

Model Name: GA-Z68AP-D3

1.0

SHEET

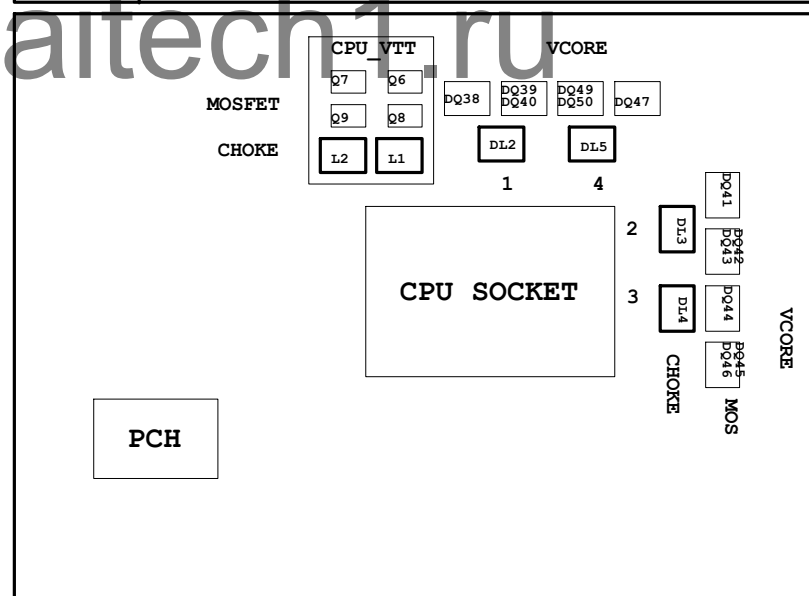
TITLE

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,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 EXPRESSX4 SLOT / PCIE X1 SLOT
16	IT8892
17	PCI SLOT 1&2&3
18	I/O ITE8728
19	COM, LPT, TPM
20	Dual BIOS
21	ALC889
22	REAR AUDIO JACK
23	VCORE PWM ISL6364CRZ-1
24	VCORE PWM ISL6364CRZ-2
25	DISCRETE POWER
26	DDR 15V & VCC1 05 PCH PWM ISL6545CBZ
27	CPU VTT PWM ISL95870

SHEET

TITLE

28	VCCSA POWER
29	F PANEL , F USB
30	ATX POWER, CLOCK GEN
31	HWM,KB/MS , FAN CTRL
32	REALTEK RTL8111E
33	ETRON 168A
34	HDMI
35	VAXG POWER, mSATA
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## GA-Z68AP-D3

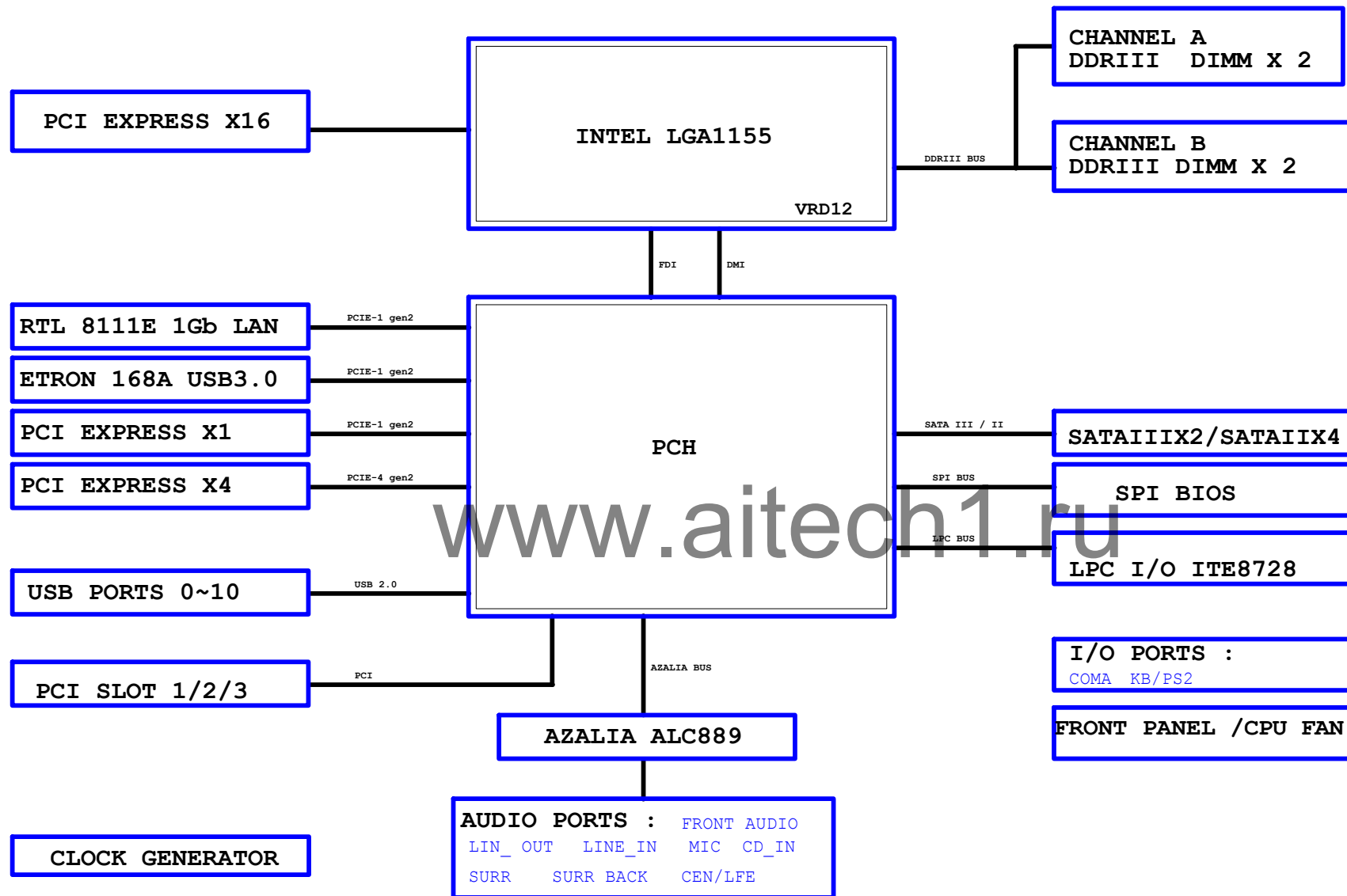
### Component value change history

[illegible]

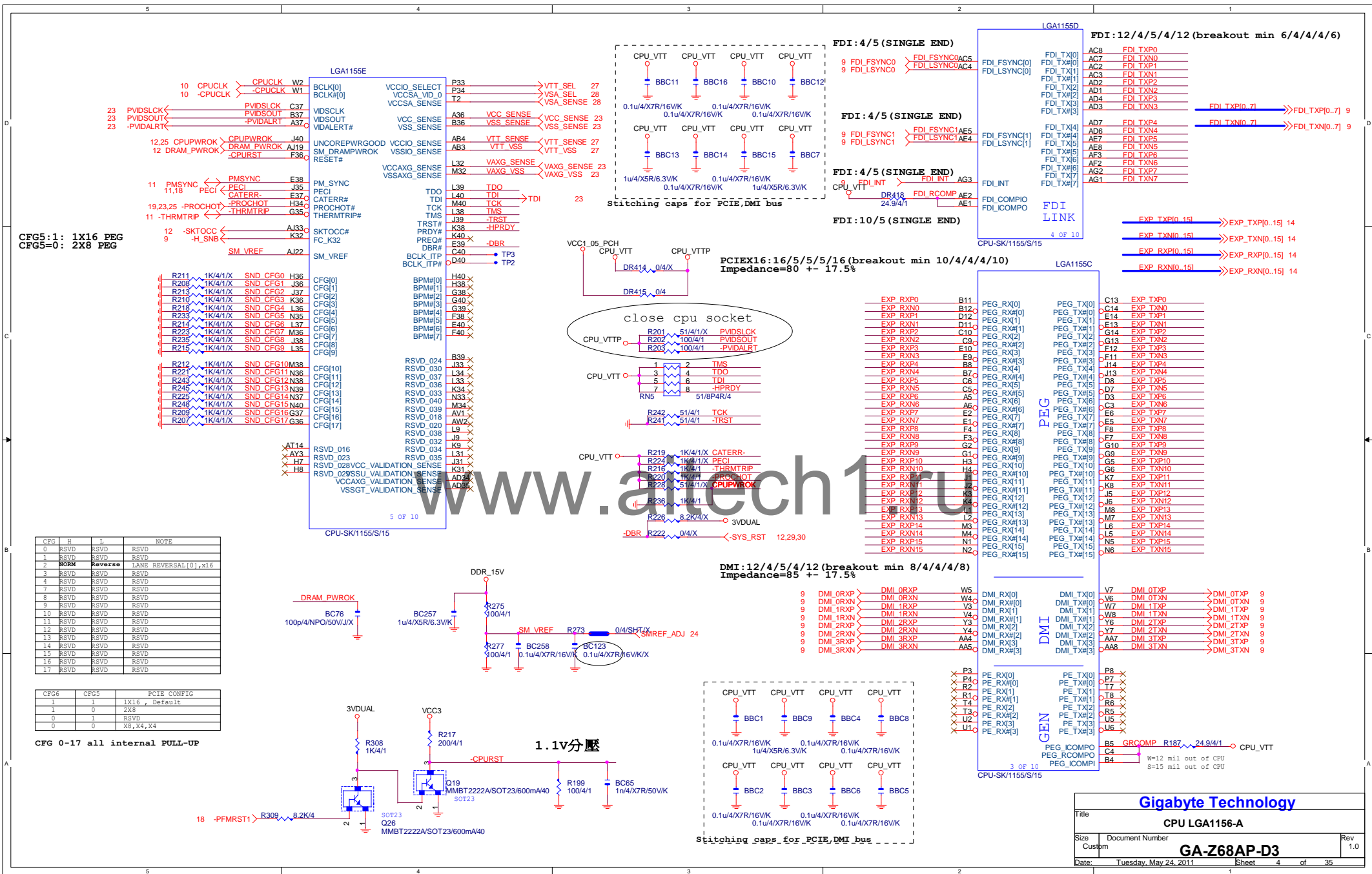
## Circuit or PCB layout change

[illegible]

