Model Name: Q35M-S2

Revision 1.0

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02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
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06	P4_LGA775_B_D
07	P4_LGA775_C
08	P4_LGA775_E_F_G_H
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10	GMCH-DDRII
11	GMCH-PCI E, DMI
12	GMCH-INT VGA
13	GMCH-GND
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15	DDRII CHANNEL A 1,2
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17	DDRII TERMINATION
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20	ICH9 GPIO, CTRL
21	ICH9 SATA, FAN PWM
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SHEET	TITLE
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32	DISCRETE POWER
33	ATX POWER
34	JMicron 368
35	NINEVEH LAN
36	FRONT PANEL,FUSB,FDD
37	REAR USB , TPM

Gigabyte Technology

Title: Cover Sheet		
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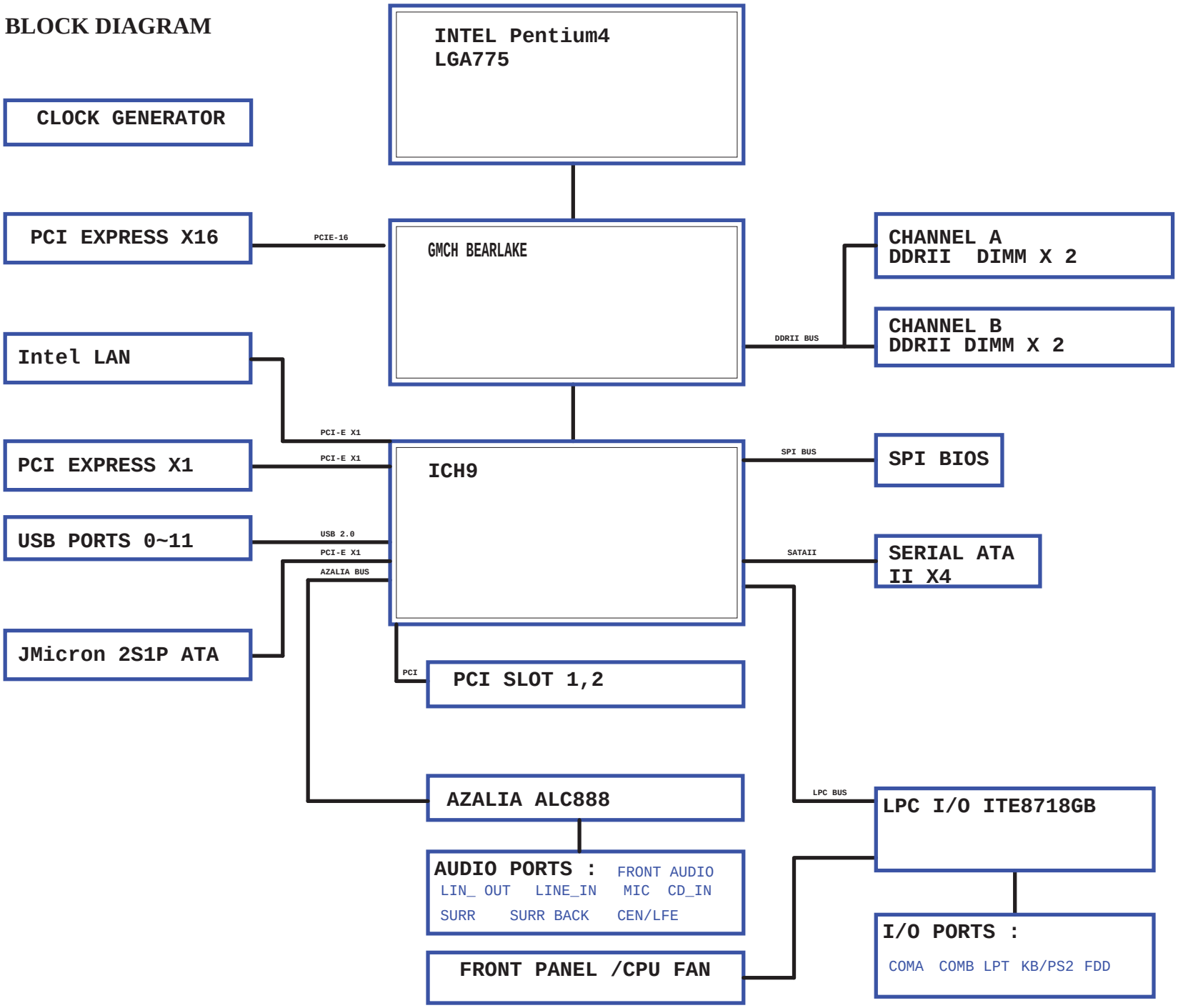
BLOCK DIAGRAM



Gigabyte Technology		
Title: BLOCK DIAGRAM		
Size: Custom	Document Number: Q35M-S2	Rev: 1.0
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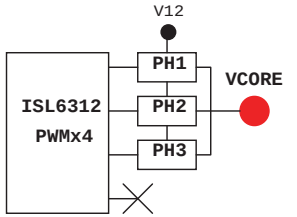
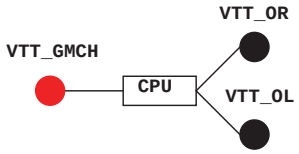
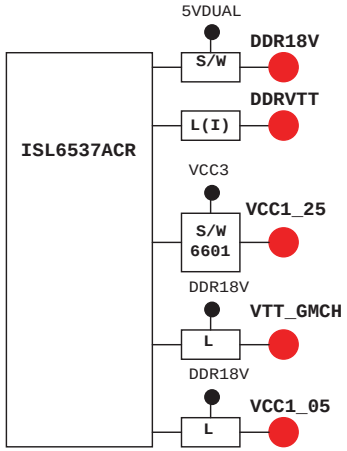
ICH8 GPIO LIST TABLE

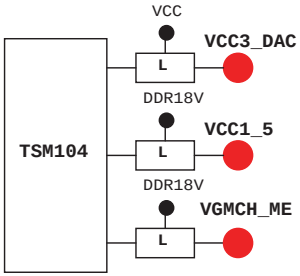
PIN NAME	PWR WELL	AFTER/ PLTRST	USAGE	NOTE
GP0	MAIN	IN	-ACZ_DET	P/U 8.2K VCC3
GP1/TACH1	MAIN	IN	N/A	P/U 8.2K VCC3
GP2/PIRQE#	MAIN	IN	-PIRQE	P/U 8.2K VCC3
GP3/PIRQF#	MAIN	IN	-PIRQF	P/U 8.2K VCC3
GP4/PIRQG#	MAIN	IN	-PIRQG	P/U 8.2K VCC3
GP5/PIRQH#	MAIN	IN	-PIRQH	P/U 8.2K VCC3
GP6/TACH2	MAIN	IN	N/A	P/U 8.2K VCC3
GP7/TACH3	MAIN	IN	N/A	P/U 8.2K VCC3
GP8	STBY	IN	GPIO8	P/U 8.2K 3VDUAL
GP9	STBY	OUT	WOL_ONLY	P/D 100K GND
GP10	STBY	OUT	GPIO10	P/U 8.2K 3VDUAL
GP11/SMBALERT#	STBY	OUT	-SMBALRT	P/U 8.2K 3VDUAL
GP12	STBY	IN	MB_ID3	P/U 8.2K 3VDUAL
GP13	STBY	IN	-LPCPME	P/U 8.2K 3VDUAL
GP14	STBY	IN	GPIO14	P/U 8.2K 3VDUAL
GP15	STBY	OUT	GPIO15(TP)	N/A
GP16	MAIN	IN	MB_ID1	P/U 8.2K VCC3
GP17/TACH0	MAIN	IN	N/A(OPT-ITE)	P/U 8.2K VCC3
GP18	MAIN	IN	MB_ID2	P/U 8.2K VCC3
GP19	MAIN	IN	GPIO19	P/U 8.2K VCC3
GP20	MAIN	OUT	GPIO20	N/A
GP21	MAIN	IN	GPIO21	P/U 8.2K VCC3
GP22	MAIN	IN	GPIO22	P/U 8.2K VCC3
GP23	MAIN	OUT	-LDRQ1	P/U 8.2K VCC3
GP24	STBY	OUT	GPIO24(TP)	N/A
GP25	STBY	IN	MB_ID4	P/U 8.2K 3VDUAL
GP26/S4_STATE#	STBY	OUT	GPIO26	P/U 8.2K 3VDUAL
GP27	STBY	LOW	GPIO27	ENERGY-LAKE LED:GREEN
GP28	STBY	LOW	GPIO28	ENERGY-LAKE LED:YEL
GP29/OC5#	STBY	IN	-USBOC_F	P/U FUSEVCC1
GP30/OC6#	STBY	IN	-USBOC_F	P/U FUSEVCC1
GP31/OC7#	STBY	IN	-USBOC_F	P/U FUSEVCC1
GP32	MAIN	IN	MB_ID0	P/U 8.2K VCC3
GP33	MAIN	IN	GPIO33	P/U 8.2K VCC3
GP34	MAIN	IN	GPIO34	P/U 8.2K VCC3
GP35	MAIN	IN	N/A(TP)	N/A
GP36	MAIN	IN	GPIO36	P/U 8.2K VCC3
GP37	MAIN	IN	GPIO37	P/U 8.2K VCC3
GP38	MAIN	IN	GPIO38	P/U 8.2K VCC3
GP39	MAIN	IN	GPIO39	P/D 8.2K GND
GP48	MAIN	IN	GPIO48	P/U 8.2K VCC3
GP49	MAIN	IN	CPUPWROK	P/U 100 VTT_OL

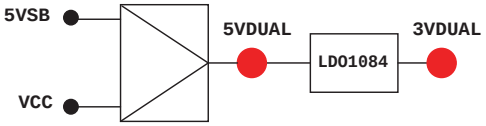
VCORE:3 PHASE PWM--ISL6312











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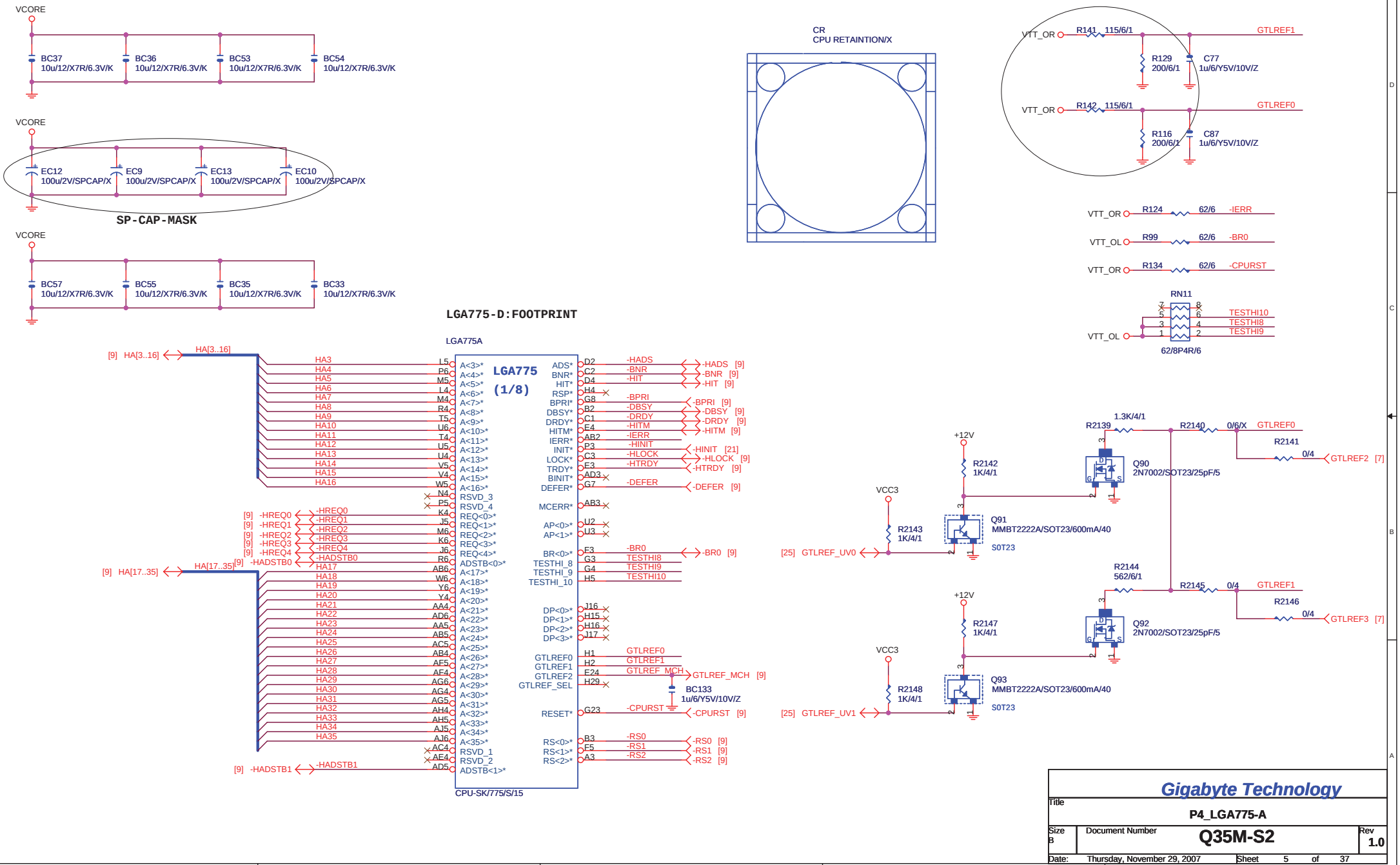

Gigabyte Technology

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Size B	Document Number Q35M-S2	Rev 1.0
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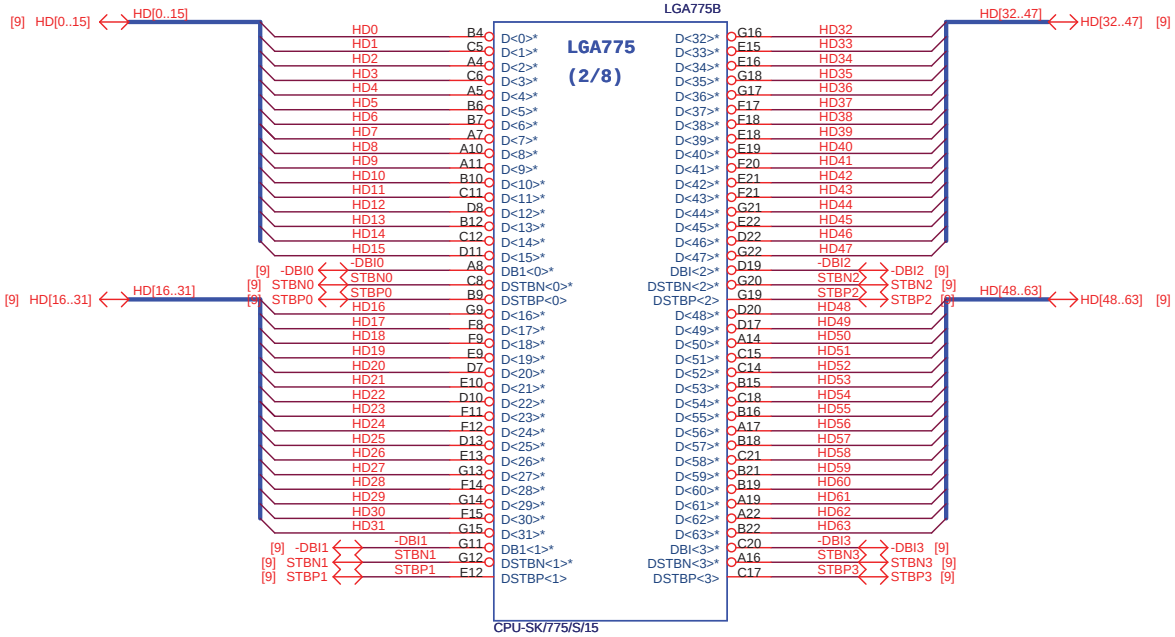

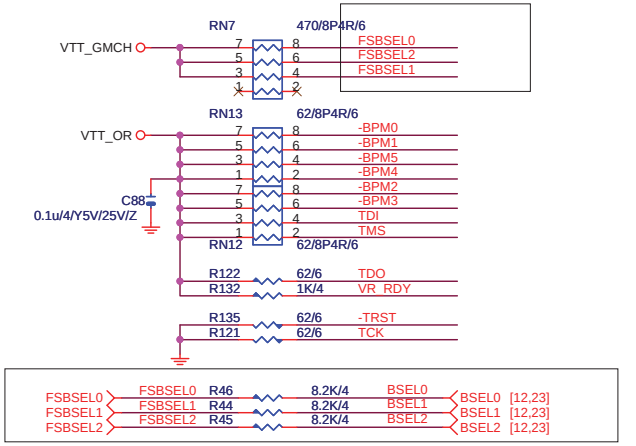

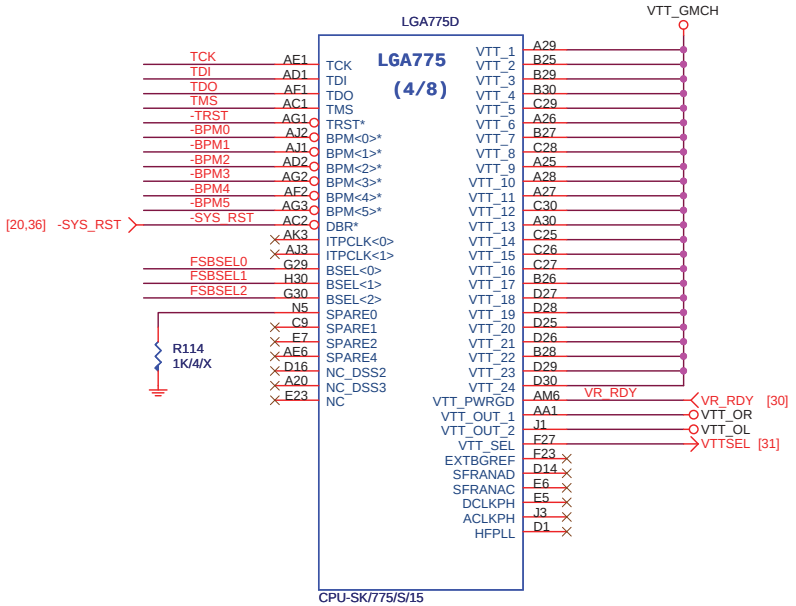

Gigabyte Technology			
Title: P4_LGA775-B,D			
Size: B	Document Number: Q35M-S2		Rev: 1.0
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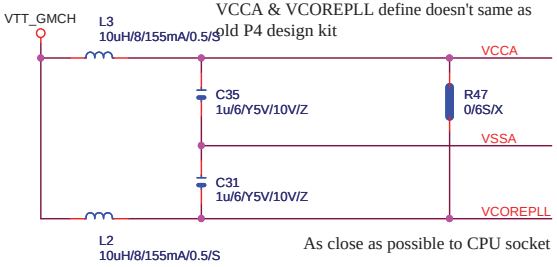
Note:

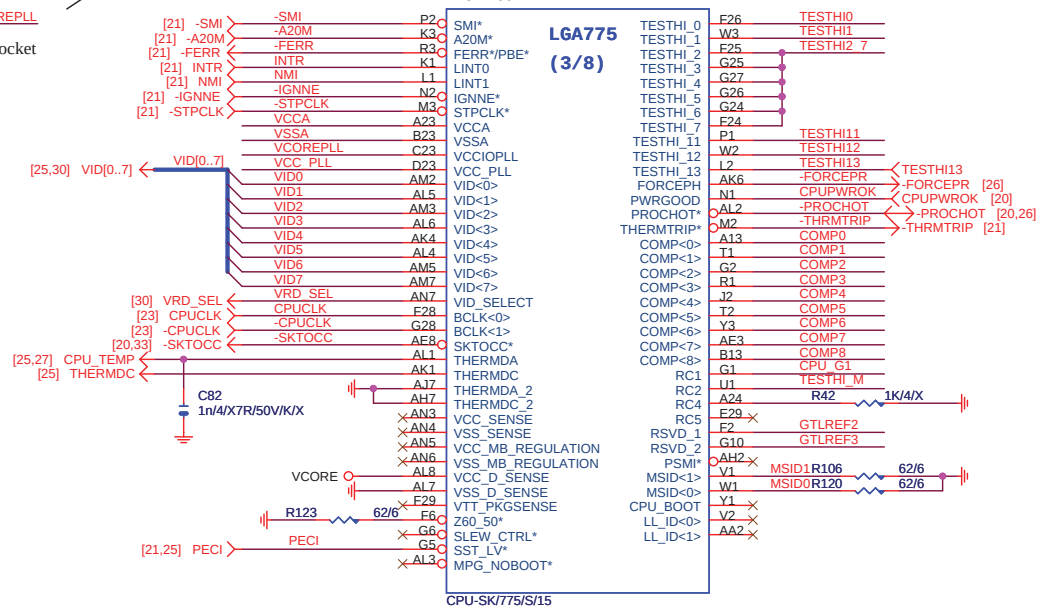
VCCA & VCOREPLL define doesn't same as old P4 design kit



Trace width doesn't less than 12 Mil

As close as possible to CPU socket

LGA775C



CPU-SK/775/S/15

C82 1n/4/X7R/50V/K/X

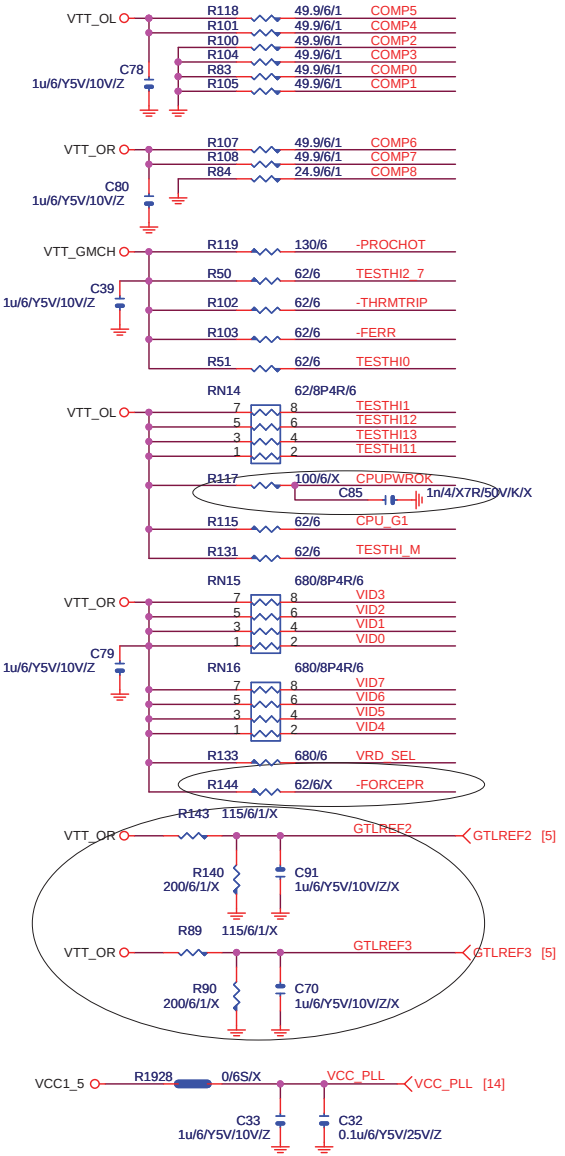
R123 62/6

R42 1K/4/X

R106 62/6

R120 62/6

Place outside of CPU socket



Gigabyte Technology			
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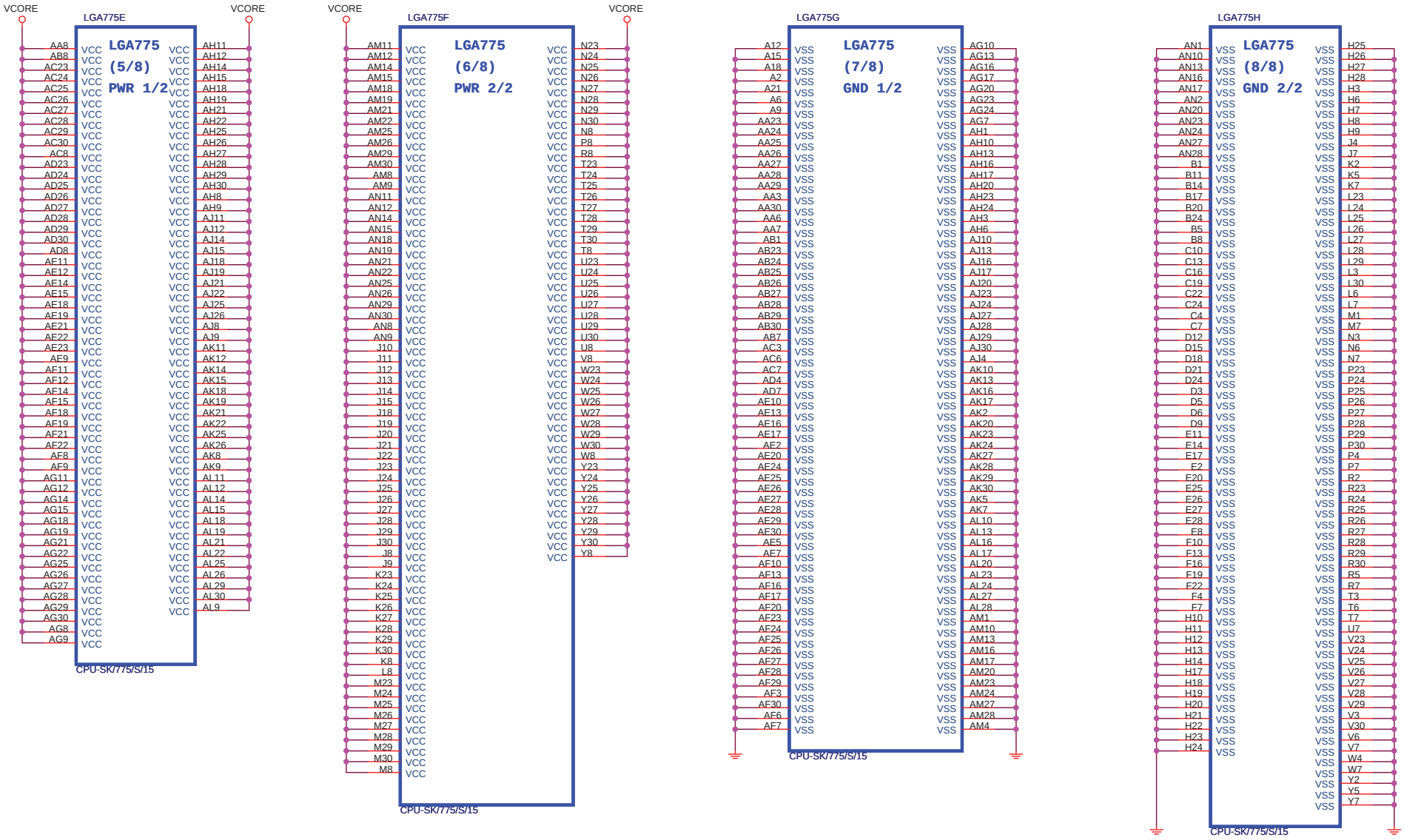

Gigabyte Technology			
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Size: B	Document Number: Q35M-S2		Rev: 1.0
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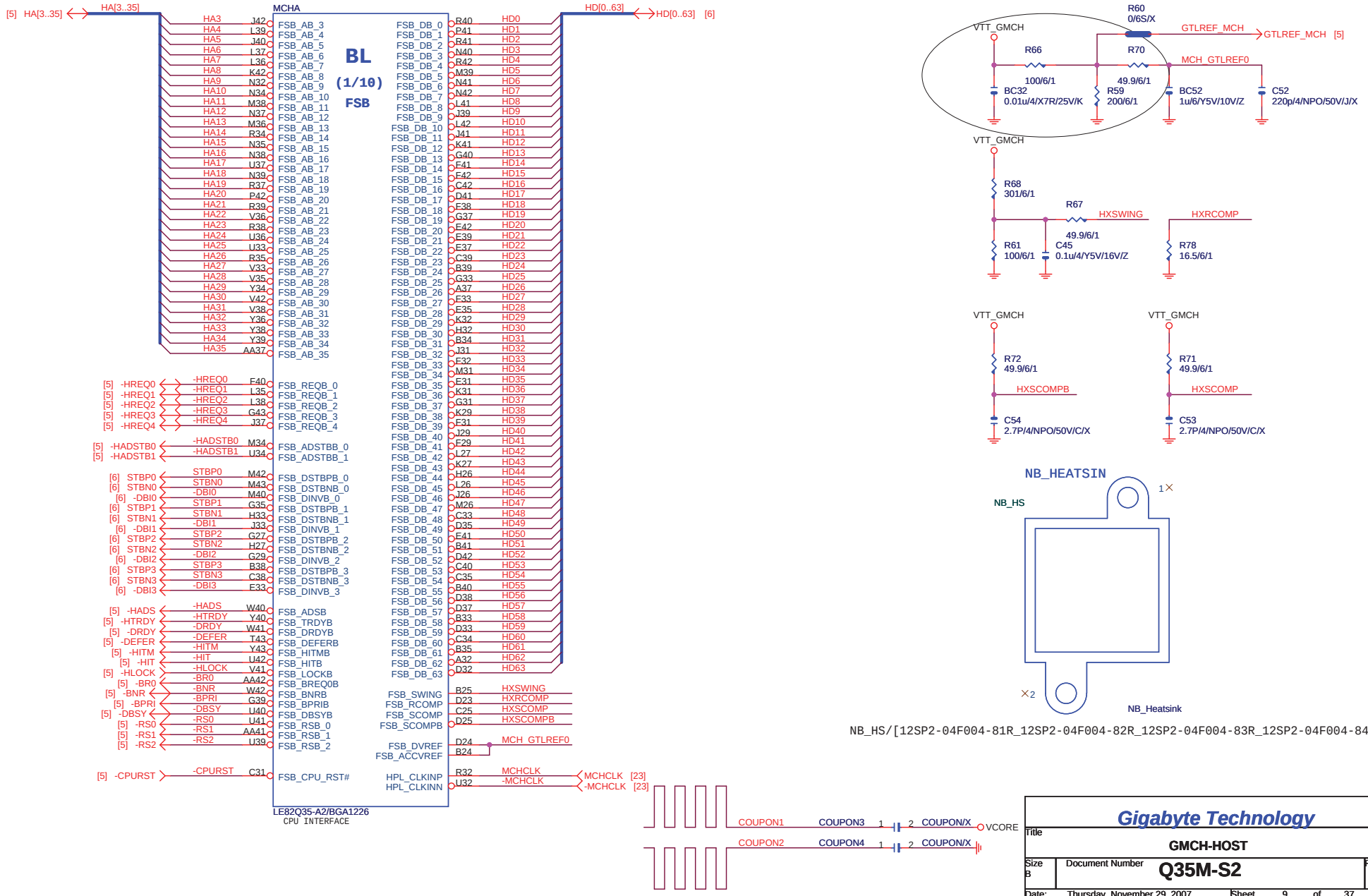

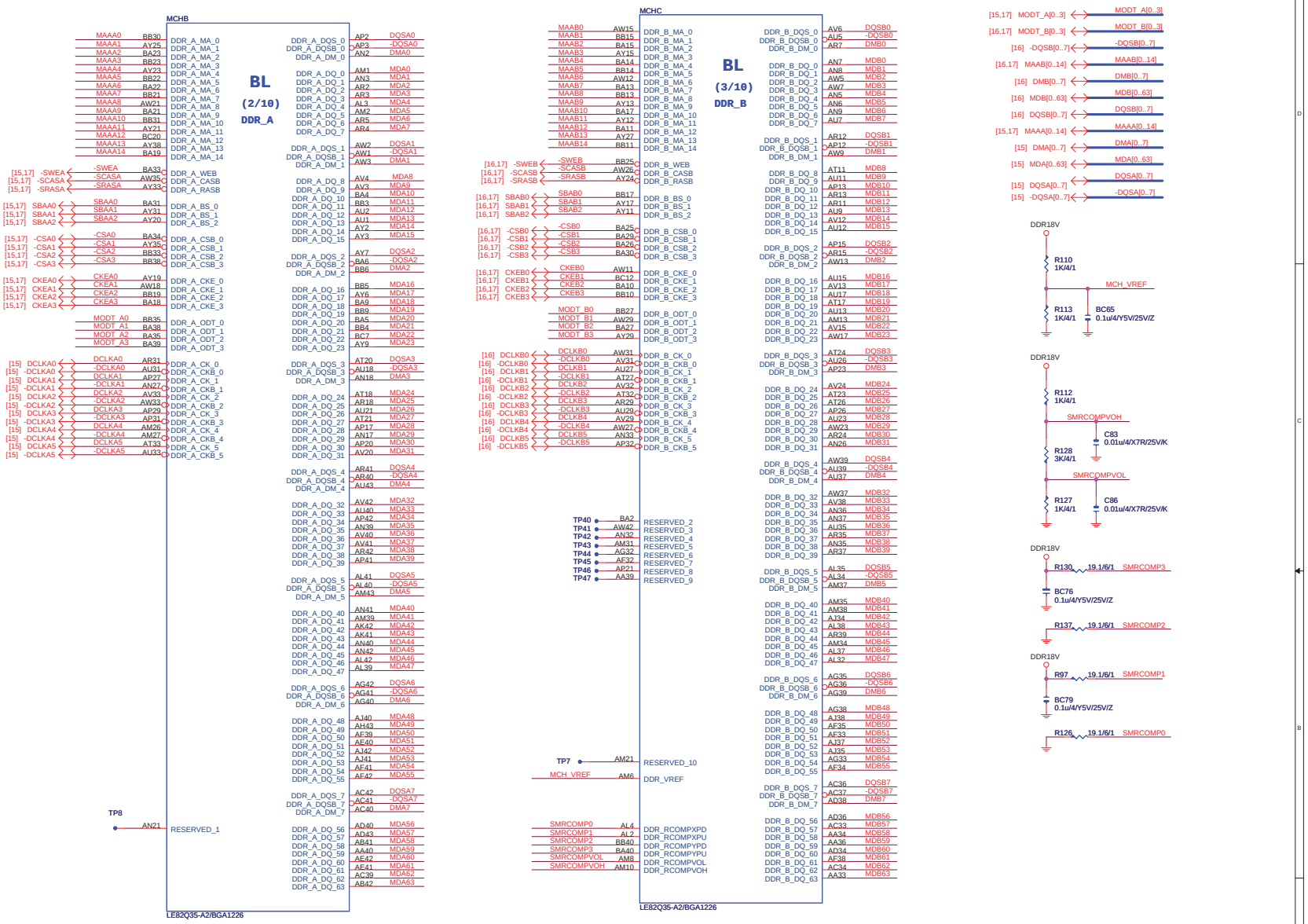

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Size: Custom	Document Number: Q35M-S2	Rev: 1.0
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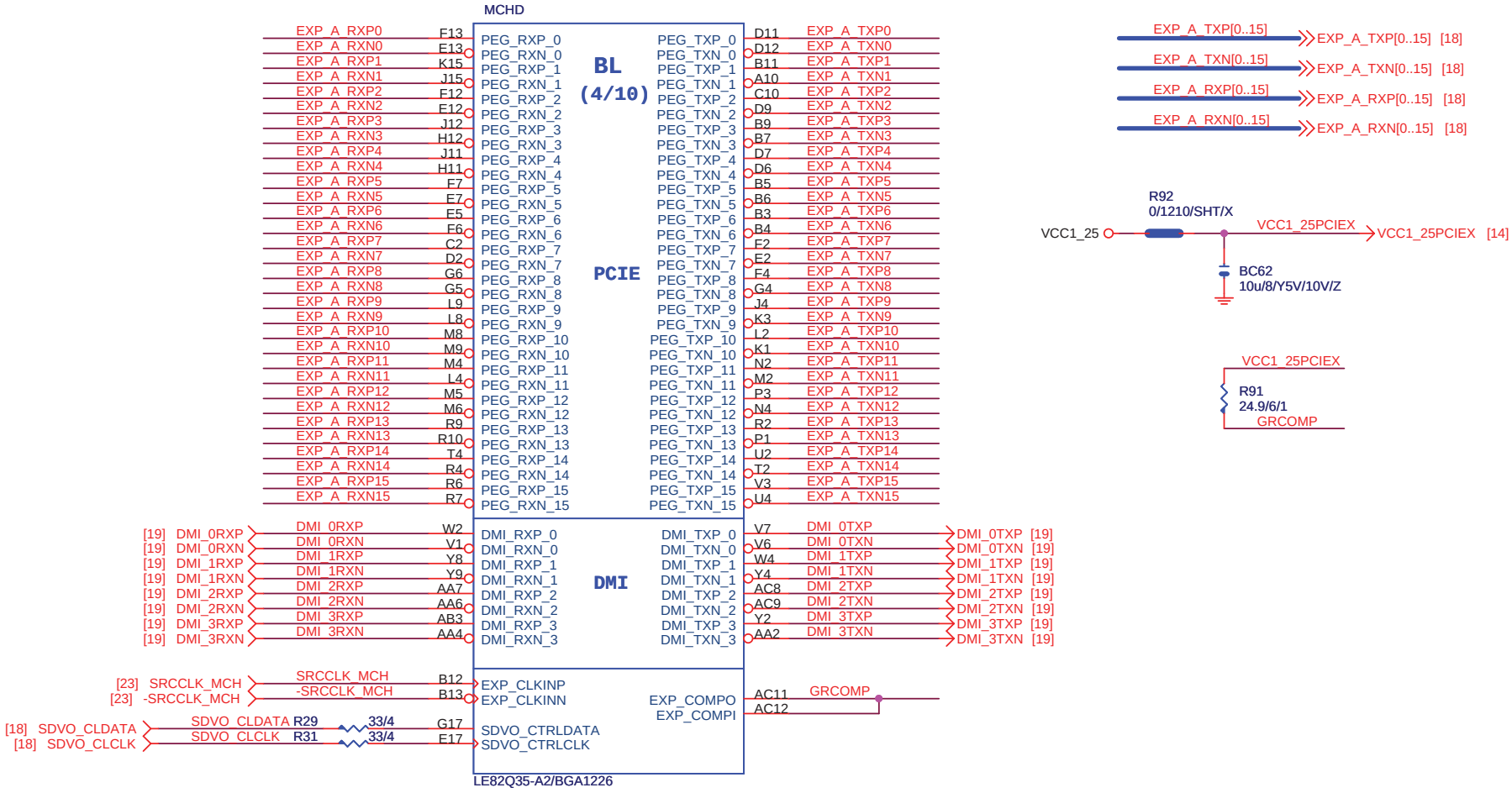

