

Model Name: GA-B85M-DS3H

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 1,2
08	DDR III CHANNEL B 1,2
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	ITE 8620 LPC IO
17	COM,KB_MS_USB,USB30_20
18	HWM,FAN CTRL,OV,-PROCHOT
19	DUAL BIOS
20	FP,FUSB,SPK,SATALED
21	Realtek ALC887-VD2
22	REAR AUDIO JACK
23	REALTEK RTL8111F
24	DISCRETE POWER
25	ATX
26	VCORE ISL95812_1
27	VCORE ISL95812_2

www.xinxunwei.com 400-800-9990

Revision 2.0

SHEET

TITLE

28	RT8120_DDR POWER
29	LPT, M3 POWER
30	DVI

Gigabyte Technology

Cover Sheet

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Component value change history

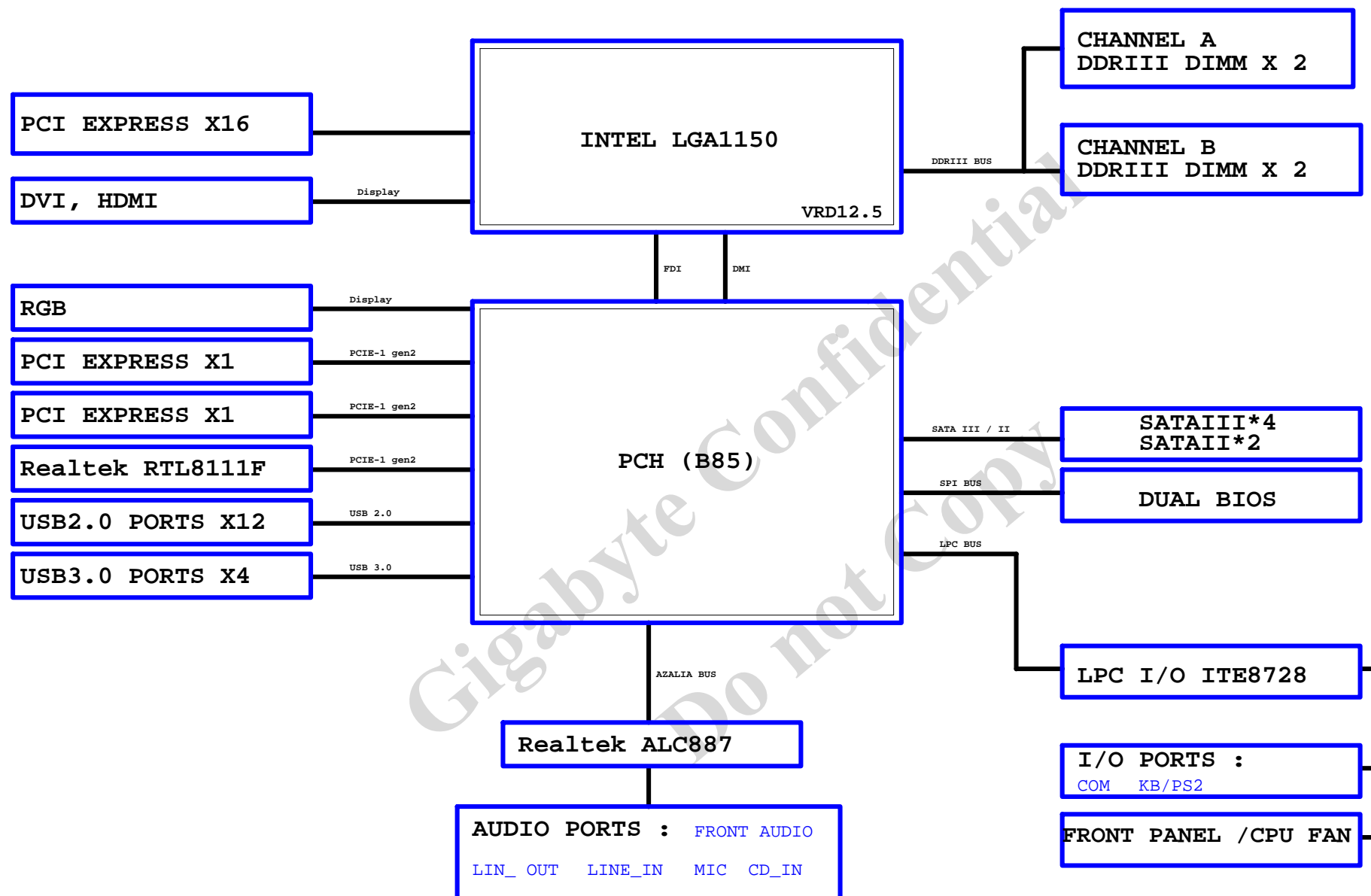
2014/04/25

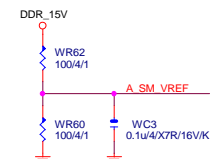
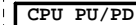
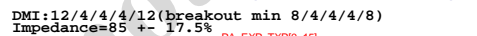
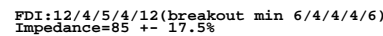
Data	Change Item	Reason
2013/06/28	ADD RSMRST DELAY	
2013/08/13	Update Rev to 1.1	
	PCIE X16 New Footprint "PCIESLOT-164DN-Q-1"	
2013/08/23		EBOM: 9M85MDS3H-00-11A
2013/09/13	Update to R1.11	
	Follow Crystal Trace Rule	
	SYS_FAN, DDR 0ohm 0402 -> 0603	
	Update Fuse 1206 Footprint "POLYSWITCH-1206-1"	
	Update PPAK Footprint "Q_TDS0N8-GDS-T"	
2013/10/22	NX1: 25M/20p -> 12p	PBOM: 9M85MDS3H-00-11B
	NC7, NX8: 27p -> 10p	
2013/11/04	NC7, NX8: 10p -> 15p	PBOM: 9M85MDS3H-00-11C
2013/11/05	Update to R1.12	PBOM: 9M85MDS3H-00-11D
	Modify NX1 Trace	
2013/11/27	MR17 0ohm -> 0603 FUSE(10FP5-06100B-00R)	PBOM: 9M85MDS3H-00-11E
	ALC887 強壯版 (10HP5-368870-32R)	
2014/02/17	Sales Costdown Rev2.0	
	CPU Power ISL95820 1U2D -> ISL95812 1U1D	
	DVI Non-Level Shift	
	BIOS Size 64M -> 32M	
2014/02/20	SBA線路OPTION,整合電阻成排阻,精簡線路	
2014/02/24	整合電阻成排阻	
2014/02/27	MASK/DEL CAP	
2014/03/07	ADD ESD : NC3,NC4 (22P)	
2014/03/11	NR6改SHT PAD	
2014/03/12	WBC28,30,25,27,31解開MASK	
	COM:BLACK,F_AUDIO:GRAY	
	DEL後窗AUDIO 180P	

Circuit or PCB layout change

[illegible]

BLOCK DIAGRAM



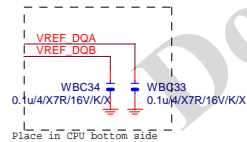


LGA1150 (A)

LGA1150 (CR)

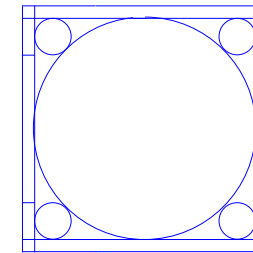
LGA1150A		DDR0_MA0	DDR0_D00	AD38	MDA0
MAAA0	AU13	DDR0_MA1	DDR0_D01	AD39	MDA1
MAAA1	AV16	DDR0_MA2	DDR0_D02	AF38	MDA2
MAAA2	AU16	DDR0_MA3	DDR0_D03	AF39	MDA3
MAAA3	AW17	DDR0_MA4	DDR0_D04	AD37	MDA4
MAAA4	AW18	DDR0_MA5	DDR0_D05	AD40	MDA5
MAAA5	AW17	DDR0_MA6	DDR0_D06	AE37	MDA6
MAAA6	AT18	DDR0_MA7	DDR0_D07	AF40	MDA7
MAAA7	AU18	DDR0_MA8	DDR0_D08	AH40	MDA9
MAAA8	AT19	DDR0_MA9	DDR0_D09	AH39	MDA13
MAAA9	AW11	DDR0_MA10	DDR0_D10	AK38	MDA10
MAAA10	AW19	DDR0_MA11	DDR0_D11	AK39	MDA11
MAAA11	AU19	DDR0_MA12	DDR0_D12	AH37	MDA12
MAAA12	AY10	DDR0_MA13	DDR0_D13	AH38	MDA14
MAAA13	AT20	DDR0_MA14	DDR0_D14	AK40	MDA15
MAAA14	AU21	DDR0_MA15	DDR0_D15	AM40	MDA17
MODT_A0	AW10	DDR0_ODT0	DDR0_D16	AM39	MDA21
MODT_A1	AY8	DDR0_ODT1	DDR0_D17	AP38	MDA18
MODT_A2	AW9	DDR0_ODT2	DDR0_D18	AP39	MDA19
MODT_A3	AU8	DDR0_ODT3	DDR0_D19	AM37	MDA20
			DDR0_D20	AM38	MDA16
			DDR0_D21	AP37	MDA22
			DDR0_D22	AP40	MDA23
			DDR0_D23	AV37	MDA25
			DDR0_D24	AW37	MDA29
			DDR0_D25	AU35	MDA26
			DDR0_D26	AV35	MDA27
			DDR0_D27	AT37	MDA28
			DDR0_D28	AU37	MDA24
			DDR0_D29	AT35	MDA30
			DDR0_D30	AW35	MDA31
			DDR0_D31	AY8	MDA33
			DDR0_D32	AU6	MDA37
			DDR0_D33	AV4	MDA34
			DDR0_D34	AU4	MDA35
			DDR0_D35	AW6	MDA36
			DDR0_D36	AV6	MDA32
			DDR0_D37	AW4	MDA38
			DDR0_D38	AY4	MDA39
			DDR0_D39	AR1	MDA41
			DDR0_D40	AR4	MDA45
			DDR0_D41	AN3	MDA42
			DDR0_D42	AN4	MDA43
			DDR0_D43	AR2	MDA44
			DDR0_D44	AR3	MDA40
			DDR0_D45	AN2	MDA46
			DDR0_D46	AN1	MDA47
			DDR0_D47	AL1	MDA49
			DDR0_D48	AL4	MDA53
			DDR0_D49	AL3	MDA50
			DDR0_D50	AJ4	MDA51
			DDR0_D51	AL2	MDA52
			DDR0_D52	AL3	MDA48
			DDR0_D53	AJ2	MDA54
			DDR0_D54	AJ1	MDA55
			DDR0_D55	AG1	MDA57
			DDR0_D56	AG4	MDA61
			DDR0_D57	AE3	MDA58
			DDR0_D58	E4	MDA59
			DDR0_D59	AG2	MDA60
			DDR0_D60	AG3	MDA56
			DDR0_D61	AE2	MDA62
			DDR0_D62	AE1	MDA63
			DDR0_D63	AE39	DQSA0
			DDR0_D64	AJ39	DQSA1
			DDR0_D65	AN39	DQSA2
			DDR0_D66	AV36	DQSA3
			DDR0_D67	AV5	DQSA4
			DDR0_D68	AP3	DQSA5
			DDR0_D69	AK3	DQSA6
			DDR0_D70	AF3	DQSA7
			DDR0_D71	AV32	DQSA8
			DDR0_D72	AE38	DQSA0
			DDR0_D73	AJ38	DQSA1
			DDR0_D74	AN38	DQSA2
			DDR0_D75	AJ36	DQSA3
			DDR0_D76	AW5	DQSA4
			DDR0_D77	AP2	DQSA5
			DDR0_D78	AK2	DQSA6
			DDR0_D79	AF2	DQSA7
			DDR0_D80	AU32	DQSA8

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



LGA1150B		DDR1_MA0	AE34	MDB0
MAAB0	AL19	DDR1_MA1	AE35	MDB1
MAAB1	AK23	DDR1_MA2	AG35	MDB2
MAAB2	AM23	DDR1_MA3	AH35	MDB3
MAAB3	AP23	DDR1_MA4	AD34	MDB4
MAAB4	AL23	DDR1_MA5	AD35	MDB5
MAAB5	AY24	DDR1_MA6	AG34	MDB6
MAAB6	AY25	DDR1_MA7	AH34	MDB7
MAAB7	AU26	DDR1_MA8	AL34	MDB8
MAAB8	AW25	DDR1_MA9	AL35	MDB9
MAAB9	AP18	DDR1_MA10	AK31	MDB10
MAAB10	AY28	DDR1_MA11	AL31	MDB11
MAAB11	AY28	DDR1_MA12	AK34	MDB12
MAAB12	AR15	DDR1_MA13	AK35	MDB13
MAAB13	AV27	DDR1_MA14	AK32	MDB14
MAAB14	AY28	DDR1_MA15	AL32	MDB15
MODT_B0	AM17	DDR1_ODT0	AP34	MDB17
MODT_B1	AL16	DDR1_ODT1	AN31	MDB19
MODT_B2	AM16	DDR1_ODT2	AP31	MDB23
MODT_B3	AK15	DDR1_ODT3	AP35	MDB20
			AP35	MDB16
			AN32	MDB18
			AP32	MDB22
			AM29	MDB25
			AM28	MDB28
			AR29	MDB27
			AR28	MDB30
			AL23	MDB24
			AL28	MDB29
			AP29	MDB26
			AP28	MDB31
			AR12	MDB32
			AL13	MDB33
			AL12	MDB35
			AR13	MDB36
			AP13	MDB37
			AM13	MDB38
			AM12	MDB39
			AR9	MDB45
			AP9	MDB41
			AR6	MDB47
			AP6	MDB43
			AR10	MDB44
			AP10	MDB40
			AR7	MDB46
			AP7	MDB42
			AM9	MDB52
			AL9	MDB53
			AL6	MDB50
			AL7	MDB55
			AM10	MDB48
			AL10	MDB49
			AM6	MDB51
			AM2	MDB54
			AH6	MDB61
			AH7	MDB60
			AE6	MDB59
			AE7	MDB63
			AJ6	MDB56
			AJ7	MDB57
			AF6	MDB58
			AF7	MDB62
			AF35	DQSB0
			AL33	DQSB1
			AN28	DQSB2
			AN29	DQSB3
			AN12	DQSB4
			AR8	DQSB5
			AM8	DQSB6
			AG6	DQSB7
			AN25	DQSB8
			AK33	DQSB1
			AK33	DQSB2
			AK33	DQSB3
			AK33	DQSB4
			AK33	DQSB5
			AK33	DQSB6
			AK33	DQSB7
			AK33	DQSB8

