

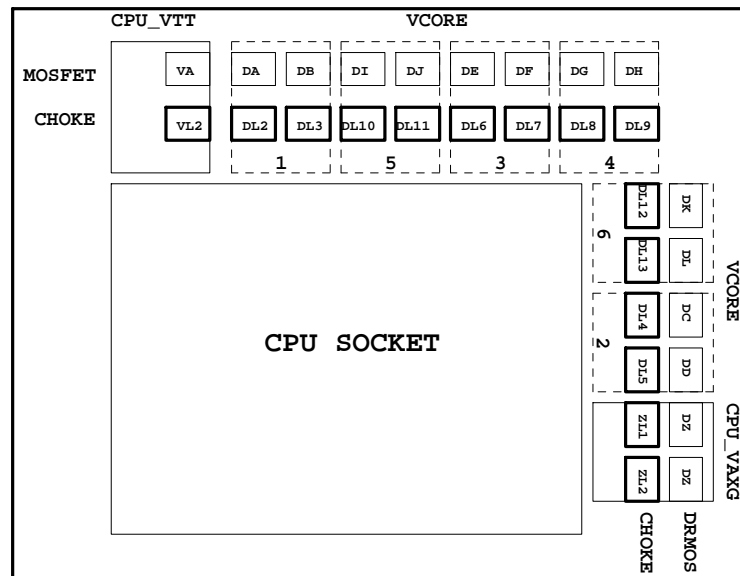
Model Name: GA-Z77X-UD5H-WB rev 1.01

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	PCI EXPRESS*8 SLOT
16	PCI EXPRESS*4 SLOT
17	PCI EXPRESS*16/*8/*4 SWITCH
18	PCI EXPRESS*1 SLOTS X3
19	ITE 8892
20	PCI SLOT 1
21	HDMI / DVI / DP
22	MSATA
23	Dual BIOS
24	ALC898
25	REAR AUDIO JACK
26	AMPLIFIER
27	PWM_IR 3567
28	VCORE POWER
29	VAXG POWER
30	PWM_IR 3570
31	VTT & DDR POWER
32	DISCRETE POWER I

SHEET TITLE

33	VCCSA POWER
34	I/O ITE8728
35	F_PANEL , F_USB , PHOT
36	F_USB3.0
37	ATX POWER, CLOCK GEN
38	HWM,KB/MS , FAN CTRL
39	ARTHEROS AR8161/AR8151
40	INTEL 82579V
41	Marvell 9172(F+R)
42	Marvell 9172(F)
43	VT6308P 1394
44	VL810 USB3_HUB1(R)
45	VL810 USB3_HUB1(F)
46	RST, PWR, CLR_CMOS
47	TABLE LIST
48	

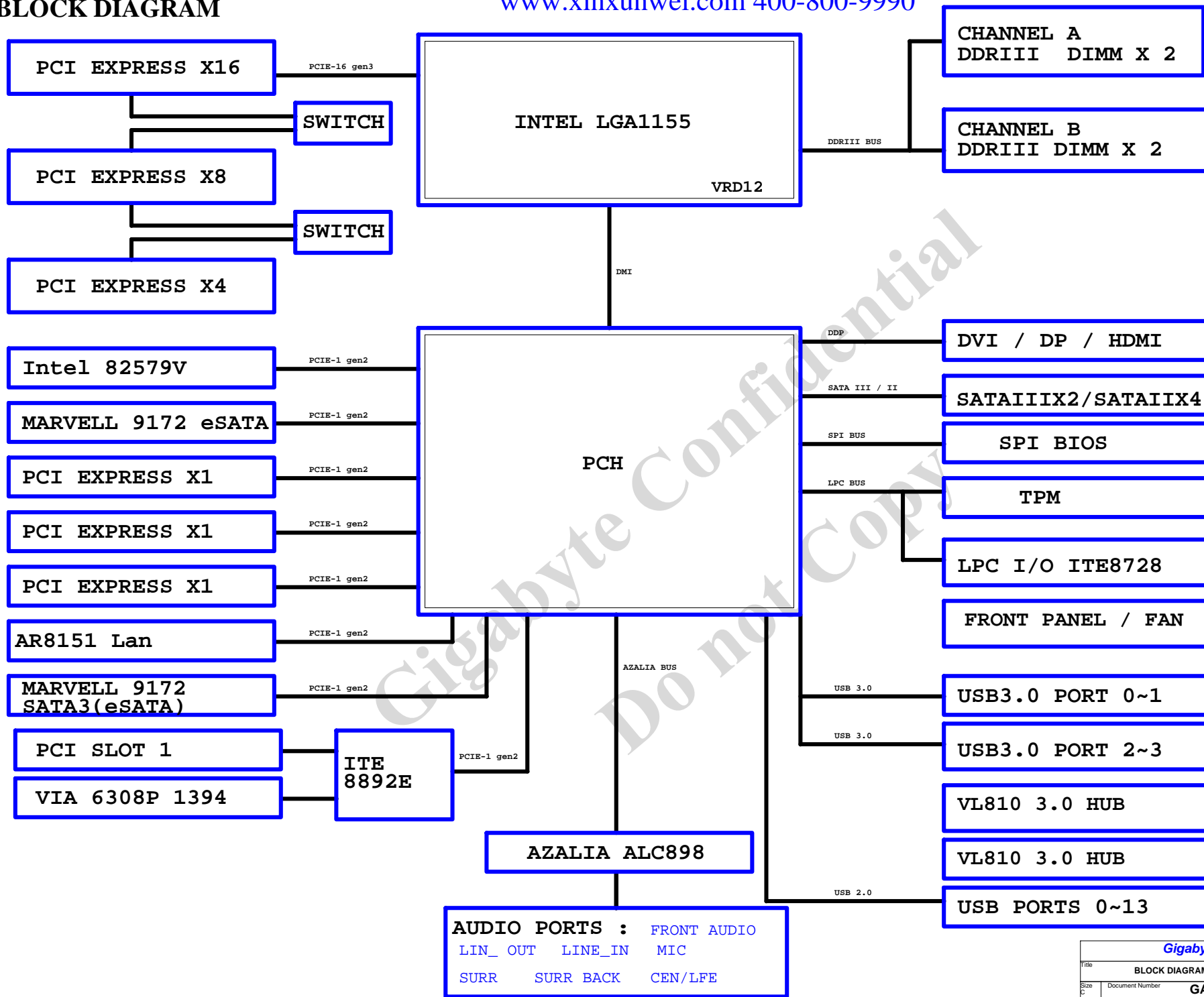


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BLOCK DIAGRAM

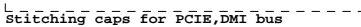
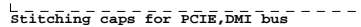
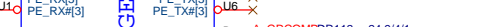
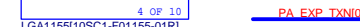
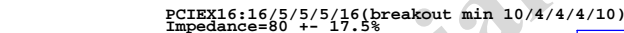
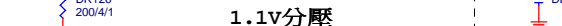
www.xinxunwei.com 400-800-9990

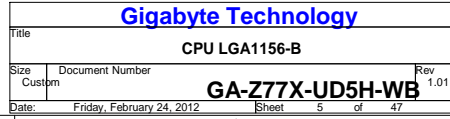


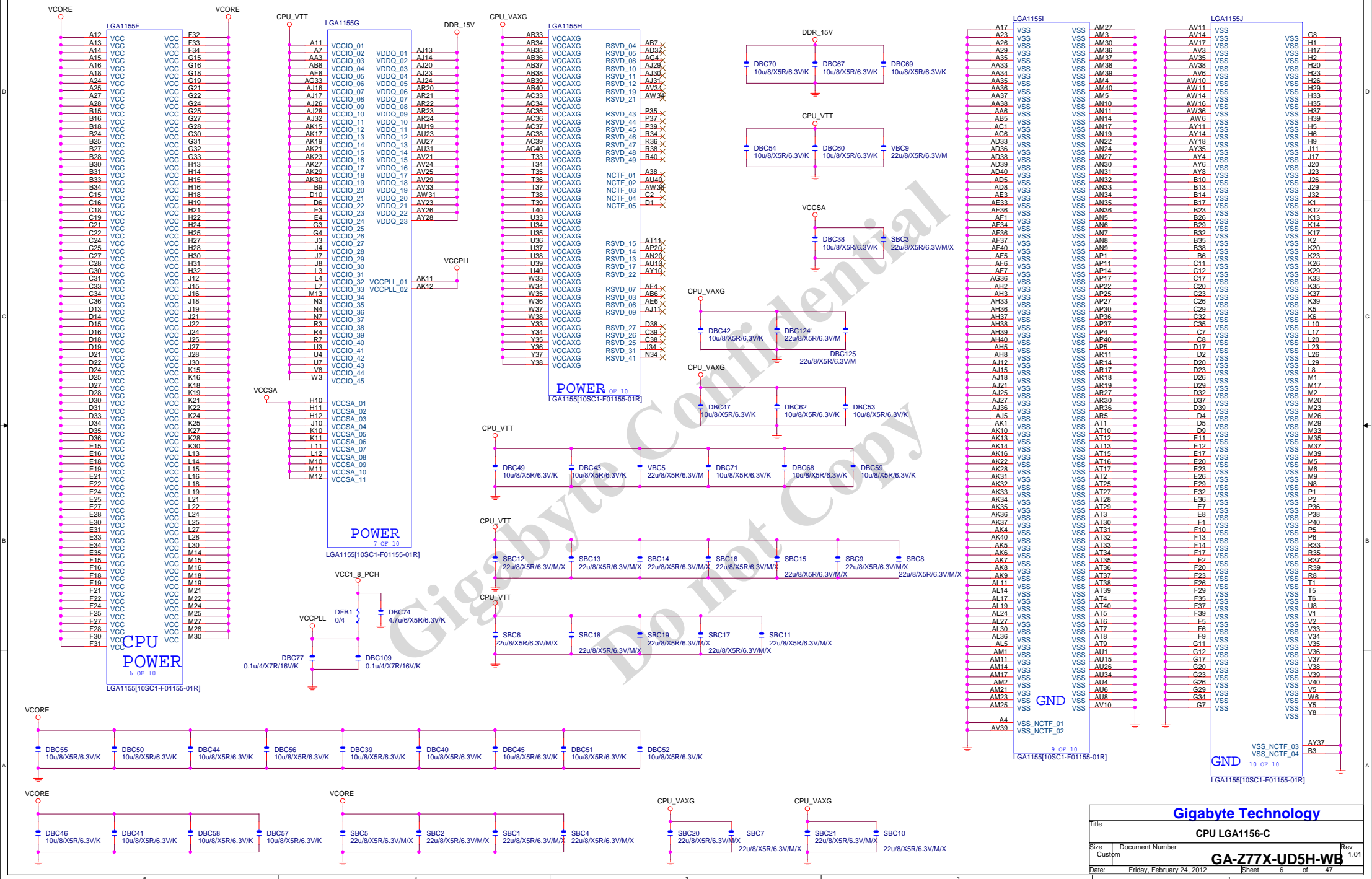


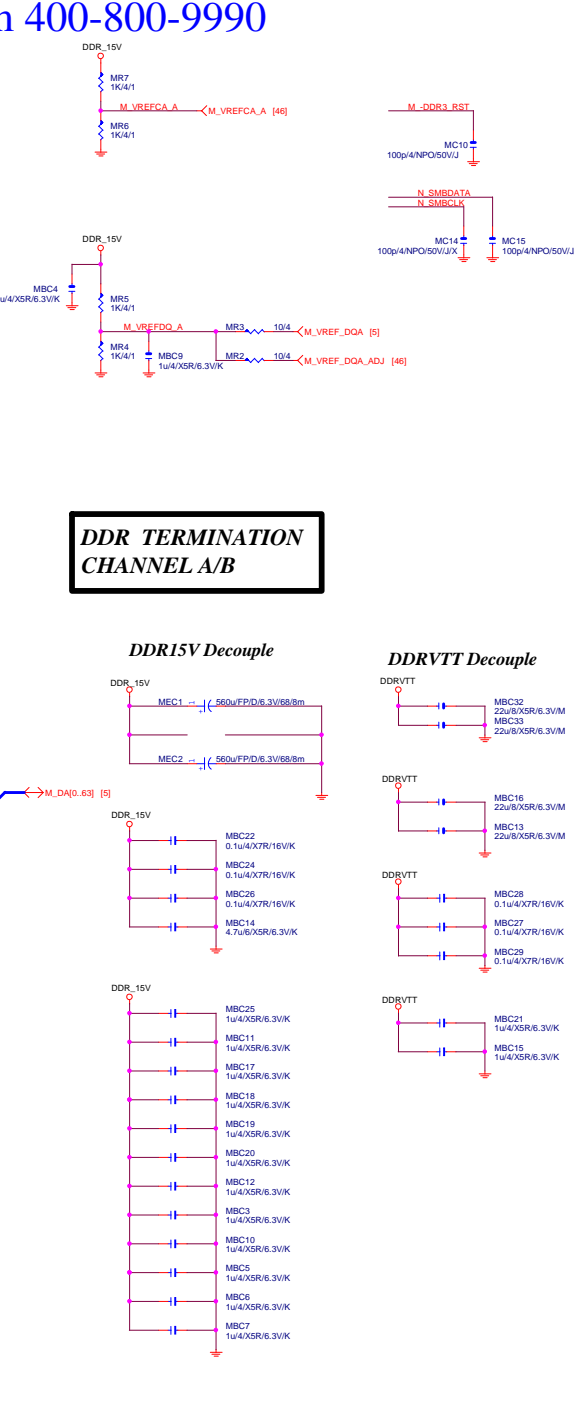
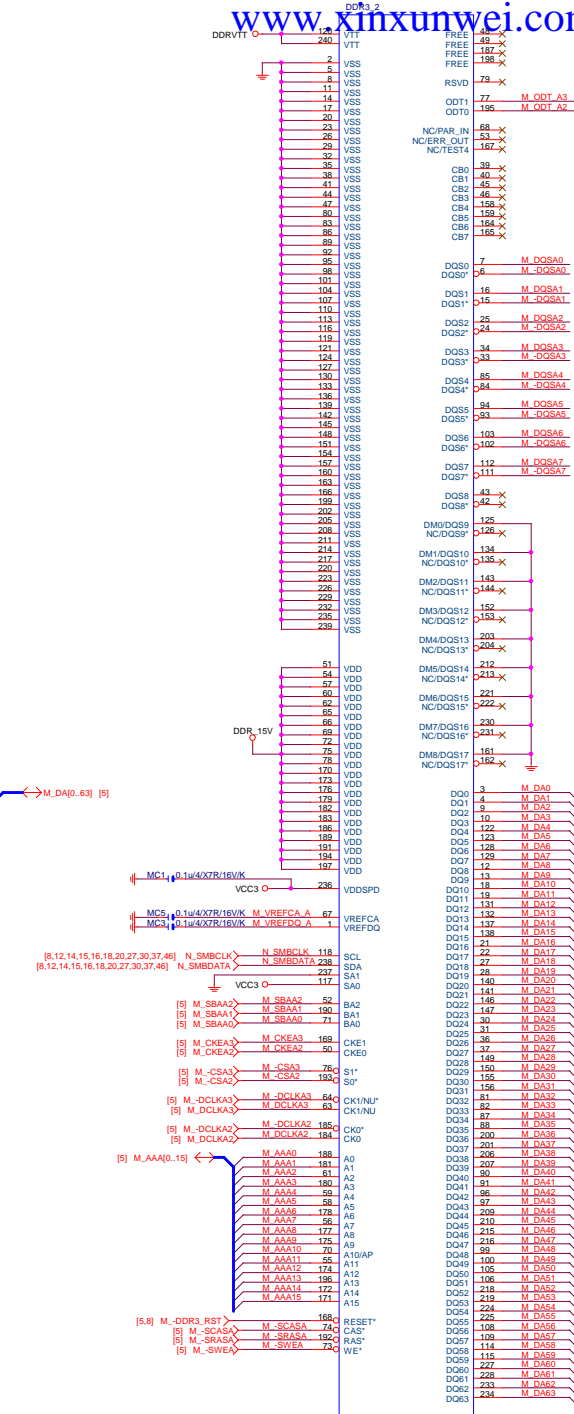
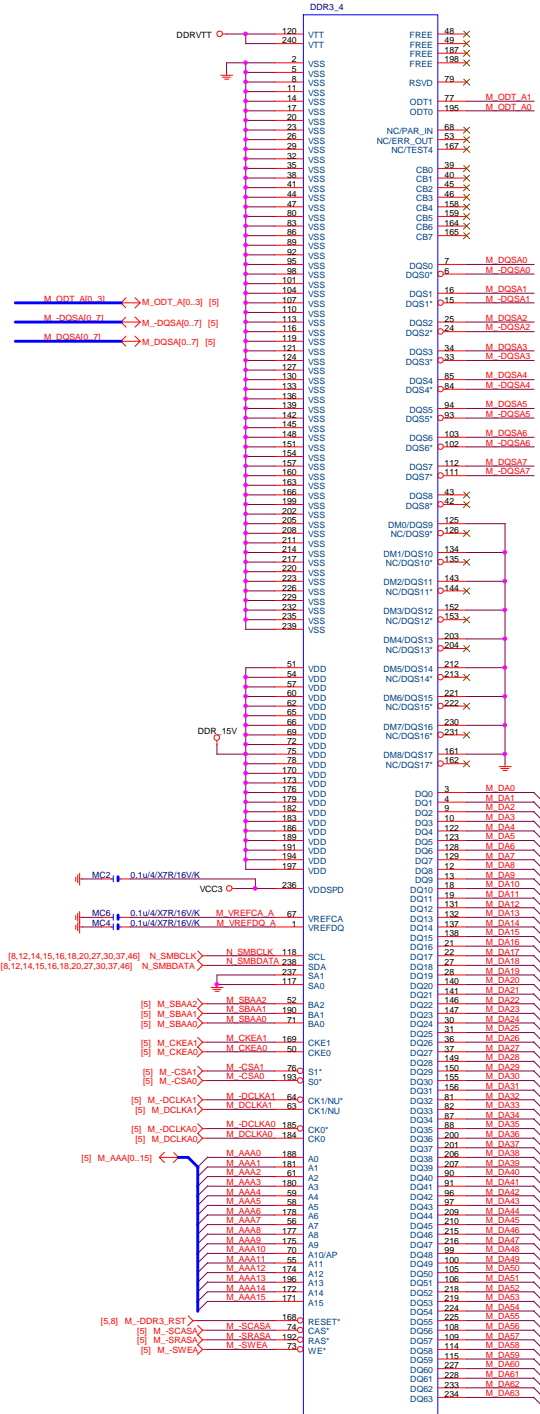
CFG6	CFG5	PCIE CONFIG
1	1	1x16 , Default
1	0	2X8
0	1	RSVD
0	0	X8,X4,X4