Gigabyte Technology		
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Size: Custom	Document Number: Q35M-S2	Rev: 1.0
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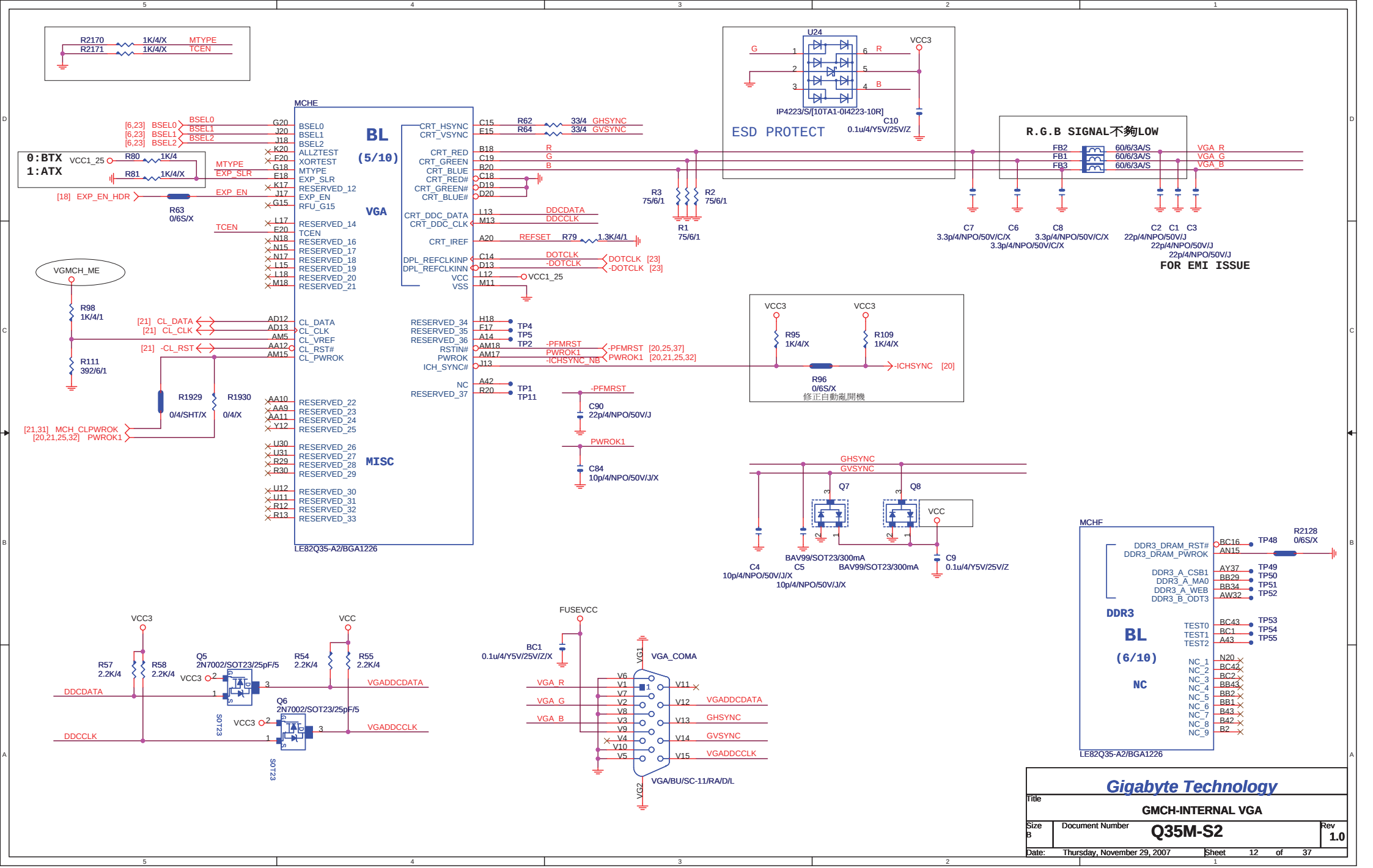

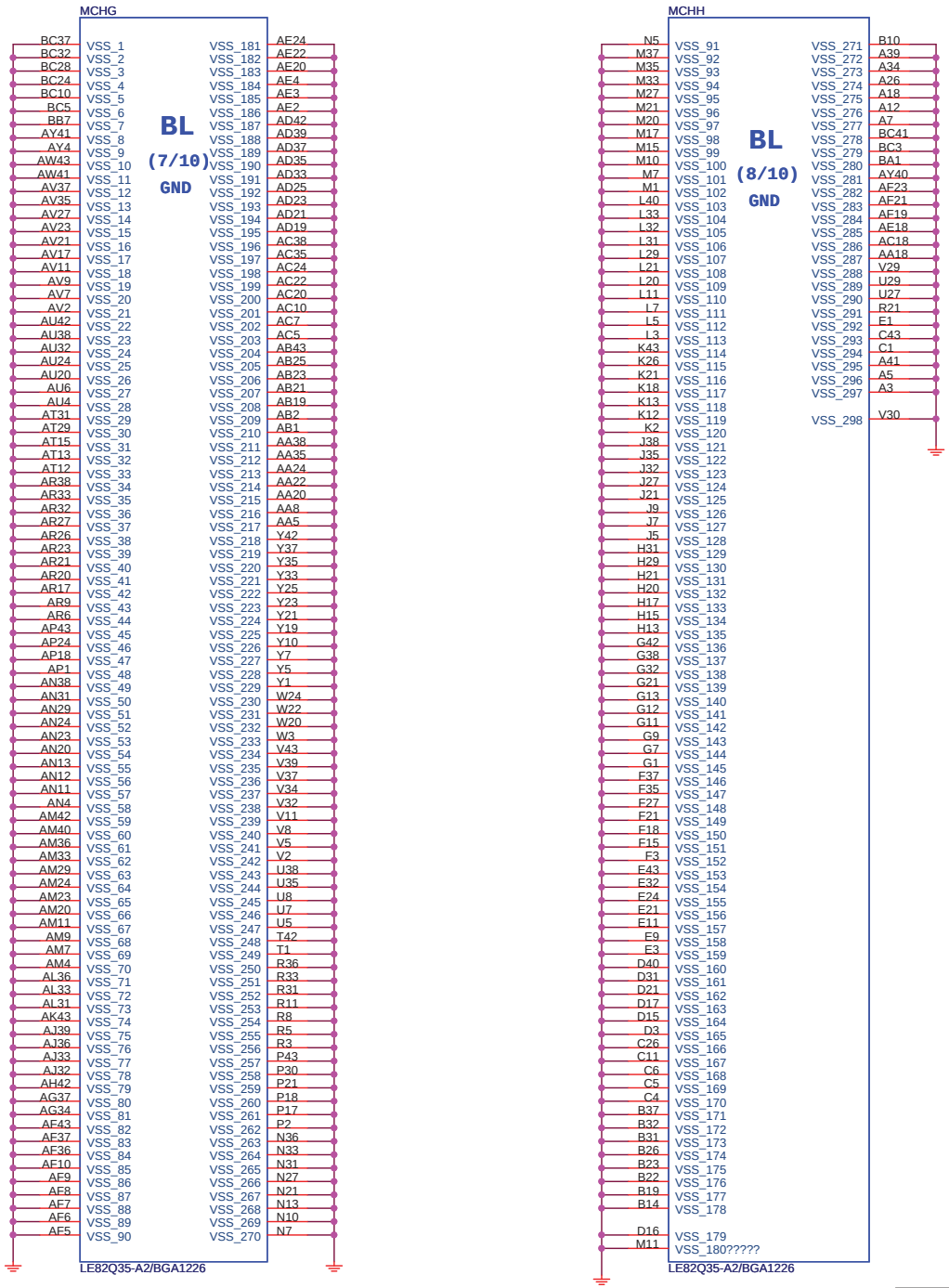

Gigabyte Technology

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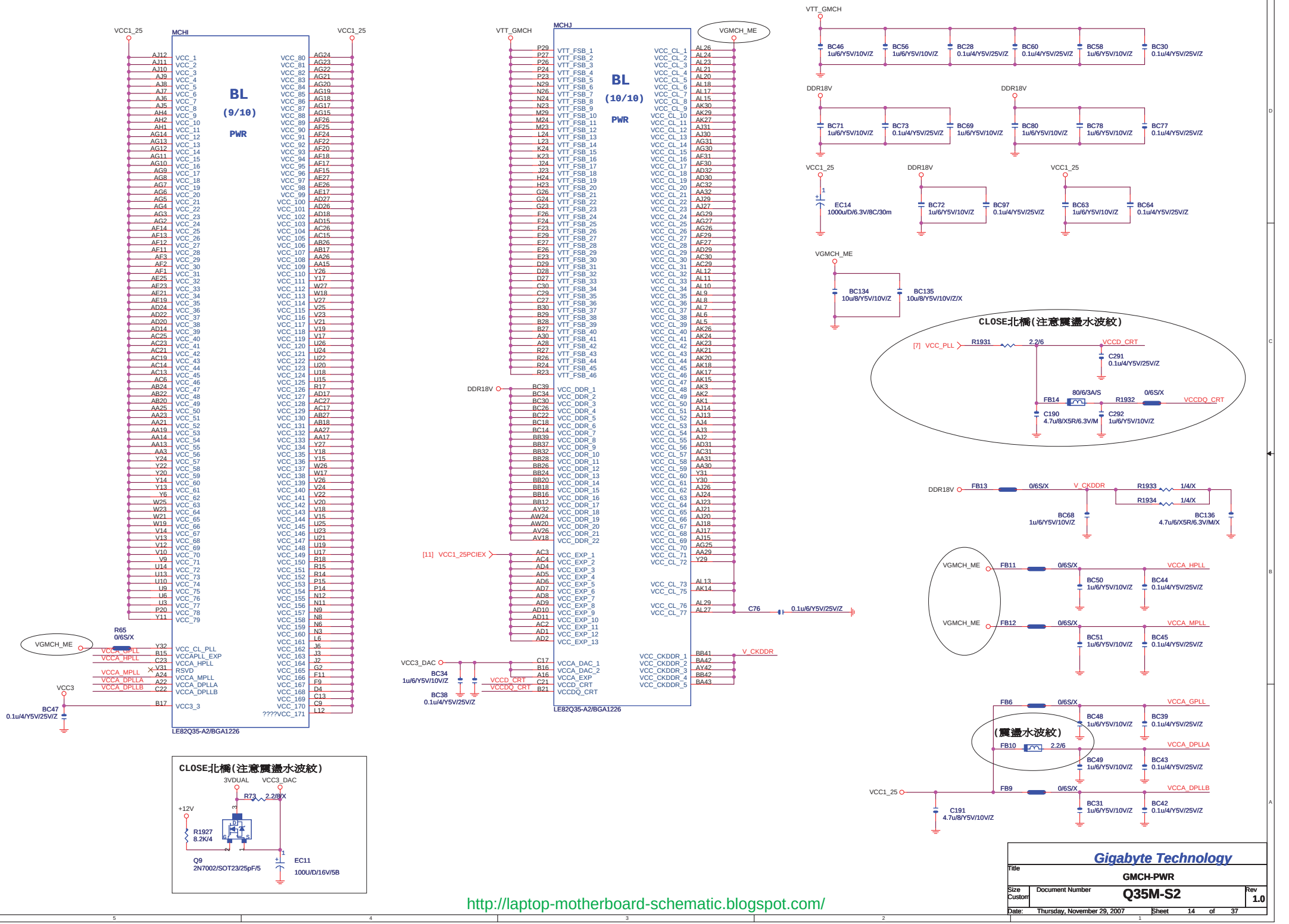

http://laptop-motherboard-schematic.blogspot.com/

Gigabyte Technology			
Title	GMCH-PWR		
Size: Custom	Document Number: Q35M-S2		Rev: 1.0
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Title	DDRII CHANNEL A		
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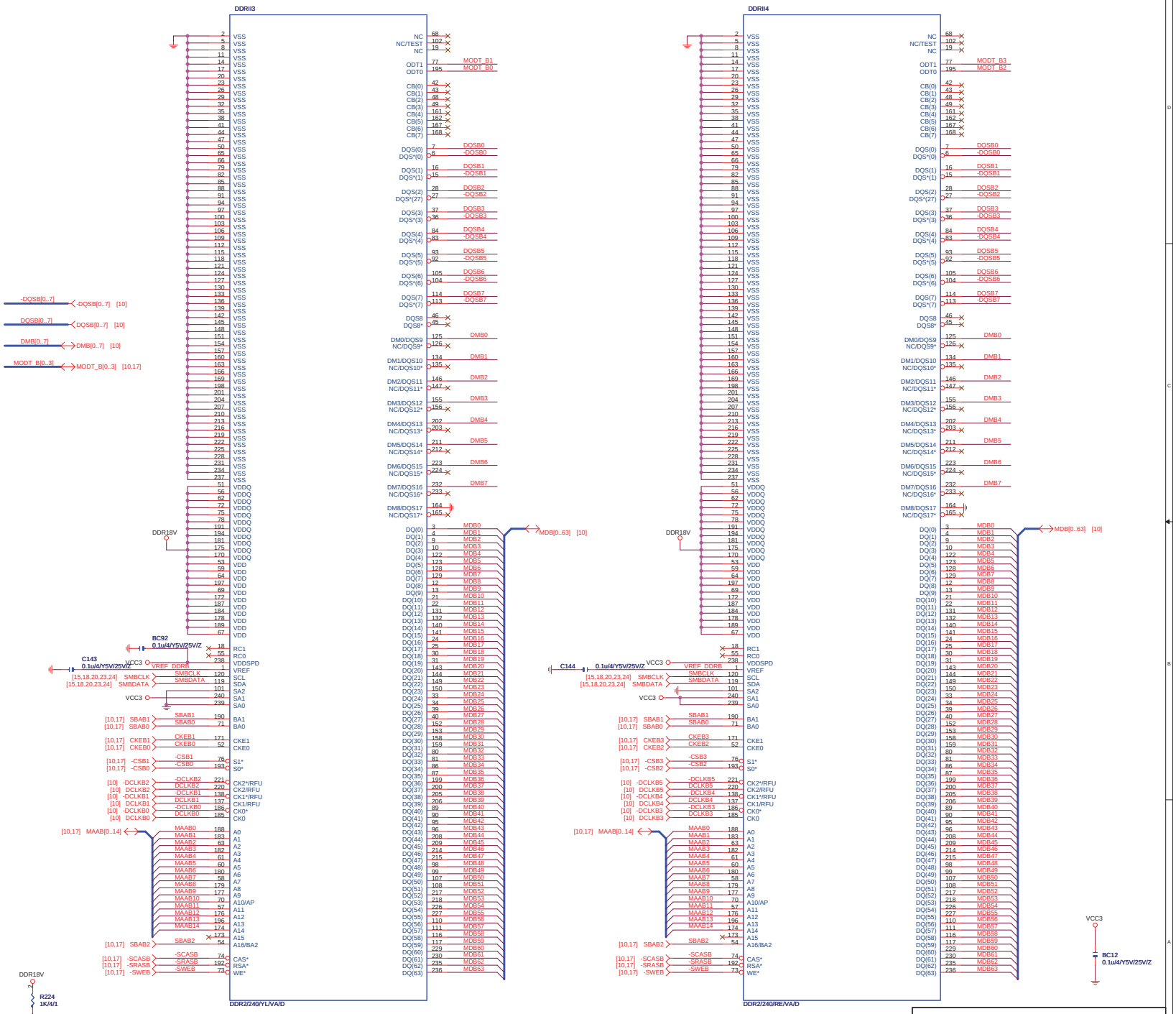
Gigabyte Technology



Gigabyte Technology			
Title: DDRII CHANNEL B			
Size: Custom	Document Number: Q35M-S2	Rev: 1.0	
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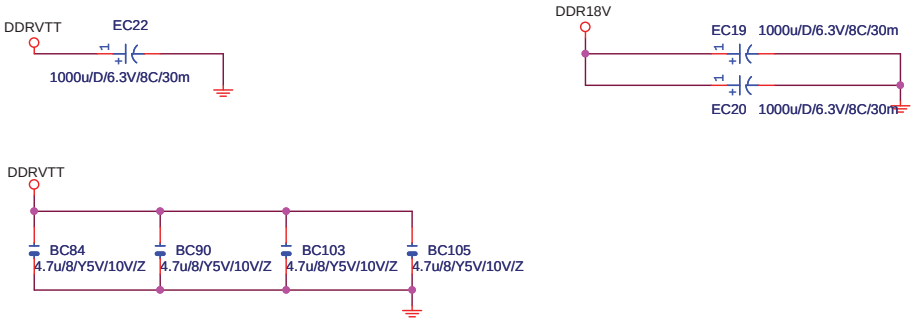
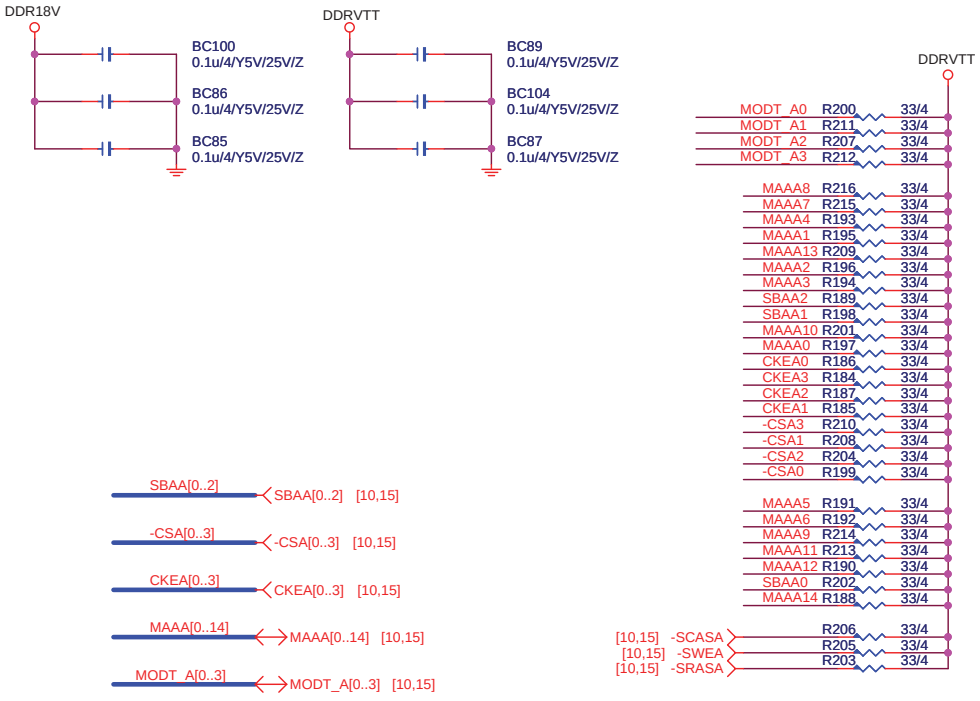
DDR TERMINATION CHANNEL A

