

Model Name: GA-H81M-H

Revision 1.1

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	ITE 8620
17	COM,KB_MS_USB,USB30_20
18	HWM,FAN CTRL,OV,-PROCHOT
19	DUAL BIOS
20	FP,FUSB,SPK,SATALED
21	Realtek ALC887-VD2
22	REAR AUDIO JACK
23	REALTEK RTL8111F
24	DISCRETE POWER
25	ATX , CLOCK GEN
26	VCORE ISL95812_1
27	VCORE ISL95812_2

SHEET

TITLE

28	RT8120_DDR POWER
29	HDMI
30	
31	
32	

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Cover Sheet

Size	Document Number	Rev
Custom	GA-H81M-H	1.1
Date:	Thursday, October 31, 2013	Sheet 1 of 29

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A vertical bar is divided into four segments labeled A, B, C, and D from bottom to top. An arrow points to the boundary between segments B and C.

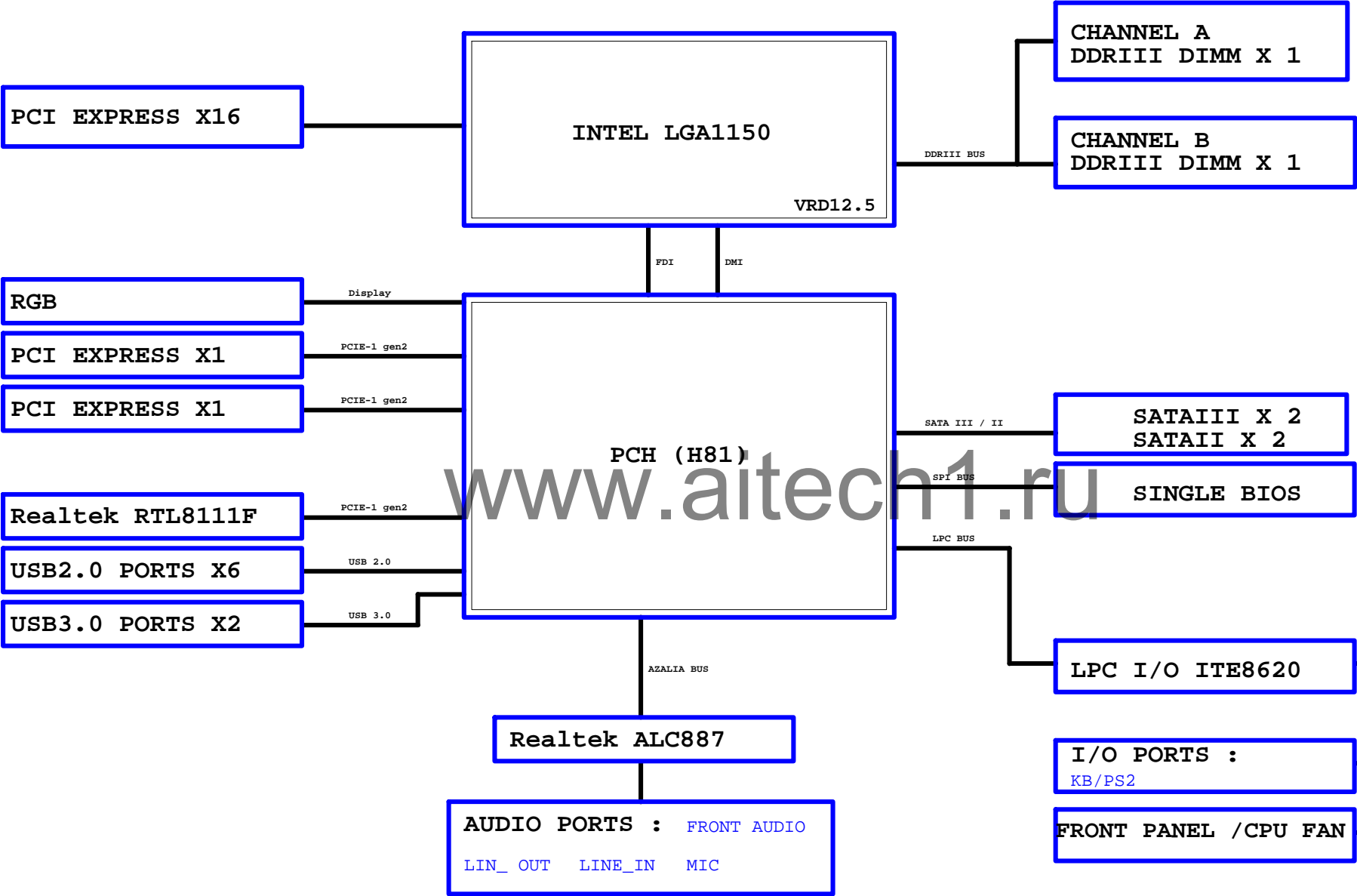
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A B

3

[illegible]

BLOCK DIAGRAM



[illegible][illegible]

PCIEX16:16/5/5/16(breakout min 10/4/4/4/10) Impedance=80 +- 17.5%									
LGAI1150C									
PA EXP RXP0	E15	PEG_RXP0	PEG_TXP0	A12	PA EXP TXP0				
PA EXP RXN0	F15	PEG_RXN0	PEG_TXN0	B12	PA EXP TXN0				
PA EXP RXP1	D14	PEG_RXP1	PEG_TXP1	B11	PA EXP TXP1				
PA EXP RXN1	E14	PEG_RXN1	PEG_TXN1	C11	PA EXP TXN1				
PA EXP RXP2	E13	PEG_RXP2	PEG_TXP2	C10	PA EXP TXP2				
PA EXP RXN2	F13	PEG_RXN2	PEG_TXN2	D10	PA EXP TXN2				
PA EXP RXP3	D12	PEG_RXP3	PEG_TXP3	B9	PA EXP TXP3				
PA EXP RXN3	E12	PEG_RXN3	PEG_TXN3	C9	PA EXP TXN3				
PA EXP RXP4	E11	PEG_RXP4	PEG_TXP4	C8	PA EXP TXP4				
PA EXP RXN4	F11	PEG_RXN4	PEG_TXN4	D8	PA EXP TXN4				
PA EXP RXP5	F10	PEG_RXP5	PEG_TXP5	B7	PA EXP TXP5				
PA EXP RXN5	G10	PEG_RXN5	PEG_TXN5	C7	PA EXP TXN5				
PA EXP RXP6	E9	PEG_RXP6	PEG_TXP6	A6	PA EXP TXP6				
PA EXP RXN6	F9	PEG_RXN6	PEG_TXN6	B6	PA EXP TXN6				
PA EXP RXP7	F8	PEG_RXP7	PEG_TXP7	B5	PA EXP TXP7				
PA EXP RXN7	G8	PEG_RXN7	PEG_TXN7	C5	PA EXP TXN7				
PA EXP RXP8	D3	PEG_RXP8	PEG_TXP8	E1	PA EXP TXP8				
PA EXP RXN8	D4	PEG_RXN8	PEG_TXN8	F2	PA EXP TXN8				
PA EXP RXP9	E4	PEG_RXP9	PEG_TXP9	F2	PA EXP TXP9				
PA EXP RXN9	E5	PEG_RXN9	PEG_TXN9	F3	PA EXP TXN9				
PA EXP RXP10	F5	PEG_RXP10	PEG_TXP10	G1	PA EXP TXP10				
PA EXP RXN10	F6	PEG_RXN10	PEG_TXN10	G2	PA EXP TXN10				
PA EXP RXP11	G4	PEG_RXP11	PEG_TXP11	H2	PA EXP TXP11				
PA EXP RXN11	G5	PEG_RXN11	PEG_TXN11	J1	PA EXP TXN11				
PA EXP RXP12	H5	PEG_RXP12	PEG_TXP12	J1	PA EXP TXP12				
PA EXP RXN12	H6	PEG_RXN12	PEG_TXN12	J2	PA EXP TXN12				
PA EXP RXP13	J4	PEG_RXP13	PEG_TXP13	K2	PA EXP TXP13				
PA EXP RXN13	J5	PEG_RXN13	PEG_TXN13	K3	PA EXP TXN13				
PA EXP RXP14	K5	PEG_RXP14	PEG_TXP14	M2	PA EXP TXP14				
PA EXP RXN14	K6	PEG_RXN14	PEG_TXN14	M3	PA EXP TXN14				
PA EXP RXP15	L4	PEG_RXP15	PEG_TXP15	L1	PA EXP TXP15				
PA EXP RXN15	L5	PEG_RXN15	PEG_TXN15	L2	PA EXP TXN15				
A DMI ORXP	U3	DMI_RXP0	DMI_TXP0	AA4	A DMI OTXP				
A DMI ORXN	T3	DMI_RXN0	DMI_TXN0	AA5	A DMI OTXN				
A DMI IRXP	U1	DMI_RXP1	DMI_TXP1	AB3	A DMI ITXP				
A DMI IRXN	U2	DMI_RXN1	DMI_TXN1	AB4	A DMI ITXN				
A DMI 2RXP	V2	DMI_RXP2	DMI_TXP2	AC5	A DMI 2TXP				
A DMI 2RXN	V2	DMI_RXN2	DMI_TXN2	AC4	A DMI 2TXN				
A DMI 3RXP	V3	DMI_RXP3	DMI_TXP3	AC1	A DMI 3TXP				
A DMI 3RXN	W3	DMI_RXN3	DMI_TXN3	AC2	A DMI 3TXN				

1.1V分壓

VCC3

WR26
2K4/1X

WR31
1K4/1X

A_CPURST

BC102
1n4/X7R/50V/K

(11,16)

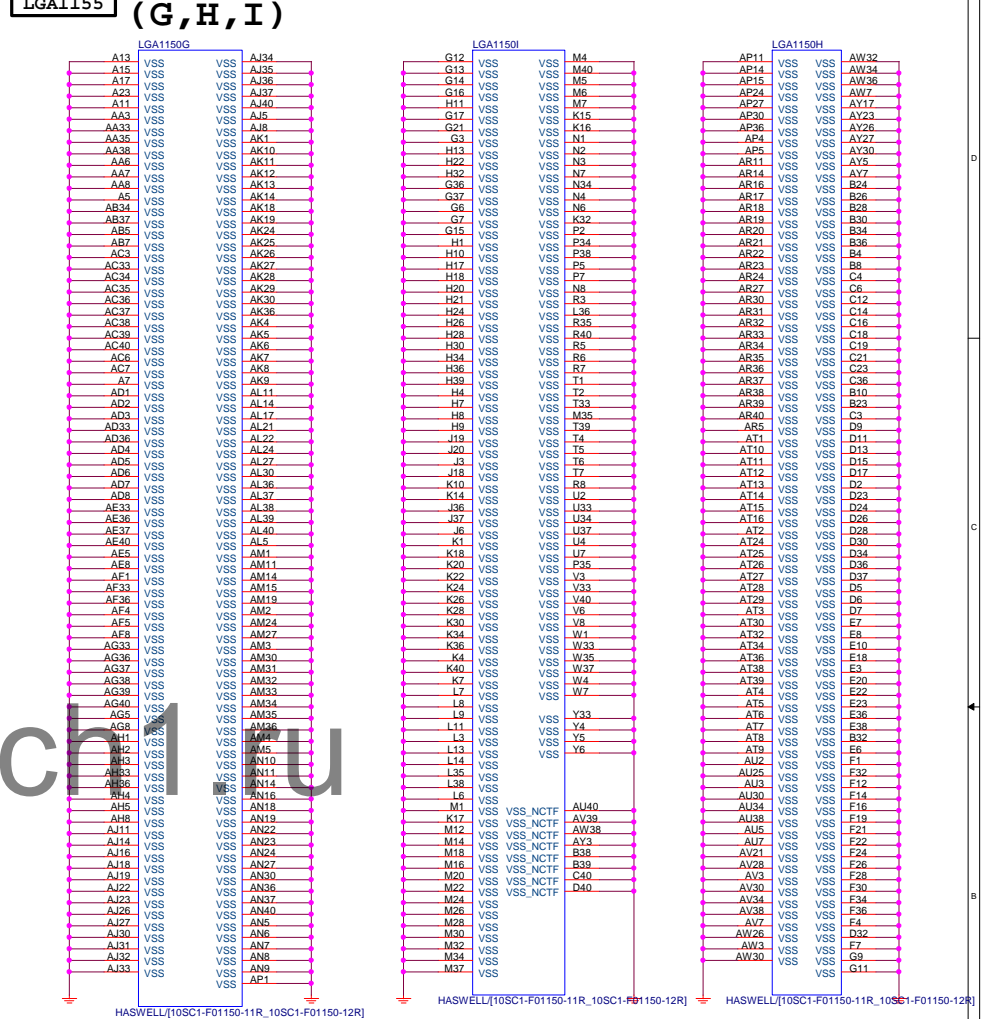
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LGA1150 (A)

