

SHEET

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SHEET

TITLE

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Gigabyte Technology

Title		
Cover Sheet		
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Revision 1.1

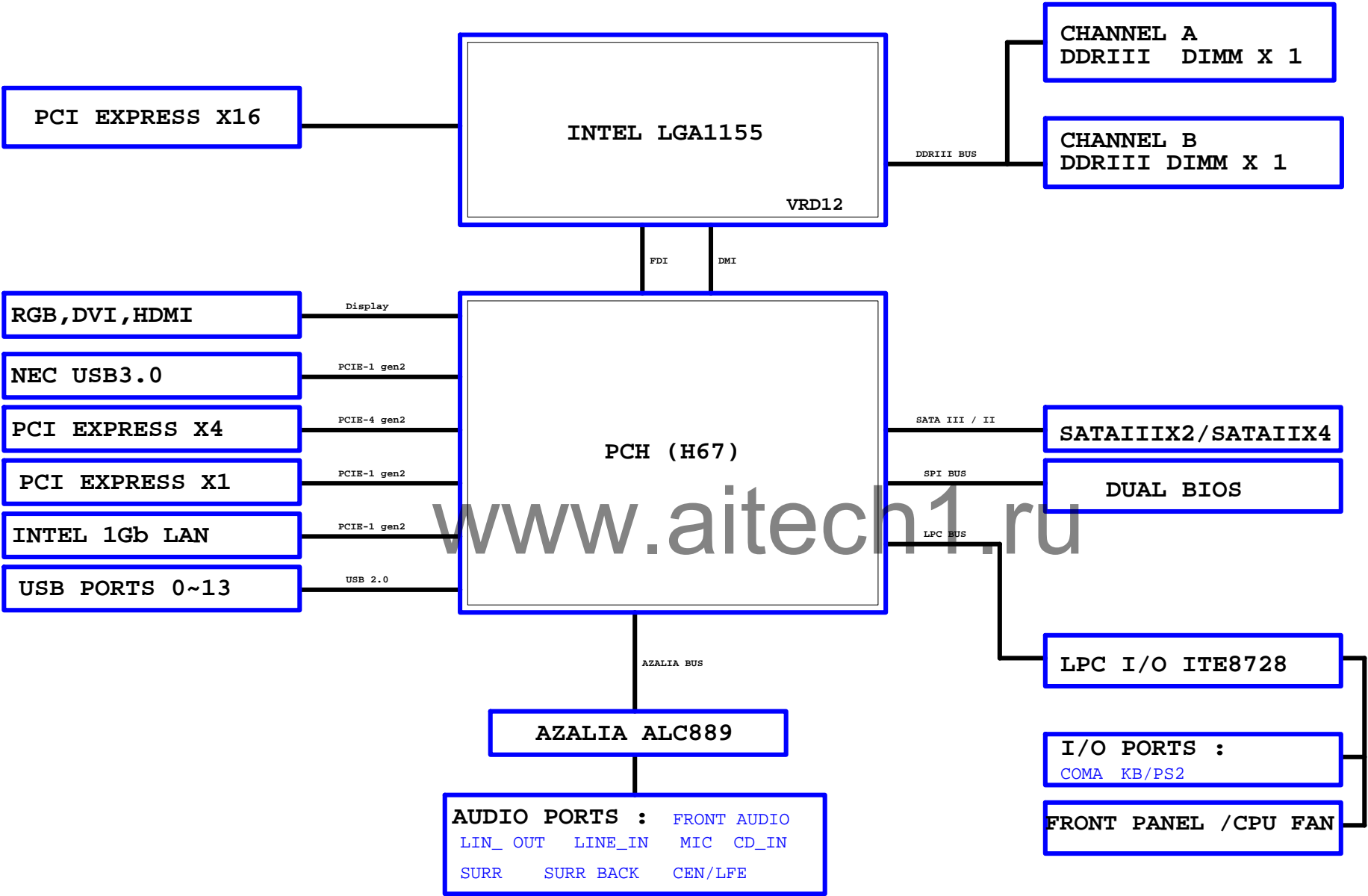
Circuit or PCB layout change

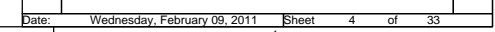
Component value change history

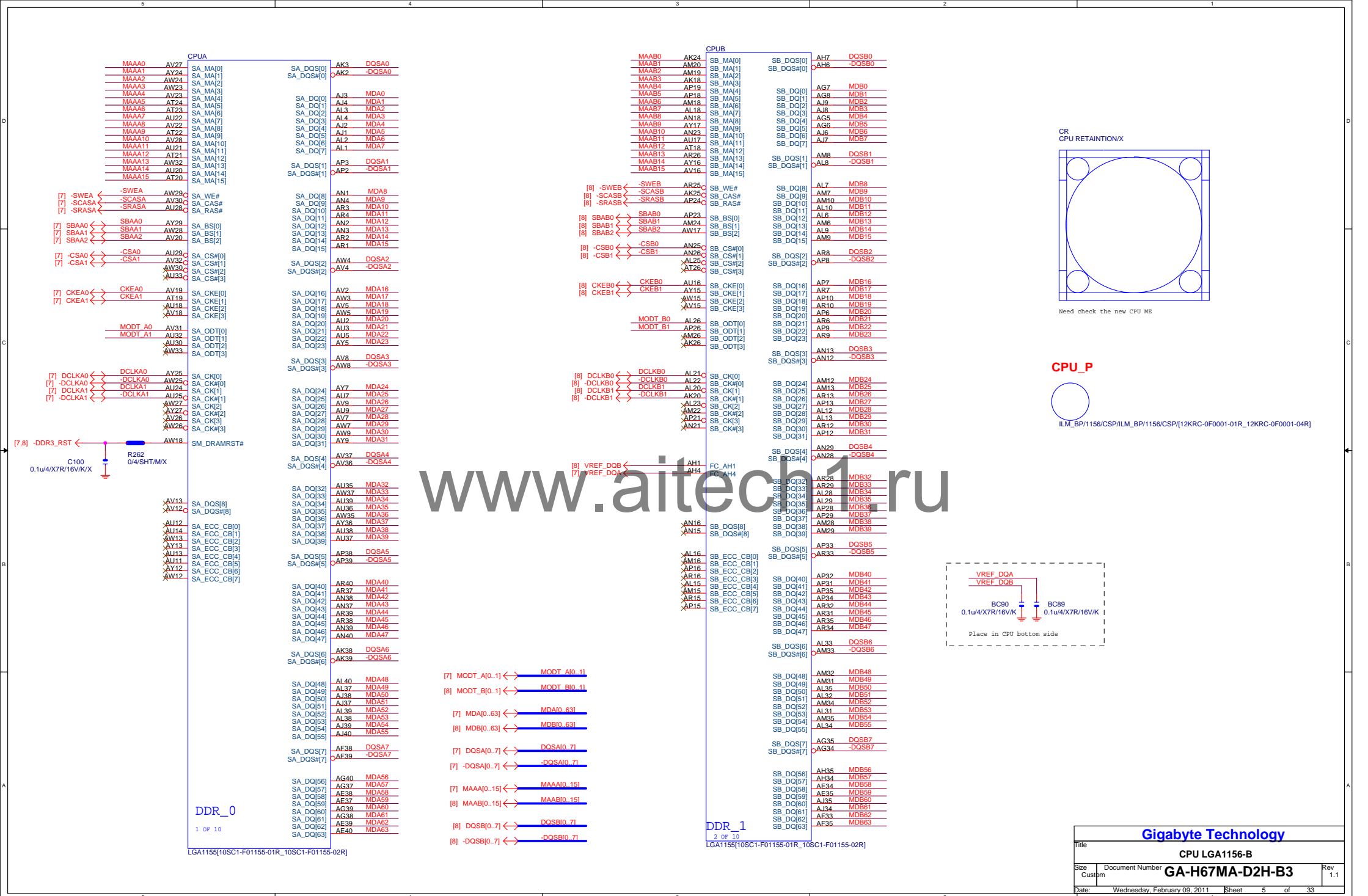
2011/02/09

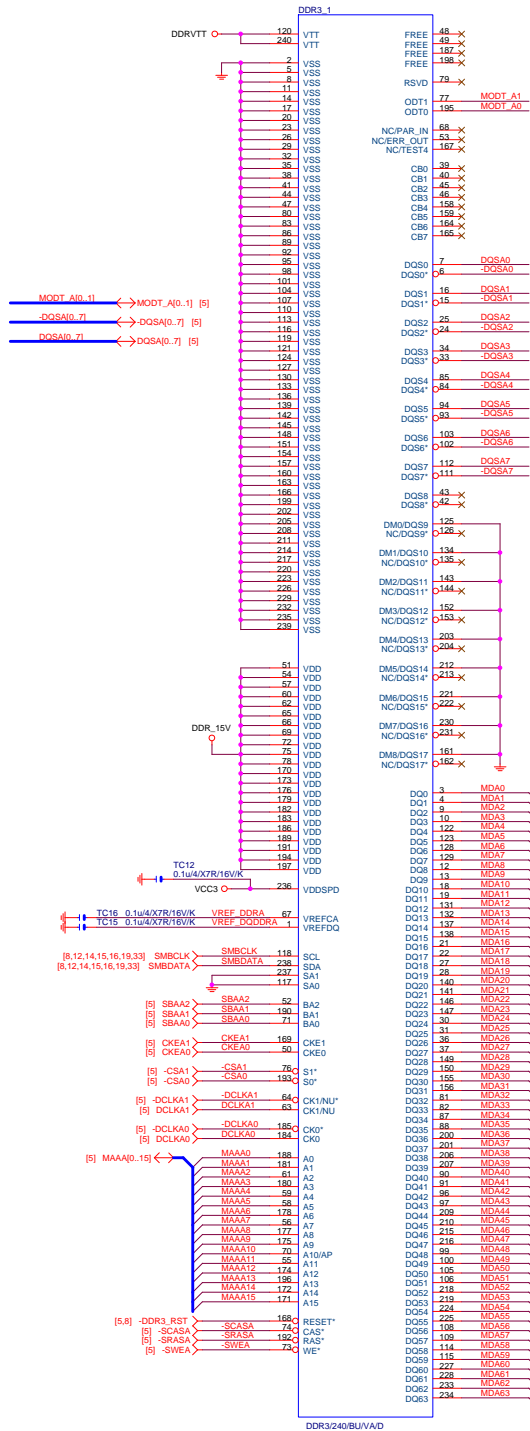
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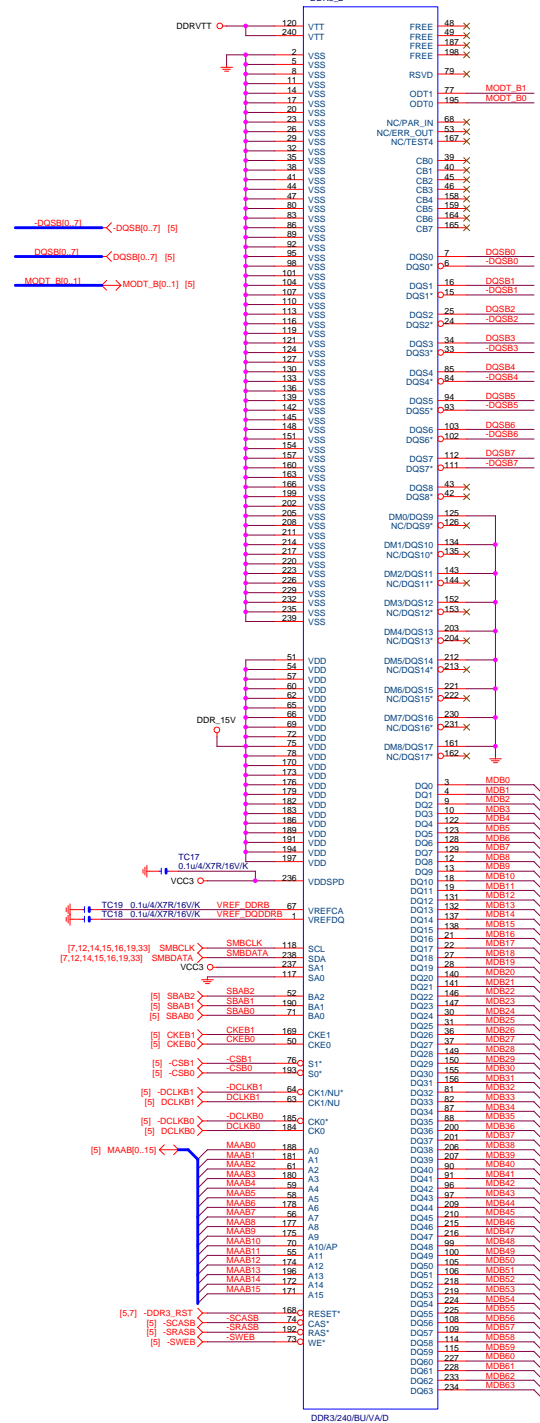
BLOCK DIAGRAM



