

**Model Name:GA-G41MT-S2****Revision 1.5****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	G41_HOST
09	G41_DDRII
10	G41_PCI E, DMI
11	G41_VGA
12	G41_GND
13	G41_PWR
14	PCI EXPRESS*16 SLOT
15	DDR3 CHANNEL A
16	DDR3 CHANNEL B
17	DDR3 TERMINATION
18	ICH7 PCI, USB, DMI, LAN
19	ICH7 IDE, GPIO, SATA, CTRL
20	ICH7 VCC, GND
21	CK505 CLOCK.
22	PCI SLOT 1,PCIE*1,2
23	IDE/FLOPPY/F_USB/R_USB
24	ITE 8718 GB
25	COM_LPT
26	CI,HWM,KB/MS,DUALBIOS
27	CODEC ALC889

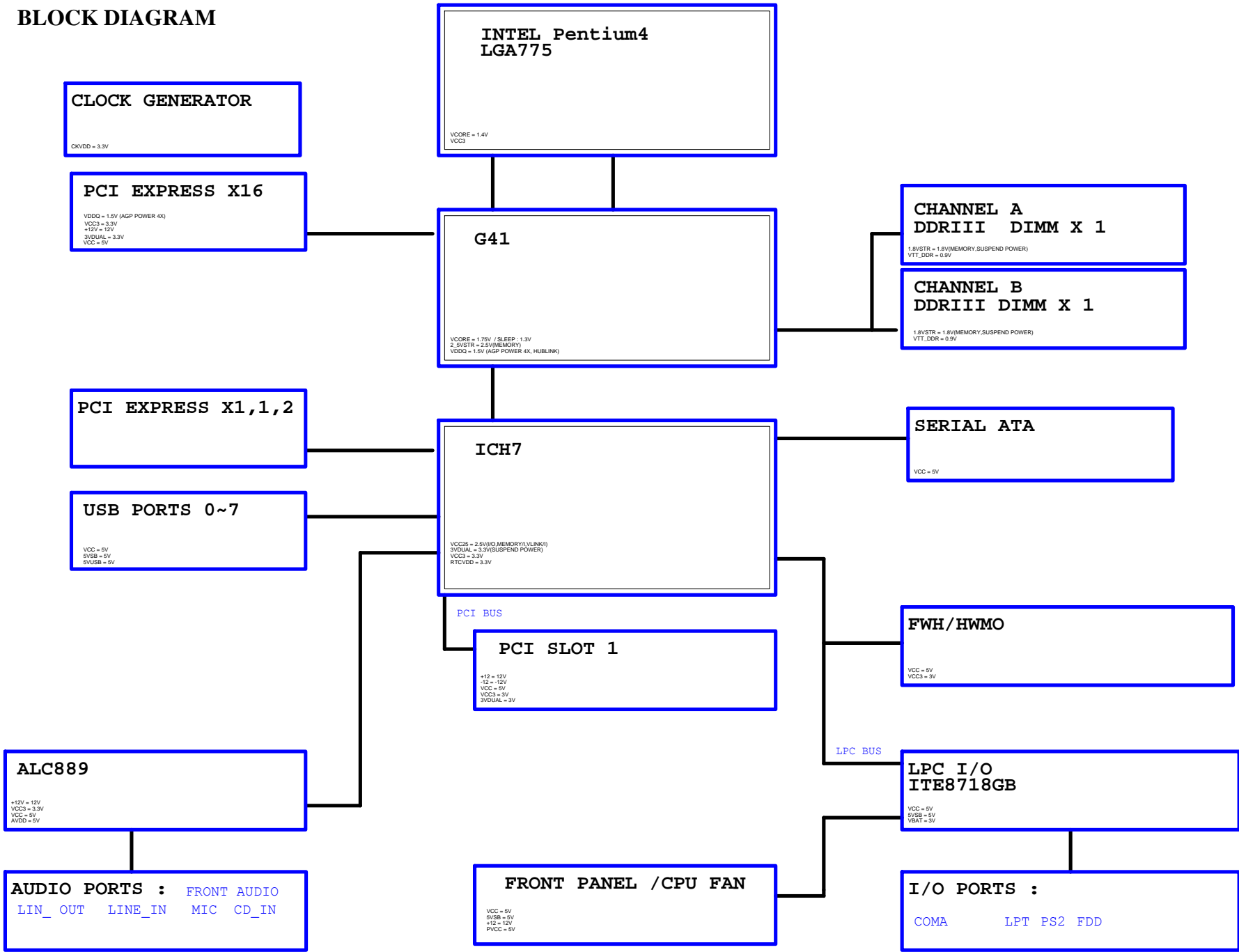
**SHEET****TITLE**

28	REAR AUDIO JACK
29	DISCRETE POWER
30	VCORE PWM_ISL6312
31	ATX, OTHERS POWER
32	FRONT PANEL
33	ARTHEROS AR8151/AR8152

**Gigabyte Technology****Cover Sheet**

Size Custom	Document Number <b>GA-G41MT-S2</b>	Rev <b>1.5</b>
Date: Monday, August 01, 2011	Sheet 1	of 33

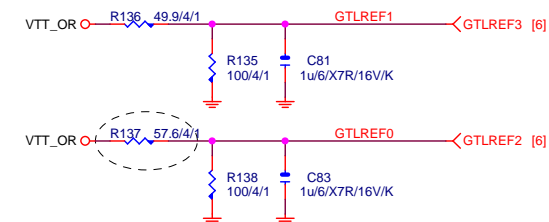
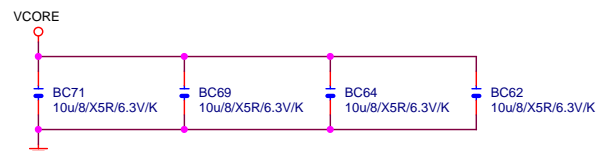
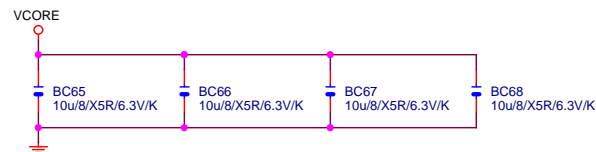
BLOCK DIAGRAM



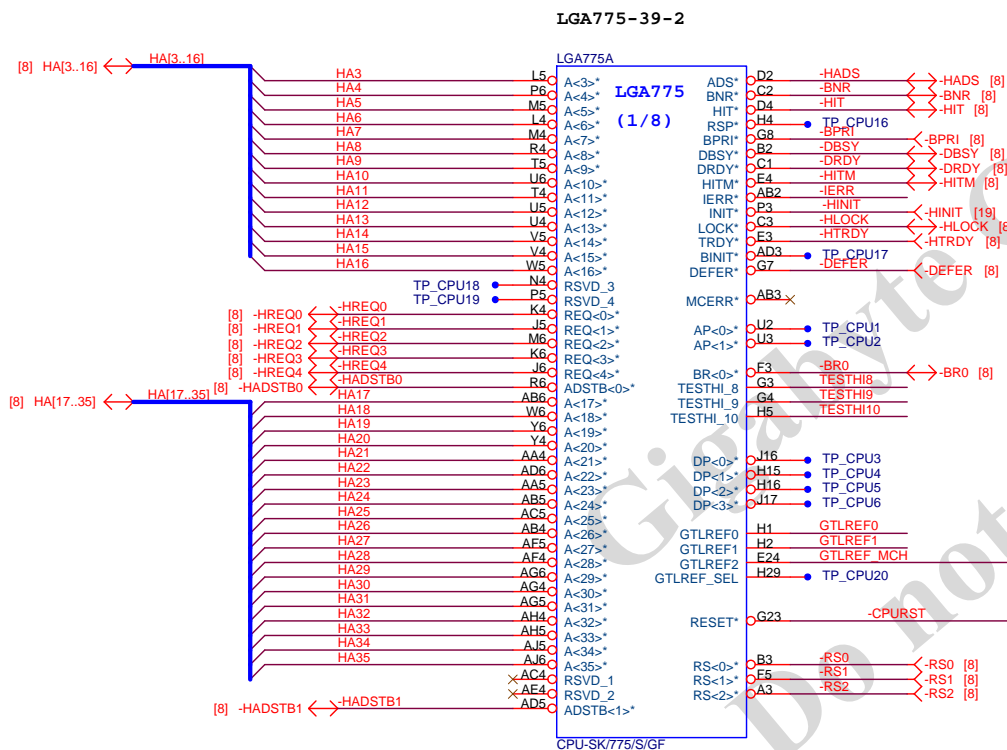
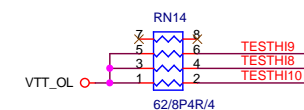
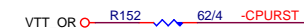
**Version: 1.5**

## Component value change history

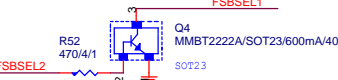
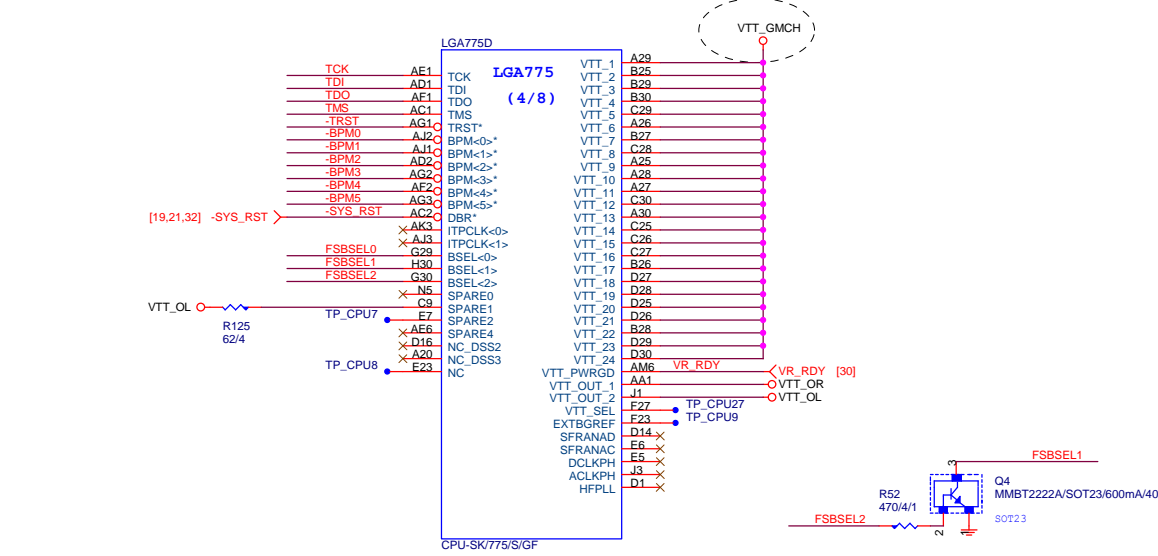
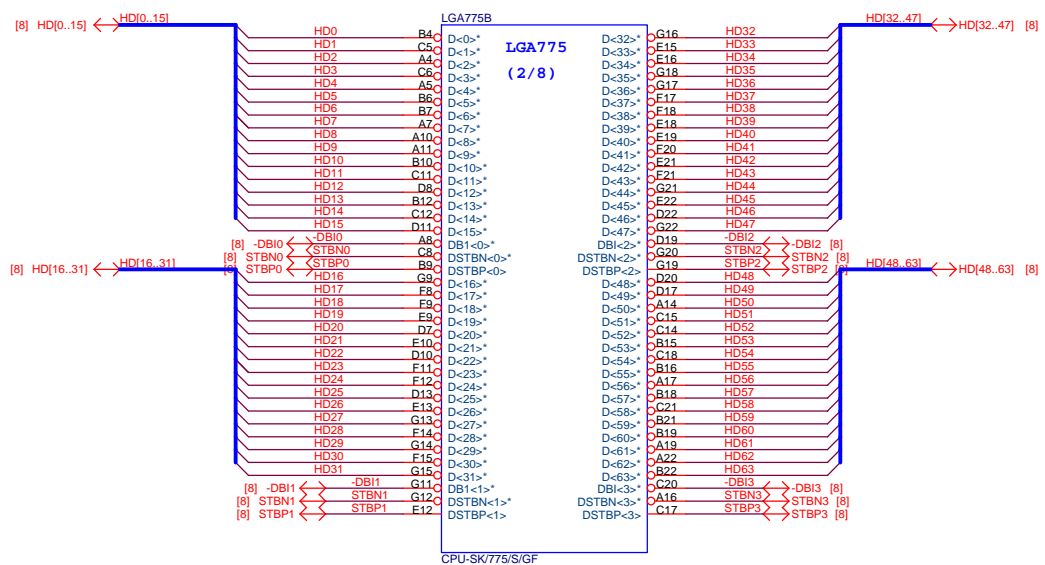
[illegible][illegible]



中間値0.9V



<b><i>Gigabyte Technology</i></b>			
Title			
P4_LGA775-A			
Size B	Document Number	GA-G41MT-S2	Rev 1.5
Date:	Monday, August 01, 2011	Sheet	4 of 33

