

Model Name: GA-B85M-HD3

Revision 2.0

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 , CLOCK GEN
27	VCORE ISL95812_1

SHEET

TITLE

28	VCORE ISL95812_2
29	RT8120_DDR POWER
30	LPT, M3 POWER
31	DVI, HDMI
32	IT8892E

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Cover Sheet

Size Custom	Document Number <b>GA-B85M-HD3</b>	Rev <b>2.0</b>
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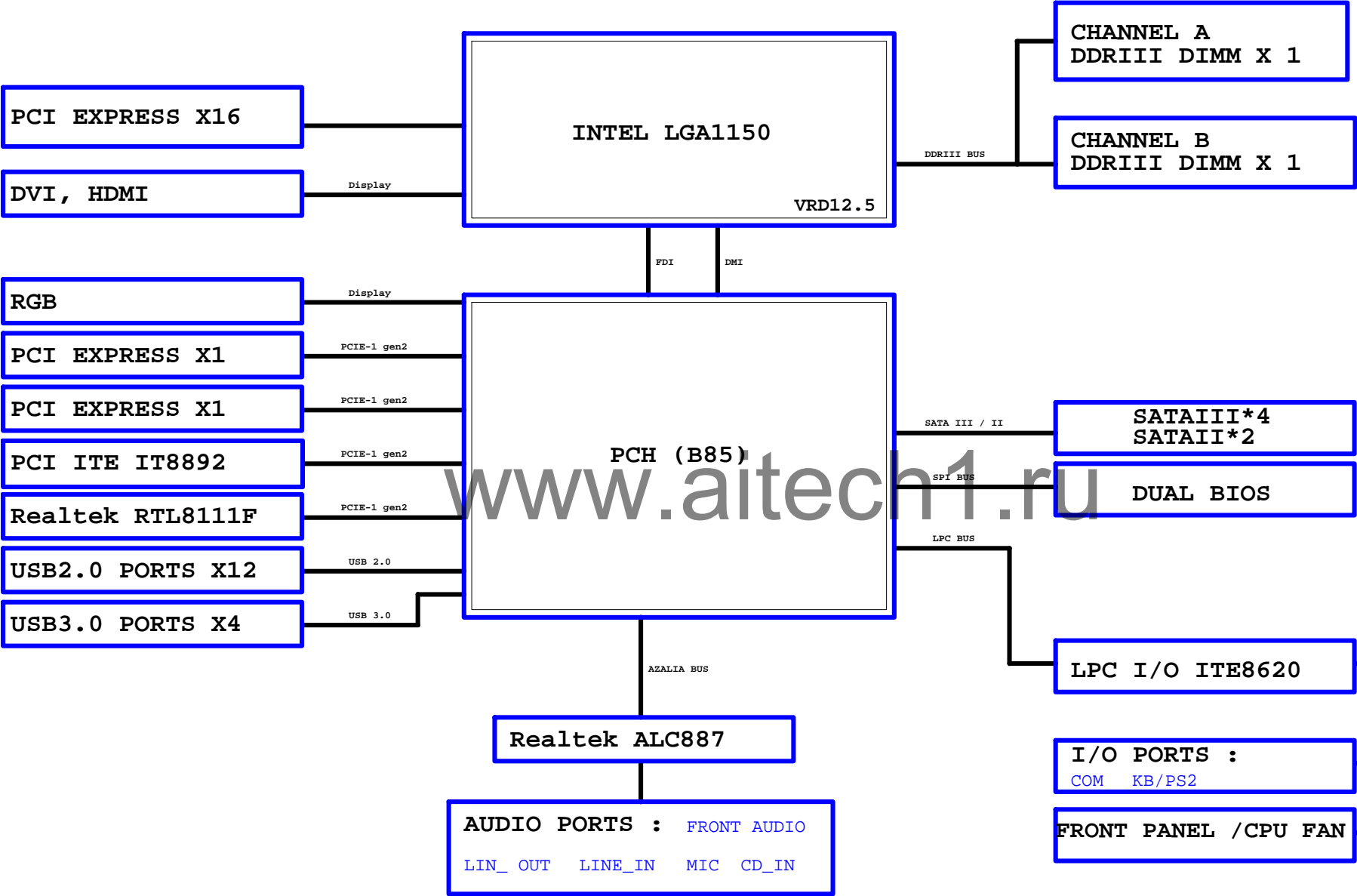
## Revision 2.0

## Component value change history

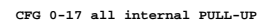
Data	Change Item	Reason
2013/01/30	Modify to R0.2	
	PCIEX1_2 CLK Change Port	
	ADD Disable SVID [SVID_CTRL]	
	ADD Disable ME [DS_ME]	
	ADD -PCIE_RST Patch	
2013/02/05	O_PWROK1 reserve 0.01u Cap (For EMI)	
2013/03/11	Update to R1.0	
	Modify F_PANEL MPD+ (Super I/O GP65)	
	ADD SYS_FAN 防燒	
	ADD N_-THRMTRIP / A_-PROCHOT Protection Option	
	ADD 5VSB OVP Protection	
	ADD +12V Dummy Control	
	Reserve N_PCH_DPWROK Control	
2013/03/19	ADD EMI 0ohm (R707)	
2013/04/02		PBOM: 9MB85MHD3-00-10A
2013/04/08	Update PROCHOT	PBOM: 9MB85MHD3-00-10B
	R148: 35.7K -> 75K	
	R136: 1.4K -> 1.5K	
	DR149: 3.83K -> 13K	
2013/06/25	Update to R1.1	PBOM: 9MB85MHD3-00-11A
	Chipset change REV: C2	
2013/07/04	ADD 5VSB Protection	PBOM: 9MB85MHD3-00-11B
	Remove Super I/O OVP/UVF Function	
2013/07/11	Modify 5VSB Protection	PBOM: 9MB85MHD3-00-11C
	DEL R704: 8.2K/4	
	ADD R706: 8.2K/4	
	R705: 715/4/1 -> 825/4/1	
	DEL AUDIO AZ2225-01L CD1	

[illegible]

BLOCK DIAGRAM



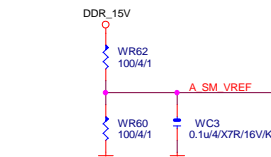
**LGA1150 (D)**



## DMI:12/4/4/



## SM REF



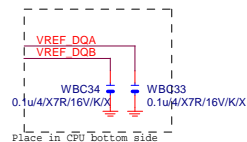
## LGA1150 (A)

LGA1150A		DDR0_MA0	DDR0_D00	AD38	MDA0
MAAA0	AU13	DDR0_MA1	DDR0_D01	AD39	MDA1
MAAA1	AV16	DDR0_MA2	DDR0_D02	AF38	MDA2
MAAA2	AU16	DDR0_MA3	DDR0_D03	AF39	MDA3
MAAA3	AW17	DDR0_MA4	DDR0_D04	AD37	MDA4
MAAA4	AU17	DDR0_MA5	DDR0_D05	AD40	MDA5
MAAA5	AW18	DDR0_MA6	DDR0_D06	AE37	MDA6
MAAA6	AV17	DDR0_MA7	DDR0_D07	AF40	MDA7
MAAA7	AT18	DDR0_MA8	DDR0_D08	AH40	MDA9
MAAA8	AU18	DDR0_MA9	DDR0_D09	AH39	MDA10
MAAA9	AT19	DDR0_MA10	DDR0_D10	AK38	MDA11
MAAA10	AW11	DDR0_MA11	DDR0_D11	AK39	MDA12
MAAA11	AV19	DDR0_MA12	DDR0_D12	AH37	MDA12
MAAA12	AU19	DDR0_MA13	DDR0_D13	AH38	MDA14
MAAA13	AT20	DDR0_MA14	DDR0_D14	AK40	MDA15
MAAA14	AW21	DDR0_MA15	DDR0_D15	AM40	MDA17
MODT_A0	AW10	DDR0_ODT0	DDR0_ODT0	AM39	MDA21
MODT_A1	AV8	DDR0_ODT1	DDR0_ODT1	AP38	MDA18
AW9	AW9	DDR0_ODT2	DDR0_ODT2	AP39	MDA19
AW8	AW8	DDR0_ODT3	DDR0_ODT3	AM37	MDA20
AW33	AW33	DDR0_ECC0	DDR0_ECC0	AM38	MDA16
AW33	AW33	DDR0_ECC1	DDR0_ECC1	AP37	MDA22
AU31	AU31	DDR0_ECC2	DDR0_ECC2	AP40	MDA23
AU31	AU31	DDR0_ECC3	DDR0_ECC3	AW37	MDA29
AU33	AU33	DDR0_ECC4	DDR0_ECC4	AU35	MDA26
AT31	AT31	DDR0_ECC5	DDR0_ECC5	AU35	MDA27
AW31	AW31	DDR0_ECC6	DDR0_ECC6	T37	MDA28
AW31	AW31	DDR0_ECC7	DDR0_ECC7	AU37	MDA24
SBAA0	SBAA0	DDR0_BA0	DDR0_BA0	AT35	MDA30
SBAA1	SBAA1	DDR0_BA1	DDR0_BA1	AW35	MDA31
SBAA2	SBAA2	DDR0_BA2	DDR0_BA2	AW6	MDA33
CKEA0	CKEA0	DDR0_CKE0	DDR0_CKE0	AU4	MDA35
CKEA1	CKEA1	DDR0_CKE1	DDR0_CKE1	AW6	MDA36
CSA0	CSA0	DDR0_CS_N0	DDR0_CS_N0	AW6	MDA32
CSA1	CSA1	DDR0_CS_N1	DDR0_CS_N1	AW4	MDA38
DCLKA0	DCLKA0	DDR0_CLK_P0	DDR0_CLK_P0	AW4	MDA39
DCLKA1	DCLKA1	DDR0_CLK_P1	DDR0_CLK_P1	AR1	MDA41
DCLKA2	DCLKA2	DDR0_CLK_P2	DDR0_CLK_P2	AR4	MDA45
DCLKA3	DCLKA3	DDR0_CLK_P3	DDR0_CLK_P3	AN3	MDA42
RSVD	RSVD	DDR0_CS_N2	DDR0_CS_N2	AN4	MDA43
RSVD	RSVD	DDR0_CS_N3	DDR0_CS_N3	AR2	MDA44
RSVD	RSVD	DDR0_DQ45	DDR0_DQ45	AR3	MDA40
RSVD	RSVD	DDR0_DQ46	DDR0_DQ46	AN2	MDA46
RSVD	RSVD	DDR0_DQ47	DDR0_DQ47	AN1	MDA47
RSVD	RSVD	DDR0_DQ48	DDR0_DQ48	AL1	MDA49
RSVD	RSVD	DDR0_DQ49	DDR0_DQ49	AL4	MDA53
RSVD	RSVD	DDR0_DQ50	DDR0_DQ50	AJ4	MDA51
RSVD	RSVD	DDR0_DQ51	DDR0_DQ51	AL2	MDA52
RSVD	RSVD	DDR0_DQ52	DDR0_DQ52	AJ2	MDA54
RSVD	RSVD	DDR0_DQ53	DDR0_DQ53	AJ1	MDA55
RSVD	RSVD	DDR0_DQ54	DDR0_DQ54	AG1	MDA57
RSVD	RSVD	DDR0_DQ55	DDR0_DQ55	AG4	MDA61
RSVD	RSVD	DDR0_DQ56	DDR0_DQ56	AE3	MDA58
RSVD	RSVD	DDR0_DQ57	DDR0_DQ57	E4	MDA59
RSVD	RSVD	DDR0_DQ58	DDR0_DQ58	AG2	MDA60
RSVD	RSVD	DDR0_DQ59	DDR0_DQ59	AG3	MDA56
RSVD	RSVD	DDR0_DQ60	DDR0_DQ60	AE2	MDA63
RSVD	RSVD	DDR0_DQ61	DDR0_DQ61	AE1	MDA62
RSVD	RSVD	DDR0_DQ62	DDR0_DQ62	AE39	DQSA0
RSVD	RSVD	DDR0_DQ63	DDR0_DQ63	AJ39	DQSA1
RSVD	RSVD	DDR0_DQ64	DDR0_DQ64	AN39	DQSA2
RSVD	RSVD	DDR0_DQ65	DDR0_DQ65	AV36	DQSA3
RSVD	RSVD	DDR0_DQ66	DDR0_DQ66	AV5	DQSA4
RSVD	RSVD	DDR0_DQ67	DDR0_DQ67	AP3	DQSA5
RSVD	RSVD	DDR0_DQ68	DDR0_DQ68	AK3	DQSA6
RSVD	RSVD	DDR0_DQ69	DDR0_DQ69	AF3	DQSA7
RSVD	RSVD	DDR0_DQ70	DDR0_DQ70	AV32	DQSA8
RSVD	RSVD	DDR0_DQ71	DDR0_DQ71	AE38	DQSA9
RSVD	RSVD	DDR0_DQ72	DDR0_DQ72	AJ38	DQSA1
RSVD	RSVD	DDR0_DQ73	DDR0_DQ73	AN38	DQSA2
RSVD	RSVD	DDR0_DQ74	DDR0_DQ74	AU36	DQSA3
RSVD	RSVD	DDR0_DQ75	DDR0_DQ75	AW5	DQSA4
RSVD	RSVD	DDR0_DQ76	DDR0_DQ76	AP2	DQSA5
RSVD	RSVD	DDR0_DQ77	DDR0_DQ77	AK2	DQSA6
RSVD	RSVD	DDR0_DQ78	DDR0_DQ78	AF2	DQSA7
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HASWELL[10SC1-F01150-11R\_10SC1-F01150-12R]

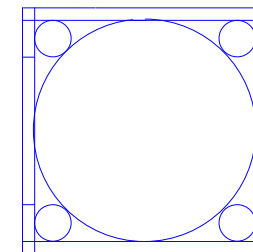
## LGA1150 (B)