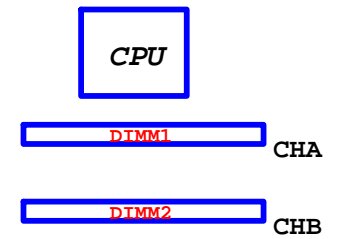




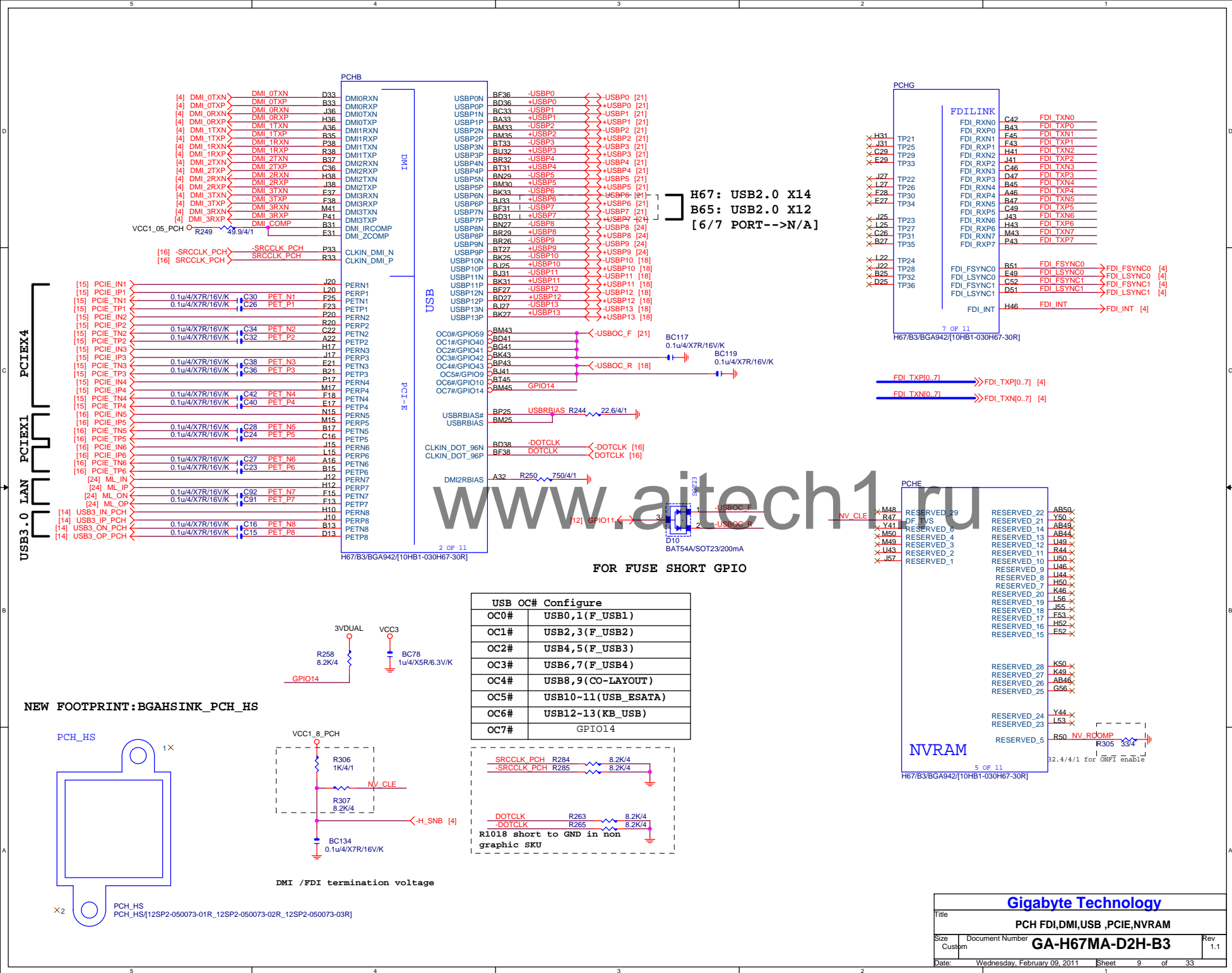




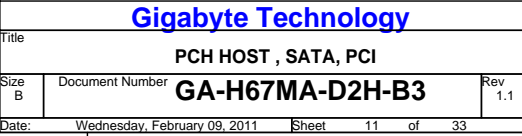
www.aitech1.ru

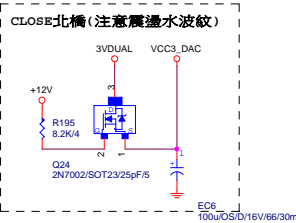


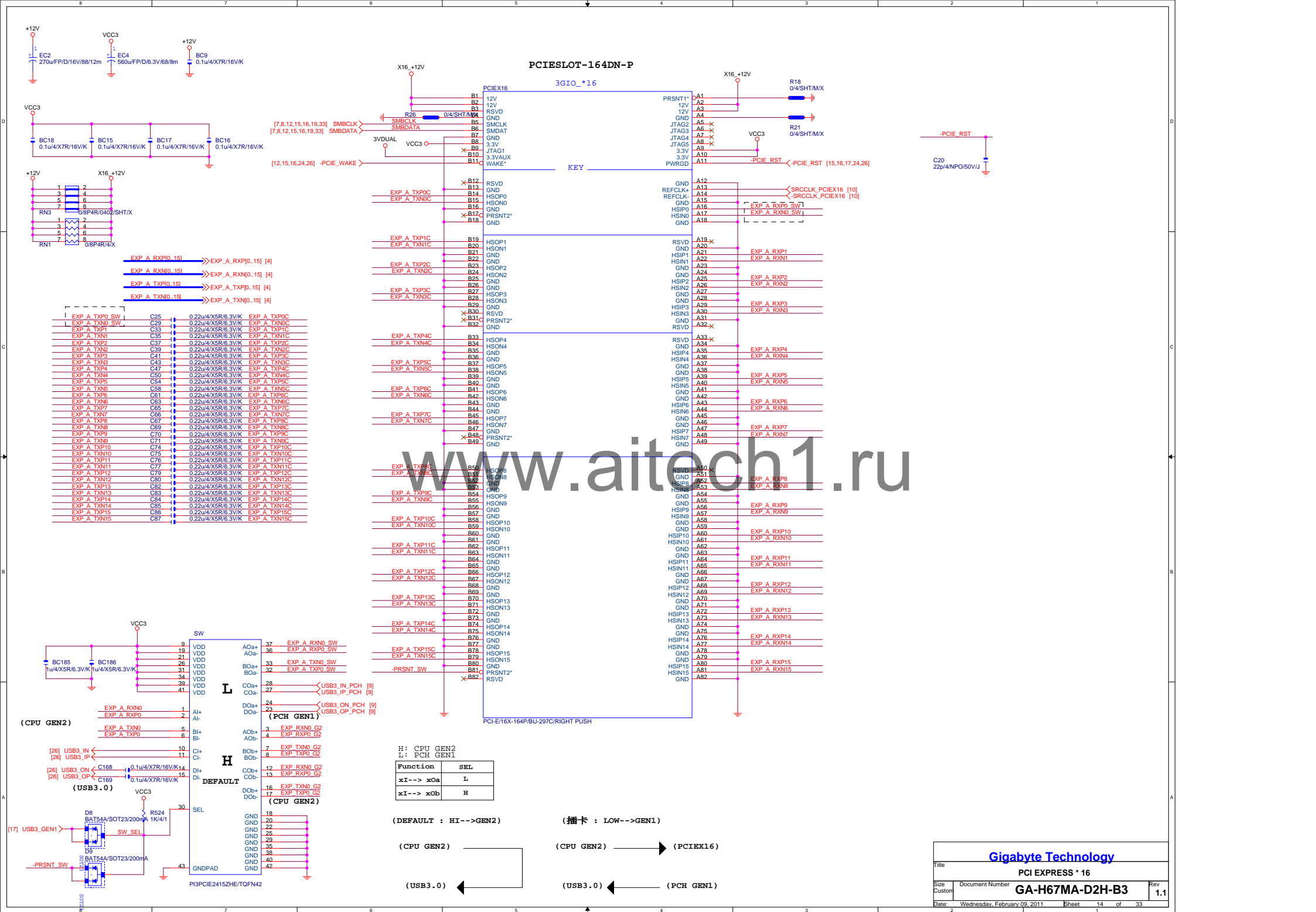
Gigabyte Technology			
DDR3 CHANNEL B			
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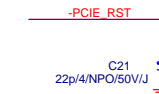
www.aitech1.ru