3VDUA



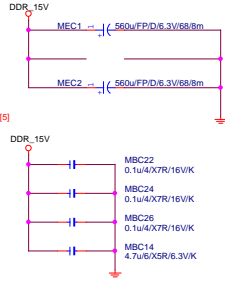




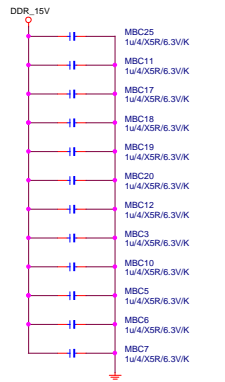
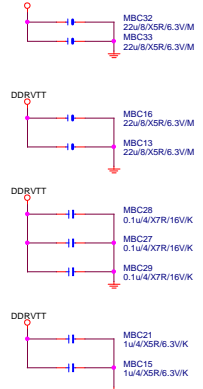


DDR TERMINATION CHANNEL A/B

DDR15V Decouple

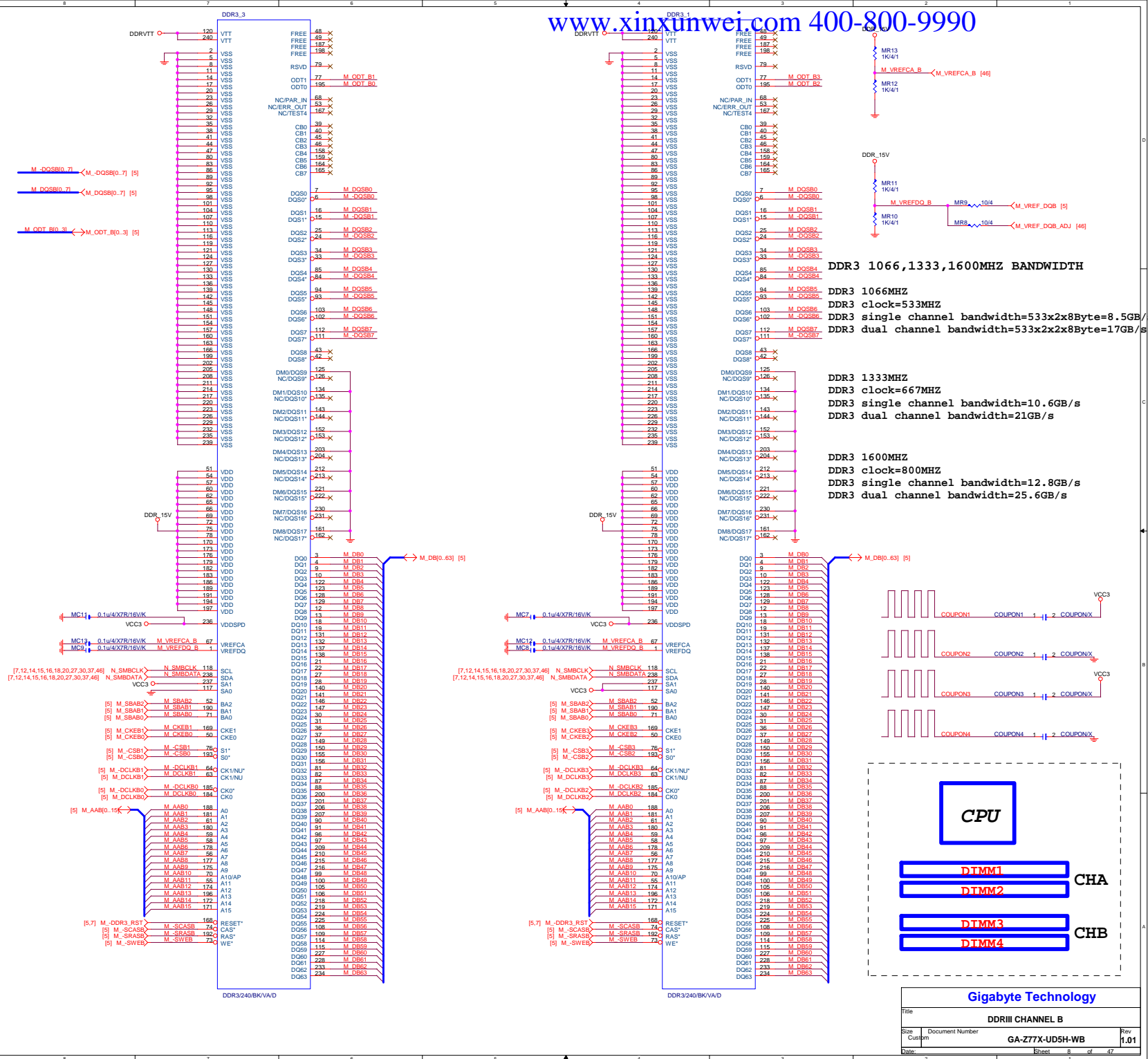


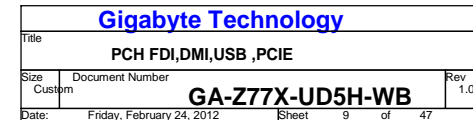
DDRVRTT Decouple

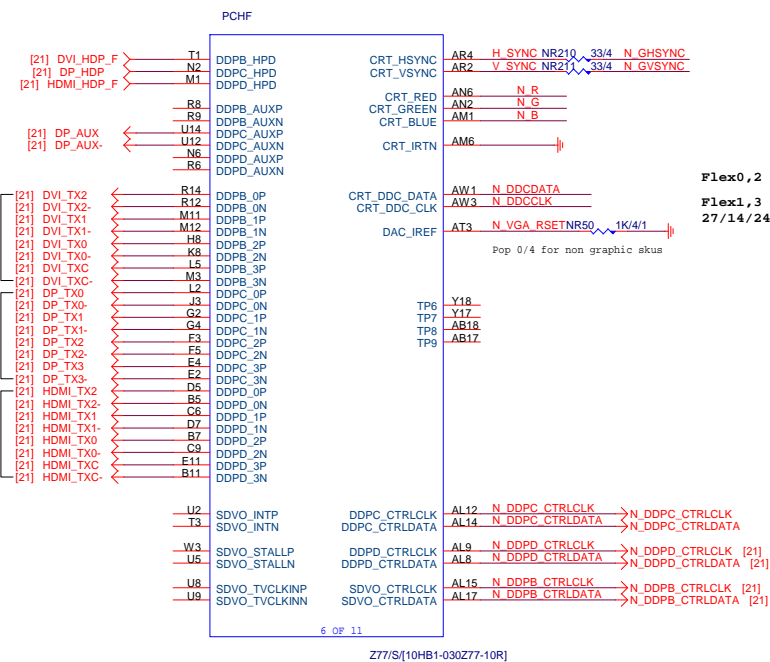


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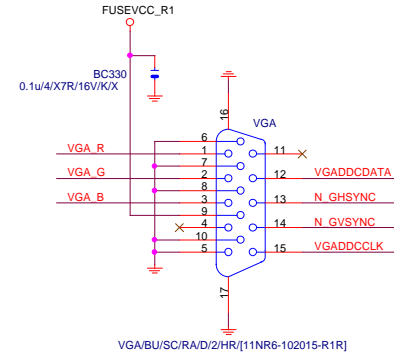
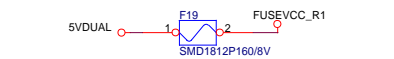
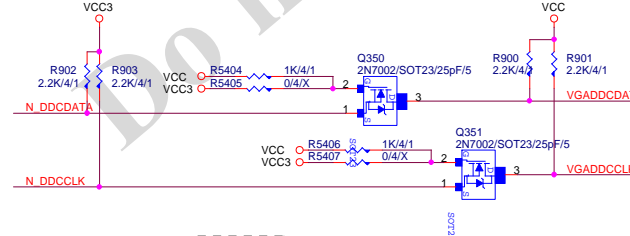
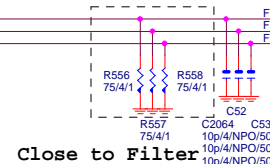
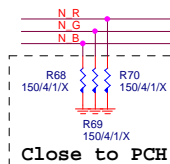
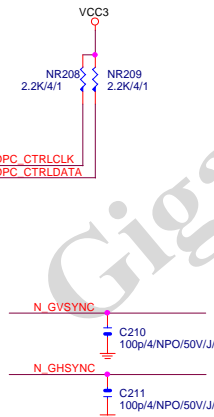
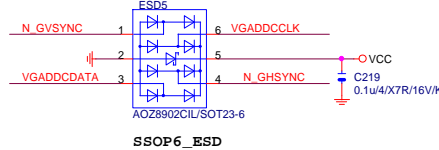
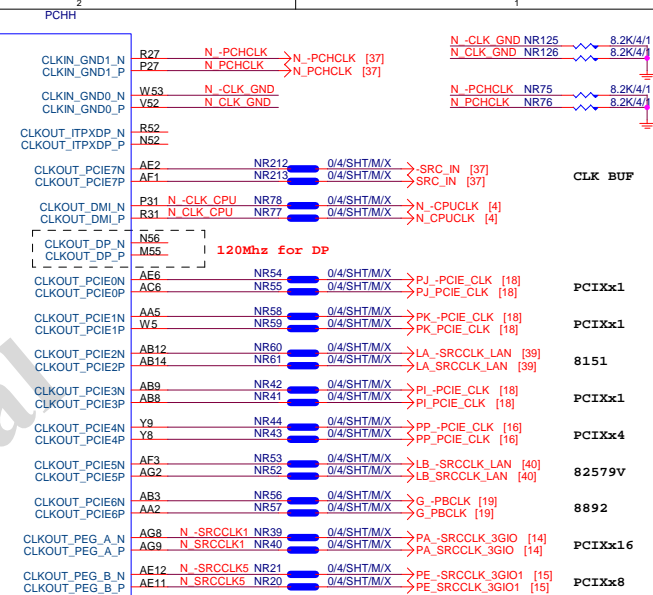
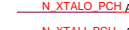
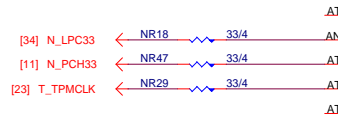
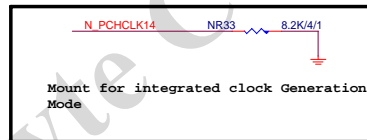
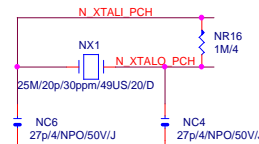
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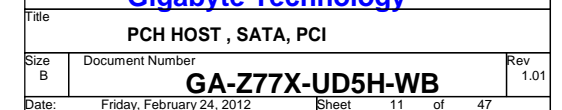


