

Model Name: GA-P55-USB3

2.0

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 1,2,3
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 ISL6334ACR
26	CPU VTT PWM ISL6322G
27	DDR 15V & VCC1 05 PCH PWM ISL6545CBZ

SHEET TITLE

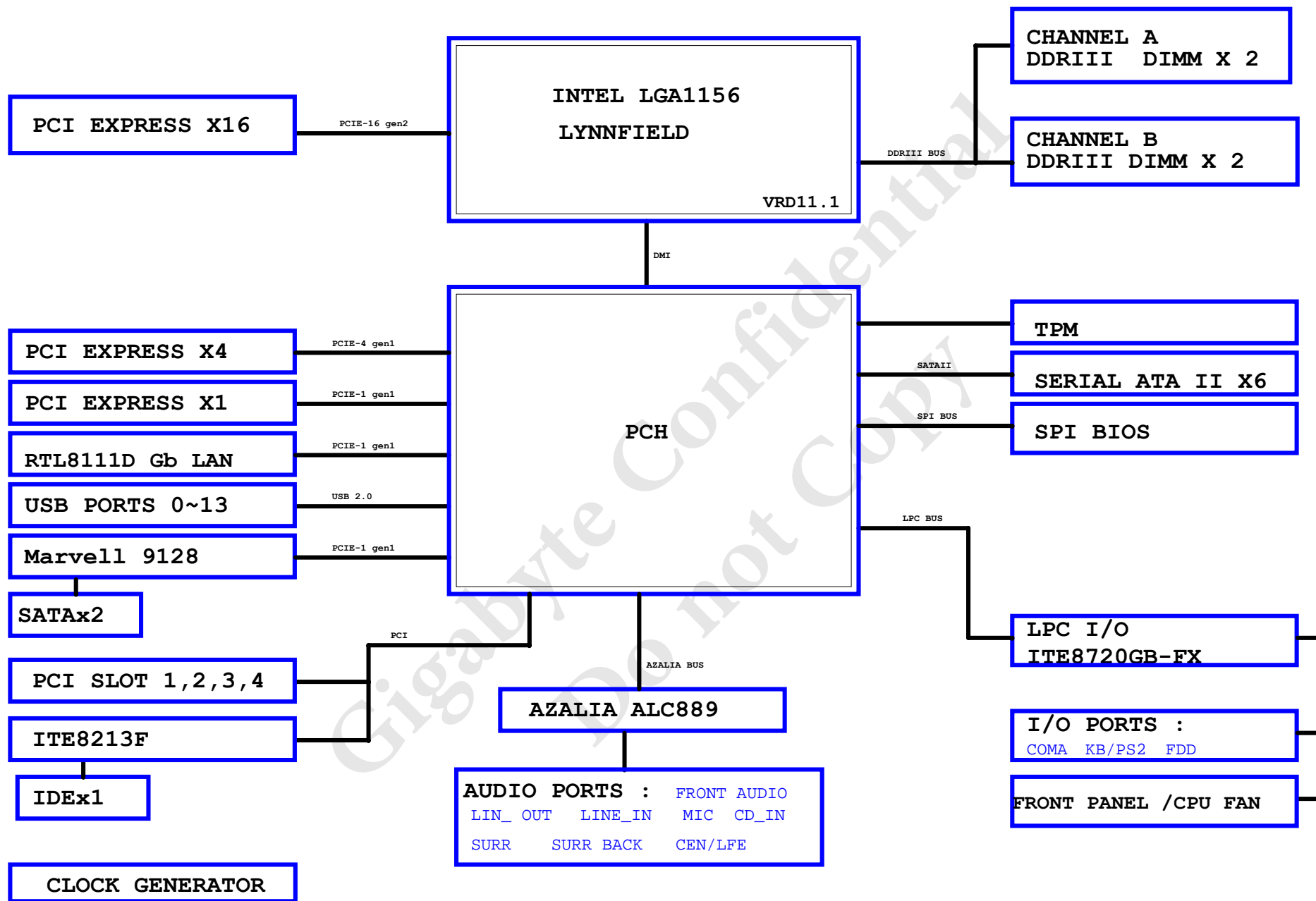
28	DISCRETE POWER
29	F PANEL , F USB , FDD
30	ATX POWER
31	Marvell 9128
32	REALTEK RTL8111D
33	TPM SLB9635TT
34	HWM,KB/MS , FAN CTRL
35	ESATA JMB362
36	IT8213-1 PATA
37	UP72022
38	TABLE LIST
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Gigabyte Technology

Title			
Cover Sheet			
Size	Document Number	GA-P55-USB3	Rev
Custom			2.0
Date:	Thursday, February 04, 2010	Sheet	1 of 37

BLOCK DIAGRAM

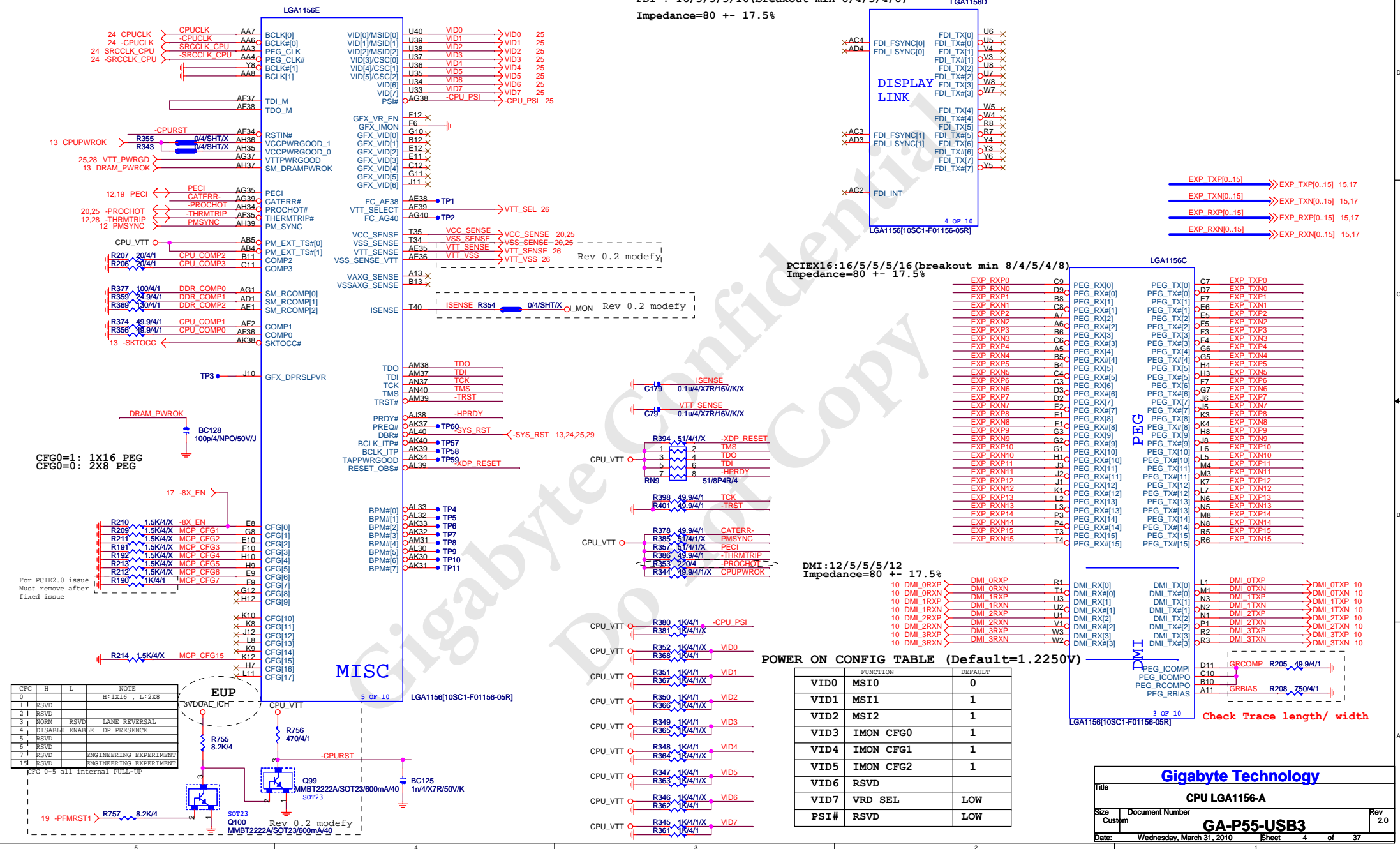
www.xinxunwei.com 400-800-9990



FDI : 16/5/5/16(breakout min 8/4/5/4/8)

Impedance=80 +- 17.5%

LGA1156D



LGA1156A

MAAA0	AW18	SA_MA[0]	SA_DS[0]	AK3	DQSA0
MAAA1	AY15	SA_MA[1]	SA_DS[1]	AK3	-DQSA0
MAAA2	AV15	SA_MA[2]	SA_DM[0]	AK2	DMA0
MAAA3	AU15	SA_MA[3]			
MAAA4	AW14	SA_MA[4]	SA_DS[0]	AH1	MDA0
MAAA5	AY13	SA_MA[5]	SA_DS[1]	AJ4	MDA1
MAAA6	AV14	SA_MA[6]	SA_DS[2]	AJ2	MDA2
MAAA7	AW13	SA_MA[7]	SA_DS[3]	AL1	MDA3
MAAA8	AU14	SA_MA[8]	SA_DS[4]	AG2	MDA4
MAAA9	AW12	SA_MA[9]	SA_DS[5]	AH2	MDA5
MAAA10	AT19	SA_MA[10]	SA_DS[6]	AK1	MDA6
MAAA11	AU13	SA_MA[11]	SA_DS[7]	AK2	MDA7
MAAA12	AW11	SA_MA[12]			
MAAA13	AU24	SA_MA[13]	SA_DS[11]	AP2	DQSA1
MAAA14	AT11	SA_MA[14]	SA_DS[11]	AP3	-DQSA1
MAAA15	AR10	SA_MA[15]	SA_DM[1]	AN1	DMA1
7 -SWEA	-SWEA	AT22	SA_WE#	AN3	MDA8
7 -SCASA	-SCASA	AU22	SA_DS[8]	AN2	MDA9
7 -SRASA	-SRASA	AT20	SA_DS[9]	AR3	MDA10
			SA_DS[10]	AR2	MDA11
7 SBAA0	SBAA0	AV20	SA_BS[0]	AR2	MDA12
7 SBAA1	SBAA1	AU19	SA_DS[12]	AM3	MDA13
7 SBAA2	SBAA2	AU12	SA_BS[1]	AP1	MDA14
			SA_DS[14]	AR4	MDA15
			SA_DS[15]		
7 -CSA0	-CSA0	AV21	SA_CS#0	AT4	MDA16
7 -CSA1	-CSA1	AW24	SA_DS[2]	AJ4	DQSA2
7 -CSA2	-CSA2	AU21	SA_DS[2]	AJ3	-DQSA2
7 -CSA3	-CSA3	AU23	SA_DS[2]	AU1	DMA2
			SA_DS[2]		
7 CKEA0	CKEA0	AU10	SA_CKE[0]	AT4	MDA16
7 CKEA1	CKEA1	AW10	SA_DS[16]	AJ2	MDA17
7 CKEA2	CKEA2	AV10	SA_CKE[1]	AJ3	MDA18
7 CKEA3	CKEA3	AY10	SA_CKE[2]	AW4	MDA19
			SA_DS[19]	AT3	MDA20
			SA_DS[20]	AT1	MDA21
MODT_A0	AV23	SA_ODT[0]	SA_DS[21]	AV2	MDA22
MODT_A1	AV24	SA_ODT[1]	SA_DS[22]	AV4	MDA23
MODT_A2	AW23	SA_ODT[2]	SA_DS[23]		
MODT_A3	AY24	SA_ODT[3]			
			SA_DS[3]	AY6	DQSA3
7 DCLKA0	DCLKA0	AR22	SA_DS[3]	AW6	-DQSA3
7 DCLKA0	DCLKA0	AR21	SA_DM[3]	AW6	DMA3
7 DCLKA1	DCLKA1	AP18			
7 DCLKA1	DCLKA1	AN18	SA_CK[0]	AW5	MDA24
7 DCLKA1	DCLKA1	AN18	SA_CK[1]	AJ5	MDA25
7 DCLKA2	DCLKA2	AN21	SA_CK[2]	AJ8	MDA26
7 DCLKA2	DCLKA2	AP21	SA_CK[3]	AY8	MDA27
7 DCLKA3	DCLKA3	AP19	SA_CK[4]	AJ5	MDA28
7 DCLKA3	DCLKA3	AN19	SA_CK[5]	AW6	MDA29
			SA_DS[29]	AV7	MDA30
7.8 -DDR3_RST	-DDR3_RST	AV8	SA_DS[30]	AW7	MDA31
			SA_DS[31]		
			SA_DS[32]	AR28	DQSA4
			SA_DS[33]	AT29	-DQSA4
			SA_DS[34]	AN29	DMA4
			SA_DS[35]		
			SA_DS[36]	AN27	MDA32
			SA_DS[37]	AT28	MDA33
			SA_DS[38]	AP28	MDA34
			SA_DS[39]	AP30	MDA35
			SA_DS[40]	AN26	MDA36
			SA_DS[41]	AR27	MDA37
			SA_DS[42]	AR29	MDA38
			SA_DS[43]	AN30	MDA39
			SA_DS[44]		
			SA_DS[45]	AV32	DQSA5
			SA_DS[46]	AW32	-DQSA5
			SA_DS[47]	AW31	DMA5
			SA_DS[48]		
			SA_DS[49]	AN30	MDA40
			SA_DS[50]	AJ31	MDA41
			SA_DS[51]	AV33	MDA42
			SA_DS[52]	AJ34	MDA43
			SA_DS[53]	AW30	MDA44
			SA_DS[54]	AW33	MDA45
			SA_DS[55]	AW33	MDA46
			SA_DS[56]	AW33	MDA47
			SA_DS[57]		
			SA_DS[58]	AW36	DQSA6
			SA_DS[59]	AW35	-DQSA6
			SA_DS[60]	AW35	DMA6
			SA_DS[61]		
			SA_DS[62]	AW35	MDA48
			SA_DS[63]	AY35	MDA49
			SA_DS[64]	AV37	MDA50
			SA_DS[65]	AJ37	MDA51
			SA_DS[66]	AY34	MDA52
			SA_DS[67]	AW34	MDA53
			SA_DS[68]	AW36	MDA54
			SA_DS[69]	AW37	MDA55
			SA_DS[70]		
			SA_DS[71]	AR38	DQSA7
			SA_DS[72]	AR38	-DQSA7
			SA_DS[73]	AT38	DMA7
			SA_DS[74]		
			SA_DS[75]	AT38	MDA56
			SA_DS[76]	AT40	MDA57
			SA_DS[77]	AN38	MDA58
			SA_DS[78]	AN38	MDA59
			SA_DS[79]	AJ38	MDA60
			SA_DS[80]	AP39	MDA61
			SA_DS[81]	AP40	MDA62
			SA_DS[82]		
			SA_DS[83]	AP40	MDA63

