

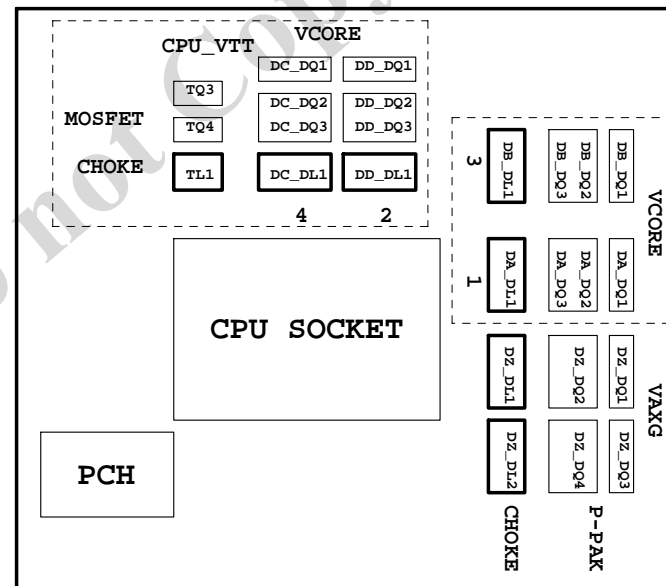
Model Name: GA-H77-D3H-MVP 1.1

SHEET TITLE

01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	CPU_LGA1155-A
05	CPU_LGA1155-B
06	CPU_LGA1155-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	PCIEX1*3 , PCIEX4 SLOT
16	ITE8892 PCI BRIDGE
17	PCI SLOT 1&2
18	I/O ITE8728
19	COM, -PROHOT, R_USB
20	Dual BIOS , TPM SLB9635TT
21	VT2021 CODEC
22	REAR AUDIO JACK
23	VCORE PWM_IR3564
24	VCORE PWM DRIVER IR3598
25	NCP3933 OVER VOLTAGE
26	DISCRETE POWER
27	DDR_15V & CPU_VTT PWM IR3570

SHEET TITLE

28	DDR_15V & CPU_VTT PWM DRIVER CHL8550
29	VCCSA POWER
30	F_PANEL , F_USB2.0/3.0
31	ATX POWER, CLOCK GEN
32	HWM , KB/MS , FAN CTRL
33	LAN ATHEROS AR8151
34	N/A
35	M-SATA
36	DVI
37	HDMI , R_USB30
38	TABLE LIST
39	
40	



Gigabyte Technology

Cover Sheet		
Title	GA-H77-D3H	
Size	Document Number	Rev
Custom		1.1
Date:	Monday, July 09, 2012	Sheet 1 of 38

GA-H77-D3H-MVP

Component value change history

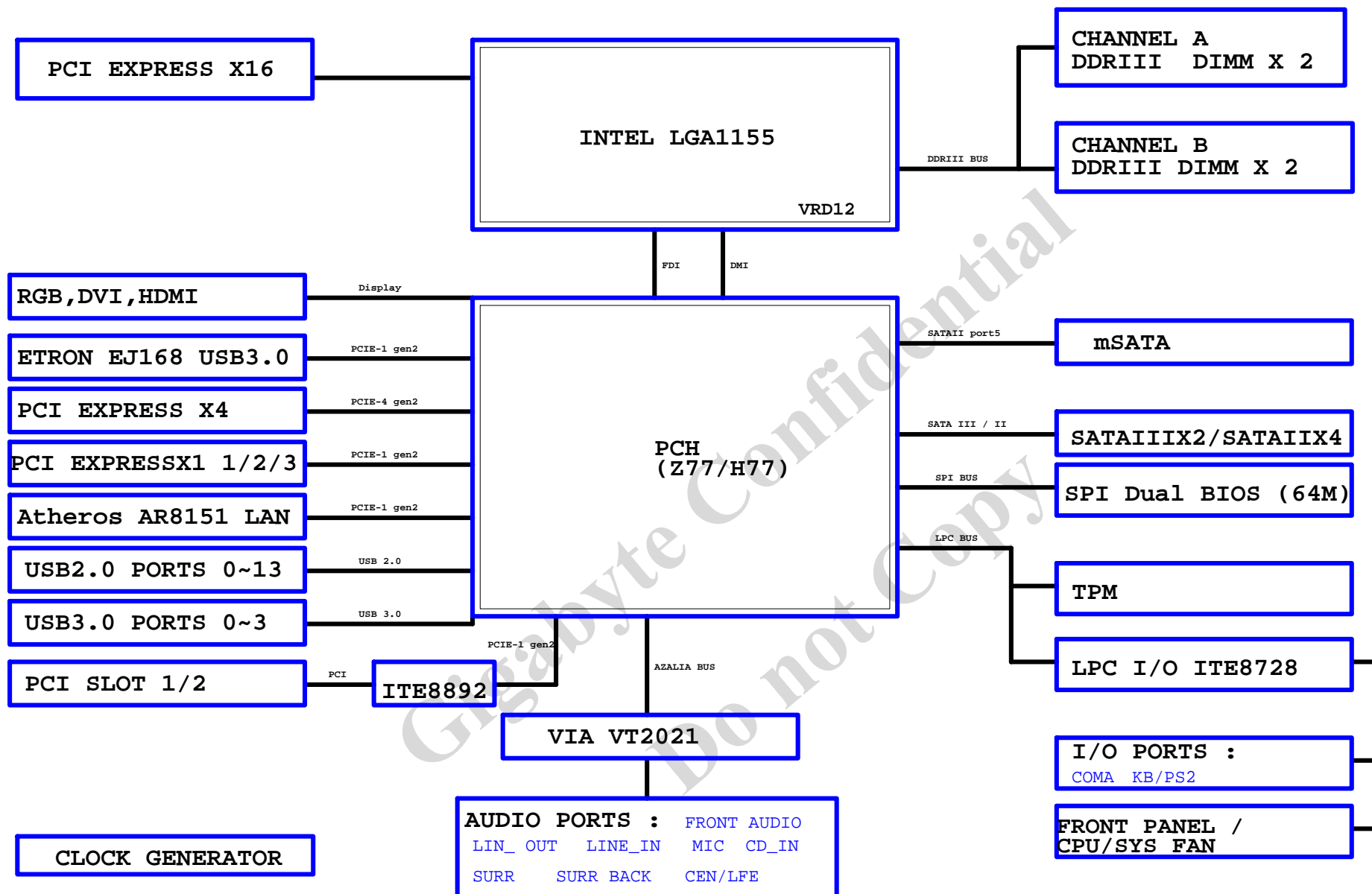
Data	Change Item	Reason
0.1-1124	E-BOM	
02-1216	1. ADD PCH_HS & MOS_HS料號	
	2. PCIE gen2 switch PI3PCIE2415ZHE --> ASM1440	
	3. load-line DAR5=12K , DAR40=1.78K	
10A-0105	1. Z77料號更新	
	2. PWM Driver power vcc or +12v?	
	3. DART2 --> 47K/1/4/S , DAR44 --> 0 ohm	
10B-0113	1. Vcore & VAXG VSEN modify , DAR1,DAR51=100/4/1,DAR2,DAR54=0/4,DAC1,DAC24=3.3mF	
	2. 1.54K加替料:10RC4-001541-22R TA-I	
	1. Remove IR PWM 1X3 pin	
10C-0117	1. DA_DR11,DC_DR11,DZ_DR18 1ohm --> 0ohm	
10D-0119	1. Prochot R65 : 1.65K/4/1 --> 2.74K/4/1	
10E-EVT-0201	1. Modify choke=0.36uH , DRIVER=5V	
10F	1. IR3564要改用新料號03R	
	2. poochot change 100K	
10T	1. 0 OHM Short-pad	
	2. DDR3 FOR OC 2400MHz UP	
10G-1.01	0. PCB Rev1.01 --> ReV1.01 (DDR3 OC 2400MHz+)	
	1. RS_PWM相關線路移除 (若有上prochot pull up改100 ohm)	
	2. Add M/B ID for DDR3 OC	
	3. 固態電容區分100uF/6.3V & 100uF/16V	
10H-1.02	1. PCB Rev1.01 --> ReV1.02 (DDR3 OC 2800MHz+)	
	2. Add M/B ID for DDR3 OC	
	3. ADD DC79 FOR A_CPUPWROK	
	4. 100u 16V-->6.3V	
10I-0430	1. PWM IR3564 --> IR3564A	
	2. Remove DAESD1	
	3. RJK0393DPA 10IF9-040393-01R --> 10IF9-040393-11R	

