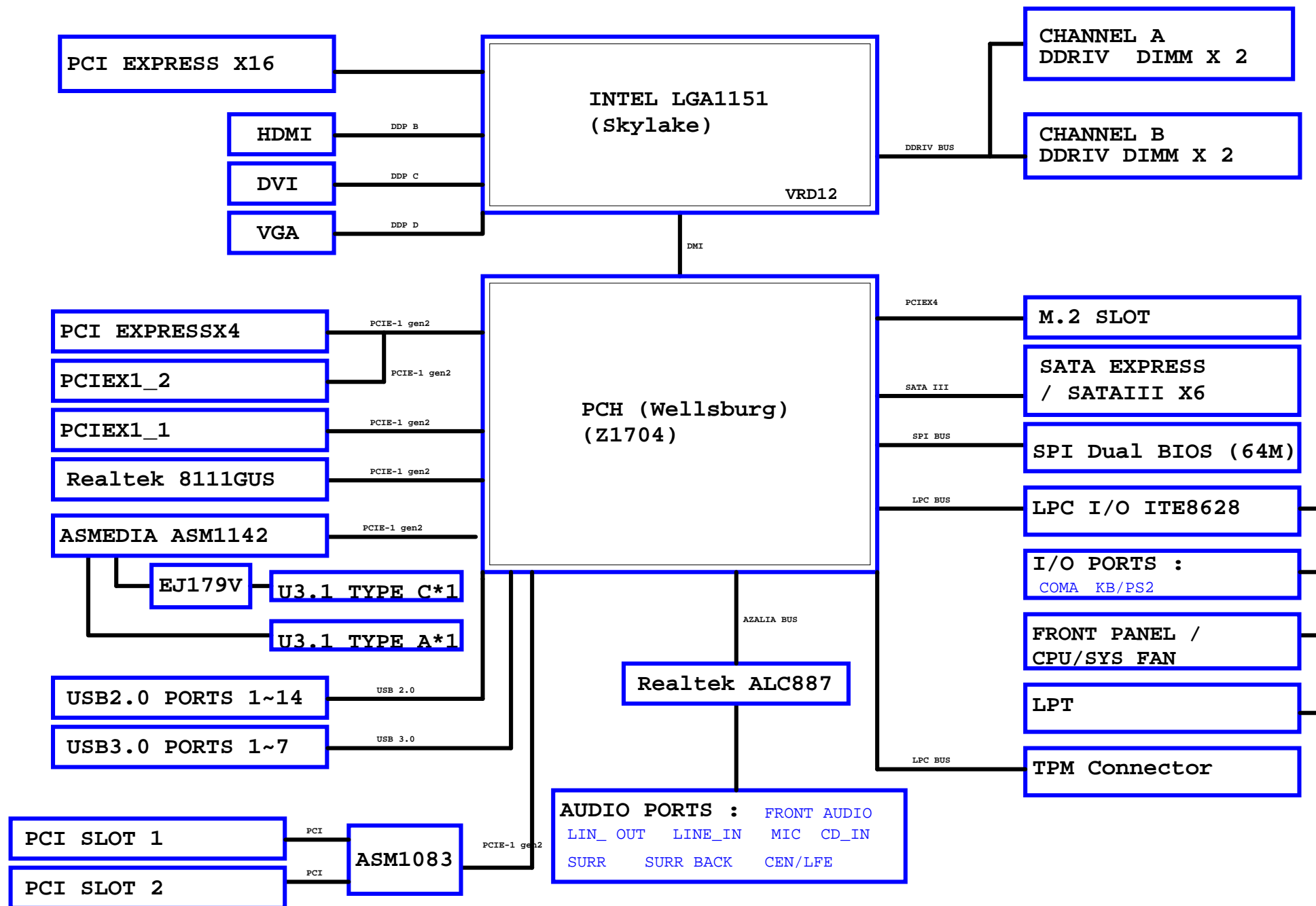


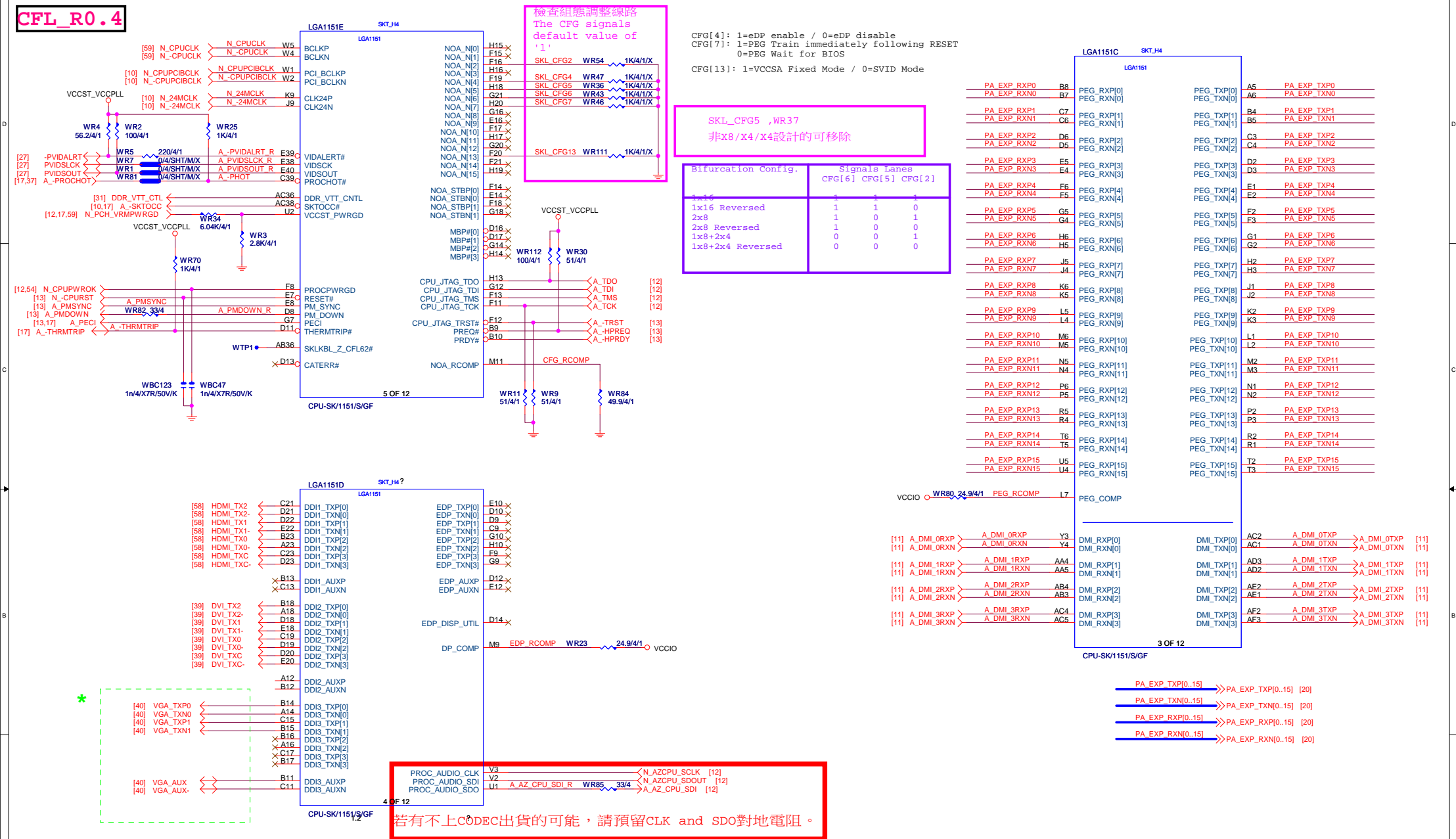
01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	CPU_LGA1151-A (CFL_R0.4)
05	CPU_LGA1151-B-DDR4 (CFL_R0.4)
06	CPU_LGA1151-C (CFL_R0.4)
07	CPU_LGA1151-D (CFL_R0.4)
08	DDR 4 CHANNEL A (REV0.6)
09	DDR 4 CHANNEL B (REV0.6)
10	PCH CLOCK BUFFER (REV0.7)
11	PCH DMI,USB,PCIE (REV0.7)
12	PCH MISC (REV0.7)
13	PCH SATA,PCIE,SATA_EXPRESS (REV0.7)
14	PCH_PWR (REV0.7)
15	PCH_GND (REV0.7)
16	Dual BIOS (CFL_R0.2)
17	I/O ITE8686 (CFL_R0.2)
18	HWM (CFL_R0.2)
19	FAN CTRL-KBL_SIO_879X (REV0.82)
20	PCIEX16 SLOT (REV0.3)
21	PCIEX4 SLOT (REV0.51)
22	PCIEX1*2 SLOT (REV0.6)
23	M.2 x4 (A)
24	M.2 x4 (P)
25	PCIEX4_S0~S1 SWITCH (CFL_R0.2)
26	SATA CONNECT (REV0.1)
27	ISL95866 PWM-IRON_1H2L (CFL_R0.1)
28	ISL95866 MOS_VCORE-IRON-1H2 (CFL_R0.1)
29	ISL95866 MOS_VCCGT-IRON-1H1 (CFL_R0.1)
30	VCCSA_VCCIO-IRON-Z系列 (CFL_R0.22)
31	RT8120_DDR_CHOKE-IRON-2L (REV0.2)
32	RT8120_VPP_CHOKE-IRON (CFL_R0.3)
33	RT8120_PCH-CHOKE-IRON (CFL_R0.3)
34	DISCRETE POWER (REV0.51)
35	CPU POWER-Z系列 (CFL_R0.3)
36	NCP3933 OVER VOLTAGE

37	ATX POWER , -PROCHOT
38	KB_MS_USB (CFL_R0.1)
39	DVI CONN (CFL_R2.0)
40	RTD2168 - DP to VGA - IC (CFL_R2.0)
41	RTD2168 - DP to VGA - Conn (CFL_R2.0)
42	R_USB30 Rev: CFL_R0.1
43	INTEL I219 (CFL_R2.01)
44	USB_LAN CONNECTOR-I219 (CFL_R2.01)
45	Realtek ALC1220 (CFL_R2.03)
46	REAR AUDIO JACK (CFL_R2.03)
47	F_USB30 (REV0.9)
48	R_USB20 /F_USB20 (REV0.9)
49	COM , LPT , TPM , THB (REV0.9)
50	F_PANEL (REV0.9)
51	IT8892E/JX (REV0.1)
52	PCI SLOT 1 (REV0.1)
53	LDO POWER (REV0.1)
54	EMI-ESD (REV0.1)
55	ASM3142 USB31A (CFL_R0.1)
56	U3.1 _PORT A (CFL_R0.1)
57	TI HD3SS3220_B (CFL_R0.1)
58	HDMI (REV0.81)
59	IDT6V41630_CLK BUFFER (REV0.1)
60	OC BUTTON
61	Audio / DEBUG / XMP LED (CFL_R2.0)
62	POWER MAP (REV0.2)
63	TABLE LIST (REV0.1)

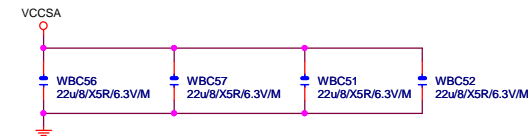
BLOCK DIAGRAM



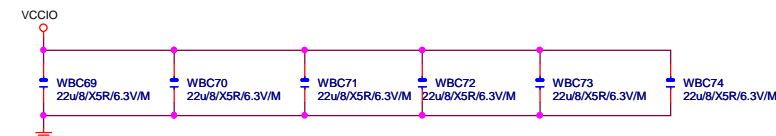
CFL_R0.4



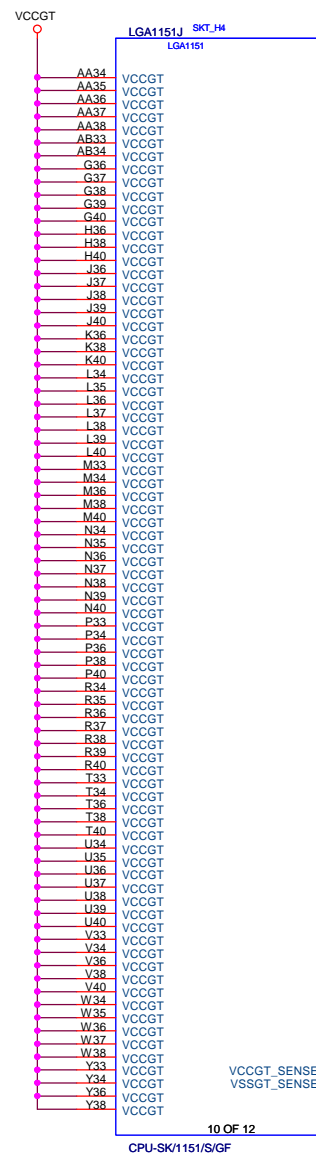
G-15u : (CPU-SK/1151/S/15)
10SC1-F01151-11R / 10SC1-F01151-12R
G-FL : (CPU-SK/1151/S/GF)
10SC1-F01151-21R / 10SC1-F01151-22R



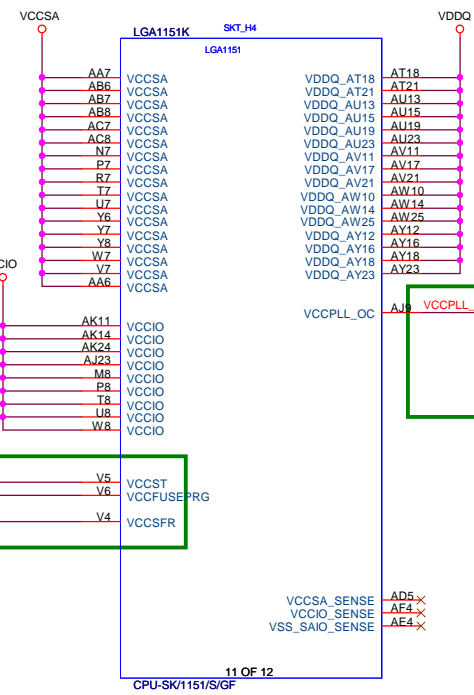
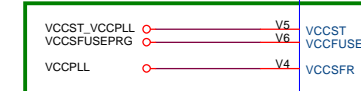
CPU POWER



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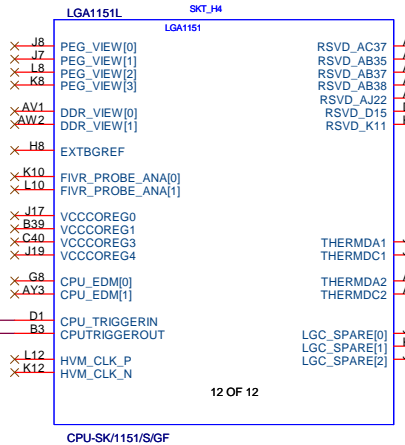
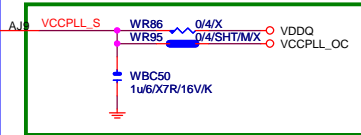
CPU POWER



VCCSA_SENSE
VCCIO_SENSE
VSS_SAIO_SENSE

11 OF 12

CPU-SK/1151/S/GF



CPU_AB35

WTP2
WTP3
WTP4
WTP5

WR89 560/4/1

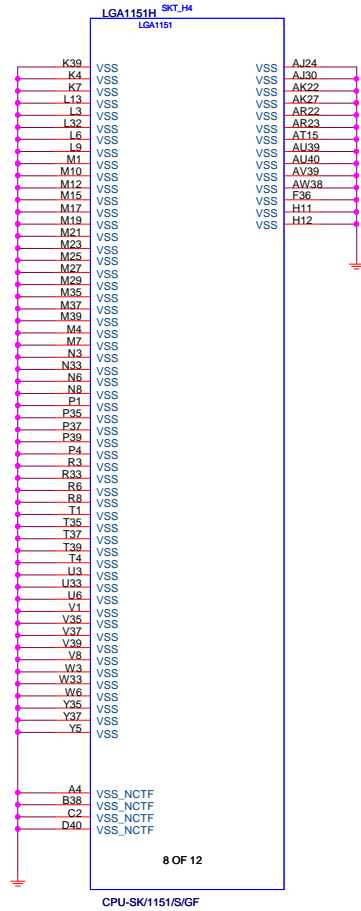
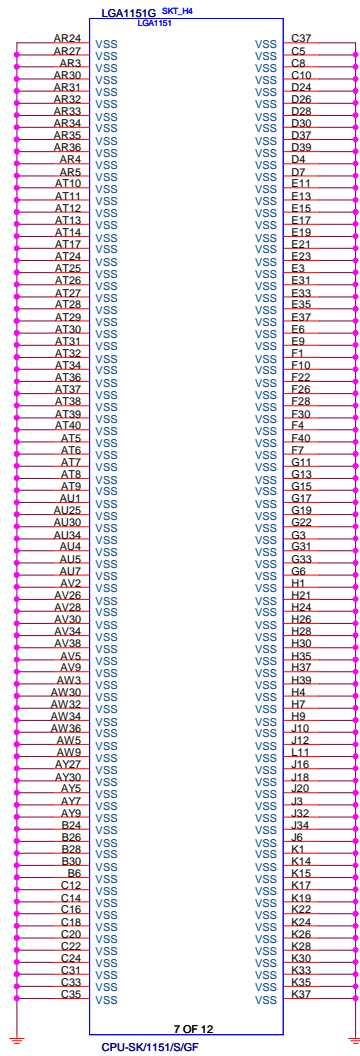
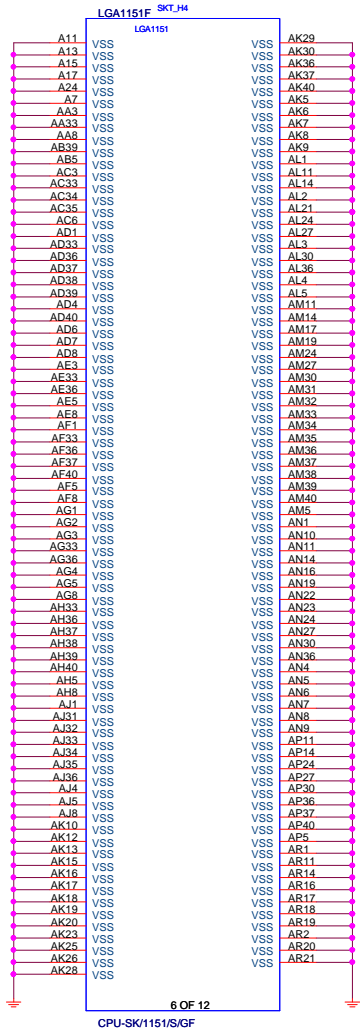
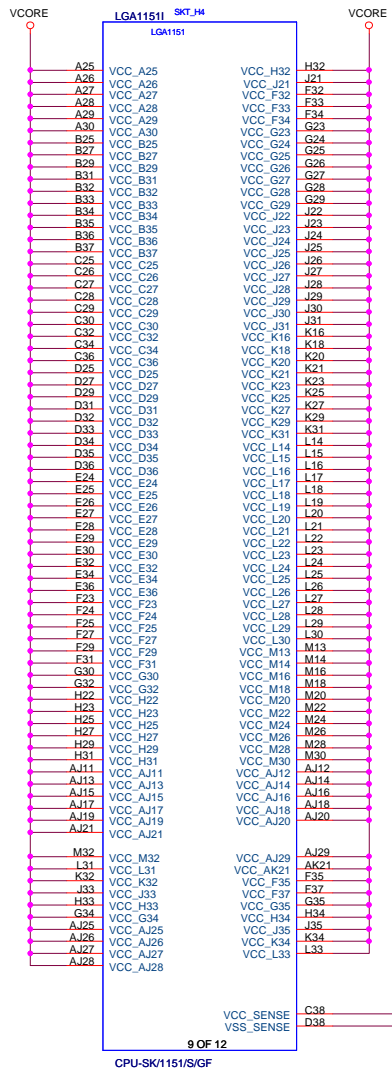
Gigabyte Technology

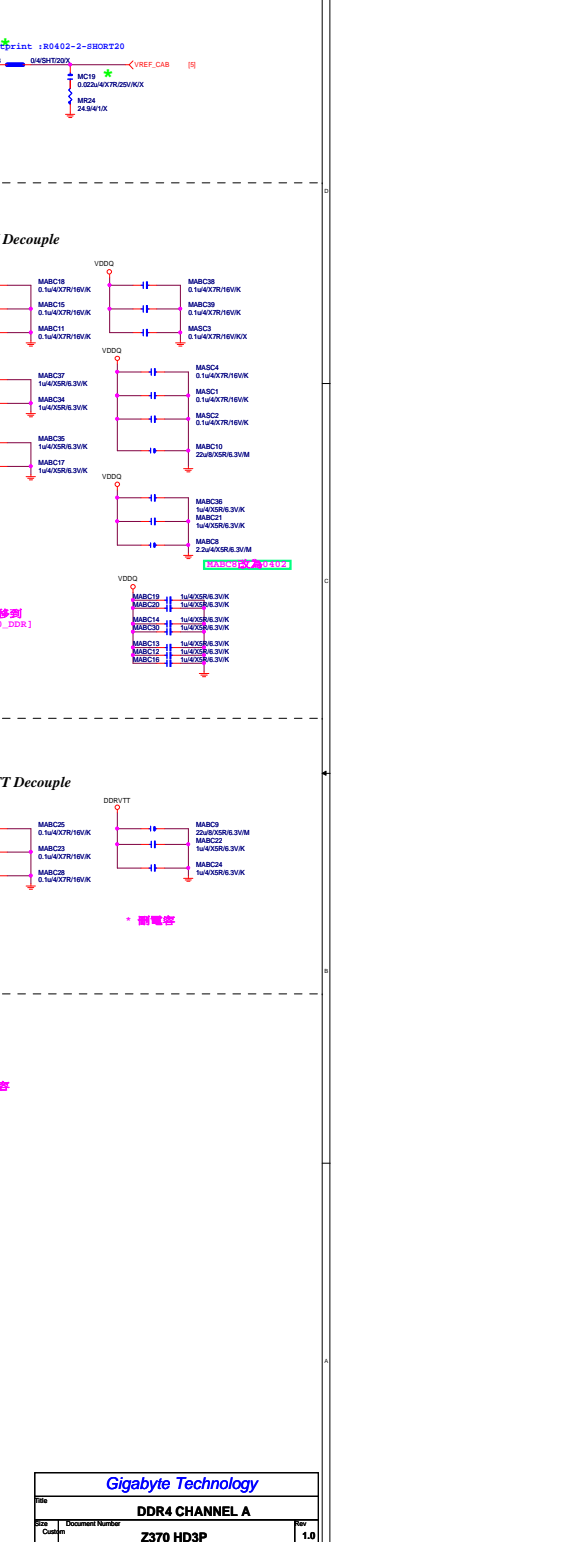
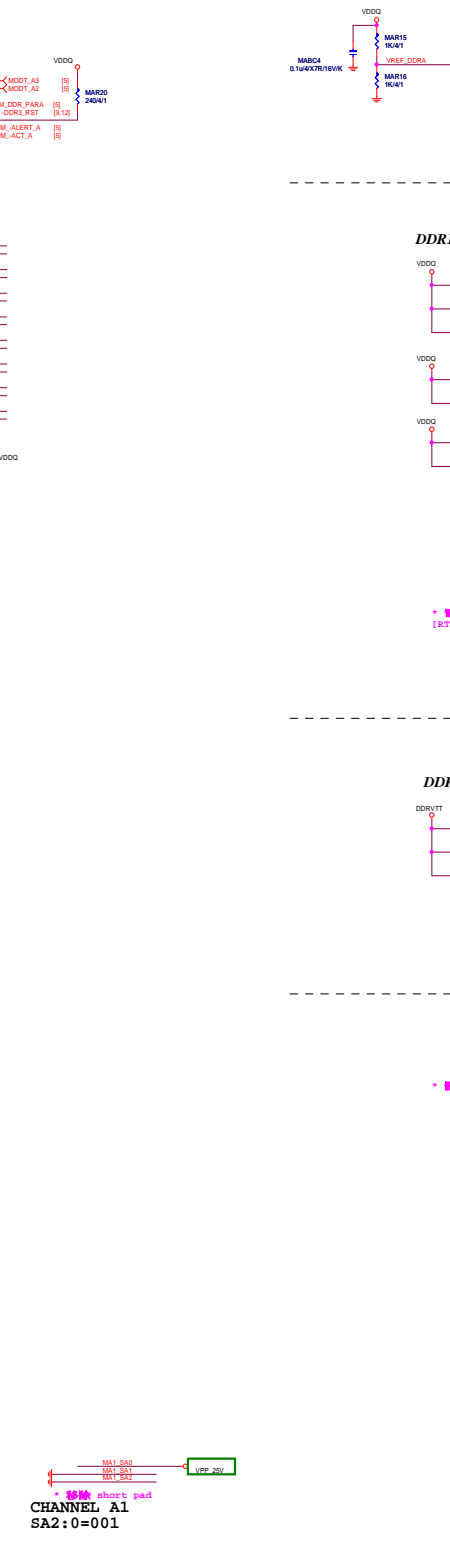
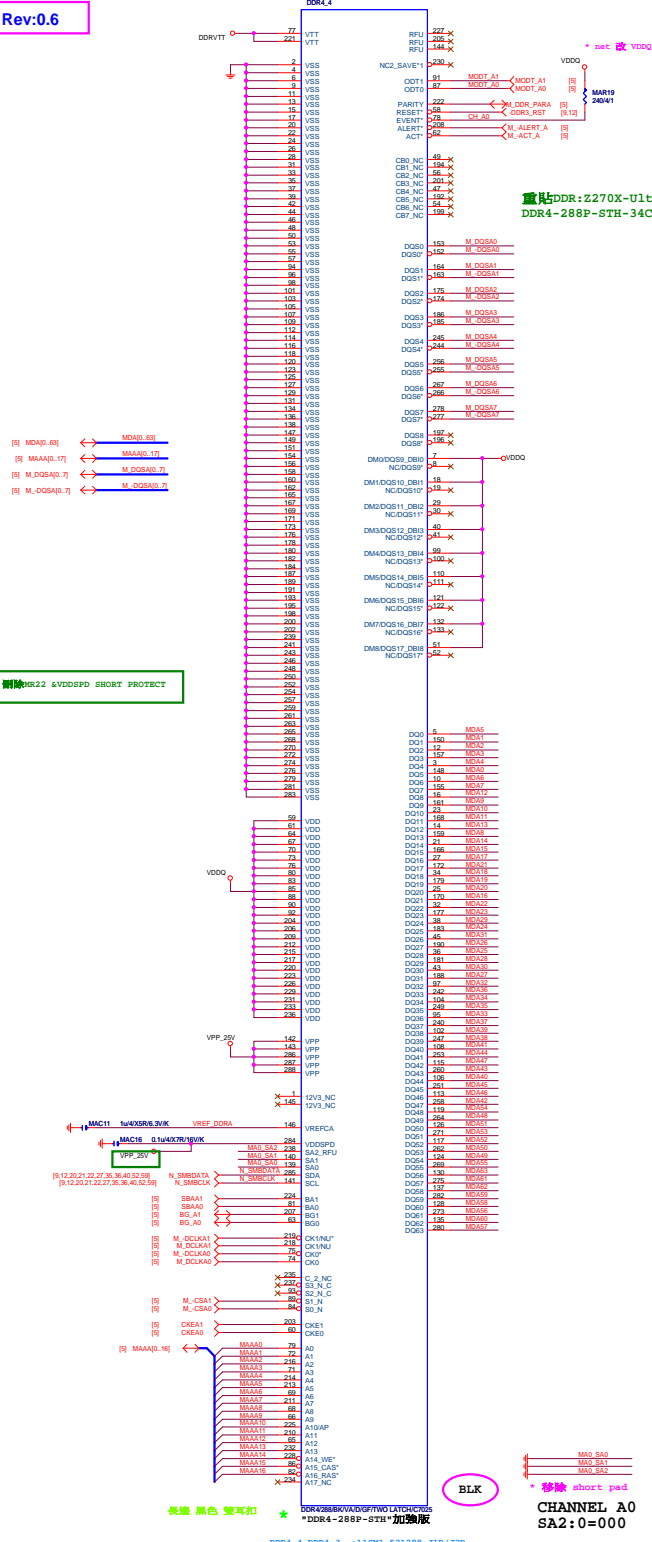
CPU LGA1151-C

