

Model Name: IPMH61G1-DB

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 8728 LPC IO
17	KB_MS,R_USB,-PROCHOT
18	HWM,FAN CTRL,OV
19	SINGLE 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	Richtek_RT8120_CPU_VTT
27	VCORE INTERSIL_95836_1

SHEET

TITLE

28	VCORE INTERSIL_95836_2
29	VCORE INTERSIL_95836_3

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Gigabyte Technology		
Cover Sheet		
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Model Name: IPMH61G1-DB


Component value change history

2011/09/14

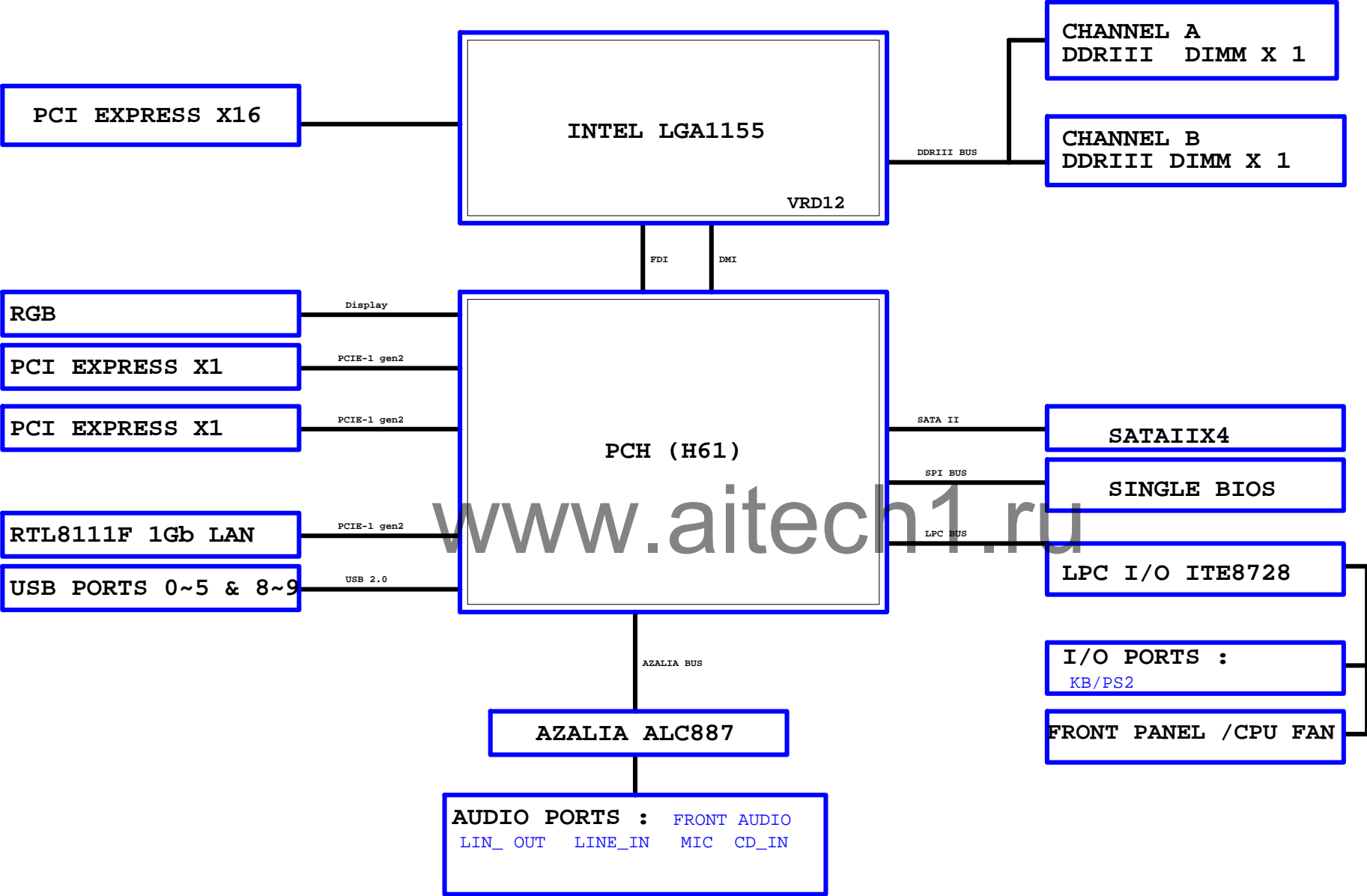
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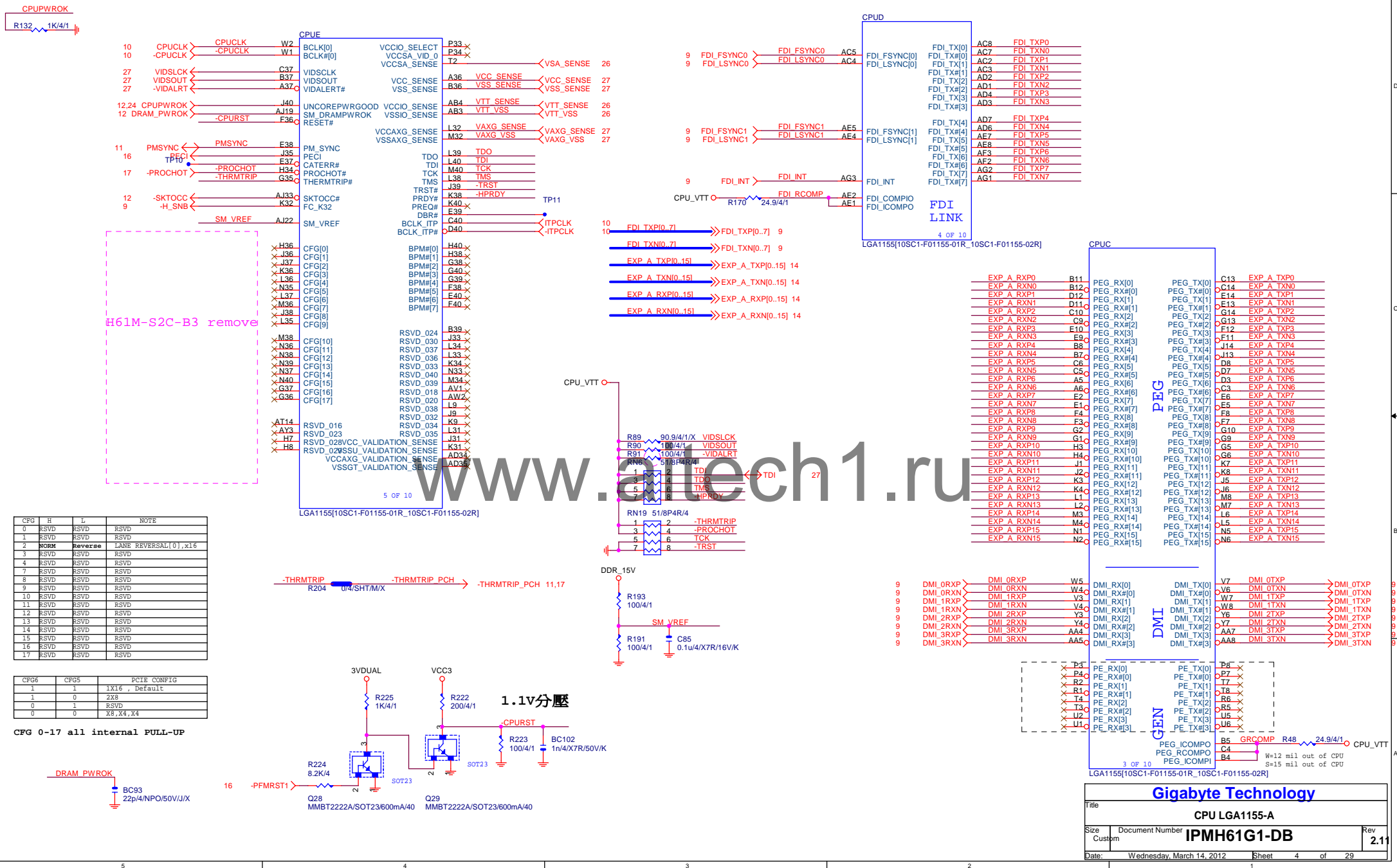
Circuit or PCB layout change

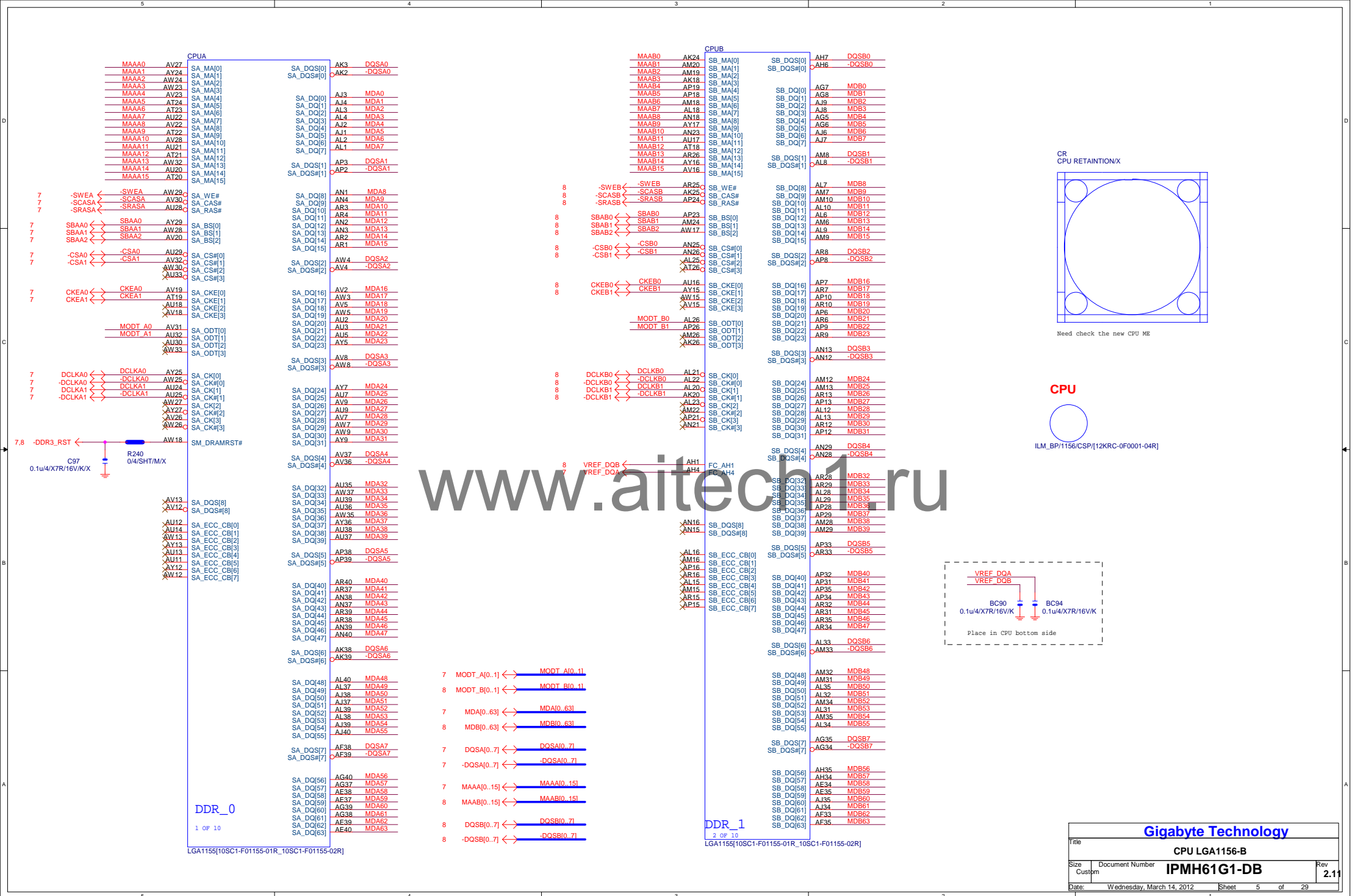
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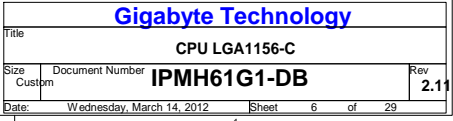
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Title			
BOM & PCB MODIFY HISTORY			
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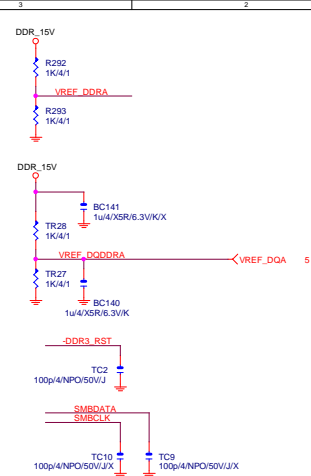
BLOCK DIAGRAM