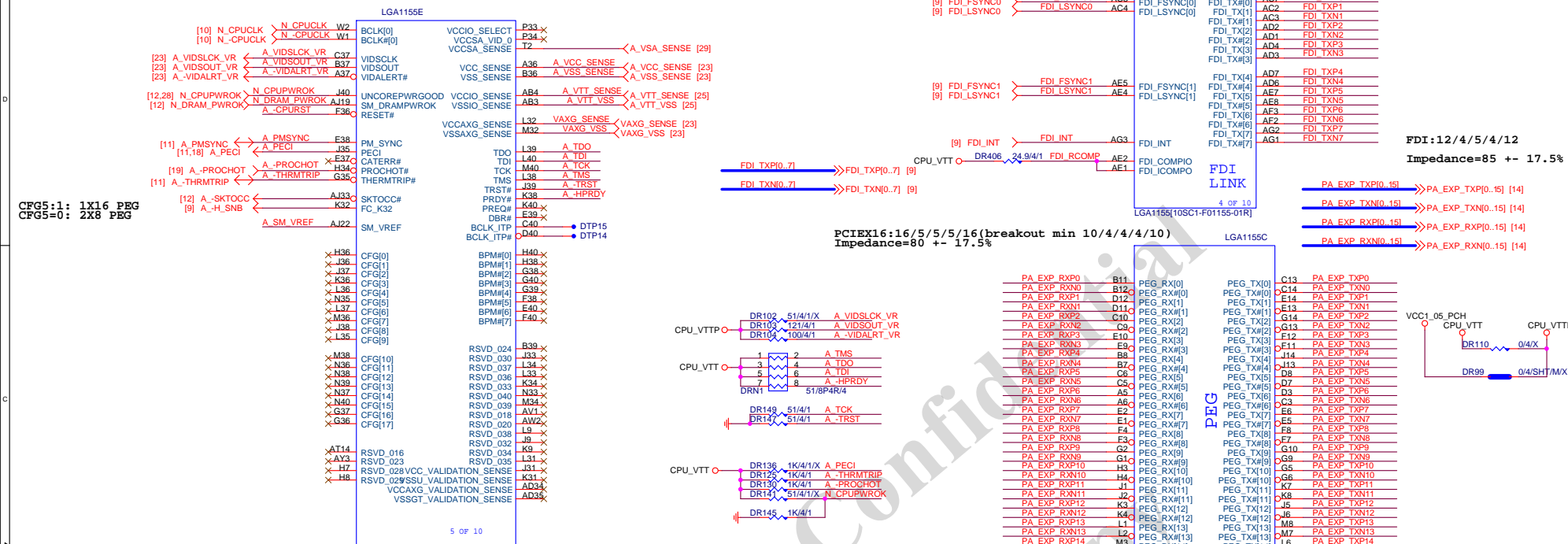
Circuit or PCB layout change

DATE	Change Item	Reason
P67X-UD3-B3		
2011/02/18-0.1	1. 移除LAR11 ,LAR14 , NR28 ,新增NTP11	
2011/02/18-1.0	2. 新增DR388,DR389,DR391 ; Remove DQ49,DR347,DR371 3. CR44改成R0603-RH 4. R1,LAR3,RBR20,LABC25 -->R0402-2-SHORT 5. RAQ1 --> Q_TO223-MASK 6. RARN1 --> R8P4R-0402-SHORT 7. CESD1-5 --> SSOP5 8. RAQ2,RAEC1一起往下移40mil 9. CESD2文字面要標pin1	
2011/03/8-1.01	1. Add "Dolby" logo	
2011/03/8-1.02	1. UAFB1,UAFB2,UBF1,UBF2 Footprint update 1206-->1812 2. Add "AD1" FOR 5VSB	
Z68XP-D3		
1.0	1. update MINI_PCIE footprint 2. 文字面 : SLOT部分全對齊	
Z77-D3H-0.1	EVT	
0.2-1216	1. Remove SE9172 , Add VCC3 內層(注意其他內層power,跨切割) 2. SPDIF AGND --> GND 3. PCI SLOT & PCIEX1/X4 CAP COST DOWN 4. 0 ohm --> SHORT PAD 5. REMOVE SMBUS FROM COMP TO SOLDER SIDE IN DR POWER 6. SATA3 connect Change to 90 degree (記得SATA3訊號部分要做挖空) 7. Add "108dB"文字面 8. Remove VCC1_05_PCH & VCC1_8_PCH gate net 9. Add EJ168 R_USB30_1 & F_USB3 10. UAE1/UAE2 NET SWAP 11. 內層+12V要打VIA在COMA處 12. SPDIFO_HDMI走12mil	
1.0	1. SATA2-SATA3文字面要隱藏 2. DART2 移至 DC_DQ1左上方 3. Q7 & DAR31 NET Change	
1.01	1. 0 OHM SHORT PAD (LAN & AUDIO) 2. DDR3 2400MHz OC modify (DDR3 DQ 走T型)	
1.02	1. DDR3 2400MHz OC modify (縮小DDR3間距)	
1.1	1. F.B "FB0603-RH" change to "FB0402-RH" 2. ATX_12V_2X2 change to ATX_12V_2X4 3. ACS105 LAN AR8161 CO-LAYOUT 4. Add pwok R200,BC9 放在ATX 端 5. mSATA LAYOUT 龍華& FOXCONN CO-LAY (變更FOOTPRINT) 6. For USB3.0 eTron EJ168A 0.11um modify (UBU1 pin88/89) 7. add VCC1_05_PCH over voltage control	

BLOCK DIAGRAM

www.xinxunwei.com 400-800-9990

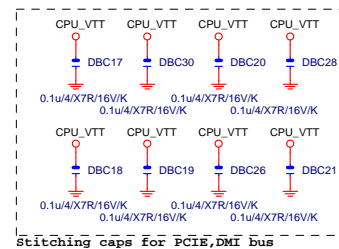
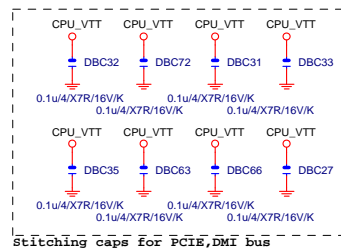
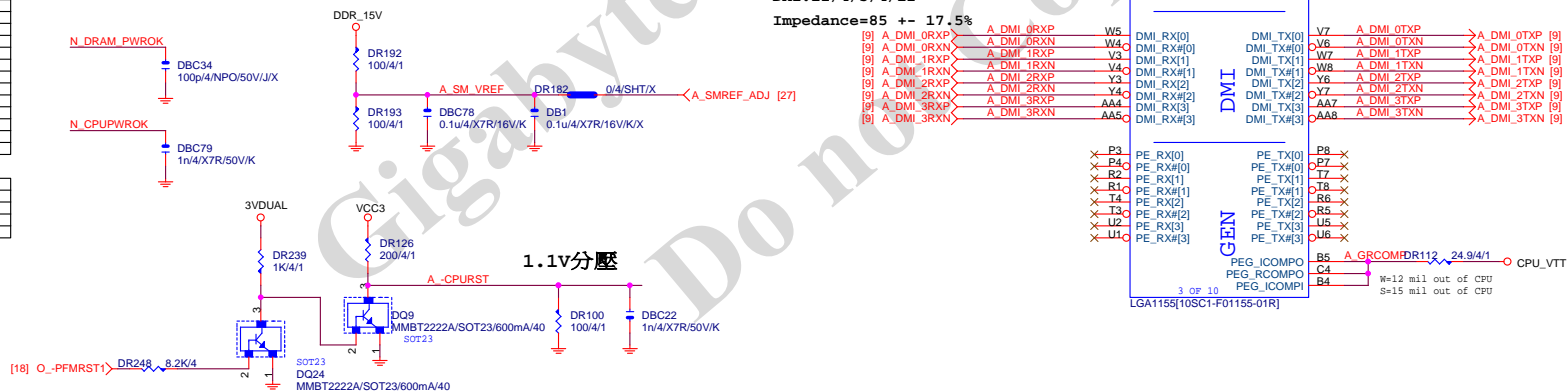




