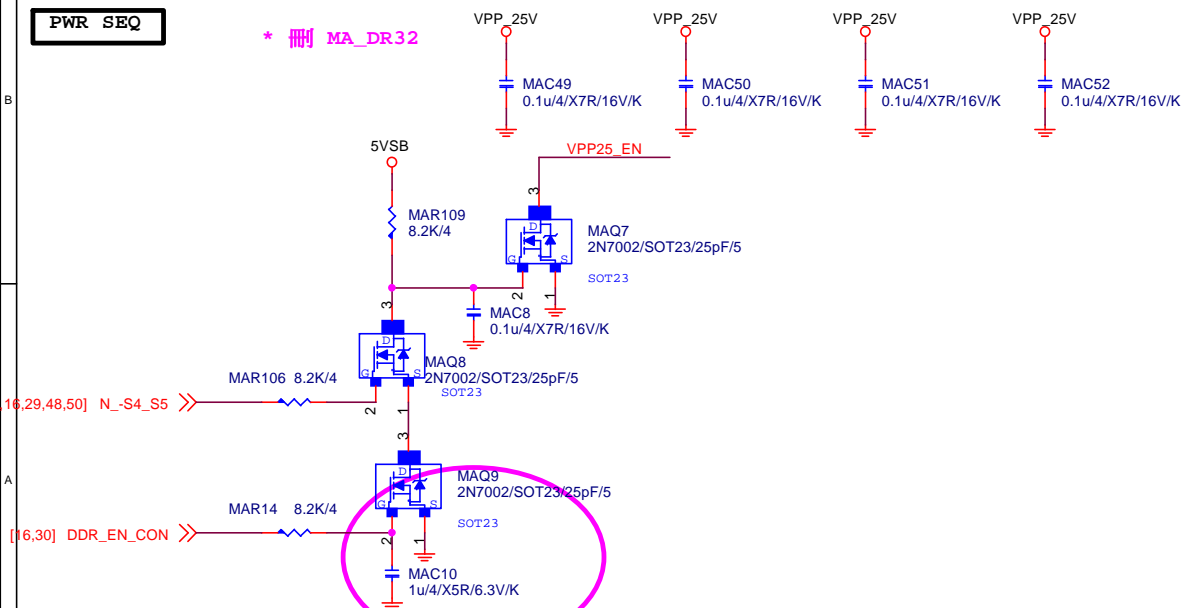
CHOKE與CAP料號可變



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PWR_SEQ

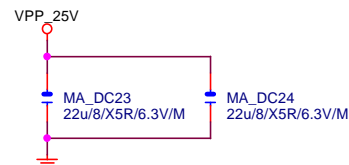
* 刪 MA_DR32



VPP_CAP

22u*1PCS

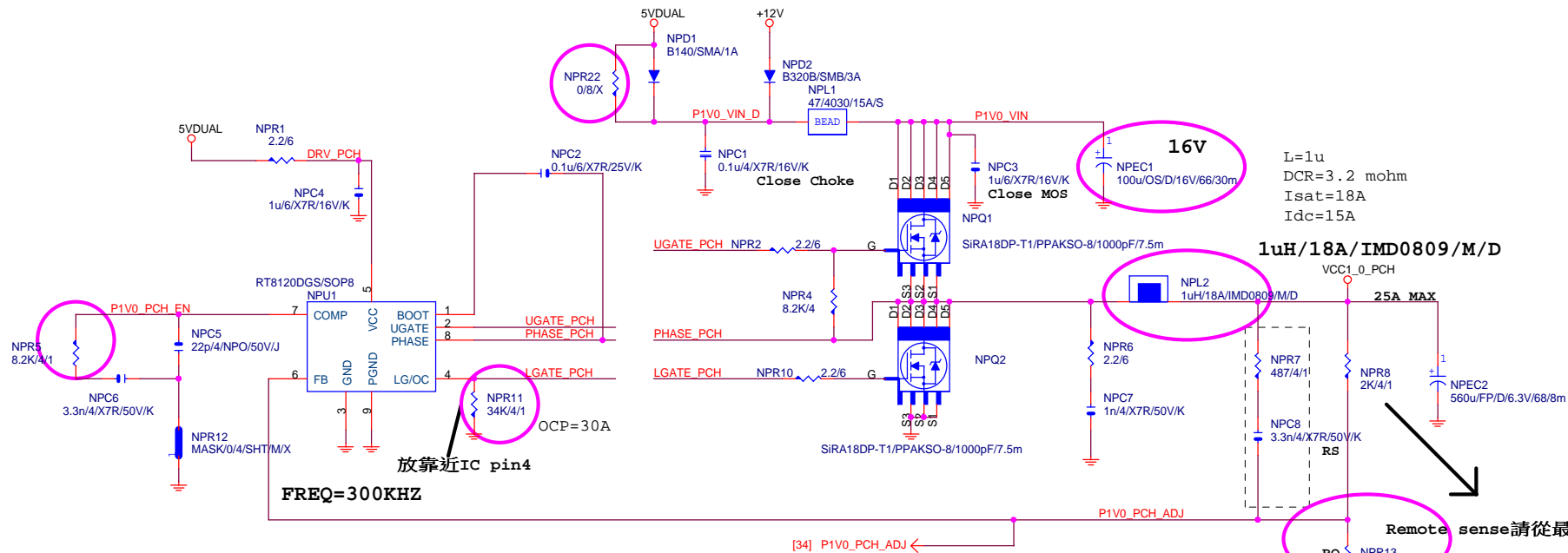
* 大電容 x0



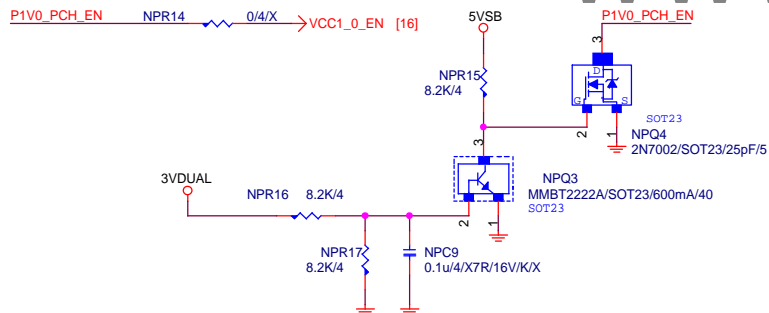
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Title
RT8068A_VPP25 POWERSize
Custom
Document Number
GA-Z170M-D3HRev
1.0

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PWR_SEQ



請放置CHOKE—出來的地方

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RT8120_PCH POWER			
Size	Document Number	Rev	
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[16] 5VAUX_SW >>

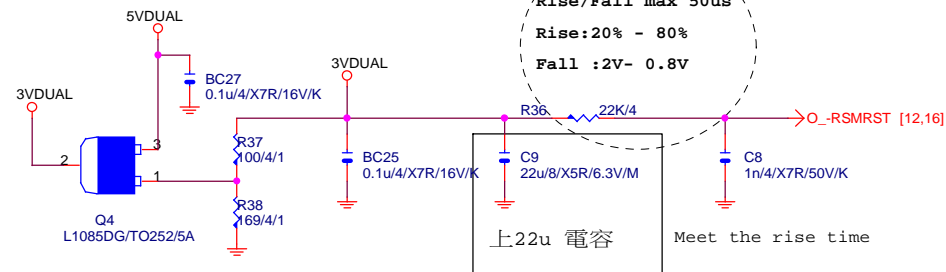


5VDUAL

```

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

```

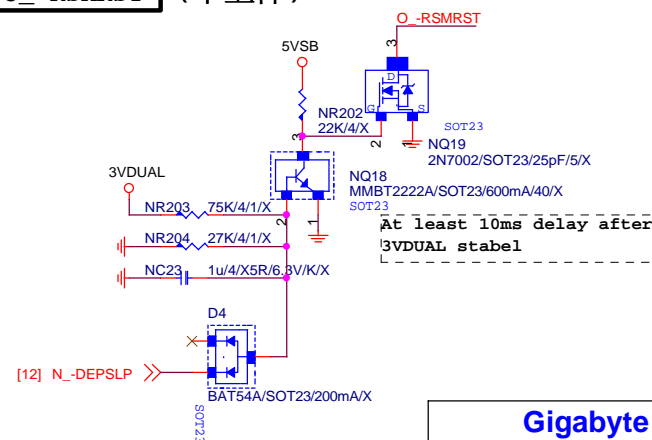


Meet the rise time

3VDUAL_PCH



0-RSMRST (不上件)

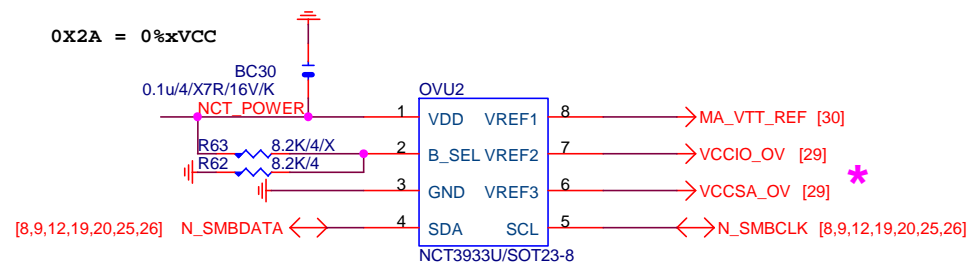
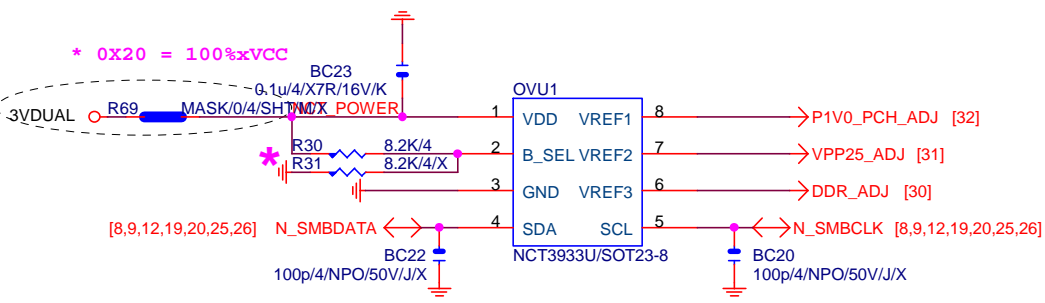


```
At least 10ms delay after
3VDUAL stabel
```

Gigabyte Technology

Title			
DISCRETE POWER			
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OVER VOLTAGE



0X22 = 75%xVCC

* 删除 OVU3

NCT3933	0X2A	0X20	0X22
VREF1	DDRVT	VREF_DDRA_DQ	PCH Core
VREF2	VREF_DDRA_CA	N/A	VCCL_5_PCH
VREF3	VREF_DDRA_CA	VREF_DDRB_DQ	SMREF

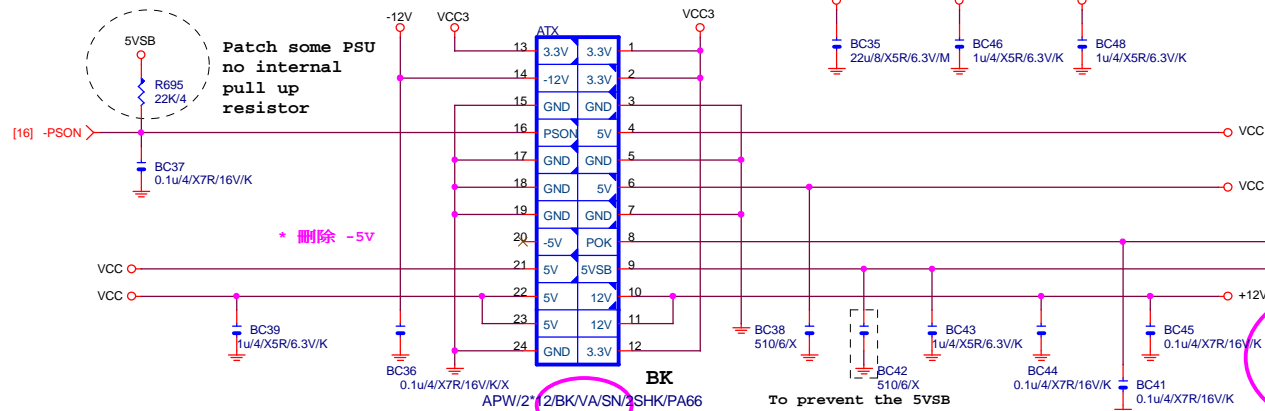
Gigabyte Technology

Title: CPU CORE VR-2

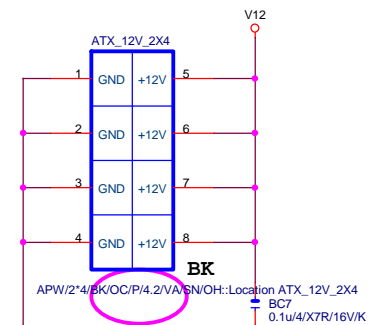
Size: Custom Document Number: GA-Z170M-D3H Rev: 1.0