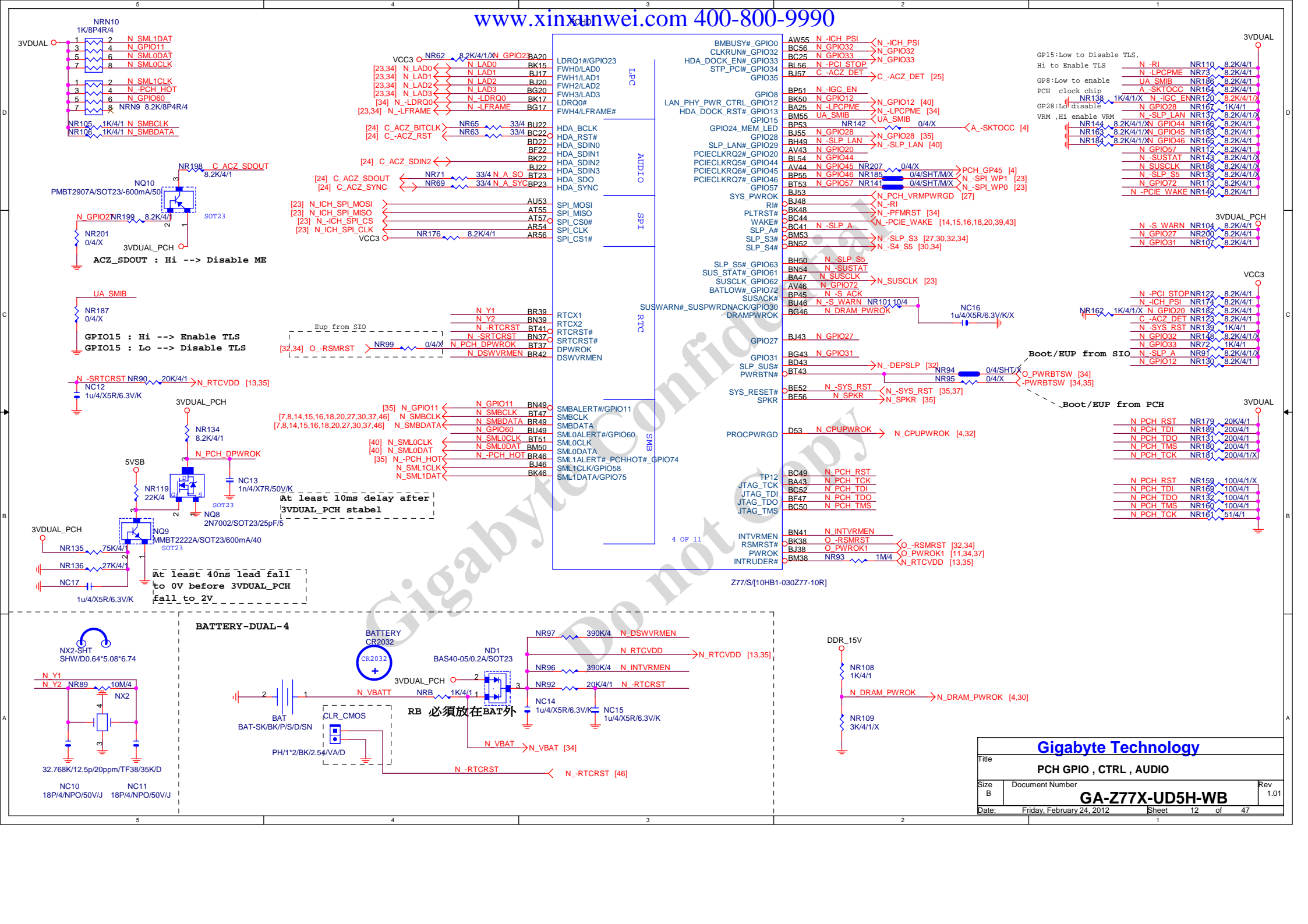


Flex0,2 : 33MHZ
Flex1,3 : 27/14/24/48/25MHZ

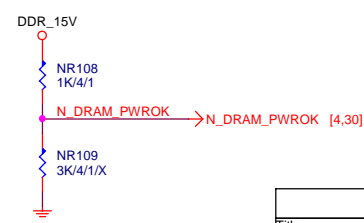
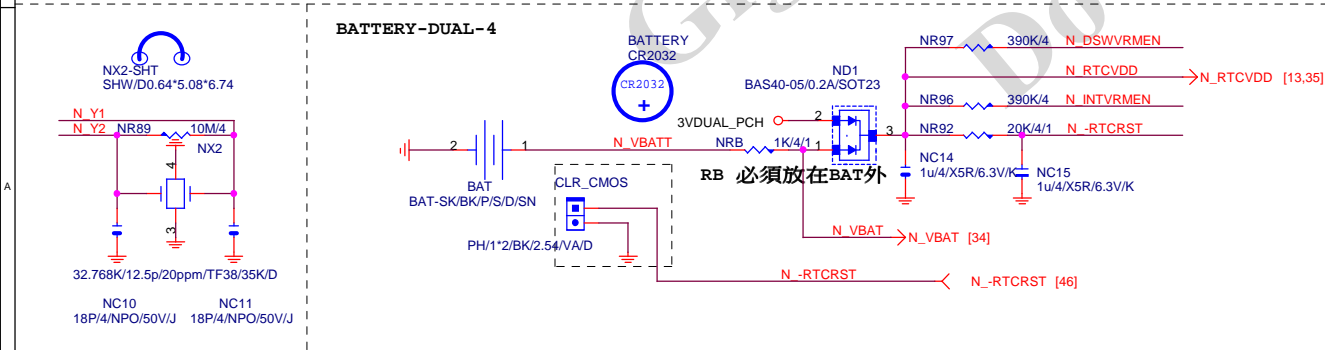


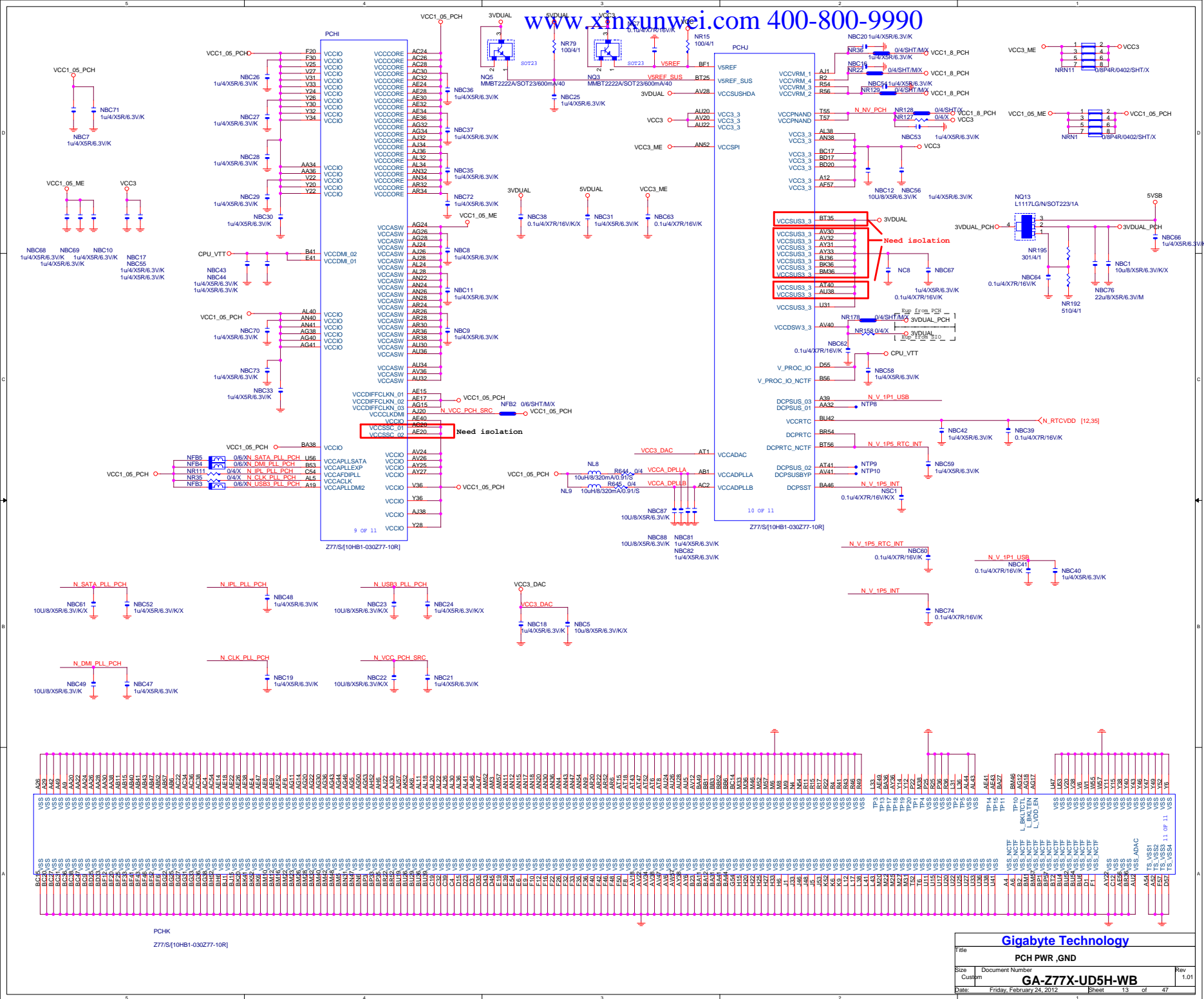
Gigabyte Technology			
PCH DISPLAY_CLK BUFFER			
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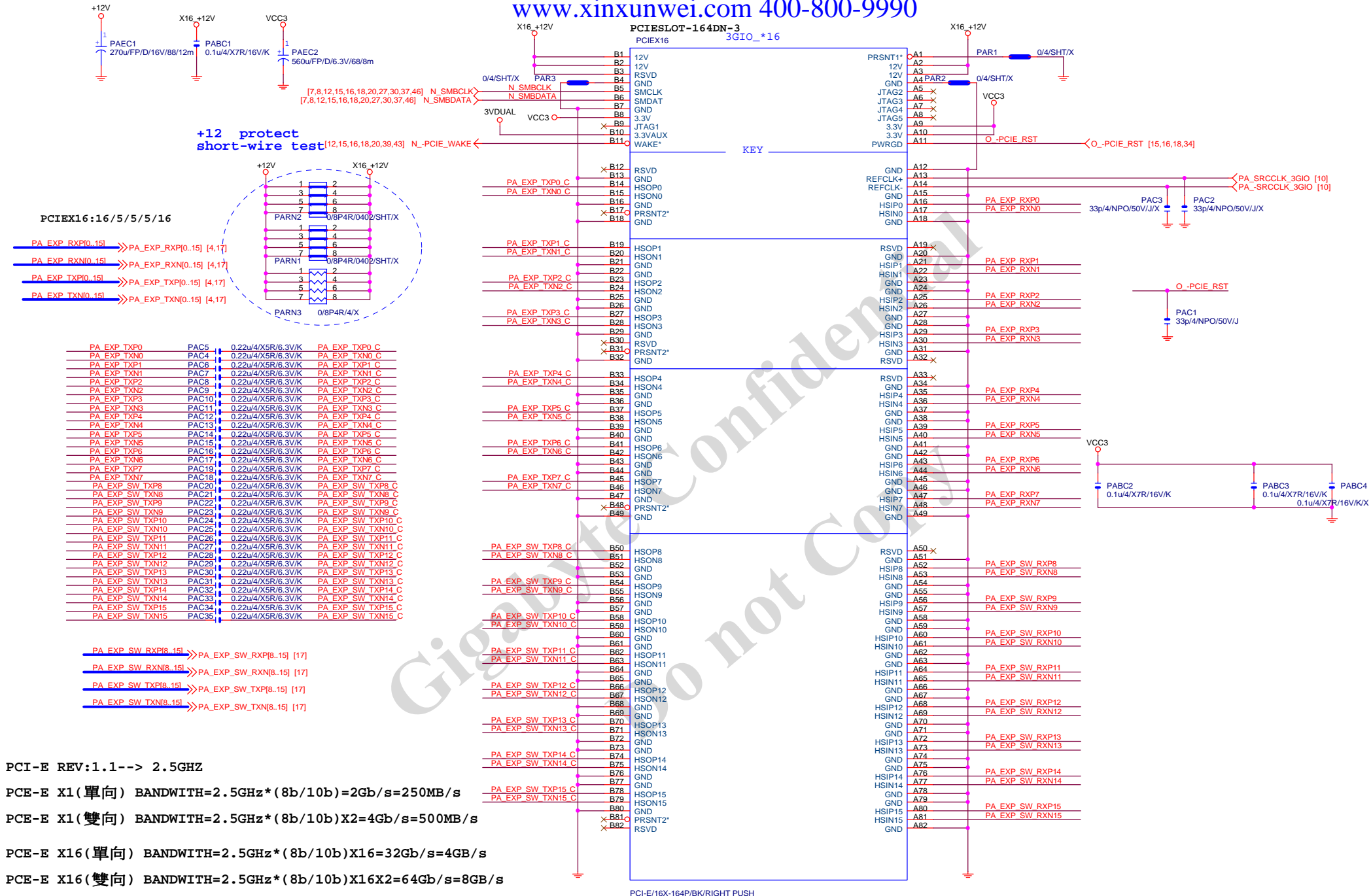




