Model Name: 8I945G

Revision 1.1

SHEET	TITLE
01	COVER SHEET
02	BLOCK DIAGRAM
03	BOM & PCB MODIFY HISTORY
04	P4_LGA775_A
05	P4_LGA775_B
06	P4_LGA775_C
07	P4_LGA775_D
08	GMCH-LAKEPORT_HOST
09	GMCH-LAKEPORT_DDRII
10	GMCH-LAKEPORT_PCI E, DMI
11	GMCH-LAKEPORT_INT VGA
12	GMCH-LAKEPORT_GND
13	GMCH-LAKEPORT_PWR
14	DDRII CHANNEL A 1,2
15	DDRII CHANNEL B 1,2
16	DDRII TERMINATION
17	PCI EXPRESS*16 SLOT
18	ICH7 PCI, USB, DMI, LAN
19	ICH7 IDE, GPIO, SATA, CTRL
20	ICH7 VCC, GND
21	ICS954148AF CLOCK.
22	ATX,ATX_12V CONNECT,DUAL BIOS
23	PCI EXPRESS*1 SLOT 1,2
24	PCI SLOT 1,2,3
25	H/W MONITOR,FAN
26	IDE
27	KB_PS2,S.P.R

SHEET	TITLE
28	FRONT PANEL
29	FRONT USB,REAL USB CONNECT
30	PROCESSOR HOT
31	AZALIA CODEC ALC880
32	AUDIO JACK 1
33	AUDIO JACK 2
34	TI1394B
35	TI1394B
36	MARVELL 88E8053 LAN
37	ITE 8712GB
38	COM_LPT
39	VCORE PWM
40	DISCRETE POWER
41	ITE8212 RAID
42	ITE8212 RAID
43	GPIO DEFINE
44	GPIO DEFINE

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Title	Cover Sheet	
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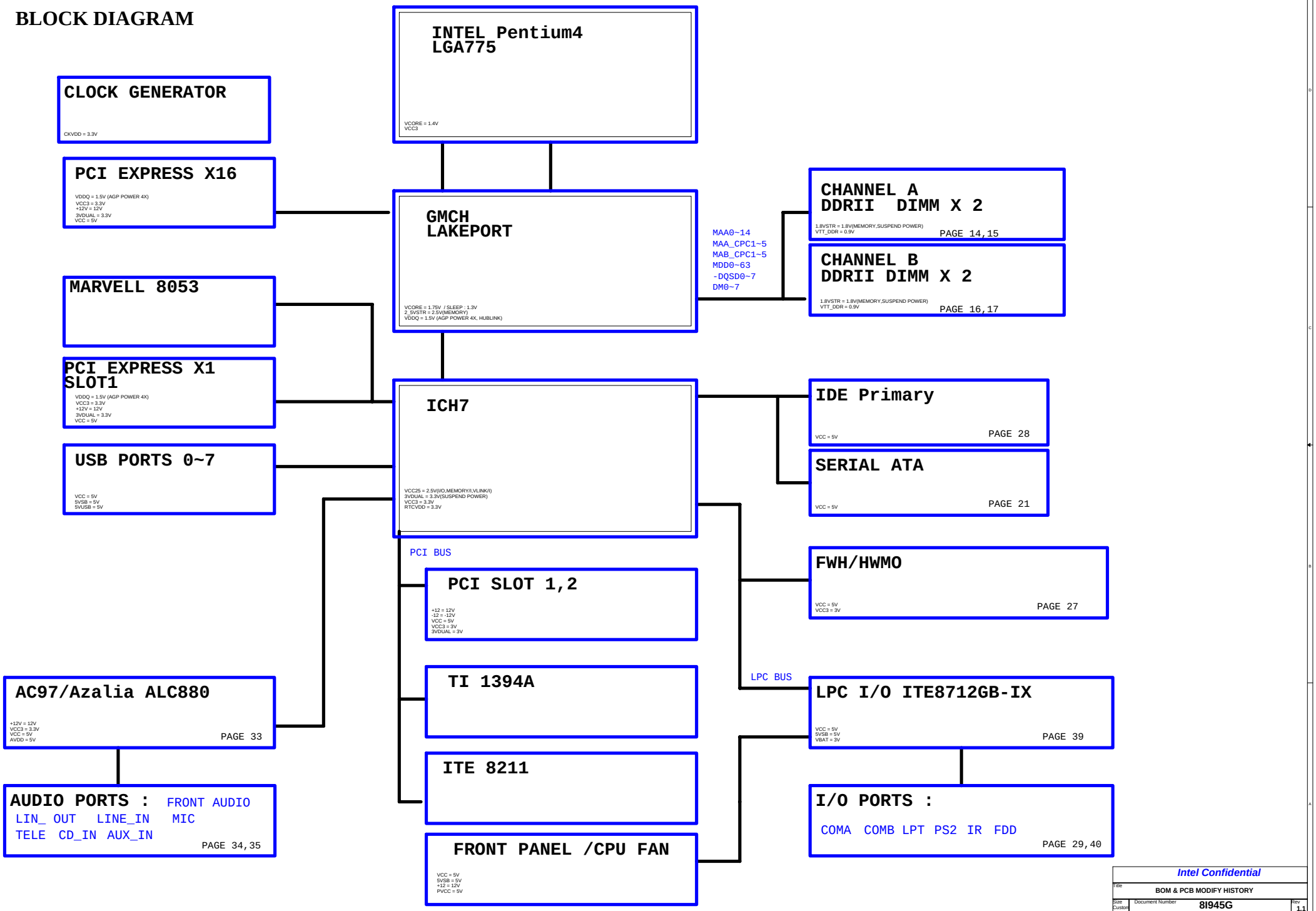
BLOCK DIAGRAM



Title	BOM & PCB MODIFY HISTORY	
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Model Name: 8I945G

Version: 1.1

Component value change history

Data	Change Item	Reason
0.2	release 02	
1.0	release 02	
	add bc24 22u	
	ddr ratio 線路圖 修改斷線且要上	
	DDR18V 線路修改	
	F2 改料號	
	INFO_LINK REMOVE	
	N/B,S/B 改料號	
	USB AGND/GND 加電阻	
	加SPDIFI	
1.0B	R1619 1K/6 REMOVE	
1.0C	REMOVE PCIE_12V(11NH4-010004-01)	
	CU1 10HP5-366882-10 CHANGE 10HP5-366882-10R ALC882	
	L1,L2,L18 10LI2-12100A-03 CHANGE 10LI2-12100A-13	
1.0D	1.NB_HS 移到DIP 階	
	2.Add X1=32.768 KHz/[11XC5-532768-00]	
	3.RU1 from VT6410 change to IT8212	
1.0E	1.PCB change to 1.0 2	
	2.VCC3 add 1u/6 *3 for DDRII SPD issue	
1.0L	1.RF_ID change to white 11NH2-000203-41	
	2.Add PWR_LED connect	
1.0M	1.C190 add 0.1u/6	
1.1A	1.FWH change to SPI function	
	2.PCB change to 1.1	

Circuit or PCB layout change for next version

DATE	Change Item	Reason
2005/11/02	1.U9 SPI Footprint change to IC8SO-DUAL	PCB version:1.1

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Title	BOM & PCB MODIFY HISTORY
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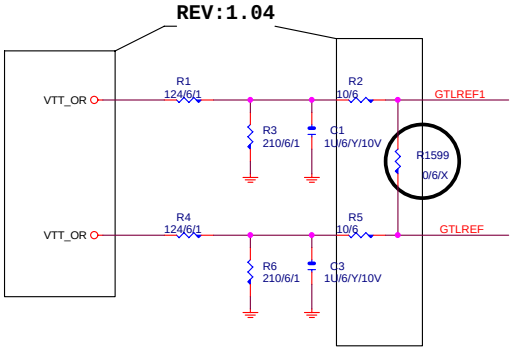
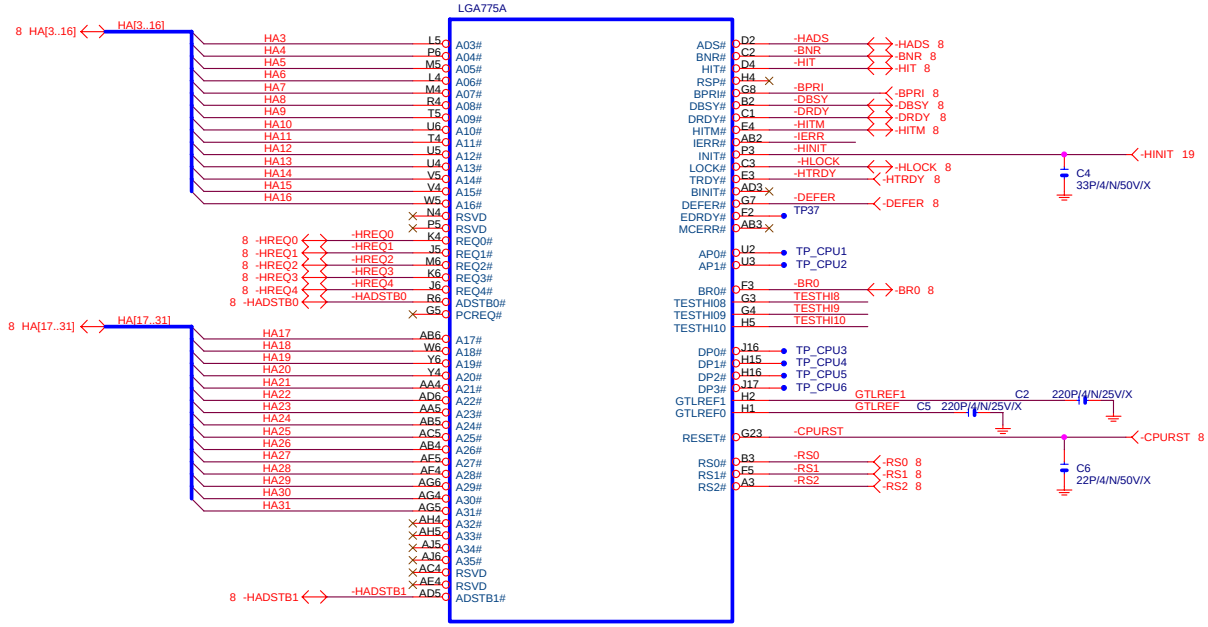
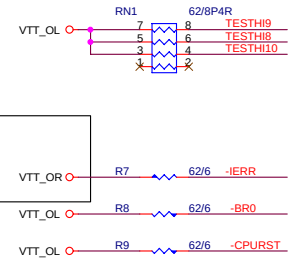
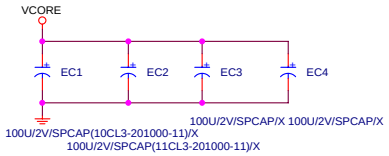
REV:1.04

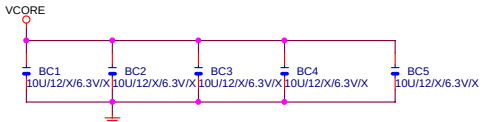


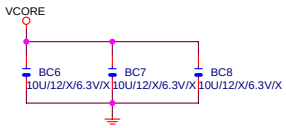


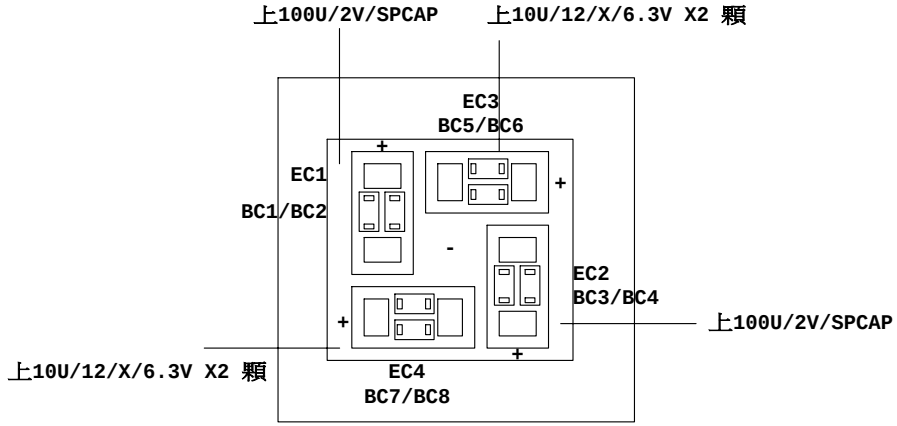


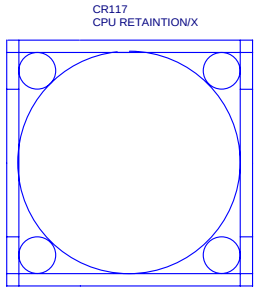
SP-CAP X 4PCS











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Title: P4_LGA775-A			
Size: Custom	Document Number: 8I945G		Rev: 1.1
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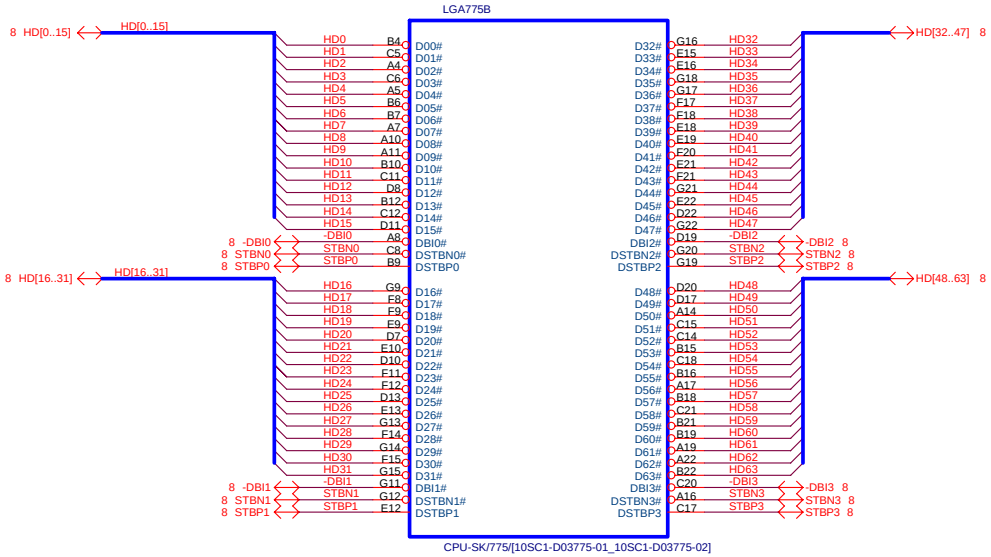

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Title	P4_LGA775-C	
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2/8/8600/235

Note:
VCCA & VCOREPLL define doesn't same as old P4 design kit

Trace width doesn't less than 12 Mil

As close as possible to CPU socket

Place outside of CPU socket

945 Design Guide rev1.5 spec.
VCCA=120~220mA
公板爲125mA

10LI2-12100A-13=INDUCTOR 10uH 320mA TAI-TECH
10LI2-12100A-02=INDUCTOR 10uH 155mA TAIYO
10LI2-12100A-03=INDUCTOR 10uH 300mA TAI-TECH(會破裂)
10LI2-12100A-01=INDUCTOR 10uH 120mA TDK

限用兩種

CPU

FSA	FSB	NA		
FSBSEL0	FSBSEL1	FSBSEL2	Clock	
1	0	1	100MHz	
1	0	0	133MHz	3/4
1	1	0	166MHz	# POWER ON
0	1	0	200MHz	2.0/2.66/3.33
0	0	0	266MHz	1.5/2.0/2.5

Locate at ICH7 Side

FOR ALL DDR CLK RATIO

CHECK BSEL0/1 ITE8712 POWER ON 時電壓是否會高於1.2V

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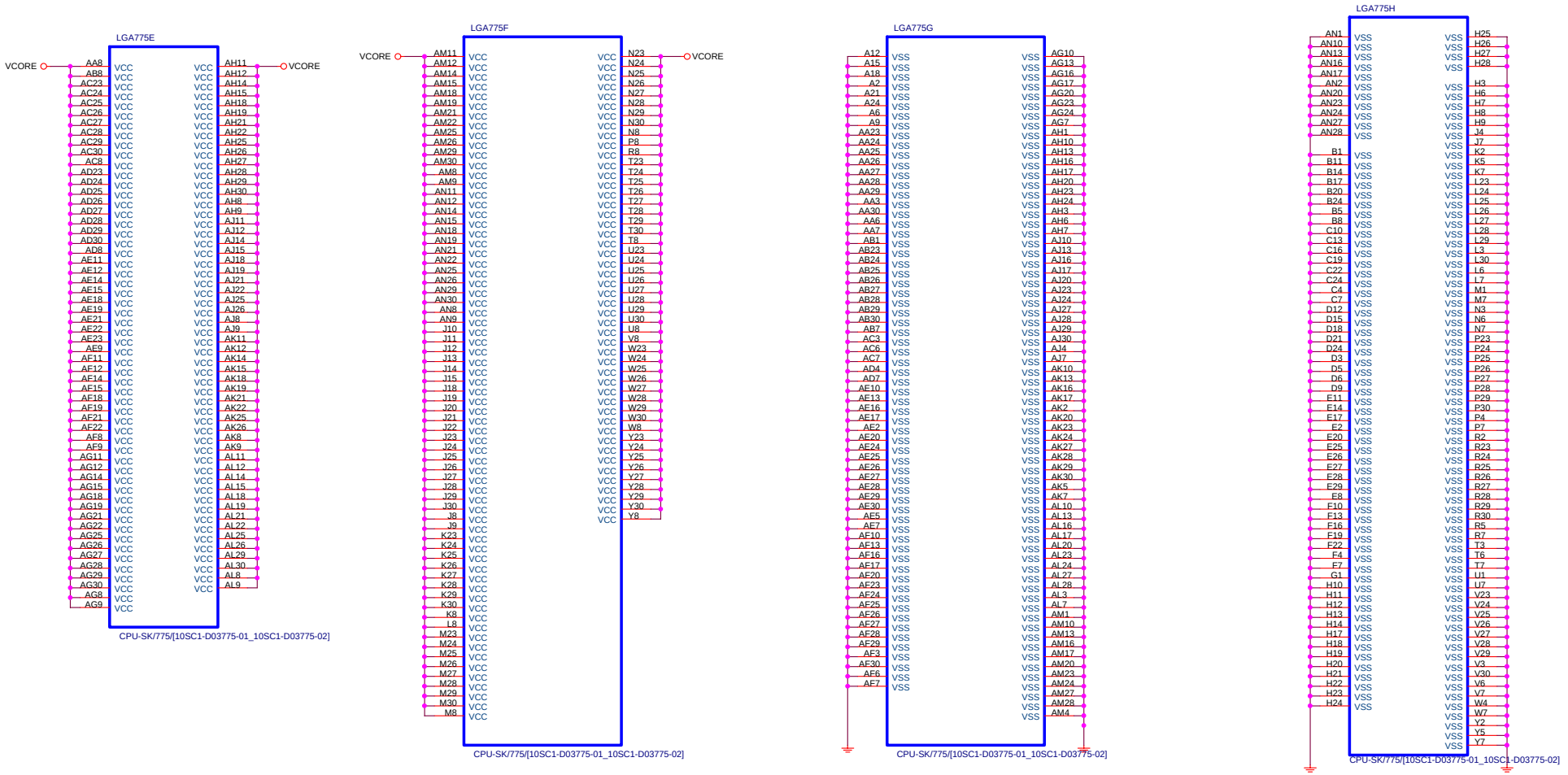
Title	P4_LGA775-B		
Size: Custom	Document Number: 8I945G		Rev: 1.1
Date: Tuesday, November 01, 2005	Sheet 6 of 44		



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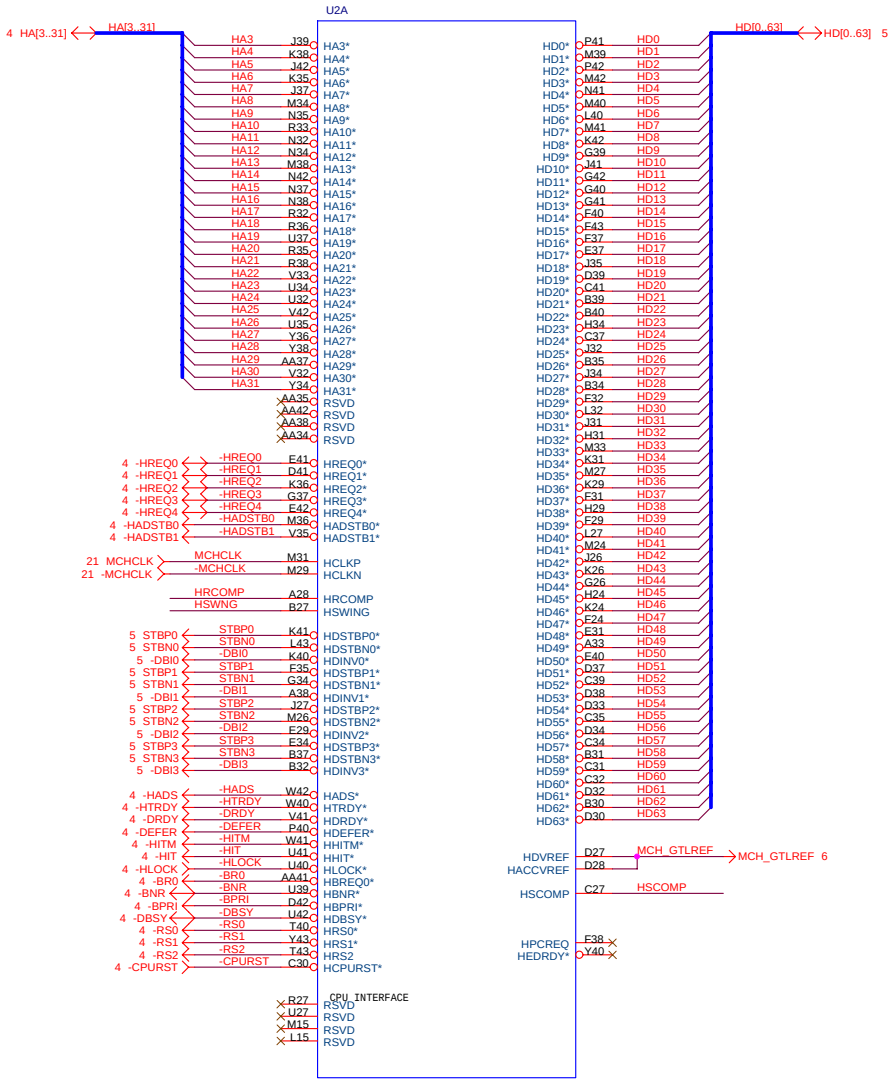
Title	P4_LGA775-D	
Size: Custom	Document Number: 8I945G	Rev: 1.1
Date: Tuesday, November 01, 2005	Sheet 7 of 44	



