

Model Name: GA-Z68X-UD7-B3

SHEET TITLE

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03	BLOCK DIAGRAM
04-06	CPU_LGA1155
07-08	DDR III CHANNEL A / B
09	PCH_DMI,USB,PCIE
10	PCH CLK BUFFER
11	PCH_HOST,SATA
12	PCH_GPIO,CTRL,AUDIO
13	PCH_PWR,GND
14	DUAL BIOS,TPM
15	PCIEX1 & PCI SLOT
16	ITE 8728
17	-PROHOT,KB/MS,PROTECT
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24	VCCSA POWER
25	ISL6322_CPU_VTTD
26	ISL6322_DDRIII
27	PCH CORE
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32	ALC889-GR
33	REAR AUDIO JACK
34	HWM,FAN CTRL
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SHEET TITLE

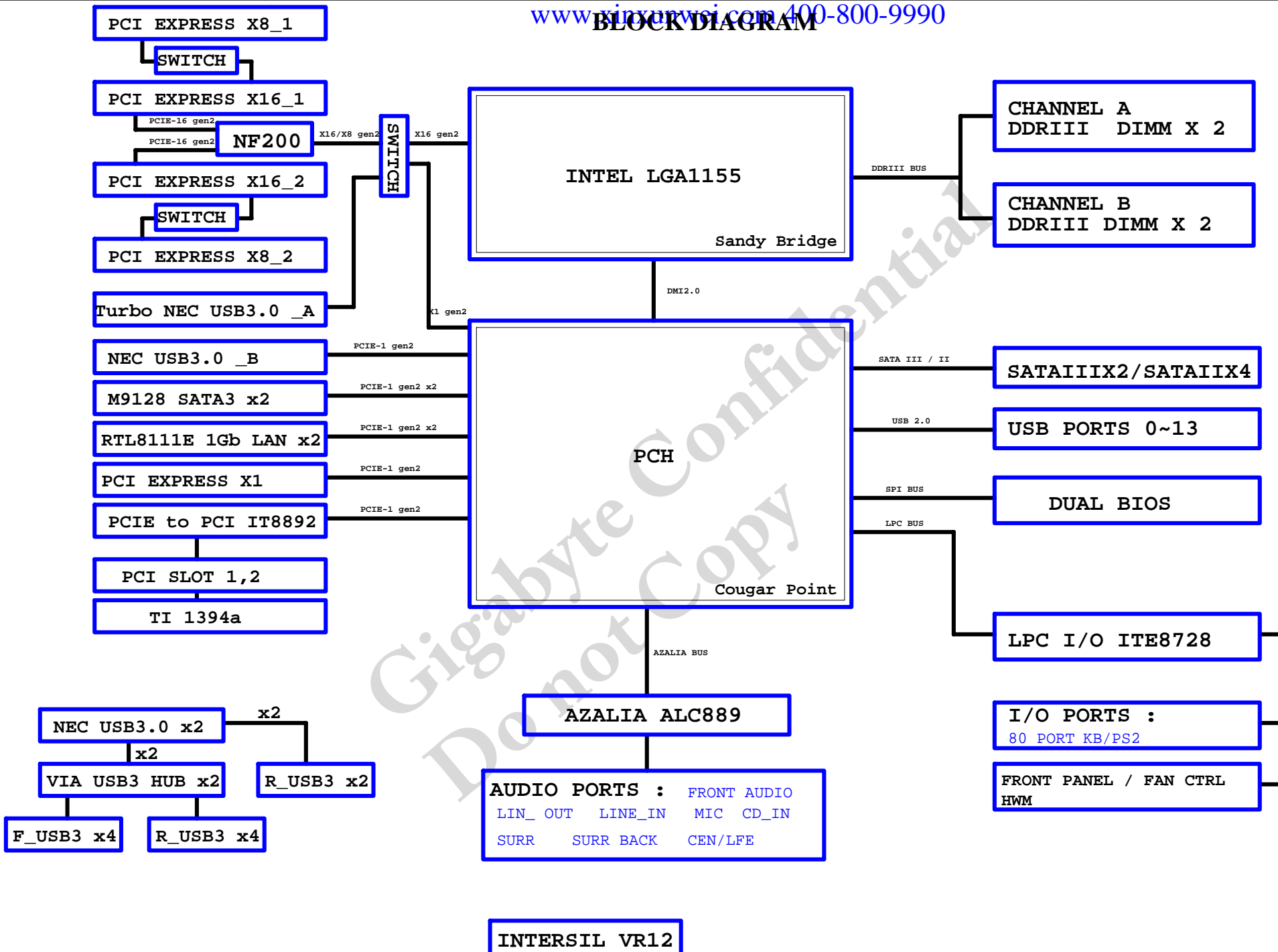
39	TI TSB43AB23 1394
40	IT8892 PCI bridge
41-42	Marvell 9128 SATA3.0 x2
43-45	PCIE X16_1 & PCIE X8_1 SWITCH
46-48	PCIE X16_2 & PCIE X8_2 SWITCH
49-50	BR04 PCIE GEN2
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Cover Sheet		
Size Custom	Document Number <b>GA-Z68X-UD7-B3</b>	Rev <b>1.01</b>
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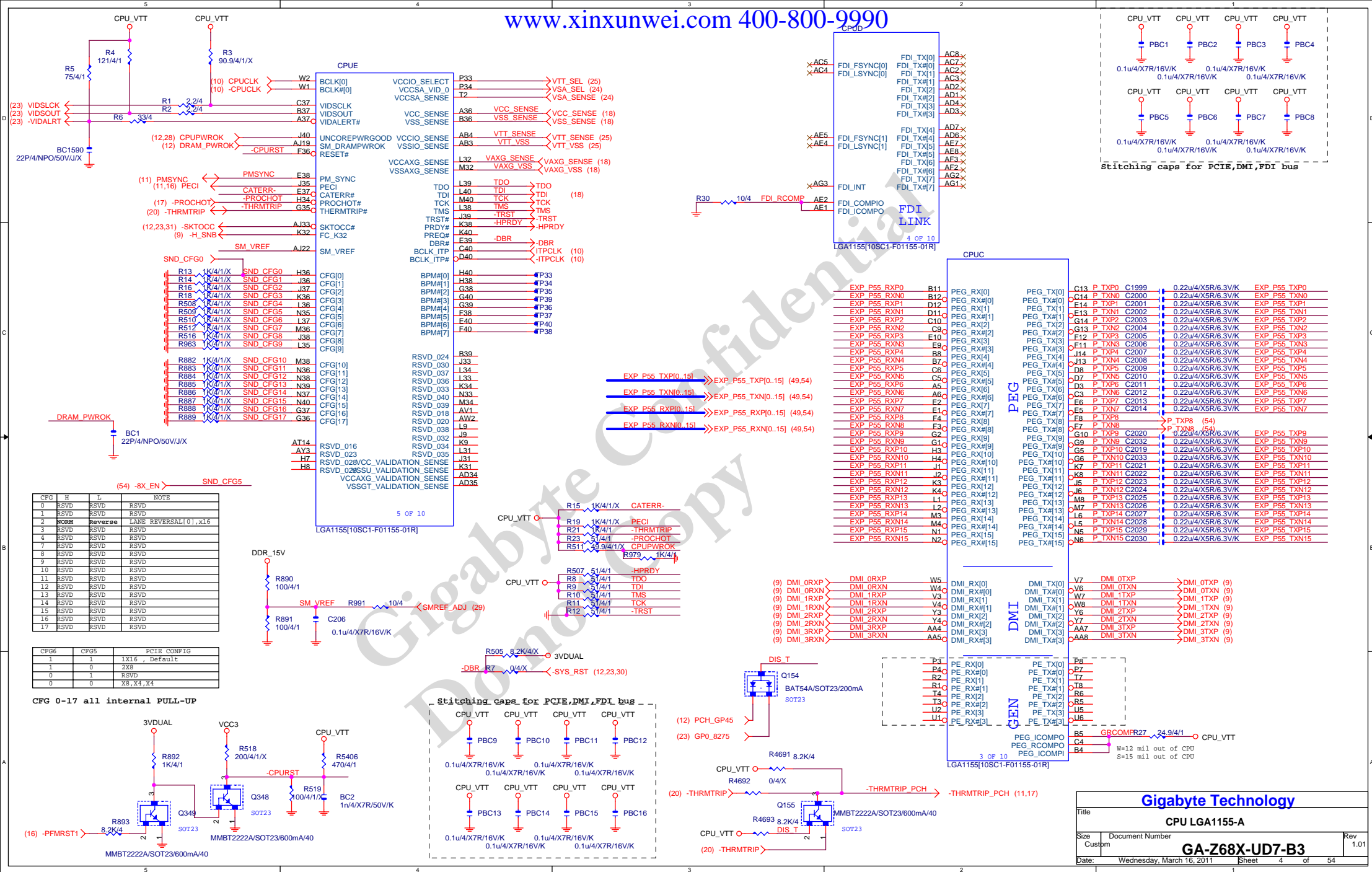


## BLOCK DIAGRAM

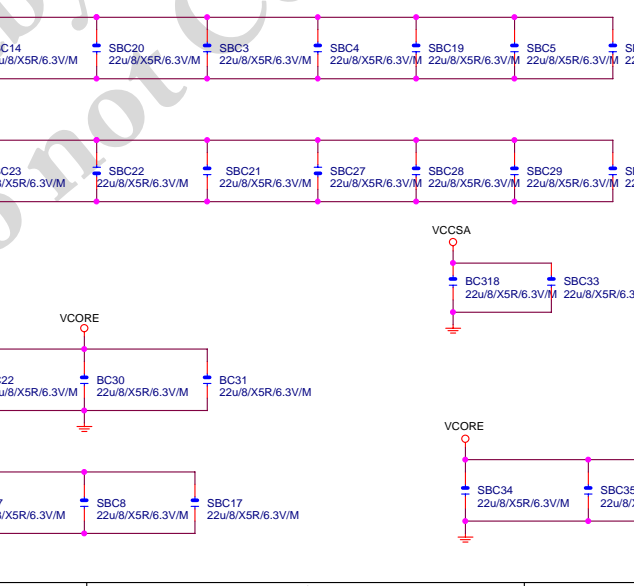


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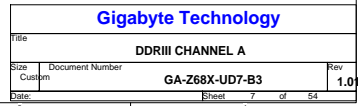
BLOCK DIAGRAM			
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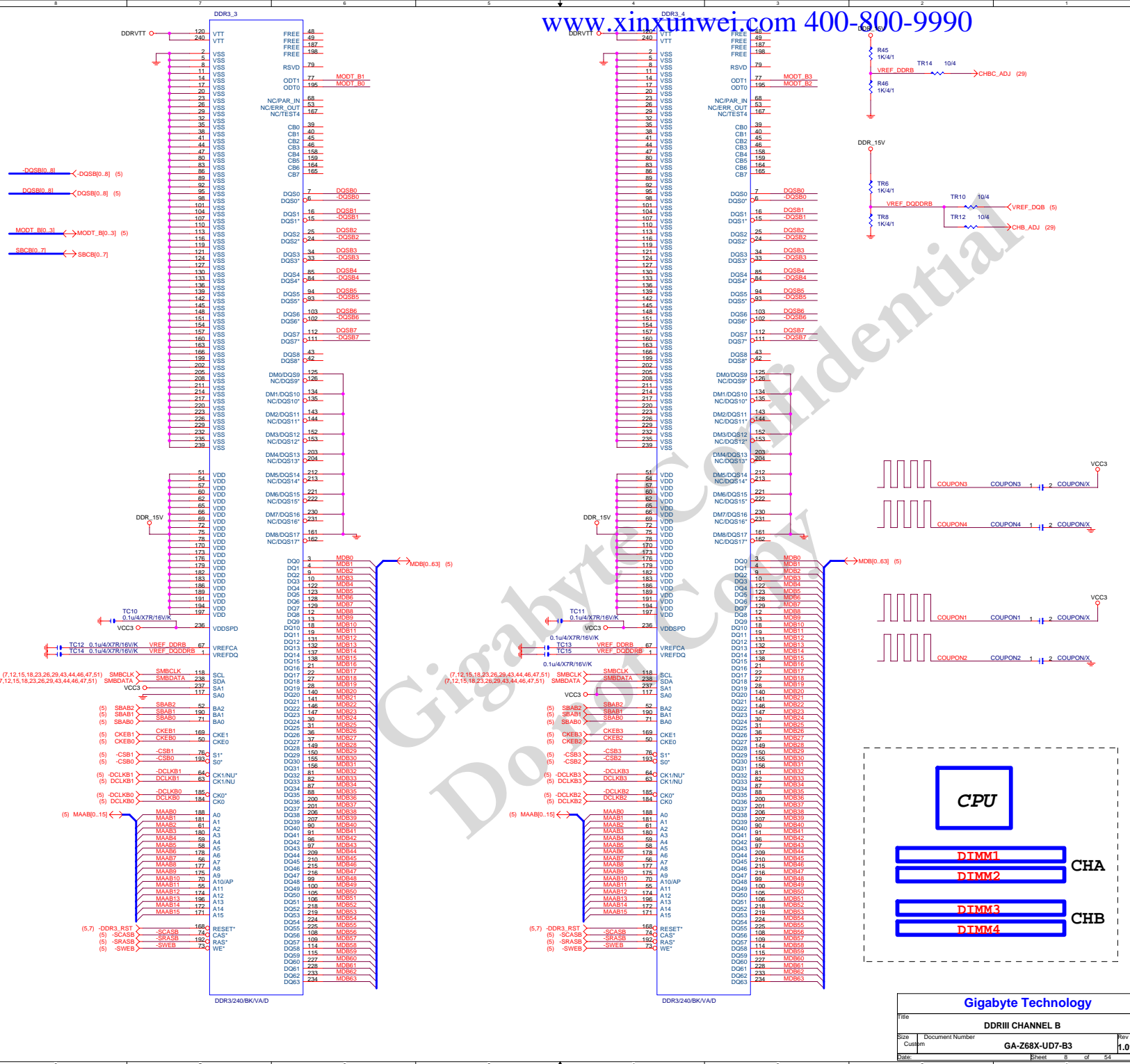