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MAAB1	AK23	DDR1_MA2	DDR1_D02	AG35	MDB2
MAAB2	AM22	DDR1_MA3	DDR1_D03	AH35	MDB3
MAAB3	AM23	DDR1_MA4	DDR1_D04	AD34	MDB4
MAAB4	AP23	DDR1_MA5	DDR1_D05	AD35	MDB5
MAAB5	AL23	DDR1_MA6	DDR1_D06	AG34	MDB6
MAAB6	AY24	DDR1_MA7	DDR1_D07	AH34	MDB7
MAAB7	AV25	DDR1_MA8	DDR1_D08	AL34	MDB8
MAAB8	AU26	DDR1_MA9	DDR1_D09	AL35	MDB9
MAAB9	AW25	DDR1_MA10	DDR1_D10	AL31	MDB11
MAABA0	AE18	DDR1_MA11	DDR1_D11	AK34	MDB12
MAABA1	AY25	DDR1_MA12	DDR1_D12	AK35	MDB13
MAABA2	AV26	DDR1_MA13	DDR1_D13	AK32	MDB14
MAABA3	AR15	DDR1_MA14	DDR1_D14	AL32	MDB15
MAABA4	AV27	DDR1_MA15	DDR1_D15	AL34	MDB17
MAABA5	AY28	DDR1_MA16	DDR1_D16	AP34	MDB21
MODT_B0	AM17	DDR1_ODT0	DDR1_ODT0	AN31	MDB19
MODT_B1	AL16	DDR1_ODT1	DDR1_ODT1	AP31	MDB23
AM16	AM16	DDR1_ODT2	DDR1_ODT2	AP35	MDB20
AK15	AK15	DDR1_ODT3	DDR1_ODT3	AP35	MDB16
AM26	AM26	DDR1_ECC0	DDR1_ECC0	AN32	MDB18
AM25	AM25	DDR1_ECC1	DDR1_ECC1	AP32	MDB22
AP25	AP25	DDR1_ECC2	DDR1_ECC2	AM29	MDB25
AP26	AP26	DDR1_ECC3	DDR1_ECC3	AM28	MDB28
AL26	AL26	DDR1_ECC4	DDR1_ECC4	AR29	MDB27
AL25	AL25	DDR1_ECC5	DDR1_ECC5	AR28	MDB30
AR26	AR26	DDR1_ECC6	DDR1_ECC6	AL28	MDB24
AR25	AR25	DDR1_ECC7	DDR1_ECC7	AL28	MDB29
BA0	BA0	DDR1_BA0	DDR1_BA0	AP29	MDB26
BA1	BA1	DDR1_BA1	DDR1_BA1	AP28	MDB31
BA2	BA2	DDR1_BA2	DDR1_BA2	AR12	MDB32
CKE0	CKE0	DDR1_CKE0	DDR1_CKE0	AL12	MDB35
CKE1	CKE1	DDR1_CKE1	DDR1_CKE1	AR13	MDB36
CSB0	CSB0	DDR1_CS_N0	DDR1_CS_N0	AP13	MDB37
CSB1	CSB1	DDR1_CS_N1	DDR1_CS_N1	AM13	MDB38
DCLKB0	DCLKB0	DDR1_CLK_P0	DDR1_CLK_P0	AM12	MDB39
DCLKB1	DCLKB1	DDR1_CLK_P1	DDR1_CLK_P1	AR9	MDB45
DCLKB2	DCLKB2	DDR1_CLK_P2	DDR1_CLK_P2	AP9	MDB41
DCLKB3	DCLKB3	DDR1_CLK_P3	DDR1_CLK_P3	AR6	MDB47
RSVD	RSVD	DDR1_CLK_N0	DDR1_CLK_N0	AP6	MDB43
RSVD	RSVD	DDR1_CLK_N1	DDR1_CLK_N1	AR10	MDB44
RSVD	RSVD	DDR1_CLK_N2	DDR1_CLK_N2	AP10	MDB40
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RSVD	RSVD	DDR1_DQ46	DDR1_DQ46	AM9	MDB52
RSVD	RSVD	DDR1_DQ47	DDR1_DQ47	AL9	MDB53
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RSVD	RSVD	DDR1_DQ50	DDR1_DQ50	AM10	MDB48
RSVD	RSVD	DDR1_DQ51	DDR1_DQ51	AL10	MDB49
RSVD	RSVD	DDR1_DQ52	DDR1_DQ52	AM6	MDB54
RSVD	RSVD	DDR1_DQ53	DDR1_DQ53	AM7	MDB51
RSVD	RSVD	DDR1_DQ54	DDR1_DQ54	AH6	MDB61
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RSVD	RSVD	DDR1_DQ57	DDR1_DQ57	AJ6	MDB56
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RSVD	RSVD	DDR1_DQ63	DDR1_DQ63	AP33	DQSB2
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RSVD	RSVD	DDR1_DQ71	DDR1_DQ71	AK33	DQSB1
RSVD	RSVD	DDR1_DQ72	DDR1_DQ72	AN33	DQSB2
RSVD	RSVD	DDR1_DQ73	DDR1_DQ73	AN29	DQSB3
RSVD	RSVD	DDR1_DQ74	DDR1_DQ74	AL13	DQSB4
RSVD	RSVD	DDR1_DQ75	DDR1_DQ75	AR8	DQSB5
RSVD	RSVD	DDR1_DQ76	DDR1_DQ76	AM8	DQSB6
RSVD	RSVD	DDR1_DQ77	DDR1_DQ77	AG6	DQSB7
RSVD	RSVD	DDR1_DQ78	DDR1_DQ78	AN26	DQSB8
RSVD	RSVD	DDR1_DQ79	DDR1_DQ79	AN26	DQSB9



HASWELL[10SC1-F01150-11R\_10SC1-F01150-12R]

## LGA1150 (CR)

CR  
CPU RETENTION/X

LGA1150\_P



ILM\_BP/1156/CSP/ILM\_BP/1156/CSP/[12KRC-0F0001-52R\_12KRC-0F0001-51R]

DDR BUS

[7] MODT_A[0..1]	MODT_A0..1
[8] MODT_B[0..1]	MODT_B0..1
[7] MDA[0..63]	MDA0..63
[8] MDB[0..63]	MDB0..63
[7] DQSA[0..7]	DQSA0..7
[7] DQSA[0..7]	DQSA0..7
[7] MAA[0..15]	MAA0..15
[8] MAB[0..15]	MAB0..15
[8] DQSB[0..7]	DQSB0..7
[8] DQSB[0..7]	DQSB0..7

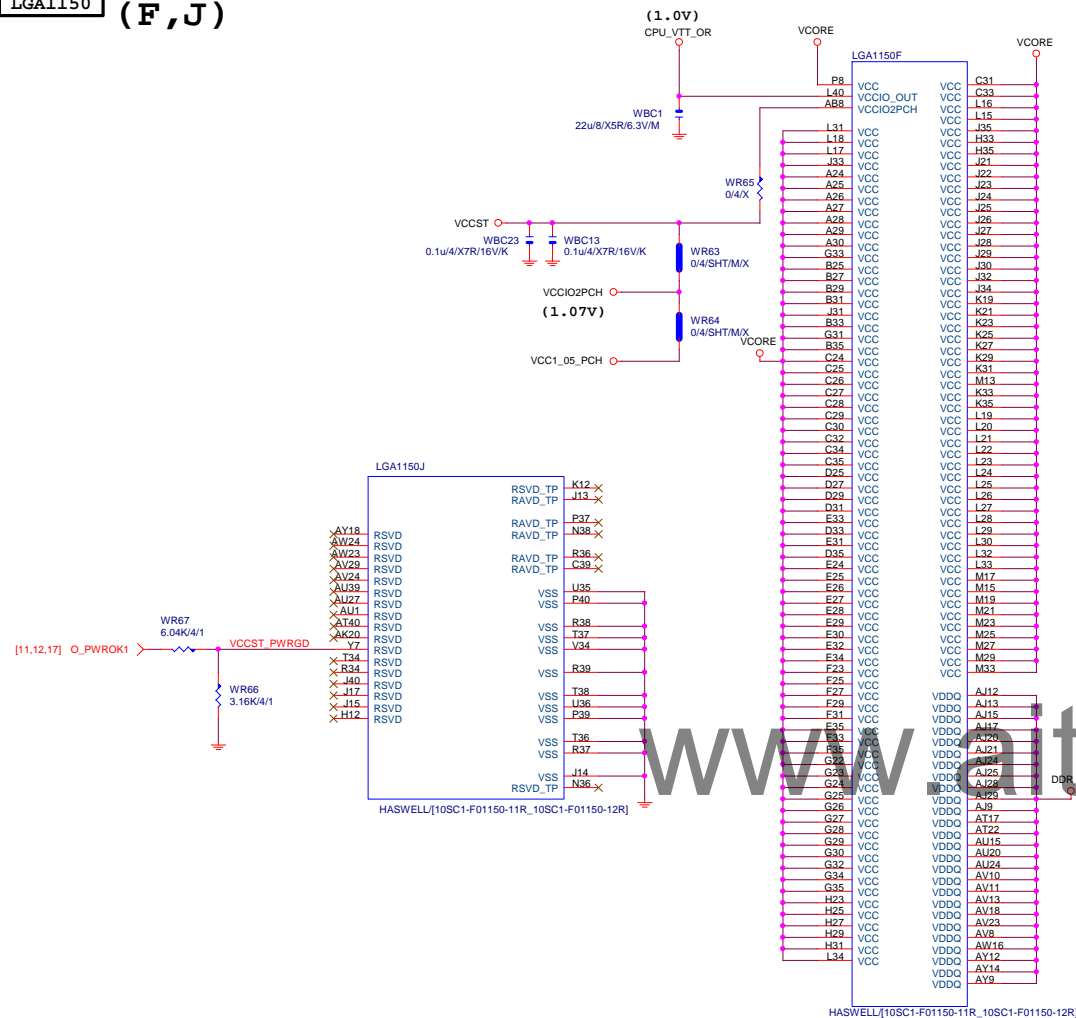
Gigabyte Technology

CPU LGA1150-B

Title	Document Number	Rev
Size	Custom	2.0
GA-B85M-HD3		

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LGA1150 (F, J)

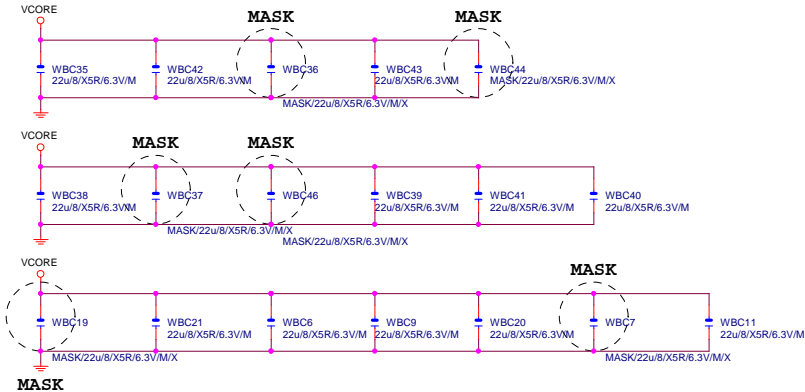


LGA1155 (G,H,I)



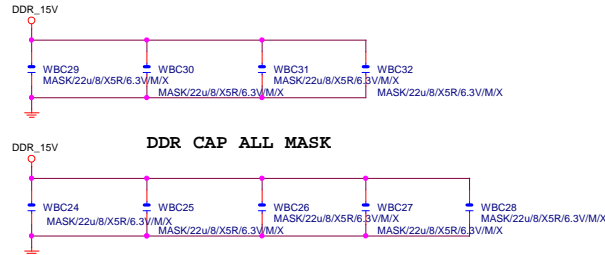
## VCore CAP

(x12)



## DDR CAP

(X0)



## Gigabyte Technology

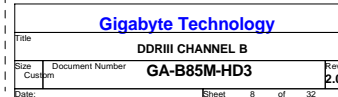
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Custom	<b>SA 200M TDS</b>	2.0
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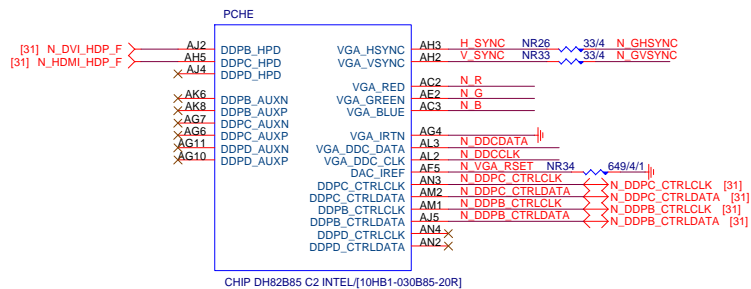