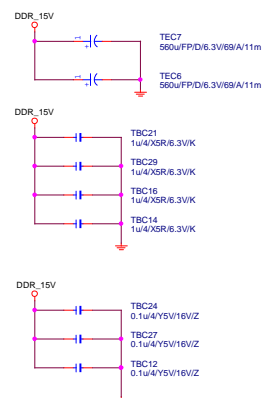




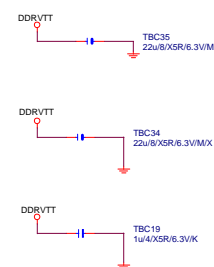


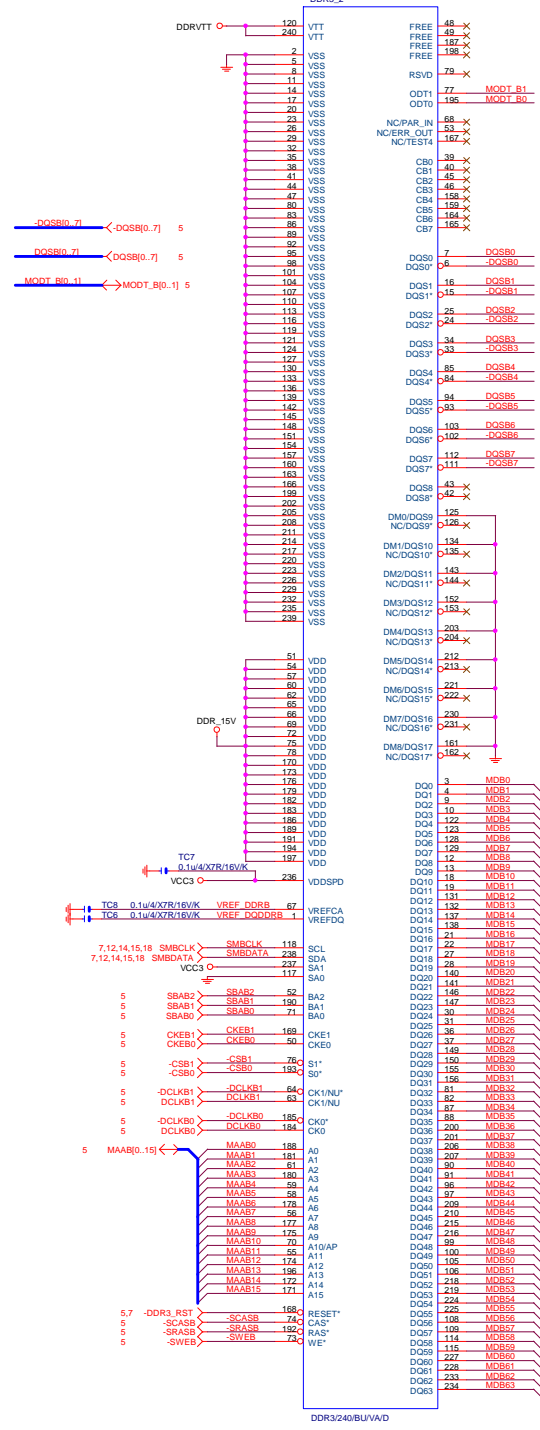
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DDR15V Decouple



DDRVTT Decouple

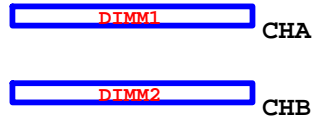


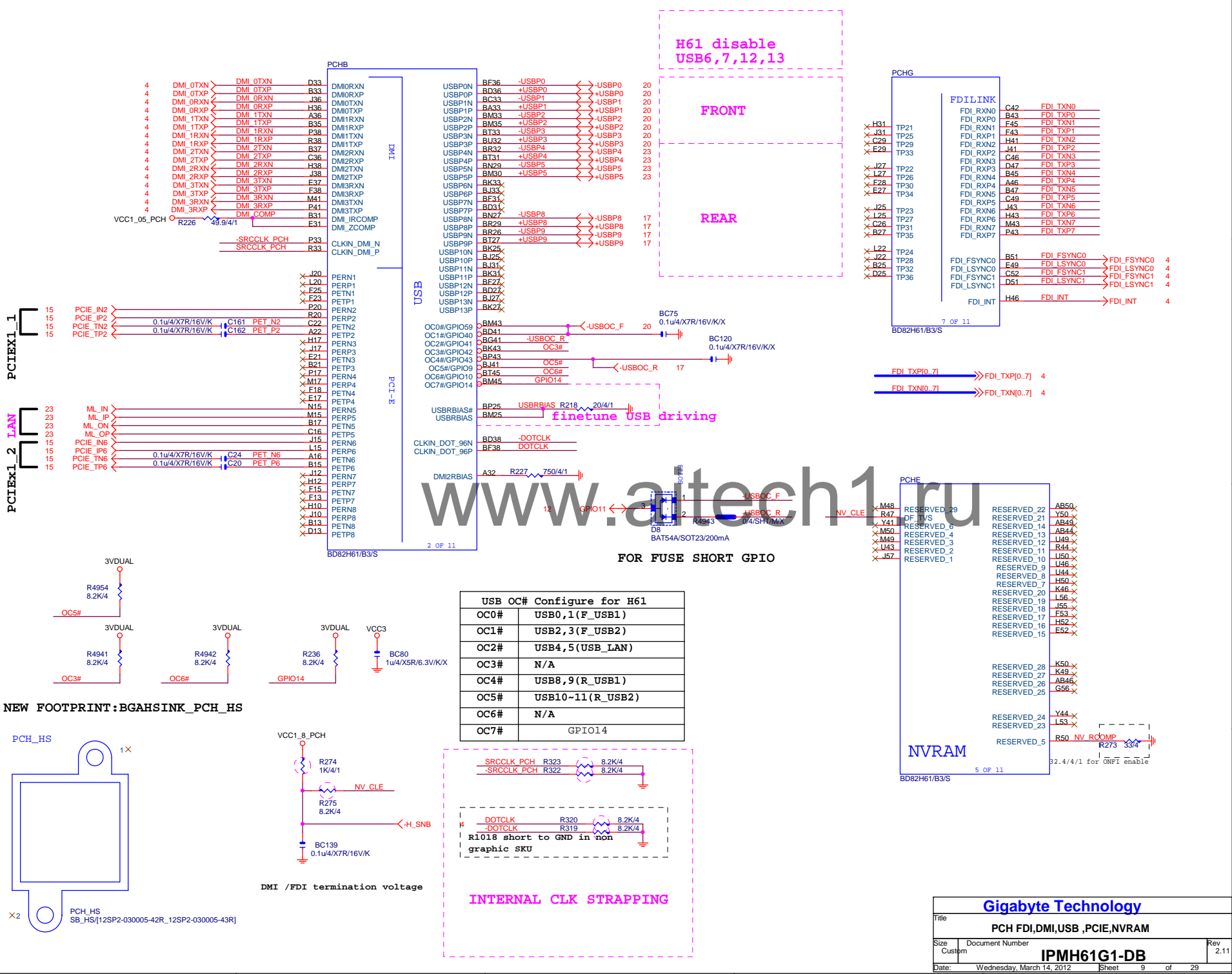


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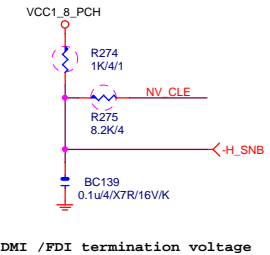
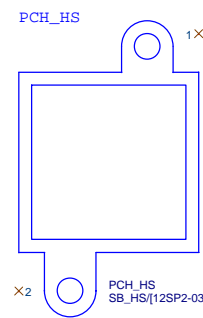
CPU



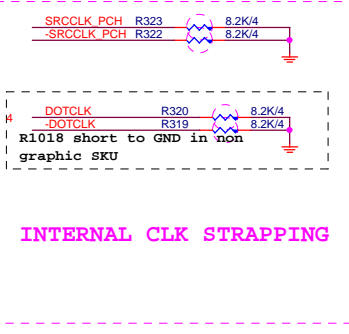


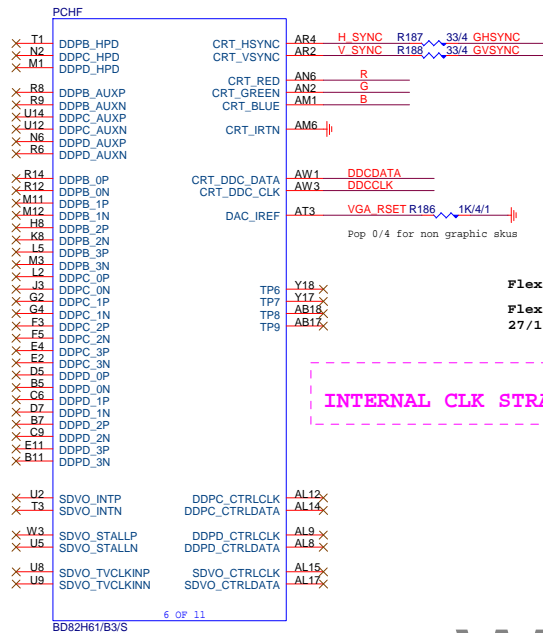
PCIEX1_1
PCIEX1_2 LAN

NEW FOOTPRINT: BGAHSINK_PCH_HS



USB OC# Configure for H61	
OC0#	USB0,1(F_USB1)
OC1#	USB2,3(F_USB2)
OC2#	USB4,5(USB_LAN)
OC3#	N/A
OC4#	USB8,9(R_USB1)
OC5#	USB10~11(R_USB2)
OC6#	N/A
OC7#	GPIO14