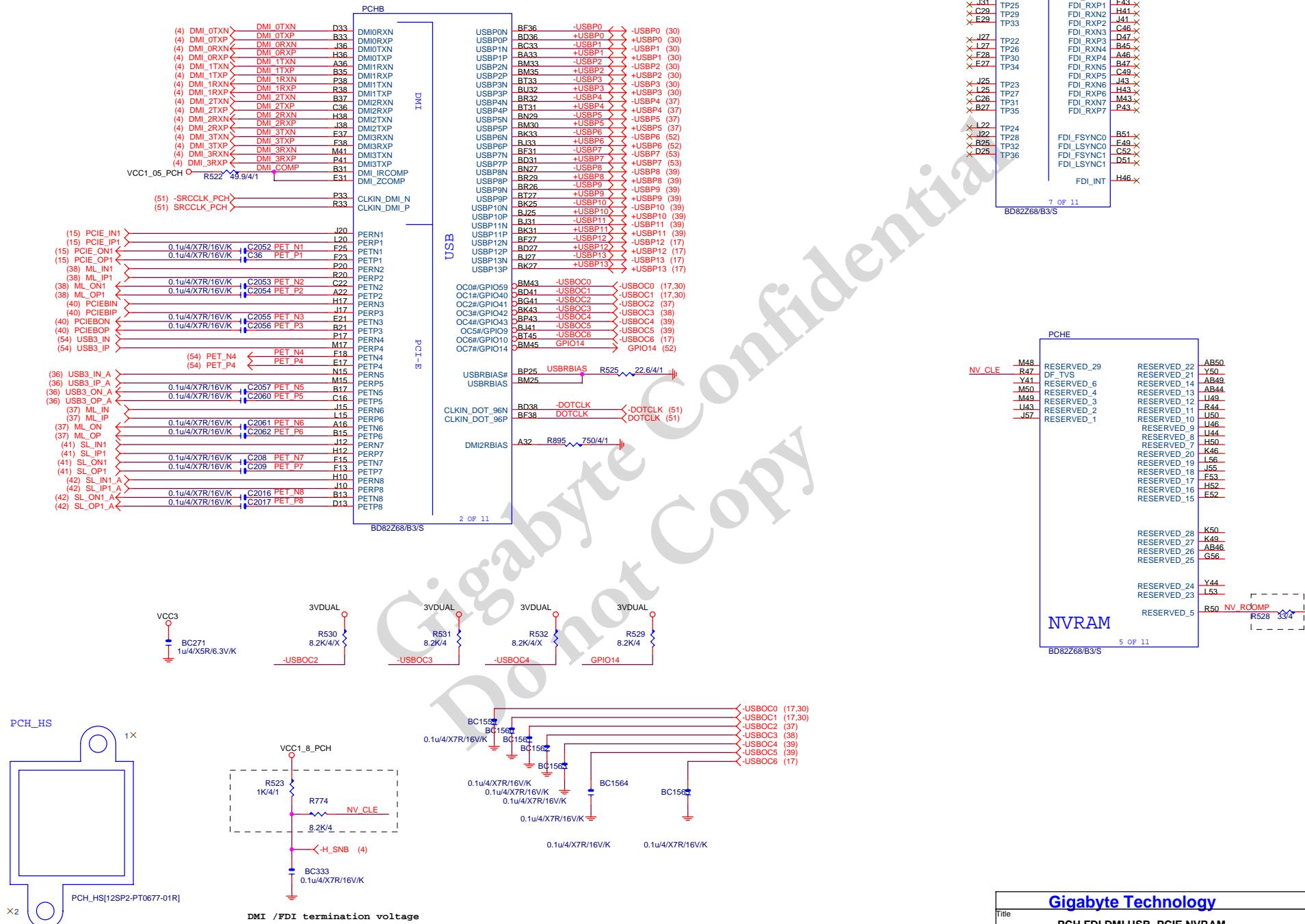


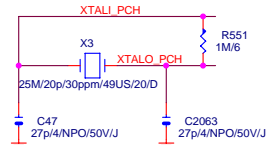








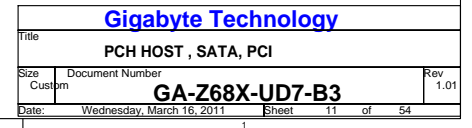


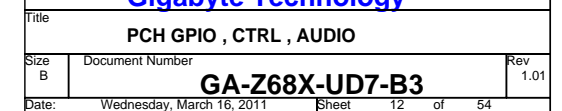


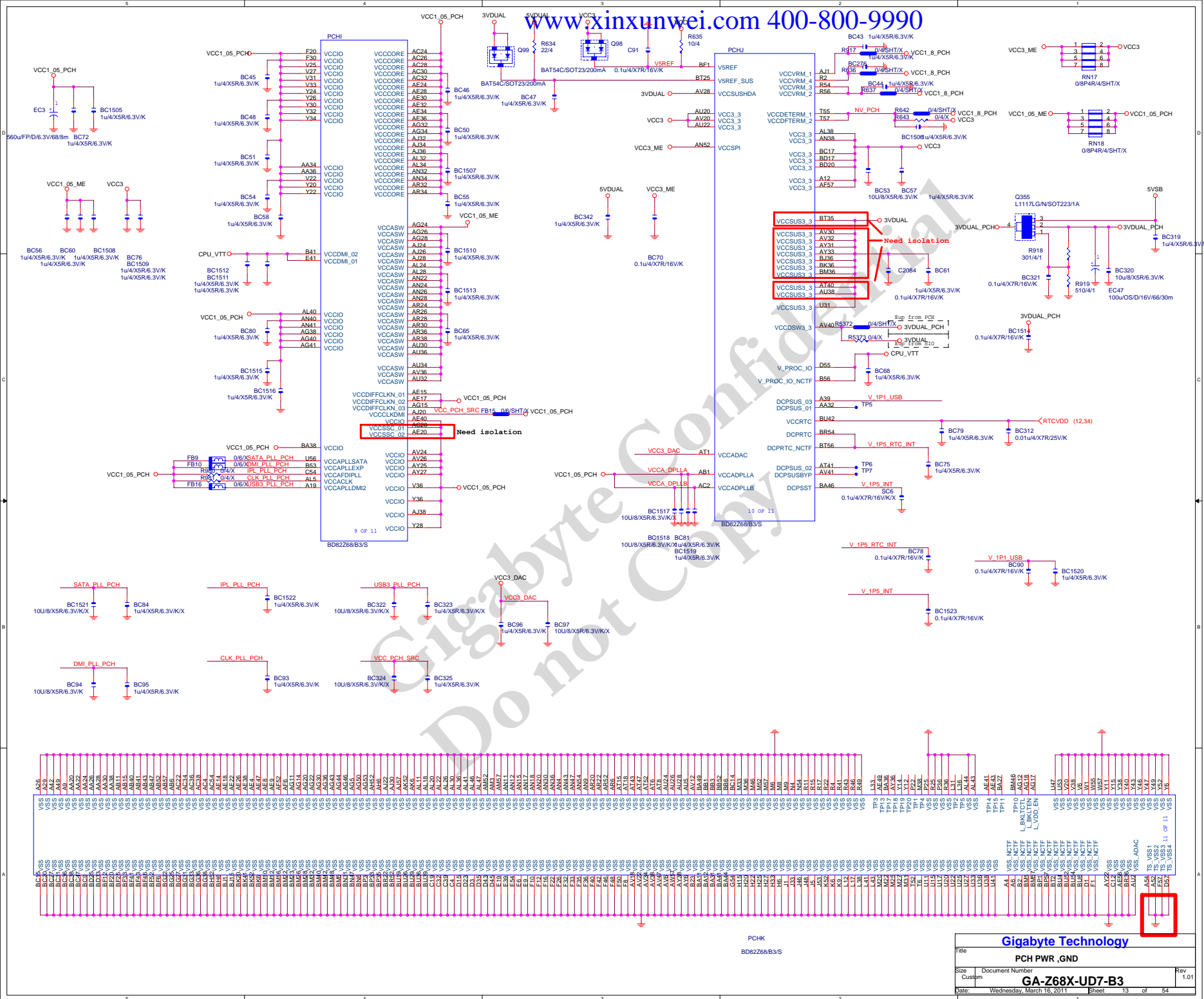
```
GP29 , 35, 36 , 37 power on with 3.3V pluse

GP8 always Hi without PU

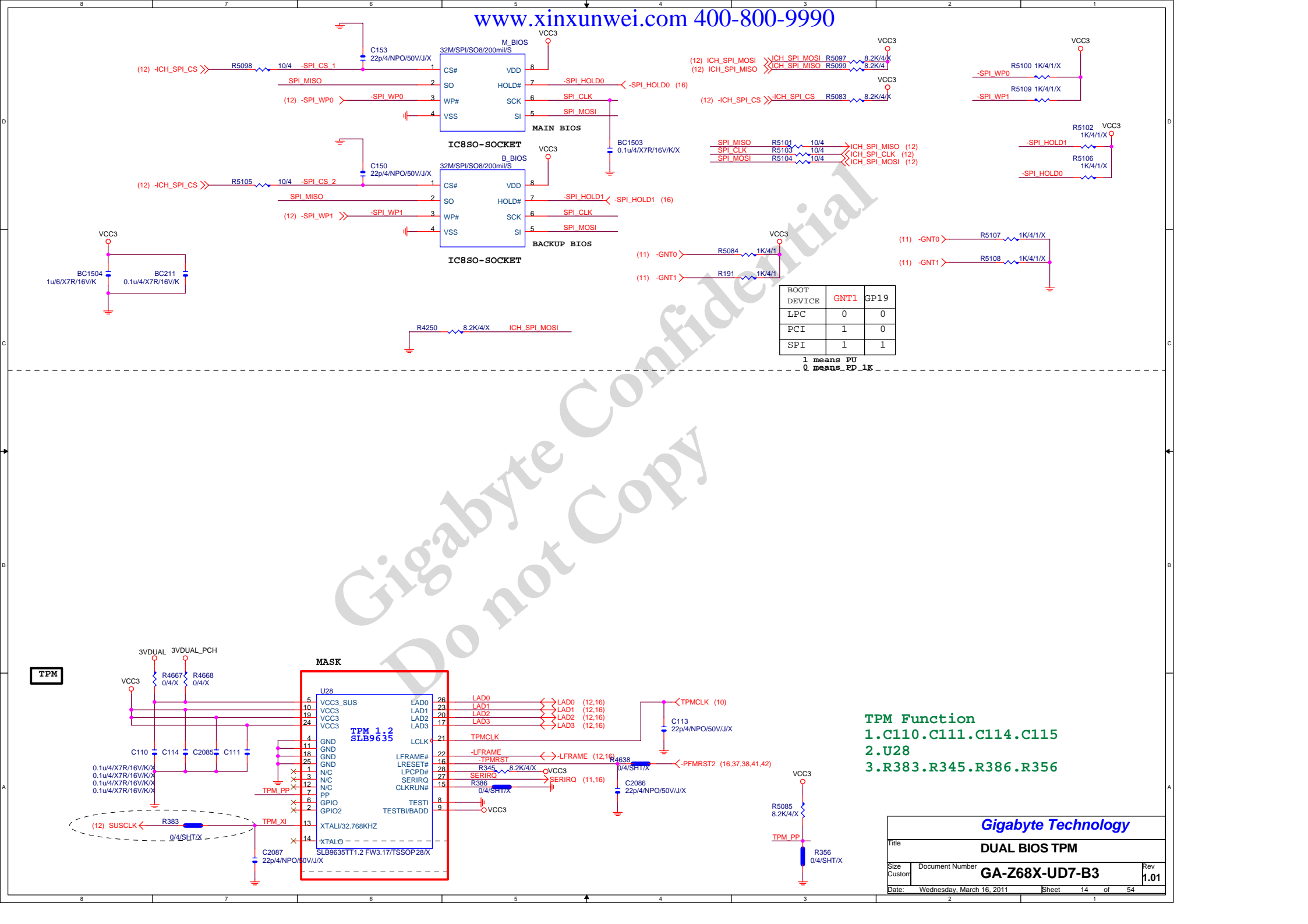
GP20 with pluse during power on & reset
```











The schematic diagram illustrates the internal components and connections of the GA-Z68X-UD7-B3 motherboard. It is divided into several functional sections:

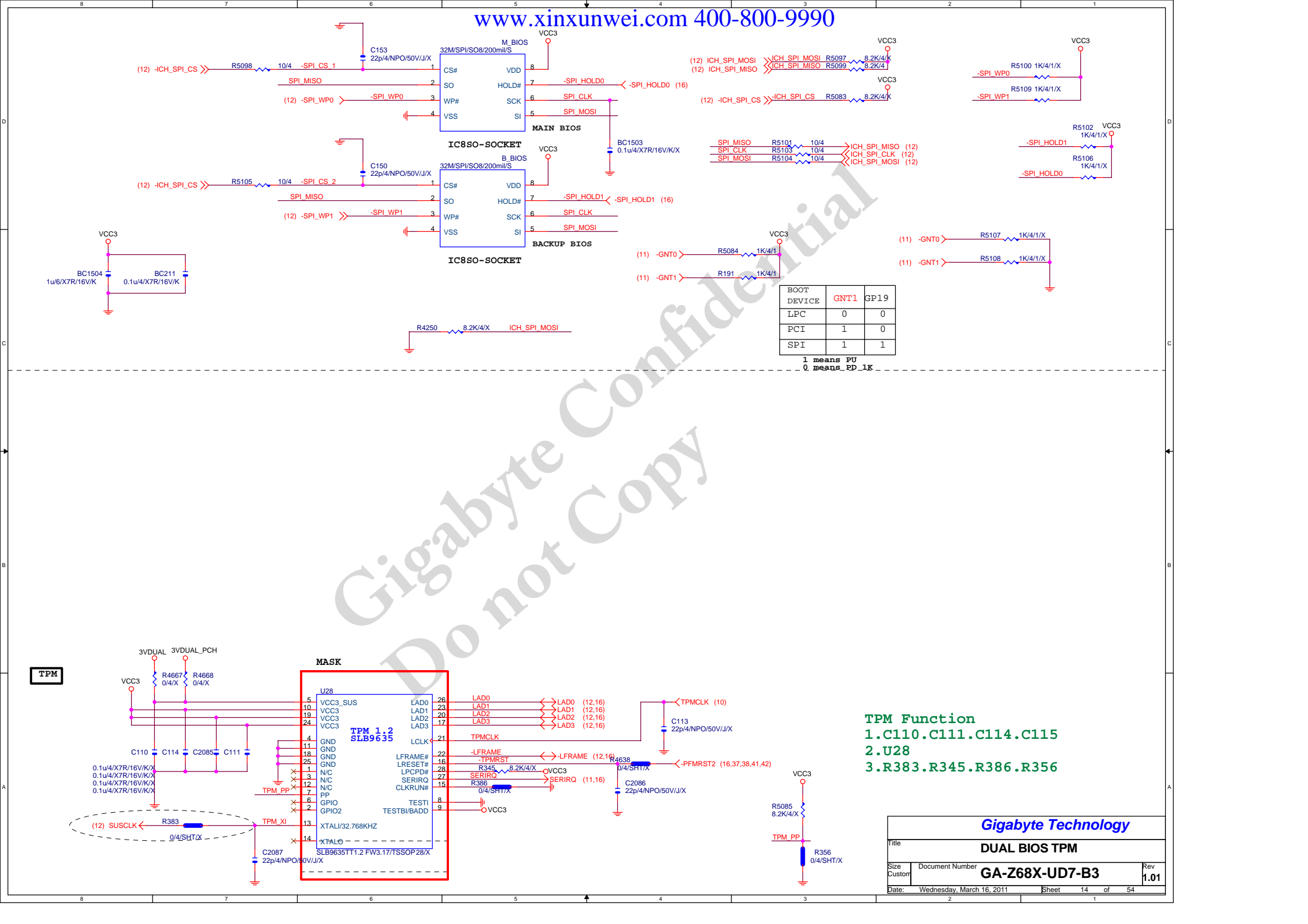
- BIOS Section:** Features three BIOS chips (M\_BIOS, MAIN BIOS, and BACKUP BIOS) connected to various pins. It includes a table for boot device settings:
 

BOOT DEVICE	GNT1	GP19
LPC	0	0
PCI	1	0
SPI	1	1

 A legend indicates that '1' means PU and '0' means PD 1K.
- TPM Section:** Shows the TPM 1.2 SLB9635 chip connected to various pins, including VCC3, GND, LFRAME, LRESET, LPCPD#, SERIRQ, CLKRUN#, PP, TESTI, TESTBI/BADD, XTAL0, and XTAL1. It also includes a table for TPM function components:
 

TPM Function	Component
1.	C110.C111.C114.C115
2.	U28
3.	R383.R345.R386.R356
- Other Components:** Includes various capacitors (C153, C150, C110, C114, C2085, C111, C2087), resistors (R5098, R5105, R5084, R191, R5107, R5108, R5102, R5106, R4250, R4667, R4668, R383, R345, R386, R356), and other components like BC1504, BC211, BC1503, and BC1504.

The diagram is a detailed representation of the motherboard's internal circuitry, showing the connections between various components and the BIOS/TPM chips.

