

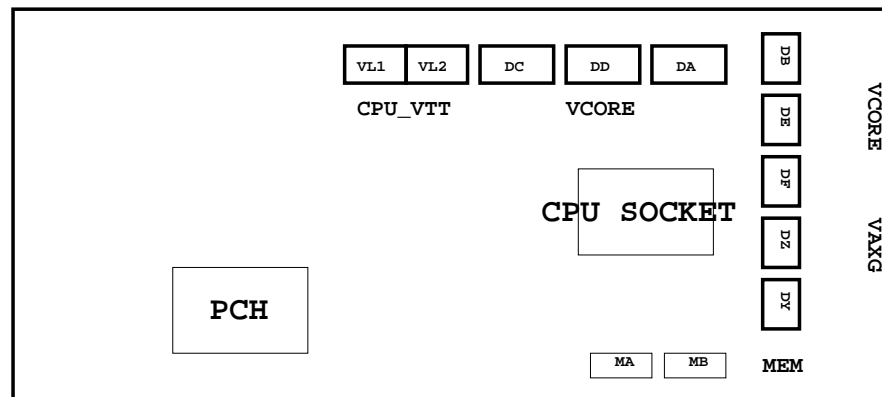
Model Name: GA-Z77X-UP4 TH 1.0

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
10	PCH_DP_HDMI_DVI_DAC,CLK BUFFER
11	PCH_HOST,SATA,PCI
12	PCH_GPIO,CTRL,AUDIO
13	PCH_PWR,GND
14	PCI EXPRESS*16 SLOT
15	PCI EXPRESS*8 SLOT
16	PCI EXPRESS*4 SLOT
17	PCI EXPRESS*1 SLOTS X3
18	PCI EXPRESS*16/*8/*4 SWITCH
19	IT8892 PCIE to PCI BRIDGE
20	PCI SLOT
21	HDMI / DVI Connector
22	mSATA Connector
23	Dual BIOS , TPM
24	Realtek 892
25	REAR AUDIO JACK
26	VCORE PWM_IR3567A -1
27	VCORE PWM_IR3567A -2

SHEET TITLE

28	DDR_15V & CPUVTT PWM_IR3570-1
29	DDR_15V & CPUVTT PWM_IR3570-2
30	DISCRETE POWER 1
31	DISCRETE POWER 2
32	I/O IT8728F
33	USB3 , KB/USB3, -PHOT
34	F_PANEL , F_USB , F_USB3
35	ATX POWER, CLOCK BUFFER
36	HWM, FAN CTRL
37	REALTEK 8111F
38	PLX PEX8605 PCIE*1 X3
39	OV NCT3933 / COM
40	VIA VL800
41	DP SWITCH
42	CACTUS RIDGE(THUNDERBOLT)
43	mDP -1
44	mDP -2
45	TABLE LIST

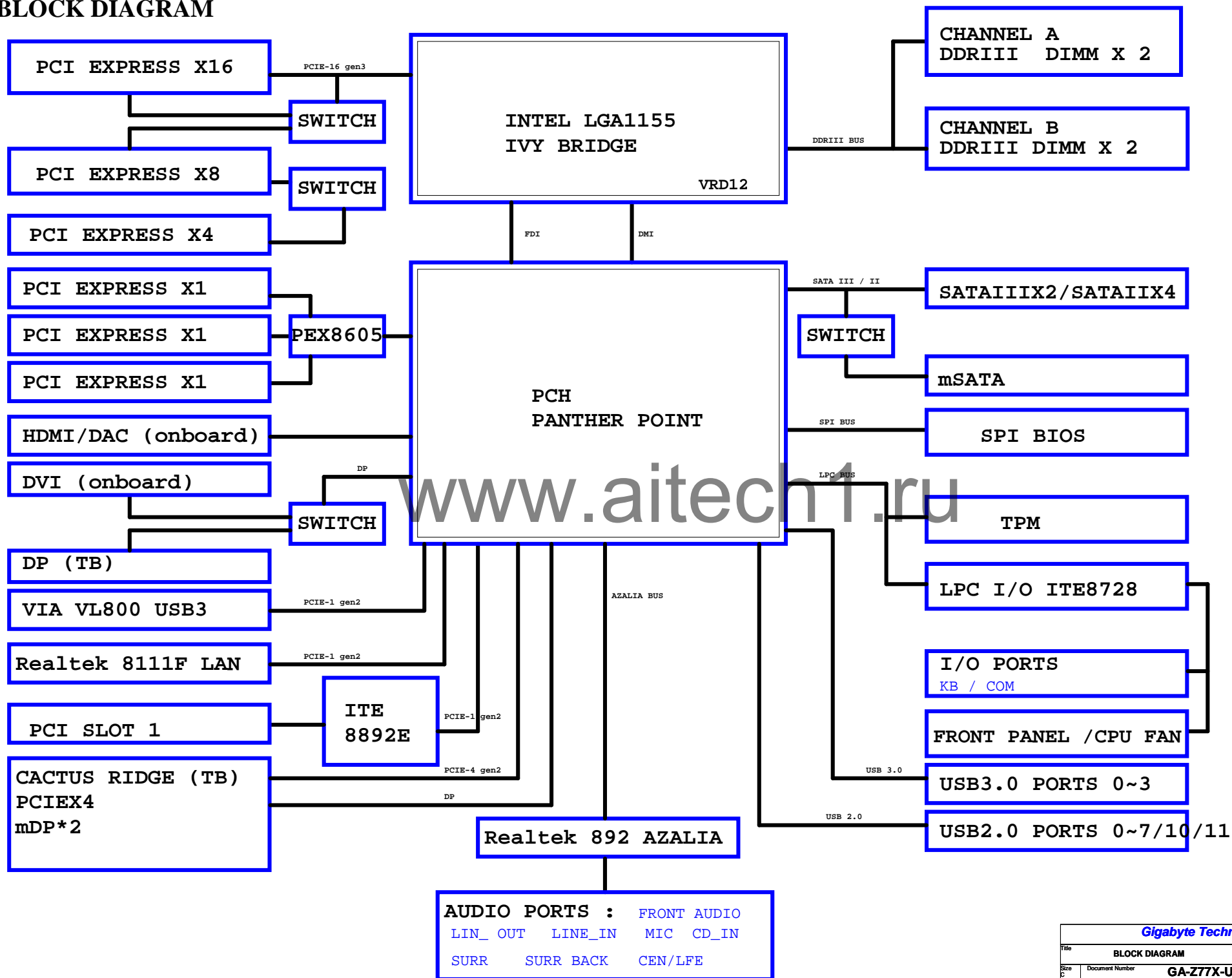


Component value change history

[illegible]

DATE	Change Item	Reason
2012/03/07	0.1 SCH modify from Z77X-UD3H VCOORE change PWRSTAGE 3550 11*11 choke + 820uF VTT change 1+1 / 2 phase TB 4C PLX8605 PCIE*1 SW Remove 9172 SATA3 PCIEX16/X8/X4 sharing COM port	Spec Change
2012/03/30	0.2 SCH modify LAN solution change to 8111F Codec soluion change to 892 VAXG Phase2 ISEN/RSEN link SWAP DP/DVI SW SCH modify	
2012/04/06	Add SPDIF_IN	
2012/04/17	CBC1/2/7/9 CHANGE 0603	

BLOCK DIAGRAM



LGA1155A

M_AA0	AV27	SA_MA[0]
M_AA1	AY24	SA_MA[1]
M_AA2	AW24	SA_MA[2]
M_AA3	AW23	SA_MA[3]
M_AA4	AV23	SA_MA[4]
M_AA5	AT24	SA_MA[5]
M_AA6	AT23	SA_MA[6]
M_AA7	AU22	SA_MA[7]
M_AA8	AV22	SA_MA[8]
M_AA9	AT22	SA_MA[9]
M_AA10	AV28	SA_MA[10]
M_AA11	AU21	SA_MA[11]
M_AA12	AT21	SA_MA[12]
M_AA13	AW32	SA_MA[13]
M_AA14	AU20	SA_MA[14]
M_AA15	AT20	SA_MA[15]

SA_DQS[0]
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SA_CAS#
SA_RAS#SA_BS[0]
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SA_BS[2]SA_CS[0]
SA_CS[1]
SA_CS[2]
SA_CS[3]SA_CKE[0]
SA_CKE[1]
SA_CKE[2]
SA_CKE[3]SA_ODT[0]
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SA_CLK[1]
SA_CLK[2]
SA_CLK[3]SA_DQS[3]
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SA_DQS[4]SA_DQS[5]
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DDR_0

1 OF 10

LGA1155[10SC1-F01155-01R]

LGA1155B

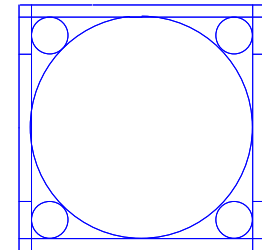
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M_AAB6	AM18	SB_MA[6]
M_AAB7	AL18	SB_MA[7]
M_AAB8	AN18	SB_MA[8]
M_AAB9	AY17	SB_MA[9]
M_AAB10	AN23	SB_MA[10]
M_AAB11	AU17	SB_MA[11]
M_AAB12	AT18	SB_MA[12]
M_AAB13	AR26	SB_MA[13]
M_AAB14	AY16	SB_MA[14]
M_AAB15	AV16	SB_MA[15]

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SB_DQS[0]SB_WE#
SB_CAS#
SB_RAS#SB_BS[0]
SB_BS[1]
SB_BS[2]SB_CS[0]
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SB_CS[2]
SB_CS[3]SB_CKE[0]
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DDR_1

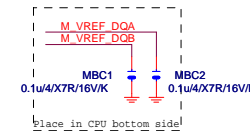
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LGA1155[10SC1-F01155-01R]

LGA1155
ILM_BP/1156/BKNI

Need check the new CPU ME

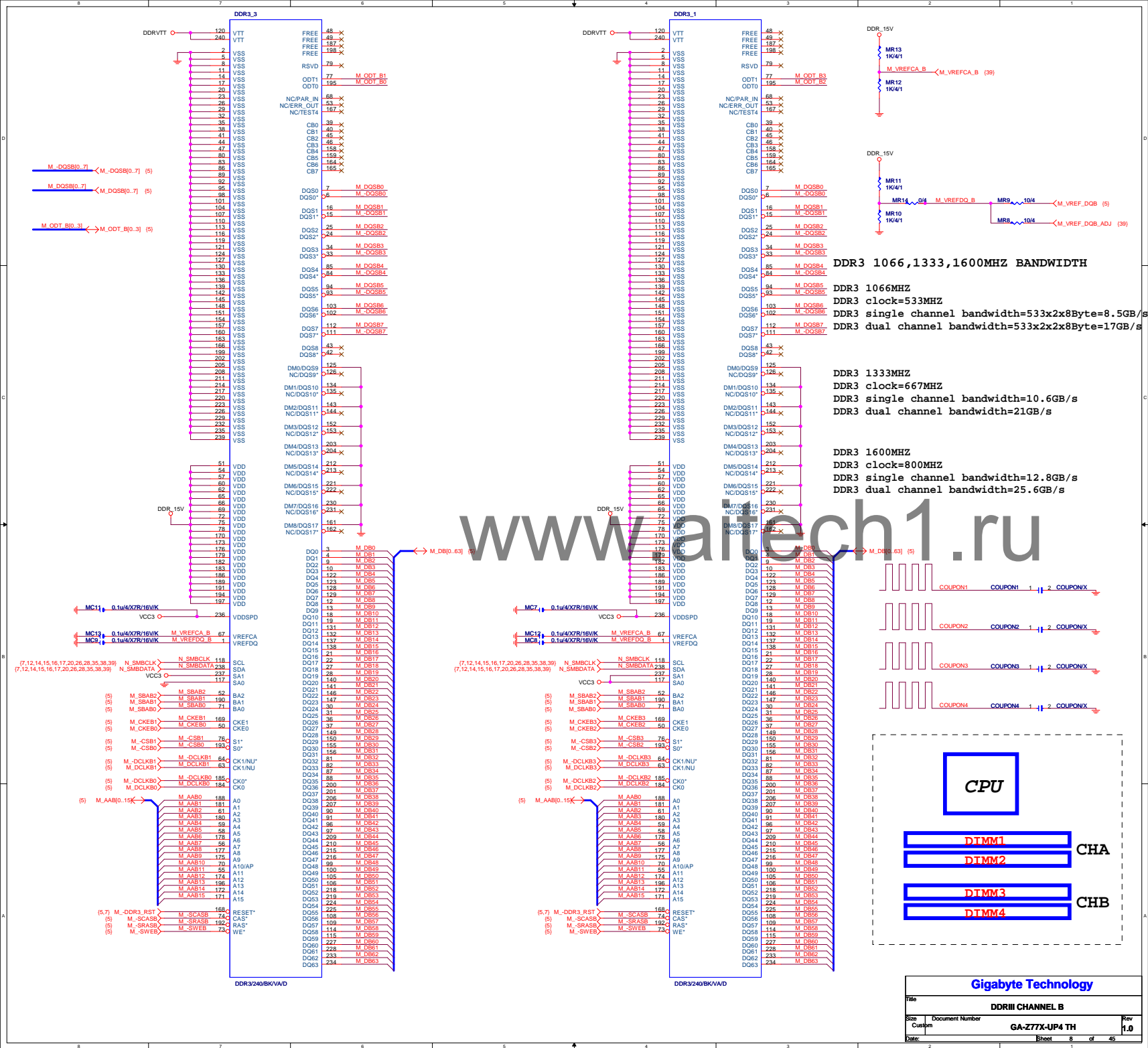
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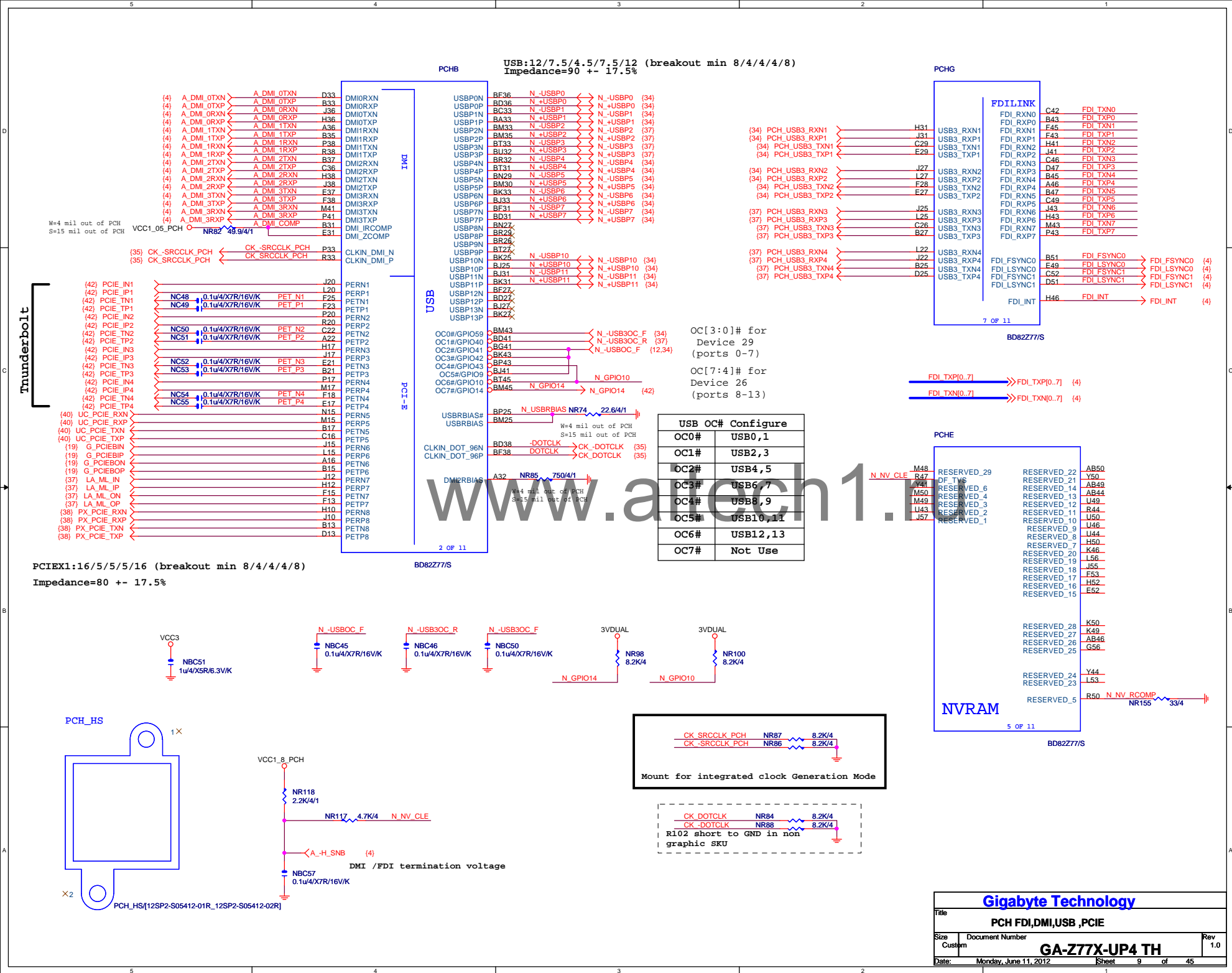


