

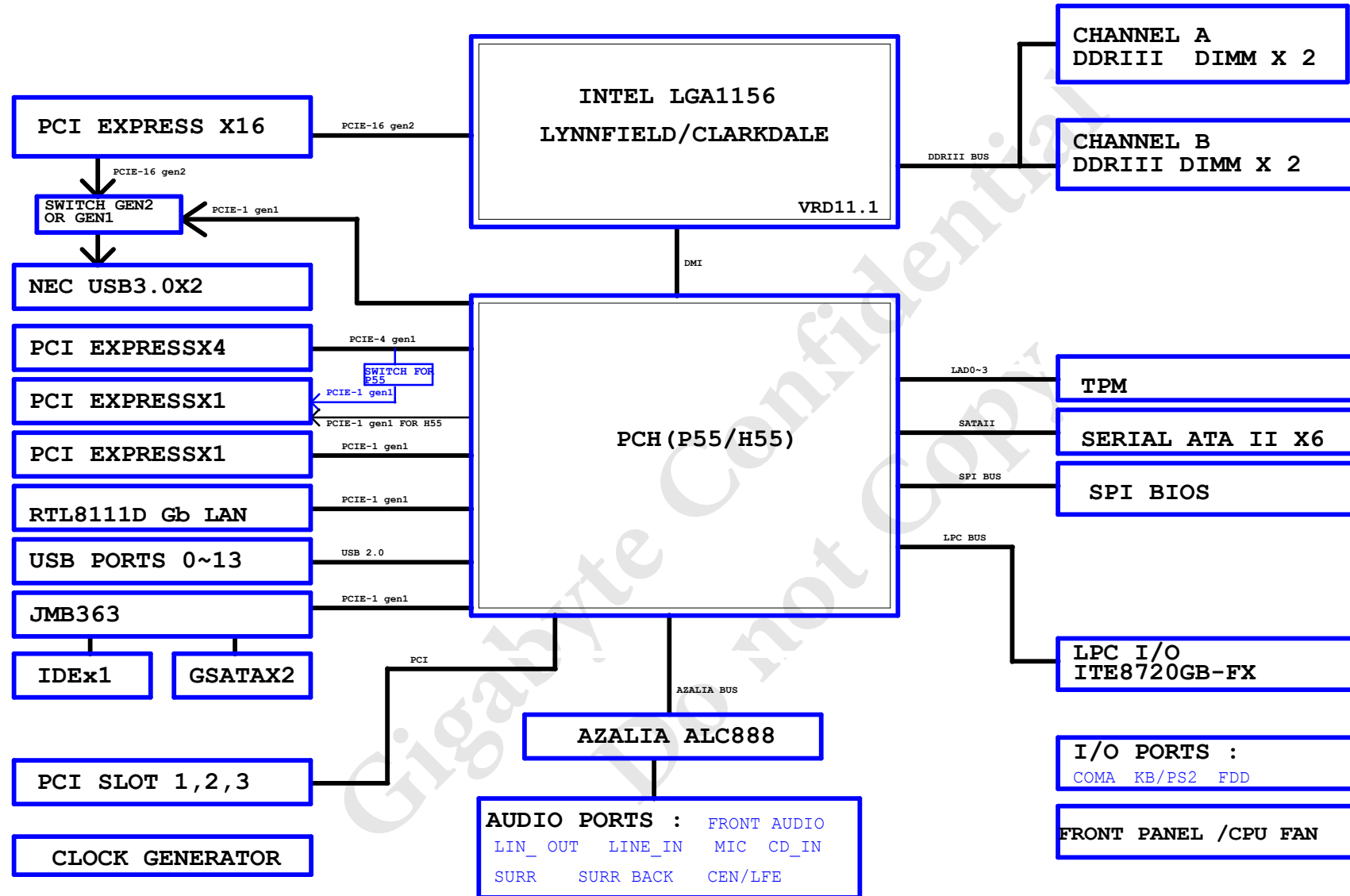
Model Name: GA-P55-USB3L 1.01

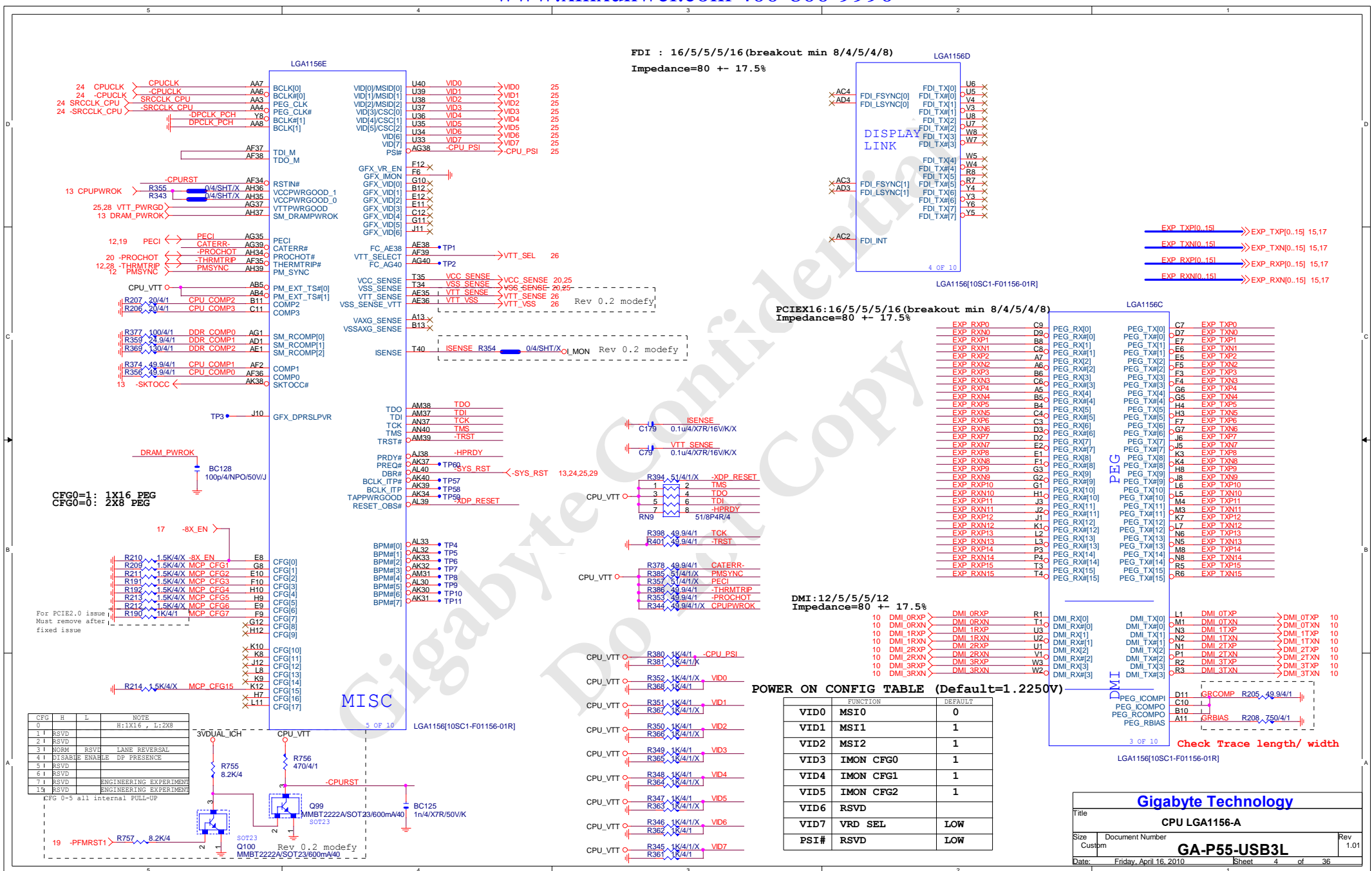
SHEET	TITLE
01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	CPU LGA1156-A
05	CPU LGA1156-B
06	CPU LGA1156-C
07	DDR III CHANNEL A
08	DDR III CHANNEL B
09	DDR III POWER CAP
10	PCH FDI,DMI,USB,PCIE,NVRAM
11	PCH DP,CLK BUFFER
12	PCH HOST,SATA,PCI
13	PCH GPIO,CTRL,AUDIO
14	PCH PWR,GND
15	PCI EXPRESS*16 SLOT
16	PCI EXPRESS*4 SLOT
17	PCI EXPRESS*1 SLOT
18	PCI SLOT X3
19	ITE 8720 LPC IO
20	COM, -PROHOT , DYNAMIC OC , LPT
21	Dual BIOS
22	ALC888
23	REAR AUDIO JACK
24	CLOCK GEN ICS9LPRS914
25	VCORE PWM ISL6334CR
26	CPU VTT PWM ISL6322G
27	DDR 15V & VCC1 05 PCH PWM ISL6545CBZ

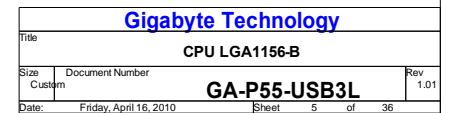
SHEET	TITLE
28	DISCRETE POWER
29	F PANEL ,USB , FDD
30	ATX POWER
31	J363
32	REALTEK RTL8111D
33	TPM SLB9635TT
34	HWM,KB/MS , FAN CTRL
35	UP720200
36	TABLE LIST
37	
38	
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46	

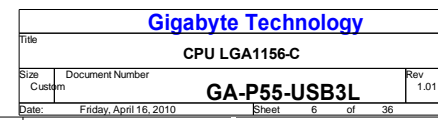
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Title	Cover Sheet		
Size	Document Number	GA-P55-USB3L	Rev
Custom			1.01
Date:	Friday, April 16, 2010	Sheet 1 of 36	

