

# Model Name: GA-B85M-D3H

www.xinxunwei.com 400-800-9990

SHEET TITLE Revision 1.1

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 8728 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 RTL8111F
25	DISCRETE POWER
26	ATX , CLOCK GEN, TPM
27	VCORE ISL95820_1

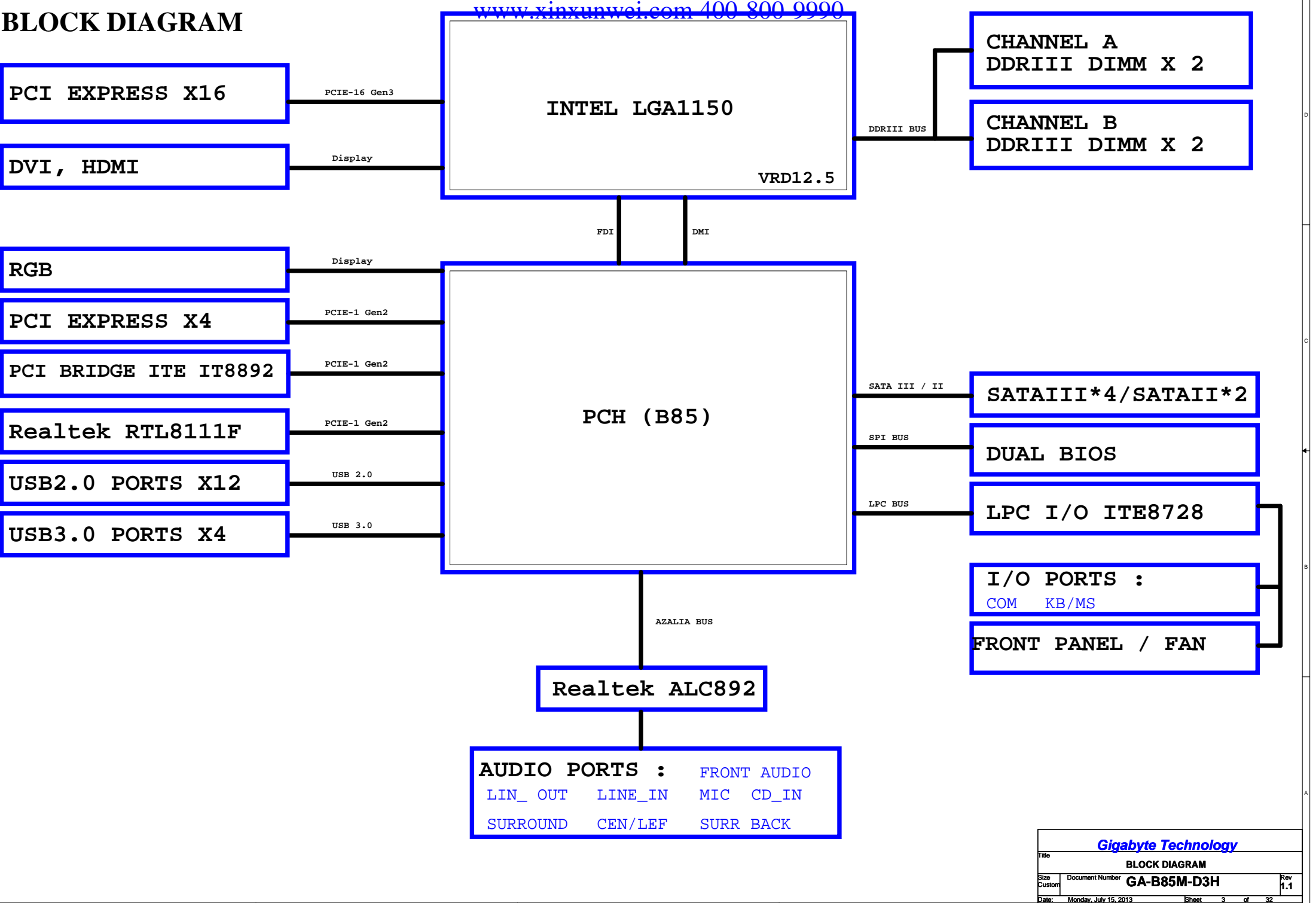
SHEET TITLE

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

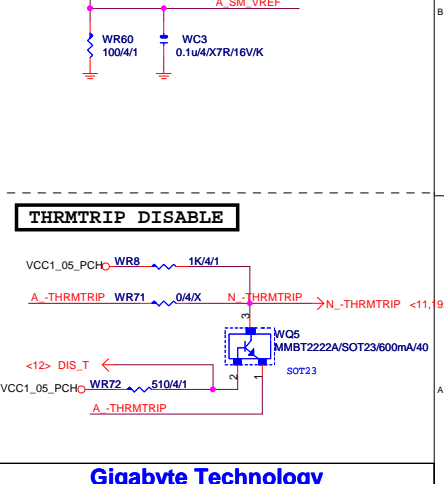
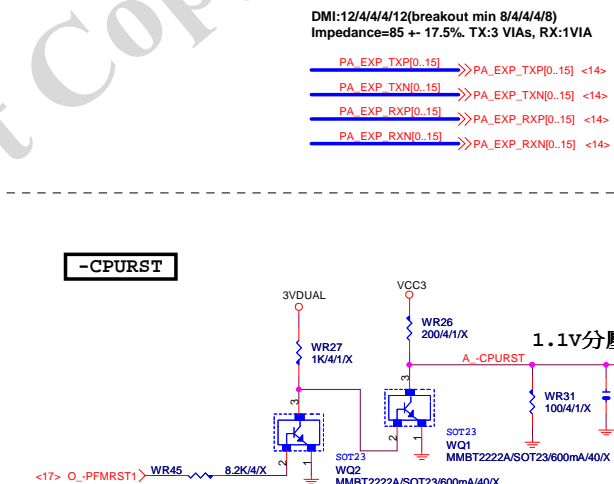
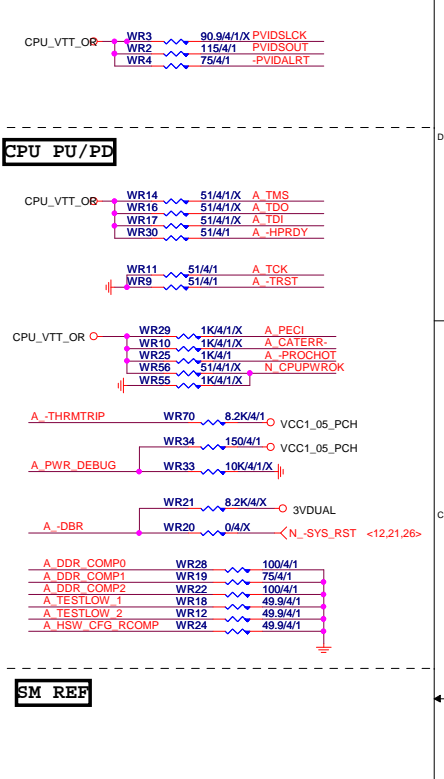
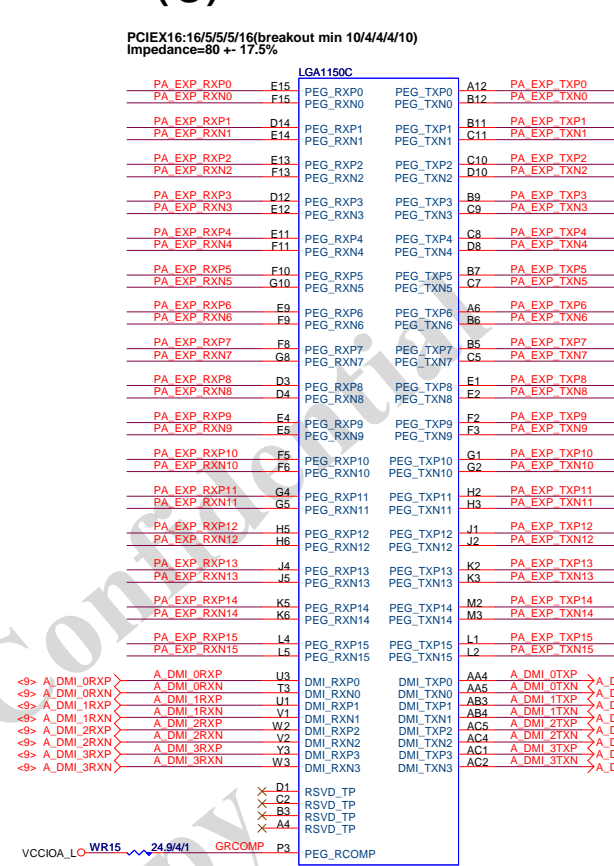
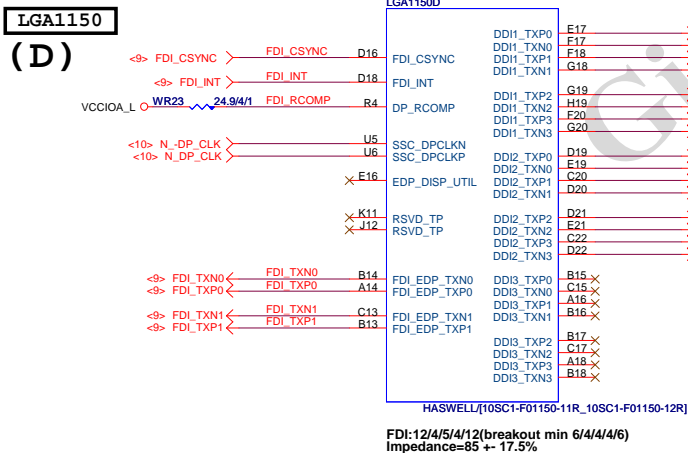
Gigabyte Technology		
Title		
Cover Sheet		
Size	Document Number	Rev
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BLOCK DIAGRAM



## CPU SVID

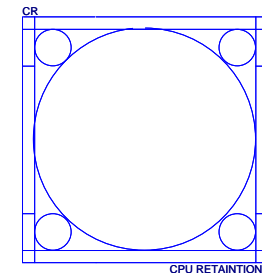


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MAAA1	AV16	DDRO, MA1	AD39 MDA1
MAAA2	AW18	DDRO, MA2	AF38 MDA2
MAAA3	AW17	DDRO, MA3	AF39 MDA3
MAAA4	AU17	DDRO, MA3	AD37 MDA4
MAAA5	AW18	DDRO, MA4	AD40 MDA5
MAAA6	AV17	DDRO, MA5	AD37 MDA6
MAAA7	AT18	DDRO, MA6	AF40 MDA7
MAAA8	AU18	DDRO, MA7	AH40 MDA9
MAAA9	AT19	DDRO, MA8	DH39 MDA13
MAAA10	AW11	DDRO, MA9	AK38 MDA10
MAAA11	AW18	DDRO, MA10	AK39 MDA11
MAAA12	AU19	DDRO, MA11	AH37 MDA12
MAAA13	AV10	DDRO, MA12	AK38 MDA8
MAAA14	AT20	DDRO, MA13	AK37 MDA14
MAAA15	AU21	DDRO, MA14	AK40 MDA17
		DDRO, MA15	AM40 MDA19
MODT A0	AW10	DDRO, DO16	AP39 MDA21
MODT A1	AY8	DDRO, DO17	AM38 MDA18
MODT A2	AU9	DDRO, DO18	AP39 MDA19
MODT A3	AW8	DDRO, DO19	AM39 MDA20
		DDRO, DO20	AK38 MDA16
		DDRO, DO21	AP37 MDA22
		DDRO, DO22	AP40 MDA23
		DDRO, DO23	AV37 MDA25
		DDRO, DO24	AW37 MDA29
		DDRO, DO25	AK38 MDA26
		DDRO, DO26	AV35 MDA27
		DDRO, DO27	AM37 MDA28
		DDRO, DO28	AT37 MDA24
		DDRO, DO29	AD35 MDA30
		DDRO, DO30	AW35 MDA31
		DDRO, DO31	AY6 MDA33
		DDRO, DO32	AV6 MDA37
		DDRO, DO33	AY4 MDA38
		DDRO, DO34	AW4 MDA39
		DDRO, DO35	AR1 MDA41
		DDRO, DO36	AR3 MDA45
		DDRO, DO37	AN2 MDA46
		DDRO, DO38	AN1 MDA47
		DDRO, DO39	AL1 MDA49
		DDRO, DO40	AL3 MDA53
		DDRO, DO41	AJ3 MDA50
		DDRO, DO42	AJ4 MDA51
		DDRO, DO43	AJ2 MDA52
		DDRO, DO44	AJ3 MDA44
		DDRO, DO45	AJ2 MDA54
		DDRO, DO46	AJ1 MDA55
		DDRO, DO47	AG1 MDA57
		DDRO, DO48	AG4 MDA61
		DDRO, DO49	AE3 MDA58
		DDRO, DO50	AE4 MDA59
		DDRO, DO51	AG2 MDA60
		DDRO, DO52	AG3 MDA56
		DDRO, DO53	AG4 MDA62
		DDRO, DO54	AJ1 MDA63
		DDRO, DO55	AE39 DQSA0
		DDRO, DO56	AJ38 DQSA1
		DDRO, DO57	AN39 DQSA2
		DDRO, DO58	AV36 DQSA3
		DDRO, DO59	AV35 DQSA4
		DDRO, DO60	AP3 DQSA5
		DDRO, DO61	AK3 DQSA6
		DDRO, DO62	AF3 DQSA7
		DDRO, DO63	AE38 DQSA0
		DDRO, DO64	AN38 DQSA1
		DDRO, DO65	AN36 DQSA2
		DDRO, DO66	AK2 DQSA6
		DDRO, DO67	AK2 DQSA7
		DDRO, DO68	AF32 DQSA0
		DDRO, DO69	AK38 DQSA1
		DDRO, DO70	AN38 DQSA2
		DDRO, DO71	AK36 DQSA3
		DDRO, DO72	AW5 DQSA4
		DDRO, DO73	AP3 DQSA5
		DDRO, DO74	AK2 DQSA6
		DDRO, DO75	AF32 DQSA7
		DDRO, DO76	AK38 DQSA0
		DDRO, DO77	AK38 DQSA1
		DDRO, DO78	AN38 DQSA2
		DDRO, DO79	AK36 DQSA3
		DDRO, DO80	AW5 DQSA4
		DDRO, DO81	AP3 DQSA5
		DDRO, DO82	AK2 DQSA6
		DDRO, DO83	AF32 DQSA7
		DDRO, DO84	AK38 DQSA0
		DDRO, DO85	AK38 DQSA1
		DDRO, DO86	AN38 DQSA2
		DDRO, DO87	AK36 DQSA3
		DDRO, DO88	AW5 DQSA4
		DDRO, DO89	AP3 DQSA5
		DDRO, DO90	AK2 DQSA6
		DDRO, DO91	AF32 DQSA7
		DDRO, DO92	AK38 DQSA0