# BLOCK DIAGRAM



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Title BLOCK DIAGRAM			
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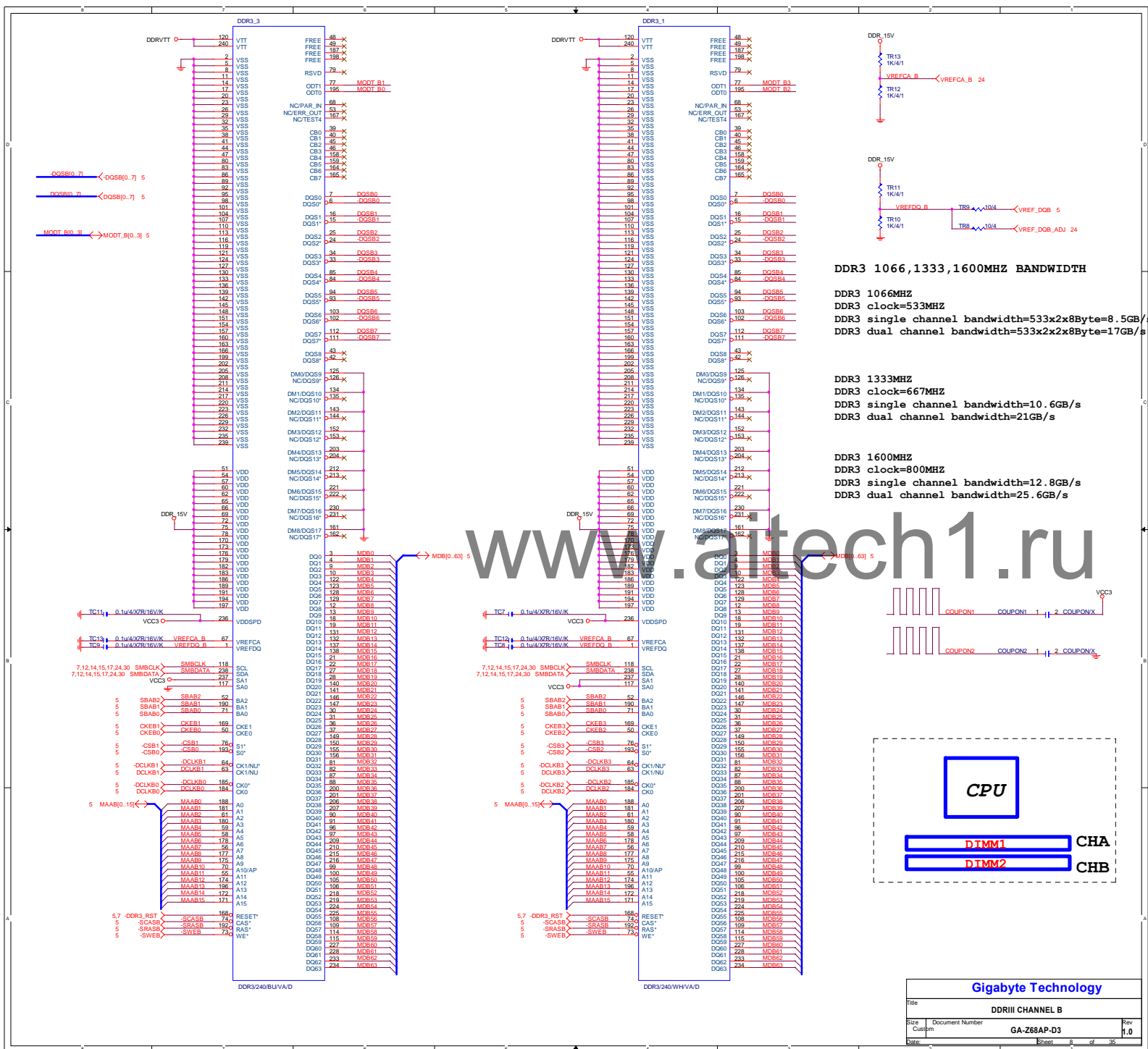