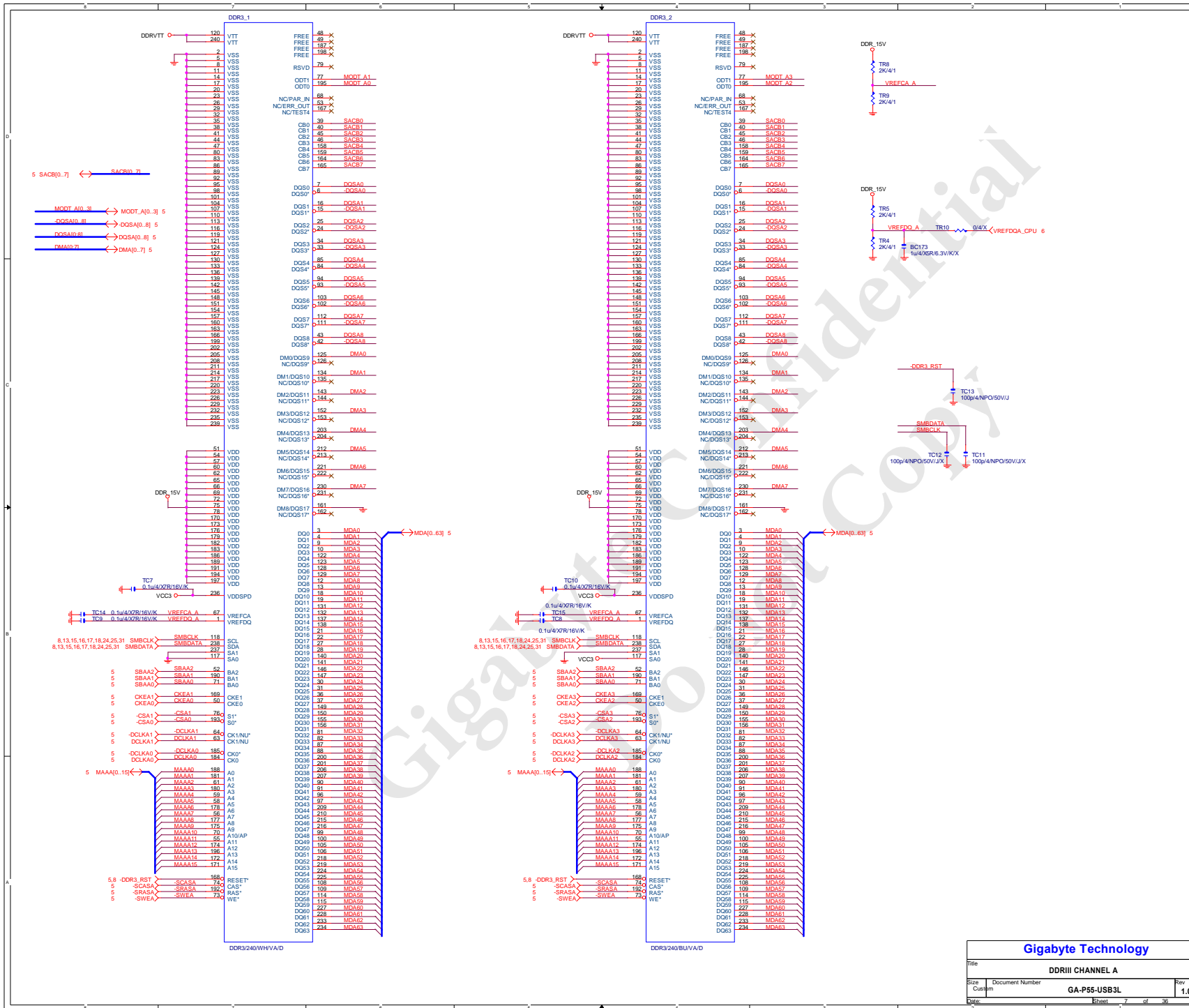
BLOCK DIAGRAM

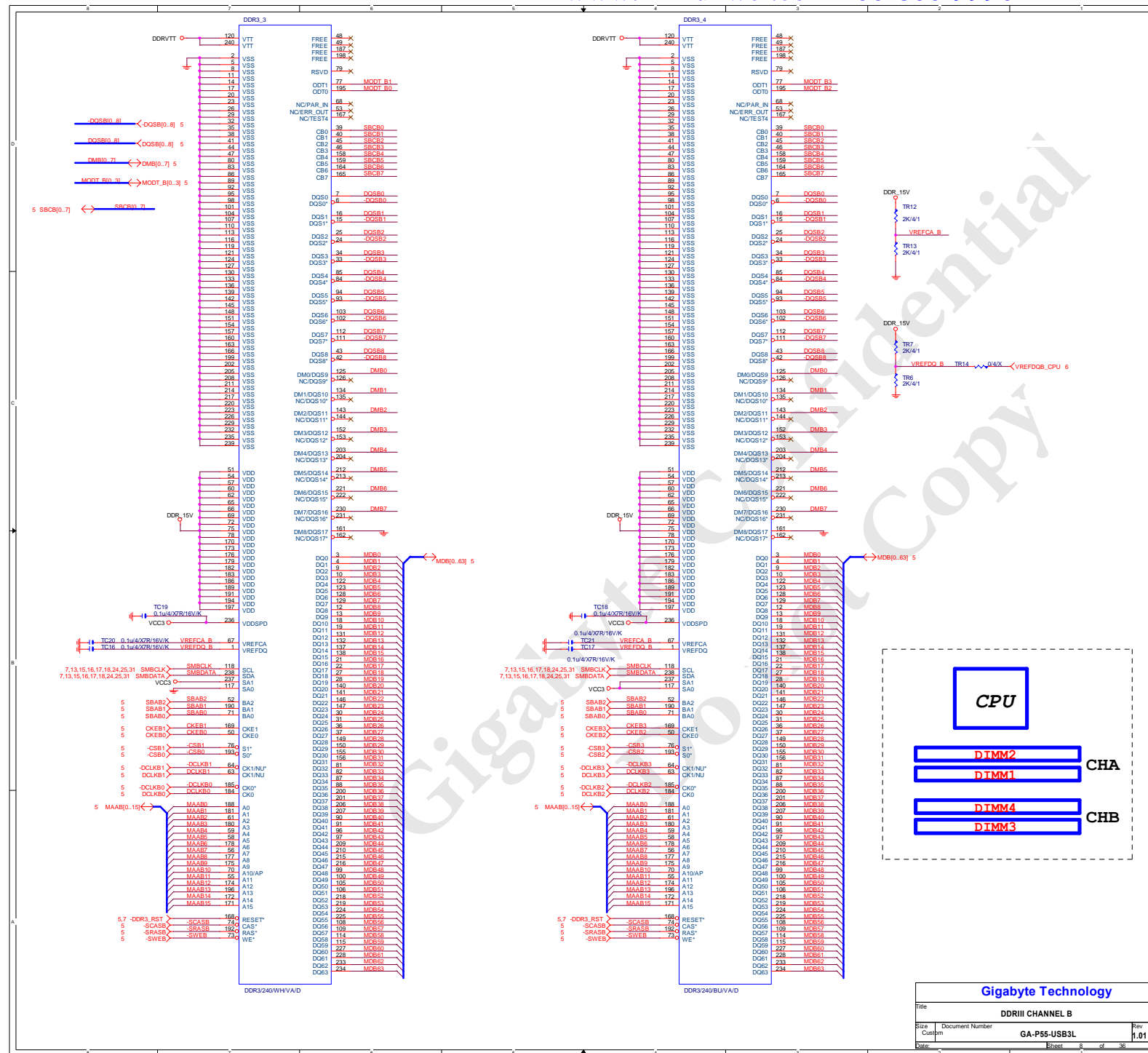








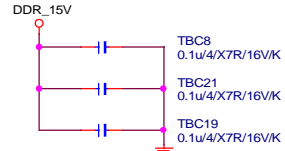




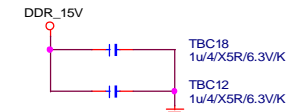
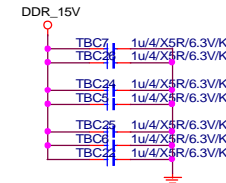
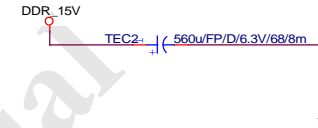
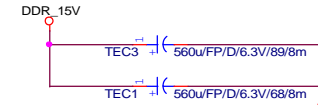
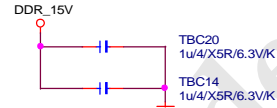
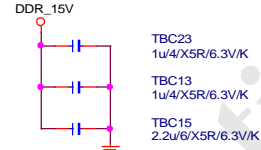
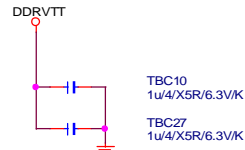
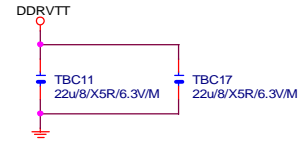
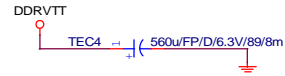
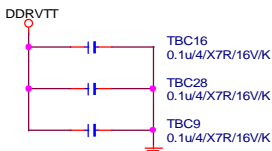
Gigabyte Technology			
DDR3 CHANNEL B			
Title	Document Number	Rev	
Size	GA-P55-USB3L	1.01	
Date	Enset	P	of 36

