Model Name: GA-B85M-D3V

Revision 2.01

SHEET	TITLE
01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	CPU_LGA1150-A
05	CPU_LGA1150-B
06	CPU_LGA1150-C
07	DDR III CHANNEL A
08	DDR III CHANNEL B
09	PCH_FDI,DMI,USB,PCIE,NVRAM
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 EXPRESS X1 *2 SLOT
16	PCI SLOT
17	ITE 8620 LPC IO
18	COM,KB_MS_USB,USB30_20
19	HWM,FAN CTRL,OV,-PROCHOT
20	DUAL BIOS
21	FP,FUSB,SPK,SATALED
22	Realtek ALC887-VD2
23	REAR AUDIO JACK
24	REALTEK RTL8111F
25	DISCRETE POWER
26	ATX
27	VCORE ISL95820_1

SHEET	TITLE
28	VCORE ISL95820_2
29	RT8120_DDR POWER
30	LPT, M3 POWER
31	DVI
32	IT8892E

Gigabyte Technology

Title: Cover Sheet		
Size: Custom	Document Number: GA-B85M-D3V	Rev: 2.01
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Model Name: GA-B85M-D3V

Revision 2.01

Component value change history

2013/11/25

Data	Change Item	Reason
2013/06/26	SWAP NET	
2013/06/28	ADD RSMRST DELAY	
2013/08/06	Update to R1.1	
2013/08/19	REMOVE WR57 FIX IT8620 TEMP ISSUE	FPBOM:9MB85MD3V-00-11B
2013/09/13	Update to R1.11	
	Follow Crystal Trace Rule	
	SYS_FAN, DDR 0ohm 0402 -> 0603	
	Update Fuse 1206 Footprint "POLYSWITCH-1206-1"	
	Update PPAK Footprint "Q_TDSON8-GDS-T"	
2013/10/22	NX1: 25M/20p -> 12p	FPBOM:9MB85MD3V-00-11C
	NC7, NX8: 27p -> 10p	
2013/11/04	NC7, NX8: 10p -> 15p	FPBOM:9MB85MD3V-00-11D
2013/11/04	Update to R2.0	
	DEL DVI Level SHIFT	
	SPI 64M -> 32M, Remove SBA Function	
	Remove M3 Power BOM (Reserve Location)	
	ADD F_USB1, F_USB2 Short Protect	
2013/11/06	ADD R173 Reserve for S3 Blinking	
2013/11/25	R2.01:SHT PAD~R364,DR153,R60;MR17~0805 FUSE	

Circuit or PCB layout change

DATE	Change Item	Reason

Gigabyte Technology

Title: BOM & PCB MODIFY HISTORY

Size: Custom | Document Number: GA-B85M-D3V | Rev: 2.01

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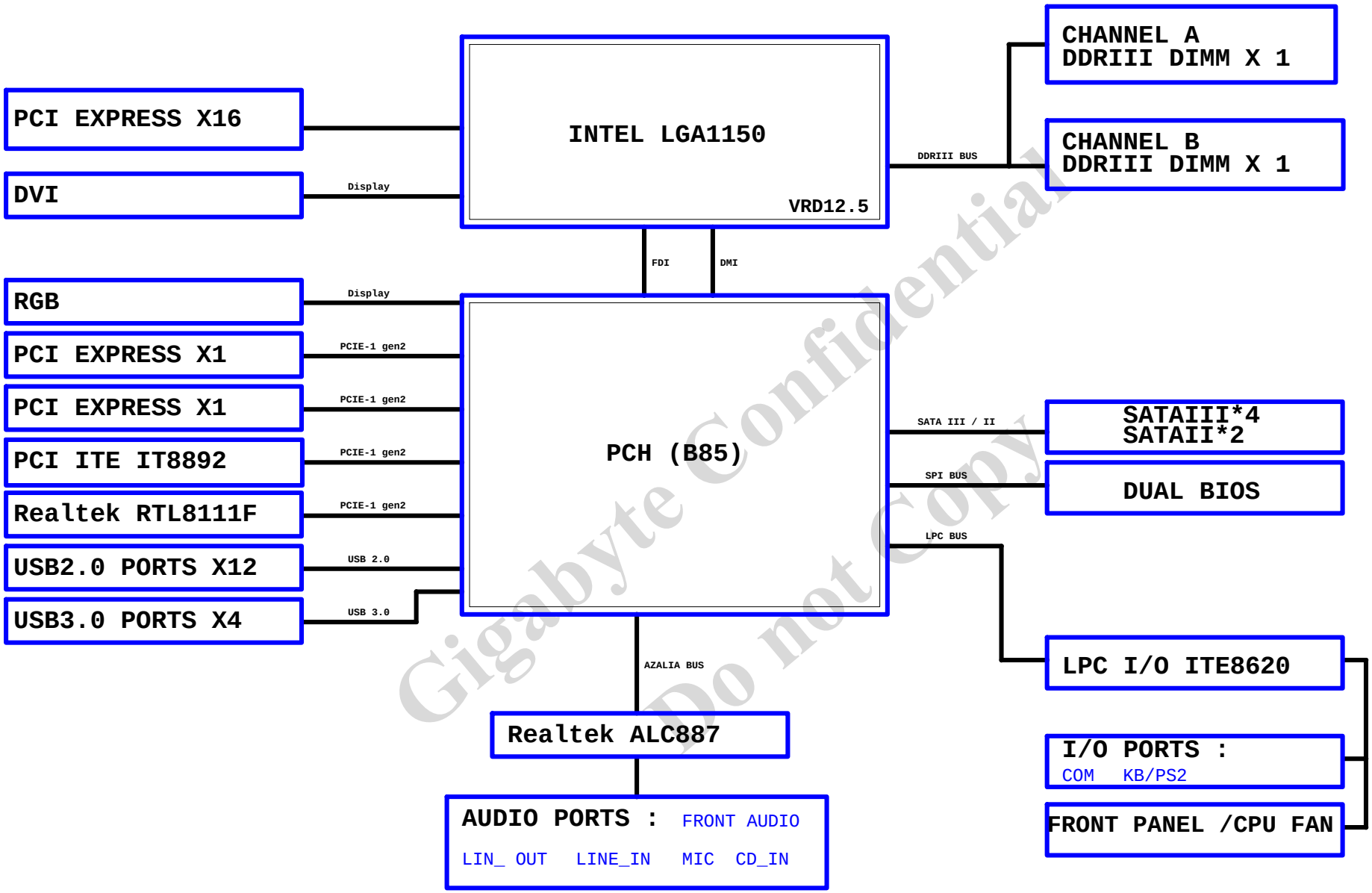
BLOCK DIAGRAM



Gigabyte Technology		
Title: BLOCK DIAGRAM		
Size: C	Document Number: GA-B85M-D3V	Rev: 2.01
Date: Thursday, November 28, 2013	Sheet 3 of 32	

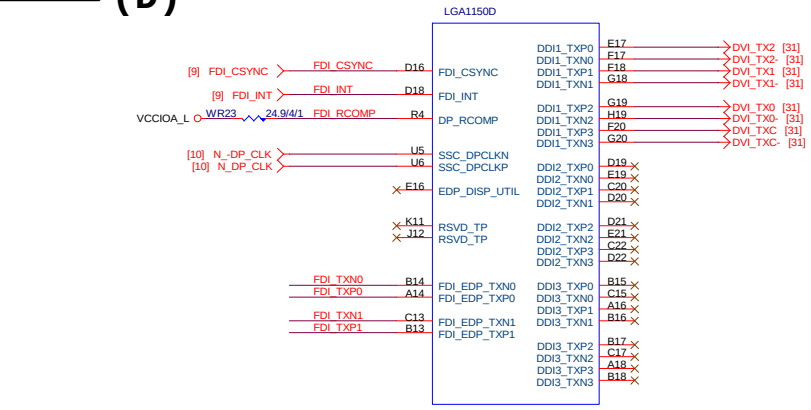
LGA1150 (E)

CFG	H	L	NOTE
0	RSVD	RSVD	RSVD
1	RSVD	RSVD	RSVD
2	**NORM**	**Reverse**	LANE REVERSAL[0],x16
3	RSVD	RSVD	RSVD
4	**Disable**	**Enable**	eDP Enable
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	X8,X4,X4

CFG 0-17 all internal PULL-UP

LGA1150 (D)



FDI:12/4/5/4/12(breakout min 6/4/4/4/6)
Impedance=85 +- 17.5%

FDI_TXP[0..1] → FDI_TXP[0..1] [9]
FDI_TXN[0..1] → FDI_TXN[0..1] [9]

LGA1155 (C)

PCIEX16:16/5/5/5/16(breakout min 10/4/4/4/10)
Impedance=80 +- 17.5%

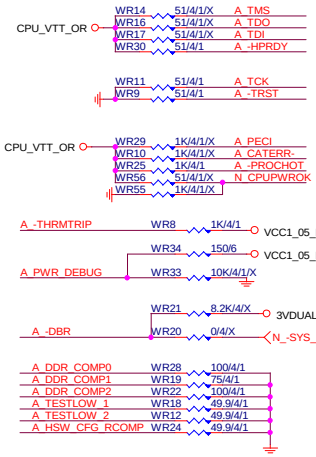
DMI:12/4/4/4/12(breakout min 8/4/4/4/8)
Impedance=85 +- 17.5%

PA_EXP_TXP[0..15] → PA_EXP_TXP[0..15] [14]
PA_EXP_TXN[0..15] → PA_EXP_TXN[0..15] [14]
PA_EXP_RXP[0..15] → PA_EXP_RXP[0..15] [14]
PA_EXP_RXN[0..15] → PA_EXP_RXN[0..15] [14]

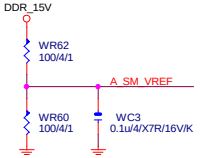
-CPURST

CPU SVID

CPU PU/PD



SM REF



Title	CPU LGA1150-A
Size	Custom
Document Number	GA-B85M-D3V
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Gigabyte Technology

LGA1150 (A)

LGA1150A

MAAA0	AU13	DDR0_MA0	DDR0_DQ0	AD38	MDA0
MAAA1	AV16	DDR0_MA1	DDR0_DQ1	AD39	MDA1
MAAA2	AU16	DDR0_MA2	DDR0_DQ2	AF38	MDA2
MAAA3	AW17	DDR0_MA3	DDR0_DQ3	AF39	MDA3
MAAA4	AU17	DDR0_MA4	DDR0_DQ4	AD37	MDA4
MAAA5	AW18	DDR0_MA5	DDR0_DQ5	AD40	MDA5
MAAA6	AV17	DDR0_MA6	DDR0_DQ6	AE37	MDA6
MAAA7	AT18	DDR0_MA7	DDR0_DQ7	AF40	MDA7
MAAA8	AU18	DDR0_MA8	DDR0_DQ8	AH40	MDA8
MAAA9	AT19	DDR0_MA9	DDR0_DQ9	AH39	MDA13
MAAA10	AW11	DDR0_MA10	DDR0_DQ10	AK38	MDA10
MAAA11	AV19	DDR0_MA11	DDR0_DQ11	AK39	MDA11
MAAA12	AU19	DDR0_MA12	DDR0_DQ12	AH37	MDA12
MAAA13	AY10	DDR0_MA13	DDR0_DQ13	AH38	MDA8
MAAA14	AT20	DDR0_MA14	DDR0_DQ14	AK37	MDA14
MAAA15	AU21	DDR0_MA15	DDR0_DQ15	AK40	MDA15
			DDR0_DQ16	AM40	MDA17
MODT_A0	AW10	DDR0_ODT0	DDR0_DQ17	AM39	MDA21
MODT_A1	AY8	DDR0_ODT1	DDR0_DQ18	AP38	MDA18
	AW9	DDR0_ODT2	DDR0_DQ19	AP39	MDA19
	AU8	DDR0_ODT3	DDR0_DQ20	AM37	MDA20
			DDR0_DQ21	AM38	MDA16
	AW33	DDR0_ECC0	DDR0_DQ22	AP37	MDA22
	AV33	DDR0_ECC1	DDR0_DQ23	AP40	MDA23
	AU31	DDR0_ECC2	DDR0_DQ24	AV37	MDA25
	AV31	DDR0_ECC3	DDR0_DQ25	AW37	MDA29
	AT33	DDR0_ECC4	DDR0_DQ26	AU35	MDA26
	AU33	DDR0_ECC5	DDR0_DQ27	AV35	MDA27
	AT31	DDR0_ECC6	DDR0_DQ28	AT37	MDA28
	AW31	DDR0_ECC7	DDR0_DQ29	AU37	MDA24
			DDR0_DQ30	AT35	MDA30
			DDR0_DQ31	AW35	MDA31
SBAA0	AV12	DDR0_BA0	DDR0_DQ32	AY6	MDA33
SBAA1	AY11	DDR0_BA1	DDR0_DQ33	AU6	MDA37
SBAA2	AT21	DDR0_BA2	DDR0_DQ34	AV4	MDA34
			DDR0_DQ35	AU4	MDA35
CKEA0	AV22	DDR0_CKE0	DDR0_DQ36	AW6	MDA36
CKEA1	AT23	DDR0_CKE1	DDR0_DQ37	AV6	MDA32
	AU22	DDR0_CKE2	DDR0_DQ38	AW4	MDA38
	AU23	DDR0_CKE3	DDR0_DQ39	AY4	MDA39
			DDR0_DQ40	AR1	MDA41
-CSA0	AU14	DDR0_CS_N0	DDR0_DQ41	AR4	MDA45
-CSA1	AV9	DDR0_CS_N1	DDR0_DQ42	AN3	MDA42
	AU10	DDR0_CS_N2	DDR0_DQ43	AN4	MDA43
	AW8	DDR0_CS_N3	DDR0_DQ44	AR2	MDA44
			DDR0_DQ45	AR3	MDA40
DCLKA0	AY15	DDR0_CLK_P0	DDR0_DQ46	AN2	MDA46
-DCLKA0	AY16	DDR0_CLK_N0	DDR0_DQ47	AN1	MDA47
DCLKA1	AW15	DDR0_CLK_P1	DDR0_DQ48	AL1	MDA49
-DCLKA1	AV15	DDR0_CLK_N1	DDR0_DQ49	AL4	MDA53
	AY14	DDR0_CLK_P2	DDR0_DQ50	AJ3	MDA50
	AW14	DDR0_CLK_N2	DDR0_DQ51	AJ4	MDA51
	AW13	DDR0_CLK_P3	DDR0_DQ52	AL2	MDA52
	AY13	DDR0_CLK_N3	DDR0_DQ53	AL3	MDA48
			DDR0_DQ54	AJ2	MDA54
	AW12	RSVD	DDR0_DQ55	AJ1	MDA55
			DDR0_DQ56	AG1	MDA57
			DDR0_DQ57	AG4	MDA61
			DDR0_DQ58	AE3	MDA58
			DDR0_DQ59	AE4	MDA59
			DDR0_DQ60	AG2	MDA60
			DDR0_DQ61	AG3	MDA56
			DDR0_DQ62	AE2	MDA62
			DDR0_DQ63	AE1	MDA63
-SRASA	AU12	DDR0_RAS*	DDR0_DQS_P0	AE39	DQSA0
-SWEA	AU11	DDR0_WE*	DDR0_DQS_P1	AJ39	DQSA1
	AV20	RSVD	DDR0_DQS_P2	AN39	DQSA2
	AW27	RSVD	DDR0_DQS_P3	AV36	DQSA3
			DDR0_DQS_P4	AV5	DQSA4
			DDR0_DQS_P5	AP3	DQSA5
-SCASA	AU9	DDR0_CAS*	DDR0_DQS_P6	AK3	DQSA6
			DDR0_DQS_P7	AE3	DQSA7
				AV32	
			DDR0_DQS_P8	AE38	-DQSA0
			DDR0_DQS_N0	AJ38	-DQSA1
			DDR0_DQS_N1	AN38	-DQSA2
			DDR0_DQS_N2	AU36	-DQSA3
			DDR0_DQS_N3	AW5	-DQSA4
			DDR0_DQS_N4	AP2	-DQSA5
			DDR0_DQS_N5	AK2	-DQSA6
			DDR0_DQS_N6	AF2	-DQSA7
			DDR0_DQS_N7	AU32	
			DDR0_DQS_N8		
-DDR3_RST	AK22	DDR_RESET*			

[7] -SRASA
[7] -SWEA
[7] -SCASA
[7] -DDR3_RST
WR61 0/4/SHT/M/X
WC4 0.1u/4/X7R/16V/K/X

HASWELL/[10SC1-F01150-11R_10SC1-F01150-12R]

LGA1150 (B)

LGA1150B

MAAB0	AL19	DDR1_MA0	DDR1_DQ0	AE34	MDB0
MAAB1	AK23	DDR1_MA1	DDR1_DQ1	AE35	MDB1
MAAB2	AM22	DDR1_MA2	DDR1_DQ2	AG35	MDB2
MAAB3	AM23	DDR1_MA3	DDR1_DQ3	AH35	MDB3
MAAB4	AP23	DDR1_MA4	DDR1_DQ4	AD34	MDB4
MAAB5	AL23	DDR1_MA5	DDR1_DQ5	AD35	MDB5
MAAB6	AY24	DDR1_MA6	DDR1_DQ6	AG34	MDB6
MAAB7	AV25	DDR1_MA7	DDR1_DQ7	AH34	MDB7
MAAB8	AU26	DDR1_MA8	DDR1_DQ8	AL34	MDB8
MAAB9	AW25	DDR1_MA9	DDR1_DQ9	AL35	MDB9
MAAB10	AP18	DDR1_MA10	DDR1_DQ10	AK31	MDB10
MAAB11	AY25	DDR1_MA11	DDR1_DQ11	AL31	MDB11
MAAB12	AV26	DDR1_MA12	DDR1_DQ12	AK34	MDB12
MAAB13	AR15	DDR1_MA13	DDR1_DQ13	AK35	MDB13
MAAB14	AV27	DDR1_MA14	DDR1_DQ14	AK32	MDB14
MAAB15	AY28	DDR1_MA15	DDR1_DQ15	AL32	MDB15
			DDR1_DQ16	AN34	MDB17
MODT_B0	AM17	DDR1_ODT0	DDR1_DQ17	AP34	MDB21
MODT_B1	AL16	DDR1_ODT1	DDR1_DQ18	AN31	MDB19
	AM16	DDR1_ODT2	DDR1_DQ19	AP31	MDB23
	AK15	DDR1_ODT3	DDR1_DQ20	AN35	MDB20
			DDR1_DQ21	AP35	MDB16
	AM26	DDR1_ECC0	DDR1_DQ22	AN32	MDB18
	AM25	DDR1_ECC1	DDR1_DQ23	AP32	MDB22
	AP25	DDR1_ECC2	DDR1_DQ24	AM29	MDB25
	AP26	DDR1_ECC3	DDR1_DQ25	AM28	MDB28
	AL26	DDR1_ECC4	DDR1_DQ26	AR29	MDB27
	AL25	DDR1_ECC5	DDR1_DQ27	AR28	MDB30
	AR26	DDR1_ECC6	DDR1_DQ28	AL29	MDB24
	AR25	DDR1_ECC7	DDR1_DQ29	AL28	MDB29
			DDR1_DQ30	AP29	MDB26
SBAB0	AK17	DDR1_BA0	DDR1_DQ31	AP28	MDB31
SBAB1	AL18	DDR1_BA1	DDR1_DQ32	AR12	MDB32
SBAB2	AW28	DDR1_BA2	DDR1_DQ33	AP12	MDB33
			DDR1_DQ34	AL13	MDB34
CKEB0	AW29	DDR1_CKE0	DDR1_DQ35	AL12	MDB35
CKEB1	AY29	DDR1_CKE1	DDR1_DQ36	AR13	MDB36
	AU28	DDR1_CKE2	DDR1_DQ37	AP13	MDB37
	AU29	DDR1_CKE3	DDR1_DQ38	AM13	MDB38
			DDR1_DQ39	AM12	MDB39
-CSB0	AP17	DDR1_CS_N0	DDR1_DQ40	AR9	MDB45
-CSB1	AN15	DDR1_CS_N1	DDR1_DQ41	AP9	MDB41
	AN17	DDR1_CS_N2	DDR1_DQ42	AR6	MDB47
	AL15	DDR1_CS_N3	DDR1_DQ43	AP6	MDB43
			DDR1_DQ44	AR10	MDB44
			DDR1_DQ45	AP10	MDB40
			DDR1_DQ46	AR7	MDB46
			DDR1_DQ47	AP7	MDB42
DCLKB0	AM20	DDR1_CLK_P0	DDR1_DQ48	AM9	MDB52
-DCLKB0	AM21	DDR1_CLK_N0	DDR1_DQ49	AL9	MDB53
DCLKB1	AP22	DDR1_CLK_P1	DDR1_DQ50	AL6	MDB50
-DCLKB1	AP21	DDR1_CLK_N1	DDR1_DQ51	AL7	MDB55
			DDR1_DQ52	AM10	MDB48
	AN20	DDR1_CLK_P2	DDR1_DQ53	AL10	MDB49
	AN21	DDR1_CLK_N2	DDR1_DQ54	AM6	MDB54
	AP19	DDR1_CLK_P3	DDR1_DQ55	AM7	MDB51
	AP20	DDR1_CLK_N3	DDR1_DQ56	AH6	MDB61
			DDR1_DQ57	AH7	MDB60
-SCASB	AP16	DDR1_CAS*	DDR1_DQ58	AE6	MDB59
	AL20	RSVD	DDR1_DQ59	AE7	MDB63
-SRASB	AM18	DDR1_RAS*	DDR1_DQ60	AJ6	MDB56
-SWEB	AK16	DDR1_WE*	DDR1_DQ61	AJ7	MDB57
			DDR1_DQ62	AF6	MDB58
VREF_DQA	AB39	DDR_VREF_DQ0	DDR1_DQ63	AF7	MDB62
VREF_DQB	AB40	DDR_VREF_DQ1	DDR1_DQS_P0	AE35	DQSB0
			DDR1_DQS_P1	AL33	DQSB1
			DDR1_DQS_P2	AP33	DQSB2
			DDR1_DQS_P3	AN28	DQSB3
			DDR1_DQS_P4	AN12	DQSB4
			DDR1_DQS_P5	AP8	DQSB5
			DDR1_DQS_P6	AL8	DQSB6
			DDR1_DQS_P7	AG7	DQSB7
			DDR1_DQS_P8	AN25	
			DDR1_DQS_N0	AF34	-DQSB0
			DDR1_DQS_N1	AK33	-DQSB1
			DDR1_DQS_N2	AN33	-DQSB2
			DDR1_DQS_N3	AP29	-DQSB3
			DDR1_DQS_N4	AN13	-DQSB4
			DDR1_DQS_N5	AR8	-DQSB5
			DDR1_DQS_N6	AM8	-DQSB6
			DDR1_DQS_N7	AG6	-DQSB7
			DDR1_DQS_N8	AN26	