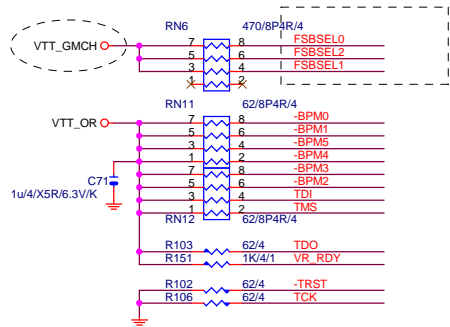


FIX FSB1600 LATCH FAIL

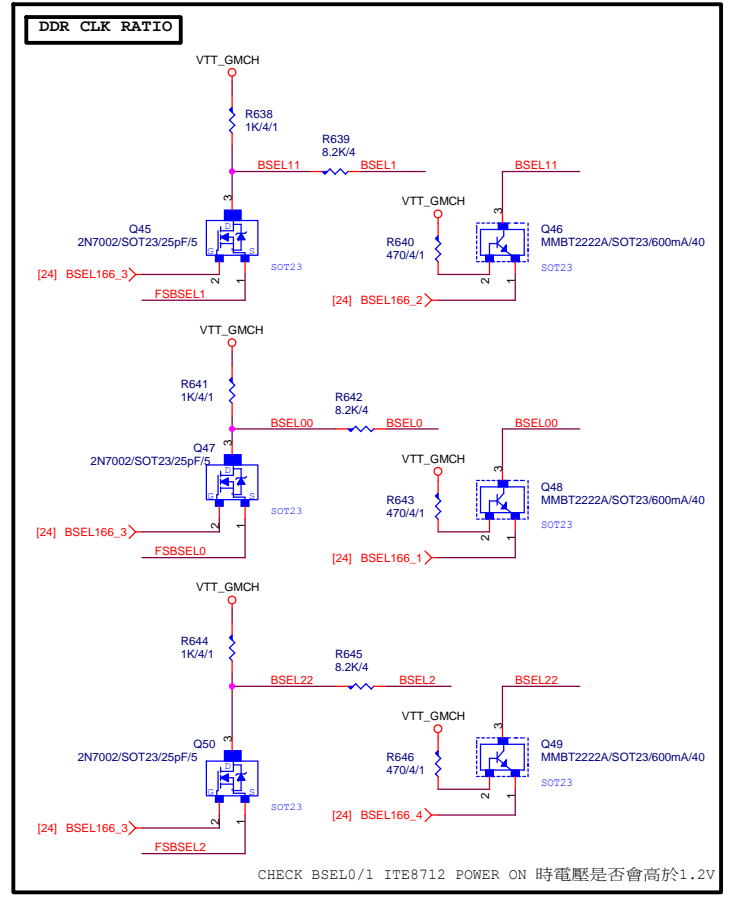
CPU

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

X



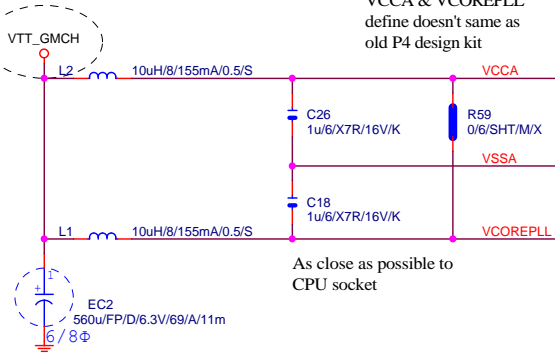
TO CLK GEN [21] FSBSEL0 FSBSEL0 R54 8.2K/4X BSEL0 [11] BSEL0 [11]  
[21] FSBSEL1 FSBSEL1 R51 8.2K/4X BSEL1 [11] BSEL1 [11]  
[21] FSBSEL2 FSBSEL2 R53 8.2K/4X BSEL2 [11] BSEL2 [11] TO NB



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

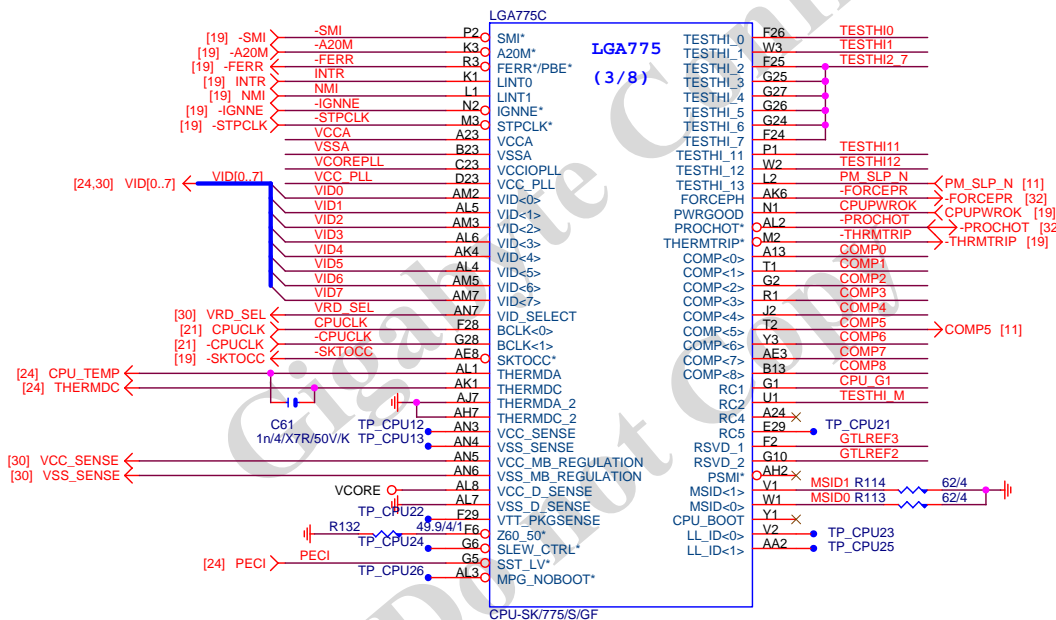
<b>Gigabyte Technology</b>			
Title P4_LGA775-B,D			
Size Custom	Document Number <b>GA-G41MT-S2</b>		Rev <b>1.5</b>
Date: Monday, August 01, 2011	Sheet 5		of 33

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

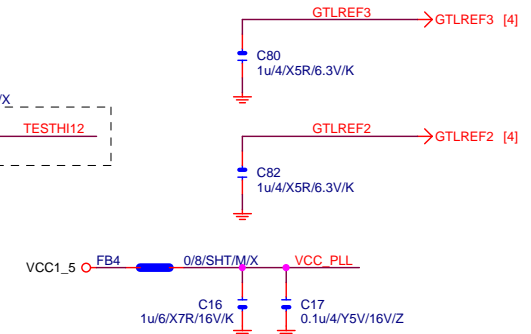
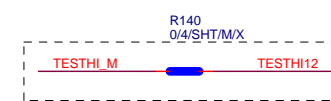
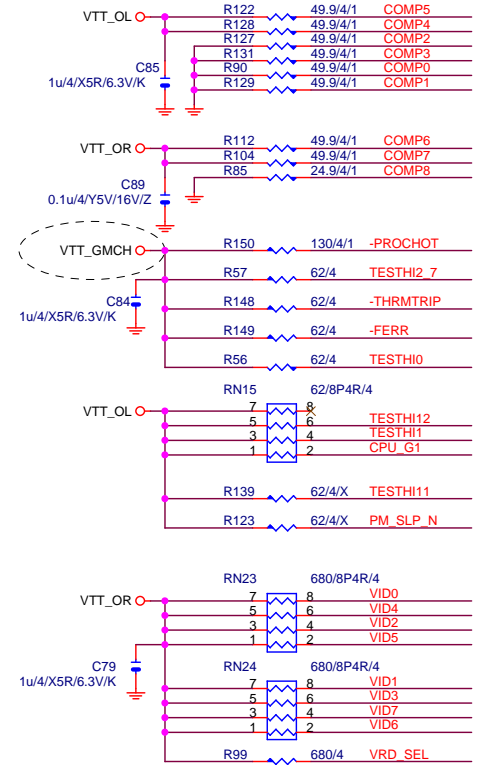


Trace width doesn't  
less than 12 Mil

As close as possible to  
CPU socket



Place outside of CPU socket

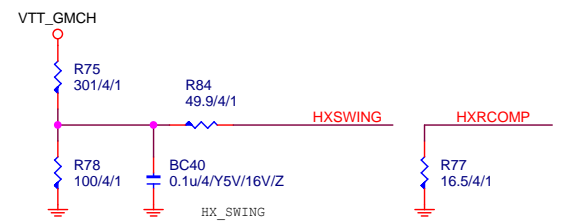
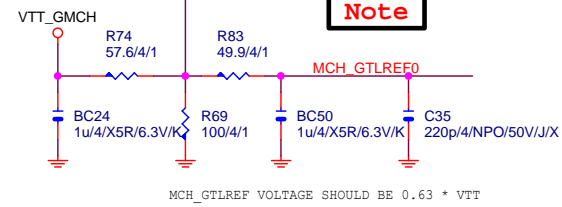
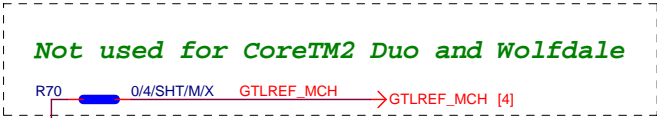
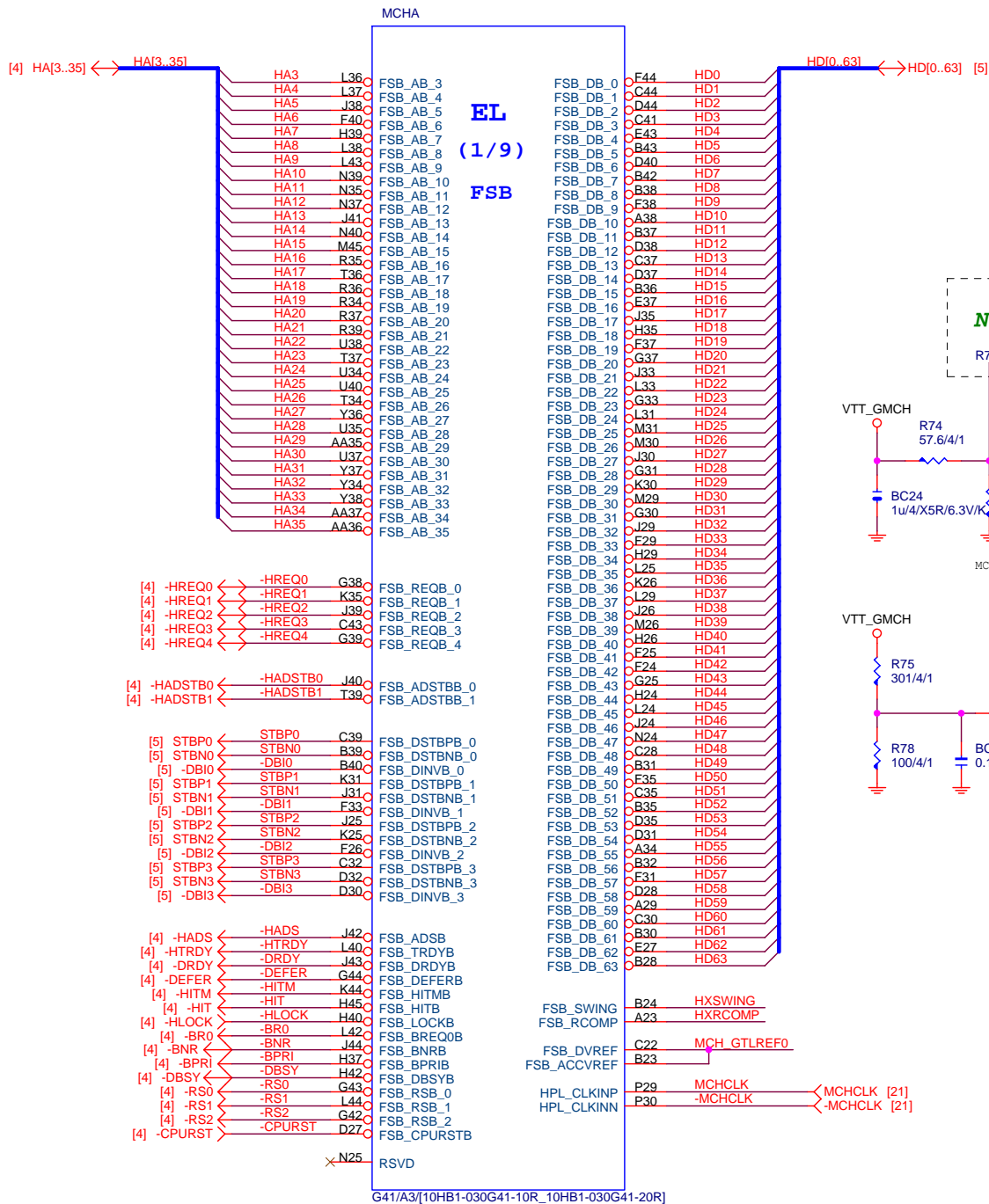


PECI:Platform Environment Control Interface

**Gigabyte Technology**

Title			P4_LGA775-C	
Size B			Document Number	
			GA-G41MT-S2	
Date:			Monday, August 01, 2011	Sheet 6 of 33
			Rev	1.5