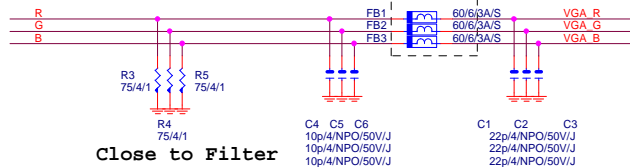
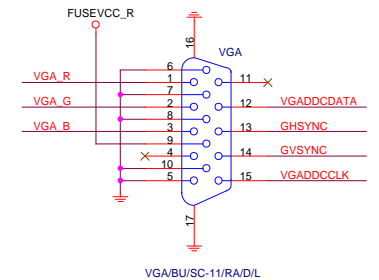
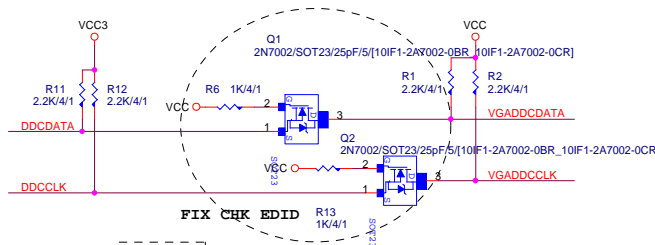
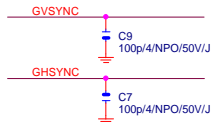
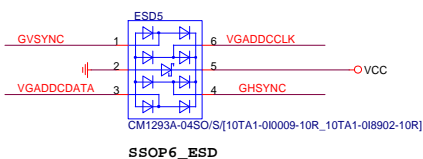
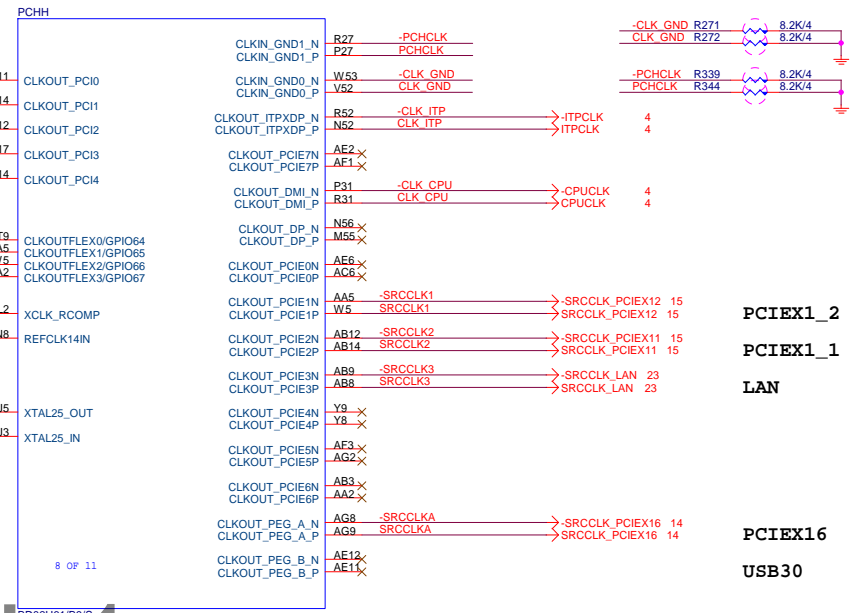
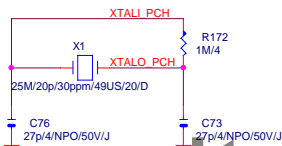




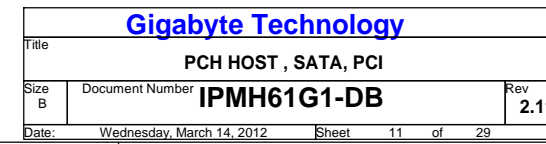
Flex0,2 : 33MHZ
Flex1,3 : 27/14/24/48/25MHZ

INTERNAL CLK STRAPPING

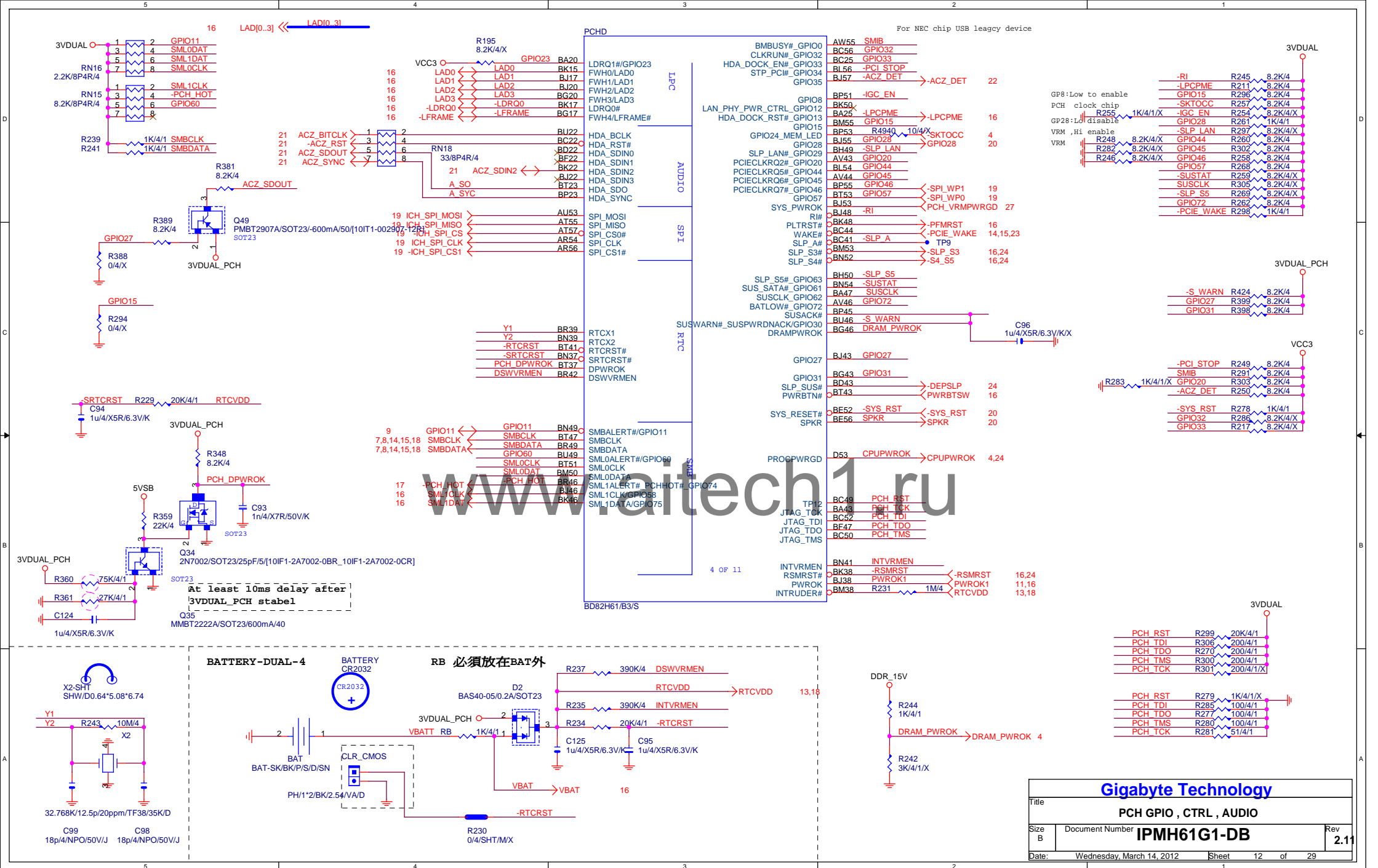
PCHCLK14 R316 8.2K/4

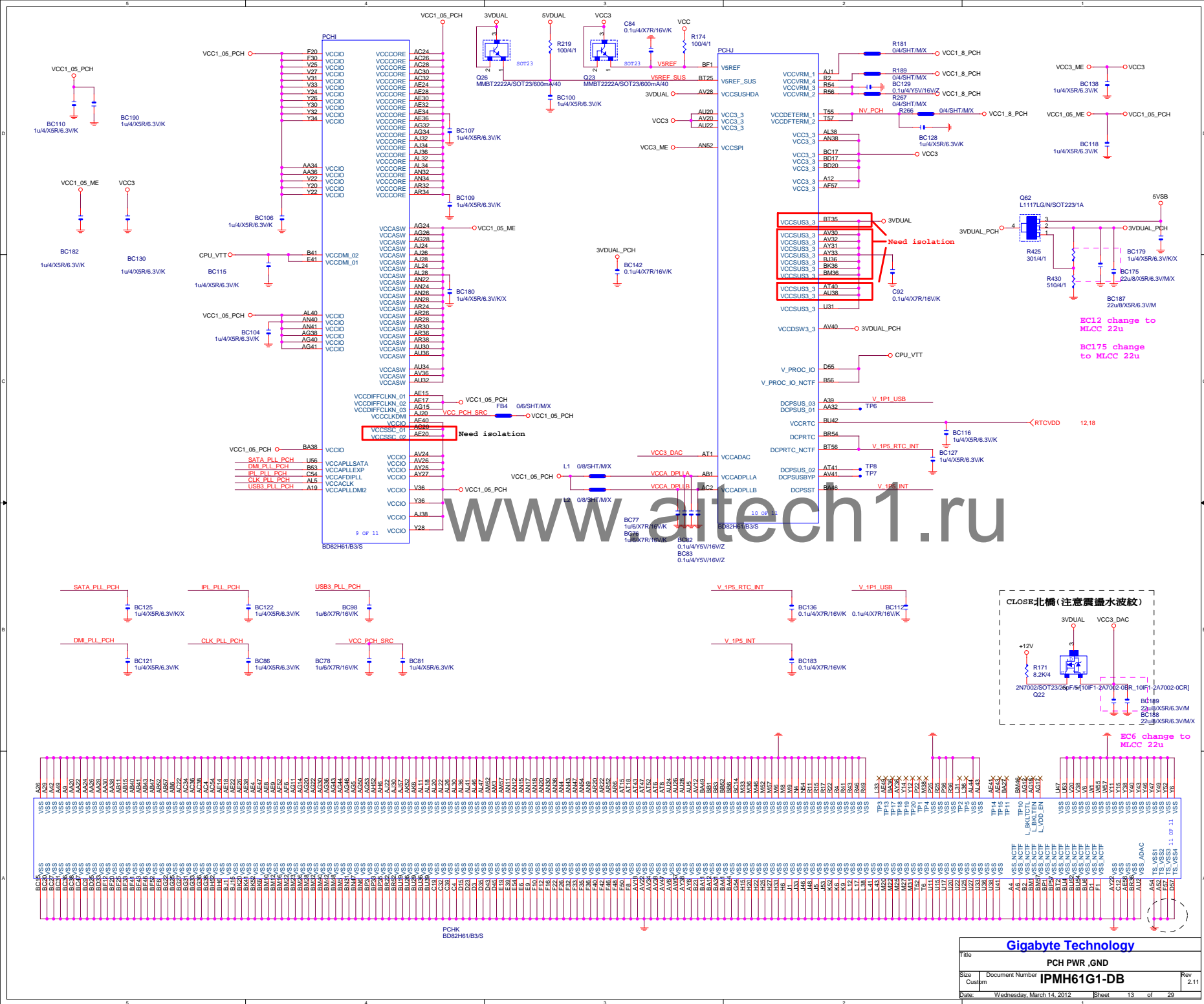


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Title			
PCH DISPLAY ,CLK BUFFER			
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H1X7-SATA2-HS-MASK

