

SHEET

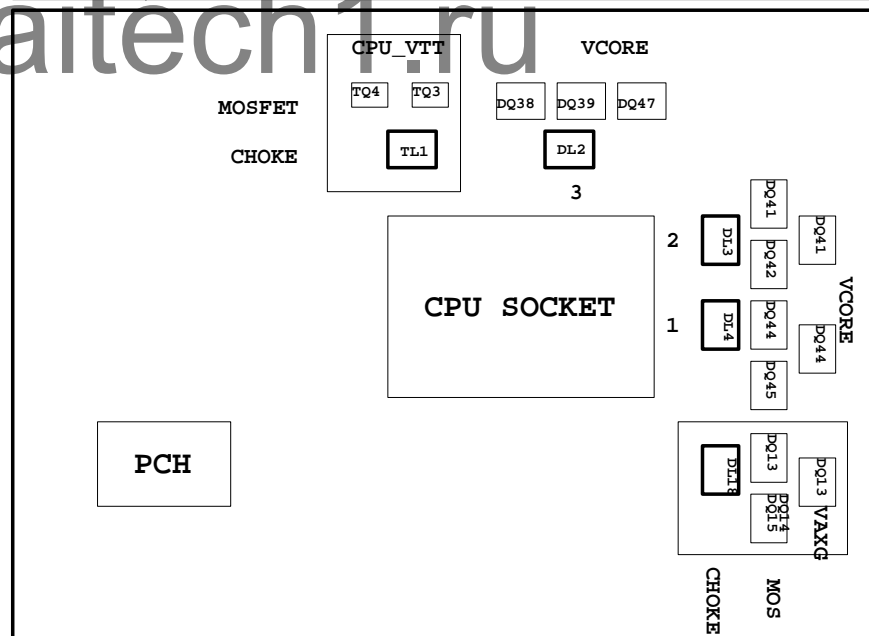
TITLE

01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	CPU_LGA1155-A
05	CPU_LGA1155-B
06	CPU_LGA1155-C
07	DDR III CHANNEL A
08	DDR III CHANNEL B
09	PCH_FDI,DMI,USB,PCIE
10	PCH_DP,CLK BUFFER
11	PCH_HOST,SATA,PCI
12	PCH_GPIO,CTRL,AUDIO
13	PCH_PWR,GND
14	PCI EXPRESS*16 SLOT
15	PCI EXPRESSX4 SLOT / PCIE X1 SLOT
16	PCI SLOT 1~2
17	I/O ITE8728
18	COM, LPT, TPM
19	Dual BIOS
20	ALC887
21	REAR AUDIO JACK
22	ISL95836_VCORE_1
23	ISL95836_VCORE_2
24	DISCRETE POWER
25	PCH CORE / VOLTAGE CONSOLE
26	RT8120_CPU_VTT
27	VCCSA POWER

SHEET

TITLE

28	F_PANEL , F_USB
29	ATX POWER, CLOCK GEN
30	HWM,KB/MS , FAN CTRL
31	ARTHEROS AR8161/AR8151
32	mSATA
33	DDR / M3 POWER
34	DVI
35	
36	
37	
38	
39	
40	



Gigabyte Technology

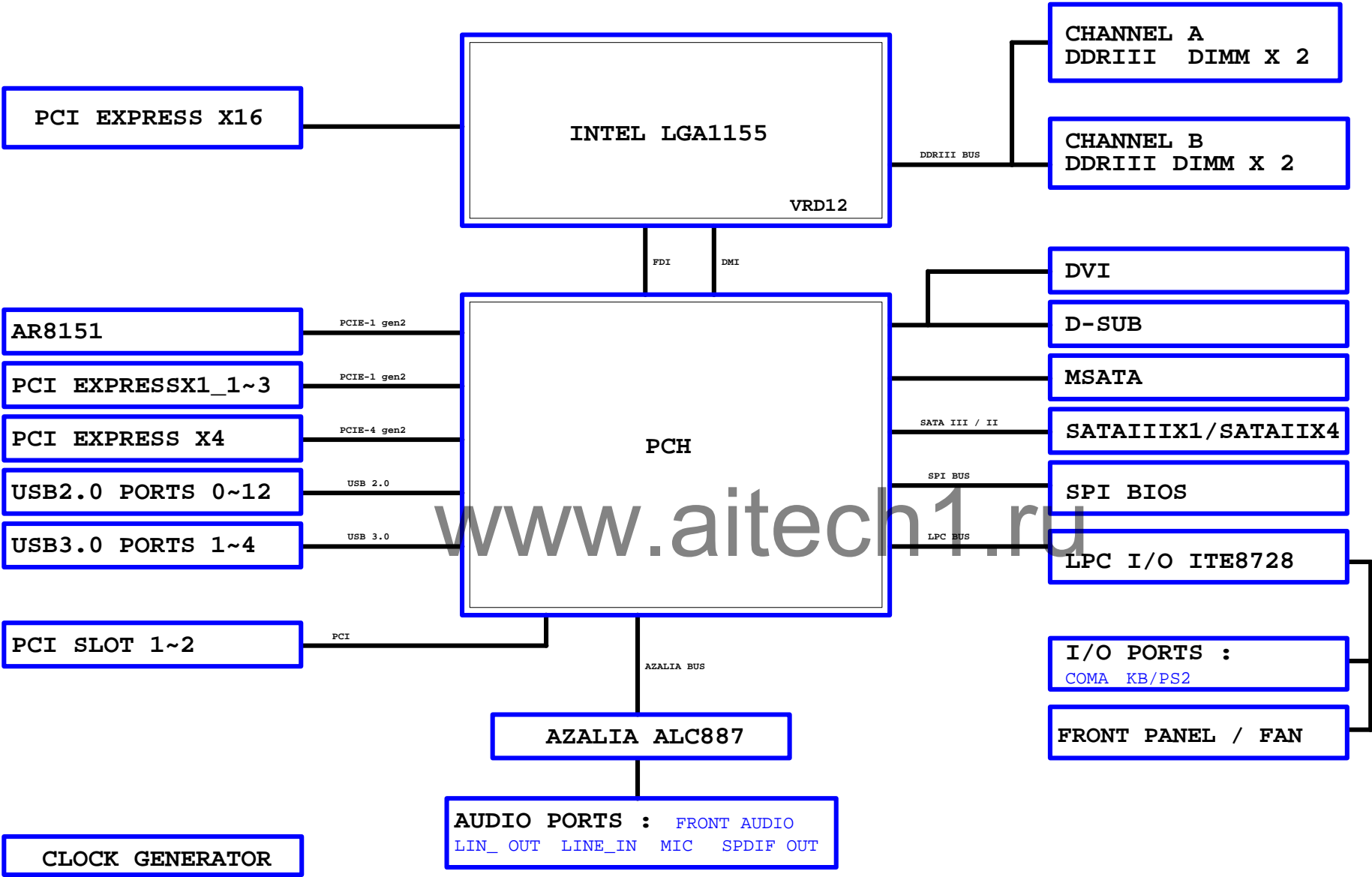
Title		
Cover Sheet		
Size	Document Number	Rev
Custom	GA-B75-D3V	1.0
Date:	Monday, January 30, 2012	Sheet 1 of 34

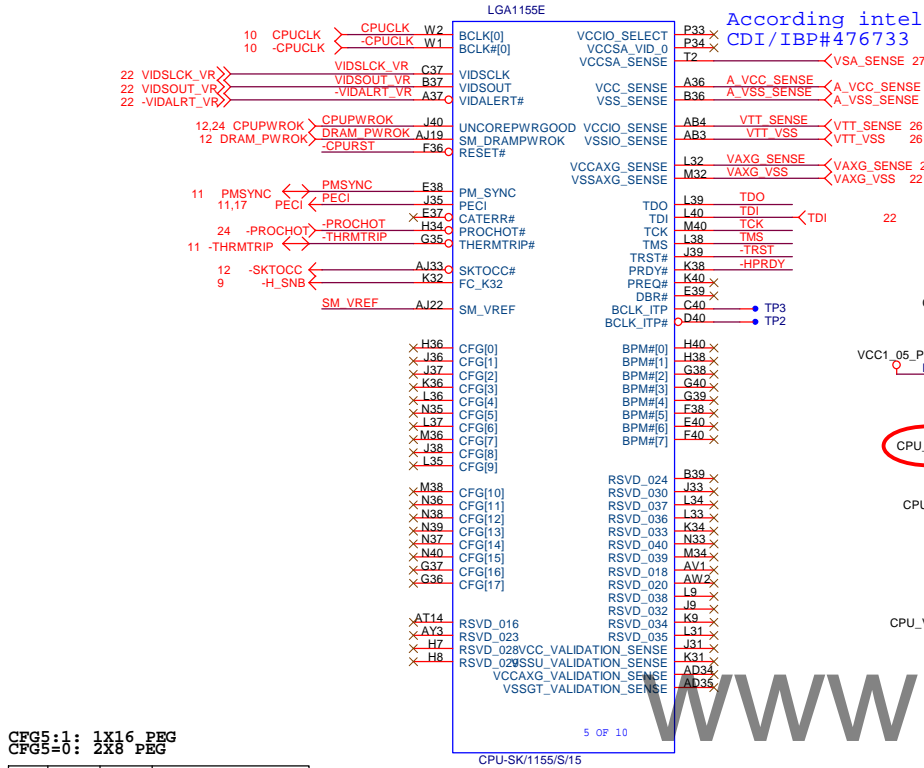
Component value change history

www.aitech1.ru

[illegible]

BLOCK DIAGRAM



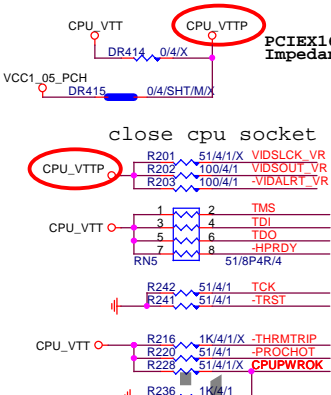
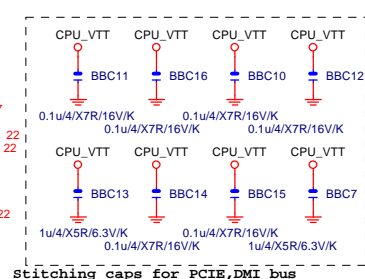
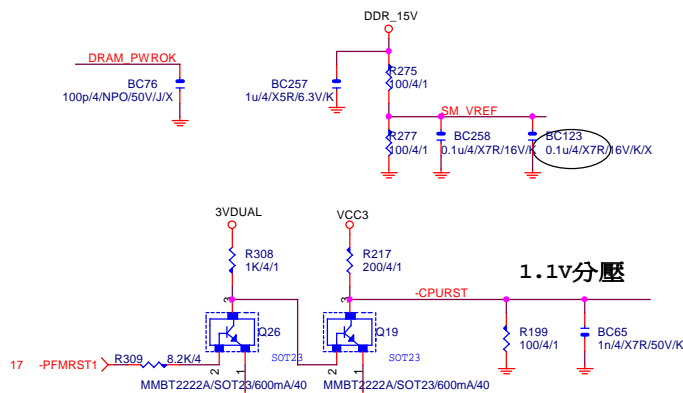


CFG5:1: 1x16 PEG
CFG5:0: 2x8 PEG

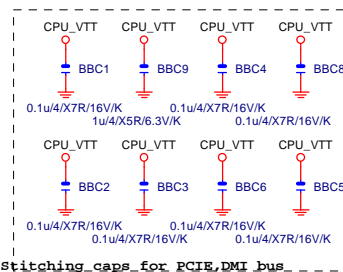
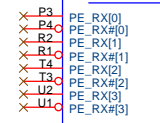
CFG	H	L	NOTE
0	RSVD	RSVD	RSVD
1	RSVD	RSVD	RSVD
2	NORM	Reverse	LANE REVERSAL[0], x16
3	RSVD	RSVD	RSVD
4	RSVD	RSVD	RSVD
7	RSVD	RSVD	RSVD
8	RSVD	RSVD	RSVD
9	RSVD	RSVD	RSVD
10	RSVD	RSVD	RSVD
11	RSVD	RSVD	RSVD
12	RSVD	RSVD	RSVD
13	RSVD	RSVD	RSVD
14	RSVD	RSVD	RSVD
15	RSVD	RSVD	RSVD
16	RSVD	RSVD	RSVD
17	RSVD	RSVD	RSVD

CFG6	CFG5	PCIE CONFIG
1	1	1x16, Default
1	0	2x8
0	1	RSVD
0	0	8x, X4, X4

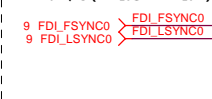
CFG 0-17 all internal PULL-UP



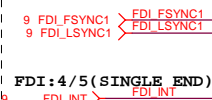
DMI:12/4/5/4/12(breakout min 8/4/4/4/8)
Impedance=85 +- 17.5%



FDI:4/5(SINGLE END)



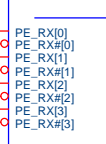
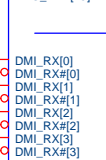
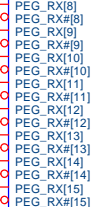
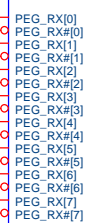
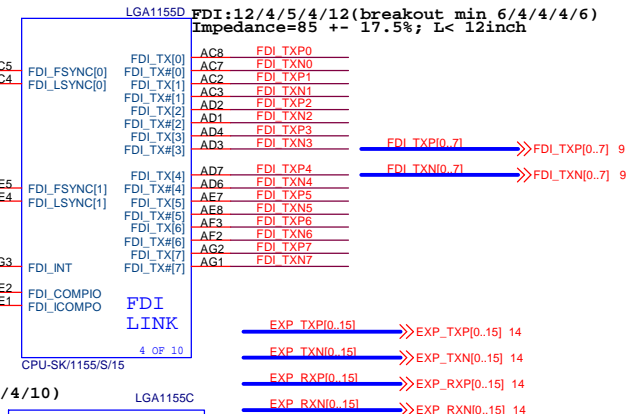
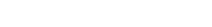
FDI:4/5(SINGLE END)