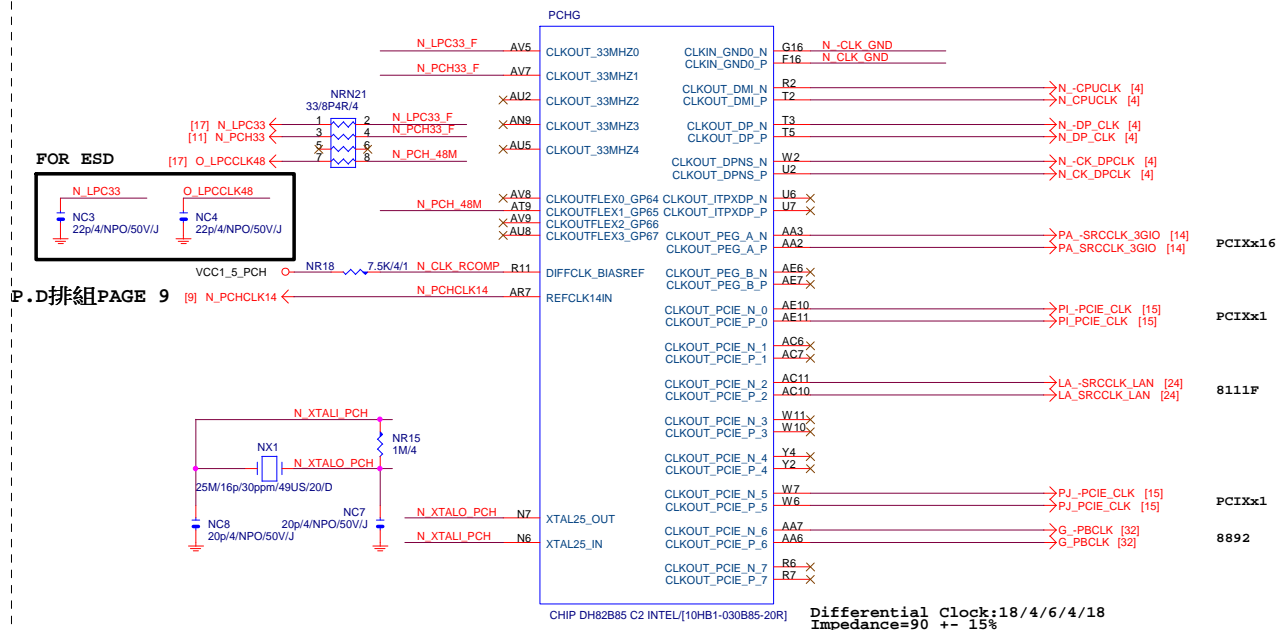


**PCH (E)**



CHIP DH82B85 C2 INTEL/I10HB1-030B85-20R1

**PCH (G)**

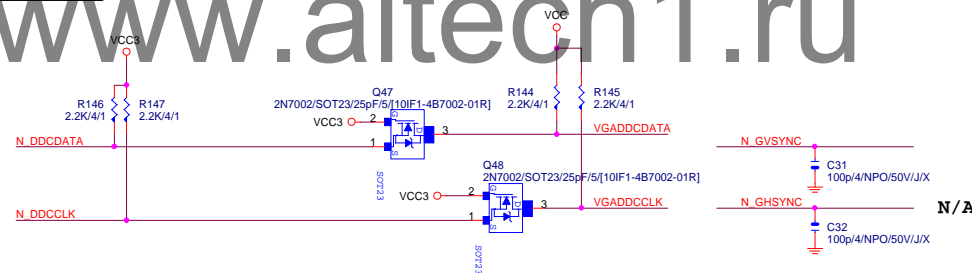


Differential Clock:18/4/6/4/18  
Impedance=90 +- 15%

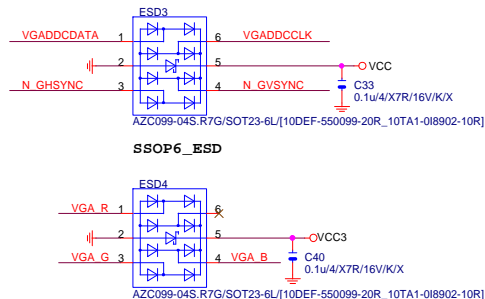
PCH CLK PD



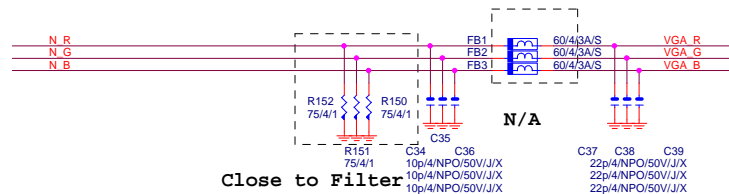
## VGA DDC



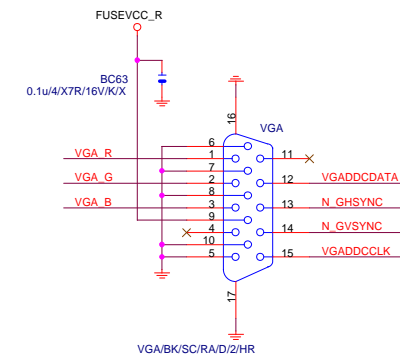
## VGA ESD



## VGA DDC



## VGA CONNECTOR



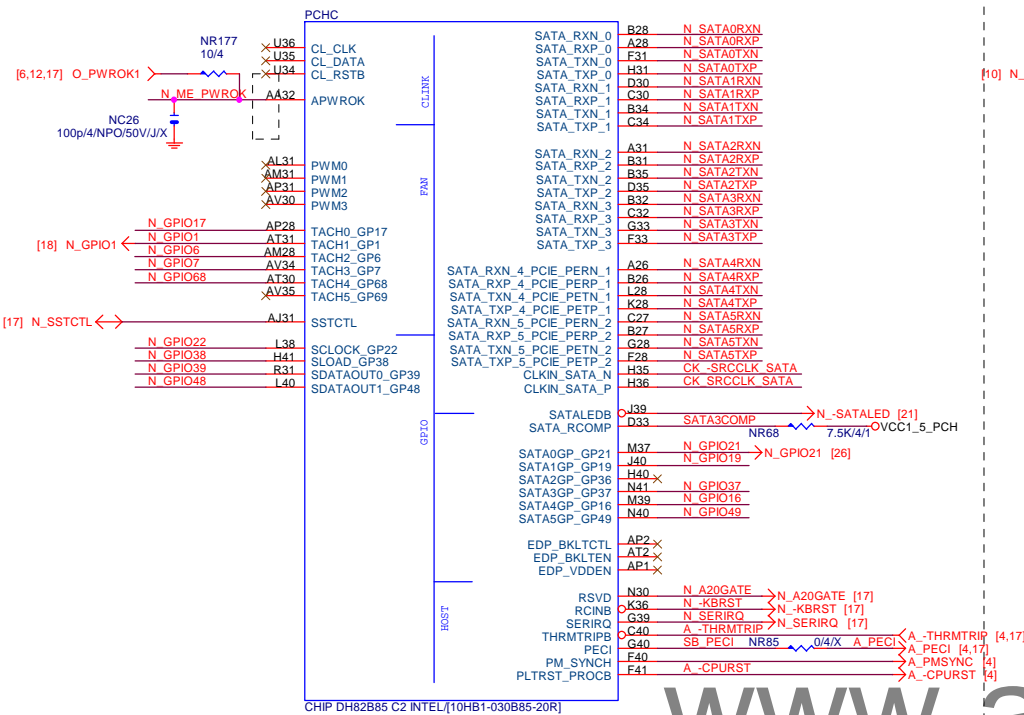
BLACK CONNECTOR

## Gigabyte Technology

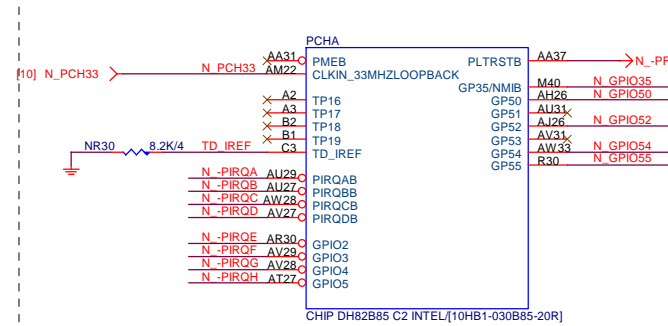
Title			
PCH DISPLAY ,CLK BUFFER			
Size	Document Number		Rev
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# PCH (C)

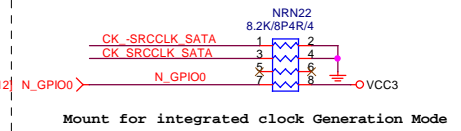
SATA3 : 20/7.5/4.5/7.5/20 (breakout min 8/4/4/4/8)  
Impedance=90 +- 17.5%  
SATA2 : 15/7.5/4.5/7.5/15 (breakout min 8/4/4/4/8)  
Impedance=90 +- 17.5%



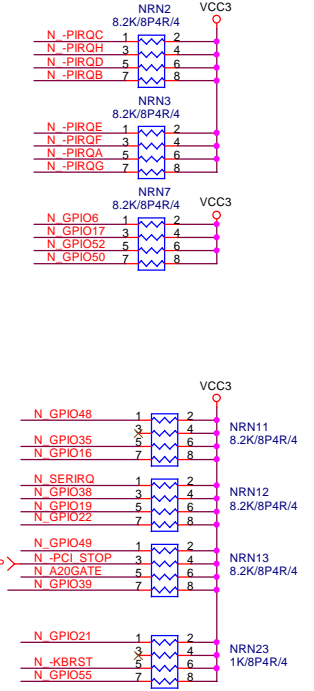
# PCH (A)



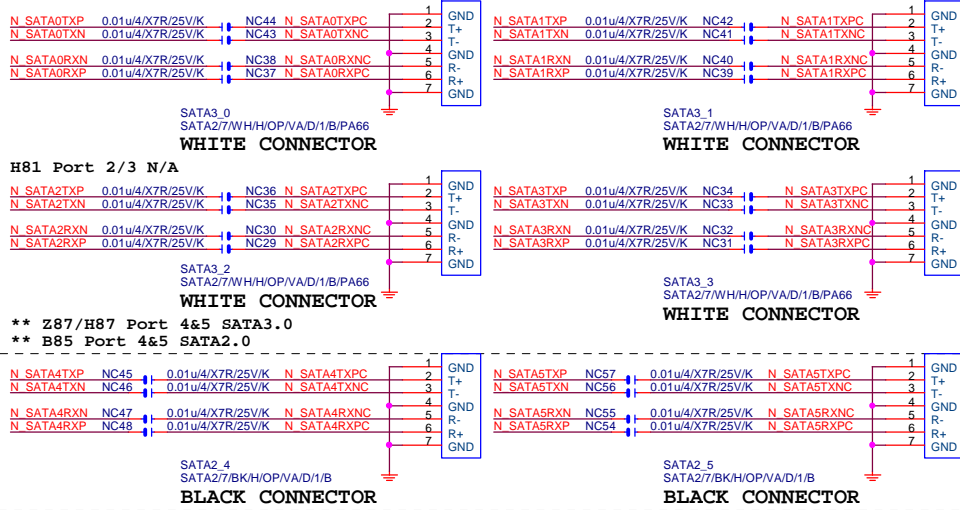
# PCH CLK PD



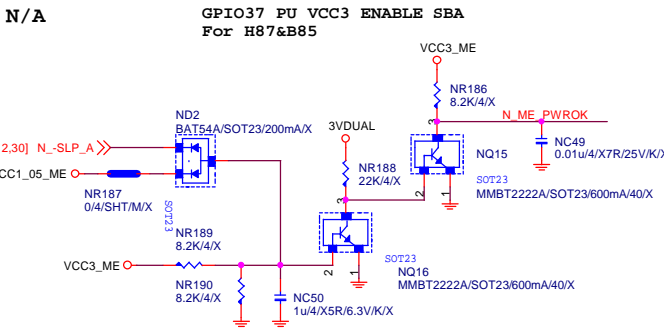
# PCH PU/PD



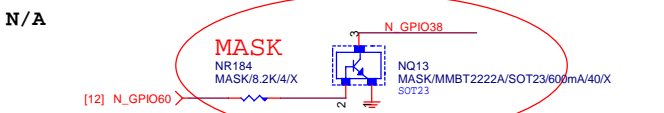
# SATA CONNECTOR



# ME PWROK



# GPIO38 Ctrl

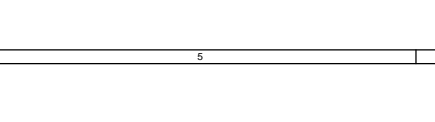
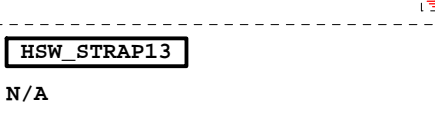
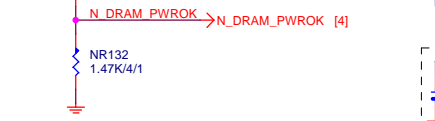
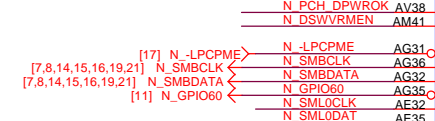
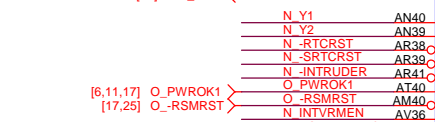
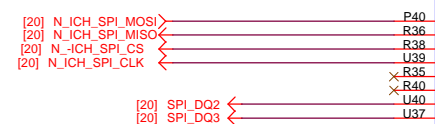
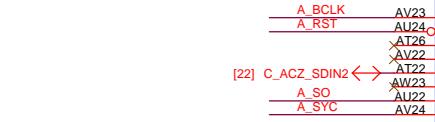
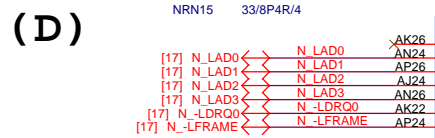


# Gigabyte Technology

Title		PCH HOST , SATA, PCI		Rev 2.0
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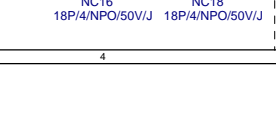
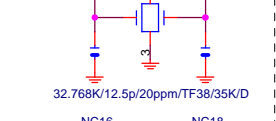
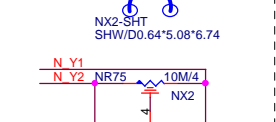
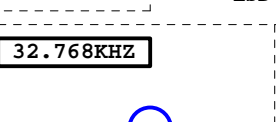
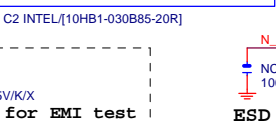
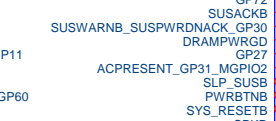
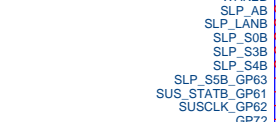
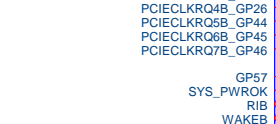
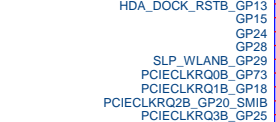
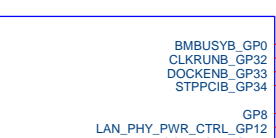
# PCH