[8] SBAB0
[8] SBAB1
[8] SBAB2
[8] CKEB0
[8] CKEB1
[8] -CSB0
[8] -CSB1
[8] DCLKB0
[8] -DCLKB0
[8] DCLKB1
[8] -DCLKB1
[8] -SCASB
[8] -SRASB
[8] -SWEB
[7] VREF_DQA
[8] VREF_DQB

VREF_DQA
VREF_DQB
WBC34 0.1u/4/X7R/16V/K
WBC33 0.1u/4/X7R/16V/K
Place in CPU bottom side

HASWELL/[10SC1-F01150-11R_10SC1-F01150-12R]

LGA1150 (CR)

CR
CPU RETAINTION/X

LGA1150_P

ILM_BP/1156/CSP/ILM_BP/1156/CSP/[12KRC-0F0001-52R_12KRC-0F0001-51R]

DDR BUS

[7] MODT_A[0..1]
[8] MODT_B[0..1]
[7] MDA[0..63]
[8] MDB[0..63]
[7] DQSA[0..7]
[7] -DQSA[0..7]
[7] MAAA[0..15]
[8] MAAB[0..15]
[8] DQSB[0..7]
[8] -DQSB[0..7]

MODT_A[0..1]
MODT_B[0..1]
MDA[0..63]
MDB[0..63]
DQSA[0..7]
-DQSA[0..7]
MAAA[0..15]
MAAB[0..15]
DQSB[0..7]
-DQSB[0..7]

Gigabyte Technology

Title	CPU LGA1150-B		
Size: Custom	Document Number: GA-B85M-D3V		Rev: 2.01
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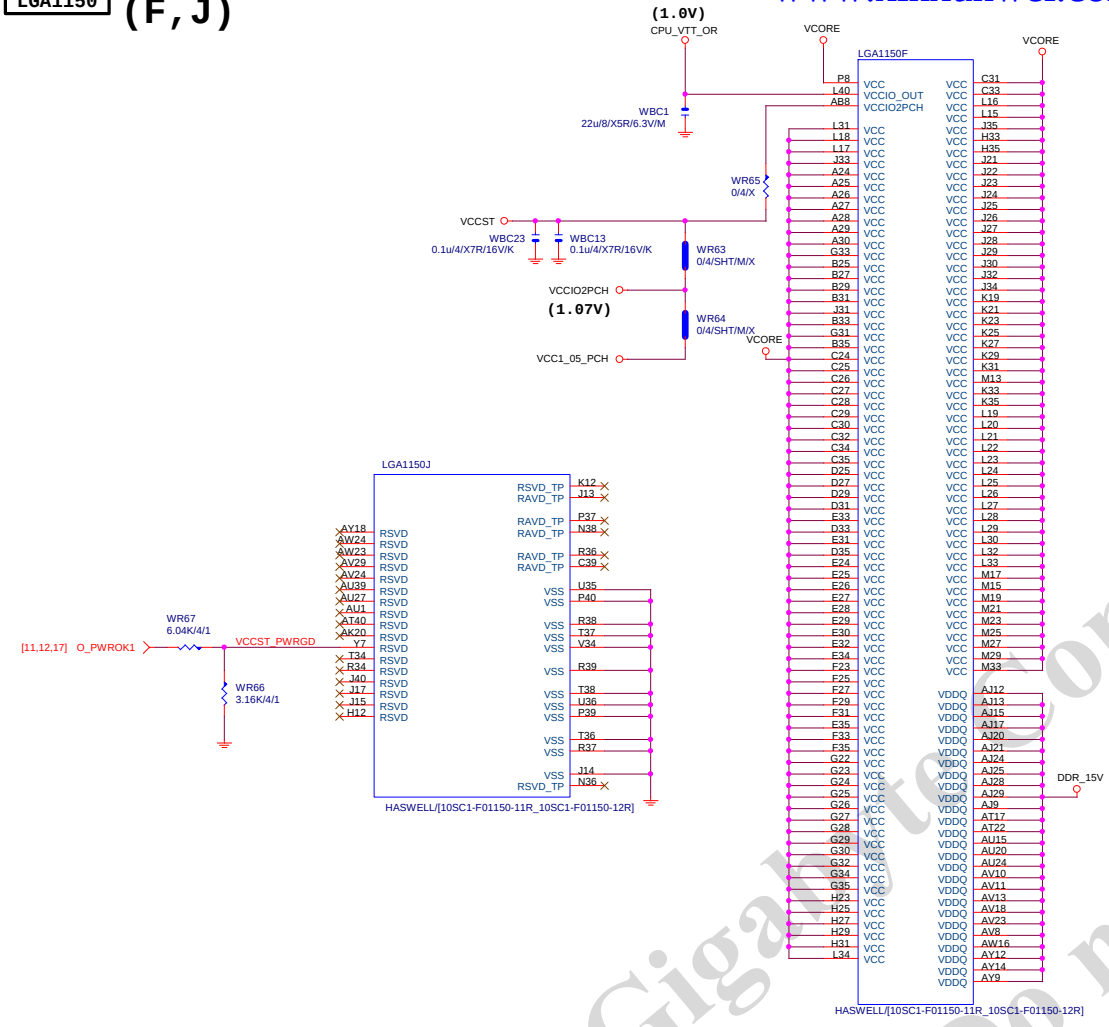
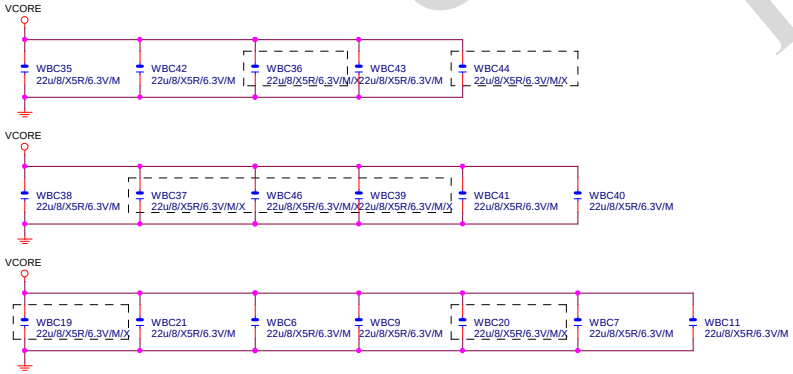
LGA1150 (F,J)



LGA1155 (G,H,I)

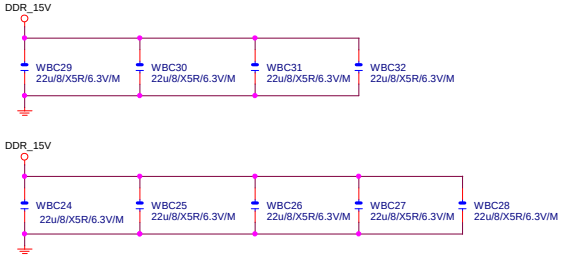
VCore CAP

(X18)



DDR CAP

(X9)



Gigabyte Technology		
Title: CPU LGA1150-C		
Size: Custom	Document Number: GA-B85M-D3V	Rev: 2.01
Date: Thursday, November 28, 2013	Sheet 6 of 32	

DDR3 (A)

DDR3_1

DDRVTT

DDR_15V

N_SMBDATA
N_SMBCLK

MC10 100p/4/NPO/50V/J/X
MC11 100p/4/NPO/50V/J/X

【技術通報R&D技術通報162】
VDDSPD SHORT PROTECT
R0603-RH

VCC3 MF1 SPR-P200T/6V/8/S VDDSPD

MC4 0.1u/4/X7R/16V/K
VDDSPD

MC5 VREF_DDRA
MC1 VREF_DQDDRA
0.1u/4/X7R/16V/K

[8,12,14,15,16,19,21,27] N_SMBCLK
[8,12,14,15,16,19,21,27] N_SMBDATA

[5] SBAA2
[5] SBAA1
[5] SBAA0

[5] CKEA1
[5] CKEA0

[5] -CSA1
[5] -CSA0

[5] -DCLKA1
[5] DCLKA1

[5] -DCLKA0
[5] DCLKA0

[5] MAAA[0..15]

[5,8] -DDR3_RST
[5] -SCASA
[5] -SRASA
[5] -SWEA

-DDR3_RST
MC6 100p/4/NPO/50V/J

DDR3/240/BK/VA/D

BLACK CONNECTOR

MDQ[0..63] [5]

MODT_A[0..1] MODT_A[0..1] [5]
-DQSA[0..7] -DQSA[0..7] [5]
DQSA[0..7] DQSA[0..7] [5]

DDR3 VREF

DDR_15V
MR15 1K/4/1
MR14 1K/4/1
VREF_DDRA

DDR_15V
MR4 1K/4/1
MR5 1K/4/1
MR1 10/4
VREF_DQDDRA
VREF_DQA [5]

DDR15V Decouple

DDR_15V
MEC1 560u/FP/D/6.3V/69/A/11m/[11CO2-695600-09R]
MEC2 560u/FP/D/6.3V/69/A/11m/[11CO2-695600-09R]

DDR_15V
MBC1 0.1u/4/X7R/16V/K
MBC2 0.1u/4/X7R/16V/K
MBC3 0.1u/4/X7R/16V/K
MBC24 0.1u/4/X7R/16V/K
MBC12 0.1u/4/X7R/16V/K
MBC14 0.1u/4/X7R/16V/K

DDR_15V
MBC15 1u/4/X5R/6.3V/K
MBC17 1u/4/X5R/6.3V/K
MBC27 1u/4/X5R/6.3V/K
MBC29 1u/4/X5R/6.3V/K
MBC35 1u/4/X5R/6.3V/K
MBC36 1u/4/X5R/6.3V/K
MBC37 1u/4/X5R/6.3V/K
MBC47 1u/4/X5R/6.3V/K
MBC9 1u/4/X5R/6.3V/K

DDRVTT Decouple

DDRVTT
MBC40 10u/6/X5R/6.3V/M

DDRVTT
MBC18 1u/4/X5R/6.3V/K
MBC10 0.1u/4/Y5V/16V/Z

Gigabyte Technology

Title: DDRIII CHANNEL A

Size: Custom | Document Number: GA-B885M-D3V | Rev: 2.01

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DDR3 (B)

DDR3_2

DDRVTT

DDR_15V

MC2 0.1u/4/X7R/16V/K

VDDSPD

MC14 0.1u/4/X7R/16V/K VREF_DDRB

MC9 0.1u/4/X7R/16V/K VREF_DQDDRB

[7,12,14,15,16,19,21,27] N_SMBCLK

[7,12,14,15,16,19,21,27] N_SMBDATA

[5] SBAB2 [5] SBAB1 [5] SBAB0

[5] CKEB1 [5] CKEB0

[5] -CSB1 [5] -CSB0

[5] -DCLKB1 [5] DCLKB1

[5] -DCLKB0 [5] DCLKB0

[5] MAAB[0..15]

[5,7] -DDR3_RST [5] -SCASB [5] -SRASB [5] -SWEB

Pin	Net	Pin	Net
120	VTT	48	FREE
240	VTT	49	FREE
		187	FREE
		198	FREE
2,5,8,11,14,17,20,23,26,29,32,35,38,41,44,47,80,83,86,89,92,95,98,101,104,107,110,113,116,119,121,124,127,130,133,136,139,142,145,148,151,154,157,160,163,166,199,202,205,208,211,214,217,220,223,226,229,232,235,239	VSS	79	RSVD
		77	ODT1 (MODT_B1)
		195	ODT0 (MODT_B0)
		68	NC/PAR_IN
		53	NC/ERR_OUT
		167	NC/TEST*
		39	CB0
		40	CB1
		45	CB2
		46	CB3
		158	CB4
		159	CB5
		164	CB6
		165	CB7
		7	DQS0 (DQSB0)
		6	DQS0* (-DQSB0)
		16	DQS1 (DQSB1)
		15	DQS1* (-DQSB1)
		25	DQS2 (DQSB2)
		24	DQS2* (-DQSB2)
		34	DQS3 (DQSB3)
		33	DQS3* (-DQSB3)
		85	DQS4 (DQSB4)
		84	DQS4* (-DQSB4)
		94	DQS5 (DQSB5)
		93	DQS5* (-DQSB5)
		103	DQS6 (DQSB6)
		102	DQS6* (-DQSB6)
		112	DQS7 (DQSB7)
		111	DQS7* (-DQSB7)
		43	DQS8
		42	DQS8*
		125	DM0/DQS9
		126	NC/DQS9*
		134	DM1/DQS10
		135	NC/DQS10*
		143	DM2/DQS11
		144	NC/DQS11*
		152	DM3/DQS12
		153	NC/DQS12*
		203	DM4/DQS13
		204	NC/DQS13*
		212	DM5/DQS14
		213	NC/DQS14*
		221	DM6/DQS15
		222	NC/DQS15*
		230	DM7/DQS16
		231	NC/DQS16*
		161	DM8/DQS17
		162	NC/DQS17*
51,54,57,60,62,65,66,69,72,75,78,170,173,176,179,182,183,186,189,191,194,197	VDD		
236	VDDSPD		
67	VREFCA		
1	VREFDQ		
118	SCL (N_SMBCLK)		
238	SDA (N_SMBDATA)		
237	SA1		
117	SA0		
52	BA2 (SBAB2)		
190	BA1 (SBAB1)		
71	BA0 (SBAB0)		
169	CKE1 (CKEB1)		
50	CKE0 (CKEB0)		
76	S1* (-CSB1)		
193	S0* (-CSB0)		
64	CK1/NU* (-DCLKB1)		
63	CK1/NU (DCLKB1)		
185	CK0* (-DCLKB0)		
184	CK0 (DCLKB0)		
188	A0 (MAAB0)		
181	A1 (MAAB1)		
61	A2 (MAAB2)		
180	A3 (MAAB3)		
59	A4 (MAAB4)		
58	A5 (MAAB5)		
178	A6 (MAAB6)		
56	A7 (MAAB7)		
177	A8 (MAAB8)		
175	A9 (MAAB9)		
70	A10/AP (MAAB10)		
55	A11 (MAAB11)		
174	A12 (MAAB12)		
196	A13 (MAAB13)		
172	A14 (MAAB14)		
171	A15 (MAAB15)		
168	RESET* (-DDR3_RST)		
74	CAS* (-SCASB)		
192	RAS* (-SRASB)		
73	WE* (-SWEB)		
		3	DQ0 (MDB0)
		4	DQ1 (MDB1)
		9	DQ2 (MDB2)
		10	DQ3 (MDB3)
		122	DQ4 (MDB4)
		123	DQ5 (MDB5)
		128	DQ6 (MDB6)
		129	DQ7 (MDB7)
		12	DQ8 (MDB8)
		13	DQ9 (MDB9)
		18	DQ10 (MDB10)
		19	DQ11 (MDB11)
		131	DQ12 (MDB12)
		132	DQ13 (MDB13)
		137	DQ14 (MDB14)
		138	DQ15 (MDB15)
		21	DQ16 (MDB16)
		22	DQ17 (MDB17)
		27	DQ18 (MDB18)
		28	DQ19 (MDB19)
		140	DQ20 (MDB20)
		141	DQ21 (MDB21)
		146	DQ22 (MDB22)
		147	DQ23 (MDB23)
		30	DQ24 (MDB24)
		31	DQ25 (MDB25)
		36	DQ26 (MDB26)
		37	DQ27 (MDB27)
		149	DQ28 (MDB28)
		150	DQ29 (MDB29)
		155	DQ30 (MDB30)
		156	DQ31 (MDB31)
		81	DQ32 (MDB32)
		82	DQ33 (MDB33)
		87	DQ34 (MDB34)
		88	DQ35 (MDB35)
		200	DQ36 (MDB36)
		201	DQ37 (MDB37)
		206	DQ38 (MDB38)
		207	DQ39 (MDB39)
		90	DQ40 (MDB40)
		91	DQ41 (MDB41)
		96	DQ42 (MDB42)
		97	DQ43 (MDB43)
		209	DQ44 (MDB44)
		210	DQ45 (MDB45)
		215	DQ46 (MDB46)
		216	DQ47 (MDB47)
		99	DQ48 (MDB48)
		100	DQ49 (MDB49)
		105	DQ50 (MDB50)
		106	DQ51 (MDB51)
		218	DQ52 (MDB52)
		219	DQ53 (MDB53)
		224	DQ54 (MDB54)
		225	DQ55 (MDB55)
		108	DQ56 (MDB56)
		109	DQ57 (MDB57)
		114	DQ58 (MDB58)
		115	DQ59 (MDB59)
		227	DQ60 (MDB60)
		228	DQ61 (MDB61)
		233	DQ62 (MDB62)
		234	DQ63 (MDB63)

MDB[0..63] [5]

DDR3/240/BK/VA/D

BLACK CONNECTOR

-DQSB[0..7]

DQSB[0..7]

MODT_B[0..1]

-DQSB[0..7] [5]

DQSB[0..7] [5]

MODT_B[0..1] [5]

DDR3 VREF

DDR_15V

MR10 1K/4/1 VREF_DDRB

MR11 1K/4/1

DDR_15V

MR8 1K/4/1 VREF_DQDDRB

MR9 1K/4/1

MR7 10/4 VREF_DQB [5]

COUPON

COUPON1 COUPON1 1 2 COUPON/X VCC3

COUPON2 COUPON2 1 2 COUPON/X

CPU

DIMM4 DIMM2 CHA

DIMM3 DIMM1 CHB

Gigabyte Technology

Title: DDRIII CHANNEL B

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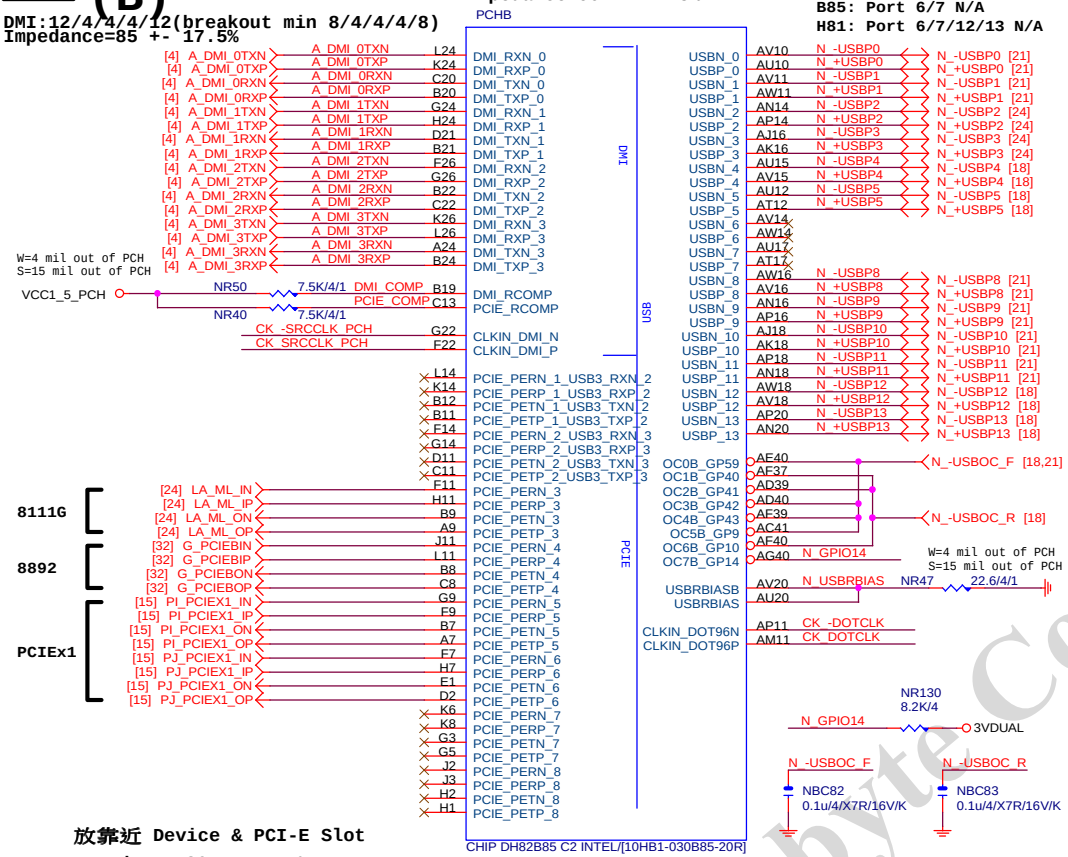
PCH (B)

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

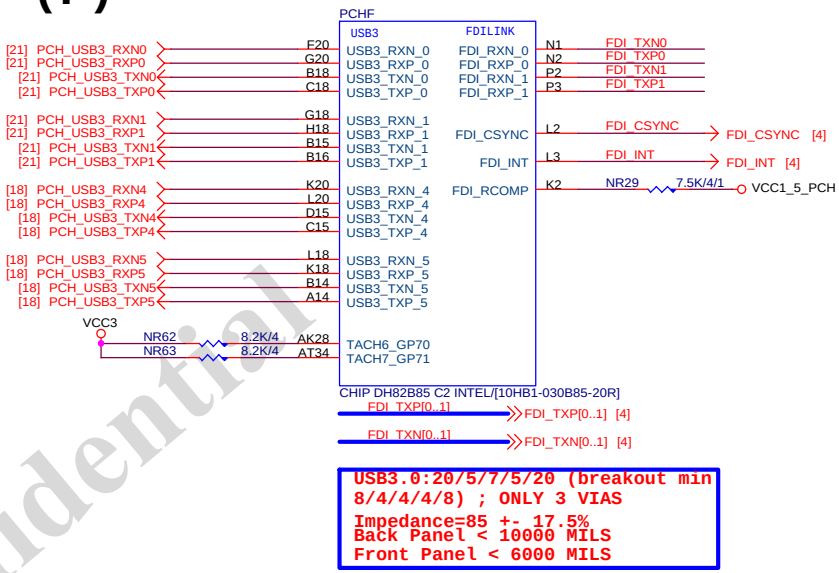
USB2.0 : 12/4.5/7.5/4.5/12 (breakout min 8/4/4/4/8)
Impedance=90 +- 17.5%