FDI:4/5(SINGLE END)



FDI:10/5(SINGLE END)



Gigabyte Technology		
Title CPU LGA1155-A		
Size	Document Number	Rev
Custom	GA-B75-D3V	1.0
Date:	Monday, January 30, 2012	Sheet 4 of 34

LGA1155A

MAAA0	AV27	SA_MA[0]	SA_DQS[0]	AK3	DQSA0
MAAA1	AY24	SA_MA[1]	SA_DQS[0]	AK2	-DQSA0
MAAA2	AW24	SA_MA[2]			
MAAA3	AW23	SA_MA[3]			
MAAA4	AV23	SA_MA[4]	SA_DQ[0]	AJ3	MDA0
MAAA5	AT24	SA_MA[5]	SA_DQ[1]	AJ4	MDA1
MAAA6	AT23	SA_MA[6]	SA_DQ[2]	AL3	MDA2
MAAA7	AU22	SA_MA[7]	SA_DQ[3]	AL4	MDA3
MAAA8	AV22	SA_MA[8]	SA_DQ[4]	AJ2	MDA4
MAAA9	AT22	SA_MA[9]	SA_DQ[5]	AJ1	MDA5
MAAA10	AV28	SA_MA[10]	SA_DQ[6]	AL2	MDA6
MAAA11	AU21	SA_MA[11]	SA_DQ[7]	AL1	MDA7
MAAA12	AT21	SA_MA[12]			
MAAA13	AW32	SA_MA[13]	SA_DQS[1]	AP3	DQSA1
MAAA14	AU20	SA_MA[14]	SA_DQS[1]	AP2	-DQSA1
MAAA15	AT20	SA_MA[15]			
-SWEA	AW29	SA_WE#	SA_DQ[8]	AN1	MDA8
-SCASA	AV30	SA_CAS#	SA_DQ[9]	AN4	MDA9
-SRASA	AU28	SA_RAS#	SA_DQ[10]	AR3	MDA10
			SA_DQ[11]	AR4	MDA11
SBA00	AY29	SA_BS[0]	SA_DQ[12]	AN2	MDA12
SBA01	AW28	SA_BS[1]	SA_DQ[13]	AN3	MDA13
SBA02	AV20	SA_BS[2]	SA_DQ[14]	AR2	MDA14
			SA_DQ[15]	AR1	MDA15
-CSA0	AU29	SA_CS#	SA_DQS[2]	AW4	DQSA2
-CSA1	AV32	SA_CS#	SA_DQS[2]	AW4	-DQSA2
-CSA2	AW30	SA_CS#			
-CSA3	AU33	SA_CS#			
CKEA0	AV19	SA_CKE[0]	SA_DQ[16]	AV2	MDA16
CKEA1	AT19	SA_CKE[1]	SA_DQ[17]	AV3	MDA17
CKEA2	AU18	SA_CKE[2]	SA_DQ[18]	AV5	MDA18
CKEA3	AV18	SA_CKE[3]	SA_DQ[19]	AW5	MDA19
			SA_DQ[20]	AU2	MDA20
MODT_A0	AV31	SA_ODT[0]	SA_DQ[21]	AU3	MDA21
MODT_A1	AU32	SA_ODT[1]	SA_DQ[22]	AU5	MDA22
MODT_A2	AU30	SA_ODT[2]	SA_DQ[23]	AY5	MDA23
MODT_A3	AW33	SA_ODT[3]			
			SA_DQS[3]	AV8	DQSA3
			SA_DQS[3]	AW8	-DQSA3
DCLKA0	AY25	SA_CK[0]	SA_DQ[24]	AY7	MDA24
-DCLKA0	AW25	SA_CK[0]	SA_DQ[25]	AU7	MDA25
DCLKA1	AU24	SA_CK[1]	SA_DQ[26]	AV9	MDA26
-DCLKA1	AU25	SA_CK[1]	SA_DQ[27]	AU9	MDA27
DCLKA2	AW27	SA_CK[2]	SA_DQ[28]	AV7	MDA28
-DCLKA2	AY27	SA_CK[2]	SA_DQ[29]	AW7	MDA29
DCLKA3	AV26	SA_CK[3]	SA_DQ[30]	AW9	MDA30
-DCLKA3	AW26	SA_CK[3]	SA_DQ[31]	AY9	MDA31
			SA_DQS[4]	AV37	DQSA4
			SA_DQS[4]	AV36	-DQSA4
			SA_DQ[32]	AU35	MDA32
			SA_DQ[33]	AW37	MDA33
			SA_DQ[34]	AU39	MDA34
			SA_DQ[35]	AU36	MDA35
			SA_DQ[36]	AW35	MDA36
			SA_DQ[37]	AY36	MDA37
			SA_DQ[38]	AU38	MDA38
			SA_DQ[39]	AU37	MDA39
			SA_DQS[5]	AP38	DQSA5
			SA_DQS[5]	AP39	-DQSA5
			SA_DQ[40]	AR40	MDA40
			SA_DQ[41]	AR37	MDA41
			SA_DQ[42]	AN38	MDA42
			SA_DQ[43]	AN37	MDA43
			SA_DQ[44]	AR39	MDA44
			SA_DQ[45]	AR38	MDA45
			SA_DQ[46]	AN39	MDA46
			SA_DQ[47]	AN40	MDA47
			SA_DQS[6]	AK38	DQSA6
			SA_DQS[6]	AK39	-DQSA6
			SA_DQ[48]	AL40	MDA48
			SA_DQ[49]	AL37	MDA49
			SA_DQ[50]	AJ38	MDA50
			SA_DQ[51]	AJ37	MDA51
			SA_DQ[52]	AL39	MDA52
			SA_DQ[53]	AL38	MDA53
			SA_DQ[54]	AJ39	MDA54
			SA_DQ[55]	AJ40	MDA55
			SA_DQS[7]	AF38	DQSA7
			SA_DQS[7]	AF39	-DQSA7
			SA_DQ[56]	AG40	MDA56
			SA_DQ[57]	AG37	MDA57
			SA_DQ[58]	AE38	MDA58
			SA_DQ[59]	AE37	MDA59
			SA_DQ[60]	AG39	MDA60
			SA_DQ[61]	AG38	MDA61
			SA_DQ[62]	AE39	MDA62
			SA_DQ[63]	AE40	MDA63

DDR_0

1 OF 10

CPU-SK/1155/S/15

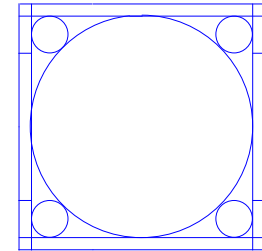
LGA1155B

MAAB0	AK24	SB_MA[0]	SB_DQS[0]	AH7	DQSB0
MAAB1	AM20	SB_MA[1]	SB_DQS[0]	AH6	-DQSB0
MAAB2	AM19	SB_MA[2]			
MAAB3	AK18	SB_MA[3]	SB_DQ[0]	AG7	MDB0
MAAB4	AP19	SB_MA[4]	SB_DQ[1]	AG8	MDB1
MAAB5	AP18	SB_MA[5]	SB_DQ[2]	AJ9	MDB2
MAAB6	AM18	SB_MA[6]	SB_DQ[3]	AJ8	MDB3
MAAB7	AL18	SB_MA[7]	SB_DQ[4]	AG5	MDB4
MAAB8	AY17	SB_MA[8]	SB_DQ[5]	AG6	MDB5
MAAB9	AY17	SB_MA[9]	SB_DQ[6]	AJ6	MDB6
MAAB10	AN23	SB_MA[10]	SB_DQ[7]	AJ7	MDB7
MAAB11	AU17	SB_MA[11]			
MAAB12	AT18	SB_MA[12]	SB_DQS[1]	AM8	DQSB1
MAAB13	AR26	SB_MA[13]	SB_DQS[1]	AL8	-DQSB1
MAAB14	AY16	SB_MA[14]			
MAAB15	AV16	SB_MA[15]			
			SB_DQ[8]	AL7	MDB8
-SWEB	AR25	SB_WE#	SB_DQ[9]	AM7	MDB9
-SCASB	AK25	SB_CAS#	SB_DQ[10]	AM10	MDB10
-SRASB	AP24	SB_RAS#	SB_DQ[11]	AL6	MDB11
			SB_DQ[12]	AM6	MDB12
SBAB0	AP23	SB_BS[0]	SB_DQ[13]	AL9	MDB13
SBAB1	AM24	SB_BS[1]	SB_DQ[14]	AM9	MDB15
SBAB2	AW17	SB_BS[2]			
-CSB0	AN25	SB_CS#	SB_DQS[2]	AR8	DQSB2
-CSB1	AN26	SB_CS#	SB_DQS[2]	AP8	-DQSB2
-CSB2	AL25	SB_CS#			
-CSB3	AT26	SB_CS#			
CKEB0	AU16	SB_CKE[0]	SB_DQ[16]	AR7	MDB16
CKEB1	AY15	SB_CKE[1]	SB_DQ[17]	AP10	MDB18
CKEB2	AW15	SB_CKE[2]	SB_DQ[19]	AP10	MDB19
CKEB3	AV15	SB_CKE[3]	SB_DQ[20]	AP6	MDB20
			SB_DQ[21]	AR6	MDB21
MODT_B0	AL26	SB_ODT[0]	SB_DQ[22]	AR9	MDB22
MODT_B1	AP26	SB_ODT[1]	SB_DQ[23]	AN13	DQSB3
MODT_B2	AM26	SB_ODT[2]			
MODT_B3	AK26	SB_ODT[3]			
			SB_DQS[3]	AN12	MDB24
			SB_DQS[3]	AN13	MDB25
DCLKB0	AL21	SB_CK[0]	SB_DQ[24]	AR13	MDB26
-DCLKB0	AL22	SB_CK[0]	SB_DQ[25]	AP13	MDB27
DCLKB1	AK20	SB_CK[1]	SB_DQ[26]	AL12	MDB28
-DCLKB1	AK20	SB_CK[1]	SB_DQ[27]	AR13	MDB29
DCLKB2	AL23	SB_CK[2]	SB_DQ[28]	AP12	MDB30
-DCLKB2	AL23	SB_CK[2]	SB_DQ[29]	AP12	MDB31
DCLKB3	AP21	SB_CK[3]	SB_DQ[30]	AN29	DQSB4
-DCLKB3	AN21	SB_CK[3]	SB_DQ[31]	AN28	-DQSB4
			SB_DQS[4]	AR28	MDB32
			SB_DQS[4]	AR29	MDB33
			SB_DQ[32]	AL28	MDB34
			SB_DQ[33]	AL29	MDB35
			SB_DQ[34]	AP28	MDB36
			SB_DQ[35]	AP29	MDB37
			SB_DQ[36]	AM28	MDB38
			SB_DQ[37]	AM29	MDB39
			SB_DQ[38]	AP33	DQSB5
			SB_DQ[39]	AR33	-DQSB5
			SB_DQS[5]		
			SB_DQS[5]	AP32	MDB40
			SB_DQ[40]	AP21	MDB41
			SB_DQ[41]	AP35	MDB42
			SB_DQ[42]	AP34	MDB43
			SB_DQ[43]	AR32	MDB44
			SB_DQ[44]	AR31	MDB45
			SB_DQ[45]	AR35	MDB46
			SB_DQ[46]	AR34	MDB47
			SB_DQS[6]	AL33	DQSB6
			SB_DQS[6]	AM33	-DQSB6
			SB_DQ[48]	AM32	MDB48
			SB_DQ[49]	AL35	MDB49
			SB_DQ[50]	AL32	MDB50
			SB_DQ[51]	AM34	MDB51
			SB_DQ[52]	AL31	MDB52
			SB_DQ[53]	AM35	MDB53
			SB_DQ[54]	AL34	MDB54
			SB_DQ[55]	AL34	MDB55
			SB_DQS[7]	AG35	DQSB7
			SB_DQS[7]	AG34	-DQSB7
			SB_DQ[56]	AH35	MDB56
			SB_DQ[57]	AH34	MDB57
			SB_DQ[58]	AE34	MDB58
			SB_DQ[59]	AE35	MDB59
			SB_DQ[60]	AJ35	MDB60
			SB_DQ[61]	AJ34	MDB61
			SB_DQ[62]	AF33	MDB62
			SB_DQ[63]	AF35	MDB63

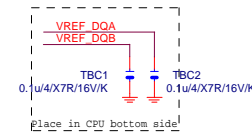
DDR_1

2 OF 10

CPU-SK/1155/S/15

LGA1155
ILM_BP/1156/CSP

Need check the new CPU ME



Gigabyte Technology

Title			CPU LGA1155-B		
Size			Document Number		
Custom			GA-B75-D3V		
Date:			Monday, January 30, 2012		
Sheet			5 of 34		
Rev			1.0		

