

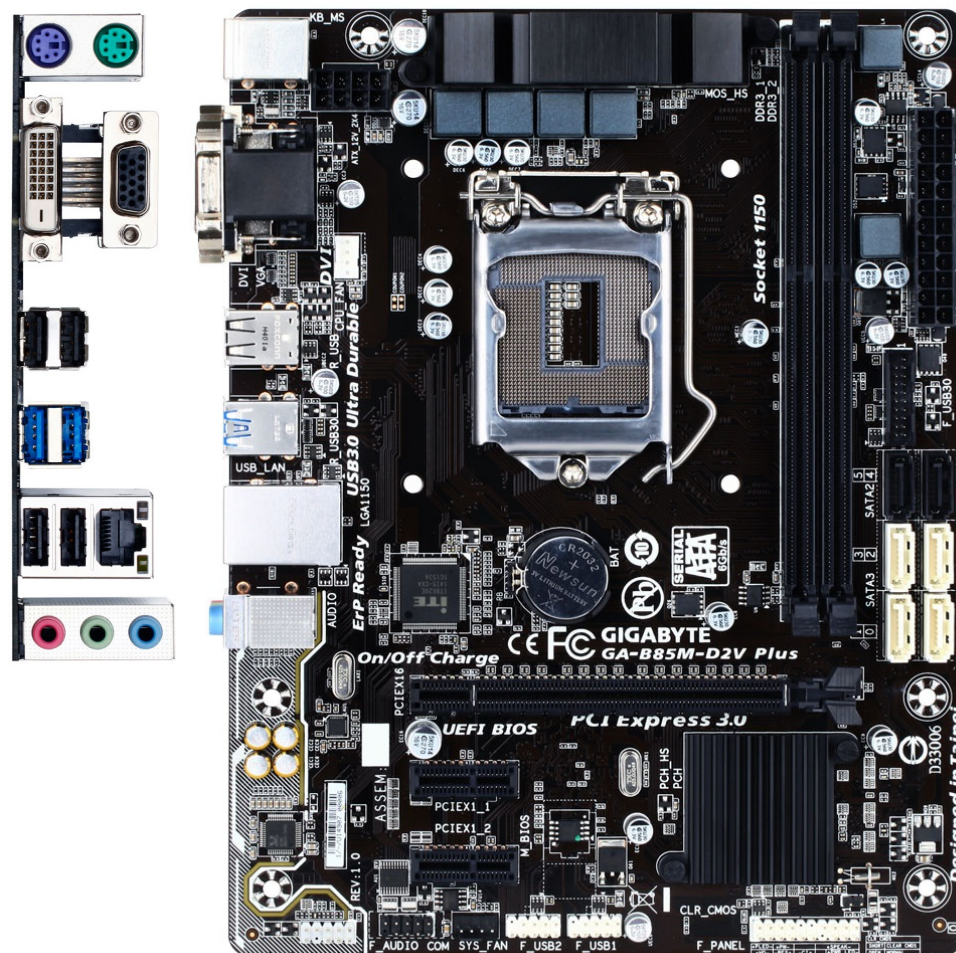
# Model Name: GA-B85M-D2V PLUS Revision 1.0

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 ( NA )
17	ITE 8620 LPC IO
18	COM,KB_MS_USB,USB30_20
19	HWM,FAN CTRL,OV
20	DUAL BIOS
21	FP,FUSB,SPK,SATALED
22	Realtek ALC887-VD2
23	REAR AUDIO JACK
24	REALTEK RTL8111F
25	DISCRETE POWER
26	ATX
27	VCORE ISL95812_1

SHEET TITLE

28	VCORE ISL95812_2
29	RT8120_DDR POWER
30	LPT
31	DVI
32	IT8892E ( NA )
33	USB3 VL805 ( NA )



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Cover Sheet

Title	Document Number	GA-B85M-D2V PLUS	Rev	1.0
Size	Custom			
Date:	Thursday, September 25, 2014	Sheet	1	of 33

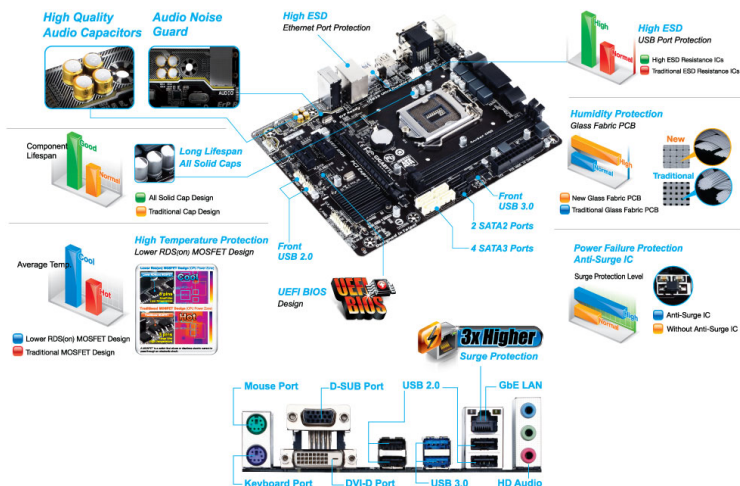
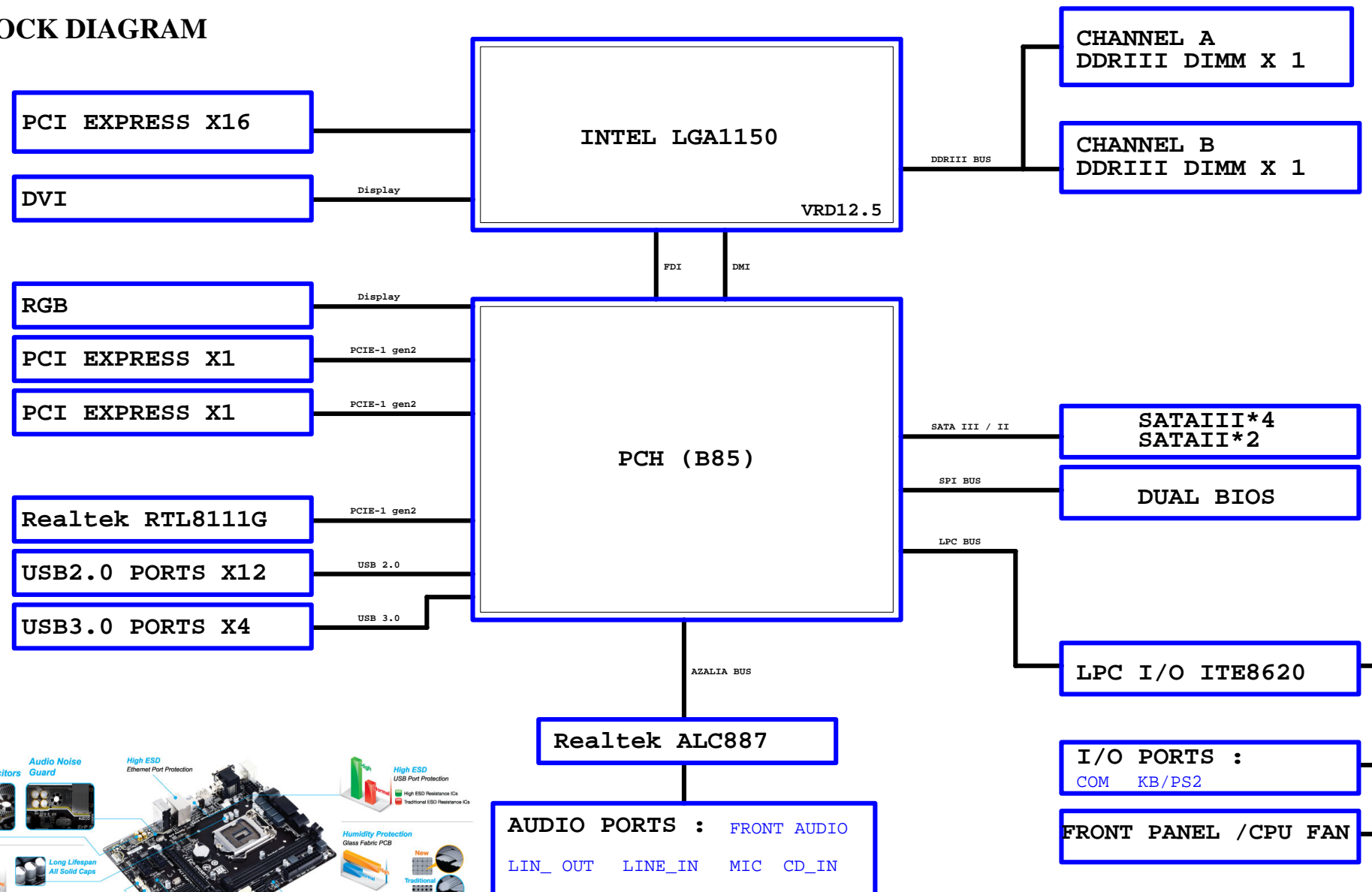
### Component value change history

[illegible][illegible]

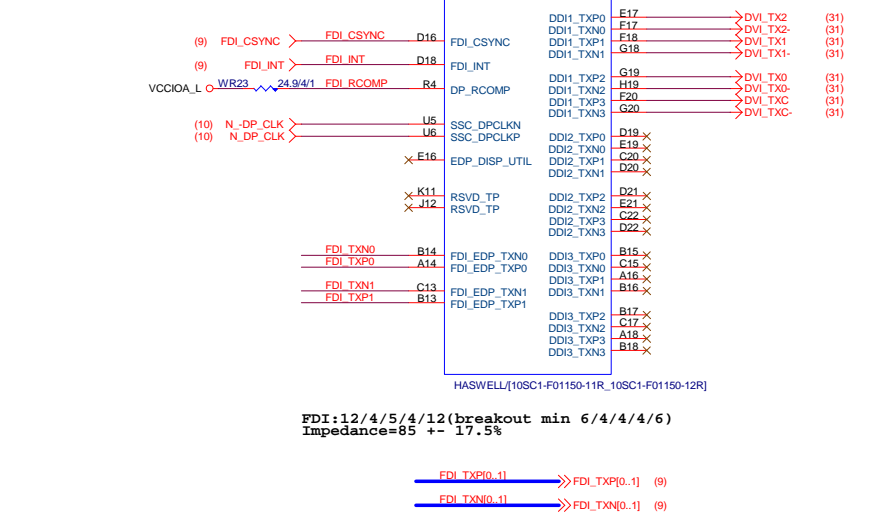
S:單文  
4:四層板  
V:第二層是VCC  
N:咖啡色  
B:製程

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Title				
BOM & PCB MODIFY HISTORY				
Size Custom	Document Number	GA-B85M-D2V PLUS		Rev 1.0
Date:	Thursday, September 25, 2014	Sheet	2 of 33	

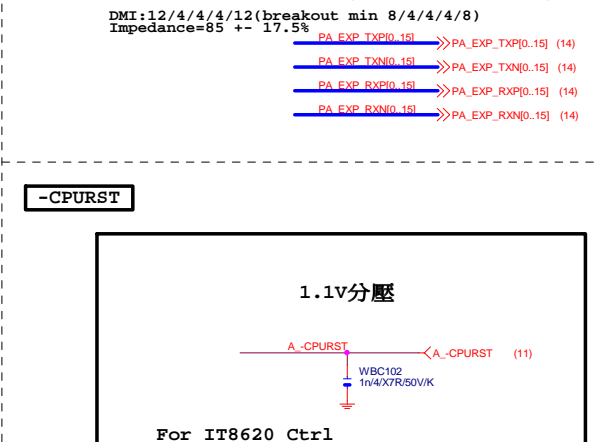
## BLOCK DIAGRAM



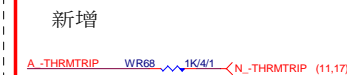
**LGA1150 (D)**



**-CPURST**



SM REF
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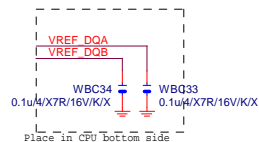
# LGA1150 (A)

LGA1150A		DDR0_MA0	DDR0_DQ0	AD38	MDA0
MAAA0	AU13	DDR0_MA1	DDR0_DQ1	AD39	MDA1
MAAA1	AV16	DDR0_MA2	DDR0_DQ2	AF38	MDA2
MAAA2	AU16	DDR0_MA3	DDR0_DQ3	AF39	MDA3
MAAA3	AW17	DDR0_MA4	DDR0_DQ4	AD37	MDA4
MAAA4	AU18	DDR0_MA5	DDR0_DQ5	AD40	MDA5
MAAA5	AW18	DDR0_MA6	DDR0_DQ6	AE37	MDA6
MAAA6	AV17	DDR0_MA7	DDR0_DQ7	AF40	MDA7
MAAA7	AT18	DDR0_MA8	DDR0_DQ8	AH40	MDA9
MAAA8	AU18	DDR0_MA9	DDR0_DQ9	AH39	MDA10
MAAA9	AT19	DDR0_MA10	DDR0_DQ10	AK38	MDA11
MAAA10	AW11	DDR0_MA11	DDR0_DQ11	AK39	MDA12
MAAA11	AV19	DDR0_MA12	DDR0_DQ12	AH37	MDA12
MAAA12	AU19	DDR0_MA13	DDR0_DQ13	AH38	MDA14
MAAA13	AT20	DDR0_MA14	DDR0_DQ14	AK40	MDA15
MAAA14	AT20	DDR0_MA15	DDR0_DQ15	AK40	MDA17
MAAA15	AU21	DDR0_ODT0	DDR0_ODT0	AM39	MDA21
MODT_A0	AW10	DDR0_ODT1	DDR0_ODT1	AP38	MDA18
MODT_A1	AY8	DDR0_ODT2	DDR0_ODT2	AP39	MDA19
	AW9	DDR0_ODT3	DDR0_ODT3	AM37	MDA20
	AW8			AM38	MDA16
	AW33	DDR0_ECC0	DDR0_ECC0	AP37	MDA22
	AW33	DDR0_ECC1	DDR0_ECC1	AP40	MDA23
	AU31	DDR0_ECC2	DDR0_ECC2	AV37	MDA25
	AW31	DDR0_ECC3	DDR0_ECC3	AW37	MDA29
	AU33	DDR0_ECC4	DDR0_ECC4	AU35	MDA26
	AT33	DDR0_ECC5	DDR0_ECC5	AV35	MDA27
	AW31	DDR0_ECC6	DDR0_ECC6	T137	MDA28
	AW31	DDR0_ECC7	DDR0_ECC7	AU37	MDA24
		DDR0_BA0	DDR0_DQ31	AT35	MDA30
(7)	SBA00 <-> SBAA0	DDR0_BA1	DDR0_DQ32	AW35	MDA31
(7)	SBA01 <-> SBAA1	DDR0_BA2	DDR0_DQ33	AY6	MDA33
(7)	SBA02 <-> SBAA2	DDR0_BA3	DDR0_DQ34	AU6	MDA37
		DDR0_BA4	DDR0_DQ35	AV4	MDA34
(7)	CKEA0 <-> CKEA0	DDR0_CKE0	DDR0_DQ36	AU4	MDA35
(7)	CKEA1 <-> CKEA1	DDR0_CKE1	DDR0_DQ37	AW6	MDA32
		DDR0_CKE2	DDR0_DQ38	AW4	MDA38
		DDR0_CKE3	DDR0_DQ39	AY4	MDA39
(7)	-CSA0 <-> -CSA0	DDR0_CS_N0	DDR0_DQ40	AR1	MDA41
(7)	-CSA1 <-> -CSA1	DDR0_CS_N1	DDR0_DQ41	AR4	MDA45
		DDR0_CS_N2	DDR0_DQ42	AN3	MDA42
		DDR0_CS_N3	DDR0_DQ43	AN4	MDA43
(7)	DCLKA0 <-> DCLKA0	DDR0_CLK_P0	DDR0_DQ44	AR2	MDA44
(7)	-DCLKA0 <-> -DCLKA0	DDR0_CLK_N0	DDR0_DQ45	AR3	MDA40
(7)	DCLKA1 <-> DCLKA1	DDR0_CLK_P1	DDR0_DQ46	AN2	MDA46
(7)	-DCLKA1 <-> -DCLKA1	DDR0_CLK_N1	DDR0_DQ47	AN1	MDA47
		DDR0_CLK_P2	DDR0_DQ48	AL1	MDA49
		DDR0_CLK_P3	DDR0_DQ49	AL4	MDA53
		DDR0_CLK_N2	DDR0_DQ50	AJ3	MDA50
		DDR0_CLK_N3	DDR0_DQ51	AJ4	MDA51
		DDR0_CLK_P4	DDR0_DQ52	AL2	MDA52
		DDR0_CLK_P5	DDR0_DQ53	AJ2	MDA54
		DDR0_CLK_P6	DDR0_DQ54	AJ1	MDA55
		DDR0_CLK_P7	DDR0_DQ55	AG1	MDA57
		DDR0_CLK_P8	DDR0_DQ56	AG4	MDA61
		DDR0_CLK_P9	DDR0_DQ57	AE3	MDA58
		DDR0_CLK_P10	DDR0_DQ58	AE4	MDA59
		DDR0_CLK_P11	DDR0_DQ59	AG2	MDA60
		DDR0_CLK_P12	DDR0_DQ60	AG3	MDA56
		DDR0_CLK_P13	DDR0_DQ61	AE2	MDA62
		DDR0_CLK_P14	DDR0_DQ62	AE1	MDA63
		DDR0_CLK_P15	DDR0_DQ63	AE39	DQSA0
		DDR0_CLK_P16	DDR0_DQ64	AJ39	DQSA1
		DDR0_CLK_P17	DDR0_DQ65	AN39	DQSA2
		DDR0_CLK_P18	DDR0_DQ66	AV36	DQSA3
		DDR0_CLK_P19	DDR0_DQ67	AV5	DQSA4
		DDR0_CLK_P20	DDR0_DQ68	AP3	DQSA5
		DDR0_CLK_P21	DDR0_DQ69	AK3	DQSA6
		DDR0_CLK_P22	DDR0_DQ70	AF3	DQSA7
		DDR0_CLK_P23	DDR0_DQ71	AV32	DQSA8
		DDR0_CLK_P24	DDR0_DQ72	AE38	DQSA9
		DDR0_CLK_P25	DDR0_DQ73	AJ38	DQSA1
		DDR0_CLK_P26	DDR0_DQ74	AN38	DQSA2
		DDR0_CLK_P27	DDR0_DQ75	AJ36	DQSA3
		DDR0_CLK_P28	DDR0_DQ76	AW5	DQSA4
		DDR0_CLK_P29	DDR0_DQ77	AP2	DQSA5
		DDR0_CLK_P30	DDR0_DQ78	AK2	DQSA6
		DDR0_CLK_P31	DDR0_DQ79	AF2	DQSA7
		DDR0_CLK_P32	DDR0_DQ80	AJ32	DQSA8

