

Model Name: GA-H61MA-D3V Revision 2.11

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*1x3 SLOT
16	ITE 8728 LPC IO
17	COMA,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	ATHEROS AR8151B/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
30	ETRON USB 3.0
31	DVI
32	Marvell 9172

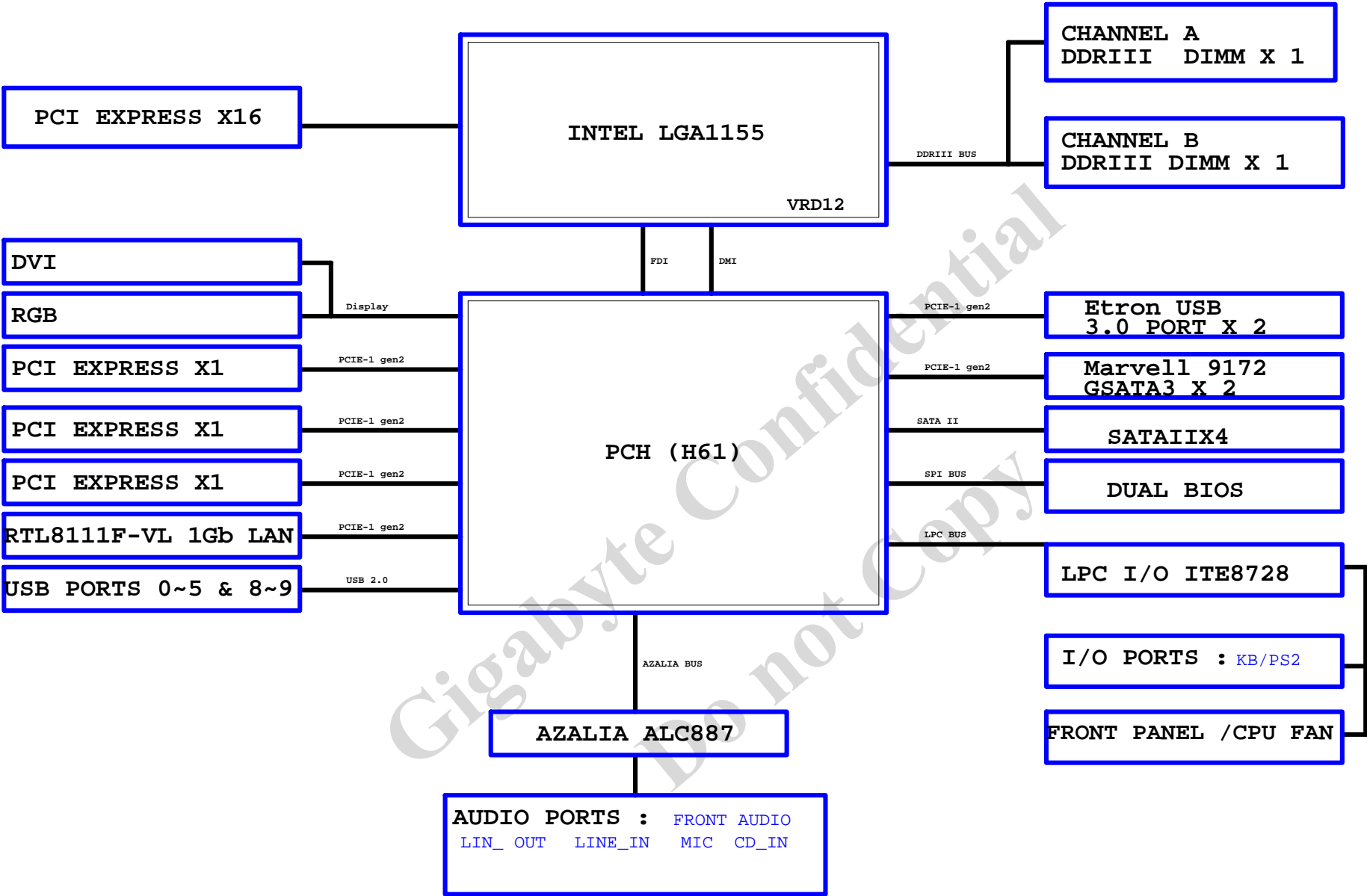
Gigabyte Technology		
Cover Sheet		
Size Custom	Document Number GA-H61MA-D3V	Rev 2.11
Date: Wednesday, May 02, 2012	Sheet 1 of 32	