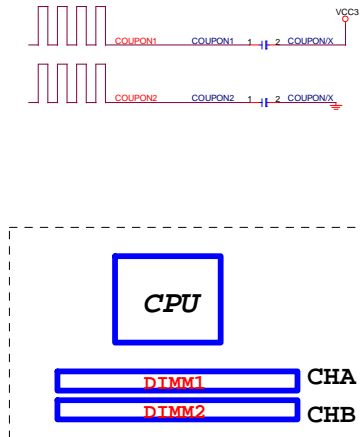


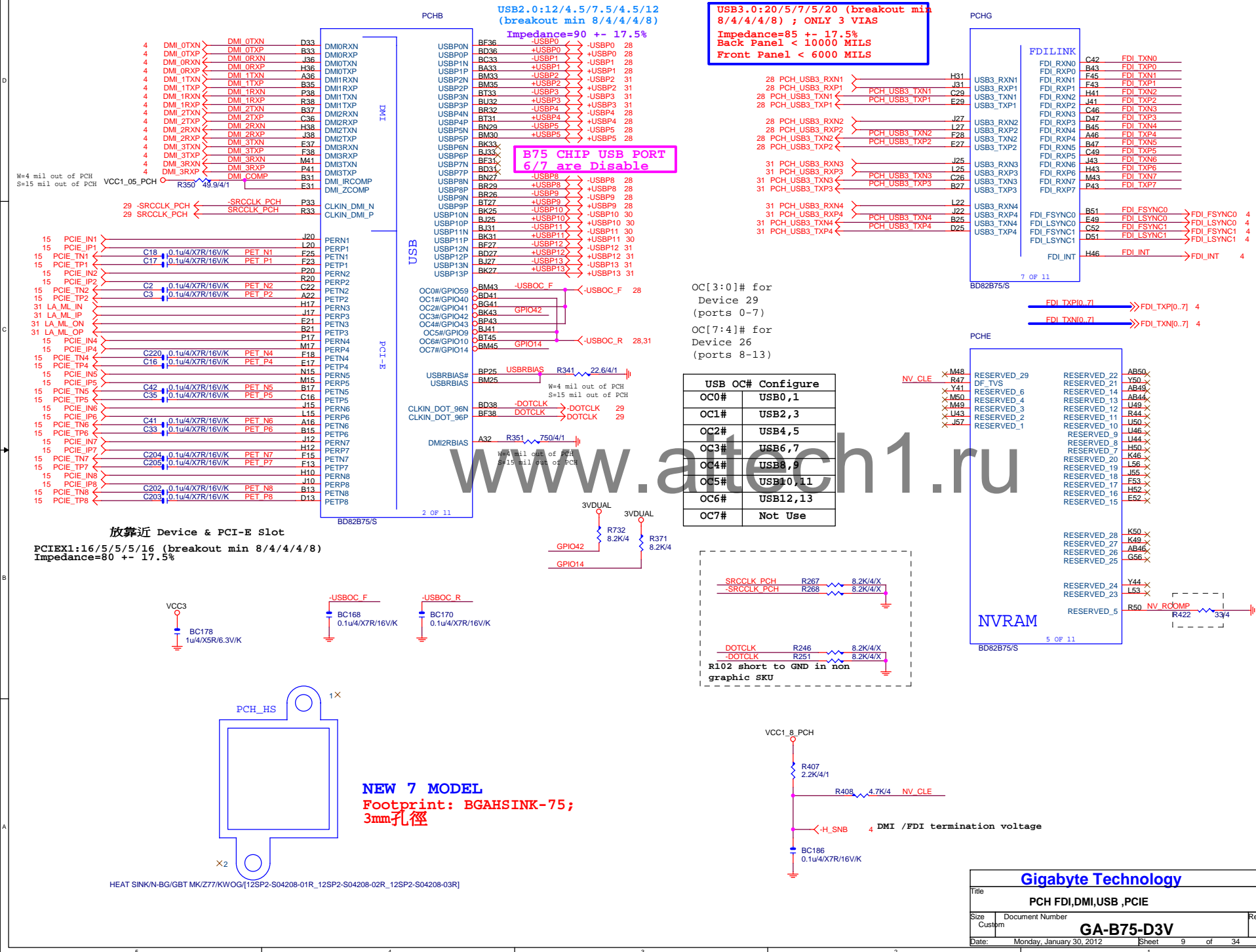
DDR3 1066,1333,1600MHZ BANDWIDTH

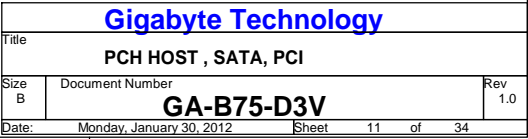
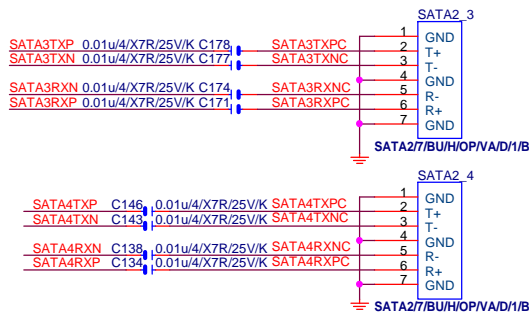
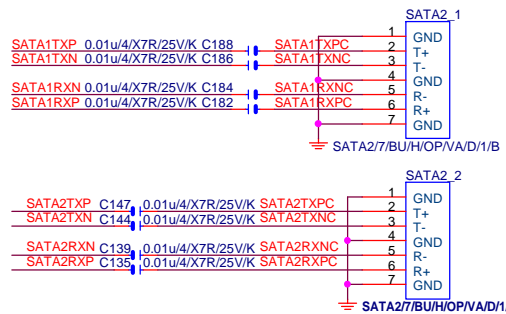
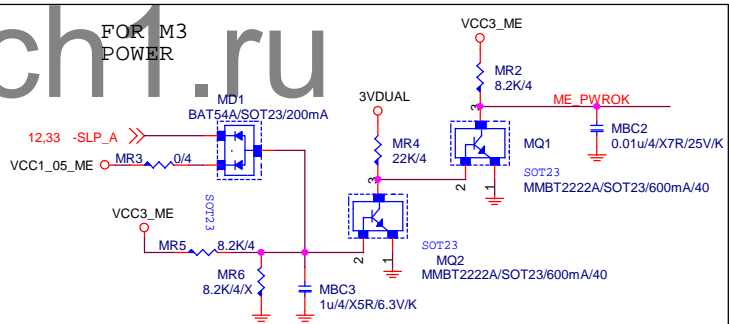
DDR3 1066MHZ
DDR3 clock=533MHZ
DDR3 single channel bandwidth=533x2x8Byte=8.5GB/s
DDR3 dual channel bandwidth=533x2x2x8Byte=17GB/s

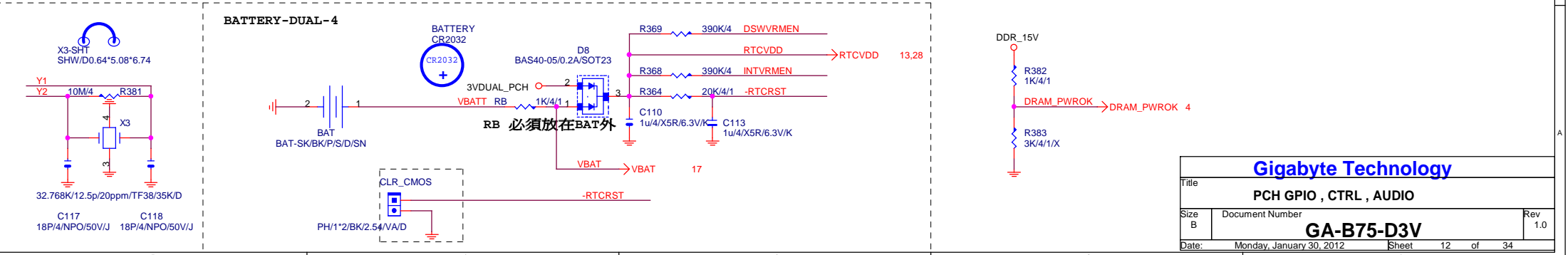
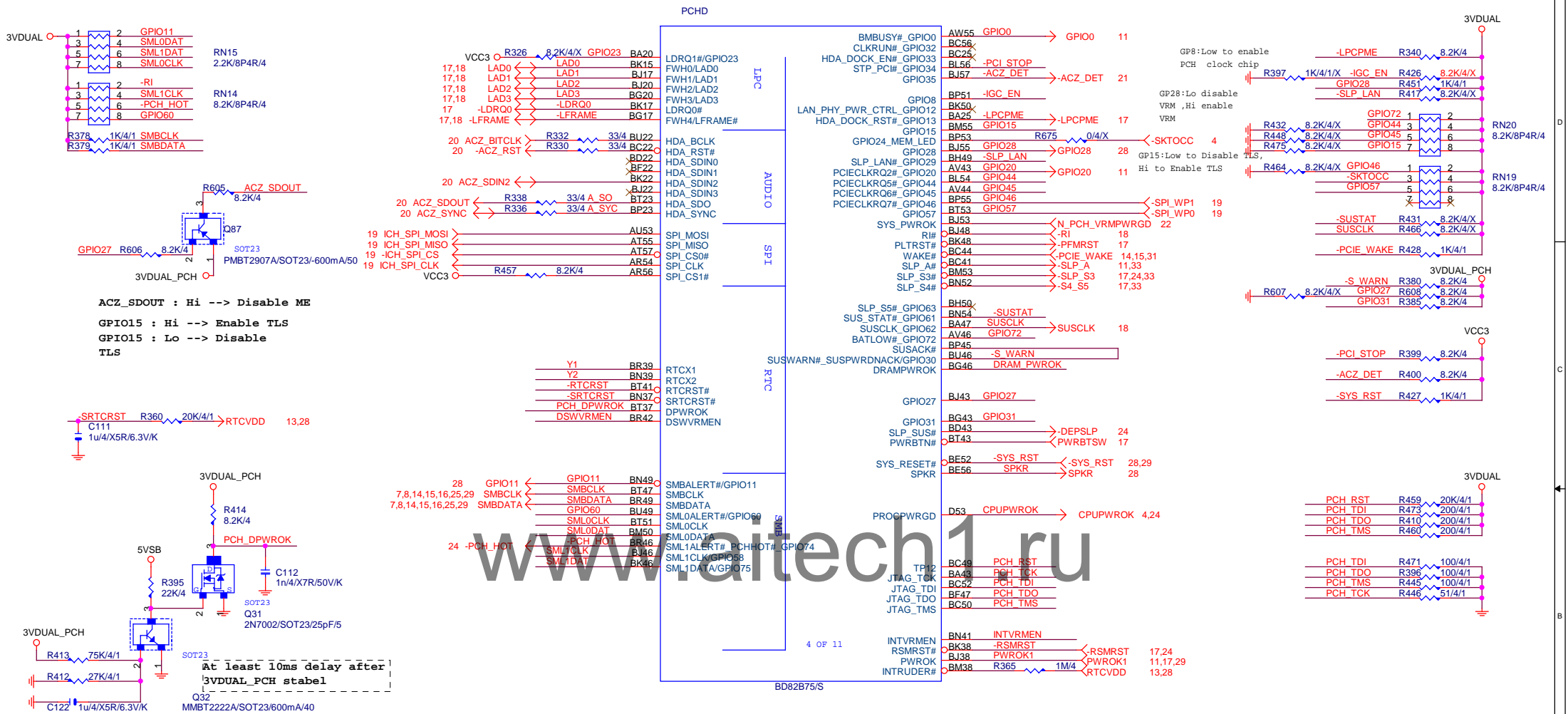
DDR3 1333MHZ
DDR3 clock=667MHZ
DDR3 single channel bandwidth=10.6GB/s
DDR3 dual channel bandwidth=21GB/s

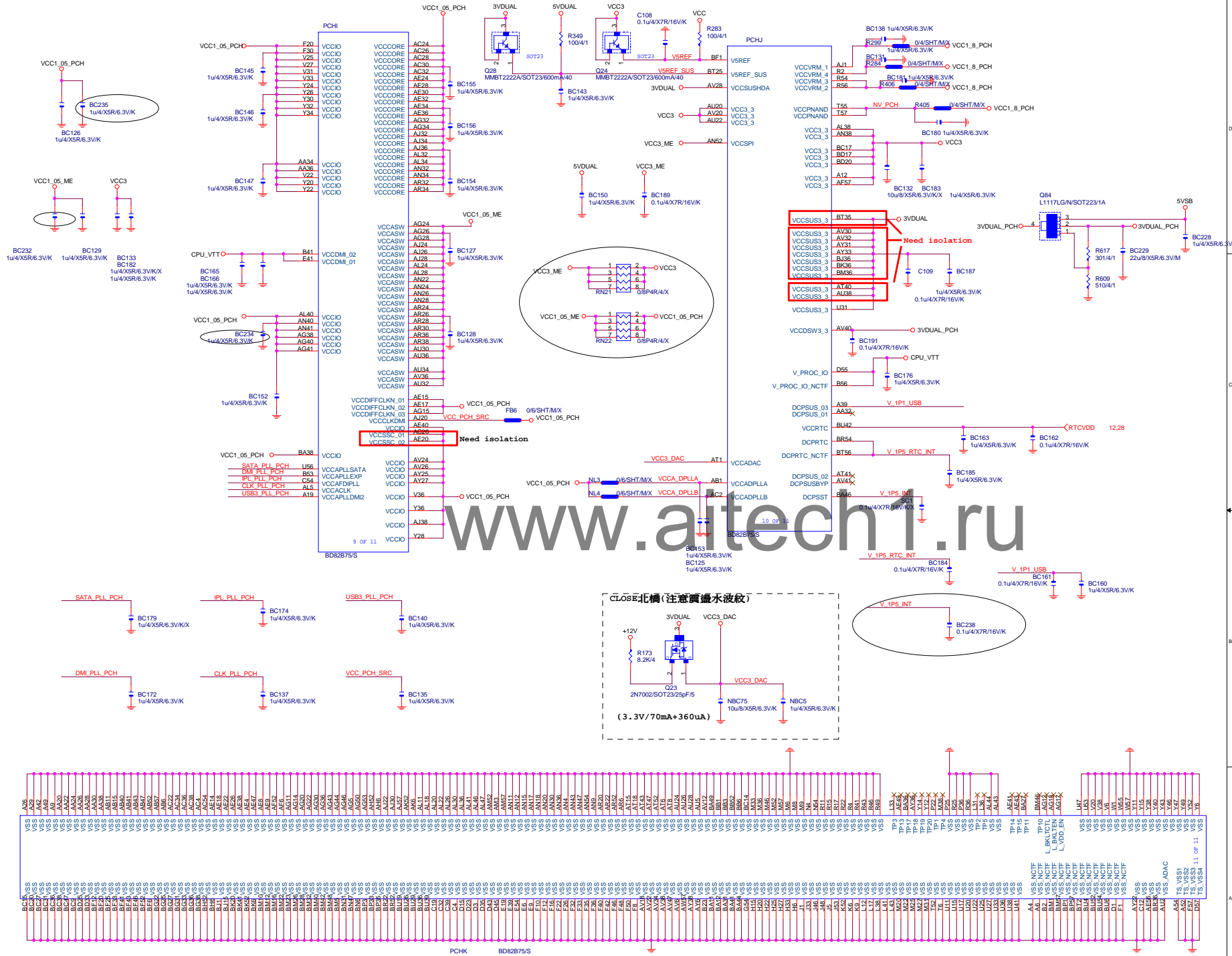
DDR3 1600MHZ
DDR3 clock=800MHZ
DDR3 single channel bandwidth=12.8GB/s
DDR3 dual channel bandwidth=25.6GB/s