HASWELL/10SC1-F01150-11R\_10SC1-F01150-12R

		LGA1150B			
	MAAB0	AL19	DDR1_MA0	DDR1_D00	AE34 MD80
	MAAB1	AK23	DDR1_MA1	DDR1_D01	AE35 MDb1
	MAAB2	AM22	DDR1_MA2	DDR1_D02	AG35 MD82
	MAAB3	AM23	DDR1_MA3	DDR1_D03	AD34 MD83
	MAAB4	AL23	DDR1_MA4	DDR1_D04	AD34 MD84
	MAAB5	AP23	DDR1_MA5	DDR1_D05	AD35 MD85
	MAAB6	AY24	DDR1_MA6	DDR1_D06	AG34 MD86
	MAAB7	AU25	DDR1_MA7	DDR1_D07	AH34 MD87
	MAAB8	AU26	DDR1_MA8	DDR1_D08	AL34 MD88
	MAAB9	AW25	DDR1_MA9	DDR1_D09	AL35 MD89
	MAAB10	AP18	DDR1_MA10	DDR1_D010	AK31 MD910
	MAAB11	AY25	DDR1_MA11	DDR1_D011	AL31 MD911
	MAAB12	AY26	DDR1_MA12	DDR1_D012	AK34 MD912
	MAAB13	AV27	DDR1_MA13	DDR1_D013	AK35 MD913
	MAAB14	AV27	DDR1_MA14	DDR1_D014	AK32 MD914
	MAAB15	AY28	DDR1_MA15	DDR1_D015	AL32 MD915
				DDR1_D016	AN34 MD917
	MODT_B0	AM17	DDR1_ODT0	DDR1_D017	AP34 MD921
	MODT_B1	AL16	DDR1_ODT1	DDR1_D018	AN31 MD919
	MODT_B2	AM16	DDR1_ODT2	DDR1_D019	AP31 MD923
	MODT_B3	AK15	DDR1_ODT3	DDR1_D020	AN35 MD920
				DDR1_D021	AP35 MD916
		AM26	DDR1_ECC0	DDR1_D022	AN32 MD918
		AM25	DDR1_ECC1	DDR1_D023	AP32 MD922
		AP25	DDR1_ECC2	DDR1_D024	AM29 MD925
		AP26	DDR1_ECC3	DDR1_D025	AM28 MD926
		AL26	DDR1_ECC4	DDR1_D026	AR29 MD927
		AL25	DDR1_ECC5	DDR1_D027	AR28 MD930
		AR26	DDR1_ECC6	DDR1_D028	AL29 MD924
		AR25	DDR1_ECC7	DDR1_D029	AL28 MD928
				DDR1_D030	AP28 MD926
				DDR1_D031	AP28 MD931
				DDR1_D032	AR12 MD932
				DDR1_D033	AP12 MD933
				DDR1_D034	AL12 MD934
				DDR1_D035	AL12 MD935
				DDR1_D036	AR13 MD936
				DDR1_D037	AP13 MD937
				DDR1_D038	MD938
				DDR1_D039	AM12 MD939
				DDR1_D040	AR9 MD945
				DDR1_D041	AP9 MD941
				DDR1_D042	AR6 MD947
				DDR1_D043	AP6 MD943
				DDR1_D044	AR10 MD940
				DDR1_D045	AP10 MD940
				DDR1_D046	AR7 MD946
				DDR1_D047	MD942
				DDR1_D048	AM9 MD952
				DDR1_D049	AL9 MD953
				DDR1_D050	AL6 MD955
				DDR1_D051	AL7 MD956
				DDR1_D052	AM10 MD948
				DDR1_D053	AL10 MD949
				DDR1_D054	AM6 MD954
				DDR1_D055	AM7 MD951
				DDR1_D056	AH6 MD957
				DDR1_D057	AH7 MD960
				DDR1_D058	AH8 MD959
				DDR1_D059	AE7 MD963
				DDR1_D060	AJ6 MD956
				DDR1_D061	AJ7 MD957
				DDR1_D062	AE6 MD958
				DDR1_D063	AE7 MD962
				DDR1_D064	AE35 MD980
				DDR1_D065	DO81
				DDR1_D066	AP33 MD982
				DDR1_D067	AN28 MD983
				DDR1_D068	AN12 MD984
				DDR1_D069	AP8 MD985
				DDR1_D070	AG7 MD986
				DDR1_D071	AG7 MD

HASWELL/10SC1-F01150-11R\_10SC1-F01150-12R



LGA1150\_F



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

DDR BUS

3. MODT\_A[0..3] / \ MODT\_A[0..3]

MODT\_B[0..3]

<7> MDA[0..63] ↔ MDA[0..63]

8 MDB[0..63]  $\longleftrightarrow$  MDB[0..63]

**<7> -DQSA[0..7]**  $\longleftrightarrow$  **-DQSA[0..7]**

MAAAIO 151

<7> MAAA[0..15] ↔ MAAA[0..15]

<8> MAAB[0..15] ↔ MAAB[0..15]

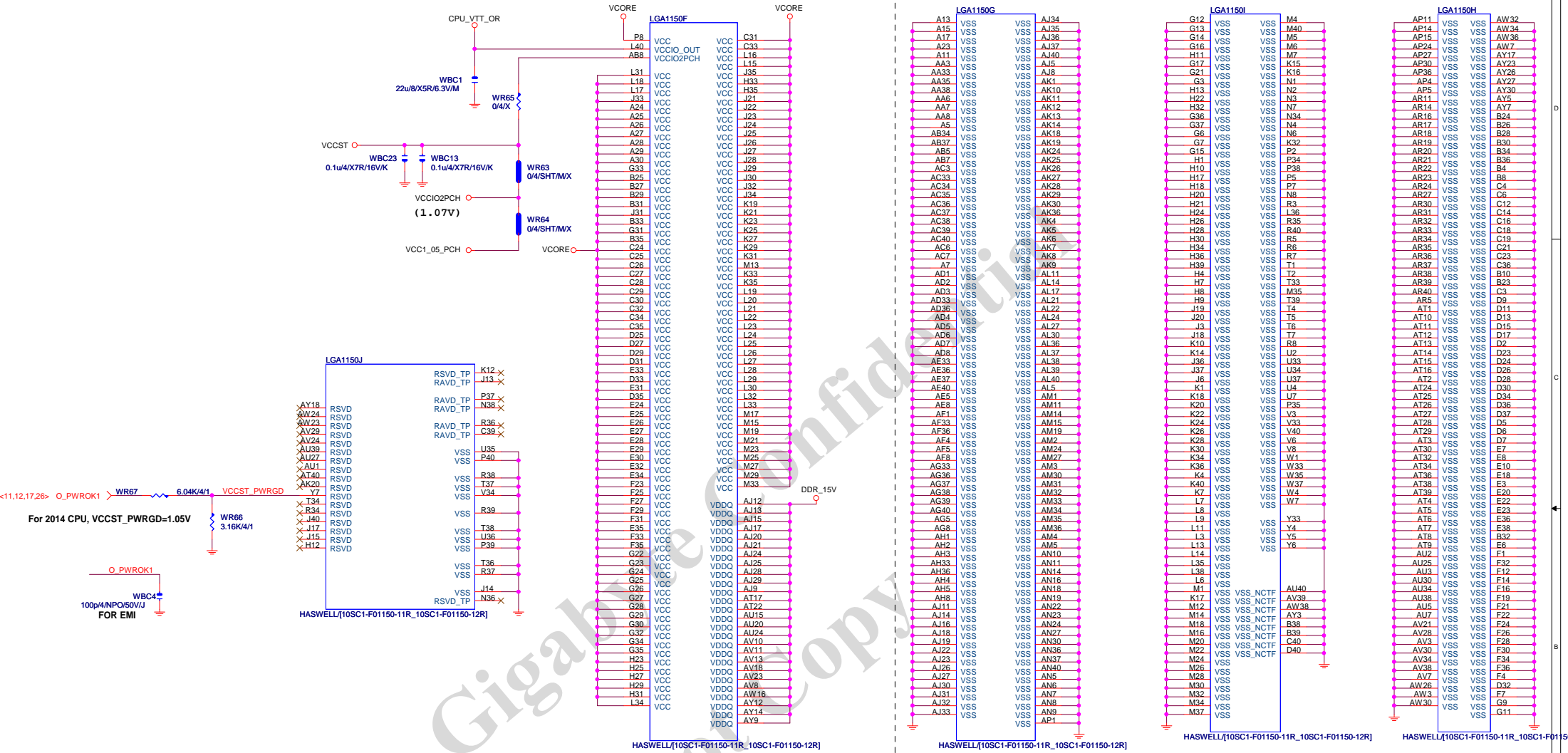
DQSB[0..7]

<8> DQSB[0..7]  $\longleftrightarrow$  -DQSB[0..7]

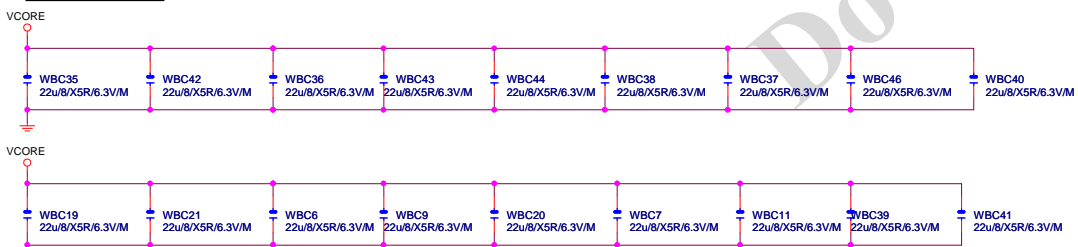
<8> -DQSB[0..7] <=>

LGA1150 (F,J)

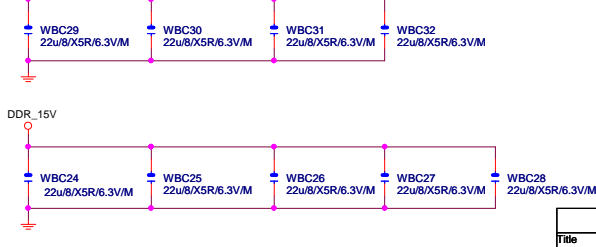
www.xinxunwei.com 400-800-9990 (G,H,I)



VCore CAP (X18)



DDR CAP (X9)



Gigabyte Technology

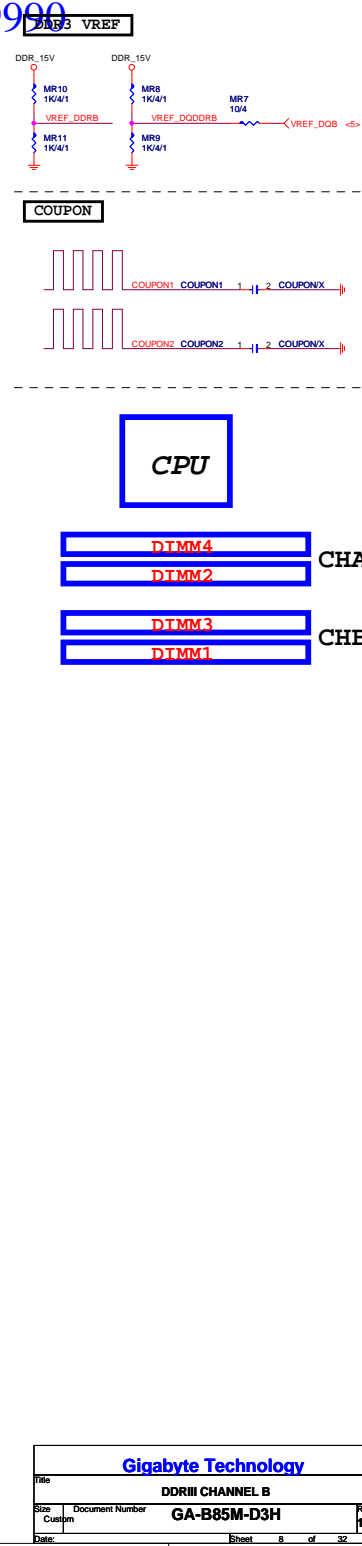
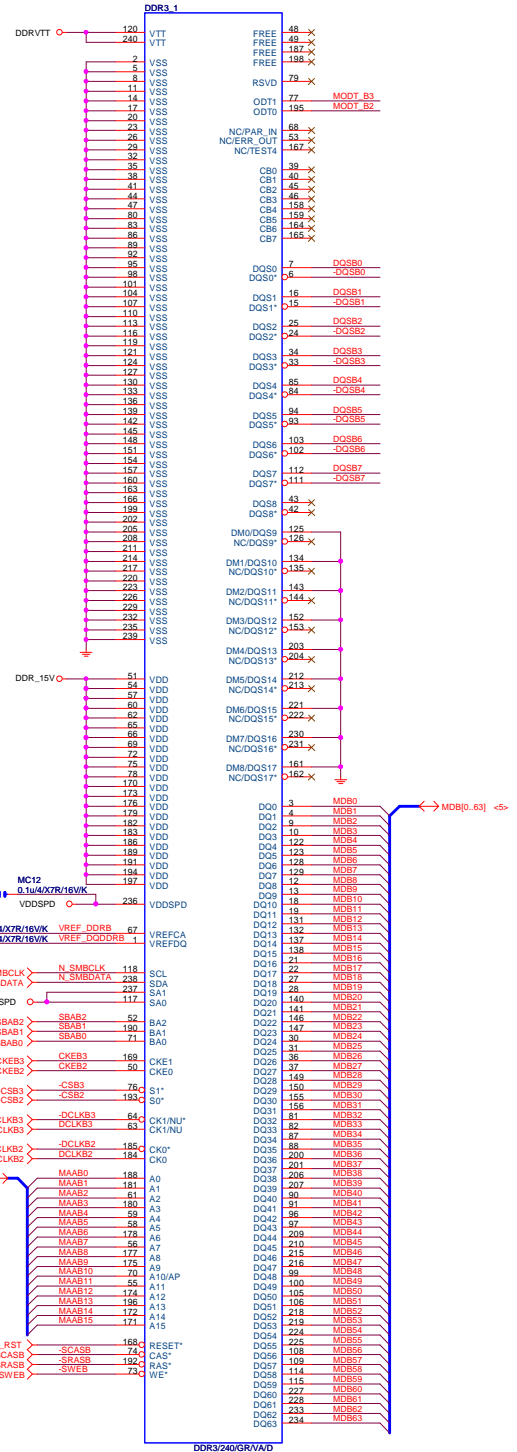
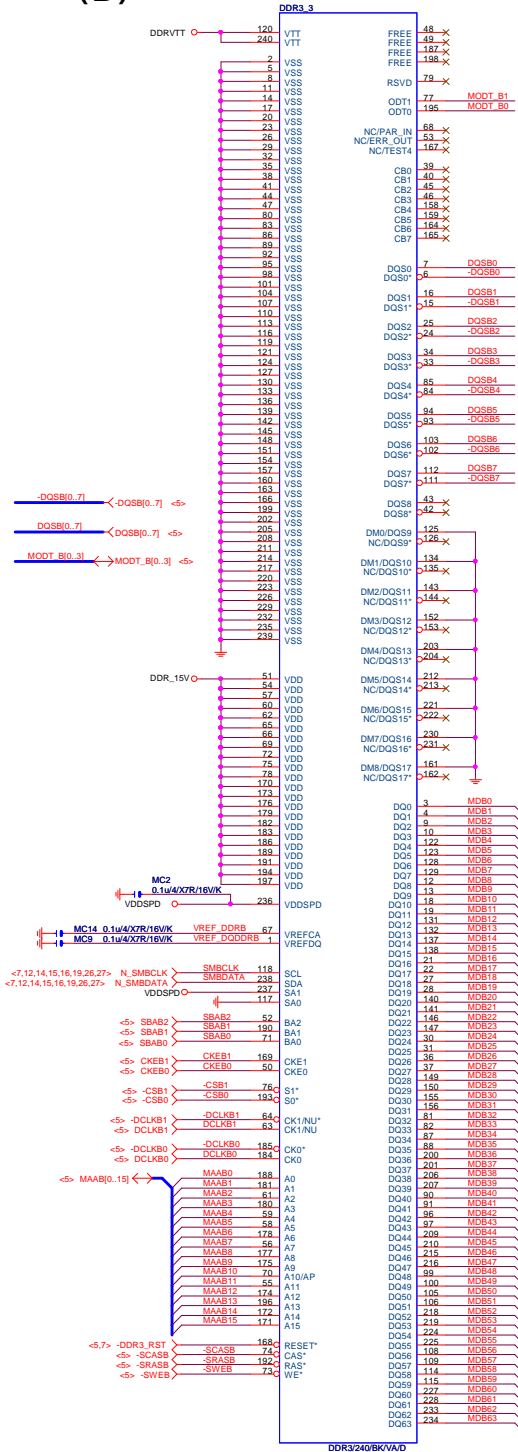
CPU LGA1150-C