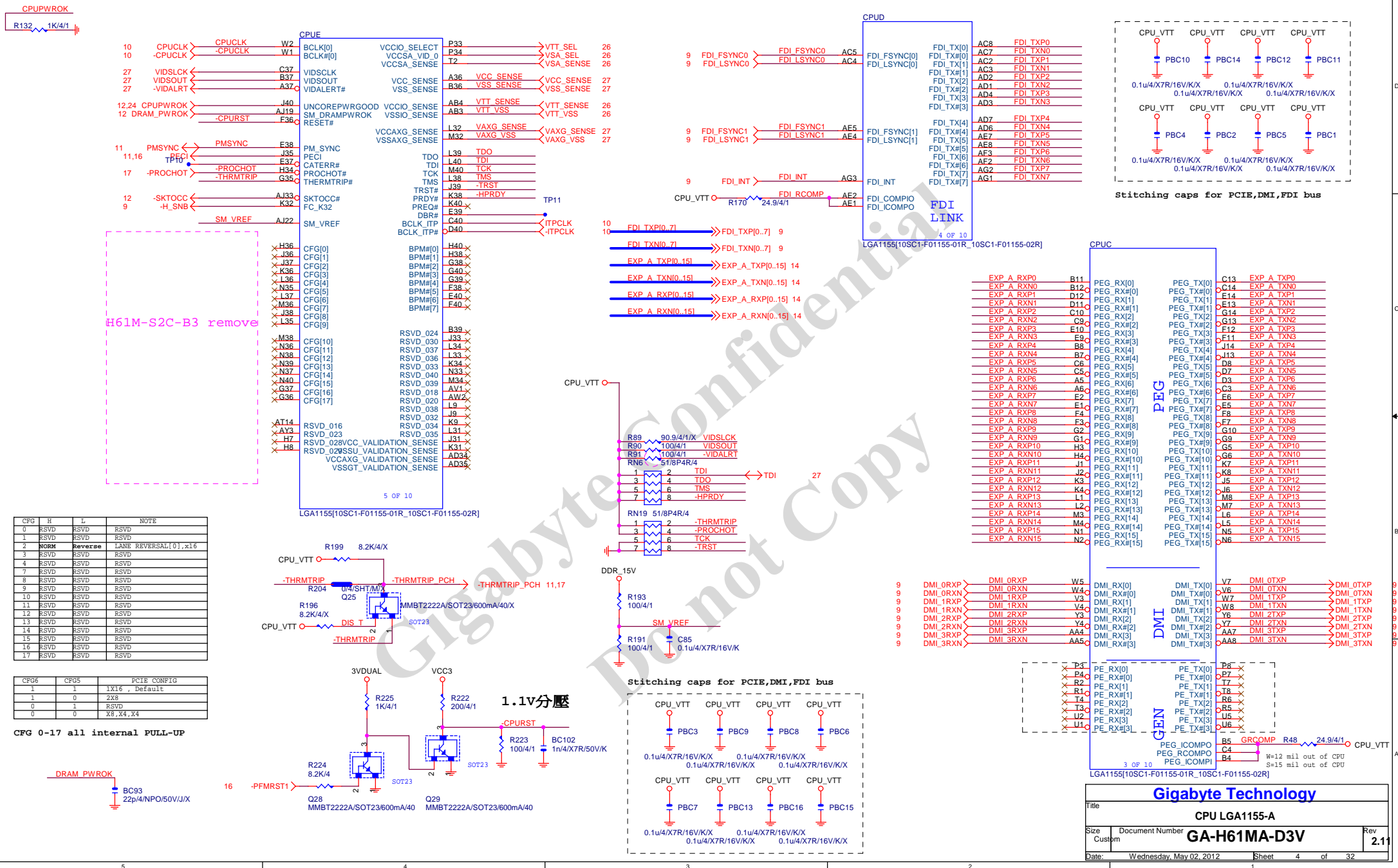
Revision 2.11

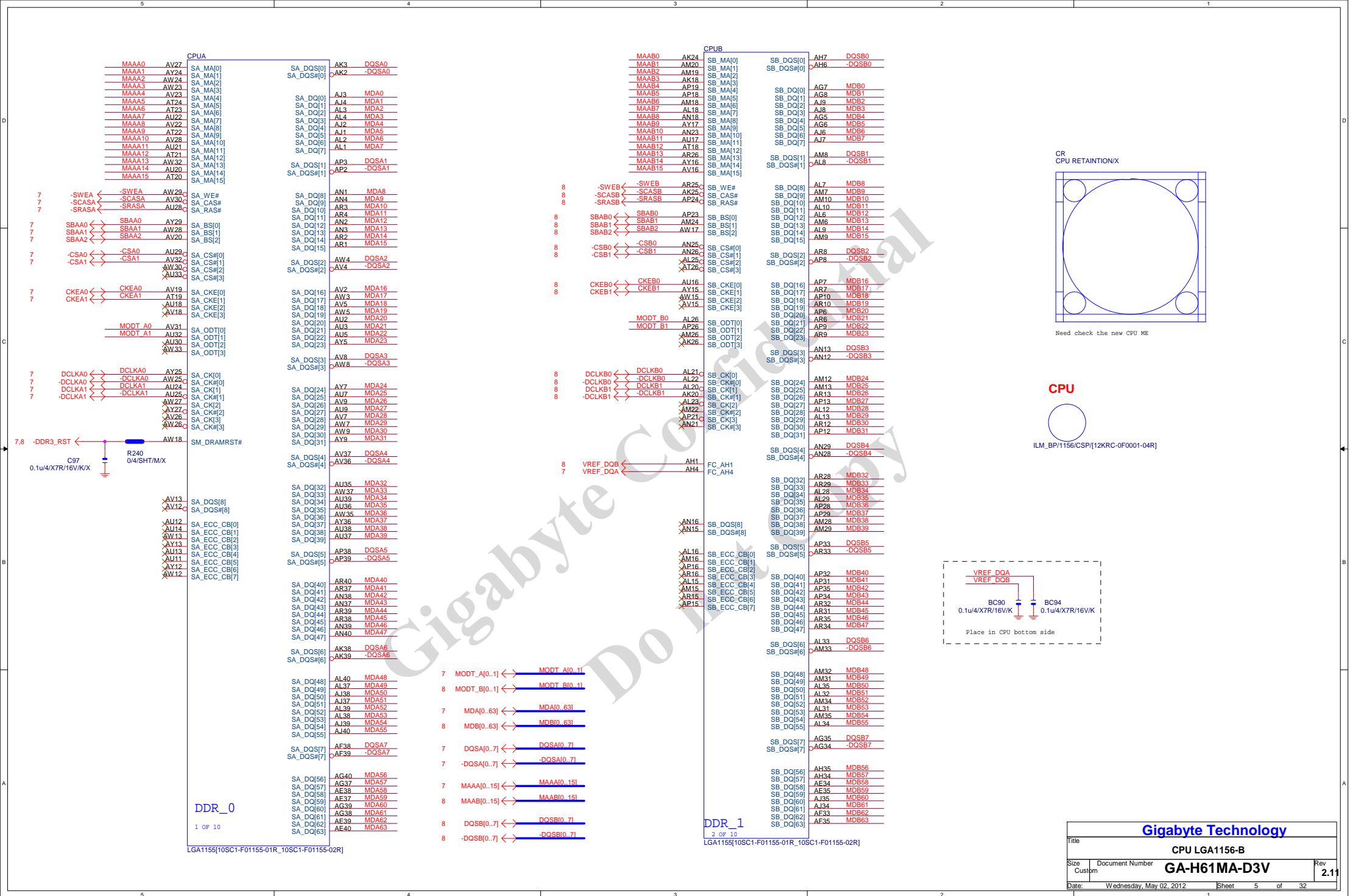
2011/12/12

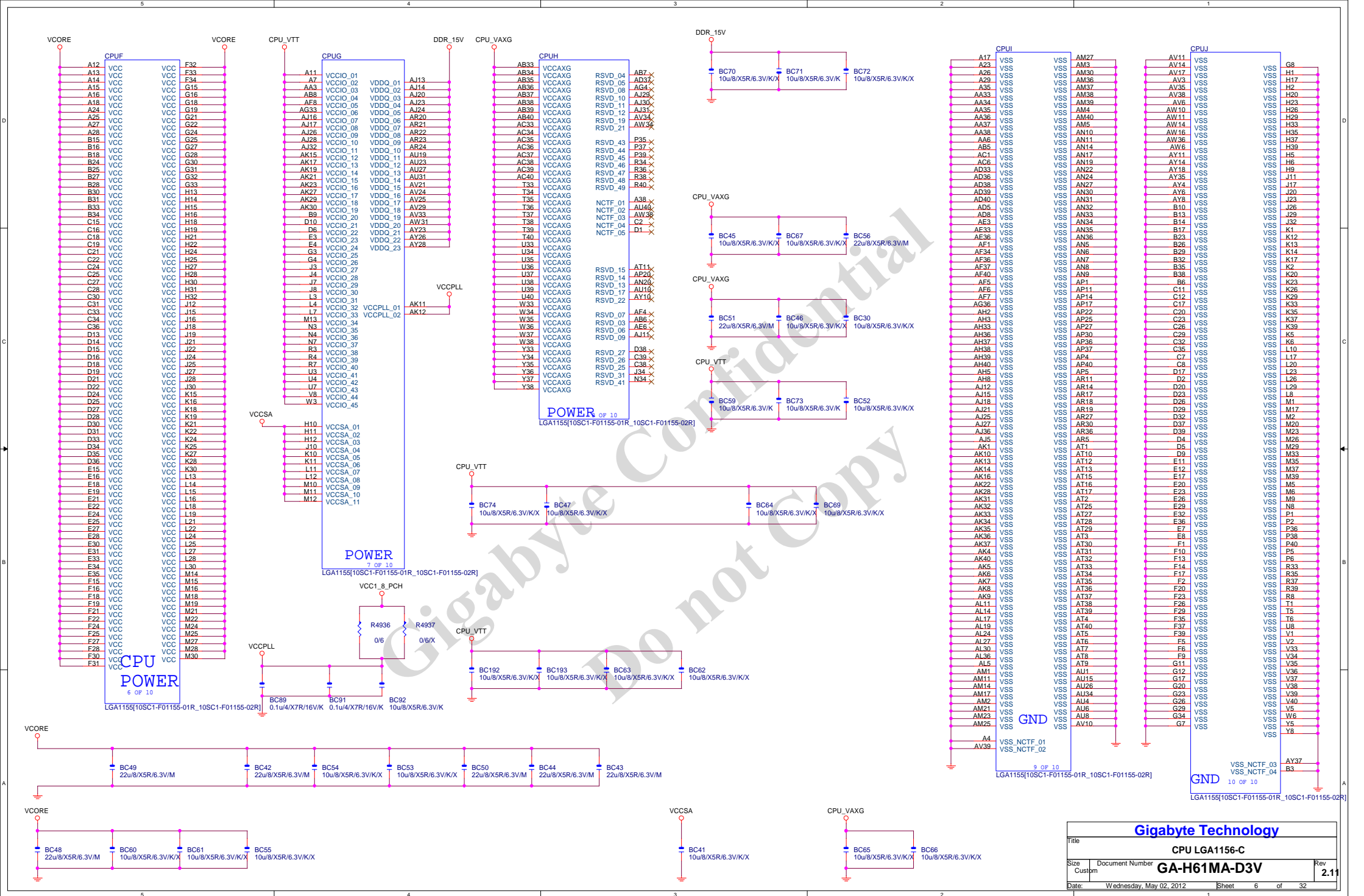
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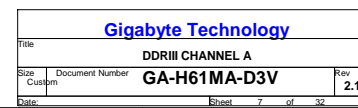
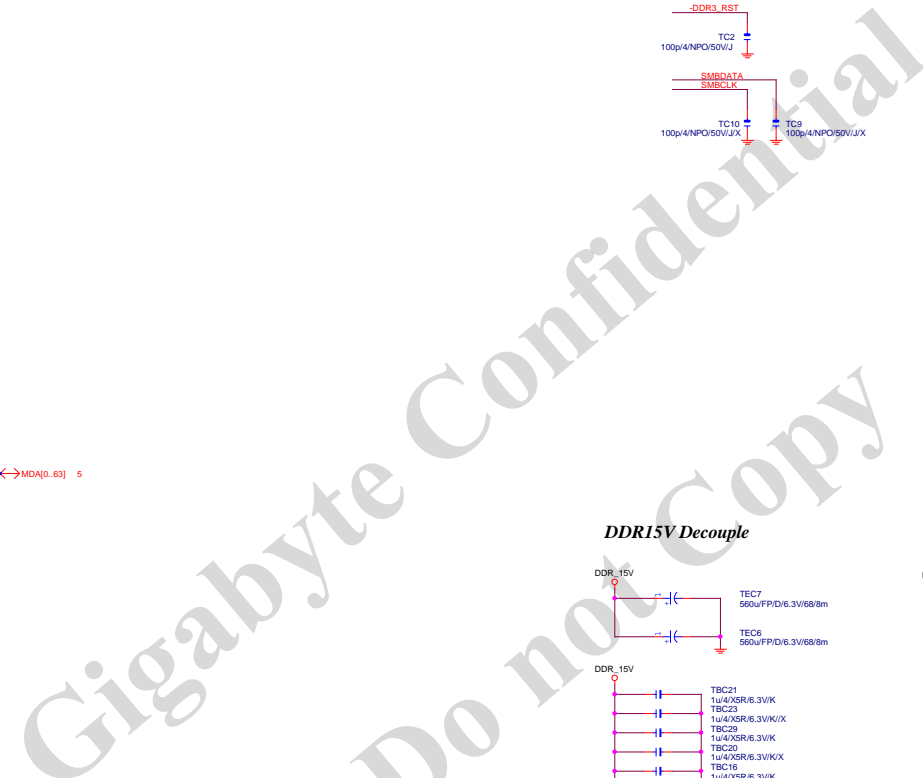
BLOCK DIAGRAM

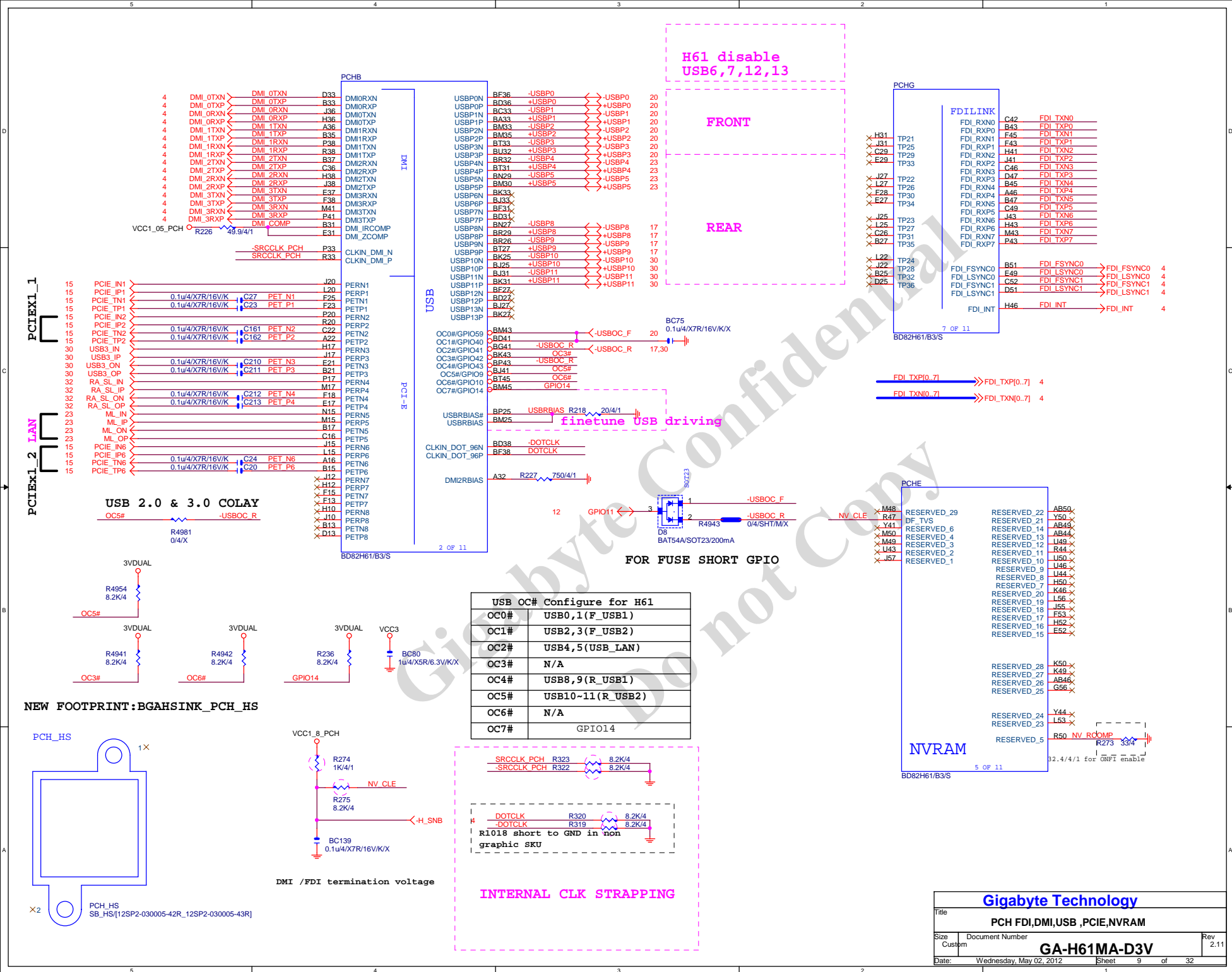


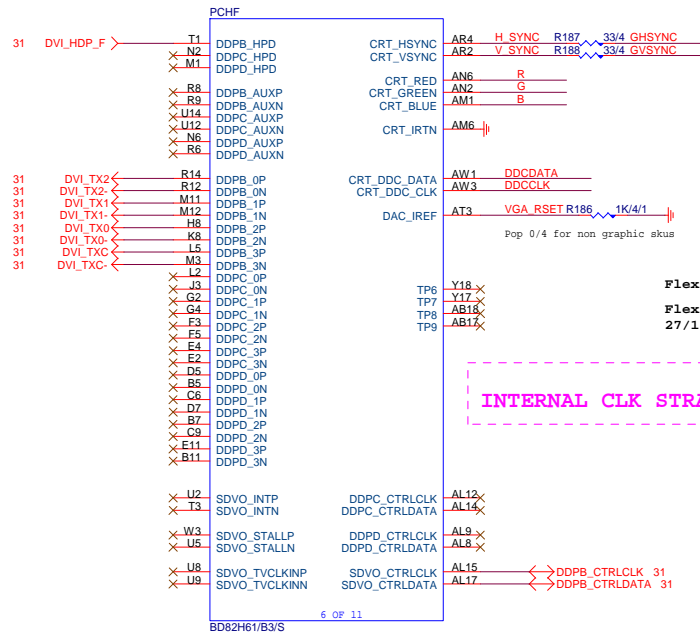






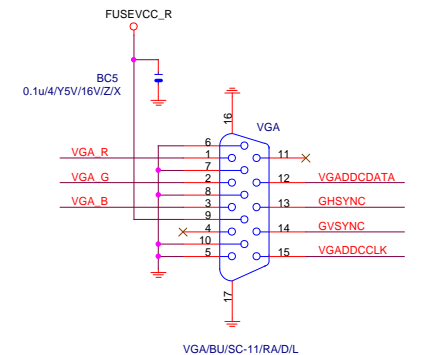
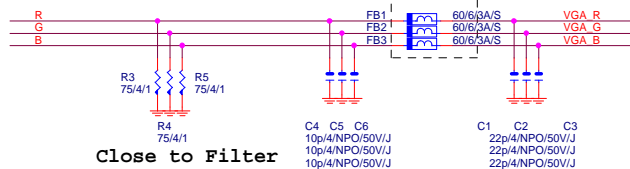
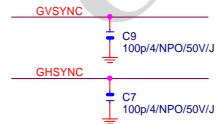
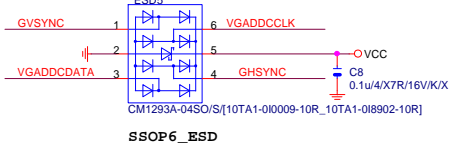
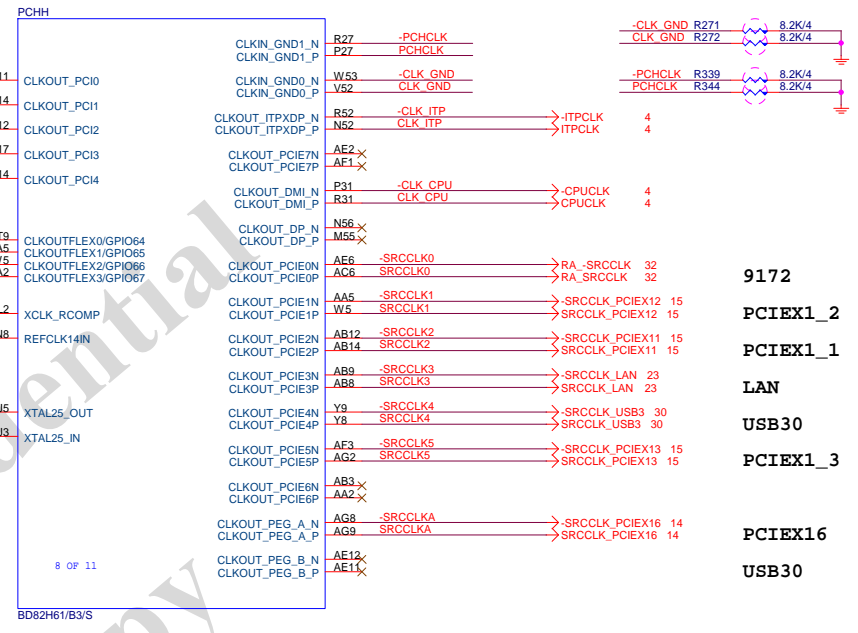
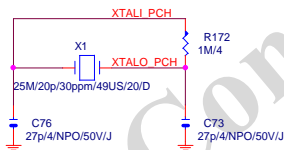