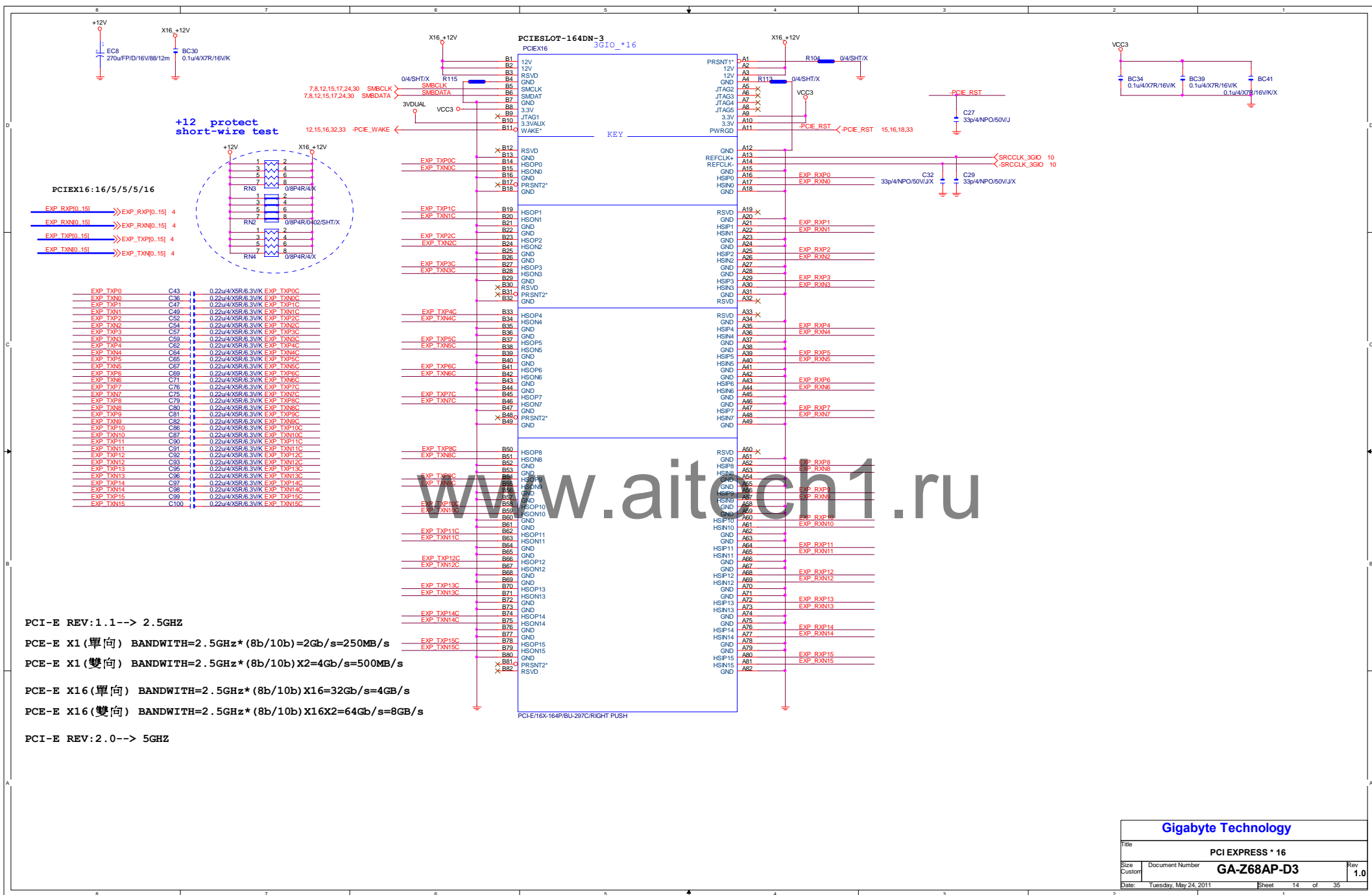






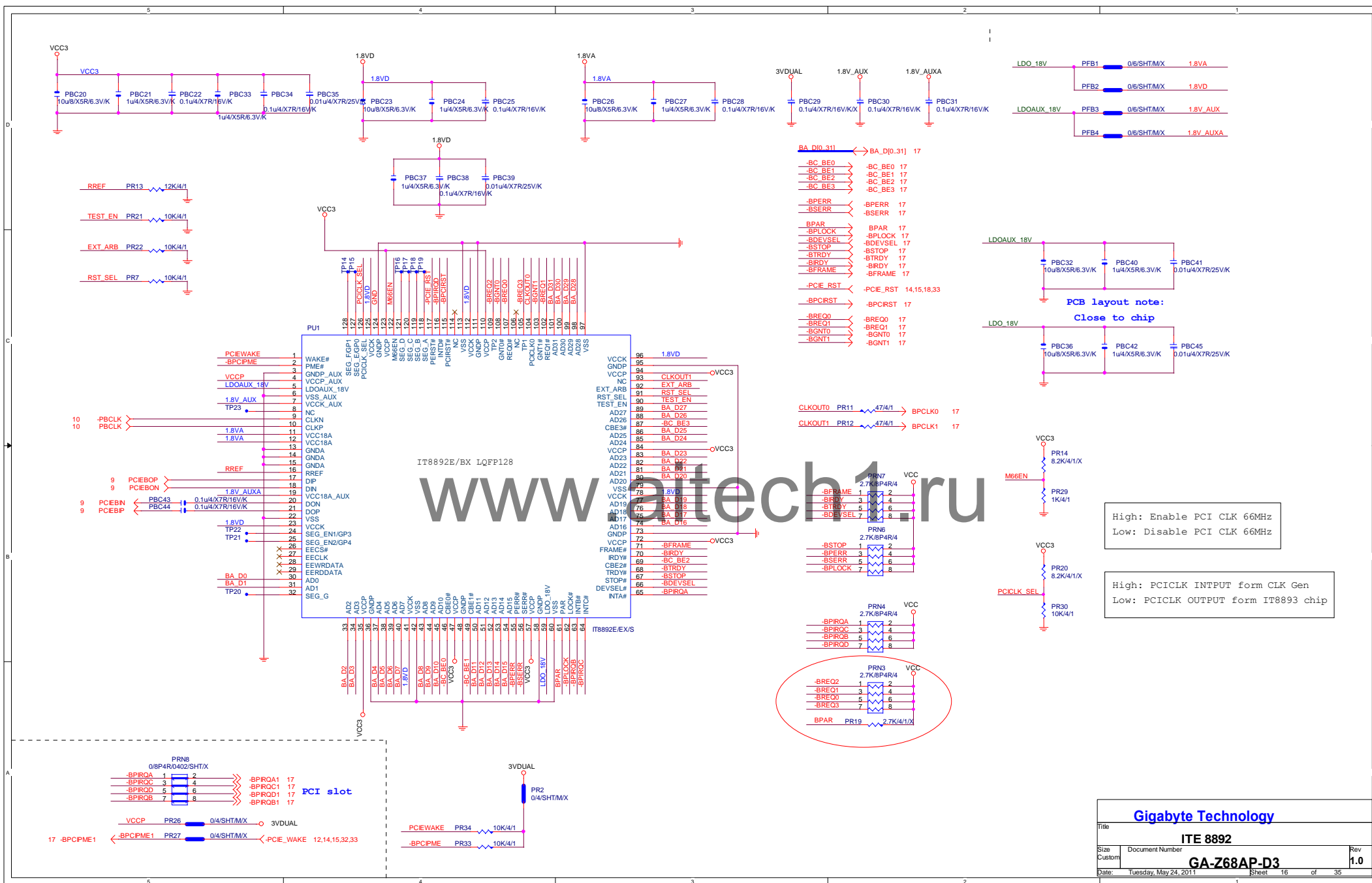


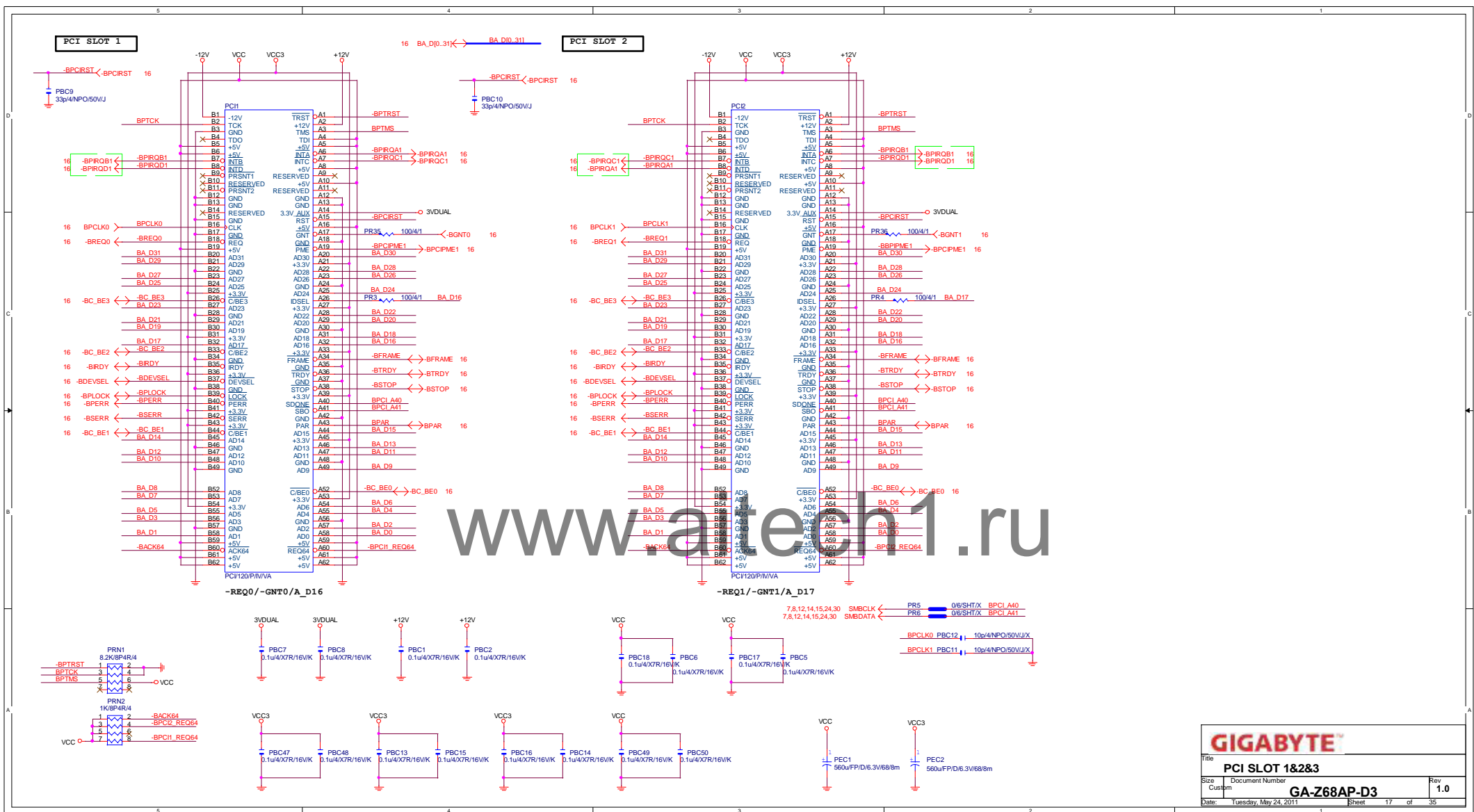




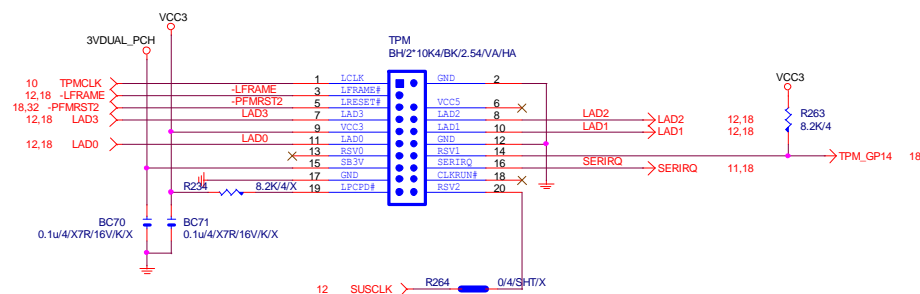
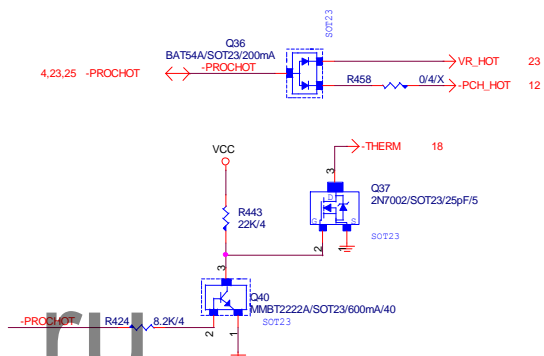
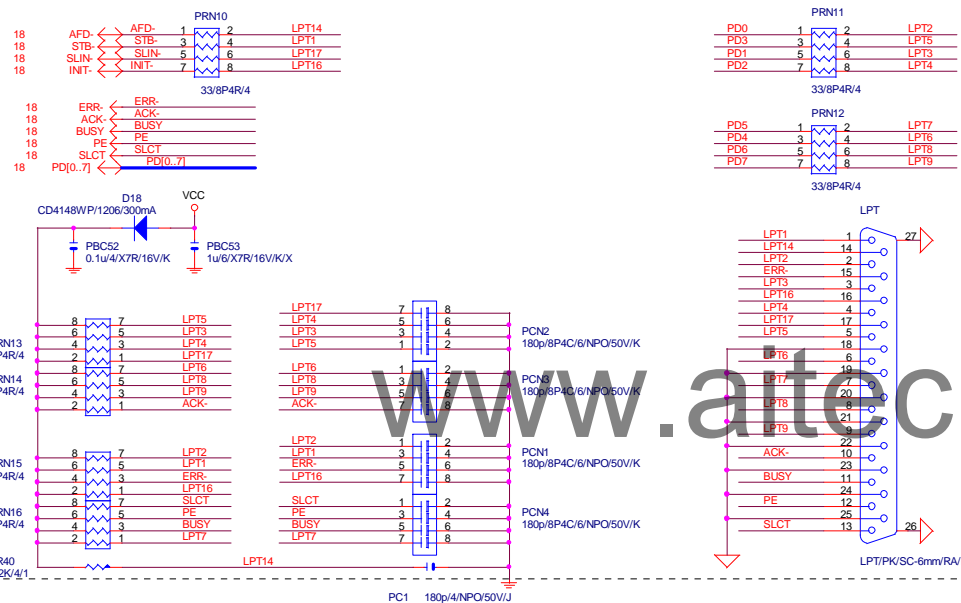
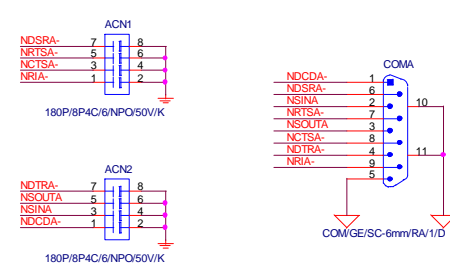
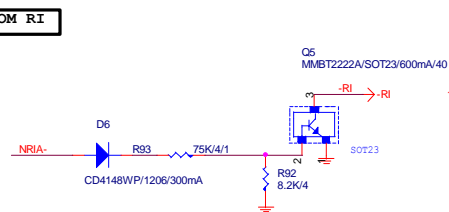