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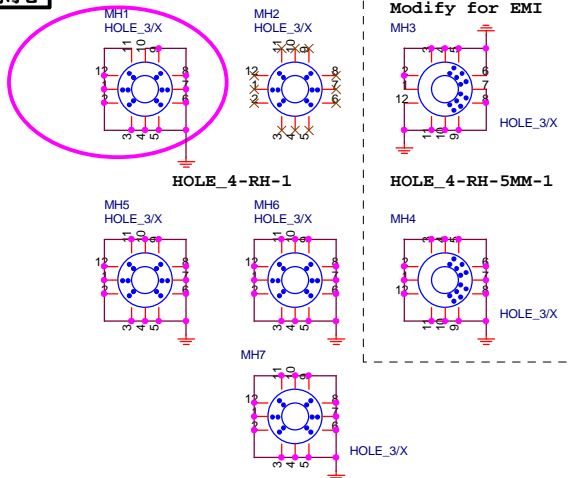
ATXX24 POWER CONNECTOR



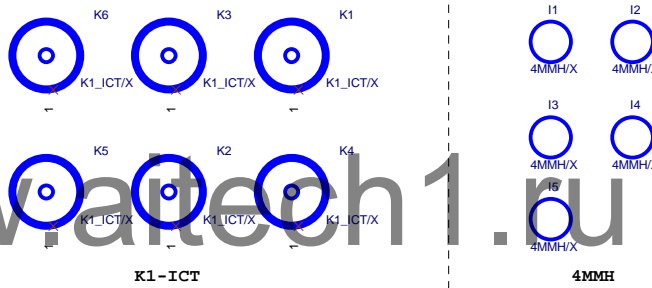
ATXX4 POWER CONNECTOR



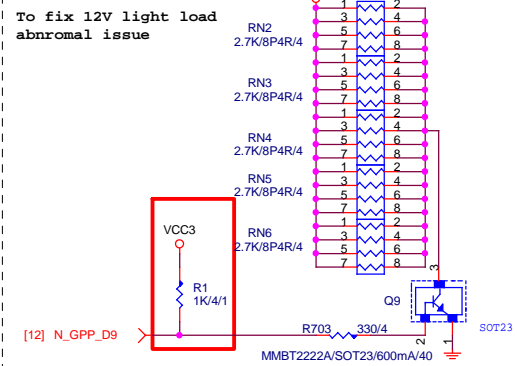
螺絲孔



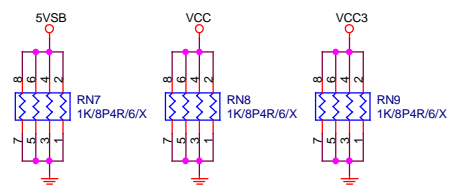
固定孔/光學點



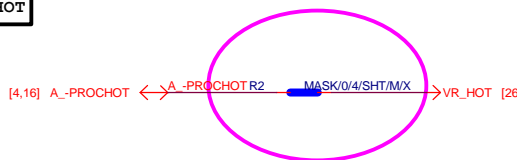
+12V DUMMY LOAD



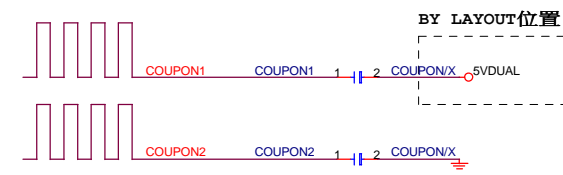
DUMMY LOAD



-PROHOT

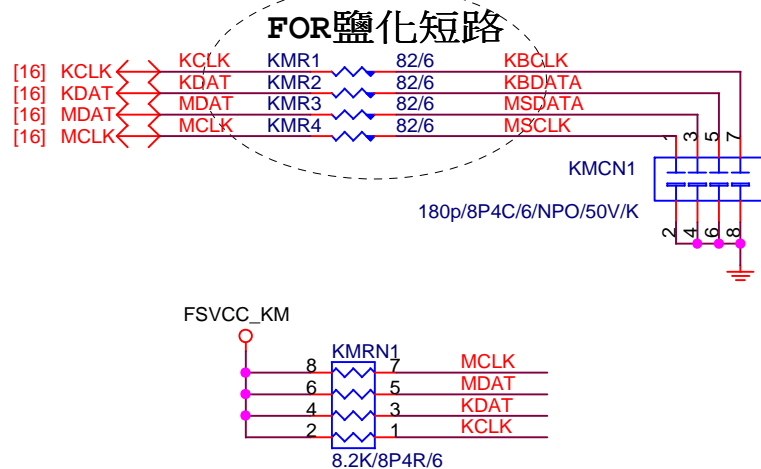
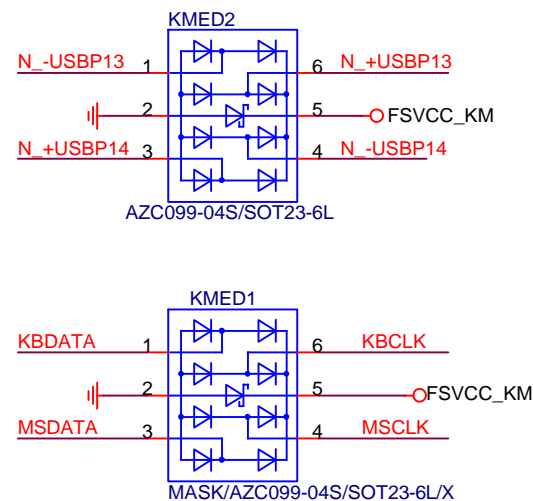
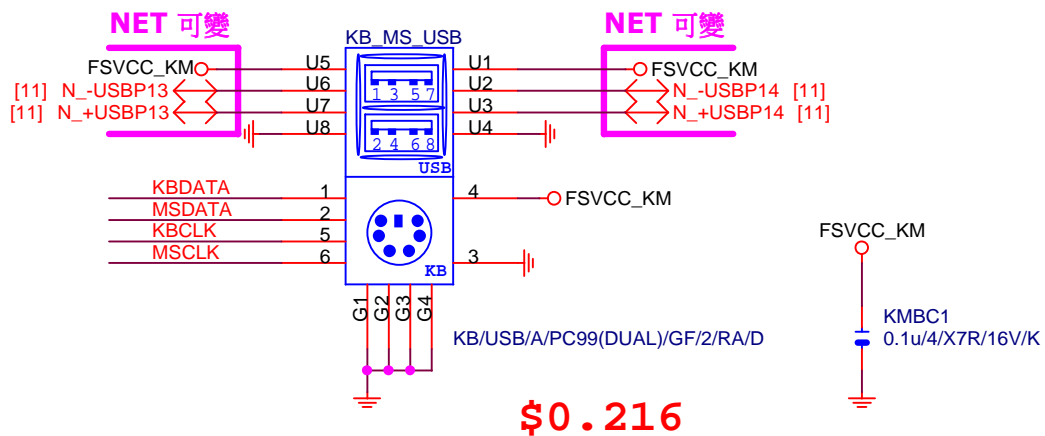


COUPON

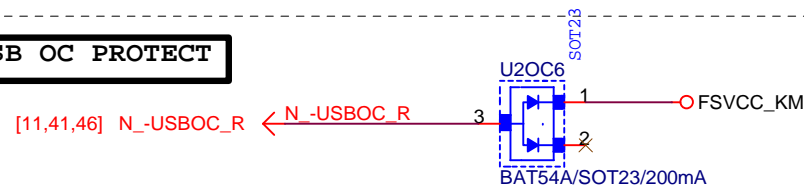
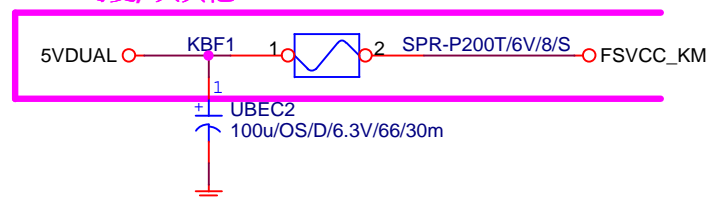


Gigabyte Technology

Title		
ATX POWER CONNECTOR		
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NET 可變, 與其他USB SHARE



Gigabyte Technology

Title

KB_MS_USB

Size
A

Document Number

GA-Z170M-D3H

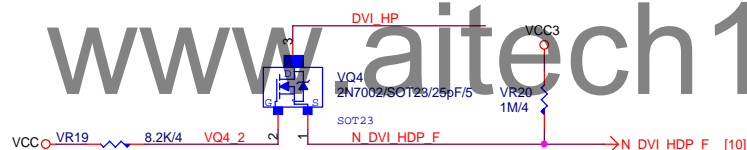
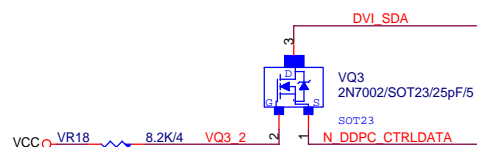
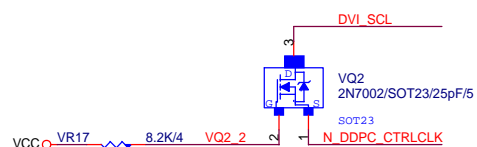
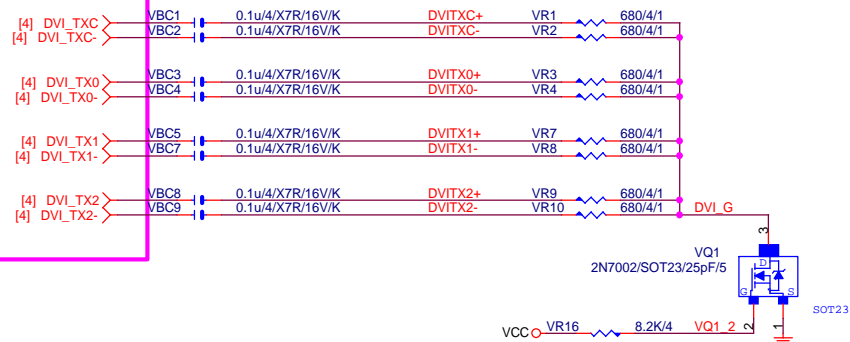
Rev
1.0

Date: Monday, July 13, 2015

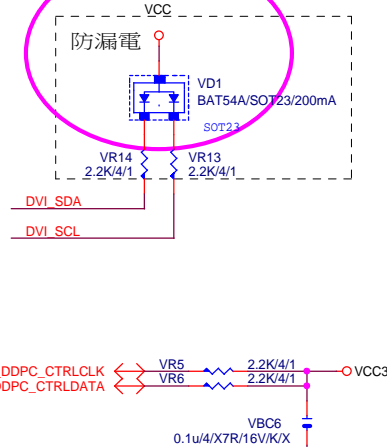
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Rev: 0.7

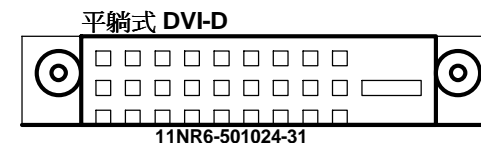
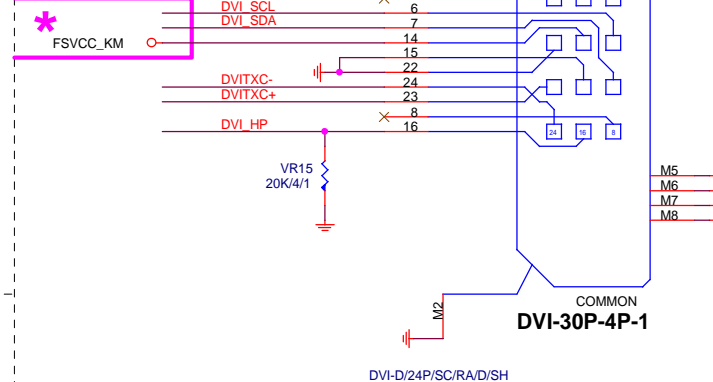
NET 可變