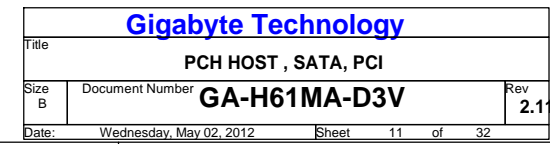


Flex0,2 : 33MHZ
 Flex1,3 :
 27/14/24/48/25MHZ

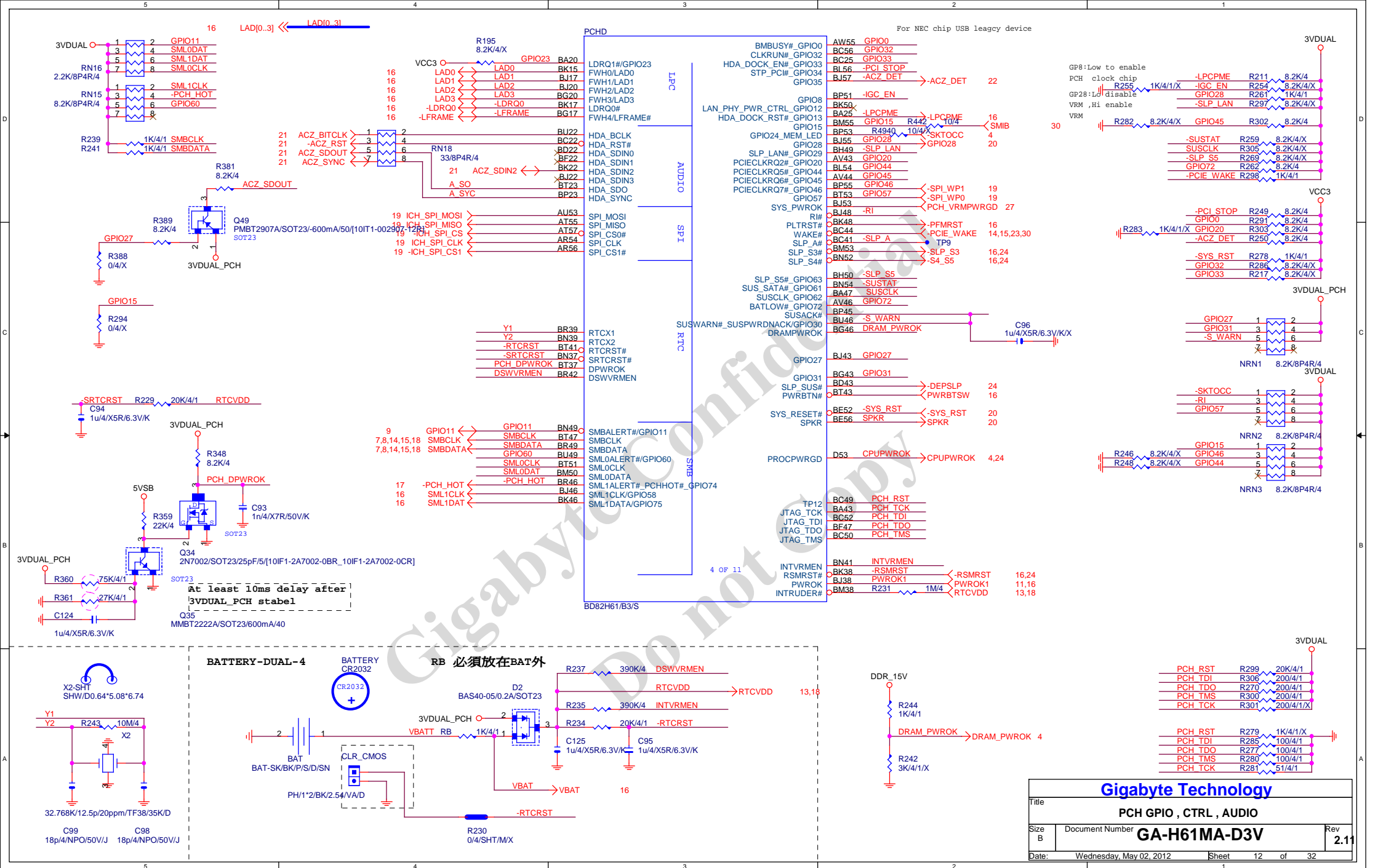
INTERNAL CLK STRAPPING

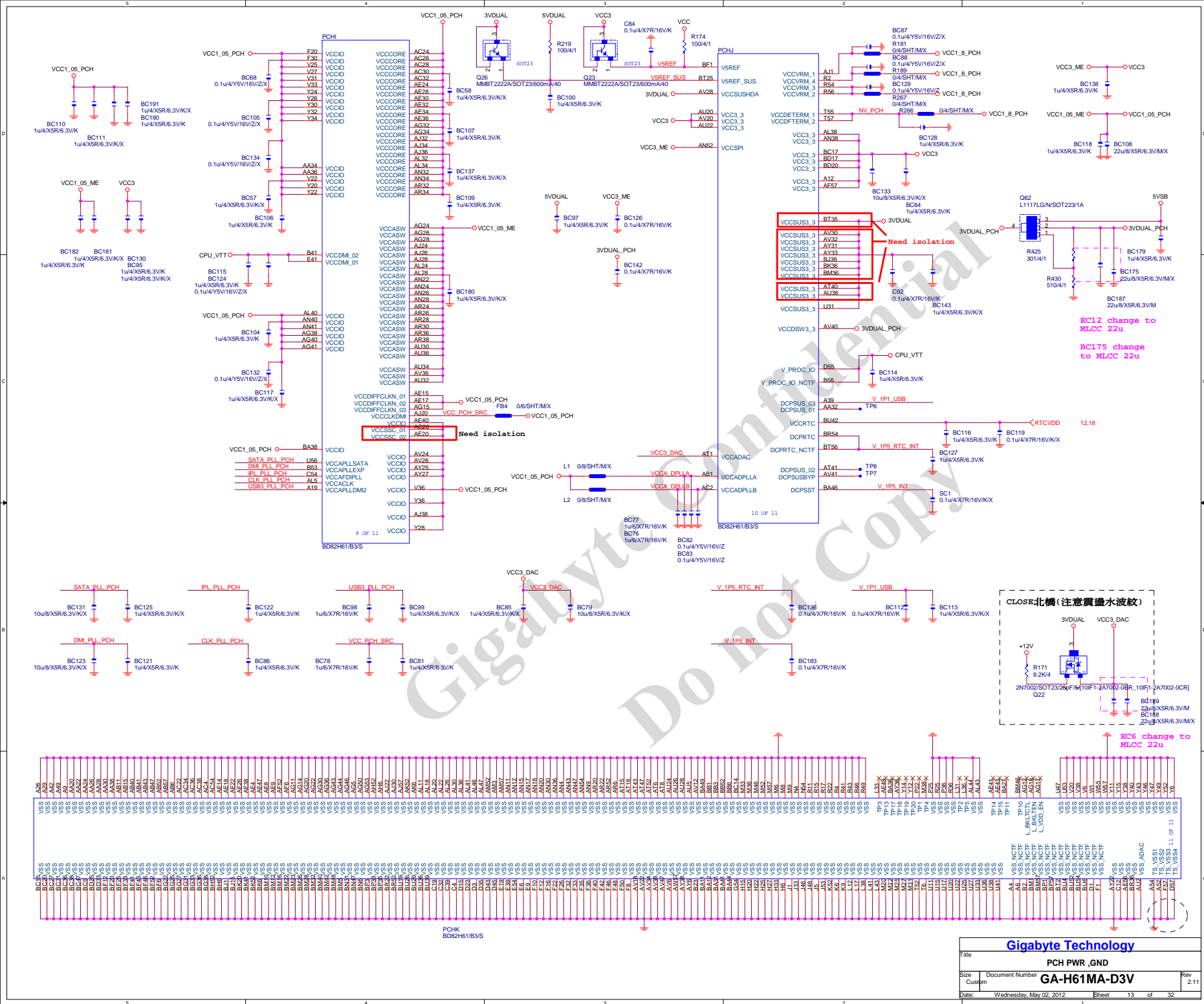


Gigabyte Technology			
Title			
PCH DISPLAY ,CLK BUFFER			
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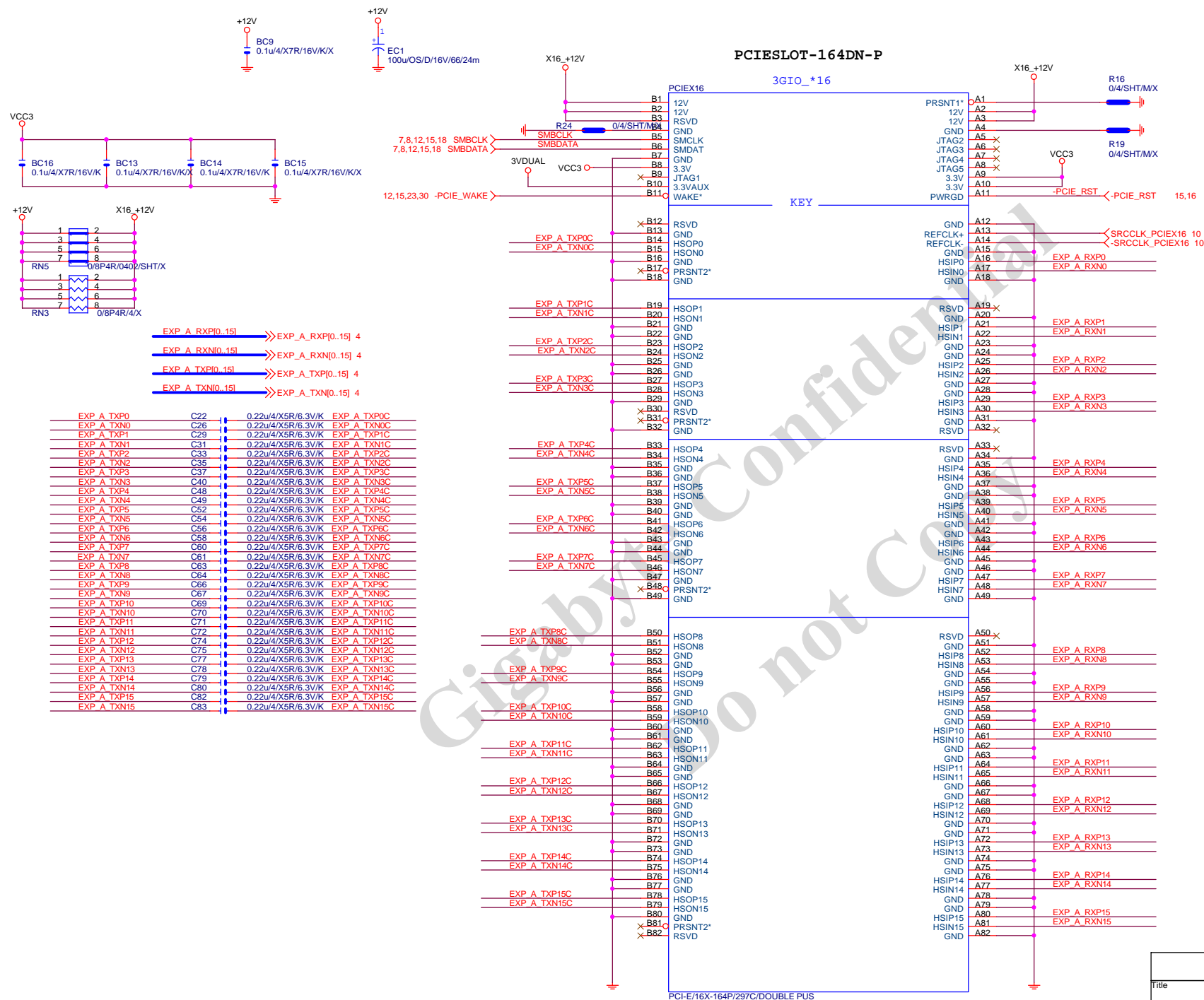