[illegible][illegible]

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IC8SO-SOCKET

IC8SO-SOCKET

IC8SO-SOCKET

TPM 1.2 SLB9635

BOOT DEVICE	GNT1	GP19
LPC	0	0
PCI	1	0
SPI	1	1

1 means PU  
0 means PD 1K

TPM Function

- 1.C110.C111.C114.C115
- 2.U28
- 3.R383.R345.R386.R356

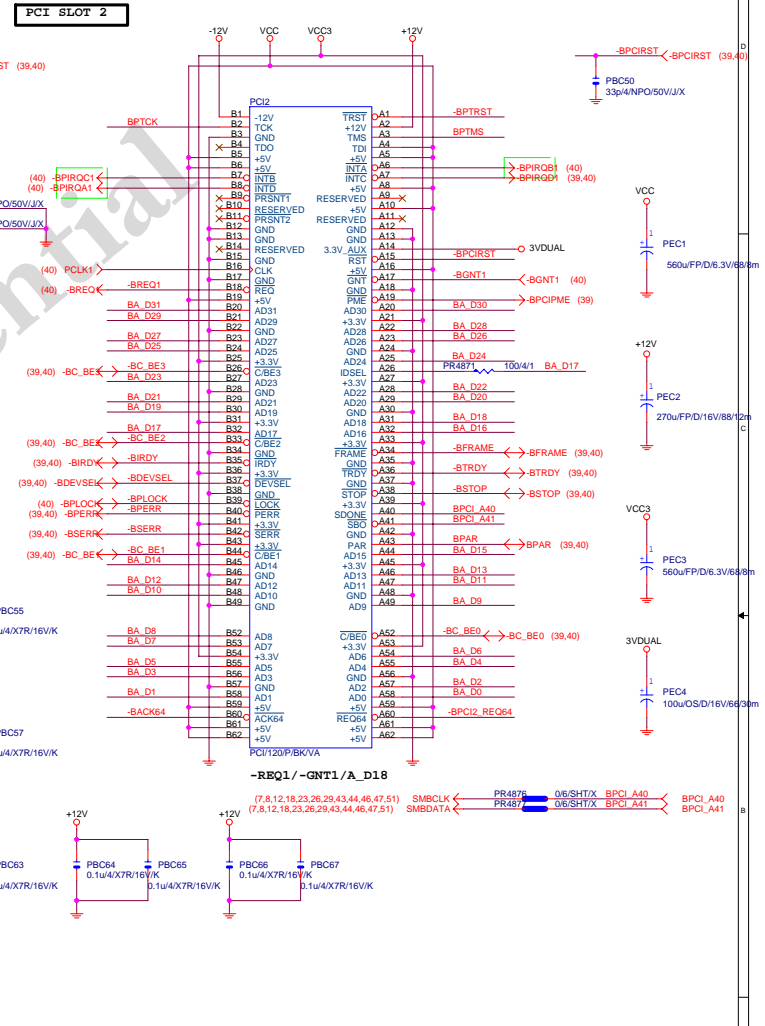
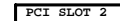
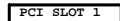
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DUAL BIOS TPM

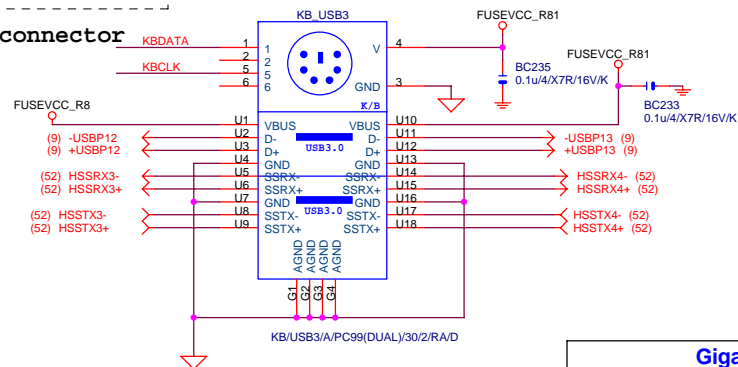
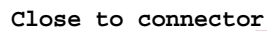
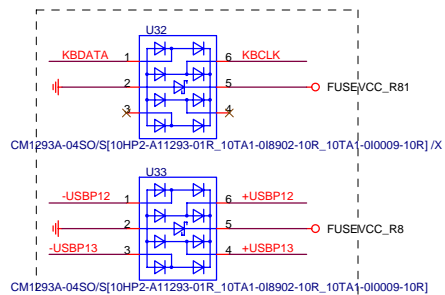
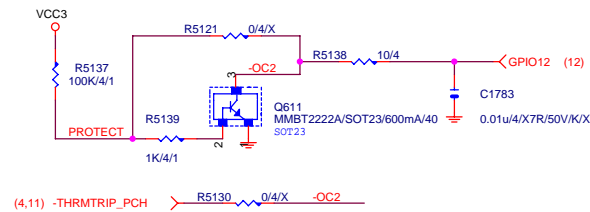
GA-Z68X-UD7-B3

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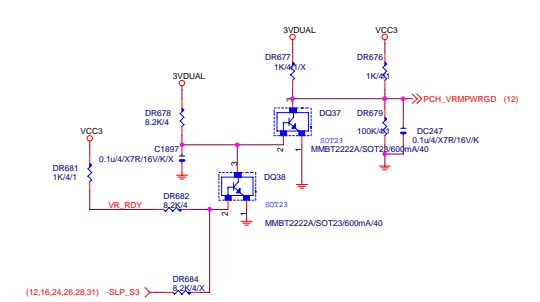






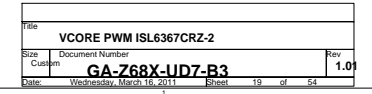
## Gigabyte Technology

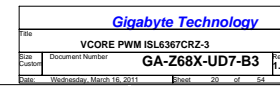
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COM & PROHOT/Dynamic O.C.			
Size	Document Number		Rev
Custom		GA-Z68X-UD7-B3	1.01
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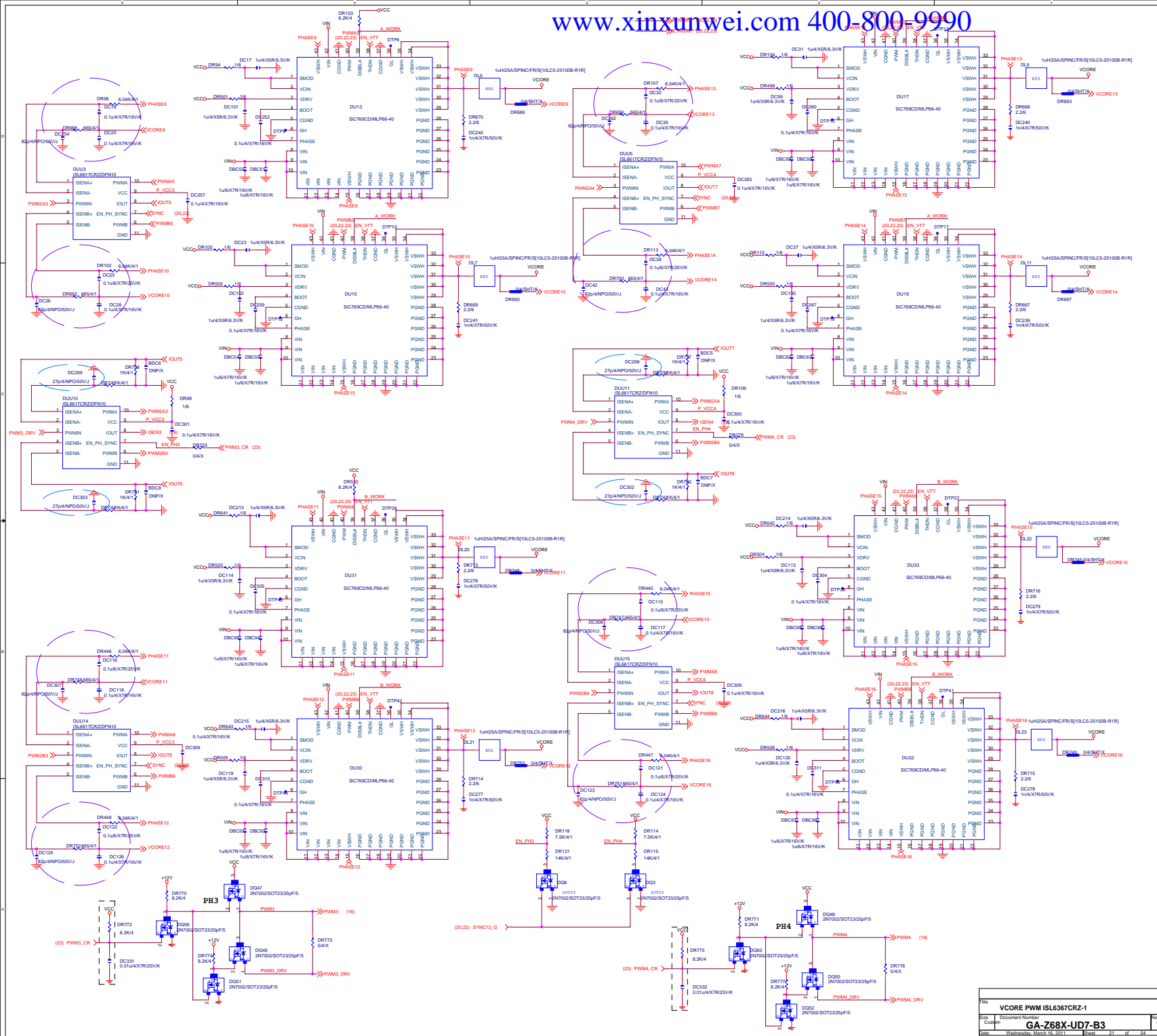


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GA-Z68X-UD7-B3			
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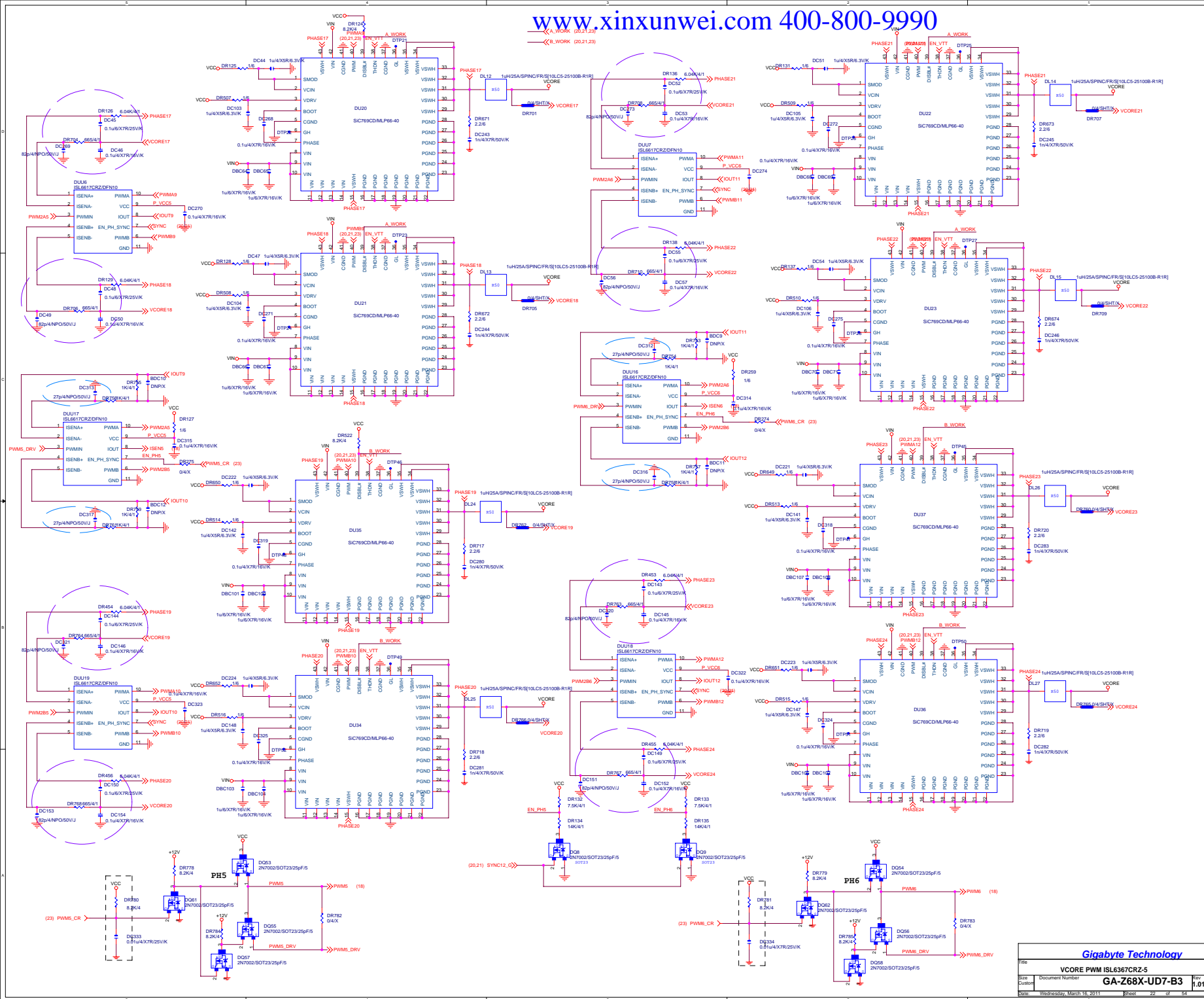


