

Model Name: GA-H61M-DS2 Rev: 4.01

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*1x2 SLOT
16	ITE 8620 LPC IO
17	KB_MS,R_USB,-PROCHOT
18	HWM,FAN CTRL,OV
19	Dual BIOS
20	FP,FUSB,SPK,SATALED
21	ALC887
22	REAR AUDIO JACK
23	REALTEK 8111F/USB_LAN
24	DISCRETE POWER
25	ATX,-S_WARN,-S_ACK,5VDUAL
26	CPU_VTT
27	VCORE INTERSIL_95836_1

SHEET TITLE

28	VCORE INTERSIL_95836_2
29	VCORE INTERSIL_95836_3
30	LPT

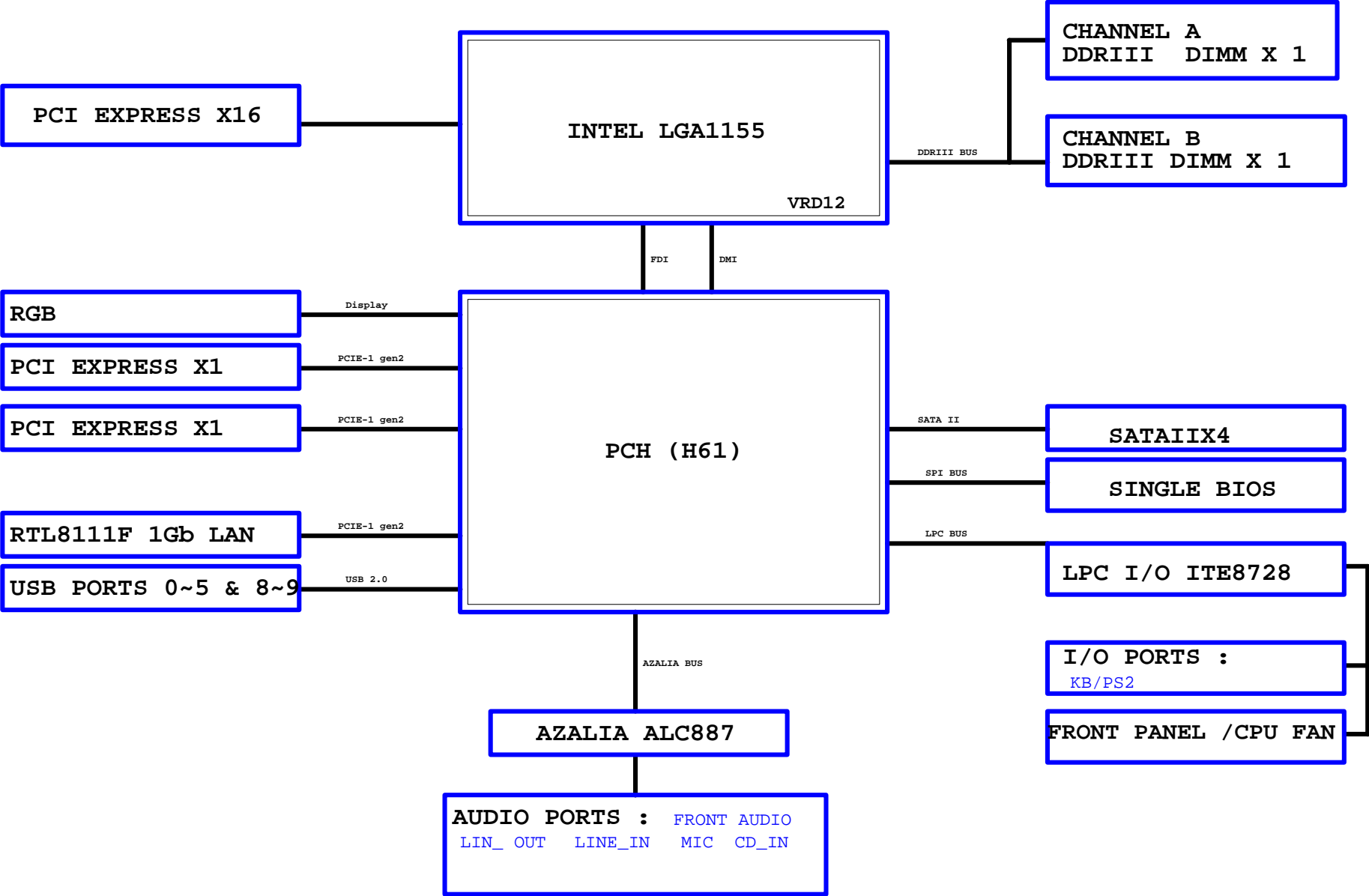
Gigabyte Technology		
Cover Sheet		
Size Custom	Document Number GA-H61M-DS2	Rev 4.01
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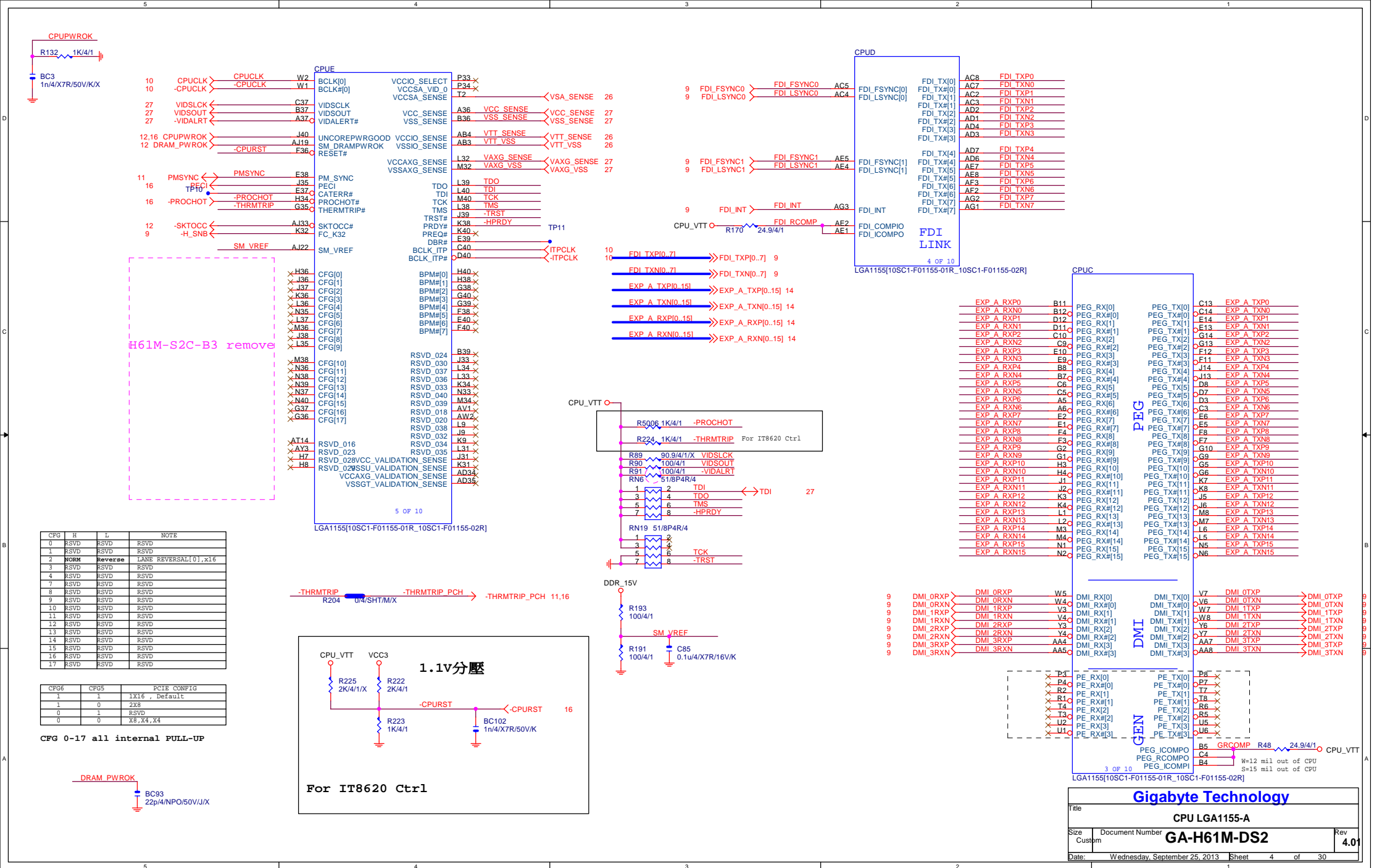
## Component value change history