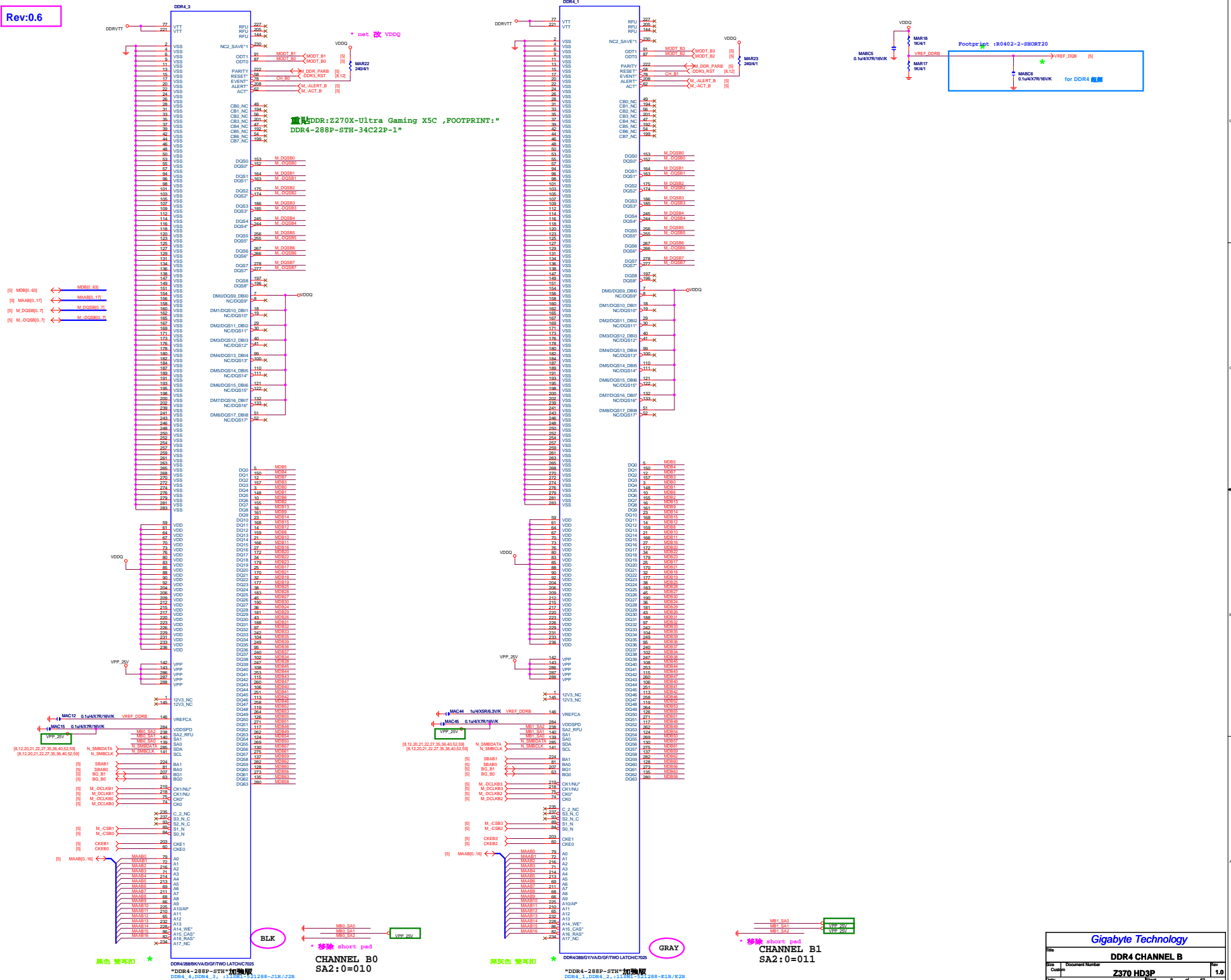
Z370 HD3P

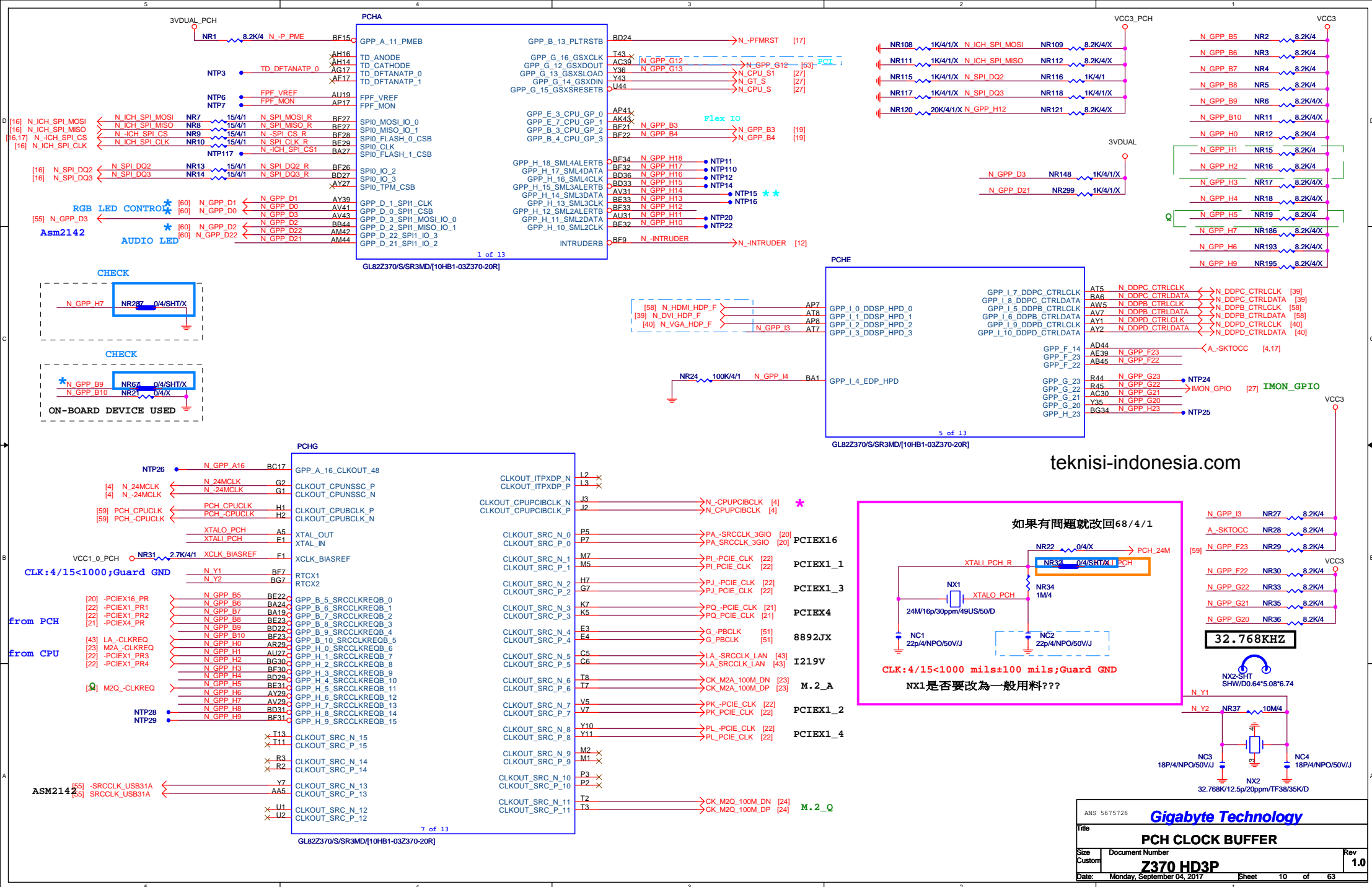
Rev 1.0

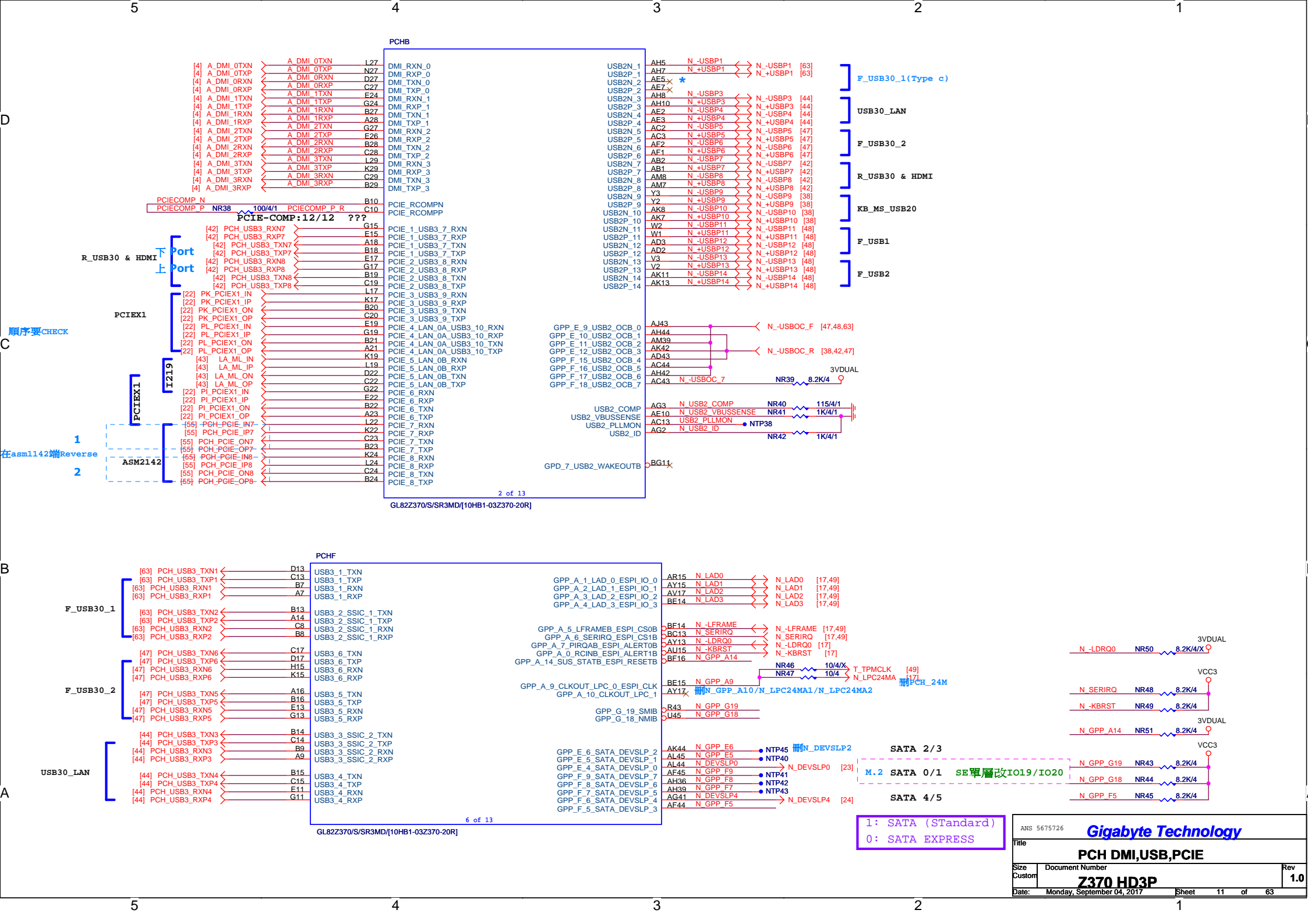
Date: Monday, September 04, 2017 Sheet 6 of 63

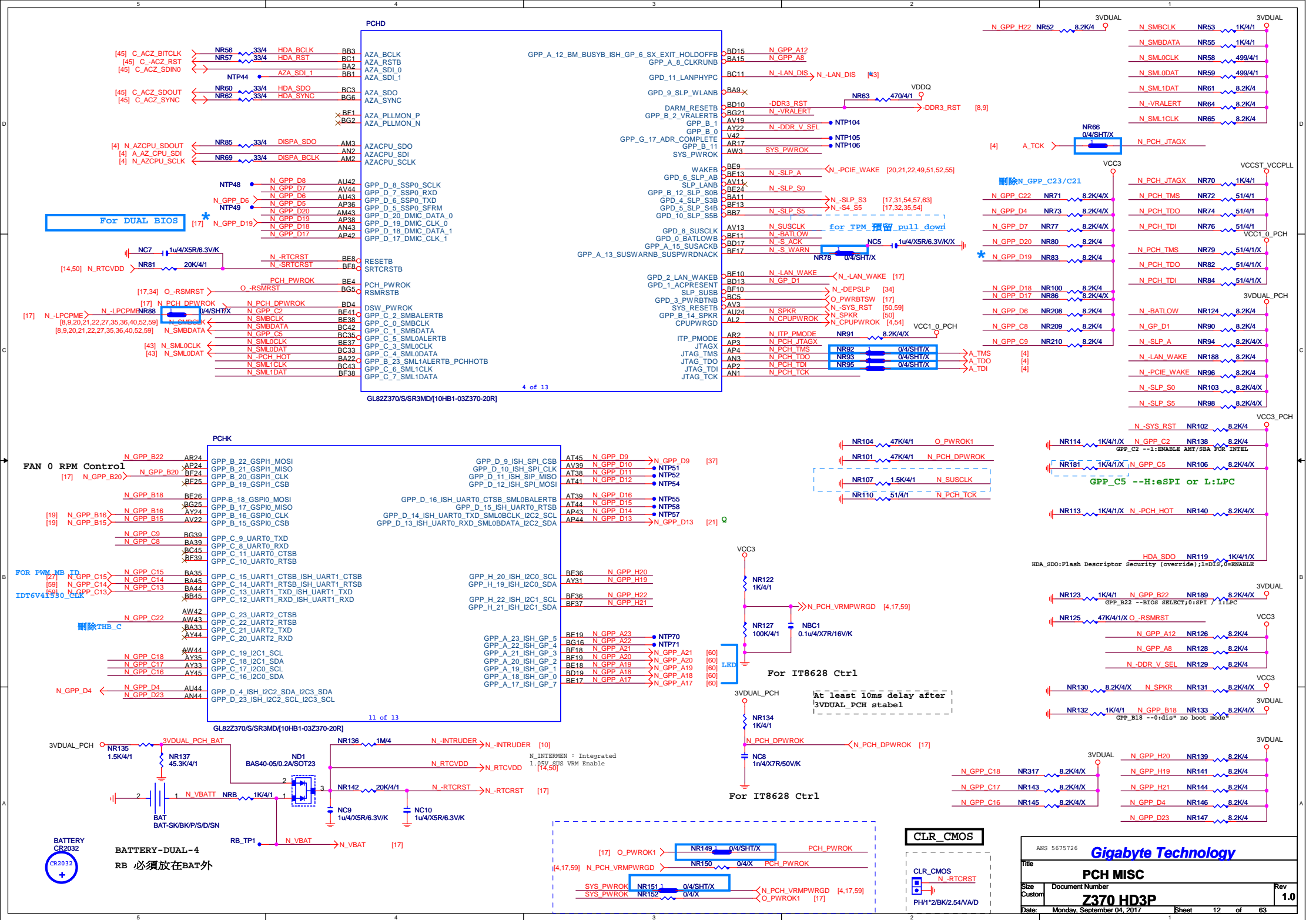


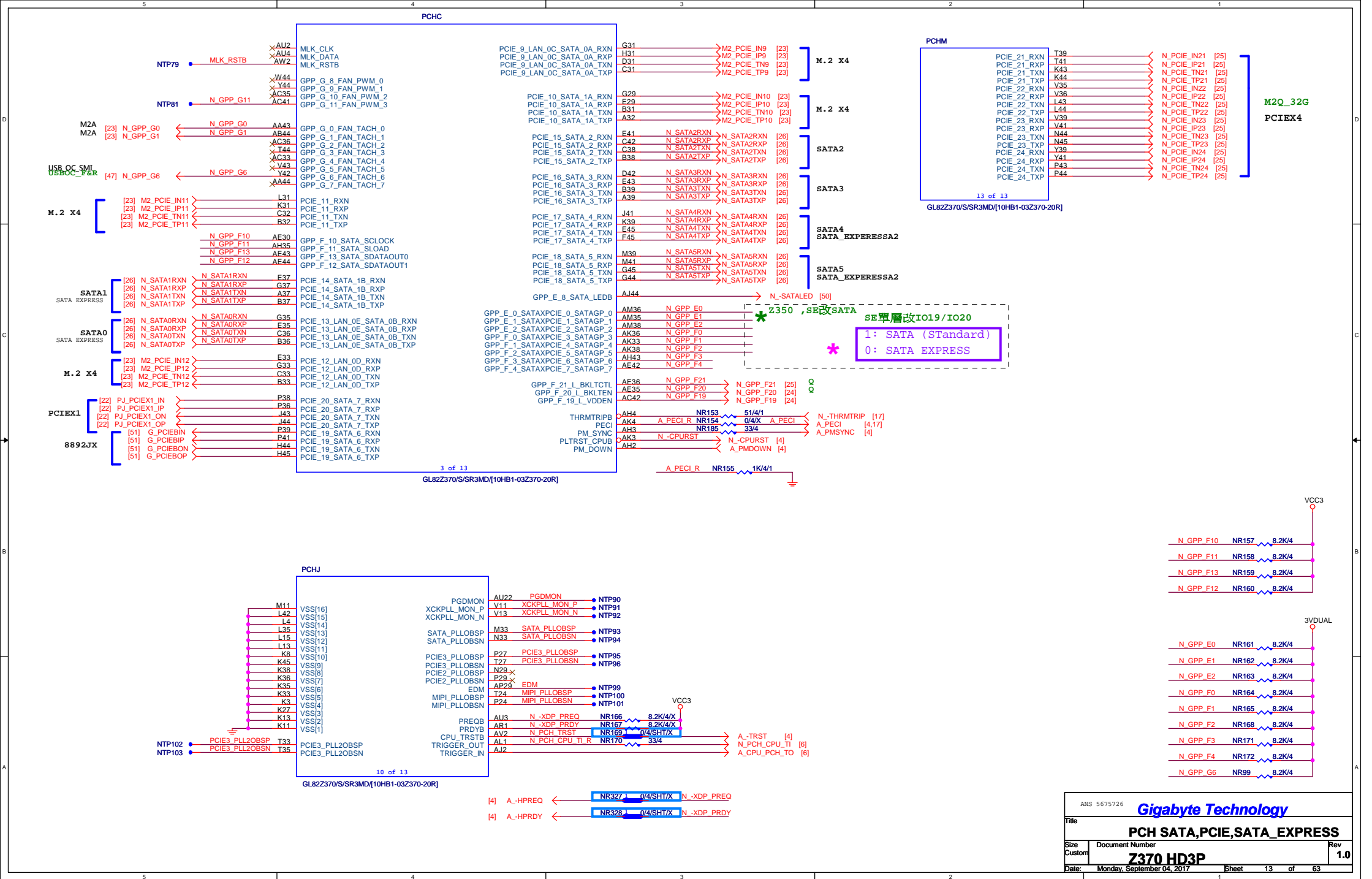


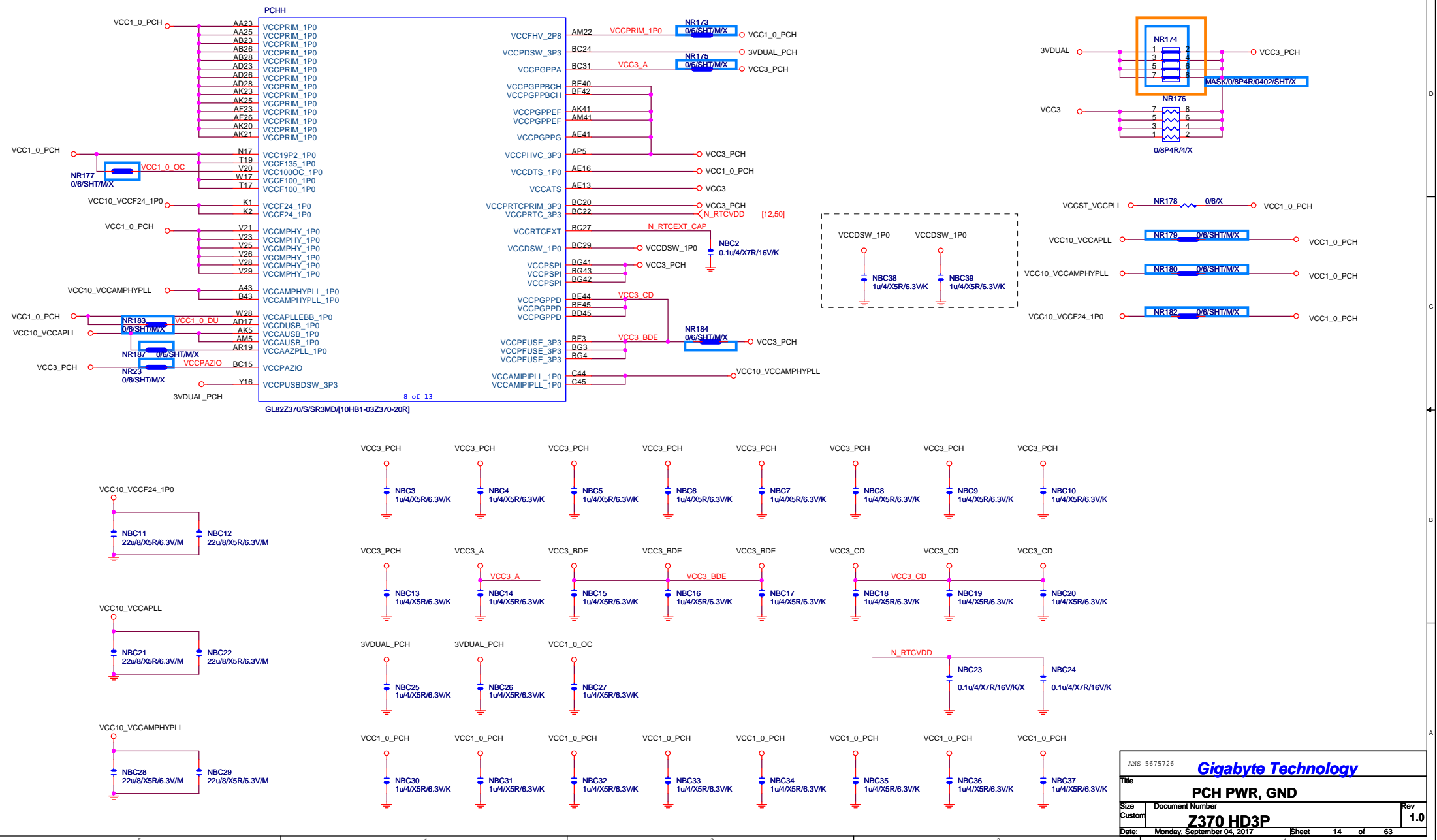












PCHI		
A25	VSS	A42
A30	VSS	D45
P22	VSS	BG44
AV38	VSS	BF44
AV45	VSS	BF45
AV8	VSS	BF2
AV11	VSS	W29
AV19	VSS	A35
AV37	VSS	AG28
AY4	VSS	A41
AY42	VSS	AA17
AY8	VSS	AA18
B25	VSS	AA20
B3	VSS	AA21
B30	VSS	AA26
B35	VSS	AA28
B4	VSS	AA29
B41	VSS	AB17
BA13	VSS	AC32
BA17	VSS	AE4
BA29	VSS	AE8
BA31	VSS	AE18
BA37	VSS	AE20
BA4	VSS	AE21
BA42	VSS	AE25
BB40	VSS	AE28
BC38	VSS	AE29
BC40	VSS	AF4
BC9	VSS	AF42
BD11	VSS	AG18
BD16	VSS	AG20
BD2	VSS	AG21
BD21	VSS	AG23
BD25	VSS	AG25
F2	VSS	AG26
F31	VSS	AG28
E6	VSS	AG29
E8	VSS	AH11
F38	VSS	AH13
F43	VSS	AH30
G4	VSS	AH32
G40	VSS	AH33
G42	VSS	AH38
G9	VSS	AJ1
H11	VSS	AJ17
H13	VSS	AJ18
H17	VSS	AJ20
H19	VSS	AJ21
H22	VSS	AJ23
H24	VSS	AJ25
H27	VSS	AJ26
H29	VSS	AJ28
H33	VSS	AJ29
H35	VSS	AJ45
H38	VSS	AK10
H4	VSS	AK14
H42	VSS	AK16
H9	VSS	AK17
J4	VSS	AK18
M36	VSS	AK26
M38	VSS	AK28
M4	VSS	AM14
M8	VSS	AN14
M9	VSS	AP19
N13	VSS	AR22
N15	VSS	AR27
N19	VSS	AU29
N22	VSS	AU33
N24	VSS	AV1
N31	VSS	AV10
N42	VSS	AV15
P10	VSS	AV24
P12	VSS	AV27
AV35	VSS	AV33

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GL822370/S/SR3MD[10HB1-03Z370-20R]

PCHL		
BD34	VSS[70]	AB18
BD39	VSS[71]	AB20
BD7	VSS[72]	AB21
BE2	VSS[73]	AB25
BF43	VSS[74]	AB29
BF5	VSS[75]	AB4
BG18	VSS[76]	AB42
BG23	VSS[77]	AC10
BG28	VSS[78]	AC11
BG32	VSS[79]	AC14
BG37	VSS[80]	AC16
BG40	VSS[81]	AC38
BG9	VSS[82]	AD29
C1	VSS[83]	AD21
A12	VSS[84]	AD25
A13	VSS[85]	AD45
C2	VSS[86]	AE11
C37	VSS[87]	AE14
A6	VSS[88]	AE32
C9	VSS[89]	AE38
D1	VSS[90]	AK29
D10	VSS[91]	AK30
D12	VSS[92]	AK32
D15	VSS[93]	AK35
D16	VSS[94]	AK39
B12	VSS[95]	AL4
D19	VSS[96]	AL42
D21	VSS[97]	AM10
D24	VSS[98]	AM11
D25	VSS[99]	AM13
D29	VSS[100]	AM17
AG20	VSS[101]	AM19
D33	VSS[102]	AM24
D35	VSS[103]	AM27
D36	VSS[104]	AM29
F2	VSS[105]	AM32
D44	VSS[106]	AM33
D7	VSS[107]	AM4
P13	VSS[108]	AN45
P15	VSS[109]	AP10
P17	VSS[110]	AP11
P19	VSS[111]	AP13
P31	VSS[112]	AP15
P33	VSS[113]	AP22
P35	VSS[114]	AP27
P4	VSS[115]	AP31
P42	VSS[116]	AP33
P8	VSS[117]	AP34
R1	VSS[118]	AP39
R32	VSS[119]	T4
T10	VSS[120]	W26
T14	VSS[121]	V16
T22	VSS[122]	V17
T29	VSS[123]	V18
T32	VSS[124]	V30
T36	VSS[125]	V32
T38	VSS[126]	V33
Y38	VSS[127]	V38
Y4	VSS[128]	V4
Y8	VSS[129]	V8
T42	VSS[130]	W18
T5	VSS[131]	W20
U4	VSS[132]	W21
U42	VSS[133]	W23
V10	VSS[134]	W25
V14	VSS[135]	
W3	VSS[136]	
AR13	VSS[137]	
AR31	VSS[138]	
AR33	VSS[139]	
AR4	VSS[140]	
AT10	VSS[141]	
AT13	VSS[142]	
AT35		
AT37		
AT42		
AU11		
AU17		
BD30		
W45		
Y13		
Y14		
Y15		
Y16		
Y30		
Y32		
Y33		
BG14		
VSS_BG14		

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GL822370/S/SR3MD[10HB1-03Z370-20R]

20170707 update

Z370中低階專案已完成新散熱片的設計,並發圖製做樣品
為確保後續圖面確認及新的機種導入,請新建LIBRARY並更新LAYOUT圖面

Z370-HD3P

Z370-HD3

都使用此款PCH LIBRARY

Z370-HD3P

Z370-HD3

Z370M-D3H

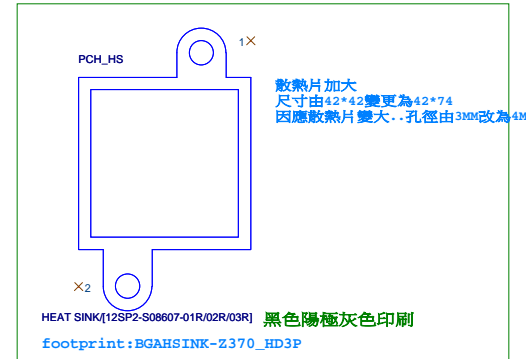
都使用此款TMOS/RMOS LIBRARY

BGAHSINK-Z370_HD3P

MOSHSINK-Z370_HD3P-T

MOSHSINK-Z370_HD3P-R

使用大尺寸 from z270-hd3p rev0.1



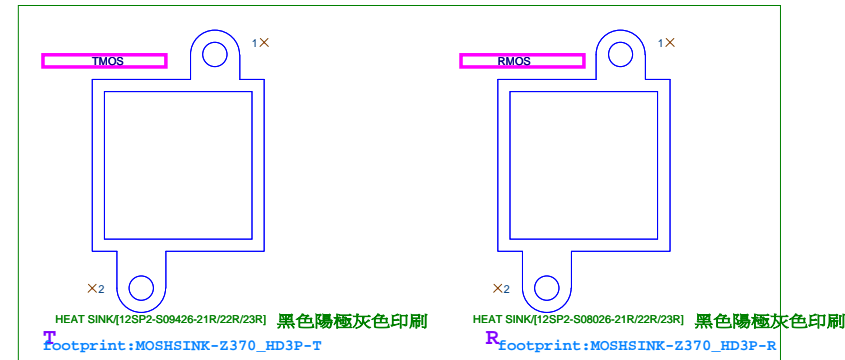
裝甲HEATSINK 分成四大部份
重新確認

*料號

RMOS12SP2-S08026-11R/12R/13R
TOMS12SP2-S09426-11R/12R/13R
PCH12SP2-S08607-01R/02R/03R

*圖騰

: A or B , -0727尚未決定

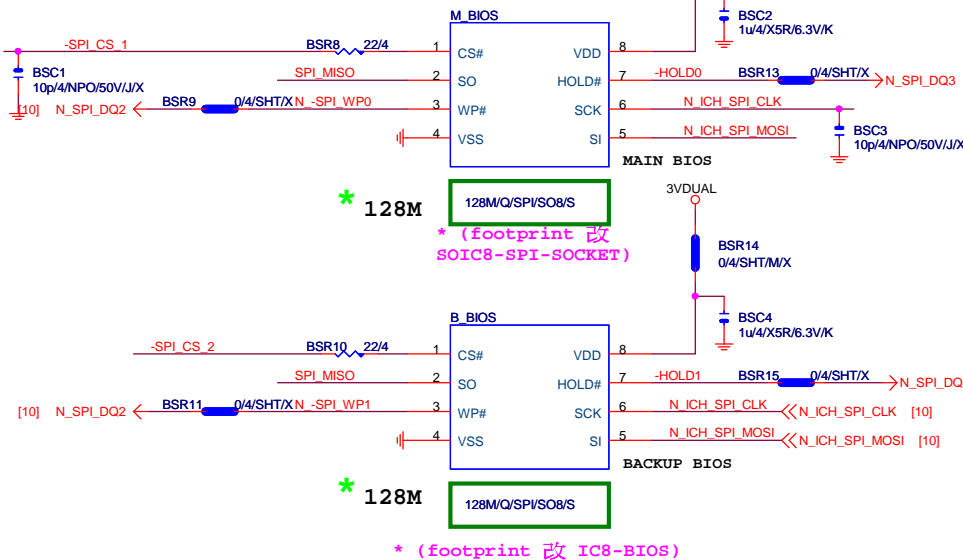


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ANSI 5679726			
Gigabyte Technology			
Title			
PCH PWR, GND			
Size			
Custom			
Document Number			
Z370 HD3P			
Date: Monday, September 04, 2017			
Sheet 15 of 63			
Rev 1.0			

MOSI For DMI RX Termination Voltage

[17] -SPI_HOLD_M ← -SPI_HOLD_M BSR16 1K/4/1
[17] -SPI_HOLD_B ← -SPI_HOLD_B BSR17 1K/4/1



```
1 means floating
0 means PD 1K
```

REV.2 CHECK
KBL & CBL BIOS, main & backup BIOS 要分2個料號

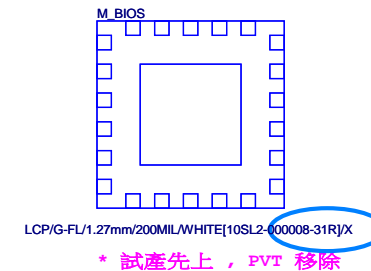
建立料號區分如下，請參考。

64MB ROM, 廠商MXIC

M_BIOS料號: 10HP4-112564-50R

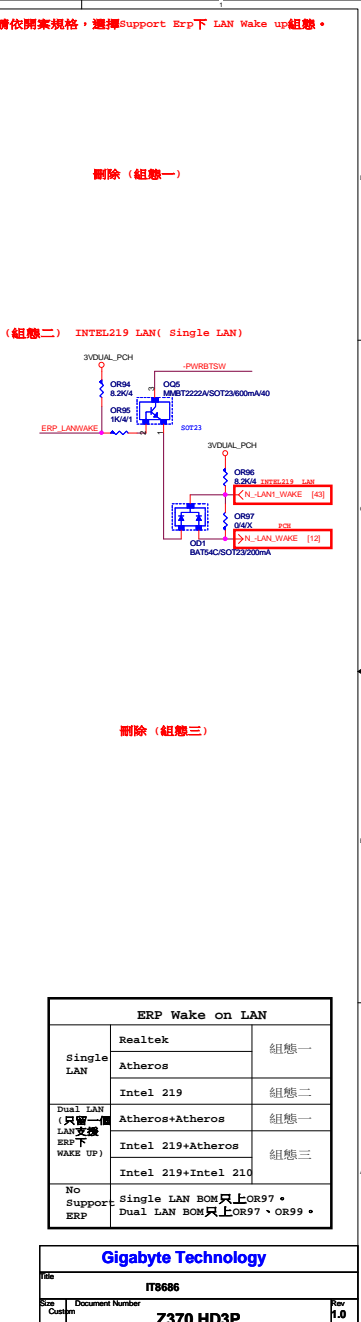
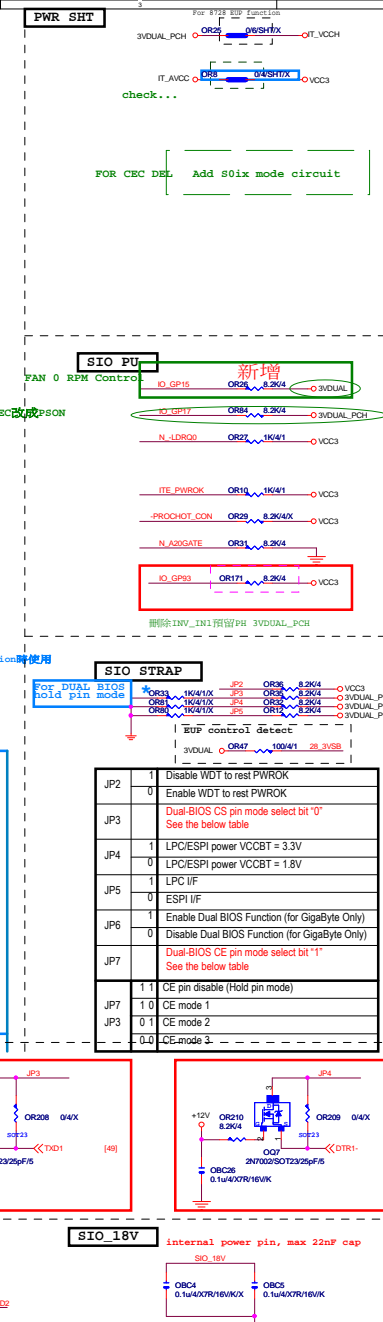
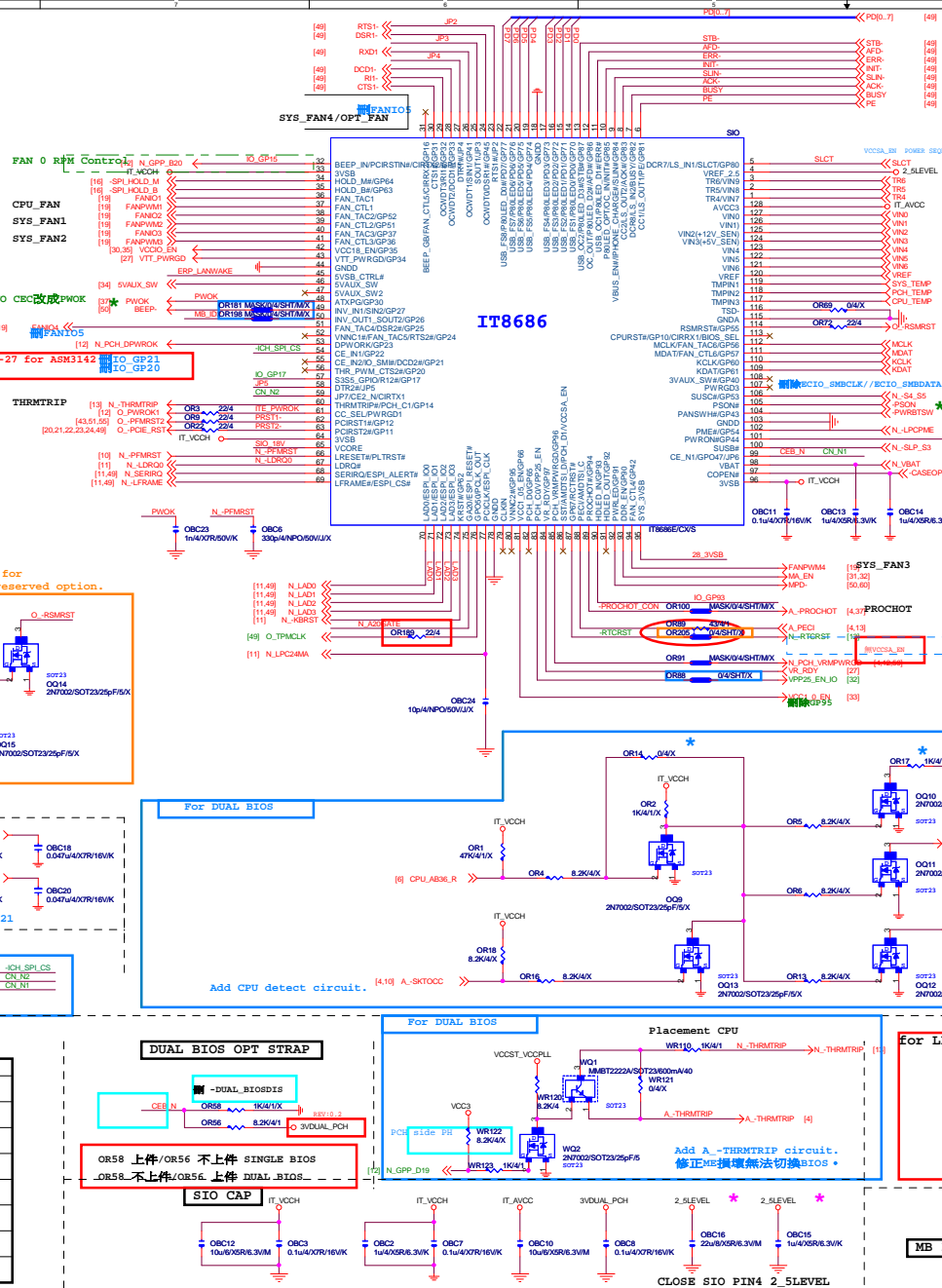
B_BIOS料號: 10HP4-112564-51R