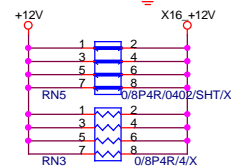




EC6D_8D10MM-RH

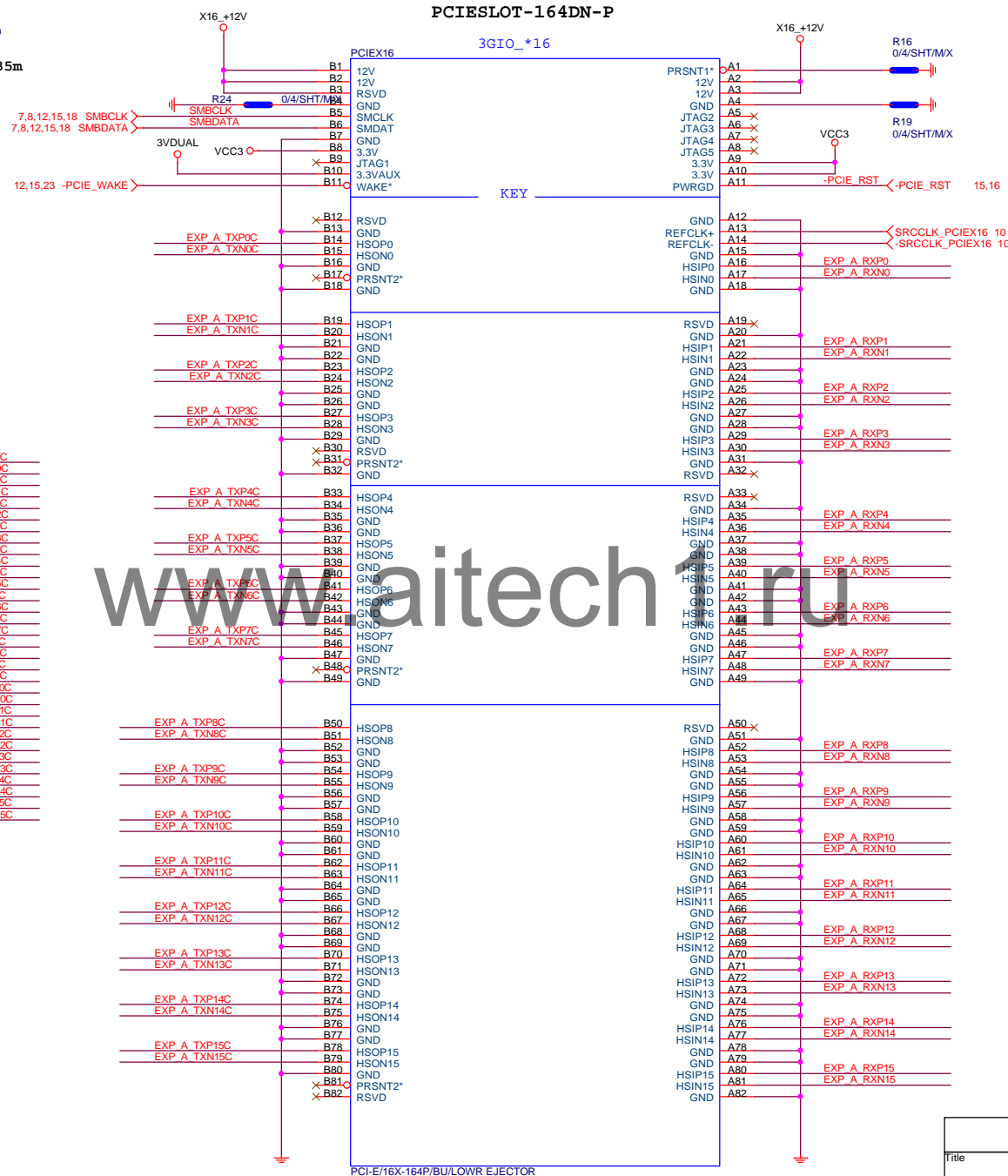


100u/OS/D/16V/69/A/35m



```
EXP_A_RXP[0..15] >> EXP_A_RXP[0..15] 4
EXP_A_RXN[0..15] >> EXP_A_RXN[0..15] 4
EXP_A_TXP[0..15] >> EXP_A_TXP[0..15] 4
EXP_A_TXN[0..15] >> EXP_A_TXN[0..15] 4
```

EXP A TXP0	C22	0.22u4/X5R/6.3V/K	EXP A TXP0C
EXP A TXN0	C26	0.22u4/X5R/6.3V/K	EXP A TXN0C
EXP A TXP1	C29	0.22u4/X5R/6.3V/K	EXP A TXP1C
EXP A TXN1	C31	0.22u4/X5R/6.3V/K	EXP A TXN1C
EXP A TXP2	C33	0.22u4/X5R/6.3V/K	EXP A TXP2C
EXP A TXN2	C35	0.22u4/X5R/6.3V/K	EXP A TXN2C
EXP A TXP3	C40	0.22u4/X5R/6.3V/K	EXP A TXP3C
EXP A TXN3	C40	0.22u4/X5R/6.3V/K	EXP A TXN3C
EXP A TXP4	C48	0.22u4/X5R/6.3V/K	EXP A TXP4C
EXP A TXN4	C49	0.22u4/X5R/6.3V/K	EXP A TXN4C
EXP A TXP5	C52	0.22u4/X5R/6.3V/K	EXP A TXP5C
EXP A TXN5	C54	0.22u4/X5R/6.3V/K	EXP A TXN5C
EXP A TXP6	C56	0.22u4/X5R/6.3V/K	EXP A TXP6C
EXP A TXN6	C58	0.22u4/X5R/6.3V/K	EXP A TXN6C
EXP A TXP7	C60	0.22u4/X5R/6.3V/K	EXP A TXP7C
EXP A TXN7	C61	0.22u4/X5R/6.3V/K	EXP A TXN7C
EXP A TXP8	C63	0.22u4/X5R/6.3V/K	EXP A TXP8C
EXP A TXN8	C64	0.22u4/X5R/6.3V/K	EXP A TXN8C
EXP A TXP9	C66	0.22u4/X5R/6.3V/K	EXP A TXP9C
EXP A TXN9	C67	0.22u4/X5R/6.3V/K	EXP A TXN9C
EXP A TXP10	C69	0.22u4/X5R/6.3V/K	EXP A TXP10C
EXP A TXN10	C70	0.22u4/X5R/6.3V/K	EXP A TXN10C
EXP A TXP11	C71	0.22u4/X5R/6.3V/K	EXP A TXP11C
EXP A TXN11	C72	0.22u4/X5R/6.3V/K	EXP A TXN11C
EXP A TXP12	C74	0.22u4/X5R/6.3V/K	EXP A TXP12C
EXP A TXN12	C75	0.22u4/X5R/6.3V/K	EXP A TXN12C
EXP A TXP13	C77	0.22u4/X5R/6.3V/K	EXP A TXP13C
EXP A TXN13	C78	0.22u4/X5R/6.3V/K	EXP A TXN13C
EXP A TXP14	C79	0.22u4/X5R/6.3V/K	EXP A TXP14C
EXP A TXN14	C80	0.22u4/X5R/6.3V/K	EXP A TXN14C
EXP A TXP15	C82	0.22u4/X5R/6.3V/K	EXP A TXP15C
EXP A TXN15	C83	0.22u4/X5R/6.3V/K	EXP A TXN15C

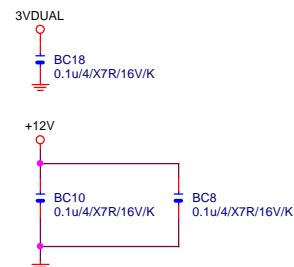
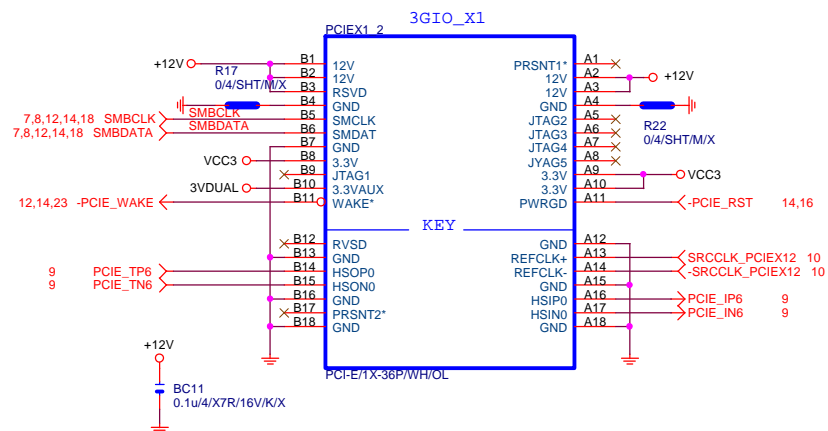
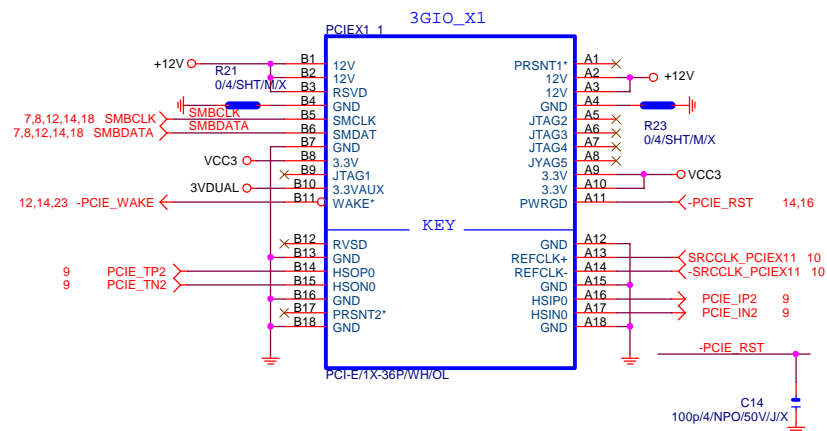


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PCI EXPRESS * 16


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PCIE*1



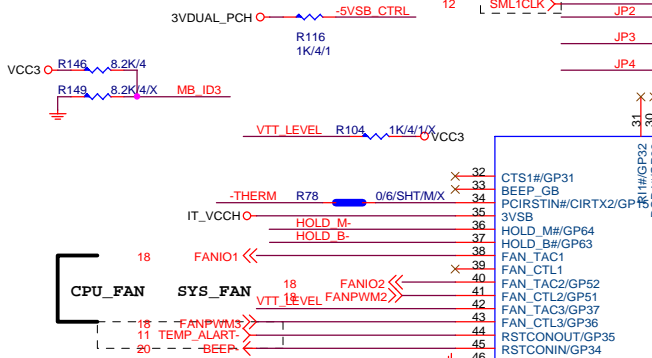
CLK GEN

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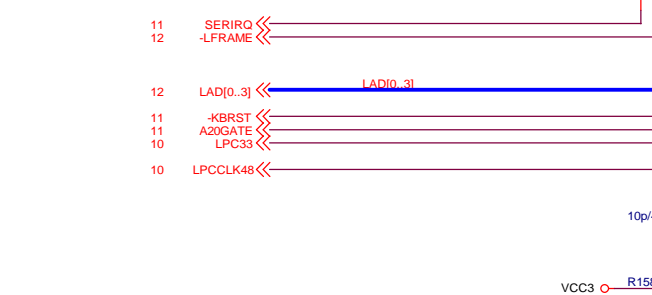
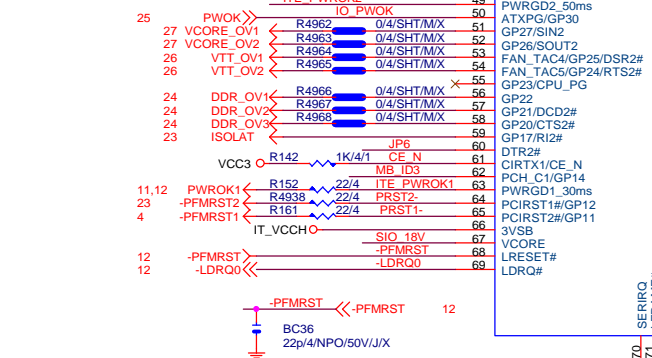
			
Title			
PCIEX1,X2/CLK GEN			
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GP22 Default GP22 DIOD8

GP23 Default CPU_PG DOD8

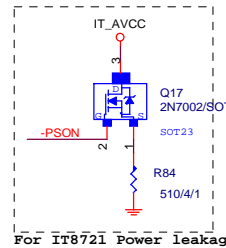
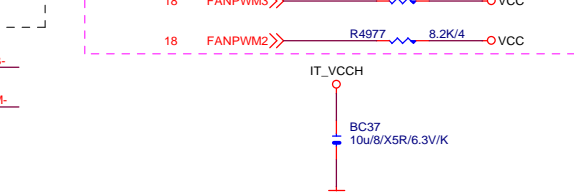


IT8728F(GB)

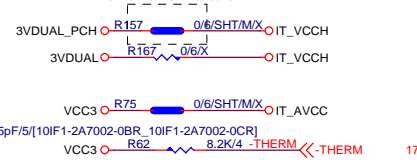


IT8728	
PIN121	VCORE_EN/PCH_C0
PIN120	VLDT_EN/PCH_D0
PIN19	ATXPG
PIN31	PCH_C1
PIN53	SST/AMDTSI_D/MTRB#/PCH_D1
PIN55	PECI/AMDTSI_C/DRV#
PIN66	SYS_3VSB
PIN70	GP47
PIN95	VIN2 (VCC5)
PIN96	VIN1 (VCC12)
PIN97	VIN1/VDIMM_STR(1.5V)
PIN98	VIN0/VCORE(1.1V)/NC

