

Model Name: GA-B85M-D3H-A WP

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*4 SLOT
16	PCI SLOT1,2
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 ALC892-GR
23	REAR AUDIO JACK
24	REALTEK RTL8111G
25	DISCRETE POWER
26	ATX ,TPM
27	VCORE ISL95812_1

Revision 1.0

SHEET

TITLE

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

Gigabyte Technology

Cover Sheet

Size	Document Number	GA-B85M-D3H-A WP	Rev
Custom			1.0
Date:	Thursday, April 02, 2015	Sheet	1 of 32

Revision 1.0

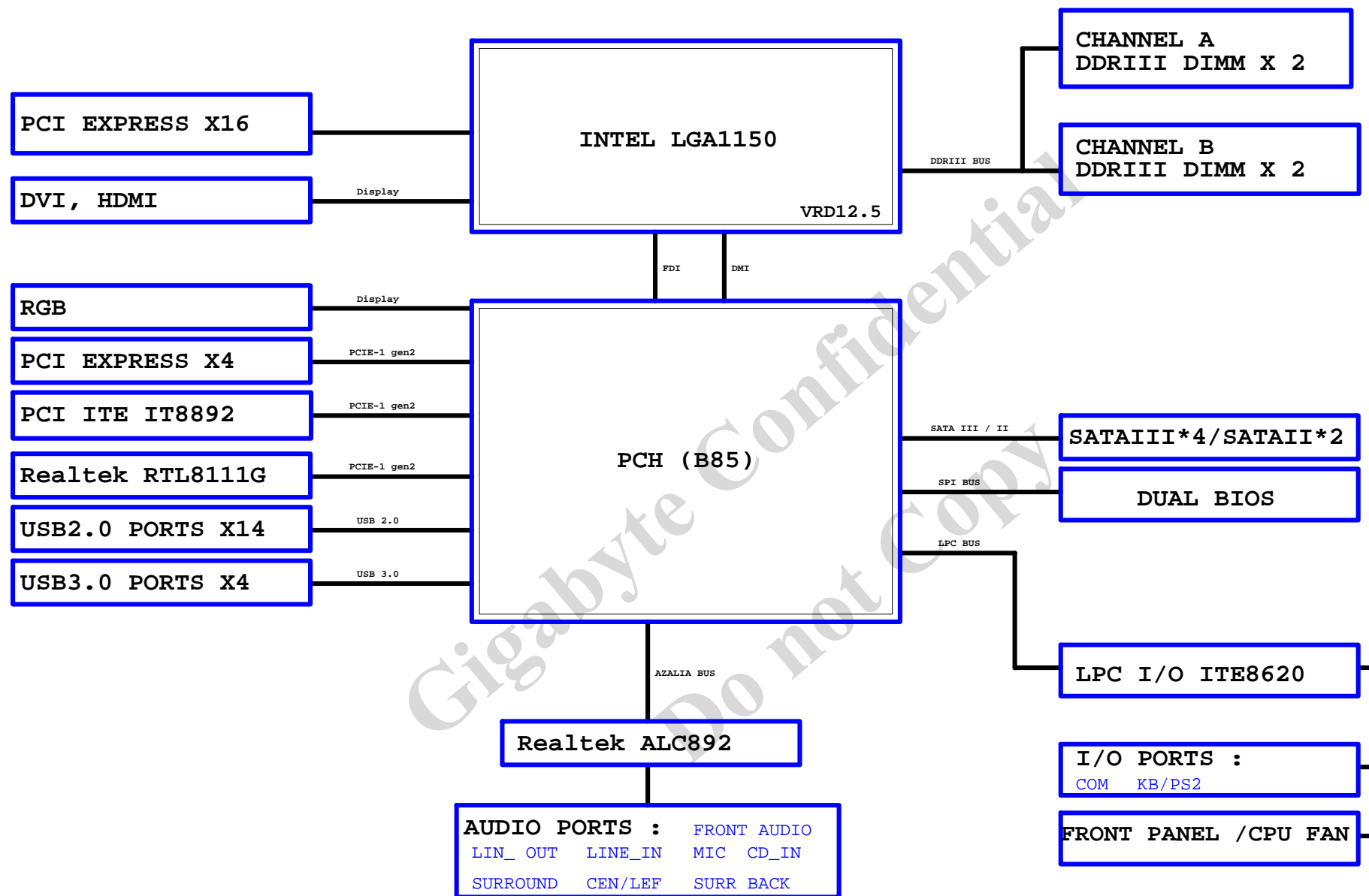
2014/2/20

[illegible]

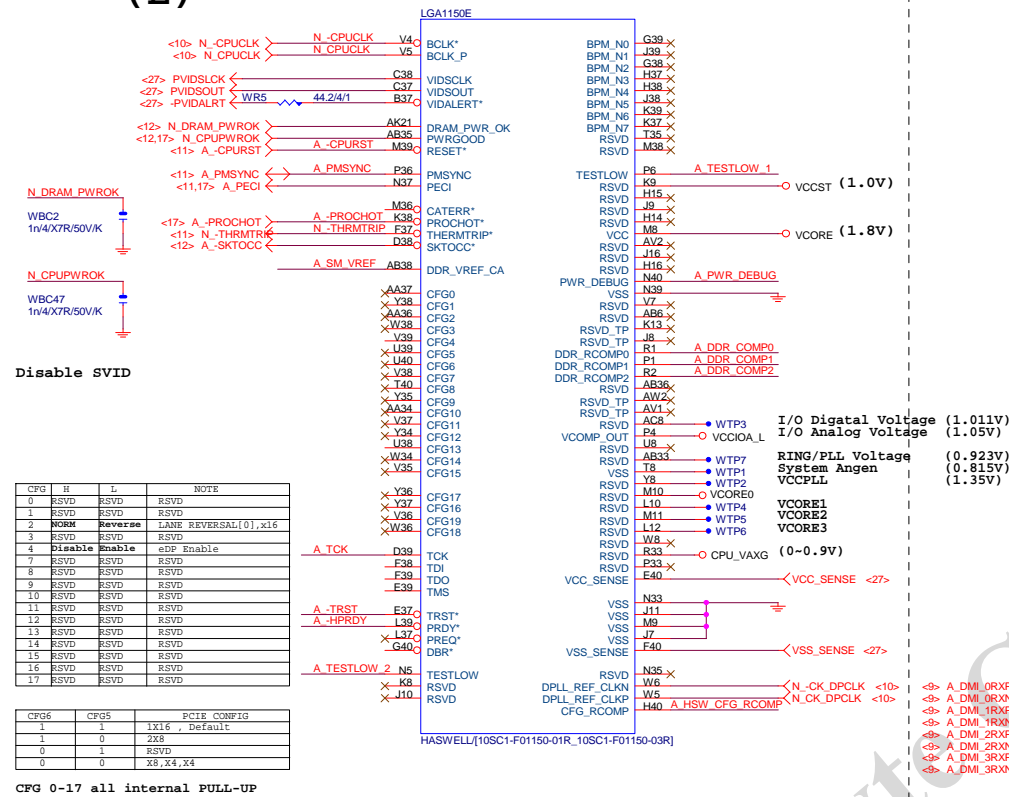
Circuit or PCB layout change

[illegible]

BLOCK DIAGRAM

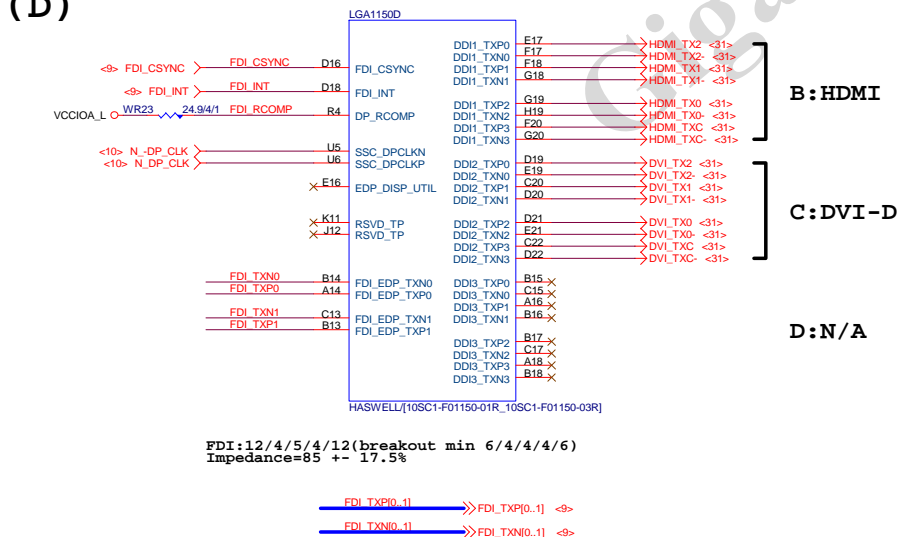


LGA1150 (E)



LGA1150

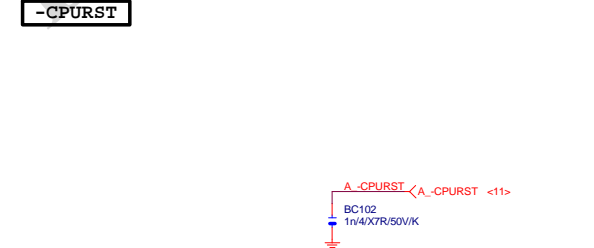
(D)



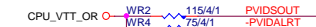
LGA1155 (C)



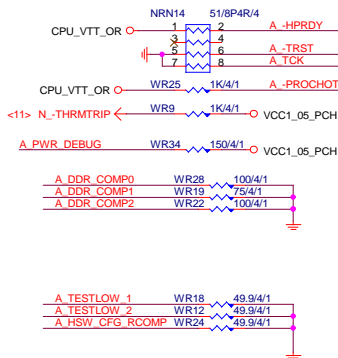
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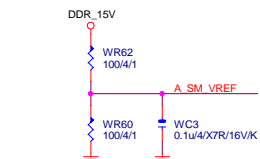
CPU SVID



CPU	PU/PD
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100	100



SM REF



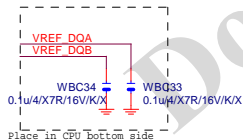
THRMTrip DISABLE

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	MDA10
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	MDA12
MAAA13	AT20	DDR0_MA14	DDR0_D14	AK37	MDA14
MAAA14	AU21	DDR0_MA15	DDR0_D15	AK40	MDA15
MAAA15			DDR0_D16	AM40	MDA17
MODT_A0	AW10	DDR0_ODT0	DDR0_D17	AM39	MDA21
MODT_A1	AY8	DDR0_ODT1	DDR0_D18	AP38	MDA18
MODT_A2	AW9	DDR0_ODT2	DDR0_D19	AP39	MDA19
MODT_A3	AU8	DDR0_ODT3	DDR0_D20	AM37	MDA20
			DDR0_D21	AM38	MDA16
			DDR0_D22	AP37	MDA22
			DDR0_D23	AP40	MDA23
			DDR0_D24	AV37	MDA25
			DDR0_D25	AW37	MDA28
			DDR0_D26	AU35	MDA26
			DDR0_D27	AV35	MDA27
			DDR0_D28	AT37	MDA28
			DDR0_D29	AU37	MDA24
			DDR0_D30	AT35	MDA30
			DDR0_D31	AW35	MDA31
			DDR0_D32	AY6	MDA33
			DDR0_D33	AU6	MDA37
			DDR0_D34	AV4	MDA34
			DDR0_D35	AU4	MDA35
			DDR0_D36	AW6	MDA36
			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	AE4	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	DQSA9
			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

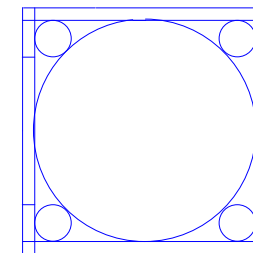
HASWELL[10SC1-F01150-01R_10SC1-F01150-03R]



未上件

LGA1150B		DDR1_MA0	AE34	MD80
MAAB0	AL19	DDR1_MA1	AE35	MD81
MAAB1	AK23	DDR1_MA2	AG35	MD82
MAAB2	AM23	DDR1_MA3	AH35	MD83
MAAB3	AP23	DDR1_MA4	AD34	MD84
MAAB4	AL23	DDR1_MA5	AD35	MD85
MAAB5	AY24	DDR1_MA6	AG34	MD86
MAAB6	AV25	DDR1_MA7	AH34	MD87
MAAB7	AU26	DDR1_MA8	AL34	MD88
MAAB8	AW25	DDR1_MA9	AL35	MD89
MAAB9	AP18	DDR1_MA10	AK31	MD810
MAAB10	AK31	DDR1_MA11	AK34	MD811
MAAB11	AR15	DDR1_MA12	AK35	MD812
MAAB12	AV28	DDR1_MA13	AK32	MD813
MAAB13	AY27	DDR1_MA14	AL32	MD814
MAAB14	AY28	DDR1_MA15	AL34	MD817
MODT_B0	AM17	DDR1_ODT0	AP34	MD821
MODT_B1	AL16	DDR1_ODT1	AN31	MD819
MODT_B2	AM16	DDR1_ODT2	AP31	MD823
MODT_B3	AK15	DDR1_ODT3	AP35	MD820
			AP35	MD816
			AN32	MD818
			AP32	MD822
			AM29	MD825
			AM28	MD828
			AR29	MD827
			AR28	MD830
			AL23	MD824
			AL28	MD829
			AP29	MD826
			AP28	MD831
			AR12	MD832
			AL12	MD835
			AR13	MD836
			AP13	MD837
			AM13	MD838
			AM12	MD839
			AR9	MD845
			AP9	MD841
			AR6	MD847
			AP6	MD843
			AR10	MD844
			AP10	MD840
			AR7	MD846
			AP7	MD842
			AM9	MD852
			AL9	MD853
			AL6	MD850
			AL7	MD855
			AM10	MD848
			AL10	MD849
			AM6	MD854
			AM7	MD851
			AH6	MD861
			AH7	MD860
			AE6	MD859
			AE7	MD863
			AJ6	MD856
			AJ7	MD857
			AG6	MD858
			AF7	MD862
			AF35	DQSB0
			AL33	DQSB1
			AN28	DQSB2
			AN28	DQSB3
			AN12	DQSB4
			AP8	DQSB5
			AL8	DQSB6
			AG7	DQSB7
			AN25	DQSB8
			AE34	DQSB9
			AK33	DQSB1
			AN33	DQSB2
			AN29	DQSB3
			AL13	DQSB4
			AR8	DQSB5
			AM8	DQSB6
			AG6	DQSB7
			AN26	DQSB8