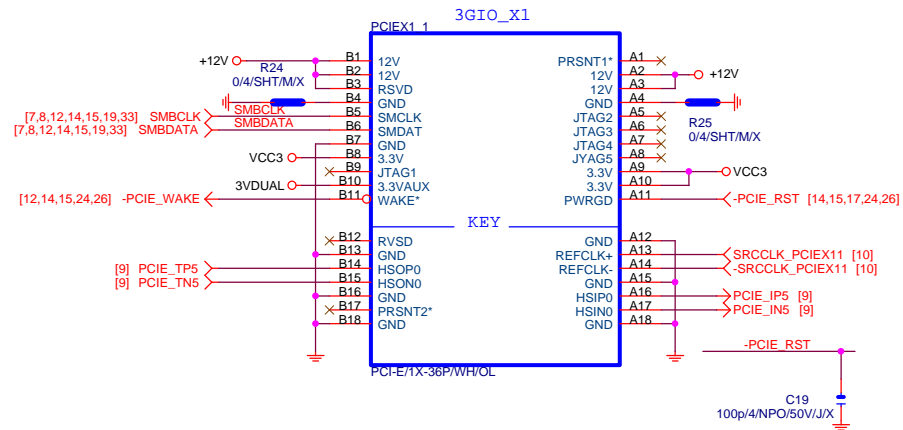


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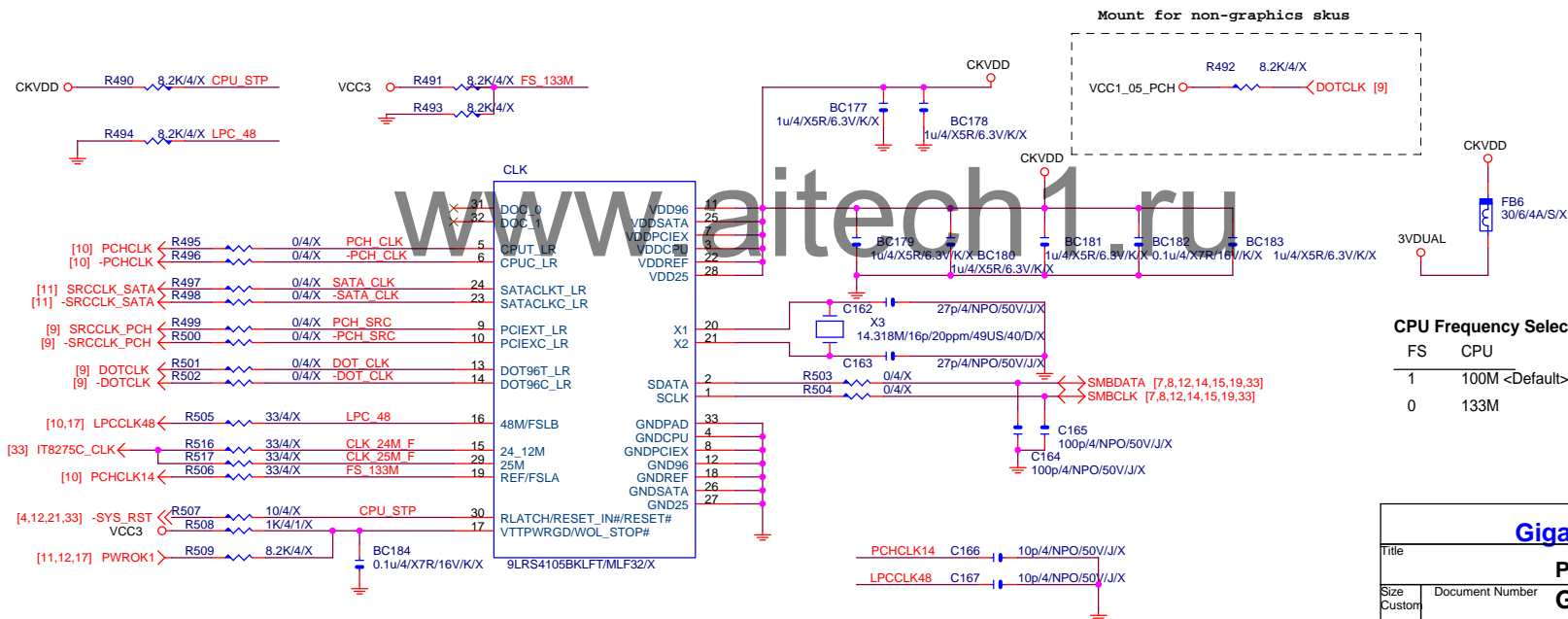


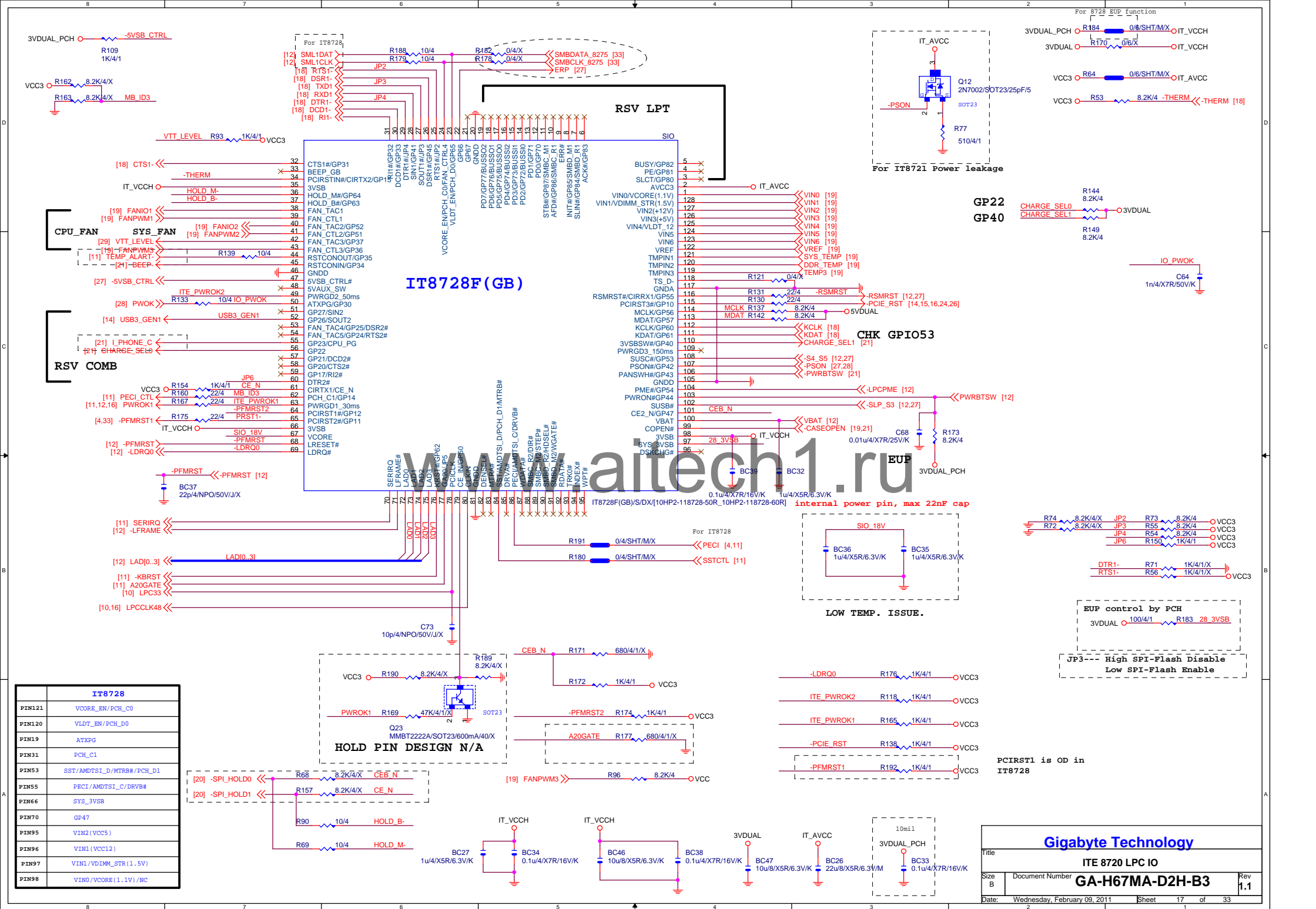
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<h2 style="text-align: center;">PCI EXPRESS X 4 PORT</h2>				
Size	Document Number	GA-H67MA-D2H-B3		Rev
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PCIE*1

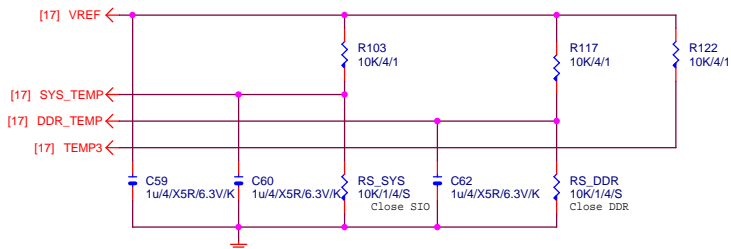


CLK GEN





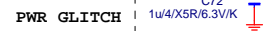
TEMP H/W MONITOR



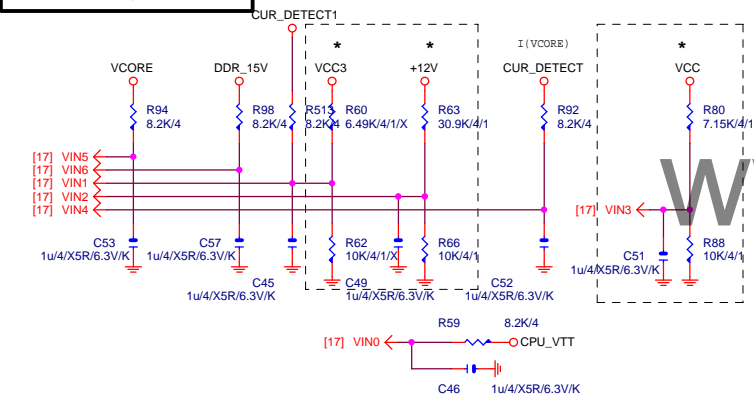
CASE OPEN



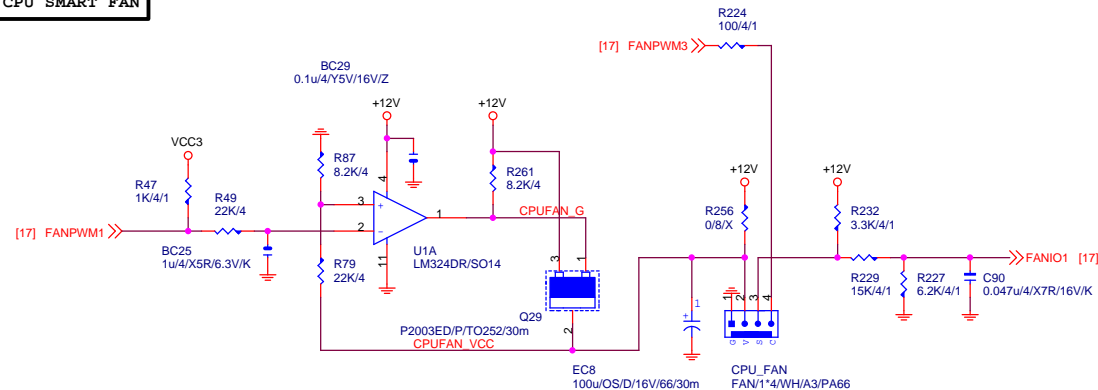
Case Open Circuits



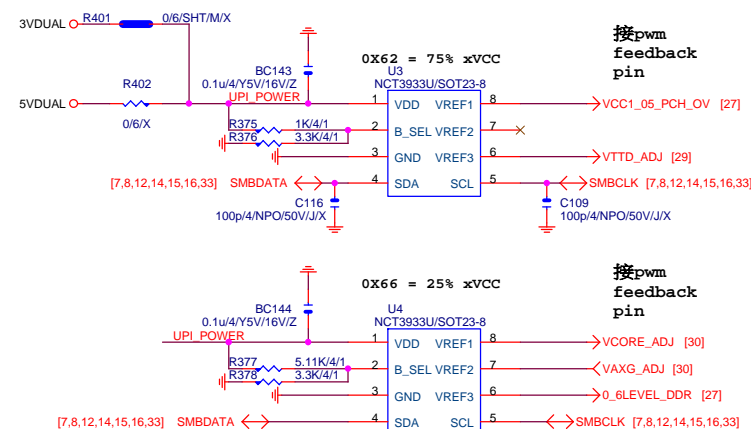
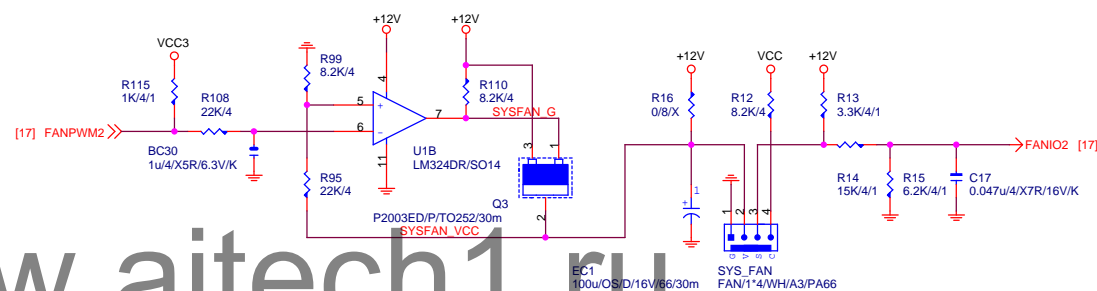
VOLTAGE-- H/W MONITOR