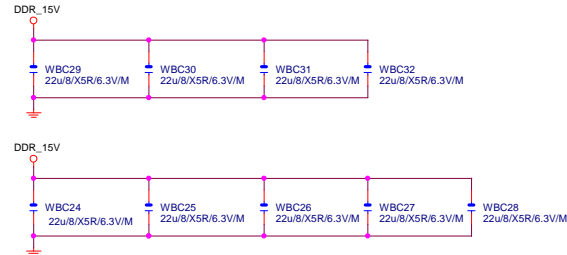
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MAAA0	AU13	DDR0_MA1	DDR0_DQ1	AD39	MDA1
MAAA1	AV16	DDR0_MA2	DDR0_DQ2	AF38	MDA2
MAAA2	AU16	DDR0_MA3	DDR0_DQ3	AF39	MDA3
MAAA3	AW17	DDR0_MA4	DDR0_DQ4	AD37	MDA4
MAAA4	AU18	DDR0_MA5	DDR0_DQ5	AD40	MDA5
MAAA5	AW18	DDR0_MA6	DDR0_DQ6	AE37	MDA6
MAAA6	AV17	DDR0_MA7	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	MDA10
MAAA10	AW11	DDR0_MA11	DDR0_DQ11	AK39	MDA11
MAAA11	AV19	DDR0_MA12	DDR0_DQ12	AH37	MDA12
MAAA12	AU19	DDR0_MA13	DDR0_DQ13	AH38	MDA14
MAAA13	AY10	DDR0_MA14	DDR0_DQ14	AK37	MDA14
MAAA14	AT20	DDR0_MA15	DDR0_DQ15	AK40	MDA15
MAAA15	AU21	DDR0_MA16	DDR0_DQ16	AM40	MDA17
MODT_A0	AW10	DDR0_ODT0	DDR0_ODT0	AM39	MDA21
MODT_A1	AY8	DDR0_ODT1	DDR0_ODT1	AP38	MDA18
AW8	AW8	DDR0_ODT2	DDR0_ODT2	AP39	MDA19
AW8	AW8	DDR0_ODT3	DDR0_ODT3	AM37	MDA20
AW33	AW33	DDR0_ECC0	DDR0_ECC0	AM38	MDA16
AW33	AW33	DDR0_ECC1	DDR0_ECC1	AP37	MDA22
AU31	AU31	DDR0_ECC2	DDR0_ECC2	AP40	MDA23
AU31	AU31	DDR0_ECC3	DDR0_ECC3	AW37	MDA29
AU33	AU33	DDR0_ECC4	DDR0_ECC4	AU35	MDA26
AT31	AT31	DDR0_ECC5	DDR0_ECC5	AU35	MDA27
AW31	AW31	DDR0_ECC6	DDR0_ECC6	T37	MDA28
AW31	AW31	DDR0_ECC7	DDR0_ECC7	AU37	MDA24
AW31	AW31	DDR0_ECC8	DDR0_ECC8	AT35	MDA30
AW31	AW31	DDR0_ECC9	DDR0_ECC9	AW35	MDA31
AW31	AW31	DDR0_ECC10	DDR0_ECC10	AW6	MDA33
AW31	AW31	DDR0_ECC11	DDR0_ECC11	AW6	MDA37
AW31	AW31	DDR0_ECC12	DDR0_ECC12	AW4	MDA34
AW31	AW31	DDR0_ECC13	DDR0_ECC13	AW4	MDA35
AW31	AW31	DDR0_ECC14	DDR0_ECC14	AW4	MDA36
AW31	AW31	DDR0_ECC15	DDR0_ECC15	AW4	MDA38
AW31	AW31	DDR0_ECC16	DDR0_ECC16	AW4	MDA39
AW31	AW31	DDR0_ECC17	DDR0_ECC17	AW4	MDA40
AW31	AW31	DDR0_ECC18	DDR0_ECC18	AW4	MDA41
AW31	AW31	DDR0_ECC19	DDR0_ECC19	AW4	MDA42
AW31	AW31	DDR0_ECC20	DDR0_ECC20	AW4	MDA43
AW31	AW31	DDR0_ECC21	DDR0_ECC21	AW4	MDA44
AW31	AW31	DDR0_ECC22	DDR0_ECC22	AW4	MDA45
AW31	AW31	DDR0_ECC23	DDR0_ECC23	AW4	MDA46
AW31	AW31	DDR0_ECC24	DDR0_ECC24	AW4	MDA47
AW31	AW31	DDR0_ECC25	DDR0_ECC25	AW4	MDA48
AW31	AW31	DDR0_ECC26	DDR0_ECC26	AW4	MDA49
AW31	AW31	DDR0_ECC27	DDR0_ECC27	AW4	MDA50
AW31	AW31	DDR0_ECC28	DDR0_ECC28	AW4	MDA51
AW31	AW31	DDR0_ECC29	DDR0_ECC29	AW4	MDA52
AW31	AW31	DDR0_ECC30	DDR0_ECC30	AW4	MDA53
AW31	AW31	DDR0_ECC31	DDR0_ECC31	AW4	MDA54
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AW31	AW31	DDR0_ECC36	DDR0_ECC36	AW4	MDA59
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AW31	AW31	DDR0_ECC148	DDR0_ECC148	AW4	MDA171
AW31	AW31	DDR0_ECC149	DDR0_ECC149	AW4	MDA172
AW31	AW31	DDR0_ECC150	DDR0_ECC150	AW4	MDA173
AW31	AW31	DDR0_ECC151	DDR0_ECC151	AW4	MDA174
AW31	AW31	DDR0_ECC152	DDR0_ECC152	AW4	MDA175
AW31	AW31	DDR0_ECC153	DDR0_ECC153	AW4	MDA176
AW31	AW31	DDR0_ECC154	DDR0_ECC154	AW4	MDA177
AW31	AW31	DDR0_ECC155	DDR0_ECC155	AW4	MDA178
AW31	AW31	DDR0_ECC156	DDR0_ECC156	AW4	MDA179
AW31	AW31	DDR0_ECC157	DDR0_ECC157	AW4	MDA180
AW31	AW31	DDR0_ECC158	DDR0_ECC158	AW4	MDA181
AW31	AW31	DDR0_ECC159	DDR0_ECC159	AW4	MDA182
AW31	AW31	DDR0_ECC160	DDR0_ECC160	AW4	MDA183
AW31	AW31	DDR0_ECC161	DDR0_ECC161	AW4	MDA184
AW31	AW31	DDR0_ECC162	DDR0_ECC162	AW4	MDA185
AW31	AW31	DDR0_ECC163	DDR0_ECC163	AW4	MDA186
AW31	AW31	DDR0_ECC164	DDR0_ECC164	AW4	MDA187
AW31	AW31	DDR0_ECC165	DDR0_ECC165	AW4	MDA188
AW31	AW31	DDR0_ECC166	DDR0_ECC166	AW4	MDA189
AW31	AW31	DDR0_ECC167	DDR0_ECC167	AW4	MDA190
AW31	AW31	DDR0_ECC168	DDR0_ECC168	AW4	MDA191
AW31	AW31	DDR0_ECC169	DDR0_ECC169	AW4	MDA192
AW31	AW31	DDR0_ECC170	DDR0_ECC170	AW4	MDA193
AW31	AW31	DDR0_ECC171	DDR0_ECC171	AW4	MDA194
AW31	AW31	DDR0_ECC172	DDR0_ECC172	AW4	MDA195
AW31	AW31	DDR0_ECC173	DDR0_ECC173	AW4	MDA196
AW31	AW31	DDR0_ECC174	DDR0_ECC174	AW4	MDA197
AW31	AW31	DDR0_ECC175	DDR0_ECC175	AW4	MDA198
AW31	AW31	DDR0_ECC176	DDR0_ECC176	AW4	MDA199
AW31	AW31	DDR0_ECC177	DDR0_ECC177	AW4	MDA200
AW31	AW31	DDR0_ECC178	DDR0_ECC178	AW4	MDA201
AW31	AW31	DDR0_ECC179	DDR0_ECC179	AW4	MDA202
AW31	AW31	DDR0_ECC180	DDR0_ECC180	AW4	MDA203
AW31	AW31	DDR0_ECC181	DDR0_ECC181	AW4	MDA204
AW31	AW31	DDR0_ECC182	DDR0_ECC182	AW4	MDA205
AW31	AW31	DDR0_ECC183	DDR0_ECC183	AW4	MDA206
AW31	AW31	DDR0_ECC184	DDR0_ECC184	AW4	MDA207
AW31	AW31	DDR0_ECC185	DDR0_ECC185	AW4	MDA208
AW31	AW31	DDR0_ECC186	DDR0_ECC186	AW4	MDA209

LGA1155 (G,H,I)



DDR CAP

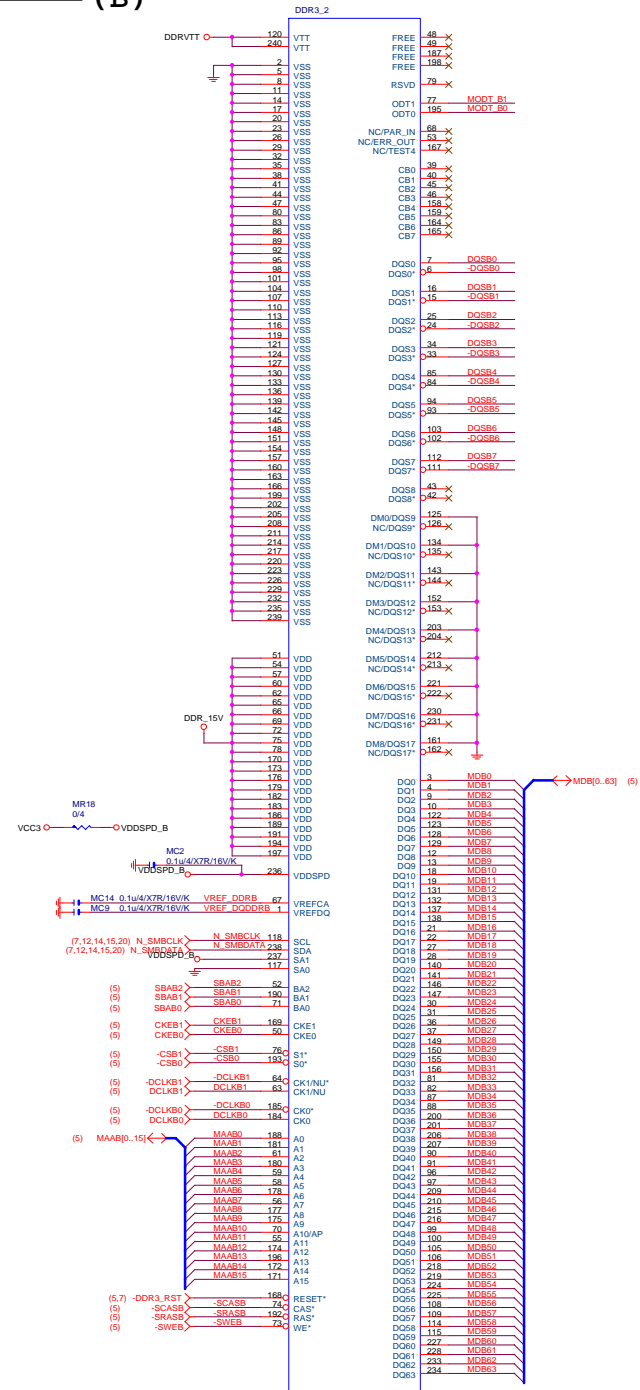
(x9)



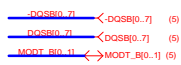
Title			
CPU LGA1150-C			
Size	Document Number	Rev	
Custom	GA--H81M-H	1.1	
Date:	Thursday, October 31, 2013	Sheet	6 of 29

DDR3

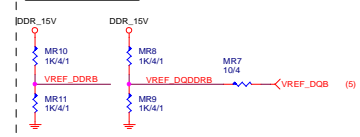
(B)



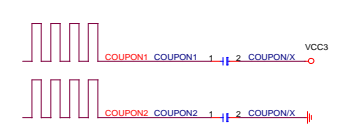
DDR3_240/BK/VA/D
BLACK CONNECTOR



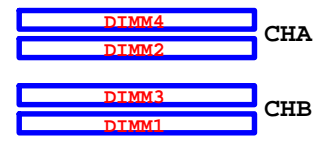
DDR3 VREF



COUPON

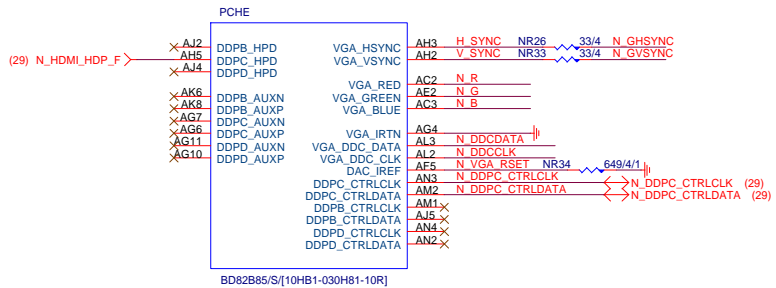


CPU

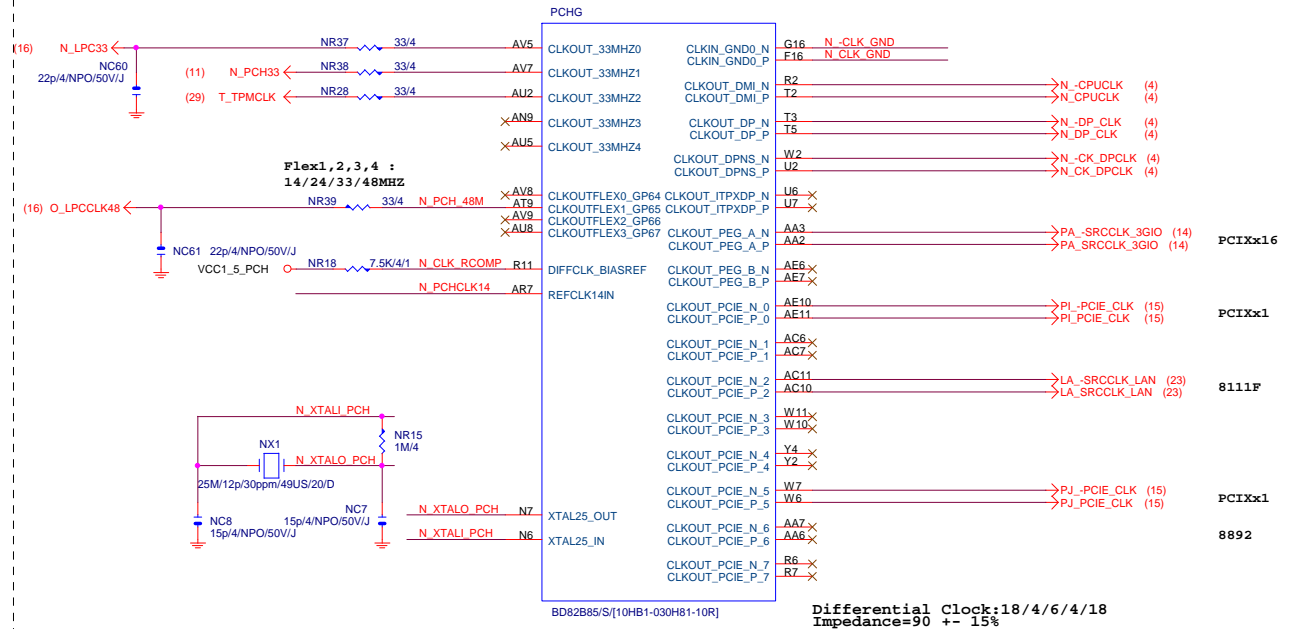


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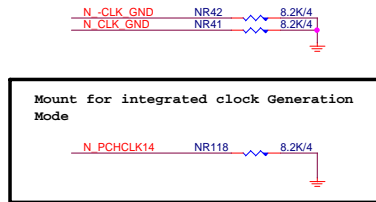
PCH (E)



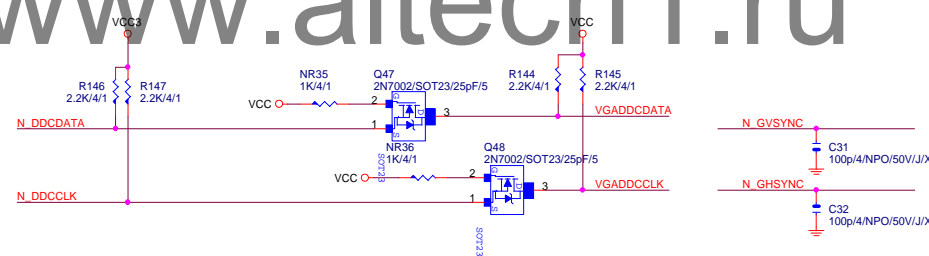
PCH (G)



