

# Model Name: GA-Z77-D3H

1.02

SHEET

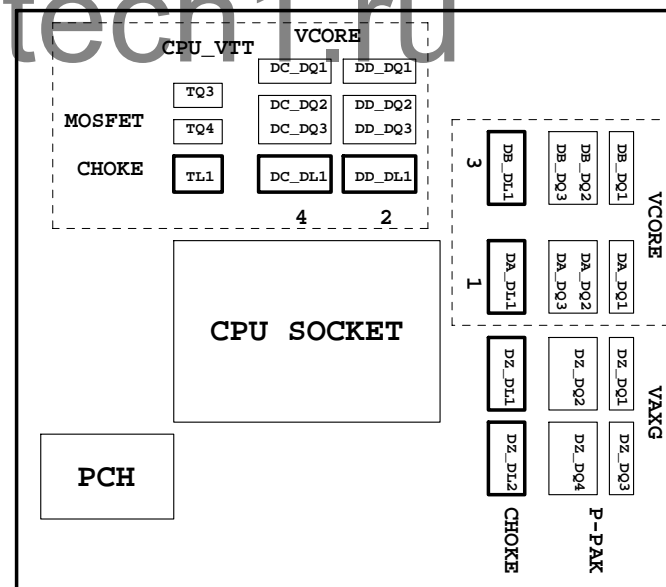
TITLE

01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	CPU_LGA1155-A
05	CPU_LGA1155-B
06	CPU_LGA1155-C
07	DDR III CHANNEL A
08	DDR III CHANNEL B
09	PCH_FDI,DMI,USB,PCIE,NVRAM
10	PCH_DP,CLK BUFFER
11	PCH_HOST,SATA,PCI
12	PCH_GPIO,CTRL,AUDIO
13	PCH_PWR,GND
14	PCI EXPRESS*16 SLOT
15	PCIEX1*3 , PCIEX4 SLOT
16	ITE8892 PCI BRIDGE
17	PCI SLOT 1&2
18	I/O ITE8728
19	COM, -PROHOT, R_USB
20	Dual BIOS , TPM SLB9635TT
21	VT2021 CODEC
22	REAR AUDIO JACK
23	VCORE PWM_IR3564
24	VCORE PWM DRIVER IR3598
25	NCP3933 OVER VOLTAGE
26	DISCRETE POWER
27	DDR_15V & CPU_VTT PWM IR3570

SHEET

TITLE

28	DDR_15V & CPU_VTT PWM DRIVER CHL8550
29	VCCSA POWER
30	F_PANEL , F_USB2.0/3.0
31	ATX POWER, CLOCK GEN
32	HWM , KB/MS , FAN CTRL
33	LAN ATHEROS AR8151
34	N/A
35	M-SATA
36	DVI
37	HDMI , R_USB30
38	TABLE LIST
39	
40	



GA-Z77-D3H

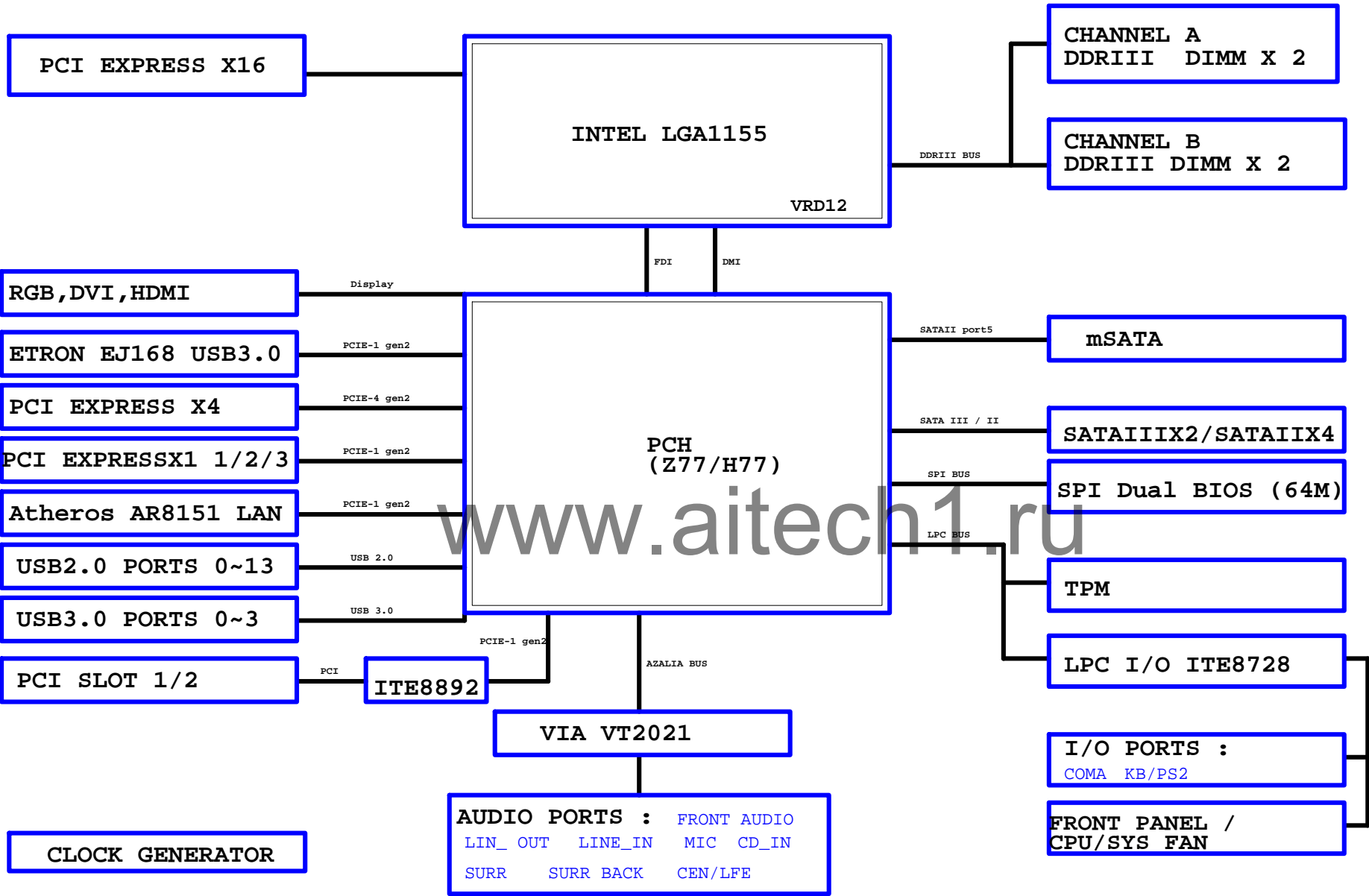
Component value change history

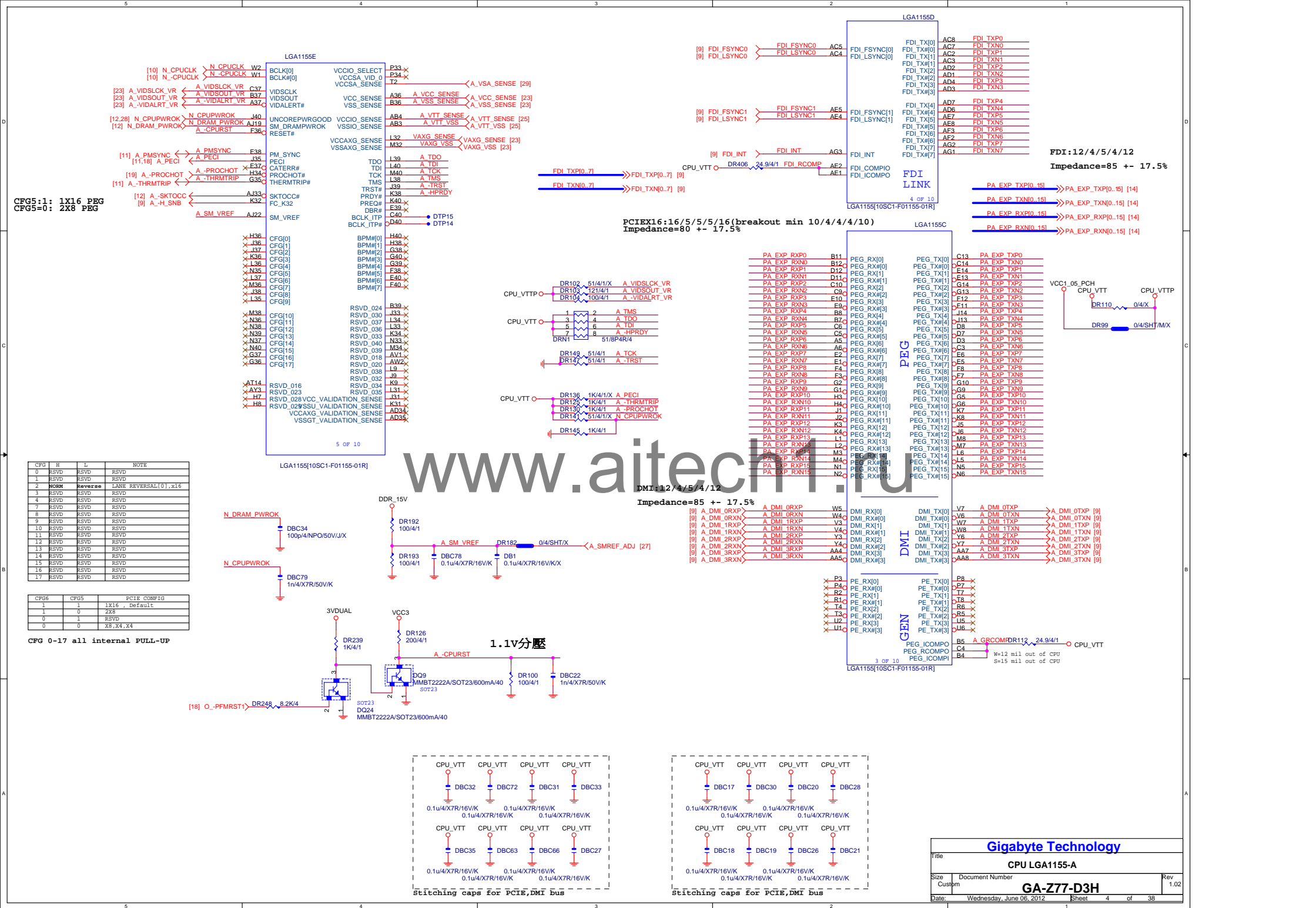
Data	Change Item	Reason
0.1-1124	E-BOM	
02-1216	1. ADD PCH_HS & MOS_HS料號	
	2. PCIE gen2 switch PI3PCIE2415ZHE --> ASM1440	
	3. load-line DAR5=12K , DAR40=1.78K	
10A-0105	1. Z77料號更新	
	2. PWM Driver power vcc or +12v?	
	3. DART2 --> 47K/1/4/S , DAR44 --> 0 ohm	
10B-0113	1. Vcore & VAXG VSEN modify , DAR1,DAR51=100/4/1,DAR2,DAR54=0/4,DAC1,DAC24=3.3nF	
	2. 1.54K加替料:10RC4-001541-22R TA-I	
	1. Remove IR PWM 1X3 pin	
10C-0117	1. DA_DR11,DC_DR11,DZ_DR18 1ohm --> 0ohm	
10D-0119	1. Prochot R65 : 1.65K/4/1 --> 2.74K/4/1	
10E-EVT-0201	1. Modify choke=0.36uH , DRIVER=5V	
10F	1. IR3564要改用新料號03R	
	2. poochot change 100K	
10T	1. 0 OHM Short-pad	
	2. DDR3 FOR OC 2400MHz UP	
10G-1.01	0. PCB Rev1.01 --> ReV1.01 (DDR3 OC 2400MHz+)	
	1. RS_PWM相關線路移除 (若有上prochot pull up改100 ohm)	
	2. Add M/B ID for DDR3 OC	
	3. 固態電容區分100uF/6.3V & 100uF/16V	
10H-1.02	1. PCB Rev1.01 --> ReV1.02 (DDR3 OC 2800MHz+)	
	2. Add M/B ID for DDR3 OC	
	3. ADD DC79 FOR A_CPUPWROK	
	4. 100u 16V-->6.3V	
10I-0430	1. PWM IR3564 --> IR3564A	
	2. Remove DAESD1	
	3. RJK0393DPA 10IF9-040393-01R --> 10IF9-040393-11R	

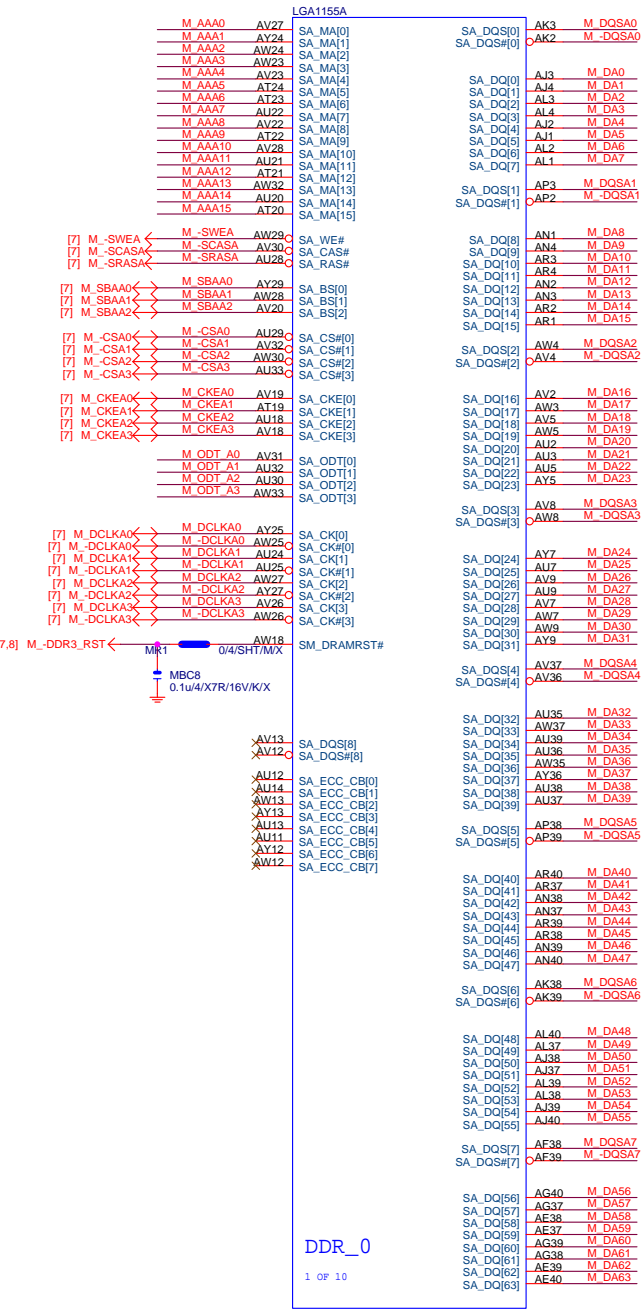
Circuit or PCB layout change

DATE	Change Item	Reason
P67X-UD3-B3		
2011/02/18-0.1	1. 移除LAR11 ,LAR14 , NR28 ,新增NTP11	
2011/02/18-1.0	2. 新增DR388,DR389,DR391 ; Remove DQ49,DR347,DR371 3. CR44改成R0603-RH 4. R1,LAR3,RBR20,LABC25 -->R0402-2-SHORT 5. RAQ1 --> Q_TO223-MASK 6. RARN1 --> R8P4R-0402-SHORT 7. CESD1-5 --> SSOP5 8. RAQ2,RAEC1一起往下移40mil 9. CESD2文字面要標pin1	
2011/03/8-1.01	1. Add "Dolby" logo	
2011/03/8-1.02	1. UAFB1,UAFB2,UBF1,UBF2 Footprint update 1206-->1812 2. Add "AD1" FOR 5VSB	
Z68XP-D3		
1.0	1. update MINI_PCIE footprint 2. 文字面 : SLOT部分全對齊	
Z77-D3H-0.1	EVT	
0.2-1216	1. Remove SE9172 , Add VCC8 內層(注意其他內層power,跨切割) 2. SPDIF AGND --> GND 3. PCI SLOT & PCIEX1/X4 CAP COST DOWN 4. 0 ohm --> SHORT PAD 5. REMOVE SMBUS FROM COMP TO SOLDER SIDE IN DR POWER 6. SATA3 connect Change to 90 degree (記得SATA3訊號部分要做挖空) 7. Add "108dB"文字面 8. Remove VCC1_05_PCH & VCC1_8_PCH gate net 9. Add EJ168 R_USB30_1 & F_USB3 10. UAE1/UAE2 NET SWAP 11. 內層+12V要打VIA在COMA處 12. SPDIFO_HDMI走12mil	
1.0	1. SATA2-SATA3文字面要隱藏 2. DART2 移至 DC_DQ1左上方 3. Q7 & DAR31 NET Change	
1.01	1. 0 OHM SHORT PAD (LAN & AUDIO) 2. DDR3 2400MHz OC modify	

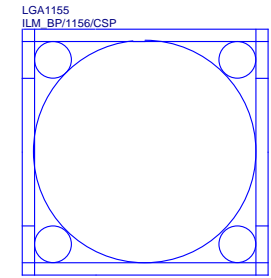
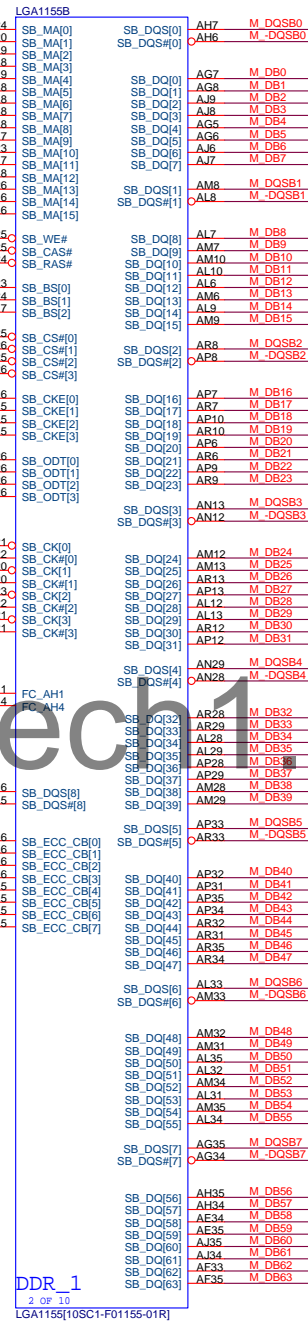
BLOCK DIAGRAM