H1X7-SATA2-HS-MASK

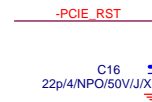
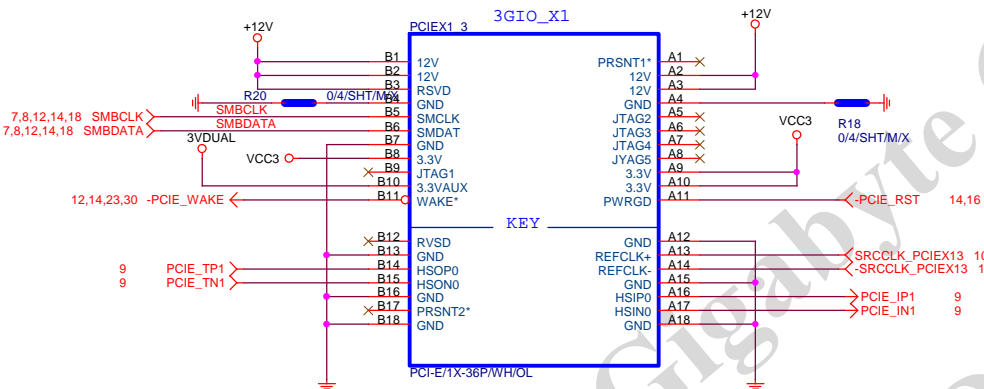
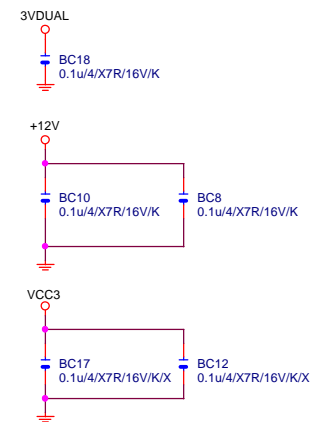
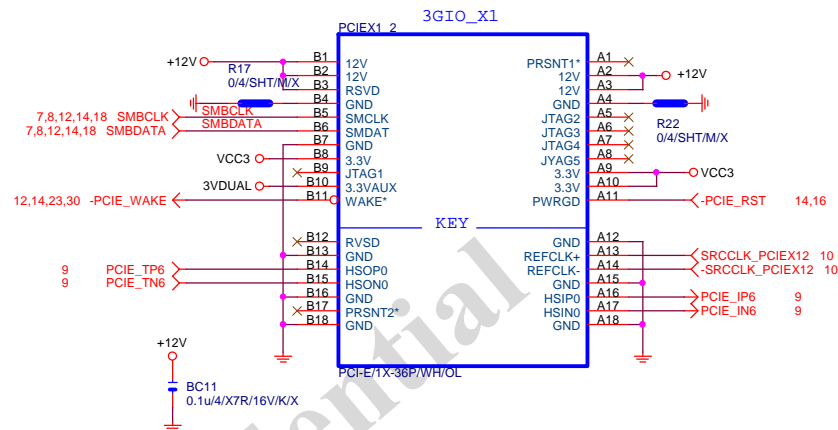
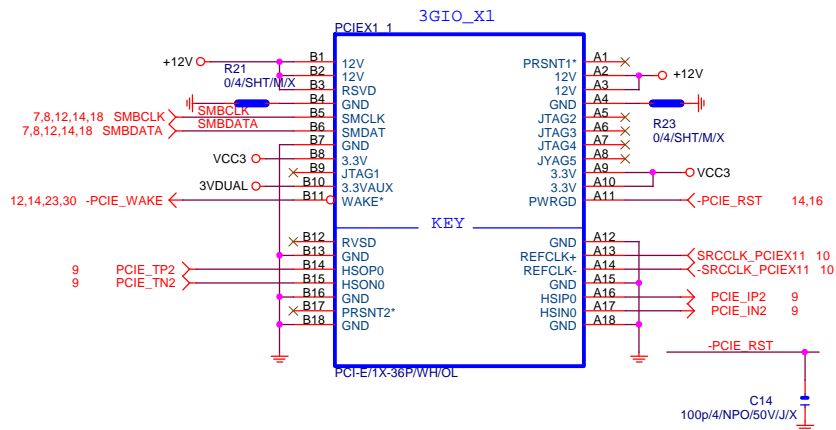




EC6D_8D10MM-RH



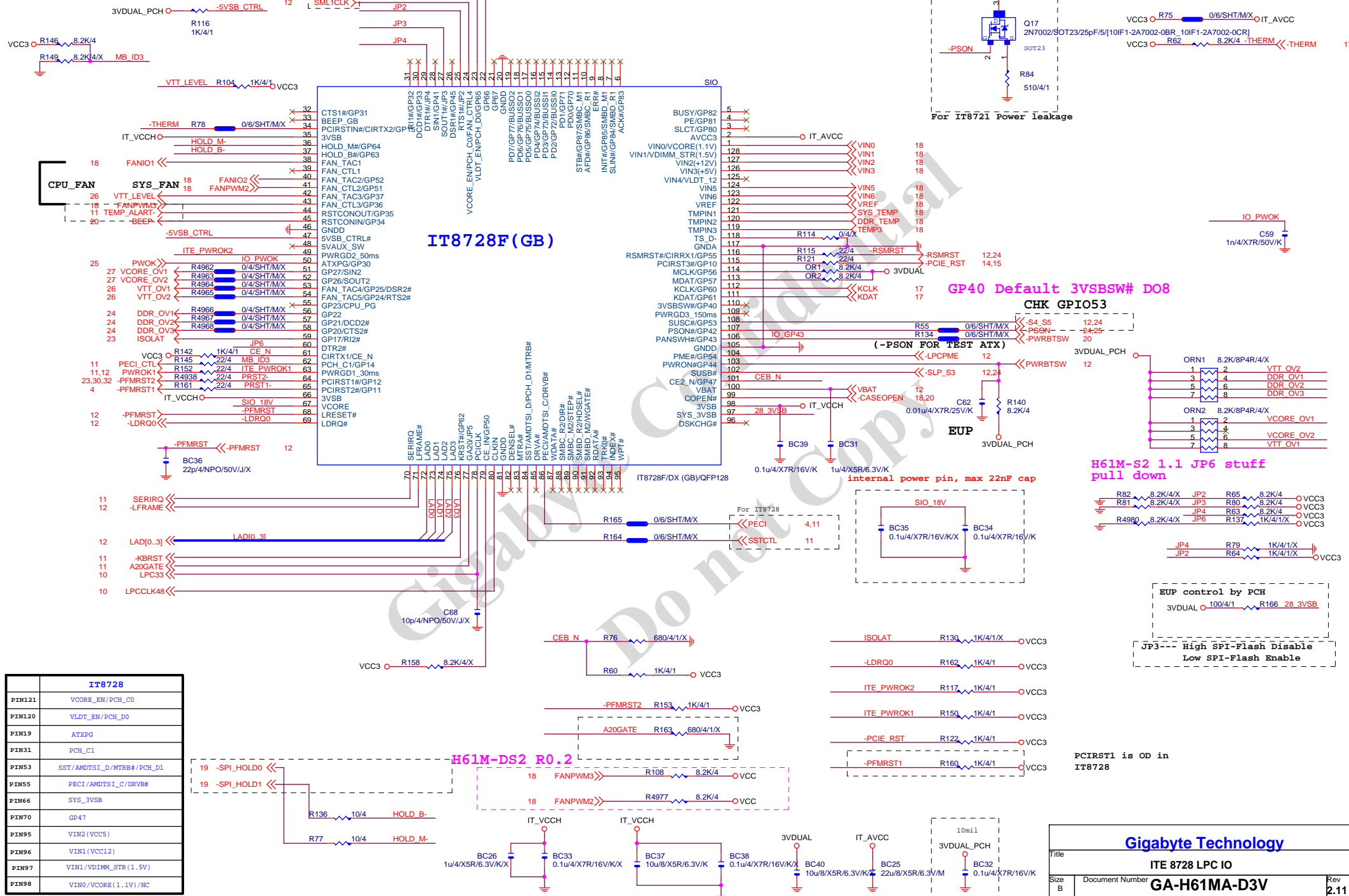
PCIEX1*3



Gigabyte Technology

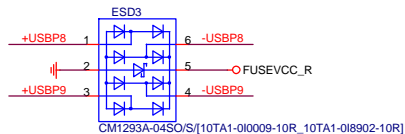
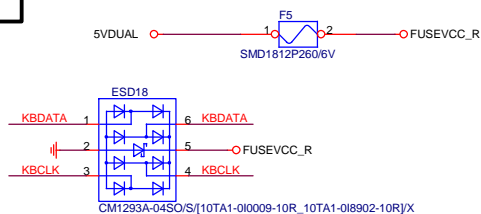
Title			PCIEX1,X2/CLK GEN	
Size	Document Number	GA-H61MA-D3V		Rev
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GP23 Default CPU_PG DOD8

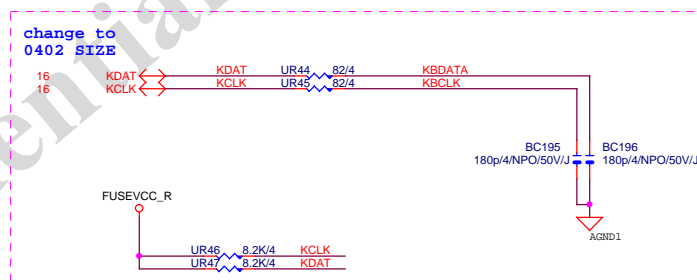
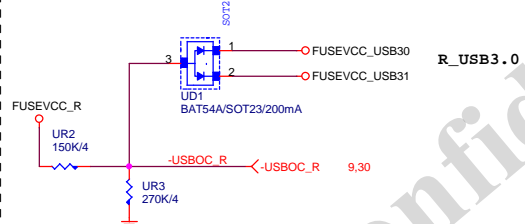


	IT8728
PIN121	VCORE_EN/PCH_C0
PIN120	VLDT_EN/PCH_D0
PIN19	ATXPG
PIN31	PCH_C1
PIN53	SST/AMDTSI_D/MTRB#/PCH_D1
PIN55	PBCT/AMDTSI_C/DRV#B
PIN66	SYS_3VSB
PIN70	GP47
PIN95	VIN2(VCC5)
PIN96	VIN1(VCC12)
PIN97	VIN1/VDIMM_STR(1.5V)
PIN98	VINO/VCORE(1.1V)/NC