DDR TERMINATION CHANNEL A/B

DDR15V Decouple



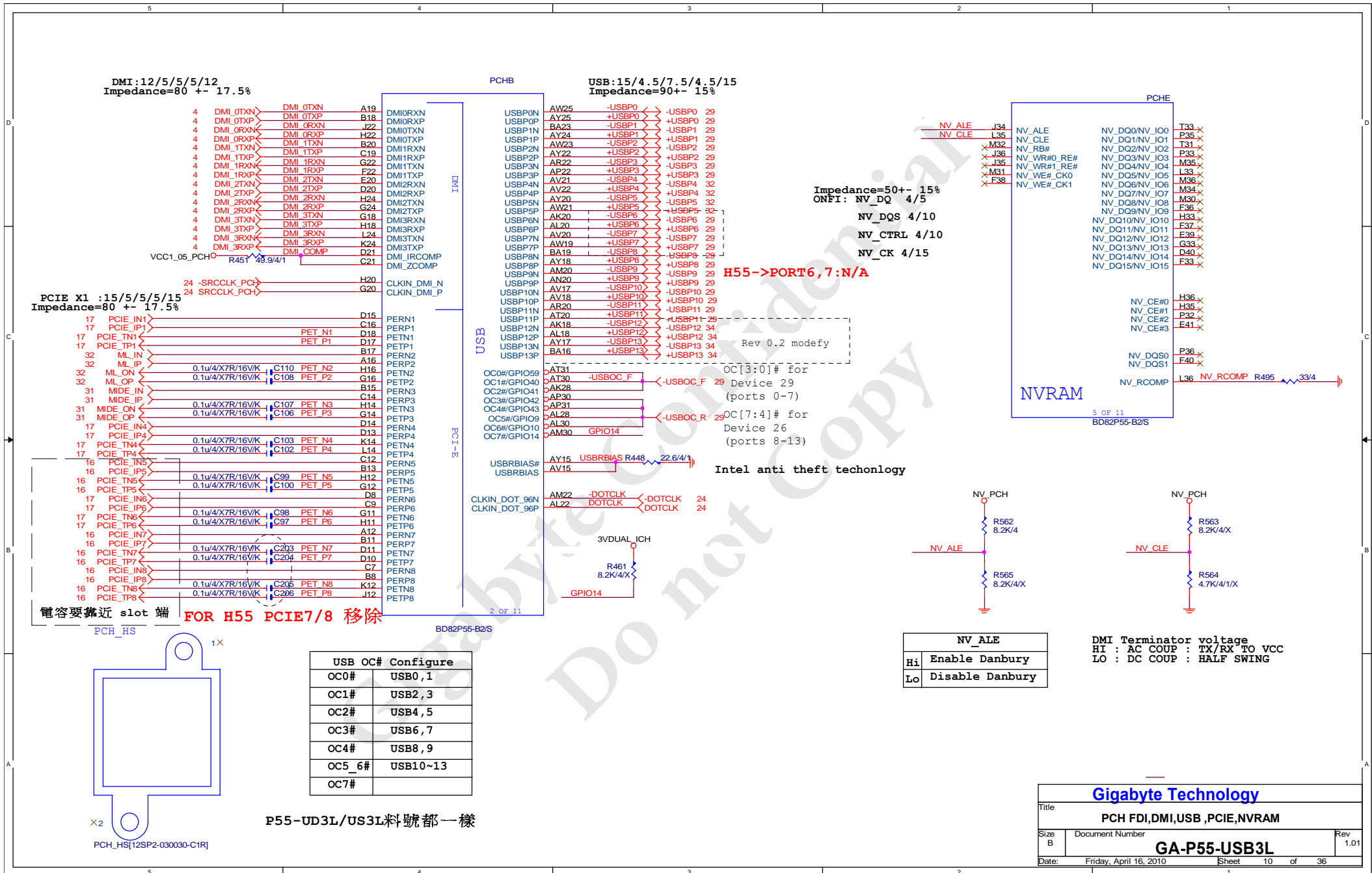
DDRVTT Decouple

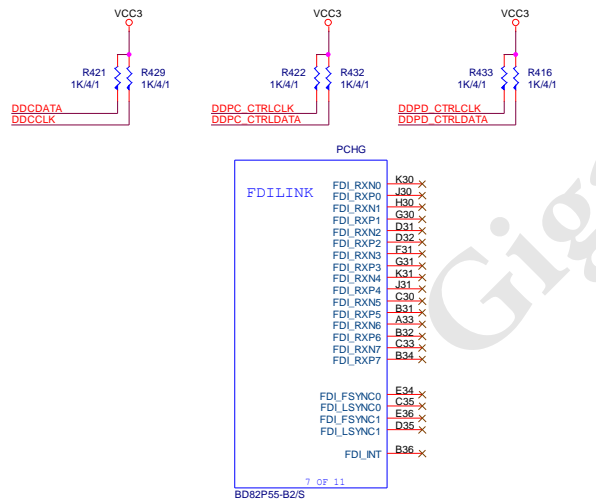


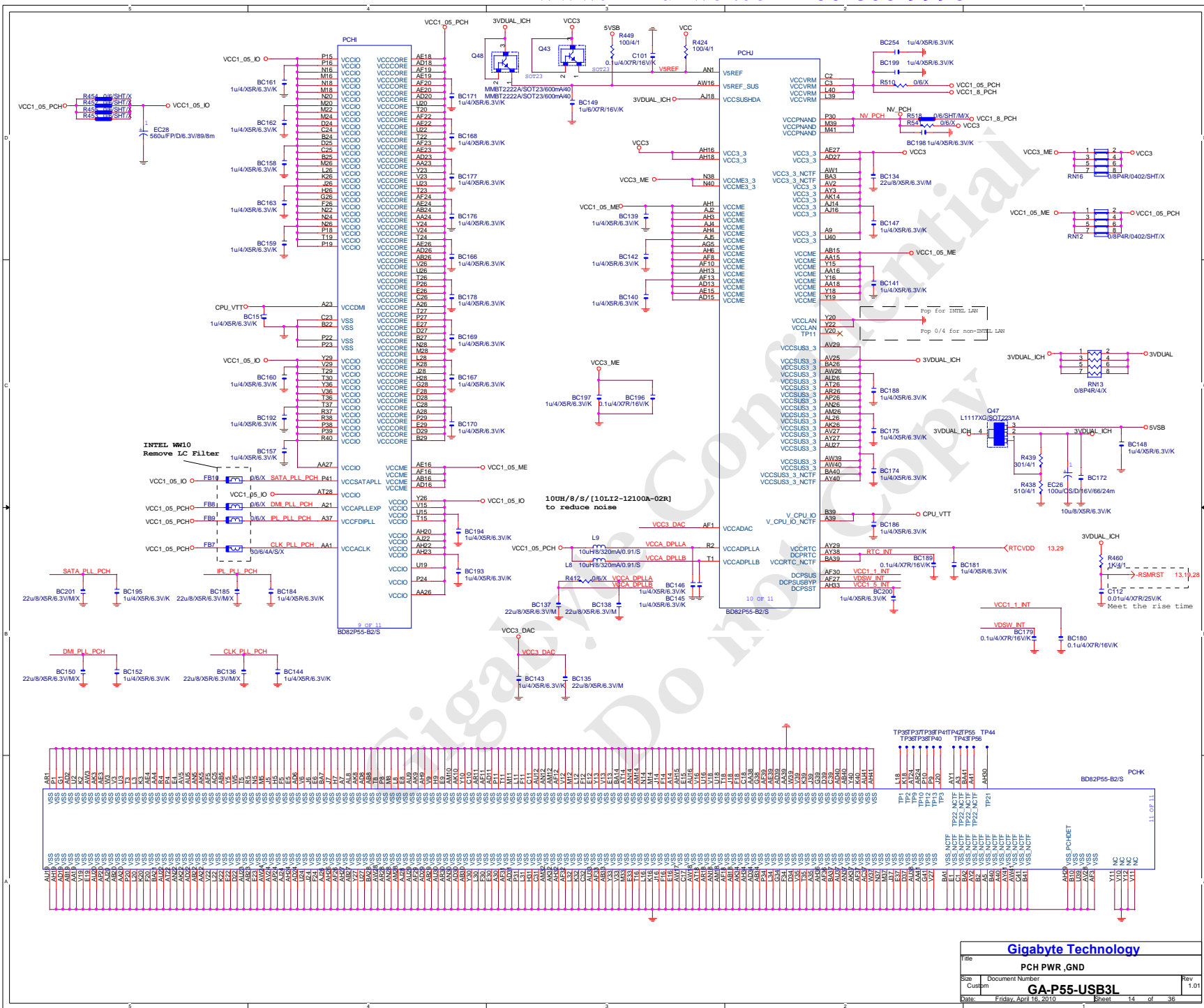
COUPON1 COUPON1 1 2 COUPONX VCC3

COUPON2 COUPON2 1 2 COUPONX

Gigabyte Technology			
Title			
DDRIII POWER CAP			
Size	Document Number	GA-P55-USB3L	
B		Rev 1.01	
Date:	Friday, April 16, 2010	Sheet	9 of 36