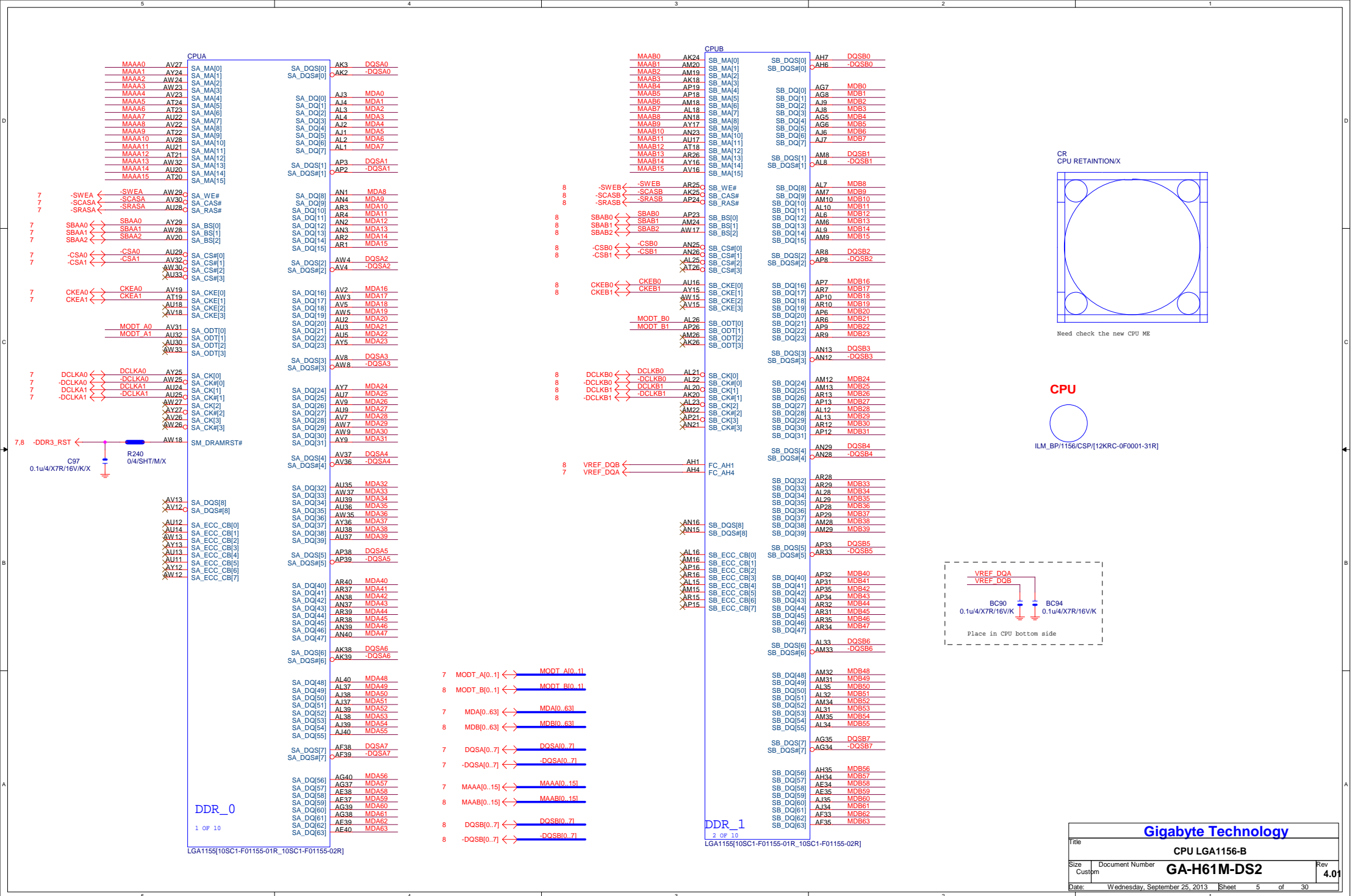
Circuit or PCB layout change

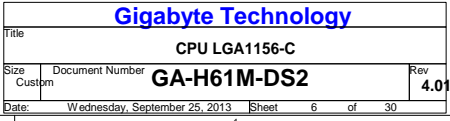
<b><i>Gigabyte Technology</i></b>			
Title			
<b>BOM &amp; PCB MODIFY HISTORY</b>			
Size Custom	Document Number	<b>GA-H61M-DS2</b>	Rev <b>4.01</b>
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BLOCK DIAGRAM

