Model Name:G31M-S2L

Revision 1.02

SHEET	TITLE
01	COVER SHEET
02	BLOCK DIAGRAM
03	BOM & PCB MODIFY HISTORY
04	P4_LGA775_A
05	P4_LGA775_B,D
06	P4_LGA775_C
07	P4_LGA775_E,F,G,H
08	G31_HOST
09	G31_DDRII
10	G31_PCI E, DMI
11	G31_VGA
12	G31_GND
13	G31_PWR
14	PCI EXPRESS*16 SLOT
15	DDRII CHANNEL A
16	DDRII CHANNEL B
17	DDRII TERMINATION
18	ICH7 PCI, USB, DMI, LAN
19	ICH7 IDE, GPIO, SATA, CTRL
20	ICH7 VCC, GND
21	CK505 CLOCK.
22	PCI SLOT 1,2,PCIE*1
23	IDE/FLOPPY
24	ITE 8718 GB/GX
25	COM LPT
26	CI,HWM,KB/MS,BIOS
27	ALC662

SHEET	TITLE
28	REAR AUDIO JACK
29	DISCRETE POWER
30	VCORE PWM_ISL6312
31	ATX, OTHERS POWER
32	FRONT PANEL
33	REALTEK RTL8111C/8101E

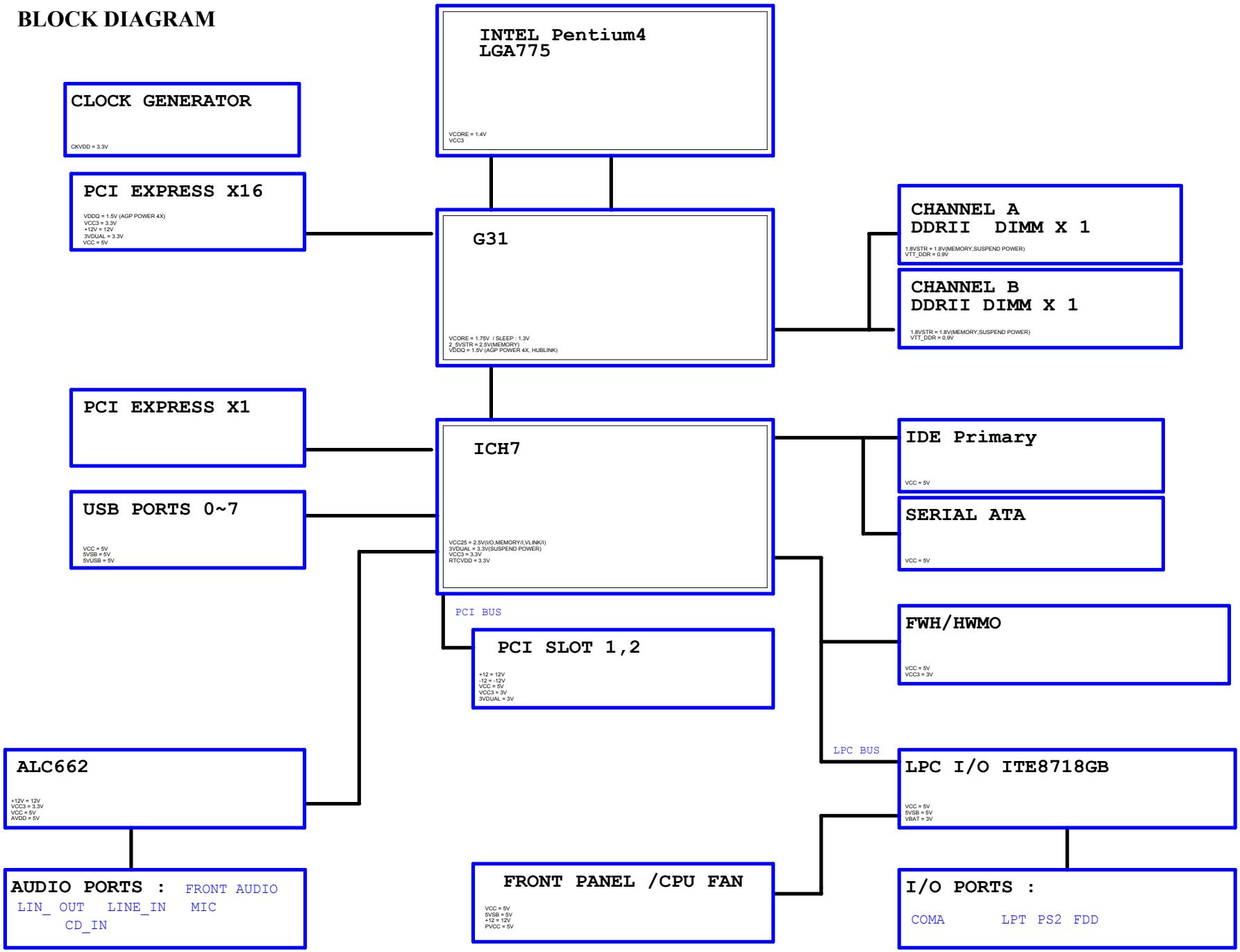
Gigabyte Technology

Title: Cover Sheet

Size: Custom | Document Number: G31M-S2L | Rev: 1.02

Date: Tuesday, August 21, 2007 | Sheet 1 of 33

BLOCK DIAGRAM



Gigabyte Technology

Title: BOM & PCB MODIFY HISTORY

Size: Custom | Document Number: G31M-S2L | Rev: 1.02

Date: Tuesday, August 21, 2007 | Sheet 2 of 33

Model Name:G31M-S2L

Version: 1.02

Component value change history

2007/08/20

Data	Change Item	Reason
2007/08/03		EBOM:9MG31MS2L-00-10B
2007/08/15	R1.02:VIN 470UX3(FP)+RTL8111C OC GPIO65	

Circuit or PCB layout change for next version

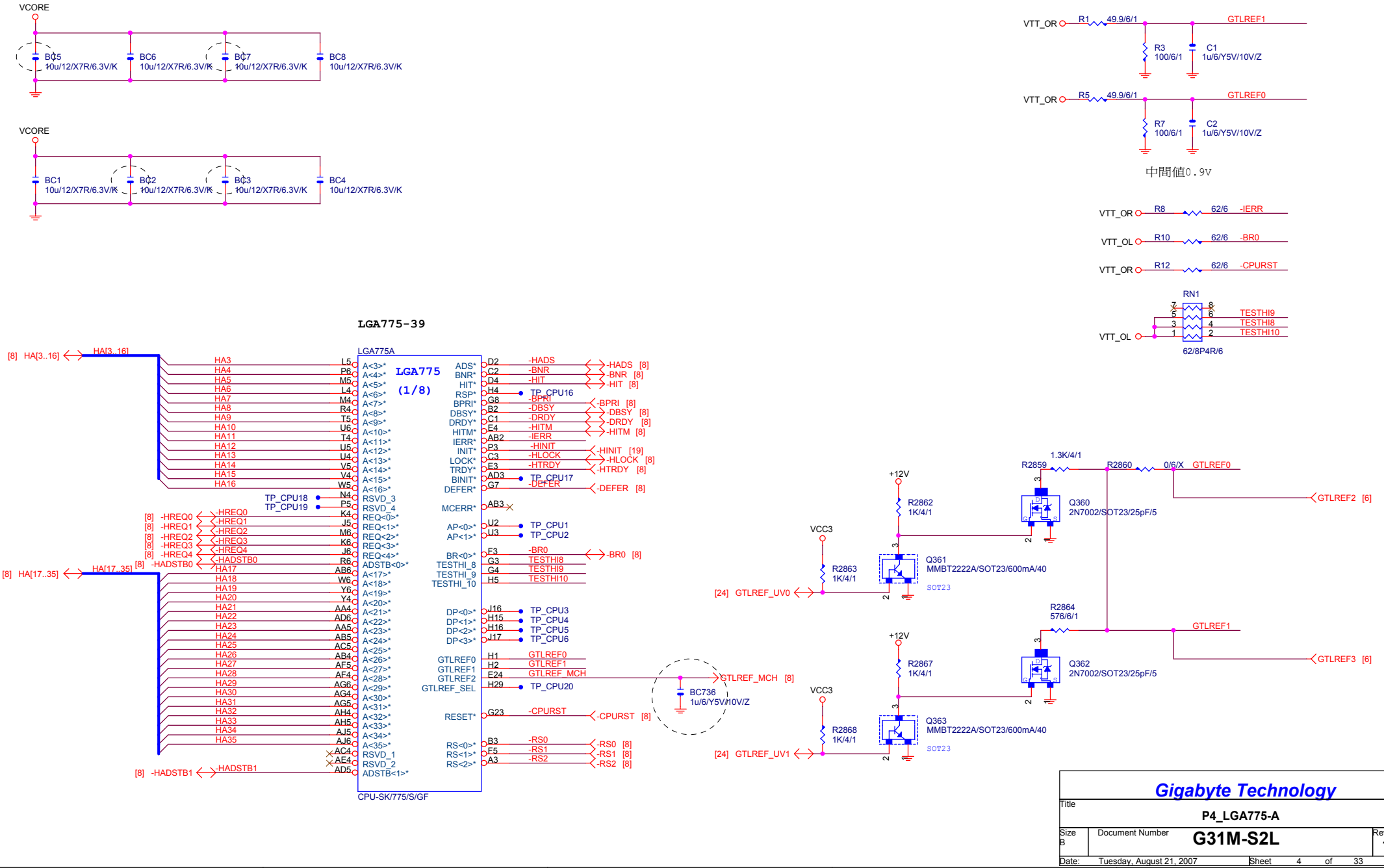
DATE	Change Item	Reason

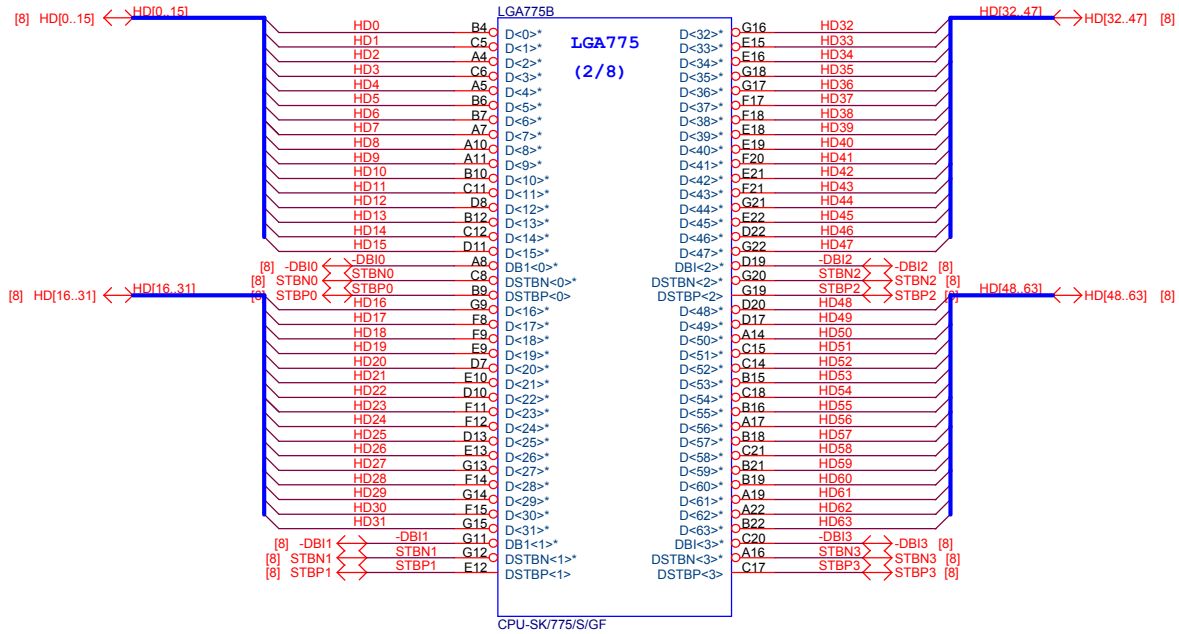
Gigabyte Technology

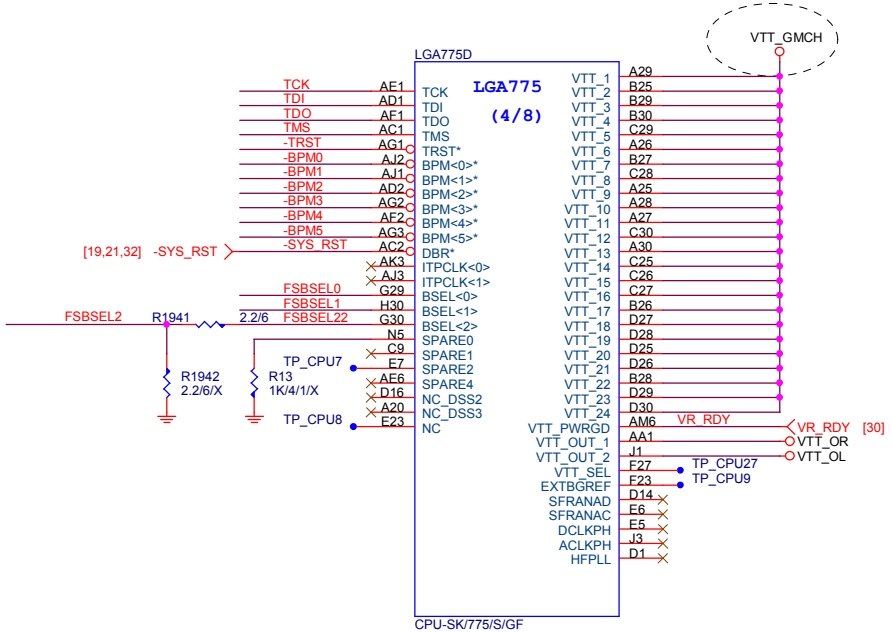
Title: BOM & PCB MODIFY HISTORY

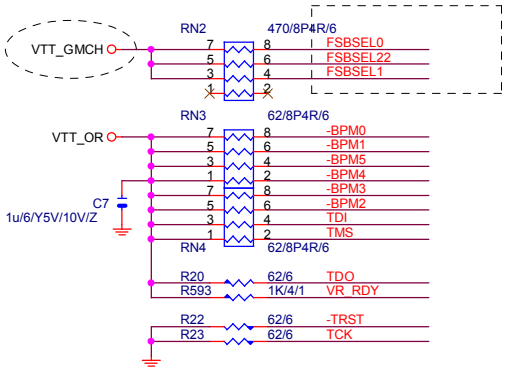
Size: Custom | Document Number: G31M-S2L | Rev: 1.02

Date: Tuesday, August 21, 2007 | Sheet 3 of 33

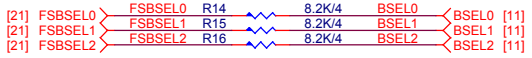

VCORE
BC5 10u/12/X7R/6.3V/K
BC6 10u/12/X7R/6.3V/K
BC7 10u/12/X7R/6.3V/K
BC8 10u/12/X7R/6.3V/K
VCORE
BC1 10u/12/X7R/6.3V/K
BC2 10u/12/X7R/6.3V/K
BC3 10u/12/X7R/6.3V/K
BC4 10u/12/X7R/6.3V/K
VTT_OR R1 49.9/6/1 GTLREF1
R3 100/6/1 C1 1u/6/Y5V/10V/Z
VTT_OR R5 49.9/6/1 GTLREF0
R7 100/6/1 C2 1u/6/Y5V/10V/Z
中間值0.9V
VTT_OR R8 62/6 -IERR
VTT_OL R10 62/6 -BR0
VTT_OR R12 62/6 -CPURST
RN1
VTT_OL
TESTHI9
TESTHI8
TESTHI10
62/8P4R6
LGA775-39
LGA775A
LGA775 (1/8)
[8] HA[3..16]
HA[3..16]
[8] HA[17..35]
HA[17..35]
[8] -HREQ0
[8] -HREQ1
[8] -HREQ2
[8] -HREQ3
[8] -HREQ4
[8] -HADSTB0
[8] -HADSTB1
TP_CPU18
TP_CPU19
-HADS [8]
-BNR [8]
-HIT [8]
TP_CPU16
-BPRI [8]
-DBSY [8]
-DRDY [8]
-HITM [8]
-IERR
-HINIT [19]
-HLOCK [8]
-HTRDY [8]
TP_CPU17
-DEFER [8]
TP_CPU1
TP_CPU2
-BR0 [8]
TESTHI8
TESTHI9
TESTHI10
TP_CPU3
TP_CPU4
TP_CPU5
TP_CPU6
GTLREF0
GTLREF1
GTLREF_MCH
TP_CPU20
-CPURST [8]
-RS0 [8]
-RS1 [8]
-RS2 [8]
CPU-SK/775/S/GF
GTLREF_MCH [8]
BC736 1u/6/Y5V/10V/Z
[24] GTLREF_UV0
[24] GTLREF_UV1
+12V
VCC3
R2862 1K/4/1
R2863 1K/4/1
R2867 1K/4/1
R2868 1K/4/1
Q361 MMBT2222A/SOT23/600mA/40
Q363 MMBT2222A/SOT23/600mA/40
SOT23
R2859 1.3K/4/1
R2860 0/6/X
R2864 576/6/1
Q360 2N7002/SOT23/25pF/5
Q362 2N7002/SOT23/25pF/5
GTLREF2 [6]
GTLREF3 [6]
Gigabyte Technology
Title
P4_LGA775-A
Size B
Document Number
G31M-S2L
Rev 1.02
Date: Tuesday, August 21, 2007
Sheet 4 of 33