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

# LGA1150 (B)

LGA1150B		DDR1_MA0	DDR1_DQ0	AE34	MDB0
MAAB0	AL19	DDR1_MA1	DDR1_DQ1	AE35	MDB1
MAAB1	AK23	DDR1_MA2	DDR1_DQ2	AG35	MDB2
MAAB2	AM22	DDR1_MA3	DDR1_DQ3	AH35	MDB3
MAAB3	AM23	DDR1_MA4	DDR1_DQ4	AD34	MDB4
MAAB4	AP23	DDR1_MA5	DDR1_DQ5	AD35	MDB5
MAAB5	AL23	DDR1_MA6	DDR1_DQ6	AG34	MDB6
MAAB6	AY24	DDR1_MA7	DDR1_DQ7	AH34	MDB7
MAAB7	AV25	DDR1_MA8	DDR1_DQ8	AL34	MDB8
MAAB8	AU26	DDR1_MA9	DDR1_DQ9	AL35	MDB9
MAAB9	AW25	DDR1_MA10	DDR1_DQ10	AK31	MDB10
MAAB10	AP18	DDR1_MA11	DDR1_DQ11	AK34	MDB11
MAAB11	AY25	DDR1_MA12	DDR1_DQ12	AK35	MDB12
MAAB12	AV26	DDR1_MA13	DDR1_DQ13	AK32	MDB13
MAAB13	AR15	DDR1_MA14	DDR1_DQ14	AL32	MDB14
MAAB14	AV27	DDR1_MA15	DDR1_DQ15	AL34	MDB17
MAAB15	AY28	DDR1_MA16	DDR1_DQ16	AP34	MDB21
MODT_B0	AM17	DDR1_ODT0	DDR1_ODT1	AN31	MDB19
MODT_B1	AL16	DDR1_ODT2	DDR1_ODT3	AP31	MDB20
	AM16			AP35	MDB16
	AK15			AN32	MDB18
	AM26	DDR1_ECC0	DDR1_ECC1	AP32	MDB22
	AM25	DDR1_ECC2	DDR1_ECC3	AM29	MDB25
	AP25	DDR1_ECC4	DDR1_ECC5	AM28	MDB28
	AL26	DDR1_ECC6	DDR1_ECC7	AR29	MDB27
	AL25			AR28	MDB30
	AR26			AL23	MDB24
	AR25			AL28	MDB29
		DDR1_BA0	DDR1_DQ31	AP29	MDB26
		DDR1_BA1	DDR1_DQ32	AP28	MDB31
		DDR1_BA2	DDR1_DQ33	AR12	MDB32
		DDR1_CKE0	DDR1_DQ34	AL12	MDB35
		DDR1_CKE1	DDR1_DQ35	AR13	MDB36
		DDR1_CKE2	DDR1_DQ36	AP13	MDB37
		DDR1_CKE3	DDR1_DQ37	AM13	MDB38
		DDR1_CS_N0	DDR1_DQ38	AM12	MDB39
		DDR1_CS_N1	DDR1_DQ39	AR9	MDB45
		DDR1_CS_N2	DDR1_DQ40	AP9	MDB41
		DDR1_CS_N3	DDR1_DQ41	AR6	MDB47
		DDR1_CLK_P0	DDR1_DQ42	AP6	MDB43
		DDR1_CLK_N0	DDR1_DQ43	AR10	MDB44
		DDR1_CLK_P1	DDR1_DQ44	AP10	MDB40
		DDR1_CLK_N1	DDR1_DQ45	AR7	MDB46
		DDR1_CLK_P2	DDR1_DQ46	AP7	MDB42
		DDR1_CLK_N2	DDR1_DQ47	AM9	MDB52
		DDR1_CLK_P3	DDR1_DQ48	AL9	MDB53
		DDR1_CLK_N3	DDR1_DQ49	AL6	MDB50
		DDR1_CLK_P4	DDR1_DQ50	AL7	MDB55
		DDR1_CLK_N4	DDR1_DQ51	AM10	MDB48
		DDR1_CLK_P5	DDR1_DQ52	AL10	MDB49
		DDR1_CLK_N5	DDR1_DQ53	AM6	MDB51
		DDR1_CLK_P6	DDR1_DQ54	AM7	MDB54
		DDR1_CLK_N6	DDR1_DQ55	AH6	MDB61
		DDR1_CLK_P7	DDR1_DQ56	AH7	MDB60
		DDR1_CLK_N7	DDR1_DQ57	AE6	MDB59
		DDR1_CAS*	DDR1_DQ58	AE7	MDB63
		DDR1_RAS*	DDR1_DQ59	AJ6	MDB56
		DDR1_WE*	DDR1_DQ60	AJ7	MDB57
		DDR_VREF_DQ0	DDR1_DQ61	AF7	MDB58
		DDR_VREF_DQ1	DDR1_DQ62	AF7	MDB62
		DDR1_DQ63	DDR1_DQ63	AF35	DQSB0
		DDR1_DQ64	DDR1_DQ64	AL33	DQSB1
		DDR1_DQ65	DDR1_DQ65	AP33	DQSB2
		DDR1_DQ66	DDR1_DQ66	AN28	DQSB3
		DDR1_DQ67	DDR1_DQ67	AN12	DQSB4
		DDR1_DQ68	DDR1_DQ68	AP8	DQSB5
		DDR1_DQ69	DDR1_DQ69	AL8	DQSB6
		DDR1_DQ70	DDR1_DQ70	AG7	DQSB7
		DDR1_DQ71	DDR1_DQ71	AN25	DQSB8
		DDR1_DQ72	DDR1_DQ72	AE34	DQSB9
		DDR1_DQ73	DDR1_DQ73	AK33	DQSB1
		DDR1_DQ74	DDR1_DQ74	AN33	DQSB2
		DDR1_DQ75	DDR1_DQ75	AN29	DQSB3
		DDR1_DQ76	DDR1_DQ76	AL13	DQSB4
		DDR1_DQ77	DDR1_DQ77	AR8	DQSB5
		DDR1_DQ78	DDR1_DQ78	AM8	DQSB6
		DDR1_DQ79	DDR1_DQ79	AG6	DQSB7
		DDR1_DQ80	DDR1_DQ80	AN26	DQSB8

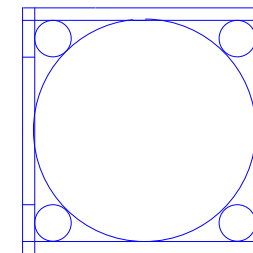


未上件

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

# LGA1150 (CR)

CR  
CPU RETAINION/X



LGA1150



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)	MAAA[0..15]	<->	MAAA0..15
(8)	MAAB[0..15]	<->	MAAB0..15
(8)	DQSB[0..7]	<->	DQSB0..7
(8)	-DQSB[0..7]	<->	-DQSB0..7

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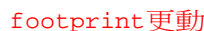
CPU LGA1150-B

Title	CPU LGA1150-B		
Size	Custom	Document Number	GA-B85M-D2V PLUS
Date:	Thursday, September 25, 2014	Sheet	5 of 33

Rev 1.0



(F, J)



(G,H,I)



(X18)



(x9)



Title			
CPU LGA1150-C			
Size	Document Number		Rev
Custom	GA-B85M-D2V PLUS		1.0
Date:	Thursday, September 25, 2014	Sheet	6 of 33







PCH

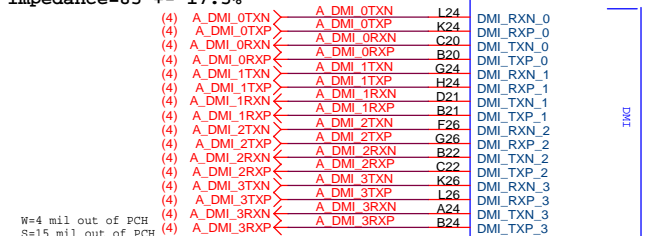
(B)

DMI:12/4/4/4/12(breakout min 8/4/4/4/8)  
Impedance=85 +/- 17.5%USB2.0 : 12/4.5/7.5/4.5/12 (breakout min 8/4/4/4/8)  
Impedance=90 +/- 17.5%

PCHB

B85: Port 6/7 N/A

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

VCC1\_5\_PCH NR50 7.5K/4/1 DMI\_COMP B19  
PCIE\_COMP C13(10) CK\_SRCLCK\_PCH NR40 7.5K/4/1  
(10) CK\_SRCLCK\_PCH CK\_SRCLCK\_PCH G22  
(10) CK\_SRCLCK\_PCH CK\_SRCLCK\_PCH F22

PCIE Only

8111G

PCIEX1

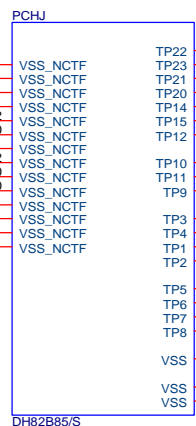
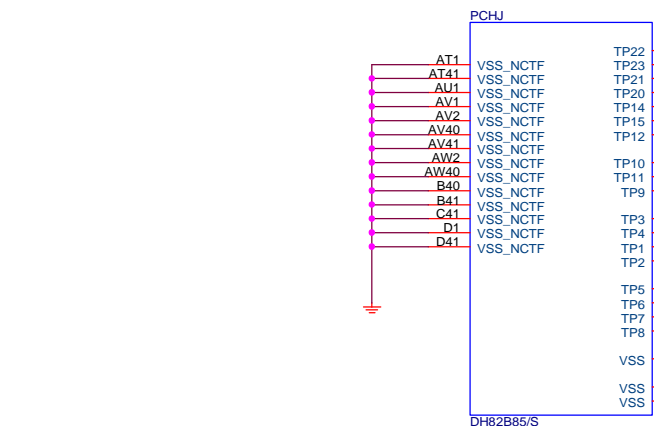
N/A

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

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

PCH

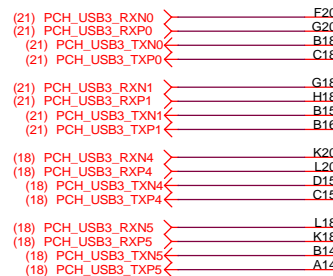
(J)



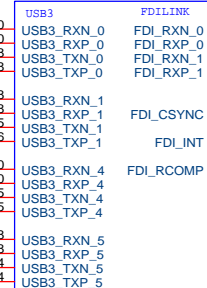
DH82B85/S

PCH

(F)



PCHF

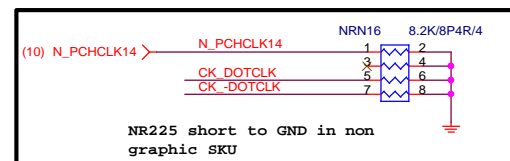


DH82B85/S

FDI\_TXP0..11 >> FDI\_TXP0..11 (4)  
FDI\_TXN0..11 >> FDI\_TXN0..11 (4)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

新增

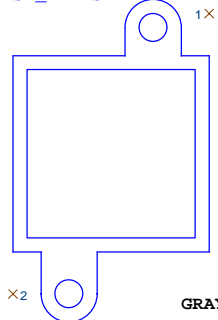
N-USBOC\_F1  
NBC84 0.1u/4/X7R/16V/K

NR225 short to GND in non graphic SKU

PCH H/S

LOW COST ICH7 HEATSINK

SB\_HEATSINK



X2

GRAY HS

PCH\_HS  
PCH\_HS[12SP2-030005-51R\_12SP2-030005-52R\_12SP2-030005-53R]

USB TABLE

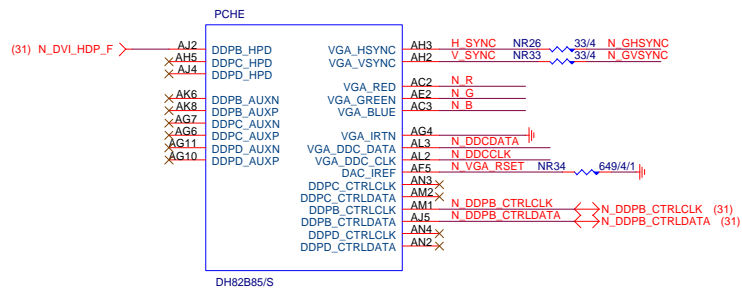
OC[3:0]# for Device 29 (ports 0-7)  
OC[7:4]# for Device 26 (ports 8-13)

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

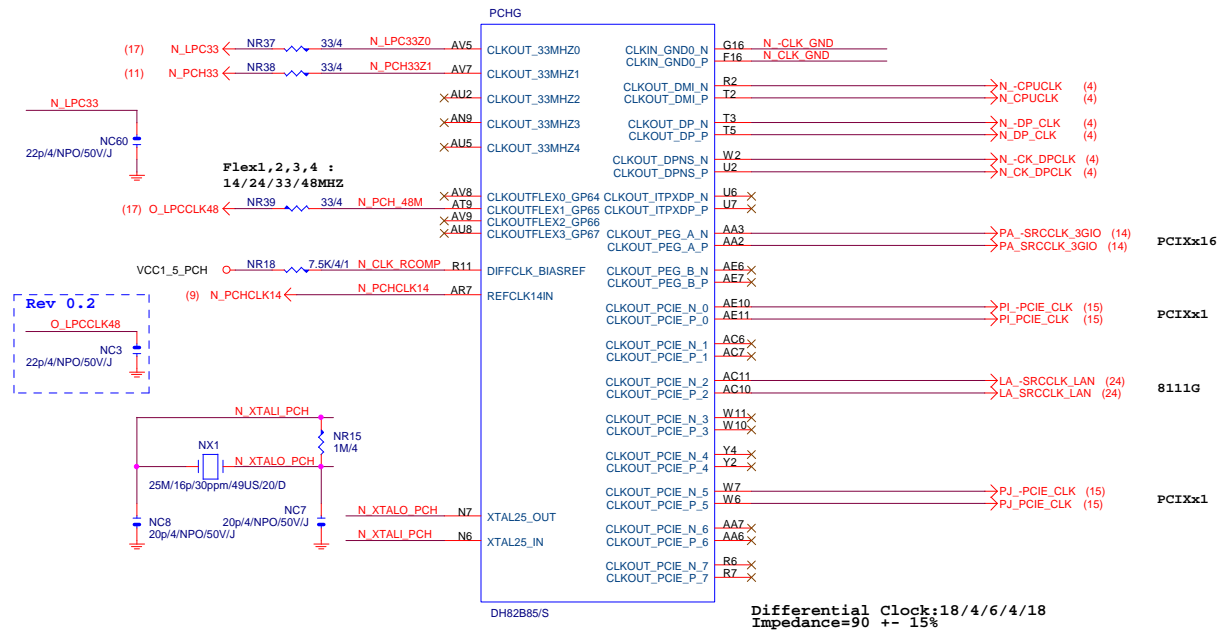
Gigabyte Technology

Title		PCH FDI,DMI,USB,PCIE,NVRAM	
Size	Document Number	GA-B85M-D2V PLUS	
Custom			Rev 1.0
Date:	Thursday, September 25, 2014	Sheet 9 of 33	1