HASWELL[10SC1-F01150-01R_10SC1-F01150-03R]

CR
CPU RETAINION/X

LGA1150



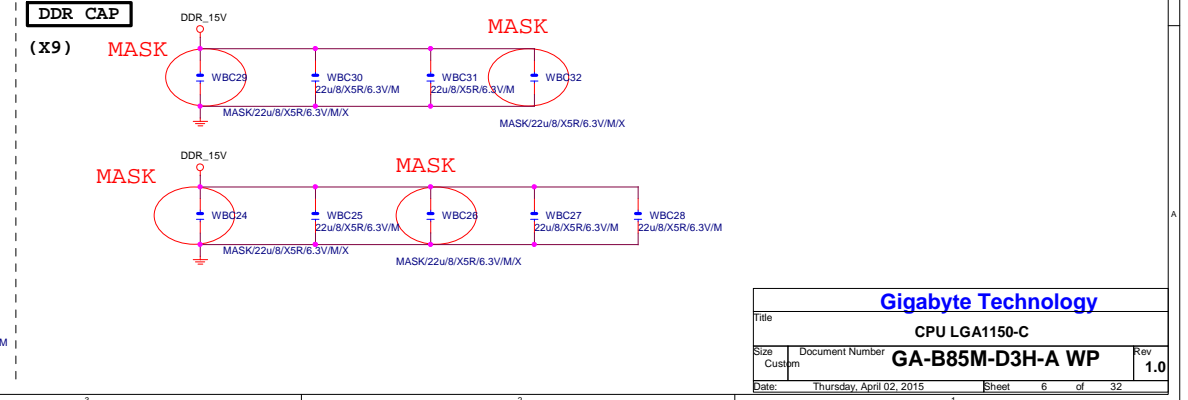
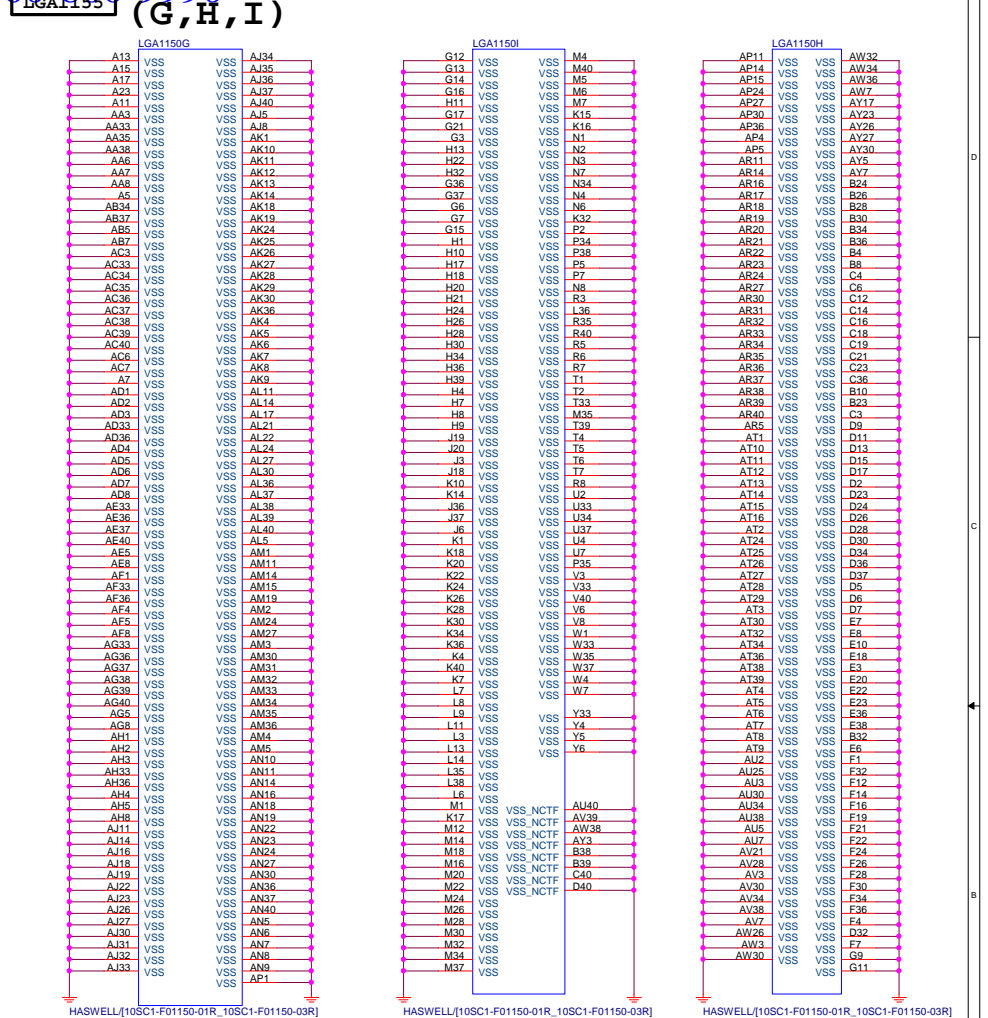
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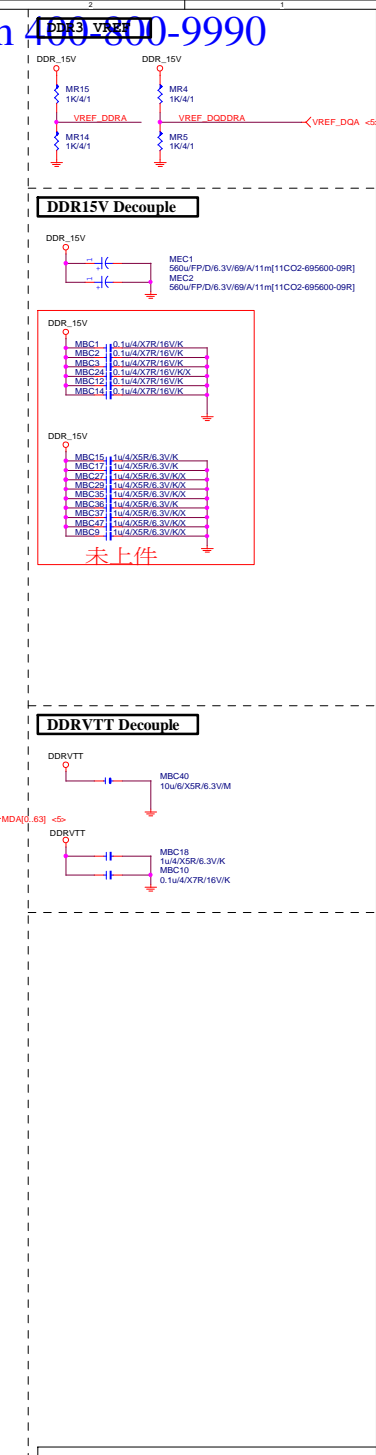
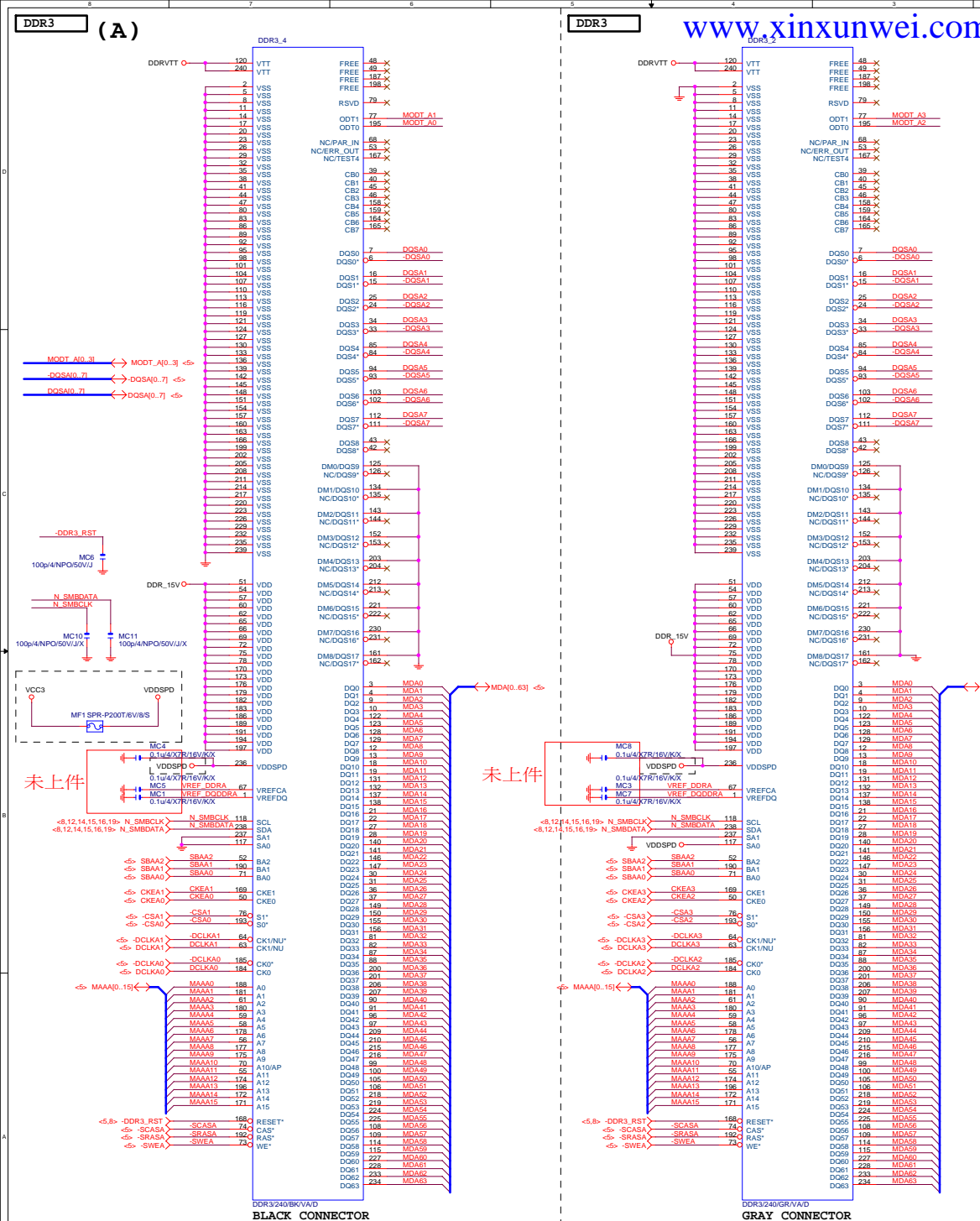
DDR BUS

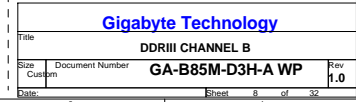
<7>	MODT_A[0..3]	MODT_A0..3
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<7>	MDA[0..63]	MDA0..63
<8>	MDB[0..63]	MDB0..63
<7>	DQSA[0..7]	DQSA0..7
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<7>	MAAA[0..15]	MAAA0..15
<8>	MAAB[0..15]	MAAB0..15
<8>	DQSB[0..7]	DQSB0..7
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Gigabyte Technology

Title		CPU LGA1150-B	
Size	Document Number	GA-B85M-D3H-A WP	
Custom			Rev 1.0
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PCH

(B)

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

PCHB

<> A DMI_0TXN A DMI_0TXN L24
<> A DMI_0TXP A DMI_0TXP K24
<> A DMI_0RXN A DMI_0RXN C20
<> A DMI_0RXP A DMI_0RXP B20
<> A DMI_1TXN A DMI_1TXN G24
<> A DMI_1TXP A DMI_1TXP H24
<> A DMI_1RXN A DMI_1RXN D21
<> A DMI_1RXP A DMI_1RXP B21
<> A DMI_2TXN A DMI_2TXN F26
<> A DMI_2TXP A DMI_2TXP G26
<> A DMI_2RXN A DMI_2RXN B22
<> A DMI_2RXP A DMI_2RXP C22
<> A DMI_3TXN A DMI_3TXN K26
<> A DMI_3TXP A DMI_3TXP L26
<> A DMI_3RXN A DMI_3RXN A24
<> A DMI_3RXP A DMI_3RXP B24

W=4 mil out of PCH
S=15 mil out of PCH

VCC1_5_PCH NR50 7.5K/4/1 DMI_COMP B19
PCIE_COMP C13
NR40 7.5K/4/1

<10> CK_SRCCLK_PCH CK_SRCCLK_PCH G22
<10> CK_SRCCLK_PCH CK_SRCCLK_PCH F22

8111G

8892

PCIEx4

電容放靠近 Device & PCI-E Slot

PCIEX1:15/4/4/4/15 (breakout min 8/4/4/4/8)
Impedance=85 +- 17.5%

PCH

(J)

PCH PCIE ,DMI 15/4/4/4/15

usb2.0 12/5/7/5//12
usb3.0 20/5/7/5//20

AT1 VSS_NCTF
AT41 VSS_NCTF
AU1 VSS_NCTF
AV1 VSS_NCTF
AV2 VSS_NCTF
AV40 VSS_NCTF
AV41 VSS_NCTF
AW2 VSS_NCTF
AW40 VSS_NCTF
B40 VSS_NCTF
B41 VSS_NCTF
C41 VSS_NCTF
D1 VSS_NCTF
D41 VSS_NCTF

PCHJ

TP22 U11
TP23 U10
TP21 AJ14
TP20 AK14
TP14 K34
TP15 K33
TP12 AH24
TP10 L16
TP11 K16
TP9 AM34
TP3 R12
TP4 N12
TP1 L22
TP2 K22
TP5 R4
TP6 K5
TP7 P5
TP8 L5
VSS AC31
VSS AF3
VSS AV21

DH82B85/S/[10HB1-030B85-20R]

B85: Port 6/7 N/A

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

AV10 N-USBP0
AU10 N-USBP0
AV11 N-USBP1
AW11 N-USBP1
ASB1 N-USBP1
ASB2 N-USBP2
ASB3 N-USBP2
ASB4 N-USBP2
AK16 N-USBP3
AU15 N-USBP4
AV15 N-USBP4
AT12 N-USBP5
AU12 N-USBP5
ASB7 N-USBP7
ASB8 N-USBP8
ASB9 N-USBP9
AP16 N-USBP9
AU18 N-USBP10
AK18 N-USBP10
AP18 N-USBP11
AN18 N-USBP11
AW18 N-USBP12
AV18 N-USBP12
AP20 N-USBP13
AN20 N-USBP13