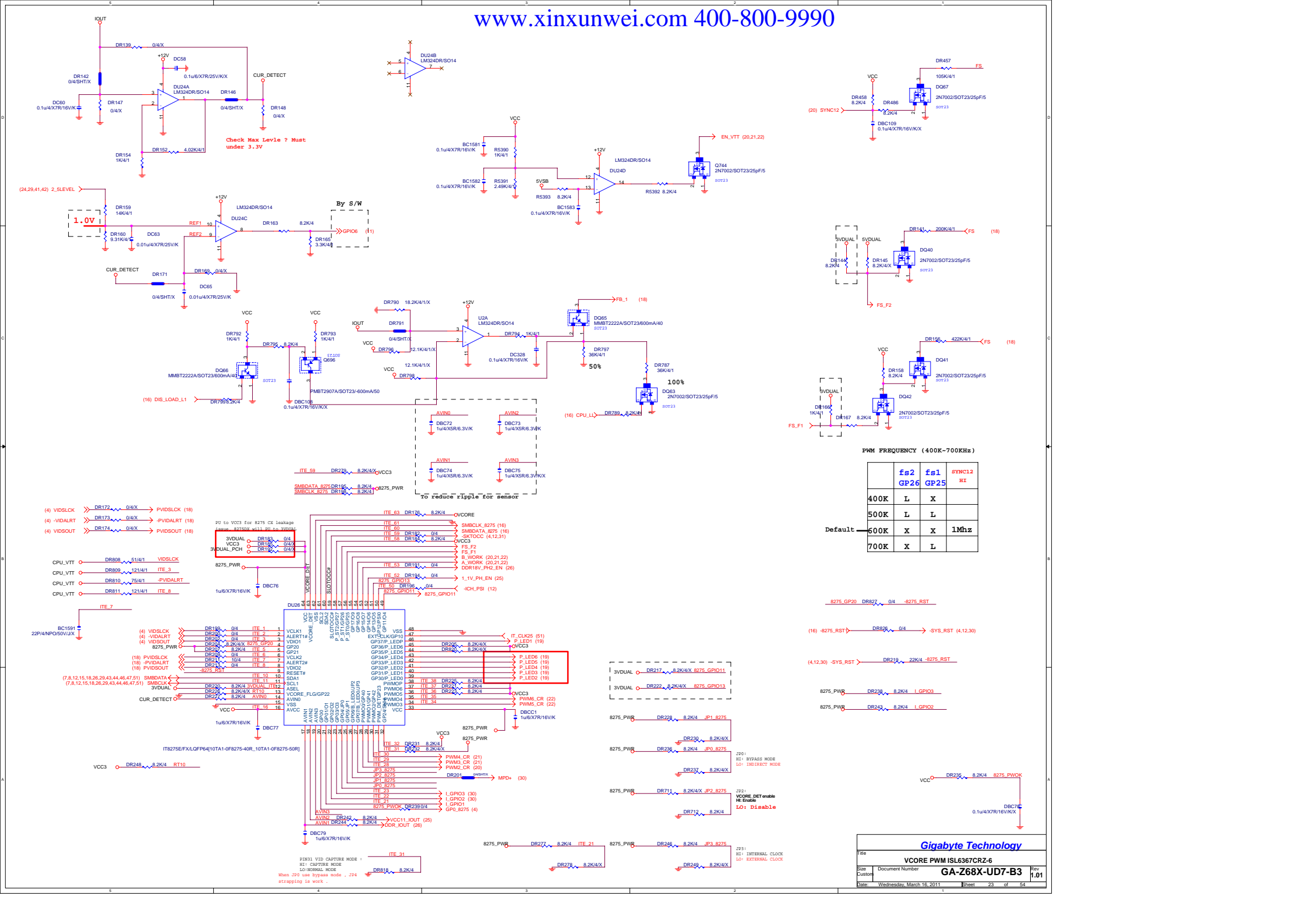




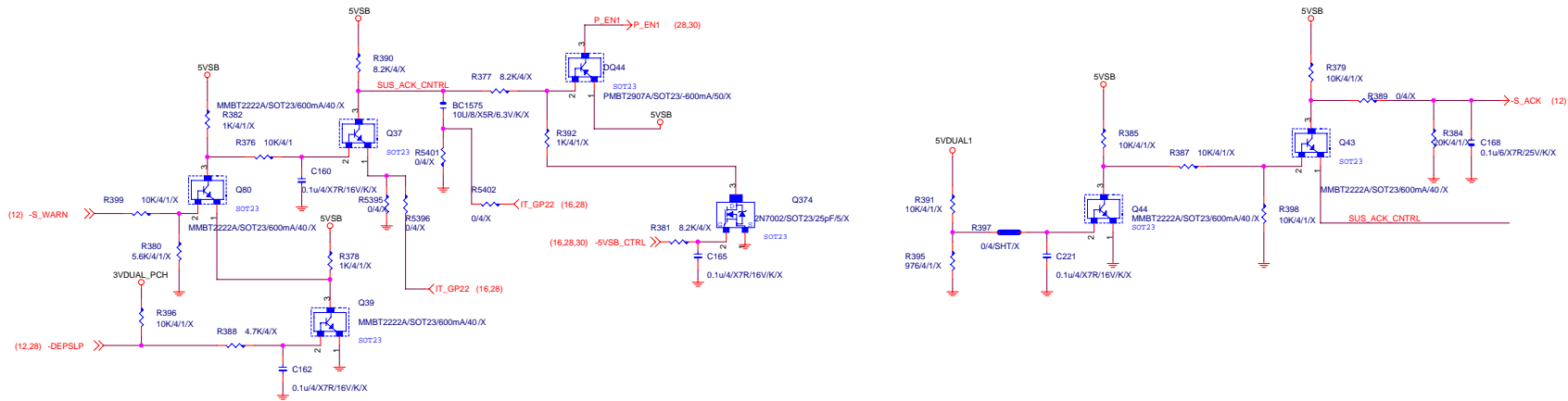


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Size	Document Number		
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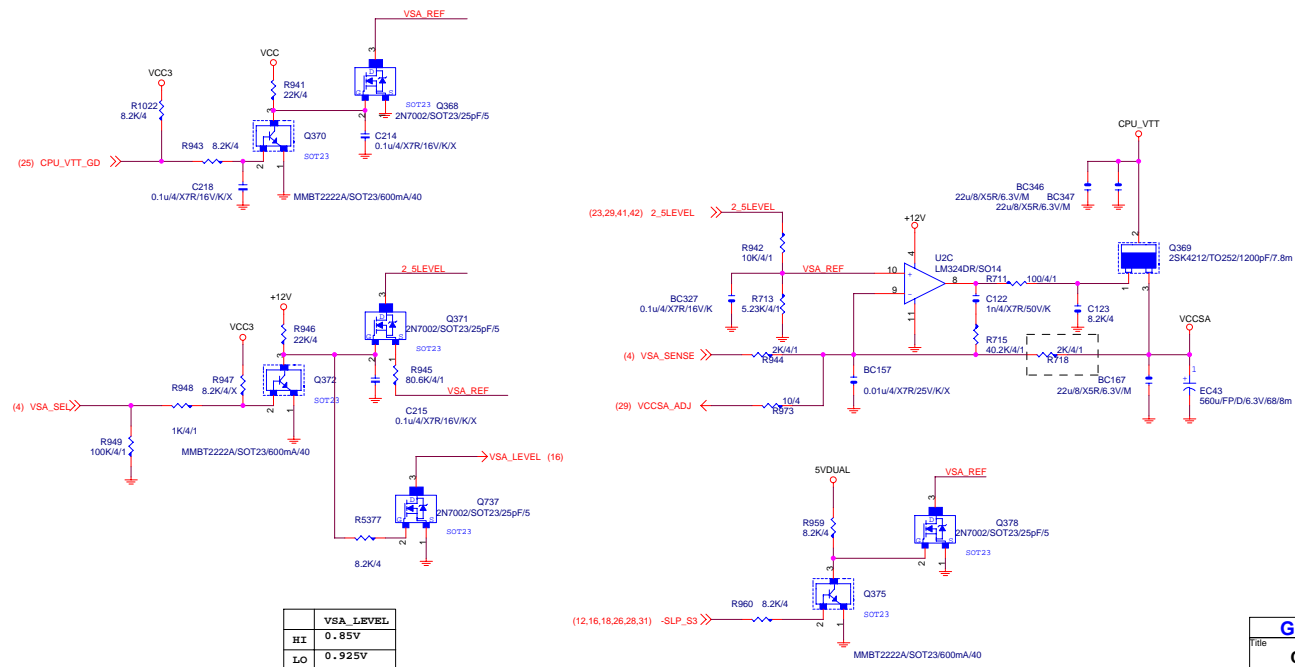








## VCC\_SA



PDG 0.8

VSA_SEL
HI 0.85V
LO 0.925V

CPU internal PU for HI  
But need external PD for Low

VSA_LEVEL
HI 0.85V
LO 0.925V

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File CPU VTT PWM\_ISL6312

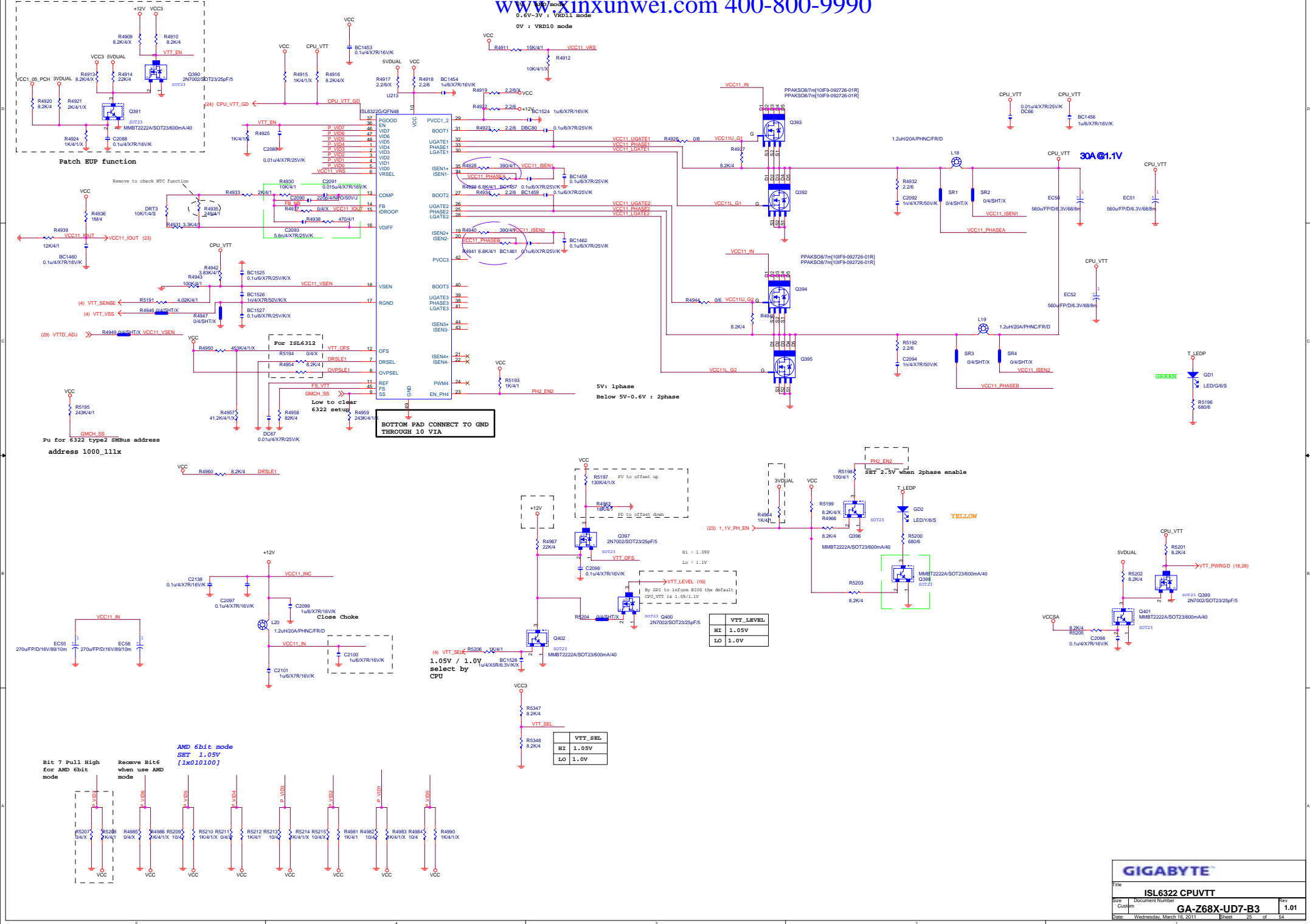
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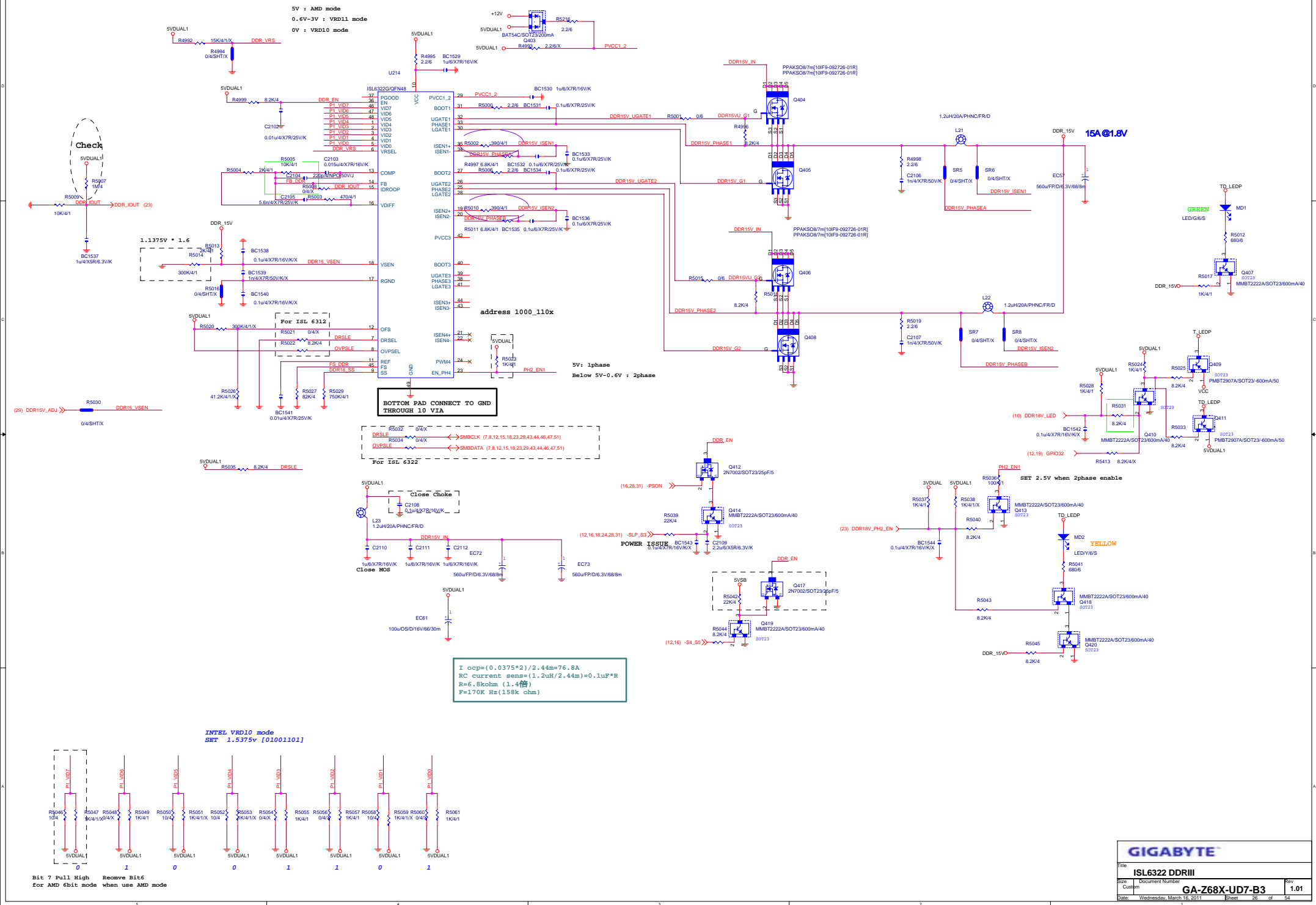
Rev 1.01

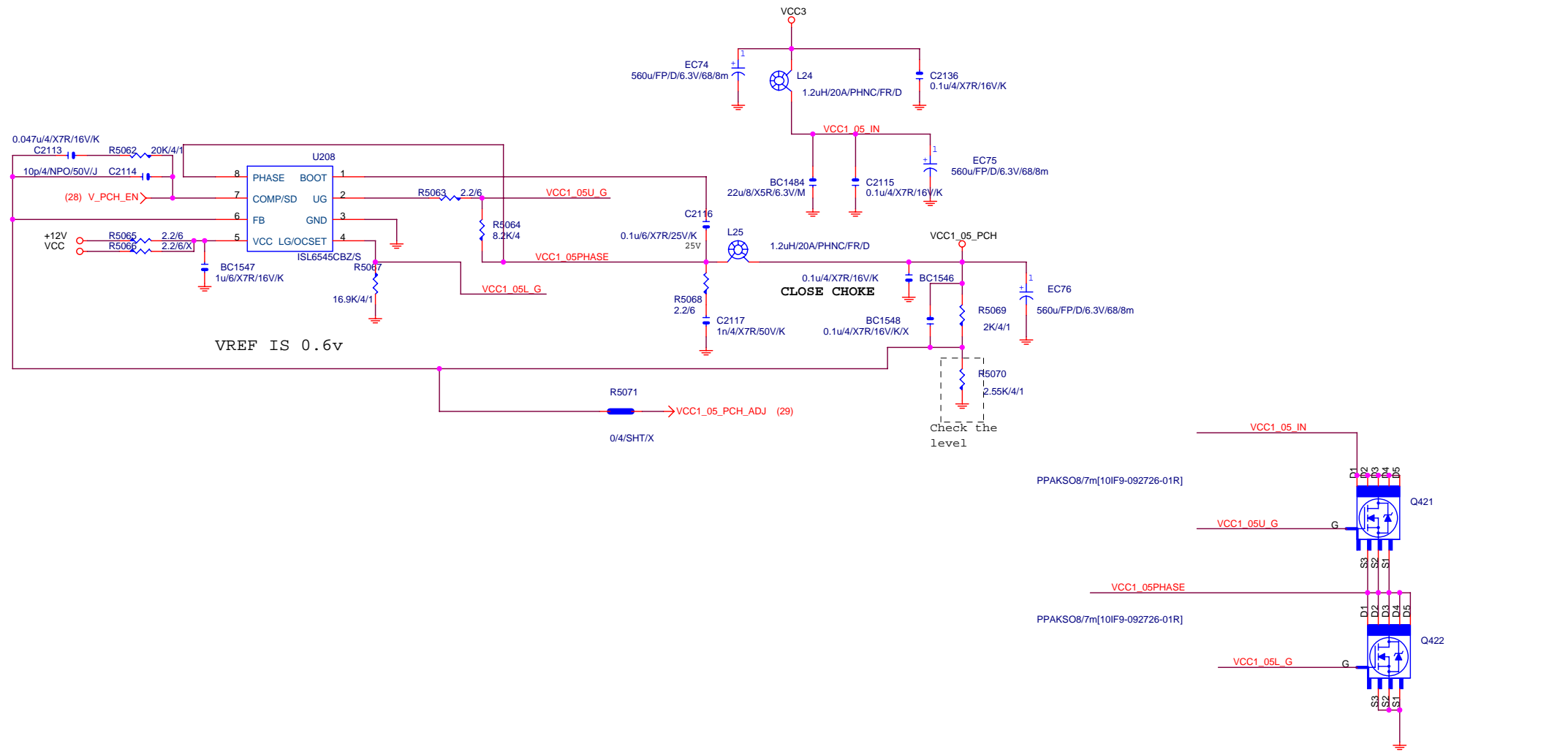
0.6V-3V : VRD11 mode

0V : VRD10 mode

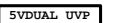
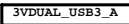