BATTERY-DUAL-4

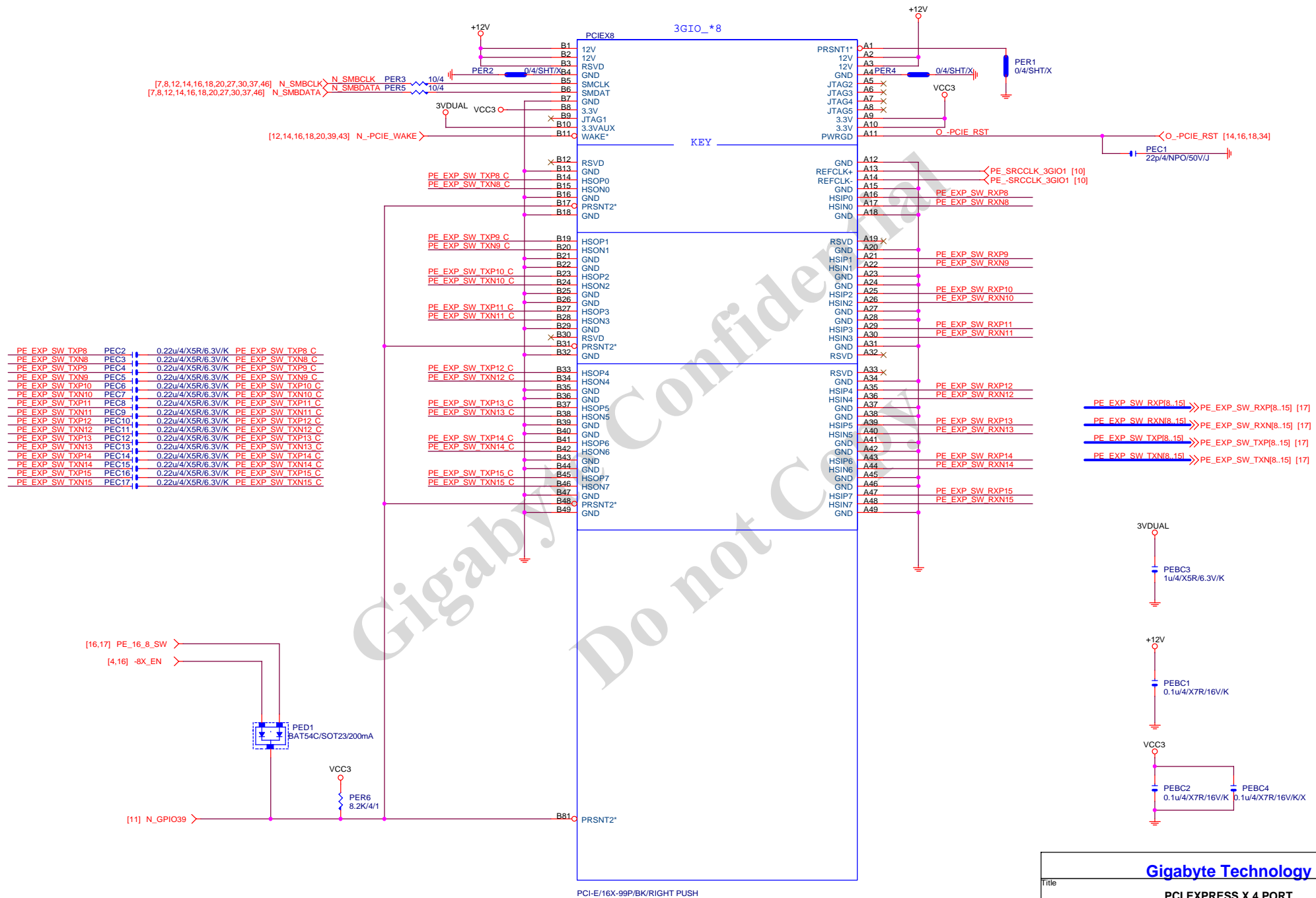






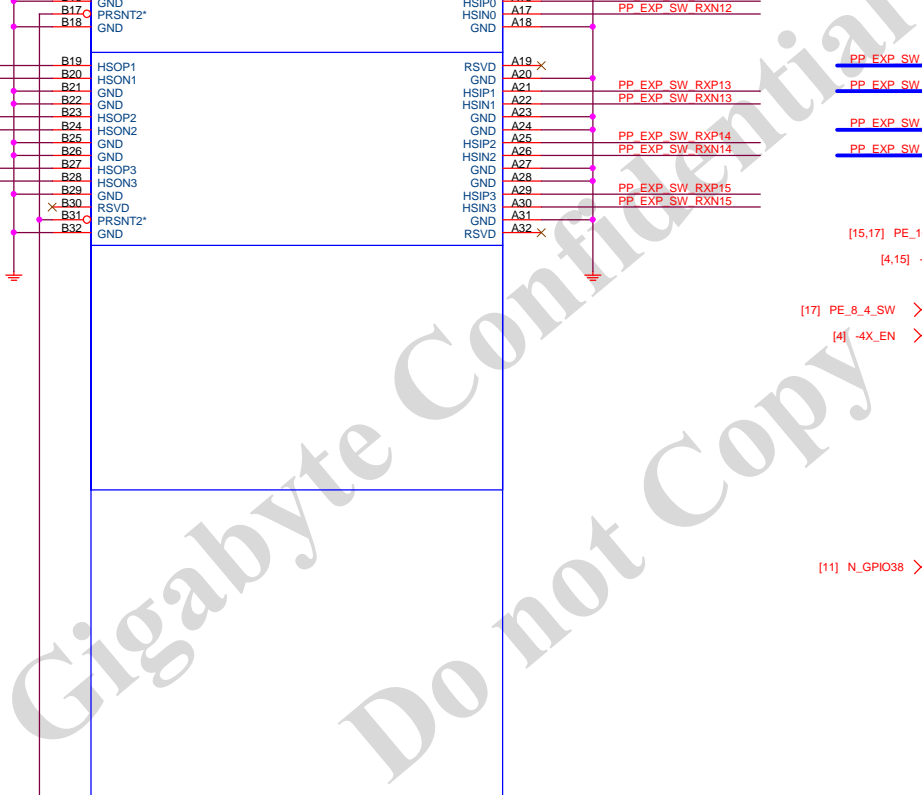
Gigabyte Technology

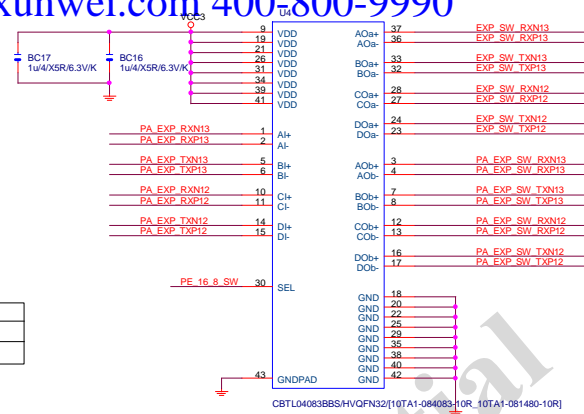
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PCI EXPRESS * 16			
Size	Document Number	Rev	
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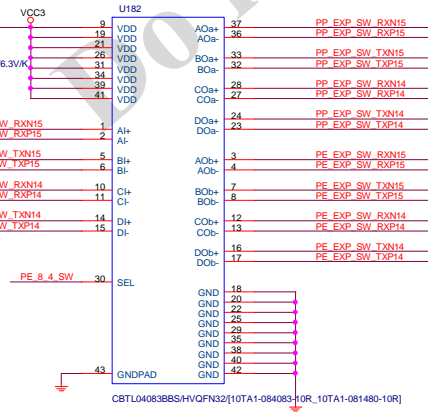
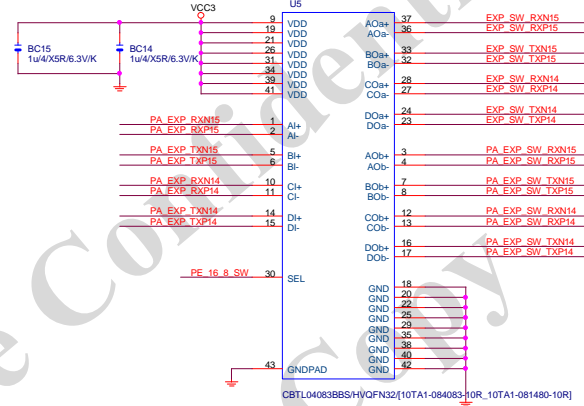
Gigabyte Technology

Title			PCI EXPRESS X 4 PORT	
Size			Document Number	
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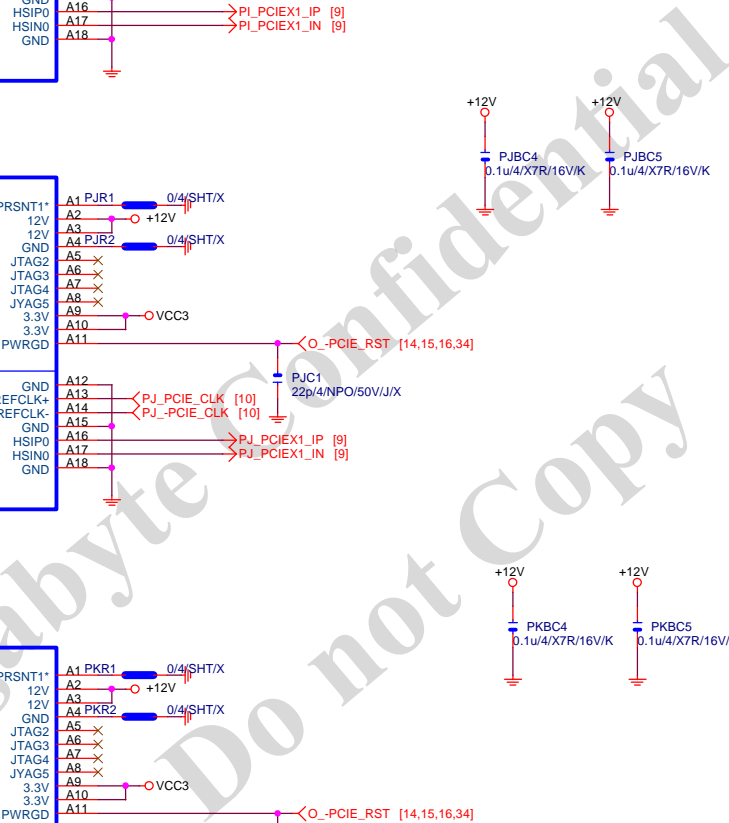


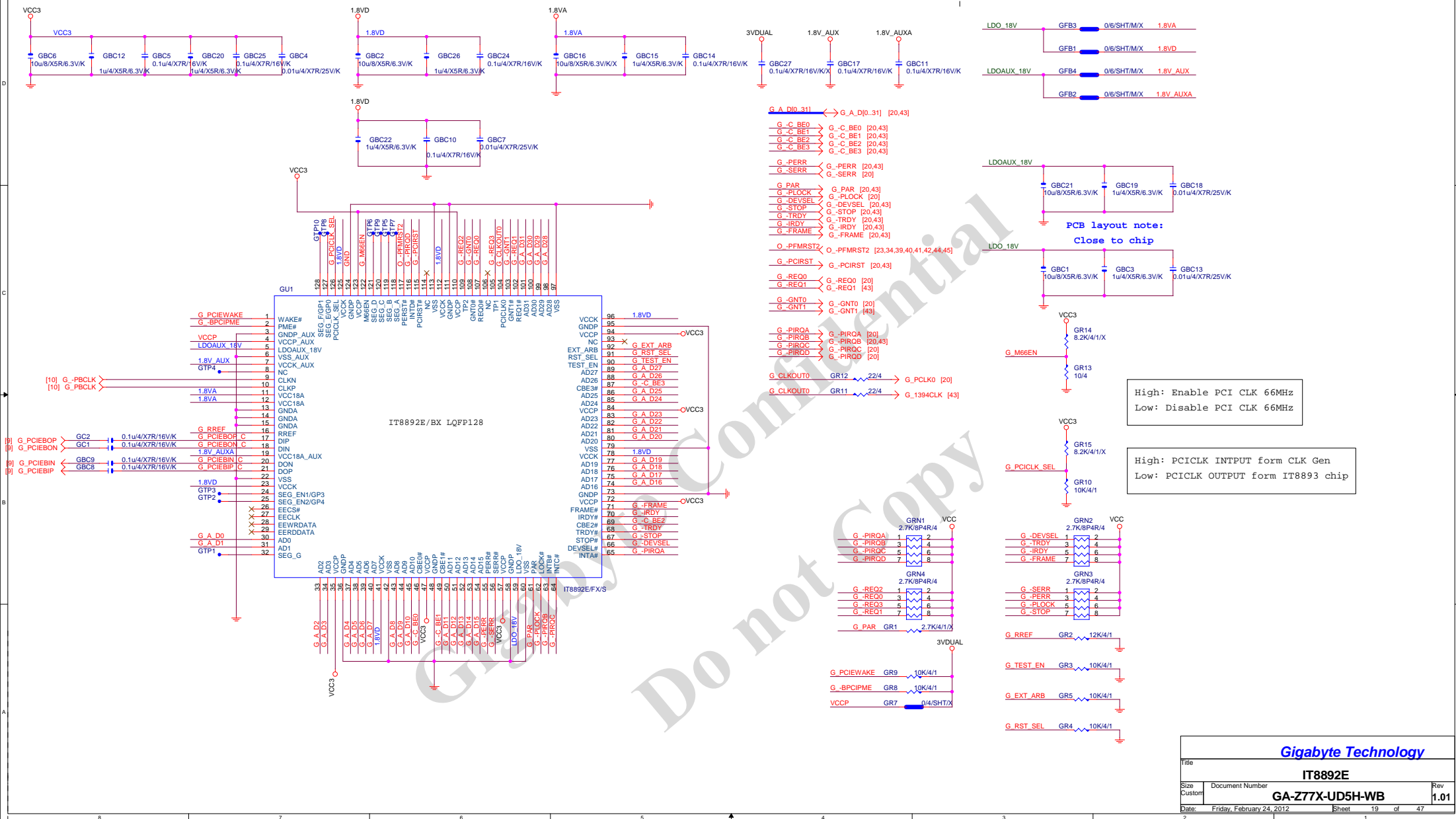


<u>PA_EXP_RX[P0..15]</u>	<u>>>>PA_EXP_RX[P0..15]</u>	[4,14]
<u>PA_EXP_RX[N0..15]</u>	<u>>>>PA_EXP_RX[N0..15]</u>	[4,14]
<u>PA_EXP_TX[P0..15]</u>	<u>>>>PA_EXP_TX[P0..15]</u>	[4,14]
<u>PA_EXP_TX[N0..15]</u>	<u>>>>PA_EXP_TX[N0..15]</u>	[4,14]
<u>PA_EXP_SW_RX[P8..15]</u>	<u>>>>PA_EXP_SW_RX[P8..15]</u>	[14]
<u>PA_EXP_SW_RX[N8..15]</u>	<u>>>>PA_EXP_SW_RX[N8..15]</u>	[14]
<u>PA_EXP_SW_TX[P8..15]</u>	<u>>>>PA_EXP_SW_TX[P8..15]</u>	[14]
<u>PA_EXP_SW_TX[N8..15]</u>	<u>>>>PA_EXP_SW_TX[N8..15]</u>	[14]
<u>PE_EXP_SW_RX[P8..15]</u>	<u>>>>PE_EXP_SW_RX[P8..15]</u>	[15]
<u>PE_EXP_SW_RX[N8..15]</u>	<u>>>>PE_EXP_SW_RX[N8..15]</u>	[15]
<u>PE_EXP_SW_TX[P8..15]</u>	<u>>>>PE_EXP_SW_TX[P8..15]</u>	[15]
<u>PE_EXP_SW_TX[N8..15]</u>	<u>>>>PE_EXP_SW_TX[N8..15]</u>	[15]
<u>PP_EXP_SW_RX[P12..15]</u>	<u>>>>PP_EXP_SW_RX[P12..15]</u>	[16]
<u>PP_EXP_SW_RX[N12..15]</u>	<u>>>>PP_EXP_SW_RX[N12..15]</u>	[16]
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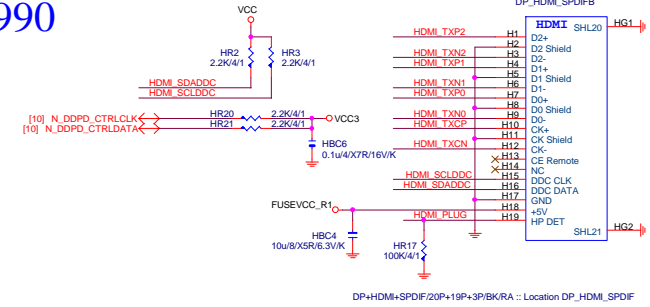
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Size C	Document Number	GA-Z77X-UD5H-WB	Rev 1.01
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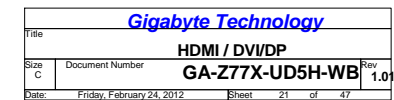
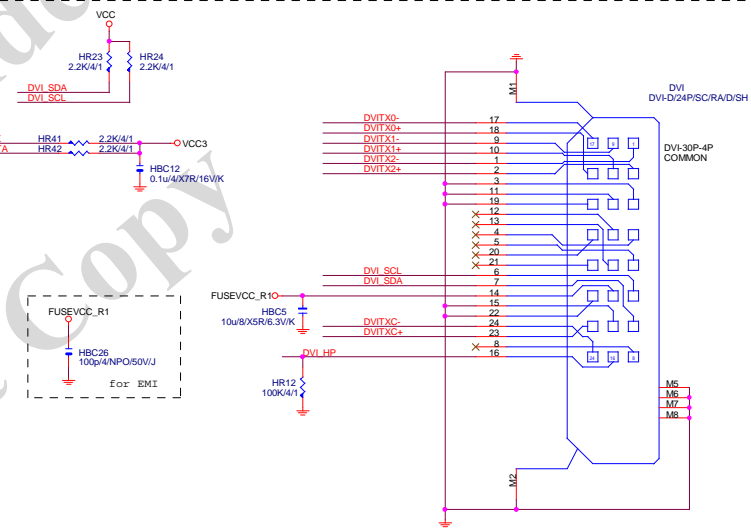