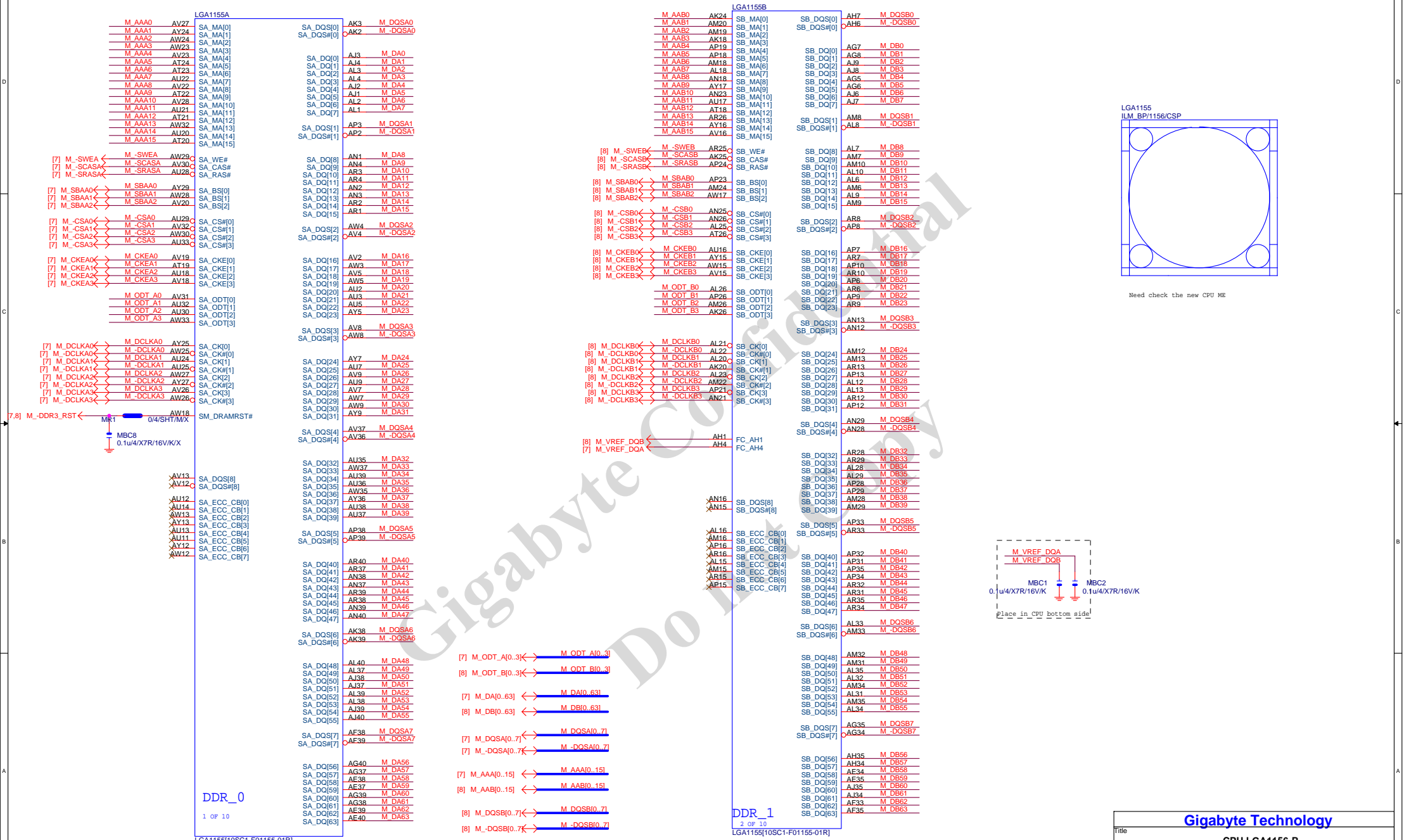
CFG	H	L	NOTE
0	RSVD	RSVD	RSVD
1	RSVD	RSVD	RSVD
2	NOOP	Reverse	LANE REVERSAL[0], x16
3	RSVD	RSVD	RSVD
4	RSVD	RSVD	RSVD
7	RSVD	RSVD	RSVD
8	RSVD	RSVD	RSVD
9	RSVD	RSVD	RSVD
10	RSVD	RSVD	RSVD
11	RSVD	RSVD	RSVD
12	RSVD	RSVD	RSVD
13	RSVD	RSVD	RSVD
14	RSVD	RSVD	RSVD
15	RSVD	RSVD	RSVD
16	RSVD	RSVD	RSVD
17	RSVD	RSVD	RSVD

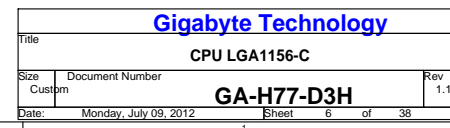
CFG6	CFG5	PCI-E CONFIG
1	1	1x16 , Default
1	0	2X8
0	1	RSVD
0	0	X8,X4,X4

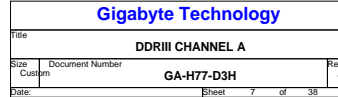
CFG 0-17 all internal PULL-UP

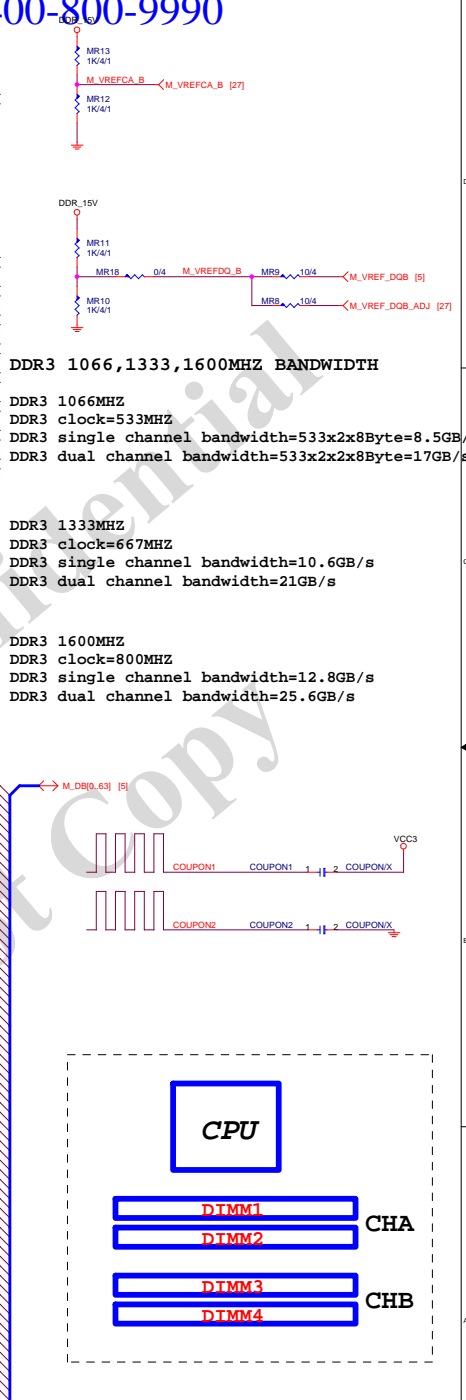
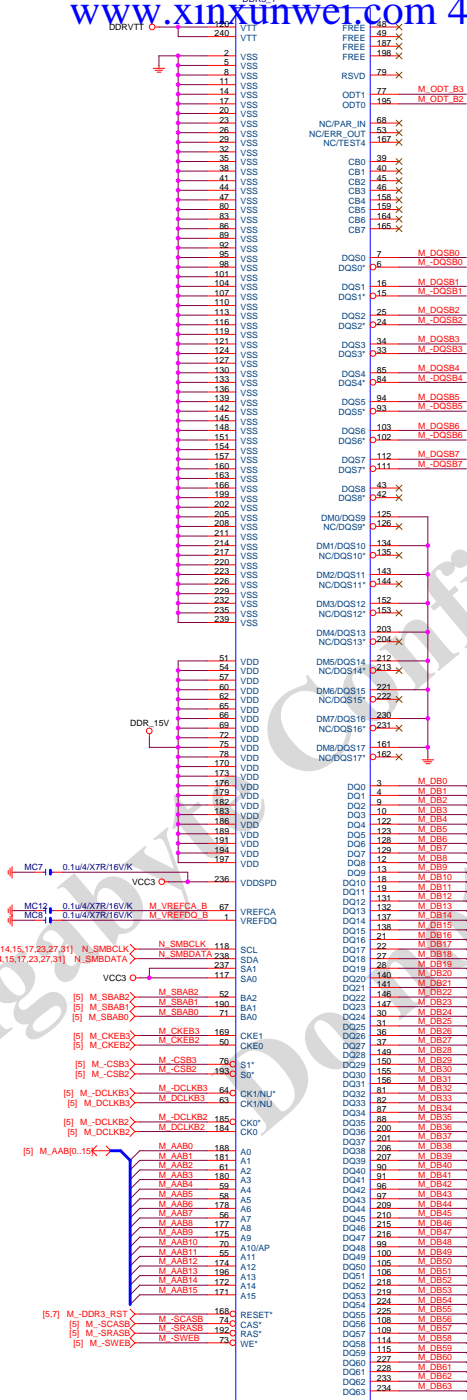
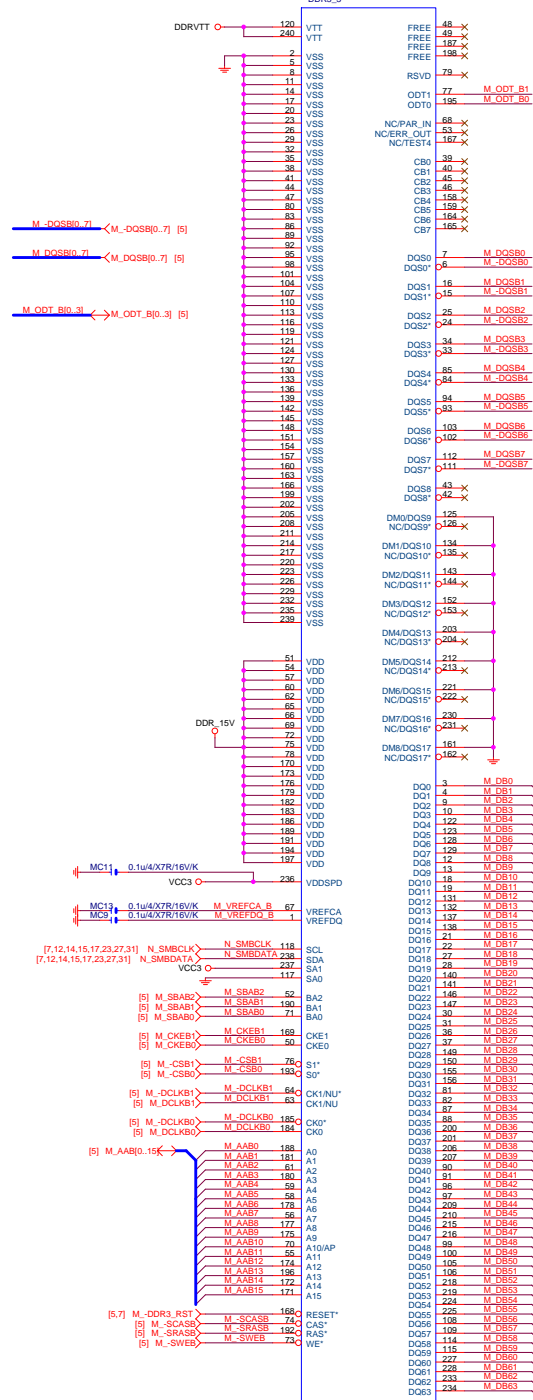