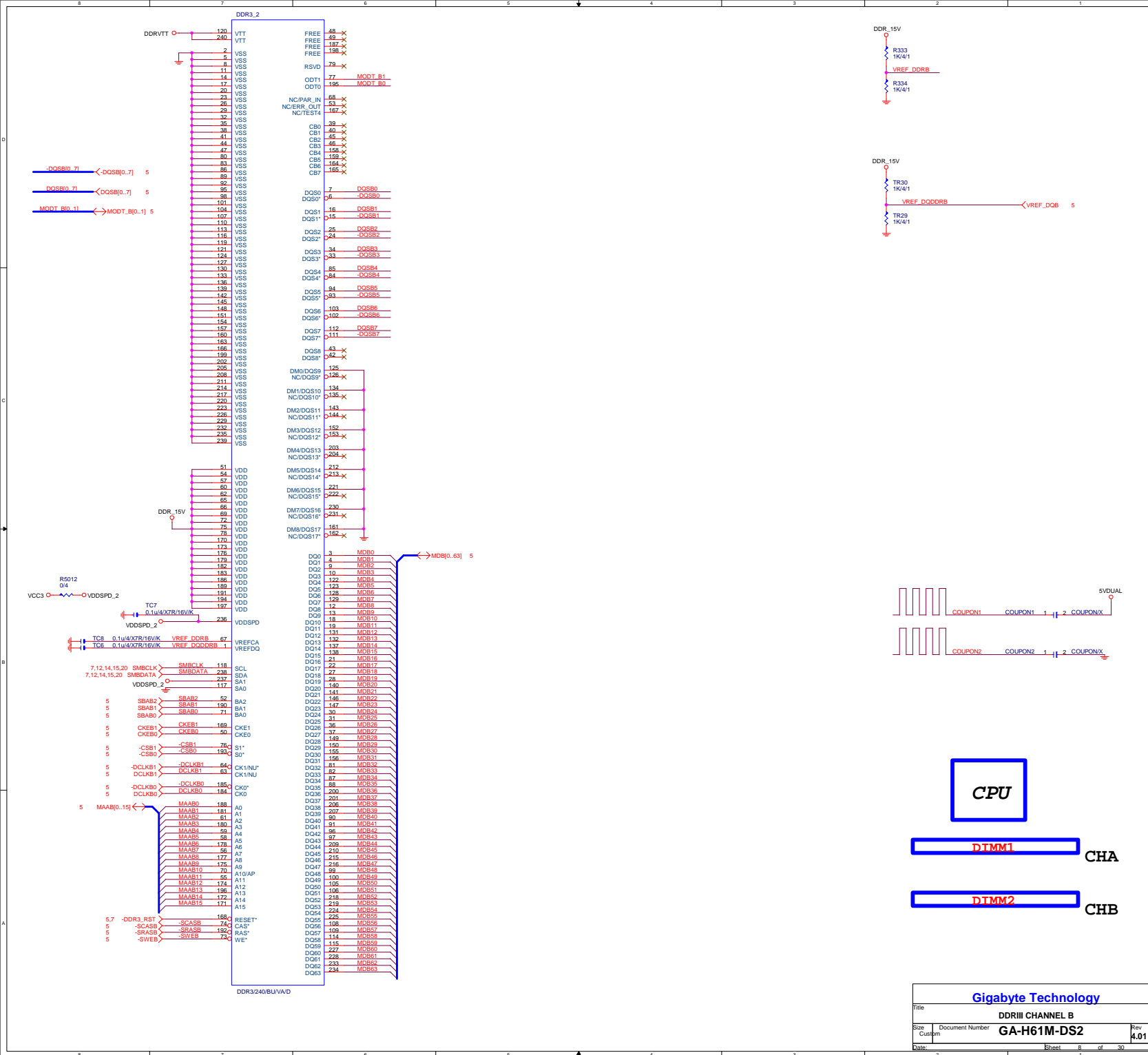




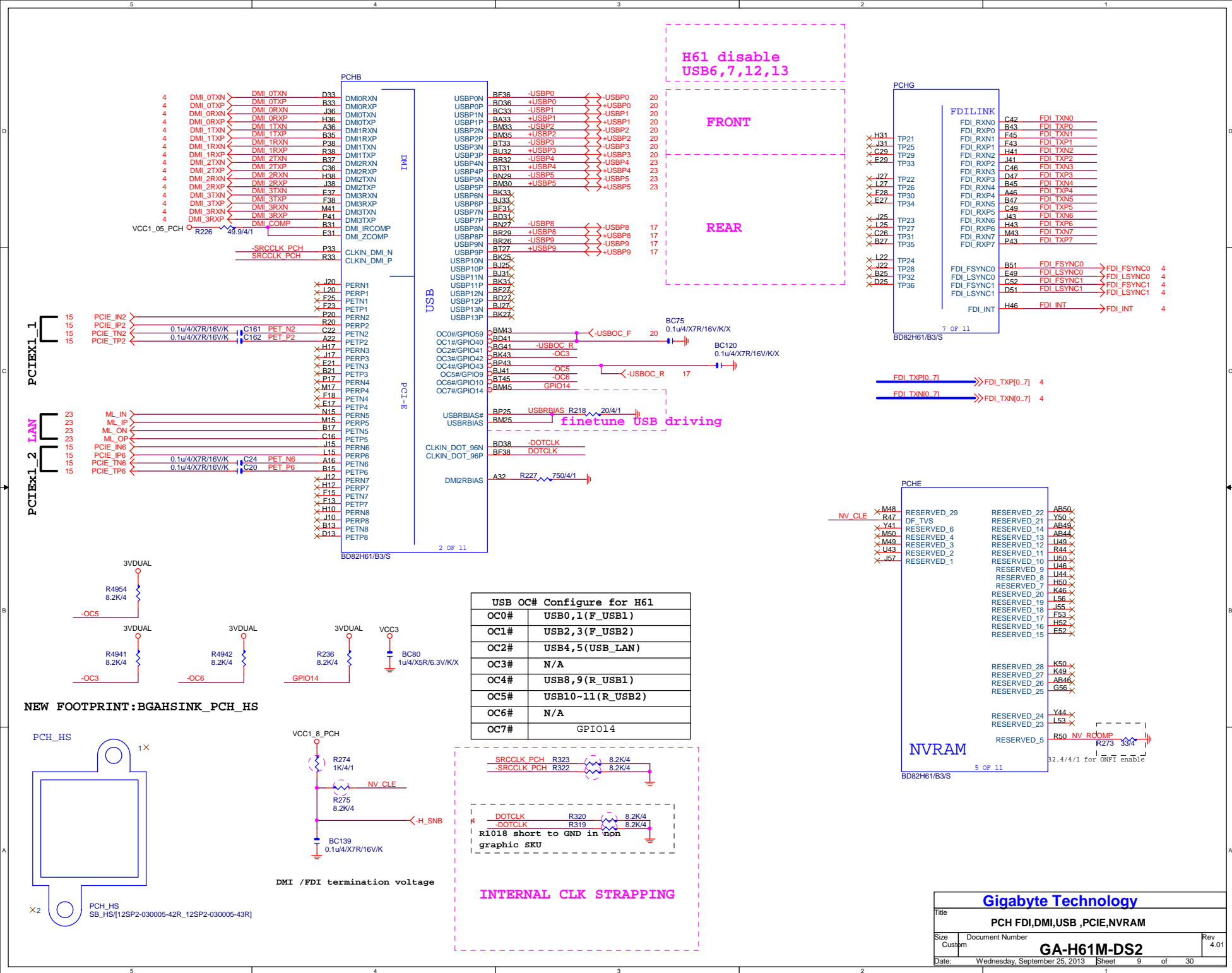






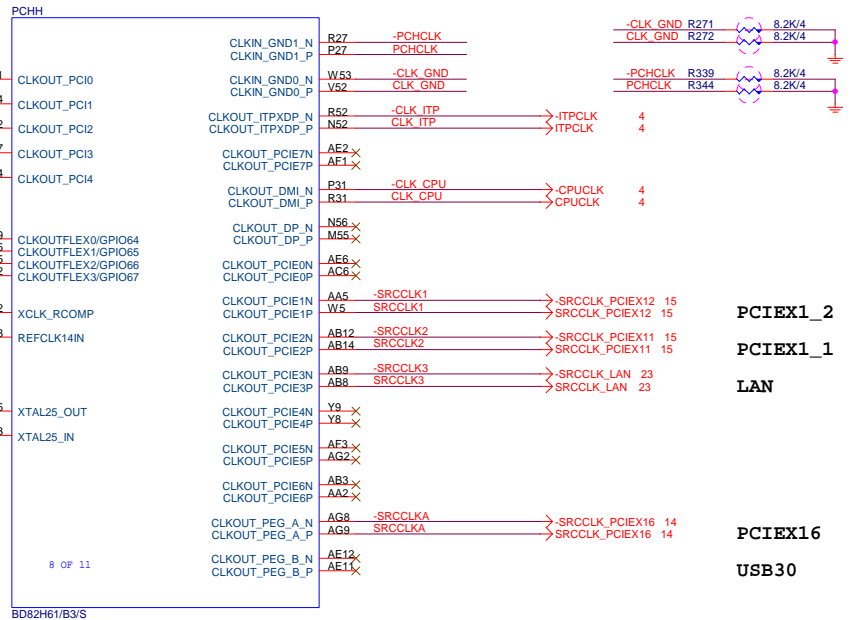
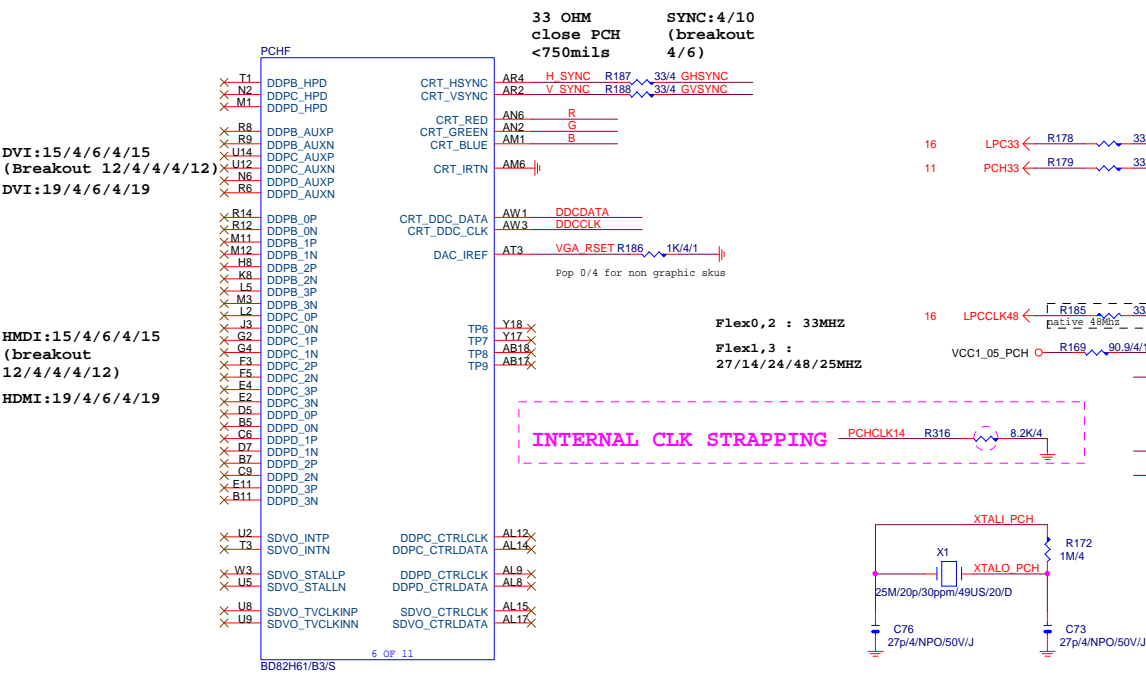




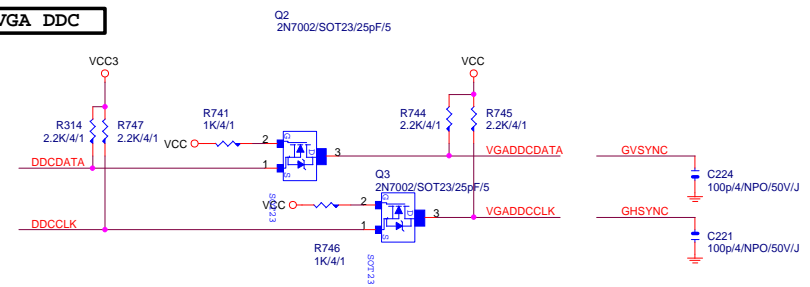


DVI:15/4/6/4/15  
(Breakout 12/4/4/4/12)  
DVI:19/4/6/4/19

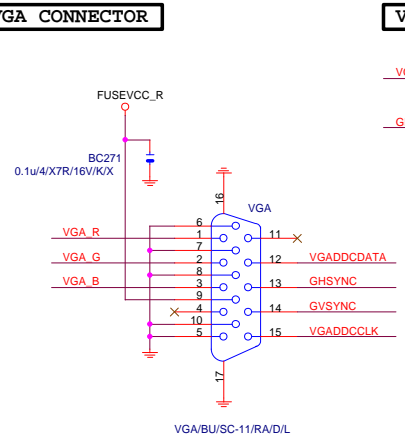
HDMI:15/4/6/4/15  
(breakout  
12/4/4/4/12)  
HDMI:19/4/6/4/19