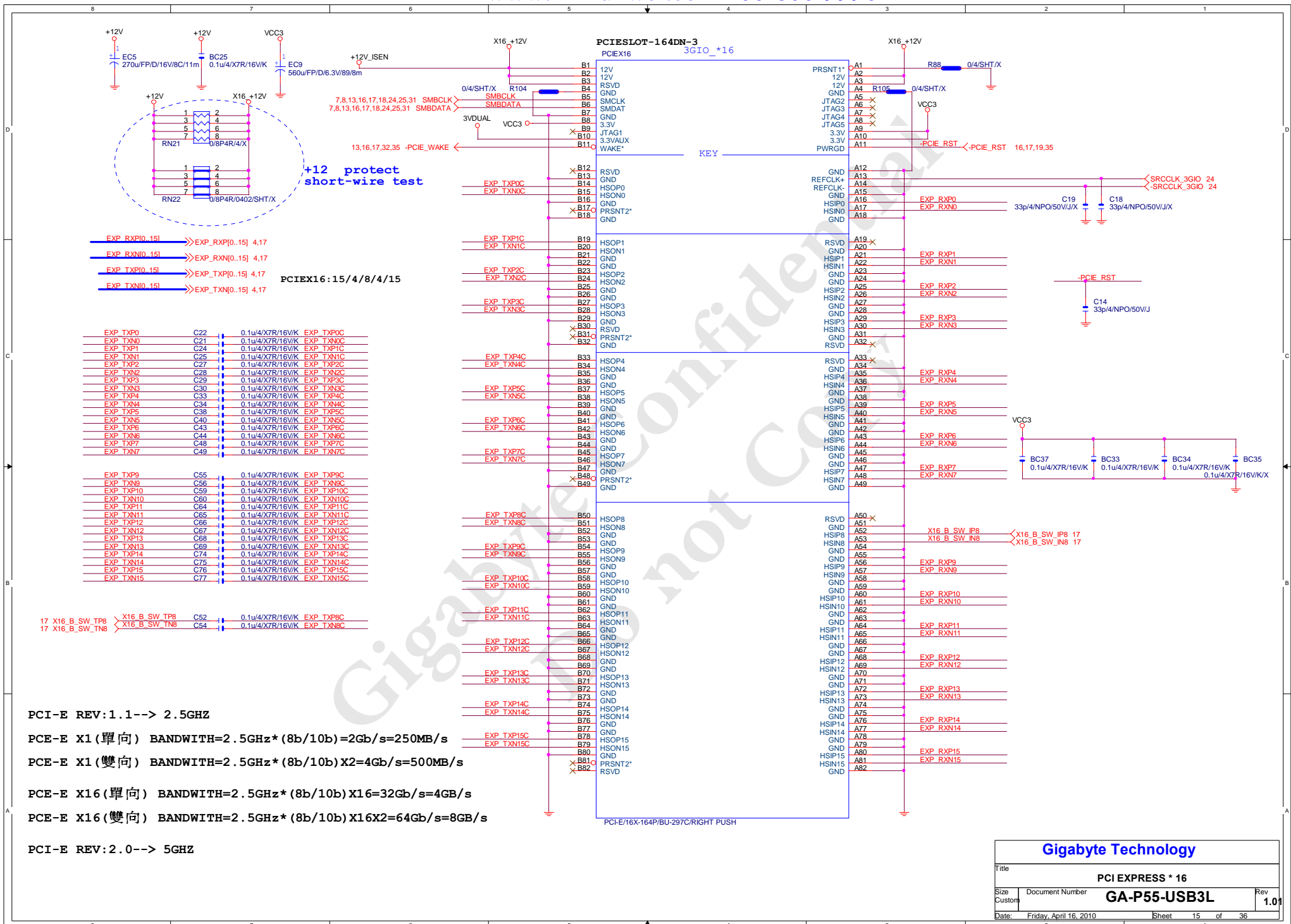


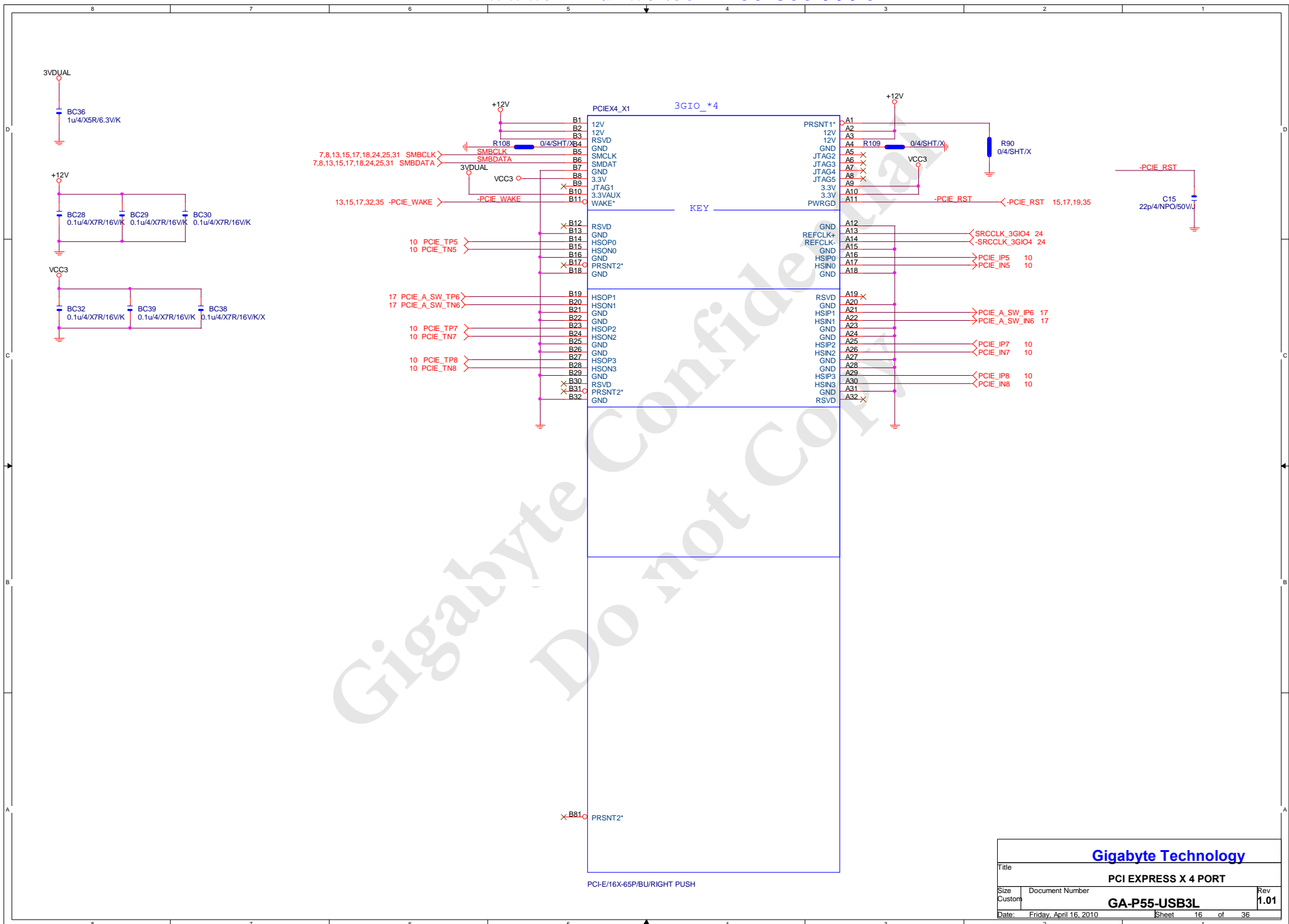




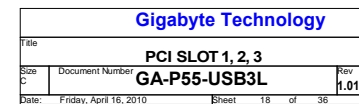
Gigabyte Technology

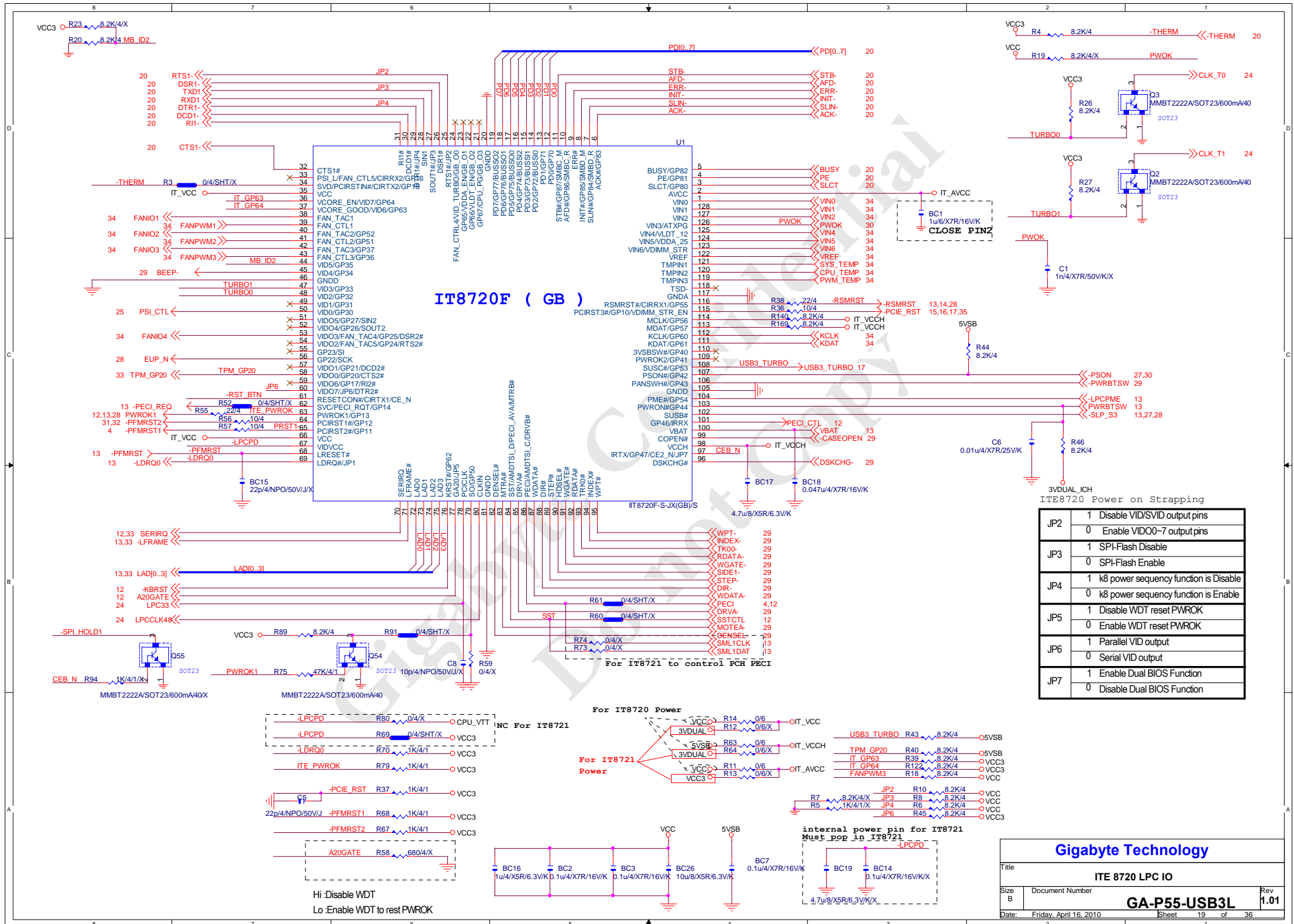
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Size	Document Number	GA-P55-USB3L	
Custom			
Date	Friday, April 16, 2010	Sheet	14 of 36



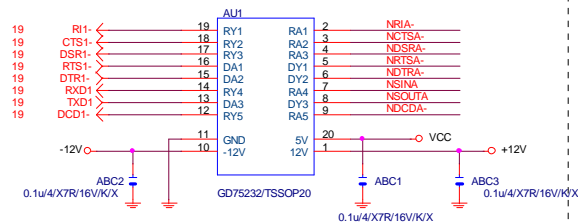


Gigabyte Technology			
Title			
PCI EXPRESS X 4 PORT			
Size	Document Number	Rev	
Custom	GA-P55-USB3L	1.01	
Date:	Friday, April 16, 2010	Sheet	16 of 36

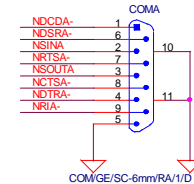
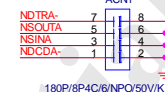
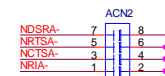
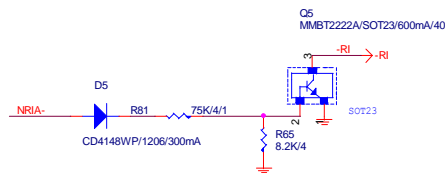




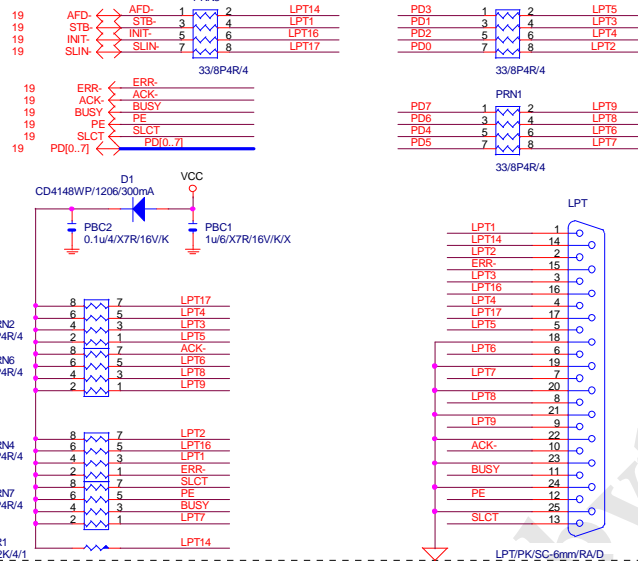
COMA



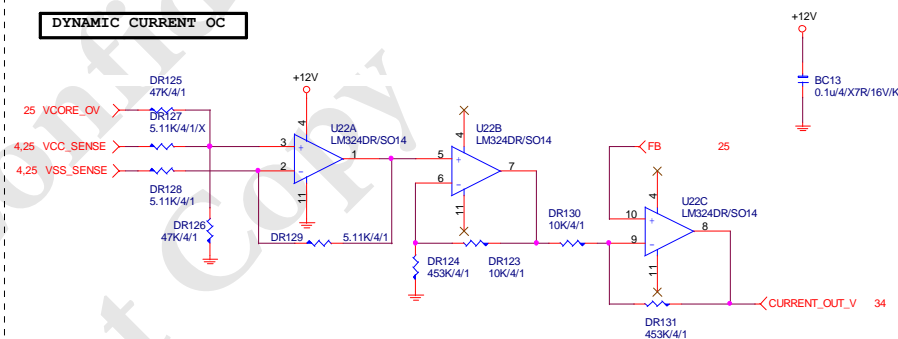
COM RI



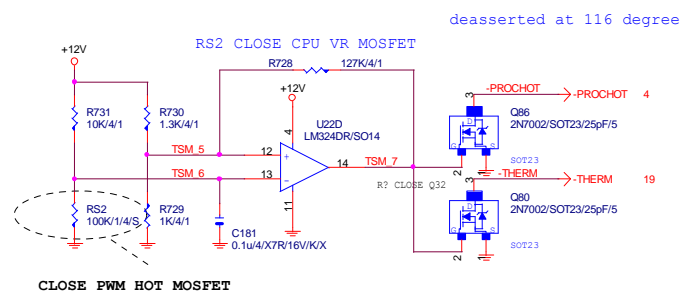
LPT PORT



DYNAMIC CURRENT OC



-PROHOT



Gigabyte Technology			
Title			
COM & PROHOT/Dynamic O.C.			
Size	Document Number	Rev	
Custom		GA-P55-USB3L	
Date:	Friday, April 16, 2010	Sheet	20 of 36

VCC3
BC215
0.1u/4/X7R/16V/K

r1.0 DG;0.7 CRB

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

1 means floating
0 means PD 1K

IC8SO-SOCKET need to check which
is right

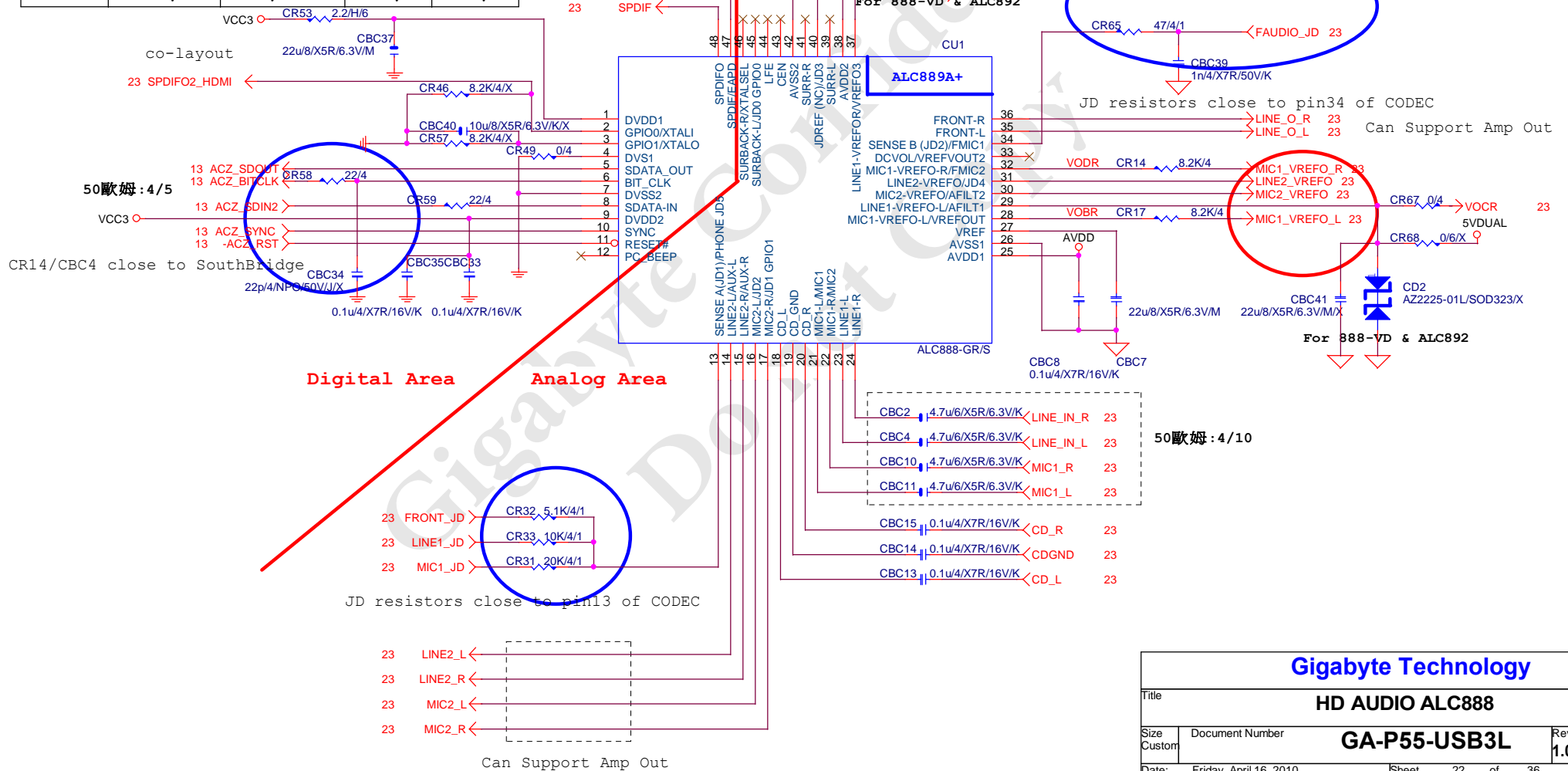
Gigabyte Confidential
Do not Copy

Gigabyte Technology			
Title		BIOS	
Size	Document Number	GA-P55-USB3L	Rev
Custom			1.01
Date:	Friday, April 16, 2010	Sheet	21 of 36