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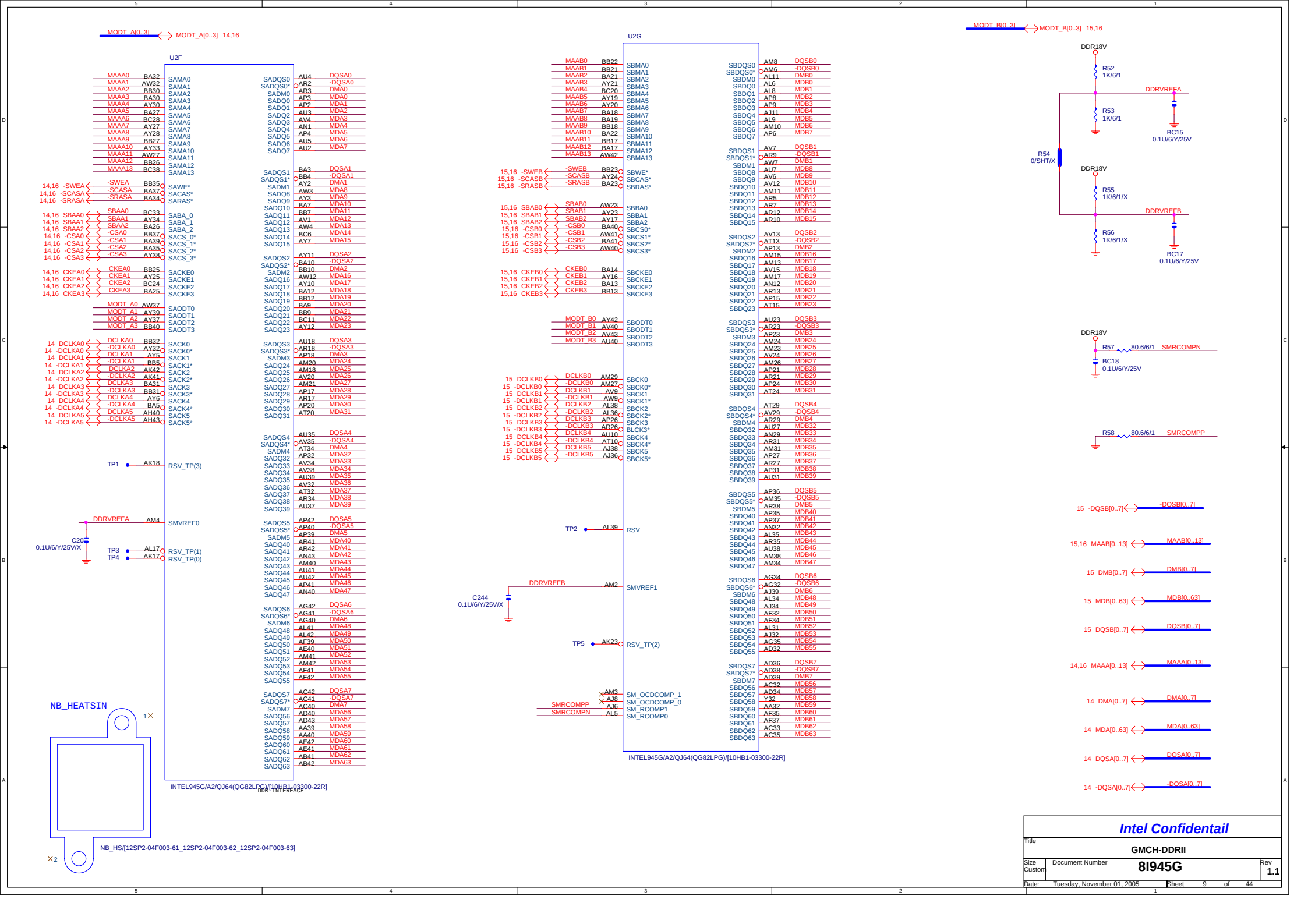
Title	GMCH-HOST	
Size: Custom	Document Number: 8I945G	Rev: 1.1
Date: Tuesday, November 01, 2005	Sheet 8 of 44	


MODT_A[0..3]
MODT_A[0..3] 14,16
U2F
MAAA0 BA32
MAAA1 AW32
MAAA2 BB30
MAAA3 BA30
MAAA4 AY30
MAAA5 BA27
MAAA6 BC28
MAAA7 AY27
MAAA8 AY28
MAAA9 BB27
MAAA10 AY33
MAAA11 AW27
MAAA12 BB26
MAAA13 BC38
SAMA0
SAMA1
SAMA2
SAMA3
SAMA4
SAMA5
SAMA6
SAMA7
SAMA8
SAMA9
SAMA10
SAMA11
SAMA12
SAMA13
14,16 -SWEA BB35
14,16 -SCASA BA37
14,16 -SRASA BA34
-SWEA
-SCASA
-SRASA
SAWE*
SACAS*
SARAS*
14,16 SBAA0 BC33
14,16 SBAA1 AY34
14,16 SBAA2 BA26
14,16 -CSA0 BB37
14,16 -CSA1 BA39
14,16 -CSA2 BA35
14,16 -CSA3 AY38
SBAA0
SBAA1
SBAA2
-CSA0
-CSA1
-CSA2
-CSA3
SABA_0
SABA_1
SABA_2
SACS_0*
SACS_1*
SACS_2*
SACS_3*
14,16 CKEA0 BB25
14,16 CKEA1 AY25
14,16 CKEA2 BC24
14,16 CKEA3 BA25
CKEA0
CKEA1
CKEA2
CKEA3
SACKE0
SACKE1
SACKE2
SACKE3
MODT_A0 AW37
MODT_A1 AY39
MODT_A2 AY37
MODT_A3 BB40
SAODT0
SAODT1
SAODT2
SAODT3
14 DCLKA0 BB32
14 -DCLKA0 AY32
14 DCLKA1 AY5
14 -DCLKA1 BB5
14 DCLKA2 AK42
14 -DCLKA2 AK41
14 DCLKA3 BA31
14 -DCLKA3 BB31
14 DCLKA4 AY6
14 -DCLKA4 BA5
14 DCLKA5 AH40
14 -DCLKA5 AH43
DCLKA0
-DCLKA0
DCLKA1
-DCLKA1
DCLKA2
-DCLKA2
DCLKA3
-DCLKA3
DCLKA4
-DCLKA4
DCLKA5
-DCLKA5
SACK0
SACK0*
SACK1
SACK1*
SACK2
SACK2*
SACK3
SACK3*
SACK4
SACK4*
SACK5
SACK5*
TP1 AK18
RSV_TP(3)
DDRVREFA AM4
SMVREF0
C20
0.1U/6/Y/25V/X
TP3 AL17
TP4 AK17
RSV_TP(1)
RSV_TP(0)
SADQS0 AU4
SADQS0* AR2
SADM0 AR3
SADQ0 AP3
SADQ1 AP2
SADQ2 AU3
SADQ3 AV4
SADQ4 AN1
SADQ5 AP4
SADQ6 AU5
SADQ7 AU2
DQSA0
-DQSA0
DMA0
MDA0
MDA1
MDA2
MDA3
MDA4
MDA5
MDA6
MDA7
SADQS1 BA3
SADQS1* BB4
SADM1 AY2
SADQ8 AW3
SADQ9 AY3
SADQ10 BA7
SADQ11 BB7
SADQ12 AV1
SADQ13 AW4
SADQ14 BC6
SADQ15 AY7
DQSA1
-DQSA1
DMA1
MDA8
MDA9
MDA10
MDA11
MDA12
MDA13
MDA14
MDA15
SADQS2 AY11
SADQS2* BA10
SADM2 BB10
SADQ16 AW12
SADQ17 AY10
SADQ18 BA12
SADQ19 BB12
SADQ20 BA9
SADQ21 BB9
SADQ22 BC11
SADQ23 AY12
DQSA2
-DQSA2
DMA2
MDA16
MDA17
MDA18
MDA19
MDA20
MDA21
MDA22
MDA23
SADQS3 AU18
SADQS3* AR18
SADM3 AP18
SADQ24 AM20
SADQ25 AM18
SADQ26 AV20
SADQ27 AM21
SADQ28 AP17
SADQ29 AR17
SADQ30 AP20
SADQ31 AT20
DQSA3
-DQSA3
DMA3
MDA24
MDA25
MDA26
MDA27
MDA28
MDA29
MDA30
MDA31
SADQS4 AU35
SADQS4* AV35
SADM4 AT34
SADQ32 AP32
SADQ33 AV34
SADQ34 AV38
SADQ35 AU39
SADQ36 AV32
SADQ37 AT32
SADQ38 AR34
SADQ39 AU37
DQSA4
-DQSA4
DMA4
MDA32
MDA33
MDA34
MDA35
MDA36
MDA37
MDA38
MDA39
SADQS5 AP42
SADQS5* AP40
SADM5 AP39
SADQ40 AR41
SADQ41 AR42
SADQ42 AN43
SADQ43 AM40
SADQ44 AU41
SADQ45 AU42
SADQ46 AP41
SADQ47 AN40
DQSA5
-DQSA5
DMA5
MDA40
MDA41
MDA42
MDA43
MDA44
MDA45
MDA46
MDA47
SADQS6 AG42
SADQS6* AG41
SADM6 AG40
SADQ48 AL41
SADQ49 AL42
SADQ50 AF39
SADQ51 AE40
SADQ52 AM41
SADQ53 AM42
SADQ54 AF41
SADQ55 AF42
DQSA6
-DQSA6
DMA6
MDA48
MDA49
MDA50
MDA51
MDA52
MDA53
MDA54
MDA55
SADQS7 AC42
SADQS7* AC41
SADM7 AC40
SADQ56 AD40
SADQ57 AD43
SADQ58 AA39
SADQ59 AA40
SADQ60 AE42
SADQ61 AE41
SADQ62 AB41
SADQ63 AB42
DQSA7
-DQSA7
DMA7
MDA56
MDA57
MDA58
MDA59
MDA60
MDA61
MDA62
MDA63
INTEL945G/A2/QJ64(QG82LPG)/[10HB1-03300-22R]
DDR INTERFACE
NB_HEATSIN
1
2
NB_HS/[12SP2-04F003-61_12SP2-04F003-62_12SP2-04F003-63]
U2G
MAAB0 BB22
MAAB1 BB21
MAAB2 BA21
MAAB3 AY21
MAAB4 BC20
MAAB5 AY19
MAAB6 AY20
MAAB7 BA18
MAAB8 BA19
MAAB9 BB18
MAAB10 BA22
MAAB11 BB17
MAAB12 BA17
MAAB13 AW42
SBMA0
SBMA1
SBMA2
SBMA3
SBMA4
SBMA5
SBMA6
SBMA7
SBMA8
SBMA9
SBMA10
SBMA11
SBMA12
SBMA13
15,16 -SWEB BB23
15,16 -SCASB AY24
15,16 -SRASB BA23
-SWEB
-SCASB
-SRASB
SBWE*
SBCAS*
SBRAS*
15,16 SBAB0 AW23
15,16 SBAB1 AY23
15,16 SBAB2 AY17
15,16 -CSB0 BA40
15,16 -CSB1 AW41
15,16 -CSB2 BA41
15,16 -CSB3 AW40
SBAB0
SBAB1
SBAB2
-CSB0
-CSB1
-CSB2
-CSB3
SBBA0
SBBA1
SBBA2
SBCS0*
SBCS1*
SBCS2*
SBCS3*
15,16 CKEB0 BA14
15,16 CKEB1 AY16
15,16 CKEB2 BA13
15,16 CKEB3 BB13
CKEB0
CKEB1
CKEB2
CKEB3
SBCKE0
SBCKE1
SBCKE2
SBCKE3
MODT_B0 AY42
MODT_B1 AV40
MODT_B2 AV43
MODT_B3 AU40
SBODT0
SBODT1
SBODT2
SBODT3
15 DCLKB0 AM29
15 -DCLKB0 AM27
15 DCLKB1 AV9
15 -DCLKB1 AW9
15 DCLKB2 AL38
15 -DCLKB2 AL36
15 DCLKB3 AP26
15 -DCLKB3 AR26
15 DCLKB4 AU10
15 -DCLKB4 AT10
15 DCLKB5 AJ38
15 -DCLKB5 AJ36
DCLKB0
-DCLKB0
DCLKB1
-DCLKB1
DCLKB2
-DCLKB2
DCLKB3
-DCLKB3
DCLKB4
-DCLKB4
DCLKB5
-DCLKB5
SBCK0
SBCK0*
SBCK1
SBCK1*
SBCK2
SBCK2*
SBCK3
BLCK3*
SBCK4
SBCK4*
SBCK5
SBCK5*
TP2 AL39
RSV
DDRVREFB AM2
SMVREF1
C244
0.1U/6/Y/25V/X
TP5 AK23
RSV_TP(2)
AM3
AJ8
AJ6
AL5
SMRCOMPP
SMRCOMPN
SM_OCDCOMP_1
SM_OCDCOMP_0
SM_RCOMP1
SM_RCOMP0
SBDQS0 AM8
SBDQS0* AM6
SBDM0 AL11
SBDQ0 AL6
SBDQ1 AL8
SBDQ2 AP8
SBDQ3 AP9
SBDQ4 AJ11
SBDQ5 AL9
SBDQ6 AM10
SBDQ7 AP6
DQSB0
-DQSB0
DMB0
MDB0
MDB1
MDB2
MDB3
MDB4
MDB5
MDB6
MDB7
SBDQS1 AV7
SBDQS1* AR9
SBDM1 AW7
SBDQ8 AU7
SBDQ9 AV6
SBDQ10 AV12
SBDQ11 AM11
SBDQ12 AR5
SBDQ13 AR7
SBDQ14 AR12
SBDQ15 AR10
DQSB1
-DQSB1
DMB1
MDB8
MDB9
MDB10
MDB11
MDB12
MDB13
MDB14
MDB15
SBDQS2 AV13
SBDQS2* AT13
SBDM2 AP13
SBDQ16 AM15
SBDQ17 AM13
SBDQ18 AV15
SBDQ19 AM17
SBDQ20 AN12
SBDQ21 AR13
SBDQ22 AP15
SBDQ23 AT15
DQSB2
-DQSB2
DMB2
MDB16
MDB17
MDB18
MDB19
MDB20
MDB21
MDB22
MDB23
SBDQS3 AU23
SBDQS3* AR23
SBDM3 AP23
SBDQ24 AM24
SBDQ25 AM23
SBDQ26 AV24
SBDQ27 AM26
SBDQ28 AP21
SBDQ29 AR21
SBDQ30 AP24
SBDQ31 AT24
DQSB3
-DQSB3
DMB3
MDB24
MDB25
MDB26
MDB27
MDB28
MDB29
MDB30
MDB31
SBDQS4 AT29
SBDQS4* AV29
SBDM4 AR29
SBDQ32 AU27
SBDQ33 AN29
SBDQ34 AR31
SBDQ35 AM31
SBDQ36 AP27
SBDQ37 AR27
SBDQ38 AP31
SBDQ39 AU31
DQSB4
-DQSB4
DMB4
MDB32
MDB33
MDB34
MDB35
MDB36
MDB37
MDB38
MDB39
SBDQS5 AP36
SBDQS5* AM35
SBDM5 AR38
SBDQ40 AP35
SBDQ41 AP37
SBDQ42 AN32
SBDQ43 AL35
SBDQ44 AR35
SBDQ45 AU38
SBDQ46 AM38
SBDQ47 AM34
DQSB5
-DQSB5
DMB5
MDB40
MDB41
MDB42
MDB43
MDB44
MDB45
MDB46
MDB47
SBDQS6 AG34
SBDQS6* AG32
SBDM6 AJ39
SBDQ48 AL34
SBDQ49 AJ34
SBDQ50 AF32
SBDQ51 AF34
SBDQ52 AL31
SBDQ53 AJ32
SBDQ54 AG35
SBDQ55 AD32
DQSB6
-DQSB6
DMB6
MDB48
MDB49
MDB50
MDB51
MDB52
MDB53
MDB54
MDB55
SBDQS7 AD36
SBDQS7* AD38
SBDM7 AD39
SBDQ56 AC32
SBDQ57 AD34
SBDQ58 Y32
SBDQ59 AA32
SBDQ60 AF35
SBDQ61 AF37
SBDQ62 AC33
SBDQ63 AC35
DQSB7
-DQSB7
DMB7
MDB56
MDB57
MDB58
MDB59
MDB60
MDB61
MDB62
MDB63
INTEL945G/A2/QJ64(QG82LPG)/[10HB1-03300-22R]
MODT_B[0..3] 15,16
DDR18V
R52 1K/6/1
DDRVREFA
R53 1K/6/1
BC15 0.1U/6/Y/25V
R54 0/SHT/X
DDR18V
R55 1K/6/1/X
DDRVREFB
R56 1K/6/1/X
BC17 0.1U/6/Y/25V
DDR18V
R57 80.6/6/1 SMRCOMPN
BC18 0.1U/6/Y/25V
R58 80.6/6/1 SMRCOMPP
15 -DQSB[0..7] -DQSB[0..7]
15,16 MAAB[0..13] MAAB[0..13]
15 DMB[0..7] DMB[0..7]
15 MDB[0..63] MDB[0..63]
15 DQSB[0..7] DQSB[0..7]
14,16 MAAA[0..13] MAAA[0..13]
14 DMA[0..7] DMA[0..7]
14 MDA[0..63] MDA[0..63]
14 DQSA[0..7] DQSA[0..7]
14 -DQSA[0..7] -DQSA[0..7]
Intel Confidentail
Title
GMCH-DDRII
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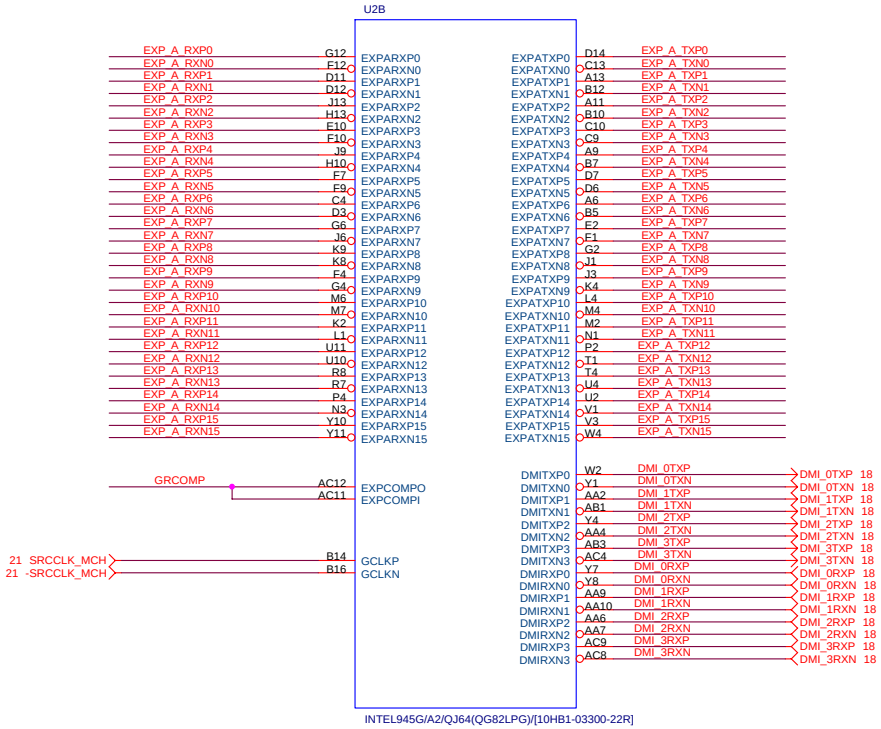

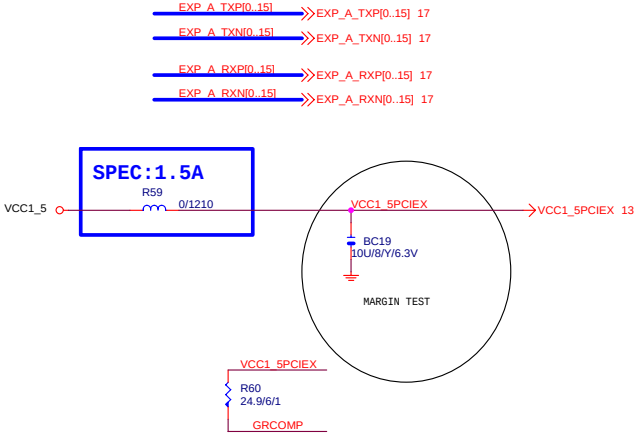

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Title	GMCH-PCI E & DMI		
Size: Custom	Document Number: 8I945G		Rev: 1.1
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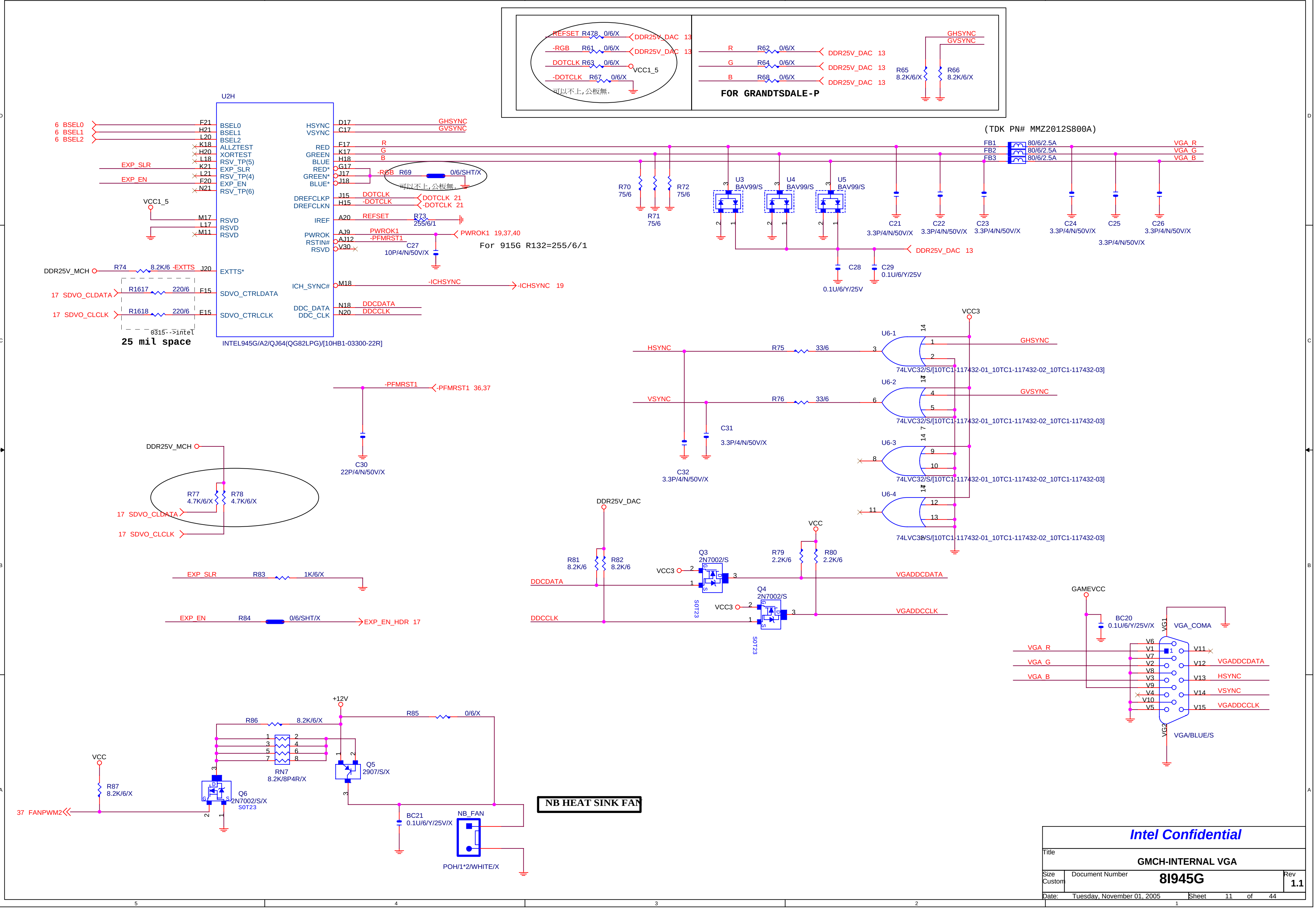