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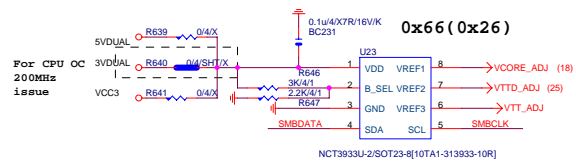
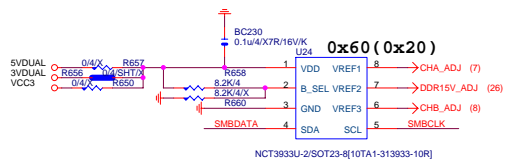
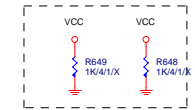
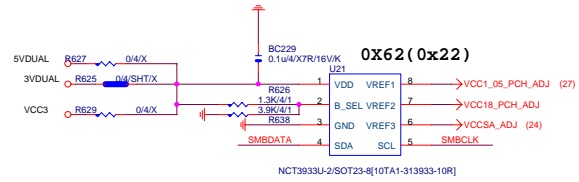
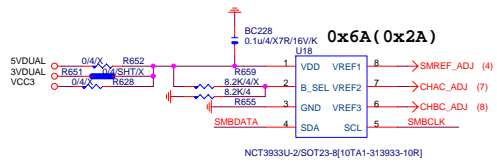
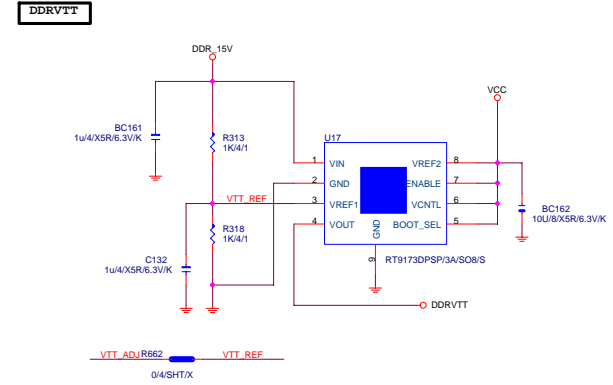
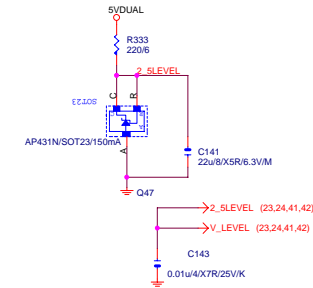
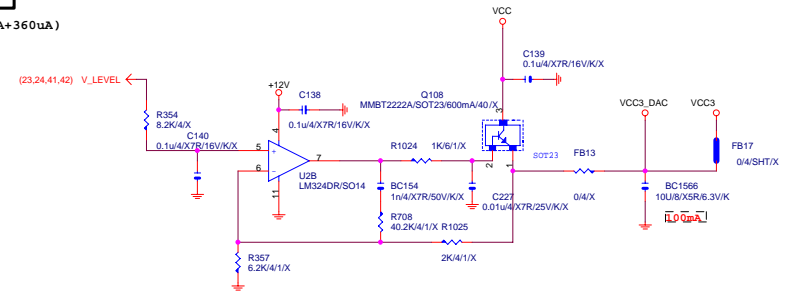
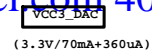
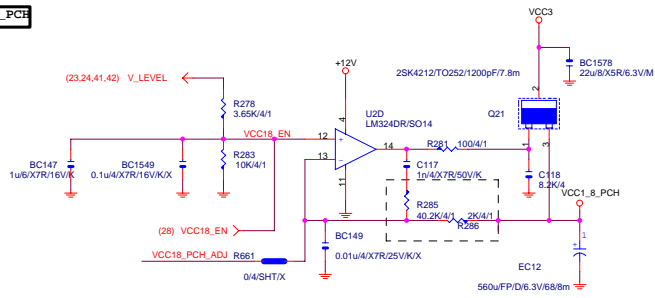


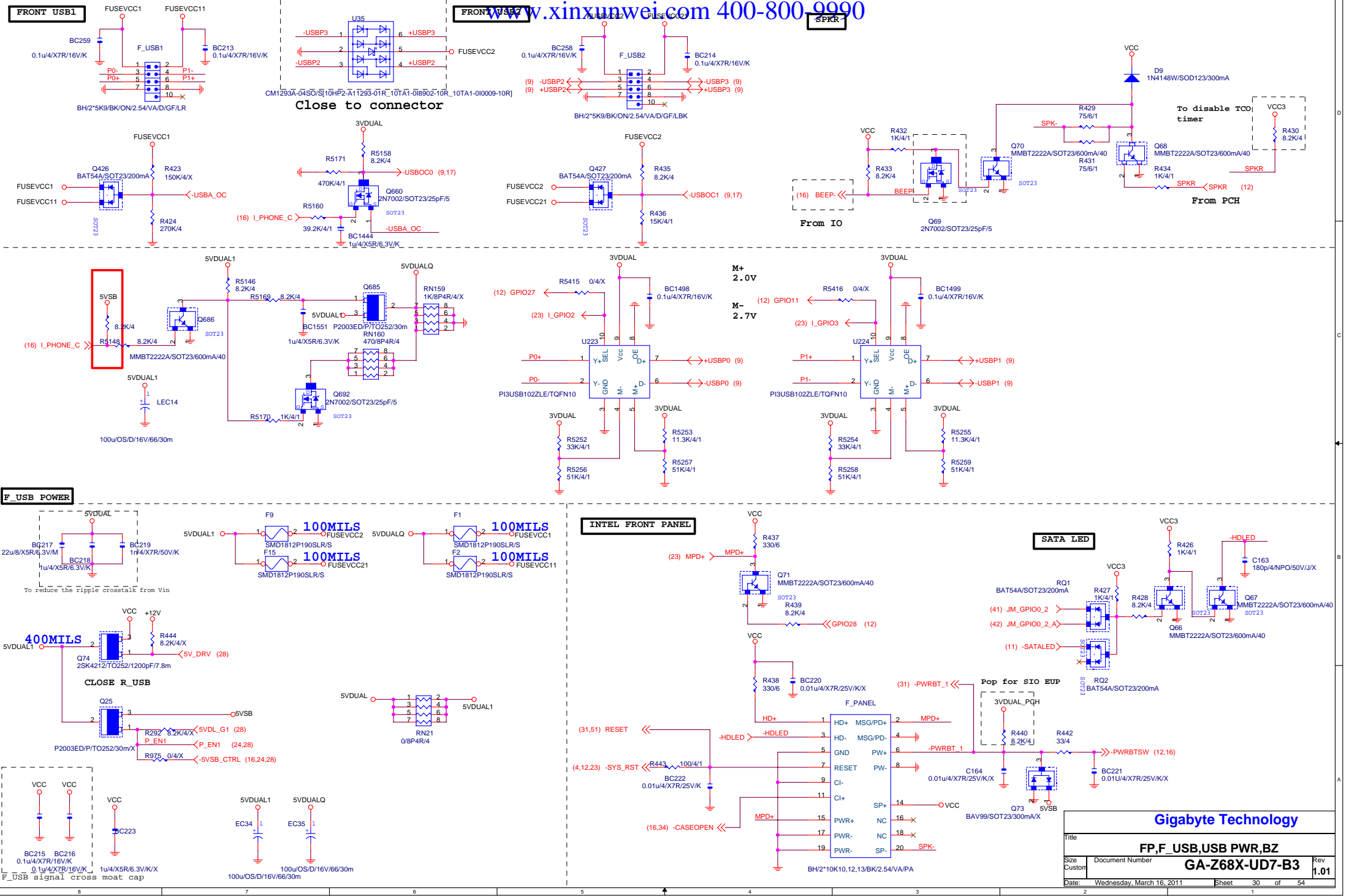
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Size	Document Number	Rev	
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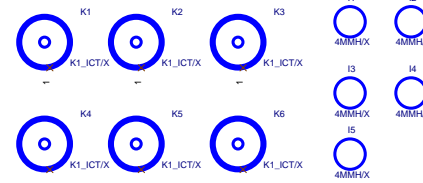


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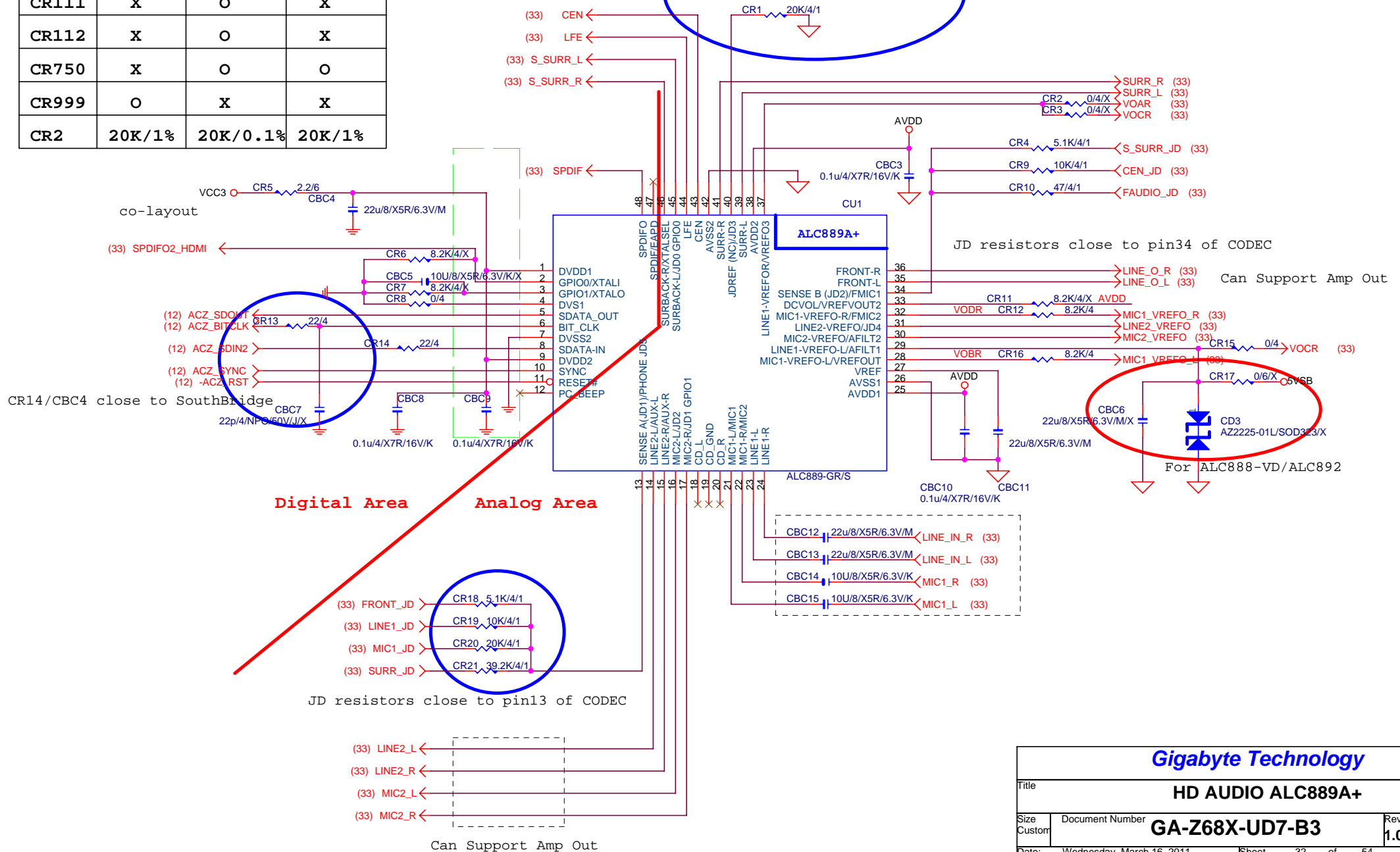


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ATX & LED/ BUTTON			
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## AZALIA CODEC

ALC889A+/ALC889A/ALC888Vx Colay

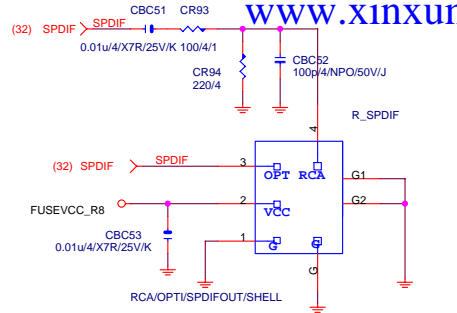
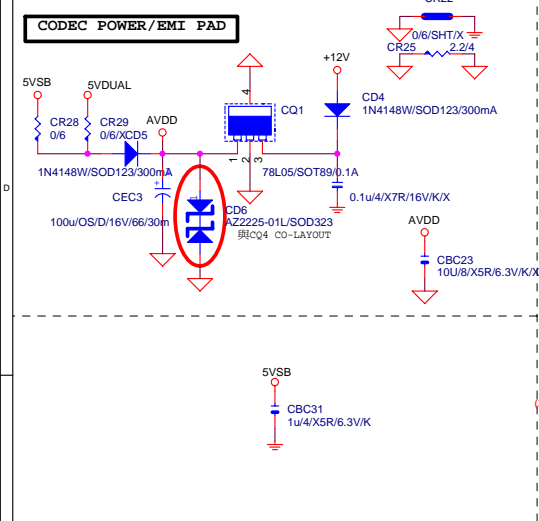
	ALC889A+	ALC889A	ALC888Vx
CR111	X	O	X
CR112	X	O	X
CR750	X	O	O
CR999	O	X	X
CR2	20K/1%	20K/0.1%	20K/1%



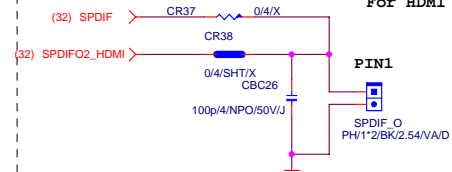
Gigabyte Technology

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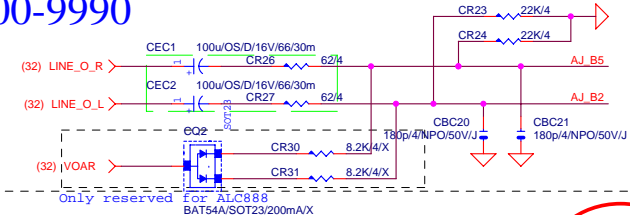
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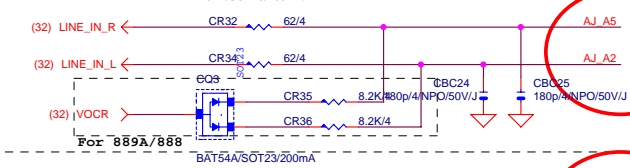
For HDMI SPDIF



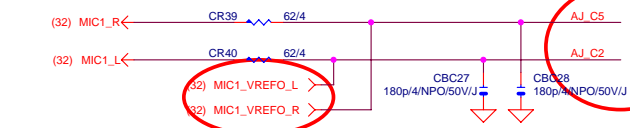
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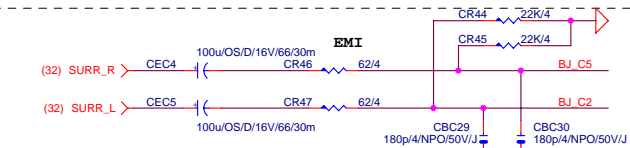
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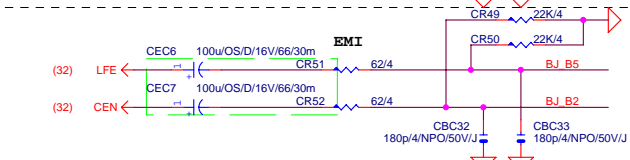
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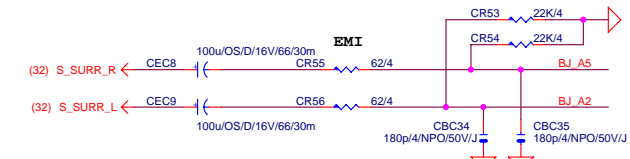
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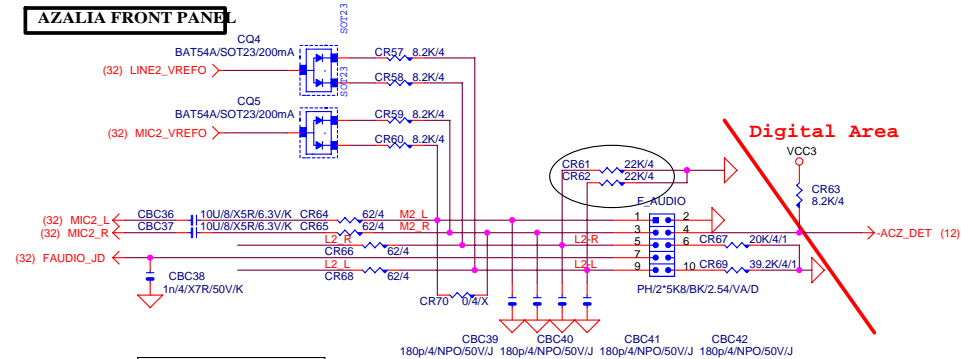
## CEN/LFE