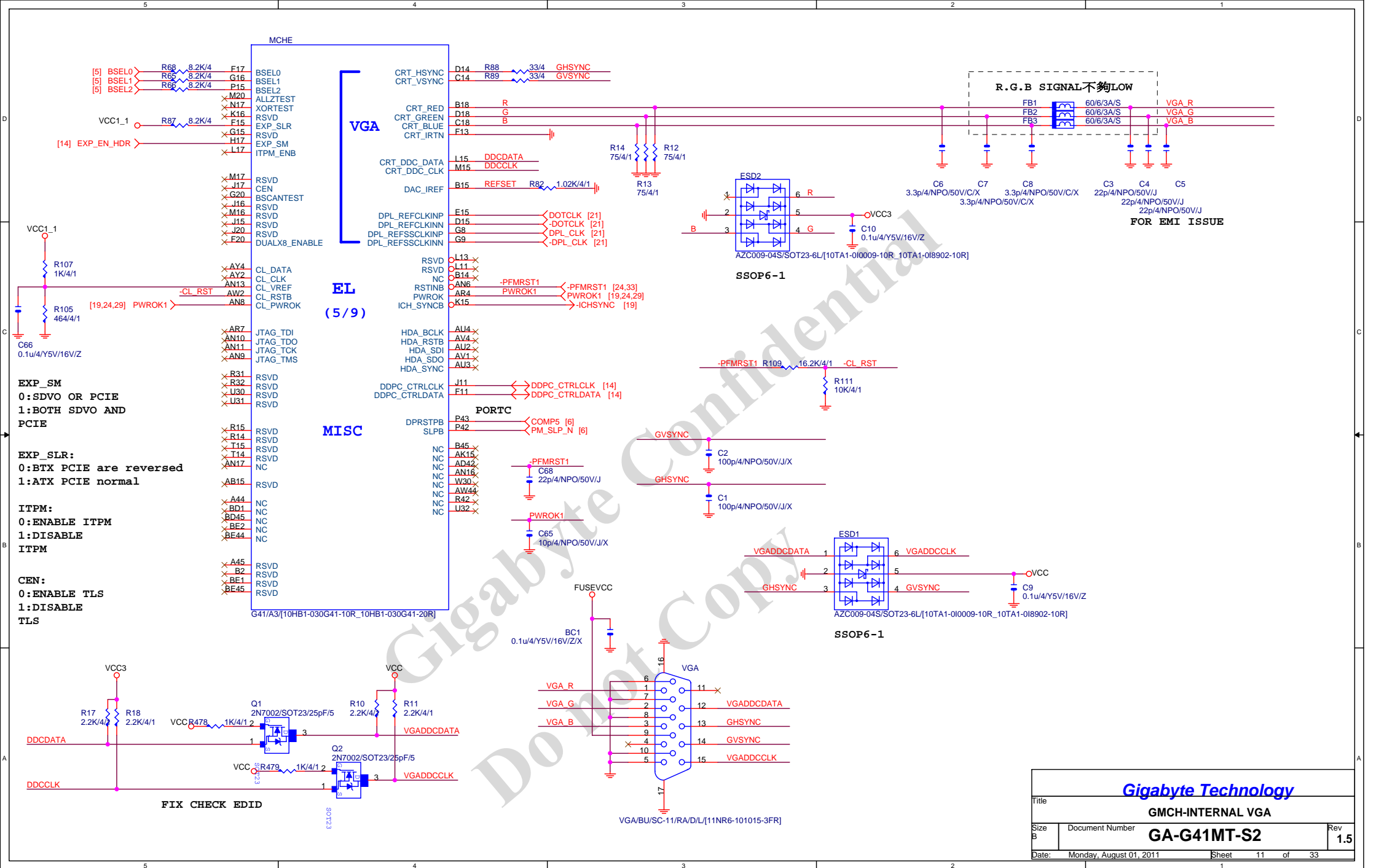


Gigabyte Technology			
Title			
GMCH-HOST			
Size	Document Number	Rev	
Custom	GA-G41MT-S2	1.5	
Date:	Monday, August 01, 2011	Sheet	8 of 33









MCHH

A12	VSS	AK35
A15	VSS	AK38
A19	VSS	AK39
A27	VSS	AL38
A31	VSS	BB6
A36	VSS	BD12
A40	VSS	BD17
AA1	VSS	BD8
AA8	VSS	BE10
AA11	VSS	BE15
AA12	VSS	BE19
AA13	VSS	BE21
AA20	VSS	BE22
AA22	VSS	BE24
AA24	VSS	BE29
AA26	VSS	BE34
AA34	VSS	BE40
AA38	VSS	C16
AA40	VSS	C3
AA44	VSS	C5
AB4	VSS	D11
AB6	VSS	D16
AB7	VSS	D21
AB8	VSS	D25
AB11	VSS	D26
AB12	VSS	D38
AB19	VSS	D6
AB21	VSS	D7
AB23	VSS	E3
AB25	VSS	E31
AB27	VSS	E41
AB34	VSS	E5
AB36	VSS	F16
AB39	VSS	F2
AC5	VSS	F30
AC20	VSS	F4
AC22	VSS	F42
AC24	VSS	F45
AC26	VSS	F49
AC45	VSS	G11
AD3	VSS	G17
AD6	VSS	G24
AD9	VSS	G26
AD12	VSS	G29
AD19	VSS	G3
AD21	VSS	G35
AD23	VSS	H1
AD25	VSS	H11
AD27	VSS	H13
AD34	VSS	H15
AD36	VSS	H16
AD39	VSS	H20
AE1	VSS	H25
AE8	VSS	H30
AE11	VSS	H31
AE20	VSS	H33
AE22	VSS	H38
AE24	VSS	H44
AE26	VSS	H7
AE34	VSS	H8
AE38	VSS	H9
AE40	VSS	J3
AE44	VSS	J37
AF6	VSS	J4
AF7	VSS	J5
AF10	VSS	J8
AF11	VSS	J9
AF12	VSS	K11
AF13	VSS	K13
AF33	VSS	K17
AF36	VSS	K20
AF39	VSS	K24
AG5	VSS	K29
AG19	VSS	K33
AG21	VSS	K45
AG23	VSS	L10
AG25	VSS	L16
AG27	VSS	L20
AG45	VSS	U11
AH2	VSS	U12
AH3	VSS	U13
AH4	VSS	U16
AJ20	VSS	U17
AJ22	VSS	U19
AJ24	VSS	U20
AJ26	VSS	U36
AJ36	VSS	U39
AJ39	VSS	U44
AJ44	VSS	U8
AJ45	VSS	W1
	VSS	W16
	VSS	W17
	VSS	A3
	VSS	A43
	VSS	A6
	VSS	B44
	VSS	BC1

G41/A3/[10HB1-030G41-10R\_10HB1-030G41-20R]

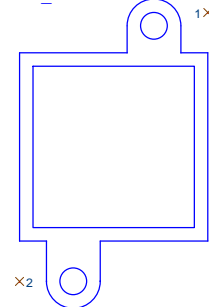
MCHI

BA5	VSS	L26
BB21	VSS	L30
BB25	VSS	L35
BB28	VSS	L39
BB6	VSS	L4
BD12	VSS	L8
BD17	VSS	L9
BD8	VSS	M1
BE10	VSS	M24
BE15	VSS	M25
BE19	VSS	M44
BE21	VSS	N11
BE22	VSS	N13
BE24	VSS	N16
BE29	VSS	N26
BE34	VSS	N29
BE40	VSS	N30
C16	VSS	N33
C3	VSS	N36
C5	VSS	N38
D11	VSS	N8
D16	VSS	P16
D21	VSS	P17
D25	VSS	P25
D26	VSS	P26
D38	VSS	P31
D6	VSS	R11
D7	VSS	R12
E3	VSS	R16
E31	VSS	R17
E41	VSS	R19
E5	VSS	R2
F16	VSS	R30
F2	VSS	R38
F30	VSS	R45
F4	VSS	R5
F42	VSS	R8
F45	VSS	T10
F49	VSS	T11
G11	VSS	T12
G17	VSS	T13
G24	VSS	T16
G26	VSS	T17
G29	VSS	T19
G3	VSS	T20
G35	VSS	T3
H1	VSS	T30
H11	VSS	T31
H13	VSS	T32
H15	VSS	T33
H16	VSS	T35
H20	VSS	T38
H25	VSS	T4
H30	VSS	T40
H31	VSS	T6
H33	VSS	T7
H38	VSS	T8
H44	VSS	T9
H7	VSS	U1
H8	VSS	W2
H9	VSS	W20
J3	VSS	W22
J37	VSS	W24
J4	VSS	W26
J5	VSS	W44
J8	VSS	W45
J9	VSS	W5
K11	VSS	Y10
K13	VSS	Y11
K17	VSS	Y12
K20	VSS	Y13
K24	VSS	Y16
K29	VSS	Y17
K33	VSS	Y19
K45	VSS	Y2
L10	VSS	Y21
L16	VSS	Y23
L20	VSS	Y26
U11	VSS	Y27
U12	VSS	Y3
U13	VSS	Y35
U16	VSS	Y39
U17	VSS	Y9
U19	VSS	BD45
U20	VSS	BD2
U36	VSS	BD44
U39	VSS	BE3
U44	VSS	BE43
U8	VSS	C1
W1	VSS	C45
W16	VSS	BD43
W17	VSS	AD30
A3	VSS	AC30
A43	VSS	AE30
A6	VSS	AE30
B44	VSS	NC
BC1	VSS	NC

G41/A3/[10HB1-030G41-10R\_10HB1-030G41-20R]

EL  
(9/9)  
GND

NB\_HEATSIN



NB\_HS

NB\_HEATSINK[12SP2-S04520-01R\_12SP2-S04520-02R\_12SP2-S04520-03R]

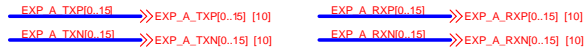
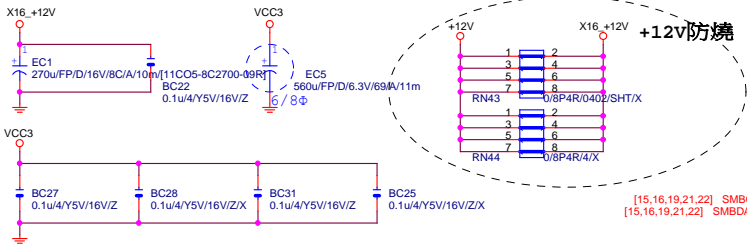
BGASINK445A-L

NEW COST DOWN

Gigabyte Technology

Title			
GMCH-GND			
Size	Document Number	GA-G41MT-S2	
Custom			Rev 1.5
Date:	Monday, August 01, 2011	Sheet 12	of 33





EXP A TXP0	C30	0.1u/4/7R/16V/K	EXP A TXP0C
EXP A TXN0	C29	0.1u/4/7R/16V/K	EXP A TXN0C
EXP A TXP1	C31	0.1u/4/7R/16V/K	EXP A TXP1C
EXP A TXN1	C32	0.1u/4/7R/16V/K	EXP A TXN1C
EXP A TXP2	C33	0.1u/4/7R/16V/K	EXP A TXP2C
EXP A TXN2	C34	0.1u/4/7R/16V/K	EXP A TXN2C
EXP A TXP3	C37	0.1u/4/7R/16V/K	EXP A TXP3C
EXP A TXN3	C38	0.1u/4/7R/16V/K	EXP A TXN3C
EXP A TXP4	C39	0.1u/4/7R/16V/K	EXP A TXP4C
EXP A TXN4	C40	0.1u/4/7R/16V/K	EXP A TXN4C
EXP A TXP5	C42	0.1u/4/7R/16V/K	EXP A TXP5C
EXP A TXN5	C41	0.1u/4/7R/16V/K	EXP A TXN5C
EXP A TXP6	C44	0.1u/4/7R/16V/K	EXP A TXP6C
EXP A TXN6	C43	0.1u/4/7R/16V/K	EXP A TXN6C
EXP A TXP7	C47	0.1u/4/7R/16V/K	EXP A TXP7C
EXP A TXN7	C45	0.1u/4/7R/16V/K	EXP A TXN7C
EXP A TXP8	C48	0.1u/4/7R/16V/K	EXP A TXP8C
EXP A TXN8	C49	0.1u/4/7R/16V/K	EXP A TXN8C
EXP A TXP9	C59	0.1u/4/7R/16V/K	EXP A TXP9C
EXP A TXN9	C60	0.1u/4/7R/16V/K	EXP A TXN9C
EXP A TXP10	C63	0.1u/4/7R/16V/K	EXP A TXP10C
EXP A TXN10	C62	0.1u/4/7R/16V/K	EXP A TXN10C
EXP A TXP11	C67	0.1u/4/7R/16V/K	EXP A TXP11C
EXP A TXN11	C64	0.1u/4/7R/16V/K	EXP A TXN11C
EXP A TXP12	C69	0.1u/4/7R/16V/K	EXP A TXP12C
EXP A TXN12	C70	0.1u/4/7R/16V/K	EXP A TXN12C
EXP A TXP13	C73	0.1u/4/7R/16V/K	EXP A TXP13C
EXP A TXN13	C72	0.1u/4/7R/16V/K	EXP A TXN13C
EXP A TXP14	C76	0.1u/4/7R/16V/K	EXP A TXP14C
EXP A TXN14	C74	0.1u/4/7R/16V/K	EXP A TXN14C
EXP A TXP15	C78	0.1u/4/7R/16V/K	EXP A TXP15C
EXP A TXN15	C77	0.1u/4/7R/16V/K	EXP A TXN15C