KB/MS

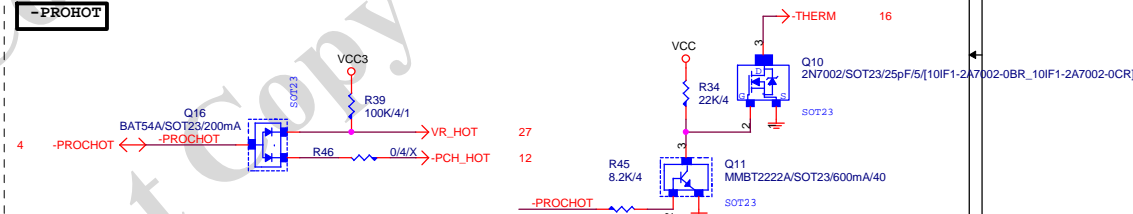


CLOSE R_USB2

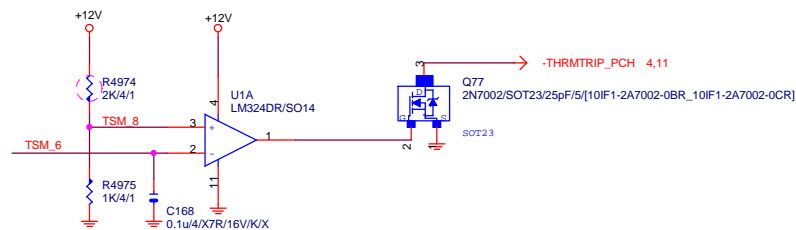


R_USB1

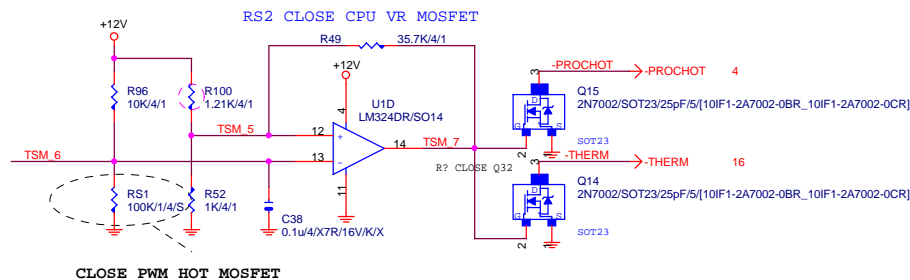
-PROHOT



EMI request
change to
short pad



deasserted at 116 degree

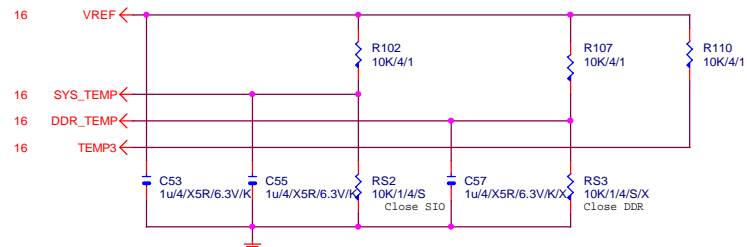


CLOSE PWM HOT MOSFET

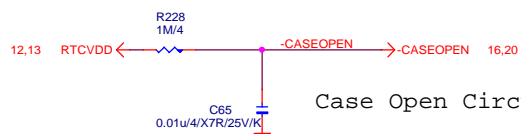
Gigabyte Technology

Title			
COM,-RI,KB_USB,USB_ESATA,-PROHOT			
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TEMP H/W MONITOR



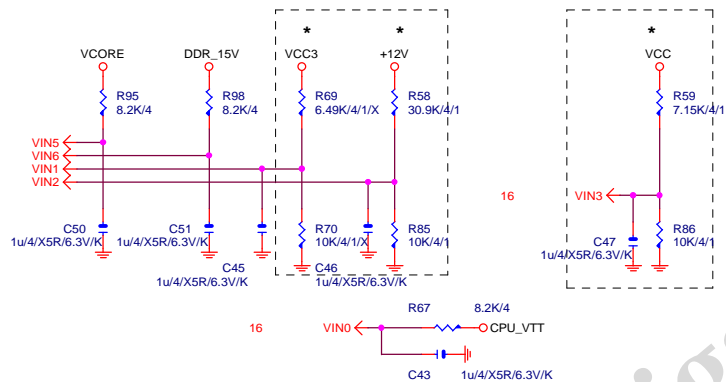
CASE OPEN



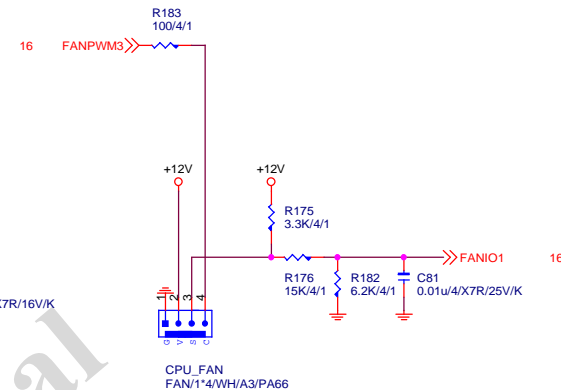
Case Open Circuits

VOLTAGE-- H/W MONITOR

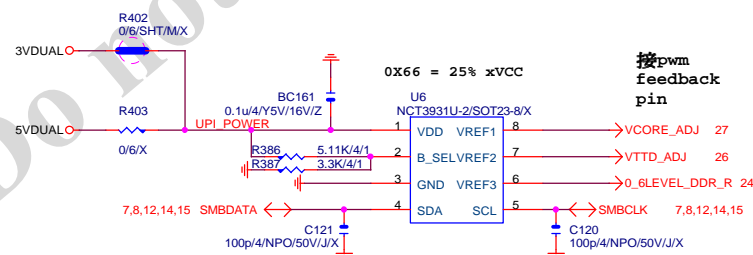
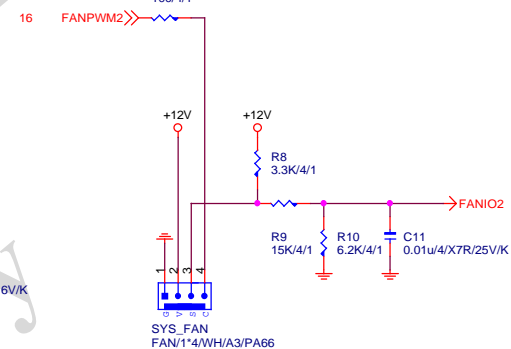
I (VAXG)



CPU SMART FAN



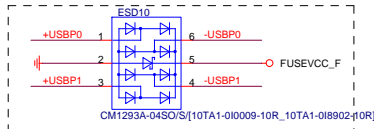
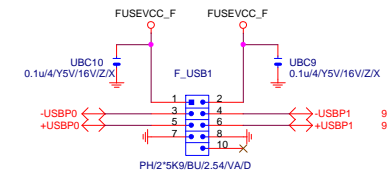
SYS SMART FAN



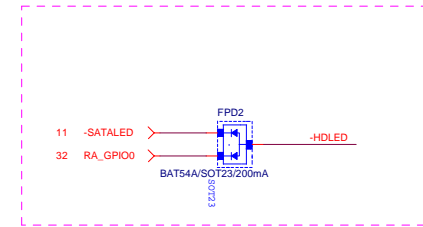
Gigabyte Technology

Title			HWM,FAN CTRL,OV
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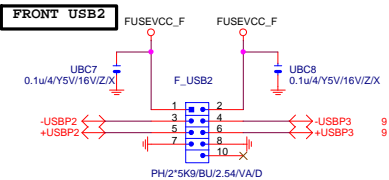
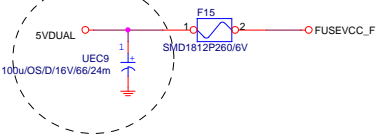
FRONT USB1



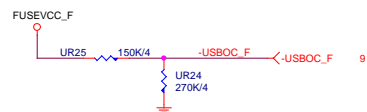
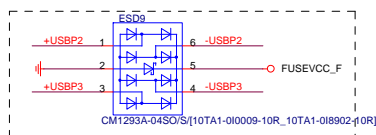
SATA LED



CLOSE F_USB1

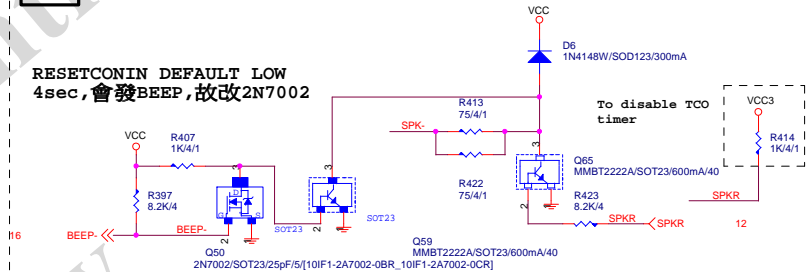


FRONT USB3

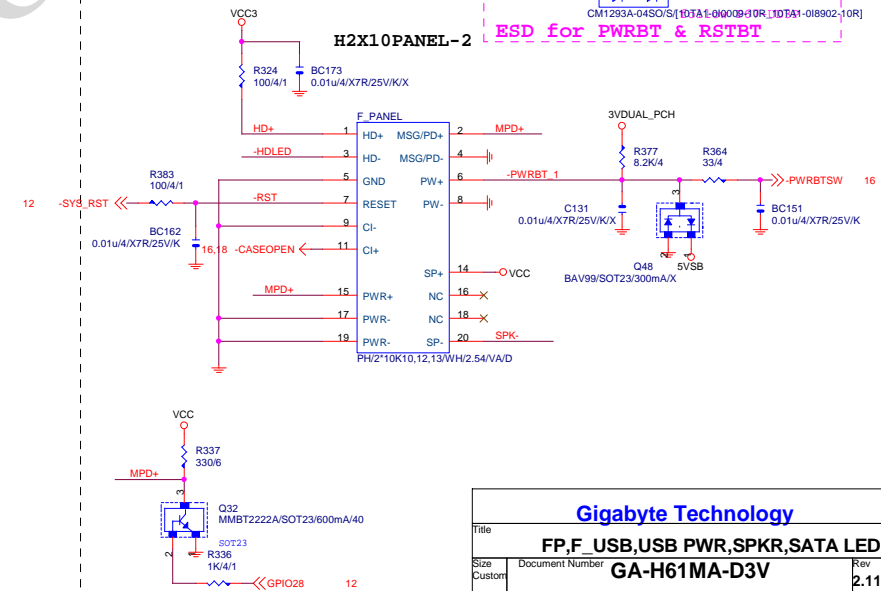
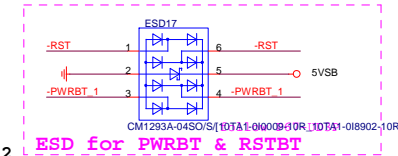


SPKR

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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FOR VT1708S

CBC42
100p4/NPO/50V/J/X

CR28 20K/4/1

CR26: 20K/4/0.1% @ALC889A
CR26: 20K/4/1% @others

For ALC888-VD/ALC892

CR68 0/4/X → VOCR

AVDD

CBC25

0.1u4/X7R/16V/K

CU1

ALC889A+

FRONT-R
FRONT-L
SENSE B (JD2)/FIMIC1
DCVOL/VREF/OUT2
MIC1-VREF0-R/FIMIC2
LINE2-VREF0/JD4
MIC2-VREF0/AFILT2
LINE1-VREF0-L/AFILT1
MIC1-VREF0-L/VREFOUT
VREF
AVSS1
AVDD1