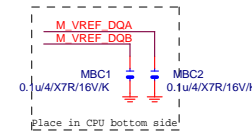




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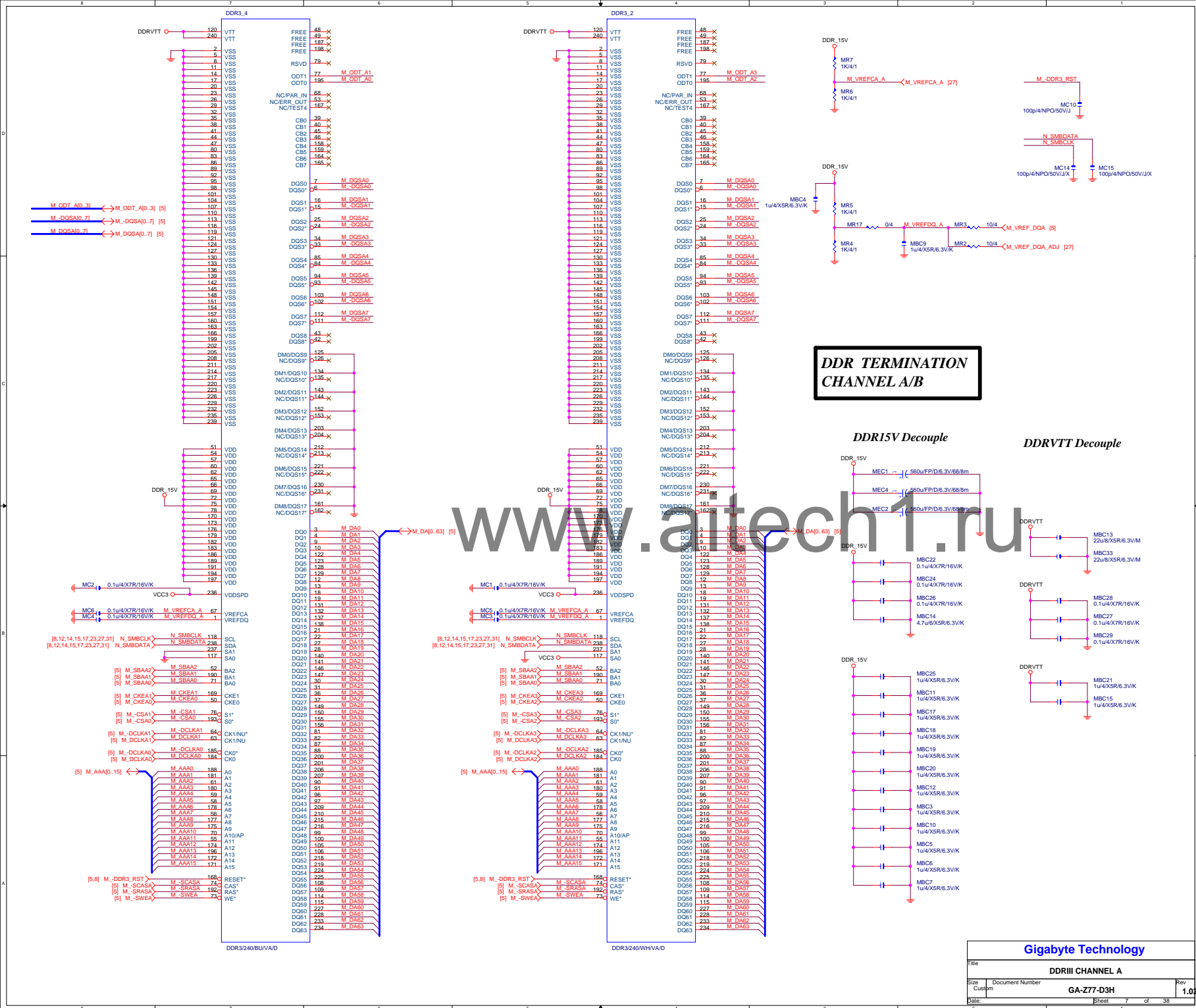


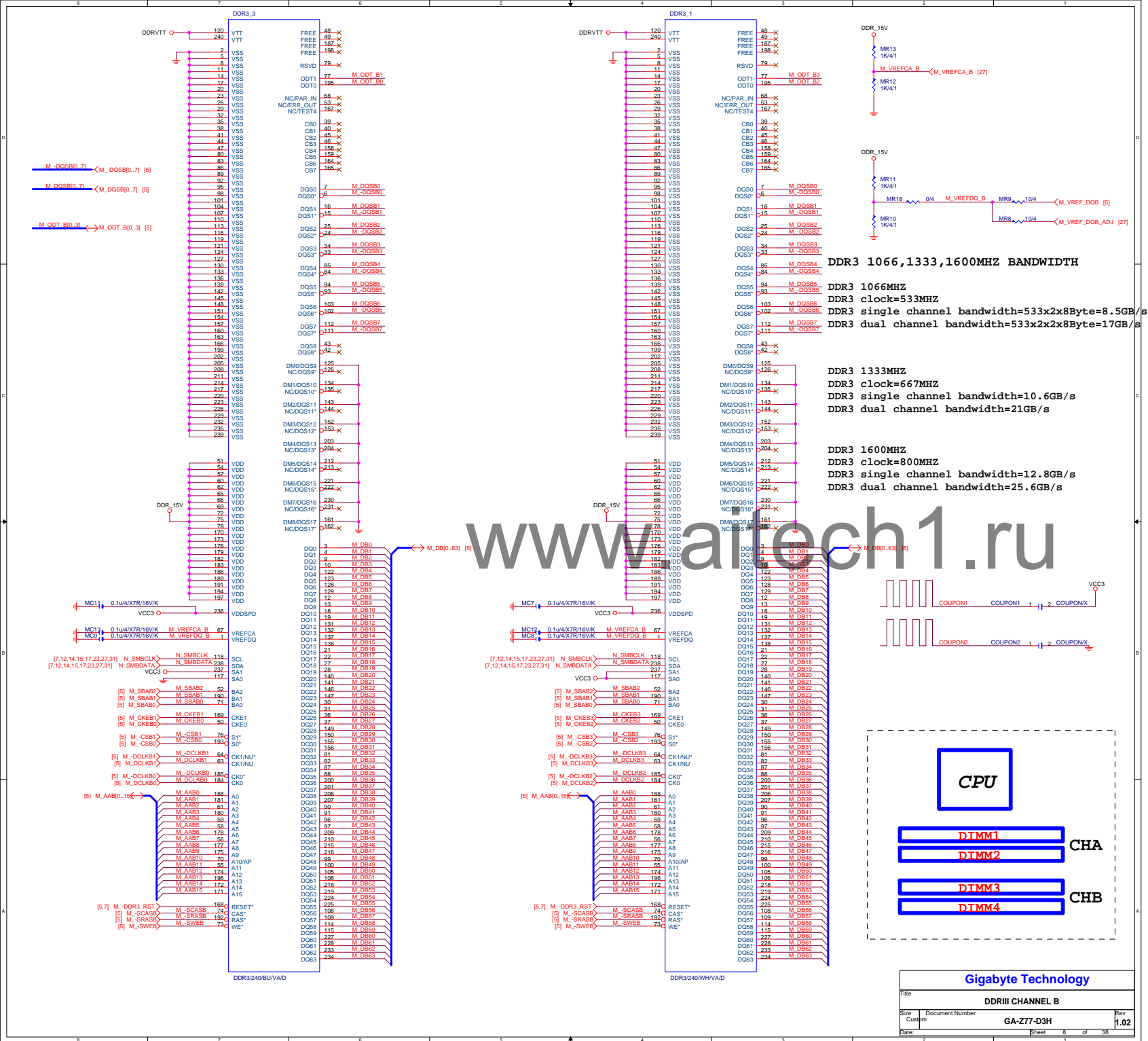
Need check the new CPU ME







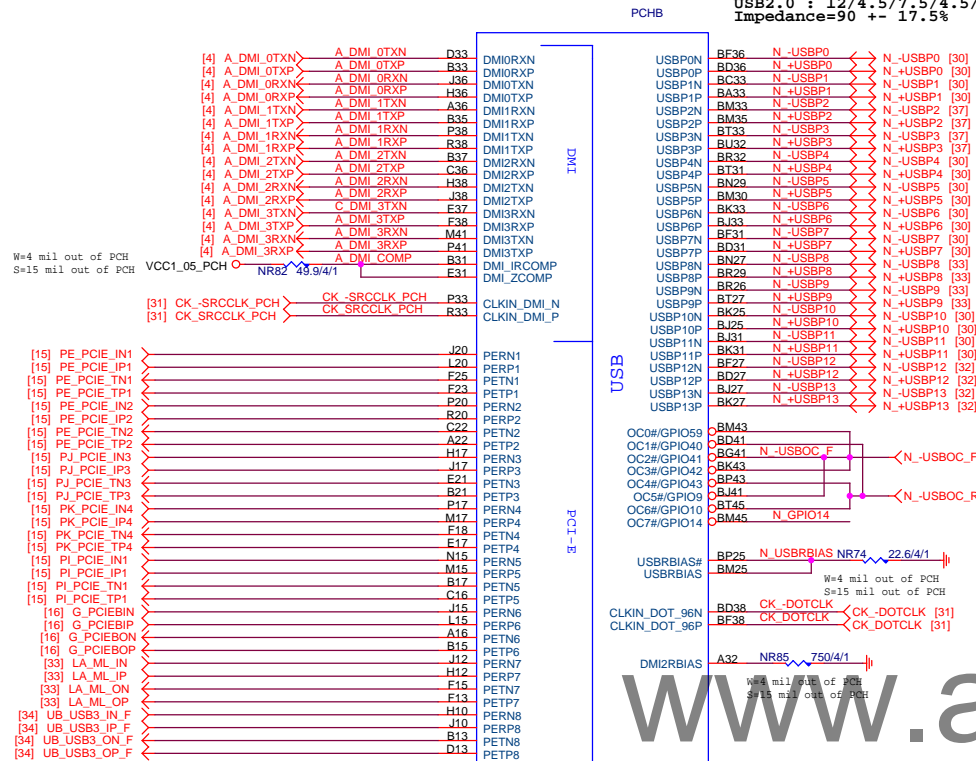






USB3.0:20/5/7/5/20 (breakout min  
8/4/4/4/8) ; ONLY 3 VIAS  
Impedance=85 +- 17.5%  
Back Panel < 10000 MILS  
Front Panel < 6000 MILS

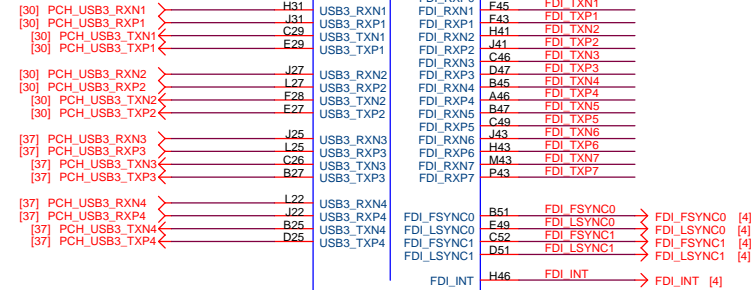
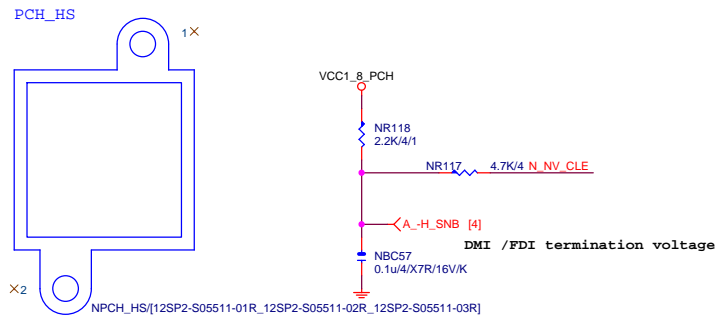
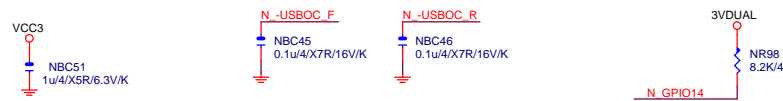
USB2.0 : 12/4.5/7.5/4.5/12 (breakout min 8/4/4/4/8)  
Impedance=90 +- 17.5%



**放靠近** Device & PCI-E Slot

PCIEX1:16/5/5/5/16 (breakout min 8/4/4/4/8)

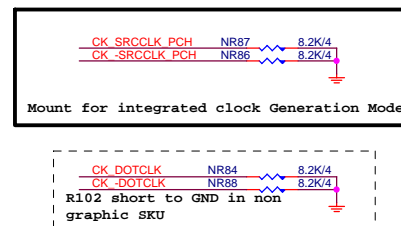
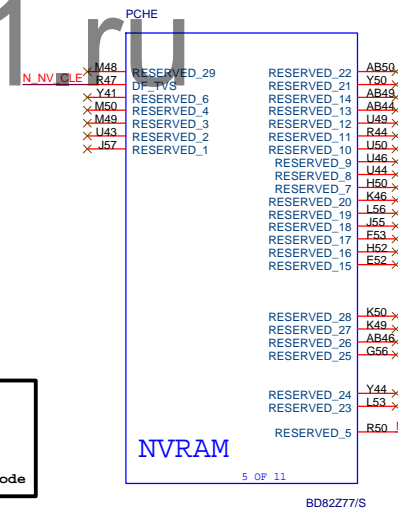
Impedance=80 +- 17.5%

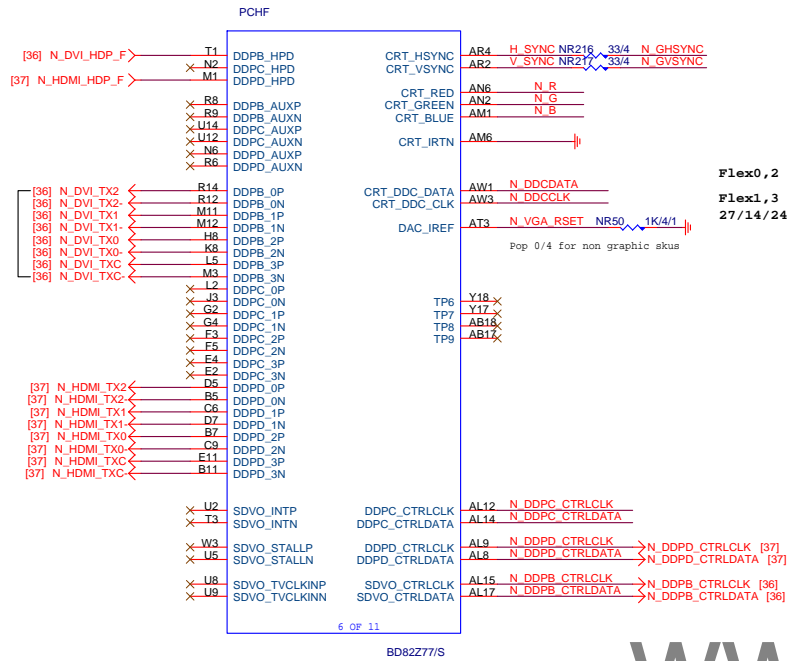


FDI:12/4/5/4/12  
Impedance=85 +- 17.5%

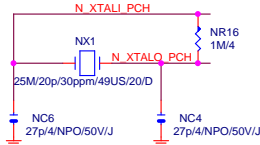


USB OC#	Configure
OC0#	USB0,1
OC1#	USB2,3
OC2#	USB4,5
OC3#	USB6,7
OC4#	USB8,9
OC5#	USB10,11
OC6#	USB12,13
OC7#	Not Use



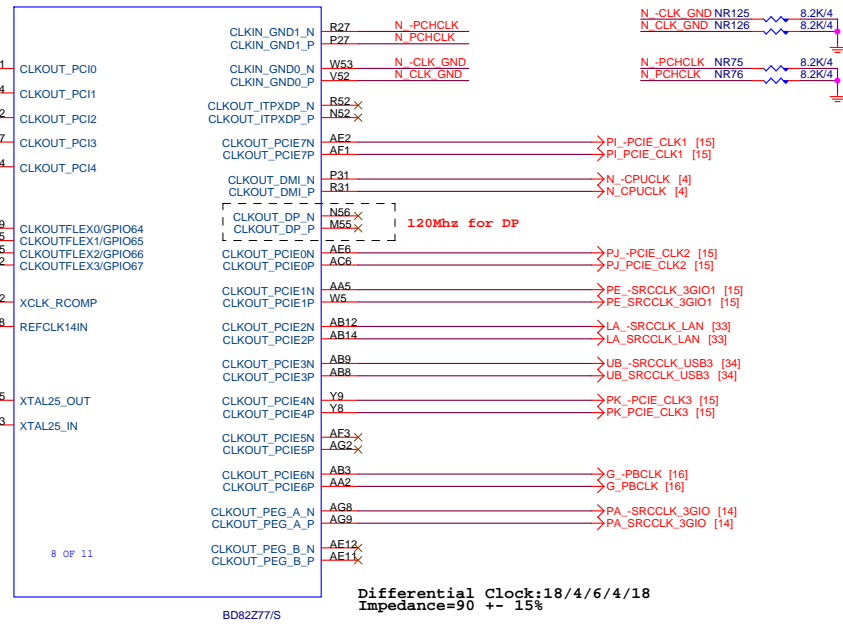


Flex0,2 : 33MHz  
Flex1,3 :  
27/14/24/48/25MHz



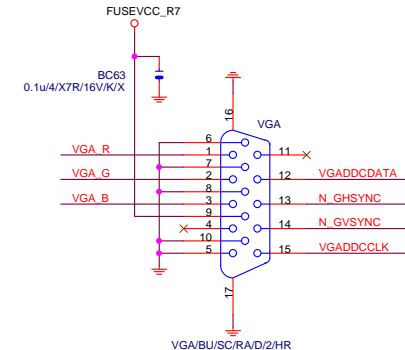
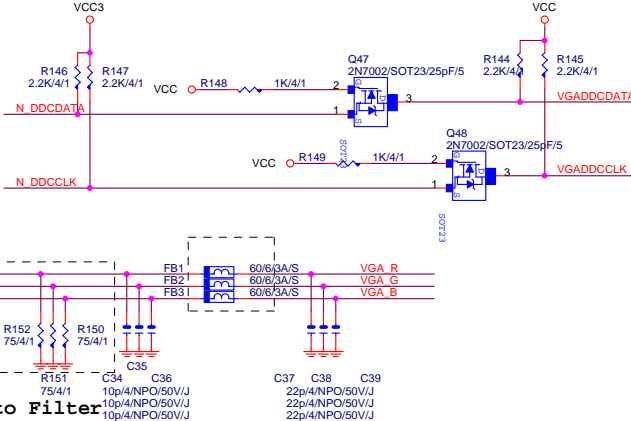
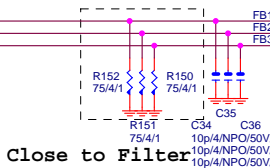
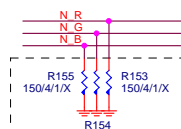
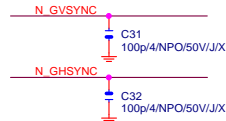
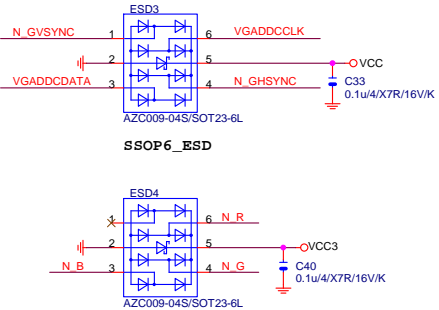
N\_PCHCLK14 NR33 8.2K/4