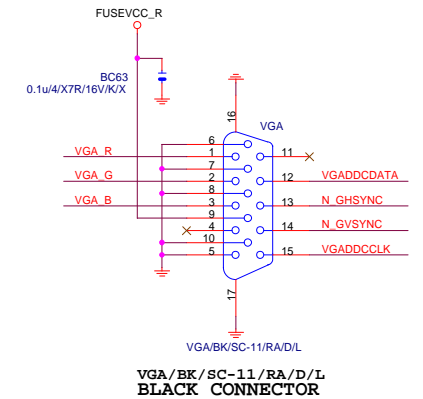
PCH CLK PD



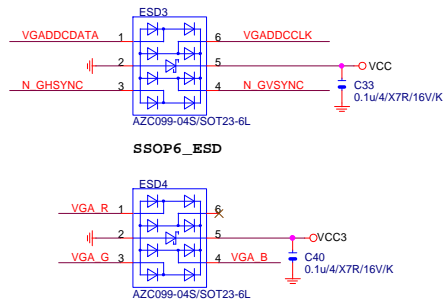
VGA DDC



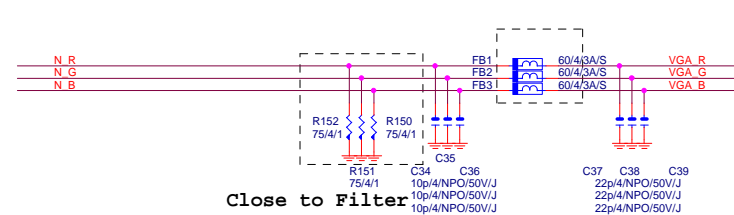
VGA CONNECTOR



VGA ESD



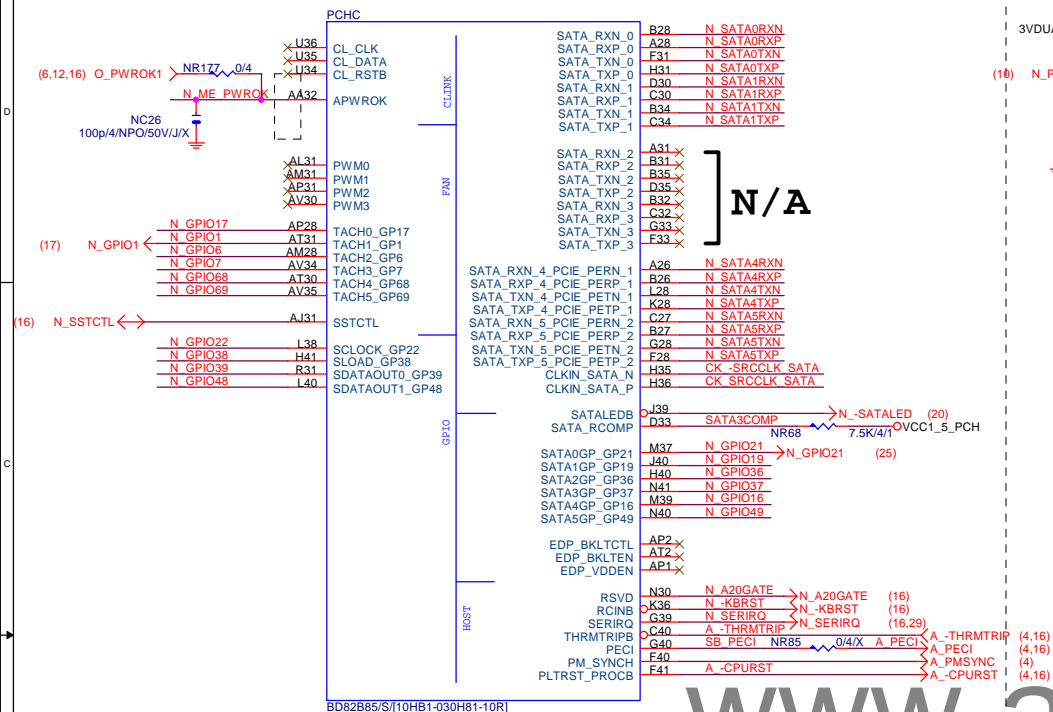
VGA DDC



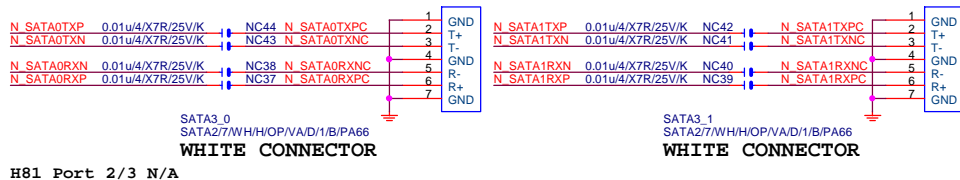
Gigabyte Technology			
PCH DISPLAY, CLK BUFFER			
Size	Document Number	Rev	
Custom	GA--H81M-H	1.1	
Date:	Thursday, October 31, 2013	Sheet	10 of 29

(C)

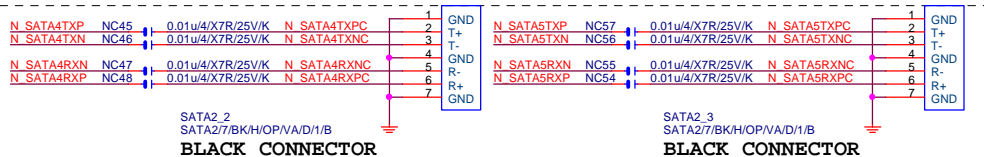
SATA3 : 20/7.5/4.5/7.5/20 (breakout min 8/4/4/4/8)
Impedance=90 +- 17.5%
SATA2 : 15/7.5/4.5/7.5/15 (breakout min 8/4/4/4/8)
Impedance=90 +- 17.5%



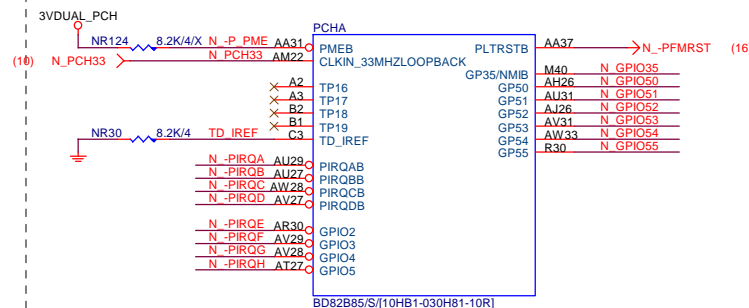
SATA CONNECTOR



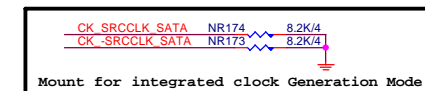
```
** Z87/H87 Port 4&5 SATA3.0
** B85 Port 4&5 SATA2.0
```



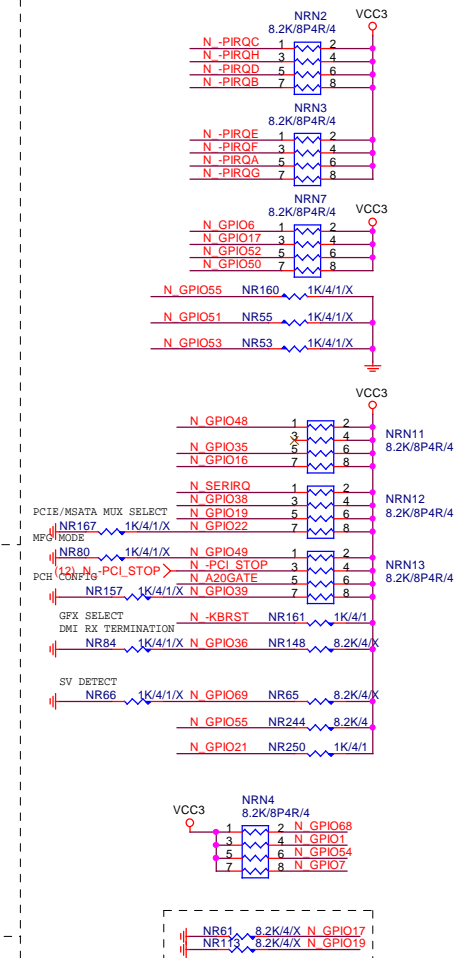
PCH (A)



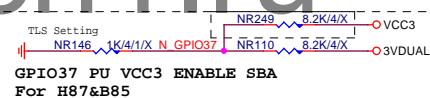
PCH	CLK	PD
-----	-----	----



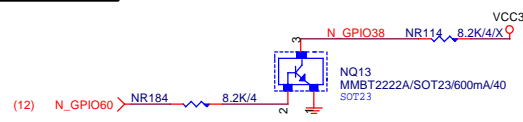
PCH	PU/PD
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ME PWROK



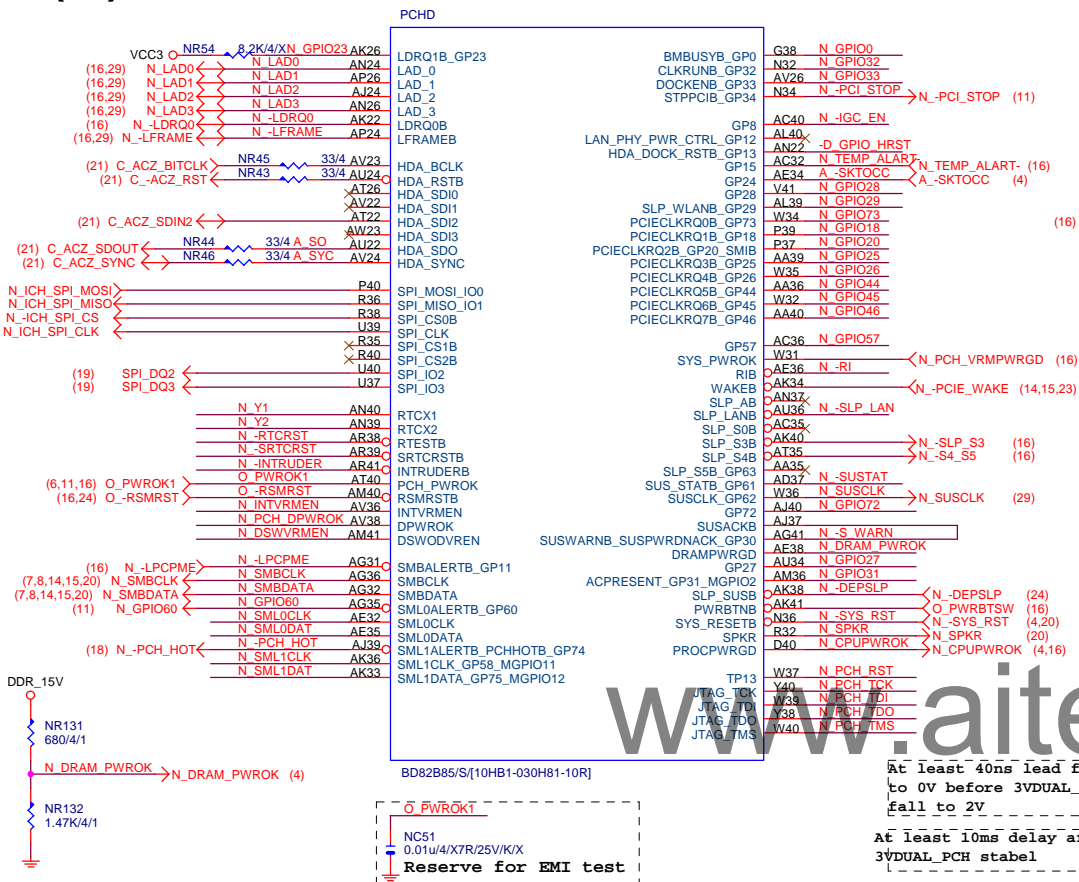
GPIO38 Ctrl



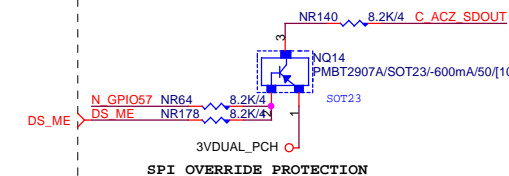
Gigabyte Technology

Title			
PCH HOST , SATA, PCI			
Size	Document Number		Rev
Custom	GA--H81M-H		1.1
Date:	Thursday, October 31, 2013	Sheet	11 of 29

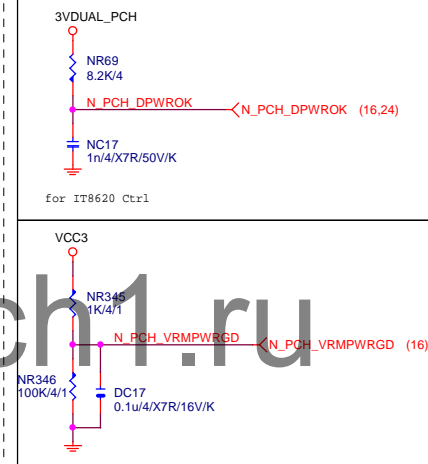
(D)



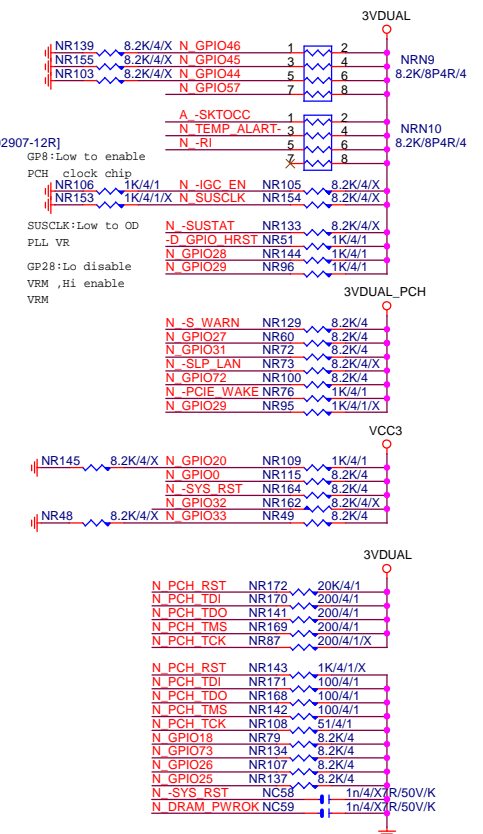
ACZ_SDOUT



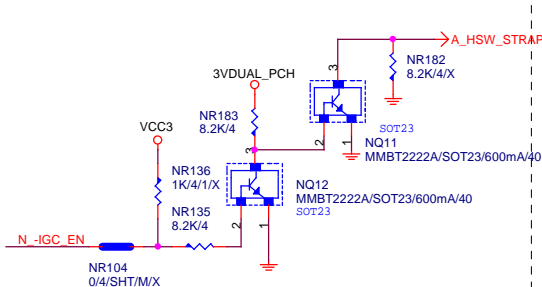
PCH_DPWROK



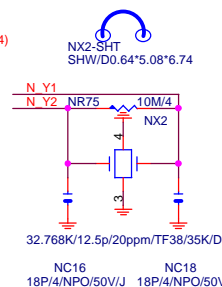
PCH	PU/PD
-----	-------



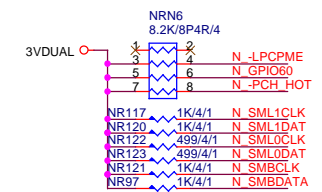
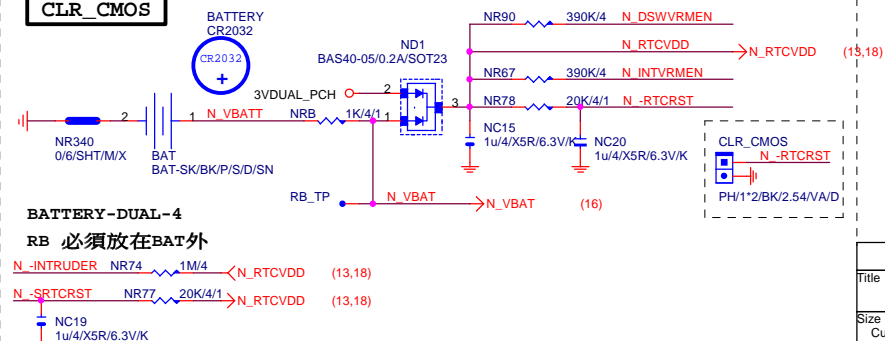
HSW_STRAP13