OC0B GP59
OC1B GP40
OC2B GP41
OC3B GP42
OC4B GP43
OC5B GP9
OC6B GP10
OC7B GP14
N-USBOC_F <18,21>
N-USBOC_R <18>
N_GPIO14
N-USBRBIAS NR47 22.6/4/1
AU20 W=4 mil out of PCH
S=15 mil out of PCH

N_GPIO14 NR130 8.2K/4
N-USBOC_F NBC82 0.1u/4/X7R/16V/K
N-USBOC_R NBC83 0.1u/4/X7R/16V/K

PCH

(F)

USB2.0/3.0
PORT要對應

VCC3

NR62 8.2K/4/X AK28
NR63 8.2K/4/X AT34

未上件

PCH CLK PD

<10> N_PCHCLK14 NR168 2K/8P4R/4
CK_DOTCLK
CK DOTCLK

PCHF

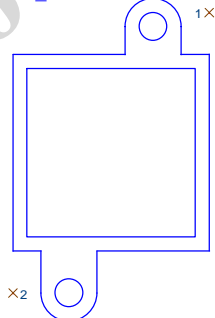
USB3 FDI LINK
USB3_RXN_0 FDI_RXN_0
USB3_RXP_0 FDI_RXP_0
USB3_TXN_0 FDI_TXN_0
USB3_TXP_0 FDI_TXP_0
USB3_RXN_1 FDI_CSXN_1
USB3_RXP_1 FDI_CSXN_1
USB3_TXN_1 FDI_INT_1
USB3_TXP_1 FDI_INT_1
USB3_RXN_4 K20
USB3_RXP_4 L20
USB3_TXN_4 D15
USB3_TXP_4 C15
TACH6_GP70
TACH7_GP71

DH82B85/S/[10HB1-030B85-20R]
FDI_TXP0_11 FDI_TXP0[0..1] <>
FDI_TXN0_11 FDI_TXN0[0..1] <>

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 H/S

SB_HEATSIN



PCH_HS
PCH_HS[12SP2-S04208-61R_12SP2-S04208-62R_12SP2-S04208-63R]

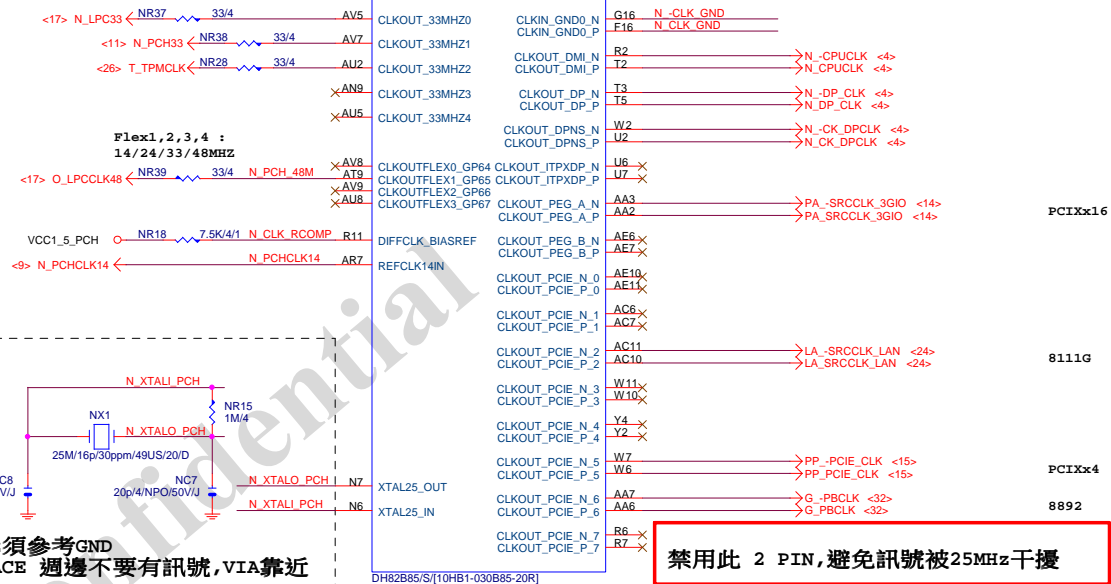
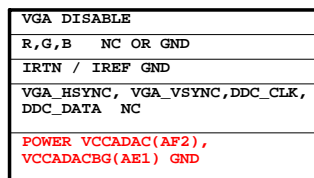
USB TABLE

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#	R_USB30
OC2#	USB30_LAN
OC3#	F_USB3
OC4#	F_USB2
OC5#	KB_MS_USB
OC6#	F_USB1
OC7#	Not Use

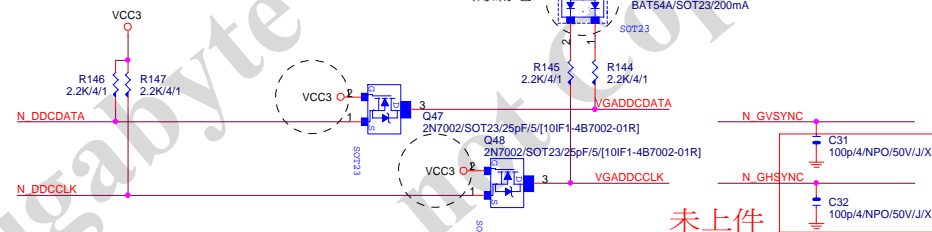
Gigabyte Technology

Title	PCH FDI,DMI,USB ,PCIE,NVRAM	Rev	1.0
Size	Document Number	GA-B85M-D3H-A WP	
Custom			
Date:	Thursday, April 02, 2015	Sheet	9 of 32

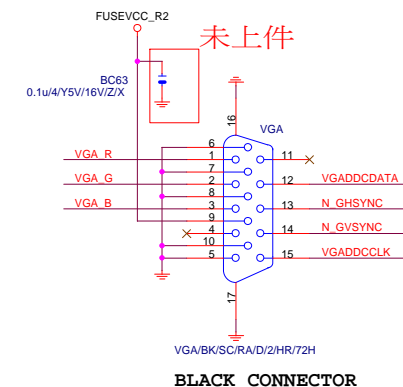


Differential Clock:18/4/6/4/18
Impedance=90 +- 15%

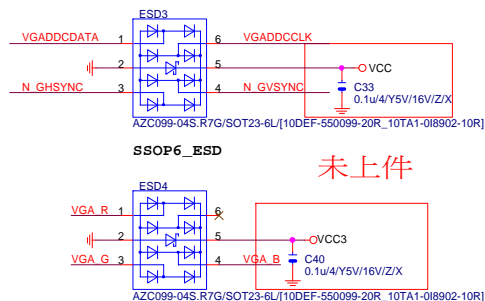
VGA DDC



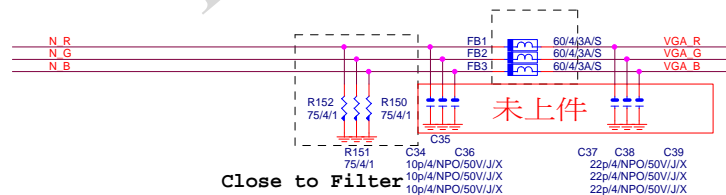
VGA CONNECTOR



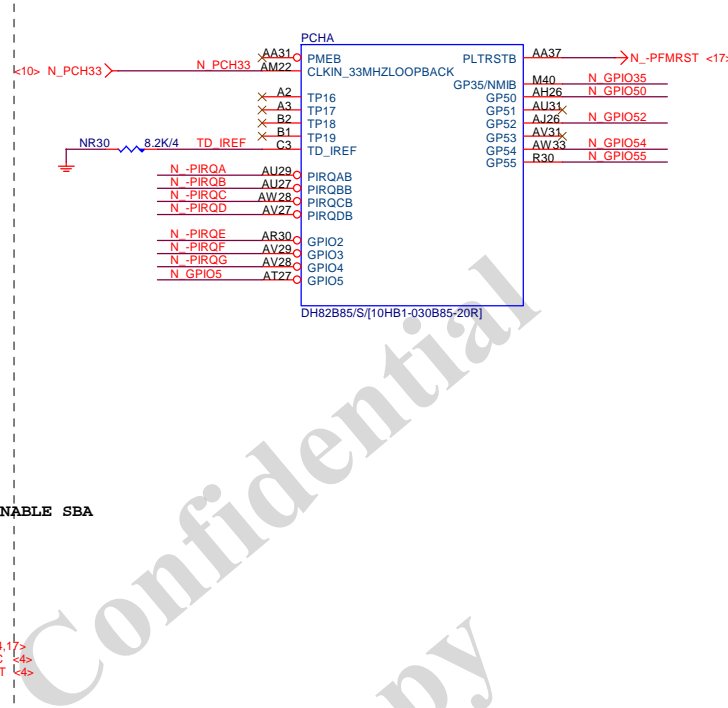
VGA ESD



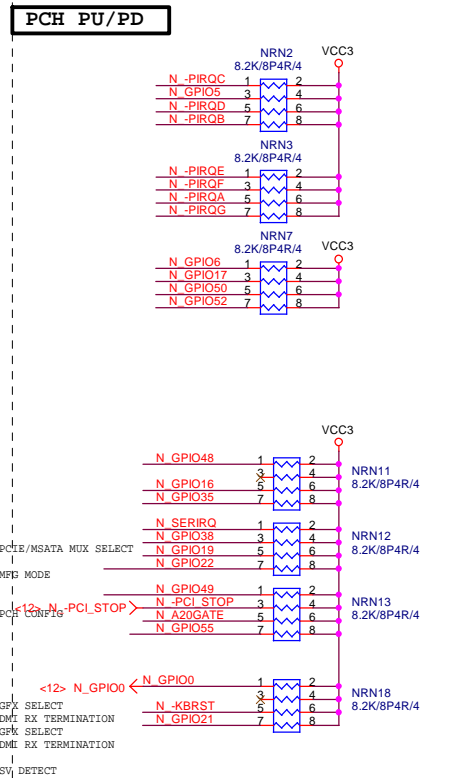
VGA DDC



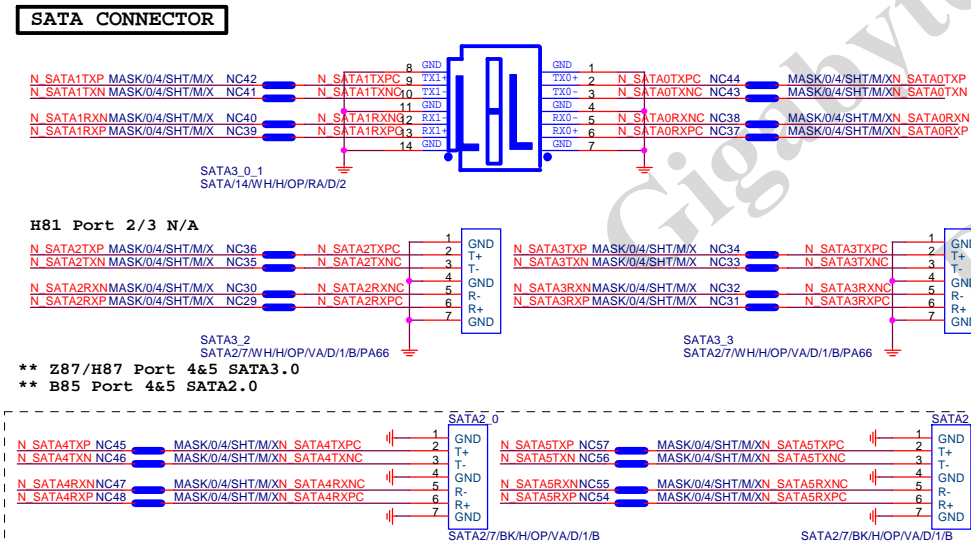
PCHC



PCH	PU/PD
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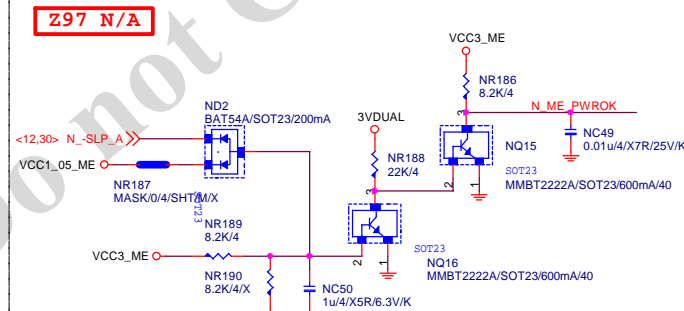


SATA CONNECTOR



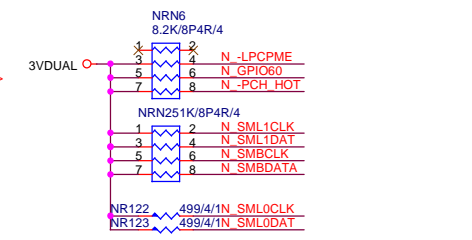
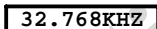
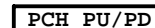
ME PWROK

Z97 N/A



GPI038 Ctrl



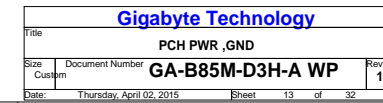
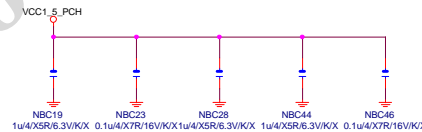


Gigabyte Technology

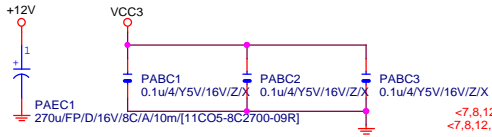
PCH GPIO , CTRL , AUDIO

Size	Document Number	Rev
Custom	GA-B85M-D3H-A WP	1

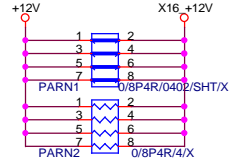
Date:	Thursday, April 02, 2015	Sheet	12	of	32
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PCIEX16 CAP