REV10B
* 因為CFL-S CPU 6+2, 4+2 + 8國語言, 64Mb flash已無空間可預留給未來的升級空間
All Z370機種須改用128Mb flash (x2 for Dual BIOS)

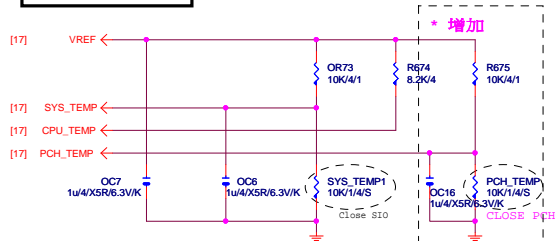


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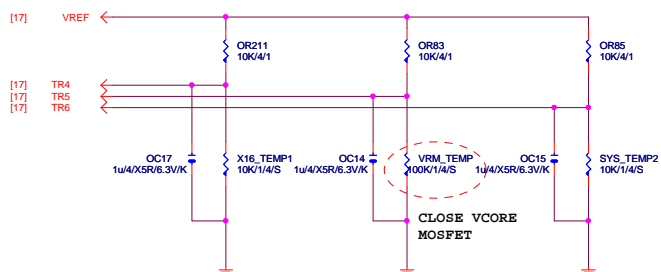
Title		BIOS	
Size Custom	Document Number	Z370 HD3P	Rev 1.0
Date:	Monday, September 04, 2017	Sheet	16 of 63



TEMP H/W MONITOR

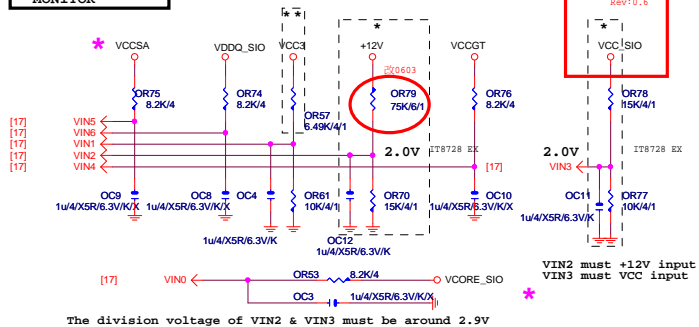


5個FAN時使用

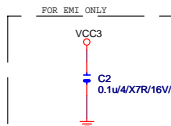
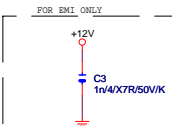
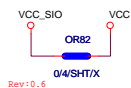


刪除 8個FAN時使用

VOLTAGE-- H/W MONITOR



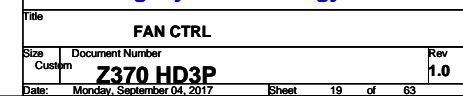
(靠近ATX CONNECTOR)



★Update 2015-04.24

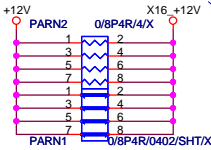
Gigabyte Technology

Title			HWM,KB/MS, FAN CTRL
Size	Document Number	Rev	
Custom	Z370 HD3P	1.0	
Date:	Monday, September 04, 2017	Sheet	18 of 63



Rev 0.2

+12V - protect
short-wire test



PCIESLOT-1648TH

3GIO_*16

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

PA_EXP_TXP0	PAC5	0.22u/4/X5R/6.3V/K	PA_EXP_TXP0 C
PA_EXP_TXN0	PAC4	0.22u/4/X5R/6.3V/K	PA_EXP_TXN0 C
PA_EXP_TXP1	PAC6	0.22u/4/X5R/6.3V/K	PA_EXP_TXP1 C
PA_EXP_TXN1	PAC7	0.22u/4/X5R/6.3V/K	PA_EXP_TXN1 C
PA_EXP_TXP2	PAC8	0.22u/4/X5R/6.3V/K	PA_EXP_TXP2 C
PA_EXP_TXN2	PAC9	0.22u/4/X5R/6.3V/K	PA_EXP_TXN2 C
PA_EXP_TXP3	PAC10	0.22u/4/X5R/6.3V/K	PA_EXP_TXP3 C
PA_EXP_TXN3	PAC11	0.22u/4/X5R/6.3V/K	PA_EXP_TXN3 C
PA_EXP_TXP4	PAC12	0.22u/4/X5R/6.3V/K	PA_EXP_TXP4 C
PA_EXP_TXN4	PAC13	0.22u/4/X5R/6.3V/K	PA_EXP_TXN4 C
PA_EXP_TXP5	PAC14	0.22u/4/X5R/6.3V/K	PA_EXP_TXP5 C
PA_EXP_TXN5	PAC15	0.22u/4/X5R/6.3V/K	PA_EXP_TXN5 C
PA_EXP_TXP6	PAC16	0.22u/4/X5R/6.3V/K	PA_EXP_TXP6 C
PA_EXP_TXN6	PAC17	0.22u/4/X5R/6.3V/K	PA_EXP_TXN6 C
PA_EXP_TXP7	PAC18	0.22u/4/X5R/6.3V/K	PA_EXP_TXP7 C
PA_EXP_TXN7	PAC19	0.22u/4/X5R/6.3V/K	PA_EXP_TXN7 C
PA_EXP_TXP8	PAC21	0.22u/4/X5R/6.3V/K	PA_EXP_TXP8 C
PA_EXP_TXN8	PAC20	0.22u/4/X5R/6.3V/K	PA_EXP_TXN8 C
PA_EXP_TXP9	PAC22	0.22u/4/X5R/6.3V/K	PA_EXP_TXP9 C
PA_EXP_TXN9	PAC23	0.22u/4/X5R/6.3V/K	PA_EXP_TXN9 C
PA_EXP_TXP10	PAC24	0.22u/4/X5R/6.3V/K	PA_EXP_TXP10 C
PA_EXP_TXN10	PAC25	0.22u/4/X5R/6.3V/K	PA_EXP_TXN10 C
PA_EXP_TXP11	PAC26	0.22u/4/X5R/6.3V/K	PA_EXP_TXP11 C
PA_EXP_TXN11	PAC27	0.22u/4/X5R/6.3V/K	PA_EXP_TXN11 C
PA_EXP_TXP12	PAC28	0.22u/4/X5R/6.3V/K	PA_EXP_TXP12 C
PA_EXP_TXN12	PAC29	0.22u/4/X5R/6.3V/K	PA_EXP_TXN12 C
PA_EXP_TXP13	PAC30	0.22u/4/X5R/6.3V/K	PA_EXP_TXP13 C
PA_EXP_TXN13	PAC31	0.22u/4/X5R/6.3V/K	PA_EXP_TXN13 C
PA_EXP_TXP14	PAC32	0.22u/4/X5R/6.3V/K	PA_EXP_TXP14 C
PA_EXP_TXN14	PAC33	0.22u/4/X5R/6.3V/K	PA_EXP_TXN14 C
PA_EXP_TXP15	PAC34	0.22u/4/X5R/6.3V/K	PA_EXP_TXP15 C
PA_EXP_TXN15	PAC35	0.22u/4/X5R/6.3V/K	PA_EXP_TXN15 C

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PCIEX16:16/5/5/5/16

PCI-E REV:1.1--> 2.5GHZ

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

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

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

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

PCI-E REV:2.0--> 5GHZ

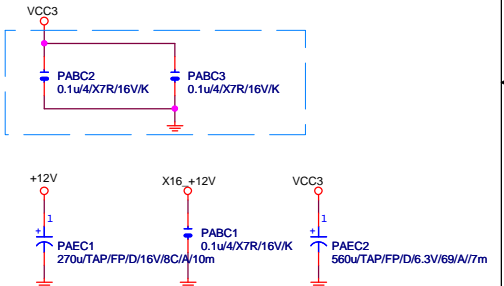
PCE-E X1(單向) BANDWIDTH=5GHz*(8b/10b)=4Gb/s=500MB/s

PCI-E REV:3.0--> 8GHZ

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

PCI-E16X-164P/GY/LONG DOUBLE/HK*2/SHELL(11AC1-02316-G1R)

深灰色金屬加強

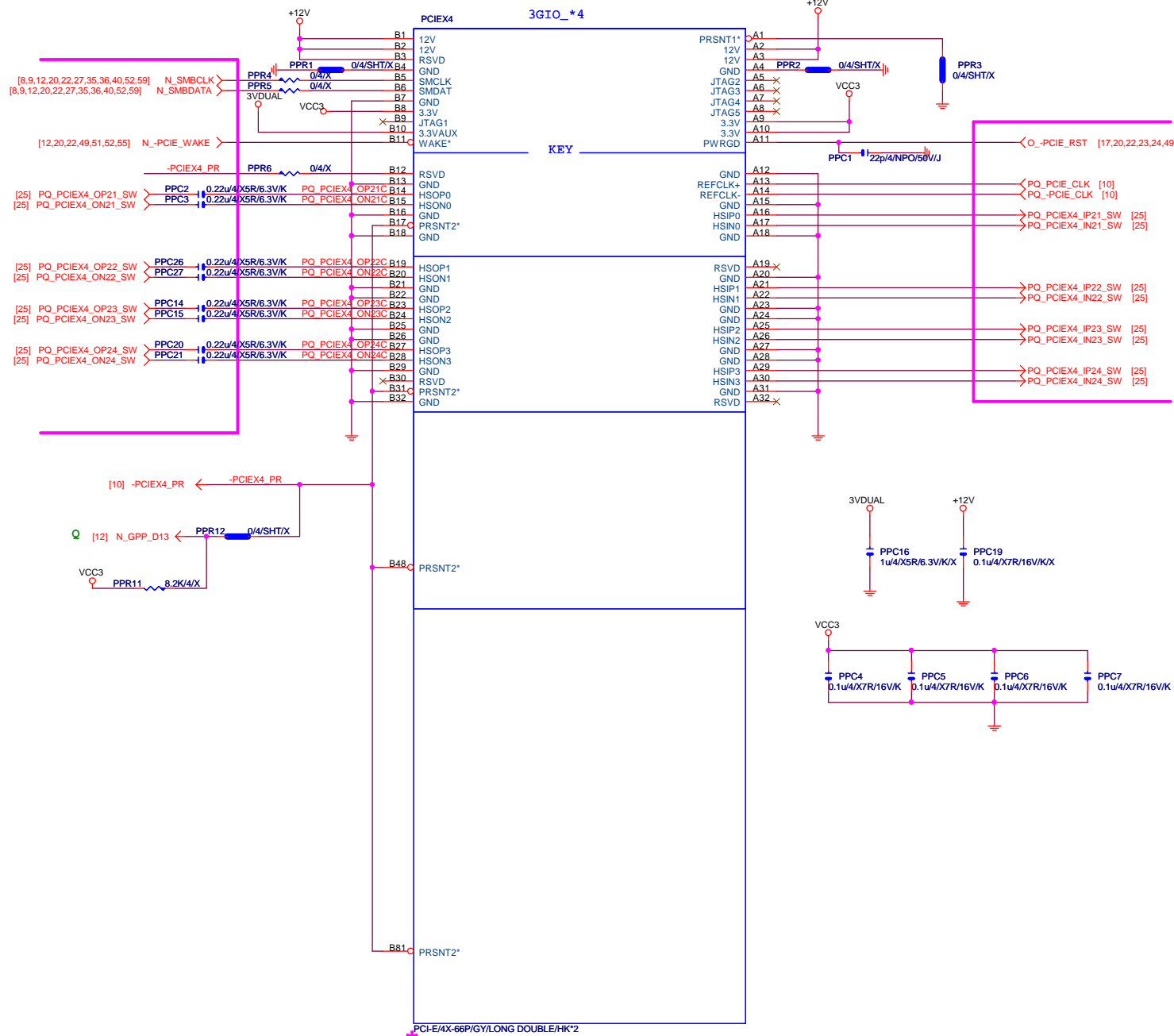


Gigabyte Technology		
Title PCI EXPRESS * 16		
Size Custom	Document Number Z370 HD3P	Rev 1.0
Date Monday, September 04, 2017	Sheet 20	of 63

Rev 0.51

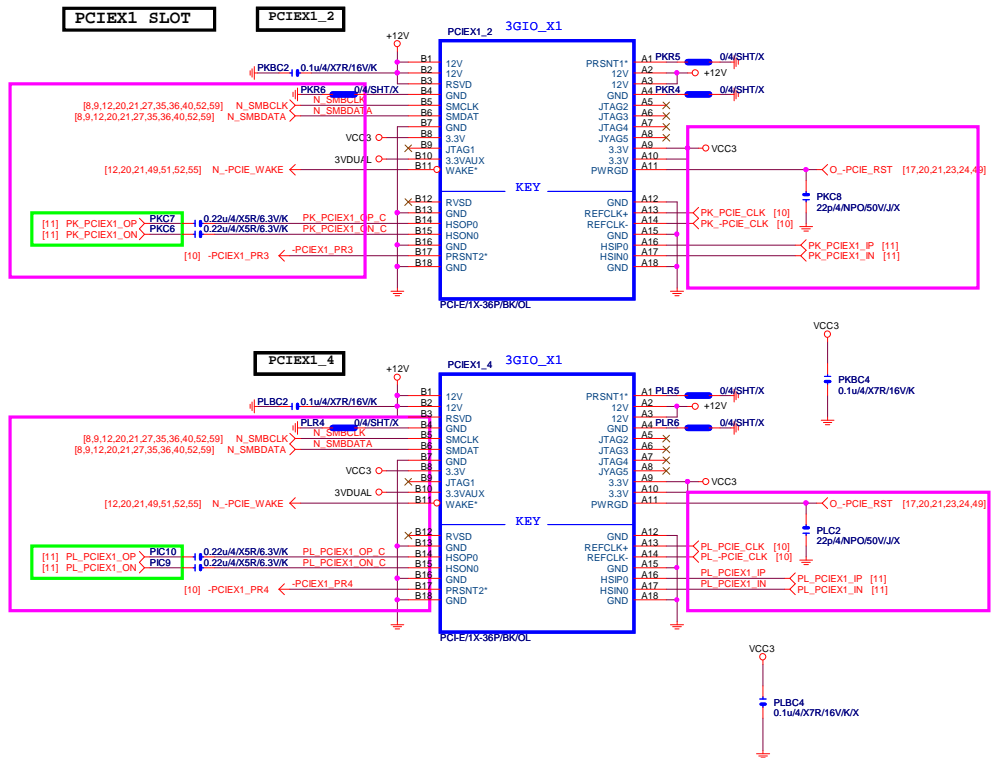
PCIE*4

Footprint "PCIESLOT-64STH-1"

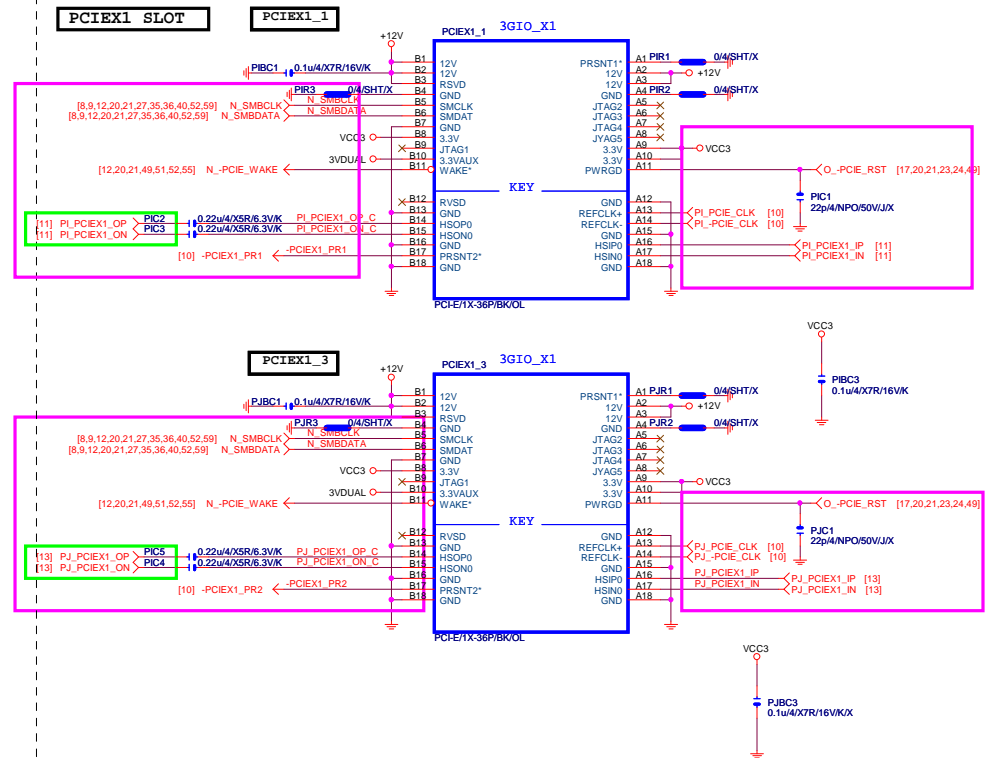


灰色(預留金屬加強,不上)
11AC1-023065-51R:

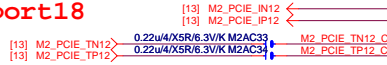
Gigabyte Technology			
Title	PCIE_X4		
Size	Document Number	Rev	
Custom	Z370 HD3P	1.0	
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4各x1 ,不用SWITCH



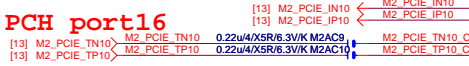
M.2 Lane4 from PCH port18



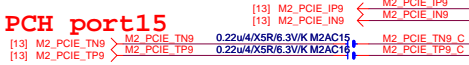
M.2 Lane3 from PCH port17



M.2 Lane2 from PCH port16

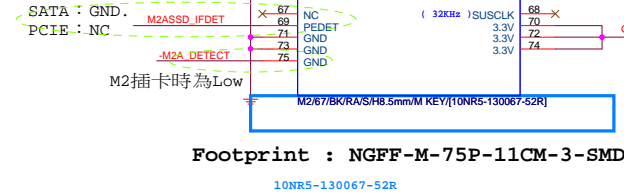
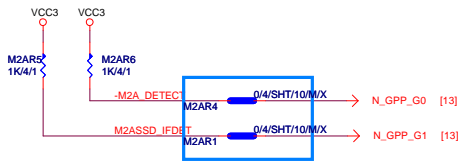


M.2 Lane2 from PCH port15



需與M2_-CLKREQ對應

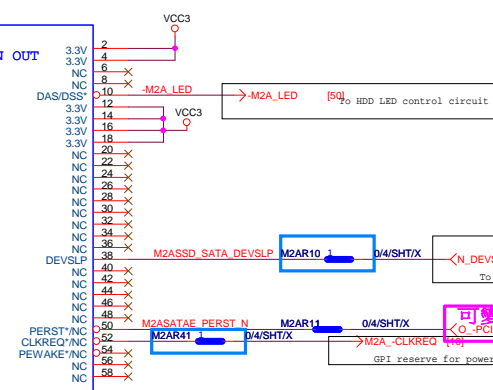
支援SATA and M.2 function



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

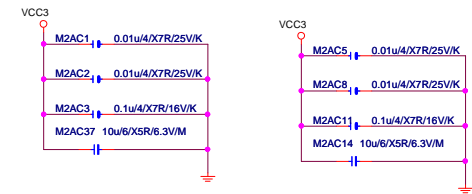
10NR5-130067-52R

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

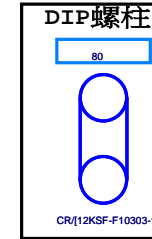


Footprint : NGFF-M-75P-11CM-3-SMD

10NR5-130067-52R

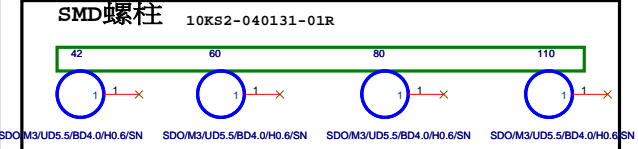


DIP螺絲



DIP螺絲

刪除SMD螺柱文字面 "A", 不要show 出在PCB文字面上



* Footprint : HOLE_C236D165-A

Gigabyte Technology

Title	M.2 X4		
Size	Document Number	Rev	
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Rev 0.2

M.2 Lane4 from PCH port24

M.2 Lane3 from PCH port23

M.2 Lane2 from PCH port22

M.2 Lane2 from PCH port21

支援SATA and M.2 function

需與M2_-CLKREQ對應

DIP螺柱

架高

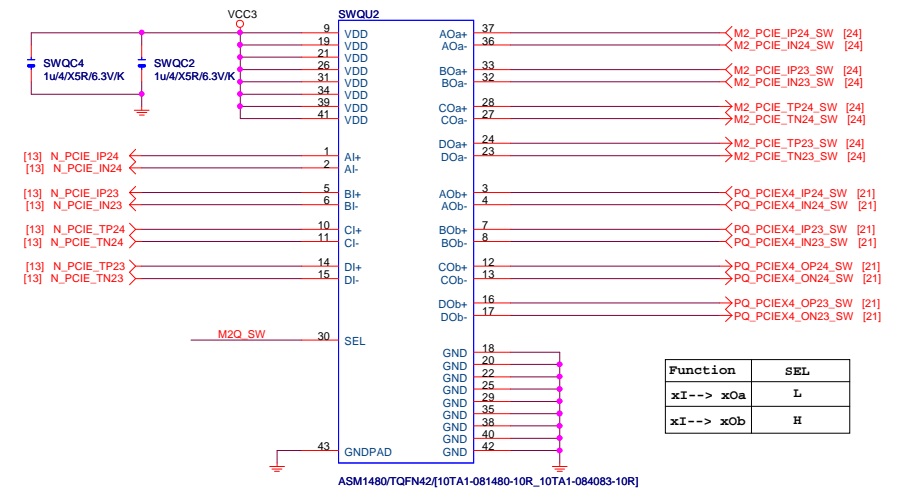
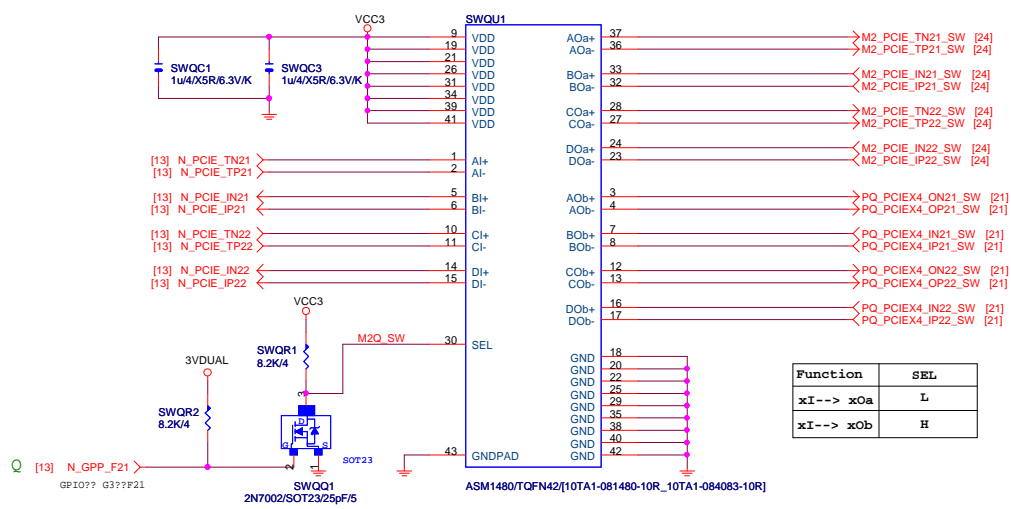
DIP螺絲

SMD螺柱文字面 "Q", 不要show 出在PCB文字面上

SMD螺柱

Gigabyte Technology

Title M.2 X4 (P)
Size Custom Document Number Z370 AORUS Gaming 7 Rev 1.0
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Flex IO priority	M2Q_32G N_GPP_F19	M2Q_32G N_GPP_F20	PCIEX4 N_GPP_D13	PCH N_GPP_F21
PCIEx4 only	NA	X	L	L
M2Q_32G + PCIEX4 (M2Q_32G ONLY)	L	X	L	H
M.2x4 only_PCIE mode	L	X	NA	H

Remark : (X=Don't Care) #M.2_Det #PCIEX4_Det
Remark : (NA=不上)

6. PCIe4 switch with M.2x4 (2選1)																									
Model Name					H270-HD3 1.0					H270-HD3		M.2 / PCIe4		GPI		GPO		P24		P23		P22		P21	
IO30		P24		X4	X2	IRST	x4 slot (7th) switch with X4 2280 M.2 (2選1)					N_GPP_F19		N_GPP_F20		N_GPP_D13									
IO29		P23										1		0		0									
IO28		P22										0		X		1									
IO27		P21																							
												Remark : (X=Don't Care)		#M.2_Det		#PCIEX4_Det									

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Gigabyte Technology

PCIEX4 S0~S1 SWITCH

Title

Size

Customer

Date

Document Number

Monday, September 04, 2017

Rev

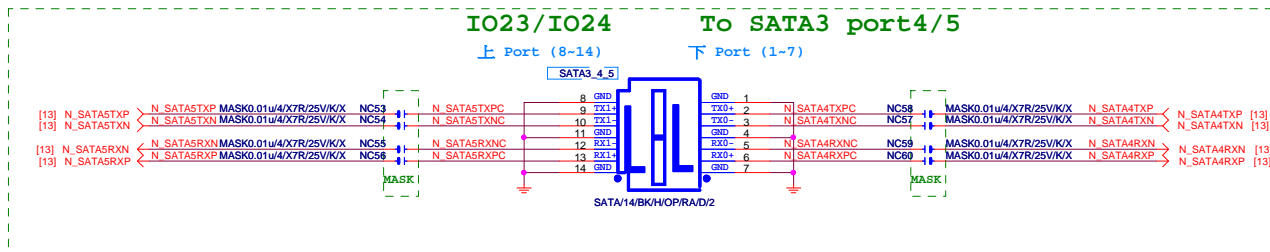
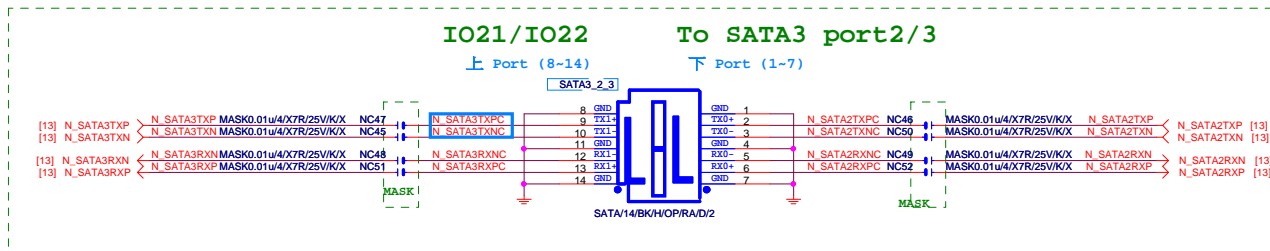
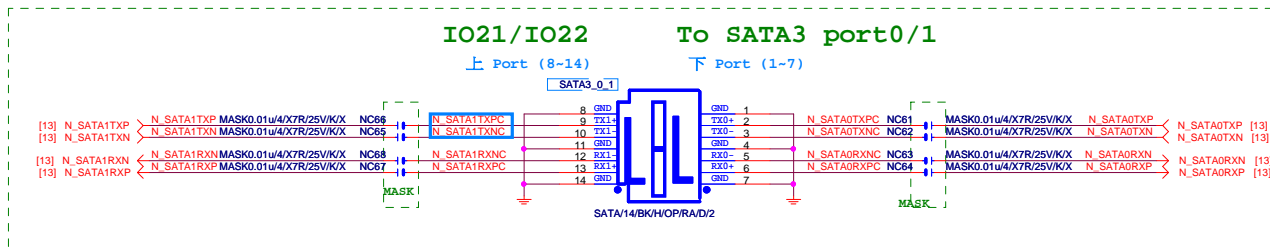
1.0