[15,16,19,21,22] SMBCLK  
[15,16,19,21,22] SMBDATA

[19,22,33] -PCIE\_WAKE  
[10] SDVO\_CTRL\_CLK <>

[10] SDVO\_CTRL\_DATA <>

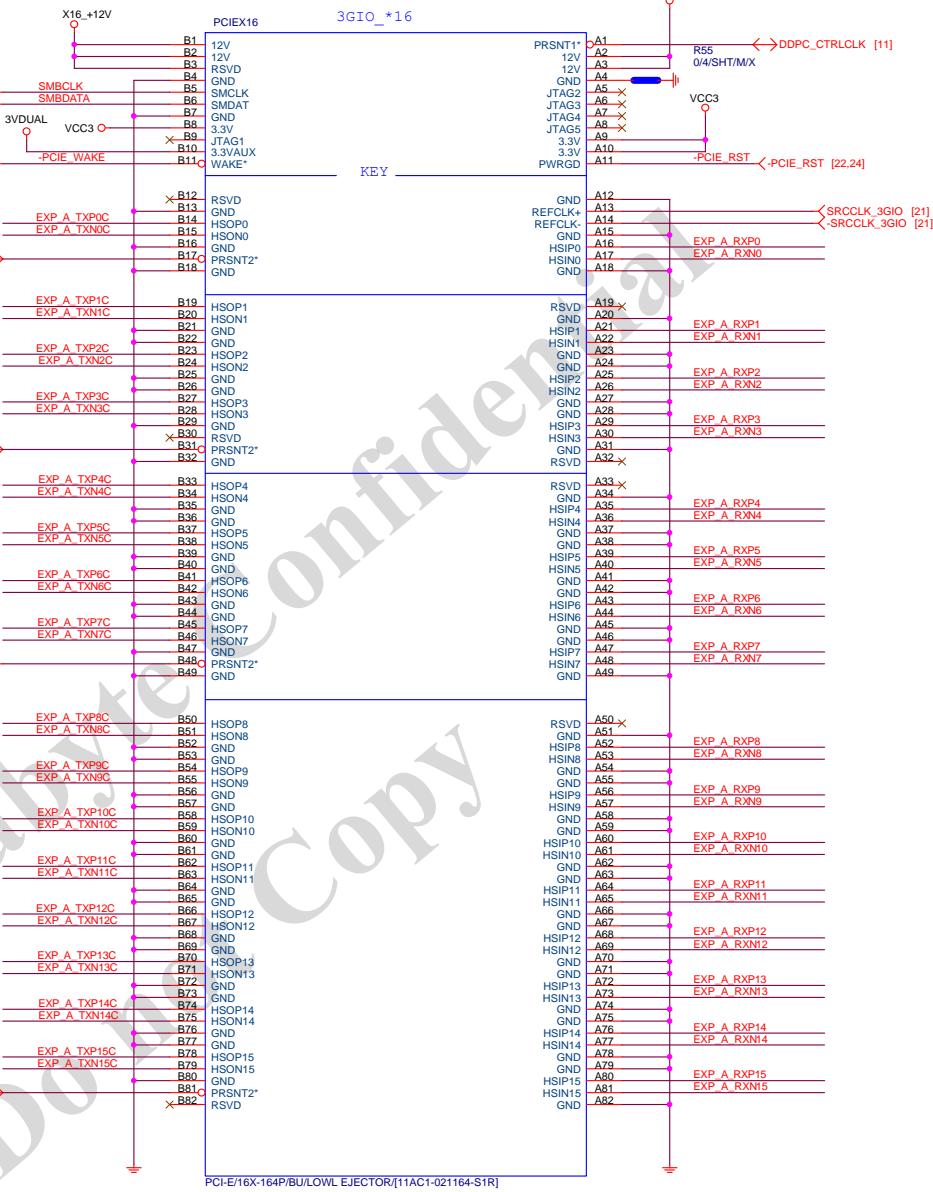
[11] EXP\_EN\_HDR >

[11] DDPC\_CTRLCLK <>

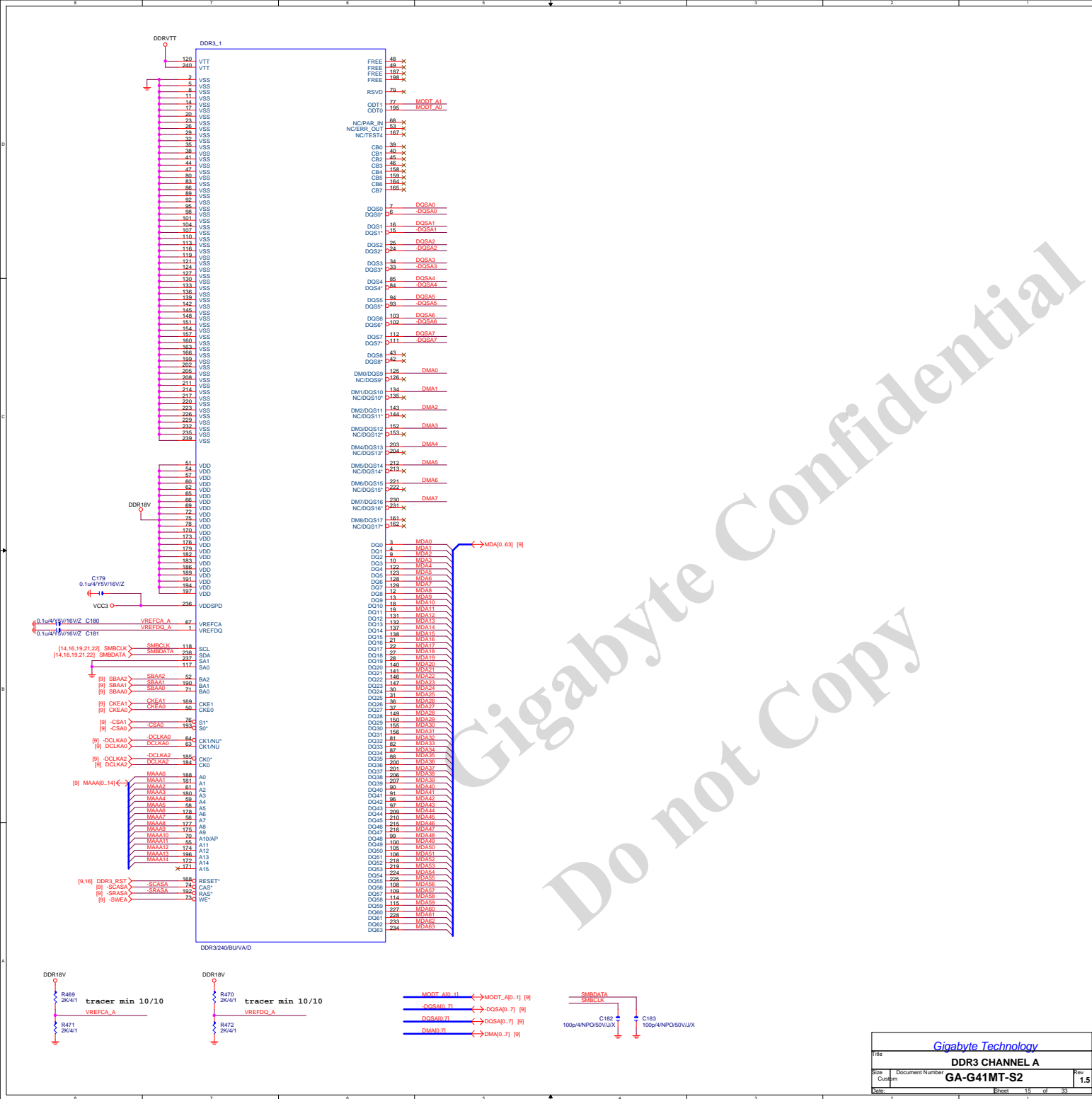
+12V防燒

PCIESLOT-164DN-4

+12V防燒



LOW LEFT BLUE



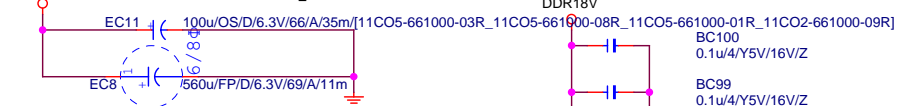




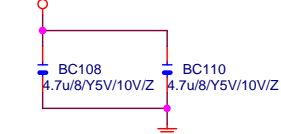


## DDR TERMINATION CHANNEL A

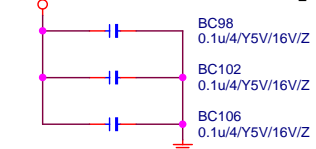
### DDR18V Decouple



### DDRVTT Decouple



### DDR18V Decouple

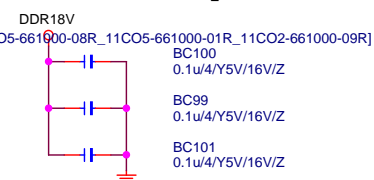


### DDRVTT Decouple

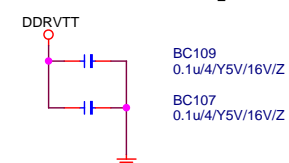


## DDR TERMINATION CHANNEL B

### DDR18V Decouple



### DDRVTT Decouple

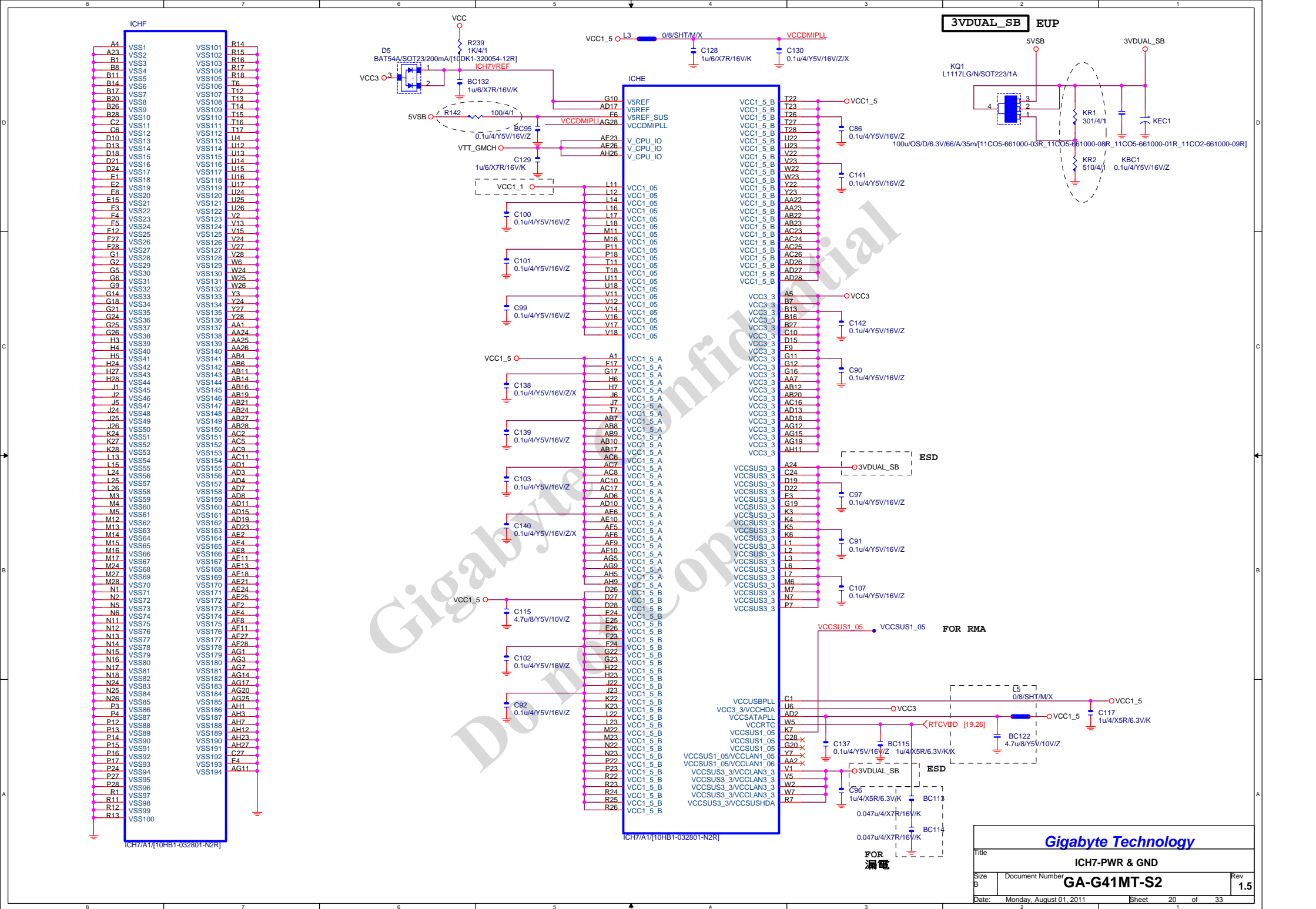


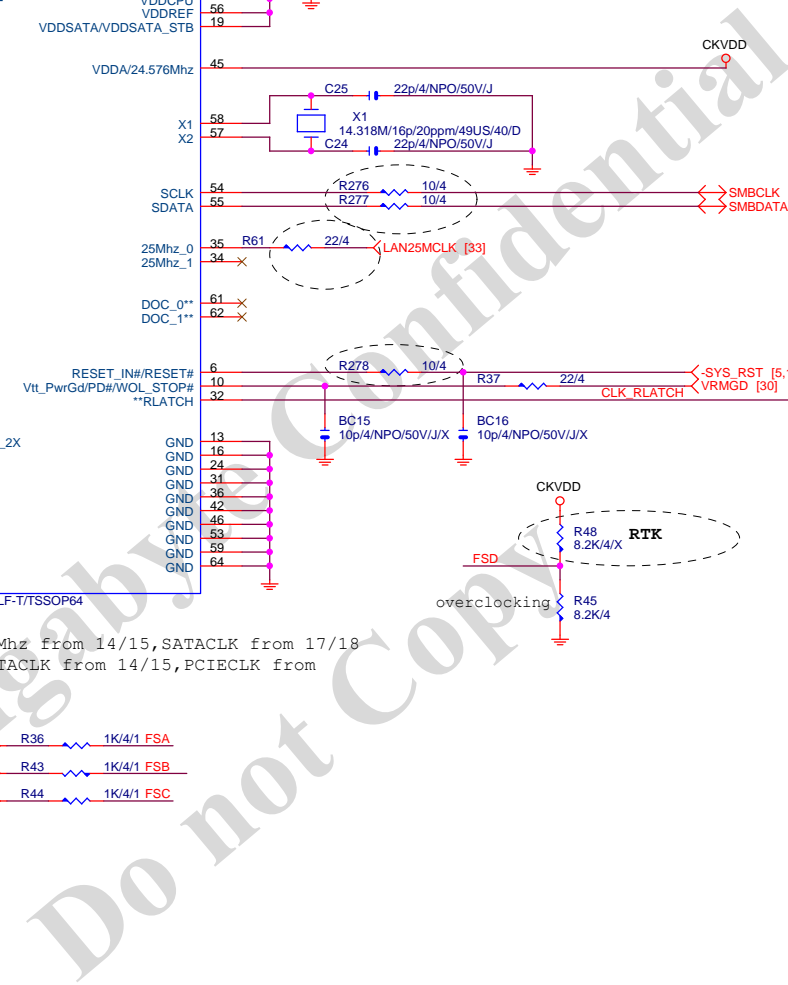
**Gigabyte Technology**

Title			DDR II TERMINATOR
Size	Document Number	Rev	