32.768KHZ



CLR_CMOS



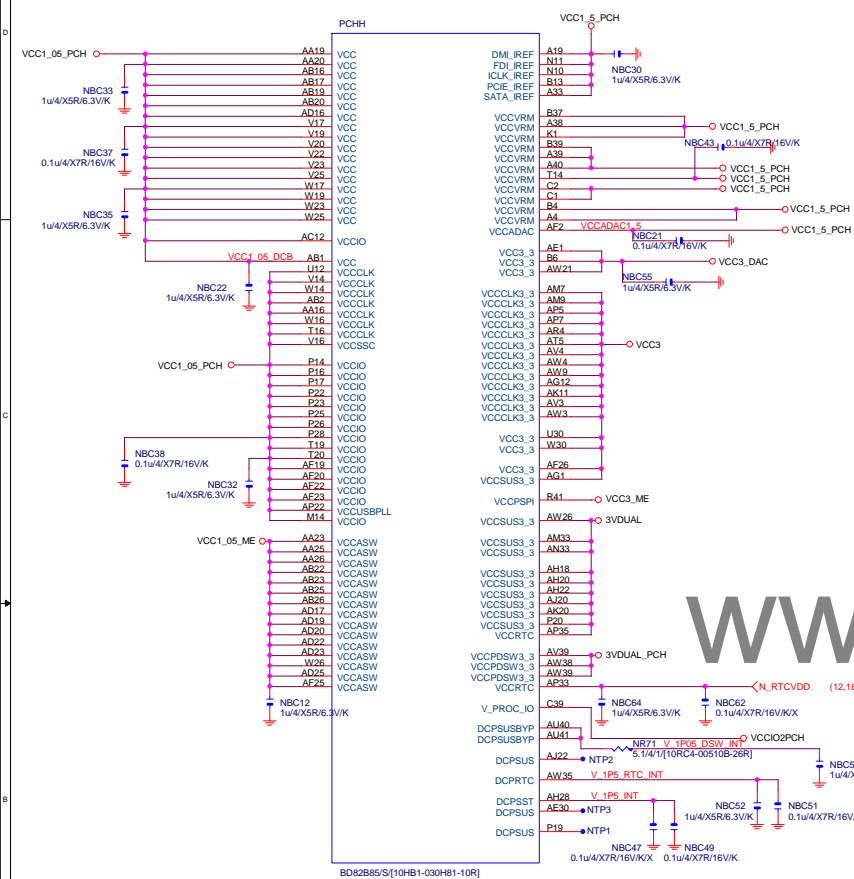
Gigabyte Technology

PCH GPIO , CTRL , AUDIO

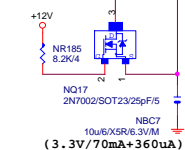
Size	Document Number	Rev
Custom	GA--H81M-H	1.1

Date: Thursday, October 31, 2013 Sheet 12 of 29

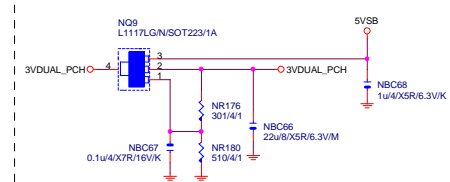
PCH (H)



VCC3_DAC



3VDUAL_PCH



SHT PWR

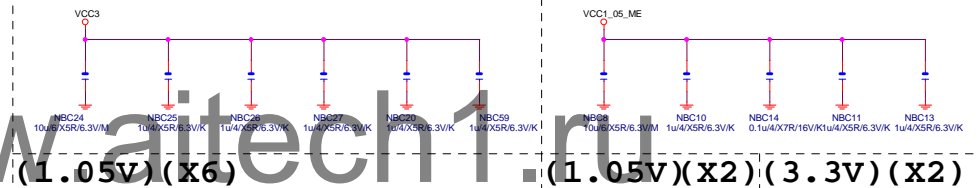


CAP



(3.3V) (X6)

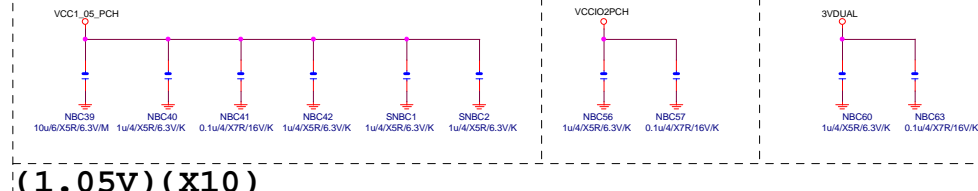
(1.05V) (x5)



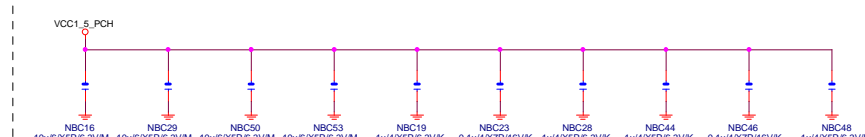
(1.05V)(x6)

■ (1.05V)(x2) (3.3V)(x2)

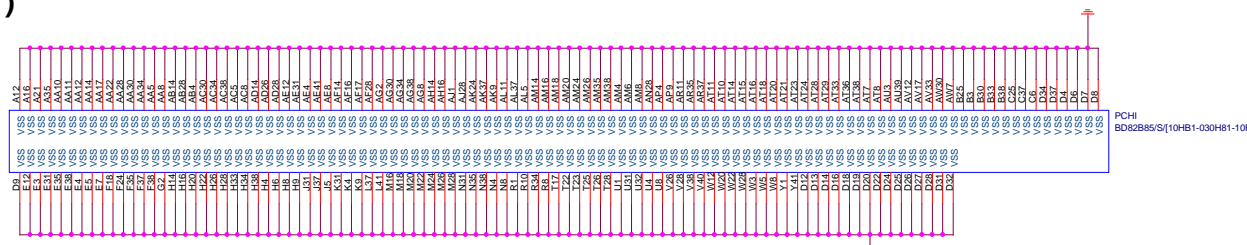
)(3.3V) (x2)



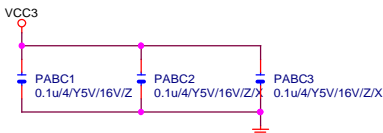
(1.05V) (x10)



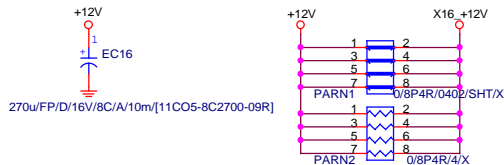
PCH (I)



PCIEX16 CAP



PCIEX16 PROTECT SHT



PCIEX16 AC CAP

PA EXP TXP0	PAC5	0.22u4/X5R/6.3V/K	PA EXP TXP0 C
PA EXP TXN0	PAC4	0.22u4/X5R/6.3V/K	PA EXP TXN0 C
PA EXP TXP1	PAC6	0.22u4/X5R/6.3V/K	PA EXP TXP1 C
PA EXP TXN1	PAC7	0.22u4/X5R/6.3V/K	PA EXP TXN1 C
PA EXP TXP2	PAC8	0.22u4/X5R/6.3V/K	PA EXP TXP2 C
PA EXP TXN2	PAC9	0.22u4/X5R/6.3V/K	PA EXP TXN2 C
PA EXP TXP3	PAC10	0.22u4/X5R/6.3V/K	PA EXP TXP3 C
PA EXP TXN3	PAC11	0.22u4/X5R/6.3V/K	PA EXP TXN3 C
PA EXP TXP4	PAC12	0.22u4/X5R/6.3V/K	PA EXP TXP4 C
PA EXP TXN4	PAC13	0.22u4/X5R/6.3V/K	PA EXP TXN4 C
PA EXP TXP5	PAC14	0.22u4/X5R/6.3V/K	PA EXP TXP5 C
PA EXP TXN5	PAC15	0.22u4/X5R/6.3V/K	PA EXP TXN5 C
PA EXP TXP6	PAC16	0.22u4/X5R/6.3V/K	PA EXP TXP6 C
PA EXP TXN6	PAC17	0.22u4/X5R/6.3V/K	PA EXP TXN6 C
PA EXP TXP7	PAC18	0.22u4/X5R/6.3V/K	PA EXP TXP7 C
PA EXP TXN7	PAC19	0.22u4/X5R/6.3V/K	PA EXP TXN7 C
PA EXP TXP8	PAC20	0.22u4/X5R/6.3V/K	PA EXP TXP8 C
PA EXP TXN8	PAC21	0.22u4/X5R/6.3V/K	PA EXP TXN8 C
PA EXP TXP9	PAC22	0.22u4/X5R/6.3V/K	PA EXP TXP9 C
PA EXP TXN9	PAC23	0.22u4/X5R/6.3V/K	PA EXP TXN9 C
PA EXP TXP10	PAC24	0.22u4/X5R/6.3V/K	PA EXP TXP10 C
PA EXP TXN10	PAC25	0.22u4/X5R/6.3V/K	PA EXP TXN10 C
PA EXP TXP11	PAC26	0.22u4/X5R/6.3V/K	PA EXP TXP11 C
PA EXP TXN11	PAC27	0.22u4/X5R/6.3V/K	PA EXP TXN11 C
PA EXP TXP12	PAC28	0.22u4/X5R/6.3V/K	PA EXP TXP12 C
PA EXP TXN12	PAC29	0.22u4/X5R/6.3V/K	PA EXP TXN12 C
PA EXP TXP13	PAC30	0.22u4/X5R/6.3V/K	PA EXP TXP13 C
PA EXP TXN13	PAC31	0.22u4/X5R/6.3V/K	PA EXP TXN13 C
PA EXP TXP14	PAC32	0.22u4/X5R/6.3V/K	PA EXP TXP14 C
PA EXP TXN14	PAC33	0.22u4/X5R/6.3V/K	PA EXP TXN14 C
PA EXP TXP15	PAC34	0.22u4/X5R/6.3V/K	PA EXP TXP15 C
PA EXP TXN15	PAC35	0.22u4/X5R/6.3V/K	PA EXP TXN15 C

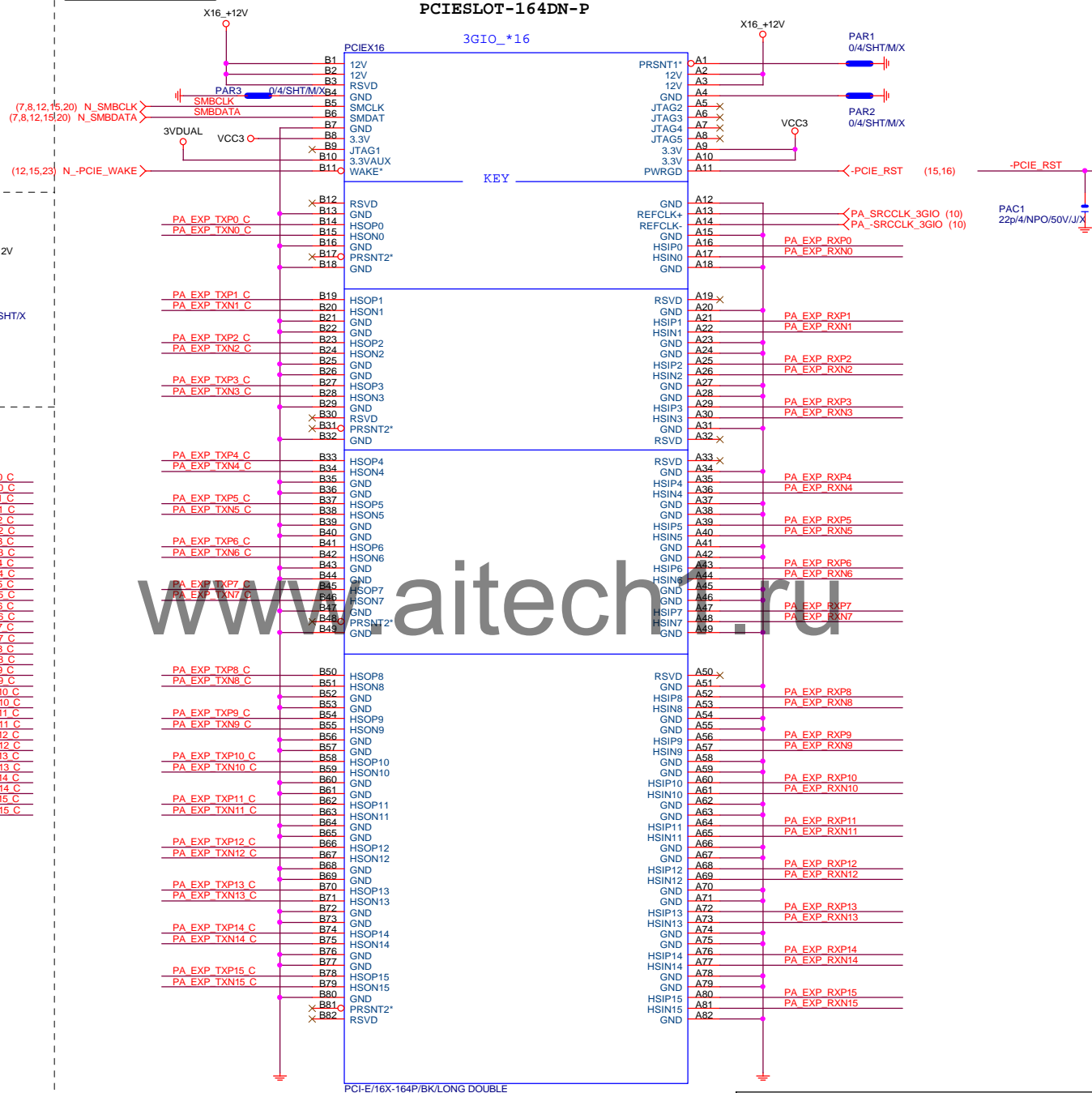
PA EXP RXP0.[15] >>> PA_EXP_RXP[0..15] (4)