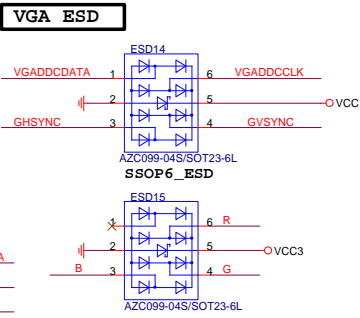
VGA DDC



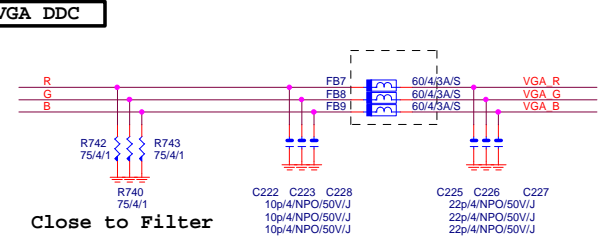
VGA CONNECTOR

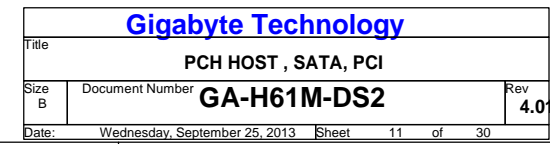


VGA ESD

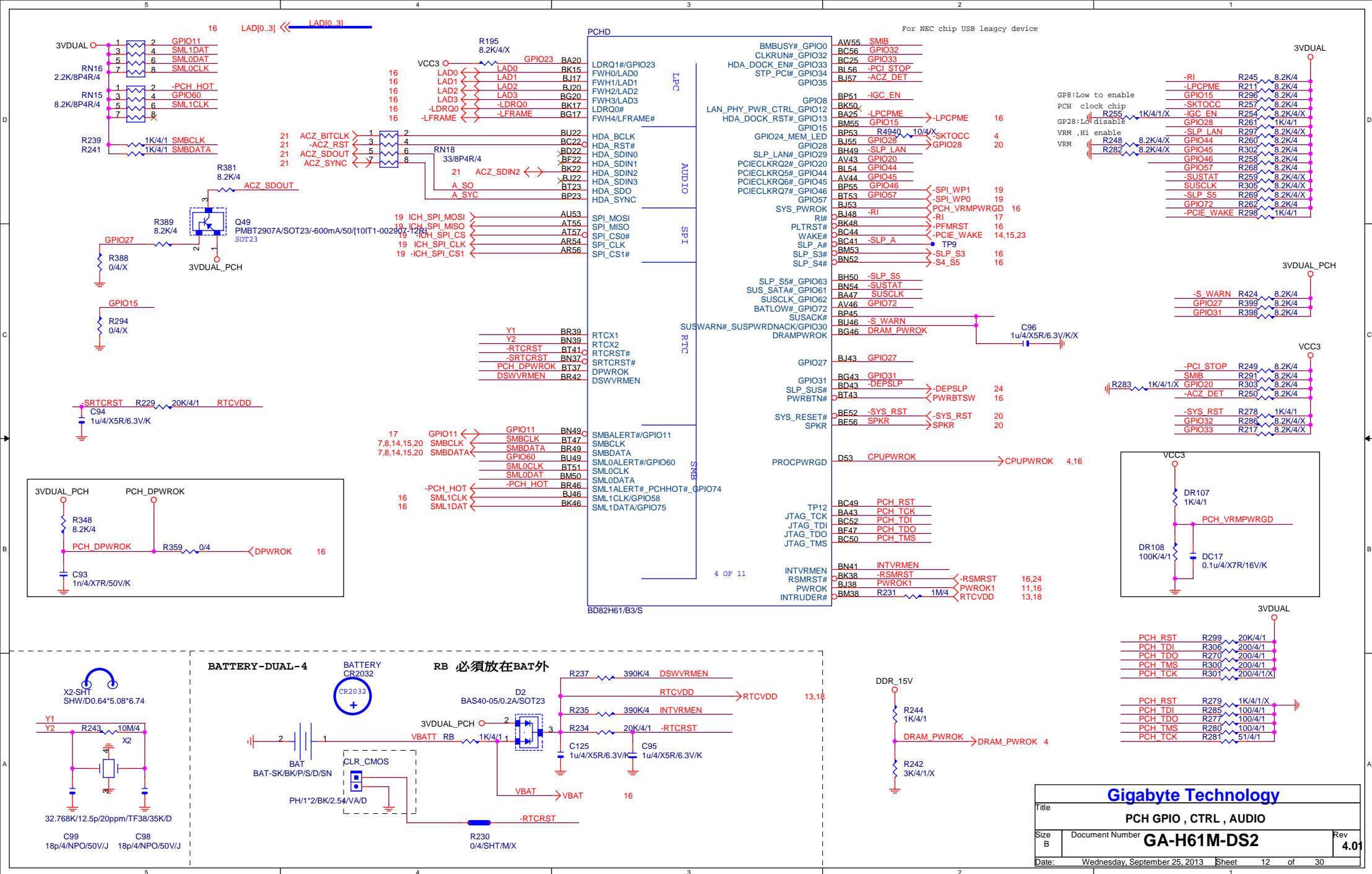


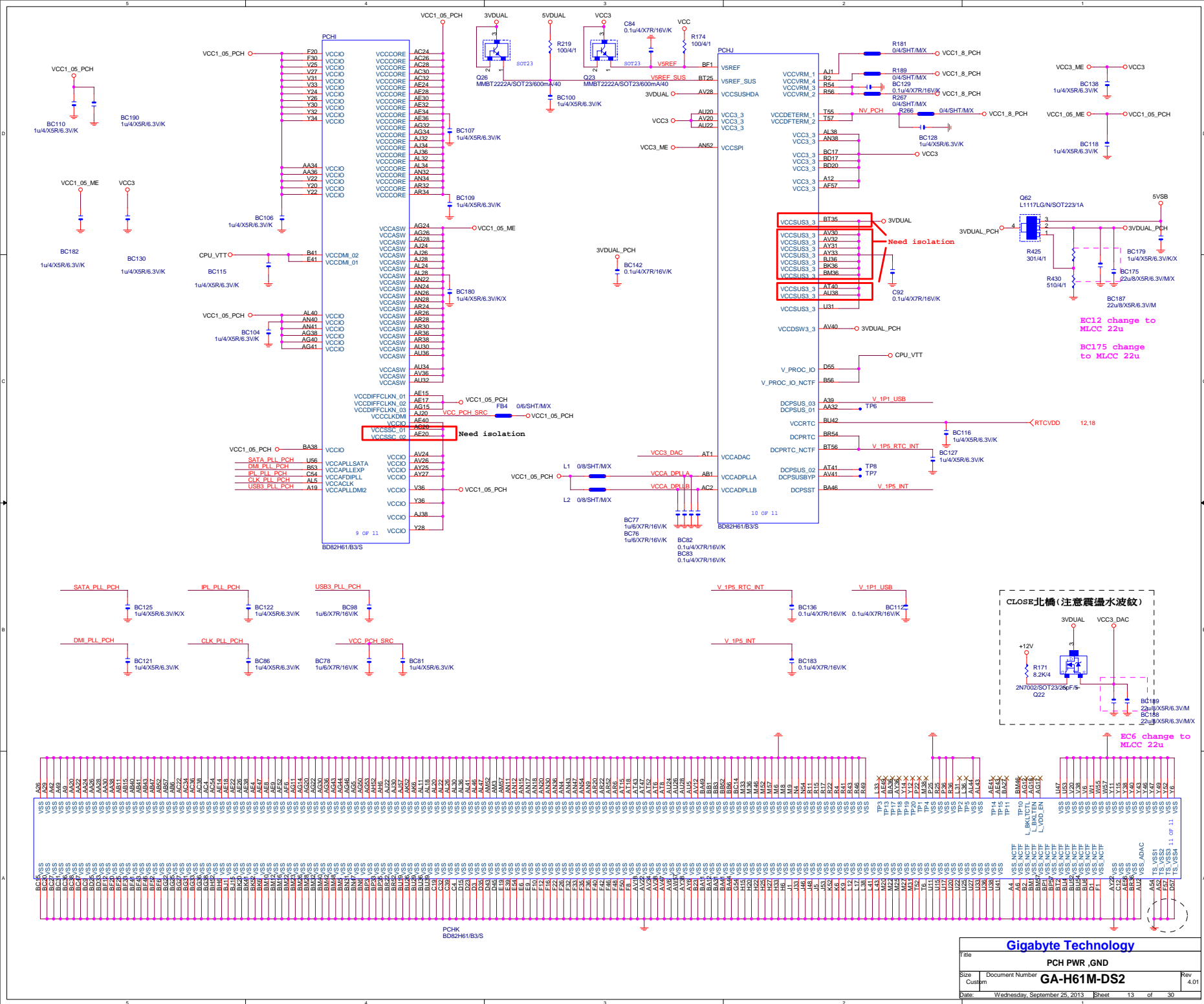
VGA DDC



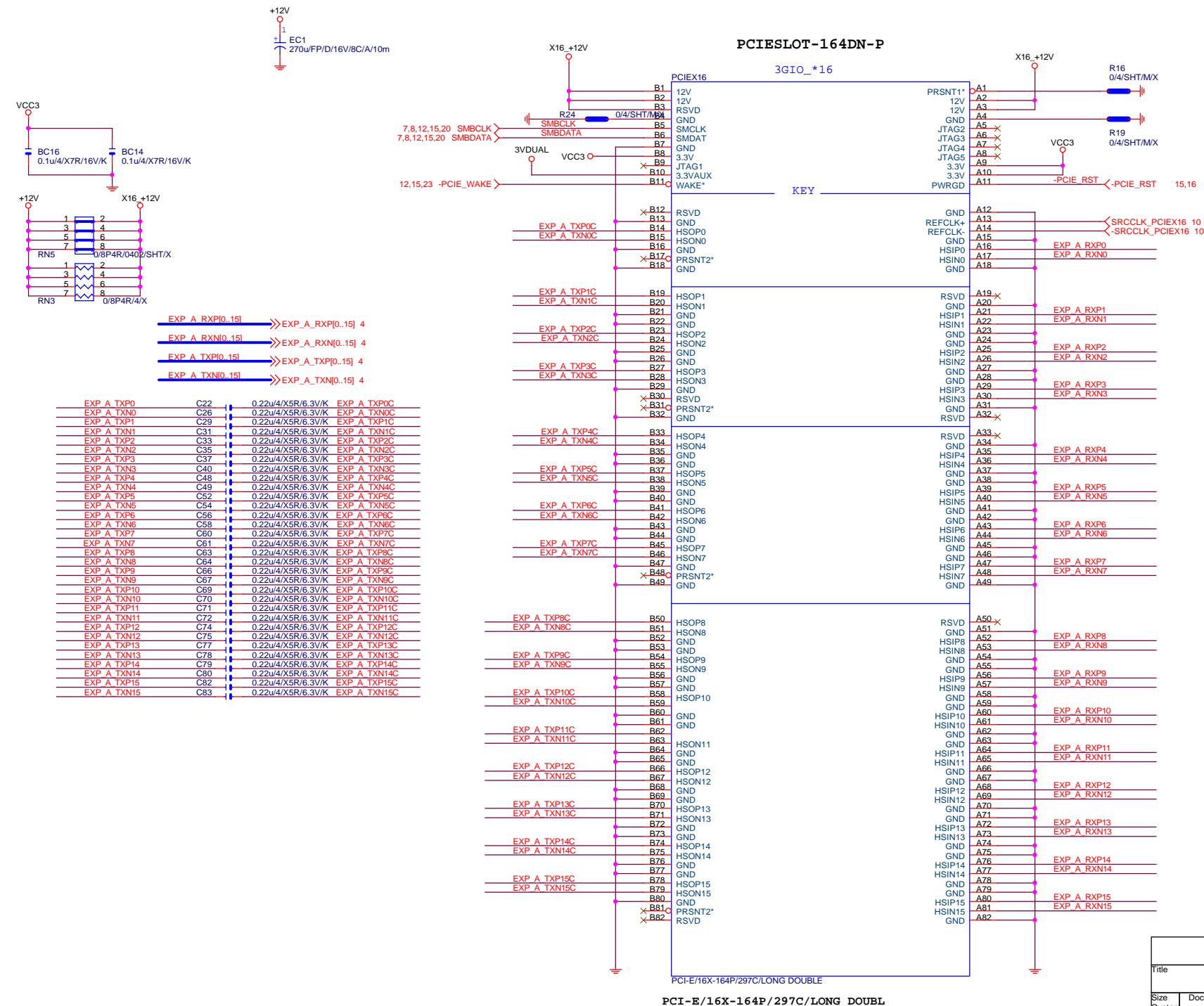


H1X7-SATA2-HS-MASK

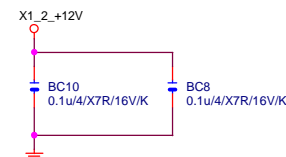
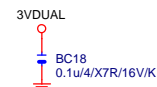
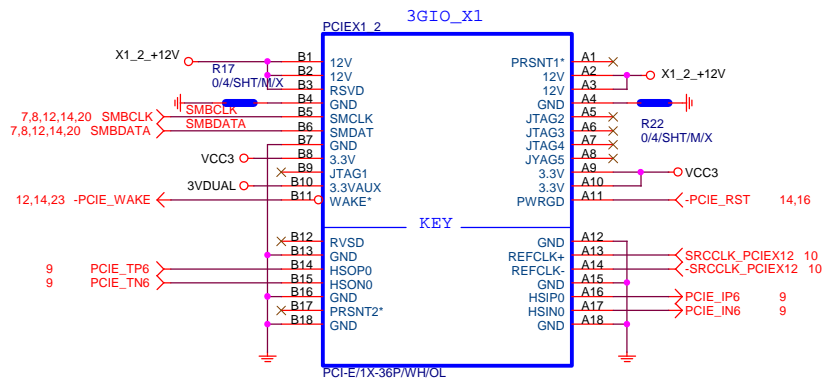
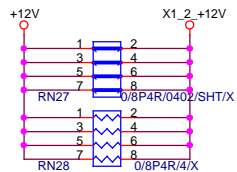
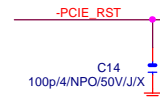
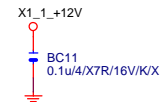
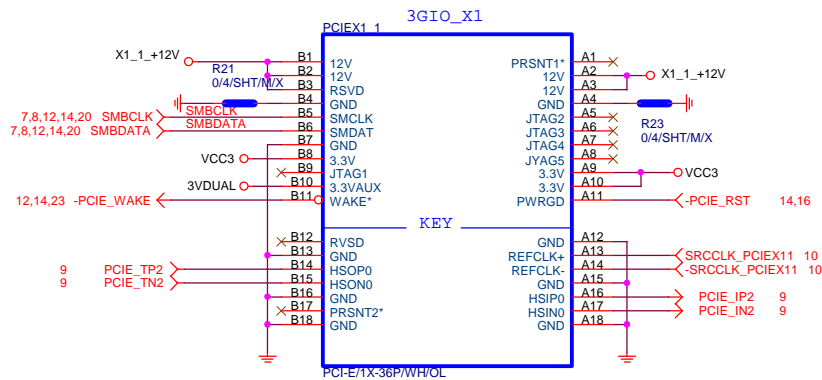
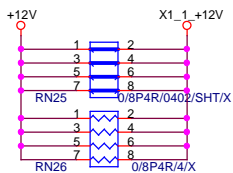




EC6D\_8D10MM-RH



PCIE\*1

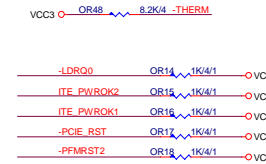
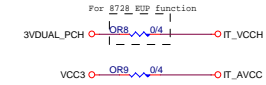
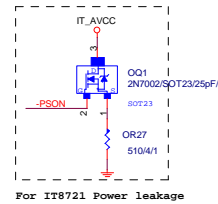
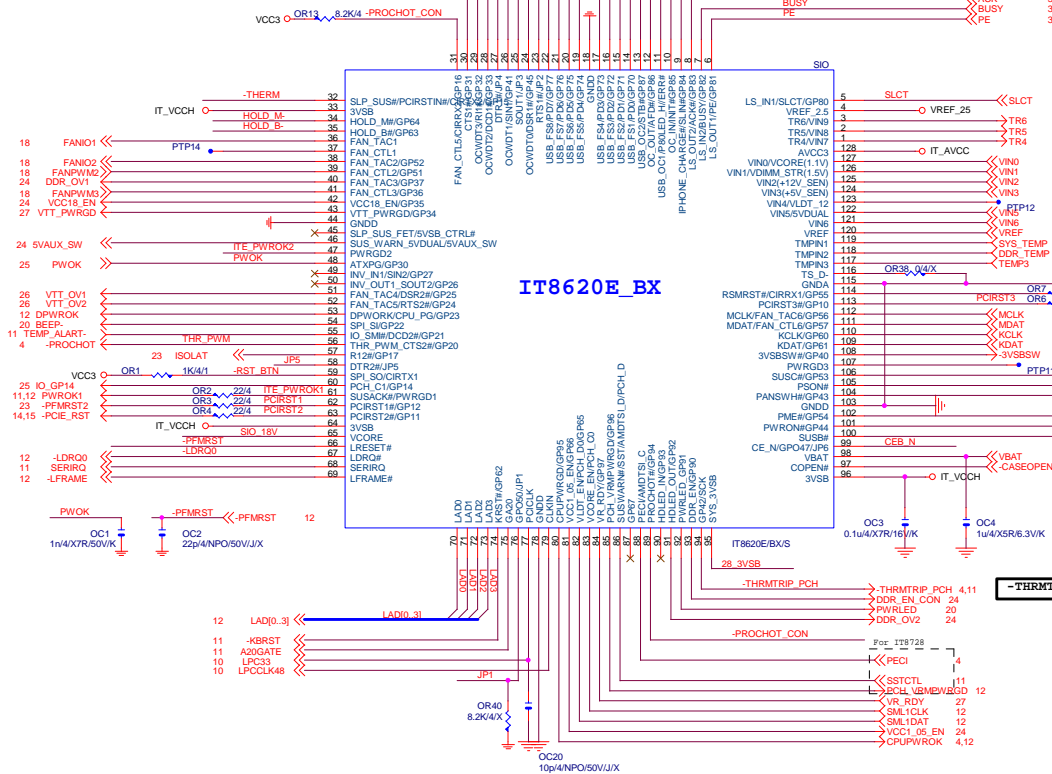