TO CLK GEN



TO NB

CPU

NA	FSB	FSA		
FSBSEL3	FSBSEL1	FSBSEL0	Clock	
1	0	1	100MHz	X
0	0	1	133MHz	
0	1	1	166MHz	
0	1	0	200MHz	
0	0	0	266MHz	

Gigabyte Technology			
Title: P4_LGA775-B,D			
Size: B	Document Number: G31M-S2L		Rev: 1.02
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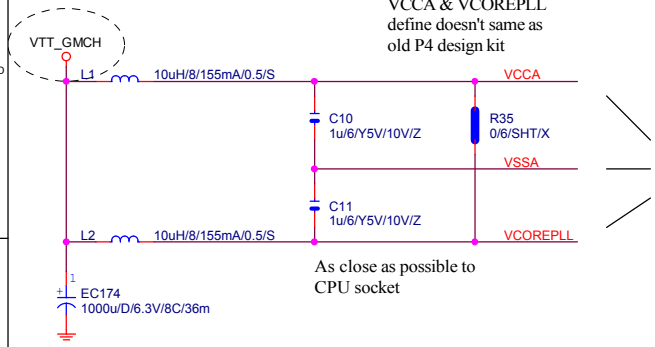
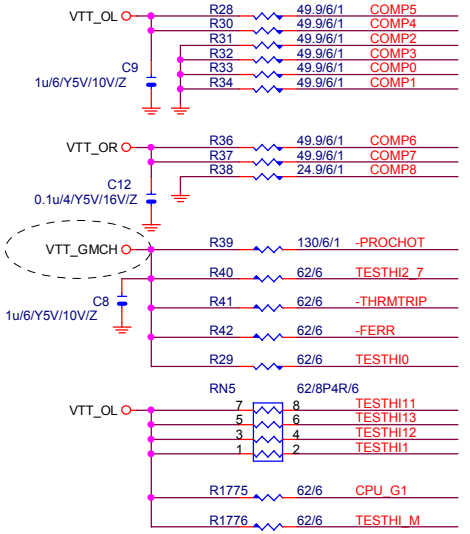
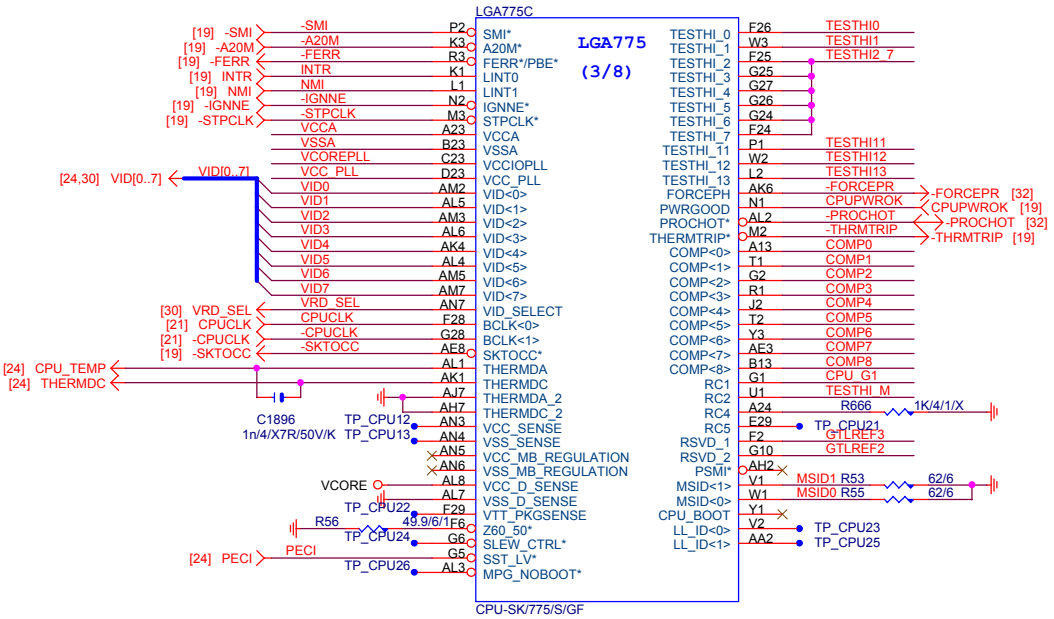
Note:

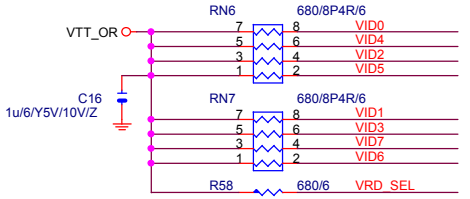
VCCA & VCOREPLL define doesn't same as old P4 design kit

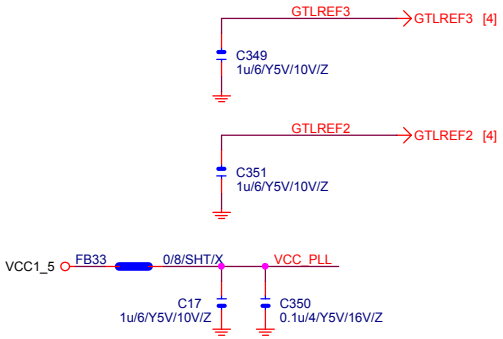


Place outside of CPU socket



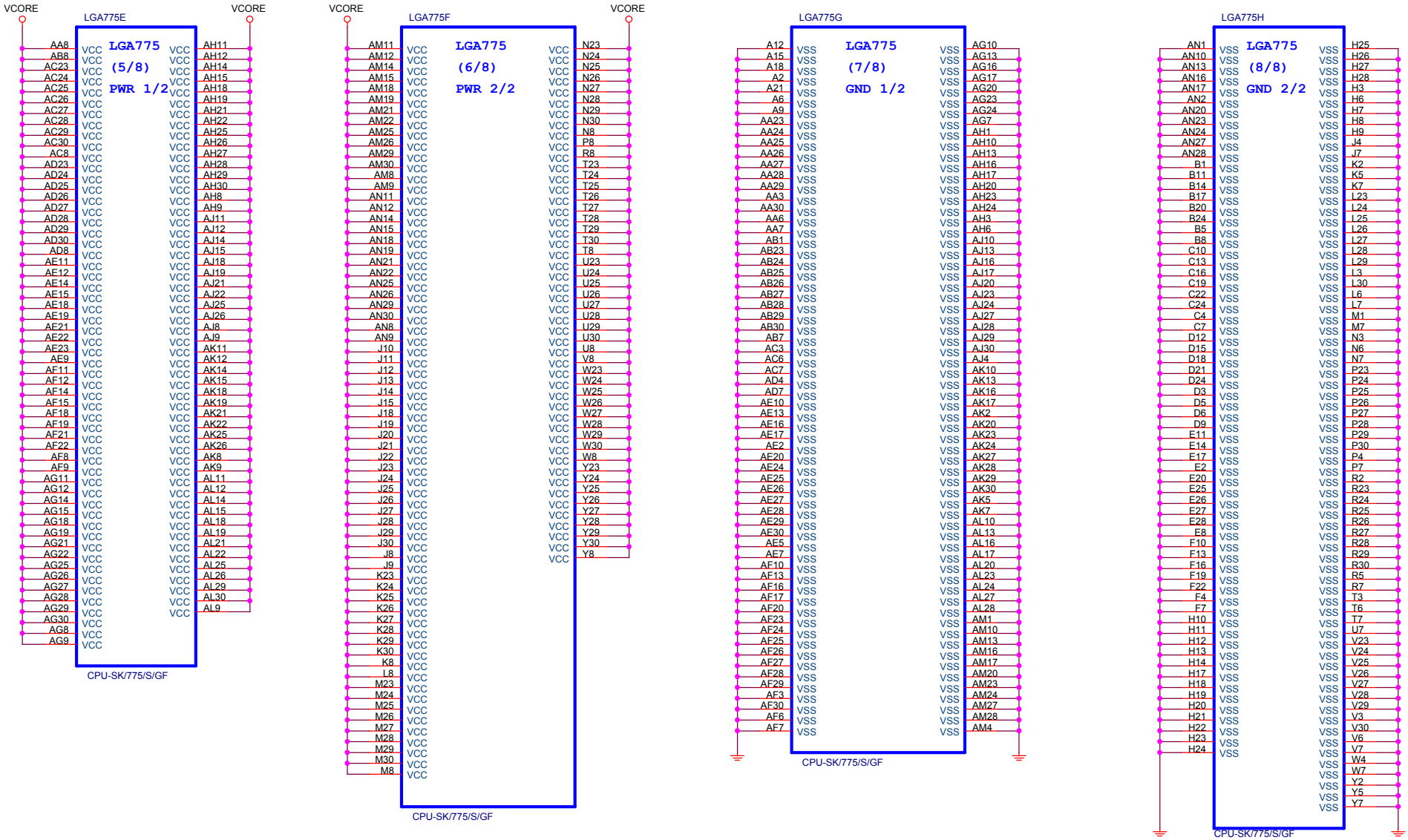




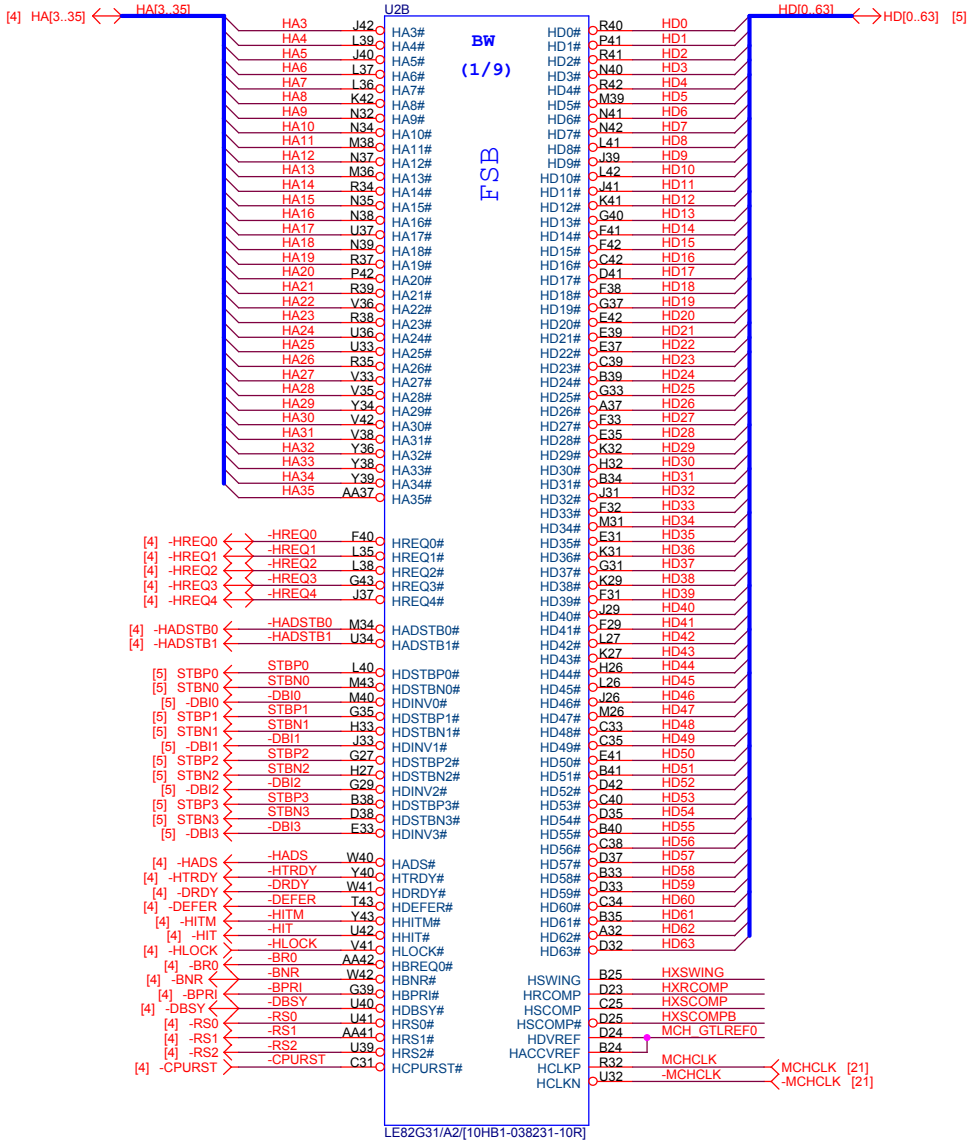


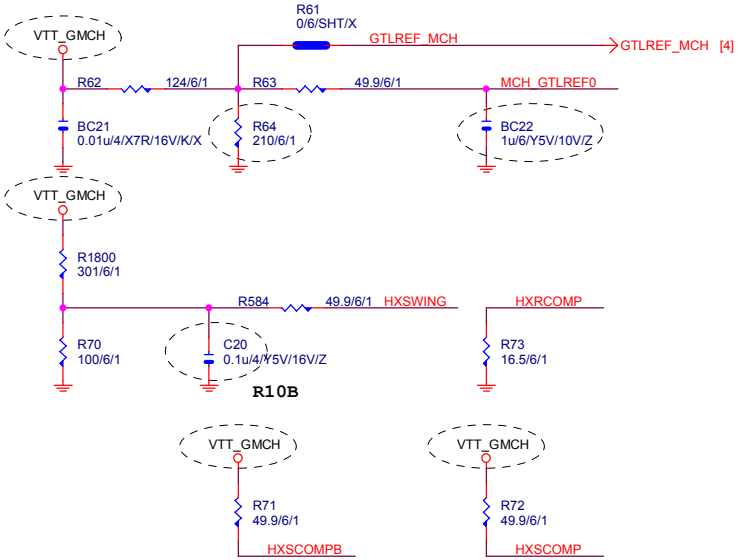
PECI:Platform Environment Control Interface

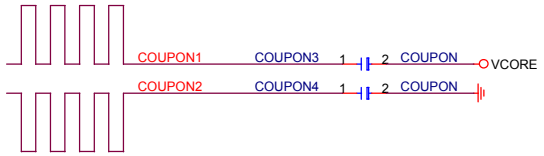
Gigabyte Technology			
Title: P4_LGA775-C			
Size: B	Document Number: G31M-S2L		Rev: 1.02
Date: Tuesday, August 21, 2007	Sheet 6 of 33		



Gigabyte Technology			
Title	P4_LGA775-E,F,G,H		
Size B	Document Number G31M-S2L		Rev 1.02
Date: Tuesday, August 21, 2007	Sheet 7 of 33		



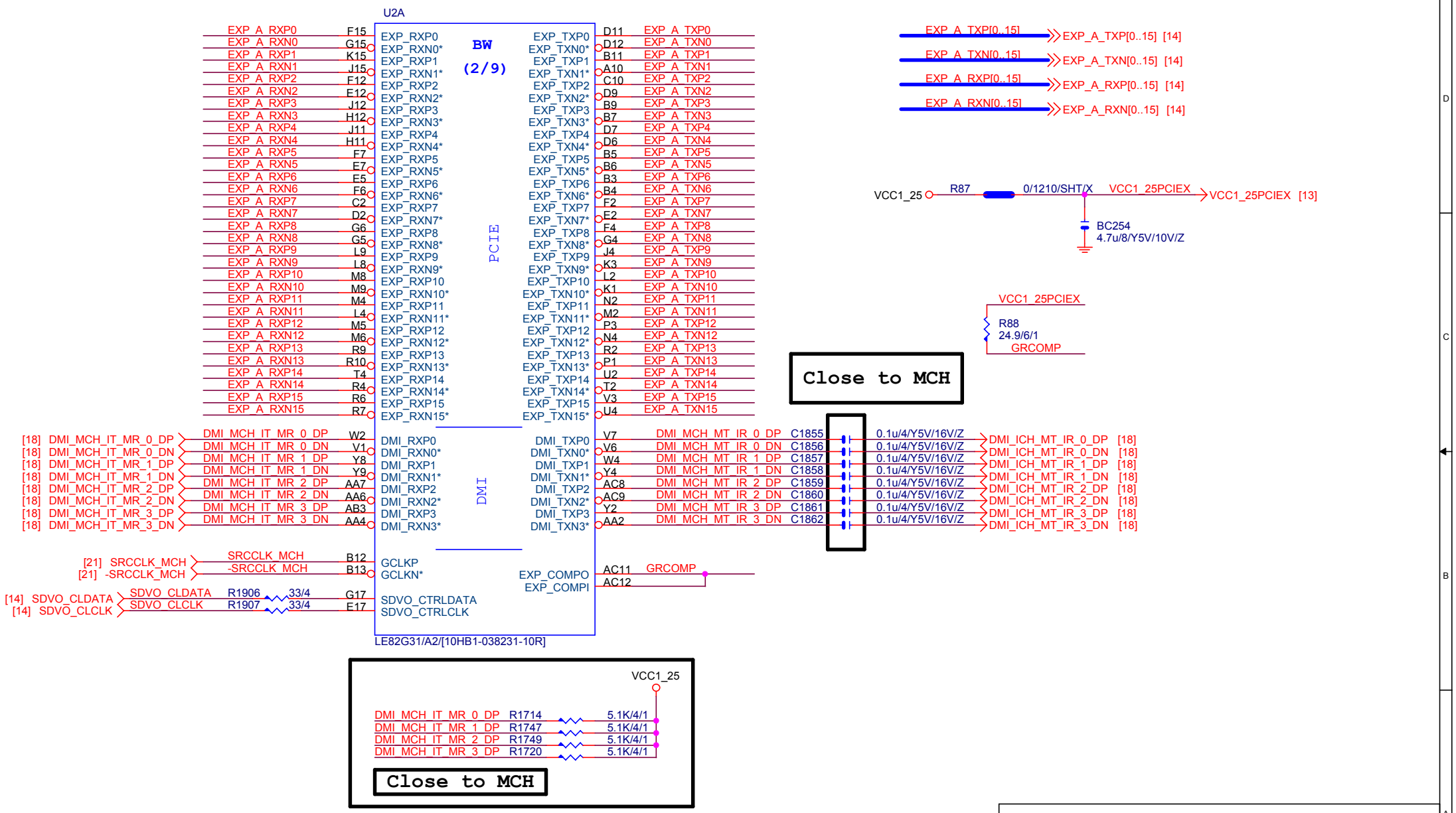




Gigabyte Technology

Title	GMCH-HOST	
Size B	Document Number G31M-S2L	Rev 1.02
Date: Tuesday, August 21, 2007	Sheet 8 of 33	

Gigabyte Technology	
Title	GMCH-DDRII
Size: Custom	Document Number: G31M-S2L
Rev	1.02
Date: Tuesday, August 21, 2007	Sheet 9 of 33