PA EXP RXN0.[15] >>> PA_EXP_RXN[0..15] (4)

PA EXP TXP0.[15] >>> PA_EXP_TXP[0..15] (4)

PA EXP TXN0.[15] >>> PA_EXP_TXN[0..15] (4)

PCIEX16 SLOT



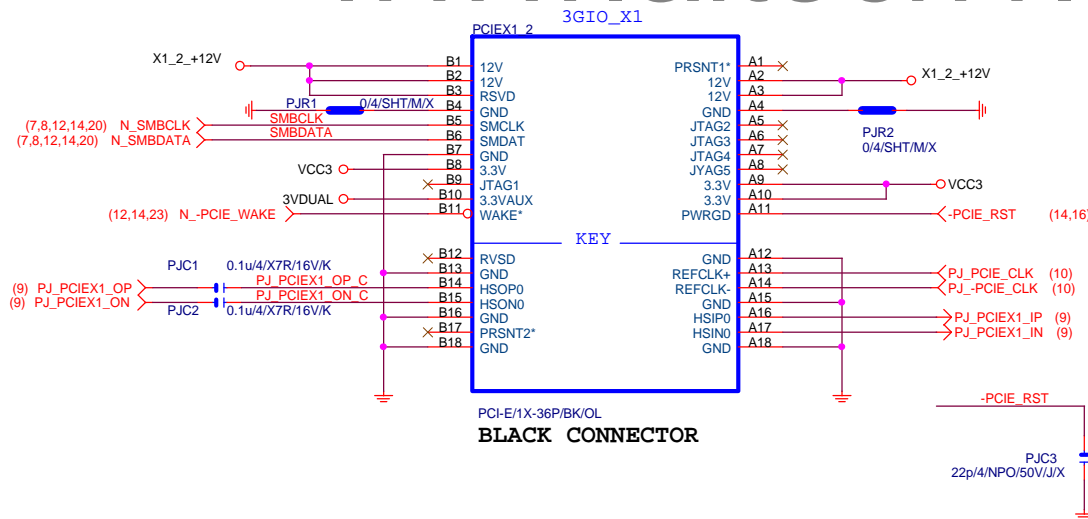
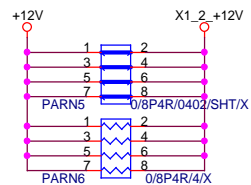
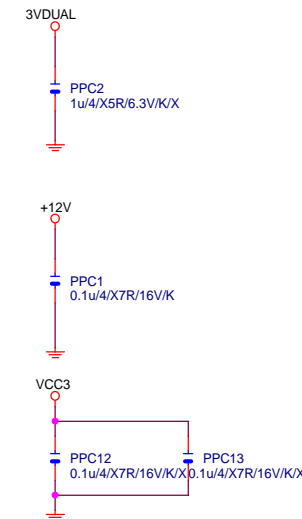
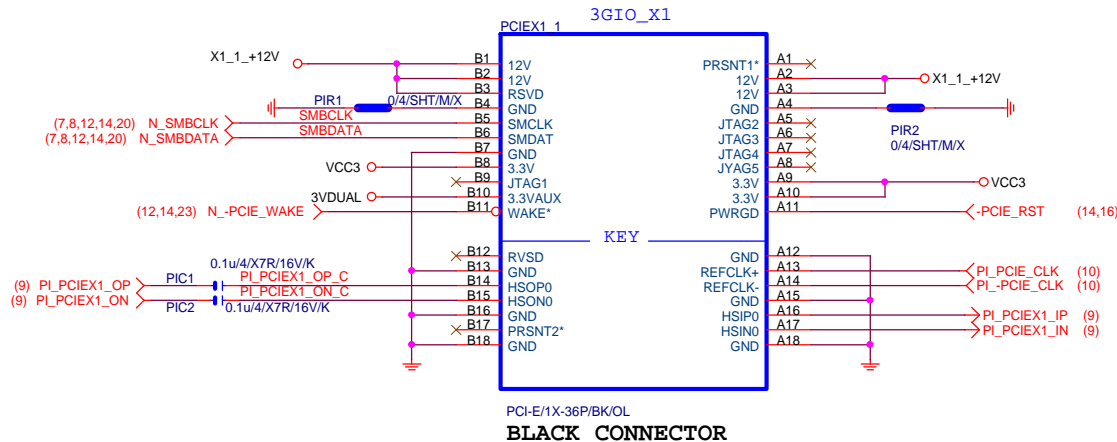
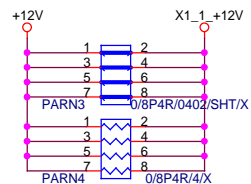
BLACK CONNECTOR

Gigabyte Technology

Title			PCI EXPRESS * 16	
Size			GA--H81M-H	
Custom			Rev 1.1	
Date:			Thursday, October 31, 2013	
Sheet			14 of 29	

PCIEX1 SLOT

PCIEX1 PROTECT SHT



Gigabyte Technology			
PCI EXPRESS X 1 PORT			
Title	Document Number	Rev	
Size	Custom	GA-H81M-H	
Date:	Thursday, October 31, 2013	Sheet	15 of 29

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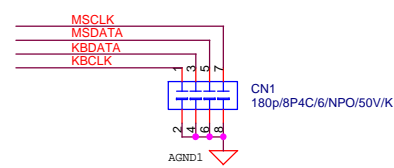
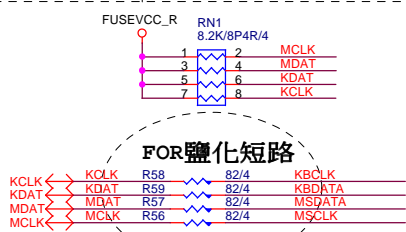
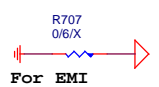
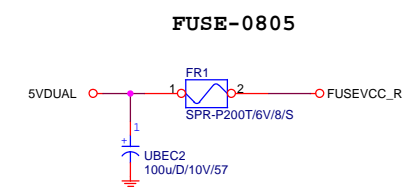
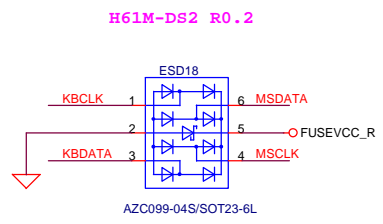
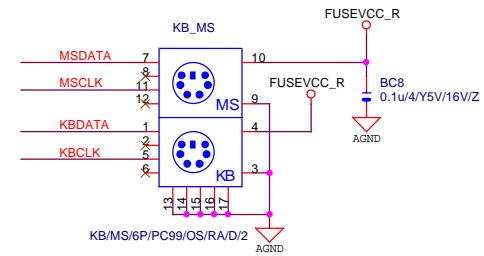
COM

KB/MS

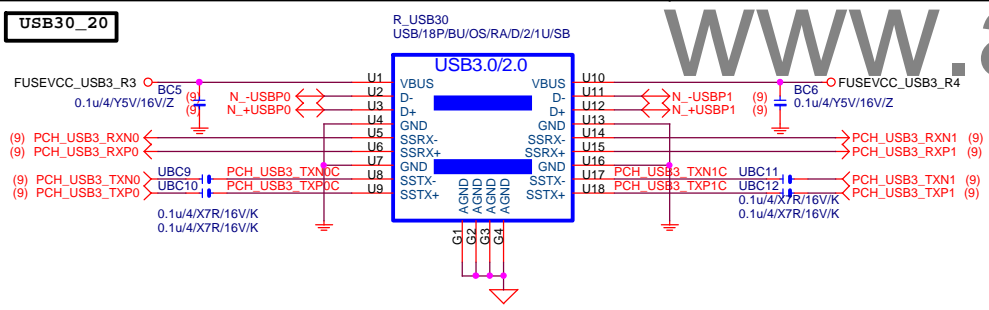
KB_MS ESD

USB2.0 PWR

COM RI

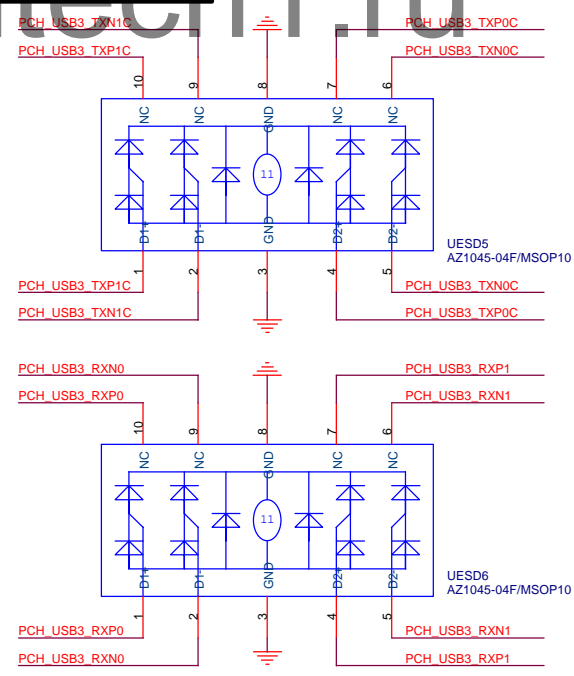


USB30_20

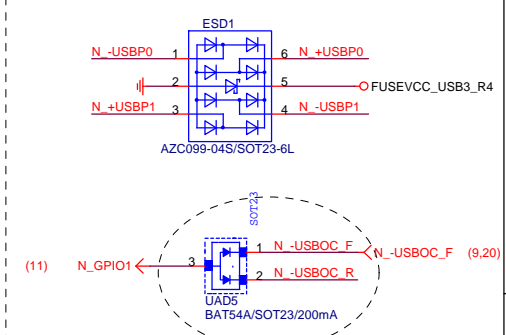


USB30_20 ESD PROTECT

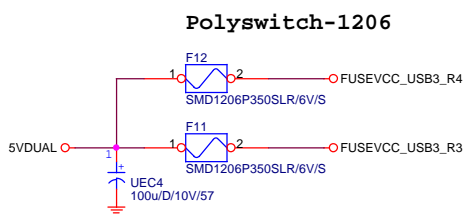
USB3.0 ESD



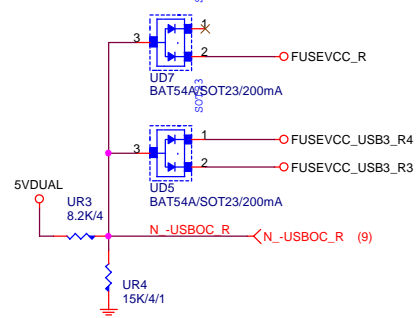
USB POWER PROTECT



USB30_20 PWR



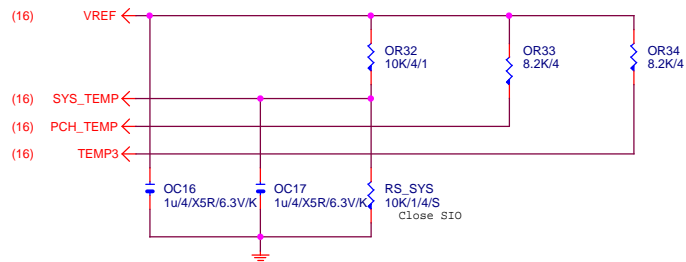
-USBOC_R



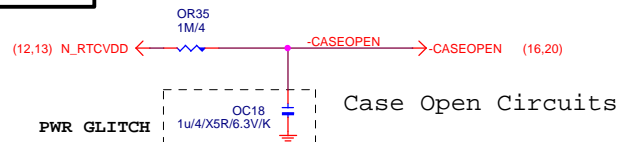
N_GPIO1接USBOC,S3/S4/S5會拉LOW

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

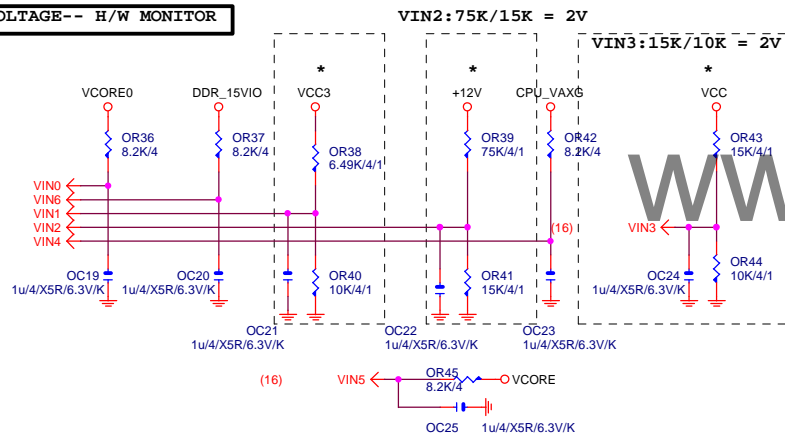
TEMP H/W MONITOR



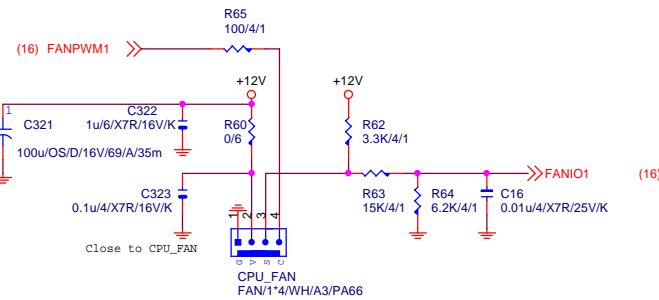
CASE OPEN



VOLTAGE-- H/W MONITOR



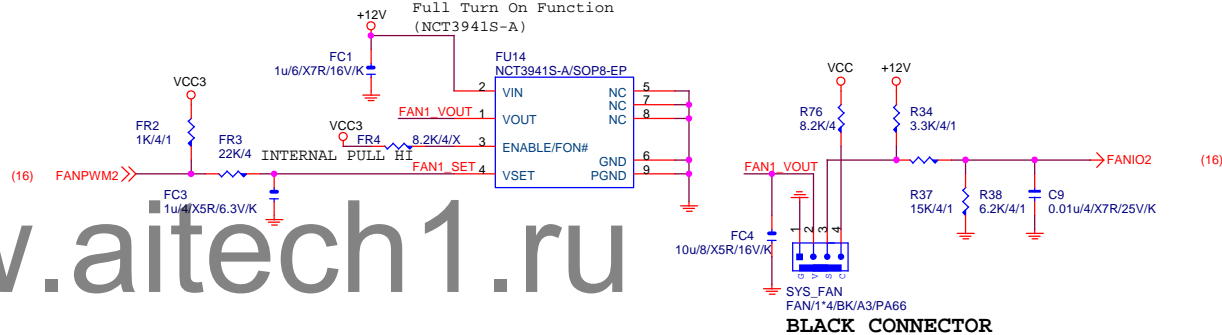
CPU SMART FAN



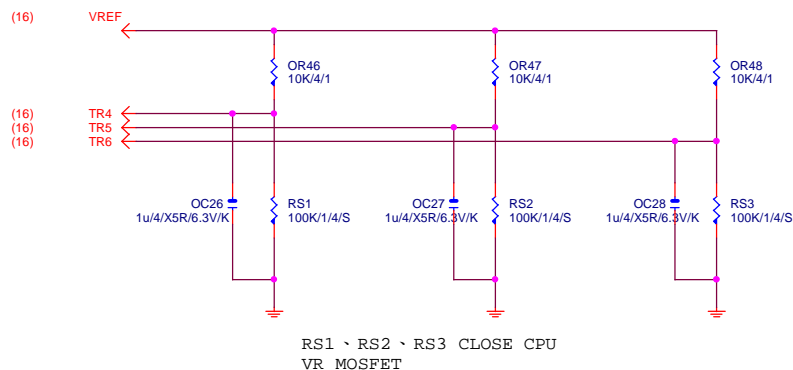
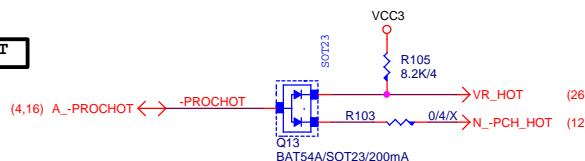
SYS SMART FAN