GA-B85M-D3H

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PCH

(B)

DMI:12/4/4/4/12(breakout min 8/4/4/4/8)

Impedance=85 +- 17.5%

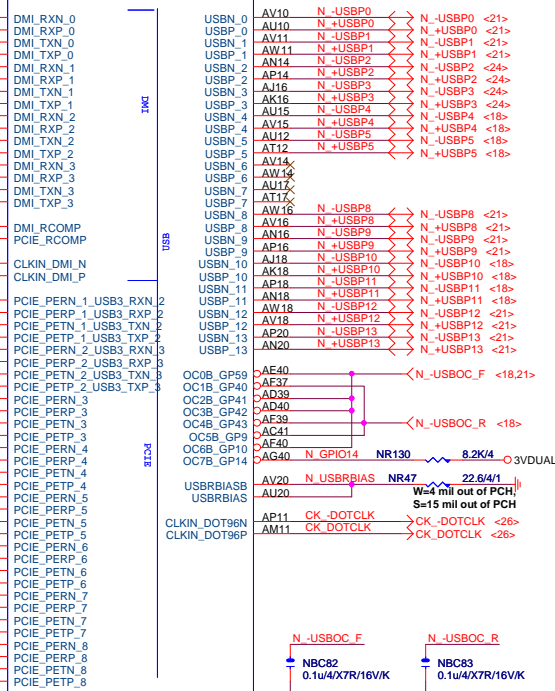
USB2.0 : 12/4.5/7/5/4.5/12 (breakout min 8/4/4/4/8)

Impedance=90 +- 17.5%

PCHB

B85: Port 6/7 N/A

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



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

放靠近 Device &amp; PCI-E Slot

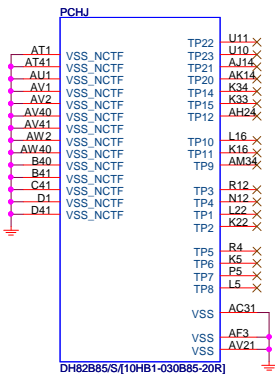
Impedance=80 +- 17.5%

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

PCH

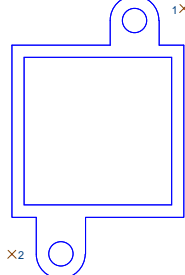
(J)

PCH H/S



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

SB HEATSIN

PCH\_HS  
PCH\_HS[12SP2-S04209-01R\_12SP2-S04209-02R\_12SP2-S04209-03R]

USB TABLE

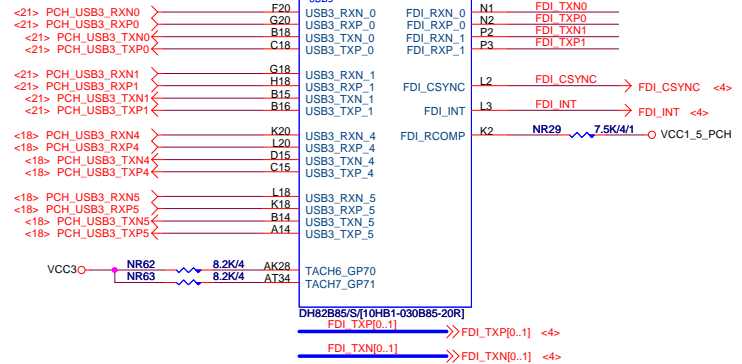
OC[3:0]# for Device 29 (ports 0-7)

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

USB OC#	Configure
OC0#	F_USB30
OC1#	F_USB1
OC2#	F_USB2
OC3#	F_USB3
OC4#	USB_LAN
OC5#	R_USB30
OC6#	KB_MS_USB
OC7#	Not Use

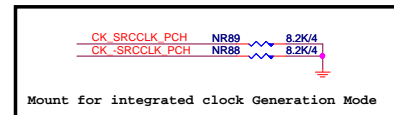
PCH

(F)

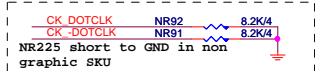


USB3.0:20/5/7/5/20 (breakout min 8/4/4/4/8) ; ONLY 3 VIAS  
Impedance=85 +- 17.5%  
Back Panel < 10000 MILS  
Front Panel < 6000 MILS

PCH CLK PD



Mount for integrated clock Generation Mode



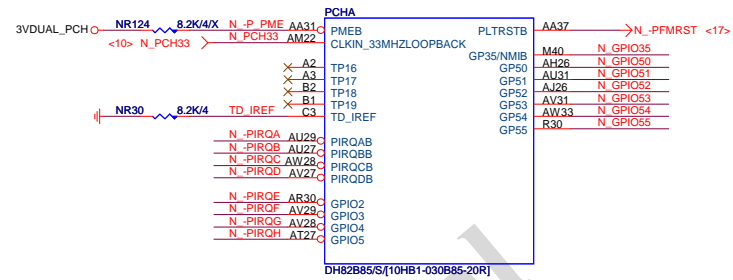
NR225 short to GND in non graphic SKU

Gigabyte Technology

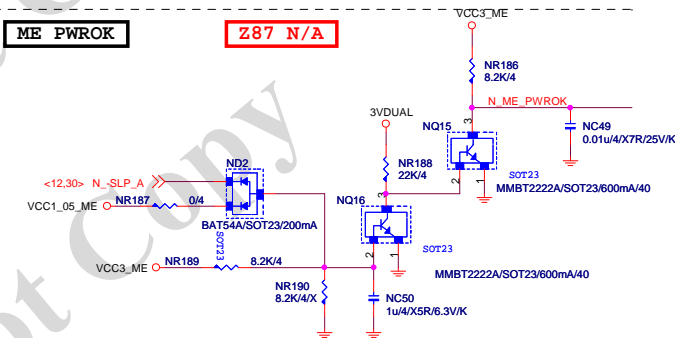
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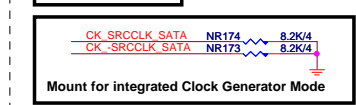
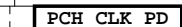
PCH (A)



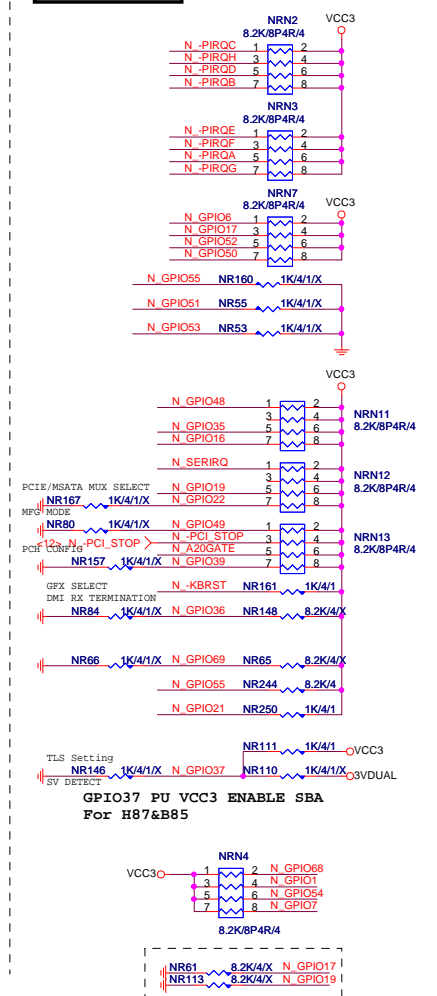
## Z87 N/A



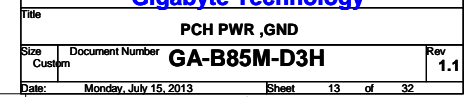
GPIO38 Ctrl



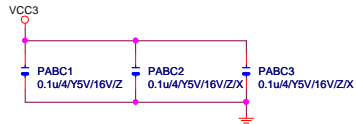
PCH	PU/PD
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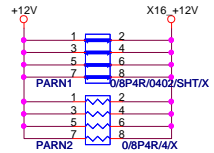