Sheet

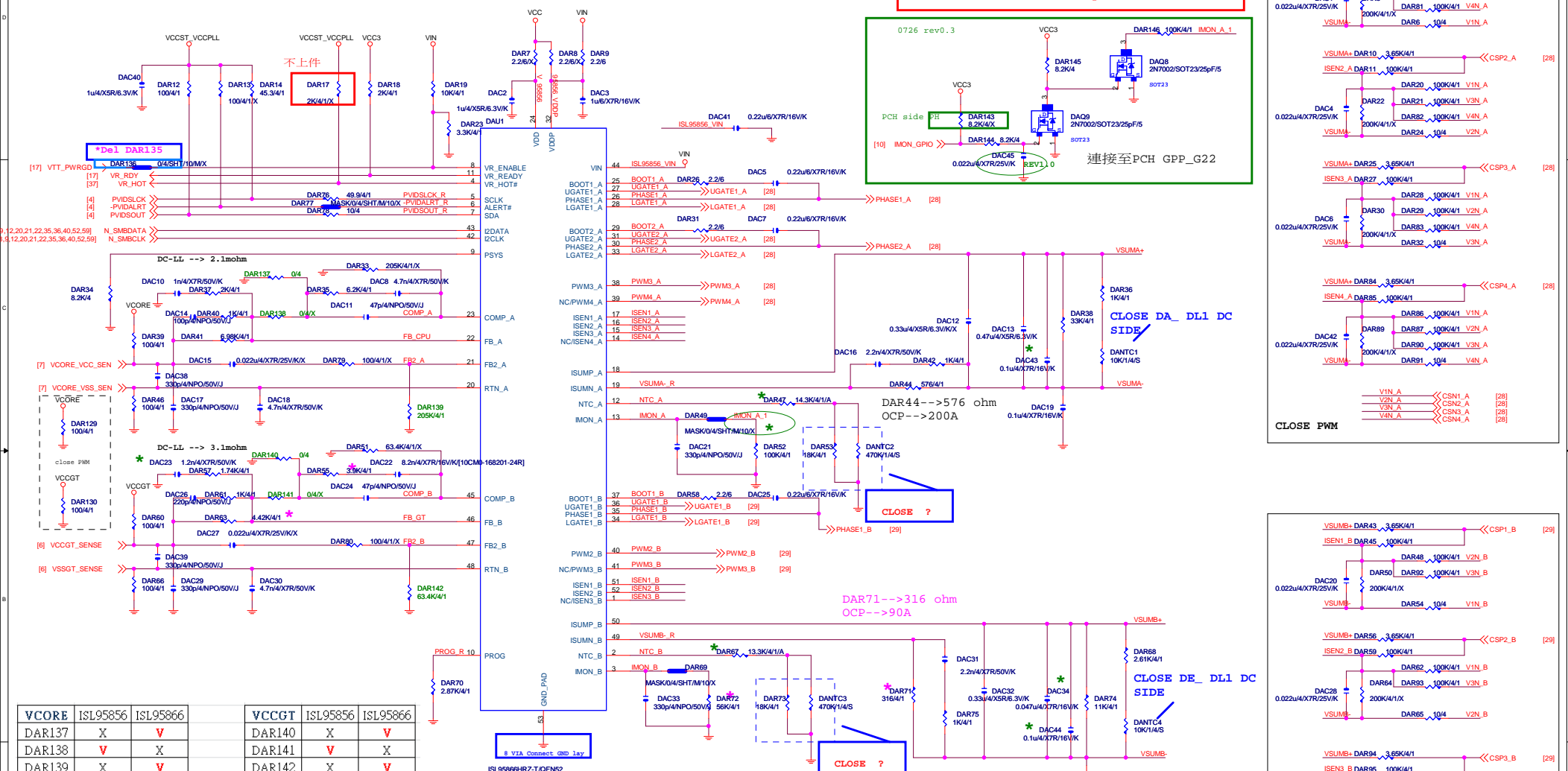
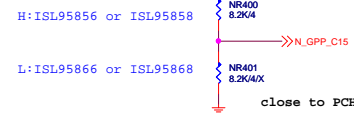
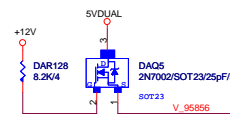
25

of

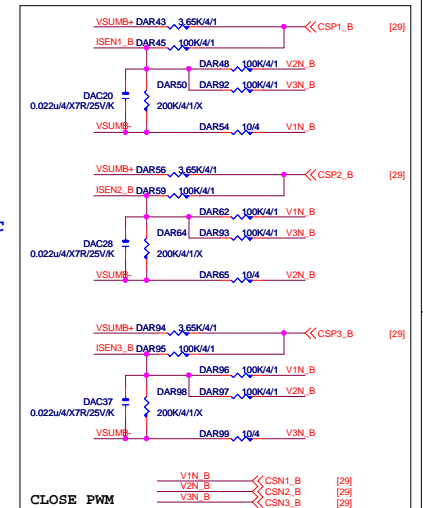
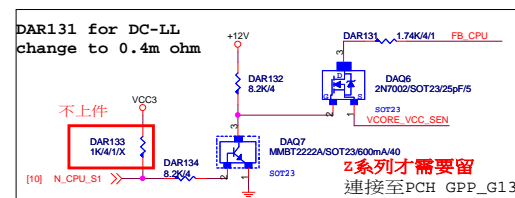
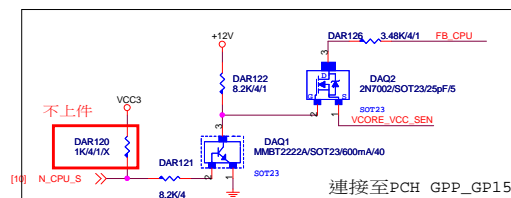
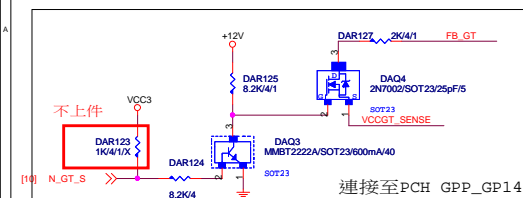
63



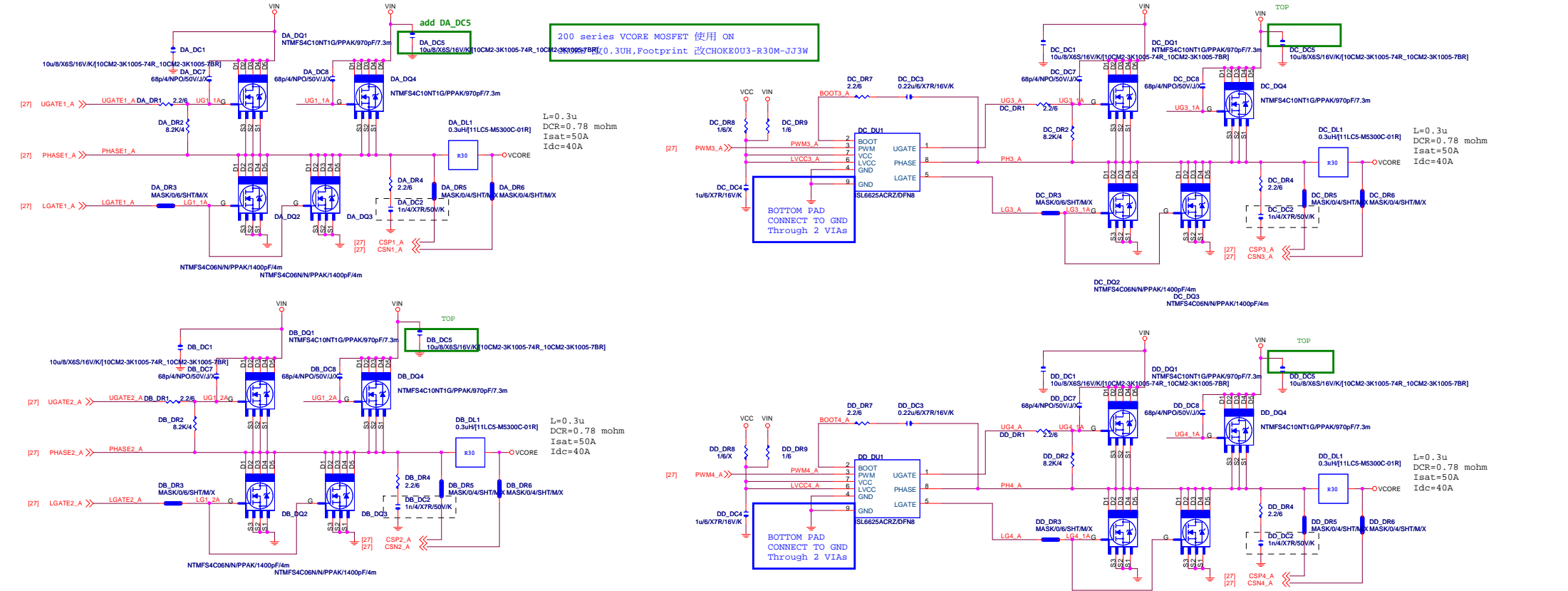
SATA 5 (文字面寫SATA 1)
 SATA 4 (文字面寫SATA 0)
 SATA 3
 SATA 2
 SATA 1 (文字面寫SATA 5)
 SATA 0 (文字面寫SATA 4)



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

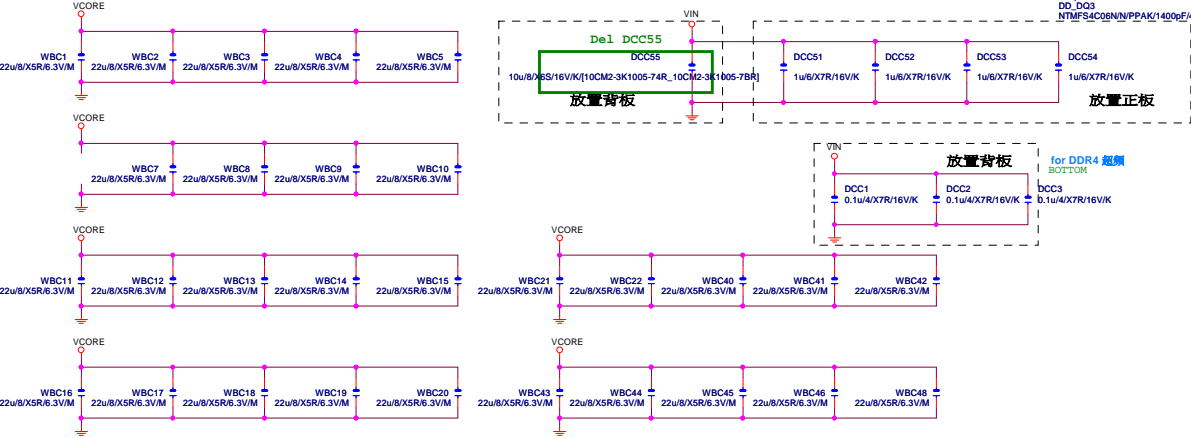
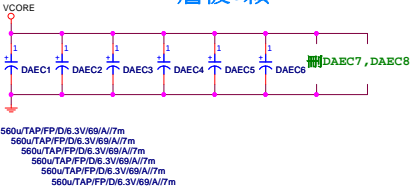


VCORE

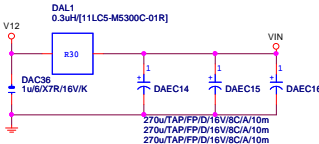


VCORE CAP

560u*6PCS
22u*29PCS
4層板6顆



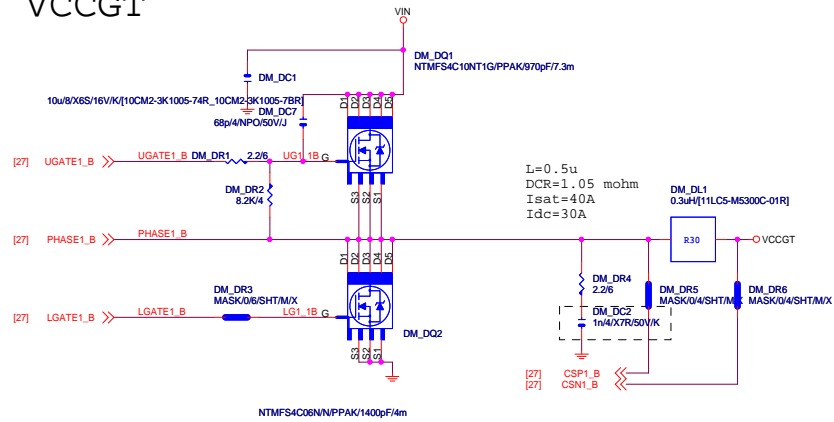
VIN CAP 270u*3PCS



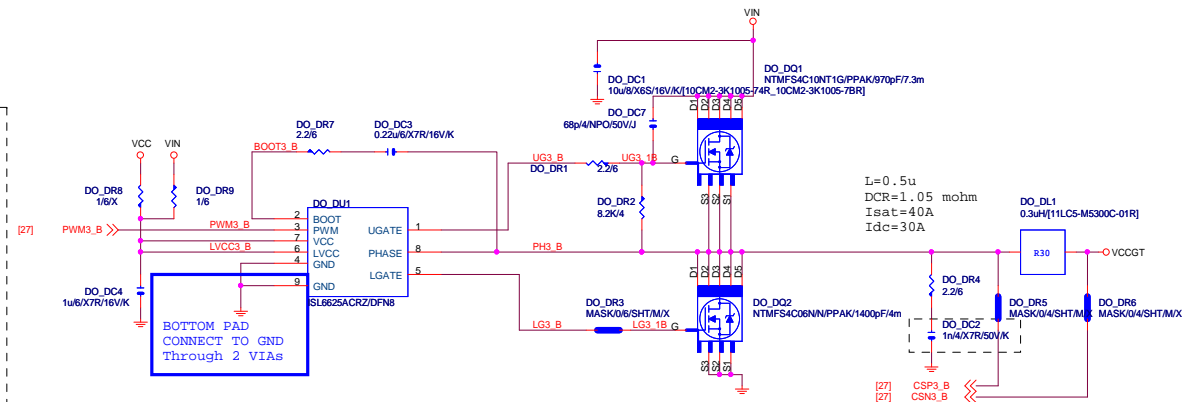
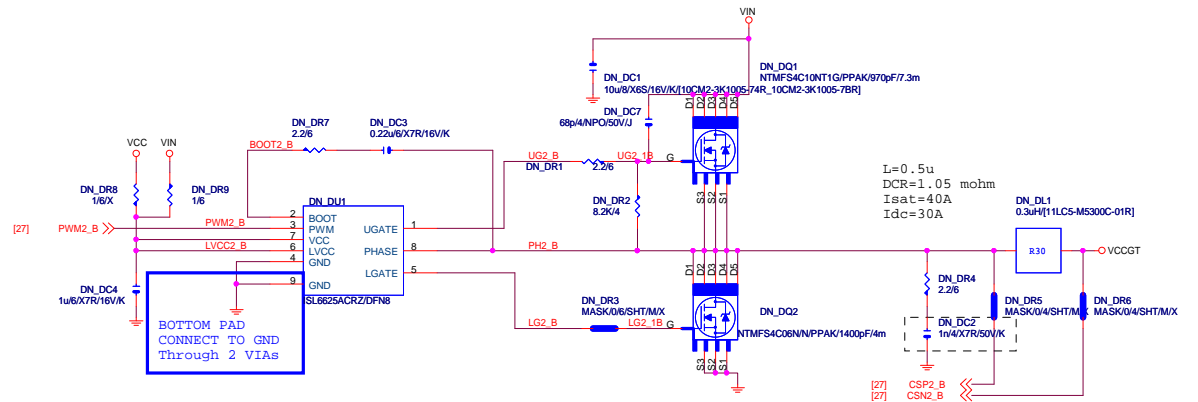
GIGABYTE

Title		
ISL95866 MOS		
Size	Document Number	Rev
Custom	Z370 HD3P	1.0
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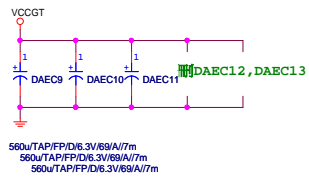
VCCGT




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VCCGT CAP 560u*5PCS
22u*15PCS
4層板3顆



			
Title			
ISL95866_MOS			
Size	Document Number		Rev
Custom	Z370 HD3P		1.0
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REV:0.22

SMD Molding(合金)
10LC4-15100B-01R CORE 1.0uH 15A
TAI-TECH SMD TMPA0603S-1R0MN-D
DCR=6.7m

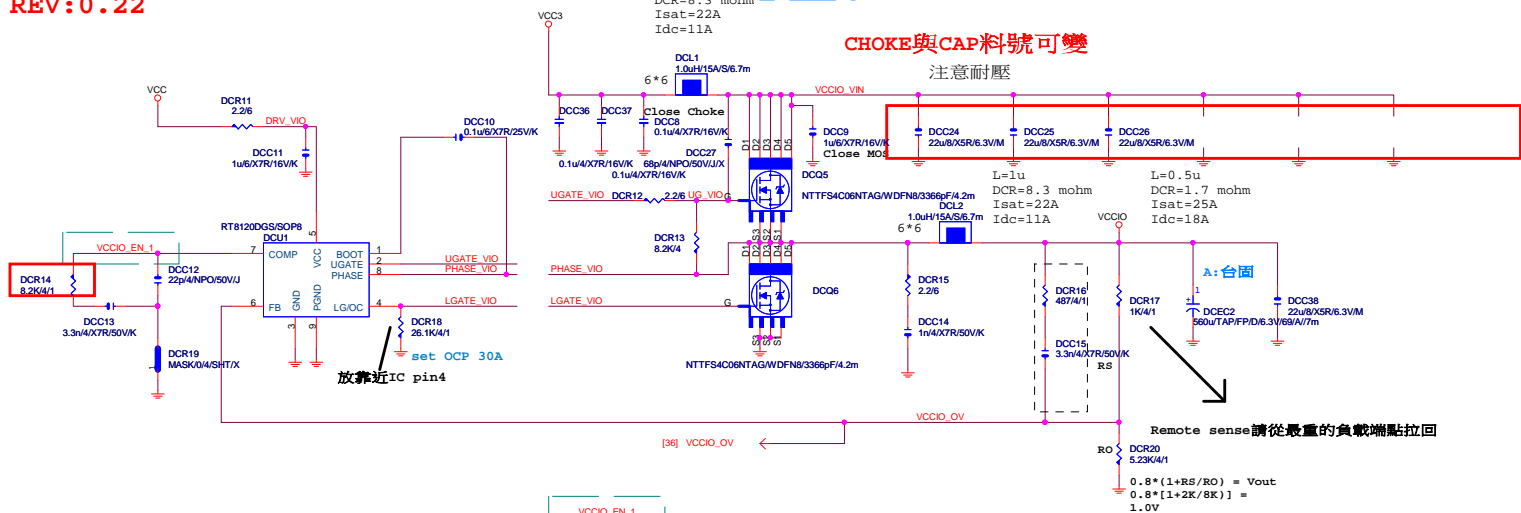
VCCSA_VCCIO-IRON-Z系列 & VPP25 改合金CHOKE...改回上15A

CHOK-合金

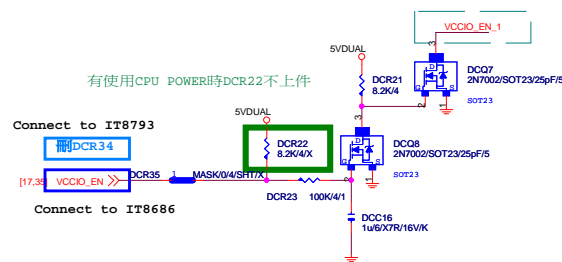
```
L=1u
DCR=8.3 mohm
Isat=22A
Idc=11A
```

CHOKES與CAP料號可變

注意耐壓

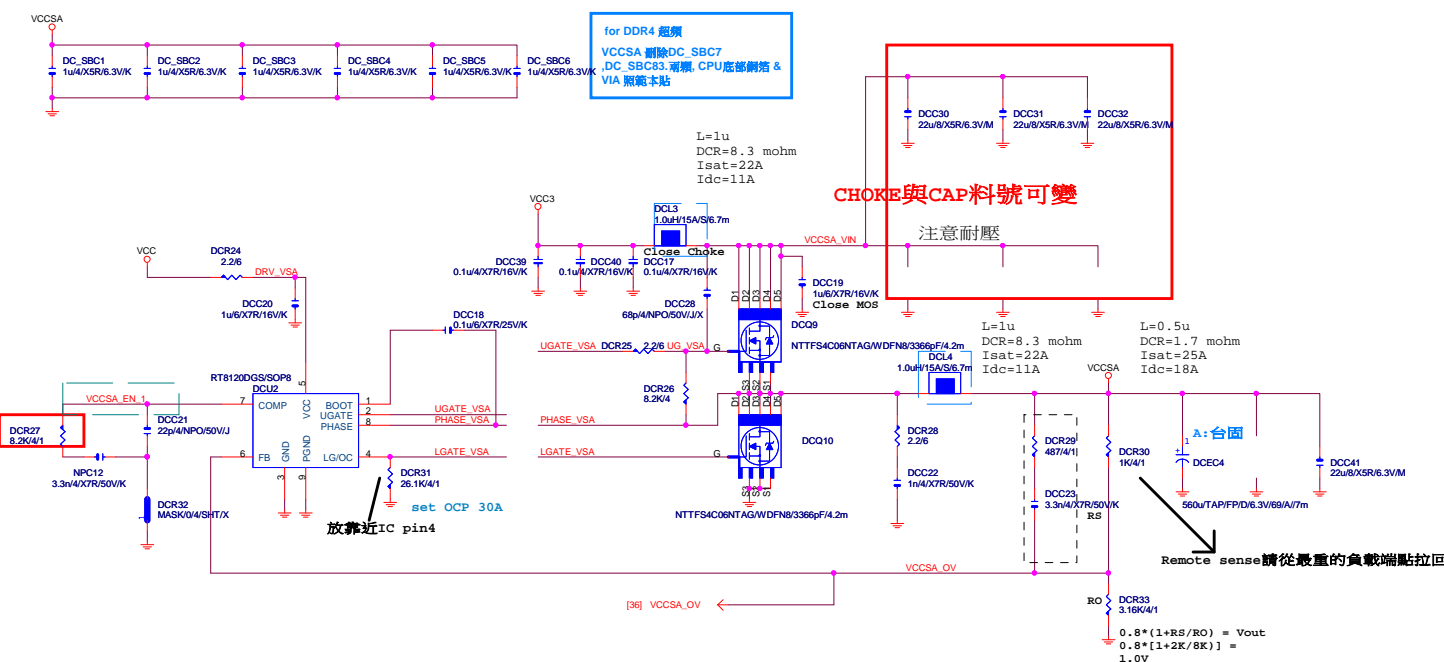
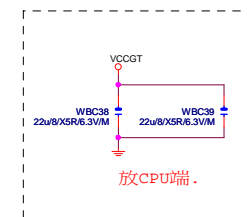


有使用CPU POWER時DCR22不上件

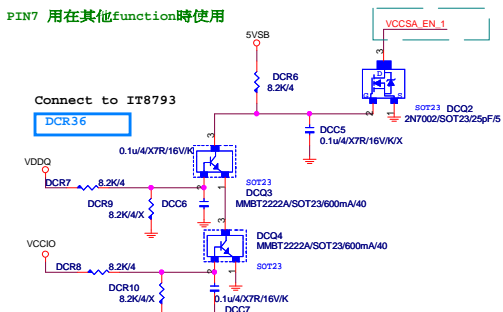


CHOKE
FOOTPRINT:CHOKE6X6mm_SM
1.0uH/22A/S/10m
DCL1,DCL2,DCL3,DCL4

電容 A:台固
560u/FP/D/6.3V/69/A/11m
DCEC2,DCEC4

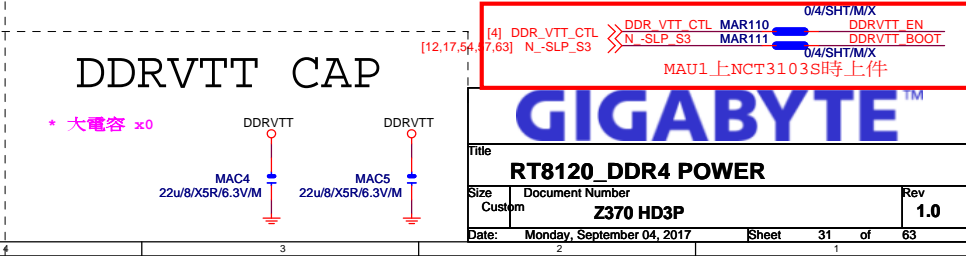
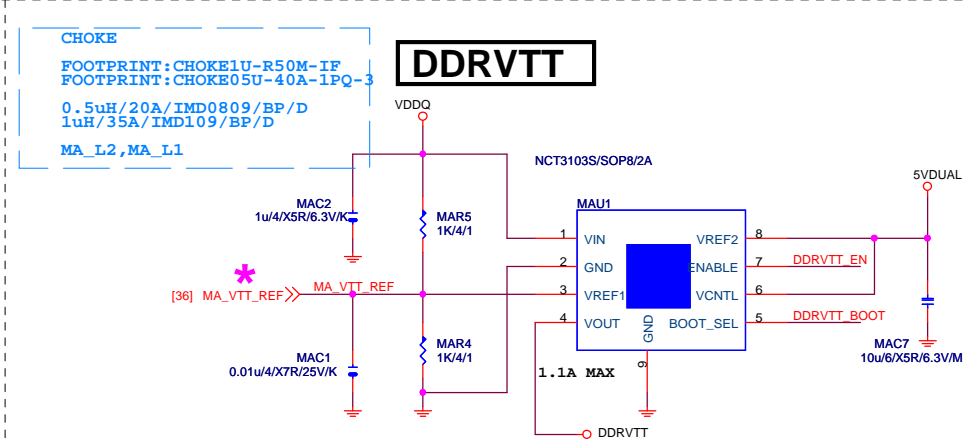
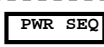


SIO PIN5 . PIN7 用在其他function時使用



刪除 SIO PIN5接VDDQ . PIN7接VCCIO .時使用

DDR4



REV:0.3

SMD Molding(合金)
10LC4-15100B-01R CORE 1.0uH 15A
TAI-TECH SMD TMPA0603S-1R0MN-D
DCR=6.7m

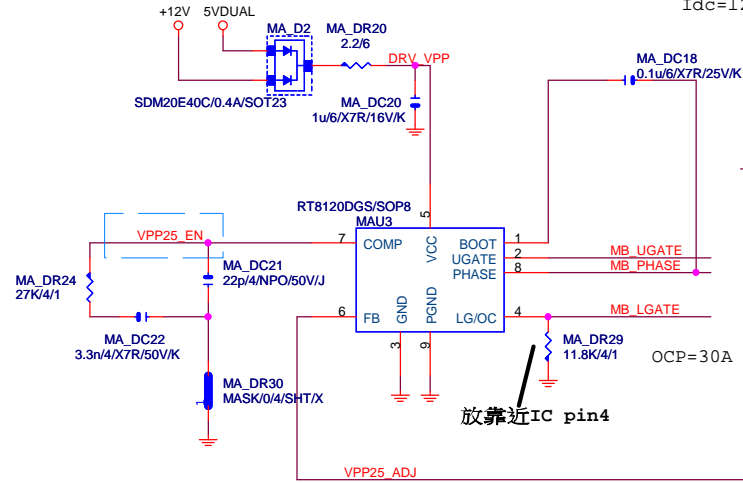
CHOKE-合金

4. VPP_25V CHOKE footprint 改CHOKE6X6mm_SMD-1

CHOKE與CAP料號可變

VPP_25V

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



L=1u

DCR=6.7 mohm

Isat=15A

Idc=12A

MA_DC18

0.1u/6/X7R/25V/K

MA_DR20

2.2/6

MA_DC20

1u/6/X7R/16V/K

MA_DR24

27K/4/1

MA_DC22

3.3n/4/X7R/50V/K

MA_DR30

MASK/0/4/SHT/X

MA_DC21

22p/4/NPO/50V/J

MA_DR29

11.8K/4/1

MA_DR25

2.2/6

MA_DR26

487/4/1

MA_DR27

4.02K/4/1

MA_DR31

1.87K/4/1

MA_DC23

1n/4/X7R/50V/K

MA_DC24

3.3n/4/X7R/50V/K

MA_DC19

1u/6/X7R/16V/K

MA_DQ4

NTTFS4C06NTAG/WDFN8/3366pF/4.2m

MA_DQ5

NTTFS4C06NTAG/WDFN8/3366pF/4.2m

MA_DQ6

NTTFS4C06NTAG/WDFN8/3366pF/4.2m

MA_DQ7

2N7002/SOT23/25pF/5

MA_DQ8

2N7002/SOT23/25pF/5

MA_DQ9

2N7002/SOT23/25pF/5/X

MA_DQ10

1u/4/X5R/6.3V/K/X

MA_DQ11

1u/4/X5R/6.3V/K/X

MA_DQ12

560u/TAP/FP/D/6.3V/69/A/7m

MA_DQ13

1u/4/X7R/16V/K

MA_DQ14

1u/4/X7R/16V/K

MA_DQ15

1u/4/X7R/16V/K

MA_DQ16

1u/4/X7R/16V/K

MA_DQ17

1u/4/X7R/16V/K

MA_DQ18

1u/4/X7R/16V/K

MA_DQ19

1u/4/X7R/16V/K

MA_DQ20

1u/4/X7R/16V/K

MA_DQ21

1u/4/X7R/16V/K

MA_DQ22

1u/4/X7R/16V/K

MA_DQ23

1u/4/X7R/16V/K

MA_DQ24

1u/4/X7R/16V/K

MA_DQ25

1u/4/X7R/16V/K

MA_DQ26

1u/4/X7R/16V/K

MA_DQ27

1u/4/X7R/16V/K

MA_DQ28

1u/4/X7R/16V/K

MA_DQ29

1u/4/X7R/16V/K

MA_DQ30

1u/4/X7R/16V/K

MA_DQ31

1u/4/X7R/16V/K

MA_DQ32

1u/4/X7R/16V/K

MA_DQ33

1u/4/X7R/16V/K

MA_DQ34

1u/4/X7R/16V/K

MA_DQ35

1u/4/X7R/16V/K

MA_DQ36

1u/4/X7R/16V/K

MA_DQ37

1u/4/X7R/16V/K

MA_DQ38

1u/4/X7R/16V/K

MA_DQ39

1u/4/X7R/16V/K

MA_DQ40

1u/4/X7R/16V/K

MA_DQ41

1u/4/X7R/16V/K

MA_DQ42

1u/4/X7R/16V/K

MA_DQ43

1u/4/X7R/16V/K

MA_DQ44

1u/4/X7R/16V/K

MA_DQ45

1u/4/X7R/16V/K

MA_DQ46

1u/4/X7R/16V/K

MA_DQ47

1u/4/X7R/16V/K

MA_DQ48

1u/4/X7R/16V/K

MA_DQ49

1u/4/X7R/16V/K

MA_DQ50

1u/4/X7R/16V/K

MA_DQ51

1u/4/X7R/16V/K

MA_DQ52

1u/4/X7R/16V/K

MA_DQ53

1u/4/X7R/16V/K

MA_DQ54

1u/4/X7R/16V/K

MA_DQ55

1u/4/X7R/16V/K

MA_DQ56

1u/4/X7R/16V/K

MA_DQ57

1u/4/X7R/16V/K

MA_DQ58

1u/4/X7R/16V/K

MA_DQ59

1u/4/X7R/16V/K

MA_DQ60

1u/4/X7R/16V/K

MA_DQ61

1u/4/X7R/16V/K

MA_DQ62

1u/4/X7R/16V/K

MA_DQ63

1u/4/X7R/16V/K

MA_DQ64

1u/4/X7R/16V/K

MA_DQ65

1u/4/X7R/16V/K

MA_DQ66

1u/4/X7R/16V/K

MA_DQ67

1u/4/X7R/16V/K

MA_DQ68

1u/4/X7R/16V/K

MA_DQ69

1u/4/X7R/16V/K

MA_DQ70

1u/4/X7R/16V/K

MA_DQ71

1u/4/X7R/16V/K

MA_DQ72

1u/4/X7R/16V/K

MA_DQ73

1u/4/X7R/16V/K

MA_DQ74

1u/4/X7R/16V/K

MA_DQ75

1u/4/X7R/16V/K

MA_DQ76

1u/4/X7R/16V/K

MA_DQ77

1u/4/X7R/16V/K

MA_DQ78

1u/4/X7R/16V/K

MA_DQ79

1u/4/X7R/16V/K

MA_DQ80

1u/4/X7R/16V/K

MA_DQ81

1u/4/X7R/16V/K

MA_DQ82

1u/4/X7R/16V/K

MA_DQ83

1u/4/X7R/16V/K

MA_DQ84

1u/4/X7R/16V/K

MA_DQ85

1u/4/X7R/16V/K

MA_DQ86

1u/4/X7R/16V/K

MA_DQ87

1u/4/X7R/16V/K

MA_DQ88

1u/4/X7R/16V/K

MA_DQ89

1u/4/X7R/16V/K

MA_DQ90

1u/4/X7R/16V/K

MA_DQ91

1u/4/X7R/16V/K

MA_DQ92

1u/4/X7R/16V/K

MA_DQ93

1u/4/X7R/16V/K

MA_DQ94

1u/4/X7R/16V/K

MA_DQ95

1u/4/X7R/16V/K

MA_DQ96

1u/4/X7R/16V/K

MA_DQ97

1u/4/X7R/16V/K

MA_DQ98

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MA_DQ99

1u/4/X7R/16V/K

MA_DQ100

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MA_DQ103

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MA_DQ104

1u/4/X7R/16V/K

MA_DQ105

1u/4/X7R/16V/K

MA_DQ106

1u/4/X7R/16V/K

MA_DQ107

1u/4/X7R/16V/K

MA_DQ108

1u/4/X7R/16V/K

REV:0.3

L=0.5u
DCR=2.1 mohm
Isat=20A
Idc=15A

CHOKE與CAP料號可變

A : 全台系固態

注意耐壓16V
注意耐壓

L=1u
DCR=3.2 mohm
Isat=18A
Idc=15A

黑色閃電料號:

A : 全台系固態

Remote sense請從最重的負載端點拉回

$$0.8 * (1 + RS / RO) = V_{out}$$

$$0.8 * [1 + 2K / (8K)] = 1.0V$$

CHOKe

FOOTPRINT: CHOKE1U-R50M-IF
0.5uH/20A/IMD0809/BP/D
1uH/18A/IMD0809/BP/D
NPL1, NPEC1

CHECK..