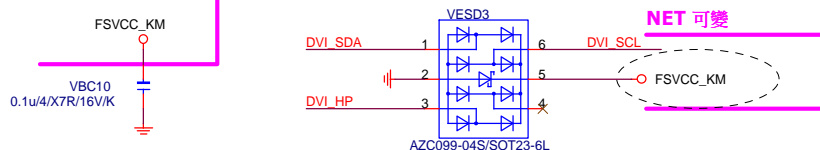
R&D技術通報 162



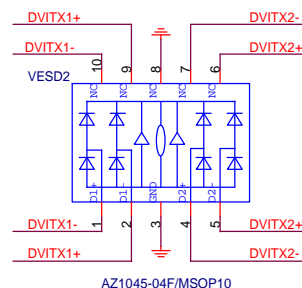
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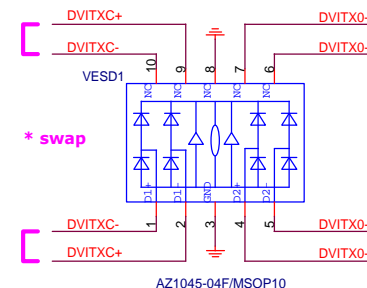
NET 可變



Close to connector



Close to connector



Close to connector

Gigabyte Technology

Title			
DVI			
Size Custom	Document Number	GA-Z170M-D3H	Rev 1.0
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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]

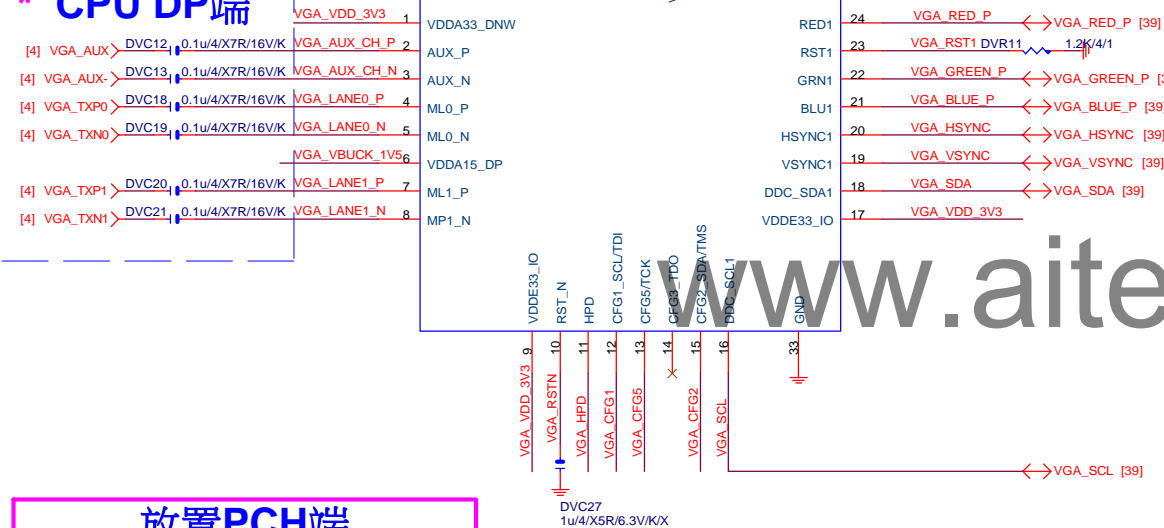
2. 删除:

DVX1 [25M/16p/30ppm/49US/20/D]

DVC10 [20p/4/NPO/50V/J]

DVR9 [8.2K/4]

* CPU DP端

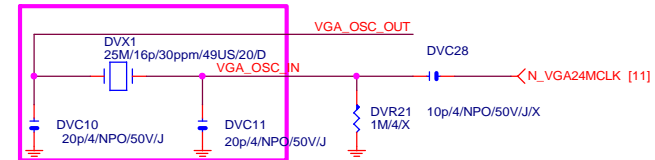


放置PCH端



25M Crystal

FROM PCH 24MHZ ISSUE

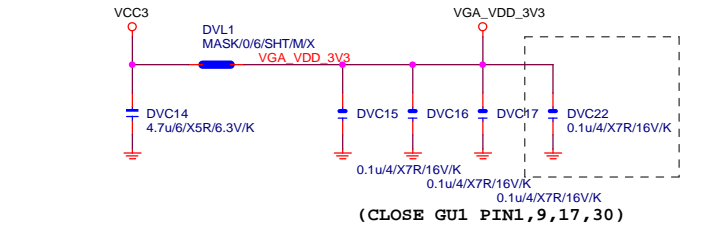


CFG5

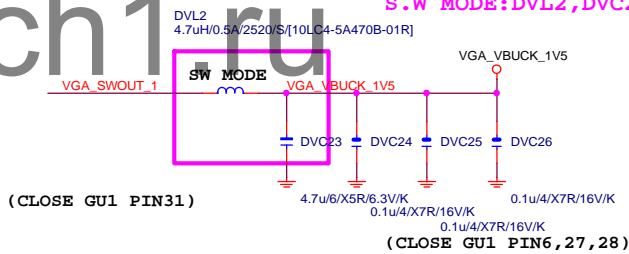
For Crystal Less



ADAPTER POWER

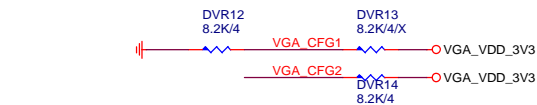


LDO MODE: DVL2, DVC23-->X
S.W MODE: DVL2, DVC23-->O



CFG1&2

Non-Compliant



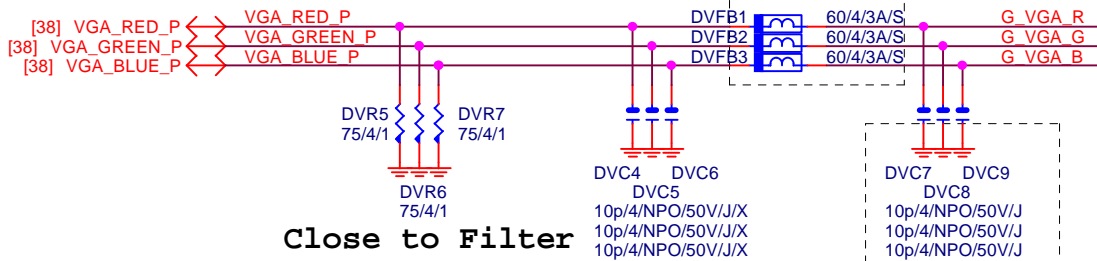
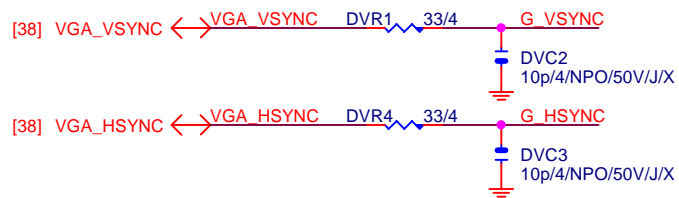
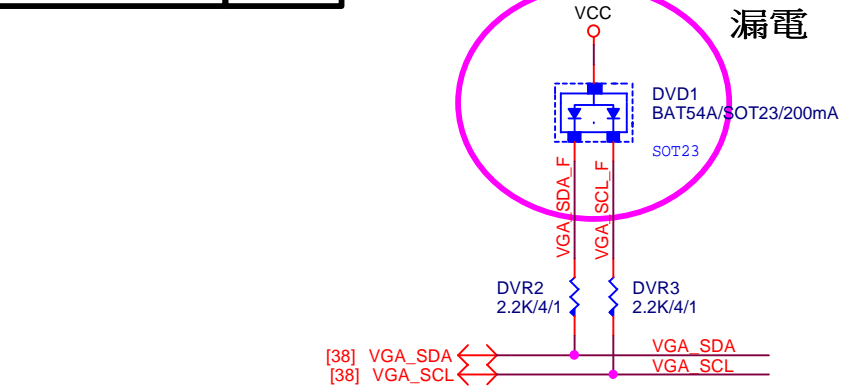
HPD

PCH端 *



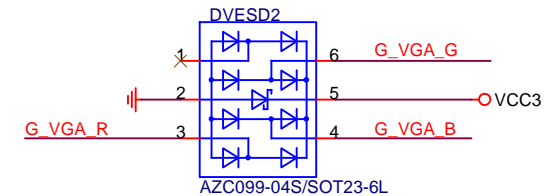
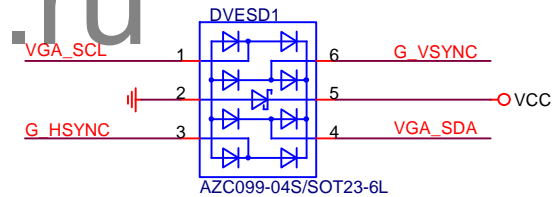
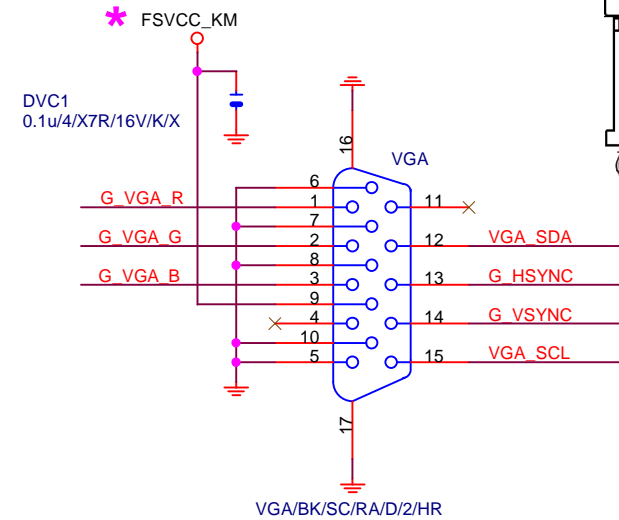
Gigabyte Technology
NXP-PTN3356

Title		Rev	1.0
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Custom			
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Close to Filter