## SURR BACK



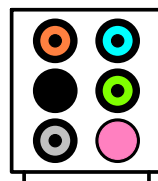
## AZALIA FRONT PANEL



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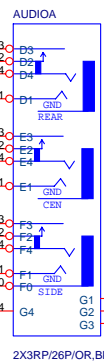
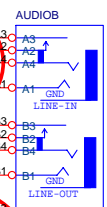
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Size	Document Number	Rev
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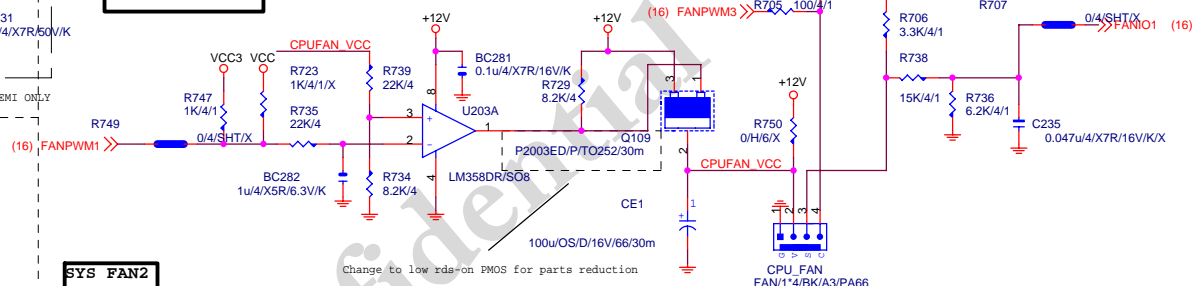
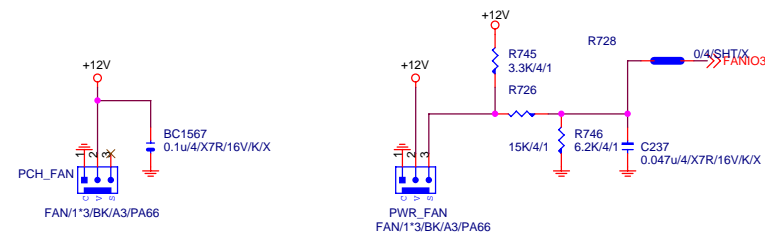
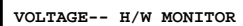
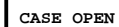
BTX AZALIA CONNECTOR



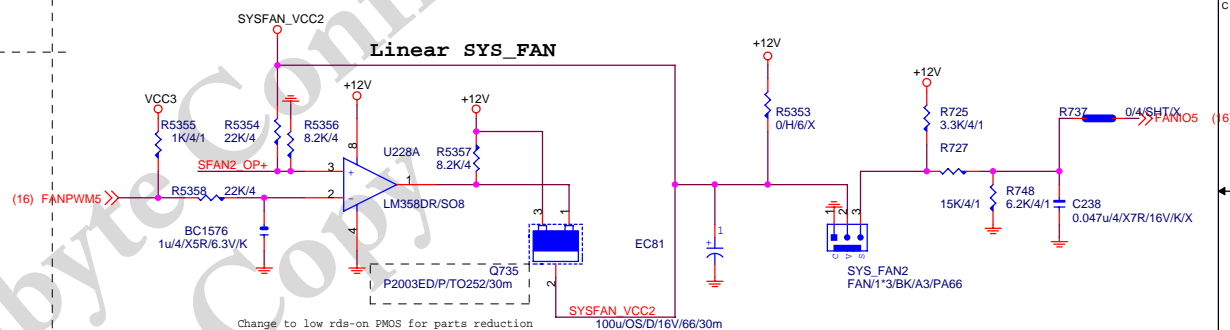
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## AZALIA JACK

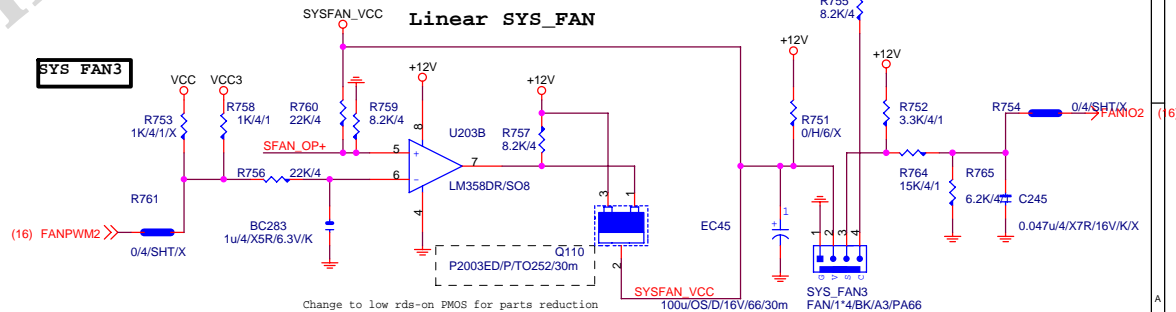
BLUE  
LINE-INGREEN  
LINE-OUTPINK  
MIC-INOrange  
CEN/LFEBlack  
SURROUNDGray  
SURROUND SIDE



SYS FAN2



Linear SYS\_FAN

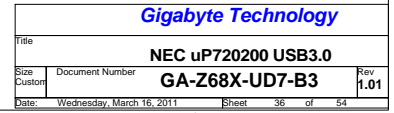


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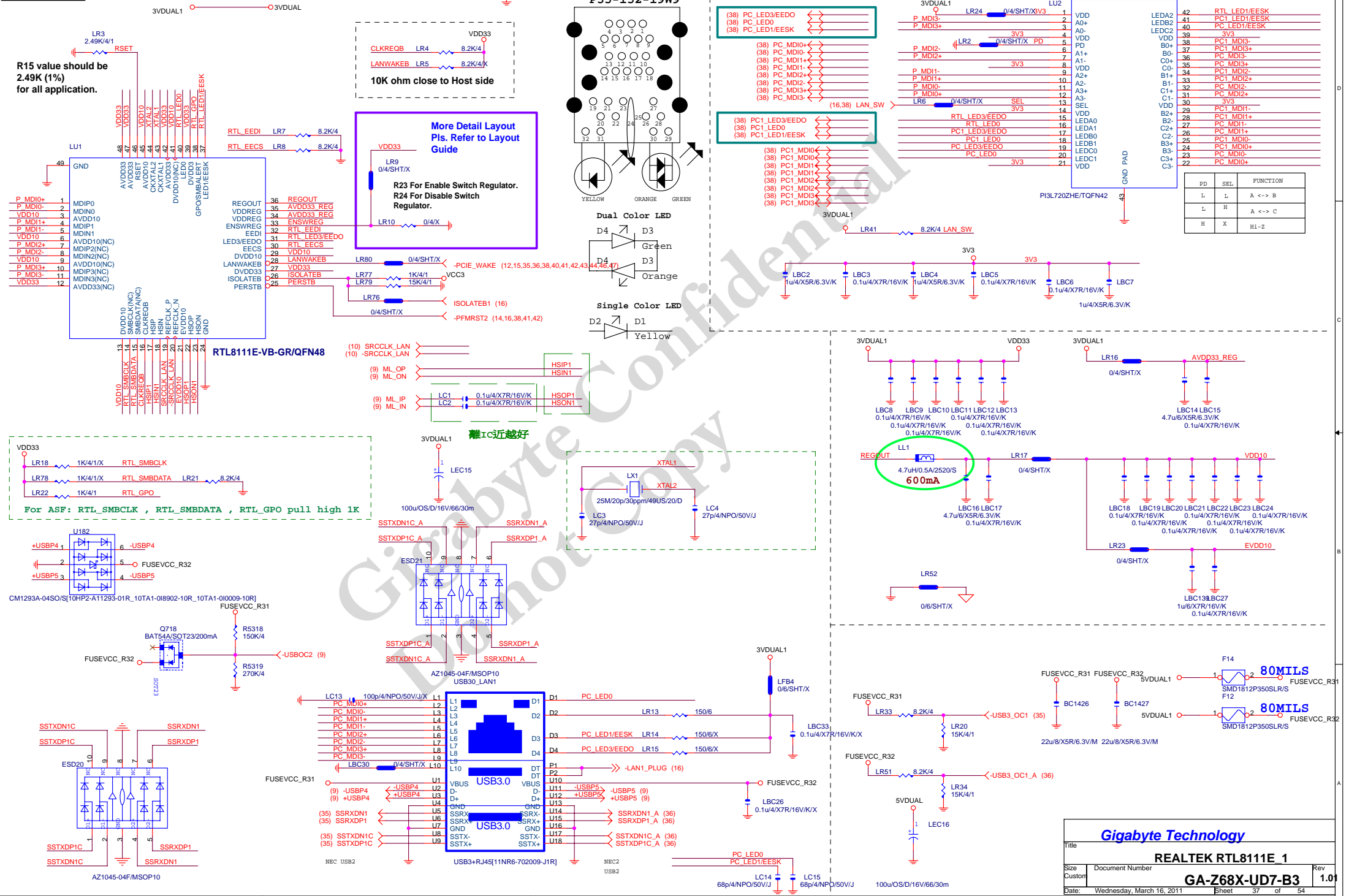
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HWM,KB/MS, FAN CTRL			
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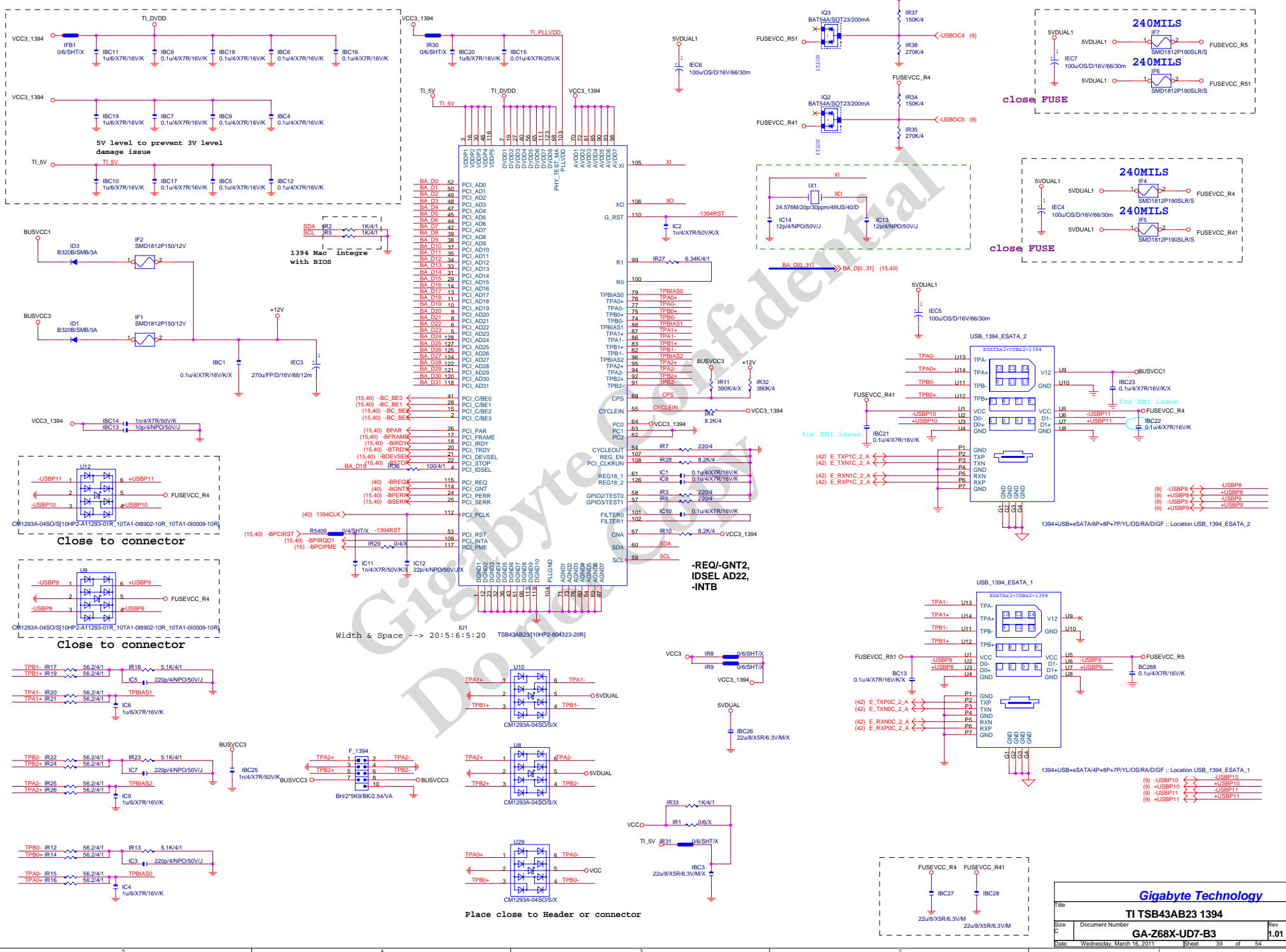


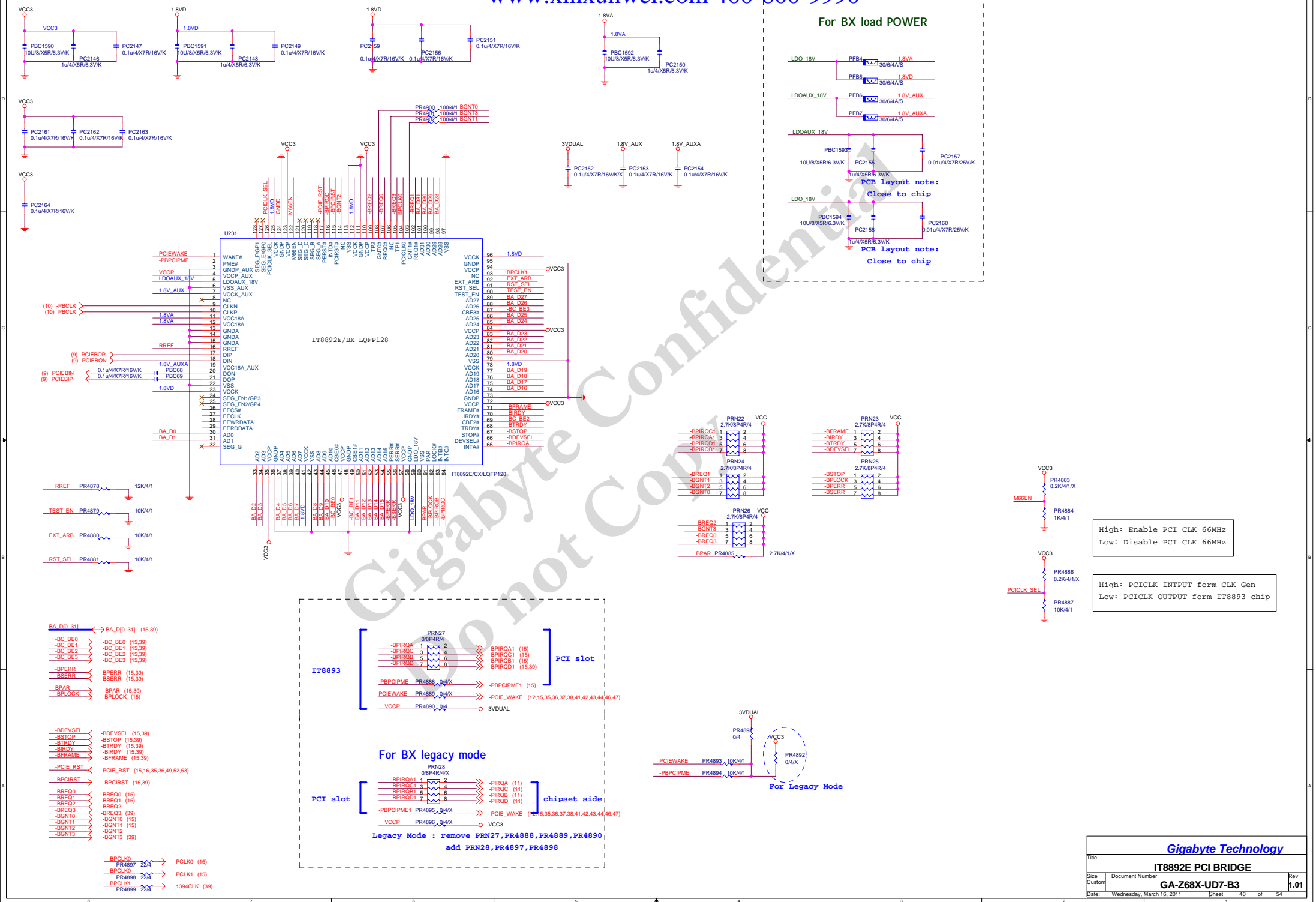
PCIE-1G LAN



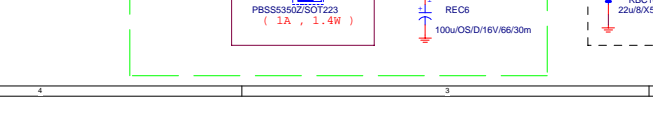
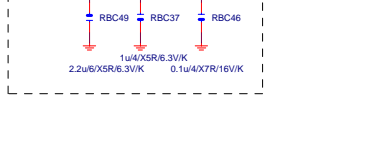
PD	SEL	FUNCTION
L	L	A <-> B
L	H	A <-> C
H	X	HI-Z