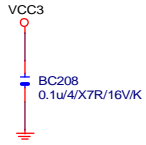








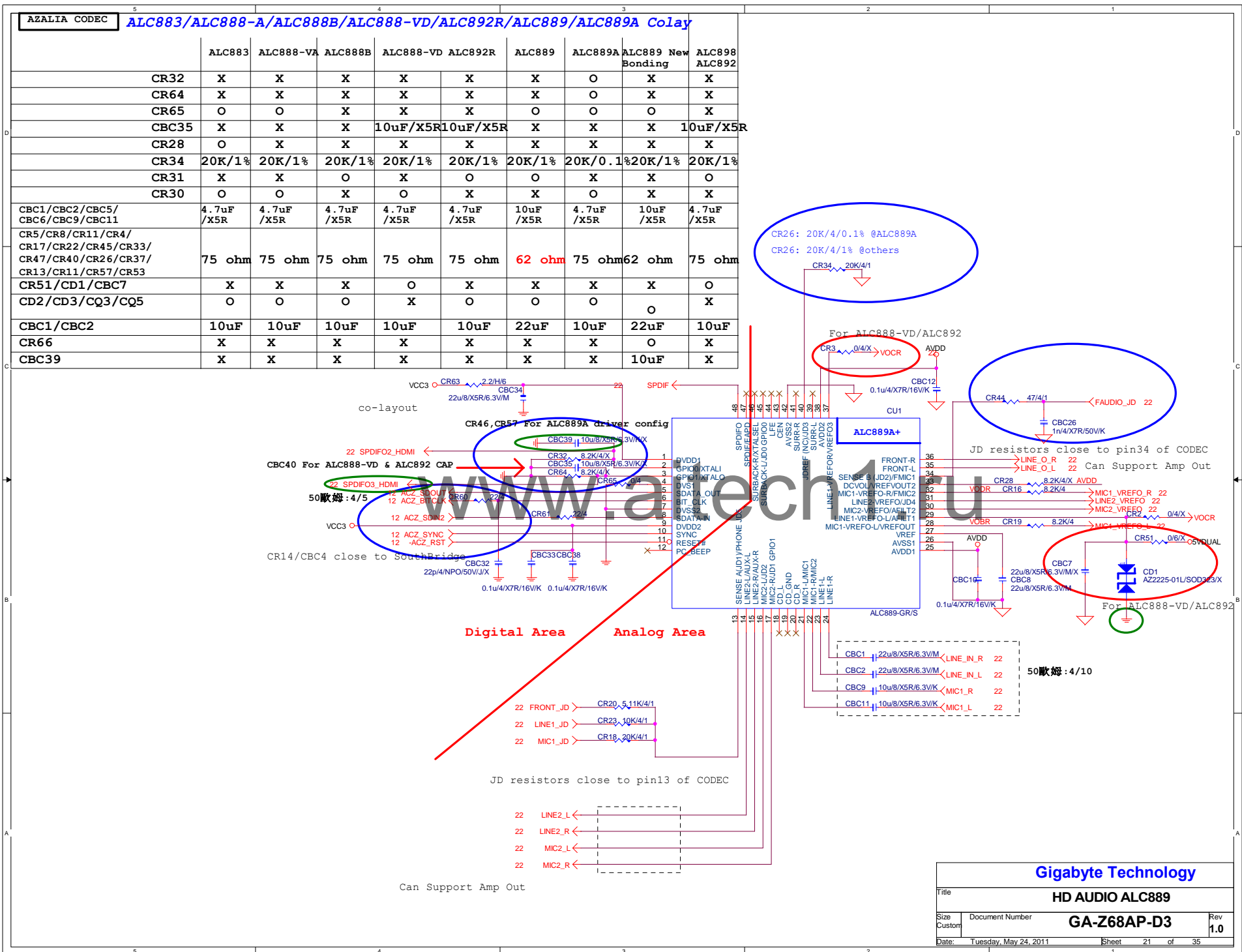




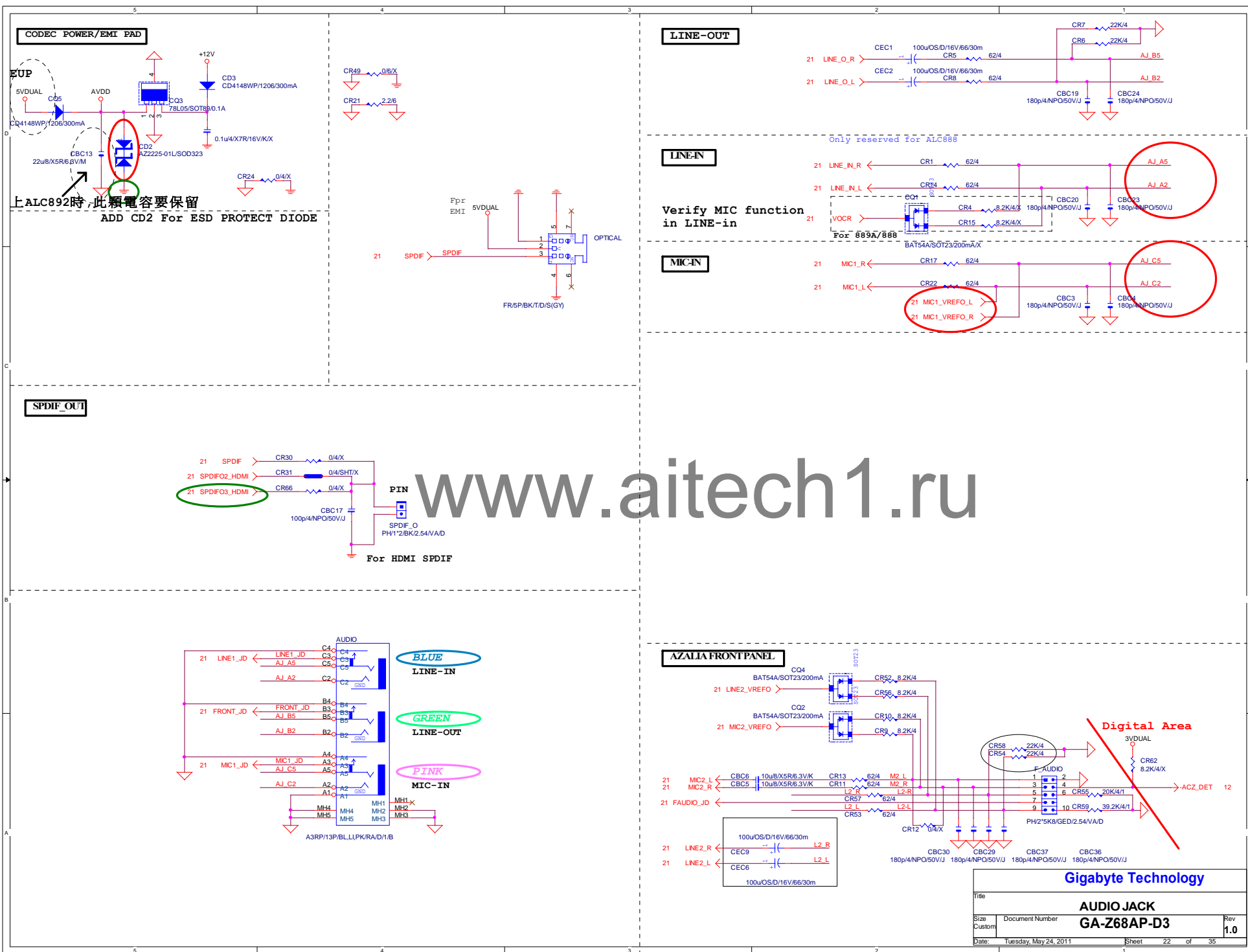
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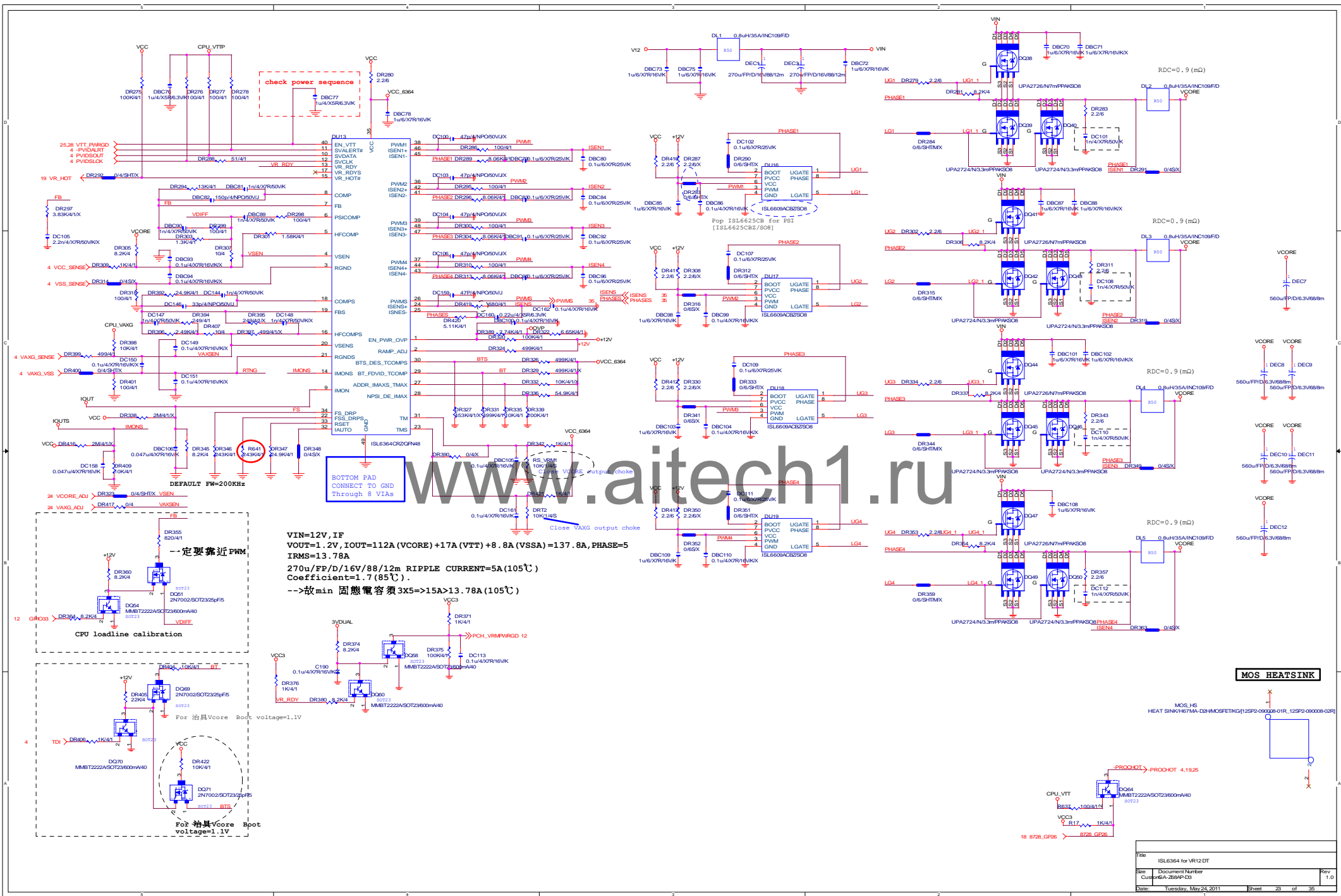
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Title		BIOS	
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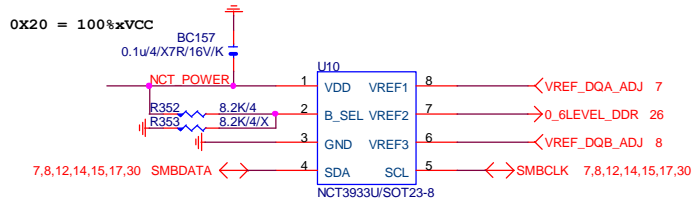
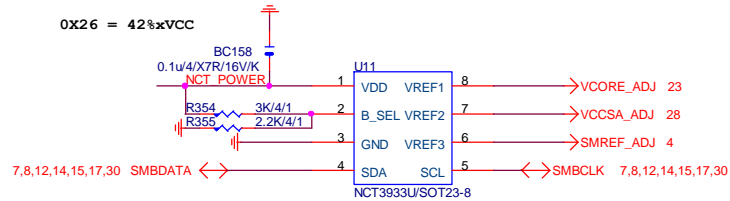
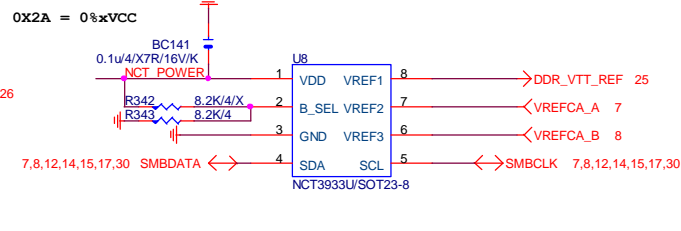
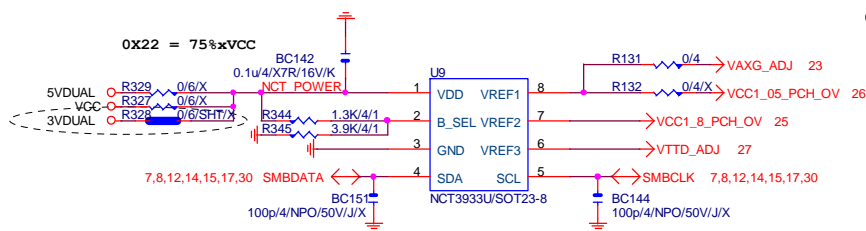


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Title HD AUDIO ALC889			
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VIN=12V, IF  