Mount for integrated clock generation Mode



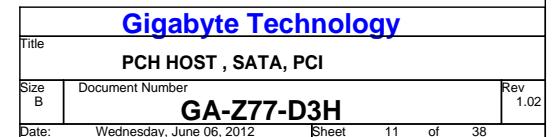
Differential Clock:18/4/6/4/18  
Impedance=90 +- 15%

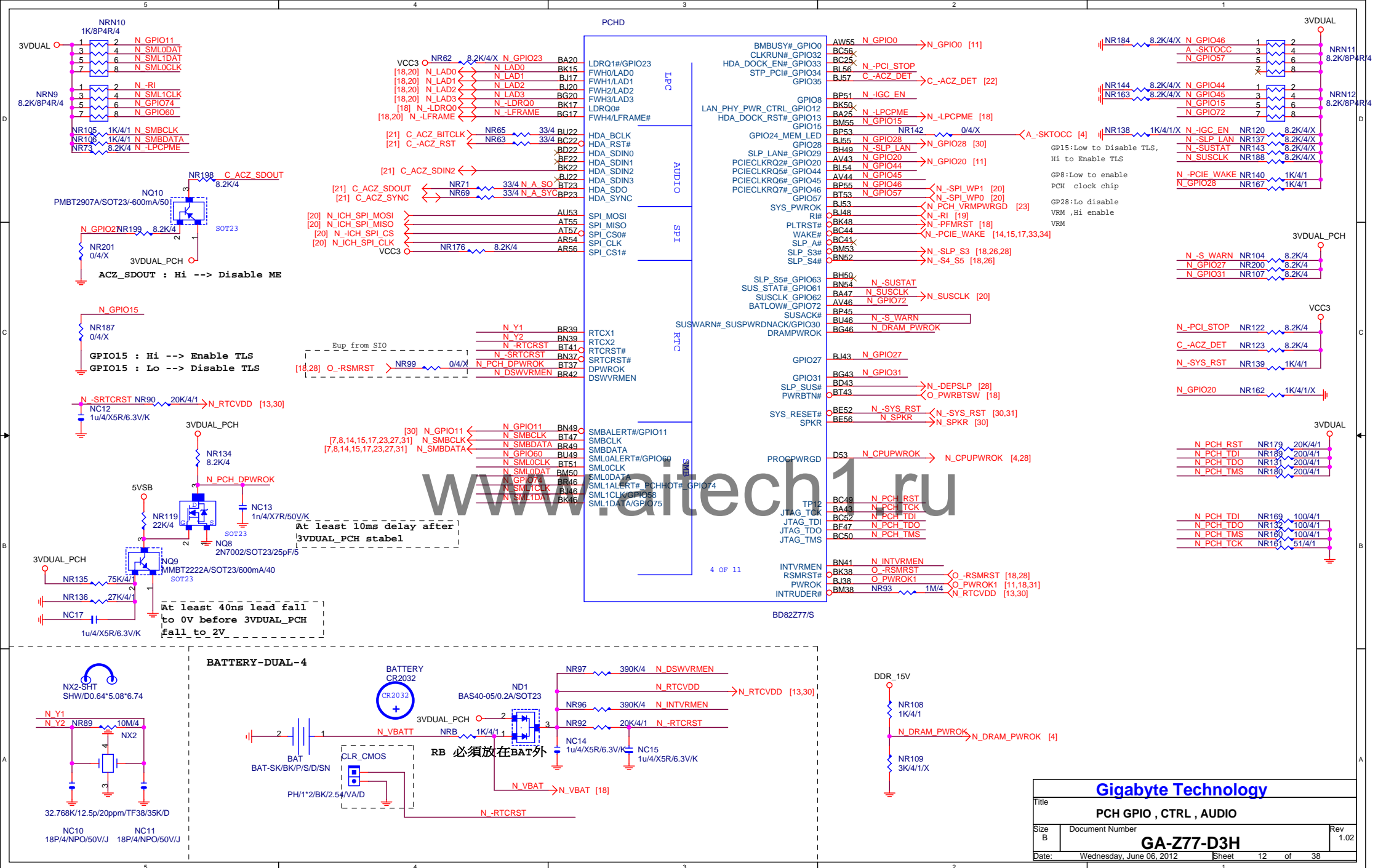
Check if NC for P67 non graphic chip

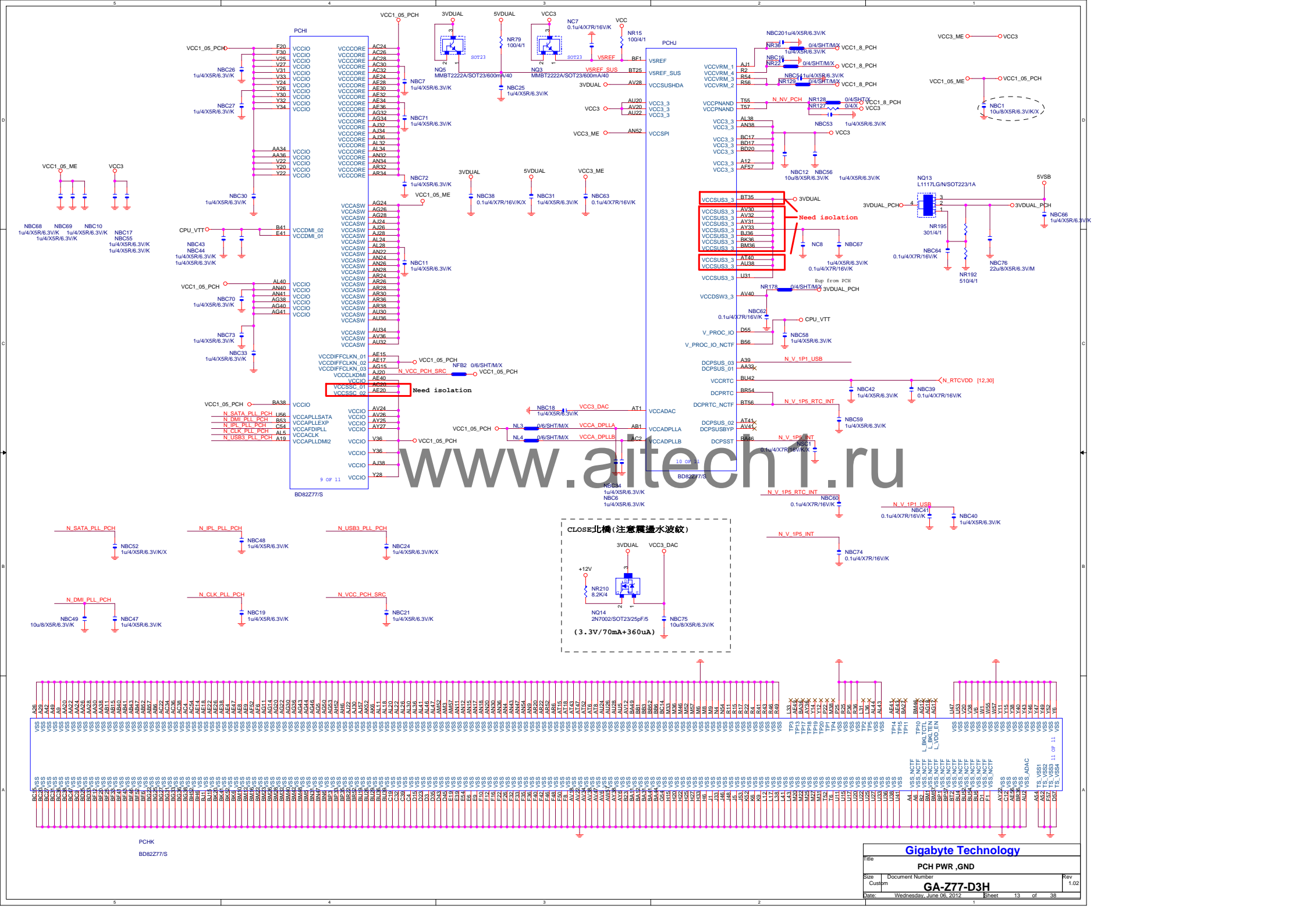


Gigabyte Technology			
Title			
PCH DISPLAY ,CLK BUFFER			
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SATA2 : 15/7.5/4.5/7.5/15 (breakout min 8/4/4/4/8)  
Impedance=90 +- 17.5%







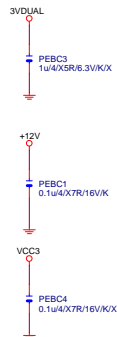
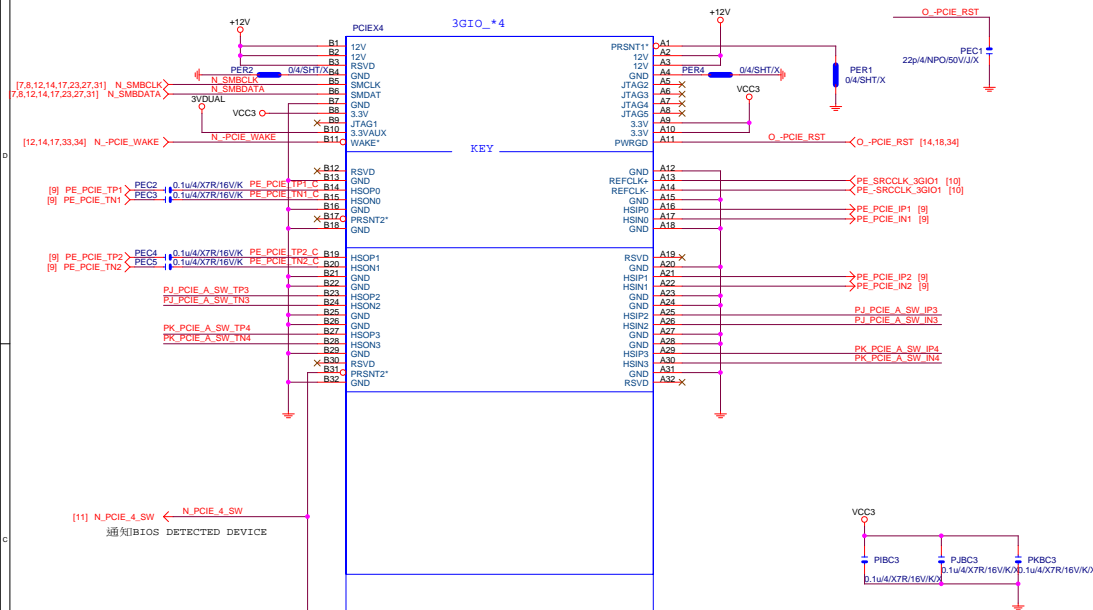
Gigabyte Technology			
File	PCH PWR, GND		
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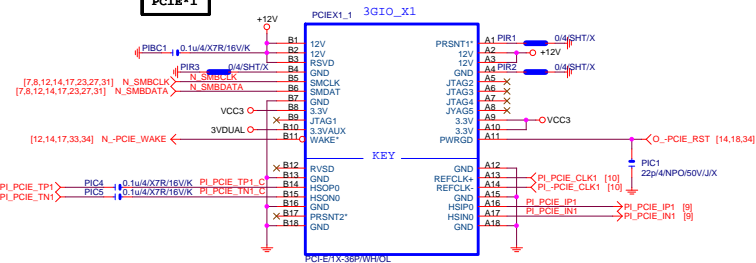
# PCIE\*4



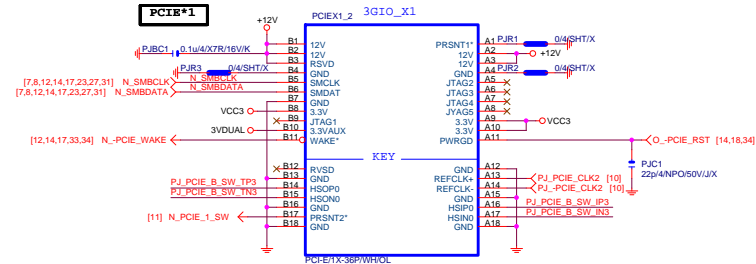
N\_PCIE\_4\_SW (PCH GPIO38)    PCIE4\_X1 (SIO GPIO26)

PCIE1,PCIE4 --> X1 (Default)	H	H
PCIE4 No devices	H	H
PCIE4 Have devices	L	L
PCIE4 -> X4		
PCIE1_2/PCIE1_3 --> N/A		

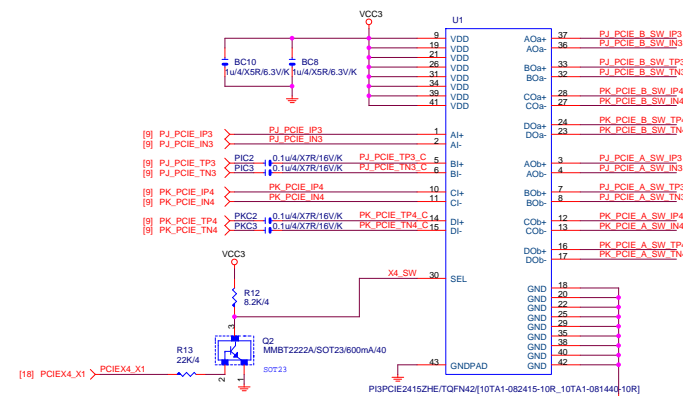
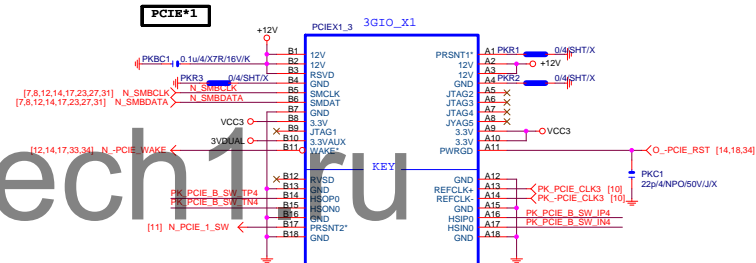
# PCIE\*1



# PCIE\*1



# PCIE\*1



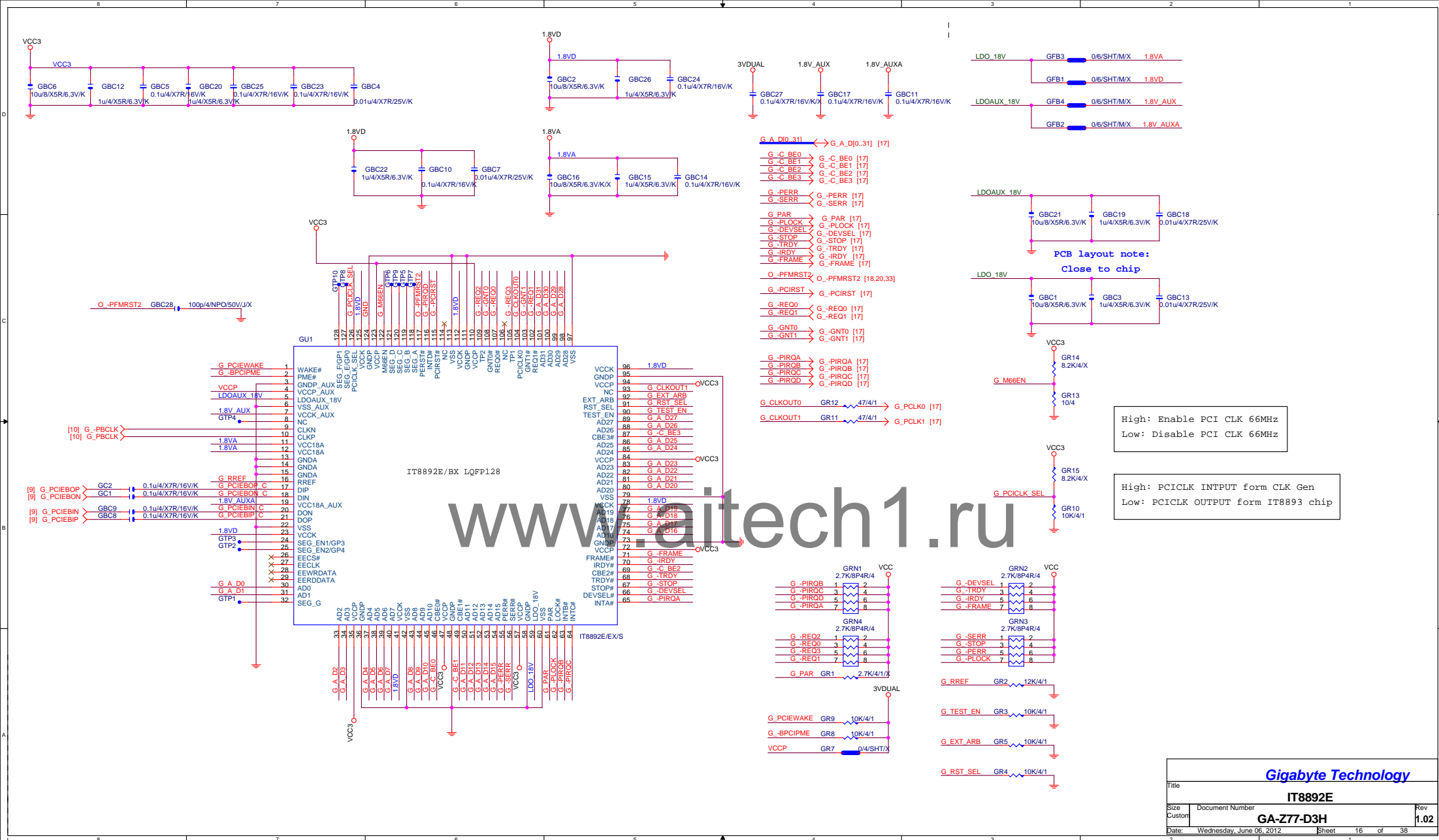
Function	SEL
X1--> x0a	L <sub>1</sub> PCIE4 SLOT-->X1
X1--> x0b	H <sub>1</sub> PCIE4 SLOT-->X4

