Model Name: 8I945PL-G

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

Title	Cover Sheet	
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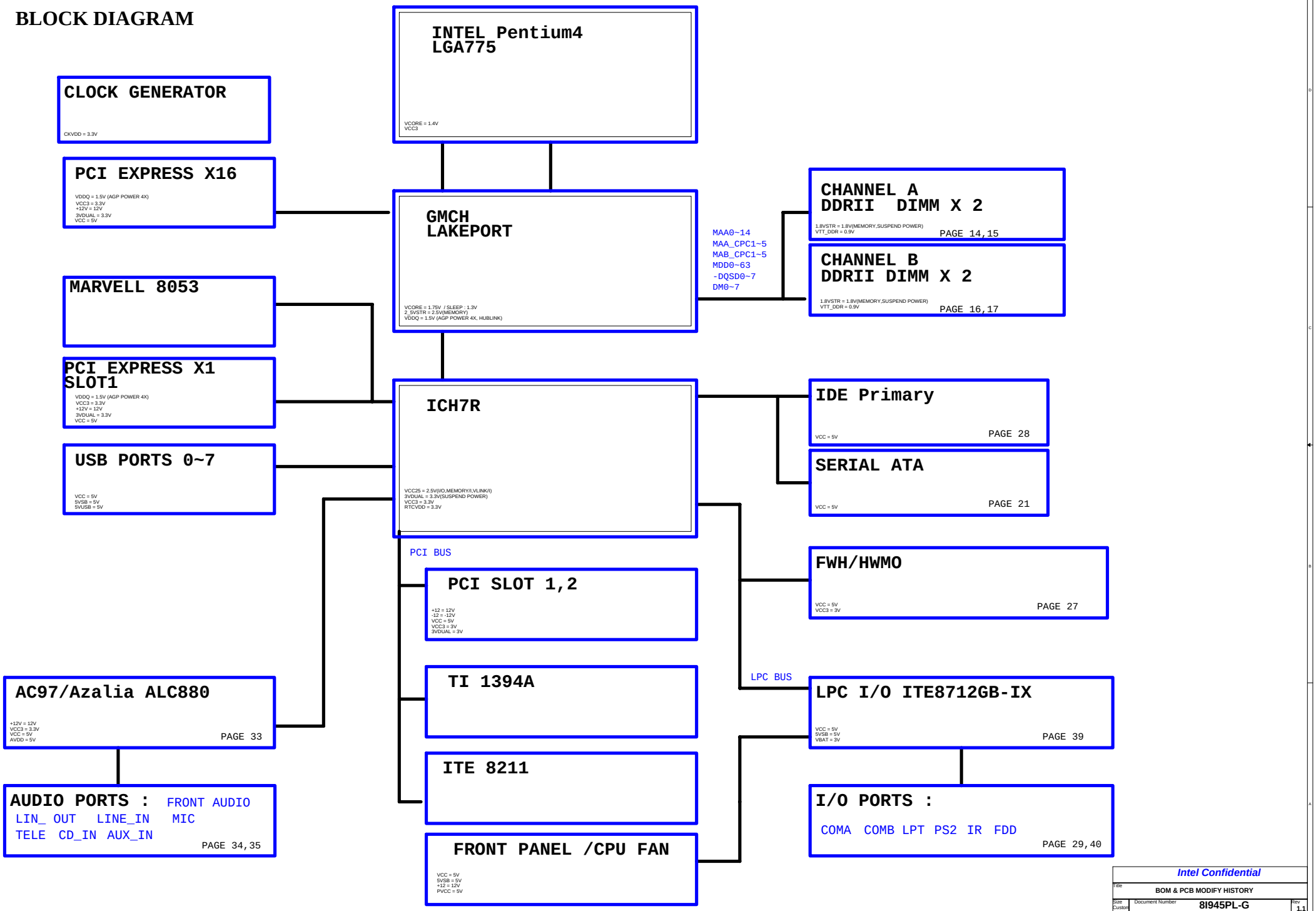
BLOCK DIAGRAM



Title	BOM & PCB MODIFY HISTORY	
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Model Name: 8I945PL-G
Version:1.1

Component value change history

2005/08/24

Data	Change Item	Reason
1.0A	Change from 8I945P-G	
	1.N/B change to I945PL	
	2.DDR2 share	
2005/09/27	1.轉P-BOM	
2005/09/27	1.PCB 育富Change to 慶生	
2005/10/03	1.Add N/B替代料	
1.0B	1.PCB Version change to 1.0 1	2005/10/31

Circuit or PCB layout change for next version

DATE	Change Item	Reason
1.0	Change from 8I945P-G	
	1.N/B change to I945PL	
	2.DDR2 share	
1.0 1	1.Remove FSB1066MHz 文字面	
	2.Remove Dual Channel DDRII 文字面	
	3.PCB Version change to 1.0 1	

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Title	BOM & PCB MODIFY HISTORY		
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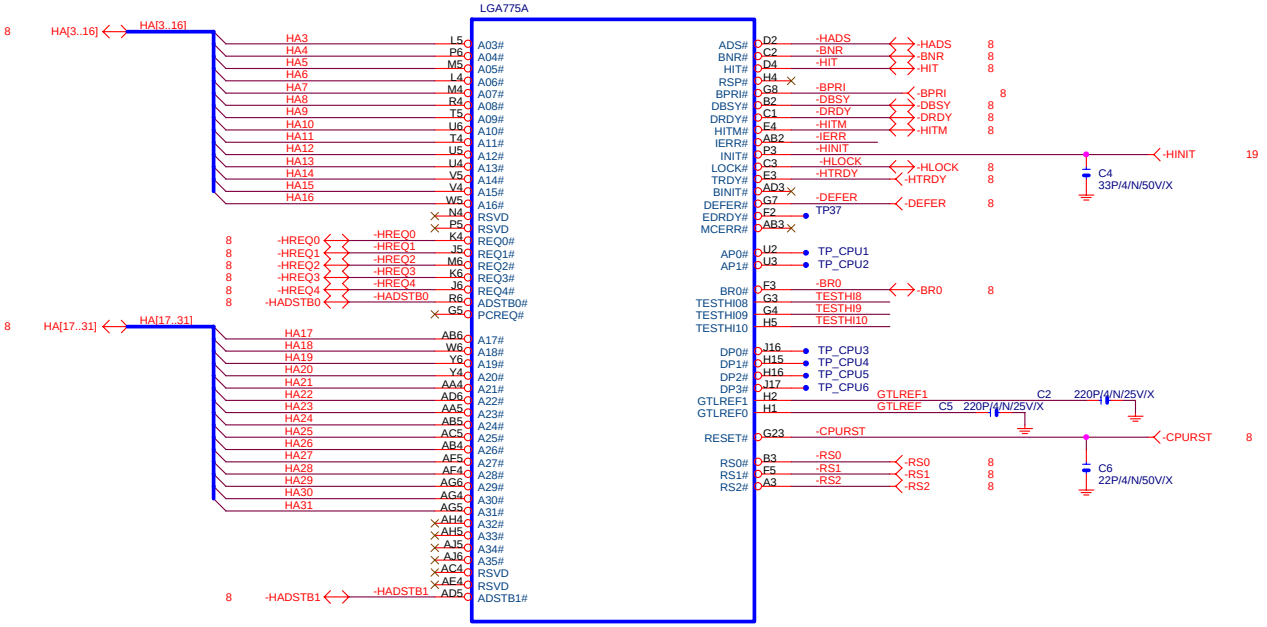
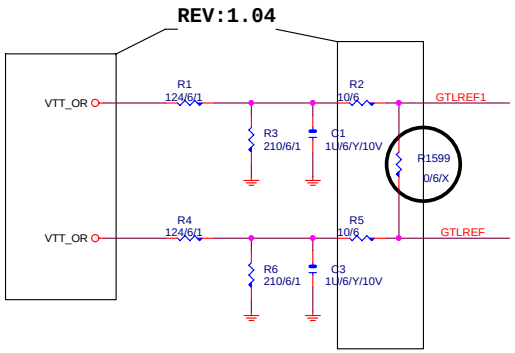
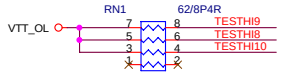
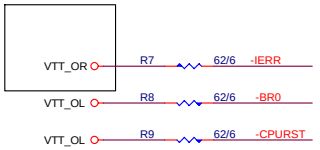
REV:1.04

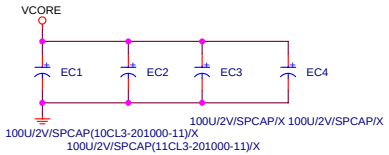


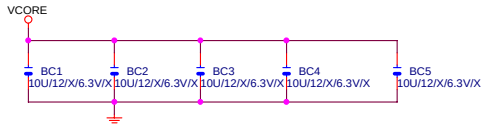


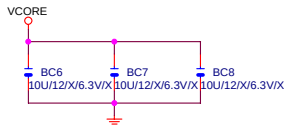


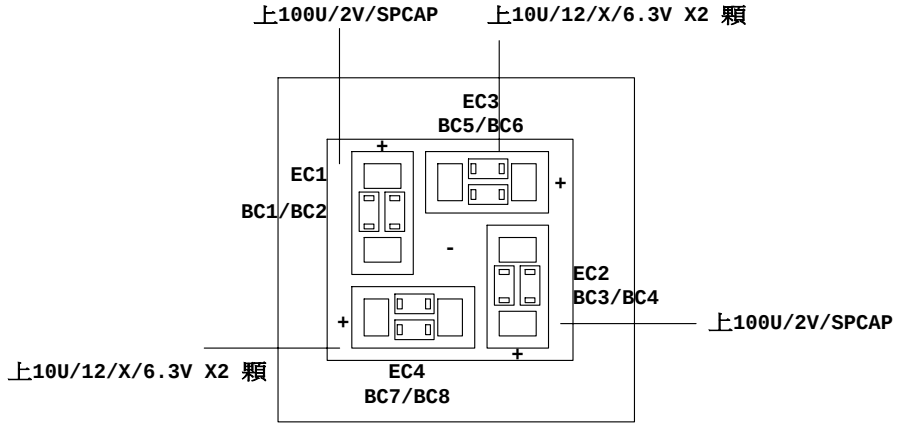


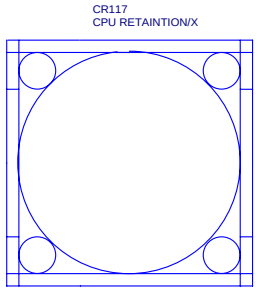
SP-CAP X 4PCS











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Title	P4_LGA775-A		
Size: Custom	Document Number: 8I945PL-G		Rev: 1.1
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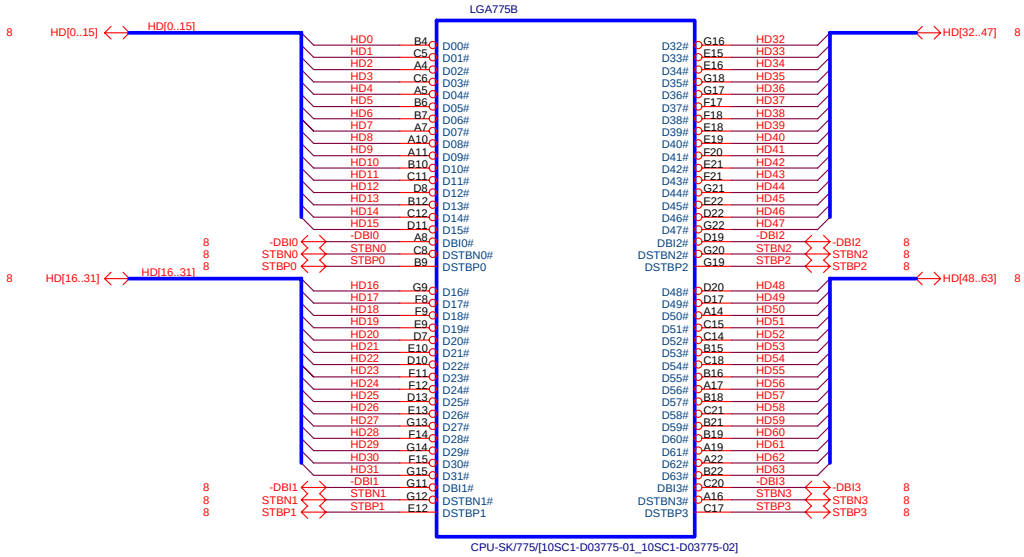

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Title	P4_LGA775-C	
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2/8/8600/235

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

Locate at ICH7 Side

CPU

FSA	FSB	NA	
FSBSEL0	FSBSEL1	FSBSEL2	Clock
1	0	1	100MHz
1	0	0	133MHz
1	1	0	166MHz
0	1	0	200MHz
0	0	0	266MHz

3/4

POWER ON

FOR ALL DDR CLK RATIO

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

CPU-SK/775/[10SC1-D03775-01_10SC1-D03775-02]

CPU-SK/775/[10SC1-D03775-01_10SC1-D03775-02]

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Title	P4_LGA775-B		
Size: Custom	Document Number: 8I945PL-G		Rev: 1.1
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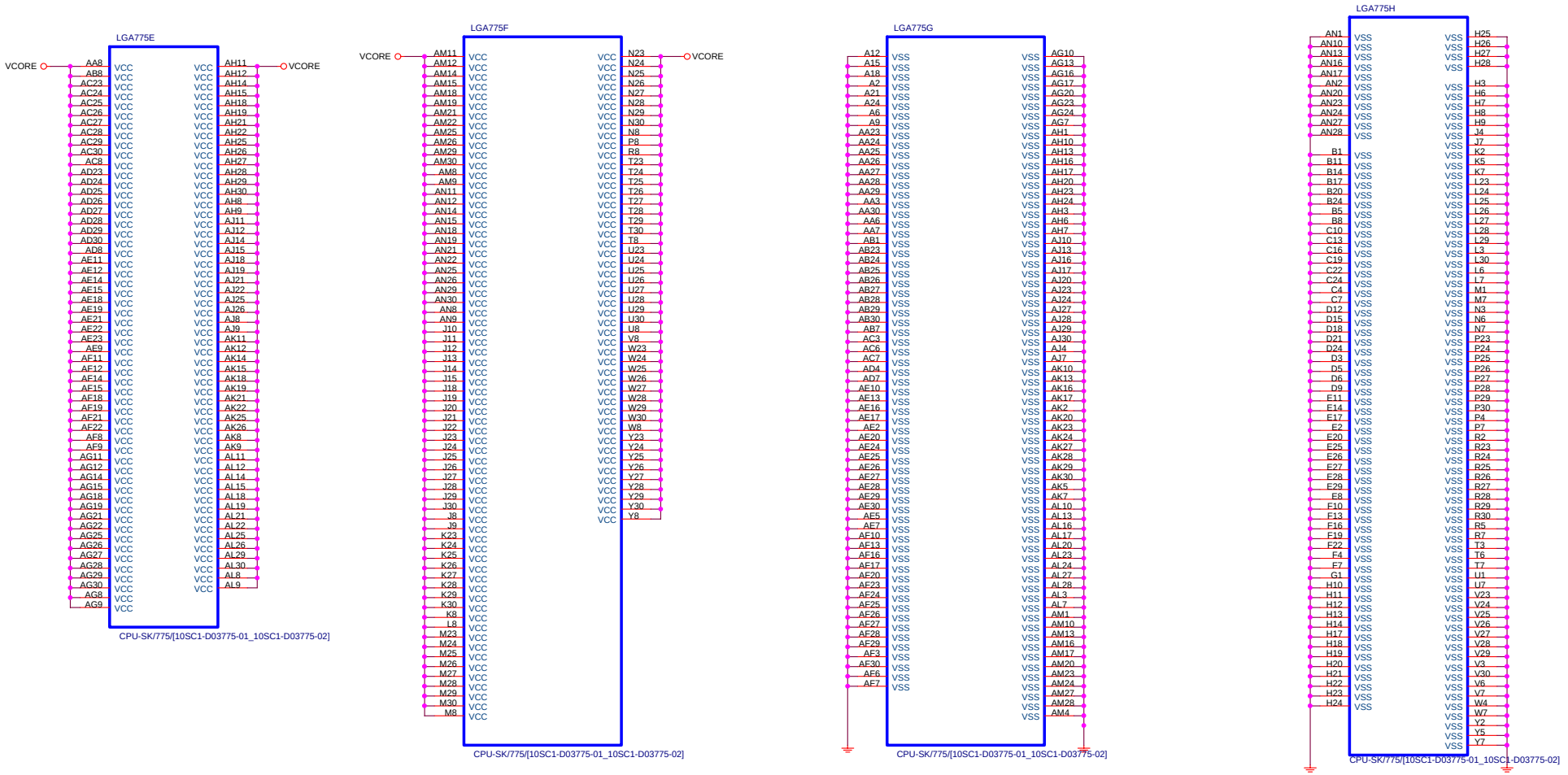

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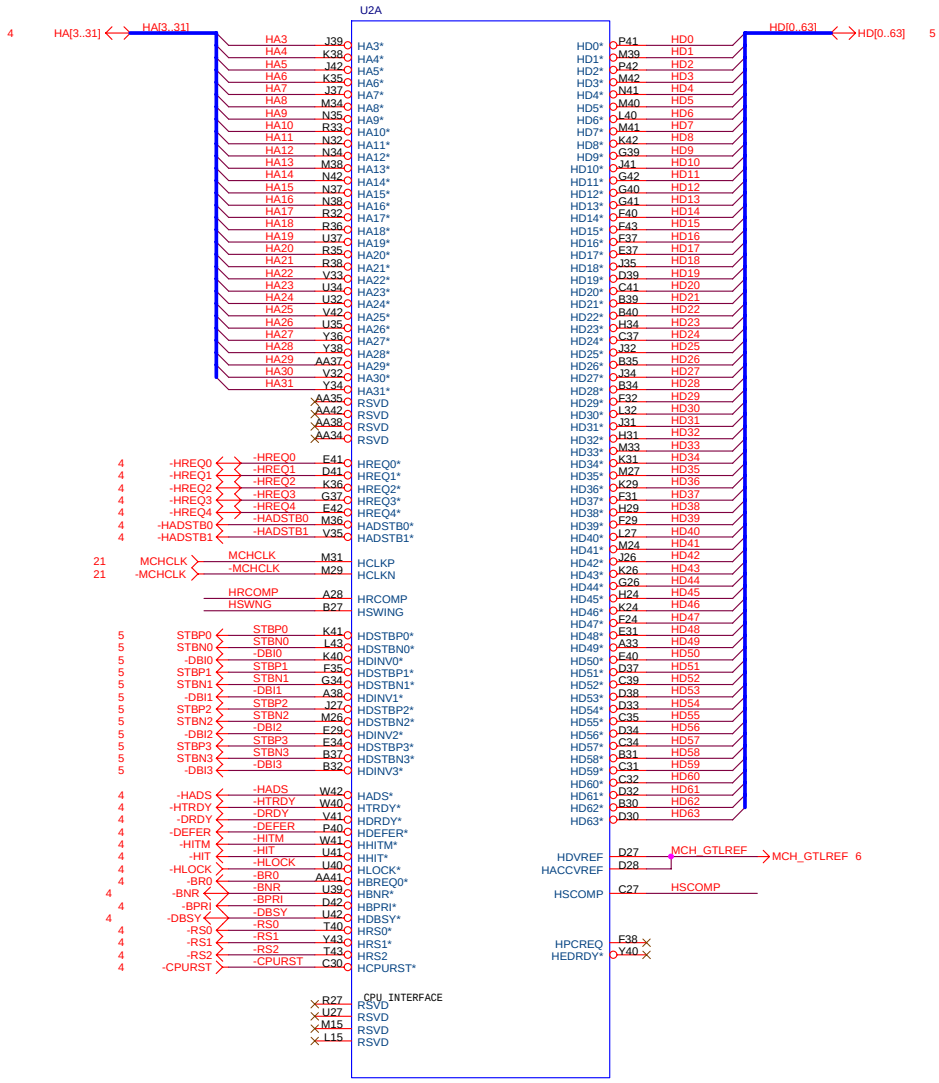
Title	P4_LGA775-D	
Size: Custom	Document Number: 8I945PL-G	Rev: 1.1
Date: Tuesday, November 01, 2005	Sheet 7 of 44	