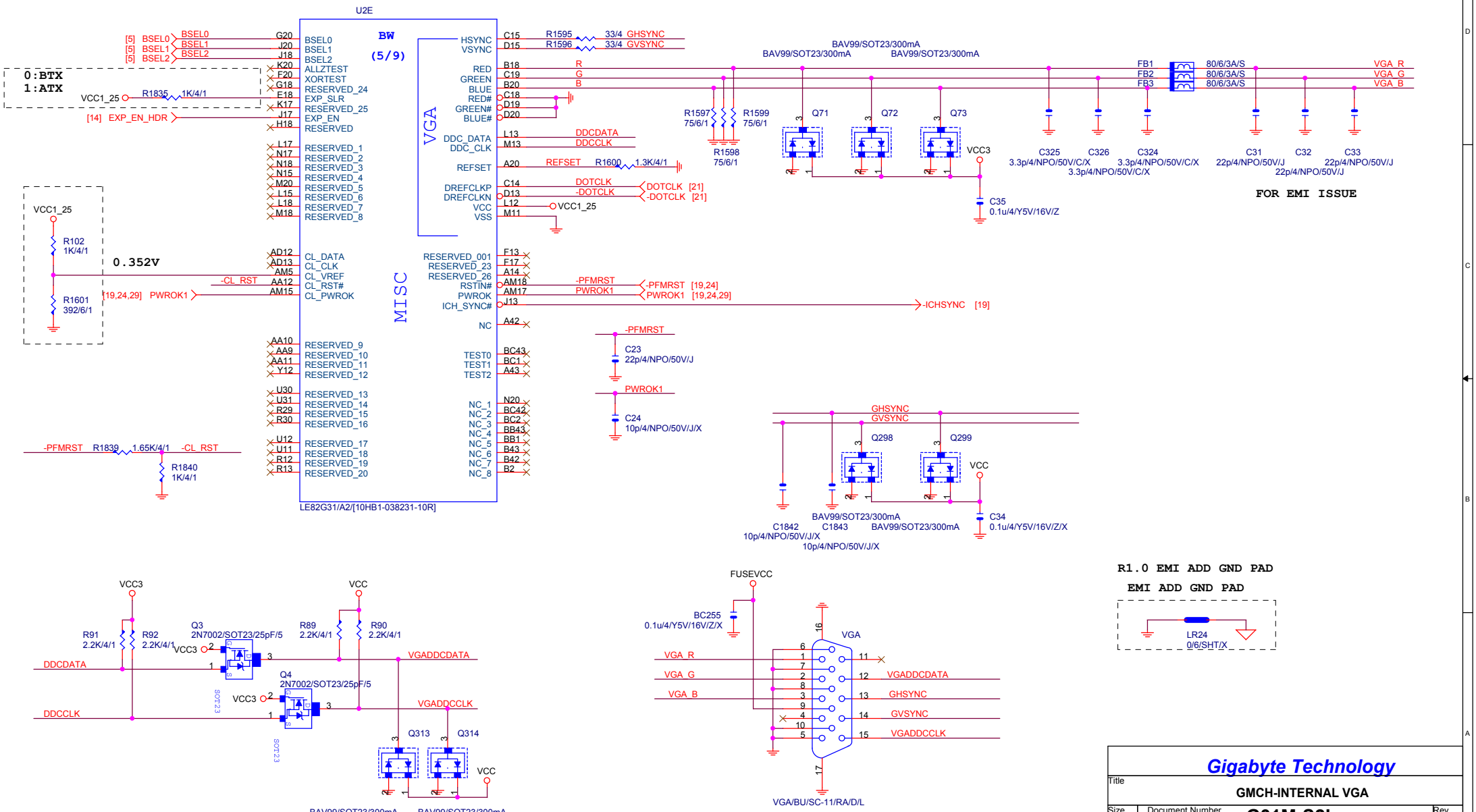


Gigabyte Technology

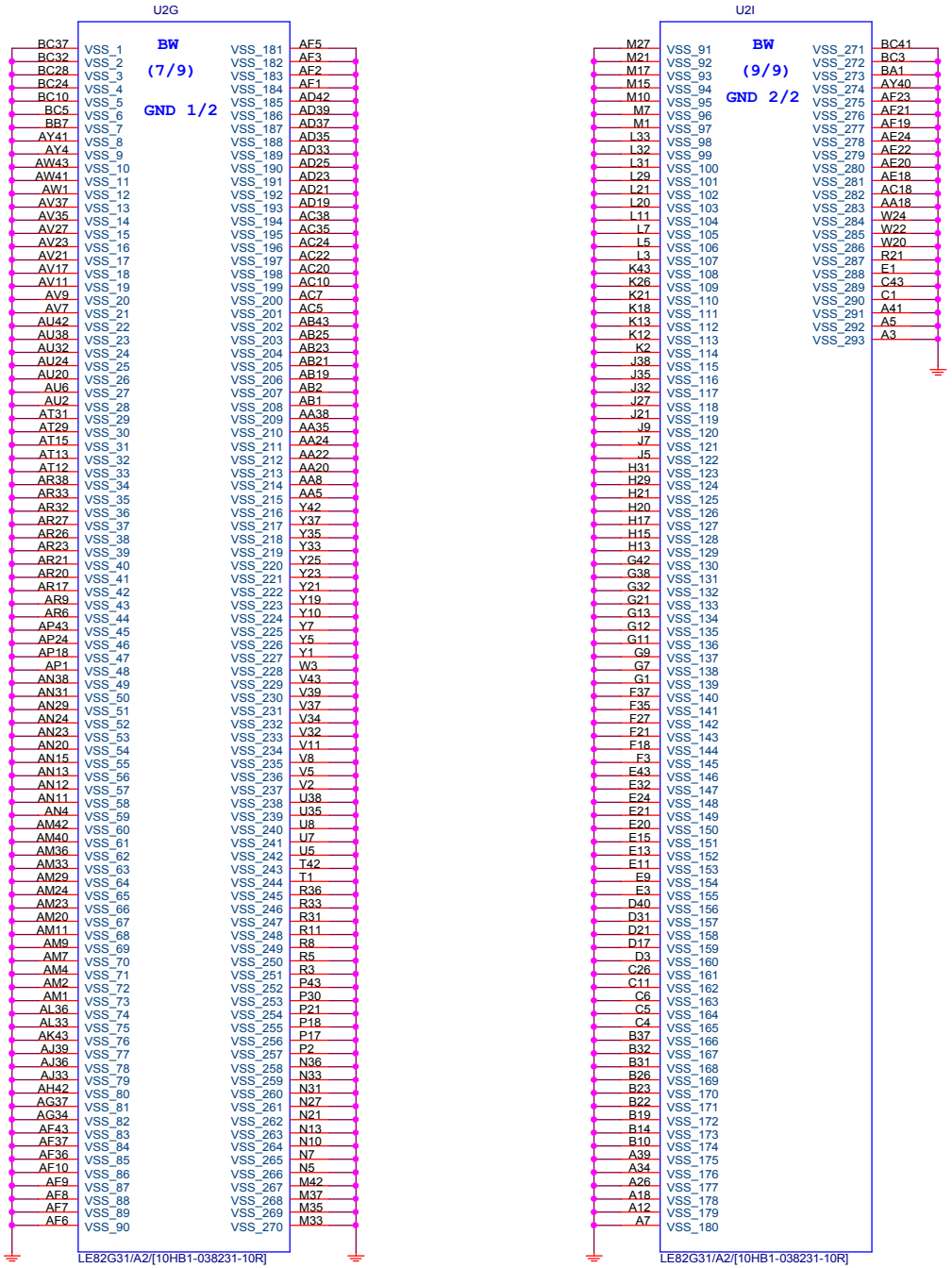
Title: GMCH-PCI E & DMI

Size: Custom | Document Number: G31M-S2L | Rev: 1.02

Date: Tuesday, August 21, 2007 | Sheet 10 of 33

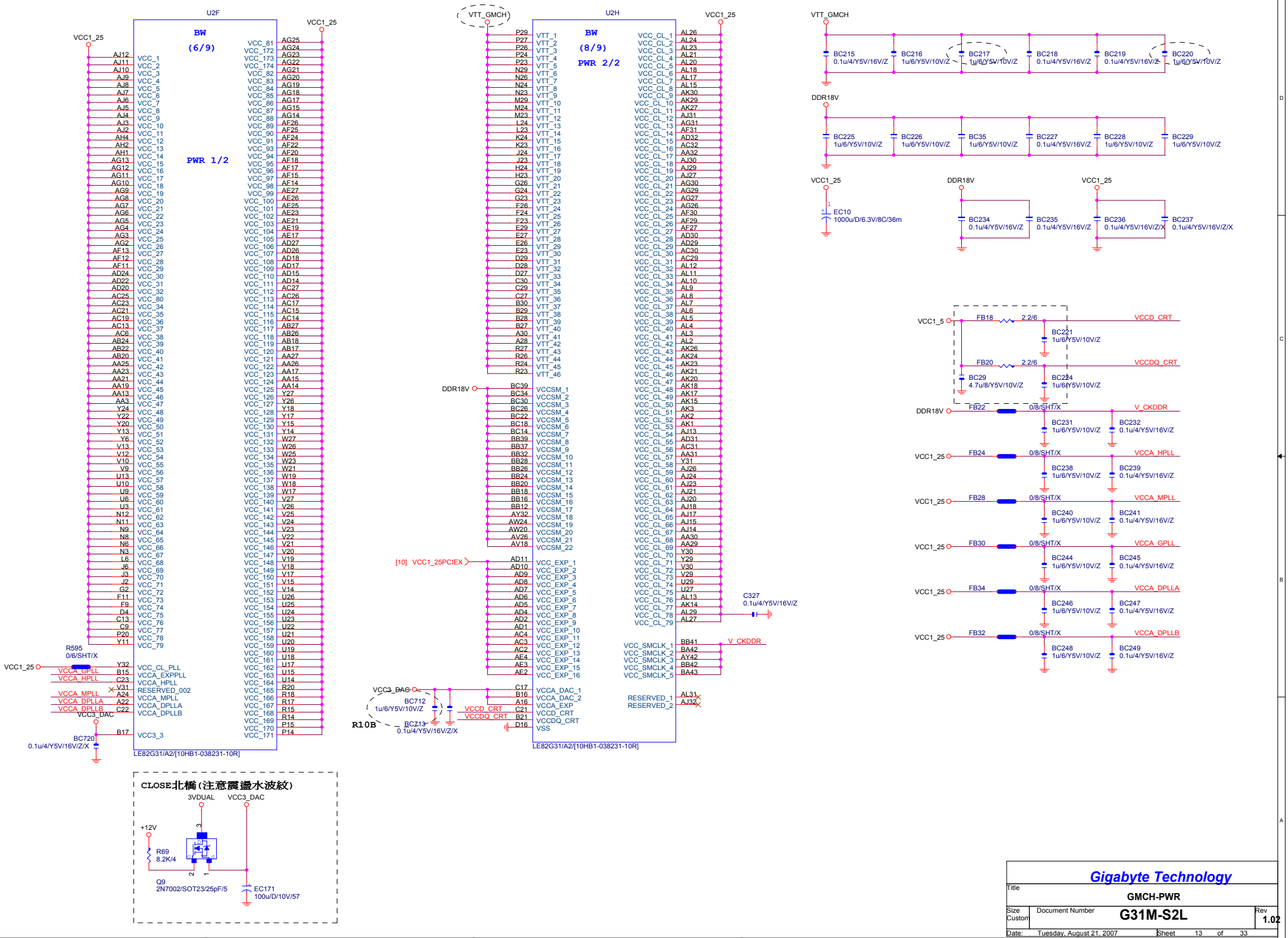


Gigabyte Technology		
Title	GMCH-INTERNAL VGA	
Size B	Document Number G31M-S2L	Rev 1.02
Date: Tuesday, August 21, 2007	Sheet 11 of 33	