CPU SMART FAN



SYS SMART FAN

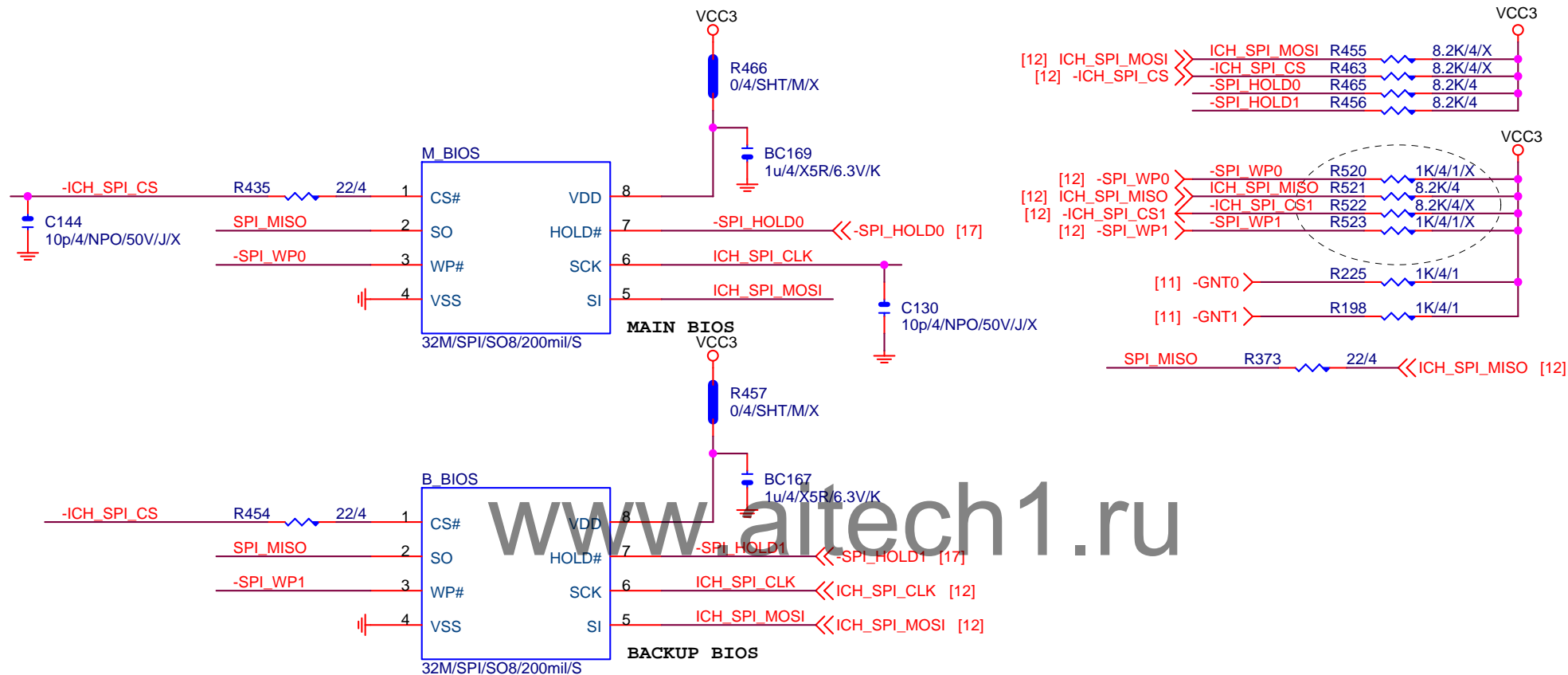


Gigabyte Technology

HWM,FAN CTRL,OV

Title		HWM,FAN CTRL,OV	
Size	Document Number	GA-H67MA-D2H-B3	
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DUAL BIOS



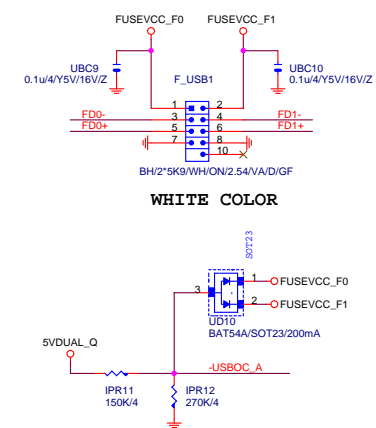
BOOT DEVICE	GNT1	GNT0
LPC	0	0
PCI	0	1
SPI	1	1

1 means floating
0 means PD 1K

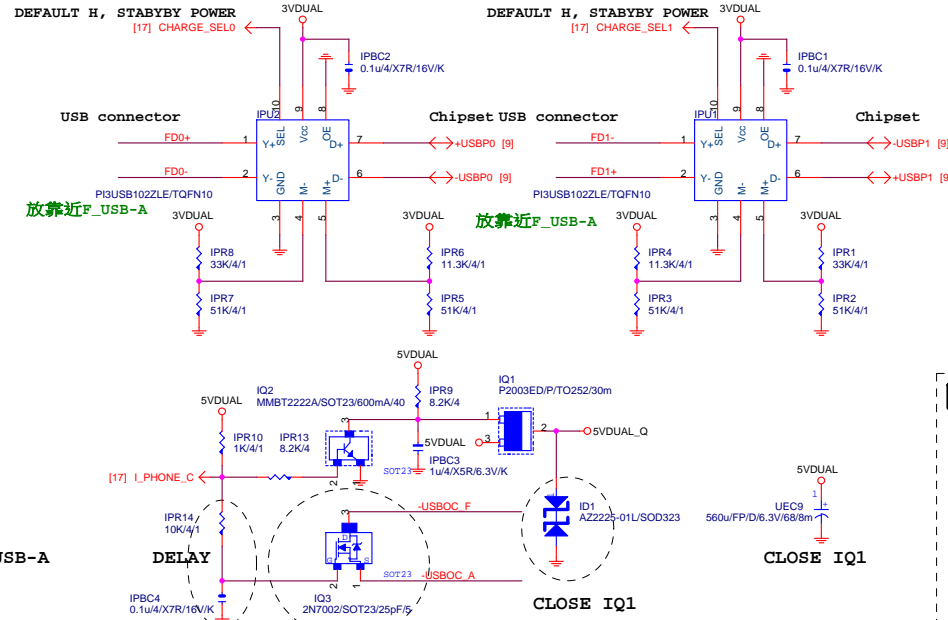
Gigabyte Technology

Title		
DUAL BIOS		
Size A	Document Number	Rev
	GA-H67MA-D2H-B3	1.1
Date:	Wednesday, February 09, 2011	Sheet 20 of 33

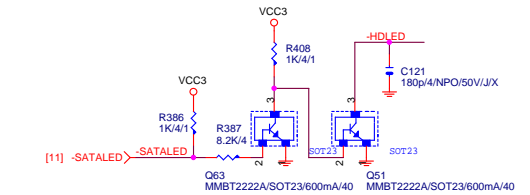
FRONT USB1



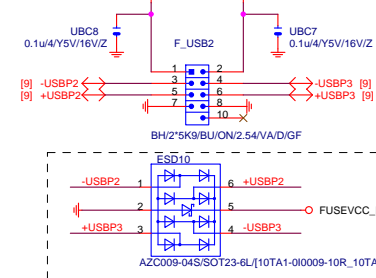
i_phone charger circuit



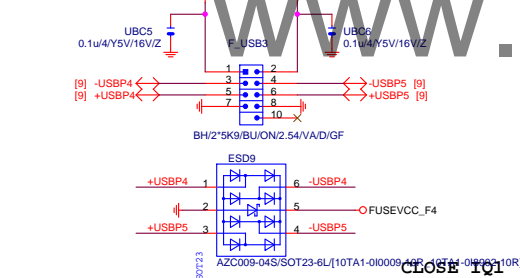
SATA LED



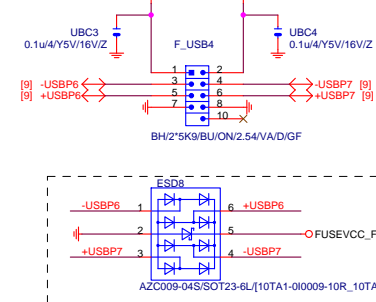
FRONT USB2



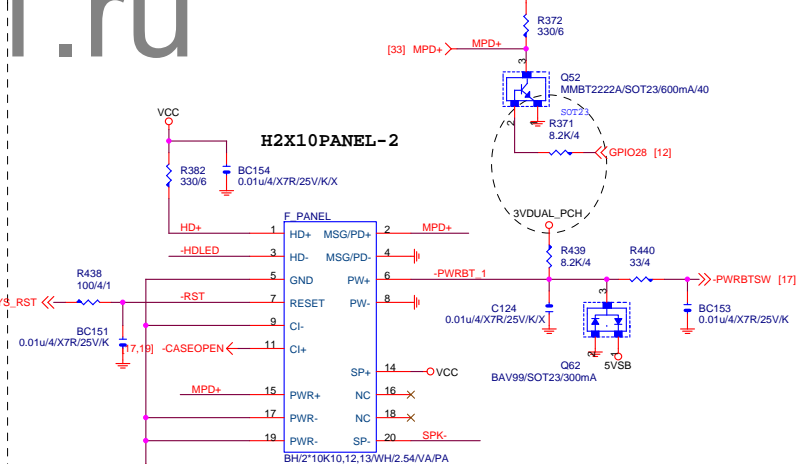
FRONT USB3



FRONT USB4



INTEL FRONT PANEL



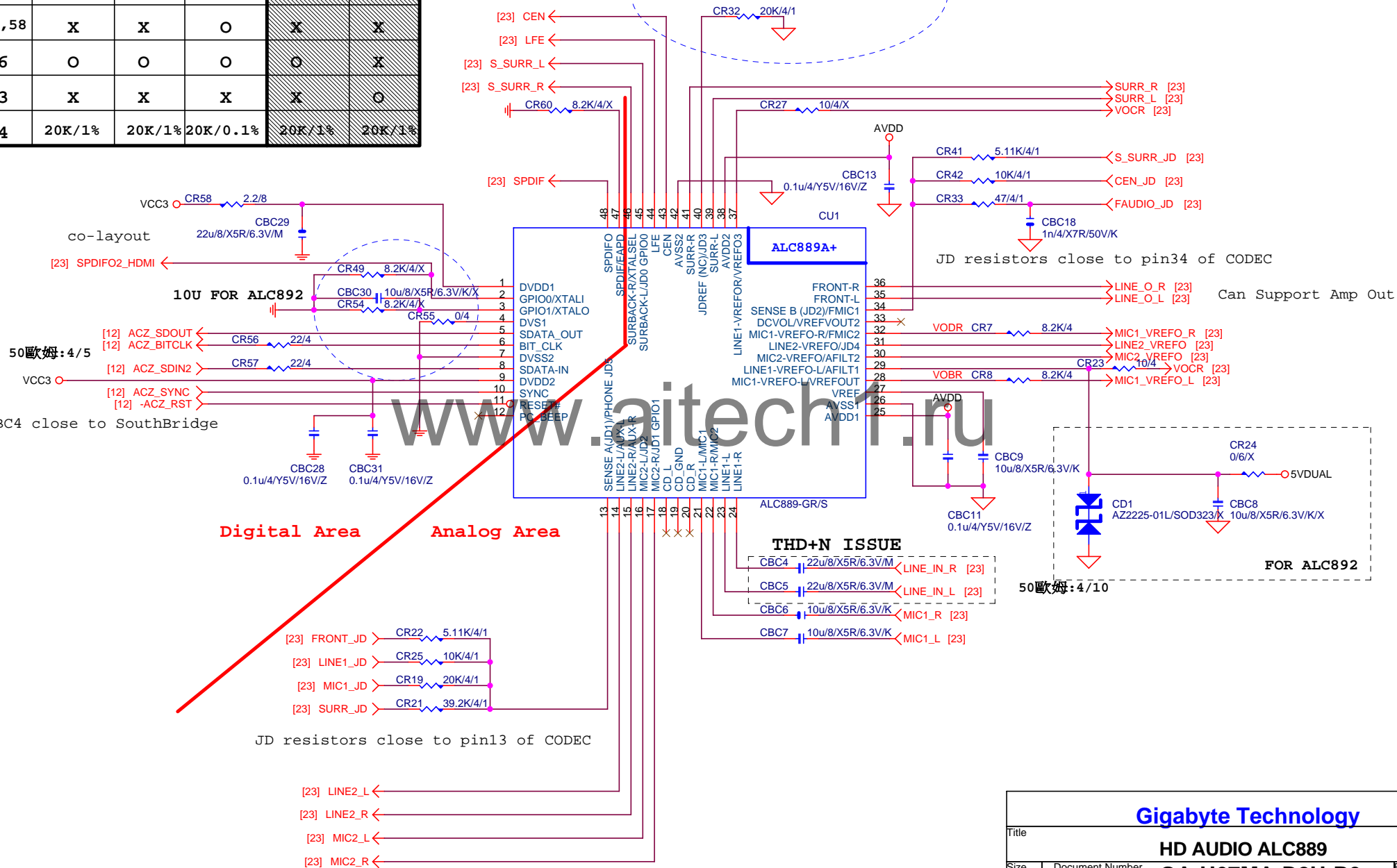
Gigabyte Technology

Title	FP.F USB.USB PWR.SPKR.SATA LED
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Size Custom	Document Number GA-H67MA-D2H-B3	Rev 1.1
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	ALC888B	ALC888-VA	ALC889A	ALC888-VD	ALC892
CR59	X	O	O	O	O
CR53,58	X	X	O	X	X
CR56	O	O	O	O	X
CR63	X	X	X	X	O
CR34	20K/1%	20K/1%	20K/0.1%	20K/1%	20K/1%