(D)



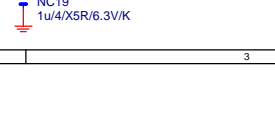
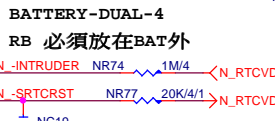
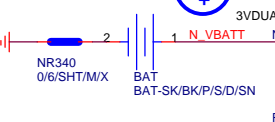
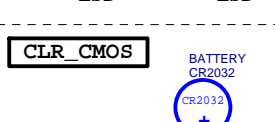
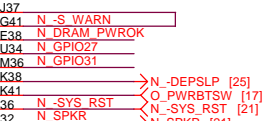
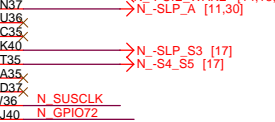
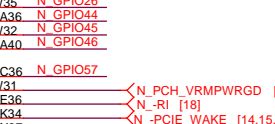
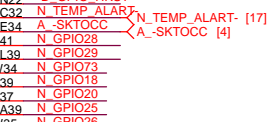
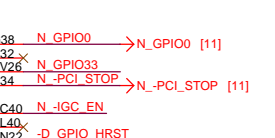
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N\_LAD[0..3]



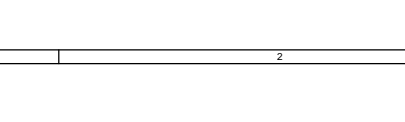
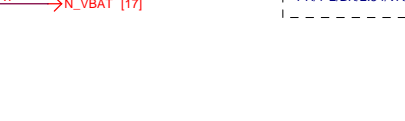
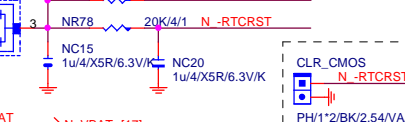
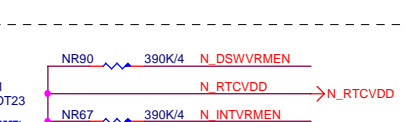
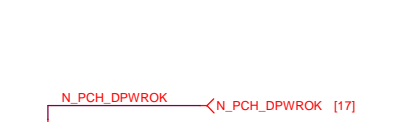
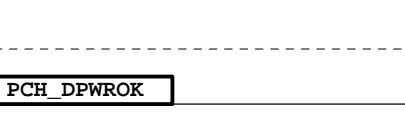
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N\_LAD[0..3]

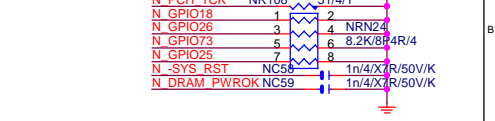
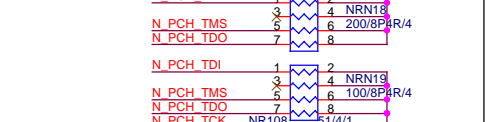
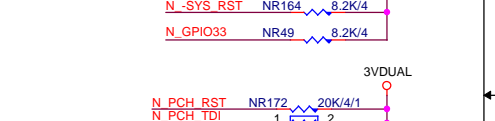
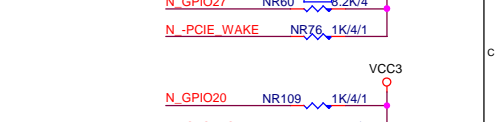
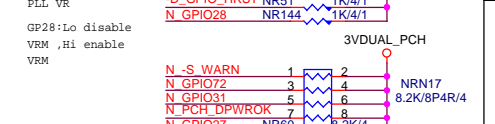
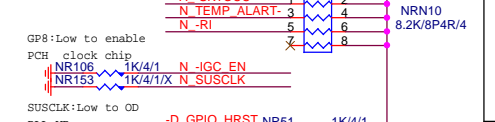
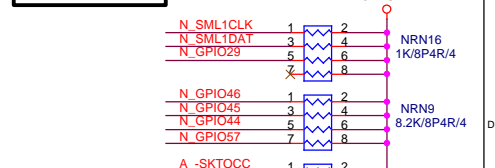


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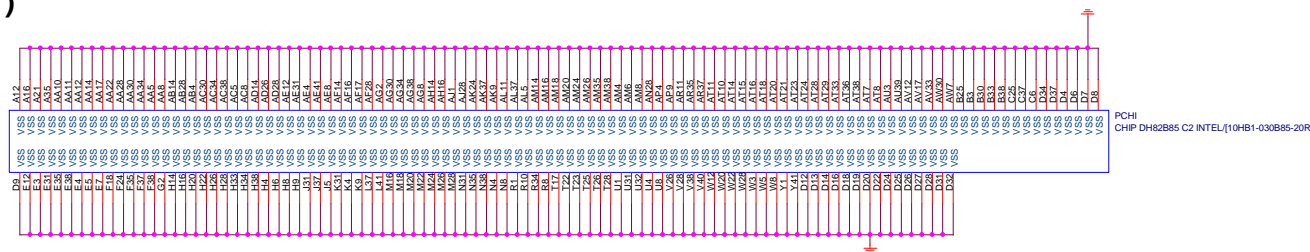
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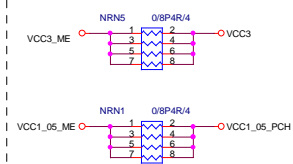
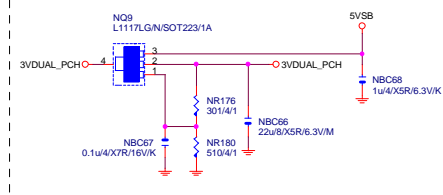
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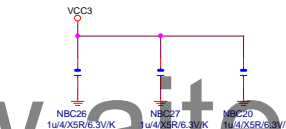
**PCH (I)**



SHT PWR

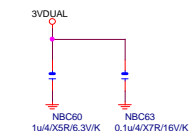
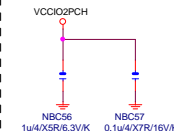


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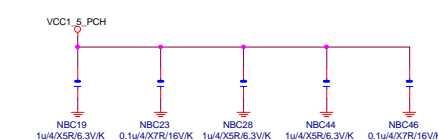


www.aitech1.ru (1.05)

■ (1.05V)(x2) (3.3V)(x2)

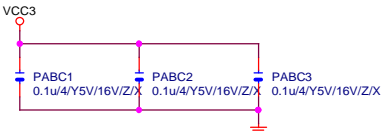


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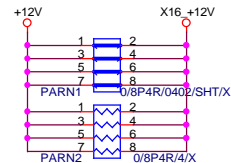


# PCIEX16 CAP

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# PCIEX16 PROTECT SHT



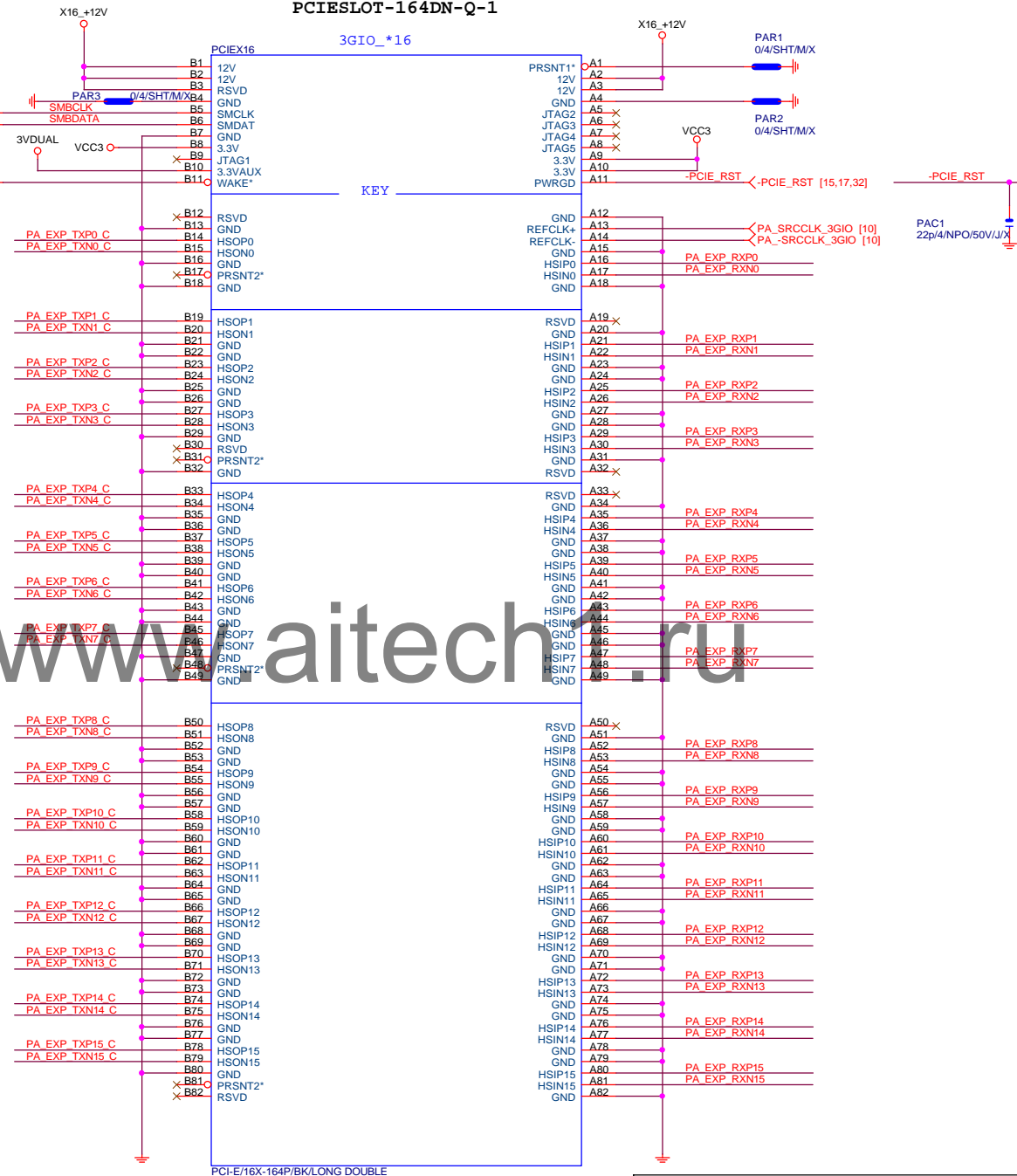
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PA EXP TXP1	PAC6	0.22u4/X5R/6.3V/K	PA EXP TXP1 C
PA EXP TXN1	PAC7	0.22u4/X5R/6.3V/K	PA EXP TXN1 C
PA EXP TXP2	PAC8	0.22u4/X5R/6.3V/K	PA EXP TXP2 C
PA EXP TXN2	PAC9	0.22u4/X5R/6.3V/K	PA EXP TXN2 C
PA EXP TXP3	PAC10	0.22u4/X5R/6.3V/K	PA EXP TXP3 C
PA EXP TXN3	PAC11	0.22u4/X5R/6.3V/K	PA EXP TXN3 C
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PA EXP TXN4	PAC13	0.22u4/X5R/6.3V/K	PA EXP TXN4 C
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PA EXP TXN7	PAC19	0.22u4/X5R/6.3V/K	PA EXP TXN7 C
PA EXP TXP8	PAC20	0.22u4/X5R/6.3V/K	PA EXP TXP8 C
PA EXP TXN8	PAC21	0.22u4/X5R/6.3V/K	PA EXP TXN8 C
PA EXP TXP9	PAC22	0.22u4/X5R/6.3V/K	PA EXP TXP9 C
PA EXP TXN9	PAC23	0.22u4/X5R/6.3V/K	PA EXP TXN9 C
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PA EXP RXP0.[15] >>> PA\_EXP\_RXP[0..15] [4]  
 PA EXP RXN0.[15] >>> PA\_EXP\_RXN[0..15] [4]  
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# PCIEX16 SLOT

