Model Name: 8I915PL-G REV2.0

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	VCORE POWER
09	GMCH-GRANTSDALE_HOST
10	GMCH-GARNTSDALE_DDR
11	GMCH-GRANTSDALE_PCI E, DMI
12	GMCH-GRANTSDALE_INT VGA
13	GMCH-GRANTSDALE_GND
14	GMCH-GRANTSDALE_PWR
15	DDR CHANNEL A
16	DDR CHANNEL B
17	DDR TERMINATION
18	PCI EXPRESS*16 SLOT
19	ICH6 PCI, USB, DMI, LAN
20	ICH6 IDE, GPIO, SATA, CTRL
21	ICH6 VCC, GND
22	CLK GEN

SHEET	TITLE
23	PCI SLOT
24	PCI EXPRESS*1 SLOT
25	ITE8712HX
26	HWMO/FAN/FWH BIOS
27	KB_MS/GAME
28	COM/LPT/FDD
29	(FRONT+REAR)USB/RING/IDE
30	AZALIA CODEC ALC880/CMI9880
31	AUDIO JACK
32	LAN BCM5705E/5751
33	LAN BCM5751
34	ATX POWER CONN.
35	ALL POWER
36	1394 TSB43AB23
37	FRONT PANEL/BZ
38	RAID VIA6410
39	RAID IDE CONNECTOR
40	GPIO TABLE
41	RESET TABLE

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Title	Cover Sheet	
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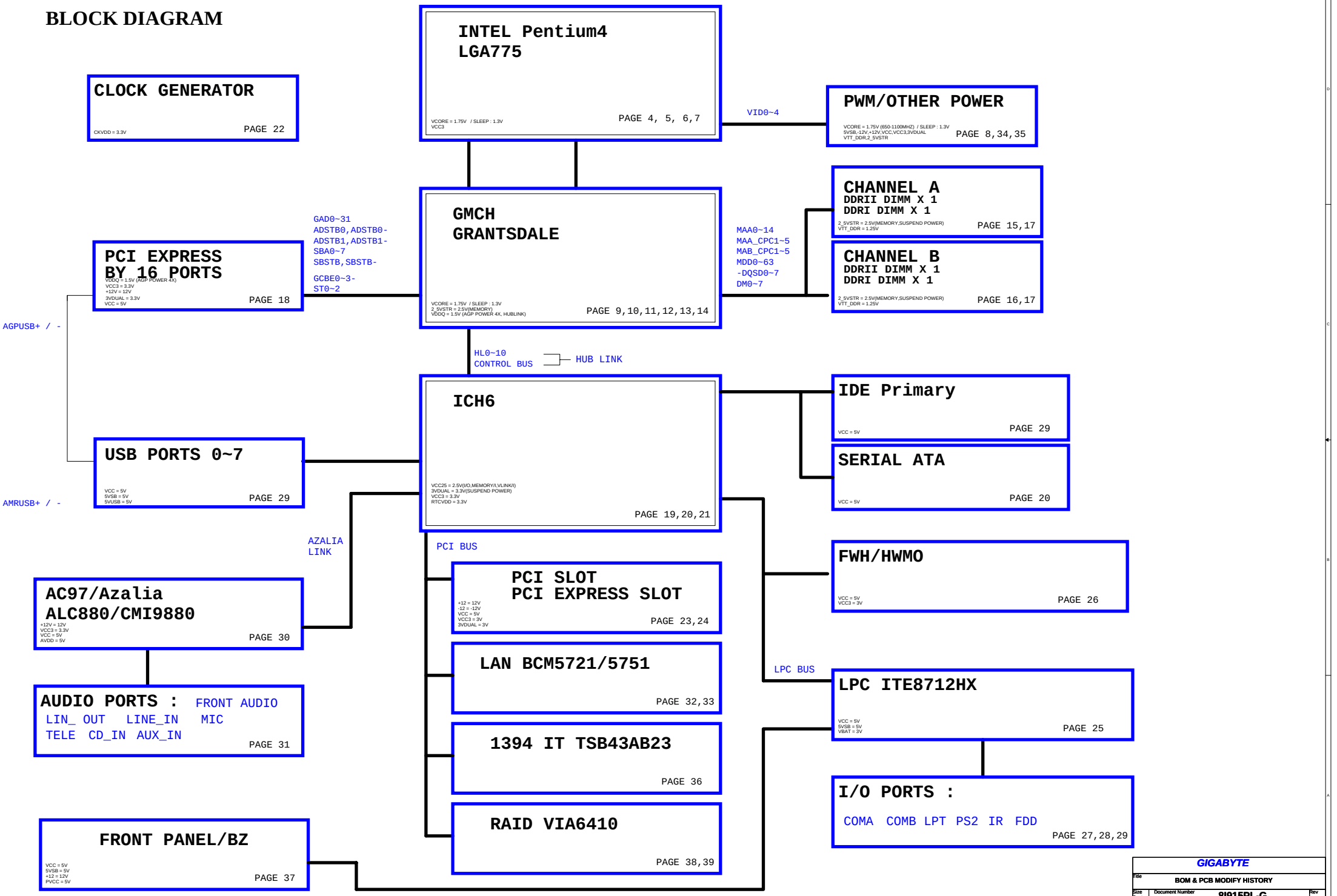
BLOCK DIAGRAM



GIGABYTE			
Title	BOM & PCB MODIFY HISTORY		
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Model Name: 8I915PL-G
Version: 2.0

Component value change history

2004/11/22

Data	Change Item	Reason
0.1	RELEASE	
1.0	AUDIO2 CHANGE TO 3RJ+15F/[11NR6-403004-31]	
	-RSMRST阻值R1133=22K --> 1K/6	
	CLK-GEN VCC3 BC88,BC91 0.1U/6/Y25V --> 1U/6/Y/10V	
	REMOVE PWROK1 CAP C306=100P & C417=33P	
	PWM DR100 200K --> 178K , DR103 1.8K --> 3.3K , DR82 3.3K --> 3.9K , DR111,112,113 28K --> 39.2K	
	DC32,DC36 CHANGE TO 0.01U/6/X/50V/[10CM1-031002-21_10CM1-031002-27]	
	ADD DDRVTT POWER CAP	
10A-PVT	1. L1,L2 10LI2-00100A-01/02/03 --> 10LI2-12100A-01/02/03	
	2. R563 11K/6/1 --> 20K/6/1	
	3. R565 1.91K/6/1 --> 1.5K/6/1	
	4. U23 10HL6-184148-10 --> 10HL6-184148-20	
10B-0202	1. ADD PWM COMP DC28=180P/4/N/50V	
	2. 加替料U22 SST 49LF003B(10HL4-132003-34)	
	3. ADD KB_MS 替料 10NR6-802006-2A	
20A-0304 PVT-20A-0331	1. ADD VT6410 IDE RAID FUNCTION	
	1. MANUAL包材加入	
	2. Q193 MMBT2222A --> 2N7002/SOT23	
	3. AUDIO2 : 11NR6-403004-71	
	4. R1616 5.36K/6/1 --> 6.8K/6/1	

Circuit or PCB layout change for next version

PAGE	Change Item	Reason
0.1	EVT	
1.0	PCB 8I915PC DUO Rev0.1 --> 8I915PC DUO Rev1.0	
	ALL 0ohm resister remove , 注意鋪銅	
	CHOKE DL2,DL3,DL4 MODIFY FOOTPRINT=CHOKE06U-40A_1PDL	
	LU1 MARVELL8001 VDD15_L & AVDD25_L ADD 100U/DIP	
	ADD USB PROTECT DIODE	
	ITE8712 GPIO MODIFY FOR OVER VOLTAGE & TURBO PIN	
	LU1 MARVELL8001	
	PIN8,PIN9不要鋪銅,工廠ICT會SHORT	
	PROCHOT THERMAL RESISTOR REMOVE TO PWM MOSFET	
	背版(ICH6)ICT測試點,保持1.27mm以上	
	CPU PIN/H16 , PIN/U3 未LAUOUT TESTPOINT	
	注意VCC1_5切割	
	(干擾MCHCLK)	
	BAT SOCKET要改成CO-LAYOUT	
	AUDIO & LAN 之間的AGND,COMP-SOLDER SIDE切開,COMP增加CR32=2.2 ohm	
	PIN HEADER CHECK NEME RULE	
20A-0304	1. ADD VT6410 IDE RAID FUNCTION	
	2. ADD DDR18V_OV3	
	3. ADD BAT RB=1Kohm	
	4. VCC1_5 ADD BC719=0.1U & GATE R1147 2.2 --> 4.7/6	
	5. ADD NEW AVL MOSFET	

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Title: BOM & PCB MODIFY HISTORY

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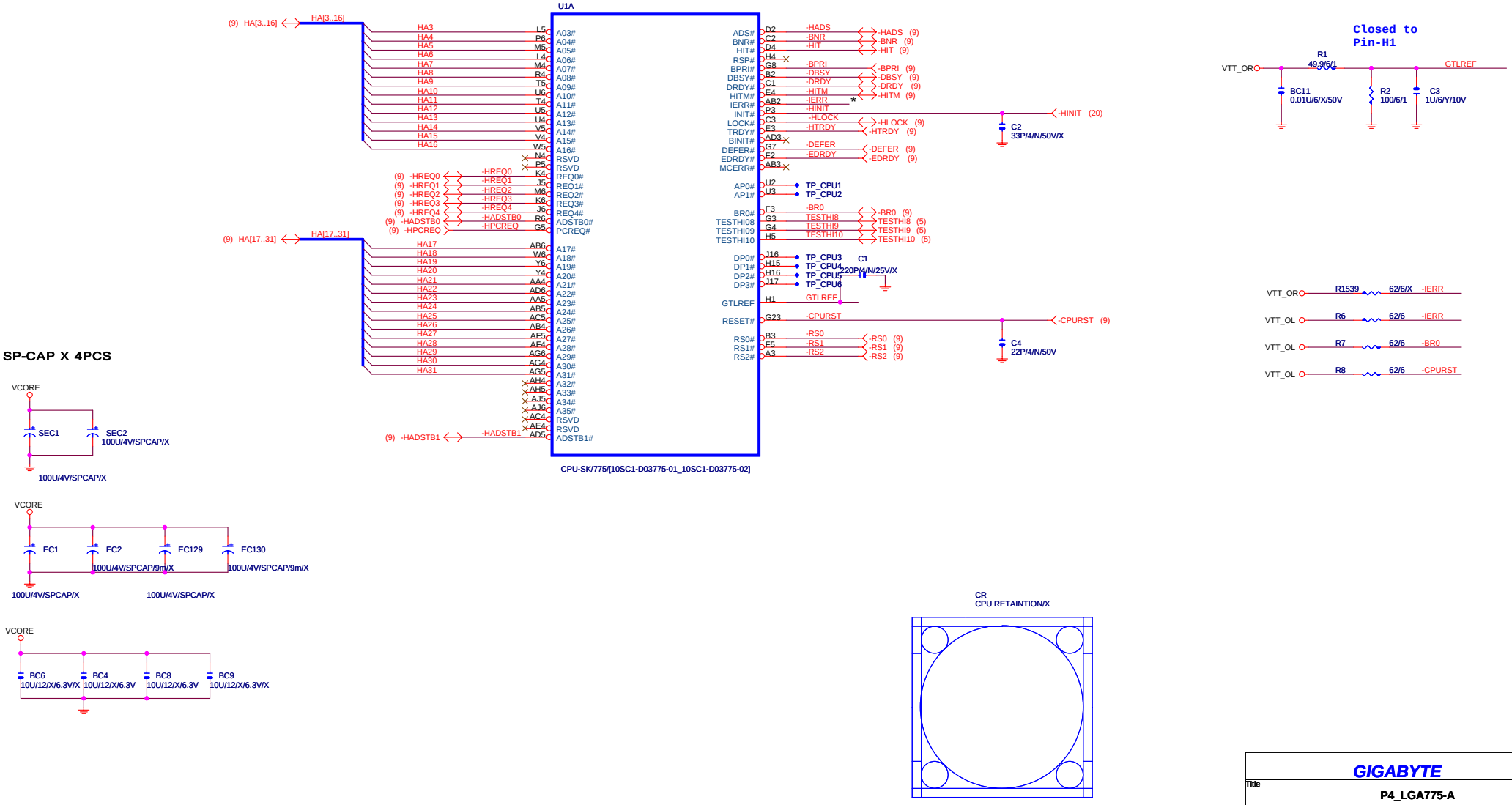

GIGABYTE			
Title	P4_LGA775-A		
Size: Custom	Document Number: 8I915PL-G		Rev: 2.0
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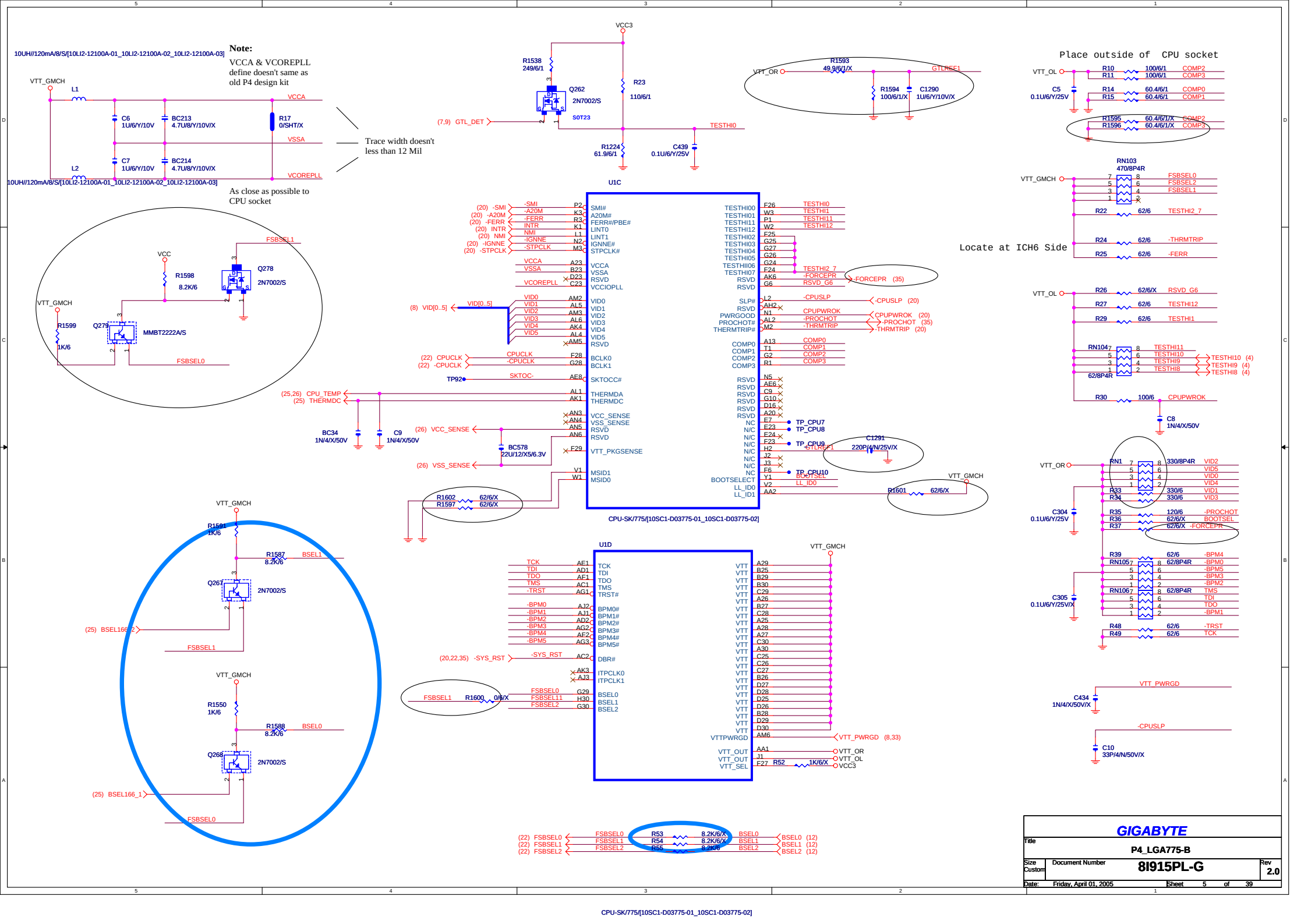
Note:
VCCA & VCOREPLL define doesn't same as old P4 design kit
Trace width doesn't less than 12 Mil
As close as possible to CPU socket
Place outside of CPU socket
Locate at ICH6 Side
10UH//120mA/8/S/[10LI2-12100A-01_10LI2-12100A-02_10LI2-12100A-03]
VTT_GMCH
L1
L2
C6 1U/6Y/10V
C7 1U/6Y/10V
BC213 4.7U/8/Y/10V/X
BC214 4.7U/8/Y/10V/X
R17 0/SHT/X
VCCA
VSSA
VCOREPLL
VCC3
R1538 249/6/1
Q262 2N7002/S
SOT23
R23 110/6/1
(7,9) GTL_DET
TESTHI0
R1224 61.9/6/1
C439 0.1U/6Y/25V
R1593 49.9/6/1/X
R1594 100/6/1/X
C1290 1U/6Y/10V/X
VTT_OR
GTLREF1
VTT_OL
R10 100/6/1 COMP2
R11 100/6/1 COMP3
C5 0.1U/6Y/25V
R14 60.4/6/1 COMP0
R15 60.4/6/1 COMP1
R1595 60.4/6/1/X COMP2
R1596 60.4/6/1/X COMP3
RN103 470/8P4R
R22 62/6 TESTHI2_7
R24 62/6 -THRMTRIP
R25 62/6 -FERR
R26 62/6/X RSVD_G6
R27 62/6 TESTHI12
R29 62/6 TESTHI1
RN104 62/8P4R
TESTHI11
TESTHI10
TESTHI9
TESTHI8
R30 100/6 CPUPWROK
C8 1N/4/X/50V
FSBSEL1
R1598 8.2K/6
Q278 2N7002/S
R1599 1K/6
Q279 MMBT2222A/S
FSBSEL0
U1C
SMI#
A20M#
FERR#/PBE#
LINT0
LINT1
IGNNE#
STPCLK#
VCCA
VSSA
RSVD
VCCIOPLL
VID0
VID1
VID2
VID3
VID4
VID5
RSVD
BCLK0
BCLK1
SKTOCC#
THERMDA
THERMDC
VCC_SENSE
VSS_SENSE
RSVD
RSVD
VTT_PKGSENSE
MSID1
MSID0
TESTHI0
TESTHI1
TESTHI11
TESTHI12
TESTHI2
TESTHI3
TESTHI4
TESTHI5
TESTHII06
TESTHI7
RSVD
RSVD
SLP#
RSVD
PWRGOOD
PROCHOT#
THERMTRIP#
COMP0
COMP1
COMP2
COMP3
RSVD
RSVD
RSVD
RSVD
RSVD
RSVD
NC
N/C
N/C
N/C
N/C
N/C
NC
BOOTSELECT
LL_ID0
LL_ID1
TESTHI2_7
-FORCEPR
RSVD_G6
-CPUSLP
CPUPWROK
-PROCHOT
-THRMTRIP
TP_CPU7
TP_CPU8
TP_CPU9
GTLREF1
TP_CPU10
BOOTSEL
LL_ID0
C1291 220P/4/N/25V/X
R1601 62/6/X
VTT_GMCH
CPU-SK/775/[10SC1-D03775-01_10SC1-D03775-02]
(8) VID[0..5]
VID[0..5]
(22) CPUCLK
(22) -CPUCLK
CPUCLK
-CPUCLK
TP92
SKTOC-
(25,26) CPU_TEMP
(25) THERMDC
BC34 1N/4/X/50V
C9 1N/4/X/50V
(26) VCC_SENSE
BC578 22U/12/X5/6.3V
(26) VSS_SENSE
R1602 62/6/X
R1597 62/6/X
U1D
TCK
TDI
TDO
TMS
-TRST
-BPM0
-BPM1
-BPM2
-BPM3
-BPM4
-BPM5
BPM0#
BPM1#
BPM2#
BPM3#
BPM4#
BPM5#
DBR#
ITPCLK0
ITPCLK1
BSEL0
BSEL1
BSEL2
(20,22,35) -SYS_RST
-SYS_RST
FSBSEL1
R1600 0/6/X
FSBSEL0
FSBSEL11
FSBSEL2
VTT
VTTPWRGD
VTT_OUT
VTT_OUT
VTT_SEL
VTT_PWRGD (8,33)
VTT_OR
VTT_OL
VCC3
R52 1K/6/X
R1591 1K/6
R1587 8.2K/6
BSEL1
Q267 2N7002/S
(25) BSEL166_2
FSBSEL1
R1550 1K/6
R1588 8.2K/6
BSEL0
Q268 2N7002/S
(25) BSEL166_1
FSBSEL0
(22) FSBSEL0
(22) FSBSEL1
(22) FSBSEL2
R53 8.2K/6/X
R54 8.2K/6/X
R55 8.2K/6/X
BSEL0 (12)
BSEL1 (12)
BSEL2 (12)
VTT_GMCH
RN1 330/8P4R
VID2
VID5
VID0
VID4
R33 330/6 VID1
R34 330/6 VID3
C304 0.1U/6Y/25V
R35 120/6 -PROCHOT
R36 62/6/X BOOTSEL
R37 62/6/X -FORCEPR
RN105 62/8P4R
-BPM4
-BPM0
-BPM5
-BPM3
-BPM2
RN106 62/8P4R
TMS
TDI
TDO
-BPM1
C305 0.1U/6Y/25V/X
R48 62/6 -TRST
R49 62/6 TCK
VTT_PWRGD
C434 1N/4/X/50V/X
-CPUSLP
C10 33P/4/N/50V/X
GIGABYTE
Title
P4_LGA775-B
Size Custom
Document Number
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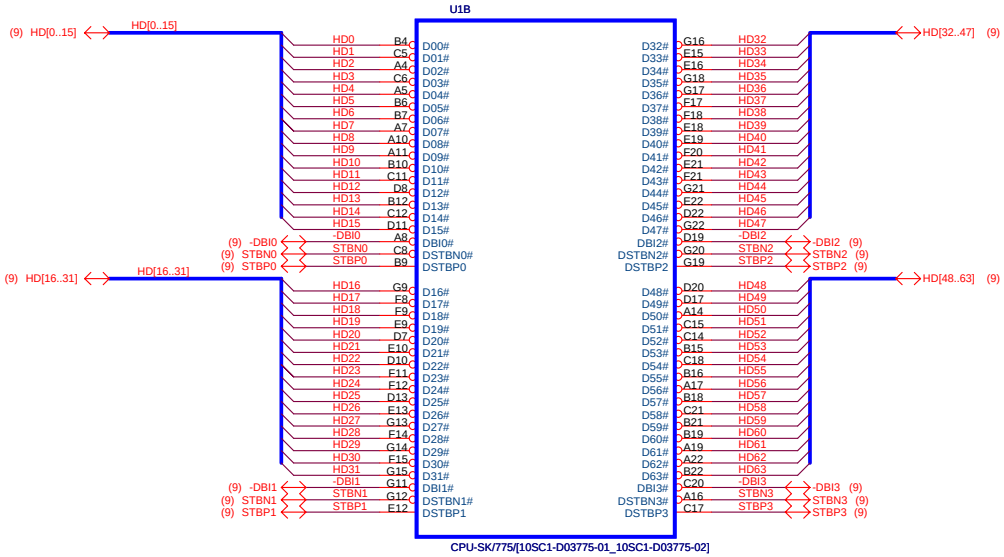
CPU-SK/775/[10SC1-D03775-01_10SC1-D03775-02]