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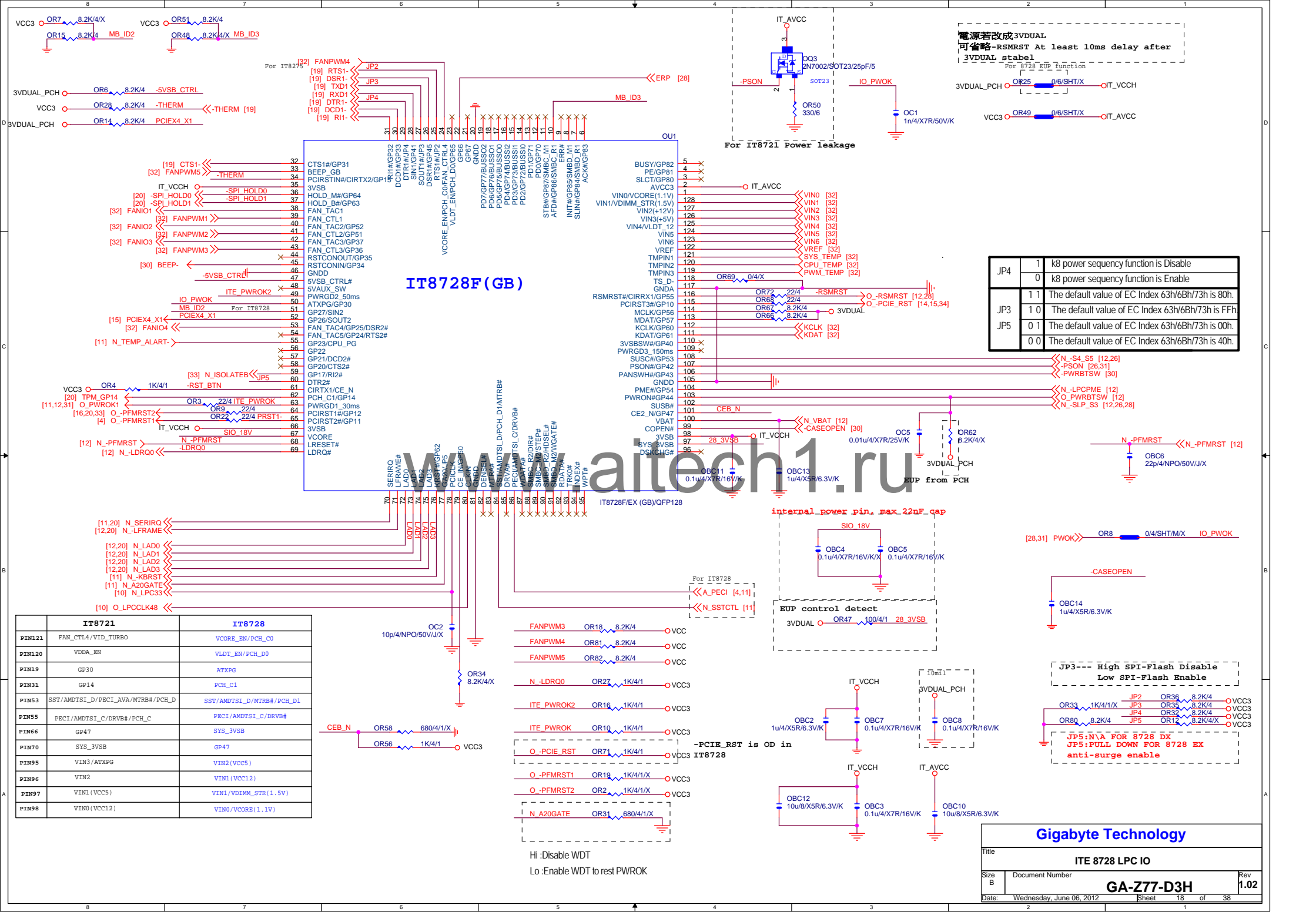
# PCIE X1 1.2

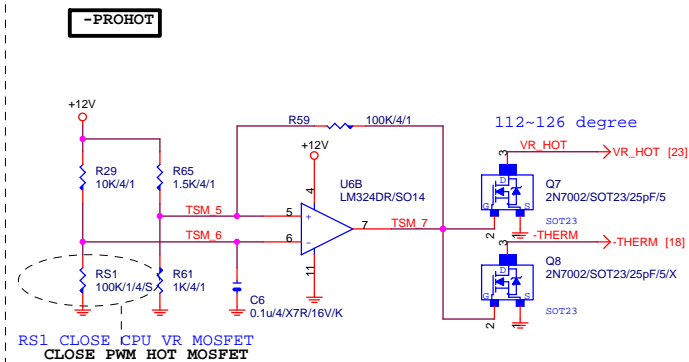
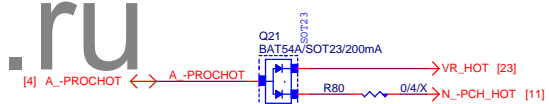
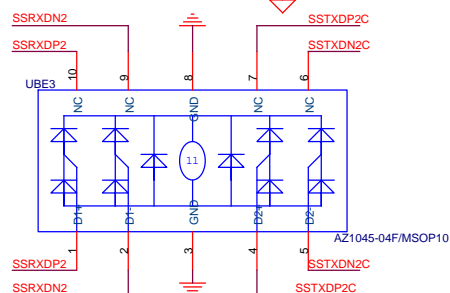
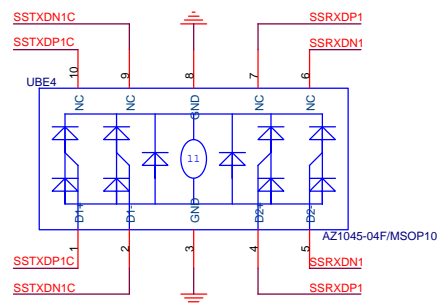
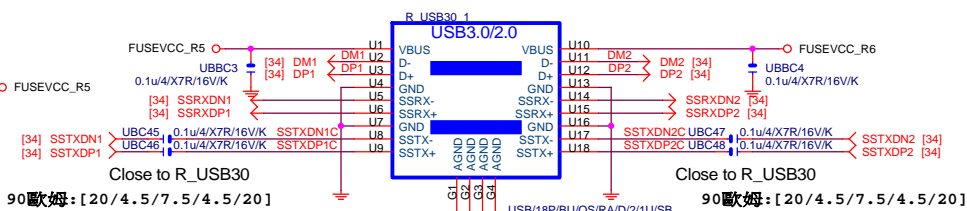
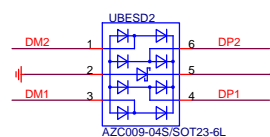
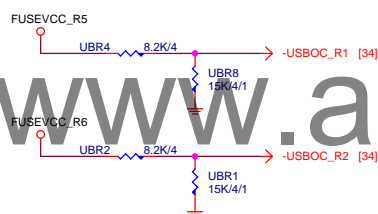
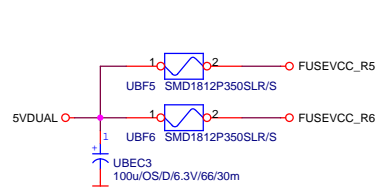
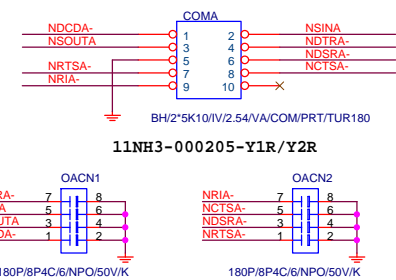
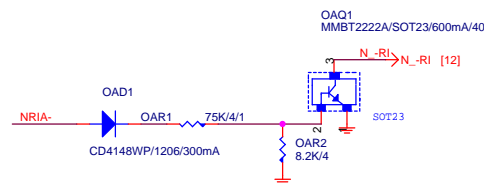
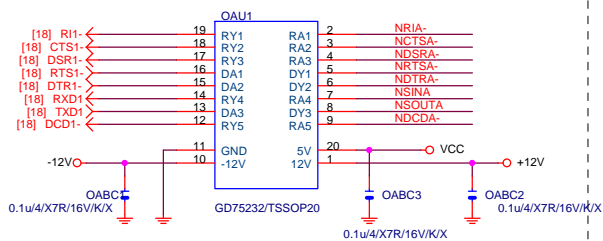
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GA-Z77-D3H	1.02	

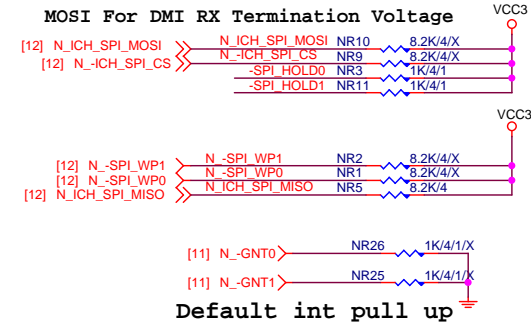
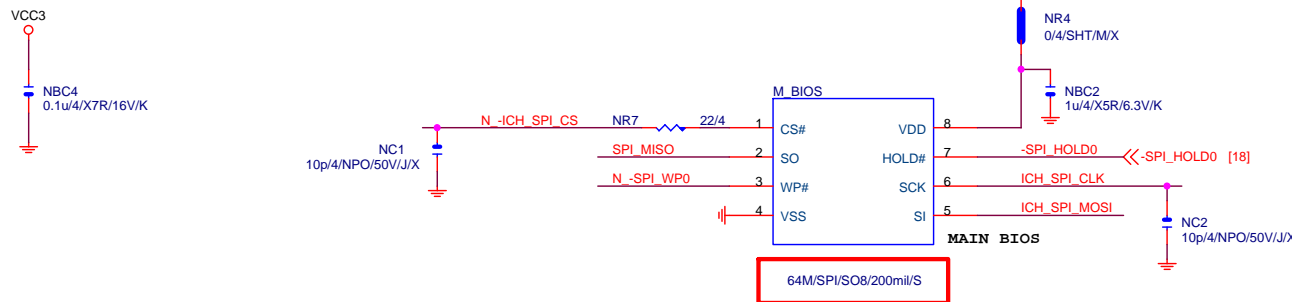
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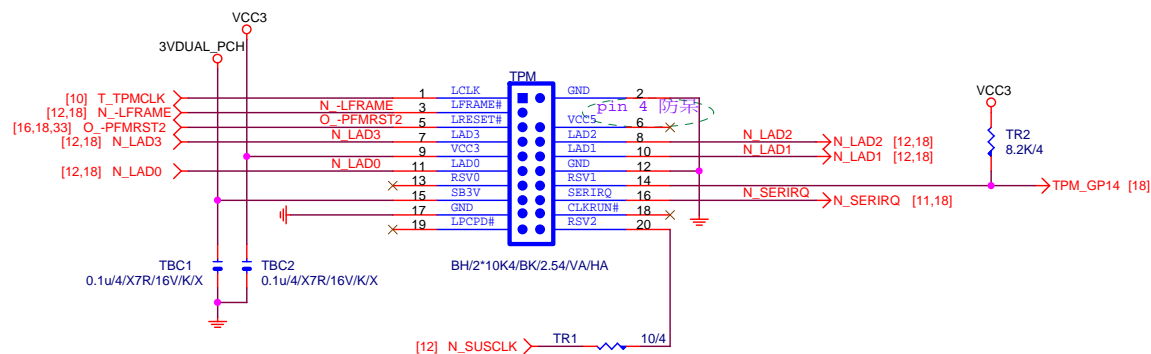




BOOT DEVICE	GNT0	GNT1
LPC	0	0
PCI	0	1
NAND	1	0
SPI	1	1

1 means floating  
 0 means PD 1K

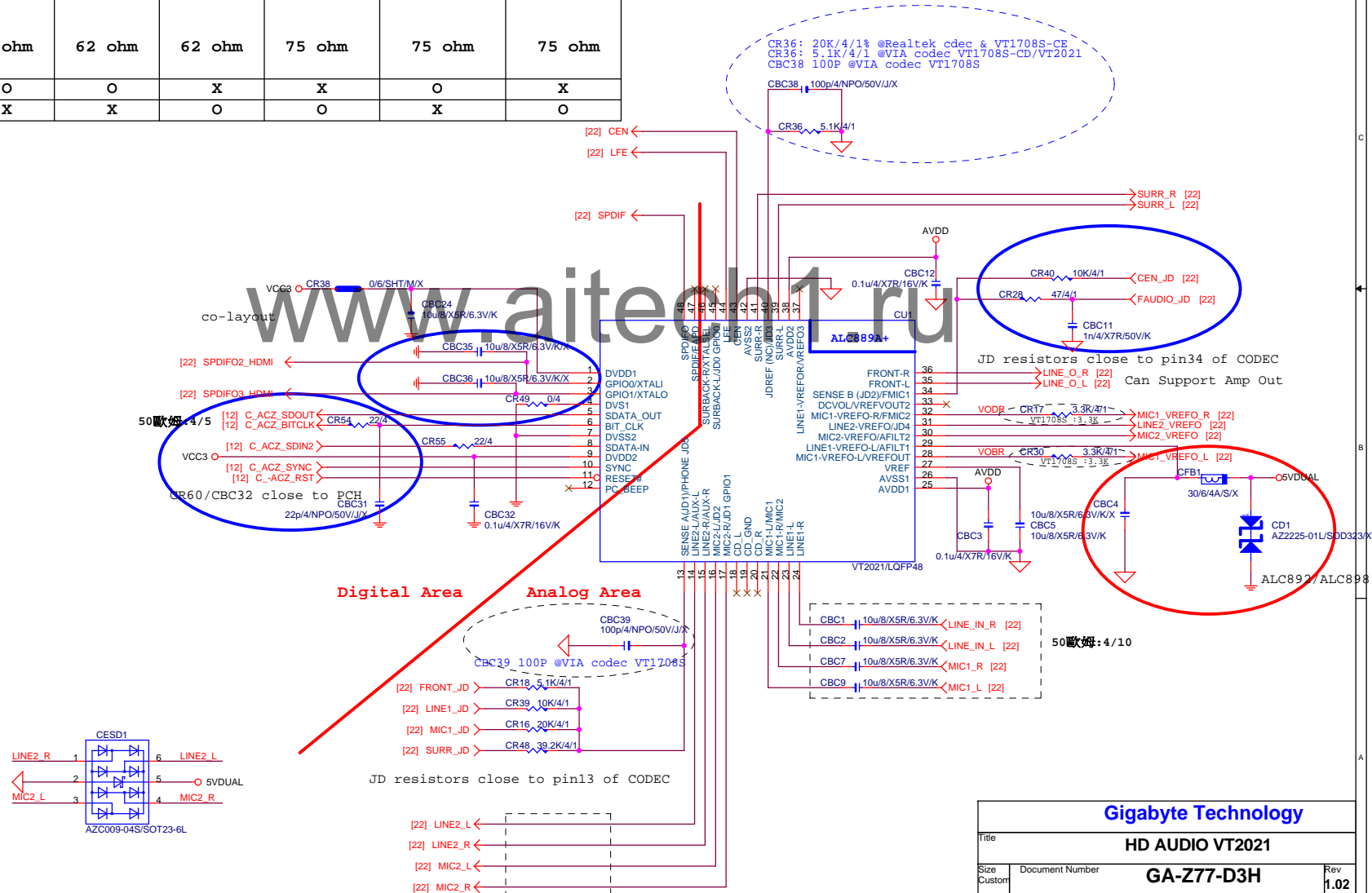
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Gigabyte Technology			
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Size	Document Number	GA-Z77-D3H	
Custom		Rev	1.02
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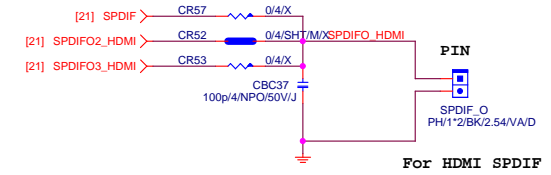
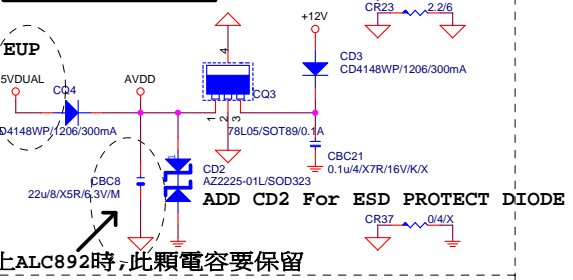
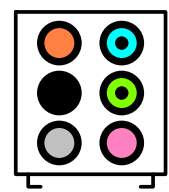
	ALC662	ALC887-VD2/ ALC892	ALC889	VT1708S-CD	VT1708S-CE/ VT1705CF	VT2021
CR49	X	X	O	O	X	O
CBC36	O	O	X	X	O	X
CR28/CBC11	47ohm+1nF	47ohm+1nF	47ohm+1nF	22ohm+100P	22ohm+100P	47ohm+1nF
CR52	X	O	O	O	O	O
CR57	O	X	X	X	X	X
CBC1/CBC2	10uF/X5R	10uF/X5R	22uF/X5R	10uF/X5R	10uF/X5R	10uF/X5R
CR36	20K/4/1	20K/4/1	20K/4/1	5.1K/4/1	20K/4/1	5.1K/4/1
CR17/CR30/ CR25/CR15/CR12/CR3/	8.2K/4	8.2K/4	8.2K/4	3.3K/4/1	3.3K/4/1	3.3K/4/1
CBC38/CBC39	X	X	X	100P/4	100P/4	X
CR10/CR8/CR20/CR45/ CR42/CR51/CR27/CR26	22K/4	22K/4	22K/4	10K/4/1	10K/4/1	10K/4/1
CR7/CR9/CR5/CR13/ CR29/CR32/CR46/CR19/ CR50/CR41/CR2/CR11/ CR14/CR24	62 ohm	62 ohm	62 ohm	75 ohm	75 ohm	75 ohm
CFB1/CD1/CBC4/CBC8	O	O	X	X	O	X
CD2/CD3/CQ3/CQ4	X	X	O	O	X	O