Intel Confidential

Title: **GMCH-INTERNAL VGA**

Size	Document Number	Rev
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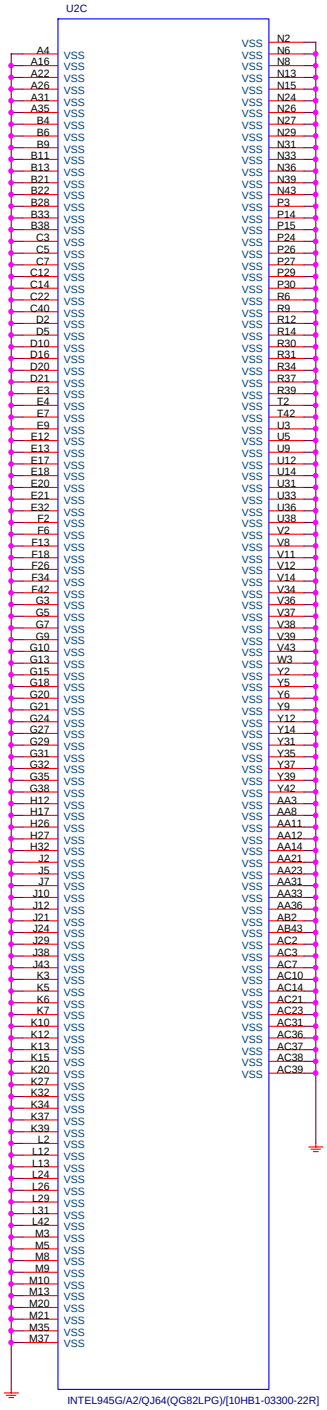
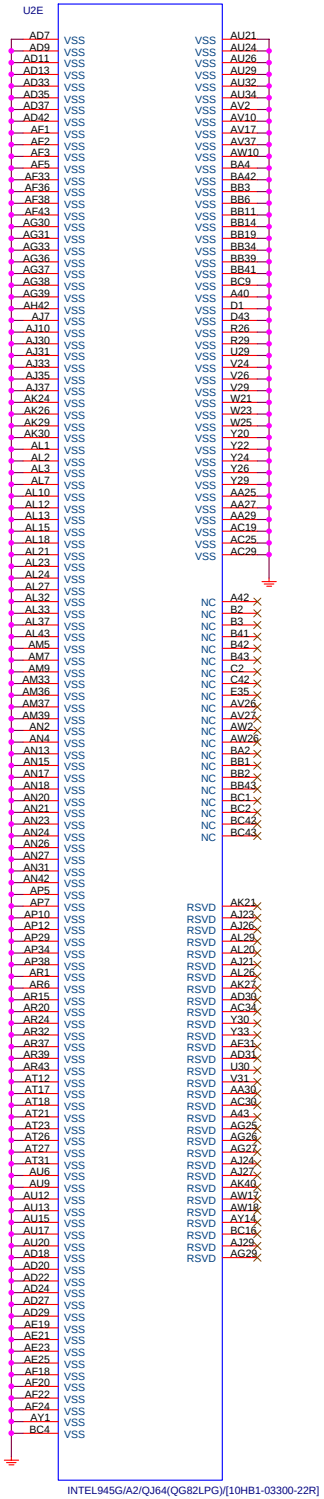
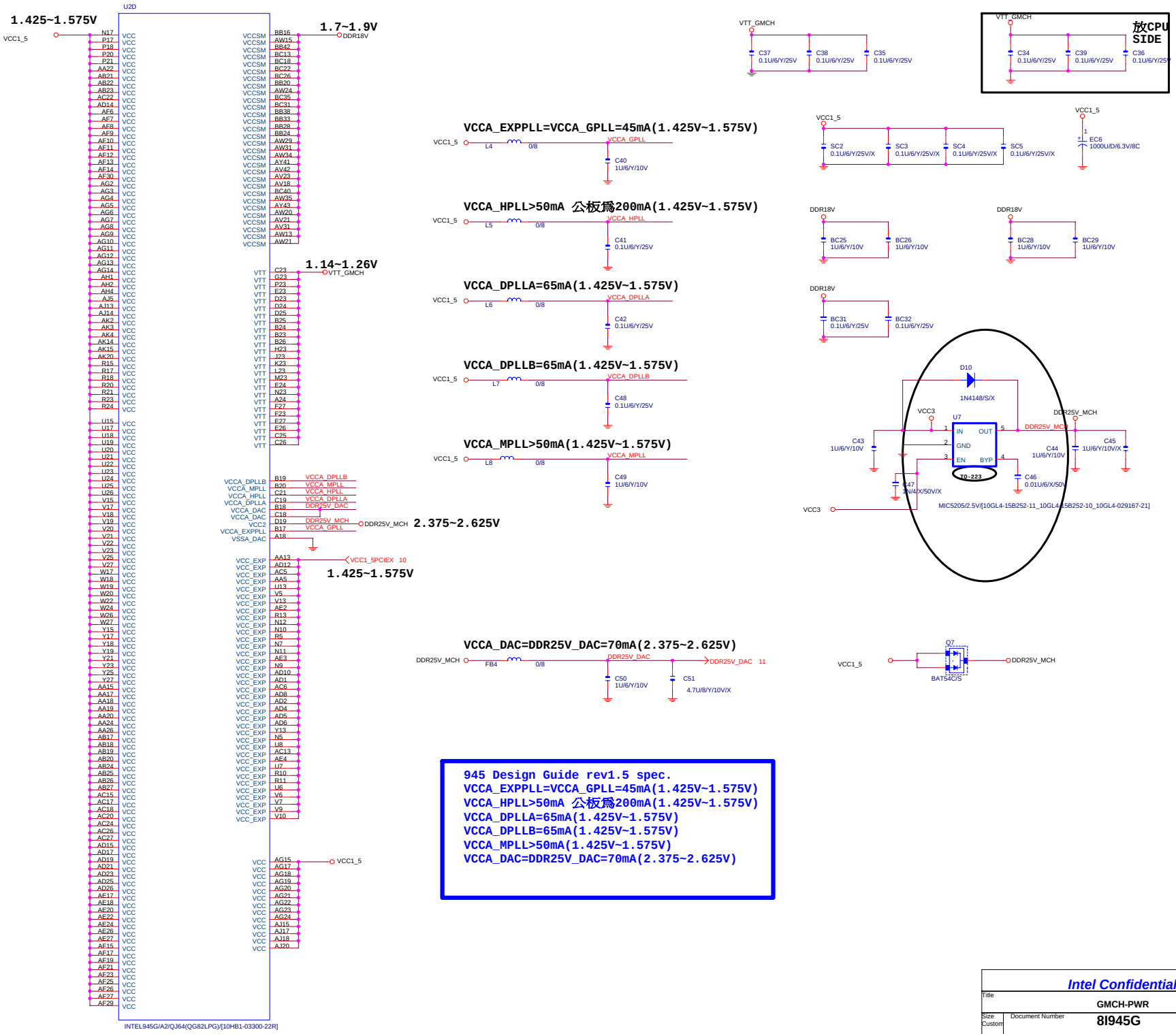




Title	GMCH-GND	
Size: Custom	Document Number: 8I945G	Rev: 1.1
Date: Tuesday, November 01, 2005	Sheet 12 of 44	


U2D
1.425~1.575V
VCC1_5
1.7~1.9V
DDR18V
1.14~1.26V
VTT_GMCH
2.375~2.625V
DDR25V_MCH
VCC1_5PCIEX 10
1.425~1.575V
VCC1_5
INTEL945G/A2/QJ64(QG82LPG)/[10HB1-03300-22R]
VCCA_EXPPLL=VCCA_GPLL=45mA(1.425V~1.575V)
VCCA_HPLL>50mA 公板爲200mA(1.425V~1.575V)
VCCA_DPLLA=65mA(1.425V~1.575V)
VCCA_DPLLB=65mA(1.425V~1.575V)
VCCA_MPLL>50mA(1.425V~1.575V)
VCCA_DAC=DDR25V_DAC=70mA(2.375~2.625V)
VTT_GMCH
放CPU SIDE
C34 0.1U/6/Y/25V
C39 0.1U/6/Y/25V
C36 0.1U/6/Y/25V
C37 0.1U/6/Y/25V
C38 0.1U/6/Y/25V
C35 0.1U/6/Y/25V
SC2 0.1U/6/Y25V/X
SC3 0.1U/6/Y25V/X
SC4 0.1U/6/Y25V/X
SC5 0.1U/6/Y25V/X
EC6 1000U/D/6.3V/8C
BC25 1U/6/Y/10V
BC26 1U/6/Y/10V
BC28 1U/6/Y/10V
BC29 1U/6/Y/10V
BC31 0.1U/6/Y/25V
BC32 0.1U/6/Y/25V
D10
1N4148/S/X
U7
IN
OUT
GND
EN
BYP
TO-223
C43 1U/6/Y/10V
C44 1U/6/Y/10V
C45 1U/6/Y/10V/X
C47 4.7U/4/X/50V/X
C46 0.01U/6/X/50V
MIC5205/2.5V/[10GL4-15B252-11_10GL4-15B252-10_10GL4-029167-21]
Q7
BAT54C/S
L4 0/8 C40 1U/6/Y/10V
L5 0/8 C41 0.1U/6/Y/25V
L6 0/8 C42 0.1U/6/Y/25V
L7 0/8 C48 0.1U/6/Y/25V
L8 0/8 C49 1U/6/Y/10V
FB4 0/8 C50 1U/6/Y/10V
C51 4.7U/8/Y/10V/X
945 Design Guide rev1.5 spec.
VCCA_EXPPLL=VCCA_GPLL=45mA(1.425V~1.575V)
VCCA_HPLL>50mA 公板爲200mA(1.425V~1.575V)
VCCA_DPLLA=65mA(1.425V~1.575V)
VCCA_DPLLB=65mA(1.425V~1.575V)
VCCA_MPLL>50mA(1.425V~1.575V)
VCCA_DAC=DDR25V_DAC=70mA(2.375~2.625V)
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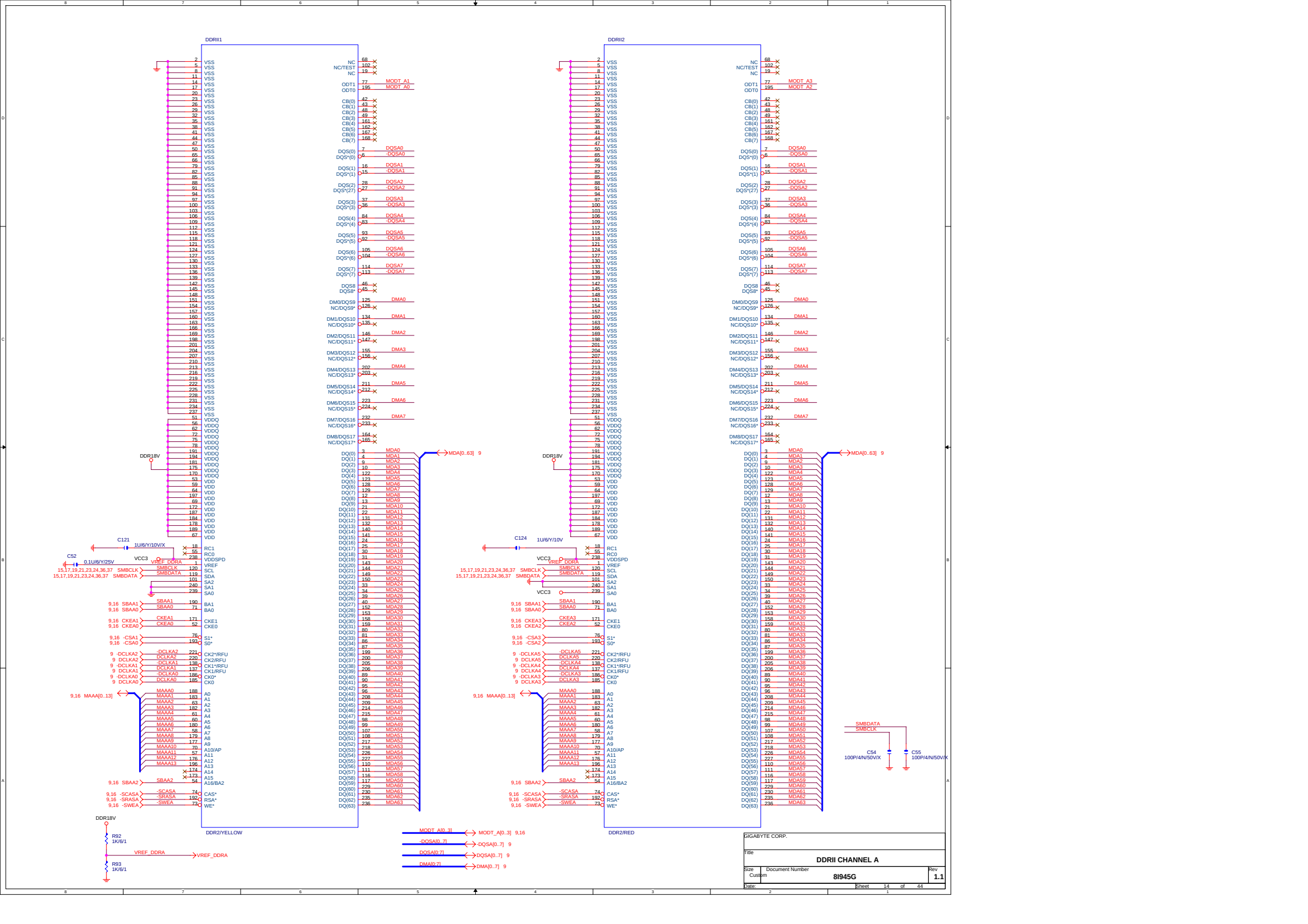
DDRII1
DDRII2
DDR18V
VCC3
VREF_DDRA
C121
C124
C52
C54
C55
R92
1K/6/1
R93
1K/6/1
DDR2/YELLOW
DDR2/RED
MDA[0..63] 9
MODT_A[0..3] 9,16
-DQSA[0..7] 9
DQSA[0..7] 9
DMA[0..7] 9
SMBDATA
SMBCLK
GIGABYTE CORP.
DDRII CHANNEL A
8I945G
1.1
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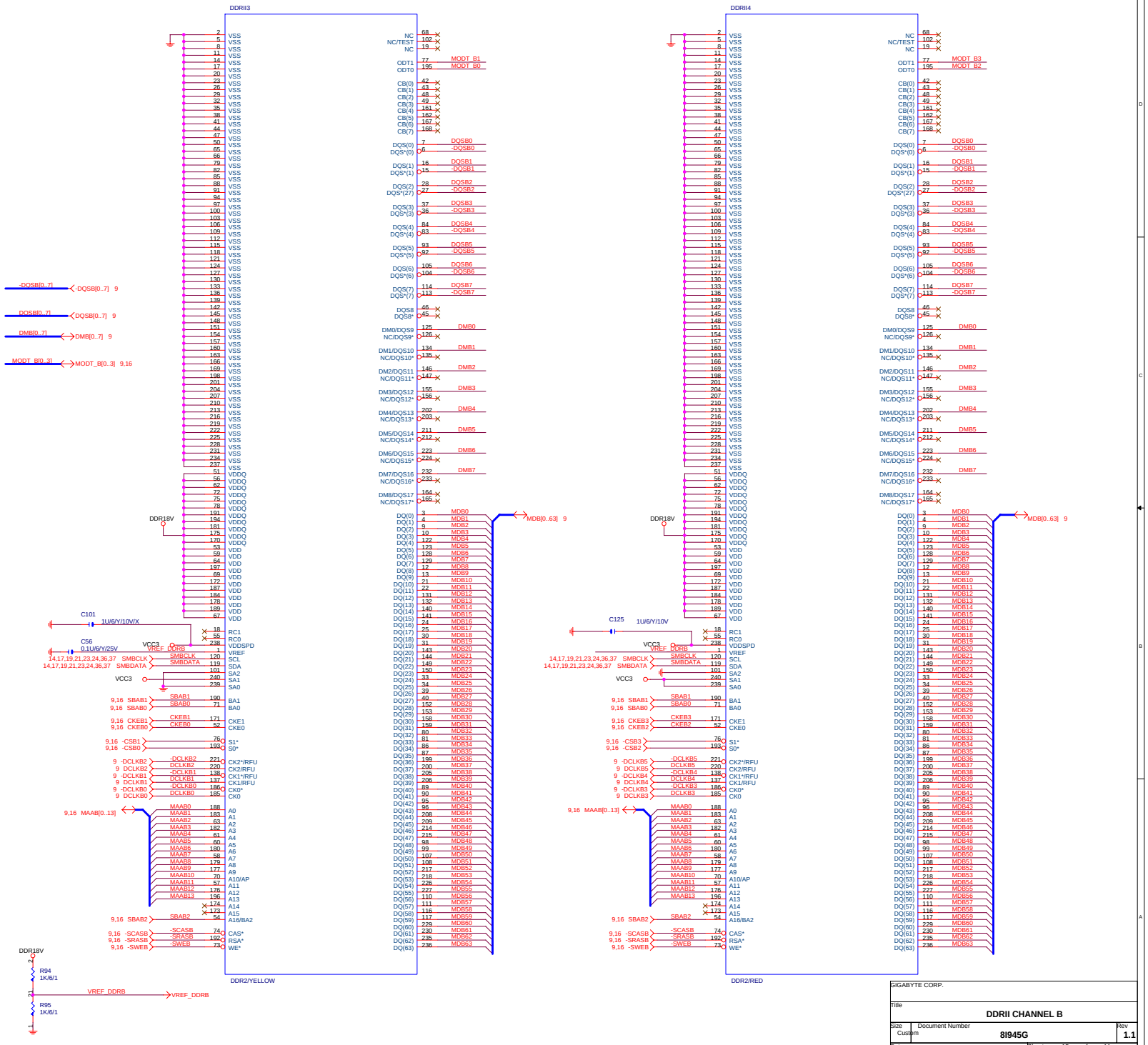

GIGABYTE CORP.

Title

DDRII CHANNEL B

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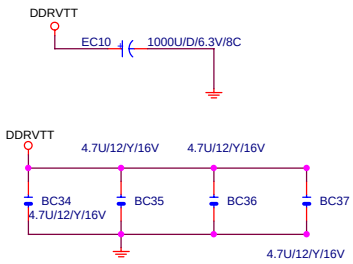
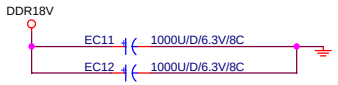
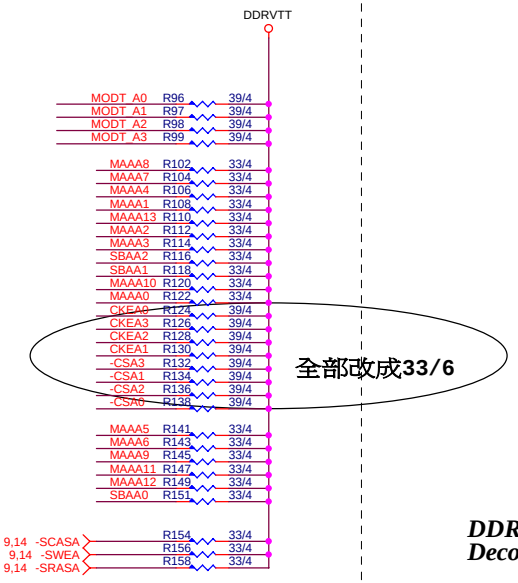
DDR TERMINATION
CHANNEL A

DDRVTT Decouple

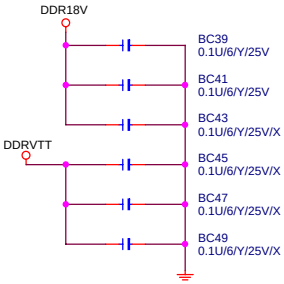


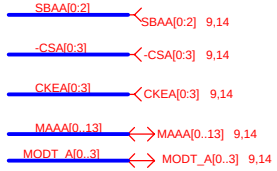




全部改成33/6

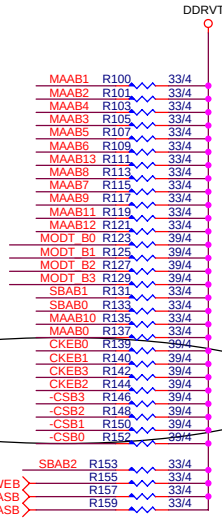
DDR18V Decouple





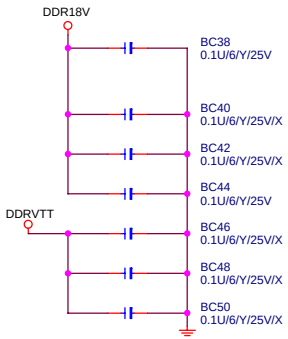
DDRVTT Decouple

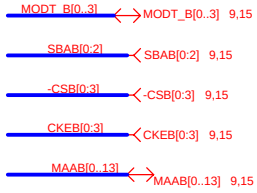
CHANNEL B



全部改成33/6

DDR18V Decouple





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Title	DDRII TERMINATOR	
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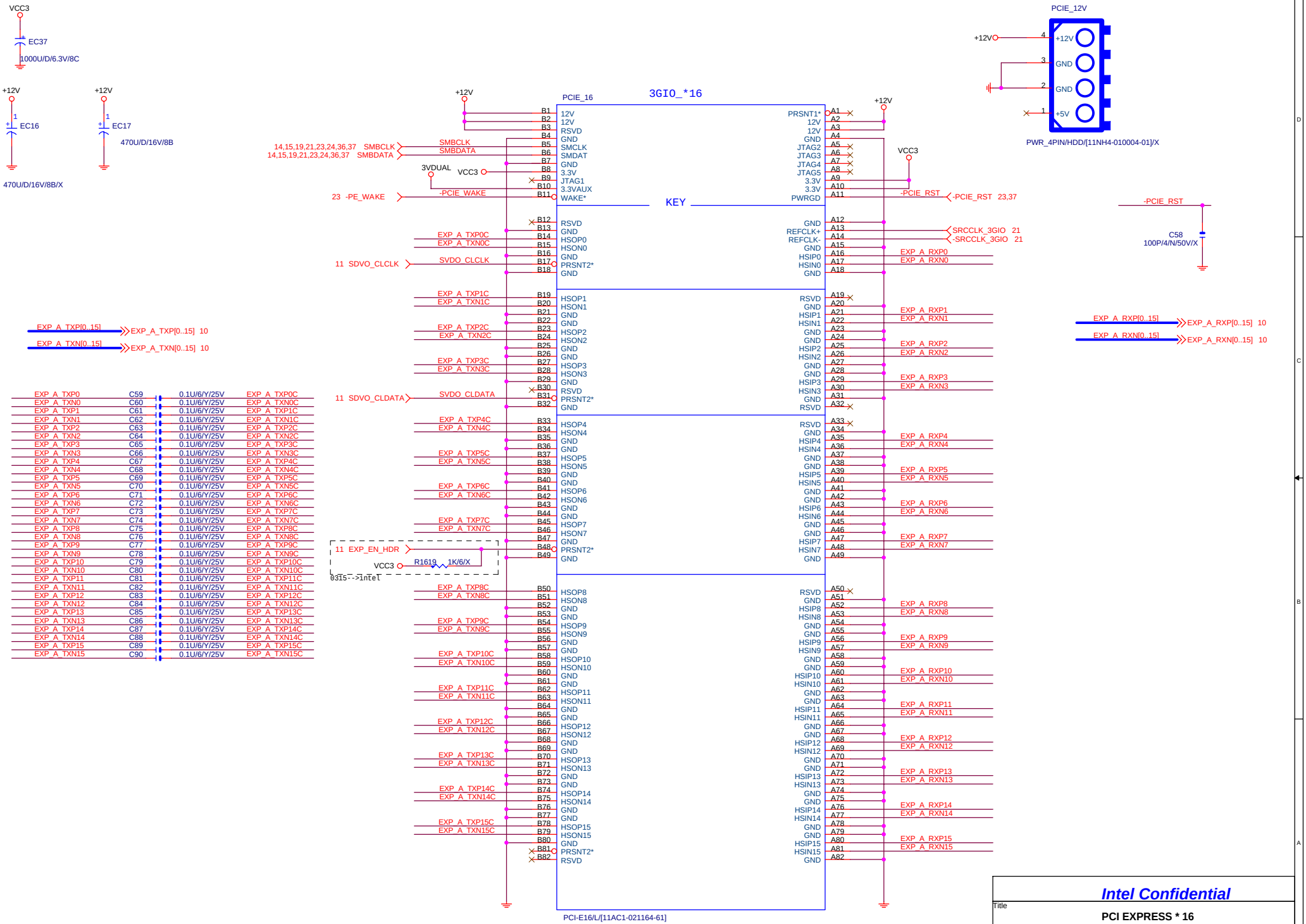