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Title	P4_LGA775-C	
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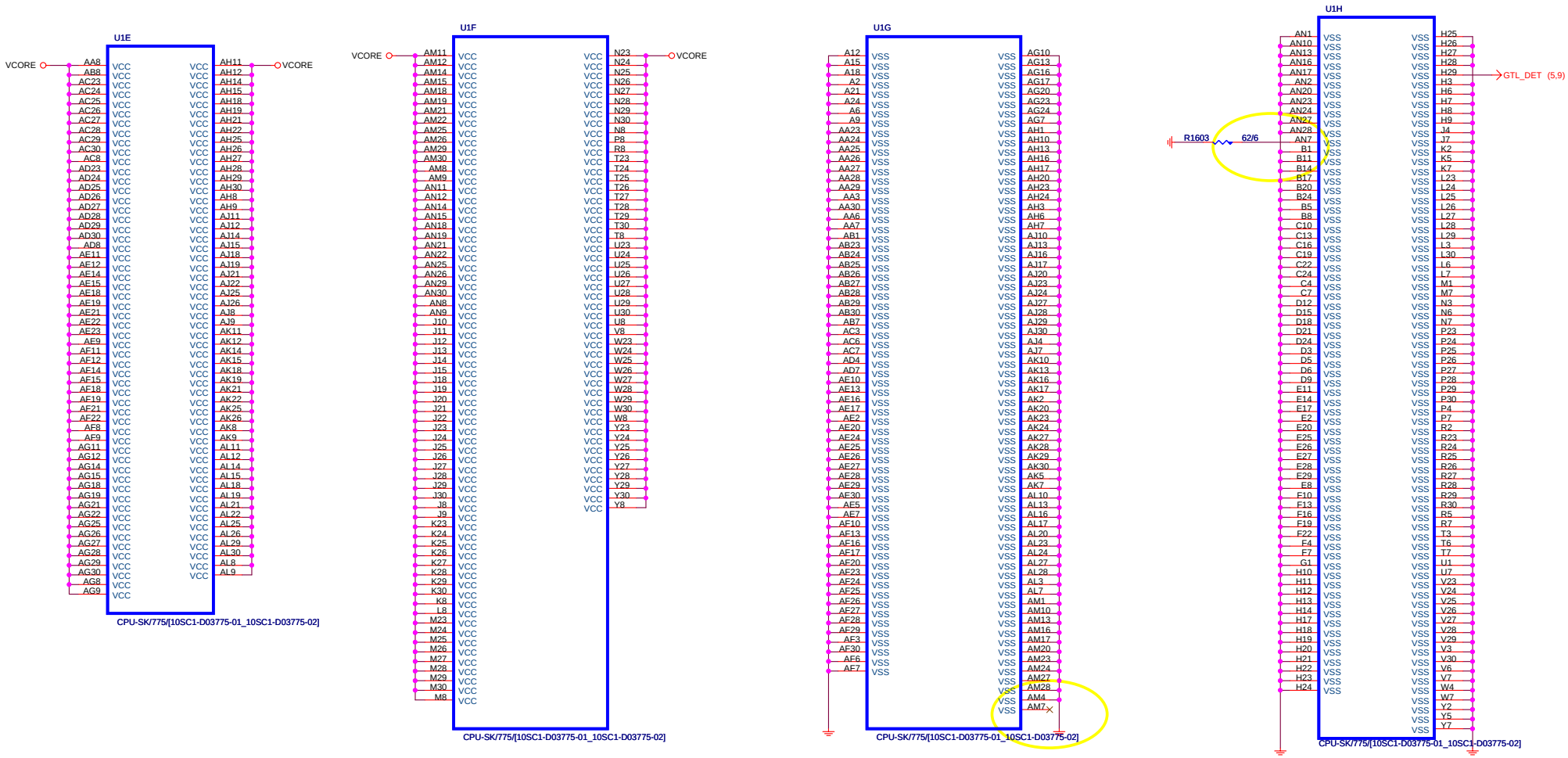

GIGABYTE		
Title	P4_LGA775-D	
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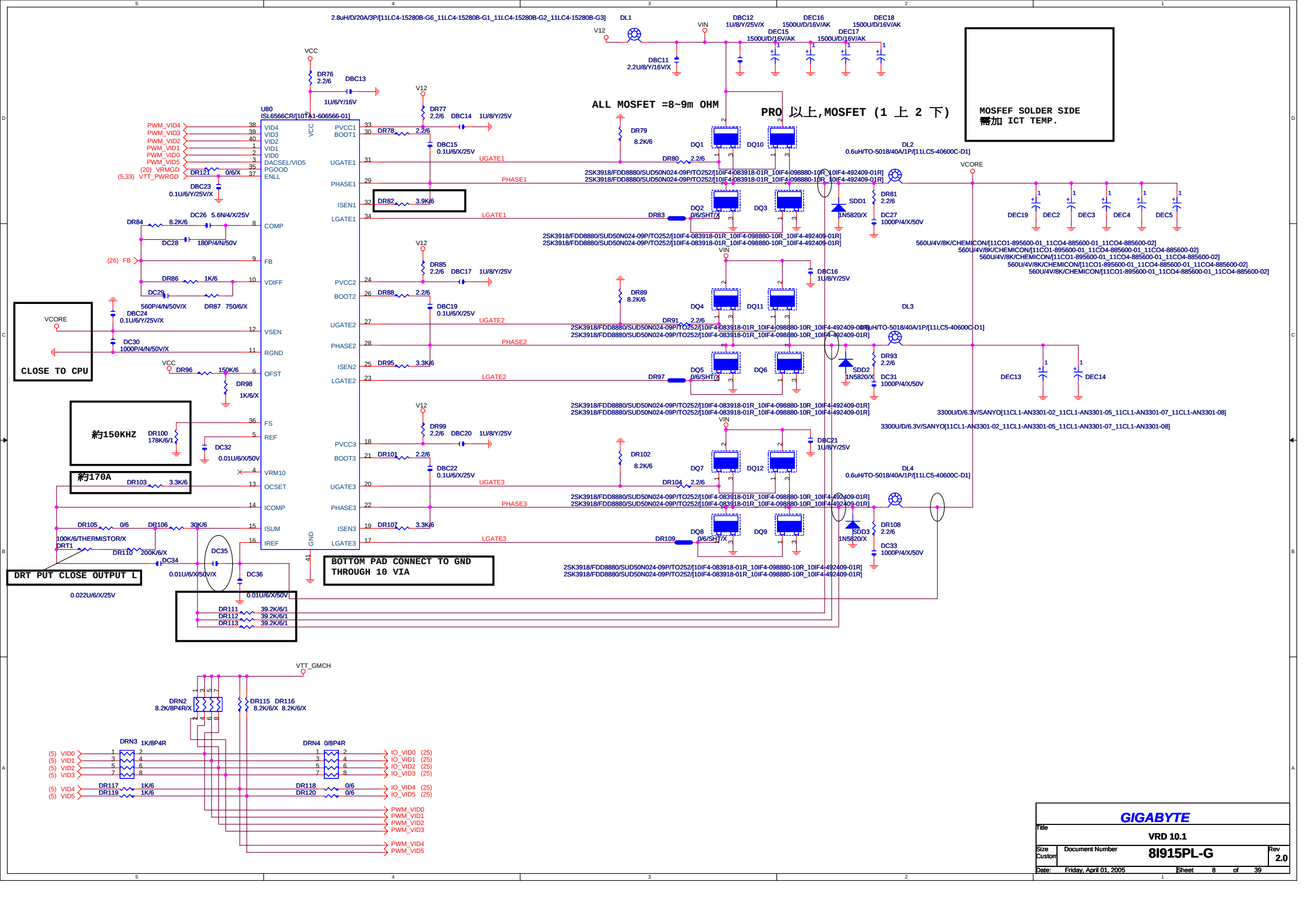
2.8uH/D/20A/3P/[11LC4-15280B-G6_11LC4-15280B-G1_11LC4-15280B-G2_11LC4-15280B-G3]
DL1
ALL MOSFET =8~9m OHM
PRO 以上,MOSFET (1 上 2 下)
MOSFEF SOLDER SIDE
需加 ICT TEMP.
U80
ISL6566CR/[10TA1-606566-01]
CLOSE TO CPU
約150KHZ
約170A
DRT PUT CLOSE OUTPUT L
BOTTOM PAD CONNECT TO GND
THROUGH 10 VIA
0.022U/6/X/25V
VCORE
VIN
VCC
GND
VTT_GMCH
GIGABYTE
VRD 10.1
8I915PL-G
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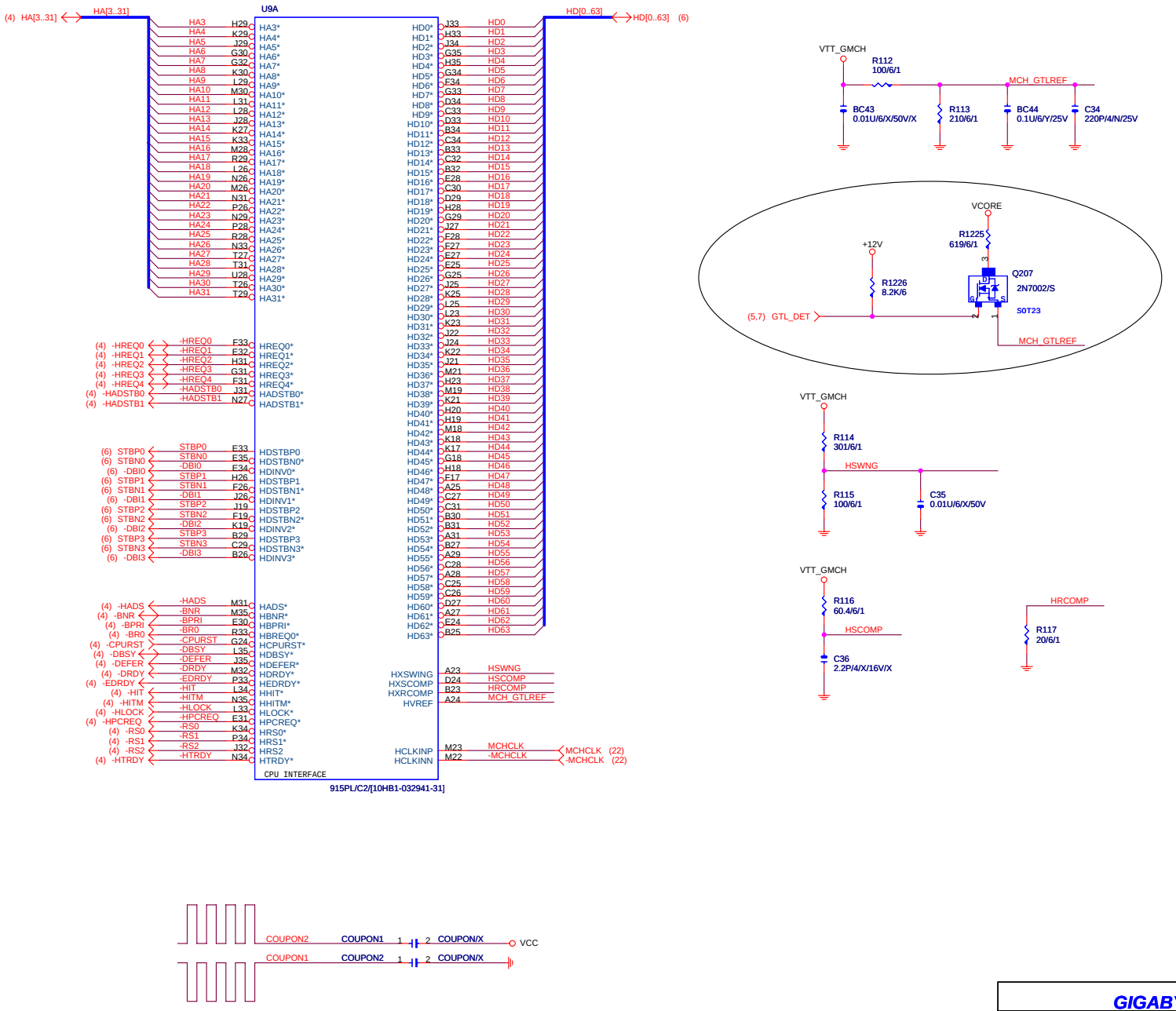

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Title	GMCH-HOST	
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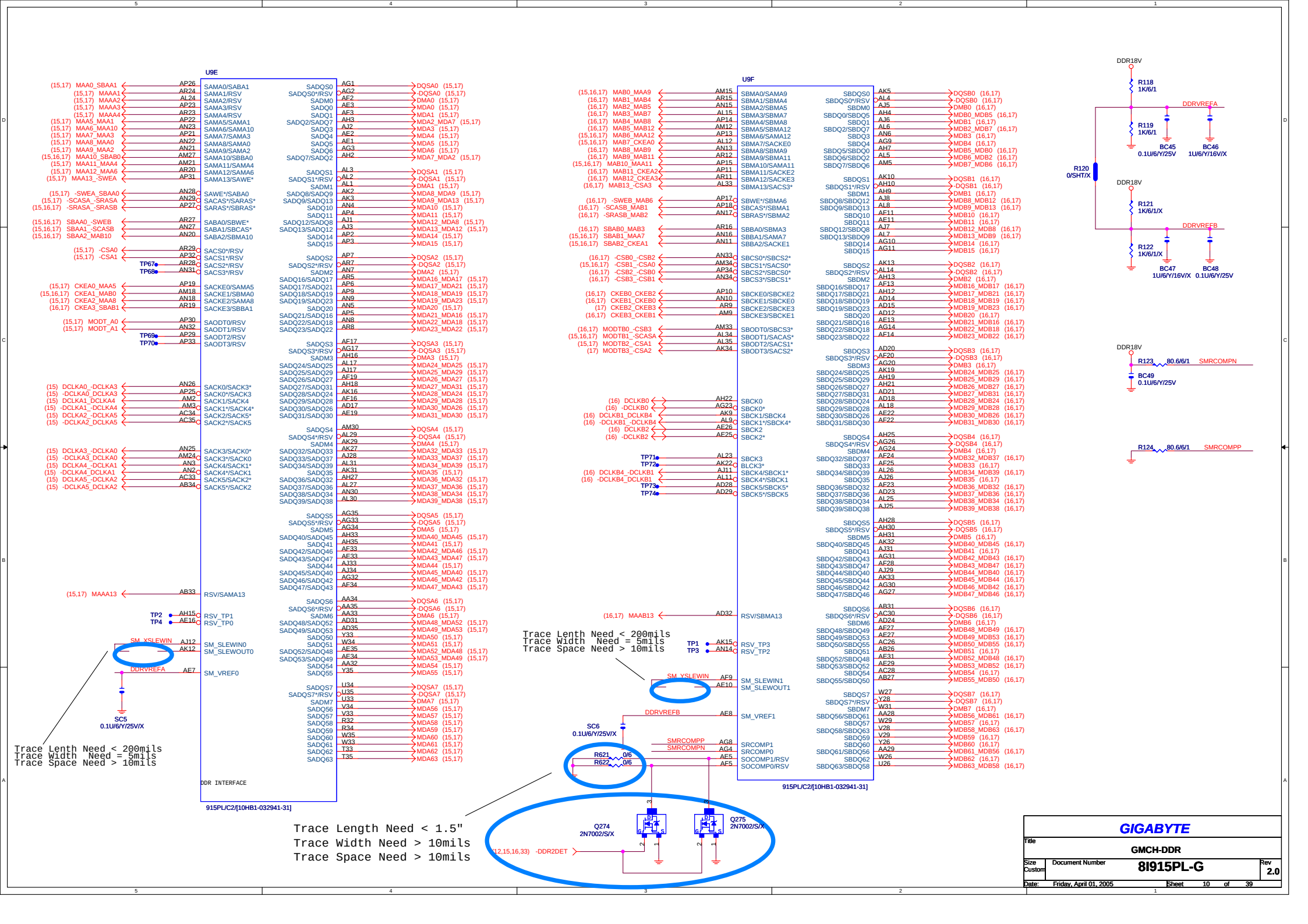
U9E
SAMA0/SABA1
SAMA1/RSV
SAMA2/RSV
SAMA3/RSV
SAMA4/RSV
SAMA5/SAMA1
SAMA6/SAMA10
SAMA7/SAMA3
SAMA8/SAMA0
SAMA9/SAMA2
SAMA10/SBBA0
SAMA11/SAMA4
SAMA12/SAMA6
SAMA13/SAWE*
SAWE*/SABA0
SACAS*/SARAS*
SARAS*/SBRAS*
SABA0/SBWE*
SABA1/SBCAS*
SABA2/SBMA10
SACS0*/RSV
SACS1*/RSV
SACS2*/RSV
SACS3*/RSV
SACKE0/SAMA5
SACKE1/SBMA0
SACKE2/SAMA8
SACKE3/SBBA1
SAODT0/RSV
SAODT1/RSV
SAODT2/RSV
SAODT3/RSV
SACK0/SACK3*
SACK0*/SACK3
SACK1/SACK4
SACK1*/SACK4*
SACK2/SACK5*
SACK2*/SACK5
SACK3/SACK0*
SACK3*/SACK0
SACK4/SACK1*
SACK4*/SACK1
SACK5/SACK2*
SACK5*/SACK2
RSV/SAMA13
RSV_TP1
RSV_TP0
SM_SLEWIN0
SM_SLEWOUT0
SM_VREF0
DDR INTERFACE
915PL/C2/[10HB1-032941-31]
SADQS0
SADQS0*/RSV
SADM0
SADQ0
SADQ1
SADQ2/SADQ7
SADQ3
SADQ4
SADQ5
SADQ6
SADQ7/SADQ2
SADQS1
SADQS1*/RSV
SADM1
SADQ8/SADQ9
SADQ9/SADQ13
SADQ10
SADQ11
SADQ12/SADQ8
SADQ13/SADQ12
SADQ14
SADQ15
SADQS2
SADQS2*/RSV
SADM2
SADQ16/SADQ17
SADQ17/SADQ21
SADQ18/SADQ19
SADQ19/SADQ23
SADQ20
SADQ21/SADQ16
SADQ22/SADQ18
SADQ23/SADQ22
SADQS3
SADQS3*/RSV
SADM3
SADQ24/SADQ25
SADQ25/SADQ29
SADQ26/SADQ27
SADQ27/SADQ31
SADQ28/SADQ24
SADQ29/SADQ28
SADQ30/SADQ26
SADQ31/SADQ30
SADQS4
SADQS4*/RSV
SADM4
SADQ32/SADQ33
SADQ33/SADQ37
SADQ34/SADQ39
SADQ35
SADQ36/SADQ32
SADQ37/SADQ36
SADQ38/SADQ34
SADQ39/SADQ38
SADQS5
SADQS5*/RSV
SADM5
SADQ40/SADQ45
SADQ41
SADQ42/SADQ46
SADQ43/SADQ47
SADQ44
SADQ45/SADQ40
SADQ46/SADQ42
SADQ47/SADQ43
SADQS6
SADQS6*/RSV
SADM6
SADQ48/SADQ52
SADQ49/SADQ53
SADQ50
SADQ51
SADQ52/SADQ48
SADQ53/SADQ49
SADQ54
SADQ55
SADQS7
SADQS7*/RSV
SADM7
SADQ56
SADQ57
SADQ58
SADQ59
SADQ60
SADQ61
SADQ62
SADQ63
DQSA0 (15,17)
-DQSA0 (15,17)
DMA0 (15,17)
MDA0 (15,17)
MDA1 (15,17)
MDA2_MDA7 (15,17)
MDA3 (15,17)
MDA4 (15,17)
MDA5 (15,17)
MDA6 (15,17)
MDA7_MDA2 (15,17)
DQSA1 (15,17)
-DQSA1 (15,17)
DMA1 (15,17)
MDA8_MDA9 (15,17)
MDA9_MDA13 (15,17)
MDA10 (15,17)
MDA11 (15,17)
MDA12_MDA8 (15,17)
MDA13_MDA12 (15,17)
MDA14 (15,17)
MDA15 (15,17)
DQSA2 (15,17)
-DQSA2 (15,17)
DMA2 (15,17)
MDA16_MDA17 (15,17)
MDA17_MDA21 (15,17)
MDA18_MDA19 (15,17)
MDA19_MDA23 (15,17)
MDA20 (15,17)
MDA21_MDA16 (15,17)
MDA22_MDA18 (15,17)
MDA23_MDA22 (15,17)
DQSA3 (15,17)
-DQSA3 (15,17)
DMA3 (15,17)
MDA24_MDA25 (15,17)
MDA25_MDA29 (15,17)
MDA26_MDA27 (15,17)
MDA27_MDA31 (15,17)
MDA28_MDA24 (15,17)
MDA29_MDA28 (15,17)
MDA30_MDA26 (15,17)
MDA31_MDA30 (15,17)
DQSA4 (15,17)
-DQSA4 (15,17)
DMA4 (15,17)
MDA32_MDA33 (15,17)
MDA33_MDA37 (15,17)
MDA34_MDA39 (15,17)
MDA35 (15,17)
MDA36_MDA32 (15,17)
MDA37_MDA36 (15,17)
MDA38_MDA34 (15,17)
MDA39_MDA38 (15,17)
DQSA5 (15,17)
-DQSA5 (15,17)
DMA5 (15,17)
MDA40_MDA45 (15,17)
MDA41 (15,17)
MDA42_MDA46 (15,17)
MDA43_MDA47 (15,17)
MDA44 (15,17)
MDA45_MDA40 (15,17)
MDA46_MDA42 (15,17)
MDA47_MDA43 (15,17)
DQSA6 (15,17)
-DQSA6 (15,17)
DMA6 (15,17)
MDA48_MDA52 (15,17)
MDA49_MDA53 (15,17)
MDA50 (15,17)
MDA51 (15,17)
MDA52_MDA48 (15,17)
MDA53_MDA49 (15,17)
MDA54 (15,17)
MDA55 (15,17)
DQSA7 (15,17)
-DQSA7 (15,17)
DMA7 (15,17)
MDA56 (15,17)
MDA57 (15,17)
MDA58 (15,17)
MDA59 (15,17)
MDA60 (15,17)
MDA61 (15,17)
MDA62 (15,17)
MDA63 (15,17)
SC5
0.1U/6/Y/25V/X
Trace Lenth Need < 200mils
Trace Width Need = 5mils
Trace Space Need > 10mils
U9F
SBMA0/SAMA9
SBMA1/SBMA4
SBMA2/SBMA5
SBMA3/SBMA7
SBMA4/SBMA8
SBMA5/SBMA12
SBMA6/SAMA12
SBMA7/SACKE0
SBMA8/SBMA9
SBMA9/SBMA11
SBMA10/SAMA11
SBMA11/SACKE2
SBMA12/SACKE3
SBMA13/SACS3*
SBWE*/SBMA6
SBCAS*/SBMA1
SBRAS*/SBMA2
SBBA0/SBMA3
SBBA1/SAMA7
SBBA2/SACKE1
SBCS0*/SBCS2*
SBCS1*/SACS0*
SBCS2*/SBCS0*
SBCS3*/SBCS1*
SBCKE0/SBCKE2
SBCKE1/SBCKE0
SBCKE2/SBCKE3
SBCKE3/SBCKE1
SBODT0/SBCS3*
SBODT1/SACAS*
SBODT2/SACS1*
SBODT3/SACS2*
SBCK0
SBCK0*
SBCK1/SBCK4
SBCK1*/SBCK4*
SBCK2
SBCK2*
SBCK3
BLCK3*
SBCK4/SBCK1*
SBCK4*/SBCK1
SBCK5/SBCK5*
SBCK5*/SBCK5
RSV/SBMA13
RSV_TP3
RSV_TP2
SM_SLEWIN1
SM_SLEWOUT1
SM_VREF1
SRCOMP1
SRCOMP0
SOCOMP1/RSV
SOCOMP0/RSV
915PL/C2/[10HB1-032941-31]
SBDQS0
SBDQS0*/RSV
SBDM0
SBDQ0/SBDQ5
SBDQ1
SBDQ2/SBDQ7
SBDQ3
SBDQ4
SBDQ5/SBDQ0
SBDQ6/SBDQ2
SBDQ7/SBDQ6
SBDQS1
SBDQS1*/RSV
SBDM1
SBDQ8/SBDQ12
SBDQ9/SBDQ13
SBDQ10
SBDQ11
SBDQ12/SBDQ8
SBDQ13/SBDQ9
SBDQ14
SBDQ15
SBDQS2
SBDQS2*/RSV
SBDM2
SBDQ16/SBDQ17
SBDQ17/SBDQ21
SBDQ18/SBDQ19
SBDQ19/SBDQ23
SBDQ20
SBDQ21/SBDQ16
SBDQ22/SBDQ18
SBDQ23/SBDQ22
SBDQS3
SBDQS3*/RSV
SBDM3
SBDQ24/SBDQ25
SBDQ25/SBDQ29
SBDQ26/SBDQ27
SBDQ27/SBDQ31
SBDQ28/SBDQ24
SBDQ29/SBDQ28
SBDQ30/SBDQ26
SBDQ31/SBDQ30
SBDQS4
SBDQS4*/RSV
SBDM4
SBDQ32/SBDQ37
SBDQ33
SBDQ34/SBDQ39
SBDQ35
SBDQ36/SBDQ32
SBDQ37/SBDQ36
SBDQ38/SBDQ34
SBDQ39/SBDQ38
SBDQS5
SBDQS5*/RSV
SBDM5
SBDQ40/SBDQ45
SBDQ41
SBDQ42/SBDQ43
SBDQ43/SBDQ47
SBDQ44/SBDQ40
SBDQ45/SBDQ44
SBDQ46/SBDQ42
SBDQ47/SBDQ46
SBDQS6
SBDQS6*/RSV
SBDM6
SBDQ48/SBDQ49
SBDQ49/SBDQ53
SBDQ50/SBDQ55
SBDQ51
SBDQ52/SBDQ48
SBDQ53/SBDQ52
SBDQ54
SBDQ55/SBDQ50
SBDQS7
SBDQS7*/RSV
SBDM7
SBDQ56/SBDQ61
SBDQ57
SBDQ58/SBDQ63
SBDQ59
SBDQ60
SBDQ61/SBDQ56
SBDQ62
SBDQ63/SBDQ58
DQSB0 (16,17)
-DQSB0 (16,17)
DMB0 (16,17)
MDB0_MDB5 (16,17)
MDB1 (16,17)
MDB2_MDB7 (16,17)
MDB3 (16,17)
MDB4 (16,17)
MDB5_MDB0 (16,17)
MDB6_MDB2 (16,17)
MDB7_MDB6 (16,17)
DQSB1 (16,17)
-DQSB1 (16,17)
DMB1 (16,17)
MDB8_MDB12 (16,17)
MDB9_MDB13 (16,17)
MDB10 (16,17)
MDB11 (16,17)
MDB12_MDB8 (16,17)
MDB13_MDB9 (16,17)
MDB14 (16,17)
MDB15 (16,17)
DQSB2 (16,17)
-DQSB2 (16,17)
DMB2 (16,17)
MDB16_MDB17 (16,17)
MDB17_MDB21 (16,17)
MDB18_MDB19 (16,17)
MDB19_MDB23 (16,17)
MDB20 (16,17)
MDB21_MDB16 (16,17)
MDB22_MDB18 (16,17)
MDB23_MDB22 (16,17)
DQSB3 (16,17)
-DQSB3 (16,17)
DMB3 (16,17)
MDB24_MDB25 (16,17)
MDB25_MDB29 (16,17)
MDB26_MDB27 (16,17)
MDB27_MDB31 (16,17)
MDB28_MDB24 (16,17)
MDB29_MDB28 (16,17)
MDB30_MDB26 (16,17)
MDB31_MDB30 (16,17)
DQSB4 (16,17)
-DQSB4 (16,17)
DMB4 (16,17)
MDB32_MDB37 (16,17)
MDB33 (16,17)
MDB34_MDB39 (16,17)
MDB35 (16,17)
MDB36_MDB32 (16,17)
MDB37_MDB36 (16,17)
MDB38_MDB34 (16,17)
MDB39_MDB38 (16,17)
DQSB5 (16,17)
-DQSB5 (16,17)
DMB5 (16,17)
MDB40_MDB45 (16,17)
MDB41 (16,17)
MDB42_MDB43 (16,17)
MDB43_MDB47 (16,17)
MDB44_MDB40 (16,17)
MDB45_MDB44 (16,17)
MDB46_MDB42 (16,17)
MDB47_MDB46 (16,17)
DQSB6 (16,17)
-DQSB6 (16,17)
DMB6 (16,17)
MDB48_MDB49 (16,17)
MDB49_MDB53 (16,17)
MDB50_MDB55 (16,17)
MDB51 (16,17)
MDB52_MDB48 (16,17)
MDB53_MDB52 (16,17)
MDB54 (16,17)
MDB55_MDB50 (16,17)
DQSB7 (16,17)
-DQSB7 (16,17)
DMB7 (16,17)
MDB56_MDB61 (16,17)
MDB57 (16,17)
MDB58_MDB63 (16,17)
MDB59 (16,17)
MDB60 (16,17)
MDB61_MDB56 (16,17)
MDB62 (16,17)
MDB63_MDB58 (16,17)
SC6
0.1U/6/Y/25V/X
R621 0/6
R622 0/6
Q274
2N7002/S/X
Q275
2N7002/S/X
(12,15,16,33) -DDR2DET
Trace Length Need < 1.5"
Trace Width Need > 10mils
Trace Space Need > 10mils
Trace Lenth Need < 200mils
Trace Width Need = 5mils
Trace Space Need > 10mils
R118 1K/6/1
R119 1K/6/1
R120 0/SHT/X
R121 1K/6/1/X
R122 1K/6/1/X
BC45 0.1U/6/Y/25V
BC46 1U/6/Y/16V/X
BC47 1U/6/Y/16V/X
BC48 0.1U/6/Y/25V
R123 80.6/6/1 SMRCOMPN
BC49 0.1U/6/Y/25V
R124 80.6/6/1 SMRCOMPP
DDR18V
DDRVREFA
DDRVREFB
SMRCOMPN
SMRCOMPP
GIGABYTE
Title
GMCH-DDR
Size Custom
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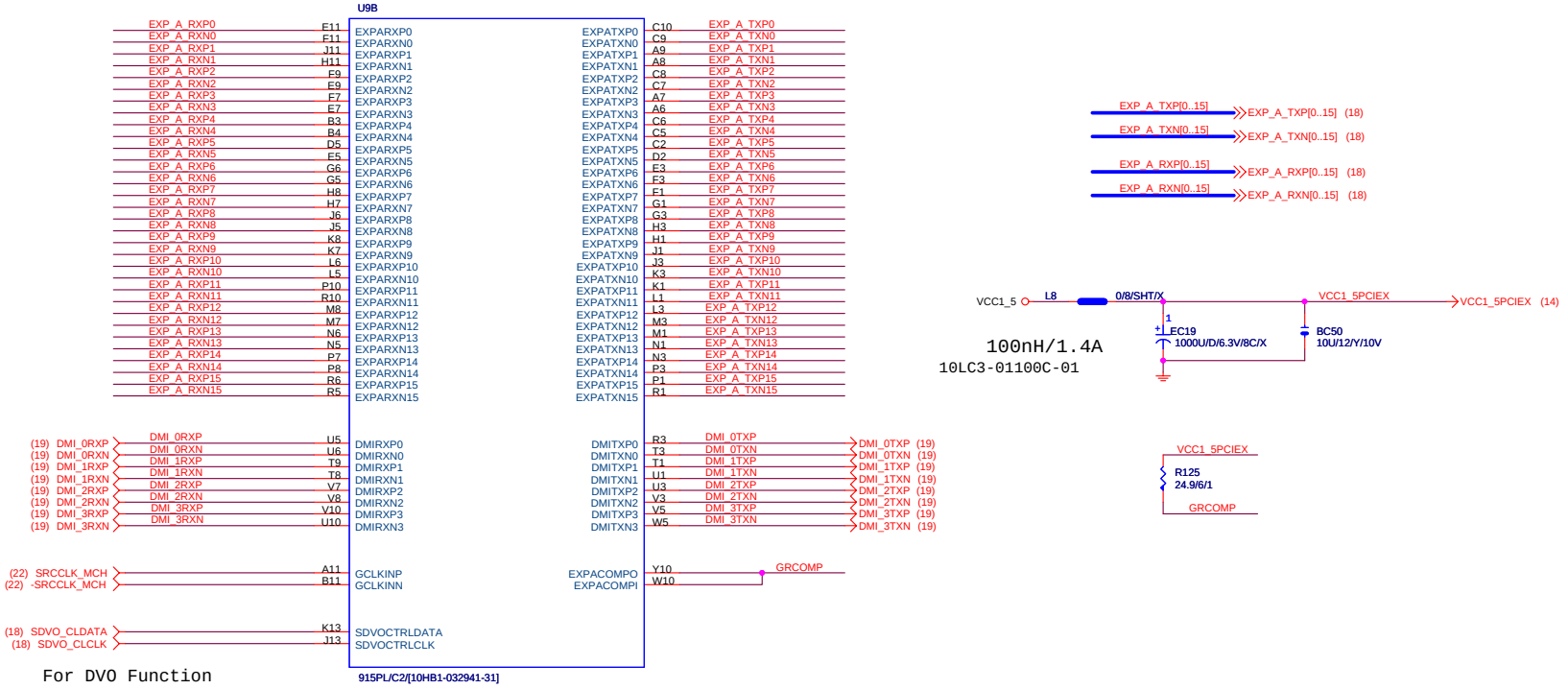

