Model Name: ST4265-BI

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	PCI EXPRESS*16 SLOT
10	PCH_FDI,DMI,USB,PCIE
11	PCH_DP,CLK BUFFER
12	PCH_HOST,SATA,PCI
13	PCH_GPIO,CTRL,AUDIO
14	PCH_PWR,GND
15	PCH_HDMI,DVI,DP
16	PCI EXPRESS*4 SLOT
17	PCI & PCIEX1 SLOT
18	LAN_ RTL8111DP
19	ITE 8728 LPC IO
20	COM,LPT
21	BIOS, TPM
22	VCORE /VAXG PWM_ISL95836-1
23	VCORE /VAXG PWM_ISL95836-2
24	RT8120-DDR POWWER
25	RT8120-VTT POWER
26	DISCRET POWER1
27	DISCRET POWER2

SHEET	TITLE
28	ATX,RUSB,PROCHOT-
29	AUDIO CODEC
30	REAR AUDIO JACK
31	FP,FUSB,SPKR
32	HWM,KB/MS, FAN CTRL
33	M9172-GSATA3
34	USB2.0 Hub uPD720114
35	
36	

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Title	Cover Sheet	
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Model Name: ST4265-BI

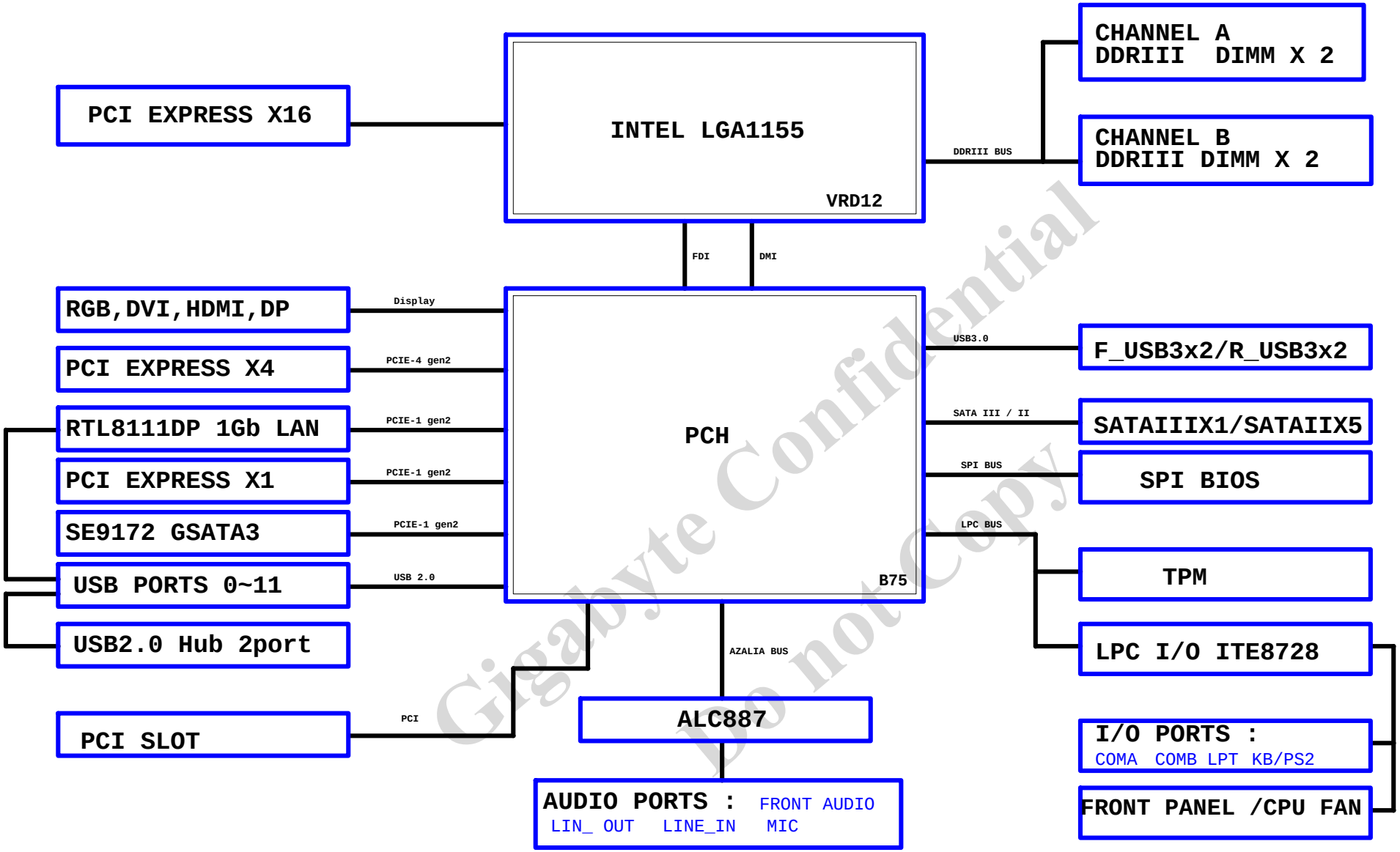
Component value change history

Data	Change Item	Reason
11/08	Follow Channel 12C bom ,ST4265 change to 1.2 PCB	Build 12C BOM

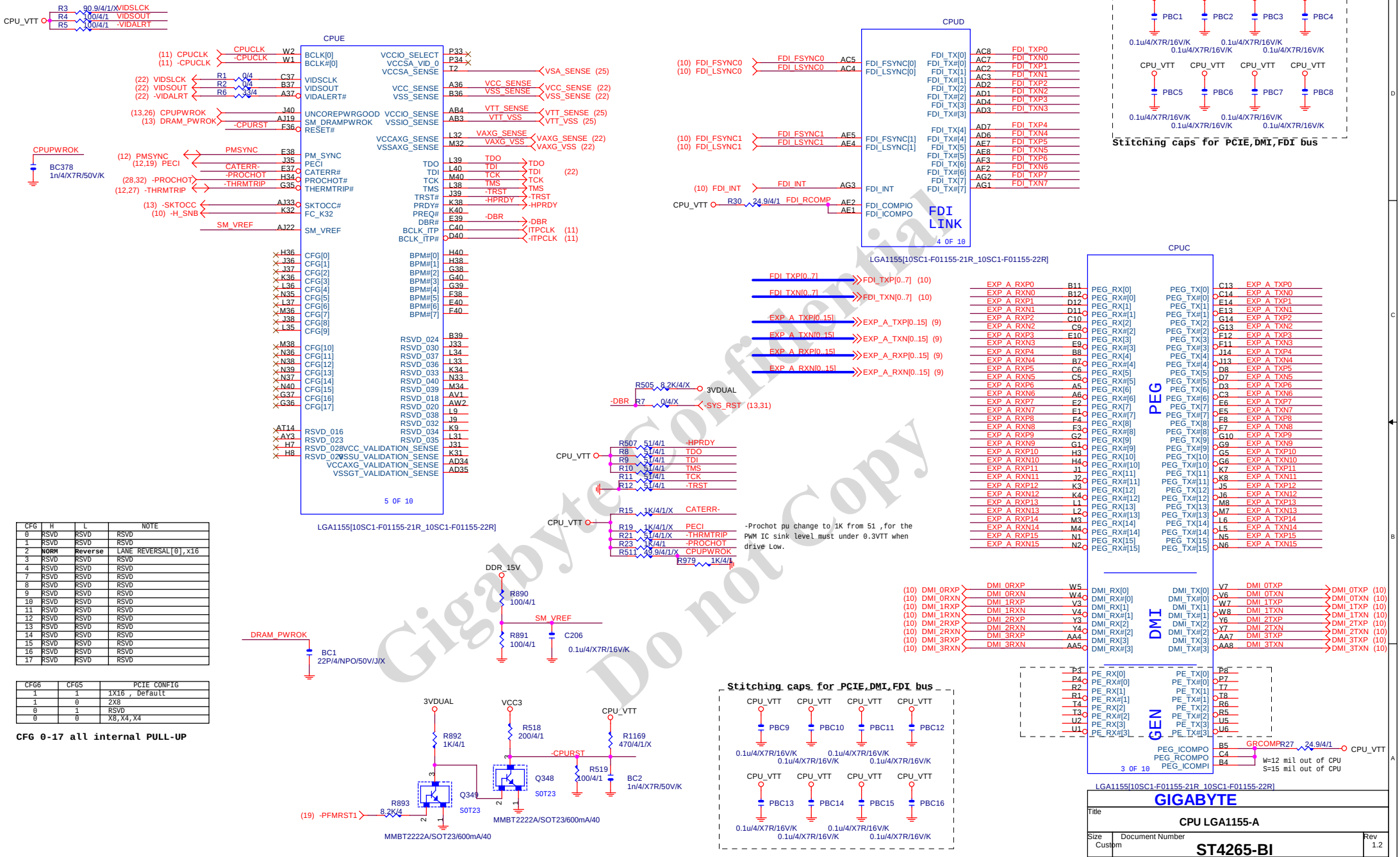
Circuit or PCB layout change

DATE	Change Item	Reason
02/20	Build 0.1 PCB	
03/14	Build 0.2 PCB	
04/05	Build 1.0 PCB	
11/08	Build 1.2 PCB	

BLOCK DIAGRAM



GIGABYTE		
Title: BLOCK DIAGRAM		
Size: C	Document Number: ST4265-BI	Rev: 1.2
Date: Monday, December 03, 2012	Sheet 3 of 34	



CFG	H	L	NOTE
0	RSVD	RSVD	RSVD
1	RSVD	RSVD	RSVD
2	**NORM**	**Reverse**	LANE REVERSAL[0],x16
3	RSVD	RSVD	RSVD
4	RSVD	RSVD	RSVD
7	RSVD	RSVD	RSVD
8	RSVD	RSVD	RSVD
9	RSVD	RSVD	RSVD
10	RSVD	RSVD	RSVD
11	RSVD	RSVD	RSVD
12	RSVD	RSVD	RSVD
13	RSVD	RSVD	RSVD
14	RSVD	RSVD	RSVD
15	RSVD	RSVD	RSVD
16	RSVD	RSVD	RSVD
17	RSVD	RSVD	RSVD

CFG6	CFG5	PCIE CONFIG
1	1	1X16 , Default
1	0	2X8
0	1	RSVD
0	0	X8,X4,X4

CFG 0-17 all internal PULL-UP

Title	CPU LGA1155-A
Size	Custom
Document Number	ST4265-BI
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Date:	Monday, December 03, 2012
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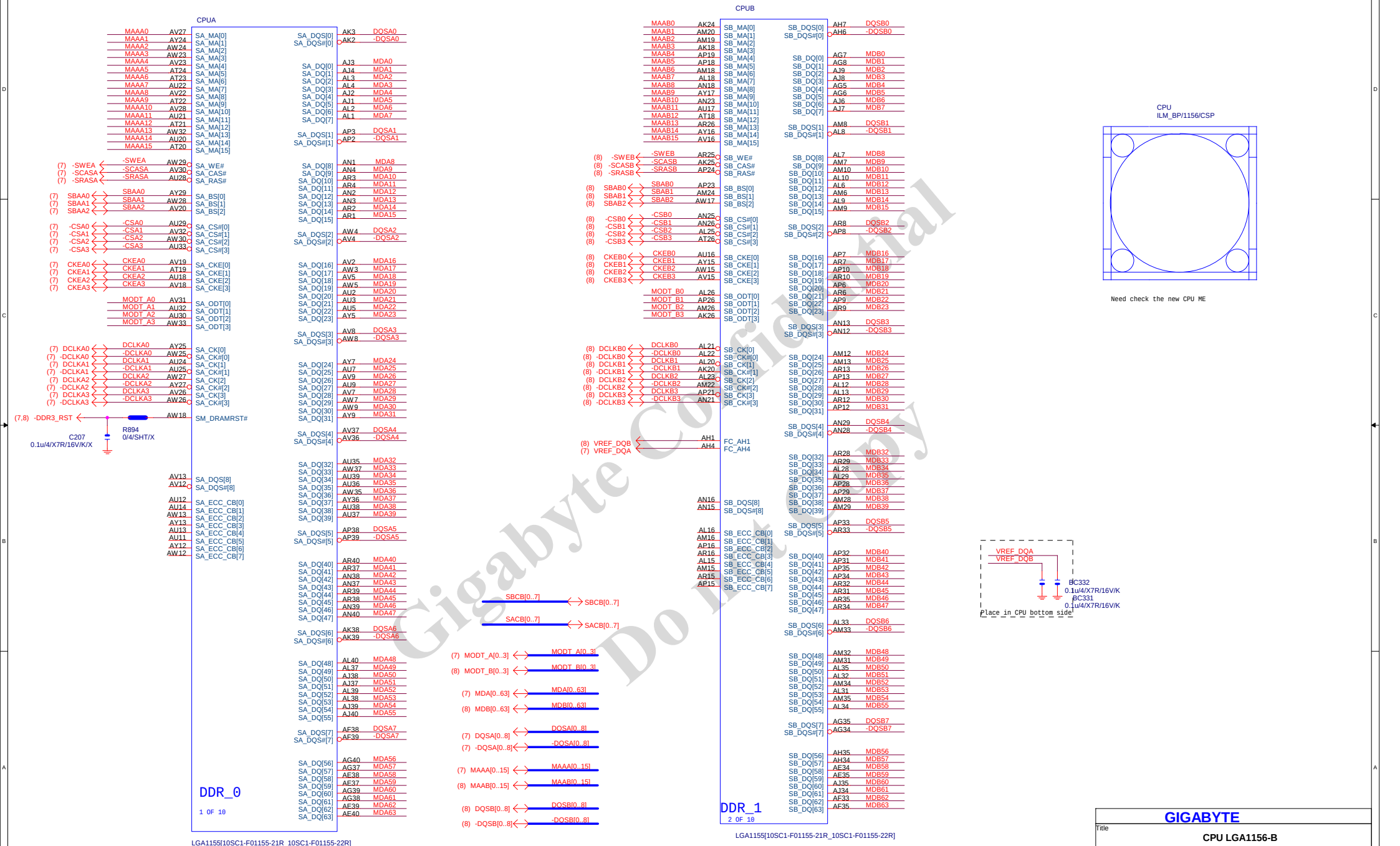

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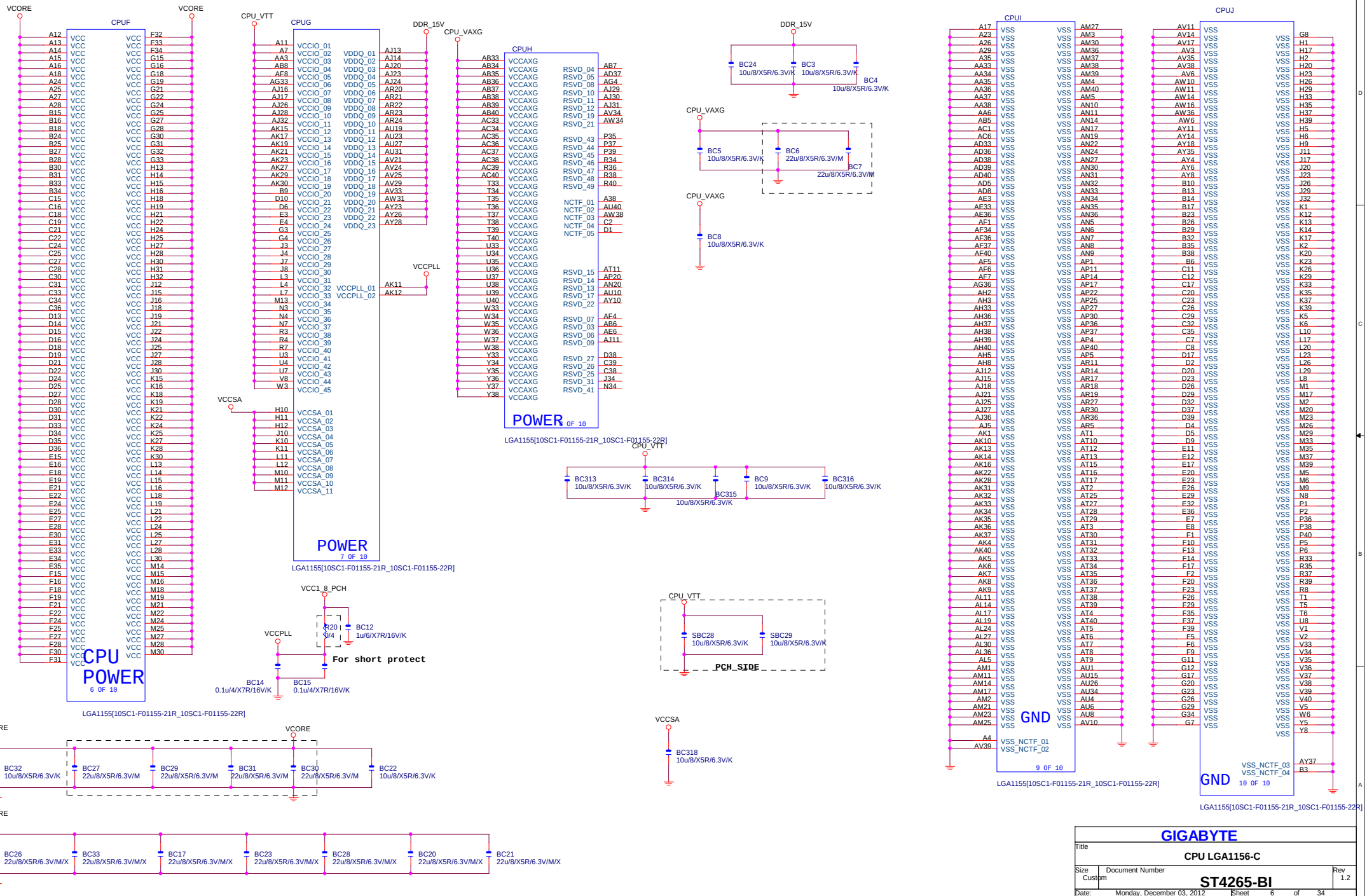
Title: CPU LGA1156-B			
Size: Custom	Document Number: ST4265-BI		Rev: 1.2
Date: Monday, December 03, 2012	Sheet 5 of 34		