Gigabyte Technology				
Title				
CPU LGA1155-A				
Size	Document Number			Rev
Custom	GA-H77-D3H			1.1
Date:	Monday, July 09, 2012		Sheet	4 of 38





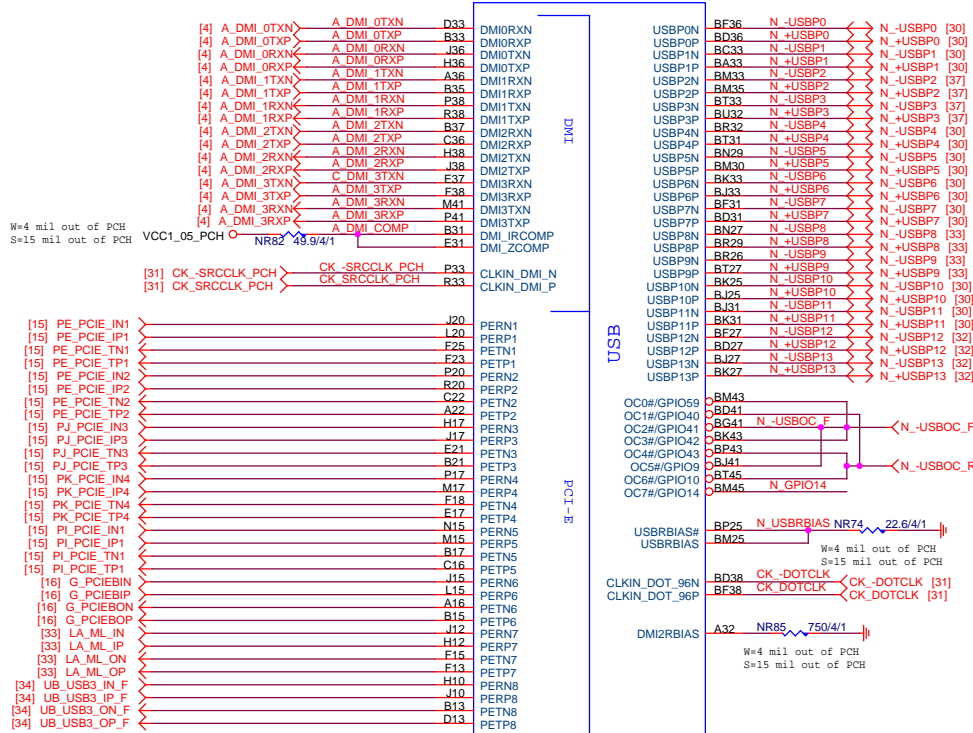




USB3.1 30/5/7/5/20 (breakout min 8/4/4/4/8) ; ONLY 3 VIAS
 Impedance=85 +- 17.5%
 Back Panel < 10000 MILS
 Front Panel < 6000 MILS

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

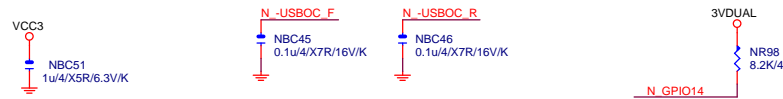
PCHB



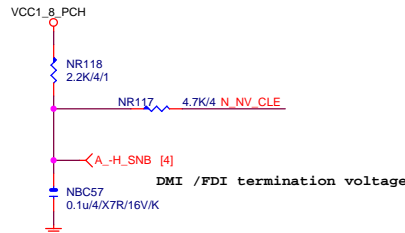
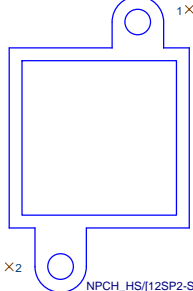
放靠近 Device & PCI-E Slot

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

Impedance=80 +- 17.5%

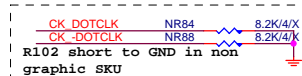
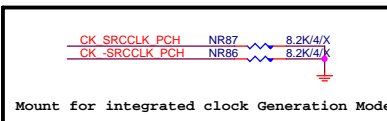


PCH_HS

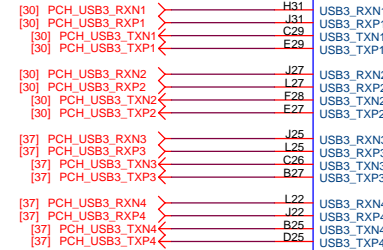


OC[3:0]# for Device 29 (ports 0-7)
 OC[7:4]# for Device 26 (ports 8-13)

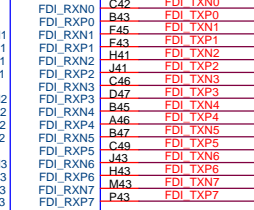
USB OC#	Configure
OC0#	USB0,1
OC1#	USB2,3
OC2#	USB4,5
OC3#	USB6,7
OC4#	USB8,9
OC5#	USB10,11
OC6#	USB12,13
OC7#	Not Use