Gigabyte Technology

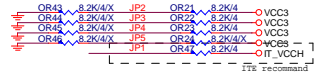
Title			
PCIEX1,X2/CLK GEN			
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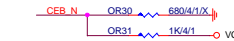
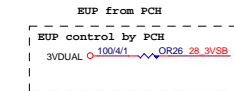
GP22 Default GP22 DIOD8  
GP23 Default CPU\_PG DOD8



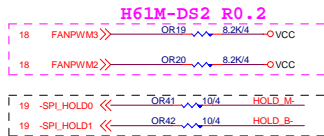
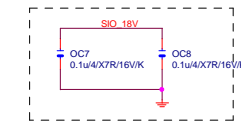
H61M-S2 1.1 JP6 stuff  
pull down



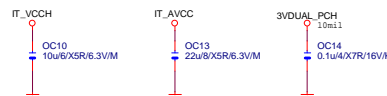
JP3--- High SPI-Flash Disable  
Low SPI-Flash Enable



internal power pin, max 22nF cap



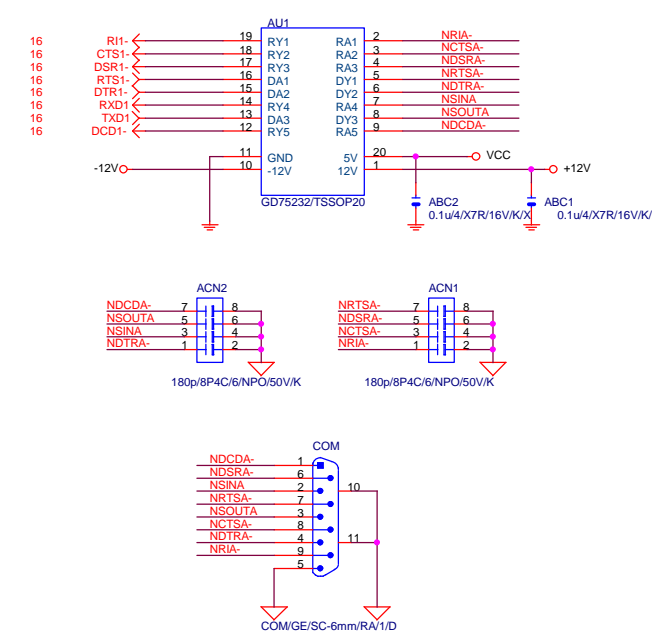
IT8728
PIN121
VOCER_RN/PCH_D0
PIN120
VLDT_BN/PCH_D0
PIN19
ATXPG
PIN31
PCH_CL
PIN53
SST/AMTSL_D/MTRB#/PCH_D1
PIN55
PRCI/AMTSL_C/SRVB#
PIN66
SVS_3VSB
PIN70
GP47
PIN95
VIN2(VCC5)
PIN96
VIN1(VCC12)
PIN97
VIN1/VIDIMM_STK(1.5V)
PIN98
VINO/VOCORE(1.1V)/NC



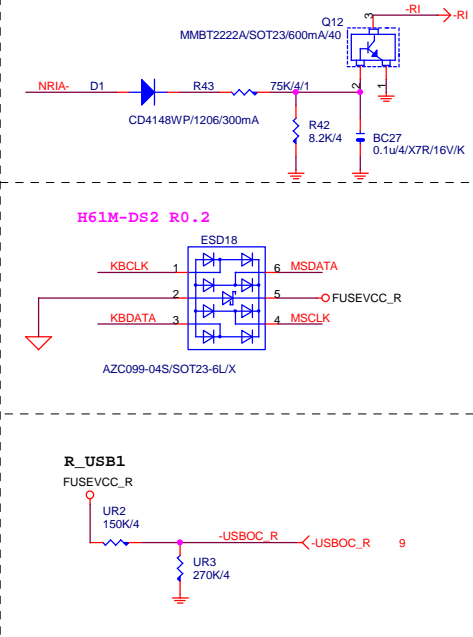
<b>Gigabyte Technology</b>			
Title			
<b>PCH GPIO, CTRL, AUDIO</b>			
Size	Document Number		Rev
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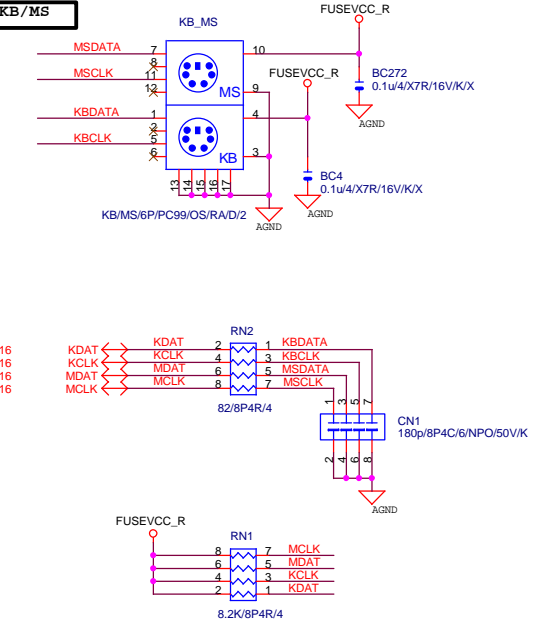
# COM



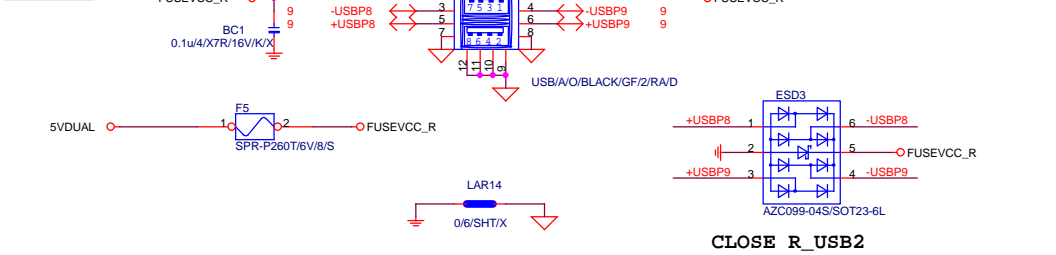
# COM RI



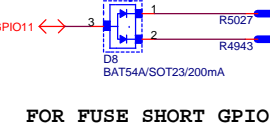
# KB/MS



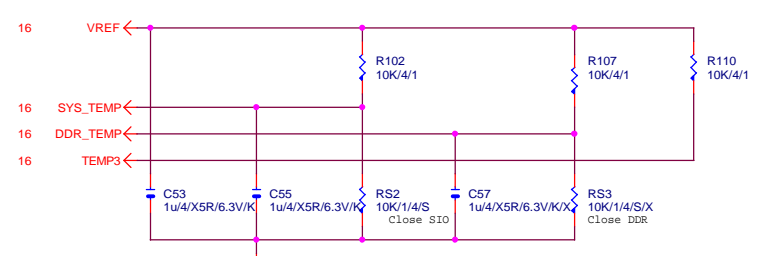
# R\_USB1



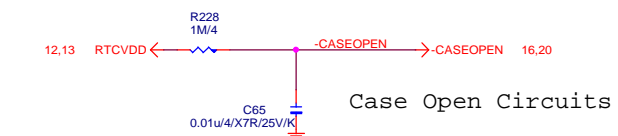
# CLOSE R\_USB2



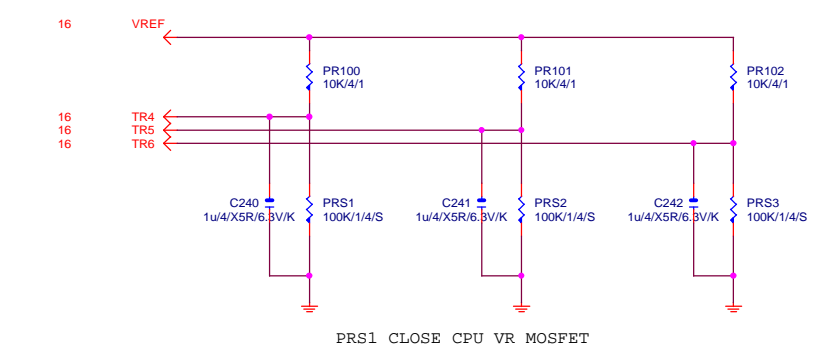
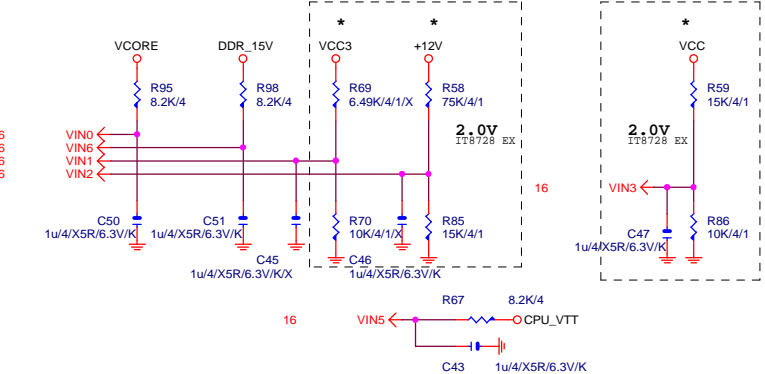
TEMP H/W MONITOR