# PCIESLOT-164DN-Q-1



PCI-E/16X-164P/BK/LONG DOUBLE

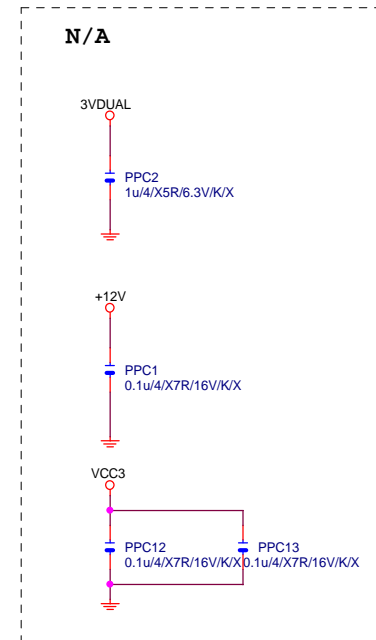
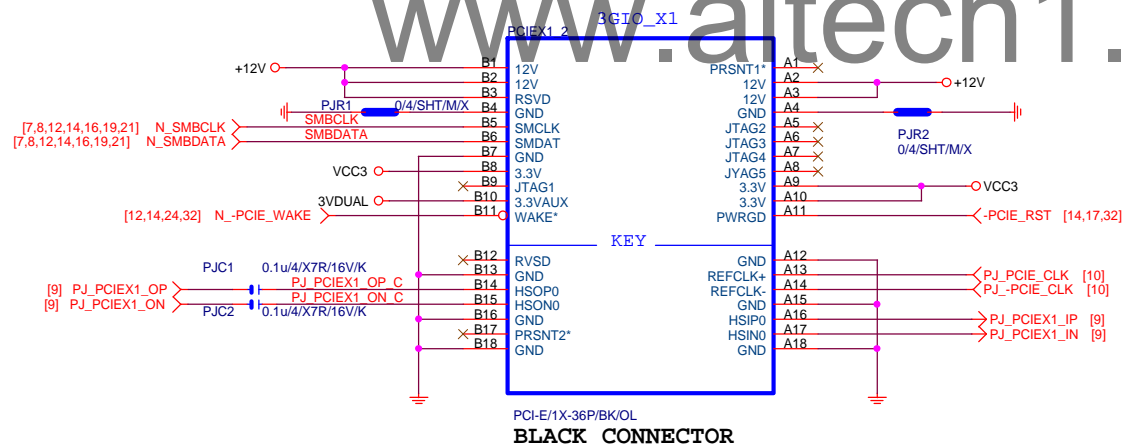
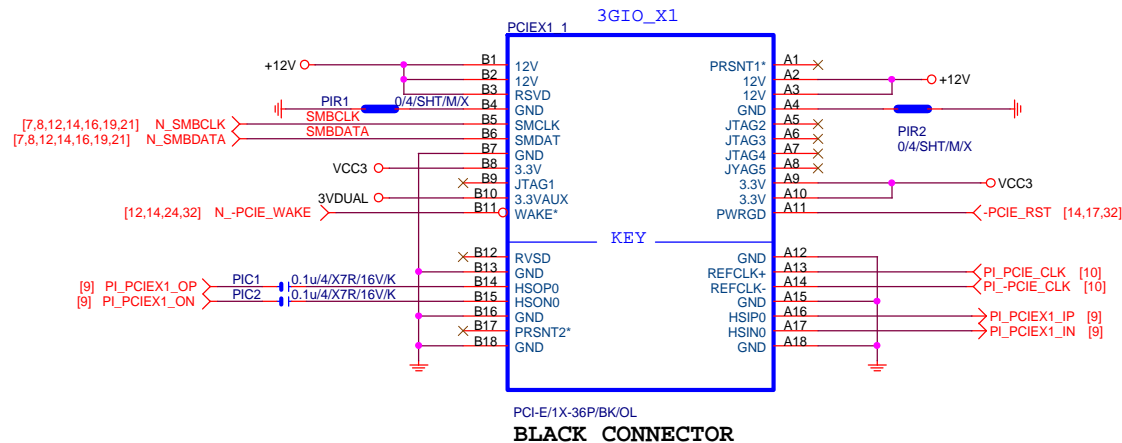
BLACK CONNECTOR

Gigabyte Technology

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Size			GA-B85M-HD3	
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# PCIEX1 SLOT



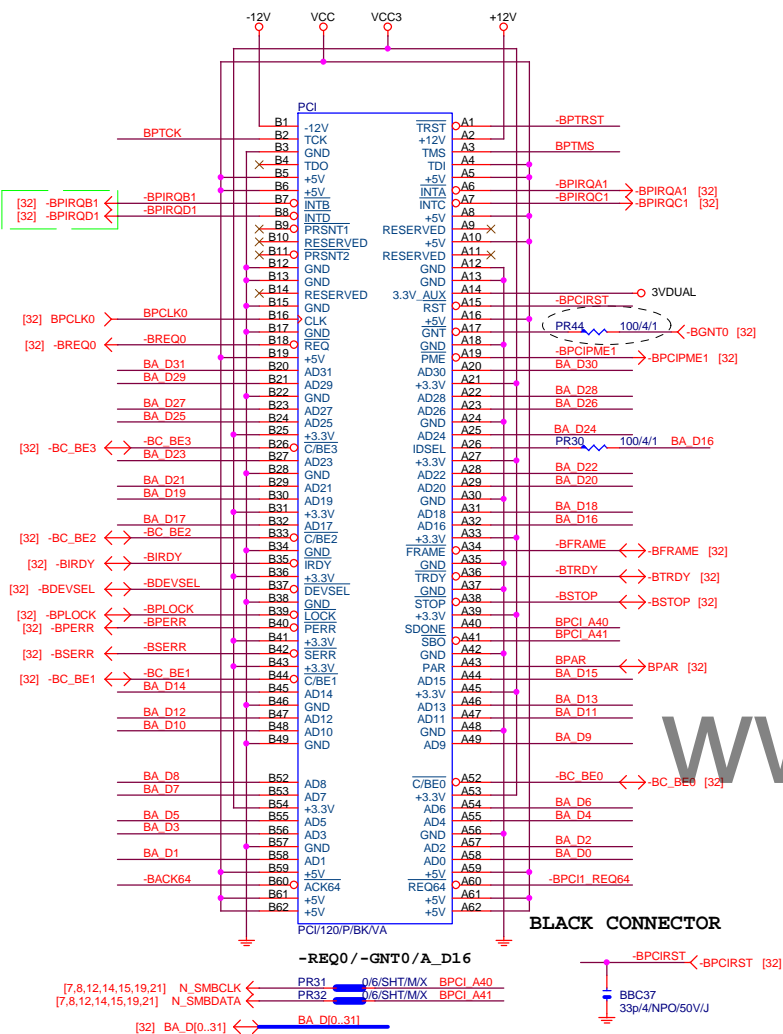
**Gigabyte Technology**

**PCI EXPRESS X 1 PORT**

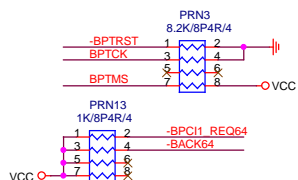
Title	Document Number	Rev
	<b>GA-B85M-HD3</b>	<b>2.0</b>
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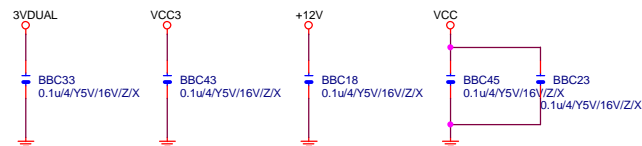
PCI SLOT 1
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## PCI PU

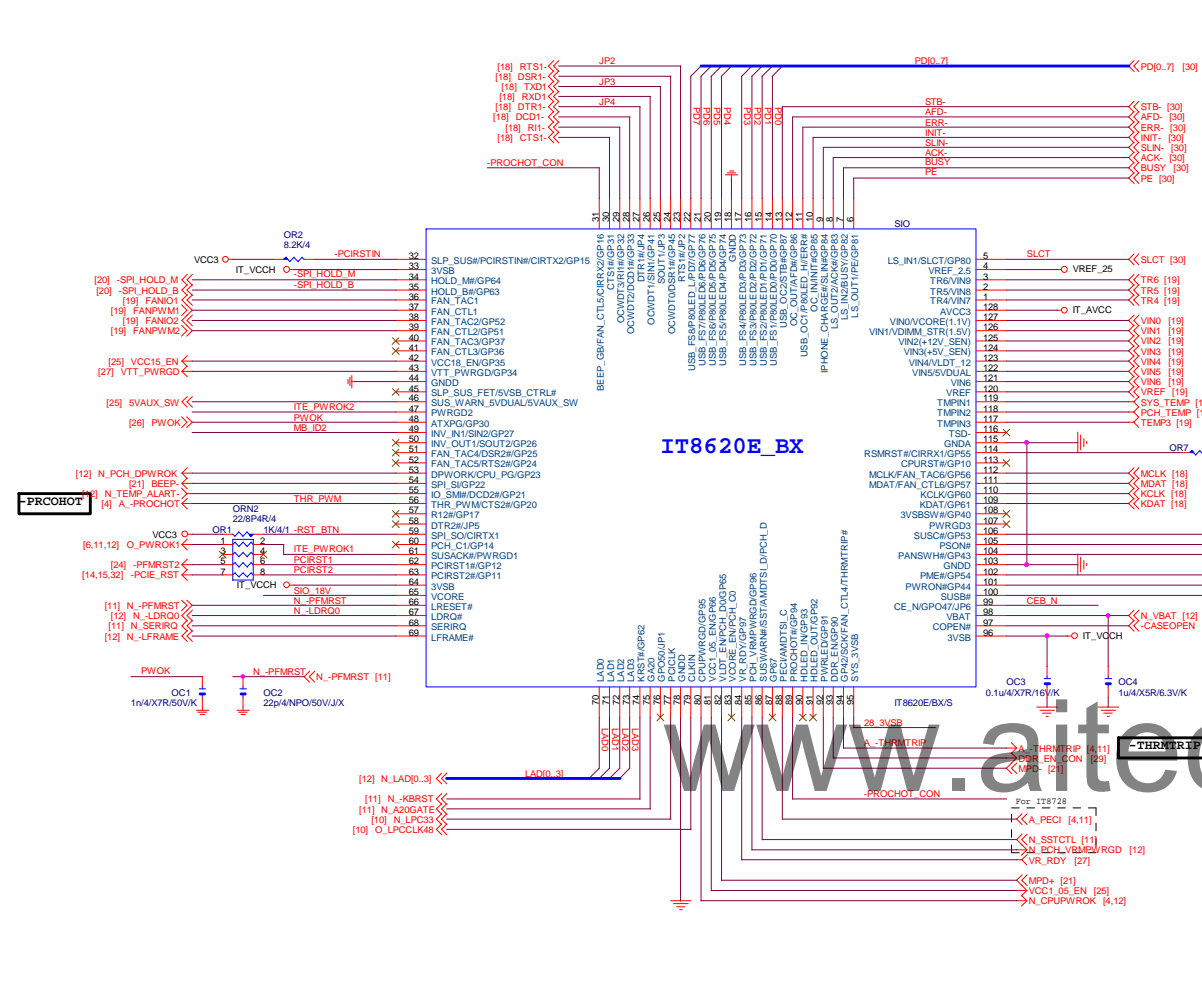


PCI CAP	N/A
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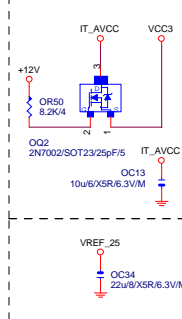


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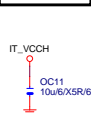
SIO IT8620



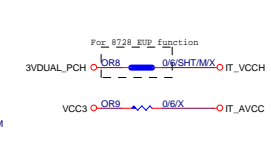
FIX ATX 插拔漏電



PWR SHT



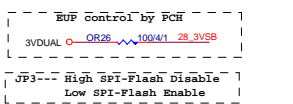
SIO PU



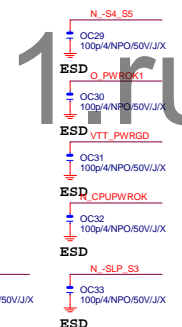
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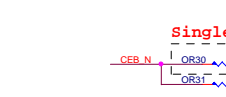
SIO STRAP



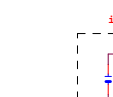
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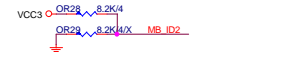
DUAL BIOS OPT STRAP