PCHG

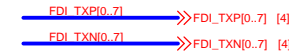


FDILINK

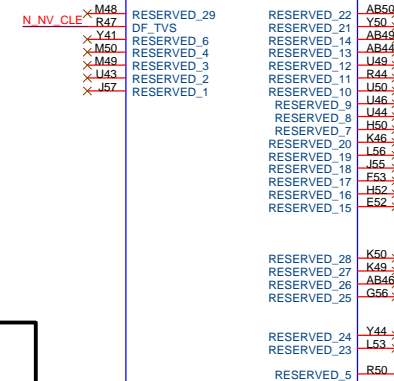


7 OF 11

FDI:12/4/5/4/12
 Impedance=85 +- 17.5%



PCHE

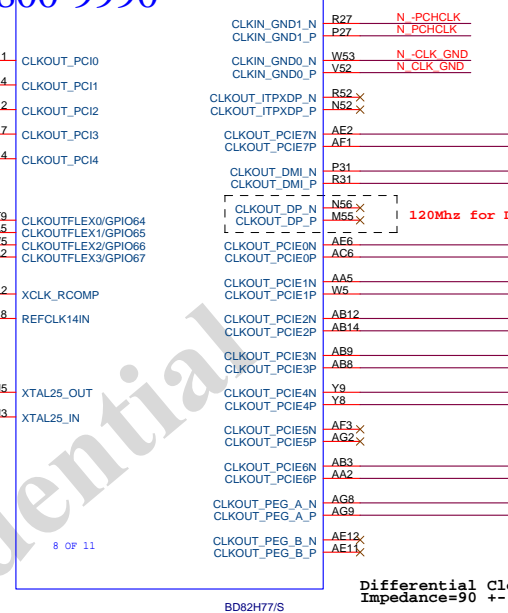
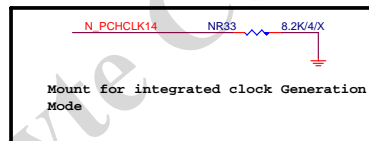
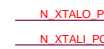
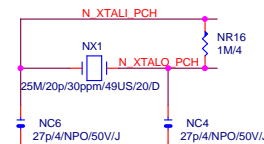
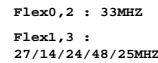
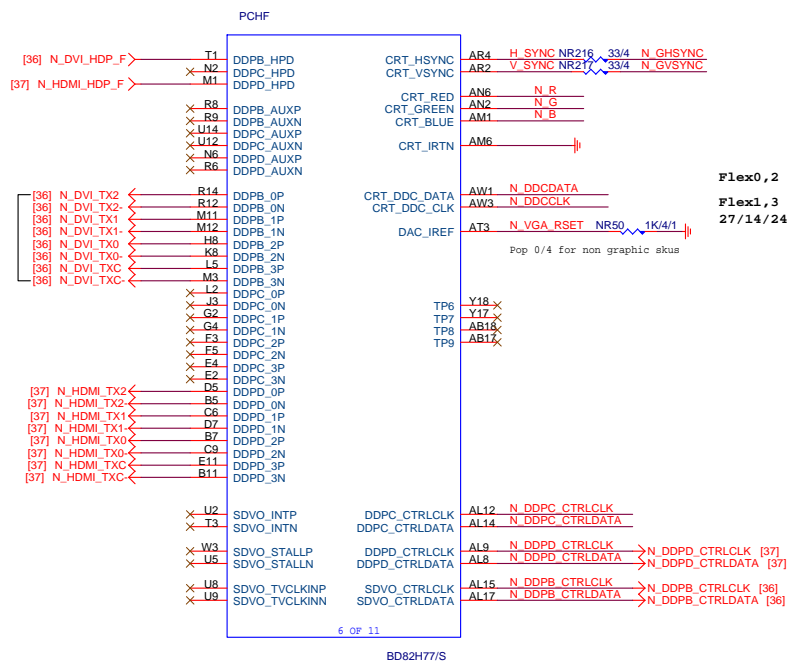


NVRAM

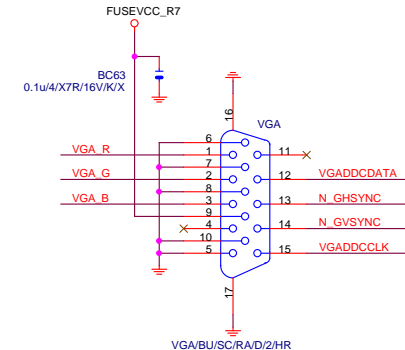
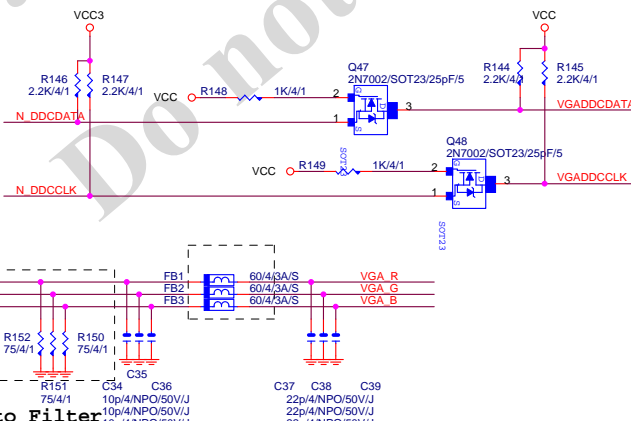
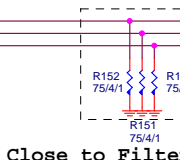
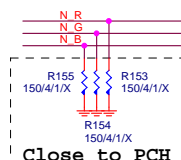
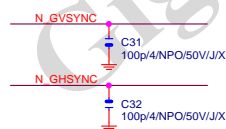
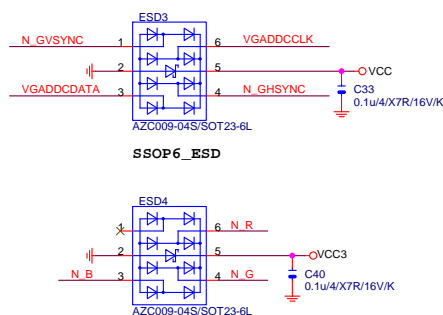
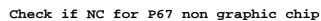
BD82H77/S

Gigabyte Technology

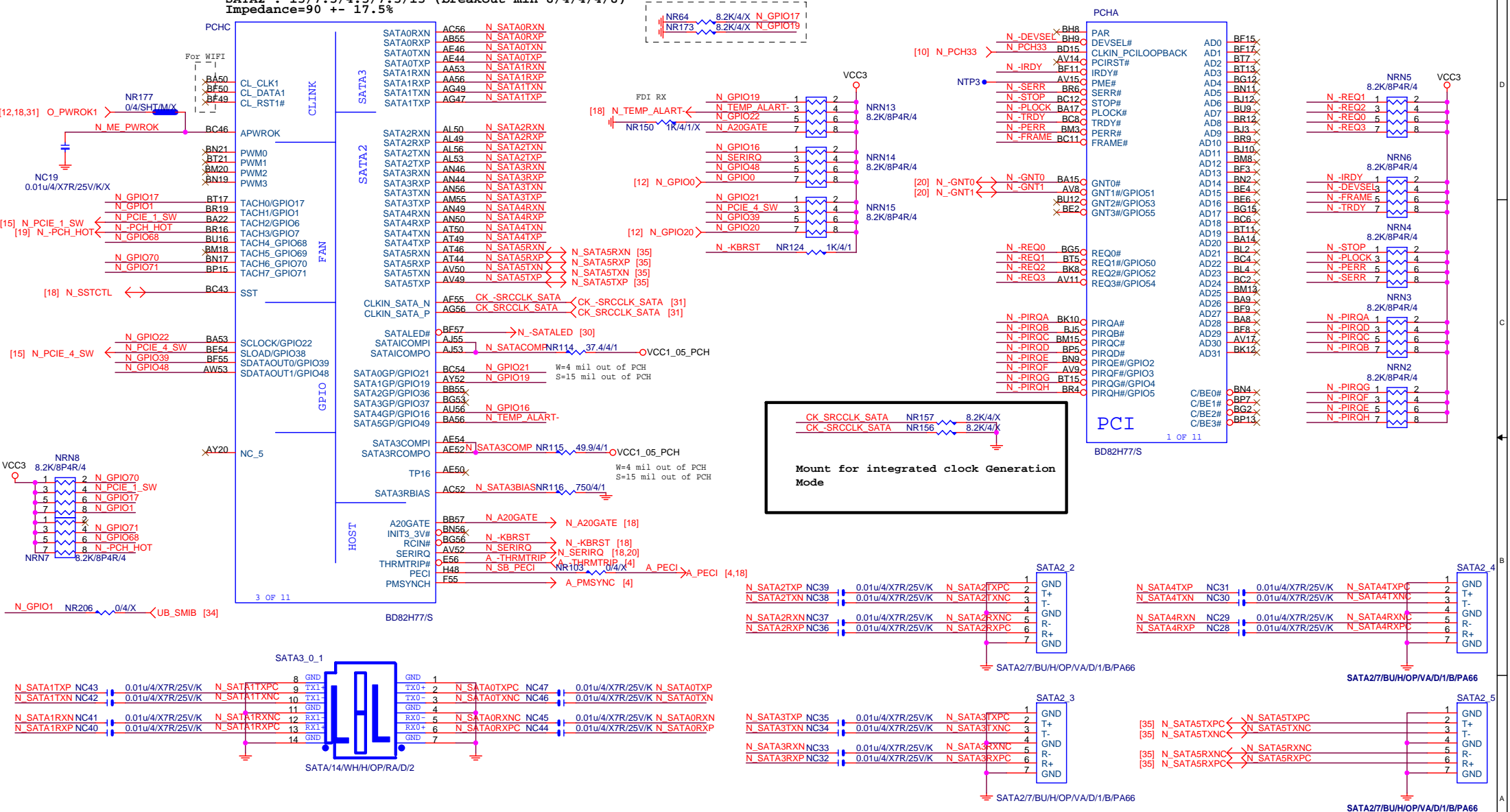
Title		
PCH FDI,DMI,USB,PCI-E		
Size	Document Number	Rev
Custom	GA-H77-D3H	1.1
Date:	Monday, July 09, 2012	Sheet 9 of 38