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

CR
CPU RETAINTION/X

LGA1150_P



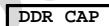
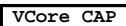
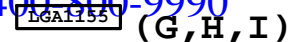
ILM_BP/1156/CSP/ILM_BP/1156/CSP/[12KRC-0F0001-52R_12KRC-0F0001-51R]

DDR BUS

[7] MODT_A[0..3]	←	MODT_A10..31
[8] MODT_B[0..3]	←	MODT_B10..31
[7] MDA[0..63]	←	MDA10..63
[8] MDB[0..63]	←	MDB10..63
[7] DQSA[0..7]	←	DQSA10..71
[7] -DQSA[0..7]	←	-DQSA10..71
[7] MAA[0..15]	←	MAA10..151
[8] MAAB[0..15]	←	MAAB10..151
[8] DQSB[0..7]	←	DQSB10..71
[8] -DQSB[0..7]	←	-DQSB10..71

Gigabyte Technology

Title			
CPU LGA1150-B			
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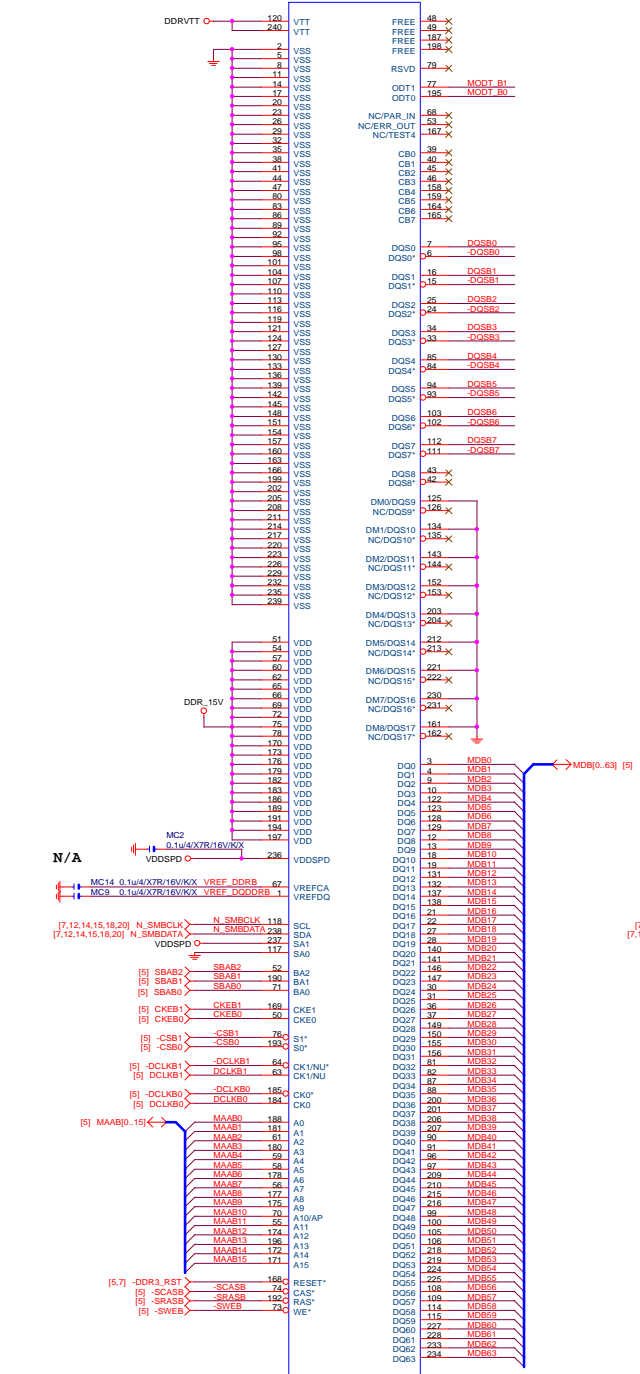
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Size	Document Number	GA-B85M-DS3H				Rev	
Custom						2.0	
Date:	Thursday, April 24, 2014		Sheet	6	of	30	

DDR3

(B)

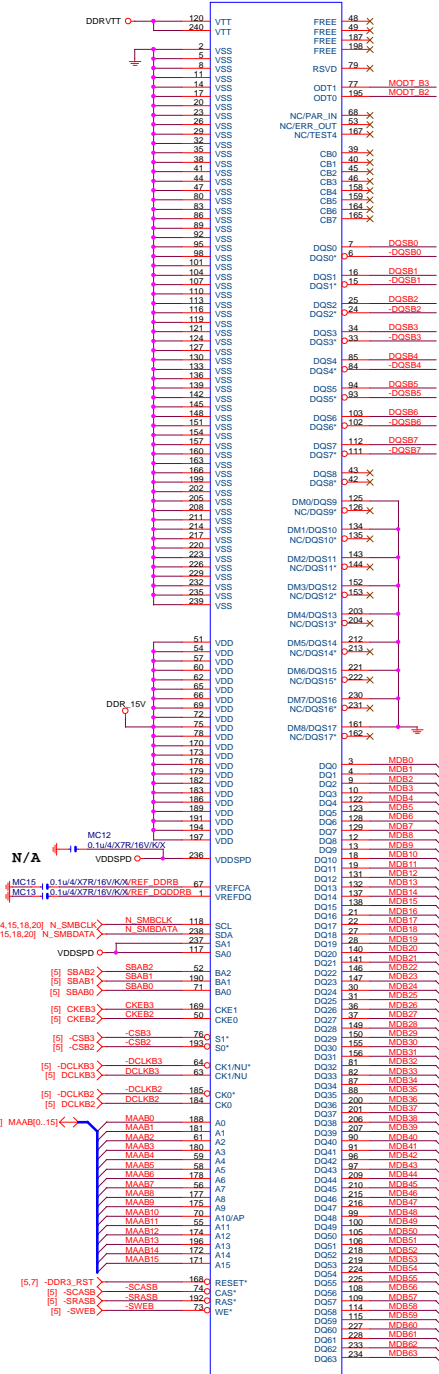
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DDR3 VREF



DDR3 240/BK/VA/D[11SM1-511240-P3R]

BLACK CONNECTOR



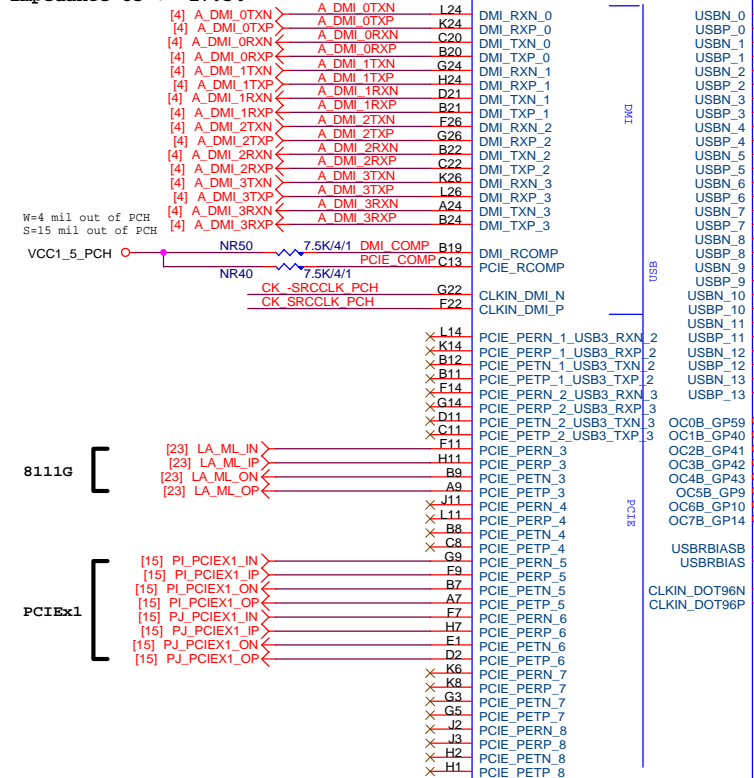
DDR3 240/GR/VA/D[11SM1-511240-W2R]

GRAY CONNECTOR



PCH (B)

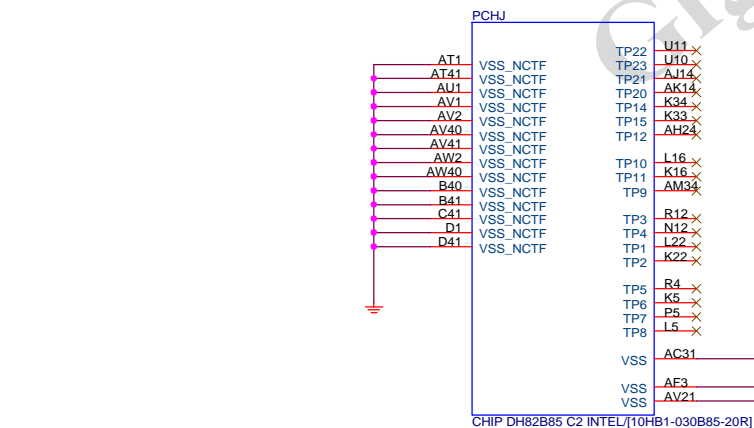
DMI:12/4/4/4/12(breakout min 8/4/4/4/8)
Impedance=85 +- 17.5%



放靠近 Device & PCI-E Slot
Impedance=80 +- 17.5%

PCIEX1:16/5/5/5/16 (breakout min 8/4/4/4/8)

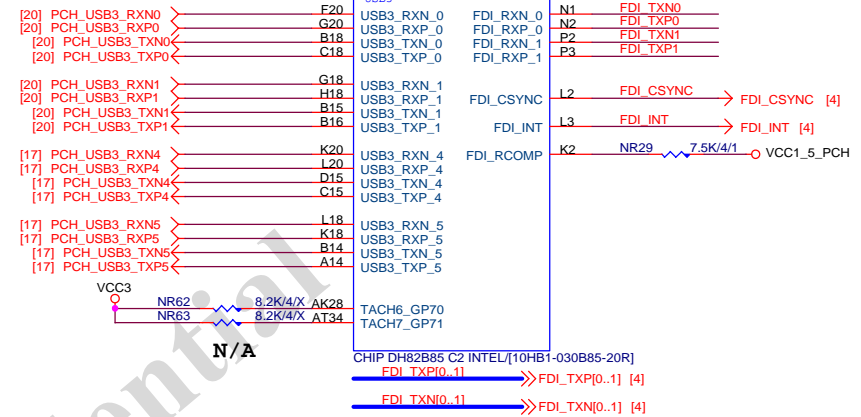
PCH (J)



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

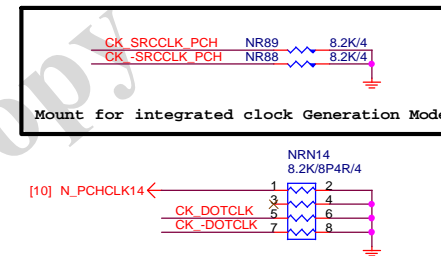
PCH (F)

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



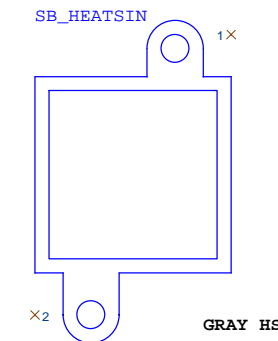
USB3.0:20/5/7/5/20 (breakout min
8/4/4/4/8) ; ONLY 3 VIAS
Impedance=85 +- 17.5%
Back Panel < 10000 MILS
Front Panel < 6000 MILS

PCH CLK PD



PCH H/S

LOW COST ICH7 HEATSINK



PCH_HS
PCH_HS/[12SP2-030005-43R_12SP2-030005-41R_12SP2-030005-42R_

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

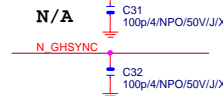
Gigabyte Technology

Title			
PCH FDI,DMI,USB ,PCIE,NVRAM			
Size	Document Number		Rev
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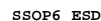