36
35
34
33
32
31
30
29
28
27
26
25

JD resistors close to pin34 of CODEC
Can Support Amp Out

CR65 47/4/1

FAUDIO_JD 22

CBC39
1n4/X7R/50V/K

CR20 8.2K/4/X AVDD

VODR CR14 8.2K/4

MIC1_VREF0_R 22
LINE2_VREF0 22
MIC2_VREF0 22

VOBR CR18 8.2K/4

MIC1_VREF0_L 22

CR67 0/4/X → VOCR

CR66 0/6

C5VDDAL

CBC41
22u/8/X5R/6.3V/M
CBC7
22u/8/X5R/6.3V/M

0.1u4/X7R/16V/K

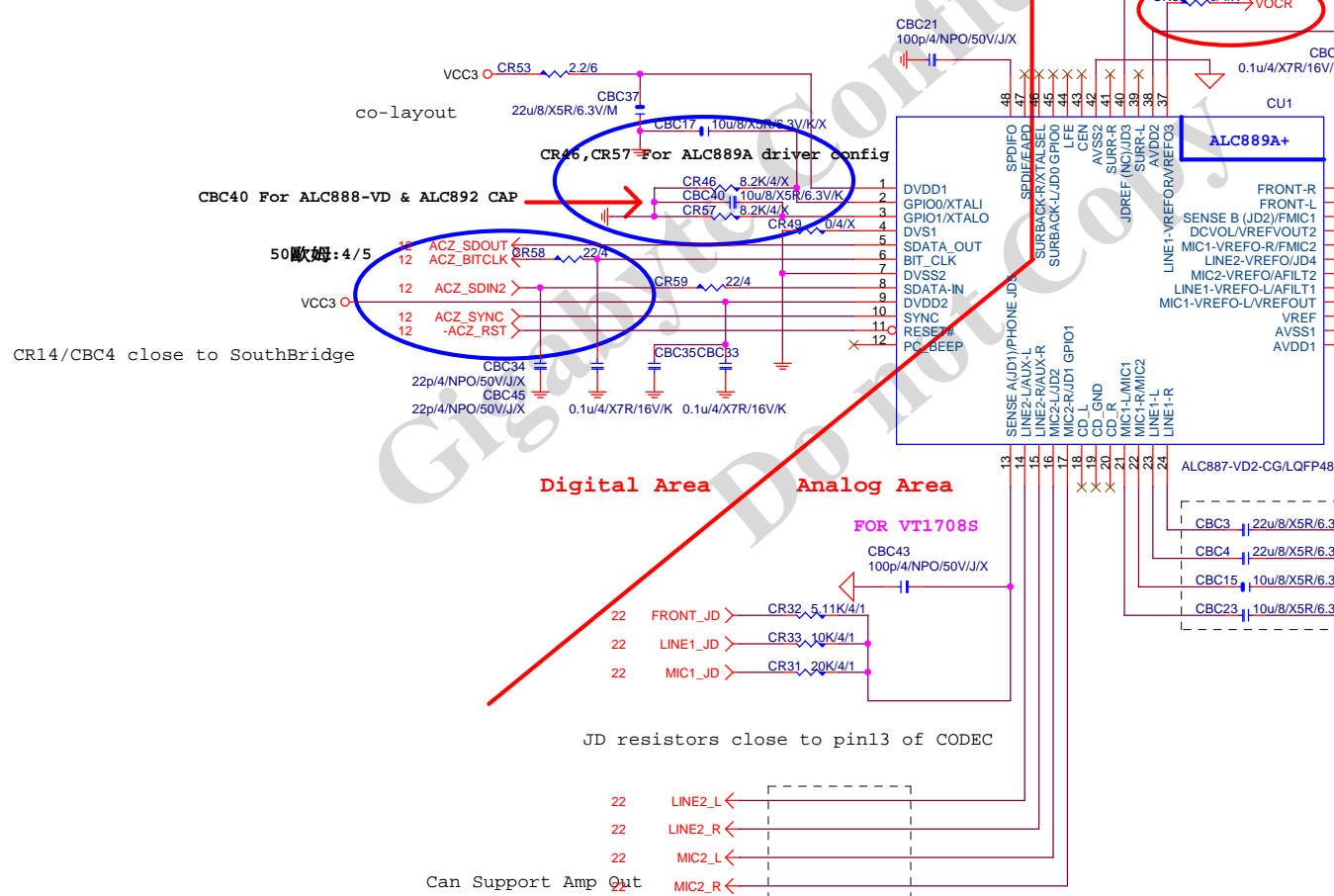
For ALC888-VD/ALC892

CD1
A2225-01U/SOD323

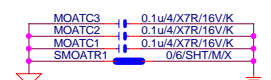
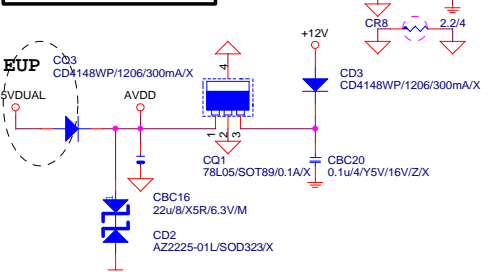
ALC887-VD2-CG/LQFP48/S

CBC3 22u/8/X5R/6.3V/M → LINE_IN_R 22
CBC4 22u/8/X5R/6.3V/M → LINE_IN_L 22
CBC15 10u/8/X5R/6.3V/K → MIC1_R 22
CBC23 10u/8/X5R/6.3V/K → MIC1_L 22

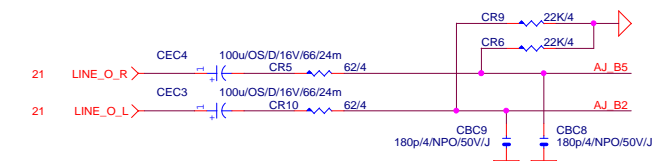
50歐姆: 4/10



CODEC POWER/EMI PAD

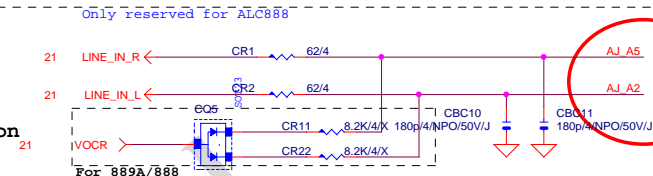


LINE-OUT

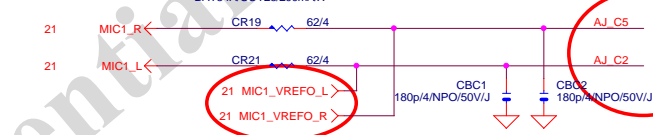


LINE-IN

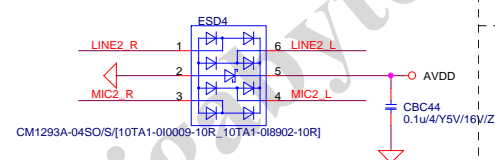
Verify MIC function in LINE-in



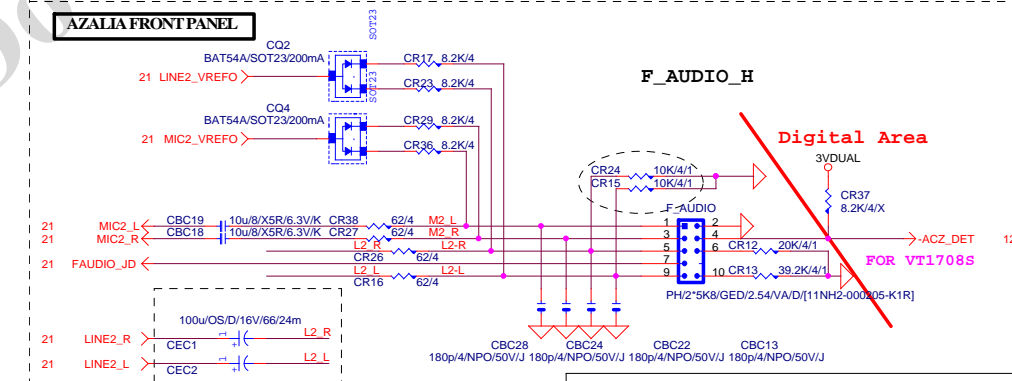
MIC-IN



AZALIA JACK



AZALIA FRONT PANEL



F_AUDIO_H

Digital Area

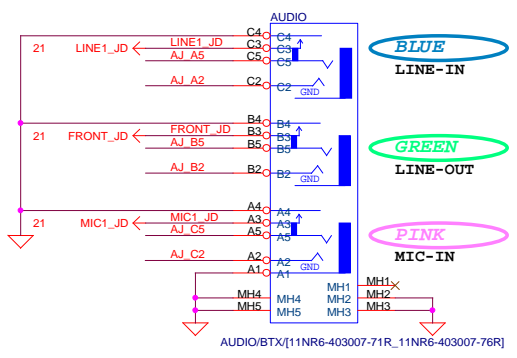
FOR VT1708S

Gigabyte Technology

AUDIO JACK

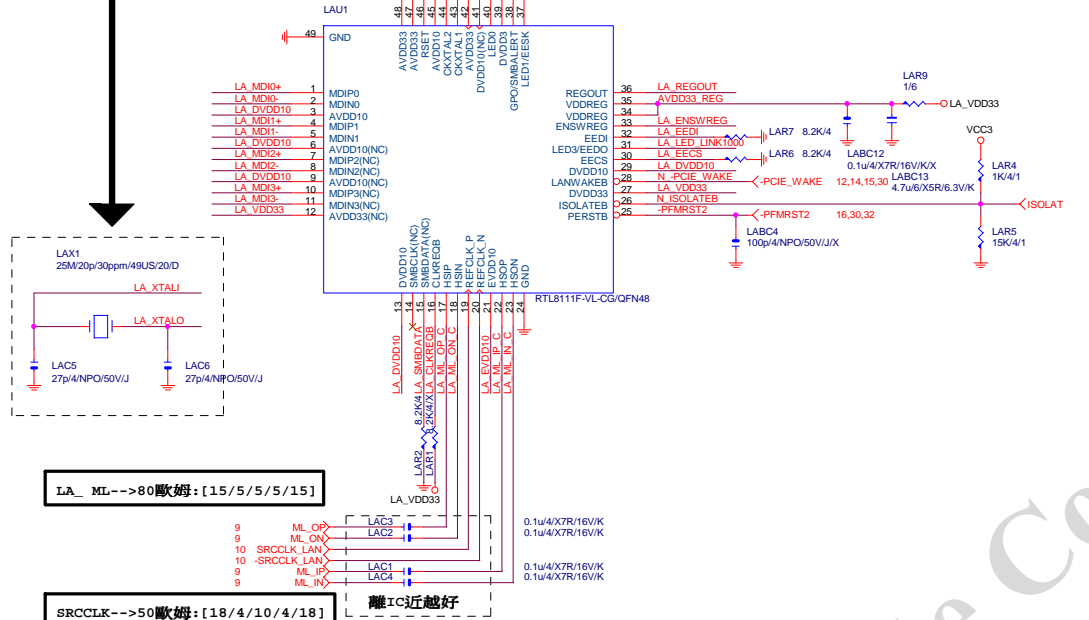
GA-H61MA-D3V

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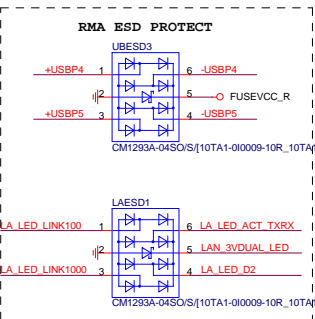


LAN:RTL8111E/VB/VL

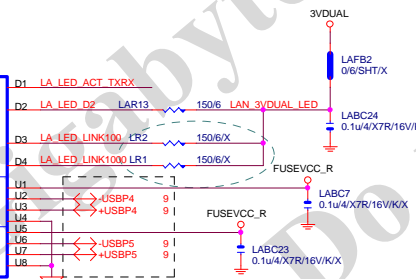
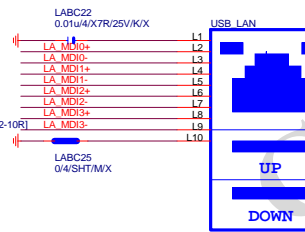
SCH BOM OPT:(二擇一使用)
-->(LAR11):M/B有CLK GEN 25M
-->(LAX1,LAC5,LAC6):M/B無CLK GEN 25M



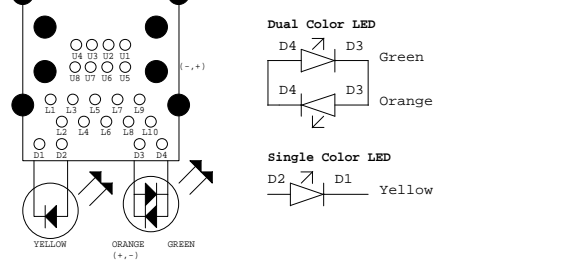
USB LAN CONNECTOR



LA MDI-->100歐姆:[20/4/8/4/20]



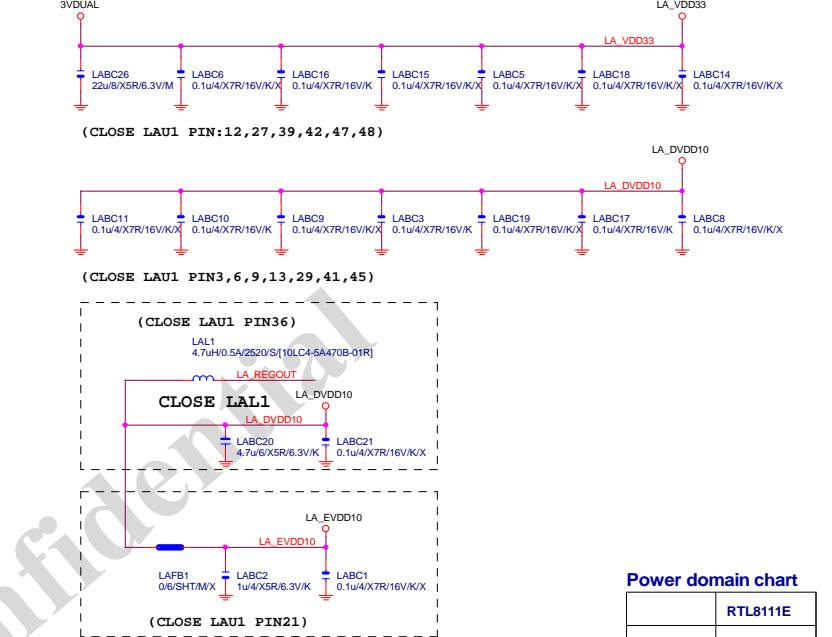
注意:LAN LED PROTECT:(CO-LAYOUT)
1.ESD(6PIN):AOZ8902CIL/SOT23-6(DEFAULT)
2.SURGE(5PIN):AZ2025-04S/SOT23-5L