PCIEX16 PROTECT SHT

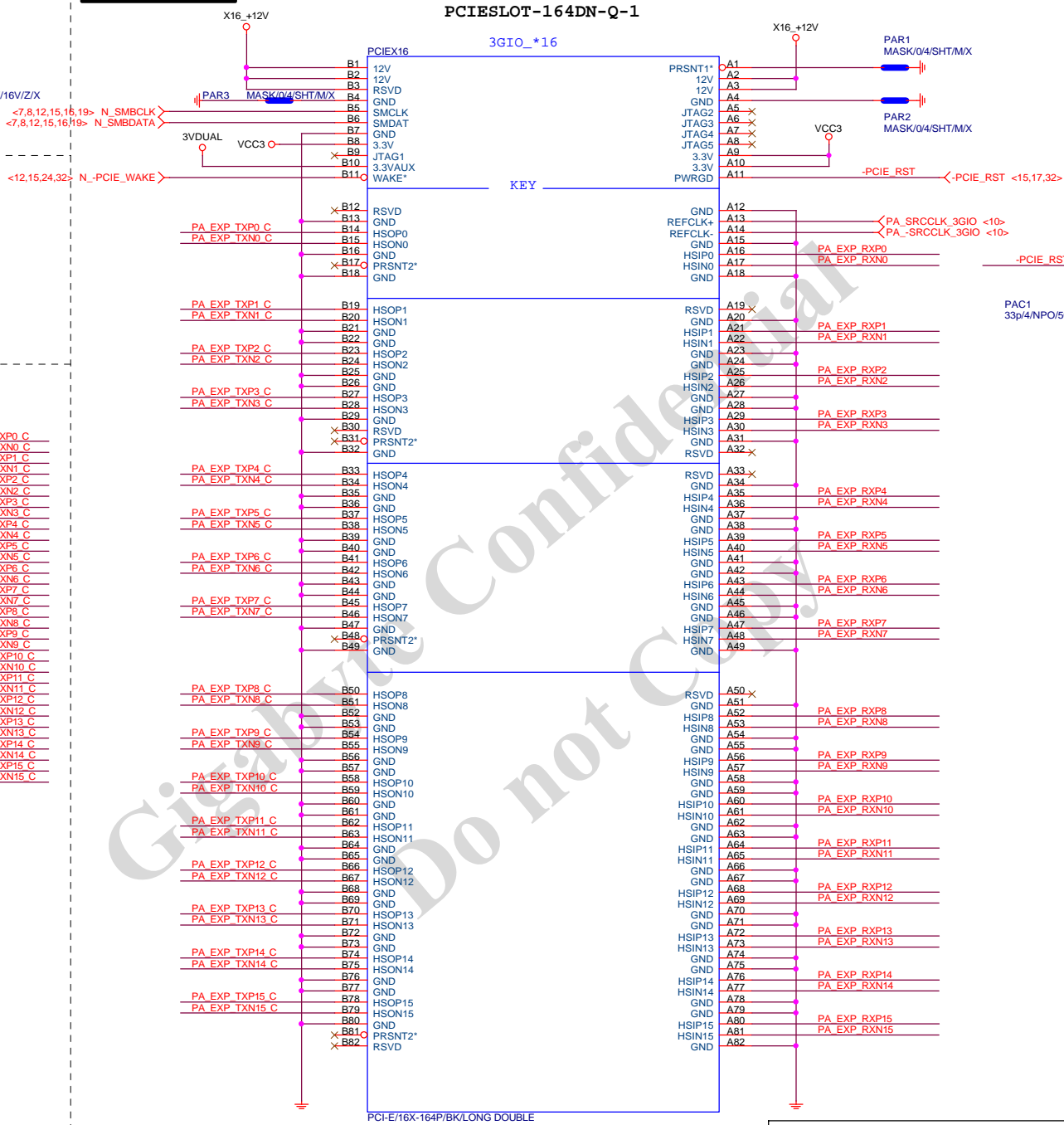


PCIEX16 AC CAP

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	PAC18	0.22u/4/X5R/6.3V/K	PA EXP TXP7 C
PA EXP TXN7	PAC19	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_RXP0[0..15] >>> PA_EXP_RXP0[0..15] <4>
PA_EXP_RXN0[0..15] >>> PA_EXP_RXN0[0..15] <4>
PA_EXP_TXP0[0..15] >>> PA_EXP_TXP0[0..15] <4>
PA_EXP_TXN0[0..15] >>> PA_EXP_TXN0[0..15] <4>

PCIEX16 SLOT



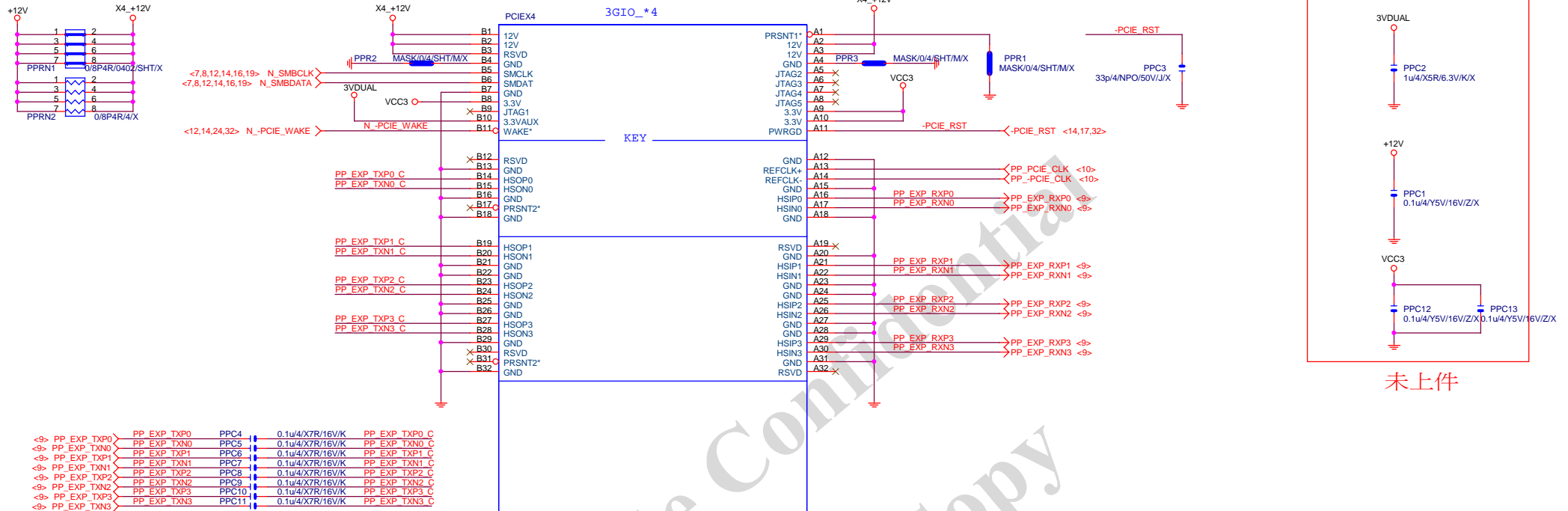
BLACK CONNECTOR

Gigabyte Technology

Title			PCI EXPRESS * 16		
Size			GA-B85M-D3H-A WP		
Custom			Rev 1.0		
Date:			Thursday, April 02, 2015		
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PCIESLOT-64D-98D-P

3GIO_*4

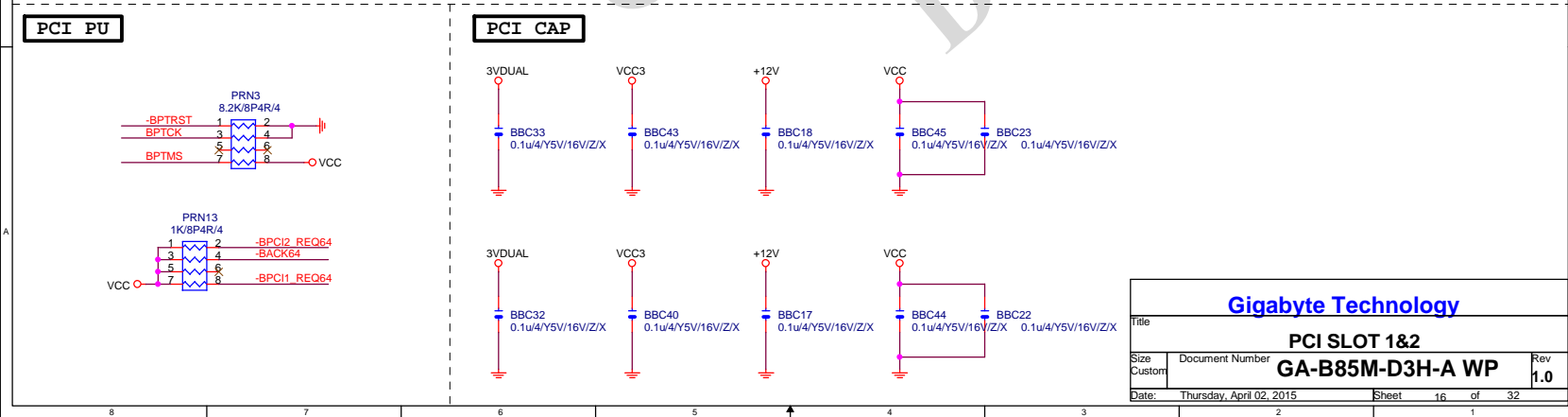


PCI-E/4X-65P/BK/LONG DOUBLE

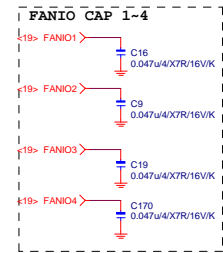
BLACK CONNECTOR

Gigabyte Technology

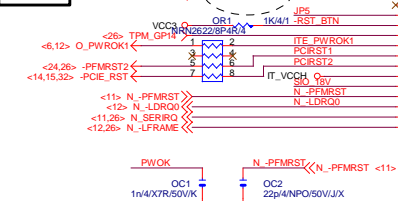
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Size			Document Number		
Custom			GA-B85M-D3H-A WP		
Date:			Thursday, April 02, 2015		
Sheet			15 of 32		
Rev			1.0		



SIO IT8620



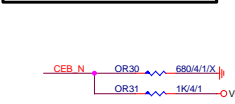
-PROCHOT



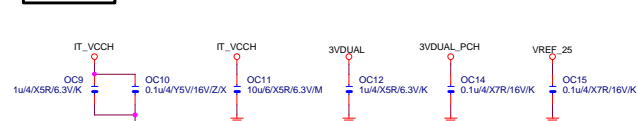
IT8620E GPIO問題匯整

PIN 50	GP26---
PIN 90/91	第一次接上POWER時會拉 LO DEFAULT 為 HDLED FUNCTION, GP93 BYPASS TO GP92 高溫時 GP92 會拉 Lo (YTB BUG)
PIN 108	GP40--- POWER ON 時會拉 LO
PIN 111/112	MOUSE 與 FANS FUNCTION 擇一使用, 不然會互相干擾

DUAL BIOS OPT STRAP

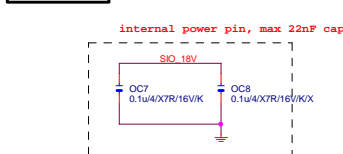


SIO CAP



Power leakage N/A

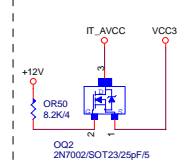
SIO_18V



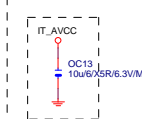
MB ID



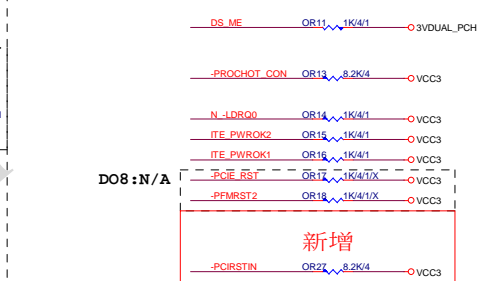
FIX MAX 插拔漏電



PWR_SHT

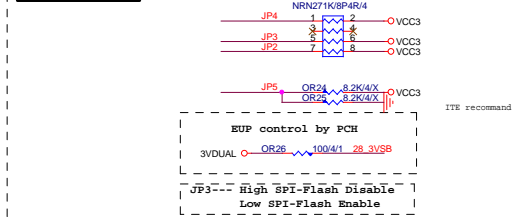


SIO_PU



DO8:N/A

SIO STRAP



J4	1	k8 power sequency function is Disable
J4	0	k8 power sequency function is Enable
J3	1	The default value of EC Index 63h/6Bh/73h is 80h.
J3	0	The default value of EC Index 63h/6Bh/73h is FFh
J5	1	The default value of EC Index 63h/6Bh/73h is 00h.
J5	0	The default value of EC Index 63h/6Bh/73h is 40h.