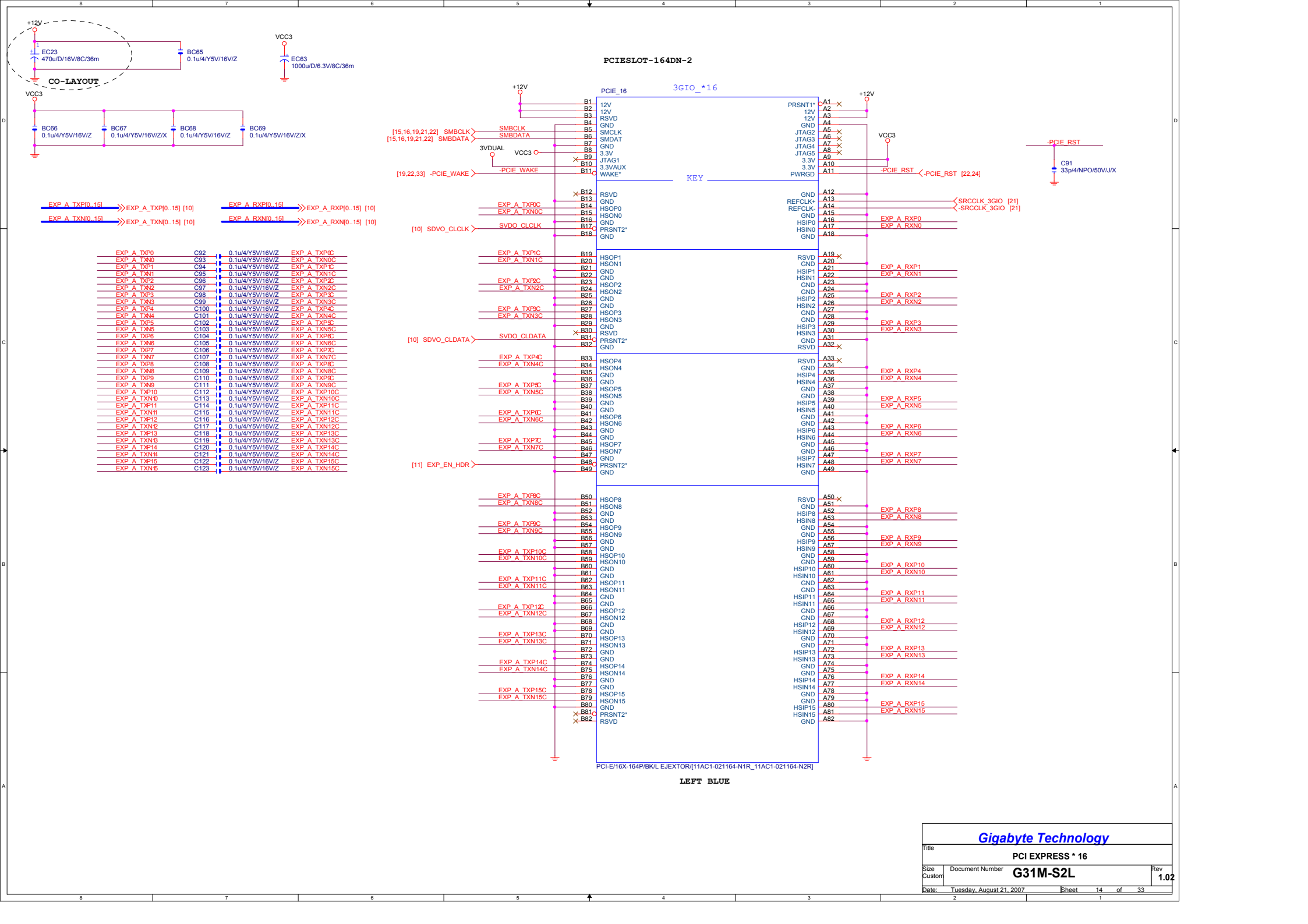


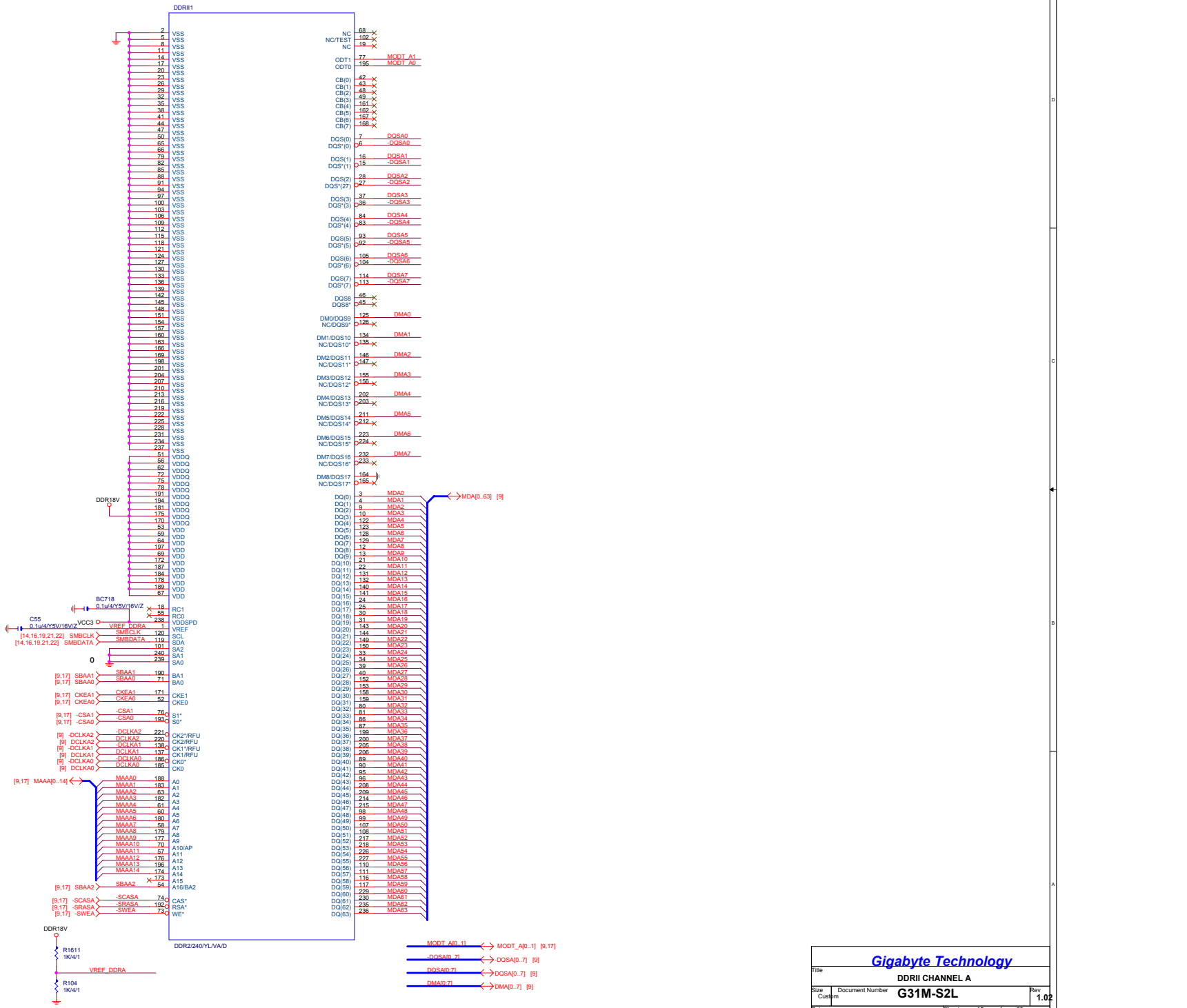
Gigabyte Technology

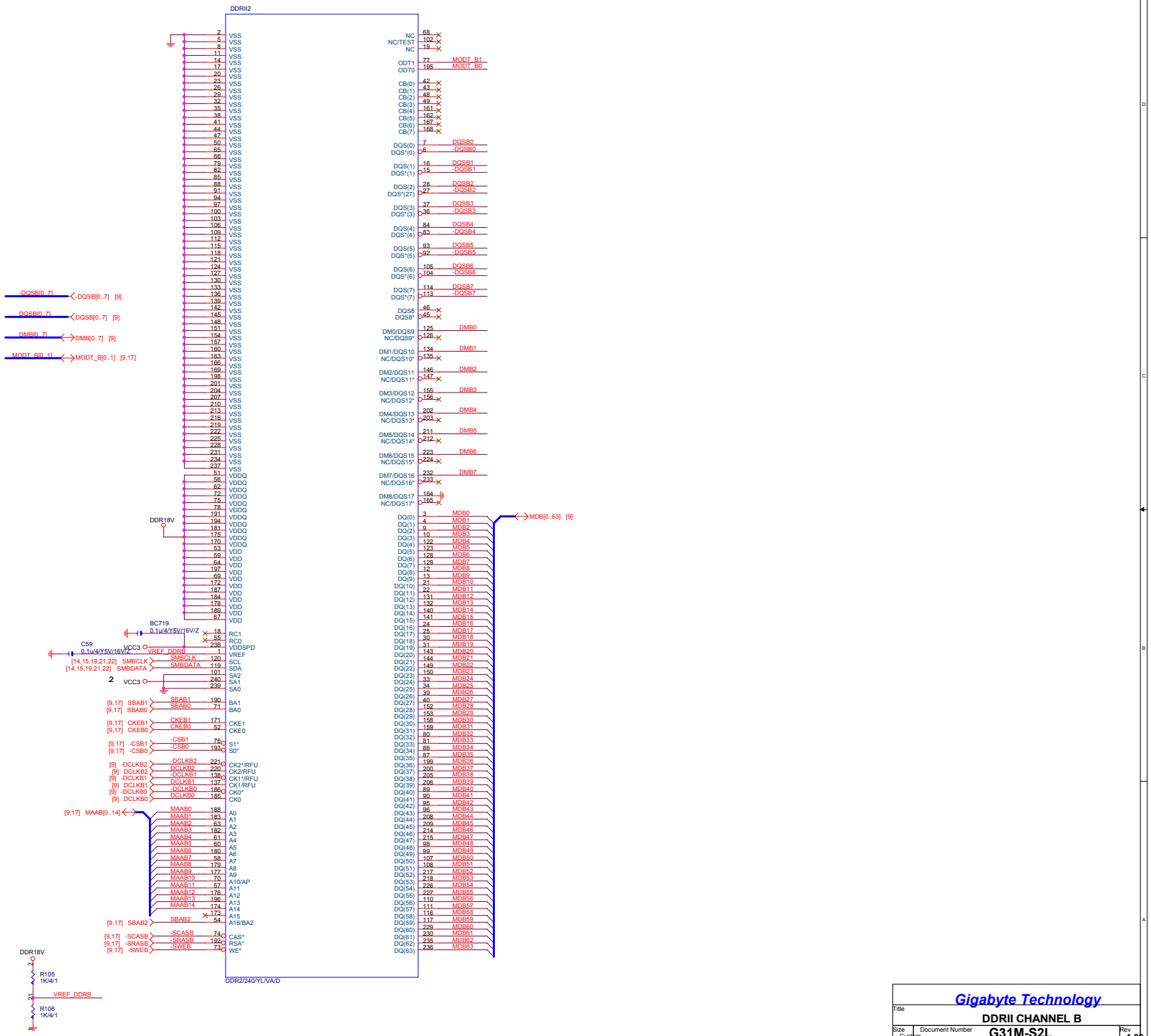
Title	GMCH-GND		
Size: Custom	Document Number: G31M-S2L		Rev: 1.02
Date: Tuesday, August 21, 2007	Sheet 12 of 33		



Gigabyte Technology			
Title	GMCH-PWR		
Size: Custom	Document Number: G31M-S2L		Rev: 1.02
Date: Tuesday, August 21, 2007	Sheet 13 of 33		


+12V
EC23
470u/D/16V/8C/36m
BC65
0.1u/4/Y5V/16V/Z
CO-LAYOUT
VCC3
EC63
1000u/D/6.3V/8C/36m
VCC3
BC66
0.1u/4/Y5V/16V/Z
BC67
0.1u/4/Y5V/16V/Z/X
BC68
0.1u/4/Y5V/16V/Z
BC69
0.1u/4/Y5V/16V/Z/X
PCIESLOT-164DN-2
PCIE_16
3GIO_*16
KEY
EXP_A_TXP[0..15]
EXP_A_TXP[0..15] [10]
EXP_A_TXN[0..15]
EXP_A_TXN[0..15] [10]
EXP_A_RXP[0..15]
EXP_A_RXP[0..15] [10]
EXP_A_RXN[0..15]
EXP_A_RXN[0..15] [10]
[15,16,19,21,22] SMBCLK
[15,16,19,21,22] SMBDATA
3VDUAL
[19,22,33] -PCIE_WAKE
[10] SDVO_CLCLK
[10] SDVO_CLDATA
[11] EXP_EN_HDR
-PCIE_RST
-PCIE_RST [22,24]
C91
33p/4/NPO/50V/J/X
SRCCLK_3GIO [21]
-SRCCLK_3GIO [21]
PCI-E/16X-164P/BK/L EJEXTOR/[11AC1-021164-N1R_11AC1-021164-N2R]
LEFT BLUE
Gigabyte Technology
PCI EXPRESS * 16
G31M-S2L
1.02
Tuesday, August 21, 2007
Sheet 14 of 33

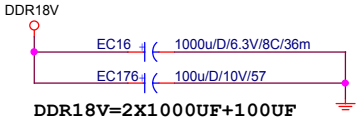

DDRII1
DDR18V
BC718
0.1u/4/Y5V/16V/Z
C55
0.1u/4/Y5V/16V/Z
VCC3
VREF_DDRA
SMBCLK
SMBDATA
[14,16,19,21,22] SMBCLK
[14,16,19,21,22] SMBDATA
0
[9,17] SBAA1
[9,17] SBAA0
[9,17] CKEA1
[9,17] CKEA0
[9,17] -CSA1
[9,17] -CSA0
[9] -DCLKA2
[9] DCLKA2
[9] -DCLKA1
[9] DCLKA1
[9] -DCLKA0
[9] DCLKA0
[9,17] MAAA[0..14]
[9,17] SBAA2
[9,17] -SCASA
[9,17] -SRASA
[9,17] -SWEA
DDR18V
R1611
1K/4/1
VREF_DDRA
R104
1K/4/1
DDR2/240/YL/VA/D
MDA[0..63] [9]
MODT_A[0..1]
MODT_A[0..1] [9,17]
-DQSA[0..7]
-DQSA[0..7] [9]
DQSA[0..7]
DQSA[0..7] [9]
DMA[0..7]
DMA[0..7] [9]
Gigabyte Technology
Title
DDRII CHANNEL A
Size
Custom
Document Number
G31M-S2L
Rev
1.02
Date:
Sheet 15 of 33

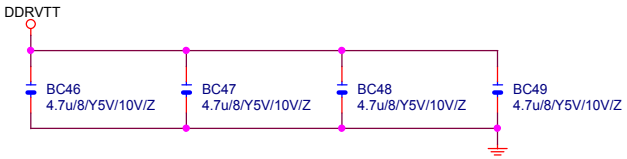


Gigabyte Technology	
Title	DDRII CHANNEL B
Size: Custom	Document Number: G31M-S2L
Rev: 1.02	
Date:	Sheet 16 of 33

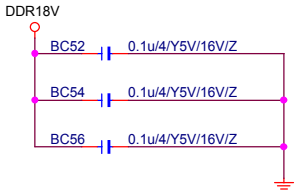
DDR TERMINATION CHANNEL A

DDRVTT Decouple

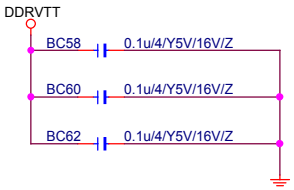


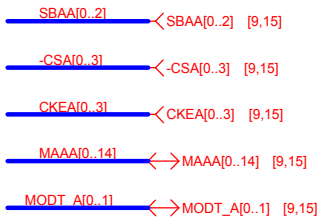


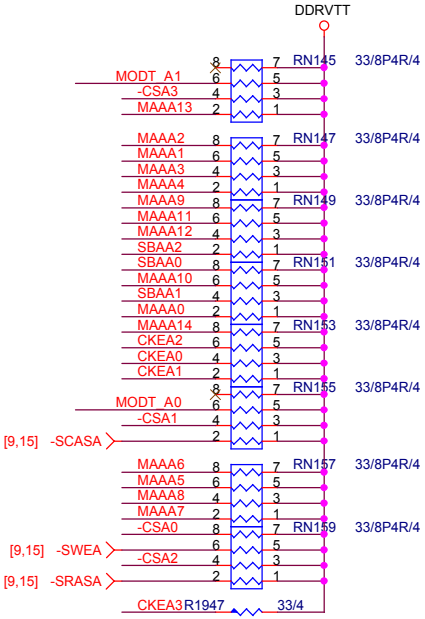
DDR18V Decouple



DDRVTT Decouple

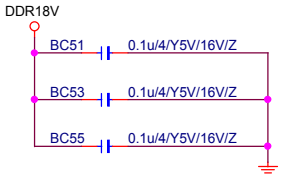




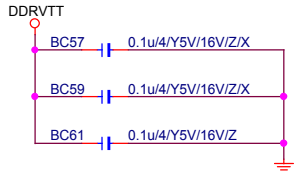


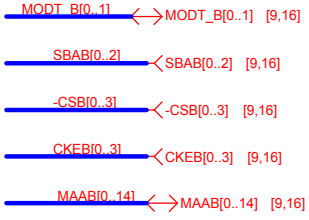
DDR TERMINATION CHANNEL B

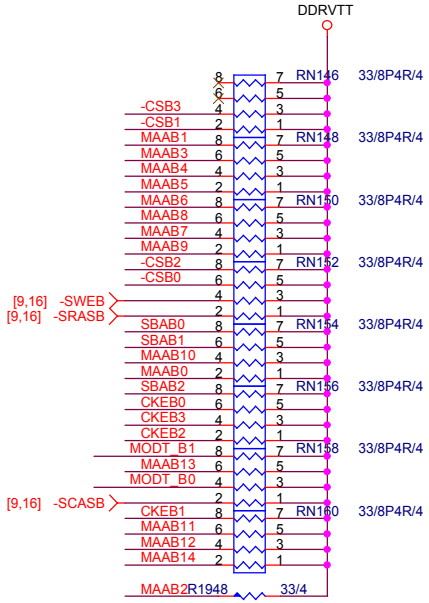
DDR18V Decouple



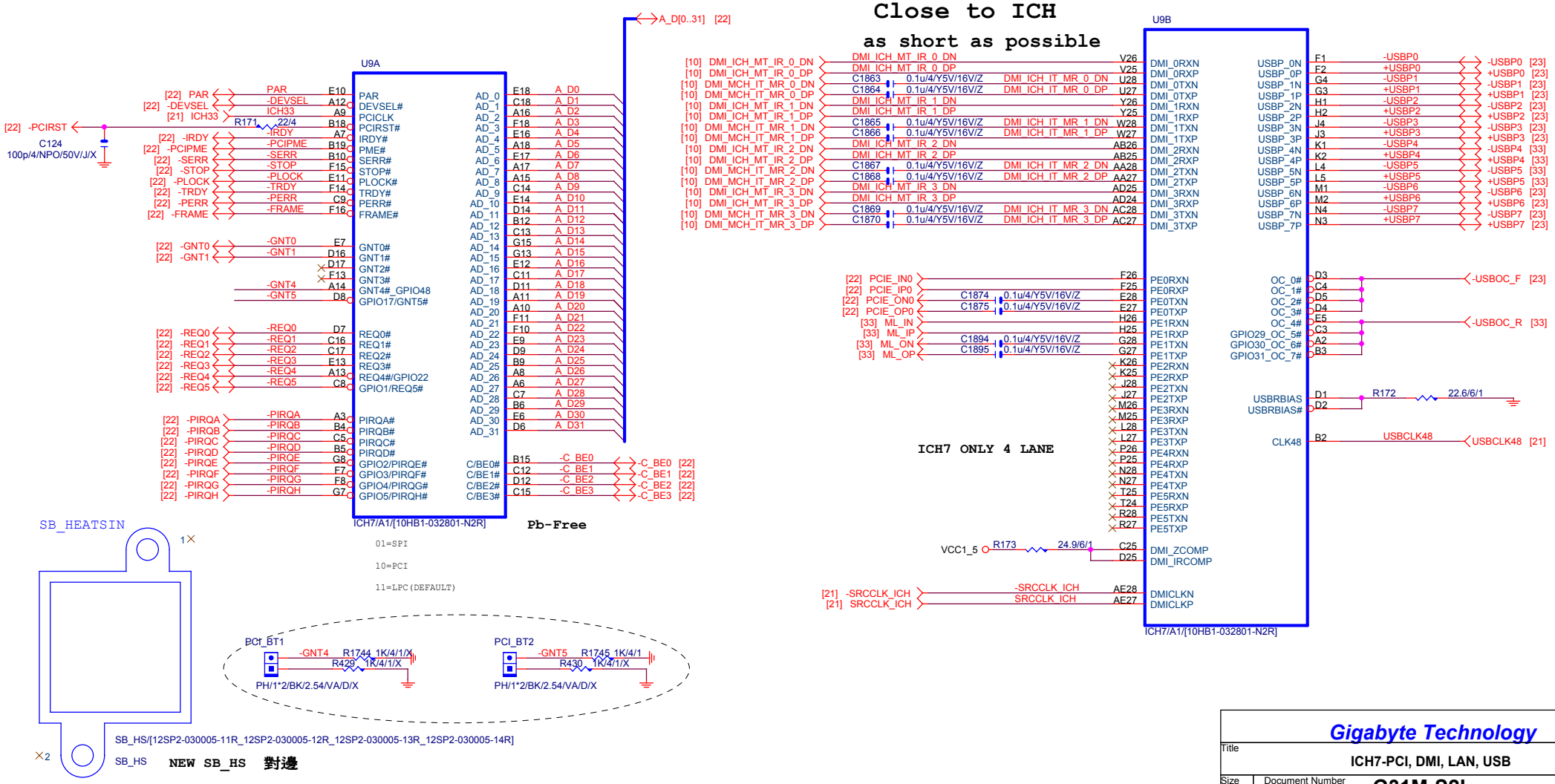
DDRVTT Decouple



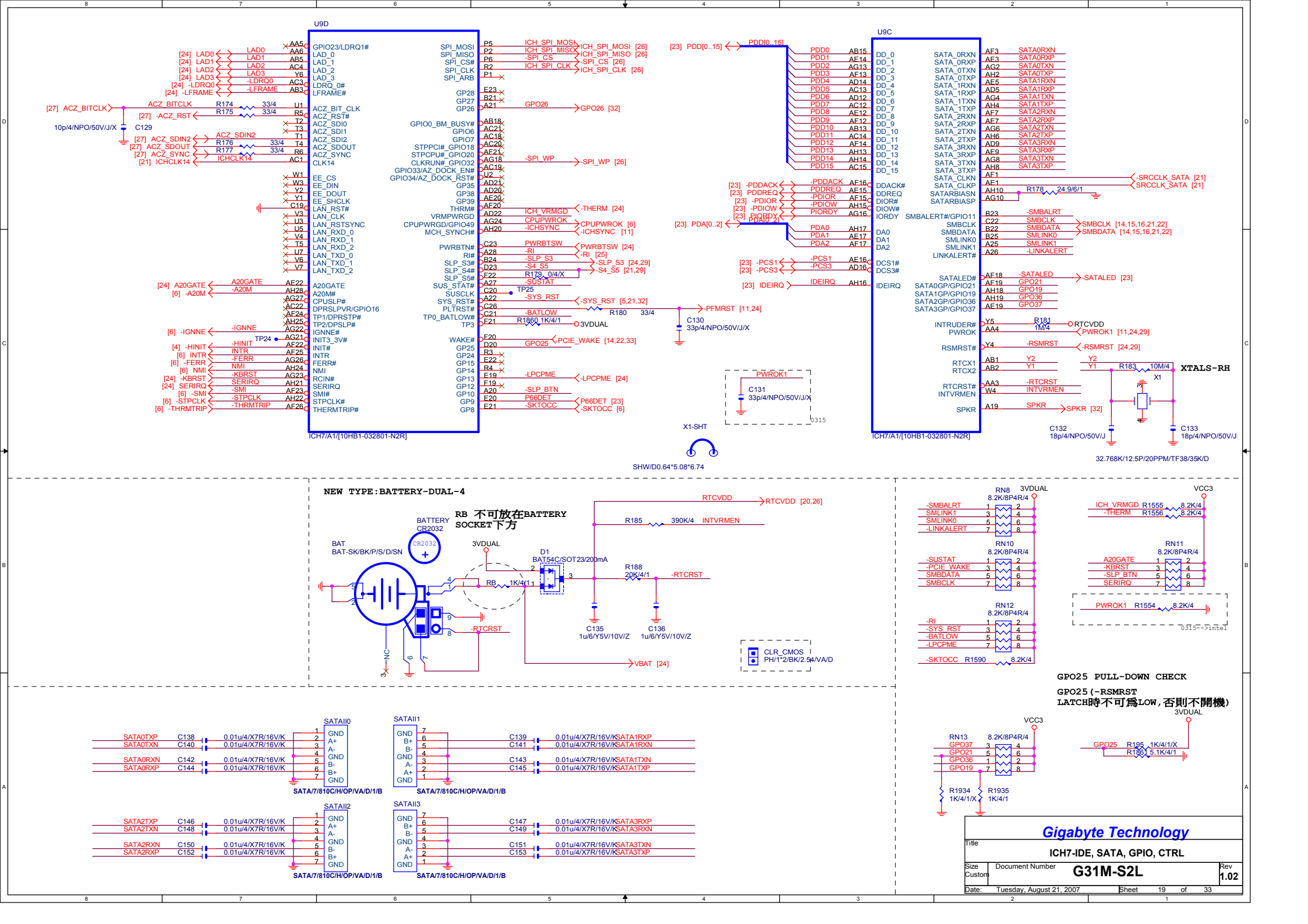




Gigabyte Technology		
Title: DDRII TERMINATOR		
Size: Custom	Document Number: G31M-S2L	Rev: 1.02
Date: Tuesday, August 21, 2007	Sheet 17 of 33	