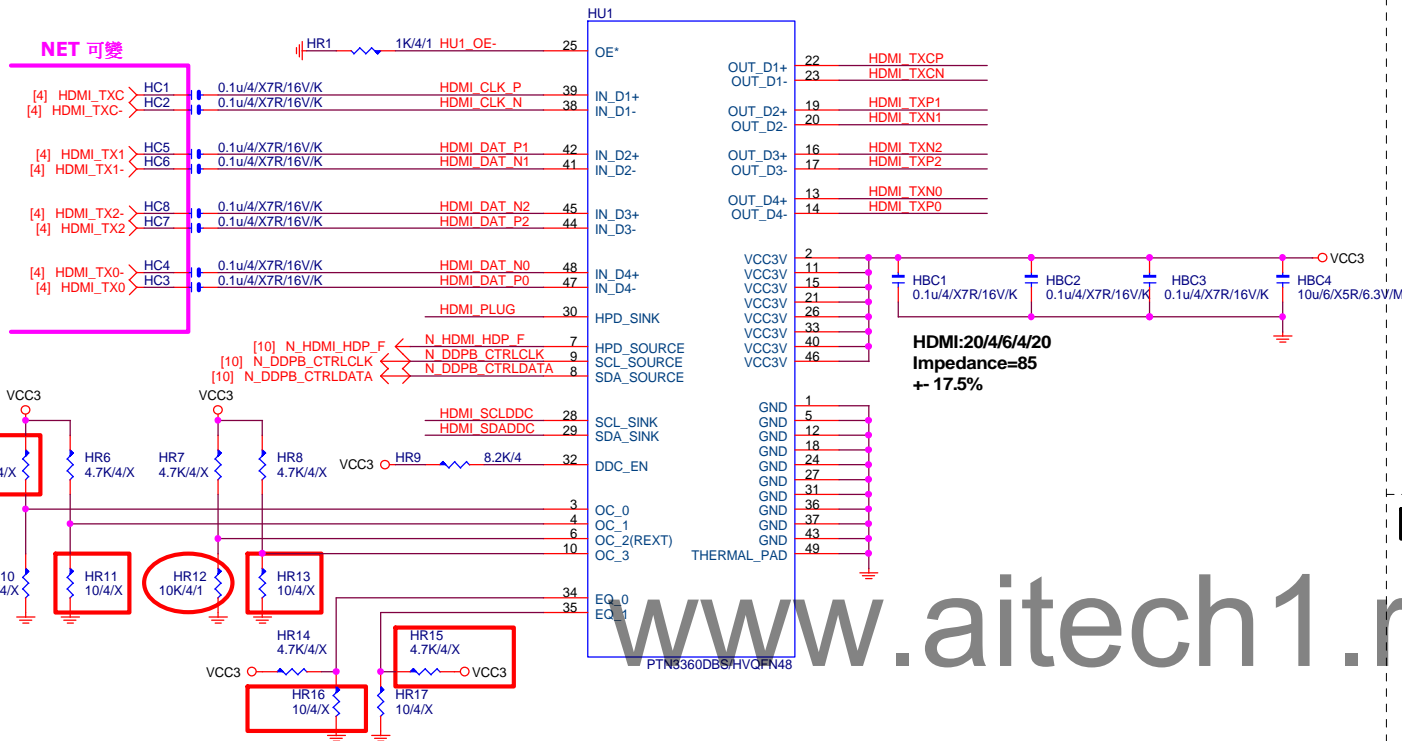
FOR EMI



Gigabyte Technology
NXP-PTN3356

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

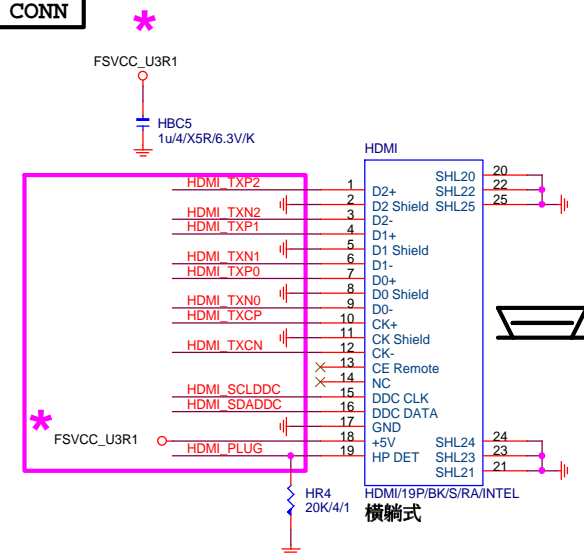
【技術通報R&D技術通報150】

HDMI eye diagram1.4版(deep color)會fail

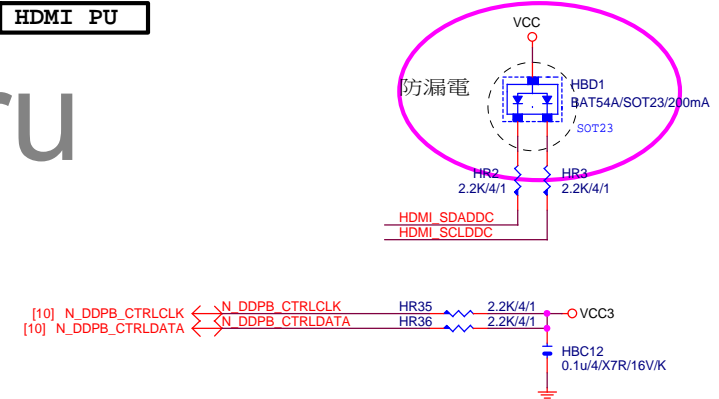
原因: 因目前的HDMI訊號過長,造成RISING TIME過慢,而會壓到eye diagram

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

HDMI CONN



HDMI PU

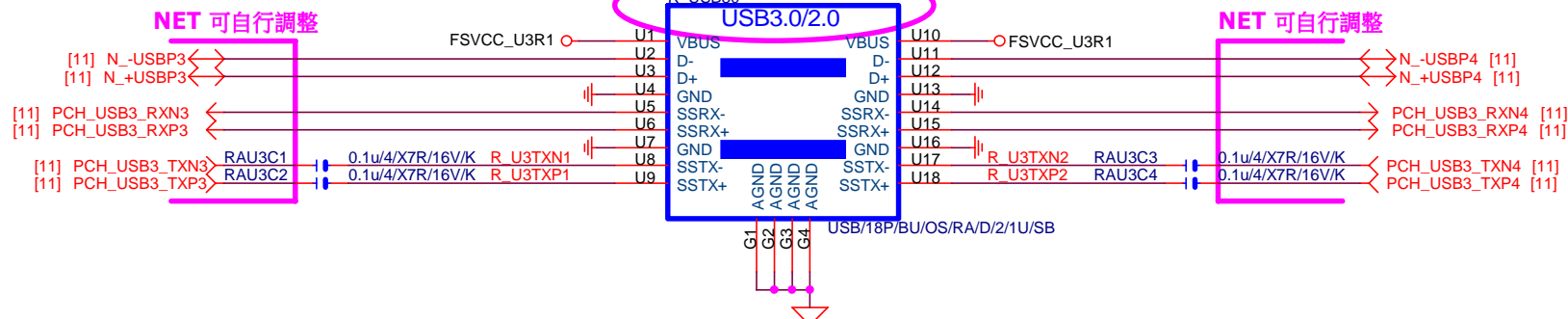


Gigabyte Technology

Title				HDMI
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Custom				1.0
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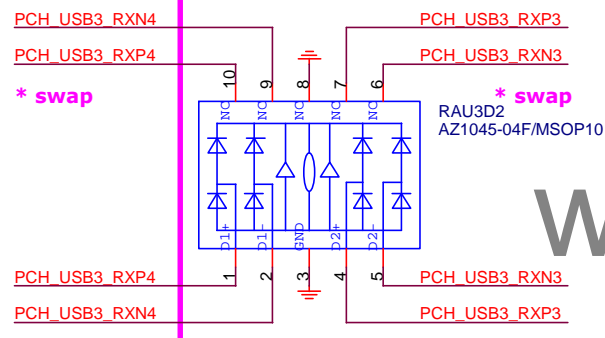
Rev: 0.7

ESD 可自行SWAP PIN ,CONN端 NET 名稱 不可

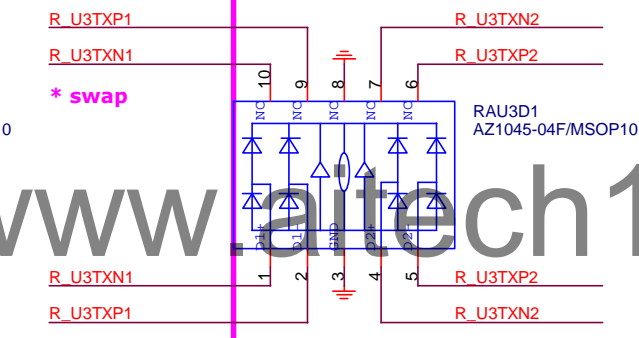


ESD

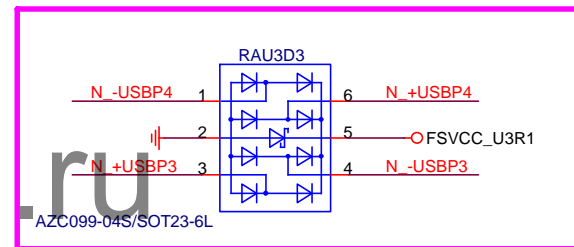
NET 可自行調整



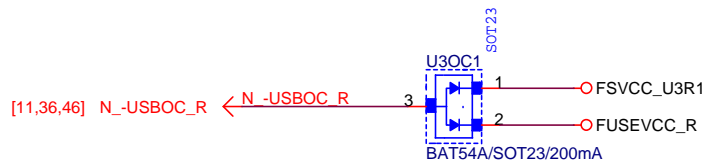
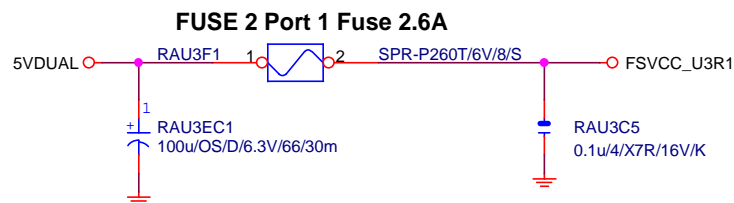
NET 可自行調整