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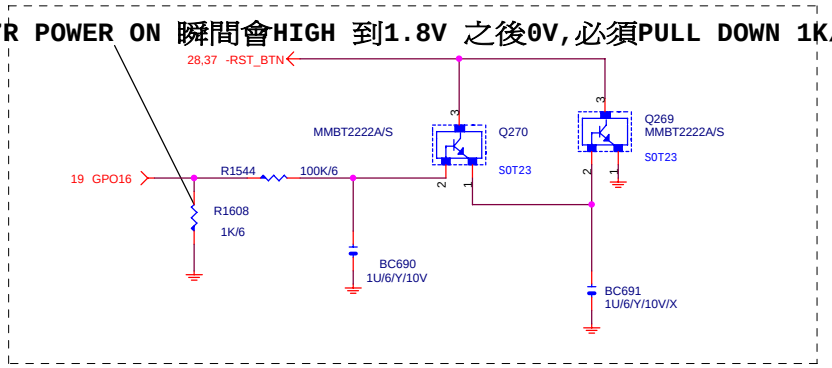
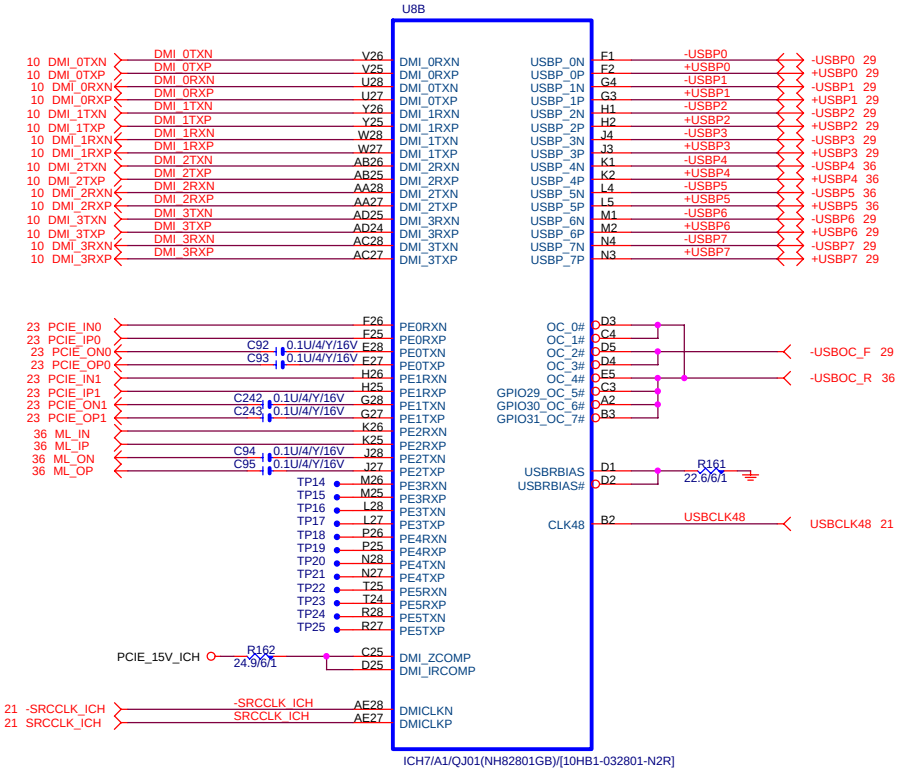
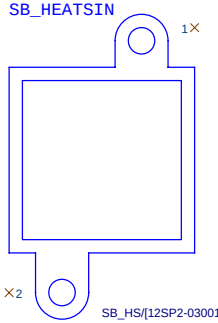
FOR ICH7R POWER ON 瞬間會HIGH 到1.8V 之後0V,必須PULL DOWN 1K/6



H/W RESET



SB_HEATSIN



SB_HS/[12SP2-030010-21_12SP2-030010-2 2]/X

PCI_BT1 PH/1*2/X

-GNT4 R163 1K/6/X

-GNT5 R164 1K/6

PCI_BT2: OPEN FWH

CLOSE SPI

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Title: ICH6-PCI, DMI, LAN, USB			
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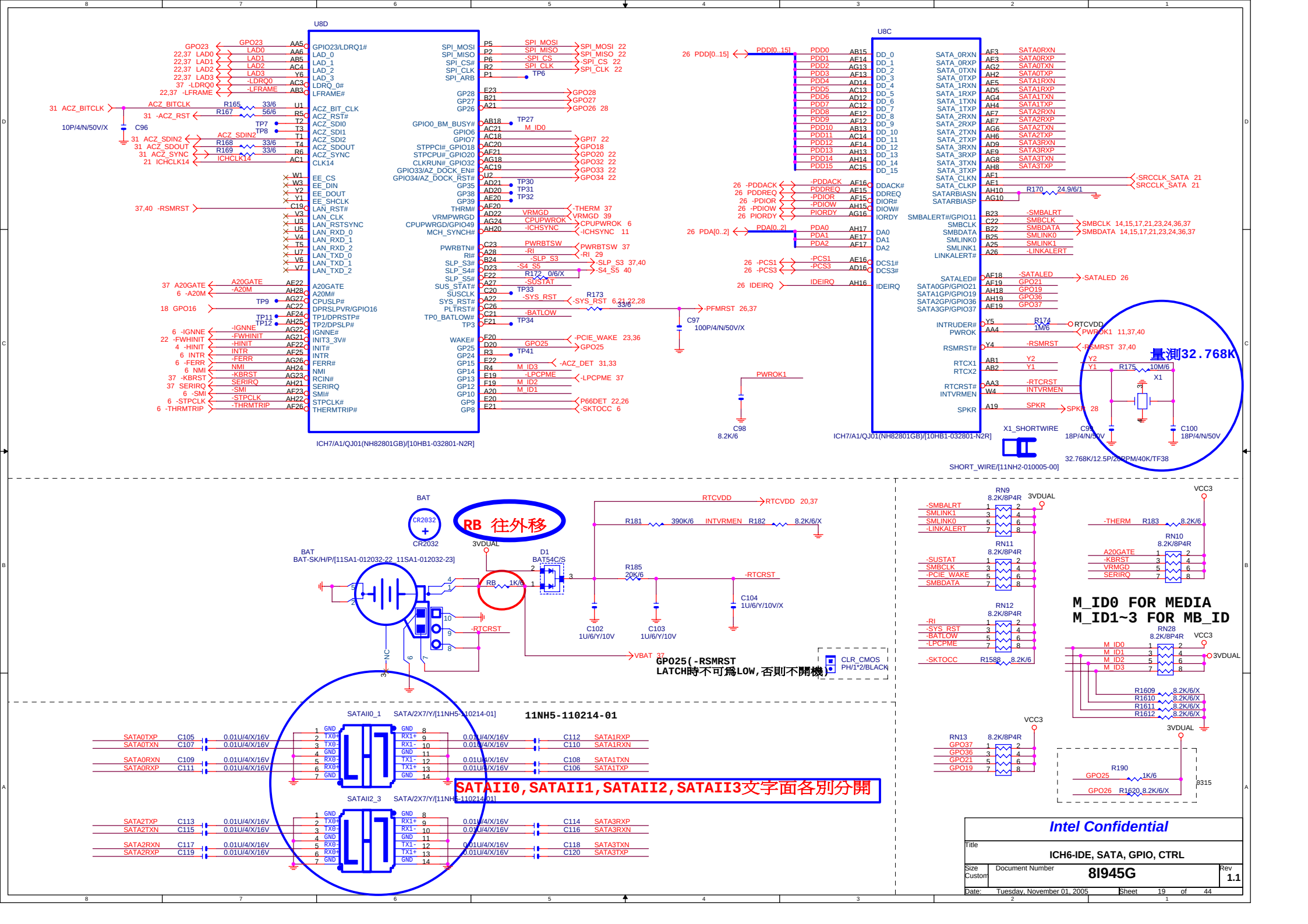
U8D
ICH7/A1/QJ01(NH82801GB)/[10HB1-032801-N2R]
U8C
ICH7/A1/QJ01(NH82801GB)/[10HB1-032801-N2R]
量測32.768K
X1_SHORTWIRE
SHORT_WIRE/[11NH2-010005-00]
32.768K/12.5P/20PPM/40K/TF38
RB 往外移
BAT
BAT54C/S
GPO25(-RSMRST
LATCH時不可爲LOW,否則不開機)
CLR_CMOS
PH/1*2/BLACK
M_ID0 FOR MEDIA
M_ID1~3 FOR MB_ID
11NH5-110214-01
SATAII0_1
SATAII2_3
SATAII0,SATAII1,SATAII2,SATAII3文字面各別分開
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ICH6-IDE, SATA, GPIO, CTRL
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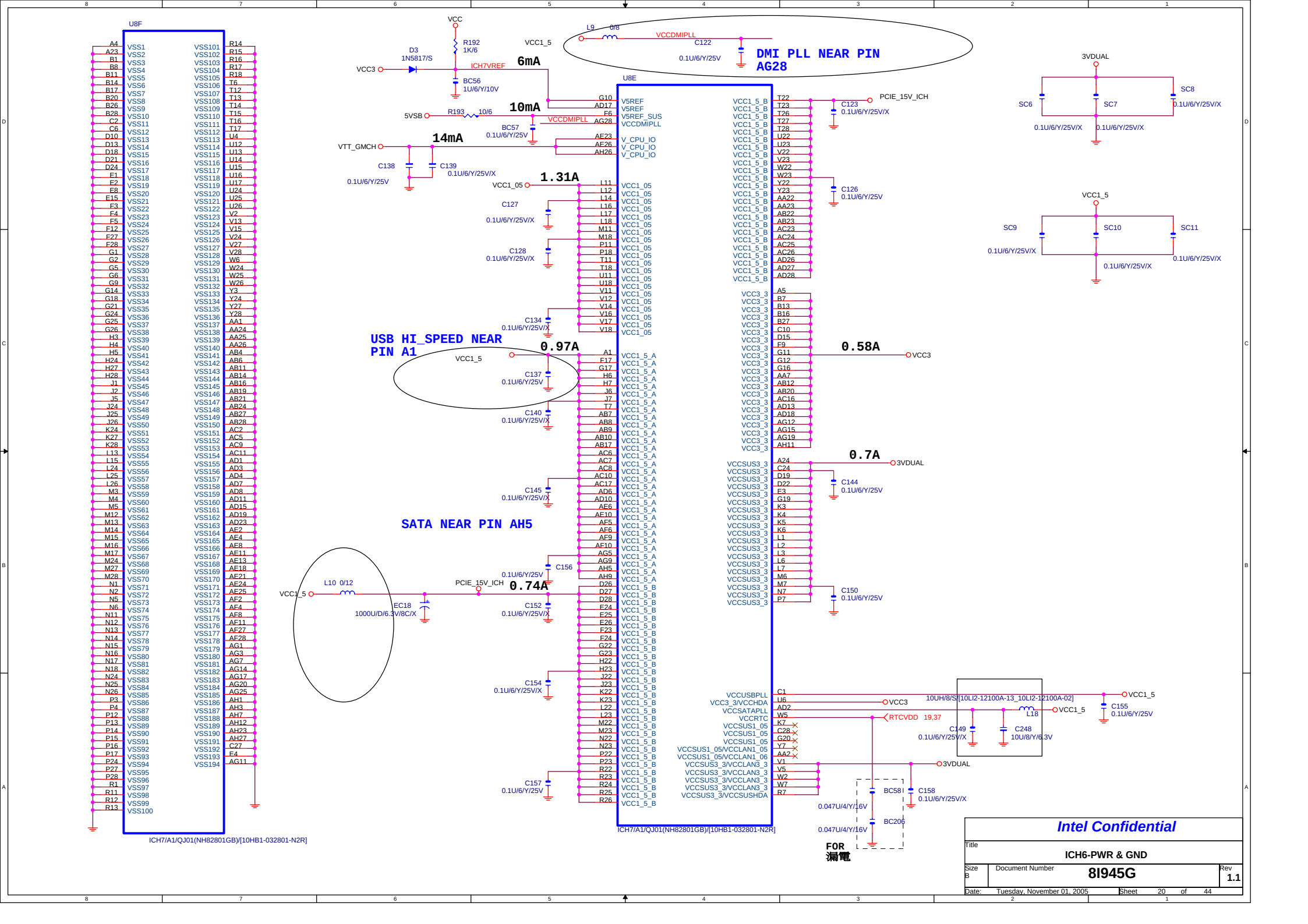
U8F
ICH7/A1/QJ01(NH82801GB)/[10HB1-032801-N2R]
U8E
ICH7/A1/QJ01(NH82801GB)/[10HB1-032801-N2R]
VCC
VCC3
D3
1N5817/S
R192
1K/6
ICH7VREF
6mA
BC56
1U/6/Y/10V
VCC1_5
L9 0/8
VCCDMIPLL
C122
0.1U/6/Y/25V
DMI PLL NEAR PIN
AG28
5VSB
R193 10/6
10mA
BC57
0.1U/6/Y/25V
VTT_GMCH
14mA
C138
0.1U/6/Y/25V
C139
0.1U/6/Y/25V/X
VCC1_05
1.31A
C127
0.1U/6/Y/25V/X
C128
0.1U/6/Y/25V/X
C134
0.1U/6/Y/25V/X
USB HI_SPEED NEAR
PIN A1
0.97A
C137
0.1U/6/Y/25V
C140
0.1U/6/Y/25V/X
C145
0.1U/6/Y/25V/X
SATA NEAR PIN AH5
L10 0/12
PCIE_15V_ICH
0.74A
EC18
1000U/D/6.3V/8C/X
C156
0.1U/6/Y/25V
C152
0.1U/6/Y/25V/X
C154
0.1U/6/Y/25V/X
C157
0.1U/6/Y/25V
PCIE_15V_ICH
C123
0.1U/6/Y/25V/X
C126
0.1U/6/Y/25V
0.58A
0.7A
C144
0.1U/6/Y/25V
C150
0.1U/6/Y/25V
3VDUAL
SC6
SC7
SC8
0.1U/6/Y/25V/X
VCC1_5
SC9
SC10
SC11
0.1U/6/Y/25V/X
10UH/8/S/[10LI2-12100A-13_10LI2-12100A-02]
L18
C155
0.1U/6/Y/25V
C149
0.1U/6/Y/25V/X
C248
10U/8/Y/6.3V
RTCVDD 19,37
BC58
0.047U/4/Y/16V
C158
0.1U/6/Y/25V/X
BC206
0.047U/4/Y/16V
FOR
漏電
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GSEL=1, DOT FREQ=96MHZ
GSEL=0, DOT FREQ=100MHZ

R194 8.2K/6/X

U10
ICS954148AF/[10HL6-184148-20]

CHECK 14.318M COUNTER

CHECK 33/6 LPC33/ICH33 WAVEFORM

Q8 MMBT2222A/S S0T23

Q9 MMBT2222A/S S0T23

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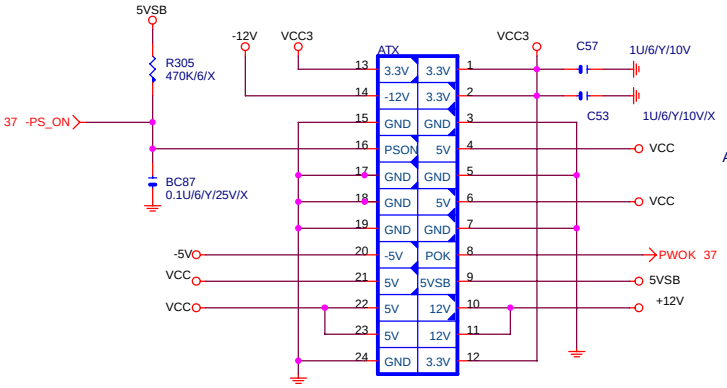
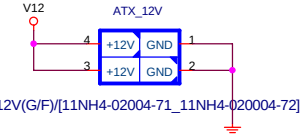
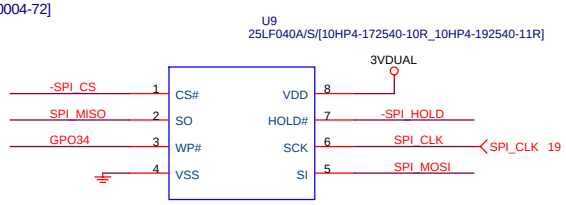
ATX POWER CONNECTOR

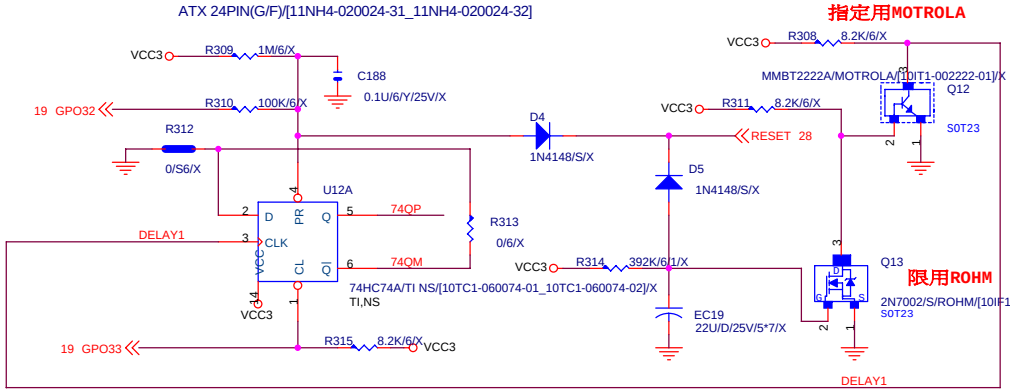


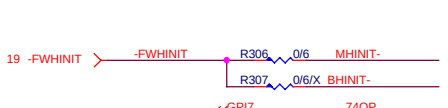
ATX 24PIN(G/F)/[11NH4-020024-31_11NH4-020024-32]

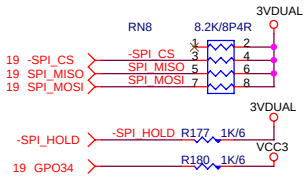


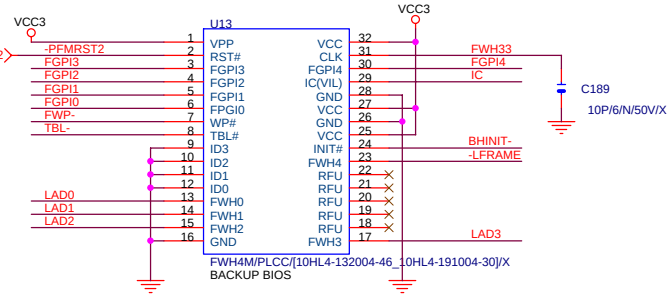
ATX12V(G/F)/[11NH4-02004-71_11NH4-020004-72]

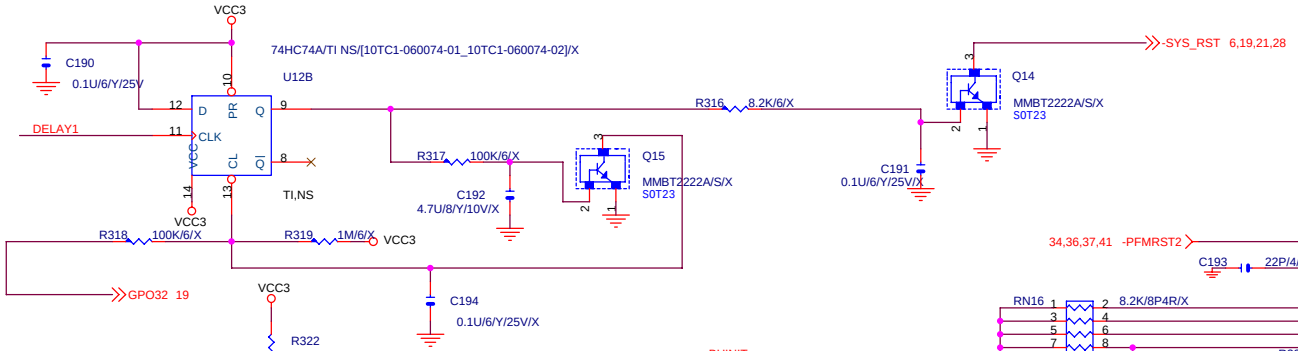


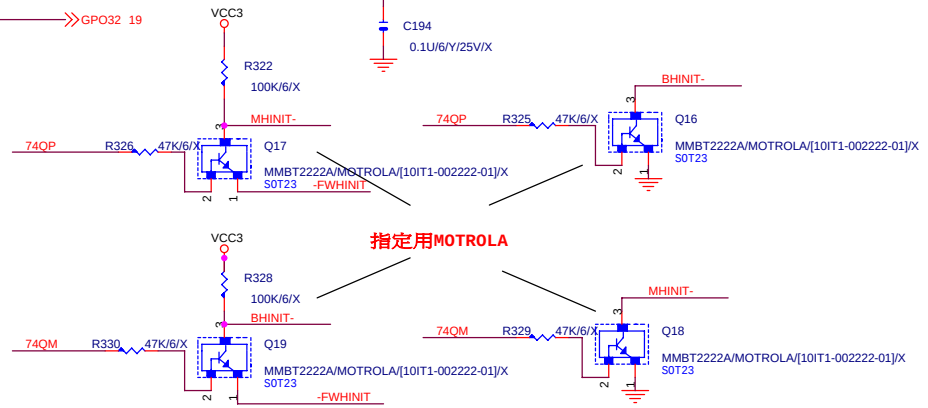


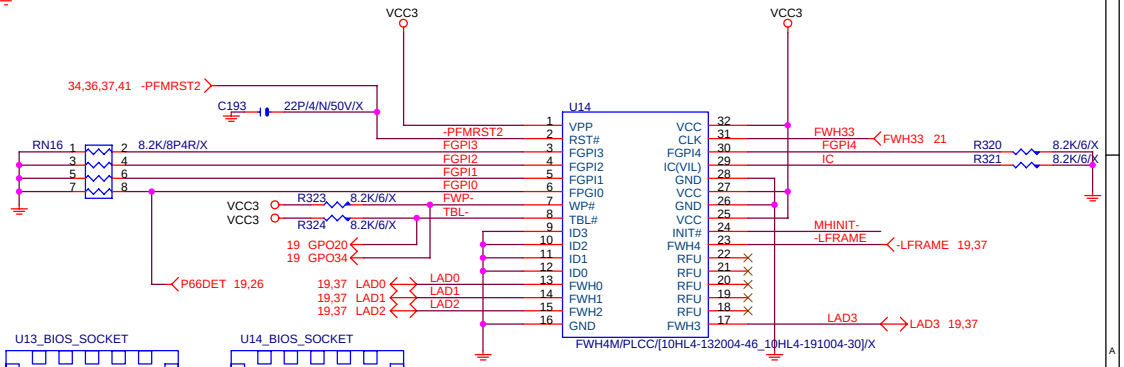


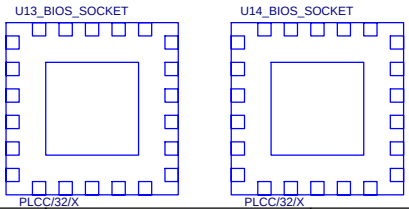












GIGABYTE

Title	ATX POWER CONNECTOR,DUAL BIOS	
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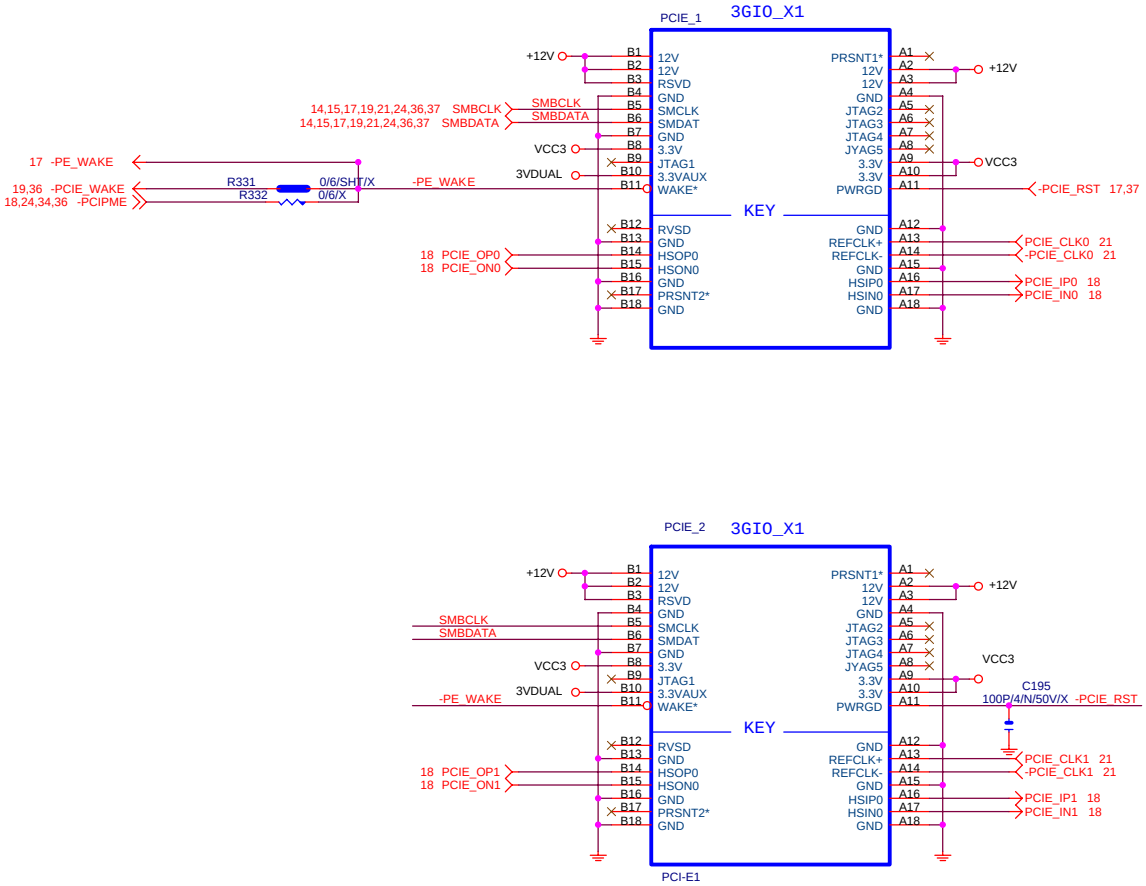