 VOUT=1.2V, IOUT=112A (VCORE) + 17A (VTT) + 8.8A (VSSA) = 137.8A, PHASE=5  
 IRMS=13.78A  
 270u/FP/D/16V/88/12m RIPPLE CURRENT=5A(105℃)  
 Coefficient=1.7(85℃)  
 -->故min 固態電容須3X5=>15A>13.78A(105℃)



up6262	0X2A	0X20	0X22	0X26
VREF1	DDRVTT	VREF_DDRA_DQ	VCC1_05_PCH	VCORE
VREF2	VREF_DDRA_CA	DDR15V	VCC1_8_PCH	VCCSA
VREF3	VREF_DDRA_CAV	REF_DDRB_DQ	CPU_VTT	SMREF

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Title			
CPU CORE VR-2			
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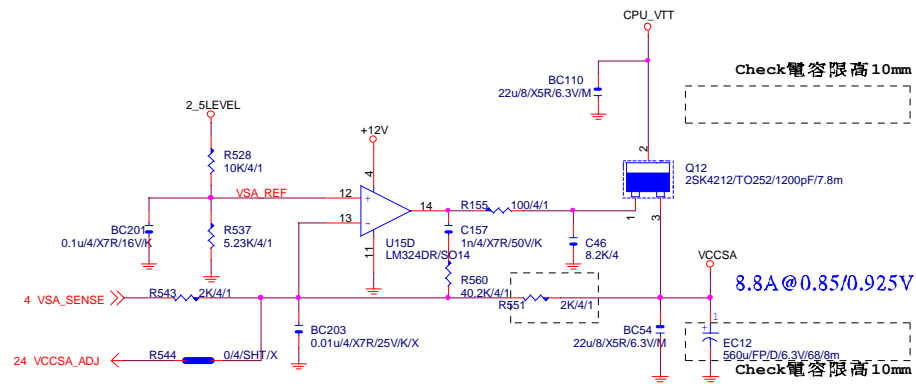






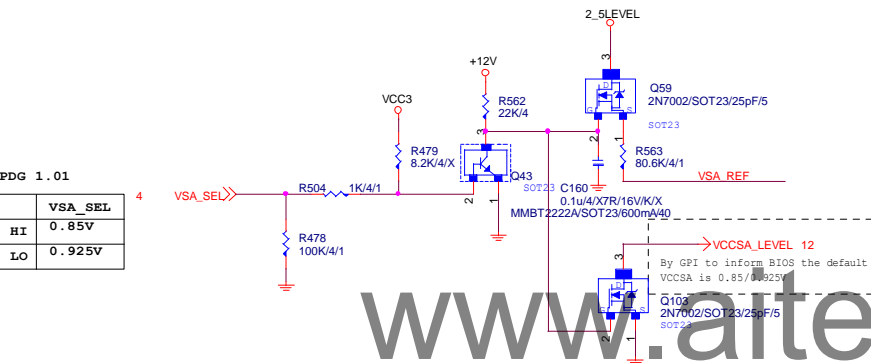


# VCC\_SA

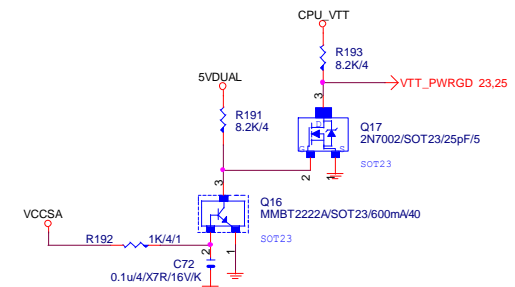
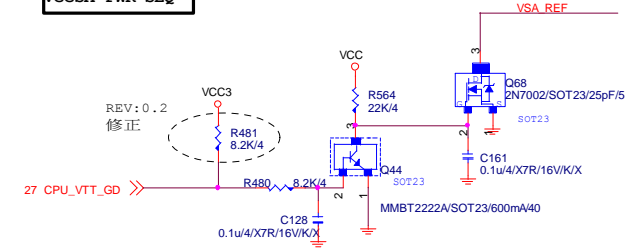