Differential Clock:18/4/6/4/18
Impedance=90 +- 15%

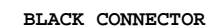
PCH CLK PD



VGA ESD



VGA DDC



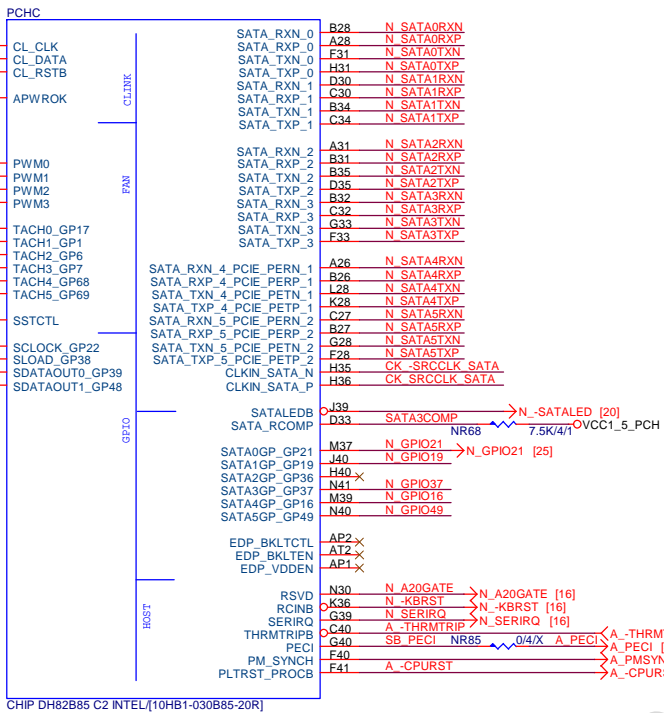
Gigabyte Technology

PCH DISPLAY ,CLK BUFFER

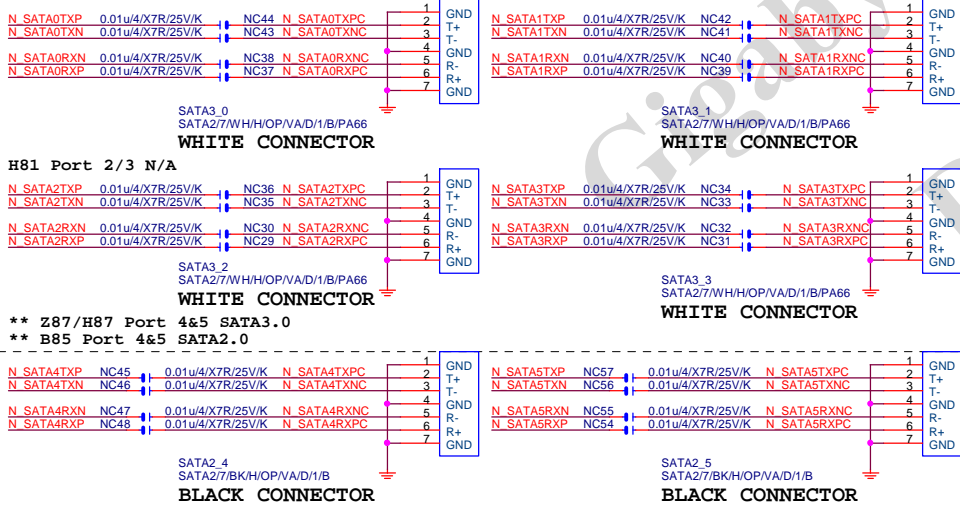
GA-B85M-DS3H

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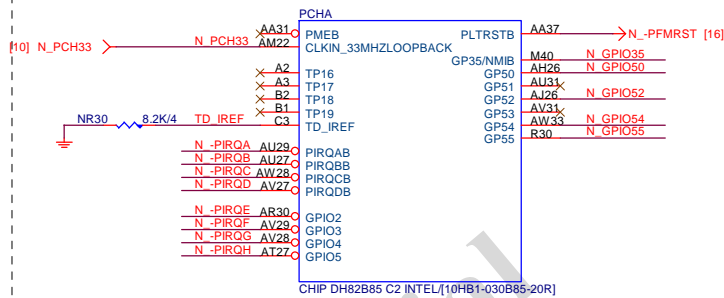
PCH (C)



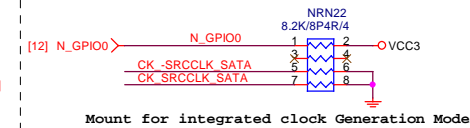
SATA CONNECTOR



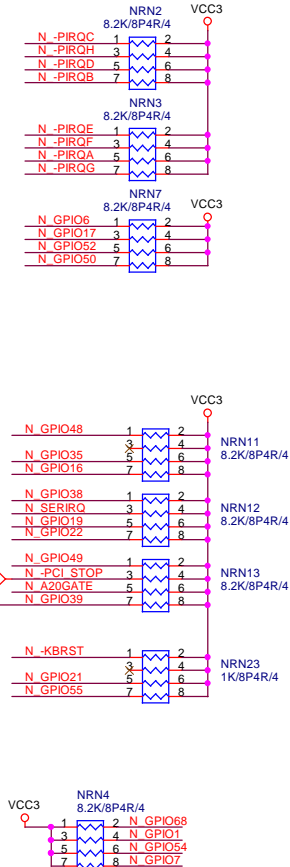
PCH (A)



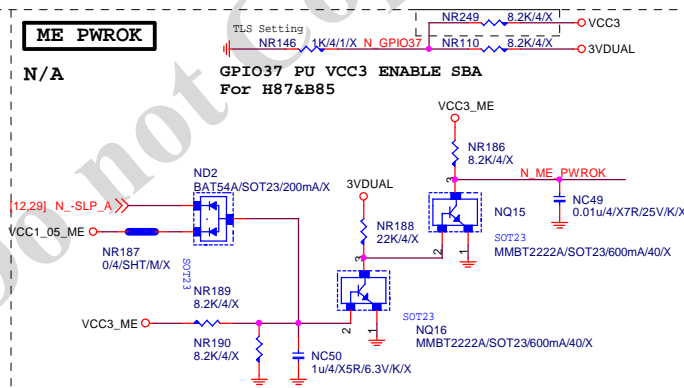
PCH CLK PD



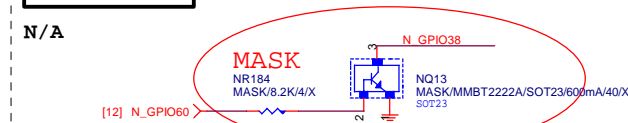
PCH PU/PD



ME PWROK

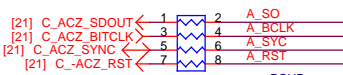


GPI038 Ctrl



PCH

(D)



NRN15 33/8P4R/4

PCHD

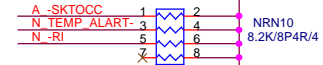
[16] N_LAD[0..3] << N_LAD[0..3]

ACZ_SDOUT

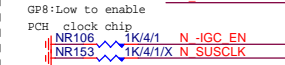
N/A

PCH PU/PD

3VDUAL

NRN16 1K/8P4R/4
NRN9 8.2K/8P4R/4

NRN10 8.2K/8P4R/4



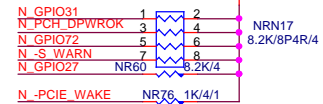
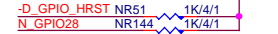
SUSCLK:Low to OD

PLL VR

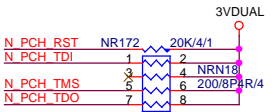
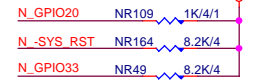
GP28:Lo disable

VRM ,Hi enable

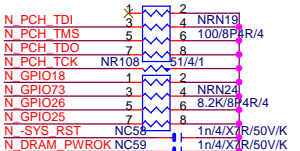
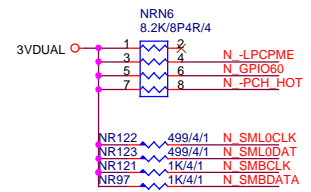
VRM



NRN17 8.2K/8P4R/4

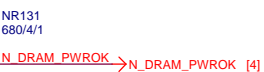


NRN18 200/8P4R/4

NRN19 100/8P4R/4
NRN24 8.2K/8P4R/4NRN19 100/8P4R/4
NRN24 8.2K/8P4R/4

DDR_15V

NR131 680/4/1



NR132 1.47K/4/1

O_PWR0K1

NC51 0.01u/4/X/7R/25V/K/X
Reserve for EMI test

N_SLP_S3

NC60 100p/4/NPO/50V/J

N_S4_S5

NC61 100p/4/NPO/50V/J

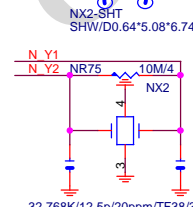
N_CPUPWROK

NC62 100p/4/NPO/50V/J

HSW_STRAP13

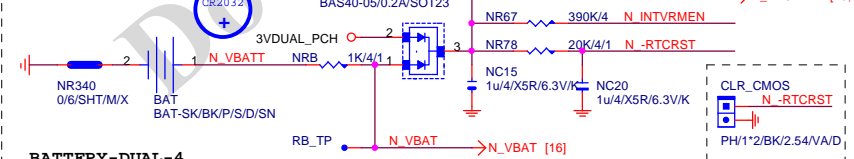
N/A

32.768KHZ



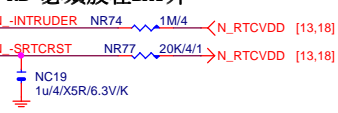
CLR_CMOS

BATTERY CR2032



BATTERY-DUAL-4

RB 必須放在BAT外



Gigabyte Technology

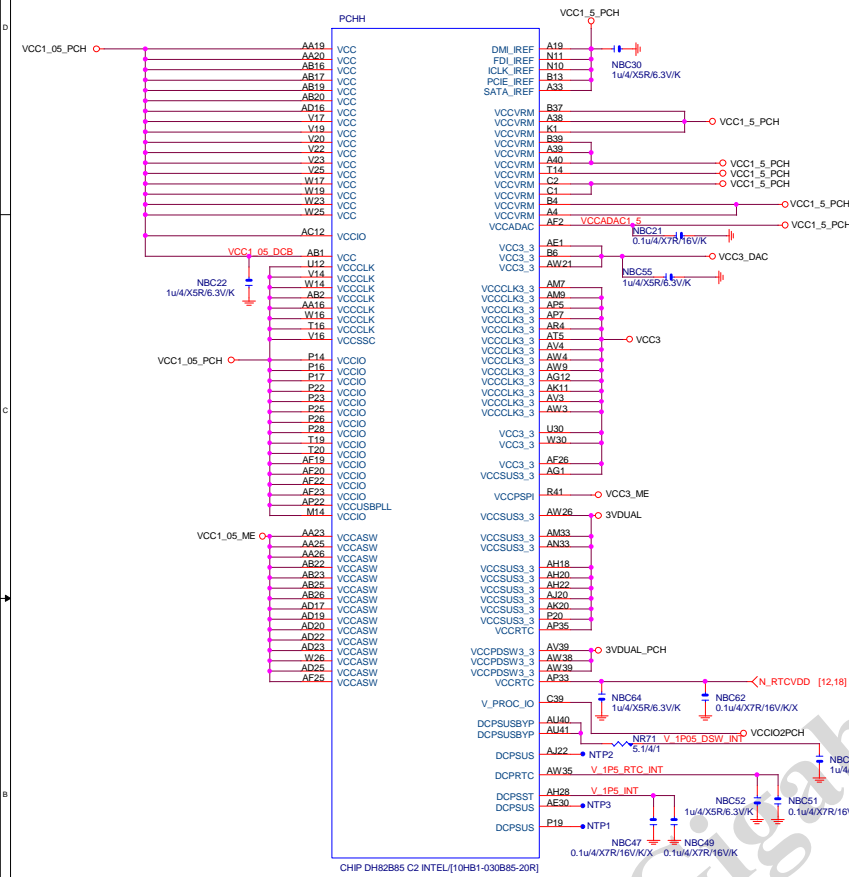
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Size	Document Number	GA-B85M-DS3H	
Custom		Rev 2.0	
Date:	Thursday, April 24, 2014	Sheet 12	of 30

PCH (H)

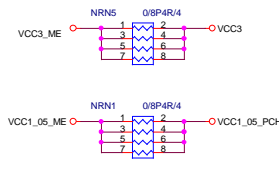
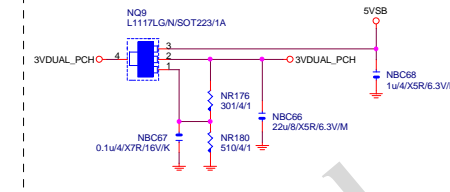
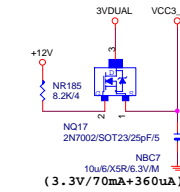
VCC3_DAC

3VDUAL_PCH

SHT_PWR

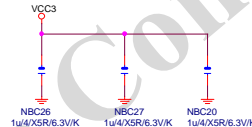


CLOSE北橋(注意震盪水波紋)

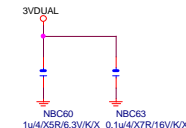
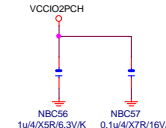


CAP

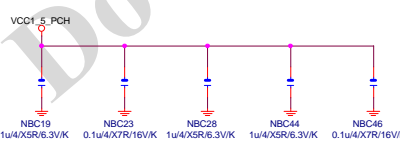
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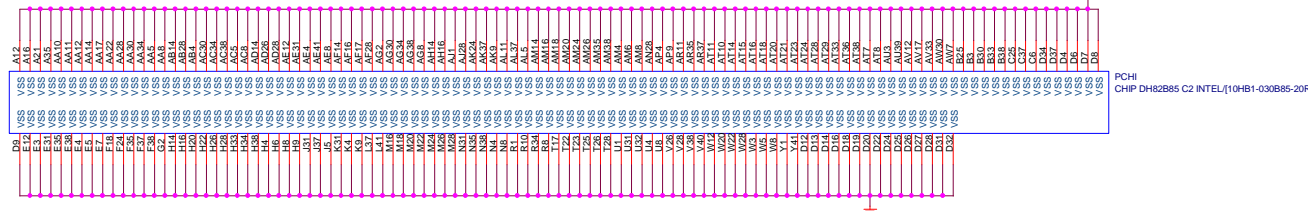
(1.05V)(X2)(3.3V)(X2)



(1.5V)(X5)

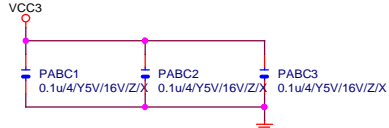


PCH (I)