DDRVTT Decouple



DDR18V Decouple

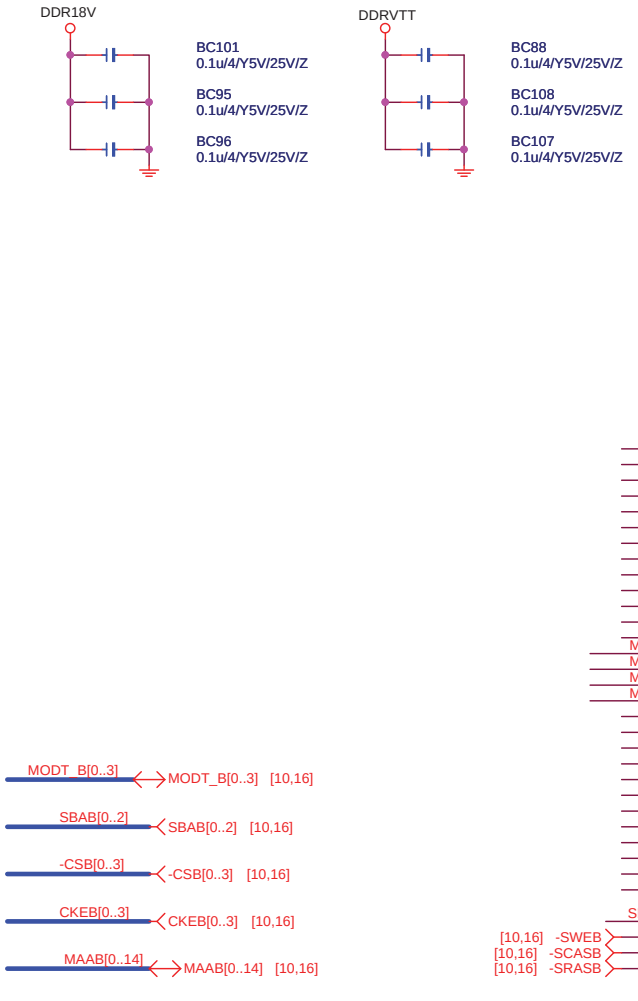
DDRVTT Decouple



DDR TERMINATION CHANNEL B

DDR18V Decouple

DDRVTT Decouple



Gigabyte Technology

Title: DDRII TERMINATOR

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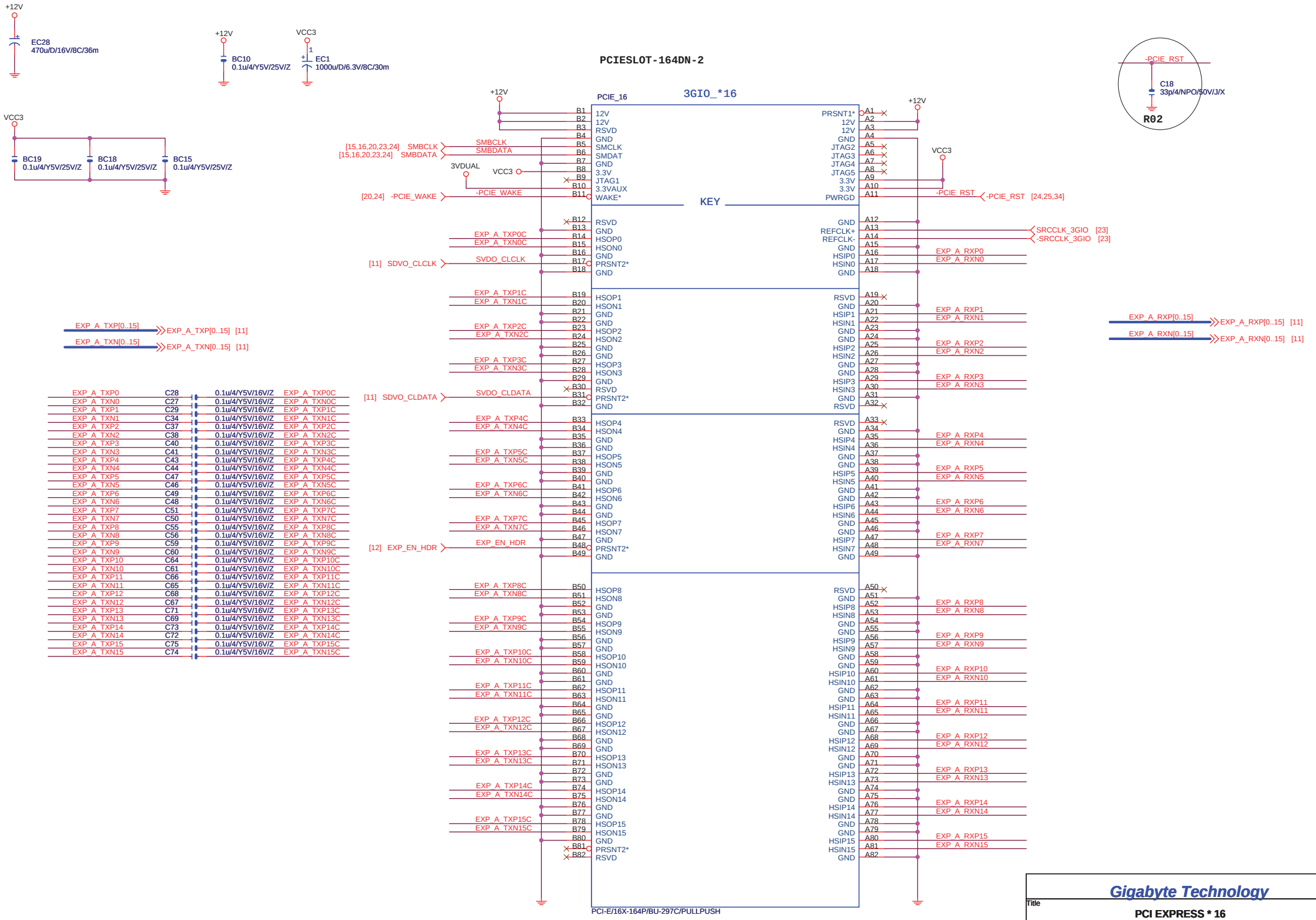

EXP_A_TXP0	C28	0.1u/4/Y5V/16V/Z	EXP_A_TXP0C
EXP_A_TXN0	C27	0.1u/4/Y5V/16V/Z	EXP_A_TXN0C
EXP_A_TXP1	C29	0.1u/4/Y5V/16V/Z	EXP_A_TXP1C
EXP_A_TXN1	C34	0.1u/4/Y5V/16V/Z	EXP_A_TXN1C
EXP_A_TXP2	C37	0.1u/4/Y5V/16V/Z	EXP_A_TXP2C
EXP_A_TXN2	C38	0.1u/4/Y5V/16V/Z	EXP_A_TXN2C
EXP_A_TXP3	C40	0.1u/4/Y5V/16V/Z	EXP_A_TXP3C
EXP_A_TXN3	C41	0.1u/4/Y5V/16V/Z	EXP_A_TXN3C
EXP_A_TXP4	C43	0.1u/4/Y5V/16V/Z	EXP_A_TXP4C
EXP_A_TXN4	C44	0.1u/4/Y5V/16V/Z	EXP_A_TXN4C
EXP_A_TXP5	C47	0.1u/4/Y5V/16V/Z	EXP_A_TXP5C
EXP_A_TXN5	C46	0.1u/4/Y5V/16V/Z	EXP_A_TXN5C
EXP_A_TXP6	C49	0.1u/4/Y5V/16V/Z	EXP_A_TXP6C
EXP_A_TXN6	C48	0.1u/4/Y5V/16V/Z	EXP_A_TXN6C
EXP_A_TXP7	C51	0.1u/4/Y5V/16V/Z	EXP_A_TXP7C
EXP_A_TXN7	C50	0.1u/4/Y5V/16V/Z	EXP_A_TXN7C
EXP_A_TXP8	C55	0.1u/4/Y5V/16V/Z	EXP_A_TXP8C
EXP_A_TXN8	C56	0.1u/4/Y5V/16V/Z	EXP_A_TXN8C
EXP_A_TXP9	C59	0.1u/4/Y5V/16V/Z	EXP_A_TXP9C
EXP_A_TXN9	C60	0.1u/4/Y5V/16V/Z	EXP_A_TXN9C
EXP_A_TXP10	C64	0.1u/4/Y5V/16V/Z	EXP_A_TXP10C
EXP_A_TXN10	C61	0.1u/4/Y5V/16V/Z	EXP_A_TXN10C
EXP_A_TXP11	C66	0.1u/4/Y5V/16V/Z	EXP_A_TXP11C
EXP_A_TXN11	C65	0.1u/4/Y5V/16V/Z	EXP_A_TXN11C
EXP_A_TXP12	C68	0.1u/4/Y5V/16V/Z	EXP_A_TXP12C
EXP_A_TXN12	C67	0.1u/4/Y5V/16V/Z	EXP_A_TXN12C
EXP_A_TXP13	C71	0.1u/4/Y5V/16V/Z	EXP_A_TXP13C
EXP_A_TXN13	C69	0.1u/4/Y5V/16V/Z	EXP_A_TXN13C
EXP_A_TXP14	C73	0.1u/4/Y5V/16V/Z	EXP_A_TXP14C
EXP_A_TXN14	C72	0.1u/4/Y5V/16V/Z	EXP_A_TXN14C
EXP_A_TXP15	C75	0.1u/4/Y5V/16V/Z	EXP_A_TXP15C
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Gigabyte Technology

Title: PCI EXPRESS * 16

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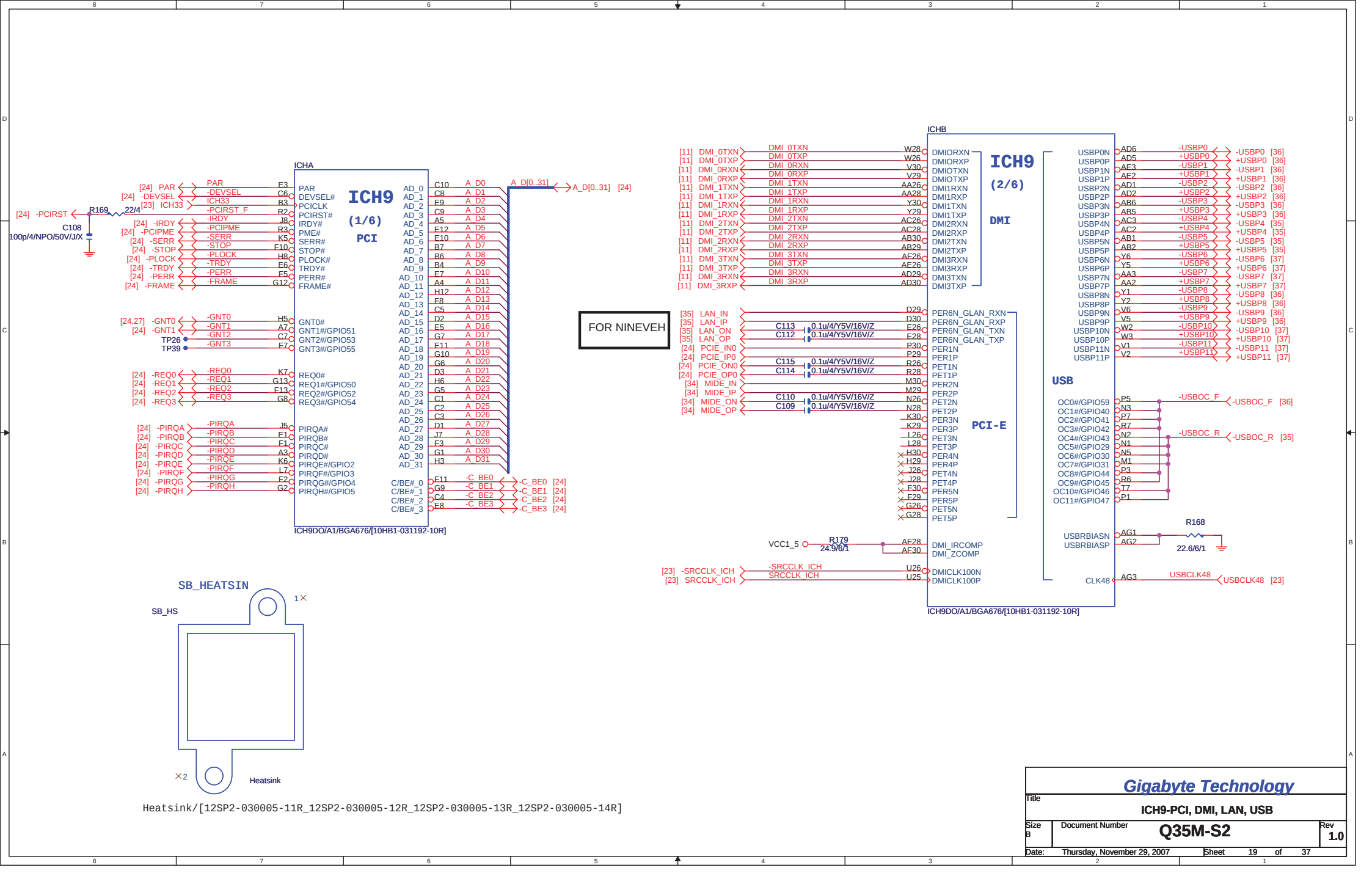

Gigabyte Technology			
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Size: B	Document Number: Q35M-S2		Rev: 1.0
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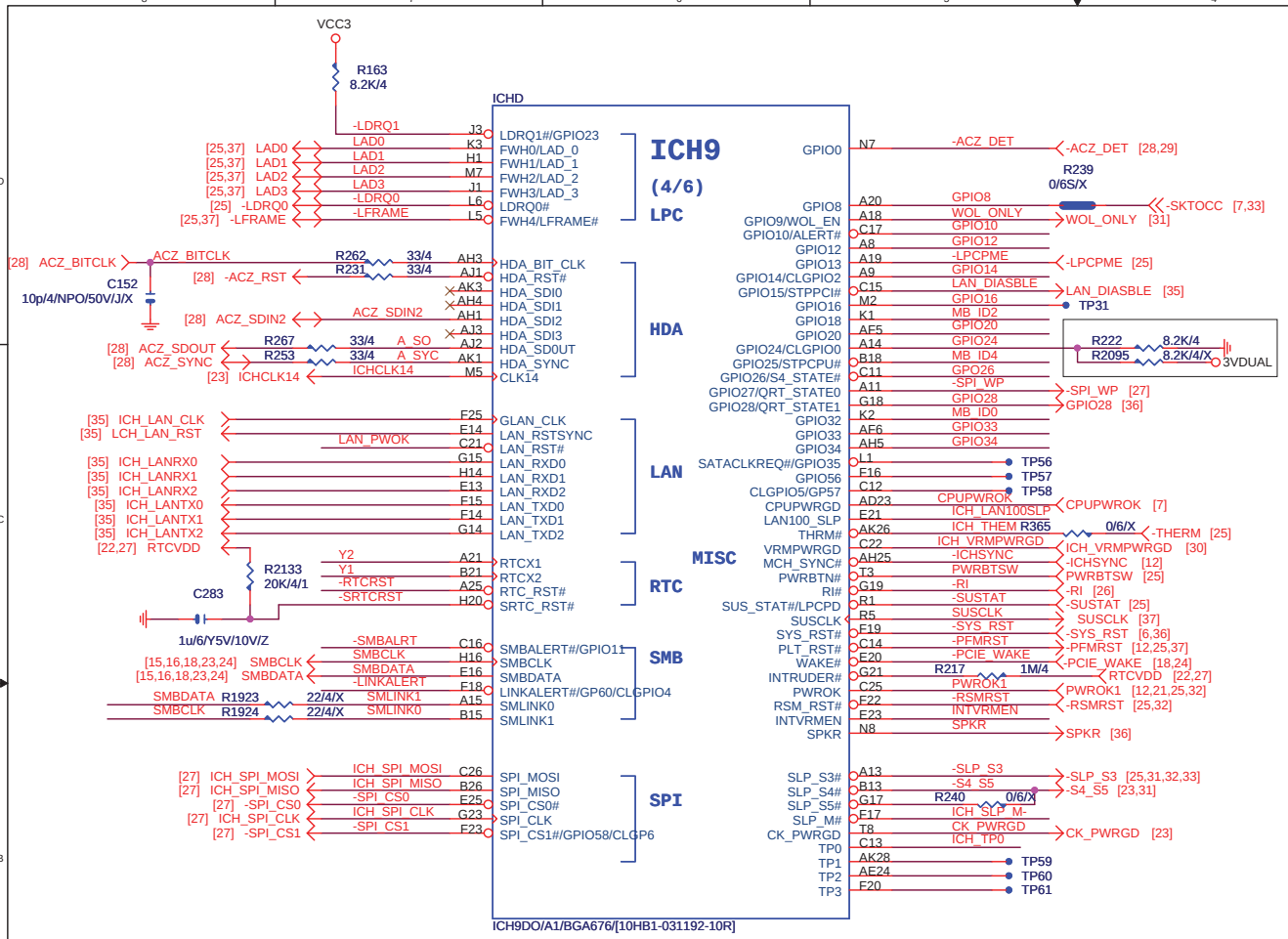
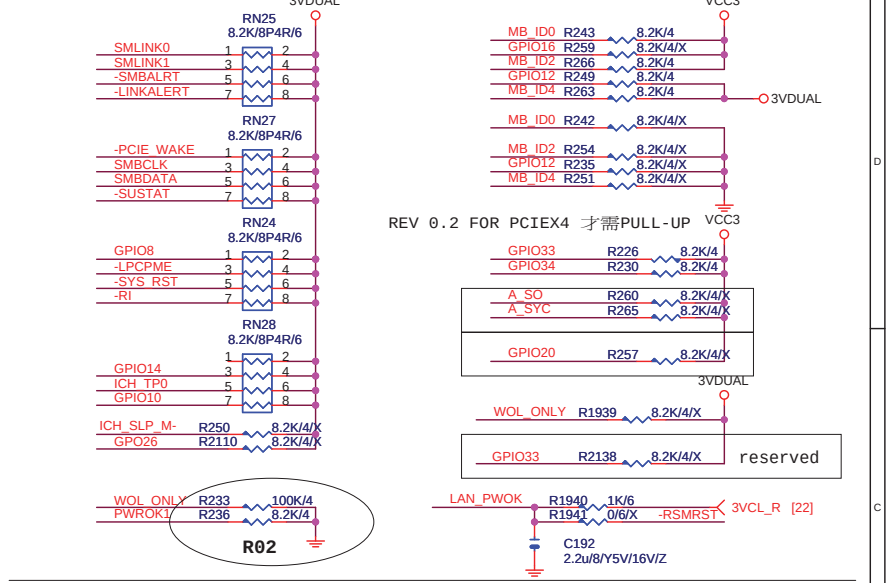
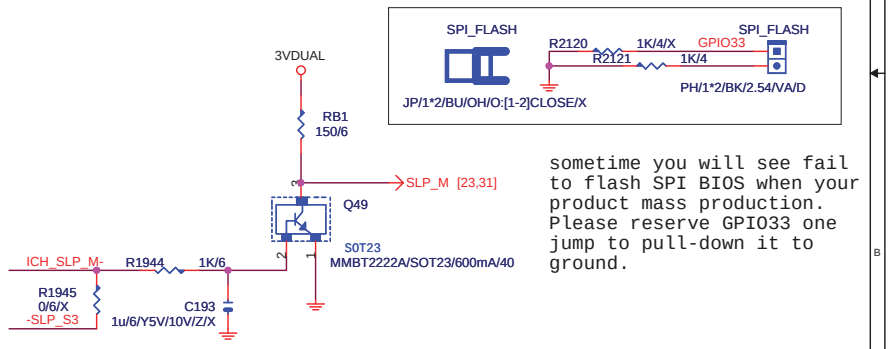
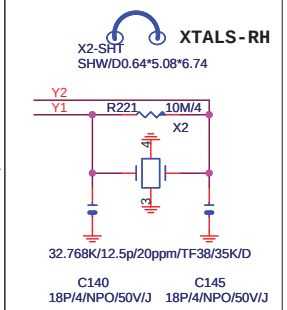
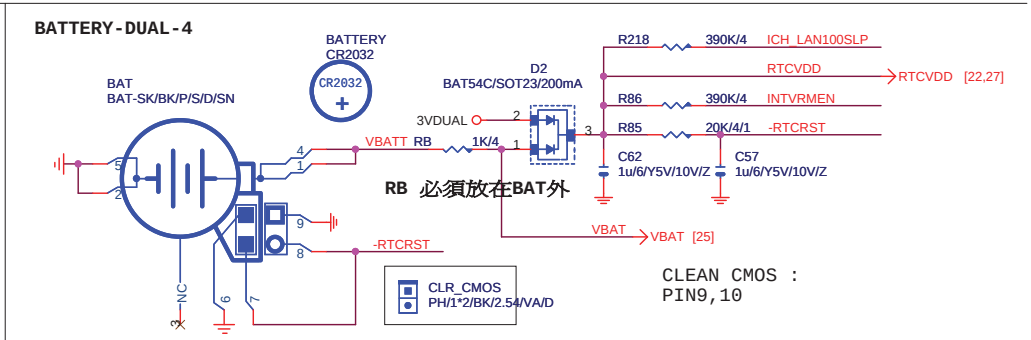
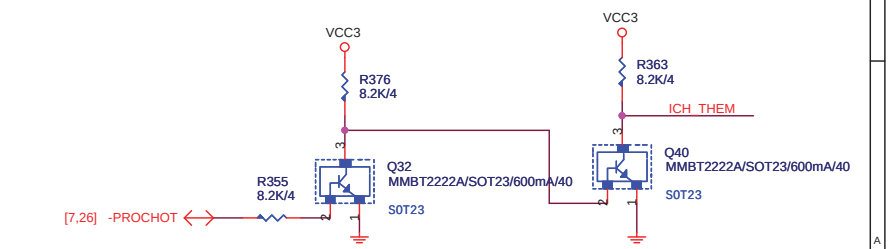