PDG 1.01

VSA_SEL	
HI	0.85V
LO	0.925V



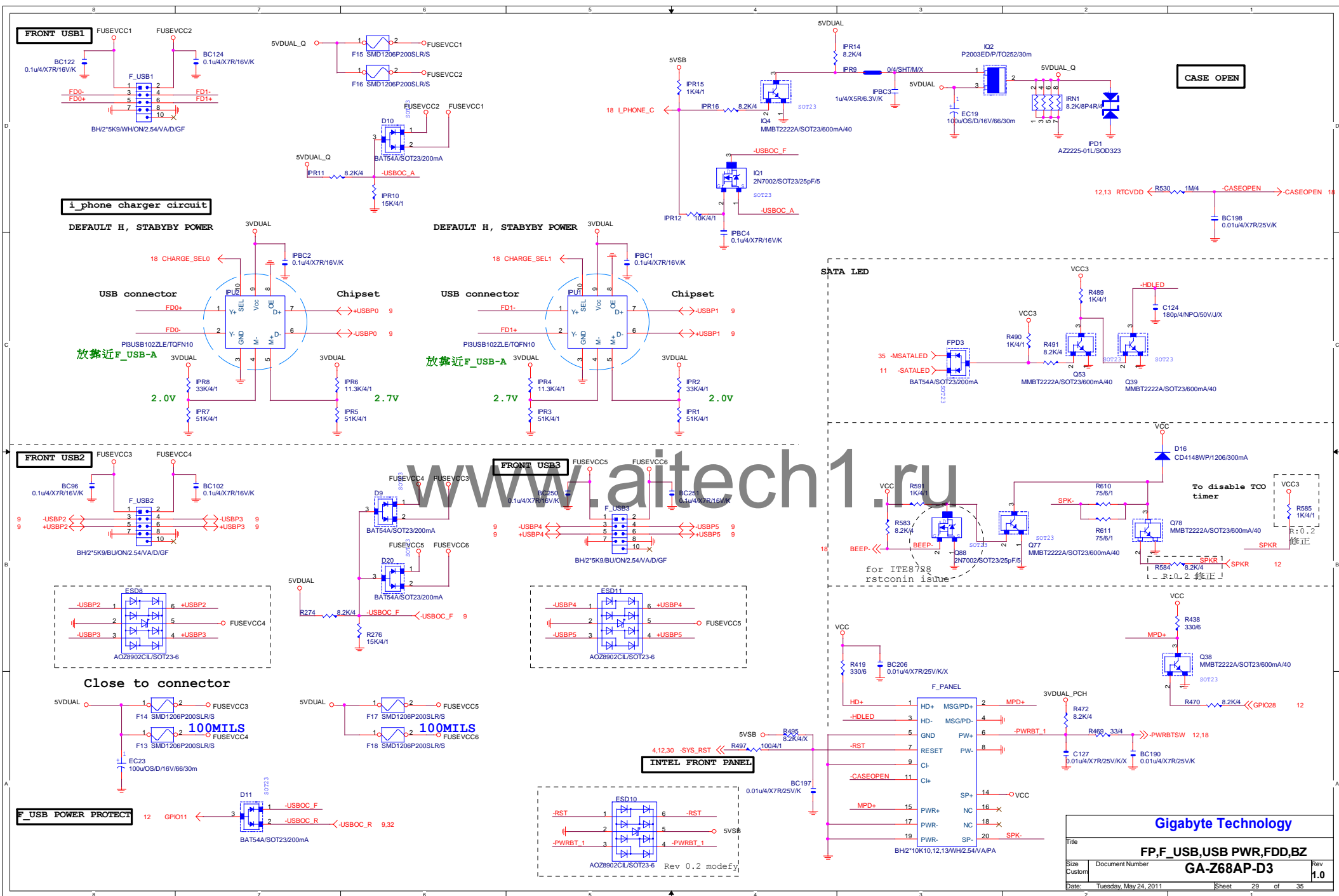
# VCCSA PWR SEQ



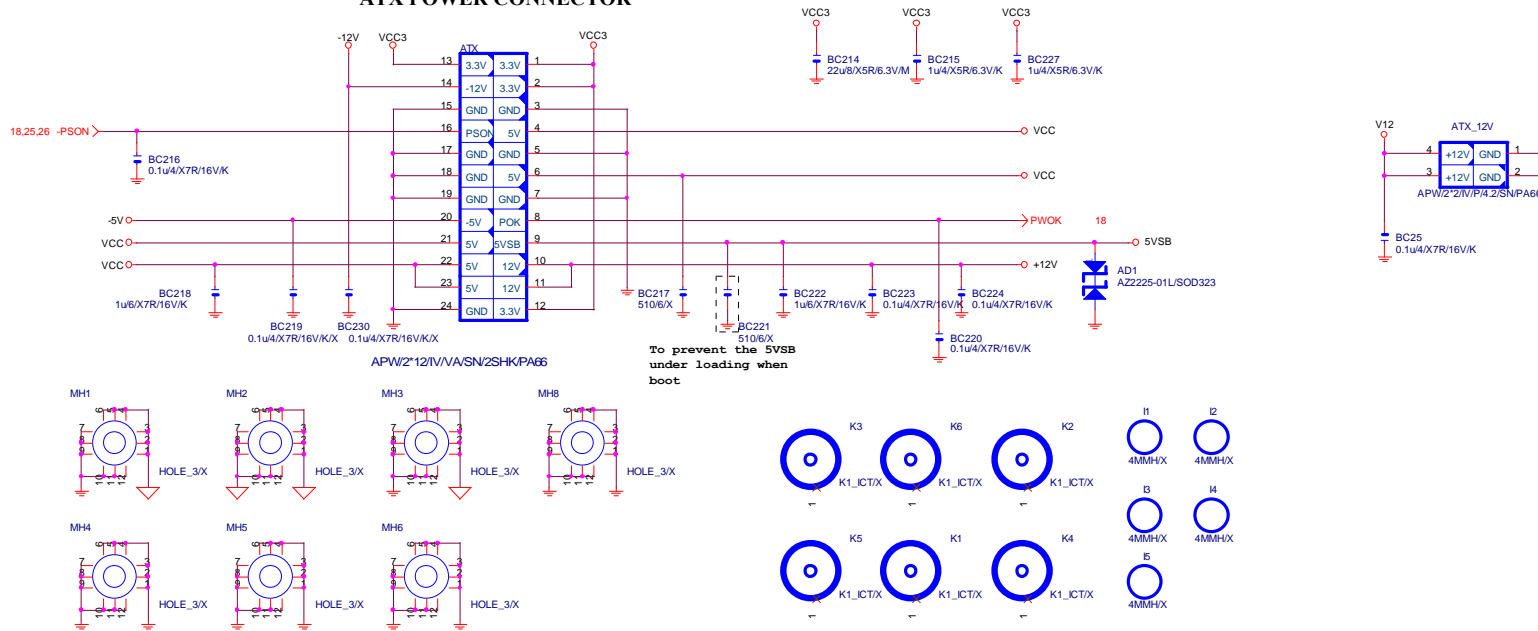
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# ATX POWER CONNECTOR

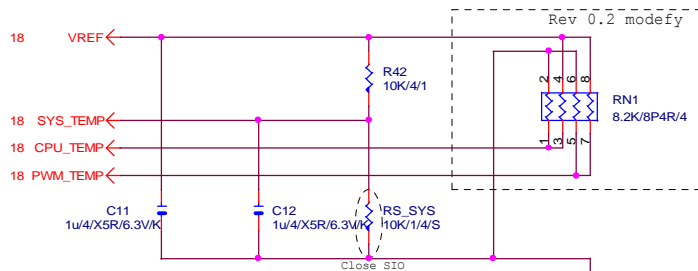


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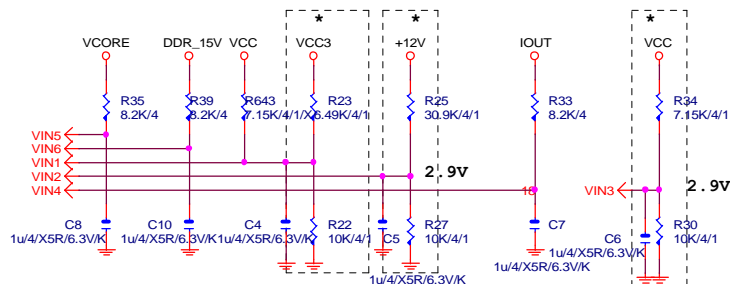
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Title		
ATX POWER CONNECTOR		
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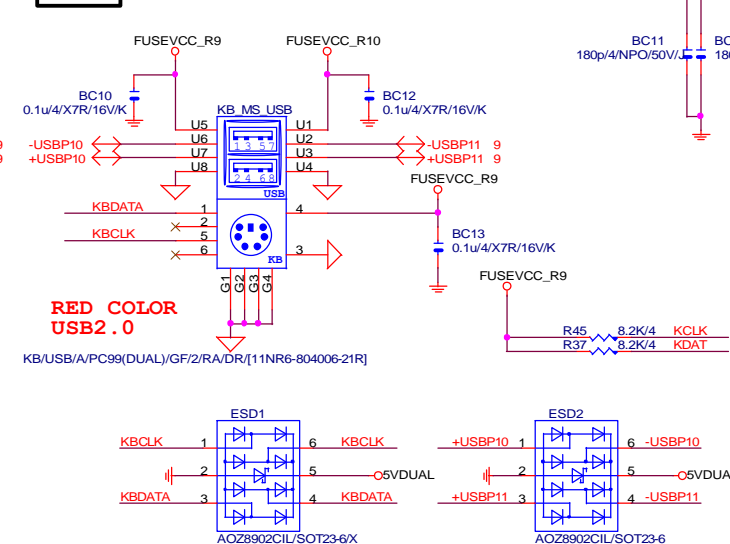
# TEMP H/W MONITOR