電容

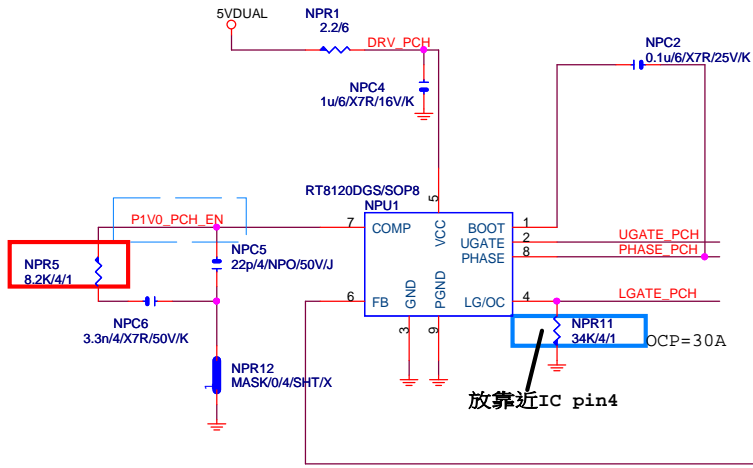
560u/FP/D/6.3V/69/A/11

NPEC1

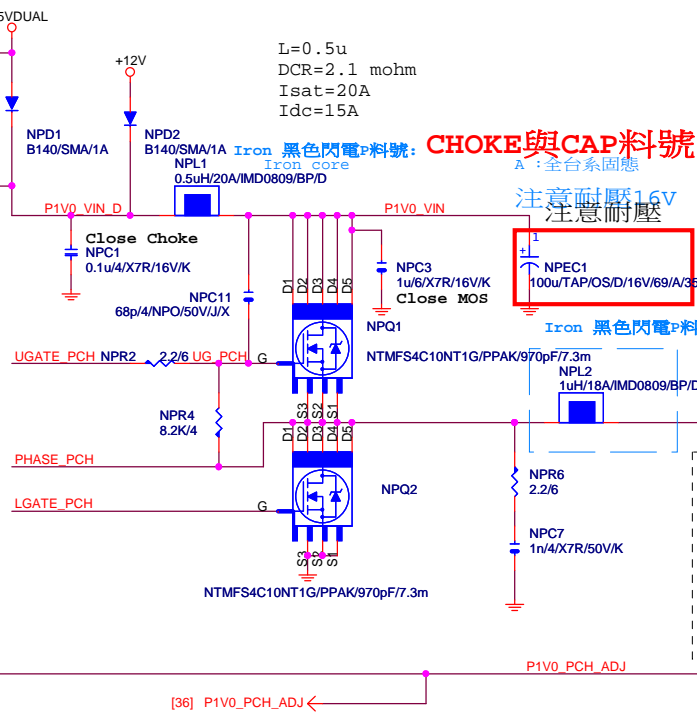
GIGABYTE™

RT8120_PCH POWER

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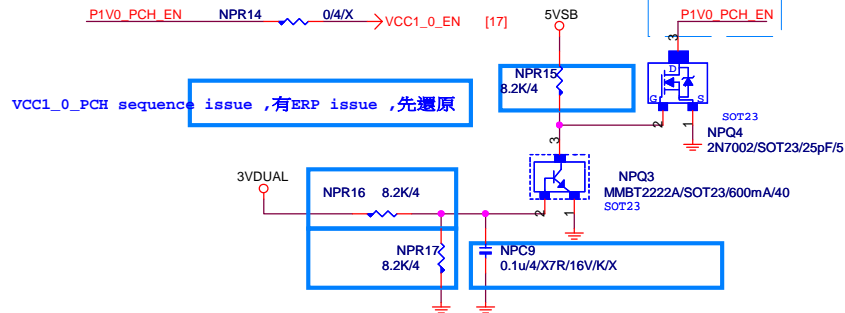


放靠近IC pin4



[36] P1V0_PCH_ADJ

PWR_SEQ



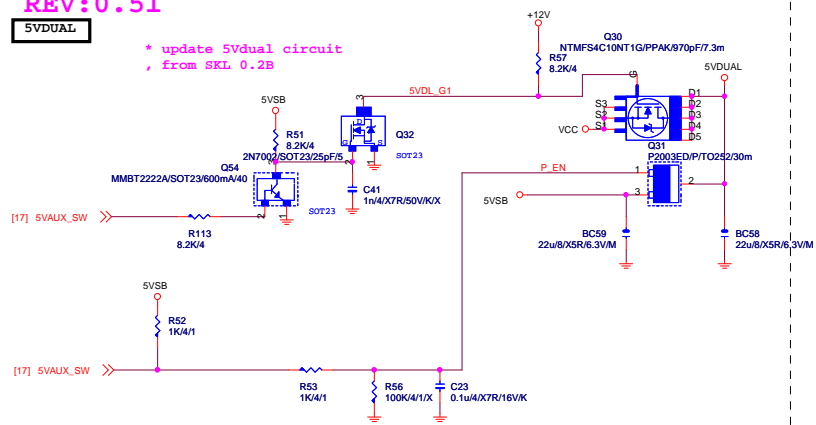
VCC1_0_PCH sequence issue ,有ERP issue ,先還原

請放置CHOKe一出來的地方

REV:0.51

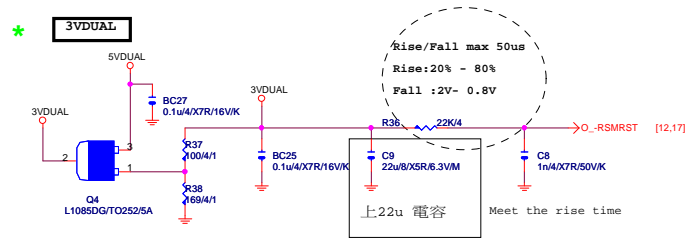
5VDUAL

* update 5Vdual circuit
from SKL 0.2B

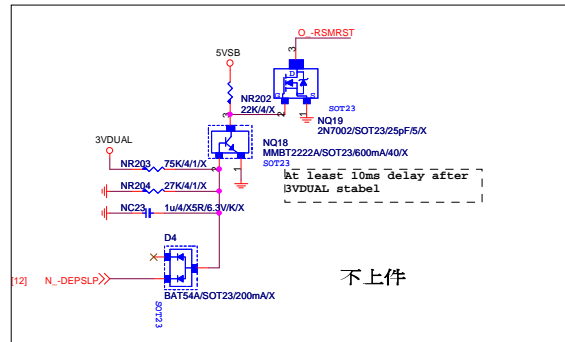
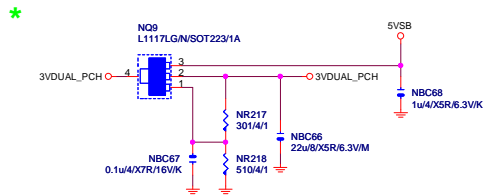


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3VDUAL



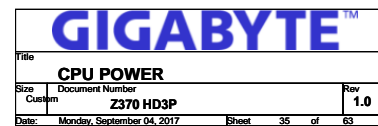
3VDUAL_PCH



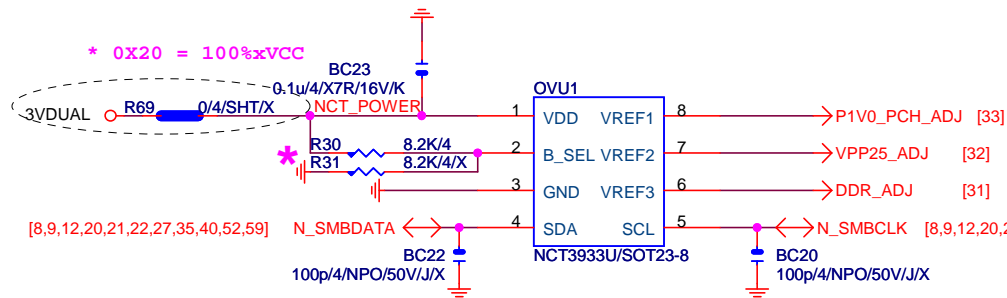
不上件

Gigabyte Technology

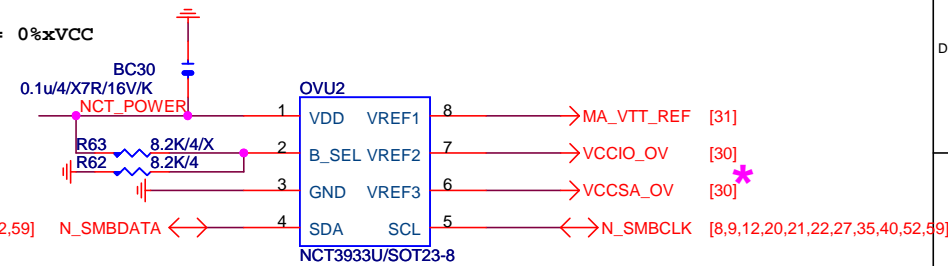
Title			
DISCRETE POWER			
Size	Custom	Document Number	Rev
		Z370 HD3P	1.0
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OVER VOLTAGE



0X2A = 0%xVCC

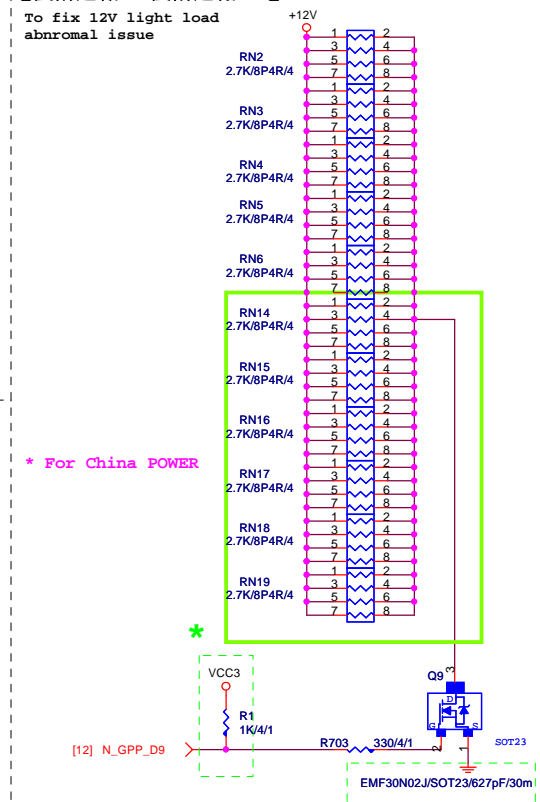
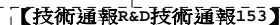
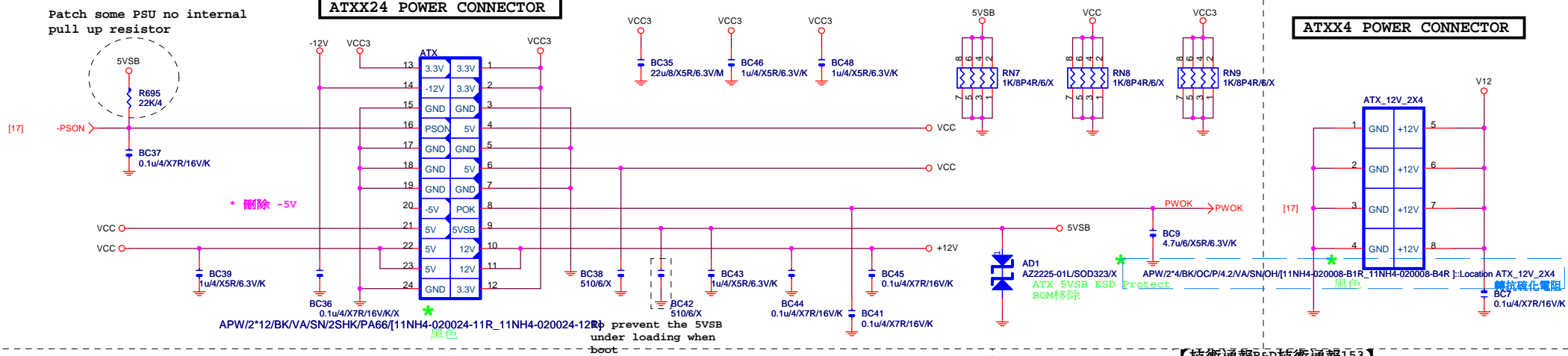


0X22 = 75%xVCC

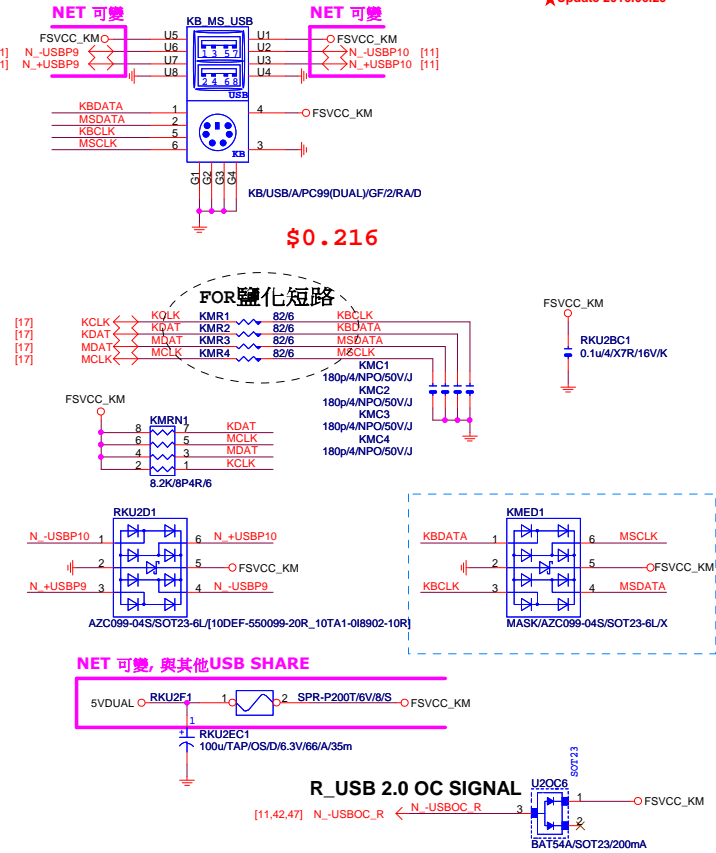
* 删除 OVU3

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

Gigabyte Technology			
CPU CORE VR-2			
Size Custom	Document Number		Rev
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★Update 2016.06.29



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AUDIO JACK

MODULE

Rev 1.0

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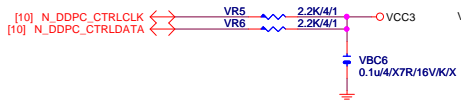
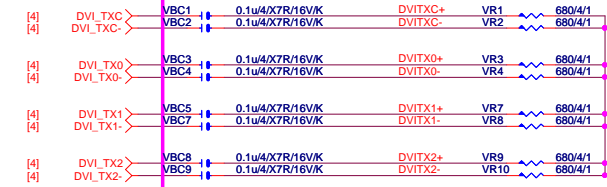
Rev: CFL_R0.1

DVI CONN

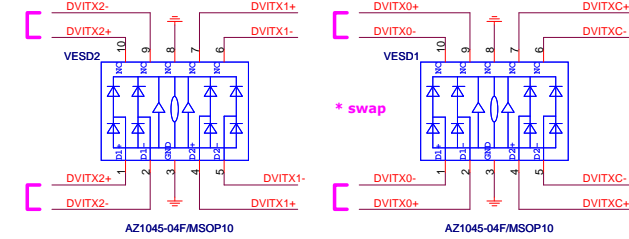
DVI:20/4/6/4/20

Impedance=85 +- 17.5%

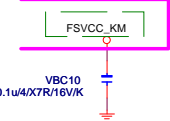
NET 可變



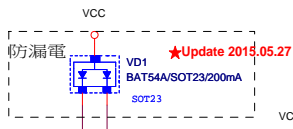
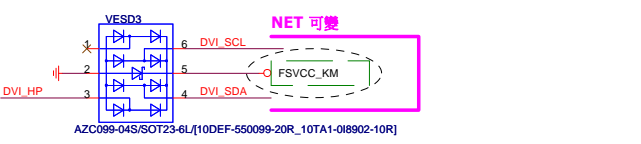
Close to connector



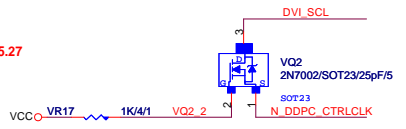
NET 可變



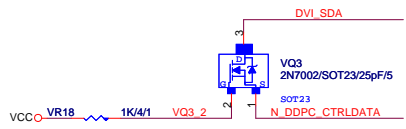
Close to connector



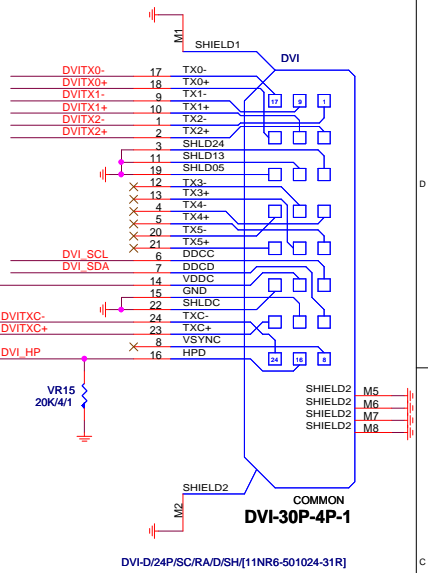
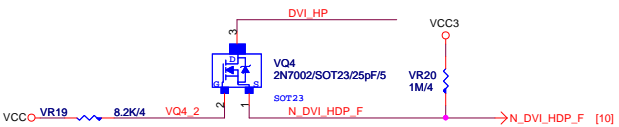
★Update 2015.05.27



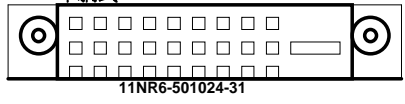
★Update 2016.06.20



★Update 2016.06.20



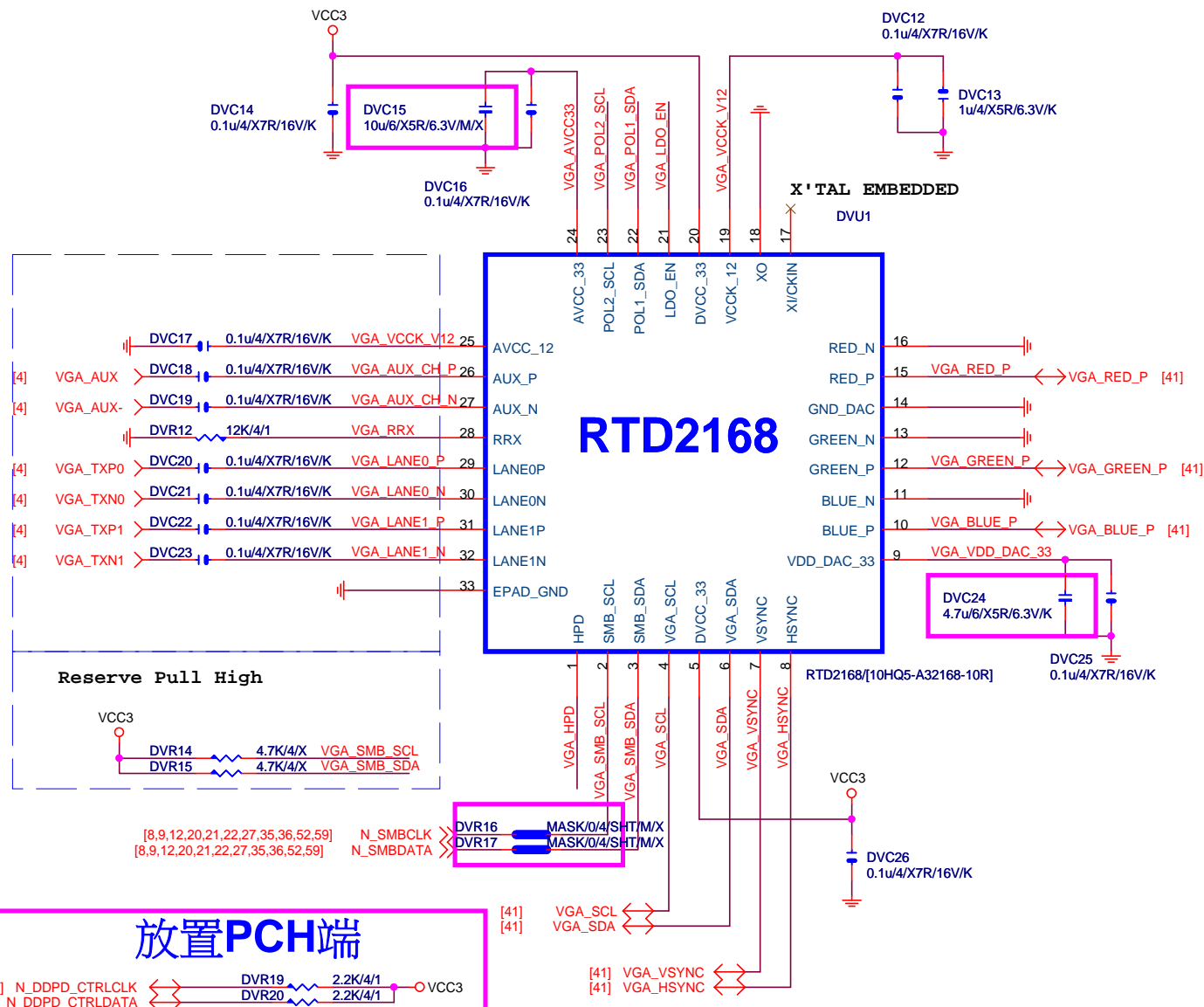
平躺式 DVI-D



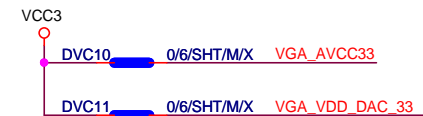
Gigabyte Technology

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Custom			
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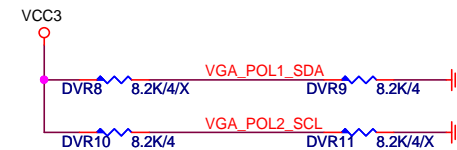
Rev 1.0



POWER

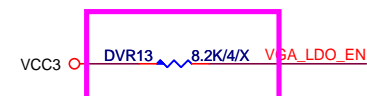


Power on latch



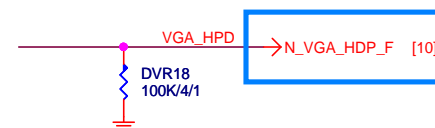
		POL1_SDA(PIN22)	
		0	1
POL2_SCL (PIN23)	0	X	EP MODE
	1	ROM ONLY MODE	EEPROM MODE

Embedded LDO



LDO_EN(PIN21)	
0	1
VCCK_V12 from External 1.2V	VCCK_V12 from Embedded LDO

DP HPD

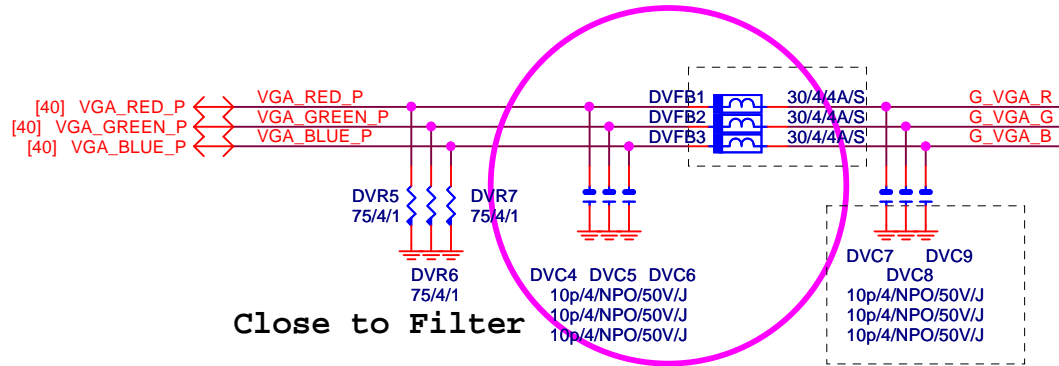
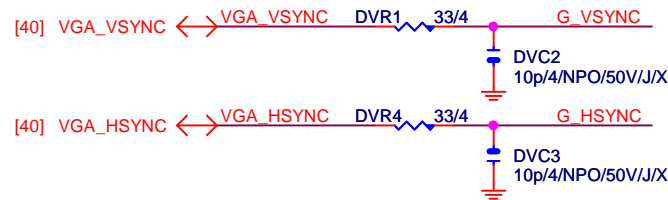
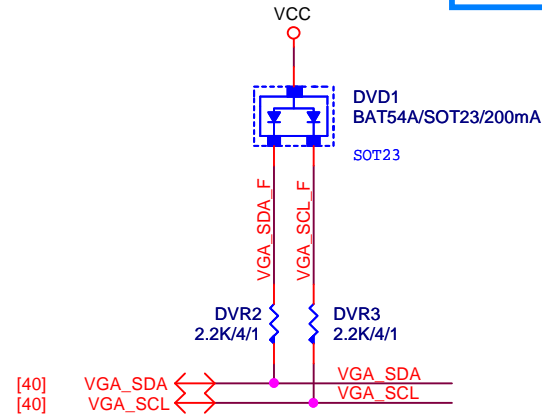


VGA SIGNAL

R2.0

Fuse: (PS2+U3x2+DVI+D-SUB)=RFUS1[2.6A]

FSVCC_KM

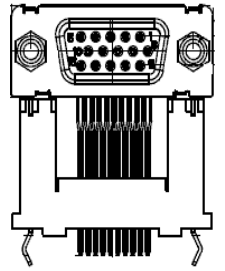
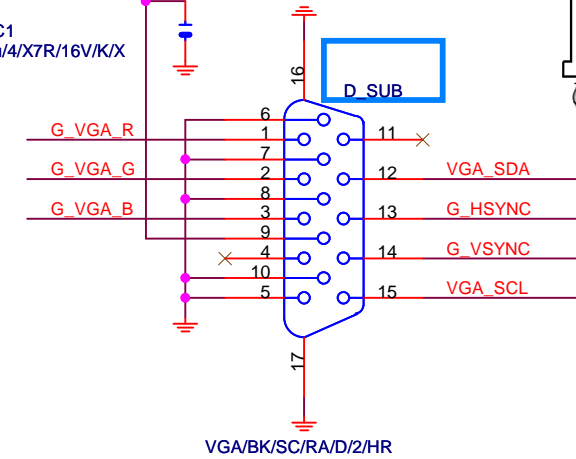


Close to Filter

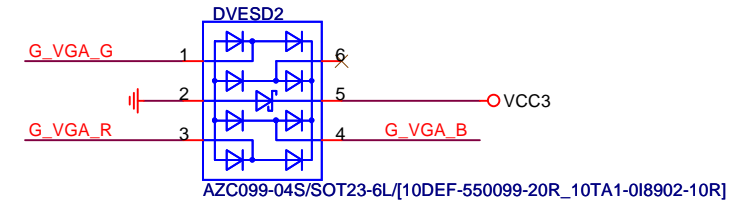
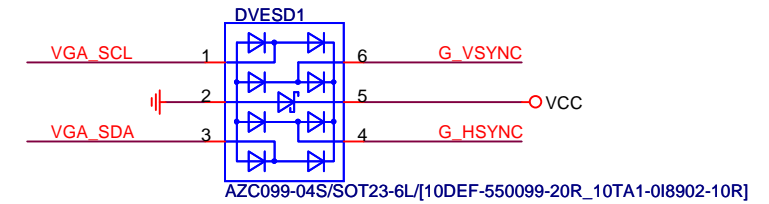
FOR EMI

VGA CONN.

架高型VGA (BLACK)