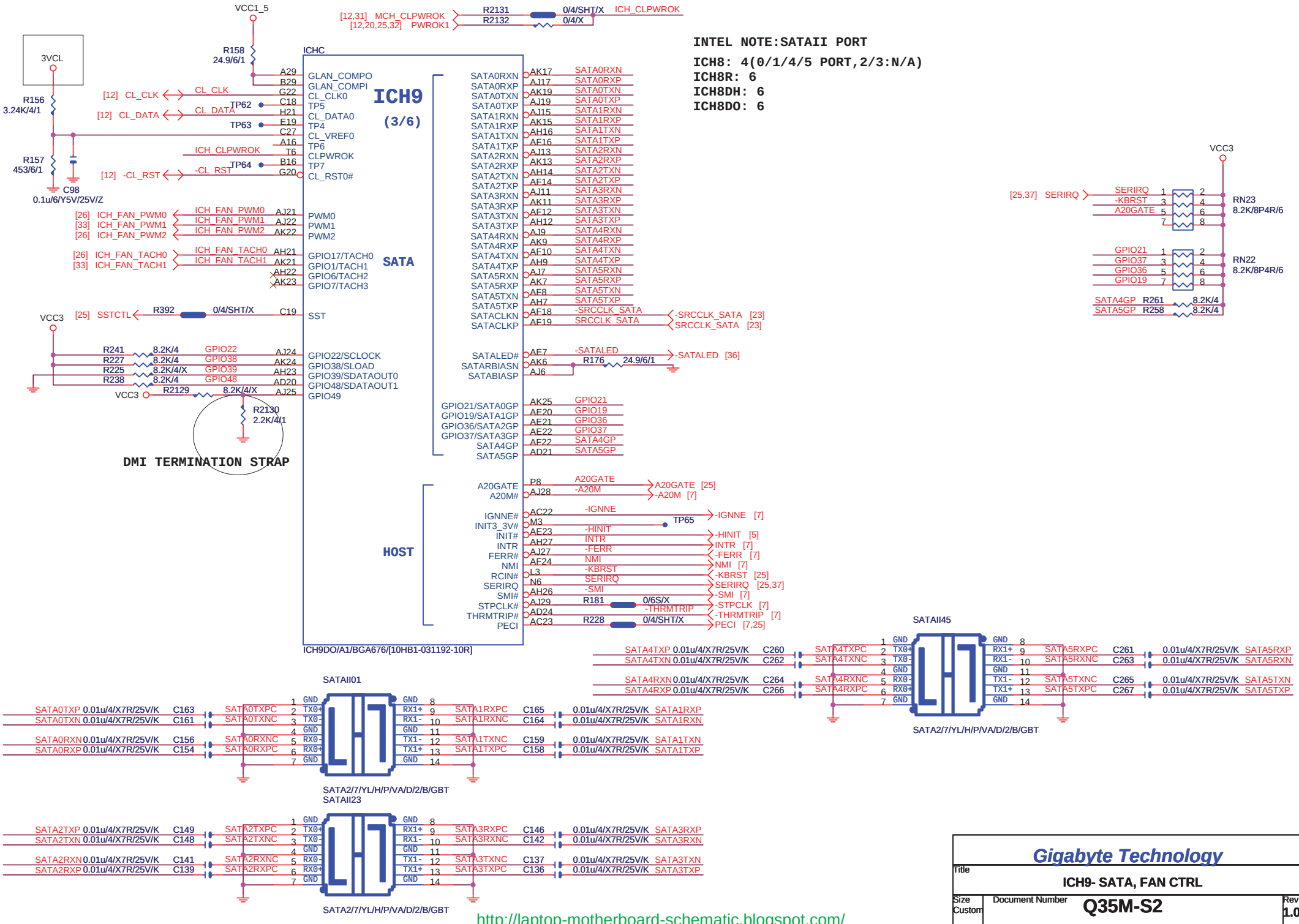






Gigabyte Technology

Title	ICH9 GPIO, CTRL		
Size B	Document Number Q35M-S2		Rev 1.0
Date: Thursday, November 29, 2007	Sheet 20 of 37		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ICH8R: 6
ICH8DH: 6
ICH8DO: 6
ICH9
(3/6)
SATA
HOST
ICHC
ICH9DO/A1/BGA676/[10HB1-031192-10R]
DMI TERMINATION STRAP
SATAII01
SATAII23
SATAII45
SATA2/7/YL/H/P/VA/D/2/B/GBT
Gigabyte Technology
ICH9- SATA, FAN CTRL
Q35M-S2
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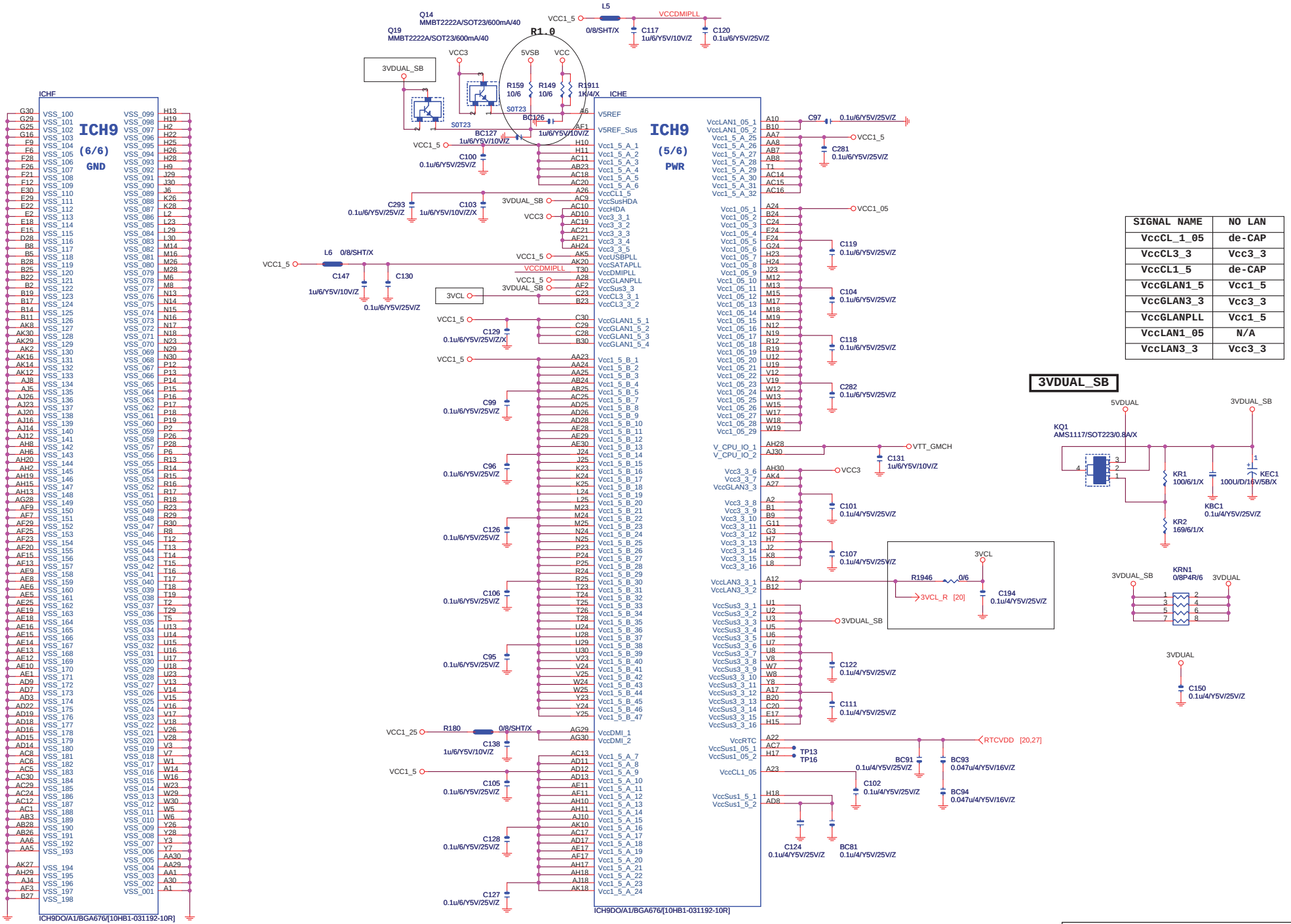
ICHF
ICH9
(6/6)
GND
ICH9DO/A1/BGA676/[10HB1-031192-10R]
ICHE
ICH9
(5/6)
PWR
ICH9DO/A1/BGA676/[10HB1-031192-10R]
Q14
MMBT2222A/SOT23/600mA/40
Q19
MMBT2222A/SOT23/600mA/40
R1.0
L5
0/8/SHT/X
VCCDMIPLL
C117
1u/6/Y5V/10V/Z
C120
0.1u/6/Y5V/25V/Z
3VDUAL_SB
VCC3
5VSB
VCC
R159
10/6
R149
10/6
R1911
1K/4/X
S0T23
BC126
BC127
1u/6/Y5V/10V/Z
C100
0.1u/6/Y5V/25V/Z
C293
0.1u/6/Y5V/25V/Z
C103
1u/6/Y5V/10V/Z/X
L6
0/8/SHT/X
C147
1u/6/Y5V/10V/Z
C130
0.1u/6/Y5V/25V/Z
3VCL
C99
0.1u/6/Y5V/25V/Z
C96
0.1u/6/Y5V/25V/Z
C126
0.1u/6/Y5V/25V/Z
C106
0.1u/6/Y5V/25V/Z
C95
0.1u/6/Y5V/25V/Z
C129
0.1u/6/Y5V/25V/Z/X
R180
0/8/SHT/X
C138
1u/6/Y5V/10V/Z
C105
0.1u/6/Y5V/25V/Z
C128
0.1u/6/Y5V/25V/Z
C127
0.1u/6/Y5V/25V/Z
C97
0.1u/6/Y5V/25V/Z
C281
0.1u/6/Y5V/25V/Z
C119
0.1u/6/Y5V/25V/Z
C104
0.1u/6/Y5V/25V/Z
C118
0.1u/6/Y5V/25V/Z
C282
0.1u/6/Y5V/25V/Z
C131
1u/6/Y5V/10V/Z
C101
0.1u/4/Y5V/25V/Z
C107
0.1u/4/Y5V/25V/Z
R1946
0/6
3VCL_R [20]
C194
0.1u/4/Y5V/25V/Z
C122
0.1u/4/Y5V/25V/Z
C111
0.1u/4/Y5V/25V/Z
TP13
TP16
BC91
BC93
0.047u/4/Y5V/16V/Z
C102
0.1u/4/Y5V/25V/Z
BC94
0.047u/4/Y5V/16V/Z
C124
0.1u/4/Y5V/25V/Z
BC81
0.1u/4/Y5V/25V/Z
RTCVDD [20,27]
VTT_GMCH
VCC3
VCC1_5
VCC1_05
3VDUAL_SB
3VCL
SIGNAL NAME | NO LAN
VccCL_1_05 | de-CAP
VccCL3_3 | Vcc3_3
VccCL1_5 | de-CAP
VccGLAN1_5 | Vcc1_5
VccGLAN3_3 | Vcc3_3
VccGLANPLL | Vcc1_5
VccLAN1_05 | N/A
VccLAN3_3 | Vcc3_3
3VDUAL_SB
5VDUAL
3VDUAL_SB
KQ1
AMS1117/SOT223/0.8A/X
KR1
100/6/1/X
KEC1
100U/D/16V/5B/X
KBC1
0.1u/4/Y5V/25V/Z
KR2
169/6/1/X
3VDUAL_SB
KRN1
0/8P4R/6
3VDUAL
3VDUAL
C150
0.1u/4/Y5V/25V/Z
Gigabyte Technology
Title
ICH9-PWR & GND
Size
Custom
Document Number
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1.0
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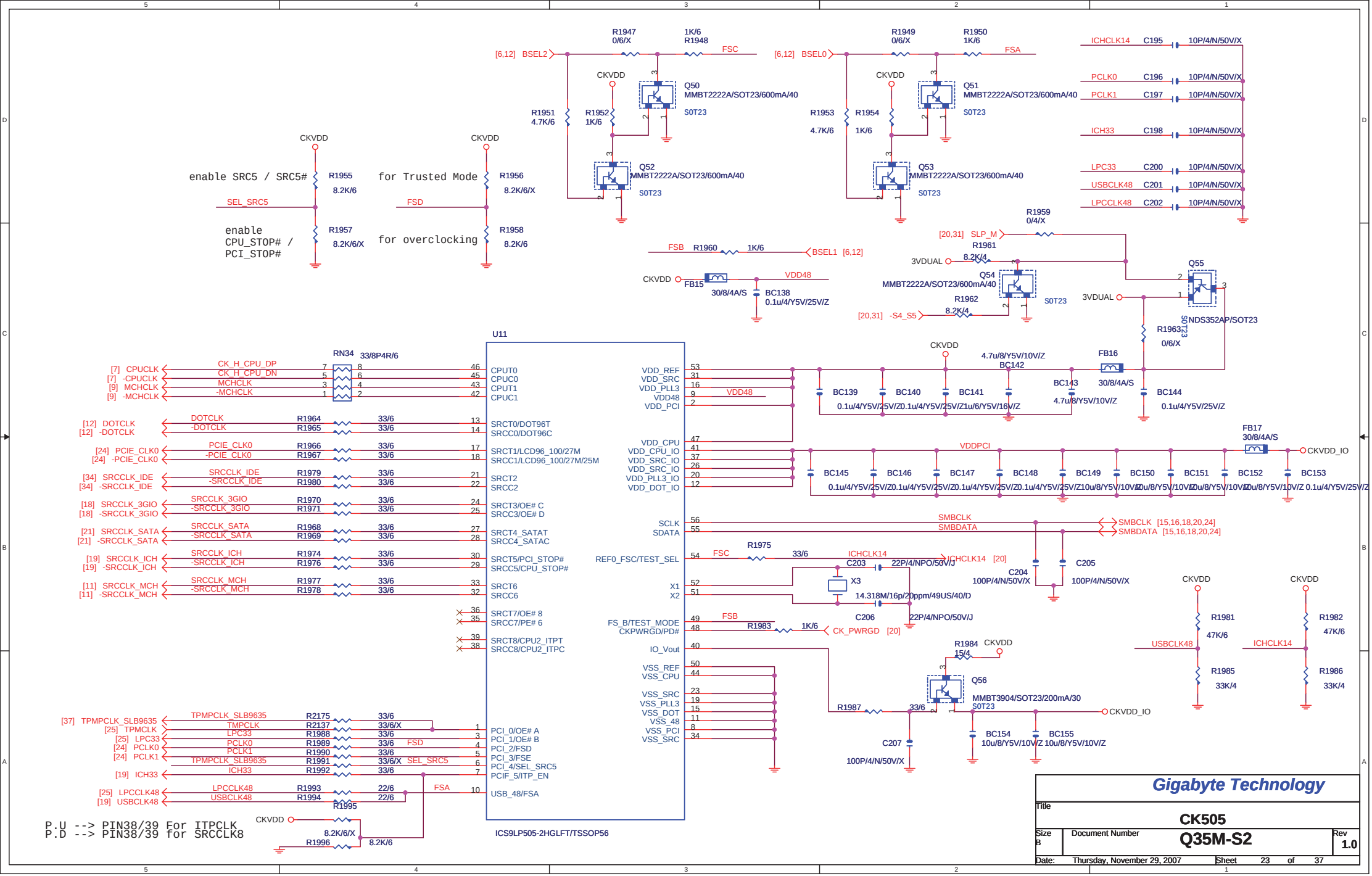
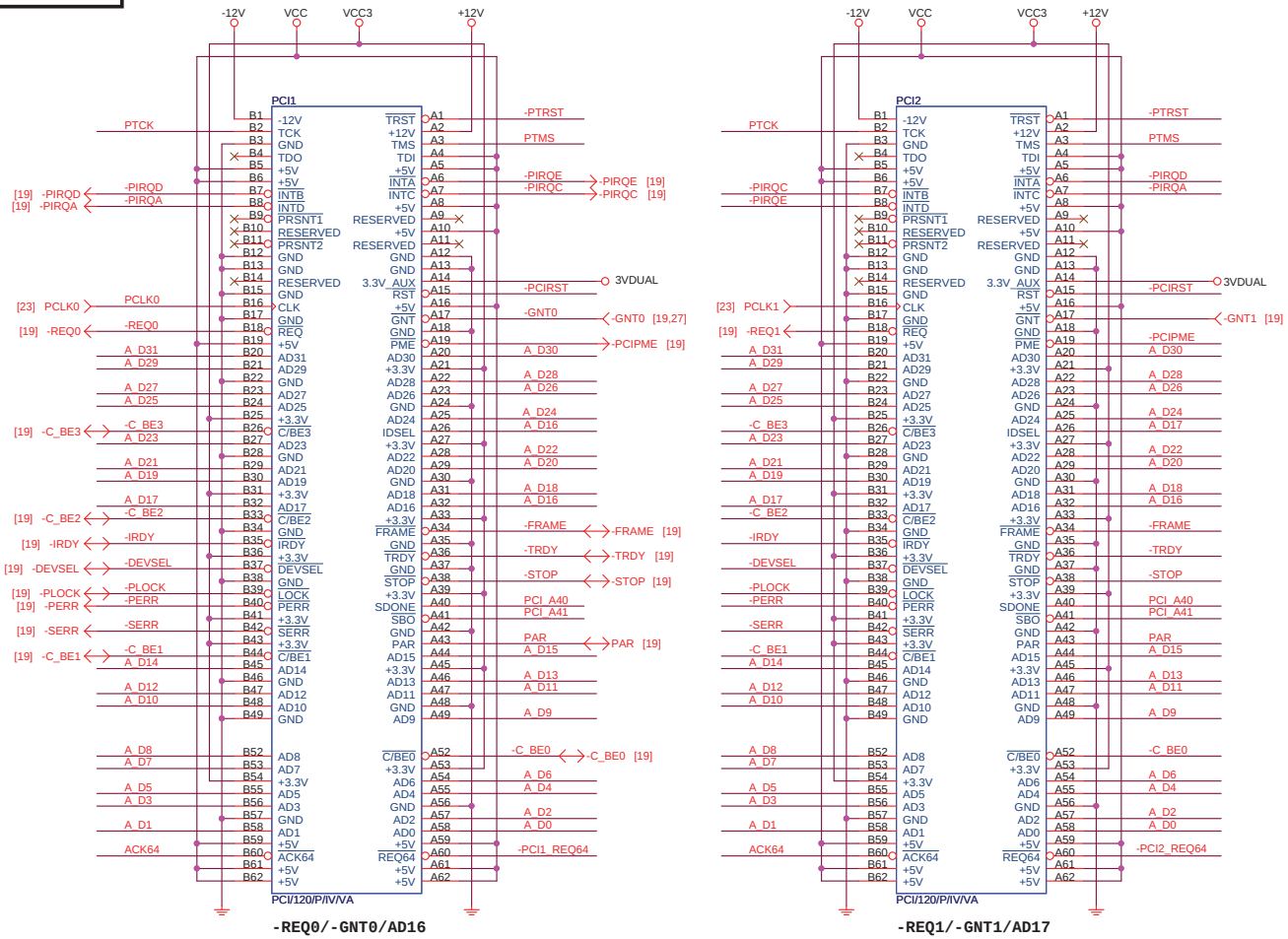
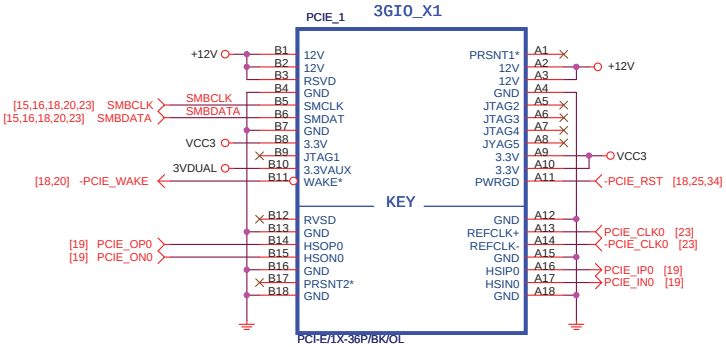
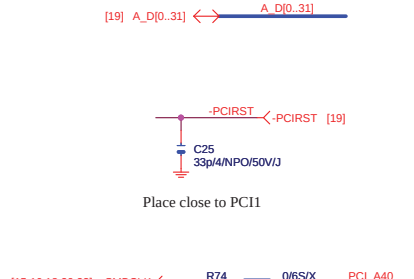