B85: Port 6/7 N/A
H81: Port 6/7/12/13 N/A



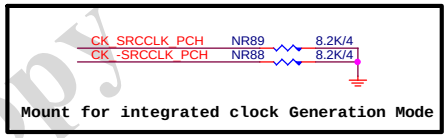
放靠近 Device & PCI-E Slot
Impedance=80 +- 17.5%
PCIEX1:16/5/5/5/16 (breakout min 8/4/4/4/8)

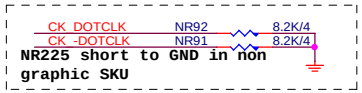
PCH (F)



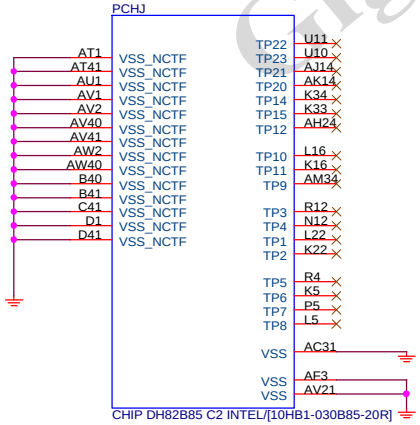
USB3.0:20/5/7/5/20 (breakout min 8/4/4/4/8) ; ONLY 3 VIAS
Impedance=85 +- 17.5%
Back Panel < 10000 MILS
Front Panel < 6000 MILS

PCH CLK PD



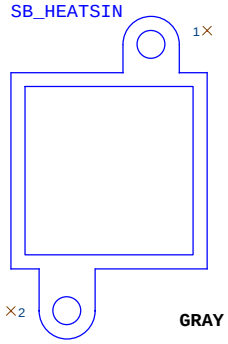


PCH (J)



PCH H/S

LOW COST ICH7 HEATSINK



USB TABLE

OC[3:0]# for Device 29 (ports 0-7)
OC[7:4]# for Device 26 (ports 8-13)

USB OC#	Configure
OC0#	F_USB30
OC1#	USB_LAN
OC2#	R_USB30
OC3#	N/A
OC4#	F_USB1
OC5#	F_USB2
OC6#	KB_MS_USB
OC7#	Not Use

Gigabyte Technology

Title: PCH FDI,DMI,USB ,PCIE,NVRAM

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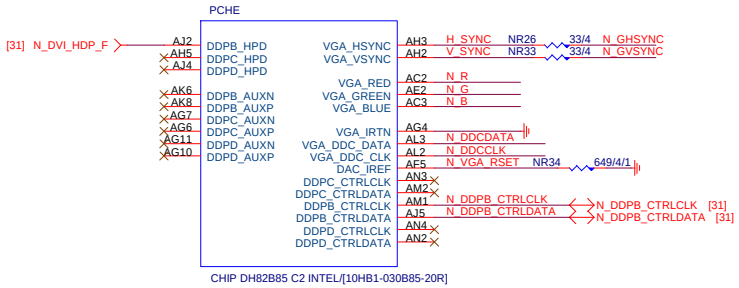
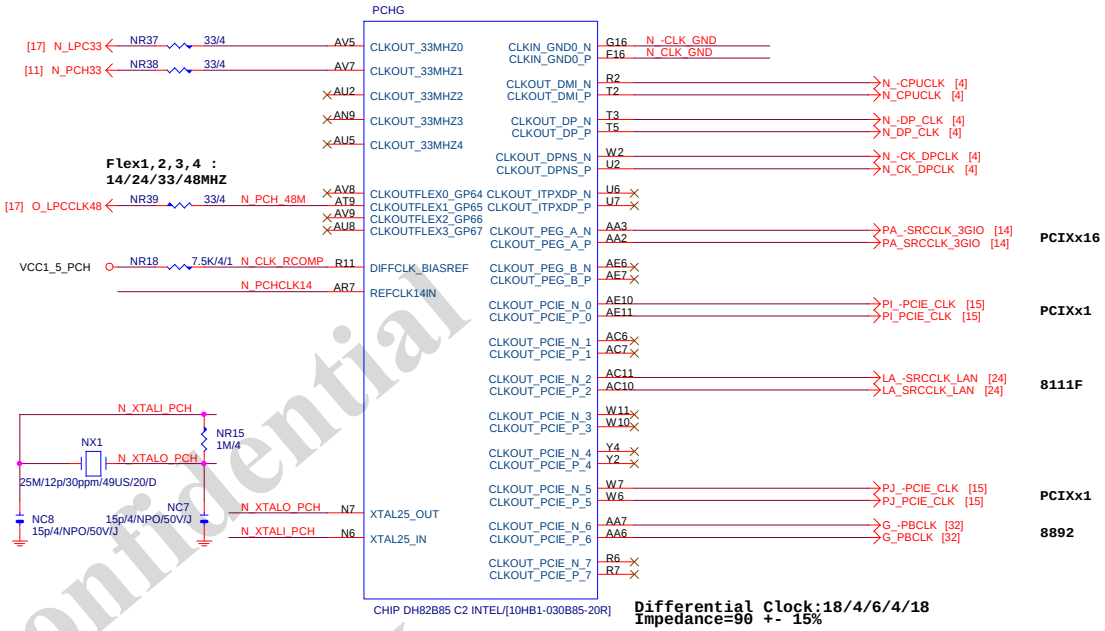
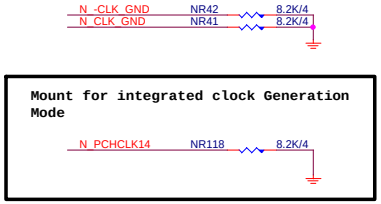
PCH (E)



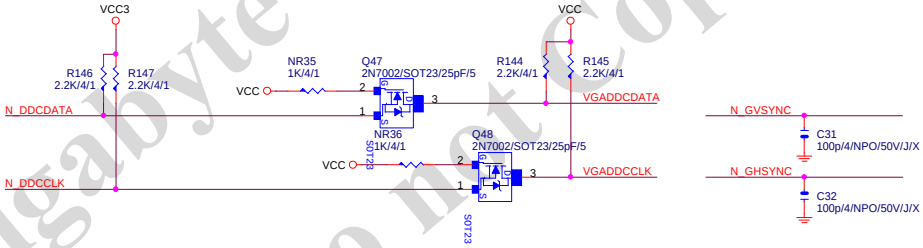
PCH (G)



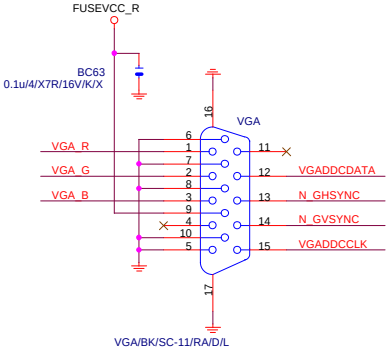
PCH CLK PD



VGA DDC

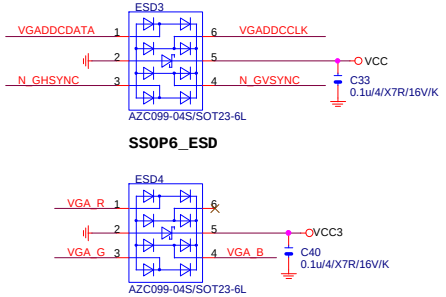


VGA CONNECTOR

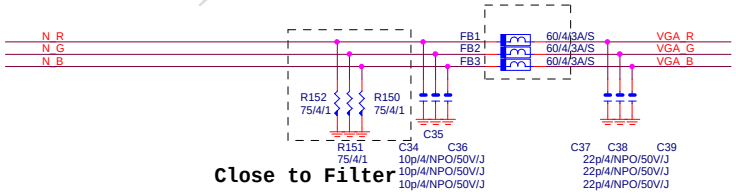


BLACK CONNECTOR

VGA ESD



VGA DDC



Close to Filter

Gigabyte Technology		
Title: PCH DISPLAY ,CLK BUFFER		
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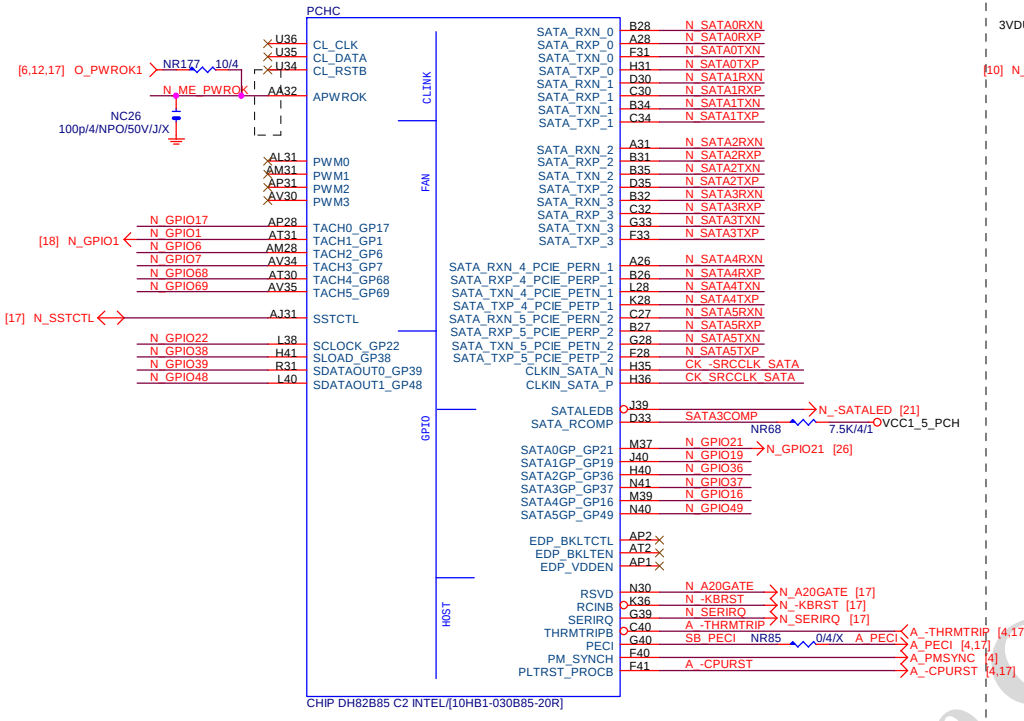
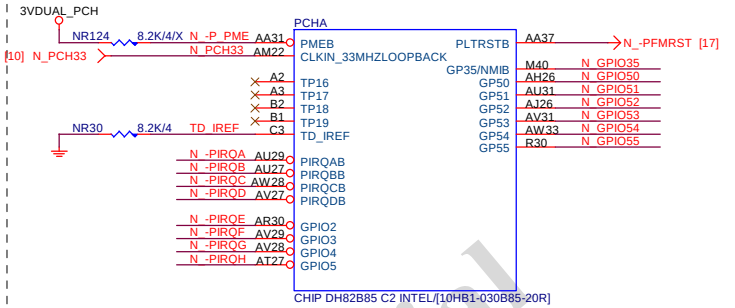
PCH (C)

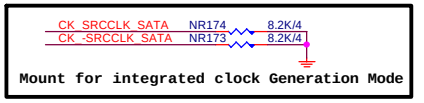
SATA3 : 20/7.5/4.5/7.5/20 (breakout min 8/4/4/4/8)
Impedance=90 +- 17.5%
SATA2 : 15/7.5/4.5/7.5/15 (breakout min 8/4/4/4/8)
Impedance=90 +- 17.5%



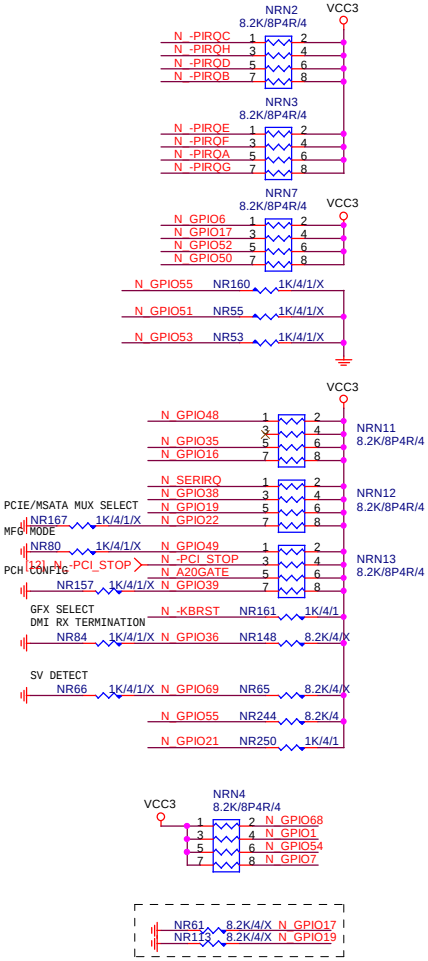
PCH (A)



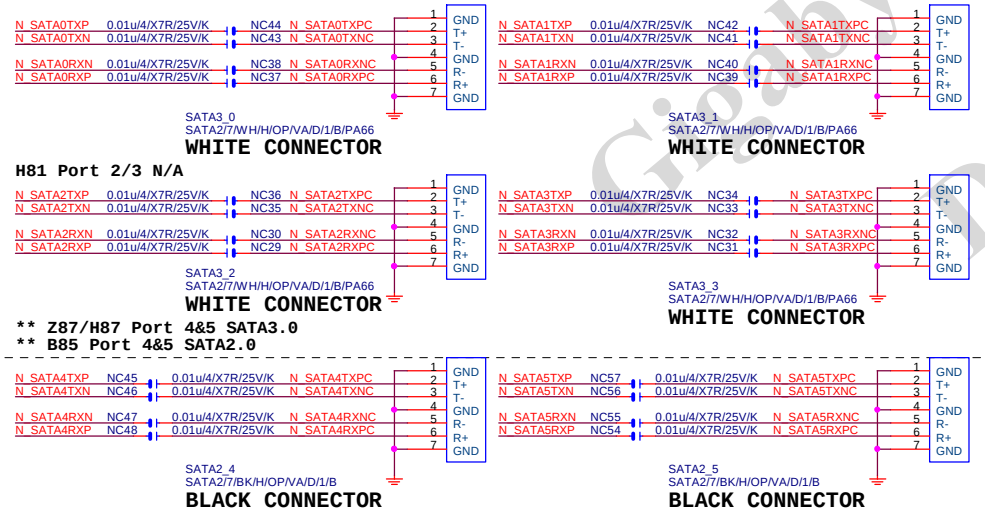
PCH CLK PD



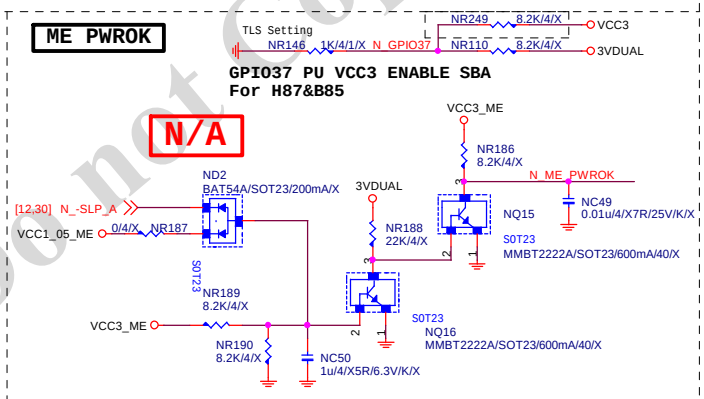
PCH PU/PD



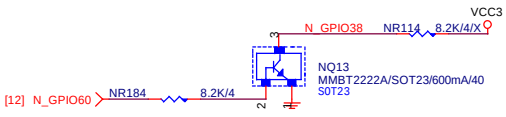
SATA CONNECTOR



ME PWROK



GPIO38 Ctrl



Gigabyte Technology

Title	PCH HOST , SATA, PCI	
Size: Custom	Document Number: GA-B85M-D3V	Rev: 2.01
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PCH (D)

[17] N_LAD[0..3] ← N_LAD[0..3]

PCHD

VCC3 NR54 8.2K/4/X N_GPIO23 AK26
[17] N_LAD0 N_LAD0 AN24 LDRQ1B_GP23
[17] N_LAD1 N_LAD1 AP26 LAD_0
[17] N_LAD2 N_LAD2 AJ24 LAD_1
[17] N_LAD3 N_LAD3 AN26 LAD_2
[17] N_-LDRQ0 N_-LDRQ0 AK22 LAD_3
[17] N_-LFRAME N_-LFRAME AP24 LDRQ0B
LFRAMEB

[22] C_ACZ_BITCLK NR45 33/4 AV23 HDA_BCLK
[22] C_-ACZ_RST NR43 33/4 AU24 HDA_RSTB
AT26 HDA_SDI0
AV22 HDA_SDI1
[22] C_ACZ_SDIN2 AT22 HDA_SDI2
AW23 HDA_SDI3
[22] C_ACZ_SDOUT NR44 33/4 A_SO AU22 HDA_SDO
[22] C_ACZ_SYNC NR46 33/4 A_SYC AV24 HDA_SYNC

[20] N_ICH_SPI_MOSI P40 SPI_MOSI_IO0
[20] N_ICH_SPI_MISO R36 SPI_MISO_IO1
[20] N_-ICH_SPI_CS R38 SPI_CS0B
[20] N_ICH_SPI_CLK U39 SPI_CLK
R35 SPI_CS1B
R40 SPI_CS2B
[20] SPI_DQ2 U40 SPI_IO2
[20] SPI_DQ3 U37 SPI_IO3

N_Y1 AN40 RTCX1
N_Y2 AN39 RTCX2
N_-RTCRST AN38 RTESTB
N_-SRTCRST AN39 SRTCRSTB
N_-INTRUDER AR41 INTRUDERB
[6,11,17] O_PWROK1 AT40 PCH_PWROK
[17,25] O_-RSMRST AM40 RSMRSTB
N_INTVRMEN AV36 INTVRMEN
N_PCH_DPWROK AV38 DPWROK
N_DSWVRMEN AM41 DSWODVREN

[17] N_-LPCPME AG31 SMBALERTB_GP11
[7,8,14,15,16,19,21,27] N_SMBCLK AG36 SMBCLK
[7,8,14,15,16,19,21,27] N_SMBDATA AG32 SMBDATA
[11] N_GPIO60 AG35 SML0ALERTB_GP60
N_SML0CLK AE32 SML0CLK
N_SML0DAT AE35 SML0DATA
[19] N_-PCH_HOT AJ39 SML1ALERTB_PCHHOTB_GP74
N_SML1CLK AK36 SML1CLK_GP58_MGPIO11
N_SML1DAT AK33 SML1DATA_GP75_MGPIO12

BMBUSYB_GP0 G38 N_GPIO0
CLKRUNB_GP32 N32 N_GPIO32
DOCKENB_GP33 AV26 N_GPIO33
STPPCIB_GP34 N34 N_-PCI_STOP N_-PCI_STOP [11]

GP8 AC40 N_-IGC_EN
LAN_PHY_PWR_CTRL_GP12 AL40
HDA_DOCK_RSTB_GP13 AN22 -D_GPIO_HRST
GP15 AC32 N_TEMP_ALART N_TEMP_ALART- [17]
GP24 AE34 A_-SKTOCC A_-SKTOCC [4]
GP28 V41 N_GPIO28
SLP_WLANB_GP29 AL39 N_GPIO29
PCIECLKRQ0B_GP73 W34 N_GPIO73
PCIECLKRQ1B_GP18 P39 N_GPIO18
PCIECLKRQ2B_GP20_SMIB P37 N_GPIO20
PCIECLKRQ3B_GP25 AA39 N_GPIO25
PCIECLKRQ4B_GP26 W35 N_GPIO26
PCIECLKRQ5B_GP44 AA36 N_GPIO44
PCIECLKRQ6B_GP45 W32 N_GPIO45
PCIECLKRQ7B_GP46 AA40 N_GPIO46

GP57 AC36 N_GPIO57
SYS_PWROK W31 N_PCH_VRMPWRGD [17]
RIB AE36 N_-RI [18]
WAKEB AK34 N_-PCIE_WAKE [14,15,24,32]
SLP_AB AN37 N_-SLP_A [11,30]
SLP_LANB AU36 N_-SLP_LAN
SLP_S0B AC35
SLP_S3B AK40 N_-SLP_S3 [17]
SLP_S4B AT35 N_-S4_S5 [17]
SLP_S5B_GP63 AA35
SUS_STATB_GP61 AD37 N_-SUSTAT
SUSCLK_GP62 W36 N_SUSCLK
GP72 AJ40 N_GPIO72
SUSACKB AJ37
SUSWARNB_SUSPWRDNACK_GP30 AG41 N_-S_WARN
DRAMPWRGD AE38 N_DRAM_PWROK
GP27 AU34 N_GPIO27
ACPRESENT_GP31_MGPIO2 AM36 N_GPIO31
SLP_SUSB AK38 N_-DEPSLP N_-DEPSLP [25]
PWRBTNB AK41 O_PWRBTSW [17]
SYS_RESETB N36 N_-SYS_RST N_-SYS_RST [4,21]
SPKR R32 N_SPKR N_SPKR [21]
PROCPWRGD D40 N_CPUPWROK N_CPUPWROK [4,17]

W37 N_PCH_RST
TP13 Y40 N_PCH_TCK
JTAG_TCK W39 N_PCH_TDI
JTAG_TDI Y38 N_PCH_TDO
JTAG_TDO W40 N_PCH_TMS
JTAG_TMS

CHIP DH82B85 C2 INTEL/[10HB1-030B85-20R]

DDR_15V
NR131 680/4/1
N_DRAM_PWROK N_DRAM_PWROK [4]
NR132 1.47K/4/1

O_PWROK1
NC51 0.01u/4/X7R/25V/K/X
Reserve for EMI test

ACZ_SDOUT

NR140 8.2K/4 C_ACZ_SDOUT
NQ14 PMBT2907A/SOT23/-600mA/50 S0T23
N_GPIO57 NR64 8.2K/4
DS_ME NR178 8.2K/4
[17] DS_ME
3VDUAL_PCH
SPI OVERRIDE PROTECTION