NET 可自行調整

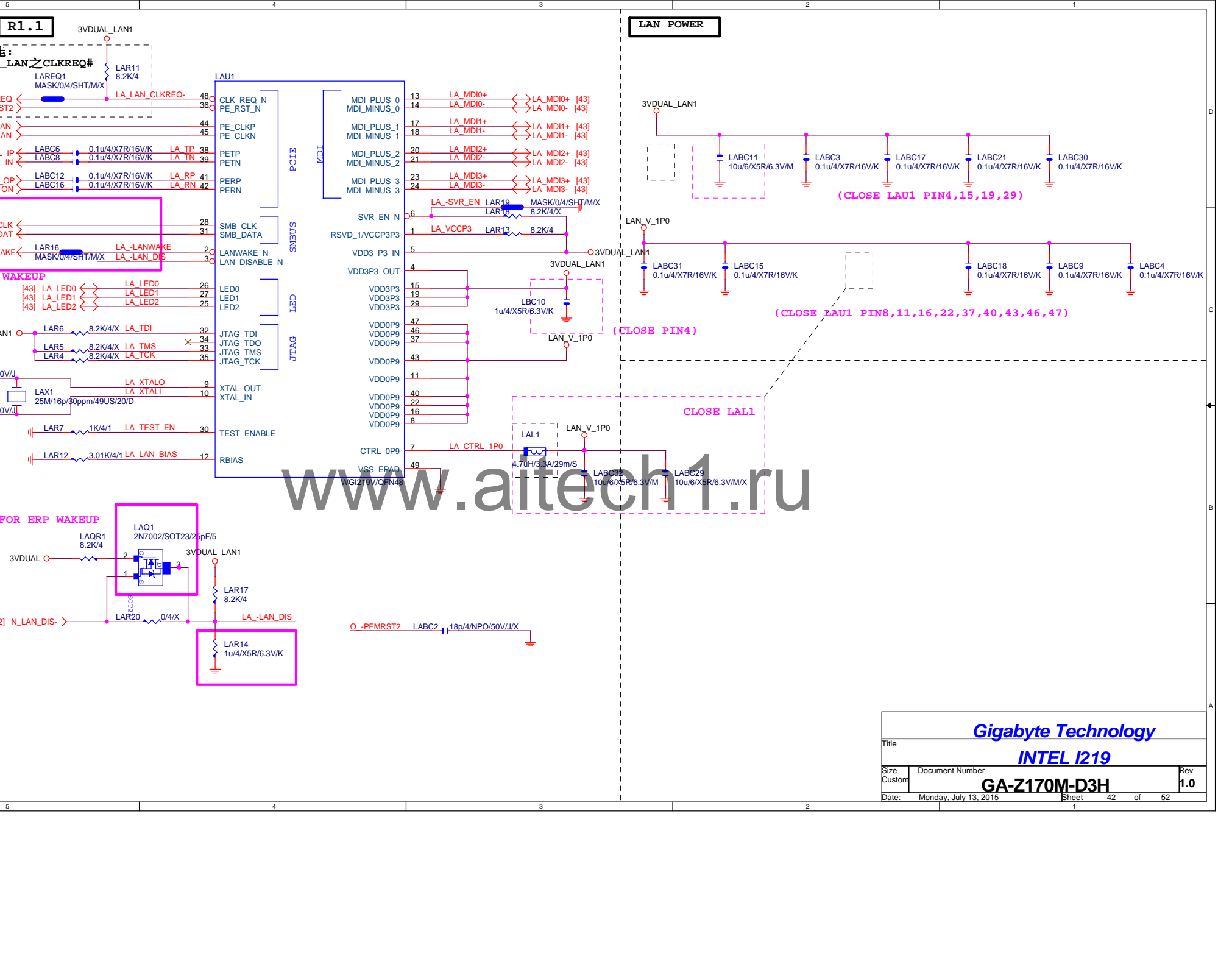
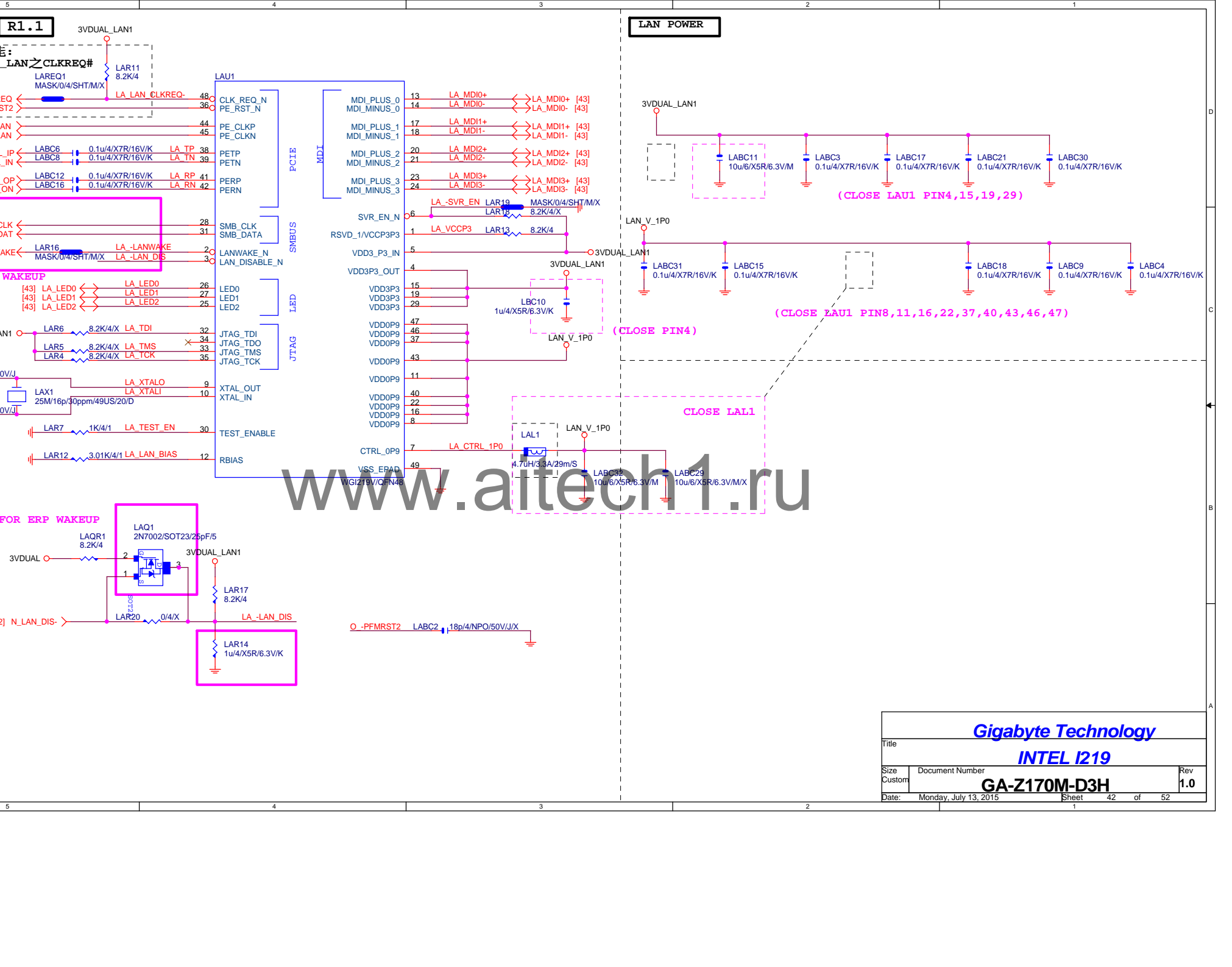
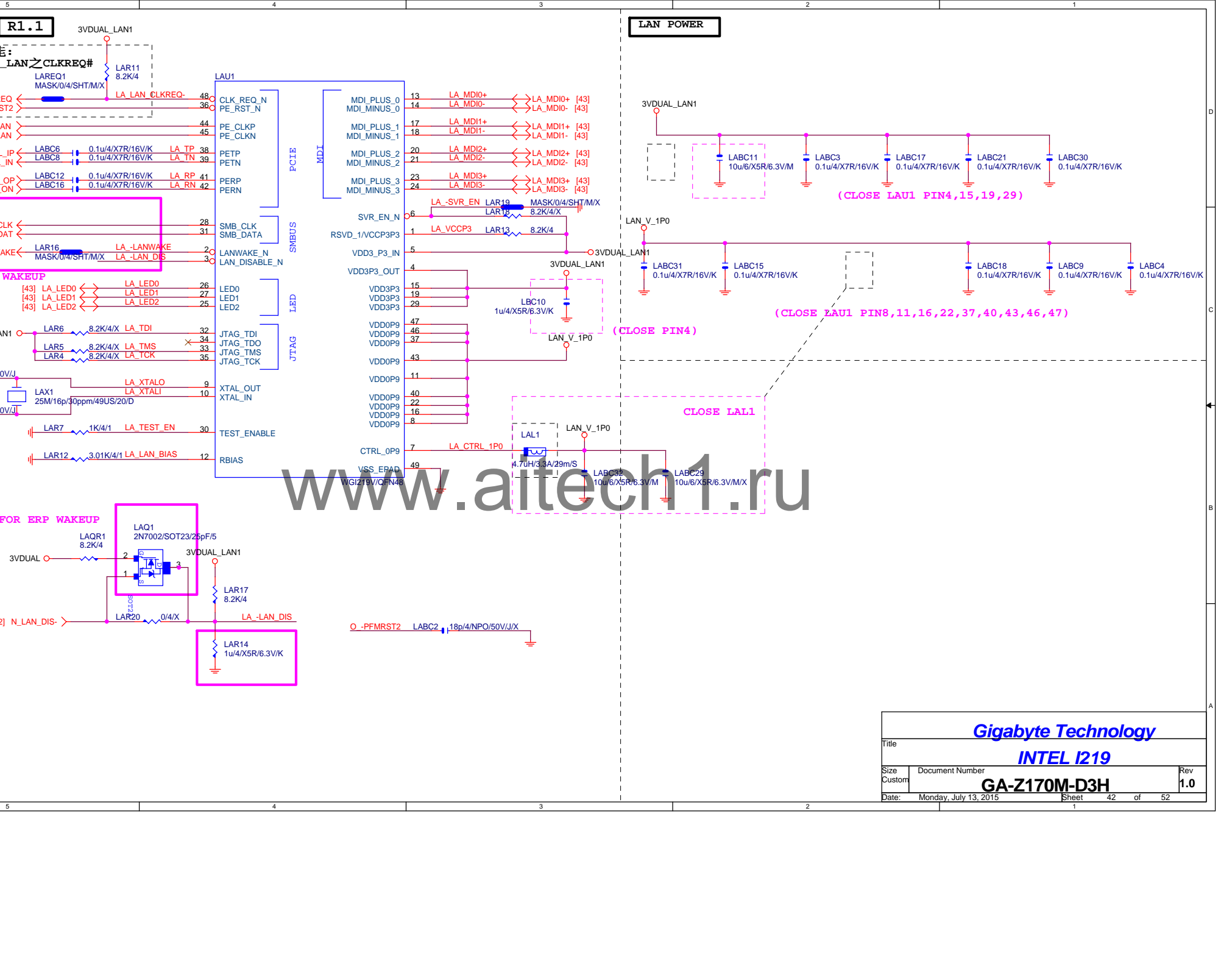
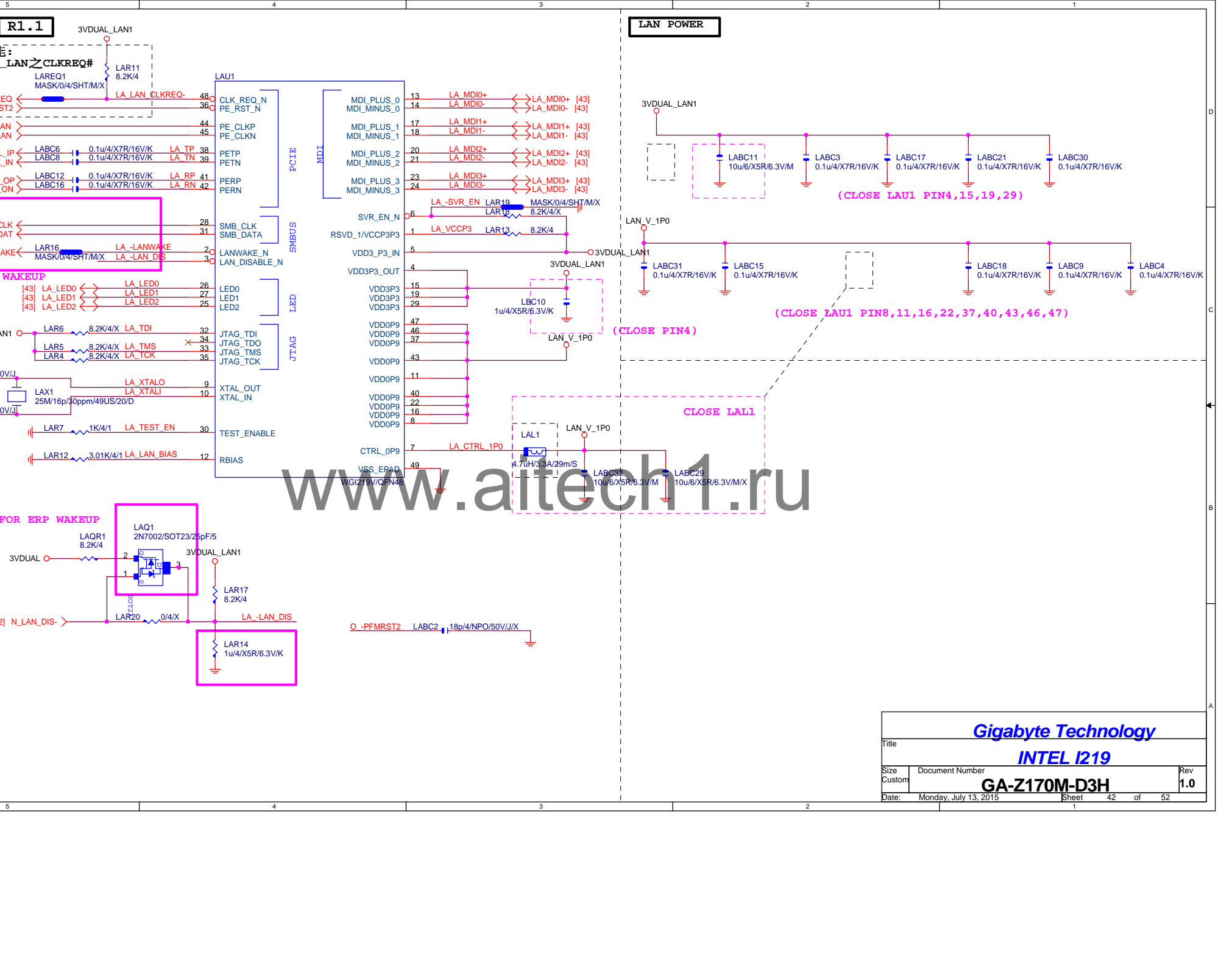


FUSE



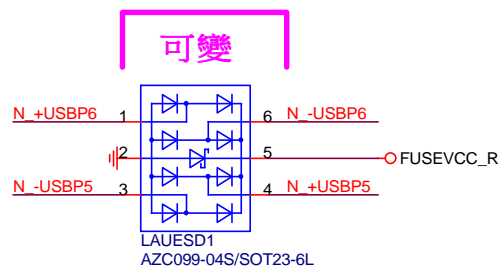
Gigabyte Technology

Title			R_USB30,USB_OC	
Size			Document Number	
Custom			GA-Z170M-D3H	
Date:			Monday, July 13, 2015	Sheet 41 of 52
				Rev 1.0