DDR_A

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LGA1156[10SC1-F01156-05R]

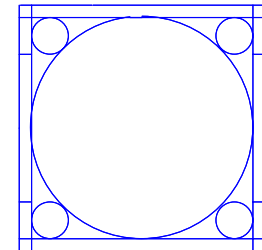
LGA1156B

MAAB0	AU20	SB_MA[0]	SB_DS[0]	AF4	DQSB0
MAAB1	AU18	SB_MA[1]	SB_DS[1]	AE5	-DQSB0
MAAB2	AV18	SB_MA[2]	SB_DS[2]	AE4	DMB0
MAAB3	AU17	SB_MA[3]	SB_DS[3]		
MAAB4	AY18	SB_MA[4]	SB_DS[4]	AD7	MDB0
MAAB5	AV17	SB_MA[5]	SB_DS[5]	AD6	MDB1
MAAB6	AW17	SB_MA[6]	SB_DS[6]	AH8	MDB2
MAAB7	AU16	SB_MA[7]	SB_DS[7]	AJ8	MDB3
MAAB8	AY16	SB_MA[8]	SB_DS[8]	AC7	MDB4
MAAB9	AT17	SB_MA[9]	SB_DS[9]	AC6	MDB5
MAAB10	AY25	SB_MA[10]	SB_DS[10]	AE5	MDB6
MAAB11	AW16	SB_MA[11]	SB_DS[11]	AE6	MDB7
MAAB12	AW15	SB_MA[12]	SB_DS[12]	AH6	DQSB1
MAAB13	AW28	SB_MA[13]	SB_DS[13]	AJ5	-DQSB1
MAAB14	AY12	SB_MA[14]	SB_DS[14]	AH4	DMB1
MAAB15	AV11	SB_MA[15]	SB_DS[15]		
			SB_DS[16]	AG5	MDB8
8 -SWEB	-SWEB	AU26	SB_DS[17]	AH7	MDB9
8 -SCASB	-SCASB	AW22	SB_DS[18]	AK9	MDB10
8 -SRASB	-SRASB	AW26	SB_DS[19]	AL4	MDB11
			SB_DS[20]	AG6	MDB12
8 SBAB0	SBAB0	AU25	SB_DS[21]	AJ7	MDB13
8 SBAB1	SBAB1	AV12	SB_DS[22]	AK7	MDB15
8 SBAB2	SBAB2	AV12	SB_DS[23]		
			SB_DS[24]	AN6	DQSB2
8 -CSB0	-CSB0	AY27	SB_DS[25]	AM6	-DQSB2
8 -CSB1	-CSB1	AW26	SB_DS[26]	AM7	DMB2
8 -CSB2	-CSB2	AV26	SB_DS[27]		
8 -CSB3	-CSB3	AV26	SB_DS[28]	AL6	MDB16
			SB_DS[29]	AN6	MDB17
8 CKEB0	CKEB0	AW8	SB_DS[30]	AP6	MDB18
8 CKEB1	CKEB1	AY9	SB_DS[31]	AR5	MDB19
8 CKEB2	CKEB2	AU9	SB_DS[32]	AL5	MDB20
8 CKEB3	CKEB3	AV9	SB_DS[33]	AN7	MDB21
			SB_DS[34]	AP5	MDB23
MODT_B0	AU27	SB_ODT[0]	SB_DS[35]	AR8	DQSB3
MODT_B1	AU29	SB_ODT[1]	SB_DS[36]	AP9	-DQSB3
MODT_B2	AV27	SB_ODT[2]	SB_DS[37]	AT7	DMB3
MODT_B3	AU28	SB_ODT[3]	SB_DS[38]		
			SB_DS[39]	AT6	MDB24
8 DCLKB0	DCLKB0	AR17	SB_DS[40]	AR7	MDB25
8 DCLKB0	DCLKB0	AR16	SB_DS[41]	AP9	MDB26
8 DCLKB1	DCLKB1	AT15	SB_DS[42]	AM8	MDB27
8 DCLKB1	DCLKB1	AT15	SB_DS[43]	AN8	MDB28
8 DCLKB2	DCLKB2	AN16	SB_DS[44]	AR6	MDB29
8 DCLKB2	DCLKB2	AR16	SB_DS[45]	AL8	MDB30
8 DCLKB3	DCLKB3	AR18	SB_DS[46]	AT9	MDB31
			SB_DS[47]		
			SB_DS[48]	AT25	DQSB4
			SB_DS[49]	AR24	-DQSB4
			SB_DS[50]	AN24	DMB4
			SB_DS[51]		
			SB_DS[52]	AN23	MDB32
			SB_DS[53]	AP23	MDB33
			SB_DS[54]	AR25	MDB34
			SB_DS[55]	AR26	MDB35
			SB_DS[56]	AT23	MDB36
			SB_DS[57]	AP25	MDB37
			SB_DS[58]	AR25	MDB38
			SB_DS[59]	AT26	MDB39
			SB_DS[60]		
			SB_DS[61]	AP32	DQSB5
			SB_DS[62]	AR32	-DQSB5
			SB_DS[63]	AN32	DMB5
			SB_DS[64]		
			SB_DS[65]	AT32	MDB40
			SB_DS[66]	AP31	MDB41
			SB_DS[67]	AR33	MDB42
			SB_DS[68]	AM32	MDB43
			SB_DS[69]	AT31	MDB44
			SB_DS[70]	AR31	MDB45
			SB_DS[71]	AR34	MDB46
			SB_DS[72]	AT33	MDB47
			SB_DS[73]		
			SB_DS[74]	AR36	DQSB6
			SB_DS[75]	AR37	-DQSB6
			SB_DS[76]	AM33	DMB6
			SB_DS[77]		
			SB_DS[78]	AR35	MDB48
			SB_DS[79]	AT36	MDB49
			SB_DS[80]	AP36	MDB50
			SB_DS[81]	AP34	MDB51
			SB_DS[82]	AT35	MDB52
			SB_DS[83]	AN34	MDB53
			SB_DS[84]	AP37	MDB54
			SB_DS[85]		
			SB_DS[86]	AL37	DQSB7
			SB_DS[87]	AM36	-DQSB7
			SB_DS[88]	AK35	DMB7
			SB_DS[89]		
			SB_DS[90]	AL35	MDB56
			SB_DS[91]	AM35	MDB57
			SB_DS[92]	AJ36	MDB58
			SB_DS[93]	AJ37	MDB59
			SB_DS[94]	AN35	MDB60
			SB_DS[95]	AM34	MDB61
			SB_DS[96]	AJ35	MDB62
			SB_DS[97]	AL36	MDB63

DDR_B

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LGA1156[10SC1-F01156-05R]

OR
CPU RETENTION X

Need check the new CPU ME

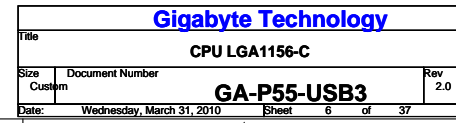
LGA1156

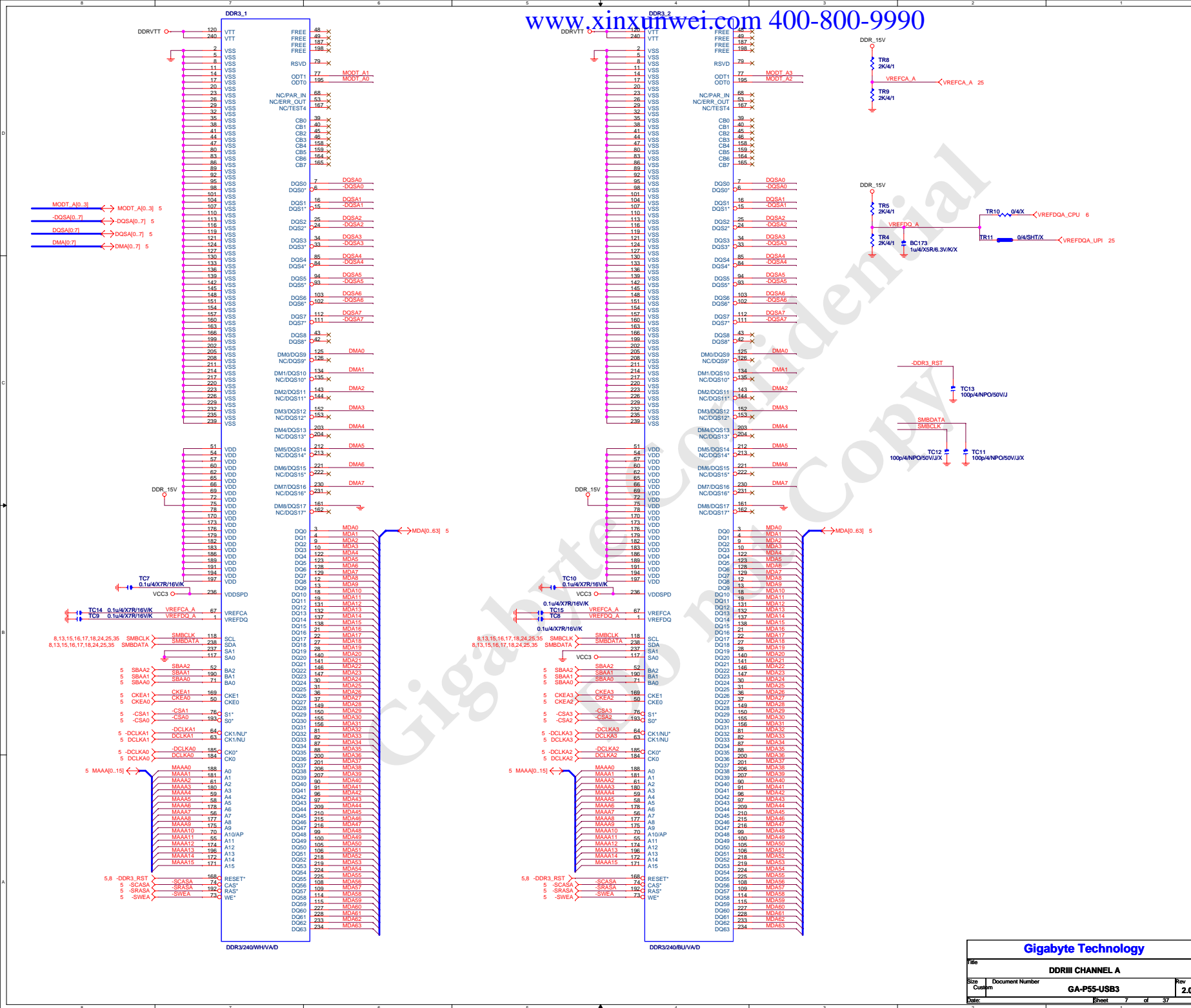


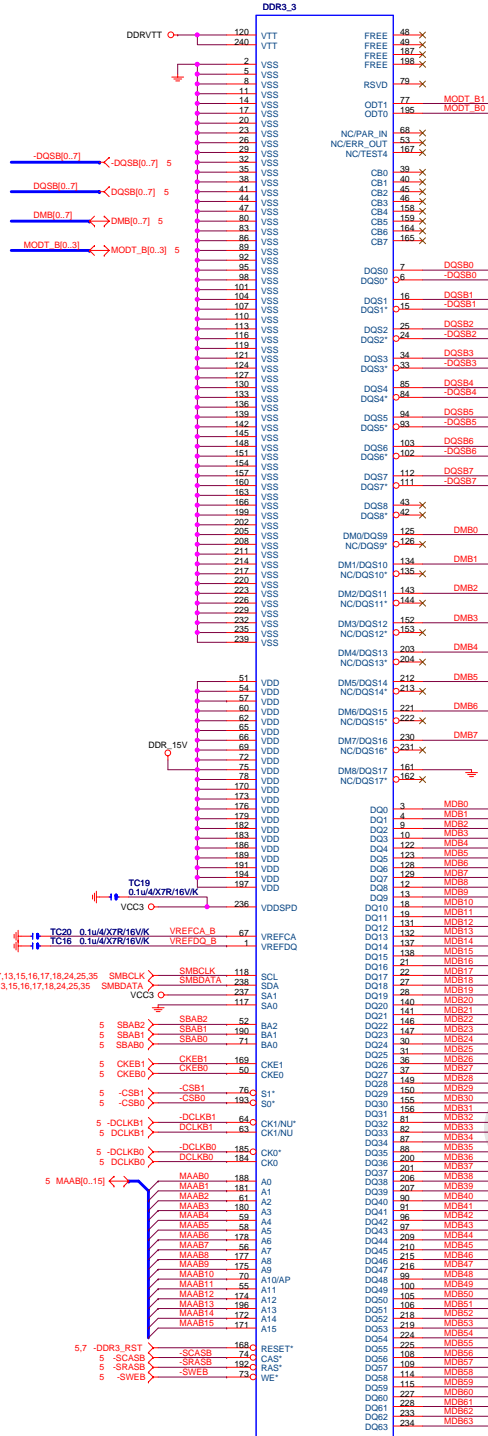
PLATE+ILM[12KRC-0F0001-22R]