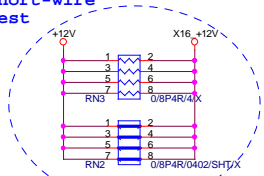








+12 protect
short-wire
test



PCIE16:16/5/5/5/16

EXP_RXP0_15] >>> EXP_RXP0_15] 4
EXP_RXN0_15] >>> EXP_RXN0_15] 4
EXP_TXP0_15] >>> EXP_TXP0_15] 4
EXP_TXN0_15] >>> EXP_TXN0_15] 4

EXP_TXP0	C43	0.22u/4X5R6.3V/K/EXP_TXP0C
EXP_TXN0	C36	0.22u/4X5R6.3V/K/EXP_TXN0C
EXP_TXP1	C47	0.22u/4X5R6.3V/K/EXP_TXP1C
EXP_TXN1	C49	0.22u/4X5R6.3V/K/EXP_TXN1C
EXP_TXP2	C52	0.22u/4X5R6.3V/K/EXP_TXP2C
EXP_TXN2	C54	0.22u/4X5R6.3V/K/EXP_TXN2C
EXP_TXP3	C57	0.22u/4X5R6.3V/K/EXP_TXP3C
EXP_TXN3	C59	0.22u/4X5R6.3V/K/EXP_TXN3C
EXP_TXP4	C62	0.22u/4X5R6.3V/K/EXP_TXP4C
EXP_TXN4	C64	0.22u/4X5R6.3V/K/EXP_TXN4C
EXP_TXP5	C65	0.22u/4X5R6.3V/K/EXP_TXP5C
EXP_TXN5	C67	0.22u/4X5R6.3V/K/EXP_TXN5C
EXP_TXP6	C69	0.22u/4X5R6.3V/K/EXP_TXP6C
EXP_TXN6	C71	0.22u/4X5R6.3V/K/EXP_TXN6C
EXP_TXP7	C76	0.22u/4X5R6.3V/K/EXP_TXP7C
EXP_TXN7	C75	0.22u/4X5R6.3V/K/EXP_TXN7C
EXP_TXP8	C79	0.22u/4X5R6.3V/K/EXP_TXP8C
EXP_TXN8	C80	0.22u/4X5R6.3V/K/EXP_TXN8C
EXP_TXP9	C81	0.22u/4X5R6.3V/K/EXP_TXP9C
EXP_TXN9	C82	0.22u/4X5R6.3V/K/EXP_TXN9C
EXP_TXP10	C86	0.22u/4X5R6.3V/K/EXP_TXP10C
EXP_TXN10	C87	0.22u/4X5R6.3V/K/EXP_TXN10C
EXP_TXP11	C90	0.22u/4X5R6.3V/K/EXP_TXP11C
EXP_TXN11	C91	0.22u/4X5R6.3V/K/EXP_TXN11C
EXP_TXP12	C92	0.22u/4X5R6.3V/K/EXP_TXP12C
EXP_TXN12	C93	0.22u/4X5R6.3V/K/EXP_TXN12C
EXP_TXP13	C95	0.22u/4X5R6.3V/K/EXP_TXP13C
EXP_TXN13	C96	0.22u/4X5R6.3V/K/EXP_TXN13C
EXP_TXP14	C97	0.22u/4X5R6.3V/K/EXP_TXP14C
EXP_TXN14	C98	0.22u/4X5R6.3V/K/EXP_TXN14C
EXP_TXP15	C99	0.22u/4X5R6.3V/K/EXP_TXP15C
EXP_TXN15	C100	0.22u/4X5R6.3V/K/EXP_TXN15C

PCI-E REV:1.1--> 2.5GHZ

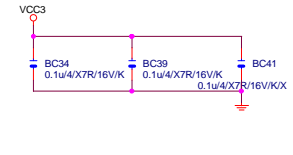
PCE-E X1(單向) BANDWITH=2.5GHZ*(8b/10b)=2Gb/s=250MB/s

PCE-E X1(雙向) BANDWITH=2.5GHZ*(8b/10b)X2=4Gb/s=500MB/s

PCE-E X16(單向) BANDWITH=2.5GHZ*(8b/10b)X16=32Gb/s=4GB/s

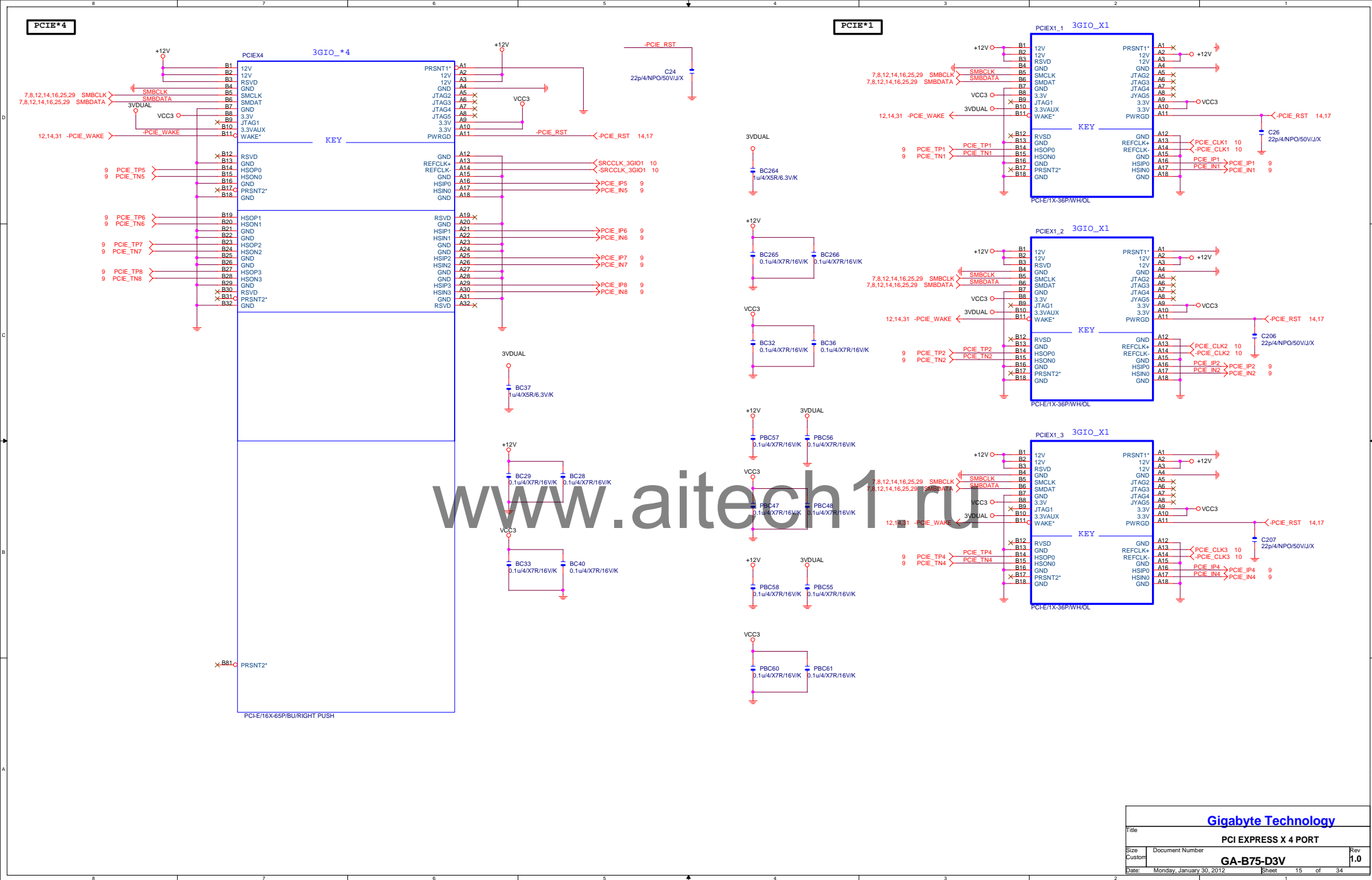
PCE-E X16(雙向) BANDWITH=2.5GHZ*(8b/10b)X16X2=64Gb/s=8GB/s

PCI-E REV:2.0--> 5GHZ



Gigabyte Technology

Title			PCI EXPRESS * 16
Size	Document Number	GA-B75-D3V	
Custom			Rev 1.0
Date:	Monday, January 30, 2012	Sheet	14 of 34

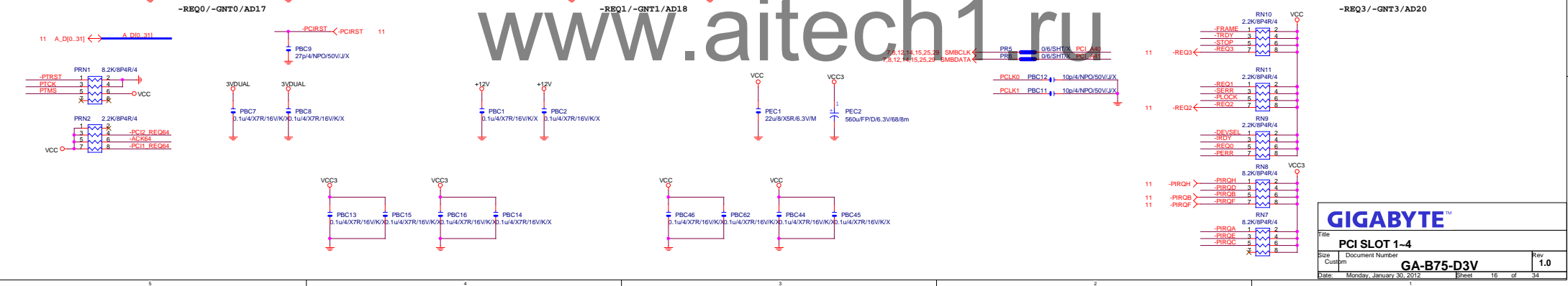
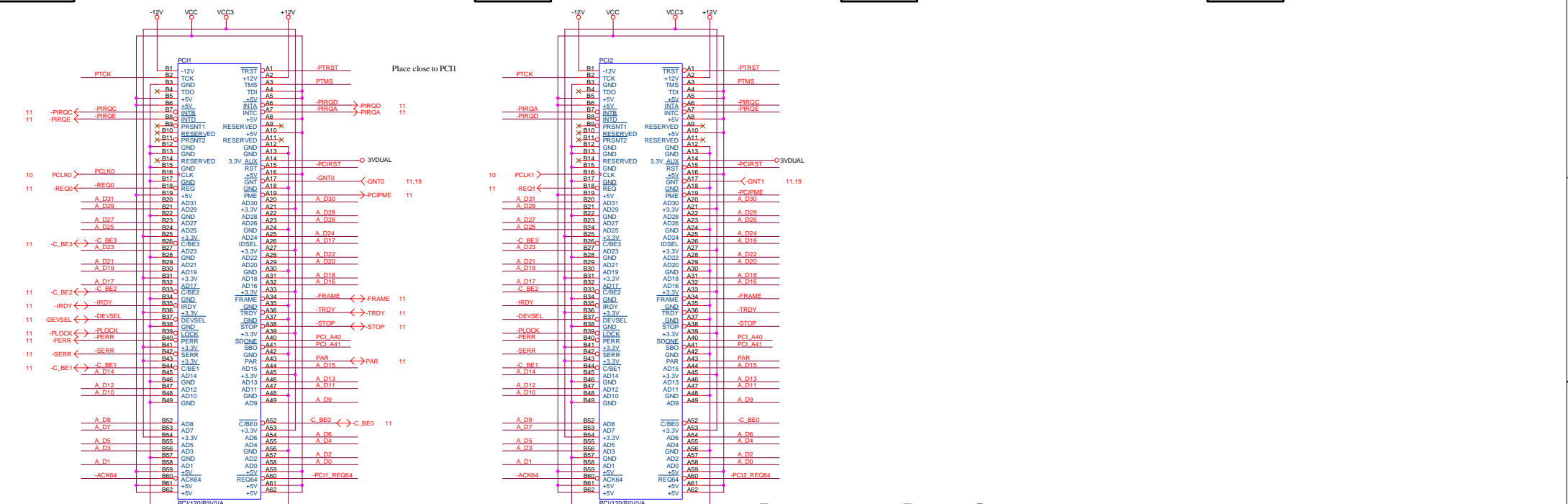