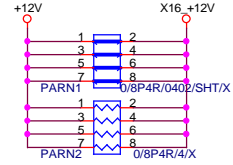


PCIEX16 CAP

N/A



PCIEX16 PROTECT SHT



PCIEX16 AC CAP

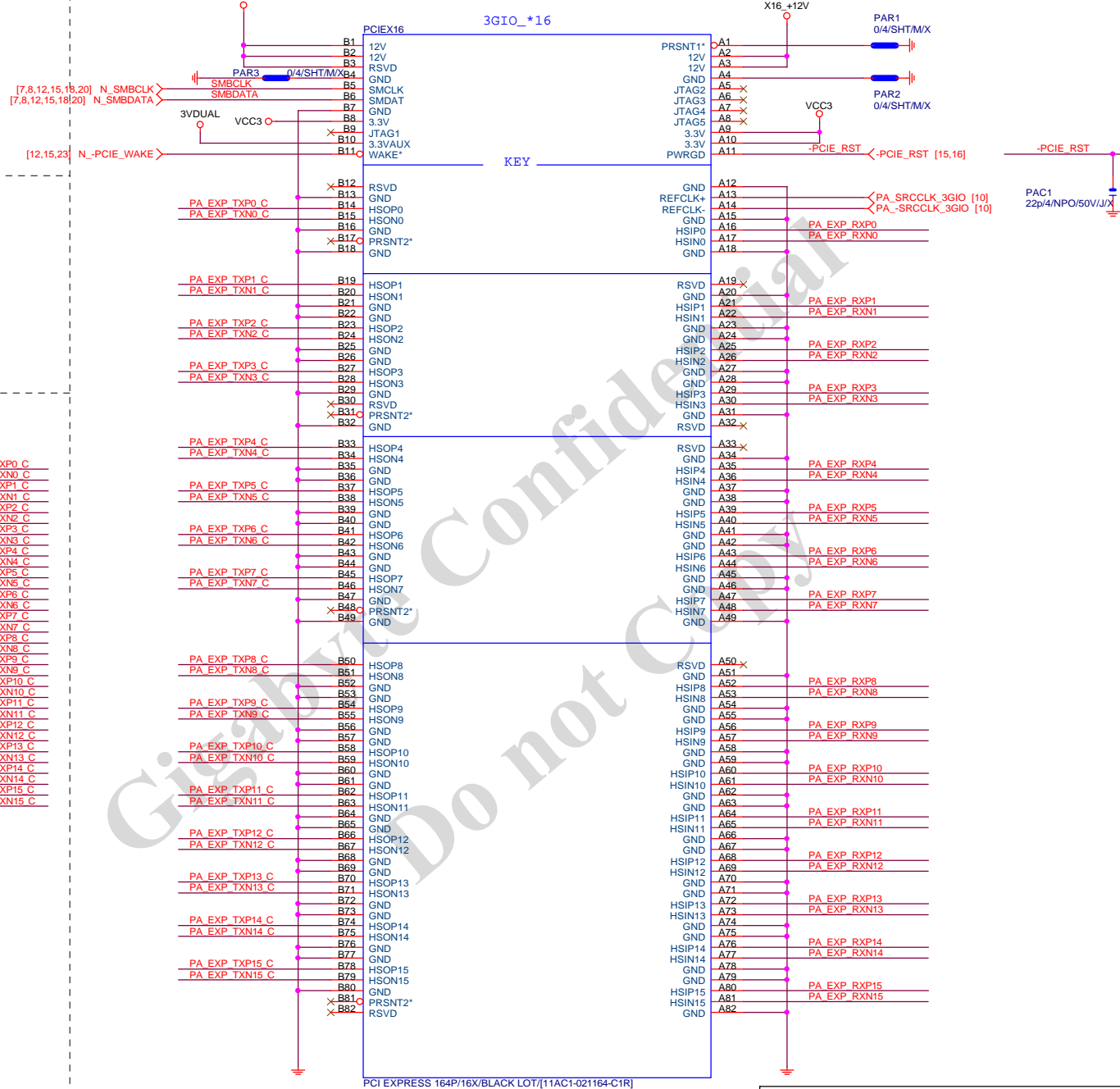
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PA EXP TXN0	PAC4	0.22u4/X5R/6.3V/K	PA EXP TXN0 C
PA EXP TXP1	PAC6	0.22u4/X5R/6.3V/K	PA EXP TXP1 C
PA EXP TXN1	PAC7	0.22u4/X5R/6.3V/K	PA EXP TXN1 C
PA EXP TXP2	PAC8	0.22u4/X5R/6.3V/K	PA EXP TXP2 C
PA EXP TXN2	PAC9	0.22u4/X5R/6.3V/K	PA EXP TXN2 C
PA 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
PA EXP TXP4	PAC12	0.22u4/X5R/6.3V/K	PA EXP TXP4 C
PA EXP TXN4	PAC13	0.22u4/X5R/6.3V/K	PA EXP TXN4 C
PA EXP TXP5	PAC14	0.22u4/X5R/6.3V/K	PA EXP TXP5 C
PA EXP TXN5	PAC15	0.22u4/X5R/6.3V/K	PA EXP TXN5 C
PA EXP TXP6	PAC16	0.22u4/X5R/6.3V/K	PA EXP TXP6 C
PA EXP TXN6	PAC17	0.22u4/X5R/6.3V/K	PA EXP TXN6 C
PA EXP TXP7	PAC19	0.22u4/X5R/6.3V/K	PA EXP TXP7 C
PA EXP TXN7	PAC18	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
PA EXP TXP10	PAC24	0.22u4/X5R/6.3V/K	PA EXP TXP10 C
PA EXP TXN10	PAC25	0.22u4/X5R/6.3V/K	PA EXP TXN10 C
PA EXP TXP11	PAC26	0.22u4/X5R/6.3V/K	PA EXP TXP11 C
PA EXP TXN11	PAC27	0.22u4/X5R/6.3V/K	PA EXP TXN11 C
PA EXP TXP12	PAC28	0.22u4/X5R/6.3V/K	PA EXP TXP12 C
PA EXP TXN12	PAC29	0.22u4/X5R/6.3V/K	PA EXP TXN12 C
PA EXP TXP13	PAC30	0.22u4/X5R/6.3V/K	PA EXP TXP13 C
PA EXP TXN13	PAC31	0.22u4/X5R/6.3V/K	PA EXP TXN13 C
PA EXP TXP14	PAC32	0.22u4/X5R/6.3V/K	PA EXP TXP14 C
PA EXP TXN14	PAC33	0.22u4/X5R/6.3V/K	PA EXP TXN14 C
PA EXP TXP15	PAC34	0.22u4/X5R/6.3V/K	PA EXP TXP15 C
PA EXP TXN15	PAC35	0.22u4/X5R/6.3V/K	PA EXP TXN15 C

PA EXP RXP0.[15] >>> PA_EXP_RXP[0..15] [4]
PA EXP RXN0.[15] >>> PA_EXP_RXN[0..15] [4]
PA EXP TXP0.[15] >>> PA_EXP_TXP[0..15] [4]
PA EXP TXN0.[15] >>> PA_EXP_TXN[0..15] [4]

PCIEX16 SLOT

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PCIESLOT-164DN-Q-1



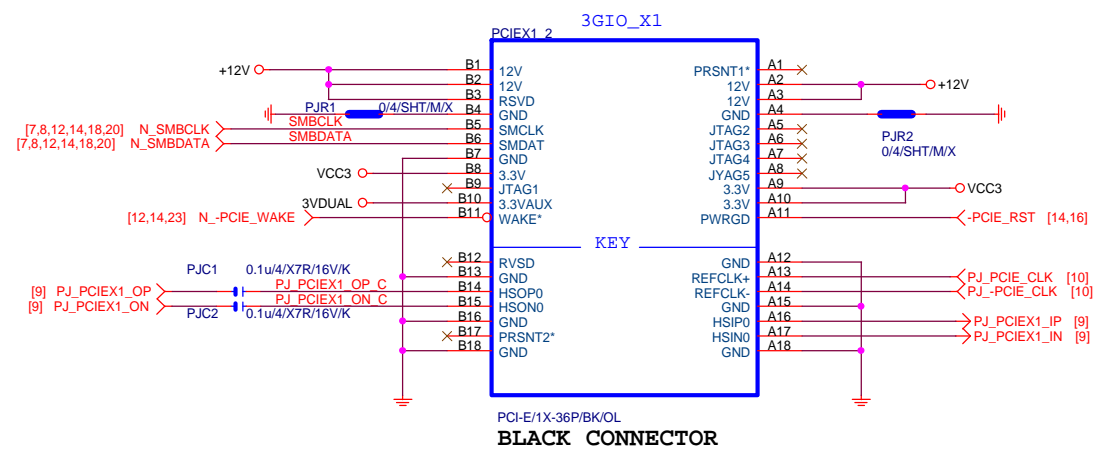
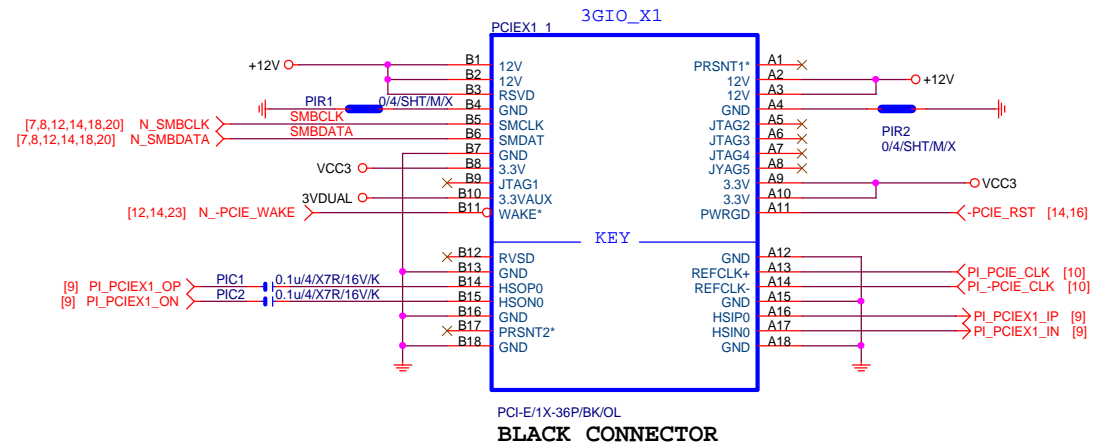
PCI EXPRESS 164P/16X/BLACK LOT/[11AC1-021164-C1R]

BLACK CONNECTOR

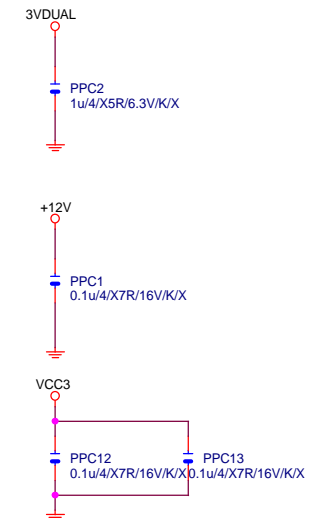
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Title		
PCI EXPRESS * 16		
Size	Document Number	Rev
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PCIEX1 SLOT

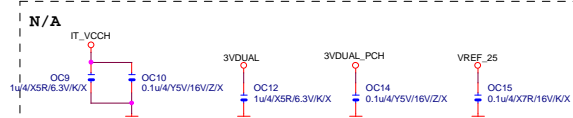
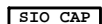
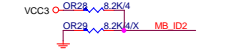
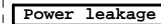
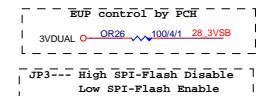
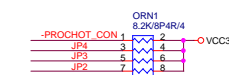
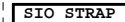
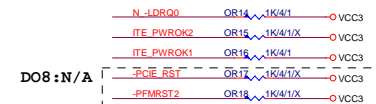
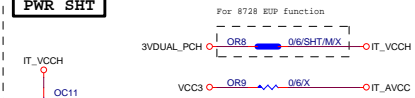
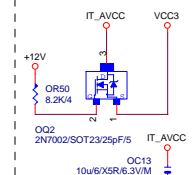
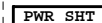