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Title	GMCH-HOST		
Size: Custom	Document Number: 8I945PL-G		Rev: 1.1
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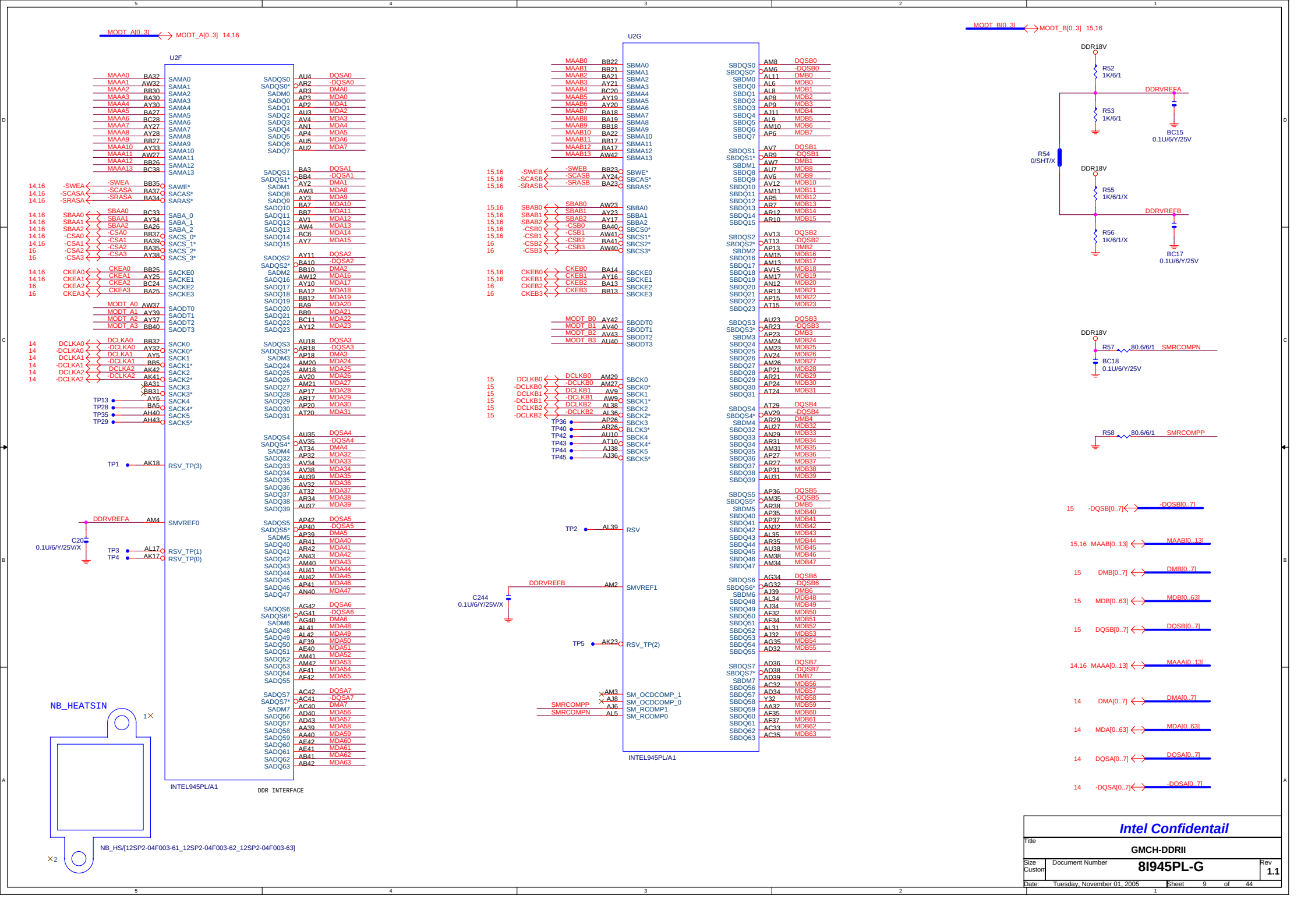
MODT_A[0..3]
MODT_A[0..3] 14,16
U2F
MAAA0 BA32
MAAA1 AW32
MAAA2 BB30
MAAA3 BA30
MAAA4 AY30
MAAA5 BA27
MAAA6 BC28
MAAA7 AY27
MAAA8 AY28
MAAA9 BB27
MAAA10 AY33
MAAA11 AW27
MAAA12 BB26
MAAA13 BC38
SAMA0
SAMA1
SAMA2
SAMA3
SAMA4
SAMA5
SAMA6
SAMA7
SAMA8
SAMA9
SAMA10
SAMA11
SAMA12
SAMA13
14,16 -SWEA BB35 SAWE*
14,16 -SCASA BA37 SACAS*
14,16 -SRASA BA34 SARAS*
14,16 SBAA0 BC33 SABA_0
14,16 SBAA1 AY34 SABA_1
14,16 SBAA2 BA26 SABA_2
14,16 -CSA0 BB37 SACS_0*
14,16 -CSA1 BA39 SACS_1*
16 -CSA2 BA35 SACS_2*
16 -CSA3 AY38 SACS_3*
14,16 CKEA0 BB25 SACKE0
14,16 CKEA1 AY25 SACKE1
16 CKEA2 BC24 SACKE2
16 CKEA3 BA25 SACKE3
MODT_A0 AW37 SAODT0
MODT_A1 AY39 SAODT1
MODT_A2 AY37 SAODT2
MODT_A3 BB40 SAODT3
14 DCLKA0 BB32 SACK0
14 -DCLKA0 AY32 SACK0*
14 DCLKA1 AY5 SACK1
14 -DCLKA1 BB5 SACK1*
14 DCLKA2 AK42 SACK2
14 -DCLKA2 AK41 SACK2*
BA31 SACK3
BB31 SACK3*
TP13 AY6 SACK4
TP28 BA5 SACK4*
TP35 AH40 SACK5
TP29 AH43 SACK5*
TP1 AK18 RSV_TP(3)
DDRVREFA AM4 SMVREF0
C20 0.1U/6/Y/25V/X
TP3 AL17 RSV_TP(1)
TP4 AK17 RSV_TP(0)
SADQS0 AU4 DQSA0
SADQS0* AR2 -DQSA0
SADM0 AR3 DMA0
SADQ0 AP3 MDA0
SADQ1 AP2 MDA1
SADQ2 AU3 MDA2
SADQ3 AV4 MDA3
SADQ4 AN1 MDA4
SADQ5 AP4 MDA5
SADQ6 AU5 MDA6
SADQ7 AU2 MDA7
SADQS1 BA3 DQSA1
SADQS1* BB4 -DQSA1
SADM1 AY2 DMA1
SADQ8 AW3 MDA8
SADQ9 AY3 MDA9
SADQ10 BA7 MDA10
SADQ11 BB7 MDA11
SADQ12 AV1 MDA12
SADQ13 AW4 MDA13
SADQ14 BC6 MDA14
SADQ15 AY7 MDA15
SADQS2 AY11 DQSA2
SADQS2* BA10 -DQSA2
SADM2 BB10 DMA2
SADQ16 AW12 MDA16
SADQ17 AY10 MDA17
SADQ18 BA12 MDA18
SADQ19 BB12 MDA19
SADQ20 BA9 MDA20
SADQ21 BB9 MDA21
SADQ22 BC11 MDA22
SADQ23 AY12 MDA23
SADQS3 AU18 DQSA3
SADQS3* AR18 -DQSA3
SADM3 AP18 DMA3
SADQ24 AM20 MDA24
SADQ25 AM18 MDA25
SADQ26 AV20 MDA26
SADQ27 AM21 MDA27
SADQ28 AP17 MDA28
SADQ29 AR17 MDA29
SADQ30 AP20 MDA30
SADQ31 AT20 MDA31
SADQS4 AU35 DQSA4
SADQS4* AV35 -DQSA4
SADM4 AT34 DMA4
SADQ32 AP32 MDA32
SADQ33 AV34 MDA33
SADQ34 AV38 MDA34
SADQ35 AU39 MDA35
SADQ36 AV32 MDA36
SADQ37 AT32 MDA37
SADQ38 AR34 MDA38
SADQ39 AU37 MDA39
SADQS5 AP42 DQSA5
SADQS5* AP40 -DQSA5
SADM5 AP39 DMA5
SADQ40 AR41 MDA40
SADQ41 AR42 MDA41
SADQ42 AN43 MDA42
SADQ43 AM40 MDA43
SADQ44 AU41 MDA44
SADQ45 AU42 MDA45
SADQ46 AP41 MDA46
SADQ47 AN40 MDA47
SADQS6 AG42 DQSA6
SADQS6* AG41 -DQSA6
SADM6 AG40 DMA6
SADQ48 AL41 MDA48
SADQ49 AL42 MDA49
SADQ50 AF39 MDA50
SADQ51 AE40 MDA51
SADQ52 AM41 MDA52
SADQ53 AM42 MDA53
SADQ54 AF41 MDA54
SADQ55 AF42 MDA55
SADQS7 AC42 DQSA7
SADQS7* AC41 -DQSA7
SADM7 AC40 DMA7
SADQ56 AD40 MDA56
SADQ57 AD43 MDA57
SADQ58 AA39 MDA58
SADQ59 AA40 MDA59
SADQ60 AE42 MDA60
SADQ61 AE41 MDA61
SADQ62 AB41 MDA62
SADQ63 AB42 MDA63
INTEL945PL/A1
DDR INTERFACE
NB_HEATSIN
1
2
NB_HS/[12SP2-04F003-61_12SP2-04F003-62_12SP2-04F003-63]
U2G
MAAB0 BB22 SBMA0
MAAB1 BB21 SBMA1
MAAB2 BA21 SBMA2
MAAB3 AY21 SBMA3
MAAB4 BC20 SBMA4
MAAB5 AY19 SBMA5
MAAB6 AY20 SBMA6
MAAB7 BA18 SBMA7
MAAB8 BA19 SBMA8
MAAB9 BB18 SBMA9
MAAB10 BA22 SBMA10
MAAB11 BB17 SBMA11
MAAB12 BA17 SBMA12
MAAB13 AW42 SBMA13
15,16 -SWEB BB23 SBWE*
15,16 -SCASB AY24 SBCAS*
15,16 -SRASB BA23 SBRAS*
15,16 SBAB0 AW23 SBBA0
15,16 SBAB1 AY23 SBBA1
15,16 SBAB2 AY17 SBBA2
15,16 -CSB0 BA40 SBCS0*
15,16 -CSB1 AW41 SBCS1*
16 -CSB2 BA41 SBCS2*
16 -CSB3 AW40 SBCS3*
15,16 CKEB0 BA14 SBCKE0
15,16 CKEB1 AY16 SBCKE1
16 CKEB2 BA13 SBCKE2
16 CKEB3 BB13 SBCKE3
MODT_B0 AY42 SBODT0
MODT_B1 AV40 SBODT1
MODT_B2 AV43 SBODT2
MODT_B3 AU40 SBODT3
15 DCLKB0 AM29 SBCK0
15 -DCLKB0 AM27 SBCK0*
15 DCLKB1 AV9 SBCK1
15 -DCLKB1 AW9 SBCK1*
15 DCLKB2 AL38 SBCK2
15 -DCLKB2 AL36 SBCK2*
TP36 AP26 SBCK3
TP40 AR26 BLCK3*
TP42 AU10 SBCK4
TP43 AT10 SBCK4*
TP44 AJ38 SBCK5
TP45 AJ36 SBCK5*
TP2 AL39 RSV
DDRVREFB AM2 SMVREF1
C244 0.1U/6/Y/25V/X
TP5 AK23 RSV_TP(2)
AM3 SM_OCDCOMP_1
AJ8 SM_OCDCOMP_0
SMRCOMPP AJ6 SM_RCOMP1
SMRCOMPN AL5 SM_RCOMP0
SBDQS0 AM8 DQSB0
SBDQS0* AM6 -DQSB0
SBDM0 AL11 DMB0
SBDQ0 AL6 MDB0
SBDQ1 AL8 MDB1
SBDQ2 AP8 MDB2
SBDQ3 AP9 MDB3
SBDQ4 AJ11 MDB4
SBDQ5 AL9 MDB5
SBDQ6 AM10 MDB6
SBDQ7 AP6 MDB7
SBDQS1 AV7 DQSB1
SBDQS1* AR9 -DQSB1
SBDM1 AW7 DMB1
SBDQ8 AU7 MDB8
SBDQ9 AV6 MDB9
SBDQ10 AV12 MDB10
SBDQ11 AM11 MDB11
SBDQ12 AR5 MDB12
SBDQ13 AR7 MDB13
SBDQ14 AR12 MDB14
SBDQ15 AR10 MDB15
SBDQS2 AV13 DQSB2
SBDQS2* AT13 -DQSB2
SBDM2 AP13 DMB2
SBDQ16 AM15 MDB16
SBDQ17 AM13 MDB17
SBDQ18 AV15 MDB18
SBDQ19 AM17 MDB19
SBDQ20 AN12 MDB20
SBDQ21 AR13 MDB21
SBDQ22 AP15 MDB22
SBDQ23 AT15 MDB23
SBDQS3 AU23 DQSB3
SBDQS3* AR23 -DQSB3
SBDM3 AP23 DMB3
SBDQ24 AM24 MDB24
SBDQ25 AM23 MDB25
SBDQ26 AV24 MDB26
SBDQ27 AM26 MDB27
SBDQ28 AP21 MDB28
SBDQ29 AR21 MDB29
SBDQ30 AP24 MDB30
SBDQ31 AT24 MDB31
SBDQS4 AT29 DQSB4
SBDQS4* AV29 -DQSB4
SBDM4 AR29 DMB4
SBDQ32 AU27 MDB32
SBDQ33 AN29 MDB33
SBDQ34 AR31 MDB34
SBDQ35 AM31 MDB35
SBDQ36 AP27 MDB36
SBDQ37 AR27 MDB37
SBDQ38 AP31 MDB38
SBDQ39 AU31 MDB39
SBDQS5 AP36 DQSB5
SBDQS5* AM35 -DQSB5
SBDM5 AR38 DMB5
SBDQ40 AP35 MDB40
SBDQ41 AP37 MDB41
SBDQ42 AN32 MDB42
SBDQ43 AL35 MDB43
SBDQ44 AR35 MDB44
SBDQ45 AU38 MDB45
SBDQ46 AM38 MDB46
SBDQ47 AM34 MDB47
SBDQS6 AG34 DQSB6
SBDQS6* AG32 -DQSB6
SBDM6 AJ39 DMB6
SBDQ48 AL34 MDB48
SBDQ49 AJ34 MDB49
SBDQ50 AF32 MDB50
SBDQ51 AF34 MDB51
SBDQ52 AL31 MDB52
SBDQ53 AJ32 MDB53
SBDQ54 AG35 MDB54
SBDQ55 AD32 MDB55
SBDQS7 AD36 DQSB7
SBDQS7* AD38 -DQSB7
SBDM7 AD39 DMB7
SBDQ56 AC32 MDB56
SBDQ57 AD34 MDB57
SBDQ58 Y32 MDB58
SBDQ59 AA32 MDB59
SBDQ60 AF35 MDB60
SBDQ61 AF37 MDB61
SBDQ62 AC33 MDB62
SBDQ63 AC35 MDB63
INTEL945PL/A1
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
Size Custom
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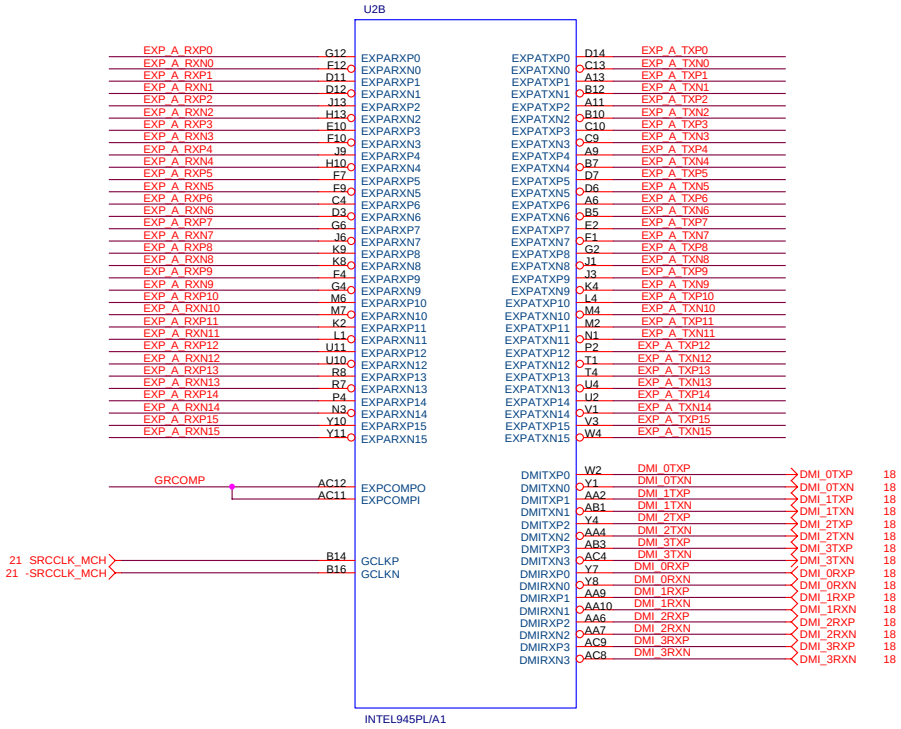

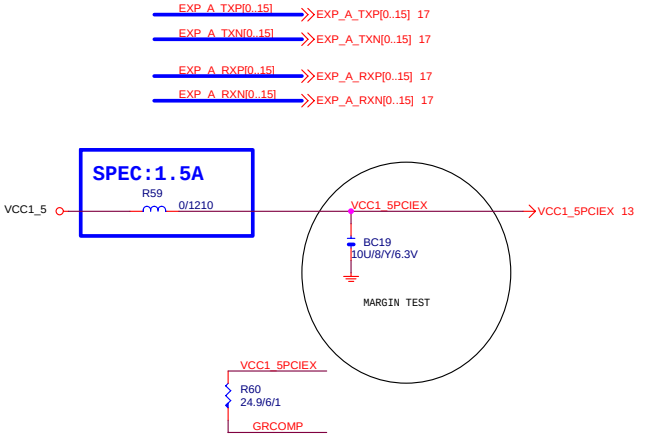

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Title	GMCH-PCI E & DMI	
Size: Custom	Document Number: 8I945PL-G	Rev: 1.1
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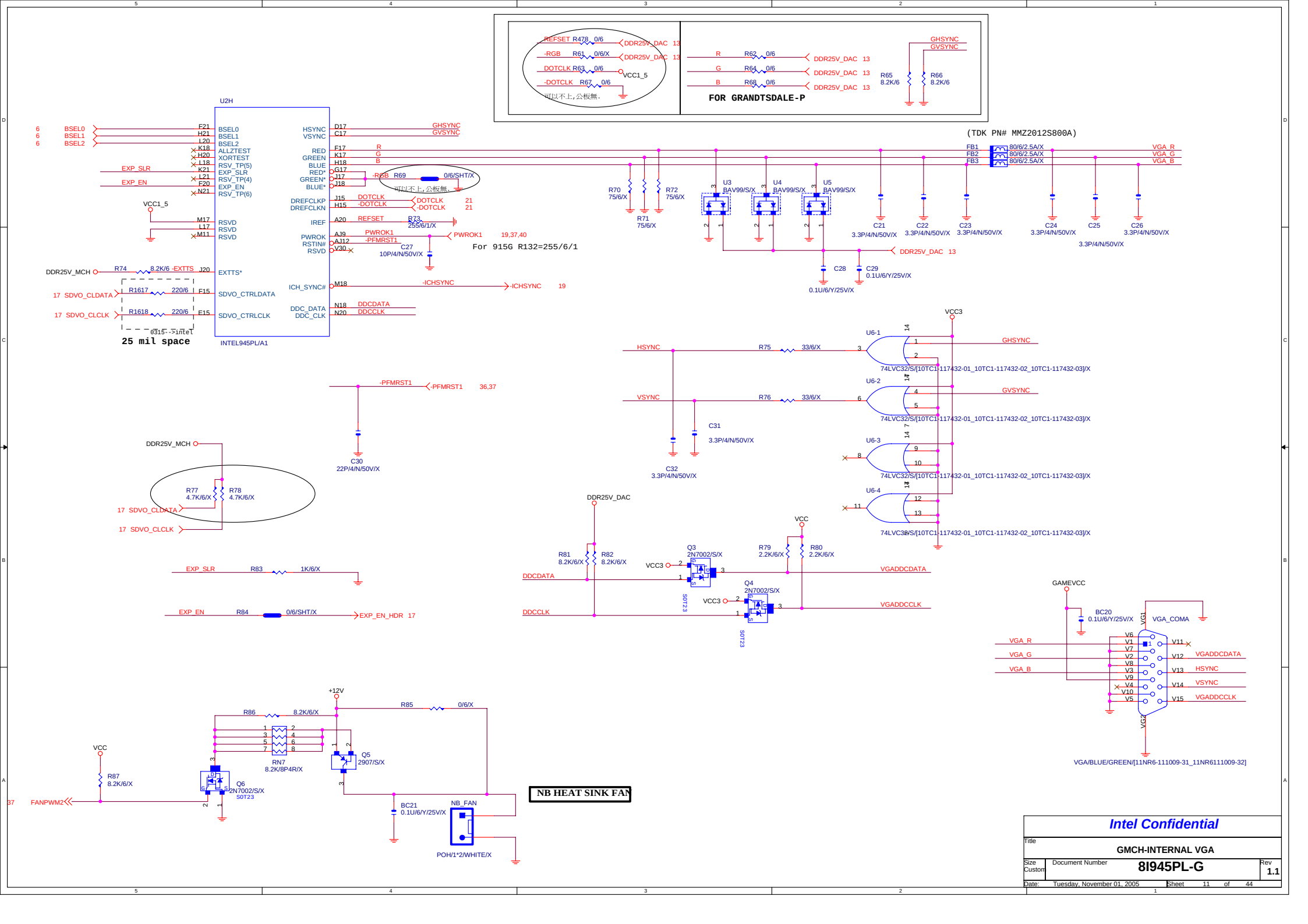
REFSET R478 0/6
DDR25V_DAC 13
-RGB R61 0/6/X
DOTCLK R63 0/6
VCC1_5
-DOTCLK R67 0/6
可以不上,公板無.
R R62 0/6
G R64 0/6
B R69 0/6
FOR GRANDTSDALE-P
GHSYNC
GVSYNC
R65 8.2K/6
R66 8.2K/6
(TDK PN# MMZ2012S800A)
U2H
BSEL0
BSEL1
BSEL2
EXP_SLR
EXP_EN
HSYNC
VSYNC
RED
GREEN
BLUE
RED*
GREEN*
BLUE*
DREFCLKP
DREFCLKN
IREF
PWROK
RSTIN#
RSVD
DOTCLK
-DOTCLK
REFSET
PWROK1
-PFMRST1
For 915G R132=255/6/1
DDR25V_MCH
R74 8.2K/6 -EXTTS
EXTTS*
SDVO_CTRLDATA
SDVO_CTRLCLK
ICH_SYNC#
-ICHSYNC
DDC_DATA
DDC_CLK
DDCDATA
DDCCLK
INTEL945PL/A1
25 mil space
R70 75/6/X
R71 75/6/X
R72 75/6/X
U3 BAV99/S/X
U4 BAV99/S/X
U5 BAV99/S/X
C21 3.3P/4/N/50V/X
C22 3.3P/4/N/50V/X
C23 3.3P/4/N/50V/X
C24 3.3P/4/N/50V/X
C25 3.3P/4/N/50V/X
C26 3.3P/4/N/50V/X
C28 0.1U/6/Y/25V/X
C29 0.1U/6/Y/25V/X
FB1
FB2
FB3
80/6/2.5A/X
VGA_R
VGA_G
VGA_B
-PFMRST1
C30 22P/4/N/50V/X
C27 10P/4/N/50V/X
R75 33/6/X
R76 33/6/X
C31 3.3P/4/N/50V/X
C32 3.3P/4/N/50V/X
U6-1
U6-2
U6-3
U6-4
74LVC32/S/[10TC1-117432-01_10TC1-117432-02_10TC1-117432-03]/X
R77 4.7K/6/X
R78 4.7K/6/X
R81 8.2K/6/X
R82 8.2K/6/X
Q3 2N7002/S/X
Q4 2N7002/S/X
R79 2.2K/6/X
R80 2.2K/6/X
VGADDCDATA
VGADDCCLK
R83 1K/6/X
R84 0/6/SHT/X
EXP_EN_HDR 17
R85 0/6/X
R86 8.2K/6/X
RN7 8.2K/8P4R/X
Q5 2907/S/X
Q6 2N7002/S/X
R87 8.2K/6/X
FANPWM2
BC21 0.1U/6/Y/25V/X
NB_FAN
POH/1*2/WHITE/X
NB HEAT SINK FAN
GAMEVCC
BC20 0.1U/6/Y/25V/X
VGA_COMA
VGA/BLUE/GREEN/[11NR6-111009-31_11NR6111009-32]
Intel Confidential
GMCH-INTERNAL VGA
8I945PL-G
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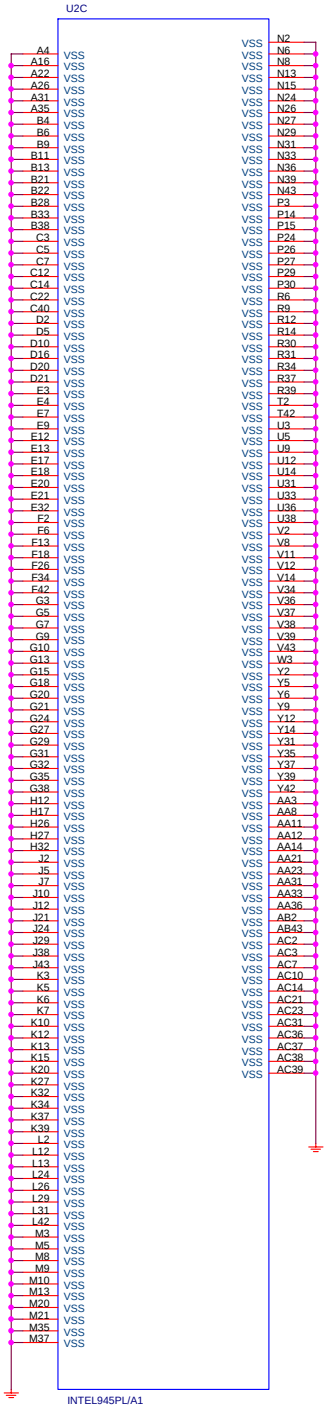