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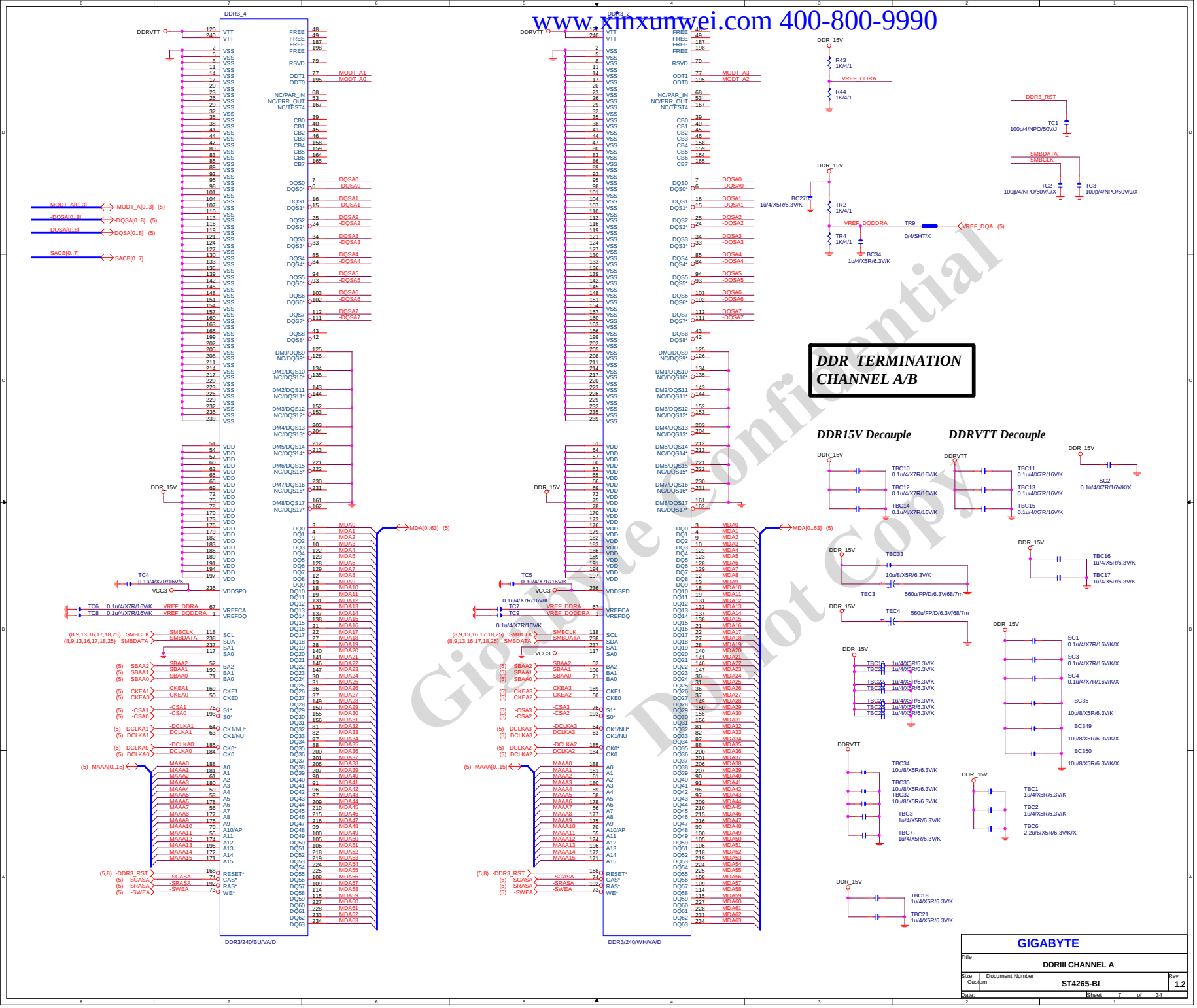
Title	CPU LGA1156-C		
Size: Custom	Document Number: ST4265-BI		Rev: 1.2
Date: Monday, December 03, 2012	Sheet 6 of 34		



DDR TERMINATION CHANNEL A/B

DDR15V Decouple

DDRVTT Decouple

Company	GIGABYTE
Title	DDRIII CHANNEL A
Size	Custom
Document Number	ST4265-BI
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Date:	
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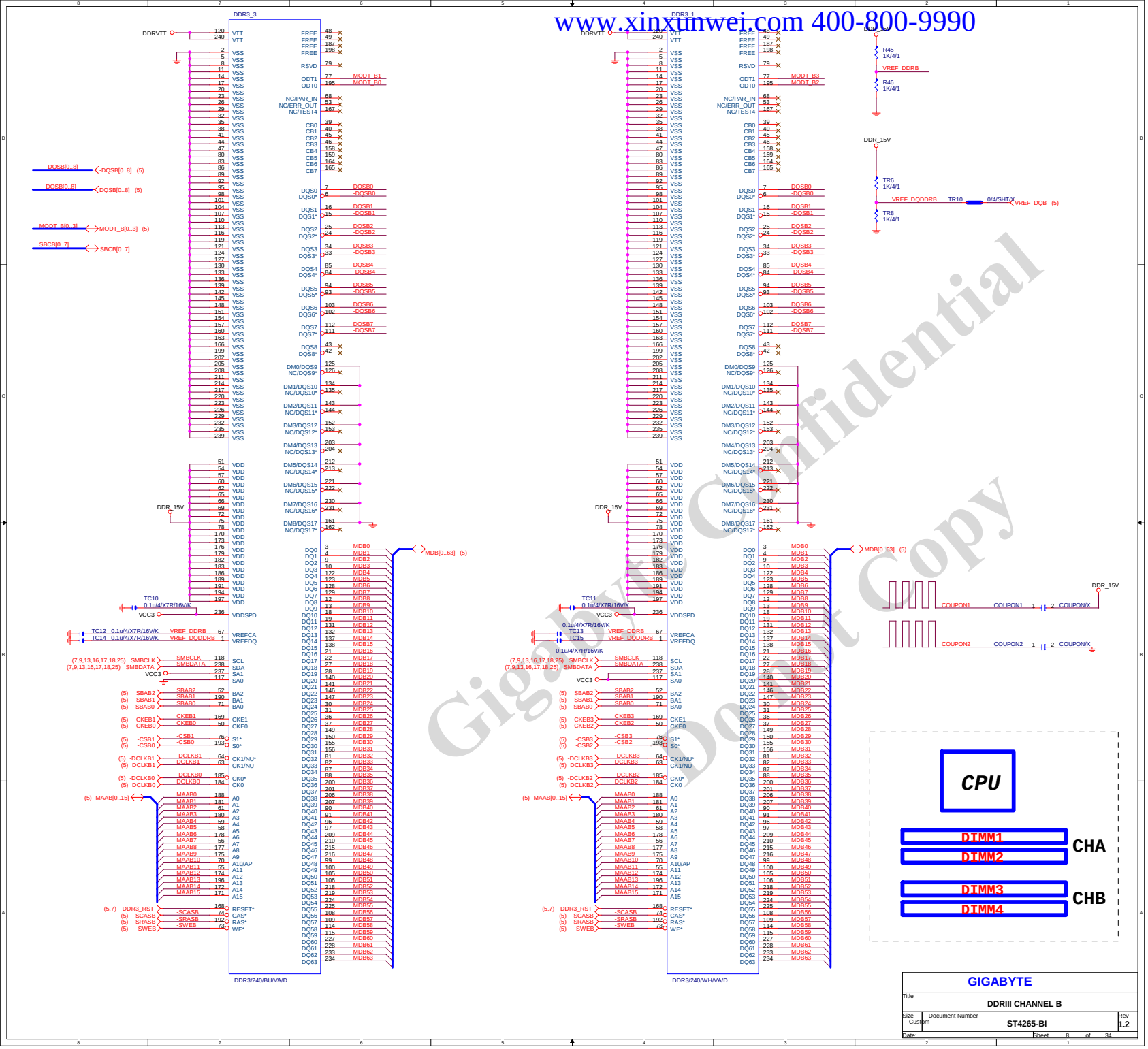

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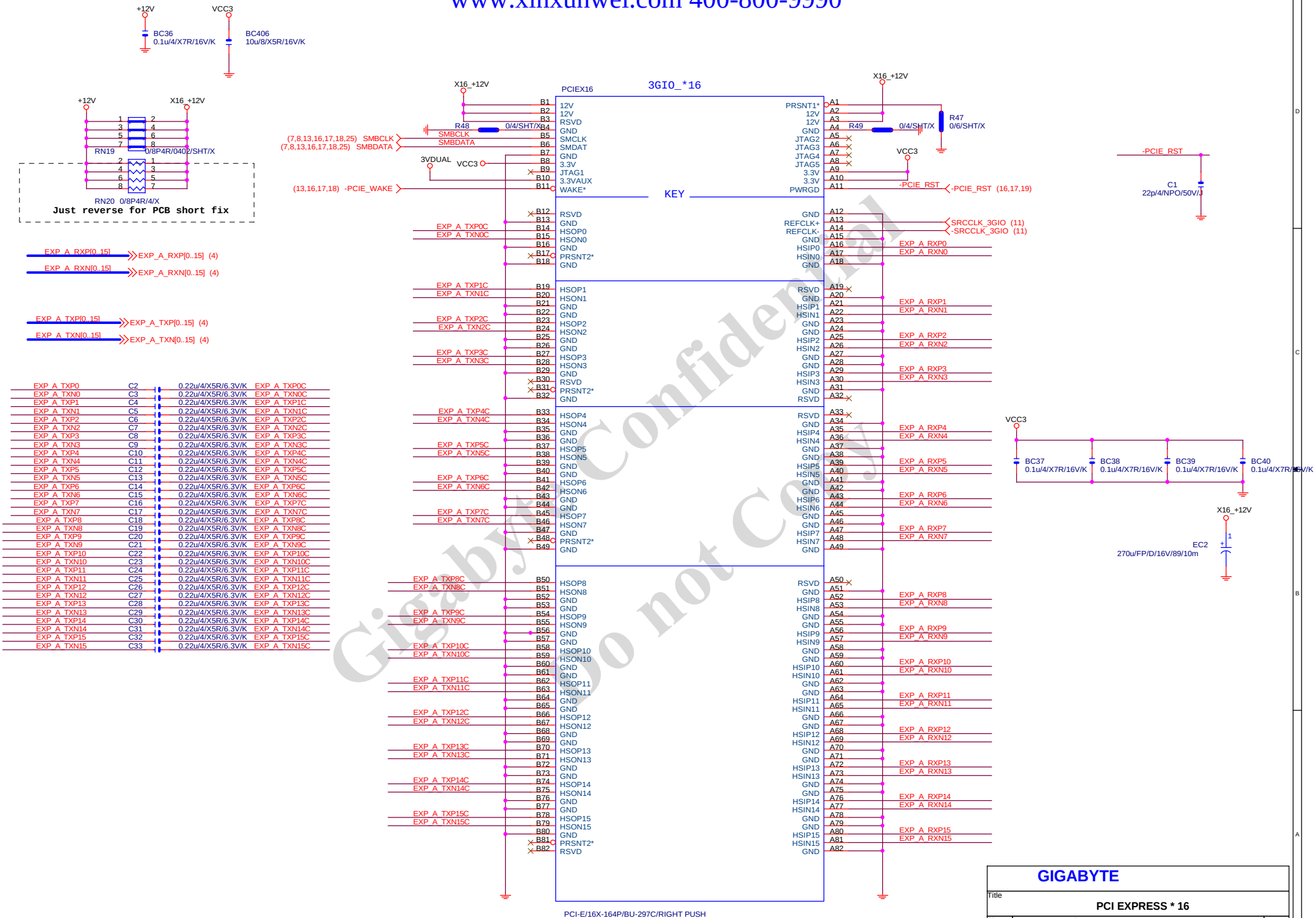
Title: DDRIII CHANNEL B

Size: Custom | Document Number: ST4265-BI | Rev: 1.2

Date: | Sheet 8 of 34



EXP_A_TXP0	C2	0.22u/4/X5R/6.3V/K	EXP_A_TXP0C
EXP_A_TXN0	C3	0.22u/4/X5R/6.3V/K	EXP_A_TXN0C
EXP_A_TXP1	C4	0.22u/4/X5R/6.3V/K	EXP_A_TXP1C
EXP_A_TXN1	C5	0.22u/4/X5R/6.3V/K	EXP_A_TXN1C
EXP_A_TXP2	C6	0.22u/4/X5R/6.3V/K	EXP_A_TXP2C
EXP_A_TXN2	C7	0.22u/4/X5R/6.3V/K	EXP_A_TXN2C
EXP_A_TXP3	C8	0.22u/4/X5R/6.3V/K	EXP_A_TXP3C
EXP_A_TXN3	C9	0.22u/4/X5R/6.3V/K	EXP_A_TXN3C
EXP_A_TXP4	C10	0.22u/4/X5R/6.3V/K	EXP_A_TXP4C
EXP_A_TXN4	C11	0.22u/4/X5R/6.3V/K	EXP_A_TXN4C
EXP_A_TXP5	C12	0.22u/4/X5R/6.3V/K	EXP_A_TXP5C
EXP_A_TXN5	C13	0.22u/4/X5R/6.3V/K	EXP_A_TXN5C
EXP_A_TXP6	C14	0.22u/4/X5R/6.3V/K	EXP_A_TXP6C
EXP_A_TXN6	C15	0.22u/4/X5R/6.3V/K	EXP_A_TXN6C
EXP_A_TXP7	C16	0.22u/4/X5R/6.3V/K	EXP_A_TXP7C
EXP_A_TXN7	C17	0.22u/4/X5R/6.3V/K	EXP_A_TXN7C
EXP_A_TXP8	C18	0.22u/4/X5R/6.3V/K	EXP_A_TXP8C
EXP_A_TXN8	C19	0.22u/4/X5R/6.3V/K	EXP_A_TXN8C
EXP_A_TXP9	C20	0.22u/4/X5R/6.3V/K	EXP_A_TXP9C
EXP_A_TXN9	C21	0.22u/4/X5R/6.3V/K	EXP_A_TXN9C
EXP_A_TXP10	C22	0.22u/4/X5R/6.3V/K	EXP_A_TXP10C
EXP_A_TXN10	C23	0.22u/4/X5R/6.3V/K	EXP_A_TXN10C
EXP_A_TXP11	C24	0.22u/4/X5R/6.3V/K	EXP_A_TXP11C
EXP_A_TXN11	C25	0.22u/4/X5R/6.3V/K	EXP_A_TXN11C
EXP_A_TXP12	C26	0.22u/4/X5R/6.3V/K	EXP_A_TXP12C
EXP_A_TXN12	C27	0.22u/4/X5R/6.3V/K	EXP_A_TXN12C
EXP_A_TXP13	C28	0.22u/4/X5R/6.3V/K	EXP_A_TXP13C
EXP_A_TXN13	C29	0.22u/4/X5R/6.3V/K	EXP_A_TXN13C
EXP_A_TXP14	C30	0.22u/4/X5R/6.3V/K	EXP_A_TXP14C
EXP_A_TXN14	C31	0.22u/4/X5R/6.3V/K	EXP_A_TXN14C
EXP_A_TXP15	C32	0.22u/4/X5R/6.3V/K	EXP_A_TXP15C
EXP_A_TXN15	C33	0.22u/4/X5R/6.3V/K	EXP_A_TXN15C

12V	B1	PRSNT1*	A1		
12V	B2	12V	A2		
RSVD	B3	12V	A3		
GND	B4	GND	A4		
SMCLK	B5	JTAG2	A5		
SMDAT	B6	JTAG3	A6		
GND	B7	JTAG4	A7		
3.3V	B8	JTAG5	A8		
JTAG1	B9	3.3V	A9		
3.3VAUX	B10	3.3V	A10		
WAKE*	B11	PWRGD	A11	-PCIE_RST	-PCIE_RST (16,17,19)
RSVD	B12	GND	A12		
GND	B13	REFCLK+	A13	SRCCLK_3GIO (11)	
HSOP0	B14	REFCLK-	A14	-SRCCLK_3GIO (11)	
HSON0	B15	GND	A15		
GND	B16	HSIP0	A16	EXP_A_RXP0	
PRSNT2*	B17	HSIN0	A17	EXP_A_RXN0	
GND	B18	GND	A18		
HSOP1	B19	RSVD	A19		
HSON1	B20	GND	A20		
GND	B21	HSIP1	A21	EXP_A_RXP1	
GND	B22	HSIN1	A22	EXP_A_RXN1	
HSOP2	B23	GND	A23		
HSON2	B24	GND	A24		
GND	B25	HSIP2	A25	EXP_A_RXP2	
GND	B26	HSIN2	A26	EXP_A_RXN2	
HSOP3	B27	GND	A27		
HSON3	B28	GND	A28		
GND	B29	HSIP3	A29	EXP_A_RXP3	
RSVD	B30	HSIN3	A30	EXP_A_RXN3	
PRSNT2*	B31	GND	A31		
GND	B32	RSVD	A32		
HSOP4	B33	RSVD	A33		
HSON4	B34	GND	A34		
GND	B35	HSIP4	A35	EXP_A_RXP4	
GND	B36	HSIN4	A36	EXP_A_RXN4	
HSOP5	B37	GND	A37		
HSON5	B38	GND	A38		
GND	B39	HSIP5	A39	EXP_A_RXP5	
GND	B40	HSIN5	A40	EXP_A_RXN5	
HSOP6	B41	GND	A41		
HSON6	B42	GND	A42		
GND	B43	HSIP6	A43	EXP_A_RXP6	
GND	B44	HSIN6	A44	EXP_A_RXN6	
HSOP7	B45	GND	A45		
HSON7	B46	GND	A46		
GND	B47	HSIP7	A47	EXP_A_RXP7	
PRSNT2*	B48	HSIN7	A48	EXP_A_RXN7	
GND	B49	GND	A49		
HSOP8	B50	RSVD	A50		
HSON8	B51	GND	A51		
GND	B52	HSIP8	A52	EXP_A_RXP8	
GND	B53	HSIN8	A53	EXP_A_RXN8	
HSOP9	B54	GND	A54		
HSON9	B55	GND	A55		
GND	B56	HSIP9	A56	EXP_A_RXP9	
GND	B57	HSIN9	A57	EXP_A_RXN9	
HSOP10	B58	GND	A58		
HSON10	B59	GND	A59		
GND	B60	HSIP10	A60	EXP_A_RXP10	
GND	B61	HSIN10	A61	EXP_A_RXN10	
HSOP11	B62	GND	A62		
HSON11	B63	GND	A63		
GND	B64	HSIP11	A64	EXP_A_RXP11	
GND	B65	HSIN11	A65	EXP_A_RXN11	
HSOP12	B66	GND	A66		
HSON12	B67	GND	A67		
GND	B68	HSIP12	A68	EXP_A_RXP12	
GND	B69	HSIN12	A69	EXP_A_RXN12	
HSOP13	B70	GND	A70		
HSON13	B71	GND	A71		
GND	B72	HSIP13	A72	EXP_A_RXP13	
GND	B73	HSIN13	A73	EXP_A_RXN13	
HSOP14	B74	GND	A74		
HSON14	B75	GND	A75		
GND	B76	HSIP14	A76	EXP_A_RXP14	
GND	B77	HSIN14	A77	EXP_A_RXN14	
HSOP15	B78	GND	A78		
HSON15	B79	GND	A79		
GND	B80	HSIP15	A80	EXP_A_RXP15	
PRSNT2*	B81	HSIN15	A81	EXP_A_RXN15	
RSVD	B82	GND	A82		