Gigabyte Technology			
Title	ICH7-PCI, DMI, LAN, USB		
Size B	Document Number G31M-S2L		Rev 1.02
Date: Tuesday, August 21, 2007	Sheet 18 of 33		


U9D
ICH7/A1/[10HB1-032801-N2R]
U9C
ICH7/A1/[10HB1-032801-N2R]
NEW TYPE:BATTERY-DUAL-4
RB 不可放在BATTERY SOCKET下方
BATTERY CR2032
BAT BAT-SK/BK/P/S/D/SN
D1 BAT54C/SOT23/200mA
CLR_CMOS PH/1*2/BK/2.54/VA/D
SATAII0
SATAII1
SATAII2
SATAII3
SATA/7/810C/H/OP/VA/D/1/B
Gigabyte Technology
Title
ICH7-IDE, SATA, GPIO, CTRL
Size Custom
Document Number G31M-S2L
Rev 1.02
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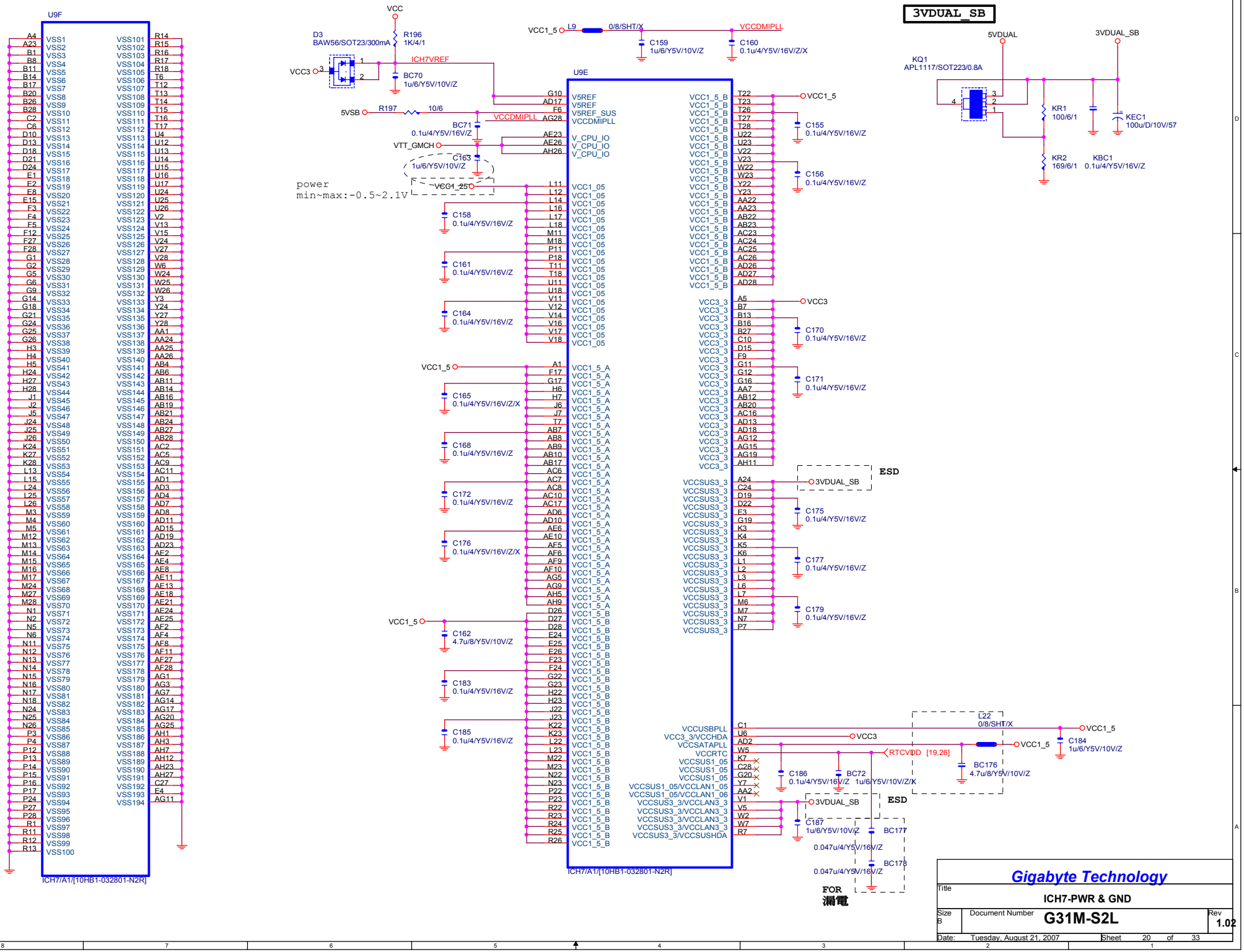
3VDUAL_SB
U9F
U9E
VCC
VCC3
VCC1_5
5VSB
5VDUAL
3VDUAL_SB
D3
BAW56/SOT23/300mA
R196
1K/4/1
ICH7VREF
BC70
1u/6/Y5V/10V/Z
R197
10/6
VCCDMIPLL
BC71
0.1u/4/Y5V/16V/Z
VTT_GMCH
C163
1u/6/Y5V/10V/Z
power
min~max:-0.5~2.1V
L9
0/8/SHT/X
C159
1u/6/Y5V/10V/Z
C160
0.1u/4/Y5V/16V/Z/X
KQ1
APL1117/SOT223/0.8A
KR1
100/6/1
KEC1
100u/D/10V/57
KR2
169/6/1
KBC1
0.1u/4/Y5V/16V/Z
C155
0.1u/4/Y5V/16V/Z
C156
0.1u/4/Y5V/16V/Z
C158
0.1u/4/Y5V/16V/Z
C161
0.1u/4/Y5V/16V/Z
C164
0.1u/4/Y5V/16V/Z
C165
0.1u/4/Y5V/16V/Z/X
C168
0.1u/4/Y5V/16V/Z
C172
0.1u/4/Y5V/16V/Z
C176
0.1u/4/Y5V/16V/Z/X
C162
4.7u/8/Y5V/10V/Z
C183
0.1u/4/Y5V/16V/Z
C185
0.1u/4/Y5V/16V/Z
C170
0.1u/4/Y5V/16V/Z
C171
0.1u/4/Y5V/16V/Z
C175
0.1u/4/Y5V/16V/Z
C177
0.1u/4/Y5V/16V/Z
C179
0.1u/4/Y5V/16V/Z
ESD
C184
1u/6/Y5V/10V/Z
BC176
4.7u/8/Y5V/10V/Z
C186
0.1u/4/Y5V/16V/Z
BC72
1u/6/Y5V/10V/Z/K
C187
1u/6/Y5V/10V/Z
BC177
0.047u/4/Y5V/16V/Z
BC178
0.047u/4/Y5V/16V/Z
FOR
漏電
RTCVDD [19,26]
ICH7/A1/[10HB1-032801-N2R]
ICH7/A1/[10HB1-032801-N2R]
Gigabyte Technology
Title
ICH7-PWR & GND
Size
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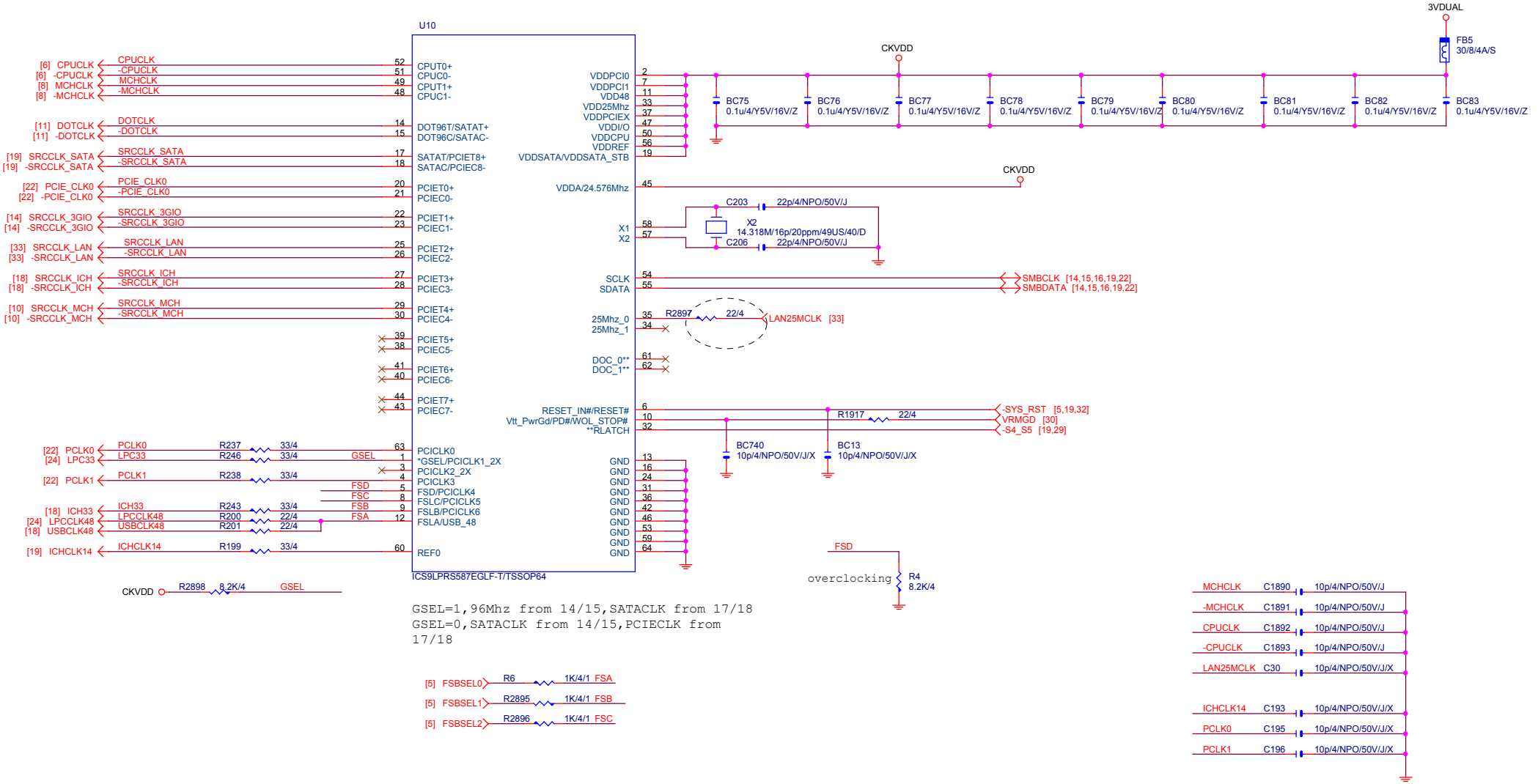
CLK GEN CK505



GSEL=1,96Mhz from 14/15,SATACLK from 17/18
GSEL=0,SATACLK from 14/15,PCIECLK from 17/18

Gigabyte Technology		
Title: CK505 CLK GEN		
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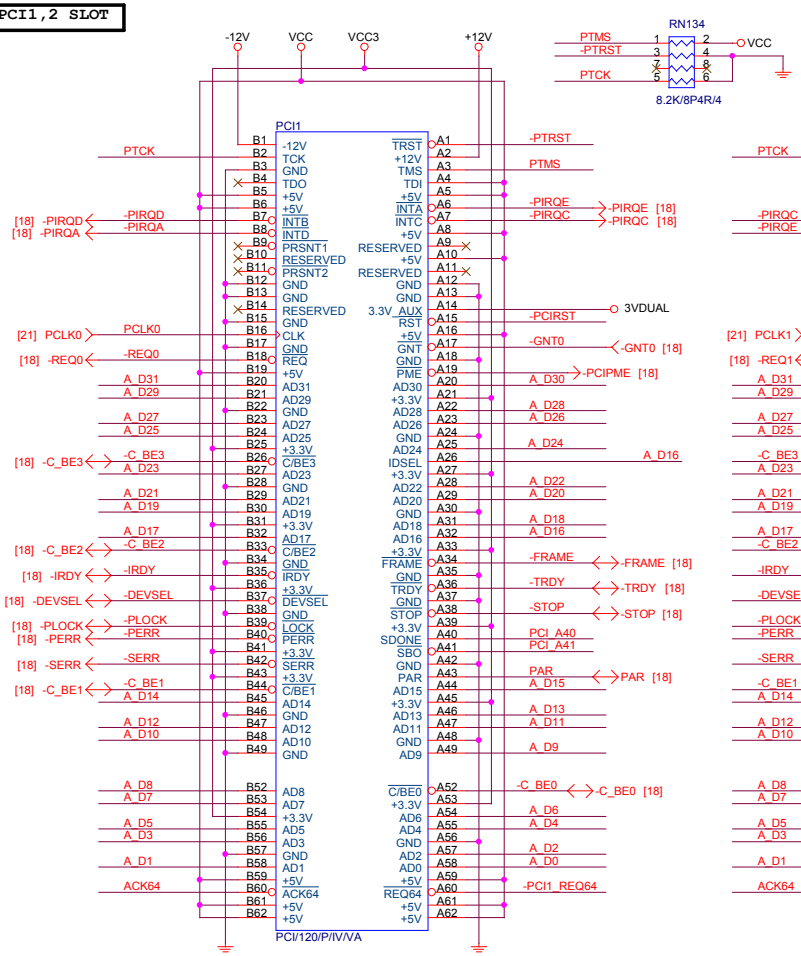
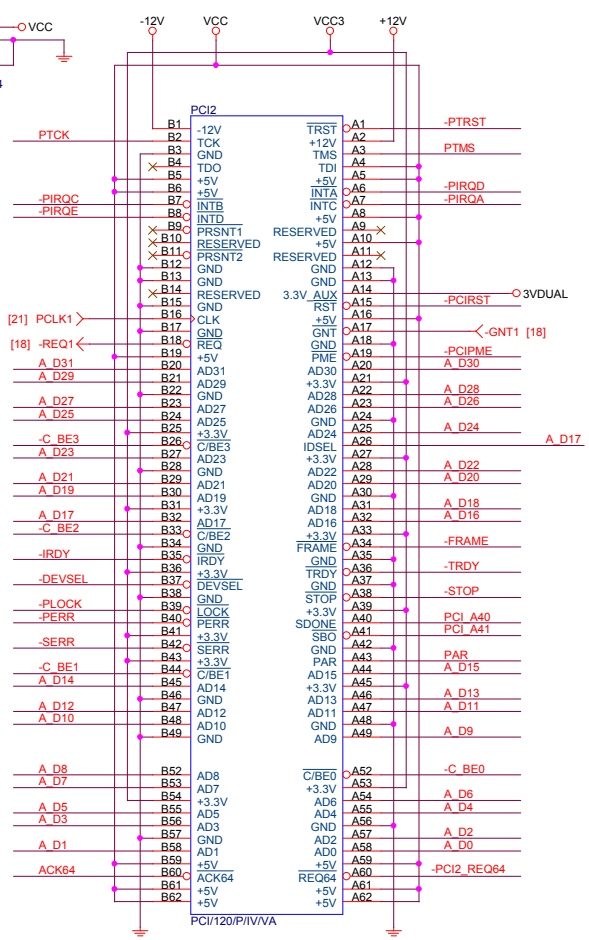
PCI1,2 SLOT