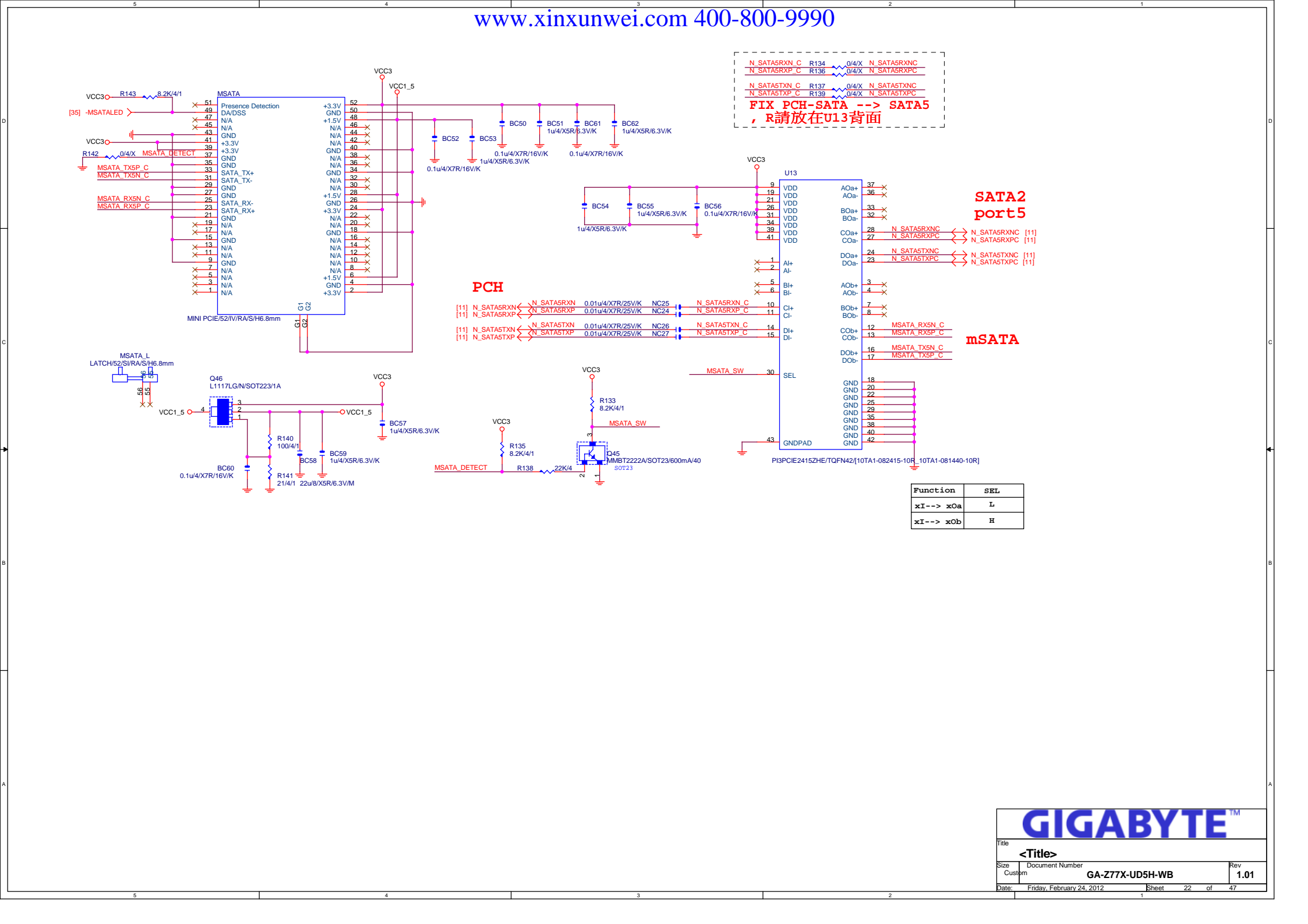
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PCI SLOT 1&2			
Size	Document Number	Rev	
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0/0/0/0:Vswing 500mV

0 1:7.2dB



[illegible]

MOSI For DMI RX Termination Voltage

[12] N_ICH_SPI_MOSI ICH_SPI_MOSI NR10 8.2K/4/1/X
 [12] N_ICH_SPI_CS ICH_SPI_CS NR9 8.2K/4/1/X
 ICH_HOLD0 NR3 8.2K/4/1/X
 ICH_HOLD1 NR11 8.2K/4/1/X

[12] N_SPL_WP1 ICH_WP1 NR2 8.2K/4/1/X
 [12] N_SPL_WP0 ICH_WP0 NR1 8.2K/4/1/X
 [12] N_ICH_SPI_MISO ICH_SPI_MISO NR5 8.2K/4/1/X

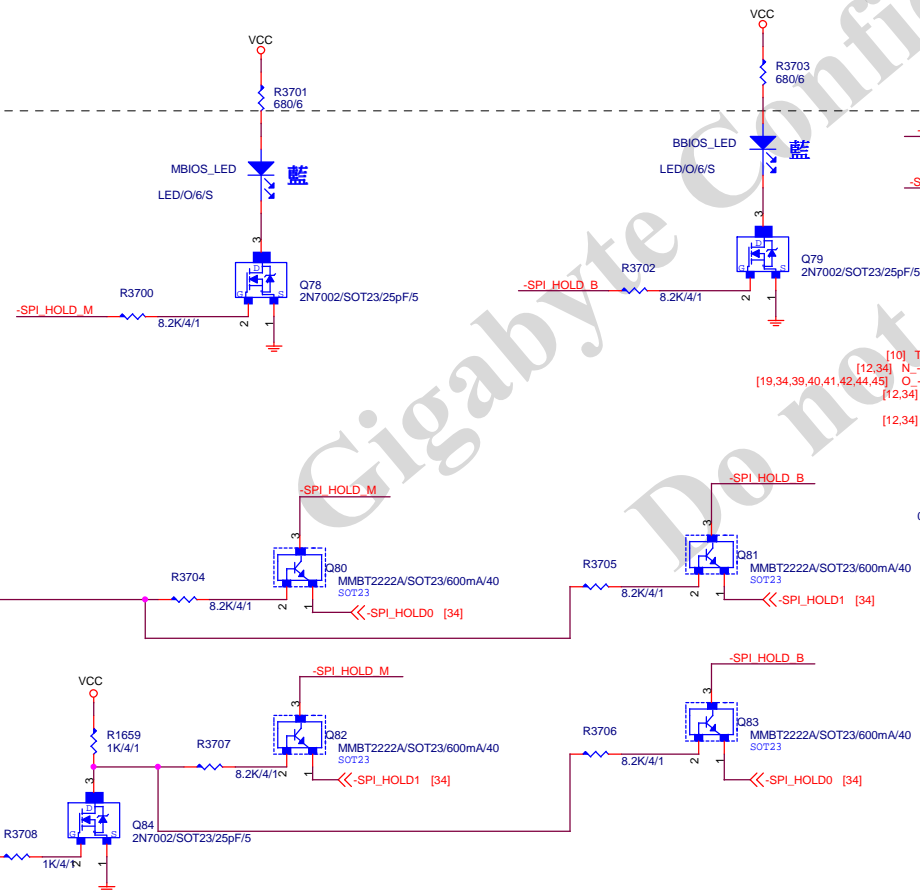
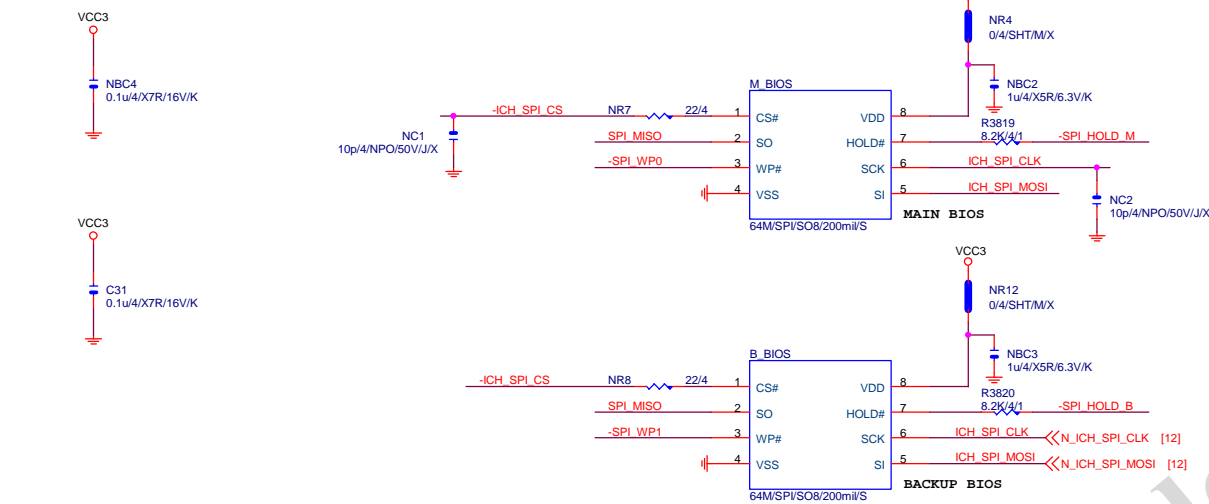
[11] N_GNT0 NR26 1K/4/1/X
 [11] N_GNT1 NR25 1K/4/1/X

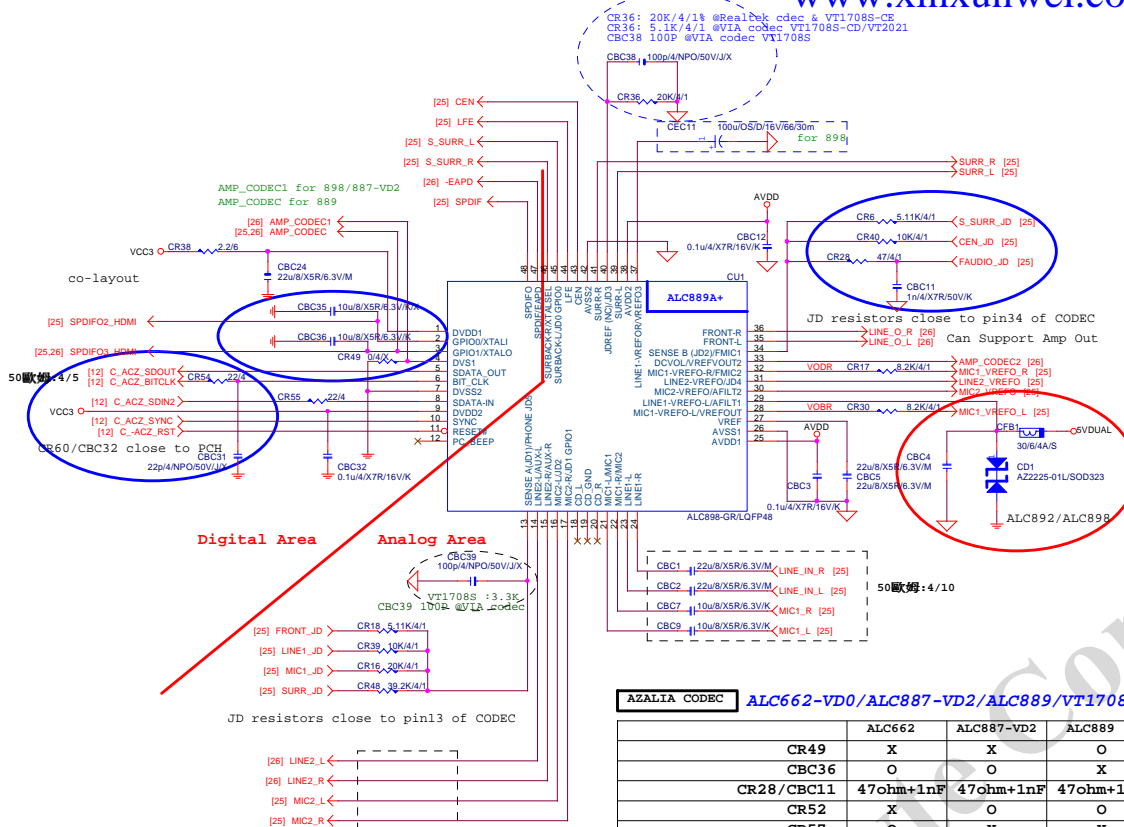
Default int pull up

SPI_MISO NR6 22/4 << N_ICH_SPI_MISO [12]

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

1 means floating
 0 means PD 1K



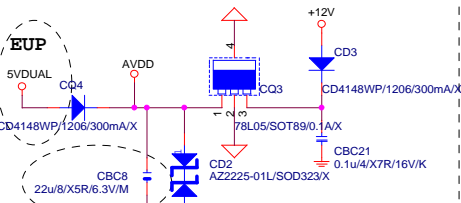


ALC889	ALC889B	ALC892	ALC898	Colay
CR49	O	O	X	
CBC36	X	X	10uF/X5R	
CBC35	X	10uF/X5R	X	
CR52	O	X	O	
CR53	X	O	X	
CBC1/CBC2	22uF/X5R	22uF/X5R	22uF/X5R	
CBC7/CBC9/CBC20/CBC15	10uF/X5R	10uF/X5R	10uF/X5R	
CFB1/CD1/CBC4	X	X	O	
CD2/CD3/CQ3/CQ4	O	O	X	
CR7/CR9/CR5/CR13/ CR29/CR32/CR46/CR19/ CR50/CR41/CR21/CR47/ CR2/CR11/CR14/CR24	62 ohm	62 ohm	62 ohm	

АЗАЛИА CODEC	ALC662-VD0/ALC887-VD2/ALC889/VT1708S-CD/VT1708S-CE/VT2021						Colay
	ALC662	ALC887-VD2	ALC889	VT1708S-CD	VT1708S-CE	VT2021	ALC898/ALC892
CR49	X	X	O	O	X	O	X
CBC36	O	O	X	X	O	X	O
CR28/CBC11	47ohm+1nF	47ohm+1nF	47ohm+1nF	22ohm+100P	22ohm+100P	47ohm+1nF	47ohm+1nF
CR52	X	O	O	O	O	O	O
CR57	O	X	X	X	X	X	X
CBC1/CBC2	10uF/X5R	10uF/X5R	22uF/X5R	10uF/X5R	10uF/X5R	10uF/X5R	22uF/X5R
CR36	20K/4/1	20K/4/1	20K/4/1	5.1K/4/1	20K/4/1	5.1K/4/1	20K/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	8.2K/4
CBC38/CBC39	X	X	X	100P/4	100P/4	X	X
CR10/CR8/CR20/CR45/ CR42/CR51/CR27/CR26	22K/4	22K/4	22K/4	10K/4/1	10K/4/1	10K/4/1	22K/4
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	62 ohm
CFB1/CD1/CBC4/CBC8	O	O	X	X	O	X	O
CD2/CD3/CQ3/CQ4	X	X	O	O	X	O	X
CEC11	X	X	X	X	X	X	O
CESD6	X	X	X	O	O	O	X

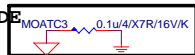
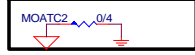
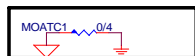
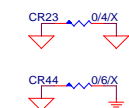
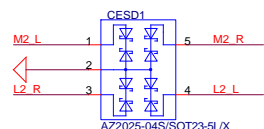
Gigabyte Technology	
Title HD AUDIO ALC889A	
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CODEC POWER/EMI PAD



ADD CD2 For ESD PROTECT DIODE

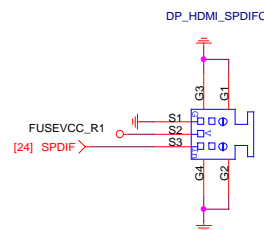
上ALC892時,此顆電容要保留



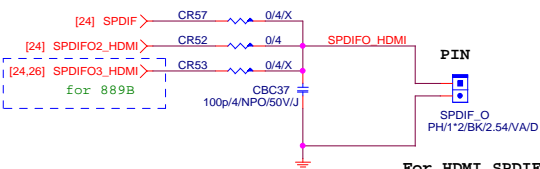
→ Near Audio jack left

→ Codec --> Audio jack

→ F_AUDIO



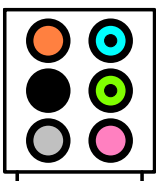
DP+HDMI+SPDIF/20P+19P+3P/BK/RA:: Location DP_HDMI_SPDIF



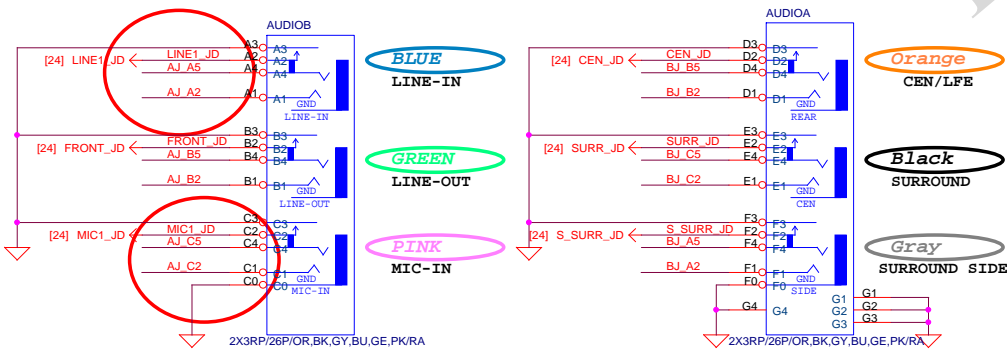
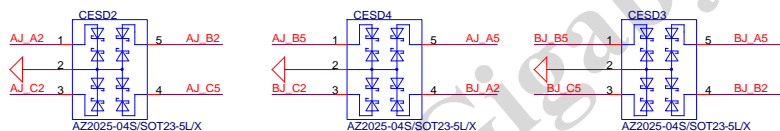
For HDMI SPDIF