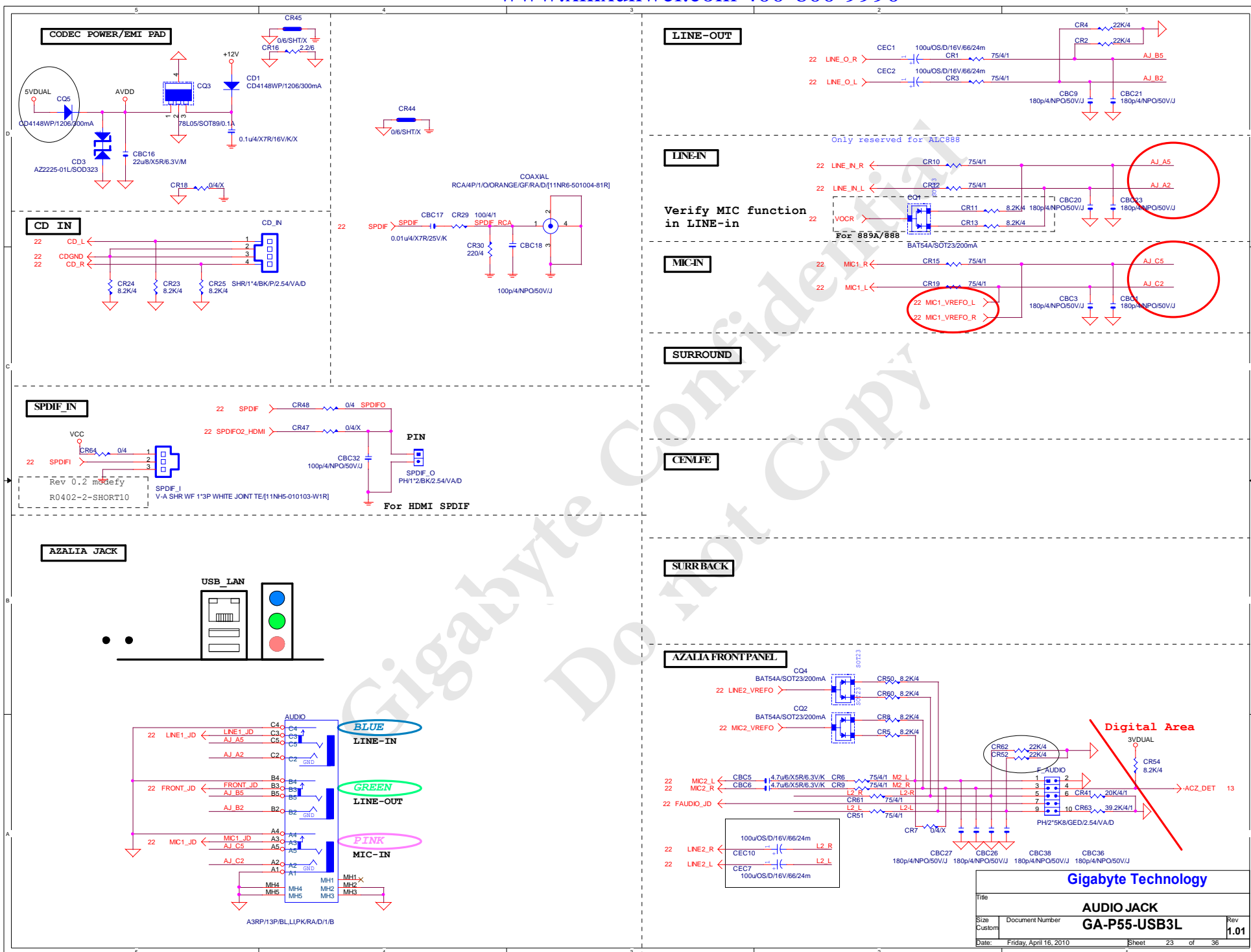
AZALIA CODEC

ALC889A+/ALC889A/ALC888Vx Colay

	ALC888-VA ALC888-VC2	ALC888S-VC ALC888B ALC892	ALC889A	ALC889A
CR49	O	X	O	O
CR46	X	X	O	X
CR57	X	X	O	X
CR47	X	O	X	O
CR48	O	X	O	X
CR26	20K/1%	20K/0.1%	20K/1%	20K/1%



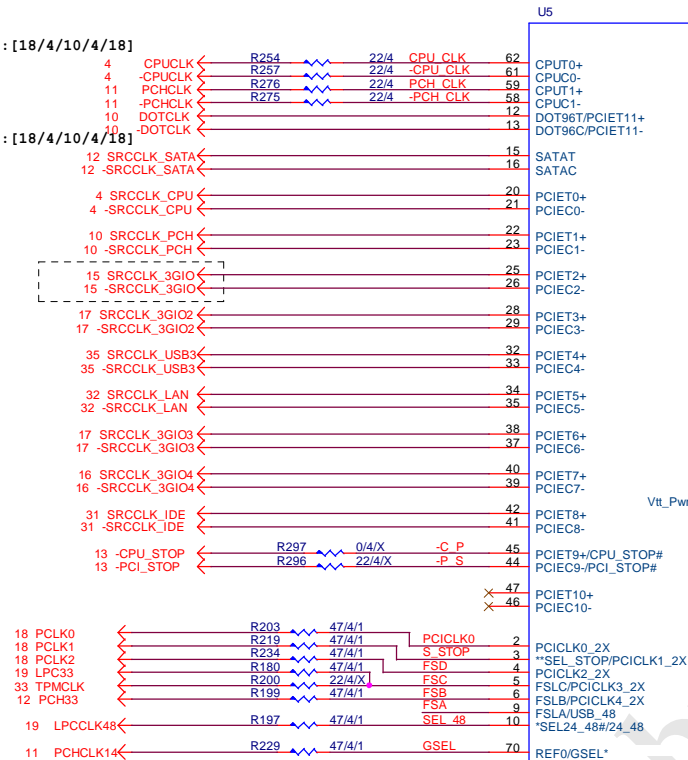
Gigabyte Technology			
Title			
HD AUDIO ALC888			
Size	Document Number	GA-P55-USB3L	
Custom		Rev 1.01	
Date:	Friday, April 16, 2010	Sheet	22 of 36



CLK GEN CK505

50 歐姆 : [18/4/10/4/18]

50 歐姆 : [18/4/10/4/18]



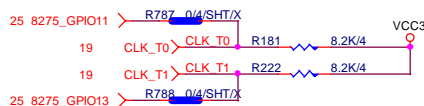
50 歐姆 : [4/10]

ICS9LPRS14EKL7-TMLF72

FSC	FSB	FSA	CPU
0	0	0	266MHz
0	0	1	133MHz
0	1	0	200MHz
0	1	1	166MHz
1	0	0	333MHz
1	1	0	400MHz

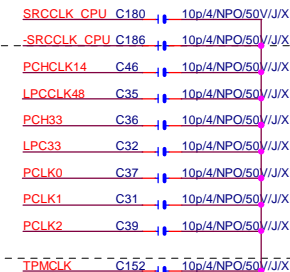
GSEL=1, 96MHz from 12/13
GSEL=0, 100MHz from 12/13

SEL_48=1, 24Mhz from pin10
SEL_48=0, 48Mhz from pin10



SEL_STOP: latched input to select pin functionality
1 = Selects pin 44/45 to be PCI_STOP#/CPU_STOP#
0 = Selects pin 44/45 to be PCIE outputs ;
3.3V PCICLK output

Rev 0.2 modify

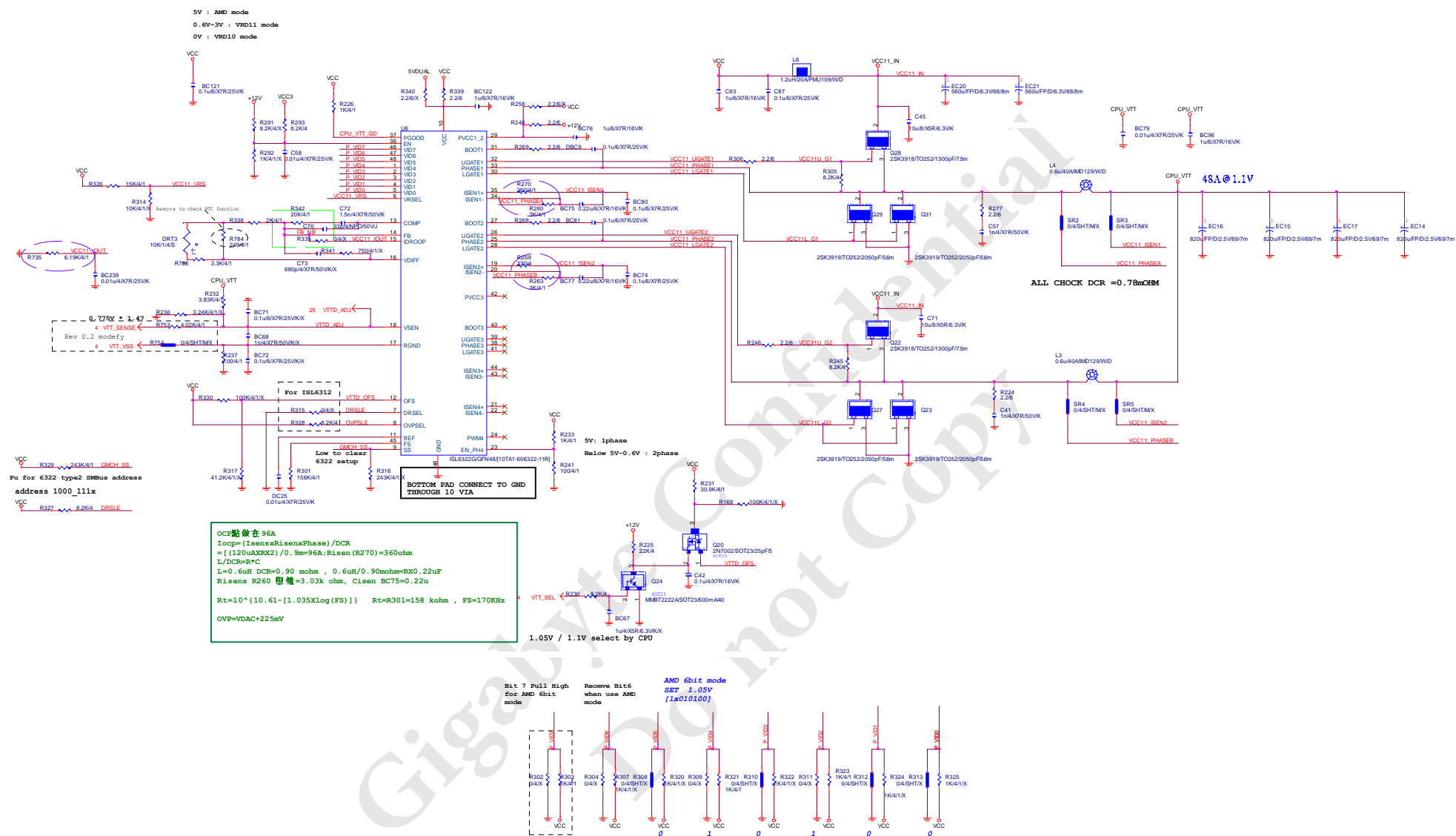


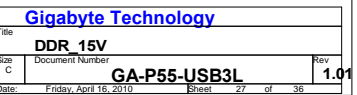
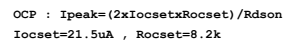
Rev 0.2 modify

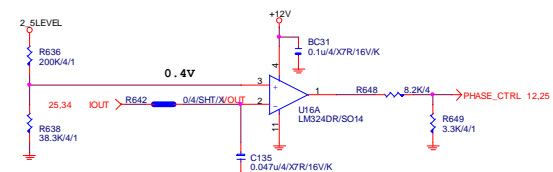
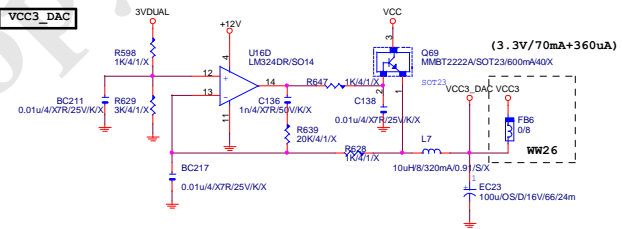
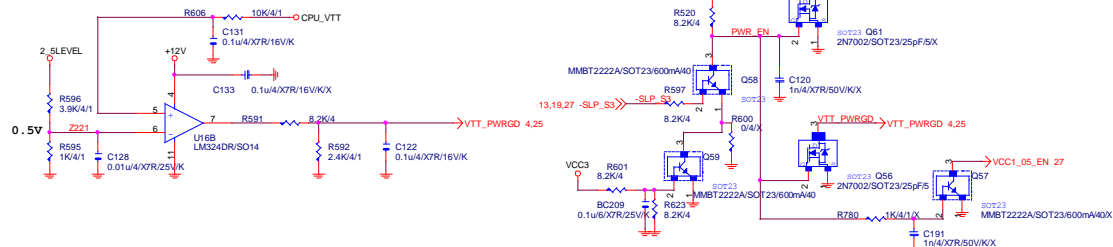
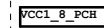
Gigabyte Technology

Title			CK505 CLK GEN
Size Custom			GA-P55-USB3L
Date: Friday, April 16, 2010			Rev 1.01
Sheet 24 of 36			