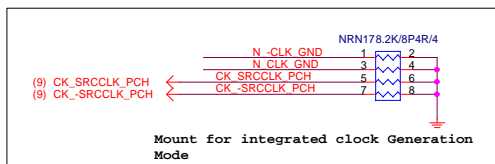
**PCH (E)**



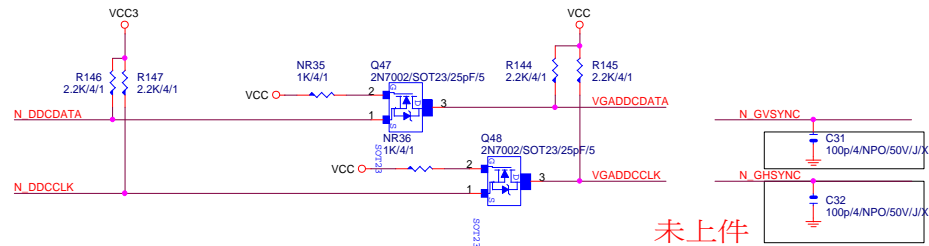
**PCH (G)**



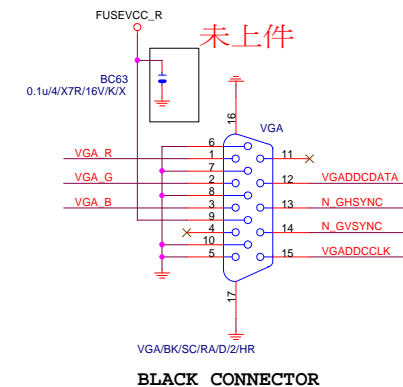
PCH CLK PD



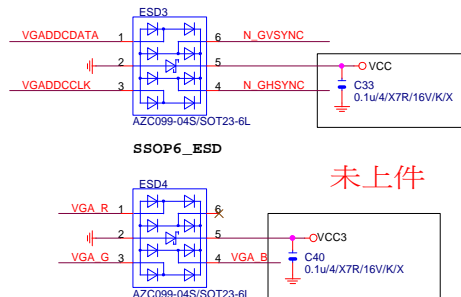
## VGA DDC



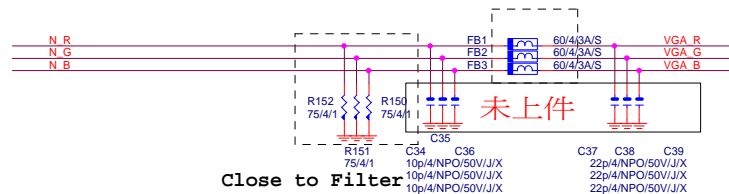
## VGA CONNECTOR



## VGA ESD

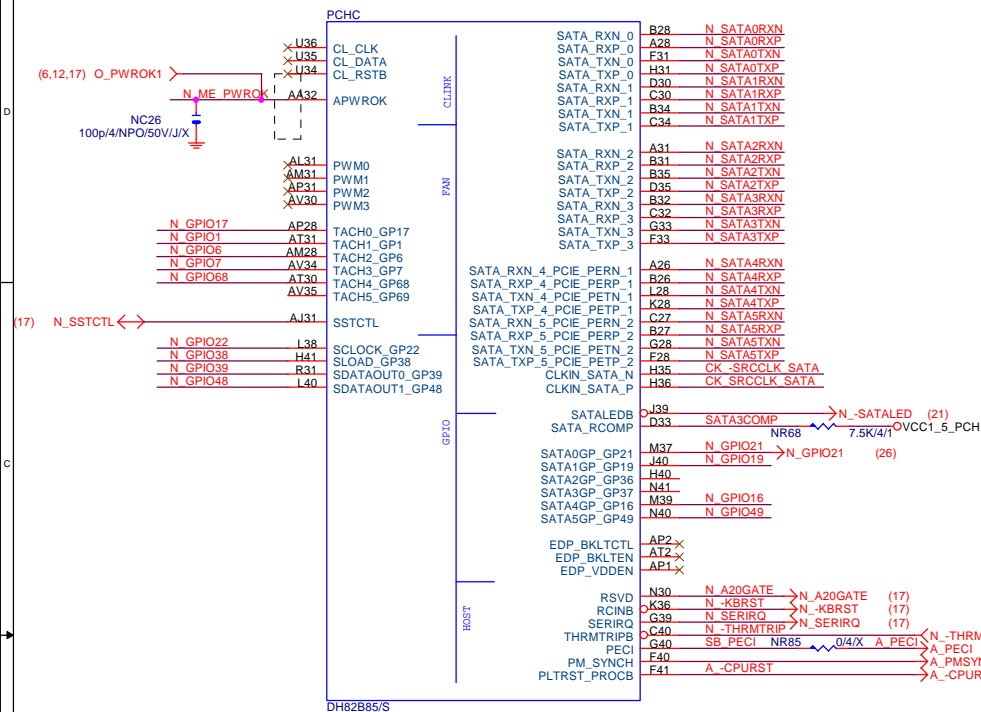


## VGA DDC



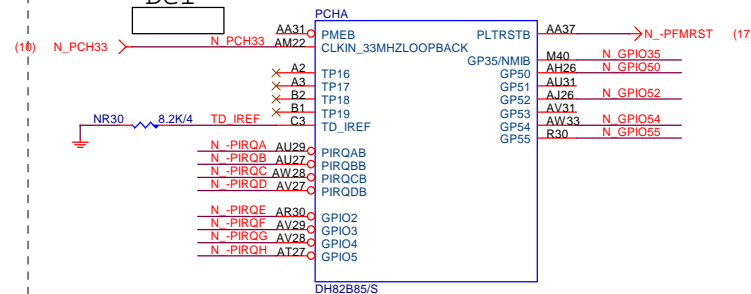
(C)

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%

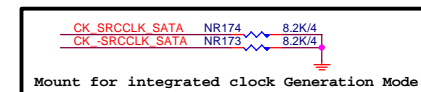


**PCH (A)**

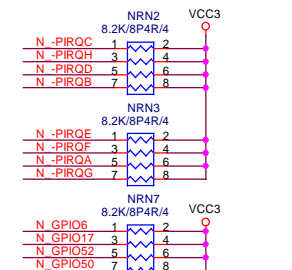
Del



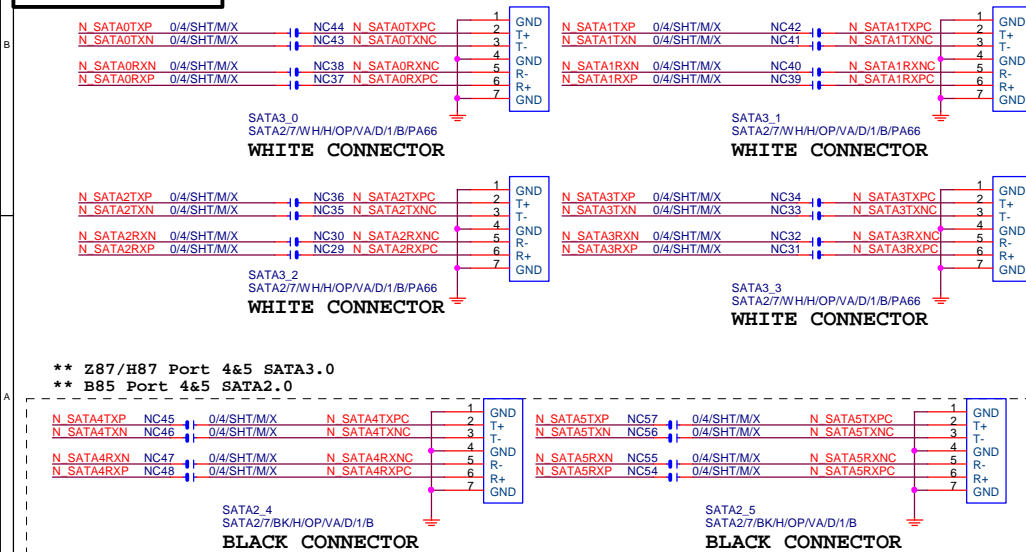
## PCH CLK PD



PCH	PU/PD
-----	-------

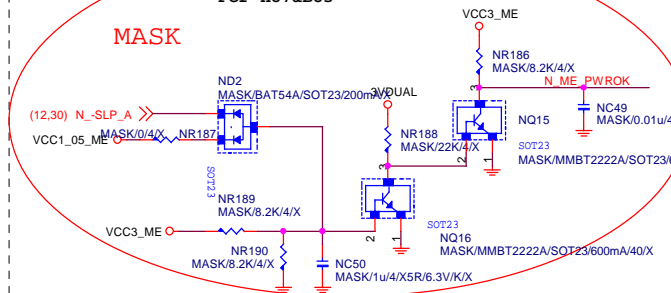


SATA CONNECTOR
----------------

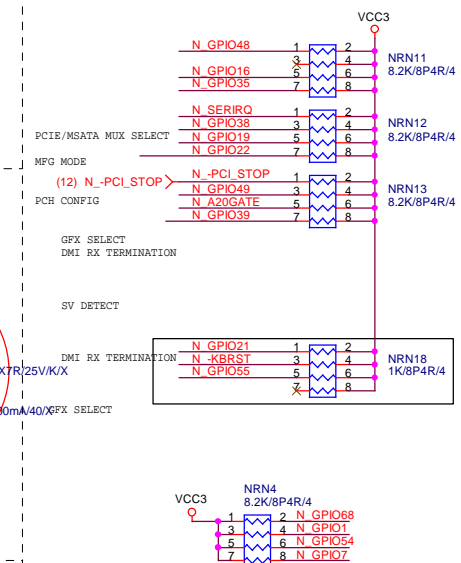
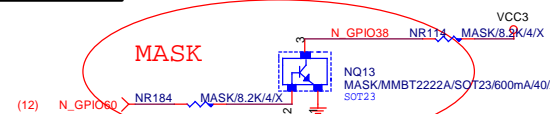


ME PWROK

GPIO37 PU VCC3 ENABLE SBA  
For H87&B85



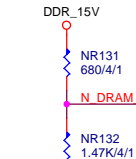
GPIO38 Ctrl



## Gigabyte Technology

Title			
PCH HOST , SATA, PCI			
Size	Document Number		Rev
Custom	GA-B85M-D2V PLUS		1.0
Date:	Thursday, September 25, 2014	Sheet	11 of 33

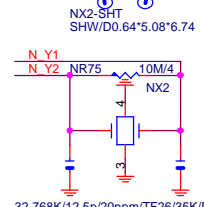
(D)



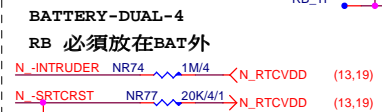
## HSW\_STRAP13

REMOVE

32.768KHZ



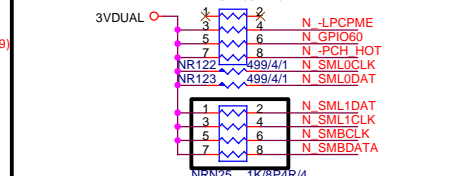
## CLR\_CMOS



## ACZ\_SDOUT



PCH	PU/PD
-----	-------



## Gigabyte Technology

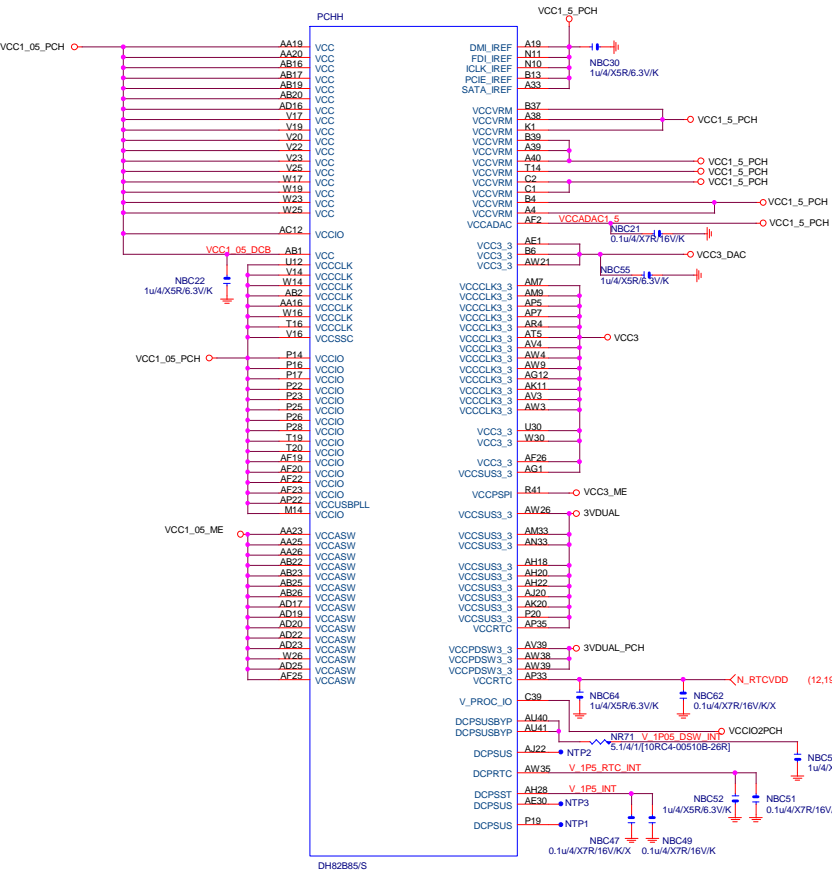
## PCH GPIO , CTRL , AUDIO

GA-B85M-D2V PLUS

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

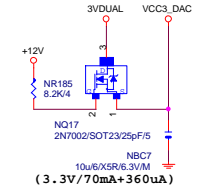
Date: Thursday, September 25, 2014 Sheet 12 of 33

PCH (H)

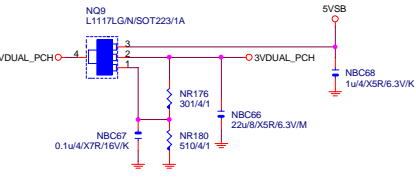


VCC3\_DAC

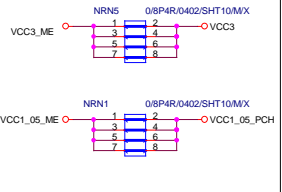
CLOSE北橋(注意震盪水波紋)



3VDUAL\_PCH

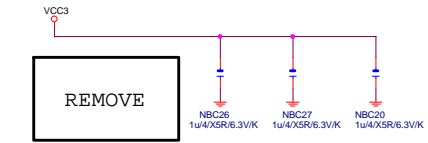


SHT\_PWR



CAP

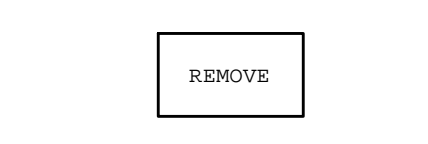
(3.3V) (X6)



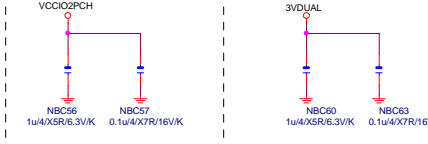
(1.05V) (X5)



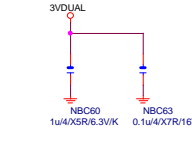
(1.05V) (X6)



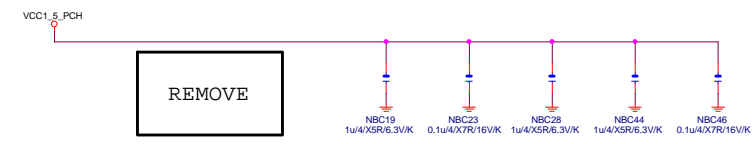
(1.05V) (X2)