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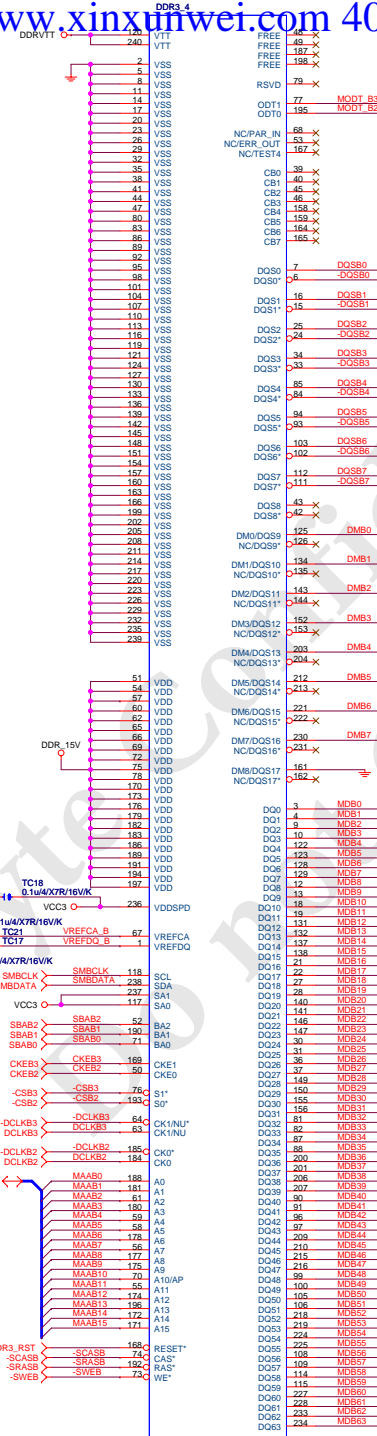
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Size			Document Number		
Custom			GA-P55-USB3		
Date:			Wednesday, March 31, 2010		
			Sheet 5 of 37		
			Rev 2.0		





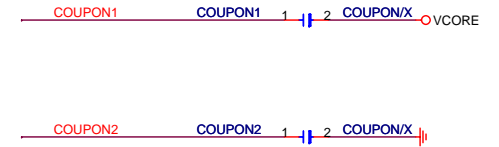
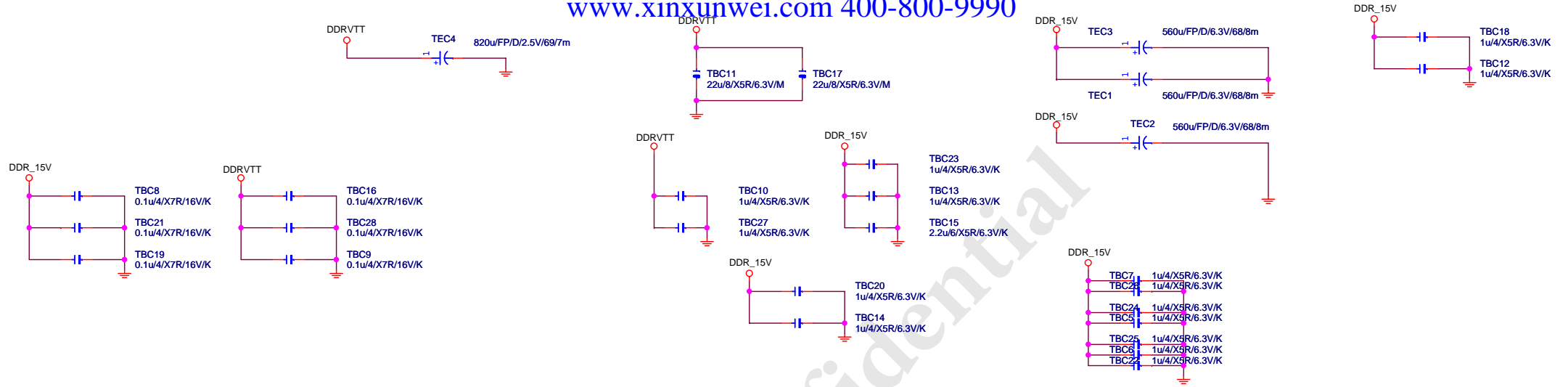


DDR3/240/WH/VA/

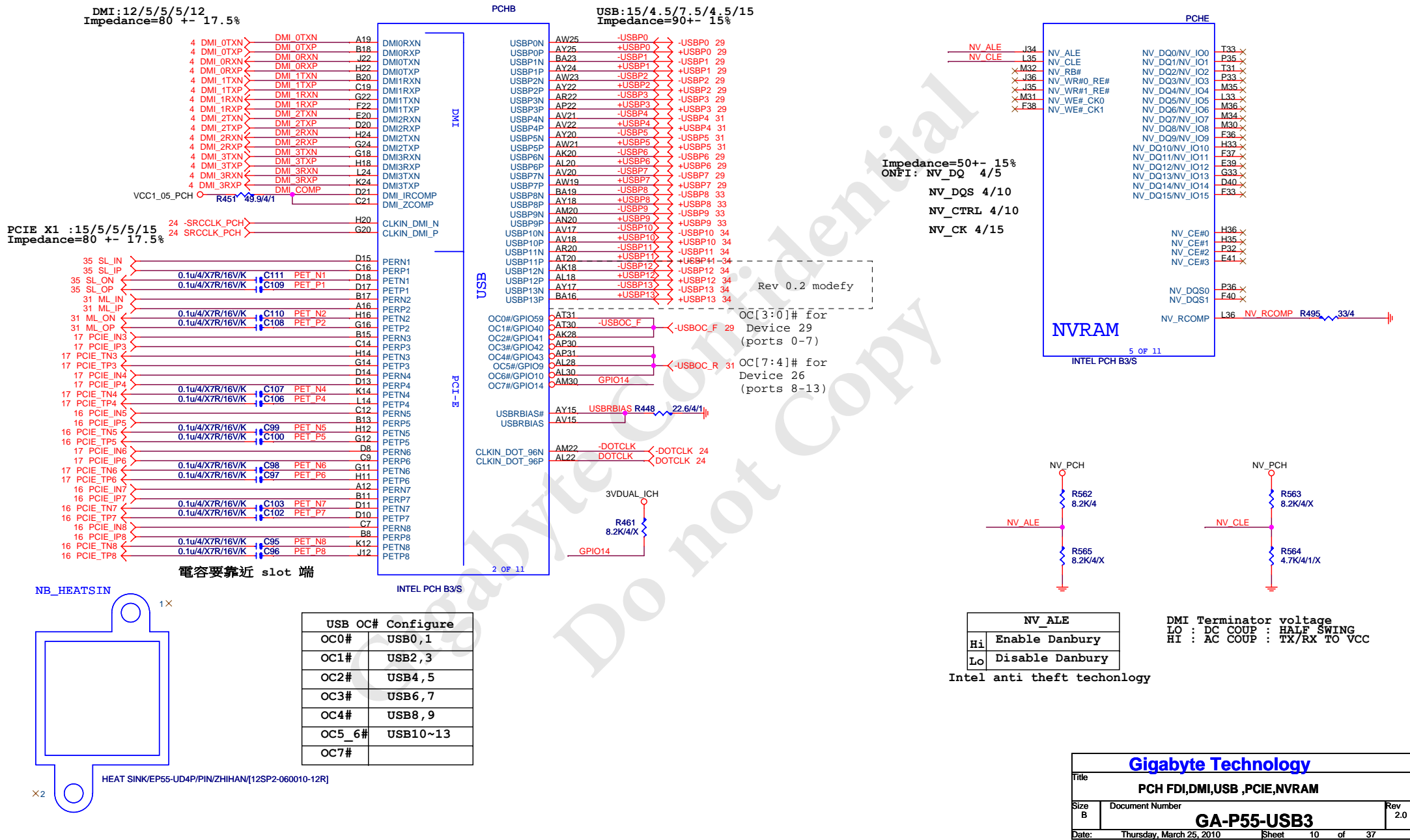


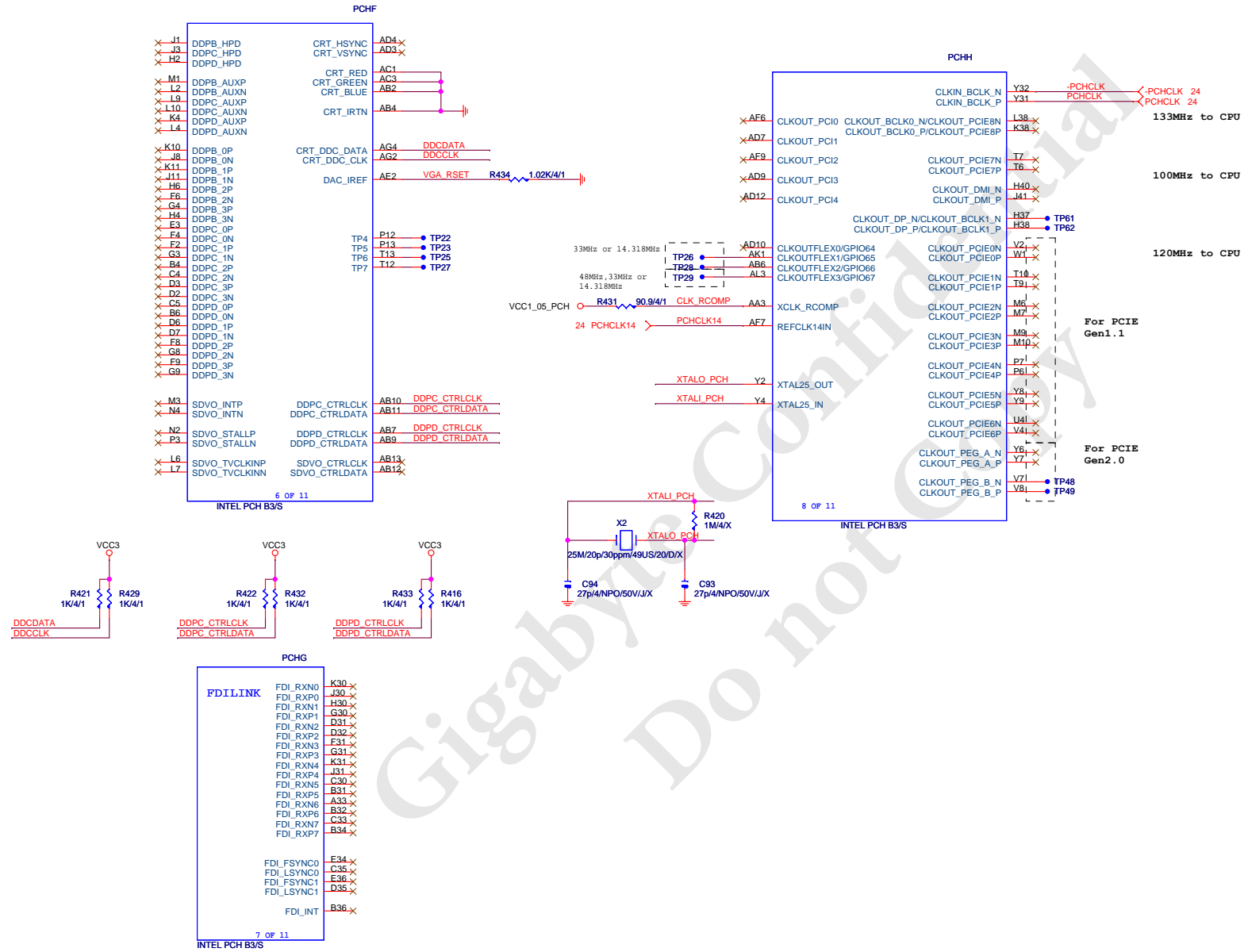
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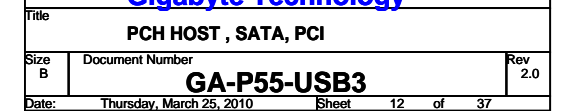