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

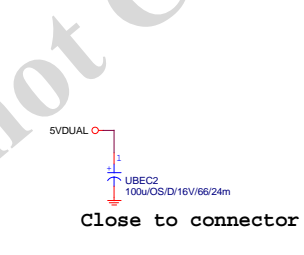
LAN POWER



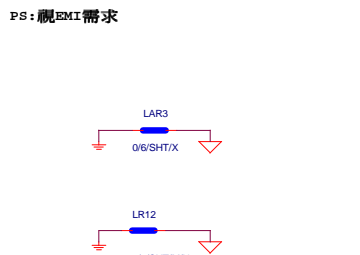
Power domain chart

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

USB X3 POWER

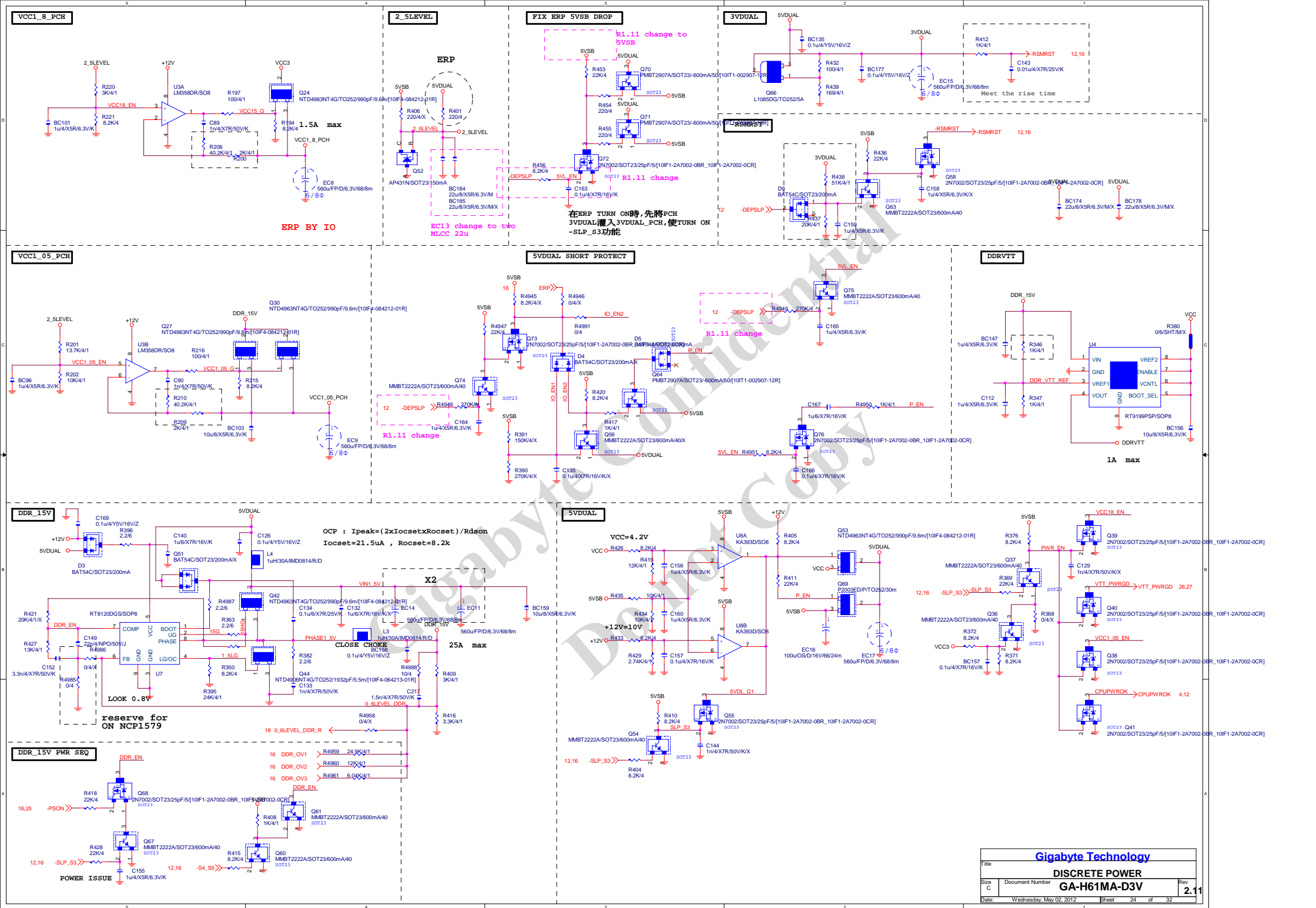


EMI SHORT PAD

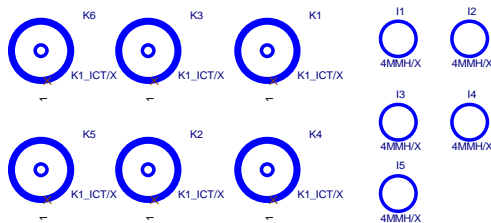
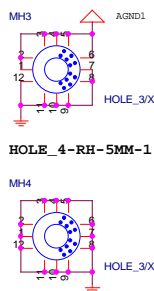
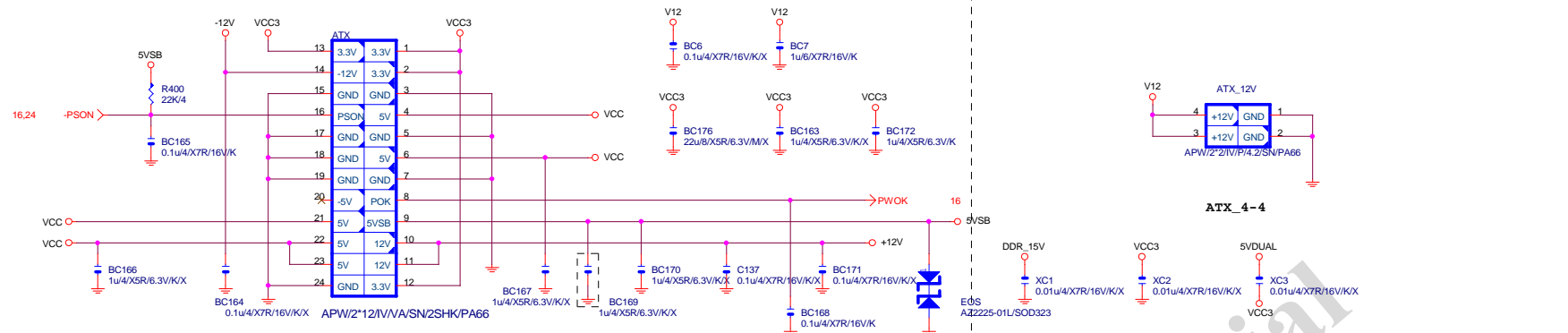


USB OC/FUSE PROTECT





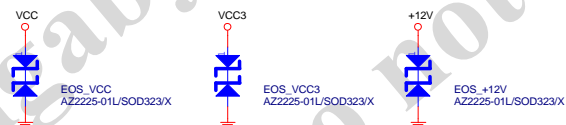
ATXX4 POWER CONNECTOR



To prevent the 5VSB
under loading when
boot

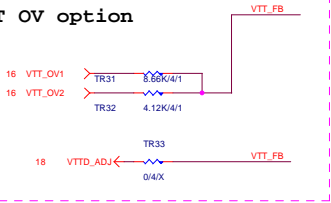
5VDUAL1(USB PORT/DDRIII POWER)
5VDUAL(3VDUAL/OTHER)

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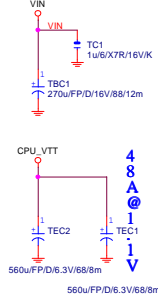
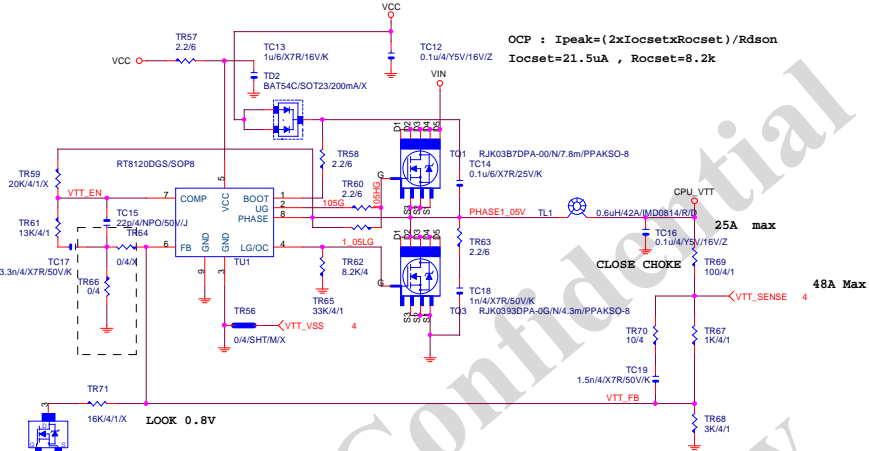