GPI0	GP0	GP1	GP2	GP3	GP4	GP5
SET	X	X	X	X	X	X

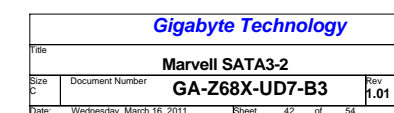
E TXP0_2	0.01u4/X7R/25V/K	RC18	E TXP0C_2
E TXN0_2	0.01u4/X7R/25V/K	RC17	E TXN0C_2
E RXN0_2	0.01u4/X7R/25V/K	RC12	E RXN0C_2
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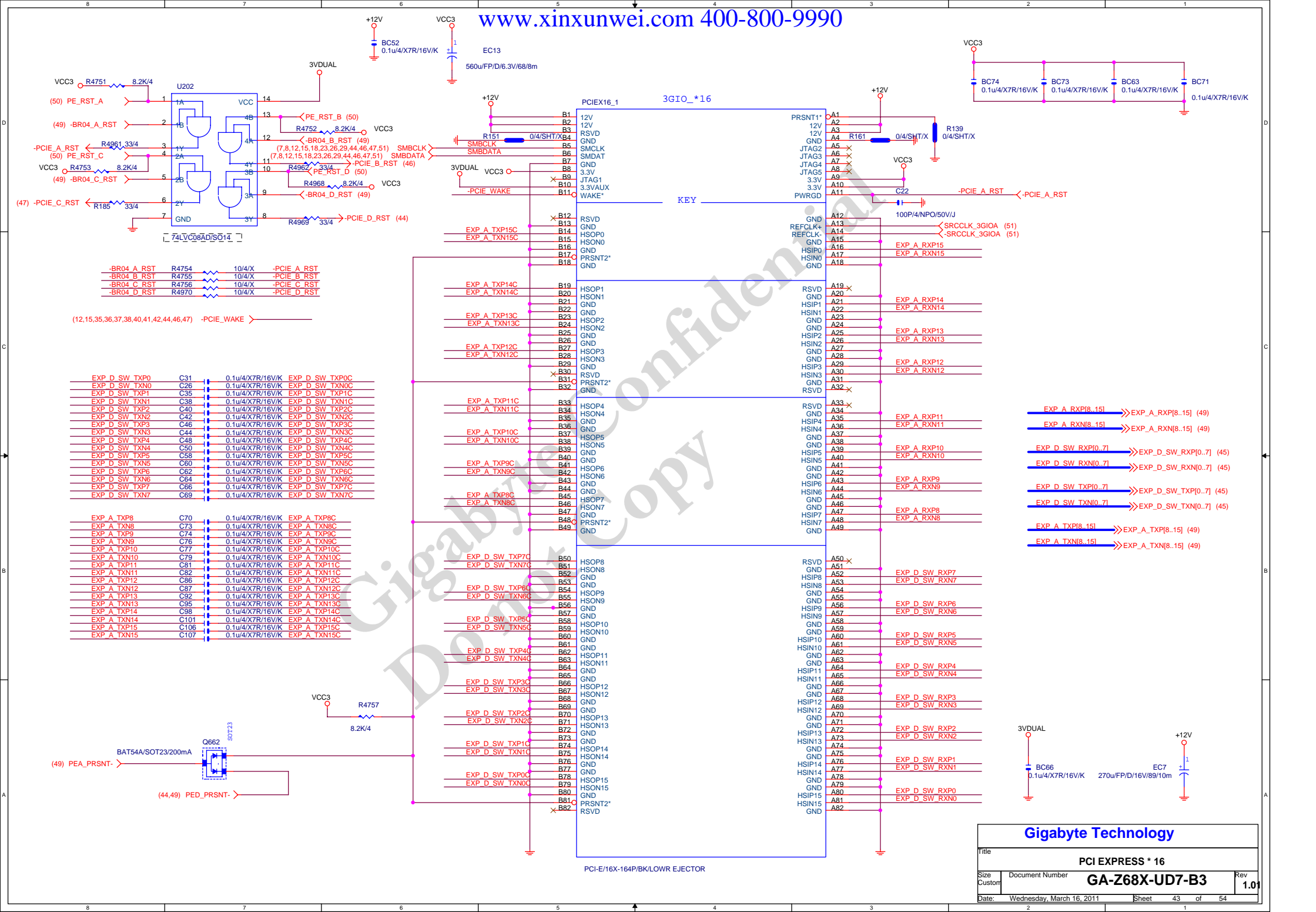
  

E TXP1_2	0.01u4/X7R/25V/K	RC16	E TXP1C_2
E TXN1_2	0.01u4/X7R/25V/K	RC15	E TXN1C_2
E RXN1_2	0.01u4/X7R/25V/K	RC14	E RXN1C_2
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白色  
connector

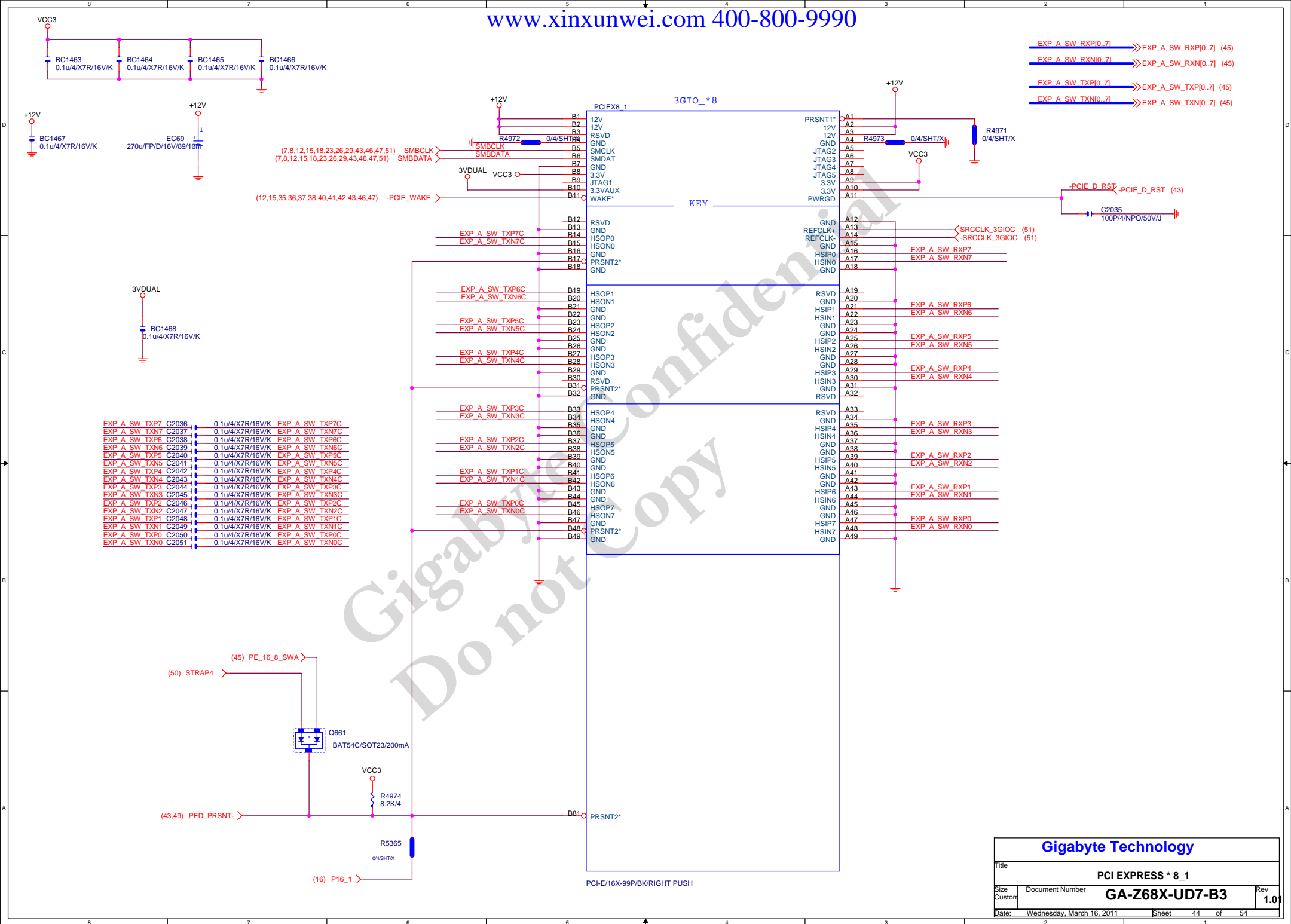
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VCONT_10_2
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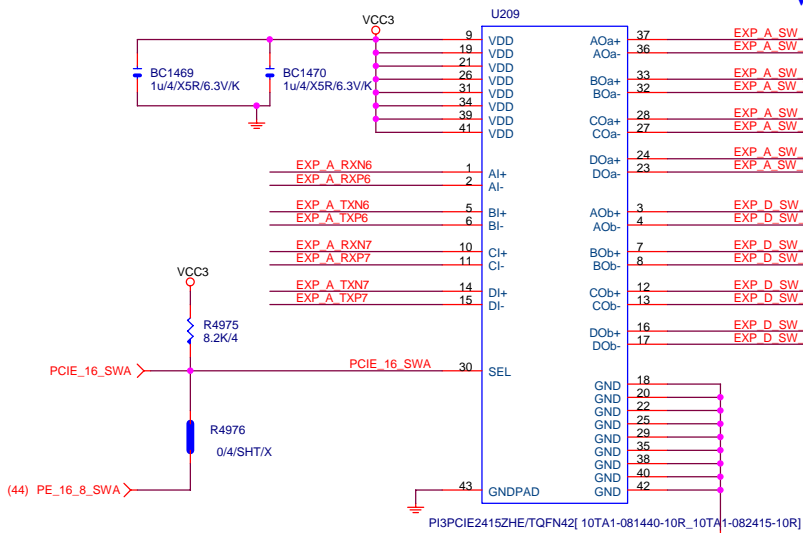




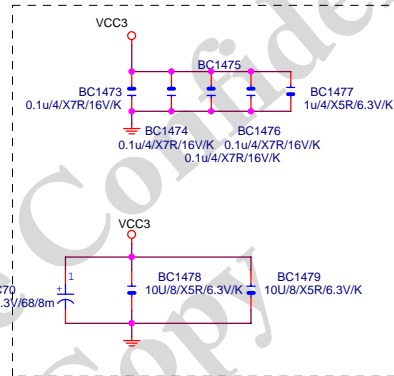
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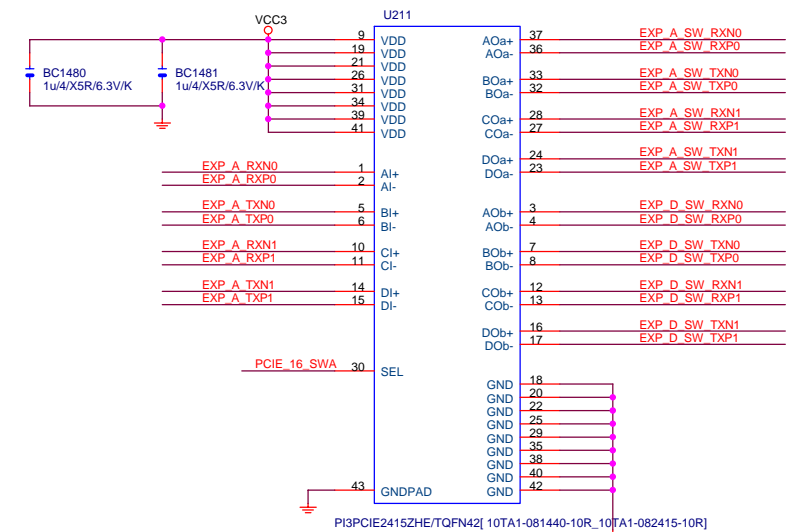
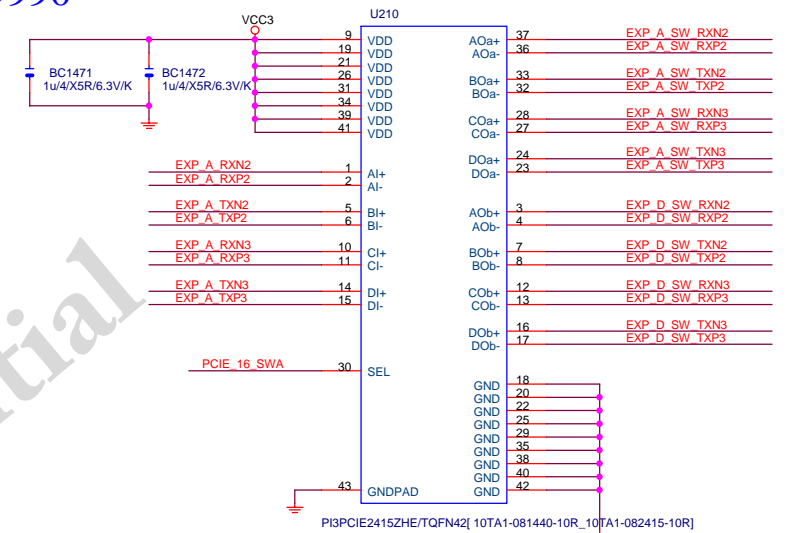