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Title	PCI EXPRESS * 16		
Size: Custom	Document Number: ST4265-BI		Rev: 1.2
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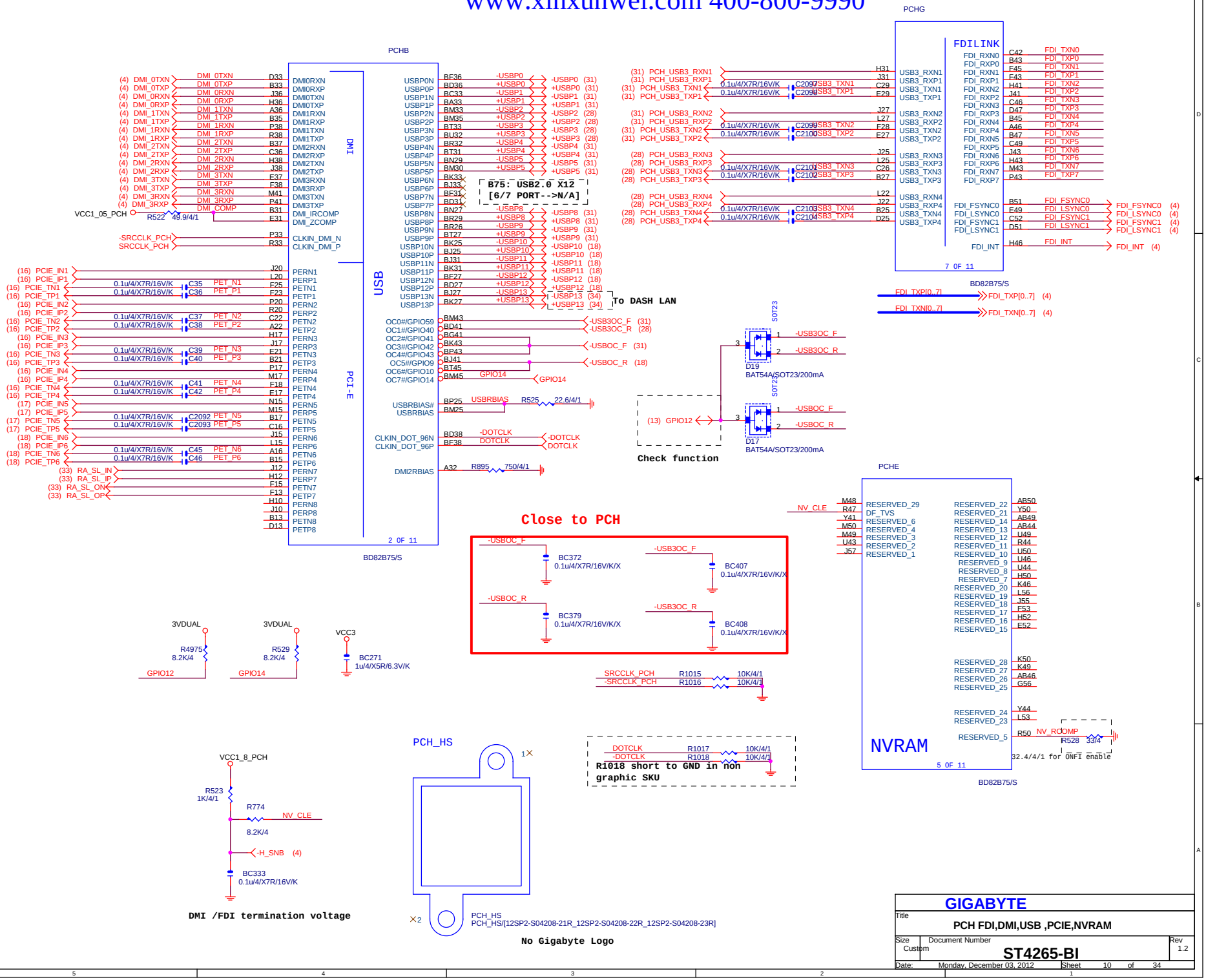

GIGABYTE			
Title	PCH FDI,DMI,USB ,PCIE,NVRAM		
Size	Document Number		Rev
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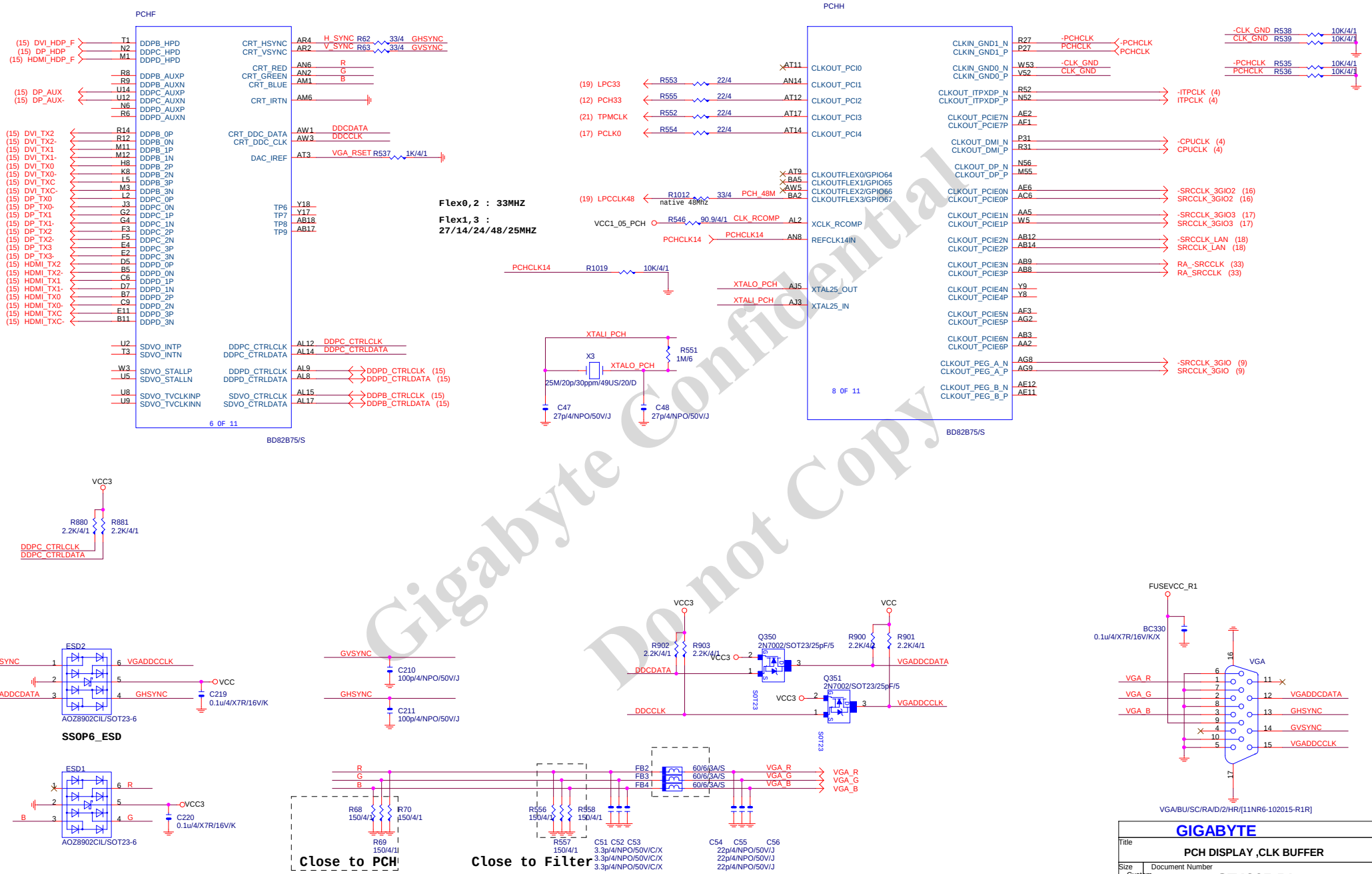
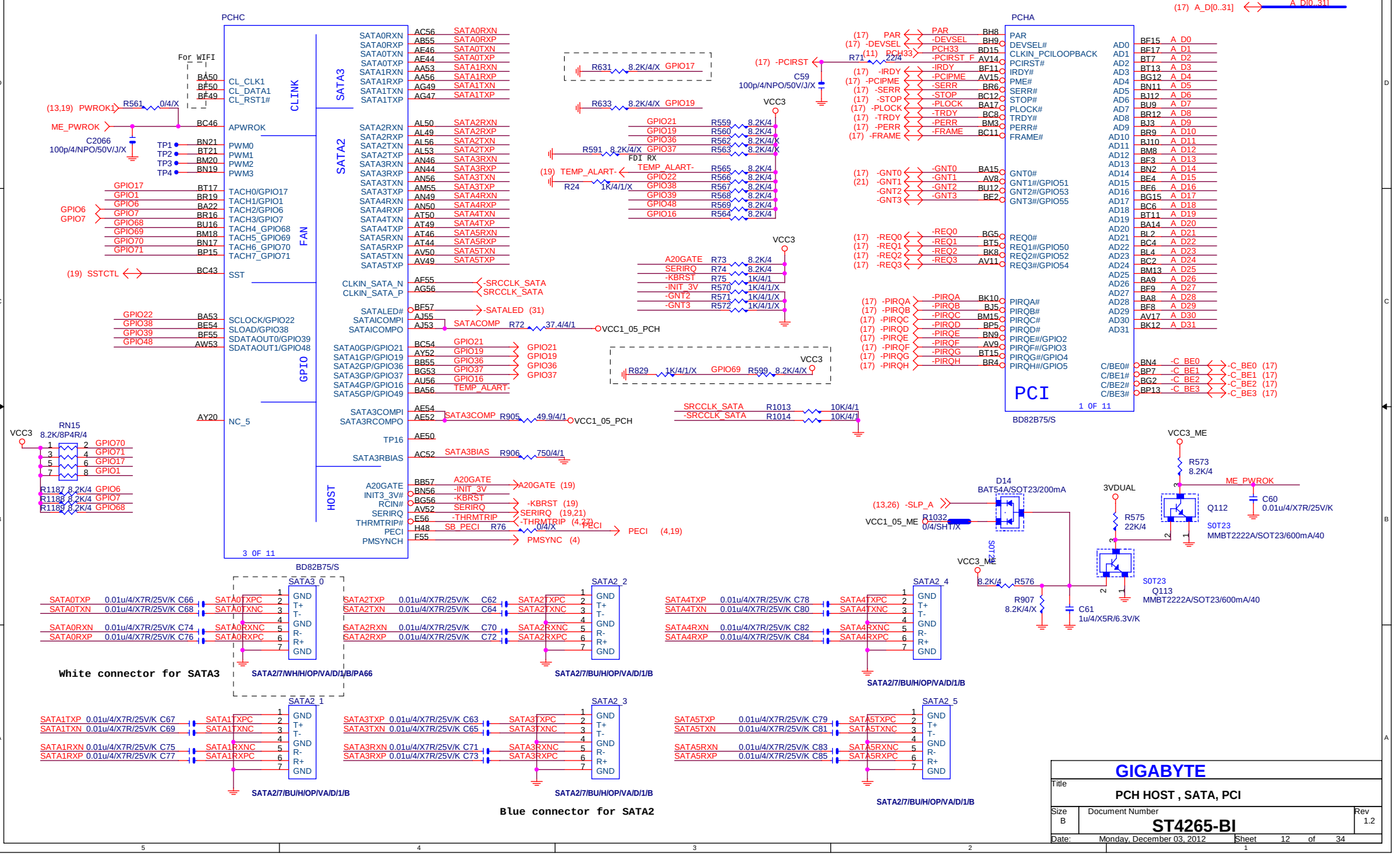