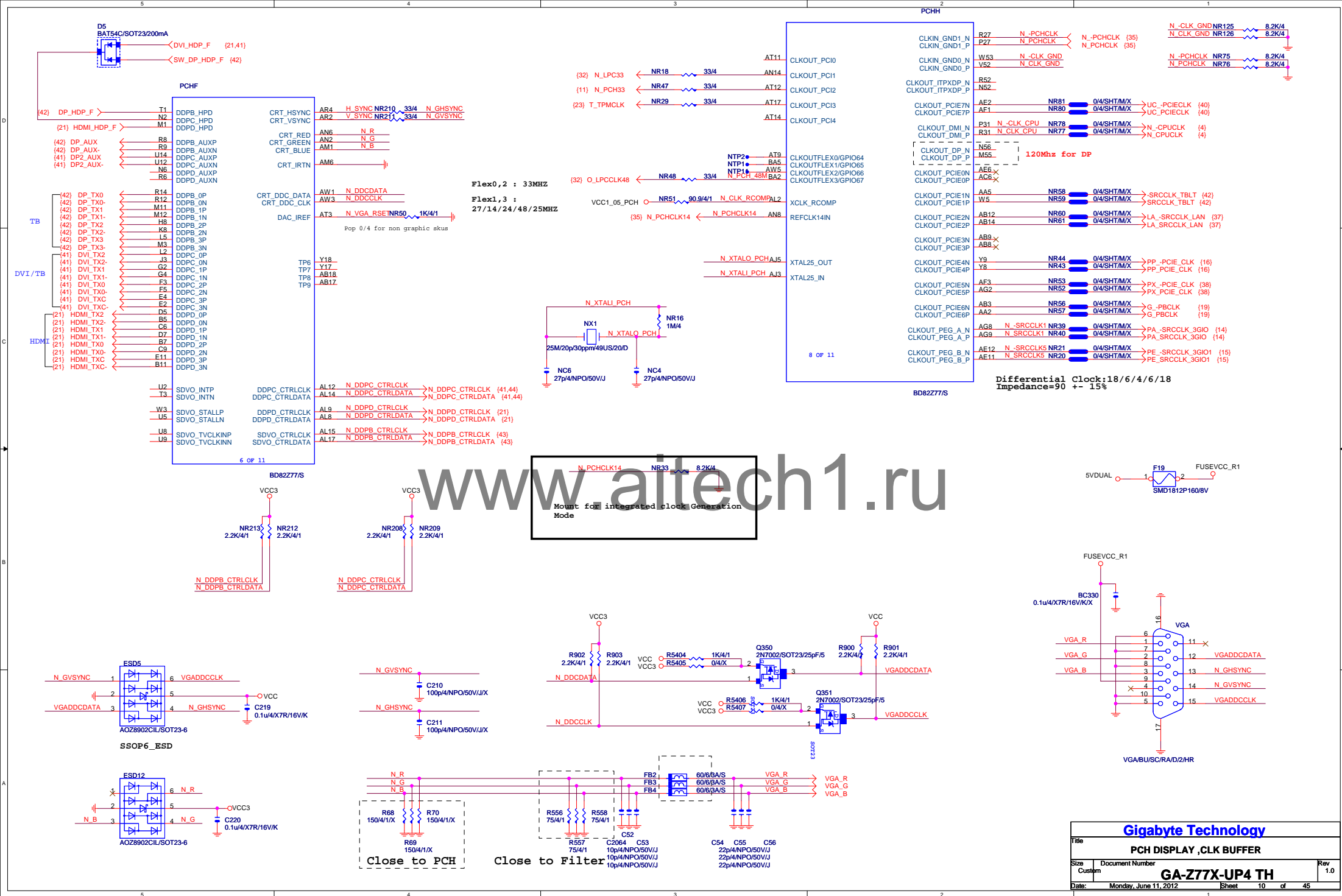
Gigabyte Technology

CPU LGA1156-B

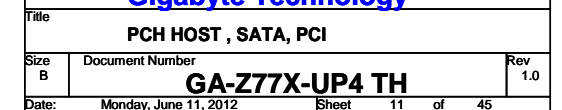
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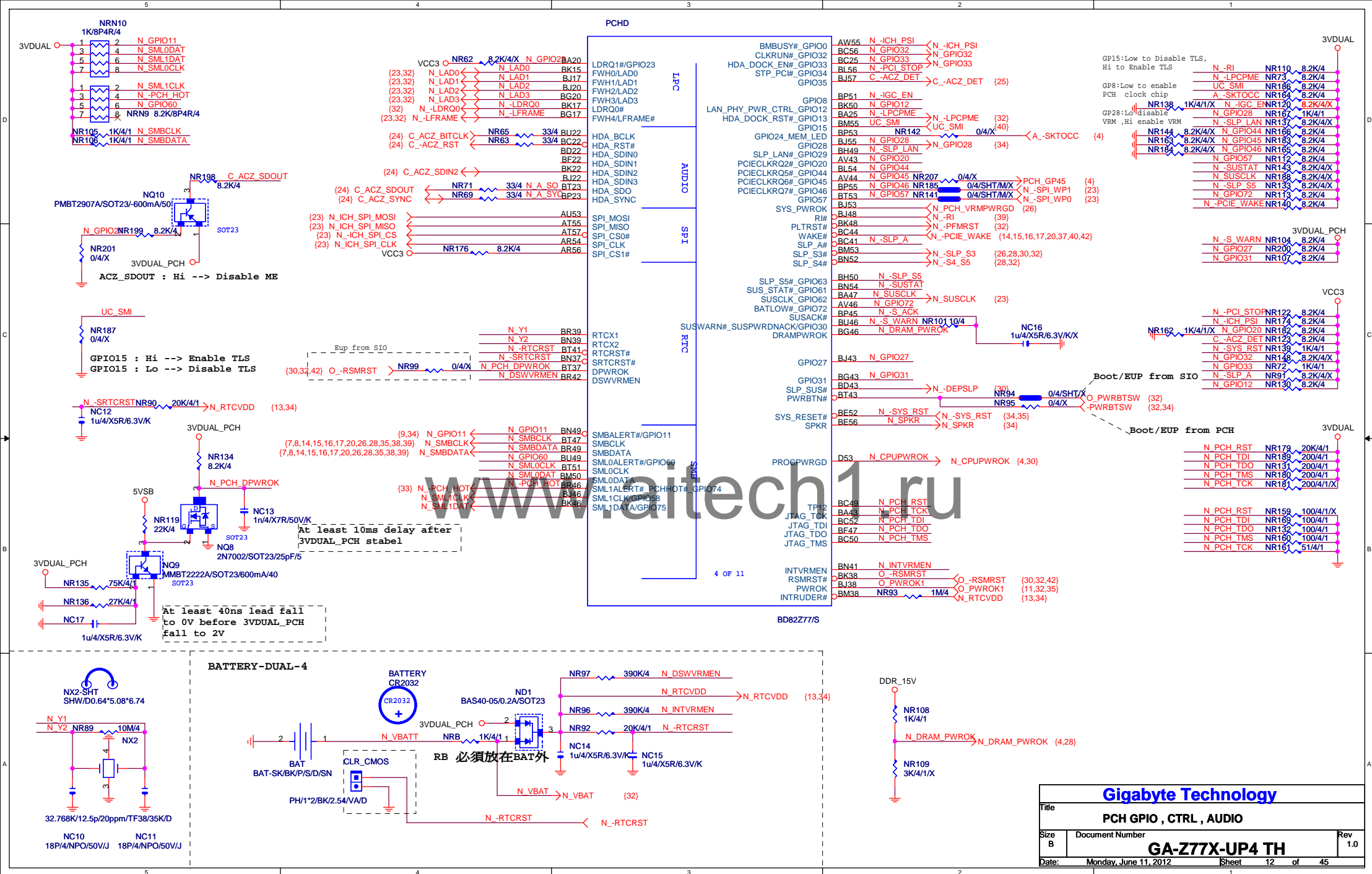


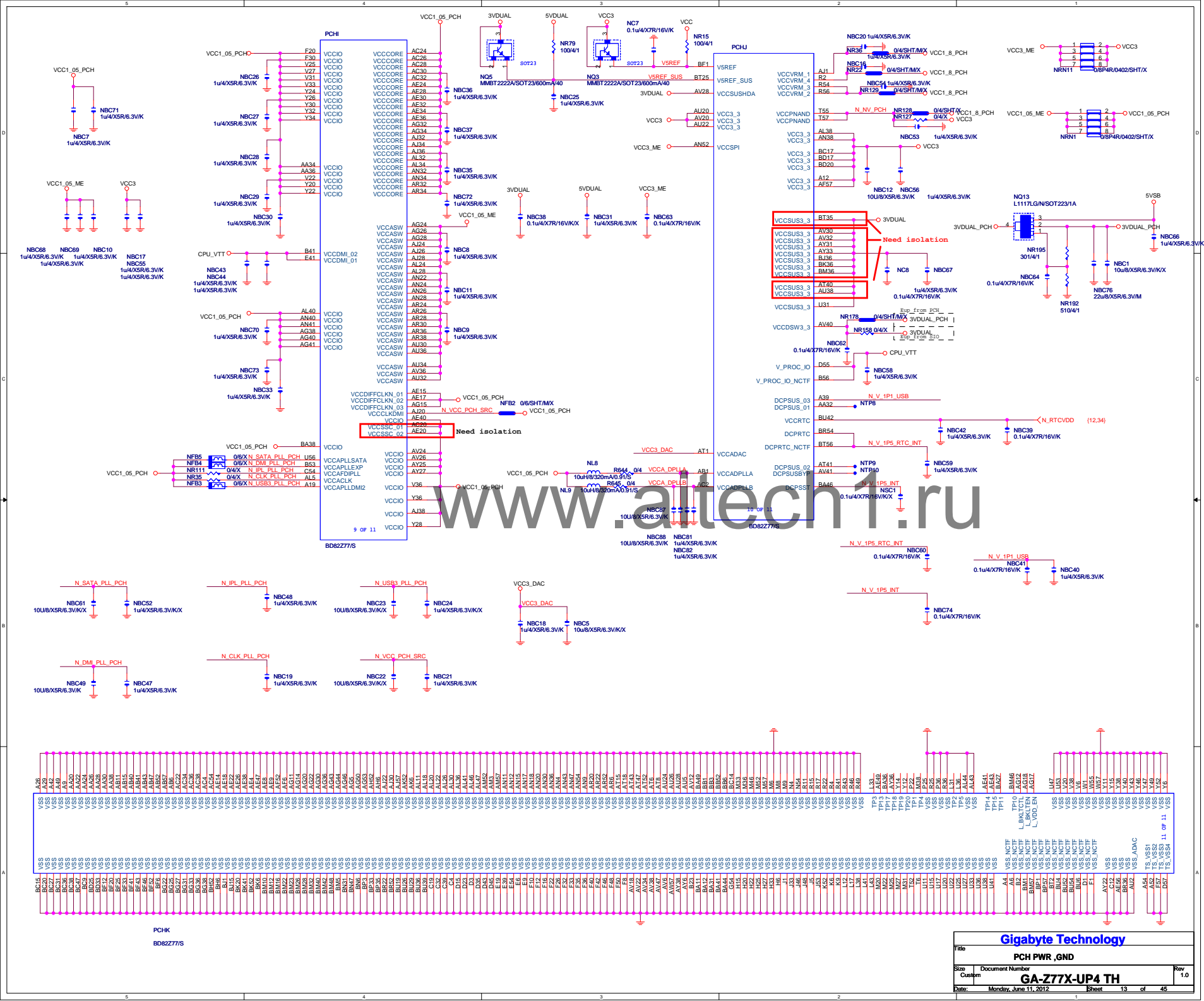


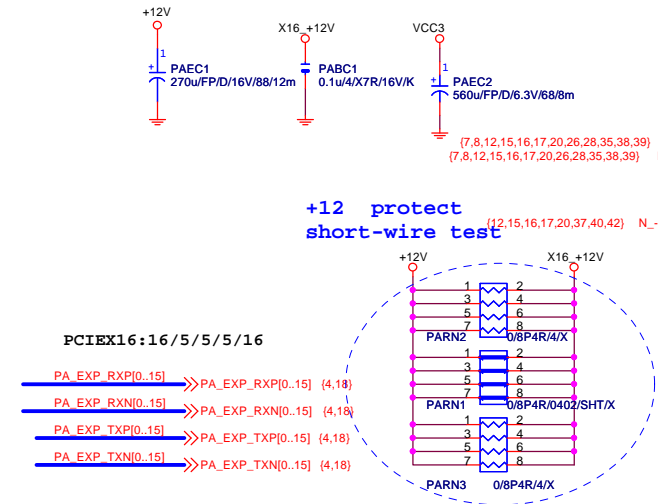


PCHC









PA EXP TXP0	PAC5	0.22u/4/X5R6.3V/K	PA EXP TXP0 C
PA EXP TXN0	PAC4	0.22u/4/X5R6.3V/K	PA EXP TXN0 C
PA EXP TXP1	PAC6	0.22u/4/X5R6.3V/K	PA EXP TXP1 C
PA EXP TXN1	PAC7	0.22u/4/X5R6.3V/K	PA EXP TXN1 C
PA EXP TXP2	PAC8	0.22u/4/X5R6.3V/K	PA EXP TXP2 C
PA EXP TXN2	PAC9	0.22u/4/X5R6.3V/K	PA EXP TXN2 C
PA EXP TXP3	PAC10	0.22u/4/X5R6.3V/K	PA EXP TXP3 C
PA EXP TXN3	PAC11	0.22u/4/X5R6.3V/K	PA EXP TXN3 C
PA EXP TXP4	PAC12	0.22u/4/X5R6.3V/K	PA EXP TXP4 C
PA EXP TXN4	PAC13	0.22u/4/X5R6.3V/K	PA EXP TXN4 C
PA EXP TXP5	PAC14	0.22u/4/X5R6.3V/K	PA EXP TXP5 C
PA EXP TXN5	PAC15	0.22u/4/X5R6.3V/K	PA EXP TXN5 C
PA EXP TXP6	PAC16	0.22u/4/X5R6.3V/K	PA EXP TXP6 C
PA EXP TXN6	PAC17	0.22u/4/X5R6.3V/K	PA EXP TXN6 C
PA EXP TXP7	PAC18	0.22u/4/X5R6.3V/K	PA EXP TXP7 C
PA EXP TXN7	PAC19	0.22u/4/X5R6.3V/K	PA EXP TXN7 C
PA EXP SW TXP8	PAC20	0.22u/4/X5R6.3V/K	PA EXP SW TXP8 C
PA EXP SW TXN8	PAC21	0.22u/4/X5R6.3V/K	PA EXP SW TXN8 C
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PA EXP SW TXN10	PAC25	0.22u/4/X5R6.3V/K	PA EXP SW TXN10 C
PA EXP SW TXP11	PAC26	0.22u/4/X5R6.3V/K	PA EXP SW TXP11 C
PA EXP SW TXN11	PAC27	0.22u/4/X5R6.3V/K	PA EXP SW TXN11 C
PA EXP SW TXP12	PAC28	0.22u/4/X5R6.3V/K	PA EXP SW TXP12 C
PA EXP SW TXN12	PAC29	0.22u/4/X5R6.3V/K	PA EXP SW TXN12 C
PA EXP SW TXP13	PAC30	0.22u/4/X5R6.3V/K	PA EXP SW TXP13 C
PA EXP SW TXN13	PAC31	0.22u/4/X5R6.3V/K	PA EXP SW TXN13 C
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PA EXP SW TXN15	PAC35	0.22u/4/X5R6.3V/K	PA EXP SW TXN15 C

PA EXP SW RXP8.15] >> PA_EXP_SW_RXP[8.15] (18)

PA EXP SW RXN8.15] >> PA_EXP_SW_RXN[8.15] (18)

PA EXP SW TXP8.15] >> PA_EXP_SW_TXP[8.15] (18)

PA EXP SW TXN8.15] >> PA_EXP_SW_TXN[8.15] (18)

PCI-E REV:1.1--> 2.5GHZ

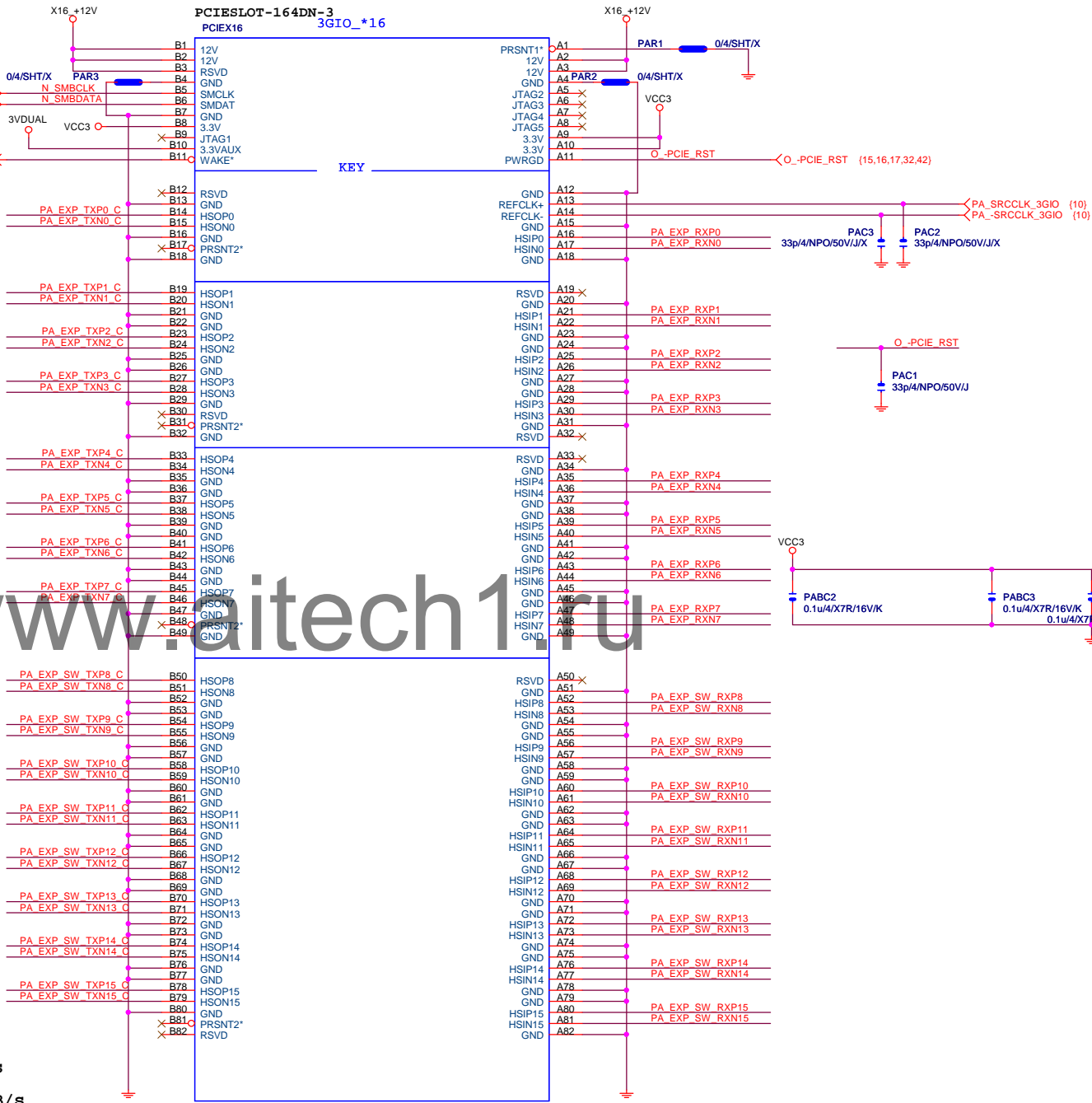
PCE-E X1(單向) BANDWITH=2.5GHz*(8b/10b)=2Gb/s=250MB/s