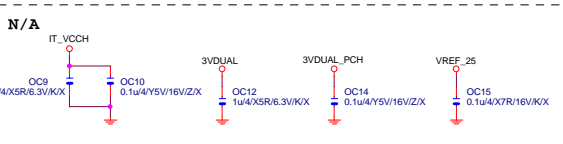
SIO 18V



MB ID



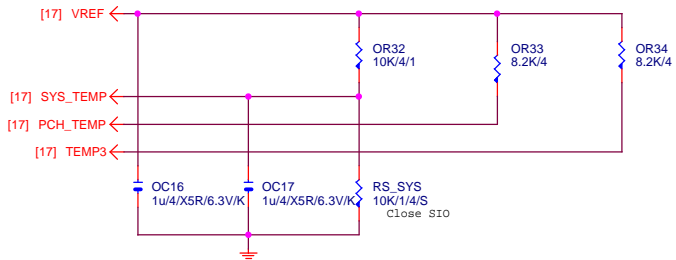
SIO CAP



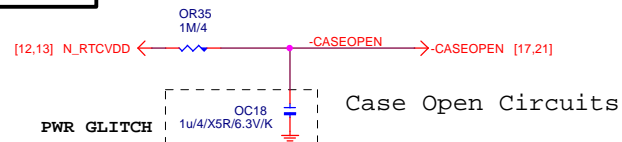
Gigabyte Technology			
Title		ITE 8728 LPC IO	
Size	Document Number	GA-B85M-HD3	
C			Rev 2.0
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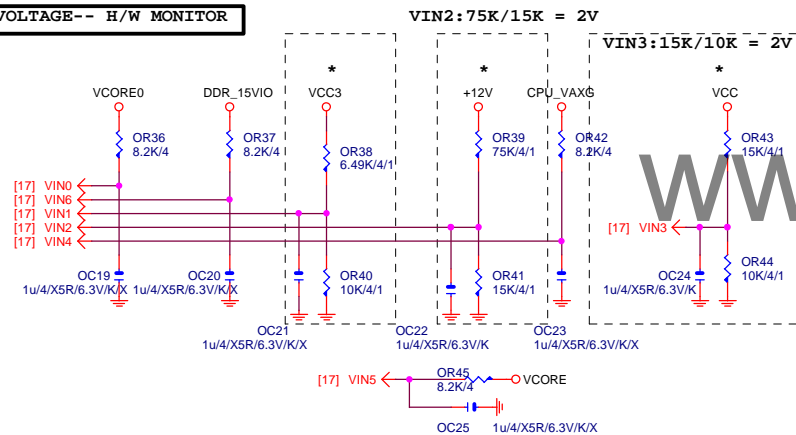
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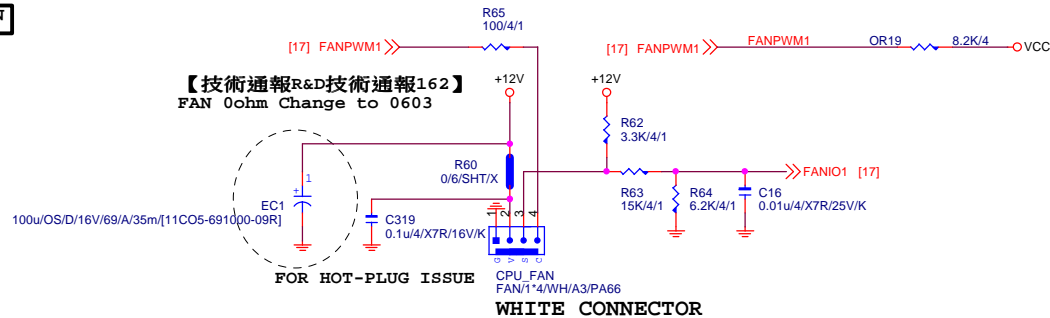
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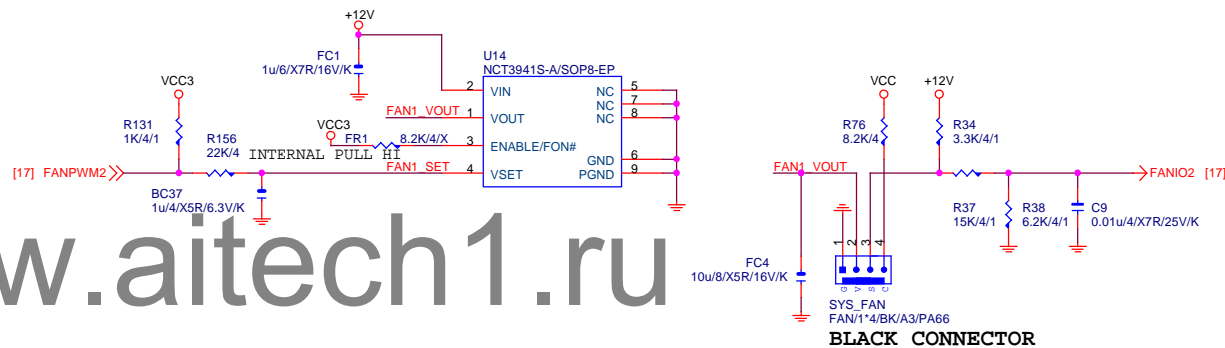
## VOLTAGE-- H/W MONITOR



## CPU SMART FAN

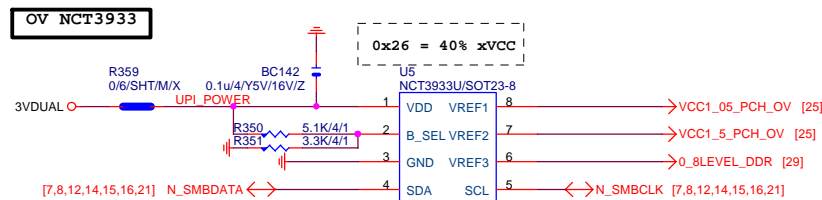


## SYS SMART FAN



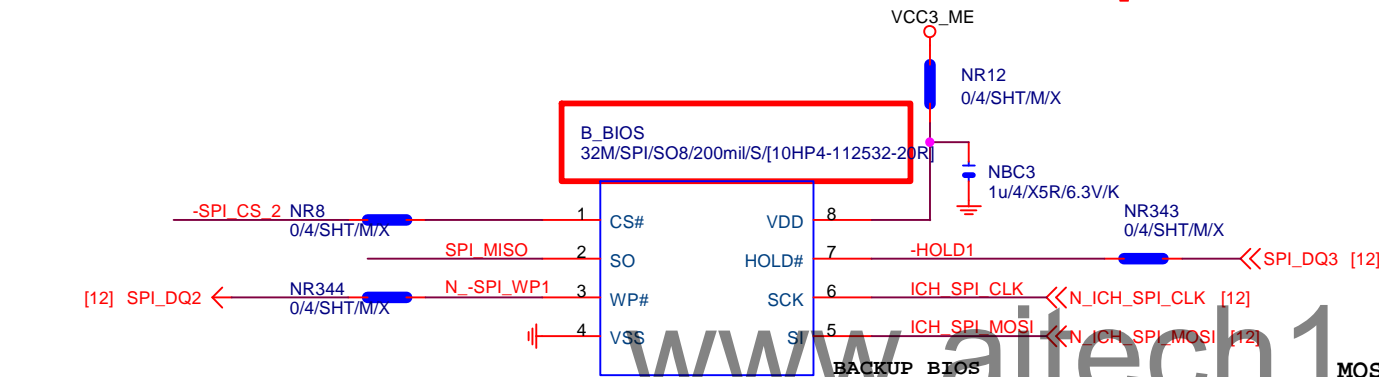
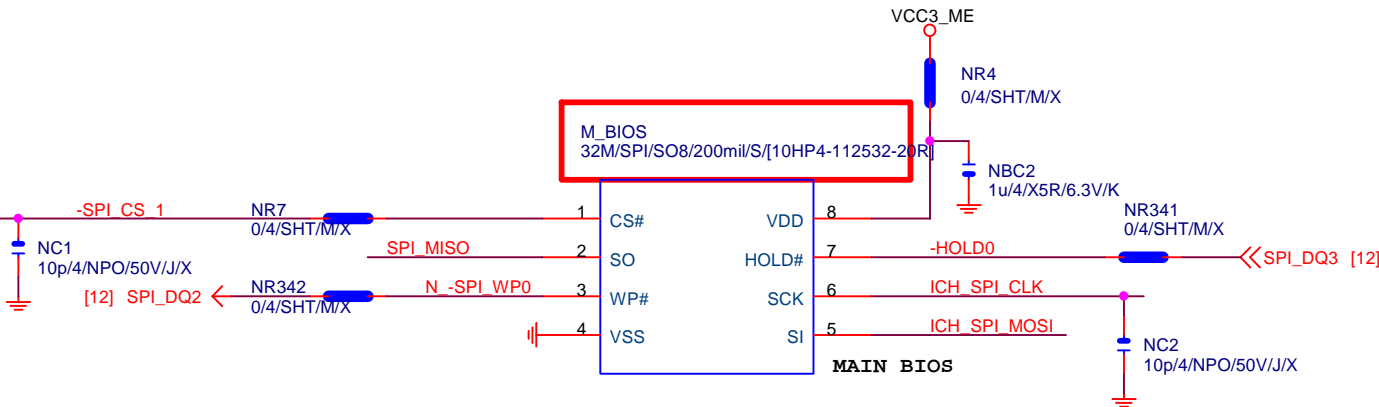
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## 接pwm feedback pin



## Gigabyte Technology

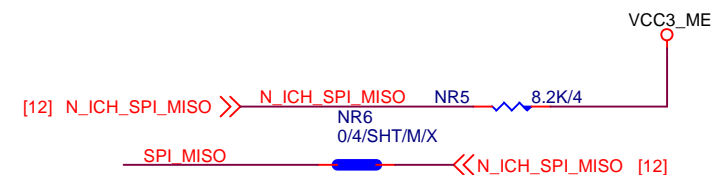
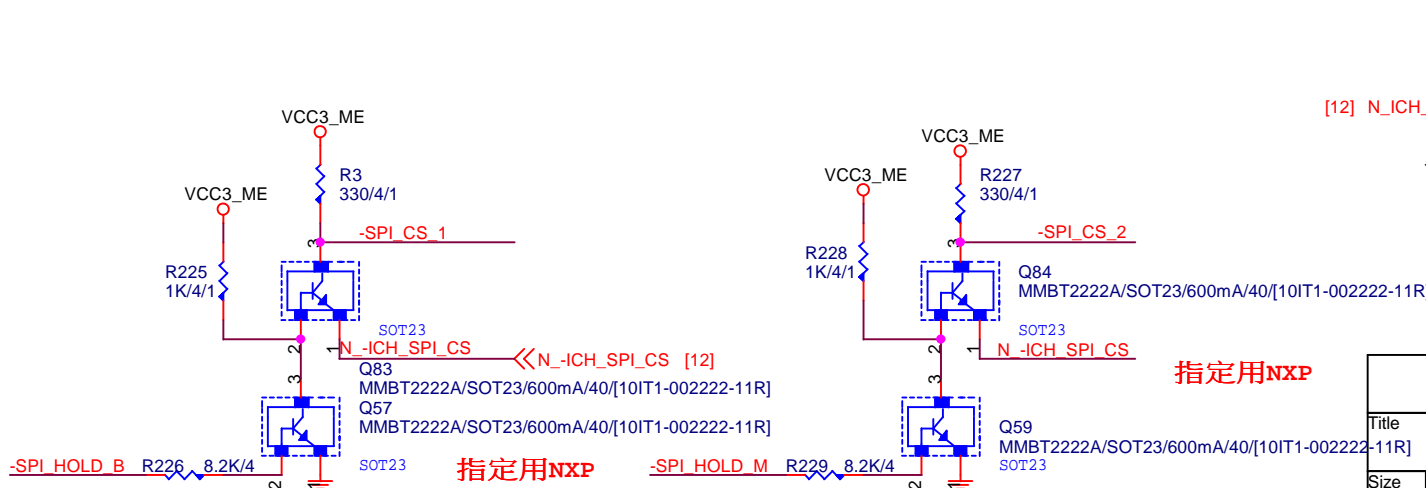
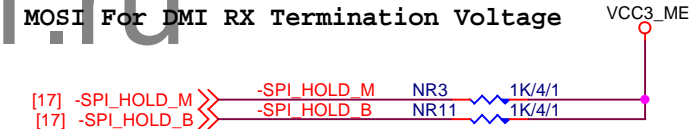
Title			HWM,FAN CTRL,OV	
Size			GA-B85M-HD3	
Custom			Rev 2.0	
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BOOT DEVICE	GNT0	GNT1
LPC	0	0
PCI	0	1
NAND	1	0
SPI	1	1

1 means floating  
0 means PD 1K

MOSI For DMI RX Termination Voltage



指定用NXP

Gigabyte Technology

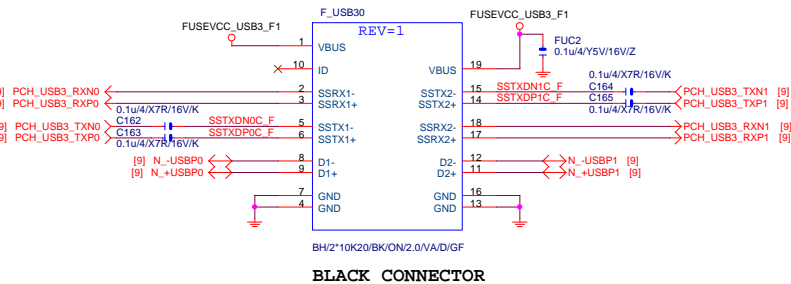
DUAL BIOS

GA-B85M-HD3

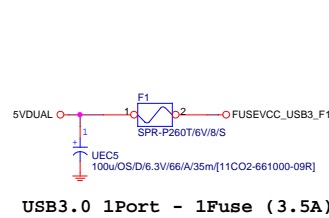
Rev 2.0

Title	Document Number	Rev
		2.0
Date:	Thursday, March 27, 2014	Sheet 20 of 32

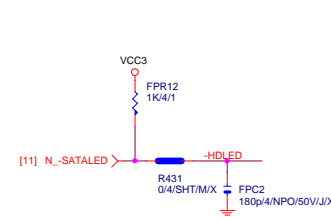
# F\_USB30



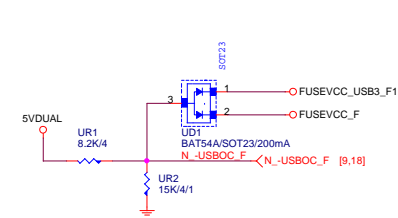
# F\_USB30 PWR



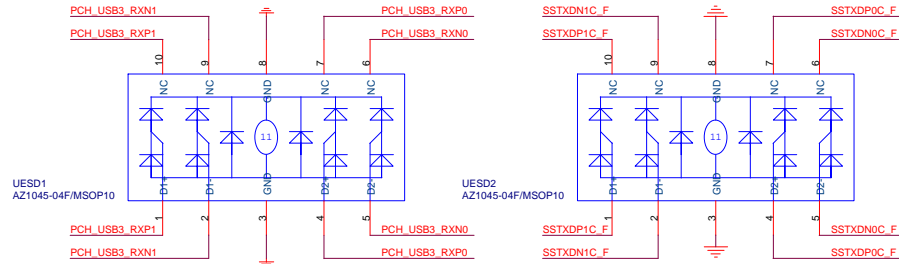
# SATA LED



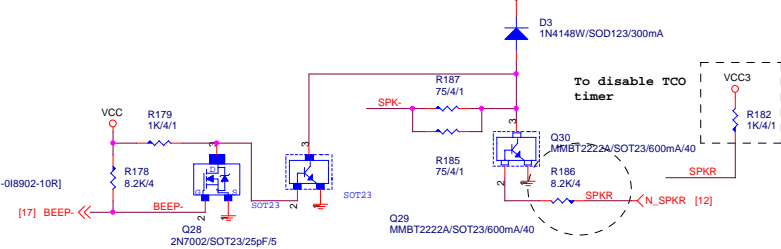
# -USBOC\_F



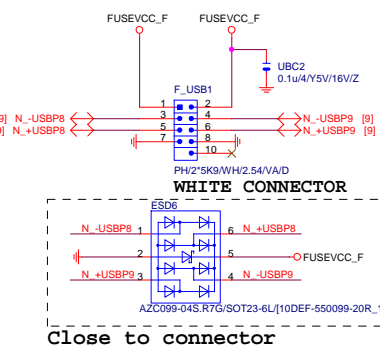
# F\_USB30 ESD PROTECT



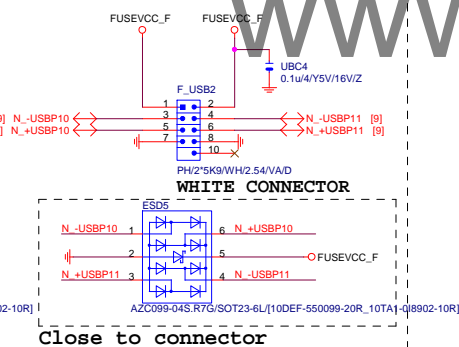
# SPKR



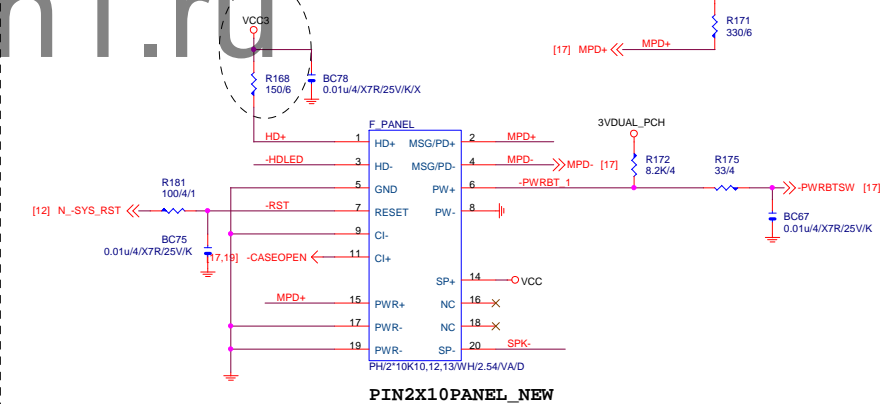
# FRONT USB1



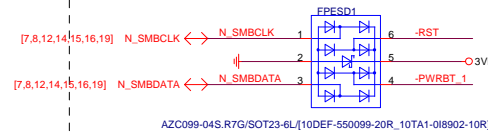
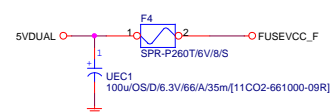
# FRONT USB2