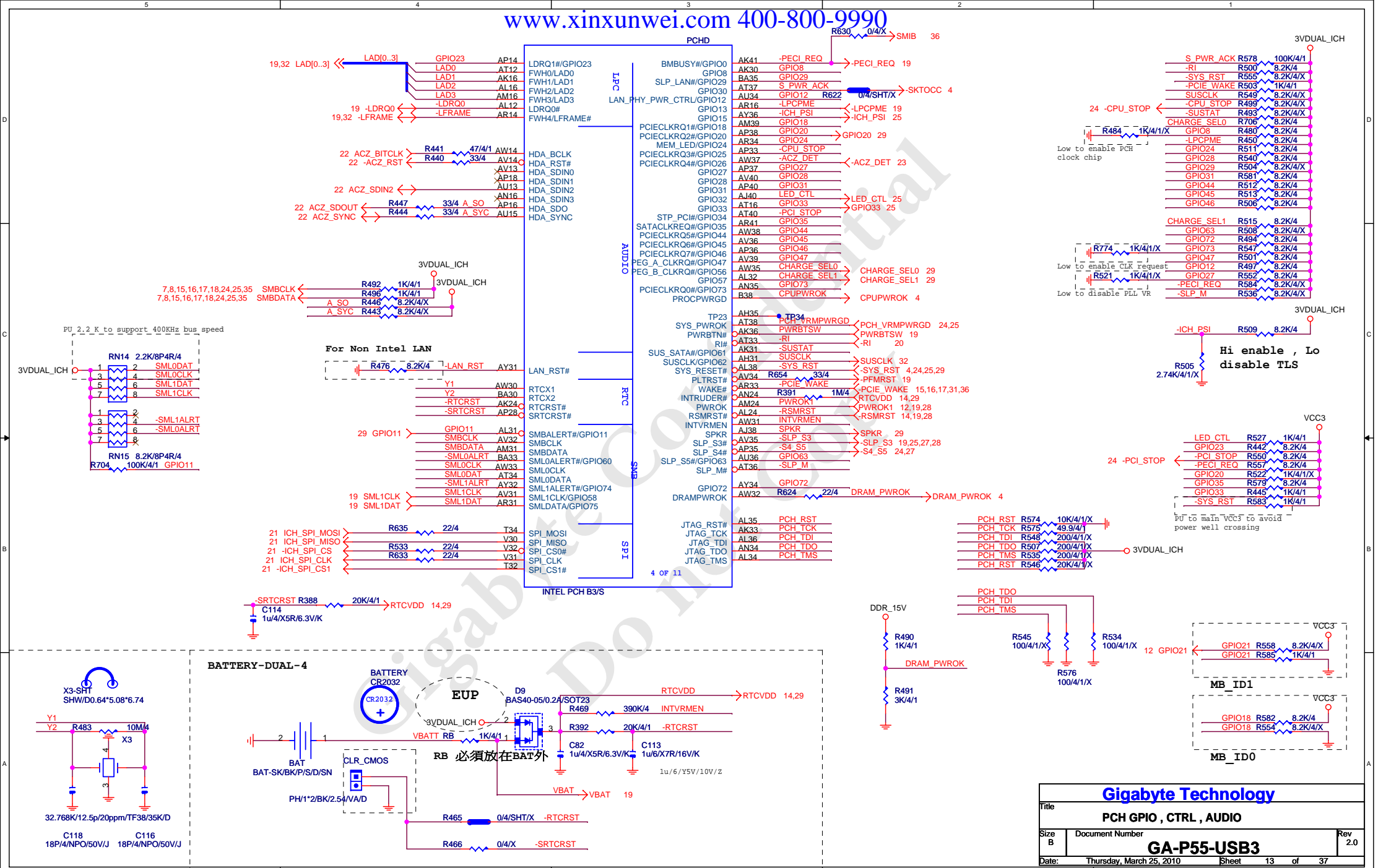


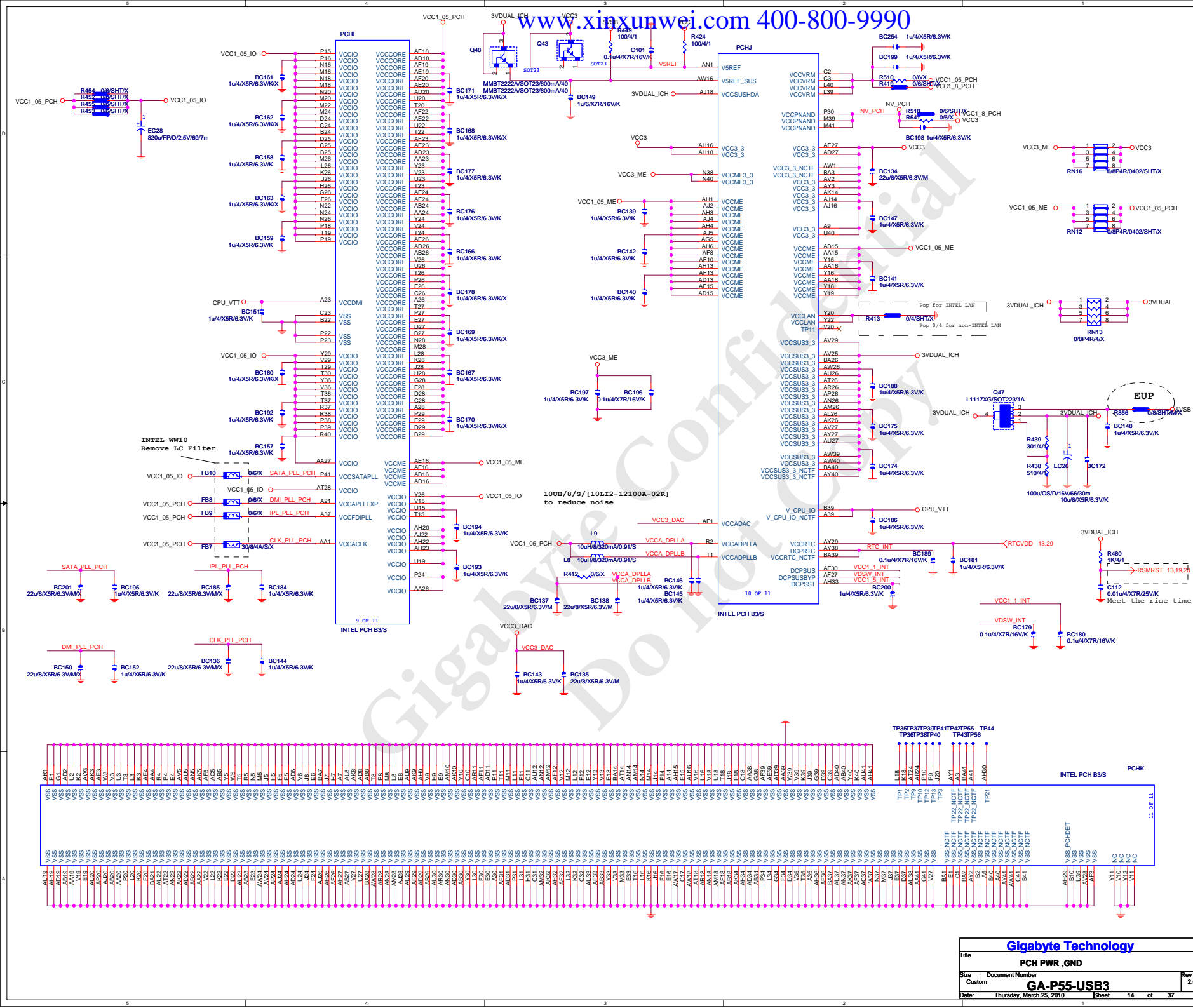
Gigabyte Technology			
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DDRIII POWER CAP			
Size	Document Number	GA-P55-USB3	Rev
B			2.0
Date:	Thursday, March 25, 2010	Sheet	9 of 37





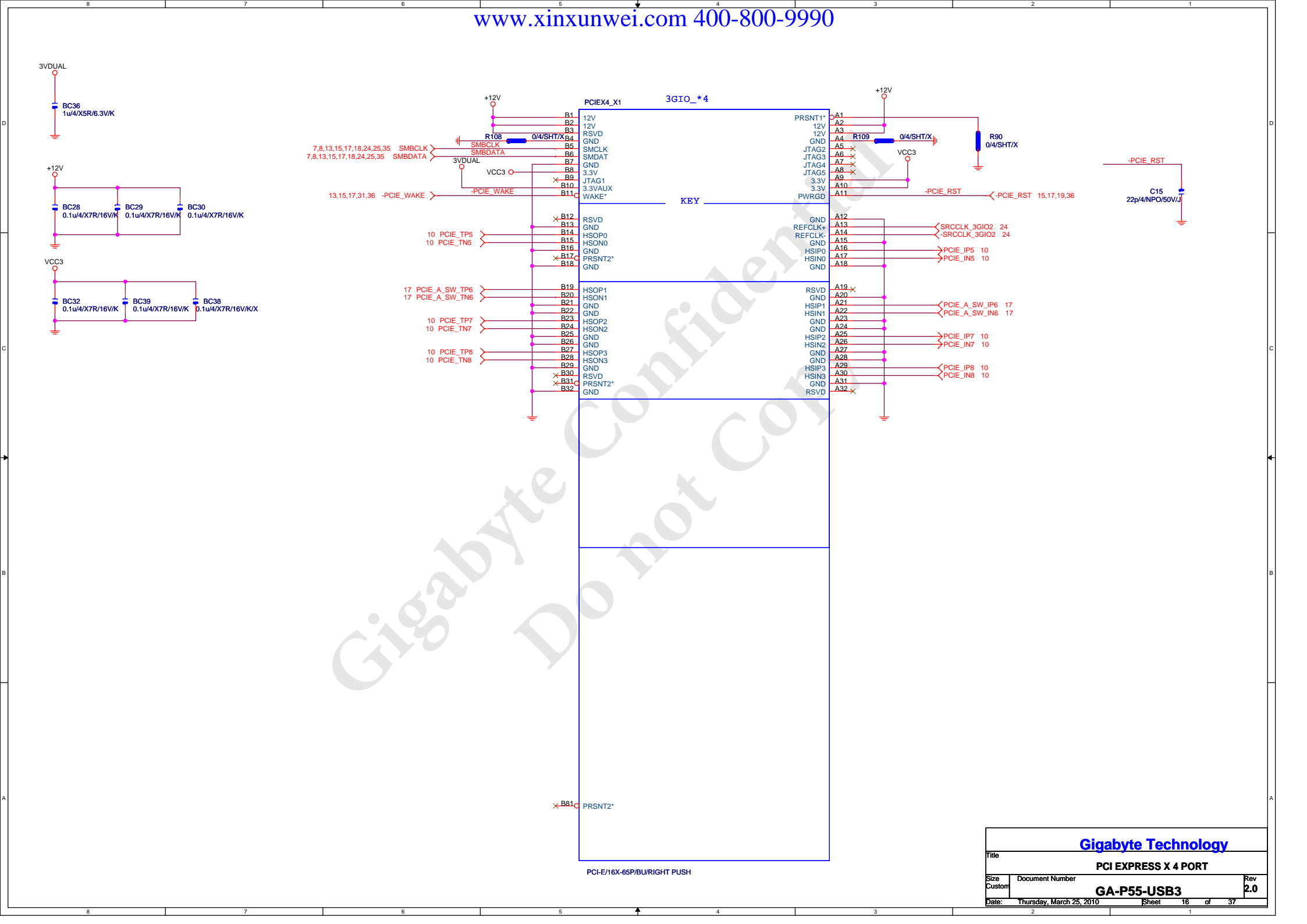


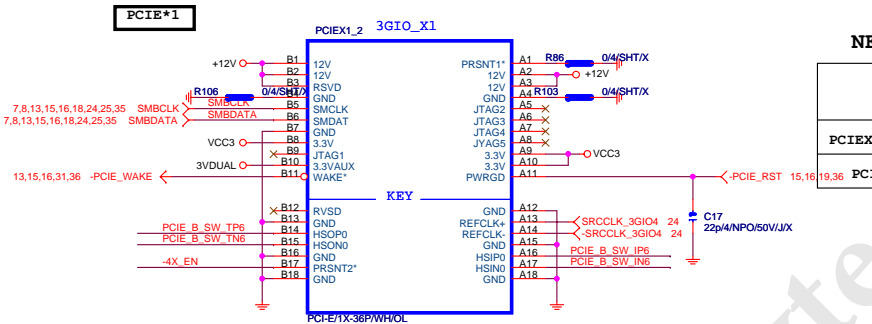
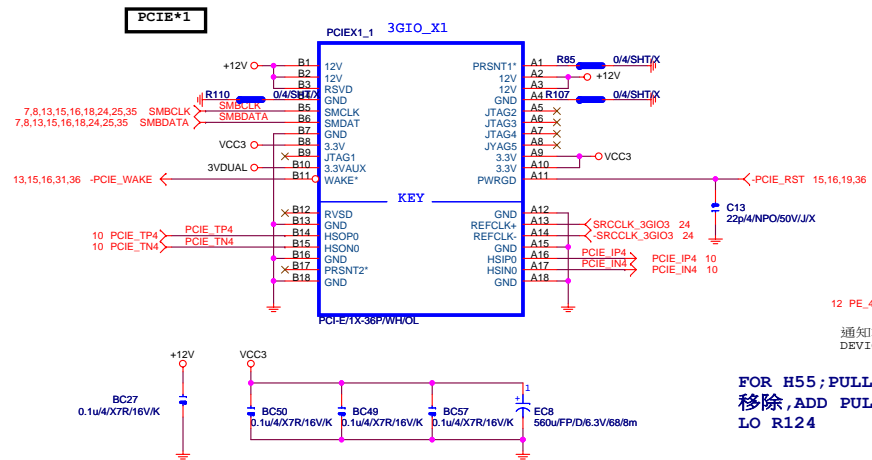






PCI-E REV:2.0--> 5GHZ





NEC USB3.0 Gen1/Gen2 switch

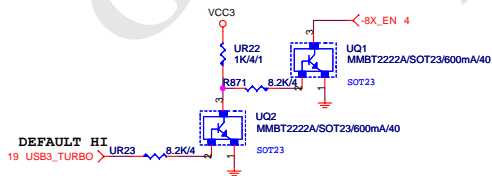
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PCIE1_2未插卡	Hi	Lo
PCIE1_2插卡	Lo	Lo

Function	SEL
xI--> x0a	L: PCIE1_2 SLOT-->X1
xI--> x0b	H: PCIE1_2 SLOT-->X4

FOR H55 ONLY,
R請放在U3背面

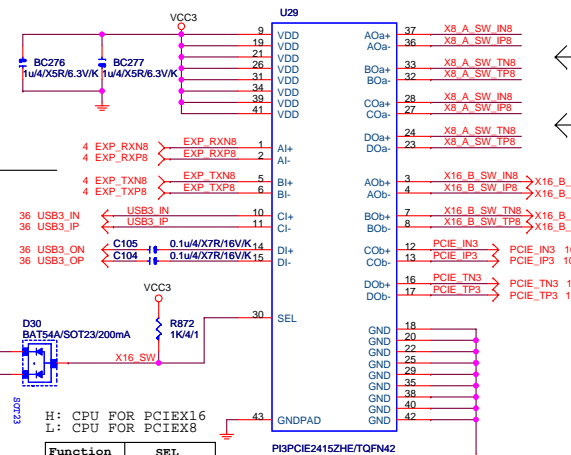
CPU PCIE16 LANE8

USB3.0



NEC USB3.0 Gen1/Gen2 switch

	USB3.0 Gen1 : Lo	USB3.0 Gen2 : Hi
USB3.0 Gen1	Hi	Hi
USB3.0 Gen2	Lo	Lo



Function	SEL
xI--> x0a	L
xI--> x0b	H

Function	SEL
USB3.0 GNE2	L
USB3.0 GNE1	H

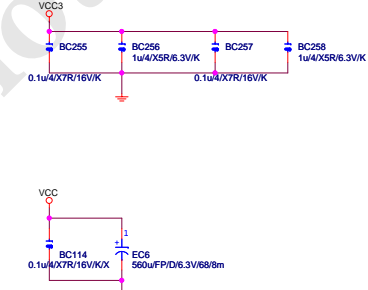
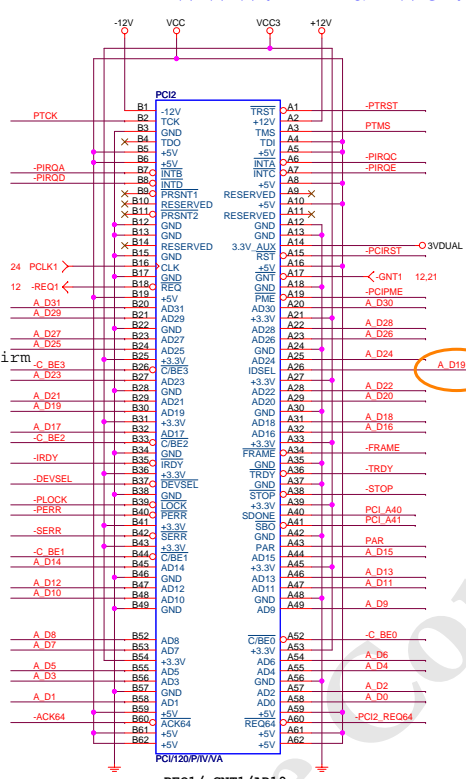
GEN2