AZALIA JACK

BTX AZALIA CONNECTOR



11NR6-403007-21R



LINE-IN

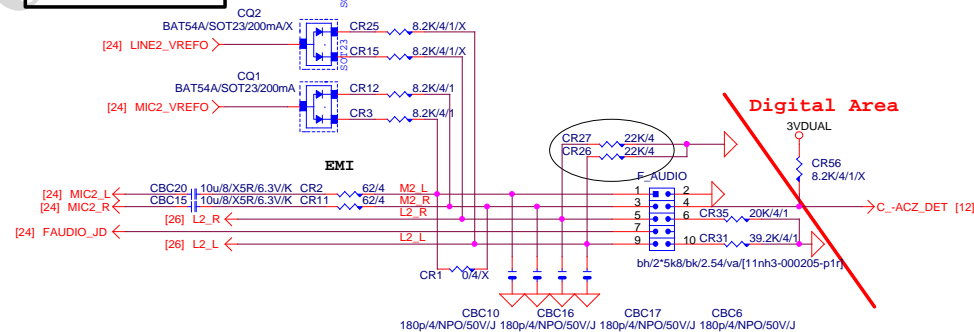
MIC-IN

SURROUND

CEN/LFE

SURRBACK

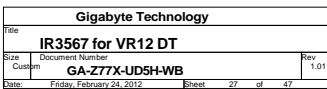
AZALIA FRONT PANEL



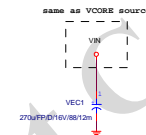
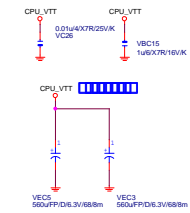
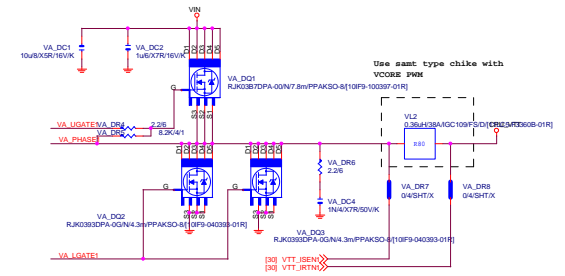
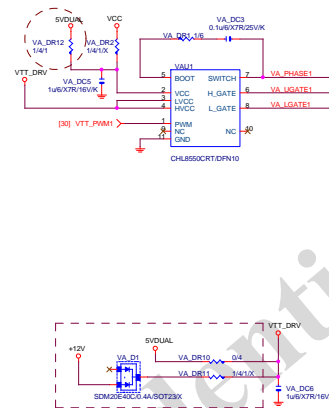
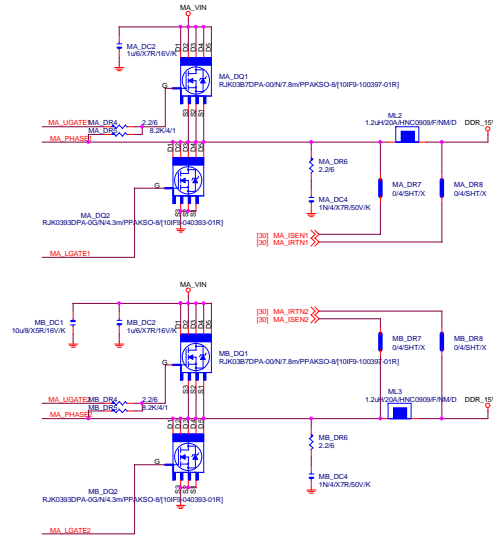
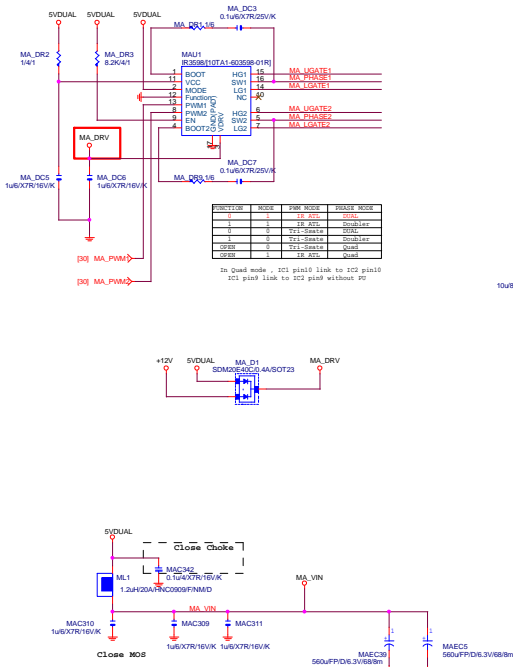
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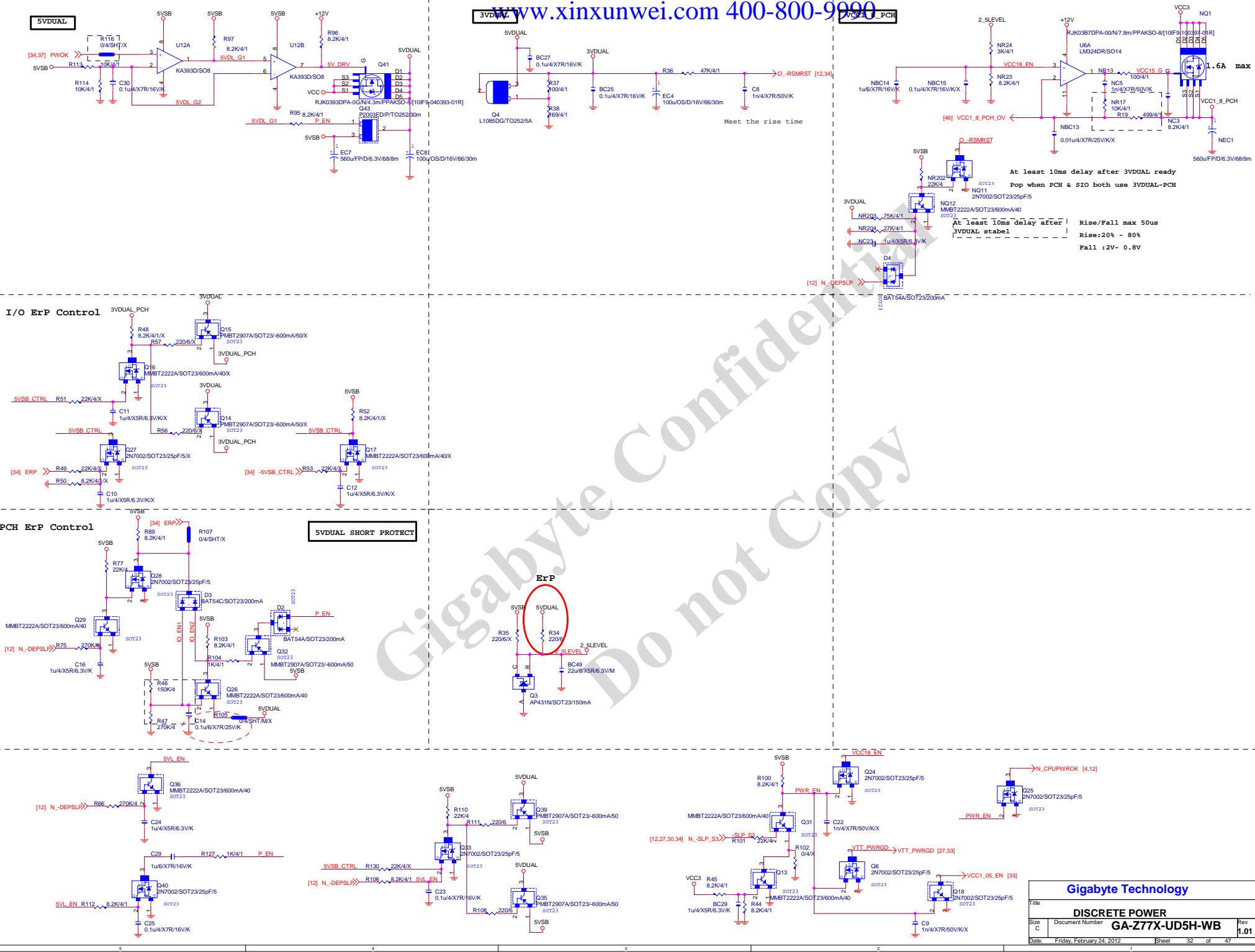
Gigabyte Technology

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Size	Document Number	GA-Z77X-UD5H-WB	Rev 1.01
Custom	Date:	Friday, February 24, 2012	Sheet 25 of 47

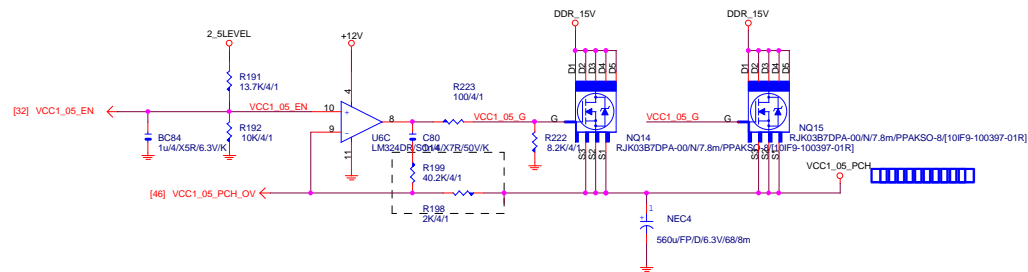


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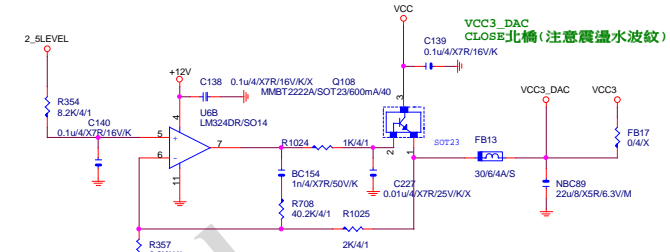


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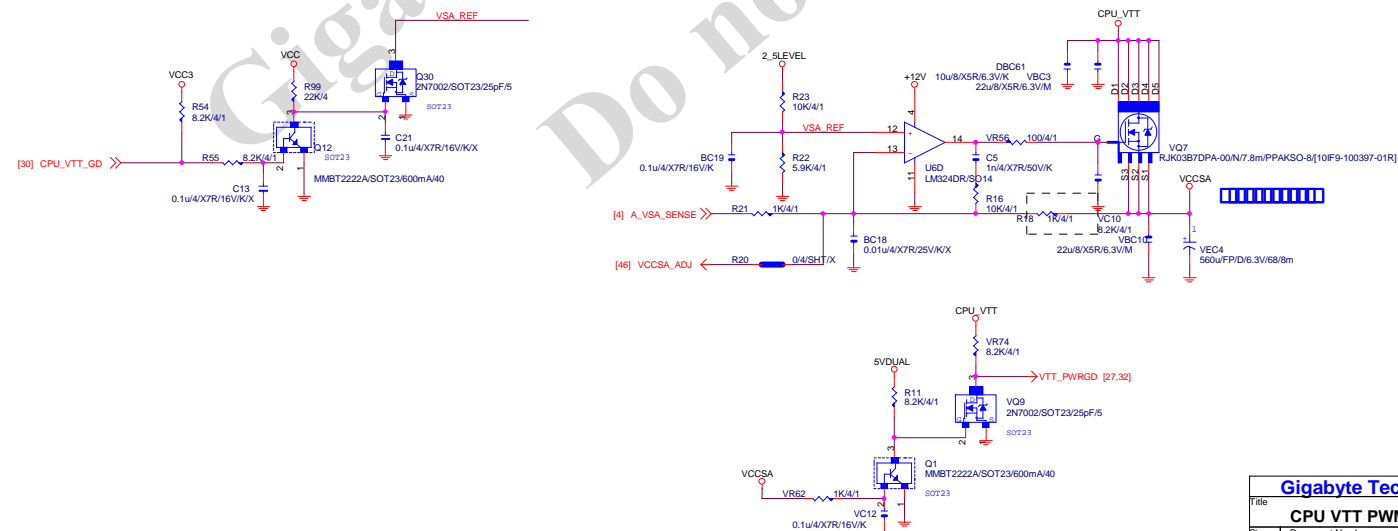


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(3.3V/70mA+360uA)