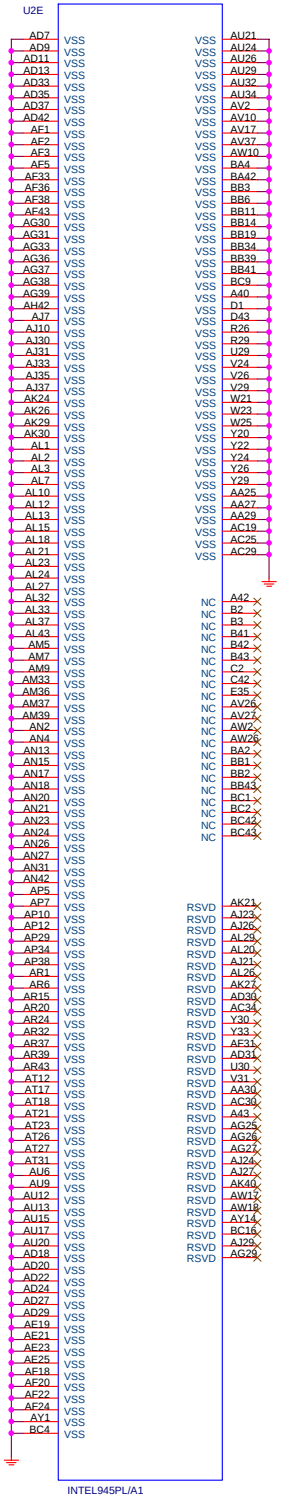

Title	GMCH-GND		
Size: Custom	Document Number: 8I945PL-G		Rev: 1.1
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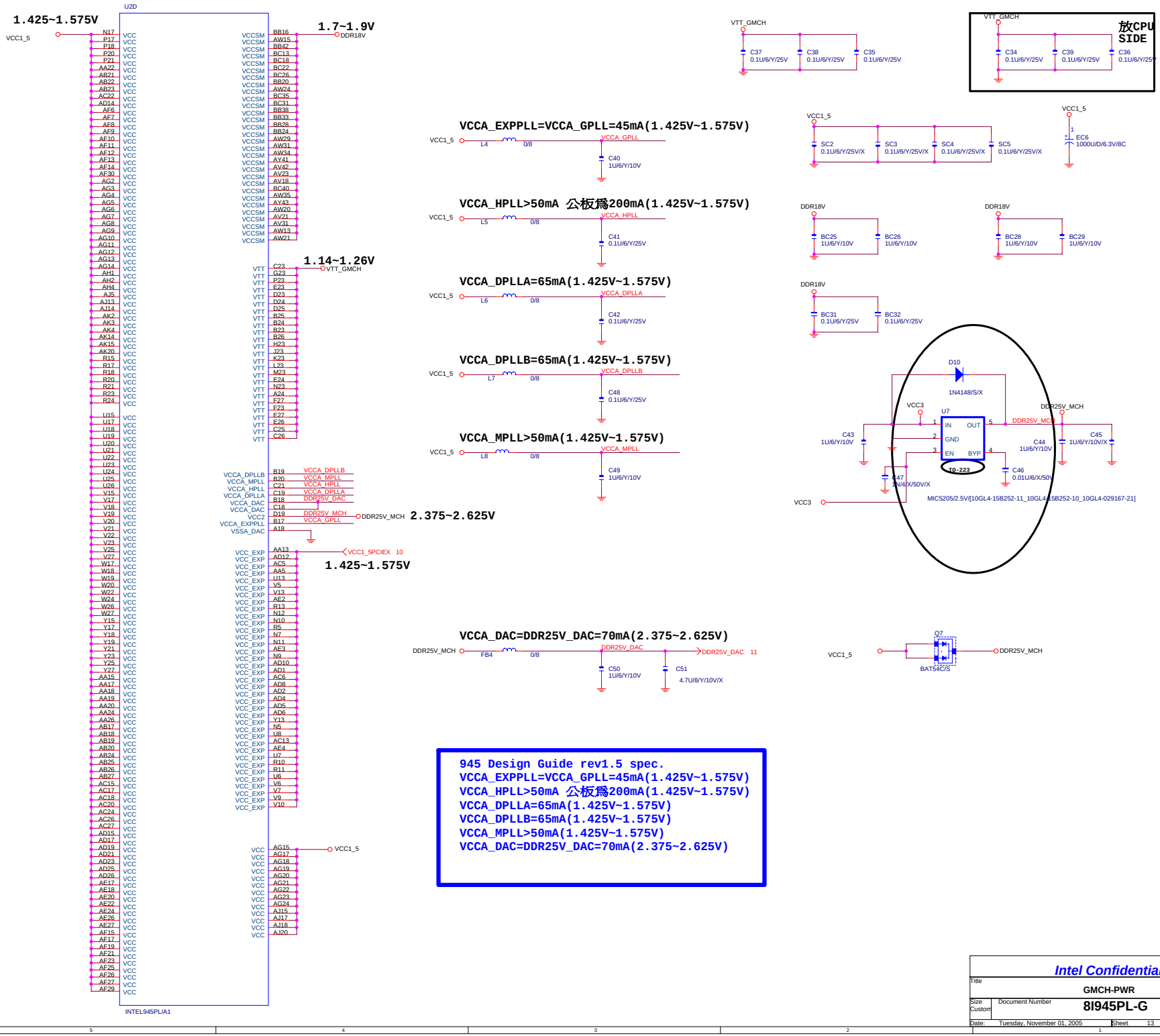
1.425~1.575V
U2D
1.7~1.9V
DDR18V
1.14~1.26V
VTT_GMCH
2.375~2.625V
DDR25V_MCH
1.425~1.575V
VCC1_5PCIEX
VCC1_5
INTEL945PL/A1
VCCA_EXPPLL=VCCA_GPLL=45mA(1.425V~1.575V)
VCCA_HPLL>50mA 公板爲200mA(1.425V~1.575V)
VCCA_DPLLA=65mA(1.425V~1.575V)
VCCA_DPLLB=65mA(1.425V~1.575V)
VCCA_MPLL>50mA(1.425V~1.575V)
VCCA_DAC=DDR25V_DAC=70mA(2.375~2.625V)
放CPU SIDE
1N4148/S/X
MIC5205/2.5V/[10GL4-15B252-11_10GL4-15B252-10_10GL4-029167-21]
BAT54C/S
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)
Intel Confidential
GMCH-PWR
8I945PL-G
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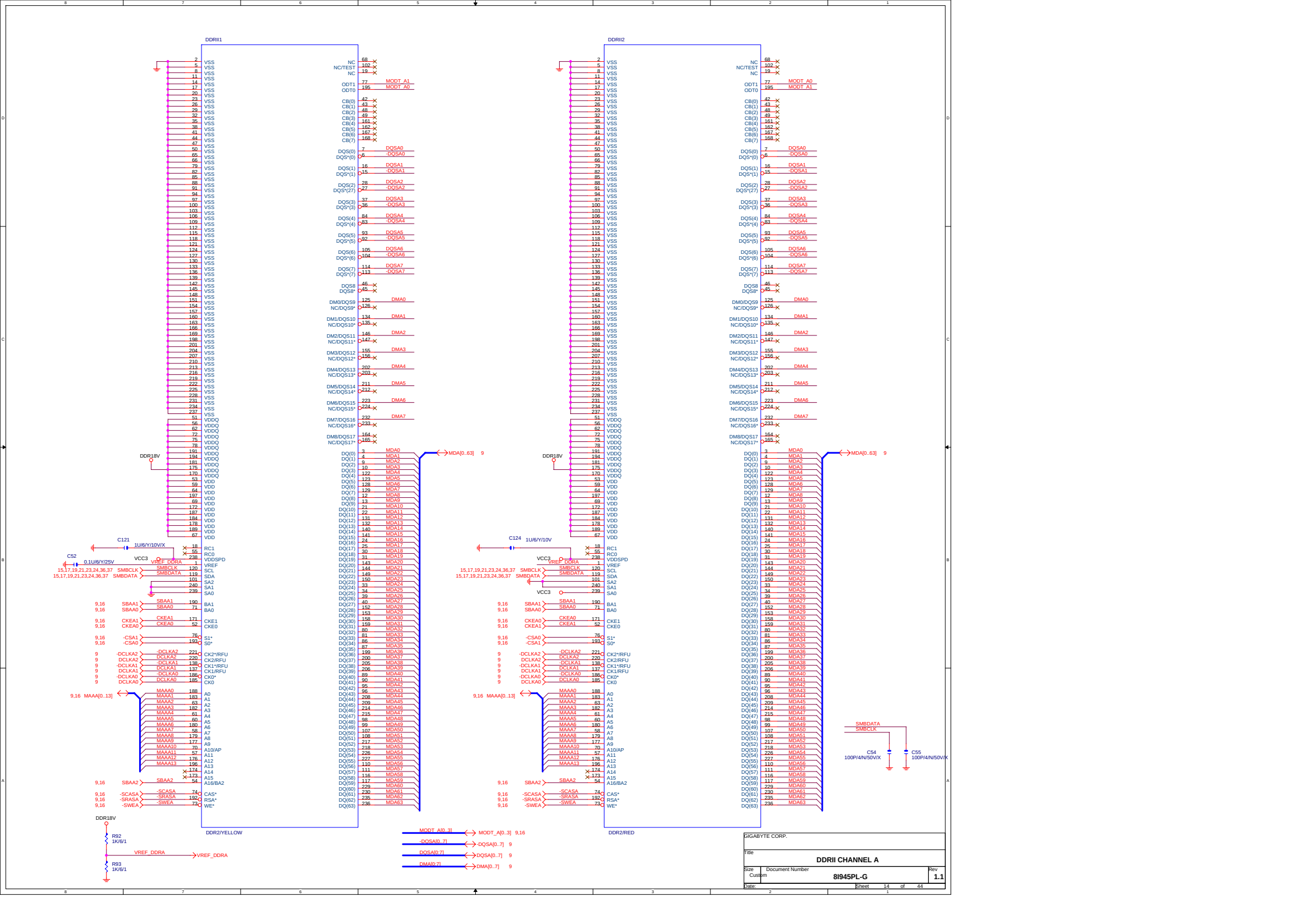
DDRII1
DDRII2
DDR18V
VCC3
VREF_DDRA
C121
1U/6/Y/10V/X
C52
0.1U/6/Y/25V
C124
1U/6/Y/10V
R92
1K/6/1
R93
1K/6/1
VREF_DDRA
SMBCLK
SMBDATA
C54
100P/4/N/50V/X
C55
100P/4/N/50V/X
DDR2/YELLOW
DDR2/RED
MODT_A[0..3]
-DQSA[0..7]
DQSA[0:7]
DMA[0:7]
MDA[0..63]
GIGABYTE CORP.
DDRII CHANNEL A
8I945PL-G
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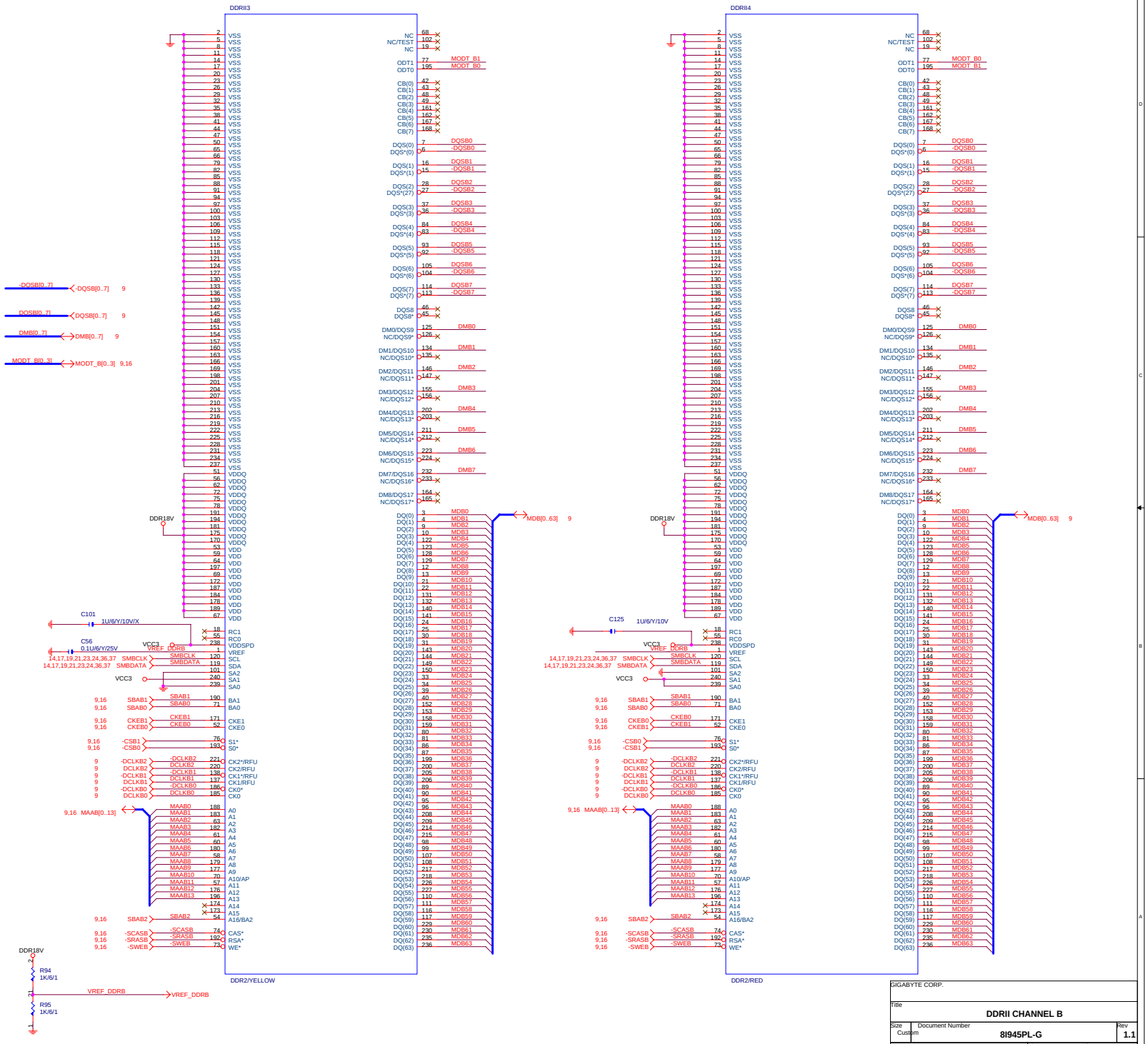

GIGABYTE CORP.		
Title: DDRII CHANNEL B		
Size: Custom	Document Number: 8I945PL-G	Rev: 1.1
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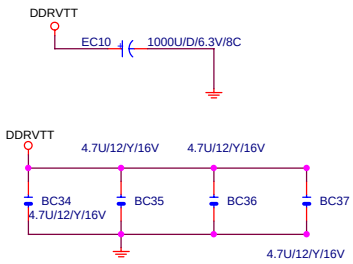
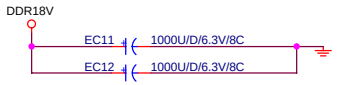
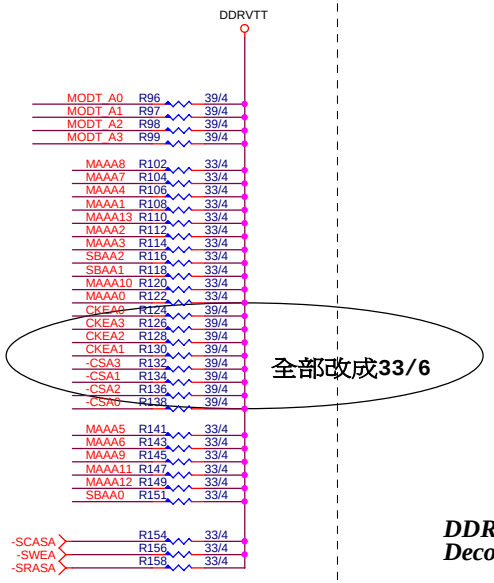
DDR TERMINATION CHANNEL A