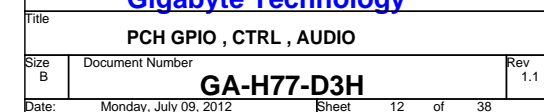


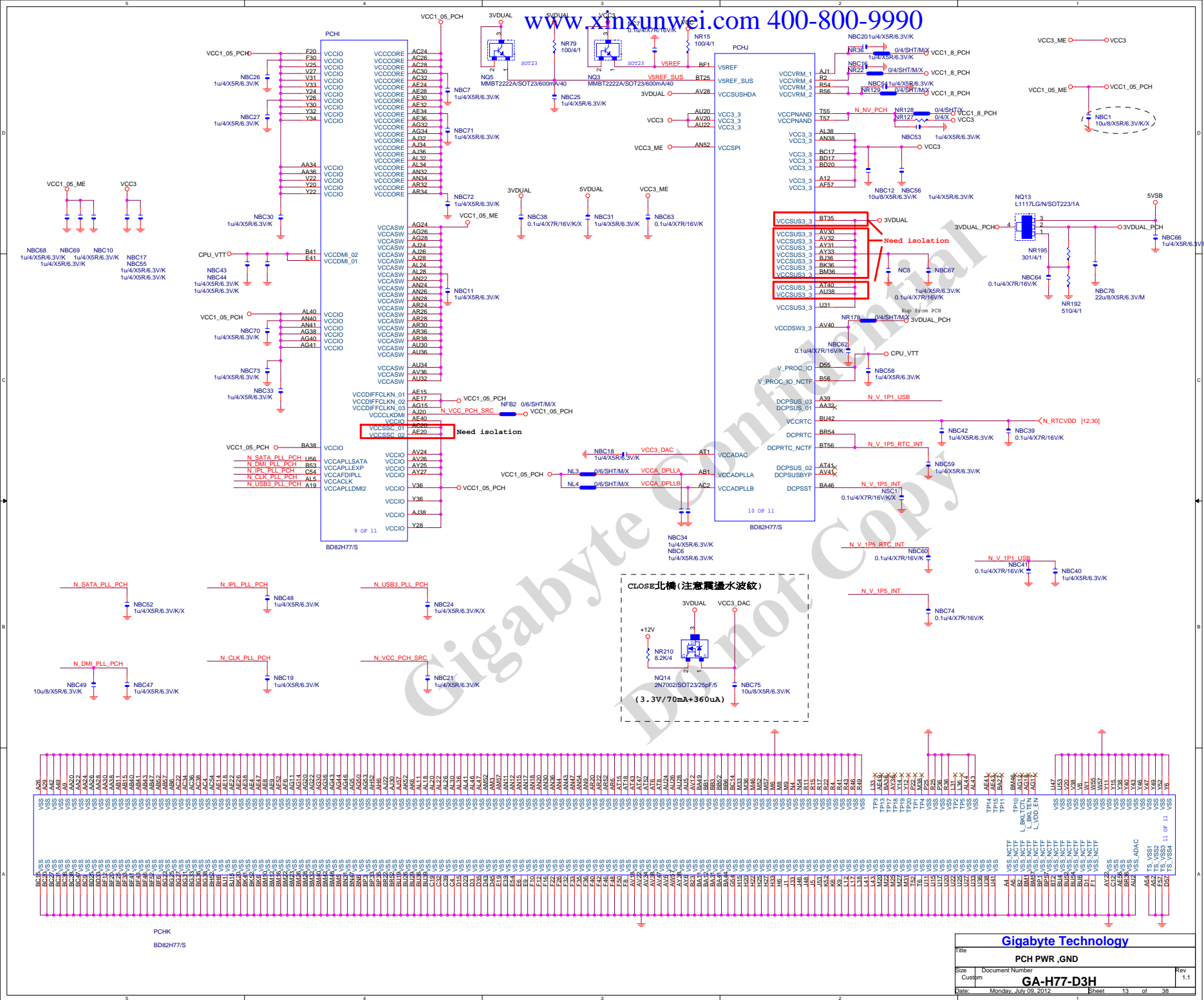
Differential Clock:18/4/6/4/18
Impedance=90 +- 15%

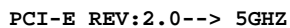


SATA3 : 20/7.5/4.5/7.5/20 (breakout min 8/4/4/4/8)
Impedance=90 +- 17.5%
SATA2 : 15/7.5/4.5/7.5/15 (breakout min 8/4/4/4/8)
Impedance=90 +- 17.5%

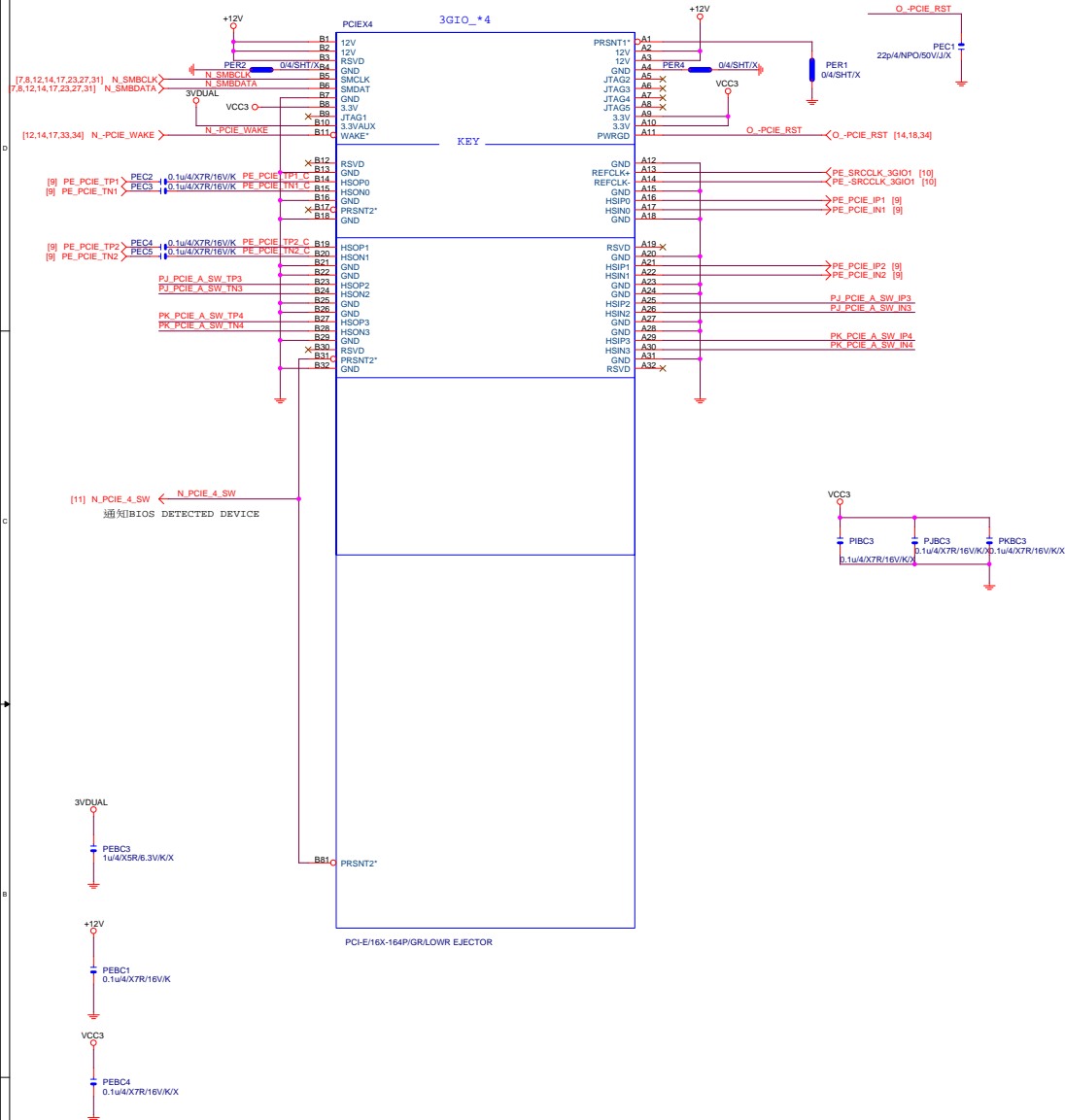








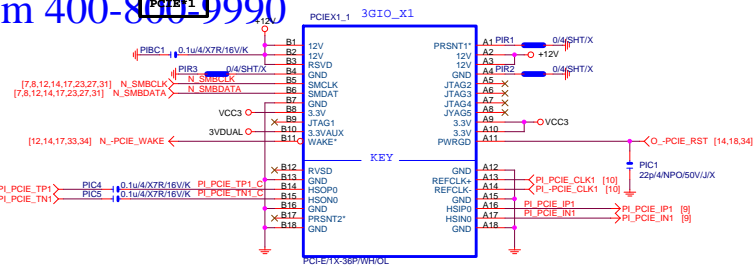
PCIE*4



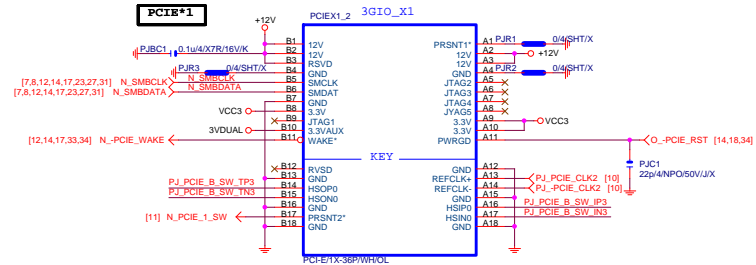
N_PCIE_4_SW (PCH GPIO38) PCIEX4_X1 (SIO GPIO26)