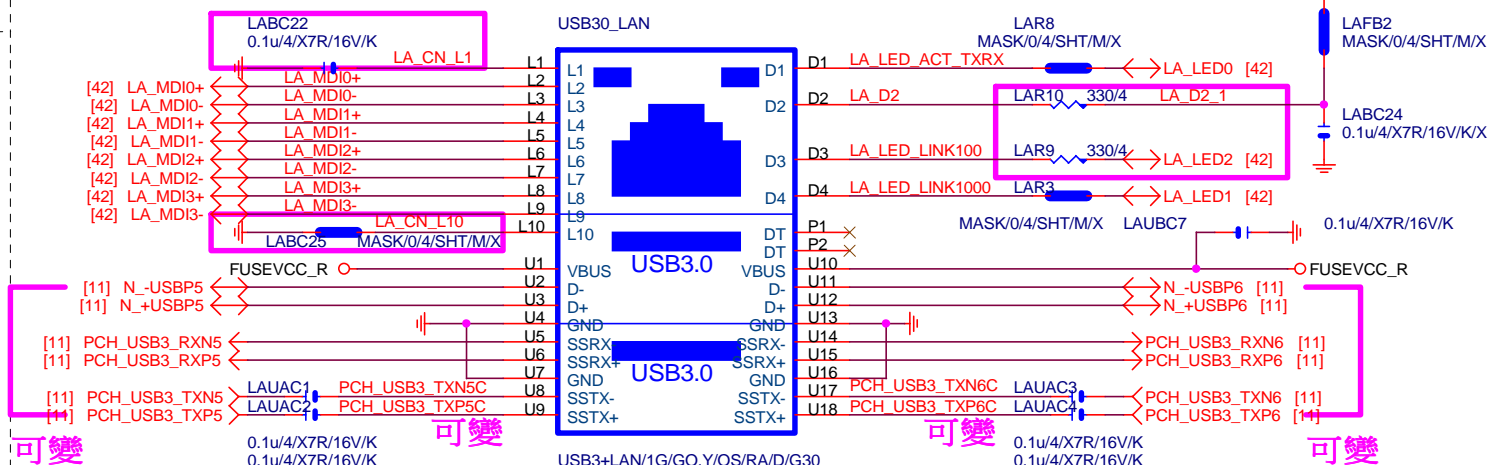
R1.1

note:可變更USB NAME



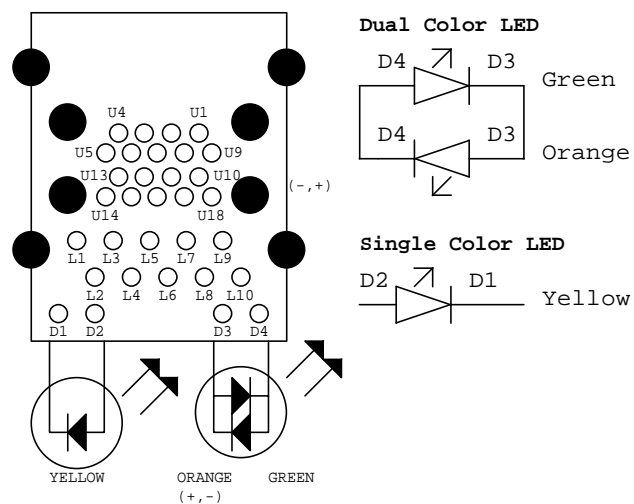
note:可變更USB NAME

[I219]



LA MDI-->100歐姆:[20/4/8/4/20]

Dual Color LED

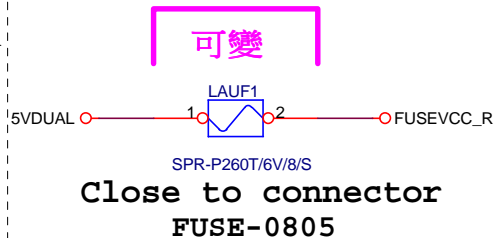


FOOT PRINT:LAN COVER

可變 [視SPEC需求]

[-D3H不加蓋]

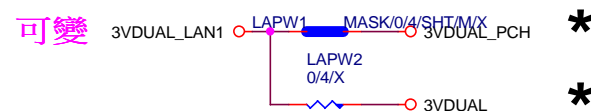
note:可變更FUSE



PS:視EMI需求

LAR24 MASK/0/4/SHT/M/X

note: lan power連接及電流



Gigabyte Technology

LAN CONNECTOR-I219

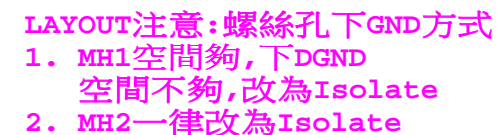
Size	Document Number
Custom	

GA-Z170M-D3H

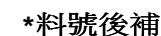
Rev	1.0
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Date: Monday, July 13, 2015

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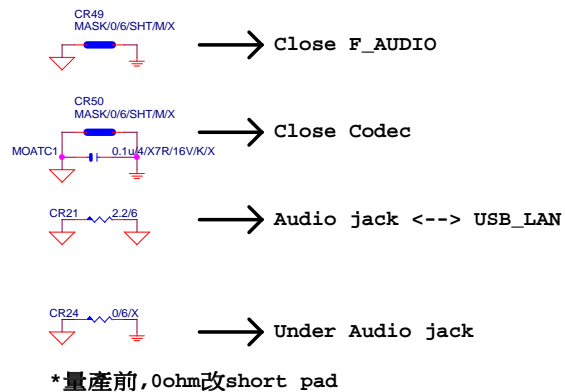
VALUE可變,LED顏色請自行修改
(預設:低亮度黃色LED:LED/Y/6/S)



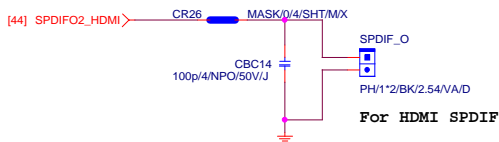
BOM OPTION : 1. Chemicon 音效電容
2. 金屬外罩 Reserve (上件與否, 依照各Model spec)
3. LED Reserve (上件與否和LED顏色, 依照各Model spec)

音效區域印刷

			
Title HD AUDIO ALC887			
Size Custom	Document Number	GA-Z170M-D3H	Rev 1.0
Date:	Monday, July 13, 2015	Sheet 44 of 52	

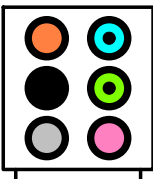


SPDIF_OUT

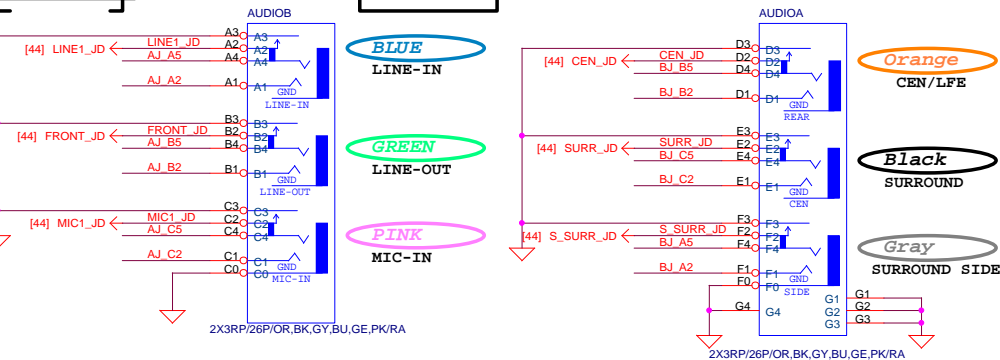


SPDIF_IN

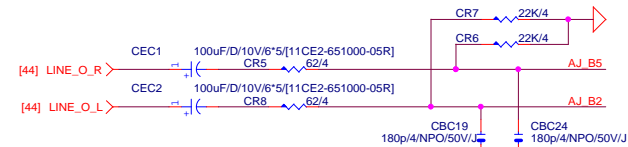
AZALIA JACK



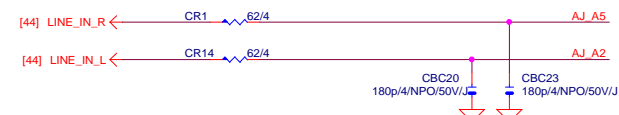
AZALIA JACK



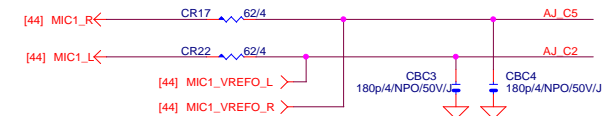
LINE-OUT



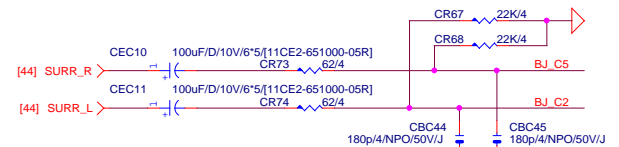
LINE-IN



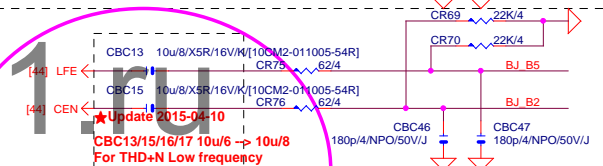
MIC-IN



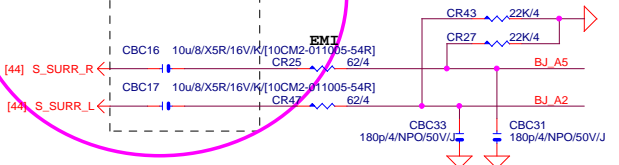
SURROUND



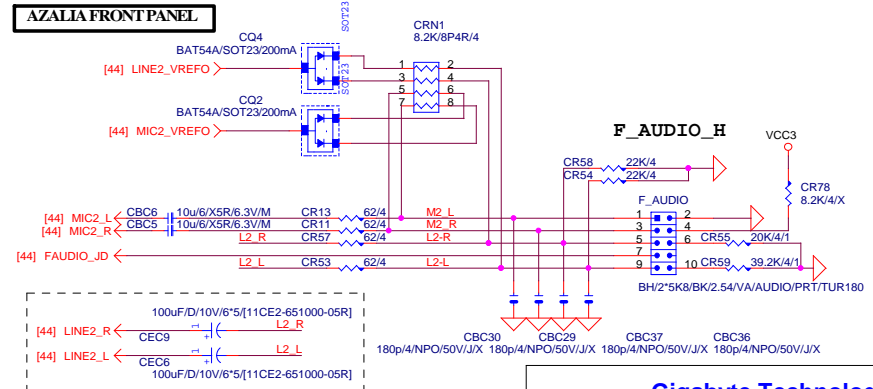
CEN/LFE



SURRBACK

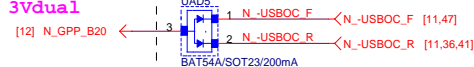
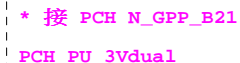


AZALIA FRONT PANEL



Gigabyte Technology

Title		
AUDIO JACK		
Size	Document Number	Rev
Custom	GA-Z170M-D3H	1.0
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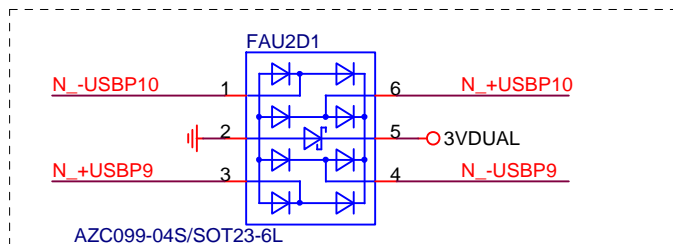
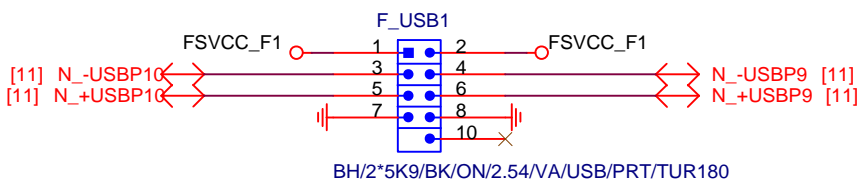


Rev: 0.7

FRONT USB1

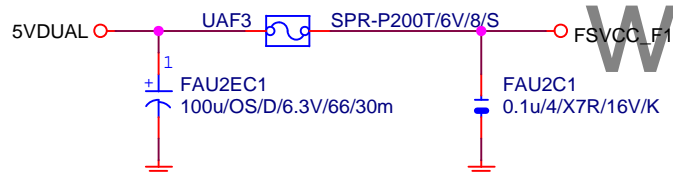
NET 可變

FUSB2X5-HS



Close to connector

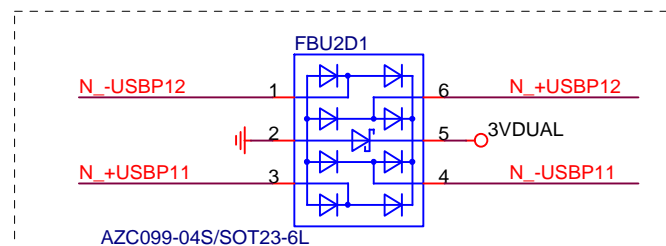
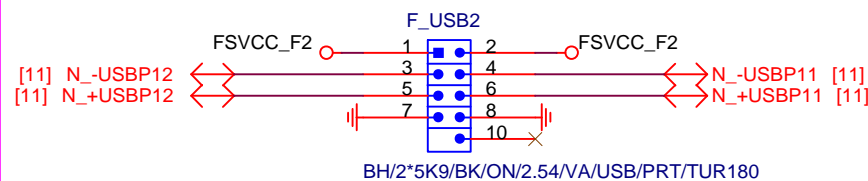
FUSE 2 Port 1 Fuse 2A