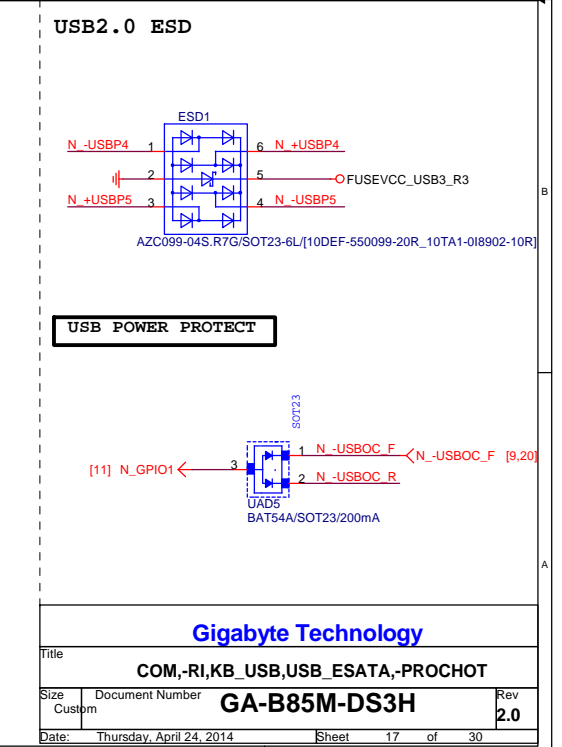
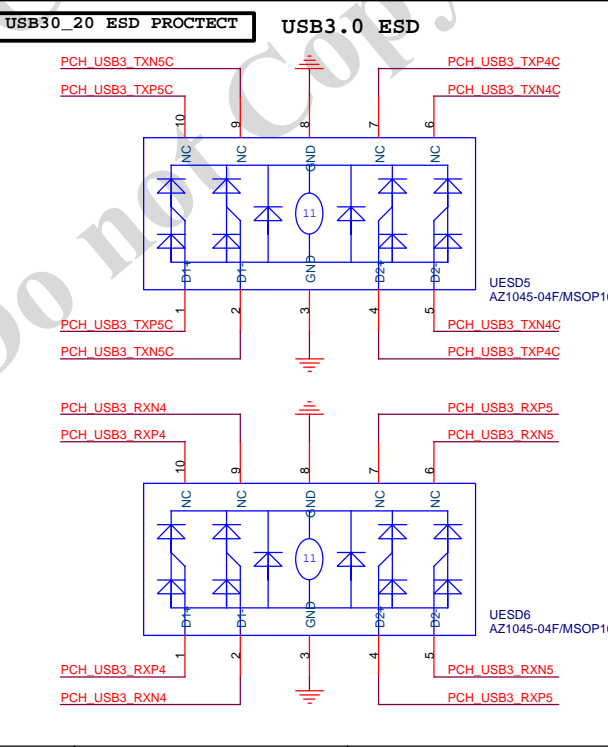
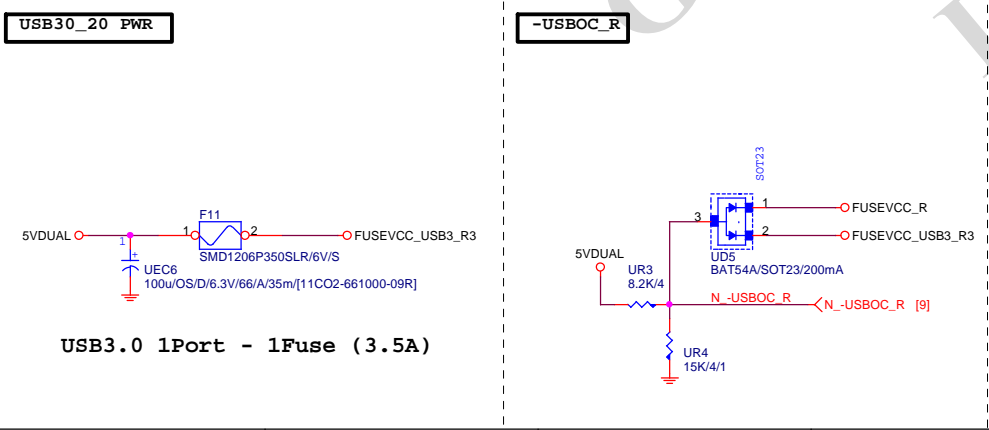
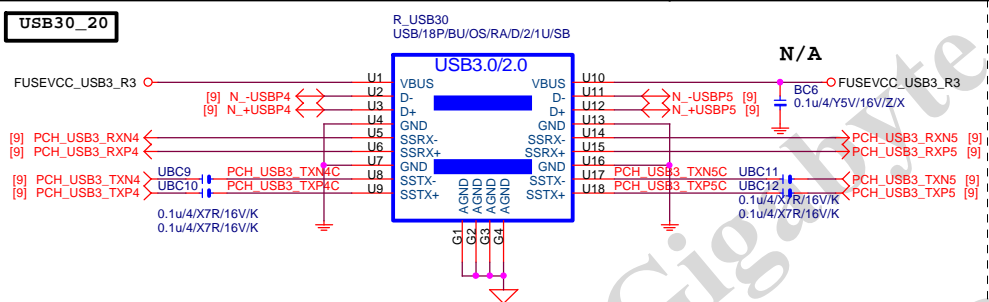
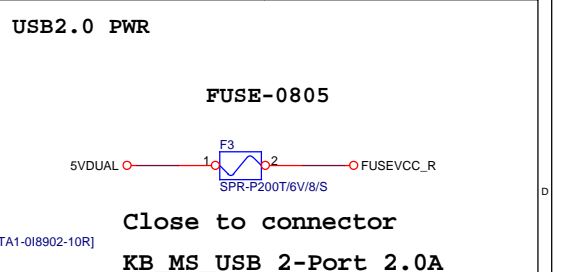
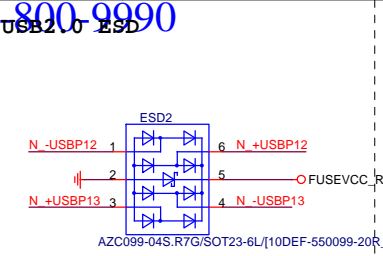
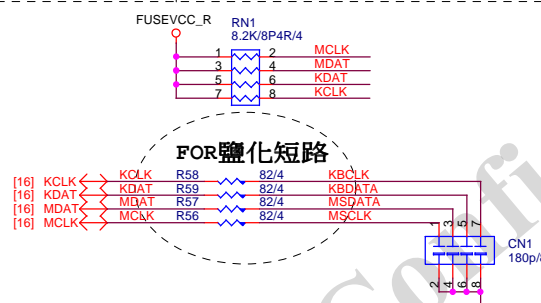
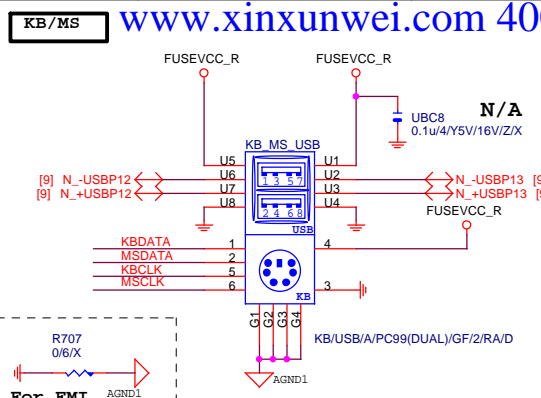
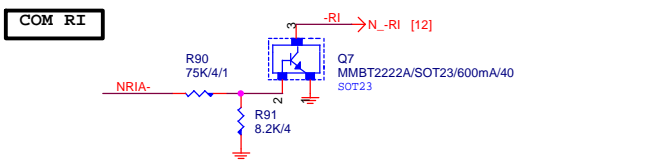
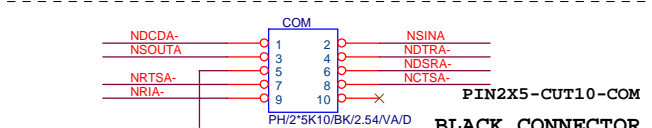
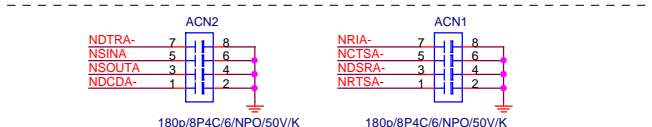
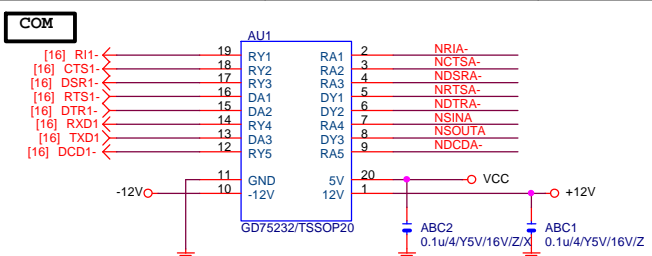
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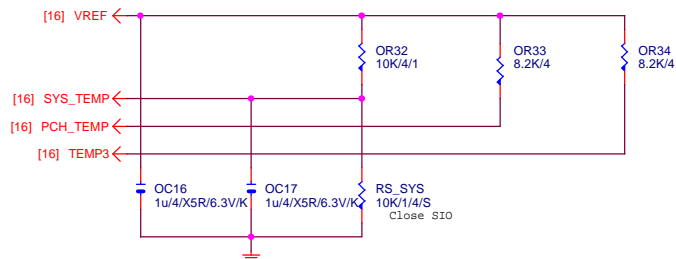
Gigabyte Technology

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Size	Document Number	Rev	
Custom	GA-B85M-DS3H	2.0	
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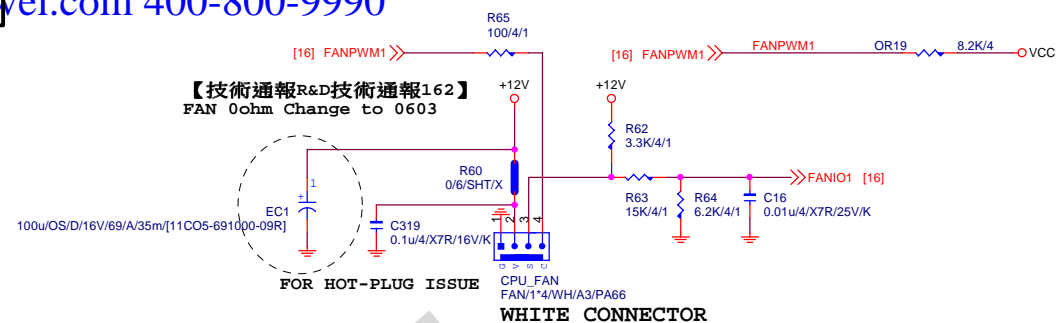




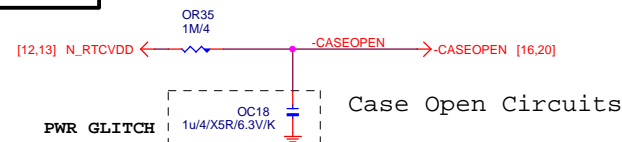
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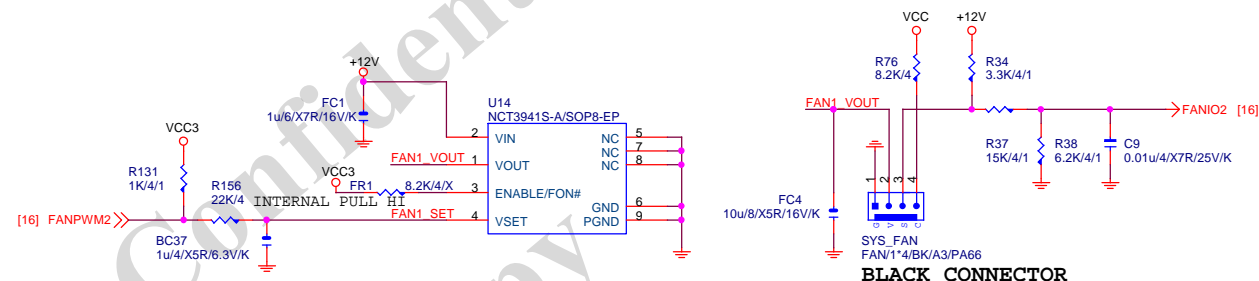
CPU SMART FAN



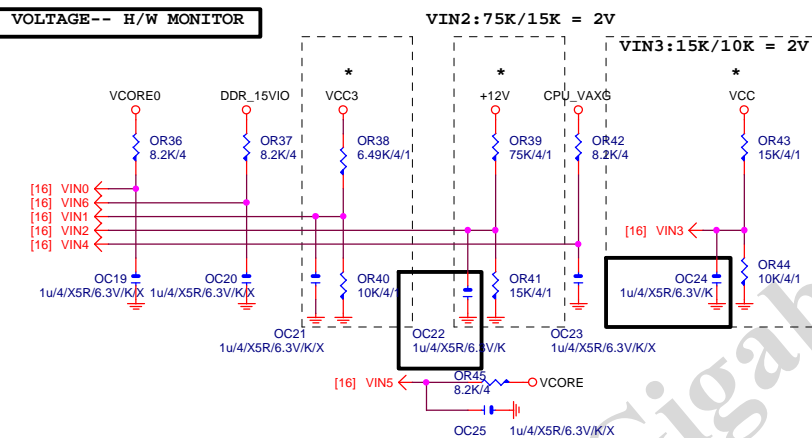
CASE OPEN



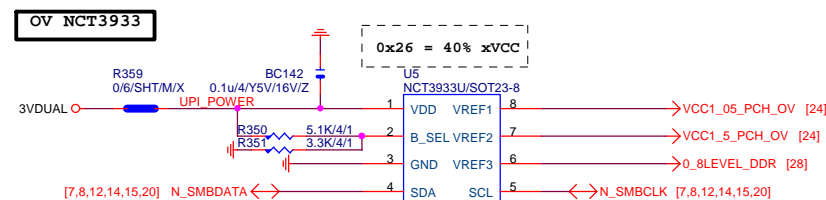
SYS SMART FAN



VOLTAGE-- H/W MONITOR



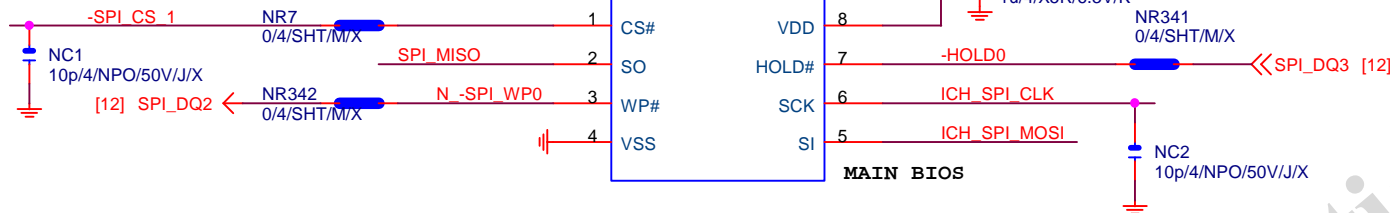
接pwm feedback pin



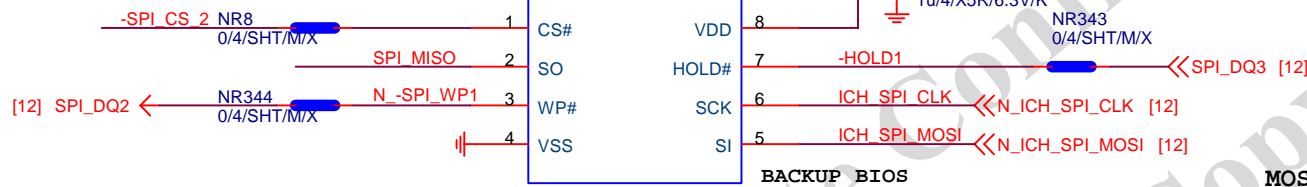
Gigabyte Technology

Title			HWM,FAN CTRL,OV	
Size			GA-B85M-DS3H	
Document Number			Rev 2.0	
Date:			Thursday, April 24, 2014	
Sheet			18 of 30	

M_BIOS
32M/SPI/SO8/200mil/S/[10HP4-112532-20R]