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

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

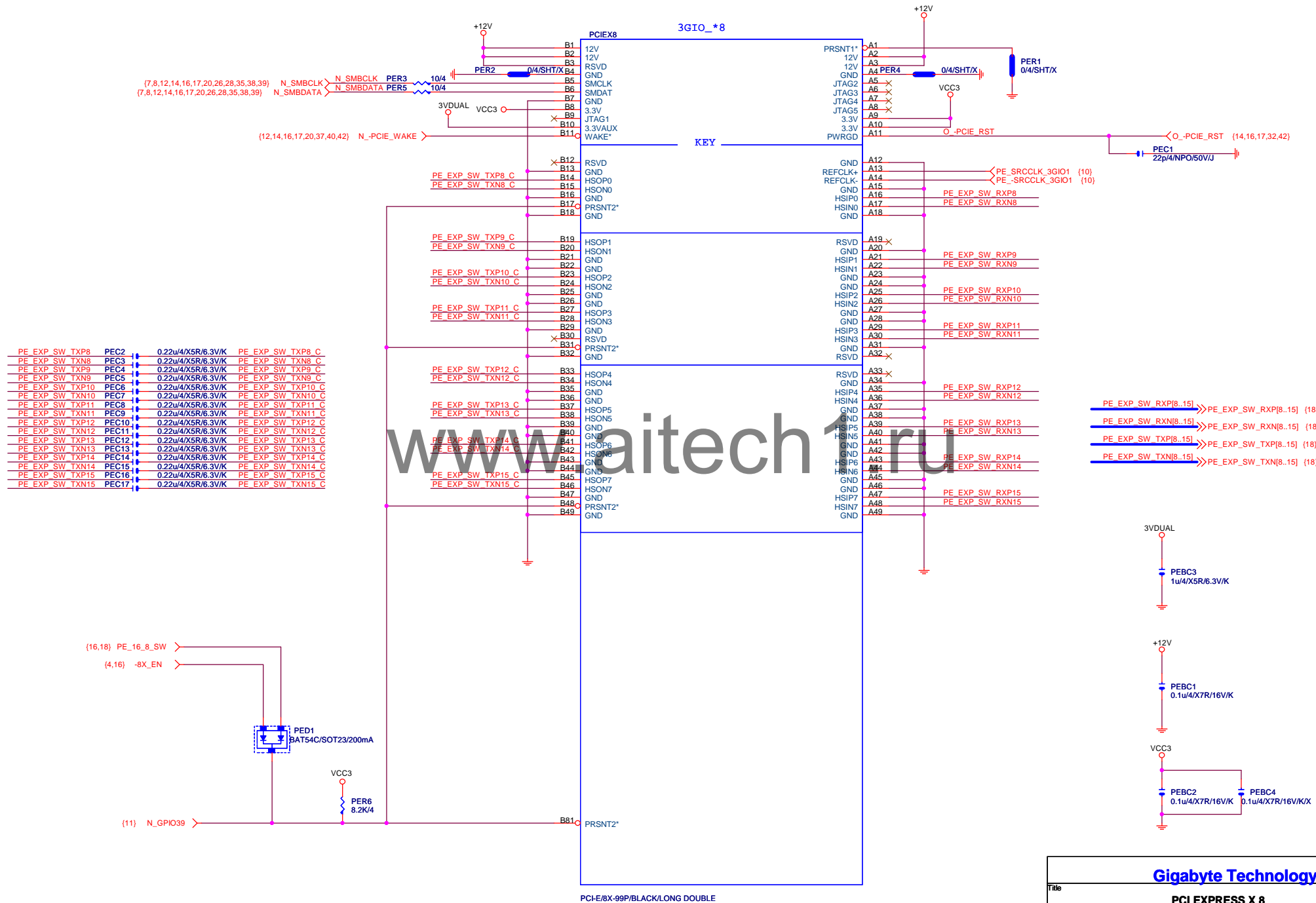
PCE-E X16(雙向) BANDWITH=2.5GHz*(8b/10b)X16X2=64Gb/s=8GB/s

PCI-E REV:2.0--> 5GHZ



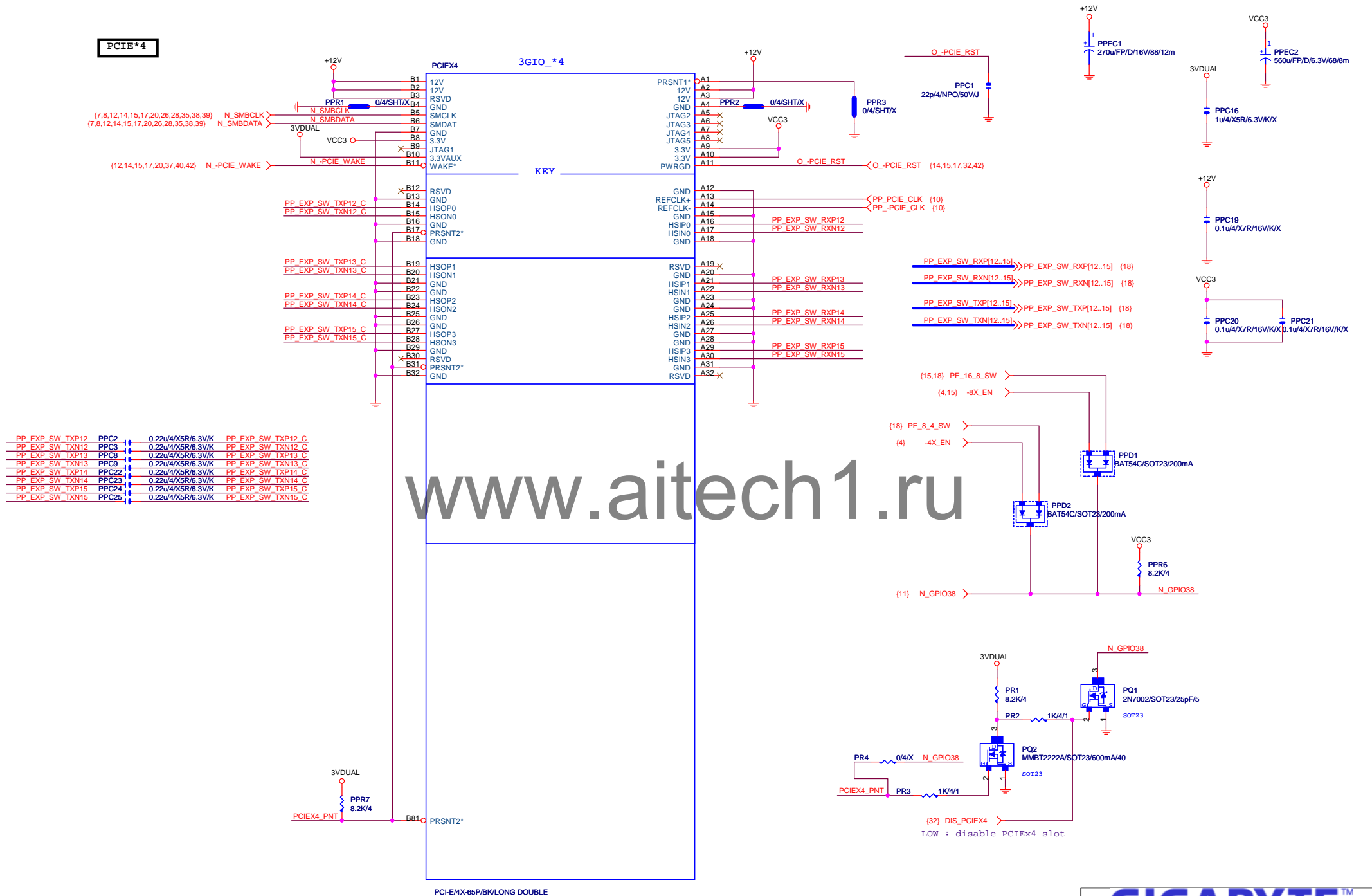
PCI-E/16X-164P/BK/LONG DOUBLE

Gigabyte Technology		
Title		
PCI EXPRESS X 16		
Size	Document Number	Rev
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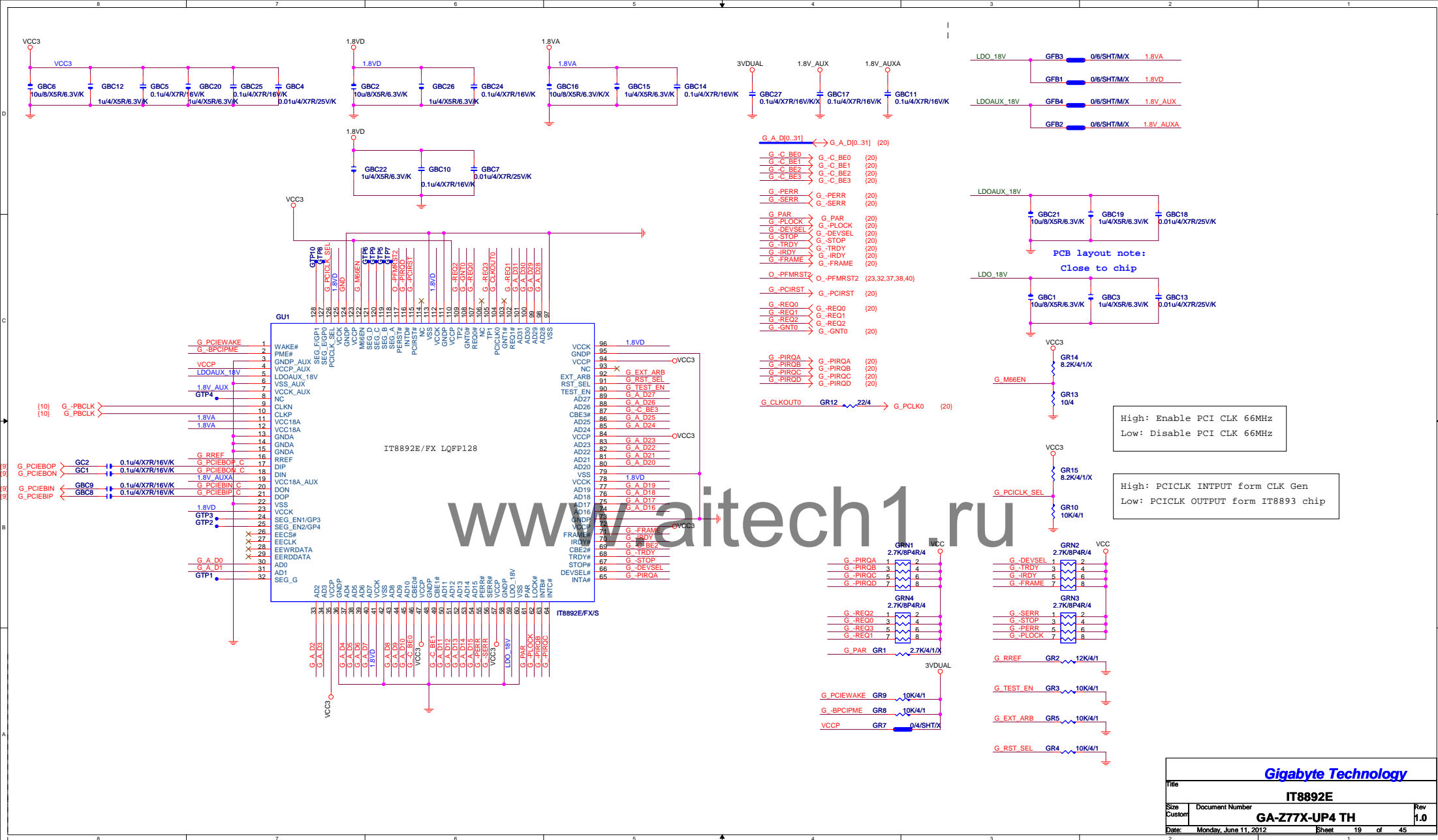
PCI-E/8X-99P/BLACK/LONG DOUBLE

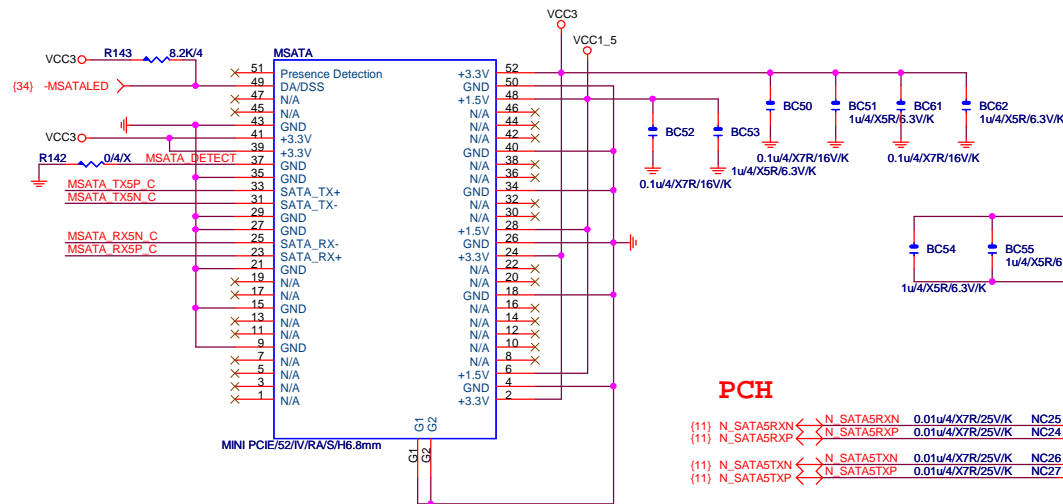
PCIE*4



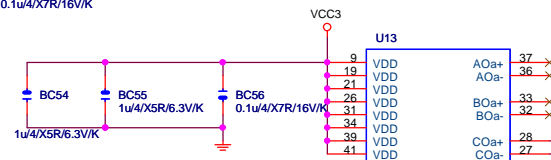
PCI-E/4X-65P/BK/LONG DOUBLE

GIGABYTE™		
Title PCI EXPRESS X 4		
Size Custom	Document Number GA-Z77X-UP4 TH	Rev 1.0
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N SATA5RXN C R134 0/4/X N SATA5RXNC
 N SATA5RXP C R136 0/4/X N SATA5RXPNC
 N SATA5TXN C R137 0/4/X N SATA5TXNC
 N SATA5TXP C R139 0/4/X N SATA5TXPC
FIX PCH-SATA --> SATA5
R請放在U13背面

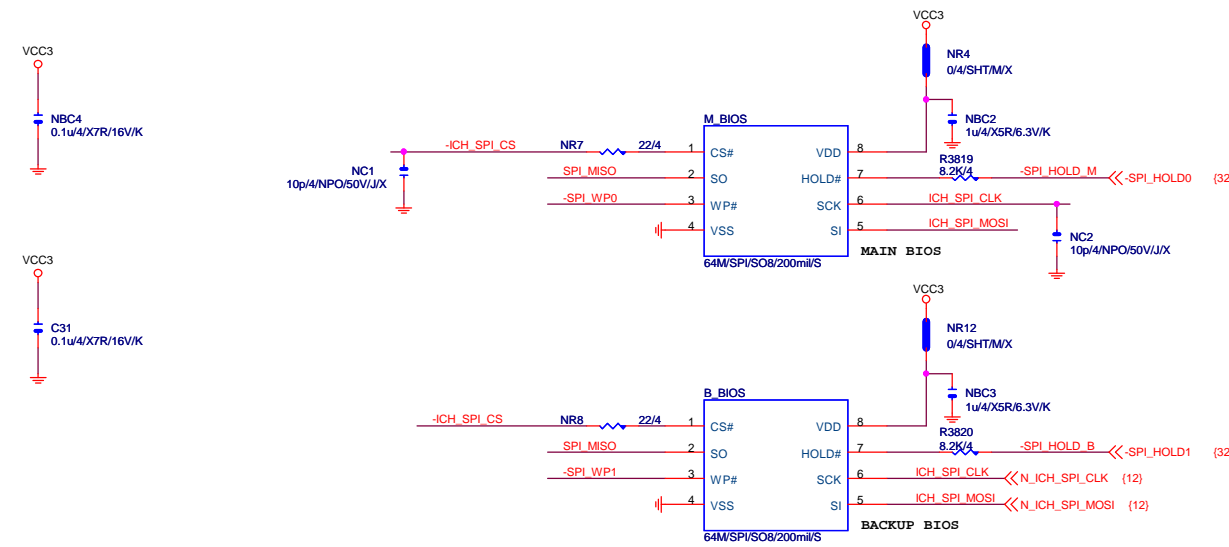


**SATA2
port5**

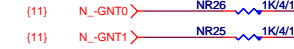
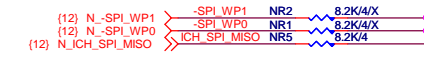
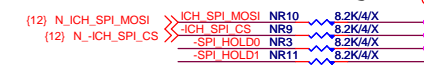
mSATA

Function	SEL
xI--> xOa	L
xI--> xOb	H

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MOSI For DMI RX Termination Voltage