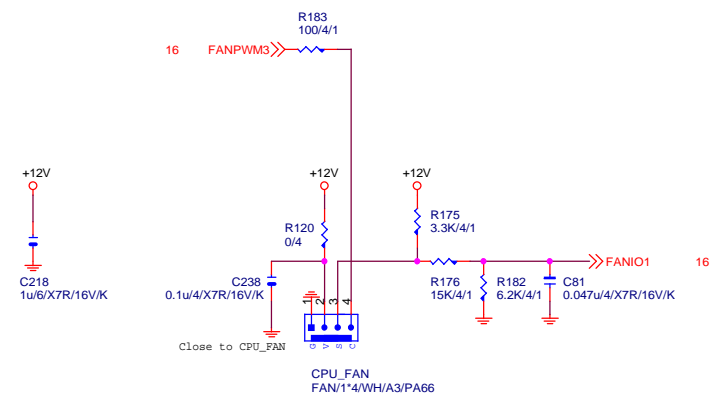
CASE OPEN



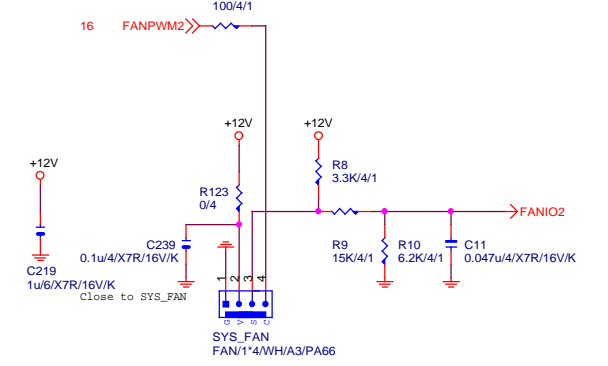
VOLTAGE-- H/W MONITOR



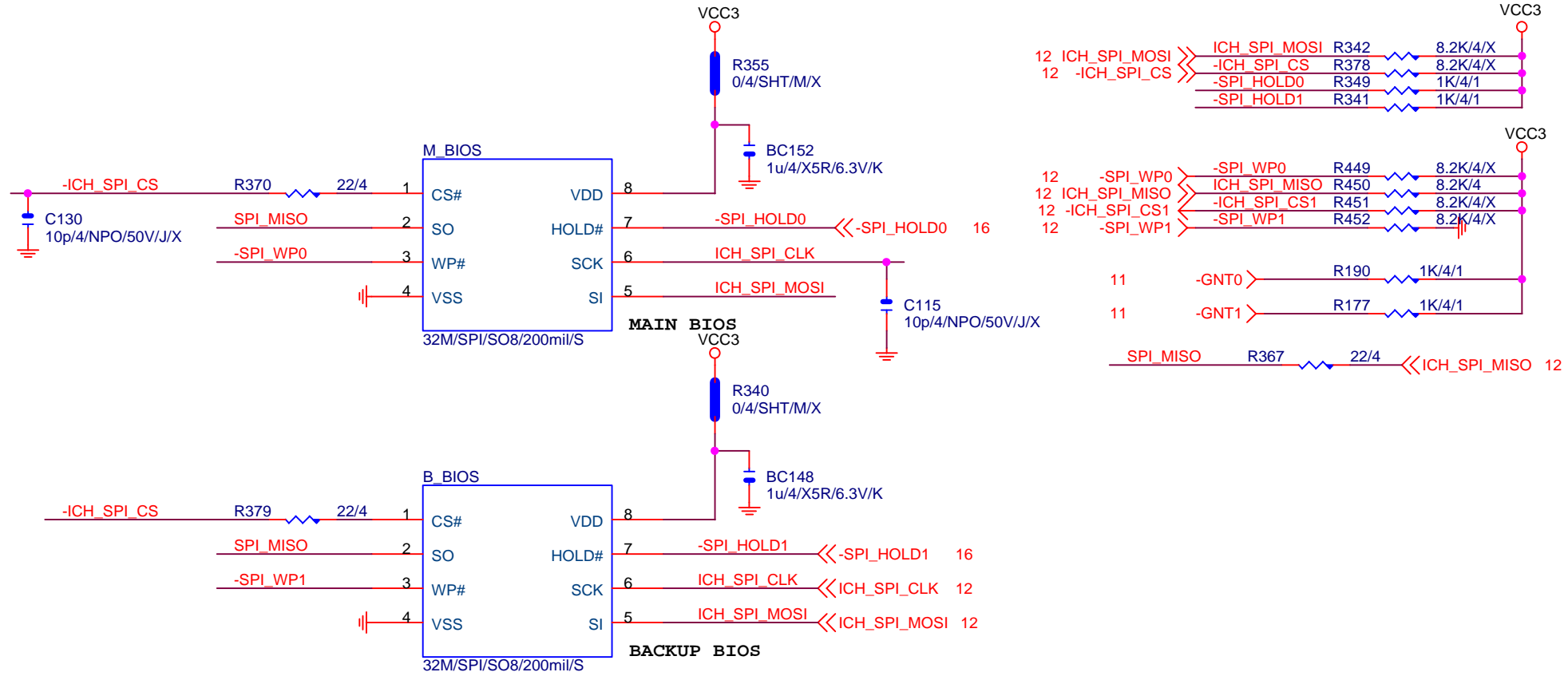
CPU SMART FAN



SYS SMART FAN



# DUAL BIOS



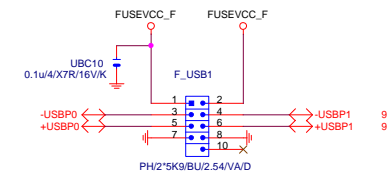
BOOT DEVICE	GNT1	GNT0
LPC	0	0
PCI	0	1
SPI	1	1

1 means floating  
0 means PD 1K

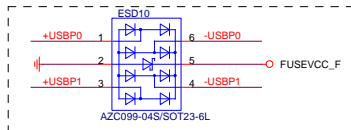
**Gigabyte Technology**

Title		
SINGLE BIOS		
Size A	Document Number	Rev
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# FRONT USB1