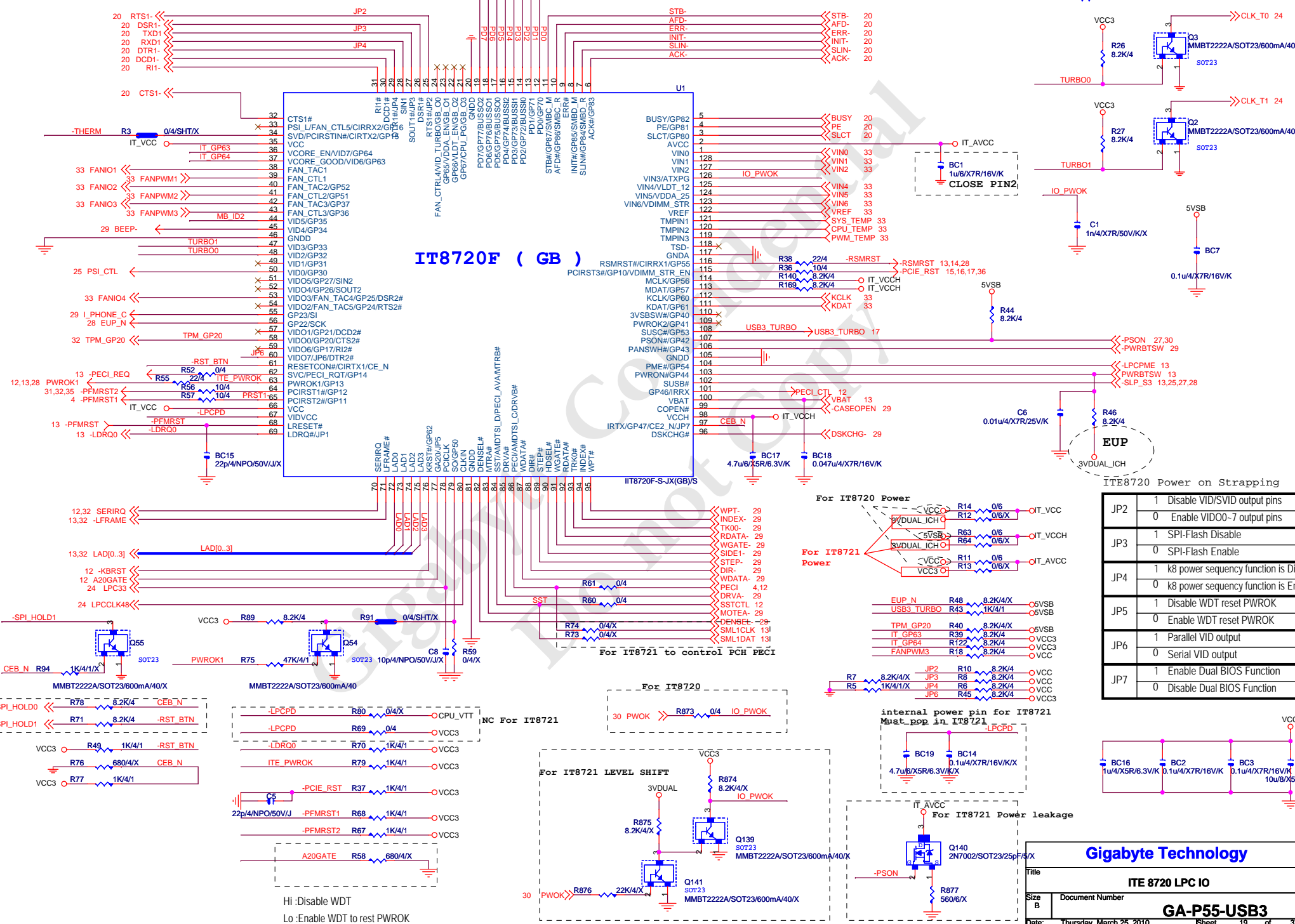
PCIE16

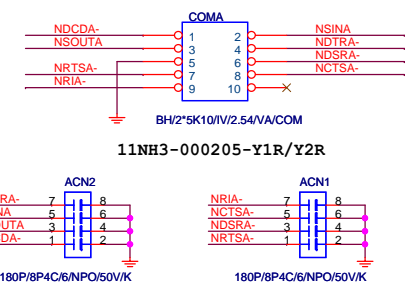
USB3.0 GEN1

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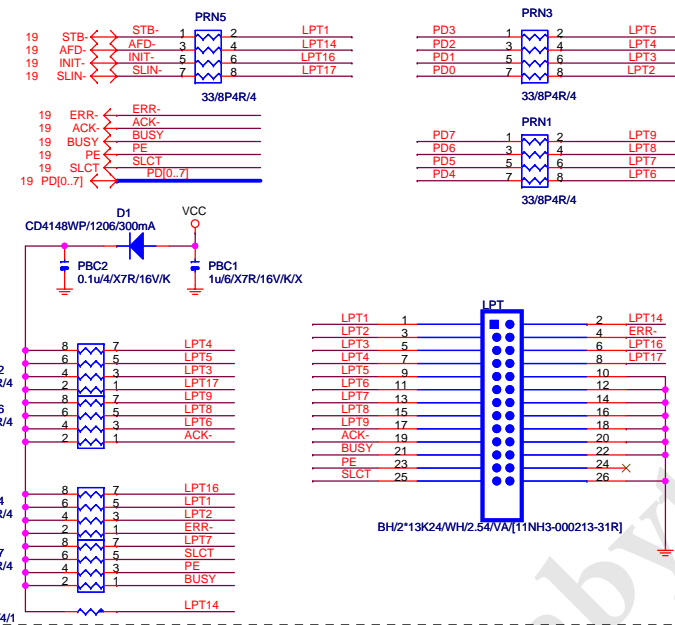
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Size	Document Number	Rev	
Custom	GA-P55-USB3	2.0	
Date:	Thursday, March 25, 2010	Sheet 17	of 37



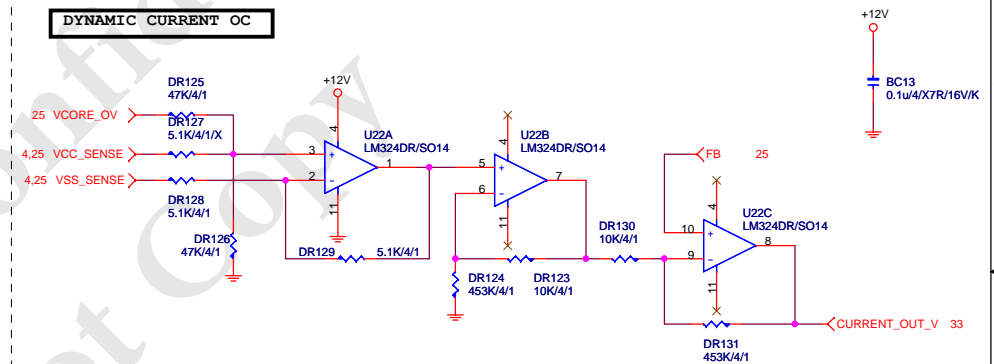




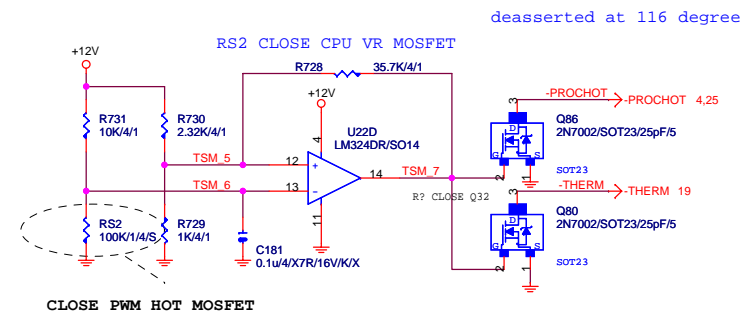
LPT PORT



DYNAMIC CURRENT OC



-PROHOT



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

C141
10p/4/NPO/50V/J/X

-ICH_SPI_CS

R781

22/4

1

CS#

VDD

8

M_BIOS

IC83

R370

0/4/SHT/X

BC214

1u/4/X5R/6.3V/K

SPI_MISO

2

SO

HOLD#

7

-SPI_HOLD0

<<SPI_HOLD0

19

-SPI_WP0

3

WP#

6

ICH_SPI_CLK

SI

5

MAIN BIOS

ICH_SPI_MOSI

16M/SPI/SO8/200mI/S[10HP4-112516-30R_10HP4-112516-40R]

VSS

4

C189

10p/4/NPO/50V/J/X

MOSI pull up to enable iTPM , floating to disable

13 ICH_SPI_MOSI >> ICH_SPI_MOSI R634 8.2K/4
13 -ICH_SPI_CS >> ICH_SPI_CS R632 8.2K/4/X
>> -SPI_HOLD0 R607 8.2K/4/X
>> -SPI_HOLD1 R599 8.2K/4/X

13 ICH_SPI_MISO >> ICH_SPI_MISO RN17 1 2
>> -SPI_WP0 3 4
>> -SPI_WP1 5 6
>> -ICH_SPI_CS1 7 8
1K/8P4R/4

12,18 -GNT0 >> R121 1K/4/1/X

12,18 -GNT1 >> R118 1K/4/1/X

Default int pull up

SPI_MISO R725 22/4 <<< ICH_SPI_MISO 13

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

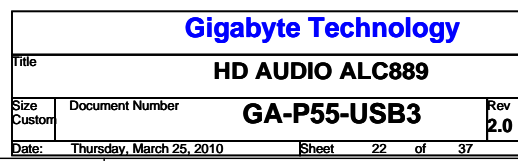
1 means floating
0 means PD 1K

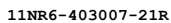
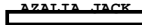
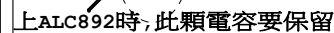
IC8SO-SOCKET need to check which
is right

CR2: 20K/4/0.1% @ALC889A
CR2: 20K/4/1% @ALC889A+/ALC888Vx

CEN ←
LFE ←
JRR L ←

CR26 20K/4/1





Verify MIC function
in LINE-in



AUDIO JACK

GA-P55-USB2

Date:	Thursday, March 25, 2010	Sheet	23	of	37
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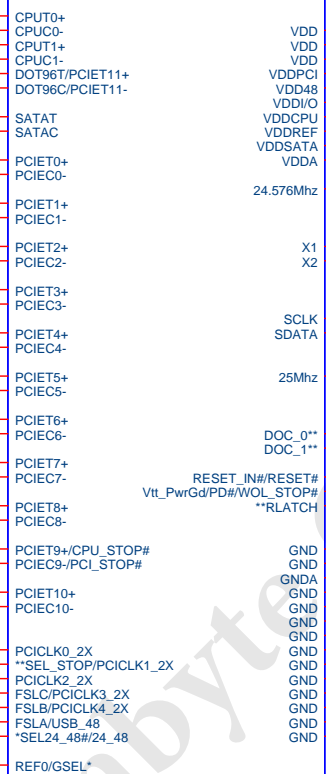
CLK GEN CK505

50歐姆:[18/4/10/4/18]

50歐姆:[18/4/10/4/18]

50歐姆:[4/10]

U5



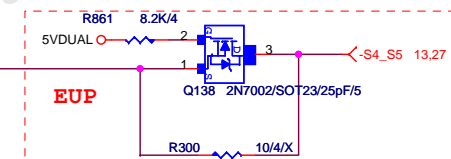
ICS9LPRS914EKLFT/MLF72[10HL6-1C0914-10R_10HL6-180914-30R]

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

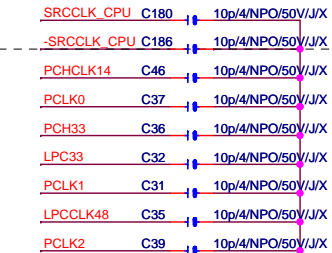
SEL_48=1, 24Mhz from pin10
SEL_48=0, 48Mhz from pin10

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

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

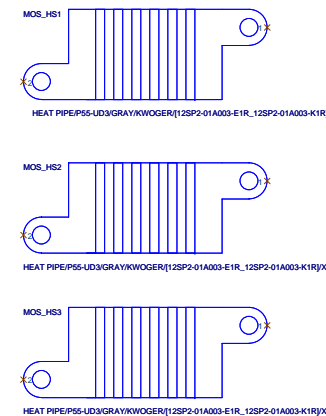
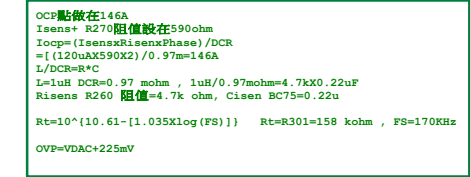