PCH_DPWROK

3VDUAL_PCH
NR69 8.2K/4
N_PCH_DPWROK N_PCH_DPWROK [17,25]
NC17 1n/4/X7R/50V/K
for IT8620 Ctrl

VCC3
NR345 1K/4/1
N_PCH_VRMPWRGD N_PCH_VRMPWRGD [17]
NR346 100K/4/1
DC17 0.1u/4/X7R/16V/K

PCH PU/PD

3VDUAL
NR139 8.2K/4/X N_GPIO46
NR155 8.2K/4/X N_GPIO45
NR103 8.2K/4/X N_GPIO44
N_GPIO57
NRN9 8.2K/8P4R/4

A_-SKTOCC
N_TEMP_ALART-
N_-RI
NRN10 8.2K/8P4R/4

GP8:Low to enable PCH clock chip
NR106 1K/4/1 N_-IGC_EN
NR153 1K/4/1/X N_SUSCLK
NR105 8.2K/4/X
NR154 8.2K/4/X

SUSCLK:Low to OD PLL VR
N_-SUSTAT NR133 8.2K/4/X
-D_GPIO_HRST NR51 1K/4/1
N_GPIO28 NR144 1K/4/1
GP28:Lo disable VRM ,Hi enable VRM
N_GPIO29 NR96 1K/4/1

3VDUAL_PCH
N_-S_WARN NR129 8.2K/4
N_GPIO27 NR60 8.2K/4
N_GPIO31 NR72 8.2K/4
N_-SLP_LAN NR73 8.2K/4/X
N_GPIO72 NR100 8.2K/4
N_-PCIE_WAKE NR76 1K/4/1
N_GPIO29 NR95 1K/4/1/X

VCC3
NR145 8.2K/4/X N_GPIO20 NR109 1K/4/1
N_GPIO0 NR115 8.2K/4
N_-SYS_RST NR164 8.2K/4
N_GPIO32 NR162 8.2K/4/X
NR48 8.2K/4/X N_GPIO33 NR49 8.2K/4

3VDUAL
N_PCH_RST NR172 20K/4/1
N_PCH_TDI NR170 200/4/1
N_PCH_TDO NR141 200/4/1
N_PCH_TMS NR169 200/4/1
N_PCH_TCK NR87 200/4/1/X

N_PCH_RST NR143 1K/4/1/X
N_PCH_TDI NR171 100/4/1
N_PCH_TDO NR168 100/4/1
N_PCH_TMS NR142 100/4/1
N_PCH_TCK NR108 51/4/1
N_GPIO18 NR79 8.2K/4
N_GPIO73 NR134 8.2K/4
N_GPIO26 NR107 8.2K/4
N_GPIO25 NR137 8.2K/4
N_-SYS_RST NC58 1n/4/X7R/50V/K
N_DRAM_PWROK NC59 1n/4/X7R/50V/K

NRN6 8.2K/8P4R/4
3VDUAL
N_-LPCPME
N_GPIO60
N_-PCH_HOT
NR117 1K/4/1 N_SML1CLK
NR120 1K/4/1 N_SML1DAT
NR122 499/4/1 N_SML0CLK
NR123 499/4/1 N_SML0DAT
NR121 1K/4/1 N_SMBCLK
NR97 1K/4/1 N_SMBDATA

HSW_STRAP13

3VDUAL_PCH
NR182 8.2K/4/X
A_HSW_STRAP13 [4]
NR183 8.2K/4
S0T23
NQ11 MMBT2222A/SOT23/600mA/40
NQ12 MMBT2222A/SOT23/600mA/40 S0T23
NR135 8.2K/4
N_-IGC_EN
NR104 0/4/SHT/M/X

32.768KHZ

NX2-SHT SHW/D0.64*5.08*6.74
N_Y1
N_Y2 NR75 10M/4
NX2
32.768K/12.5p/20ppm/TF38/35K/D
NC16 18P/4/NPO/50V/J
NC18 18P/4/NPO/50V/J

CLR_CMOS

BATTERY
CR2032
NR340 0/6/SHT/M/X
BAT
BAT-SK/BK/P/S/D/SN
N_VBATT
NRB 1K/4/1
3VDUAL_PCH
ND1 BAS40-05/0.2A/SOT23
NR90 390K/4 N_DSWVRMEN
N_RTCVDD N_RTCVDD [13,19]
NR67 390K/4 N_INTVRMEN
NR78 20K/4/1 N_-RTCRST
NC15 1u/4/X5R/6.3V/K
NC20 1u/4/X5R/6.3V/K
RB_TP
N_VBAT N_VBAT [17]
CLR_CMOS
N_-RTCRST
PH/1*2/BK/2.54/VA/D

BATTERY-DUAL-4
RB 必须放在BAT外

N_-INTRUDER NR74 1M/4 N_RTCVDD [13,19]
N_-SRTCRST NR77 20K/4/1 N_RTCVDD [13,19]
NC19 1u/4/X5R/6.3V/K

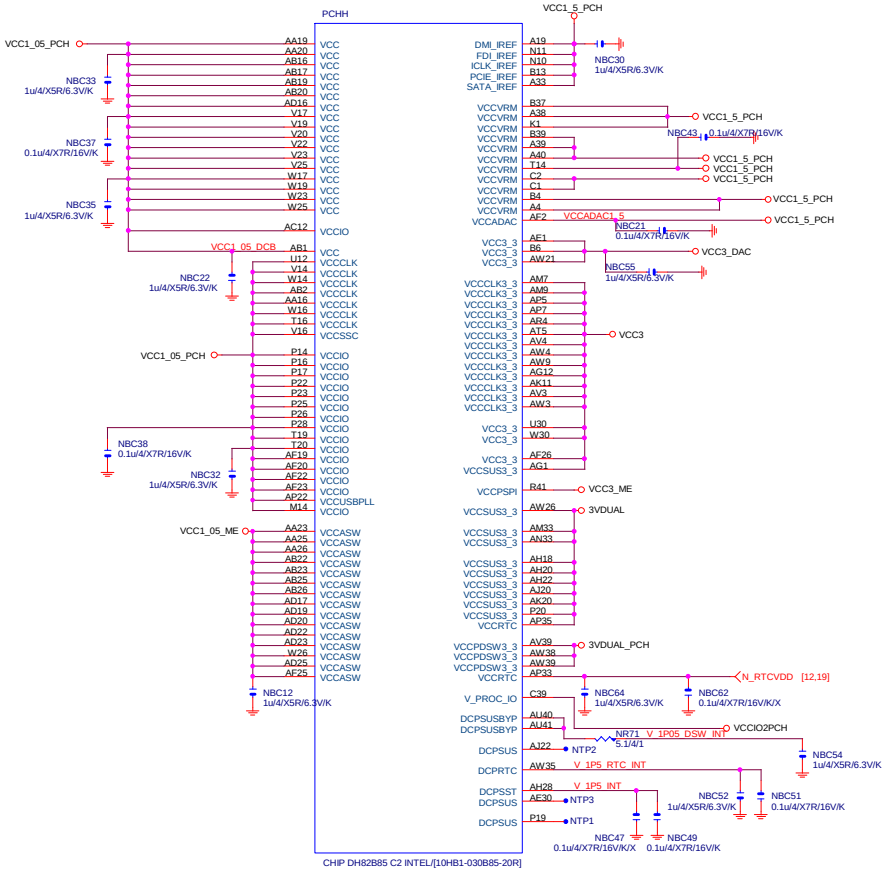
Gigabyte Technology

Title: PCH GPIO , CTRL , AUDIO

Size: Custom | Document Number: GA-B85M-D3V | Rev: 2.01

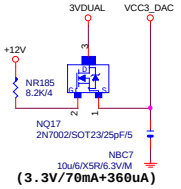
Date: Thursday, November 28, 2013 | Sheet 12 of 32

PCH (H)

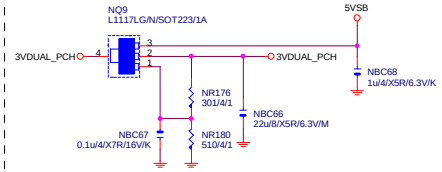


VCC3_DAC

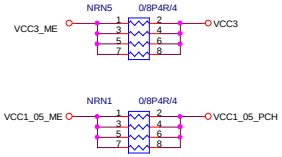
CLOSE北橋(注意震盪水波紋)



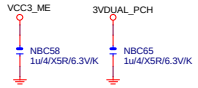
3VDUAL_PCH



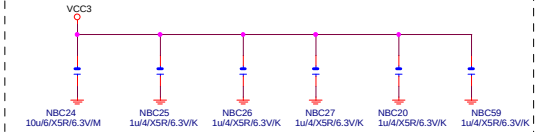
SHT PWR



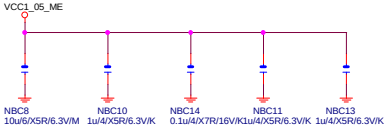
CAP



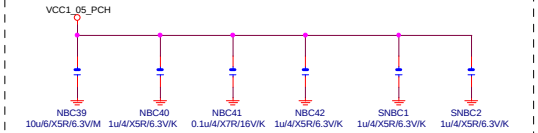
(3.3V)(X6)



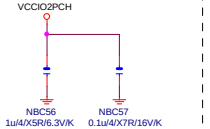
(1.05V)(X5)



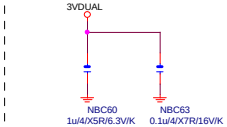
(1.05V)(X6)



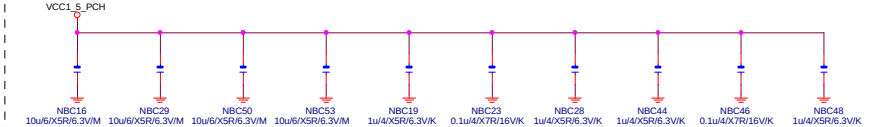
(1.05V)(X2)



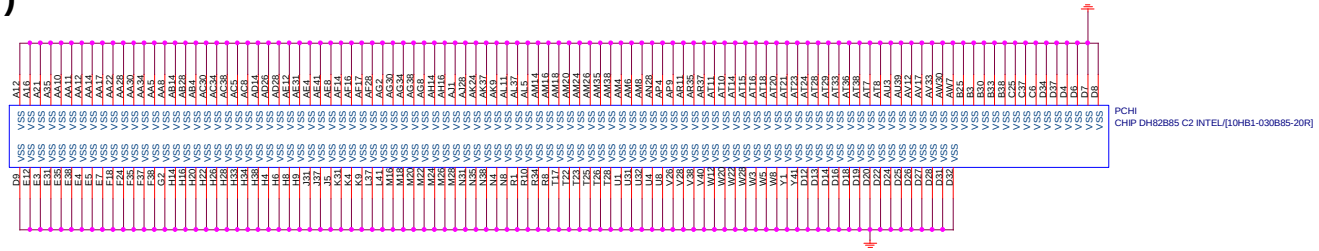
(3.3V)(X2)



(1.05V)(X10)



PCH (I)



Gigabyte Technology			
Title: PCH PWR ,GND			
Size: Custom	Document Number: GA-B85M-D3V		Rev: 2.01
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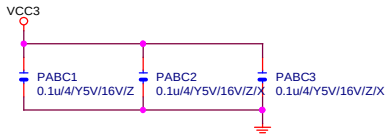
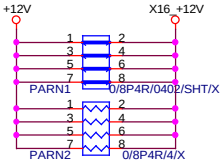
PCIEX16 CAP



PCIEX16 PROTECT SHT

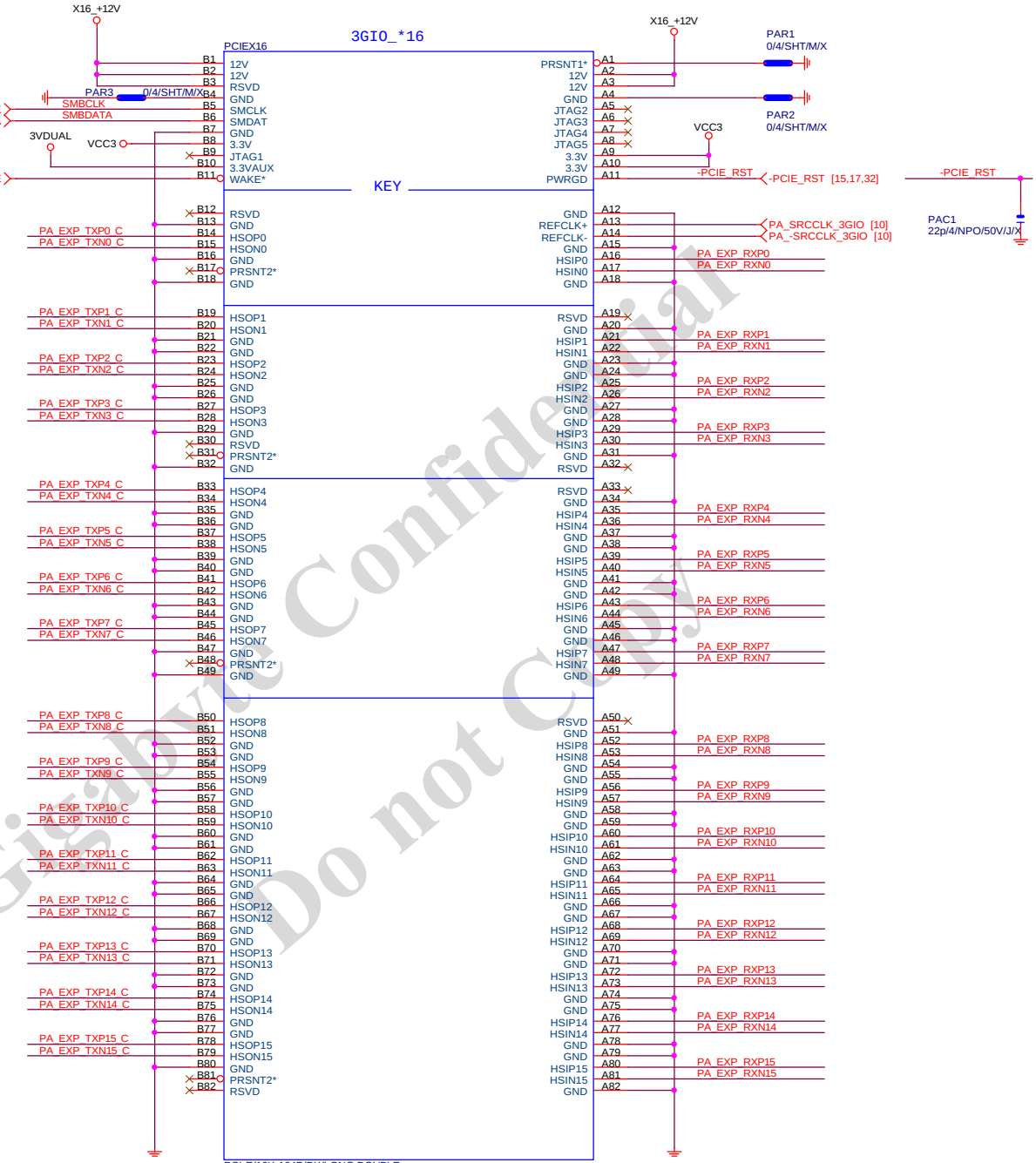


PCIEX16 AC CAP

PA_EXP_TXP0	PAC5	0.22u/4/X5R/6.3V/K	PA_EXP_TXP0_C
PA_EXP_TXN0	PAC4	0.22u/4/X5R/6.3V/K	PA_EXP_TXN0_C
PA_EXP_TXP1	PAC6	0.22u/4/X5R/6.3V/K	PA_EXP_TXP1_C
PA_EXP_TXN1	PAC7	0.22u/4/X5R/6.3V/K	PA_EXP_TXN1_C
PA_EXP_TXP2	PAC8	0.22u/4/X5R/6.3V/K	PA_EXP_TXP2_C
PA_EXP_TXN2	PAC9	0.22u/4/X5R/6.3V/K	PA_EXP_TXN2_C
PA_EXP_TXP3	PAC10	0.22u/4/X5R/6.3V/K	PA_EXP_TXP3_C
PA_EXP_TXN3	PAC11	0.22u/4/X5R/6.3V/K	PA_EXP_TXN3_C
PA_EXP_TXP4	PAC12	0.22u/4/X5R/6.3V/K	PA_EXP_TXP4_C
PA_EXP_TXN4	PAC13	0.22u/4/X5R/6.3V/K	PA_EXP_TXN4_C
PA_EXP_TXP5	PAC14	0.22u/4/X5R/6.3V/K	PA_EXP_TXP5_C
PA_EXP_TXN5	PAC15	0.22u/4/X5R/6.3V/K	PA_EXP_TXN5_C
PA_EXP_TXP6	PAC16	0.22u/4/X5R/6.3V/K	PA_EXP_TXP6_C
PA_EXP_TXN6	PAC17	0.22u/4/X5R/6.3V/K	PA_EXP_TXN6_C
PA_EXP_TXP7	PAC19	0.22u/4/X5R/6.3V/K	PA_EXP_TXP7_C
PA_EXP_TXN7	PAC18	0.22u/4/X5R/6.3V/K	PA_EXP_TXN7_C
PA_EXP_TXP8	PAC20	0.22u/4/X5R/6.3V/K	PA_EXP_TXP8_C
PA_EXP_TXN8	PAC21	0.22u/4/X5R/6.3V/K	PA_EXP_TXN8_C
PA_EXP_TXP9	PAC22	0.22u/4/X5R/6.3V/K	PA_EXP_TXP9_C
PA_EXP_TXN9	PAC23	0.22u/4/X5R/6.3V/K	PA_EXP_TXN9_C
PA_EXP_TXP10	PAC24	0.22u/4/X5R/6.3V/K	PA_EXP_TXP10_C
PA_EXP_TXN10	PAC25	0.22u/4/X5R/6.3V/K	PA_EXP_TXN10_C
PA_EXP_TXP11	PAC26	0.22u/4/X5R/6.3V/K	PA_EXP_TXP11_C
PA_EXP_TXN11	PAC27	0.22u/4/X5R/6.3V/K	PA_EXP_TXN11_C
PA_EXP_TXP12	PAC28	0.22u/4/X5R/6.3V/K	PA_EXP_TXP12_C
PA_EXP_TXN12	PAC29	0.22u/4/X5R/6.3V/K	PA_EXP_TXN12_C
PA_EXP_TXP13	PAC30	0.22u/4/X5R/6.3V/K	PA_EXP_TXP13_C
PA_EXP_TXN13	PAC31	0.22u/4/X5R/6.3V/K	PA_EXP_TXN13_C
PA_EXP_TXP14	PAC32	0.22u/4/X5R/6.3V/K	PA_EXP_TXP14_C
PA_EXP_TXN14	PAC33	0.22u/4/X5R/6.3V/K	PA_EXP_TXN14_C
PA_EXP_TXP15	PAC34	0.22u/4/X5R/6.3V/K	PA_EXP_TXP15_C
PA_EXP_TXN15	PAC35	0.22u/4/X5R/6.3V/K	PA_EXP_TXN15_C

PA_EXP_RXP[0..15] >> PA_EXP_RXP[0..15] [4]
PA_EXP_RXN[0..15] >> PA_EXP_RXN[0..15] [4]
PA_EXP_TXP[0..15] >> PA_EXP_TXP[0..15] [4]
PA_EXP_TXN[0..15] >> PA_EXP_TXN[0..15] [4]

PCIEX16 SLOT

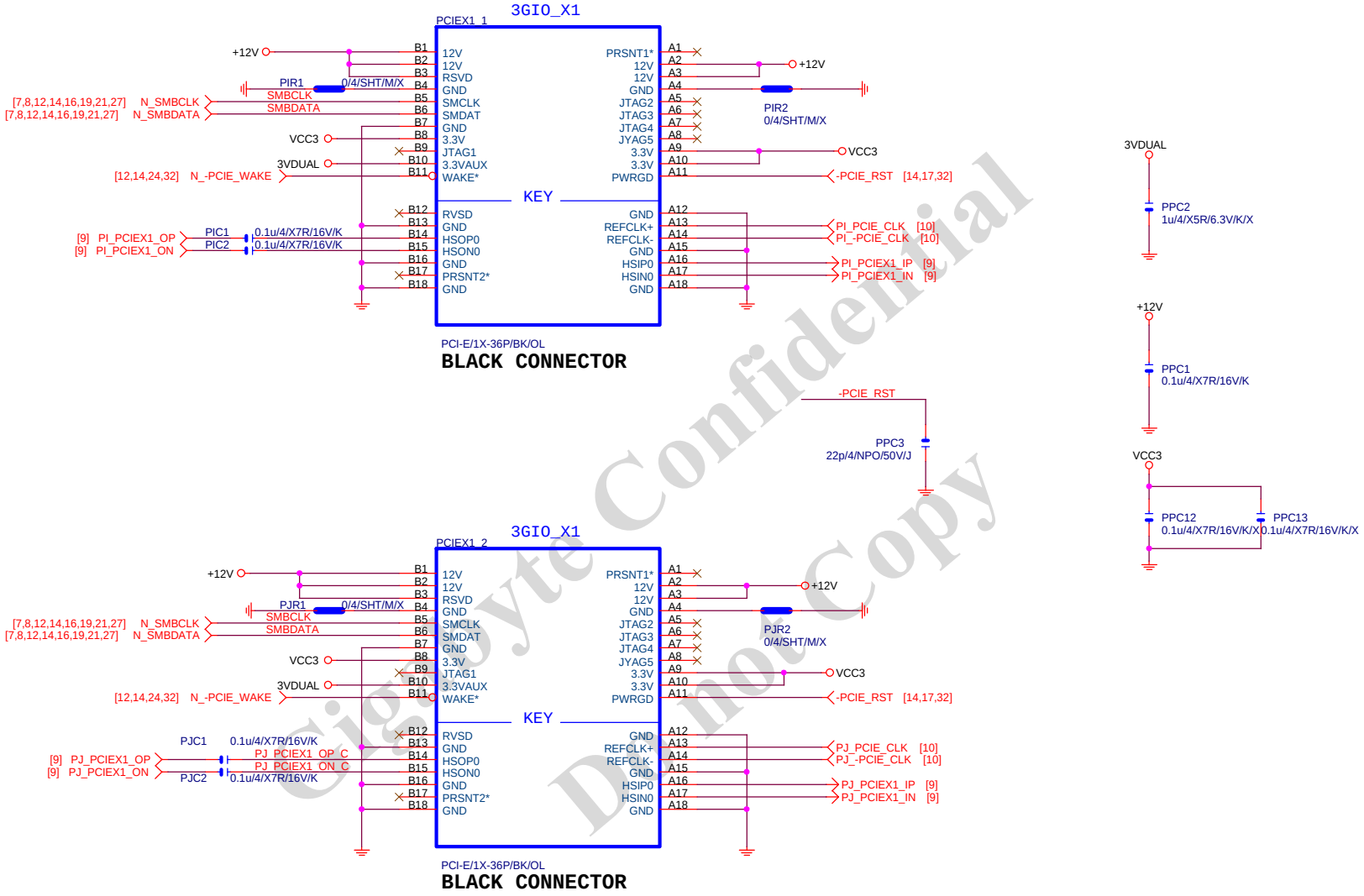


PCIESLOT-164DN-Q-1

BLACK CONNECTOR

Gigabyte Technology		
Title: PCI EXPRESS * 16		
Size: Custom	Document Number: GA-B85M-D3V	Rev: 2.01
Date: Thursday, November 28, 2013	Sheet 14 of 32	