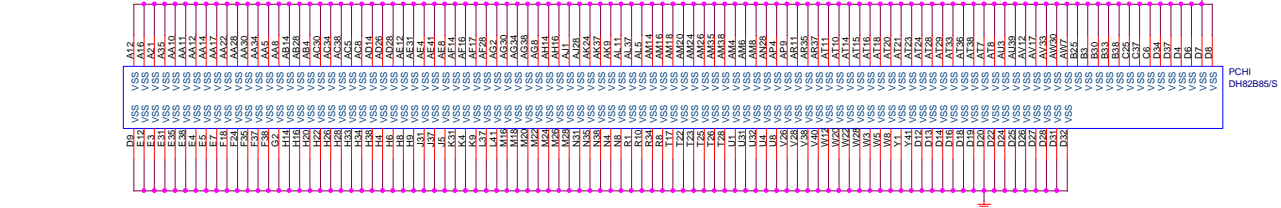
(3.3V) (X2)



(1.05V) (X10)



PCH (I)





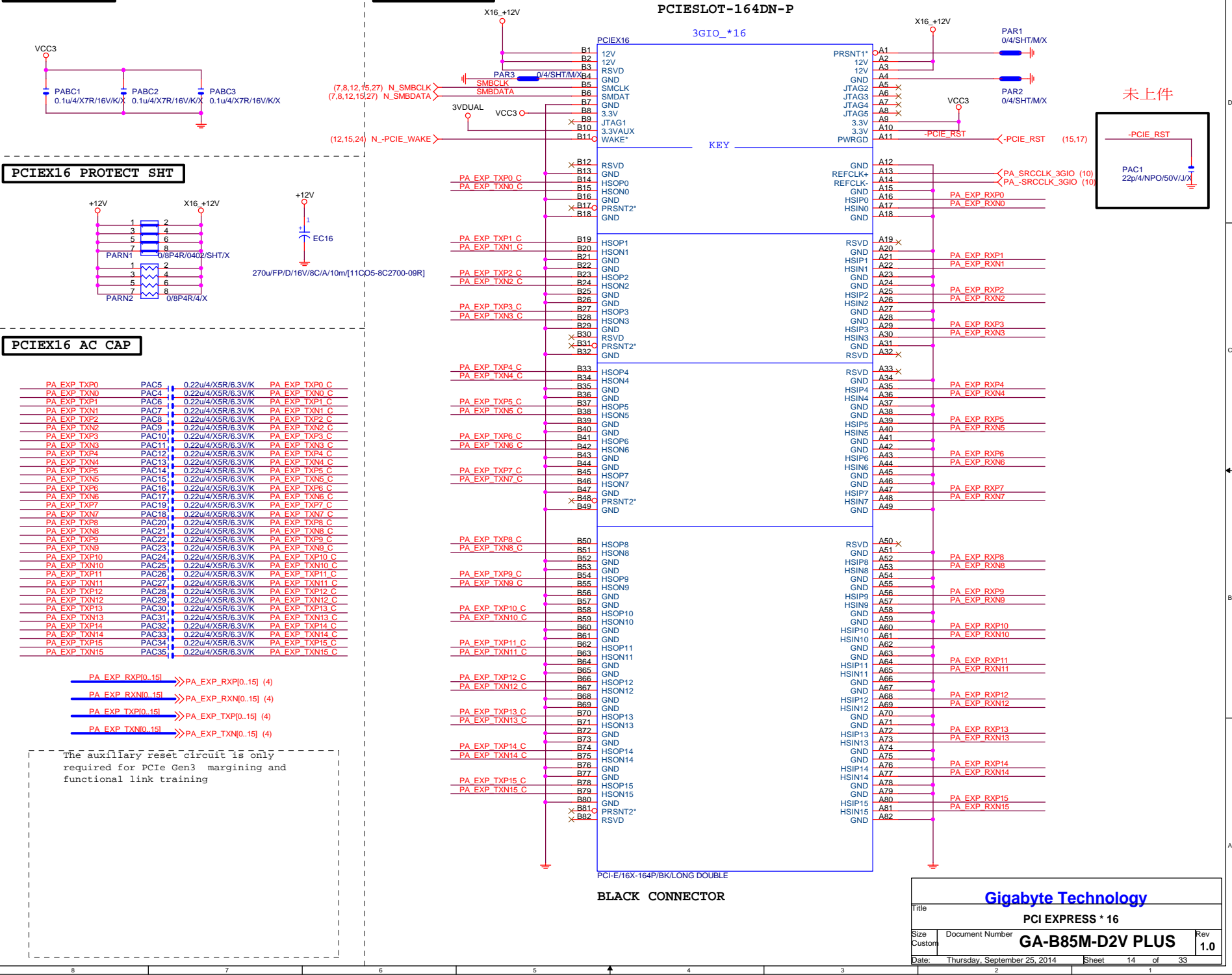
# PCIEX16 CAP

# PCIEX16 PROTECT SHT

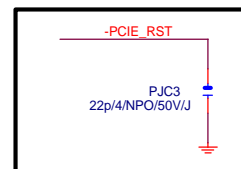
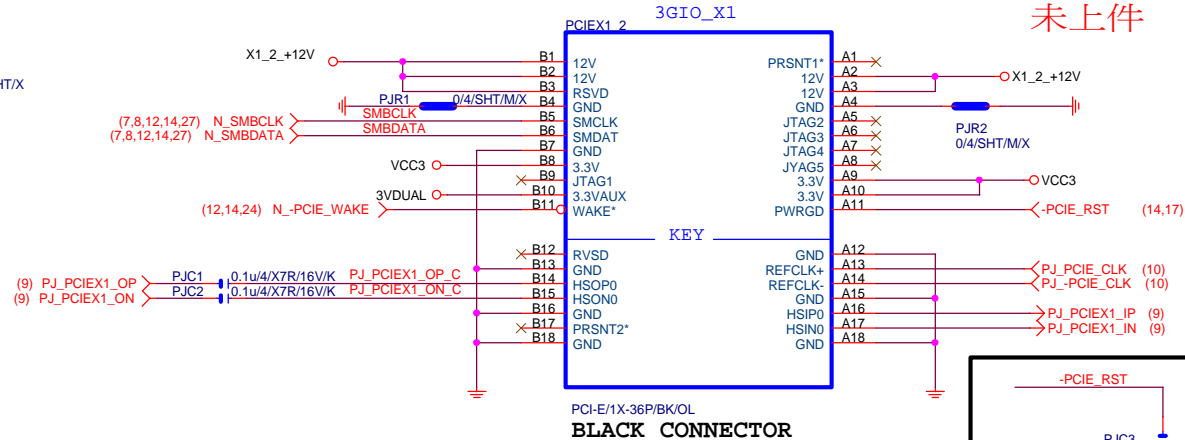
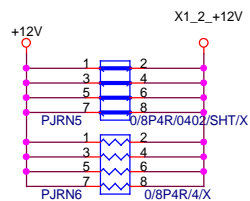
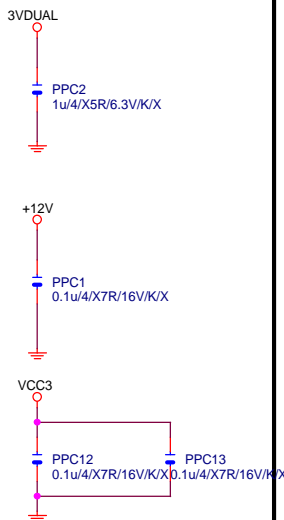
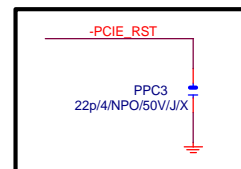
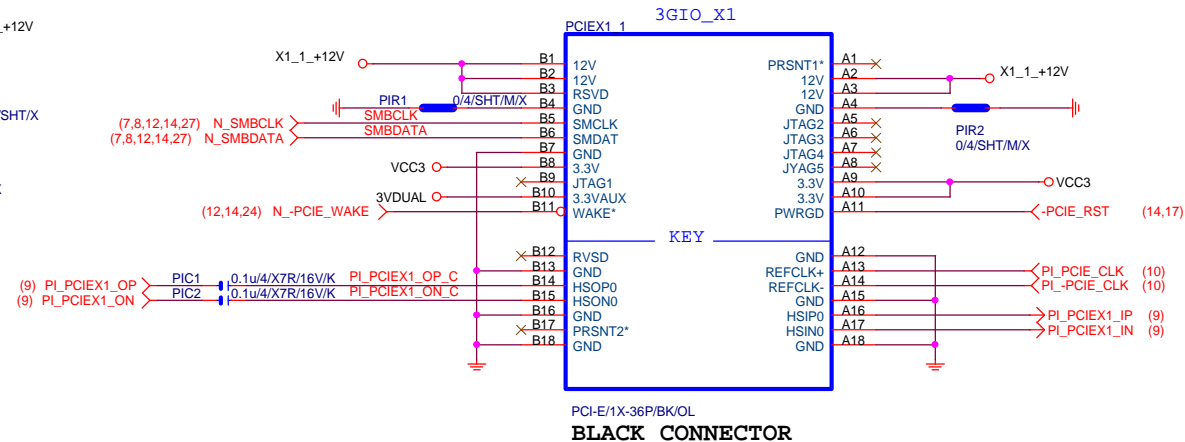
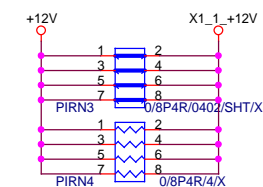
# PCIEX16 AC CAP

# PCIEX16 SLOT

# PCIESLOT-164DN-P



# PCIEX1 SLOT

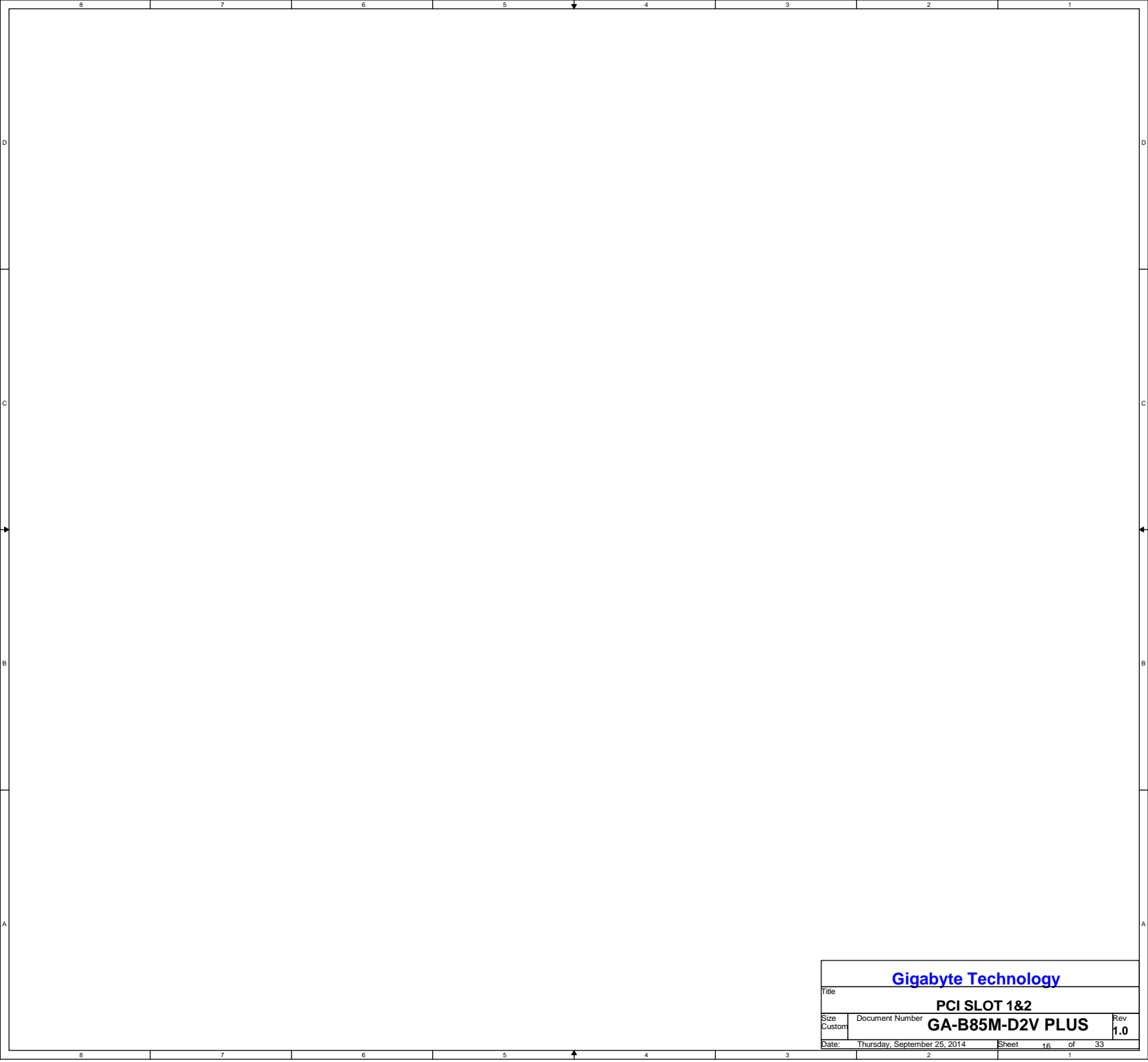


未上件

未上件

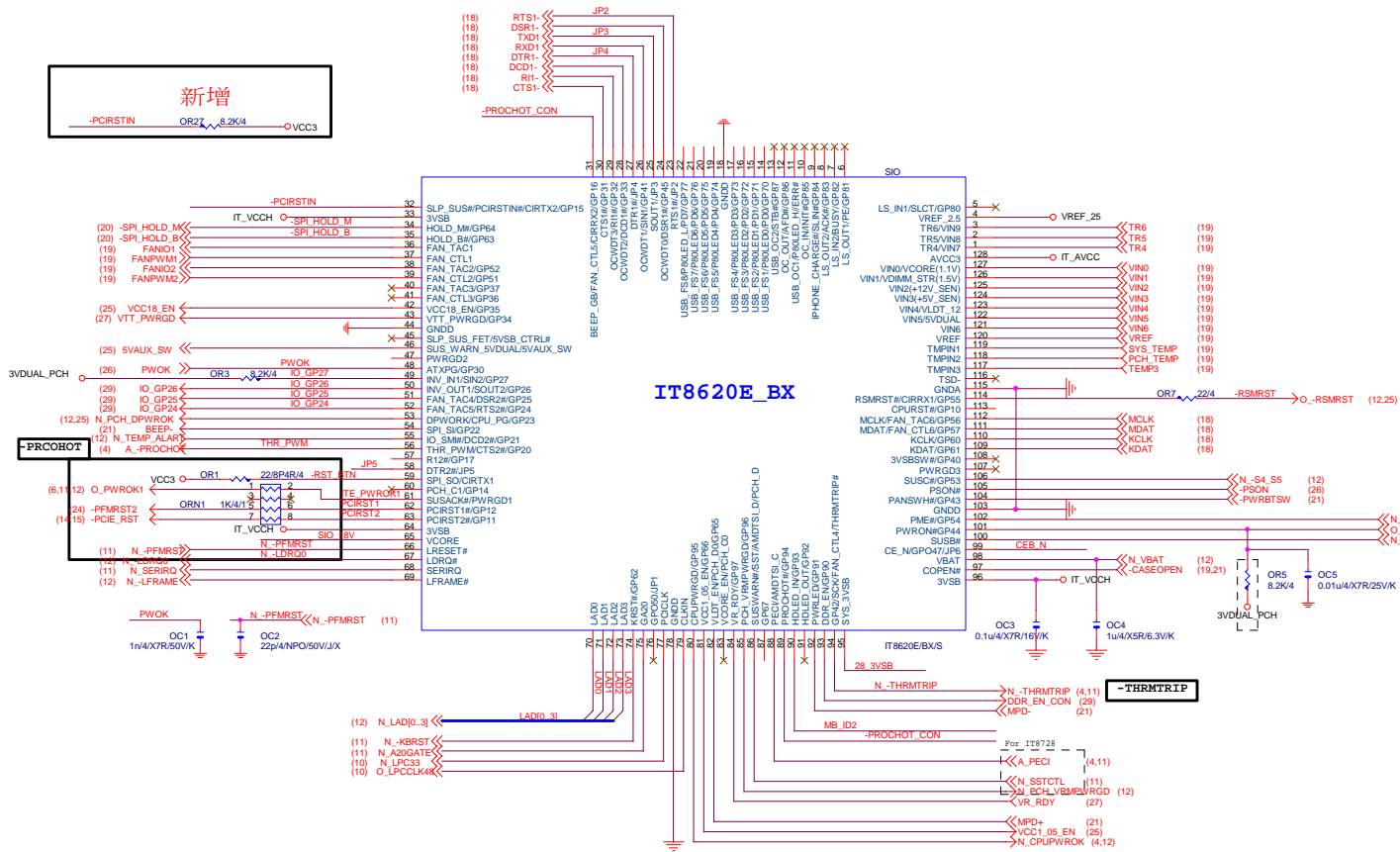
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Gigabyte Technology			
PCI EXPRESS X 1 PORT			
Title	Document Number	Rev	
Size Custom	GA-B85M-D2V PLUS	1.0	
Date:	Thursday, September 25, 2014	Sheet	15 of 33