PEMC0
0.01u4/X7R/50V/K/K

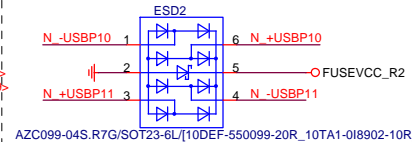
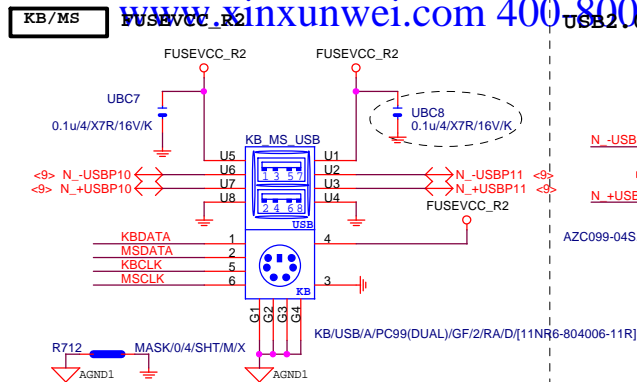
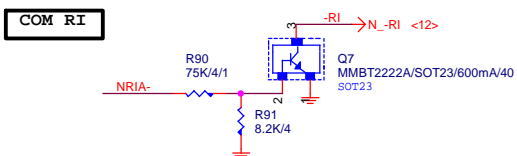
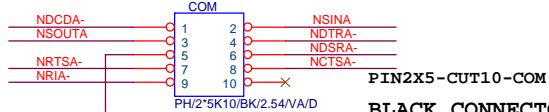
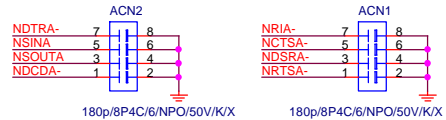
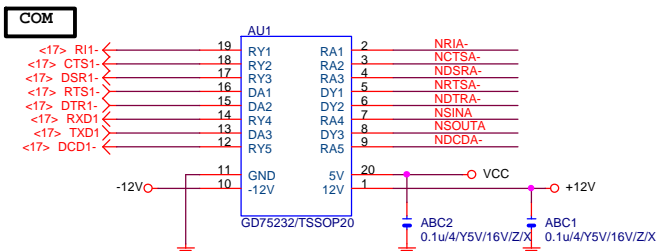
EMI REQUEST

PEMC5
1u4/X7R/50V/K/K

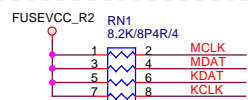
EMI REQUEST

Gigabyte Technology

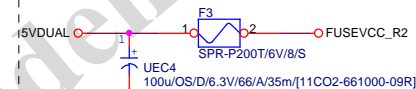
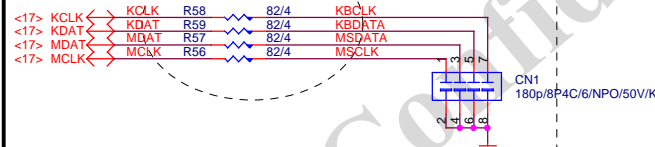
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Size	Document Number	GA-B85M-D3H-A WP	
C		Rev	1.0
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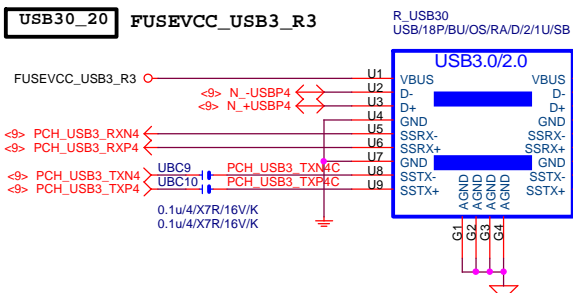
USB2.0 PWR



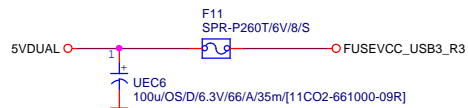
FOR鹽化短路



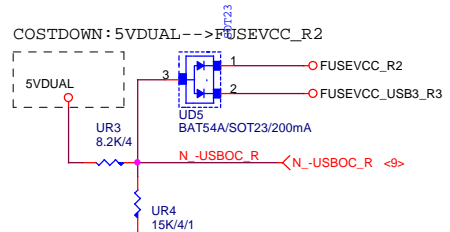
Close to connector



USB30_20 PWR

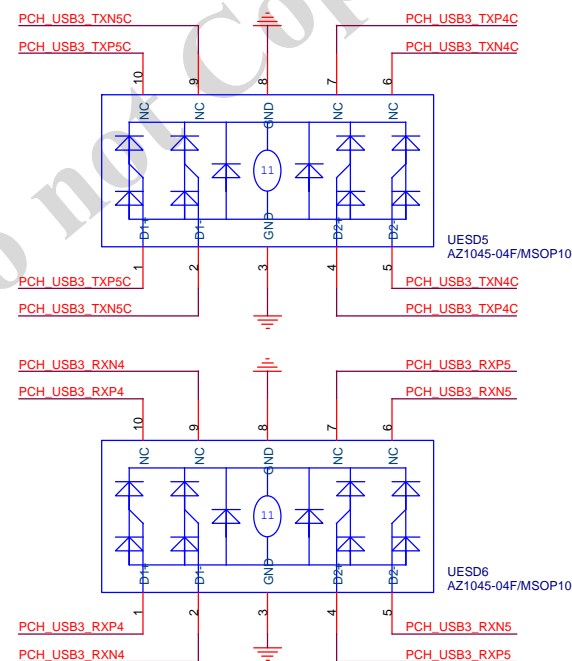


USB3.0 1Port - 1Fuse (3.5A)

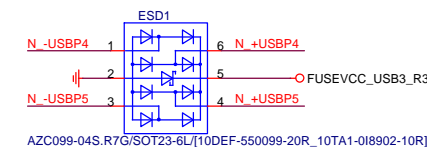


USB30_20 ESD PROTECT

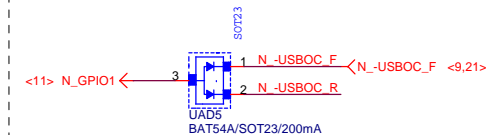
USB3.0 ESD



USB2.0 ESD



USB POWER PROTECT



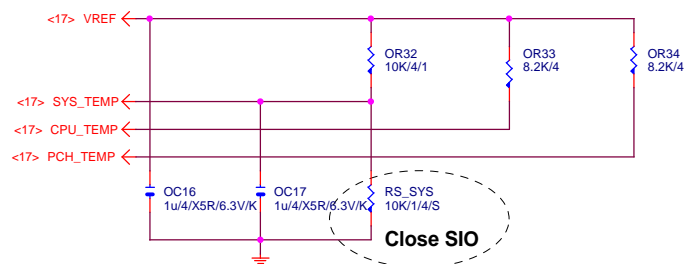
Gigabyte Technology

COM,-RI,KB_USB,USB_ESATA,-PROCHOT

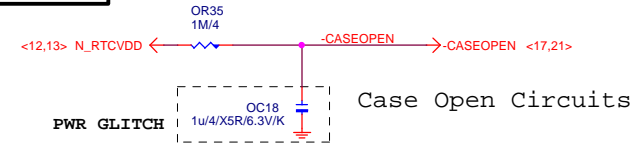
Size	Document Number	GA-B85M-D3H-A WP
Custom		

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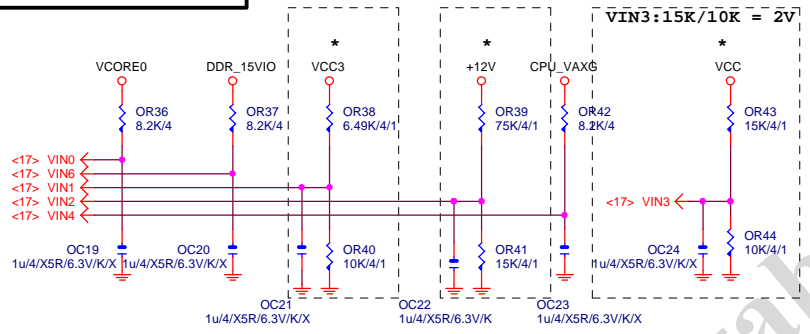
TEMP H/W MONITOR



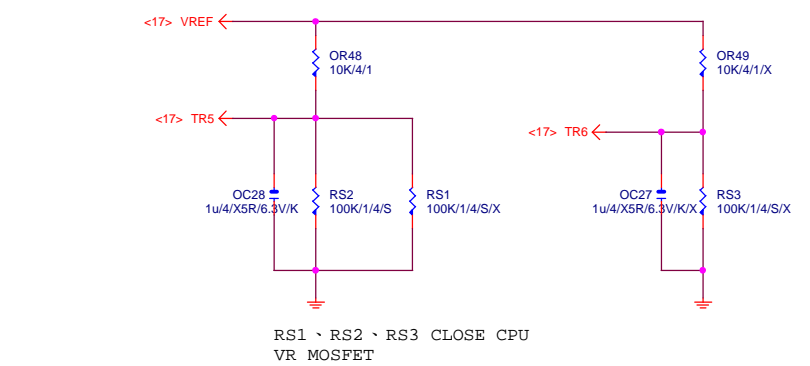
CASE OPEN



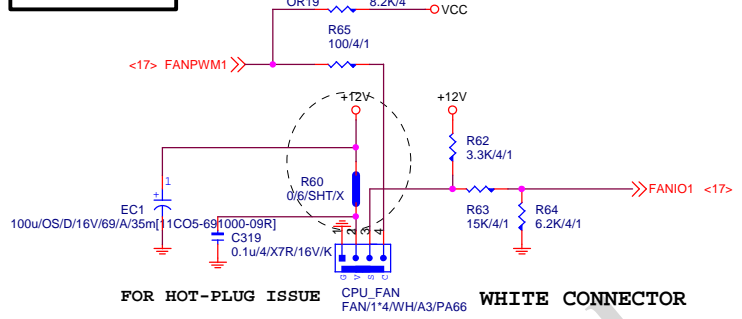
VOLTAGE-- H/W MONITOR



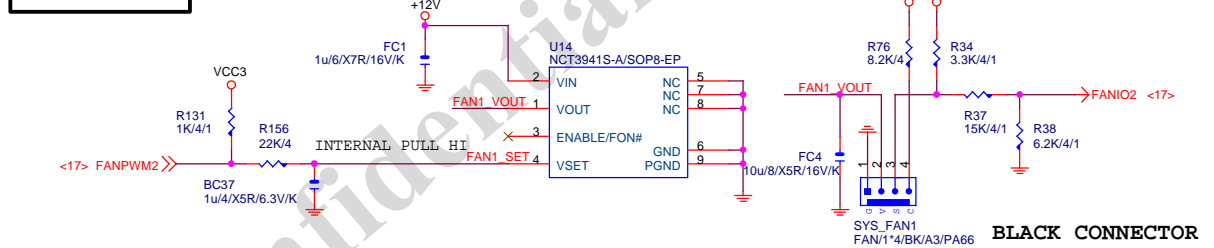
VCORE0	VCC3	+12V	VCC	CPU_VAXG	VCC	DDR_15V
VIN0	VIN1	VIN2	VIN3	VIN4	VIN5	VIN6



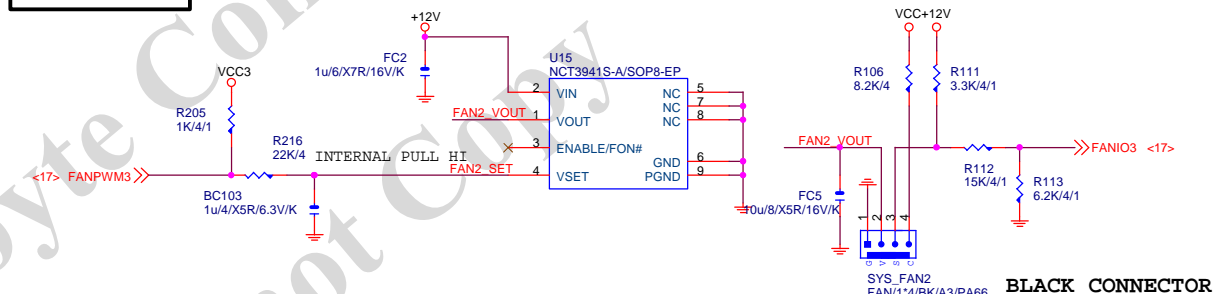
CPU SMART FAN



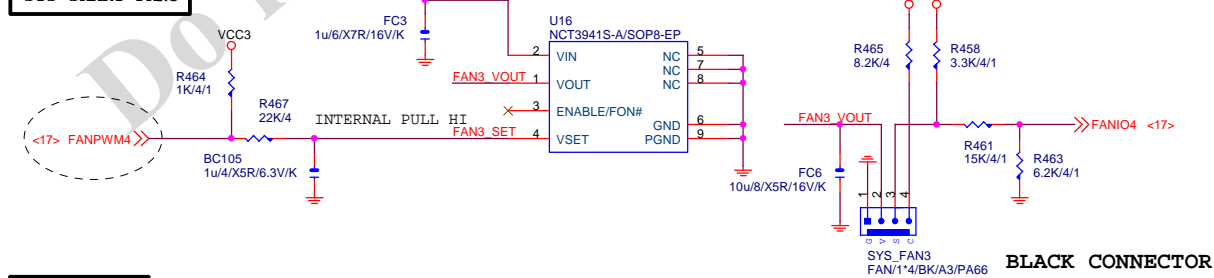
SYS SMART FAN1



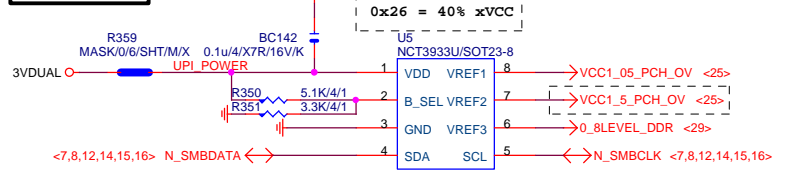
SYS SMART FAN2



SYS SMART FAN3

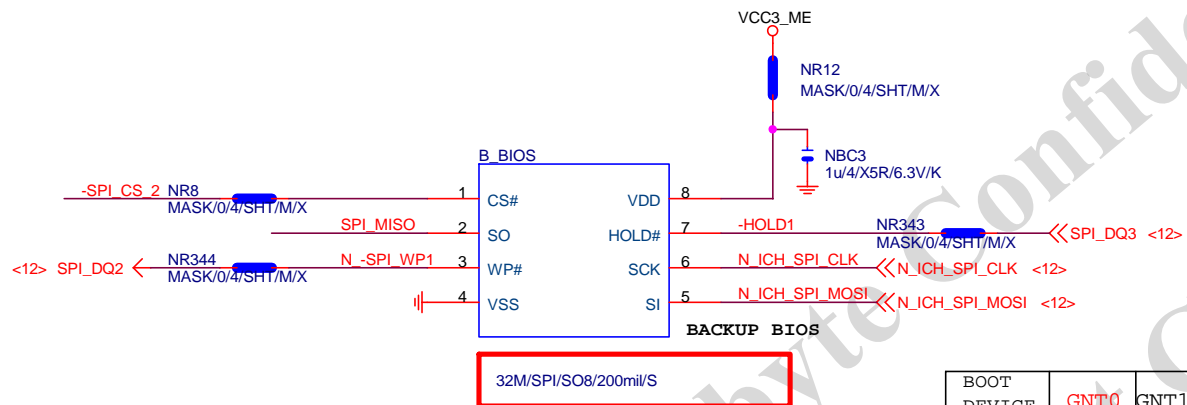
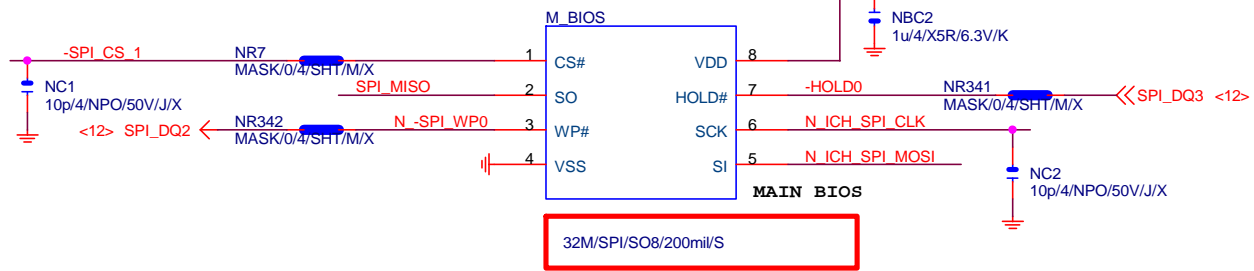