# PCIEX16 CAP



# PCIEX16 PROTECT SHT

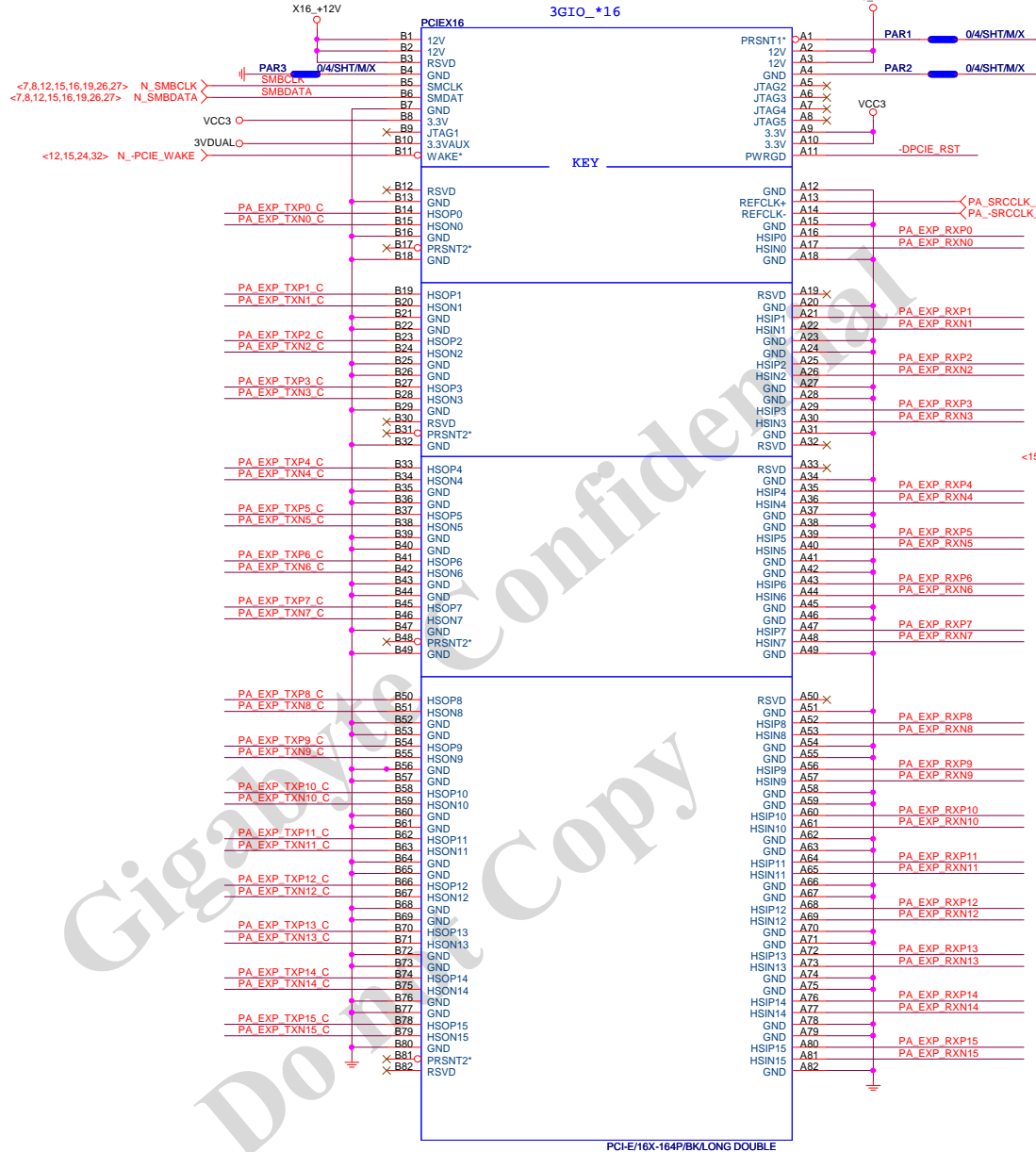


# PCIEX16 AC CAP

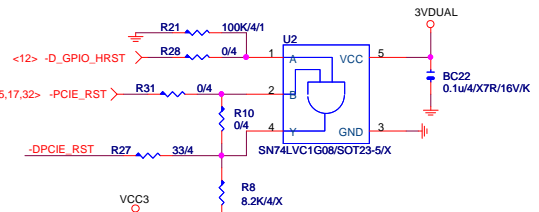
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PA EXP TXN0	PAC4	0.22u4/X5R6.3V/K	PA EXP TXN0 C
PA EXP TXP1	PAC6	0.22u4/X5R6.3V/K	PA EXP TXP1 C
PA EXP TXN1	PAC7	0.22u4/X5R6.3V/K	PA EXP TXN1 C
PA EXP TXP2	PAC8	0.22u4/X5R6.3V/K	PA EXP TXP2 C
PA EXP TXN2	PAC9	0.22u4/X5R6.3V/K	PA EXP TXN2 C
PA EXP TXP3	PAC10	0.22u4/X5R6.3V/K	PA EXP TXP3 C
PA EXP TXN3	PAC11	0.22u4/X5R6.3V/K	PA EXP TXN3 C
PA EXP TXP4	PAC12	0.22u4/X5R6.3V/K	PA EXP TXP4 C
PA EXP TXN4	PAC13	0.22u4/X5R6.3V/K	PA EXP TXN4 C
PA EXP TXP5	PAC14	0.22u4/X5R6.3V/K	PA EXP TXP5 C
PA EXP TXN5	PAC15	0.22u4/X5R6.3V/K	PA EXP TXN5 C
PA EXP TXP6	PAC16	0.22u4/X5R6.3V/K	PA EXP TXP6 C
PA EXP TXN6	PAC17	0.22u4/X5R6.3V/K	PA EXP TXN6 C
PA EXP TXP7	PAC18	0.22u4/X5R6.3V/K	PA EXP TXP7 C
PA EXP TXN7	PAC19	0.22u4/X5R6.3V/K	PA EXP TXN7 C
PA EXP TXP8	PAC20	0.22u4/X5R6.3V/K	PA EXP TXP8 C
PA EXP TXN8	PAC21	0.22u4/X5R6.3V/K	PA EXP TXN8 C
PA EXP TXP9	PAC22	0.22u4/X5R6.3V/K	PA EXP TXP9 C
PA EXP TXN9	PAC23	0.22u4/X5R6.3V/K	PA EXP TXN9 C
PA EXP TXP10	PAC24	0.22u4/X5R6.3V/K	PA EXP TXP10 C
PA EXP TXN10	PAC25	0.22u4/X5R6.3V/K	PA EXP TXN10 C
PA EXP TXP11	PAC26	0.22u4/X5R6.3V/K	PA EXP TXP11 C
PA EXP TXN11	PAC27	0.22u4/X5R6.3V/K	PA EXP TXN11 C
PA EXP TXP12	PAC28	0.22u4/X5R6.3V/K	PA EXP TXP12 C
PA EXP TXN12	PAC29	0.22u4/X5R6.3V/K	PA EXP TXN12 C
PA EXP TXP13	PAC30	0.22u4/X5R6.3V/K	PA EXP TXP13 C
PA EXP TXN13	PAC31	0.22u4/X5R6.3V/K	PA EXP TXN13 C
PA EXP TXP14	PAC32	0.22u4/X5R6.3V/K	PA EXP TXP14 C
PA EXP TXN14	PAC33	0.22u4/X5R6.3V/K	PA EXP TXN14 C
PA EXP TXP15	PAC34	0.22u4/X5R6.3V/K	PA EXP TXP15 C
PA EXP TXN15	PAC35	0.22u4/X5R6.3V/K	PA EXP TXN15 C

PA EXP RXP[0..15] >>> PA\_EXP\_RXP[0..15] <4>  
PA EXP RXN[0..15] >>> PA\_EXP\_RXN[0..15] <4>  
PA EXP TXP[0..15] >>> PA\_EXP\_TXP[0..15] <4>  
PA EXP TXN[0..15] >>> PA\_EXP\_TXN[0..15] <4>

# PCIEX16 SLOT

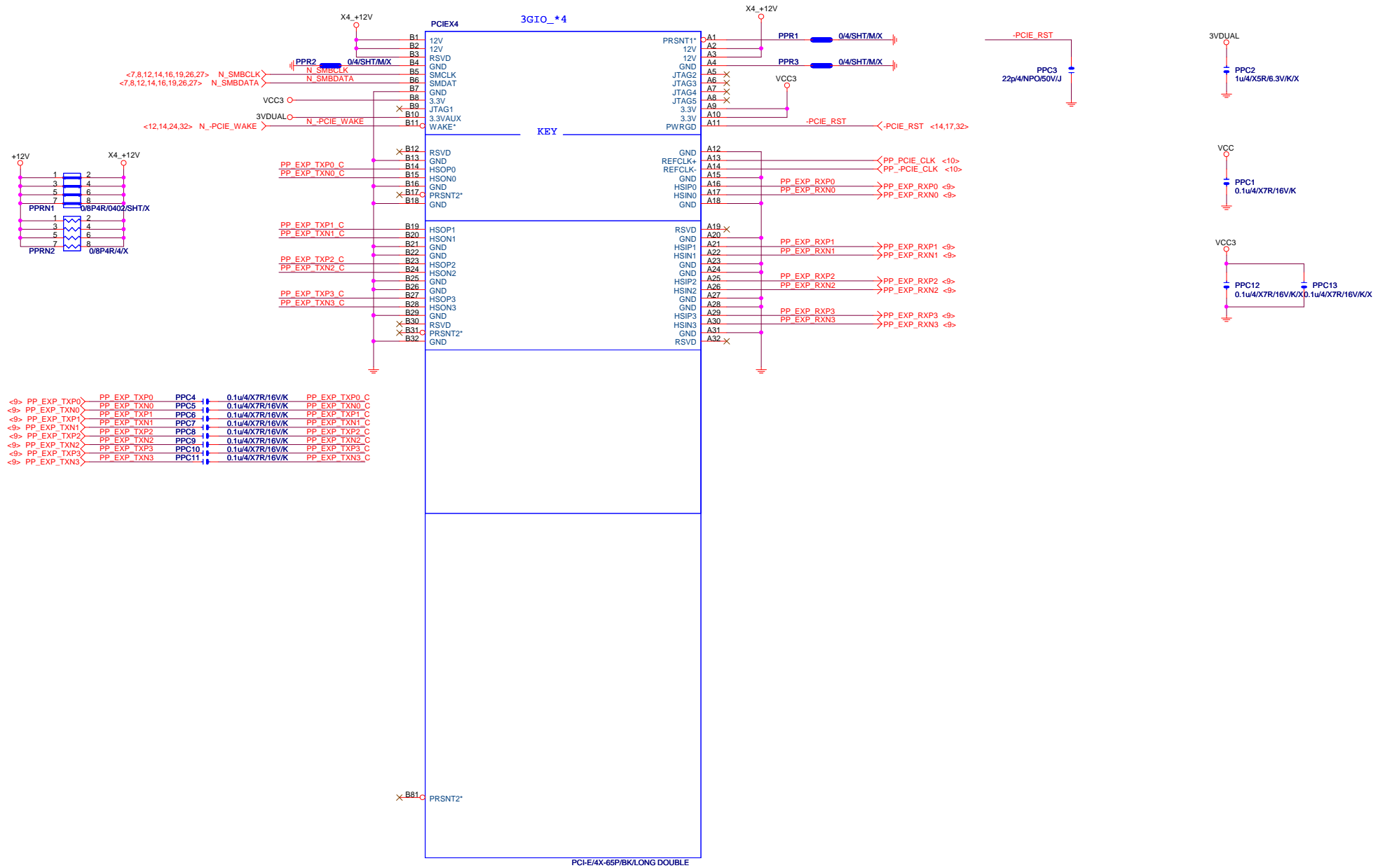


The auxiliary reset circuit is only required for PCIe Gen3 margining and functional link training



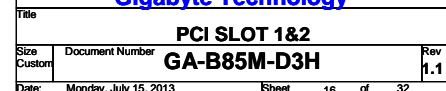


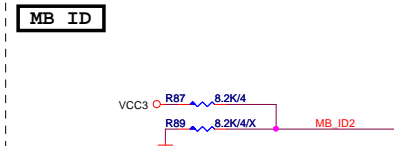
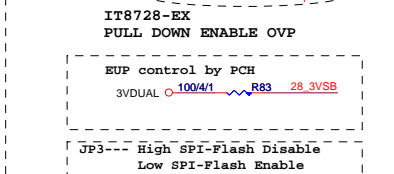
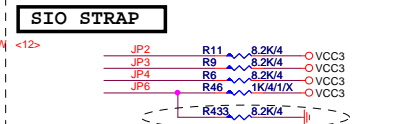
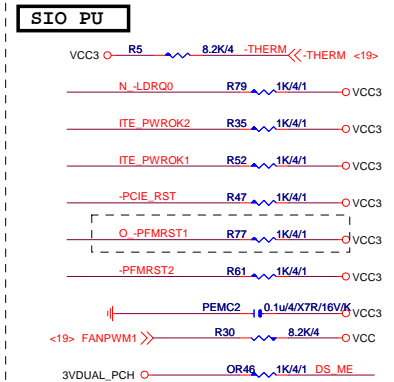
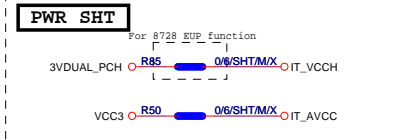
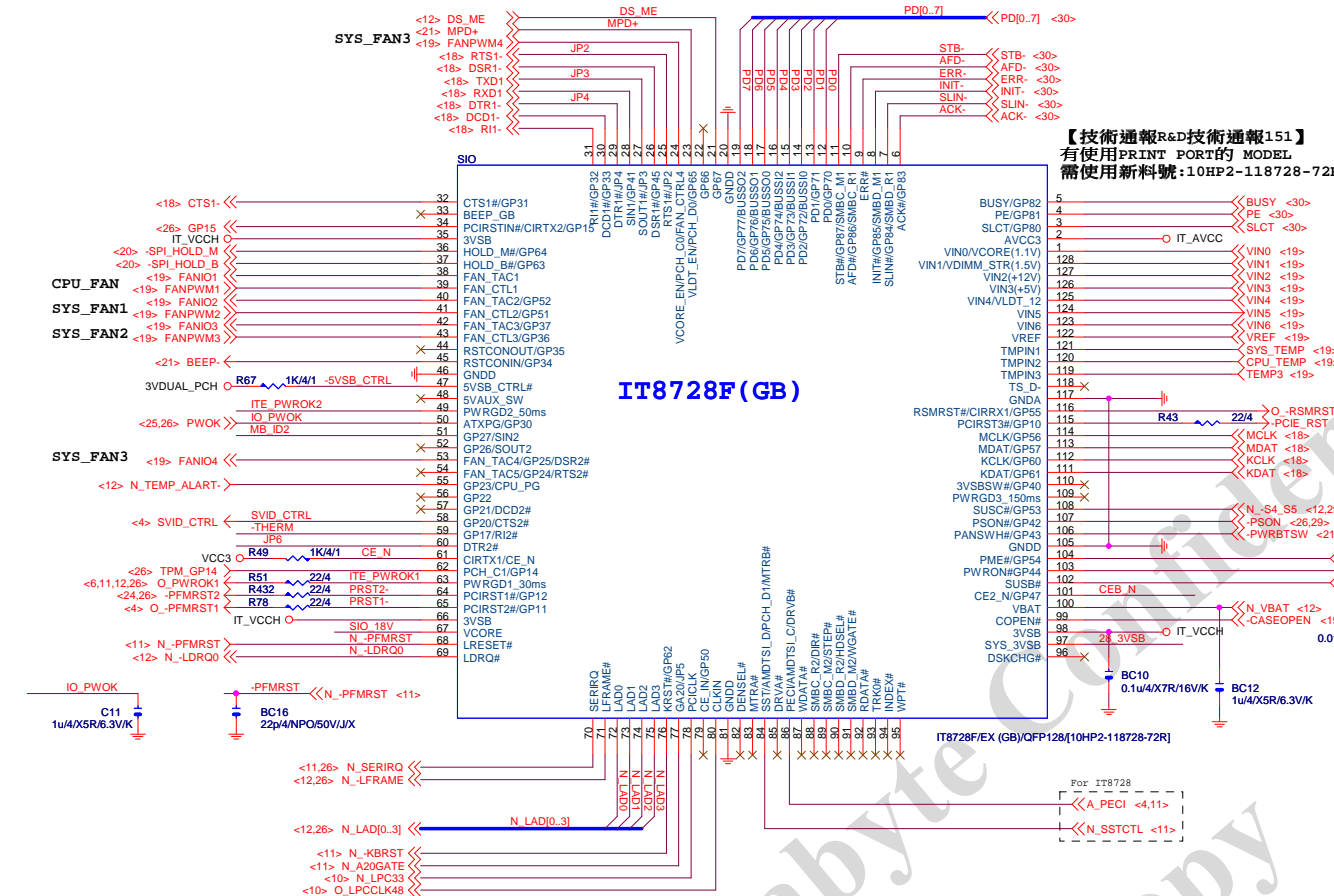
## PCIEX4 SLOT



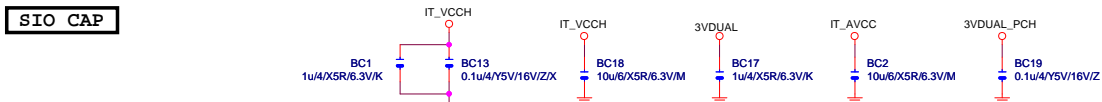
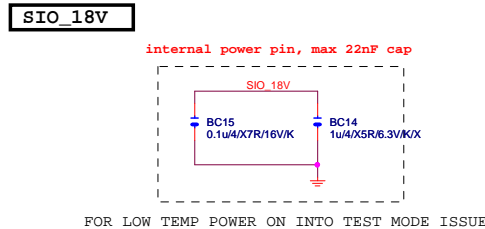
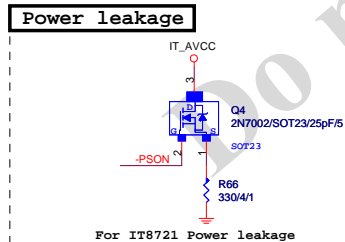
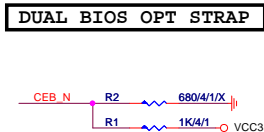
Gigabyte Technology

Title			
PCI EXPRESS X 1 PORT			
Size	Document Number	Rev	
Custom	GA-B85M-D3H	1.1	
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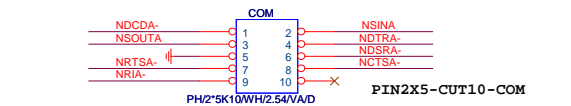
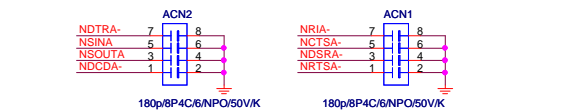
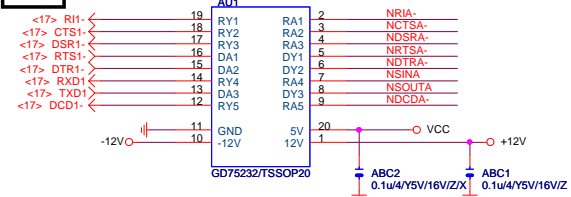




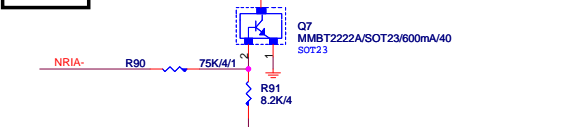
IT8728F NOTE	
	IT8728
PIN121	VCORE_EN/PCCH_C0
PIN120	VLTG_EN/PCCH_D0
PIN19	ATXPG
PIN31	PCCH_C1
PIN53	SST/AMDTSI_D/MTRBS/PCCH_D1
PIN55	PECI/AMDTSI_C/DRV#
PIN66	SYS_3VSB
PIN70	GP47
PIN95	VIN2(VCC5)
PIN96	VIN1(VCC12)
PIN97	VIN1/VDIMM_STR(1.5V)
PIN98	VIN0/VCPGE(1.1V)/NC