Gigabyte Technology

Title			HD AUDIO ALC889
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Custom			Rev 1.1
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Can Support Amp Out

CODEC POWER/EMI PAD

The schematic shows the following components and connections:

- EUP**: A dashed circle around the input stage.
- CD5**: CD4148WP/1206/300mA diode.
- AVDD**: Analog supply voltage connection point.
- CQ4**: 78L05/SOT89/0.1A voltage regulator.
- CBC32**: 22uX/X5R/6.3V/M capacitor.
- CD2**: AZ2225-01L/SOD323 transistor.
- +12V**: Power supply input.
- CR47**: 0/6/SHT/M/X component.
- CR20**: 2.2/4 component.
- CD3**: CD4148WP/1206/300mA diode.
- CBC35**: 0.1u/4/75V/16V/Z/X capacitor.

[22] SPDIFO2_HDMI

CR50

10/4

For HDMI SPDIF

CBC27

100pF/4NPO/50V/J

PIN

SPDIF_O

PH/1*2/BK/2.54/VA/D

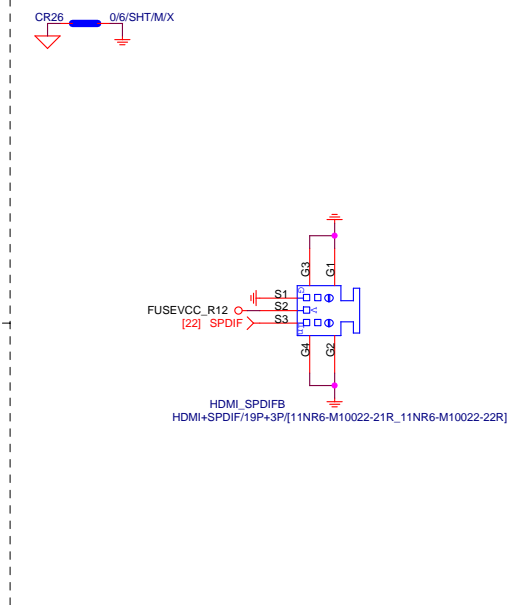
For HDMI SPDIF

SPDIF_IN

The diagram shows a 6-pin connector labeled "AZALIA JACK" with the following connections:

- LINE-IN (Blue oval):**
 - Pin 3: LINE1_JD
 - Pin 2: AJ_A5
 - Pin 4: AJ_A2
- LINE-OUT (Green oval):**
 - Pin 3: FRONT_JD
 - Pin 2: AJ_B5
 - Pin 4: AJ_B2
- MIC-IN (Pink oval):**
 - Pin 3: MIC1_JD
 - Pin 2: AJ_C5
 - Pin 4: AJ_C2

The connector is labeled "2X3RP/26P/OR,BK,GY,BU,GE,PK/RA".

[illegible]

MIC-IN

The schematic diagram for the MIC-IN section shows the following components and connections:

- Inputs:** MIC1_R and MIC1_L are connected to the MIC-IN block.
- Feedback Components:** CR10 and CR11 are 62/4 resistors connected to the MIC1_R and MIC1_L inputs, respectively.
- Reference Voltages:** MIC1_VREFO_L and MIC1_VREFO_R are connected to the MIC1_R and MIC1_L inputs, respectively.
- Capacitors:** CBC3 and CBC2 are 180pF/4NPO/50V/J capacitors connected to the MIC1_R and MIC1_L inputs, respectively.
- Outputs:** The MIC1_R and MIC1_L inputs are connected to the AJ_C5 and AJ_C2 outputs, respectively.

SURROUND

CEC9 100u/OS/D/16V/66/30m CR43 62/4 EMI CR36 10K/4/1 CR44 10K/4/1 B_J C5

[22] SURR_R

CEC5 100u/OS/D/16V/66/30m CR28 62/4 B_J C2

[22] SURR_L

CBC19 180p/4/NPO/50V/J CBC23 180p/4/NPO/50V/J

SURR BACK

CEC1 100uOS/D/16V/66/30m

CEC3 100uOS/D/16V/66/30m

CR14 62/4

CR15 62/4

CR1 10K/4/1

CR2 10K/4/1

CBC1 180p/4/NPO/50V/J

CBC22 180p/4/NPO/50V/J

BJ A5

BJ A2

EMI

22] S_SURR_R

22] S_SURR_L

AZALIA FRONT PANEL

F_AUDIO_H

Digital Area

Gigabyte Technology

AUDIO JACK

GA-H67MA-D2H-B3

Rev 1.1

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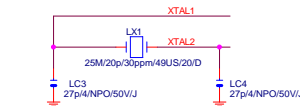
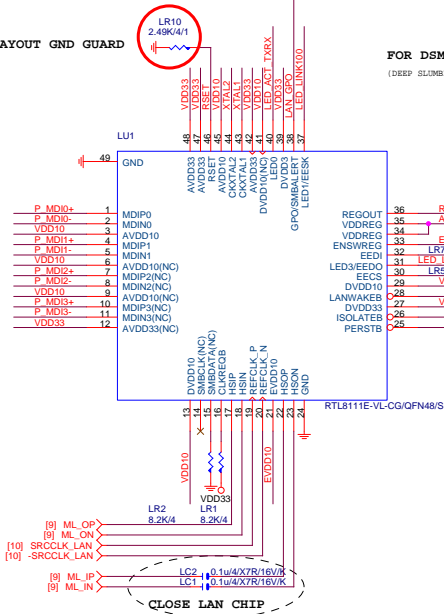
Digital Area

Title			
AUDIO JACK			
Size	Document Number		Rev
Custom	GA-H67MA-D2H-B3		1.1
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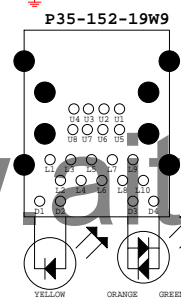
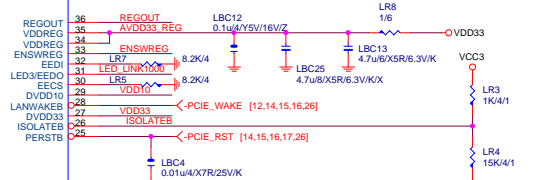
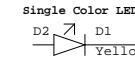
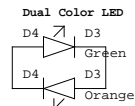
PCIE-1G LAN

XTAL2:外部CLK IN

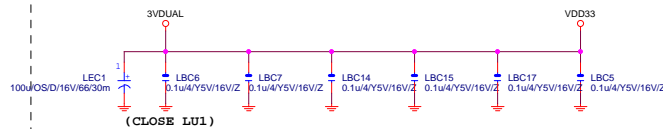
RSET需LAYOUT GND GUARD



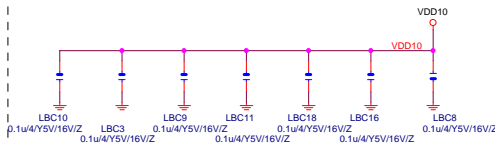
FOR DSM MODE
(DEEP SLEEP MODE)



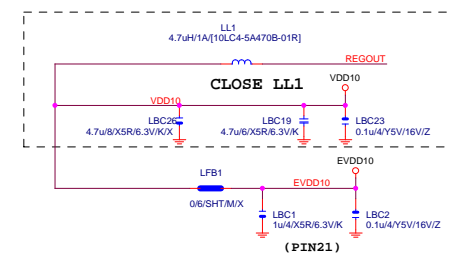
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(CLOSE LU1)



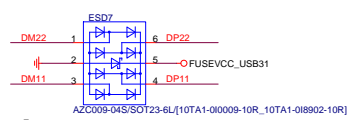
(PIN3, 6, 9, 13, 29, 41, 45)



(PIN21)

USB_LAN CONNECTOR

90欧姆: [20/4/8/4/20]



Close to connector

AZC009-04S/SOT23-6L[10TA1-010009-10R_10TA1-018902-10R]

FUSEVCC_USB31

0.1u4/4X7R/25V/K

LBC22 0.1u4/4Y5V/16V/Z

SSRXDN1 [26] SSRXDP1 [26] SSTXDN1C [26] SSTXDP1C [26]

SSRXDN2 [26] SSRXDP2 [26] SSTXDN2C [26] SSTXDP2C [26]

SSRXDN1C [26] SSRXDP1C [26] SSTXDN1C [26] SSTXDP1C [26]

SSRXDN2C [26] SSRXDP2C [26] SSTXDN2C [26] SSTXDP2C [26]

SSRXDN1C [26] SSRXDP1C [26] SSTXDN1C [26] SSTXDP1C [26]

SSRXDN2C [26] SSRXDP2C [26] SSTXDN2C [26] SSTXDP2C [26]

SSRXDN1C [26] SSRXDP1C [26] SSTXDN1C [26] SSTXDP1C [26]

SSRXDN2C [26] SSRXDP2C [26] SSTXDN2C [26] SSTXDP2C [26]

SSRXDN1C [26] SSRXDP1C [26] SSTXDN1C [26] SSTXDP1C [26]

SSRXDN2C [26] SSRXDP2C [26] SSTXDN2C [26] SSTXDP2C [26]

SSRXDN1C [26] SSRXDP1C [26] SSTXDN1C [26] SSTXDP1C [26]

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SSRXDN2C [26] SSRXDP2C [26] SSTXDN2C [26] SSTXDP2C [26]

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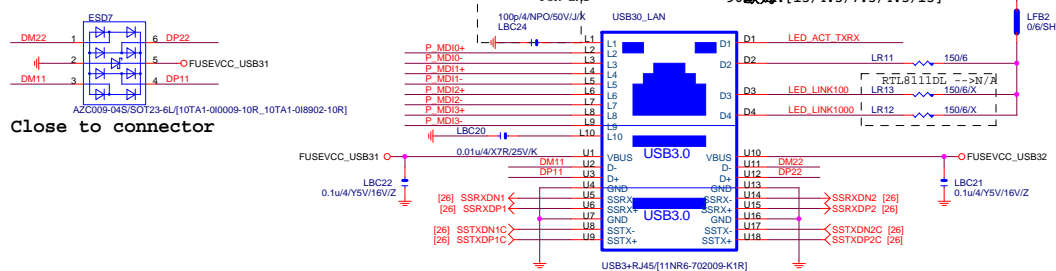
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SSRXDN2C [26] SSRXDP2C [26] SSTXDN2C [26] SSTXDP2C [26]

SSRXDN1C [26] SSRXDP1C [26] SSTXDN1C [26] SSTXDP1C [26]