GIGABYTE		
Title	GMCH-PCI E & DMI	
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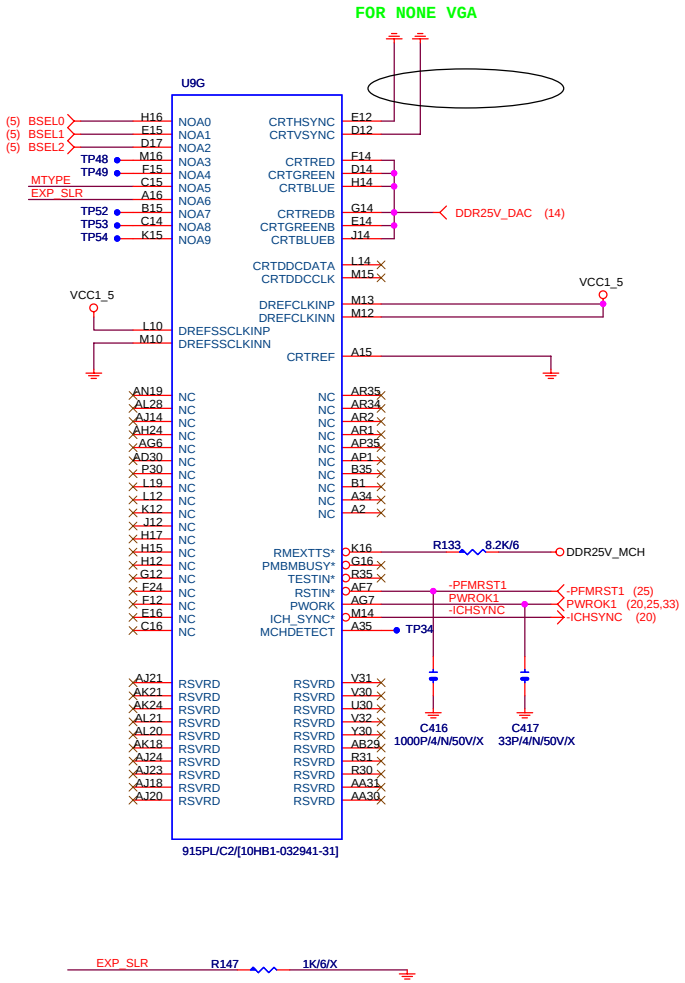
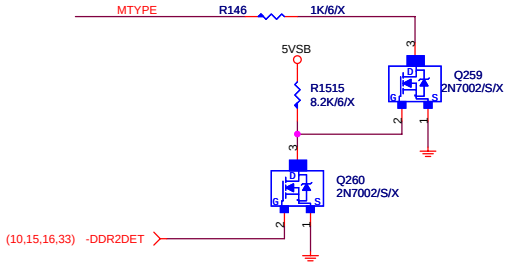
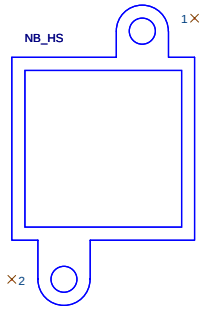
FOR NONE VGA





When -DDR2DET=0, MTYPE --> 0
When -DDR2DET=1, MTYPE --> 1



NEW_HS/[12SP2-04E003-01_12SP2-04E003-02_12SP2-04E003-03]

GIGABYTE		
Title: GMCH-INTERNAL VGA		
Size: Custom	Document Number: 8I915PL-G	Rev: 2.0
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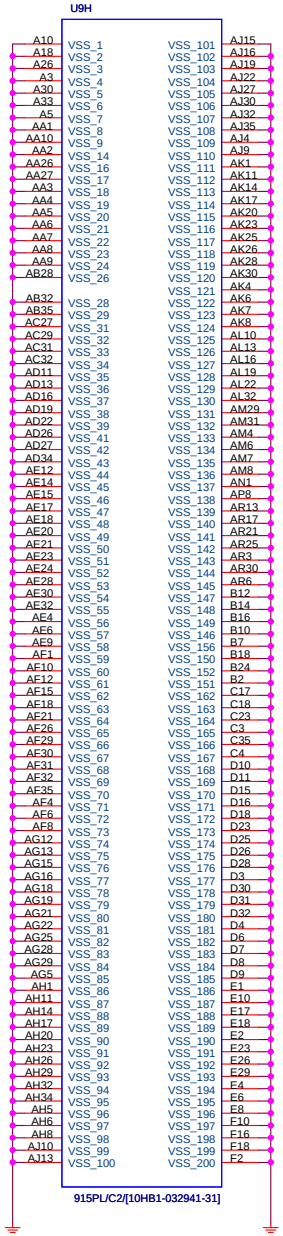