PCIEX1 SLOT



Gigabyte Technology		
Title: PCI EXPRESS X 1 PORT		
Size: Custom	Document Number: GA-B85M-D3V	Rev: 2.01
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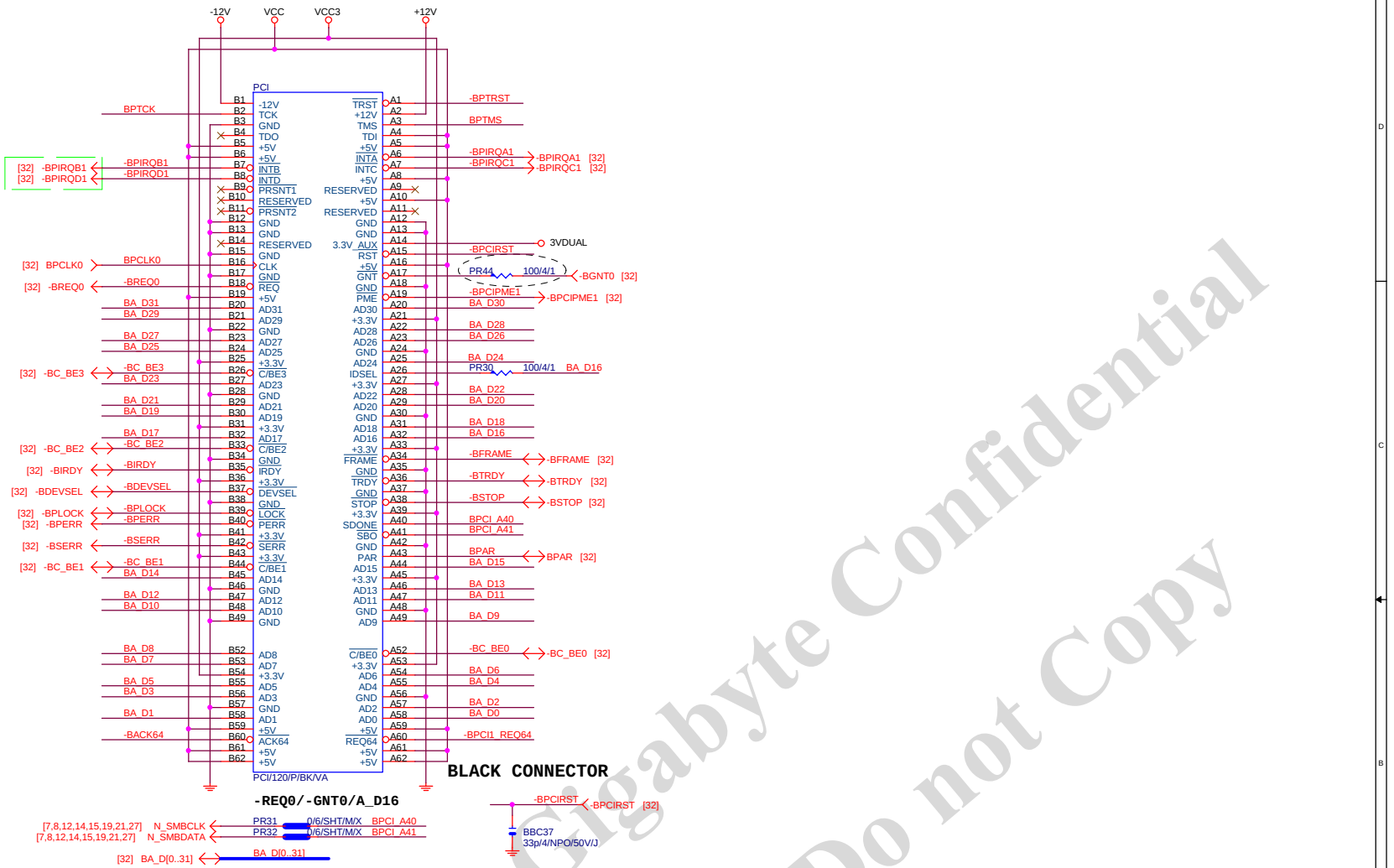
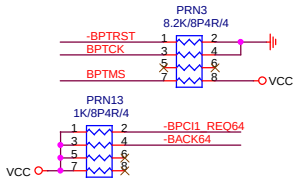
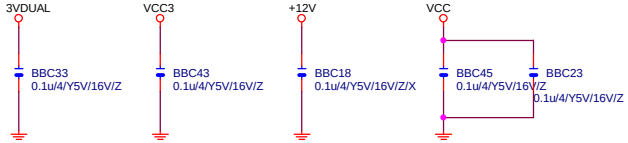
PCI SLOT 1



PCI PU



PCI CAP



Gigabyte Technology		
Title: PCI SLOT 1&2		
Size: Custom	Document Number: GA-B85M-D3V	Rev: 2.01
Date: Thursday, November 28, 2013	Sheet 16 of 32	

SIO IT8620

CLK_GEN 插拔漏電

3VDUAL
IT_AVCC
+12V
OR50 8.2K/4
OQ2 2N7002/SOT23/25pF/5
OC13 10u/6/X5R/6.3V/M

PWR SHT

For 8728 EUP function
3VDUAL_PCH — OR8 0/6/SHT/M/X — IT_VCCH
VCC3 — OR9 0/6/X — IT_AVCC

SIO PU

IO_GP25 — OR10 1K/4/1/X — 3VDUAL_PCH
DS_ME — OR11 1K/4/1 — 3VDUAL_PCH
SVID_CTRL — OR12 8.2K/4 — 3VDUAL_PCH
-PROCHOT_CON — OR13 8.2K/4 — VCC3
N_-LDRQ0 — OR14 1K/4/1 — VCC3
ITE_PWROK2 — OR15 1K/4/1 — VCC3
ITE_PWROK1 — OR16 1K/4/1 — VCC3
-PCIE_RST — OR17 1K/4/1 — VCC3
-PFMRST2 — OR18 1K/4/1 — VCC3
[19] FANPWM1 — FANPWM1 OR19 8.2K/4 — VCC
[19] FANPWM2 — FANPWM2 OR20 8.2K/4/X — VCC

SIO STRAP

H61M-S2 1.1 JP6 stuff pull down

JP2 OR21 8.2K/4 VCC3
JP3 OR22 8.2K/4 VCC3
JP4 OR23 8.2K/4 VCC3
JP5 OR24 8.2K/4/X VCC3
OR25 8.2K/4/X
ITE recommand

EUP control by PCH
3VDUAL — OR26 100/4/1 28_3VSB

JP3-- High SPI-Flash Disable
Low SPI-Flash Enable

Power leakage

IT_AVCC
OQ1 2N7002/SOT23/25pF/5
SOT23
-PSON
OR27 510/4/1

For IT8721 Power leakage

IT8620E_BX

SIO

SLP_SUS#/PCIRSTIN#/CIRTX2/GP15
3VSB
HOLD_M#/GP64
HOLD_B#/GP63
FAN_TAC1
FAN_CTL1
FAN_TAC2/GP52
FAN_CTL2/GP51
FAN_TAC3/GP37
FAN_CTL3/GP36
VCC18_EN/GP35
VTT_PWRGD/GP34
GNDD
SLP_SUS_FET/5VSB_CTRL#
SUS_WARN_SVDUAL/5VAUX_SW
PWRGD2
ATXPG/GP30
INV_IN1/SIN2/GP27
INV_OUT1/SOUT2/GP26
FAN_TAC4/DSR2#/GP25
FAN_TAC5/RTS2#/GP24
DPWORK/CPU_PG/GP23
SPI_SI/GP22
IO_SMI#/DCD2#/GP21
THR_PWM/CTS2#/GP20
R12#/GP17
DTR2#/JP5
SPI_SO/CIRTX1
PCH_C1/GP14
SUSACK#/PWRGD1
PCIRST1#/GP12
PCIRST2#/GP11
3VSB
VCORE
LRESET#
LDRQ#
SERIRQ
LFRAME#

LS_IN1/SLCT/GP80
VREF_2.5
TR6/VIN9
TR5/VIN8
TR4/VIN7
AVCC3
VIN0/VCORE(1.1V)
VIN1/VDIMM_STR(1.5V)
VIN2(+12V_SEN)
VIN3(+5V_SEN)
VIN4/VLDT_12
VIN5/5VDUAL
VIN6
VREF
TMPIN1
TMPIN2
TMPIN3
TSD-
GNDA
RSMRST#/CIRRX1/GP55
CPURST#/GP10
MCLK/FAN_TAC6/GP56
MDAT/FAN_CTL6/GP57
KCLK/GP60
KDAT/GP61
3VSBSW#/GP40
PWRGD3
SUSC#/GP53
PSON#
PANSWH#/GP43
GNDD
PME#/GP54
PWRON#/GP44
SUSB#
CE_N/GPO47/JP6
VBAT
COPEN#
3VSB

SIO_18V

internal power pin, max 22nF cap
SIO_18V
OC7 0.1u/4/X7R/16V/K
OC8 0.1u/4/X7R/16V/K/X

MB ID

VCC3 — OR28 8.2K/4
OR29 8.2K/4/X — MB_ID2

DUAL BIOS OPT STRAP

-CASEOPEN
OC6 1u/4/X5R/6.3V/K

CEB_N — OR30 680/4/1/X
OR31 1K/4/1 — VCC3

SIO CAP

IT_VCCH
OC9 1u/4/X5R/6.3V/K
OC10 0.1u/4/Y5V/16V/Z/X
IT_VCCH
OC11 10u/6/X5R/6.3V/M
3VDUAL
OC12 1u/4/X5R/6.3V/K

3VDUAL_PCH
OC14 0.1u/4/Y5V/16V/Z
VREF_25
OC15 0.1u/4/X7R/16V/K

Title	ITE 8728 LPC IO
Size C	Document Number GA-B85M-D3V Rev 2.01
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Gigabyte Technology

COM

AU1 GD75232/TSSOP20

[17] RI1- [17] CTS1- [17] DSR1- [17] RTS1- [17] DTR1- [17] RXD1 [17] TXD1 [17] DCD1-

NRIA- NCTSA- NDSRA- NRTSA- NDTRA- NSINA NSOUTA NDCDA-

-12V +12V VCC

ABC2 0.1u/4/Y5V/16V/Z/X

ABC1 0.1u/4/Y5V/16V/Z

ACN2 NDTRA- NSINA NSOUTA NDCDA-

ACN1 NRIA- NCTSA- NDSRA- NRTSA-

180p/8P4C/6/NPO/50V/K

180p/8P4C/6/NPO/50V/K

COM PH/2*5K10/BK/2.54/VA/D

NDCDA- NSOUTA NRTSA- NRIA- NSINA NDTRA- NDSRA- NCTSA-

PIN2X5-CUT10-COM

COM RI

-RI N_-RI [12]

R90 75K/4/1

Q7 MMBT2222A/SOT23/600mA/40 SOT23

NRIA-

R91 8.2K/4

KB/MS

FUSEVCC_R

UBC7 0.1u/4/Y5V/16V/Z

UBC8 0.1u/4/Y5V/16V/Z

KB_MS_USB

[9] N_-USBP12 [9] N_+USBP12

N_-USBP13 [9] N_+USBP13 [9]

KBDATA MSDATA KBCLK MSCLK

KB/USB/A/PC99(DUAL)/GF/2/RA/D

AGND1

R707 0/6/X

For EMI

RN1 8.2K/8P4R/4

MCLK MDAT KDAT KCLK

FOR鹽化短路

[17] KCLK [17] KDAT [17] MDAT [17] MCLK

KCLK KDAT MDAT MCLK R58 R59 R57 R56 82/4

KBCLK KBDATA MSDATA MSCLK

CN1 180p/8P4C/6/NPO/50V/K

USB2.0 ESD

ESD2 AZC099-04S/SOT23-6L

N_-USBP12 N_+USBP12 N_+USBP13 N_-USBP13 FUSEVCC_R

USB2.0 PWR

FUSE-0805

5VDUAL F3 SPR-P260T/6V/8/S FUSEVCC_R

Close to connector

KB_MS_USB 2-Port 2.0A

USB30_20

R_USB30 USB/18P/BU/OS/RA/D/2/1U/SB

USB3.0/2.0

FUSEVCC_USB3_R3 BC5 0.1u/4/Y5V/16V/Z/X

[9] N_-USBP4 [9] N_+USBP4

[9] PCH_USB3_RXN4 [9] PCH_USB3_RXP4

[9] PCH_USB3_TXN4 [9] PCH_USB3_TXP4

UBC9 UBC10 PCH_USB3_TXN4C PCH_USB3_TXP4C

0.1u/4/X7R/16V/K 0.1u/4/X7R/16V/K

N_-USBP5 [9] N_+USBP5 [9] BC6 0.1u/4/Y5V/16V/Z/X FUSEVCC_USB3_R4

PCH_USB3_RXN5 [9] PCH_USB3_RXP5 [9]

PCH_USB3_TXN5 [9] PCH_USB3_TXP5 [9]

PCH_USB3_TXN5C PCH_USB3_TXP5C UBC11 UBC12 0.1u/4/X7R/16V/K 0.1u/4/X7R/16V/K

AGND AGND AGND AGND G1 G2 G3 G4

USB30_20 ESD PROCTECT

PCH_USB3_TXN5C PCH_USB3_TXP5C PCH_USB3_TXP4C PCH_USB3_TXN4C

NC NC GND NC NC D1 D1 GND D2 D2

UESD5 AZ1045-04F/MSOP10

PCH_USB3_RXN4 PCH_USB3_RXP4 PCH_USB3_RXP5 PCH_USB3_RXN5

UESD6 AZ1045-04F/MSOP10

USB3.0 ESD

USB2.0 ESD

ESD1 AZC099-04S/SOT23-6L

N_-USBP4 N_-USBP5 N_+USBP4 N_+USBP5 FUSEVCC_USB3_R4

USB30_20 PWR

Polyswitch-1206

F12 SMD1206P350SLR/6V/S FUSEVCC_USB3_R4

5VDUAL F11 SMD1206P350SLR/6V/S FUSEVCC_USB3_R3

UEC6 100u/OS/D/6.3V/66/A/35m/[11CO2-661000-09R]

USB3.0 1Port - 1Fuse (3.5A)

-USBOC_R

UD7 BAT54A/SOT23/200mA FUSEVCC_R

UD5 BAT54A/SOT23/200mA FUSEVCC_USB3_R4 FUSEVCC_USB3_R3

5VDUAL UR3 8.2K/4

N_-USBOC_R N_-USBOC_R [9]

UR4 15K/4/1

USB POWER PROTECT

[11] N_GPIO1 UAD5 BAT54A/SOT23/200mA N_-USBOC_F N_-USBOC_F [9,21] N_-USBOC_R

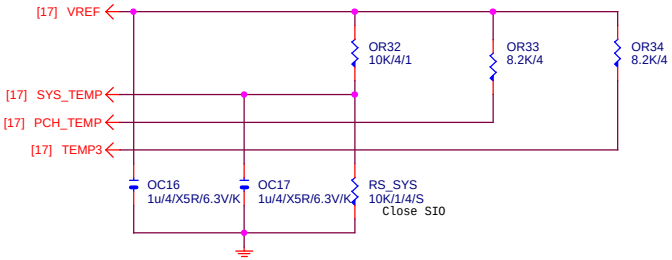
Gigabyte Technology

Title: COM,-RI,KB_USB,USB_ESATA,-PROCHOT

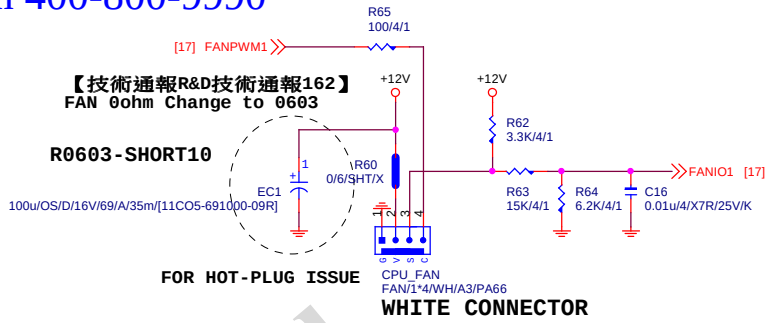
Size: Custom | Document Number: GA-B85M-D3V | Rev: 2.01