FRONT USB2

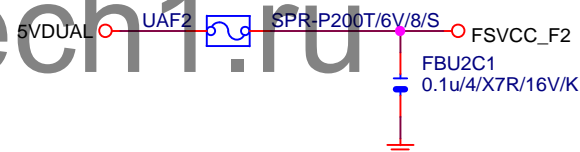
NET 可變

FUSB2X5-HS

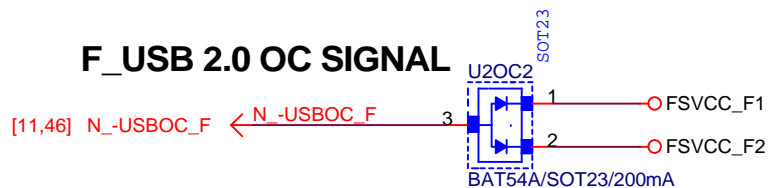


Close to connector

FUSE 2 Port 1 Fuse 2A



F_USB 2.0 OC SIGNAL



Gigabyte Technology

Title

USB2.0

Size
A

Document Number

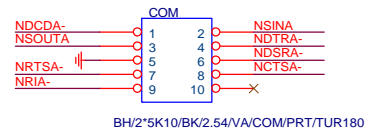
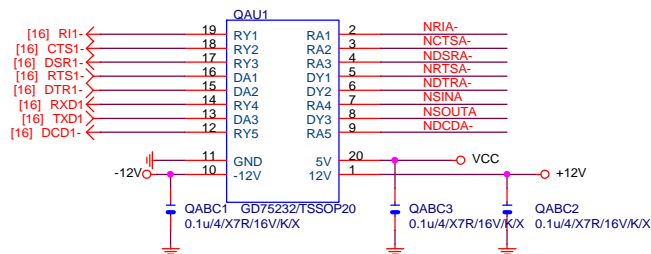
GA-Z170M-D3H

Rev
1.0

Date: Monday, July 13, 2015

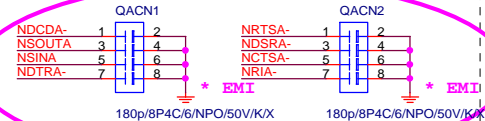
Sheet 47 of 52

Rev: 0.7

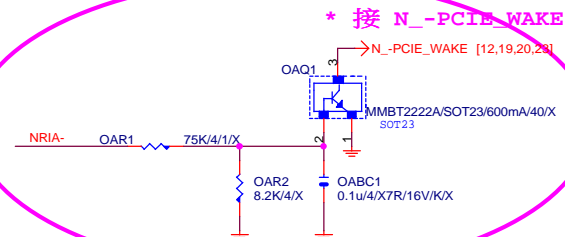


BH/2*5K10/BK/2.54/VA/COM/PRT/TUR180

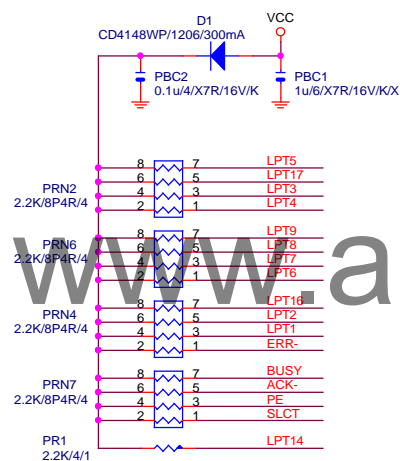
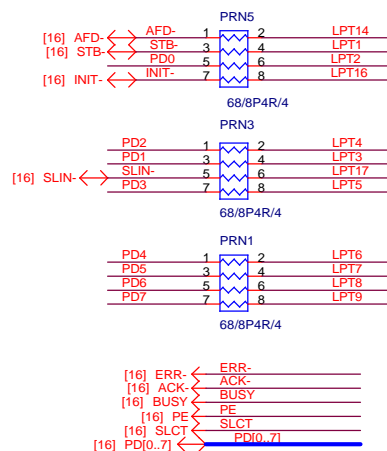
F_COM-HS



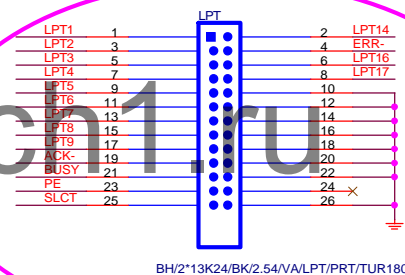
COM RI	N/A
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LPT PORT

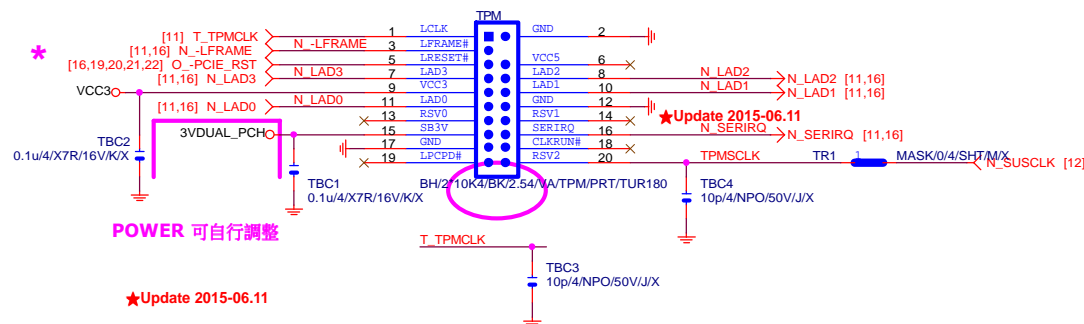


R&D技術通報151 有使用PRINT PORT的
MODEL, 需使用新料號:10HP2-118728-72R。(CHIP IT8728F/EX (GB) ITE/SMD
QFP128 PRINTPORT SORTING)料件。串電阻33 ohm改為68 ohm。

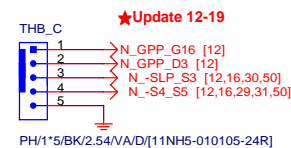


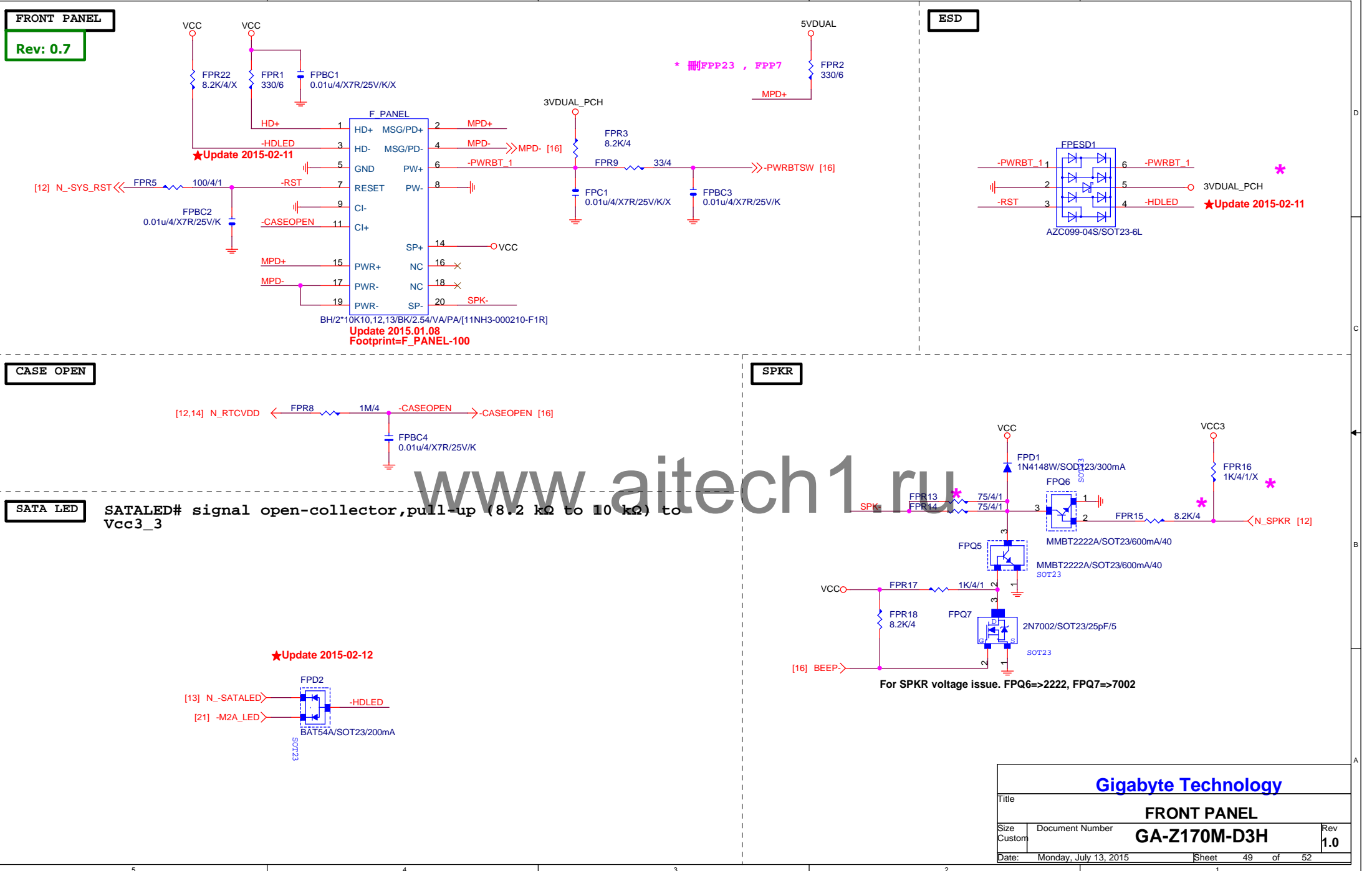
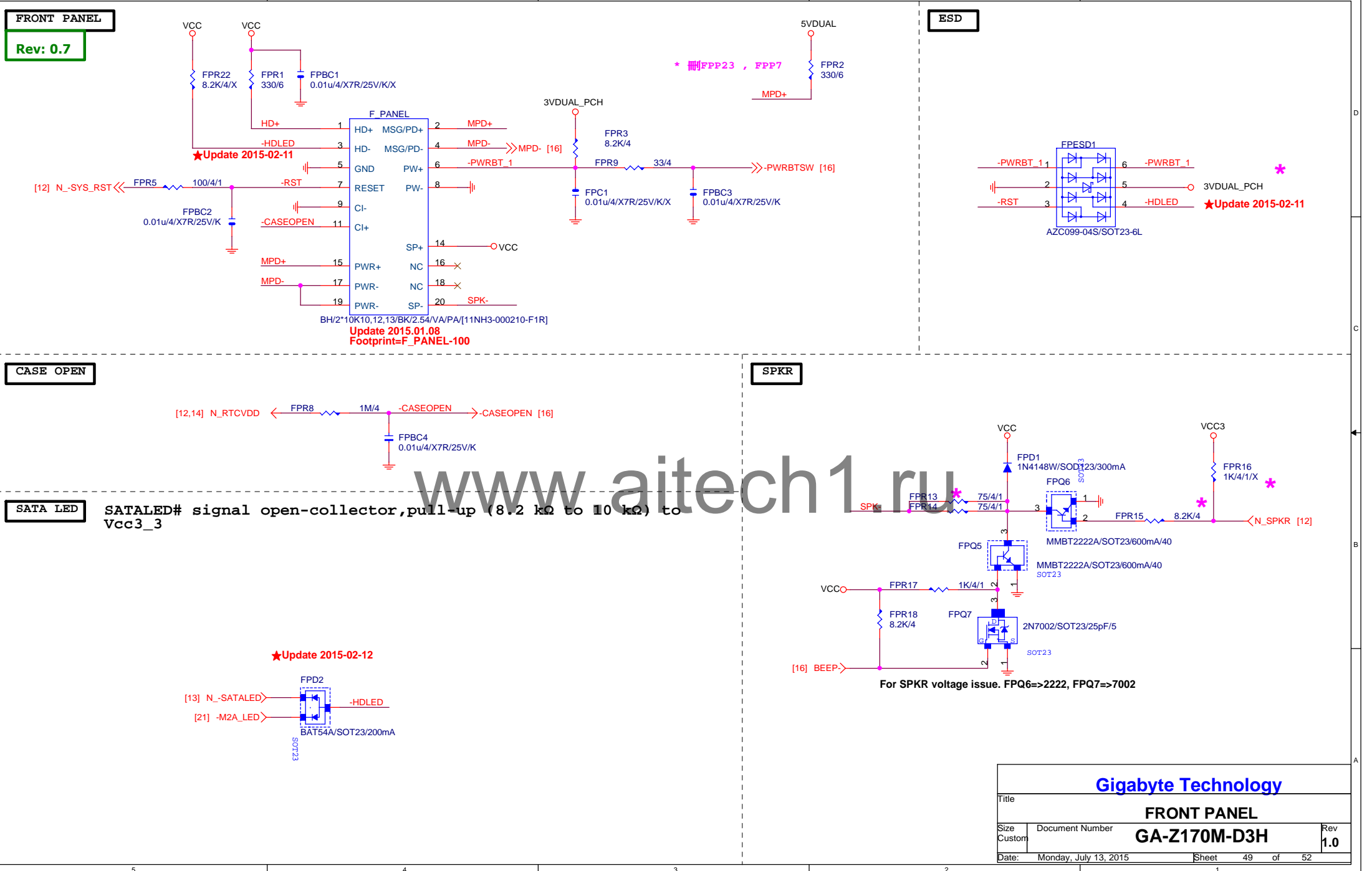
F LPT-HS