PCIEX1,PCIEX4 --> X1 (Default)	H	H
PCIEX4 No devices	H	H
PCIEX4 --> X1		
PCIEX4 Have devices		
PCIEX4 --> X4	L	L
PCIEX1_2/PCIEX1_3 --> N/A		

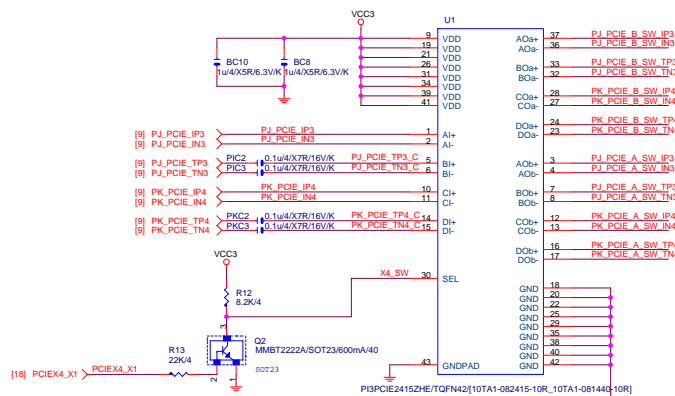
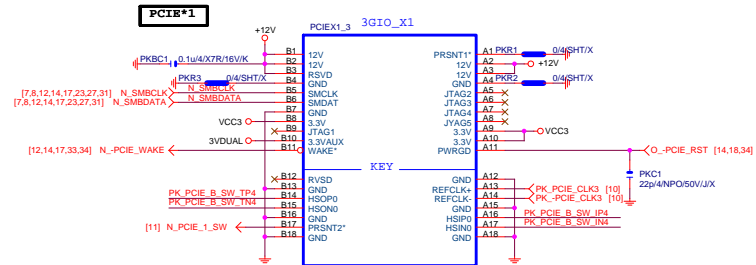
PCIE*1



PCIE*1



PCIE*1



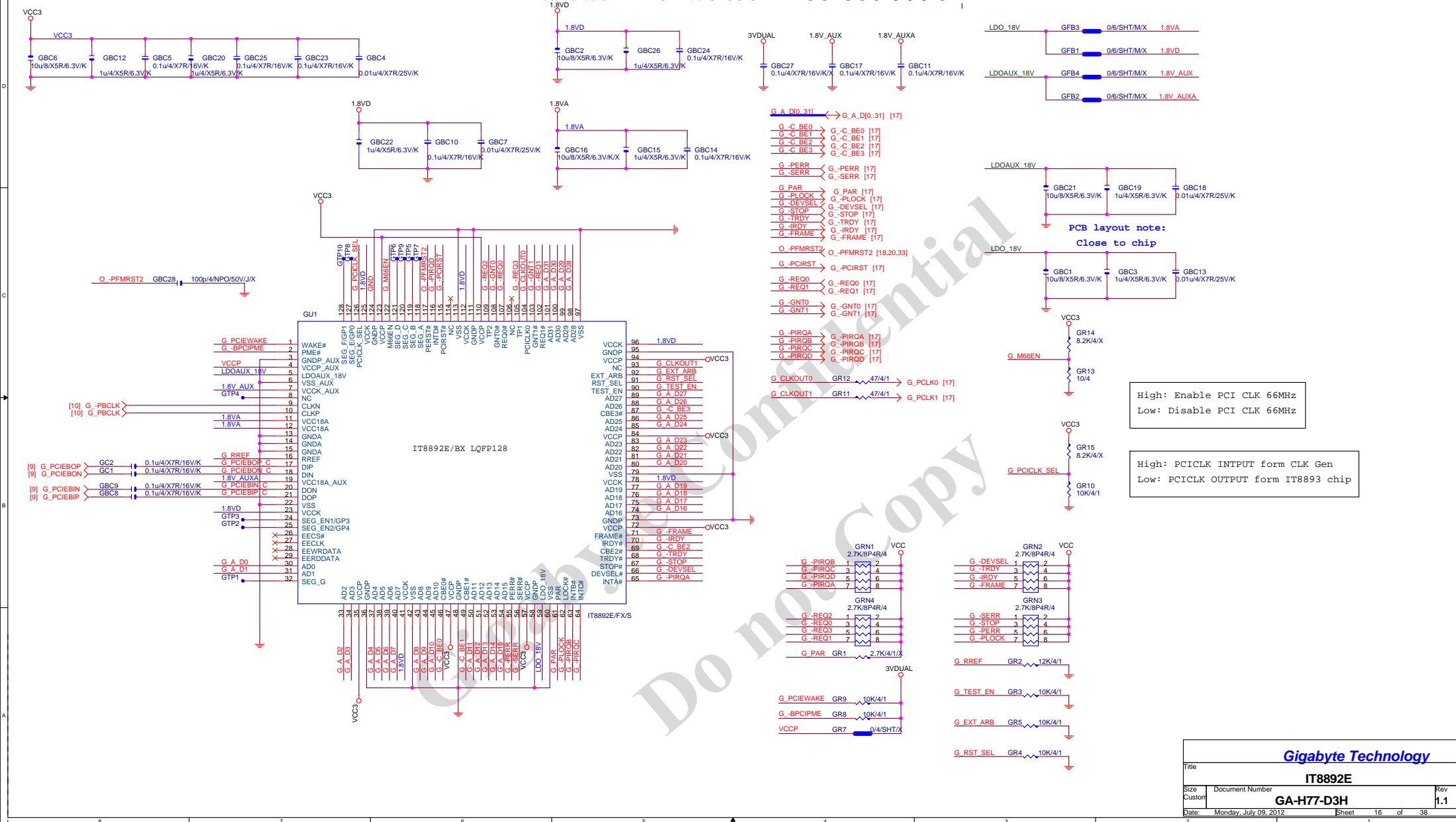
Function	SEL
X1--> x0a	L ₁ PCIEX4 SLOT-->X1
X1--> x0b	H ₁ PCIEX4 SLOT-->X4