H61M-DS2 R0.2



For IT8721 Power leakage

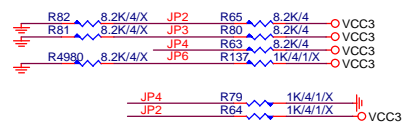


GP40 Default 3VBSW# DO8

CHK GPIO53

(-PSON FOR TEST ATX)

H61M-S2 1.1 JP6 stuff pull down



EUP control by PCH

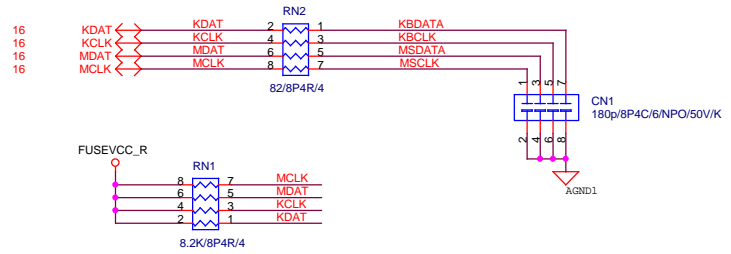
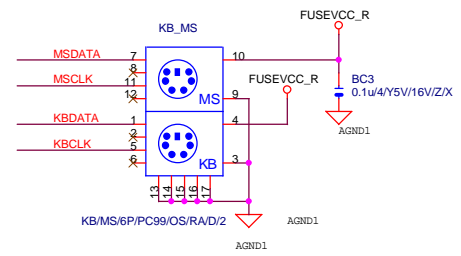
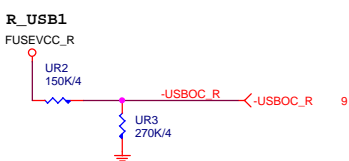
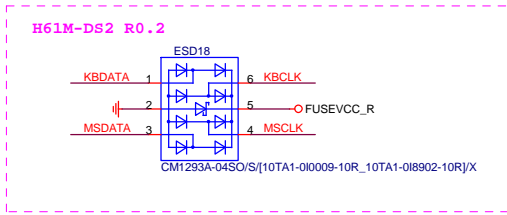
JP3--- High SPI-Flash Disable Low SPI-Flash Enable

PCIRST1 is OD in IT8728

COM

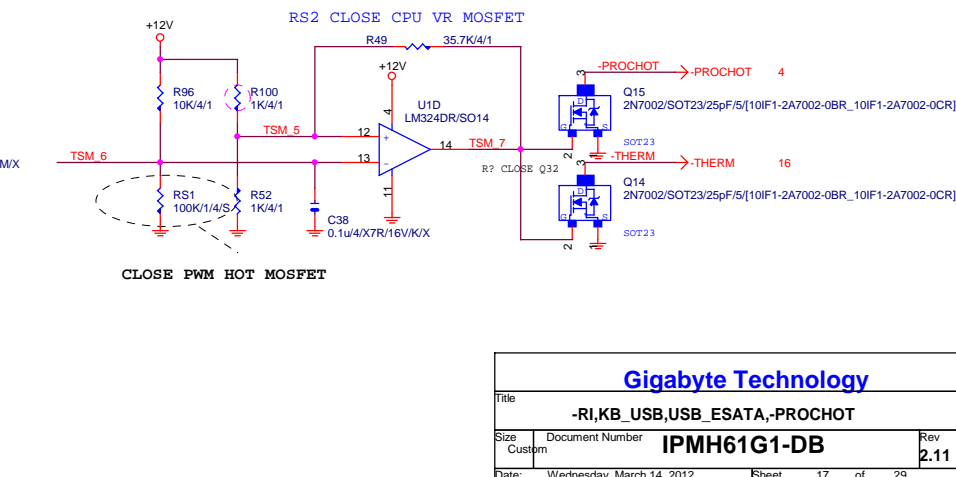
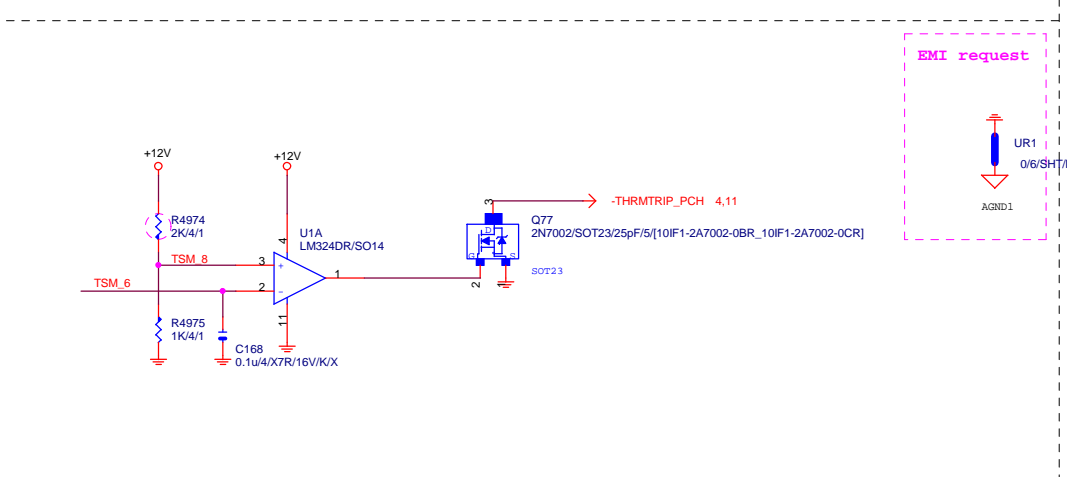
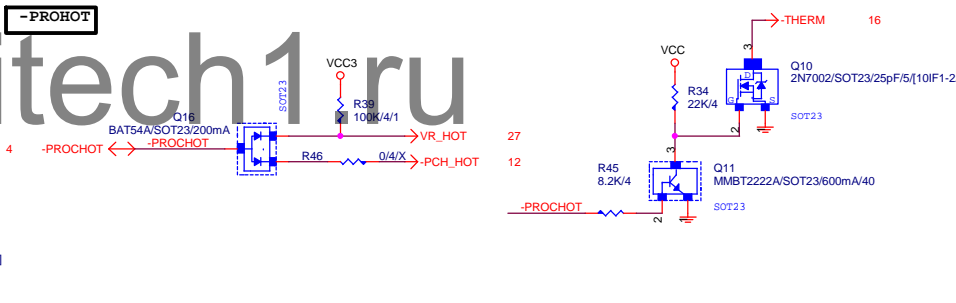
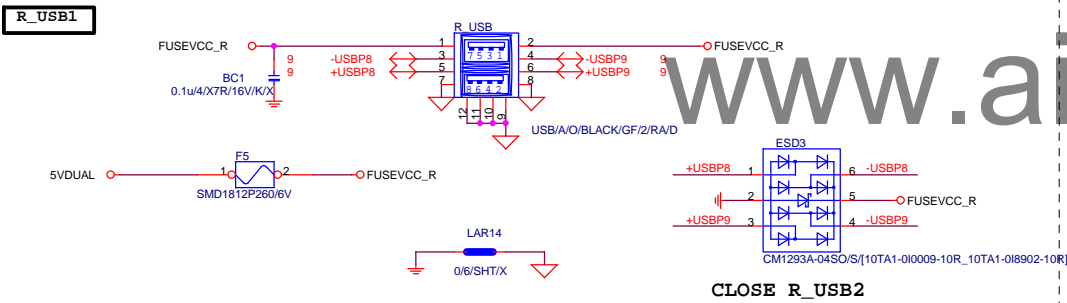
COM RI