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Title	PCI E SLOT 1, 2, 3	
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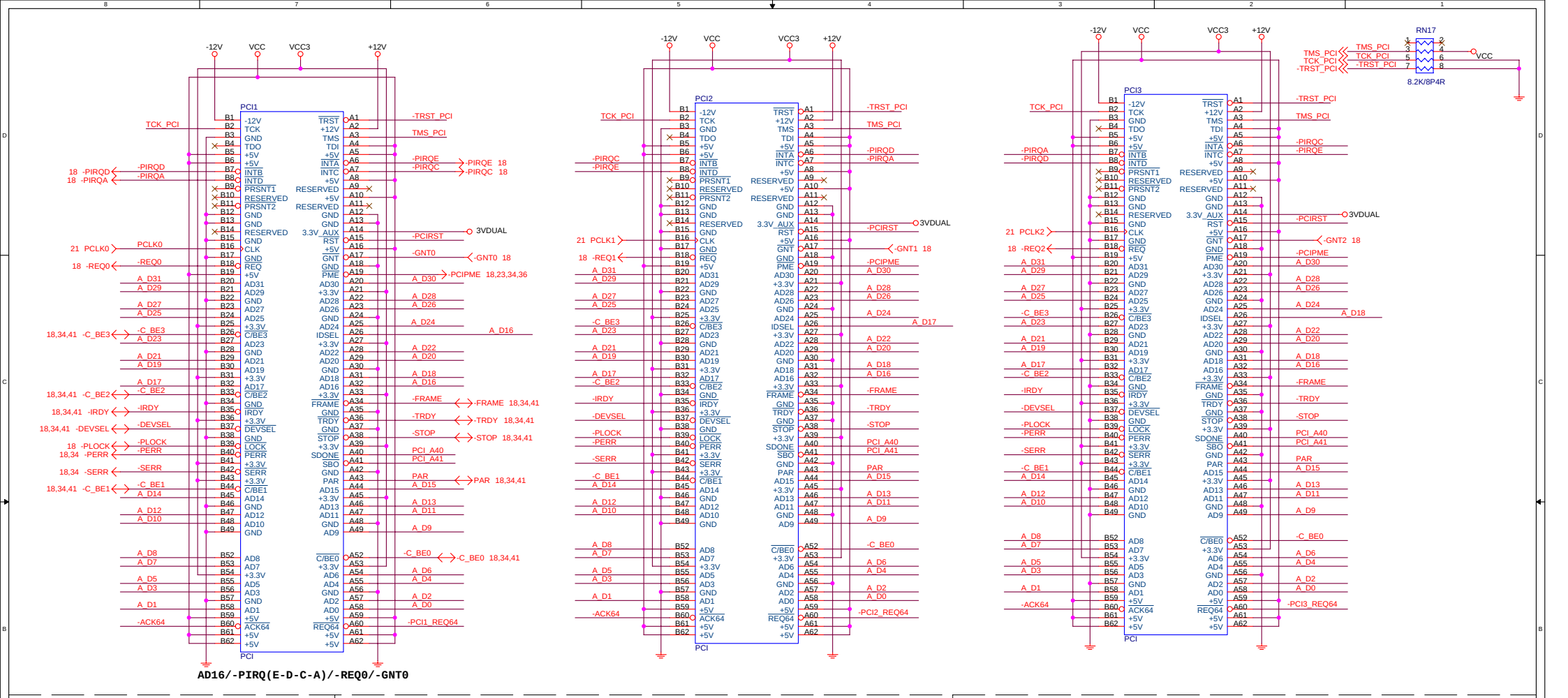

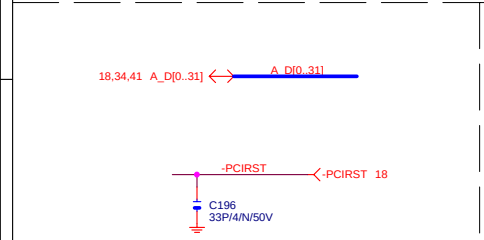

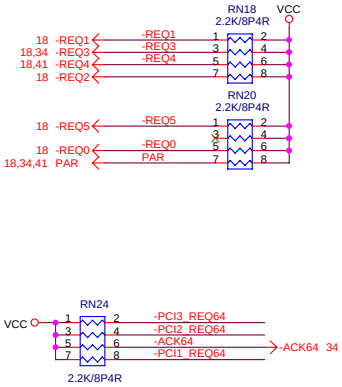

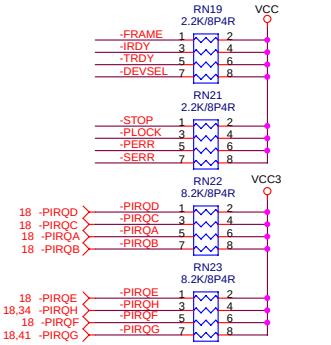

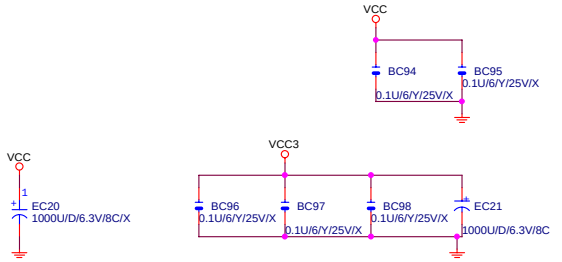

Intel Confidential

Title	PCI SLOT 1, 2	
Size: Custom	Document Number: 8I945G	Rev: 1.1
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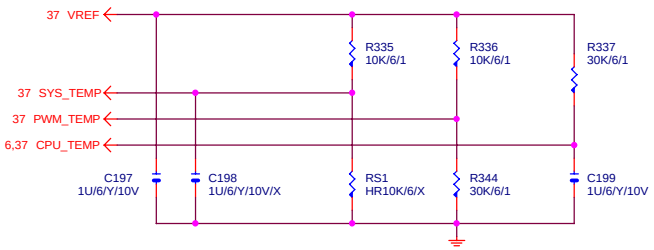
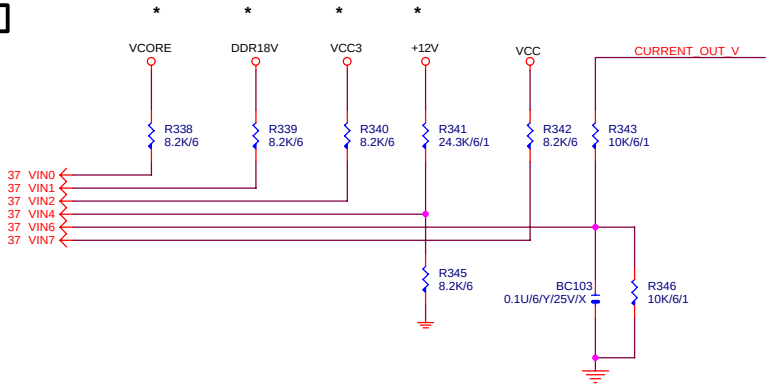
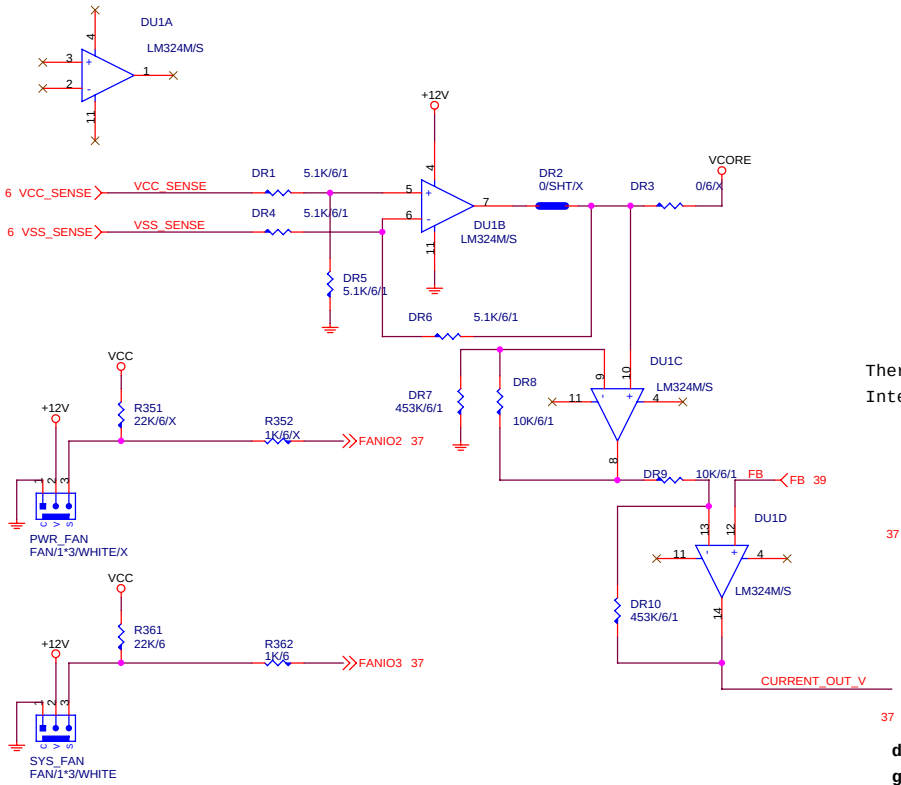
TEMP. SENSE



VOLTAGE SENSE



DUAL POWER



CPU/SYS FAN

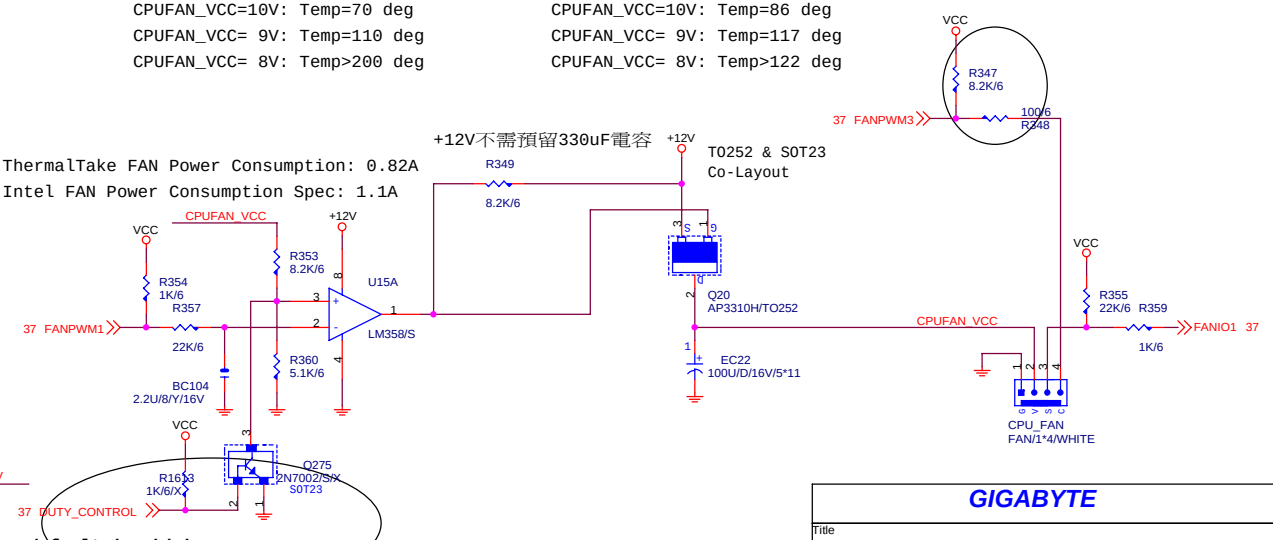
```
If use PBSS5240 1pcs : (non airflow)
-------------------------------------
CPUFAN_VCC=12V: Temp=40 deg
CPUFAN_VCC=11V: Temp=82 deg
CPUFAN_VCC=10V: Temp=70 deg
CPUFAN_VCC= 9V: Temp=110 deg
CPUFAN_VCC= 8V: Temp>200 deg

If use PBSS5240 1pcs : (with airflow)
-------------------------------------
CPUFAN_VCC=12V: Temp=33 deg
CPUFAN_VCC=11V: Temp=62 deg
CPUFAN_VCC=10V: Temp=86 deg
CPUFAN_VCC= 9V: Temp=117 deg
CPUFAN_VCC= 8V: Temp>122 deg
```

ThermalTake FAN Power Consumption: 0.82A
Intel FAN Power Consumption Spec: 1.1A

+12V不需預留330uF電容

TO252 & SOT23
Co-Layout



default is high
gpiox pin 可以3.3v or 5v
if 3pin fan 則開機後將program is low

GIGABYTE		
Title	HWM/FAN/CI/BIOS	
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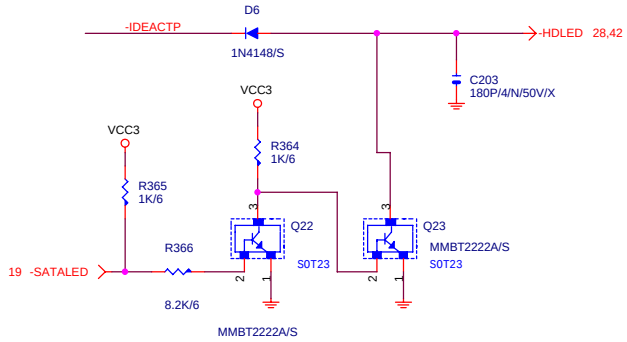
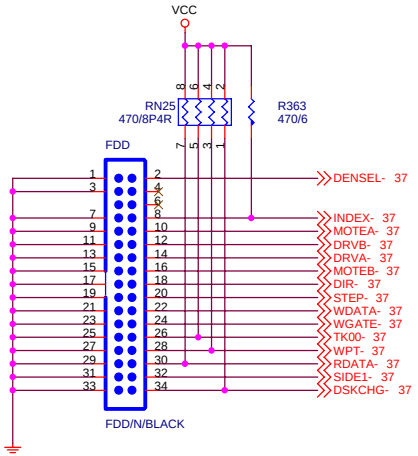
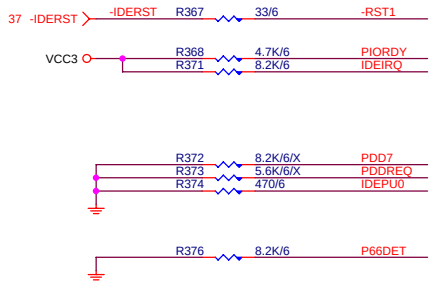
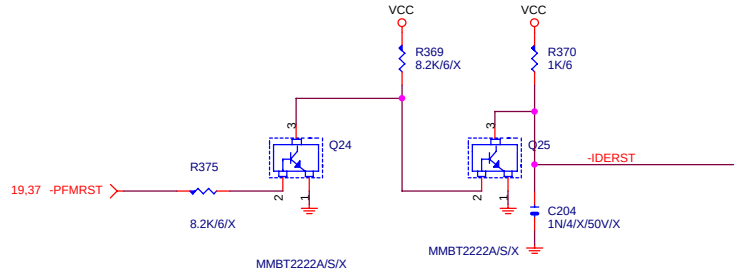
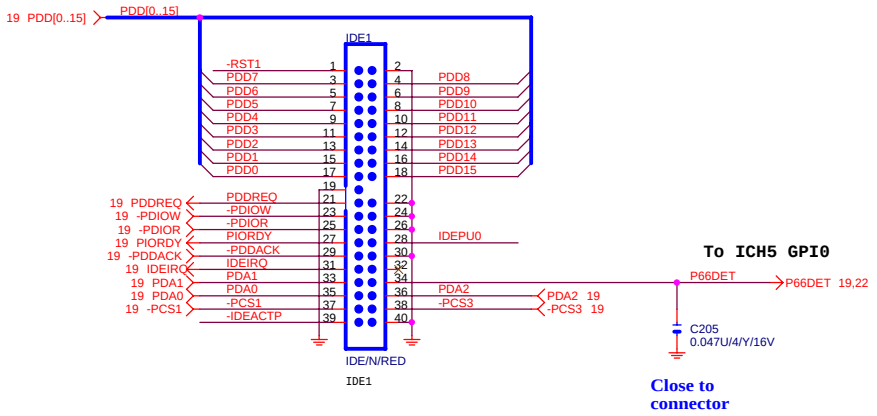








Default 不上,由IT8712 OUTPUT,REV0.2 驗證



PRIMARY IDE CONNECTOR

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Title: IDE		
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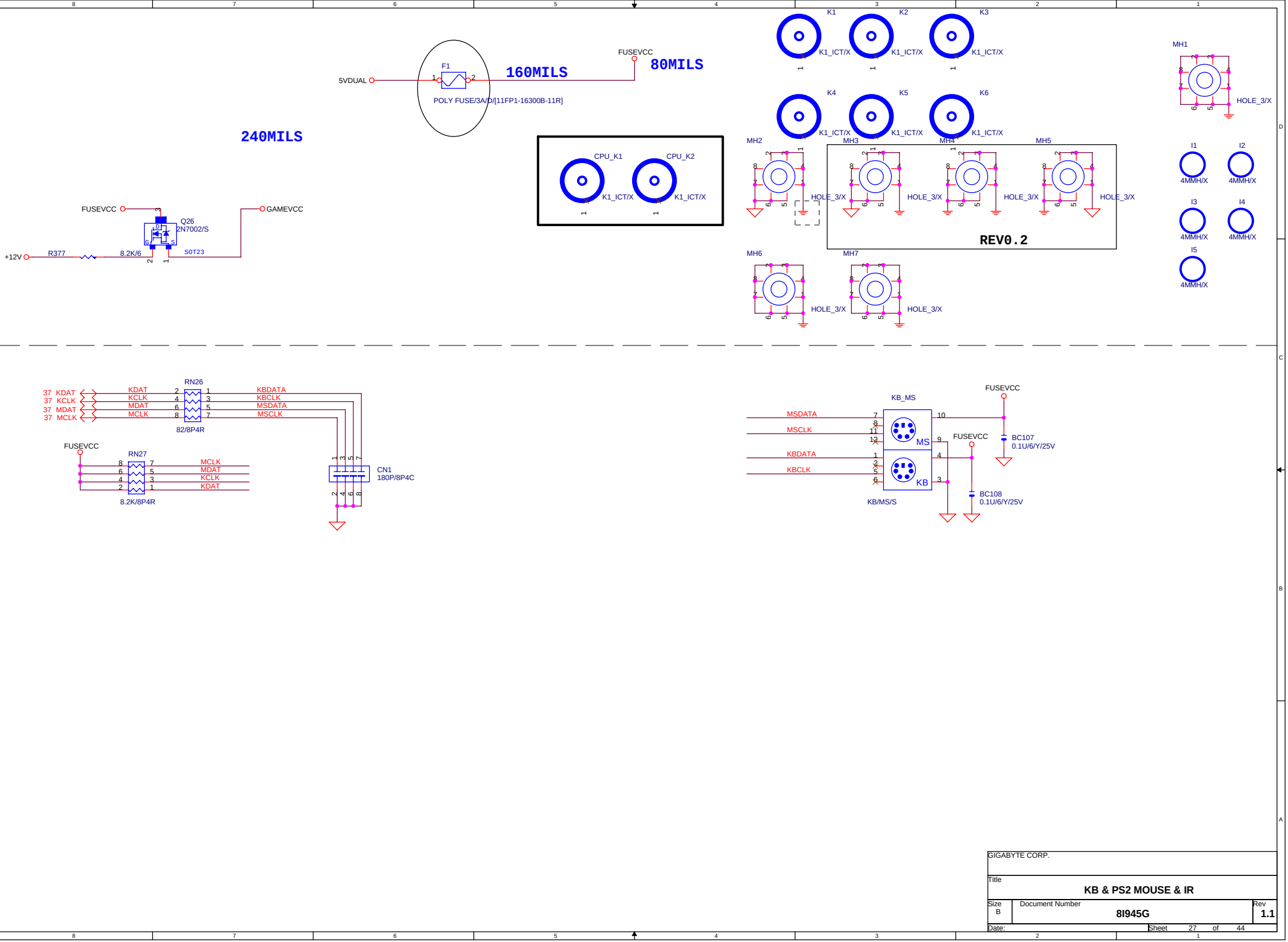