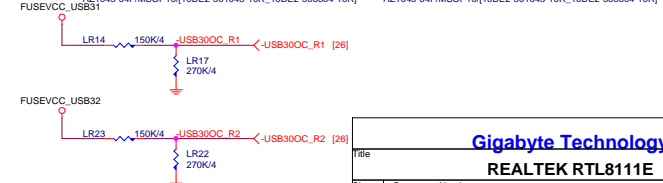
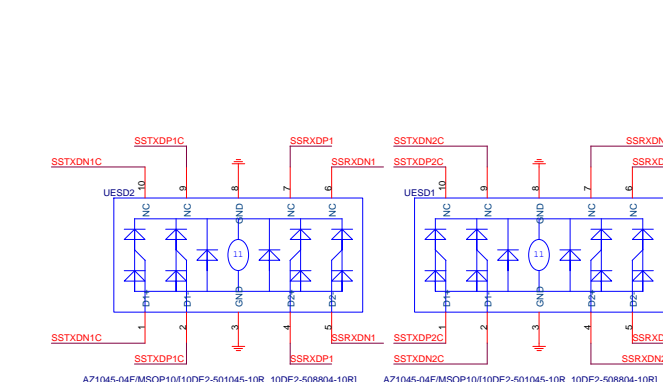
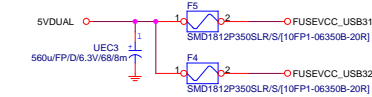
SSRXDN2C [26] SSRXDP2C [26] SSTXDN2C [26] SSTXDP2C [26]

90欧姆: [15/4.5/7.5/4.5/15]

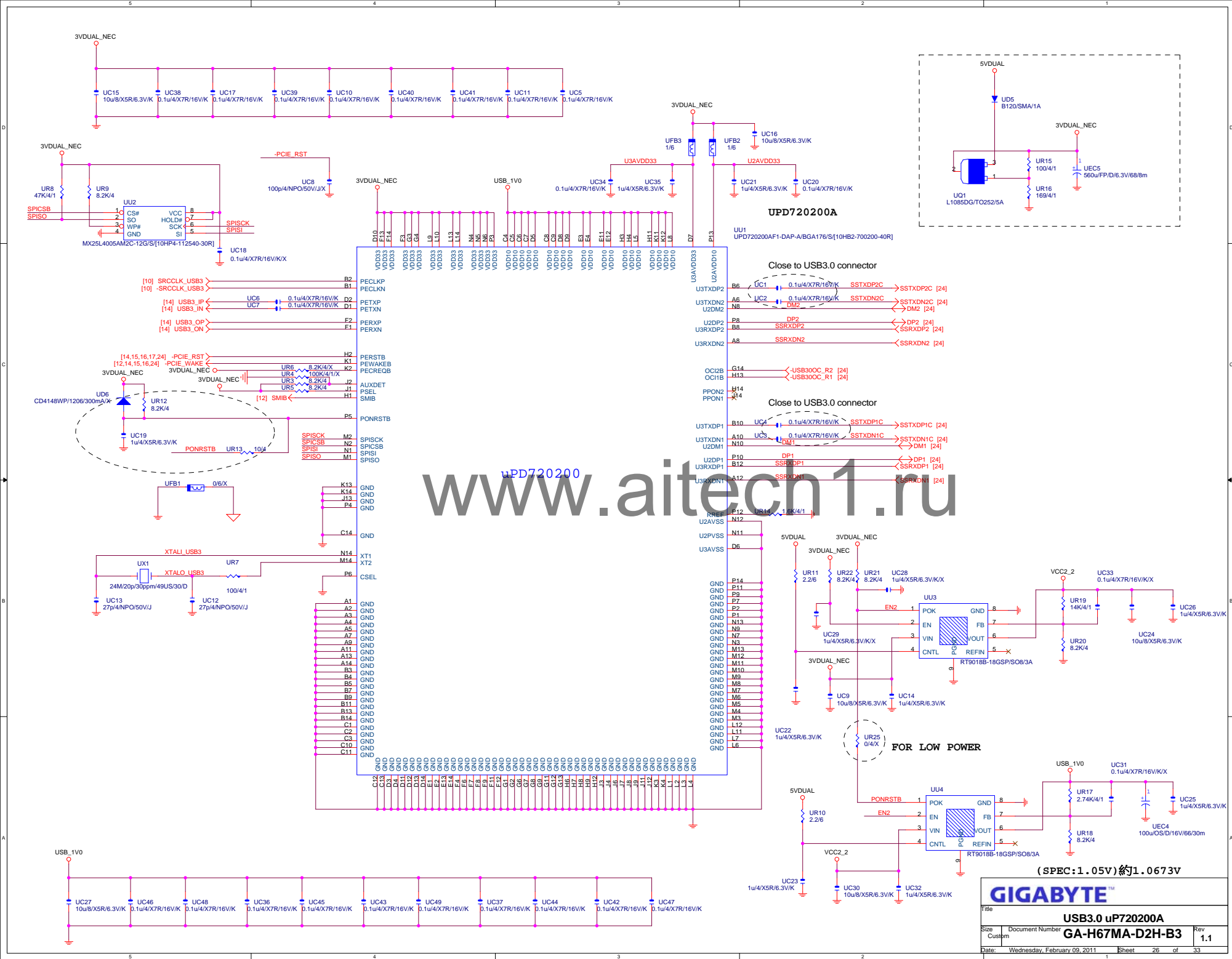


USB30_LAN-N

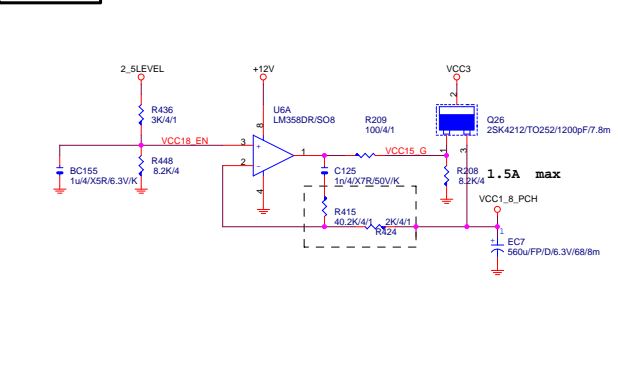
CLOSE USB30_LAN



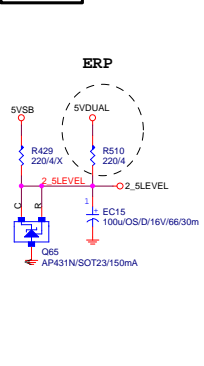
Gigabyte Technology		
REALTEK RTL8111E		
GA-H67MA-D2H-B3		
Rev	1.1	



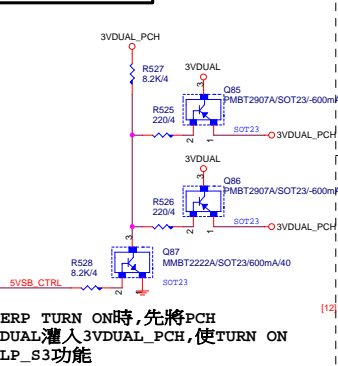
VCC1_8_PCH



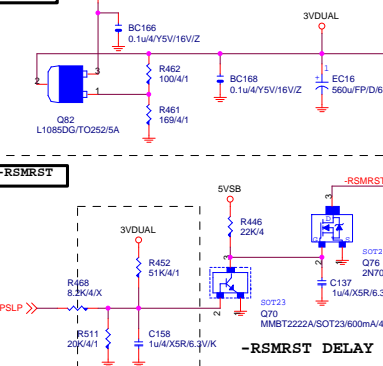
2_5LEVEL



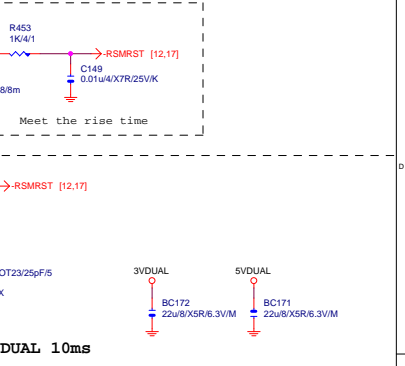
FIX ERP 5VSB DROP



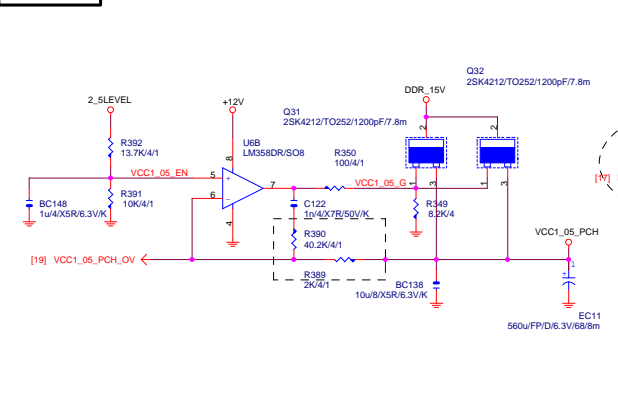
3VDUAL



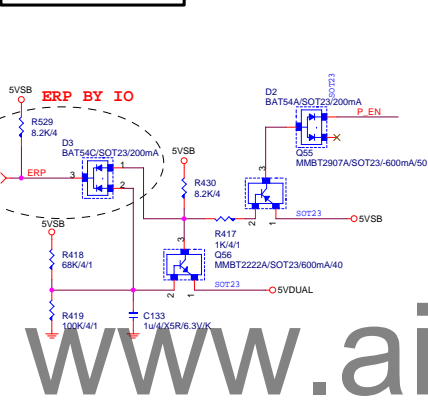
-RSMRST



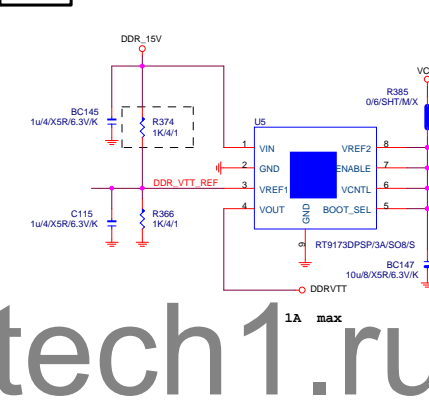
VCC1_05_PCH



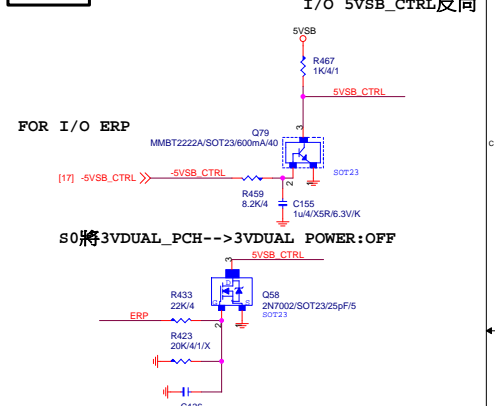
5VDUAL SHORT PROTECT



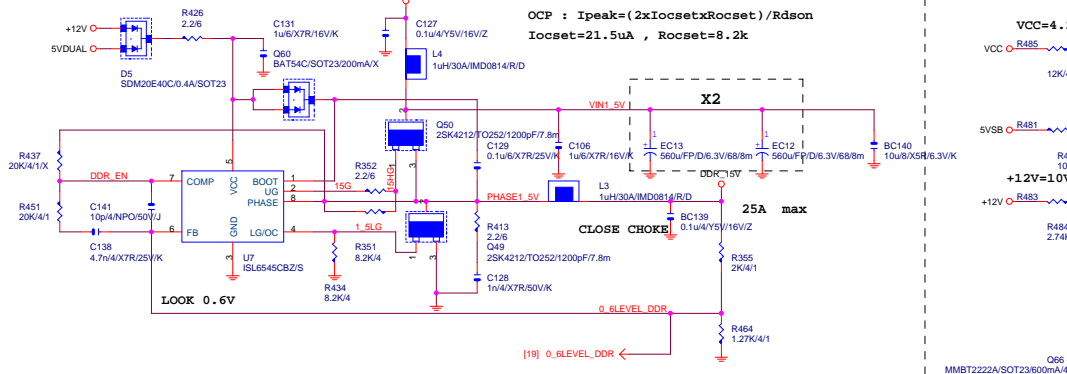
DDR_VTT



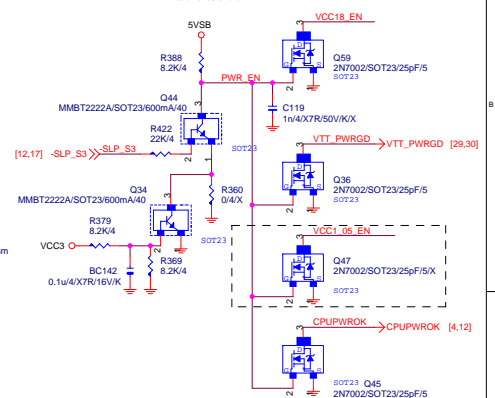
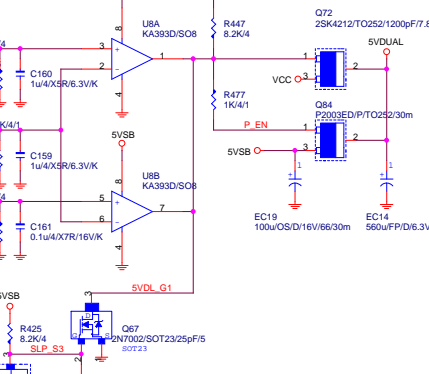
PWR_SEQ