# INTEL FRONT PANEL



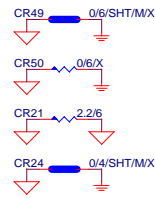
# FUSE-0805 F\_USB1, F\_USB2 4-Port 2.6A



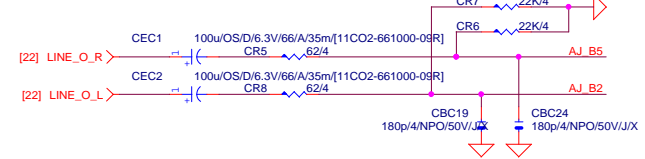
Gigabyte Technology			
FP,F_USB,USB PWR,SPKR,SATA LED			
Size	Document Number	Rev	
Custom	GA-B85M-HD3	2.0	
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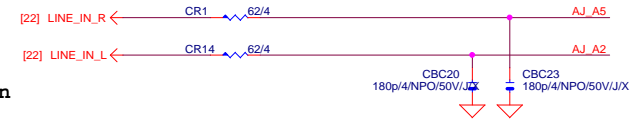
## LINE-OUT



## LINE-IN

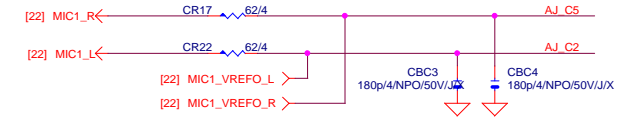
Verify MIC function  
in LINE-in

Only reserved for ALC888



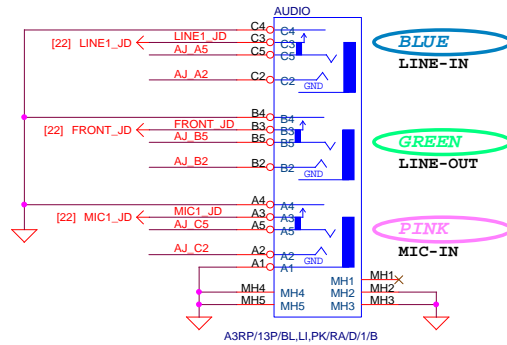
For 889A/888

## MIC-IN

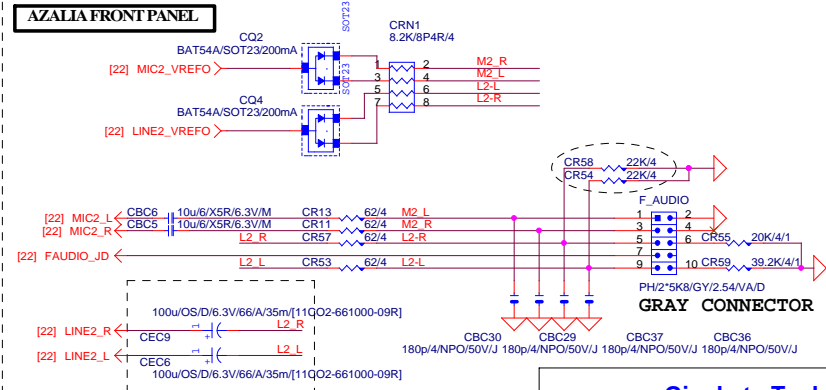


## SPDIF\_OUT

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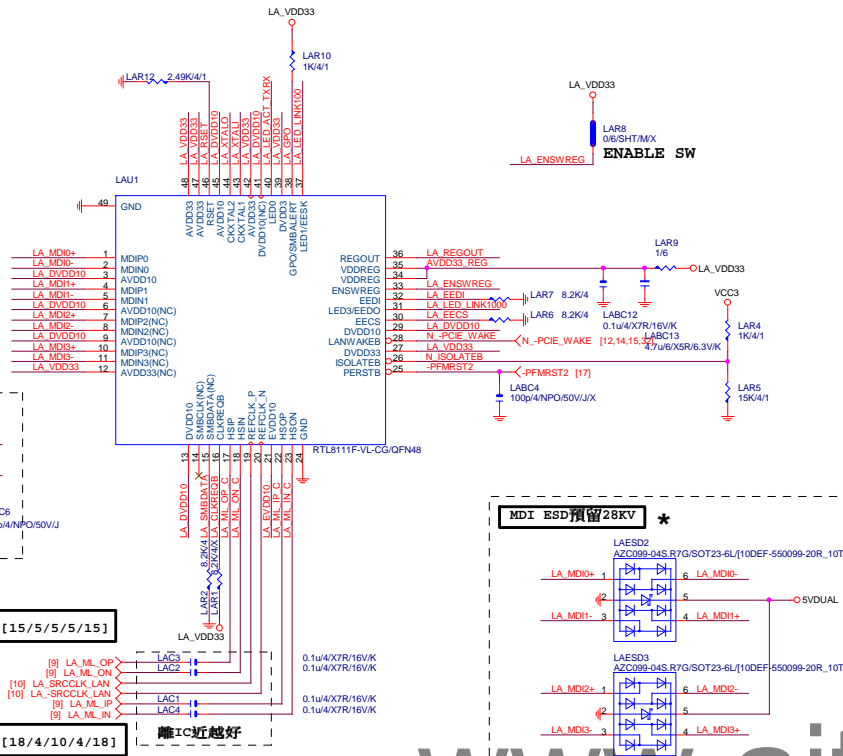
## AZALIA FRONT PANEL



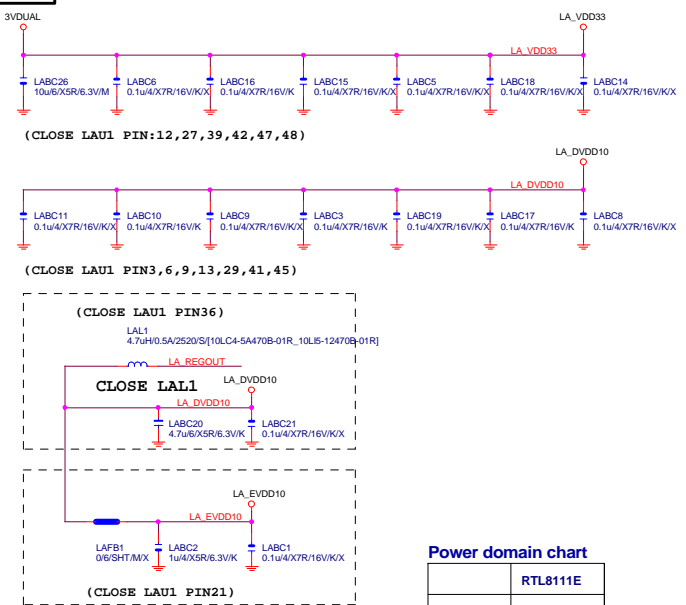
Gigabyte Technology

Title		
AUDIO JACK		
Size	Document Number	Rev
Custom	GA-B85M-HD3	2.0
Date:	Thursday, March 27, 2014	Sheet 23 of 32

LAN:RTL8111F/VB/VL



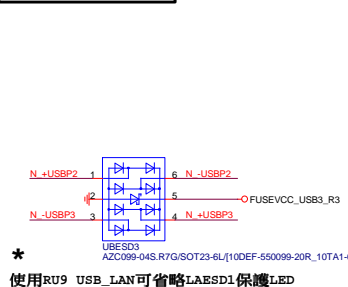
LAN POWER



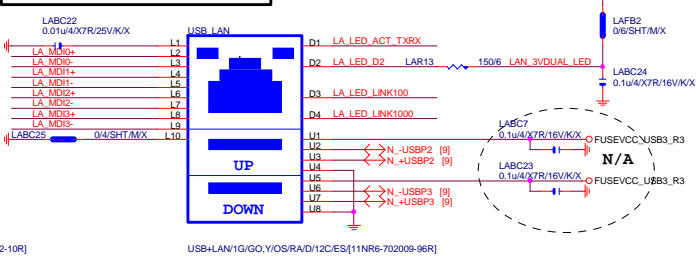
Power domain chart

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

USB LAN CONNECTOR



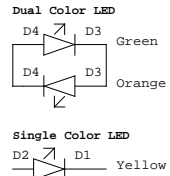
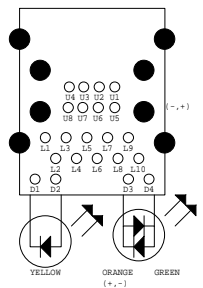
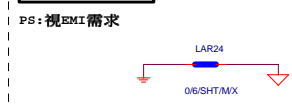
LA\_MDI-->100歐姆:[20/4/8/4/20]



USB X3 POWER



EMI SHORT PAD



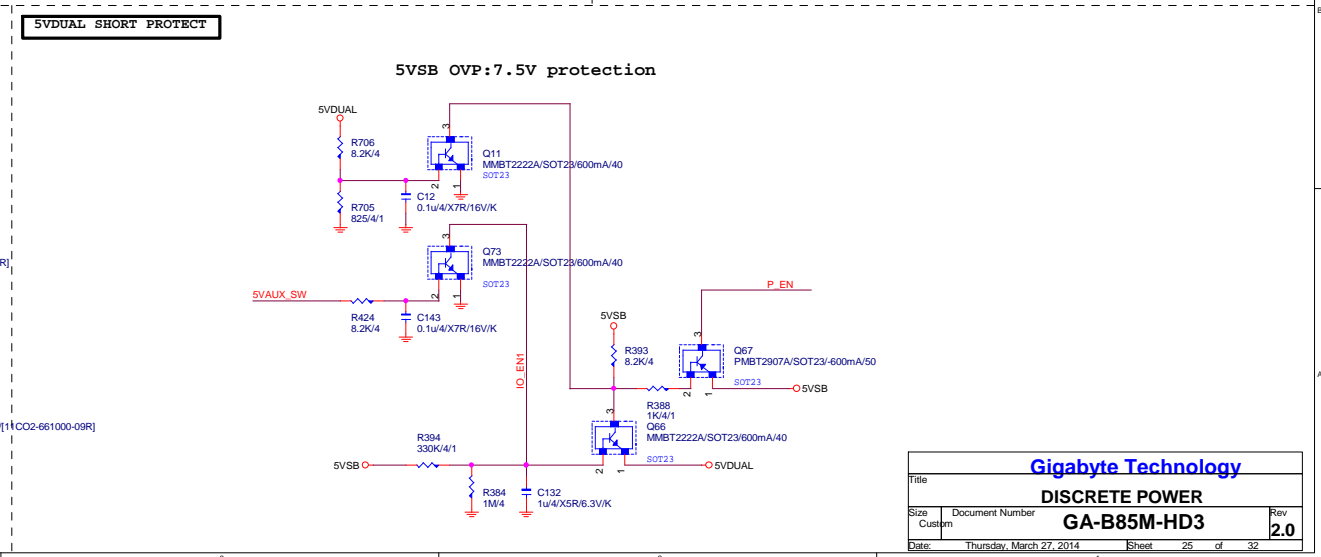
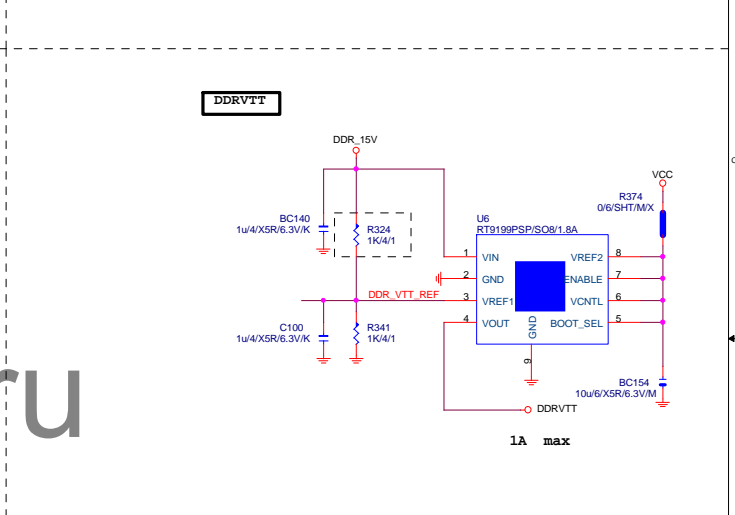
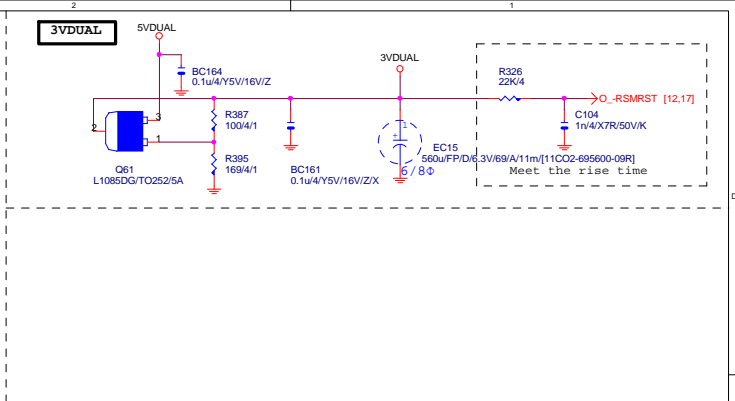
注意:USB PORT(目前:暫代6,7PORT)  
USB-->90歐姆:[15/4.5/7.5/4.5/15]