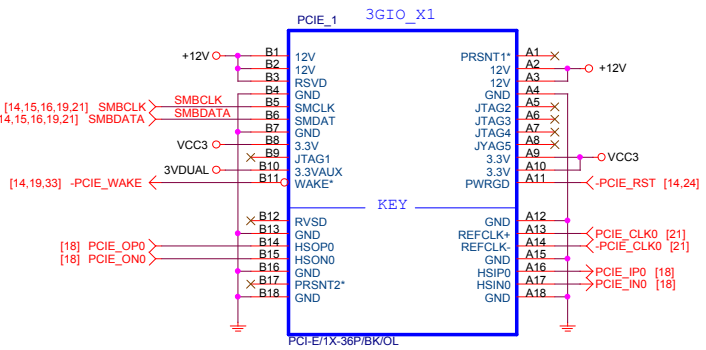


AD_16/-PIRQ(E-D-C-A)/-REQ0/-GNT0



AD_17/-PIRQ(D-C-A-E)/-REQ1/-GNT1

PCIE*1



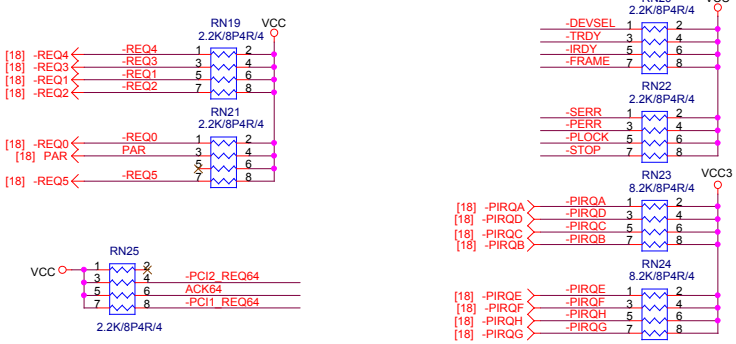
[18] A_D[0..31] — A_D[0..31]

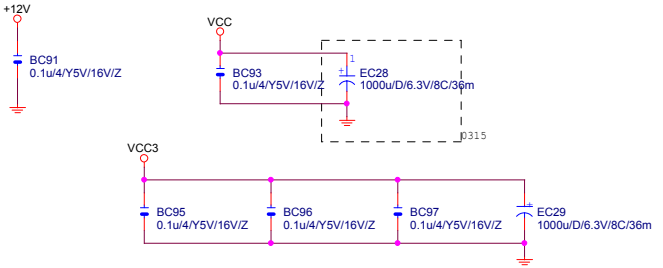
-PCIRST — -PCIRST [18]

C208
33p/4/NPO/50V/J/X

Place close to PCI1

[14,15,16,19,21] SMBCLK — PCI_A40
[14,15,16,19,21] SMBDATA — PCI_A41





Gigabyte Technology

Title	PCI SLOT 1, 2/PCIEX1		
Size: Custom	Document Number: G31M-S2L		Rev: 1.02
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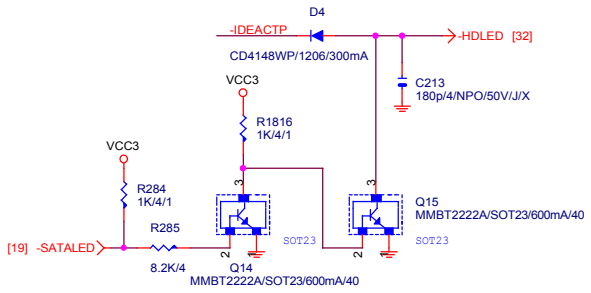
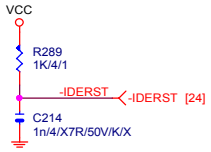
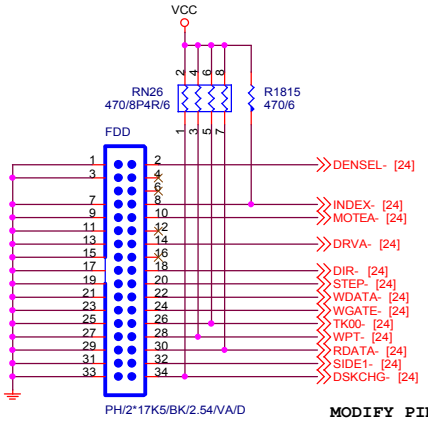
IDE/SATA LED



IDE RESET

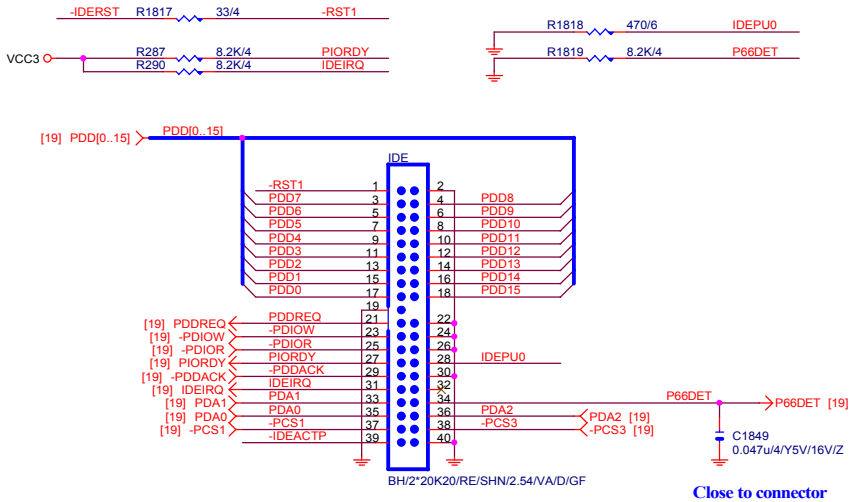


FLOPPY



MODIFY PIN HEADER

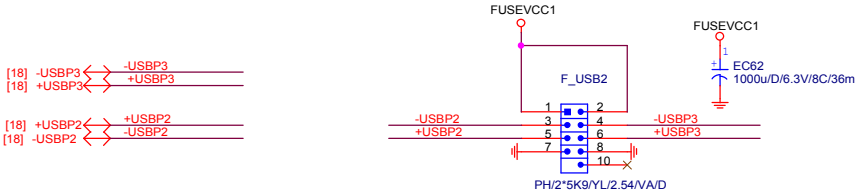
IDE

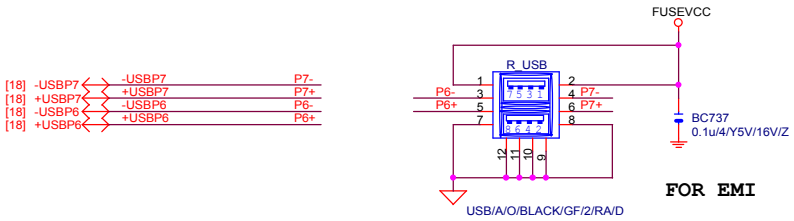


Close to connector

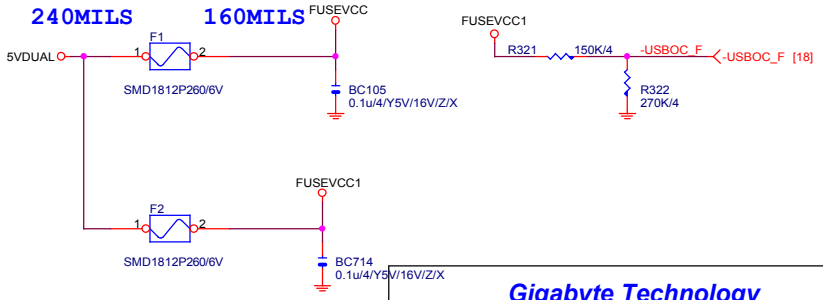
FRONT USB1

FRONT USB2





FOR EMI



Gigabyte Technology

Title	IDE,FDD,F_USB	
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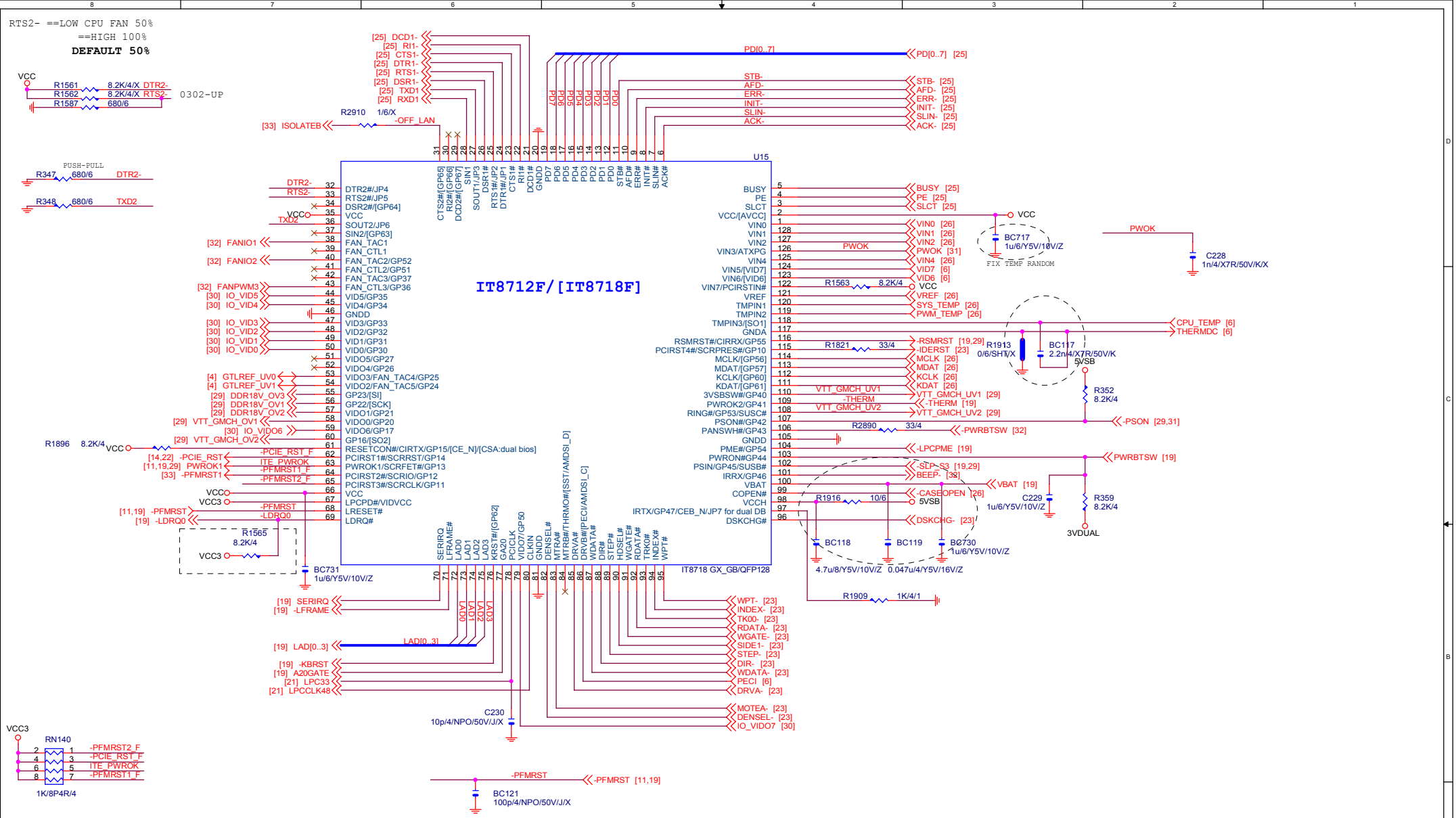
RTS2- ==LOW CPU FAN 50%
==HIGH 100%
DEFAULT 50%
IT8712F/[IT8718F]
U15
IT8718 GX_GB/QFP128
R2910 1/6/X -OFF_LAN
R1561 8.2K/4/X DTR2-
R1562 8.2K/4/X RTS2-
R1587 680/6
0302-UP
PUSH-PULL
R347 680/6 DTR2-
R348 680/6 TXD2
R1896 8.2K/4
R1565 8.2K/4
R1563 8.2K/4
R1821 33/4
R1913 0/6/SHT/X
R1916 10/6
R2890 33/4
R1909 1K/4/1
R352 8.2K/4
R359 8.2K/4
BC731 1u/6/Y5V/10V/Z
BC717 1u/6/Y5V/10V/Z
FIX TEMP RANDOM
BC117 2.2n/4/X7R/50V/K
BC118 4.7u/8/Y5V/10V/Z
BC119 0.047u/4/Y5V/16V/Z
BC730 1u/6/Y5V/10V/Z
C228 1n/4/X7R/50V/K/X
C229 1u/6/Y5V/10V/Z
C230 10p/4/NPO/50V/J/X
BC121 100p/4/NPO/50V/J/X
RN140 1K/8P4R/4
PWOK
5VSB
3VDUAL
VCC
VCC3
Dual BIOS:
GB logo :Pin 61 (GP15/CSA)
GB logo :Pin 59 (GP17/CSB)
Pin 59 Dual BIOS ,Power On Strapping:
H ==>Dual BIOS function Enable
L ==>Dual BIOS function Disable
1.2V or 3.3V tolerance select.
1.2V OUTPUT 接 VTT_GMCH
3.3V OUTPUT 接3.3V
LPCPD#=VIDVCC
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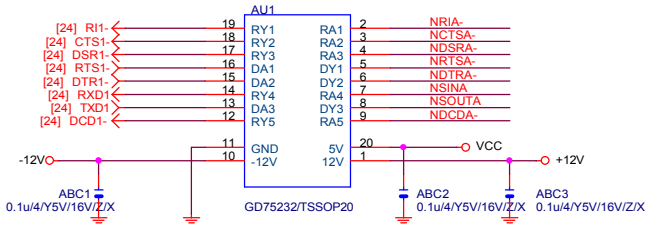
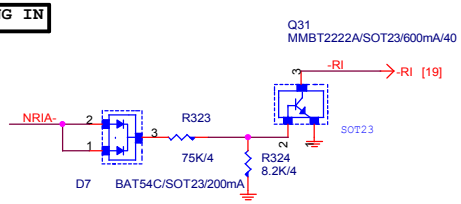
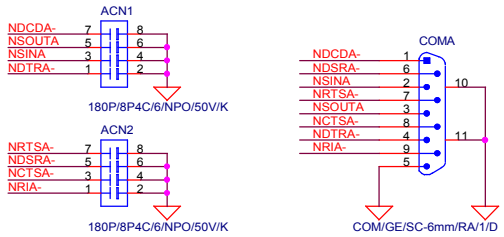
COMA



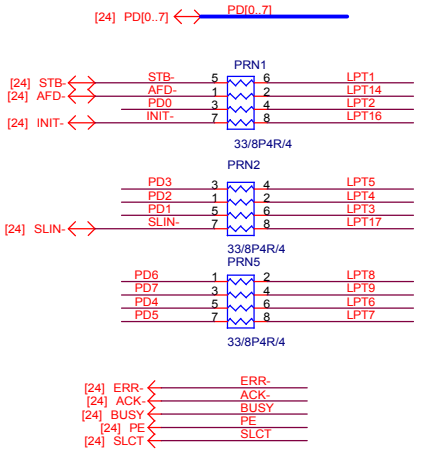
RING IN

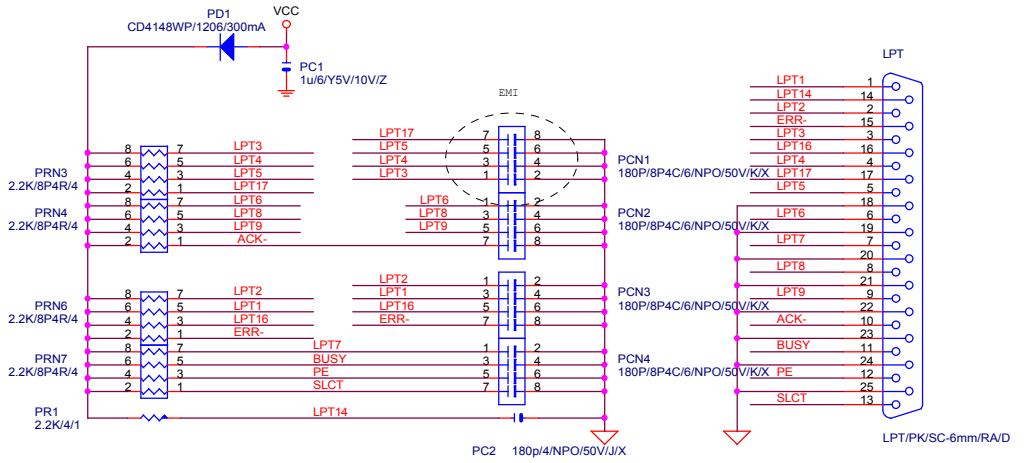


EXTERNAL COMA



LPT PORT





Gigabyte Technology			
Title: COM & LPT PORT			
Size: B	Document Number: G31M-S2L		Rev: 1.02
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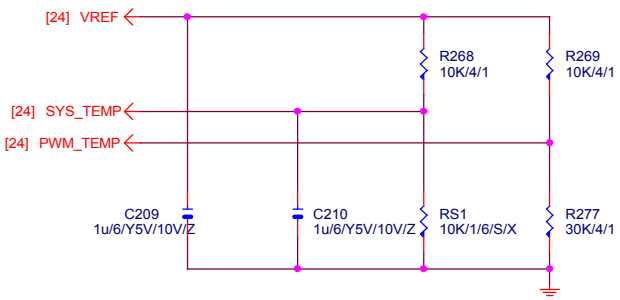
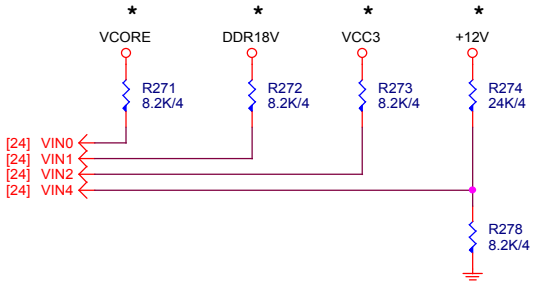
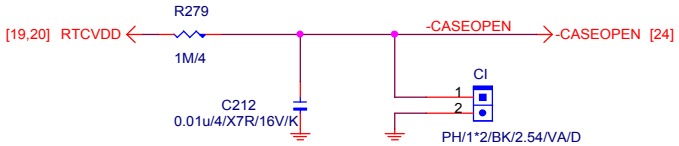
TEMP H/W MONITOR