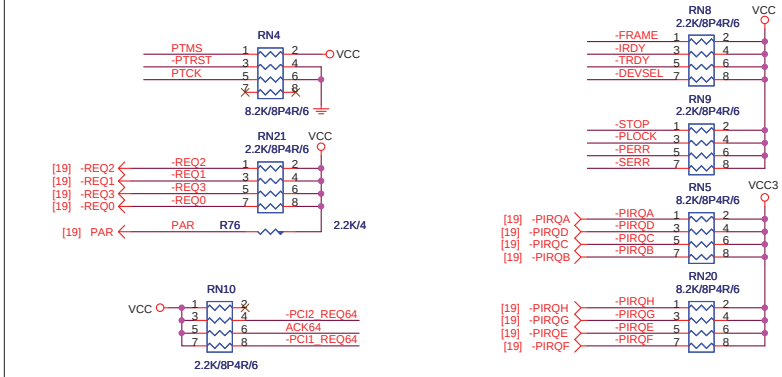
PCI1,2 SLOT

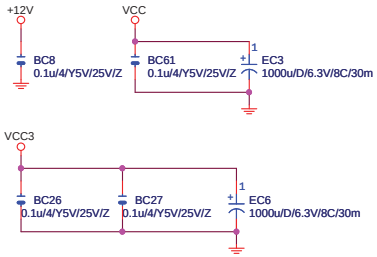


PCIE*1









Gigabyte Technology			
Title: PCI SLOT 1, 2/PCIEX1			
Size: Custom	Document Number: Q35M-S2		Rev: 1.0
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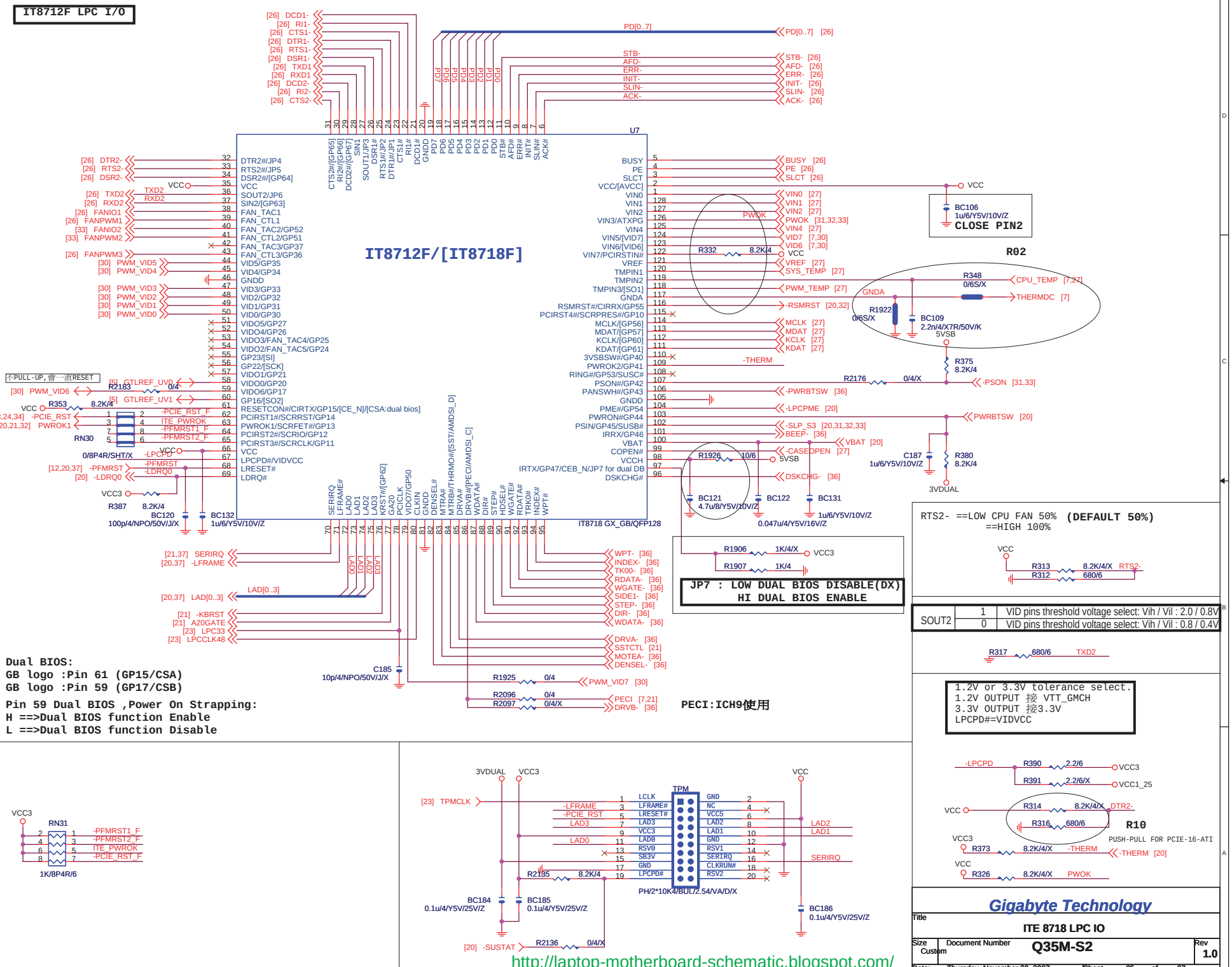
IT8712F LPC I/O



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

RTS2- ==LOW CPU FAN 50% **(DEFAULT 50%)**
==HIGH 100%

R313 8.2K/4/X RTS2-
R312 680/6

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

R317 680/6 TXD2

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

-LPCPD R390 2.2/6 VCC3
R391 2.2/6/X VCC1_25

VCC R314 8.2K/4/X DTR2-
R316 680/6
R10
PUSH-PULL FOR PCIE-16-ATI

VCC3 R373 8.2K/4/X -THERM -THERM [20]

VCC R326 8.2K/4/X PWOK

Gigabyte Technology

Title	ITE 8718 LPC IO	
Size: Custom	Document Number: Q35M-S2	Rev: 1.0
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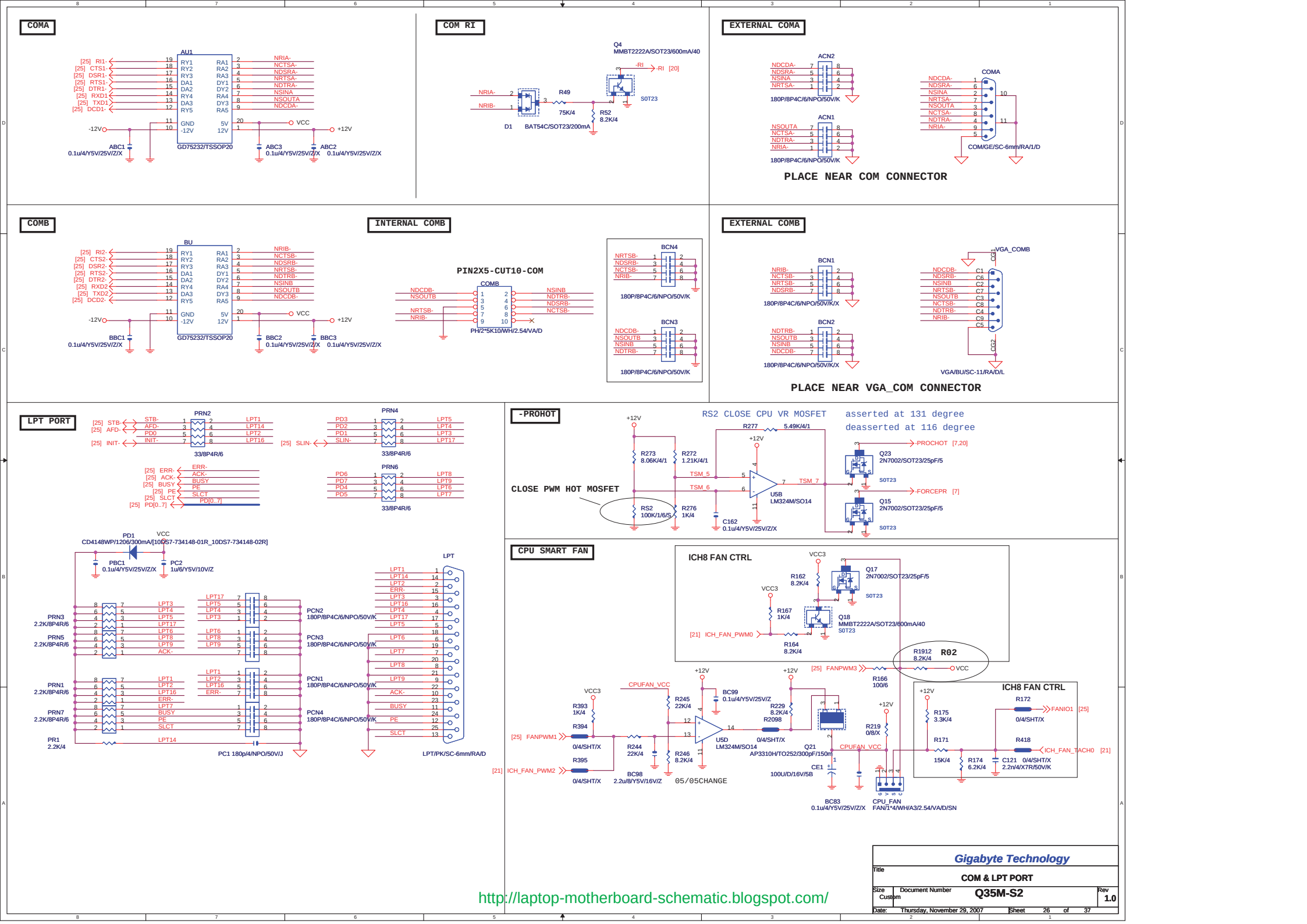
COMA
AU1
GD75232/TSSOP20
ABC1 0.1u/4/Y5V/25V/Z/X
ABC3 0.1u/4/Y5V/25V/Z/X
ABC2 0.1u/4/Y5V/25V/Z/X
COM RI
Q4 MMBT2222A/SOT23/600mA/40
R49 75K/4
R52 8.2K/4
D1 BAT54C/SOT23/200mA
S0T23
EXTERNAL COMA
ACN2
ACN1
180P/8P4C/6/NPO/50V/K
COMA
COM/GE/SC-6mm/RA/1/D
PLACE NEAR COM CONNECTOR
COMB
BU
GD75232/TSSOP20
BBC1 0.1u/4/Y5V/25V/Z/X
BBC2 0.1u/4/Y5V/25V/Z/X
BBC3 0.1u/4/Y5V/25V/Z/X
INTERNAL COMB
PIN2X5-CUT10-COM
COMB
PH/2*5K10/WH/2.54/VA/D
BCN4
BCN3
180P/8P4C/6/NPO/50V/K
EXTERNAL COMB
BCN1
BCN2
180P/8P4C/6/NPO/50V/K/X
VGA_COMB
VGA/BU/SC-11/RA/D/L
PLACE NEAR VGA_COM CONNECTOR
LPT PORT
PRN2
PRN4
PRN6
33/8P4R/6
PD1 CD4148WP/1206/300mA/[10DS7-734148-01R_10DS7-734148-02R]
PBC1 0.1u/4/Y5V/25V/Z/X
PC2 1u/6/Y5V/10V/Z
PRN3 2.2K/8P4R/6
PRN5 2.2K/8P4R/6
PRN1 2.2K/8P4R/6
PRN7 2.2K/8P4R/6
PR1 2.2K/4
PCN2 180P/8P4C/6/NPO/50V/K
PCN3 180P/8P4C/6/NPO/50V/K
PCN1 180P/8P4C/6/NPO/50V/K
PCN4 180P/8P4C/6/NPO/50V/K
PC1 180p/4/NPO/50V/J
LPT
LPT/PK/SC-6mm/RA/D
-PROHOT
RS2 CLOSE CPU VR MOSFET
asserted at 131 degree
deasserted at 116 degree
CLOSE PWM HOT MOSFET
R277 5.49K/4/1
R273 8.06K/4/1
R272 1.21K/4/1
RS2 100K/1/6/S
R276 1K/4
C162 0.1u/4/Y5V/25V/Z/X
U5B LM324M/SO14
Q23 2N7002/SOT23/25pF/5
Q15 2N7002/SOT23/25pF/5
-PROCHOT [7,20]
-FORCEPR [7]
CPU SMART FAN
ICH8 FAN CTRL
Q17 2N7002/SOT23/25pF/5
Q18 MMBT2222A/SOT23/600mA/40
R162 8.2K/4
R167 1K/4
R164 8.2K/4
R1912 8.2K/4
R02
R166 100/6
R245 22K/4
R244 22K/4
R246 8.2K/4
R393 1K/4
R394
R395
BC99 0.1u/4/Y5V/25V/Z
BC98 2.2u/8/Y5V/16V/Z
U5D LM324M/SO14
R229 8.2K/4
R2098
R219 0/8/X
Q21 AP3310H/TO252/300pF/150m
CE1 100U/D/16V/5B
BC83 0.1u/4/Y5V/25V/Z/X
CPU_FAN FAN/1*4/WH/A3/2.54/VA/D/SN
05/05CHANGE
R172
R175 3.3K/4
R171 15K/4
R174 6.2K/4
R418
C121 0/4/SHT/X 2.2n/4/X7R/50V/K
FANIO1 [25]
ICH_FAN_TACH0 [21]
Gigabyte Technology
Title
COM & LPT PORT
Size Custom
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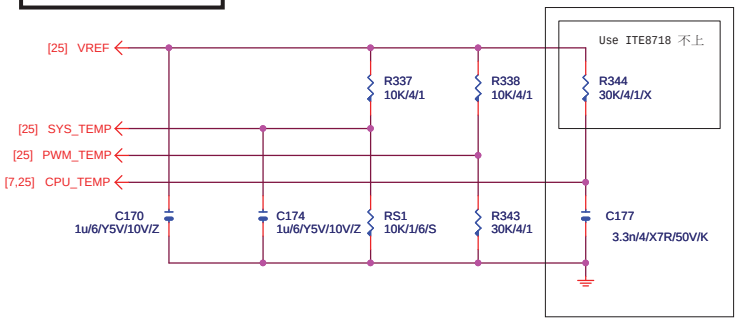
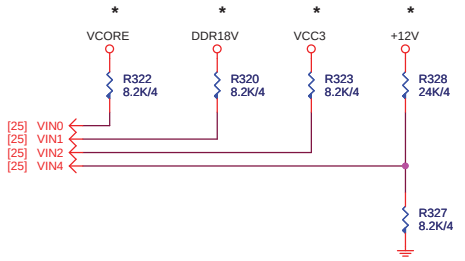
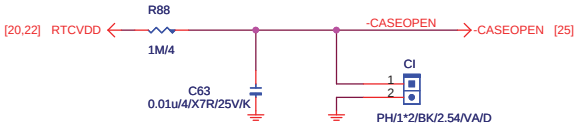
TEMP H/W MONITOR