KB/MS

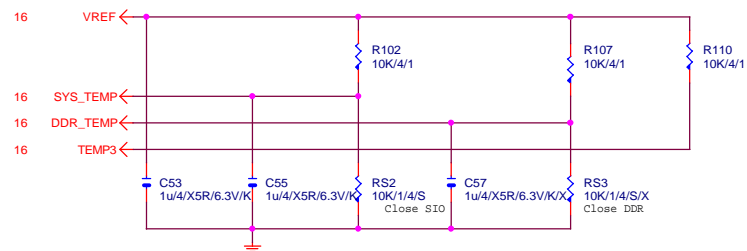


R_USB1

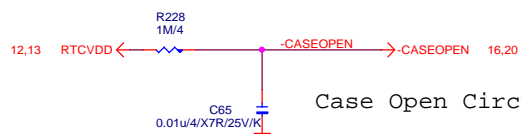
PROHOT



TEMP H/W MONITOR

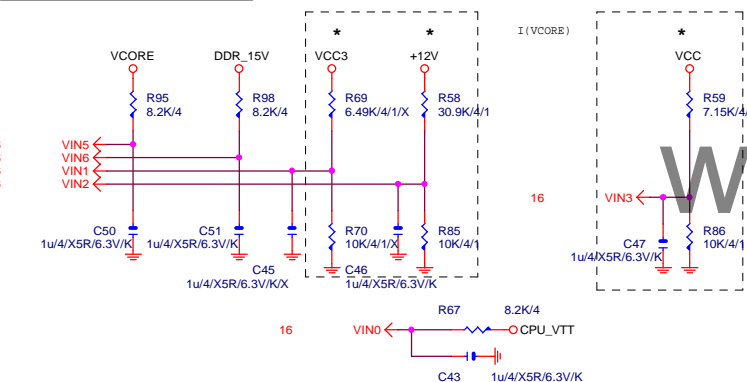


CASE OPEN

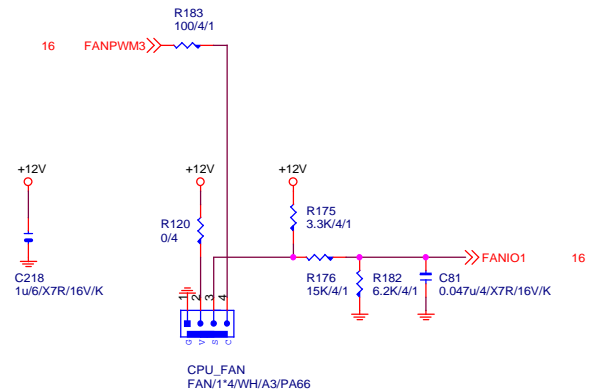


Case Open Circuits

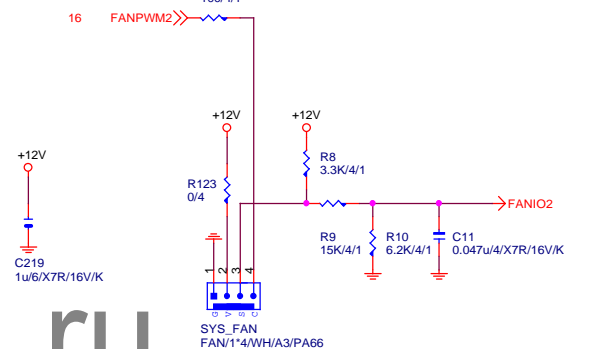
VOLTAGE-- H/W MONITOR



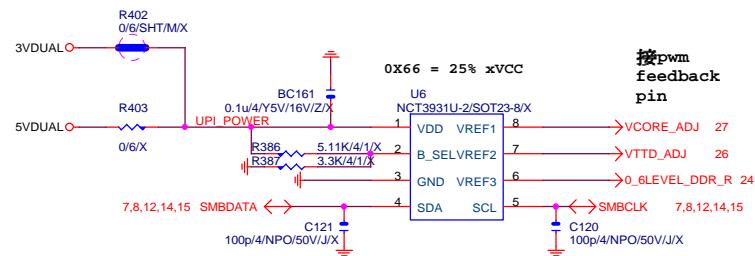
CPU SMART FAN



SYS SMART FAN



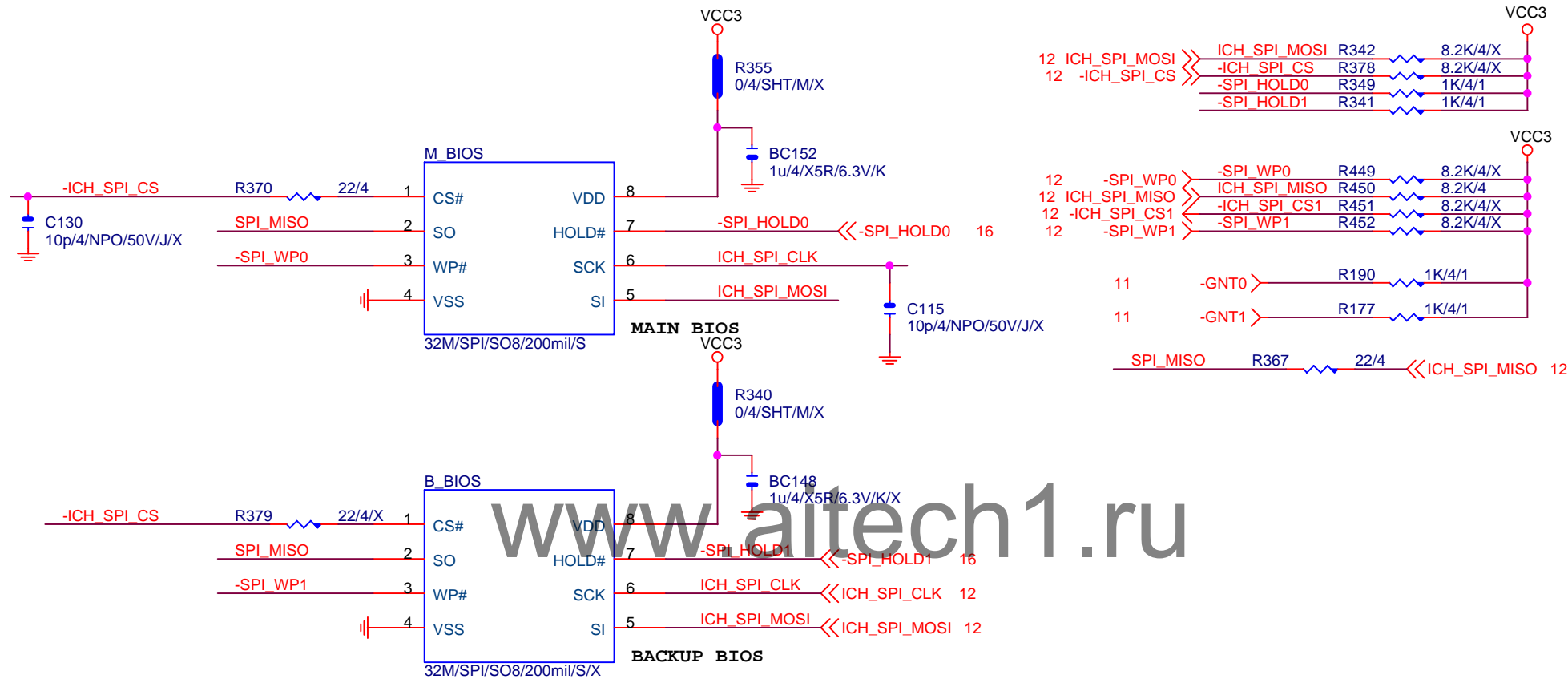
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Gigabyte Technology

Title		
HWM,FAN CTRL,OV		
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DUAL BIOS



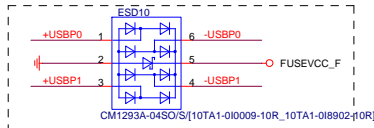
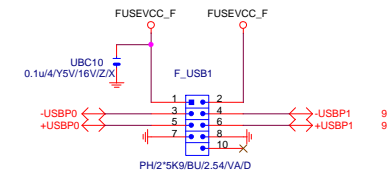
BOOT DEVICE	GNT1	GNT0
LPC	0	0
PCI	0	1
SPI	1	1

1 means floating
0 means PD 1K

Gigabyte Technology

Title		
SINGLE BIOS		
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FRONT USB1

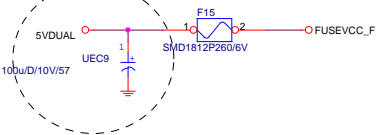


Close to connector

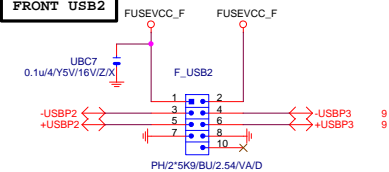
SATA LED



CLOSE F_USB1



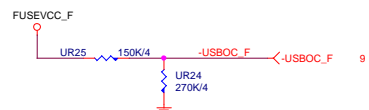
FRONT USB2



FRONT USB3

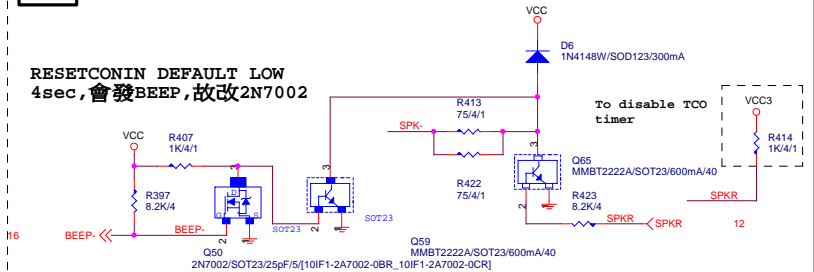


Close to connector

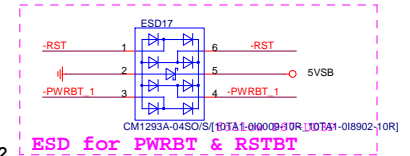


SPKR

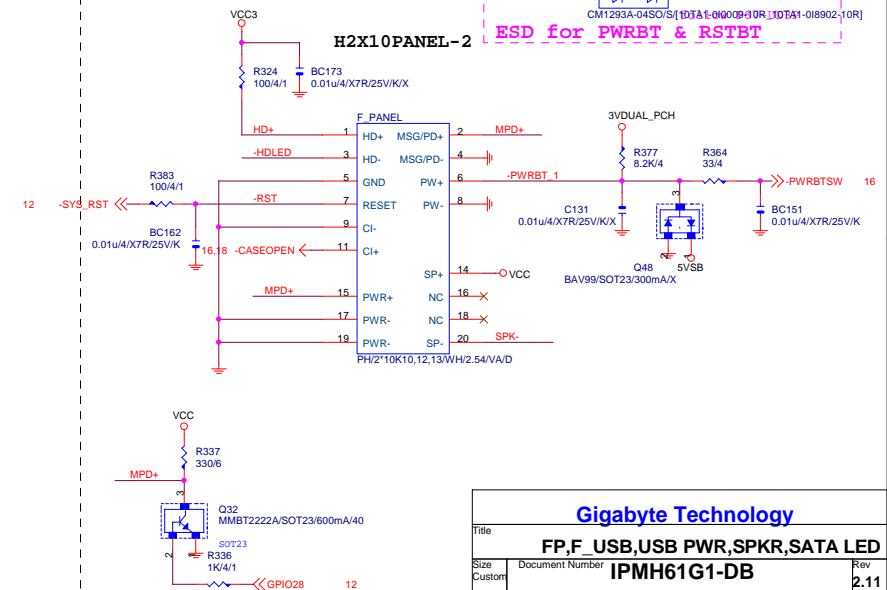
RESETCONIN DEFAULT LOW
4sec, 會發BEEP, 故改2N7002



INTEL FRONT PANEL



H2X10PANEL-2



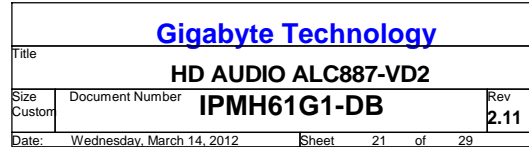

Gigabyte Technology			
Title	FP,F_USB,USB PWR,SPKR,SATA LED		
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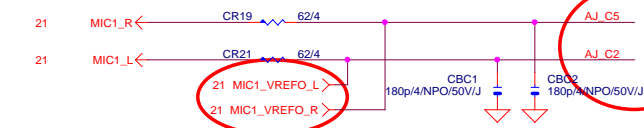
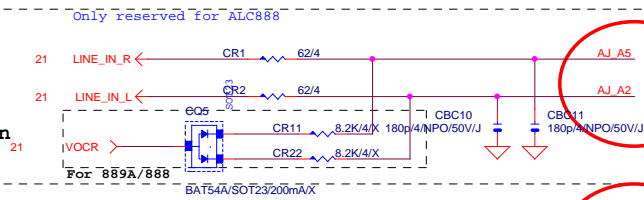
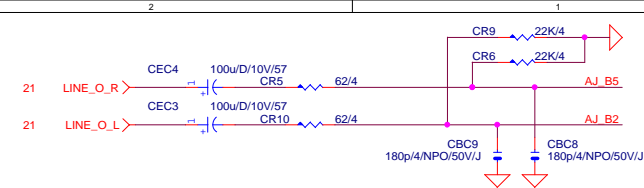
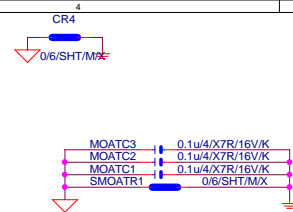
FOR VT1708S

CBC42
100pF/4/NPO/50V/J/X

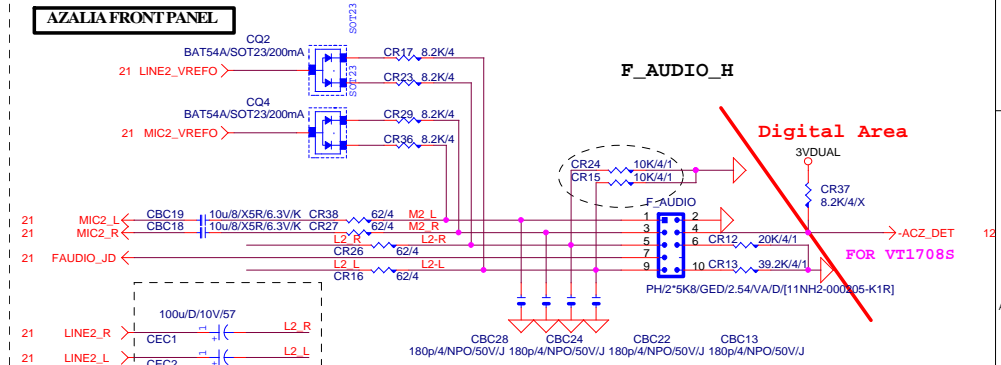
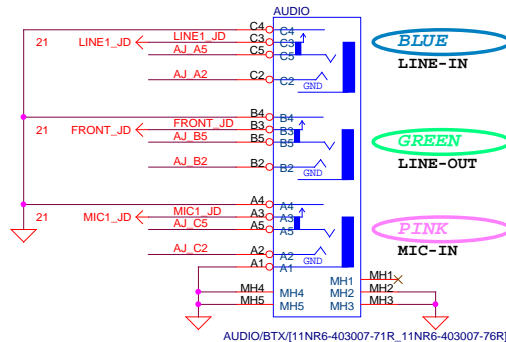
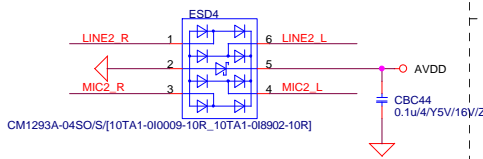
CR26 20K/4/1% @ALC889A