PCI SLOT 1

PCI SLOT 2

PCI SLOT 3

PCI SLOT 4

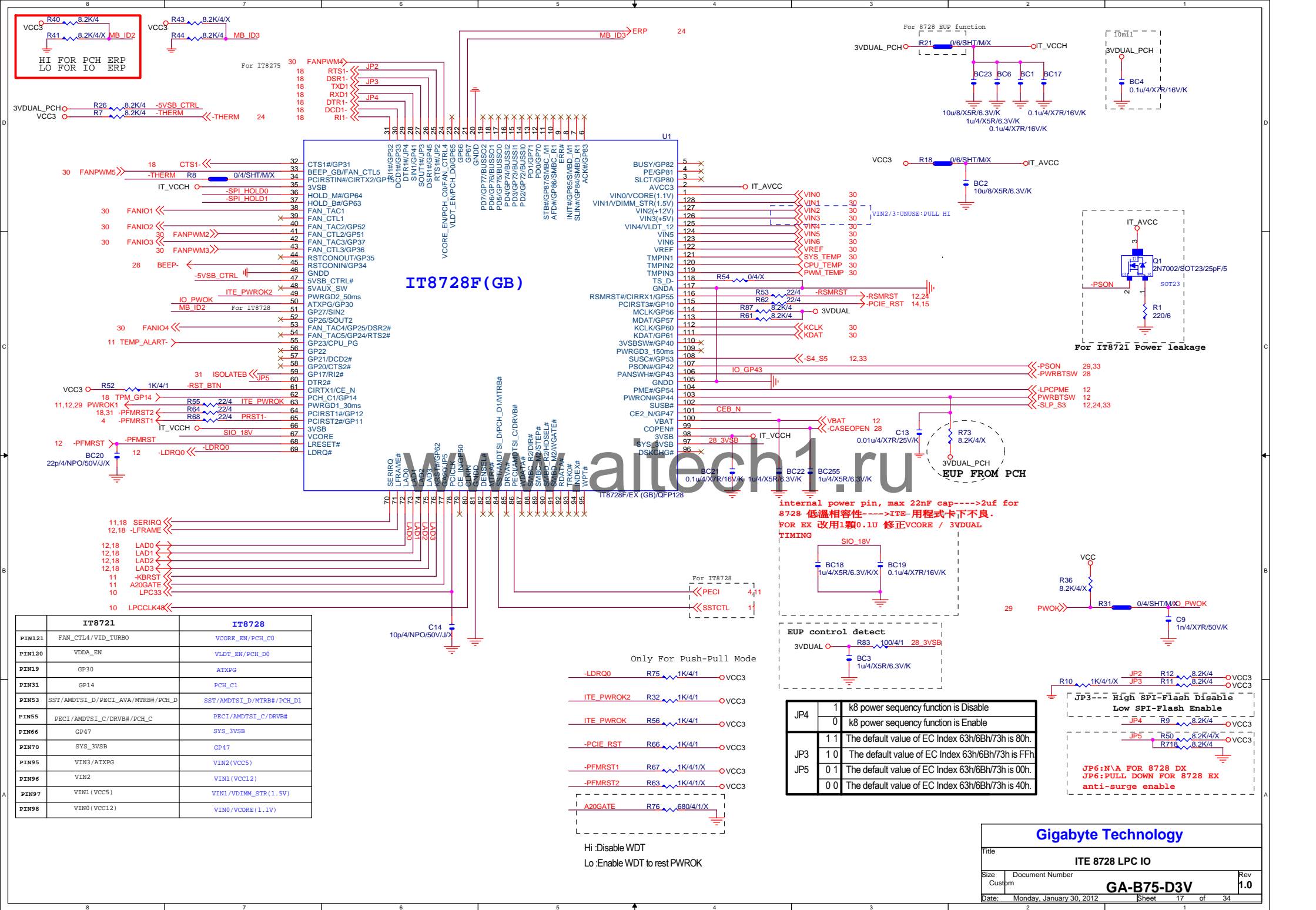


GIGABYTE

Title: **PCI SLOT 1-4**

Size: Custom Document Number: **GA-B75-D3V** Rev: **1.0**

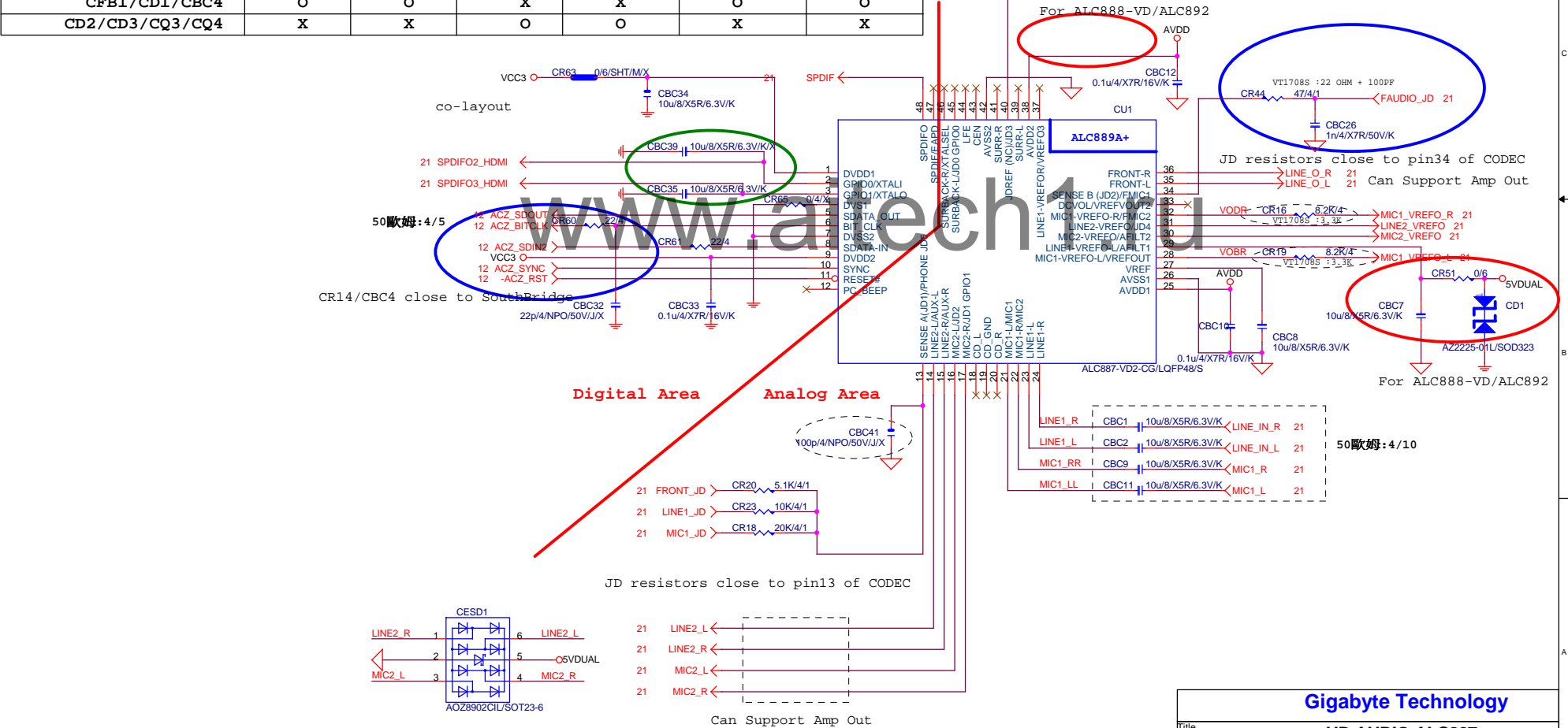
Date: Monday, January 30, 2012 Sheet: 16 of 34

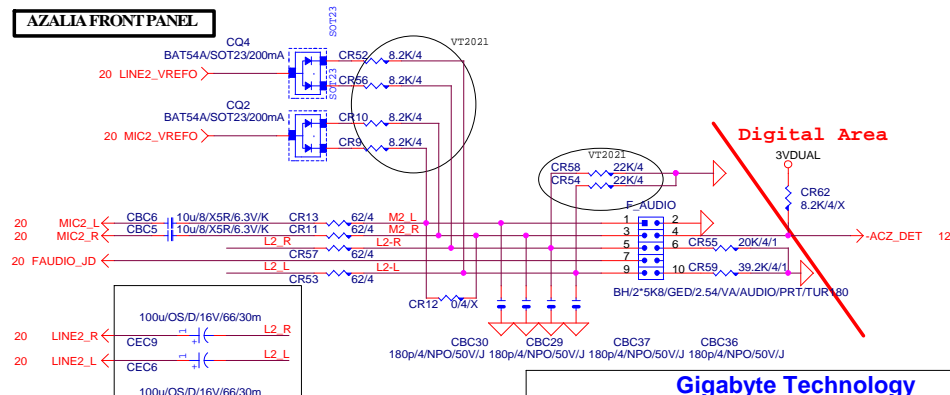
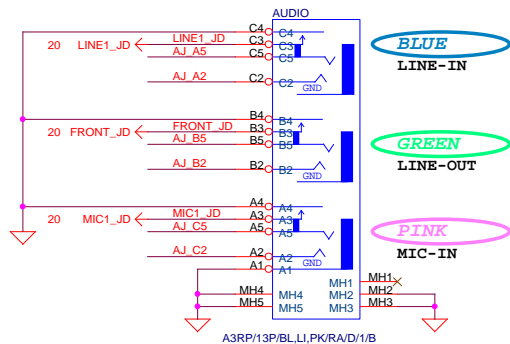
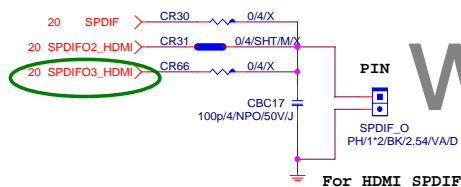
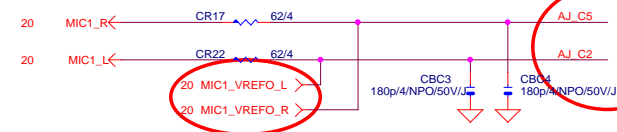
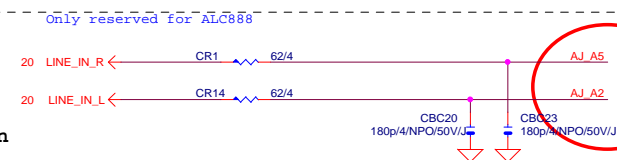
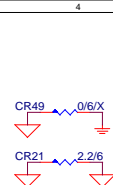


www.aitech1.ru

Gigabyte Technology		
Title BIOS		
Size Custom	Document Number GA-B75-D3V	Rev 1.0
Date: Monday, January 30, 2012	Sheet 19	of 34

	ALC662	ALC887-VD2	ALC889	VT1708S-CD	VT1708S-CE	VT2021
CR49	X	X	O	O	X	O
CBC36	O	O	X	X	O	X
CR28/CBC11	47ohm+1nF	47ohm+1nF	47ohm+1nF	22ohm+100P	22ohm+100P	47ohm+1nF
CR52	X	O	O	O	O	O
CR57	O	X	X	X	X	X
CBC1/CBC2	10uF/X5R	10uF/X5R	22uF/X5R	10uF/X5R	10uF/X5R	10uF/X5R
CR18	5.11K/4/1	5.11K/4/1	5.11K/4/1	5.1K/4/1	5.1K/4/1	5.1K/4/1
CR36	20K/4/1	20K/4/1	20K/4/1	5.1K/4/1	20K/4/1	5.1K/4/1
CBC38/CBC39	X	X	X	100P/4	100P/4	X
CR10/CR8/CR20/CR45/ CR42/CR51/CR43/CR22/ CR27/CR26	22K/4	22K/4	22K/4	10K/4/1	10K/4/1	10K/4/1
CR7/CR9/CR5/CR13/ CR29/CR32/CR46/CR19/ CR50/CR41/CR21/CR47/ CR2/CR11/CR14/CR24	62 ohm	62 ohm	62 ohm	75 ohm	75 ohm	75 ohm
CFB1/CD1/CBC4	O	O	X	X	O	O
CD2/CD3/CQ3/CQ4	X	X	O	O	X	X