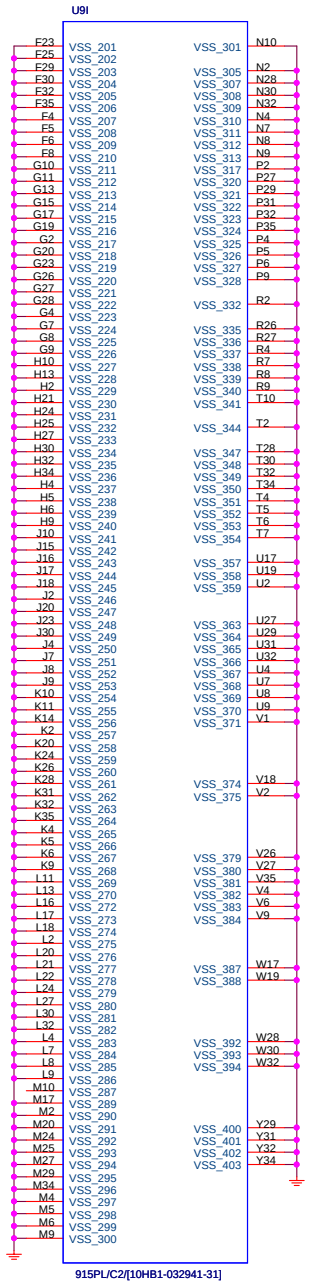

GIGABYTE

Title	GMCH-GND	
Size: Custom	Document Number: 8I915PL-G	Rev: 2.0
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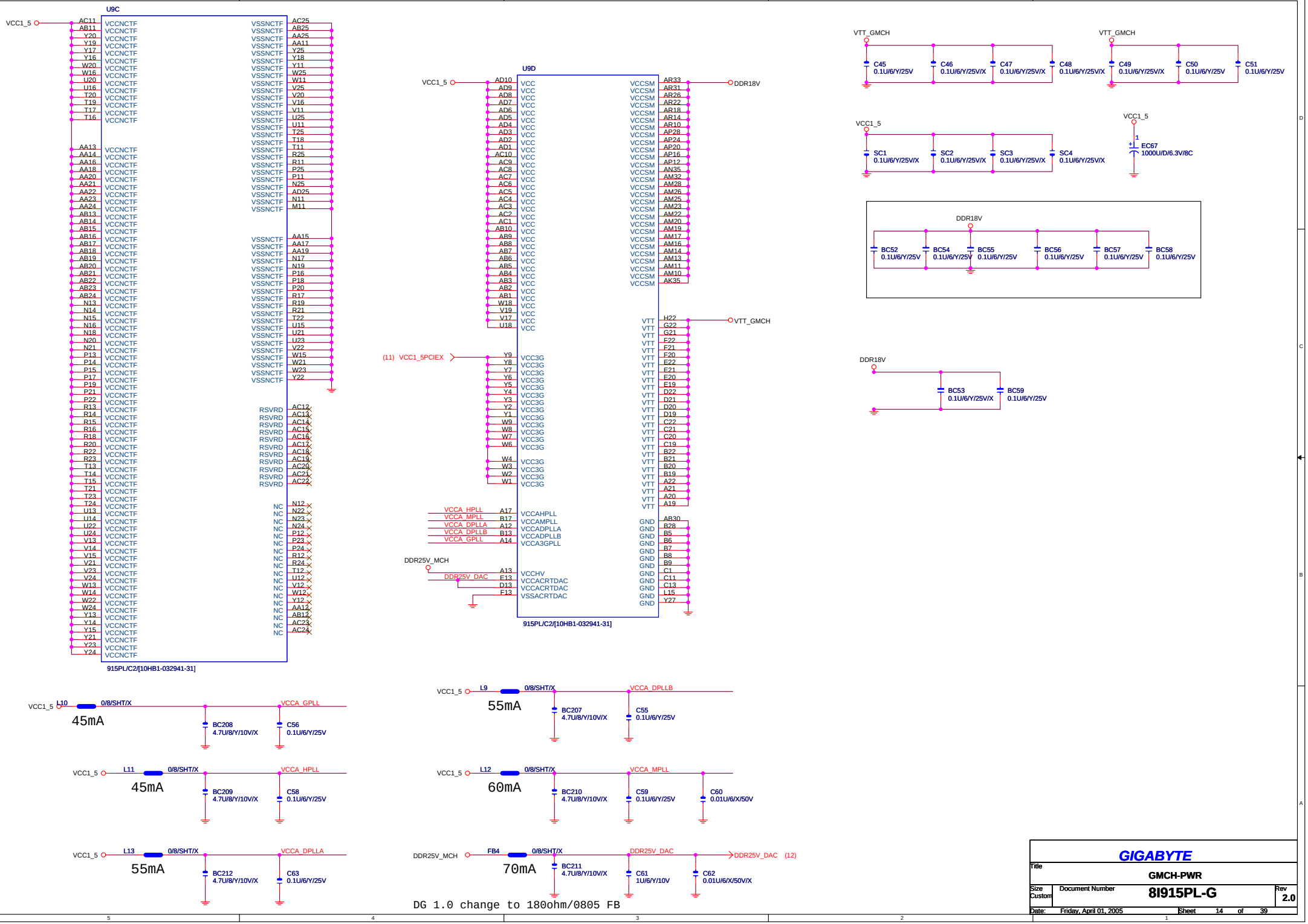
U9C
VCC1_5
VCCNCTF
VSSNCTF
RSVRD
NC
915PL/C2/[10HB1-032941-31]
U9D
VCC1_5
DDR18V
(11) VCC1_5PCIEX
VCC
VCC3G
VTT
VTT_GMCH
VCCA_HPLL
VCCA_MPLL
VCCA_DPLLA
VCCA_DPLLB
VCCA_GPLL
VCCAHPLL
VCCAMPLL
VCCADPLLA
VCCADPLLB
VCCA3GPLL
DDR25V_MCH
DDR25V_DAC
VCCHV
VCCACRTDAC
VSSACRTDAC
GND
915PL/C2/[10HB1-032941-31]
VTT_GMCH
C45 0.1U/6/Y/25V
C46 0.1U/6/Y/25V/X
C47 0.1U/6/Y/25V/X
C48 0.1U/6/Y/25V/X
C49 0.1U/6/Y/25V/X
C50 0.1U/6/Y/25V
C51 0.1U/6/Y/25V
VCC1_5
SC1 0.1U/6/Y/25V/X
SC2 0.1U/6/Y/25V/X
SC3 0.1U/6/Y/25V/X
SC4 0.1U/6/Y/25V/X
EC67 1000U/D/6.3V/8C
DDR18V
BC52 0.1U/6/Y/25V
BC54 0.1U/6/Y/25V
BC55 0.1U/6/Y/25V
BC56 0.1U/6/Y/25V
BC57 0.1U/6/Y/25V
BC58 0.1U/6/Y/25V
DDR18V
BC53 0.1U/6/Y/25V/X
BC59 0.1U/6/Y/25V
VCC1_5 L10 0/8/SHT/X VCCA_GPLL
45mA
BC208 4.7U/8/Y/10V/X
C56 0.1U/6/Y/25V
VCC1_5 L9 0/8/SHT/X VCCA_DPLLB
55mA
BC207 4.7U/8/Y/10V/X
C55 0.1U/6/Y/25V
VCC1_5 L11 0/8/SHT/X VCCA_HPLL
45mA
BC209 4.7U/8/Y/10V/X
C58 0.1U/6/Y/25V
VCC1_5 L12 0/8/SHT/X VCCA_MPLL
60mA
BC210 4.7U/8/Y/10V/X
C59 0.1U/6/Y/25V
C60 0.01U/6/X/50V
VCC1_5 L13 0/8/SHT/X VCCA_DPLLA
55mA
BC212 4.7U/8/Y/10V/X
C63 0.1U/6/Y/25V
DDR25V_MCH FB4 0/8/SHT/X DDR25V_DAC DDR25V_DAC (12)
70mA
BC211 4.7U/8/Y/10V/X
C61 1U/6/Y/10V
C62 0.01U/6/X/50V/X
DG 1.0 change to 180ohm/0805 FB
GIGABYTE
Title
GMCH-PWR
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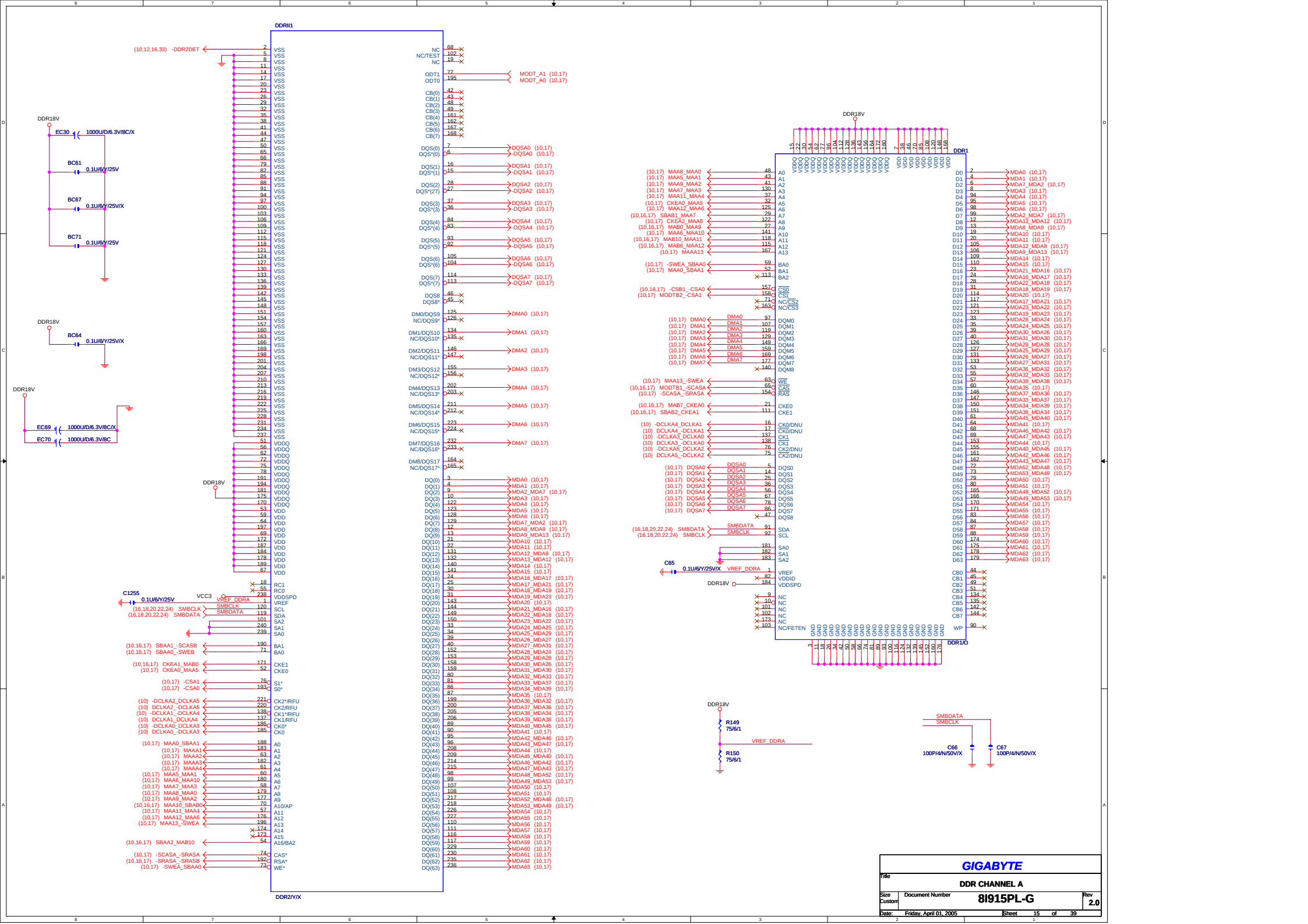
DDRII1
DDR2/Y/X
DDR1
DDR1/O
DDR18V
EC30 1000U/D/6.3V/8C/X
BC61 0.1U/6/Y/25V
BC67 0.1U/6/Y/25V/X
BC71 0.1U/6/Y/25V
BC64 0.1U/6/Y/25V/X
EC69 1000U/D/6.3V/8C/X
EC70 1000U/D/6.3V/8C
C1255 0.1U/6/Y/25V
C65 0.1U/6/Y/25V/X
C66 100P/4/N/50V/X
C67 100P/4/N/50V/X
R149 75/6/1
R150 75/6/1
VREF_DDRA
SMBDATA
SMBCLK
VCC3
(10,12,16,33) -DDR2DET
(10,17) MAA0_SBAA1
(10,17) MAA1_SBAA2
(10,17) MAA2_SBAA3
(10,17) MAA3_SBAA4
(10,17) MAA4_MAA5
(10,17) MAA5_MAA1
(10,17) MAA6_MAA10
(10,17) MAA7_MAA3
(10,17) MAA8_MAA0
(10,17) MAA9_MAA2
(10,16,17) MAA10_SBAB0
(10,17) MAA11_MAA4
(10,17) MAA12_MAA6
(10,17) MAA13_-SWEA
(10,16,17) SBAA2_MAB10
(10,17) -SCASA_-SRASA
(10,16,17) -SRASA_-SRASB
(10,17) -SWEA_SBAA0
(10,16,17) SBAA1_-SCASB
(10,16,17) SBAA0_-SWEB
(10,16,17) CKEA1_MAB0
(10,17) CKEA0_MAA5
(10,17) -CSA1
(10,17) -CSA0
(10) -DCLKA2_DCLKA5
(10) DCLKA2_-DCLKA5
(10) -DCLKA1_-DCLKA4
(10) DCLKA1_DCLKA4
(10) -DCLKA0_DCLKA3
(10) DCLKA0_-DCLKA3
(16,18,20,22,24) SMBCLK
(16,18,20,22,24) SMBDATA
(10,16,17) MAB8_MAA0
(10,16,17) MAB9_MAA2
(10,16,17) MAB10_MAA11
(10,16,17) MAB6_MAA12
(10,17) MAAA13
(10,17) -SWEA_SBAA0
(10,17) MAA0_SBAA1
(10,16,17) -CSB1_-CSA0
(10,17) MODTB2_-CSA1
(10,17) MAA13_-SWEA
(10,16,17) MODTB1_-SCASA
(10,17) -SCASA_-SRASA
(10,16,17) MAB7_CKEA0
(10,16,17) SBAB2_CKEA1
(10) -DCLKA4_DCLKA1
(10) DCLKA4_-DCLKA1
(10) -DCLKA3_DCLKA0
(10) DCLKA3_-DCLKA0
(10) -DCLKA5_DCLKA2
(10) DCLKA5_-DCLKA2
(10,17) DQSA0
(10,17) DQSA1
(10,17) DQSA2
(10,17) DQSA3
(10,17) DQSA4
(10,17) DQSA5
(10,17) DQSA6
(10,17) DQSA7
(16,18,20,22,24) SMBDATA
(16,18,20,22,24) SMBCLK
MODT_A1 (10,17)
MODT_A0 (10,17)
DQSA0 (10,17)
-DQSA0 (10,17)
DQSA1 (10,17)
-DQSA1 (10,17)
DQSA2 (10,17)
-DQSA2 (10,17)
DQSA3 (10,17)
-DQSA3 (10,17)
DQSA4 (10,17)
-DQSA4 (10,17)
DQSA5 (10,17)
-DQSA5 (10,17)
DQSA6 (10,17)
-DQSA6 (10,17)
DQSA7 (10,17)
-DQSA7 (10,17)
DMA0 (10,17)
DMA1 (10,17)
DMA2 (10,17)
DMA3 (10,17)
DMA4 (10,17)
DMA5 (10,17)
DMA6 (10,17)
DMA7 (10,17)
MDA0 (10,17)
MDA1 (10,17)
MDA2_MDA7 (10,17)
MDA3 (10,17)
MDA4 (10,17)
MDA5 (10,17)
MDA6 (10,17)
MDA7_MDA2 (10,17)
MDA8_MDA9 (10,17)
MDA9_MDA13 (10,17)
MDA10 (10,17)
MDA11 (10,17)
MDA12_MDA8 (10,17)
MDA13_MDA12 (10,17)
MDA14 (10,17)
MDA15 (10,17)
MDA16_MDA17 (10,17)
MDA17_MDA21 (10,17)
MDA18_MDA19 (10,17)
MDA19_MDA23 (10,17)
MDA20 (10,17)
MDA21_MDA16 (10,17)
MDA22_MDA18 (10,17)
MDA23_MDA22 (10,17)
MDA24_MDA25 (10,17)
MDA25_MDA29 (10,17)
MDA26_MDA27 (10,17)
MDA27_MDA31 (10,17)
MDA28_MDA24 (10,17)
MDA29_MDA28 (10,17)
MDA30_MDA26 (10,17)
MDA31_MDA30 (10,17)
MDA32_MDA33 (10,17)
MDA33_MDA37 (10,17)
MDA34_MDA39 (10,17)
MDA35 (10,17)
MDA36_MDA32 (10,17)
MDA37_MDA36 (10,17)
MDA38_MDA34 (10,17)
MDA39_MDA38 (10,17)
MDA40_MDA45 (10,17)
MDA41 (10,17)
MDA42_MDA46 (10,17)
MDA43_MDA47 (10,17)
MDA44 (10,17)
MDA45_MDA40 (10,17)
MDA46_MDA42 (10,17)
MDA47_MDA43 (10,17)
MDA48_MDA52 (10,17)
MDA49_MDA53 (10,17)
MDA50 (10,17)
MDA51 (10,17)
MDA52_MDA48 (10,17)
MDA53_MDA49 (10,17)
MDA54 (10,17)
MDA55 (10,17)
MDA56 (10,17)
MDA57 (10,17)
MDA58 (10,17)
MDA59 (10,17)
MDA60 (10,17)
MDA61 (10,17)
MDA62 (10,17)
MDA63 (10,17)
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Size Custom
Document Number
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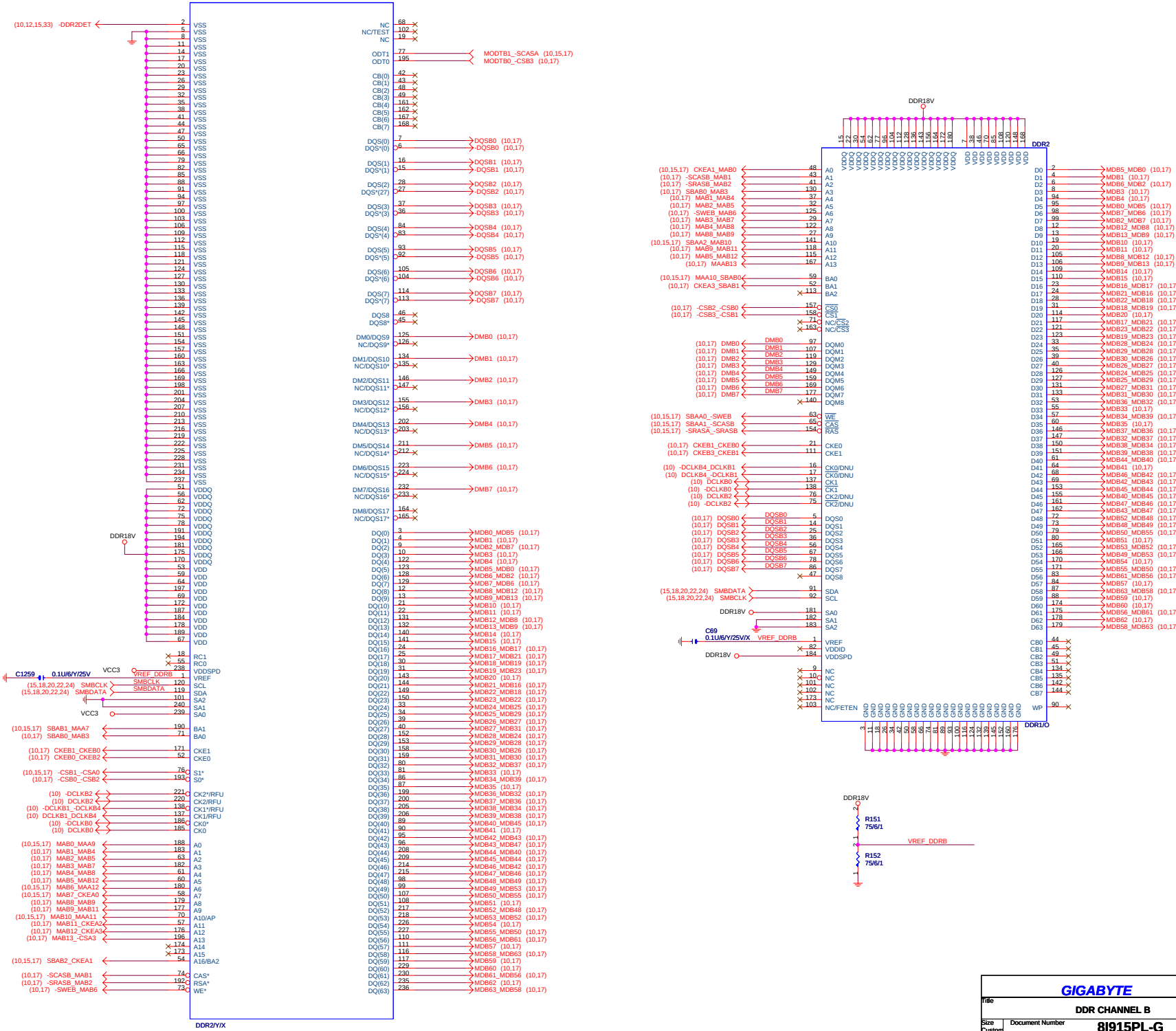
DDRII2
DDR2/Y/X
DDR2
DDR1/O
DDR18V
VCC3
C1259
0.1U/6/Y/25V
C69
0.1U/6/Y/25V/X
R151
75/6/1
R152
75/6/1
VREF_DDRB
GIGABYTE
Title
DDR CHANNEL B
Size
Custom
Document Number
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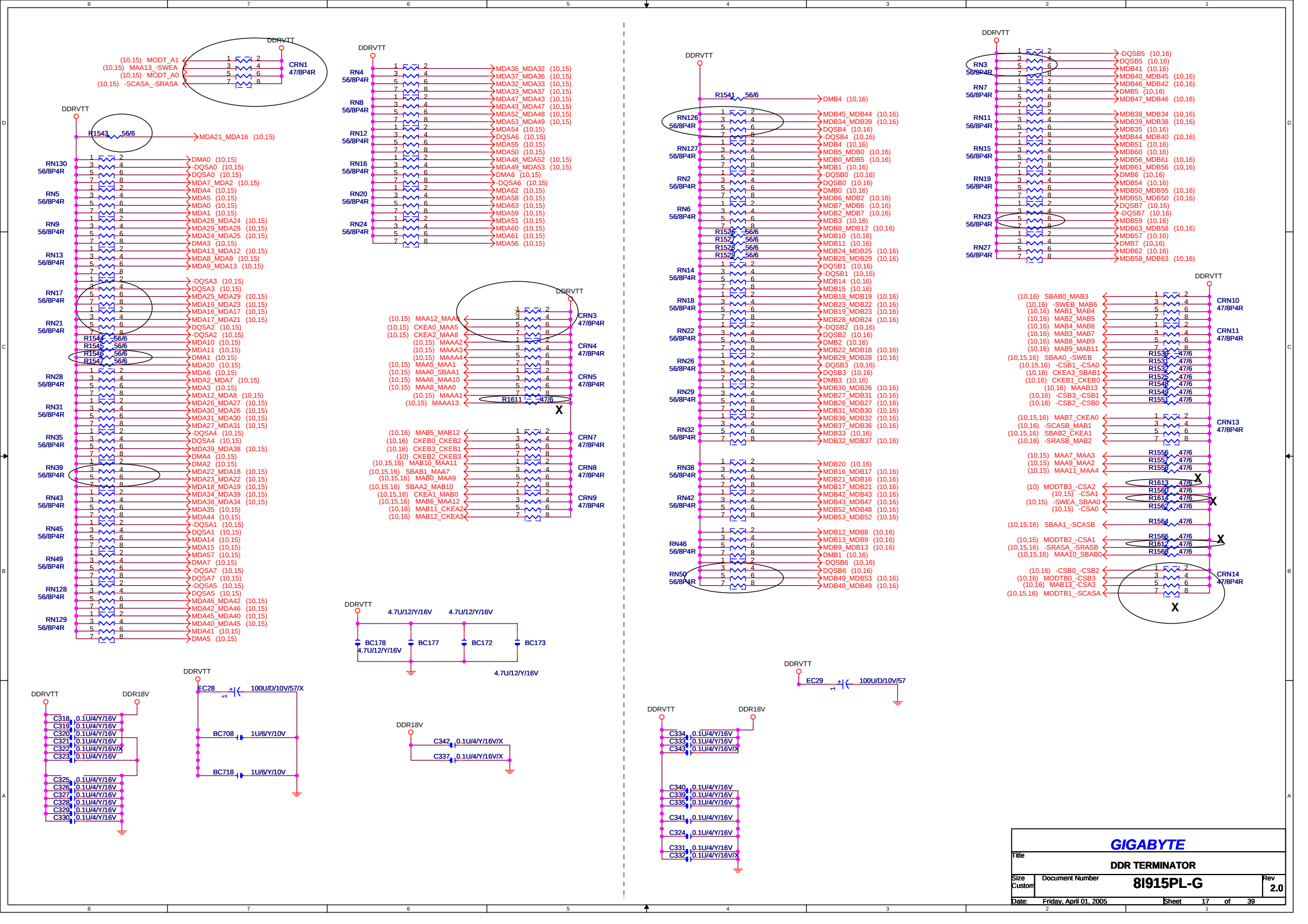
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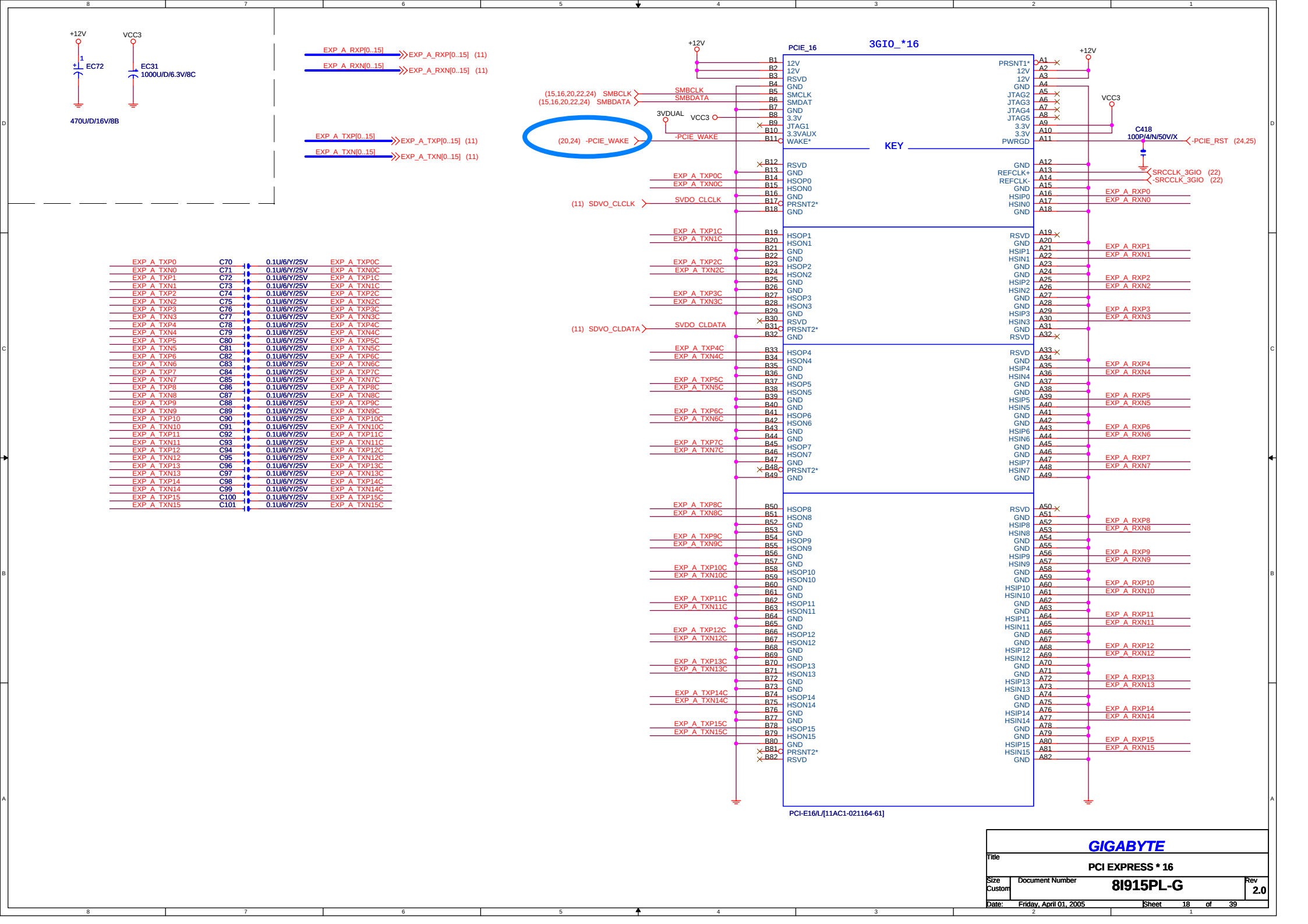
(10,15) MAA13_-SWEA
(10,15) MODT_A0
(10,15) -SCASA_-SRASA
CRN1 47/8P4R
R1543 56/6
MDA21_MDA16 (10,15)
RN130 56/8P4R
RN5 56/8P4R
RN9 56/8P4R
RN13 56/8P4R
RN17 56/8P4R
RN21 56/8P4R
R1544 56/6
R1545 56/6
R1546 56/6
R1547 56/6
RN28 56/8P4R
RN31 56/8P4R
RN35 56/8P4R
RN39 56/8P4R
RN43 56/8P4R
RN45 56/8P4R
RN49 56/8P4R
RN128 56/8P4R
RN129 56/8P4R
DDR18V
C318 0.1U/4/Y/16V
C319 0.1U/4/Y/16V
C320 0.1U/4/Y/16V
C321 0.1U/4/Y/16V
C322 0.1U/4/Y/16V/X
C323 0.1U/4/Y/16V
C325 0.1U/4/Y/16V
C326 0.1U/4/Y/16V
C327 0.1U/4/Y/16V
C328 0.1U/4/Y/16V
C329 0.1U/4/Y/16V
C330 0.1U/4/Y/16V
EC28 100U/D/10V/57/X
BC708 1U/6/Y/10V
BC718 1U/6/Y/10V
RN4 56/8P4R
RN8 56/8P4R
RN12 56/8P4R
RN16 56/8P4R
RN20 56/8P4R
RN24 56/8P4R
CRN3 47/8P4R
CRN4 47/8P4R
CRN5 47/8P4R
R1611 47/6
CRN7 47/8P4R
CRN8 47/8P4R
CRN9 47/8P4R
4.7U/12/Y/16V
BC178 4.7U/12/Y/16V
BC177
BC172
BC173
C342 0.1U/4/Y/16V/X
C337 0.1U/4/Y/16V/X
R1541 56/6
RN126 56/8P4R
RN127 56/8P4R
RN2 56/8P4R
RN6 56/8P4R
R1526 56/6
R1527 56/6
R1528 56/6
R1529 56/6
RN14 56/8P4R
RN18 56/8P4R
RN22 56/8P4R
RN26 56/8P4R
RN29 56/8P4R
RN32 56/8P4R
RN38 56/8P4R
RN42 56/8P4R
RN46 56/8P4R
RN50 56/8P4R
EC29 100U/D/10V/57
C334 0.1U/4/Y/16V
C333 0.1U/4/Y/16V
C343 0.1U/4/Y/16V/X
C340 0.1U/4/Y/16V
C339 0.1U/4/Y/16V
C335 0.1U/4/Y/16V
C341 0.1U/4/Y/16V
C324 0.1U/4/Y/16V
C331 0.1U/4/Y/16V
C332 0.1U/4/Y/16V/X
RN3 56/8P4R
RN7 56/8P4R
RN11 56/8P4R
RN15 56/8P4R
RN19 56/8P4R
RN23 56/8P4R
RN27 56/8P4R
CRN10 47/8P4R
CRN11 47/8P4R
R1530 47/6
R1531 47/6
R1532 47/6
R1525 47/6
R1548 47/6
R1549 47/6
R1551 47/6
CRN13 47/8P4R
R1556 47/6
R1557 47/6
R1558 47/6
R1613 47/6
R1560 47/6
R1614 47/6
R1562 47/6
R1564 47/6
R1566 47/6
R1612 47/6
R1568 47/6
CRN14 47/8P4R
GIGABYTE
Title
DDR TERMINATOR
Size Custom
Document Number 8I915PL-G
Rev 2.0
Date: Friday, April 01, 2005
Sheet 17 of 39


+12V
VCC3
EC72
EC31
1000U/D/6.3V/8C
470U/D/16V/8B
EXP_A_RXP[0..15]
EXP_A_RXP[0..15] (11)
EXP_A_RXN[0..15]
EXP_A_RXN[0..15] (11)
EXP_A_TXP[0..15]
EXP_A_TXP[0..15] (11)
EXP_A_TXN[0..15]
EXP_A_TXN[0..15] (11)
PCIE_16
3GIO_*16
KEY
SMBCLK
SMBDATA
3VDUAL
-PCIE_WAKE
SVDO_CLCLK
SVDO_CLDATA
C418
100P/4/N/50V/X
-PCIE_RST (24,25)
SRCCLK_3GIO (22)
-SRCCLK_3GIO (22)
PCI-E16/L/[11AC1-021164-61]
C70
C71
C72
C73
C74
C75
C76
C77
C78
C79
C80
C81
C82
C83
C84
C85
C86
C87
C88
C89
C90
C91
C92
C93
C94
C95
C96
C97
C98
C99
C100
C101
0.1U/6/Y/25V
GIGABYTE
Title
PCI EXPRESS * 16
Size
Custom
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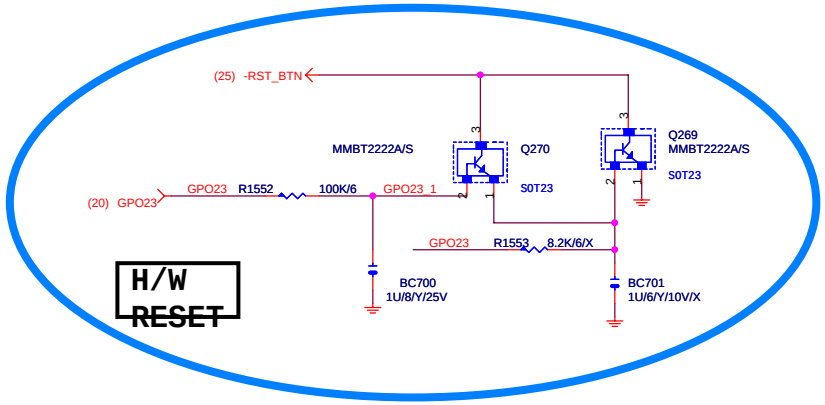
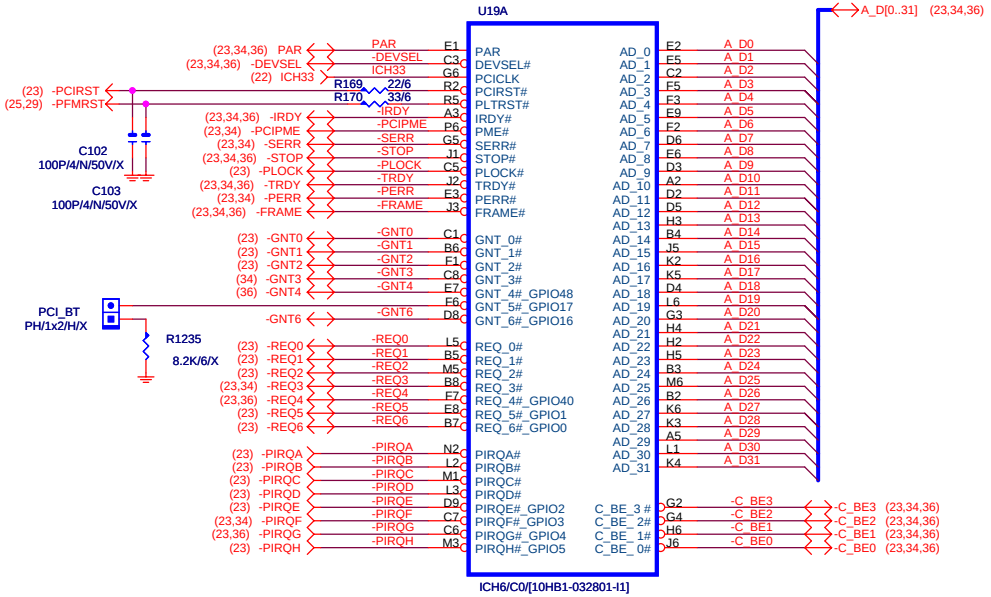
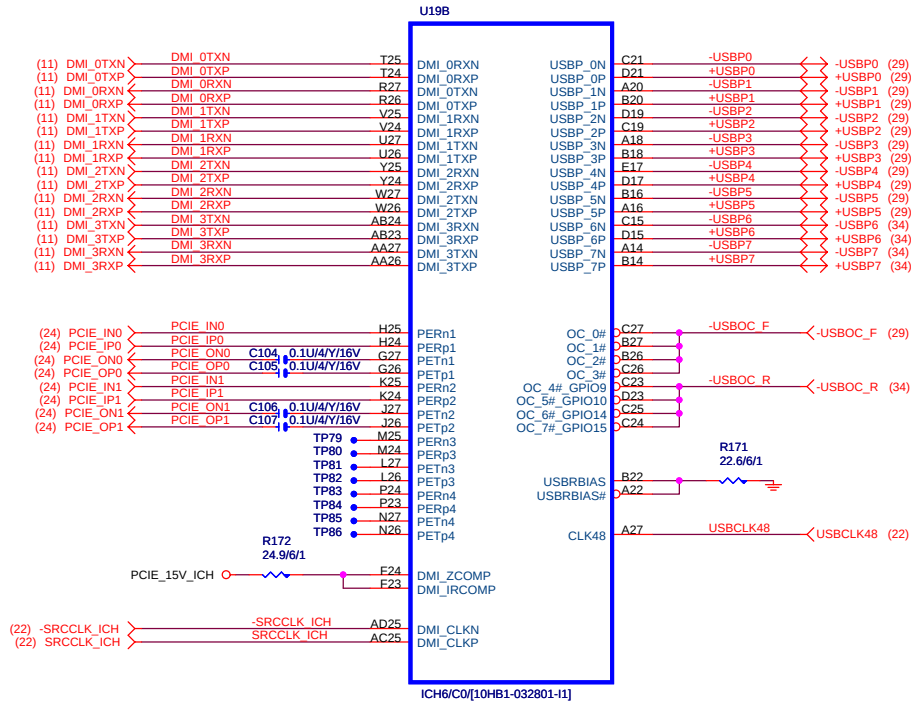
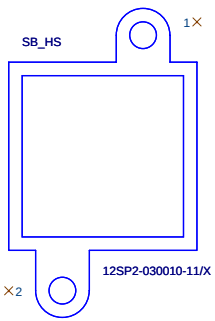