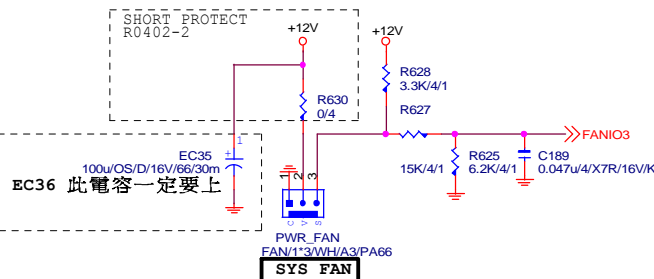
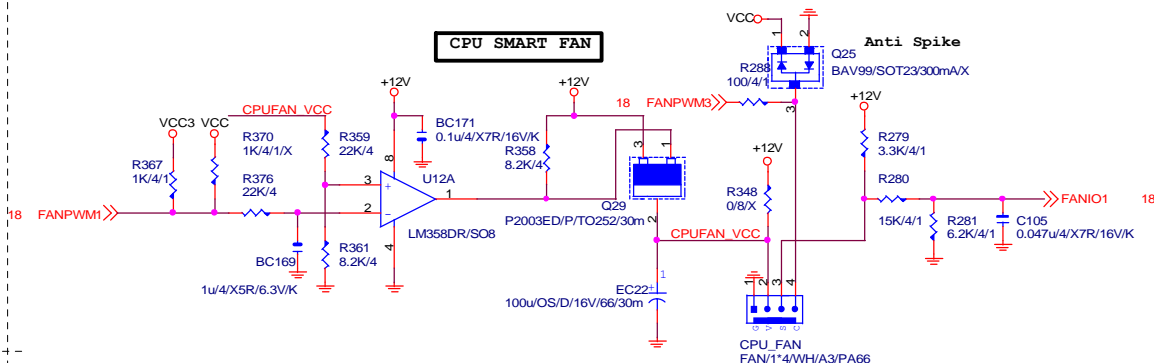
# VOLTAGE-- H/W MONITOR



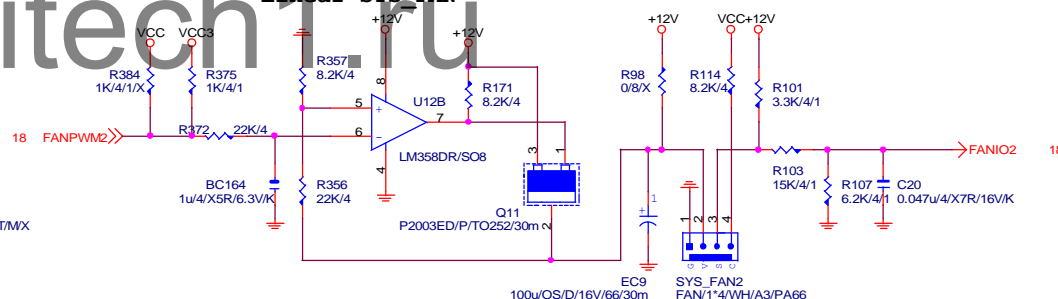
# KB/USB



# CPU SMART FAN



# Linear SYS FAN



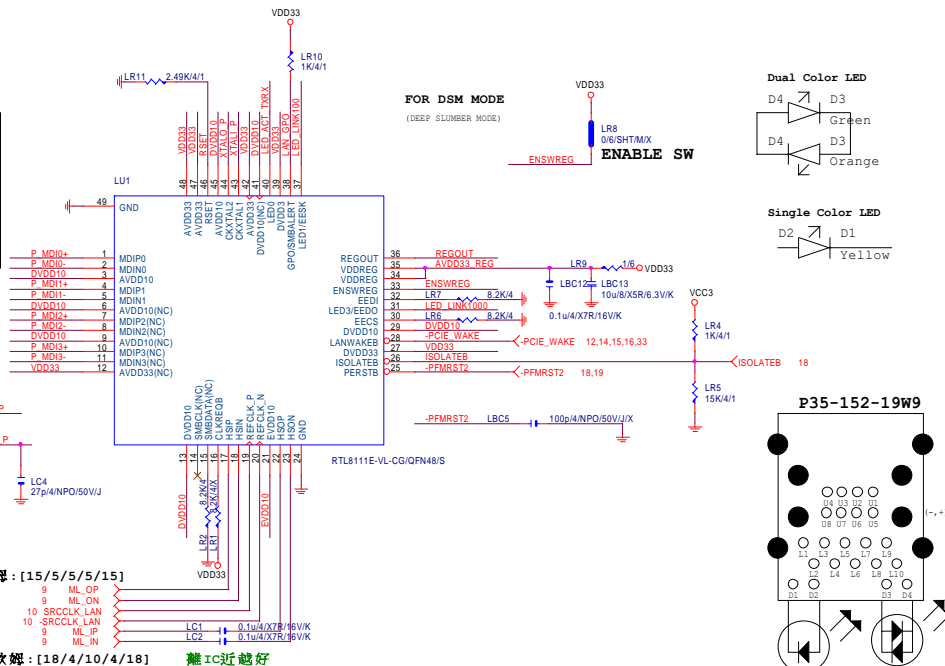
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Title		
HWM,KB/MS, FAN CTRL		
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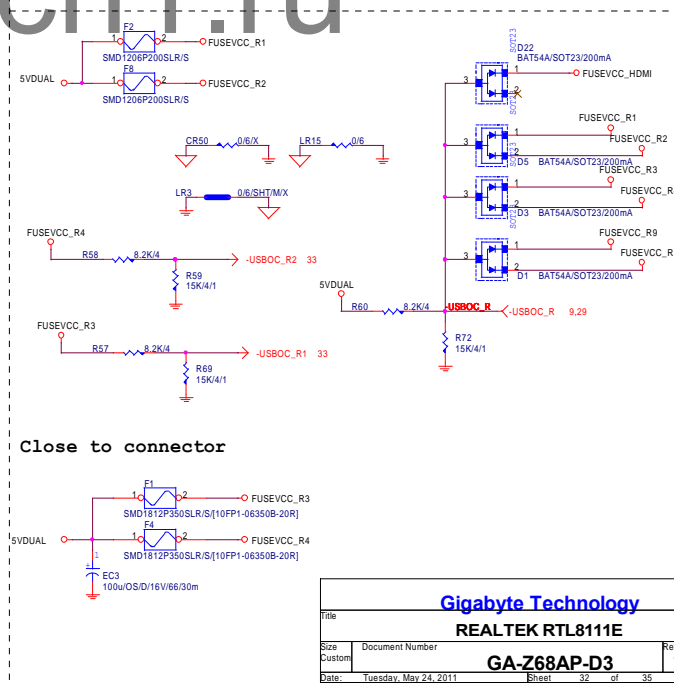
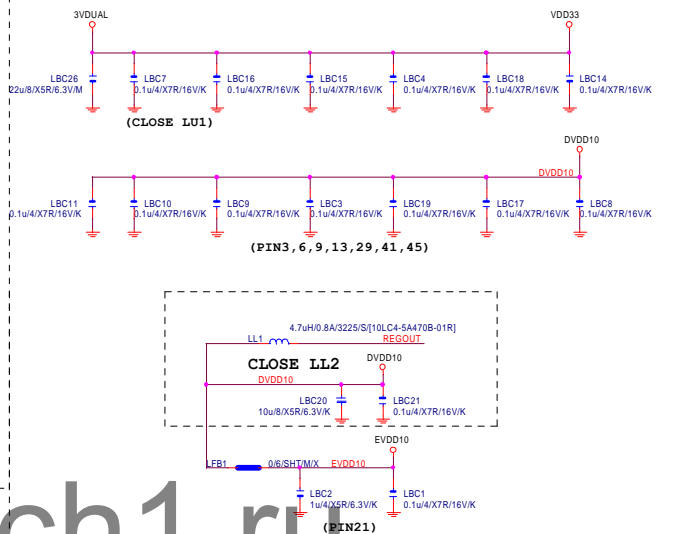
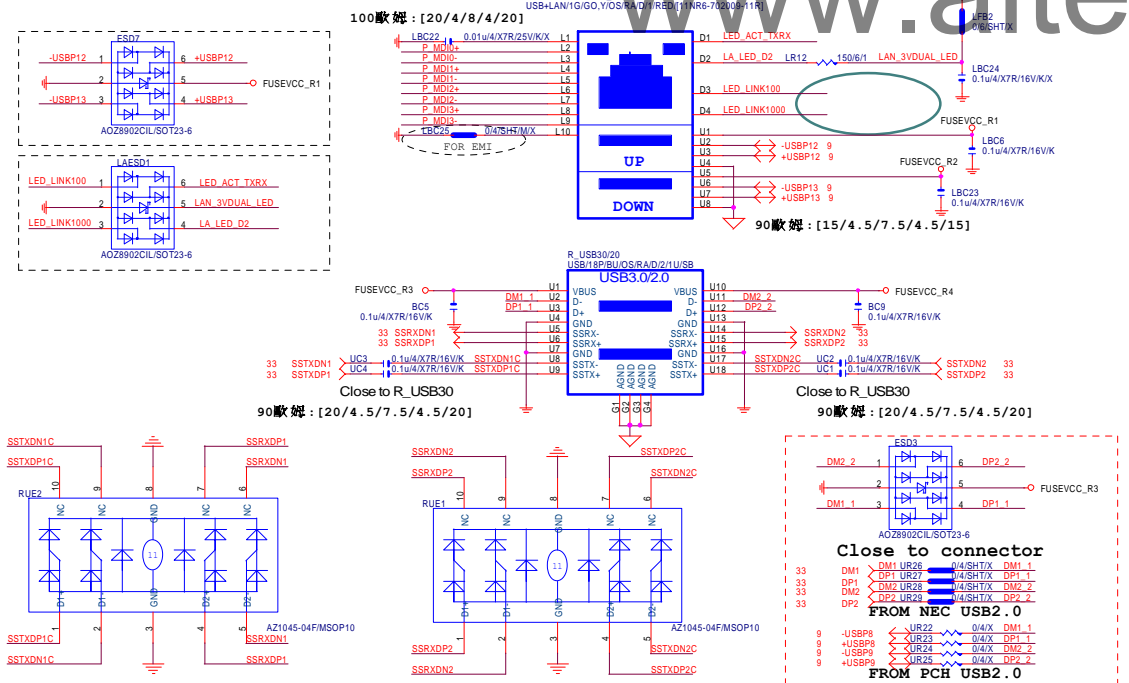
# PCIE-1G LAN