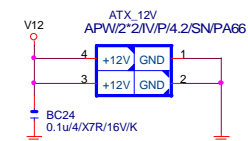


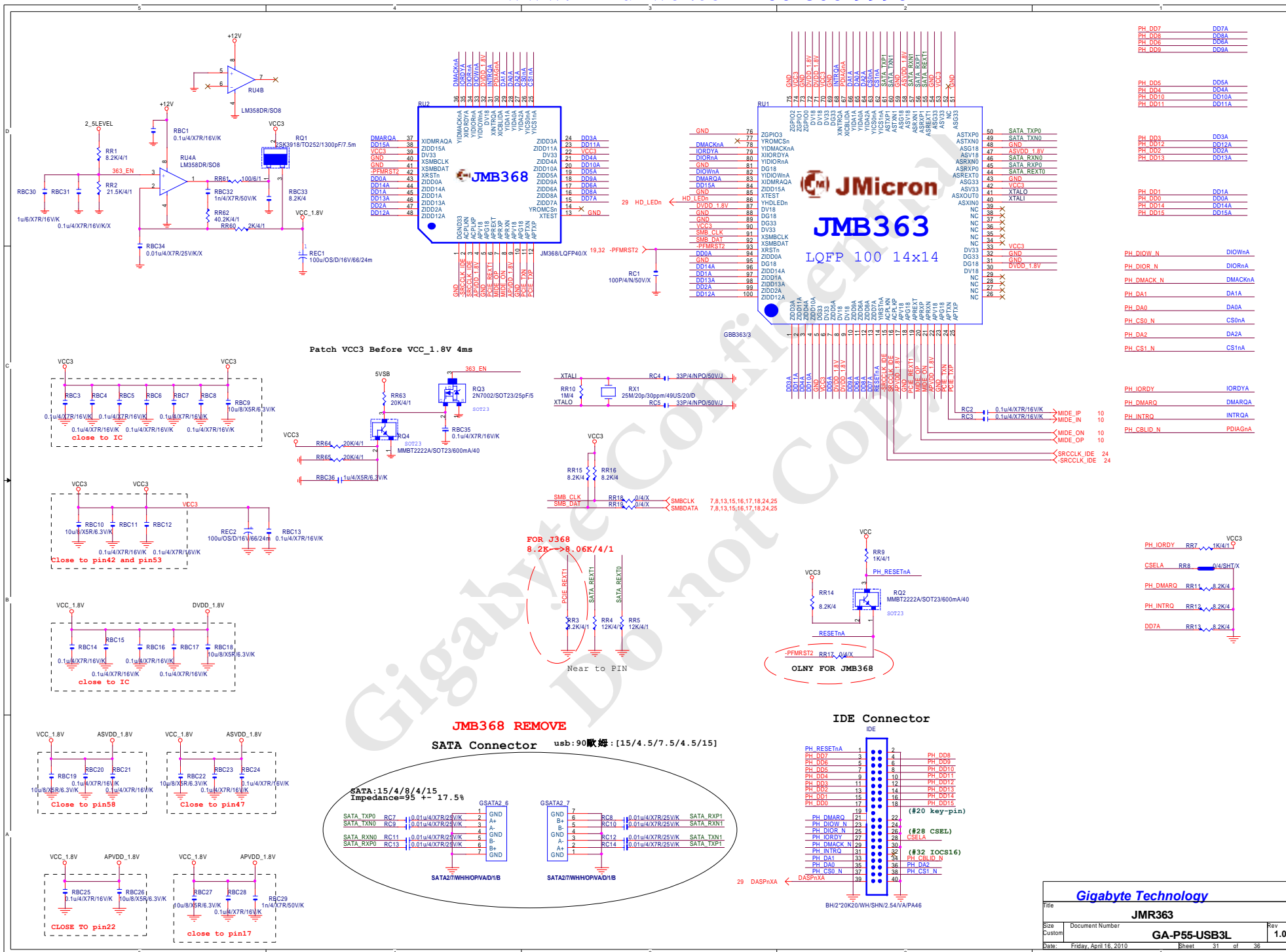






Gigabyte Technology			
Title			
DISCRETE POWER			
Size C	Document Number	GA-P55-USB3L	Rev 1.01
Date:	Friday, April 16, 2010	Sheet	28 of 38





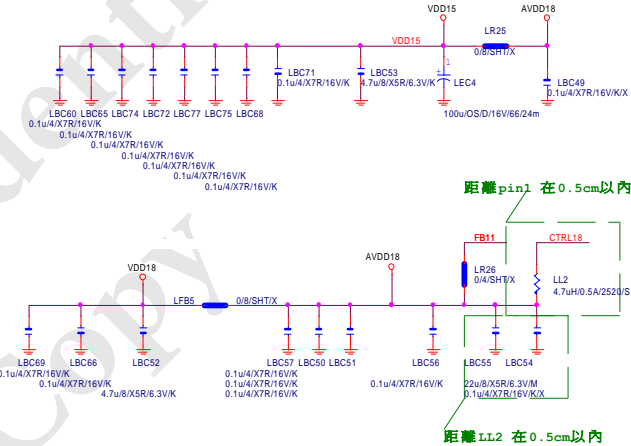
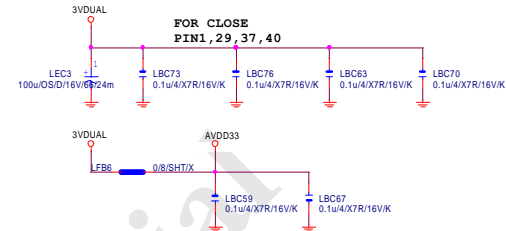
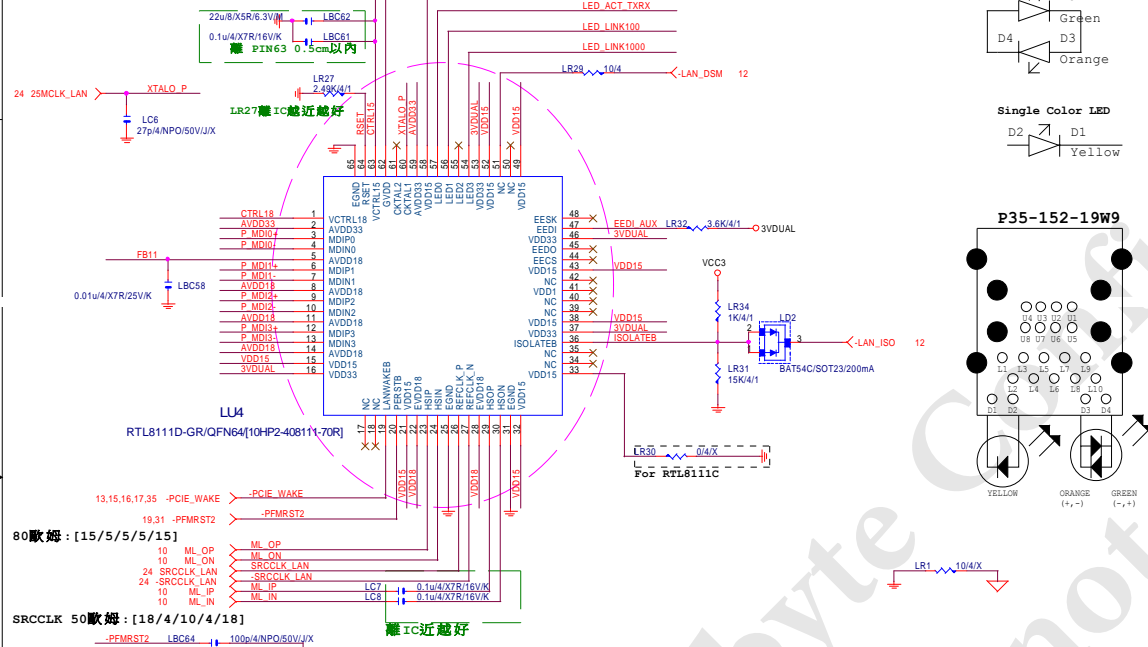
PCIE-1G LAN

Power domain chart

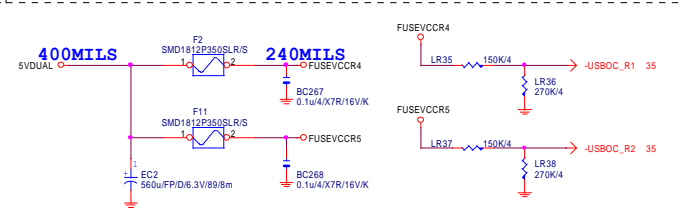
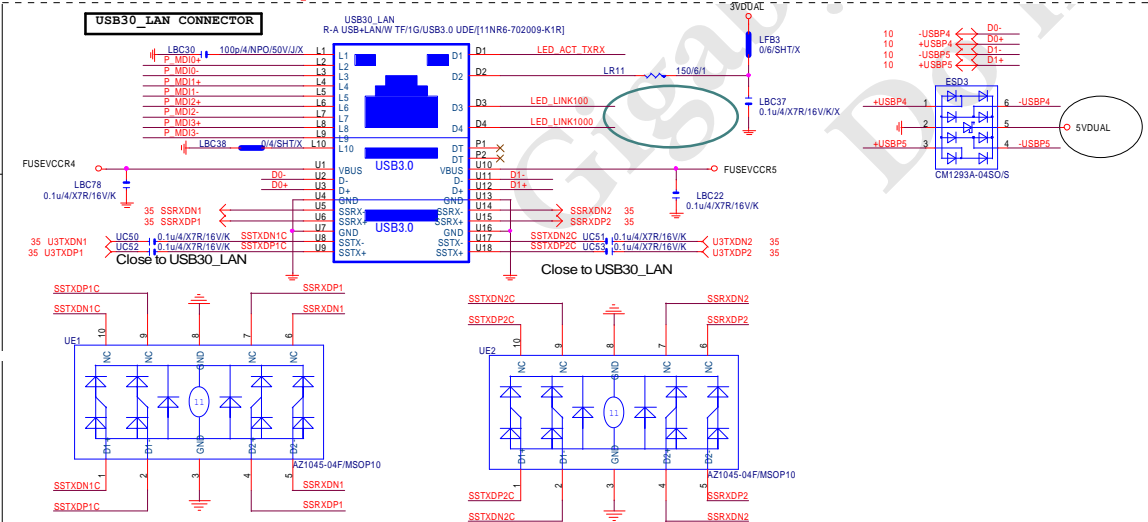
	RTL8111B/ RTL8101E	RTL8111C
AVDD33	3.3V	3.3V
AVDD18	1.8V	1.2V
EVDD18	1.8V	1.2V
VDD15	1.5V	1.2V

FOI
RT8

```
for RT8111B N/C
for RT8111C 0 ohm
(Internal Regulator)
for RT8111C N/C
(external Regulator)
```



USB30_LAN CONNECTOR

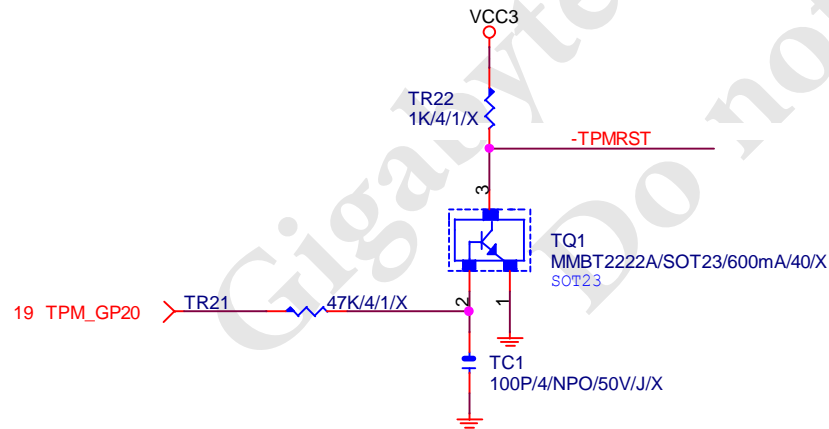
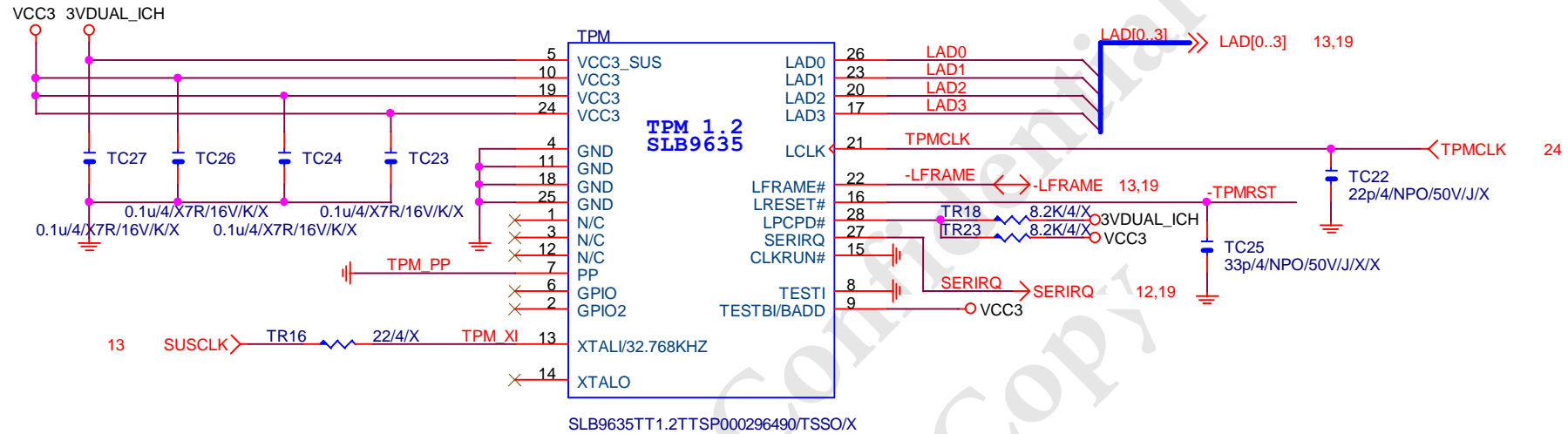