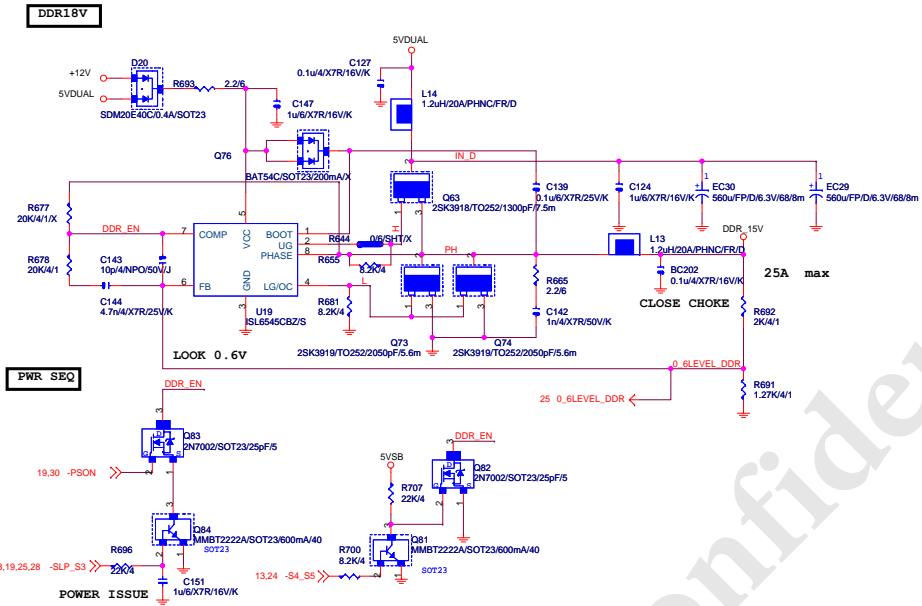
Rev 0.2 modify

Gigabyte Technology

Title			CK505 CLK GEN
Size			GA-P55-USB3
Custom	Document Number	Rev	2.0
Date:	Friday, April 16, 2010	Sheet	24 of 37

PWM PHASE CONTROL			
	ITE8275_GPIO2	ITE8275_GPIO1	ITE8275_GPIO0
1 PHASE	L	L	L
2 PHASE	X	L	L
3 PHASE	X	X	L
4 PHASE	X	X	X





$$OCP : I_{peak} = (2 \times I_{ocset} \times R_{ocset}) / R_{dson}$$

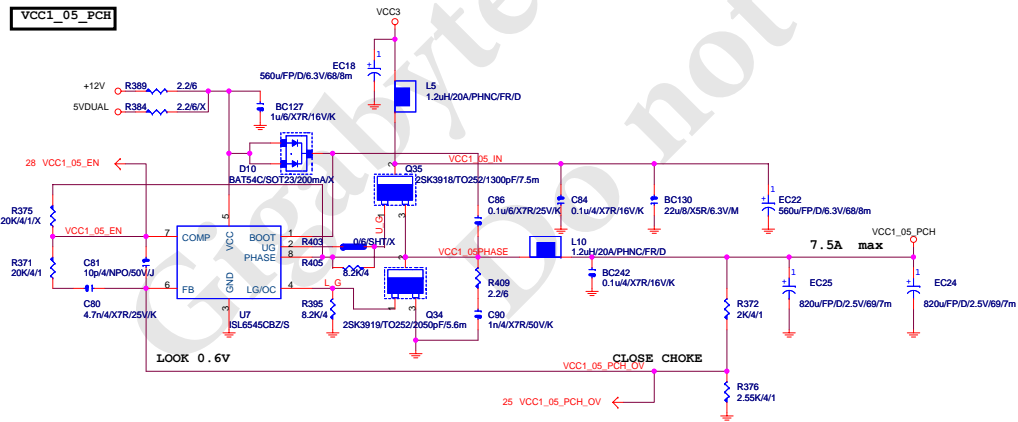
$$I_{ocset} = 21.5uA, R_{ocset} = 8.2k$$

$$OCP : I_{peak} = (2 \times I_{ocset} \times R_{ocset}) / R_{dson}$$

$$= (2 \times 21.5uA \times 8.2k) / (5.6m\Omega)$$

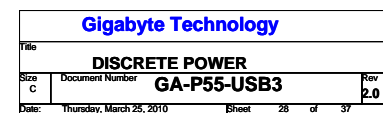
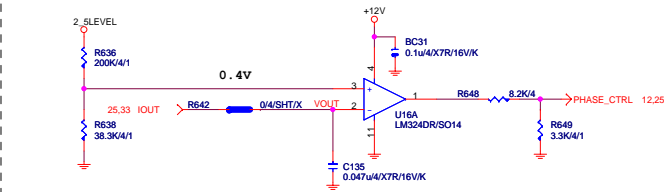
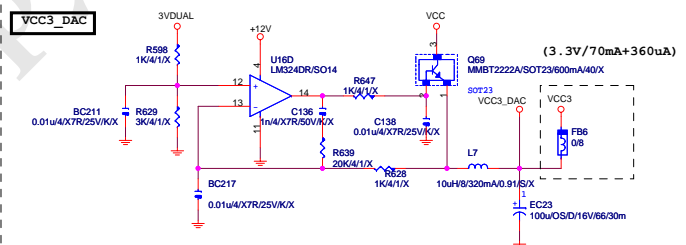
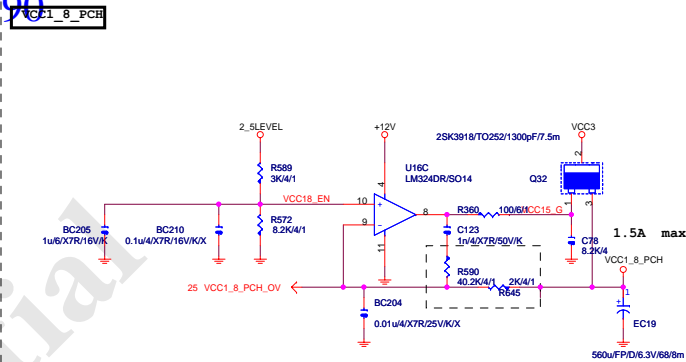
$$= 125.92A$$

注意： R_{ocset} 的阻值要依據 Lo 設定 R_{dson} 改變
 一般 I_{peak} 設定在 50~60A 即可

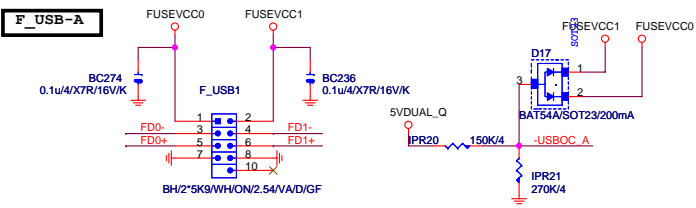


OCP : $I_{peak} = (2 \times I_{ocset} \times R_{ocset}) / R_{ds(on)}$
 $I_{ocset} = 21.5uA$, $R_{ocset} = 8.2k$
OCP : $I_{peak} = (2 \times I_{ocset} \times R_{ocset}) / R_{ds(on)}$
 $= (2 \times 21.5uA \times 8.2k) / 5.6m$
 $= 62.96A$

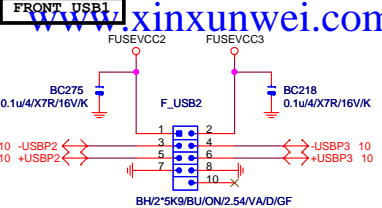
注意 : R_{ocset} 的阻值要依據Lo side $R_{ds(on)}$ 改變
一般 I_{peak} 設定在50~60A即可



F_USB-A

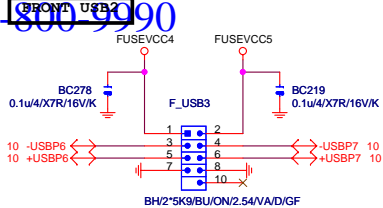


FRONT USB1



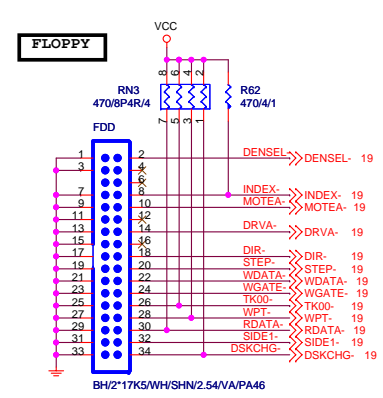
Close to connector

FRONT USB2

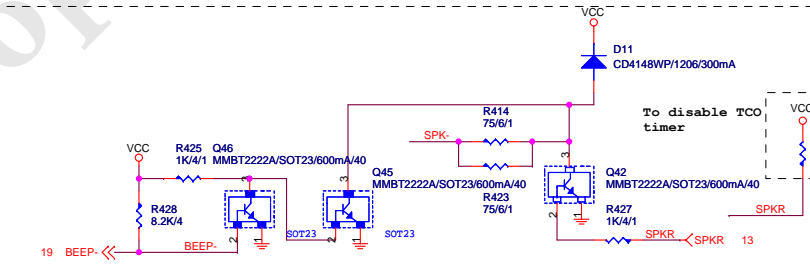
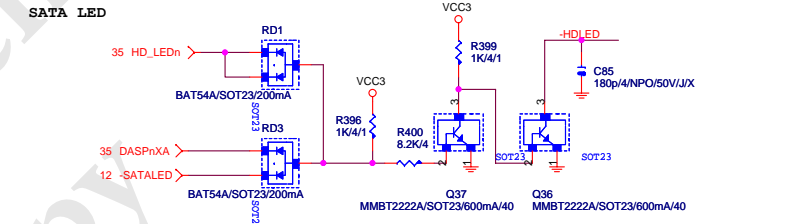


Close to connector

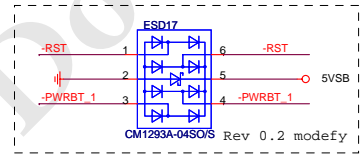
FLOPPY



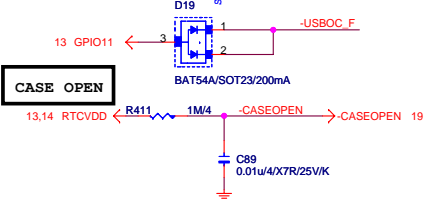
SATA LED



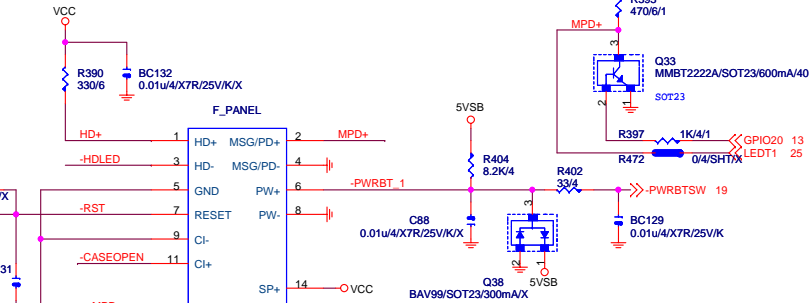
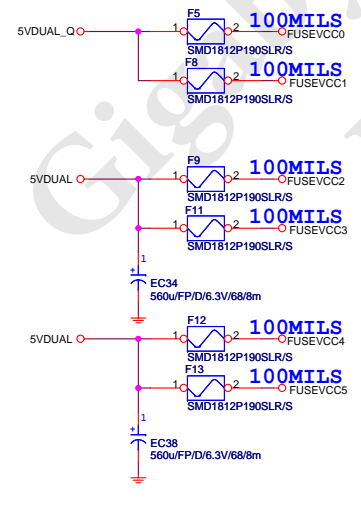
INTEL FRONT PANEL



F USB SHORT PROTECT



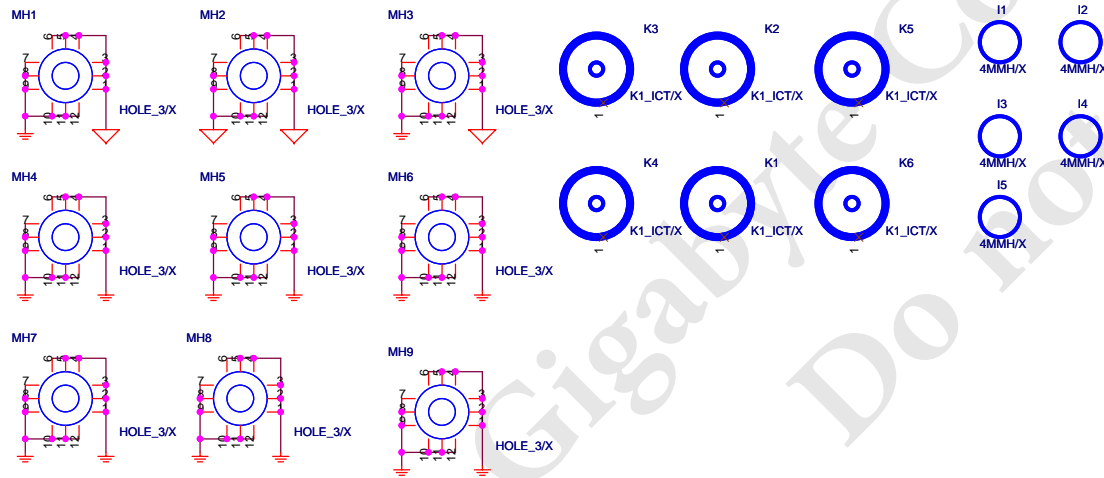
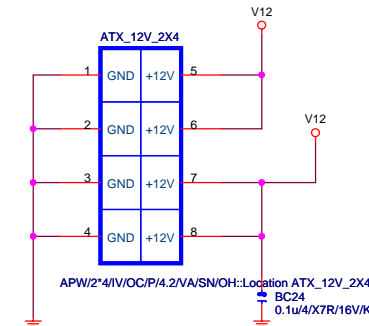
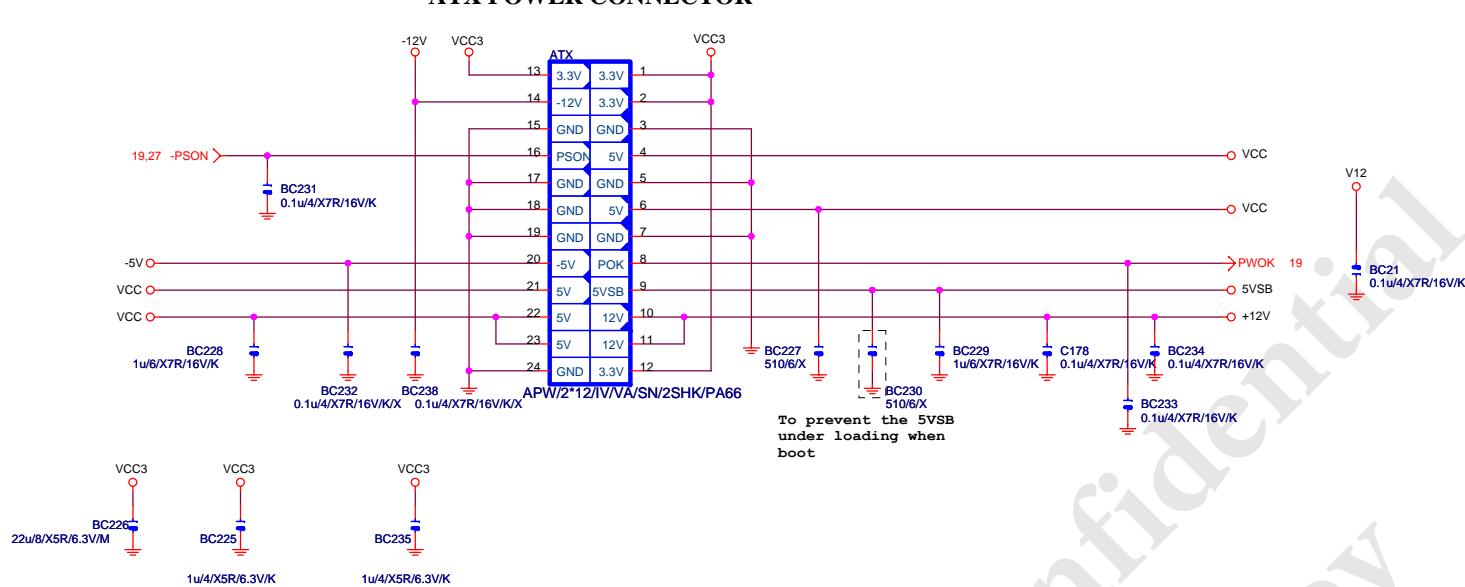
CASE OPEN