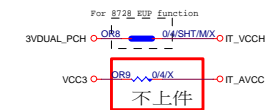


Gigabyte Technology			
Title			
PCI SLOT 1&2			
Size	Document Number		Rev
Custom	GA-B85M-D2V PLUS		1.0
Date:	Thursday, September 25, 2014	Sheet	16 of 33

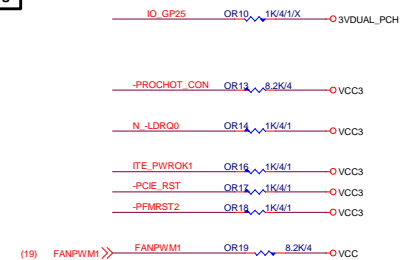
## SIO IT8620



PWR SHT

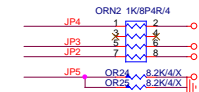
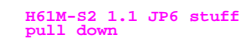


SIO PU



OR20 删除

SIO STRAP

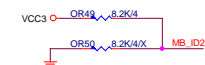


ITE recommandé

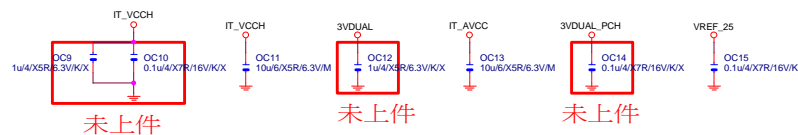
Power leakage

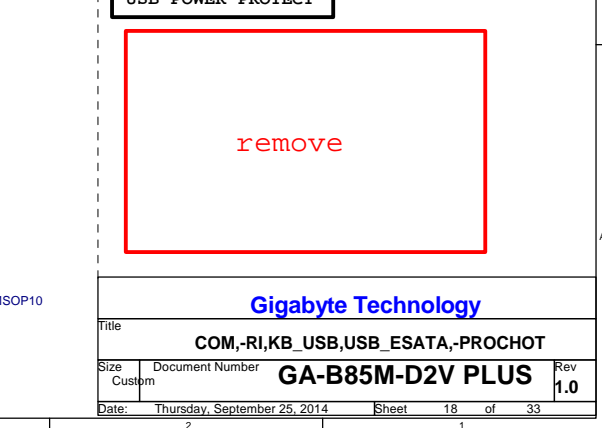
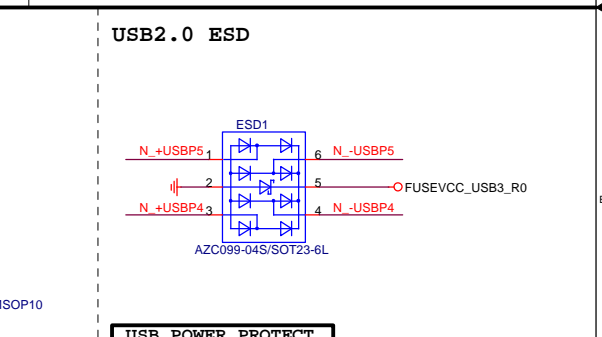
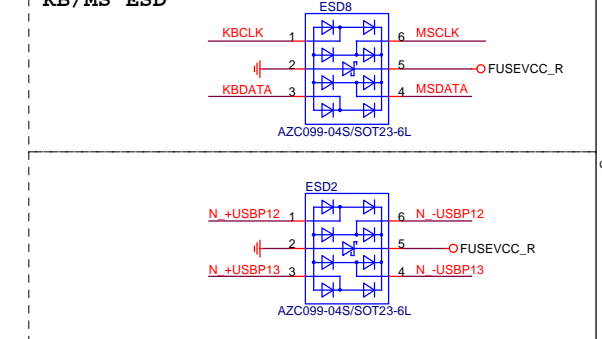
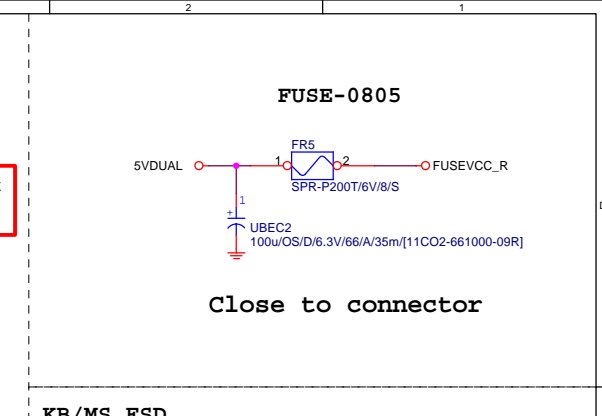
remove

## MB ID



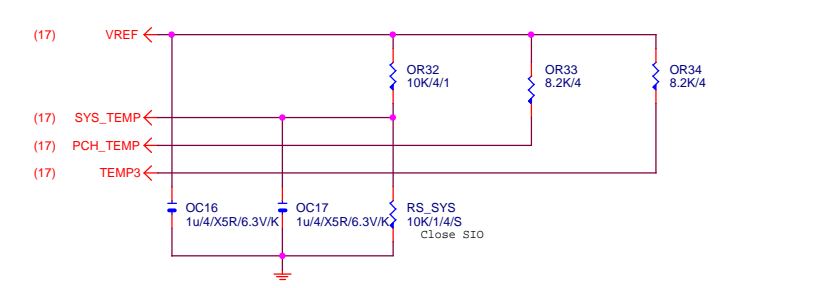
SIO CAP



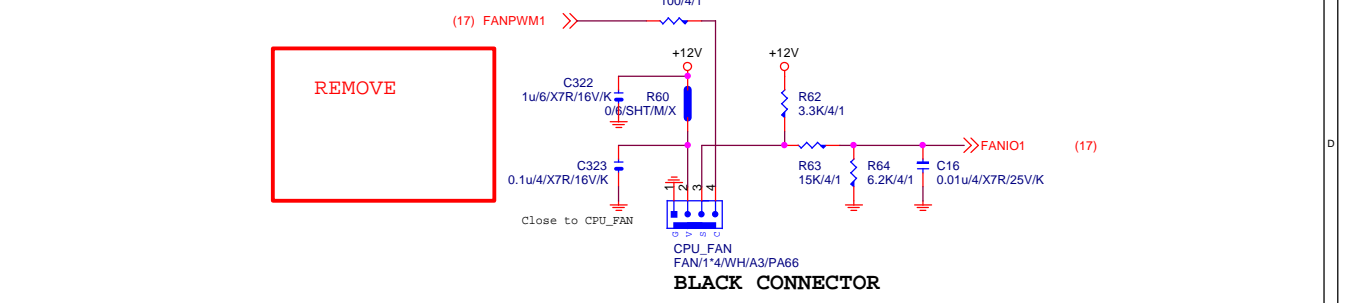




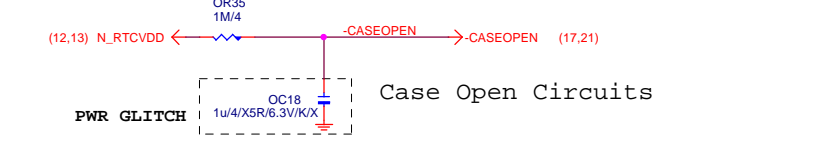
TEMP H/W MONITOR



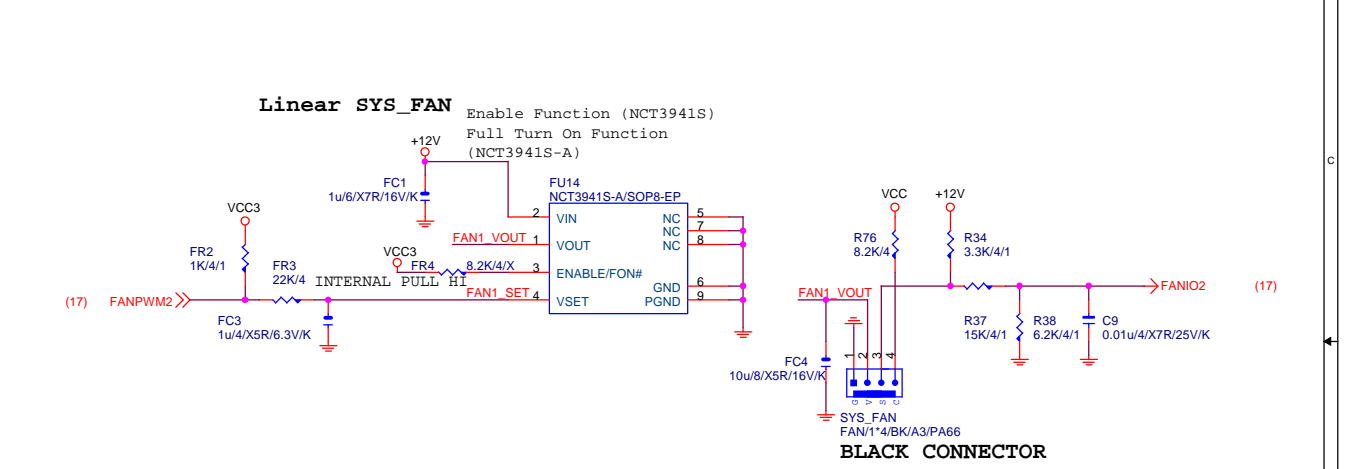
CPU SMART FAN



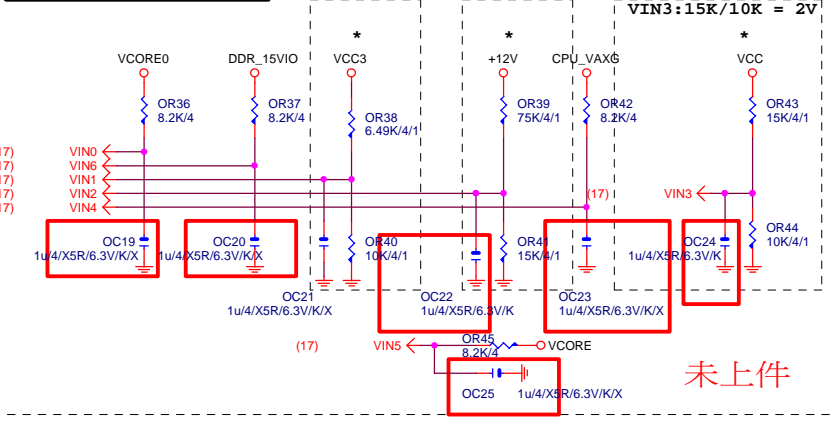
CASE OPEN



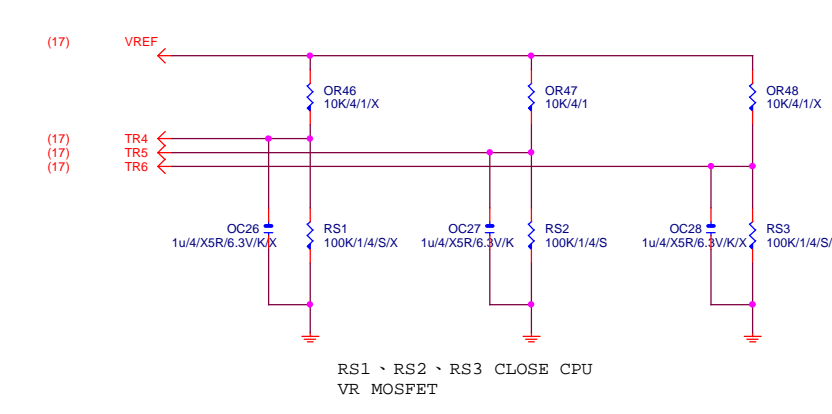
SYS SMART FAN

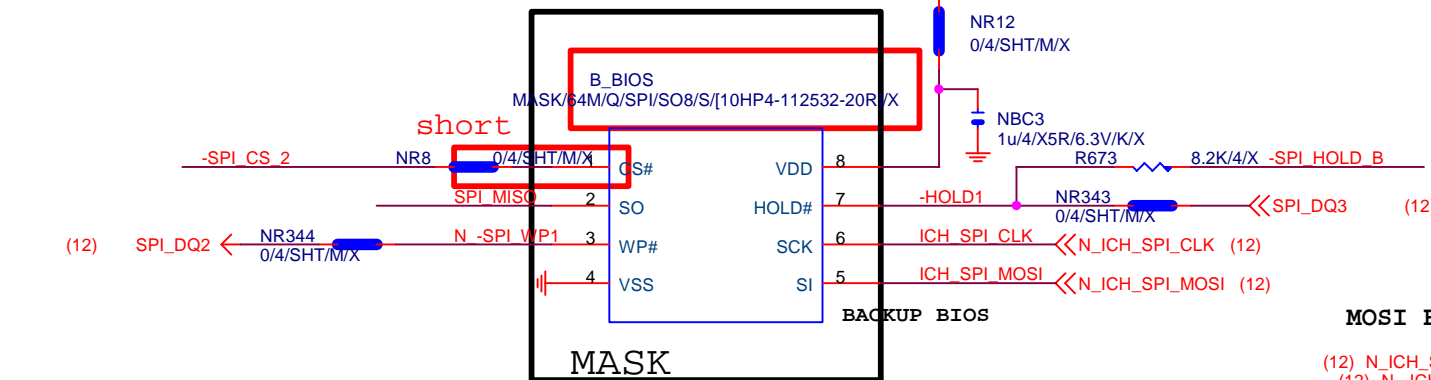
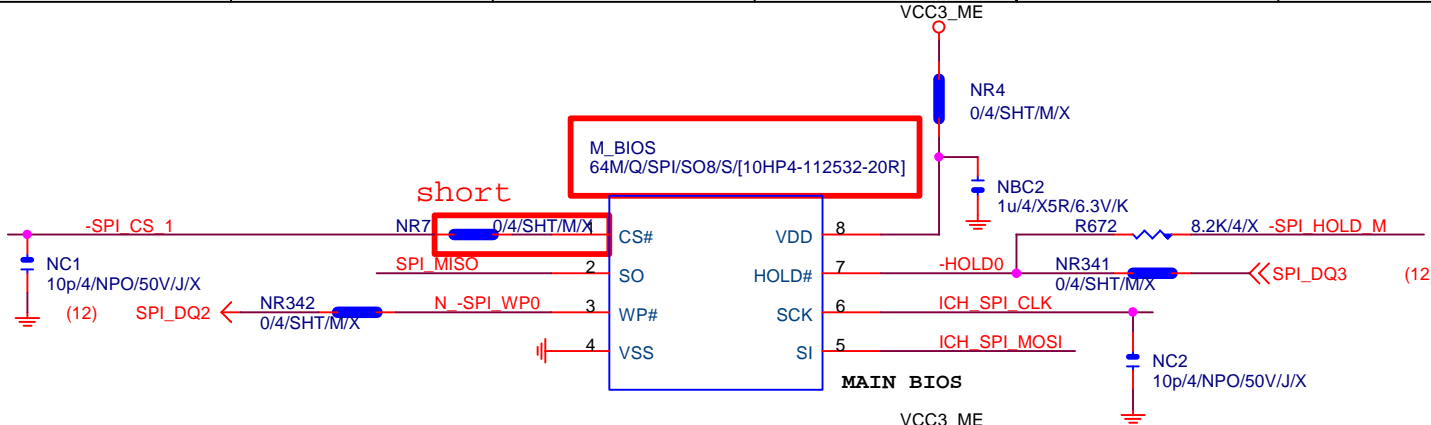