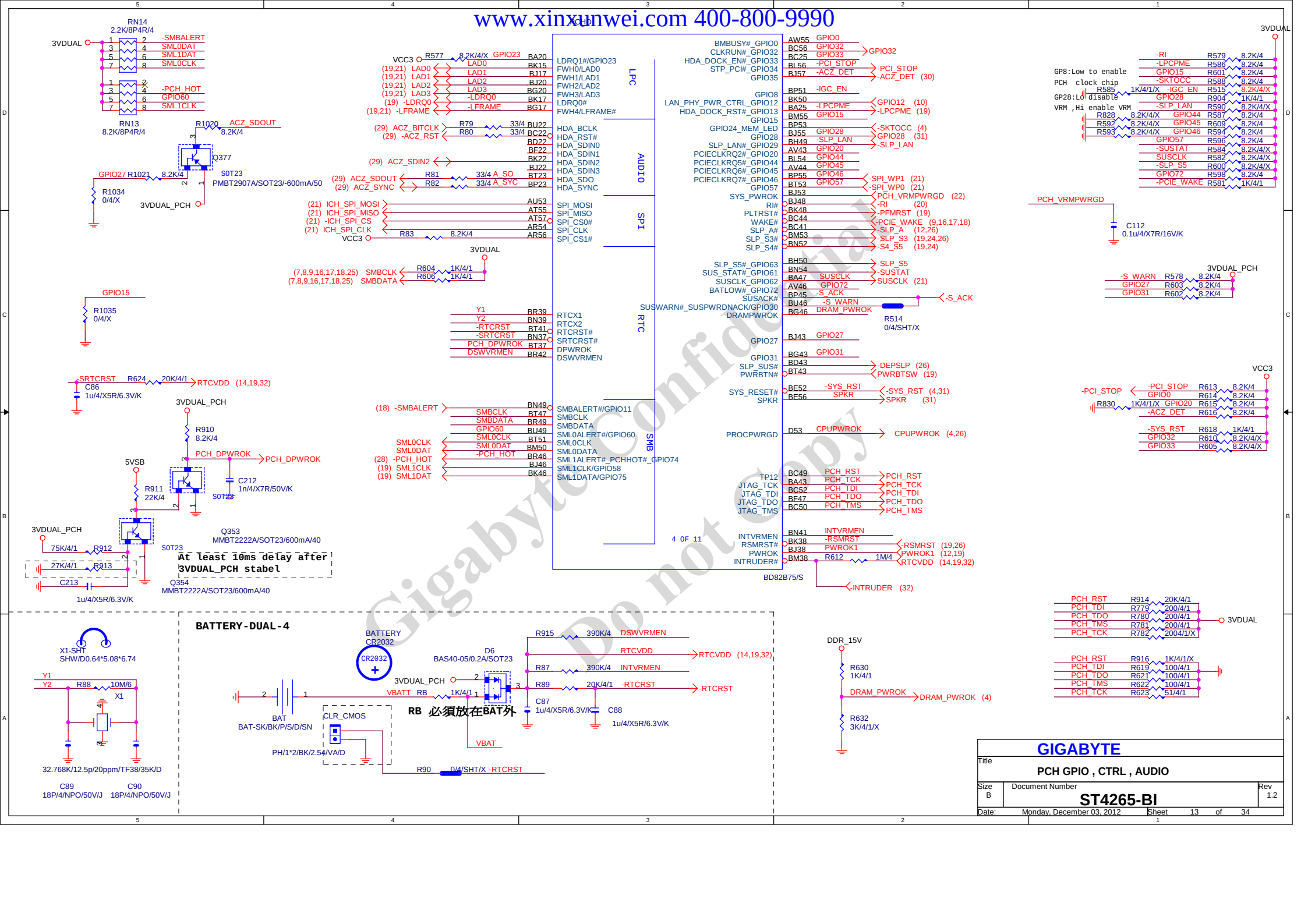
GIGABYTE

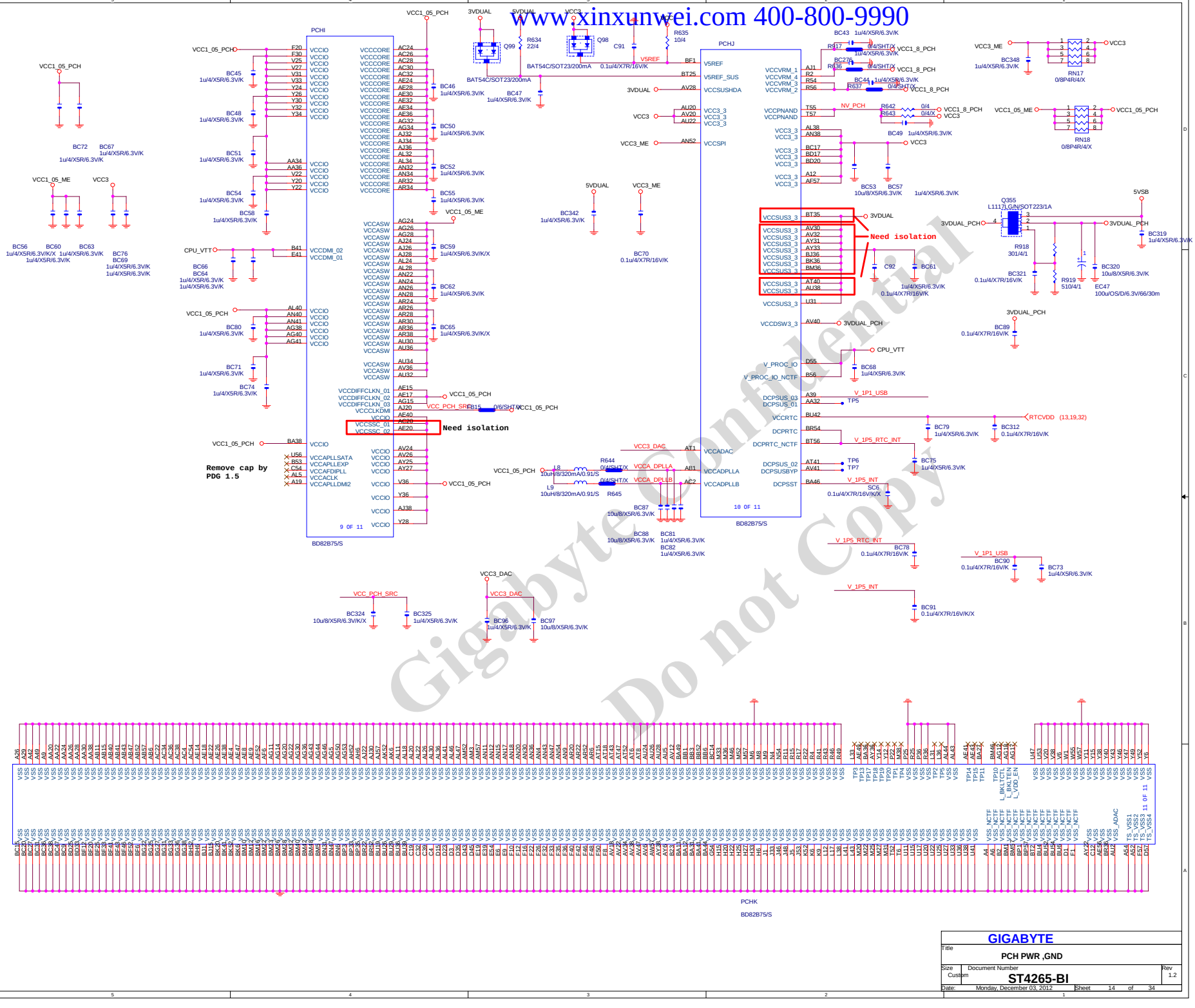
Title: PCH DISPLAY ,CLK BUFFER

Size: Custom | Document Number: ST4265-BI | Rev: 1.2

Date: Monday, December 03, 2012 | Sheet 11 of 34







Title	PCH PWR ,GND
Size	Custom
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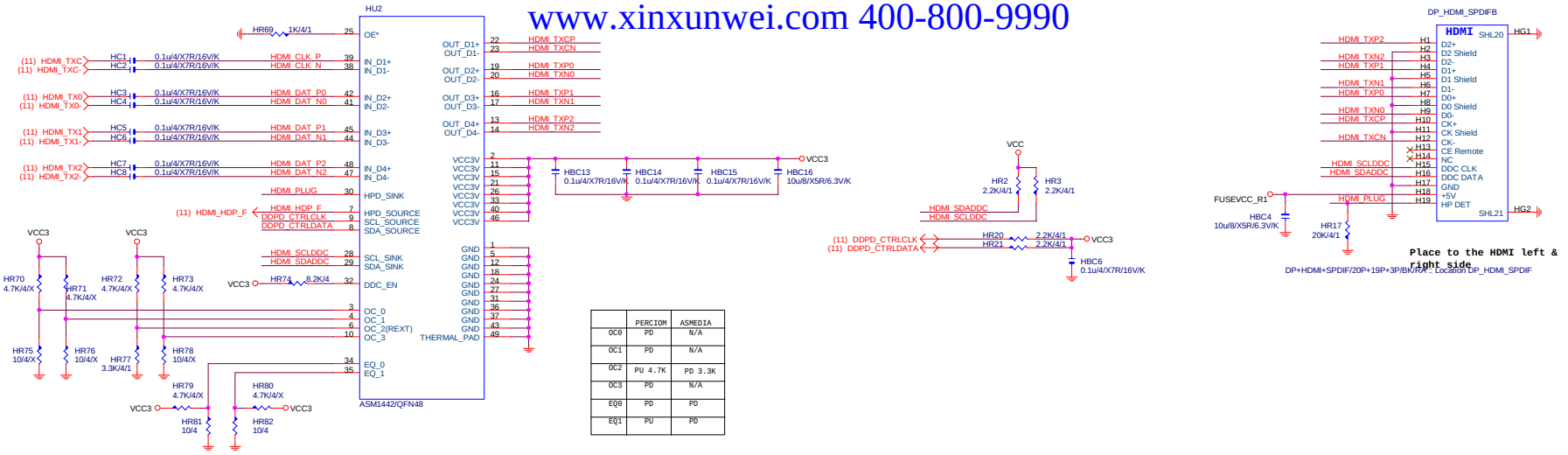
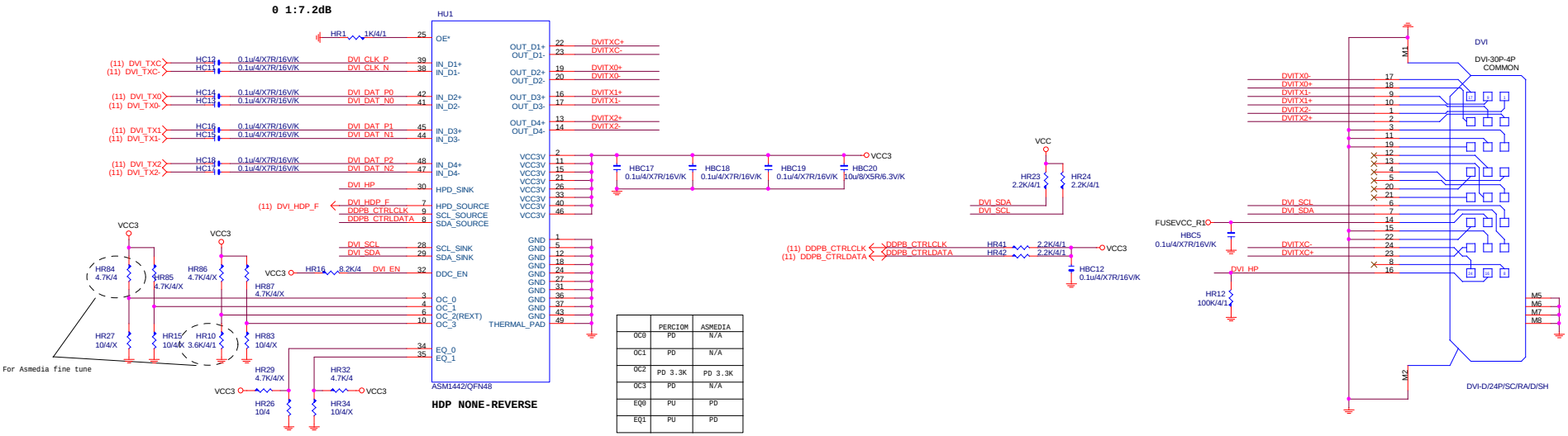
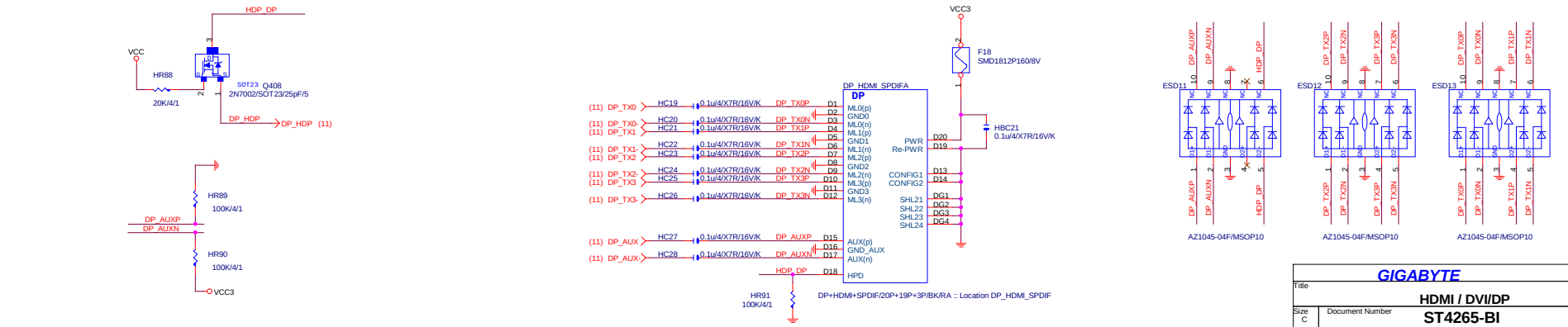


	PERCIOM	ASMEDIA
OC0	PD	N/A
OC1	PD	N/A
OC2	PU 4.7K	PD 3.3K
OC3	PD	N/A
EQ0	PD	PD
EQ1	PU	PD



	PERCIOM	ASMEDIA
OC0	PD	N/A
OC1	PD	N/A
OC2	PD 3.3K	PD 3.3K
OC3	PD	N/A
EQ0	PU	PD
EQ1	PU	PD



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Title	HDMI / DVI/DP	
Size C	Document Number ST4265-BI	Rev 1.2
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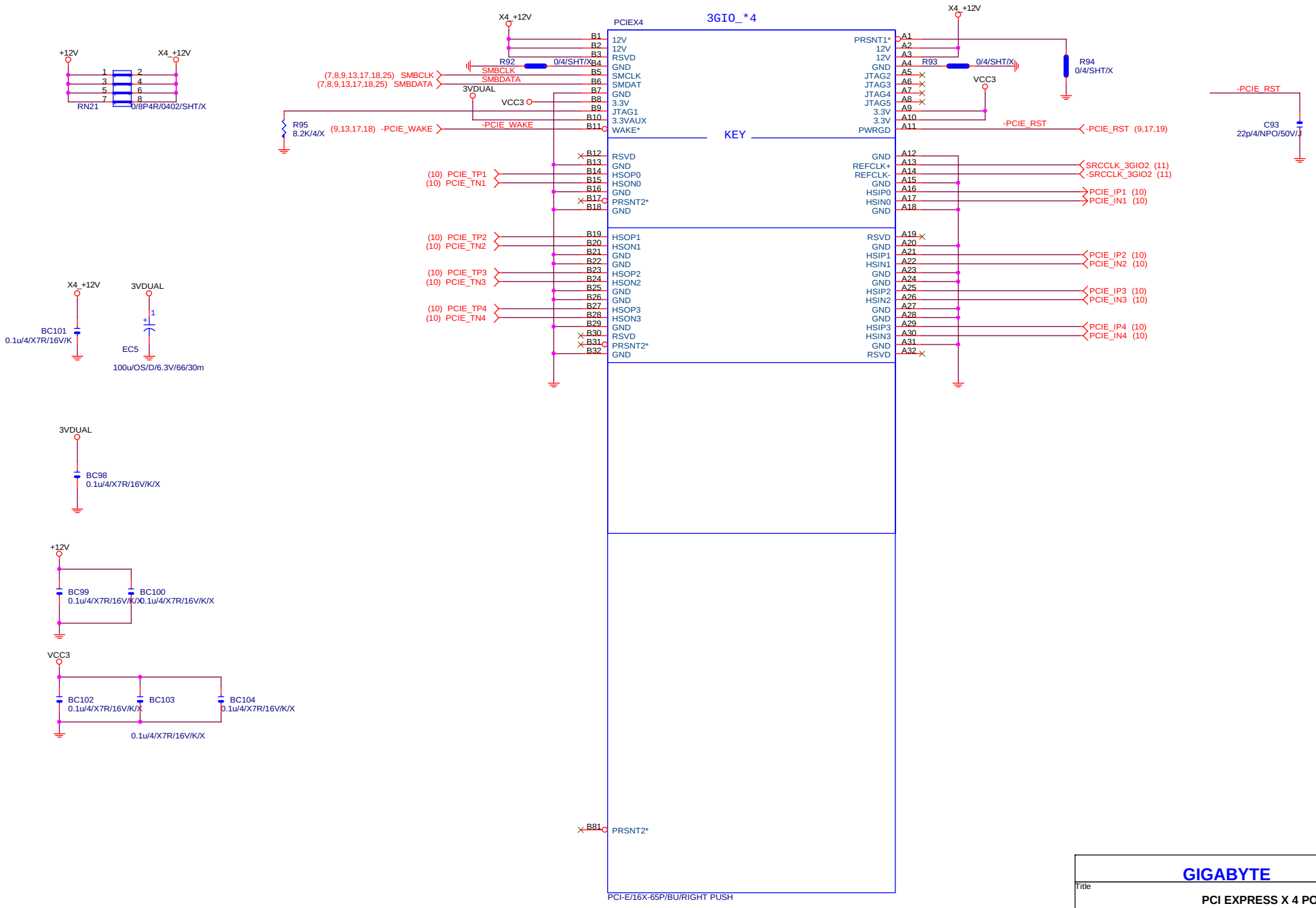

	GIGABYTE	
Title	PCI EXPRESS X 4 PORT	
Size: Custom	Document Number: ST4265-BI	Rev: 1.2
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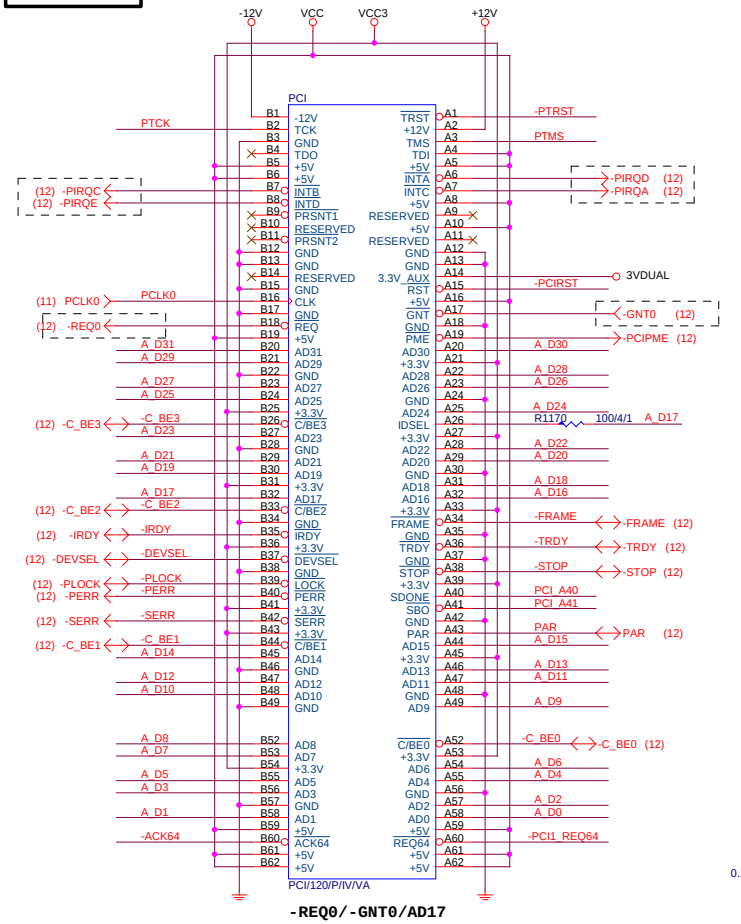
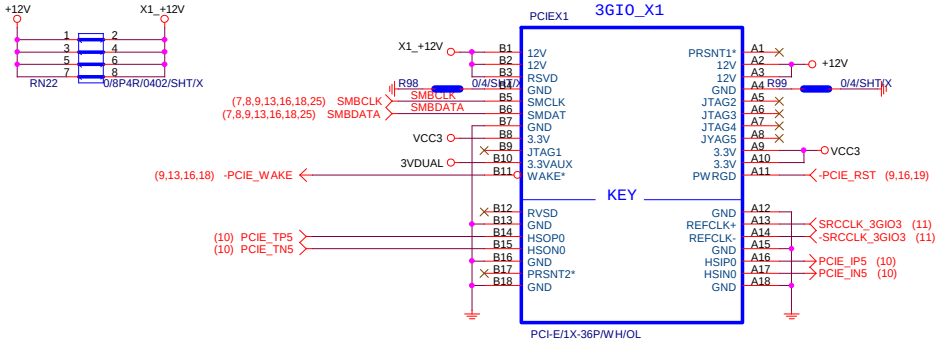
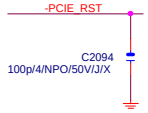
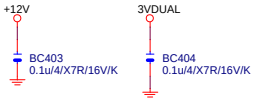
PCI SLOT

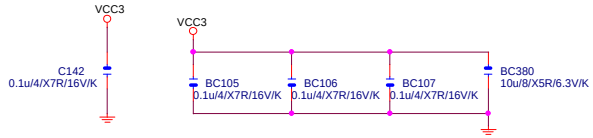


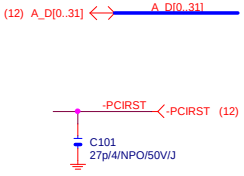
PCIE*1

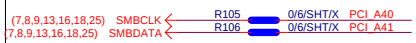


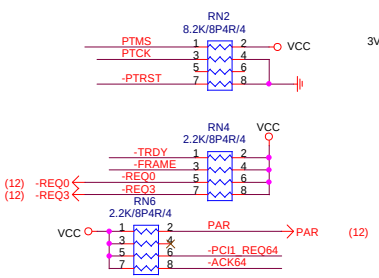


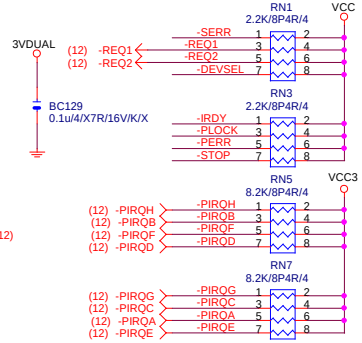


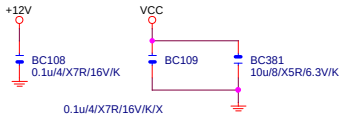












GIGABYTE

Title	PCIEX1,PCI SLOT	
Size: Custom	Document Number: ST4265-BI	Rev: 1.2
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PCIE-1G LAN

ENABLE SW

LAU1 RTL8111DP-VC-CG/QFN64[10HP2-408111-D0R]

LAU2 8M/SPI/SO8/200mil/S

To_PCH_USB2.0

離IC近越好

PCIE 80歐姆:[15/5/5/5/15]

SRCCLK 50歐姆:[18/4/10/4/18]

(PIN2,59)

(PIN16,37,46,53)

(PIN8)

(PIN5)

(PIN8,11,14)

(PIN58)

(PIN15,21,32,38,49,52)

USB_LAN CONNECTOR

100歐姆:[20/4/8/4/20]

USB_LAN

UP

DOWN

USB+LAN/1G/GO,Y/OS/RA/D/1

For USB signal GND reference

90歐姆:[15/4.5/7.5/4.5/15]