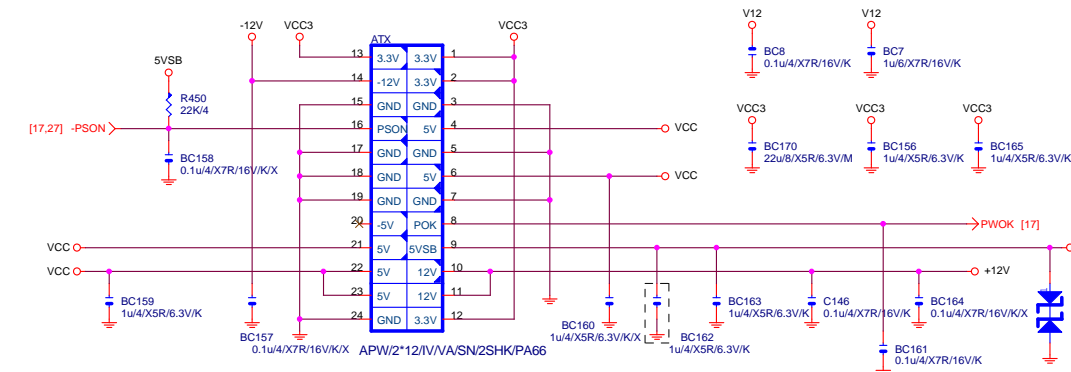
DDR_15V



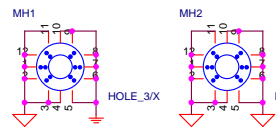
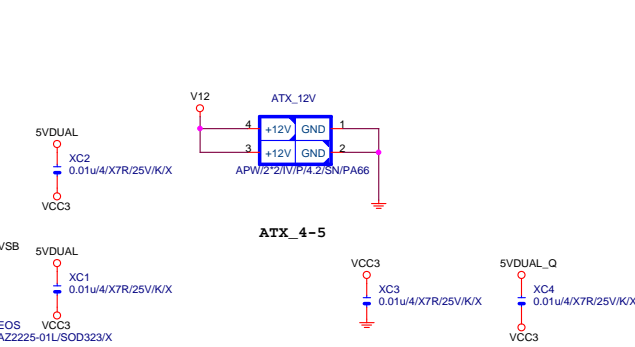
5VDUAL



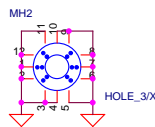
ATXX24 POWER CONNECTOR



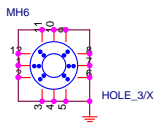
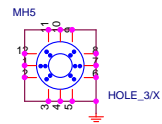
ATXX4 POWER CONNECTOR



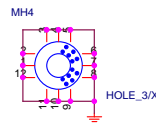
HOLE_4-RH-1



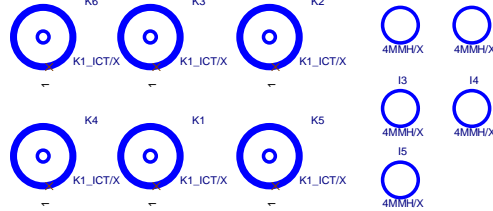
HOLE_4-RH-5MM-1



HOLE_4-RH-5MM-1



HOLE_4-RH-5MM-5PIN-1



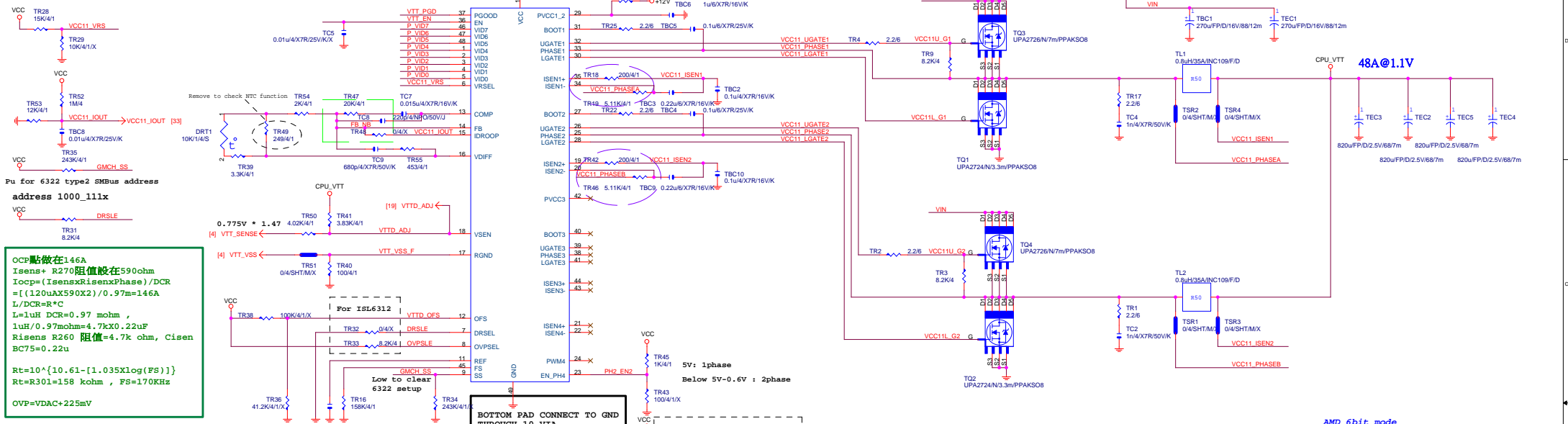
```
| To prevent the 5VSB  
| under loading when  
| boot
```

5VDUAL1(USB PORT/DDRIII POWER)
5VDUAL(3VDUAL/OTHER)

```
-S_WARN-->5VDUAL1-->-S_ACK(PCH)-->-DEPSLP/-RSMRST-->5VDUAL-->3VDUAL
```

CPU_VTT

5V : AMD mode
0.6V~3V : VRD11 mode
0V : VRD10 mode

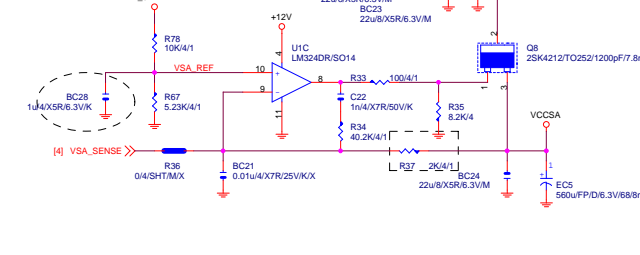


OCP點做在146A
Isens+ R270阻值設在590ohm
Iocp=(IsensxRisenxPhase)/DCR
=[(120uAX590X2)/0.97m=146A
L/DCR=RxC
L=1uH DCR=0.97 mohm ,
1uH/0.97mohm=4.7kX0.22uF
Risens R260 阻值=4.7k ohm, Cisen
BC75=0.22u
Rt=10^{0.161-[1.035Xlog(FS)]}
Rt=R301=158 kohm , FS=170KHz
OVP=VDAC+225mV

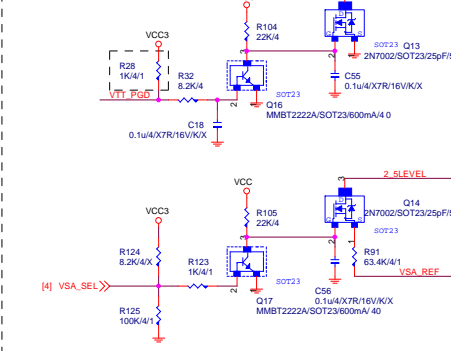
www.aitech1.ru

VCCSA

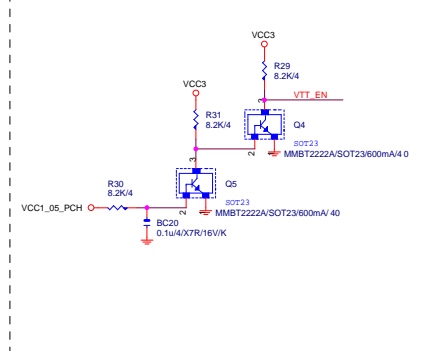
PDG 0.8
VSA_SEL
HI 0.85V
LO 0.925V



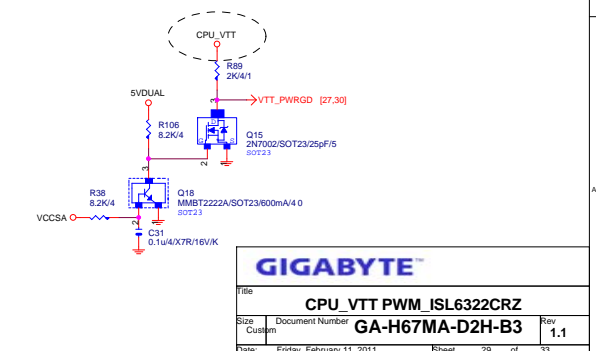
VCCSA_PWR_SEQ



CPU_VTT_PWR_SEQ



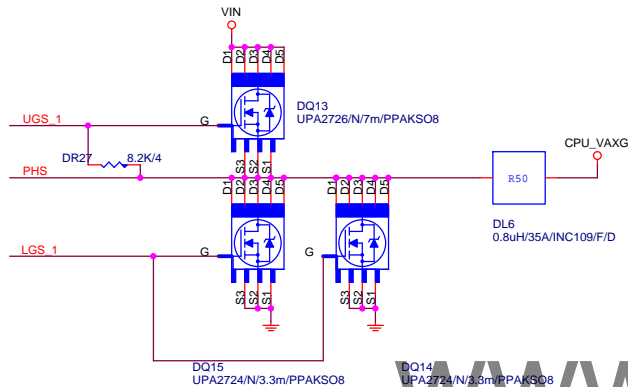
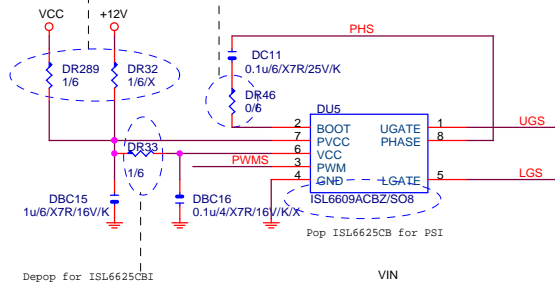
VTT_PWRGD