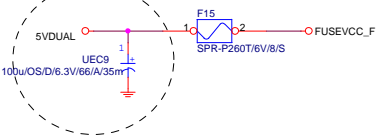


change to BLUE COLOR

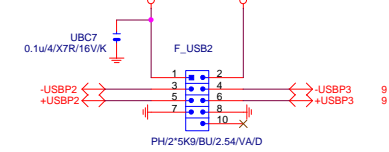


Close to connector

# CLOSE F\_USB1

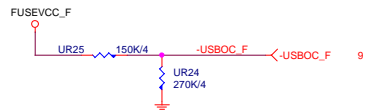


# FRONT USB2



Close to connector

# FRONT USB3

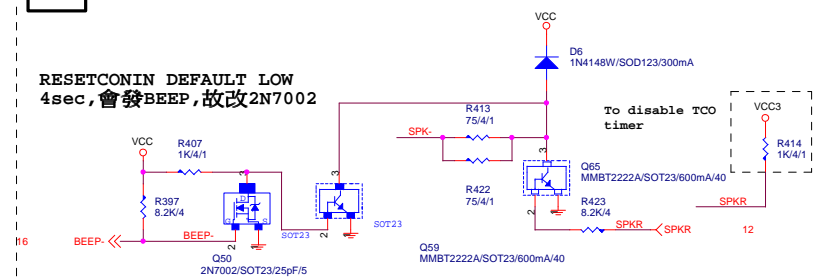


# SATA LED

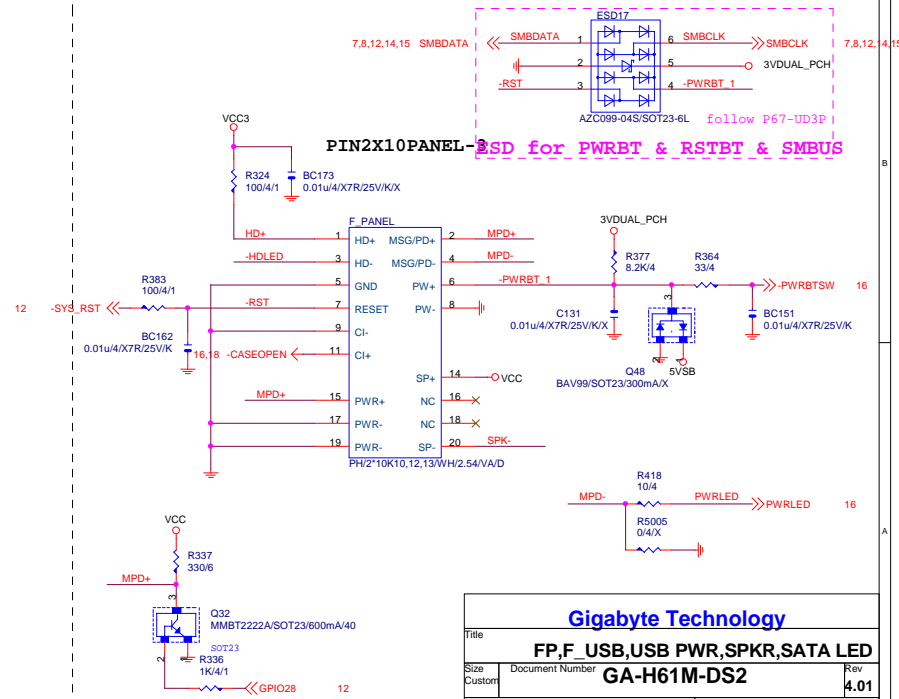


# SPKR

RESETCONIN DEFAULT LOW  
4sec, 會發BEEP, 故改2N7002

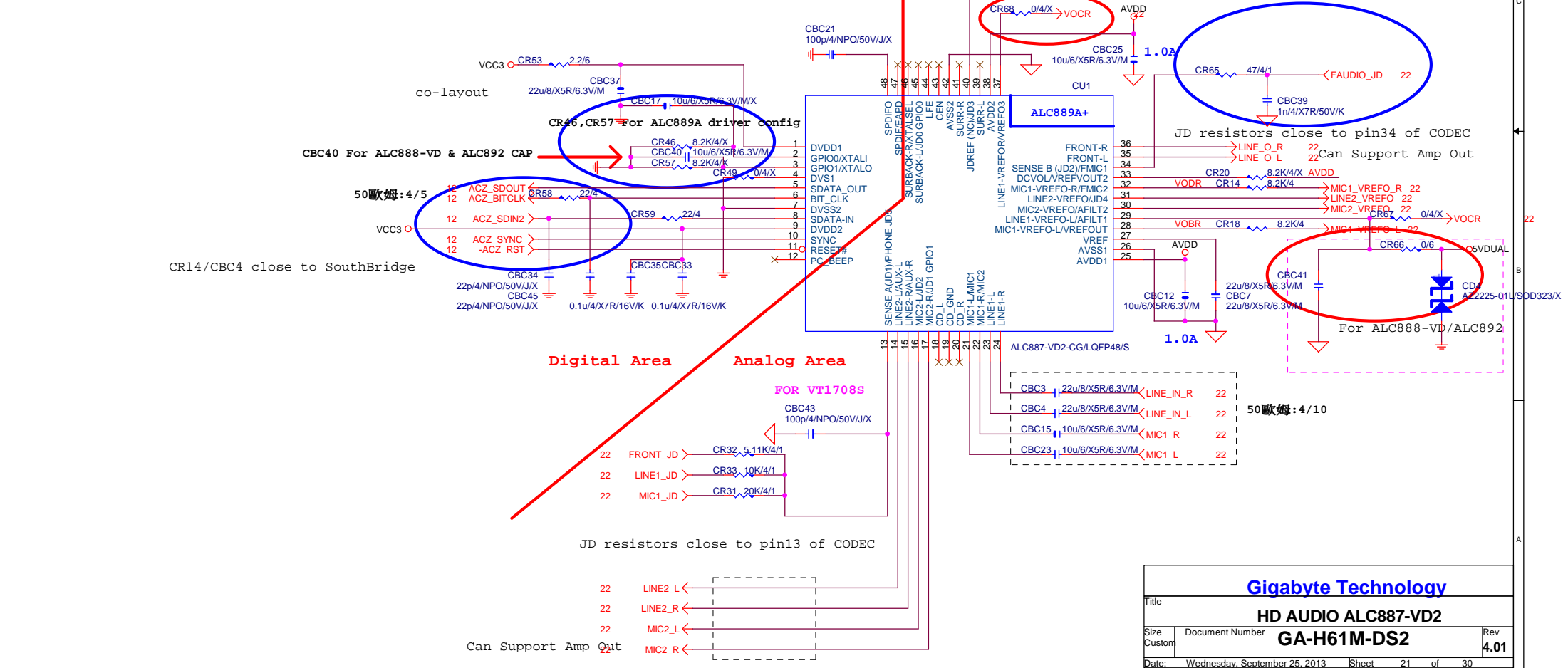


# INTEL FRONT PANEL



Gigabyte Technology			
Title	FP,F_USB,USB PWR,SPKR,SATA LED		
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	ALC883	ALC888-VA	ALC888B	ALC888-VD	ALC892R	ALC889	ALC889A
CR46	X	X	X	X	X	X	O
CR57	X	X	X	X	X	X	O
CR49	O	O	X	X	X	O	O
CBC40	X	X	X	10uF/X5R	10uF/X5R	X	X
CR20	O	X	X	X	X	X	X
CR26	20K/1%	20K/1%	20K/1%	20K/1%	20K/1%	20K/1%	20K/0.1%
CR47	X	X	O	X	O	O	X
CR48	O	O	X	O	X	X	O
CBC2/CBC4/CBC5/ CBC6/CBC10/CBC11	4.7uF /X5R	4.7uF /X5R	4.7uF /X5R	4.7uF /X5R	4.7uF /X5R	10uF /X5R	4.7uF /X5R
CR1/CR3/CR10/CR12/ CR15/CR19/CR56/CR27/ CR55/CR37/CR28/CR34/ CR6/CR9/CD51/CR61	75 ohm	75 ohm	75 ohm	75 ohm	75 ohm	66 ohm or lower	75 ohm
CR66/CR68/CD3/CBC41	X	X	X	O	X	X	X
CR67/CD1/CD2/CQ3/CQ5	O	O	O	X	O	O	O



**CODEC POWER/EMI PAD**

**EUP**

CD3  
CD4148WP/1206/300mA/X

AVDD

+12V

CD3  
CD4148WP/1206/300mA/X

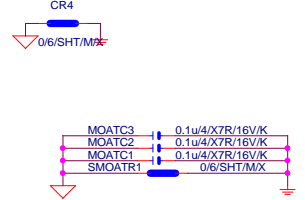
CBC20  
0.1u4/X7R/16V/K/X

CD25 0/6/SHT/M

C8 2.2/4

CBC16  
22u/8/X5R/6.3V/M

CD2  
AZ2225-01L/SOD323/X



Only reserved for ALC888

**LINE-IN**

21 LINE\_IN\_R ← CR1 62/4

21 LINE\_IN\_L ← CR2 62/4

Verify MIC function in LINE-in

21

VOCR

For 889A/888

BAT54A/SOT23/200mA/X

CR11 8.2K/4/X 180p/4/NPO/50V/J

CR22 8.2K/4/X

CB10 180p/4/NPO/50V/J

CB11 180p/4/NPO/50V/J

AJ\_A5

AJ\_A2

21 MIC1\_R ← CR19 62/4

21 MIC1\_L ← CR21 62/4

21 MIC1\_VREFO\_L

21 MIC1\_VREFO\_R

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

CBC2 180pF/4/NPO/50V/J

AJ\_C5

AJ\_C2

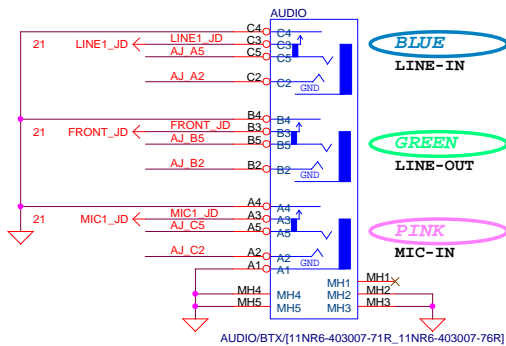
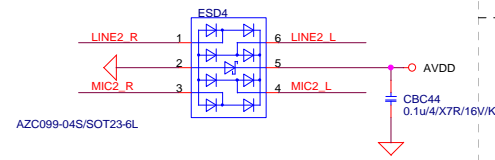
**AZALIA JACK**

LINE2\_R 1 2 3 MIC2\_R MIC2\_L 4 5 6 LINE2\_L

AVDD

CBC44  
0.1uF/4/X7R/10%

AZC099-04S/SOT23-6L



**AZALIA FRONT PANEL**

**F\_AUDIO\_H**

**Digital Area**

**FOR VT1708S**

**Gigabyte Technology**

**AUDIO JACK**

**GA-H61M-DS2**

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Digital Area

FOR VT1708S

## Gigabyte Technology

## AUDIO JACK

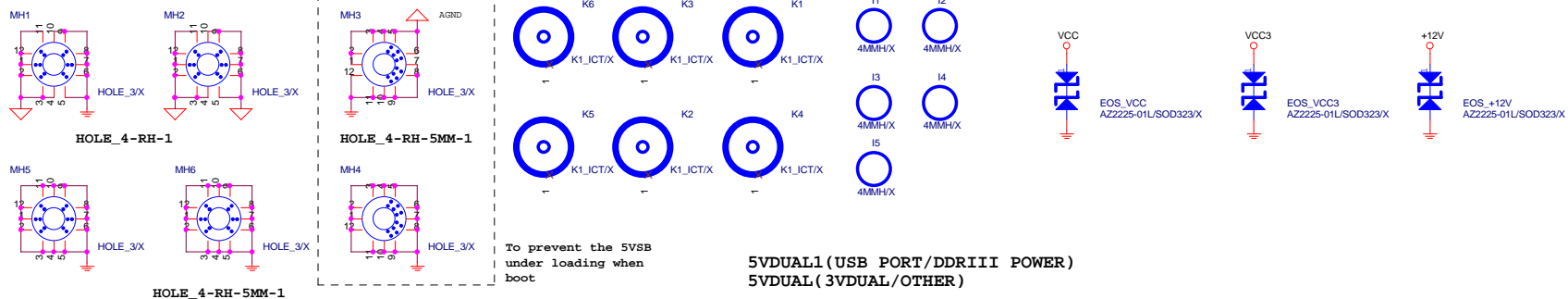
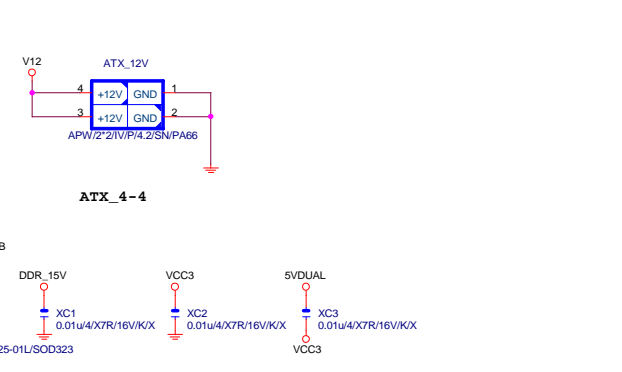
Title			
AUDIO JACK			
Size Custom	Document Number	GA-H61M-DS2	Rev 4.01
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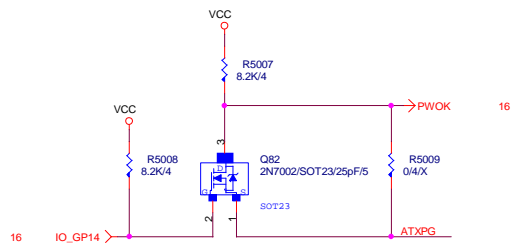




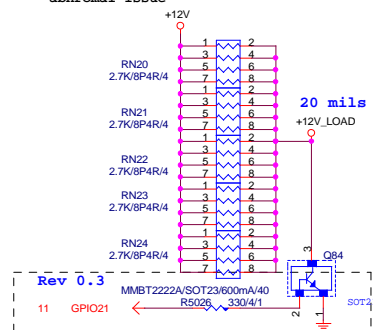
## ATXX4 POWER CONNECTOR



```
5VDUAL1(USB PORT/DDRIII POWER)
5VDUAL(3VDUAL/OTHER)
-s WARN-->5VDUAL1-->-s ACK(PCH)-->-DEPSLP/-RSMRST-->5VDUAL-->3VDUAL
```



To fix 12V light load  
abnromal issue



## CPU\_VTT

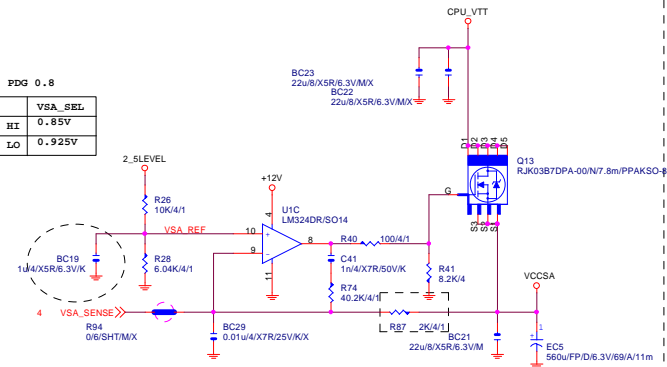
	VTT_EN
HI	ENABLE
LO	DISABLE



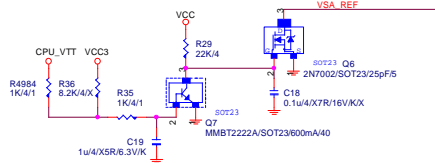
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VCCSA