VOLTAGE-- H/W MONITOR

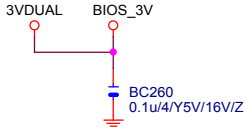


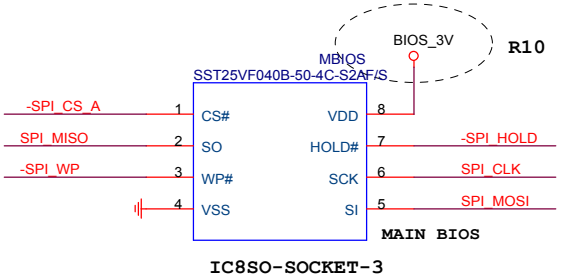
CASE OPEN



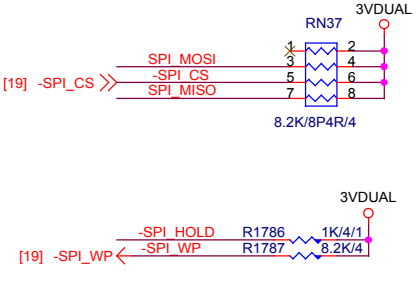
Case Open Circuits

DUAL BIOS

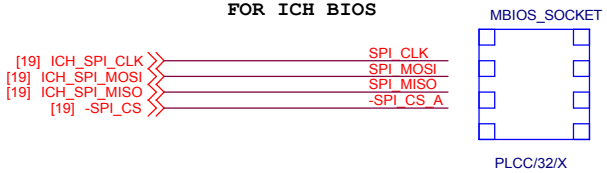




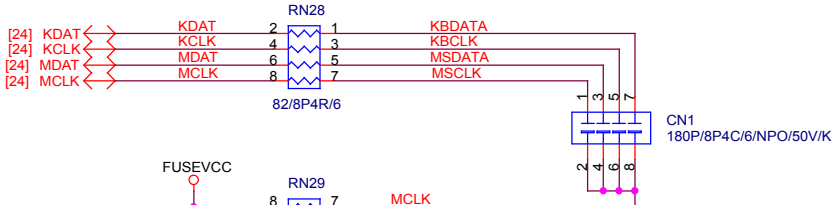
IC8SO-SOCKET-3

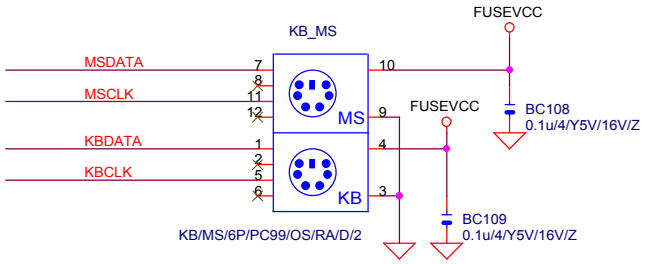


FOR ICH BIOS



KB/MS





Gigabyte Technology		
Title: HW-MONITOR/CI/KB/MS/BIOS		
Size: Custom	Document Number: G31M-S2L	Rev: 1.02
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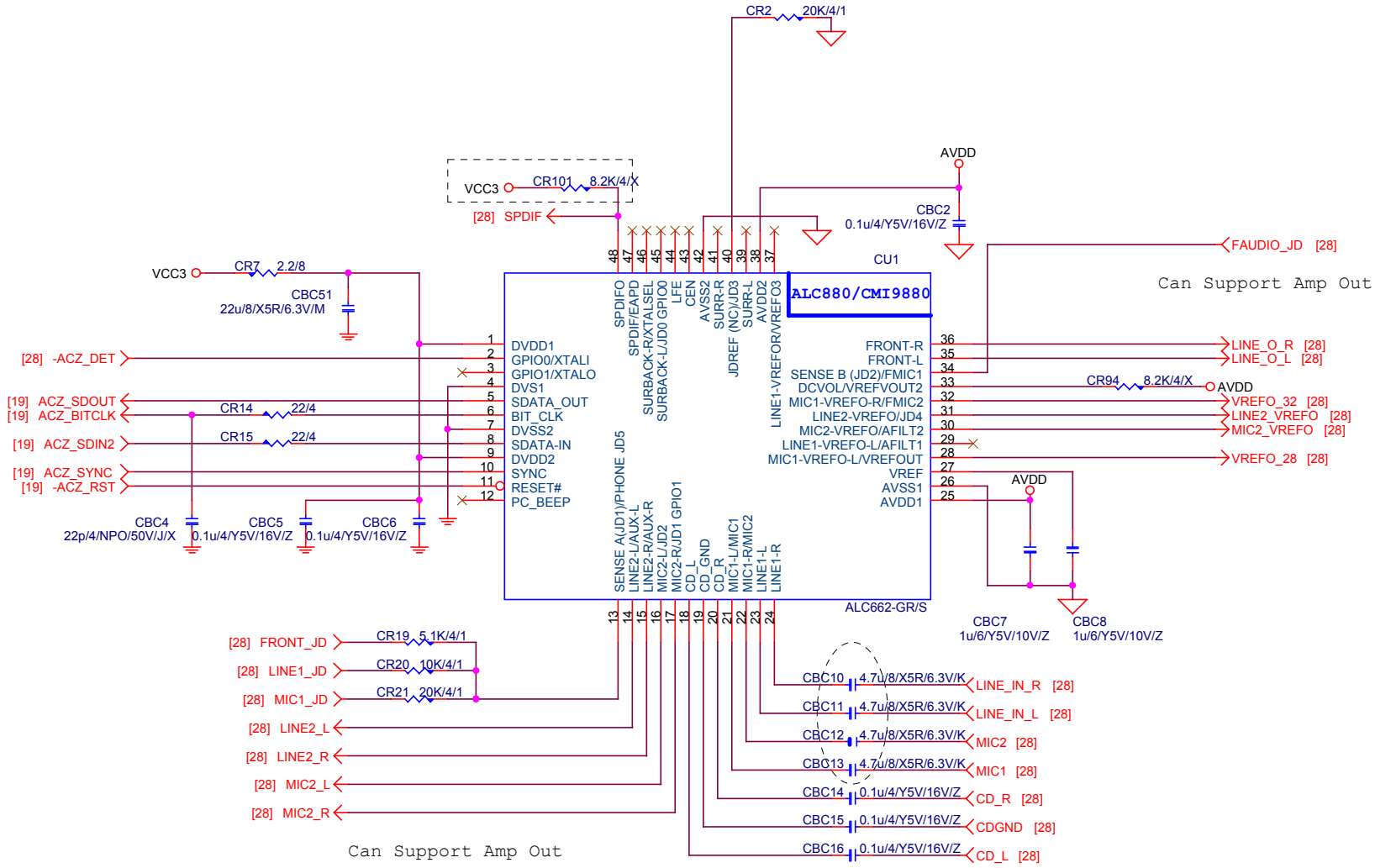
AZALIA CODEC



Gigabyte Technology			
Title: AZALIA ALC662			
Size: Custom	Document Number: G31M-S2L		Rev: 1.02
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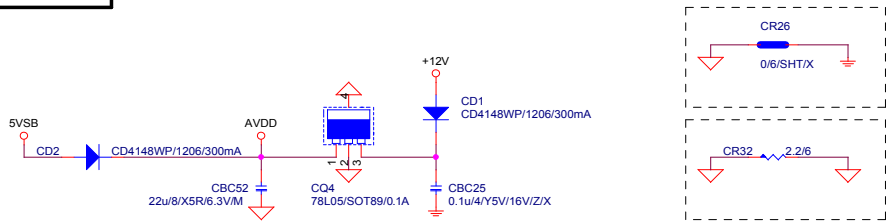
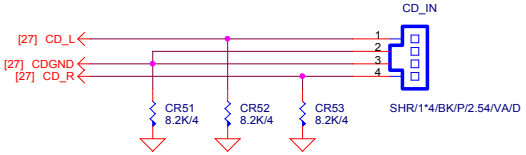
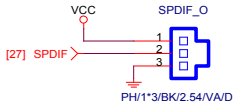
CODEC POWER/EMI PAD



CD IN

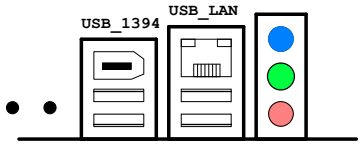


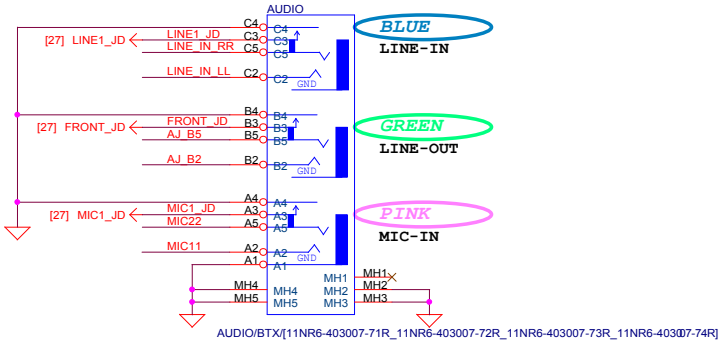
SPDIF



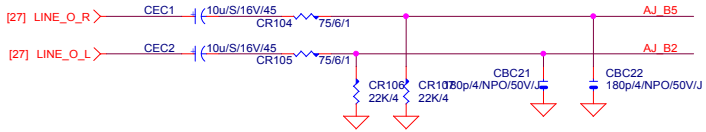
PIN HEADER 1X3

AZALIA JACK

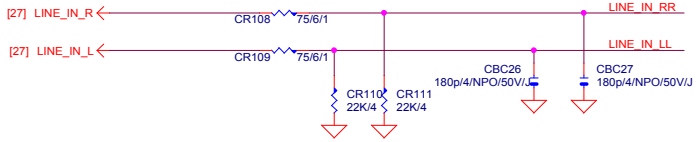




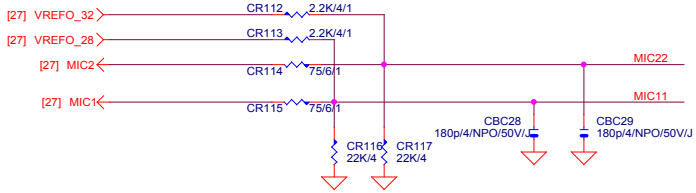
LINE-OUT



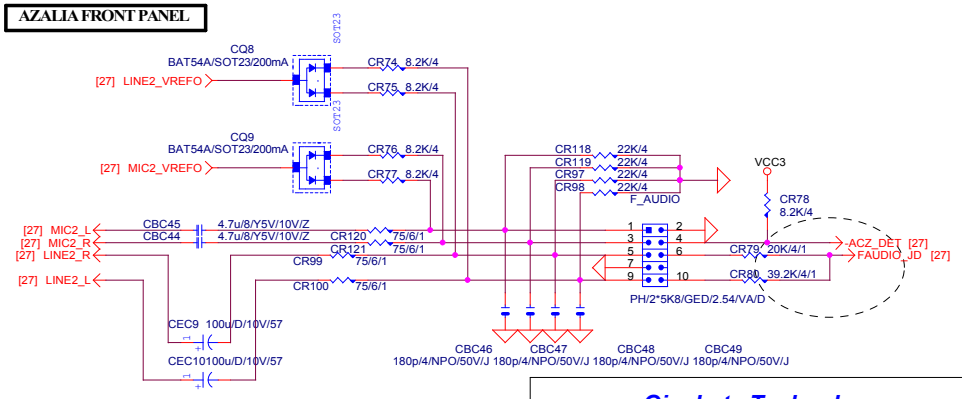
LINE-IN



MIC-IN



AZALIA FRONT PANEL



Gigabyte Technology

Title: AUDIO JACK

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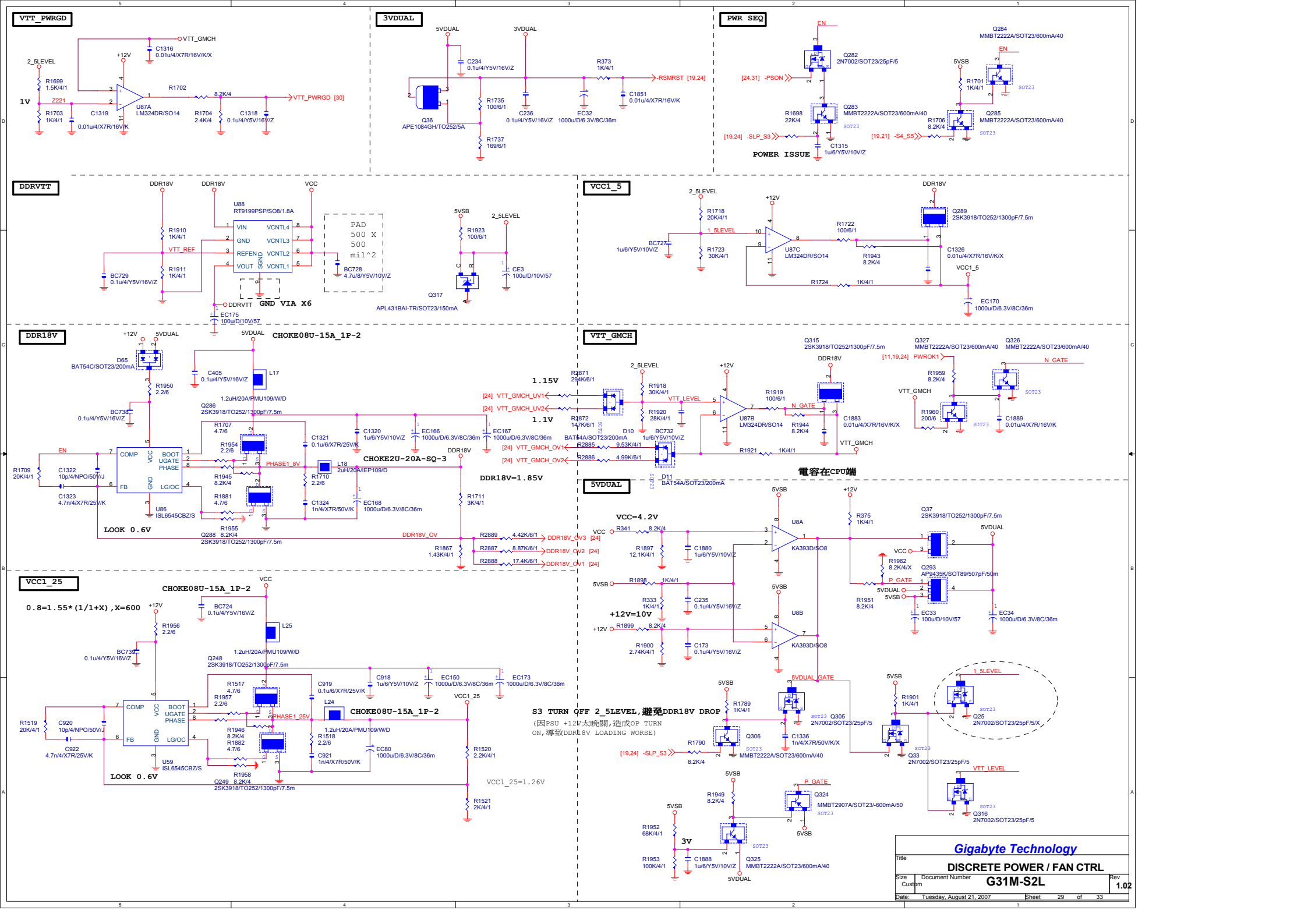
VTT_PWRGD
3VDUAL
PWR SEQ
DDRVTT
VCC1_5
DDR18V
VTT_GMCH
VCC1_25
5VDUAL
POWER ISSUE
GND VIA X6
CHOKE08U-15A_1P-2
CHOKE2U-20A-SQ-3
LOOK 0.6V
電容在CPU端
S3 TURN OFF 2_5LEVEL,避免DDR18V DROP
(因PSU +12V太晚關,造成OP TURN ON,導致DDR18V LOADING WORSE)
Gigabyte Technology
DISCRETE POWER / FAN CTRL
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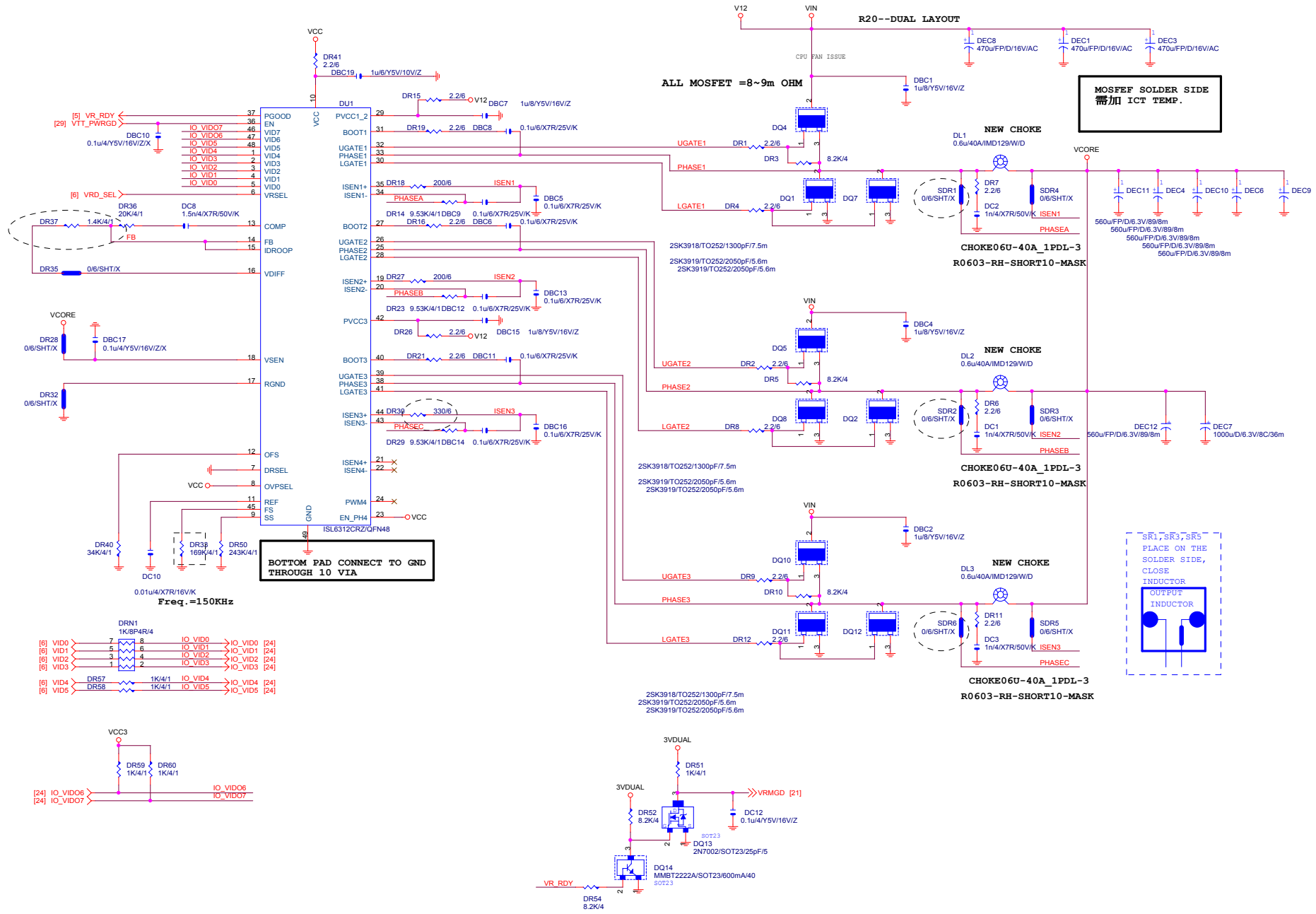