BOM NOTICE \*

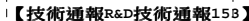
料號	規格	廠商
11NR6-702009-96R	1G LAN (12core)	UDE(RU9 ESD+)
[LED獨立走線,可省略外加AZC099料件LAESD1]		
1. 9KV ESD BOM:		
USB LAN (RU9):11NR6-702009-96R		
2. 28KV ESD BOM:		
USB LAN (RU9):11NR6-702009-96R		
LAESD2,LAESD3:上件AZC398-04S		

Gigabyte Technology

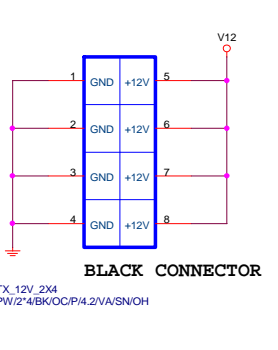
Title	Realtek RTL8111G	Rev	2.0
Size	Document Number	GA-B85M-HD3	
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## 【技術通報R&amp;D技術通報155】



To fix 12V light load  
abnromal issue +12V

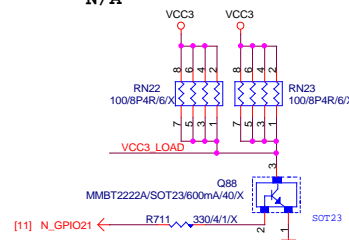


To prevent the 5VSB  
under loading when  
boot

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FIX PWR MINMUN LOAD

N/A

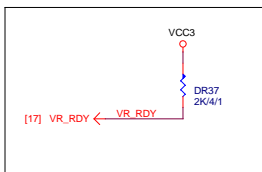


## 【技術通報R&amp;D技術通報154】

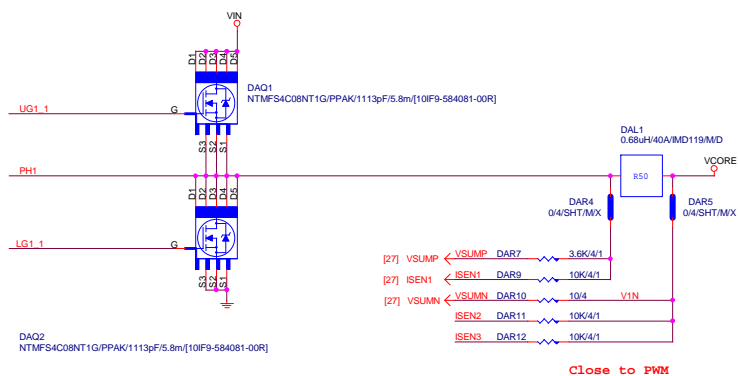
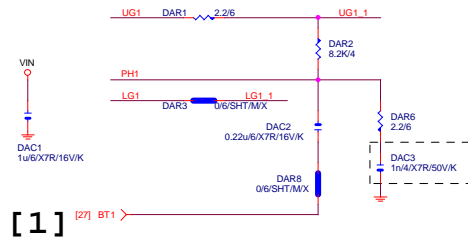
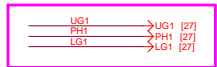
R_PROG1 (Kohm)	3-Phase Iccmax (A)
24.9	105
28.7	114
34.0	129
42.2	144

R_PROG2 (Kohm)	Fsw (KHz)	VBOOT
64.9	315	1.75
73.2	315	1.70
80.6	315	1.65
90.9	315	0

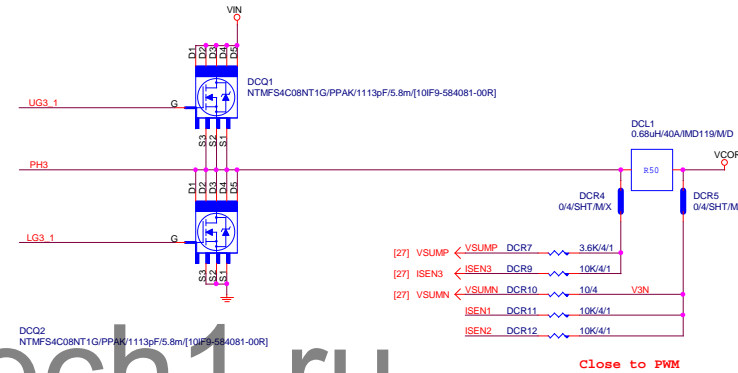
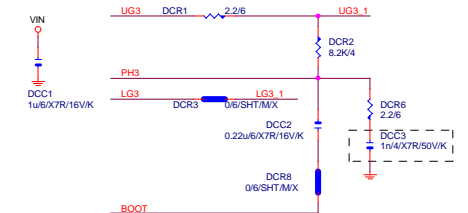
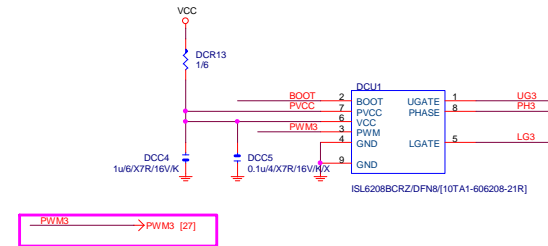
R_PROG3 (Kohm)	Fast Slew Rate (mV/us)
3.24	12
5.76	24
9.31	40
13.3	45



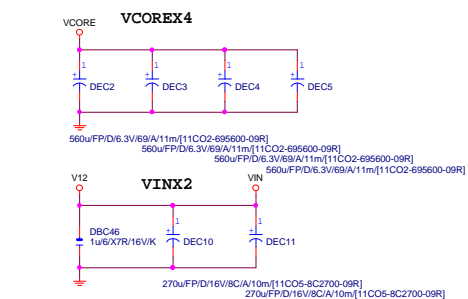
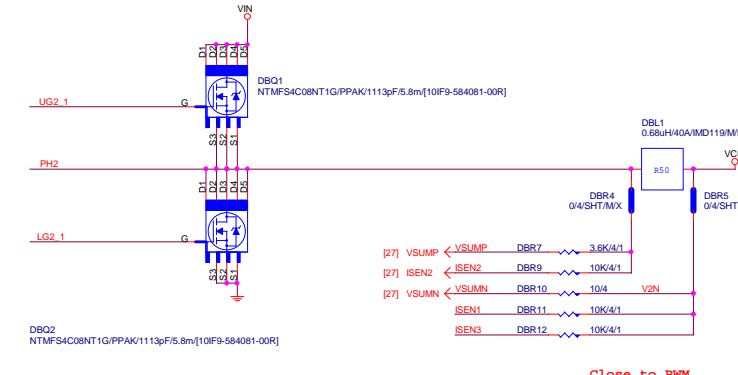
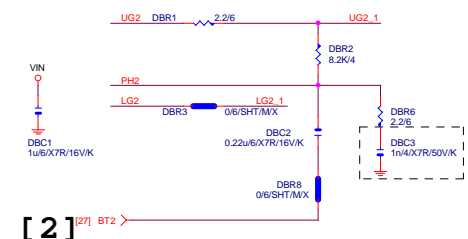
# PHASE 1



# PHASE 3



# PHASE 2



Gigabyte Technology			
Title		CPU CORE VR-2	
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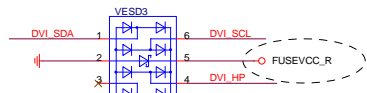
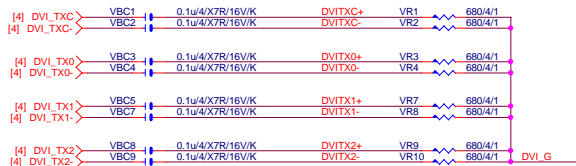
```
Rocset=(Iocp*Lgate,rdson)/Iocset
Rocset=(45A*6.7mOhm)/10uA = 30K
Iocset=10uA
```

---

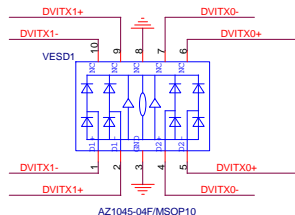
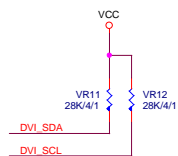
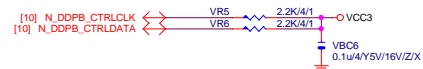




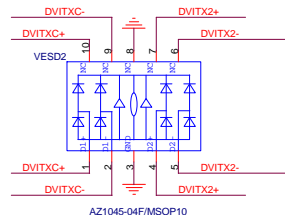
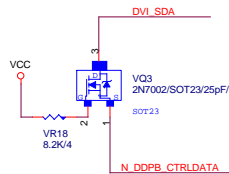
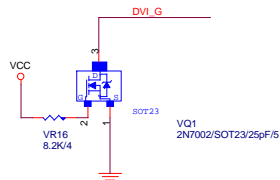
# DVI



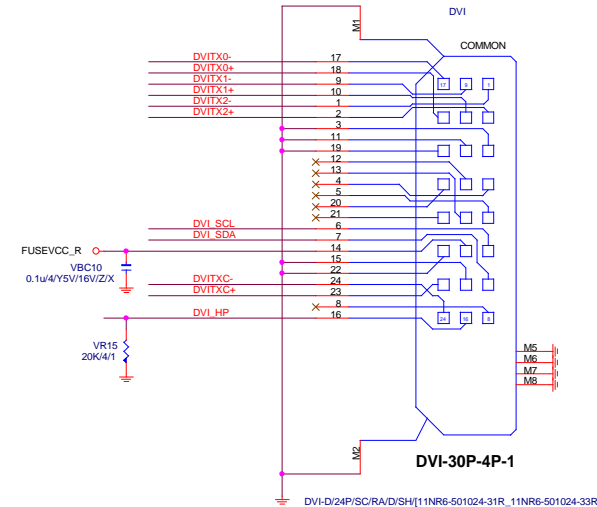
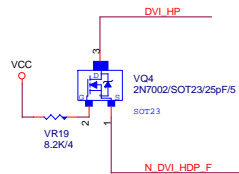
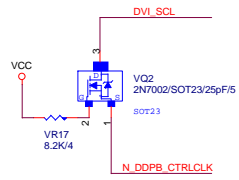
Close to connector



Close to connector

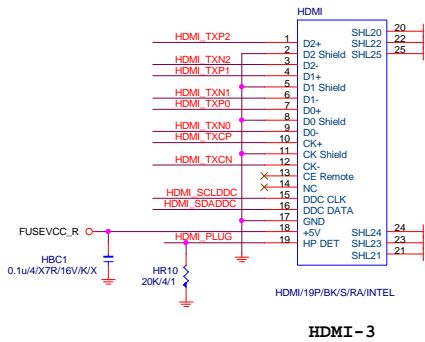
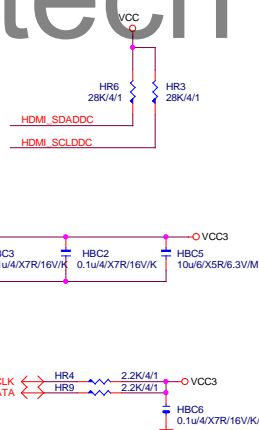
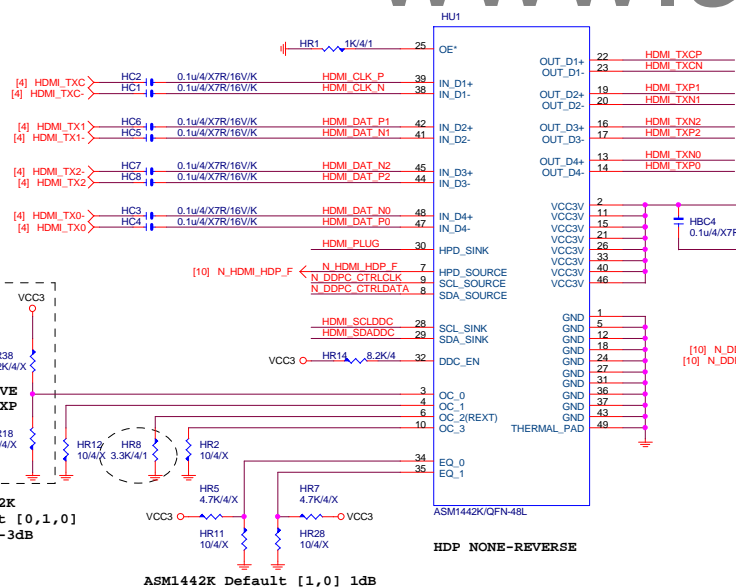


Close to connector



# HDMI LEVEL SHIFT

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Gigabyte Technology		
DVI		
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