Gigabyte Technology

REALTEK RTL8111D

GA-P55-USB3L

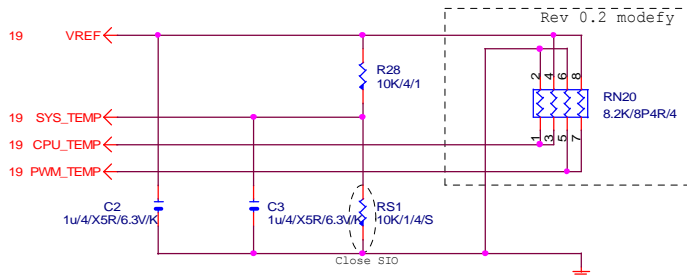
Rev	1.01
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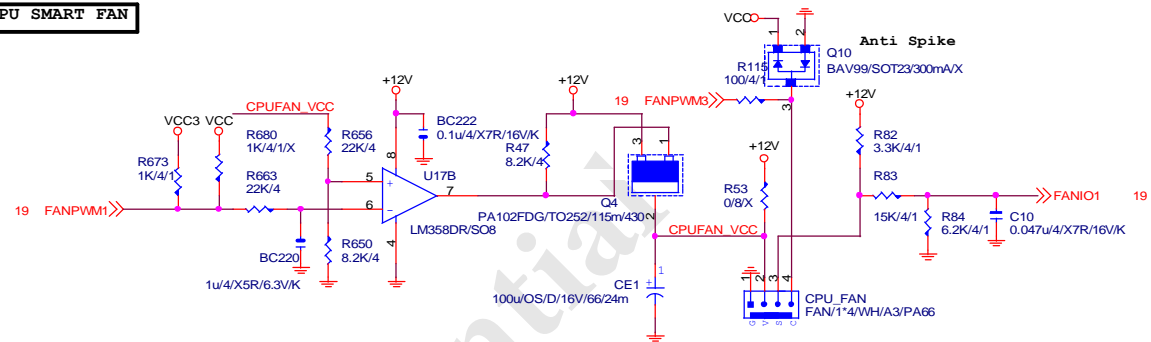
Gigabyte Technology

Title		
TPM I/F-SLB 9635 TT 1.2		
Size A	Document Number	Rev
	GA-P55-USB3L	1.01
Date:	Friday, April 16, 2010	Sheet 33 of 36

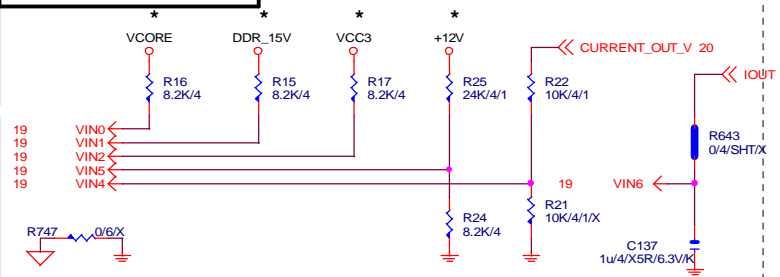
TEMP H/W MONITOR



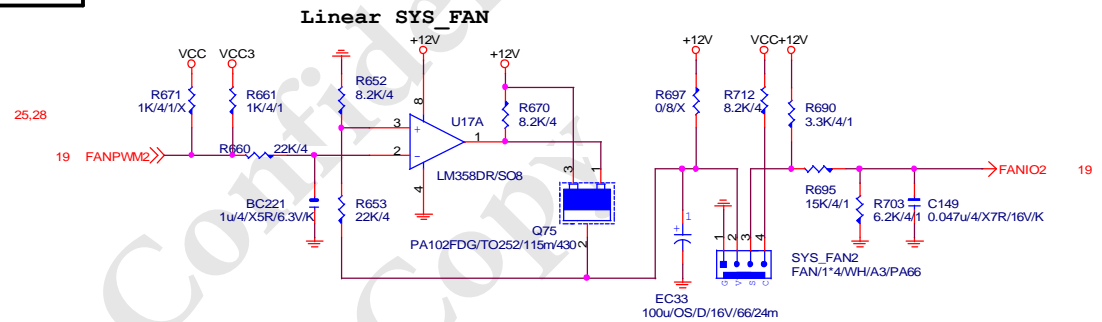
CPU SMART FAN



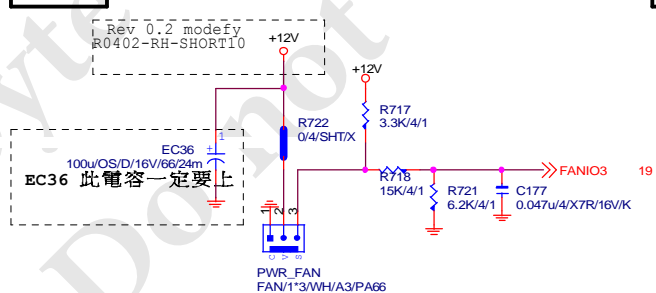
VOLTAGE-- H/W MONITOR



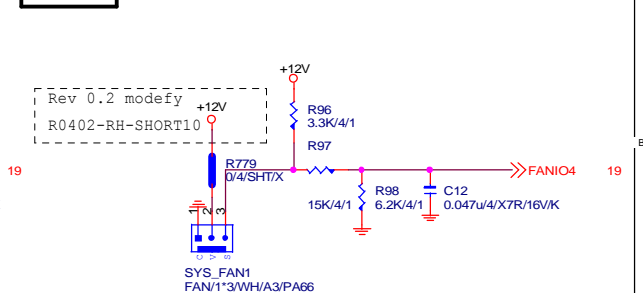
SYS FAN2



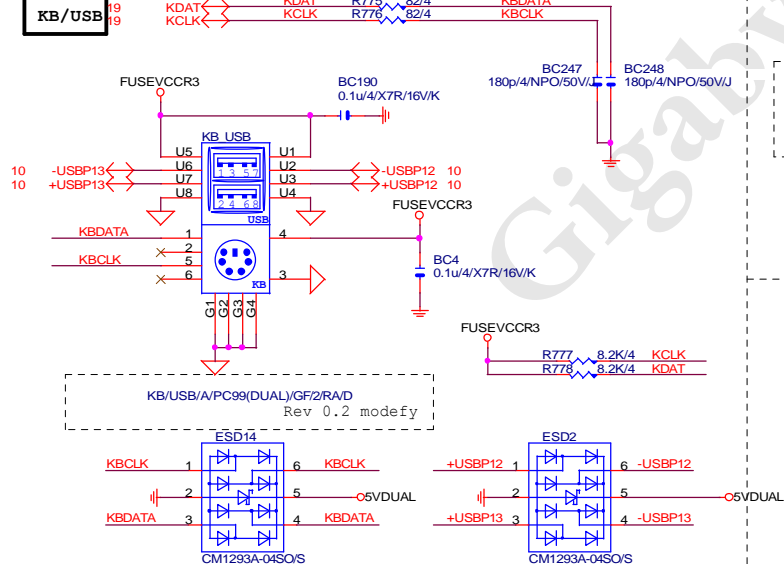
PWR FAN



SYS FAN1

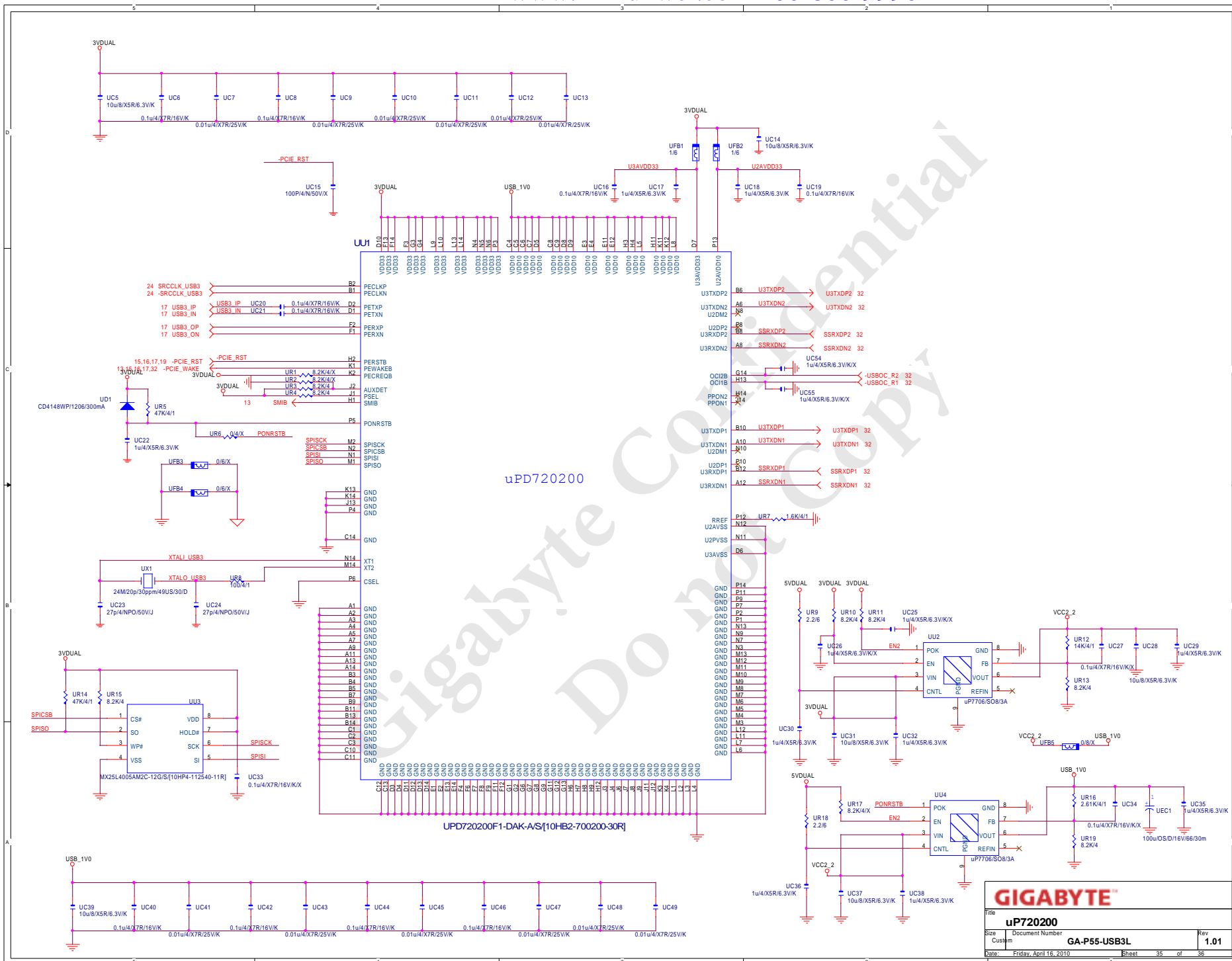


KB/USB



Gigabyte Technology

Title			HWM,KB/MS, FAN CTRL
Size	Document Number	GA-P55-USB3L	
Custom		Rev 1.01	
Date:	Friday, April 16, 2010	Sheet	34 of 36