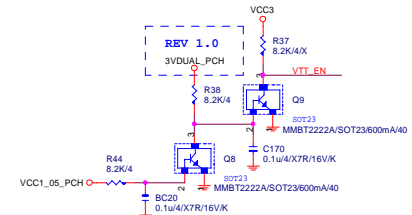
PDG 0.8	
	VSA_SEL
HI	0.85V
LO	0.925V

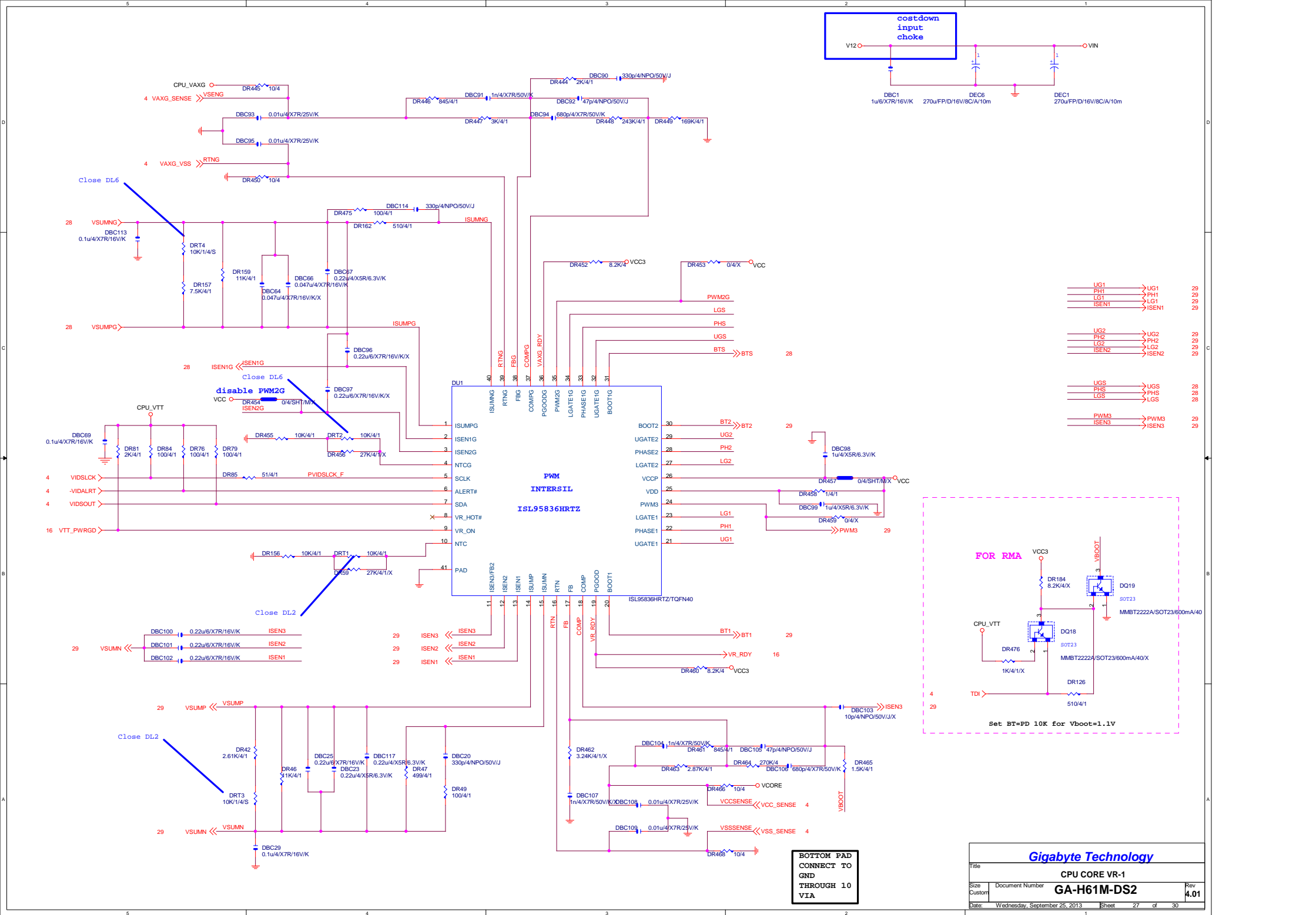


VCCSA PWR SEQ

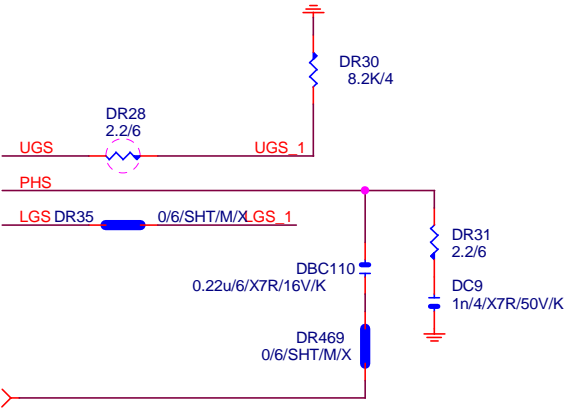
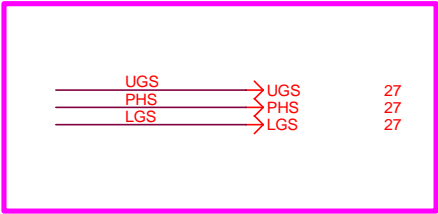


CPU_VTT	PWR	SEQ
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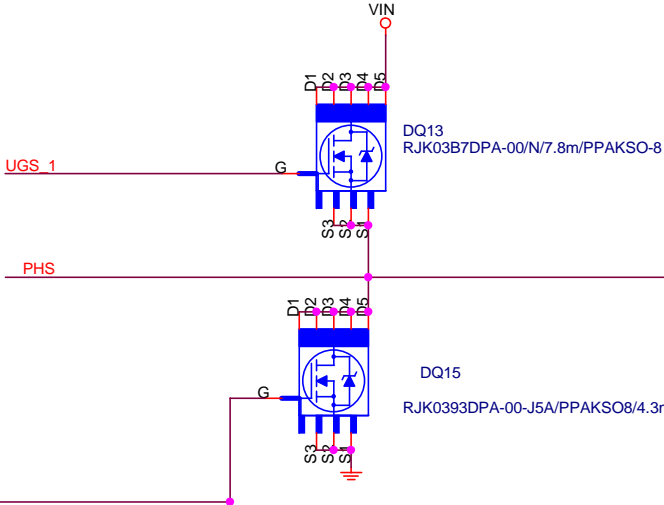




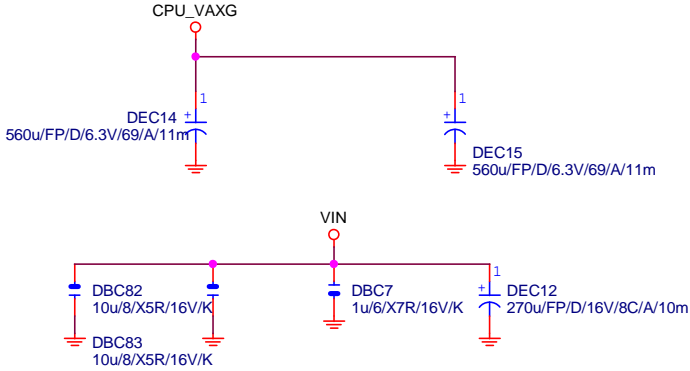
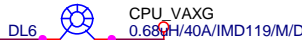
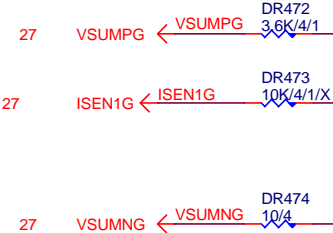
VAXG



27 BTS

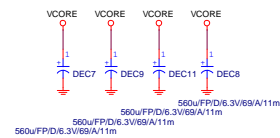
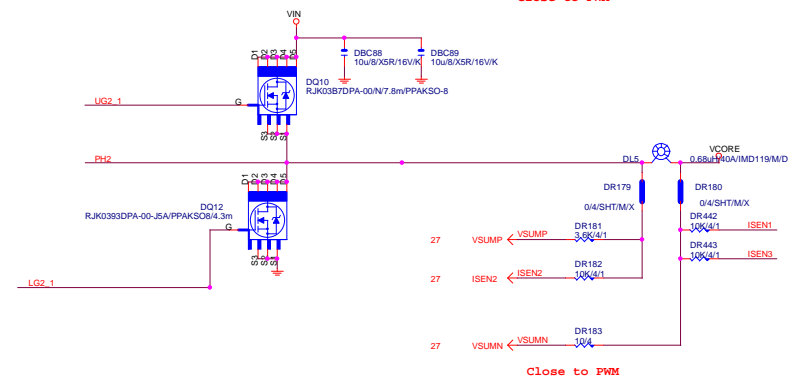
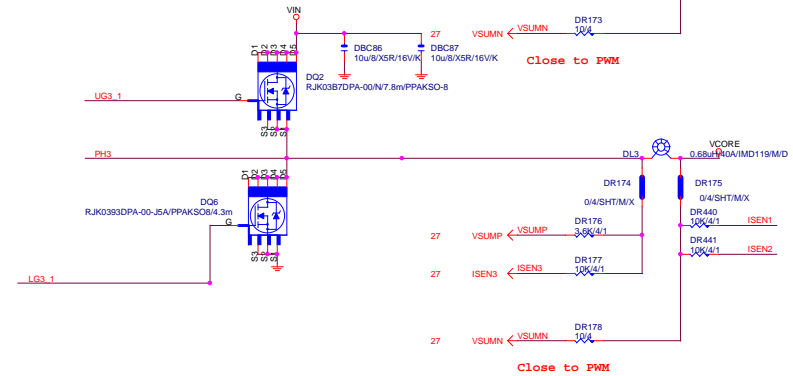
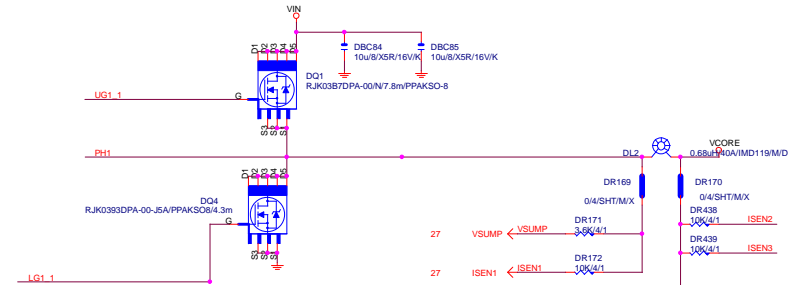


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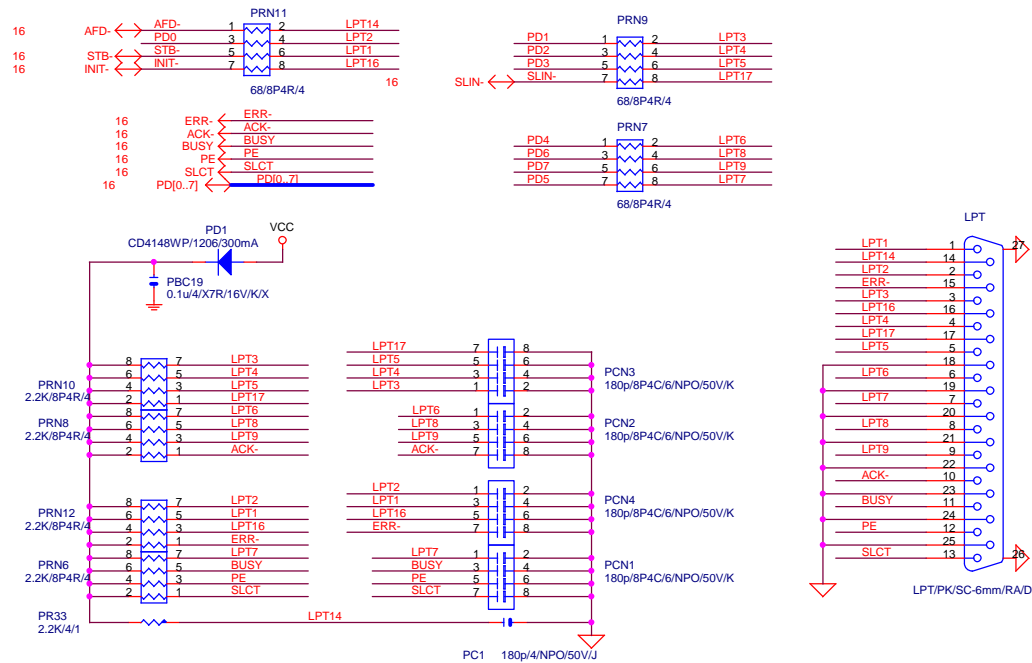


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