Gigabyte Technology			
Title			
FP,F_USB,USB PWR,FDD,BZ			
Size			
Custom			
Document Number			
GA-P55-USB3			
Rev			
2.0			
Date:			
Thursday, June 03, 2010			
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ATX POWER CONNECTOR

www.xinxunwei.com 400-800-9990

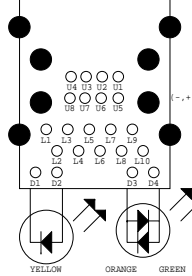
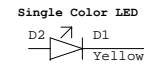
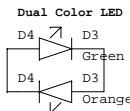


PCIE-1G LAN

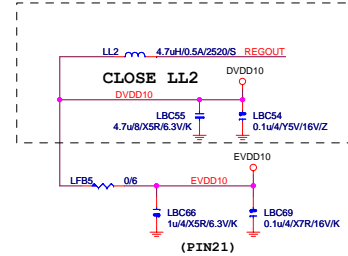
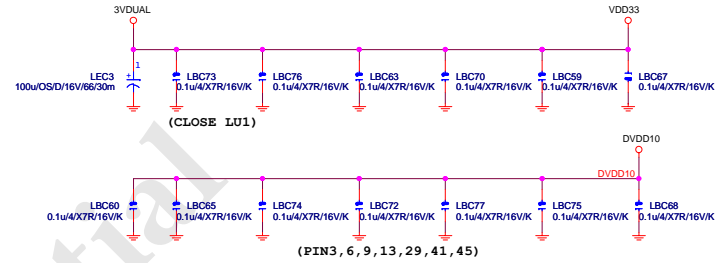
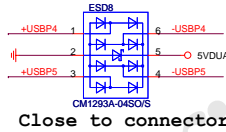
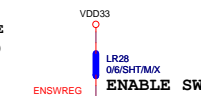
Power domain chart

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

www.xinxunwei.com 400-800-9990

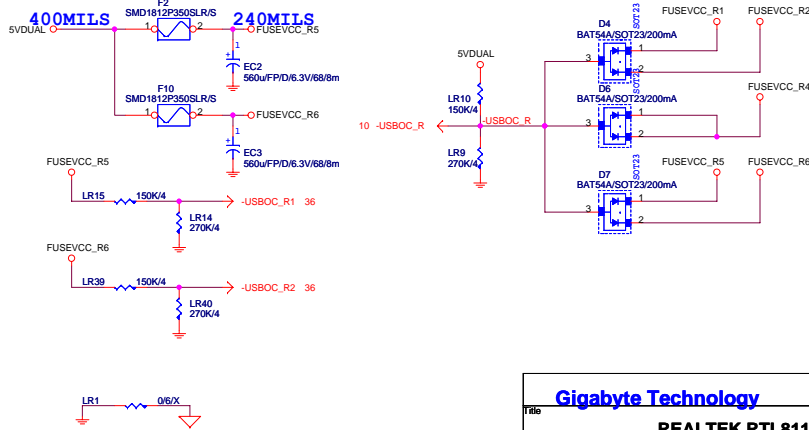
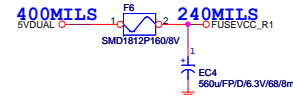
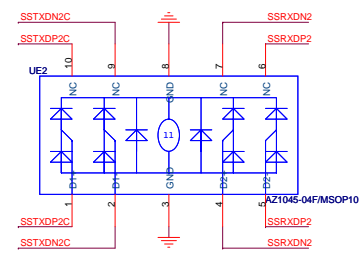
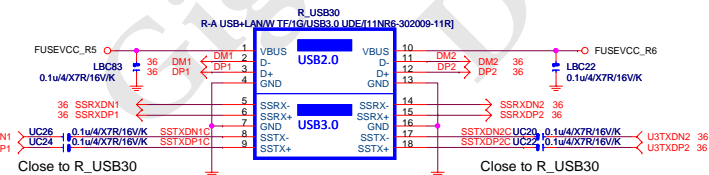
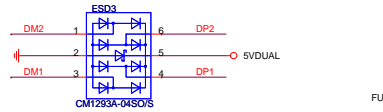


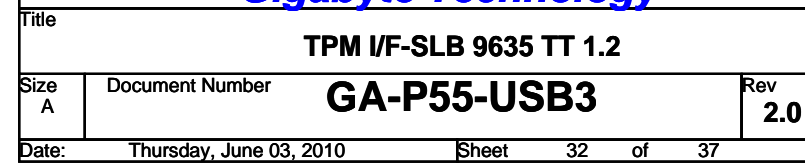
FOR DSM MODE
(DEEP SLEEPER MODE)



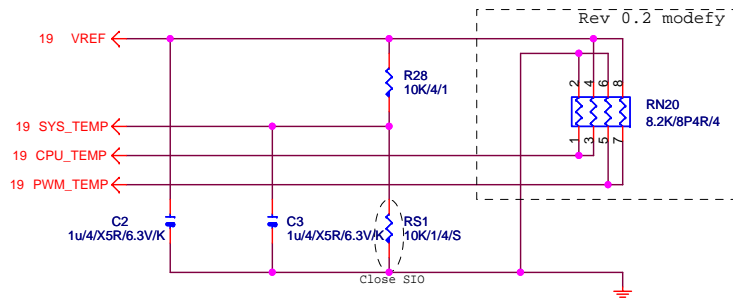
SEL	OE	Y+	Y-
X	H	Hi	Hi-Z
L	L	M+	M-
H	L	D+	D-

USB30_LAN CONNECTOR

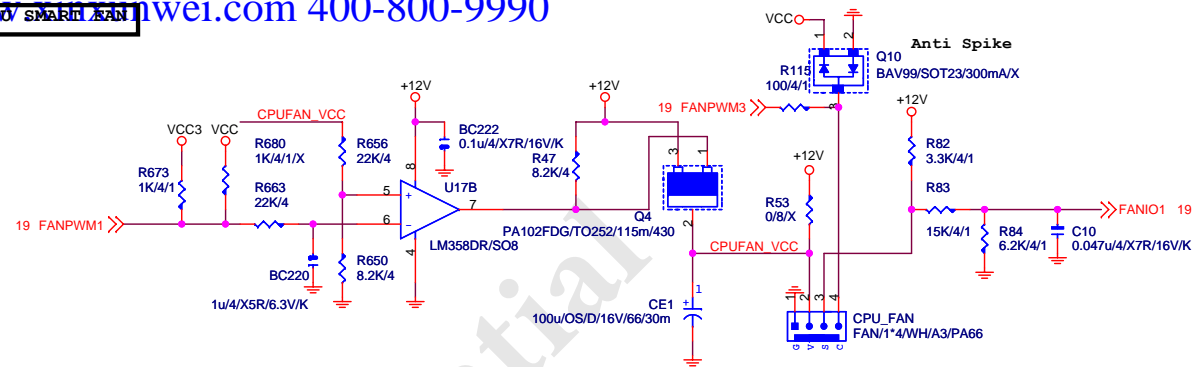




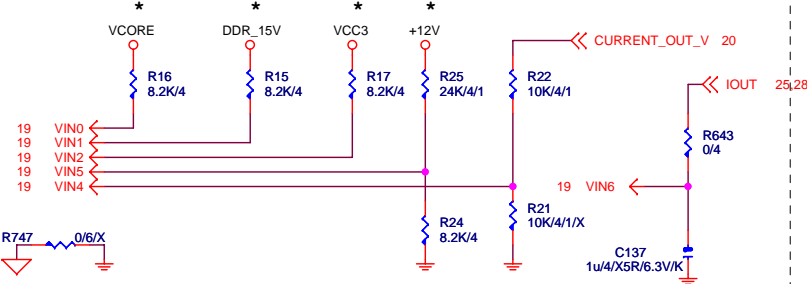
TEMP H/W MONITOR



CPU SMART FAN

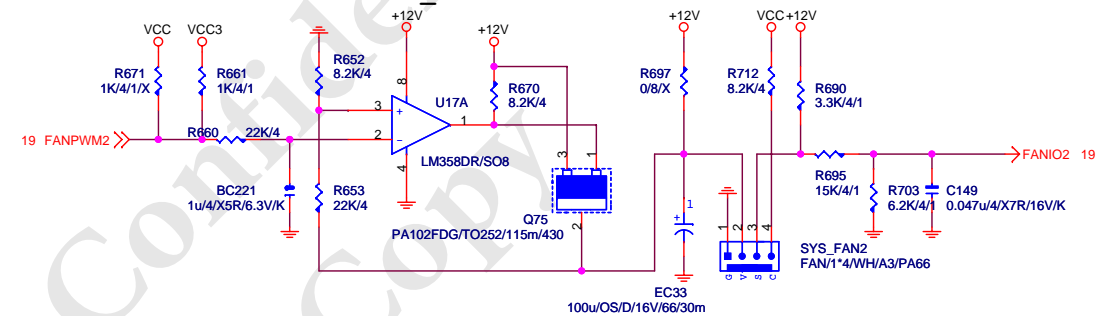


VOLTAGE-- H/W MONITOR

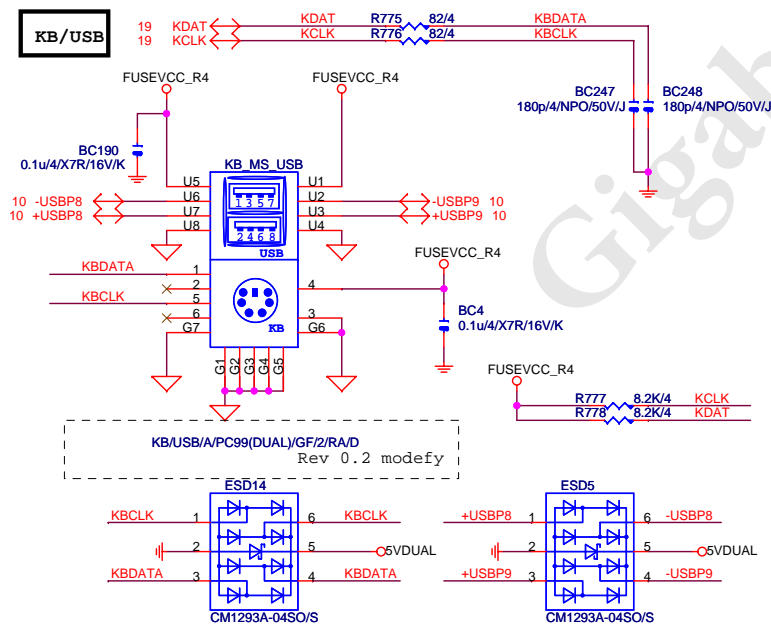


SYS FAN2

Linear SYS FAN

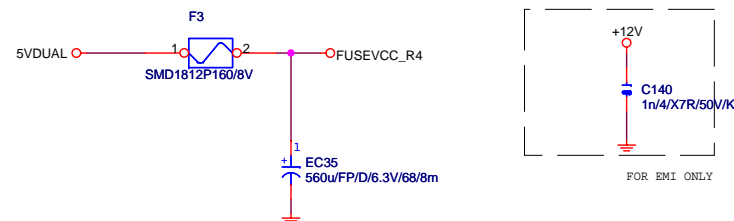
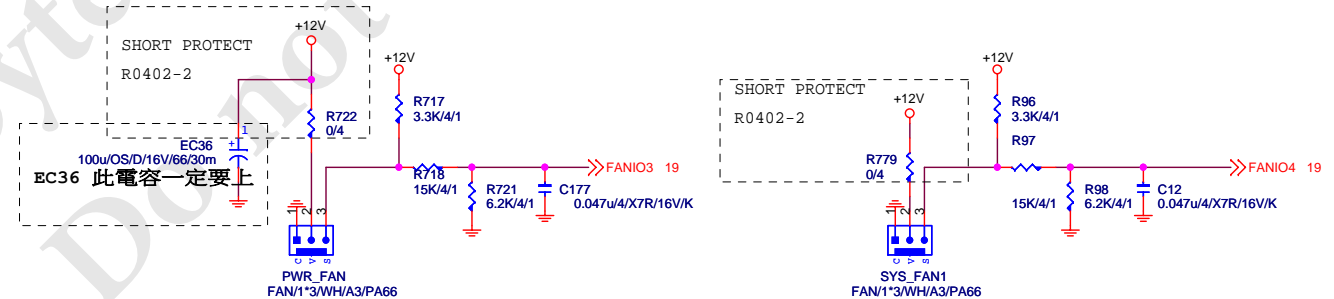