TPM CONNECT

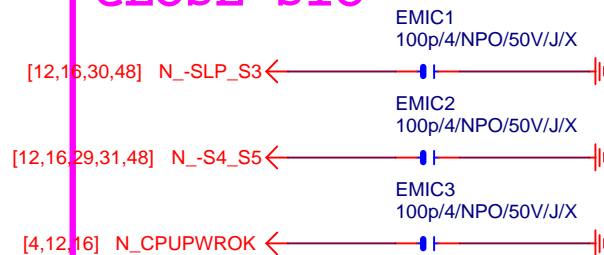


Thunderbolt





CLOSE SIO



CLOSE PCH



www.aitech1.ru

GIGABYTE™

Title

EMI/ESD

Size
A

Document Number

GA-Z170M-D3H

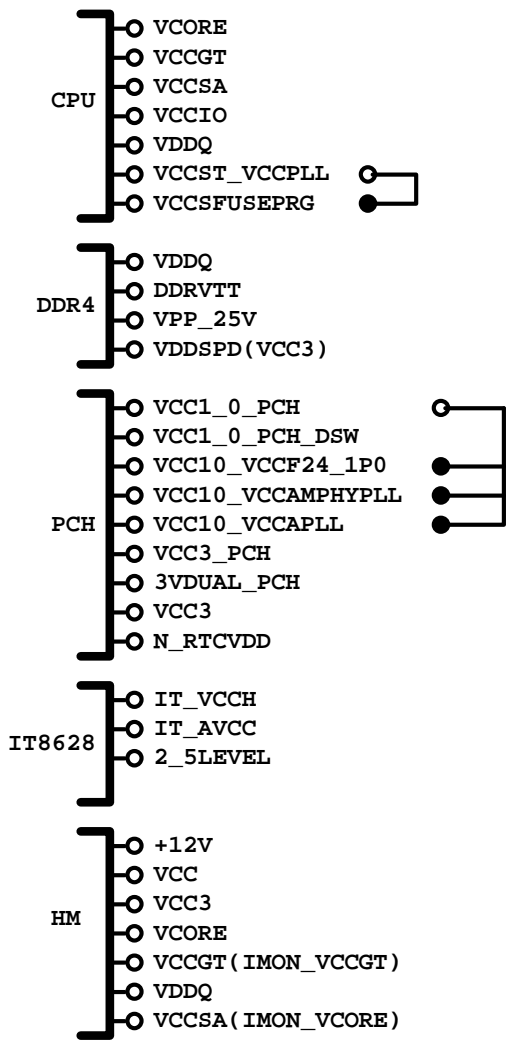
Rev

1.0

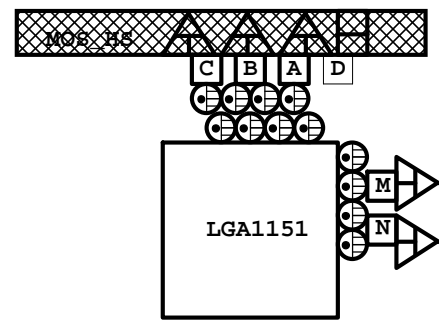
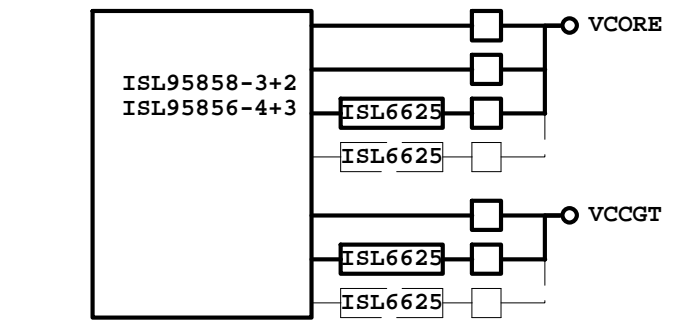
Date: Monday, July 13, 2015

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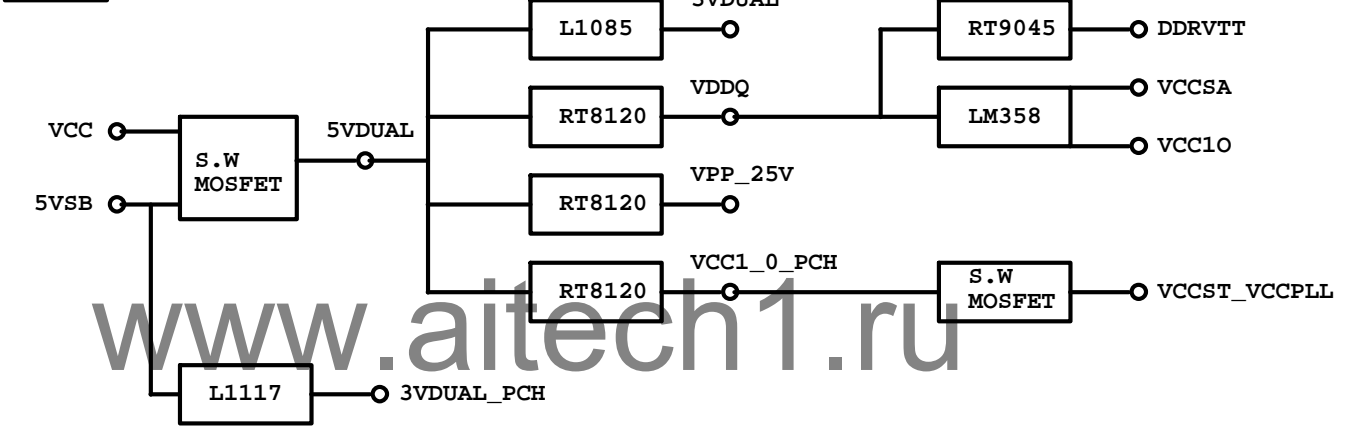
POWER BLOCK MAP



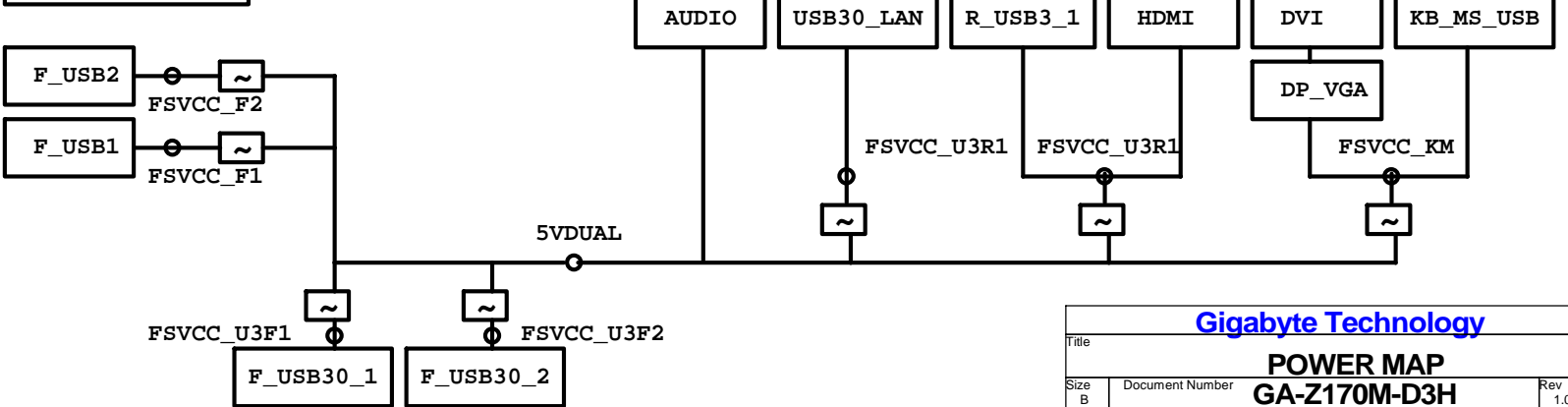
VCORE/VCCGT

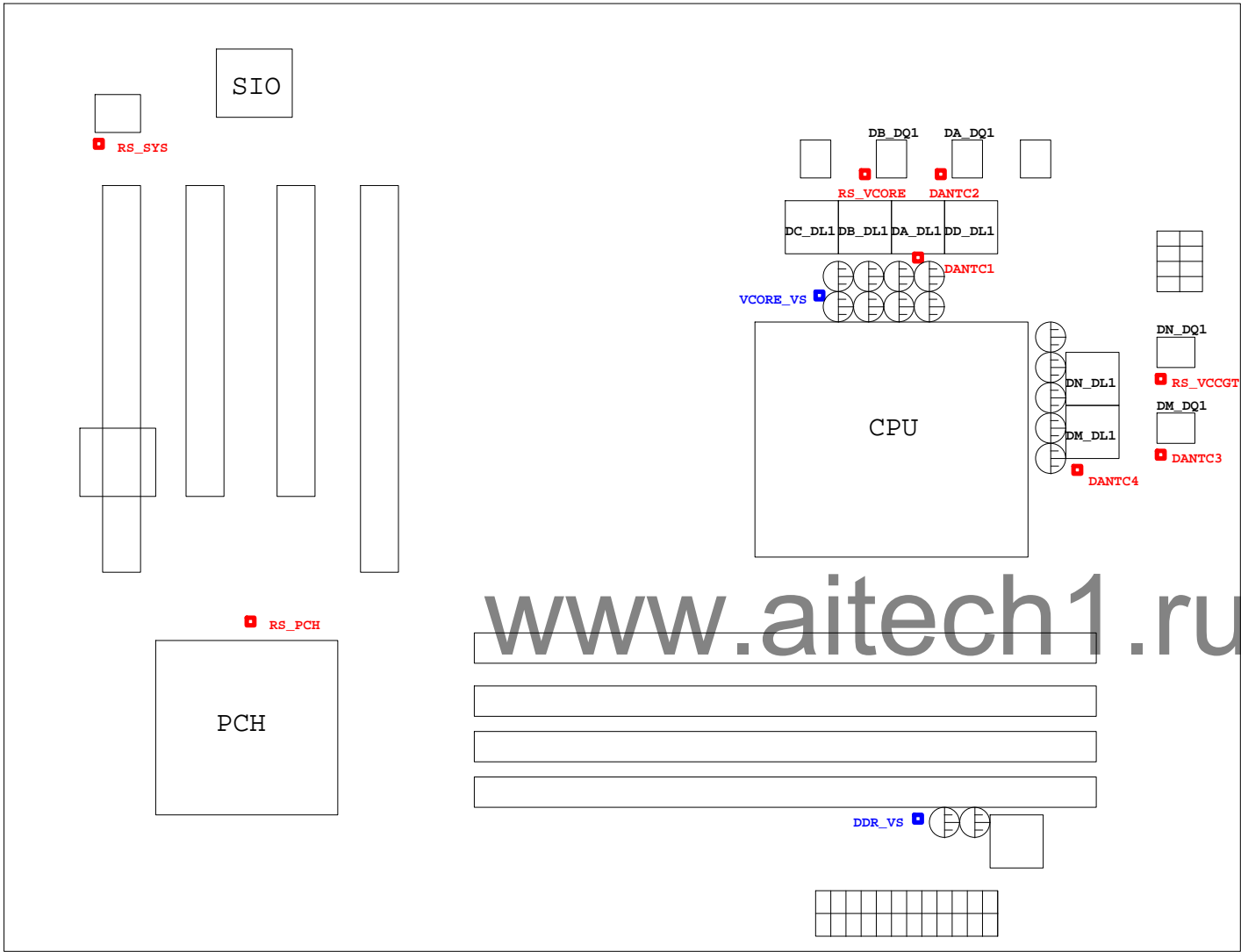


POWER



FUSE POWER F/R





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