Date: Thursday, November 28, 2013 | Sheet 18 of 32

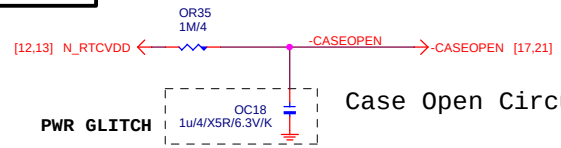
TEMP H/W MONITOR



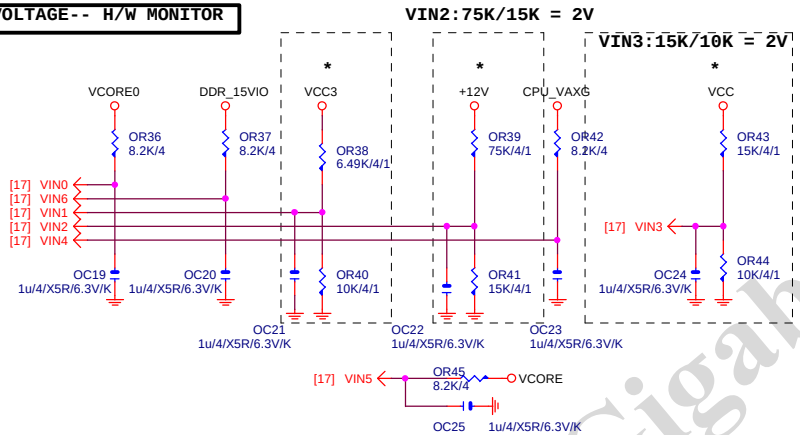
CPU SMART FAN



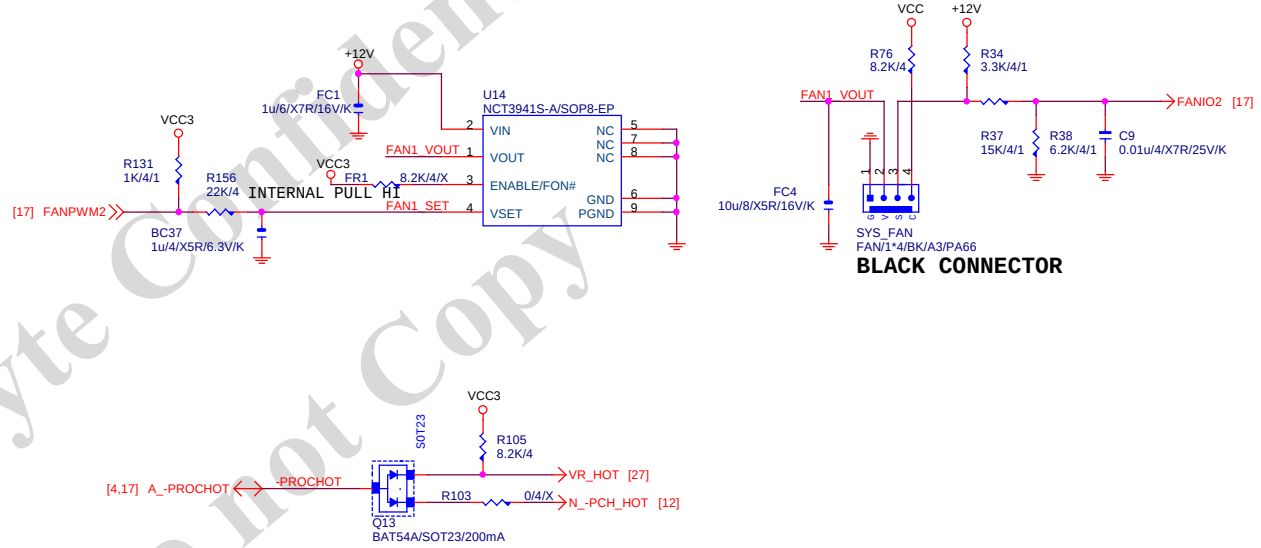
CASE OPEN

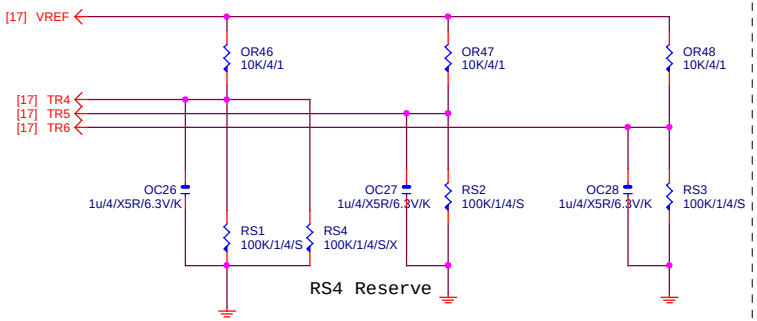


VOLTAGE-- H/W MONITOR



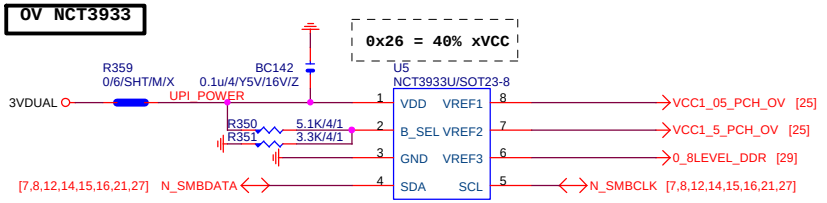
SYS SMART FAN



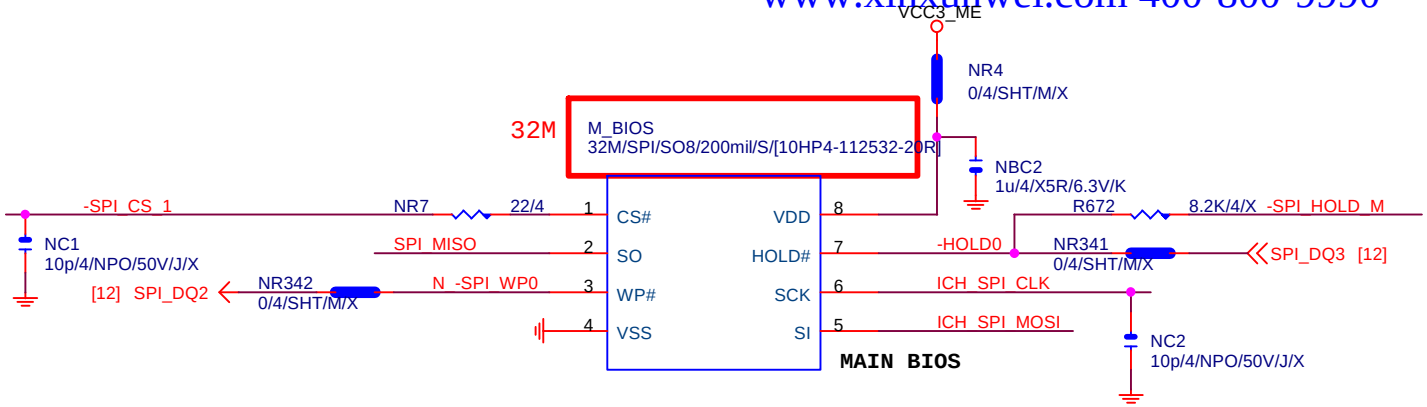


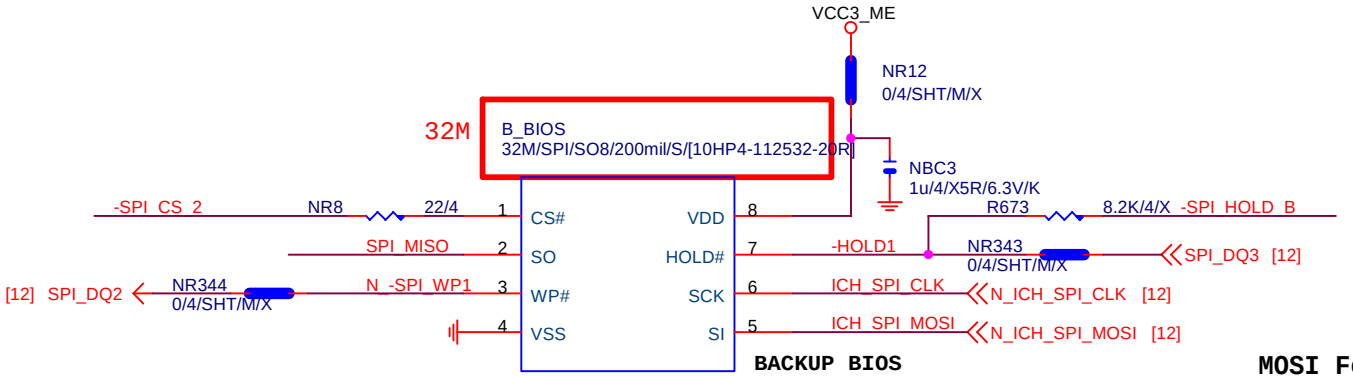
接pwm feedback pin

OV NCT3933



Gigabyte Technology		
Title: HWM,FAN CTRL,OV		
Size: Custom	Document Number: GA-B85M-D3V	Rev: 2.01
Date: Thursday, November 28, 2013	Sheet 19 of 32	

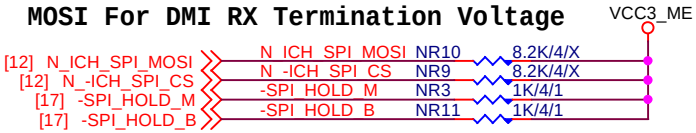


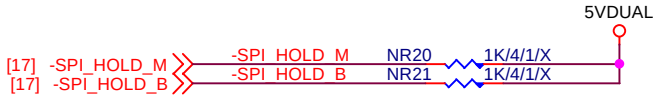


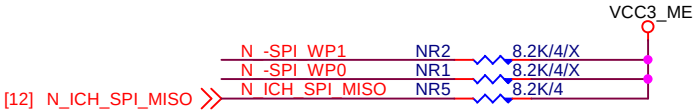
BOOT DEVICE	GNT0	GNT1
LPC	0	0
PCI	0	1
NAND	1	0
SPI	1	1

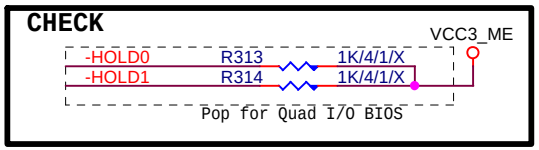
1 means floating
0 means PD 1K

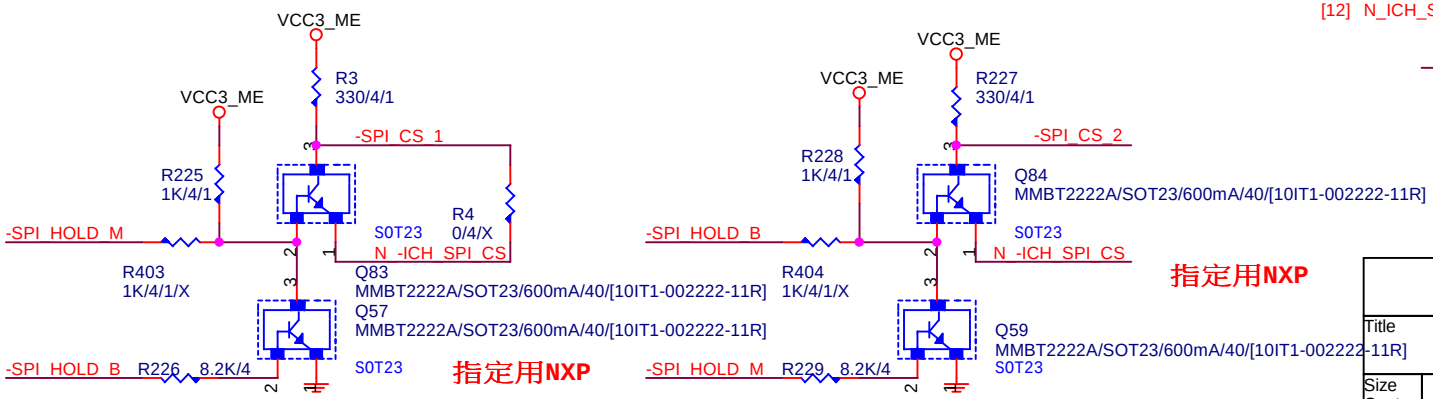
MOSI For DMI RX Termination Voltage







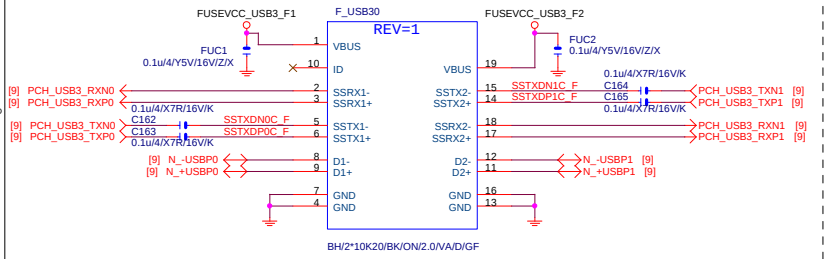




Gigabyte Technology

Title	DUAL BIOS		
Size: Custom	Document Number: GA-B85M-D3V		Rev: 2.01
Date: Thursday, November 28, 2013	Sheet 20 of 32		

F_USB30

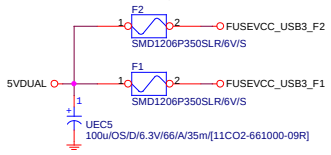


BH/2*10K20/BK/ON/2.0/VA/D/GF

BLACK CONNECTOR

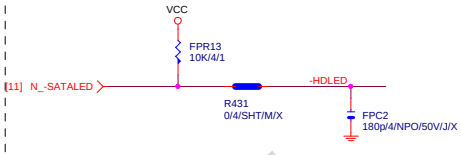
F_USB30 PWR

Polyswitch-1206

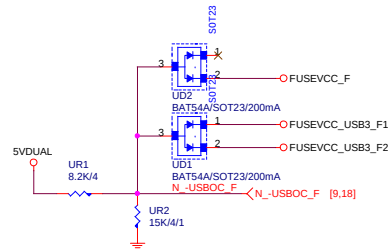


USB3.0 1Port - 1Fuse (3.5A)

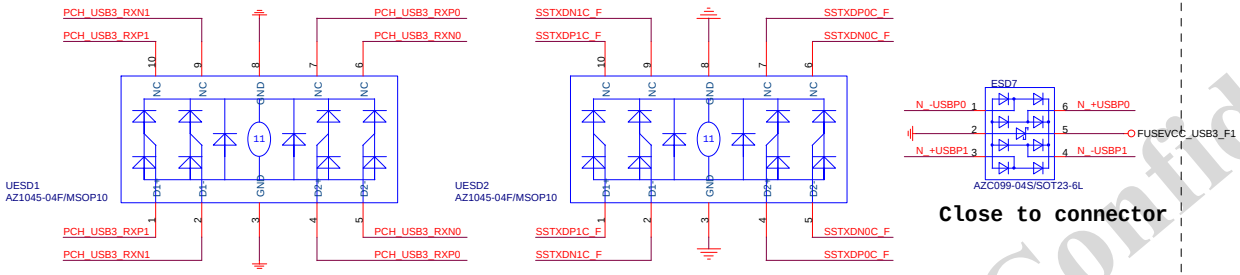
SATA LED



-USBOC_F

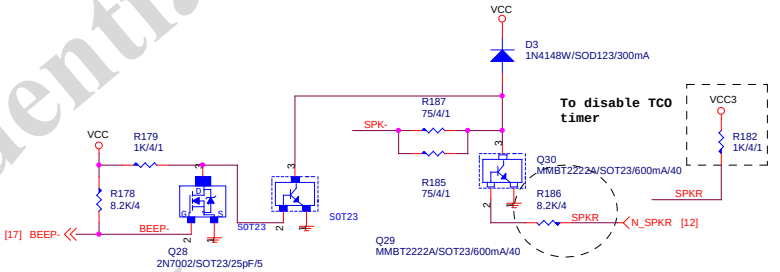


F_USB30 ESD PROTECT

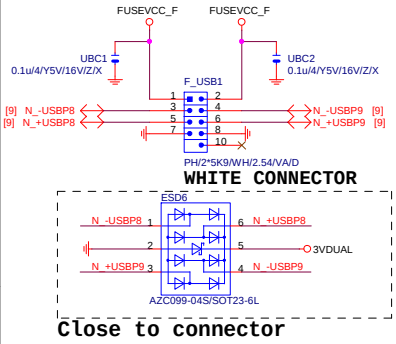


Close to connector

SPKR



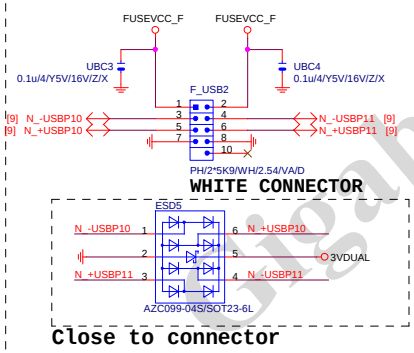
FRONT USB1



WHITE CONNECTOR

Close to connector

FRONT USB2

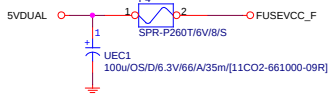


WHITE CONNECTOR

Close to connector

FUSE-0805

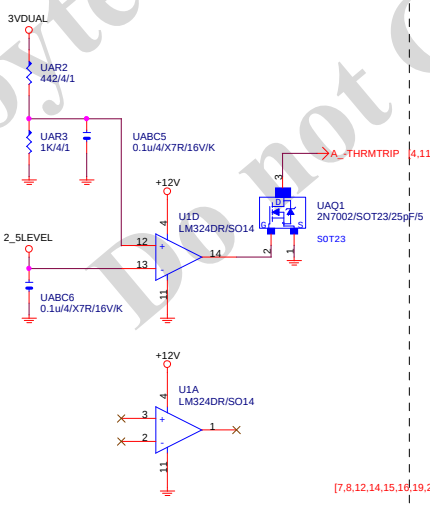
F_USB1, F_USB2 4-Port 2.6A



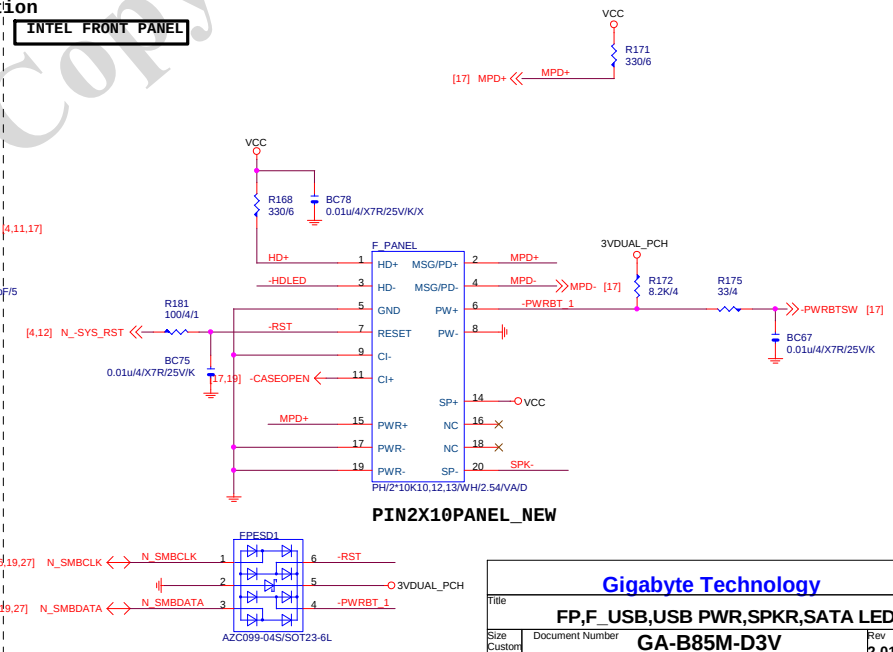
USB2.0 Signal & power short protection

USB2.0 Signal set 4.85V (If bigger than 4.95V , chip maybe fail)

Protection set --> 3VUUAL=3.6V



INTEL FRONT PANEL



PIN2X10PANEL_NEW

Gigabyte Technology	
Title	FP,F_USB,USB PWR,SPKR,SATA LED
Size: Custom	Document Number: GA-B85M-D3V
Rev	2.01
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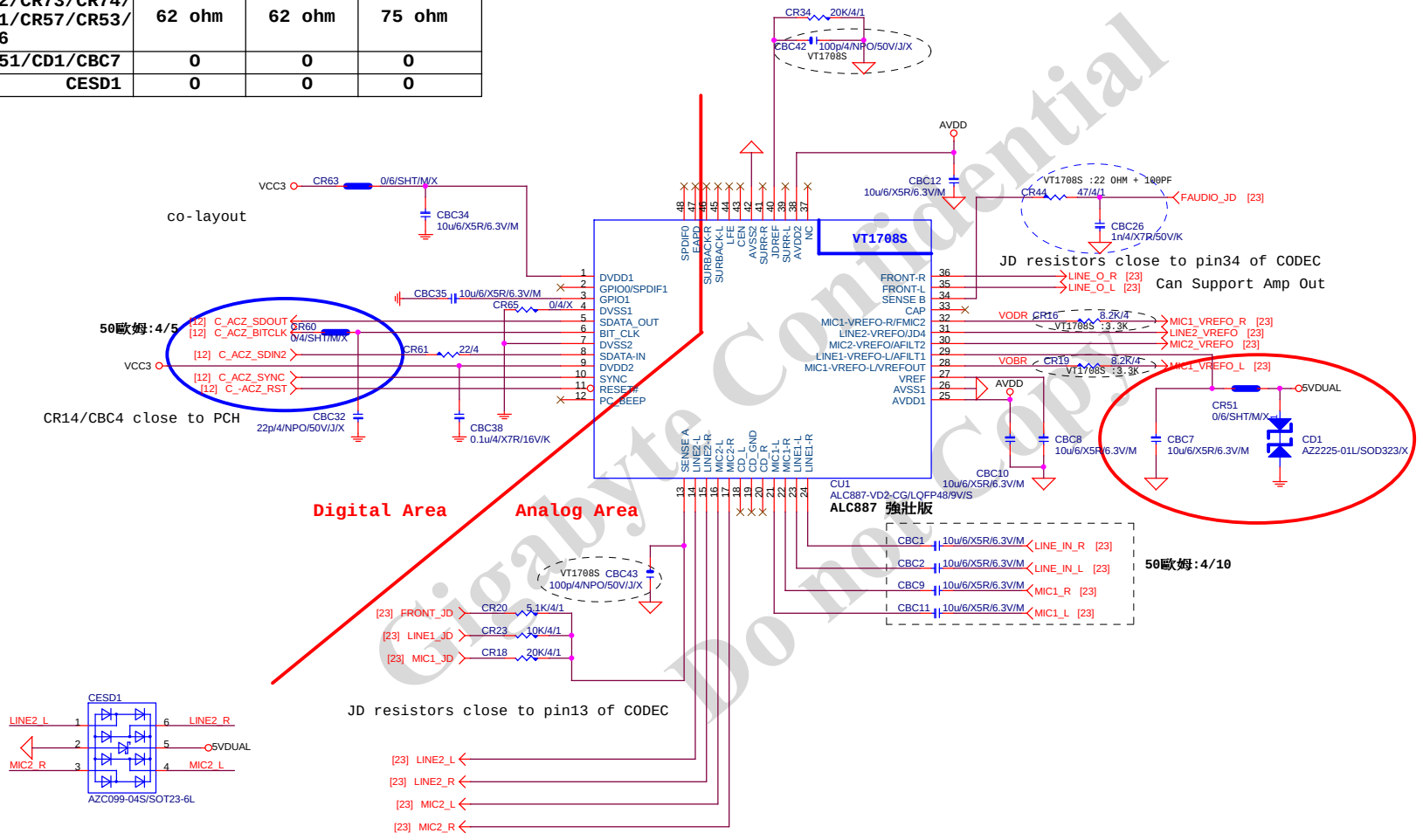
AZALIA CODEC *ALC892/ALC887-VD2/VT1708-CE Colay*

	ALC892	ALC887-VD2	VT1708S-CE
CR44/CBC26	47ohm+1nF	47ohm+1nF	22ohm+100P
CBC42/CBC43	X	X	100P/4
CR6/CR7/CR58/CR54/ CR67/CR68/CR69/CR70	22K/4	22K/4	10K/4/1
CR5/CR8/CR1/CR14/ CR17/CR22/CR73/CR74/ CR13/CR11/CR57/CR53/ CR75/CR76	62 ohm	62 ohm	75 ohm
CR51/CD1/CBC7	0	0	0
CESD1	0	0	0

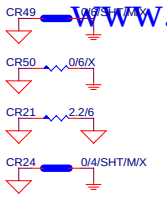


Gigabyte Technology

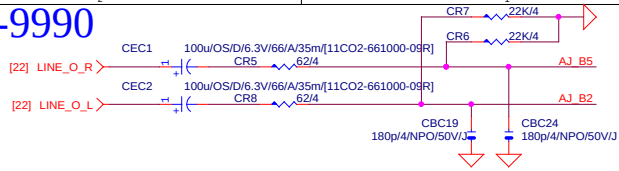
Title: HD AUDIO ALC887B-VD2/VT1708S/VT2021

Size: Custom | Document Number: GA-B85M-D3V | Rev: 2.01

Date: Thursday, November 28, 2013 | Sheet 22 of 32

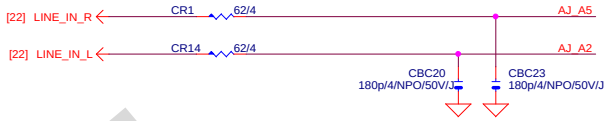


LINE_OUT



Only reserved for ALC888

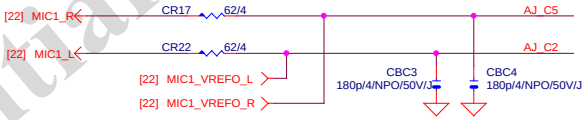
LINE-IN



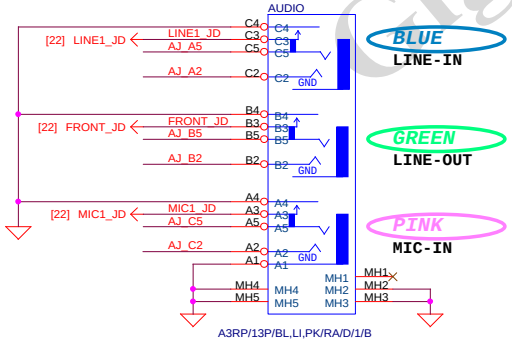
Verify MIC function in LINE-in

For 889A/888

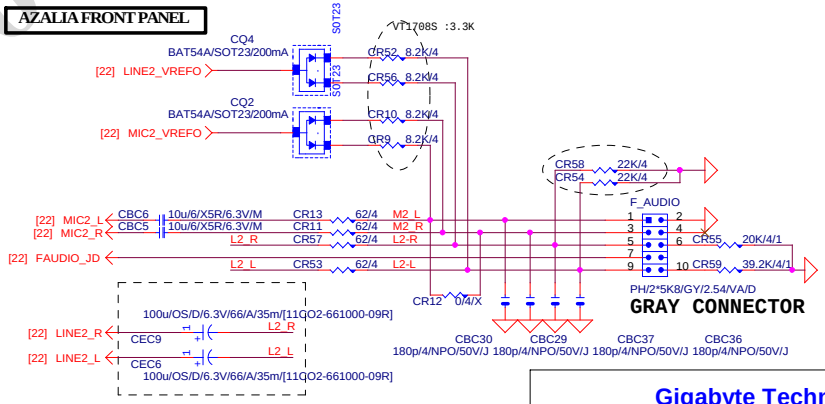
MIC-IN



SPDIF_OUT



AZALIA FRONT PANEL



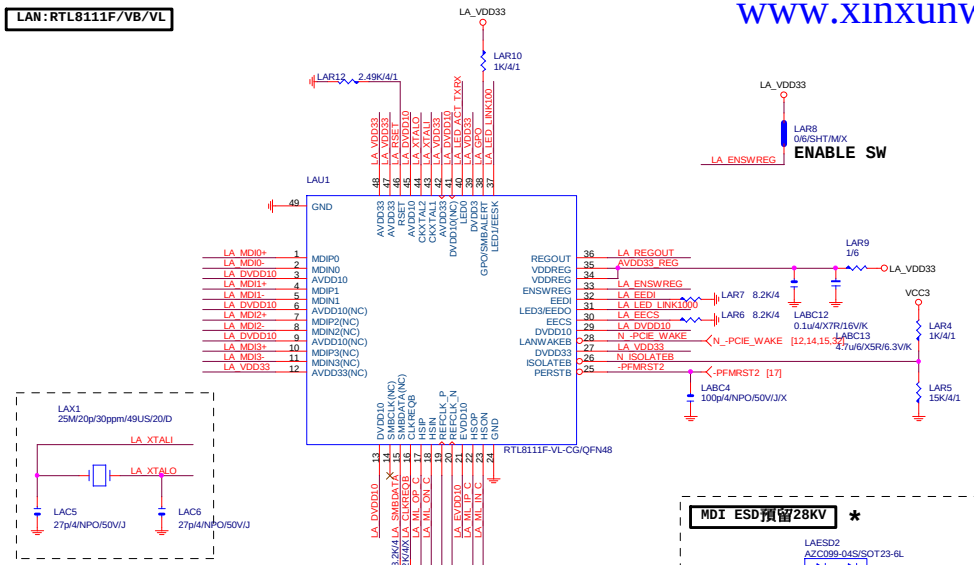
Gigabyte Technology

Title: AUDIO JACK

Size: Custom | Document Number: GA-B85M-D3V | Rev: 2.01

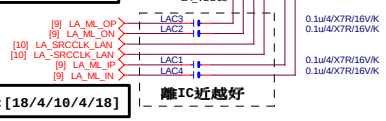
Date: Thursday, November 28, 2013 | Sheet 23 of 32