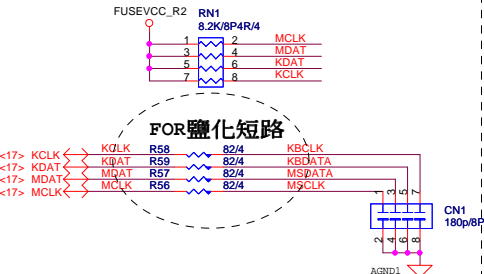
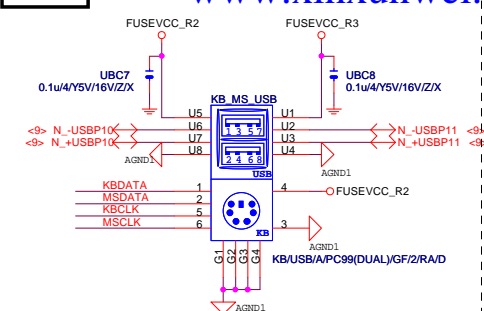
COM



COM RI



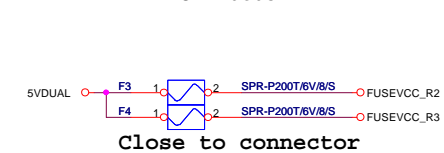
KB/MS



FOR鹽化短路

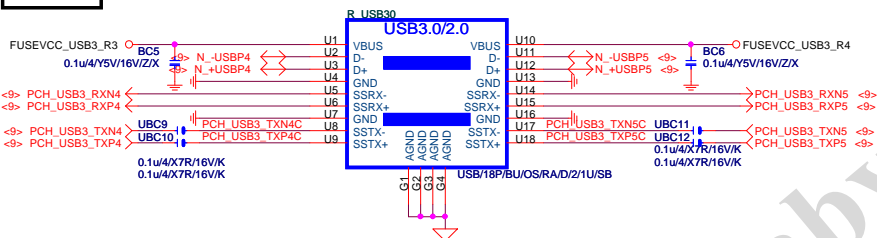
USB2.0 PWR

FUSE-0805

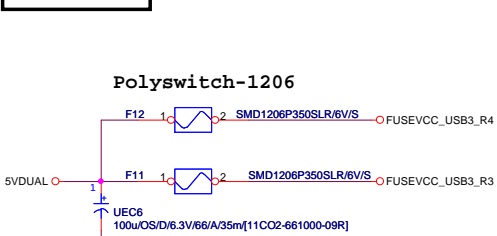


Close to connector

USB30\_20

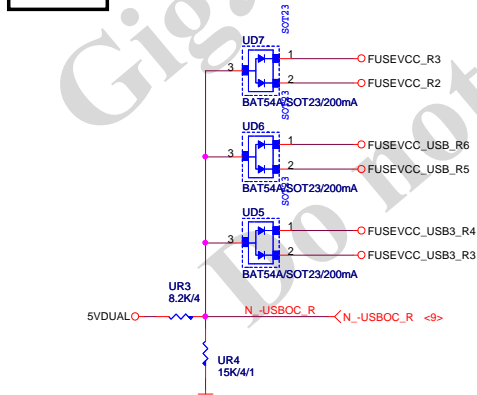


USB30\_20 PWR



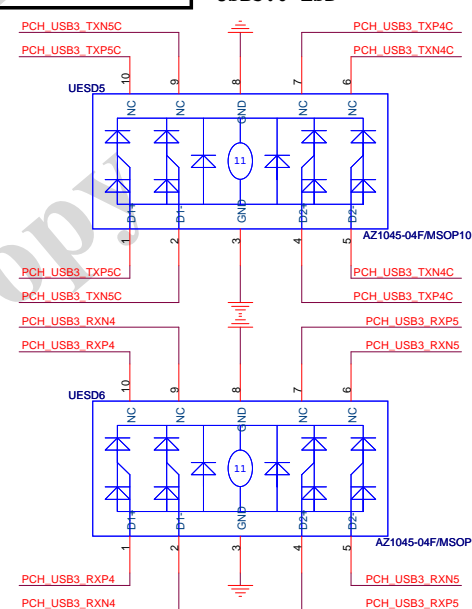
USB3.0 1Port - 1Fuse (3.5A)

-USB0C\_R

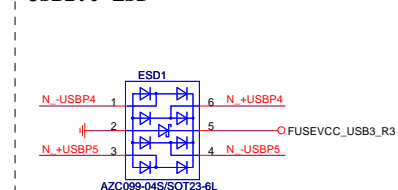


USB30\_20 ESD PROTECT

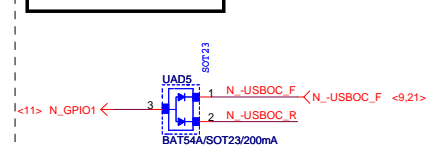
USB3.0 ESD



USB2.0 ESD



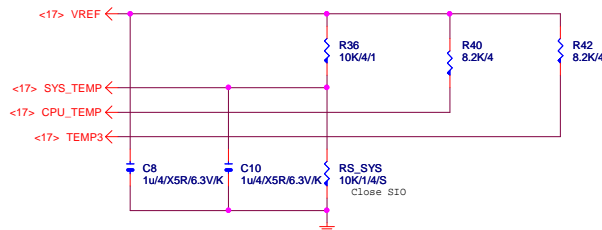
USB POWER PROTECT



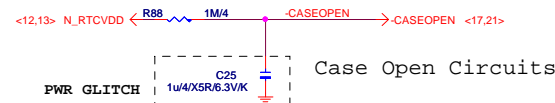
Gigabyte Technology

Title		COM,RI,KB_USB,USB_ESATA,PROCHOT	
Size	Document Number	GA-B85M-D3H	
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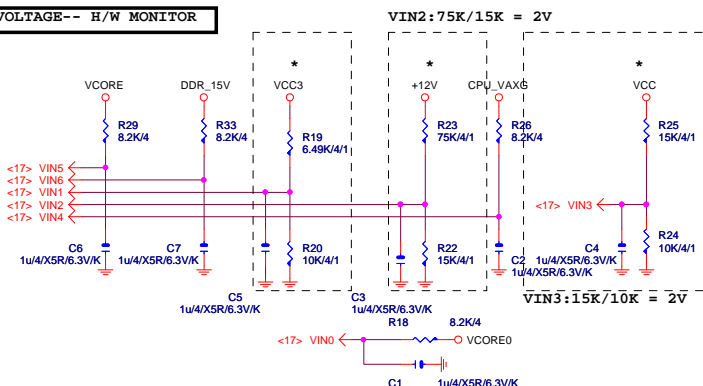
# TEMP H/W MONITOR



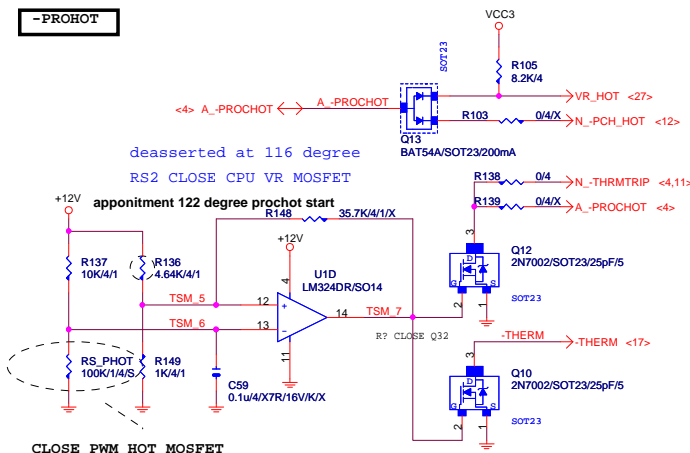
# CASE OPEN



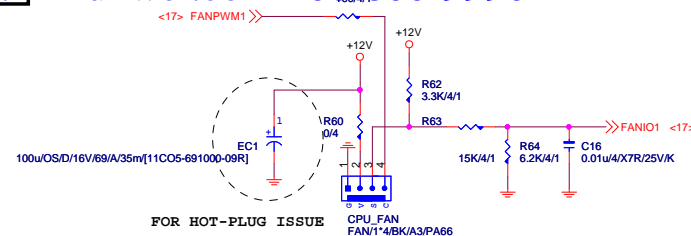
# VOLTAGE-- H/W MONITOR



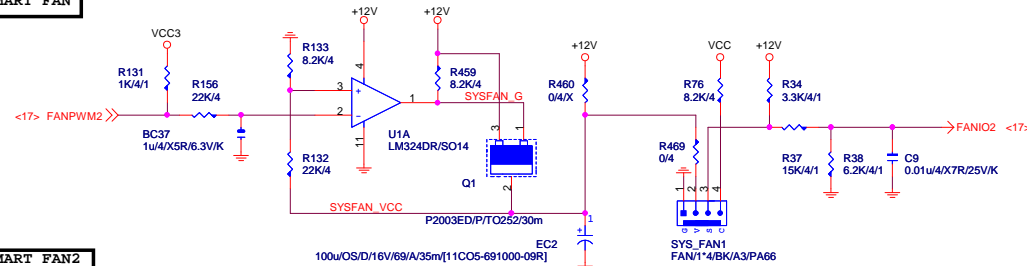
# -PROHOT



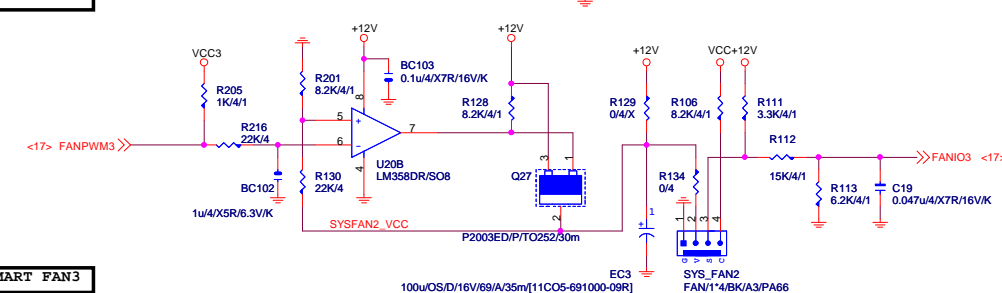
# CPU SMART FAN



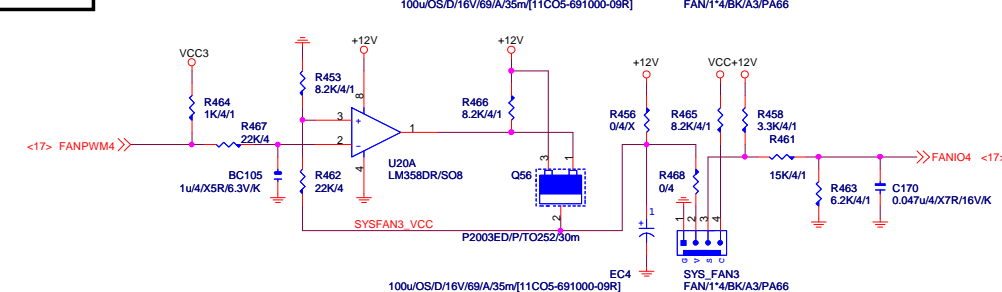
# SYS SMART FAN



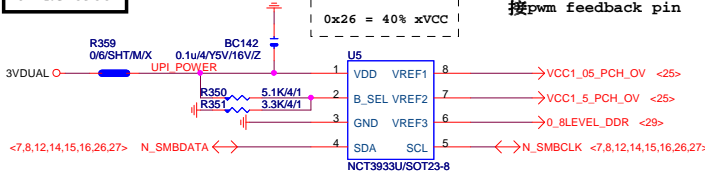
# SYS SMART FAN2



# SYS SMART FAN3

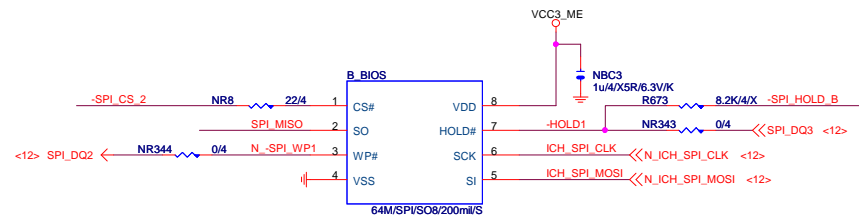
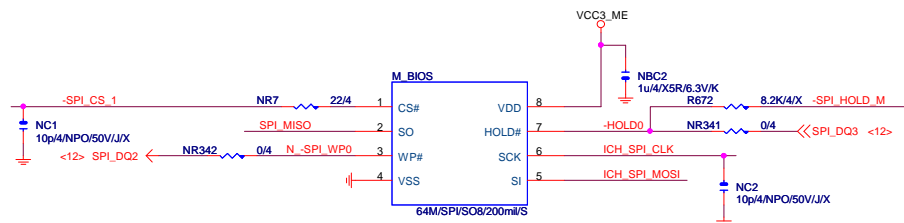


# OV NCT3933



Gigabyte Technology

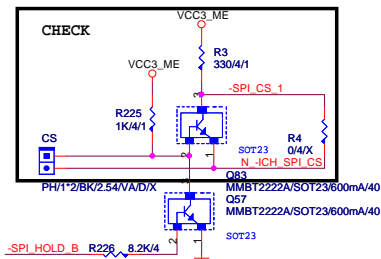
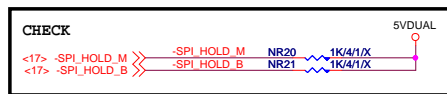
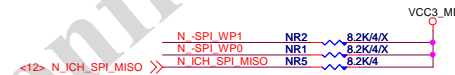
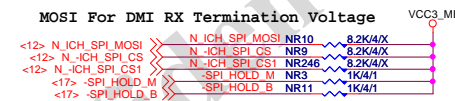
Title		HWM,FAN CTRL,OV	
Size	Document Number	GA-B85M-D3H	
Custom		Rev 1.1	
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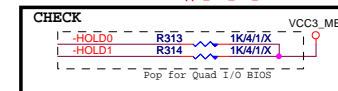
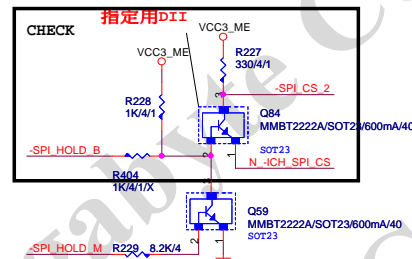
BOOT DEVICE	GNT0	GNT1
LPC	0	0
PCI	0	1
NAND	1	0
SPI	1	1

1 means floating  
0 means PD 1k

#### MOSI For DMI RX Termination Voltage



Dual BIOS CS connect  
circuit update

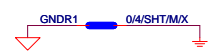
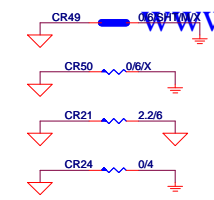