OV NCT3933



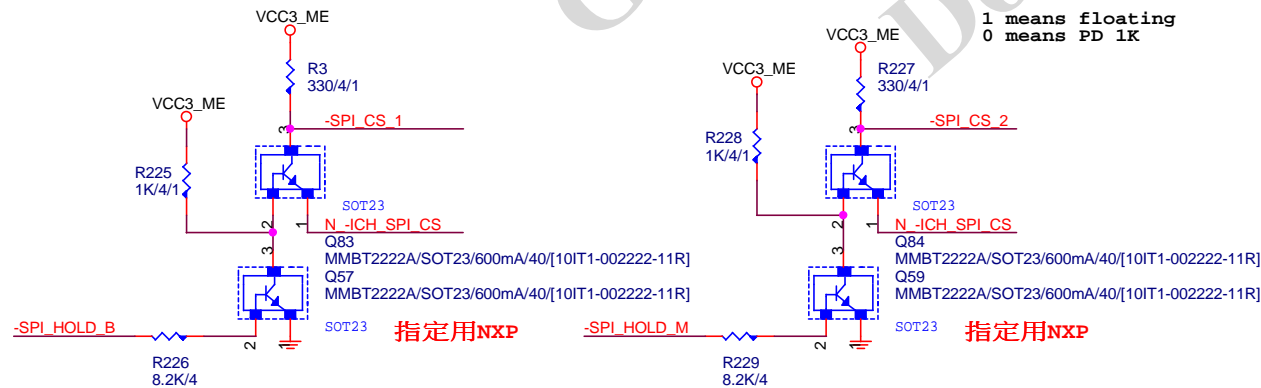
BIOS DEBUG PORT

BIOS_PH R1.0 移除

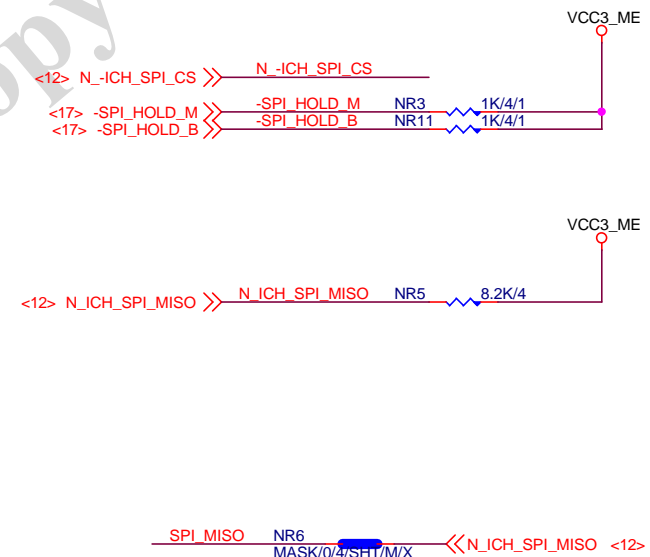


BOOT DEVICE	GNT0	GNT1
LPC	0	0
PCI	0	1
NAND	1	0
SPI	1	1

1 means floating
0 means PD 1K



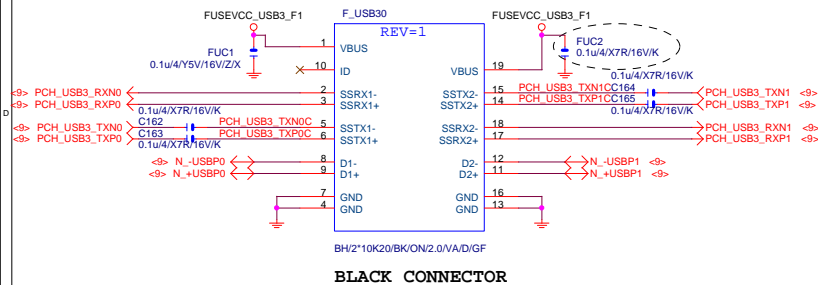
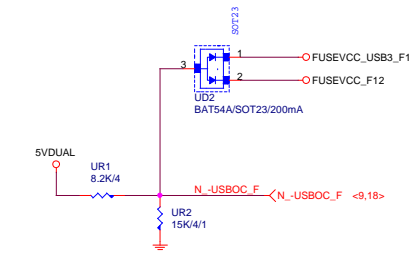
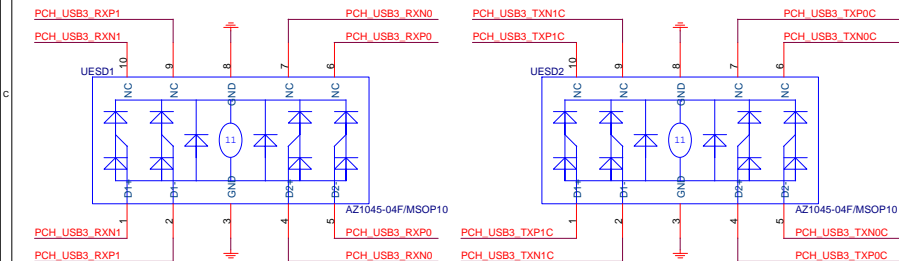
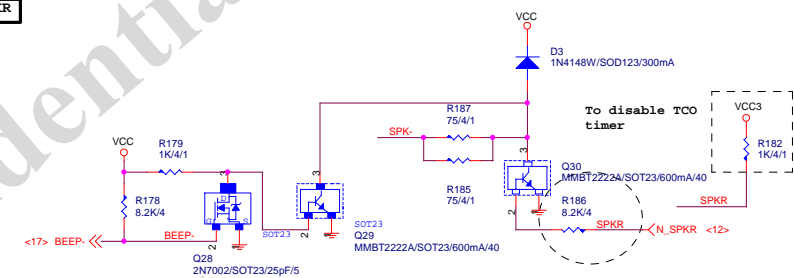
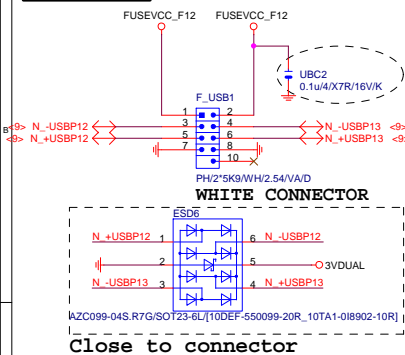
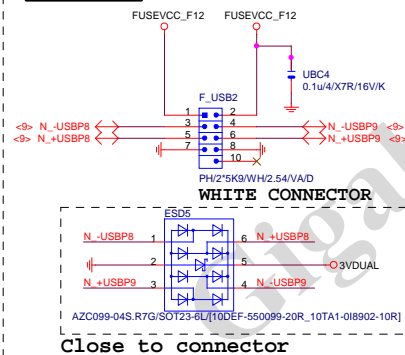
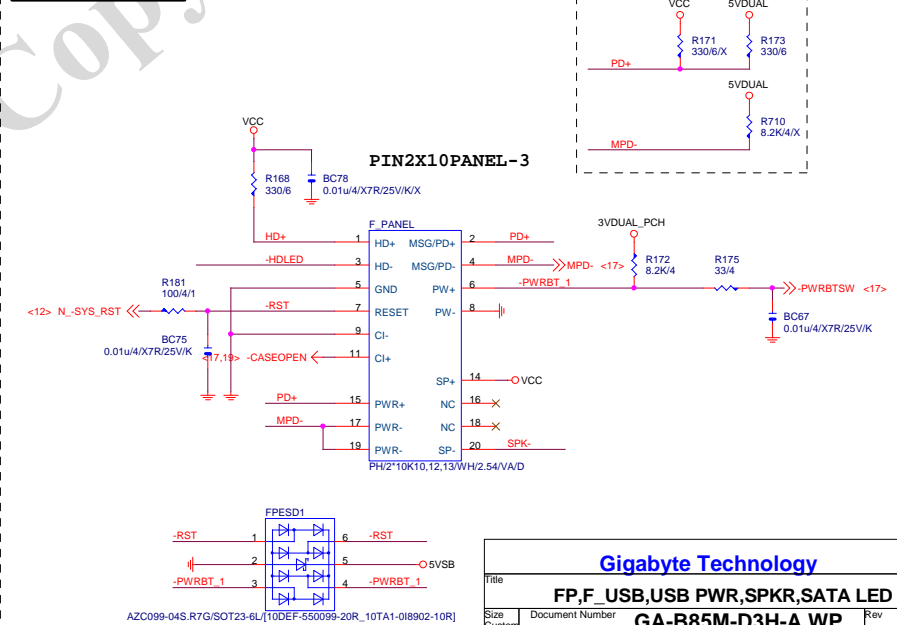
MOSI For DMI RX Termination Voltage



Gigabyte Technology

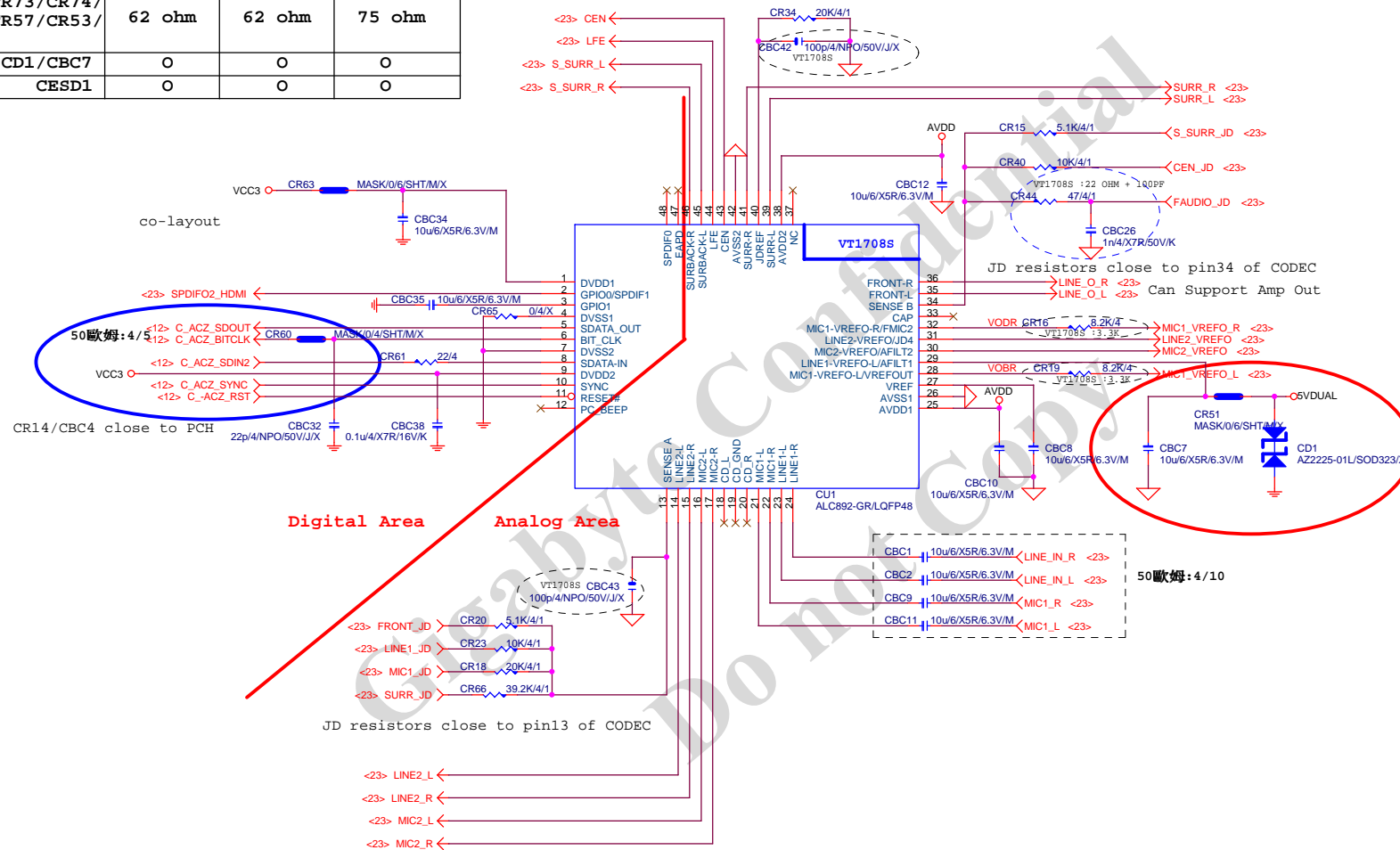
DUAL BIOS

Size Custom	Document Number	GA-B85M-D3H-A WP	Rev 1.0
Date:	Thursday, April 02, 2015	Sheet 20 of 32	

F_USB30 FUSEVCC_USB3_F1**-USB0C_F****F_USB30 ESD PROTECT****SPKR****FRONT USB1 FUSEVCC_F12****FRONT USB2 FUSEVCC_F4****INTEL FRONT PANEL**

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

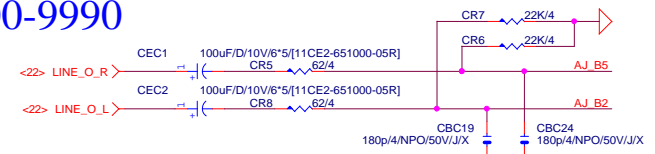
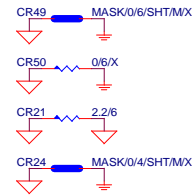
	ALC892	ALC887-VD2	VT1708S-CE
CR44/CBC26	47ohm+1nF	47ohm+1nF	22ohm+100P
CBC42/CBC43	X	X	100P/4
CR6/CR7/CR58/CR54/ CR67/CR68/CR69/CR70	22K/4	22K/4	10K/4/1
CR5/CR8/CR1/CR14/ CR17/CR22/CR73/CR74/ CR13/CR11/CR57/CR53/ CR75/CR76	62 ohm	62 ohm	75 ohm
CR51/CD1/CBC7	O	O	O
CESD1	O	O	O