Linear SYS_FAN

Enable Function (NCT3941S)
Full Turn On Function
(NCT3941S-A)

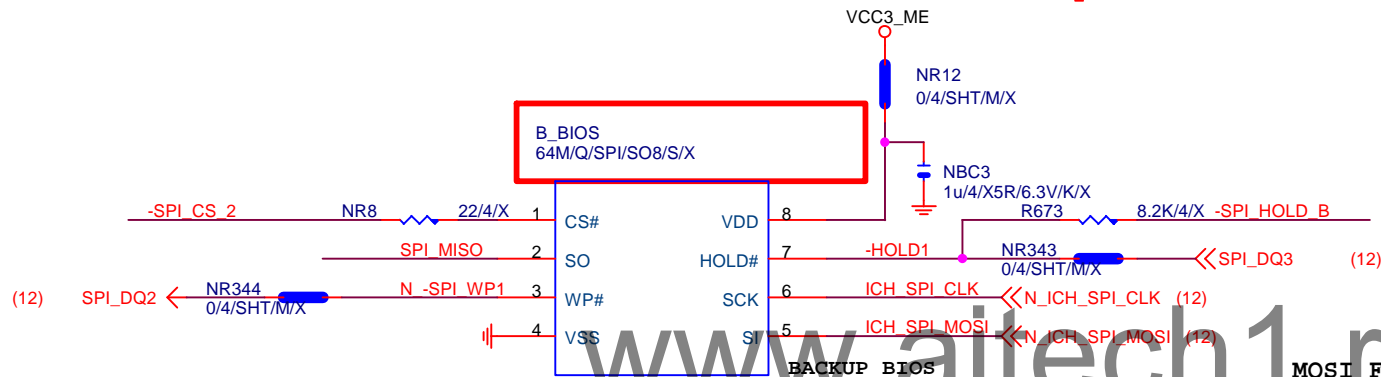
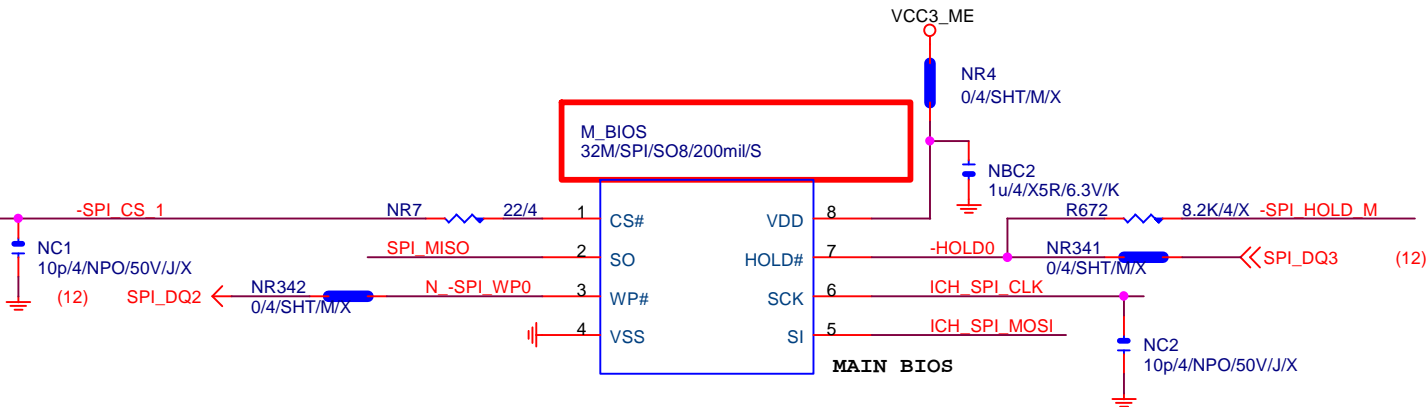


-PROHOT



Gigabyte Technology

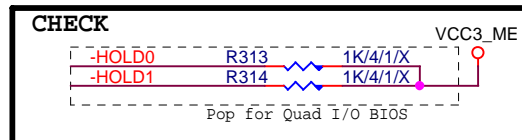
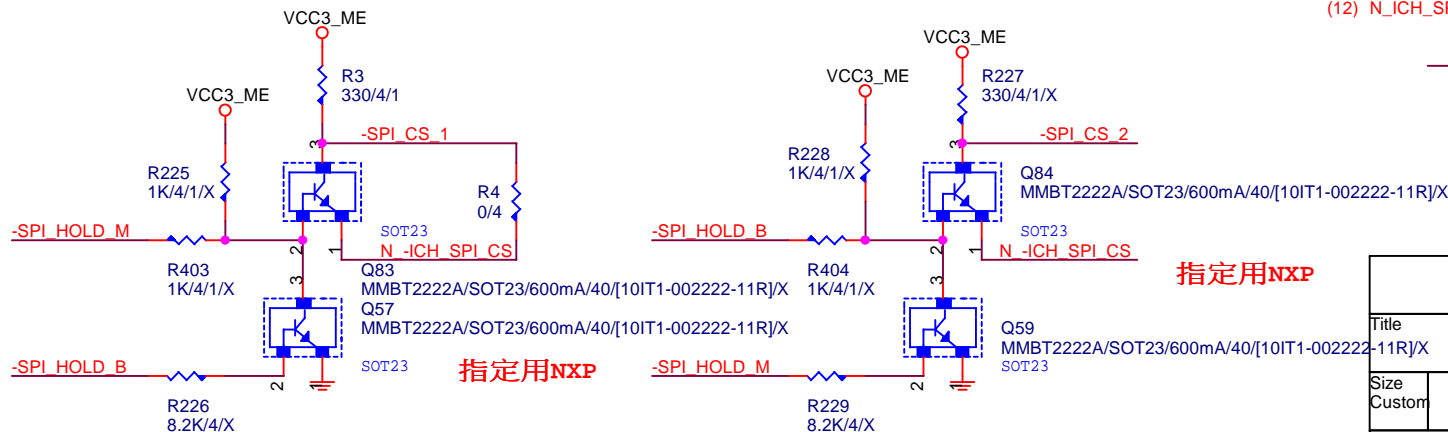
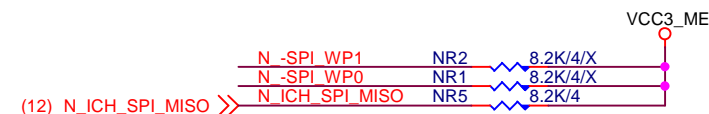
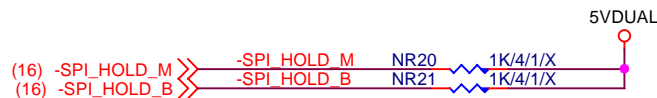
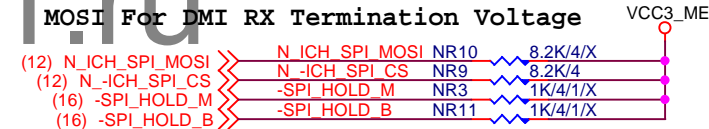
Title			HWM,FAN CTRL,OV
Size	Document Number	GA--H81M-H	
Custom		Rev 1.1	
Date:	Thursday, October 31, 2013	Sheet	18 of 29



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

1 means floating
0 means PD 1K

MOSI For DMI RX Termination Voltage



指定用NXP

Gigabyte Technology

DUAL BIOS

GA--H81M-H

Rev 1.1

Title

Size Custom

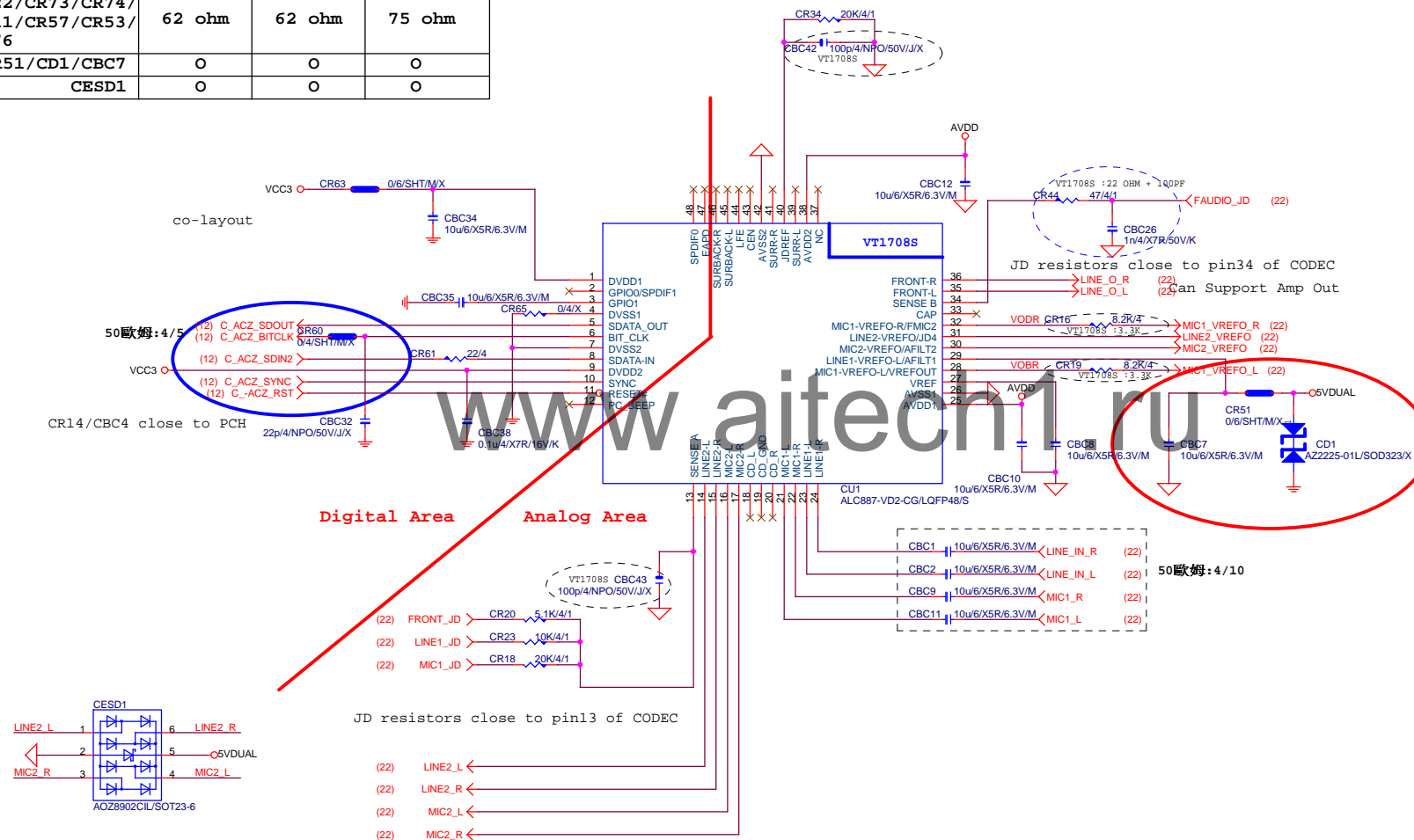
Document Number

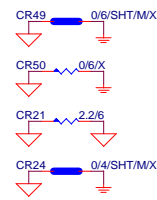
Date: Thursday, October 31, 2013

Sheet 19 of 29

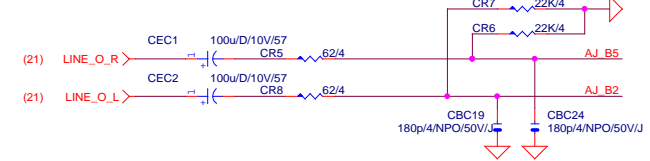
AZALIA CODEC **ALC892/ALC887-VD2/VT1708-CE Colay**

	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





LINE-OUT

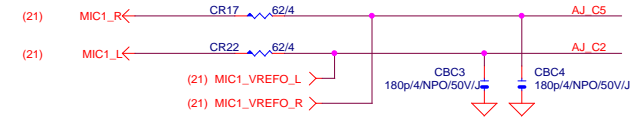


LINE-IN

Verify MIC function
in LINE-in

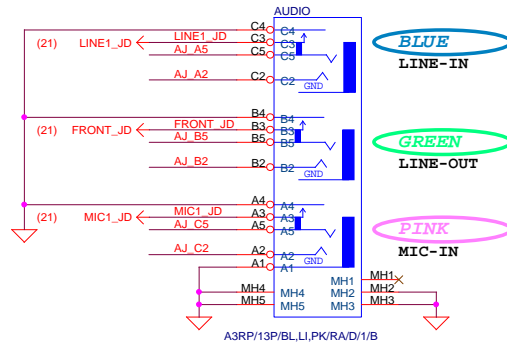
For 889A/888

MIC-IN



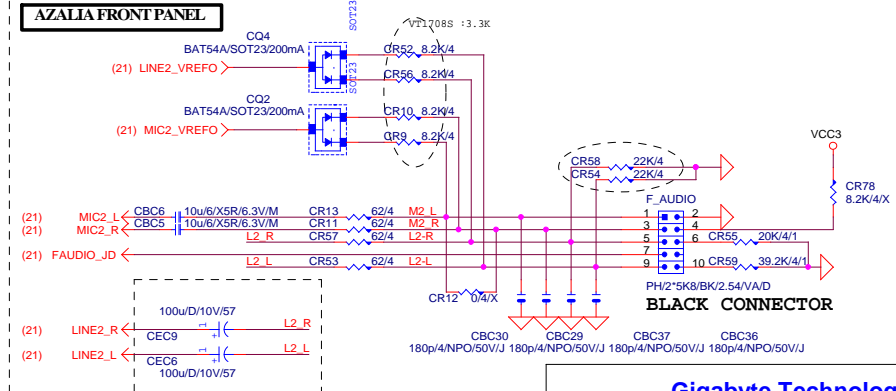
SPDIF_OUT

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BLUE
LINE-IN
GREEN
LINE-OUT
PINK
MIC-IN