LAN:RTL8111F/VB/VL



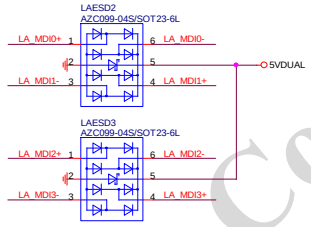
LA_ ML-->80歐姆:[15/5/5/5/15]

SRCCLK-->50歐姆:[18/4/10/4/18]

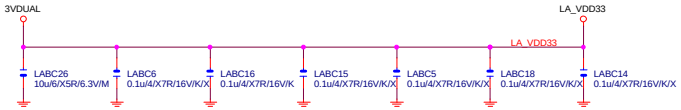


離IC近越好

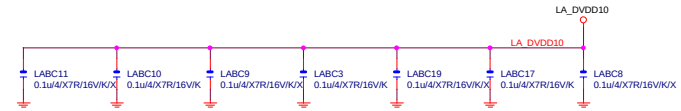
MDI ESD預留28KV *



LAN POWER

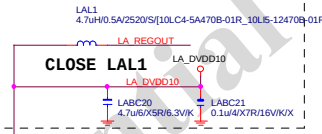


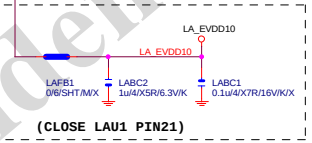
(CLOSE LAU1 PIN:12,27,39,42,47,48)



(CLOSE LAU1 PIN3,6,9,13,29,41,45)

(CLOSE LAU1 PIN36)





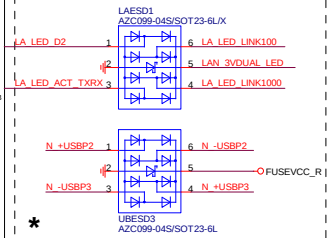
(CLOSE LAU1 PIN21)

Power domain chart

	RTL8111E
AVDD33	3.3V
DVDD33	3.3V
VDDREG	3.3V
DVDD10	1.05V

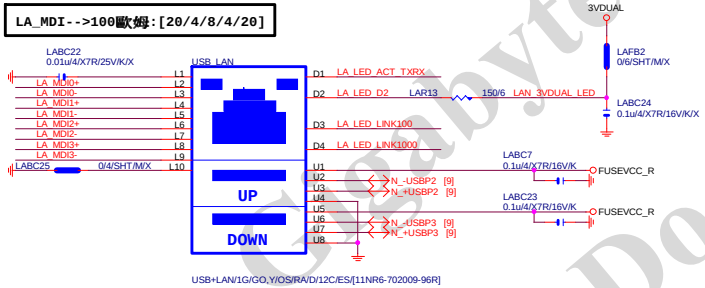
USB_LAN CONNECTOR

RMA ESD PROTECT



* 使用RU9 USB_LAN可省略LAESD1保護LED

LA_MDI-->100歐姆:[20/4/8/4/20]



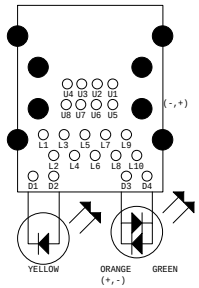
USB+LAN/1G/GQ,Y/OS/RA/D/12C/ES/[11NR6-702009-96R]

USB X3 POWER

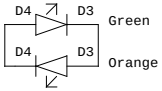
EMI SHORT PAD

PS:視EMI需求

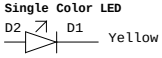
注意:USB PORT(目前:暫代6,7PORT)
USB-->90歐姆:[15/4.5/7.5/4.5/15]



Dual Color LED



Single Color LED



BOM NOTICE *

料號	規格	廠商
11NR6-702009-96R	1G LAN (12core)	UDE(RU9 ESD+)

[LED獨立走線,可省略外加AZC099料件LAESD1]

1. 9KV ESD BOM:
USB_LAN (RU9):11NR6-702009-96R
2. 28KV ESD BOM:
USB_LAN (RU9):11NR6-702009-96R
LAESD2,LAESD3:上件AZC398-04S

Gigabyte Technology

Title: Realtek RTL8111G

Size: Custom | Document Number: GA-B85M-D3V | Rev: 2.01

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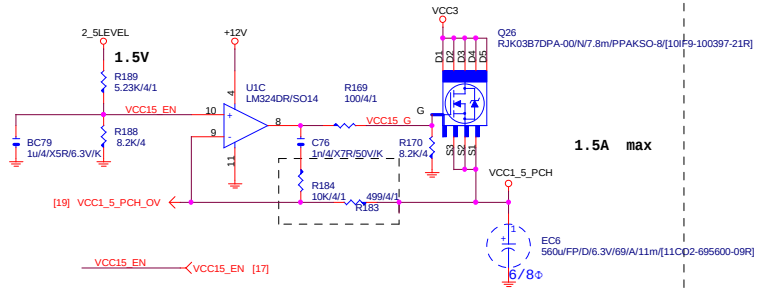
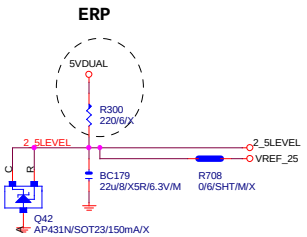
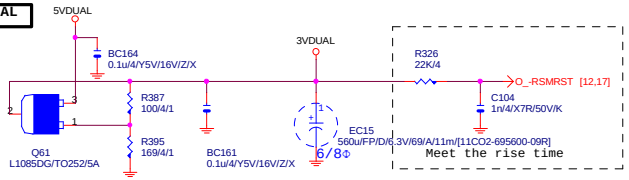
VCC1_5_PCH



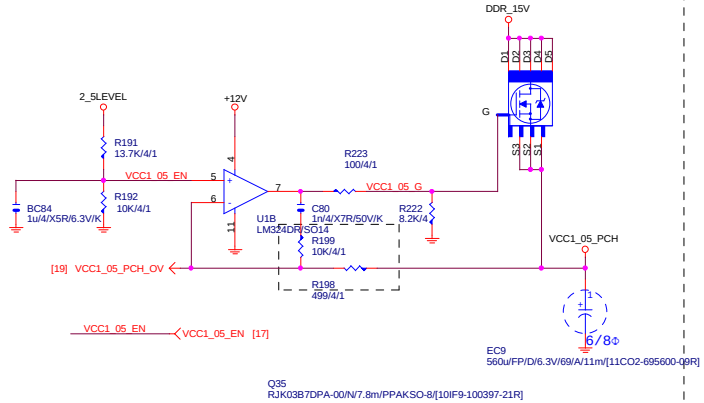
2_5LEVEL

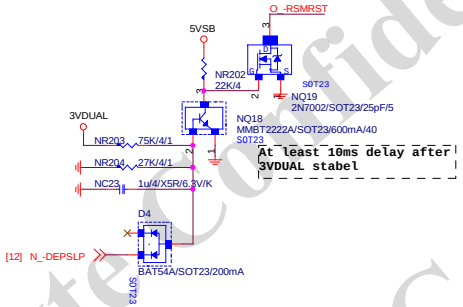


3VDUAL

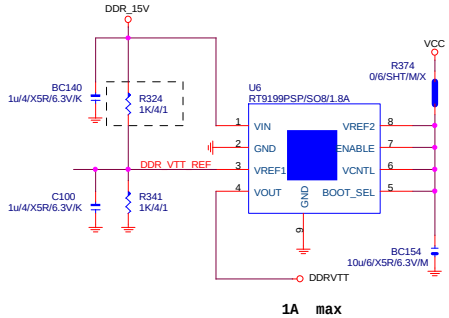


VCC1_05_PCH

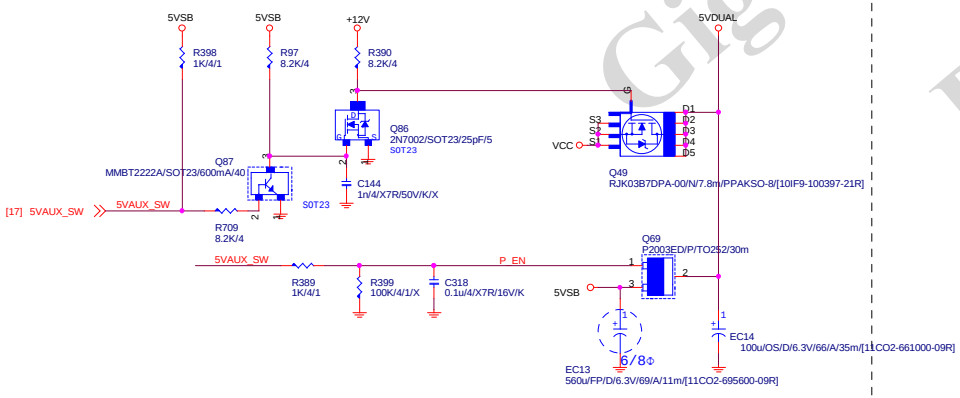




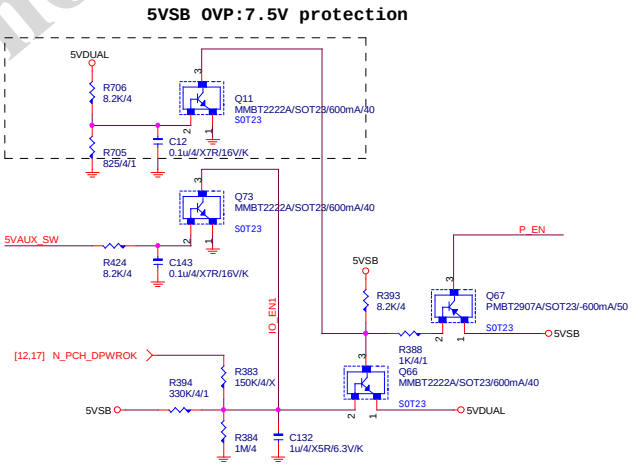
DDRVTT



5VDUAL



5VDUAL SHORT PROTECT



Gigabyte Technology		
Title: DISCRETE POWER		
Size: Custom	Document Number: GA-B85M-D3V	Rev: 2.01
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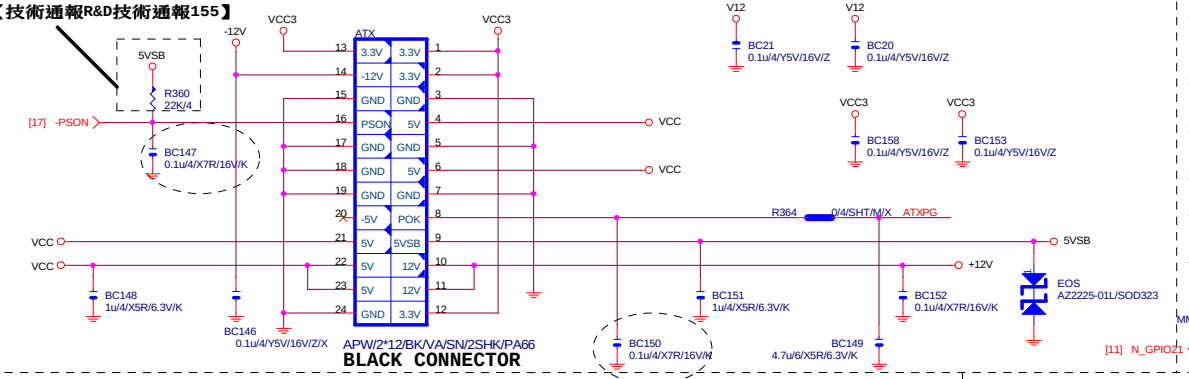
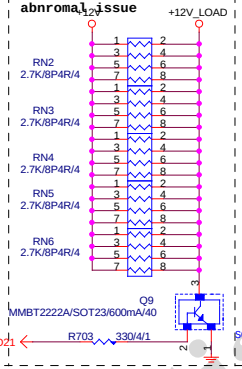
ATXX24 POWER CONNECTOR

【技術通報R&D技術通報155】

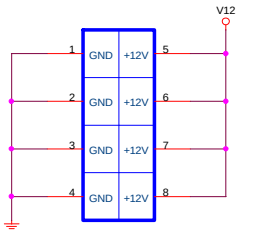


【技術通報R&D技術通報158】

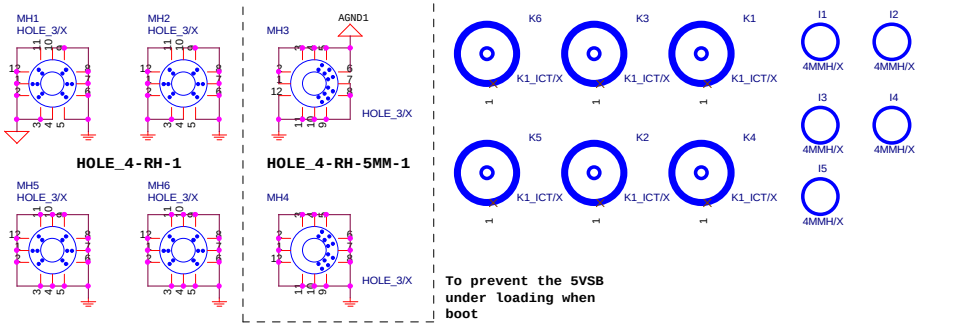
To fix 12V light load abnroma l issue



ATXX4 POWER CONNECTOR



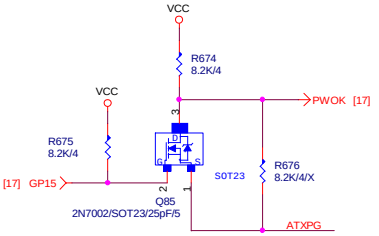
TPM

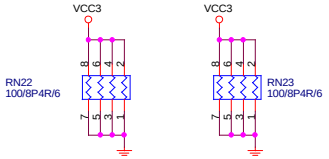


To prevent the 5VSB under loading when boot

PWOK PATCH

【技術通報R&D技術通報154】





FIX PWR MINMUN LOAD

Gigabyte Technology

Title	ATX CONNECTOR	
Size: Custom	Document Number: GA-B85M-D3V	Rev: 2.01
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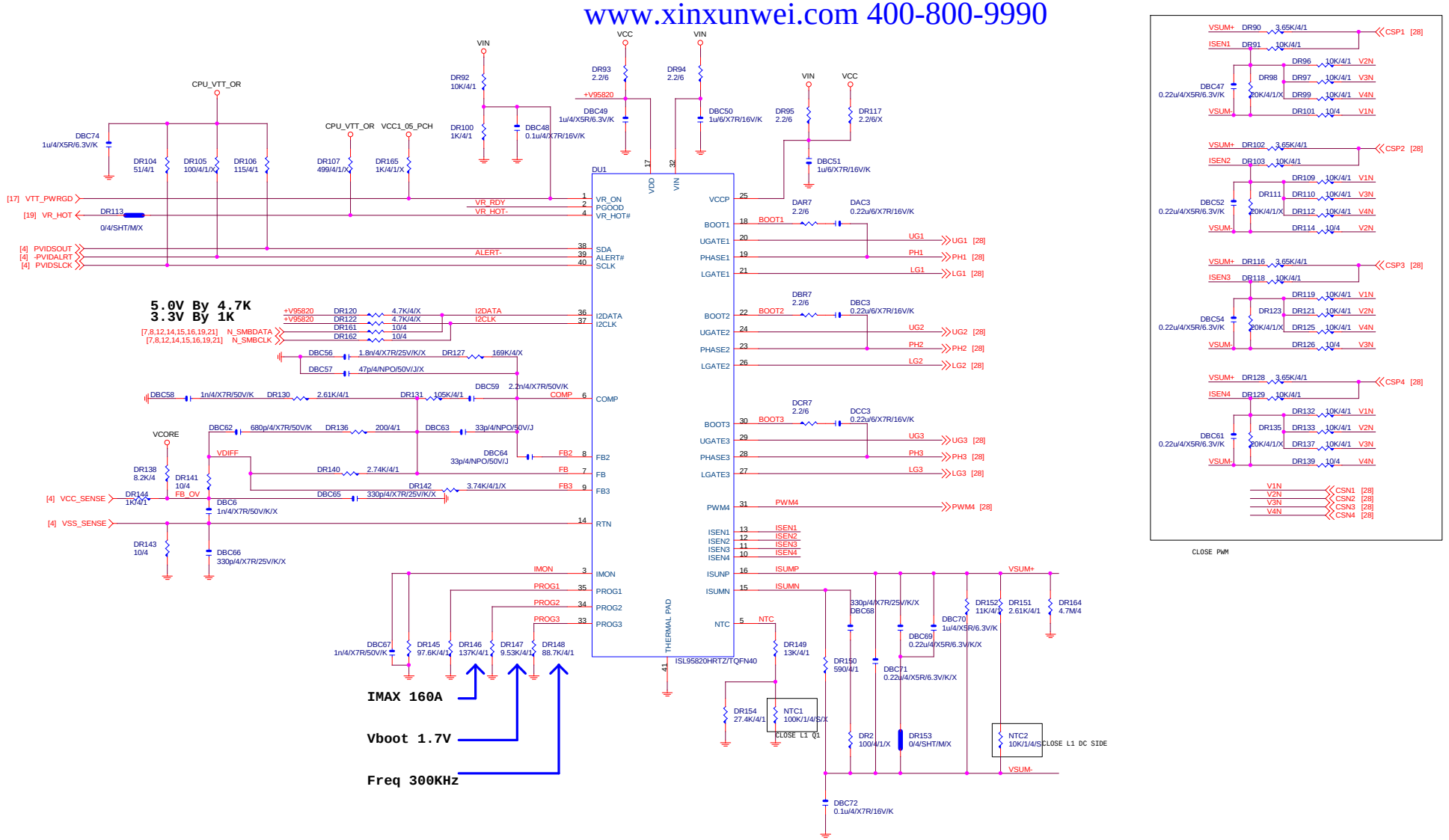
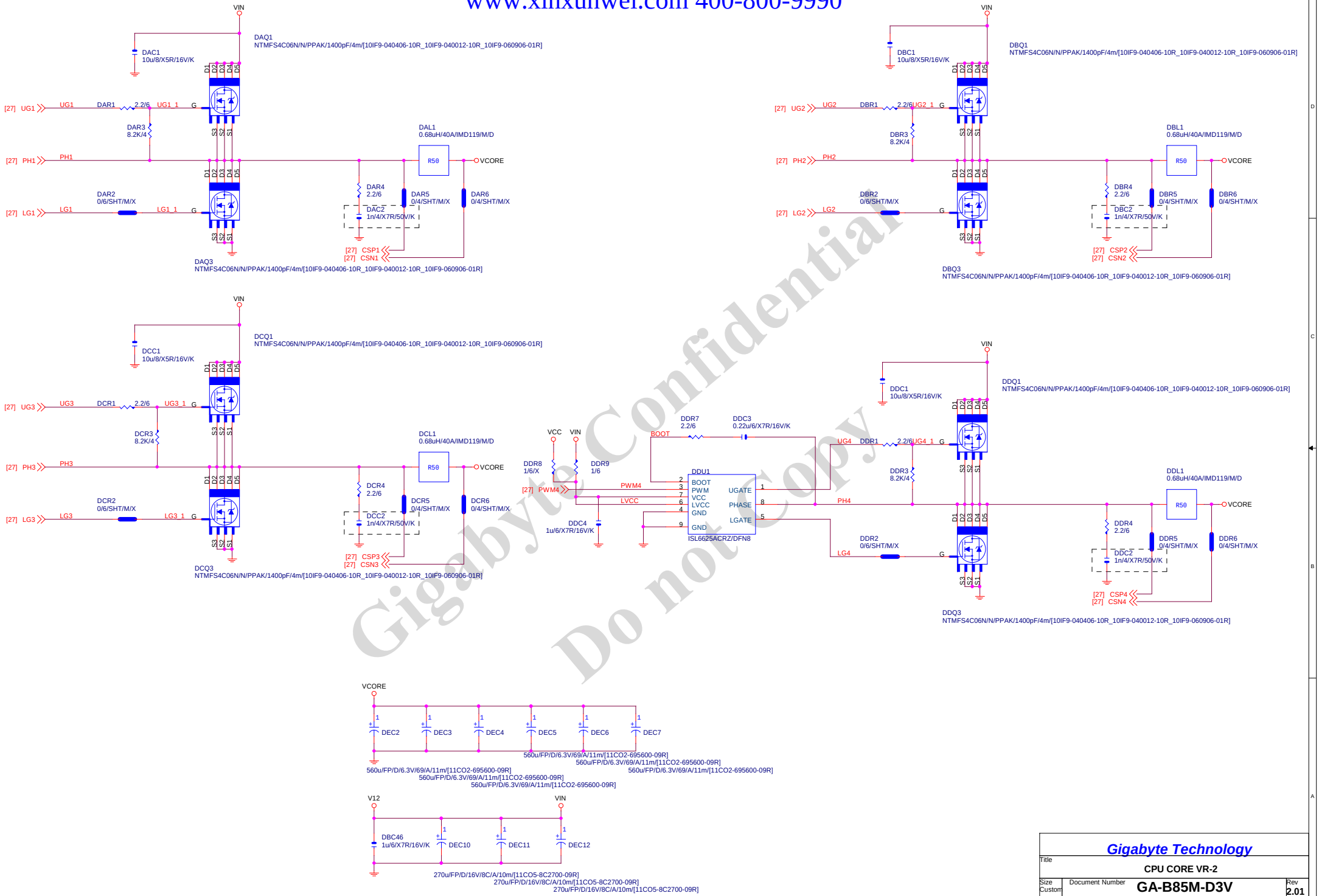