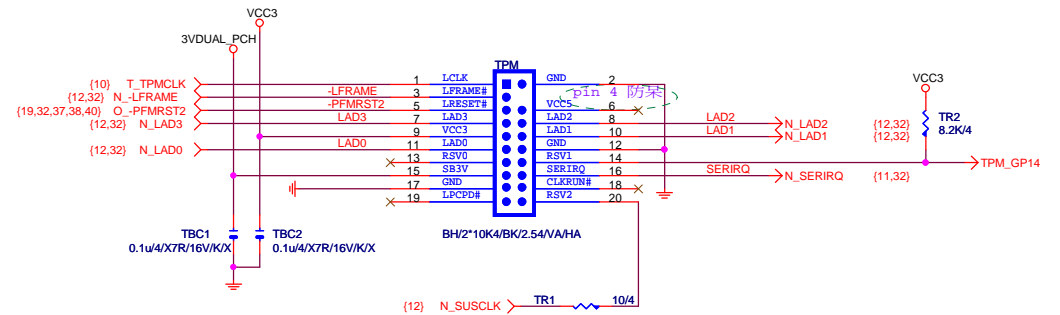
Default int pull up



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

1 means floating
0 means PD 1K

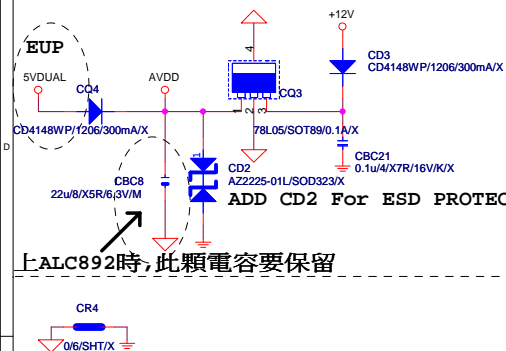
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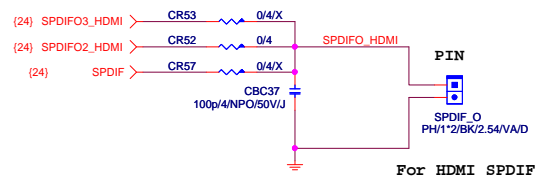
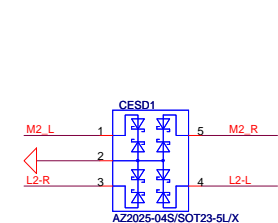
Gigabyte Technology

Title				BIOS	
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CODEC POWER/EMI PAD

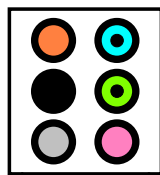


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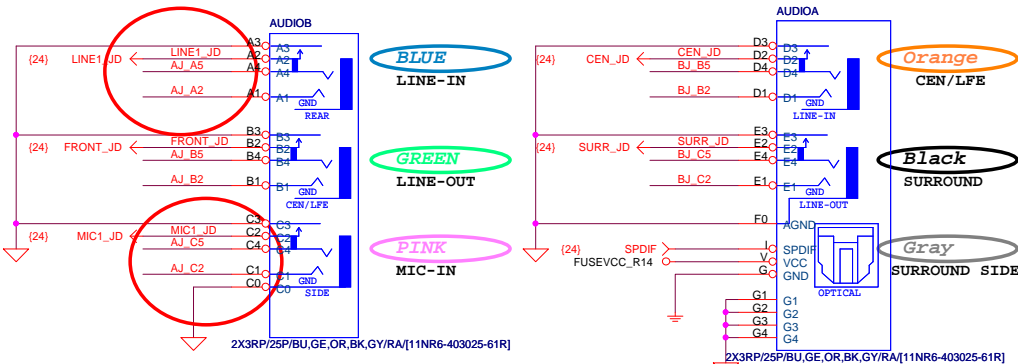
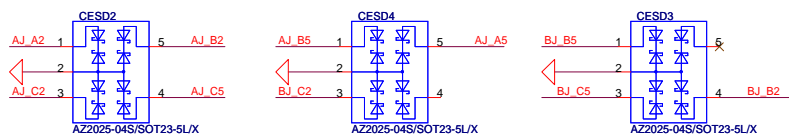


AZALIA JACK

BTX AZALIA CONNECTOR



11NR6-403007-21R



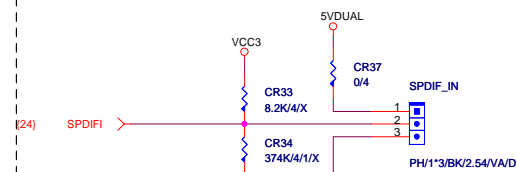
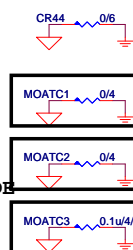
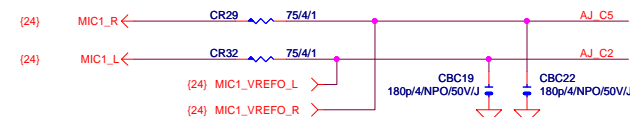
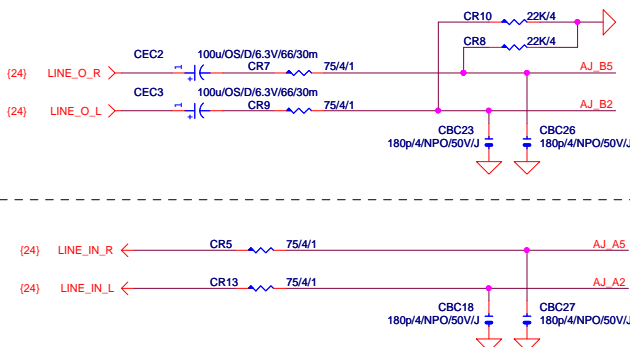
LINE-OUT

- Audio jack --> USB

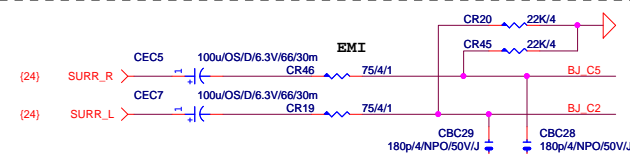
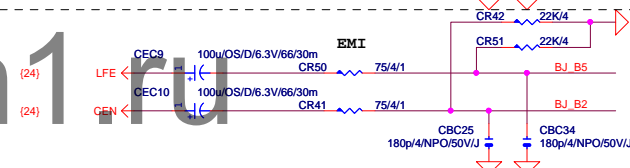
• Near Audio jack left

```
Codec --> Audio jack
```

F_AUDIO

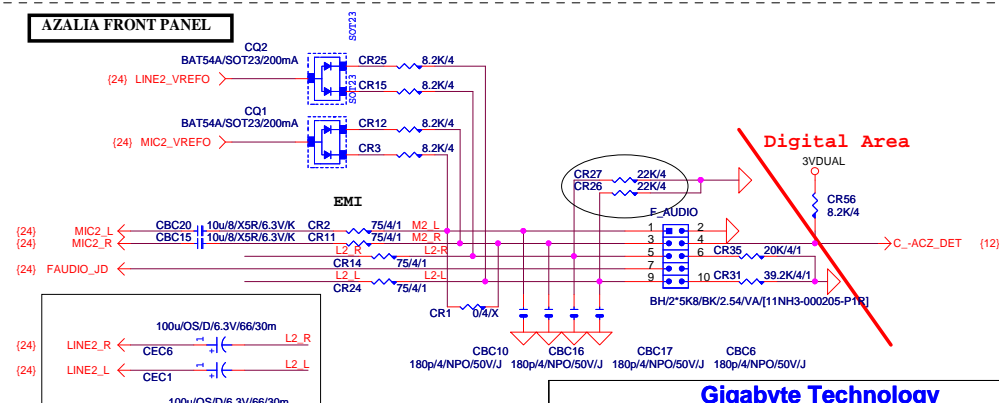
**MIC-IN**

SURROUND

**CEN/LFE**

SURR BACK

AZALIA FRONT PANEL



\\ Digital Area

3VDC

→ C_-ACZ_DET {12}

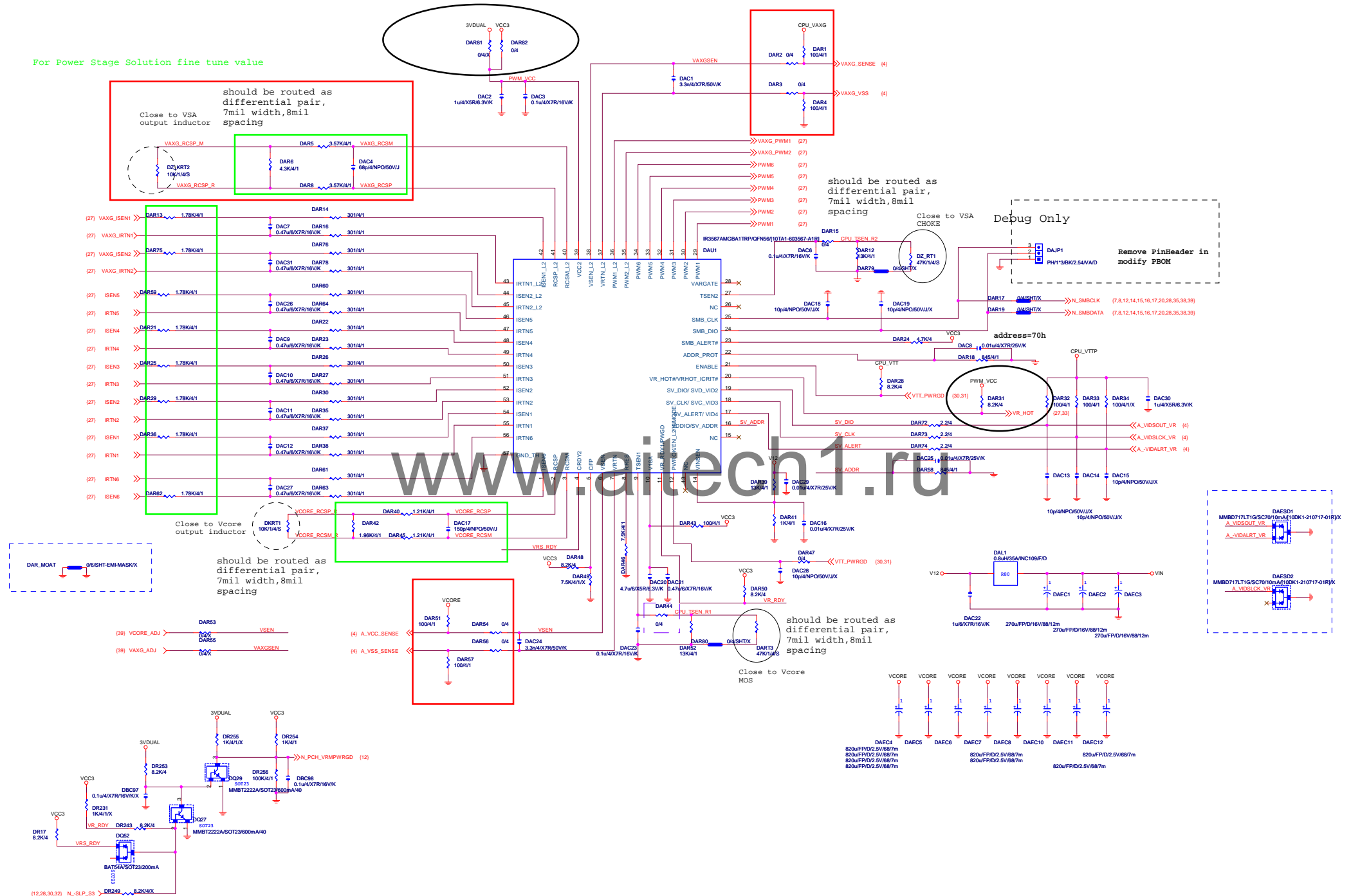
Gigabyte Technology

AUDIO JACK

GA-Z77X-UP4 TH

1.0

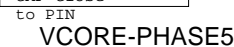
For Power Stage Solution fine tune value



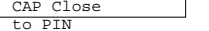
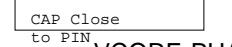
(3553 / 3550 co-lay)



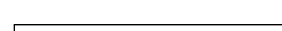
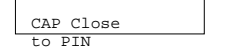
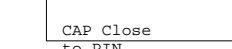
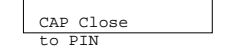
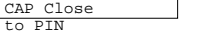
VCORE-PHASE5

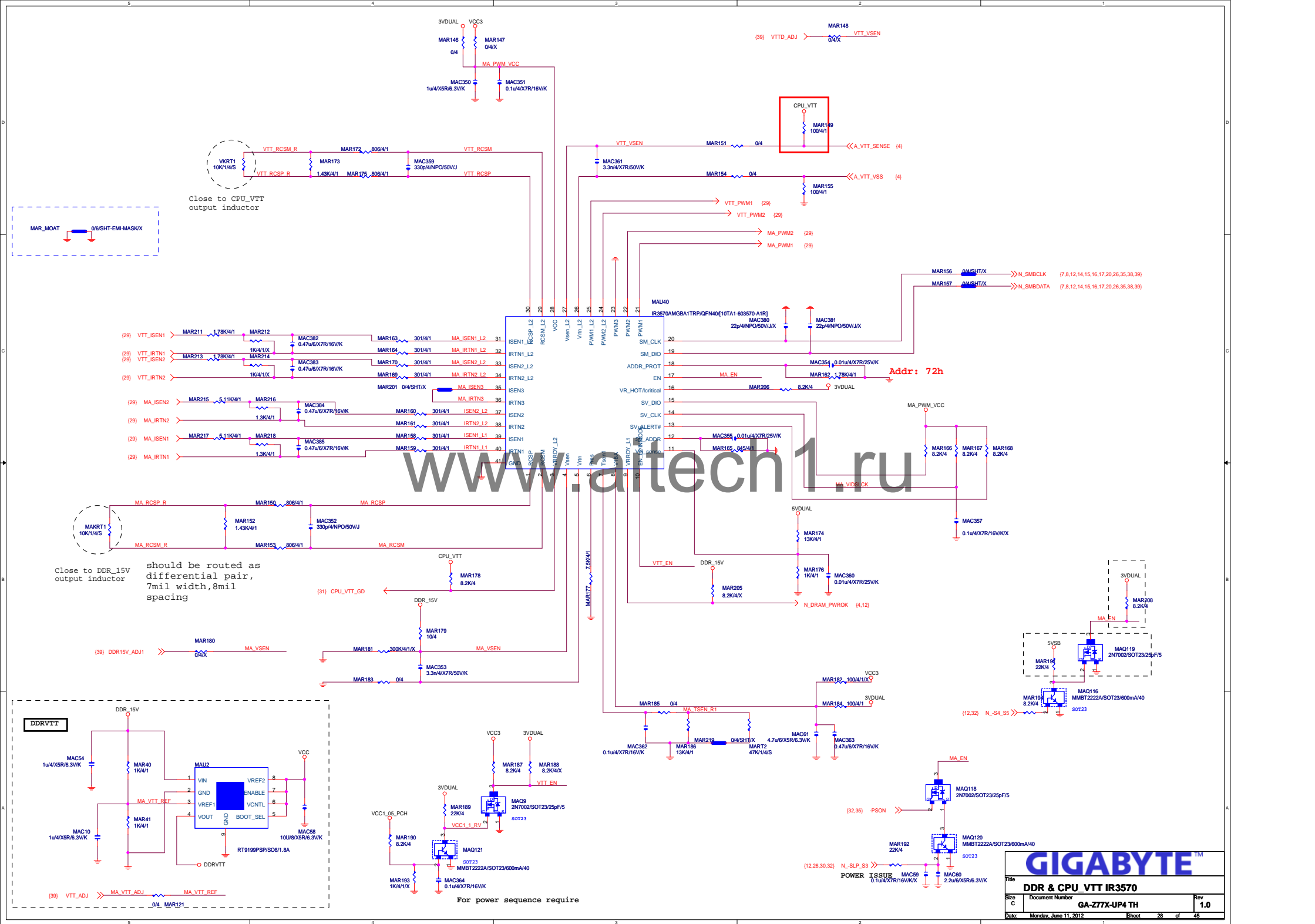


VCORE-PHASE6

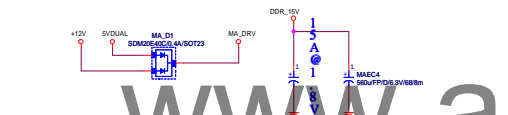
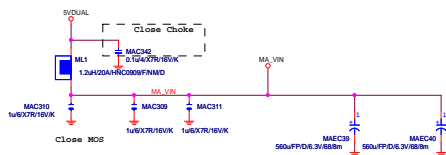
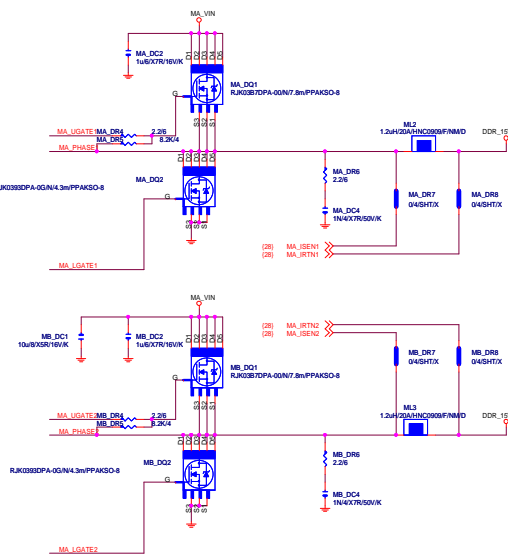
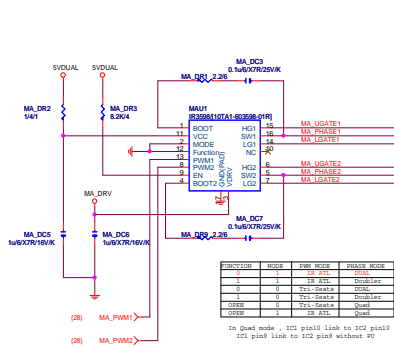


VAXG Phase

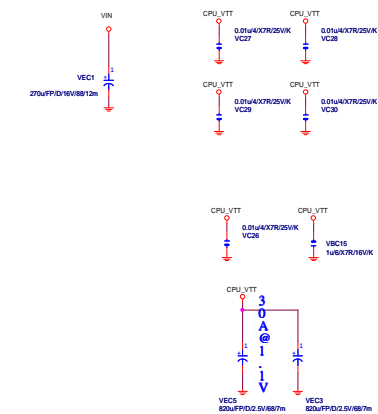
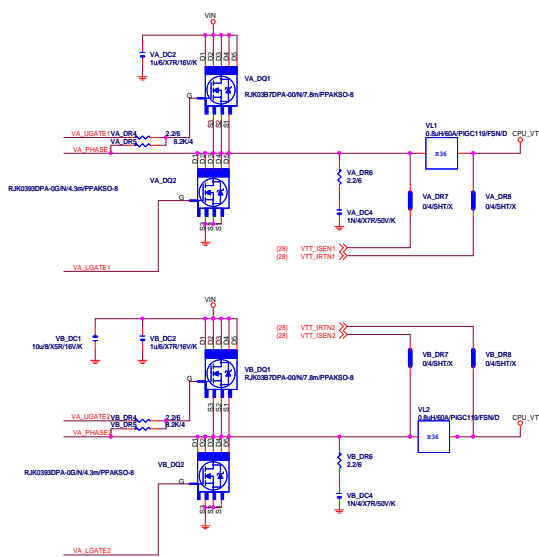
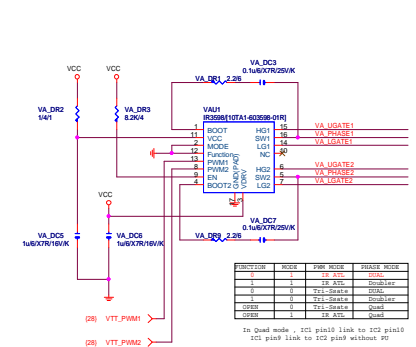