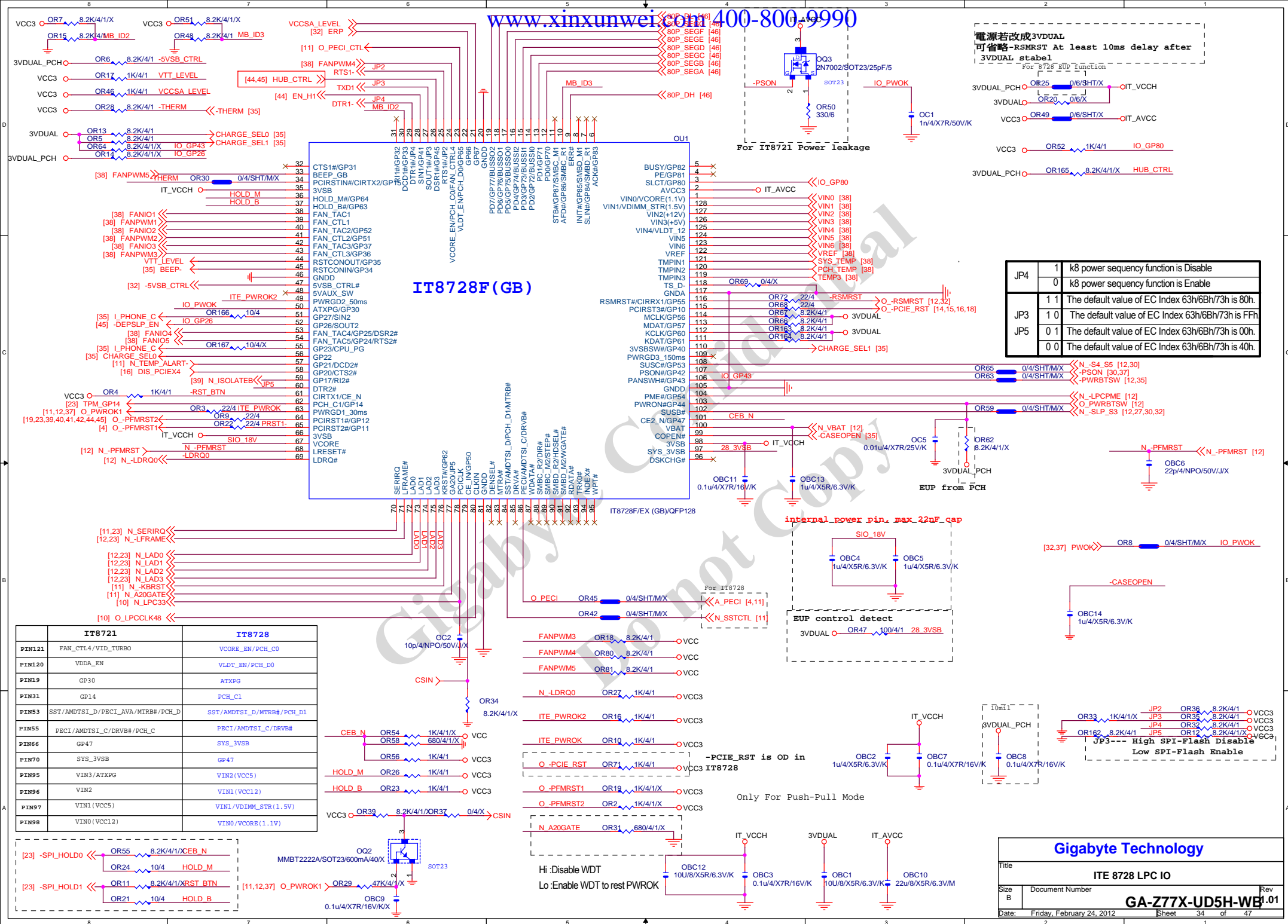
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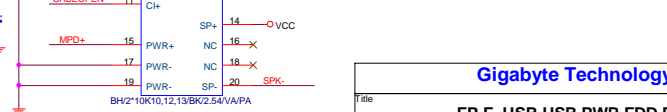
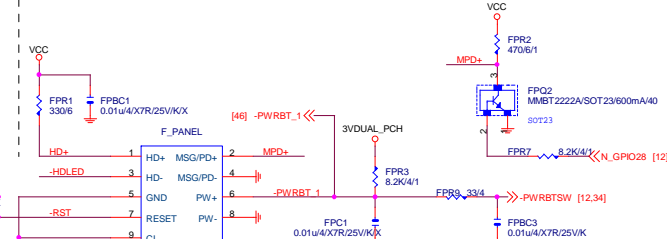
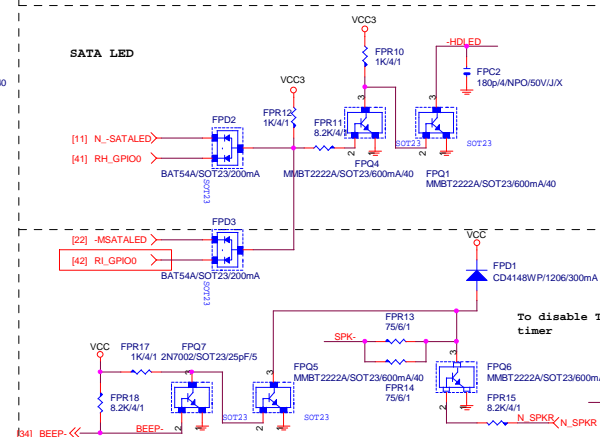
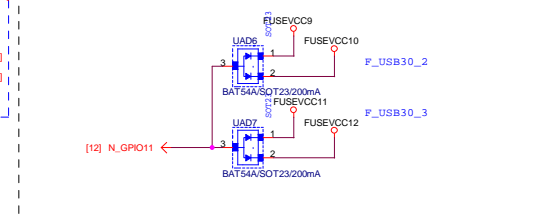
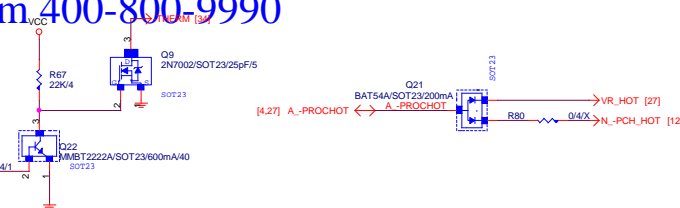
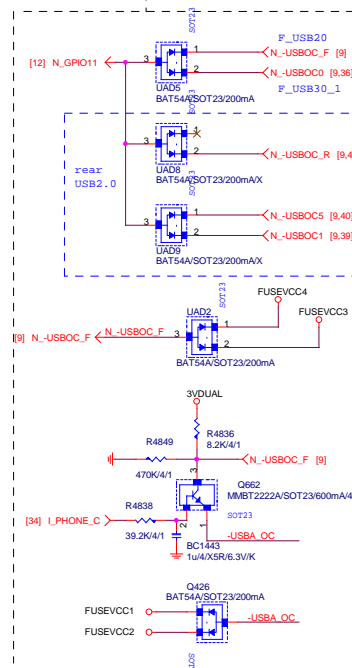
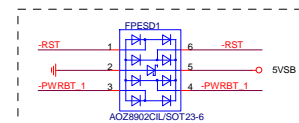
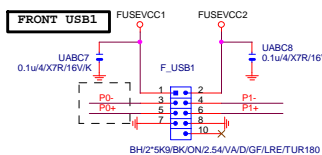
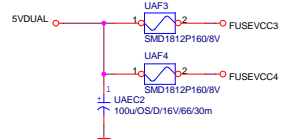
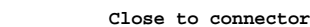
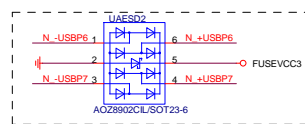
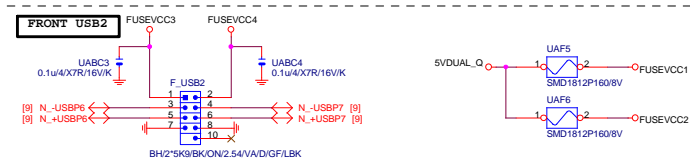
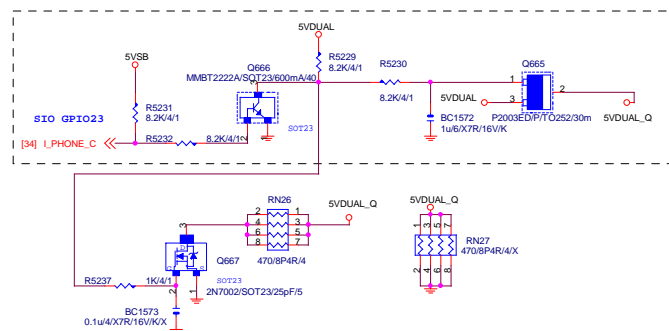
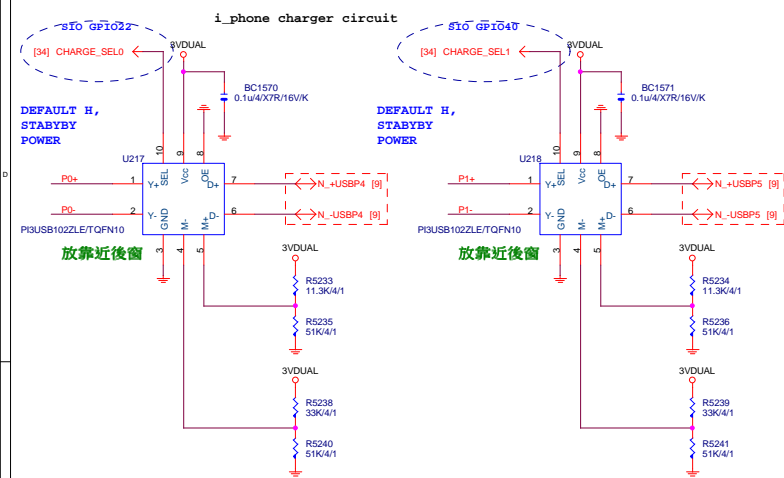


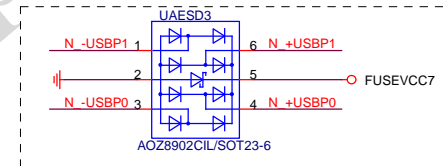
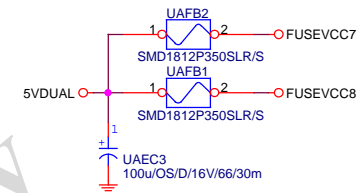
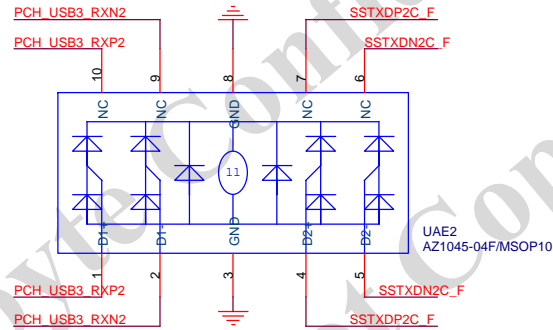
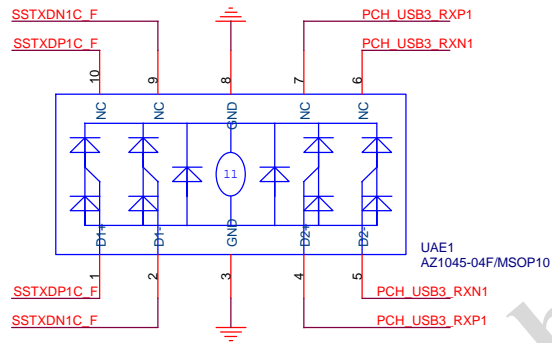
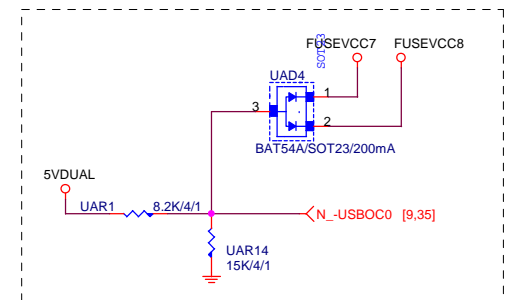
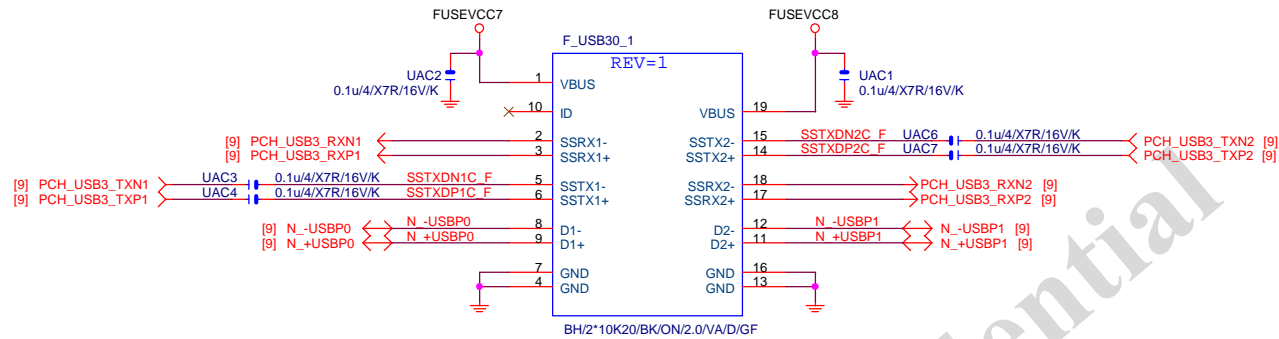
Gigabyte Technology

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GA-Z77X-UD5H-WBRev
1.01

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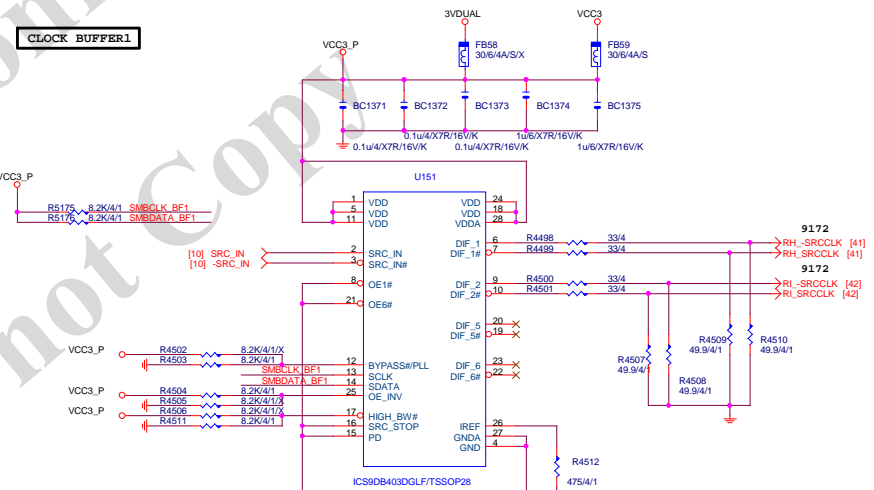
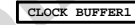




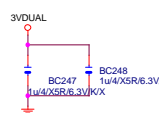


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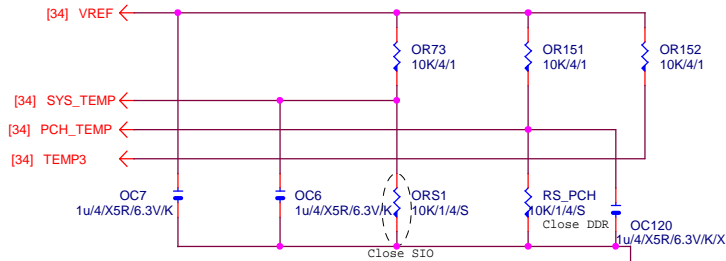
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Rev		1.01	
Date:	Friday, February 24, 2012	Sheet	36 of 47