Gigabyte Technology

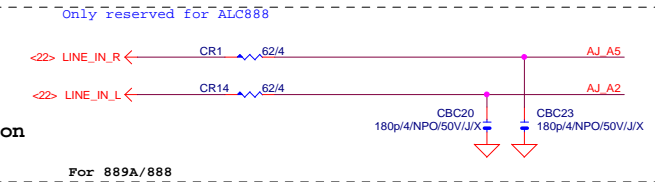
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Size	Document Number	GA-B85M-D3H-A WP	Rev 1.0
Custom			
Date:	Thursday, April 02, 2015	Sheet 22	of 32

LINE-OUT

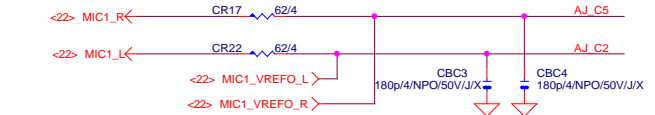


LINE-IN

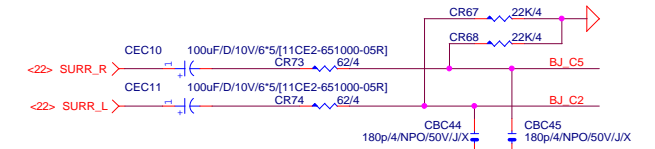
Verify MIC function
in LINE-in



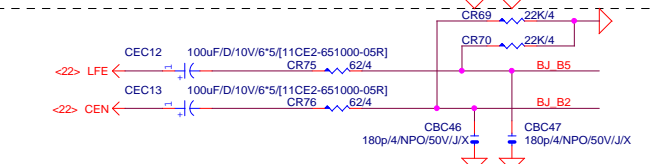
MIC-IN



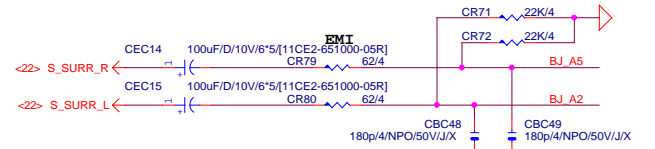
SURROUND



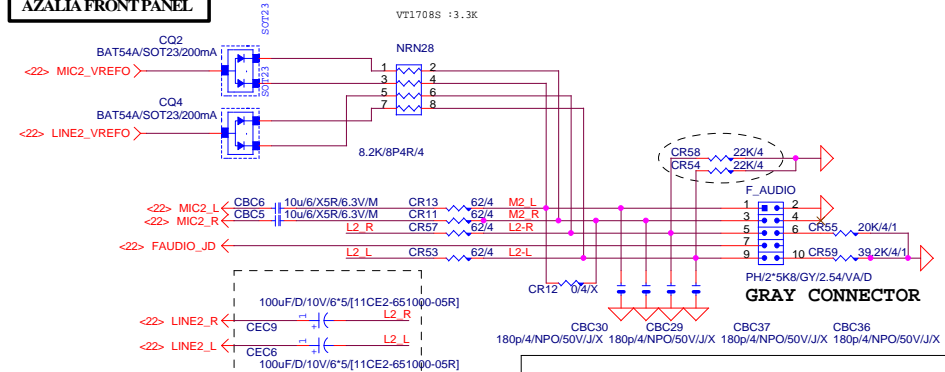
CEN/LFE



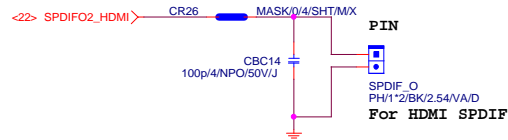
SURRBACK



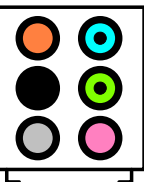
AZALIA FRONT PANEL



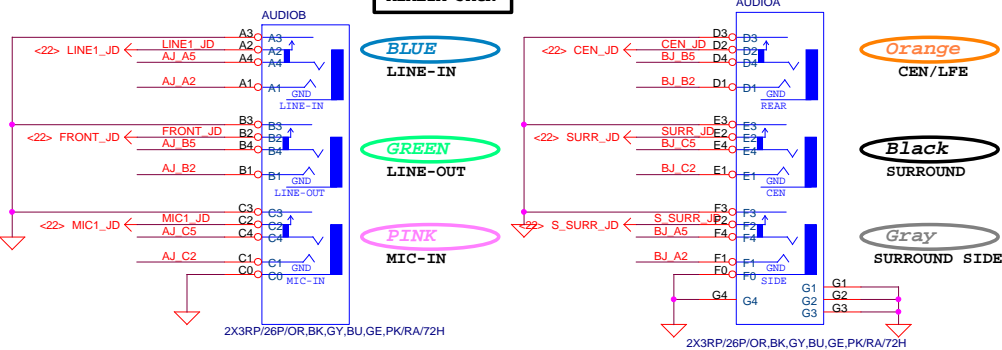
SPDIF_OUT



AZALIA JACK



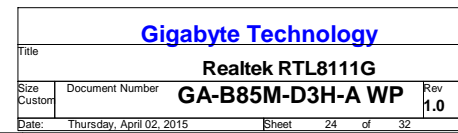
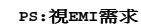
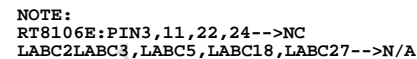
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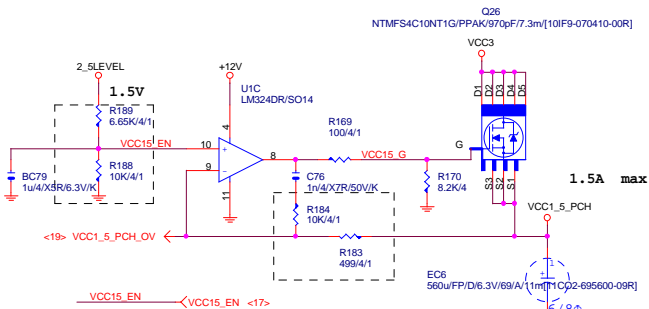
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AUDIO JACK

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VCC1_5_PCH

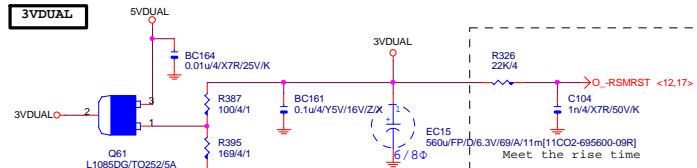


2_5LEVEL

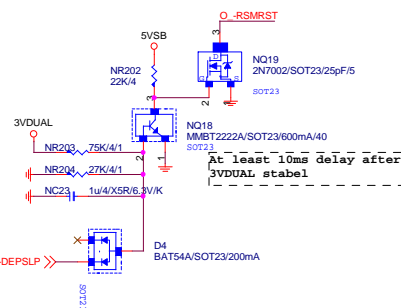
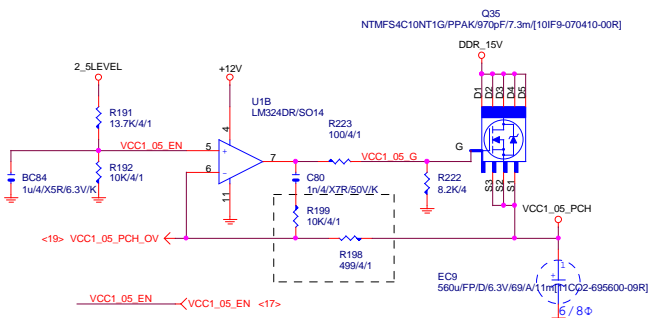
FOOT MASK
MASK