Gigabyte Technology			
Title: CPU CORE VR-1			
Size: Custom	Document Number: GA-B85M-D3V		Rev: 2.01
Date: Thursday, November 28, 2013		Sheet 27 of 32	



Gigabyte Technology			
Title: CPU CORE VR-2			
Size: Custom	Document Number: GA-B85M-D3V		Rev: 2.01
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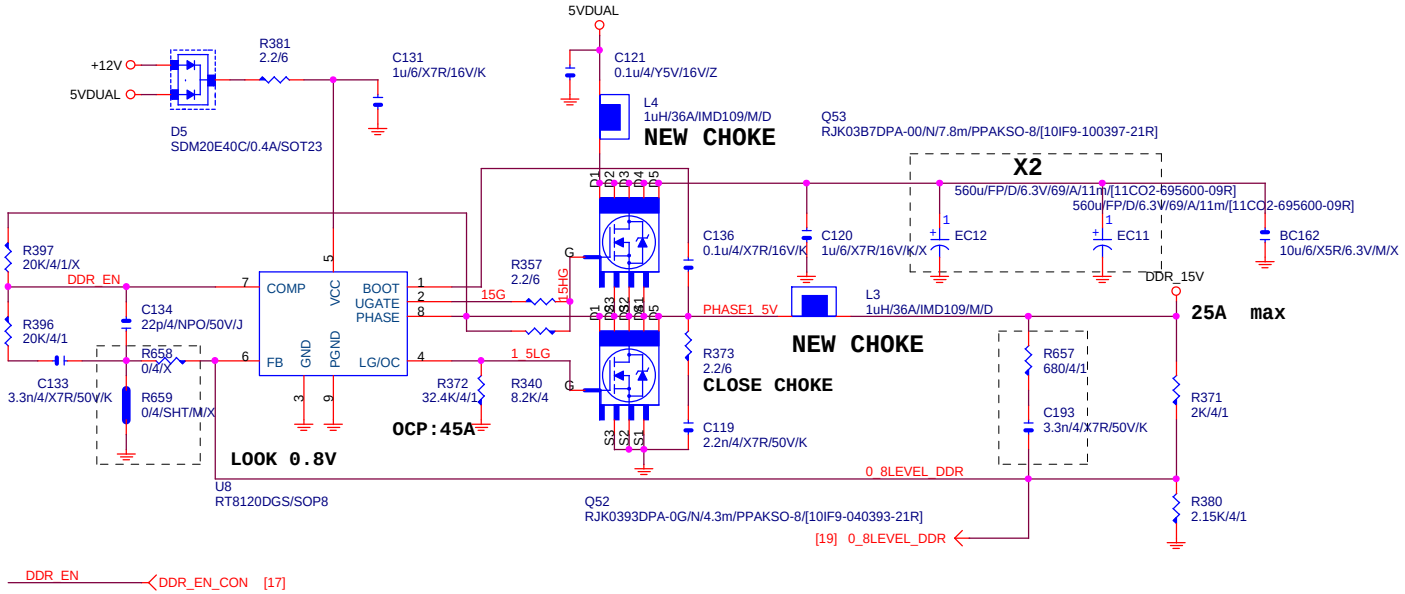
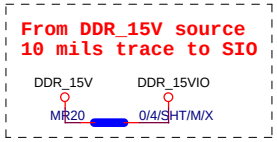
DDR15V



From DDR_15V source
10 mils trace to SIO



PWR SEQ

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℃),1(105℃)

VIN Ripple current=4.7X1.7=7.99A(85℃)
-->故固態電容須2X7.99=15.98>11.45A

Rocset=(Iocp*Lgate,rdson)/Iocset
Rocset=(45A*6.7mOhm)/10uA = 30K
Iocset=10uA

Gigabyte Technology			
Title: DDR POWER			
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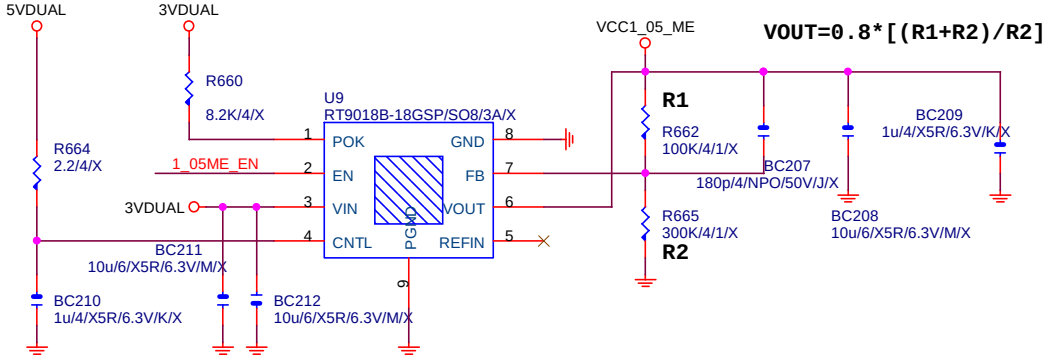
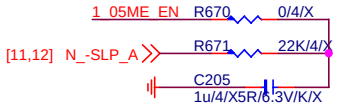
VCC1_05_ME

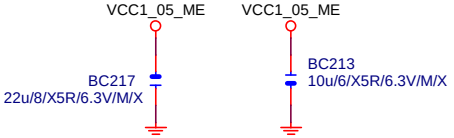
N/A

【技術通報R&D技術通報156】
(RICHTEK), (NUVOTON), (EMC)做共用
PIN7分壓阻值須做修改為100K以上電阻值

VOUT=0.8*[(R1+R2)/R2]



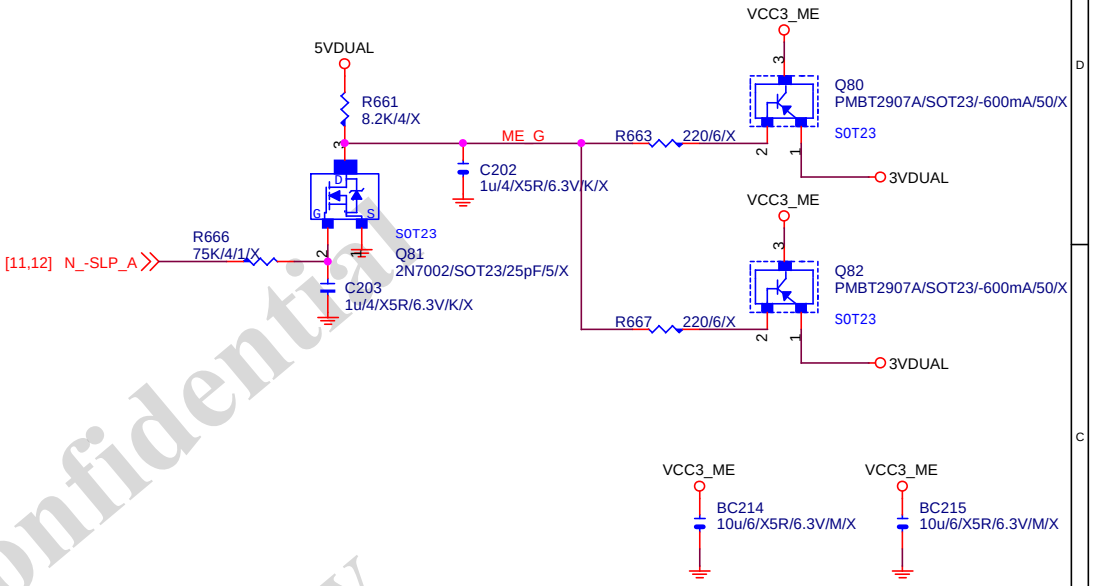




Second source
EM5103 - 10GL2-305103-01R
NCT3730S -
10GL2-303730-01R

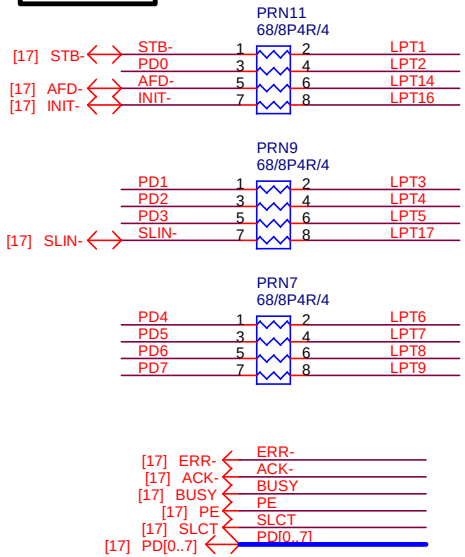
VCC3_ME

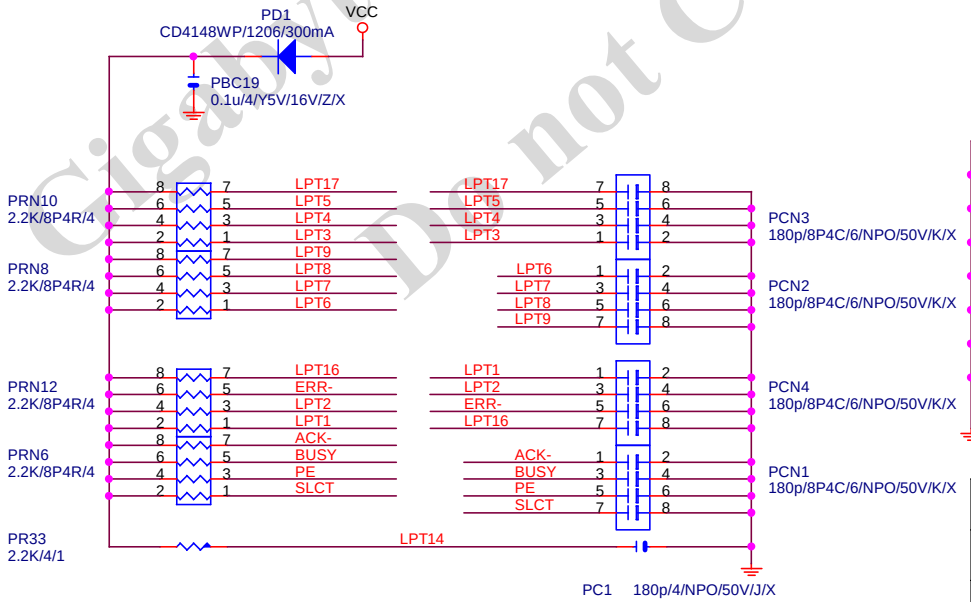
N/A

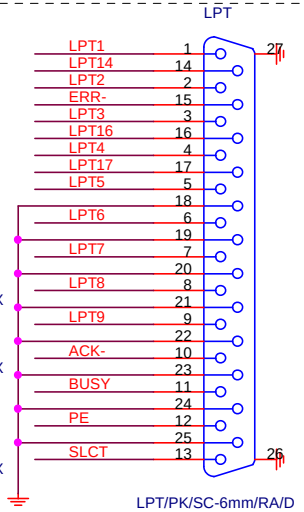


【技術通報R&D技術通報151】
33ohm Change to 68ohm

LPT PORT







Gigabyte Technology

Title: LPT

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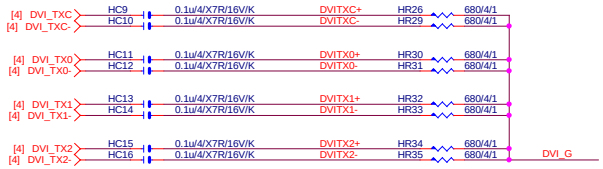
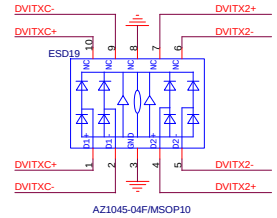
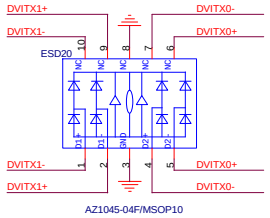
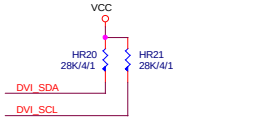


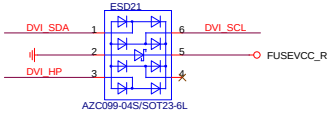


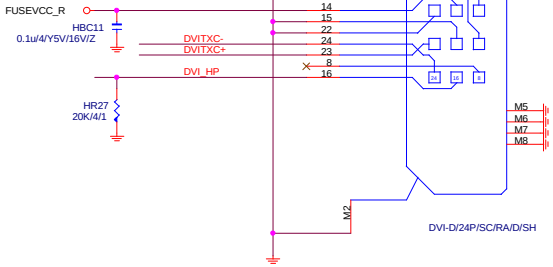
Close to connector

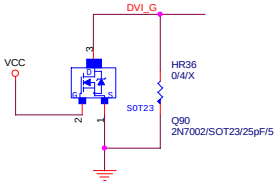


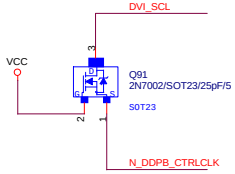
Close to connector

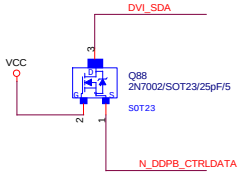


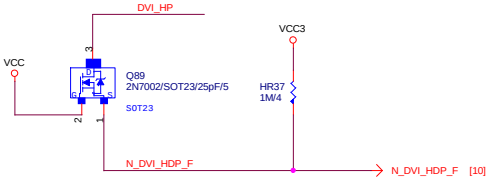












Gigabyte Technology			
Title: DVI			
Size: Custom	Document Number: GA-B85M-D3V		Rev: 2.01
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PCIE TO PCI

PCI:5/4/5 Impedance=50 +- 15%

IT8892: PR24 -> 47ohm
IT8893: PR24 -> 22ohm

BA_D[0..31] BA_D[0..31] [16]

-BC_BE0 -BC_BE0 [16]
-BC_BE1 -BC_BE1 [16]
-BC_BE2 -BC_BE2 [16]
-BC_BE3 -BC_BE3 [16]

-BPERR -BPERR [16]
-BSERR -BSERR [16]

BPAR BPAR [16]
-BPLOCK -BPLOCK [16]
-BDEVSEL -BDEVSEL [16]
-BSTOP -BSTOP [16]
-BTRDY -BTRDY [16]
-BIRDY -BIRDY [16]
-BFRAME -BFRAME [16]

-PCIE_RST -PCIE_RST [14,15,17]

-BPCIRST -BPCIRST [16]

-BREQ0 -BREQ0 [16]

-BGNT0 -BGNT0 [16]

-BPCIPME1 -BPCIPME1 [16]

[16] BPCLK0 PR24 47/4/1 CLKOUT0

RREF PR13 12K/4/1
TEST_EN PR21 10K/4/1
EXT_ARB PR22 10K/4/1
RST_SEL PR7 10K/4/1

VCC3
PR14 1K/4/1/X M66EN
PR42 1K/4/1

High: Enable PCI CLK 66MHz
Low: Disable PCI CLK 66MHz

VCC3
PR35 8.2K/4/X PCICLK_SEL
PR37 10K/4/1

High: PCICLK INTPUT form CLK Gen
Low: PCICLK OUTPUT form IT8893 chip

IT8892

PRN14 0/8P4R/0402/SHT/X
-BPIRQA 1 2 -BPIRQA1 [16]
-BPIRQD 3 4 -BPIRQD1 [16]
-BPIRQB 5 6 -BPIRQB1 [16]
-BPIRQC 7 8 -BPIRQC1 [16]

PCI slot

VCCP PR26 0/4/SHT/M/X 3VDUAL

PCI slot

-BPCIPME1 PR27 0/4/SHT/M/X N_-PCIE_WAKE [12,14,15,24]

chipset side

3VDUAL
PR2 0/4/SHT/M/X
PCIEWAKE PR34 10K/4/1
-BPCIPME PR43 10K/4/1

PU1

1	WAKE#	SEG_F/GP1	128
2	PME#	SEG_F/GP0	127
3	GNDP_AUX	PCICLK_SEL	126
4	VCCP_AUX	VCCK	125
5	LDOAUX_18V	GNDP	124
6	VSS_AUX	VCCP	123
7	VCCK_AUX	M66EN	122
8	NC	SEG_D	121
9	CLKN	SEG_C	120
10	CLKP	SEG_B	119
11	VCC18A	SEG_A	118
12	VCC18A	PERST#	117
13	GNDA	INTD#	116
14	GNDA	PCIRST#	115
15	GNDA	NC	114
16	RREF	VSS	113
17	DIP	VCCK	112
18	DIN	GNDP	111
19	VCC18A_AUX	VCCP	110
20	DON	TP2	109
21	DOP	GNT0#	108
22	VSS	REQ0#	107
23	VCCK	NC	106
24	SEG_EN1/GP3	TP1	105
25	SEG_EN2/GP4	PCICLK0	104
26	EECS#	GNT1#	103
27	EECLK	REQ1#	102
28	EEWRDATA	AD31	101
29	EERDDATA	AD29	100
30	AD0	AD28	99
31	AD1	VSS	98
32	SEG_G		97

PCIEWAKE -BPCIPME VCCP LDOAUX_18V 1.8V_AUX [10] G_-PBCLK [10] G_PBCLK 1.8VA 1.8VA RREF [9] G_PCIEBOP [9] G_PCIEBON 1.8V_AUXA [9] G_PCIEBIN [9] G_PCIEBIP 1.8VD BA_D0 BA_D1

IT8892E/BX LQFP128

33	AD2	VCCK	96
34	AD3	GNDP	95
35	GNDP	VCCP	94
36	GNDP	NC	93
37	AD4	EXT_ARB	92
38	AD5	RST_SEL	91
39	AD6	TEST_EN	90
40	AD7	AD27	89
41	VCCK	AD26	88
42	VSS	CBE3#	87
43	AD8	AD25	86
44	AD9	AD24	85
45	AD10	VCCP	84
46	CBE0#	AD23	83
47	VCCP	AD22	82
48	GNDP	AD21	81
49	CBE1#	AD20	80
50	AD11	VSS	79
51	AD12	VCCK	78
52	AD13	AD19	77
53	AD14	AD18	76
54	AD15	AD17	75
55	PERR#	AD16	74
56	SERR#	GNDP	73
57	VCCP	VCCP	72
58	GNDP	FRAME#	71
59	LDO_18V	IRDY#	70
60	VSS	CBE2#	69
61	PAR	TRDY#	68
62	LOCK#	STOP#	67
63	INTB#	DEVSEL#	66
64	INTC#	INTA#	65

IT8892E/FX/S

BA_D2 BA_D3 BA_D4 BA_D5 BA_D6 BA_D7 1.8VD BA_D8 BA_D9 BA_D10 BC_BE0 VCC3 BC_BE1 BA_D11 BA_D12 BA_D13 BA_D14 BA_D15 BPERR BSERR VCC3 LDO_18V BPAR BPLOCK BPIRQB BPIRQC

1.8VD 1.8VA 1.8V_AUX 1.8V_AUXA LDOAUX_18V LDO_18V

PRN1 2.2K/8P4R/4 -BFRAME -BTRDY -BSTOP -BDEVSEL
PRN2 2.2K/8P4R/4 -BIRDY -BPERR -BSERR -BPLOCK
PRN15 2.2K/8P4R/4 -BPIRQC -BPIRQB -BPIRQD -BPIRQA
PRN4 2.2K/8P4R/4 -BGNT3 -BREQ3 -BGNT1 -BREQ1
PRN5 2.2K/8P4R/4 -BGNT2 -BREQ2 -BGNT0 -BREQ0
BPAR PR41 2.2K/4/1/X

LDO_18V PFB1 0/6/SHT/M/X 1.8VA
PFB2 0/6/SHT/M/X 1.8VD
LDOAUX_18V PFB3 0/6/SHT/M/X 1.8V_AUX
PFB4 0/6/SHT/M/X 1.8V_AUXA

PBC60 10u/6/X5R/6.3V/M PBC21 1u/4/X5R/6.3V/K PBC22 0.1u/4/X7R/16V/K PBC33 1u/4/X5R/6.3V/K PBC34 0.1u/4/X7R/16V/K PBC35 0.1u/4/X7R/16V/K 0.1u/4/X7R/16V/K

PBC29 0.1u/4/X7R/16V/K/X PBC30 0.1u/4/X7R/16V/K PBC31 0.1u/4/X7R/16V/K

PBC23 10u/6/X5R/6.3V/M PBC24 1u/4/X5R/6.3V/K PBC25 0.1u/4/X7R/16V/K

PBC32 10u/6/X5R/6.3V/M PBC40 1u/4/X5R/6.3V/K PBC41 0.01u/4/X7R/25V/K

PBC59 1u/4/X5R/6.3V/K PBC38 0.1u/4/X7R/16V/K PBC39 0.01u/4/X7R/25V/K

PBC58 10u/6/X5R/6.3V/M PBC42 1u/4/X5R/6.3V/K PBC45 0.01u/4/X7R/25V/K

PBC26 10u/6/X5R/6.3V/M PBC27 1u/4/X5R/6.3V/K PBC28 0.1u/4/X7R/16V/K

PCB layout note: Close to chip

PCB layout note: Close to chip

Close to chip

PBC61 0.1u/4/X7R/16V/K G_PCIEBOP_C
PBC62 0.1u/4/X7R/16V/K G_PCIEBON_C
PBC43 0.1u/4/X7R/16V/K G_PCIEBIN_C
PBC44 0.1u/4/X7R/16V/K G_PCIEBIP_C

Gigabyte Technology

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