VOLTAGE-- H/W MONITOR

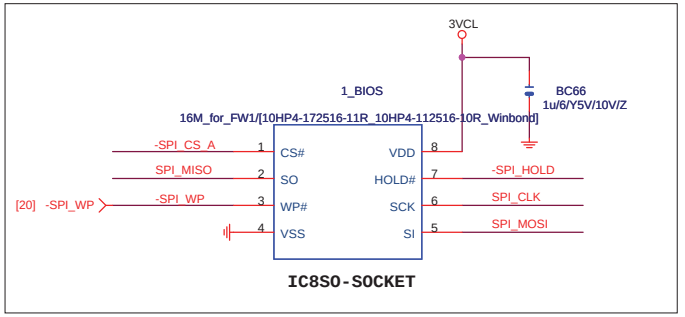


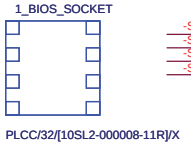
CASE OPEN

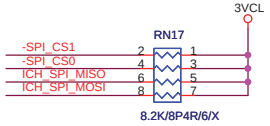


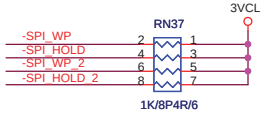
Case Open Circuits

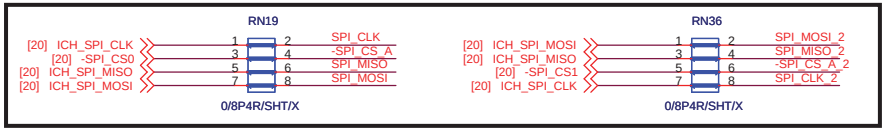
SPI BIOS

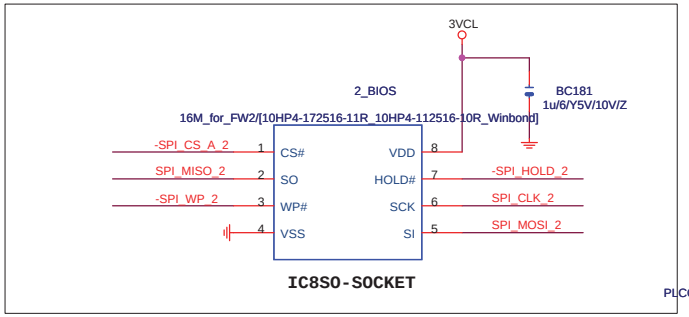


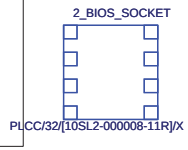


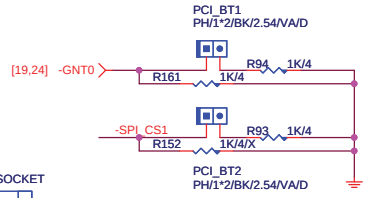






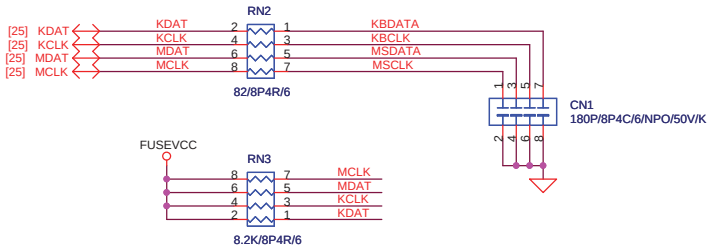


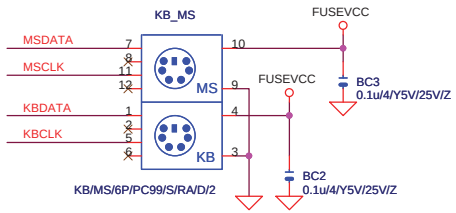




BOOT DEVICE	GNT0	CS1
SPI	0	X
PCI	1	0
FWH	1	1

KB/MS





Gigabyte Technology

Title: BIOS/HW-MONITOR/CI/KB/MS

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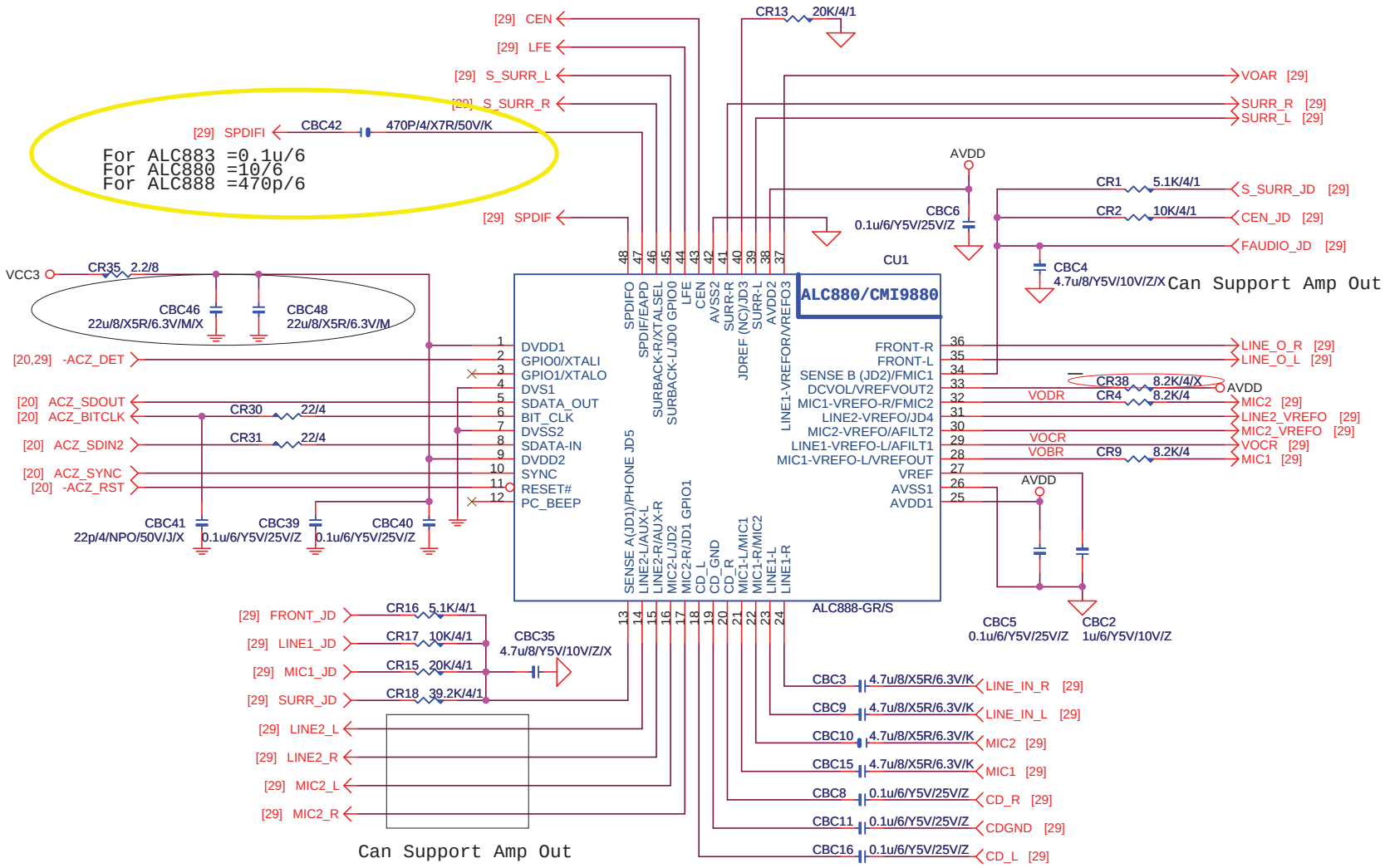
AZALIA CODEC



Gigabyte Technology		
Title: AZALIA ALC888		
Size: Custom	Document Number: Q35M-S2	Rev: 1.0
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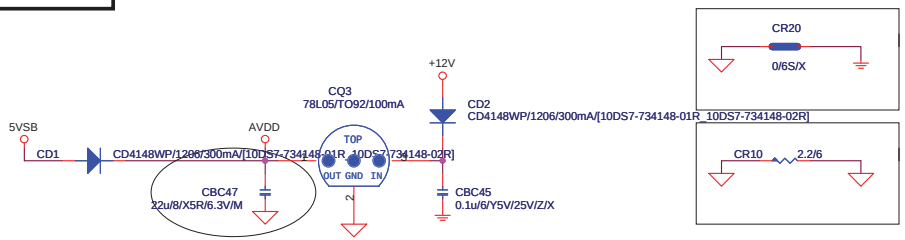
CODEC POWER/EMI PAD



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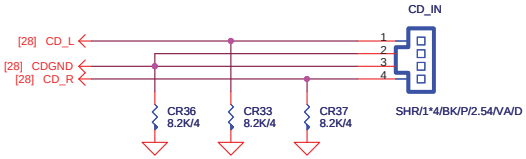

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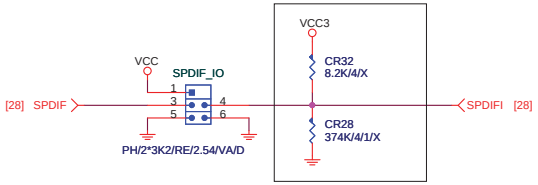
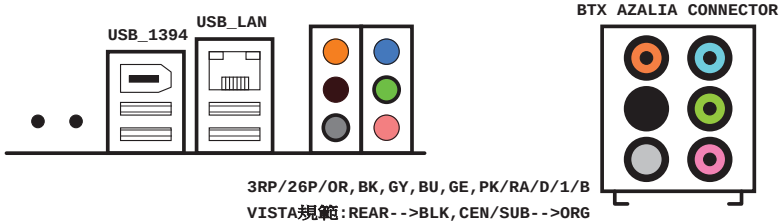
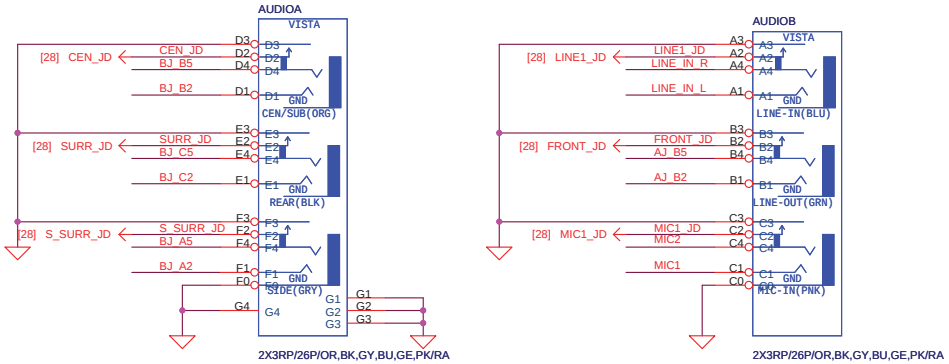


AZALIA JACK

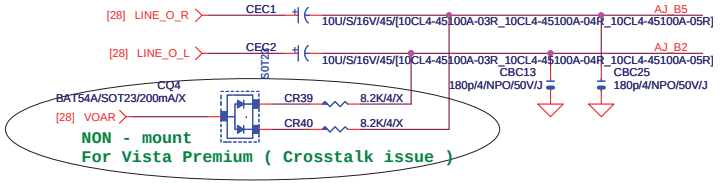


3RP/26P/OR,BK,GY,BU,GE,PK/RA/D/1/B

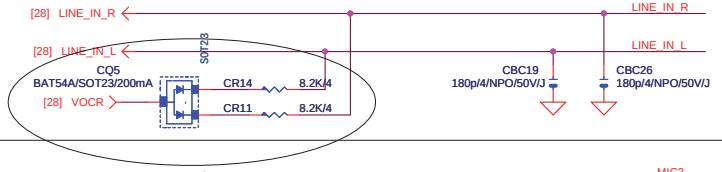
VISTA規範:REAR-->BLK,CEN/SUB-->ORG



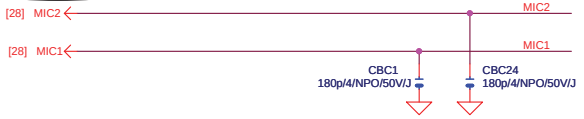
LINE-OUT



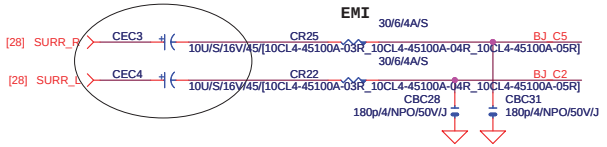
LINE-IN



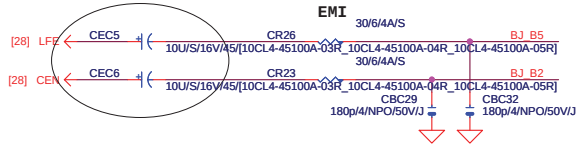
MIC-IN



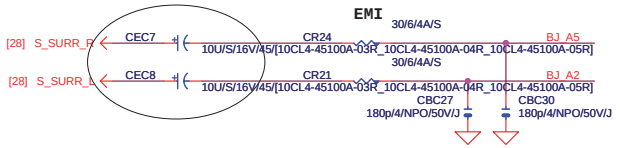
SURROUND



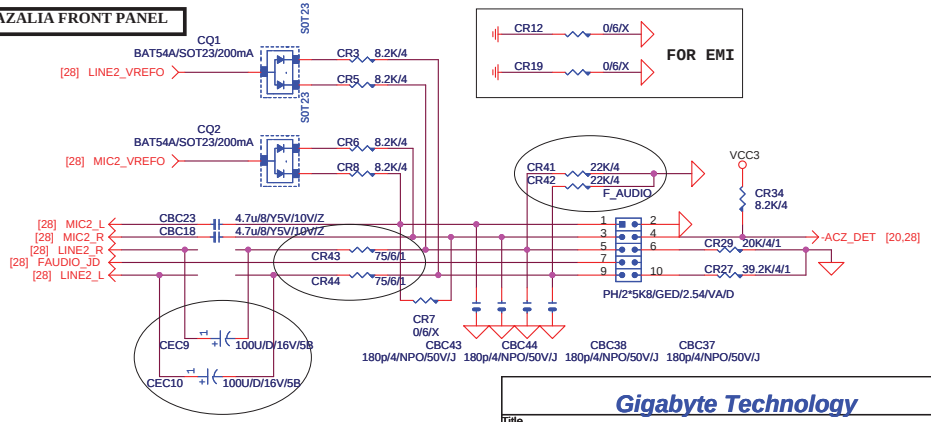
CEN/LFE



SURR BACK



AZALIA FRONT PANEL



Gigabyte Technology			
Title: AUDIO JACK			
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ALL MOSFET =8~9m OHM

MOSFEF SOLDER SIDE
需加 ICT TEMP.

169k : Freq.=158.4KHz
105.5k : Freq.=250KHz
87.3k : Freq.=300KHz

BOTTOM PAD
CONNECT TO GND

THROUGH 10 VIA

for MOS 溫差

for MOS 溫差

for fix low temp glitch

SR1,SR3,SR5 PLACE ON THE SOLDER SIDE, CLOSE INDUCTOR

OUTPUT INDUCTOR

2SK3918/TO252/1300pF/7.5m
2SK3919/TO252/2050pF/5.6m
2SK3919/TO252/2050pF/5.6m

560u/FP/D/6.3V/89/8m

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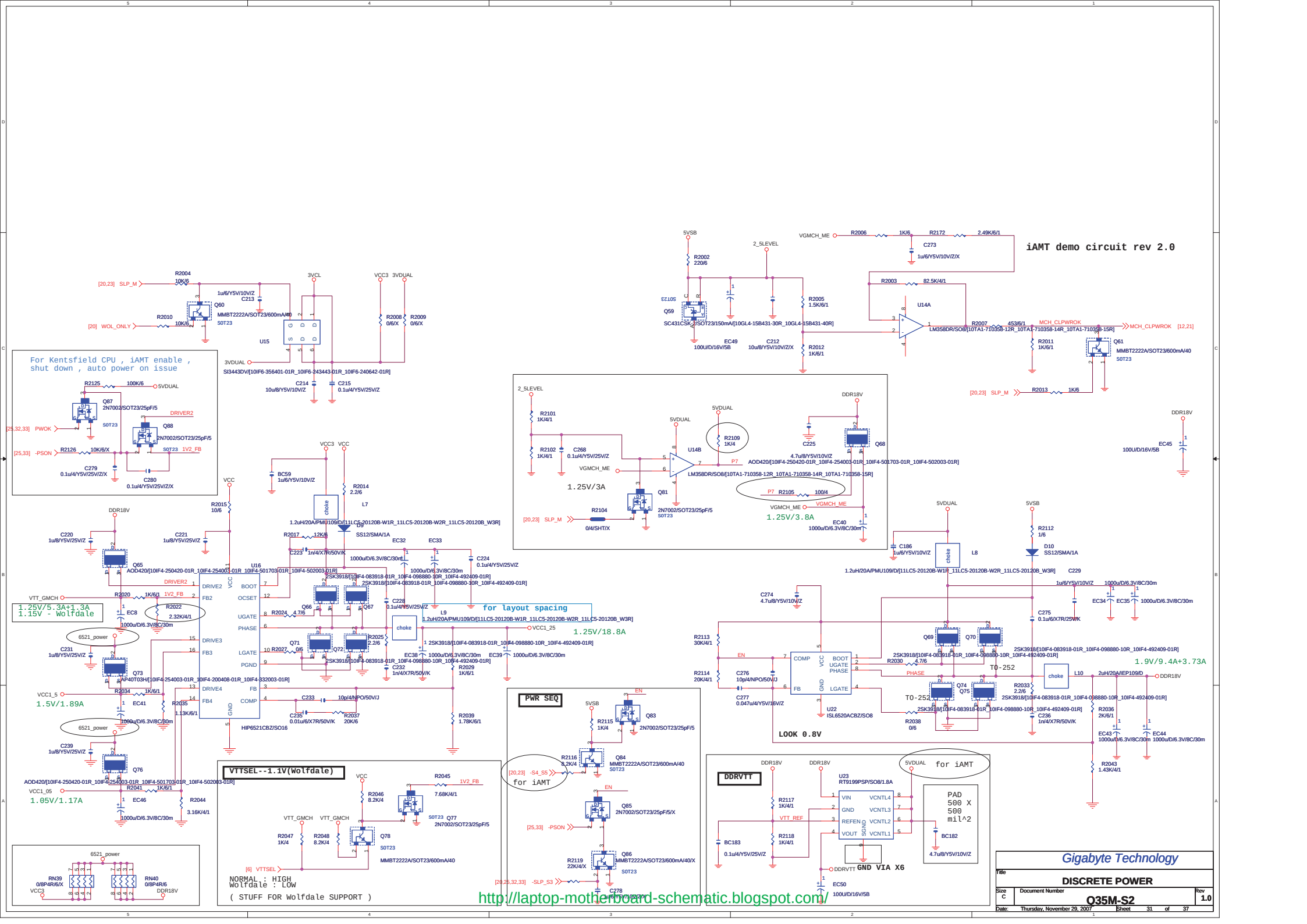
iAMT demo circuit rev 2.0
For Kentsfield CPU , iAMT enable , shut down , auto power on issue
1.25V/5.3A+1.3A
1.15V - Wolfdale
1.5V/1.89A
1.05V/1.17A
1.25V/3A
1.25V/3.8A
1.25V/18.8A
for layout spacing
1.9V/9.4A+3.73A
LOOK 0.8V
PWR SEQ
for iAMT
DDRVTT
VTTSEL--1.1V(Wolfdale)
NORMAL : HIGH
Wolfdale : LOW
(STUFF FOR Wolfdale SUPPORT)
GND VIA X6
PAD 500 X 500 mil^2
Gigabyte Technology
DISCRETE POWER
Q35M-S2
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Thursday, November 29, 2007
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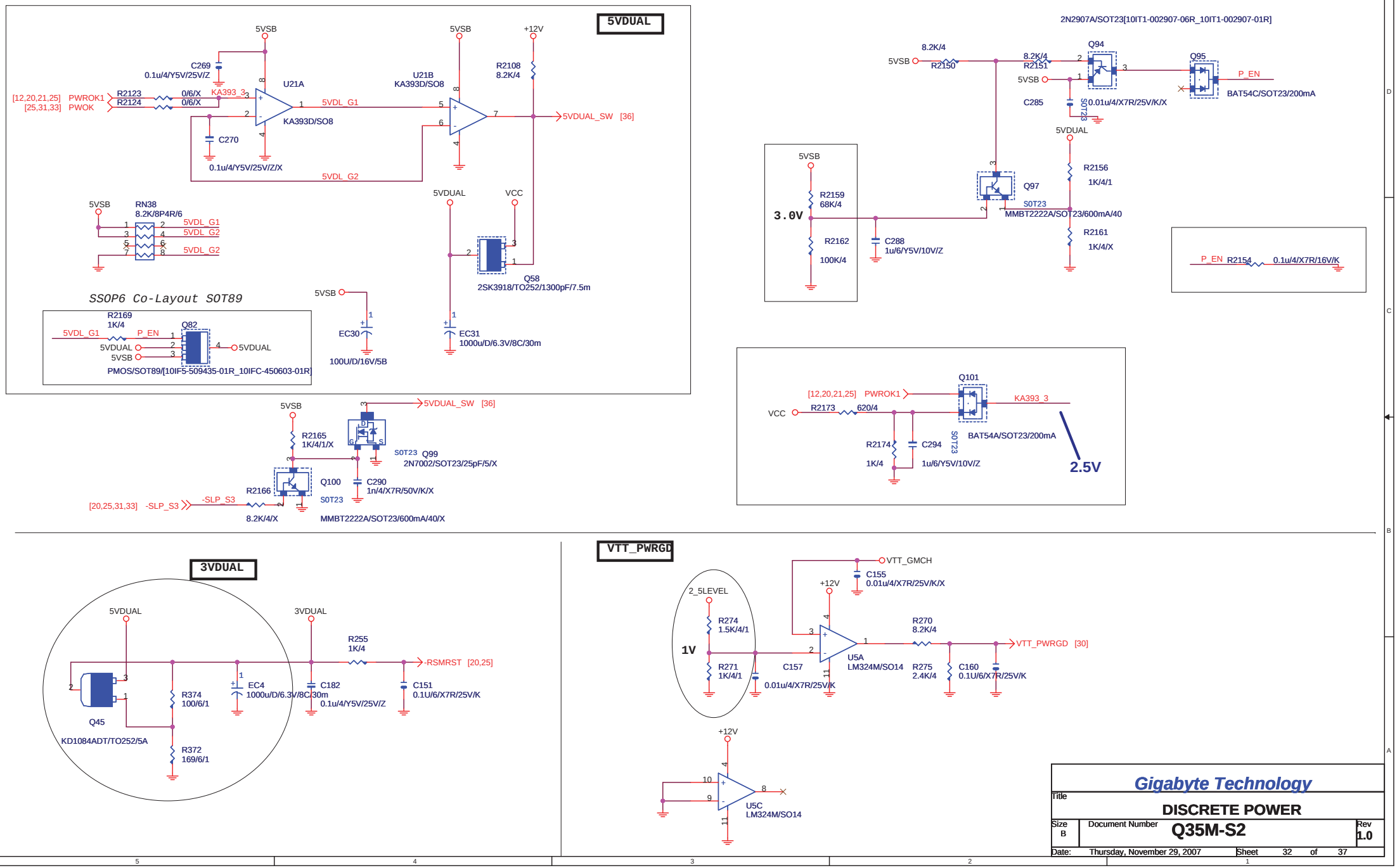
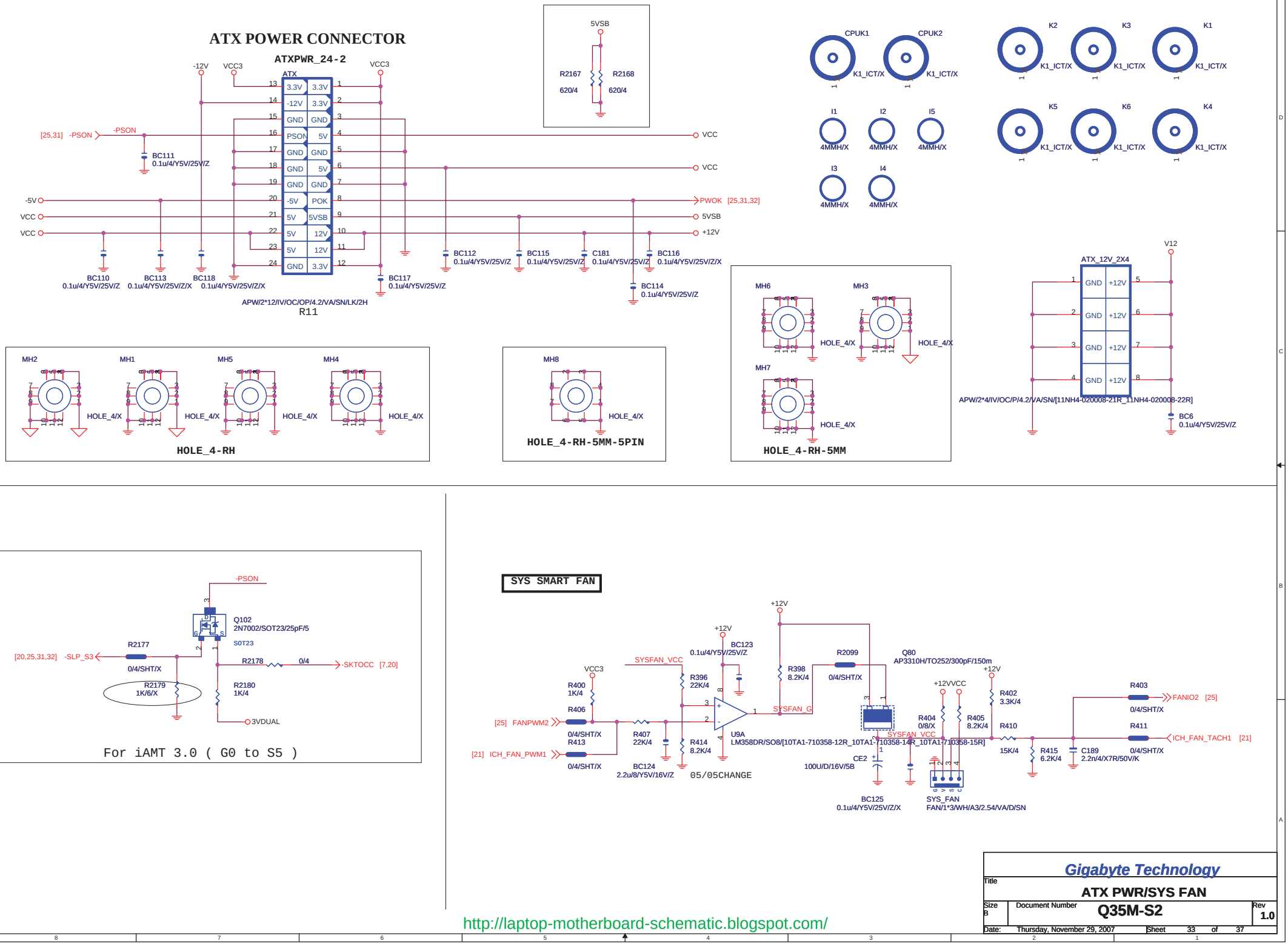
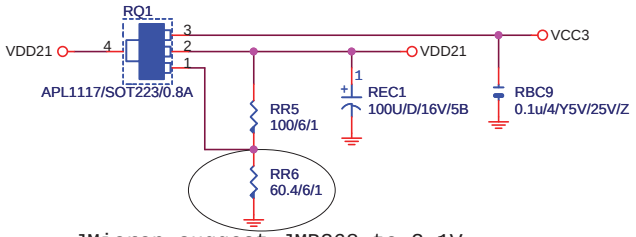
http://laptop-motherboard-schematic.blogspot.com/