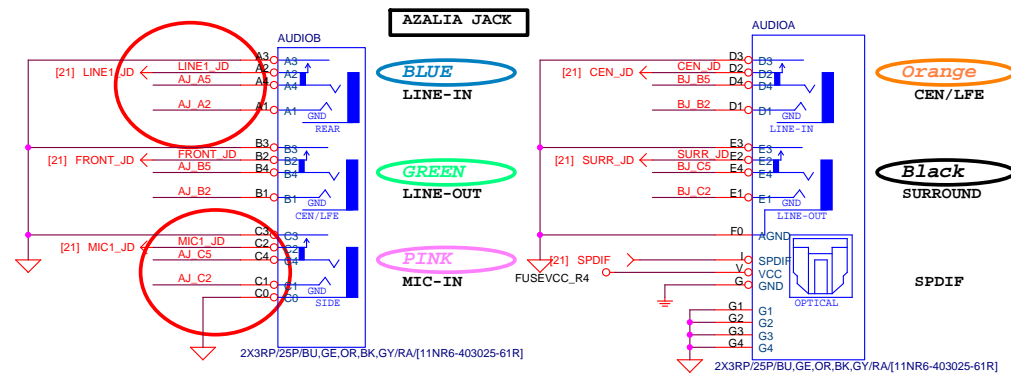
Gigabyte Technology

Title		HD AUDIO VT2021	
Size	Document Number	GA-Z77-D3H	
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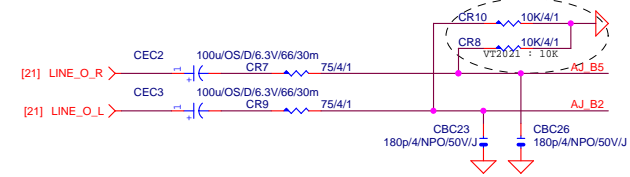
## CODEC POWER/EMI PAD

AZALIA JACK  
BTX AZALIA CONNECTOR

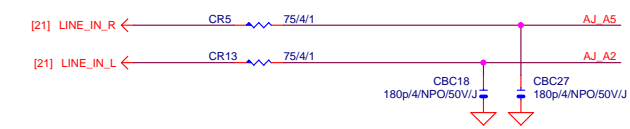
11NR6-403007-21R



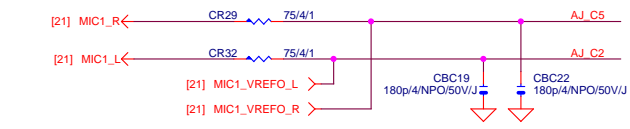
## LINE-OUT



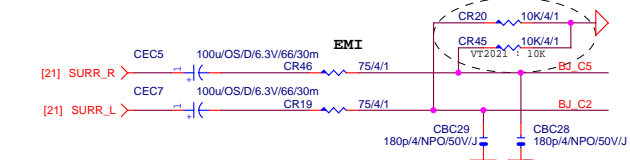
## LINE-IN



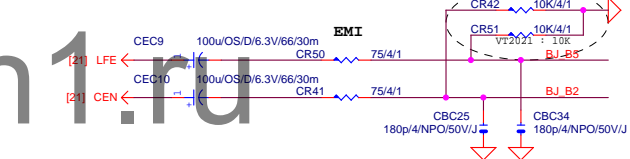
## MIC-IN



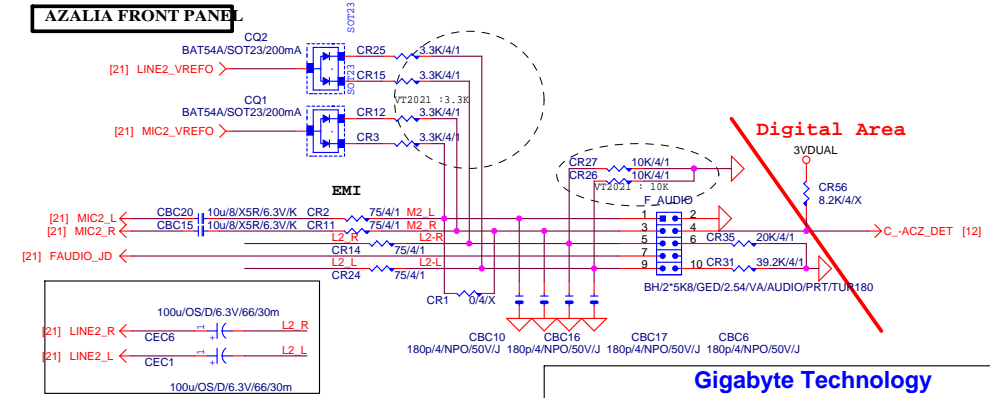
## SURROUND



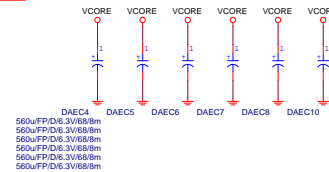
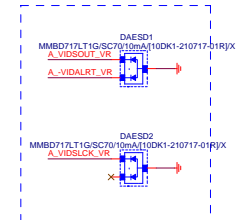
## CEN/LFE



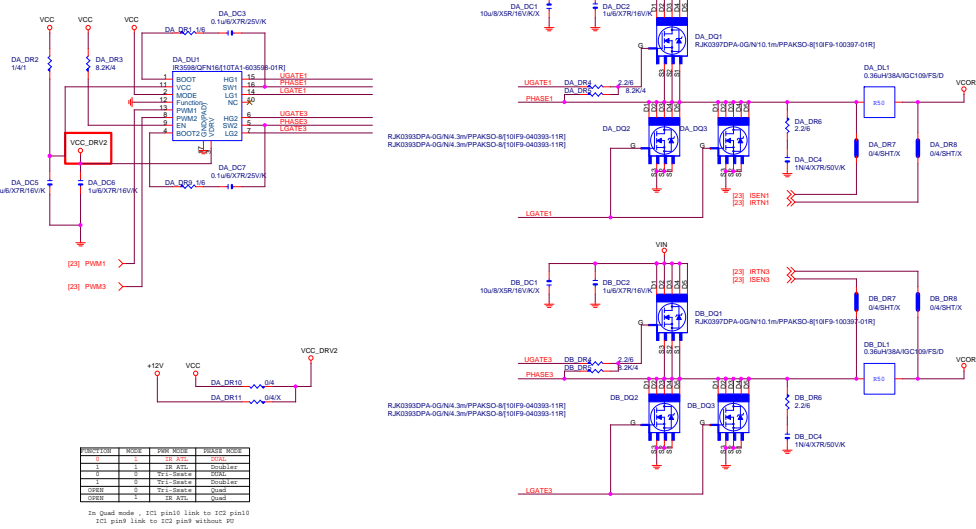
## AZALIA FRONT PANEL



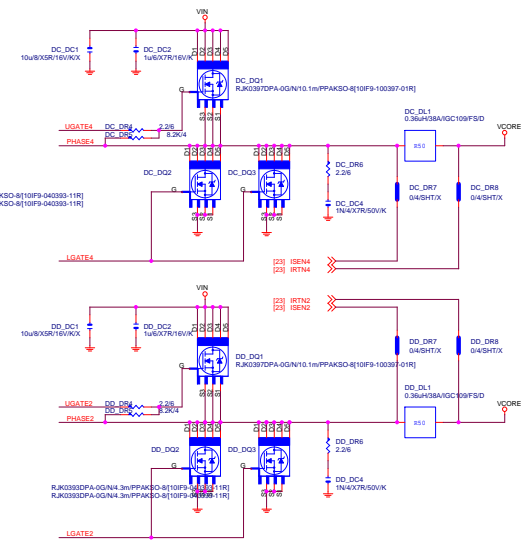
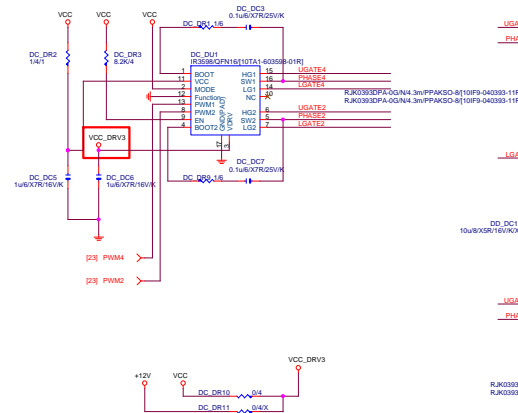
Gigabyte Technology			
Title			
AUDIO JACK			
Size			
Document Number			
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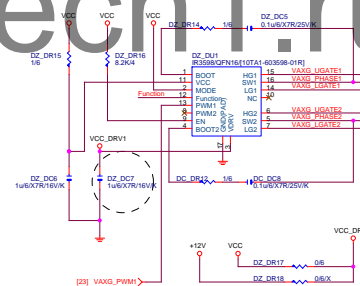
## VCORE Phase 1,3



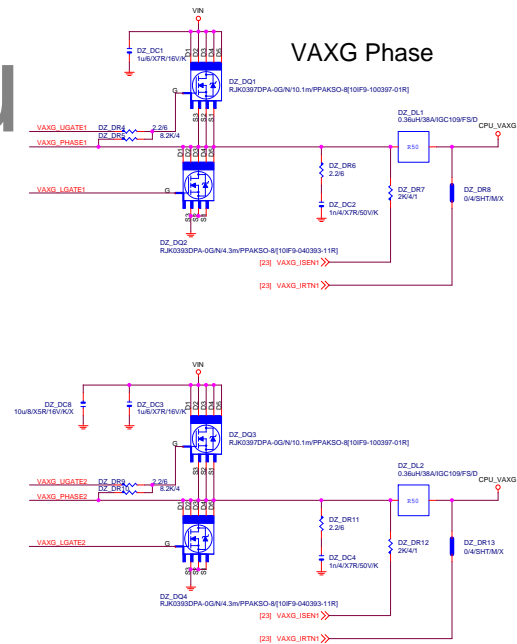
## VCORE Phase 4,2



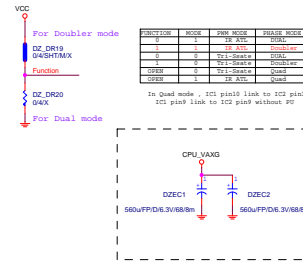
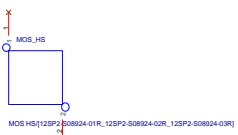
## VAXG PHASE 1,2