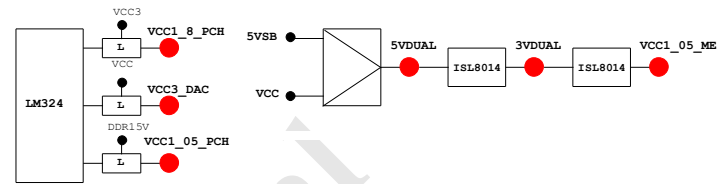
PCH GPIO LIST TABLE

PIN NAME	PWR	Default	USAG	NOTE
GP0	MAIN	H-Z	GPI -PECI_REQ	N/A
GP1/TACH1	MAIN		GPI ICH_FAN_TACH1	N/A
GP2/PIRQE#	MAIN		GPI -PIRQE	P/U 8.2K VCC3
GP3/PIRQF#	MAIN		GPI -PIRQF	P/U 8.2K VCC3
GP4/PIRQG#	MAIN		GPI -PIRQG	P/U 8.2K VCC3
GP5/PIRQH#	MAIN		GPI -PIRQH	P/U 8.2K VCC3
GP6/TACH2	MAIN		GPI ICH_FAN_TACH2	N/A
GP7/TACH3	MAIN		GPI ICH_FAN_TACH3	N/A
GP8	STBY	H	GPO GPIO8	P/U 8.2K 3VDUAL
GP9/OC5#	STBY		NATIVE OC5#	N/A
GP10/OC6#	STBY		NATIVE OC6#	N/A
GP11/SMBALERT#	STBY		NATIVE -SMBALERT	P/U 8.2K 3VDUAL
GP12	STBY	L	GPI LAN_PHY_PWR_CTRL	P/U 8.2K 3VDUAL
GP13	STBY	L	GPI GPIO13	P/U 8.2K 3VDUAL
GP14/OC7#	STBY		NATIVE OC7#	N/A
GP15	STBY	L	GPO GPIO15	N/A
GP16	MAIN		GPI -SKTOCC	P/U 8.2K VCC3
GP17/TACH0	MAIN		GPI ICH_FAN_TACH0	N/A
GP18	MAIN		NATIVE MB_ID0	P/D 8.2K GND
GP19	MAIN		GPI -LAN1_ISO	P/U 8.2K VCC3
GP20	MAIN		NATIVE LED_CTL	P/U 1K VCC3
GP21	MAIN		GPI VCC18_PCH_OV2	P/U 8.2K VCC3
GP22	MAIN	H-Z	GPI VCORE_OV3	P/U 8.2K VCC3
GP23	MAIN		NATIVE -LDRQ1	P/U 8.2K VCC3
GP24	STBY	L	GPO TLS	P/U 8.2K 3VDUAL
GP25	STBY		NATIVE -CPU_STOP	P/U 8.2K 3VDUAL
GP26	STBY		NATIVE -ACZ_DET	P/U 8.2K 3VDUAL
GP27	STBY	H	GPO GPIO27	P/U 8.2K 3VDUAL
GP28	STBY	H	GPO GPIO28	P/U 8.2K 3VDUAL
GP29	STBY	L	GPI GPIO29	N/A
GP30	STBY	H-Z	GPI S_PWR_ACK	P/U 100K 3VDUAL
GP31	STBY	H-Z	GPI N/A(Reverse)	P/U 8.2K VCC3
GP32	MAIN	H	GPO MB_ID1	P/D 8.2K GND
GP33	MAIN	H	GPO LOAD-LINE	P/U 1K VCC3
GP34	MAIN	H-Z	GPI -PCI_STOP	P/U 8.2K VCC3
GP35	MAIN	L	GPO GPIO35	P/U 8.2K VCC3
GP36	MAIN		GPI -LAN1_DSM	P/U 8.2K VCC3
GP37	MAIN		GPI N/A	P/U 8.2K VCC3
GP38	MAIN	H-Z	GPI VCORE_OV2	P/U 8.2K VCC3
GP39	MAIN	H-Z	GPI -LAN_DSM	P/U 8.2K VCC3
GP40	STBY		NATIVE OCL#	N/A
GP41	STBY		NATIVE OC2#	N/A
GP42	STBY		NATIVE OC3#	N/A
GP43	STBY		NATIVE OC4#	N/A
GP44	STBY	L	NATIVE N/A	P/U 8.2K 3VDUAL
GP45	STBY		NATIVE -LPCPME	P/U 8.2K 3VDUAL
GP46	STBY	L	NATIVE PWR_LED	P/U 8.2K 3VDUAL
GP47	STBY		NATIVE PSI_LED	P/U 8.2K 3VDUAL
GP48	MAIN	H-Z	IN EN_PWM	P/U 8.2K VCC3
GP49	MAIN	H-Z	IN VCC18_OV1	P/U 8.2K VCC3
GP50	MAIN		NATIVE -REQ1	P/U 2.2K VCC
GP51	MAIN	H	NATIVE -GNT1	N/A
GP52	MAIN		NATIVE -REQ2	P/U 2.2K VCC
GP53	MAIN	H	NATIVE -GNT2	N/A
GP54	MAIN		NATIVE -REQ3	P/U 2.2K VCC
GP55	MAIN	H	NATIVE -GNT3	N/A
GP56	STBY		NATIVE N/A(Reverse)	P/U 8.2K 3VDUAL
GP57	STBY	H-Z	IN VCORE_OV1	P/U 8.2K 3VDUAL
GP58	STBY	H-Z	NATIVE F_USB_OC	P/U 8.2K 3VDUAL
GP59	STBY		NATIVE USB_OCO#	N/A
GP60	STBY	H-Z	NATIVE N/A(Reverse)	P/U 8.2K 3VDUAL
GP61	STBY	L	NATIVE -SUSTAT	N/A
GP62	STBY	L	NATIVE SUSCLK	N/A
GP63	STBY	L	NATIVE GPIO63	N/A
GP64	MAIN	L	NATIVE CLKOUTFLEX0	N/A
GP65	MAIN	L	NATIVE CLKOUTFLEX1	N/A
GP66	MAIN	L	NATIVE CLKOUTFLEX2	N/A
GP67	MAIN	L	NATIVE CLKOUTFLEX3	N/A
GP72	STBY	H-Z	NATIVE VCORE_OV4	P/U 8.2K 3VDUAL
GP73	STBY		NATIVE 1_05V_OV1	P/U 8.2K 3VDUAL
GP74	STBY	H-Z	NATIVE 1_05V_OV2	P/U 8.2K 3VDUAL
GP75	STBY	H-Z	NATIVE N/A(Reverse)	P/U 8.2K 3VDUAL

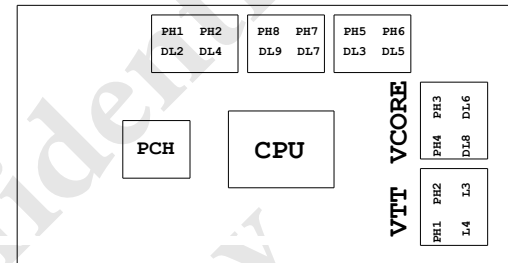
Super I/O ITE8720 GPIO Table

PIN NAME	USAG	NOTE
SVC/PECI_RQT/GP14	-PECI_REQ	
PWROK1/GP13	PWROK1/ITE_PWROK	
KRST#/GP62	-KBRST	
SO/GP50	-ICH_SPI_CS	
IRTX/GP47/CE2_N/JP7	CEB_N	
GP46/IRRX	-LAN2_DSM	
PSION#/GP42	-PSON	
PWROK2#/GP41	PECI_CTL	
PCIRST3#/GP10/VDIMM_STR_EN	-PCIE_RST	
RSMRST#CIRRX1/GP55	-RSMRST	
PME#/GP54	-LPCPME	
PD5/GP75/BUSS00	N/A	

PIN NAME	USAG	NOTE
FAN_TAC2/GP52	FANIO2	
FAN_TAC3/GP37	FANIO3	
VIDO3/FAN_TAC4/GP25/DSR2#	FANIO4	
FAN_CTL2/GP51	FANPWM2	
FAN_CTL3/GP36	FANPWM3	
VID4/GP34	BEEP-	
VID3/GP33	TURBO1	
VID2/GP32	TURBO0	
VCORE_GOOD/VID6/GP63	CPUT_LED1_C	
VID5/GP35	CPUT_LED2_C	
VID1/GP31	CPUT_LED3_C	
VID0/GP30	-LAN1_DSM	NBT_LED1_C
SLCT/GP80	CPU_LED1_C	
PE/GP81	CPU_LED2_C	
BUSY/GP82	CPU_LED3_C	
PD3/GP73/BUSSI1	SB_LED1_C	
PD4/GP74/BUSSI2	SB_LED2_C	
VCORE_EN/VID7/GP64	IT_GP64	SB_LED3_C
PD0/GP70	NB_LED1_C	
PD1/GP71	NB_LED2_C	
PD2/GP72/BUSSI0	NB_LED3_C	
GP22/SCK	LOW_PWR_1	
VID05/GP27/SIN2	LOW_PWR_2	
PCIRST2#/GP11	-PFMRST1	
PCIRST1#/GP12	-PFMRST2	
3VSB5W#/GP40	CSI_F0	BSEL166_1
SUSC#/GP53	CSI_F1	BSEL166_2
GP23/SI	BSEL166_3/CSISBSL	
VID00/GP20/CTS2#	CPUT_LED1_C	BSEL166_4
GP65/VDDA_EN/GB_01	MB_ID2	
PD6/GP76/BUSS01	MB_ID3	
PD7/GP77/BUSS02	MB_ID4	
AFD#/GP86/SMB_C_R	SEC_PIN	FST_2X8
INIT#/GP85/SMB_D_M	SEC_2x8	GTLREF_AD2
ACK#/GP83	DDR_LED1_C	
VID01/GP21/DCD2#	DDR_LED2_C	
STB#/GP87/SMB_C_M	DDR_LED3_C	
PWRON#/GP44	VCORE_OV1	
PANSWH#/GP43	PWRBTW	
KDAT/GP61	-PWRBTW	
KCLK/GP60	KDAT	
MDAT/GP57	KCLK	
MACL/GP56	MDAT	
GP66/VLDT_EN/GB_02	NBT_LED1_C	MCLK
SVD/PCIRSTIN#/CIRRX/GP15	PWM2_CR	
KDAT/GP61	PWM2_CR	
GP67/CPU_PG/GB_03	EN_LOADLINE	IT_GP67/-EN_PWM2
SLIN#/GP84/SMB_D_R	-EN_PWM2	
PSI_L/FAN_CLT5/CIRRX2/GP16	-THERM	
VID04/GP26/SOUT2	DDR18V_PH2_EN	
VID02/FAN_TAC5/GP24/DSR2#	DDR18V_LED	
VID06/GP17/RI2#	1_1V_PH_EN	
VID07/JP6/DTR2#	JP6	
PD5/GP75/BUSS00	SB_LED3_C	



PWM各相位的擺法如下：



BIOS超電壓對應表：

線路圖名稱	BIOS選項
Vcore	CPU Vcore
CPU_VTT	CPU Termination
CPU_VAXG	CPU Graphic Core
VCC1_8_PCH	CPU PLL
VCC1_05_PCH	PCH core
3VDUAL	3VDUAL
DDR15V	DRAM voltage
DDRVTT	DRAM Termination
VREF_CA_A/VREF_CA_B	DRAM Address Ref
VREF_DQ_A/VREF_DQ_B	DRAM Data Ref

散熱模組料號：

8IBP:
 1.12SP2-01A001-Y1R/Y2R
 2.12SP2-01A001-Z1R/Z2R
 (HIBRID模組)包材階

	3 pin FAN control	4 pin FAN control	FAN speed	Controller
CPU FAN	FANPWM1 ICH_FAN_PWM2	FANPWM3 ICH_FAN_PWM0	FANIO1 ICH_FAN_TACH0	IT8720 PCH
SYS FAN	FANPWM2 ICH_FAN_PWM1	N/A	FANIO2 ICH_FAN_TACH1	IT8720 PCH
PWR FAN	N/A	N/A	FANIO3 ICH_FAN_TACH2	IT8720 PCH

Gigabyte Technology

TABLE LIST			
Size	Document Number	Rev	
C	GA-P55-USB3L	t.01	
Date	Friday, April 16, 2010	Sheet	38 of 38