DVC1
0.1u/4/X7R/16V/K/X

VGA ESD

Gigabyte Technology
DP-VGA RTD2168

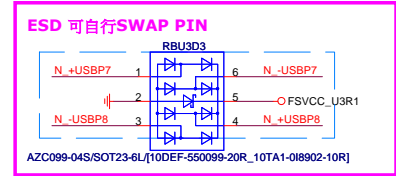
Size Document Number Z370 HD3P

Rev 1.0


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R_USB30

下 Port R USB30 上 Port



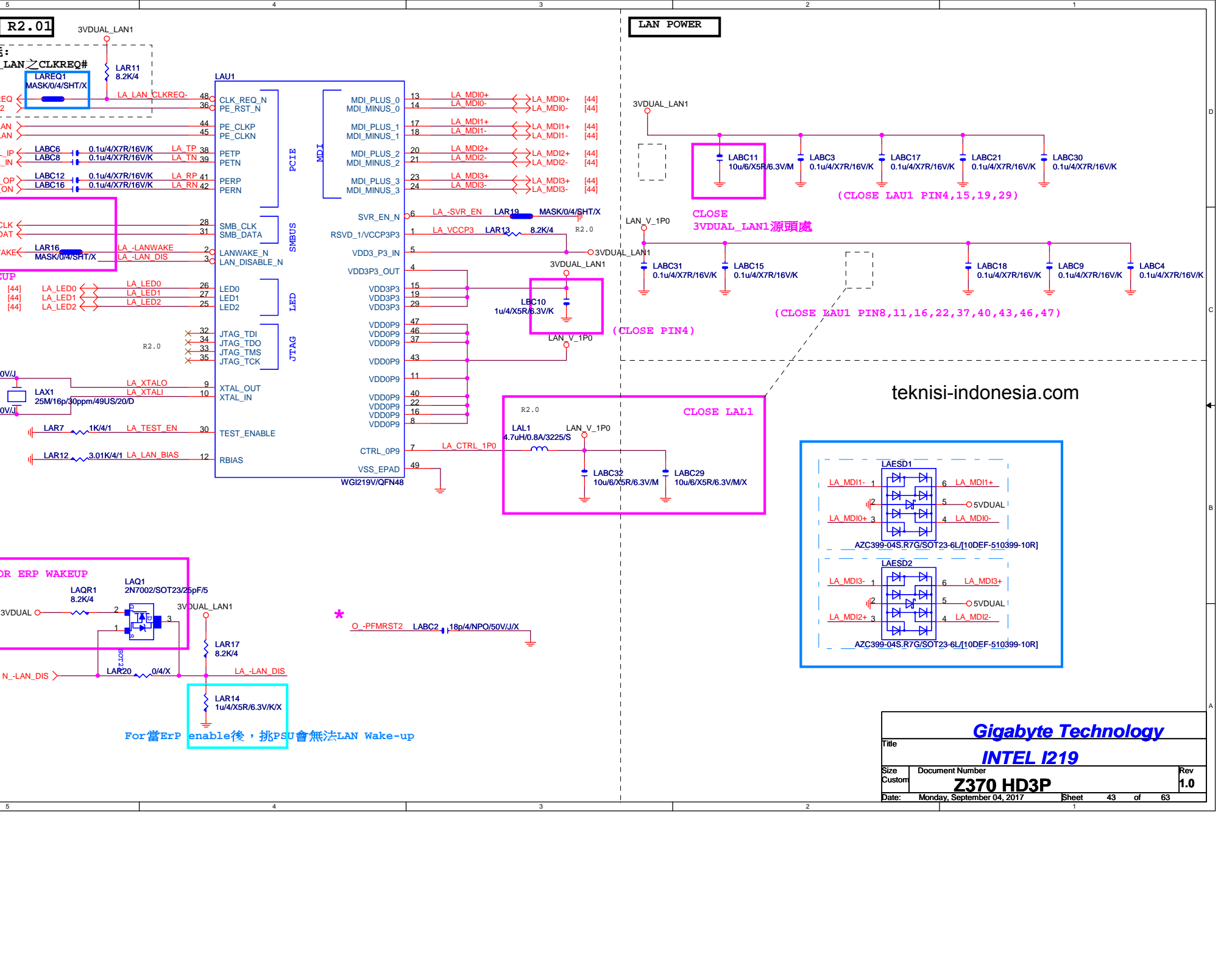
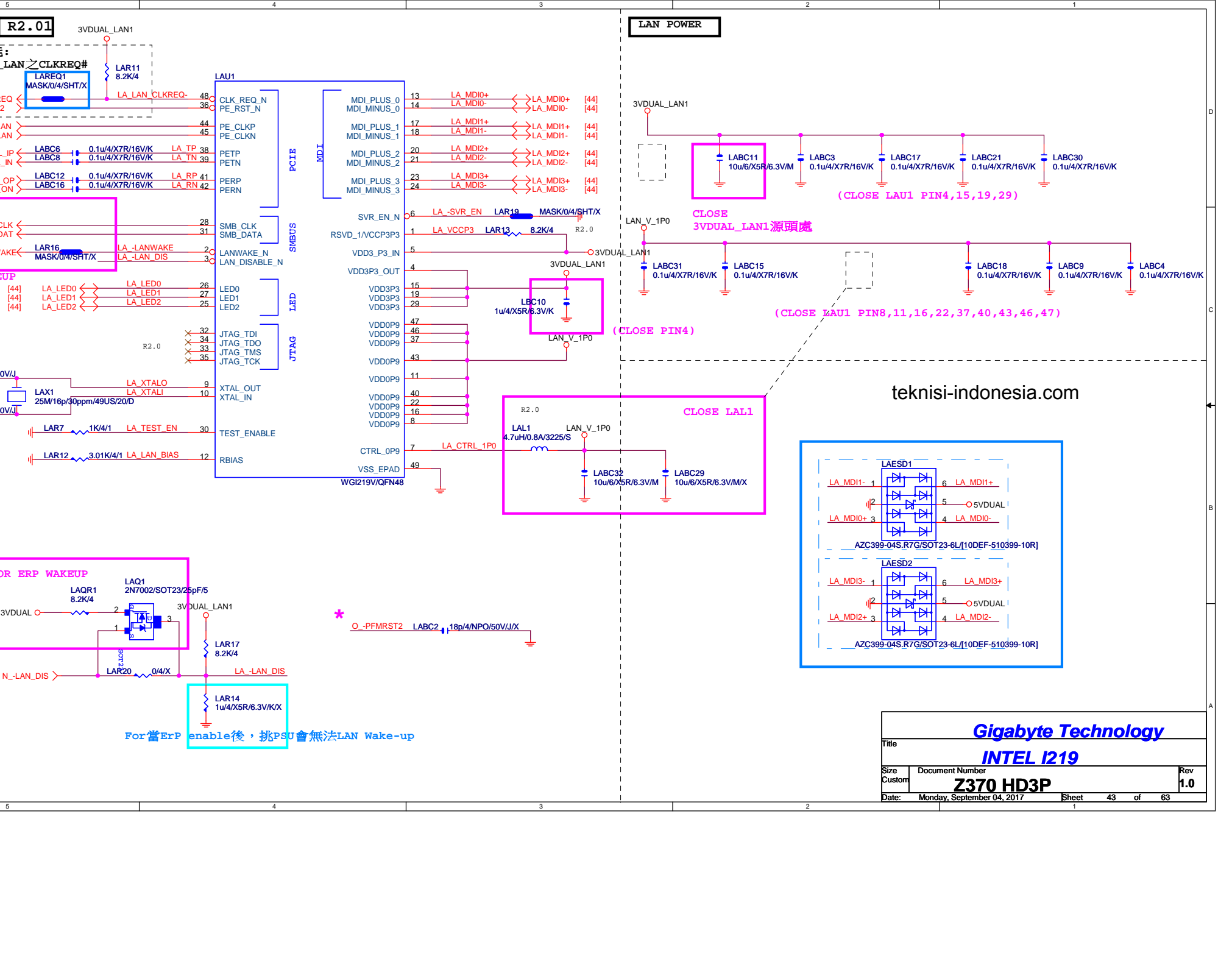
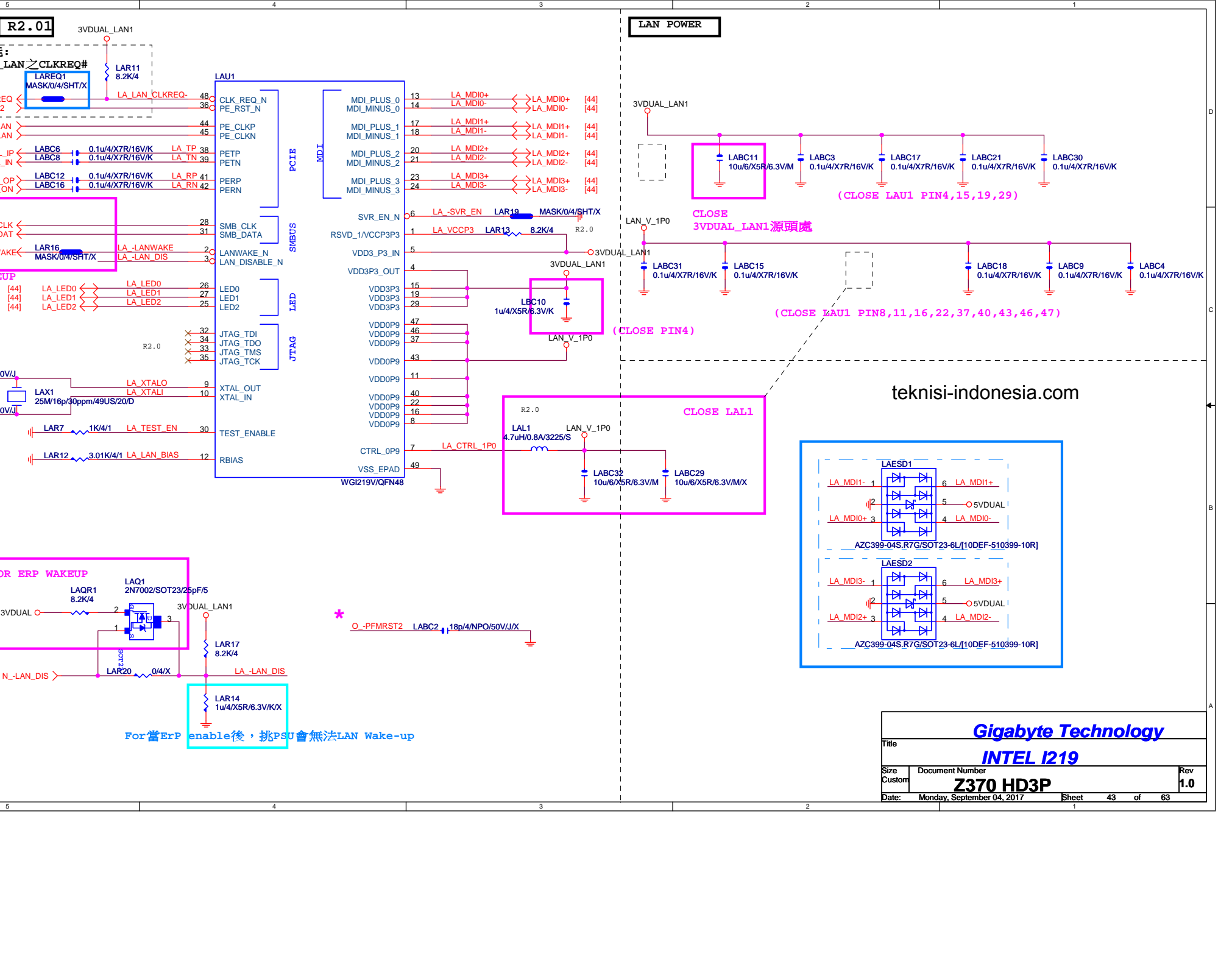
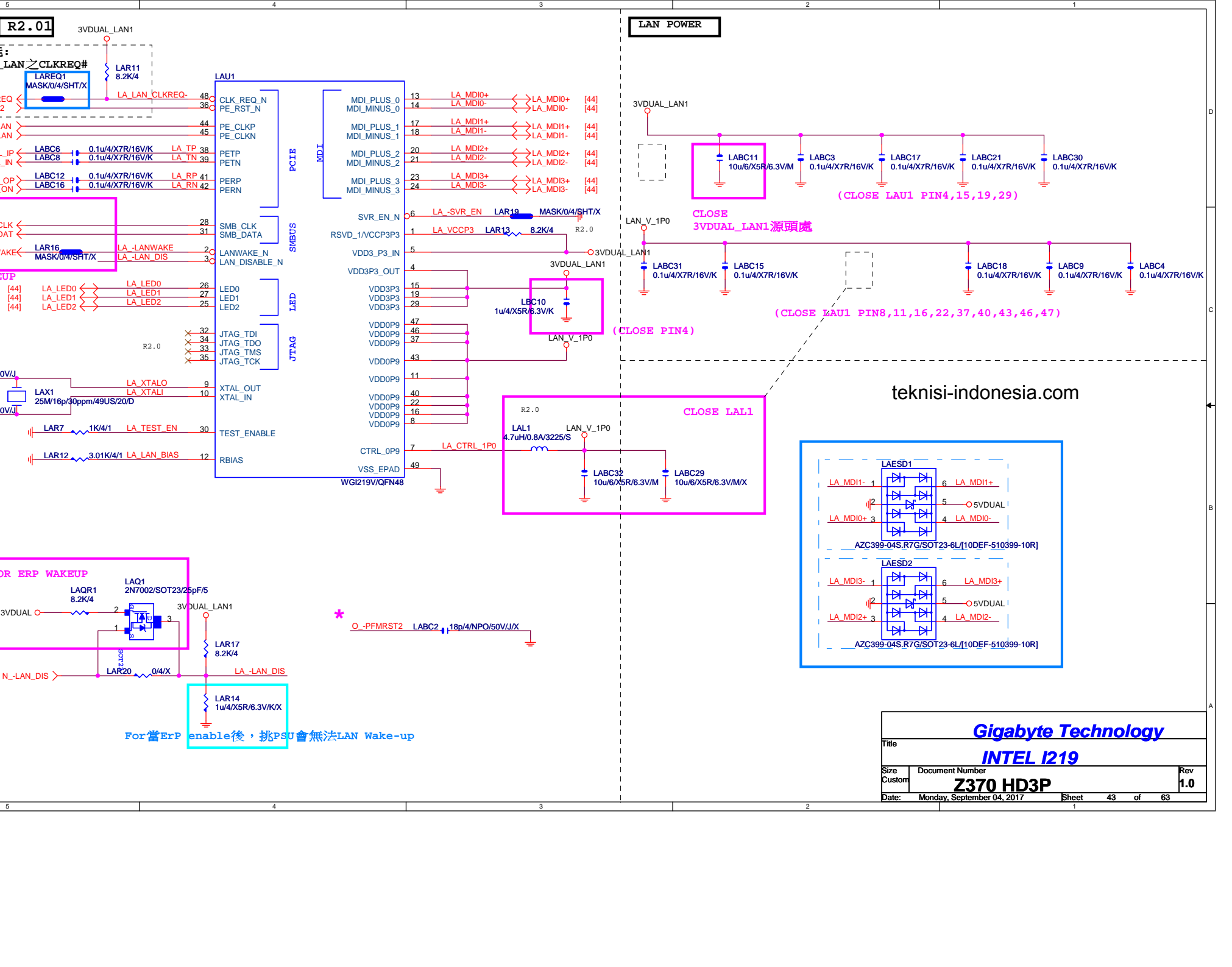
2 port USB 3.0 Capture:



USB/18P/BU/OS/RA/D/2/H/U/S/B

USB/18P/BU/OS/RA/D/2/H/R

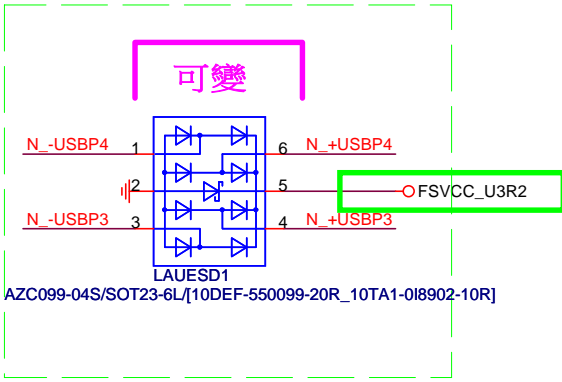
KB_MS_USB3

[illegible][illegible]

USB30_LAN CONNECTOR R2.01

RMA ESD PROTECT

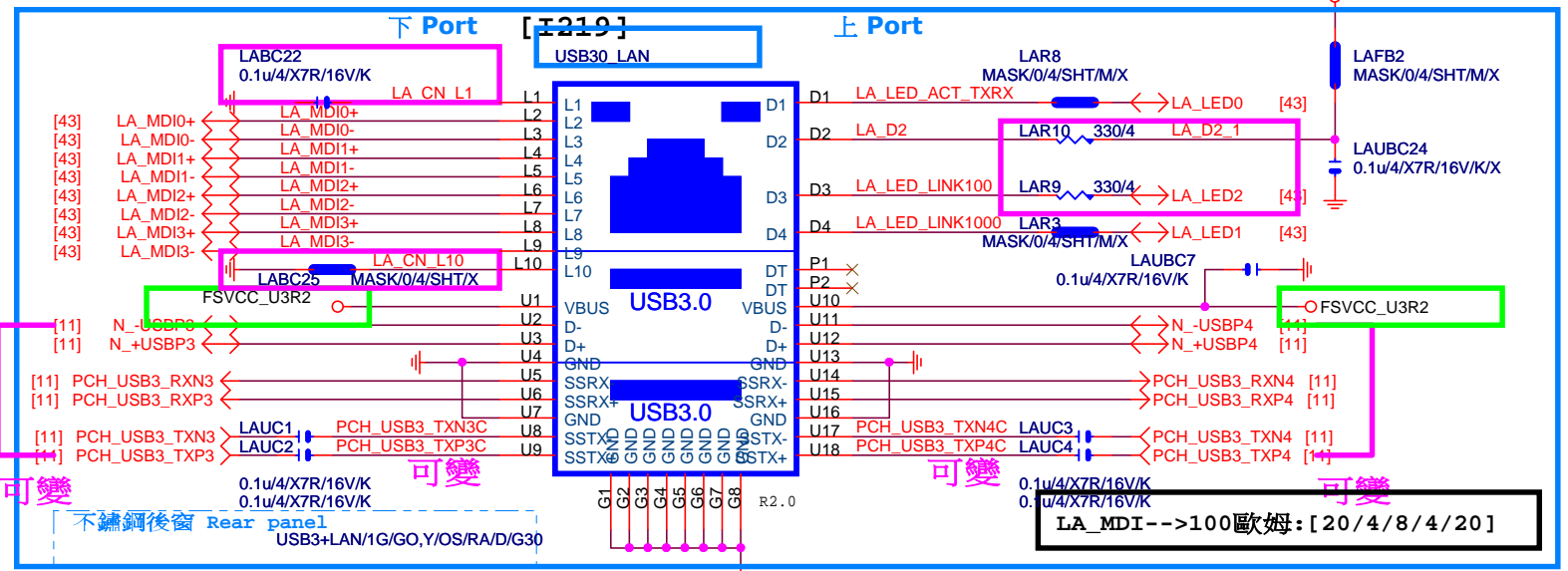
note:可變更USB NAME



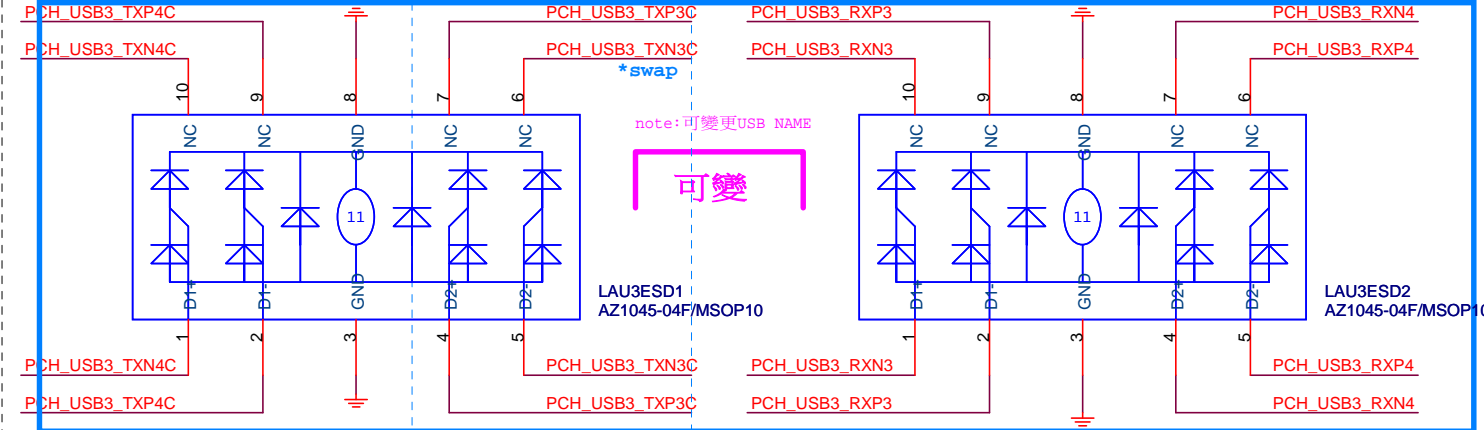
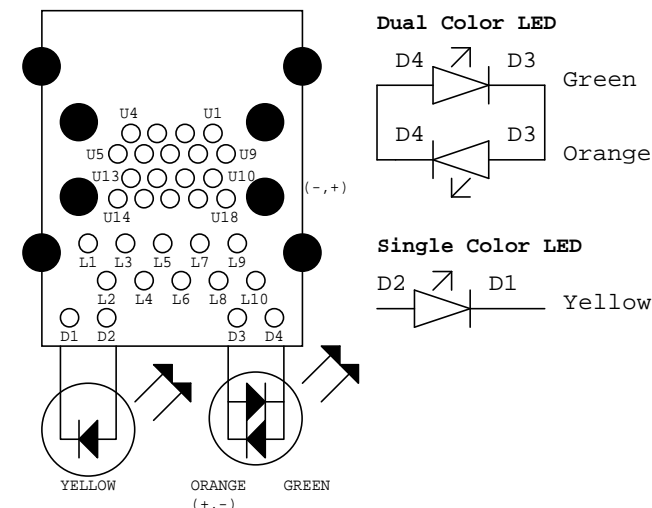
USB_LAN CONNECTOR

note:可變更USB NAME

from usb3_9/10 for Flex IO 不可改



USB30_LAN LAYOUT示意圖



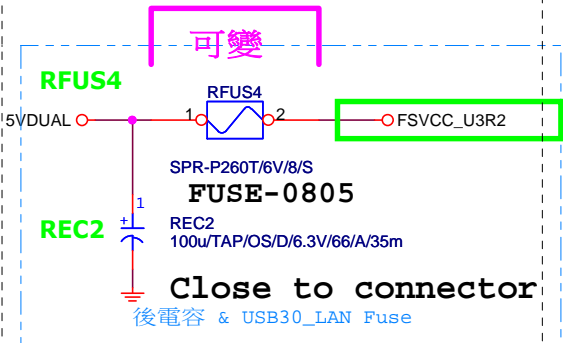
LAN_COVER

FOOT PRINT:LAN_COVER



USB POWER

note:可變更FUSE

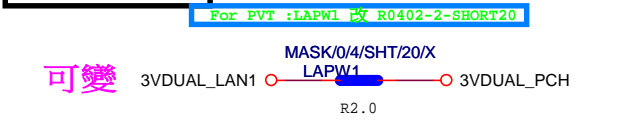


EMI SHORT PAD

PS:視EMI需求

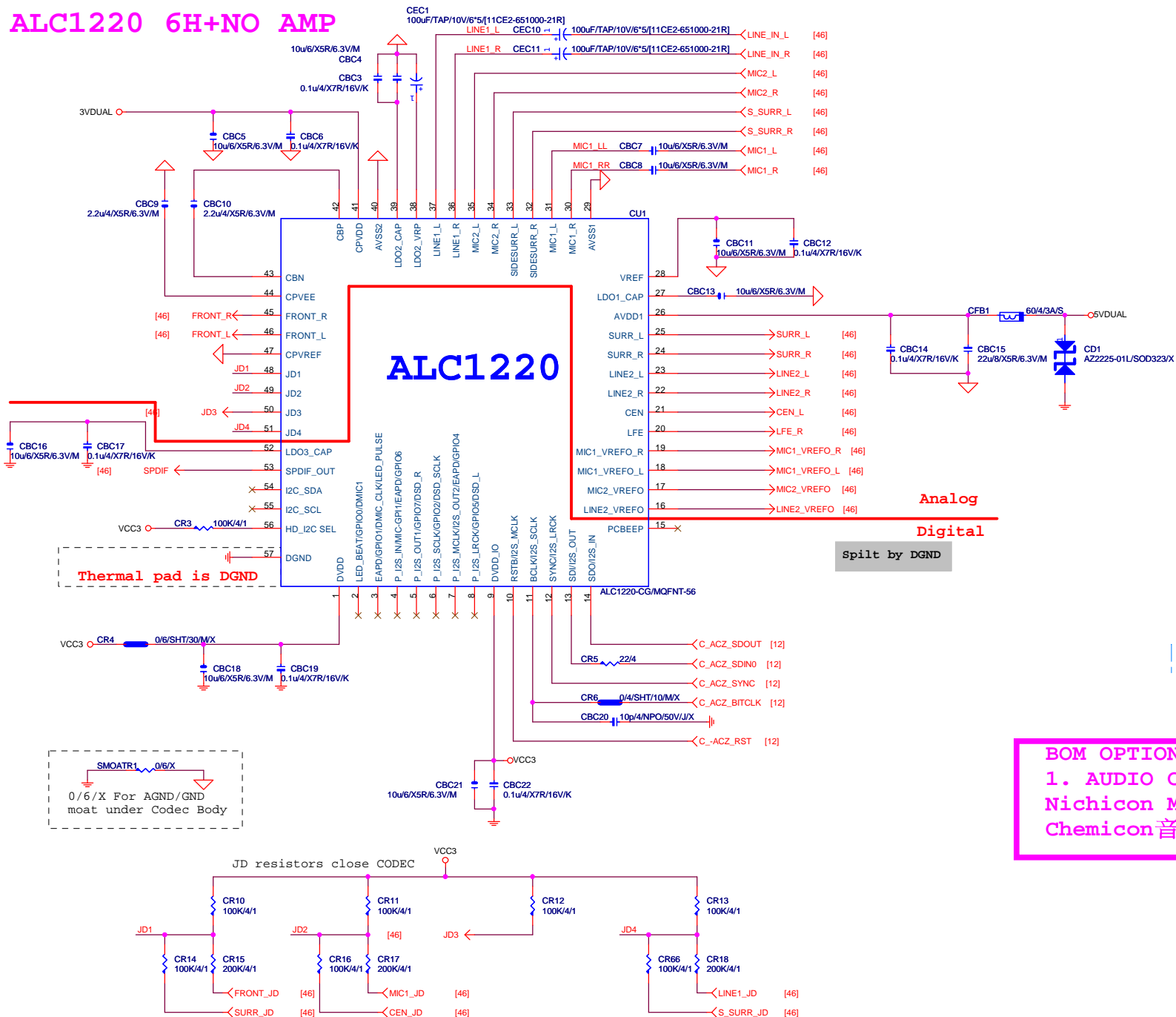
LAN POWER

note: lan power連接及電流



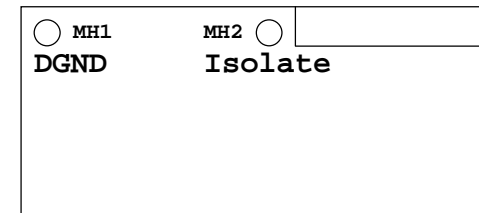
Rev 2.03

ALC1220 6H+NO AMP



LAYOUT注意: 螺絲孔下GND方式

1. MH1下DGND
2. MH2一律改為Isolate

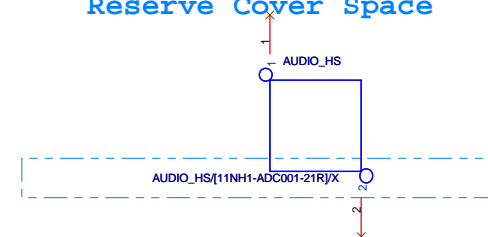


LAYOUT注意: 是否要加?

AGND切割線



Reserve Cover Space



BOM OPTION :

1. AUDIO CAP

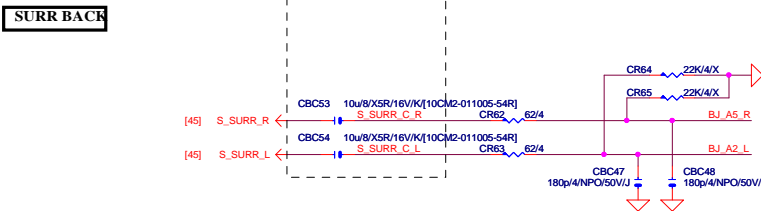
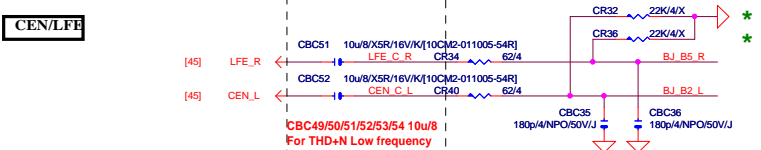
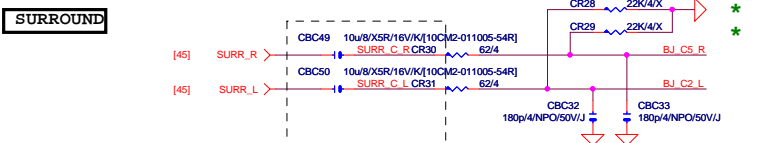
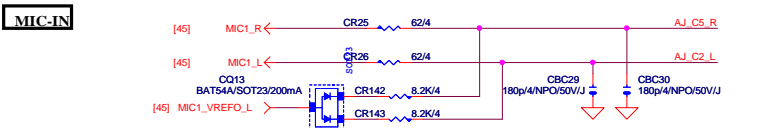
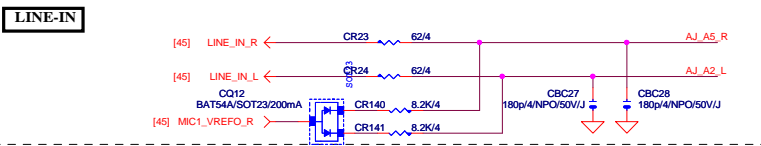
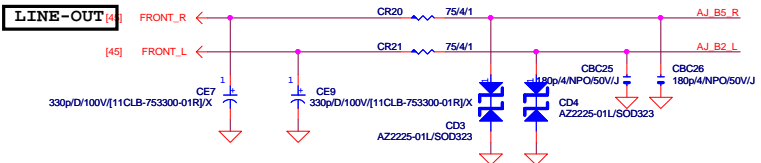
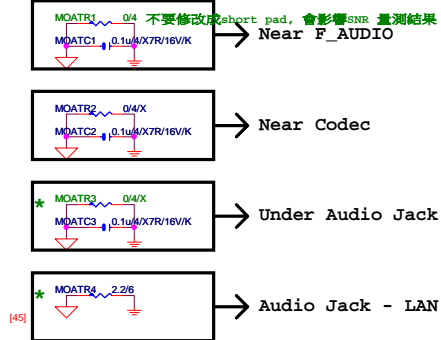
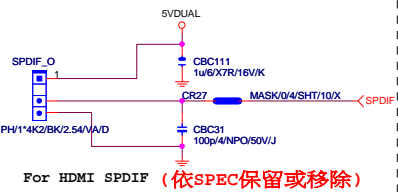
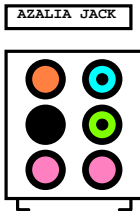
Nichicon MW音效電容 : 11CE1-651000-12R

Chemicon音效電容 : 11CE2-651000-05R

Gigabyte Technology

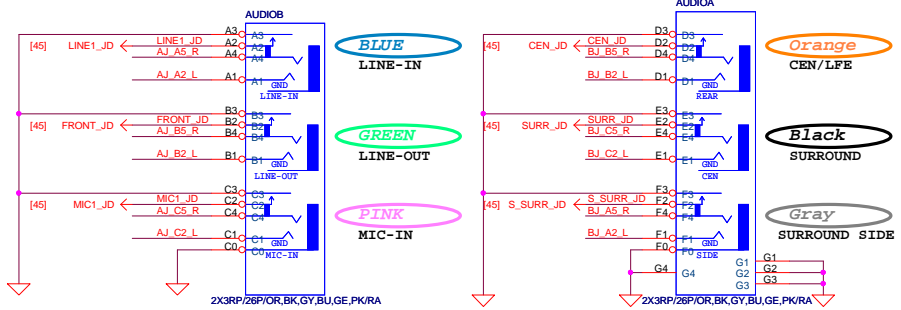
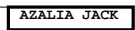
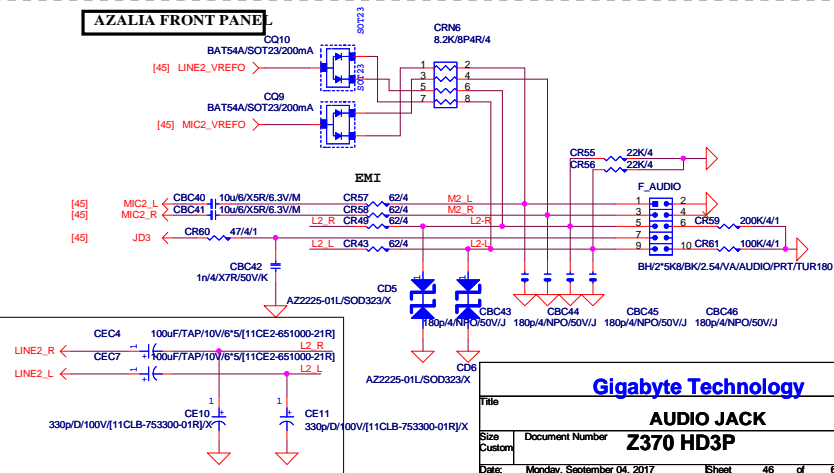
Title			ALC1220
Size	Document Number	Rev	
Custom		1.0	
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Rev 2.04



Z370 HD3P / HD3 WIMA footprint,CE7/CE9/CE10/CE11
改回圆孔:C2700PF-DIP

REV1.0 : 業務確認Z370非Gaming 機種WIMA電容都不上件 Footprint --' C2700PF-DIP-MASK

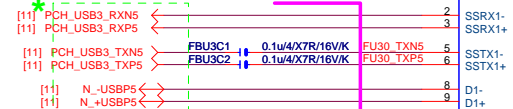


Front USB3.0

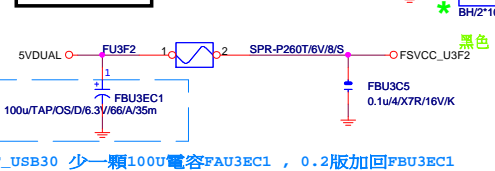
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Front USB3.0

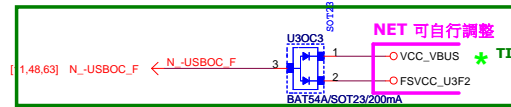
NET 可自行調整



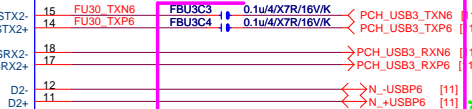
F_USB30 PWR



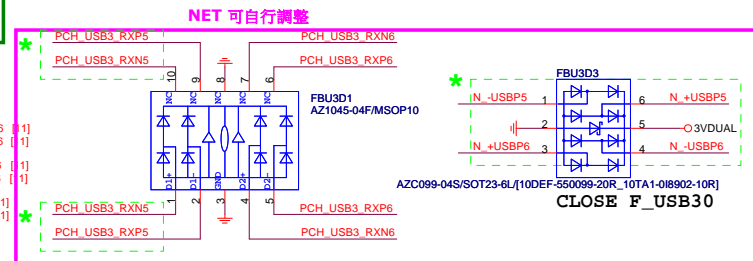
F_USB30 少一顆100U電容FAU3EC1, 0.2版加回FBU3EC1



NET 可自行調整



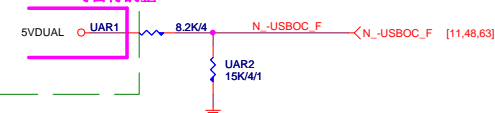
F_USB POWER PROTECT



CLOSE F_USB30

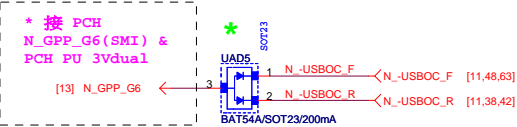
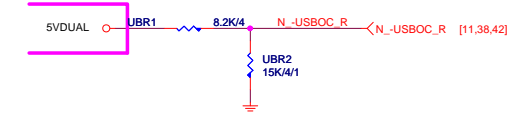
-USBOC_F

POWER 可自行調整



-USBOC_R

POWER 可自行調整

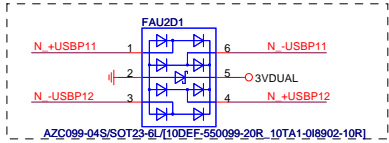
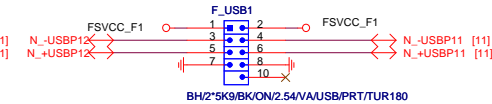


Gigabyte Technology

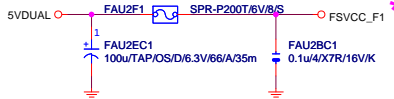
Title		
R_USB30,F_USB30, USB_OC		
Size	Document Number	Rev
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FRONT USB1

NET 可變

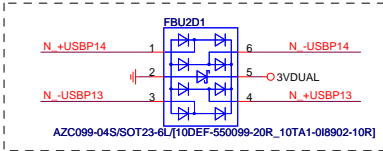
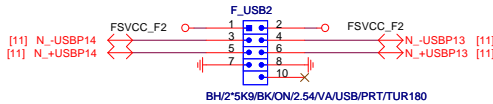


Close to connector
FUSE 2 Port 1 Fuse 2A

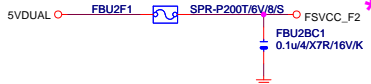


FRONT USB2

NET 可變



Close to connector
FUSE 2 Port 1 Fuse 2A



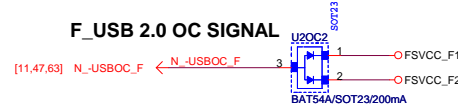
FRONT USB3

FRONT USB4

REAR USB1

REAR USB2

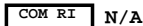
F_USB 2.0 OC SIGNAL



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Title			
USB2.0			
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COM PORT



COMA

NDCDA-	1	2	NSINA
NSOUTA	3	4	NDTRA-
	5	6	NDTRA-
NRTSA	7	8	NDCTSA-
NRTA-	9	10	

BH2/5K10/BK/2.54/VA/COM/PRT/TUR180

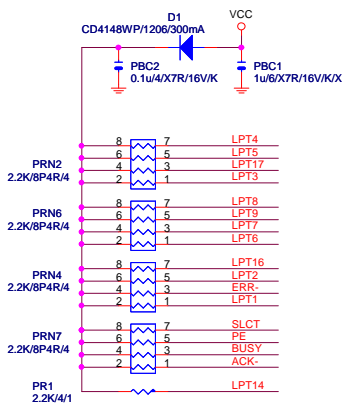
* footprint : F_COM-HS

* capacitance value :

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

The schematic shows the NR1A signal path. It starts with an input NR1A entering a component labeled OAD1 (BAT54C/SOT23/200mA/X). The output of OAD1 goes through OAR1 (75K/4/1/X) to a node connected to OAQ1 (MMBT2222A/SOT23/600mA/40/X) and OABC1 (0.1U/4/Y5V/16V/Z/X). OAQ1 has pins 1, 2, and 3. Pin 3 is connected to N_PCIE_WAKE [12,20,21,22,51,52,5]. A red star icon and the text "Update 2015.04.22 remove." are at the bottom.