Gigabyte Technology	
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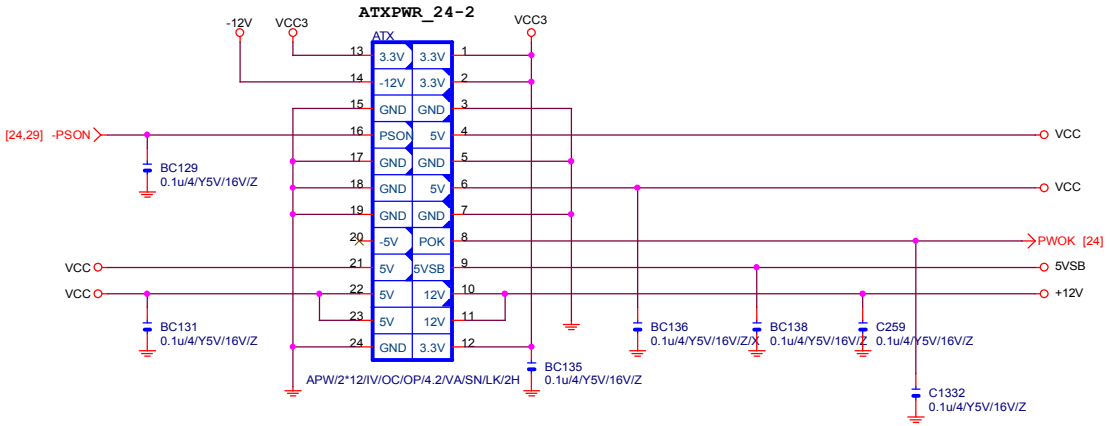
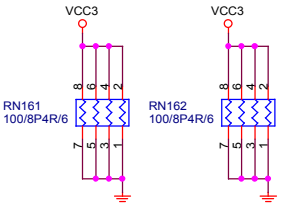
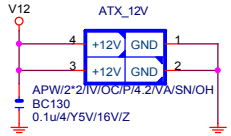
ATX POWER CONNECTOR

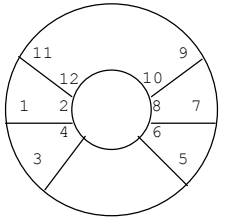


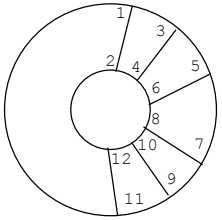
FIX PWR AcBel(ATX-400C-A2ADB)

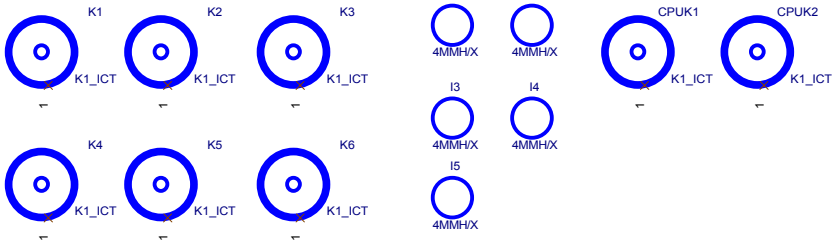


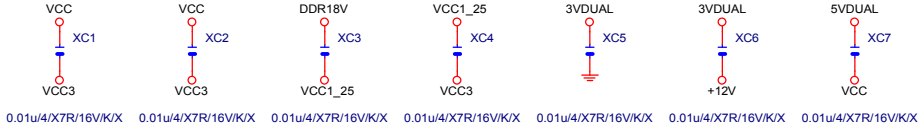


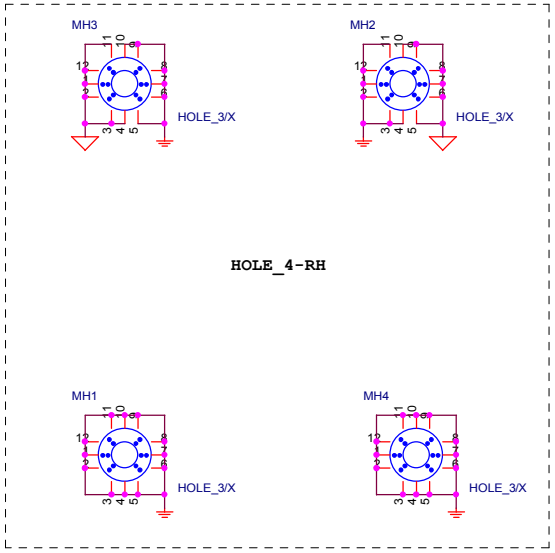
ATX_4-1

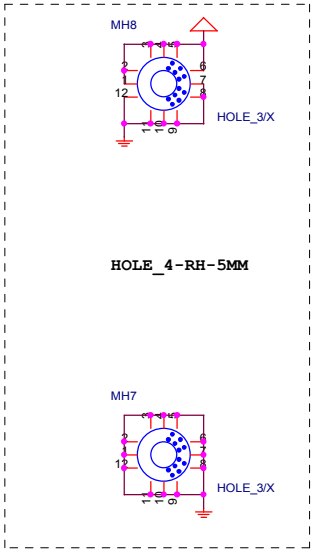












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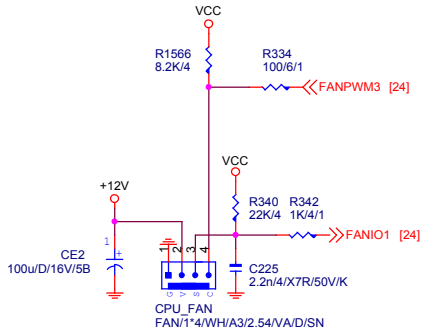
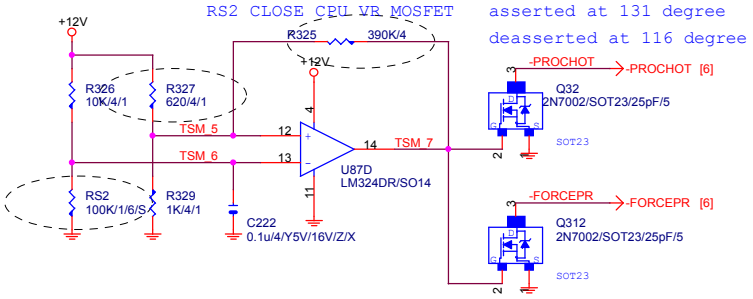
CPU SMART FAN

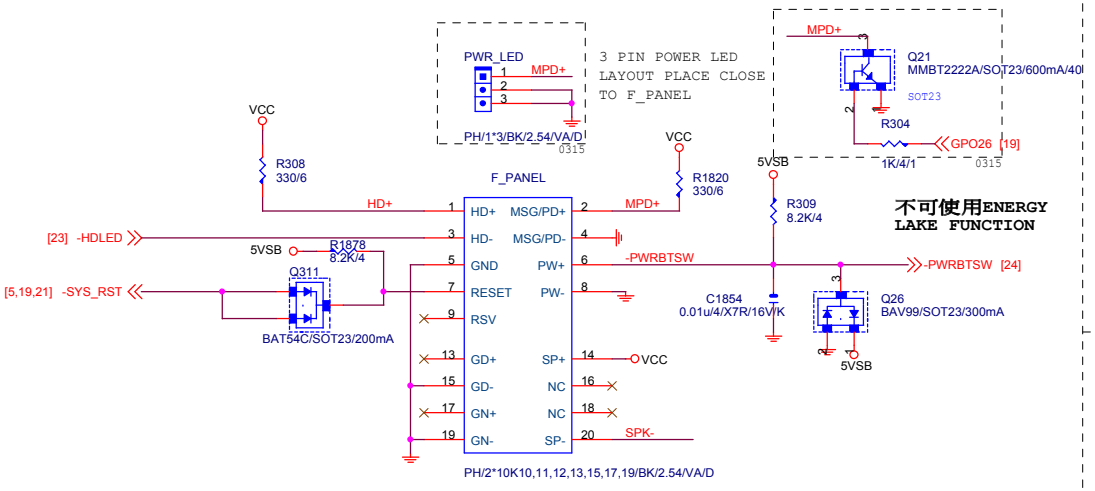
SMART FAN



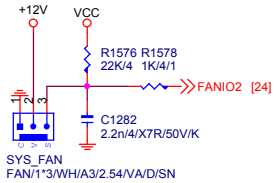
PROCESSOR HOT



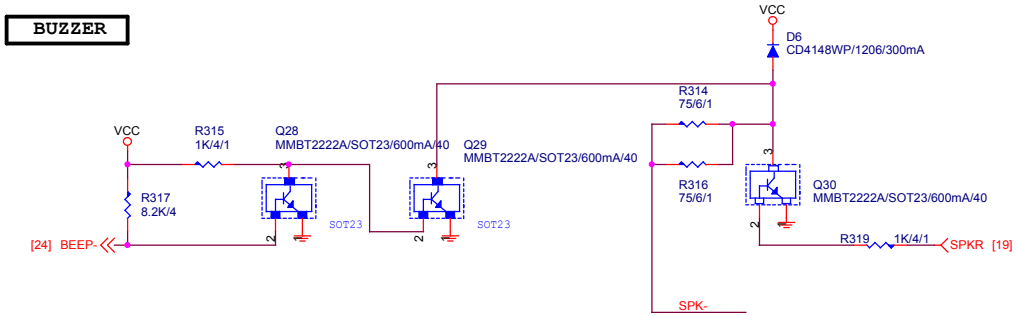
INTEL FRONT PANEL



SYS_FAN



BUZZER



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PCIE-1G LAN

RTL8111C

3VDUAL AVDD18 VDD15

LR23 1/6 LR36 1/6 LR25 1/6 LR26 1/6/X

LR36:
RTL8101E/8102E -->X
RTL8111C-->O

LR33:0/6 DISABLE SWICHING REG

LBC61 0.1u/4/Y5V/16V/Z LBC62 22u/8/X5R/6.3V/M

LR33 0/6/X

1u/6/Y5V/10V/Z LBC39
0.1u/4/Y5V/16V/Z LBC40

[21] LAN25MCLK LR16 2.49K/4/1

LR16:
RTL8101E-->2K/4/1
RTL8111C/8102E-->2.49K/4/1

LR:
RTL8101E/8102E -->X
RTL8111C-->O

LED_ACT_TXRX
LED_LINK100
LED_LINK1000

RSET CTRL15 AVDD33 VDD15_18 3VDUAL VDD15 VDD15

LU1

CTRL18 1 AVDD33 2 P_MDI0+ 3 P_MDI0- 4 FB12 5 P_MDI1+ 6 P_MDI1- 7 AVDD18 8 P_MDI2+ 9 P_MDI2- 10 AVDD18 11 P_MDI3+ 12 P_MDI3- 13 AVDD18 14 VDD15 15 3VDUAL 16

VCTRL18 AVDD33 MDIP0 MDIN0 AVDD18 MDIP1 MDIN1 AVDD18 MDIP2 MDIN2 AVDD18 MDIP3 MDIN3 AVDD18 VDD15 VDD33

RSET VCTRL15 GVDD CKTAL2 CKTAL1 AVDD33 VDD15 LED0 LED1 LED2 LED3 VDD33 VDD15 NC VDD15

EESK 48 EEDI_AUX 47 3VDUAL 46 EEDO 45 EECS 44 VDD15 43 NC 42 VDD1 41 NC 40 NC 39 VDD15 38 VDD33 37 ISOLATEB 36 NC 35 NC 34 VDD15 33

LR29 1/6/X AVDD18

LR37 1/6/X VDD15

LR31 1/6/X VDD15

VCC3

LR17 1K/4/1 ISOLATEB [24]

LR18 15K/4/1

EGND NC NC LANWAKEB PERSTB VDD15 VDD18 HSIP HSIN EGND REFCLK_P REFCLK_N EVDD18 HSOP HSON EGND VDD15

65 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

RTL8111C-GR/QFN64

[14,19,22] -PCIE_WAKE

[24] -PFMRST1

[18] ML_OP
[18] ML_ON
[21] SRCCLK_LAN
[21] -SRCCLK_LAN
[18] ML_IP
[18] ML_IN

LC3 0.1u/4/Y5V/16V/Z
LC4 0.1u/4/Y5V/16V/Z

CLOSE LAN CHIP

LED_GREEN LED_LINK100

-PFMRST1 LBC34 100p/4/NPO/50V/J/X

Dual Color LED

D4 D3 Green
D4 D3 Orange

Single Color LED

D2 D1 Yellow

P35-152-19W9

U4 U3 U2 U1
U8 U7 U6 U5
L1 L3 L5 L7 L9
L2 L4 L6 L8 L10
D1 D2 D3 D4

YELLOW ORANGE (+,-) GREEN (-,+)

3VDUAL
LEC7 100u/D/10V/57
LBC35 0.1u/4/Y5V/16V/Z/X
LBC36 0.1u/4/Y5V/16V/Z/X
LBC51 0.1u/4/Y5V/16V/Z

CTRL15 LFB9 0/8/X VDD15 VDD15 LFB8 0/8 VDD18

LBC49 4.7u/8/Y5V/10V/Z

LBC44 0.1u/4/Y5V/16V/Z
LBC45 0.1u/4/Y5V/16V/Z
LBC46 0.1u/4/Y5V/16V/Z
LBC47 0.1u/4/Y5V/16V/Z
LBC48 0.1u/4/Y5V/16V/Z
LBC50 0.1u/4/Y5V/16V/Z

3VDUAL AVDD33

LFB6 0/8/SHT/X

LBC53 0.1u/4/Y5V/16V/Z

LL1/LFB10 CO-LAYOUT CLOSE

LFB10 0/8/X

CHOKE4U7-500MA

LL1 4.7uH/1A/[10LC3-5A470B-01R]

FB12 LR32 0/6/SHT/X CTRL18

LL1/LBC64/LBC63
CLOSE LU1 PIN1

LBC63 0.1u/4/Y5V/16V/Z LBC64 22u/8/X5R/6.3V/M

RTL8102E LFB7-->X

AVDD18 LFB7 0/8 VDD18 VDD18

LBC54 0.1u/4/Y5V/16V/Z
LBC55 0.1u/4/Y5V/16V/Z
LBC56 0.1u/4/Y5V/16V/Z
LBC57 0.1u/4/Y5V/16V/Z
LBC59 0.1u/4/Y5V/16V/Z
LBC58 4.7u/8/Y5V/10V/Z

FOR 93C56 OR BIOS DETECT
RTL8102E -->X

LR35 8.2K/4 3VDUAL LU2

EECS EESK EEDI_AUX EEDO

CS VCC SK DC DI ORG DO GND

AT93C46-10SU-2.7/S/X

LBC60 0.1u/4/Y5V/16V/Z

LR19 3.6K/4 3VDUAL

USB_LAN CONNECTOR

RTL8101E:LR38/LC5/LR43/LC6-->O
RTL8102E:LC5/LC6-->O
RTL8111C:LC6-->O

RTL8101E :L1+L10-->AVDD18+0.1U(BIOS DISABLE MDI-X FUNCTION)

1G :USB+LAN/1G/GO,Y/OS/RA/D/1
100M:USB+LAN/100/GO,Y/OS/RA/D/1

RTL8102E -->X

AVDD18 LR38 1/6/X LC5 0.1u/4/Y5V/16V/Z/X

P_MDI0+ P_MDI0- P_MDI1+ P_MDI1- P_MDI2+ P_MDI2- P_MDI3+ P_MDI3-

LR39 49.9/6/1/X LR40 49.9/6/1/X LR41 49.9/6/1/X LR42 49.9/6/1/X

AVDD18 LR43 1/6/X LC6 0.01u/4/X7R/16V/K

LC7 0.01u/4/X7R/16V/K/X LC8 0.01u/4/X7R/16V/K/X

CLOSE LAN CHIP

1G:LC6=0.01u/4/X7R/16V/K
100M:LC6=0.1u/4/Y5V/16V/Z

USB_LAN

L1 L2 L3 L4 L5 L6 L7 L8 L9 L10

UP
DOWN

D1 LED_ACT_TXRX
D2 LR13 150/6
D3 LED_GREEN LR14 150/6
D4 LED_LINK1000 LR15 150/6

U1 U2 U3 U4 U5 U6 U7 U8

P4- P4+ P5- P5+

FUSEVCC

3VDUAL
LFB4 0/6/SHT/X
LBC33 0.1u/6/Y5V/25V/Z/X
LBC26 0.1u/6/Y5V/25V/Z/X

USB+LAN/1G/GO,Y/OS/RA/D/1

USB_LAN

EMI LR28 0/6/SHT/X

FUSEVCC
LR6 150K/4
LEC2 1000u/D/6.3V/8C/36m
LR7 270K/4
-USBOC_R [18]

P4+ +USBP4 [18]
P4- -USBP4 [18]
P5+ +USBP5 [18]
P5- -USBP5 [18]

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