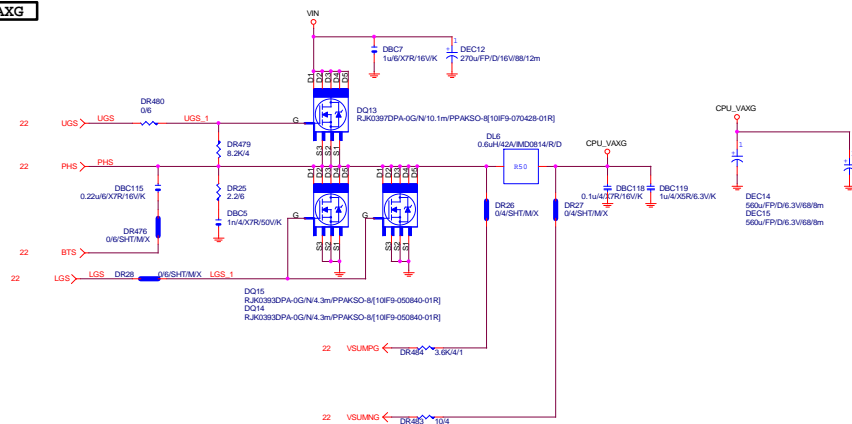
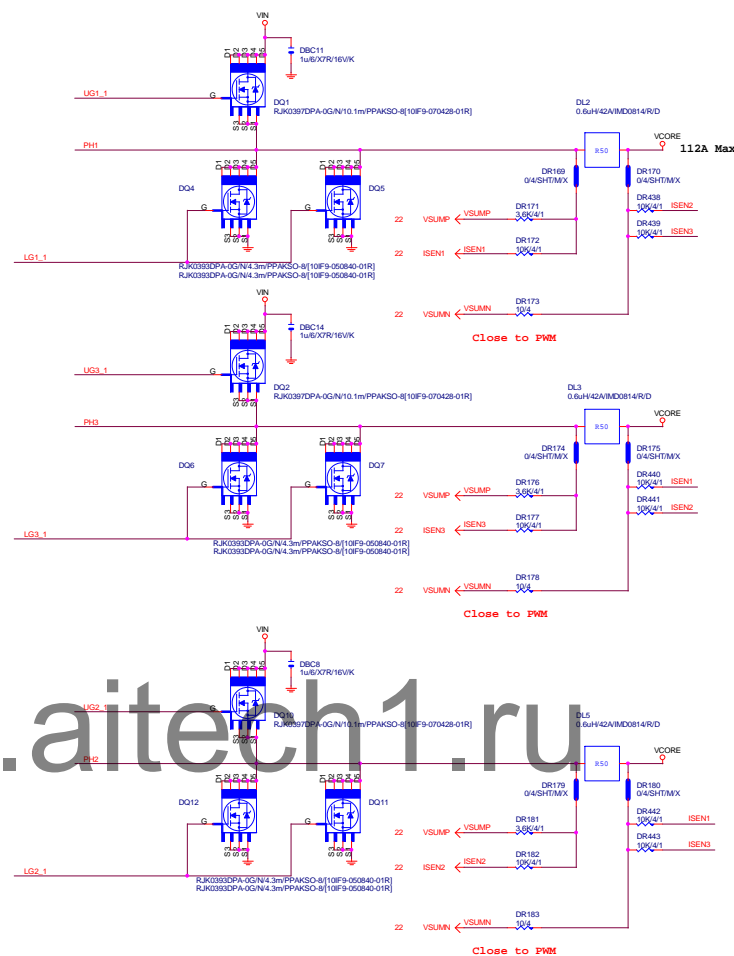
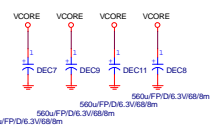
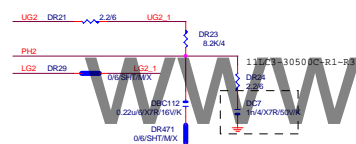
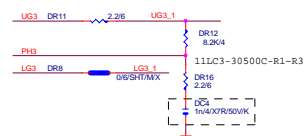




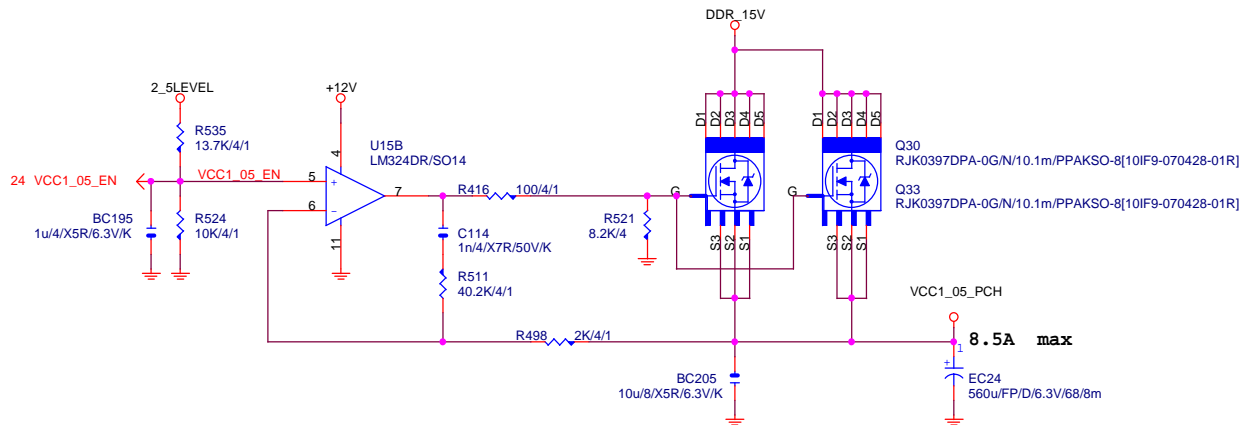
<h1 style="text-align: center;">Gigabyte Technology</h1>			
<p>Title</p> <h2 style="text-align: center;">AUDIO JACK</h2>			
Size Custom	Document Number	<h2 style="text-align: center;">GA-B75-D3V</h2>	
Date:	Monday, January 30, 2012	Sheet	21 of 34



UG2	UG2	22
PH2	PH2	22
LG2	LG2	22
ISEN2	ISEN2	22

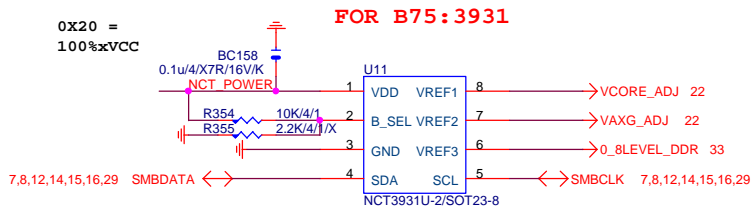
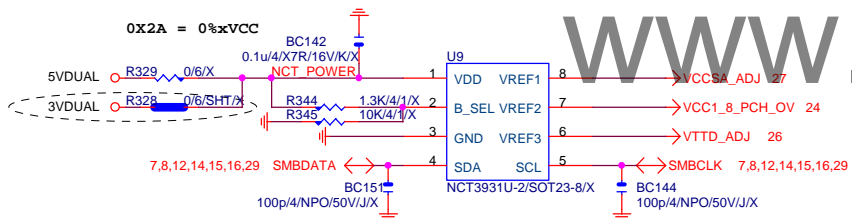


VCC1_05_PCH



Voltage console

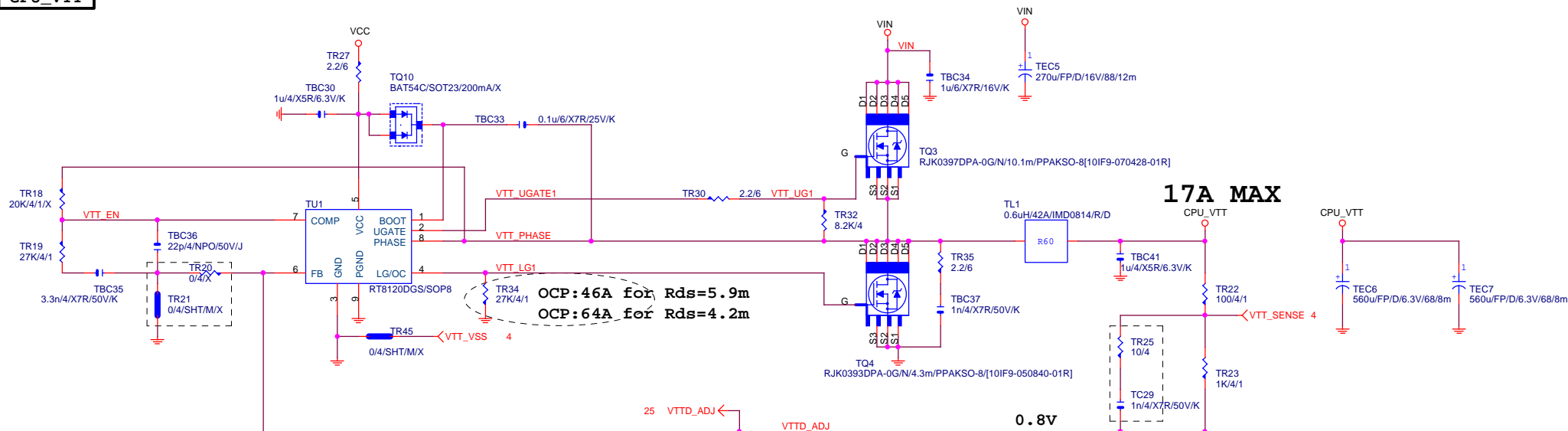
ADDRESS	0X2A	0X20	0X22	0X26
R1 (K)	OPEN	10	1.3	3
R2 (K)	10	OPEN	3.9	2.2
%VCC	0	100	75	42



up6262	0X2A	0X20
VREF1	VCC1_05_PCH	VCORE
VREF2	VCC1_8_PCH	VCCSA
VREF3	CPU_VTT	DDR

Gigabyte Technology		
PCH CORE / VOLTAGE CONSOLE		
Size B	Document Number	Rev
	GA-B75-D3V	1.0
Date:	Monday, January 30, 2012	Sheet 25 of 34

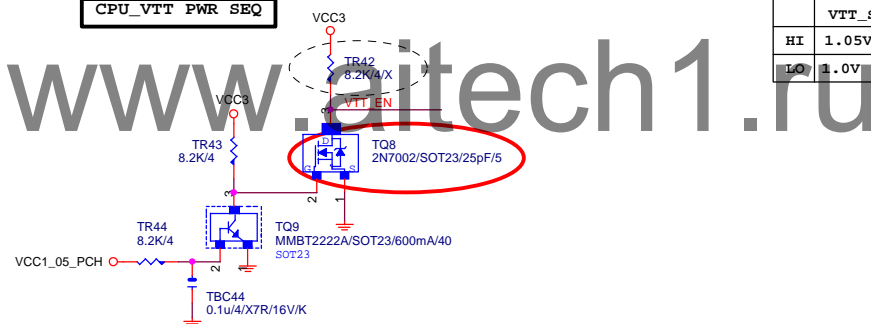
CPU_VTT



$$OCP:46A=Ro_{set} \cdot I_{ocset} / R_{ds(on)}$$

$$=27K \cdot 10\mu A / 5.9m$$

CPU_VTT PWR SEQ



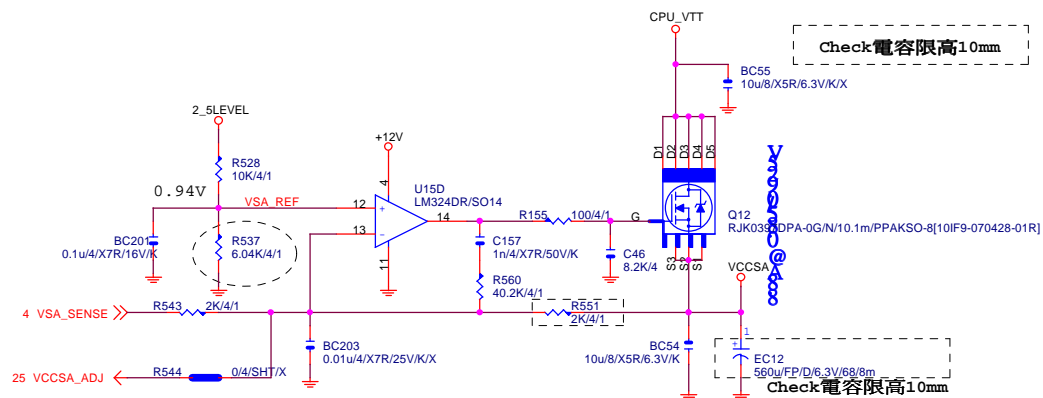
VTT_SEL	
HI	1.05V
LO	1.0V

According intel
CDI/IBP#476733, 固定1.05v

GIGABYTE

Title	RT8120 CPU_VTT		
Size	Document Number	Rev	1.0
Custom	GA-B75-D3V		
Date:	Monday, January 30, 2012	Sheet	26 of 34

VCC_SA



Check電容限高10mm

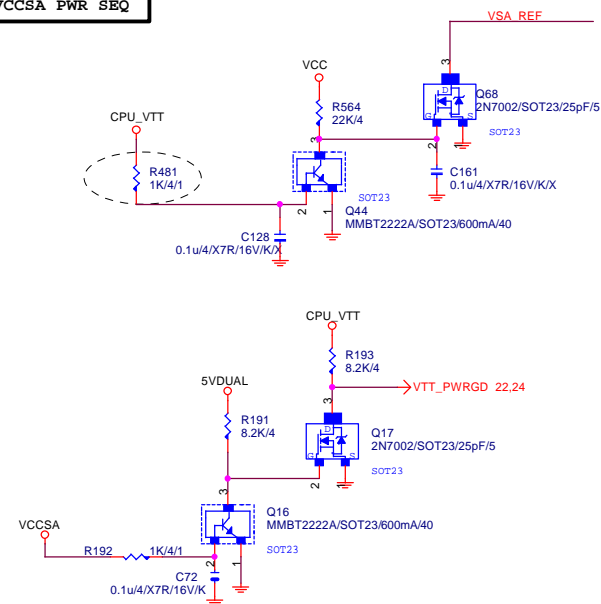
Check電容限高10mm

PDG 1.01

VSA_SEL	
HI	0.85V
LO	0.925V

According intel
CDI/IBP#476733, 固定0.925v

VCCSA_PWR_SEQ

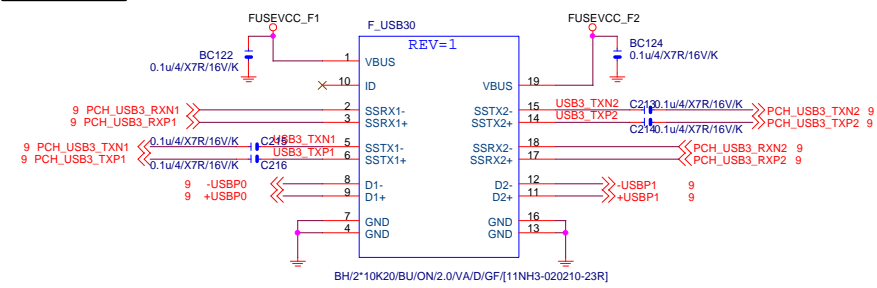


www.aitech1.ru

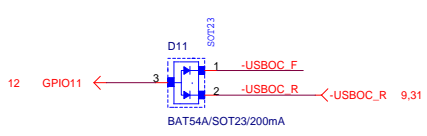
Gigabyte Technology

Title		
VCCSA POWER		
Size	Document Number	Rev
Custom	GA-B75-D3V	1.0
Date:	Monday, January 30, 2012	Sheet 27 of 34