## Power domain chart

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



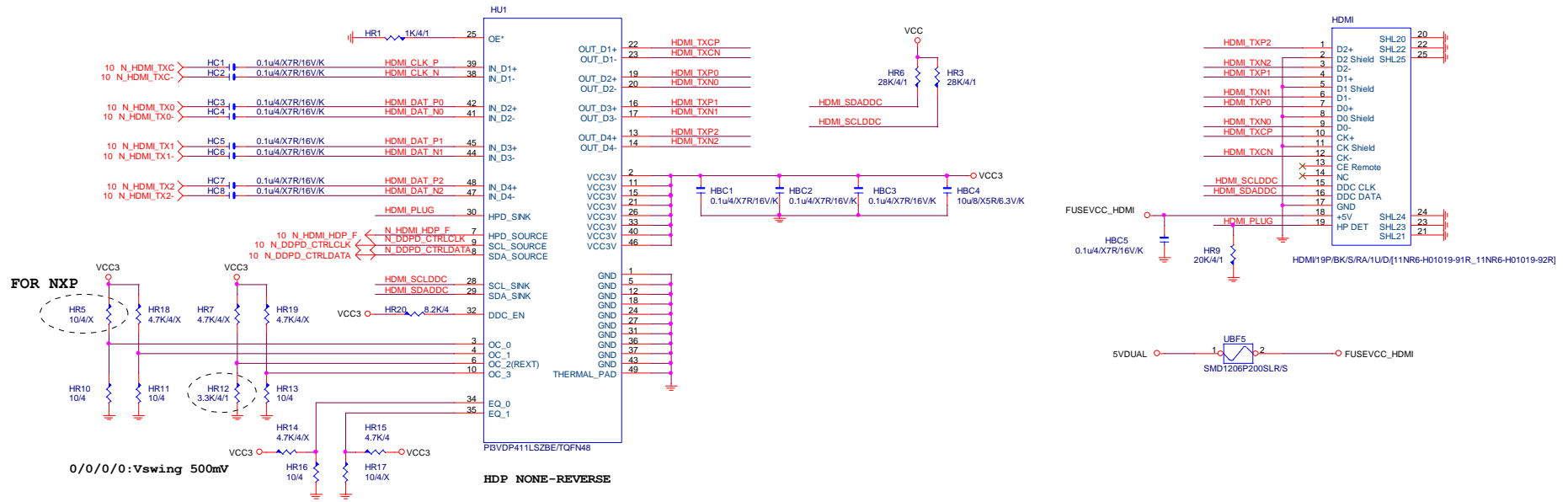
# USB30 LAN CONNECTOR



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REALTEK RTL8111E		
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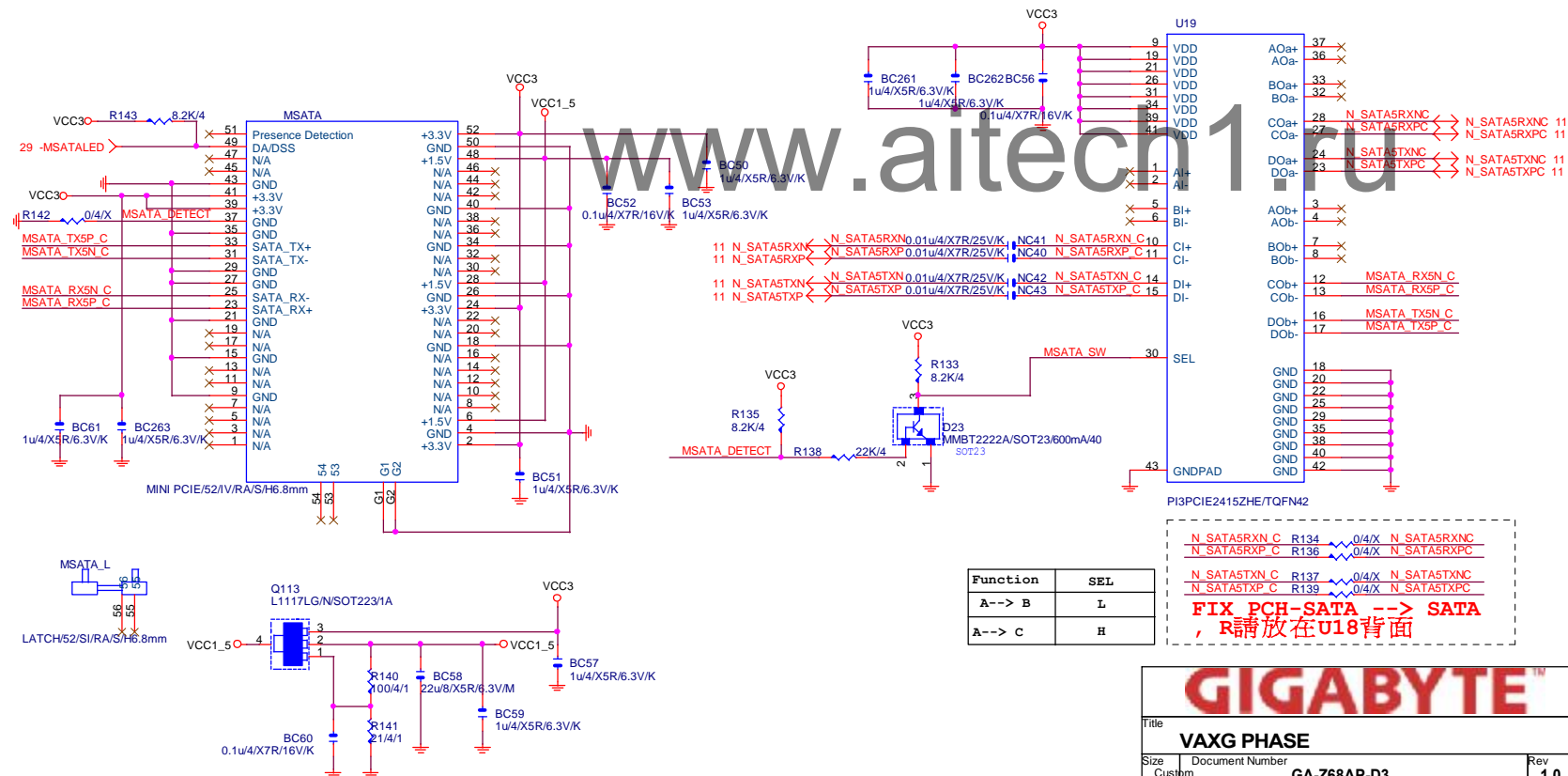
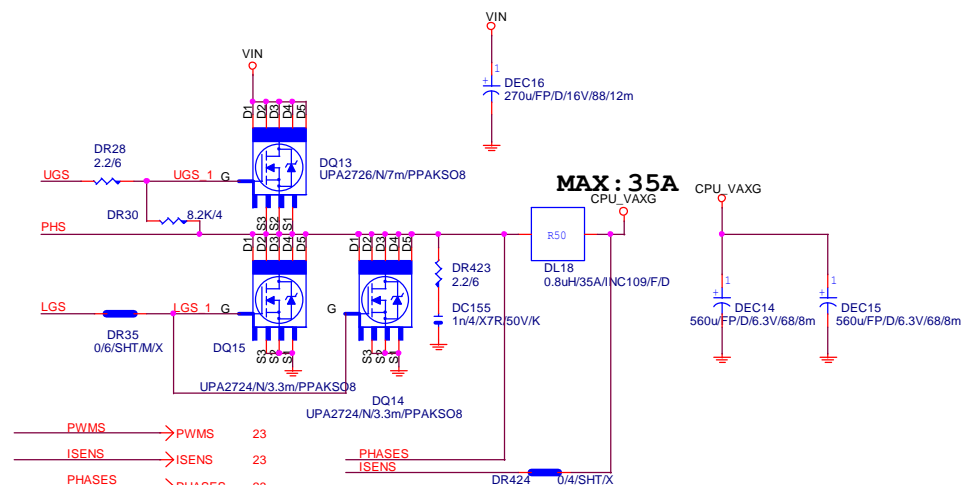
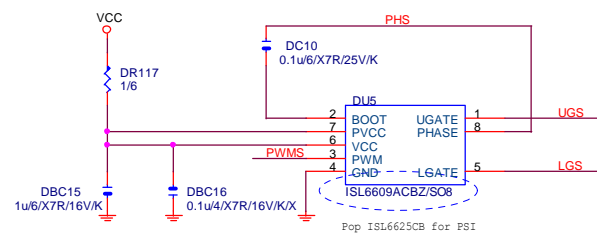


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Title			
HDMI			
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## VAXG

```
ISL6612 use +12V
ISL6609 use VCC
ISL6612 use 1 ohm
ISL6609 use 0 ohm
```



Function	SEL
A--> B	L
A--> C	H

**FIX PCH-SATA --> SATA**  
**, R請放在U18背面**

# GIGABYTE

Title  
**VAXG PHASE**

Size	Document Number
Custom	GA-Z68AP-D3

Rev	1.0
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