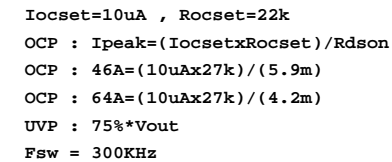
## VAXG Phase



## MOS HEATSINK



## CPU\_VTT

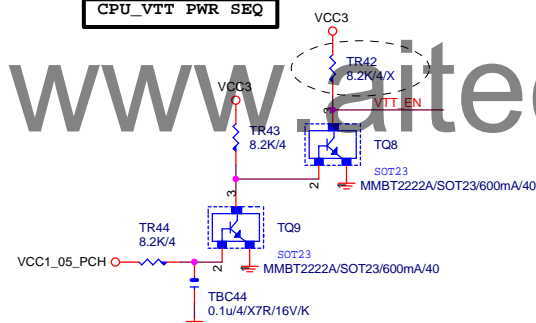


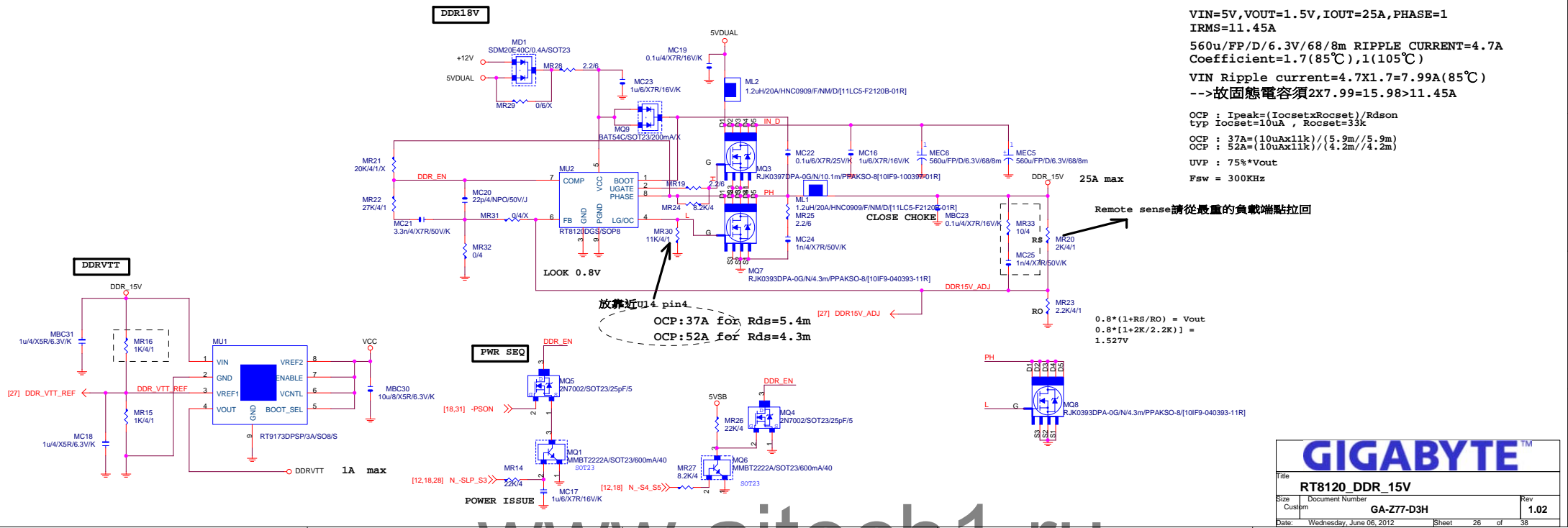
CPU\_VTT PWR SEQ

	VTT_SEL
HI	1.05V
LO	1.0V

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

$$0.8 \cdot [1 + 1.1K/3K] =$$

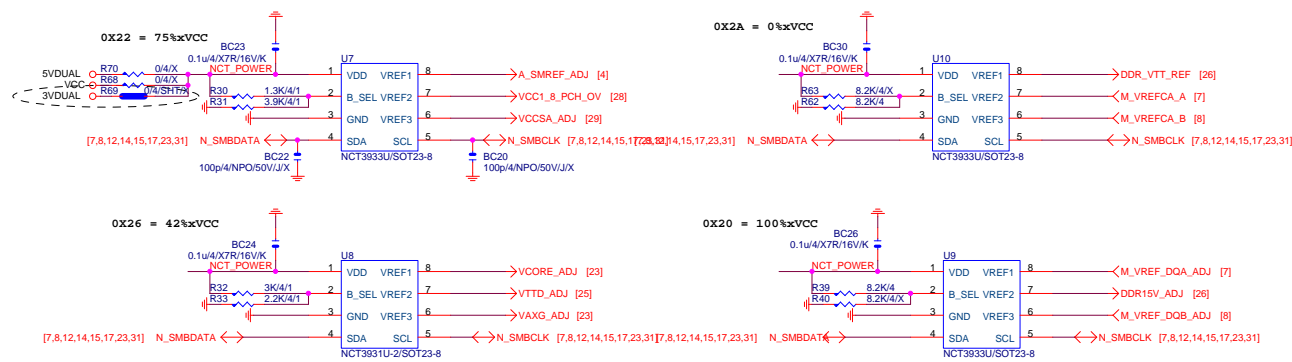
$$1.09V$$




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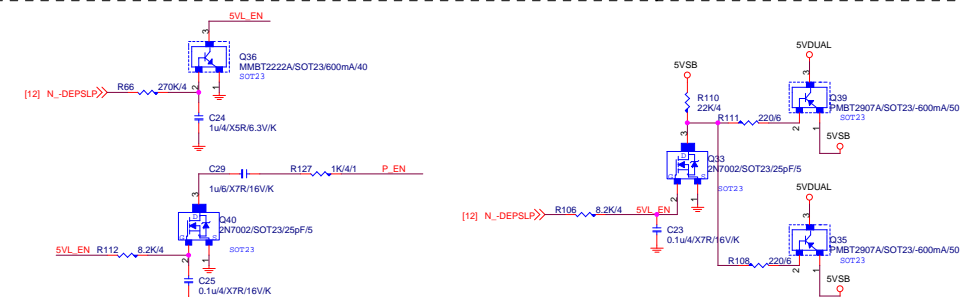
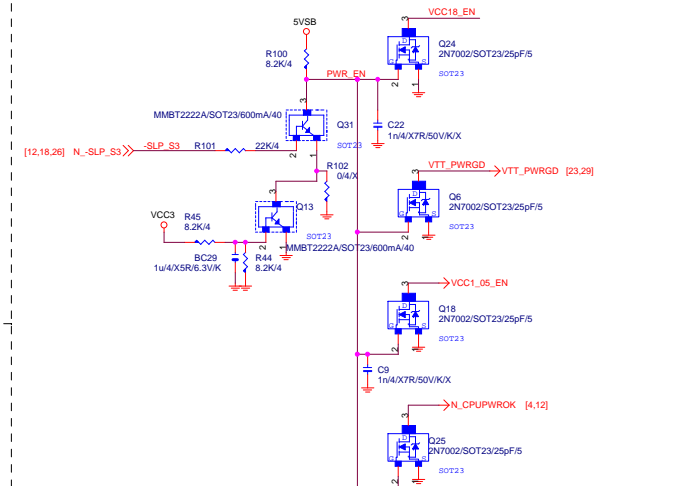
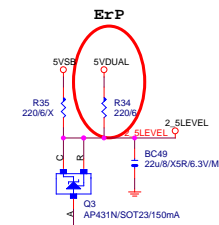
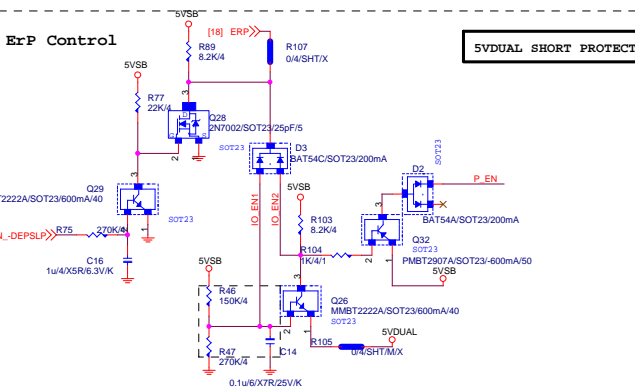
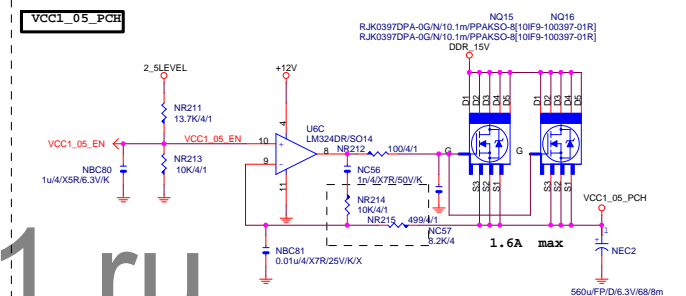
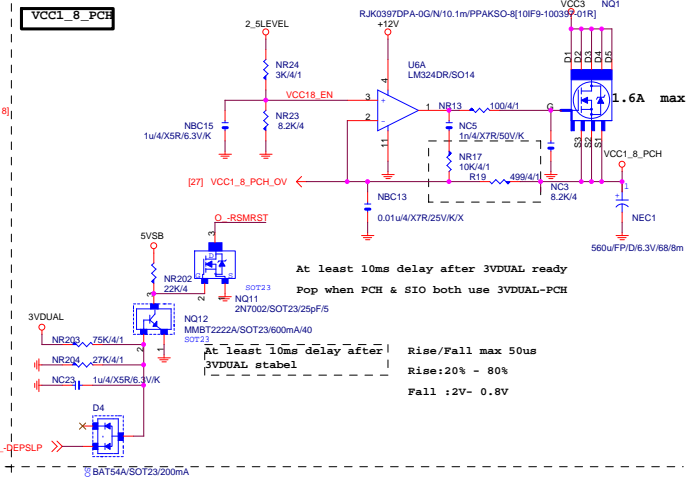
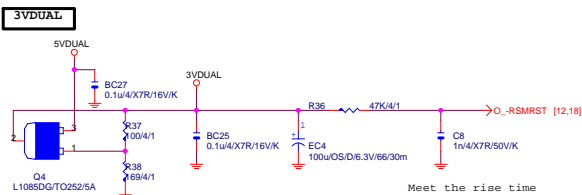
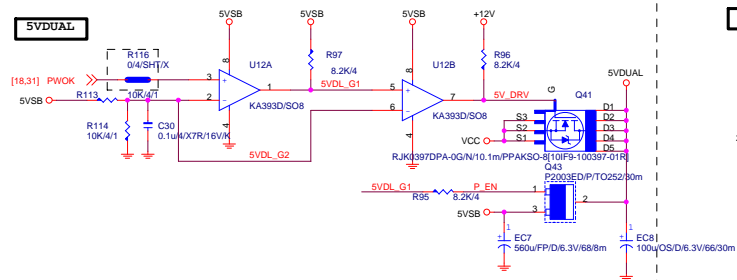


NCT3933	0X2A	0X20	0X22	0X26
VREF1	DDRVTT	VREF_DDRA_DQ	SMREF	VCORE
VREF2	VREF_DDRA_CA	DDR15V	VCC1_8_PCH	CPU_VTT
VREF3	VREF_DDRA_CA	VREF_DDRB_DQ	VCCSA	VAXG

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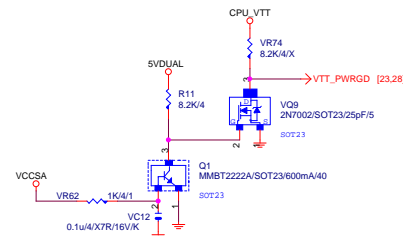
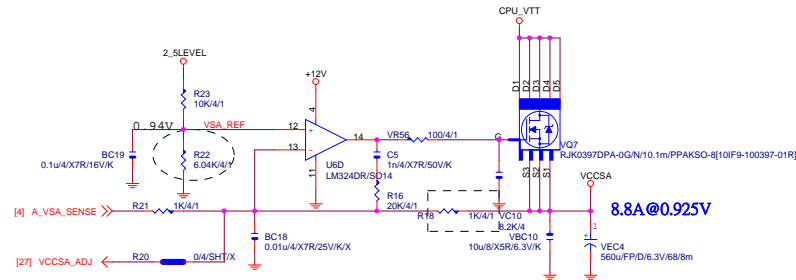
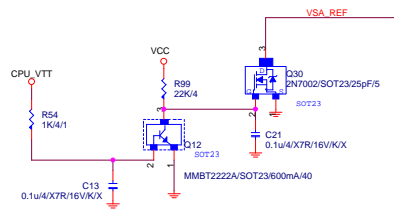
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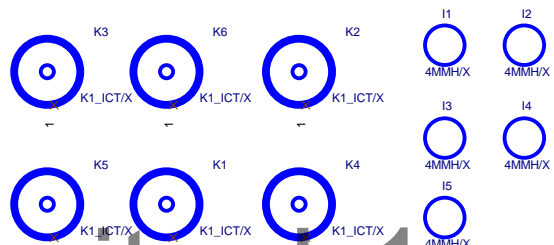
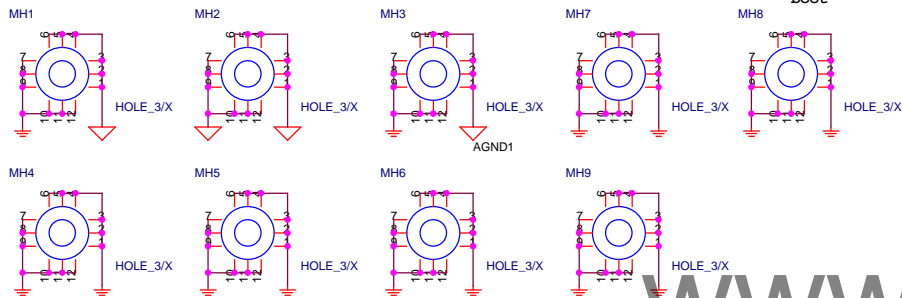
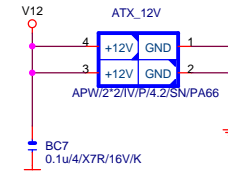
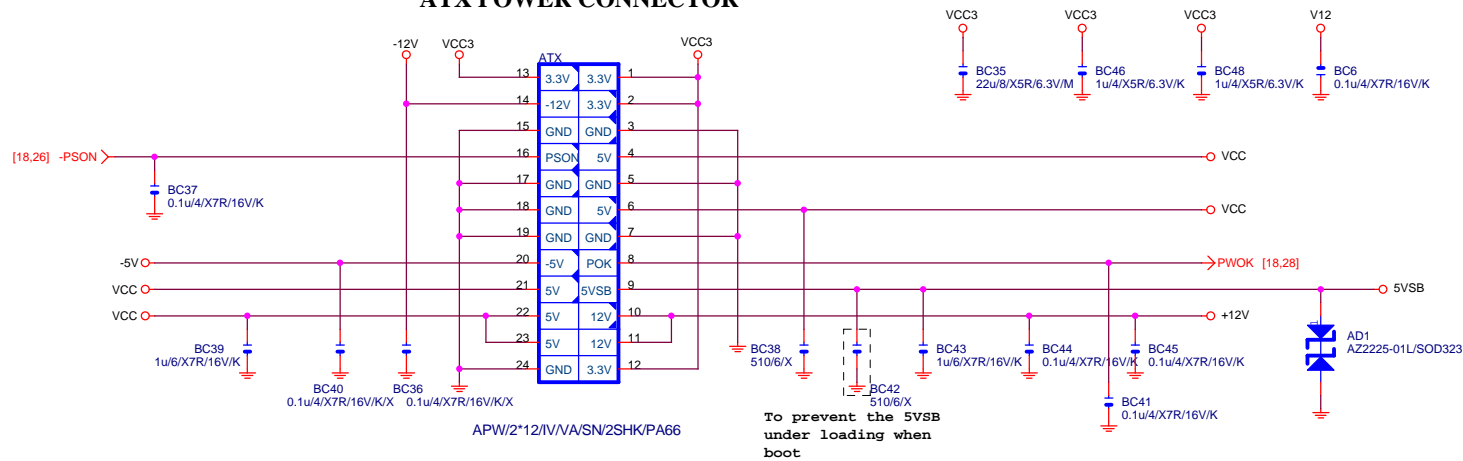
VCC\_SA



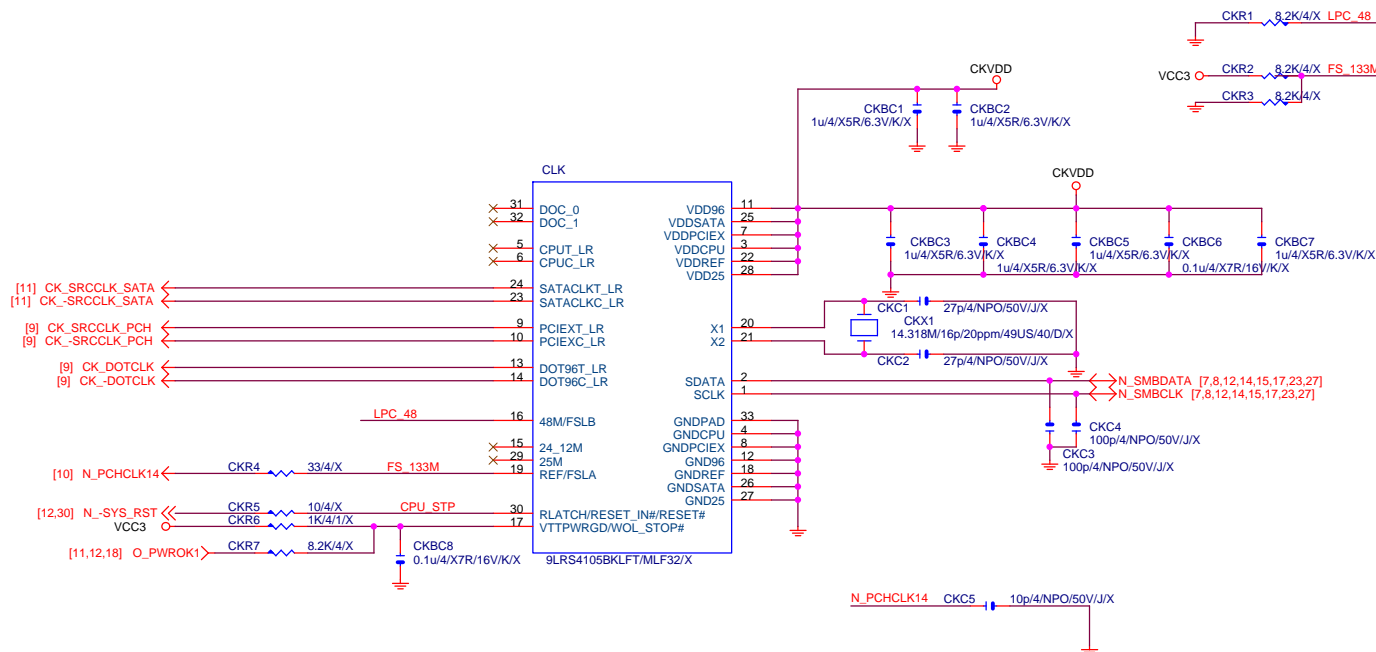
Gigabyte Technology			
CPU VTT PWM_ISL6312			
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# ATX POWER CONNECTOR

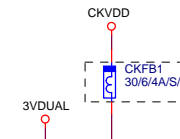


## CLK GEN



## CPU Frequency Selection

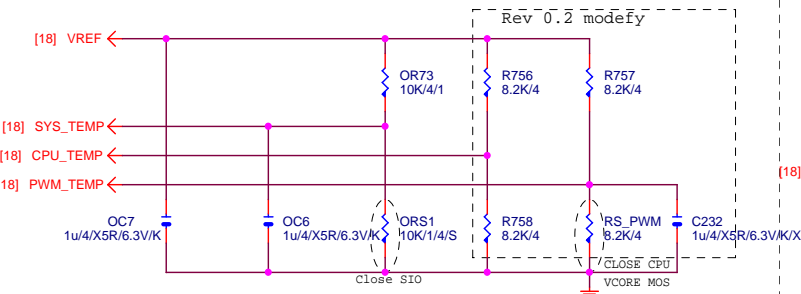
FS	CPU
0	100M <Default>
1	133M



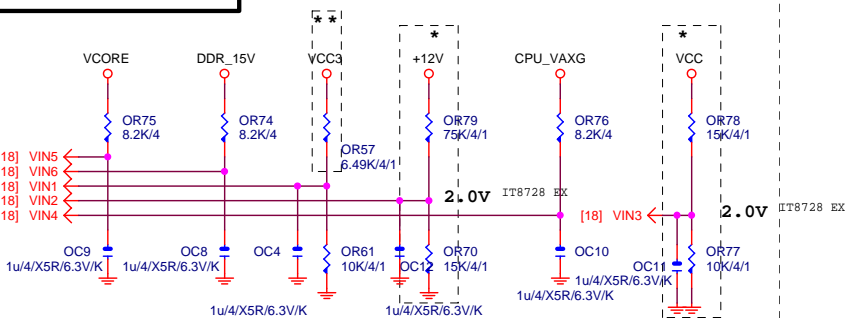
## Gigabyte Technology

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ATX POWER CONNECTOR		
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TEMP H/W MONITOR

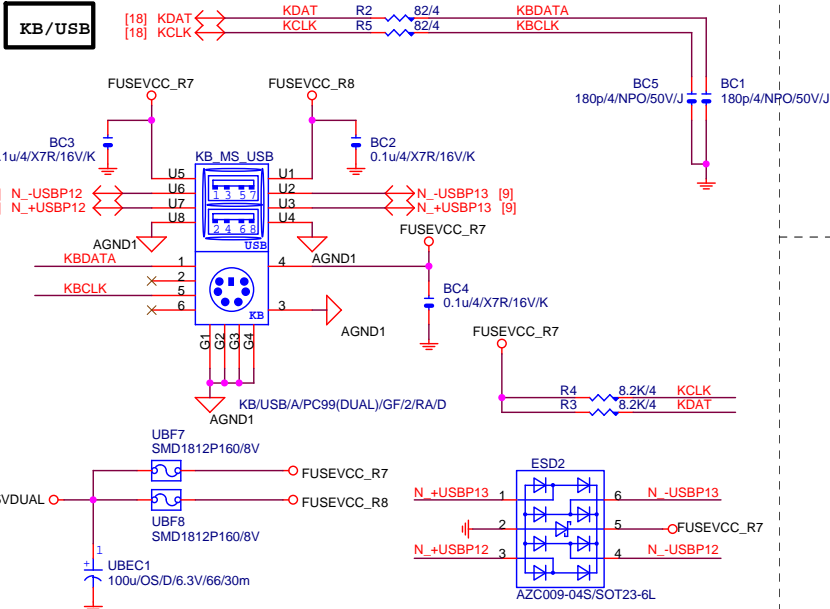


VOLTAGE-- H/W MONITOR

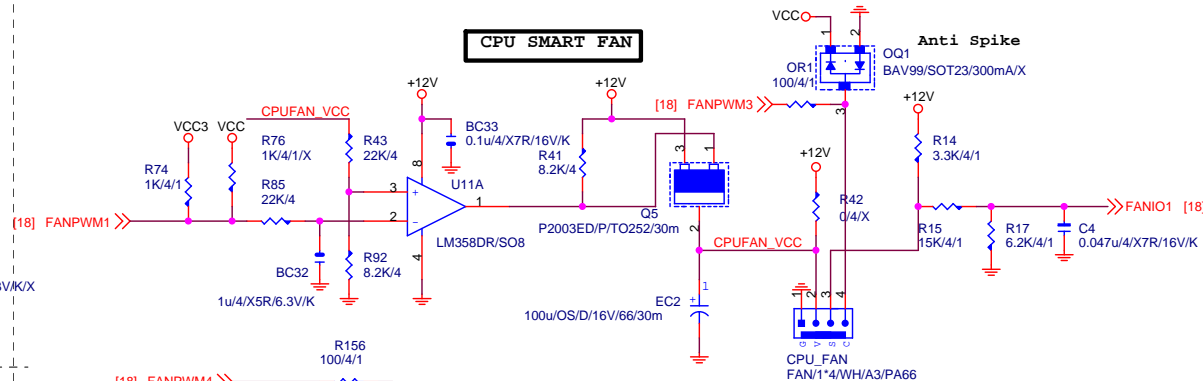


The division voltage of VIN2 & VIN3 must be around 2.9V

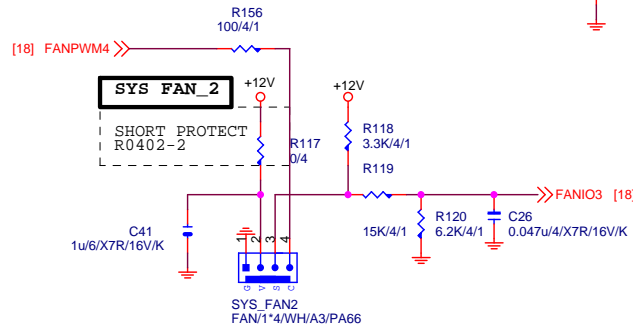
## KB/USB



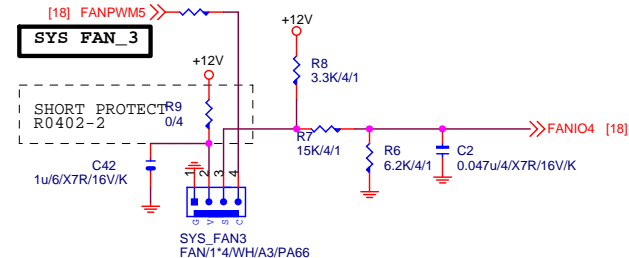
## CPU SMART FAN



**SYS FAN\_2** +12V

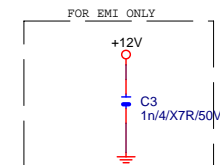
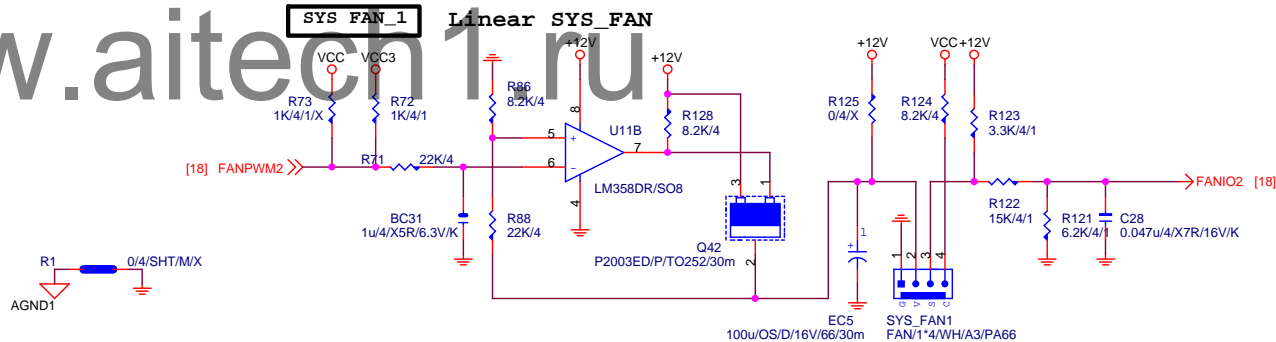