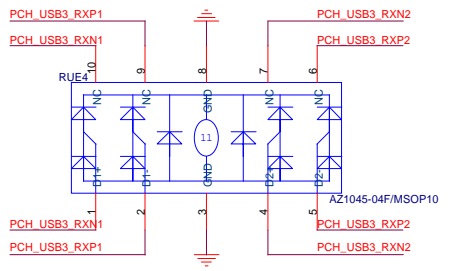
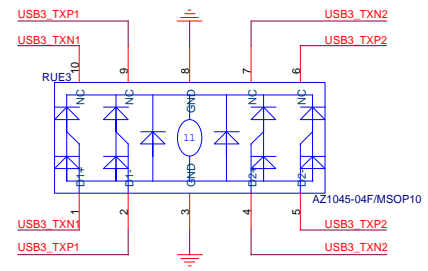
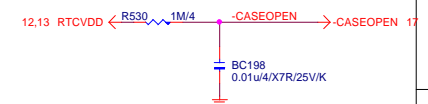
FRONT USB1



F_USB POWER PROTECT

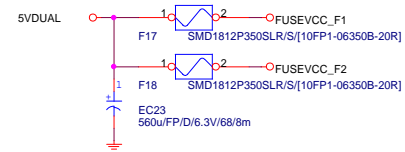
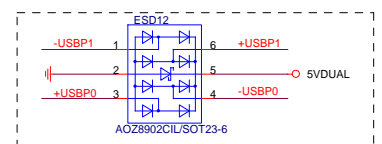


CASE OPEN

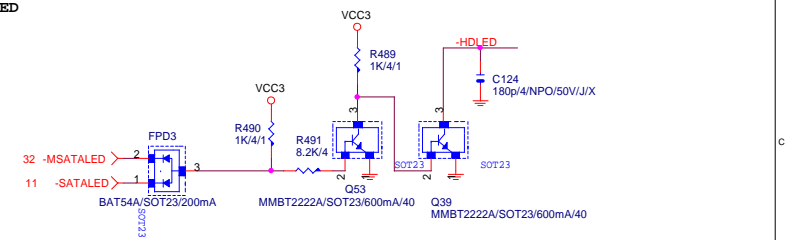


ESD Close to connector

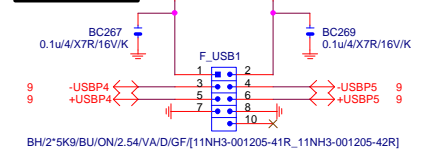
ESD Close to connector



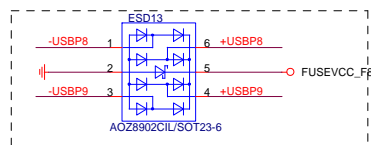
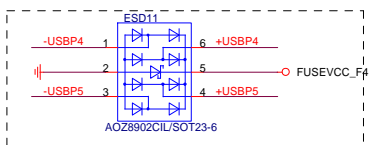
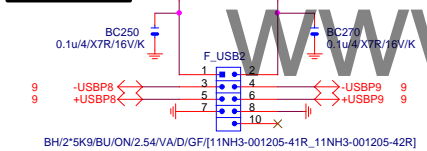
SATA LED



FRONT USB1

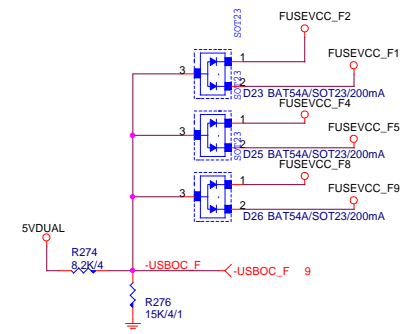
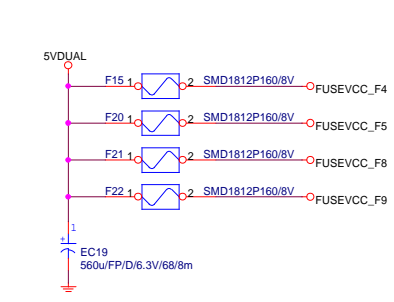


FRONT USB2

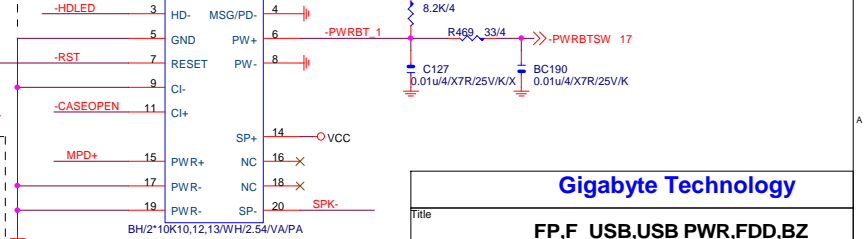
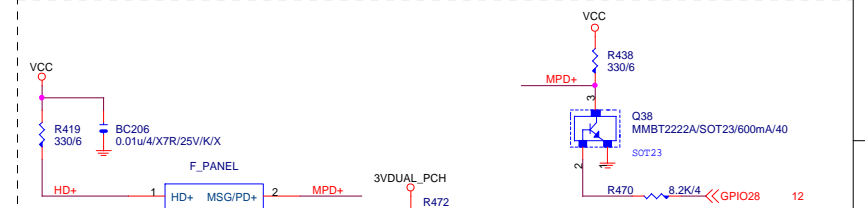
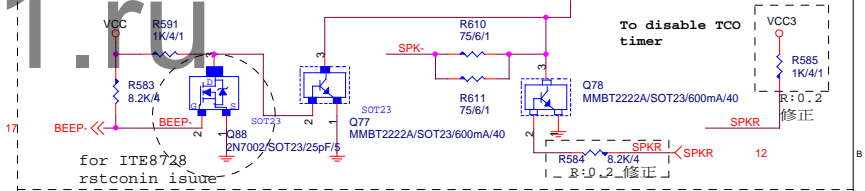
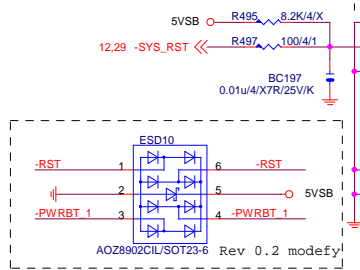


ESD Close to connector

ESD Close to connector

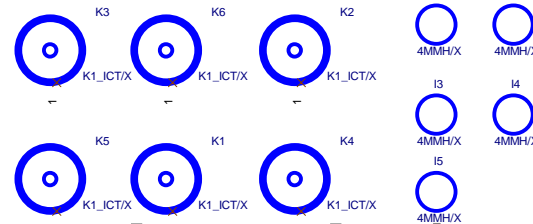
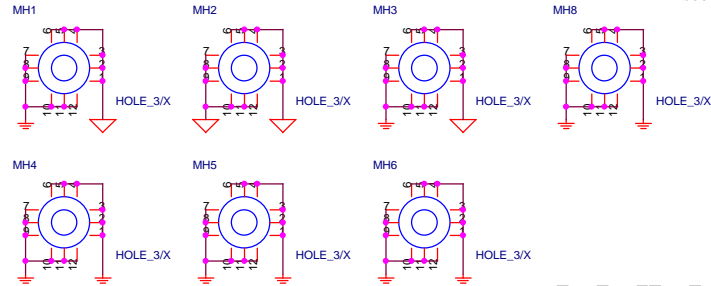
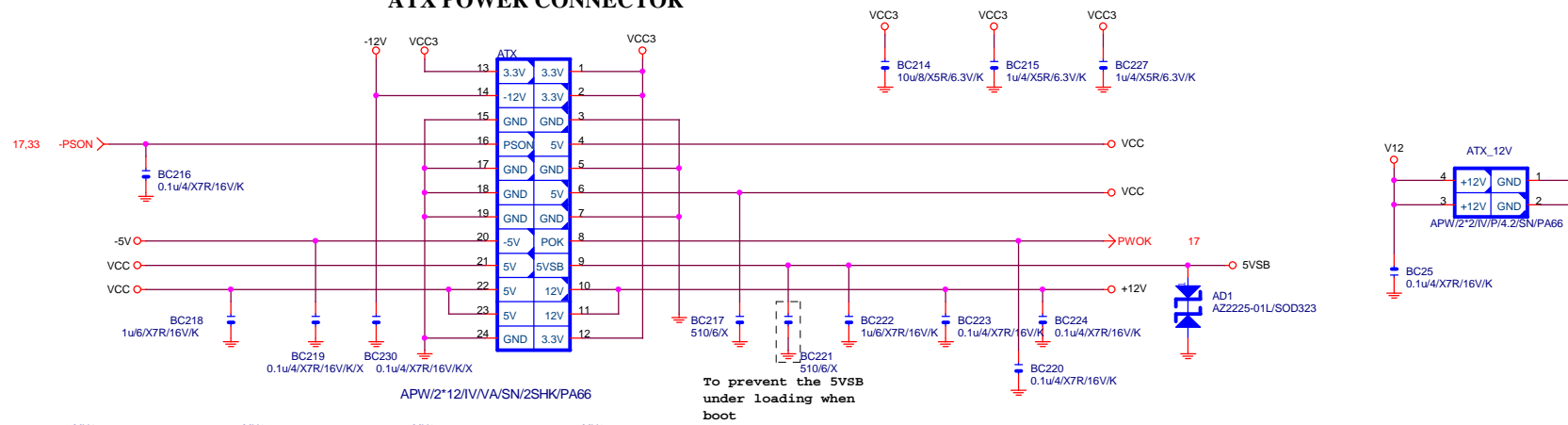


INTEL FRONT PANEL



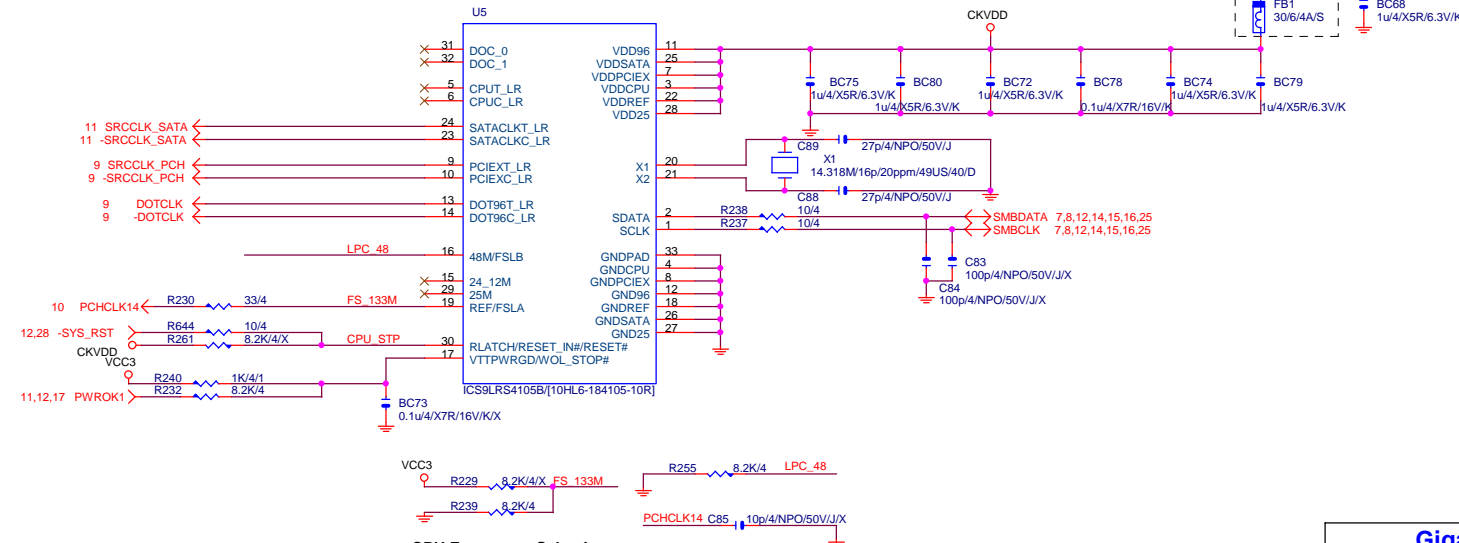
Gigabyte Technology			
Title			
FP,F_USB,USB PWR,FDD,BZ			
Size	Document Number	GA-B75-D3V	
Custom		Rev 1.0	
Date:	Monday, January 30, 2012	Sheet	28 of 34