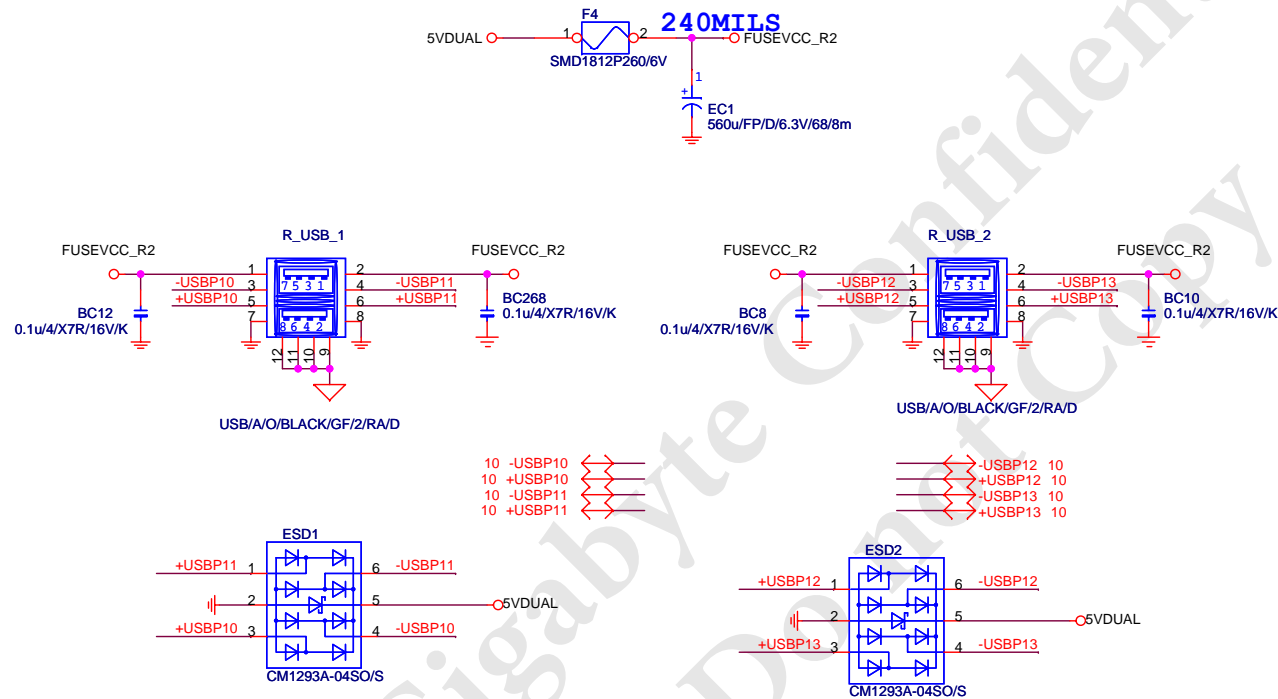
KB/USB



PWR FAN

SYS FAN1



**GIGABYTE™**

Title

R_USB

Size Document Number

Custom

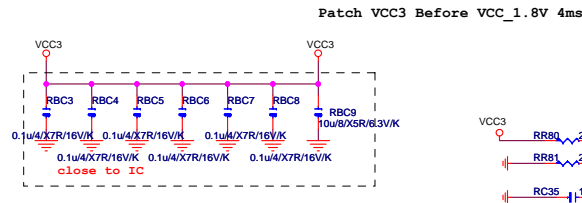
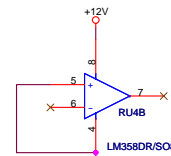
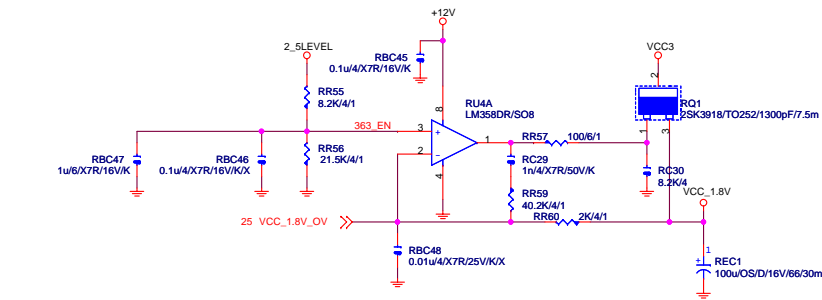
GA-P55-USB3

Rev

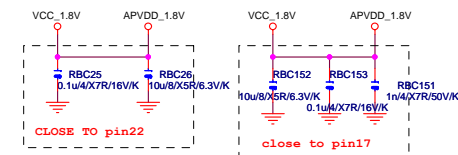
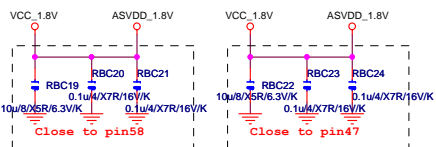
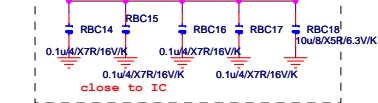
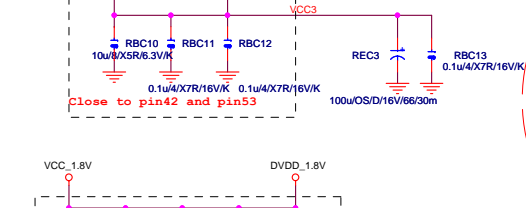
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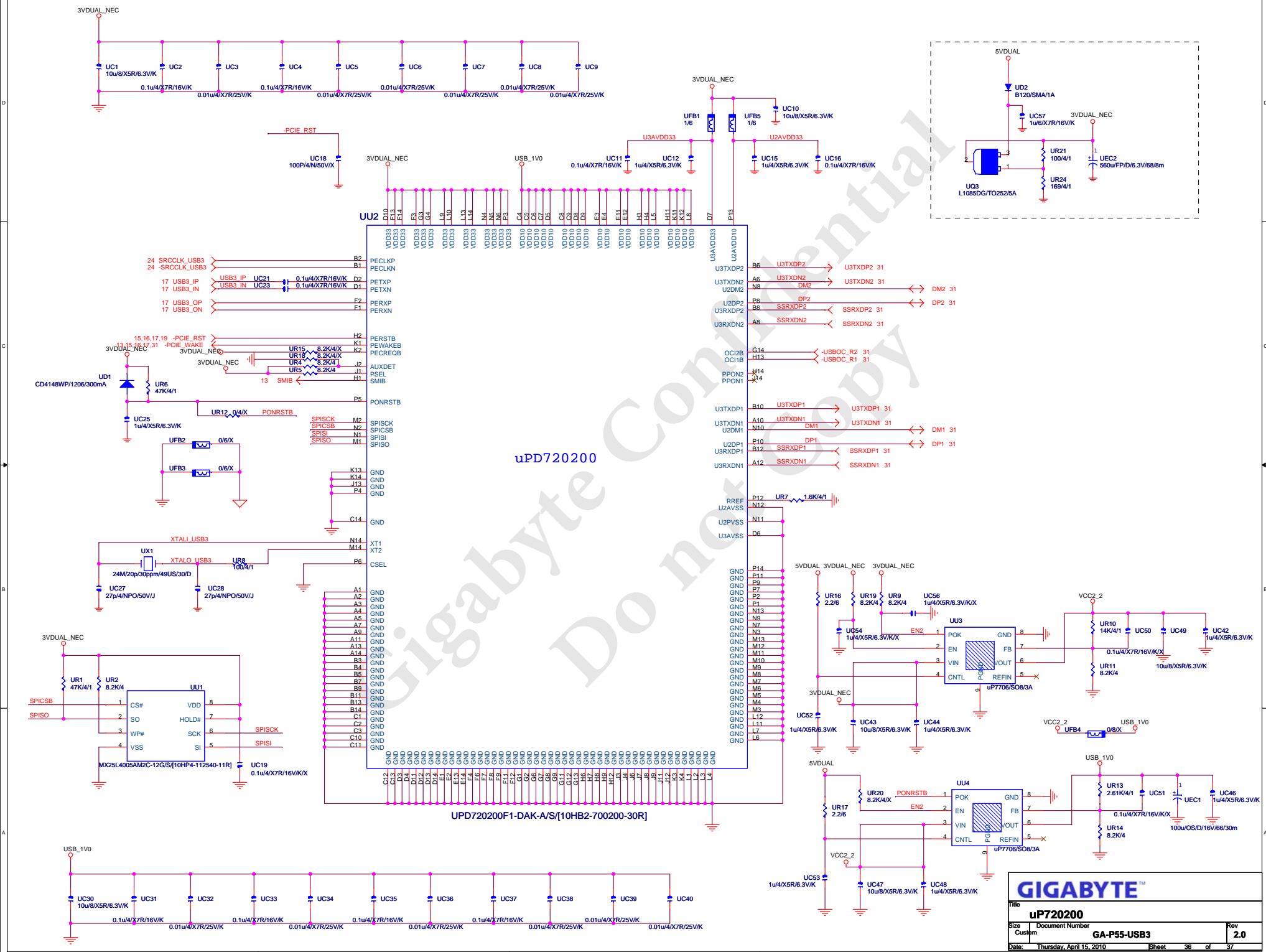
Date: Thursday, March 25, 2010

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FOR J368 12K-->8.06K/4/1



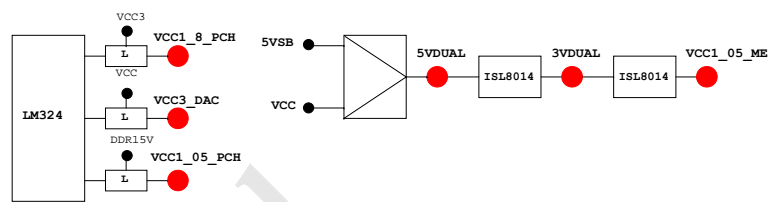


PCH GPIO LIST TABLE					
PIN NAME	PWR	Default	USAGE	NOTE	
GP0	MAIN	H-Z	GPI	-PECI_REQ	N/A
GP1/TACH1	MAIN		GPI	ICH_FAN_TACH1	N/A
GP2/PIRQE#	MAIN		GPI	-PIRQE	P/U 8.2K VCC3
GP3/PIRQF#	MAIN		GPI	-PIRQF	P/U 8.2K VCC3
GP4/PIRQG#	MAIN		GPI	-PIRQG	P/U 8.2K VCC3
GP5/PIRQH#	MAIN		GPI	-PIRQH	P/U 8.2K VCC3
GP6/TACH2	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	-AC2_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	OC1#	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_OC0#	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

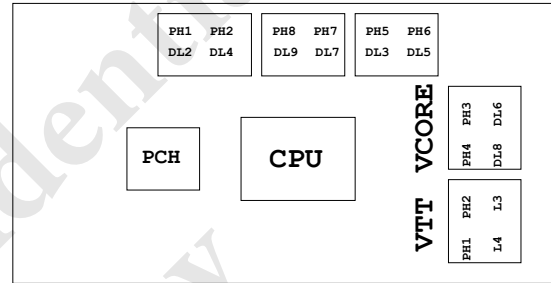
Super I/O ITE8720 GPIO Table

PIN NAME	USAGE	NOTE
SVC/PECI_RQT/GP14	-PECI_REQ	
PWROK1/GP13	PWROK1/ITE_PWROK	
KRST#/GP62	-KRST	
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	USAGE	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	
VIDO5/GP27/SIN2	LOW_PWR_2	
PCIRST2#/GP11	-PFMRST1	
PCIRST1#/GP12	-PFMRST2	
3VSBW#/GP40	CSI_F0	BSEL166_1
SUSC#/GP53	CSI_F1	BSEL166_2
GP23/SI	BSEL166_3/CSISBSL	
VIDO0/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/SMBD_M	SEC_2x8	GTLREF_AD2
ACK#/GP83	DDR_LED1_C	
VIDO1/GP21/DCD2#	DDR_LED2_C	
STB#/GP87/SMB_C_M	DDR_LED3_C	
PWRON#GP44	VCORE_OV1	
FANSWH#/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#/CIRTX/GP15	PWM2_CR	
KDAT/GP61	PWM2_CR	
GP67/CPU_PG/GB_03	EN_LOADLINE	IT_GP67/-EN_PWM2
SLIN#/GP84/SMBD_R	-EN_PWM2	
PSI_L/FAN_CLT5/CIRRX2/GP16	-THERM	
VIDO4/GP26/SOUT2	DDR18V_PH2_EN	
VIDO2/FAN_TAC5/GP24/DSR2#	DDR18V_LED	
VIDO6/GP17/RI2#	1_1V_PH_EN	
VIDO7/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 Terminatio
VREF_CA_AVREF_CA_B	DRAM Address Ref
VREF_DQ_AVREF_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	FANPWM3	FANIO1	IT8720
	ICH_FAN_PWM2	ICH_FAN_PWM0	ICH_FAN_TACH0	PCH
SYS FAN	FANPWM2	N/A	FANIO2	IT8720
	ICH_FAN_PWM1	N/A	ICH_FAN_TACH1	PCH
PWR FAN	N/A	N/A	FANIO3	IT8720
			ICH_FAN_TACH2	PCH

Gigabyte Technology			
TABLE LIST			
Size	Document Number	Rev	
C	GA-P55-USB3	2.0	
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