CR26: 20K/4/1% @others





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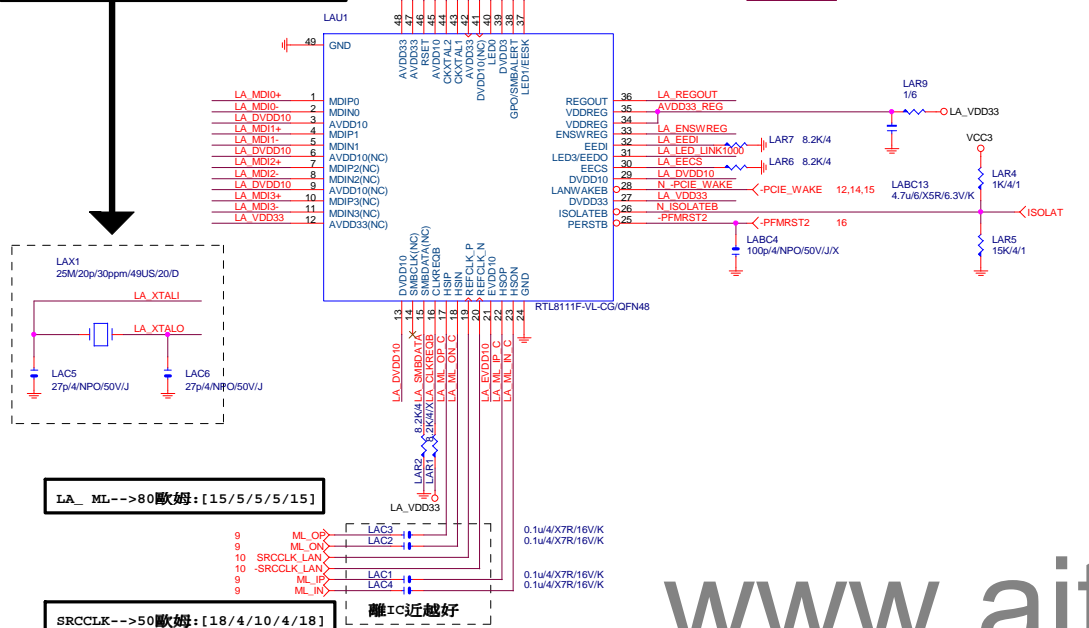


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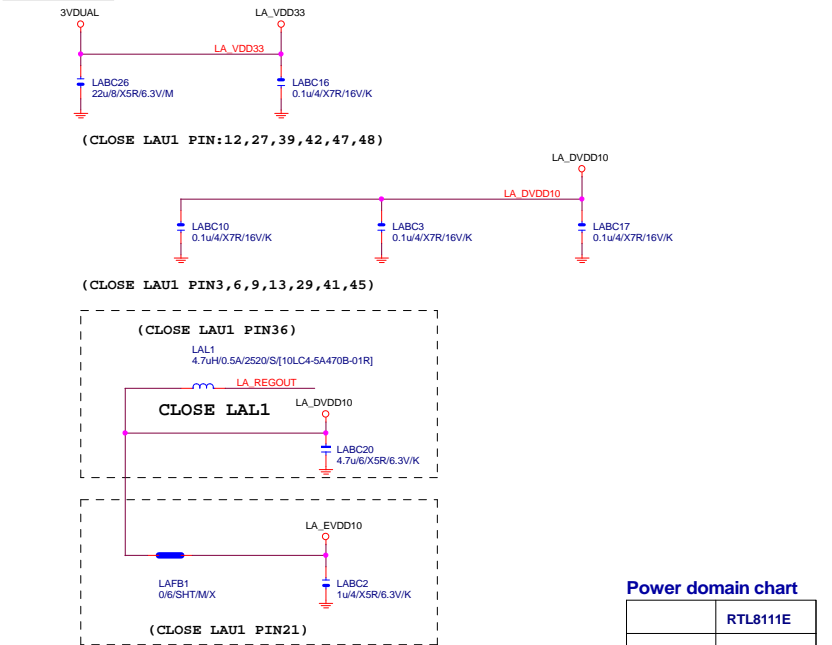
Title			
AUDIO JACK			
Size Custom	Document Number	IPMH61G1-DB	Rev 2.11
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LAN:RTL8111E/VB/VL

SCH BOM OPT:(二擇一使用)
-->(LAR11):M/B有CLK GEN 25M
-->(LAX1,LAC5,LAC6):M/B無CLK GEN 25M



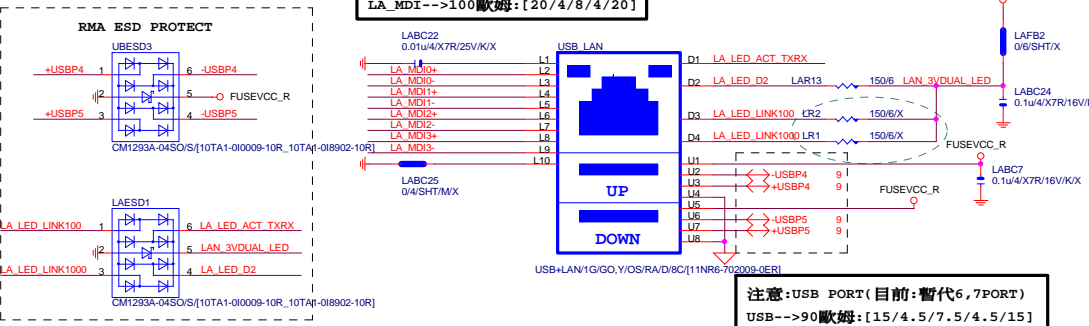
LAN POWER



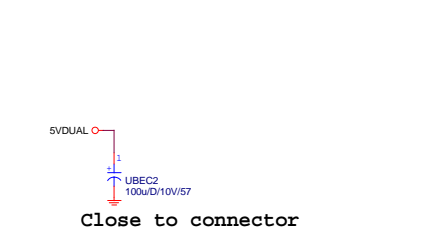
Power domain chart

	RTL8111E
AVDD33	3.3V
DVDD33	3.3V
VDDREG	3.3V
DVDD10	1.05V

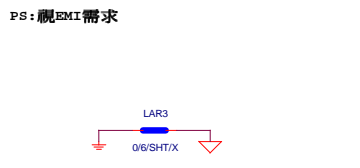
USB LAN CONNECTOR



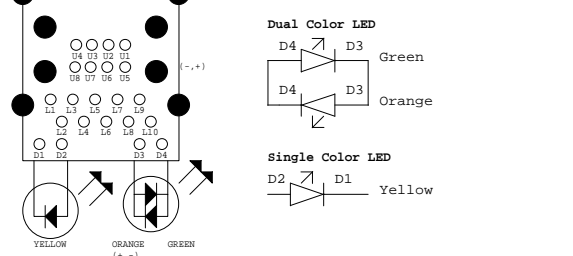
USB X3 POWER



EMI SHORT PAD



注意:LAN LED PROTECT:(CO-LAYOUT)
1.ESD(6PIN):AOZ8902CIL/SOT23-6(DEFAULT)
2.SURGE(5PIN):AZ2025-04S/SOT23-5L



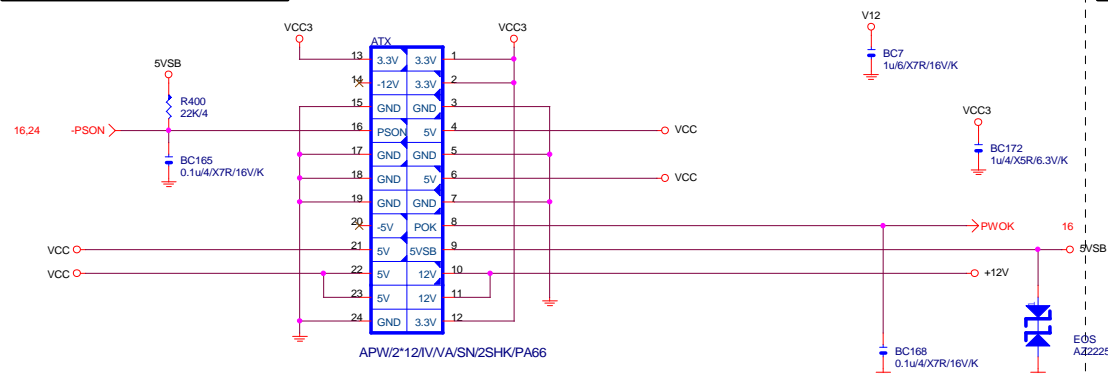
料號	規格	廠商
11NR6-702009-0ER	1G LAN (12core)	UDE
11NR6-702009-91R	1G LAN (8 core)	FOXCONN
11NR6-702009-92R	1G LAN (8 core)	UDE
11NR6-702009-11R	1G LAN (12core/RED)	UDE
11NR6-702009-12R	1G LAN (8 core/RED)	FOXCONN

USB LAN BOM區分:
1.(紅色/12CORE/三倍):USB+LAN/1G/GO,Y/OS/RA/D/1/RED
2.(黑色/12CORE):USB+LAN/1G/GO,Y/OS/RA/D/1
3.(黑色/8CORE):USB+LAN/1G/GO,Y/OS/RA/D/8C

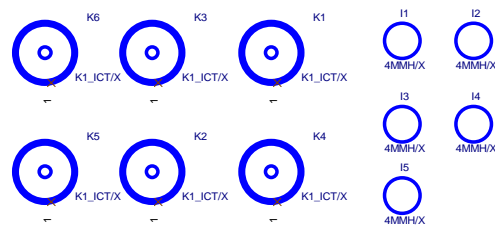
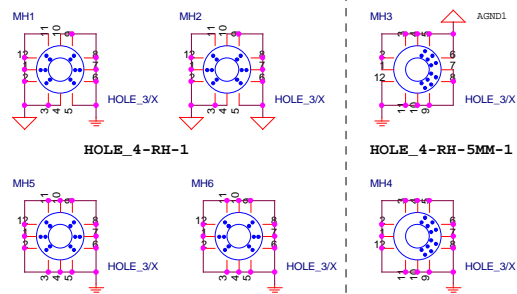
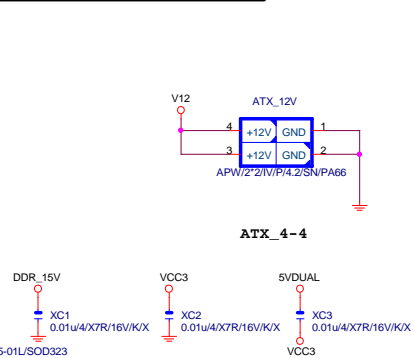
USB OC/FUSE PROTECT



ATXX24 POWER CONNECTOR



ATXX4 POWER CONNECTOR

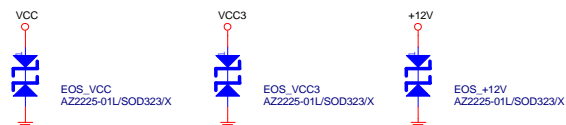


```
| To prevent the 5VSB  
| under loading when  
| boot
```

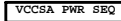
5VDUAL1(USB PORT/DDRIII POWER)
5VDUAL(3VDUAL/OTHER)

```
-S WARN-->5VDUAL1-->-S ACK(PCH)-->-DEPSLP/-RSMRST-->5VDUAL-->3VDUAL
```