Dual Color LED

D4 D3 Green

D4 D3 Orange

Single Color LED

D2 D1 Yellow

P35-152-19W9

YELLOW ORANGE GREEN

240MILS

AOZ8902CIL/SOT23-6

Title	REALTEK RTL8111E_1
Size	Custom
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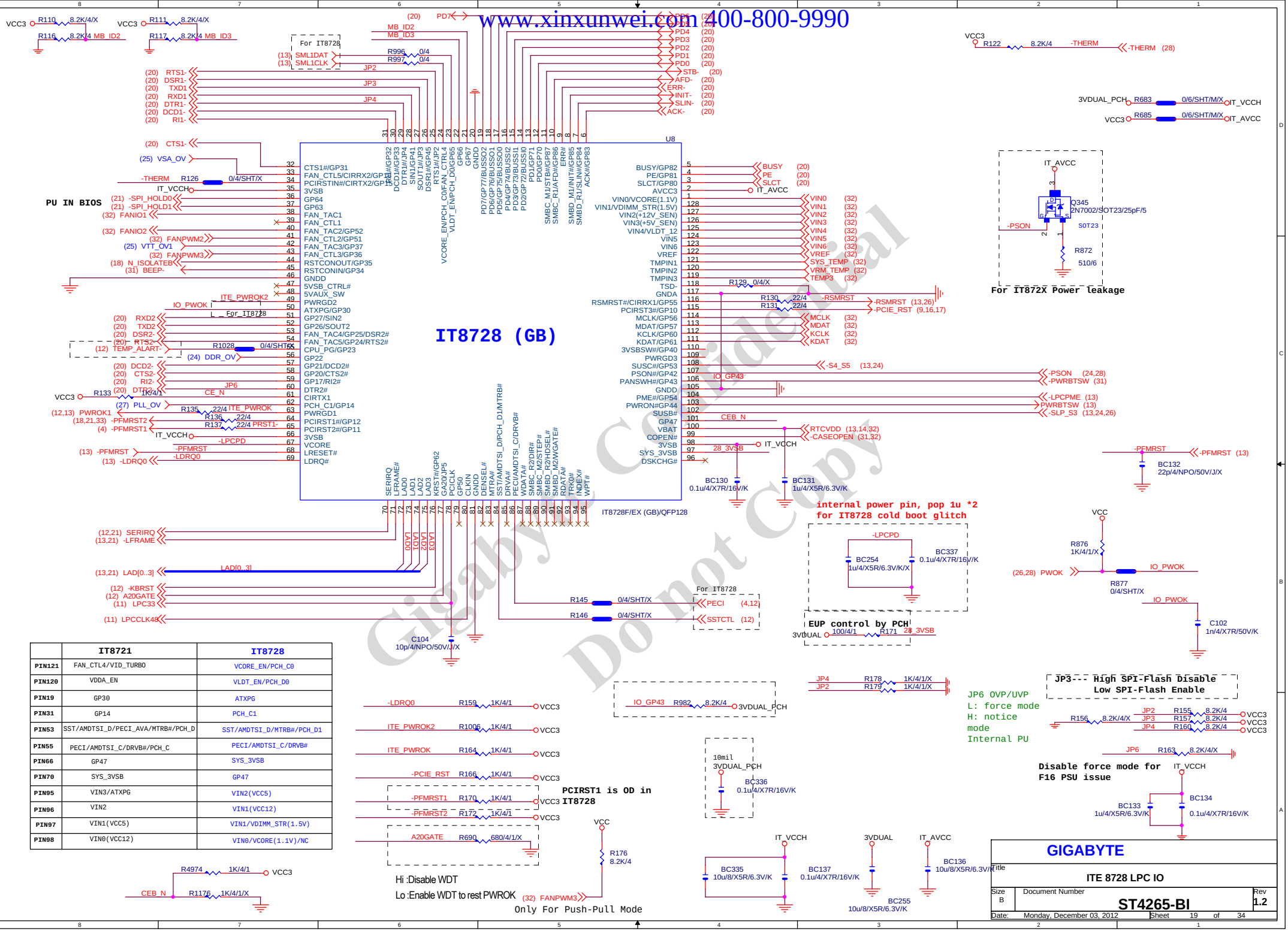

	IT8721	IT8728
PIN121	FAN_CTL4/VID_TURBO	VCORE_EN/PCH_C0
PIN120	VDDA_EN	VLDT_EN/PCH_D0
PIN19	GP30	ATXPG
PIN31	GP14	PCH_C1
PIN53	SST/AMDTSI_D/PECI_AVA/MTRB#/PCH_D	SST/AMDTSI_D/MTRB#/PCH_D1
PIN55	PECI/AMDTSI_C/DRVB#/PCH_C	PECI/AMDTSI_C/DRVB#
PIN66	GP47	SYS_3VSB
PIN70	SYS_3VSB	GP47
PIN95	VIN3/ATXPG	VIN2(VCC5)
PIN96	VIN2	VIN1(VCC12)
PIN97	VIN1(VCC5)	VIN1/VDIMM_STR(1.5V)
PIN98	VIN0(VCC12)	VIN0/VCORE(1.1V)/NC

Title	ITE 8728 LPC IO
Size	B
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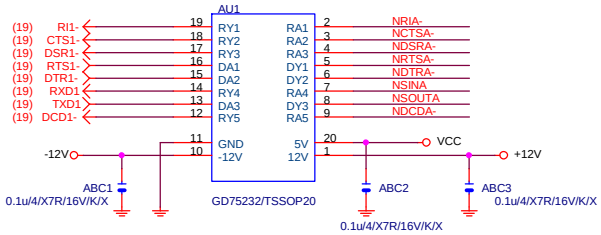
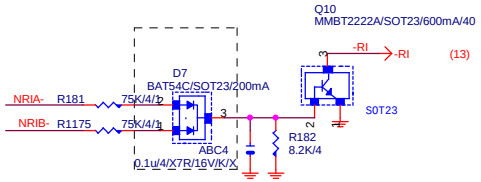
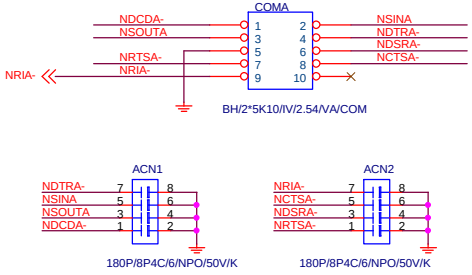
GIGABYTE

COMA

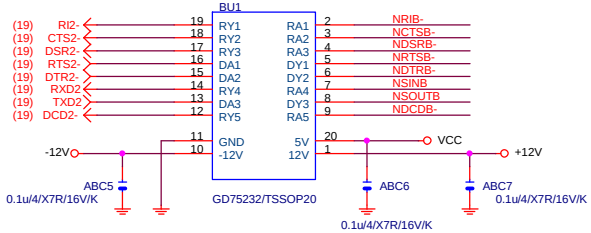


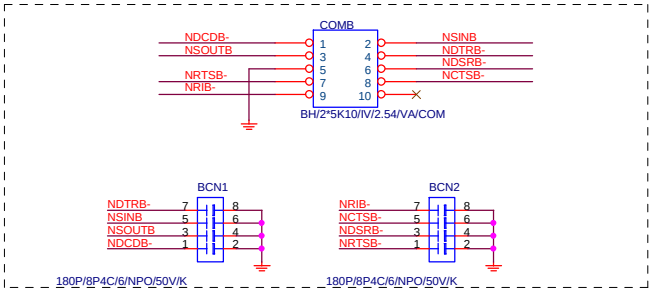
COM RI





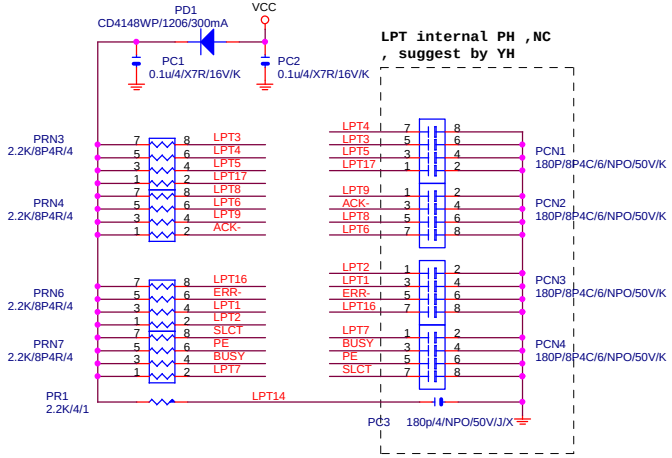
COMB

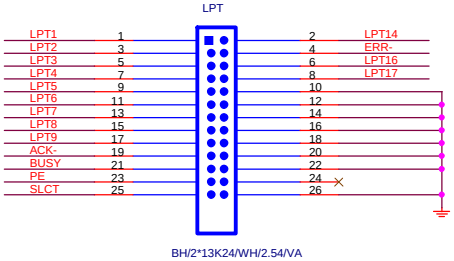


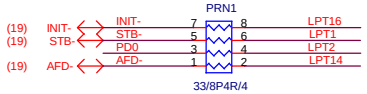


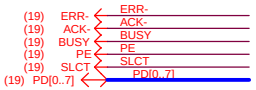
PLACE NEAR COM CONNECTOR

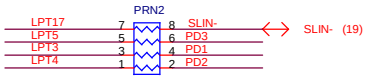
LPT PORT

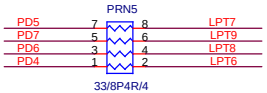












GIGABYTE		
Title: COM A/B & LPT & 80 PORT		
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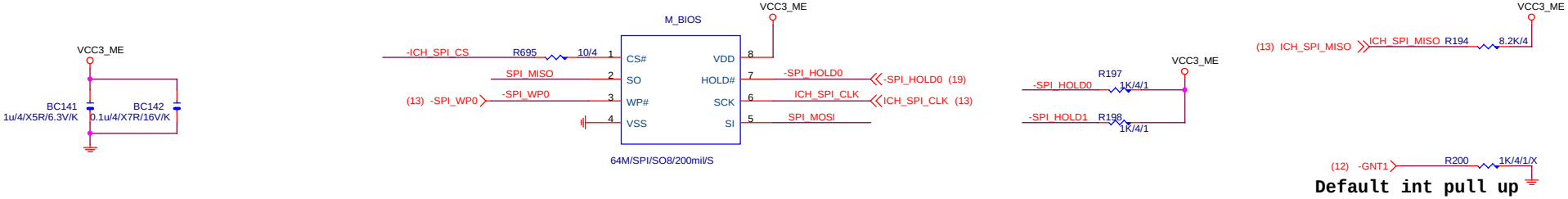
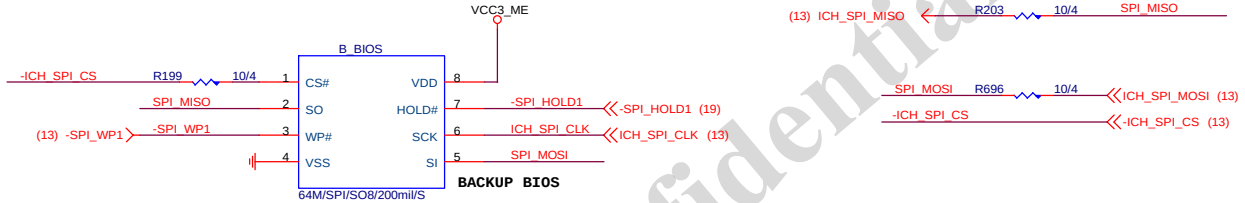
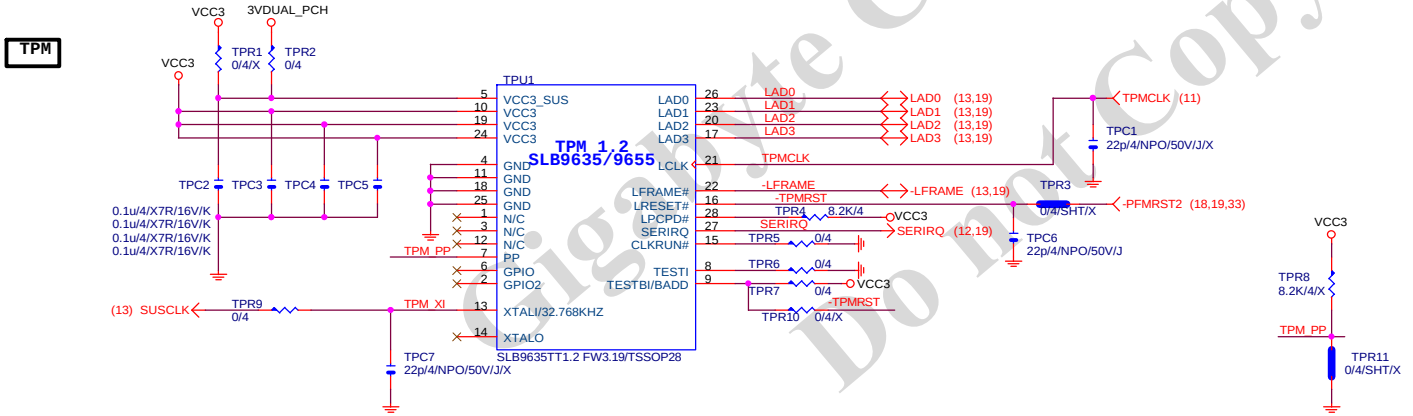




BOOT DEVICE	GNT1	GP19
LPC	0	0
PCI	1	0
SPI	1	1

1 means floating
0 means PD 1K



	SLB9635	SLB9655
TPR2,TPR4,TPR5, TPR6,TPR7,TPR9	MOUNT	N/A
TPR1,TPR10	N/A	MOUNT

GIGABYTE

Title: BIOS

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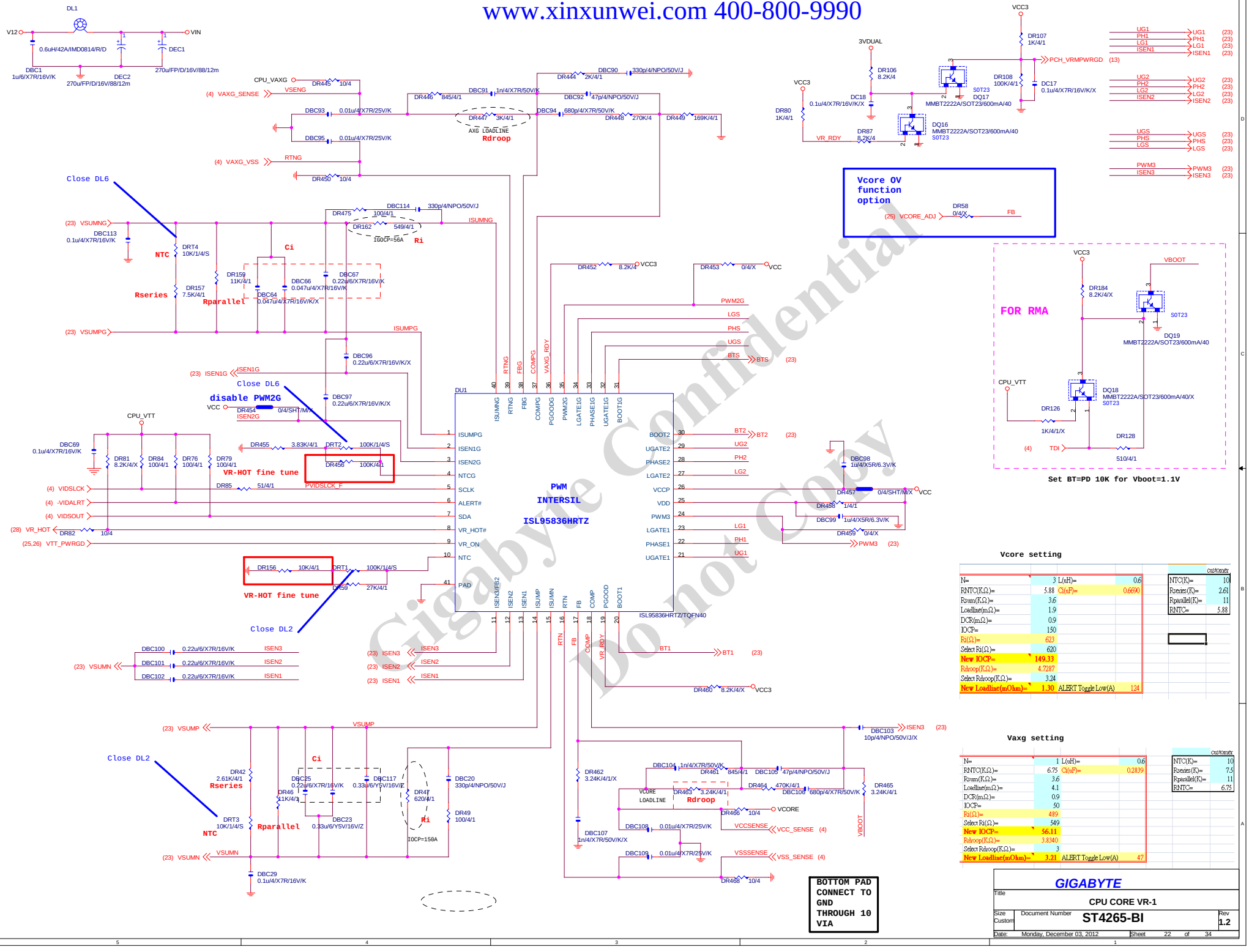