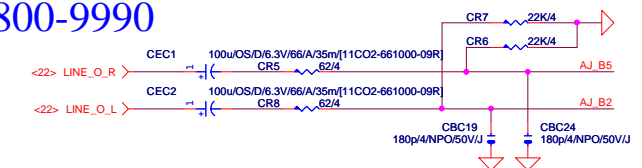


ALC892/ALC887-VD2/VT1708-CE Colay



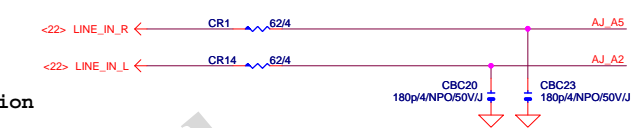


LINE-OUT



Only reserved for ALC888

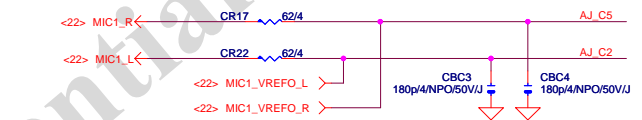
LINE-IN



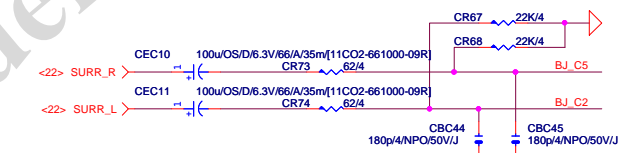
Verify MIC function in LINE-in

For 889A/888

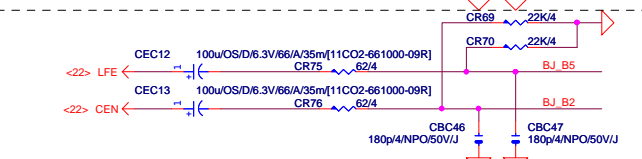
MIC-IN



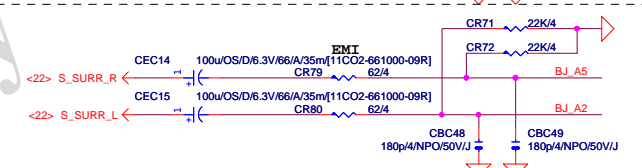
SURROUND



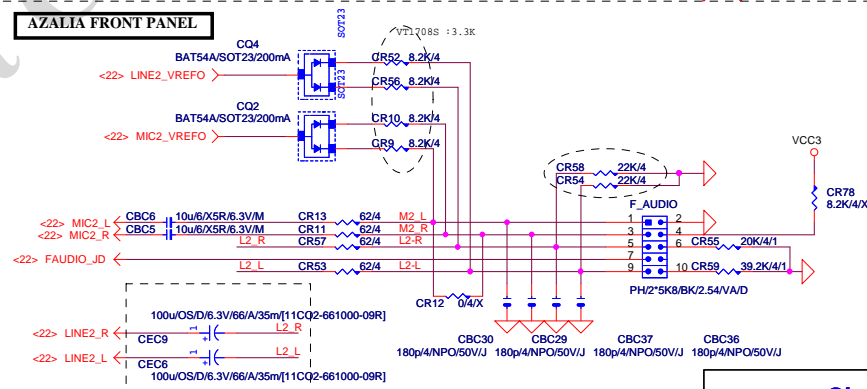
CEN/LFE



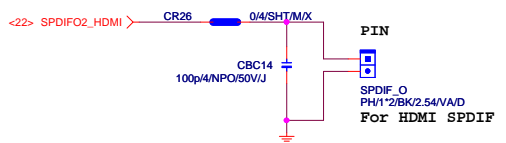
SURR BACK



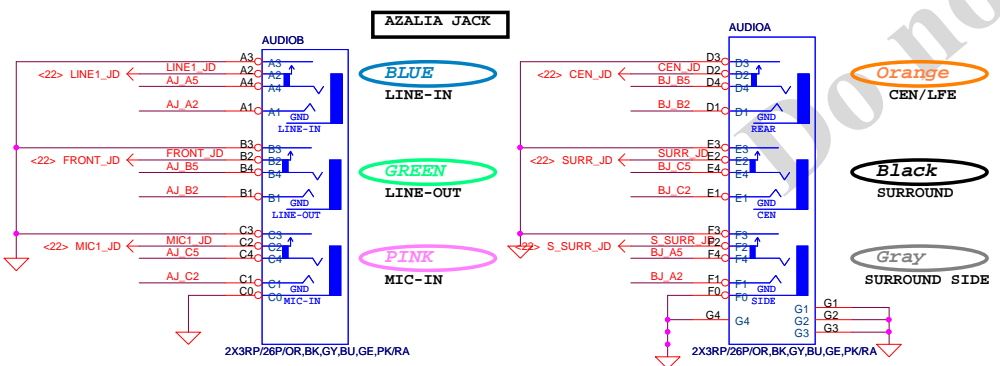
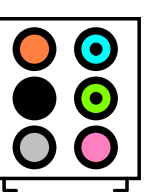
AZALIA FRONT PANEL

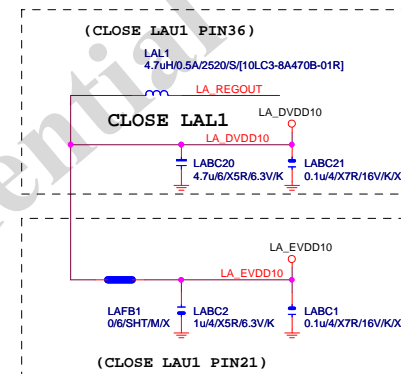
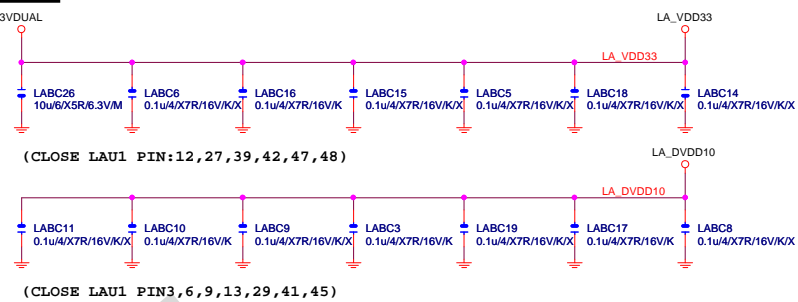


SPDIF\_OUT

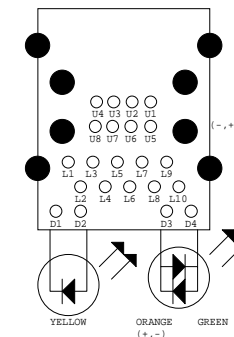


AZALIA JACK

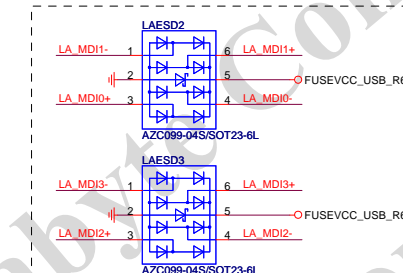




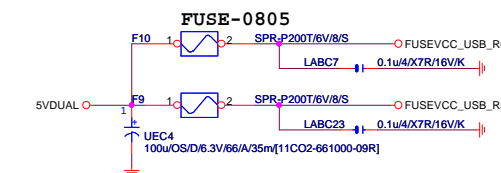
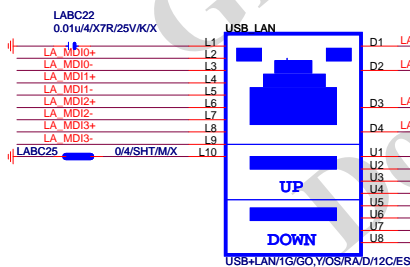
	RTL8111E
AVDD33	3.3V
DVDD33	3.3V
VDDREG	3.3V
DVDD10	1.05V



SBCCLK-->50歐姆:[18/4/10/4/18]



## USB X3 POWER



PS:視EMI需求

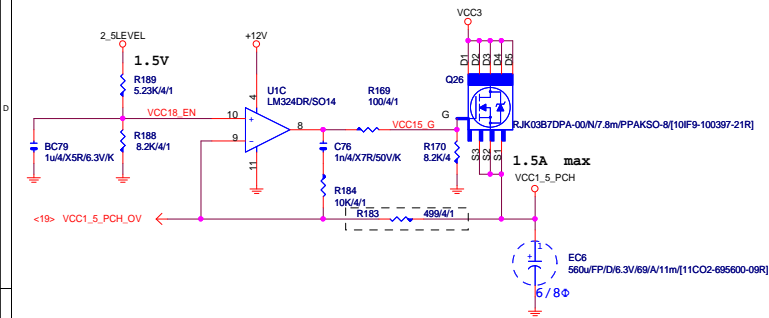


料號	規格	廠商
11NR6-702009-0ER	1G LAN (12core)	UDE
11NR6-702009-91R	1G LAN(8 core)	FOXCONN
11NR6-702009-92R	1G LAN(8 core)	FOXCONN
11NR6-702009-11R	1G LAN(12core/RED)	UDE
11NR6-702009-12R	1G LAN(8 core/RED)	FOXCONN

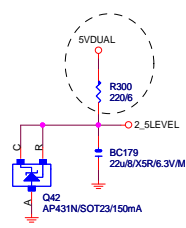
1. (紅色/12CORE/三倍):USB+LAN/1G/GO,Y/OS/RA/D/1/RED
2. (黑色/12CORE):USB+LAN/1G/GO,Y/OS/RA/D/1
3. (黑色/8CORE):USB+LAN/1G/GO,Y/OS/RA/D/8C

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

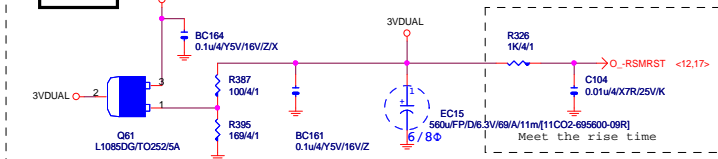
VCC1\_8\_PCH



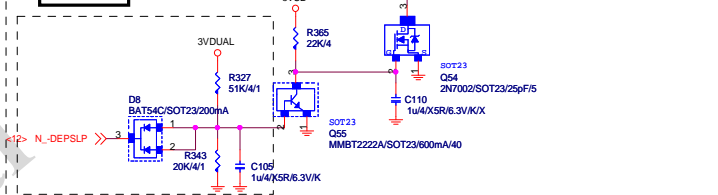
ERP



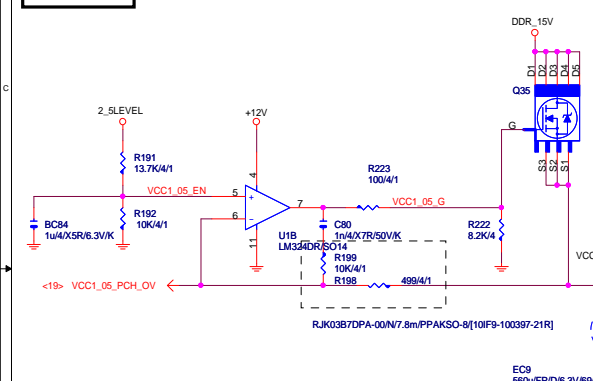
3VDUAL



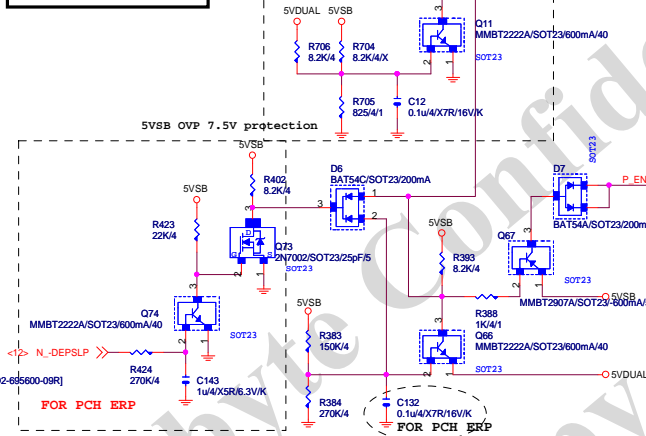
-RSMRST



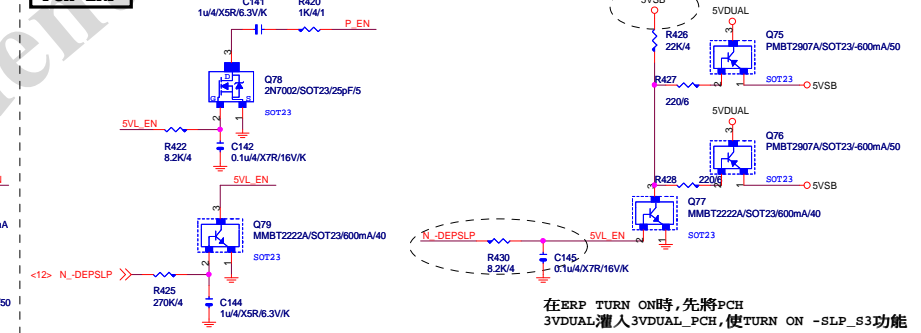
VCC1\_05\_PCH



5VDUAL SHORT PROTECT

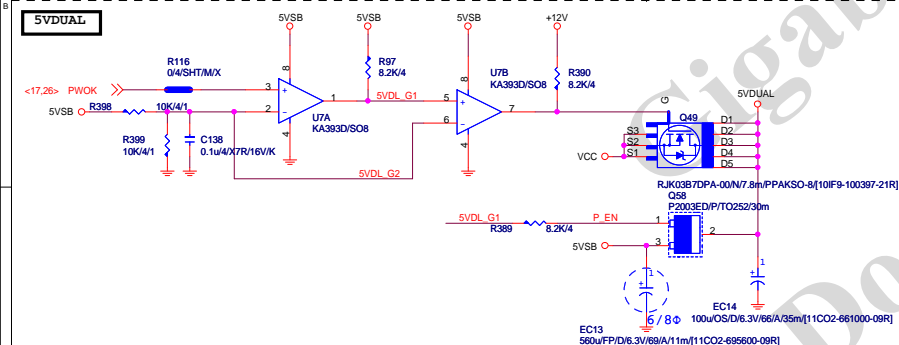


PCH ERP

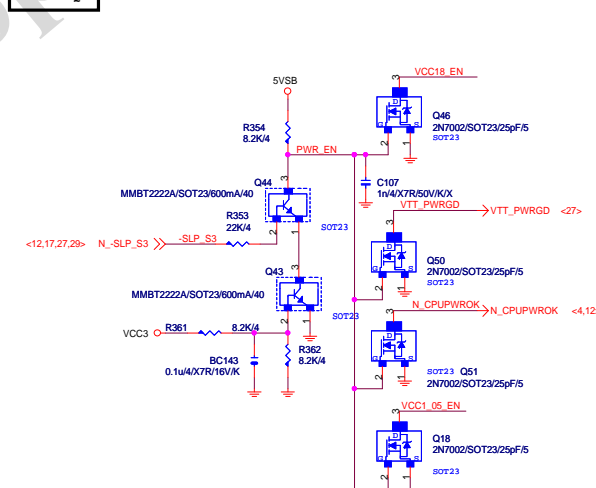


在ERP TURN ON時, 先將PCH 3VDUAL灌入3VDUAL\_PCH, 使TURN ON -SLP\_S3功能

5VDUAL



PWR SEQ

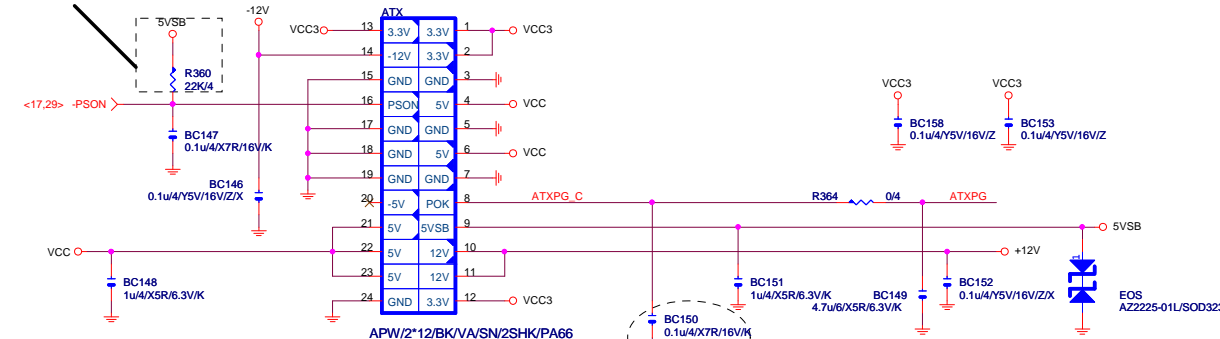


Gigabyte Technology

Title		
DISCRETE POWER		
GA-B85M-D3H		
Size	Document Number	Rev
Custom		1.1
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# ATXX24 POWER CONNECTOR