Custom	GA-G41MT-S2	1.5	
Date:	Monday, August 01, 2011	Sheet	17 of 33

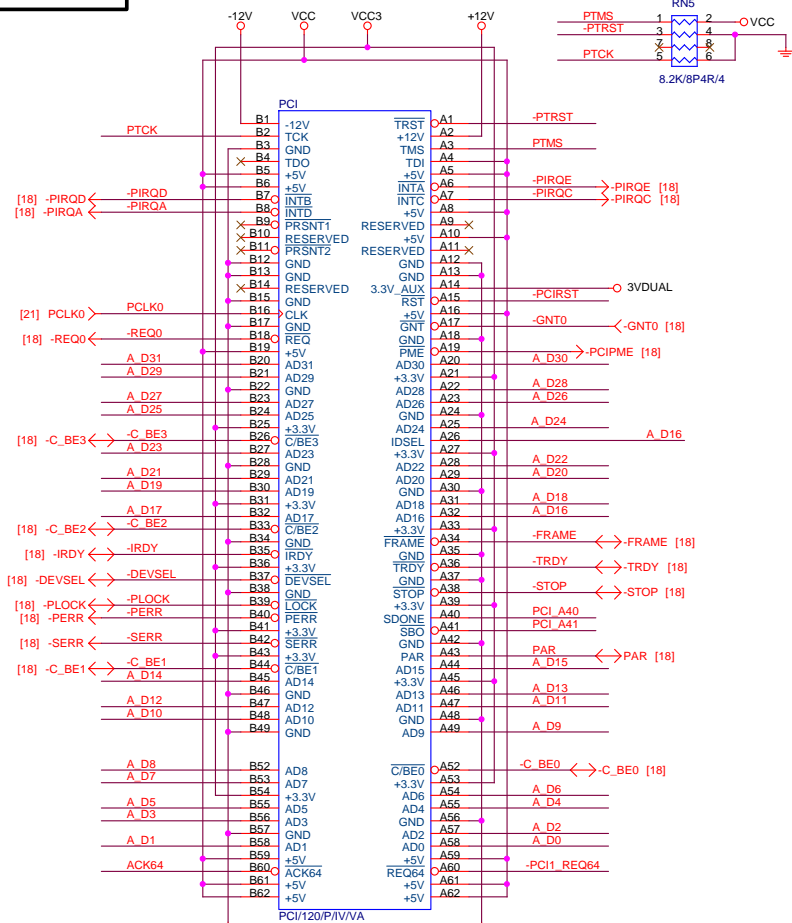








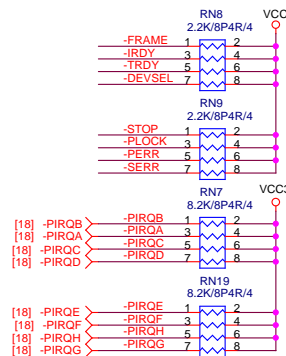
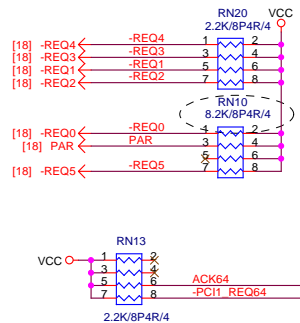
## PCI1,2 SLOT



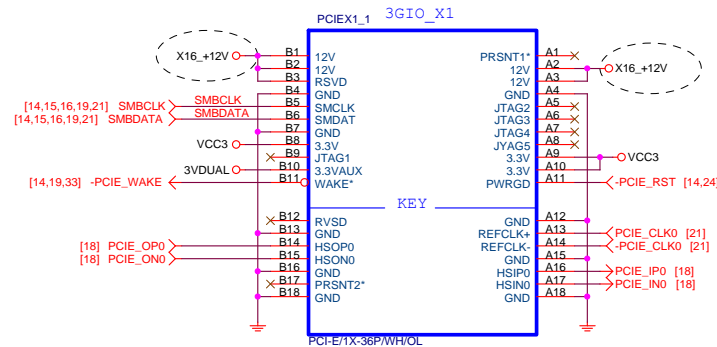
AD\_16/-PIRQ(E-D-C-A)/-REQ0/-GNT0



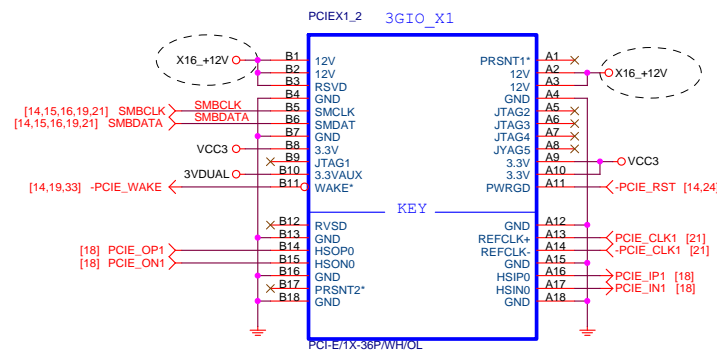
Place close to PCI1



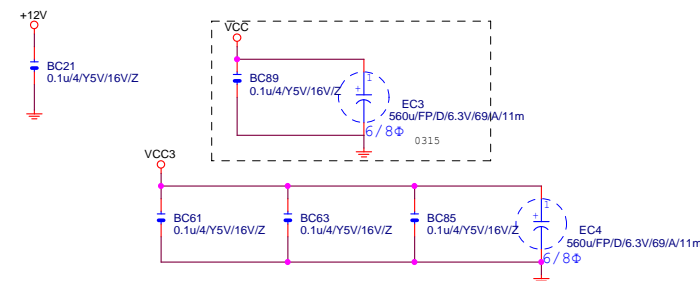
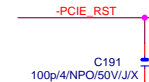
## PCIE\*1,2



WHITE



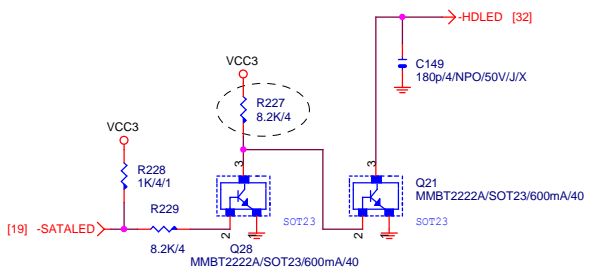
PCI-E/1X-36P/WH/OI



## Gigabyte Technology

Title			
PCI SLOT 1, 2/PCIEX1			
Size Custom	Document Number	GA-G41MT-S2	Rev 1.5
Date:	Monday, August 01, 2011	Sheet 22 of 33	

IDE/SATA LED



IDE RESET

N/A

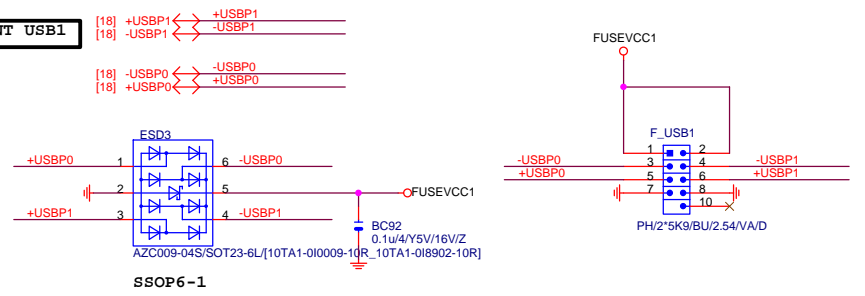
FLOPPY

N/A

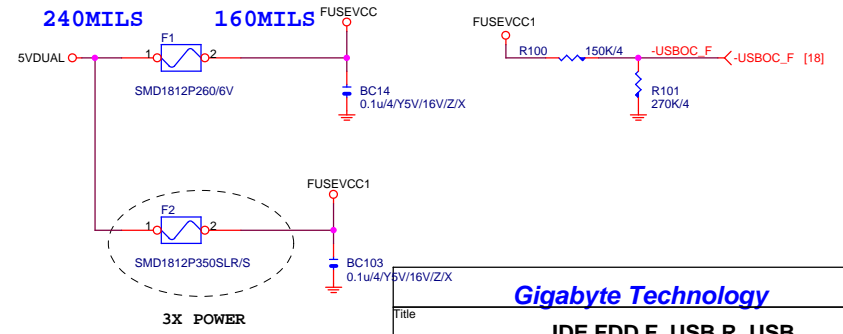
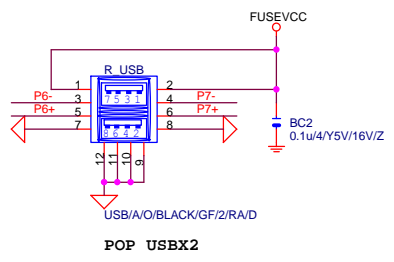
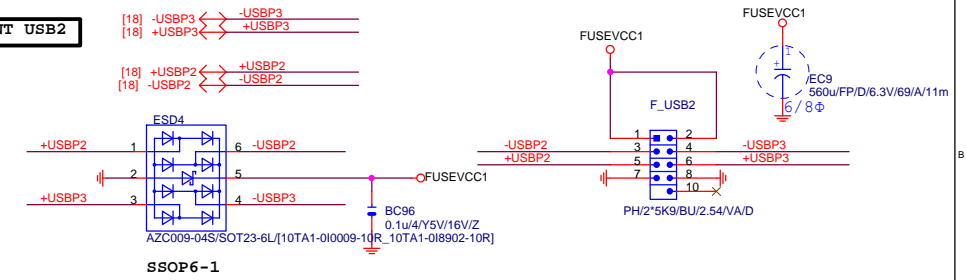
IDE