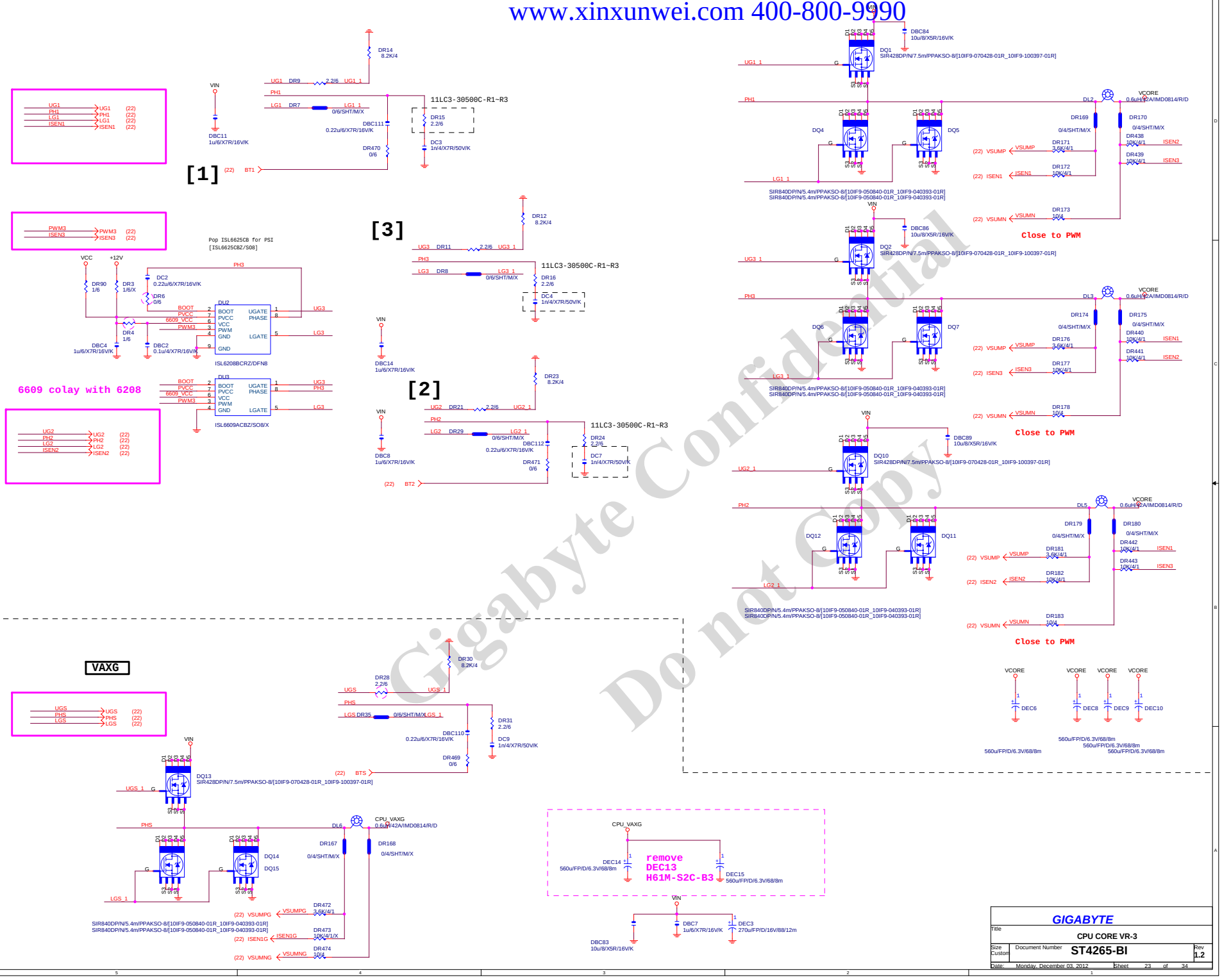

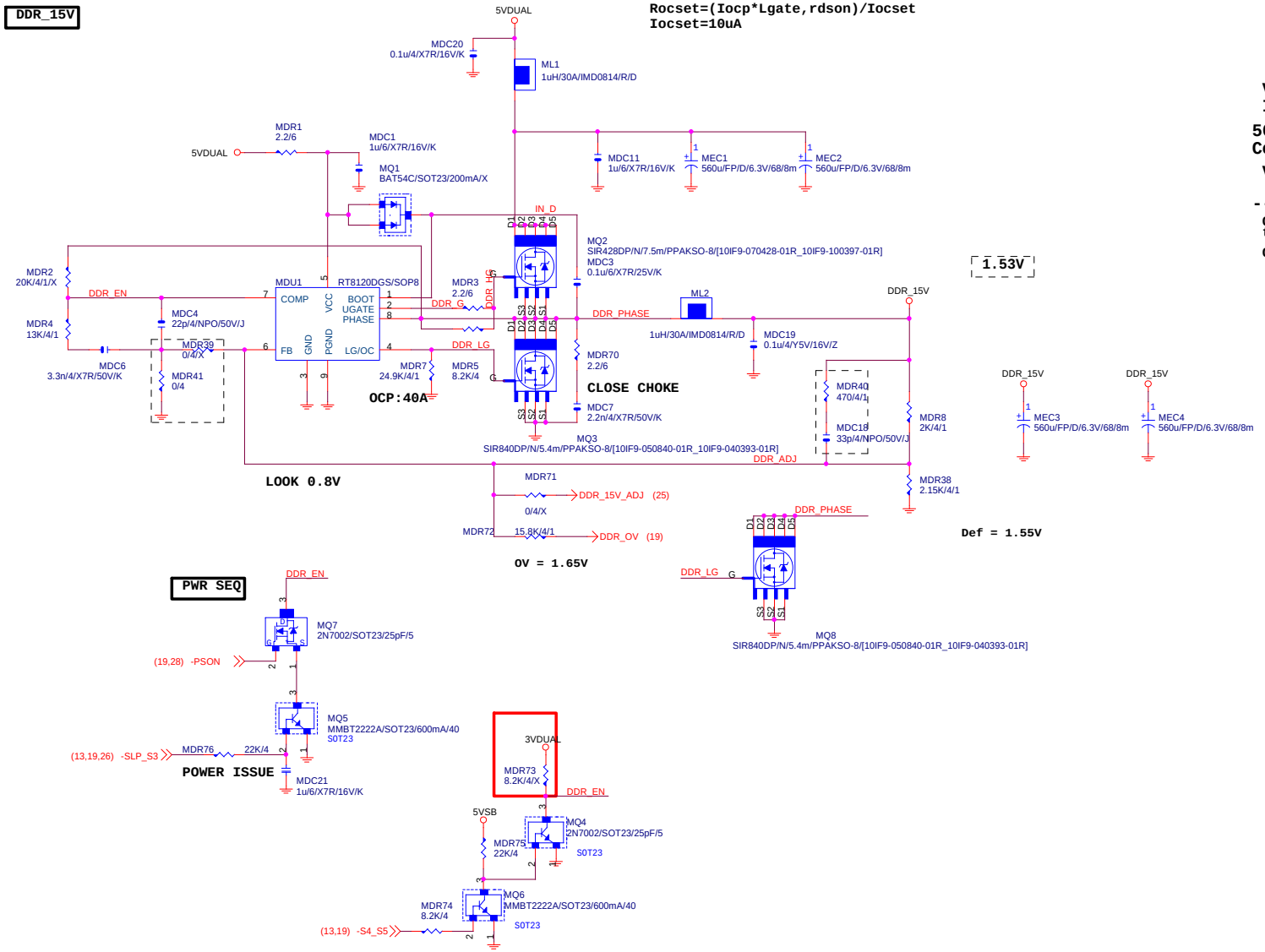

VIN=5V,VOUT=1.5V,IOUT=25A,PHASE=1
IRMS=11.45A

560u/FP/D/6.3V/68/8m RIPPLE CURRENT=4.7A
Coefficient=1.7(85℃),1(105℃)

VIN Ripple current=4.7X1.7=7.99A(85℃)

-->故固態電容須2X7.99=15.98>11.45A

OCP : Ipeak=(2xIocsetxRocset)/Rdson
typ Iocset=20uA , Rocset=4.7k

OCP :53.71A=(2x20uax4.7k)/(7m//7m)

GIGABYTE			
Title: DDR POWER			
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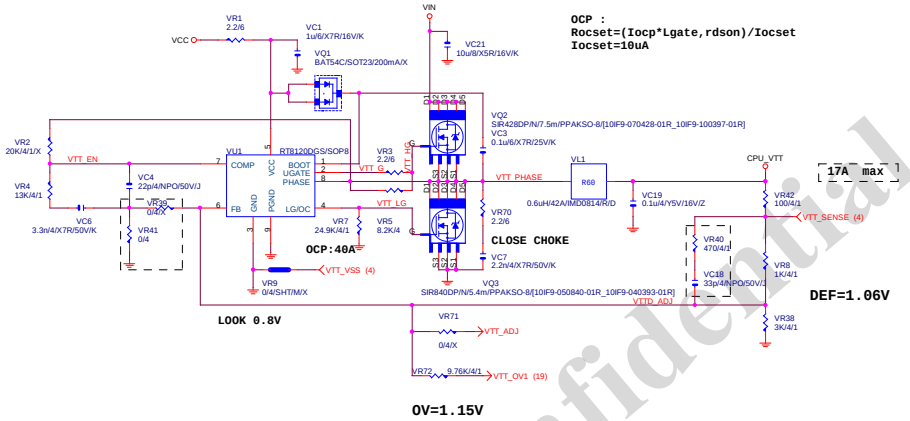
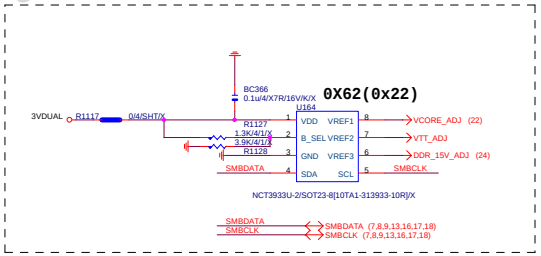
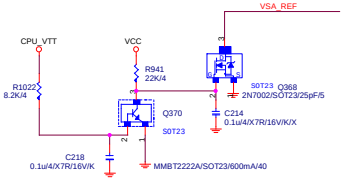
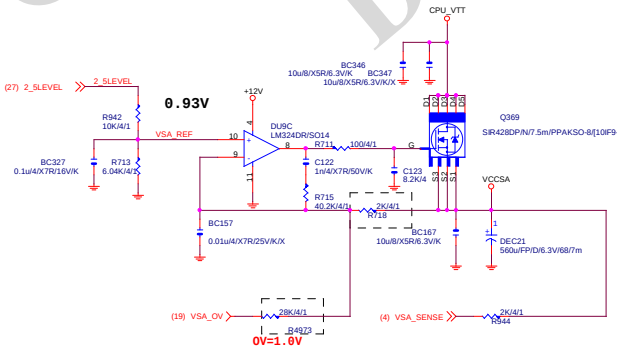
CPU_VTT

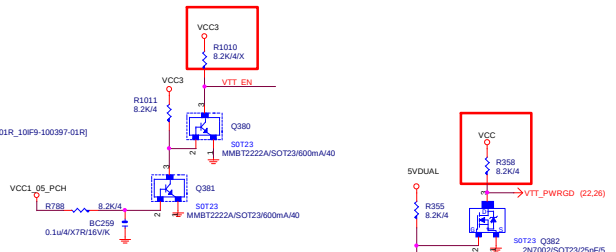


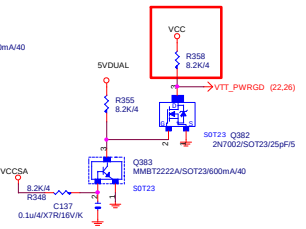


VCC_SA









GIGABYTE		
Title: CPU VTT PWM_ RT8120		
Size: Custom	Document Number: ST4265-BI	Rev: 1.2
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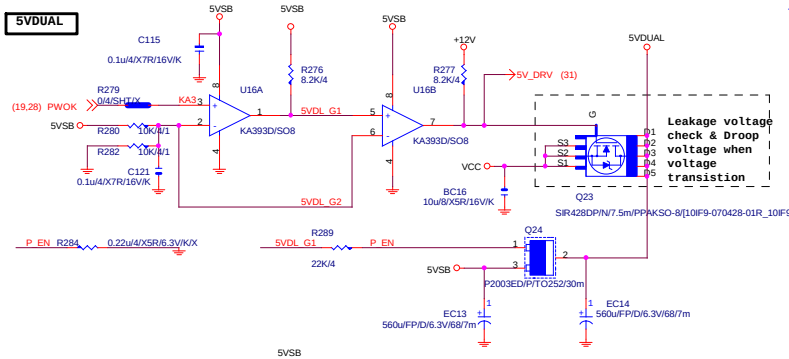
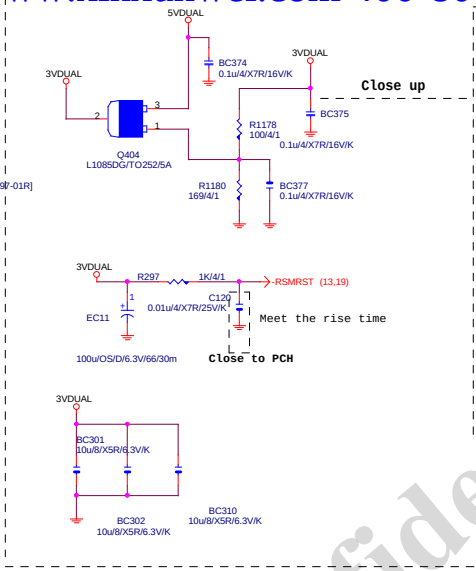
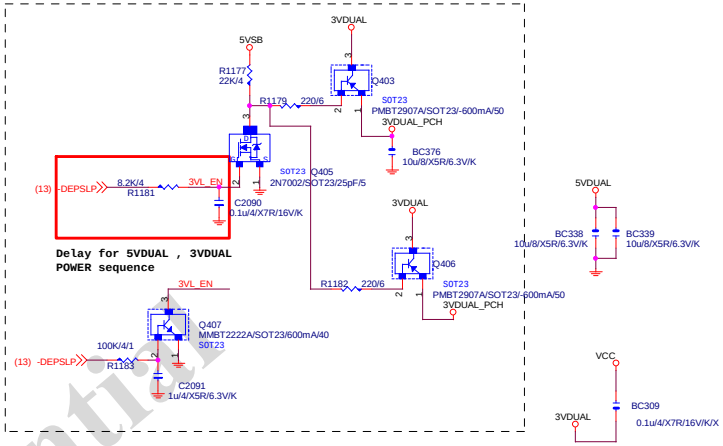
5VDUAL

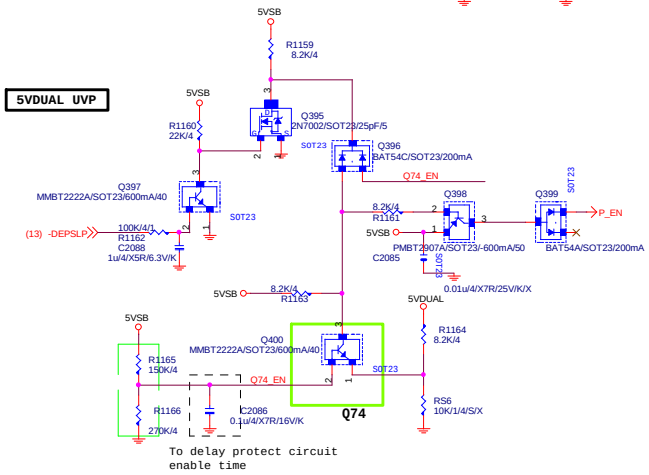


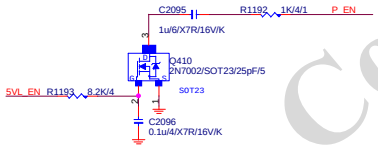
3VDUAL

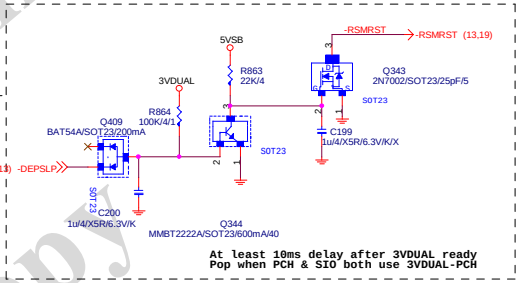




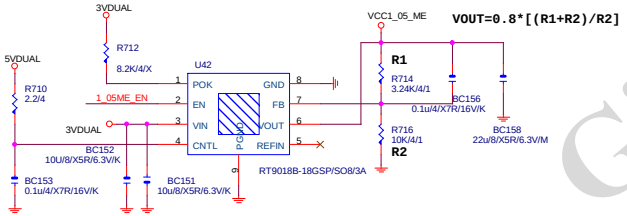
5VDUAL UVP

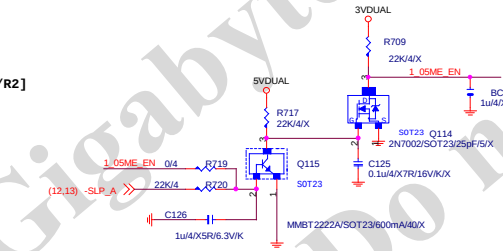


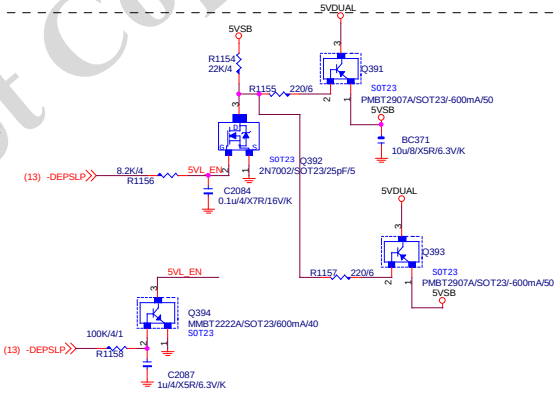




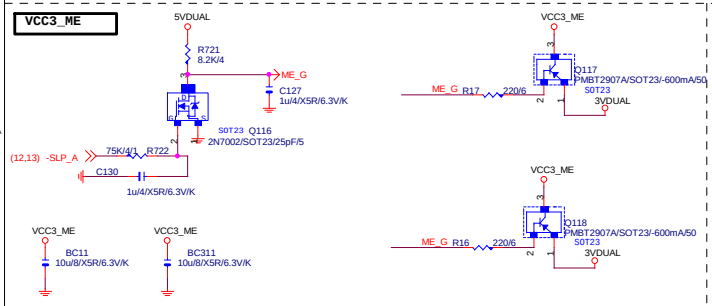
VCC1_05_ME

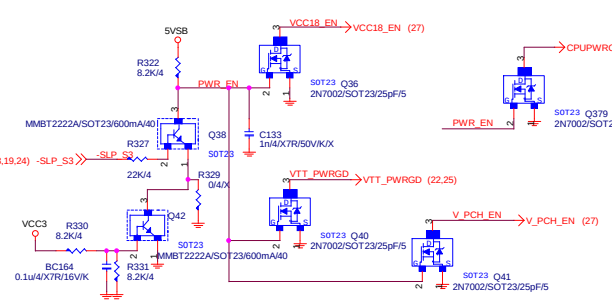






VCC3_ME





GIGABYTE		
Title: DISCRETE POWER		
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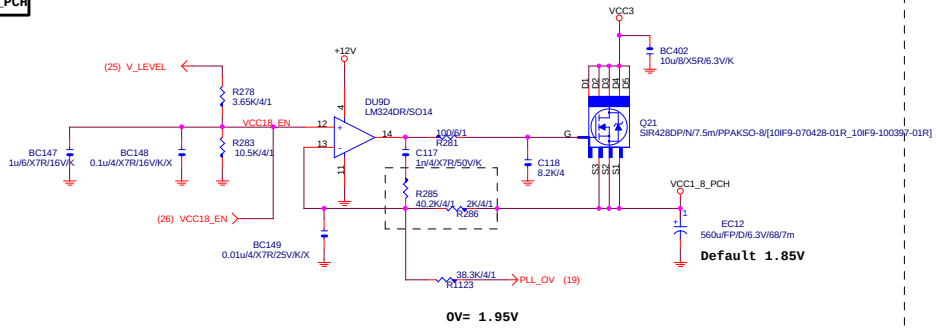
VCC1_8_PCH