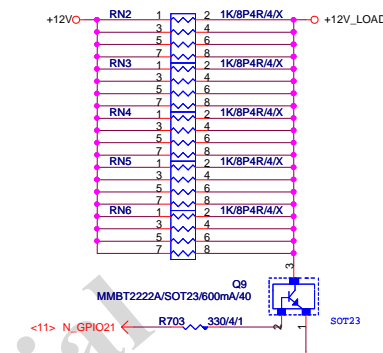
【技術通報R&D技術通報155】



www.xinxunwei.com 400-800-9990

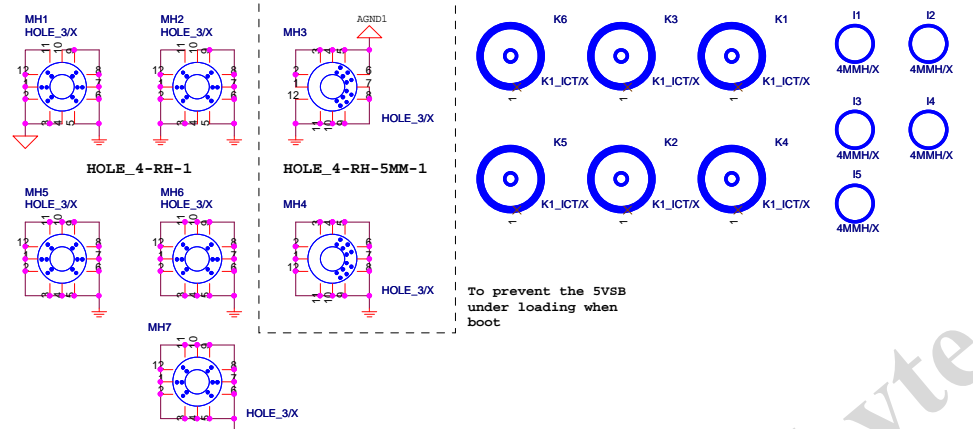
【技術通報R&D技術通報153】

To fix 12V light load abnormal issue

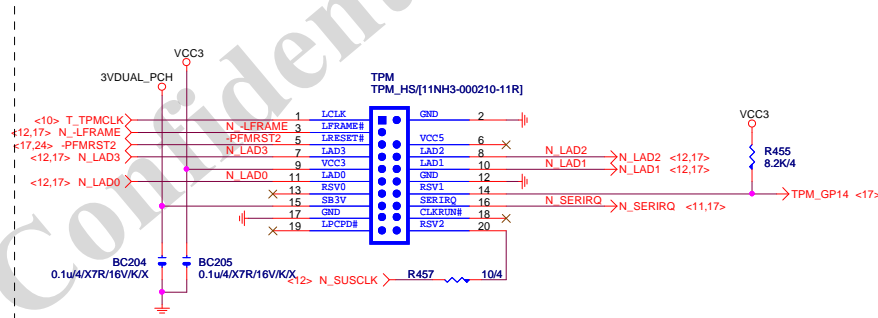


# ATXX4 POWER CONNECTOR

APW/2\*4BK/OC/PI4.2VA/SNOH:Location ATX\_12V\_2X4

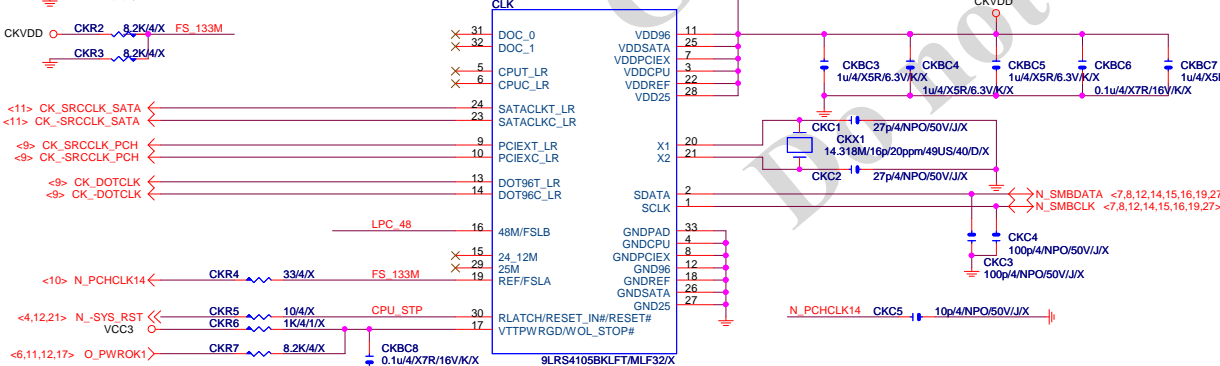


# TPM



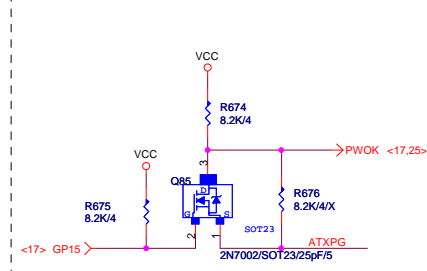
# CLK GEN

FSLB	FSLA	CPU
0	0	100M <Default>
0	1	133M
1	0	200M
1	1	166M

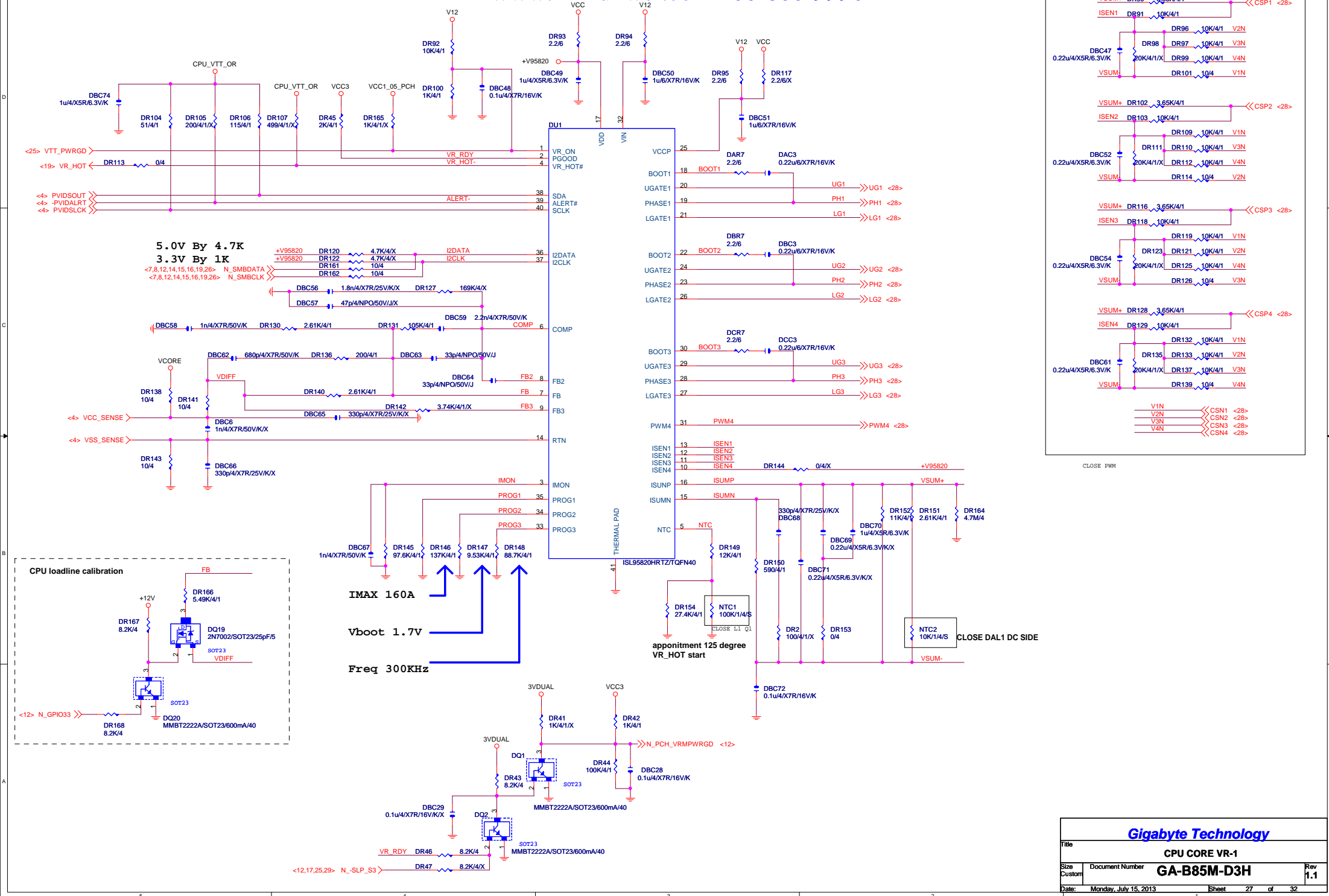


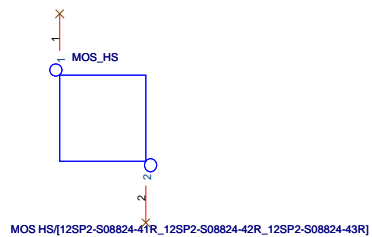
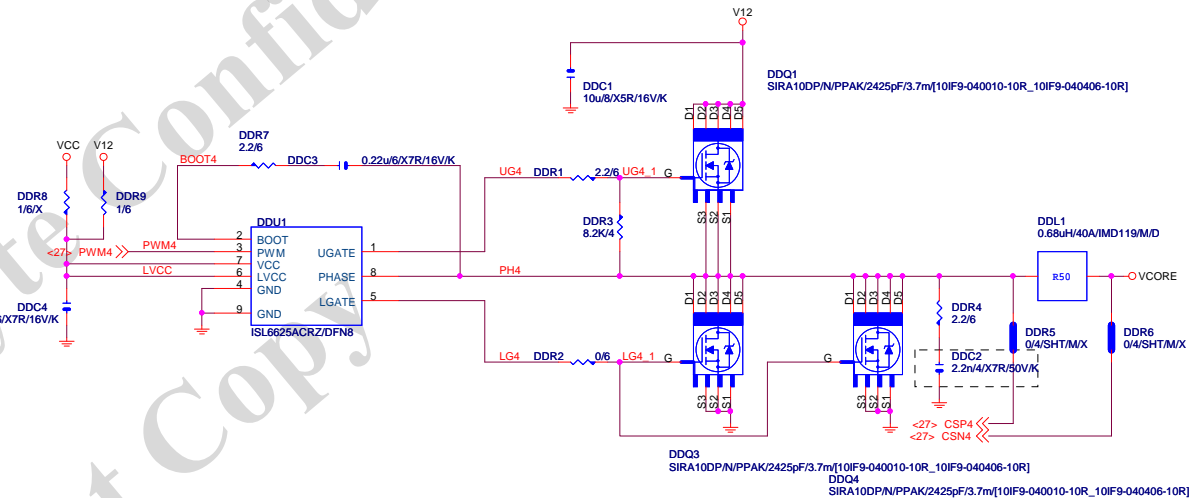
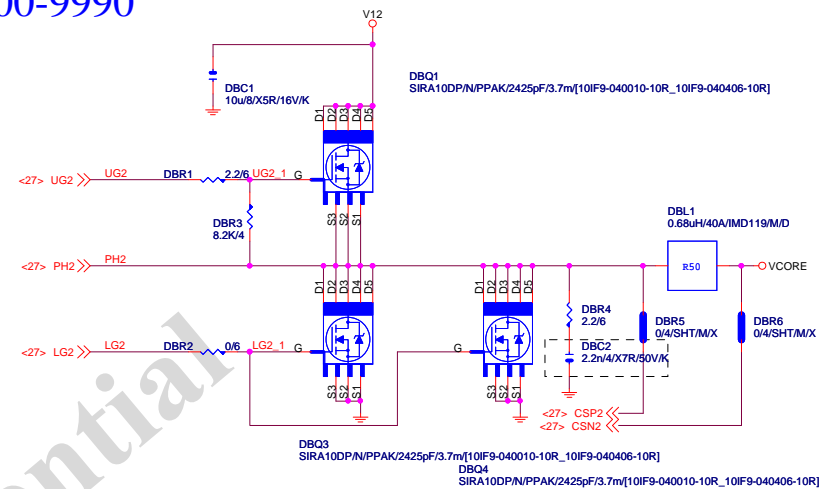
# PWOK PATCH