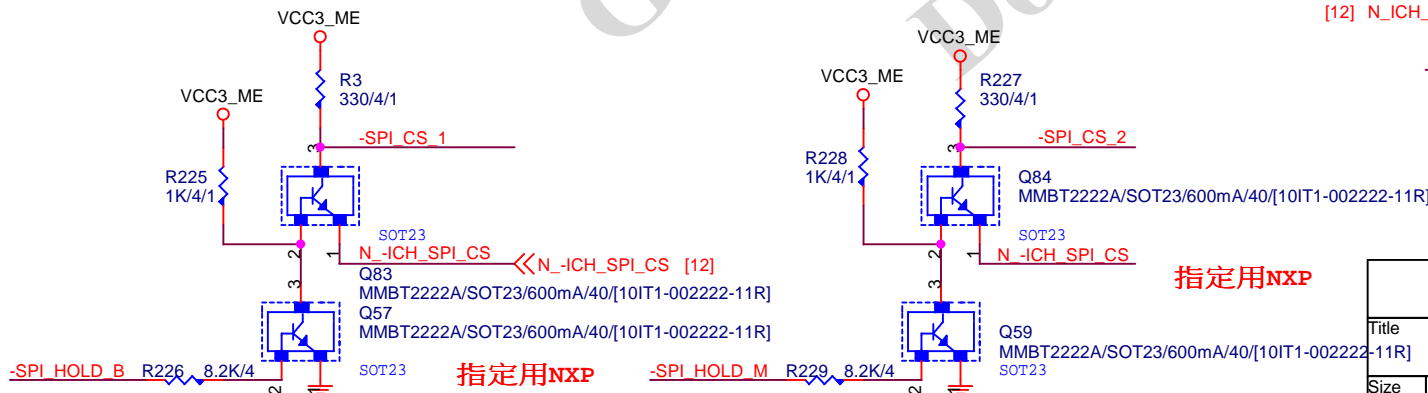
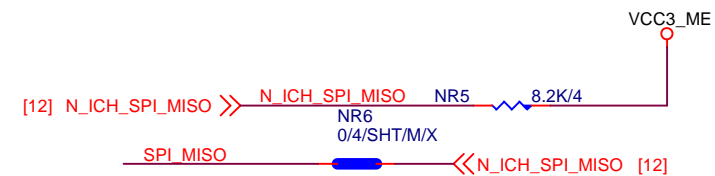
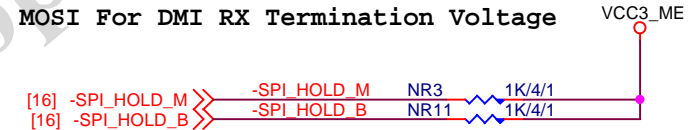
B_BIOS
32M/SPI/SO8/200mil/S/[10HP4-112532-20R]



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-DS3H

Rev
2.0

Title

Size
Custom

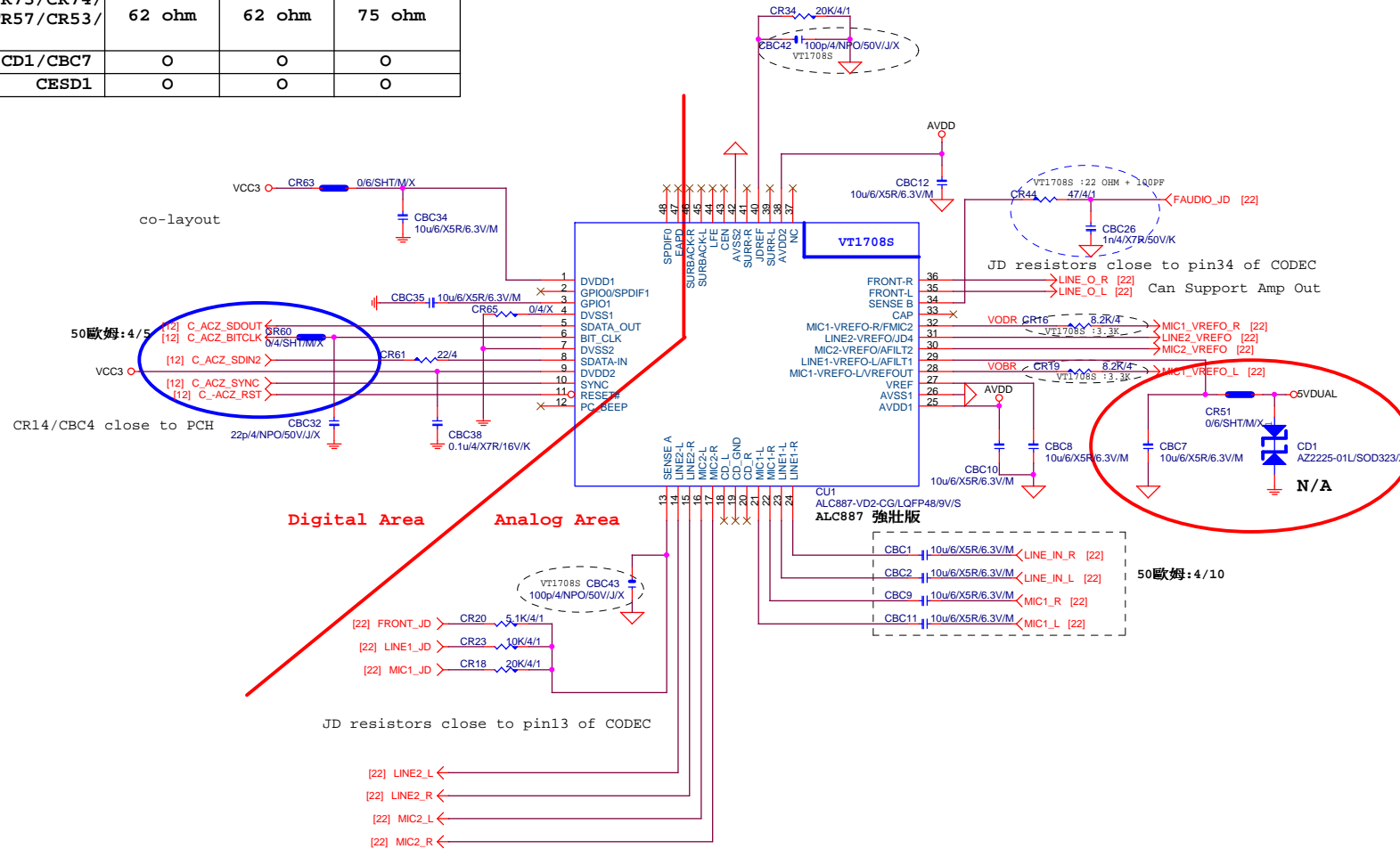
Document Number

Date: Thursday, April 24, 2014

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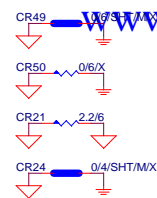
AZALIA CODEC **ALC892/ALC887-VD2/VT1708-CE Colay**

	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	O	O	O
CESD1	O	O	O



Gigabyte Technology

Title	HD AUDIO ALC887B-VD2/VT1708S/VT2021		
Size	Document Number	GA-B85M-DS3H	Rev 2.0
Custom			
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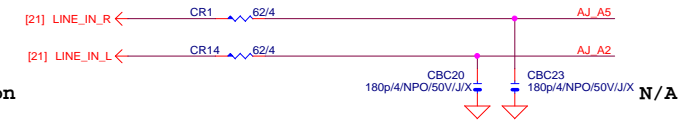


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LINE-IN

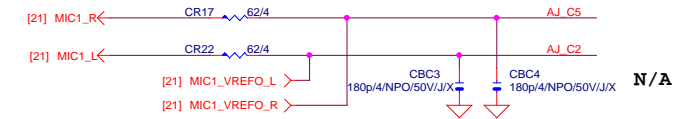
Verify MIC function
in LINE-in

Only reserved for ALC888

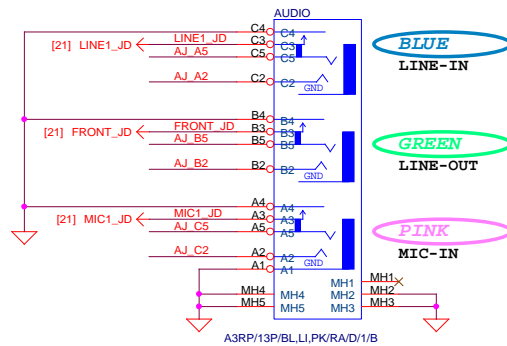


For 889A/888

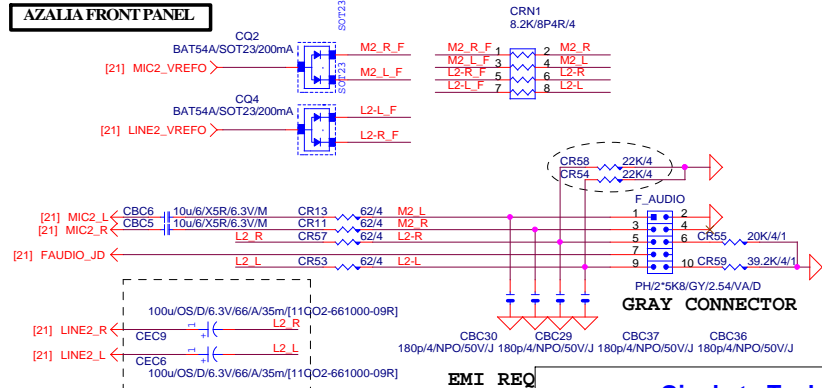
MIC-IN



SPDIF_OUT



AZALIA FRONT PANEL



Gigabyte Technology

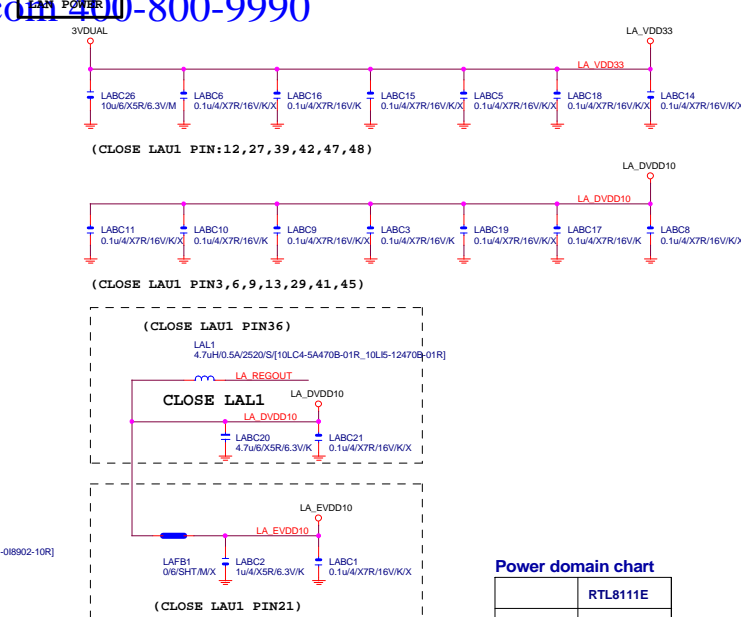
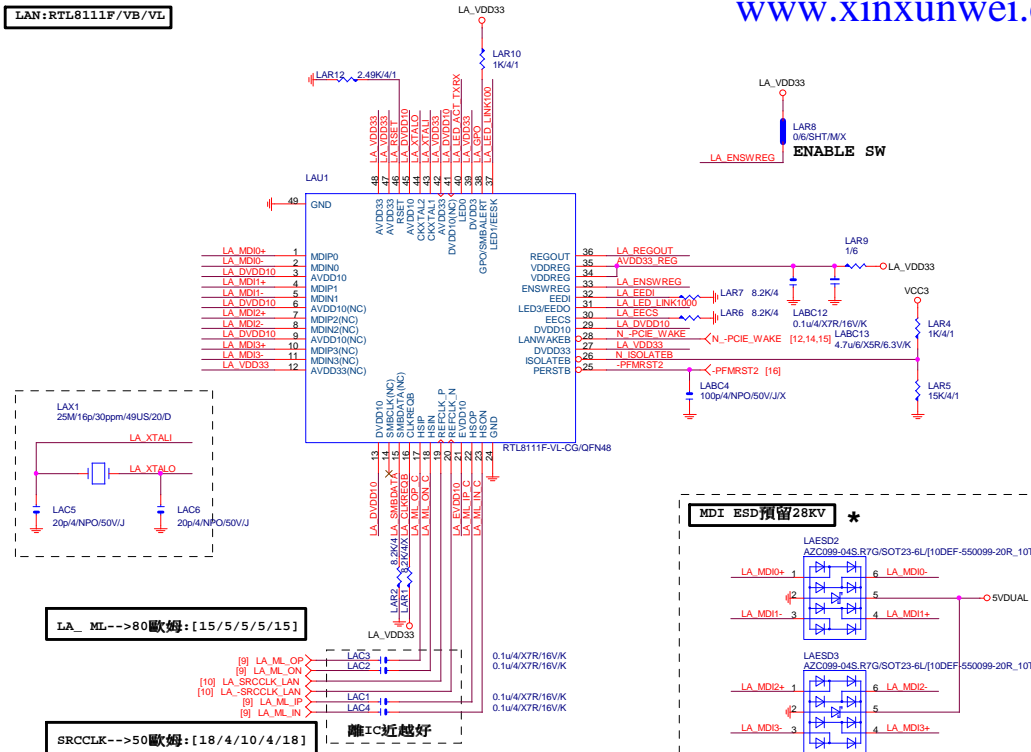
AUDIO JACK

GA-B85M-DS3H

Rev 2.0

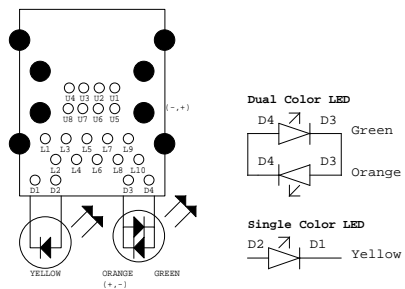
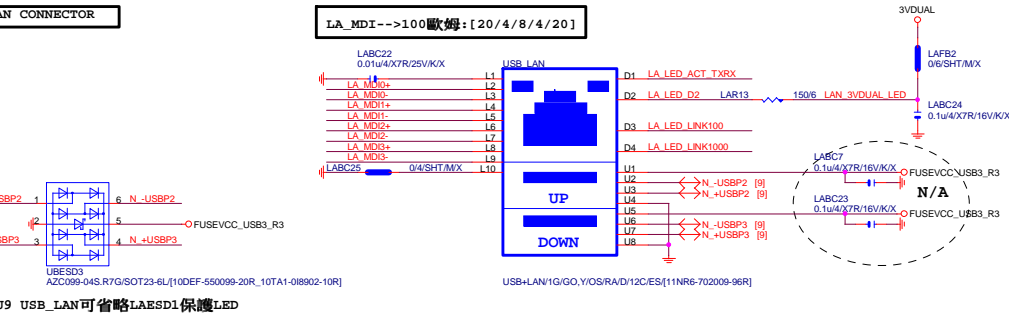
Date: Thursday, April 24, 2014 Sheet 22 of 30