GIGABYTE CORP.		
Title: KB & PS2 MOUSE & IR		
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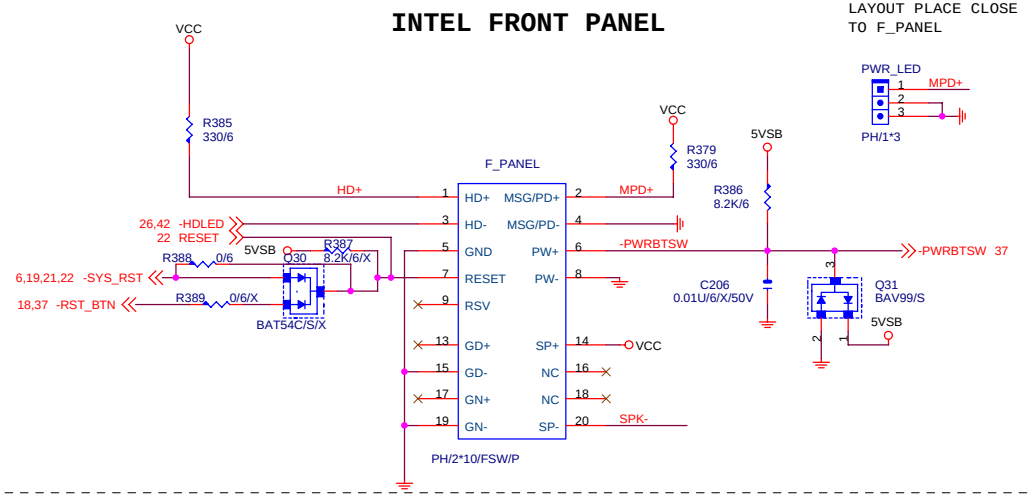
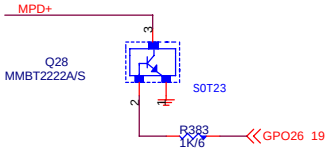
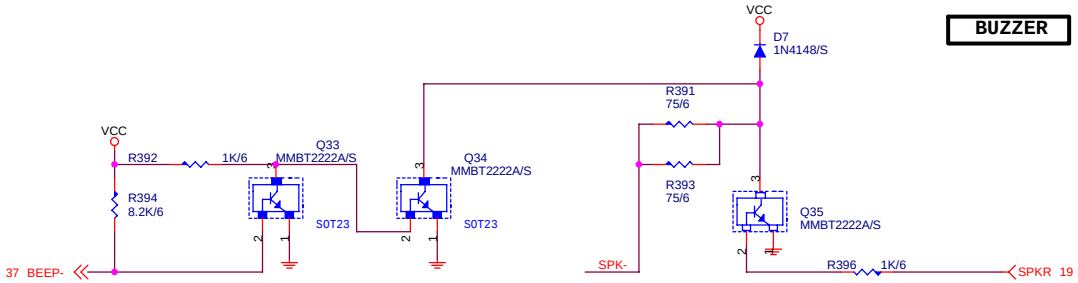
INTEL FRONT PANEL

3 PIN POWER LED
LAYOUT PLACE CLOSE
TO F_PANEL





BUZZER



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Title	FRONT PANEL	
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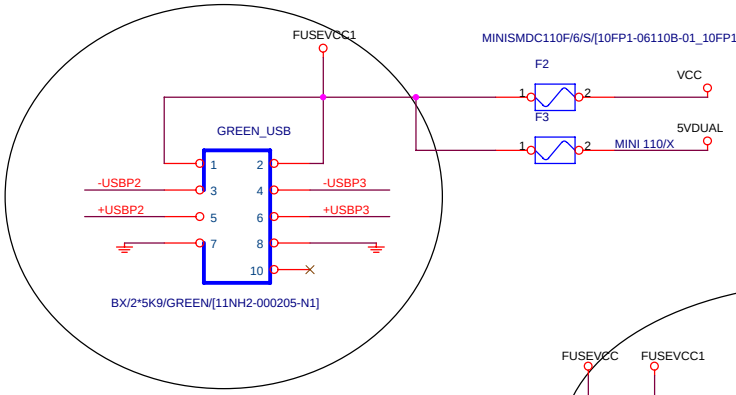
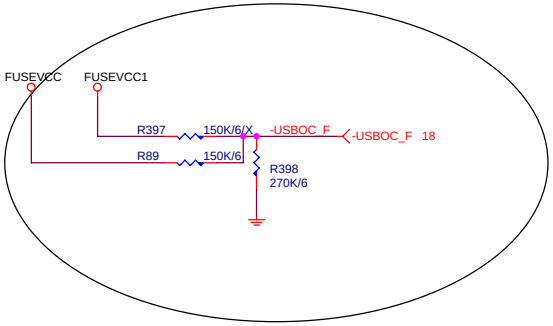
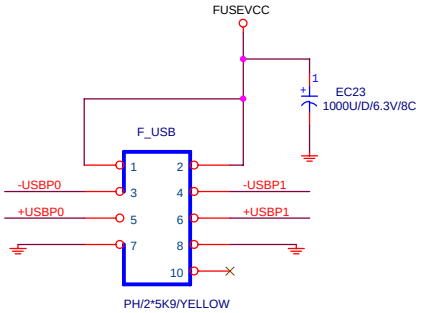
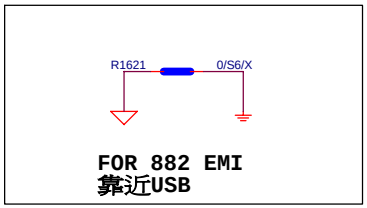
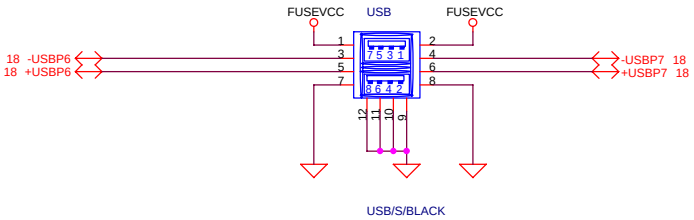
FRONT USB

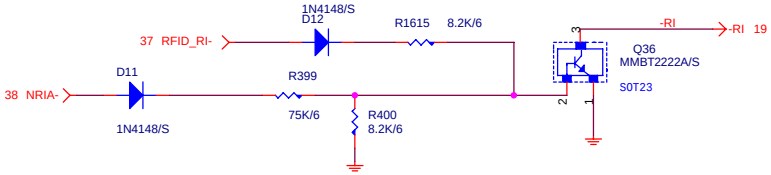












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Title	FRONT USB CONNECTOR	
Size B	Document Number 8I945G	Rev 1.1
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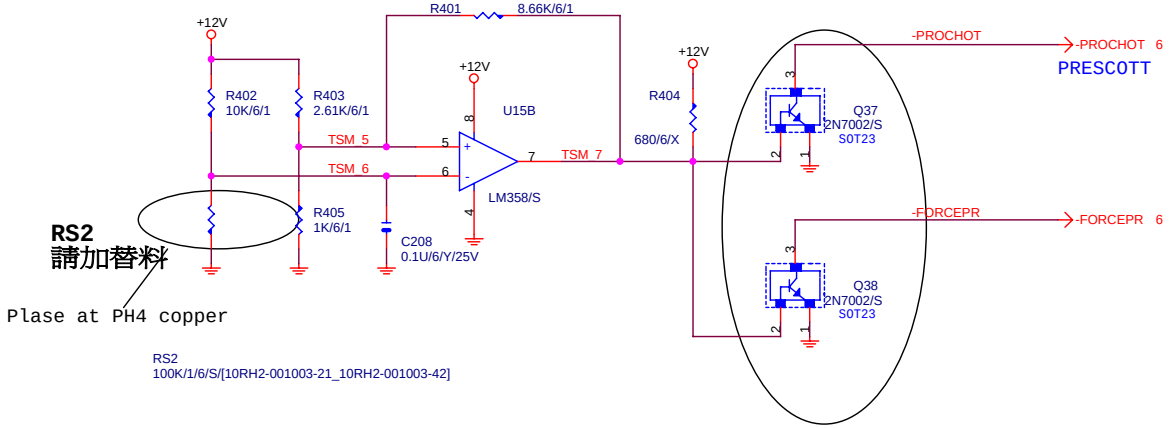
asserted at 131 degree
deasserted at 116 degree

RS2 CLOSE CPU VR MOSFET



Intel Confidential

Title	FAN CONTROL	
Size B	Document Number 8I945G	Rev 1.1
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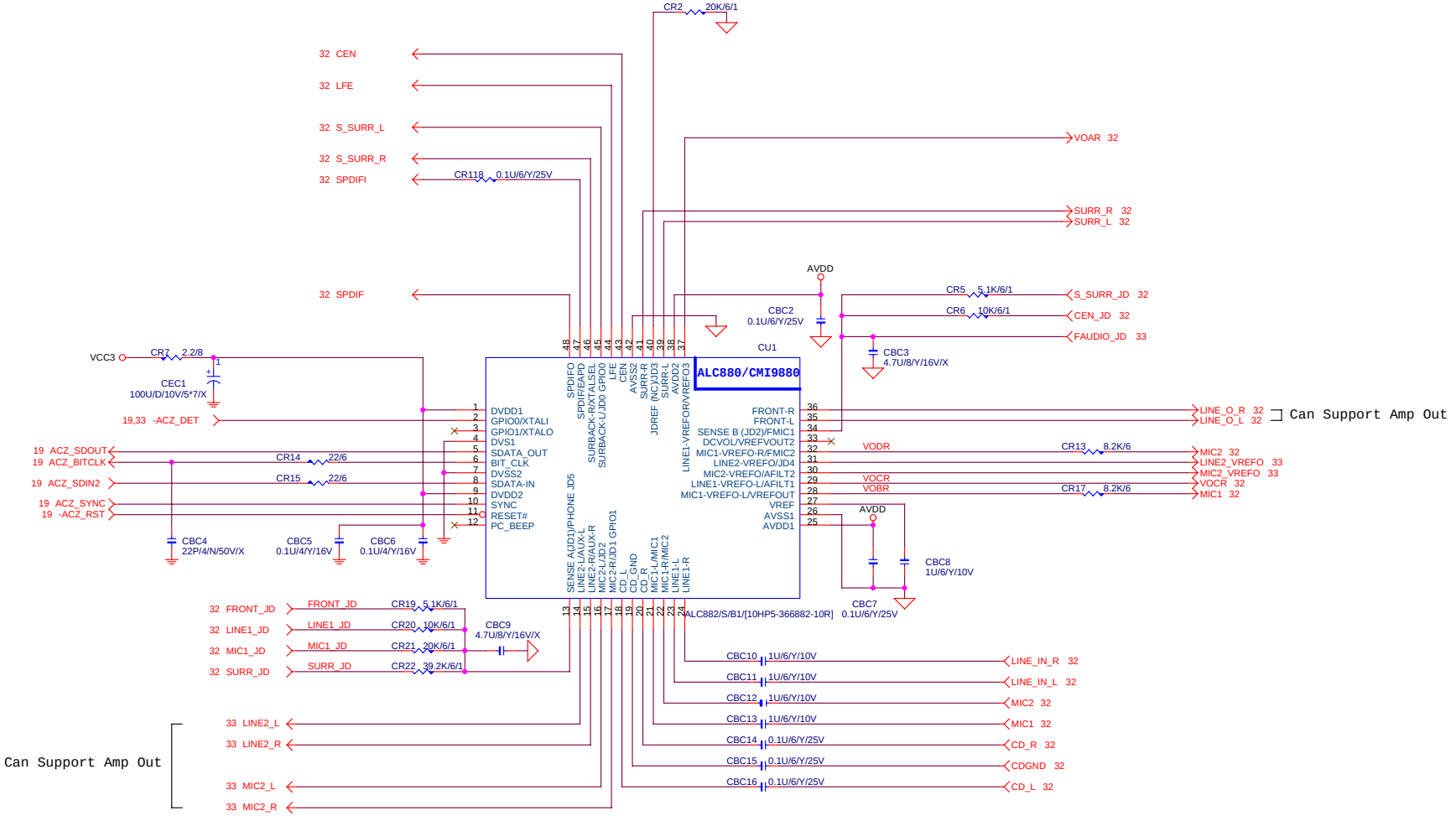

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Title	AC97 ALC658	
Size: Custom	Document Number: 8I945G	Rev: 1.1
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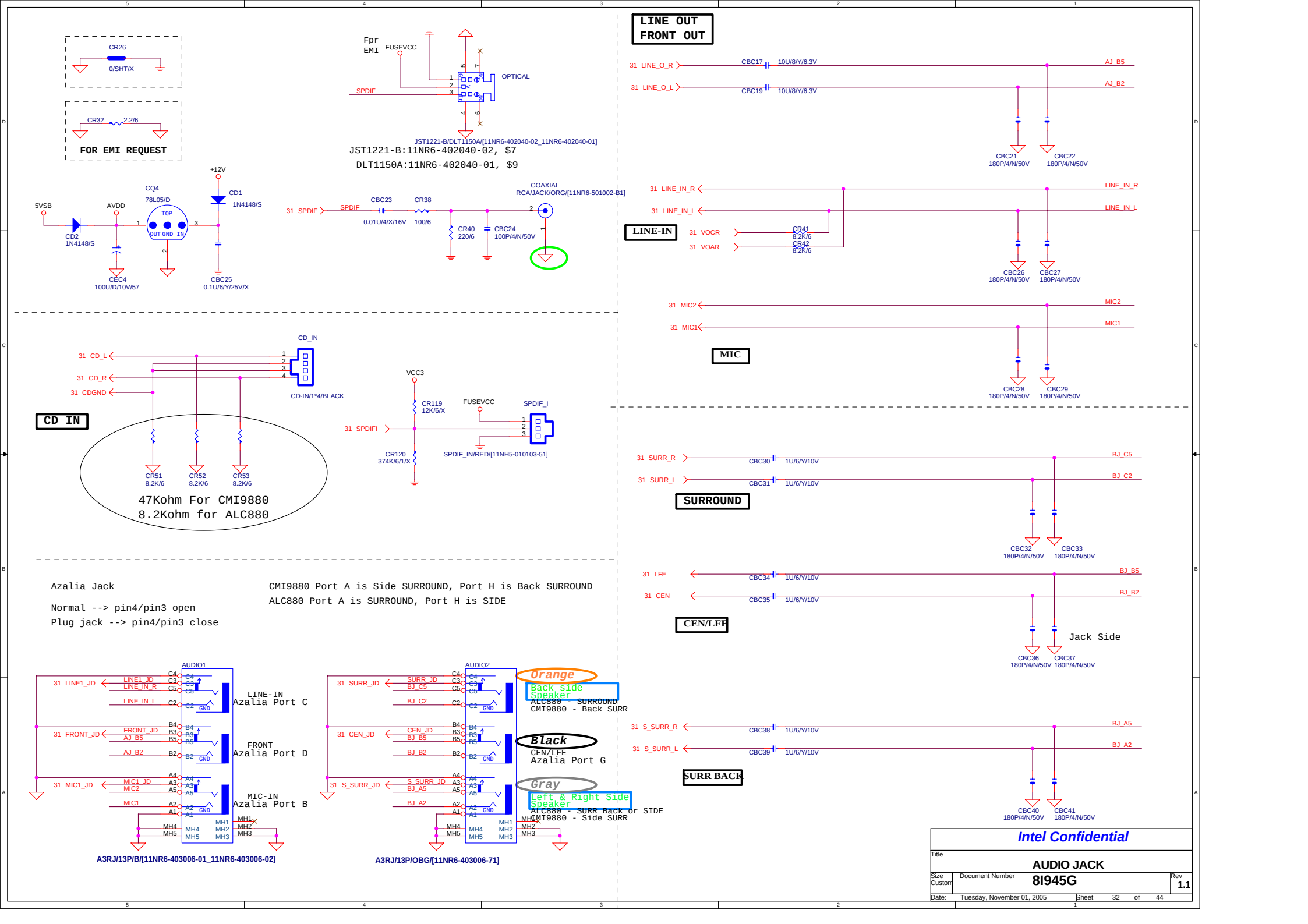
CR26
0/SHT/X
CR32
2.2/6
FOR EMI REQUEST
Fpr EMI
FUSEVCC
SPDIF
OPTICAL
JST1221-B/DLT1150A/[11NR6-402040-02_11NR6-402040-01]
JST1221-B:11NR6-402040-02, $7
DLT1150A:11NR6-402040-01, $9
+12V
CQ4
78L05/D
5VSB
AVDD
CD1
1N4148/S
CD2
1N4148/S
CEC4
100U/D/10V/57
CBC25
0.1U/6/Y/25V/X
31 SPDIF
CBC23
0.01U/4/X/16V
CR38
100/6
CR40
220/6
CBC24
100P/4/N/50V
COAXIAL
RCA/JACK/ORG/[11NR6-501002-01]
LINE OUT
FRONT OUT
31 LINE_O_R
31 LINE_O_L
CBC17
CBC19
10U/8/Y/6.3V
AJ_B5
AJ_B2
CBC21
CBC22
180P/4/N/50V
LINE-IN
31 LINE_IN_R
31 LINE_IN_L
31 VOCR
31 VOAR
CR41
CR42
8.2K/6
CBC26
CBC27
MIC
31 MIC2
31 MIC1
CD IN
31 CD_L
31 CD_R
31 CDGND
CD_IN
CD-IN/1*4/BLACK
CR51
CR52
CR53
8.2K/6
47Kohm For CMI9880
8.2Kohm for ALC880
VCC3
CR119
12K/6/X
31 SPDIFI
CR120
374K/6/1/X
SPDIF_I
SPDIF_IN/RED/[11NH5-010103-51]
SURROUND
31 SURR_R
31 SURR_L
CBC30
CBC31
1U/6/Y/10V
BJ_C5
BJ_C2
CBC32
CBC33
CEN/LFE
31 LFE
31 CEN
CBC34
CBC35
BJ_B5
BJ_B2
CBC36
CBC37
Jack Side
SURR BACK
31 S_SURR_R
31 S_SURR_L
CBC38
CBC39
BJ_A5
BJ_A2
CBC40
CBC41
Azalia Jack
Normal --> pin4/pin3 open
Plug jack --> pin4/pin3 close
CMI9880 Port A is Side SURROUND, Port H is Back SURROUND
ALC880 Port A is SURROUND, Port H is SIDE
AUDIO1
31 LINE1_JD
31 FRONT_JD
31 MIC1_JD
LINE-IN
Azalia Port C
FRONT
Azalia Port D
MIC-IN
Azalia Port B
A3RJ/13P/B/[11NR6-403006-01_11NR6-403006-02]
AUDIO2
31 SURR_JD
31 CEN_JD
31 S_SURR_JD
Orange
Back side Speaker
ALC880 - SURROUND
CMI9880 - Back SURR
Black
CEN/LFE
Azalia Port G
Gray
Left & Right Side Speaker
ALC880 - SURR Back or SIDE
CMI9880 - Side SURR
A3RJ/13P/OBG/[11NR6-403006-71]
Intel Confidential
Title
AUDIO JACK
Size
Custom
Document Number
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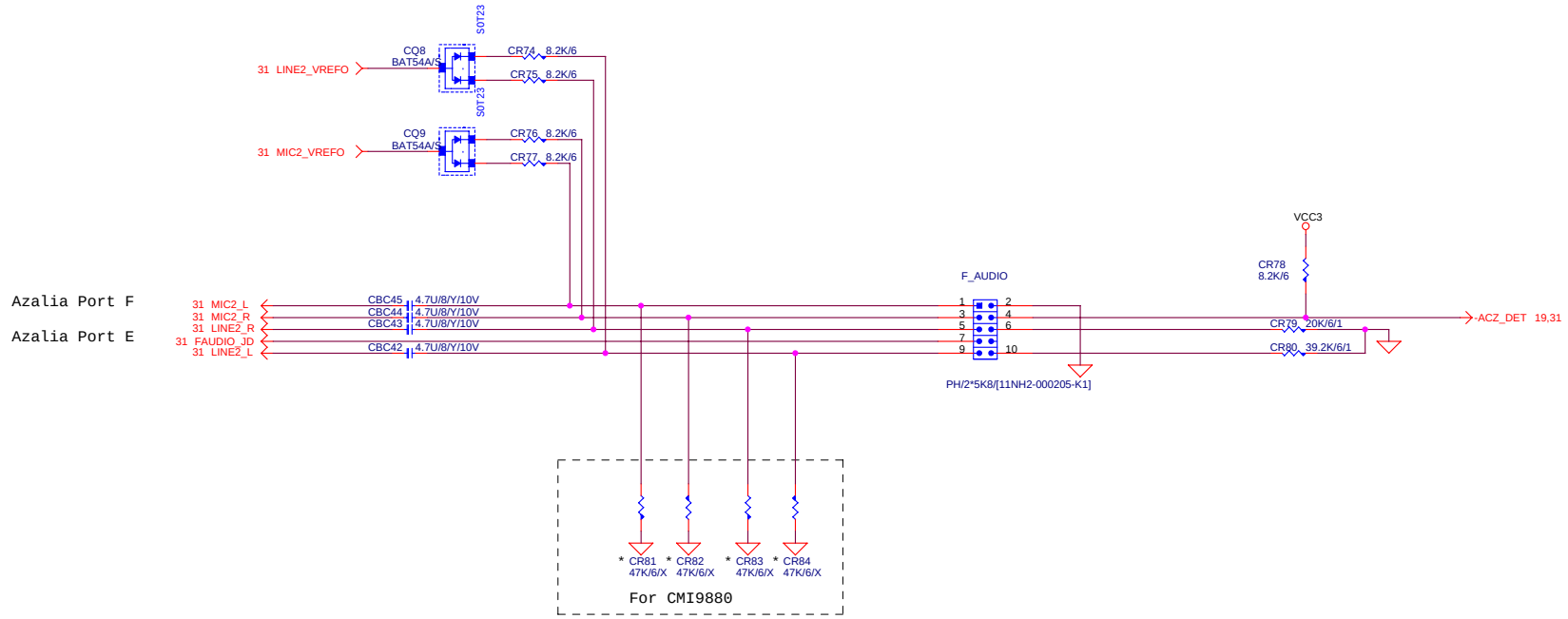
44