VOLTAGE-- H/W MONITOR



-PROHOT

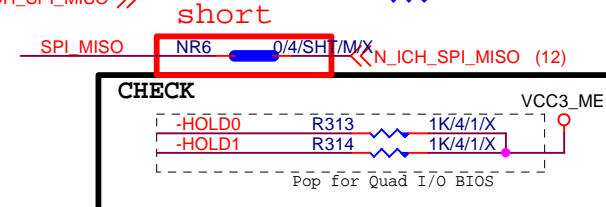
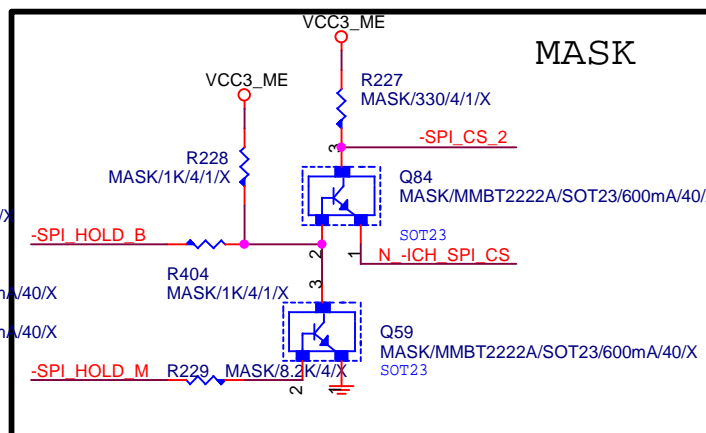
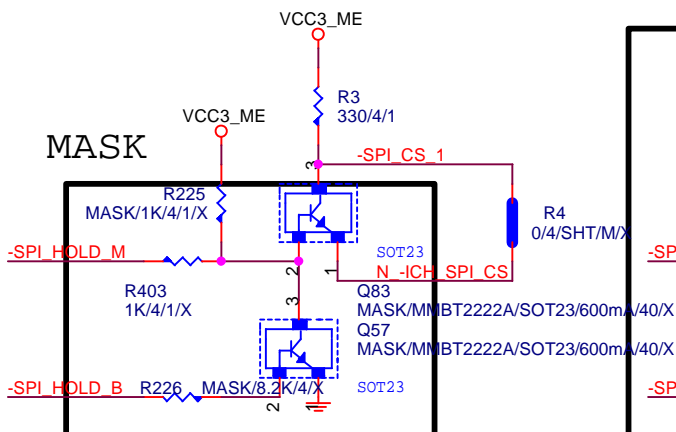
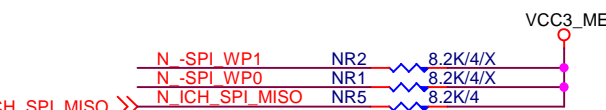
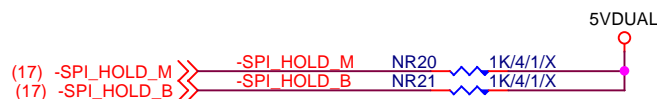
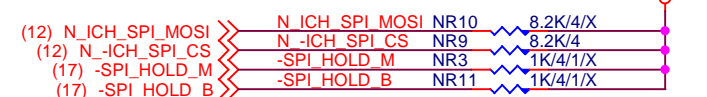




BOOT DEVICE	GNT0	GNT1
LPC	0	0
PCI	0	1
NAND	1	0
SPI	1	1

1 means floating  
0 means PD 1K

#### MOSI For DMI RX Termination Voltage



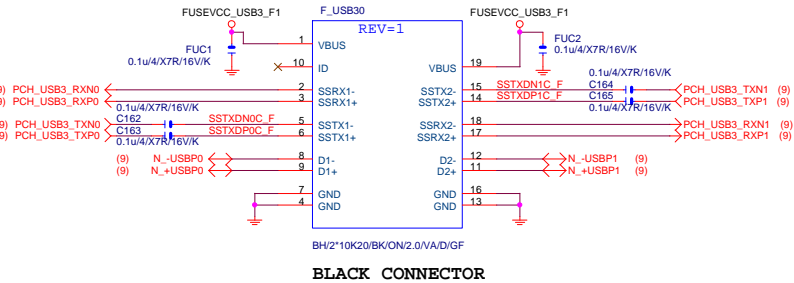
**Gigabyte Technology**

#### DUAL BIOS

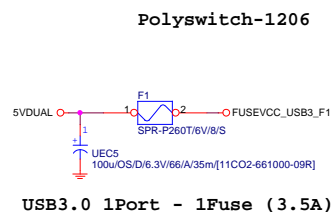
**GA-B85M-D2V PLUS**

Title	Document Number	Rev
		1.0
Date: Thursday, September 25, 2014	Sheet 20 of 33	

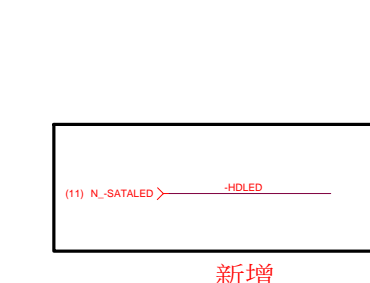
# F\_USB30



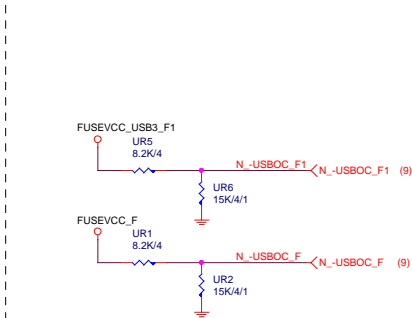
# F\_USB30 PWR



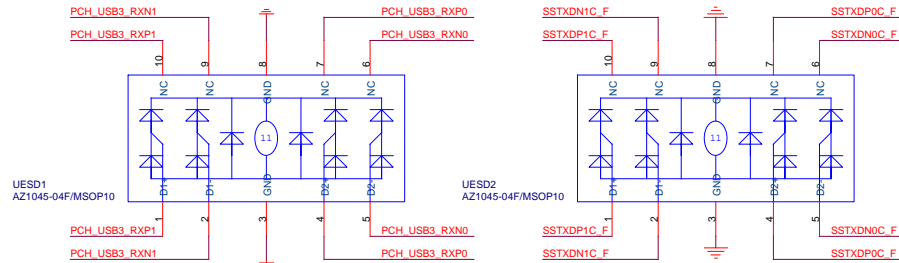
# SATA LED



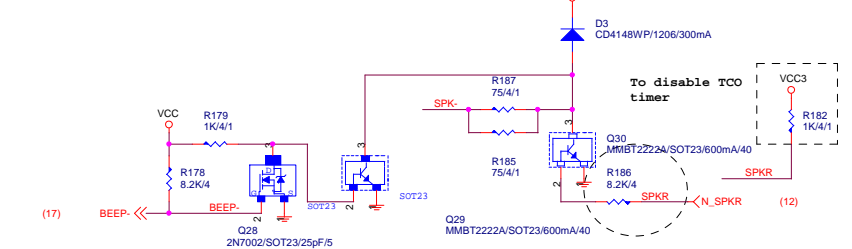
# -USB0C\_F



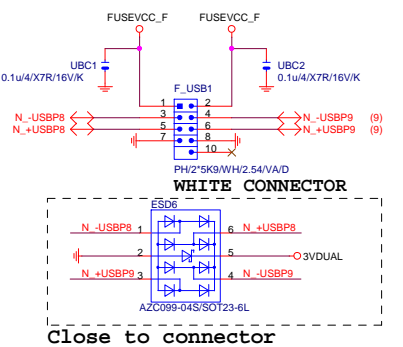
# F\_USB30 ESD PROTECT



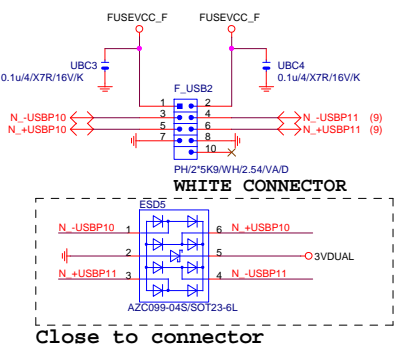
# SPKR



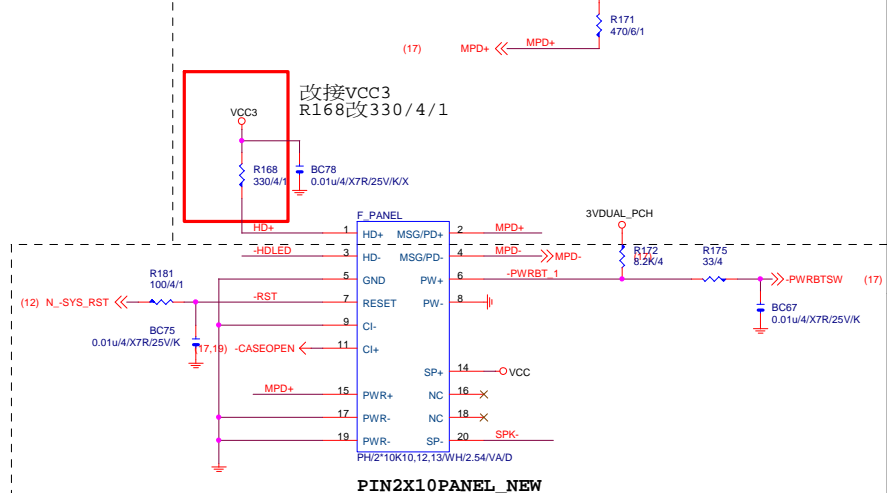
# FRONT USB1



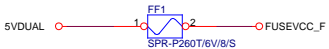
# FRONT USB2



# INTEL FRONT PANEL

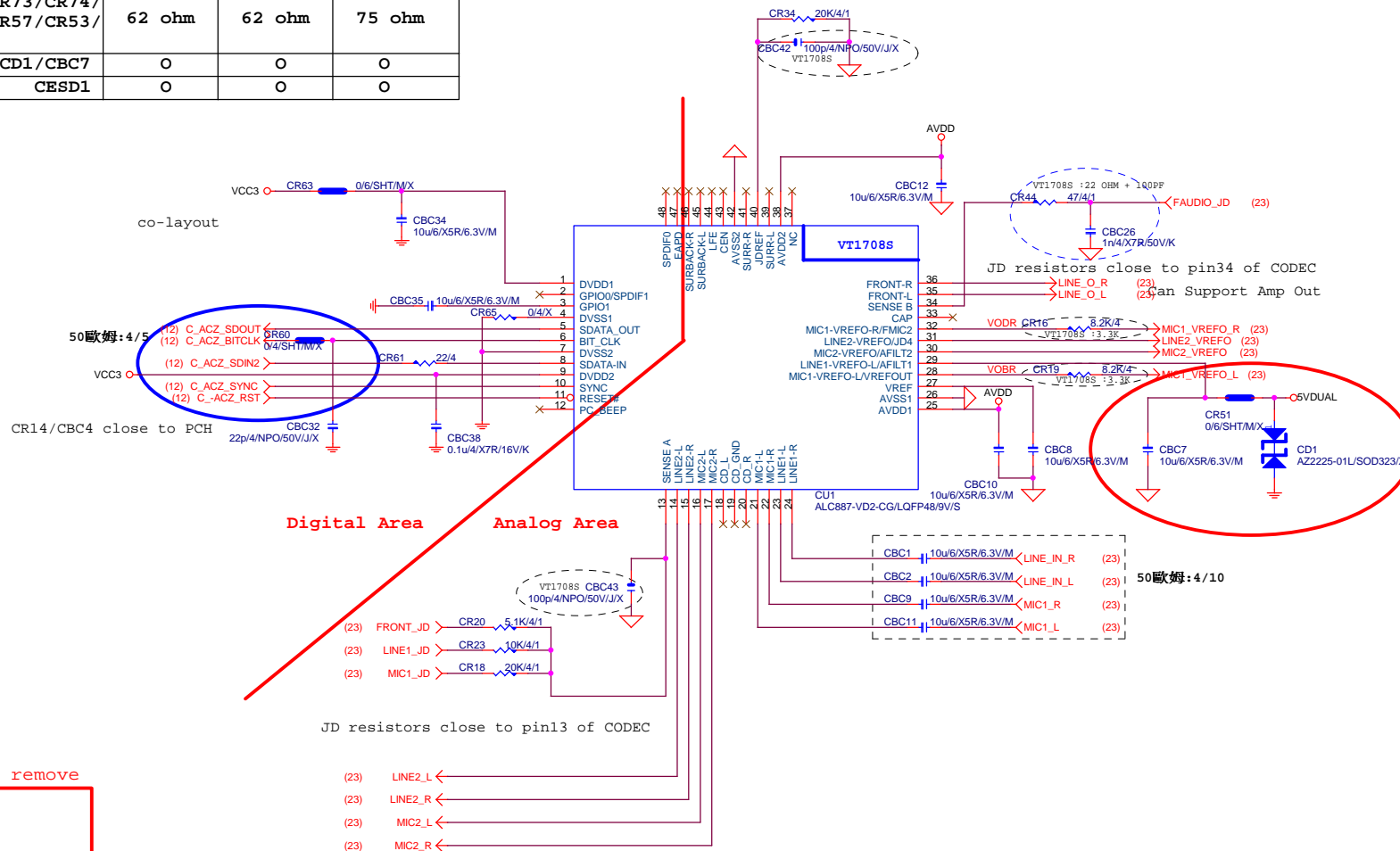


**FUSE-0805**  
**F\_USB1, F\_USB2 4-Port 2.6A**

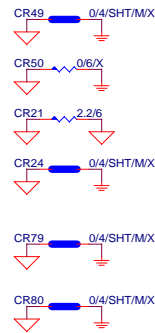


Gigabyte Technology			
FP,F_USB,USB PWR,SPKR,SATA LED			
GA-B85M-D2V PLUS			
Rev	1.0		

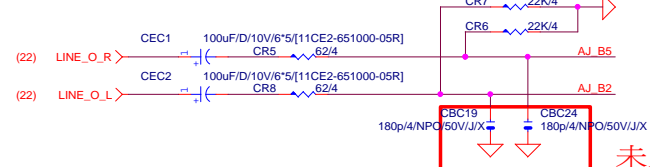
	ALC892	ALC887-VD2	VT1708S-CE
CR44/CBC26	47ohm+1nF	47ohm+1nF	22ohm+100P
CBC42/CBC43	X	X	100P/4
CR6/CR7/CR58/CR54/ CR67/CR68/CR69/CR70	22K/4	22K/4	10K/4/1
CR5/CR8/CR1/CR14/ CR17/CR22/CR73/CR74/ CR13/CR11/CR57/CR53/ CR75/CR76	62 ohm	62 ohm	75 ohm
CR51/CD1/CBC7	O	O	O
CESD1	O	O	O



ESD remove



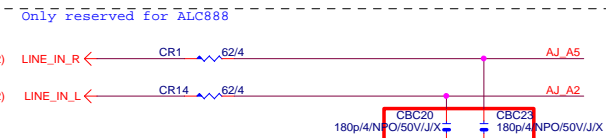
### LINE-OUT



未上件

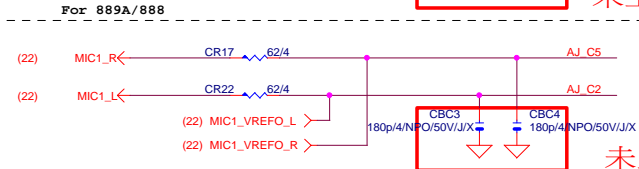
### LINE-IN

Verify MIC function  
in LINE-in



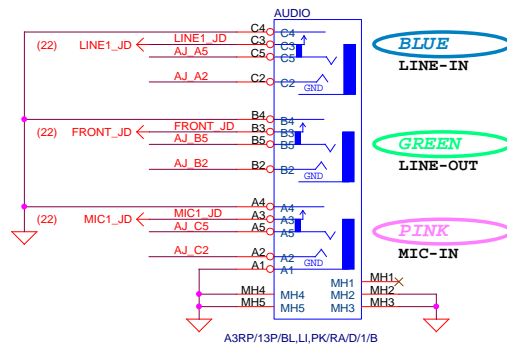
未上件

### MIC-IN

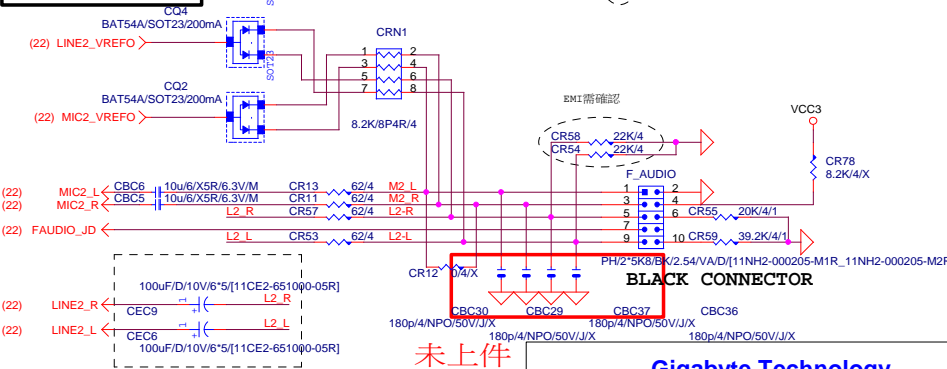


未上件

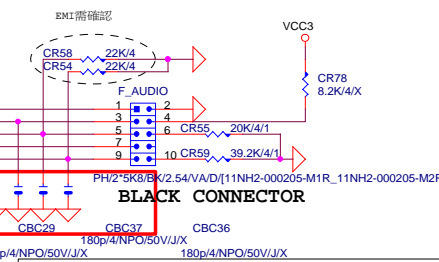
### SPDIF\_OUT



### AZALIA FRONT PANEL



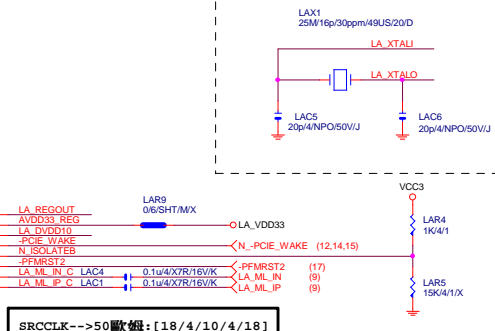
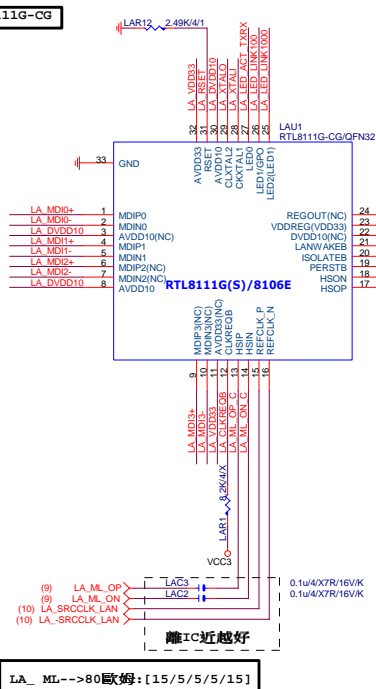
未上件