DDRVTT Decouple

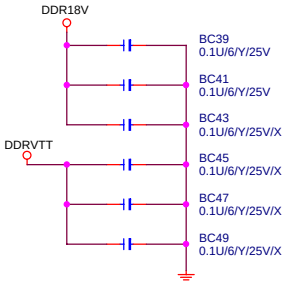


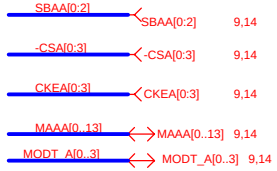




全部改成33/6

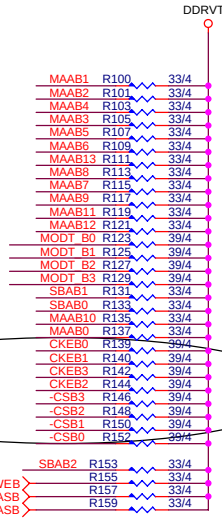
DDR18V Decouple





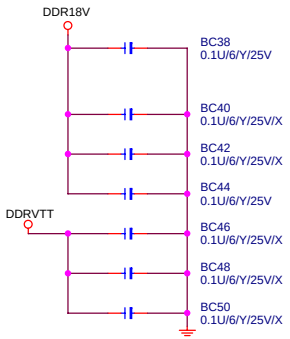
CHANNEL B

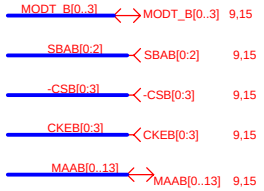
DDRVTT Decouple



全部改成33/6

DDR18V Decouple





Intel Confidential

Title	DDRII TERMINATOR	
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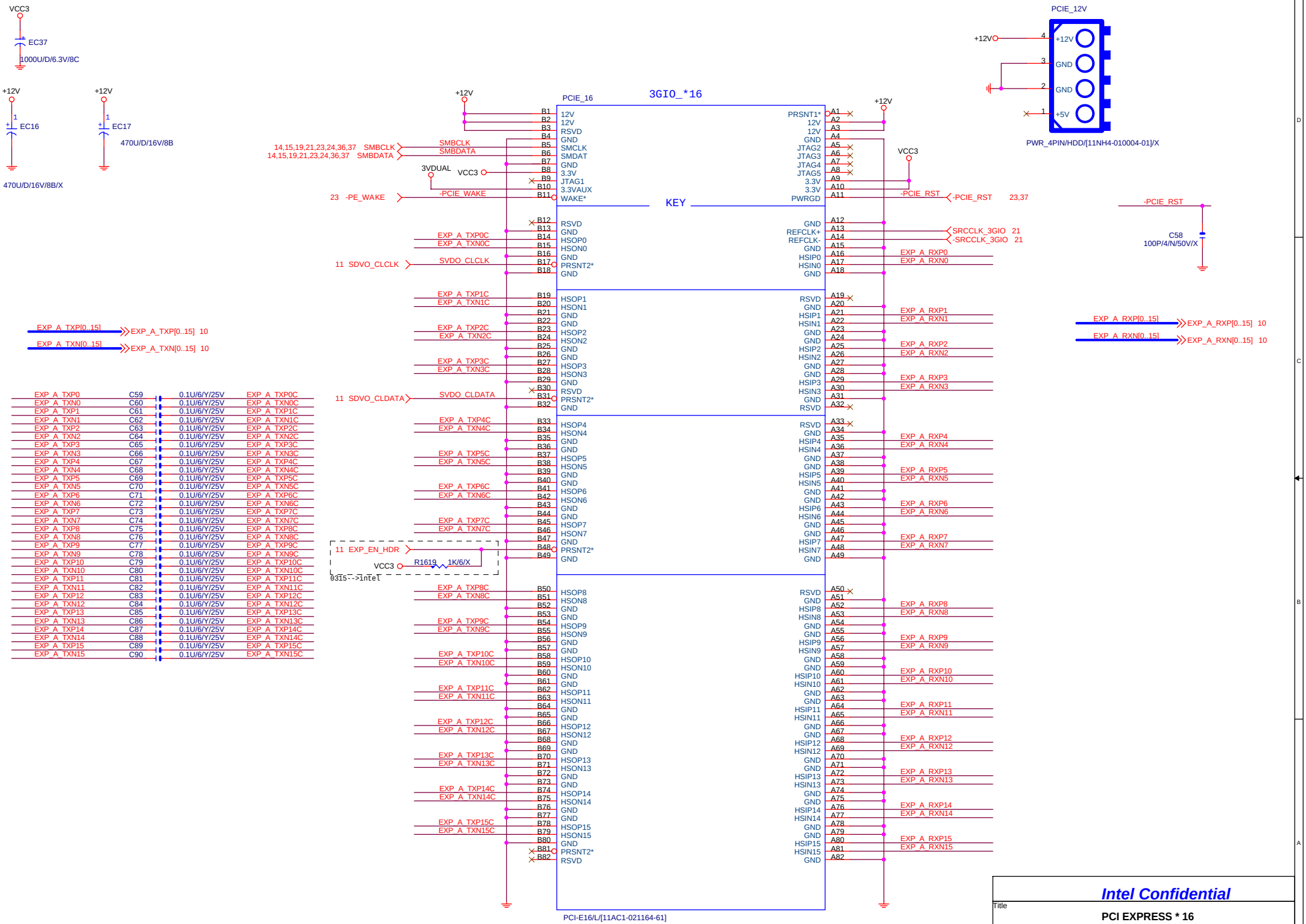
VCC3
EC37
1000U/D/6.3V/8C
+12V
EC16
EC17
470U/D/16V/8B
470U/D/16V/8B/X
PCIE_12V
+12V
GND
GND
+5V
PWR_4PIN/HDD/[11NH4-010004-01]/X
PCIE_16
3GIO_*16
KEY
3VDUAL
VCC3
-PCIE_WAKE
-PCIE_RST
SMBCLK
SMBDATA
SVDO_CLCLK
SVDO_CLDATA
EXP_EN_HDR
R1619 1K/6/X
0315-->Intel
SRCCLK_3GIO
-SRCCLK_3GIO
C58
100P/4/N/50V/X
EXP_A_TXP[0..15]
EXP_A_TXN[0..15]
EXP_A_RXP[0..15]
EXP_A_RXN[0..15]
PCI-E16/L/[11AC1-021164-61]
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PCI EXPRESS * 16
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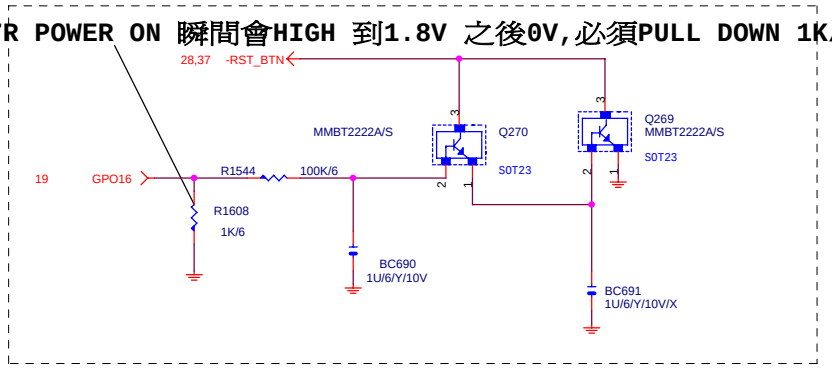
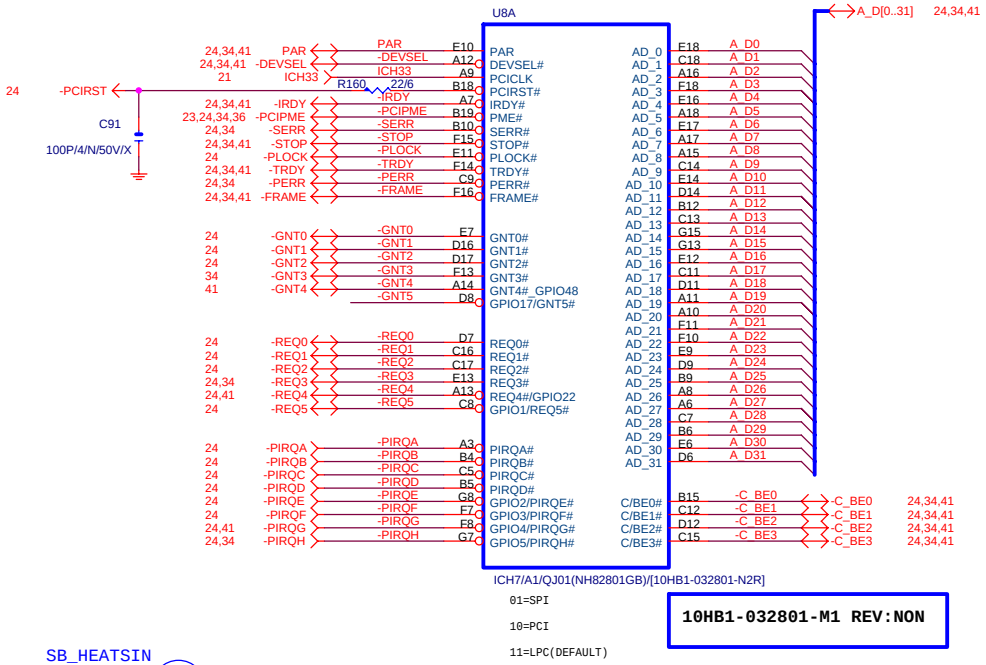
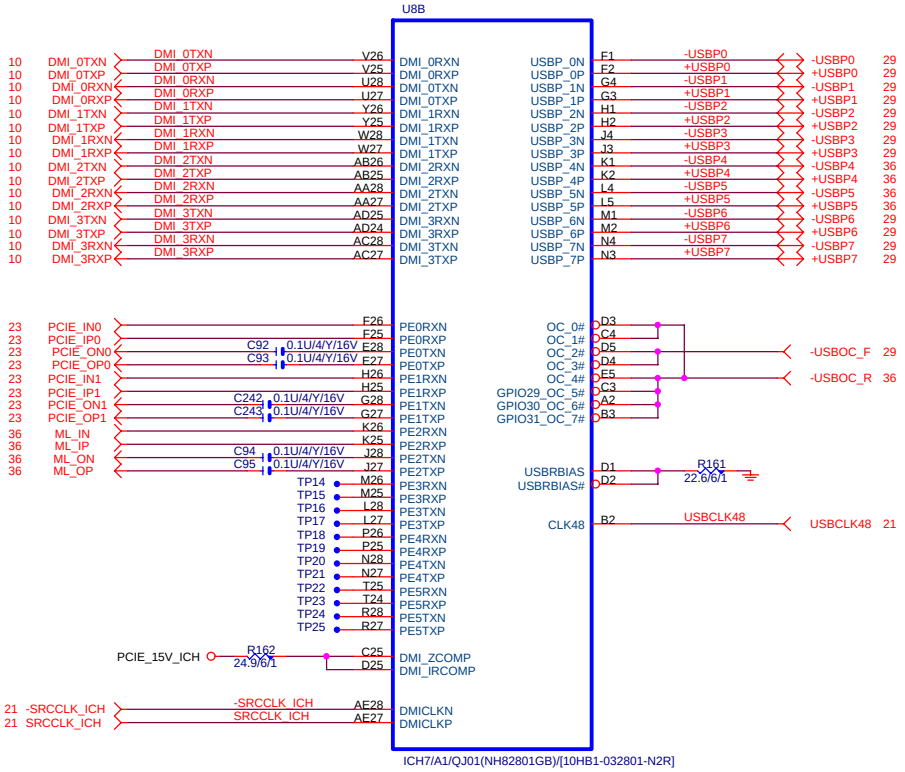
FOR ICH7R POWER ON 瞬間會HIGH 到1.8V 之後0V,必須PULL DOWN 1K/6



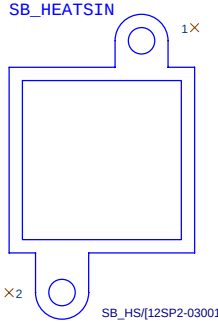
H/W RESET



10HB1-032801-M1 REV:NON



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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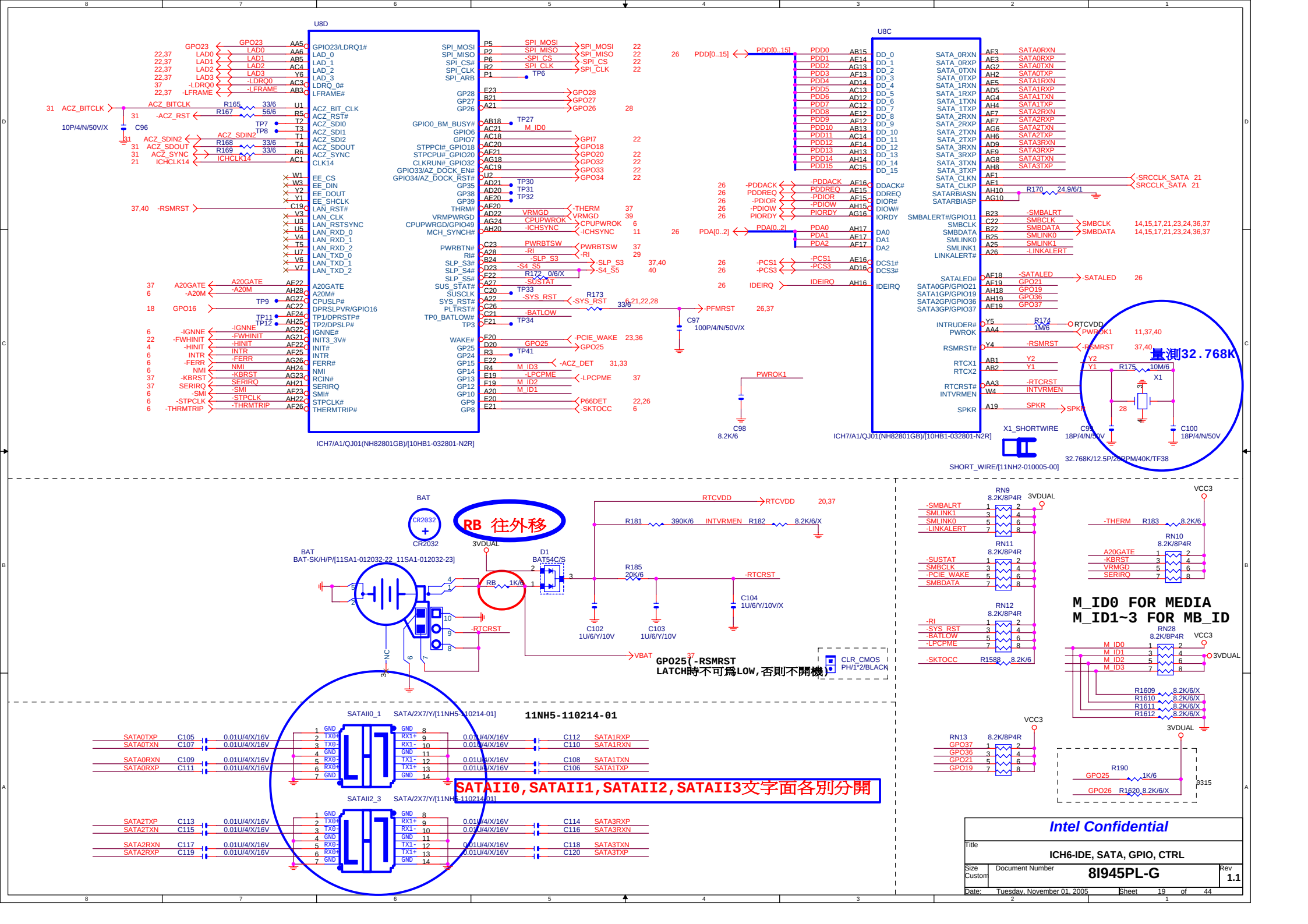
U8D
ICH7/A1/QJ01(NH82801GB)/[10HB1-032801-N2R]
U8C
ICH7/A1/QJ01(NH82801GB)/[10HB1-032801-N2R]
量測32.768K
X1_SHORTWIRE
SHORT_WIRE/[11NH2-010005-00]
32.768K/12.5P/20PPM/40K/TF38
BAT
CR2032
RB 往外移
BAT-SK/H/P/[11SA1-012032-22_11SA1-012032-23]
D1
BAT54C/S
GPO25(-RSMRST
LATCH時不可爲LOW,否則不開機)
CLR_CMOS
PH/1*2/BLACK
M_ID0 FOR MEDIA
M_ID1~3 FOR MB_ID
SATAII0_1
SATA2X7/Y/[11NH5-110214-01]
11NH5-110214-01
SATAII0,SATAII1,SATAII2,SATAII3文字面各別分開
SATAII2_3
SATA2X7/Y/[11NH5-110214-01]
Intel Confidential
Title
ICH6-IDE, SATA, GPIO, CTRL
Size
Custom
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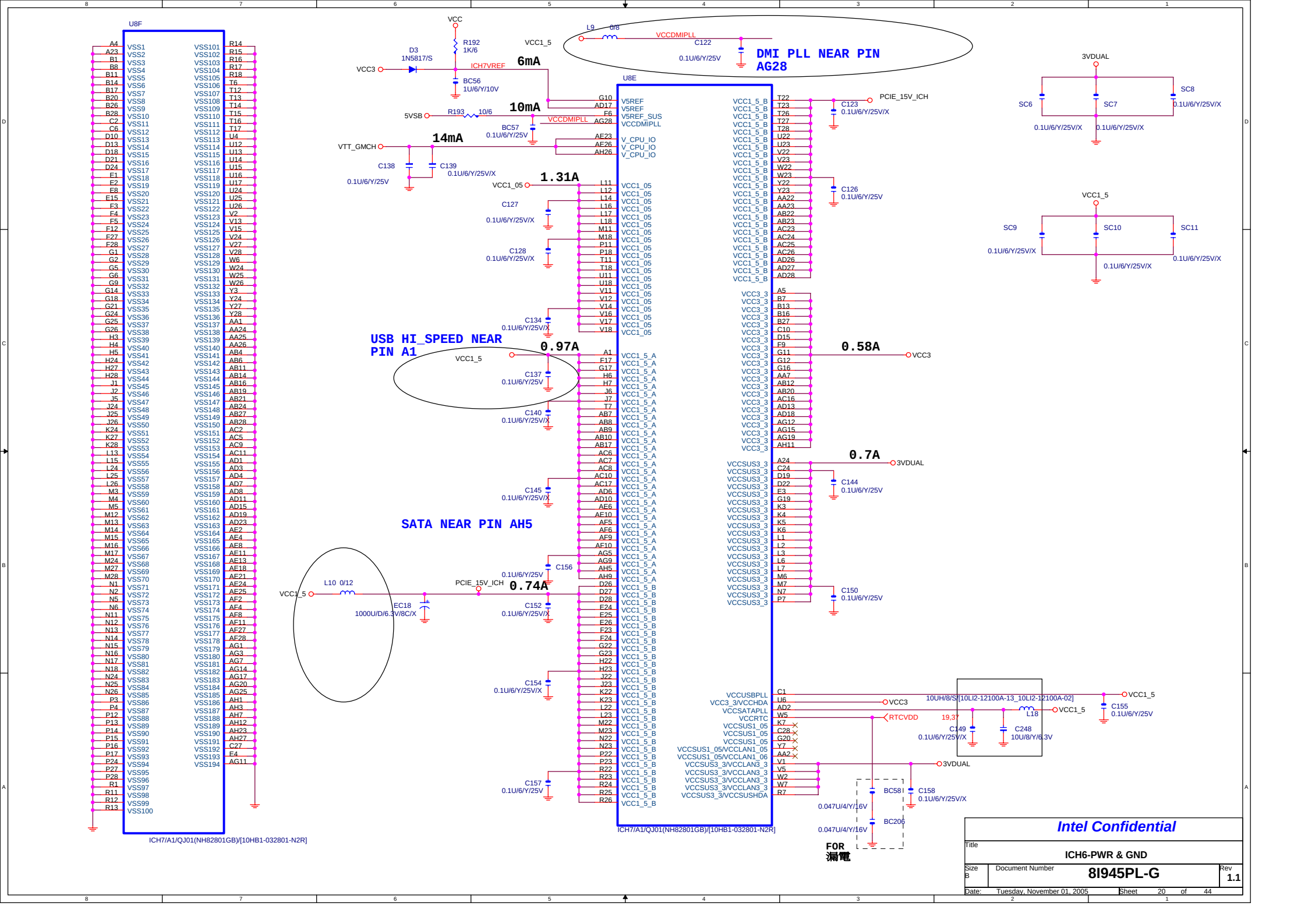
U8F
U8E
VCC
VCC3
D3
1N5817/S
R192
1K/6
ICH7VREF
6mA
BC56
1U/6/Y/10V
VCC1_5
L9 0/8
VCCDMIPLL
C122
0.1U/6/Y/25V
DMI PLL NEAR PIN
AG28
5VSB
R193 10/6
10mA
BC57
0.1U/6/Y/25V
VTT_GMCH
14mA
C138
0.1U/6/Y/25V
C139
0.1U/6/Y/25V/X
VCC1_05
1.31A
C127
0.1U/6/Y/25V/X
C128
0.1U/6/Y/25V/X
C134
0.1U/6/Y/25V/X
USB HI_SPEED 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
C123
0.1U/6/Y/25V/X
PCIE_15V_ICH
C126
0.1U/6/Y/25V
0.58A
VCC3
0.7A
3VDUAL
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
RTCVDD
19,37
10UH/8/S/[10LI2-12100A-13_10LI2-12100A-02]
L18
C149
0.1U/6/Y/25V/X
C248
10U/8/Y/6.3V
C155
0.1U/6/Y/25V
BC58
C158
0.1U/6/Y/25V/X
0.047U/4/Y/16V
BC206
0.047U/4/Y/16V
FOR
漏電
ICH7/A1/QJ01(NH82801GB)/[10HB1-032801-N2R]
ICH7/A1/QJ01(NH82801GB)/[10HB1-032801-N2R]
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ICH6-PWR & GND
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GSEL=1, DOT FREQ=96MHZ
GSEL=0, DOT FREQ=100MHZ

R194 8.2K/6

U10 ICS954148AF/[10HL6-184148-20]

CKVDD

VCC3 FB5 0/8/SHT/X
BC60 0.1U/6/Y/25V
BC61 0.1U/6/Y/25V
BC62 0.1U/6/Y/25V/X
BC63 0.1U/6/Y/25V
BC64 0.1U/6/Y/25V/X
BC65 0.1U/6/Y/25V

VCC3 FB6 0/8/SHT/X VDDPCI
BC67 1U/6/Y/10V
BC68 0.1U/6/Y/25V
BC69 0.1U/6/Y/25V
BC70 0.1U/6/Y/25V

VCC3 FB7 0/8/SHT/X
BC71 0.1U/6/Y/25V

VCC3 R203 8.2K/6
Q8 MMBT2222A/S S0T23
R206 1K/6/X
VCORE R209 220/6
BC72 0.01U/6/X/50V/X

22 FWH33 FWH33 R212 33/6

14,15,17,19,23,24,36,37 SMBDATA
14,15,17,19,23,24,36,37 SMBCLK

C170 100P/4/N/50V/X
C171 100P/4/N/50V/X
C169 22P/4/N/50V
C172 22P/4/N/50V
X2
R225 475/6/1
14.318M/16P/20PPM/40/49US/D

CLK_RT-
CLK_T2

CHECK
14.318M
COUNTER

6 FSBSEL1 R238 8.2K/6 FSB

U10 pin map:

42	VDDCPU	REFOUT	52
19	VDDSRC	FSLA/USB_48	12
28	VDDPCIEX		
34	VDDPCIEX	CPUCLKT0	44
37	VDDA	CPUCLKC0	43
		CPUCLKT1	41
1	VDDPCI	CPUCLKC1	40
7	VDDPCI		
48	VDDREF	PCIEXT6	36
		PCIEXC6	35
11	VDD48	PCIEXT0	20
10	Vtt_PwrGd#/PD	PCIEXC0	21
		PCIEXT1	22
38	GNDA	PCIEXC1	23
2	GND	PCIEXT2	24
13	GND	PCIEXC2	25
16	GND	PCIEXT3	26
29	GND	PCIEXC3	27
45	GND	PCIEXT4	31
51	GND	PCIEXC4	30
54	RTFS_1**	PCIEXT5	33
9	FSLB/PCICLK_F1	PCIEXC5	32
55	RTFS_2**	DOTT_96MHz	14
47	SDATA	DOTC_96MHz	15
46	SCLK	SRCCLKT	17
50	X1	SRCCLKC	18
49	X2	PCICLK0	56
39	IREF	PCICLK1	3
6	RESET#	PCICLK2	4
53	RTFS_0**	PCICLK3	5
		FSLC/PCICLK_F0	8

R195 33/6 ICHCLK14 → ICHCLK14 19
R196 10/6 LPCCLK48 → LPCCLK48 37
R197 10/6 USBCLK48 → USBCLK48 18
FSA R198 8.2K/6 → FSBSEL0 6
RN14 33/8P4R: CPUCLK → CPUCLK 6; -CPUCLK → -CPUCLK 6; MCHCLK → MCHCLK 8; -MCHCLK → -MCHCLK 8
R199 33/6 PCIE_CLK1 → PCIE_CLK1 23
R200 33/6 -PCIE_CLK1 → -PCIE_CLK1 23
R201 33/6 SRCCLK_MCH → SRCCLK_MCH 10
R202 33/6 -SRCCLK_MCH → -SRCCLK_MCH 10
R204 33/6 SRCCLK_ICH → SRCCLK_ICH 18
R205 33/6 -SRCCLK_ICH → -SRCCLK_ICH 18
R207 33/6 SRCCLK_3GIO → SRCCLK_3GIO 17
R208 33/6 -SRCCLK_3GIO → -SRCCLK_3GIO 17
R210 33/6 SRCCLK_LAN → SRCCLK_LAN 36
R211 33/6 -SRCCLK_LAN → -SRCCLK_LAN 36
R213 33/6 PCIE_CLK0 → PCIE_CLK0 23
R214 33/6 -PCIE_CLK0 → -PCIE_CLK0 23
R216 33/6/X DOTCLK → DOTCLK 11
R217 33/6/X -DOTCLK → -DOTCLK 11
R219 33/6 SRCCLK_SATA → SRCCLK_SATA 19
R221 33/6 -SRCCLK_SATA → -SRCCLK_SATA 19
R223 33/6 PCLK0 → PCLK0 24
R226 33/6 PCLK1 → PCLK1 24
R227 33/6 PCLK2 → PCLK2 24
R229 10/6/X 1394CLK → 1394CLK 34
R230 33/6 LPC33 → LPC33 37
R232 33/6 ICH33 → ICH33 18
R1587 10/6 → RAIDCLK 41

FSC
R236 8.2K/6 FSBSEL2 6

CHECK 33/6 LPC33/ICH33 WAVEFORM

ICHCLK14 C159 10P/4/N/50V/X
PCLK1 C160 10P/4/N/50V
PCLK0 C161 10P/4/N/50V
PCLK2 C162 10P/4/N/50V
ICH33 C163 10P/4/N/50V/X
FWH33 C164 10P/4/N/50V/X
LPC33 C165 10P/4/N/50V/X
USBCLK48 C166 10P/4/N/50V/X
LPCCLK48 C167 10P/4/N/50V/X
1394CLK C168 10P/4/N/50V/X
RAIDCLK C245 10P/4/N/50V/X