DMI Connection Note
GMCH TX Pin Need Connect to ICH6 RX Pin
ICH6 TX Pin Need Connect to GMCH RX Pin







GIGABYTE		
Title	ICH6-PCI, DMI, LAN, USB	
Size: B	Document Number: 8I915PL-G	Rev: 2.0
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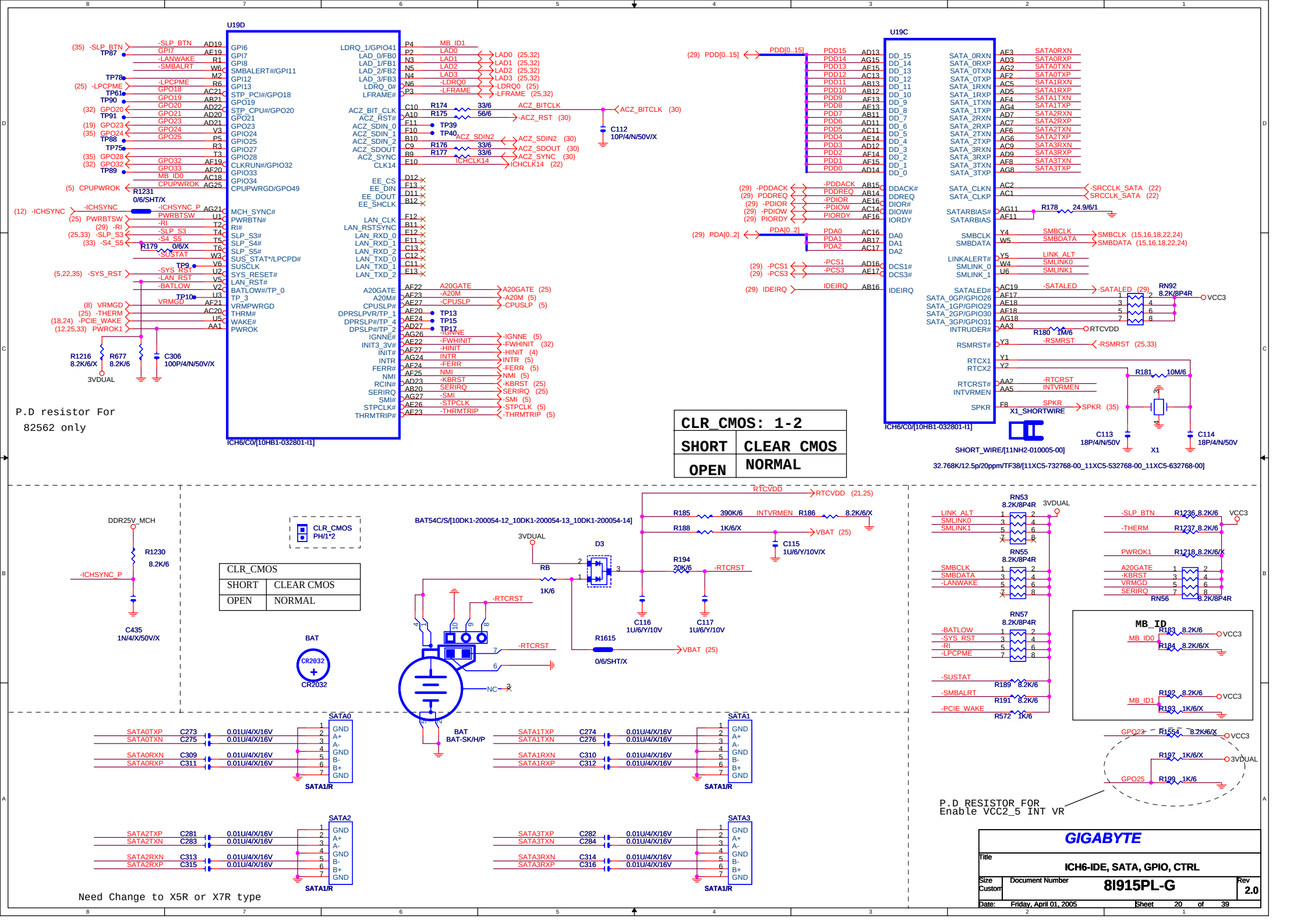

Title	ICH6-IDE, SATA, GPIO, CTRL
Size: Custom	Document Number: 8I915PL-G
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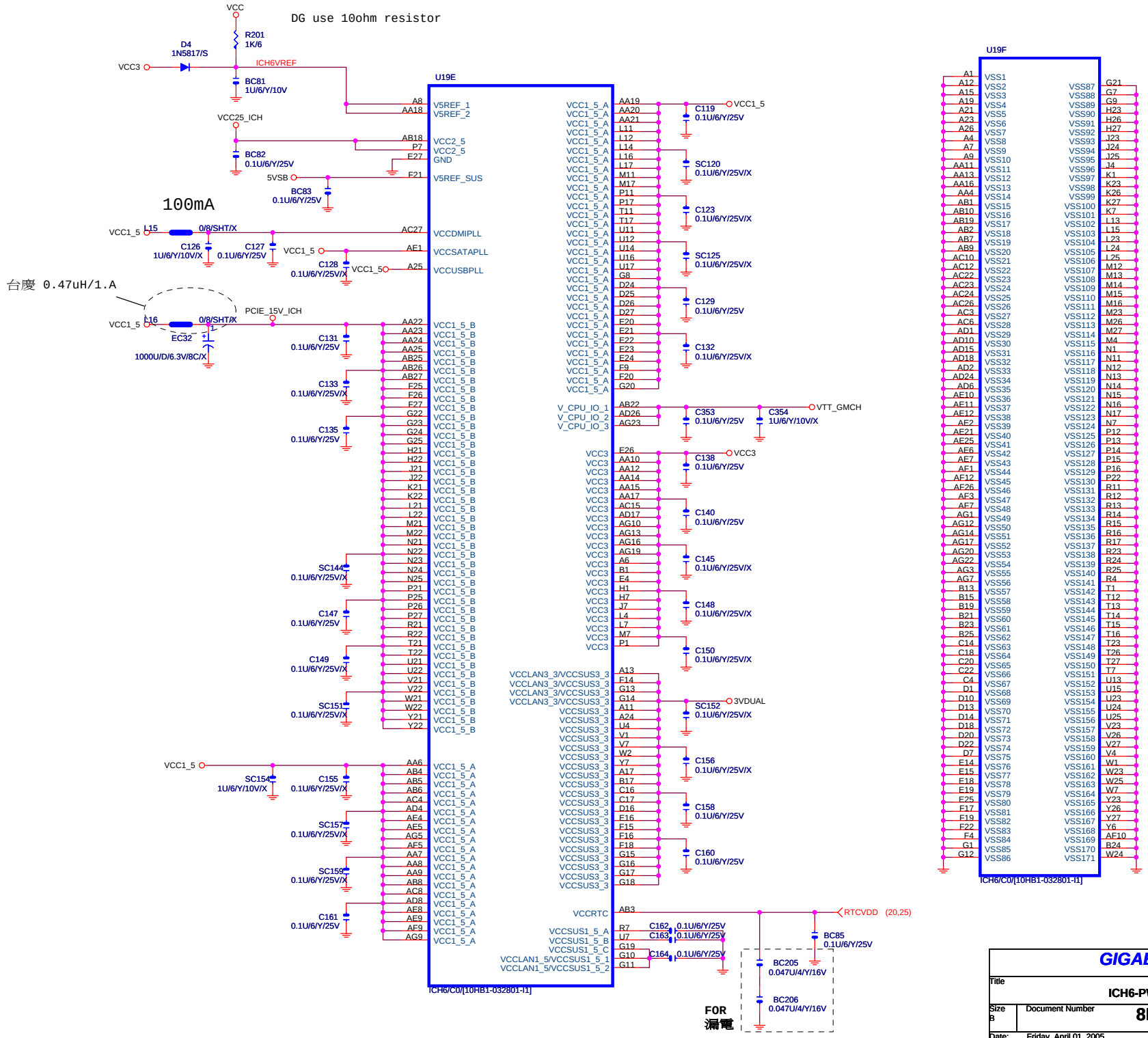
Date: Friday, April 01, 2005	Sheet 20 of 39


DG use 10ohm resistor
100mA
台慶 0.47uH/1.A
U19E
U19F
ICH6/C0/[10HB1-032801-I1]
VCC
VCC3
VCC1_5
VCC2_5
VCC25_ICH
5VSB
R201
1K/6
D4
1N5817/S
ICH6VREF
BC81
1U/6/Y/10V
BC82
0.1U/6/Y/25V
BC83
0.1U/6/Y/25V
L15
L16
0/8/SHT/X
PCIE_15V_ICH
EC32
1000U/D/6.3V/8C/X
C126
1U/6/Y/10V/X
C127
0.1U/6/Y/25V
C128
0.1U/6/Y/25V/X
C131
0.1U/6/Y/25V
C133
0.1U/6/Y/25V/X
C135
0.1U/6/Y/25V
SC144
0.1U/6/Y/25V/X
C147
0.1U/6/Y/25V
C149
0.1U/6/Y/25V/X
SC151
0.1U/6/Y/25V/X
SC154
1U/6/Y/10V/X
C155
0.1U/6/Y/25V/X
SC157
0.1U/6/Y/25V/X
SC159
0.1U/6/Y/25V/X
C161
0.1U/6/Y/25V
C119
0.1U/6/Y/25V
SC120
0.1U/6/Y/25V/X
C123
0.1U/6/Y/25V/X
SC125
0.1U/6/Y/25V/X
C129
0.1U/6/Y/25V
C132
0.1U/6/Y/25V/X
C353
0.1U/6/Y/25V
C354
1U/6/Y/10V/X
VTT_GMCH
C138
0.1U/6/Y/25V
C140
0.1U/6/Y/25V
C145
0.1U/6/Y/25V/X
C148
0.1U/6/Y/25V/X
C150
0.1U/6/Y/25V/X
SC152
0.1U/6/Y/25V/X
3VDUAL
C156
0.1U/6/Y/25V/X
C158
0.1U/6/Y/25V
C160
0.1U/6/Y/25V
C162
0.1U/6/Y/25V
C163
0.1U/6/Y/25V
C164
0.1U/6/Y/25V
BC85
0.1U/6/Y/25V
BC205
0.047U/4/Y/16V
BC206
0.047U/4/Y/16V
RTCVDD (20,25)
FOR 漏電
V5REF_1
V5REF_2
VCC2_5
GND
V5REF_SUS
VCCDMIPLL
VCCSATAPLL
VCCUSBPLL
VCCRTC
VCCSUS1_5_A
VCCSUS1_5_B
VCCSUS1_5_C
VCCLAN1_5/VCCSUS1_5_1
VCCLAN1_5/VCCSUS1_5_2
V_CPU_IO_1
V_CPU_IO_2
V_CPU_IO_3
VCCLAN3_3/VCCSUS3_3
ICH6/C0/[10HB1-032801-I1]
GIGABYTE
Title
ICH6-PWR & GND
Size
B
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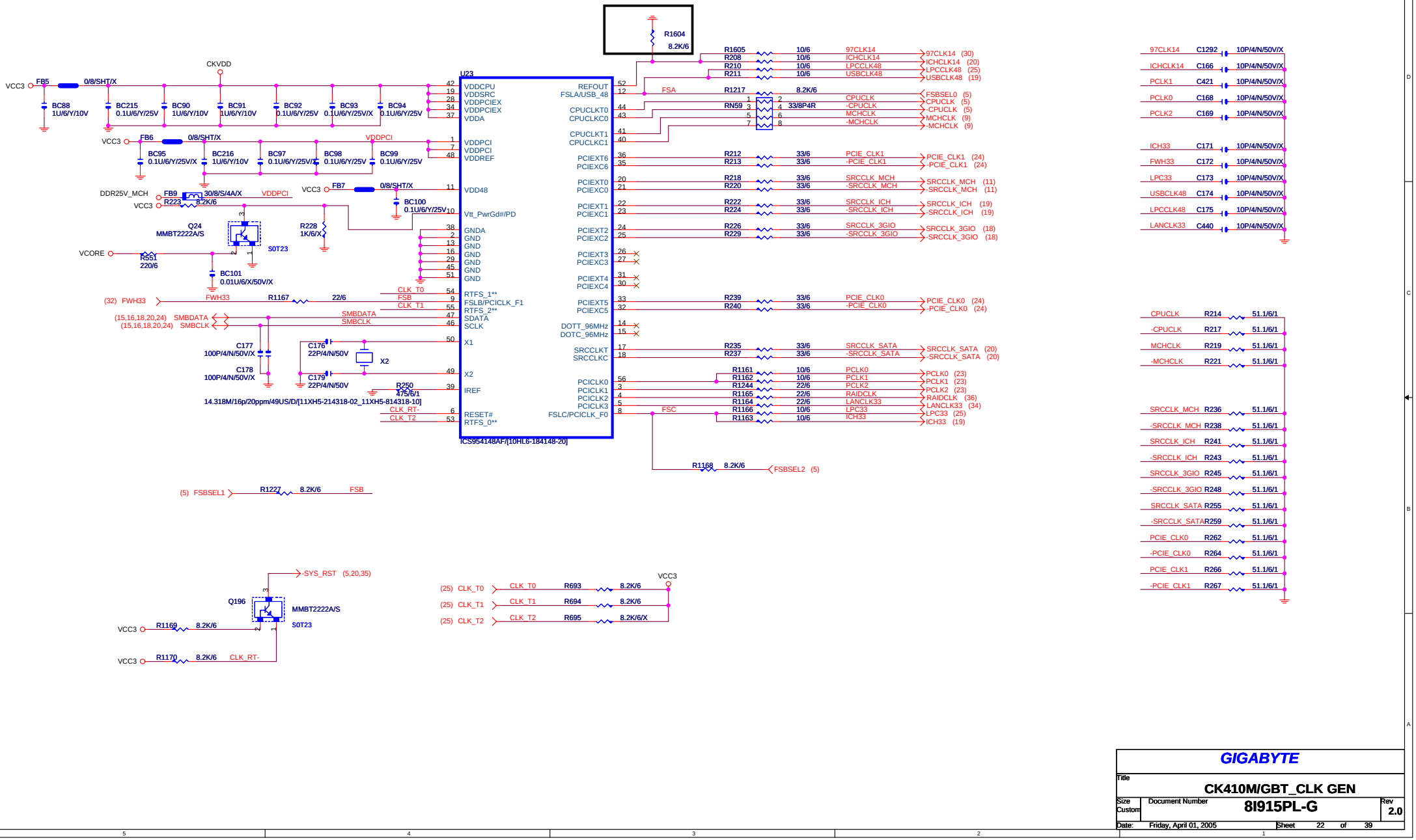
U23
ICS954148AF-[10HL6-184148-20]
R1604 8.2K/6
CKVDD
VCC3
FB5 0/8/SHT/X
BC88 1U/6/Y/10V
BC215 0.1U/6/Y/25V
BC90 1U/6/Y/10V
BC91 1U/6/Y/10V
BC92 0.1U/6/Y/25V
BC93 0.1U/6/Y/25V/X
BC94 0.1U/6/Y/25V
FB6 0/8/SHT/X
VDDPCI
BC95 0.1U/6/Y/25V/X
BC216 1U/6/Y/10V
BC97 0.1U/6/Y/25V/X
BC98 0.1U/6/Y/25V
BC99 0.1U/6/Y/25V
DDR25V_MCH
FB9 30/8/S/4A/X
R223 8.2K/6
FB7 0/8/SHT/X
BC100 0.1U/6/Y/25V
Q24 MMBT2222A/S
S0T23
R228 1K/6/X
VCORE
R551 220/6
BC101 0.01U/6/X/50V/X
(32) FWH33
R1167 22/6
(15,16,18,20,24) SMBDATA
(15,16,18,20,24) SMBCLK
C177 100P/4/N/50V/X
C178 100P/4/N/50V/X
C176 22P/4/N/50V
C179 22P/4/N/50V
X2
R250 475/6/1
14.318M/16p/20ppm/49US/D/[11XH5-214318-02_11XH5-814318-10]
CLK_RT-
CLK_T2
VDDCPU
VDDSRC
VDDPCIEX
VDDPCIEX
VDDA
VDDPCI
VDDPCI
VDDREF
VDD48
Vtt_PwrGd#/PD
GNDA
GND
RTFS_1**
FSLB/PCICLK_F1
RTFS_2**
SDATA
SCLK
X1
X2
IREF
RESET#
RTFS_0**
REFOUT
FSLA/USB_48
CPUCLKT0
CPUCLKC0
CPUCLKT1
CPUCLKC1
PCIEXT6
PCIEXC6
PCIEXT0
PCIEXC0
PCIEXT1
PCIEXC1
PCIEXT2
PCIEXC2
PCIEXT3
PCIEXC3
PCIEXT4
PCIEXC4
PCIEXT5
PCIEXC5
DOTT_96MHz
DOTC_96MHz
SRCCLKT
SRCCLKC
PCICLK0
PCICLK1
PCICLK2
PCICLK3
FSLC/PCICLK_F0
FSA
FSC
R1605 10/6 97CLK14 97CLK14 (30)
R208 10/6 ICHCLK14 ICHCLK14 (20)
R210 10/6 LPCCLK48 LPCCLK48 (25)
R211 10/6 USBCLK48 USBCLK48 (19)
R1217 8.2K/6 FSBSEL0 (5)
RN59 33/8P4R CPUCLK CPUCLK (5)
-CPUCLK -CPUCLK (5)
MCHCLK MCHCLK (9)
-MCHCLK -MCHCLK (9)
R212 33/6 PCIE_CLK1 PCIE_CLK1 (24)
R213 33/6 -PCIE_CLK1 -PCIE_CLK1 (24)
R218 33/6 SRCCLK_MCH SRCCLK_MCH (11)
R220 33/6 -SRCCLK_MCH -SRCCLK_MCH (11)
R222 33/6 SRCCLK_ICH SRCCLK_ICH (19)
R224 33/6 -SRCCLK_ICH -SRCCLK_ICH (19)
R226 33/6 SRCCLK_3GIO SRCCLK_3GIO (18)
R229 33/6 -SRCCLK_3GIO -SRCCLK_3GIO (18)
R239 33/6 PCIE_CLK0 PCIE_CLK0 (24)
R240 33/6 -PCIE_CLK0 -PCIE_CLK0 (24)
R235 33/6 SRCCLK_SATA SRCCLK_SATA (20)
R237 33/6 -SRCCLK_SATA -SRCCLK_SATA (20)
R1161 10/6 PCLK0 PCLK0 (23)
R1162 10/6 PCLK1 PCLK1 (23)
R1244 22/6 PCLK2 PCLK2 (23)
R1165 22/6 RAIDCLK RAIDCLK (36)
R1164 22/6 LANCLK33 LANCLK33 (34)
R1166 10/6 LPC33 LPC33 (25)
R1163 10/6 ICH33 ICH33 (19)
R1168 8.2K/6 FSBSEL2 (5)
(5) FSBSEL1
R1227 8.2K/6 FSB
-SYS_RST (5,20,35)
Q196 MMBT2222A/S
S0T23
R1169 8.2K/6
R1170 8.2K/6 CLK_RT-
(25) CLK_T0 CLK_T0 R693 8.2K/6
(25) CLK_T1 CLK_T1 R694 8.2K/6
(25) CLK_T2 CLK_T2 R695 8.2K/6X
97CLK14 C1292 10P/4/N/50V/X
ICHCLK14 C166 10P/4/N/50V/X
PCLK1 C421 10P/4/N/50V/X
PCLK0 C168 10P/4/N/50V/X
PCLK2 C169 10P/4/N/50V/X
ICH33 C171 10P/4/N/50V/X
FWH33 C172 10P/4/N/50V/X
LPC33 C173 10P/4/N/50V/X
USBCLK48 C174 10P/4/N/50V/X
LPCCLK48 C175 10P/4/N/50V/X
LANCLK33 C440 10P/4/N/50V/X
CPUCLK R214 51.1/6/1
-CPUCLK R217 51.1/6/1
MCHCLK R219 51.1/6/1
-MCHCLK R221 51.1/6/1
SRCCLK_MCH R236 51.1/6/1
-SRCCLK_MCH R238 51.1/6/1
SRCCLK_ICH R241 51.1/6/1
-SRCCLK_ICH R243 51.1/6/1
SRCCLK_3GIO R245 51.1/6/1
-SRCCLK_3GIO R248 51.1/6/1
SRCCLK_SATA R255 51.1/6/1
-SRCCLK_SATA R259 51.1/6/1
PCIE_CLK0 R262 51.1/6/1
-PCIE_CLK0 R264 51.1/6/1
PCIE_CLK1 R266 51.1/6/1
-PCIE_CLK1 R267 51.1/6/1
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Title
CK410M/GBT_CLK GEN
Size Custom
Document Number 8I915PL-G
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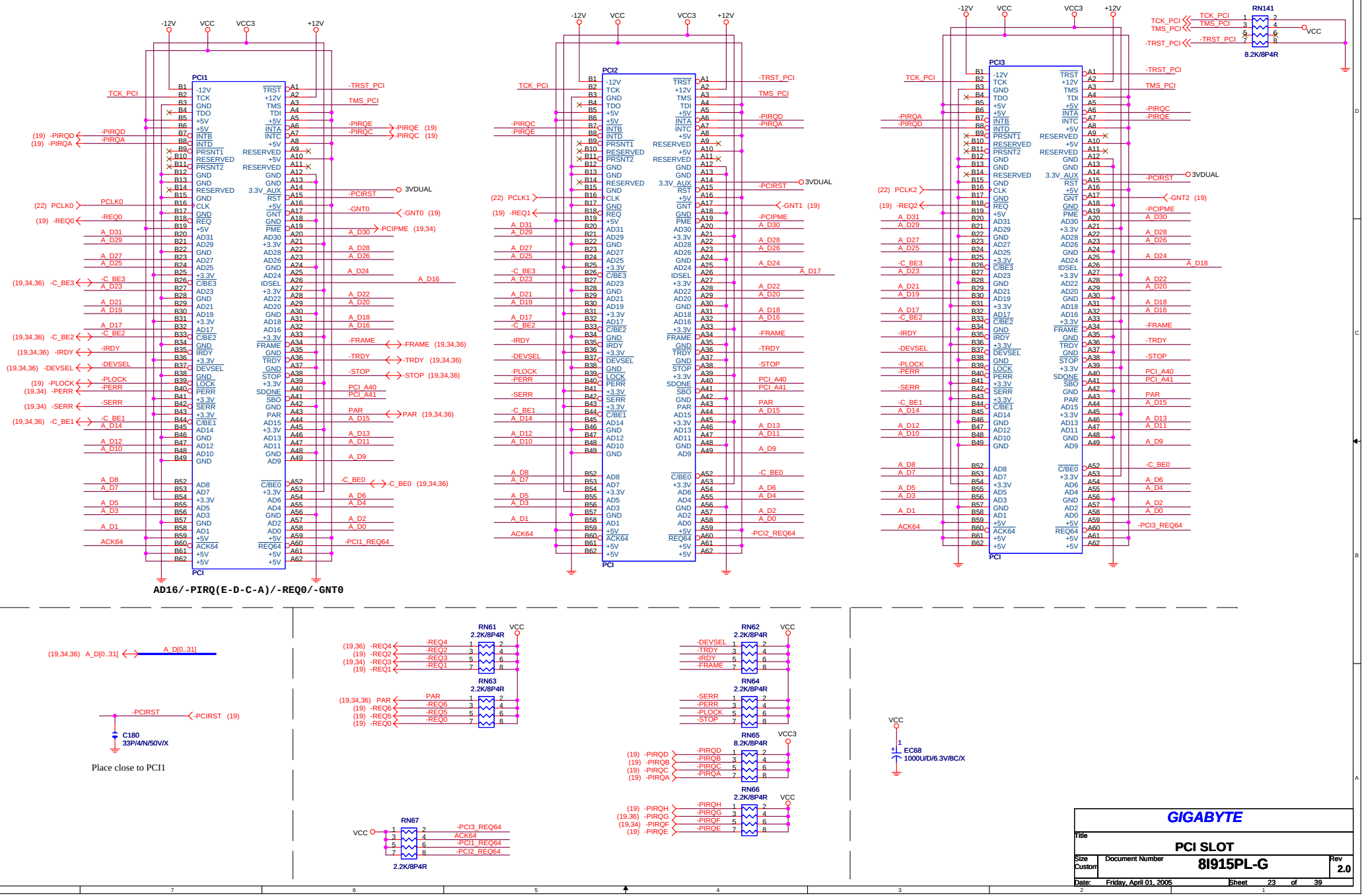