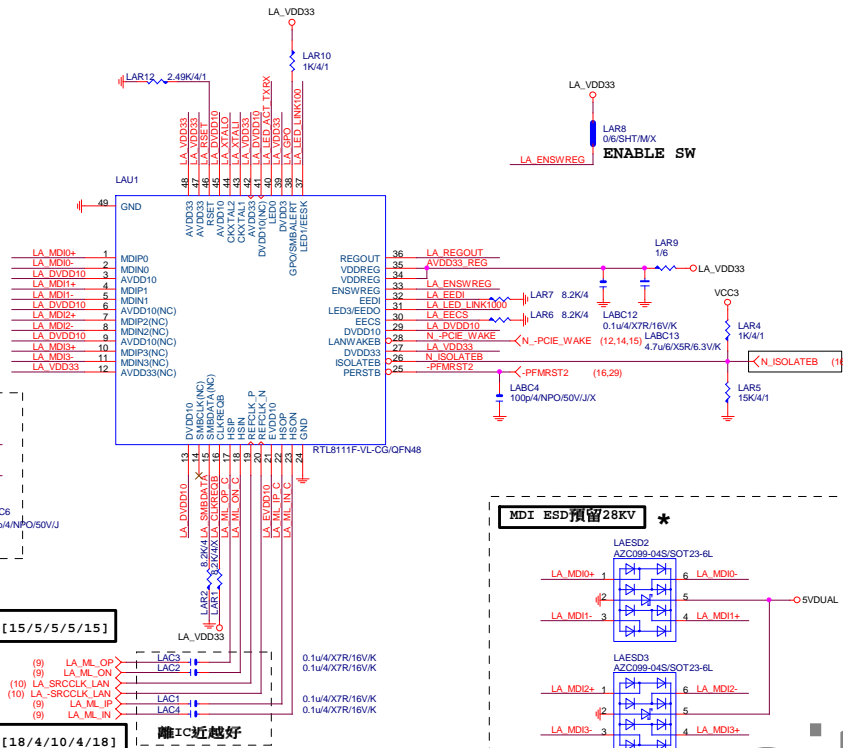
AZALIA FRONT PANEL



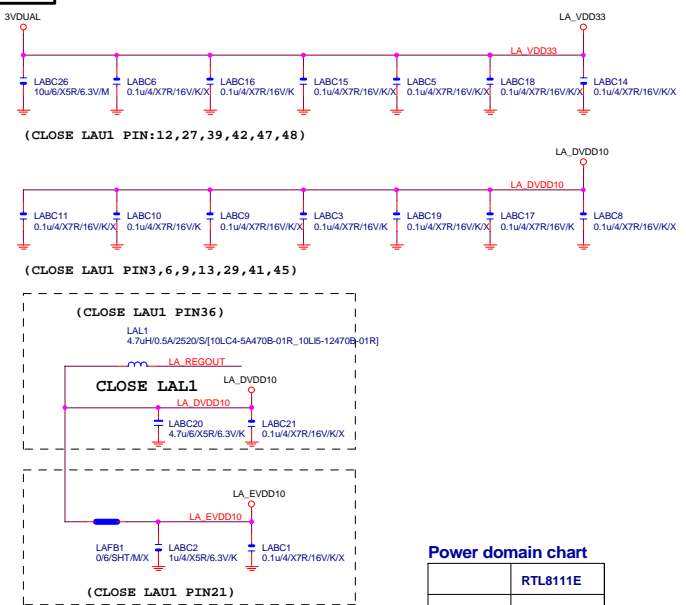
Gigabyte Technology

Title			
AUDIO JACK			
Size	Document Number	Rev	
Custom	GA--H81M-H	1.1	
Date:	Thursday, October 31, 2013	Sheet	22 of 29

LAN:RTL8111F/VB/VL



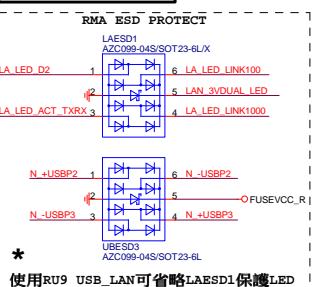
LAN POWER



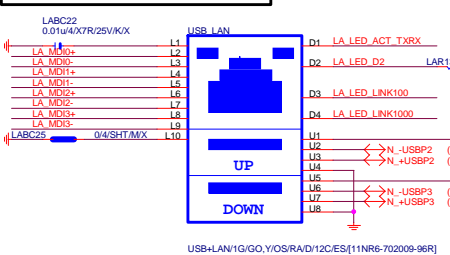
Power domain chart

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

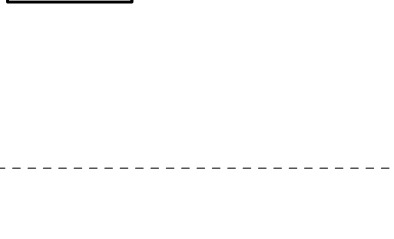
USB LAN CONNECTOR



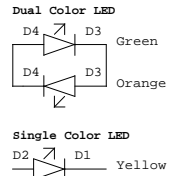
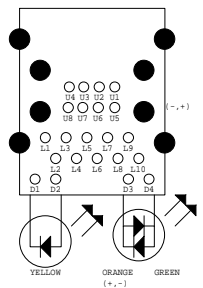
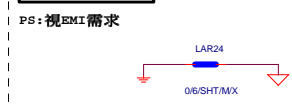
LA_MDI-->100歐姆:[20/4/8/4/20]



USB X3 POWER



EMI SHORT PAD



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

BOM NOTICE *

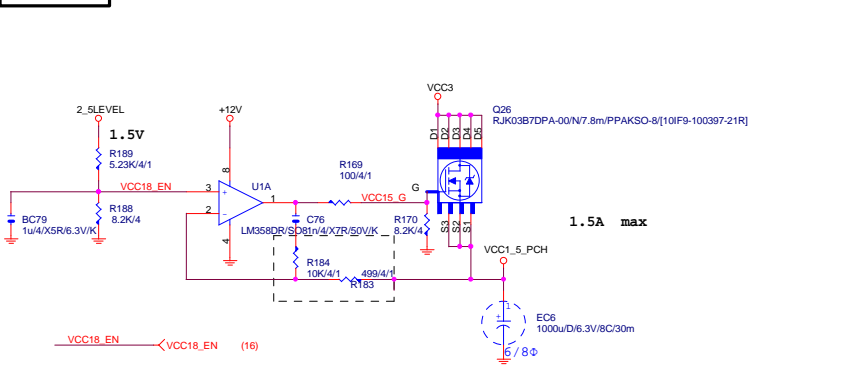
料號	規格	廠商
11NR6-702009-96R	1G LAN (12core)	UDE(RU9 ESD+)
[LED獨立走線,可省略外加AZC099料件LAESD1]		
1. 9KV ESD BOM:		
USB_LAN (RU9):11NR6-702009-96R		
2. 28KV ESD BOM:		
USB_LAN (RU9):11NR6-702009-96R		
LAESD2,LAESD3:上件AZC398-04S		

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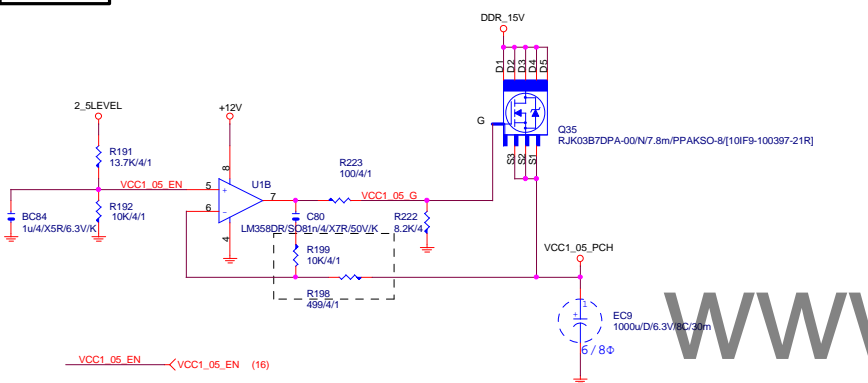
Realtek RTL8111G

Title	Document Number	Rev
Size	Custom	1.1
Date:	Thursday, October 31, 2013	Sheet 23 of 29