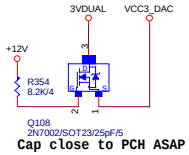
Default 1.85V

OV= 1.95V

VCC3_DAC

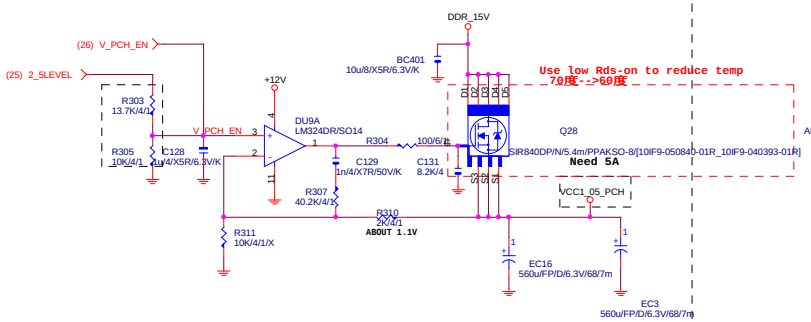
(3.3V/70mA+360uA)

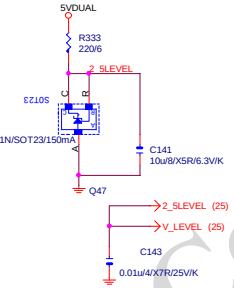
CLOSE PCH (注意震盪水波紋)



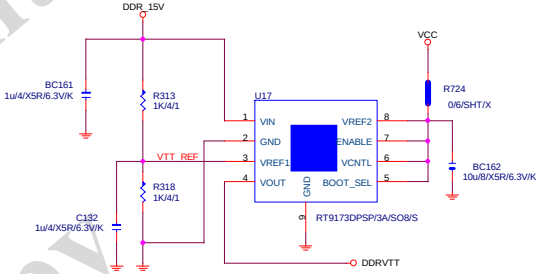
Cap close to PCH ASAP

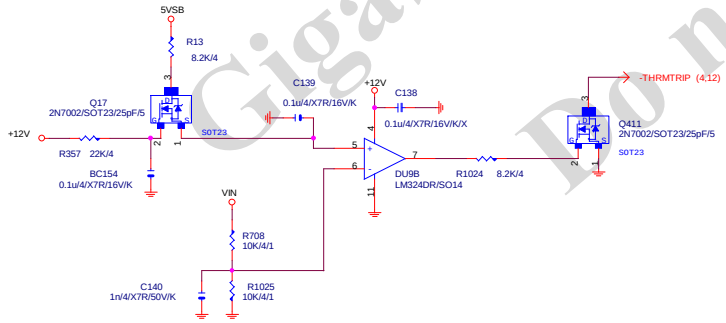
VCC1_05_PCH





DDRVTT





GIGABYTE		
Title: DISCRETE POWER II		
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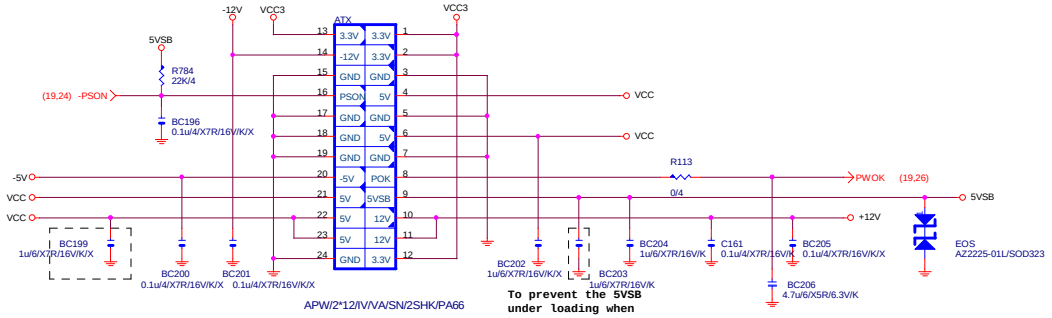
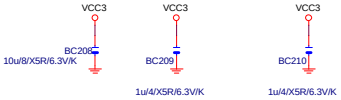
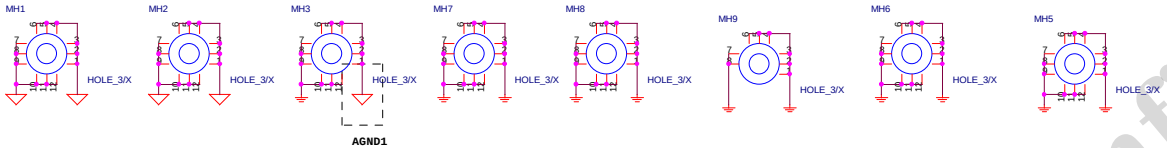
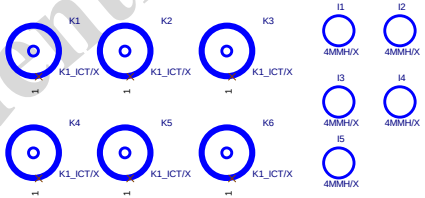
ATX POWER CONNECTOR

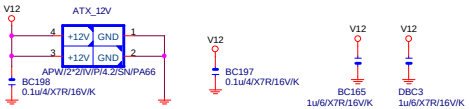


To prevent the 5VSB under loading when boot



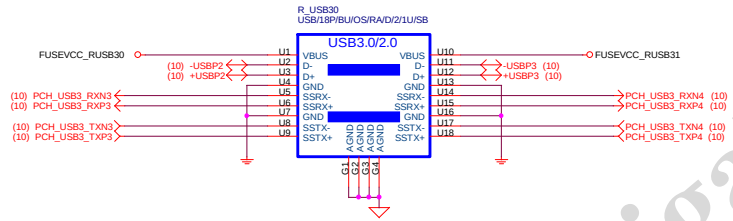


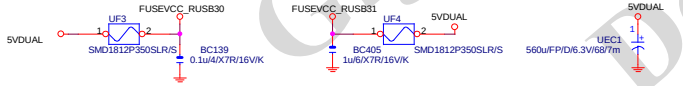


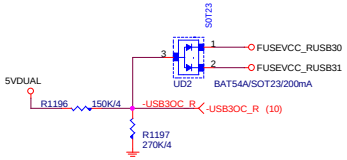


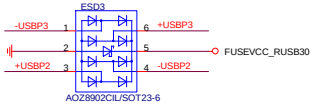
Check ME issue

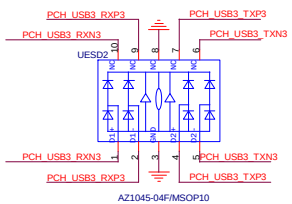
R_USB

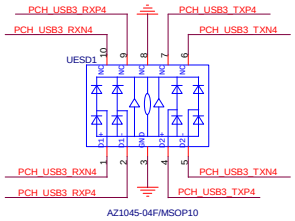




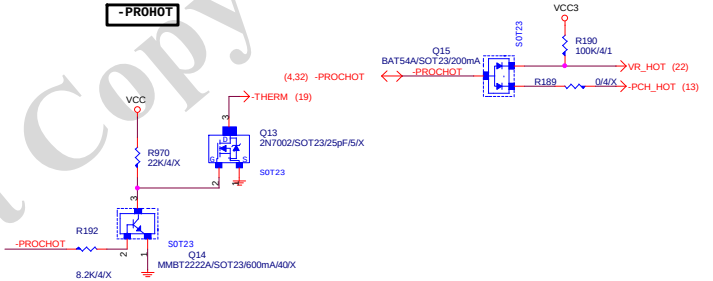




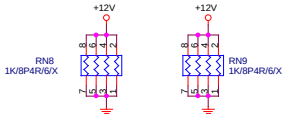




-PROHOT



FIX PWR MINMUN LOAD



GIGABYTE			
Title: ATX / CLOCK GEN			
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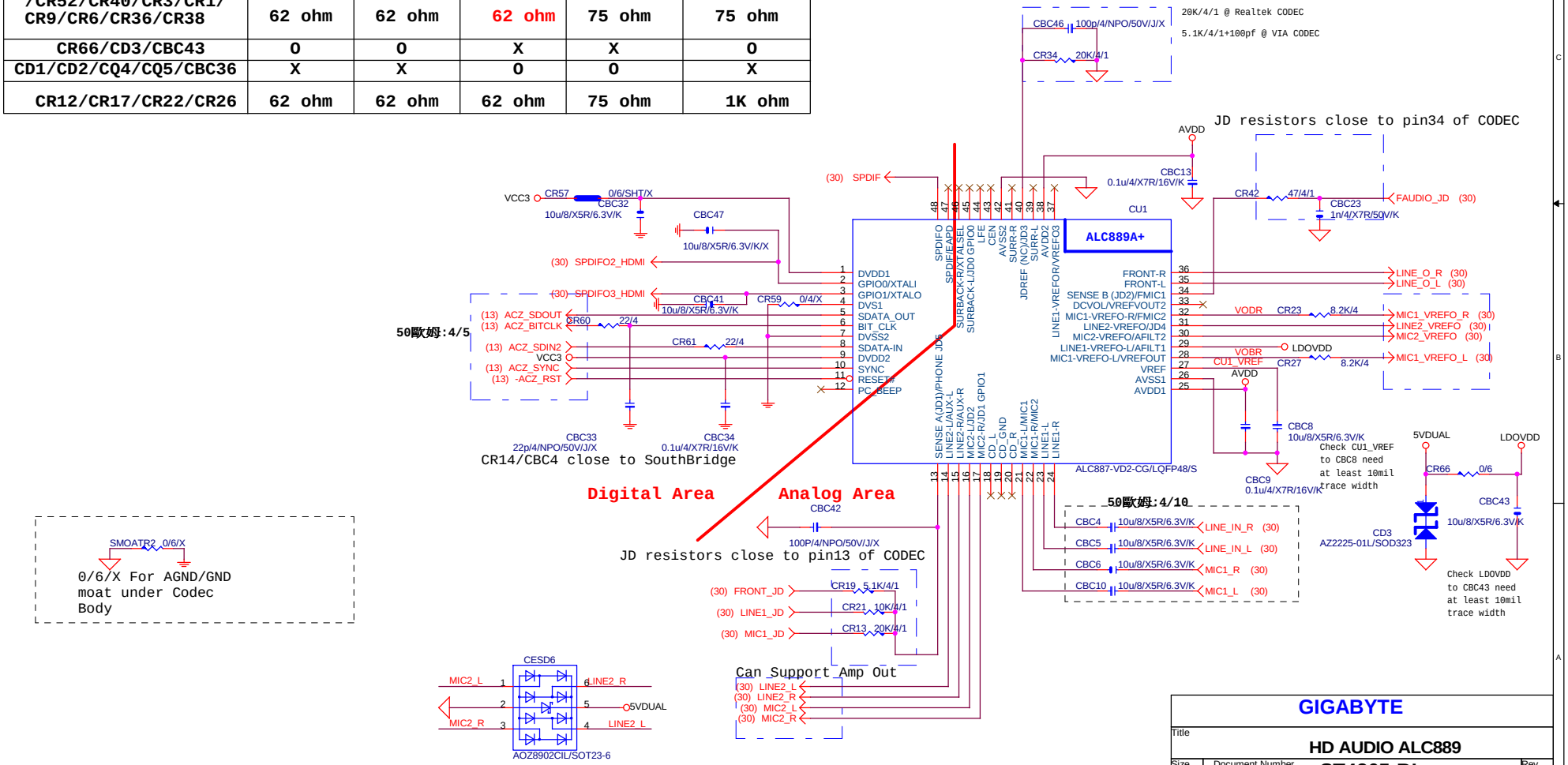
AZALIA CODEC

ALC887-VD2/ALC889/VT1708S/VT1708SCE CoTay

	ALC662	ALC887-VD2	ALC889	VT1708S	VT1708SCE
CR59	X	X	O	O	X
CR	X	X	X	X	0.1u/4
CBC41	O	O	X	X	O
CR42/CBC23	47ohm+1nF	47ohm+1nF	47ohm+1nF	22ohm+100P	22ohm+100P
CR63	X	O	O	O	O
CR56	O	X	X	X	X
CBC4/CBC5	22uF/X5R	22uF/X5R	22uF/X5R	22uF/X5R	22uF/X5R
CR19	5.11K/4/1	5.11K/4/1	5.11K/4/1	5.1K/4/1	5.1K/4/1
CR34	20K/4/1	20K/4/1	20K/4/1	5.1K/4/1	20K/4/1
CBC42/CBC46	N/A	N/A	N/A	100P/4	100P/4
CR14/CR33/CR28/CR45/ CR41/CR46/CR2/CR4/ CR35/CR39	22K/4	22K/4	22K/4	10K/4	10K/4
CR32/CR15/CR51/CR25 /CR52/CR40/CR3/CR1/ CR9/CR6/CR36/CR38	62 ohm	62 ohm	62 ohm	75 ohm	75 ohm
CR66/CD3/CBC43	O	O	X	X	O
CD1/CD2/CQ4/CQ5/CBC36	X	X	O	O	X
CR12/CR17/CR22/CR26	62 ohm	62 ohm	62 ohm	75 ohm	1K ohm



GIGABYTE			
Title	HD AUDIO ALC889		
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CODEC POWER/EMI PAD

For EUP pop noise

5VDUAL
CR68 0/6/X
AVDD
CQ4 CD4148WP/1206/300mA/X
+12V
CD1 CD4148WP/1206/300mA/X
CQ5 78L05/SOT89/0.1A/X
CBC36 0.1u/4/X7R/16V/K/X
CD2 AZ2225-01L/SOD323/X
CBC39 10u/8/X5R/6.3V/K
22u For better AUDIO quality
Check placement

CR48 0/6/X
CR31 0/4
CR47 0/6
AGND1
CR20 2.2/6
CR70 0/4/X

DP_HDMI_SPDIFC
CBC45 0.1u/4/X7R/16V/K
FUSEVCC_R1
(29) SPDIF
SPDIF
S1 S2 S3 G3 G1 G4 G2
DP+HDMI+SPDIF/20P+19P+3P/BK/RA :: Location DP_HDMI_SPDIF

(29) SPDIF CR56 0/4/X
(29) SPDIFO2_HDMI CR63 0/4
(29) SPDIFO3_HDMI CR69 0/4/X
CBC37 100p/4/NPO/50V/J
SPDIFO
SPDIF_O PH/1*2/BK/2.54/VA/D
PIN
For HDMI SPDIF

AUDIO
(29) LINE1_JD
LINE1_JD AJ_A5 AJ_A2
BLUE LINE-IN
(29) FRONT_JD
FRONT_JD AJ_B5 AJ_B2
GREEN LINE-OUT
(29) MIC1_JD
MIC1_JD AJ_C5 AJ_C2
PINK MIC-IN
GND
MH1 MH2 MH3 MH4 MH5
A3RP/13P/BL,LI,PK/RA/D/1/B

LINE-OUT

(29) LINE_O_R CEC6 100u/OS/D/6.3V/66/30m CR32 62/4
(29) LINE_O_L CEC3 100u/OS/D/6.3V/66/30m CR15 62/4
CR14 22K/4
CR33 22K/4
AJ_B5
AJ_B2
CBC7 180p/4/NPO/50V/J
CBC20 180p/4/NPO/50V/J

LINE-IN

(29) LINE_IN_R CR12 62/4
(29) LINE_IN_L CR17 62/4
AJ_A5
AJ_A2
CBC16 180p/4/NPO/50V/J
CBC21 180p/4/NPO/50V/J

MIC-IN

(29) MIC1_R CR22 62/4
(29) MIC1_L CR26 62/4
(29) MIC1_VREFO_L
(29) MIC1_VREFO_R
AJ_C5
AJ_C2
CBC2 180p/4/NPO/50V/J
CBC3 180p/4/NPO/50V/J

SURROUND

CEN/LFE

SURR BACK

AZALIA FRONT PANEL

CQ3 BAT54A/SOT23/200mA
(29) LINE2_VREFO
CQ1 BAT54A/SOT23/200mA
(29) MIC2_VREFO
SOT23
CR37 8.2K/4
CR50 8.2K/4
CR5 8.2K/4
CR8 8.2K/4

(29) MIC2_L CBC17 10u/8/X5R/6.3V/K CR9 62/4 M2_L
(29) MIC2_R CBC15 10u/8/X5R/6.3V/K CR6 62/4 M2_R
(29) FAUDIO_JD
L2_R CR36 62/4
L2_L CR38 62/4
CR7 0/4/X

F_AUDIO
CR35 22K/4
CR39 22K/4
3VDUAL
CR10 8.2K/4/X
CR55 20K/4/1
CR54 39.2K/4/1
ACZ_DET (13)
BH/2*5K8/GED/2.54/VA/AUDIO/PRT/TUR180
靠板邊，注意料號與footprint
Digital Area

(29) LINE2_R CEC7 100u/OS/D/6.3V/66/30m L2_R
(29) LINE2_L CEC8 100u/OS/D/6.3V/66/30m L2_L

CBC24 180p/4/NPO/50V/J
CBC25 180p/4/NPO/50V/J
CBC30 180p/4/NPO/50V/J
CBC19 180p/4/NPO/50V/J

GIGABYTE

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FRONT USB1

FUSEVCC1 FUSEVCC1
BC213 0.1u/4/X7R/16V/K
F_USB1
BC389 0.1u/4/X7R/16V/K
(10) -USBP4 (10) +USBP4
-USBP5 (10) +USBP5 (10)
BH/2*5K9/BU/ON/2.54/VA/USB/PRT/TUR180
5VDUAL
UEC3 100u/OS/D/6.3V/66/30m

ESD5 AOZ8902CIL/SOT23-6
-USBP5 +USBP5 FUSEVCC1
+USBP4 -USBP4
ESD6 AOZ8902CIL/SOT23-6
-USBP9 +USBP9 FUSEVCC2
+USBP8 -USBP8

Close to connector

FUSEVCC2 FUSEVCC2
BC214 0.1u/4/X7R/16V/K
F_USB2
BC394 0.1u/4/X7R/16V/K
(10) -USBP8 (10) +USBP8
-USBP9 (10) +USBP9 (10)
BH/2*5K9/BU/ON/2.54/VA/USB/PRT/TUR180

5VDUAL
F1 SMD1812P160/8V 100MILS FUSEVCC1
F2 SMD1812P160/8V 100MILS FUSEVCC2
100MILS
D18 BAT54A/SOT23/200mA S0T23
FUSEVCC1 FUSEVCC2
5VDUAL R1190 150K/4 -USBOC_F -USBOC_F (10)
R1191 270K/4