AD16/-PIRQ(E-D-C-A)/-REQ0/-GNT0

GIGABYTE			
Title	PCI SLOT		
Size: Custom	Document Number: 8I915PL-G		Rev: 2.0
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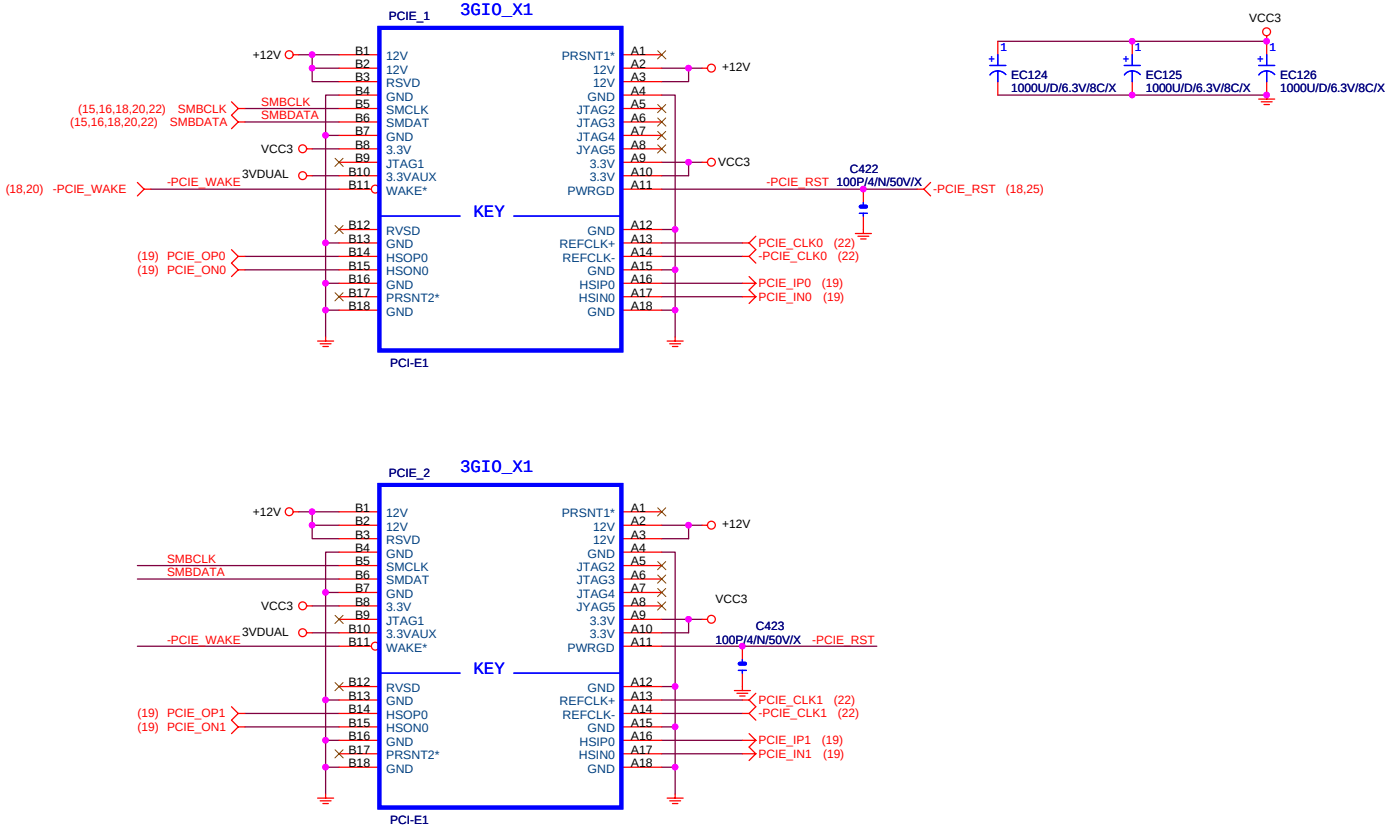

GIGABYTE

Title	PCI E SLOT	
Size B	Document Number 8I915PL-G	Rev 2.0
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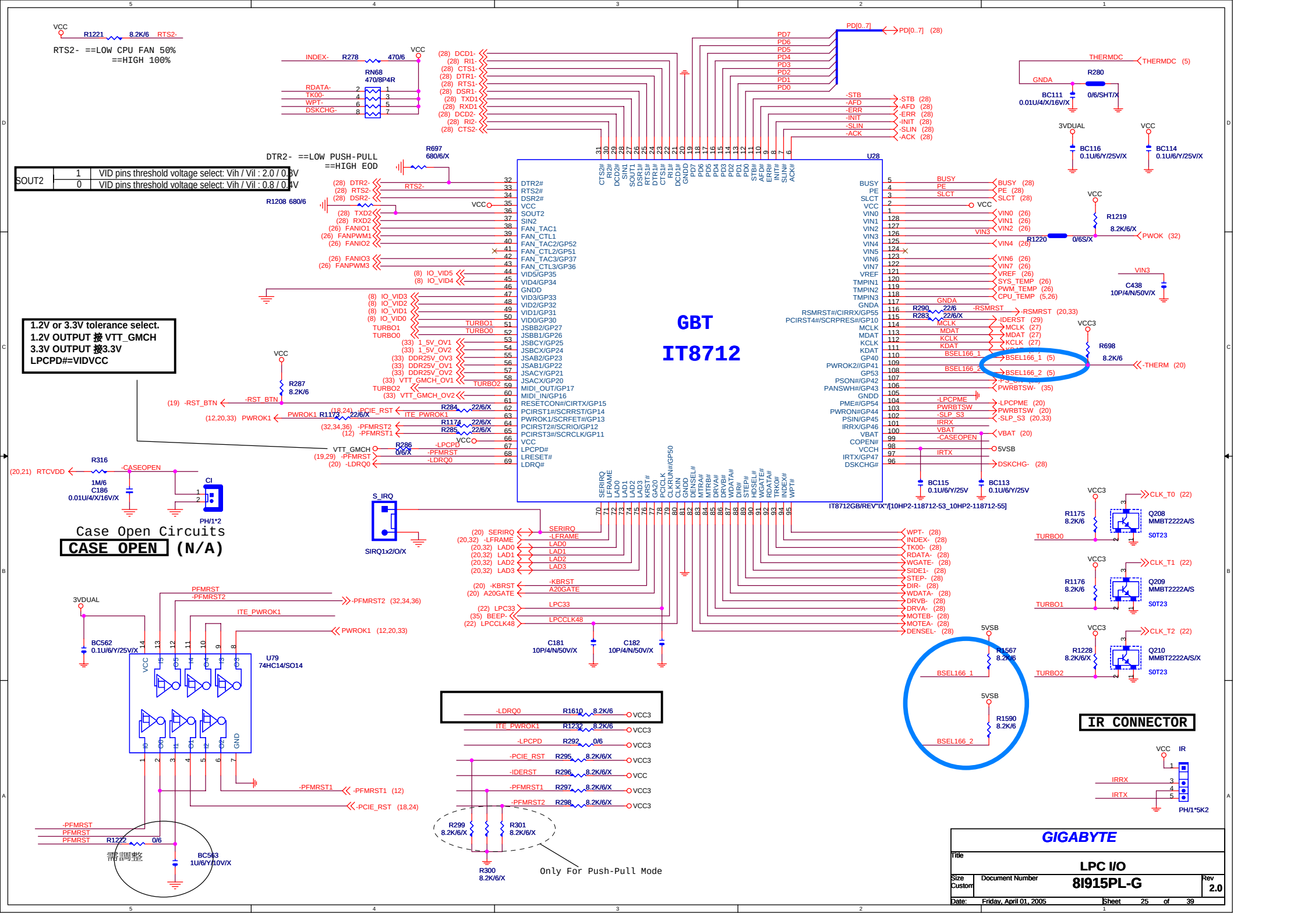
RTS2- ==LOW CPU FAN 50%
==HIGH 100%
R1221 8.2K/6
DTR2- ==LOW PUSH-PULL
==HIGH EOD
SOUT2
1 VID pins threshold voltage select: Vih / Vil : 2.0 / 0.8V
0 VID pins threshold voltage select: Vih / Vil : 0.8 / 0.4V
1.2V or 3.3V tolerance select.
1.2V OUTPUT 接 VTT_GMCH
3.3V OUTPUT 接3.3V
LPCPD#=VIDVCC
GBT
IT8712
U28
IT8712GB/REV"IX"/[10HP2-118712-53_10HP2-118712-55]
Case Open Circuits
CASE OPEN (N/A)
IR CONNECTOR
GIGABYTE
LPC I/O
8I915PL-G
Only For Push-Pull Mode
需調整
Title
Size Custom
Document Number
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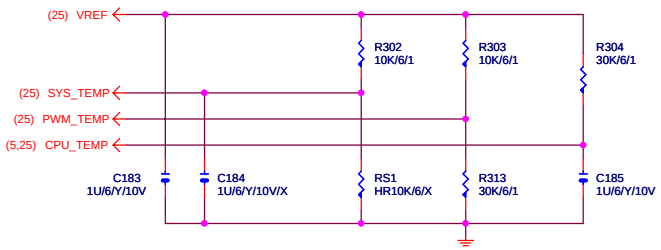
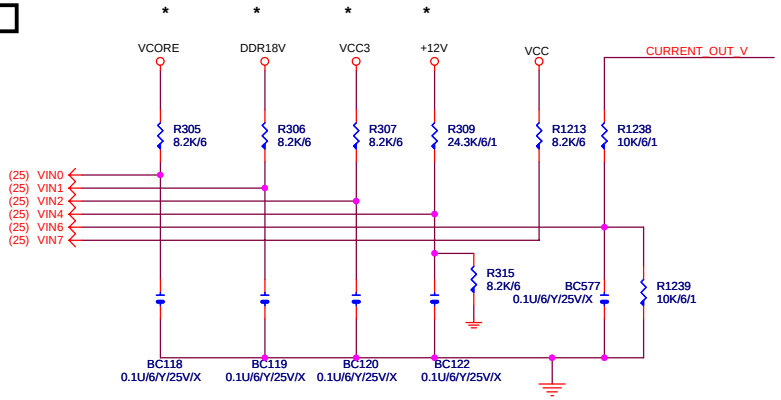
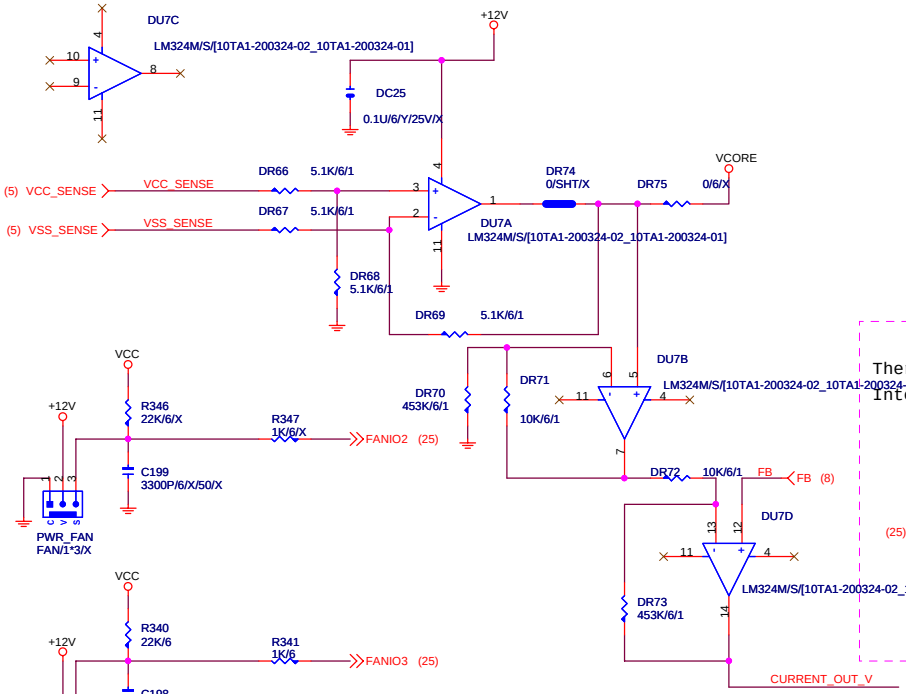
TEMP. SENSE