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FRONT USB1

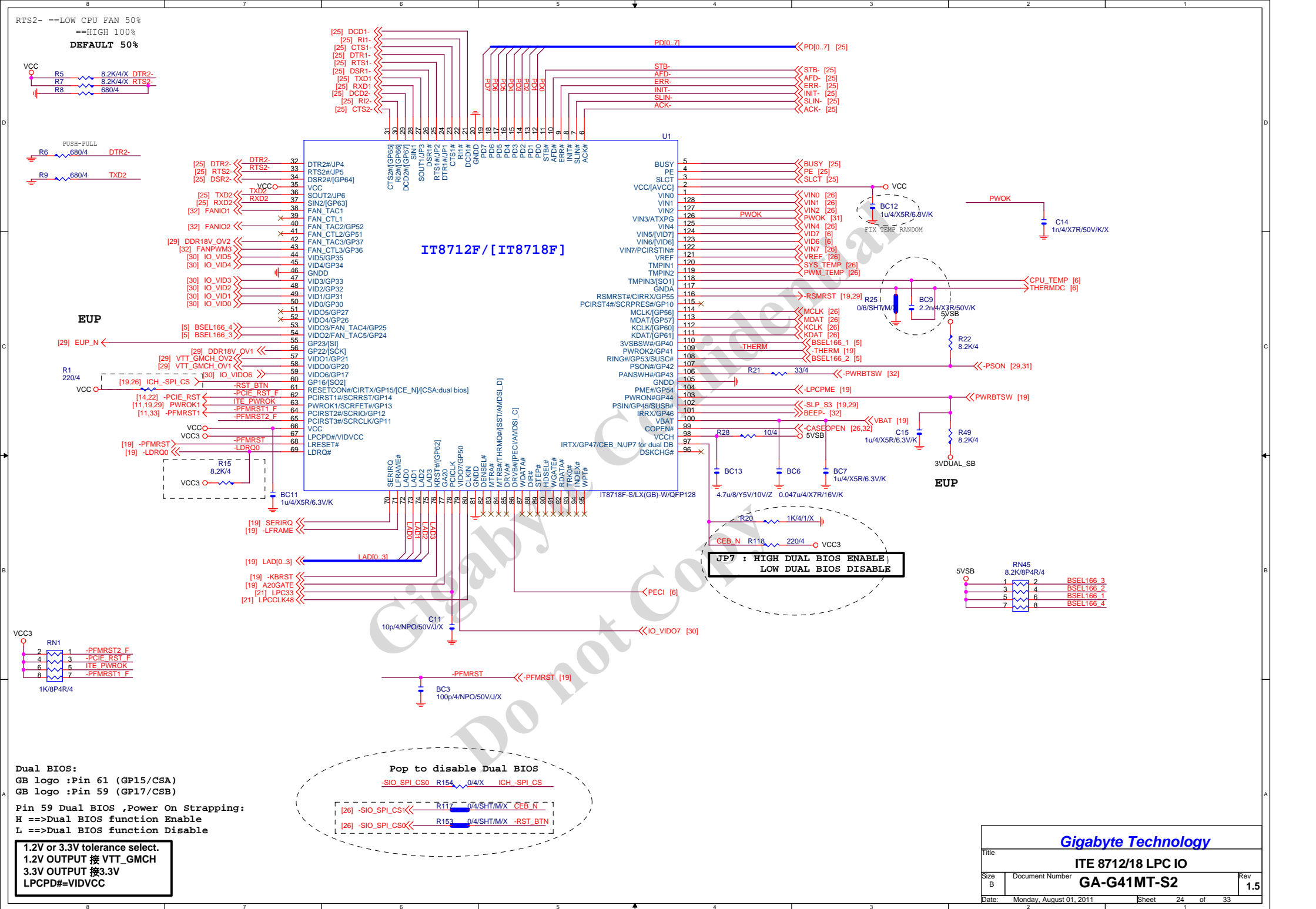


FRONT USB2

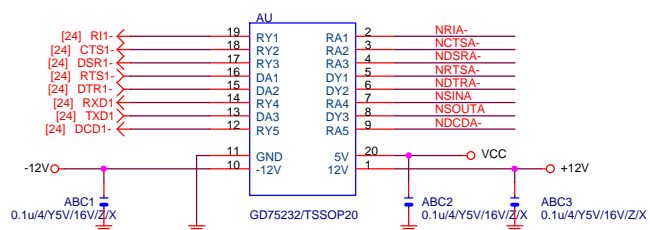


Gigabyte Technology			
Title			
IDE,FDD,F_USB,R_USB			
Size			
Document Number			
GA-G41MT-S2			
Rev			
1.5			
Date: Monday, August 01, 2011			
Sheet 23 of 33			

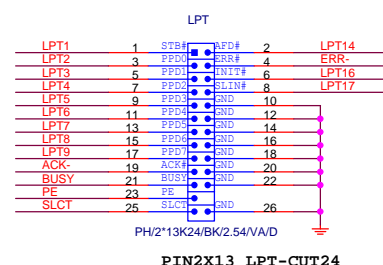
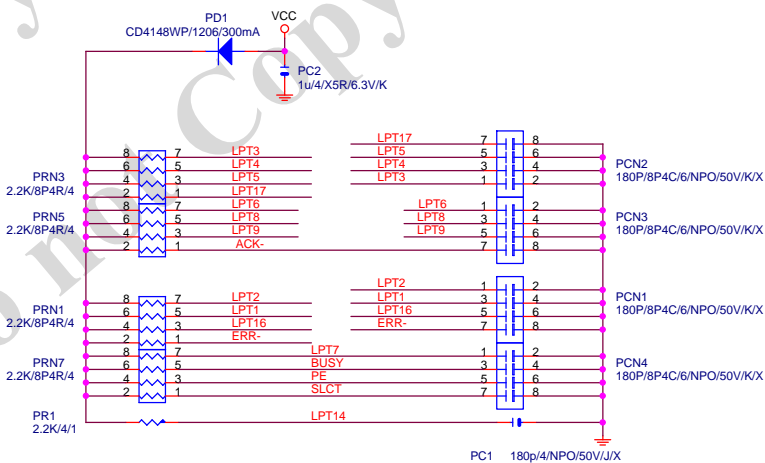
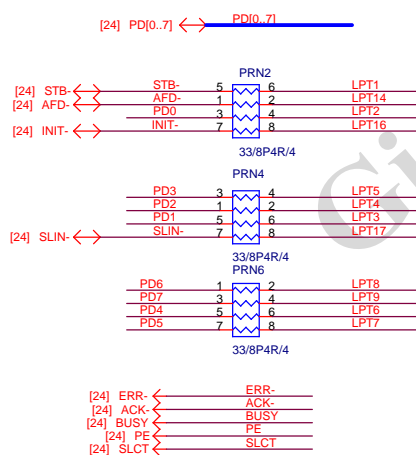
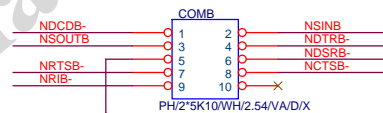
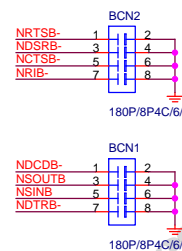
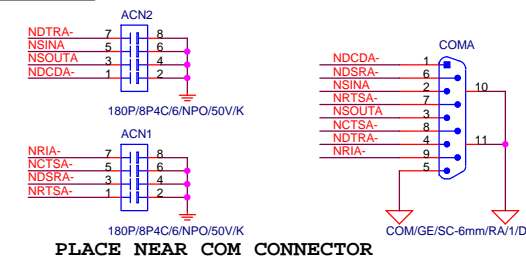
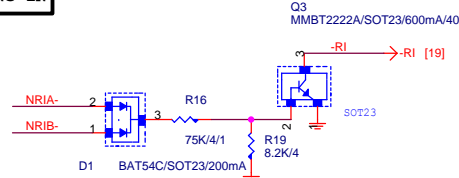
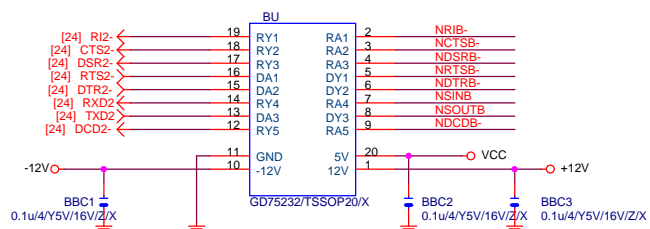