Intel Confidential

Title	FRONT AUDIO CONNECTOR		
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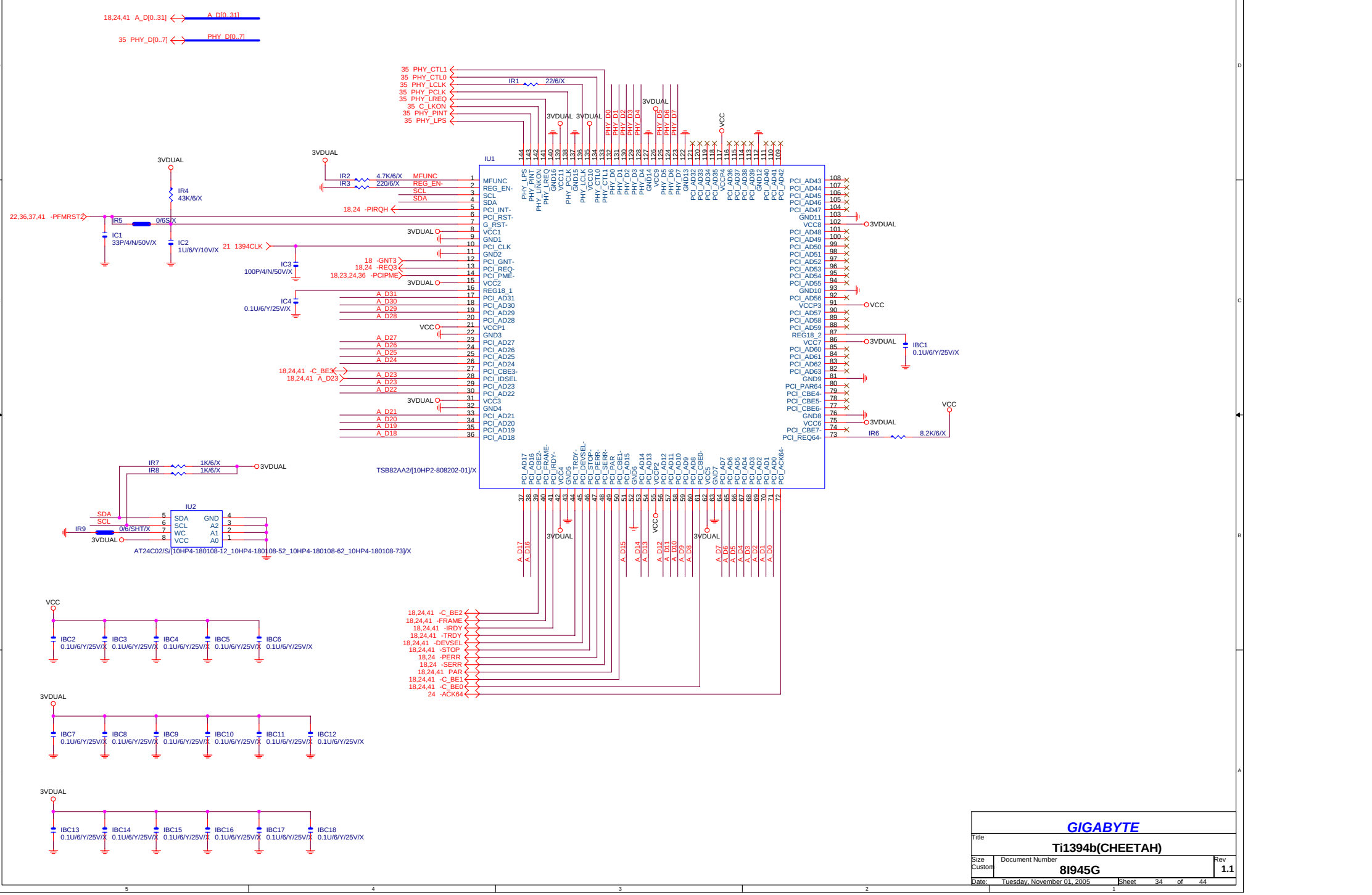
18,24,41 A_D[0..31]
A_D[0..31]
35 PHY_D[0..7]
PHY_D[0..7]
IU1
TSB82AA2/[10HP2-808202-01]/X
IR1 22/6/X
IR2 4.7K/6/X
IR3 220/6/X
IR4 43K/6/X
IR5 0/6S/X
IR6 8.2K/6/X
IR7 1K/6/X
IR8 1K/6/X
IR9 0/6/SHT/X
IC1 33P/4/N/50V/X
IC2 1U/6/Y/10V/X
IC3 100P/4/N/50V/X
IC4 0.1U/6/Y/25V/X
IBC1 0.1U/6/Y/25V/X
IU2
AT24C02/S/[10HP4-180108-12_10HP4-180108-52_10HP4-180108-62_10HP4-180108-73]/X
IBC2 0.1U/6/Y/25V/X
IBC3 0.1U/6/Y/25V/X
IBC4 0.1U/6/Y/25V/X
IBC5 0.1U/6/Y/25V/X
IBC6 0.1U/6/Y/25V/X
IBC7 0.1U/6/Y/25V/X
IBC8 0.1U/6/Y/25V/X
IBC9 0.1U/6/Y/25V/X
IBC10 0.1U/6/Y/25V/X
IBC11 0.1U/6/Y/25V/X
IBC12 0.1U/6/Y/25V/X
IBC13 0.1U/6/Y/25V/X
IBC14 0.1U/6/Y/25V/X
IBC15 0.1U/6/Y/25V/X
IBC16 0.1U/6/Y/25V/X
IBC17 0.1U/6/Y/25V/X
IBC18 0.1U/6/Y/25V/X
22,36,37,41 -PFMRST
18,24 -PIRQH
21 1394CLK
18 -GNT3
18,24 -REQ3
18,23,24,36 -PCIPME
18,24,41 -C_BE3
18,24,41 A_D23
24 -ACK64
3VDUAL
VCC
GIGABYTE
Title
Ti1394b(CHEETAH)
Size Custom
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Width & Space --> 20:7.5:7.5:7.5:20

Width & Space --> 20:5:6:5:20

Width & Space --> 20:5:6:5:20

IU3

TSB81BA3/S/[10HP2-808103-01]/X

F1_1394

BH2*5/-7/PUR/[11NH3-000205-U1]/X

F2_1394

H2X8/-14/PUR/[11NH2-000208-P1]/X

OSC98.304M/OSC/S/[10OC3-298304-00_10OC3-898304-00]/X

IQ1
APL1084UC-TR/TO252/X

VCC18_I:
DEfault voltage:1.95V
Max Ccurrent:79mA

GIGABYTE		
Title	Ti1394B/TSB81BA3	
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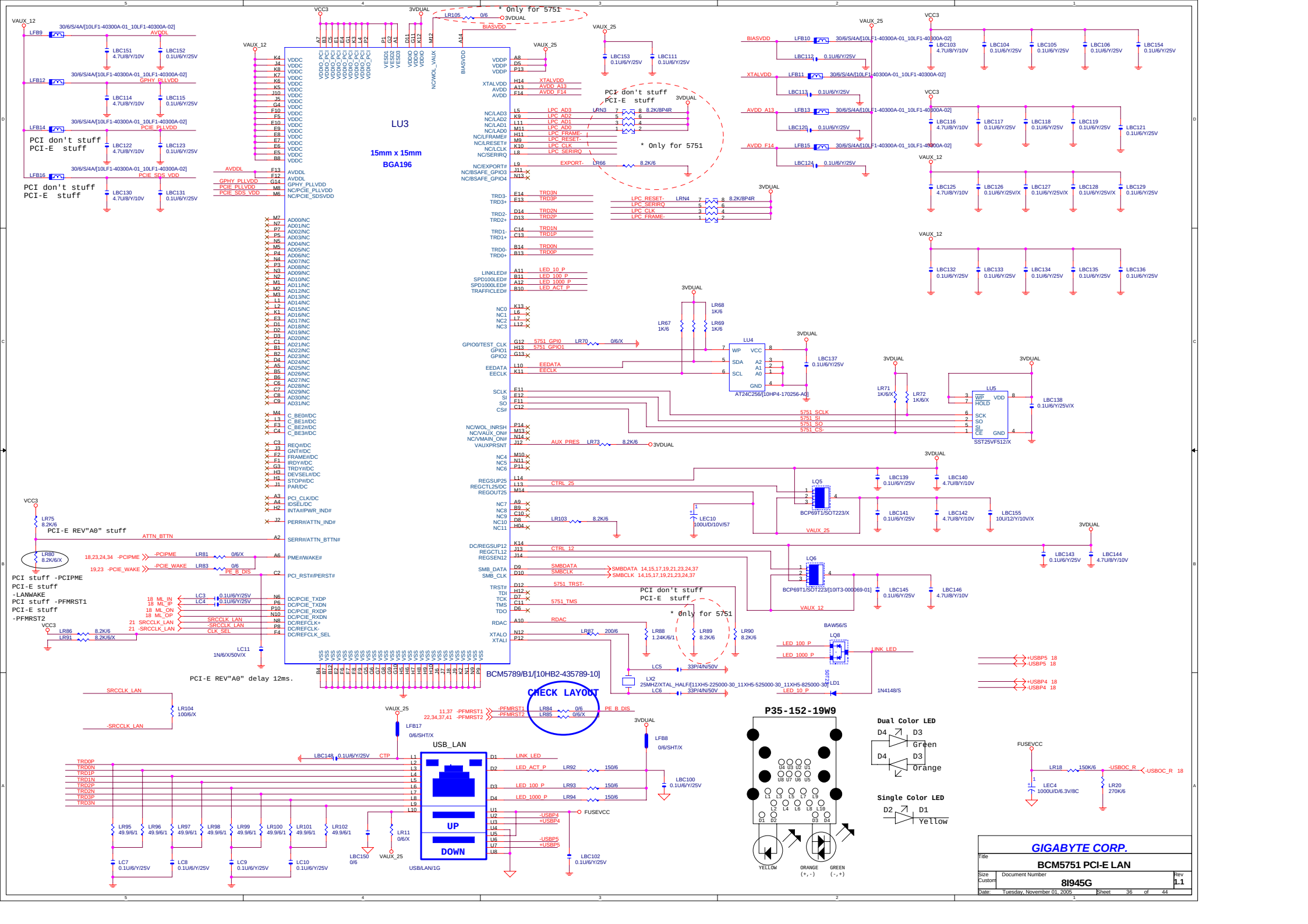

LU3
15mm x 15mm
BGA196
BCM5789/B1/[10HB2-435789-10]
* Only for 5751
PCI don't stuff
PCI-E stuff
PCI-E REV"A0" stuff
PCI-E REV"A0" delay 12ms.
CHECK LAYOUT
USB_LAN
USB/LAN/1G
P35-152-19W9
Dual Color LED
Single Color LED
GIGABYTE CORP.
BCM5751 PCI-E LAN
8I945G

RTS2- ==LOW CPU FAN 50%
==HIGH 100%

VCC R1591 8.2K/6 DTR2-
R406 8.2K/6/X RTS2-
Default 50%

SOUT2		
	1	VID pins threshold voltage select: Vih / Vil : 2.0 / 0.8V
	0	VID pins threshold voltage select: Vih / Vil : 0.8 / 0.4V

1.2V or 3.3V tolerance select.
1.2V OUTPUT 接 VTT_GMCH
3.3V OUTPUT 接3.3V
LPCPD#=VIDVCC

38 DCD1- 38 RI1- 38 CTS1- 38 DTR1- 38 RTS1- 38 DSR1- 38 TXD1 38 RXD1

PD[0..7] PD[0..7] 38

STB- AFD- ERR- INIT- SLIN- ACK-
STB- 38 AFD- 38 ERR- 38 INIT- 38 SLIN- 38 ACK- 38

U16

DTR2# RTS2# DSR2# VCC SOUT2 SIN2 FAN_TAC1 FAN_CTL1 FAN_TAC2/GP52 FAN_CTL2/GP51 FAN_TAC3/GP37 FAN_CTL3/GP36 WTI#/GP35 VID4/GP34 GNDD VID3/GP33 VID2/GP32 VID1/GP31 VID0/GP30 JSBB2/GP27 JSBB1/GP26 JSBCY/GP25 JSBCX/GP24 JSAB2/GP23 JSAB1/GP22 JSACY/GP21 JSACX/GP20 MIDI_OUT/GP17 MIDI_IN/GP16 RESETCON#/CIRTX/GP15 PCIRST1#/SCRRST/GP14 PWROK1/SCRFET#/GP13 PCIRST2#/SCRIO/GP12 PCIRST3#/SCRCLK/GP11 VCC LPCPD# LRESET# LDRQ#

BUSY PE SLCT VCC VIN0 VIN1 VIN2 VIN3 VIN4 VIN5 VIN6 VIN7 VREF TMPIN1 TMPIN2 TMPIN3 GNDA RSMRST#/CIRRX/GP55 PCIRST4#/SCRPRES#/GP10 MCLK MDAT KCLK KDAT SCLK/GP40 PWROK2/SDAT/GP41 RING#/GP53 PSON#/GP42 PANSWH#/GP43 GNDD PME#/GP54 PWRON#/GP44 PSIN/GP45 IRRX/GP46 VBAT COPEN# VCCH IRTX/GP47 DSKCHG#

BUSY 38 PE 38 SLCT 38 VCC
VIN0 25 VIN1 25 VIN2 25 PWOK 22 VIN4 25 VIN6 25 VIN7 25 VREF 25 SYS_TEMP 25 PWM_TEMP 25 CPU_TEMP 6,25
GNDA R413 22/6 -RSMRST -RSMRST 19,40
R414 22/6 -IDERST -IDERST 26
MCLK 27 MDAT 27 KCLK 27 KDAT 27 BSEL166_1 6 -THERM 19 BSEL166_2 6
BEEP- 28 VBAT 19 -CASEOPEN DUTY_CONTROL 25 DSKCHG- 26

IT8712 GB-IX/S/[10HP2-118712-53]

SERIRQ LFRAME LAD0 LAD1 LAD2 LAD3 KRST# GA20 PCICLK CLKRUN#/GP50 CLKIN GNDD DENSEL# MTR0# MTR1# DRVA# DRVB# WDATA# STEP# HDSEL# WGATE# RDATA# TRK0# WPD# WPT#

19 SERIRQ 19,22 -LFRAME
19,22 LAD[0..3] LAD[0..3]
19 -KBRST 19 A20GATE 21 LPC33
21 LPCCLK48

WPT- 26 INDEX- 26 TK00- 26 RDATA- 26 WGATE- 26 SIDE1- 26 STEP- 26 DIR- 26 WDATA- 26 DRVB- 26 DRVA- 26 MOTEB- 26 MOTEA- 26 DENSEL- 26

C212 10P/6/N/50V/X
-PFMRST -PFMRST 19,26
BC114 0.1U/6/Y/25V/X

BC111 0.1U/6/Y/25V
BC112 0.047U/6/Y/25V

如果BSEL0/1 直接拉TO N/B,R264/R265 不上

5VSB R264 8.2K/6 BSEL166_2 R265 8.2K/6 BSEL166_1 R1622 8.2K/6/X R1623 8.2K/6/X

R415 8.2K/6
-PS_ON 22 -PWRBTSW 28
-LPCPME 19 PWRBTSW 19 -SLP_S3 19,40
C211 1U/6/Y/10V R422 8.2K/6
3VDUAL

R1589 0/6/SHT/X THERMDC THERMDC 6
R1590 0/6/SHT/X
GNDA BC110 0.01U/4/X/16V/X

R408 8.2K/6/X PWOK
19,20 RTCVDD R409 1M/6 -CASEOPEN -CASEOPEN
CI PH/1*2/BLACK
PWOK C210 1N/4/X/50V/X

Case Open Circuits

RF_TXD R411 680/6 VCC RF_RXD
R410 680/6/X DTR2- R161 680/6 RTS2-

25 FANIO1 25 FANPWM1 25 FANIO2 11 FANPWM2 25 FANIO3 25 FANPWM3
39 IO_VID5 39 IO_VID4 39 IO_VID3 39 IO_VID2 39 IO_VID1 39 IO_VID0
TURBO1 TURBO0
40 1_5V_OV1 40 1_5V_OV2 40 DDR18V_OV3 40 DDR18V_OV1 40 DDR18V_OV2 40 VTT_GMCH_OV1 TURBO2 40 VTT_GMCH_OV2

R416 8.2K/6 18,28 -RST_BTN
17,23 -PCIE_RST R417 22/6/X PWROK1 R418 22/6/X ITE_PWROK
11,19,40 PWROK1 R419 22/6/X 22,34,36,41 -PFMRST2 R420 22/6/X 11,36 -PFMRST1
VTT_GMCH R421 0/6/X -LPCPD 19,26 -PFMRST -PFMRST 19 -LDRQ0

3VDUAL PFMRST -PFMRST2 ITE_PWROK PWROK1 11,19,40
U17 74HC14/SO14
19,26 -PFMRST -PFMRST PFMRST -PFMRST1 -PFMRST1 11,36 -PCIE_RST 17,23

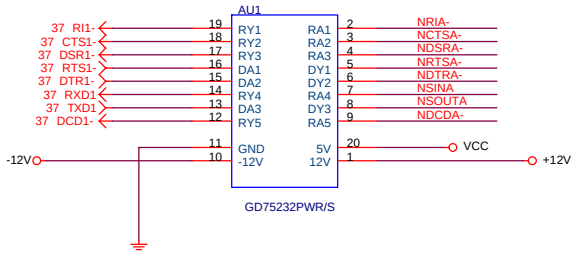
-LDRQ0 R483 8.2K/6 VCC3
-LPCPD R426 0/6/SHT/X VCC3
ITE_PWROK R427 8.2K/6 VCC3
-PCIE_RST R428 8.2K/6/X VCC3
-IDERST R429 8.2K/6/X VCC
-PFMRST1 R430 8.2K/6/X VCC3
-PFMRST2 R432 8.2K/6/X VCC3

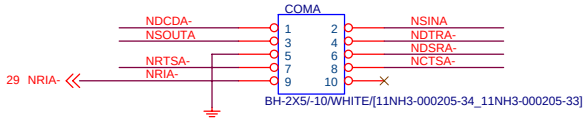
5VDUAL 有問題 RF_ID RF_TXD RFID_RI- 29 RF_RXD
H2X3/-PIN5/[11NH2-000203-41]
BC692 0.1U/6/Y/25V

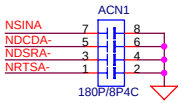
VCC INFO_LINK SMBCLK SMBDATA
14,15,17,19,21,23,24,36 SMBCLK SMBDATA 14,15,17,19,21,23,24,36
有問題
H2X3/-PIN6/[11NH2-000203-31_11NH2-000203-33]/X

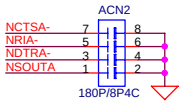
VCC3 R484 8.2K/6 TURBO0 CLK_T0 21 Q67 MMBT2222A/S S0T23
VCC3 R485 8.2K/6 TURBO1 CLK_T1 21 Q68 MMBT2222A/S S0T23
VCC3 R486 8.2K/6/X TURBO2 CLK_T2 21 Q69 MMBT2222A/S/X S0T23

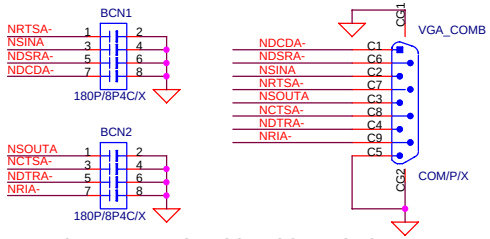
GIGABYTE TECHNOLOGIES , INC.
Title: ITE 8712 LPC IO
Size: Custom | Document Number: 8I945G | Rev: 1.1
Date: Tuesday, November 01, 2005 | Sheet 37 of 44



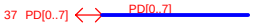


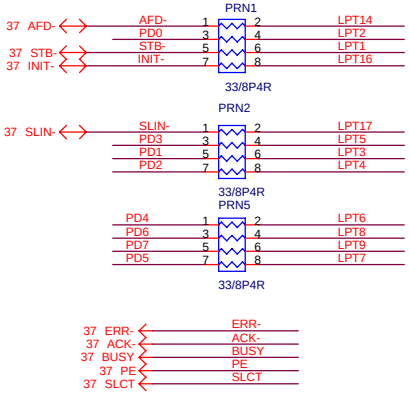


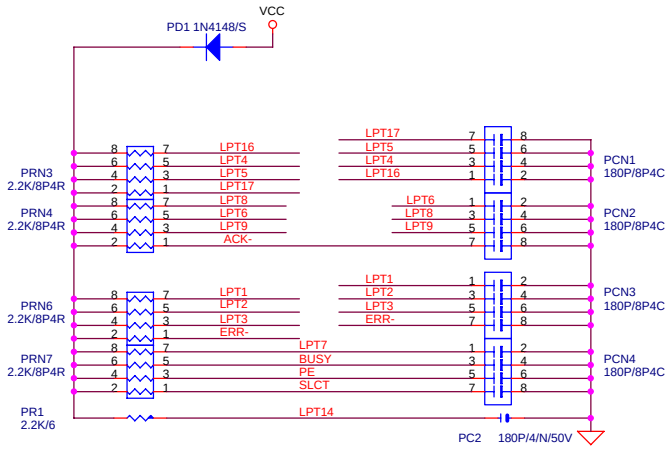


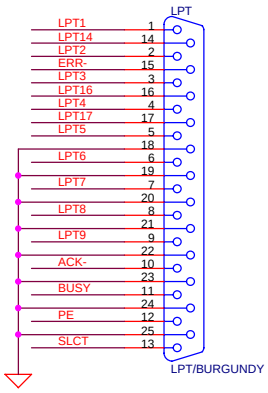


PLACE NEAR VGA_COM CONNECTOR









GIGABYTE THCHNOLOGIES , INC.		
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Size: B	Document Number: 8I945G	Rev: 1.1
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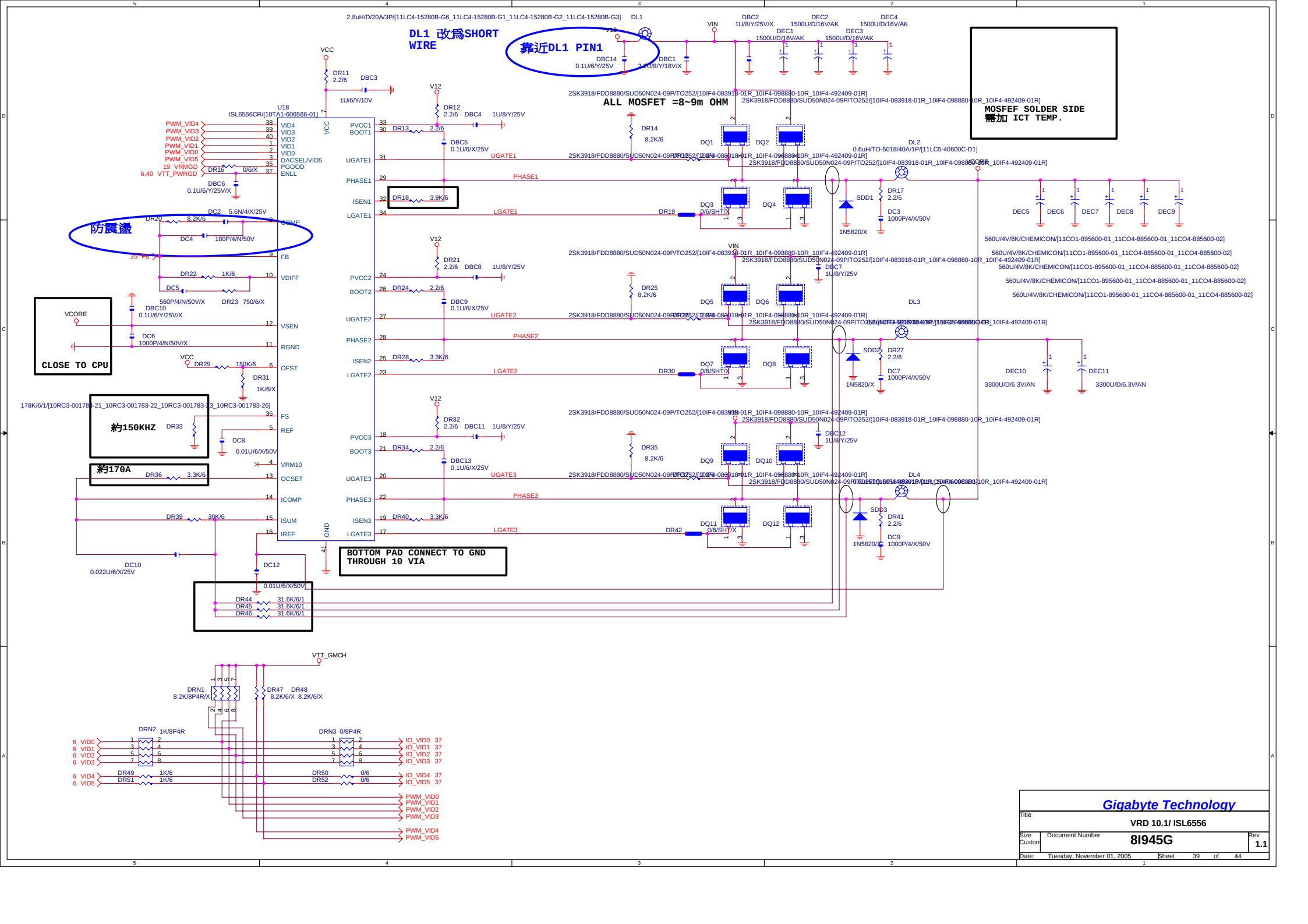