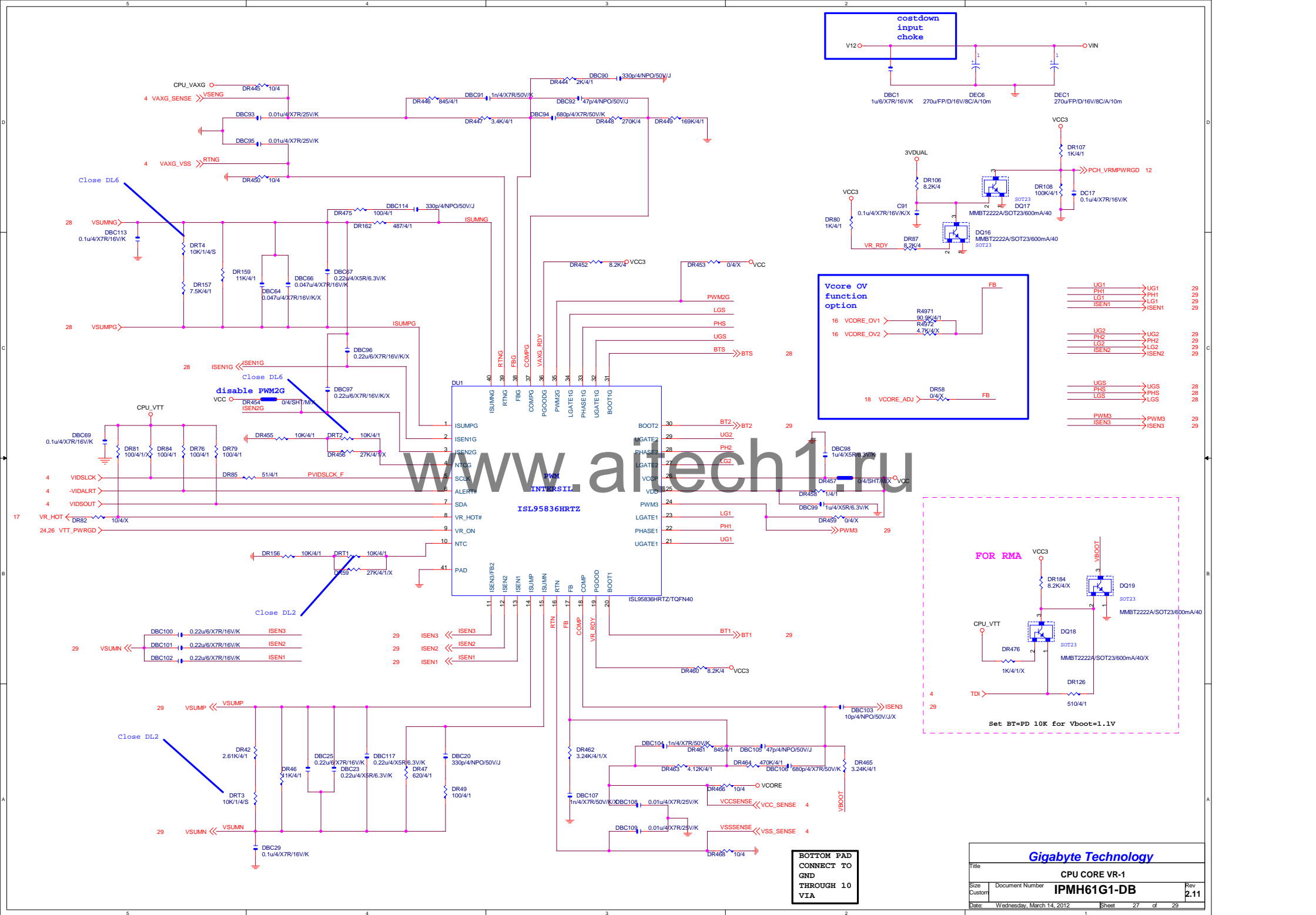
HOLE 4-RH-5MM-1



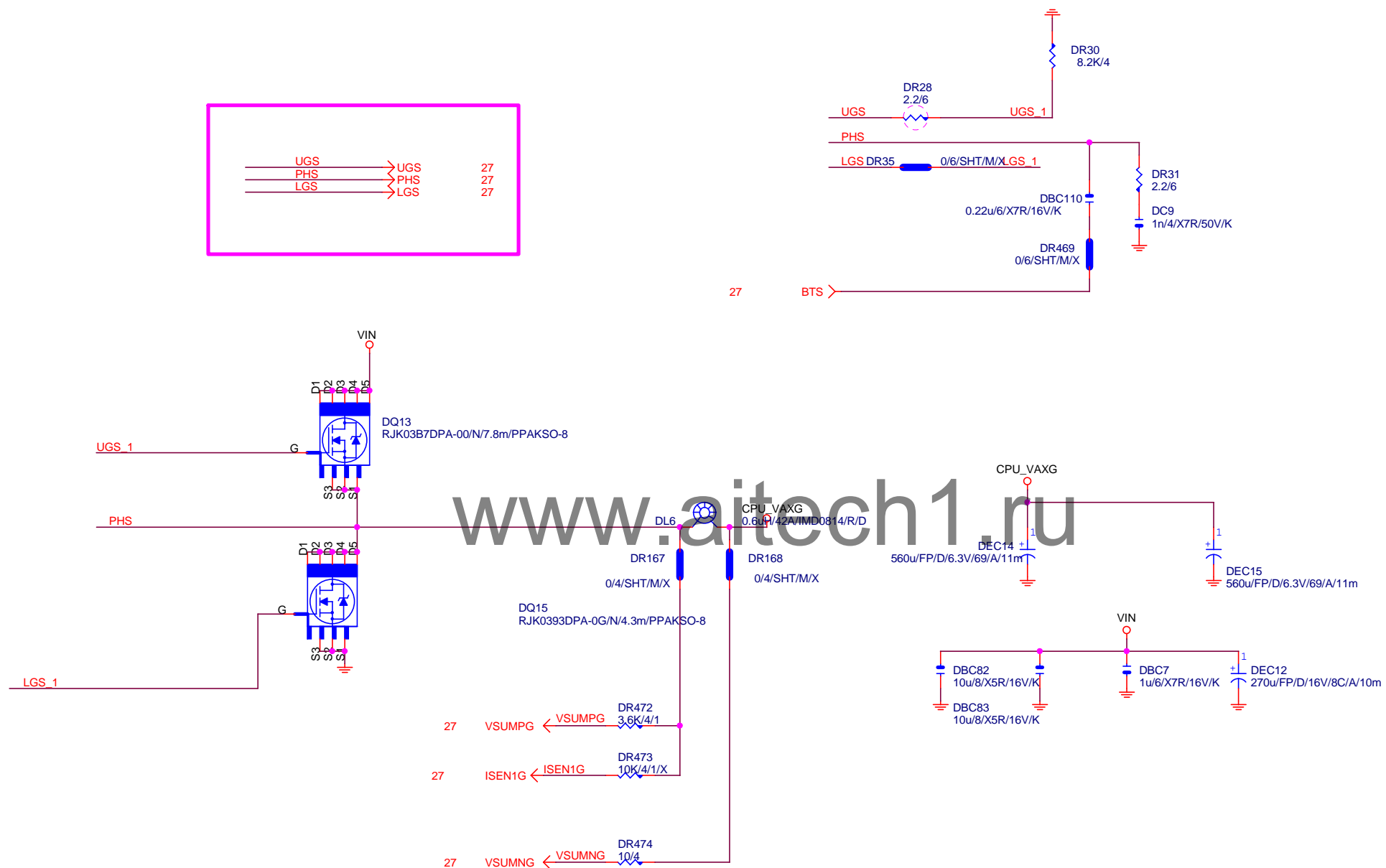
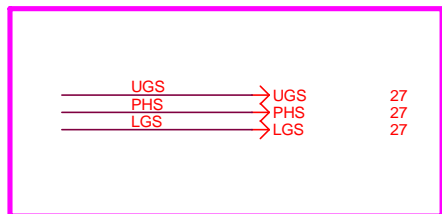
VCCSA

CPU_VTT PWR SEQ

2.11

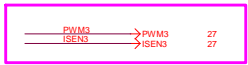
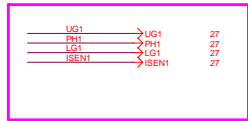


VAXG

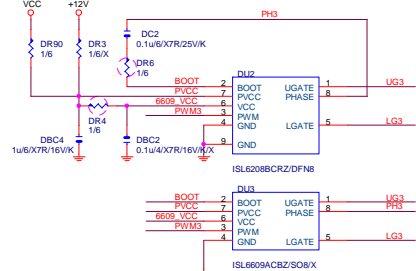


Gigabyte Technology

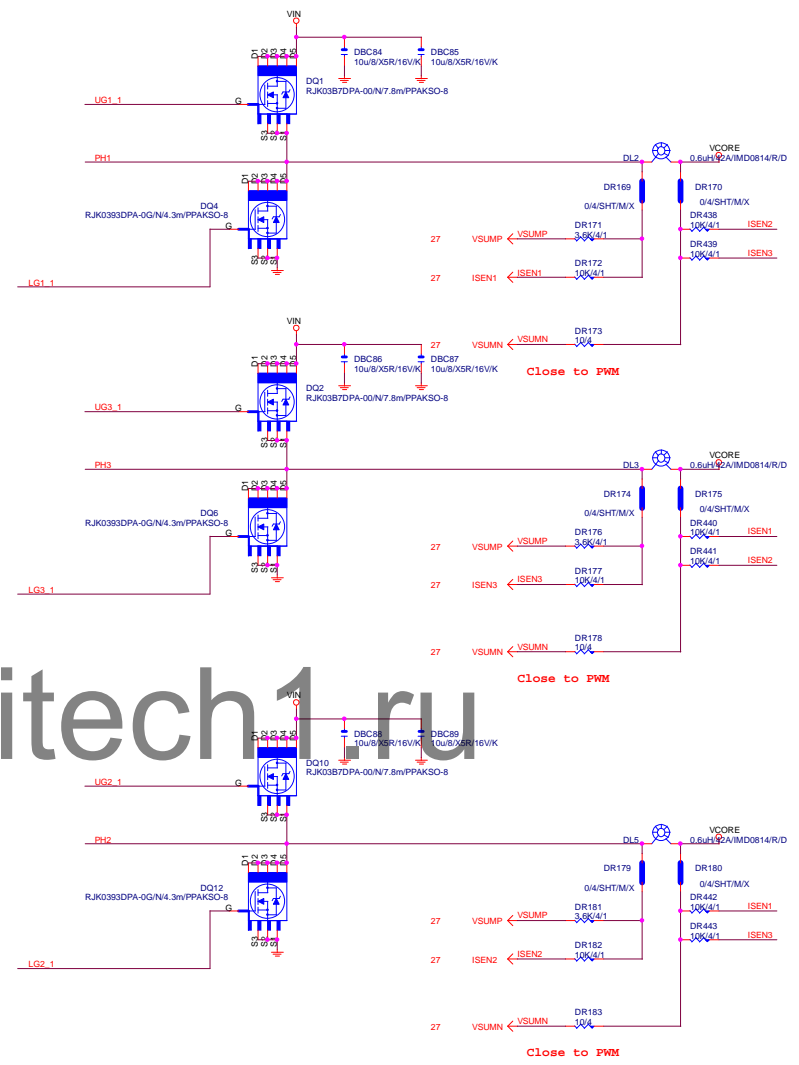
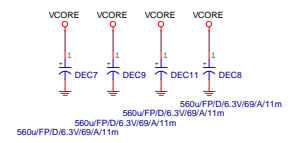
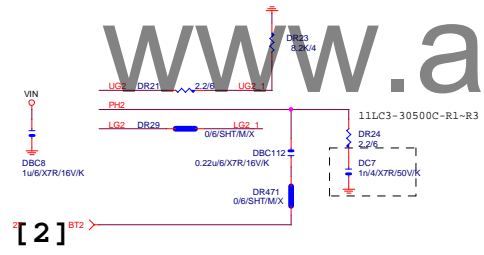
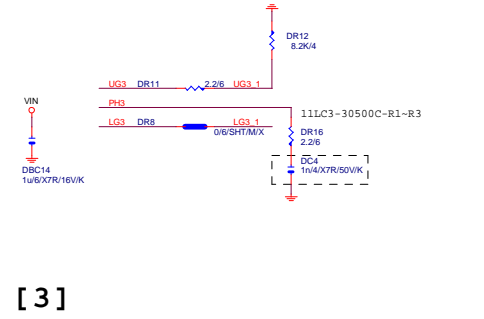
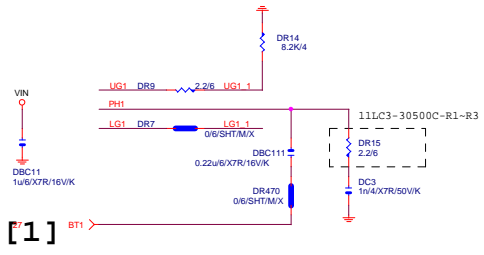
Title		
CPU CORE VR-2		
Size	Document Number	Rev
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Pop 1SL6625CB for PB2
 (1SL6625CBZ/S08)



6609 colay with 6208



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