LAN:RTL8111F/VB/VL



Power domain chart

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



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

BOM NOTICE *

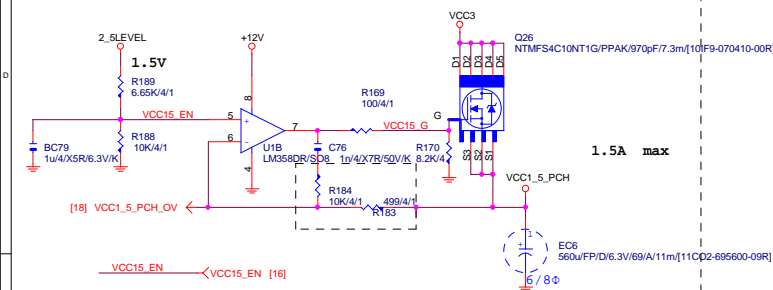
料號	規格	廠商
11NR6-702009-96R	1G LAN (12core)	UDE(RU9 ESD+)
[LED獨立走線,可省略外加AZC099料件LAESD1]		

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

Gigabyte Technology			
Title			
Realtek RTL8111G			
Size	Document Number	GA-B85M-DS3H	Rev
Custom			2.0
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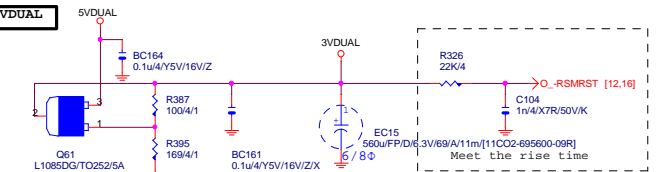
VCC1_5_PCH



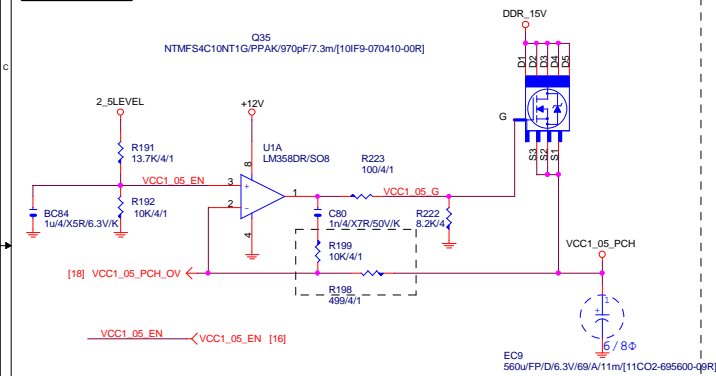
2_5LEVEL



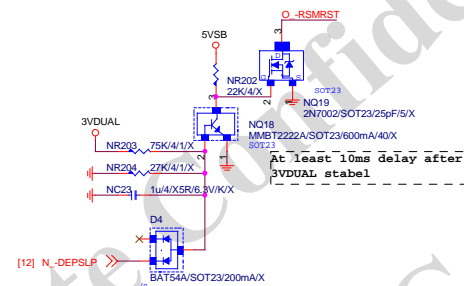
3VDUAL



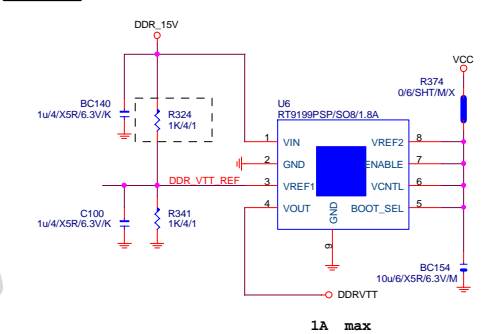
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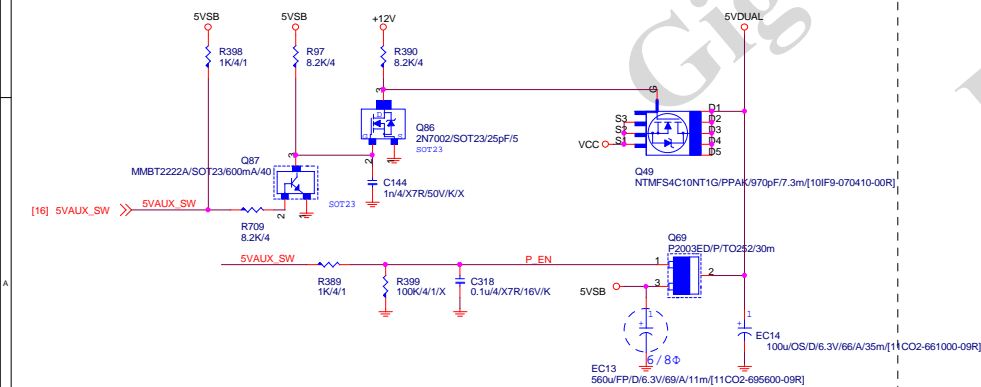
N/A



DDR_VTT

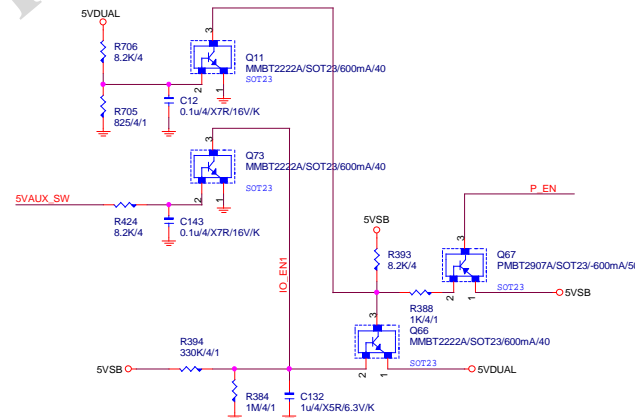


5VDUAL



5VDUAL SHORT PROTECT

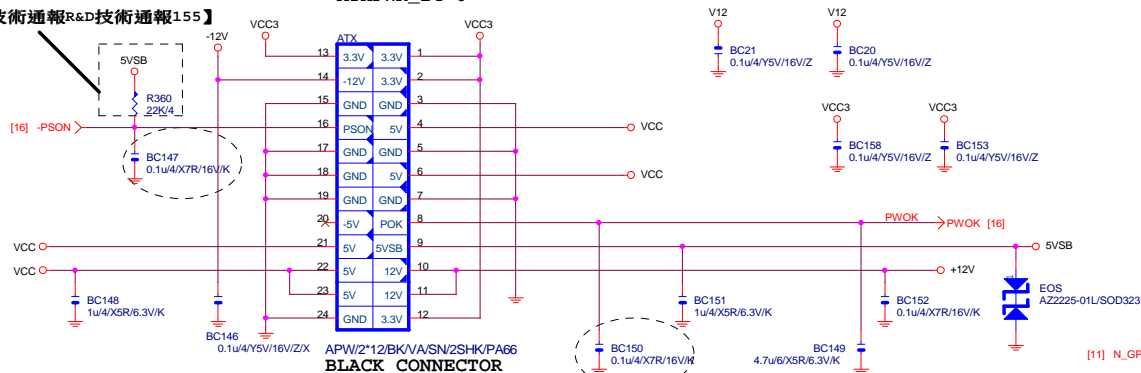
5VSB OVP:7.5V protection



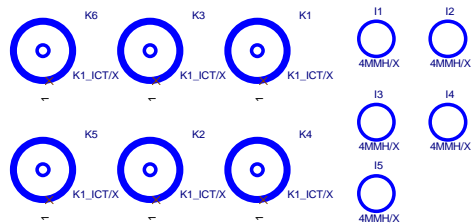
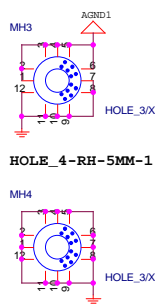
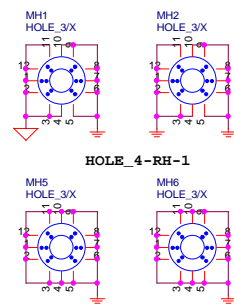
ATXX24 POWER CONNECTOR

【技術通報R&D技術通報155】

ATXPWR_24-6



APW/2*12BK/VA/SN/2SHK/PA66
BLACK CONNECTOR



To prevent the 5VSB
under loading when
boot

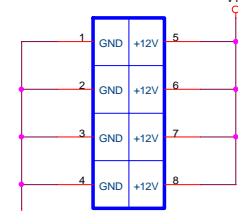
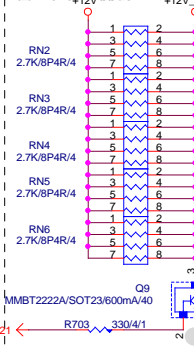
TPM