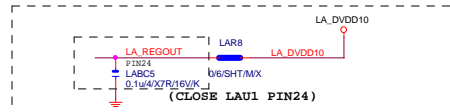
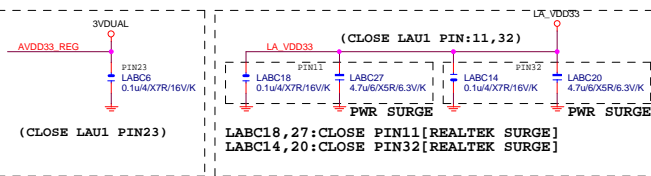
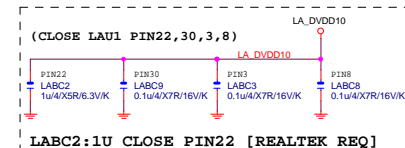
Gigabyte Technology			
Title			
AUDIO JACK			
Size			
Custom			
Document Number			
GA-B85M-D2V PLUS			
Rev			
1.0			
Date:			
Thursday, September 25, 2014			
Sheet			
23 of 33			



# LAN RTL8111G-CG



## LAN POWER



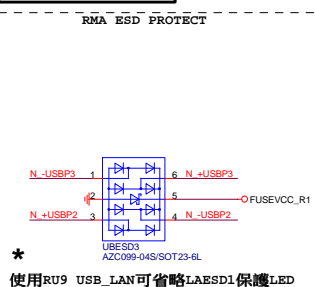
NOTE:  
RT8106E:PIN3,11,22,24-->NC  
LABC2LABC3,LABC5,LABC18,LABC27-->N/A

## BOM NOTICE \*

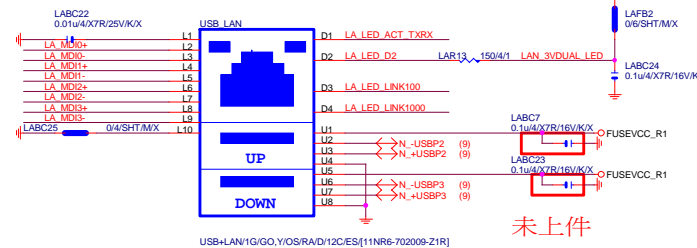
料號 規格 廠商  
11NR6-702009-96R 1G LAN (12core) UDE(RU9 ESD+)  
[LED獨立走線,可省略外加AZC099料件LAESD1]

- 9KV ESD BOM:  
USB\_LAN (RU9):11NR6-702009-96R
- 28KV ESD BOM:  
USB\_LAN (RU9):11NR6-702009-96R  
LAESD2,LAESD3:上件AZC398-048

## USB LAN CONNECTOR



LA\_MDI-->100歐姆:[20/4/8/4/20]

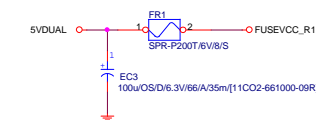


未上件

## USB X3 POWER

### USB2.0 PWR

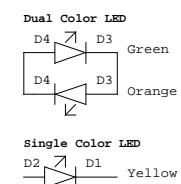
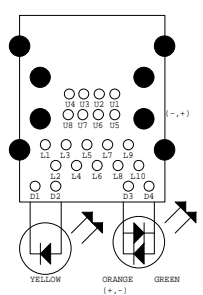
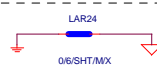
FUSE-0805  
KB\_MS\_USB 4-Port 2.6A



Close to connector

## EMI SHORT PAD

PS:視EMI需求



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

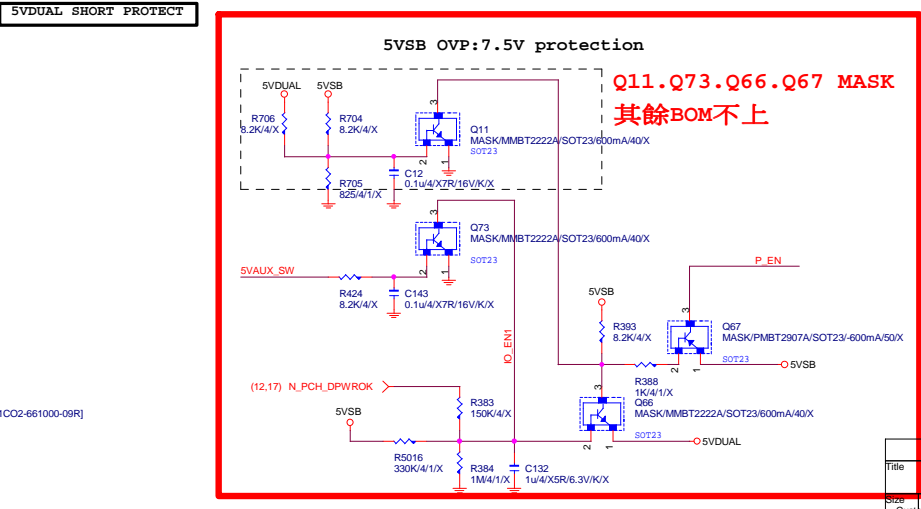
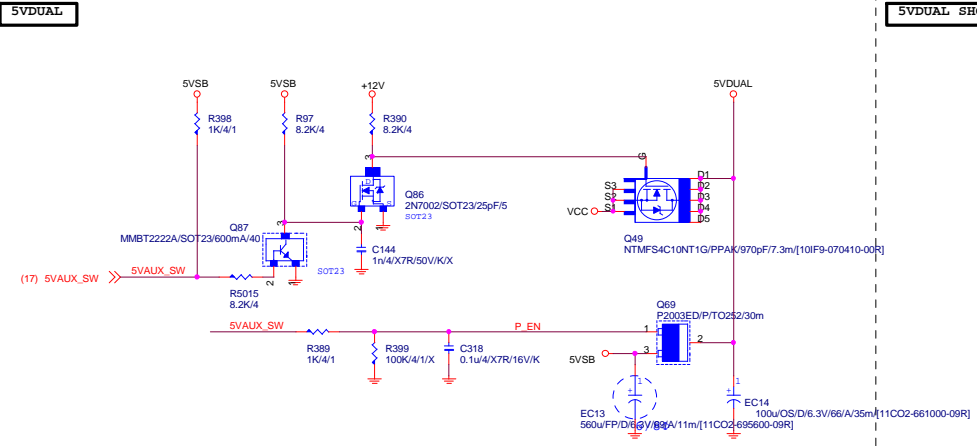
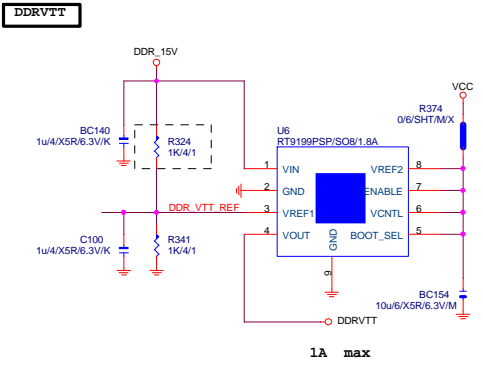
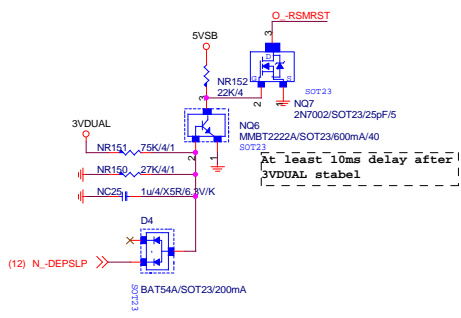
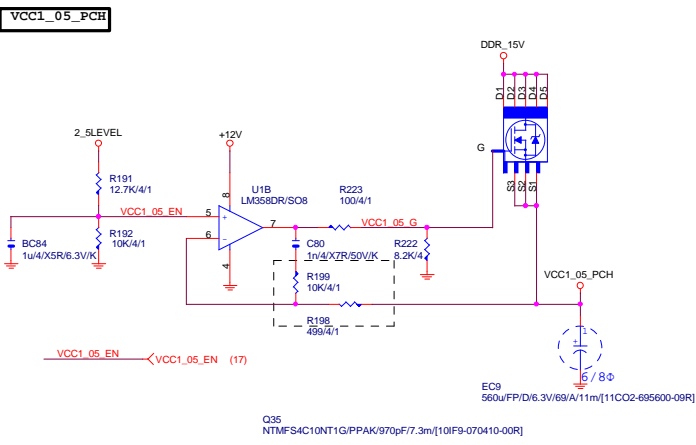
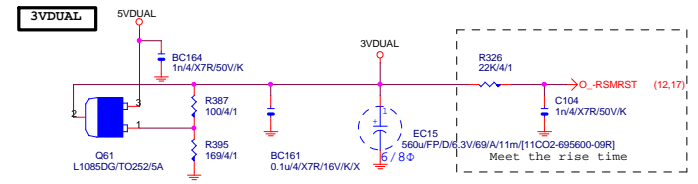
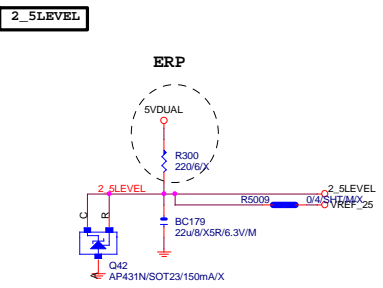
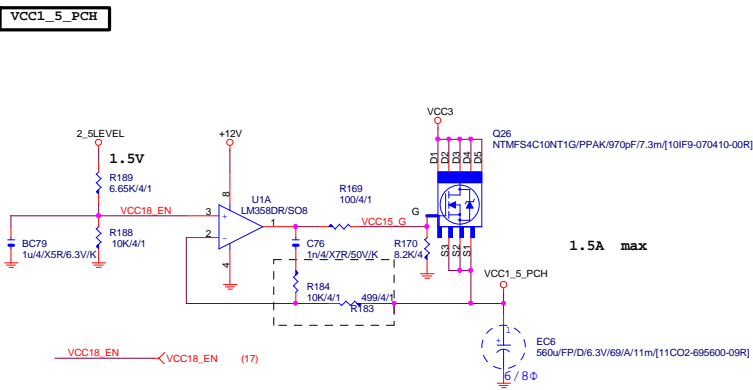
## BOM NOTICE \*

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]

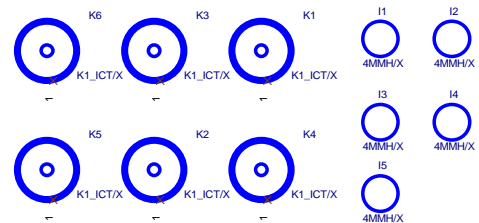
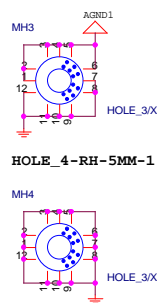
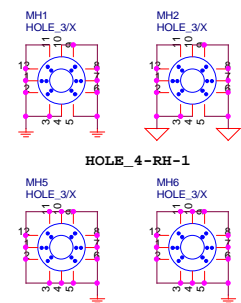
- 9KV ESD BOM:  
USB\_LAN (RU9):11NR6-702009-96R
- 28KV ESD BOM:  
USB\_LAN (RU9):11NR6-702009-96R  
LAESD2,LAESD3:上件AZC398-048

## Gigabyte Technology

Title		Realtek RTL8111G	
Size	Document Number	GA-B85M-D2V PLUS	
Custom		Rev 1.0	
Date	Thursday, September 25, 2014	Sheet	24 of 33



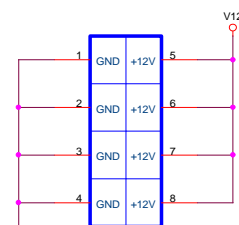
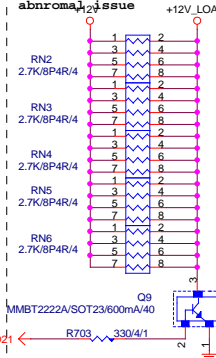
## 【技術通報R&amp;D技術通報155】



To prevent the 5VSB  
under loading when  
boot

To fix 12V light load

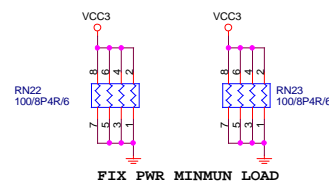
To fix 12V light load  
abnromal issue +12V