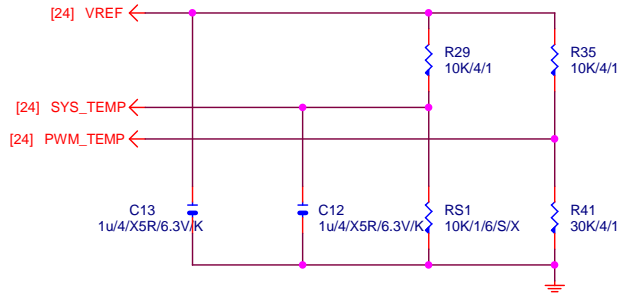




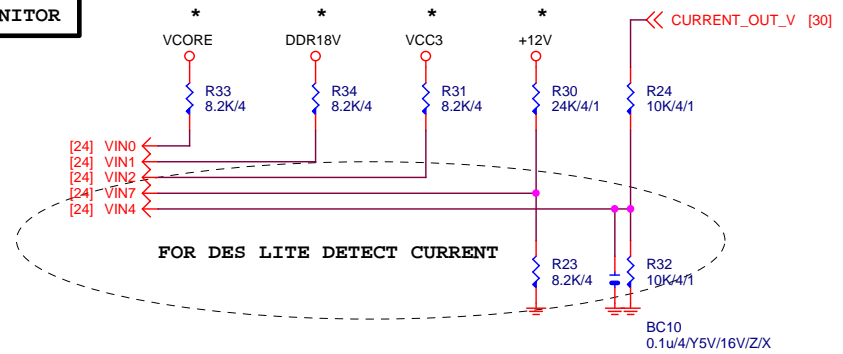
IC20TSSOP-1



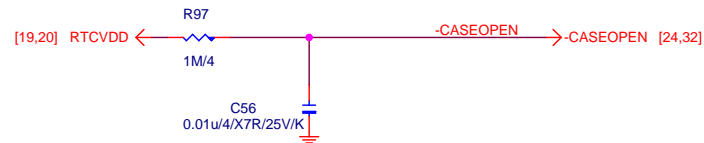
## TEMP H/W MONITOR



## VOLTAGE-- H/W MONITOR

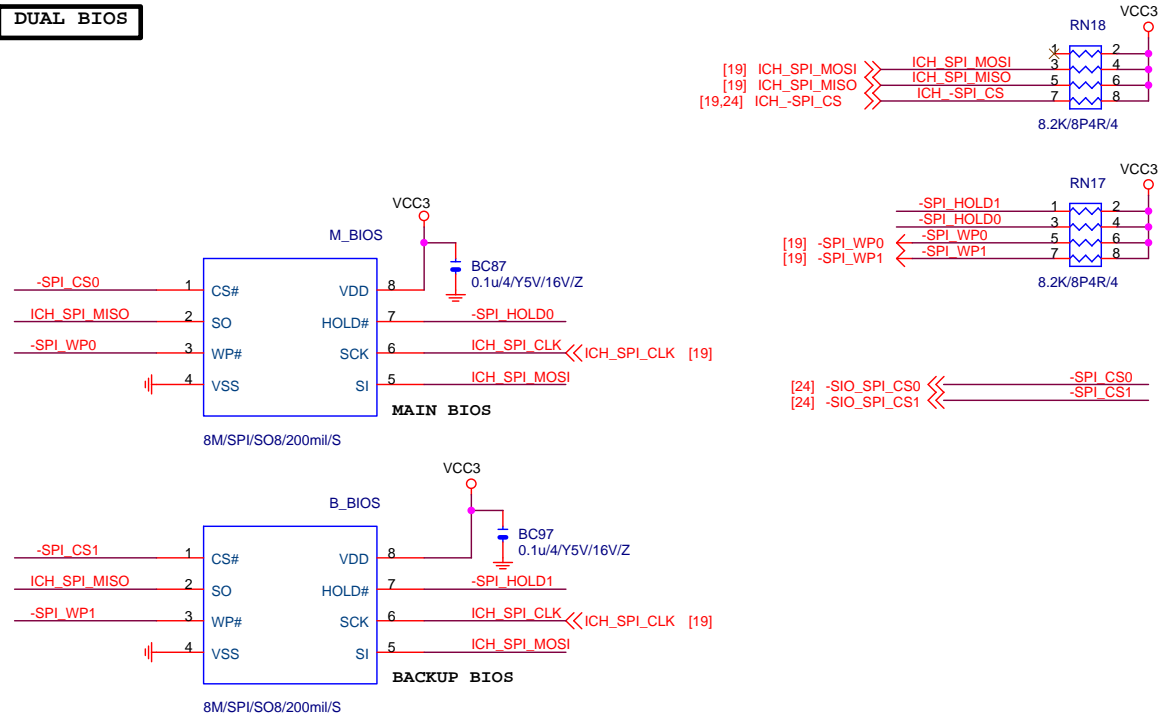


## CASE OPEN

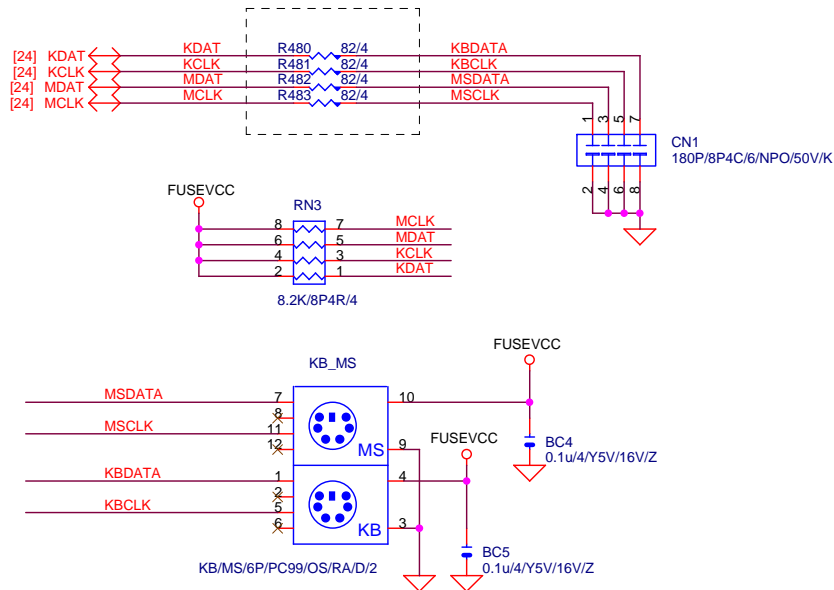


Case Open Circuits

## DUAL BIOS

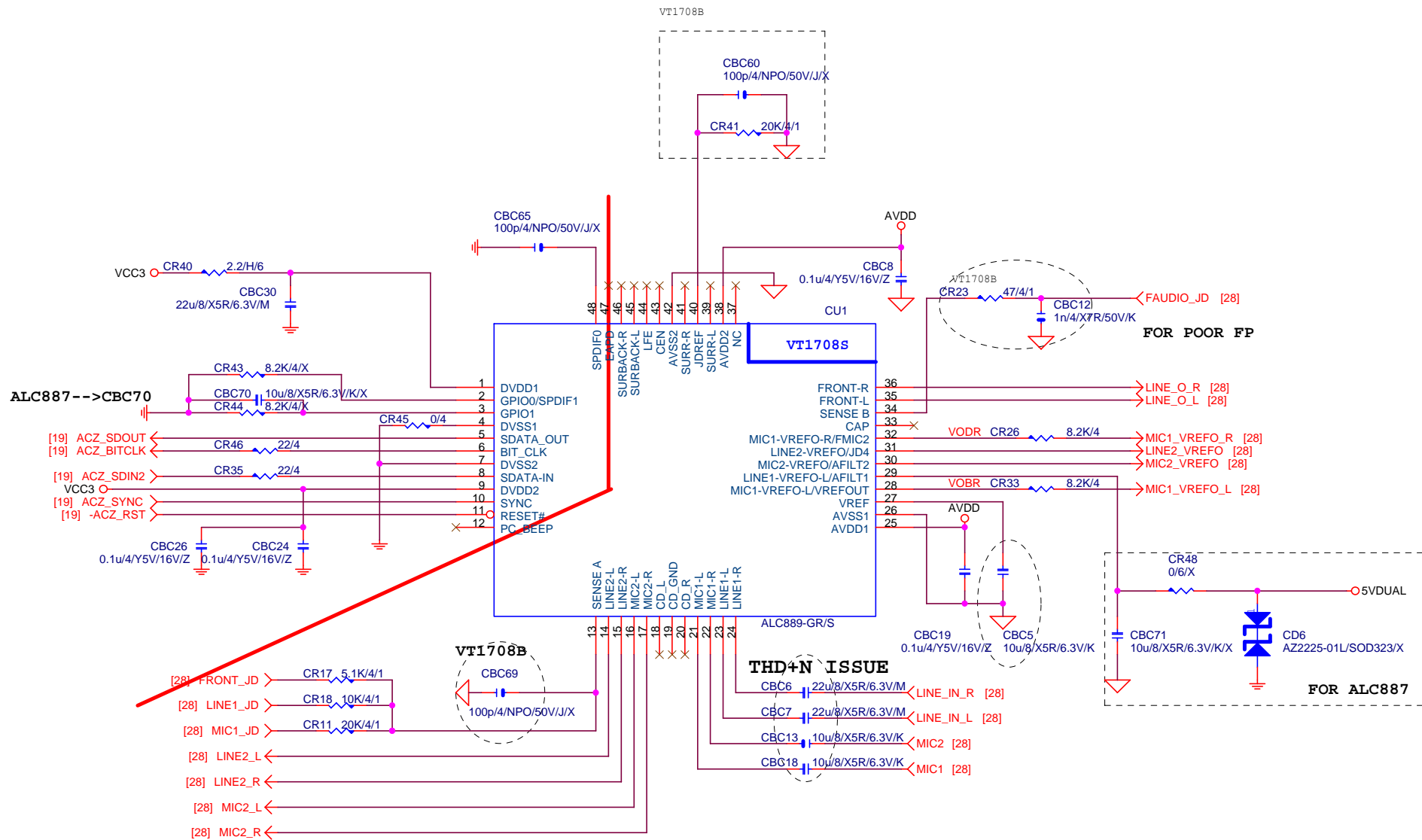


## KB/MS

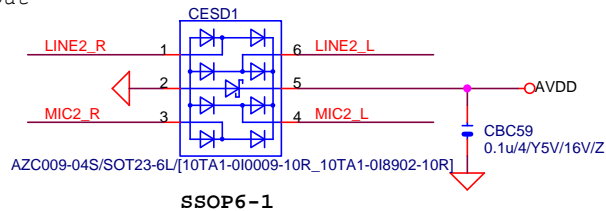


**Gigabyte Technology**

Title			
HW-MONITOR/CI/KB/MS/BIOS			
Size	Document Number	Rev	
Custom	GA-G41MT-S2	1.5	
Date:	Monday, August 01, 2011	Sheet	26 of 33

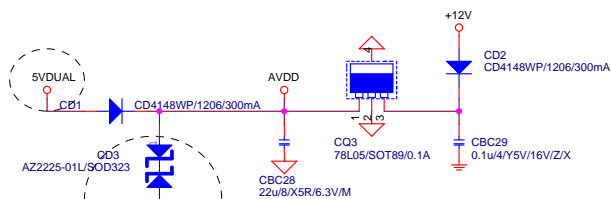


Can Support Amp Out



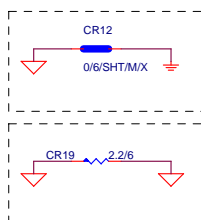
Gigabyte Technology			
Title			
ALC889			
Size	Document Number	Rev	
Custom	GA-G41MT-S2	1.5	
Date:	Monday, August 01, 2011	Sheet	27 of 33

## CODEC POWER/EMI PAD

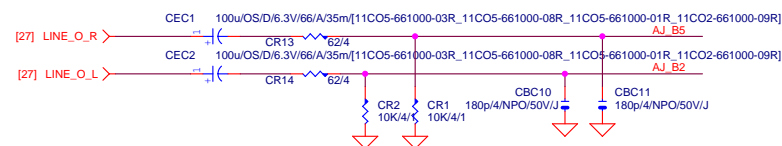
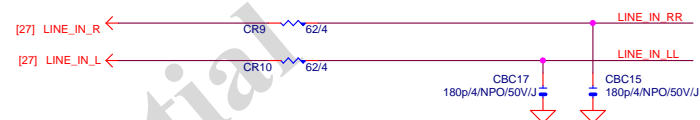


VIA	CODEC	N/A
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CD IN N/A

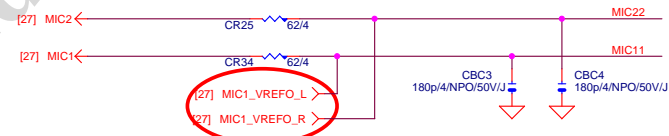


## LINE-OUT

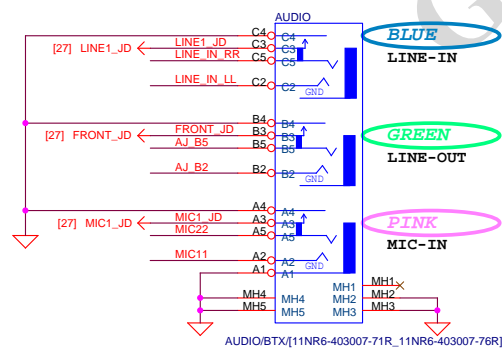
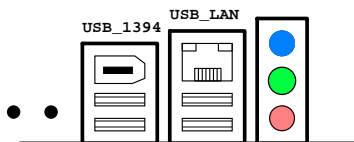
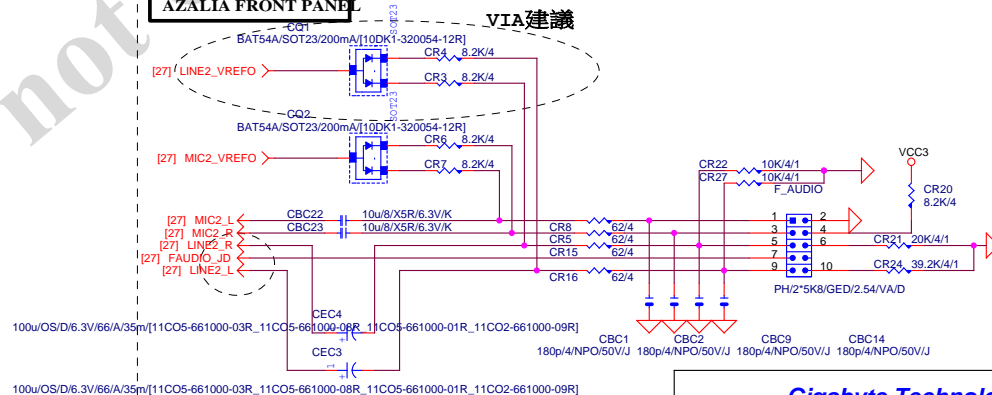
**LINE-IN**