VOLTAGE SENSE



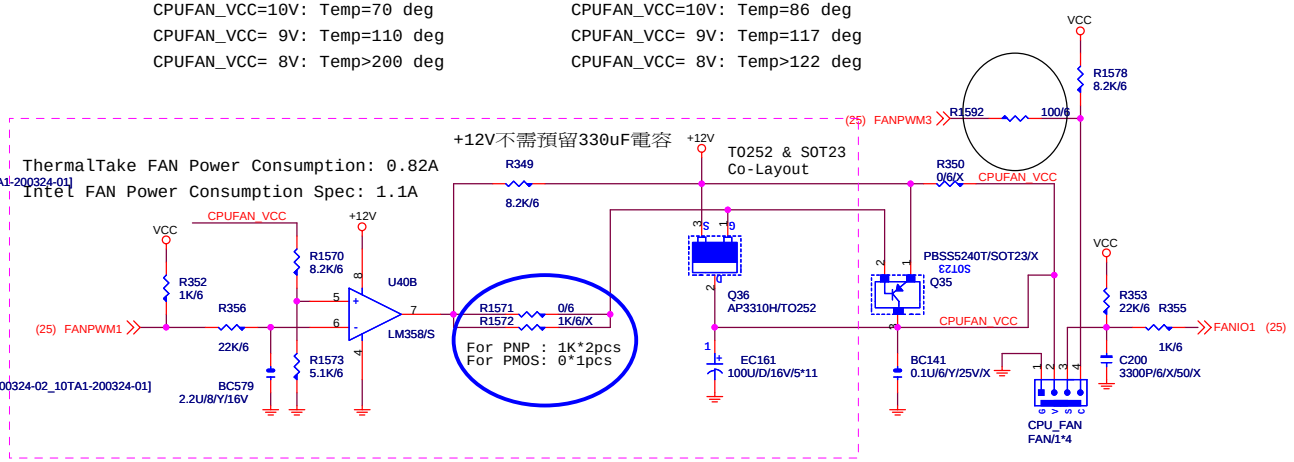
DUAL POWER



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
```



GIGABYTE			
Title: HWM/FAN/CI/BIOS			
Size: Custom	Document Number: 8I915PL-G		Rev: 2.0
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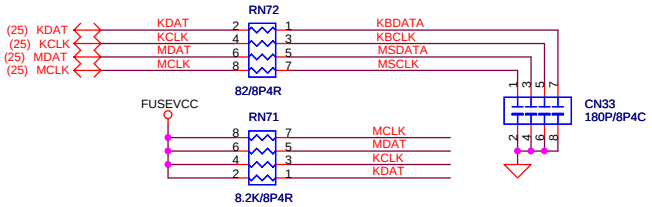
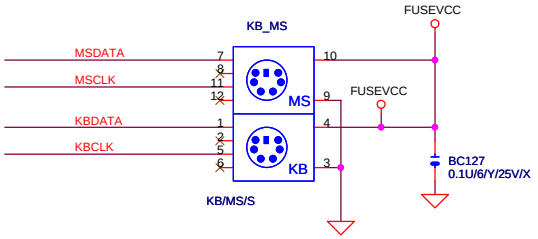
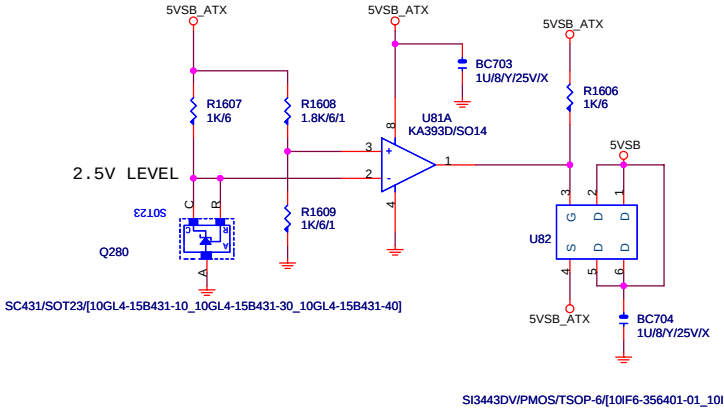
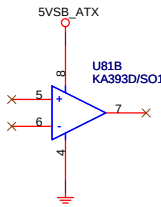
KB/MS

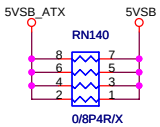


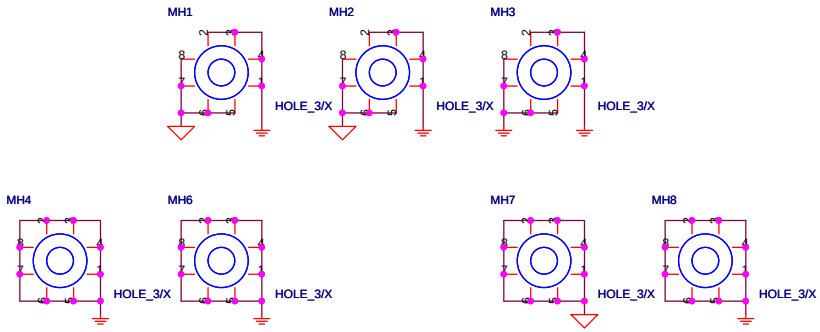


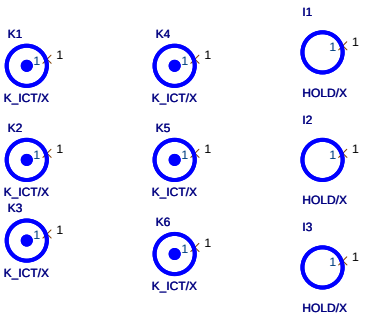
S.P.P.











GIGABYTE

Title	PS/2 KB & MS	
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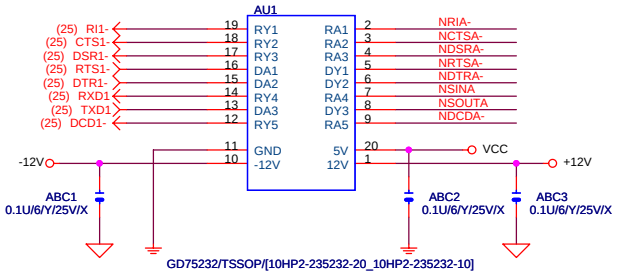
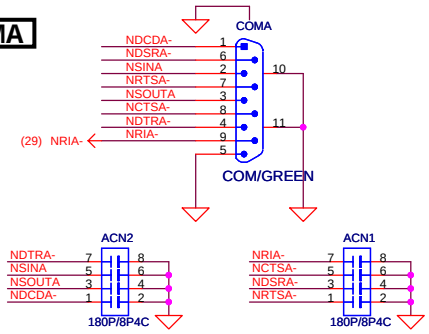
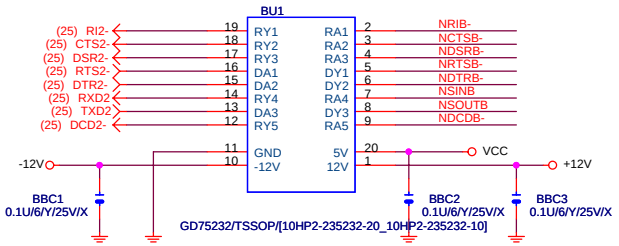
COMA/COMB

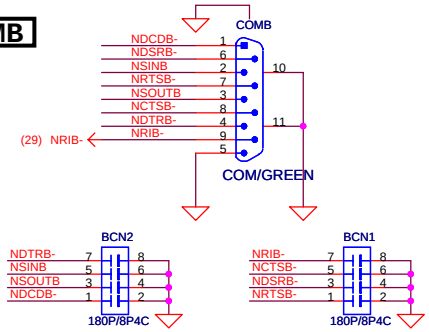


COMA

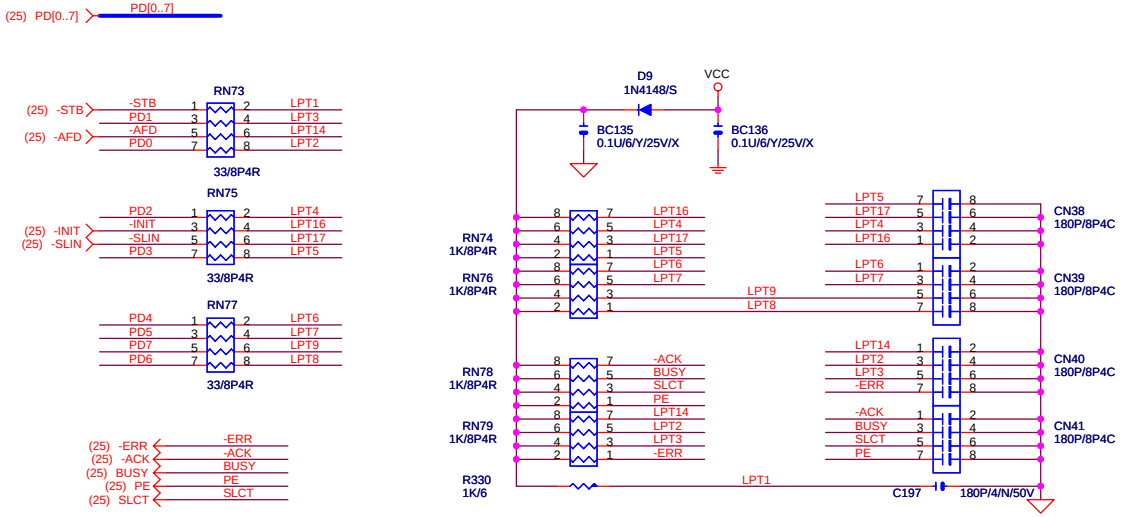




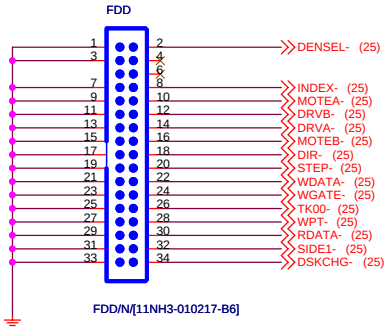
COMB



LPT



FLOPPY



GIGABYTE

Title	COM, LPT, FDD	
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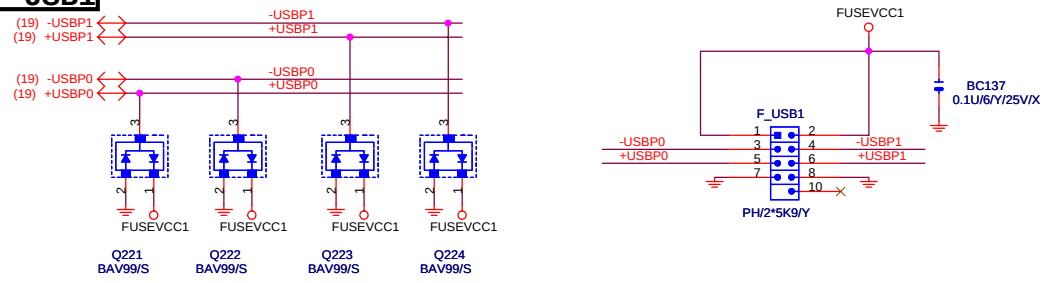
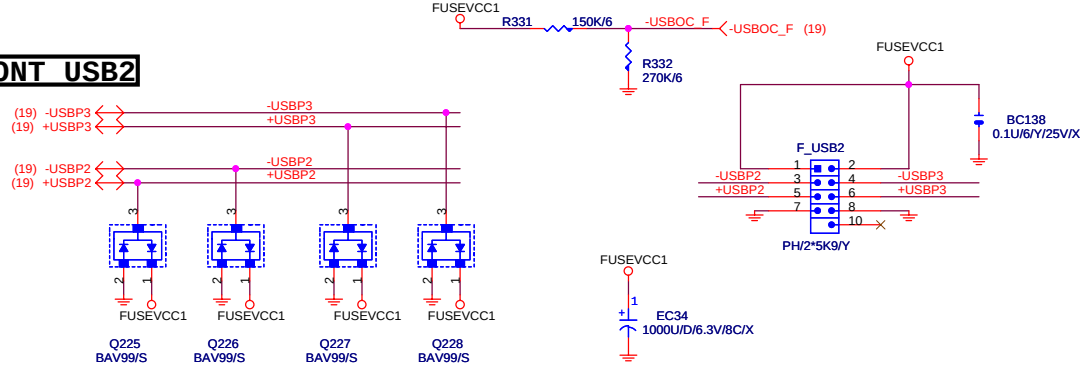
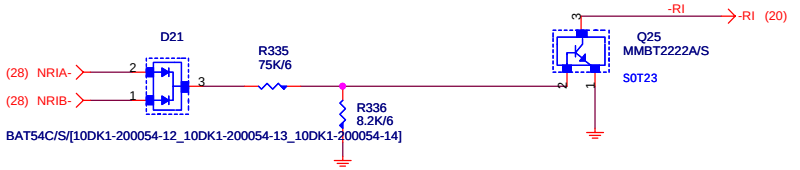
FRONT USB1



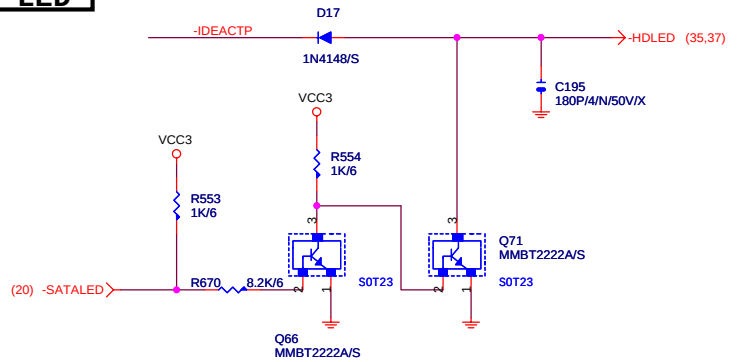
FRONT USB2



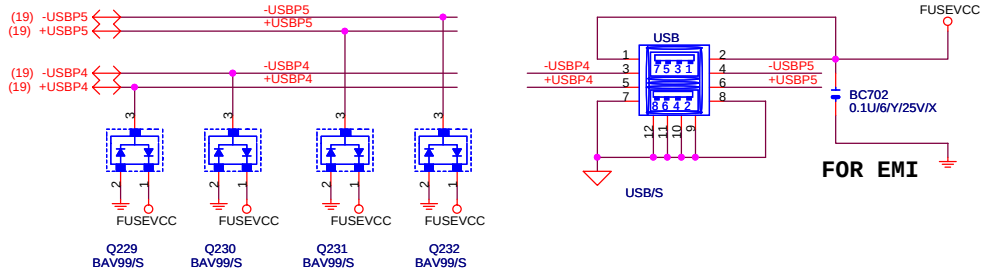
RING IN



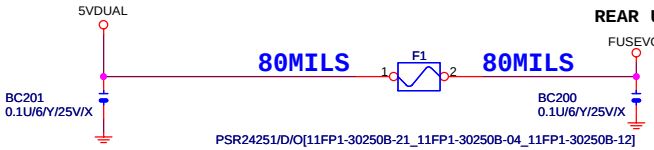
IDE/SATA LED



FUSEVCC,GAMEVCC

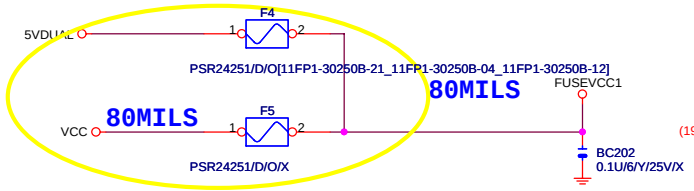


160MILS

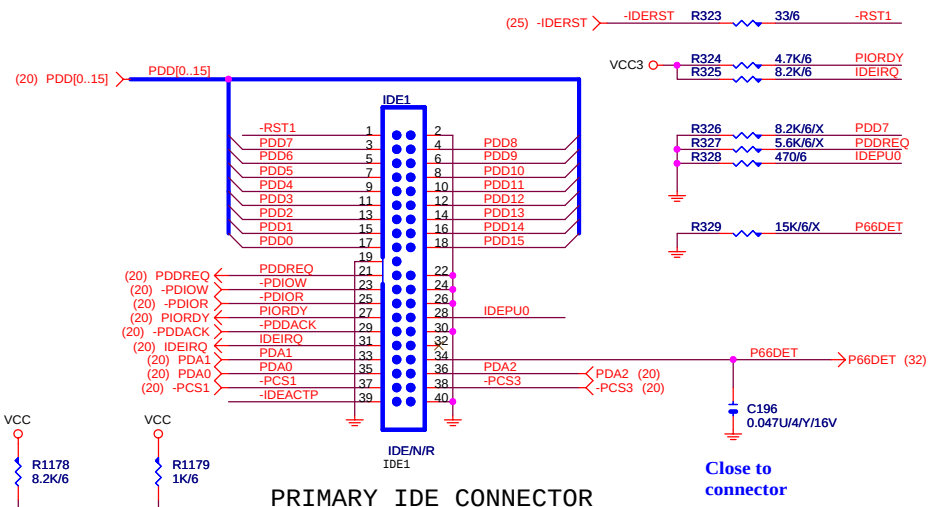


REAR USB

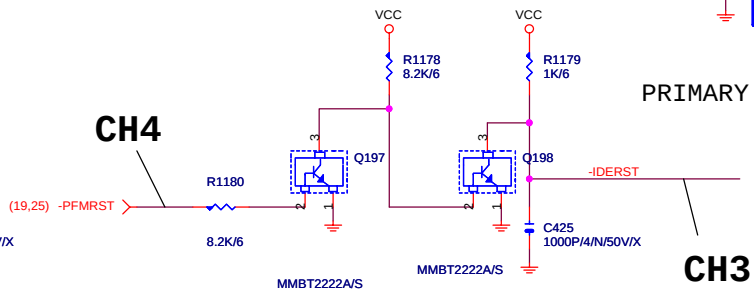
FRONT USB



IDE



CH4



CH3

GIGABYTE		
Title: FRONT/REAR USB CONNECTOR/IDE		
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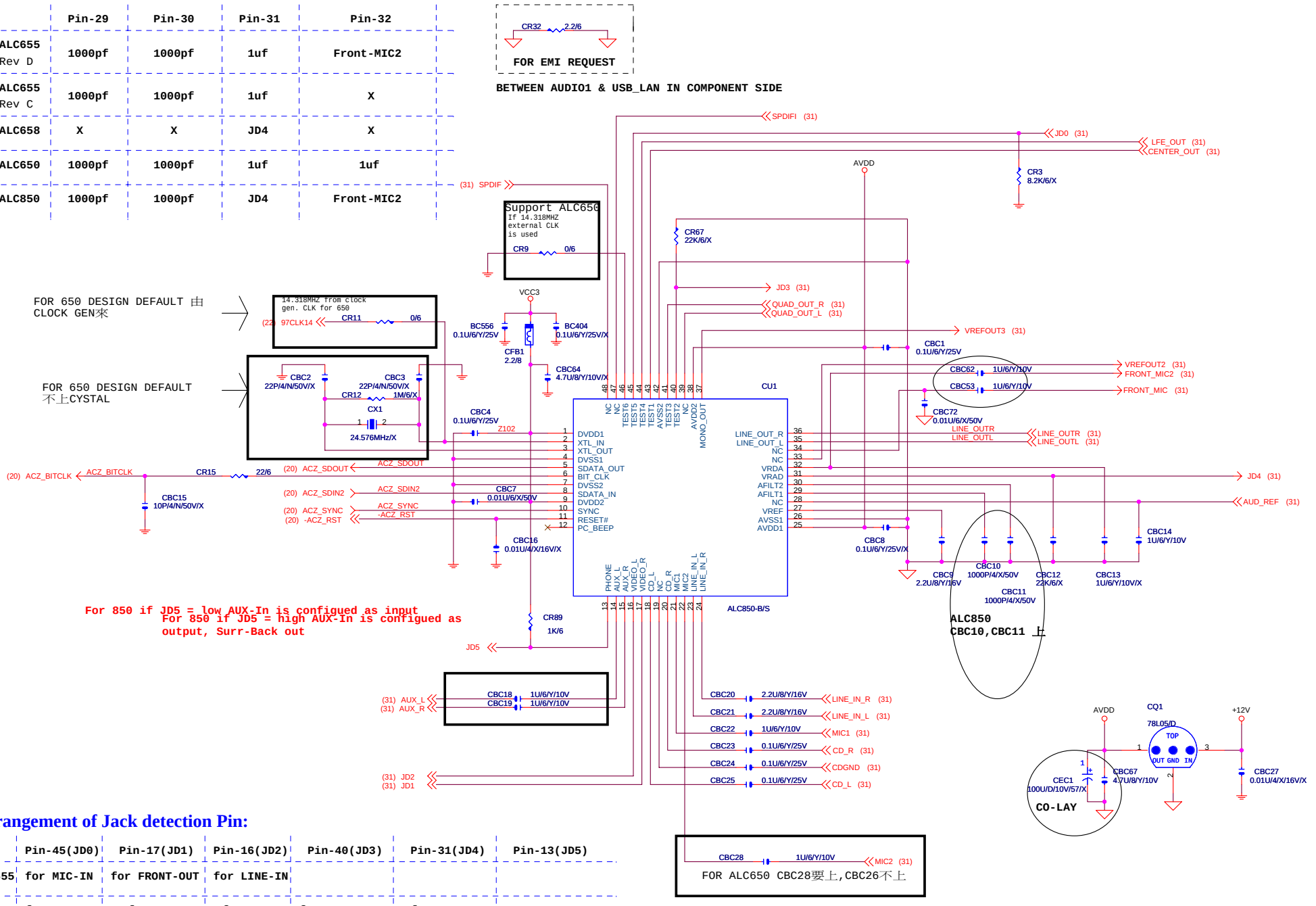
Filter Cap design:

	Pin-29	Pin-30	Pin-31	Pin-32
ALC655 Rev D	1000pf	1000pf	1uf	Front-MIC2
ALC655 Rev C	1000pf	1000pf	1uf	X
ALC658	X	X	JD4	X
ALC650	1000pf	1000pf	1uf	1uf
ALC850	1000pf	1000pf	JD4	Front-MIC2



Arrangement of Jack detection Pin:

	Pin-45(JD0)	Pin-17(JD1)	Pin-16(JD2)	Pin-40(JD3)	Pin-31(JD4)	Pin-13(JD5)
ALC655	for MIC-IN	for FRONT-OUT	for LINE-IN			
ALC658	for MIC-IN	for UAJ1	for UAJ2	for FRONT-OUT Exernal pull high is needed	for LINE-IN Exernal pull high is needed	
ALC850	for MIC-IN	for Front Pannel OUT	for Front Pannel IN	for FRONT-OUT	for LINE-IN	for SurrBack Out

For 850 if JD5 = low AUX-In is configued as input
For 850 if JD5 = high AUX-In is configued as output, Surr-Back out

GIGABYTE CORP.	
Title	ALC850
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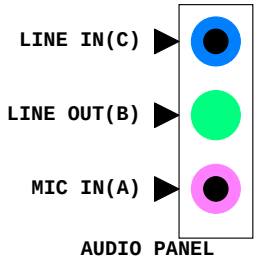
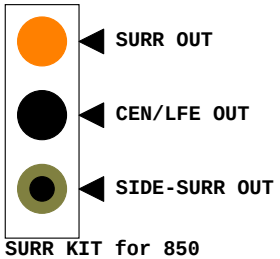
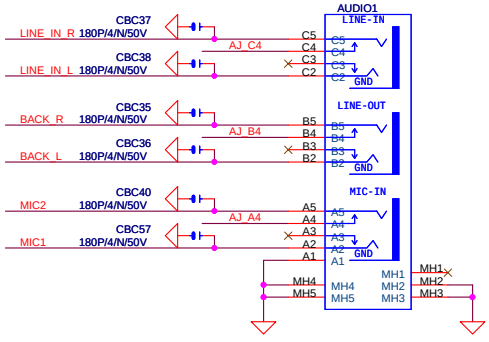


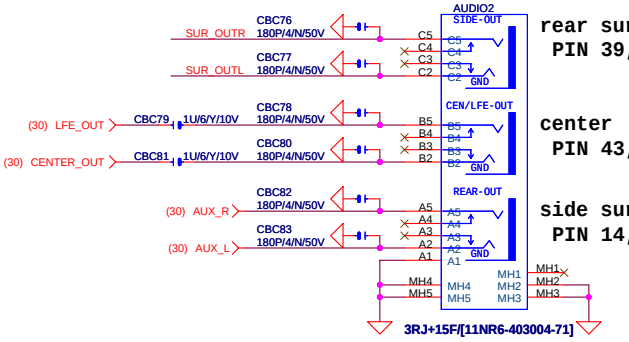
AUDIO PANEL
AUDIO1



SURR KIT for 850
AUDIO2



3RJ+15F/[11NR6-403004-11_11NR6-403004-12_11NR6-403004-16]



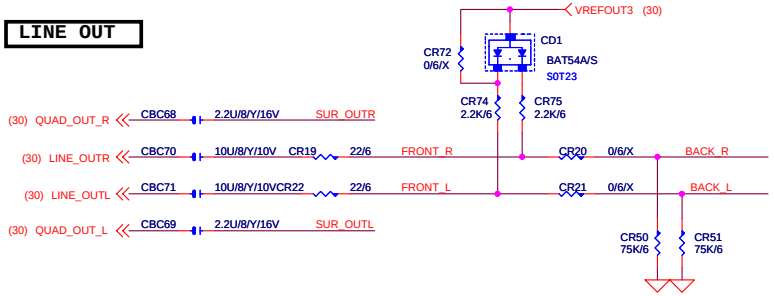
3RJ+15F/[11NR6-403004-71]

rear surround
PIN 39,41

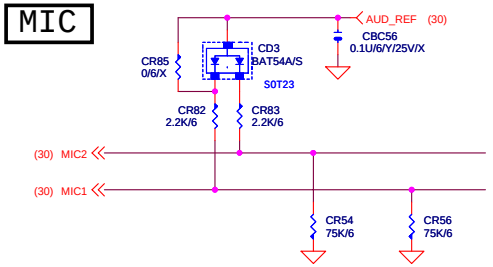
center
PIN 43,44

side surround
PIN 14,15

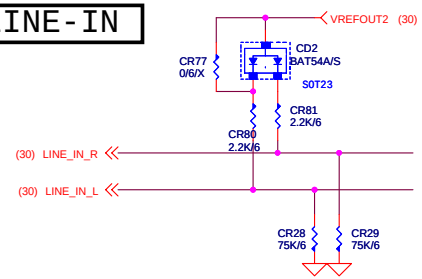
LINE OUT



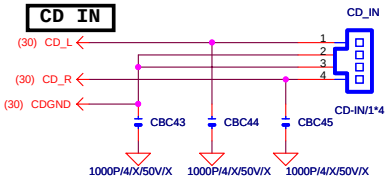
MIC

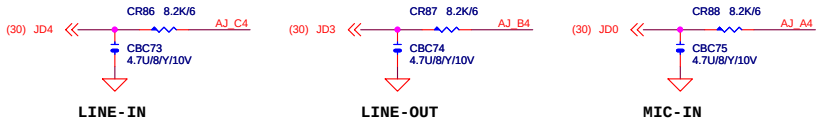


LINE-IN

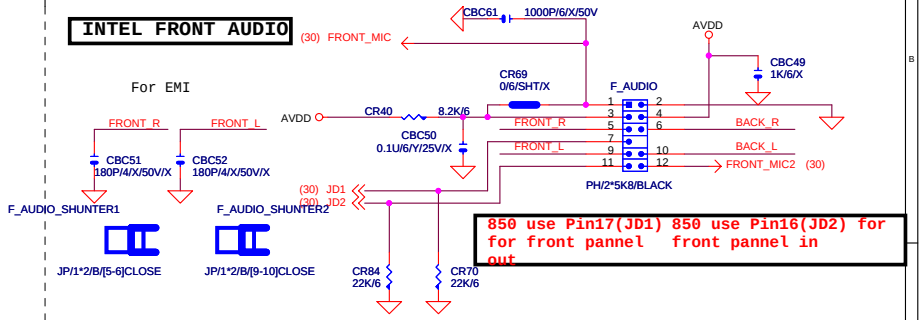


CD IN



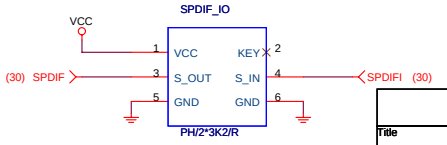


INTEL FRONT AUDIO



850 use Pin17(JD1) 850 use Pin16(JD2) for for front pannel front pannel in out

SPDIF_IO



GIGABYTE CORP.

Title: AUDIO OUTPUT,GAME PORT

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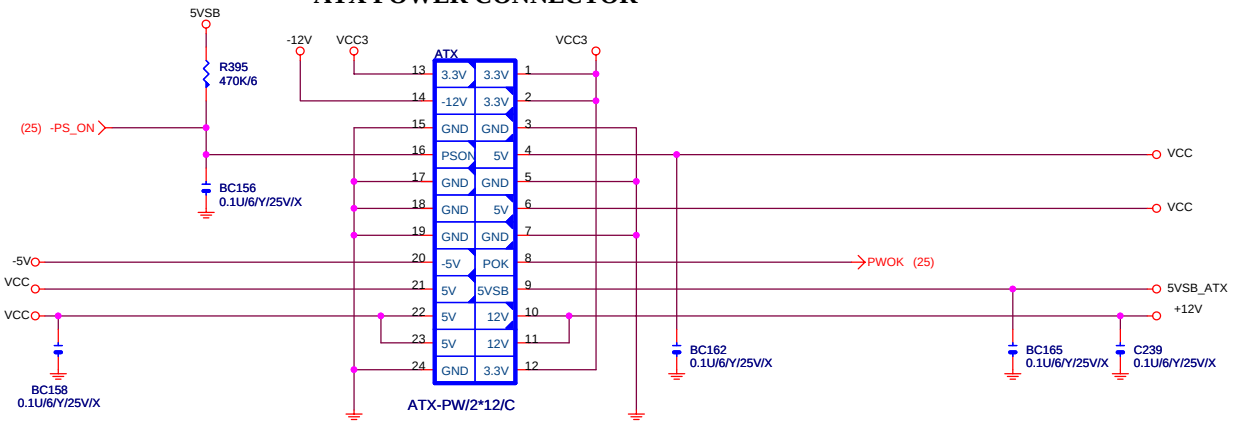
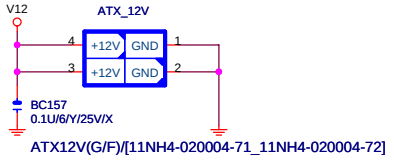
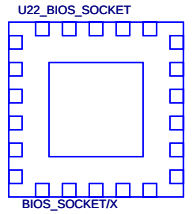
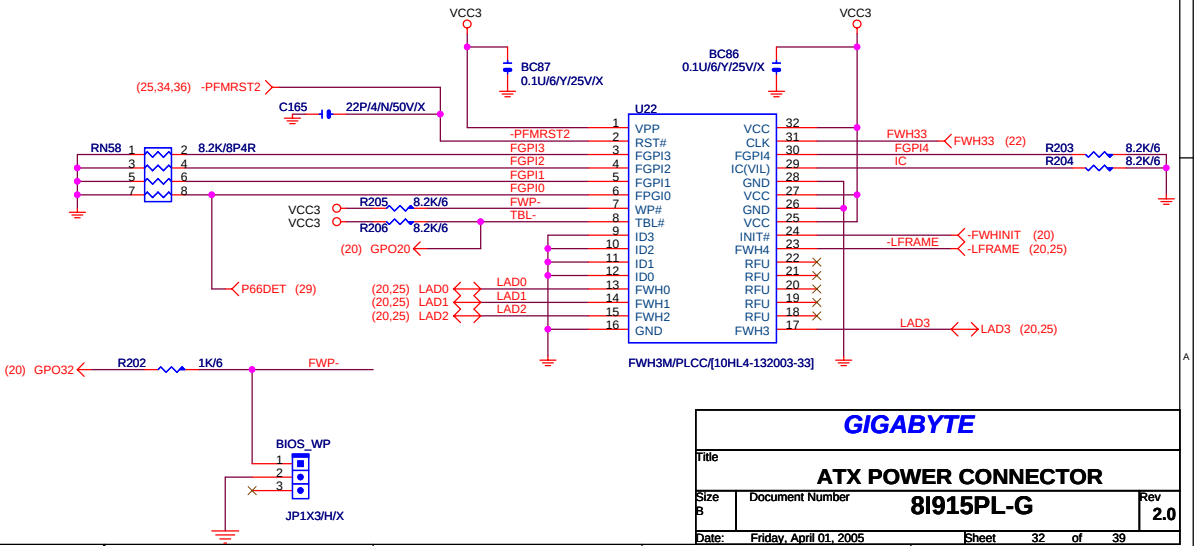
ATX POWER CONNECTOR







FWH BIOS



GIGABYTE

Title	ATX POWER CONNECTOR	
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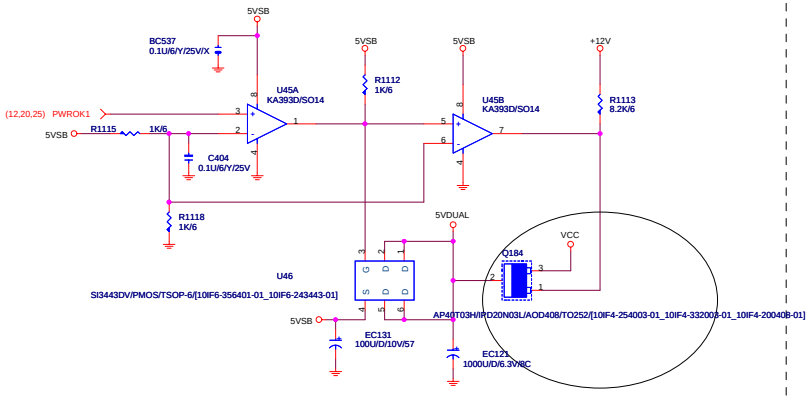
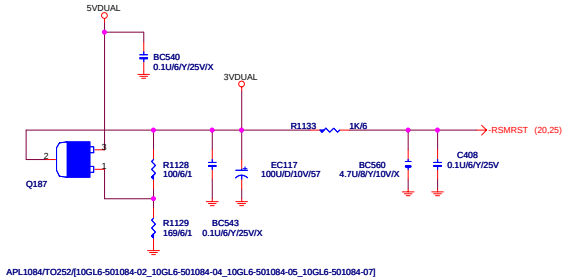
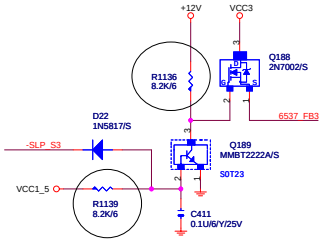
5VDUAL CIRCUIT

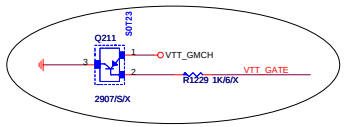


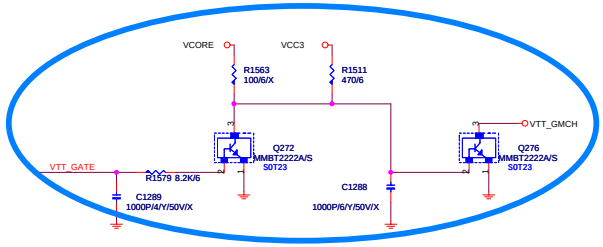
3VDUAL CIRCUIT

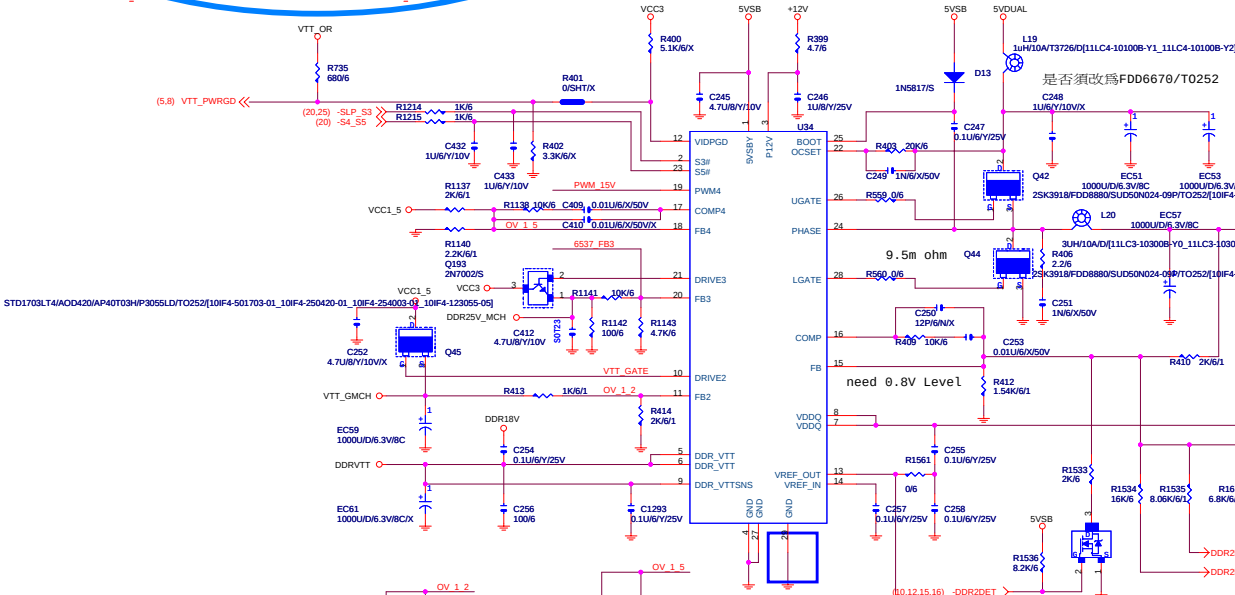


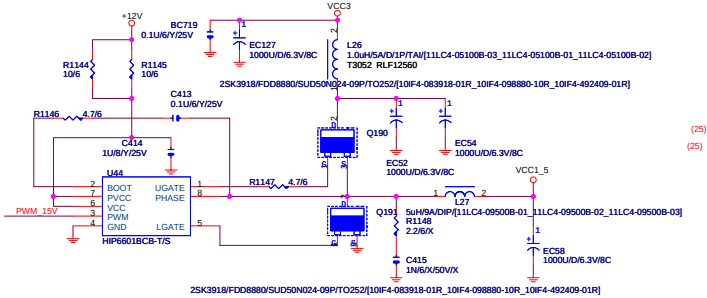
DDR25V/VCC1_5/VTT_GMCH/DDRVTT

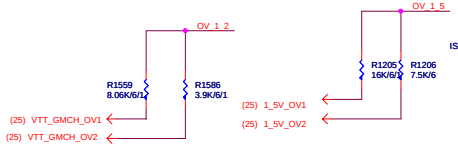








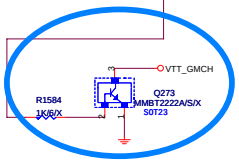




BOTTOM PAD
USE 6 VIAs
CONNECT TO
GND

VTT_GMCH_OV1= LOW=1.2+0.1V
VTT_GMCH_OV2= LOW=1.2+0.2V

1_5_OV1= LOW=1.5+0.1V