ATX POWER CONNECTOR



CLK GEN CK505

www.aitech1.ru



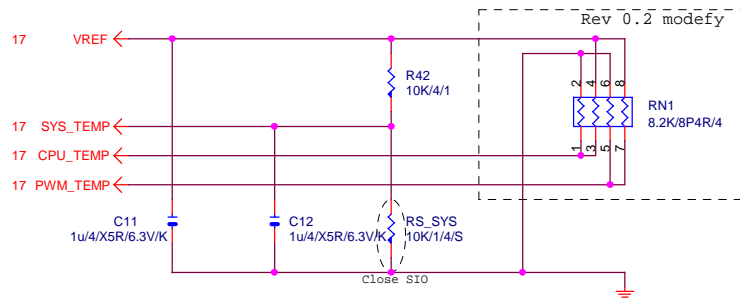
CPU Frequency Selection

FS	CPU
0	100M <Default>
1	133M

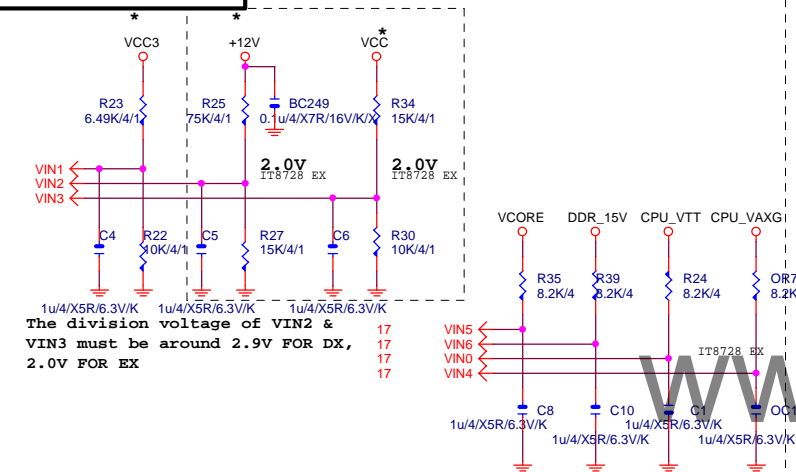
Gigabyte Technology

Title		
ATX POWER CONNECTOR		
Size	Document Number	Rev
Custom	GA-B75-D3V	1.0
Date:	Monday, January 30, 2012	Sheet 29 of 34

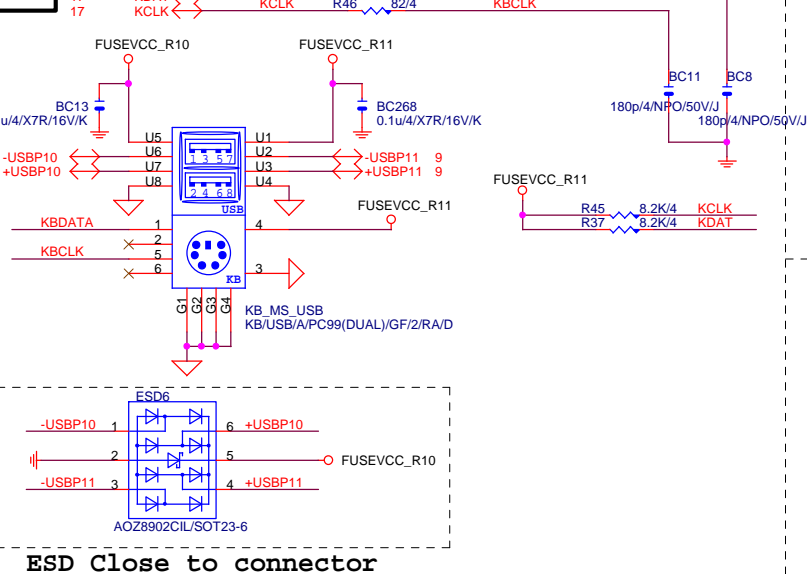
TEMP H/W MONITOR



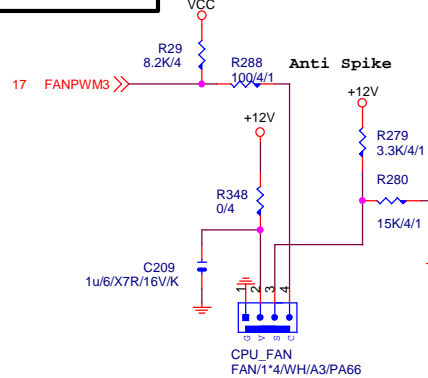
VOLTAGE-- H/W MONITOR



KB/USB

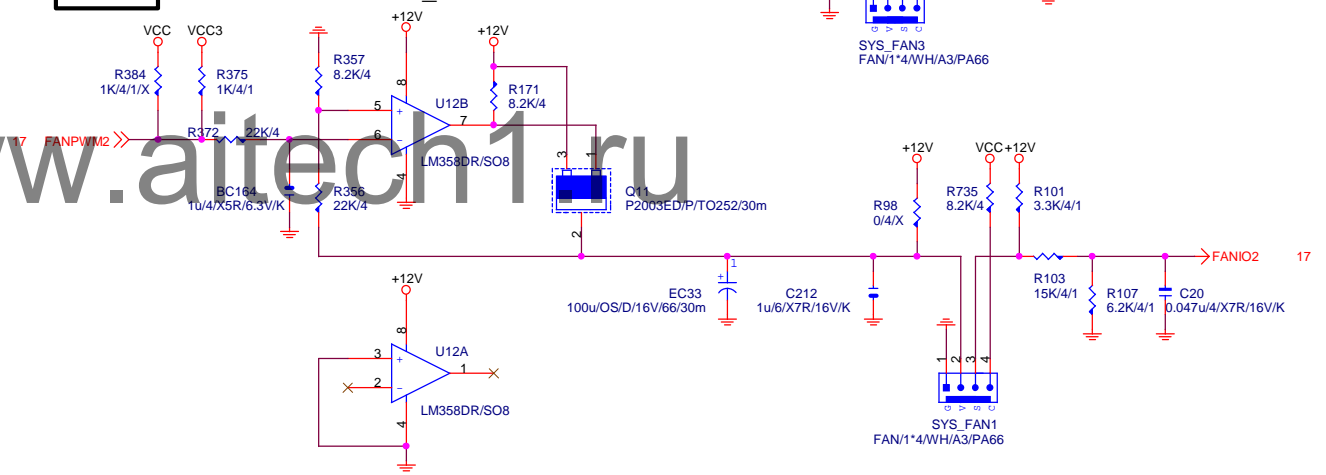


CPU SMART FAN

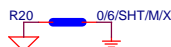


SYS FAN

Linear SYS_FAN



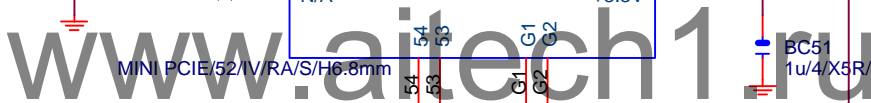
FOR EMI ONLY



Gigabyte Technology

Title				Rev
HWM,KB/MS, FAN CTRL				
Size	Document Number			
Custom	GA-B75-D3V			
Date:	Monday, January 30, 2012	Sheet	30 of 34	1.0

MSATA



Title			
MSATA			
Size A	Document Number GA-B75-D3V		Rev 1.0
Date:	Monday, January 30, 2012	Sheet 32 of 34	

MSATA

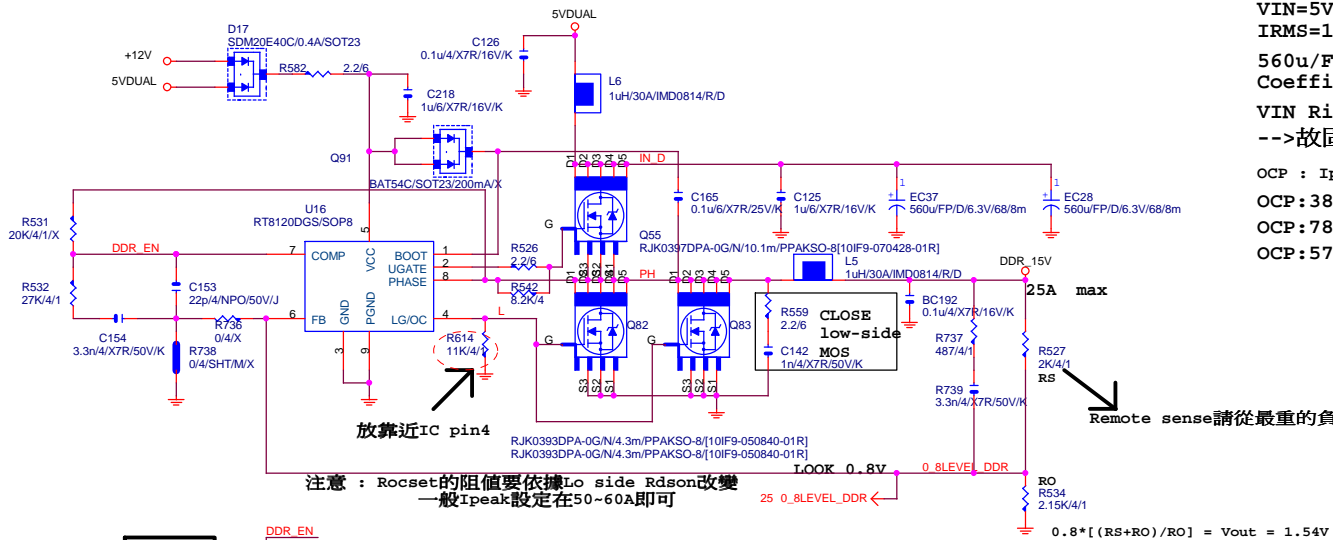
Document Number
GA-B75-D3V

GA-B75-D3V

Rev	1.0
-----	-----

Sheet	32	of	34
-------	----	----	----

DDR18V



VIN=5V,VOUT=1.5V,IOUT=25A,PHASE=1
IRMS=11.45A
560u/FP/D/6.3V/68/8m RIPPLE CURRENT=4.7A
Coefficient=1.7(85°C),1(105°C)
VIN Ripple current=4.7X1.7=7.99A(85°C)
-->故固態電容須2X7.99=15.98>11.45A

OCP : $I_{peak} = (2 \times I_{ocset} \times R_{ocset}) / R_{dson}$

OCP:38.31A for Rds=6.7m for vishay@4.5V

OCP:78.78A for Rds=3.3m for renesas@10V

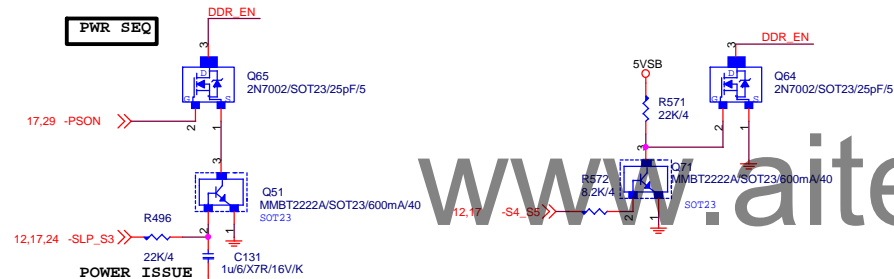
$$\text{OCP:57A} = \text{Roset} * \text{Iocset} / \text{Rds(on)} \\ = 11\text{K} * 10\text{uA} / [5//5]$$

注意：Rocset的阻值要依據Lo side Rdson改變
一般Ipeak設定在50~60A即可

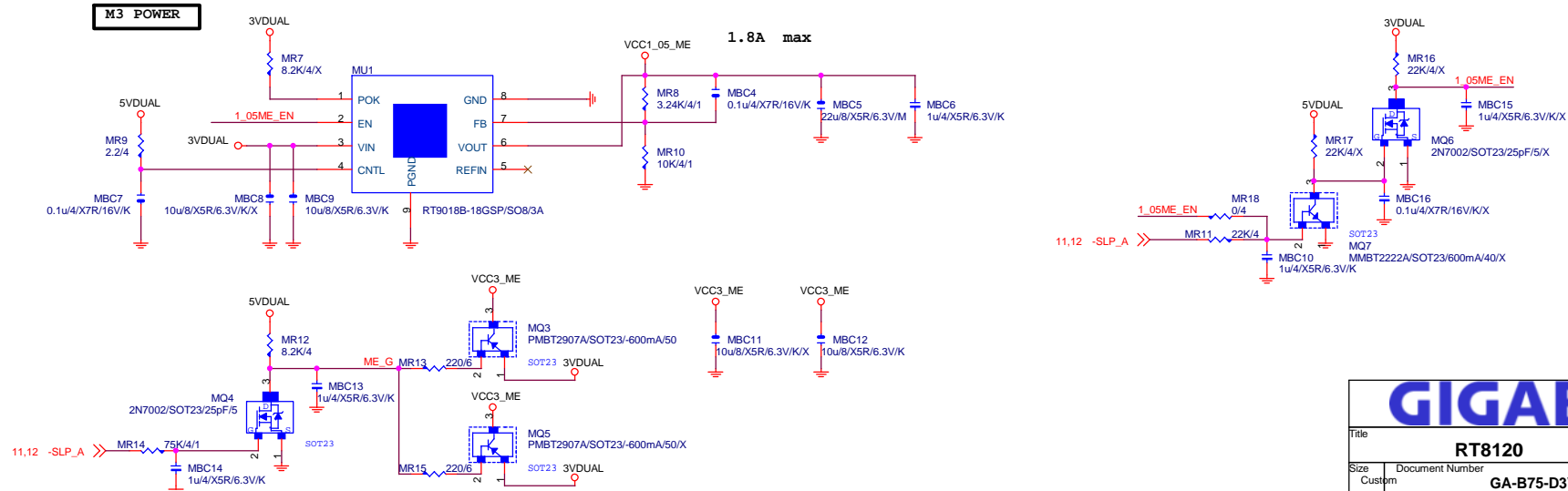
Remote sense請從最重的負載端點拉回

$$0.8 * [(R_S + R_O) / R_O] = V_{out} = 1.54V$$

PWR SEQ



M3 POWER

**GIGABYTE™**

Title			
RT8120			
Size	Document Number		Rev
Custom	GA-B75-D3V		1.0
Date:	Monday, January 30, 2012	Sheet	33 of 34

DVI LEVEL SHIFT



DVI-D/24P/SC/RA/D/SH/[11NR6-501024-31R]
DVI無鐵殼料號: 11NR6-501024-31R

DVI有鐵殼料號:11NR6-501024-31R

Gigabyte Technology

DVI

GA-B75-D3V

Rev
1.0

Date: Monday, January 30, 2012 Sheet 34 of 34

She	
-----	--

34