## SPDIF IN

N/A

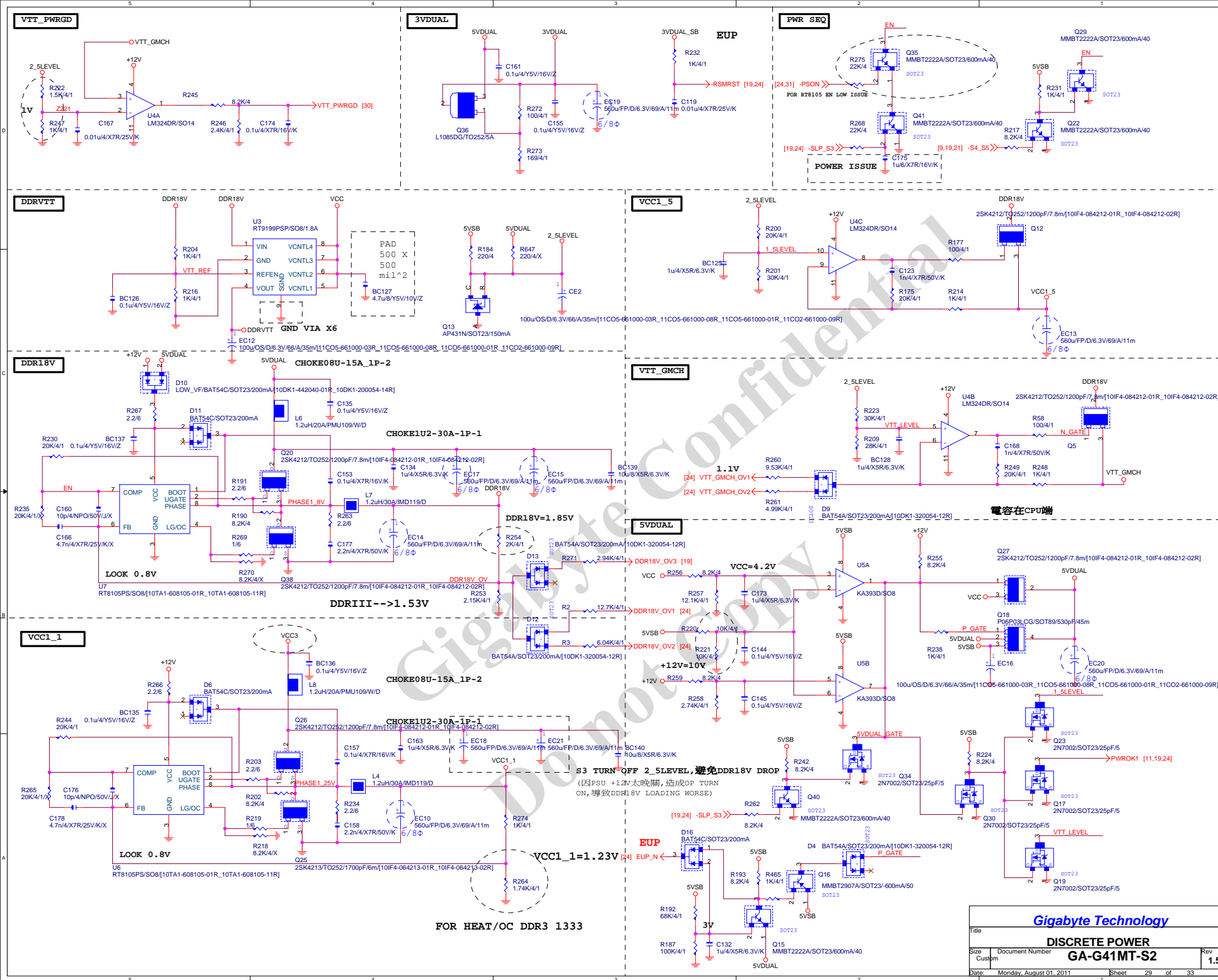
**MIC-IN**

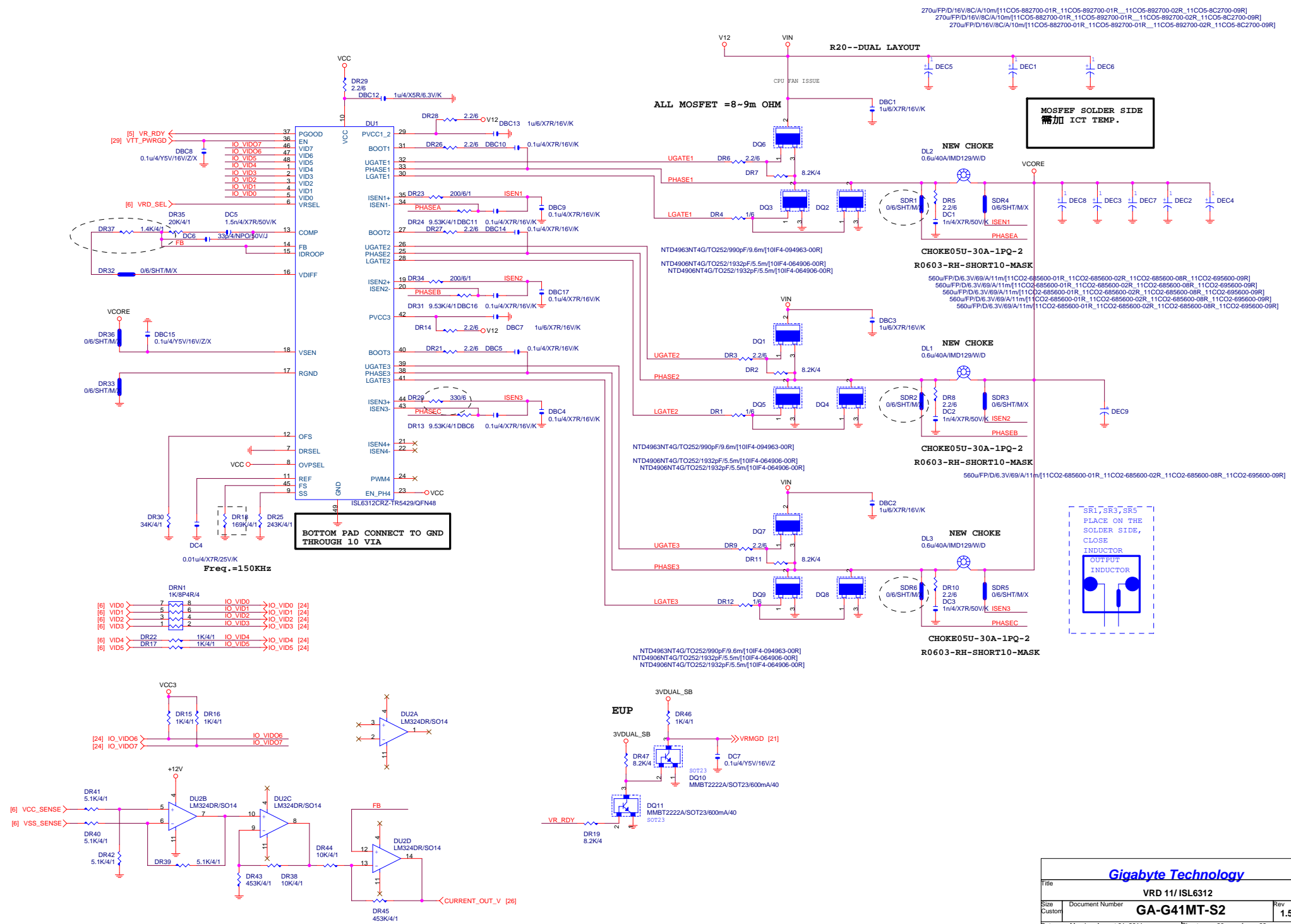
**AZALIA JACK**

**AZALIA FRONT PANEL**

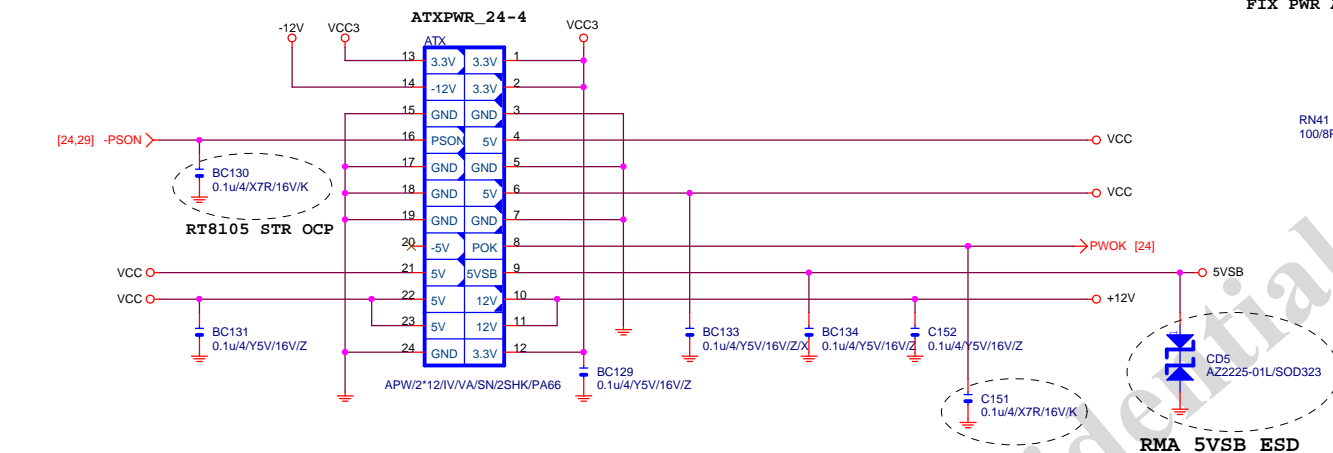
## Gigabyte Technology

Title				AUDIO JACK				Rev	
Size		Document Number		GA-G41MT-S2				1.5	
Date:		Monday, August 01, 2011		Sheet		28 of 33			

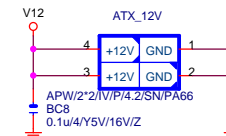
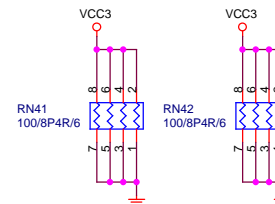




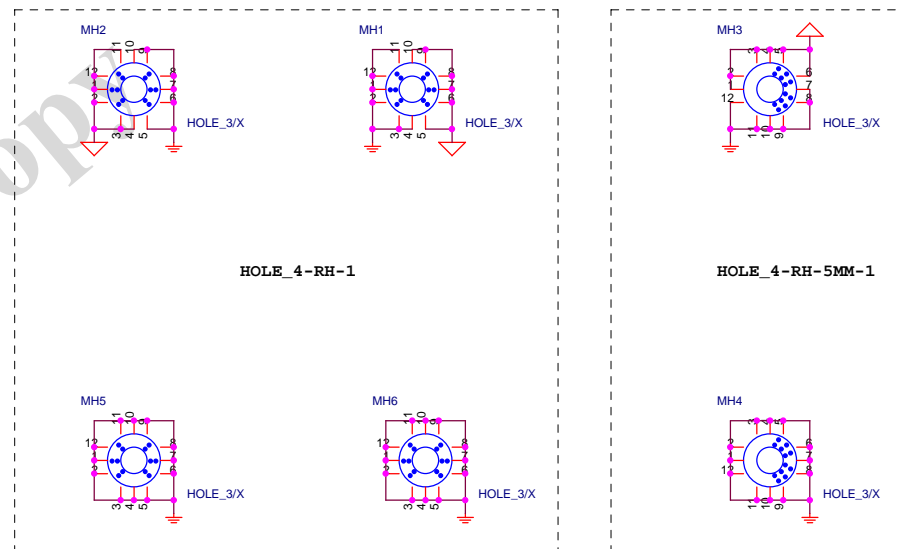
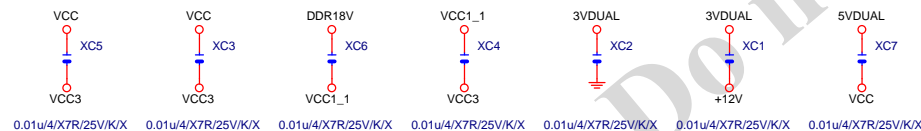
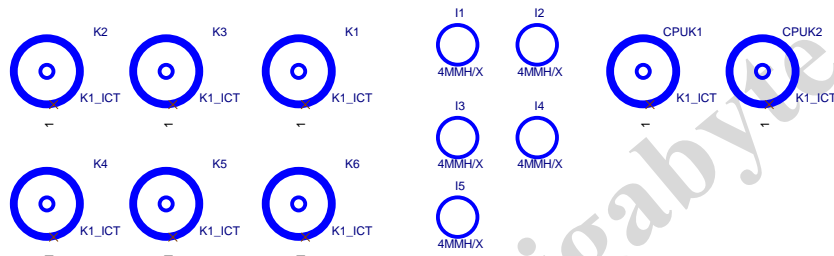
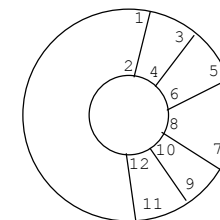
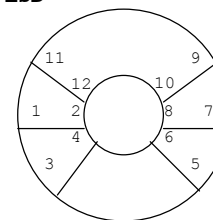
# ATX POWER CONNECTOR



## FIX PWR AcBel(ATX-400C-A2ADB)



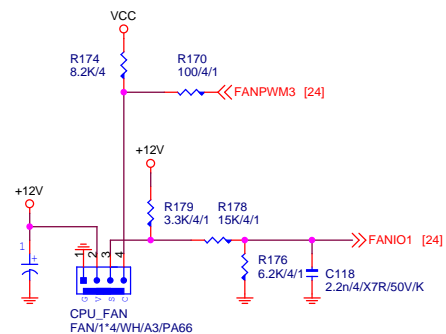
ATX\_4-5



Gigabyte Technology

Title			ATX POWER CONNECTOR
Size	Document Number	GA-G41MT-S2	
B		Rev	1.5
Date:	Monday, August 01, 2011	Sheet	31 of 33

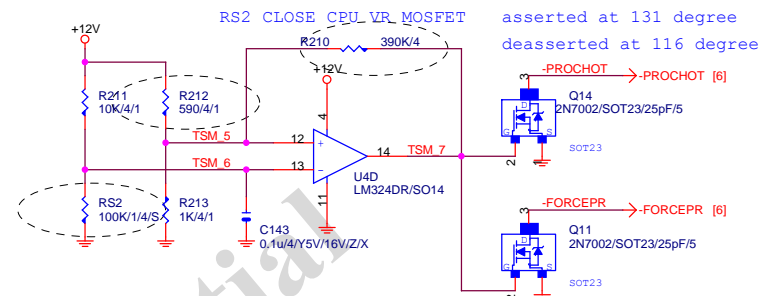
# CPU SMART FAN SMART FAN



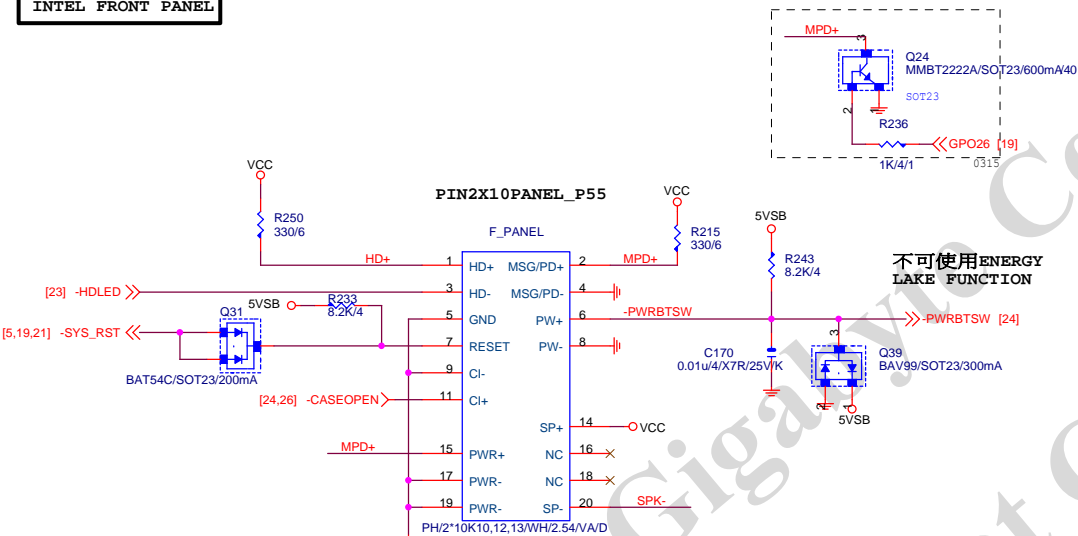
CE1

100u/OS/D/16V/69/A/35m/[11CO5-661000-08R\_11CO5-661000-03R\_11CO5-661000-01R\_11CO5-691000-09R]

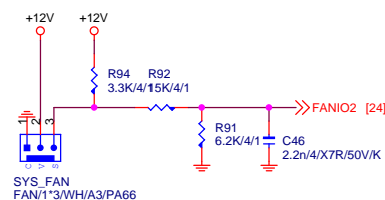
# PROCESSOR HOT



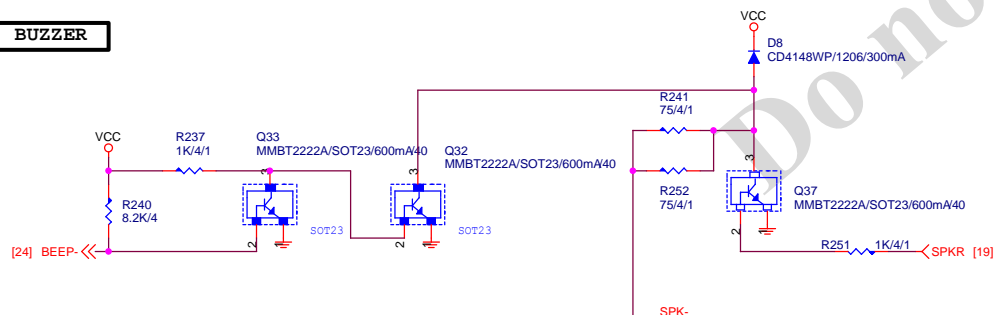
# INTEL FRONT PANEL



# SYS\_FAN



# BUZZER



Gigabyte Technology

Title		
FRONT PANEL		
Size	Document Number	Rev
Custom	GA-G41MT-S2	1.5
Date:	Monday, August 01, 2011	Sheet 32 of 33