Figure 1: Pin connections for the 6888P4R/4. The diagram shows three 8-pin connectors: PRN5, PRN3, and PRN1. Each connector has a 6888P4R/4 chip and a 6888P4R/4 chip. The PRN5 connector has pins 1-8 connected to AFD, STB, PD0, INIT, 2, 3, 4, 5, 6, 7, 8, and LPT14, LPT1, LPT2, LPT16. The PRN3 connector has pins 1-8 connected to PD1, SLIN, PD2, 3, 4, 5, 6, 7, 8, and LPT3, LPT17, LPT4, LPT5. The PRN1 connector has pins 1-8 connected to PD4, PD5, PD6, PD7, 1, 2, 3, 4, 5, 6, 7, 8, and LPT6, LPT7, LPT8, LPT9. The 6888P4R/4 chip has pins 1-8 connected to AFD, STB, PD0, INIT, 2, 3, 4, 5, 6, 7, 8, and LPT14, LPT1, LPT2, LPT16. The 6888P4R/4 chip has pins 1-8 connected to PD1, SLIN, PD2, 3, 4, 5, 6, 7, 8, and LPT3, LPT17, LPT4, LPT5. The 6888P4R/4 chip has pins 1-8 connected to PD4, PD5, PD6, PD7, 1, 2, 3, 4, 5, 6, 7, 8, and LPT6, LPT7, LPT8, LPT9.



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。

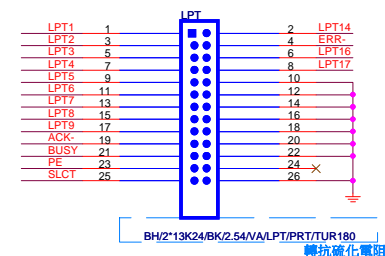


Figure 10 shows the TPM pin connections for the TSM28A010. The module is a 12-pin component with the following connections:

- Pin 1 (LAD0) to N_LAD0
- Pin 3 (LAD1) to N_LAD1
- Pin 5 (LAD2) to N_LAD2
- Pin 7 (LAD3) to N_LAD3
- Pin 9 (LFRAME) to N_LFRAME
- Pin 11 (SERIRQ) to N_SERIRQ
- Pin 2 (VCC3) to VCC3
- Pin 6 (LCLK) to TPCMCLK
- Pin 8 (GND) to GND
- Pin 10 (ESV0) to GND
- Pin 12 (LRESET#) to O_-PCIE_RST

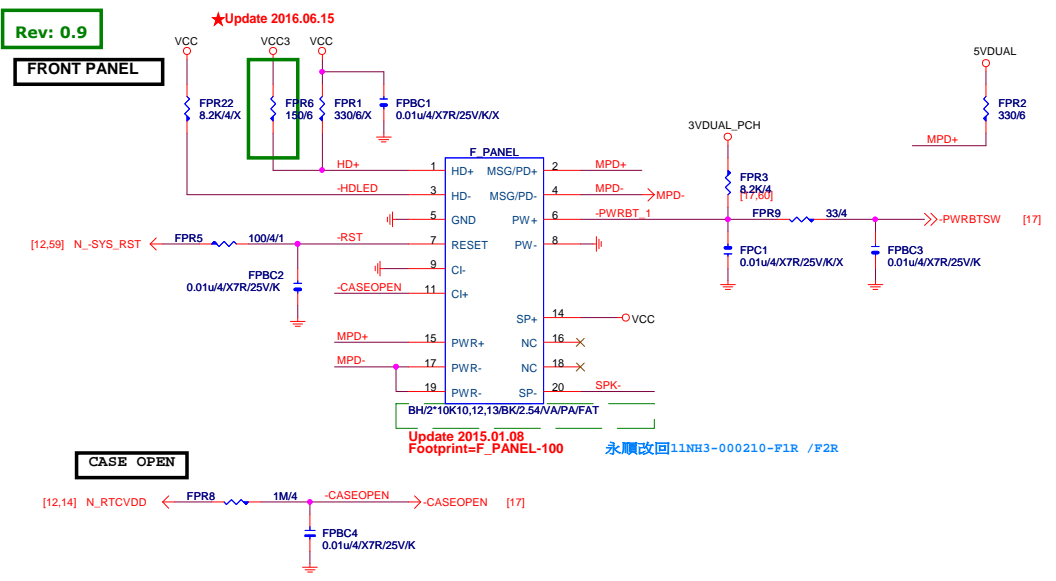
The module is labeled BH2*BK4/BK/ON2.0VA/D/GF. The footprint is TPM2X6-CUT4. Two capacitors are shown: TBC2 (0.1u4/X7R/16V/K/X) connected to VCC3 and TBC1 (10p4/NPO/50V/J/X) connected to TPCMCLK.

★Update 2015-12-29

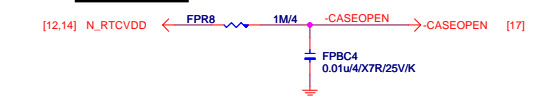
Thunderbolt 3 pin header移除

Rev: 0.9

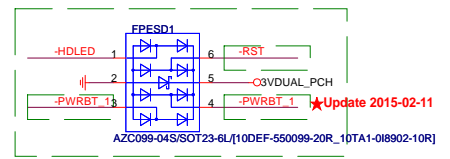
FRONT PANEL



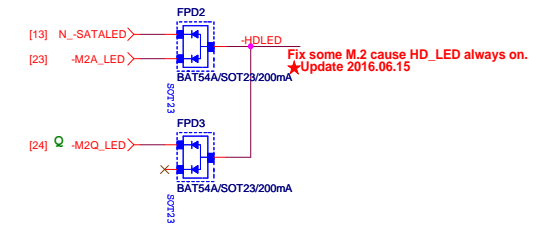
CASE OPEN



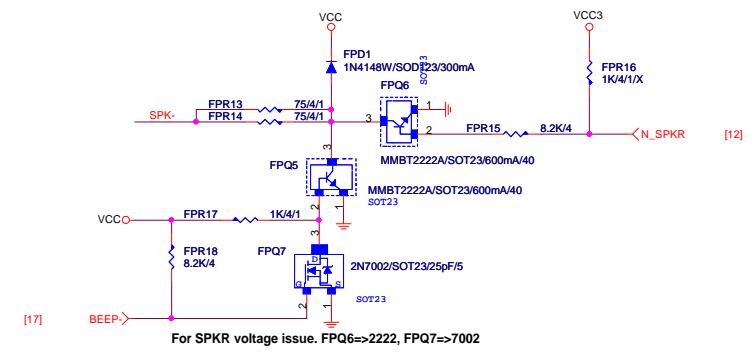
ESD



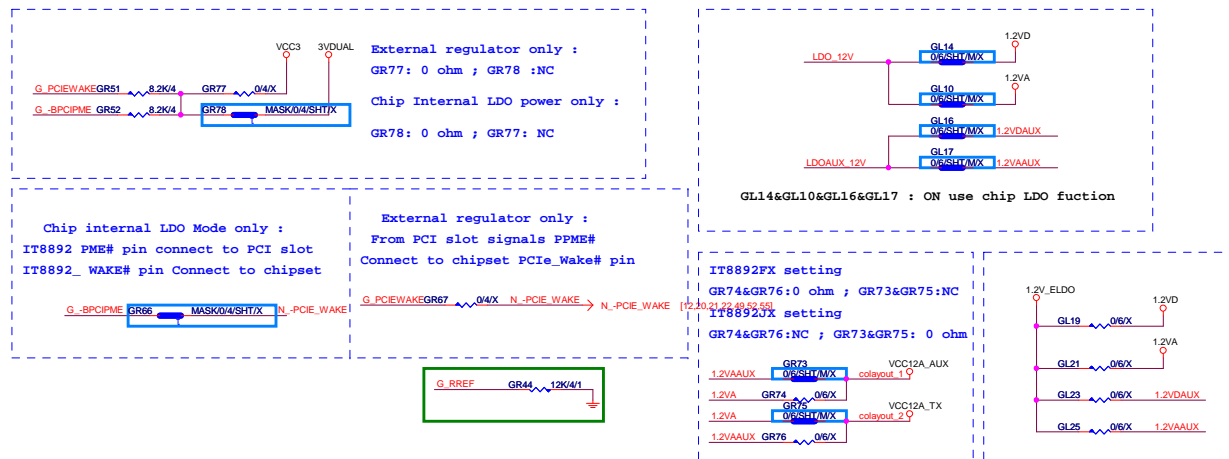
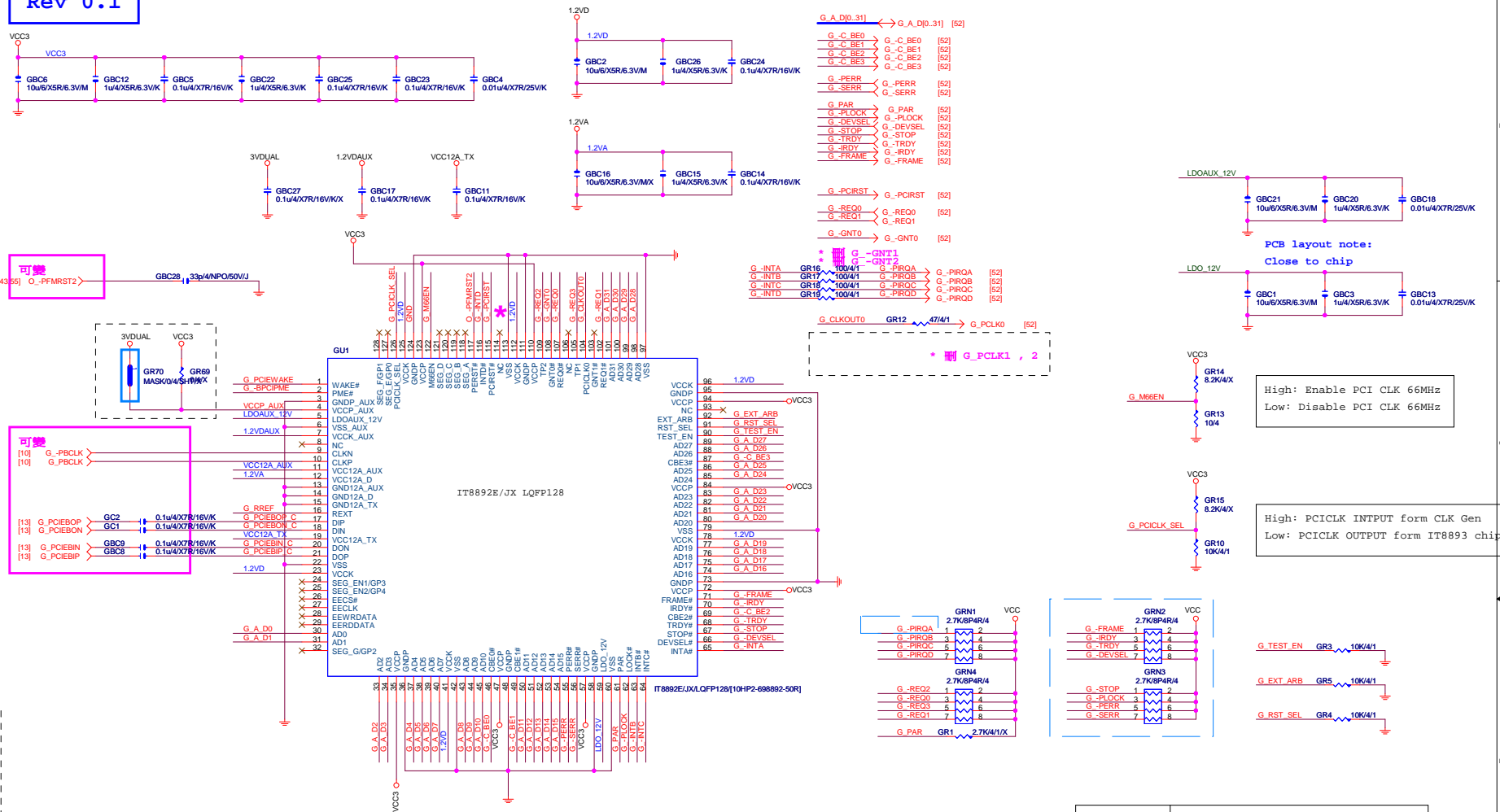
SATA_LED



SPKR W/O EC



Rev 0.1

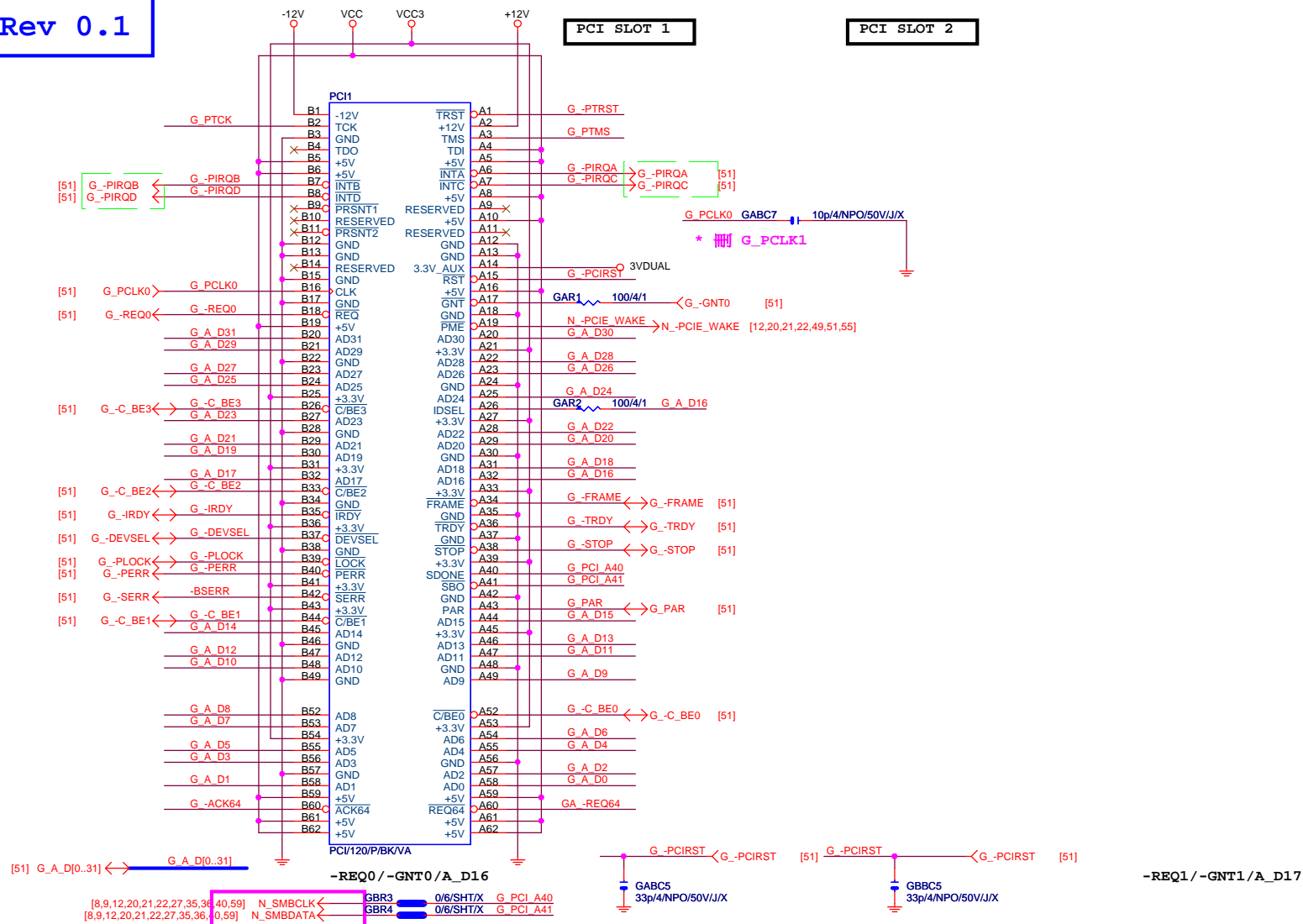


	Component change note
IT8892FX	GR70,GR74,GR76,GR78,GR66 : ON GR69,GR73,GR75,GR77,GR67 : NC GR44 resistor is 12k ohm GL14,GL10,GL16,GL17 : ON GL19,GL21,GL23,GL25: NC
IT8892JX	GR70,GR73,GR75,GR78,GR66 : ON GR69,GR74,GR76,GR77,GR67 : NC GR44 resistor is 18k ohm GL14,GL10,GL16,GL17 : ON GL19,GL21,GL23,GL25: NC
External LDO Power (IT8892JX)	GR69,GR73,GR75,GR77,GR67 : ON GR70,GR78,GR66 : NC GR44 resistor is 18k ohm GL19,GL21,GL23,GL25 : ON GL14,GL10,GL16,GL17 : ON

Rev 0.1

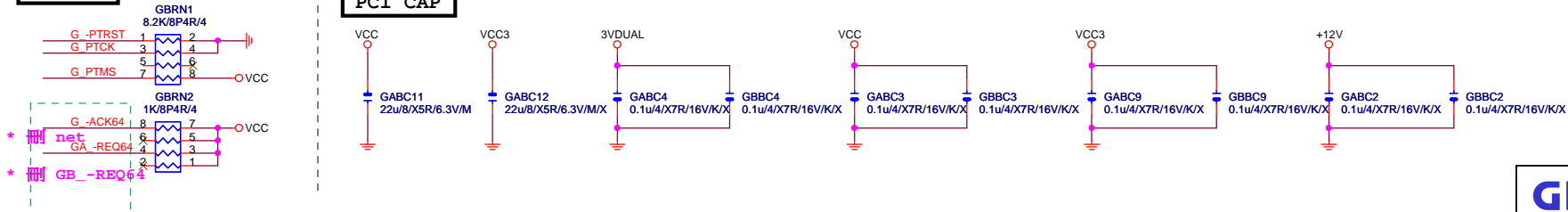
PCI SLOT 1

PCI SLOT 2



PCI PU

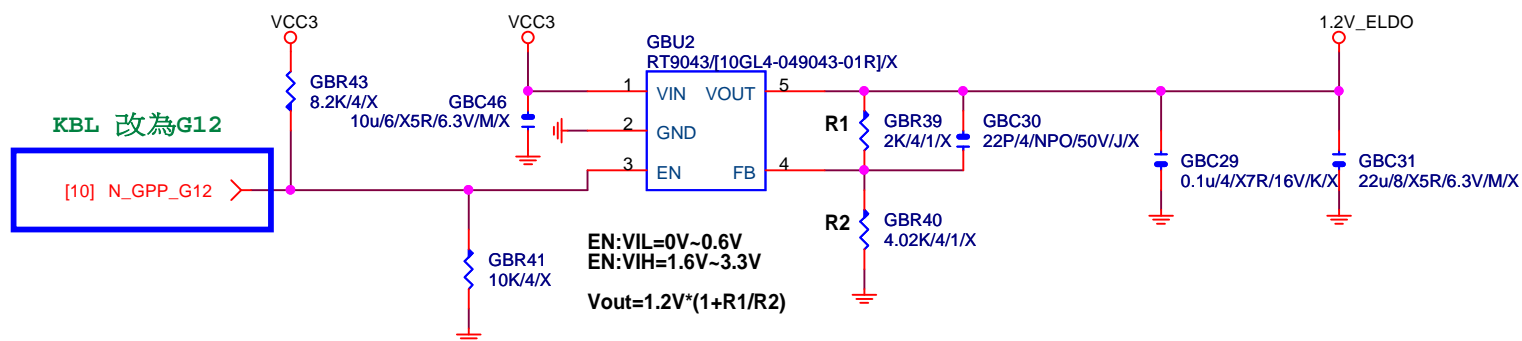
PCI CAP



GIGABYTE™			
Title PCI SLOT 1			
Size Custom	Document Number Z370 HD3P	Rev 1.0	
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Rev 0.1

* 全部不上件



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Title

ASM1085 POWER

Size
Custom

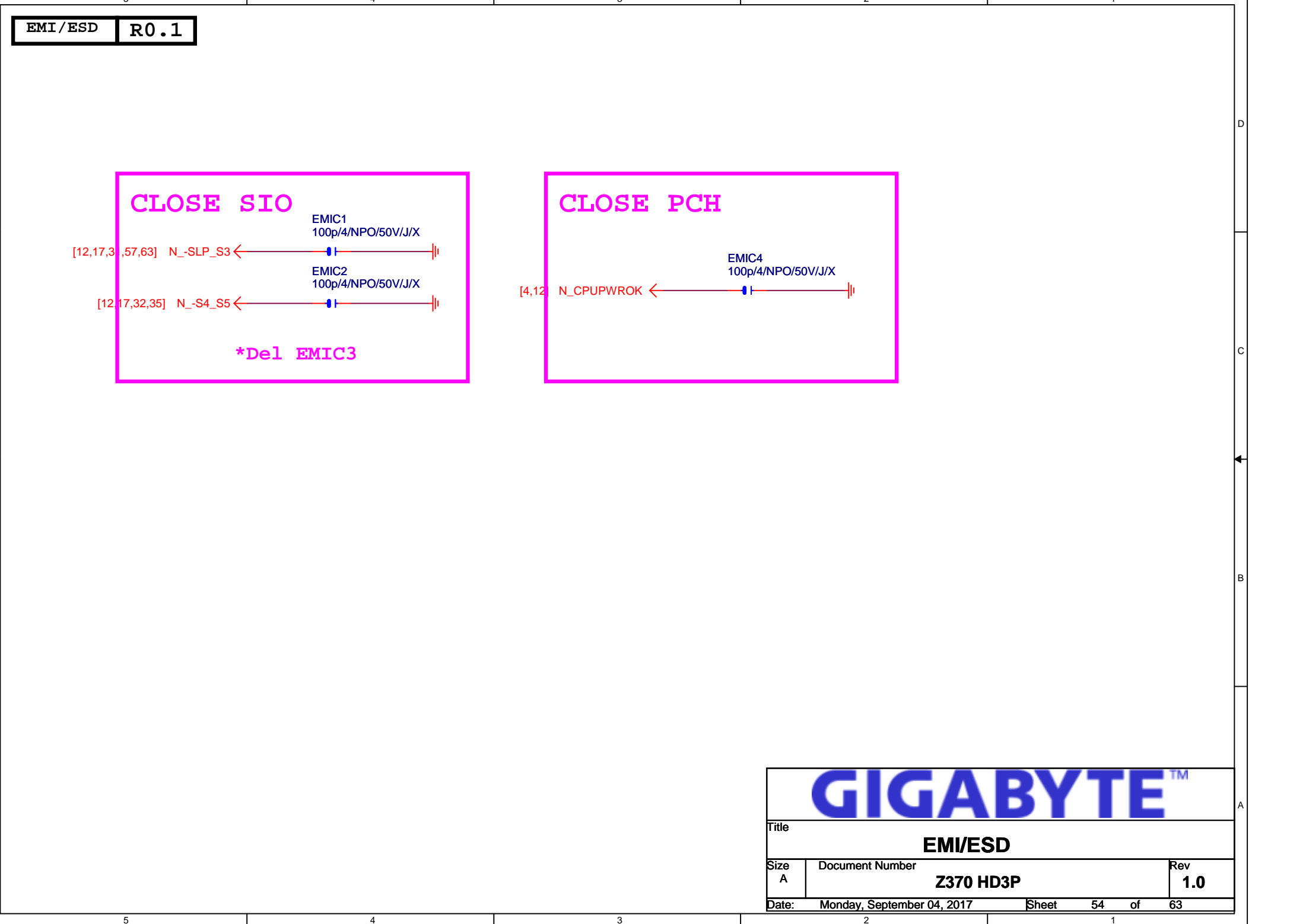
Document Number

Z370 HD3P

Rev
1.0

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ASM3142 USB3.1

The diagram shows the connection between the SSAU2 module and the SSAC21 module. The SSAU2 module has pins 1 through 8 labeled on the right side. The SSAC21 module has pins 1 through 8 labeled on the left side. The connections are as follows:

- SSAC21 pin 1 (SSA_SPICS) is connected to SSAU2 pin 1 (CS#).
- SSAC21 pin 2 (SSA_SPIDI) is connected to SSAU2 pin 2 (SO).
- SSAC21 pin 3 (SSA_SPWP) is connected to SSAU2 pin 3 (WP#).
- SSAC21 pin 4 (SSA_SPVSS) is connected to SSAU2 pin 4 (VSS).
- SSAC21 pin 5 (SSA_SPICK) is connected to SSAU2 pin 5 (SCK).
- SSAC21 pin 6 (SSA_SPIDO) is connected to SSAU2 pin 6 (SI).
- SSAC21 pin 7 (SSAC21 HOLD#) is connected to SSAU2 pin 7 (HOLD#).
- SSAC21 pin 8 (VCC3) is connected to SSAU2 pin 8 (VDD).

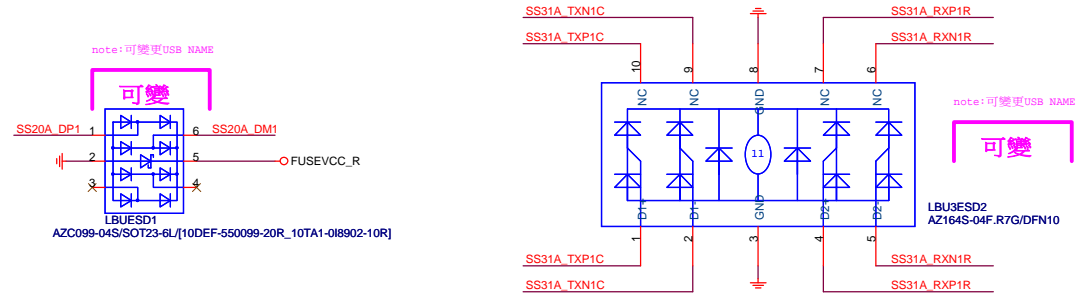
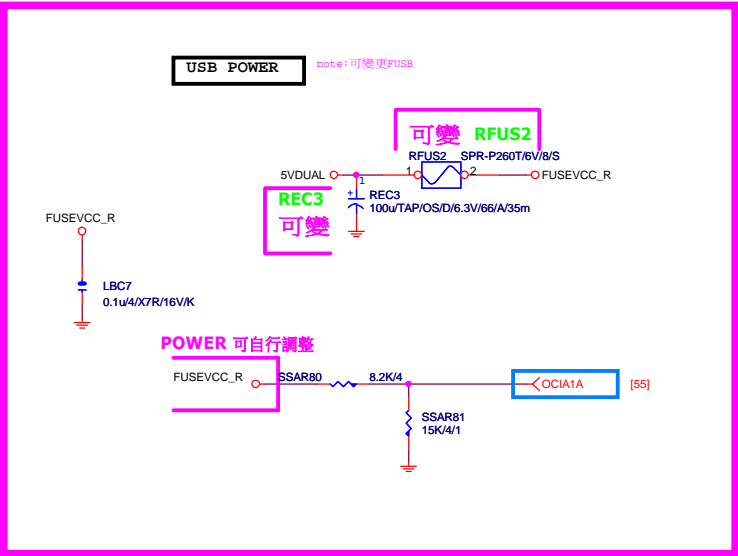
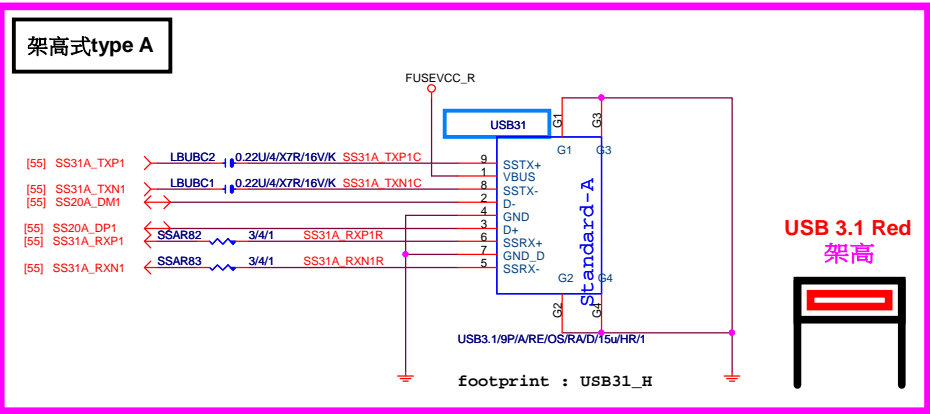
The SSAU2 module is labeled with the part number 4M/SPI/SC8200ml[S](S10HP4-112540-30R). The SSAC21 module is labeled with the part number 0.1u4/47R/16V/K. The VCC3 supply is connected to the VCC3 pin of the SSAC21 module and the VDD pin of the SSAU2 module. A 8.2K/4 resistor is connected between VCC3 and the SSAU2 pin 1 (CS#).

			
Title			
ASM3142 USB31A_R			
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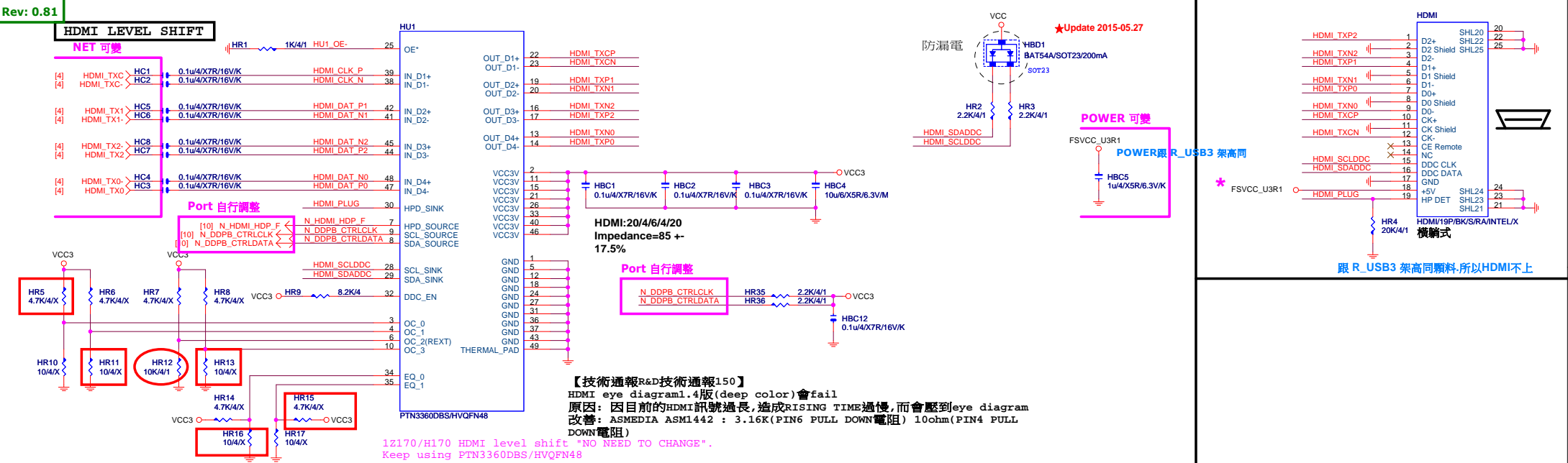
後窗Rule : (後窗由左至右)
DIP電容 : REC1, REC3, REC2
FUSE : RFUS1, RFUS2, RFUS3, RFUS4...