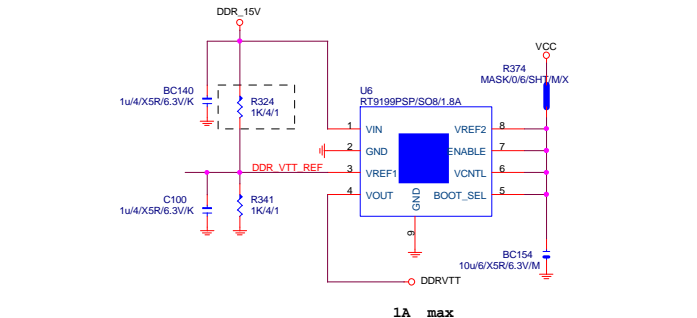
3VDUAL



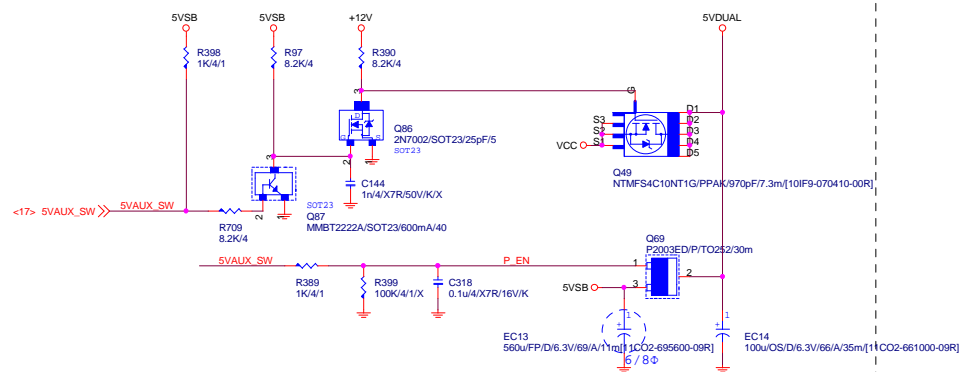
VCC1_05_PCH



DDRVT



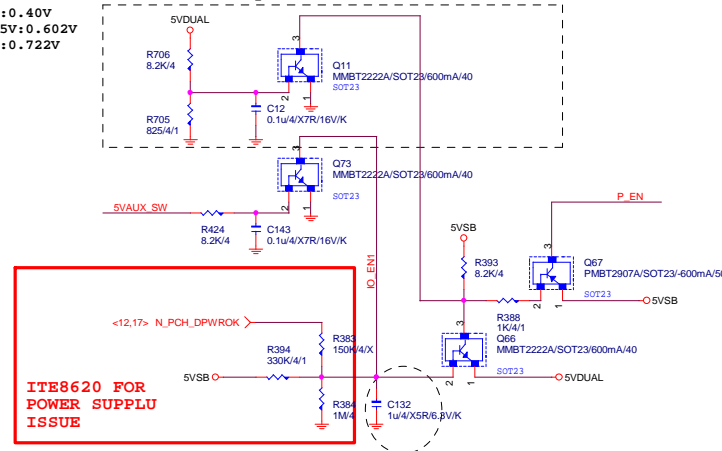
5VDUAL



5VDUAL SHORT PROTECT

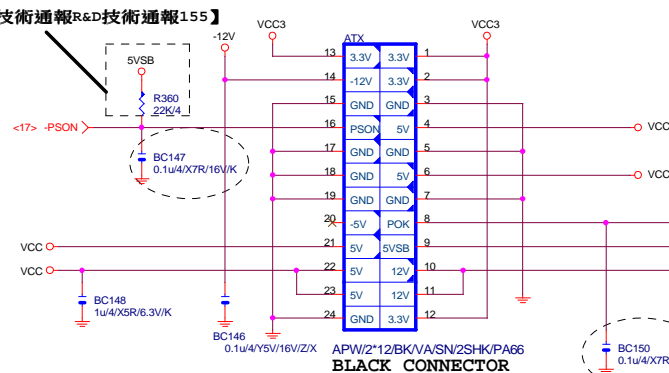
5V: 0.40V
7.5V: 0.602V
9V: 0.722V

5VSB OVP: 7.5V protection



ATXX24 POWER CONNECTOR

【技術通報R&D技術通報155】

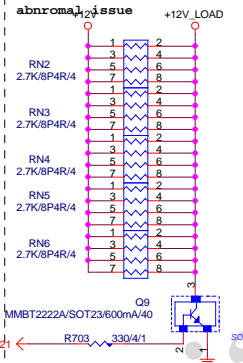


www.xinxunwei.com 400-800-0909

ATXX4 POWER CONNECTOR

【技術通報R&D技術通報153】

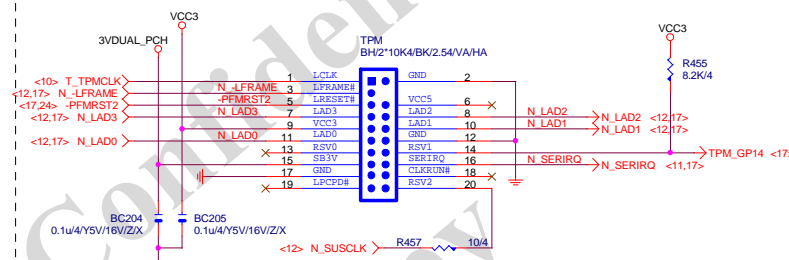
To fix 12V light load abnormal issue



ATX 12V 2X4
APW/2*4/BK/OC/P4.2/VA/SN/OH:Location ATX_12V_2X4

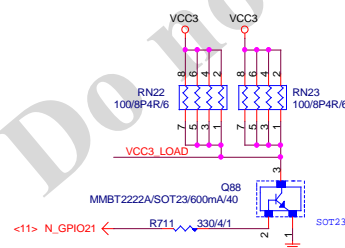
BLACK CONNECTOR

TPM



To prevent the 5VSB under loading when boot

FIX PWR MINMUN LOAD



PWOK PATCH

【技術通報R&D技術通報154】

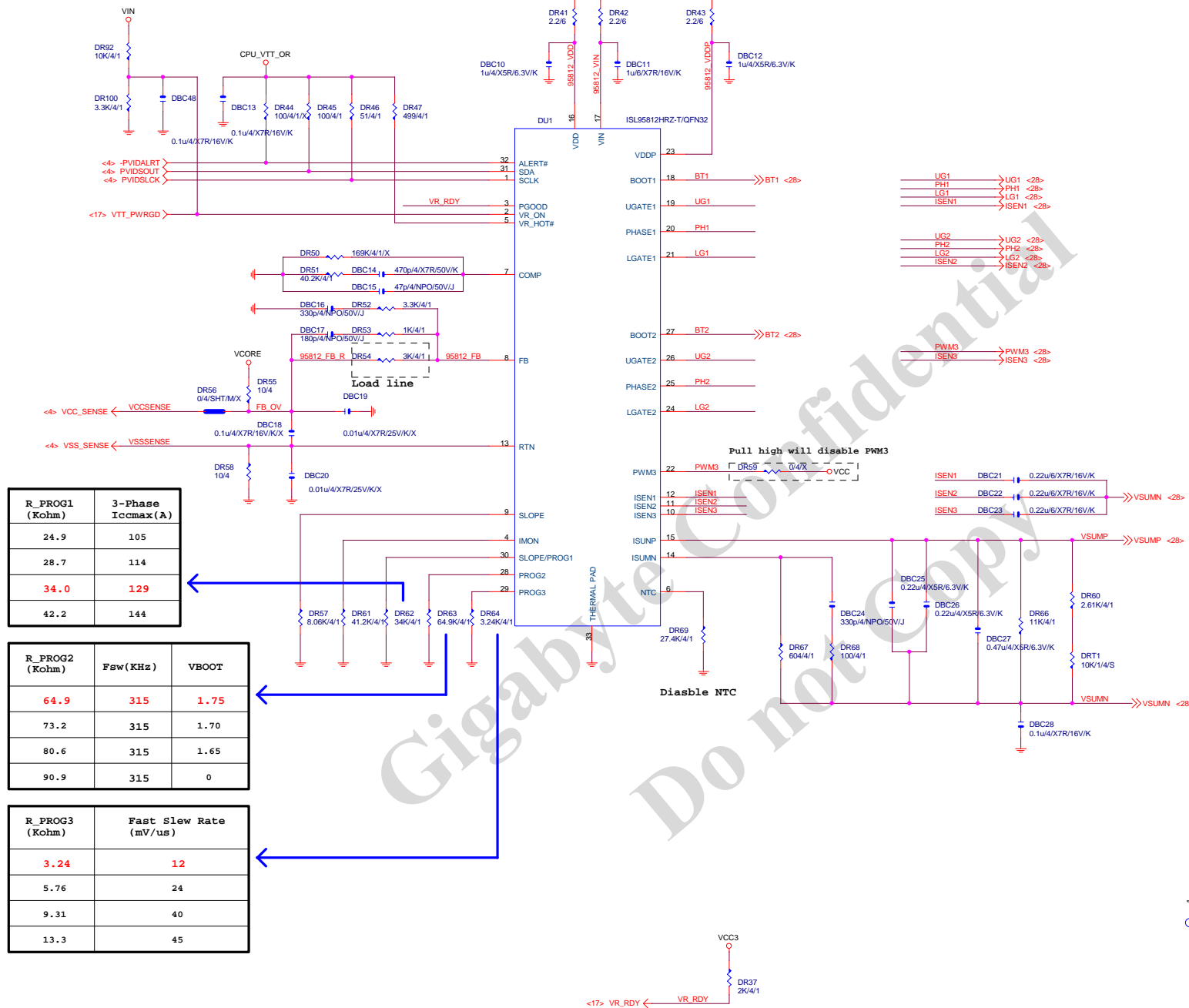
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ATX CONNECTOR

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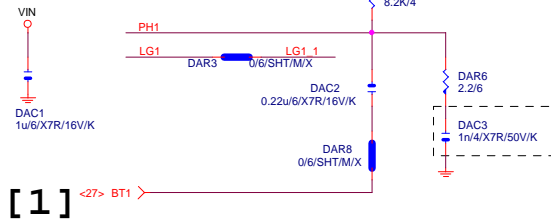


MOS HS[12SP2-S08924-11R_12SP2-S08924-12R_12SP2-S08924-13R]

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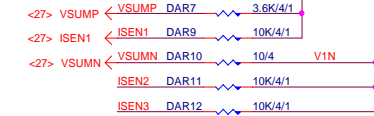
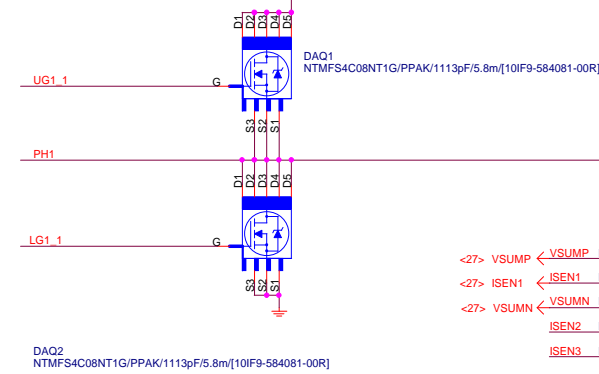
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PHASE 1

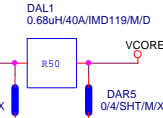


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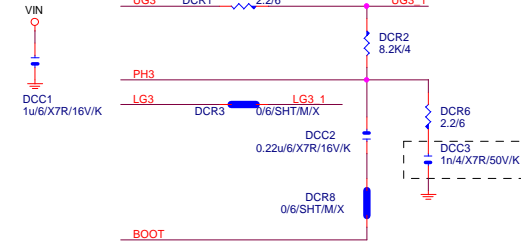
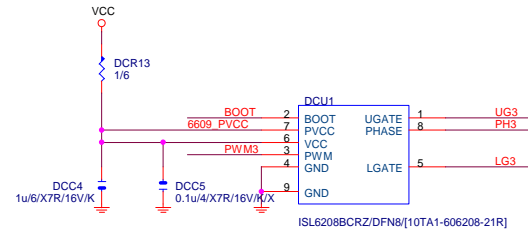
<27> BT1



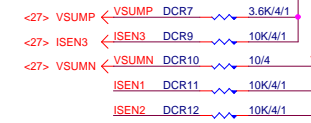
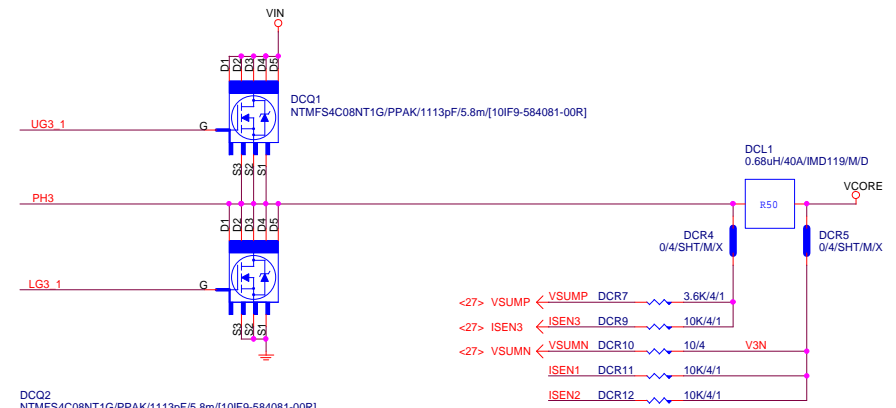
Close to PWM



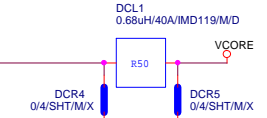
PHASE 3



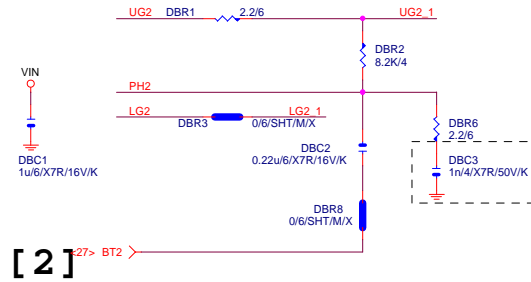
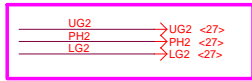
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Close to PWM

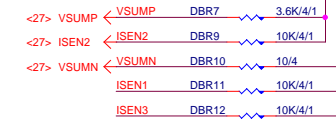
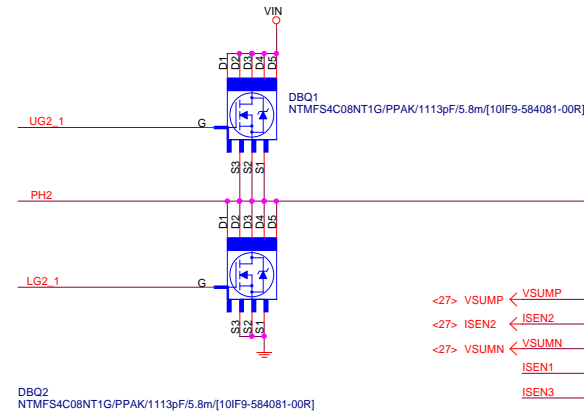


PHASE 2

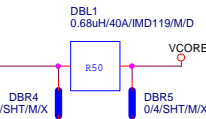


[2]

<27> BT2



Close to PWM




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

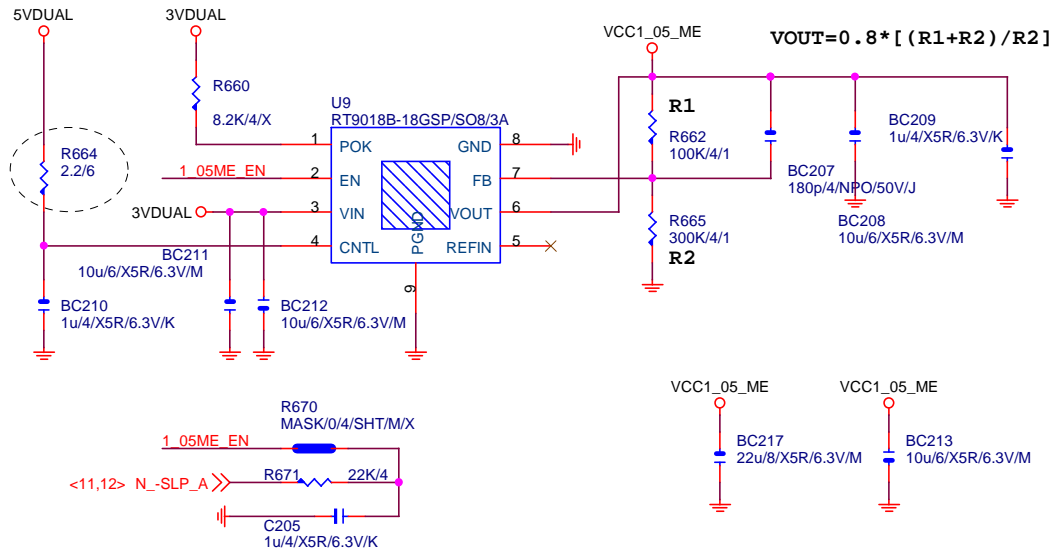
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DDR POWER			
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VCC1_05_ME FOOT MASK

Z97 N/A

【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



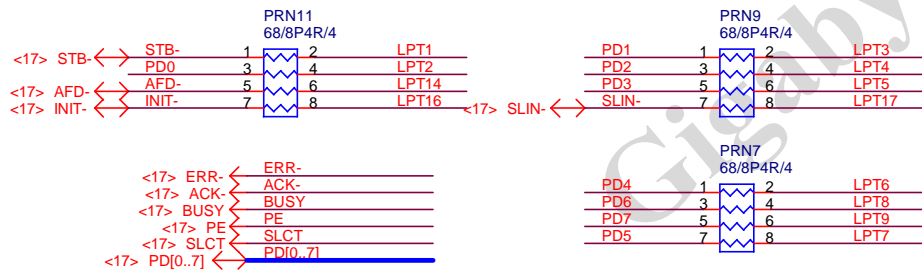
Second source

EM5103 - 10GL2-305103-01R

NCT3730S -

10GL2-303730-01R

LPT PORT

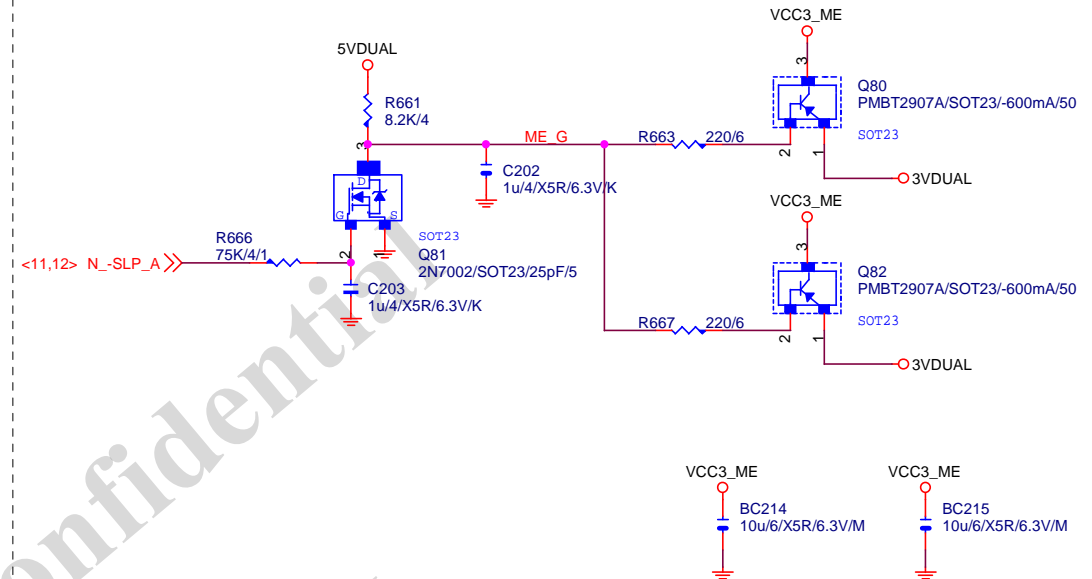


【技術通報R&D技術通報151】

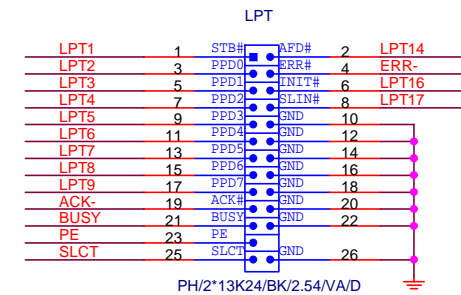
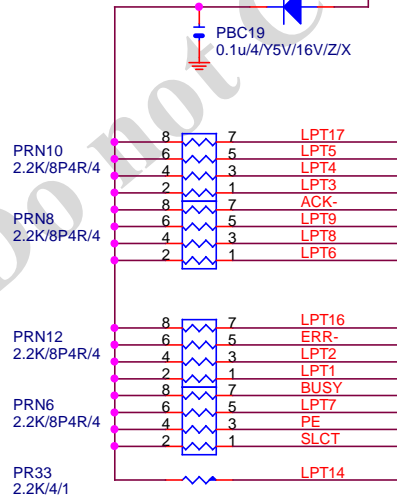
33ohm Change to 68ohm

VCC3_ME FOOT MASK

Z97 N/A



CD4148WP/1206/300mA



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LPT

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