CPU_VTT

VTT OV option

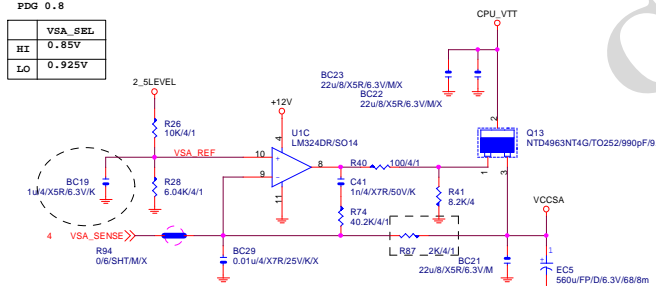


VTT_EN	
HI	ENABLE
LO	DISABLE

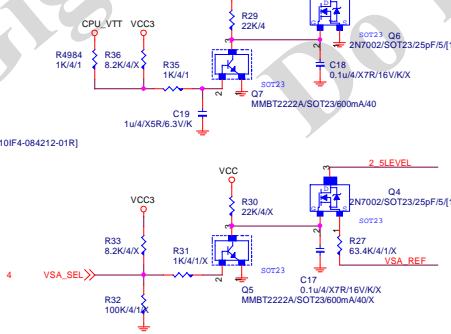


VCCSA

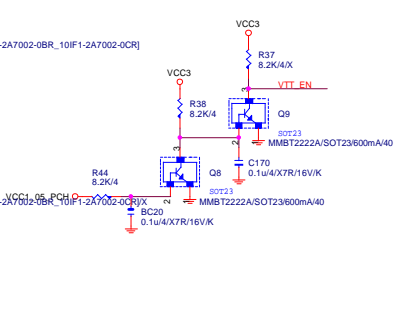
PDG 0.8	VSA_SEL
HI	0.85V
LO	0.925V



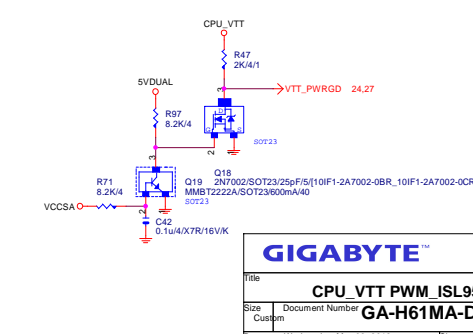
VCCSA PWR SEQ



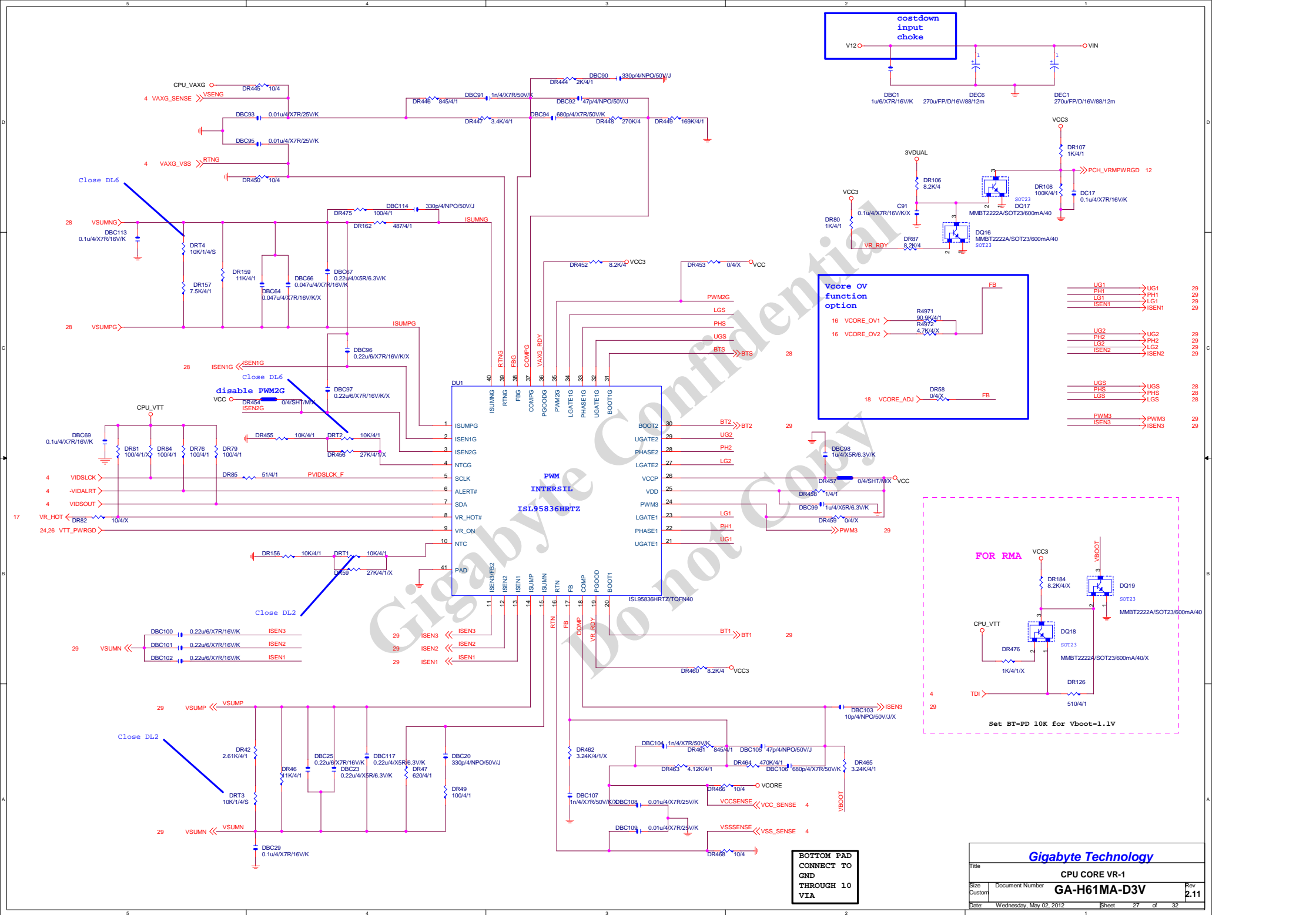
CPU_VTT PWR SEQ



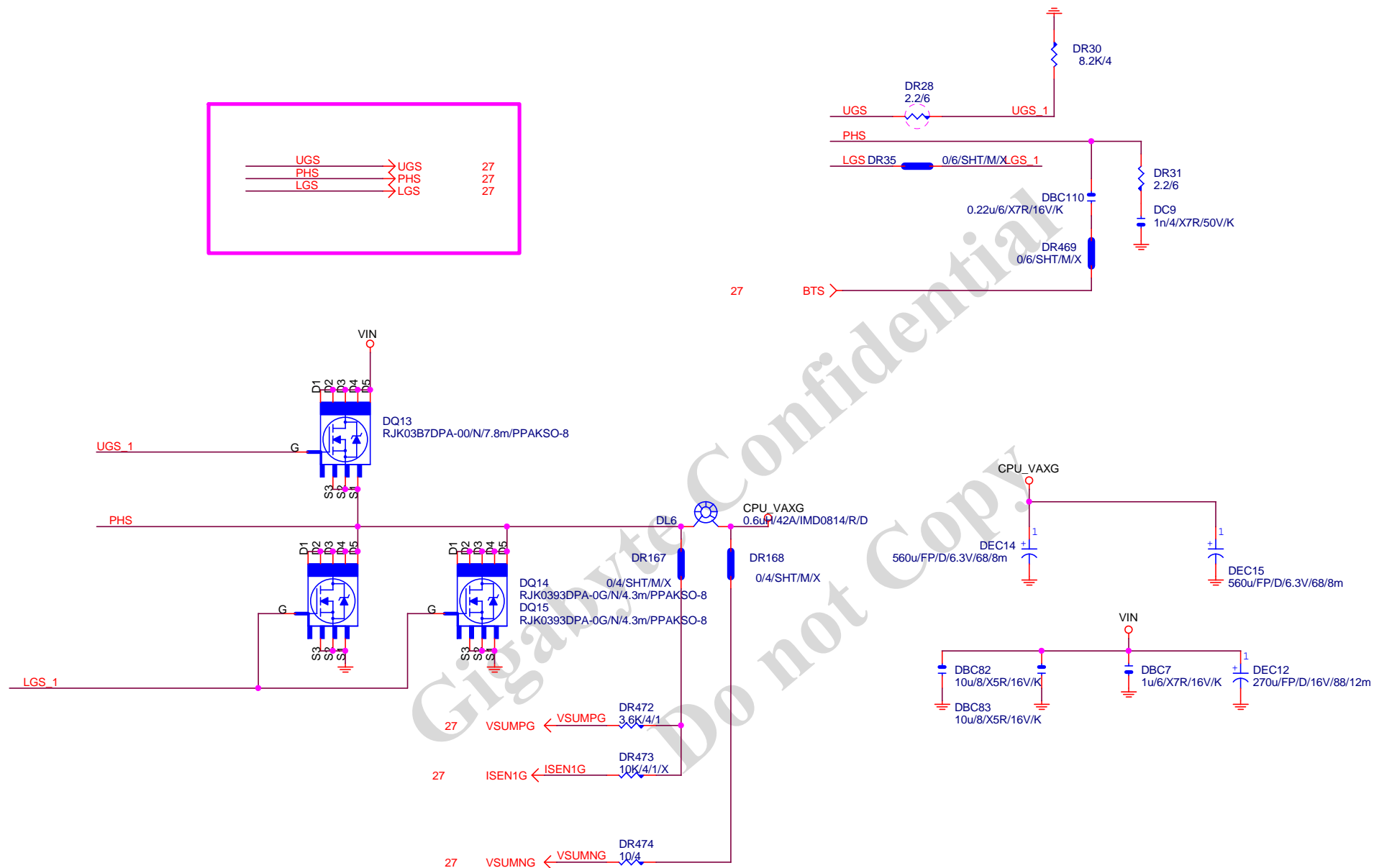
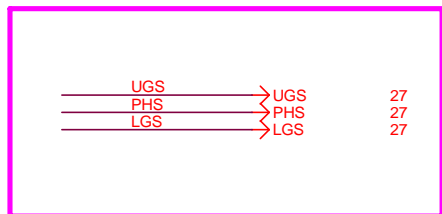
VTT_PWRGD

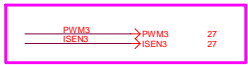


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Custom			
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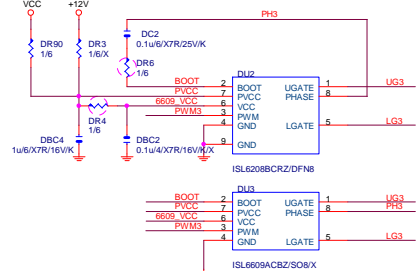


VAXG

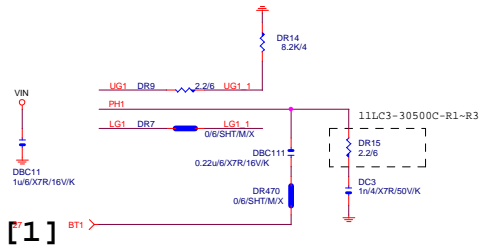
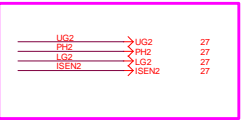




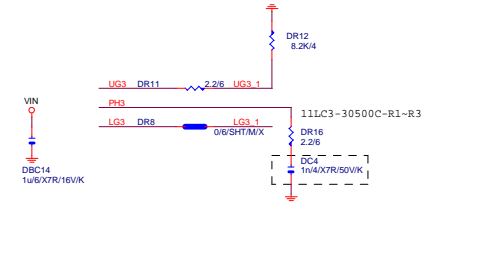
Pop 1S16425CB for PB1
(1S16425CBZ/S08)



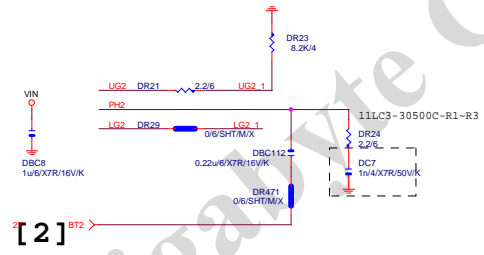
6609 colay with 6208



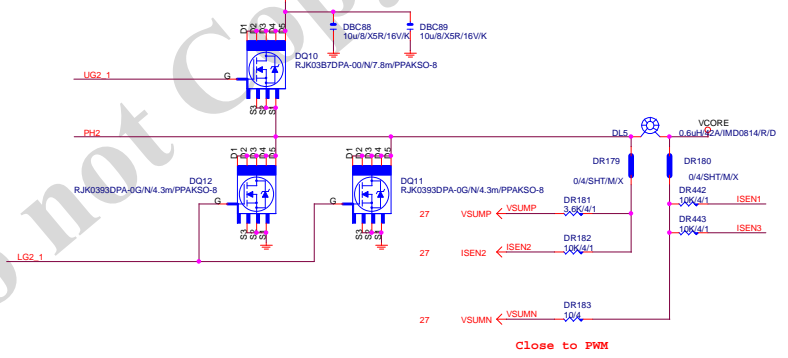
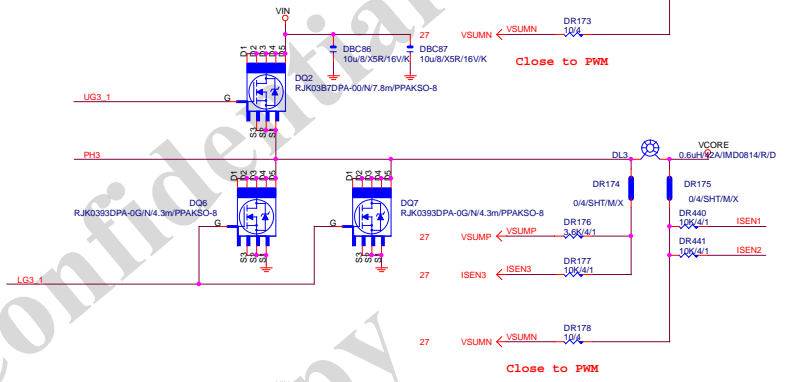
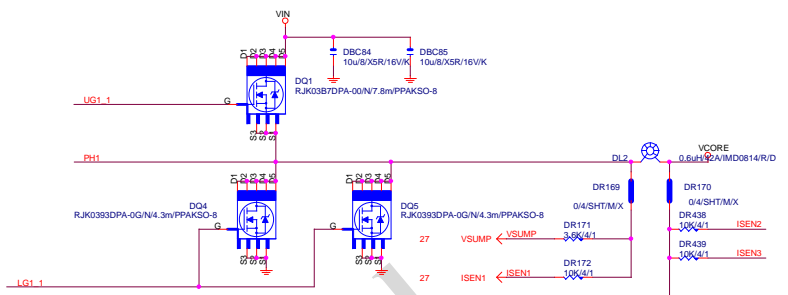
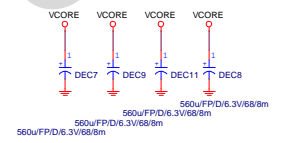
[1]



[3]



[2]



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