SATA LED

VCC3 R426 1K/4/1 -HDLED C163 180p/4/NPO/50V/J/X
VCC3 R427 1K/4/1 R428 8.2K/4
FPD1 BAT54A/SOT23/200mA
(12) -SATALED
(33) RA_GPIO0
Q66 MMBT2222A/SOT23/600mA/40
Q67 MMBT2222A/SOT23/600mA/40
S0T23

PCH_USB3_TXP1 PCH_USB3_TXN2
PCH_USB3_TXN1 PCH_USB3_TXP2
UESD3
PCH_USB3_TXN1 PCH_USB3_TXP2
PCH_USB3_TXP1 PCH_USB3_TXN2
AZ1045-04F/MSOP10
PCH_USB3_RXP1 PCH_USB3_RXN2
PCH_USB3_RXN1 PCH_USB3_RXP2
UESD4
PCH_USB3_RXN1 PCH_USB3_RXP2
PCH_USB3_RXP1 PCH_USB3_RXN2
AZ1045-04F/MSOP10

FRONT USB30

5VDUAL
UEC2 560u/FP/D/6.3V/68/7m
ESD8 AOZ8902CIL/SOT23-6
+USBP0 -USBP0
-USBP1 +USBP1 FUSEVCC_FUSB31

Close to connector

5VDUAL FUSEVCC_FUSB31
UF1 SMD1812P350SLR/S
F_USB30 REV=1
VBUS VBUS
ID
(10) PCH_USB3_RXN1 SSRX1- SSTX2- (10) PCH_USB3_TXN2
(10) PCH_USB3_RXP1 SSRX1+ SSTX2+ (10) PCH_USB3_TXP2
(10) PCH_USB3_TXN1 SSTX1- SSRX2- (10) PCH_USB3_RXN2
(10) PCH_USB3_TXP1 SSTX1+ SSRX2+ (10) PCH_USB3_RXP2
(10) -USBP0 D1- D2- (10) -USBP1
(10) +USBP0 D1+ D2+ (10) +USBP1
GND GND
BH/2*10K20/BU/ON/2.0/VA/D/GF
FUSEVCC_FUSB32 5VDUAL
UF2 SMD1812P350SLR/S
FUSEVCC_FUSB31 BC227 0.1u/4/X7R/16V/K
FUSEVCC_FUSB32 BC399 0.1u/4/X7R/16V/K

SPKR

VCC D9 1N4148W/SOD123/300mA
R429 75/6/1
SPK-
VCC R432 1K/4/1 Q69 MMBT2222A/SOT23/600mA/40
Q70 MMBT2222A/SOT23/600mA/40
R431 75/6/1
Q68 MMBT2222A/SOT23/600mA/40
R433 8.2K/4
R434 1K/4/1
(19) BEEP- BEEP-
S0T23
SPKR SPKR (13)
To disable TCO timer
VCC3 R430 8.2K/4

Q74

SIR428DP/N/7.5m/PPAKSO-8/[10IF9-070428-01R_10IF9-100397-01R]
D5 D4 D3 D2 D1 S1 S2 S3 G
VCC +12V
5VDUAL
R444 8.2K/4/X 5V_DRV (26)
400MILS
CLOSE R_USB

5VDUAL
BC219 1n/4/X7R/50V/K
BC218 1u/4/X5R/6.3V/K
To reduce the ripple crosstalk from Vin

F_USB_signal_cross_moat cap
VCC VCC
BC215 0.1u/4/X7R/16V/K
BC216 0.1u/4/X7R/16V/K
5VDUAL
EC10 100u/OS/D/6.3V/66/30m

D16 BAT54A/SOT23/200mA S0T23
FUSEVCC_FUSB31 FUSEVCC_FUSB32
5VDUAL R1198 150K/4 -USB3OC_F -USB3OC_F (10)
R1199 270K/4

INTEL FRONT PANEL

ESD9 AOZ8902CIL/SOT23-6
-PWRBT_1 5VSB RESET
VCC R438 330/6 BC220 0.01u/4/X7R/25V/K/X
F_PANEL
HD+ HD+ MSG/PD+ MPD+
-HDLED HD- MSG/PD-
RESET GND PW+ -PWRBT_1
(4,13) -SYS_RST R443 100/4/1 RESET PW-
BC222 0.01u/4/X7R/25V/K CI-
(19,32) -CASEOPEN CI+ SP+ VCC
MPD+ PWR+ NC
PWR- NC
PWR- SP- SPK-
BH/2*10K10,12,13/WH/2.54/VA/PA
C164 0.01u/4/X7R/25V/K/X
R442 33/4 -PWRBTSW (19)
VCC R437 330/6
MPD+ MPD+
Q71 MMBT2222A/SOT23/600mA/40
S0T23
R439 8.2K/4
GPIO28 (13)

GIGABYTE

Title	FP,F_USB,USB PWR,BZ	
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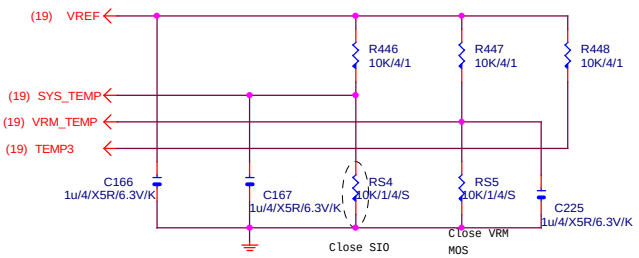
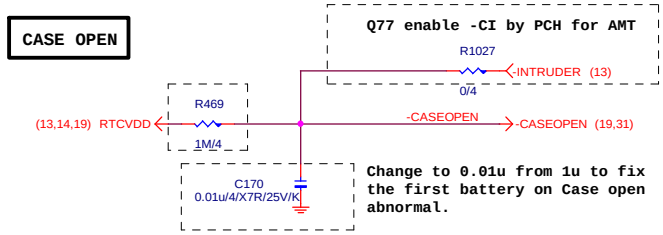
TEMP H/W MONITOR

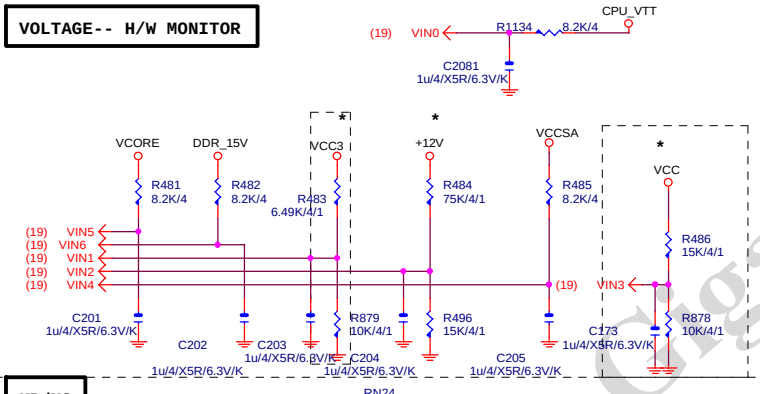


CASE OPEN

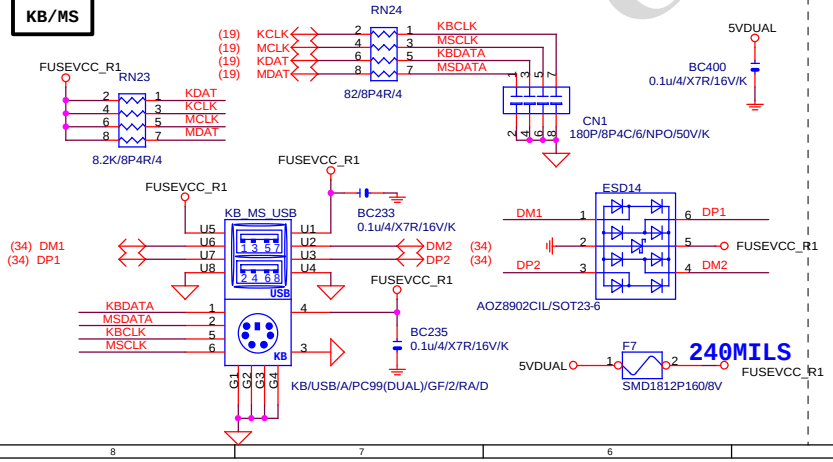


Case Open Circuits

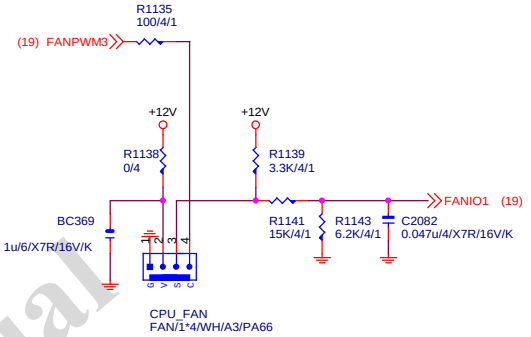
VOLTAGE-- H/W MONITOR



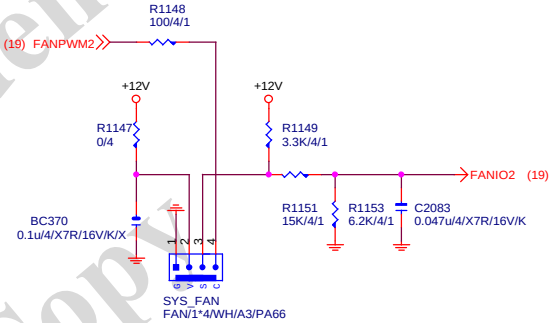
KB/MS



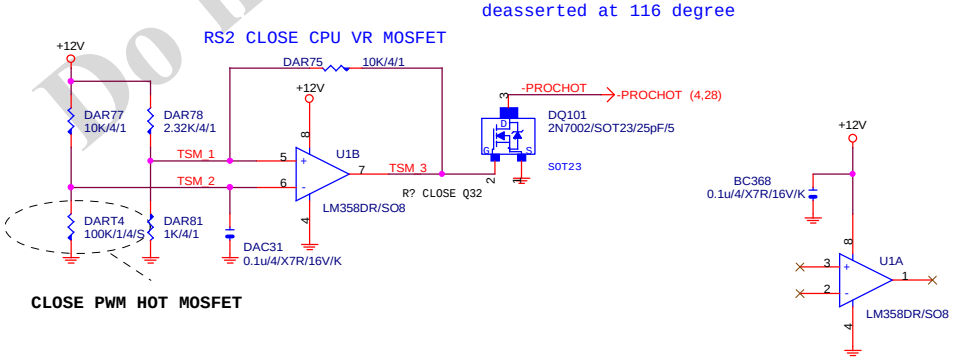
CPU SMART FAN



SYS FAN



-PROHOT



GIGABYTE		
Title	HWM,KB/MS, FAN CTRL	
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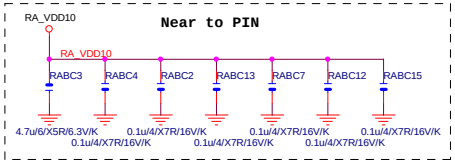
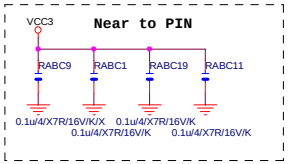
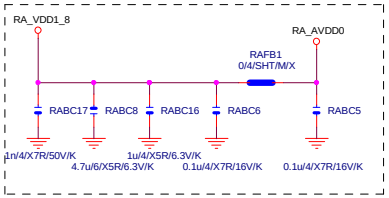
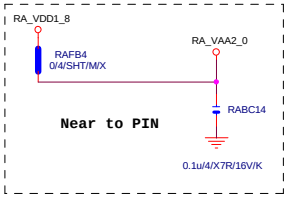
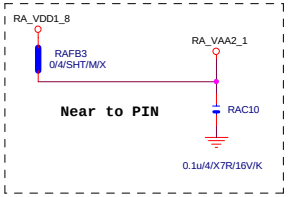
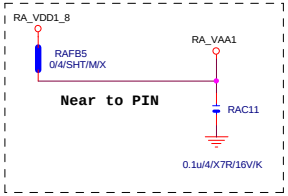


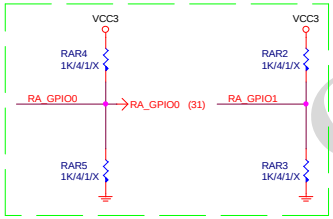


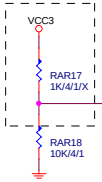


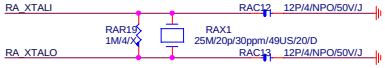


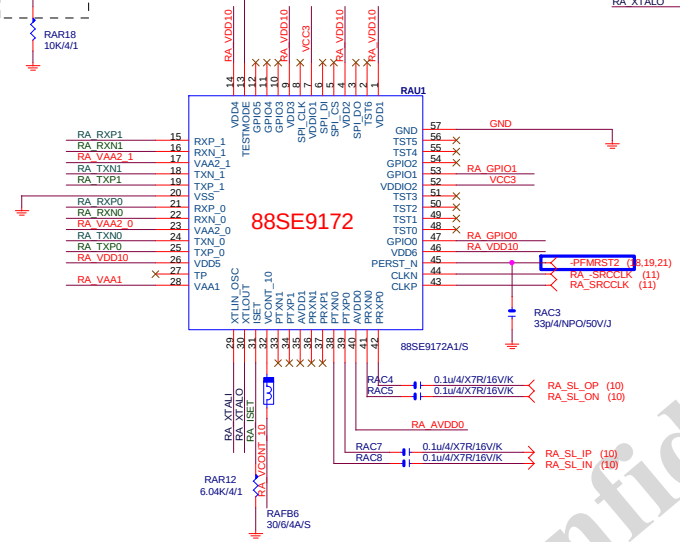


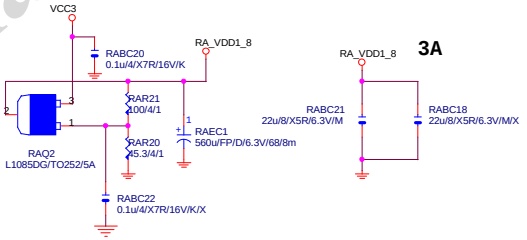




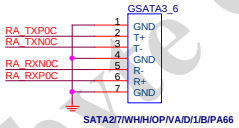


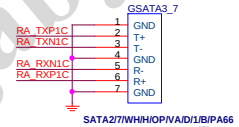


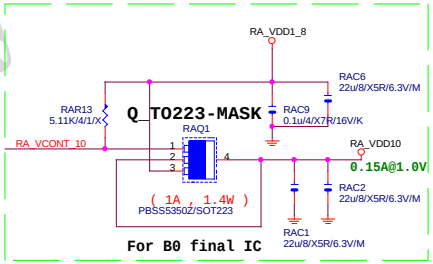




90歐姆:[15/4.5/7.5/4.5/15]







RA_TXP0	0.01u/4/X7R/25V/K	RAC21	RA_TXP0C
RA_TXN0	0.01u/4/X7R/25V/K	RAC20	RA_TXN0C
RA_RXN0	0.01u/4/X7R/25V/K	RAC19	RA_RXN0C
RA_RXP0	0.01u/4/X7R/25V/K	RAC18	RA_RXP0C
RA_TXP1	0.01u/4/X7R/25V/K	RAC16	RA_TXP1C
RA_TXN1	0.01u/4/X7R/25V/K	RAC17	RA_TXN1C
RA_RXN1	0.01u/4/X7R/25V/K	RAC15	RA_RXN1C
RA_RXP1	0.01u/4/X7R/25V/K	RAC14	RA_RXP1C

GIGABYTE

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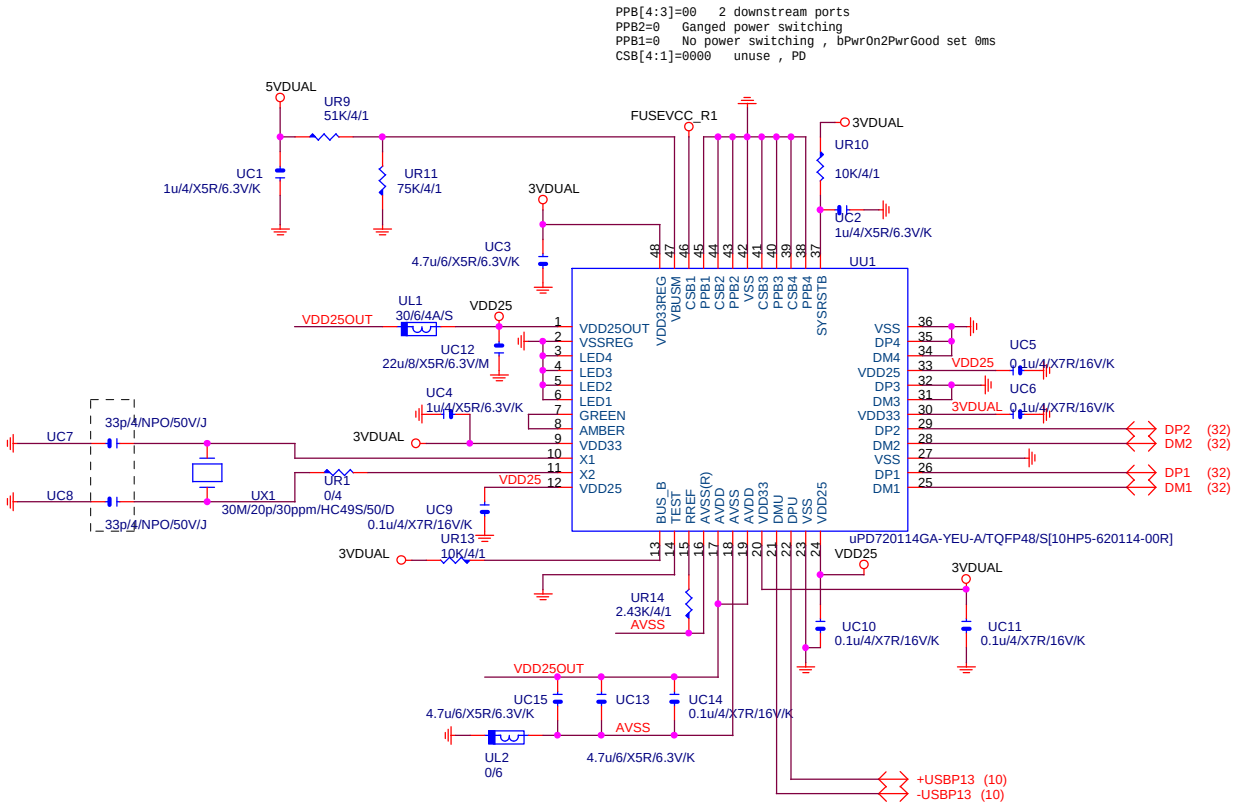

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