CPUCLK R215 51.1/6/1
-CPUCLK R218 51.1/6/1
MCHCLK R220 51.1/6/1
-MCHCLK R222 51.1/6/1
DOTCLK R224 51.1/6/1/X
-DOTCLK R228 51.1/6/1/X
SRCCLK_MCH R231 51.1/6/1
-SRCCLK_MCH R233 51.1/6/1
SRCCLK_ICH R234 51.1/6/1
-SRCCLK_ICH R235 51.1/6/1
SRCCLK_3GIO R237 51.1/6/1
-SRCCLK_3GIO R239 51.1/6/1
SRCCLK_SATA R240 51.1/6/1
-SRCCLK_SATA R241 51.1/6/1
PCIE_CLK0 R242 51.1/6/1
-PCIE_CLK0 R243 51.1/6/1
PCIE_CLK1 R244 51.1/6/1
-PCIE_CLK1 R246 51.1/6/1
SRCCLK_LAN R248 51.1/6/1
-SRCCLK_LAN R250 51.1/6/1

-SYS_RST 6,19,22,28
Q9 MMBT2222A/S S0T23
VCC3 R251 8.2K/6
VCC3 R252 8.2K/6 CLK_RT-

37 CLK_T0 CLK_T0 R245 8.2K/6
37 CLK_T1 CLK_T1 R247 8.2K/6
37 CLK_T2 CLK_T2 R249 8.2K/6/X
VCC3

Intel Confidential

Title	ICS954148AF	
Size: Custom	Document Number: 8I945PL-G	Rev: 1.1
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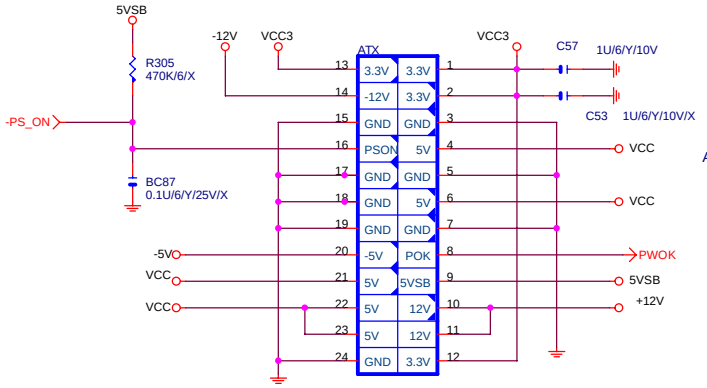
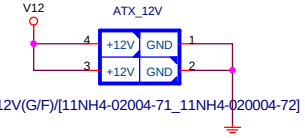
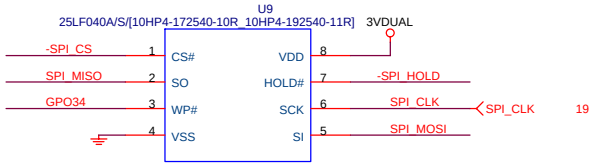
ATX POWER CONNECTOR



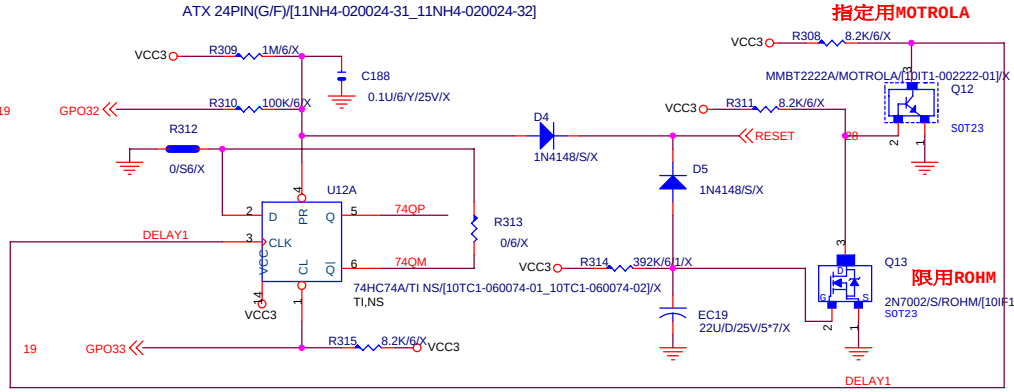
ATX 24PIN(G/F)/[11NH4-020024-31_11NH4-020024-32]

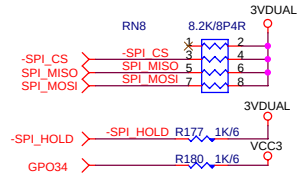


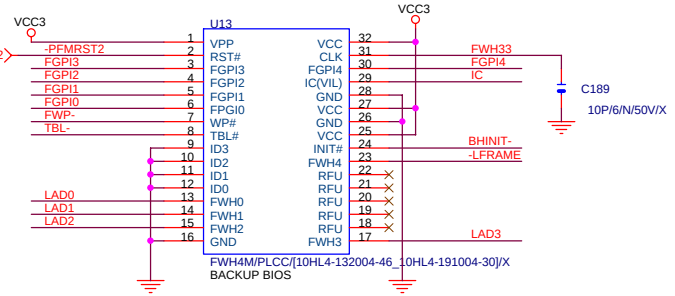
ATX12V(G/F)/[11NH4-02004-71_11NH4-020004-72]

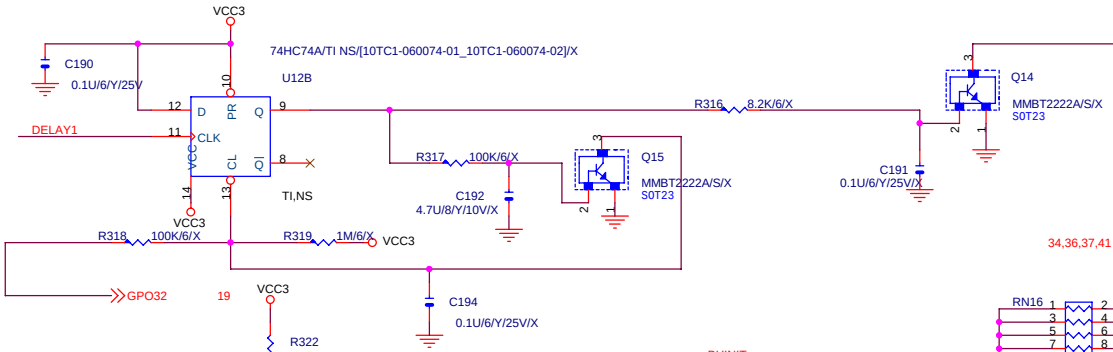


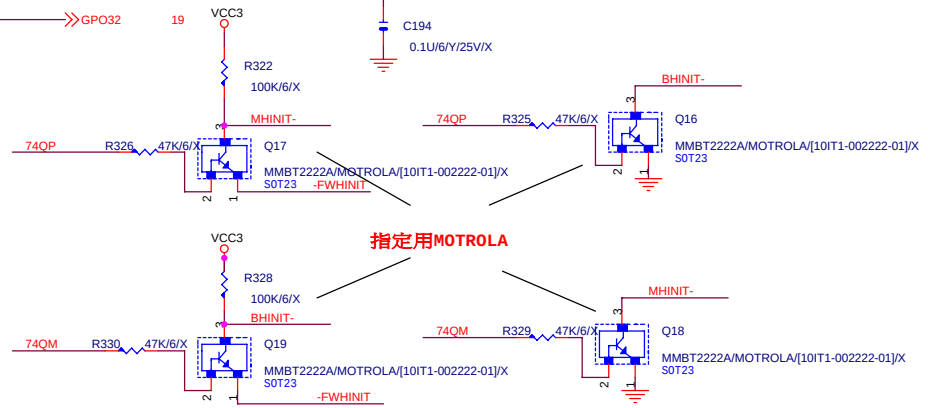
37

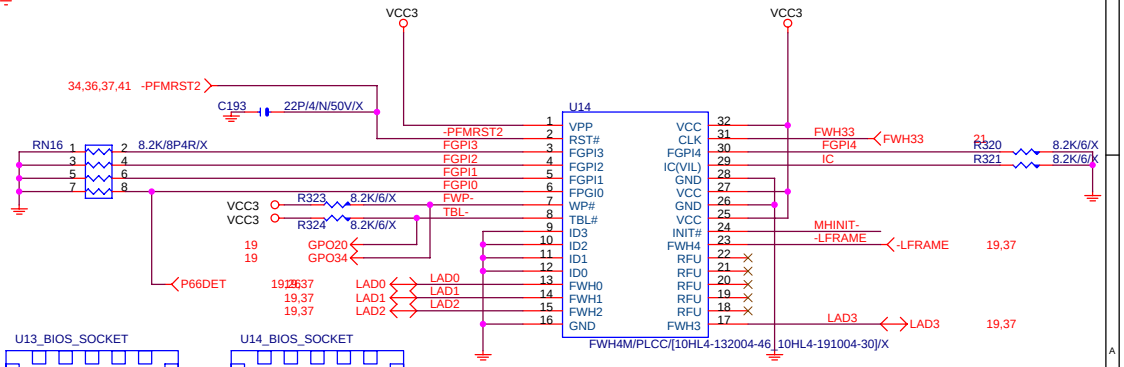


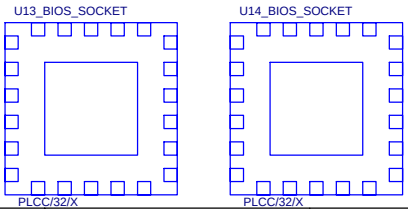












GIGABYTE

Title	ATX POWER CONNECTOR,DUAL BIOS	
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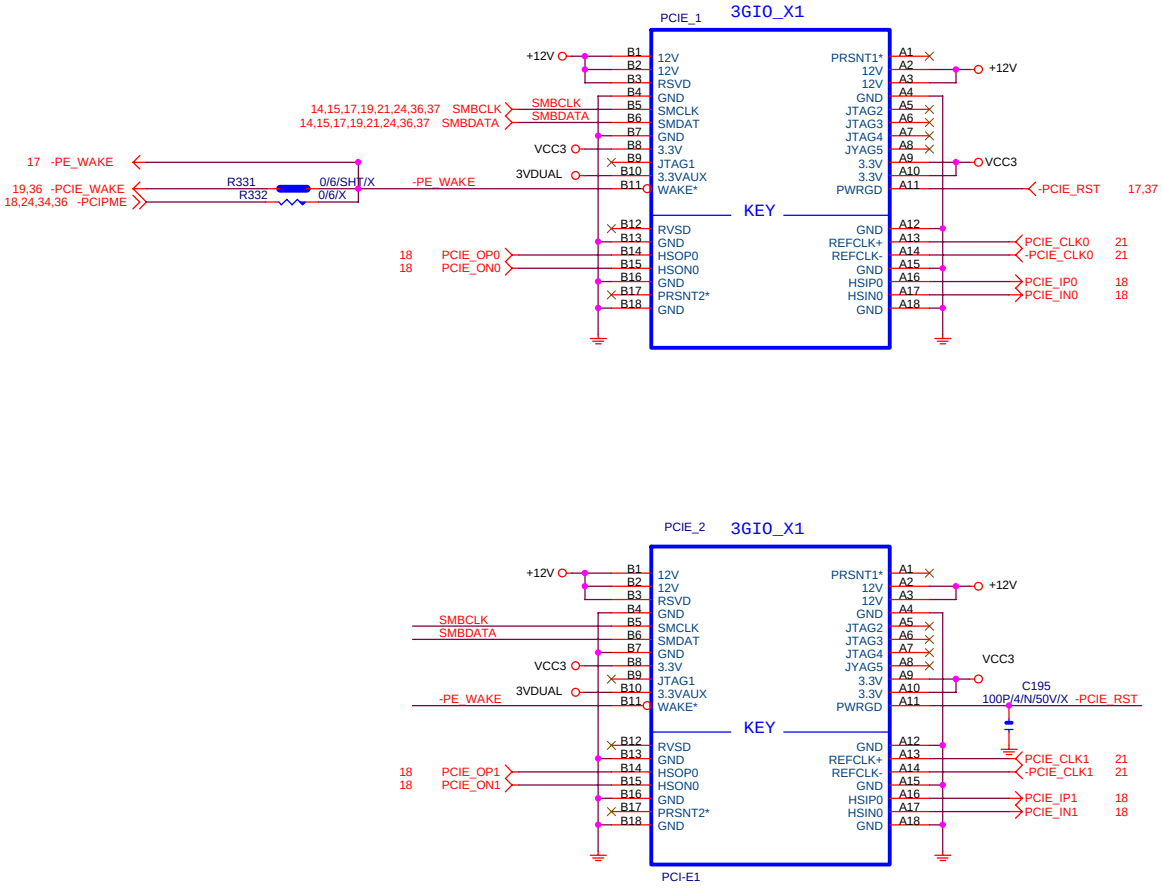
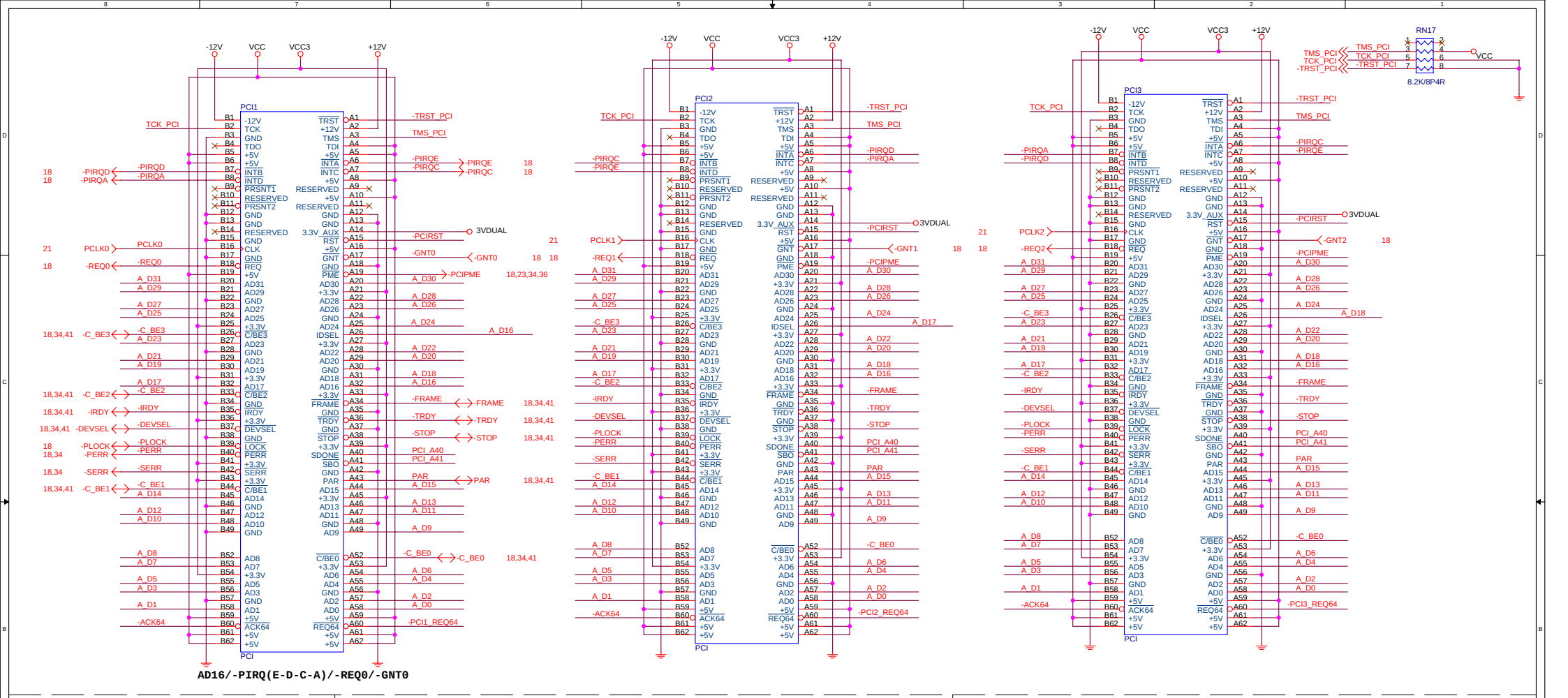
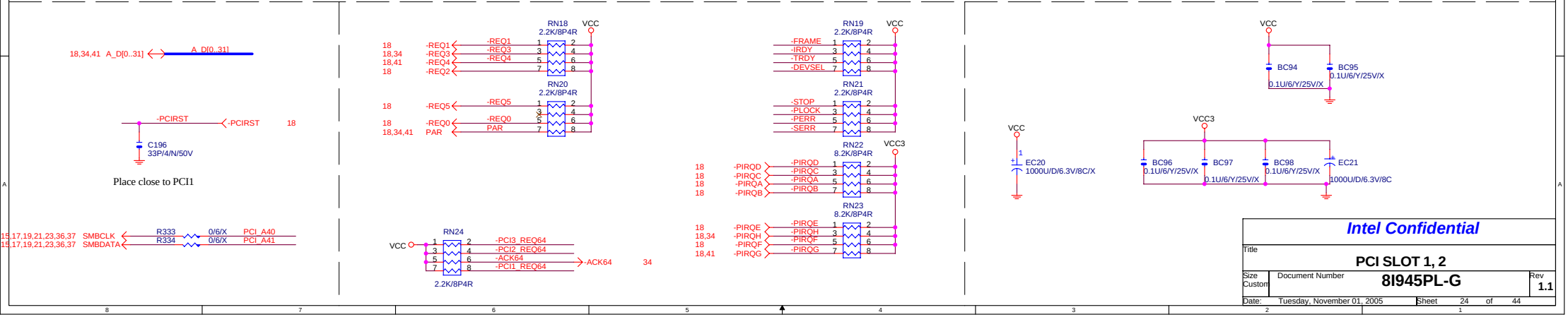
Date: Tuesday, November 01, 2005	Sheet 22 of 44	



Title	PCI E SLOT 1, 2, 3	
Size B	Document Number 8I945PL-G	Rev 1.1
Date: Tuesday, November 01, 2005	Sheet 23 of 44	

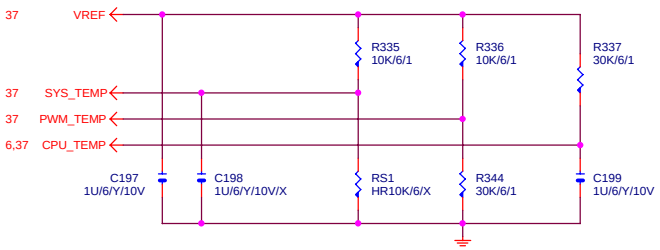




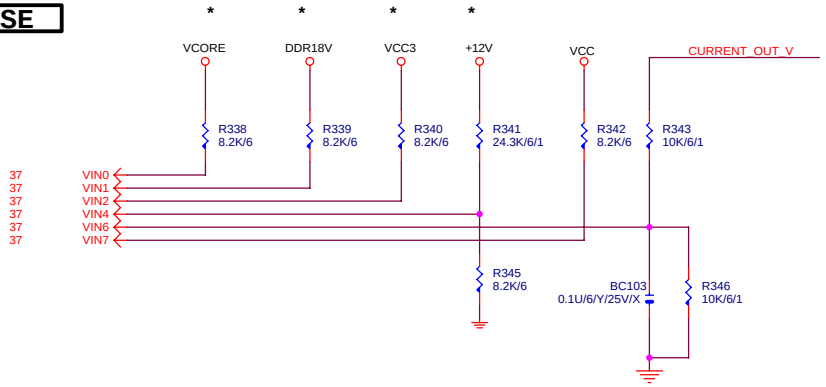
Intel Confidential

Title	PCI SLOT 1, 2	
Size: Custom	Document Number: 8I945PL-G	Rev: 1.1
Date: Tuesday, November 01, 2005	Sheet 24 of 44	

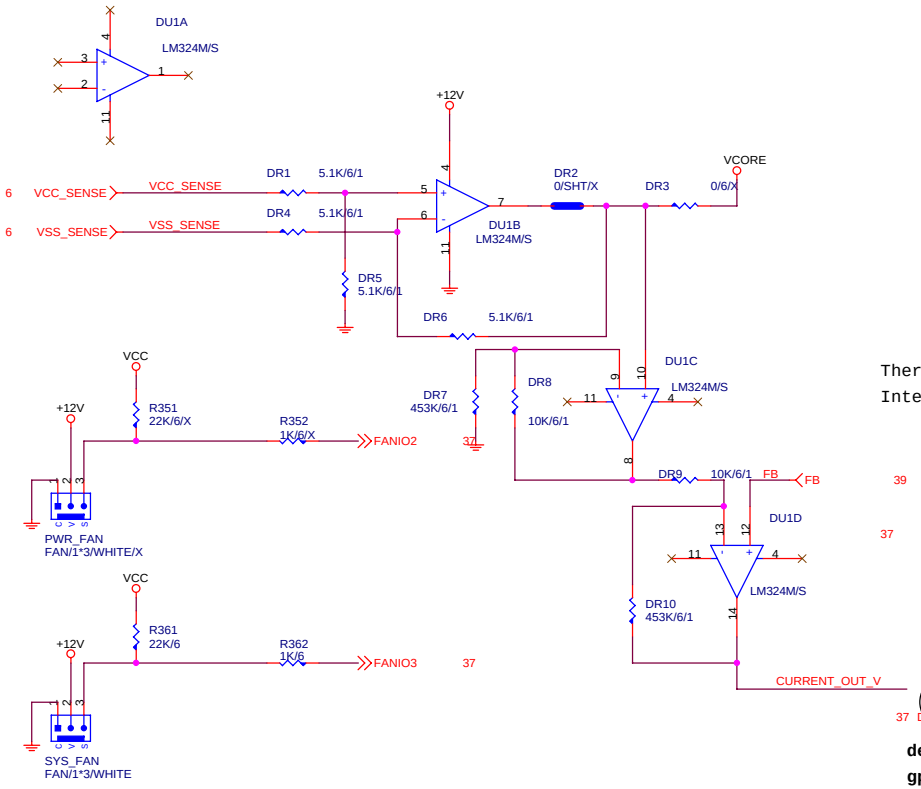
TEMP. SENSE



VOLTAGE SENSE



DUAL POWER

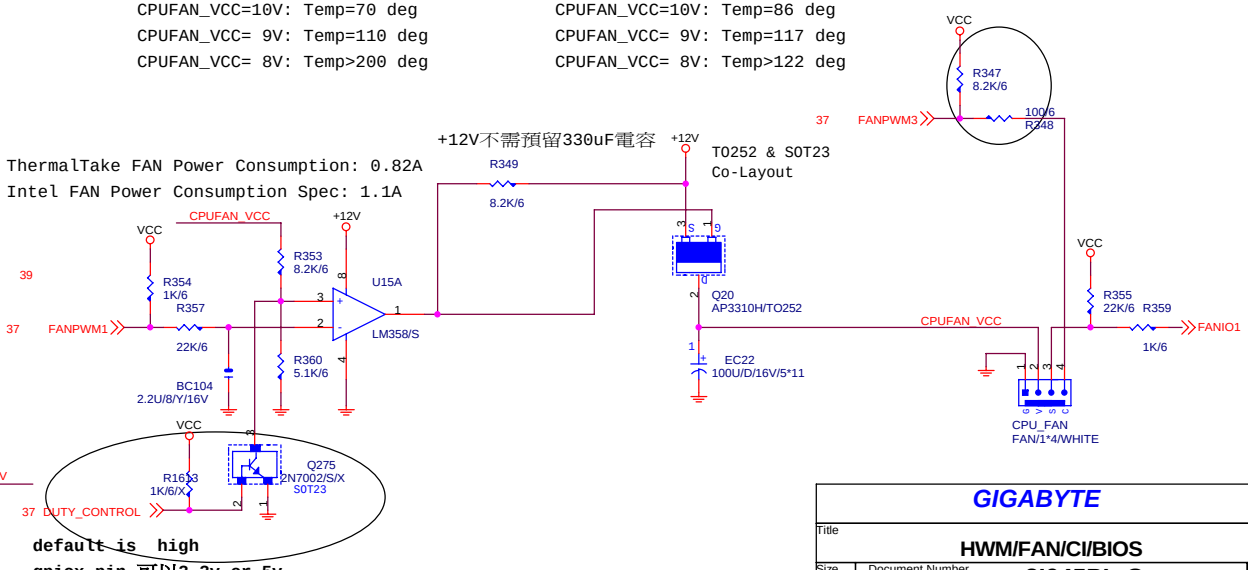


CPU/SYS FAN

If use PBSS5240 1pcs : (non airflow)	If use PBSS5240 1pcs : (with airflow)
CPUFAN_VCC=12V: Temp=40 deg	CPUFAN_VCC=12V: Temp=33 deg
CPUFAN_VCC=11V: Temp=82 deg	CPUFAN_VCC=11V: Temp=62 deg
CPUFAN_VCC=10V: Temp=70 deg	CPUFAN_VCC=10V: Temp=86 deg
CPUFAN_VCC= 9V: Temp=110 deg	CPUFAN_VCC= 9V: Temp=117 deg
CPUFAN_VCC= 8V: Temp>200 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