VAXG

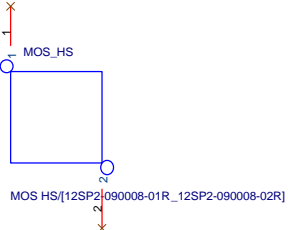
ISL6612 use +12V
ISL6609 use VCC

ISL6612 use 1 ohm
ISL6609 use 0 ohm



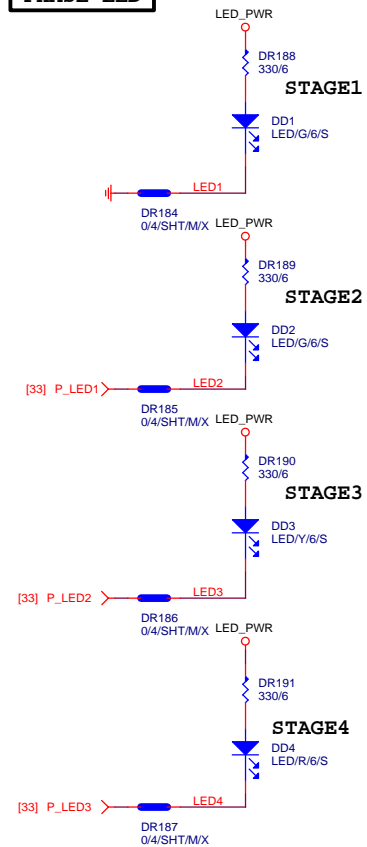
MOS HEATSINK

MOSHSINK-P67A-D3

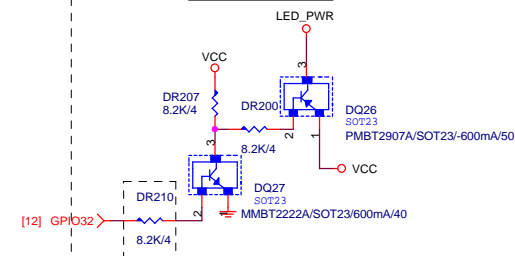


www.aitech1.ru

PHASE LED

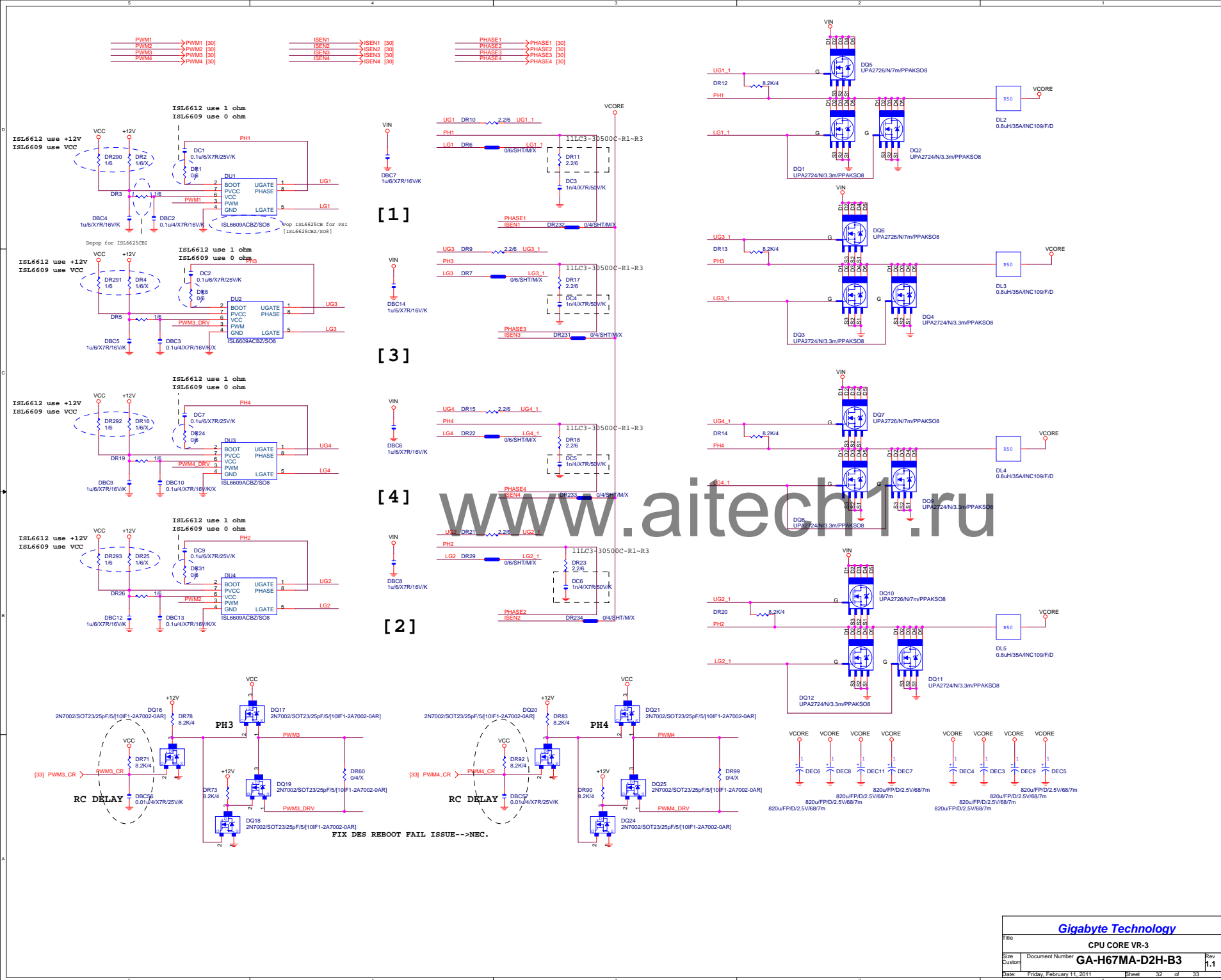


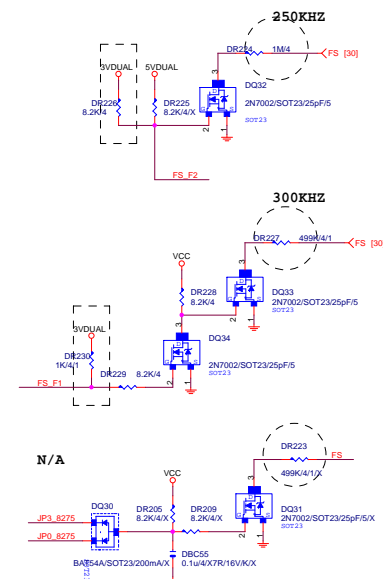
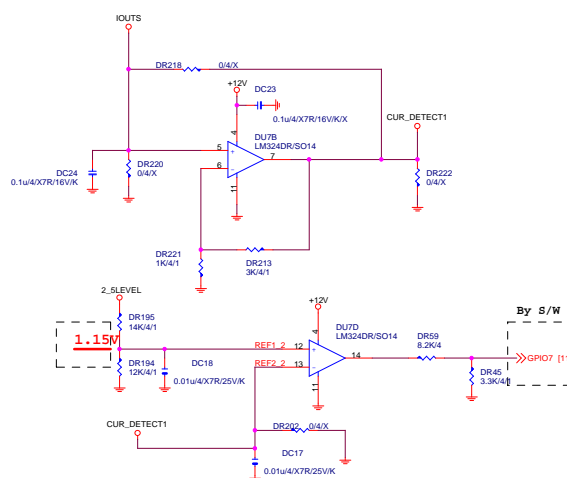
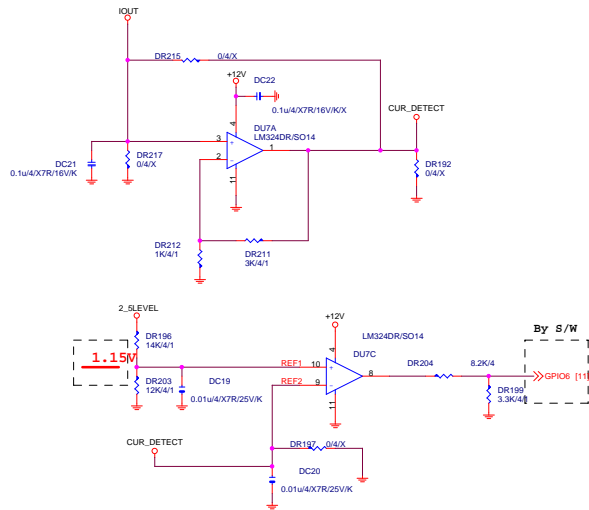
LED POWER



Gigabyte Technology

Title		
CPU CORE VR-2		
Size	Document Number	Rev
Custom	GA-H67MA-D2H-B3	1.1
Date:	Friday, February 11, 2011	Sheet 31 of 33



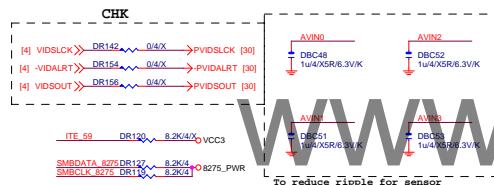


PWM FREQUENCY (400K-750KHz)

	Io_GP36	Io_GP37
	GP17	GP16
400K	L	X
500K	L	L
600K	X	X
750K	X	L

Default

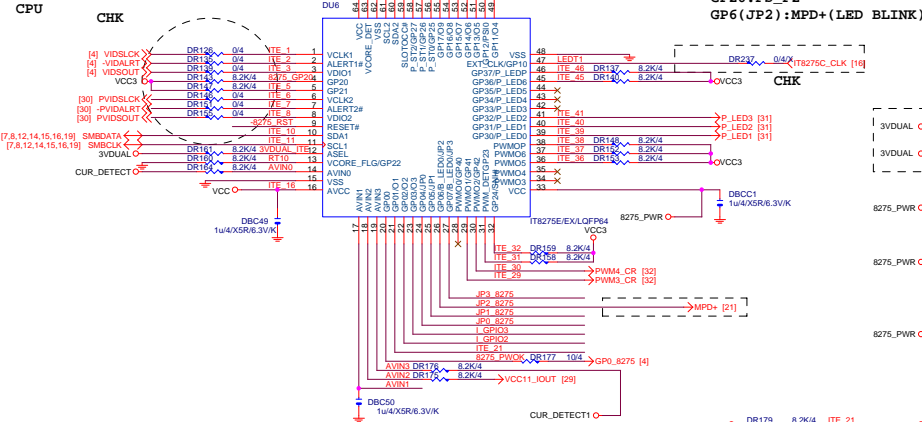
250K hard to apply 750K now almost 700K



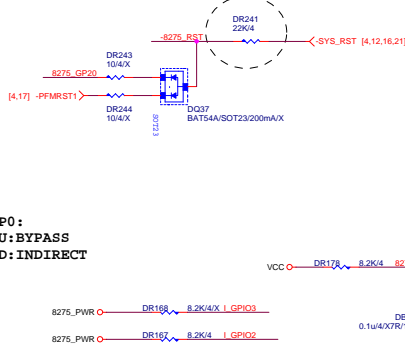
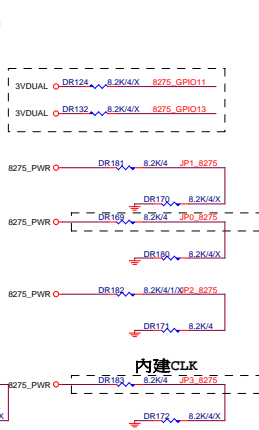
www.aitech1.ru

CLOSE IT8275C
DR287先驗證IT8275C

CPU_VTT
DR287 51/4/1 ITE 1
DR288 100/4/1 ITE 3



GP16:AWORK
GP17:BWORK
GP25:FS_F1
GP26:FS_F2
GP6(JP2):MPD+(LED BLINK)



內建CLK