【技術通報R&D技術通報154】

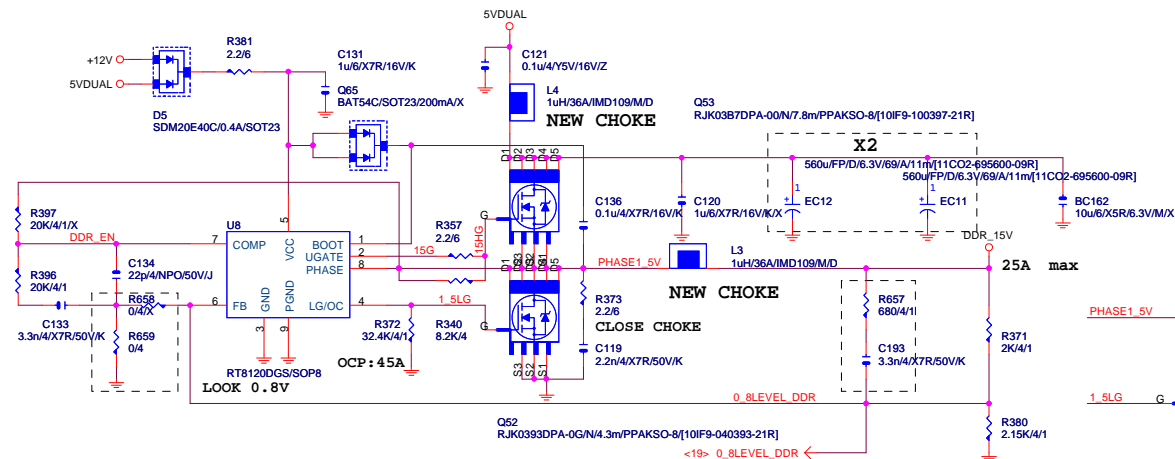




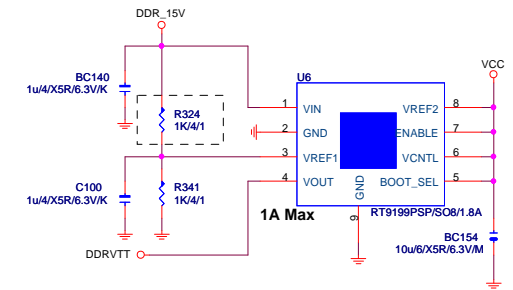




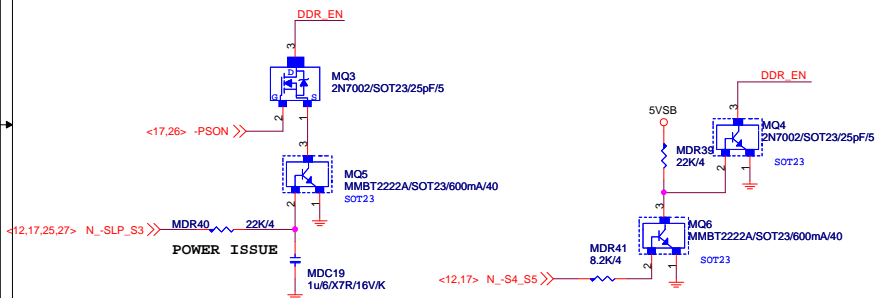
## DDR15V



## DDRVRTT



## 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)

-->故固态电容须2X7.99=15.98>11.45A

$R_{ocset} = (I_{ocp} \cdot L_{gate} + r_{dson}) / I_{ocset}$

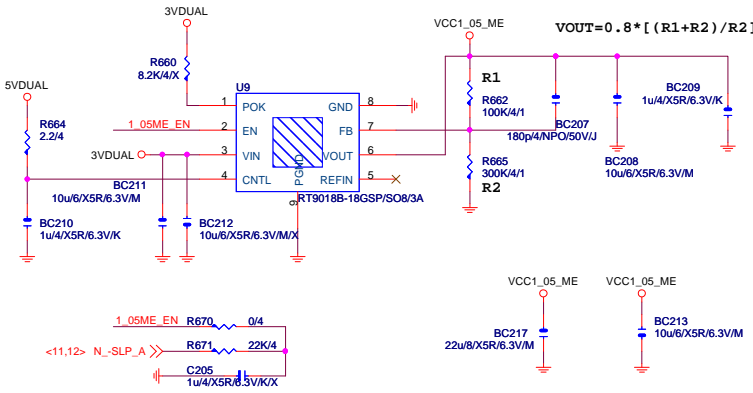
$R_{ocset} = (45A \cdot 6.7m\Omega + 10\mu A) / 30K$

$I_{ocset} = 10\mu A$

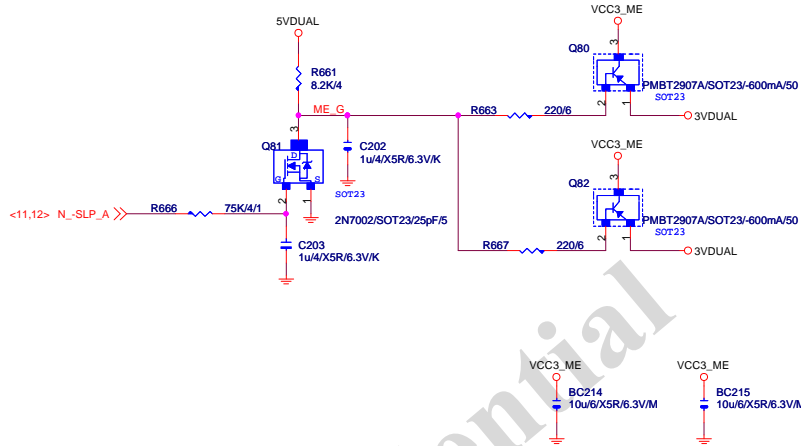
Gigabyte Technology

Title			
DDR POWER			
Size	Document Number	GA-B85M-D3H	Rev
Custom			1.1
Date:	Monday, July 15, 2013	Sheet	29 of 32

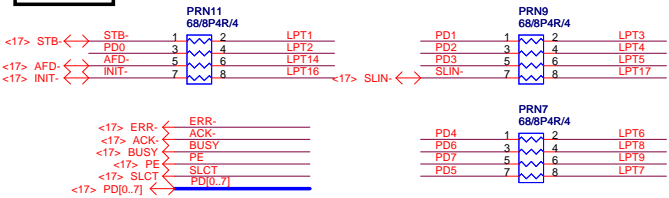
# VCC1\_05\_ME



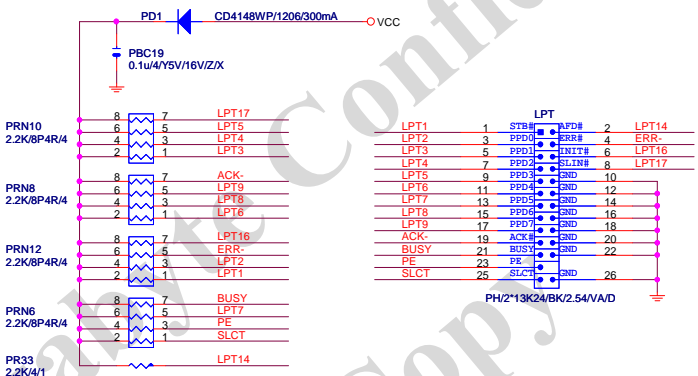
www.xinunwei.com 400-800-9990



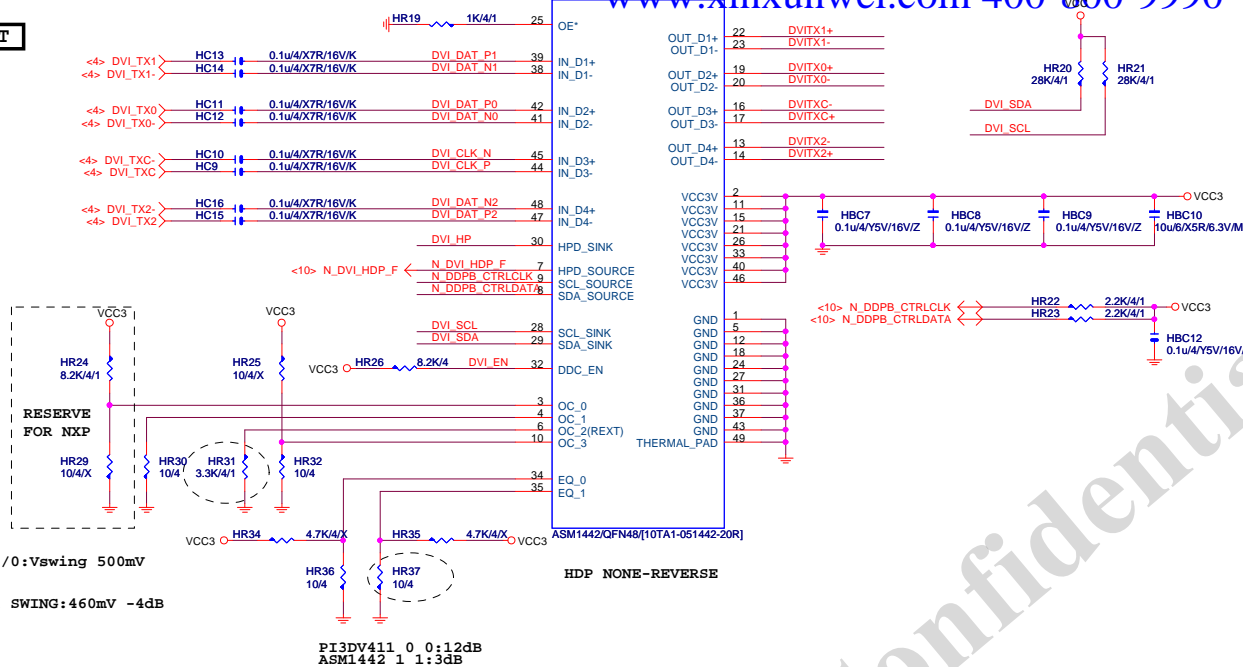
# LPT PORT



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



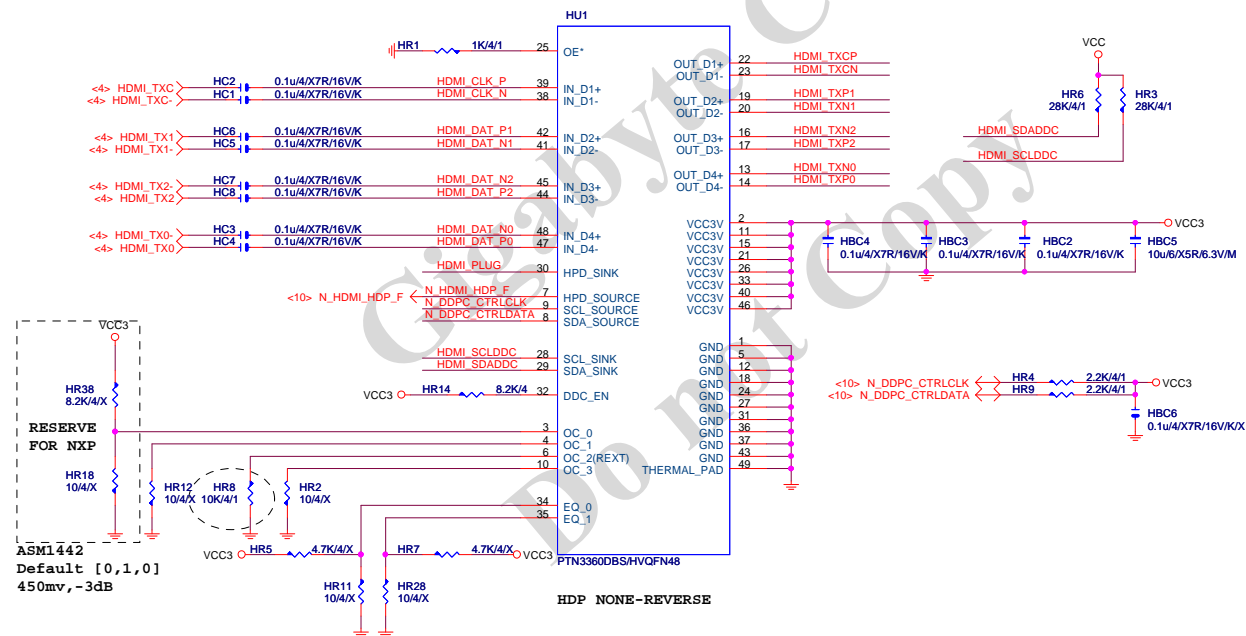
## DVI LEVEL SHIFT



```
PERICOM 0/0/0/0:Vswing 500mV
ASM1442
DEFAULT 0/1/1 SWING:460mV -4dB
```

```
PI3DV411 0 0:12dB
ASM1442 1 1:3dB
```

## HDMI LEVEL SHIFT

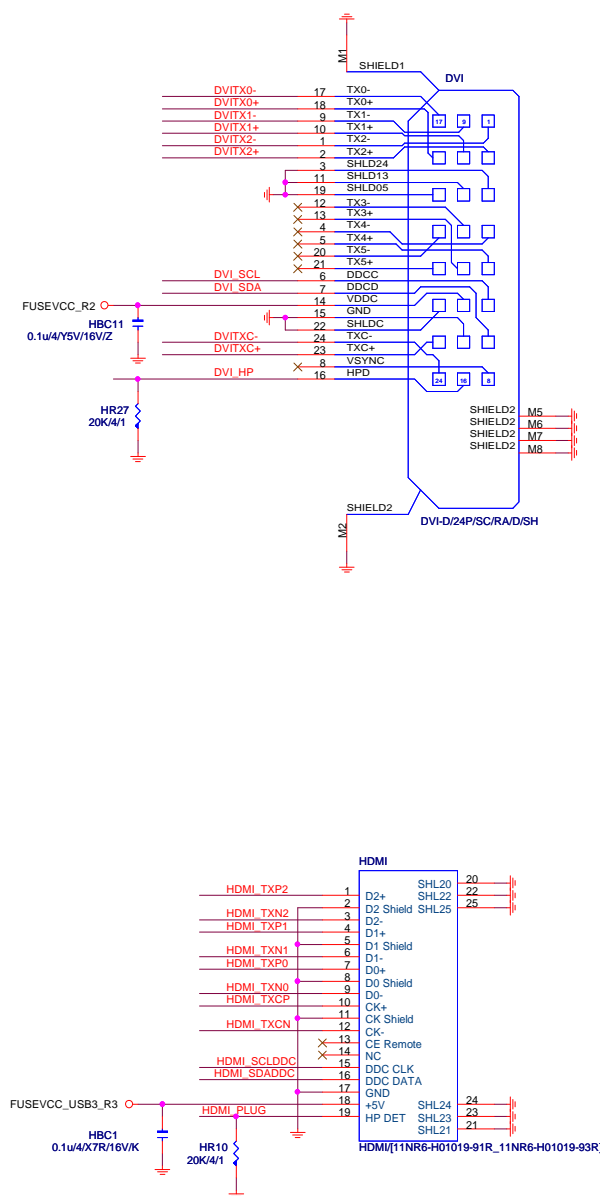


【技術通報R&amp;D技術通報150】

HDMI eye diagram1.4版(deep color)會fail

原因：因目前的HDMI訊號過長，造成RISING TIME過慢，而會壓到eye diagram

改善: ASMEDIA ASM1442 : 3.16K(PIN6 PULL DOWN電阻) 10ohm(PIN4 PULL DOWN電阻)



**Gigabyte Technology**

## DVI

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Custom		

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