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		
Size: Custom	Document Number: 8I945PL-G	Rev: 1.1
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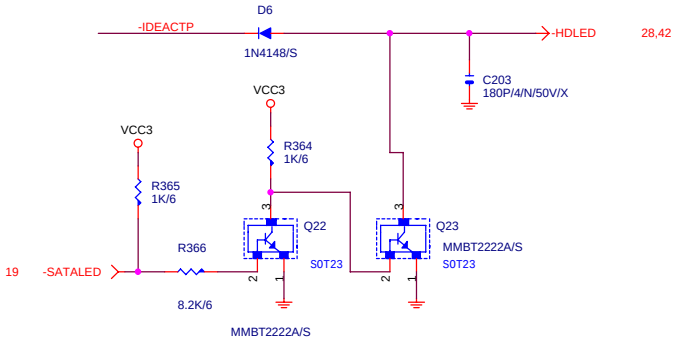
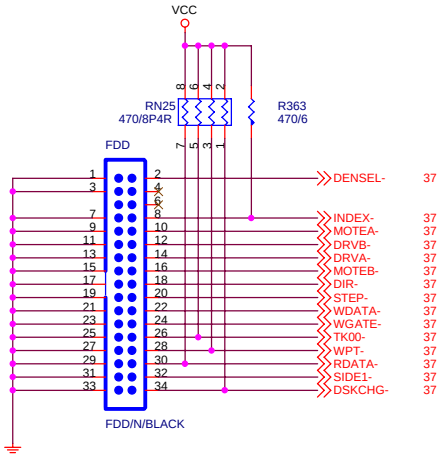
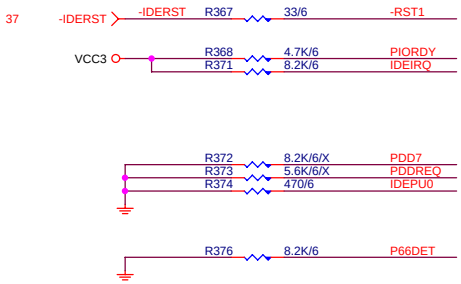
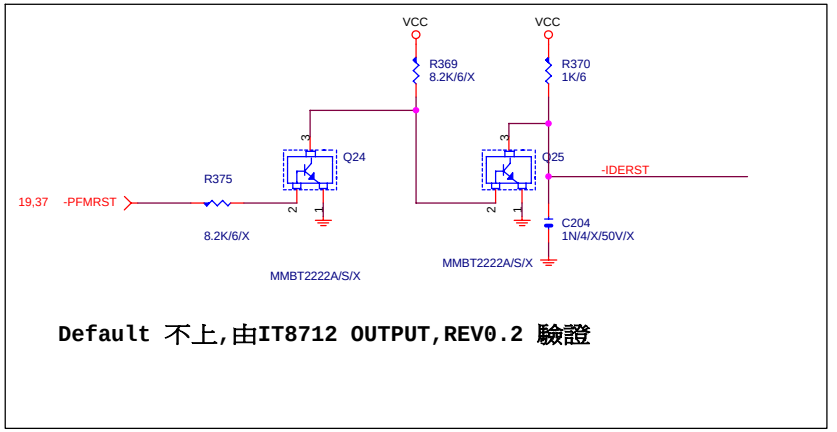
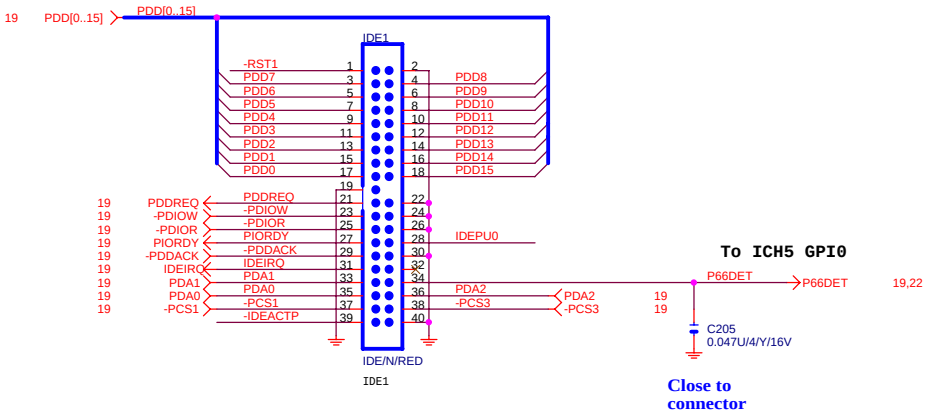








Default 不上,由IT8712 OUTPUT,REV0.2 驗證



PRIMARY IDE CONNECTOR

Intel Confidential		
Title: IDE		
Size: B	Document Number: 8I945PL-G	Rev: 1.1
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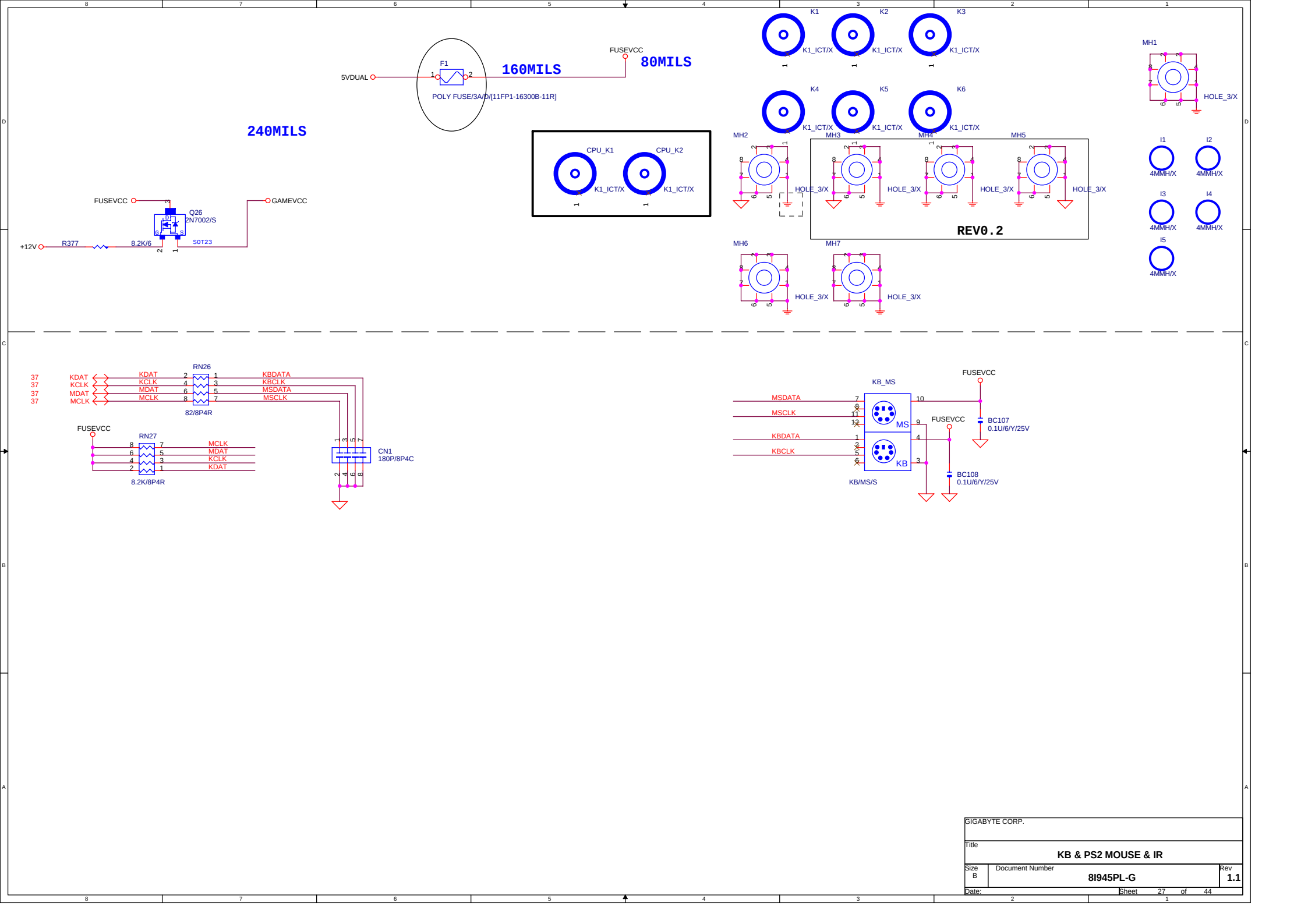
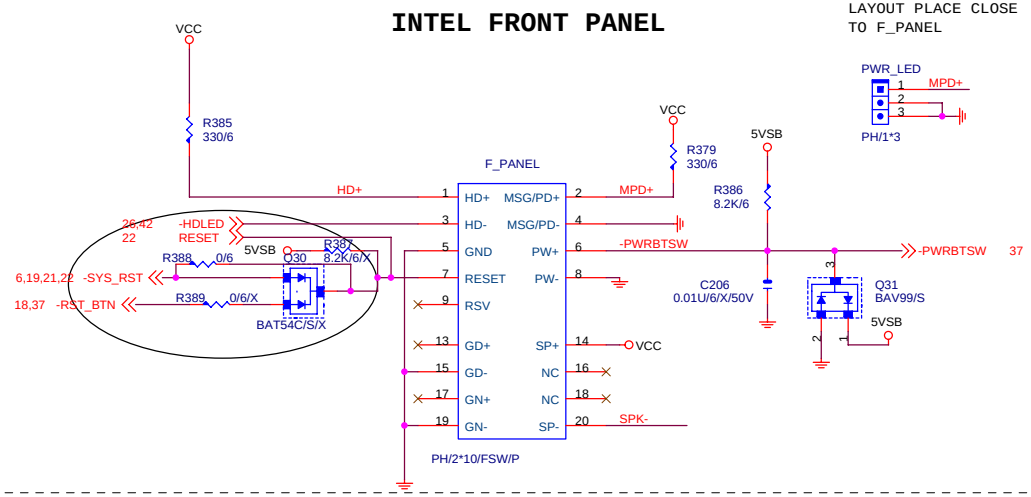
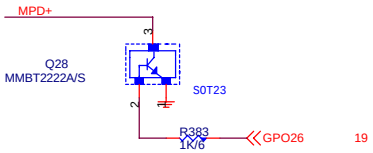

5VDUAL
F1
POLY FUSE/3A/D/[11FP1-16300B-11R]
FUSEVCC
160MILS
80MILS
240MILS
CPU_K1
CPU_K2
K1_ICT/X
K1
K2
K3
K4
K5
K6
MH1
MH2
MH3
MH4
MH5
MH6
MH7
HOLE_3/X
REV0.2
I1
I2
I3
I4
I5
4MMH/X
FUSEVCC
GAMEVCC
Q26
2N7002/S
SOT23
+12V
R377
8.2K/6
RN26
KDAT
KCLK
MDAT
MCLK
KBDATA
KBCLK
MSDATA
MSCLK
82/8P4R
RN27
8.2K/8P4R
CN1
180P/8P4C
KB_MS
MS
KB
KB/MS/S
BC107
0.1U/6/Y/25V
BC108
0.1U/6/Y/25V
GIGABYTE CORP.
Title
KB & PS2 MOUSE & IR
Size
B
Document Number
8I945PL-G
Rev
1.1
Date:
Sheet 27 of 44

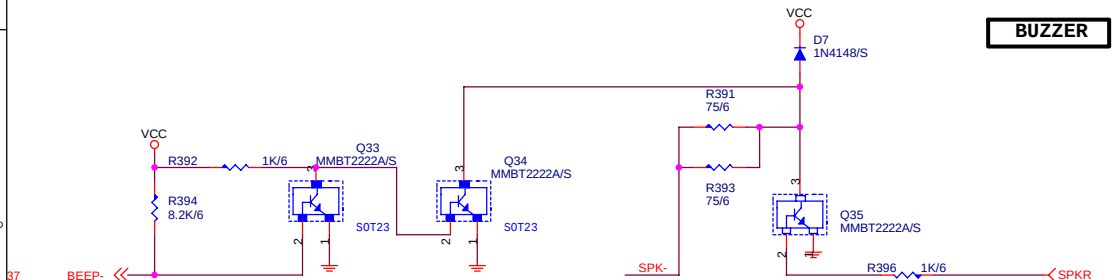
INTEL FRONT PANEL

3 PIN POWER LED
LAYOUT PLACE CLOSE
TO F_PANEL





BUZZER



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Title	FRONT PANEL	
Size: Custom	Document Number: 8I945PL-G	Rev: 1.1
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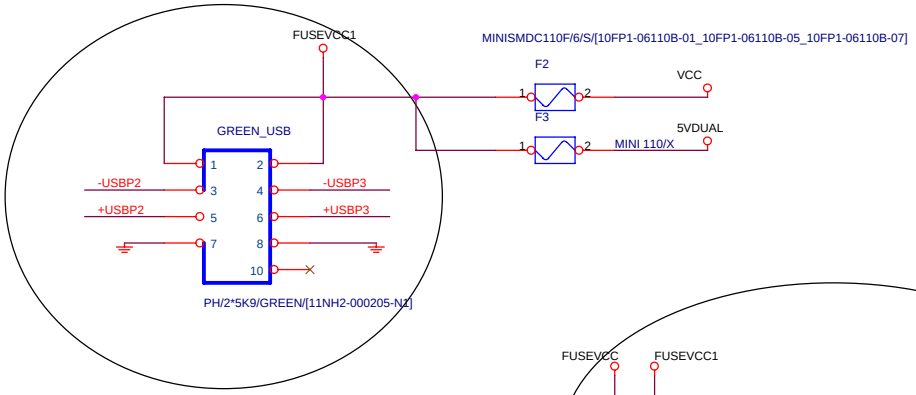
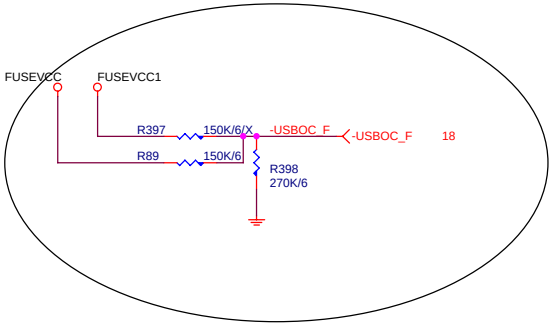
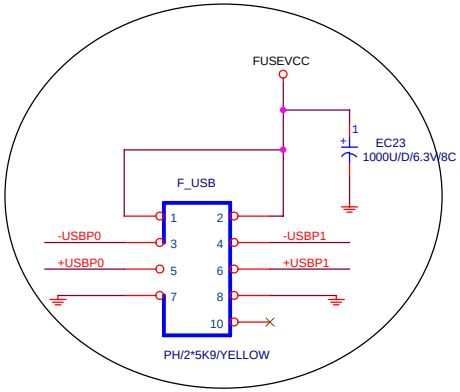
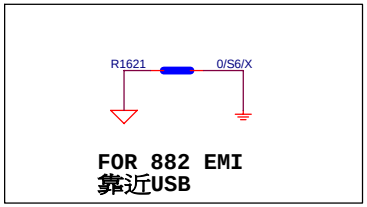
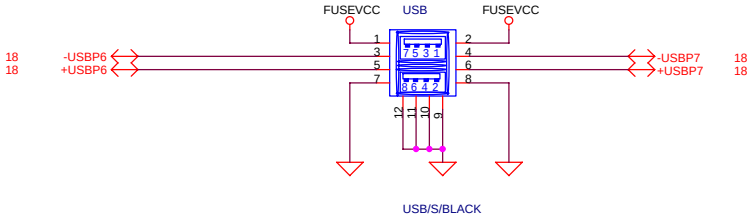
FRONT USB

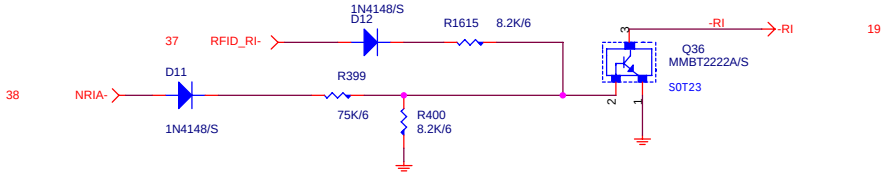












Intel Confidential

Title: FRONT USB CONNECTOR		
Size: B	Document Number: 8I945PL-G	Rev: 1.1
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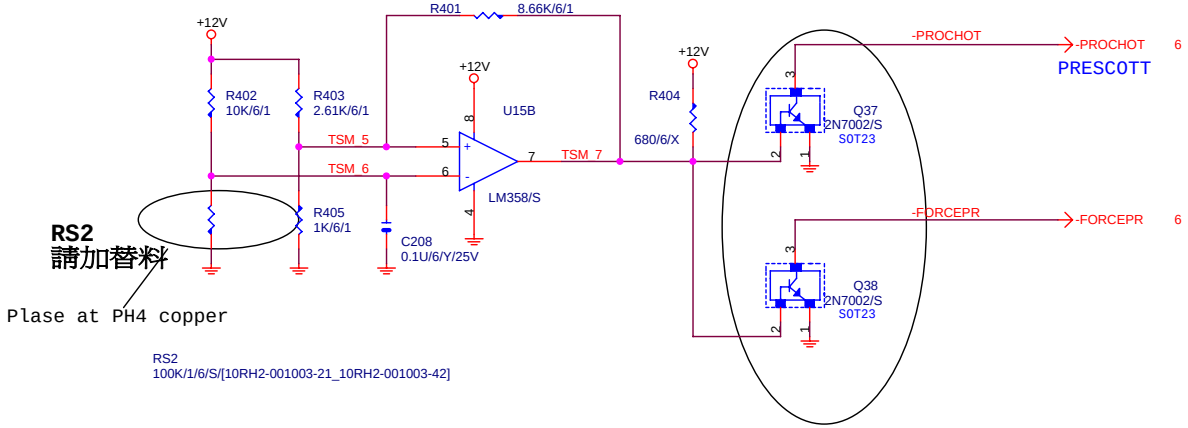
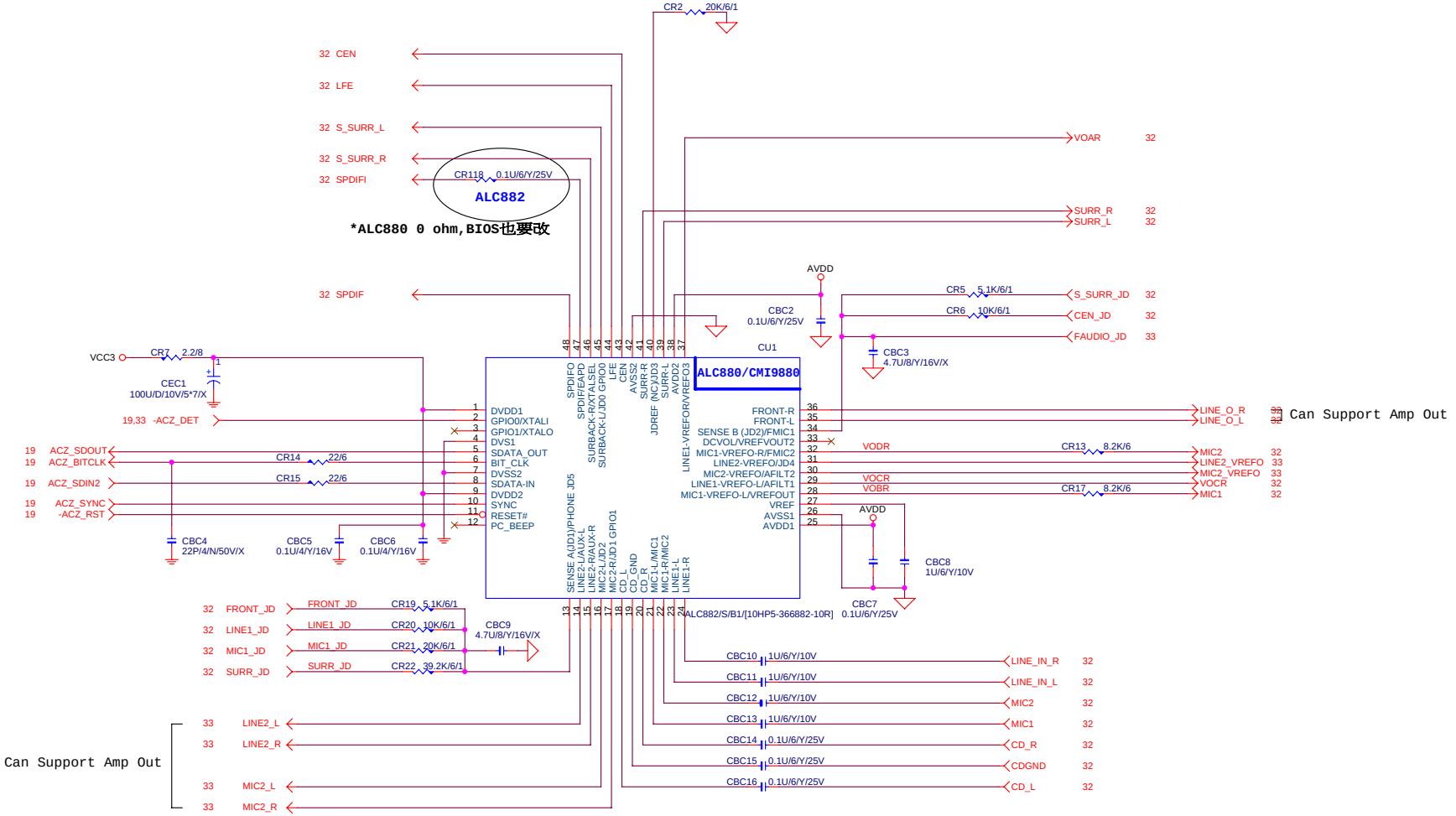
asserted at 131 degree
deasserted at 116 degree