Title	VRD 10.1/ ISL6556
Size: Custom	Document Number: 8I945G
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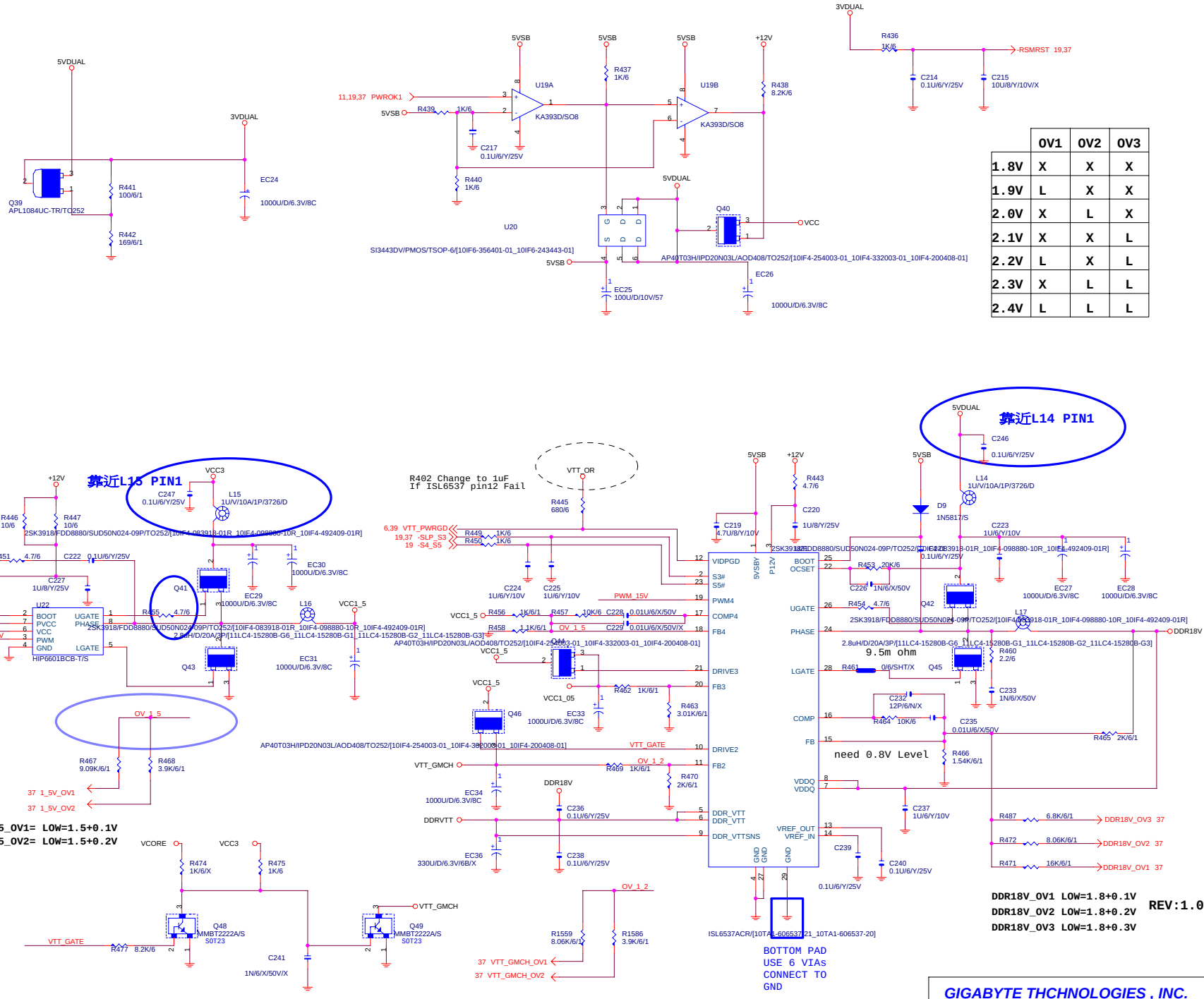
Gigabyte Technology


5VDUAL
3VDUAL
Q39
APL1084UC-TR/TO252
R441
100/6/1
R442
169/6/1
EC24
1000U/D/6.3V/8C
5VSB
+12V
11,19,37 PWROK1
R439 1K/6
U19A
U19B
KA393D/SO8
R437
1K/6
R438
8.2K/6
C217
0.1U/6/Y/25V
R440
1K/6
U20
SI3443DV/PMOS/TSOP-6/[10IF6-356401-01_10IF6-243443-01]
Q40
AP40T03H/IPD20N03L/AOD408/TO252/[10IF4-254003-01_10IF4-332003-01_10IF4-200408-01]
VCC
EC25
100U/D/10V/57
EC26
1000U/D/6.3V/8C
R436
1K/6
-RSMRST 19,37
C214
0.1U/6/Y/25V
C215
10U/8/Y/10V/X
0V1 0V2 0V3
1.8V X X X
1.9V L X X
2.0V X L X
2.1V X X L
2.2V L X L
2.3V X L L
2.4V L L L
算近L15 PIN1
VCC3
C247
0.1U/6/Y/25V
L15
1UV/V/10A/1P/3726/D
R446
10/6
R447
10/6
2SK3918/FDD8880/SUD50N024-09P/TO252/[10IF4-083918-01R_10IF4-098880-10R_10IF4-492409-01R]
R451 4.7/6
C222 0.1U/6/Y/25V
C227
1U/8/Y/25V
U22
HIP6601BCB-T/S
BOOT
PVCC
VCC
PWM
GND
UGATE
PHASE
LGATE
PWM_15V
R455 4.7/6
Q41
EC29
1000U/D/6.3V/8C
EC30
1000U/D/6.3V/8C
L16
VCC1_5
2.8uH/D/20A/3P/[11LC4-15280B-G6_11LC4-15280B-G1_11LC4-15280B-G2_11LC4-15280B-G3]
Q43
EC31
1000U/D/6.3V/8C
OV_1_5
R467
9.09K/6/1
R468
3.9K/6/1
37 1_5V_OV1
37 1_5V_OV2
1_5_OV1= LOW=1.5+0.1V
1_5_OV2= LOW=1.5+0.2V
R402 Change to 1uF
If ISL6537 pin12 Fail
VTT_OR
R445
680/6
6,39 VTT_PWRGD
19,37 -SLP_S3
19 -S4_S5
R449 1K/6
R450 1K/6
C224
1U/6/Y/10V
C225
1U/6/Y/10V
PWM_15V
R456 1K/6/1
R457 10K/6
C228 0.01U/6/X/50V
R458 1K/6/1
OV_1_5
C229 0.01U/6/X/50V/X
Q44
AP40T03H/IPD20N03L/AOD408/TO252/[10IF4-254003-01_10IF4-332003-01_10IF4-200408-01]
R462 1K/6/1
R463
3.01K/6/1
Q46
EC33
1000U/D/6.3V/8C
VTT_GATE
VTT_GMCH
OV_1_2
R469 1K/6/1
R470
2K/6/1
EC34
1000U/D/6.3V/8C
DDR18V
C236
0.1U/6/Y/25V
DDRVTT
EC36
330U/D/6.3V/6B/X
C238
0.1U/6/Y/25V
VIDPGD
S3#
S5#
PWM4
COMP4
FB4
DRIVE3
FB3
DRIVE2
FB2
DDR_VTT
DDR_VTT
DDR_VTTSNS
VREF_OUT
VREF_IN
GND
GND
GND
5VSBY
P12V
R443
4.7/6
C220
1U/8/Y/25V
C219
4.7U/8/Y/10V
ISL6537ACR/[10TA1-606537-21_10TA1-606537-20]
BOTTOM PAD
USE 6 VIAs
CONNECT TO
GND
算近L14 PIN1
C246
0.1U/6/Y/25V
L14
1UV/V/10A/1P/3726/D
D9
1N5817/S
C223
1U/6/Y/10V
2SK3918/FDD8880/SUD50N024-09P/TO252/[10IF4-083918-01R_10IF4-098880-10R_10IF4-492409-01R]
C226 1N/6/X/50V
EC27
1000U/D/6.3V/8C
EC28
1000U/D/6.3V/8C
BOOT
OCSET
UGATE
PHASE
LGATE
COMP
FB
VDDQ
VDDQ
R453 20K/6
R454 4.7/6
Q42
L17
2.8uH/D/20A/3P/[11LC4-15280B-G6_11LC4-15280B-G1_11LC4-15280B-G2_11LC4-15280B-G3]
DDR18V
9.5m ohm
R460
2.2/6
R461 0/6/SHT/X
Q45
C233
1N/6/X/50V
C232
12P/6/N/X
R464 10K/6
C235
0.01U/6/X/50V
R465 2K/6/1
need 0.8V Level
R466
1.54K/6/1
C237
1U/6/Y/10V
C239
C240
0.1U/6/Y/25V
R487 6.8K/6/1
DDR18V_OV3 37
R472 8.06K/6/1
DDR18V_OV2 37
R471 16K/6/1
DDR18V_OV1 37
DDR18V_OV1 LOW=1.8+0.1V
DDR18V_OV2 LOW=1.8+0.2V
DDR18V_OV3 LOW=1.8+0.3V
REV:1.0
VCORE
VCC3
R474
1K/6/X
R475
1K/6
Q48
MMBT2222A/S
SOT23
Q49
MMBT2222A/S
SOT23
VTT_GATE
R477 8.2K/6
C241
1N/6/X/50V/X
VTT_GMCH
R1559
8.06K/6/1
R1586
3.9K/6/1
37 VTT_GMCH_OV1
37 VTT_GMCH_OV2
VTT_GMCH_OV1= LOW=1.2+0.1V
VTT_GMCH_OV2= LOW=1.2+0.2V
GIGABYTE THCHNOLOGIES , INC.
Title
DISCRETE POWER
Size
Custom
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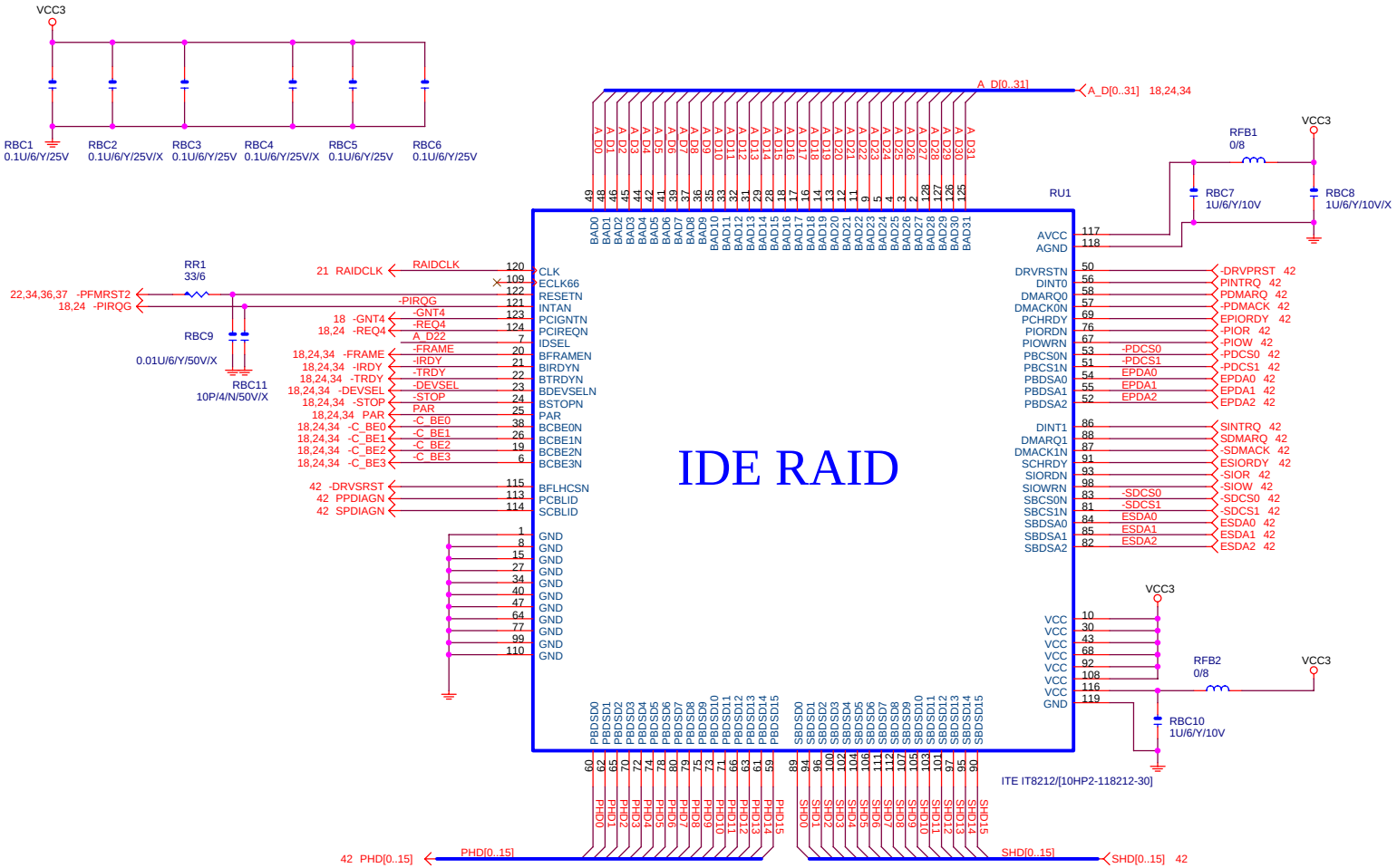
ALL INPUT PIN MUST HAVE 0.1 CAPACITOR



GIGABYTE		
Title	ATA100/133 & IDE RAID	
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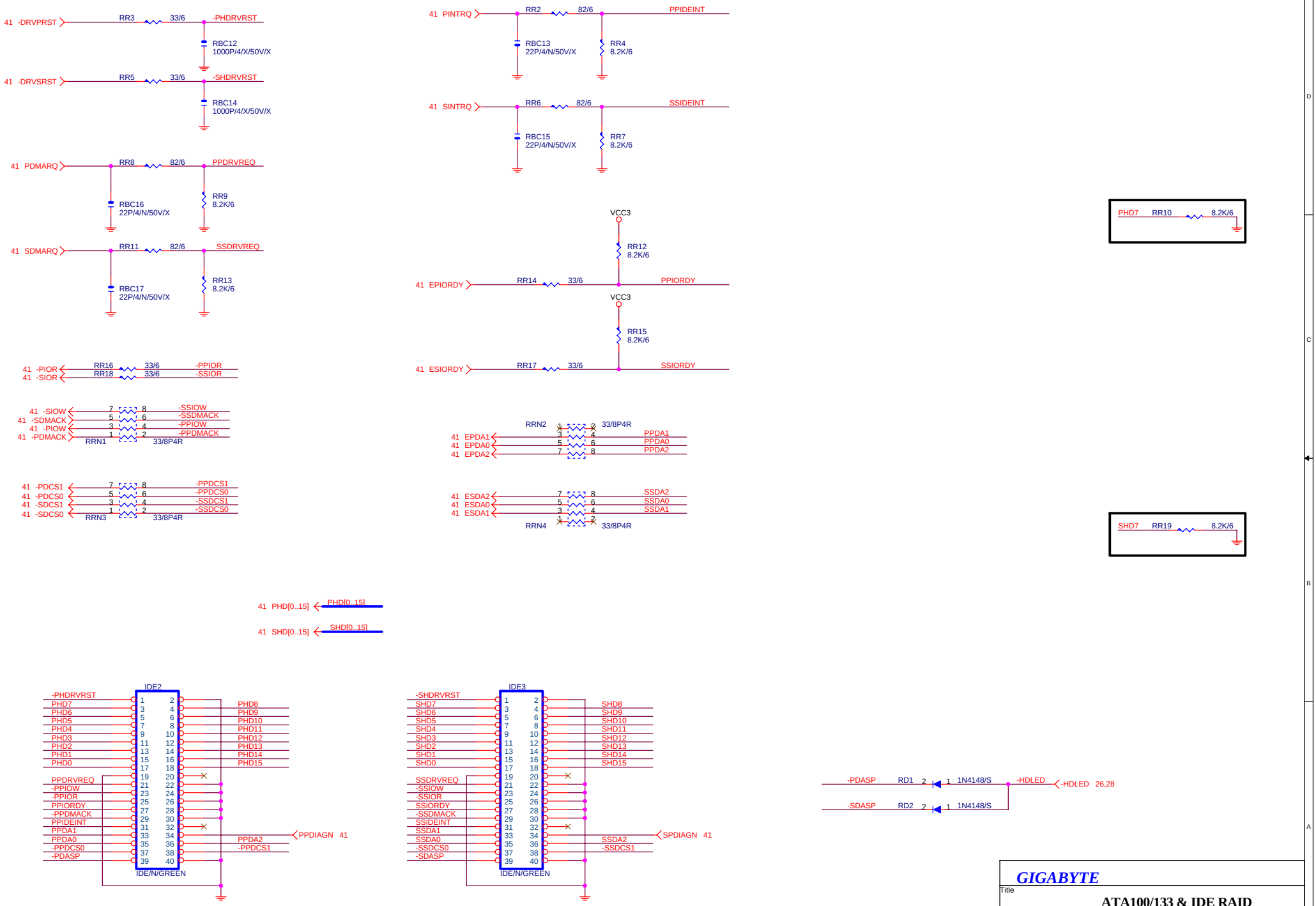

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GPI26

INTEL ICH7 GPIO Implementation

紅字表示CPI/O 同PIN

GPI PIN

Pin Name	Pin Type	Power Well			GPIO Application
GPIO[0]	I/O	VCC3	GPI/BM_BUSY#	(NA)	(NA)
GPIO[1]	I/O	VCC	-REQ[5]	(P.U VCC)	-REQ[5]
GPIO[5:2]	I/OD	VCC	-PIRQ[H:E]	(P.U VCC)	-PIRQ[H:E]
GPIO[6]	I/O	VCC3	GPI	(NA)	M_ID0 FOR MEDIA
GPIO[7]	I/O	VCC3	GPI	(NA)	DUALBIOS_INPUT
GPIO[8]	I/O	3VDUAL	GPI	(P.U 3VDUAL)	-SKTOCC
GPIO[9]	I/O	3VDUAL	GPI	(NA)	P66DET
GPIO[10]	I/O	3VDUAL	GPI	(NA)	M_ID1 FOR MB_ID
GPIO[11]	I/O	3VDUAL	-SMBALERT	(P.U 3VDUAL)	-SMBALRT
GPIO[12]	I/O	3VDUAL	GPI	(NA)	M_ID2 FOR MB_ID
GPIO[13]	I/O	3VDUAL	GPI	(P.U 3VDUAL)	-LPCPME
GPIO[14]	I/O	3VDUAL	GPI	(NA)	M_ID3 FOR MB_ID
GPIO[15]	I/O	3VDUAL	GPI	(NA)	-ACZ_DET
GPIO[16]	I/O	VCC3	GPO	P.D 20K(INT.)	HW RESET
GPIO[17]	I/O	VCC3	GPO/-GNT[5]	(NA)	GPO/-GNT[5]
GPIO[18]	I/O	VCC3	GPO/toggle	(NA)	(NA)
GPIO[19]	I/O	VCC3	SATA1GP	(P.U VCC3)	SATA1GP
GPIO[20]	I/O	VCC3	GPO	(P.U VCC3)	TBL-
GPIO[21]	I/O	VCC3	SATA0GP	(P.U VCC3)	SATA0GP
GPIO[22]	I/O	VCC3	-REQ[4]	(P.U VCC)	-REQ[4]
GPIO[23]	I/O	VCC3	LDRQ1#	(NA)	(NA)
GPIO[24]	I/O	3VDUAL	GPO/reset not cleared	(NA)	(NA)
GPIO[25]	I/O	3VDUAL	GPO	(NA)	PWD_LED
GPIO[26]	I/O	3VDUAL	EL_RSVD	(P.D)	-SPI_WP
GPIO[27]	I/O	3VDUAL	EL_STATE0	(NA)	(NA)
GPIO[28]	I/O	3VDUAL	EL_STATE1	(NA)	(NA)
GPIO[29]	I/O	3VDUAL	OC5#	(P.U VCC 分壓))	OC5#
GPIO[30]	I/O	3VDUAL	OC6#	(P.U VCC 分壓))	OC6#
GPIO[31]	I/O	3VDUAL	OC7#	(P.U VCC 分壓))	OC7#
GPIO[32]	I/O	VCC3	GPO	(NA)	DUAL_BIOS
GPIO[33]	I/O	VCC3	GPO	(NA)	DUAL_BIOS
GPIO[34]	I/O	VCC3	GPO	(P.U VCC3)	FWP-
GPIO[35]	I/O	VCC3	SATACLKREQ#	(NA)	(NA)
GPIO[36]	I	VCC3	SATA2GP	(P.U VCC3)	SATA2GP
GPIO[37]	I	VCC3	SATA3GP	(P.U VCC3)	SATA3GP

GPO PIN

Pin Name	Pin Number	Power Well	Pin Type		GPIO Application
GPIO[38]	I/O	VCC3	GPI	(NA)	(NA)
GPIO[39]	I/O	VCC3	GPI	(NA)	(NA)
GPIO[40:47]		NOT IMPLEMENTED		NOT IMPLEMENTED	
GPIO[48]	I/O	VCC3	-GNT[4]	(NA)	-GNT[4]
GPIO[49]	I/O	VTT_GMCH	CPUPWRGD	(P.U VTT_OL)	CPUPWROK
PCI1	PCLK0	-PCIRST	-REQ0/-GNT0	-PIRQE	A_D16
PCI2	PCLK1	-PCIRST	-REQ1/-GNT1	-PIRQD	A_D17
PCI3	PCLK2	-PCIRST	-REQ2/-GNT2	-PIRQC	A_D18
1394b	1394CLK	-PFMRST2	-REQ3/-GNT3	-PIRQH	A_D23
IT8212	RAIDCLK	-PFMRST2	-REQ4/-GNT4	-PIRQG	A_D22

GIGABYTE

Title	GPIO TABLE	
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ICH6 GPIO Table:

NAME	PWR LANE	USAGE	NAME	PWR LANE	USAGE
GPI0	V5REF	M/B ID (-REQ6)	GPI41	VCC3	M/B ID
GPI1	V5REF	-REQ5	GPO48	VCC3	-GNT4
GPI2	V5REF	-PIRQE	GPO49	V-CPUIO	CPUPWOK
GPI3	V5REF	-PIRQF			
GPI4	V5REF	-PIRQG			
GPI5	V5REF	-PIRQH			
GPI6	VCC3	-SLP_BTN			
GPI7	VCC3	DUAL BIOS			
GPI8	3VDAUL	-LANWAKE			
GPI9	3VDAUL	-USBOC4			
GPI10	3VDAUL	-USBOC5			
GPI11	3VDAUL	-SMBALT			
GPI12	VCC3	ATX_DET			
GPI13	3VDAUL	-LPCPME			
GPI14	3VDAUL	-USBOC6			
GPI15	3VDAUL	-USBOC7			
GPO16	VCC3	CPU OV1 (-GNT6)			
GPO17	VCC3	-GNT5			
GPO18	VCC3	CPU OV2			
GPO19	VCC3	DUAL BIOS			
GPO20	VCC3	BIOS T-BLOCK			
GPO21	VCC3	DUAL BIOS			
GPO23	VCC3	DDR OV0			
GPIO24	3VDAUL	GREEN LED			
GPIO25	3VDAUL	DDR OV1			
GPI26	VCC3	SATA_GP0			
GPIO27	3VDAUL	+PWRLED			
GPIO28	3VDAUL	-PWRLED			
GPI29	VCC3	SATA GP1			
GPI30	VCC3	SATA GP2			
GPI31	VCC3	SATA GP3			
GPIO32	VCC3	BIOS WP			
GPIO33	VCC3	AZALIA DET			
GPIO34	VCC3	PWRLED			
GPI40	V5REF	-REQ4			

PWROK/RESET Table:

ITE8712BHX PIN	NET NAME	TARGET
PIN62/-PCIRST1	-PCIE_RST	1. PCI-E * 1 Slot1 2. PCI-E * 1 Slot2 3. PCI-E * 1 Slot3 4. PCI-E * 16 Slot
PIN64/-PCIRST2	-PFMRST2	1. Onboard PCI Lan 2. Onboard 1394 Chip 3. OnBoard FWH
PIN65/-PCIRST3	-PFMRST1	1. Onboard PCI-E Lan 2. Onboard SATA Chip 3. GMCH
PIN115/-PCIRST4	-PFMRST_ -IDERST	Reserved For IDE
PIN63/PWROK1	PWROK1	1. GMCH 2. ICH6 3. 5VDUAL SWITCH 4. DPS CONTROL
PIN109/PWROK2	-THERM	1. ICH6

GIGABYTE THCHNOLOGIES , INC.

Title: GPIO/RESET TABLE

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