BLACK CONNECTOR

APW/2\*4/BK/OC/P/4.2/VA/SN/OH::Location ATX\_12V\_2X4

## 【技術通報R&amp;D技術通報154】



FIX PWR MINMUN LOAD

## Gigabyte Technology

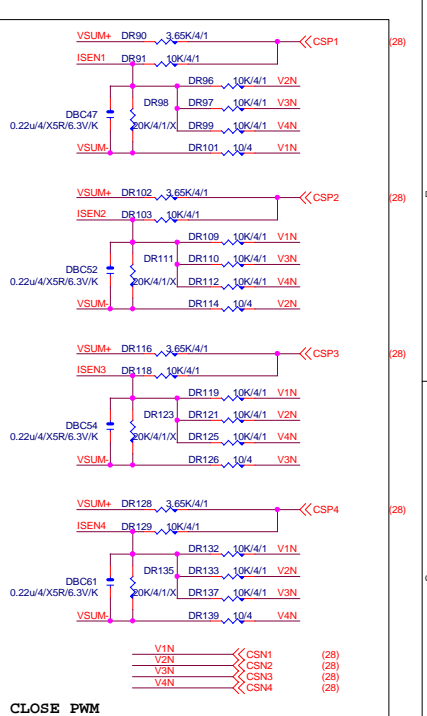
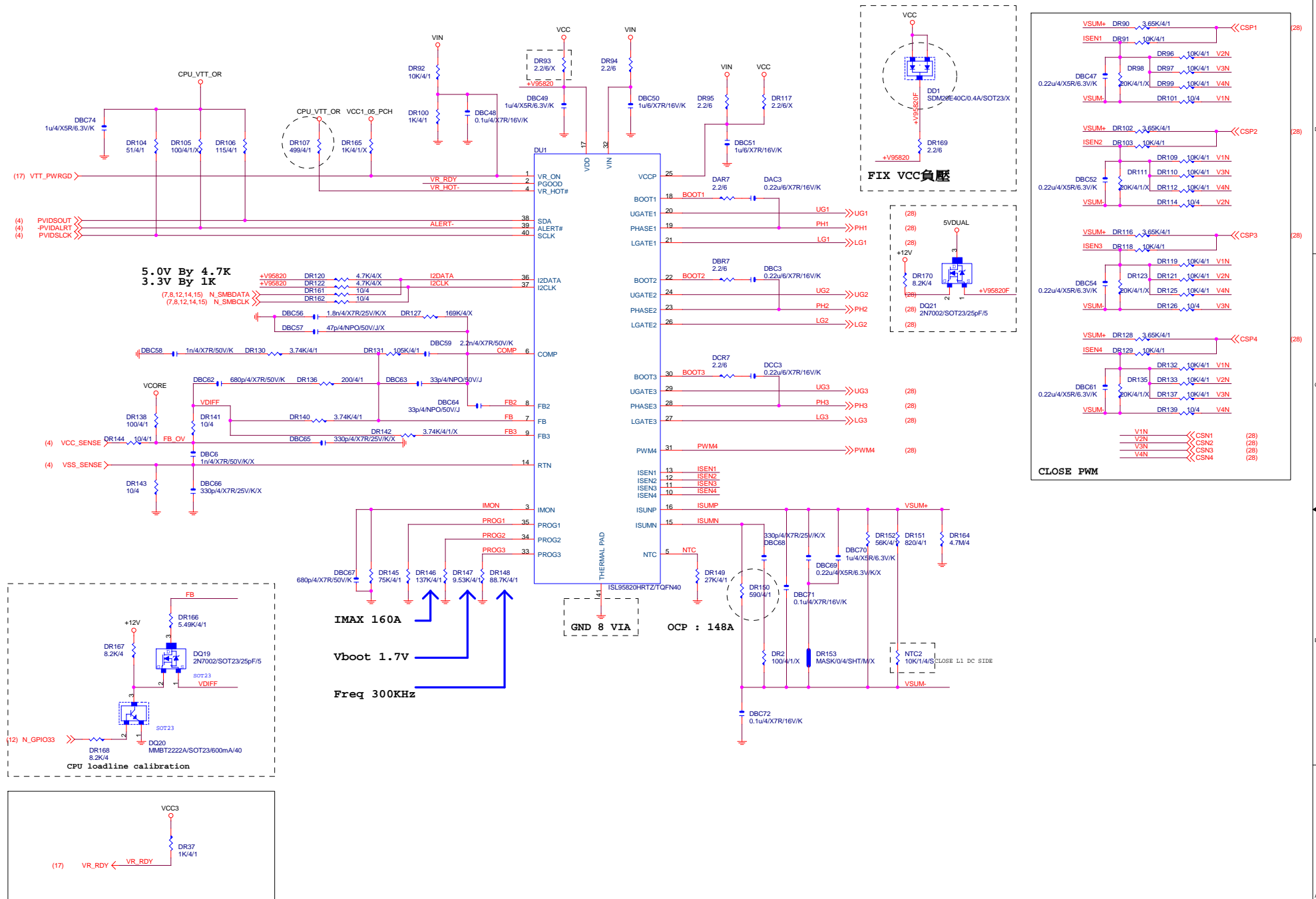
## ATX CONNECTOR

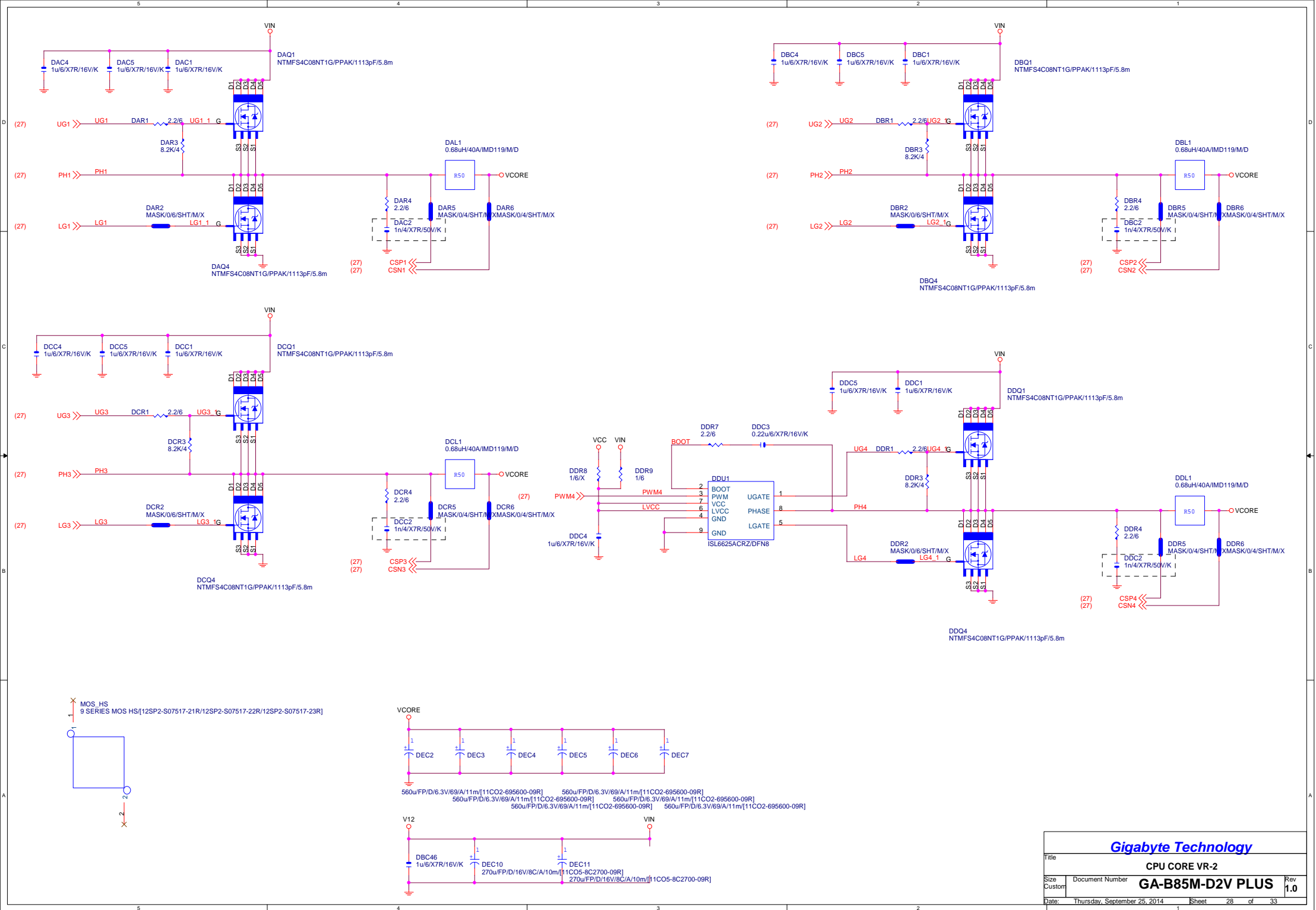
GA-B85M-D2V PLUS

Rev	
1.0	

Date: Thursday, September 25, 2014

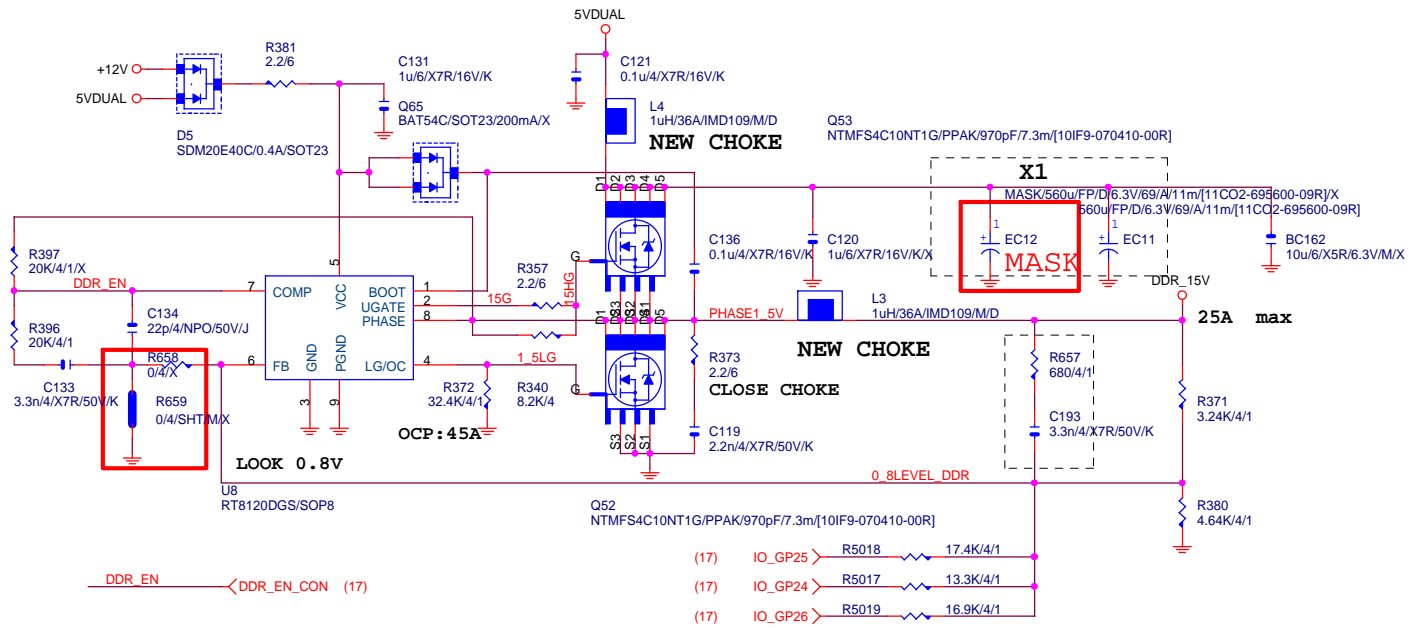
Sheet 26 of 33







# DDR15V

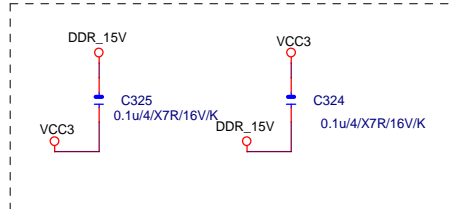


From DDR\_15V source  
10 mils trace to SIO

DDR\_15V  
MR20

DDR\_15VIO  
Q4/SHT/M/X

穿層電容



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

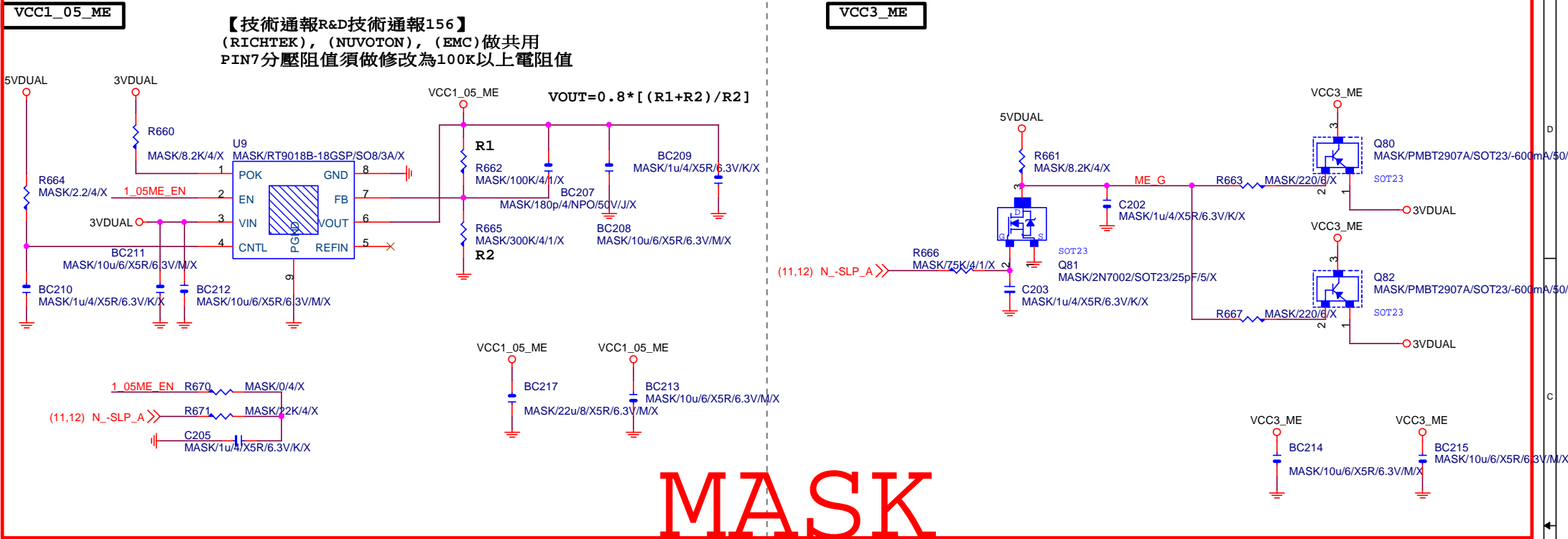
$Rocset = (Iocp * Lgate, rdson) / Iocset$

$Rocset = (45A * 6.7m\Omega) / 10uA = 30K$

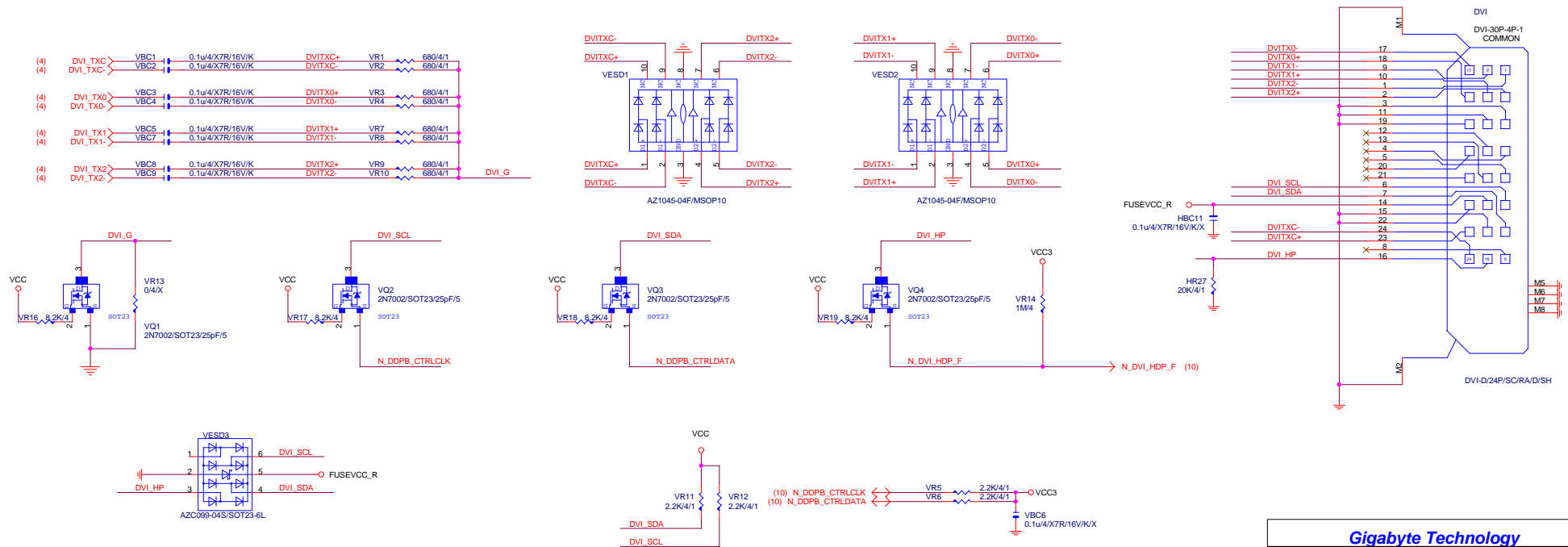
Iocset=10uA

Gigabyte Technology

Title			
DDR POWER			
Size	Document Number	Rev	
Custom	GA-B85M-D2V PLUS	1.0	
Date:	Thursday, September 25, 2014	Sheet	29 of 33



DVI



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Title
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**ITE IT8892E**

Size

Document Number
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GA-B85M-D2V PLUS

Rev	
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1.0

Date \_\_\_\_\_

Thursday, September 25, 2014

Sheet

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32

of

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33



<i>Gigabyte Technology</i>			
Title USB3 EJ188			
Size C	Document Number GA-B85M-D2V PLUS		Rev 1.0
Date: Thursday, September 25, 2014	Sheet 33 of 33		