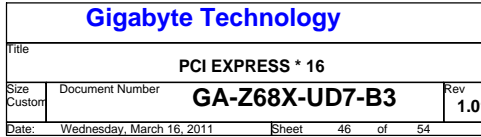


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xI--> xOb	H

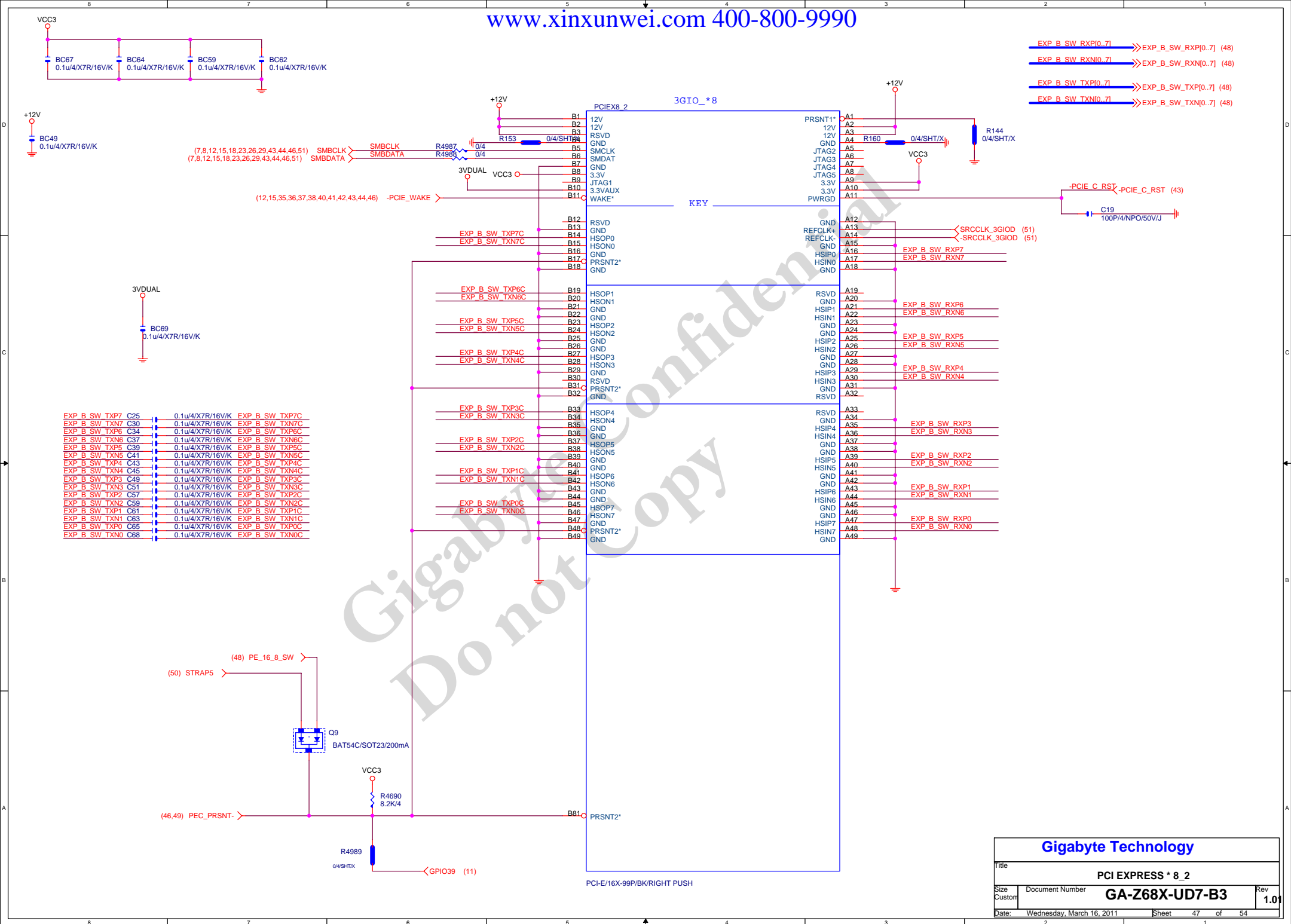


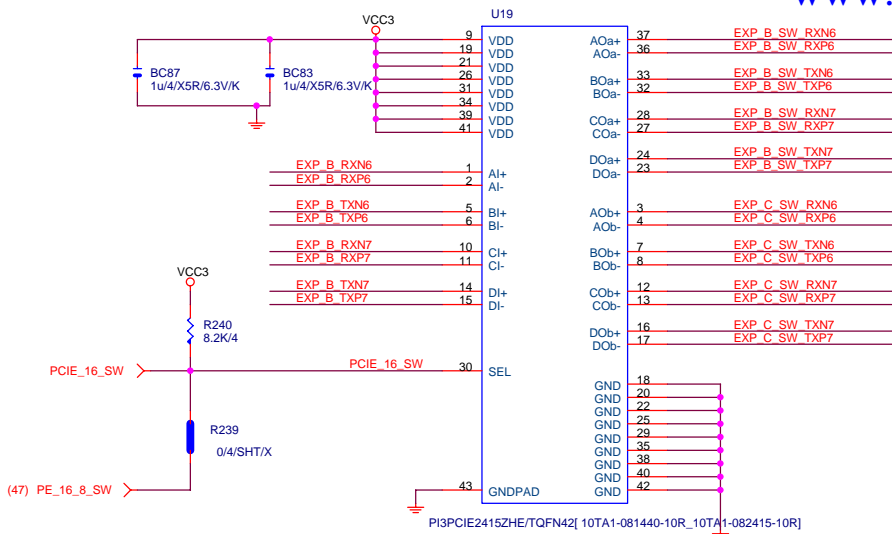
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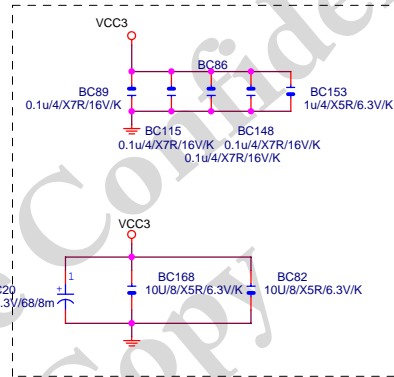




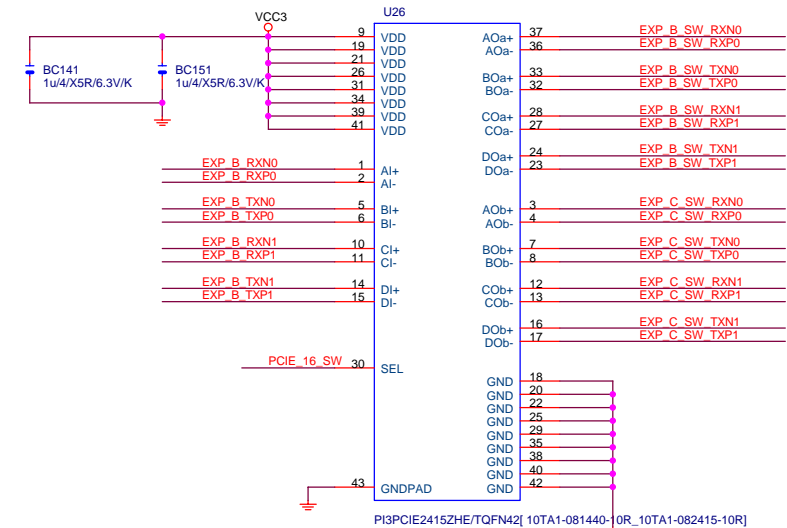
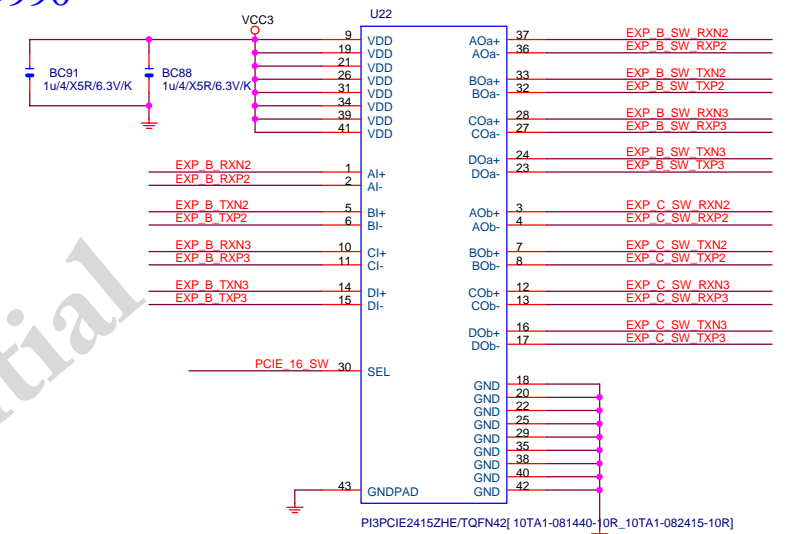




Function	SEL
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xI--> xOb	H



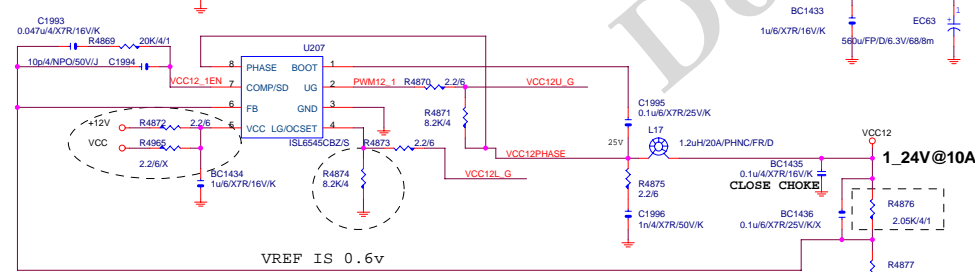
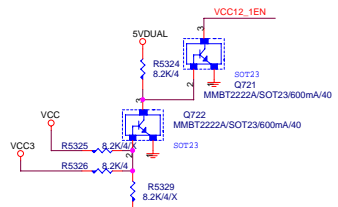
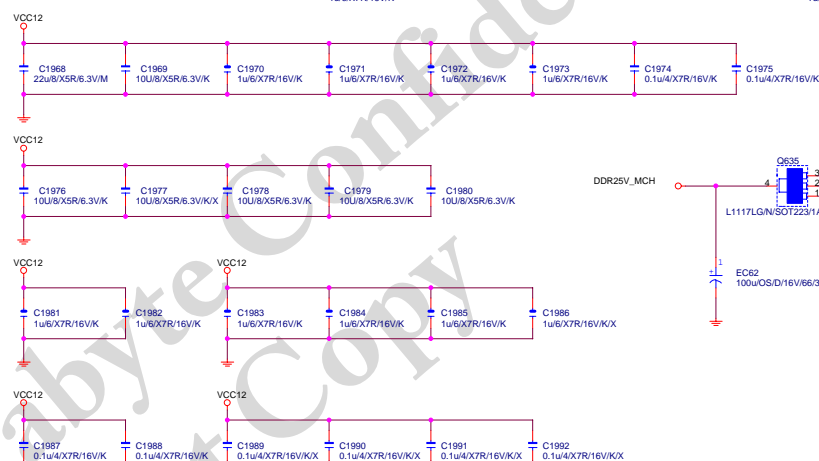
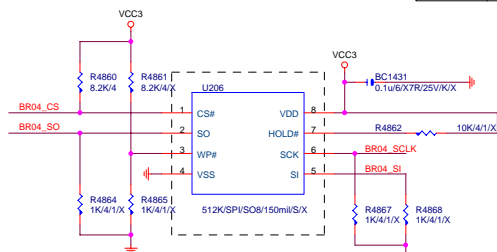
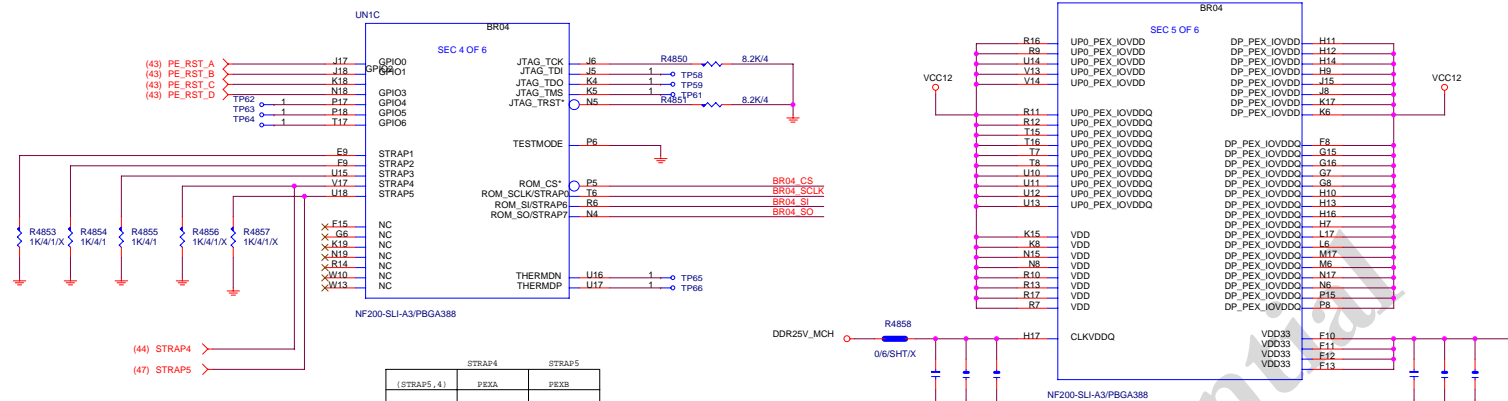
Close the Switch IC



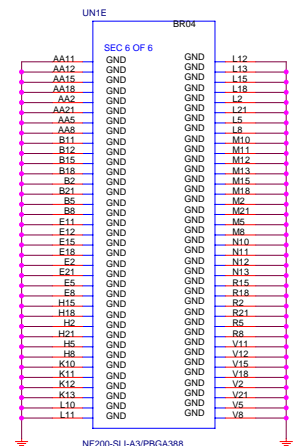
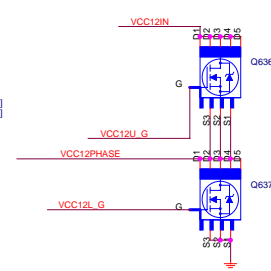
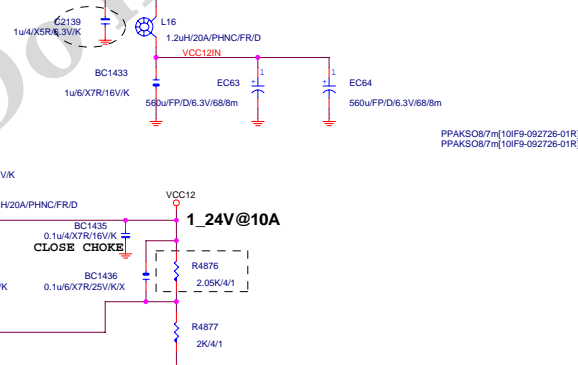
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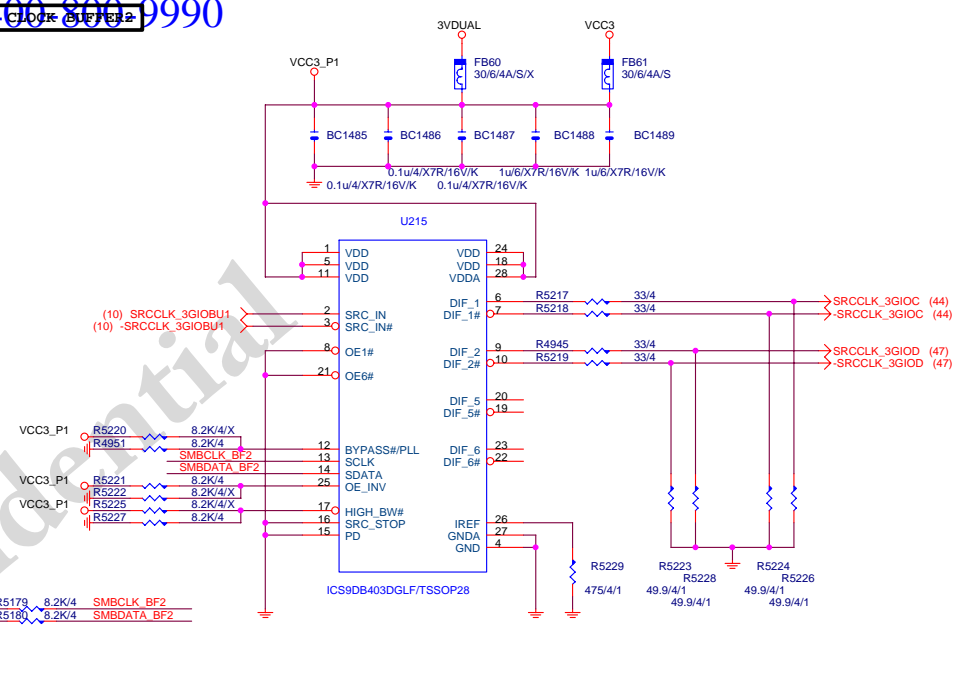


For ISL6520A Vin must be 5V



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CLK GEN CK505