RS2 CLOSE CPU VR MOSFET



Intel Confidential

Title	FAN CONTROL	
Size B	Document Number 8I945PL-G	Rev 1.1
Date: Tuesday, November 01, 2005	Sheet 30 of 44	



Intel Confidential

Title	AC97 ALC658	
Size: Custom	Document Number: 8I945PL-G	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

CD1 1N4148/S

5VSB AVDD

CD2 1N4148/S

CEC4 100U/D/10V/57

CBC25 0.1U/6/Y/25V/X

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

LINE_O_R CBC17 10U/8/Y/6.3V AJ_B5

LINE_O_L CBC19 10U/8/Y/6.3V AJ_B2

CBC21 180P/4/N/50V CBC22 180P/4/N/50V

LINE-IN

LINE_IN_R LINE_IN_L

VOCR VOAR CR41 8.2K/6 CR42 8.2K/6

CBC26 180P/4/N/50V CBC27 180P/4/N/50V

MIC

MIC2 MIC1

CBC28 180P/4/N/50V CBC29 180P/4/N/50V

CD IN

CD_IN

CD_L CD_R CDGND

CD-IN/1*4/BLACK

CR51 8.2K/6 CR52 8.2K/6 CR53 8.2K/6

47Kohm For CMI9880
8.2Kohm for ALC880

VCC3 CR119 12K/6/X FUSEVCC SPDIF_I

SPDIFI CR120 374K/6/1/X

SPDIF_IN/RED/[11NH5-010103-51]

SURROUND

SURR_R SURR_L

CBC30 CBC31 1U/6/Y/10V

BJ_C5 BJ_C2

CBC32 180P/4/N/50V CBC33 180P/4/N/50V

CEN/LFE

LFE CEN

CBC34 CBC35 1U/6/Y/10V

BJ_B5 BJ_B2

CBC36 180P/4/N/50V CBC37 180P/4/N/50V

Jack Side

SURR BACK

S_SURR_R S_SURR_L

CBC38 CBC39 1U/6/Y/10V

BJ_A5 BJ_A2

CBC40 180P/4/N/50V CBC41 180P/4/N/50V

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

LINE1_JD LINE_IN_R LINE_IN_L — LINE-IN Azalia Port C

FRONT_JD AJ_B5 AJ_B2 — FRONT Azalia Port D

MIC1_JD MIC2 MIC1 — MIC-IN Azalia Port B

A3RJ/13P/B/[11NR6-403006-01_11NR6-403006-02]

AUDIO2

SURR_JD BJ_C5 BJ_C2 — Orange — Back Side Speaker — ALC880 - SURROUND / CMI9880 - Back SURR

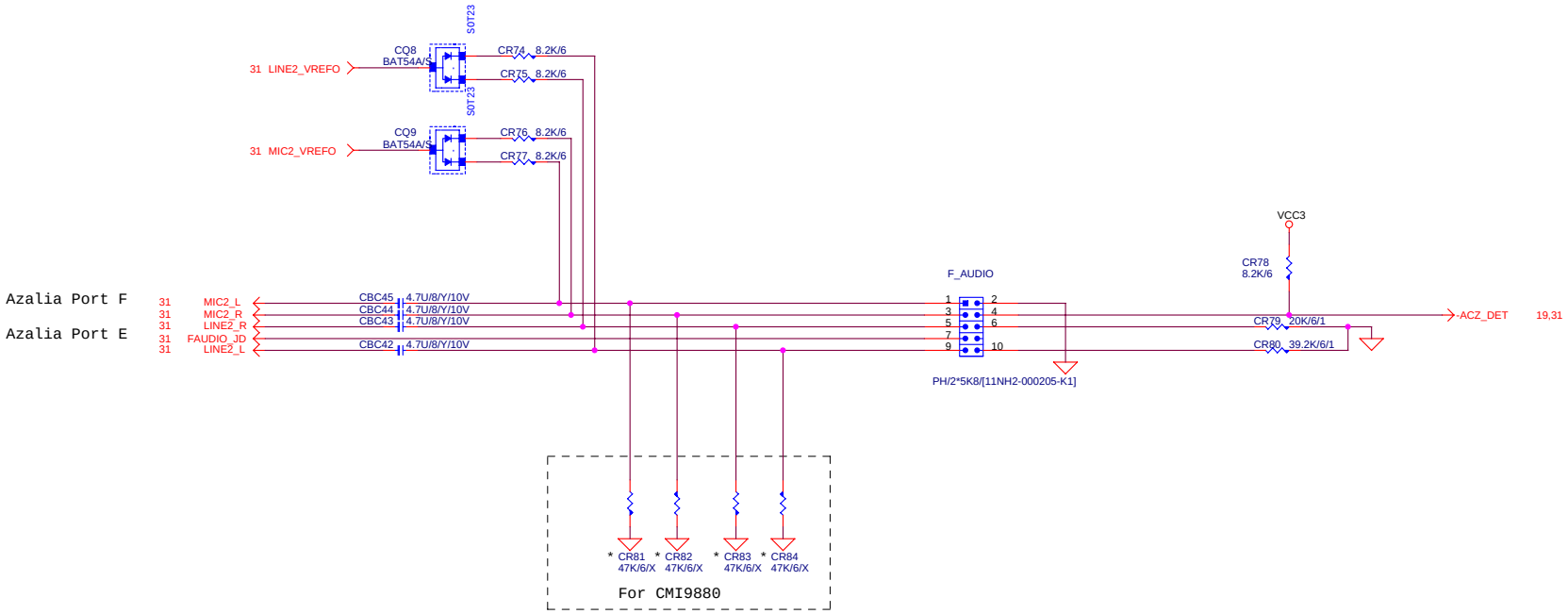
CEN_JD BJ_B5 BJ_B2 — Black — CEN/LFE Azalia Port G

S_SURR_JD BJ_A5 BJ_A2 — 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: 8I945PL-G	Rev: 1.1
Date: Tuesday, November 01, 2005	Sheet 32 of 44	

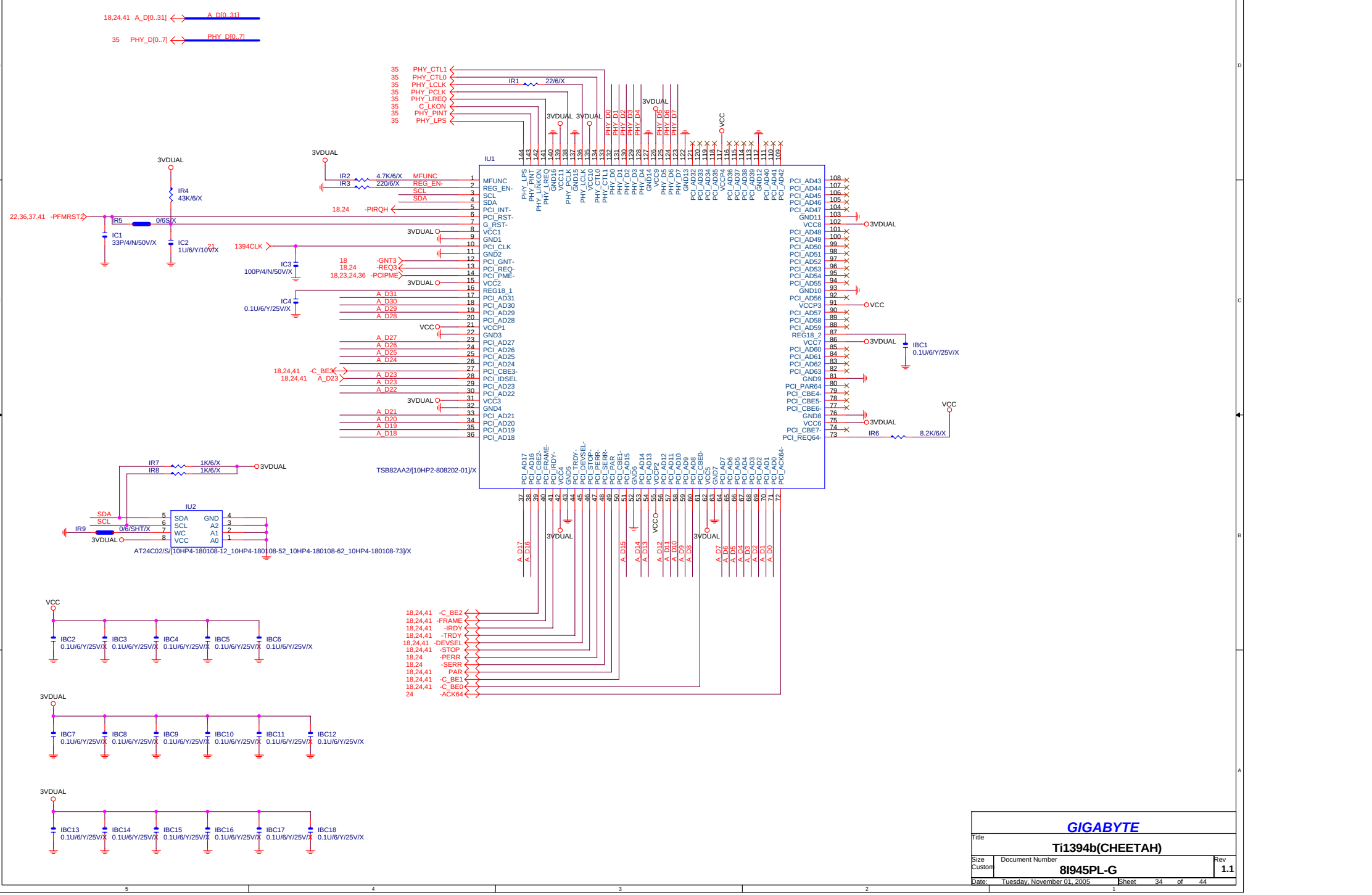


Intel Confidential

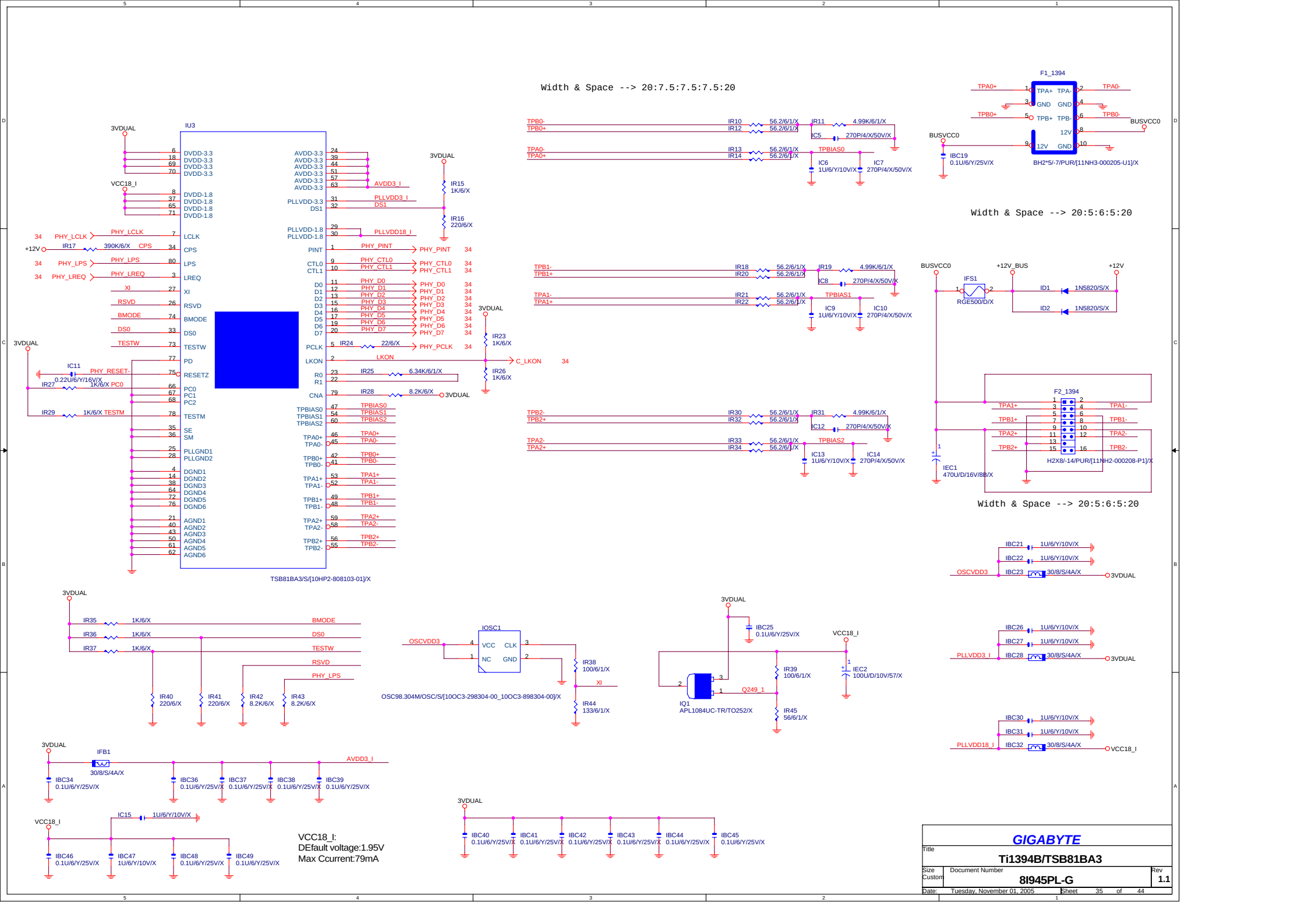
Title: FRONT AUDIO CONNECTOR

Size	Document Number	Rev
Custom	8I945PL-G	1.1

Date: Tuesday, November 01, 2005 Sheet 33 of 44



GIGABYTE			
Title	Ti1394b(CHEETAH)		
Size: Custom	Document Number: 8I945PL-G		Rev: 1.1
Date: Tuesday, November 01, 2005	Sheet 34 of 44		


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
IOSC1
OSC98.304M/OSC/S/[10OC3-298304-00_10OC3-898304-00]/X
IQ1
APL1084UC-TR/TO252/X
RGE500/D/X
VCC18_I:
DEfault voltage:1.95V
Max Ccurrent:79mA
GIGABYTE
Title
Ti1394B/TSB81BA3
Size
Custom
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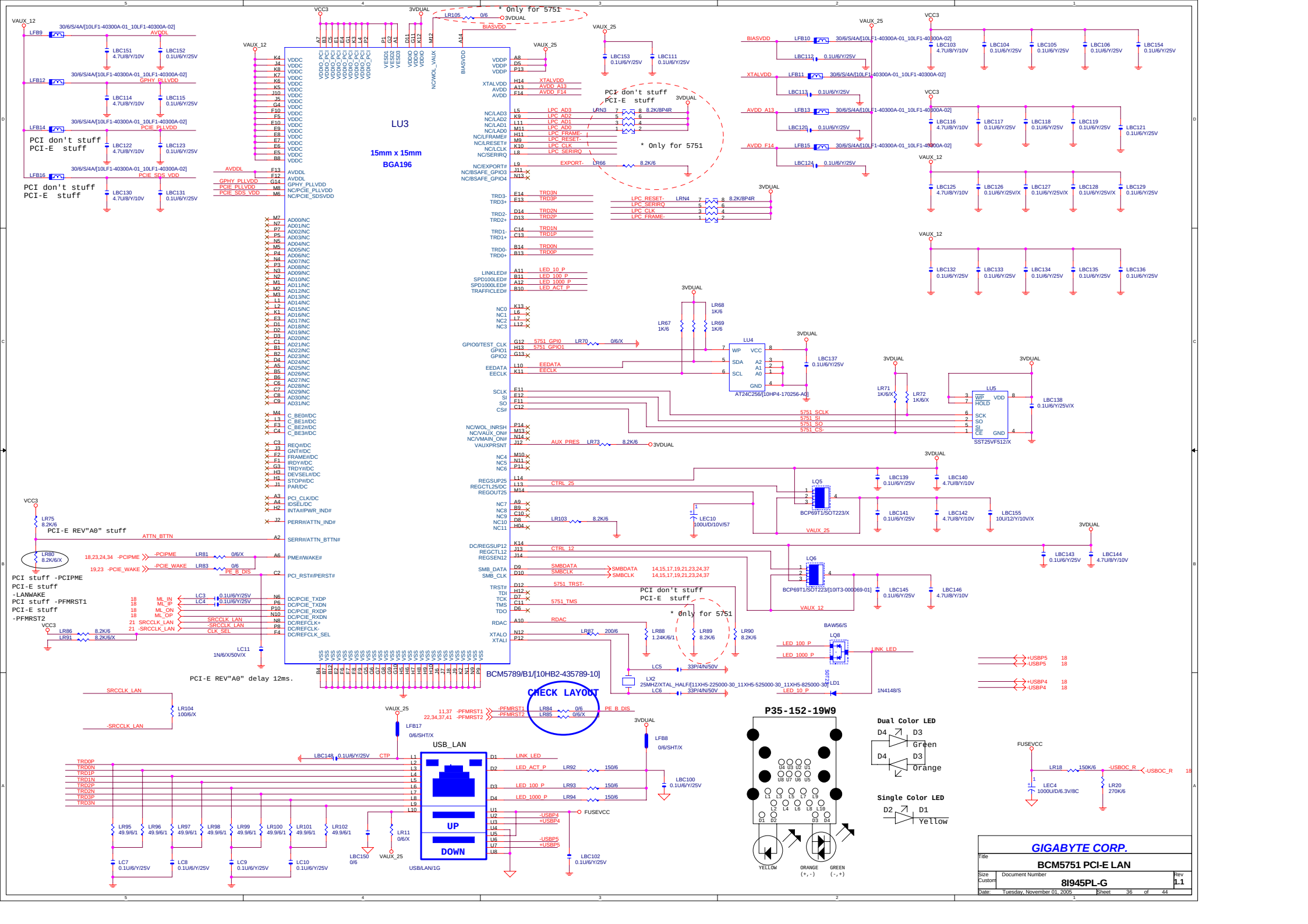
LU3
15mm x 15mm
BGA196
BCM5789/B1/[10HB2-435789-10]
* Only for 5751
PCI don't stuff
PCI-E stuff
PCI-E REV"A0" stuff
PCI-E REV"A0" delay 12ms.
CHECK LAYOUT
USB_LAN
USB/LAN/1G
P35-152-19W9
Dual Color LED
Single Color LED
GIGABYTE CORP.
BCM5751 PCI-E LAN
8I945PL-G
Tuesday, November 01, 2005

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

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

U16

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

如果BSEL0/1 直接拉TO
N/B,R264/R265 不上

Case Open Circuits

有問題

有問題

GIGABYTE THCHNOLOGIES , INC.	
Title	ITE 8712 LPC IO
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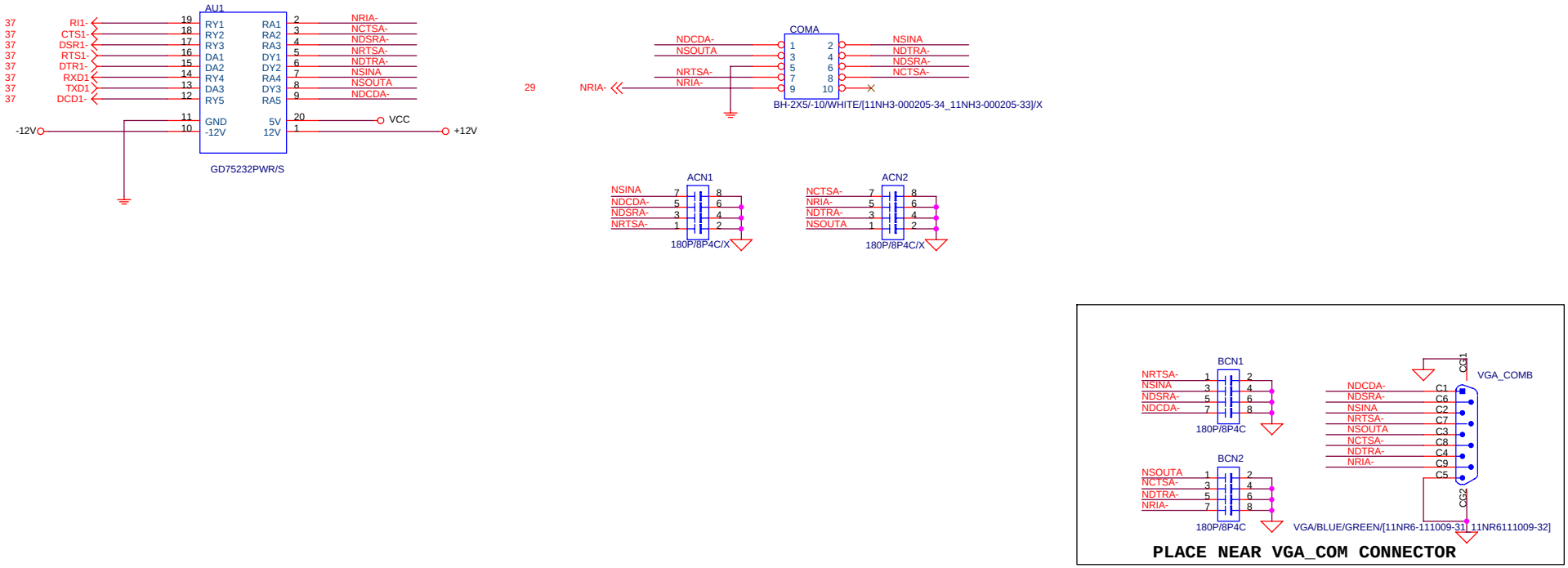