USB31 TYPE A Connector which chooses for project demand

沿用..CHECK..



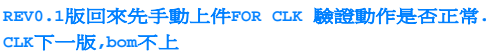
GIGABYTE™			
Title TI HD3SS3220_B			
Size C	Document Number Z370 HD3P		Rev 1.0
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PTN3360:PIN 4/10/34/35 NC PIN,都不上值;只上HR12:10K
ASM1442:紅色框要上,HR12:3.16K

IDT6V41630

MASK



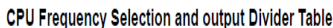
0 ohm先不要改為0 ohm short pad : Clock Buffer CKA_R18 & CKA_R19 & WR100 & WR101 & NR302 & NR303



Reserve CLK Buffer

```
*OPTION .
For PCH:NR300,NR301,WR102,WR103.
For CLK:NR302,NR303,CKA_R8,CKA_R9,WR100,WR101,
      CKA_R20,CKA_R11,CKA_R21,,CKA_D1,CKA_FB2
```

0=25MHz crystal input
1=100MHz differential input



B53b1(FS1)	B53b0(FS0)	VCO (MHz)	CPU Divider	CPU (MHz)	Typ SS%	Typ SS ON/OFF
0	0	200.00	2.00	100.00	-	OFF
0	1	400.00	4.00	100.00	-	OFF
1	0	100.00	10.00	100.00	-0.50%	ON
1	1	100.00	1.00	100.00	-	OFF



Cover remove (Ver. 1.0)



SMBUS



Real time selection function

Frequency change slew rate control



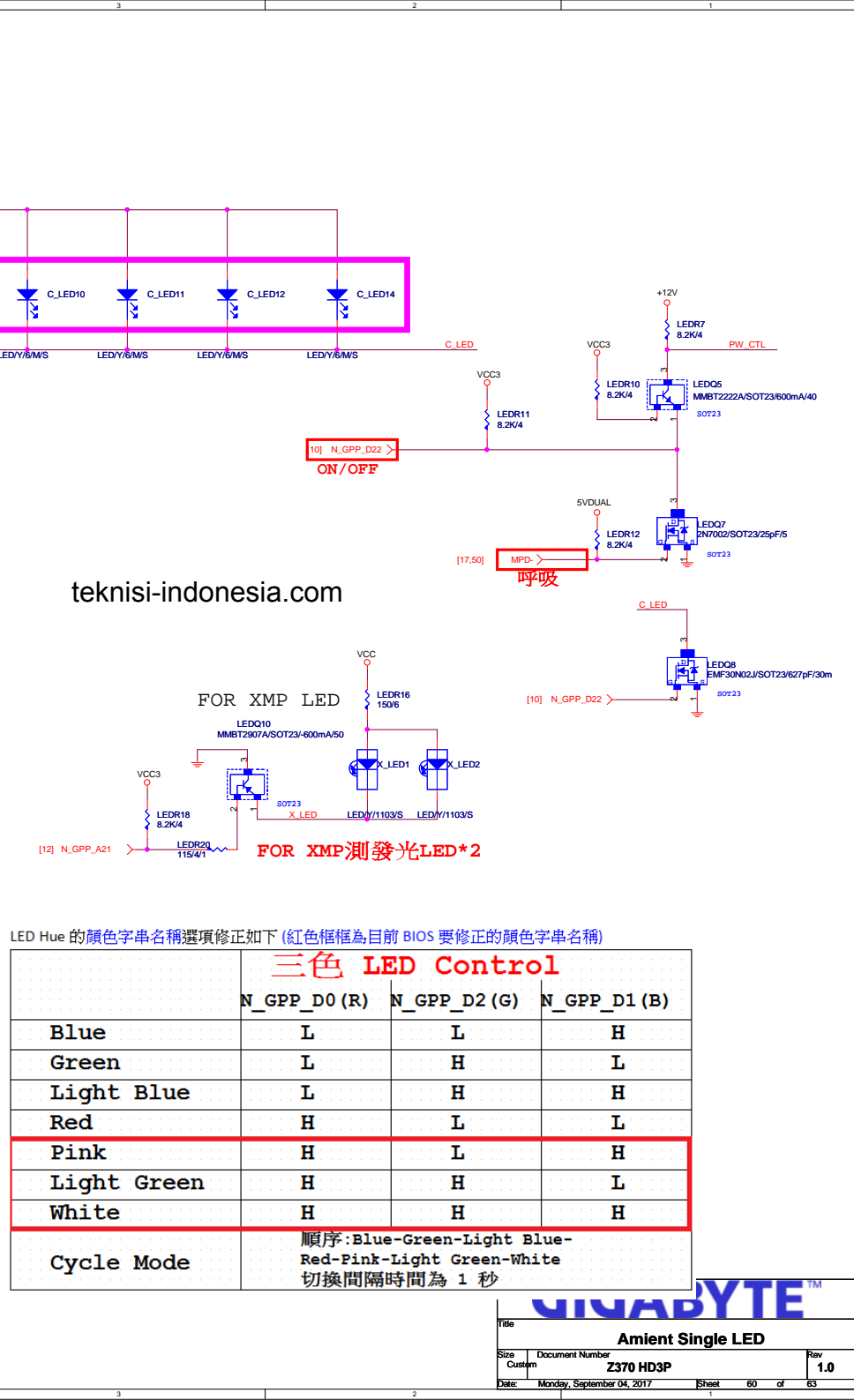
*可變，依需求上件不上件。

GIGABYTE

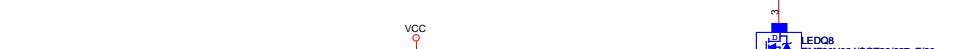
Title
IDT6V41530_CLK BUFFER

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Ambient LED Control		
	N_GPP_D22	IO_GP91

Still Mode	H	L
OFF Mode	L	L
Pluse Mode	H	BREATH

RGB LED CONTROL



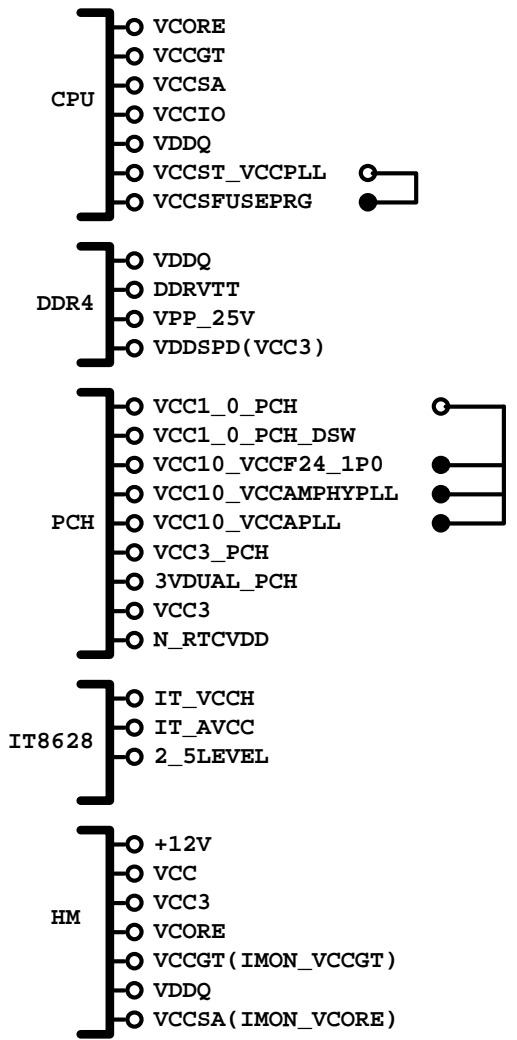
LED Hue 的顏色字串名稱選項修正如下 (紅色框框為目前 BIOS 要修正的顏色字串名稱)

三色 LED Control

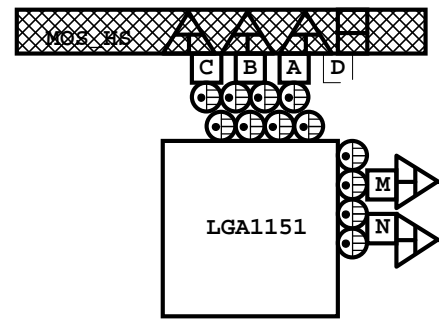
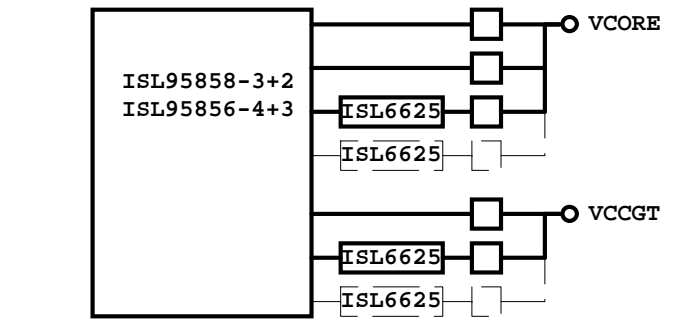
	N_GPP_D0 (R)	N_GPP_D2 (G)	N_GPP_D1 (B)
Blue	L	L	H
Green	L	H	L
Light Blue	L	H	H
Red	H	L	L
Pink	H	L	H
Light Green	H	H	L
White	H	H	H
Cycle Mode	順序: Blue-Green-Light Blue- Red-Pink-Light Green-White 切換間隔時間為 1 秒		

順序:Blue-Green-Light Blue-
Red-Pink-Light Green-White
切換間隔時間為 1 秒

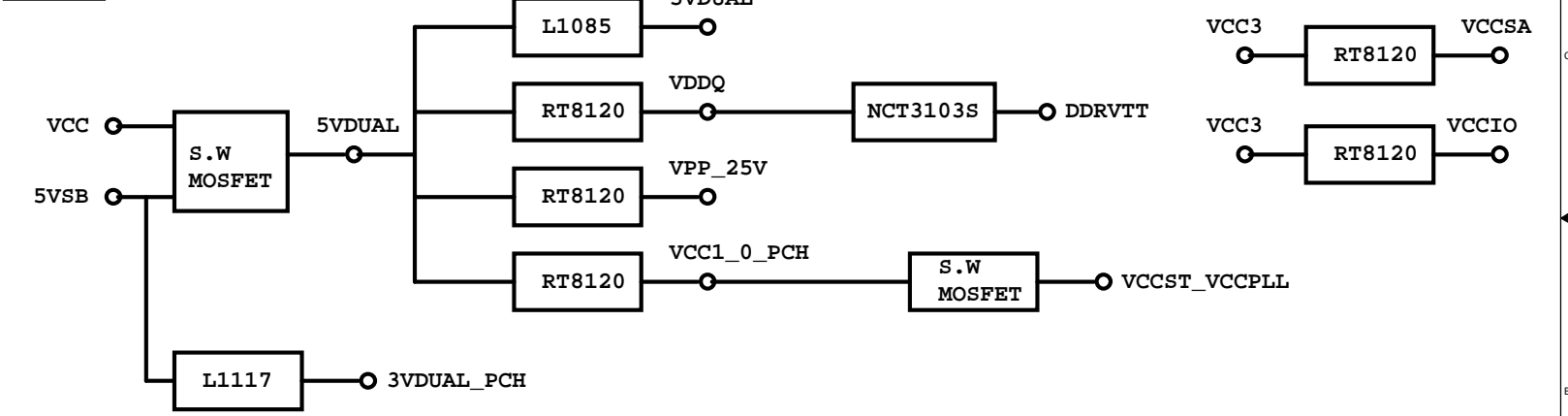
POWER BLOCK MAP



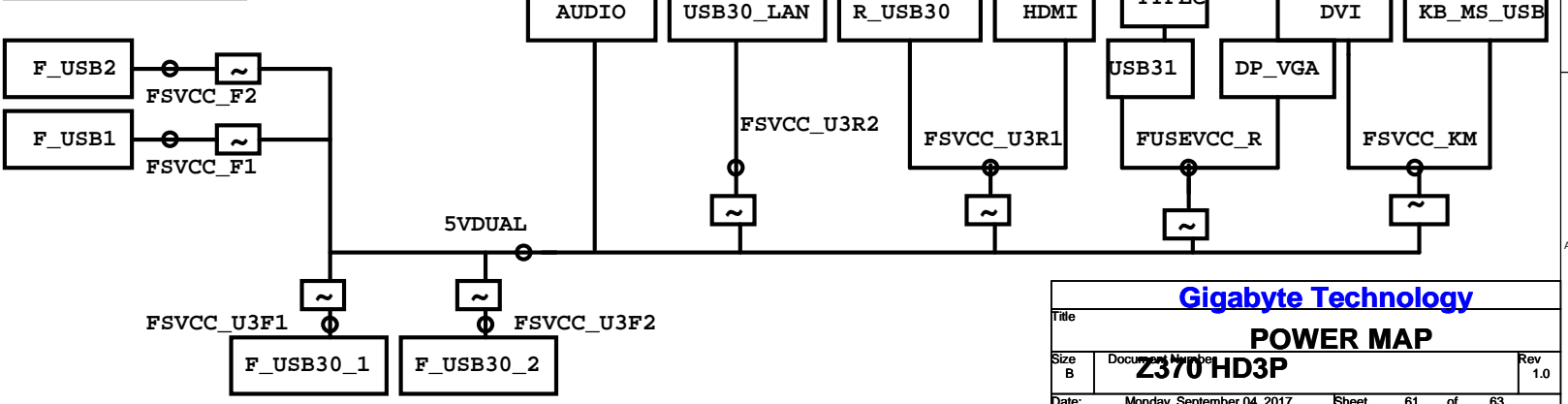
VCORE/VCCGT



POWER



FUSE POWER F/R



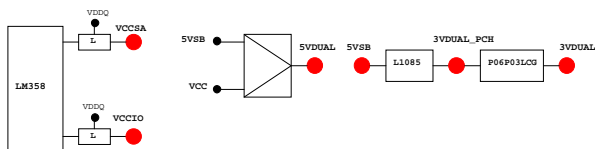
PCH GPIO LIST TABLE

PIN NAME	PWR	Default	USAGE	NOTE
GPP_A0	MAIN	NATIVE	N_KBRST	P/U 8.2K VCC3
GPP_A1	MAIN	NATIVE	N_LAD0	N/A
GPP_A2	MAIN	NATIVE	N_LAD1	N/A
GPP_A3	MAIN	NATIVE	N_LAD2	N/A
GPP_A4	MAIN	NATIVE	N_LAD3	N/A
GPP_A5	MAIN	NATIVE	N_LFRAME	N/A
GPP_A6	MAIN	NATIVE	N_SERIRQ	P/U 8.2K VCC3
GPP_A7	MAIN	NATIVE	N_LDRQ0	P/U 8.2K 3VDUAL
GPP_A8	MAIN	NATIVE	N_GPP_A8	P/U 8.2K VCC3
GPP_A9	MAIN	NATIVE	N_LFC24MB	N/A
GPP_A10	MAIN	NATIVE	N_LFC24MA	N/A
GPP_A11	MAIN	NATIVE	N_-P_PME	P/U 8.2K 3VDUAL_PCH
GPP_A12	MAIN	GPI	N_GPP_A12	P/U 8.2K VCC3
GPP_A13	MAIN	NATIVE	N_-S_WARN	N/A
GPP_A14	MAIN	NATIVE	N_GPP_A14	P/U 8.2K 3VDUAL
GPP_A15	MAIN	NATIVE	N_-S_ACK	N/A
GPP_B0	MAIN	CORE_VDD0	N_-DDR_V_SEL	P/U 8.2K VCC3
GPP_B1	MAIN	CORE_VDD1	N/A	N/A
GPP_B2	MAIN	GPI	N_-VREALRT	P/U 8.2K 3VDUAL
GPP_B5	MAIN	GPI	-PCIRX16_PR	P/U 8.2K VCC3
GPP_B6	MAIN	GPI	-PCIRX1_PR1	P/U 8.2K VCC3
GPP_B7	MAIN	GPI	-PCIRX1_PR2	P/U 8.2K VCC3
GPP_B8	MAIN	GPI	-PCIRX4_PR	P/U 8.2K VCC3
GPP_B9	MAIN	GPI	N/A	N/A
GPP_B10	MAIN	GPI	N/A	N/A
GPP_B11	MAIN	GPI	N/A	N/A
GPP_B12	MAIN	SLP_S0	N_SLP_S0	N/A
GPP_B13	MAIN	ELTRST	N_-PPWRST	N/A
GPP_B14	MAIN	N-E	GPO	N_SFPR
GPP_B18	MAIN	N-E	GPO	N_GPP_B18
GPP_B20	MAIN	GPI	N_GPP_B20	P/U 8.2K 3VDUAL
GPP_B22	MAIN	GPI	N_GPP_B22	P/D 1K GND
GPP_C0	MAIN	SHRCLK	N/A	N/A
GPP_C1	MAIN	SHRDATA	N/A	N/A
GPP_C2	MAIN	N-E	GPO	N_-LPCPME
GPP_C3	MAIN	SHRCLK	N_SHRCLK	P/U 499 3VDUAL
GPP_C4	MAIN	SHRDATA	N_SHRDATA	P/U 499 3VDUAL
GPP_C5	MAIN	N-E	GPO	N_GPP_C5
GPP_C6	MAIN	GPI	N_SHRCLK	P/U 8.2K 3VDUAL
GPP_C7	MAIN	GPI	N_SHRDATA	P/U 8.2K 3VDUAL
GPP_D4	MAIN	GPI	N_GPP_D4	P/U 8.2K 3VDUAL
GPP_D7	MAIN	GPI	N_GPP_D7	N/A
GPP_D9	MAIN	GPI	N_GPP_D9	N/A
GPP_D17	MAIN	GPI	N_GPP_D17	P/U 8.2K VCC3
GPP_D18	MAIN	GPI	N_GPP_D18	P/U 8.2K VCC3
GPP_D19	MAIN	GPI	N_GPP_D19	P/U 8.2K VCC3
GPP_D20	MAIN	GPI	N_GPP_D20	P/U 8.2K VCC3
GPP_D23	MAIN	GPI	N_GPP_D23	P/U 8.2K 3VDUAL
GPP_E0	MAIN	NATIVE	N_GPP_E0	P/U 8.2K VCC3
GPP_E1	MAIN	NATIVE	N_GPP_E1	P/U 8.2K VCC3
GPP_E2	MAIN	NATIVE	N_GPP_E2	P/U 8.2K VCC3
GPP_E3	MAIN	GPI	N_CPU_S	P/U 8.2K VCC3
GPP_E4	MAIN	GPI	N_DEVSLP0	P/U 8.2K VCC3
GPP_E6	MAIN	GPI	N_DEVSLP2	P/U 8.2K VCC3
GPP_E7	MAIN	GPI	N_GT_S	P/U 8.2K VCC3
GPP_E8	MAIN	GPI	N_-SATALED	N/A
GPP_E9	MAIN	N-E	GPI	N_-USB0C_F
GPP_E10	MAIN	N-E	GPI	N_-USB0C_R
GPP_E11	MAIN	N-E	GPI	N_-USB0C_R
GPP_E12	MAIN	N-E	GPI	N_-USB0C_F
GPP_F0	MAIN	NATIVE	N_GPP_F0	P/U 8.2K VCC3
GPP_F1	MAIN	NATIVE	N_GPP_F1	P/U 8.2K VCC3
GPP_F2	MAIN	NATIVE	N_GPP_F2	P/U 8.2K VCC3
GPP_F3	MAIN	GPI	N_GPP_F3	P/U 8.2K VCC3
GPP_F4	MAIN	GPI	N_GPP_F4	P/U 8.2K VCC3
GPP_F5	MAIN	GPI	N_GPP_F5	P/U 8.2K VCC3
GPP_F6	MAIN	GPI	N_DEVSLP4	P/U 8.2K VCC3
GPP_F10	MAIN	GPI	N_GPP_F10	P/U 8.2K VCC3
GPP_F11	MAIN	GPI	N_GPP_F11	P/U 8.2K VCC3
GPP_F12	MAIN	GPI	N_GPP_F12	P/U 8.2K VCC3
GPP_F13	MAIN	GPI	N_GPP_F13	P/U 8.2K VCC3
GPP_F14	MAIN	GPI	A_-SXT0CC	P/U 8.2K VCC3
GPP_F15	MAIN	GPI	N_-USB0C_F	N/A
GPP_F16	MAIN	GPI	N_-USB0C_F	N/A
GPP_F17	MAIN	GPI	N_-USB0C_R	N/A
GPP_F18	MAIN	GPI	N_-USB0C_7	P/U 8.2K 3VDUAL
GPP_F22	MAIN	GPI	N_GPP_F22	P/U 8.2K VCC3
GPP_F23	MAIN	GPI	N_GPP_F23	P/U 8.2K VCC3
GPP_G0	MAIN	GPI	N_GPP_G0	P/U 1K VCC3
GPP_G1	MAIN	GPI	N_GPP_G1	P/U 1K VCC3
GPP_G12	MAIN	GPI	N_GPP_G12	P/U 3.3K VCC3
GPP_G16	MAIN	GPI	N_GPP_G16	N/A
GPP_G18	MAIN	GPI	N_GPP_G18	P/U 8.2K VCC3
GPP_G19	MAIN	GPI	N_GPP_G19	P/U 8.2K VCC3
GPP_G20	MAIN	GPI	N_GPP_G20	P/U 8.2K VCC3
GPP_G21	MAIN	GPI	N_GPP_G21	P/U 8.2K VCC3
GPP_G22	MAIN	GPI	N_GPP_G22	P/U 8.2K VCC3
GPP_H0	MAIN	GPI	M2_-CLKREQ	P/U 8.2K VCC3
GPP_H12	MAIN	GPO	N_GPP_H12	P/U 8.2K VCC3
GPP_H19	MAIN	GPI	N_GPP_H19	P/U 8.2K 3VDUAL
GPP_H20	MAIN	GPI	N_GPP_H20	P/U 8.2K 3VDUAL
GPP_H21	MAIN	GPI	N_GPP_H21	P/U 8.2K 3VDUAL
GPP_H22	MAIN	GPI	N_GPP_H22	P/U 8.2K 3VDUAL
GPP_I0	MAIN	GPI	N_HDMI_HDP_F	N/A
GPP_I1	MAIN	GPI	N_DVI_HDP_F	P/U 1M VCC3
GPP_I2	MAIN	GPI	N_VGA_HDP_F	N/A

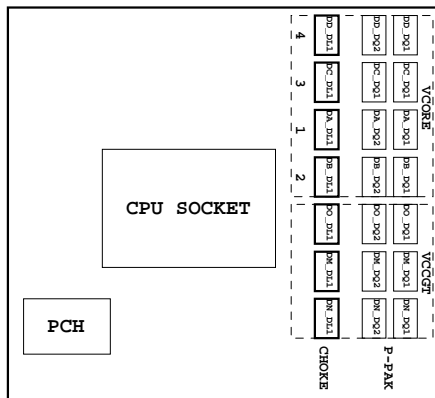
PIN NAME	PWR	Default	USAGE	NOTE
GPP_I3	MAIN	GPI	N_GPP_I3	P/U 8.2K VCC3
GPP_I4	MAIN	GPI	N_GPP_I4	P/D 100K GND
GPP_I5	MAIN	GPI	N_DDPB_CTRLCLK	P/U 2.2K VCC3
GPP_I6	MAIN	GPI	N_DDPB_CTRLCLK	P/U 2.2K VCC3
GPP_I7	MAIN	GPI	N_DDPB_CTRLCLK	P/U 2.2K VCC3
GPP_I8	MAIN	GPI	N_DDPB_CTRLCLK	P/U 2.2K VCC3
GPP_I9	MAIN	GPI	N_DDPB_CTRLCLK	P/U 2.2K VCC3
GPP_I10	MAIN	GPI	N_DDPB_CTRLCLK	P/U 2.2K VCC3
GPD0	STBY	BATLOW	N_-BATLOW	P/U 8.2K 3VDUAL_PCH
GPD1	STBY	ACPRESENT	N_GP_D1	P/U 8.2K 3VDUAL_PCH
GPD2	STBY	LAN_WAKE	N_-LAN_WAKE	N/A
GPD3	STBY	PWRBTN	O_PWRBTW	P/U 8.2K 3VDUAL_PCH
GPD4	STBY	SLP_S3	N_-SLP_S3	N/A
GPD5	STBY	SLP_S4	N_-SLP_S4	N/A
GPD6	STBY	SLP_A	N_-SLP_A	P/U 8.2K 3VDUAL
GPD7	STBY	NATIVE	N_-S_ACK	N/A
GPD8	STBY	SUSCLK	N_SUSCLK	N/A
GPD10	STBY	SLP_S5	N_-SLP_S5	N/A

Super I/O ITR8720 GPIO Table

PIN NAME	USAGE	NOTE
PCIRST3#/GP10/VDIMM_STR_EN	N/A	
PCIRST2#/GP11	O_-PCIR_RST	
PCIRST1#/GP12	O_-PPWRST2	
SVC/PECI_RQ7/GP14	TPM_GP14	
SLP_SUS#/PCIRSTIN#/CIRT2/GP15	-PCIRSTIN	
PS1_L/FAN_CLT5/CIRKX2/GP16	N_-THERMTRIP	
R12#/GP17	MB_ID2	
THR_PWM_CTS2#/GP20	N_-THERMTRIP	
IO_SM1#DCD2#/GP21	VREF PIN	
SPI_S1/GP22	BEEP-	
DPWRCK/CPU_PG/GP23	N_PCH_DPWRCK	
FAN_TAC5/RIS2#/GP24	VREF PIN	
FAN_TAC4/DSR2#/GP25	FANIO4	
INV_OUT1_SOUT2/GP26	G_PLLED	
INV_IN1/SIN2/GP27	INV_IN1	
ATXPG/GP30	PWOK	
CTS1/GP31	CTS1-	
OCMDT3/R11#/GP32	R11-	
OCMDT2/DCD1#/GP33	DCD1-	
VTT_PWRGD/GP34	VTT_PWRGD	
VCC18_EN/GP35	VCC10_EN	
FAN_CTL3/GP36	FANPWM3	
FAN_TAC3/GP37	FANIO3	
3VSB5W#/GP40	VREF PIN	
OCMDT1/SIN1/GP41	RXD1	
GP42/SCK/FAN_CTL4	VREF PIN	
FAN5W#/GP43	-PWRBTW	
PWRON#/GP44	O_PWRBTW	
OCMDT0/DSR1#/GP45	DSR1-	
CE2_N/GP47/JP6	CEB_N	
GP50/JP1	VREF PIN	
FAN_CTL2/GP51	FANPWM2	
FAN_TAC2/GP52	FANIO2	
SUSCH#/GP53	N_-S4_S5	
PMB#/GP54	N_-LPCPME	
RSRST#/CIRKX1/GP55	O_-RSRST	
MCLK/FAN_TAC6/GP56	MCLK	
MDAT/FAN_CTL6/GP57	MDAT	
KCLK/GP60	KCLK	
KDAT/GP61	KDAT	
KRST#/GP62	N_-KBRST	
HOLD_B#/GP63	-SPI_HOLD_B	
HOLD_B#/GP64	-SPI_HOLD_M	
VLDT_EN/PCH_D0/GP65	VREF PIN	
VCC1_05_EN/GP66	VCC1_0_EN	
GP67	VREF PIN	
USB_F81/PD0/GP70	PD0	
USB_F82/PD1/GP71	PD1	
USB_F83/PD2/GP72	PD2	
USB_F83/PD3/GP73	PD3	
USB_F85/PD4/GP74	PD4	
USB_F86/PD5/GP75	PD5	
USB_F87/PD7/GP76	PD6	
USB_F88/PD8/GP77	PD7	
LS_IN1/SLCT/GP80	SLCT	
LS_OUT1/PE/GP81	PE	
LS_IN2/BSY/GP82	BSY	
LS_OUT2/ACK#/GP83	ACK-	
IPHONE_CHARGE#/SLIN#/GP84	SLIN-	
OC_IN/INIT#/GP85	INIT-	
OC_OUT/AFD#/GP86	AFD-	
USB_OC2/STB#/GP87	STB-	
DDR_EN/GP90	MA_EN	
PWRLED/GP91	MPD-	
HOLD_OUT/GP92	VREF PIN	
HOLD_IN/GP93	VREF PIN	
PROCHOT#/GP94	-PROCHOT_CON	
CPUPWRGD/GP95	VREF PIN CPU_PWRGD	
PCH_VRMPWRGD/GP96	N_PCH_VRMPWRGD	
VR_RDY/GP97	VR_RDY	



PWM各相位的擺法如下:



BIOS超電壓對應表:

散熱模組料號:

Z1704-HD3 :

PCH :

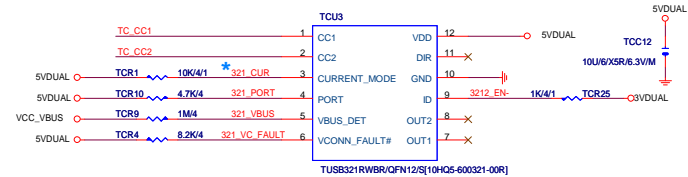
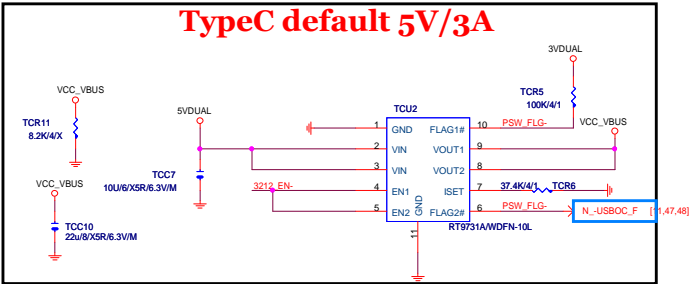
MOSFET :

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

	3 pin Fan control	4 pin Fan control	FAN speed	Controller
CPU FAN	+12V	FANPWM1	FANIO1	IT8628
SYS FAN1	FANPWM2	VCC	FANIO2	IT8628
	FAN1_VOUT	N/A	N/A	NCT3941
SYS FAN2	FANPWM3	VCC	FANIO3	IT8628
	FAN2_VOUT	N/A	N/A	NCT3941
SYS FAN3	+12V	N/A	FANIO4	IT8628

Gigabyte Technology

TABLE LIST		
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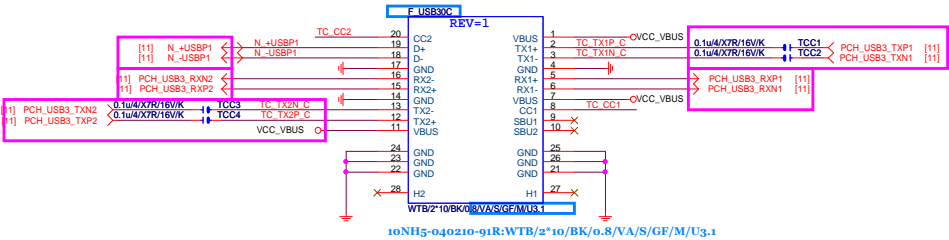
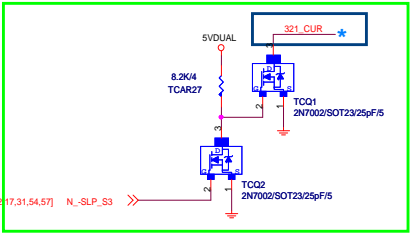
CURRENT MODE

- L - Default current / Pull down to GND or NC
- M - Medium (1.5A) current / Pull up to VDD 500K
- H - High (3.0A) current / Pull up to VDD 10K

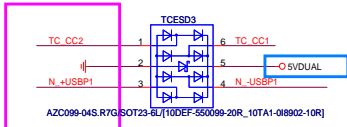
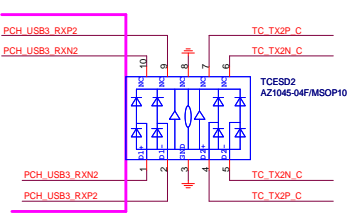
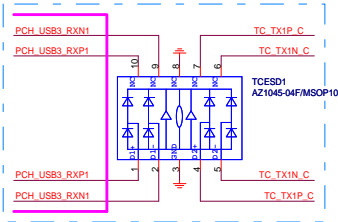
PORT

- H - HOST
- L - Device
- NC - Dual Role

For VBUS current limit at 900mA on S3



USB2.0 can be used the same source



Color markers can be changed by model