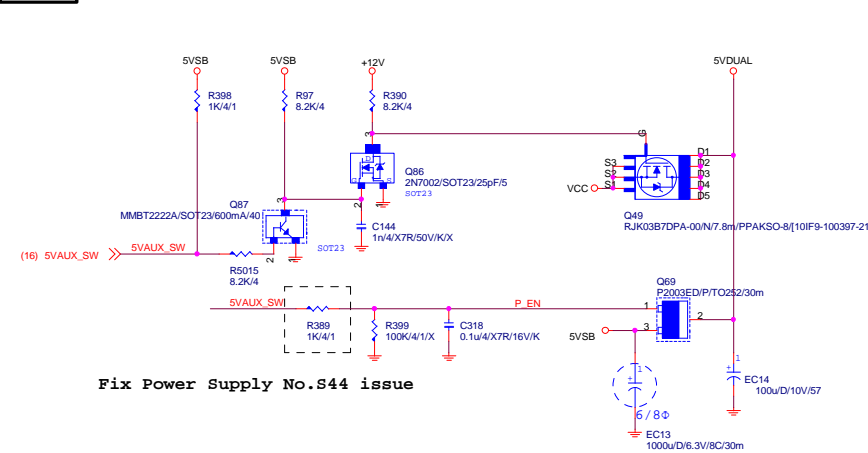
VCC1_8_PCH



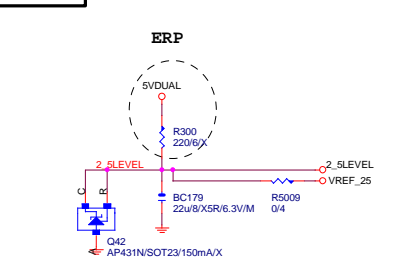
VCC1_05_PCH



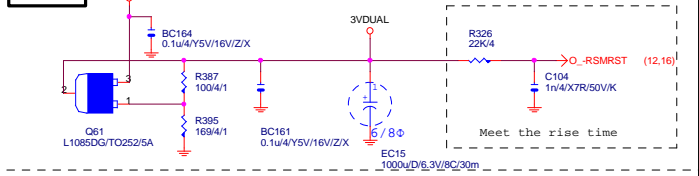
5VDUAL



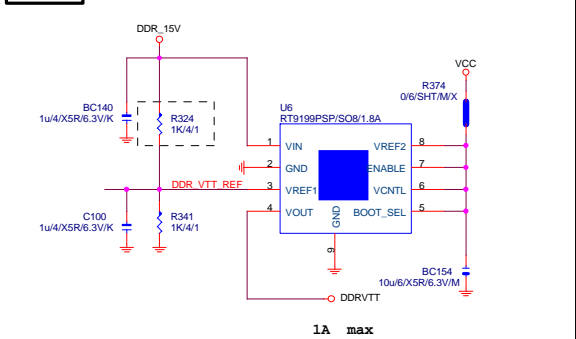
2_5LEVEL



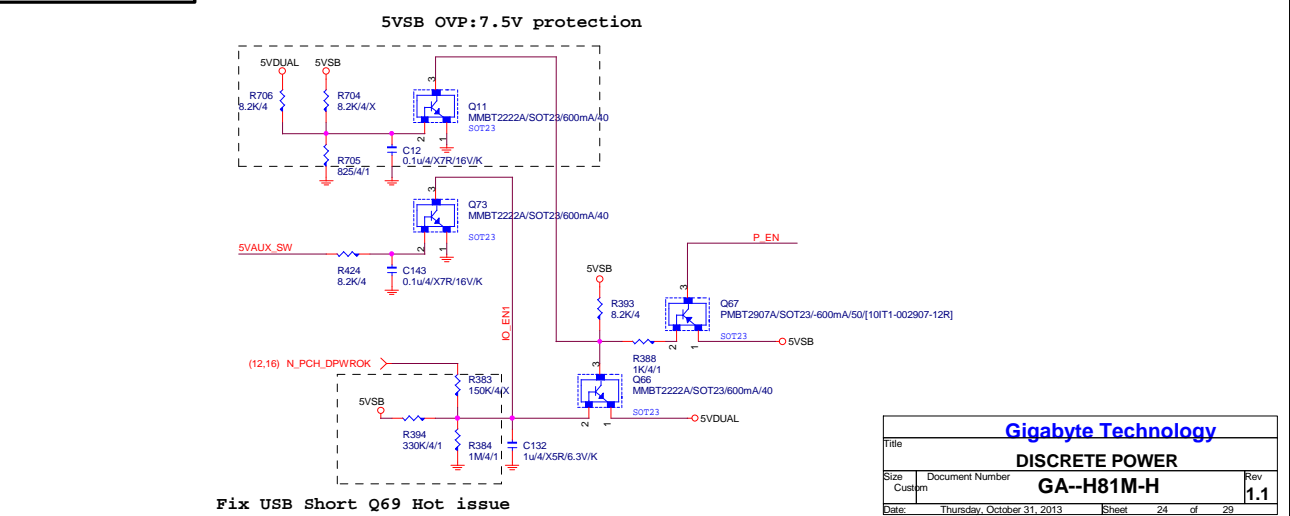
3VDUAL



DDRVTT

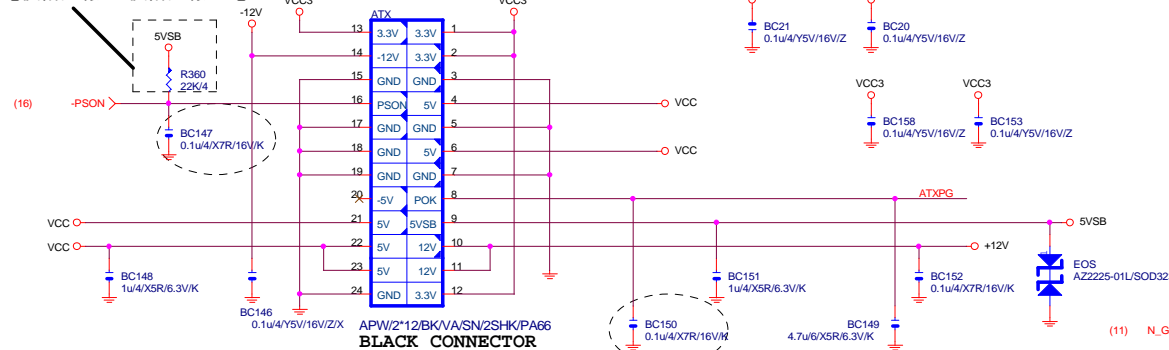


5VDUAL SHORT PROTECT



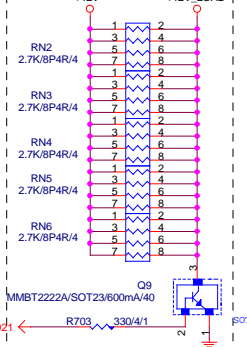
ATXX24 POWER CONNECTOR

【技術通報R&D技術通報155】



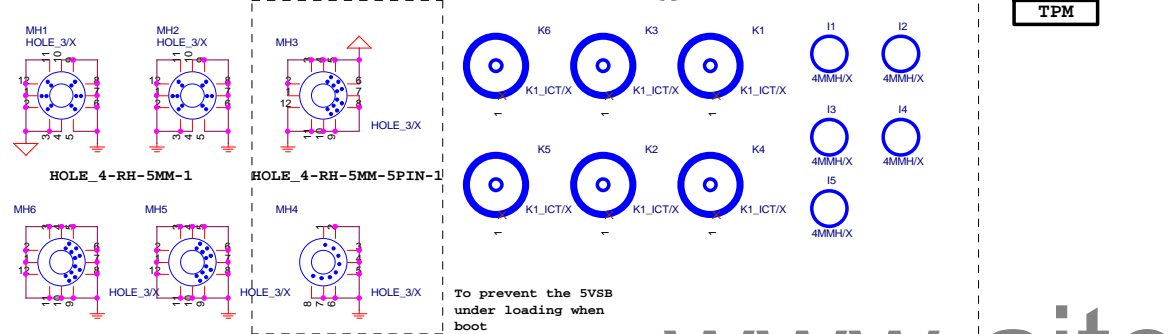
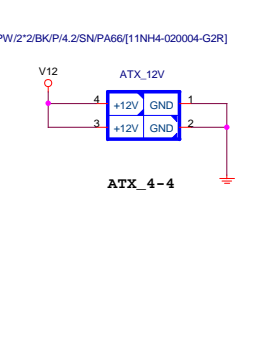
【技術通報R&D技術通報158】

To fix 12V light load abnormal issue



ATXX4 POWER CONNECTOR

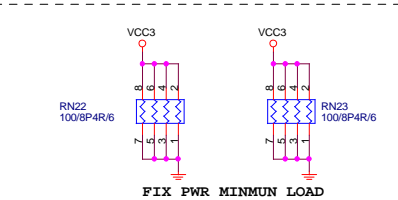
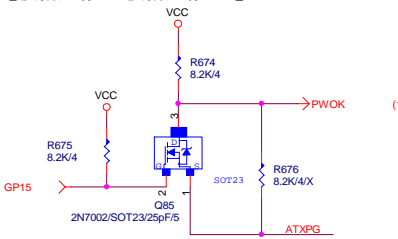
【技術通報R&D技術通報154】



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PWOK PATCH

【技術通報R&D技術通報154】



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ATX CONNECTOR

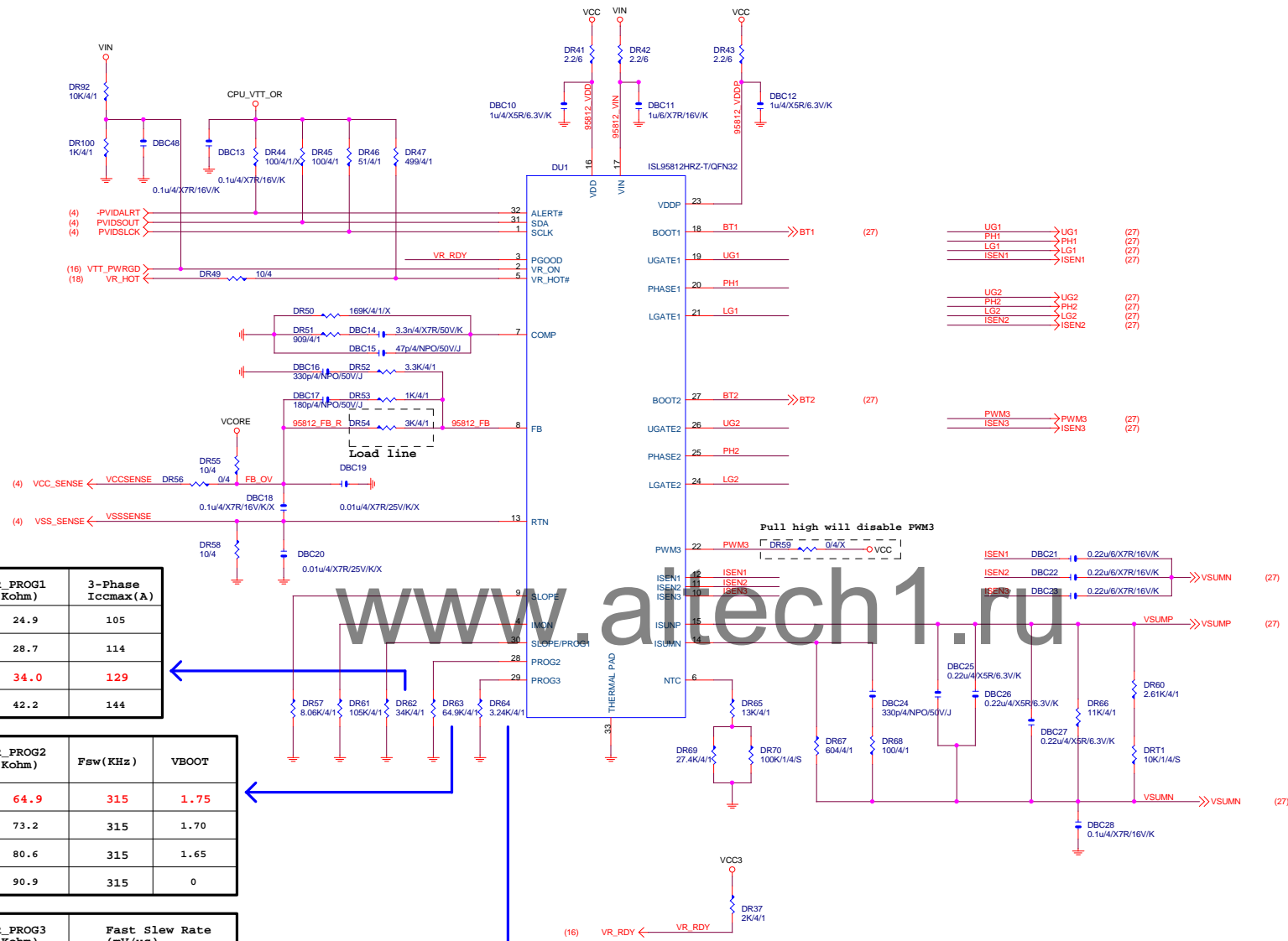
GA-H81M-H

Rev 1.1

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

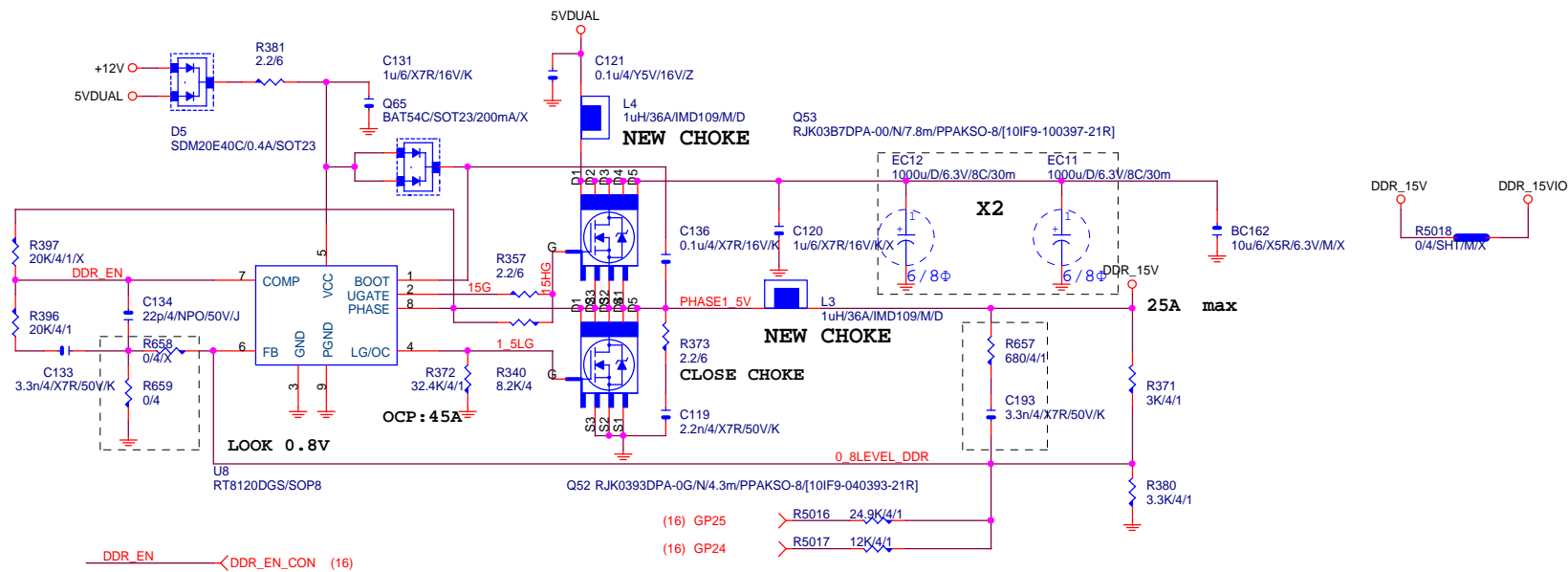
R_PROG2 (Kohm)	Fsw(KHz)	VBOOT
64.9	315	1.75
73.2	315	1.70
80.6	315	1.65
90.9	315	0

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



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File		
CPU CORE VR-1		
Size	Document Number	Rev
Custom	GA--H81M-H	1.1
Date	Thursday, October 31, 2013	Sheet 26 of 29



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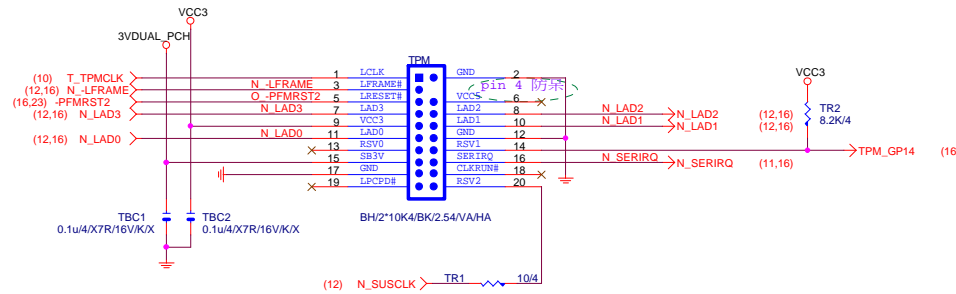
VIN=5V, VOUT=1.5V, IOUT=25A, PHASE=1
 IRMS=11.45A
 560u/FP/D/6.3V/68/8m RIPPLE CURRENT=4.7A
 Coefficient=1.7(85°C), 1(105°C)
 VIN Ripple current=4.7X1.7=7.99A(85°C)
 -->故固態電容須2X7.99=15.98>11.45A

$Rocset = (I_{ocp} * L_{gate, rdson}) / I_{ocset}$
 $Rocset = (45A * 6.7m\Omega) / 10uA = 30K$
 $I_{ocset} = 10uA$

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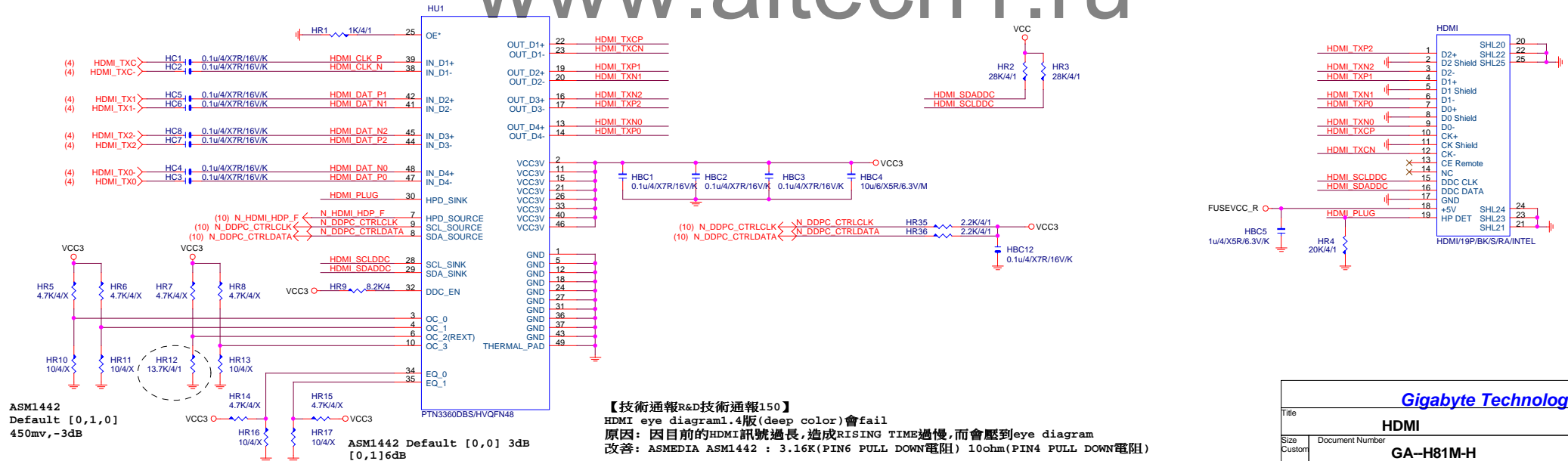
Title		
DDR POWER		
Size	Document Number	Rev
Custom	GA--H81M-H	1.1
Date:	Thursday, October 31, 2013	Sheet 28 of 29

TPM CONNECT



HDMI LEVEL SHIFT

HDMI: 20/4/6/4/20
Impedance=85 -- 17.5%



【技術通報R&D技術通報150】

HDMI eye diagram 1.4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 ASMI442 : 3.16K(PIN6 PULL DOWN電阻) 10ohm(PIN4 PULL DOWN電阻)

Gigabyte Technology

HDMI

GA-H81M-H

Rev 1.1

Date: Thursday, October 31, 2013 Sheet 29 of 29