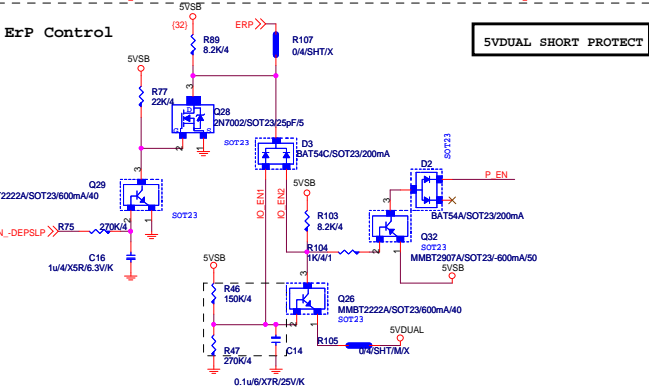
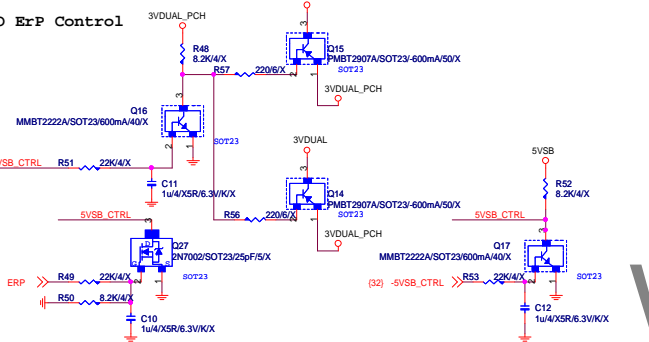
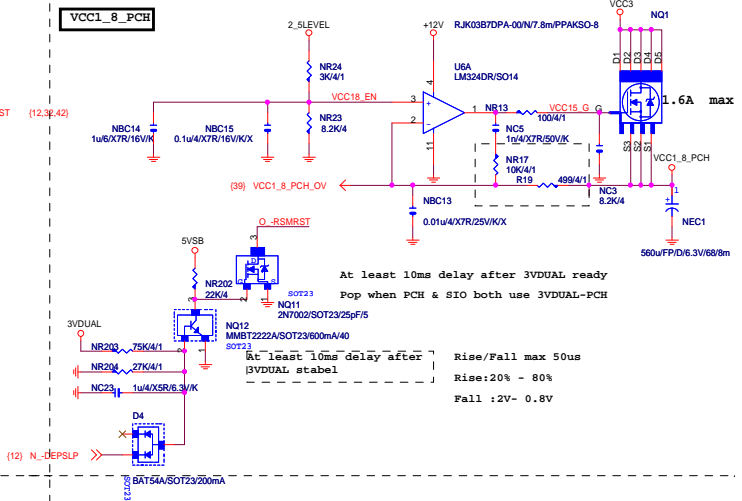
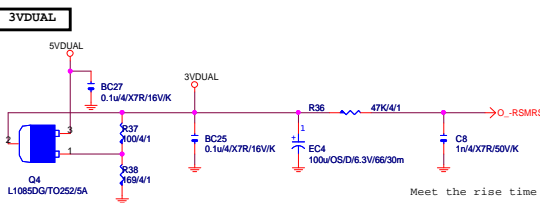
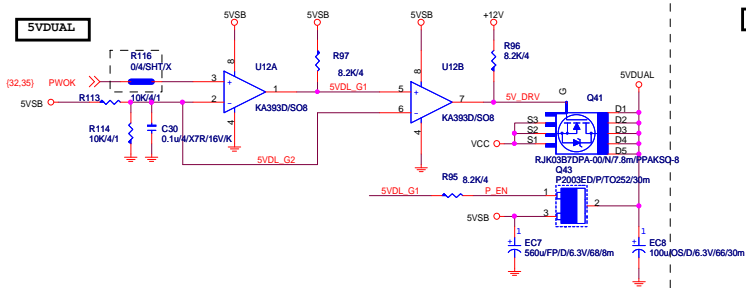


DDR_15V

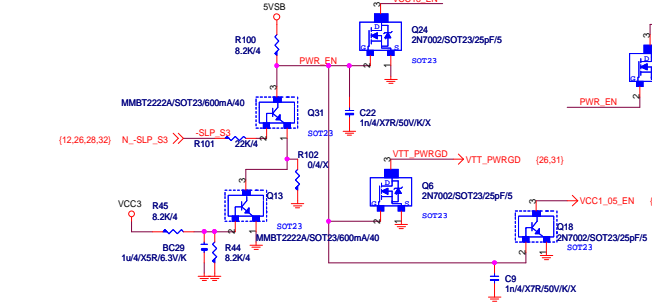
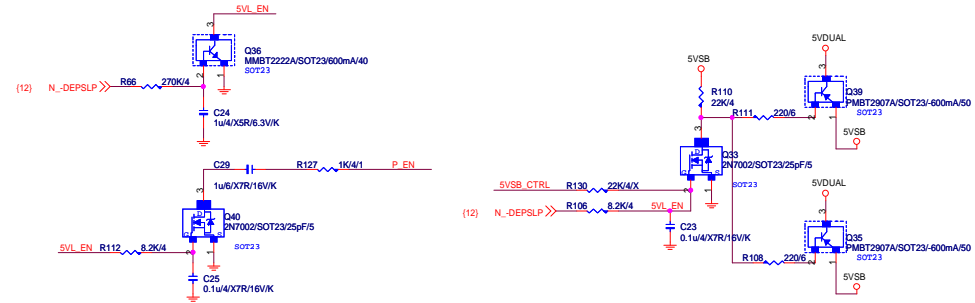
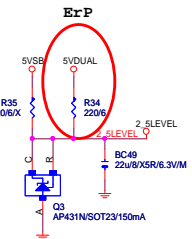


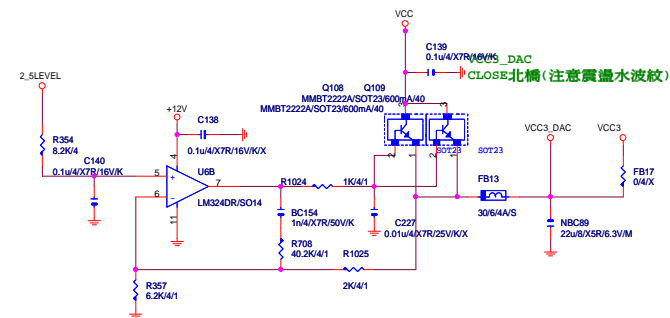
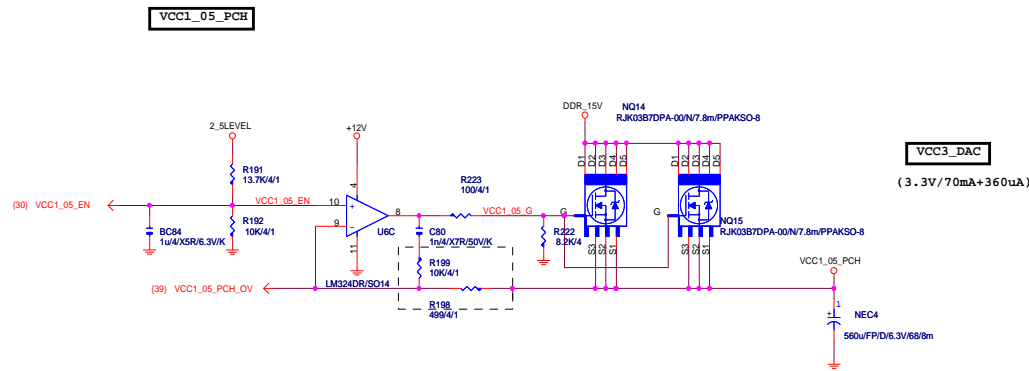
CPU_VTT





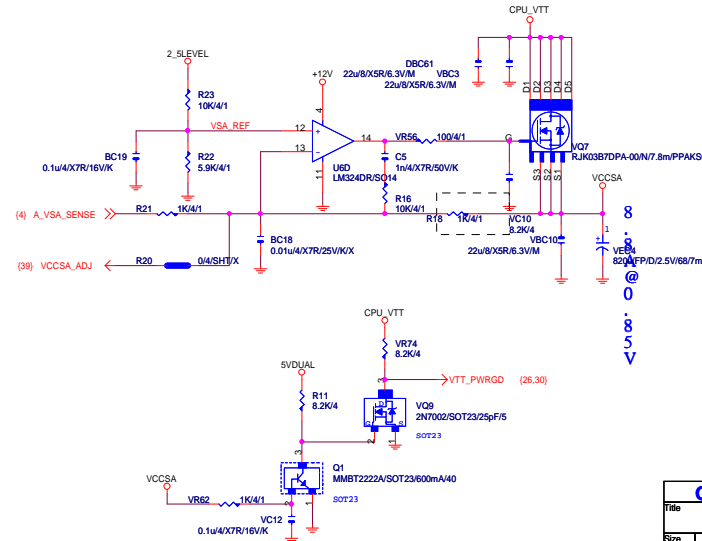
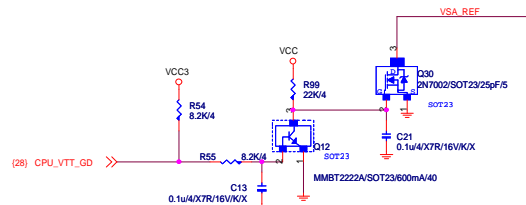
5VDUAL SHORT PROTECT

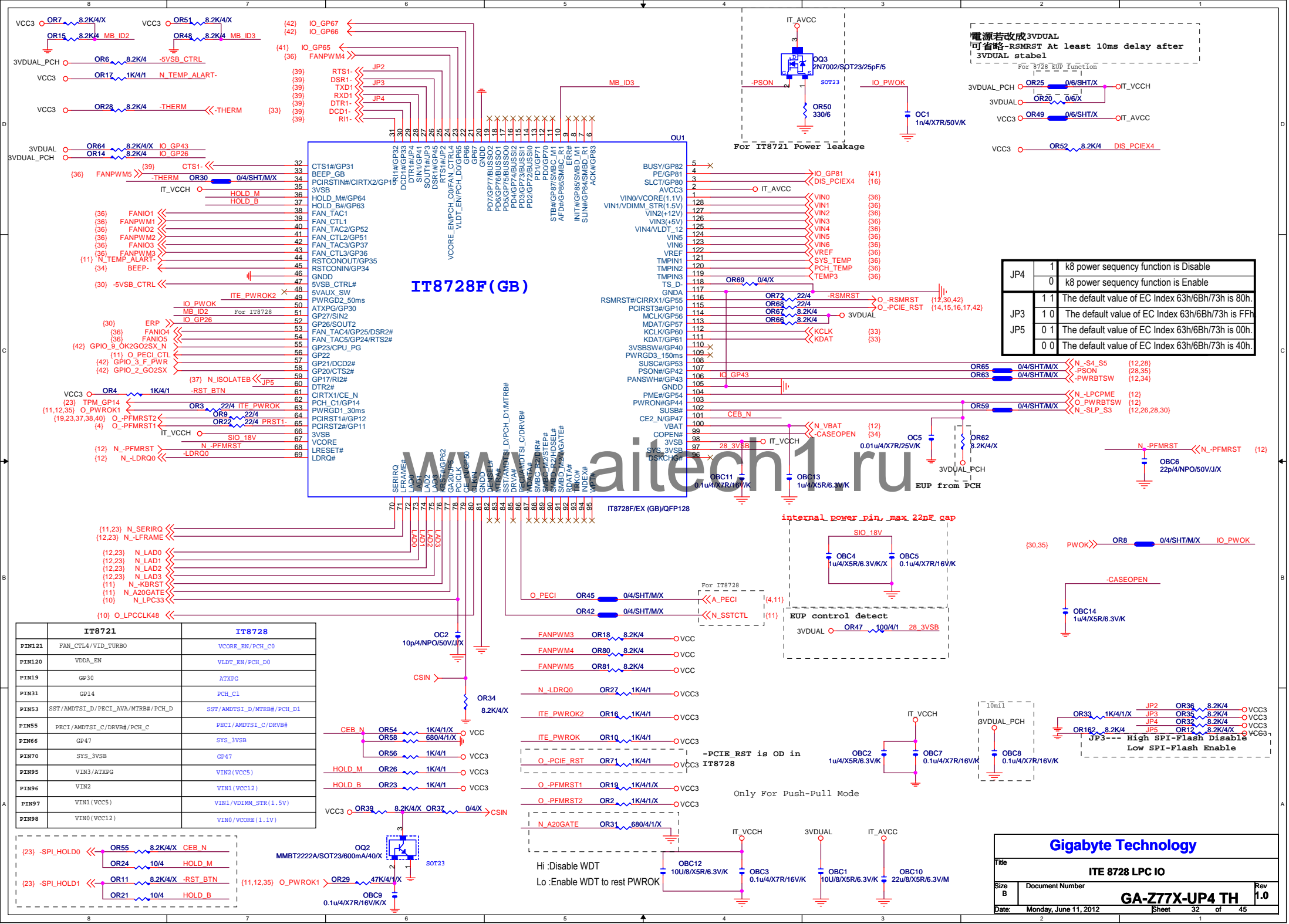


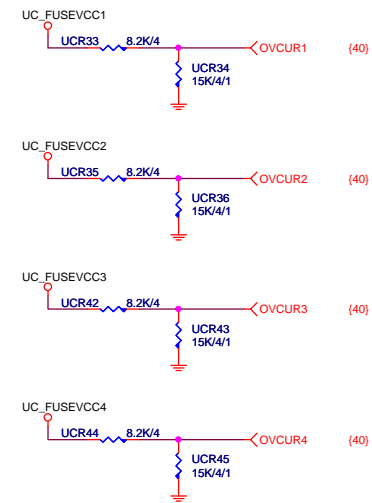
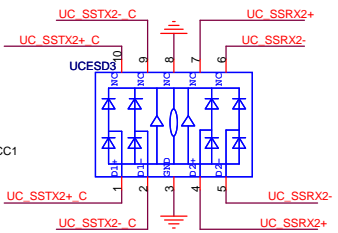
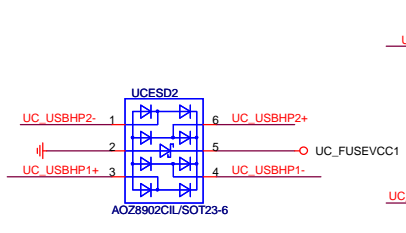
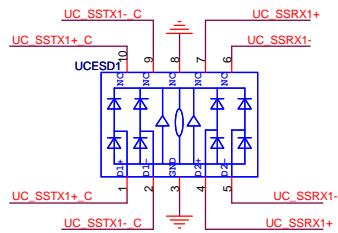
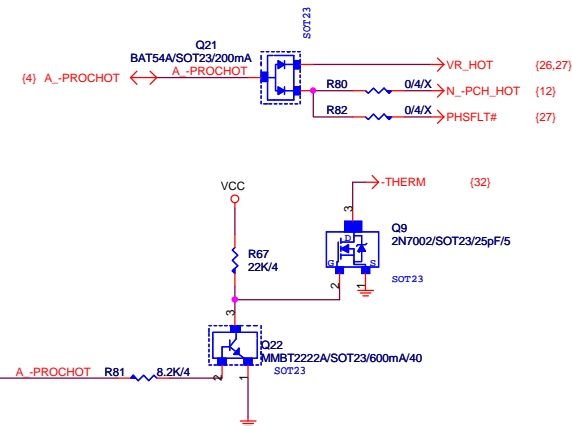
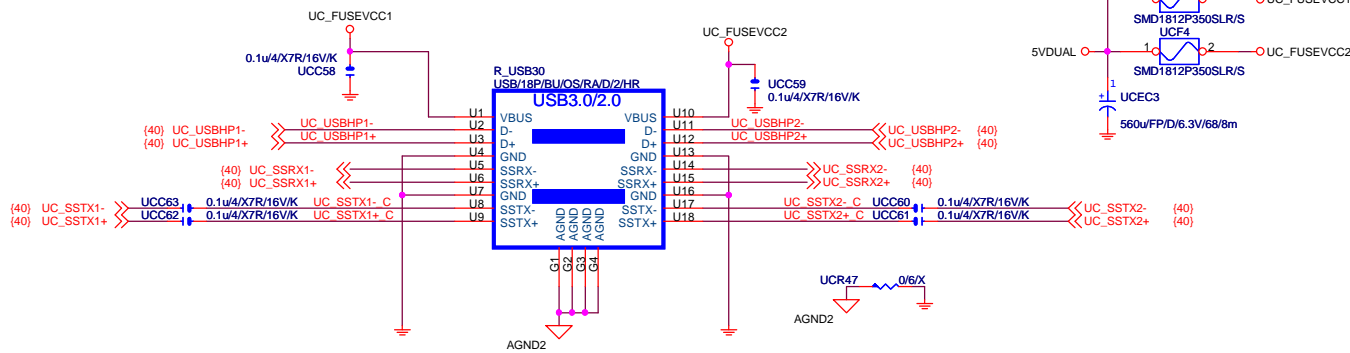