www.xinxunwei.com 400-800-0990

ATXX4 POWER CONNECTOR

ATXPW2X4-6

【技術通報R&D技術通報158】
To fix 12V light load
abnormal issue



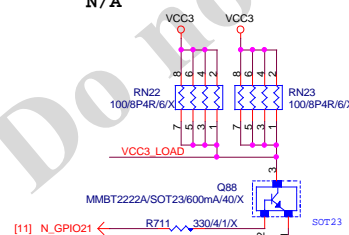
BLACK CONNECTOR

ATX_12V_2X4
APW/2*4BK/OC/P/4.2VA/SN/OH

PWOK PATCH

【技術通報R&D技術通報154】

FIX PWR MINMUN LOAD
N/A



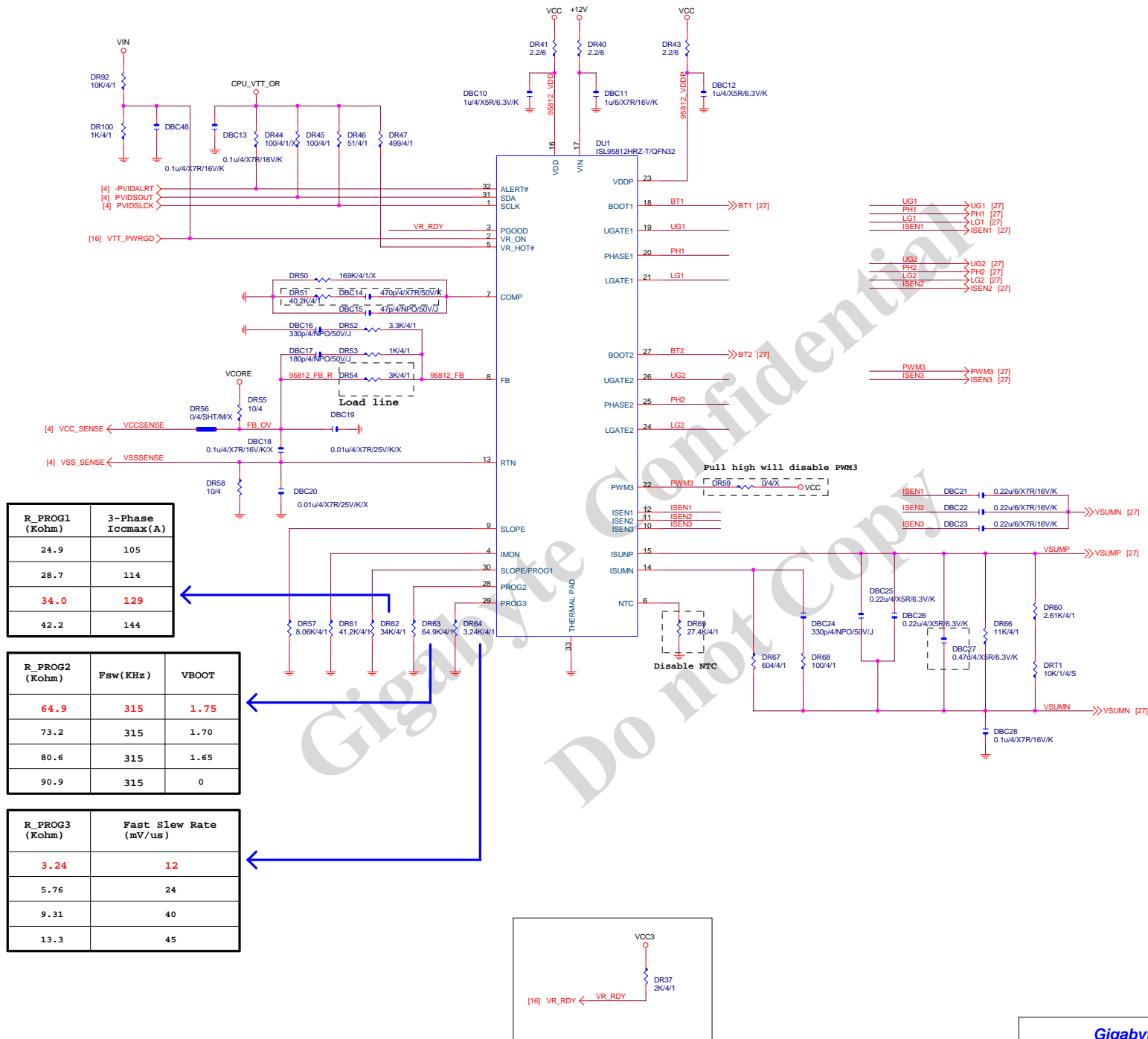
Gigabyte Technology

ATX CONNECTOR

GA-B85M-DS3H

Rev
2.0

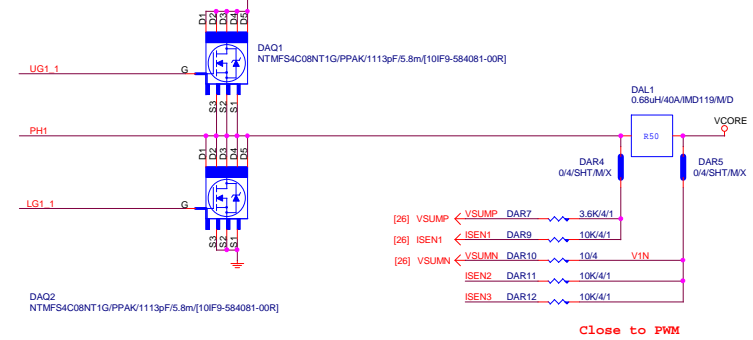
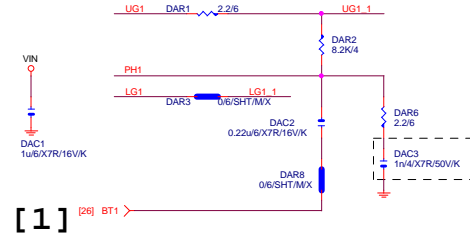
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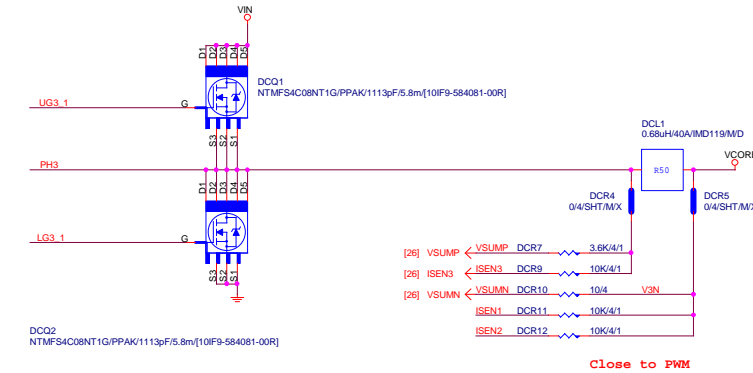
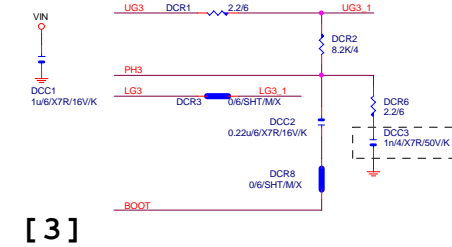
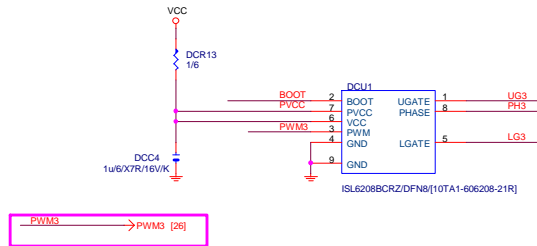
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File			CPU CORE VR-1
Size	Document Number	GA-B85M-DS3H	
Custom		Rev	2.0
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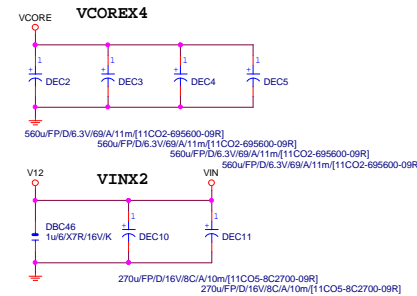
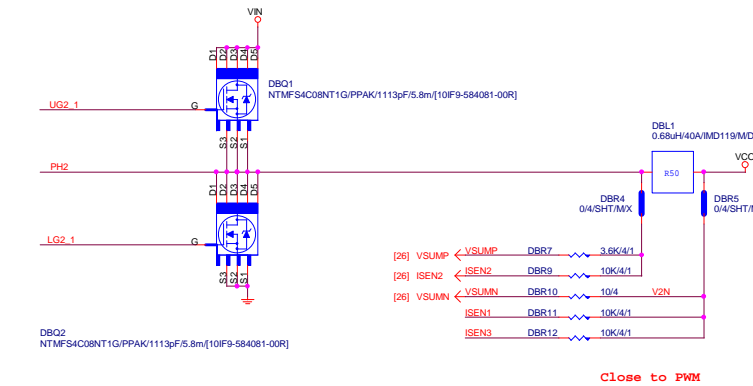
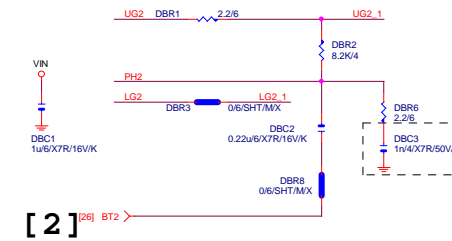
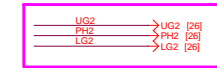
PHASE 1



PHASE 3



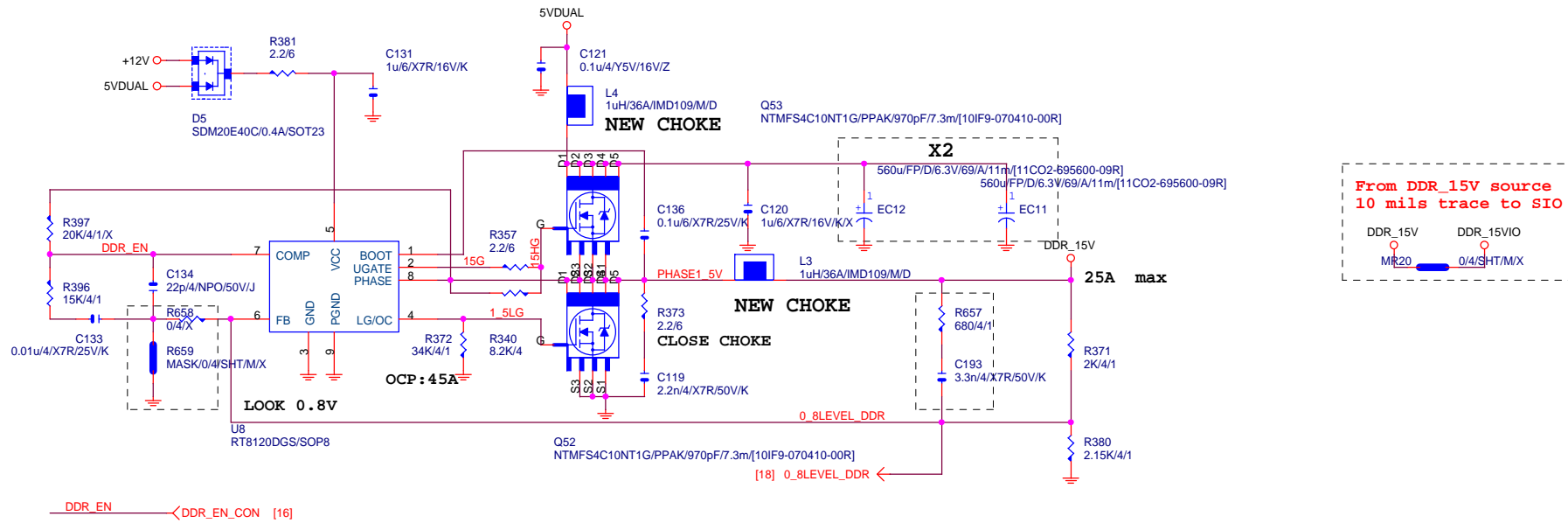
PHASE 2



Gigabyte Technology

Title			CPU CORE VR-2
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Custom			Rev 2.0
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DDR15V



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°C), 1(105°C)
VIN Ripple current=4.7X1.7=7.99A(85°C)
-->故固態電容須2X7.99=15.98>11.45A

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

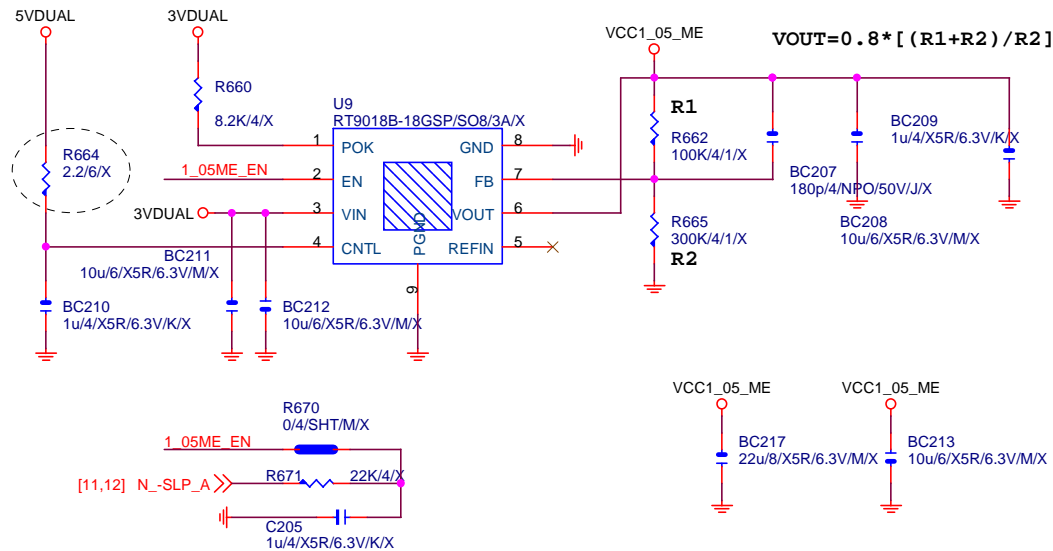
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Title			
DDR POWER			
Size	Document Number	GA-B85M-DS3H	Rev
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VCC1_05_ME

【技術通報R&D技術通報156】

(RICHTER), (NUVOTON), (EMC)做共用
PIN7分壓阻值須做修改為100K以上電阻值

N/A



Second source

EM5103 - 10GL2-305103-01R

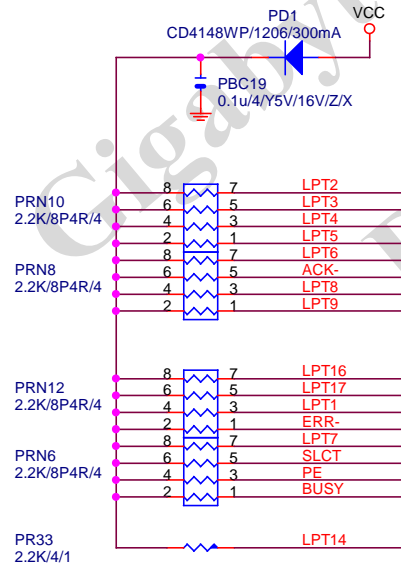
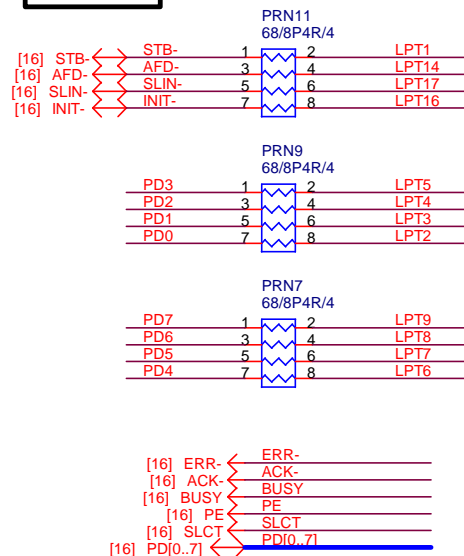
NCT3730S -

10GL2-303730-01R

【技術通報R&D技術通報151】

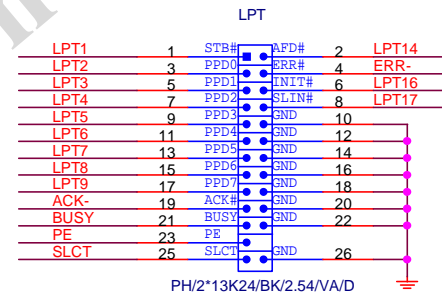
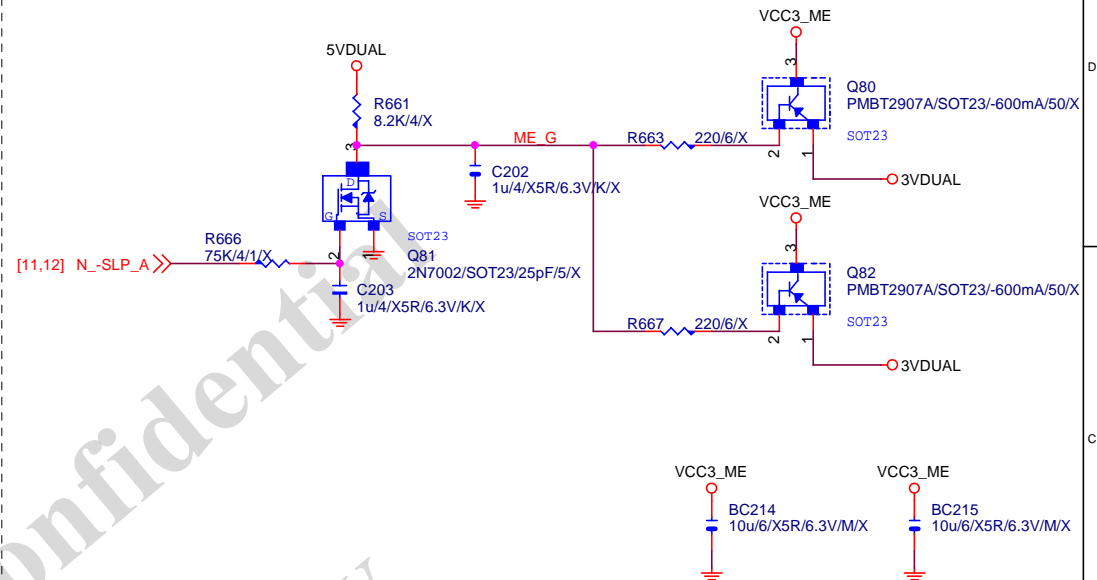
33ohm Change to 68ohm

LPT PORT



VCC3_ME

N/A



Gigabyte Technology

Title			
LPT			
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