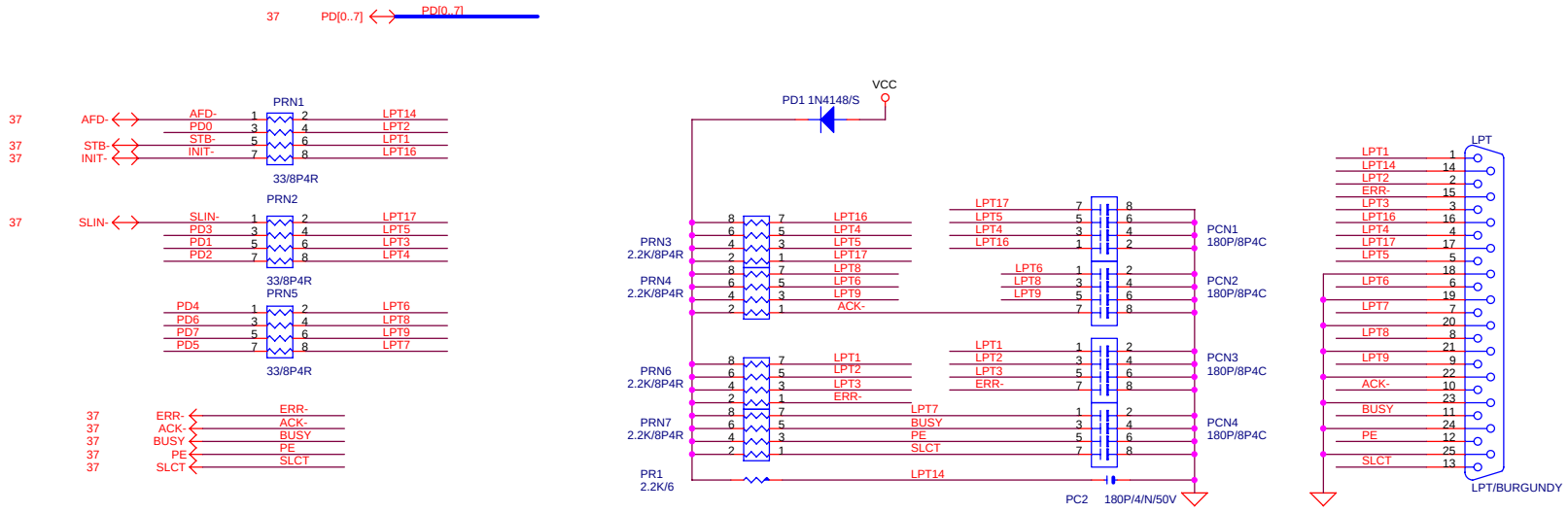

GIGABYTE THCHNOLOGIES , INC.		
Title: COM & IR & LPT PORT &FLOOPY		
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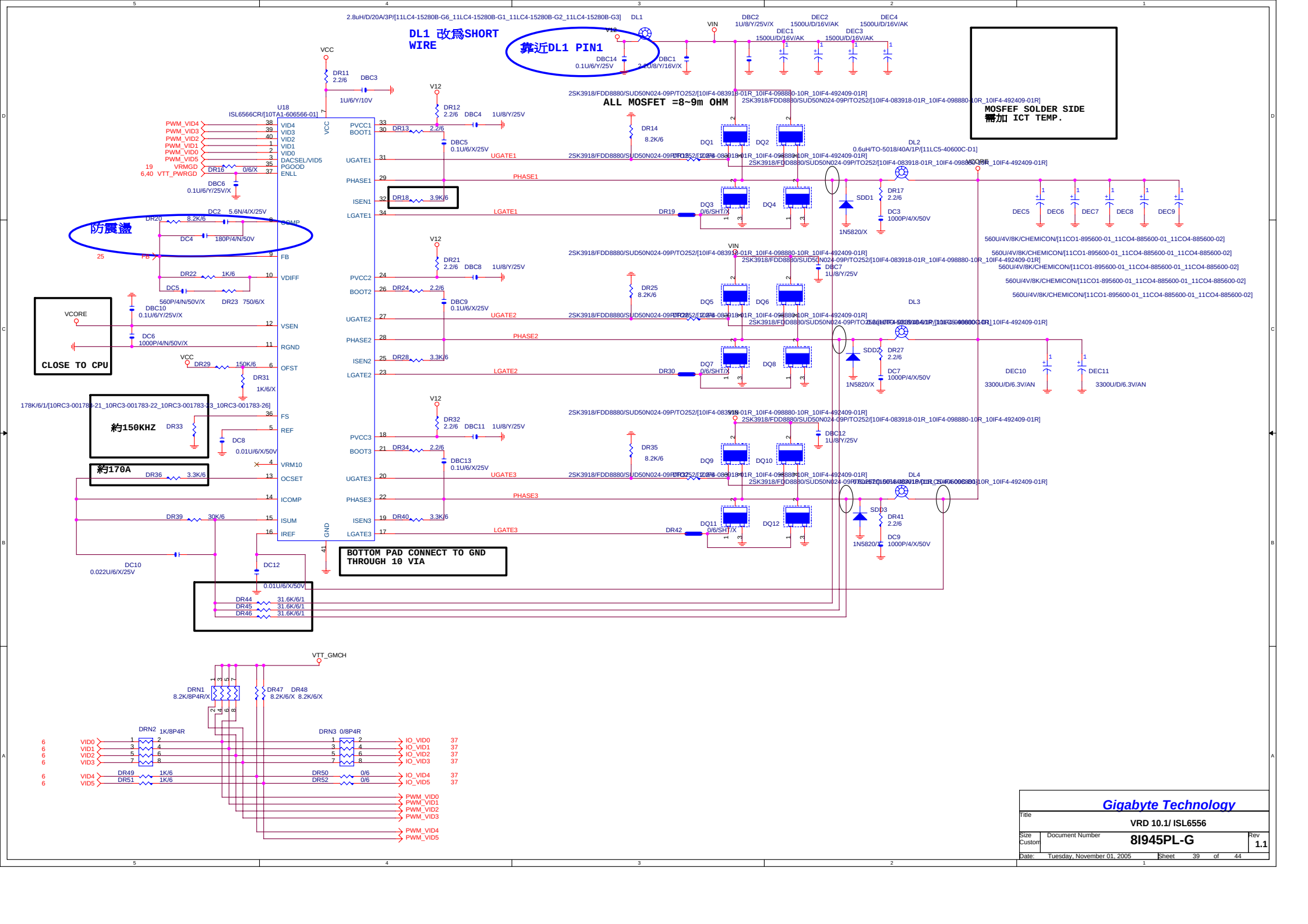
2.8uH/D/20A/3P/[11LC4-15280B-G6_11LC4-15280B-G1_11LC4-15280B-G2_11LC4-15280B-G3]
DL1
DL1 改爲SHORT WIRE
靠近DL1 PIN1
ALL MOSFET =8~9m OHM
MOSFEF SOLDER SIDE 需加 ICT TEMP.
防震邊
CLOSE TO CPU
約150KHZ
約170A
BOTTOM PAD CONNECT TO GND THROUGH 10 VIA
U18
ISL6566CR/[10TA1-606566-01]
VCC
VIN
VCORE
VTT_GMCH
0.6uH/TO-5018/40A/1P/[11LC5-40600C-D1]
560U/4V/8K/CHEMICON/[11CO1-895600-01_11CO4-885600-01_11CO4-885600-02]
3300U/D/6.3V/AN
2SK3918/FDD8880/SUD50N024-09P/TO252/[10IF4-083918-01R_10IF4-098880-10R_10IF4-492409-01R]
1N5820/X
Gigabyte Technology
VRD 10.1/ ISL6556
8I945PL-G
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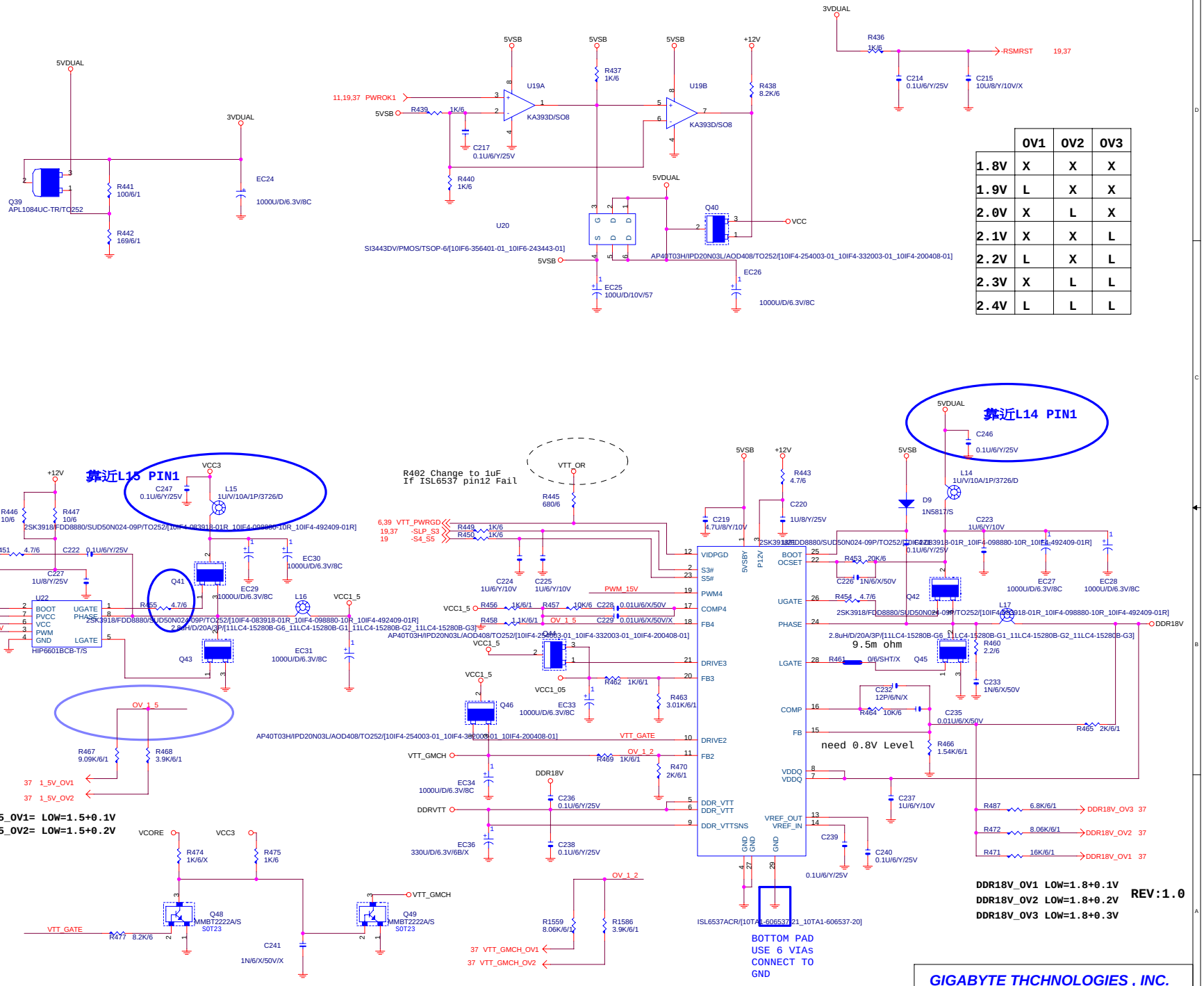
5VDUAL
3VDUAL
Q39
APL1084UC-TR/TO252
R441
100/6/1
R442
169/6/1
EC24
1000U/D/6.3V/8C
5VSB
+12V
11,19,37 PWROK1
R439
1K/6
U19A
U19B
KA393D/SO8
R437
1K/6
R438
8.2K/6
C217
0.1U/6/Y/25V
R440
1K/6
U20
SI3443DV/PMOS/TSOP-6/[10IF6-356401-01_10IF6-243443-01]
Q40
AP40T03H/IPD20N03L/AOD408/TO252/[10IF4-254003-01_10IF4-332003-01_10IF4-200408-01]
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
算近L14 PIN1
VCC3
C247
0.1U/6/Y/25V
L15
1U/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
Q41
EC29
EC30
1000U/D/6.3V/8C
U22
HIP6601BCB-T/S
BOOT
PVCC
VCC
PWM
GND
UGATE
PHASE
LGATE
PWM_15V
R455
4.7/6
2.8uH/D/20A/3P/[11LC4-15280B-G6_11LC4-15280B-G1_11LC4-15280B-G2_11LC4-15280B-G3]
L16
VCC1_5
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
R456
1K/6/1
R457
10K/6
C228
0.01U/6/X/50V
R458
1K/6/1
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_GMCH
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
OV_1_2
R469
1K/6/1
R470
2K/6/1
VTT_GATE
VIDPGD
S3#
S5#
PWM4
COMP4
FB4
DRIVE3
FB3
DRIVE2
FB2
DDR_VTT
DDR_VTT
DDR_VTTSNS
VREF_OUT
VREF_IN
GND
GND
GND
ISL6537ACR/[10TA1-606537-21_10TA1-606537-20]
BOTTOM PAD
USE 6 VIAs
CONNECT TO
GND
VCORE
R474
1K/6/X
R475
1K/6
Q48
MMBT2222A/S
SOT23
Q49
MMBT2222A/S
SOT23
R477
8.2K/6
C241
1N/6/X/50V/X
37 VTT_GMCH_OV1
37 VTT_GMCH_OV2
R1559
8.06K/6/1
R1586
3.9K/6/1
VTT_GMCH_OV1= LOW=1.2+0.1V
VTT_GMCH_OV2= LOW=1.2+0.2V
R443
4.7/6
C220
1U/8/Y/25V
C219
4.7U/8/Y/10V
D9
1N5817/S
L14
1U/V/10A/1P/3726/D
C246
0.1U/6/Y/25V
C223
1U/6/Y/10V
C227
0.1U/6/Y/25V
EC27
1000U/D/6.3V/8C
EC28
1000U/D/6.3V/8C
2SK3918/FDD8880/SUD50N024-09P/TO252/[10IF4-083918-01R_10IF4-098880-10R_10IF4-492409-01R]
BOOT
OCSET
UGATE
PHASE
LGATE
COMP
FB
VDDQ
VDDQ
R453
20K/6
C226
1N/6/X/50V
Q42
R454
4.7/6
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
0.1U/6/Y/25V
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
GIGABYTE THCHNOLOGIES , INC.
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DISCRETE POWER
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Custom
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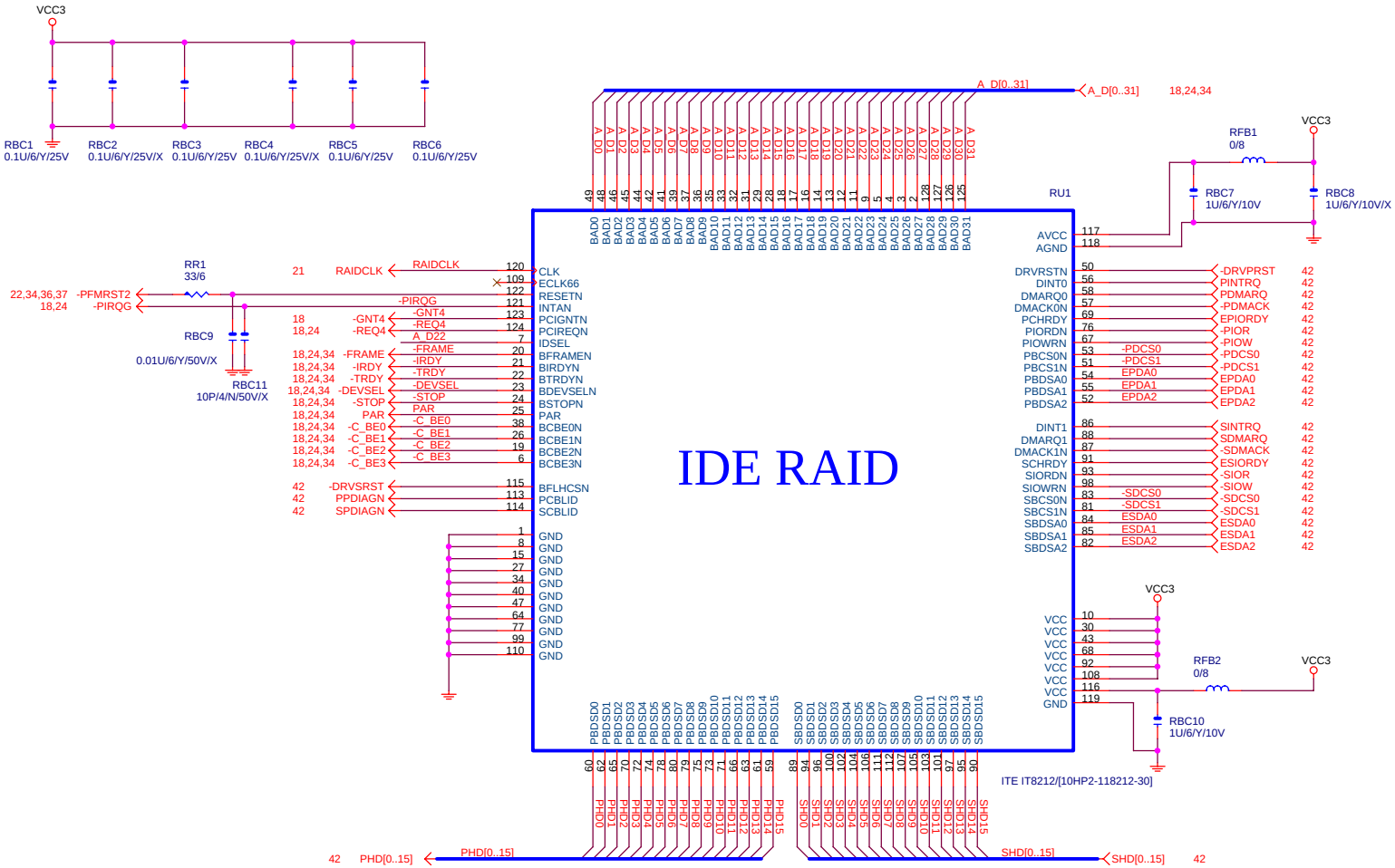
ALL INPUT PIN MUST HAVE 0.1 CAPACITOR



GIGABYTE			
Title	ATA100/133 & IDE RAID		
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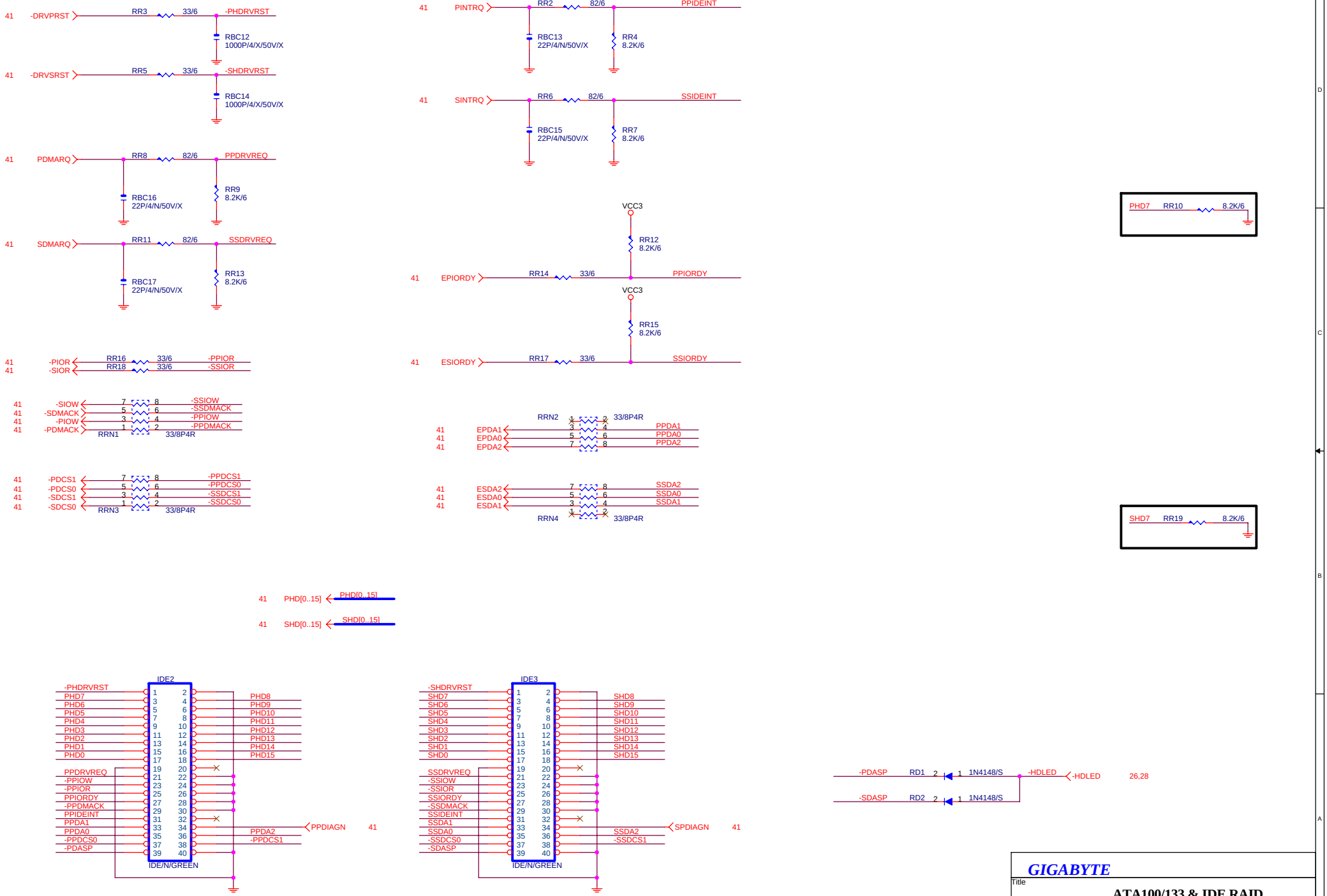

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Title: ATA100/133 & IDE RAID

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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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