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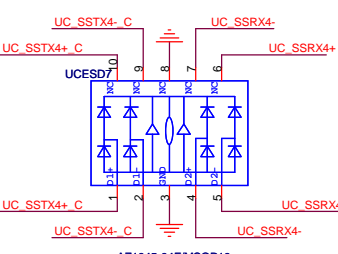
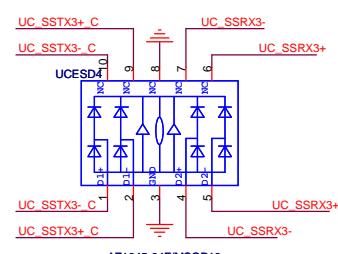
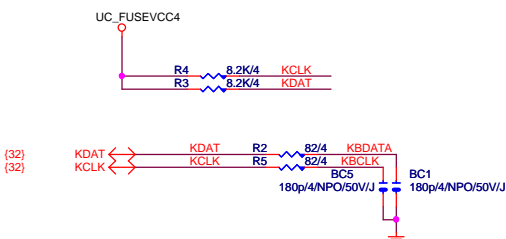
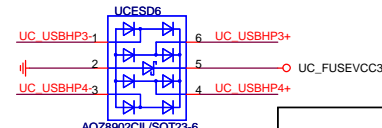
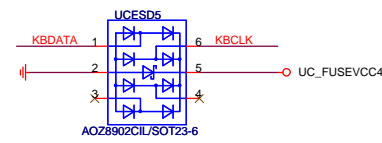
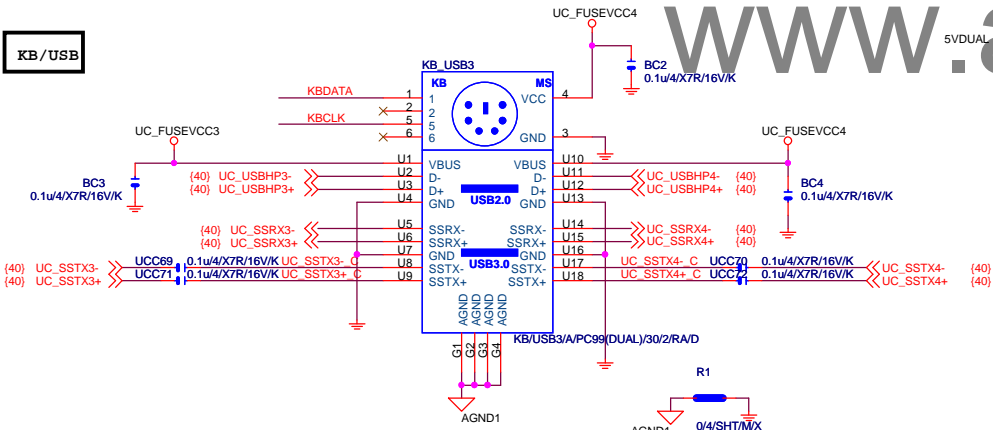
VCC_SA







KB / USB



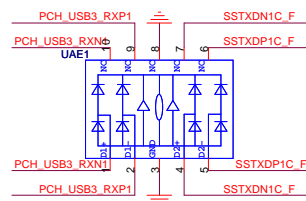
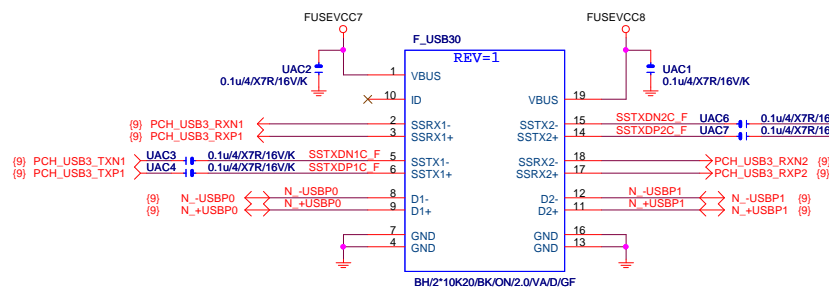
Close to connector

Close to connector

Close to connector

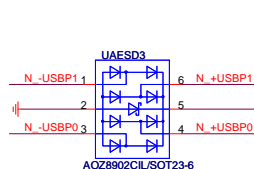
Close to connector

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File			
USB3_ESATA / KB_USB3			
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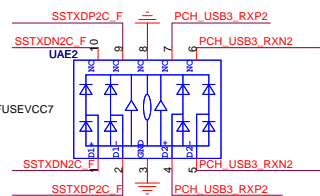


AZ1045-04F/MSOP10

Close to connector

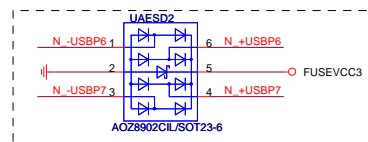
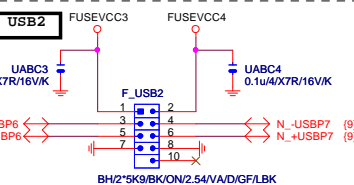
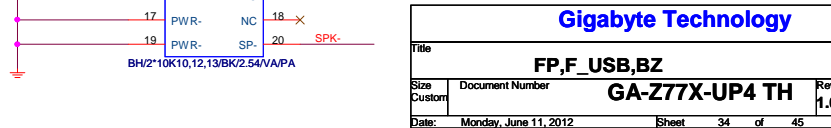
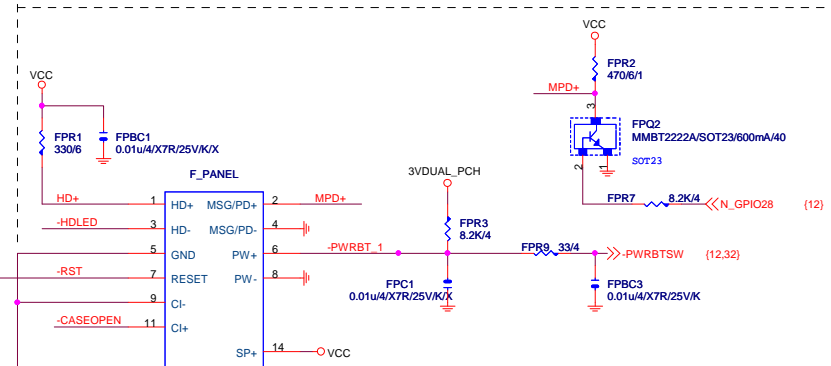
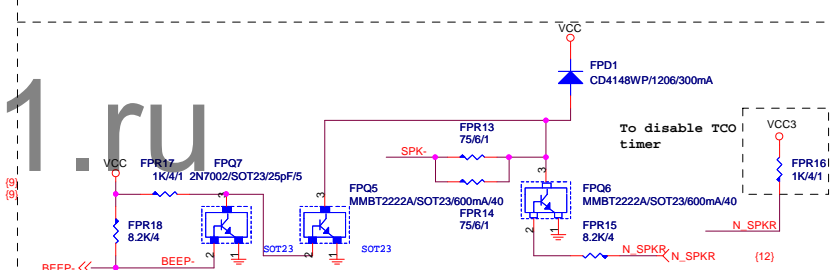
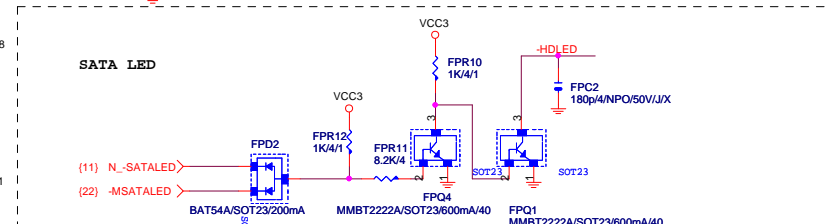
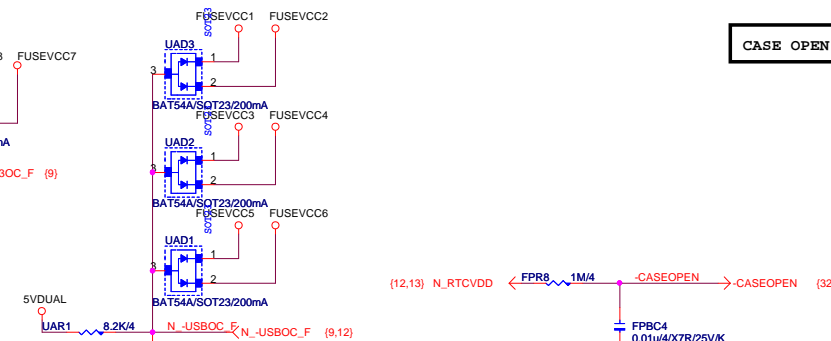
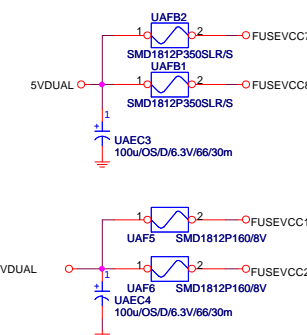


Close to connector

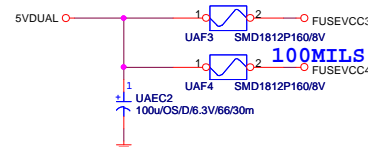


AZ1045-04F/MSOP10

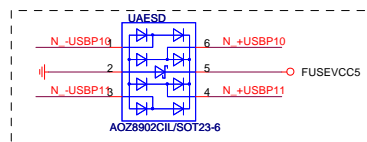
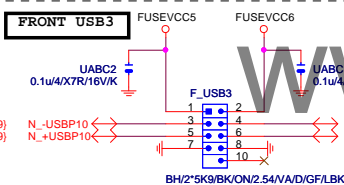
Close to connector



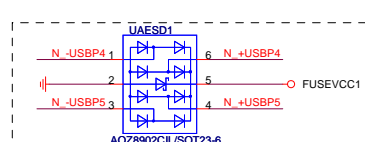
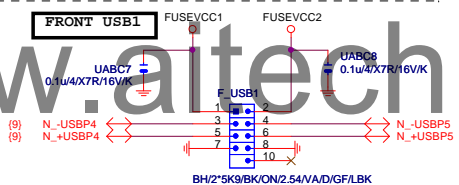
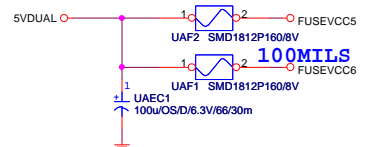
Close to connector



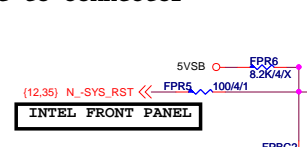
POWER PROTECT



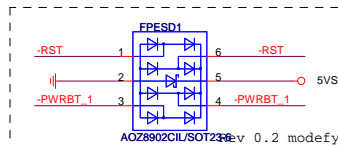
Close to connector



Close to connector

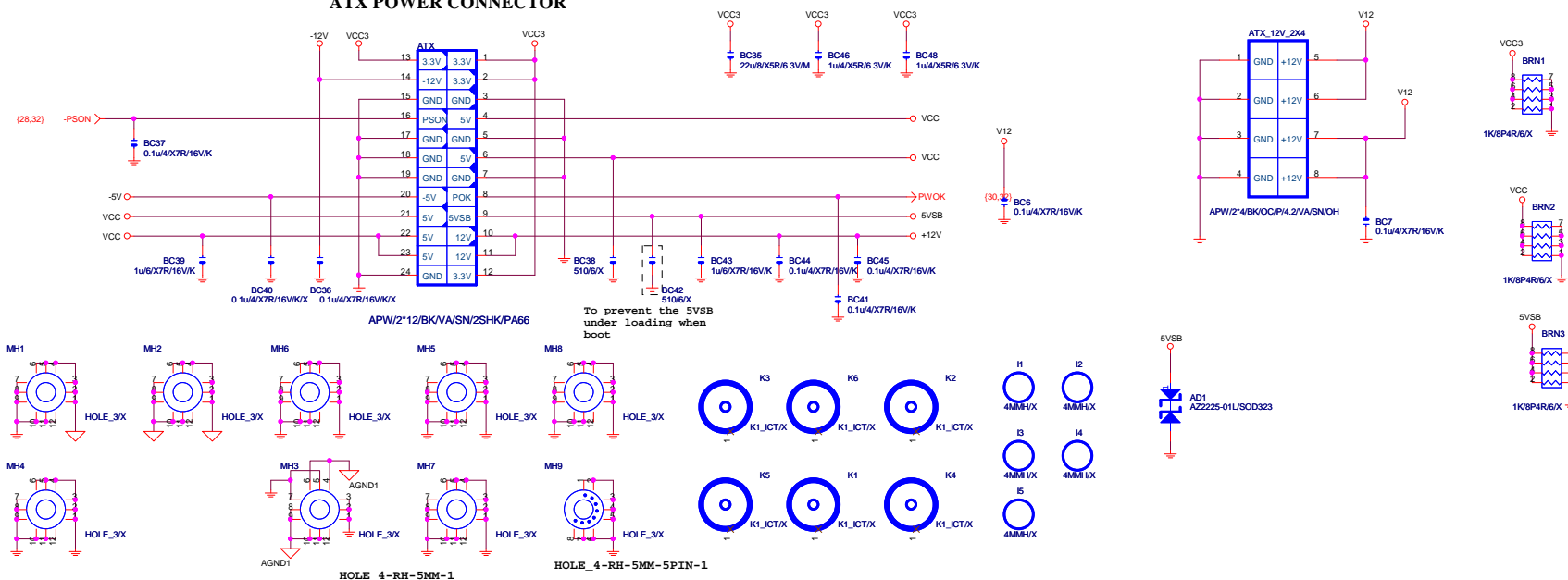


INTEL FRONT PANEL



Close to connector

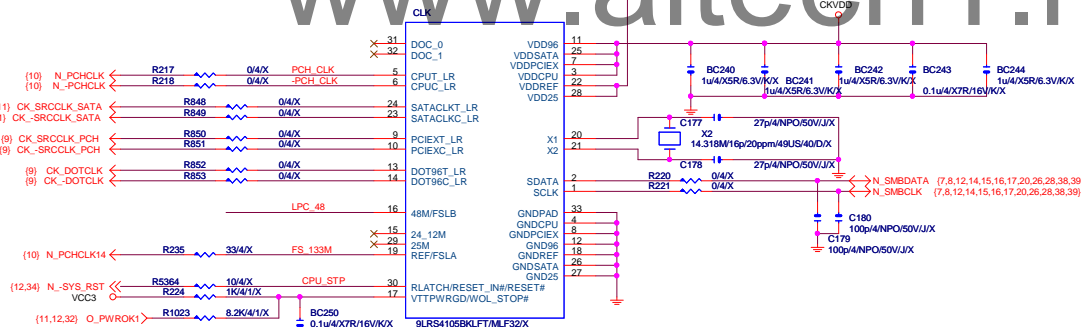
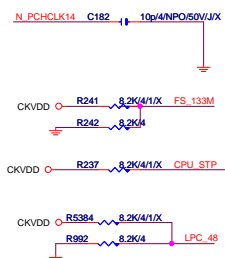
ATX POWER CONNECTOR



CLK GEN CK505

CPU Frequency Selection

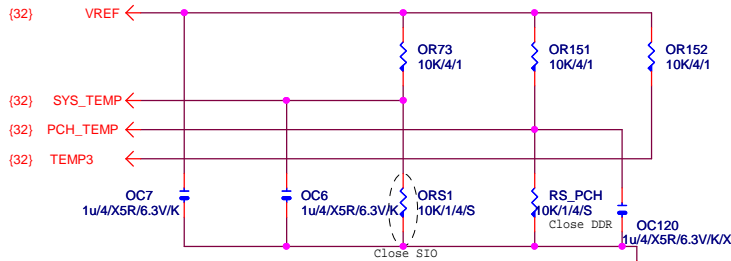
FSLB	FSLA	CPU
0	0	100M <Default>
0	1	133M
1	0	200M
1	1	166M



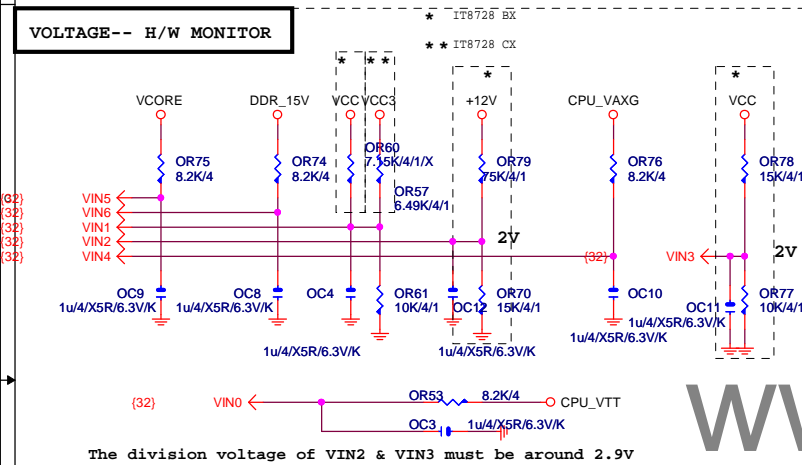
Gigabyte Technology

Title		
ATX POWER CONNECTOR		
Size	Document Number	Rev
Custom	GA-Z77X-UP4 TH	1.0
Date:	Monday, June 11, 2012	Sheet 35 of 45