1_5_OV2= LOW=1.5+0.2V



DDR25V_OV1 LOW=2.6+0.1V
DDR25V_OV2 LOW=2.6+0.2V

GIGABYTE			
Title: Discrete Power			
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POWER DECOUPLING CAP.

 # Layout Check 注意事項 :

1. LU1 PIN129 需下內層GND,至少打 22 VIA
2. 3VDUAL , VCC3 , VDD15_L , AVDD25_L 至少走20mil寬,並且電容擺設每兩pin至少放一顆Bypass Cap.
3. X'TAL 25MHz 兩訊號線,TRACE 愈短愈好,線寬12mil
4. MDI正負0~3,TRACE 8:7:8 , 每對之間保持 40mil

LU1 88E8001 88E8001/LQFP128/A4/[10HP2-408001-20]

LU2 EEPROM AT24C08S/[10HP4-172408-A1_10HP4-182408-10_10HP4-172408-60]

USB_LAN USB_LAN/1G/[11NR6-702009-01_11NR6-702009-02]

BCP69T1/S/[10IT3-000069-01_10IT3-000069-02]

LQ1 LQ2

Title	MARVELL 88E8001
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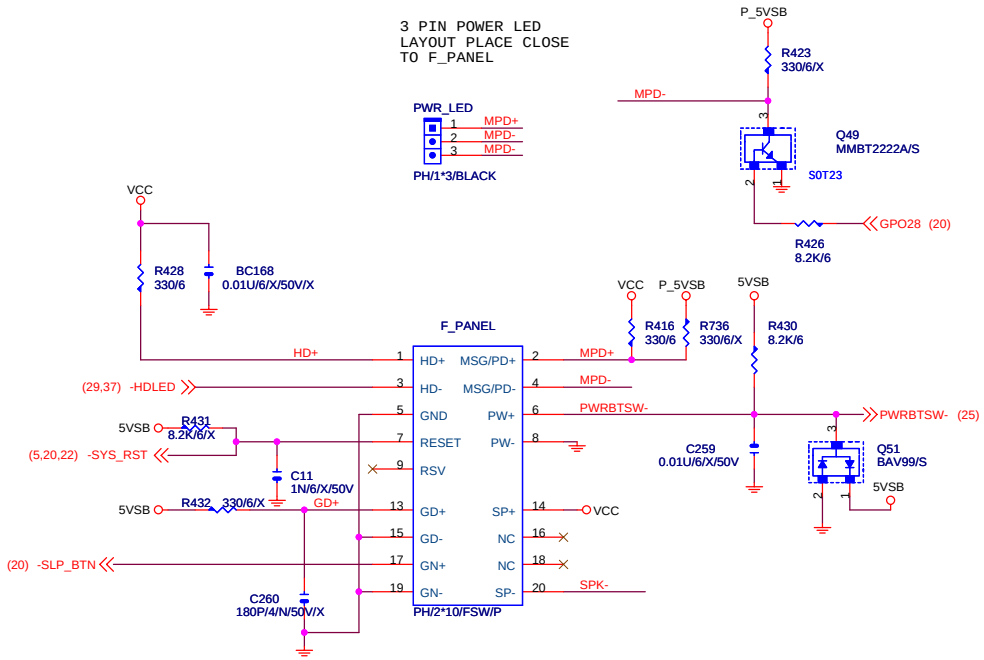
GIGABYTE

INTEL FRONT PANEL



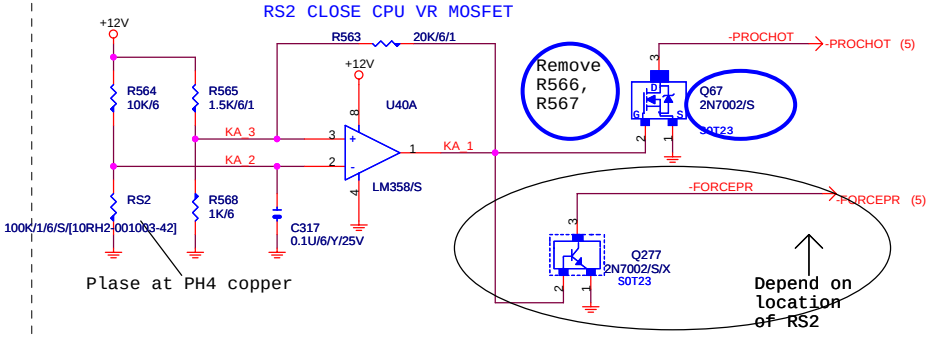
PROCESSOR HOT (N/A)

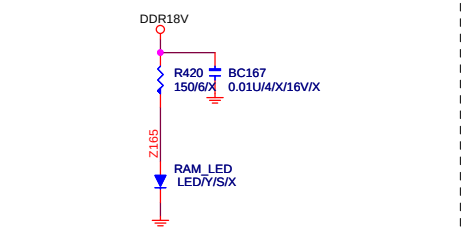
如果要用2N7002需注意OP output
Hi時的電壓是否遠大於2V。

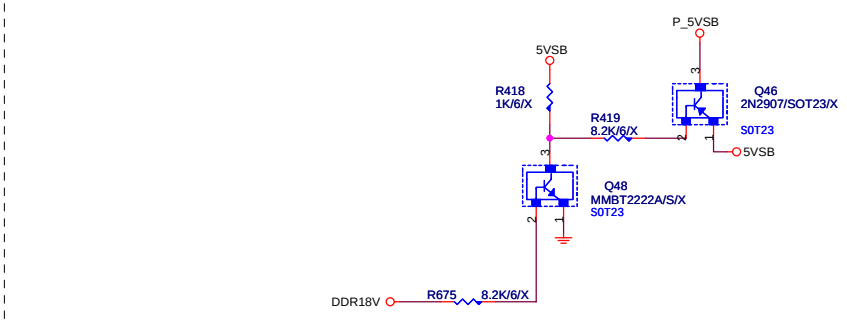
asserted at 130 degree (RS2=720 ohm)
deasserted at 115 degree (RS2=1270 ohm)

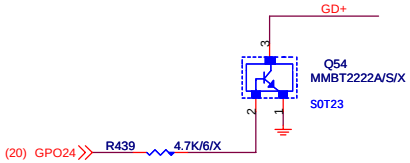
KA393改爲LM358，電源pin改接+12V，Prochot#溫度需重新調整之。

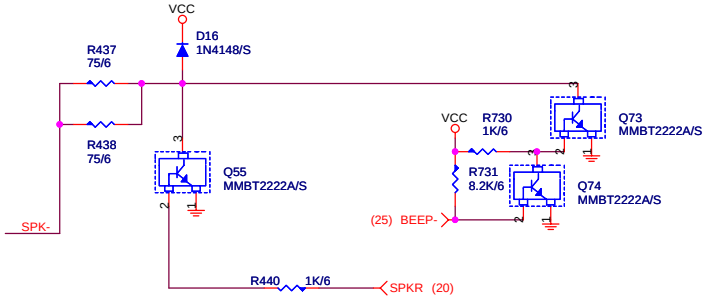
RS2 CLOSE CPU VR MOSFET











States for green LED NO1 GPO22 only S1 PROGRAMMING LOW

LED States	ACPI States	GPO28
ON	S1,S3	0
OFF	S0,S5	1

(GPO22 DEFAULT HIGH, main power)

States for a single-color power LED

LED States	ACPI States	GPO25	GPO27	GPO24
OFF	S1,S3,S5	1	1	NO1
Steady Green	S0	1	1	1
Blinking Green	S0(message waiting)	1	B	1

LED States	ACPI States	GPO25	GPO27	GPO22
OFF	S5	1	1	X
Steady Green	S0	1	1	1
Blinking Green	S0(message waiting)	1	B	1
Steady Yellow	S1,S3	1	0	NO1
Blinking Yellow	S1,S3(message waiting)	1	B	NO1

GIGABYTE

Title: FRONT PANEL

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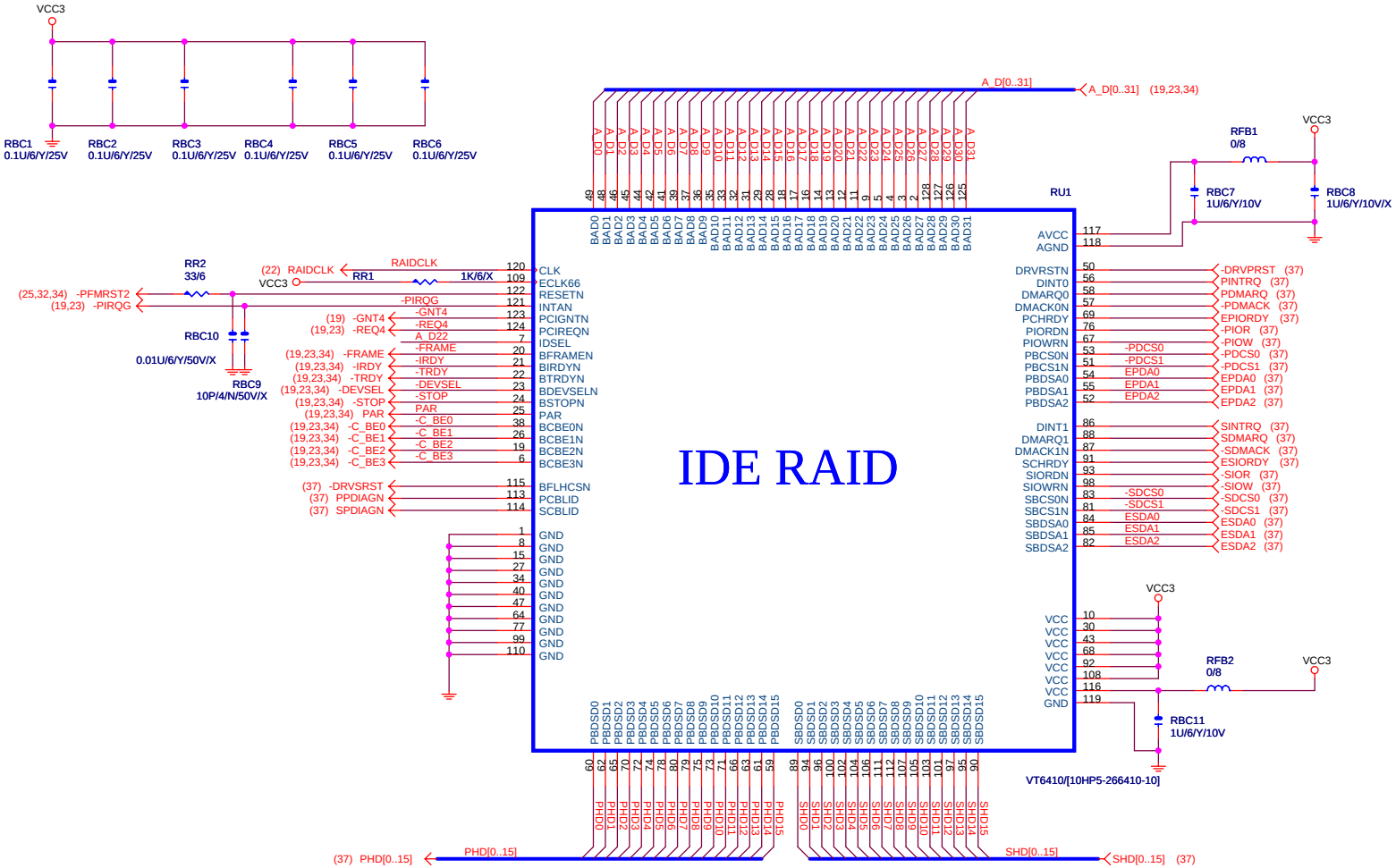
ALL INPUT PIN MUST HAVE 0.1 CAPACITOR



GIGABYTE		
Title	ATA100/133 & IDE RAID	
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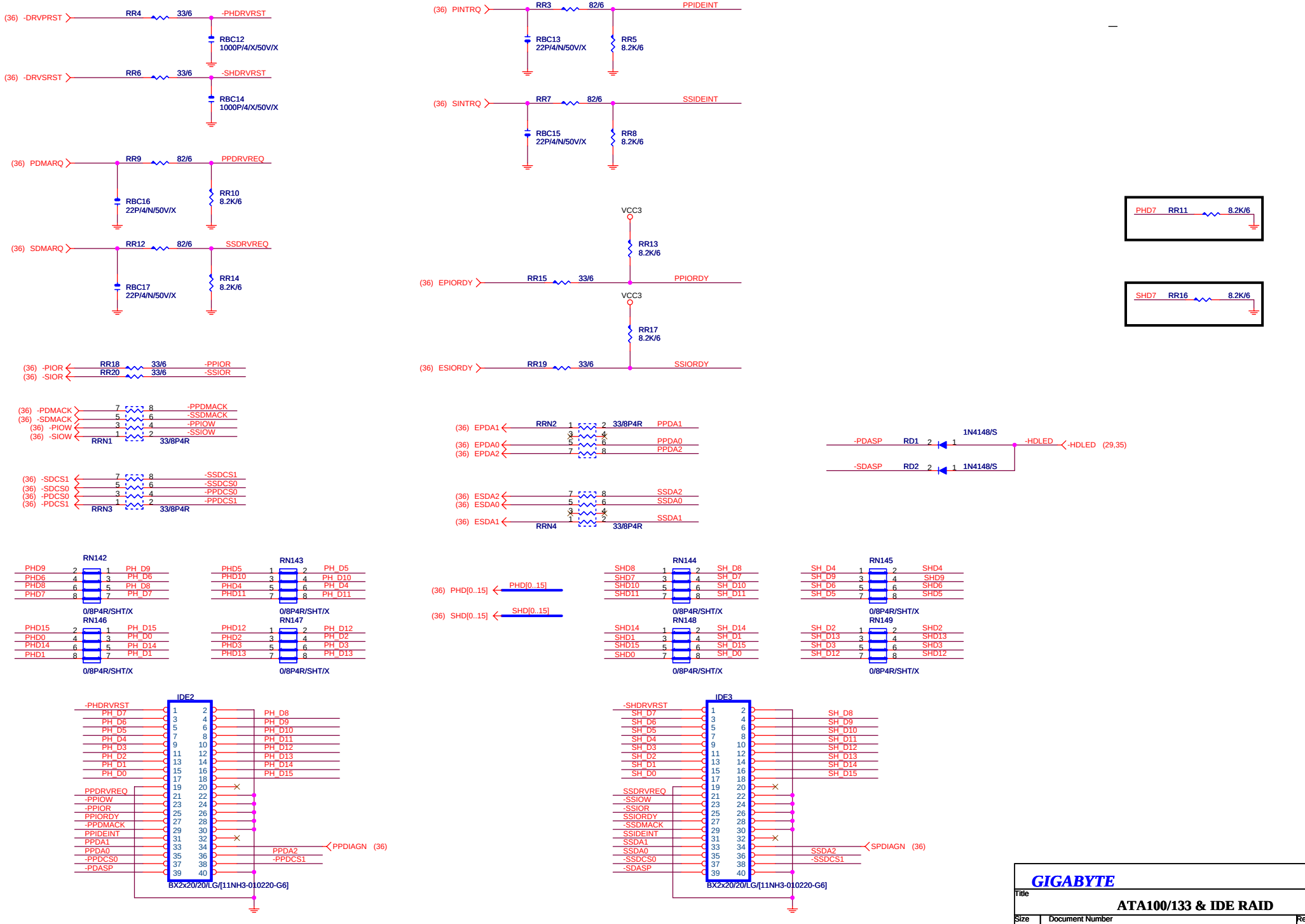

GIGABYTE

Title	ATA100/133 & IDE RAID	
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INTEL ICH6 GPIO Implementation

紅字表示CPI/O 同PIN

GPI PIN

Pin Name	Pin Type	Power Well			GPIO Application
GPI[0]	Input	V5REF	-REQ[6]	(P.U VCC)	-REQ[6]
GPI[1]	Input	V5REF	-REQ[5]	(P.U VCC)	Reserved
GPI[5:2]	Input	V5REF	-PIRQ[H:E]	(P.U VCC)	PCI/LAN/NA/1394
GPI[6]	Input	VCC3	GPI[6]	(P.U VCC3)	-SLP_BTN
GPI[7]	Input	VCC3	GPI[7]	(NA)	DUALBIOS_INPUT
GPI[8]	Input	3VDUAL	GPI[8]	(P.U 3VDUAL)	-LANWAKE
GPI[10:9]	Input	3VDUAL	0C_4/5	(P.U 5VDUAL分壓)	-USBOC_R
GPI[11]	Input	3VDUAL	-SMBALERT	(P.U 3VDUAL)	-SMBALRT
GPI[12]	Input	VCC3	GPI[12]	(P.U VCC3)	ATX24_DET
GPI[13]	Input	3VDUAL	GPI[13]	(P.U 3VDUAL)	-LPCPME
GPI[15:14]	Input	3VDUAL	0C_6/7	(P.U 5VDUAL分壓)	-USBOC_R
GPO[16]	OUTPUT	VCC3	-GNT[6]	(integrated VCC3)	Reserved
GPO[17]	OUTPUT	VCC3	-GNT[5]	(integrated VCC3)	Reserved
GPO[18]	OUTPUT	VCC3	GPO[18]	(P.U VCC3)	LANRST-
GPO[19]	OUTPUT	VCC3	GPO[19]	(P.U VCC3)	DUAL_BIOS_OUTPUT
GPO[20]	OUTPUT	VCC3	GPO[20]	(P.U VCC3)	TBL-
GPO[21]	OUTPUT	VCC3	GPO[21]	(P.U VCC3)	DUAL_BIOS_OUTPUT
GPO[22]	Not Implemented		Not Implemented		Not Implemented
GPO[23]	OUTPUT	VCC3	GPO[23]	(P.U VCC3)	LANRST-
GPO[24]	IN/OUT	3VDUAL	GPO[24]	(NA)	GREEN_LED
GPO[25]	IN/OUT	3VDUAL	vcc_25vregulator	(NA)	Reserved
GPI[26]	Input	VCC3	SATA[0]GP	(P.U VCC3)	SATA[0]GP
GPIO[27]	IN/OUT	3VDUAL	GPIO[27]	(NA)	Reserved
GPIO[28]	IN/OUT	3VDUAL	GPO[28]	(NA)	PWD_LED
GPI[29]	Input	VCC3	SATA_1GP	(P.U VCC3)	SATA_1GP
GPI[30]	Input	VCC3	SATA_2GP	(P.U VCC3)	SATA_2GP
GPI[31]	Input	VCC3	SATA_3GP	(P.U VCC3)	SATA_3GP
GPIO[32]	IN/OUT	VCC3	GPO[32]	(NA)	FWP-
GPIO[33]	IN/OUT	VCC3	GPI[33]	(P.U VCC3)	-ACZ_DET
GPIO[34]	IN/OUT	VCC3	GPIO[34]	(P.U VCC3)	MB_ID0
GPI[40]	Input	V5REF	-REQ[4]	(P.U VCC)	-REQ[4]
GPI[41]	Input	VCC3	GPI[41]	(P.U VCC3)	MB_ID1
GPO[48]	OUTPUT	VCC3	-GNT[4]	(integrated VCC3)	Reserved
GPO[49]	OD O	V_CPU_IO	CPUPWROK	(P.U VTT_OR)	CPUPWROK
GP1O[35-39,42-47]	NOT IMPLEMENTED		NOT IMPLEMENTED		

GPO PIN

Pin Name	Pin Number	Power Well	Pin Type			GPIO Application

GIGABYTE

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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	M/B ID			
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

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