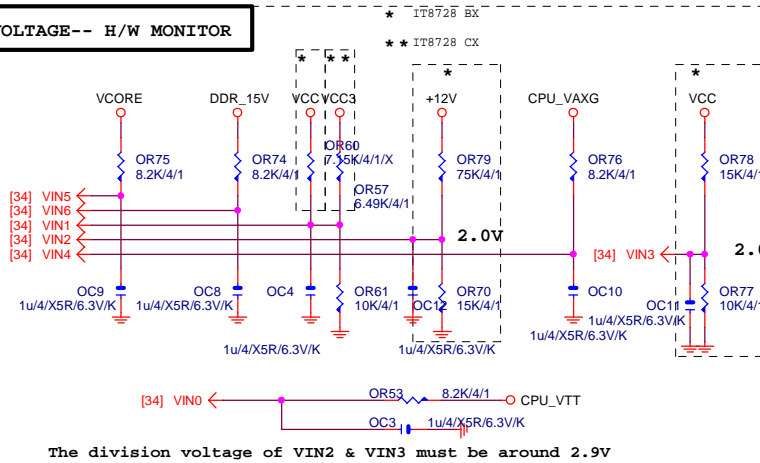
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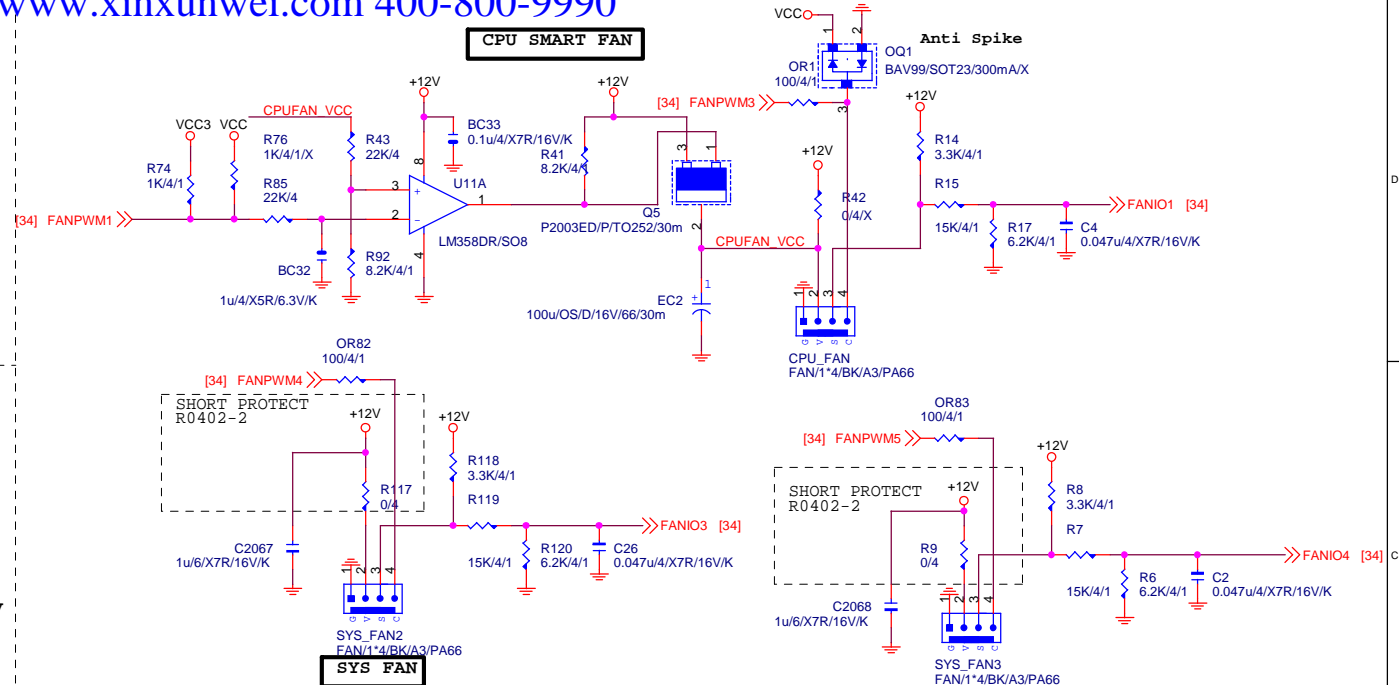
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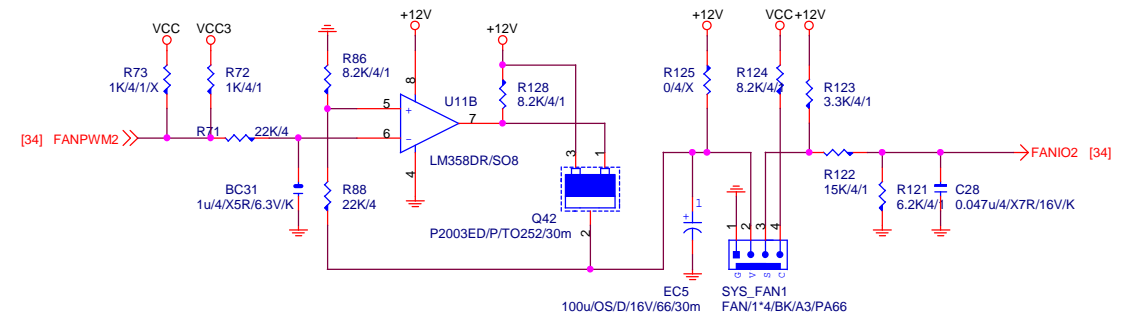
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CPU SMART FAN



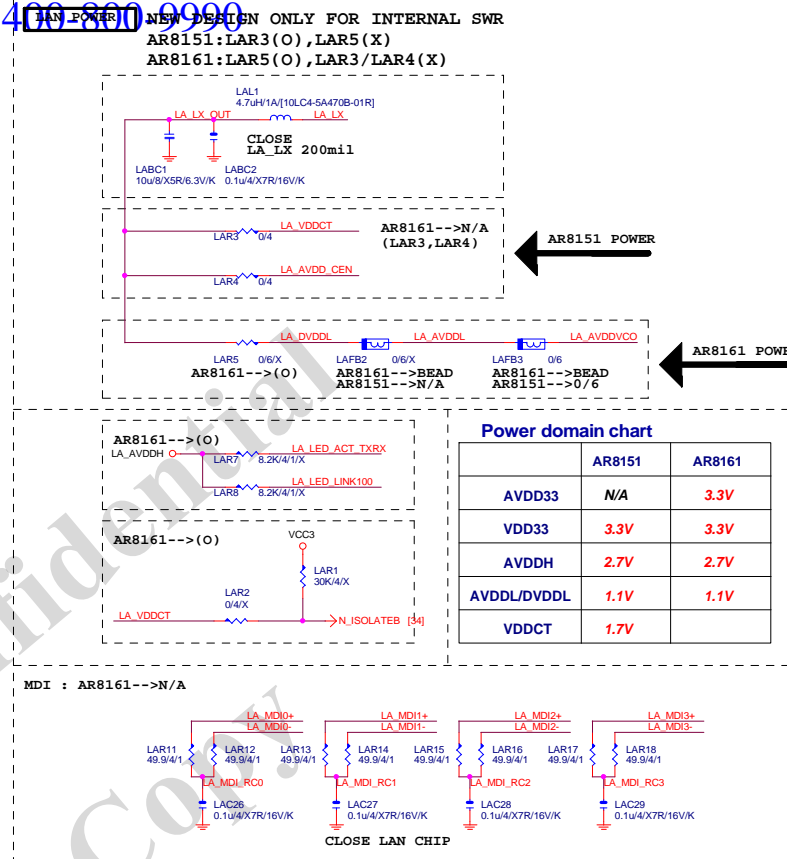
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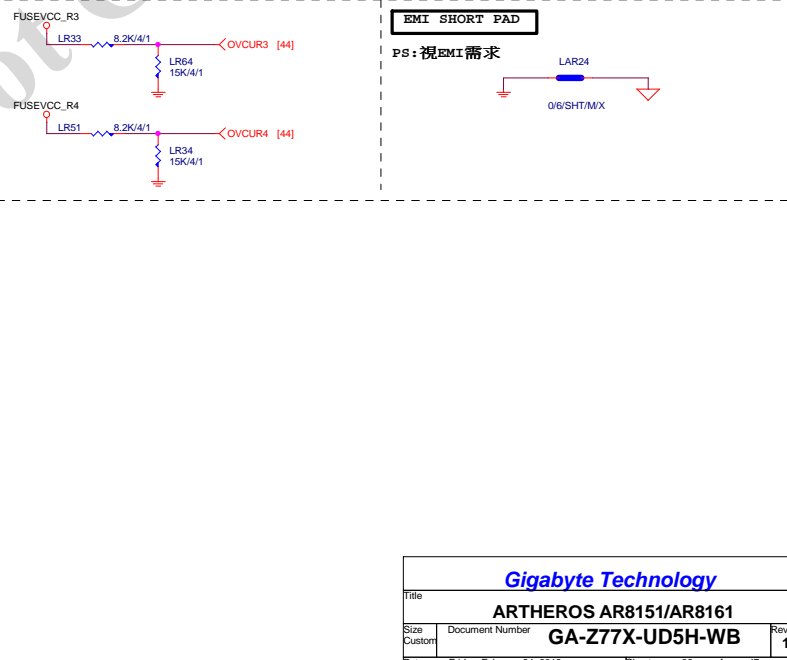
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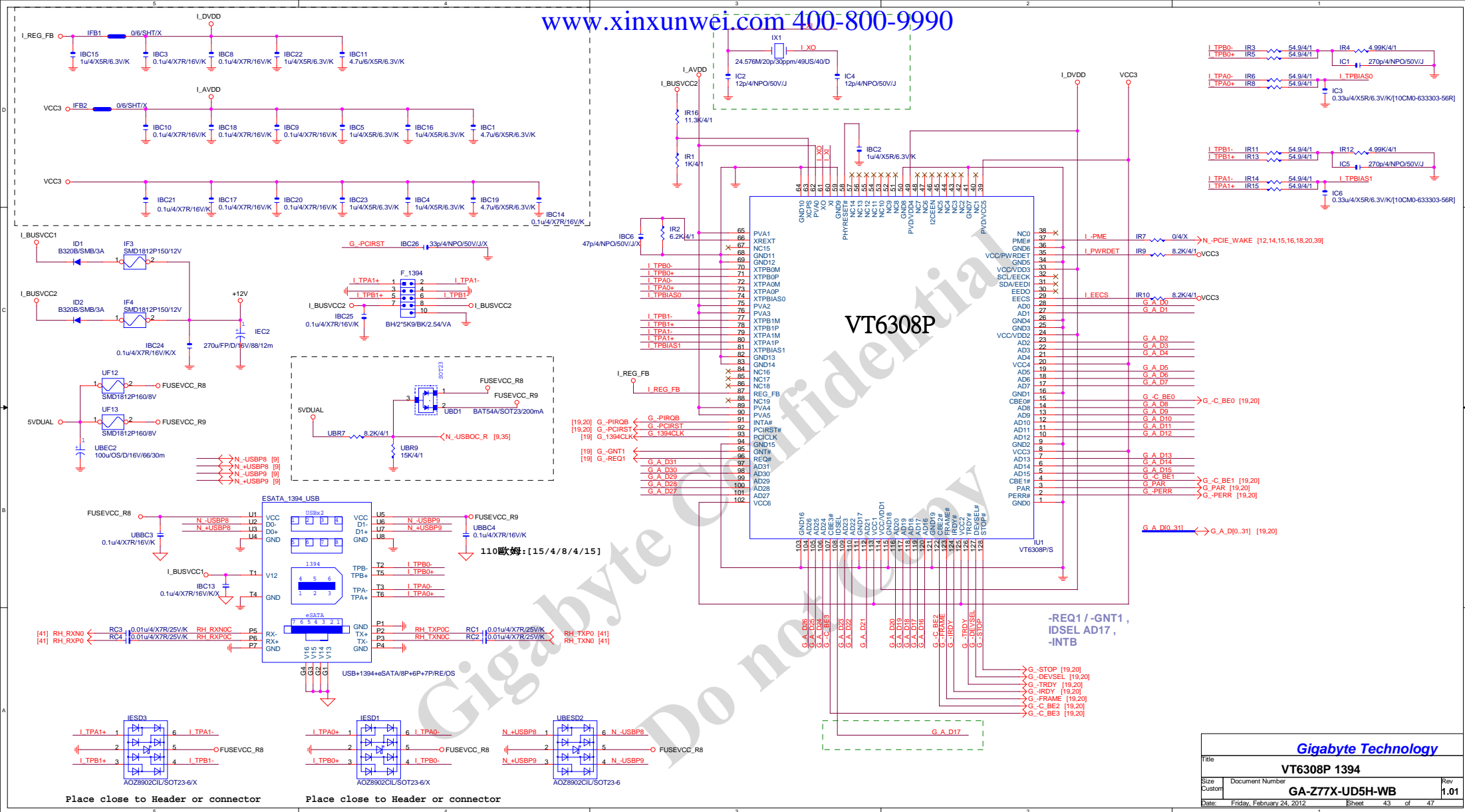
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Date:	Friday, February 24, 2012	Sheet	38 of 47

LAN:AR8151/AR8161

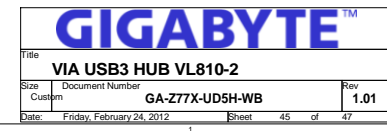


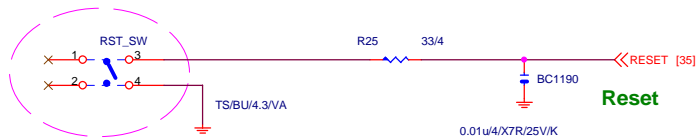
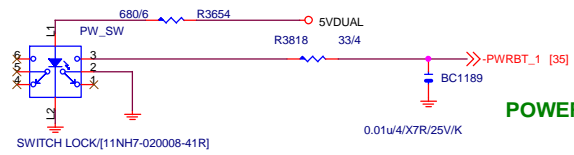
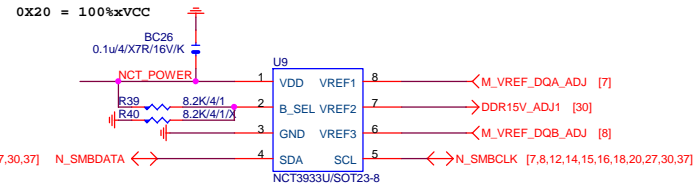
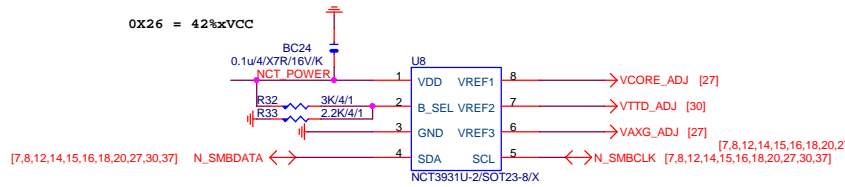
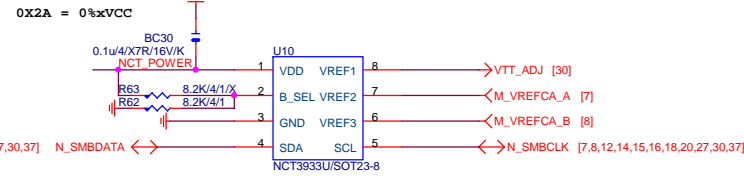
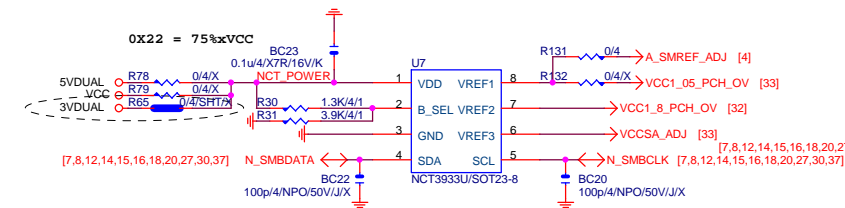
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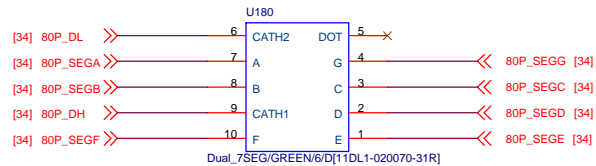
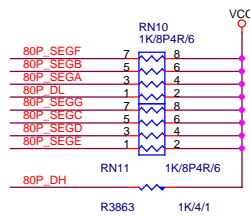




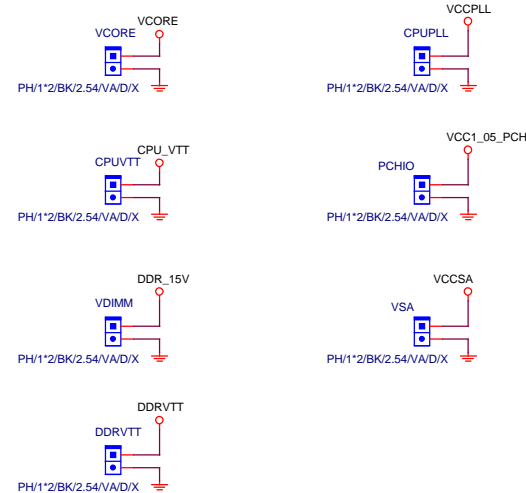
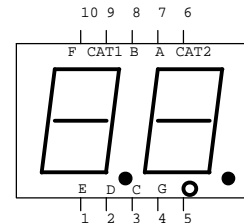




80 PORT



COMMON CATHODE

Physical Package
(TOP VIEW)

www.yinyunwei.com 400-800-9990

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					

PWM各相位的擺法如下：

PWM各相位的擺法如下：



散熱模組料號：

10. *Journal of the American Medical Association*, 2000; 284: 1039-1044.

1000

1000

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2.12SP2-01A001-Z1R/Z2R
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