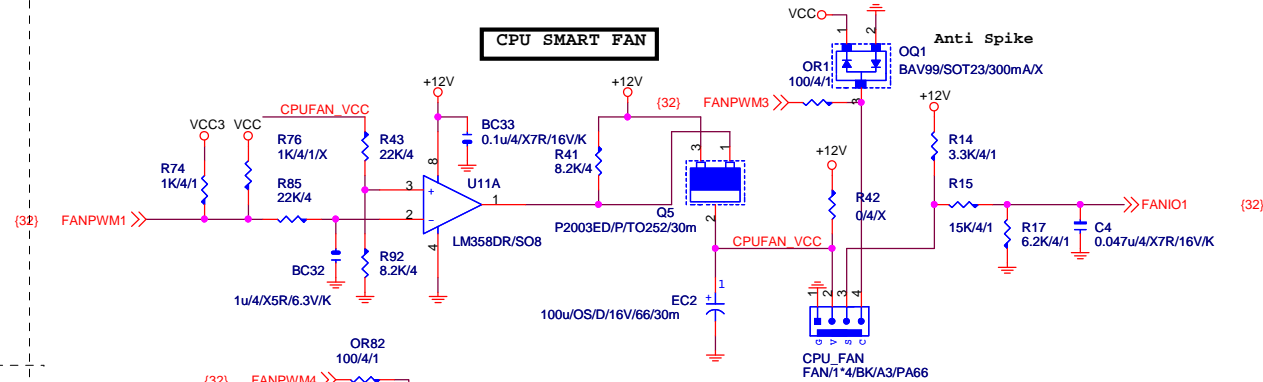
TEMP H/W MONITOR



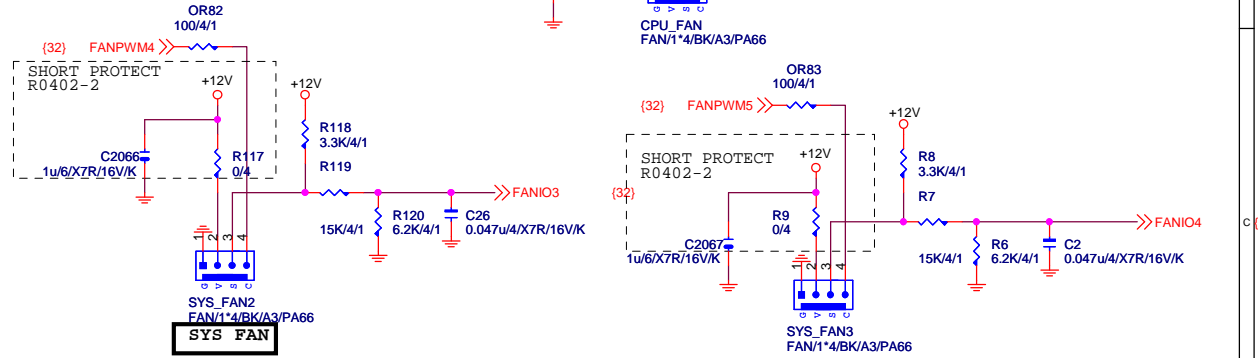
VOLTAGE-- H/W MONITOR



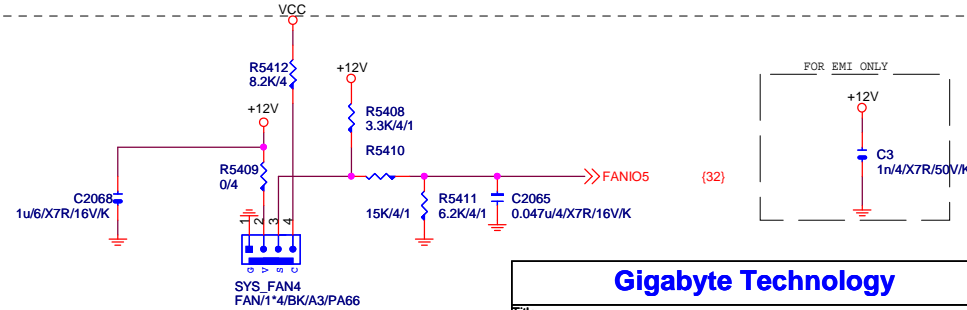
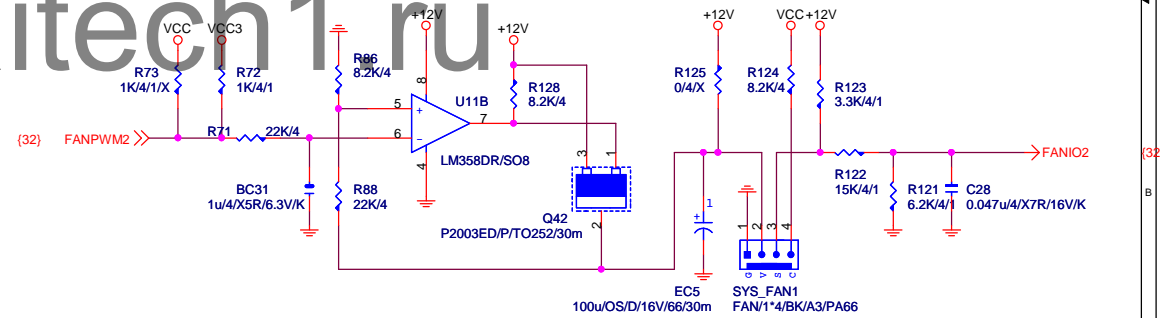
CPU SMART FAN



SYS FAN



Linear SYS_FAN



Gigabyte Technology

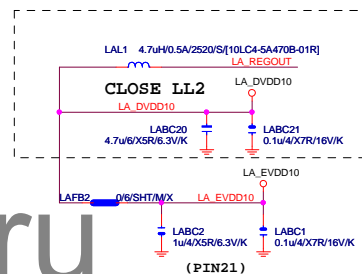
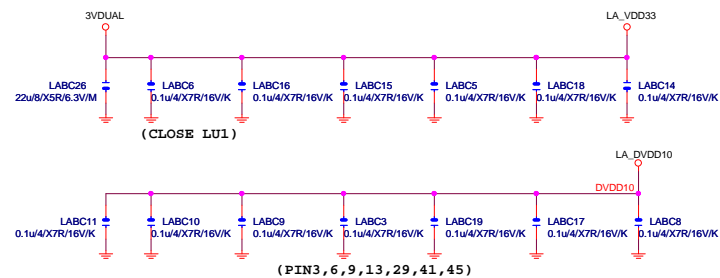
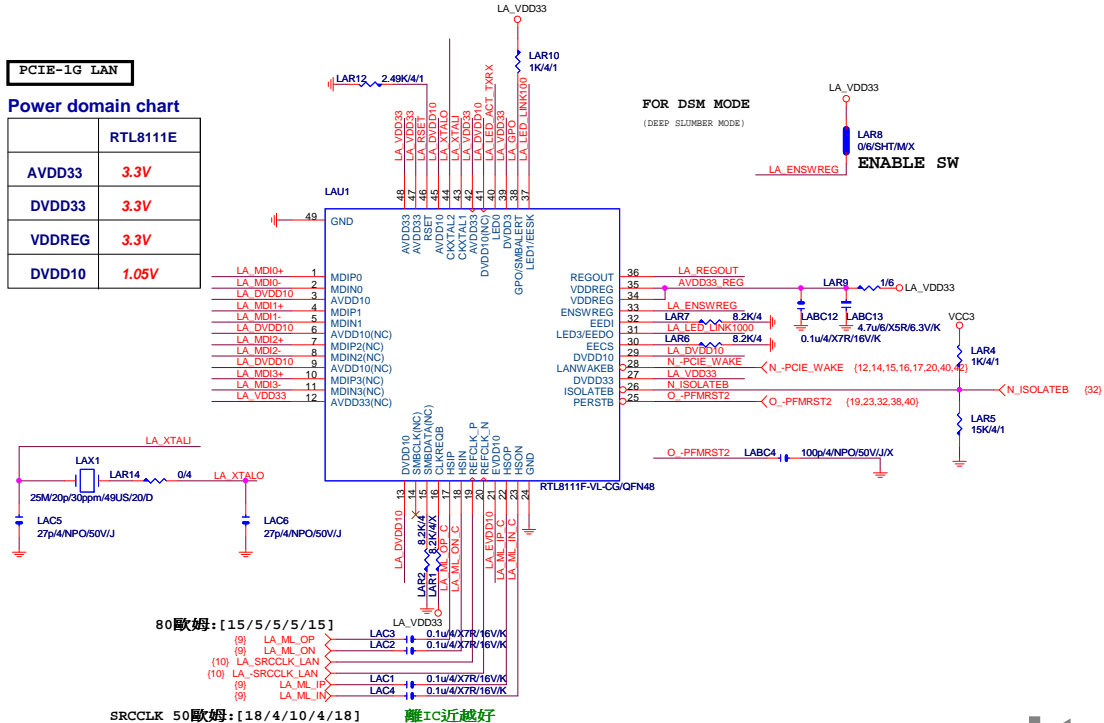
HWM,KB/MS, FAN CTRL

Title	Document Number	Rev
Size	Custom	1.0
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GA-Z77X-UP4 TH

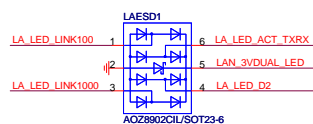
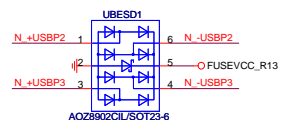
Power domain chart

	RTL8111E
AVDD33	3.3V
DVDD33	3.3V
VDDREG	3.3V
DVDD10	1.05V



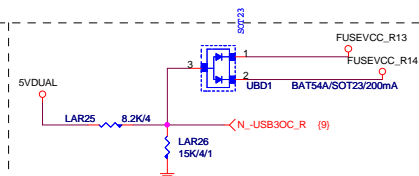
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RMA ESD PROTECT



Close to connector

Close to connector

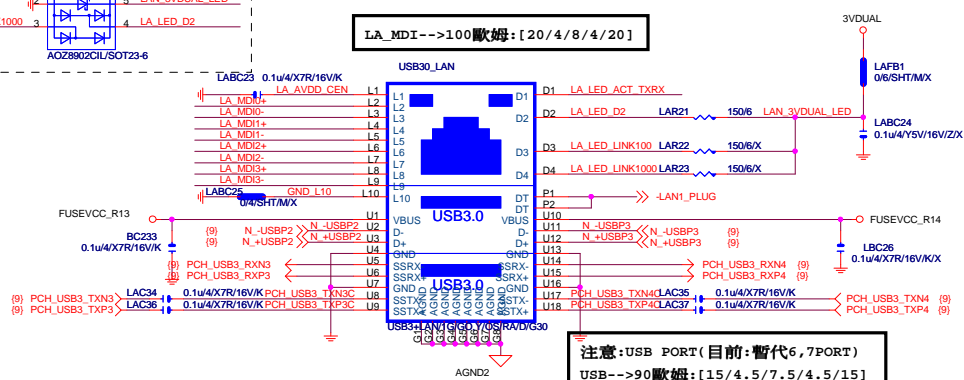


PS:視EMI需求

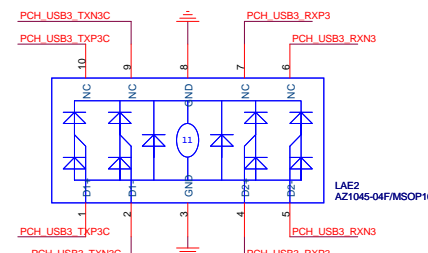
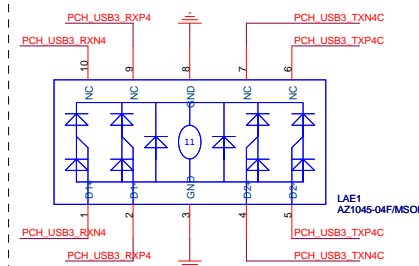
PS:視EMI需求



LA_MDI-->100歐姆:[20/4/8/4/20]



注意:USB PORT(目前:暫代6,7PORT)
USB-->90歐姆:[15/4.5/7.5/4.5/15]