SYS FAN\_3



SYS FAN\_1

## Linear SYS\_FAN



## Gigabyte Technology

HWM,KB/MS, FAN CTRL

Size	Document Number
------	-----------------

GA-Z77-D3H

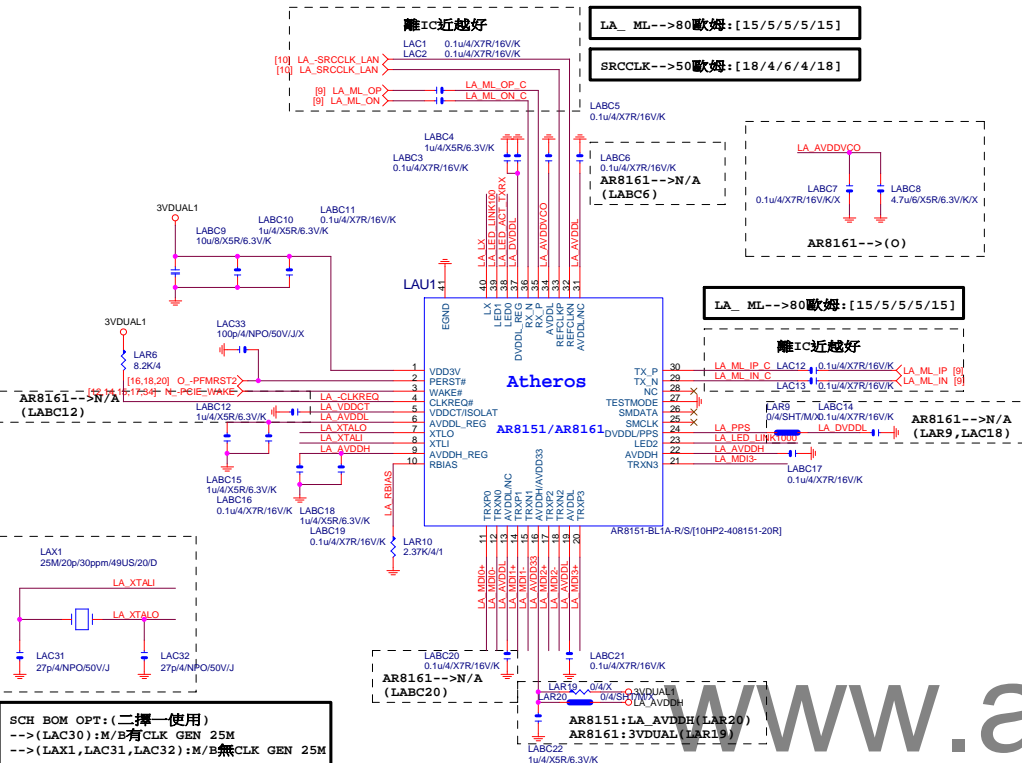
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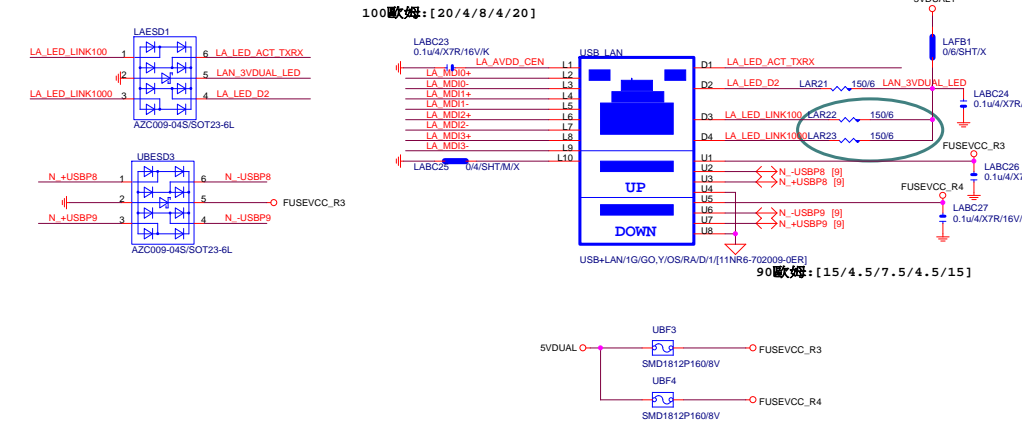


LAN:AR8151/AR8161



SCH BOM OPT: (二擇一使用)  
-->(LAC30):M/B有CLK GEN 25M  
-->(LAX1,LAC31,LAC32):M/B無CLK GEN 25M

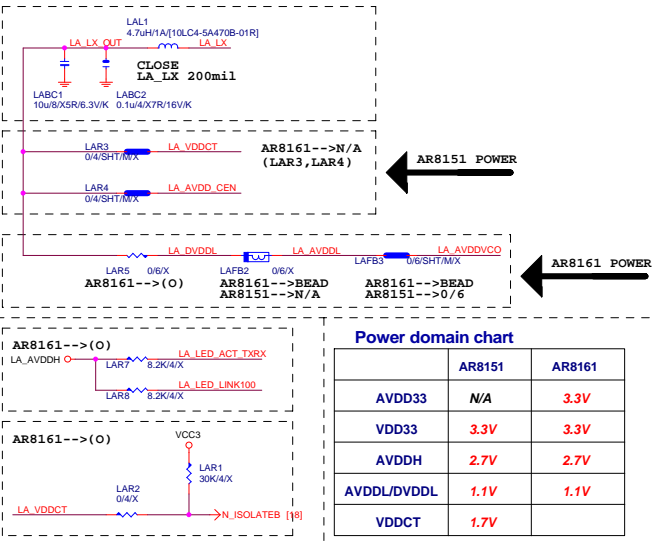
USB30 LAN CONNECTOR



LAN POWER

NEW DESIGN ONLY FOR INTERNAL SWR

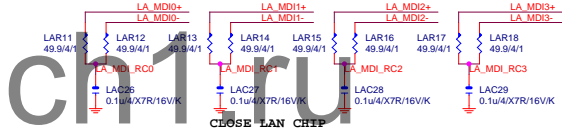
AR8151: LAR3(O), LAR5(X)  
AR8161: LAR5(O), LAR3/LAR4(X)



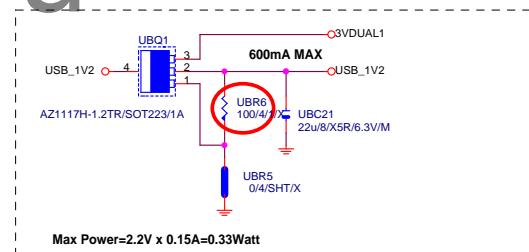
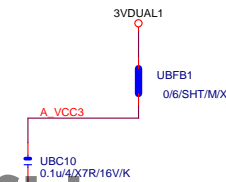
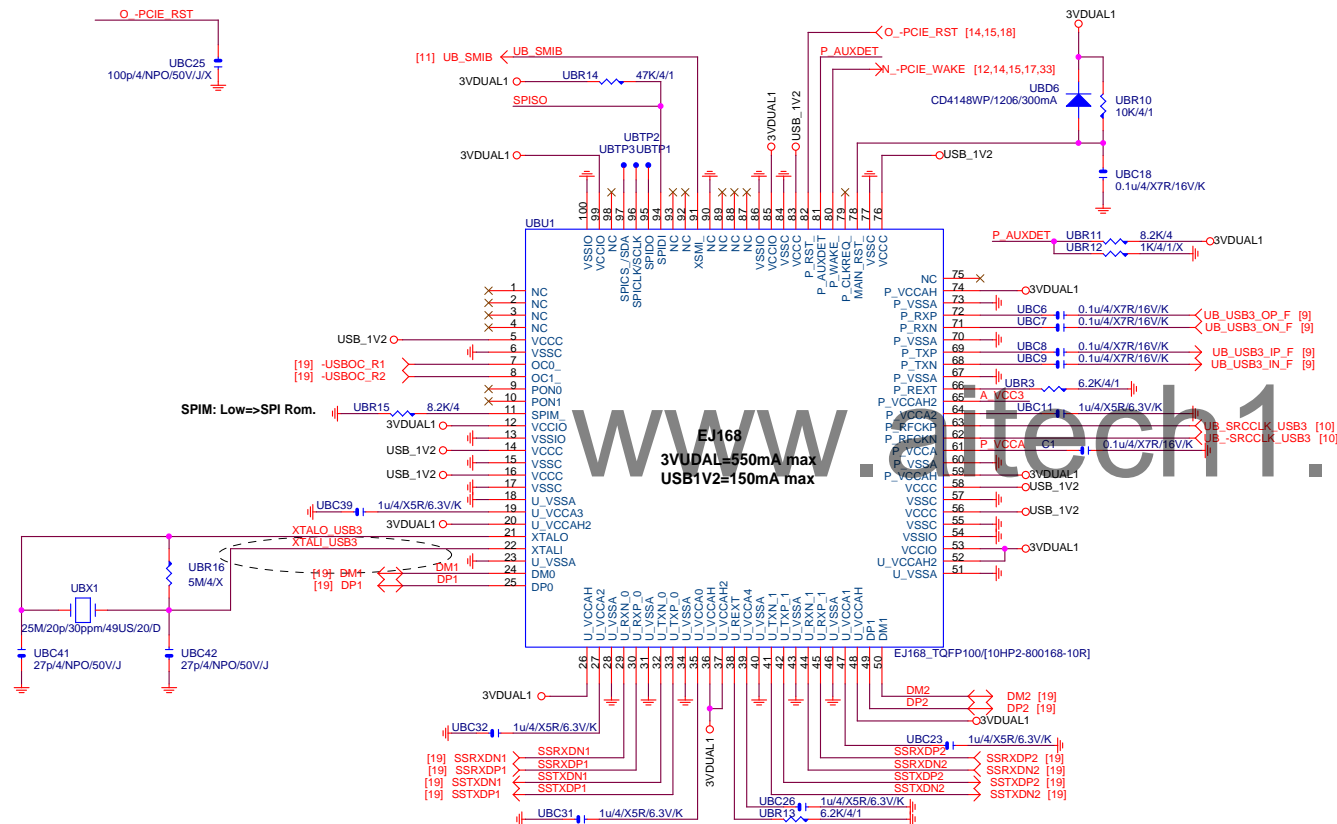
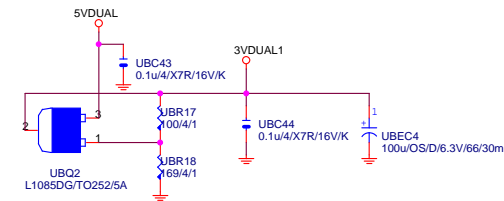
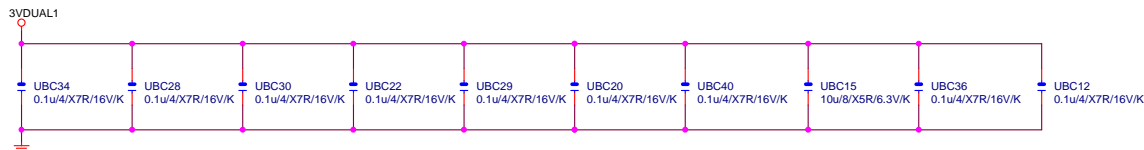
Power domain chart

	AR8151	AR8161
AVDD33	N/A	3.3V
VDD33	3.3V	3.3V
AVDDH	2.7V	2.7V
AVDDL/DVDDL	1.1V	1.1V
VDDCT	1.7V	

MDI : AR8161-->N/A



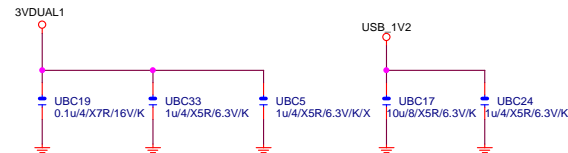
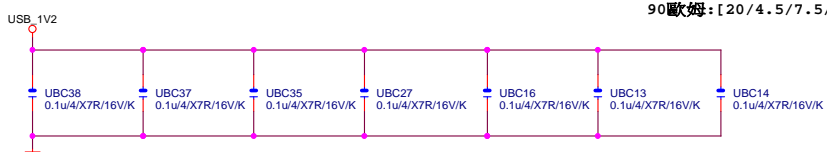
CLOSE LAN CHIP



Max Power=2.2V x 0.15A=0.33Watt

AZ1117H-1.2TR/SOT223/1A-->UR17:0/4,UR16:N/A [1.2V]

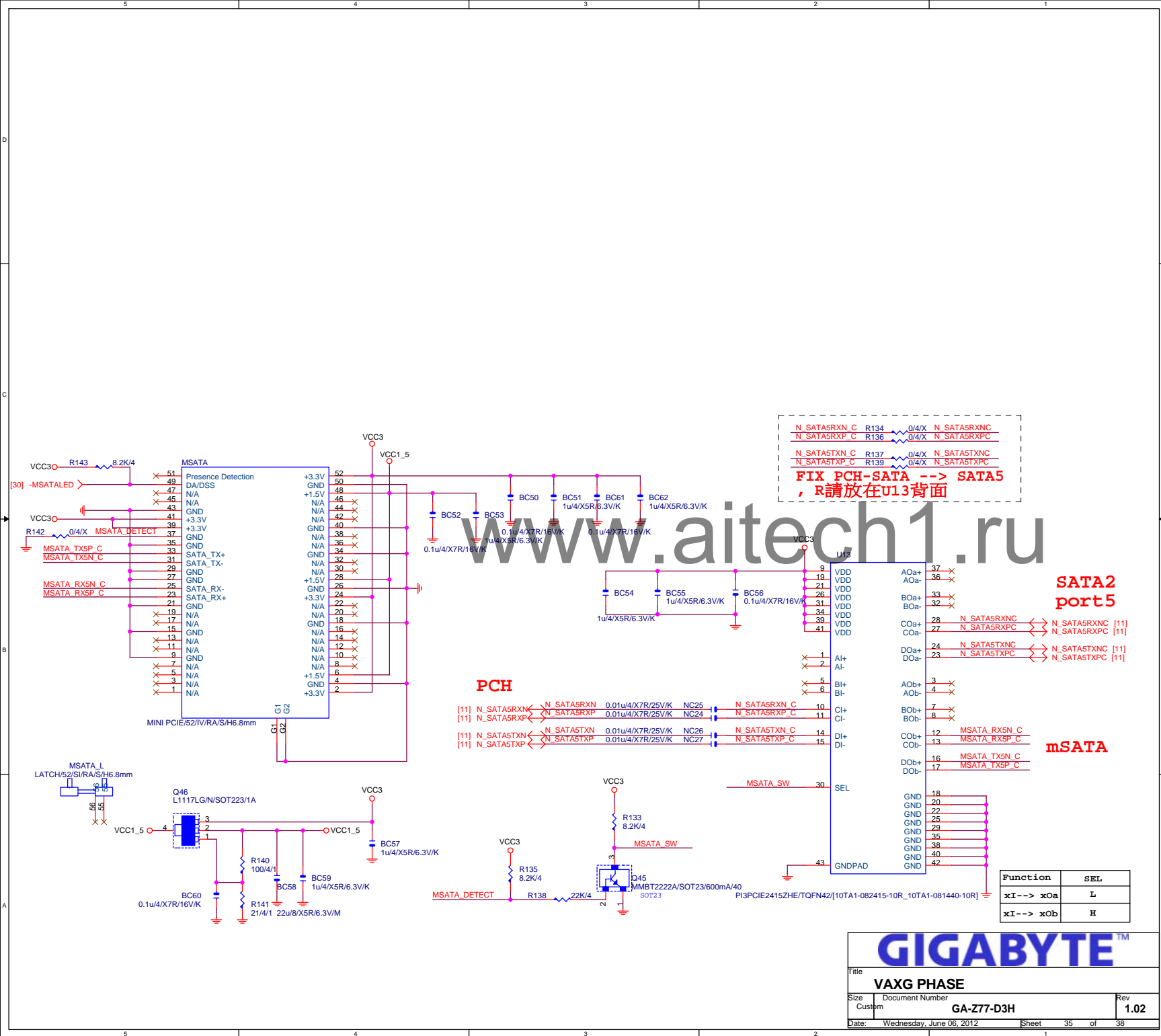
L1117LG/N/SOT223/1A-->UR17:0/4,UR16:100/4/1 [1.25V]