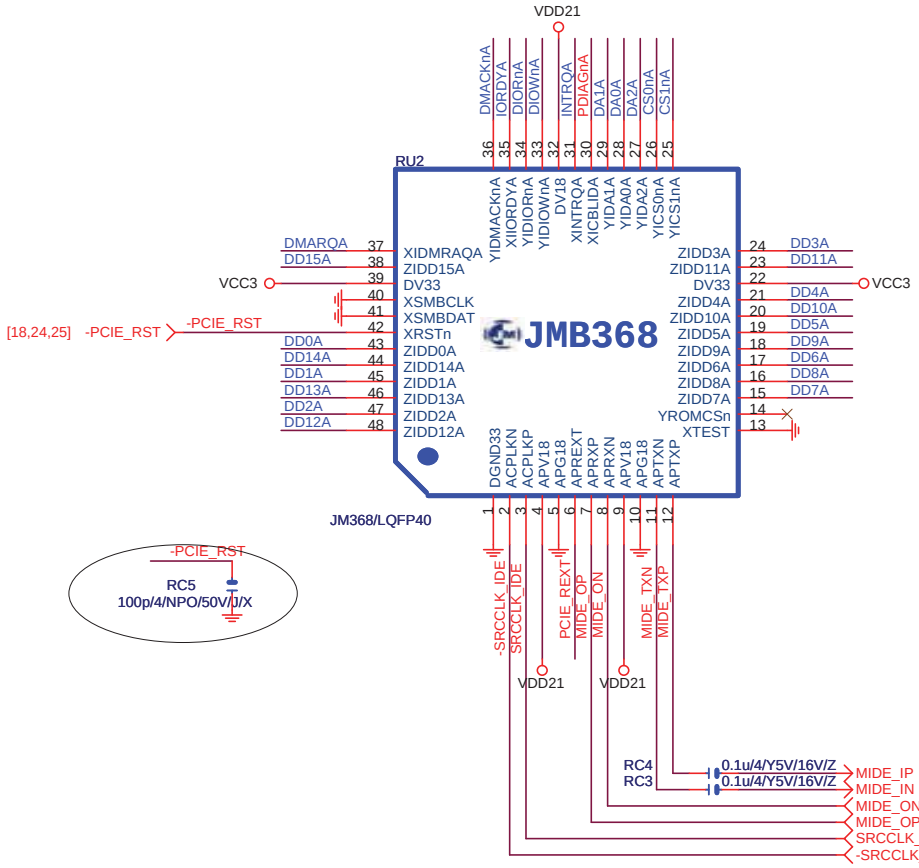


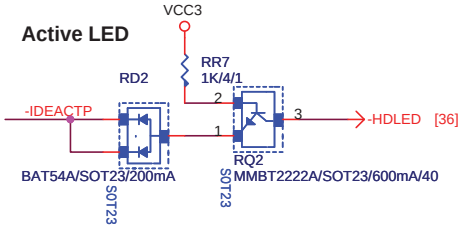
JMicron 1P PATA

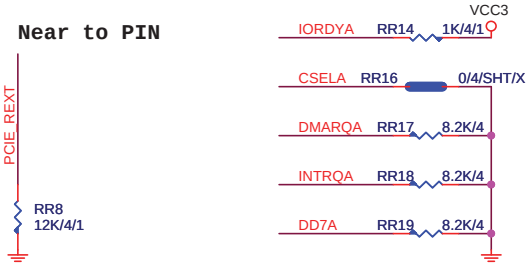
3.3V to 2.1V Voltage Regulator



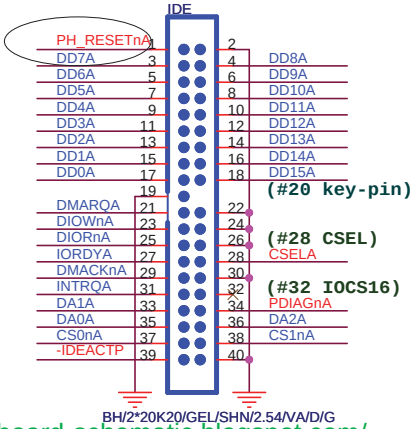
JMicron suggest JMB368 to 2.1V

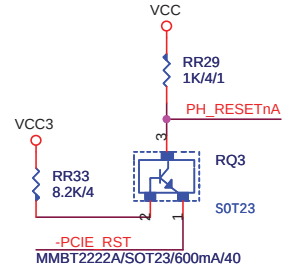


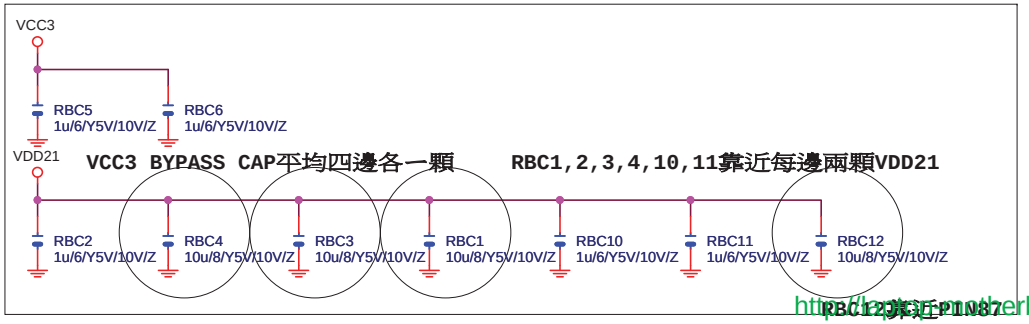




IDE Connector







Gigabyte Technology			
Title: JMicron 1P PATA			
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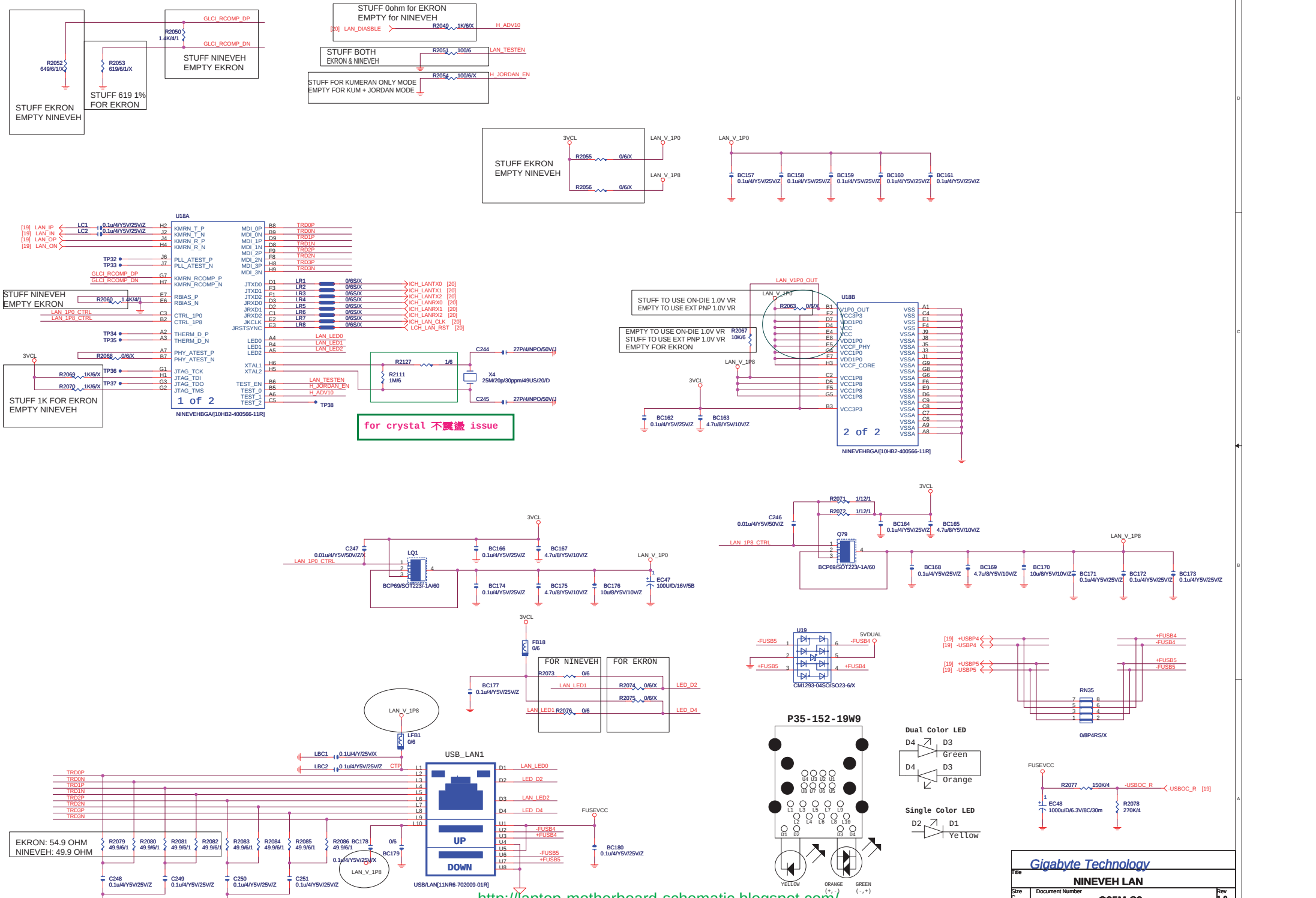

FRONT USB1

VCC
C295 1n/4/X7R/50V/K/X
For EMI

[19] -USBP0 -USBP0 P0-
[19] +USBP0 +USBP0 P0+
[19] -USBP1 -USBP1 P1+
[19] +USBP1 +USBP1 P1-

FUSEVCC1
F_USB1
BC75 0.1u/4/Y5V/25V/Z
EC16 1000u/D/6.3V/8C/30m
P0- P0+ P1+ P1-
PH/2*5K9/YL/2.54/VA/D

FRONT USB2

[19] +USBP2 +USBP2 P2+
[19] -USBP2 -USBP2 P2-
[19] -USBP3 -USBP3 P3-
[19] +USBP3 +USBP3 P3+

FUSEVCC1
F_USB2
P2- P2+ P3- P3+
PH/2*5K9/YL/2.54/VA/D

FRONT USB3

[19] +USBP9 +USBP9 P9+
[19] -USBP9 -USBP9 P9-
[19] -USBP8 -USBP8 P8-
[19] +USBP8 +USBP8 P8+

FUSEVCC1
F_USB3
P8- P8+ P9- P9+
PH/2*5K9/YL/2.54/VA/D

USB DROP

UU1
FUSEVCC
VOUT VOUT GND VIN CE
VCC
9701_CE
9701/SOT23-5/[10TA1-089701-11R]
BC9 0.1u/4/Y5V/25V/Z/X

UU2
FUSEVCC1
VOUT VOUT GND VIN CE
VCC
9701_CE
R2181 62K/4
5VDUAL_SW [32]
9701/SOT23-5/[10TA1-089701-11R]
BC82 0.1u/4/Y5V/25V/Z/X
R2182 51K/4

FRONT USB OC1

FUSEVCC1
R177 150K/4
-USBOC_F
-USBOC_F [19]
R178 270K/4

USB POWER

320MILS 160MILS 240MILS
5VDUAL
FUSEVCC
F1 SMD1812P260/6V
F2 SMD1812P160/8V/X
F3 SMD1812P160/8V
F4 SMD1812P160/8V
BC7 0.1u/4/Y5V/25V/Z
FUSEVCC1
BC74 0.1u/4/Y5V/25V/Z
[6,20] -SYS_RST

VCC +12V
R2134 8.2K/4/X
Q89 AP40T03H/TO252/655pF/25m
5VDUAL_SW [32]
CLOSE F_USB

FLOPPY

VCC
RN32 470/8P4R/6
R389 470/6
FDD
DENSEL DENSEL- [25]
INDEX- INDEX- [25]
MOTEA- MOTEA- [25]
DRVB- DRVB- [25]
DRVA- DRVA- [25]
DIR- DIR- [25]
STEP- STEP- [25]
WDATA- WDATA- [25]
WGATE- WGATE- [25]
TK00- TK00- [25]
WPT- WPT- [25]
RDATA- RDATA- [25]
SIDE1- SIDE1- [25]
DSKCHG- DSKCHG- [25]
BH/2*17K5/BK/SHN/2.54/VA/D/GF

SATA LED

VCC3
R359 1K/4
-HDLED
C184 180p/4/NPO/50V/J/X
R358 1K/4
R369 8.2K/4
[21] -SATALED -SATALED
S0T23 S0T23
Q36 MMBT2222A/SOT23/600mA/40
Q42 MMBT2222A/SOT23/600mA/40

BUZZER

VCC
D6 CD4148WP/1206/300mA/[10DS7-734148-0AR_10DS7-734148-02R]
BZ BUZZER/D/X
SPK-
R381 75/6/1
R379 1K/4
Q44 MMBT2222A/SOT23/600mA/40
Q39 MMBT2222A/SOT23/600mA/40
Q38 MMBT2222A/SOT23/600mA/40
R382 75/6/1
R383 8.2K/4
R364 1K/4
[25] BEEP- BEEP-
S0T23 S0T23
SPKR SPKR [20]

INTEL FRONT PANEL

PWR_LED
MPD+
PH/1*3/BK/2.54/VA/D
3 PIN POWER LED
LAYOUT PLACE CLOSE
TO F_PANEL
VCC
R368 330/6
BC119 0.01u/4/X7R/25V/K/X
F_PANEL
HD+ HD- GND RESET RSV GD+ GD- GN+ GN-
MSG/PD+ MSG/PD- PW+ PW- SP+ NC NC SP-
MPD+ VCC SPK-
HDLED
[34] -HDLED 5VSB
R370 8.2K/4
Q37
BAT54C/SOT23/200mA
R02
PH/2*10K10,11,12,13,15,17,19/BK/2.54/VA/D
R367 330/6
Q41 MMBT2222A/SOT23/600mA/40
S0T23
R377 1K/4
GPIO28 [20]
5VSB
R378 8.2K/4
-PWRBTSW
-PWRBTSW [25]
C183 0.01u/4/X7R/25V/K
Q43 BAV99/SOT23/300mA
5VSB

Gigabyte Technology
Title: FP,F_USB,USB PWR,FDD,BZ
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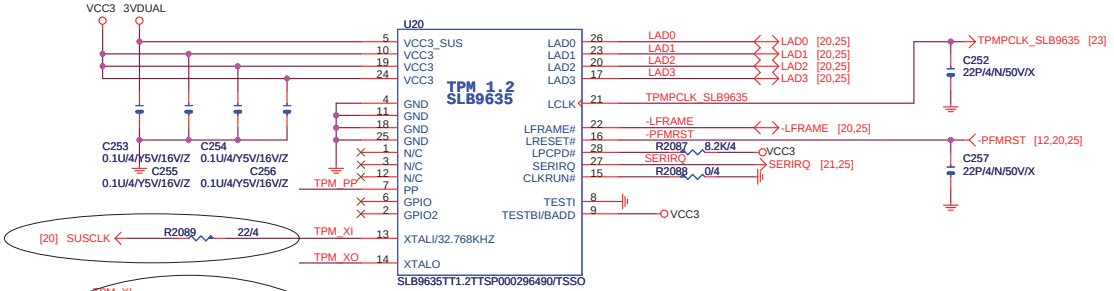
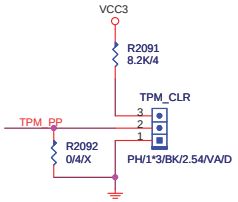
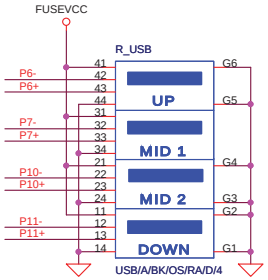
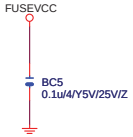


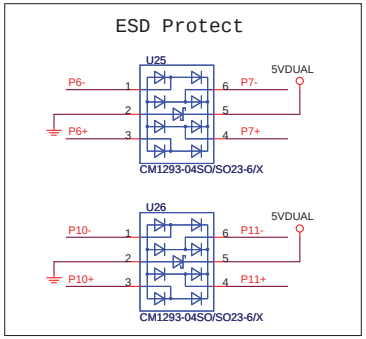


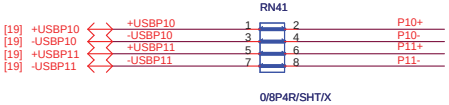
NOTE:

TPM_CLR	Force_Clear command
1-2	NORMAL
2-3	ENABLE









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Title: Misc. PWR & ATX CONN

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