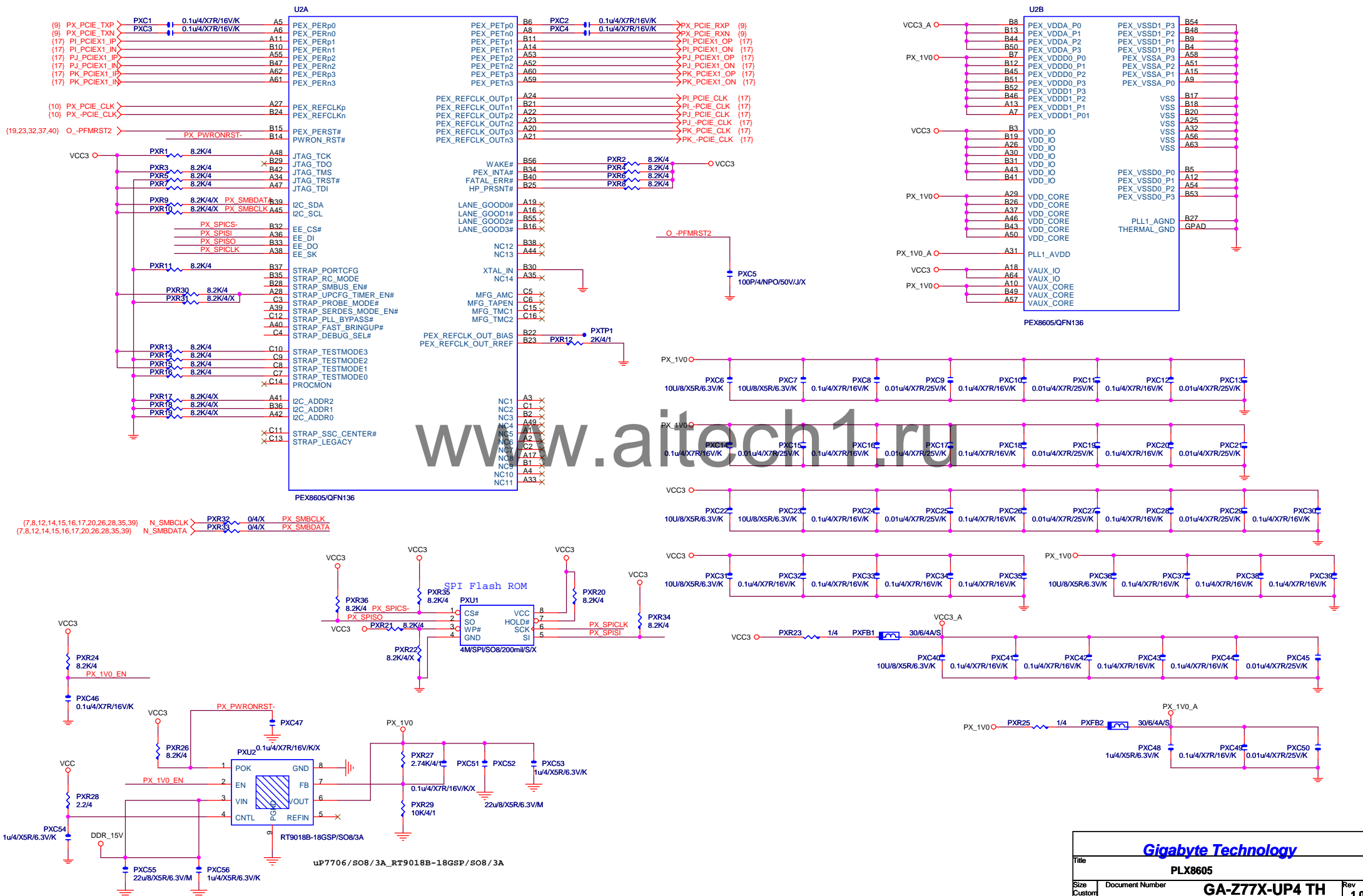


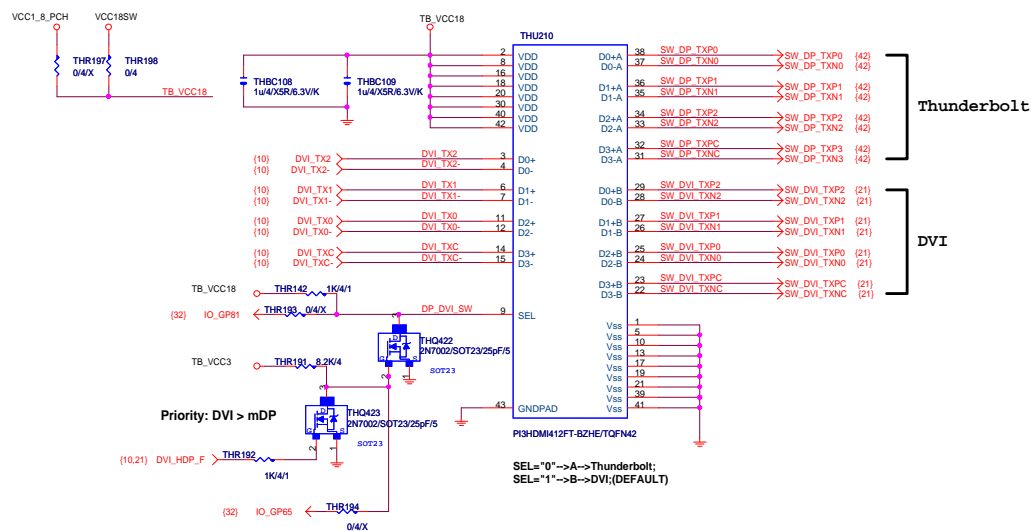
Gigabyte Technology

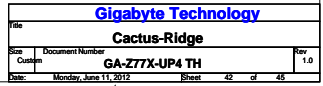
REALTEK 8111F

GA-Z77X-UP4 TH

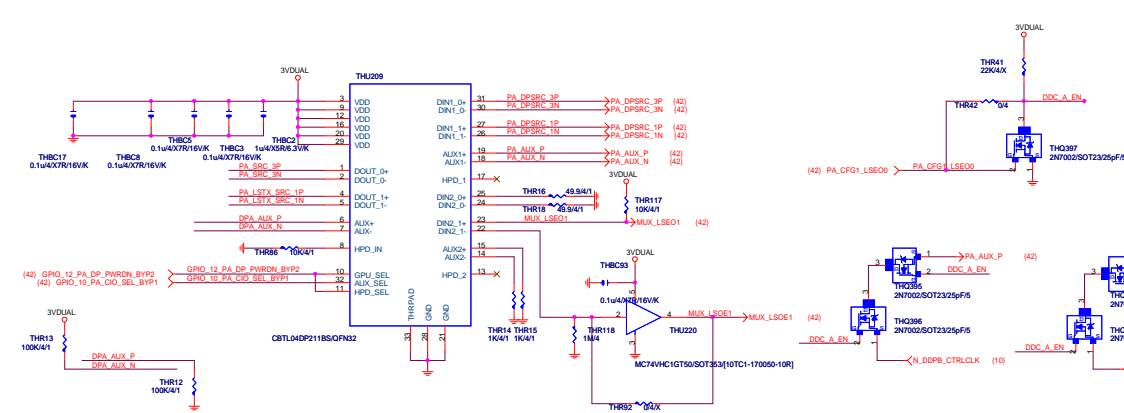
Rev
1.0



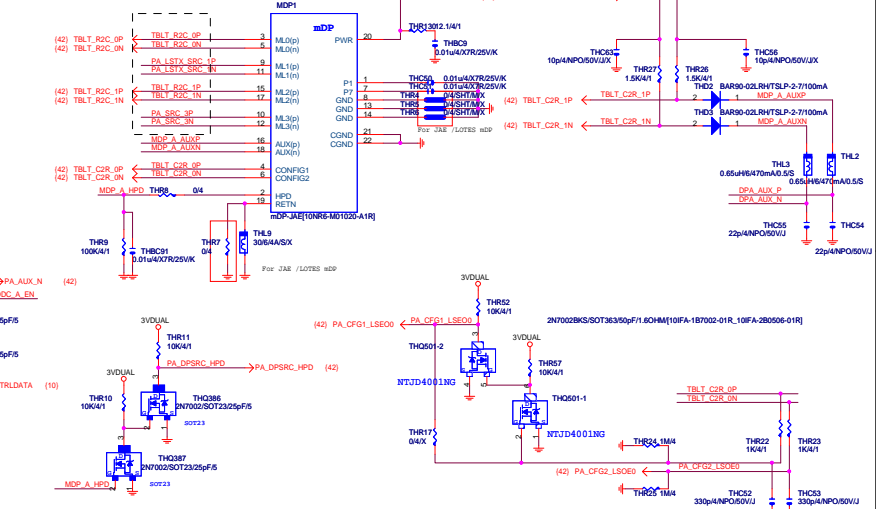




DP_A

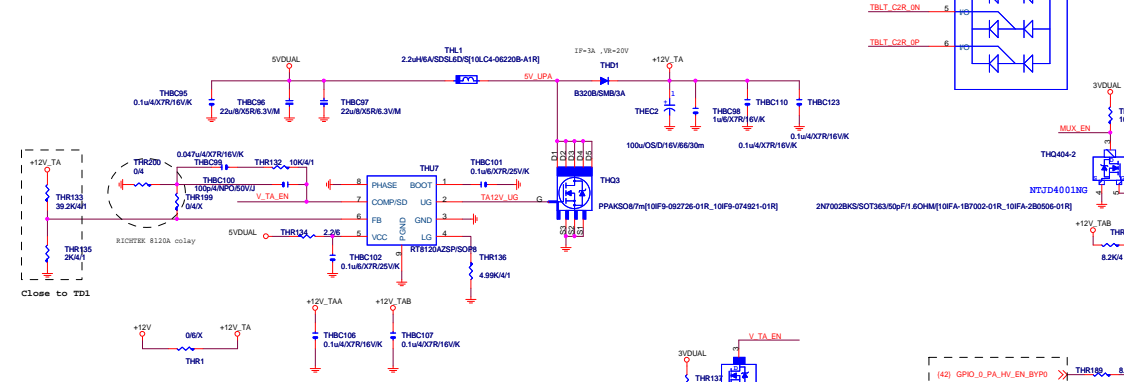


100 speed ,take care layout under 2000mil in whole length

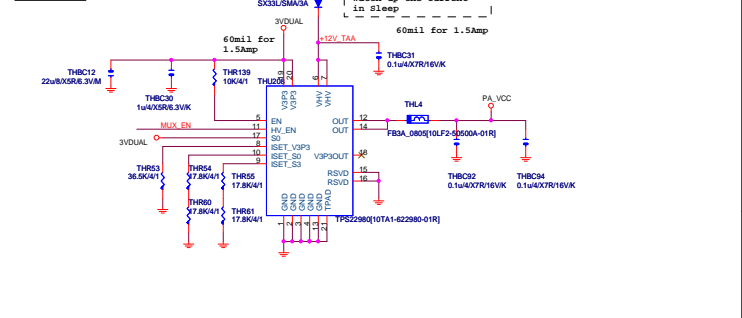


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*12V_TB



MDP_POWER

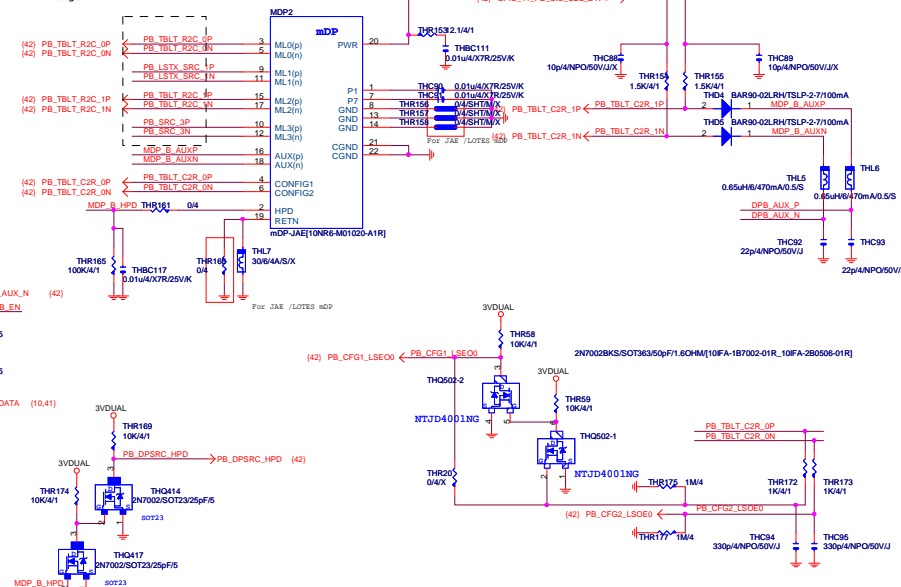
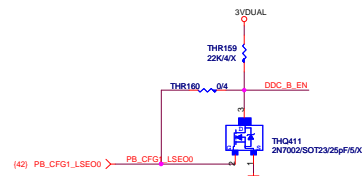
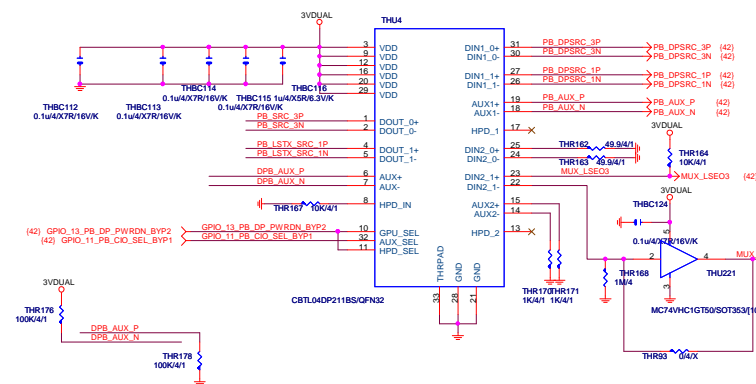


Power Rail	Current budget	S4/S5	S3	S0
VCC3P3_POC	100mA	ON	ON	ON
VCC1_LC	600mA	OFF	ON	ON
VCC1_05_LC	1A	OFF	ON	ON
VCC1_05_CIO	4A	OFF	ON	ON

PA_VCC	Power level	Current budget
S4/S5	3.3V/12V	150mA
S3	3.3V/12V	150mA
S0	3.3V/12V	1.5A

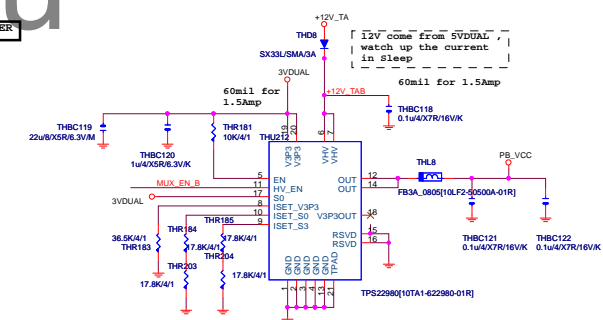
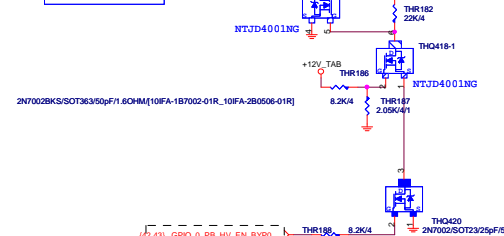
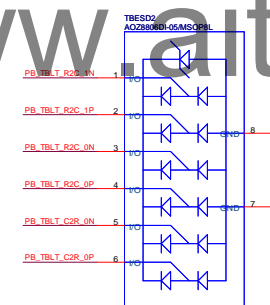
Take care ! S0 mode always active

IN	RV_IN	OUT
0	0	0V
0	1	0V
1	0	V3P3
1	1	VRV



3.3VPOC >> 1.05VLC >> 3.3VLC >> 1.05VCIO

POWER CONSUMPTION	
VCC3P3_POC	10mA
VCC3V3_IC	100mA
VCC1V05_IC	2A
VCC1V05_CIO	1.4A



PA_VCC	Power level	Current budget
S4/S5	3.3V/12V	150mA
S3	3.3V/12V	150mA
S0	3.3V/12V	1.5A

```

- - - Take care ! SC
- - - mode always
- - - active

```

Title			
Cactus-Ridge			
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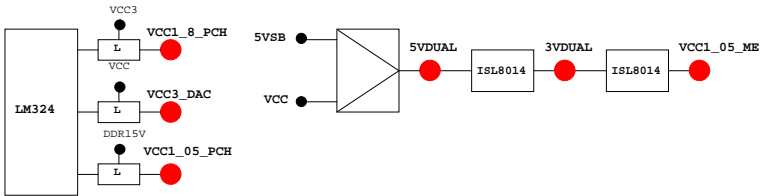
PCH GPIO LIST TABLE

PIN NAME	PWR	Default	USAGE	NOTE
GP0	MAIN	H-Z	GPI -PECI_REQ	N/A
GP1/TACH1	MAIN	GPI	ICH_FAN_TACH1	N/A
GP2/PIRQE#	MAIN	GPI	-PIRQE	P/U 8.2K VCC3
GP3/PIRQF#	MAIN	GPI	-PIRQF	P/U 8.2K VCC3
GP4/PIRQG#	MAIN	GPI	-PIRQG	P/U 8.2K VCC3
GP5/PIRQH#	MAIN	GPI	-PIRQH	P/U 8.2K VCC3
GP6/TACH2	MAIN	GPI	ICH_FAN_TACH2	N/A
GP7/TACH3	MAIN	GPI	ICH_FAN_TACH3	N/A
GP8	STBY	H	GPO GPIO8	P/U 8.2K 3VDUAL
GP9/OC5#	STBY	NATIVE	OC5#	N/A
GP10/OC6#	STBY	NATIVE	OC6#	N/A
GP11/SMBALERT#	STBY	NATIVE	-SMBALERT	P/U 8.2K 3VDUAL
GP12	STBY	L	GPI LAN_PHY_PWR_CTRL	P/U 8.2K 3VDUAL
GP13	STBY	L	GPI GPIO13	P/U 8.2K 3VDUAL
GP14/OC7#	STBY	NATIVE	OC7#	N/A
GP15	STBY	L	GPO GPIO15	N/A
GP16	MAIN	GPI	-SKTOCC	P/U 8.2K VCC3
GP17/TACH0	MAIN	GPI	ICH_FAN_TACH0	N/A
GP18	MAIN	NATIVE	MB_ID0	P/D 8.2K GND
GP19	MAIN	GPI	-LAN1_ISO	P/U 8.2K VCC3
GP20	MAIN	NATIVE	LED_CTL	P/U 1K VCC3
GP21	MAIN	GPI	VCC18_PCH_OV2	P/U 8.2K VCC3
GP22	MAIN	H-Z	GPI VCORE_OV3	P/U 8.2K VCC3
GP23	MAIN	NATIVE	-LDRQ1	P/U 8.2K VCC3
GP24	STBY	L	GPO TLS	P/U 8.2K 3VDUAL
GP25	STBY	NATIVE	-CPU_STOP	P/U 8.2K 3VDUAL
GP26	STBY	NATIVE	-AC2_DET	P/U 8.2K 3VDUAL
GP27	STBY	H	GPO GPIO27	P/U 8.2K 3VDUAL
GP28	STBY	H	GPO GPIO28	P/U 8.2K 3VDUAL
GP29	STBY	L	GPI GPIO29	N/A
GP30	STBY	H-Z	GPI S_PWR_ACK	P/U 100K 3VDUAL
GP31	STBY	H-Z	GPI N/A(Reverse)	P/U 8.2K VCC3
GP32	MAIN	H	GPO MB_ID1	P/D 8.2K GND
GP33	MAIN	H	GPO LOAD-LINE	P/U 1K VCC3
GP34	MAIN	H-Z	GPI -PCI_STOP	P/U 8.2K VCC3
GP35	MAIN	L	GPO GPIO35	P/U 8.2K VCC3
GP36	MAIN	GPI	-LAN1_DSM	P/U 8.2K VCC3
GP37	MAIN	GPI	N/A	P/U 8.2K VCC3
GP38	MAIN	H-Z	GPI VCORE_OV2	P/U 8.2K VCC3
GP39	MAIN	H-Z	GPI -LAN_DSM	P/U 8.2K VCC3
GP40	STBY	NATIVE	OC1#	N/A
GP41	STBY	NATIVE	OC2#	N/A
GP42	STBY	NATIVE	OC3#	N/A
GP43	STBY	NATIVE	OC4#	N/A
GP44	STBY	L	NATIVE N/A	P/U 8.2K 3VDUAL
GP45	STBY	NATIVE	-LPCPME	P/U 8.2K 3VDUAL
GP46	STBY	L	NATIVE PWR_LED	P/U 8.2K 3VDUAL
GP47	STBY	NATIVE	PSI_LED	P/U 8.2K 3VDUAL
GP48	MAIN	H-Z	IN EN_PWM	P/U 8.2K VCC3
GP49	MAIN	H-Z	IN VCC18_OV1	P/U 8.2K VCC3
GP50	MAIN	NATIVE	-REQ1	P/U 2.2K VCC
GP51	MAIN	H	NATIVE -GNT1	N/A
GP52	MAIN	NATIVE	-REQ2	P/U 2.2K VCC
GP53	MAIN	H	NATIVE -GNT2	N/A
GP54	MAIN	NATIVE	-REQ3	P/U 2.2K VCC
GP55	MAIN	H	NATIVE -GNT3	N/A
GP56	STBY	NATIVE	N/A(Reverse)	P/U 8.2K 3VDUAL
GP57	STBY	H-Z	IN VCORE_OV1	P/U 8.2K 3VDUAL
GP58	STBY	H-Z	NATIVE F_USB_OC	P/U 8.2K 3VDUAL
GP59	STBY	NATIVE	USB_OC0#	N/A
GP60	STBY	H-Z	NATIVE N/A(Reverse)	P/U 8.2K 3VDUAL
GP61	STBY	L	NATIVE -SUSTAT	N/A
GP62	STBY	L	NATIVE SUSCLK	N/A
GP63	STBY	L	NATIVE GPIO63	N/A
GP64	MAIN	L	NATIVE CLKOUTFLEX0	N/A
GP65	MAIN	L	NATIVE CLKOUTFLEX1	N/A
GP66	MAIN	L	NATIVE CLKOUTFLEX2	N/A
GP67	MAIN	L	NATIVE CLKOUTFLEX3	N/A
GP72	STBY	H-Z	NATIVE VCORE_OV4	P/U 8.2K 3VDUAL
GP73	STBY	NATIVE	1_05V_OV1	P/U 8.2K 3VDUAL
GP74	STBY	H-Z	NATIVE 1_05V_OV2	P/U 8.2K 3VDUAL
GP75	STBY	H-Z	NATIVE N/A(Reverse)	P/U 8.2K 3VDUAL

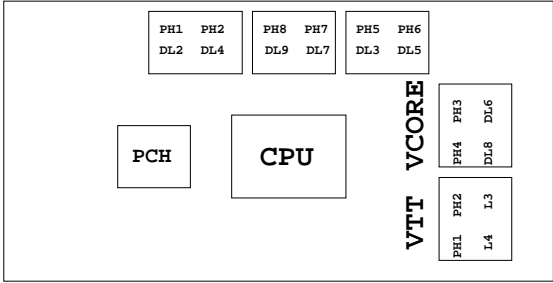
Super I/O ITE8720 GPIO Table

PIN NAME	USAGE	NOTE
SVC/PECI_RQT/GP14	-PECI_REQ	
PWROK1/GP13	PWROK1/ITE_PWROK	
KRST#/GP62	-KBRST	
SO/GP50	-ICH_SPI_CS	
IRTX/GP47/CE2_N/JP7	CEB_N	
GP46/IRRX	-LAN2_DSM	
PSION#/GP42	-PSON	
PWROK2#/GP41	PECI_CTL	
PCIRST3#/GP10/VDIMM_STR_EN	-PCIE_RST	
RSMRST#CIRRX1/GP55	-RSMRST	
PME#/GP54	-LPCPME	
PD5/GP75/BUSS00	N/A	

PIN NAME	USAGE	NOTE
FAN_TAC2/GP52	FANIO2	
FAN_TAC3/GP37	FANIO3	
VIDO3/FAN_TAC4/GP25/DSR2#	FANIO4	
FAN_CTL2/GP51	FANPWM2	
FAN_CTL3/GP36	FANPWM3	
VID4/GP34	BEEP-	
VID3/GP33	TURBO1	
VID2/GP32	TURBO0	
VCORE_GOOD/VID6/GP63	CPUT_LED1_C	
VID5/GP35	CPUT_LED2_C	
VID1/GP31	CPUT_LED3_C	
VID0/GP30	-LAN1_DSM	NBT_LED1_C
SLCT/GP80	CPU_LED1_C	
PE/GP81	CPU_LED2_C	
BUSY/GP82	CPU_LED3_C	
PD3/GP73/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/SEC	LOW_PWR_1	
VID05/GP27/SIN2	LOW_PWR_2	
PCIRST2#/GP11	-PFMRST1	
PCIRST1#/GP12	-PFMRST2	
3VSB5W#/GP40	CSI_F0	BSEL166_1
SUSCH#/GP53	CSI_F1	BSEL166_2
GP23/SI	BSEL166_3/CsisBSL	
VID00/GP20/CTS2#	CPUT_LED1_C	BSEL166_4
GP65/VDDA_EN/GB_01	MB_ID2	
PD6/GP76/BUSS01	MB_ID3	
PD7/GP77/BUSS02	MB_ID4	
AFD#/GP86/SMBC_R	⚡ PIN	FST_2X8
INIT#/GP85/SMBD_M	SEC_2x8	GTLREF_AD2
ACK#/GP83	DDR_LED1_C	
VID01/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/SMBD_R	-EN_PWM2	
PSI_L/FAN_CLT5/CIRRX2/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：

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_AVREF_CA_B	DRAM Address Ref
VREF_DQ_AVREF_DQ_B	DRAM Data Ref

散熱模組料號：

8IBP：
1.12SP2-01A001-Y1R/Y2R
2.12SP2-01A001-Z1R/Z2R
(HIBRID模組)包材階

	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

Gigabyte Technology			
TABLE LIST			
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