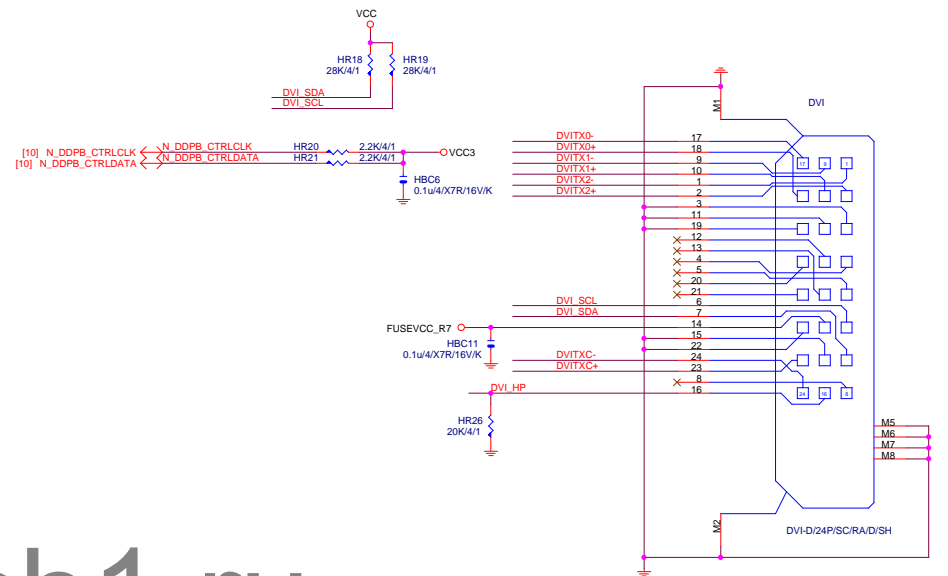
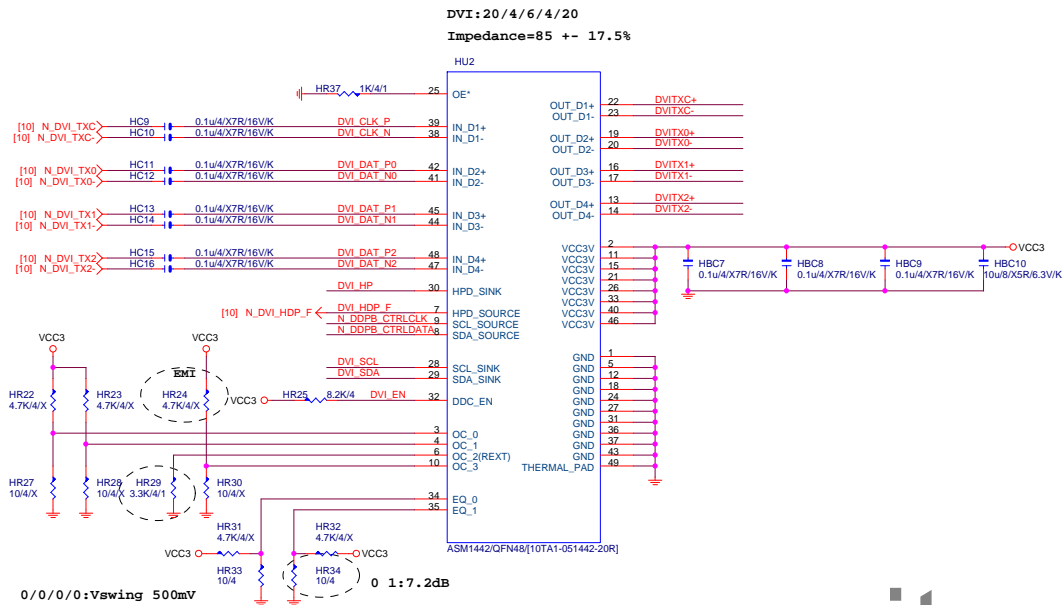


USB3.0 --> 5GHz

BANDWITH=5GHz\*(8b/10b)=4Gb/s=500MB/s

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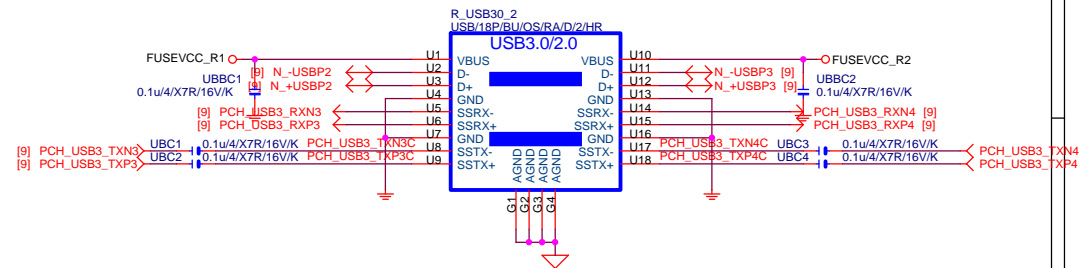
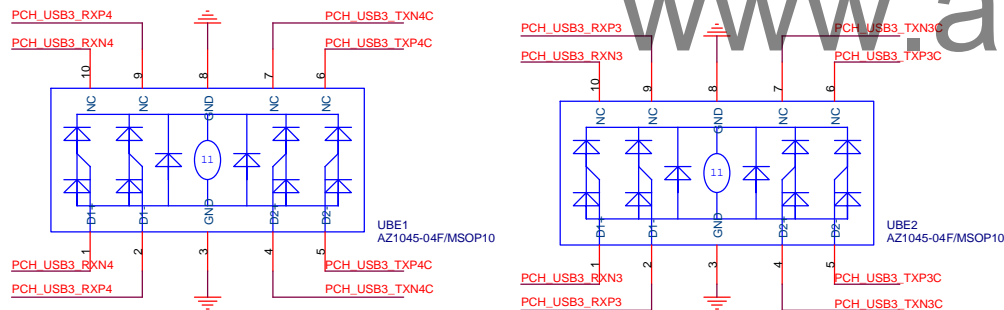
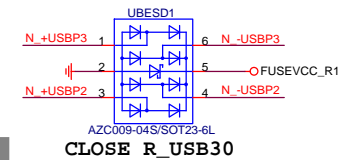
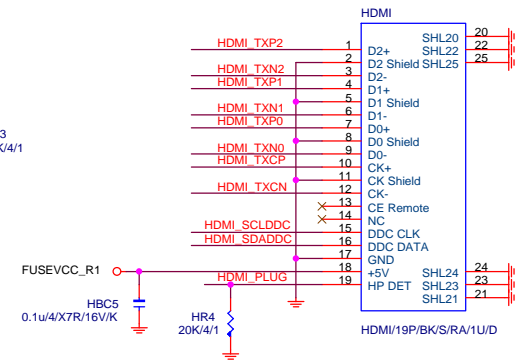
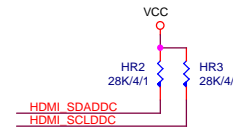
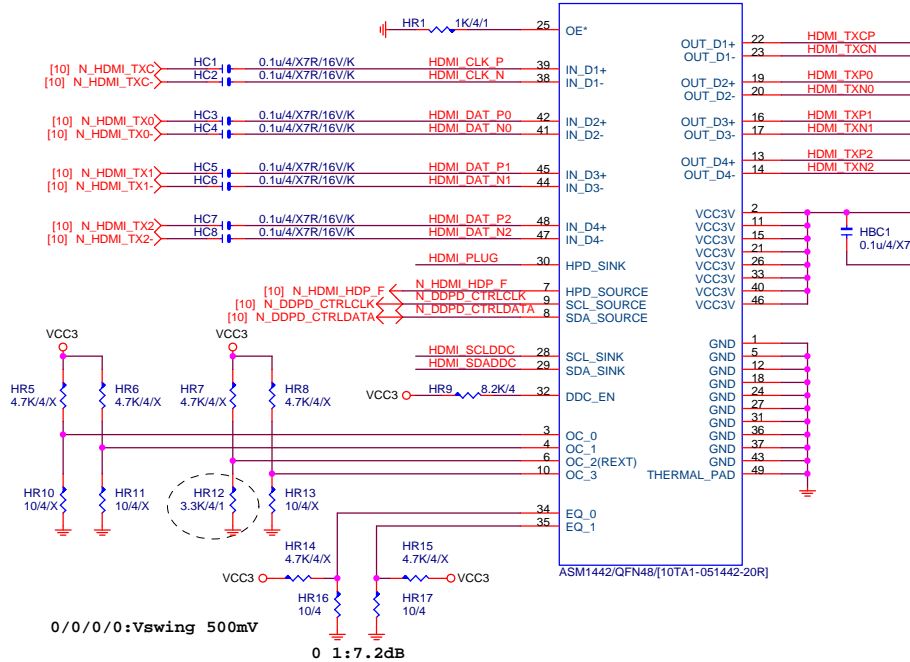




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TI TSB43AB23 1394			
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HDMI:20/4/6/4/20  
Impedance=85 +- 17.5%



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HDMI & USB			
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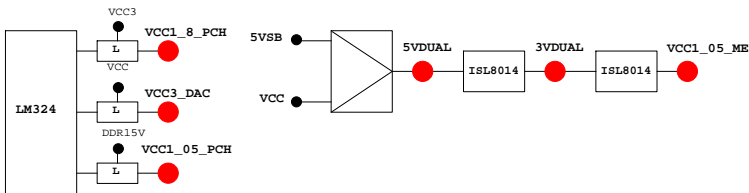
PCH GPIO LIST TABLE

PIN NAME	PWR	Default	USAGE	NOTE
GP0	MAIN	H-Z	-PECI_REQ	N/A
GP1/TACH1	MAIN		ICH_FAN_TACH1	N/A
GP2/PIRQE#	MAIN		-PIRQE	P/U 8.2K VCC3
GP3/PIRQF#	MAIN		-PIRQF	P/U 8.2K VCC3
GP4/PIRQG#	MAIN		-PIRQG	P/U 8.2K VCC3
GP5/PIRQH#	MAIN		-PIRQH	P/U 8.2K VCC3
GP6/TACH2	MAIN		ICH_FAN_TACH2	N/A
GP7/TACH3	MAIN		ICH_FAN_TACH3	N/A
GP8	STBY	H	GPO	P/U 8.2K 3VDUAL
GP9/OC5#	STBY		NATIVE	OC5#
GP10/OC6#	STBY		NATIVE	OC6#
GP11/SMBALERT#	STBY		NATIVE	-SMBALERT
GP12	STBY	L	GPI	LAN_PHY_PWR_CTRL
GP13	STBY	L	GPI	GPIO13
GP14/OC7#	STBY		NATIVE	OC7#
GP15	STBY	L	GPO	GPIO15
GP16	MAIN		GPI	-SKTOCC
GP17/TACH0	MAIN		GPI	ICH_FAN_TACH0
GP18	MAIN		NATIVE	MB_ID0
GP19	MAIN		GPI	-LAN1_ISO
GP20	MAIN		NATIVE	LED_CTL
GP21	MAIN		GPI	VCC18_PCH_OV2
GP22	MAIN	H-Z	GPI	VCORE_OV3
GP23	MAIN		NATIVE	-LDRQ1
GP24	STBY	L	GPO	TLS
GP25	STBY		NATIVE	-CPU_STOP
GP26	STBY		NATIVE	-ACZ_DET
GP27	STBY	H	GPO	GPIO27
GP28	STBY	H	GPO	GPIO28
GP29	STBY	L	GPI	GPIO29
GP30	STBY	H-Z	GPI	S_PWR_ACK
GP31	STBY	H-Z	GPI	N/A(Reverse)
GP32	MAIN	H	GPO	MB_ID1
GP33	MAIN	H	GPO	LOAD-LINE
GP34	MAIN	H-Z	GPI	-PCI_STOP
GP35	MAIN	L	GPO	GPIO35
GP36	MAIN		GPI	-LAN1_DSM
GP37	MAIN		GPI	N/A
GP38	MAIN	H-Z	GPI	VCORE_OV2
GP39	MAIN	H-Z	GPI	-LAN_DSM
GP40	STBY		NATIVE	OC1#
GP41	STBY		NATIVE	OC2#
GP42	STBY		NATIVE	OC3#
GP43	STBY		NATIVE	OC4#
GP44	STBY	L	NATIVE	N/A
GP45	STBY		NATIVE	-LPCPME
GP46	STBY	L	NATIVE	PWR_LED
GP47	STBY		NATIVE	PSI_LED
GP48	MAIN	H-Z	IN	EN_PWM
GP49	MAIN	H-Z	IN	VCC18_OV1
GP50	MAIN		NATIVE	-REQ1
GP51	MAIN	H	NATIVE	-GNT1
GP52	MAIN		NATIVE	-REQ2
GP53	MAIN	H	NATIVE	-GNT2
GP54	MAIN		NATIVE	-REQ3
GP55	MAIN	H	NATIVE	-GNT3
GP56	STBY		NATIVE	N/A(Reverse)
GP57	STBY	H-Z	IN	VCORE_OV1
GP58	STBY	H-Z	NATIVE	F_USB_OC
GP59	STBY		NATIVE	USB_OC0#
GP60	STBY	H-Z	NATIVE	N/A(Reverse)
GP61	STBY	L	NATIVE	-SUSTAT
GP62	STBY	L	NATIVE	SUSCLK
GP63	STBY	L	NATIVE	GPIO63
GP64	MAIN	L	NATIVE	CLKOUTFLEX0
GP65	MAIN	L	NATIVE	CLKOUTFLEX1
GP66	MAIN	L	NATIVE	CLKOUTFLEX2
GP67	MAIN	L	NATIVE	CLKOUTFLEX3
GP72	STBY	H-Z	NATIVE	VCORE_OV4
GP73	STBY		NATIVE	1_05V_OV1
GP74	STBY	H-Z	NATIVE	1_05V_OV2
GP75	STBY	H-Z	NATIVE	N/A(Reverse)

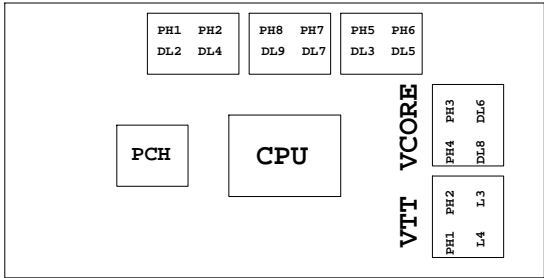
Super I/O ITE8720 GPIO Table

PIN NAME	USAGE	NOTE
SVC/PECI_RQT/GP14	-PECI_REQ	
PWROK1/GP13	PWROK1/ITE_PWROK	
KRST#/GP62	-KBRST	
SO/GP50	-ICH_SPI_CS	
IRTX/GP47/CE2_N/JP7	CEB_N	
GP46/IRRX	-LAN2_DSM	
PSION#/GP42	-PSON	
PWROK2#/GP41	PECI_CTL	
PCIRST3#/GP10/VDIMM_STR_EN	-PCIE_RST	
RSMRST#CIRRXL/GP55	-RSMRST	
PME#/GP54	-LPCPME	
PD5/GP75/BUSSO0	N/A	

PIN NAME	USAGE	NOTE
FAN_TAC2/GP52	FANIO2	
FAN_TAC3/GP37	FANIO3	
VIDO3/FAN_TAC4/GP25/DSR2#	FANIO4	
FAN_CTL2/GP51	FANPWM2	
FAN_CTL3/GP36	FANPWM3	
VID4/GP34	BEEP-	
VID3/GP33	TURBO1	
VID2/GP32	TURBO0	
VCORE_GOOD/VID6/GP63	CPUT_LED1_C	
VID5/GP35	CPUT_LED2_C	
VID1/GP31	CPUT_LED3_C	
VID0/GP30	-LAN1_DSM	NBT_LED1_C
SLCT/GP80	CPU_LED1_C	
PE/GP81	CPU_LED2_C	
BUSY/GP82	CPU_LED3_C	
PD3/GP73/BUSS11	SB_LED1_C	
PD4/GP74/BUSS12	SB_LED2_C	
VCORE_EN/VID7/GP64	IT_GP64	SB_LED3_C
PD0/GP70	NB_LED1_C	
PD1/GP71	NB_LED2_C	
PD2/GP72/BUSS10	NB_LED3_C	
GP22/SCX	LOW_PWR_1	
VIDO5/GP27/SIN2	LOW_PWR_2	
PCIRST2#/GP11	-PWRST1	
PCIRST1#/GP12	-PFMRST2	
3VSBSW#/GP40	CSI_F0	BSEL166_1
SUSC#/GP53	CSI_F1	BSEL166_2
GP23/SI	BSEL166_3/CSISBSL	
VIDO0/GP20/CTS2#	CPUT_LED1_C	BSEL166_4
GP65/VDDA_EN/GB_01	MB_ID2	
PD6/GP76/BUSS01	MB_ID3	
PD7/GP77/BUSS02	MB_ID4	
AFD#/GP86/SMBC_R	2V PIN	FST_2X8
INIT#/GP85/SMBC_M	SEC_2x8	GTLREF_AD2
ACK#/GP83	DDR_LED1_C	
VIDO1/GP21/DCD2#	DDR_LED2_C	
STB#/GP87/SMBC_M	DDR_LED3_C	
PWRON#GP44	VCORE_OV1	
PANSWH#/GP43	PWRBTSW	
KDAT/GP61	-PWRBTSW	
KCLK/GP60	KDAT	
MDAT/GP57	KCLK	
MACL/GP56	MDAT	
GP66/VLDT_EN/GB_02	NBT_LED1_C	MCLK
SVD/PCIRSTIN#/CIRTX/GP15	PWM2_CR	
KDAT/GP61	PWM2_CR	
GP67/CPU_PG/GB_03	EN_LOADLINE	IT_GP67/-EN_PWM2
SLIN#/GP84/SMBC_R	-EN_PWM2	
PSI_L/FAN_CLT5/CIRRXL/GP16	-THERM	
VIDO4/GP26/SOUT2	DDR18V_PH2_EN	
VIDO2/FAN_TAC5/GP24/DSR2#	DDR18V_LED	
VIDO6/GP17/RI2#	1_1V_PH_EN	
VIDO7/JP6/DTR2#	JP6	
PD5/GP75/BUSS00	SB_LED3_C	



PWM各相位的擺法如下：



BIOS超電壓對應表：

散熱模組料號：

線路圖名稱	BIOS選項
Vcore	CPU Vcore
CPU_VTT	CPU Termination
CPU_VAXG	CPU Graphic Core
VCC1_8_PCH	CPU PLL
VCC1_05_PCH	PCH core
3VDUAL	3VDUAL
DDR15V	DRAM voltage
DDRVTT	DRAM Terminatio
VREF_CA_A/VREF_CA_B	DRAM Address Ref
VREF_DQ_A/VREF_DQ_B	DRAM Data Ref

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

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