Gigabyte Technology

PCIE X1 1.2

Title	Document Number	Rev
Custom	GA-H77-D3H	1.1

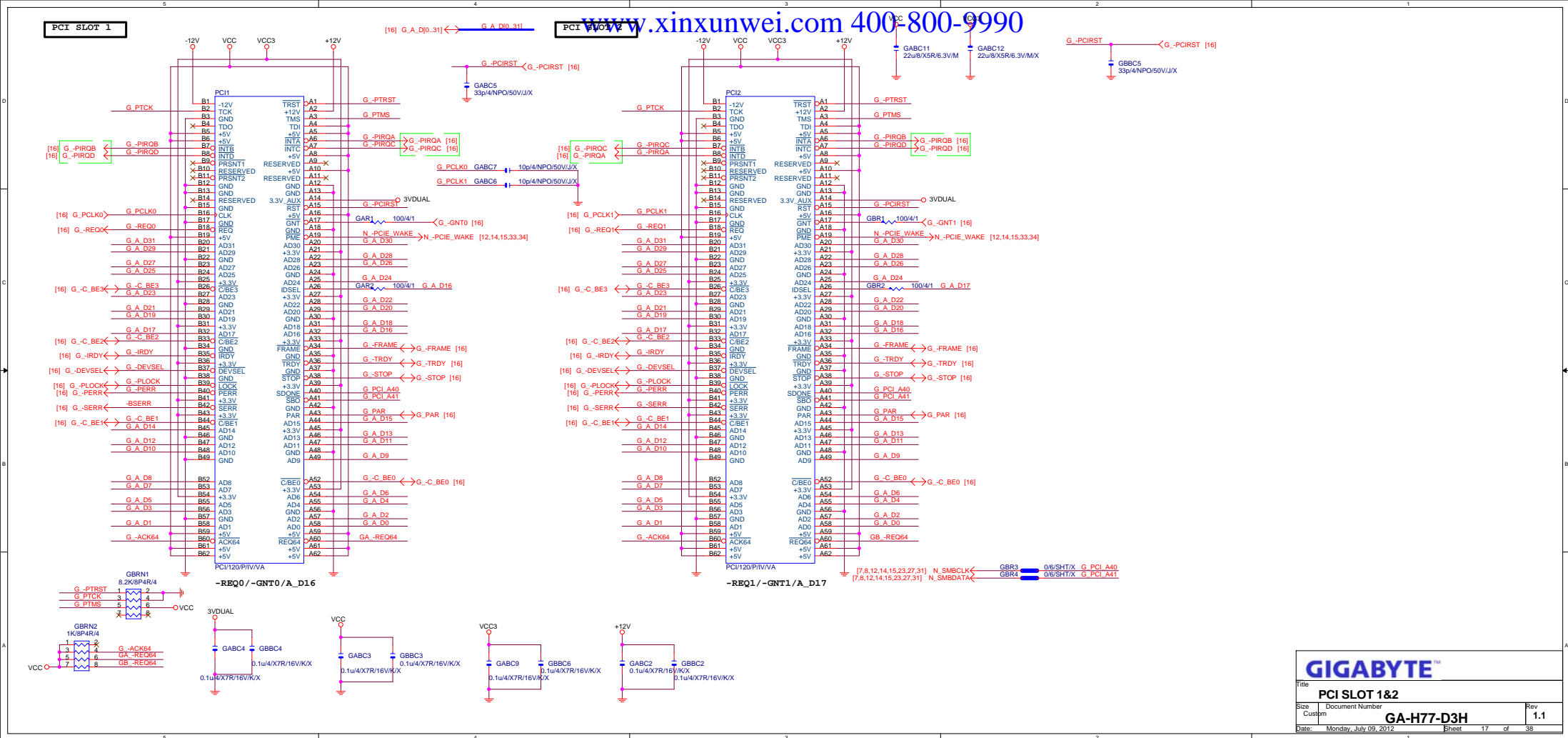
Date: Monday, July 09, 2012 15 of 38



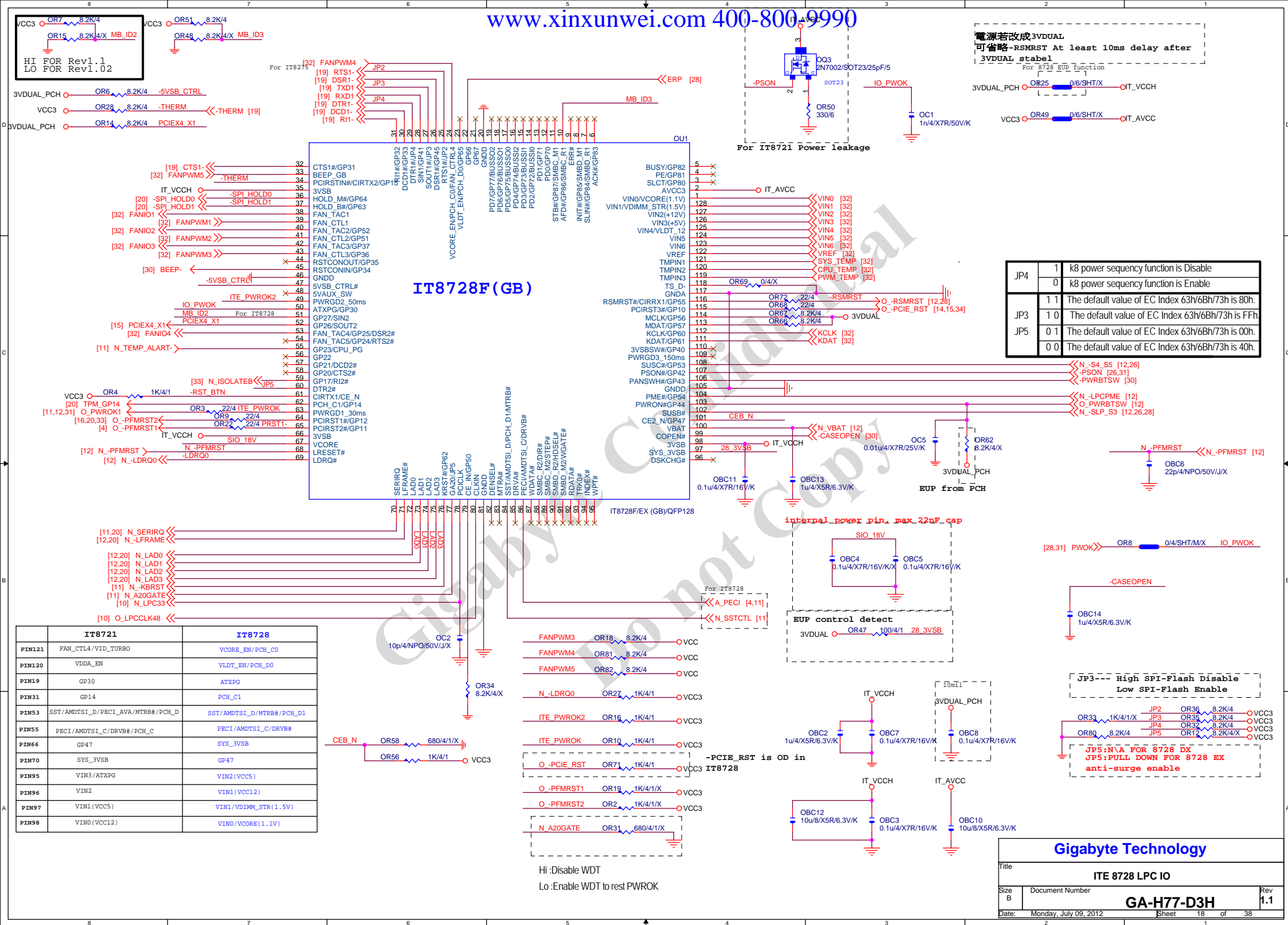
PCI SLOT 1

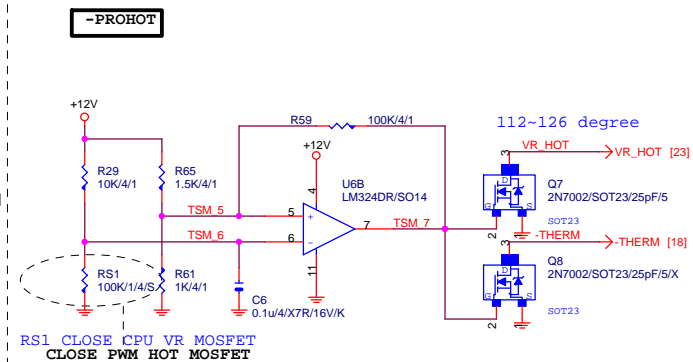
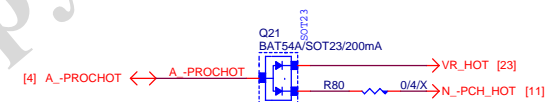
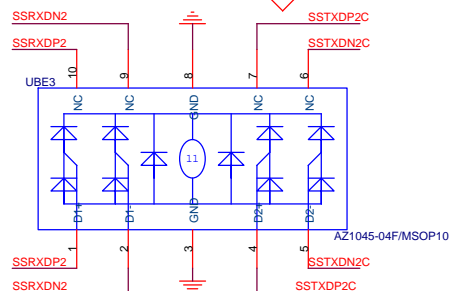
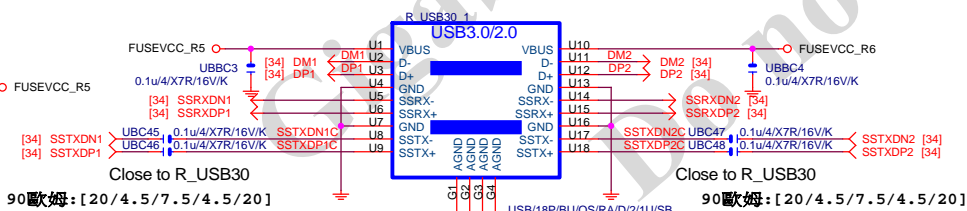
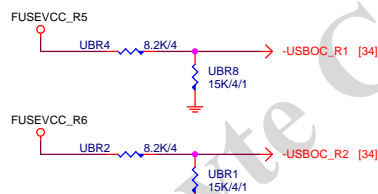
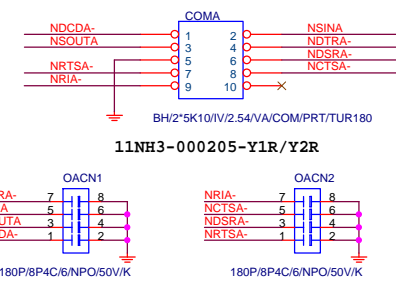
PCI SLOT 2

www.xinxun.com 400-800-9990



GIGABYTE™			
PCI SLOT 1&2			
Size	Document Number	Rev	
Custom	GA-H77-D3H	1.1	
Date:	Monday, July 09, 2012	Sheet	17 of 38





[12] N_ICH_SPI_MOSI >> N_ICH_SPI_MOSI NR10 8.2K/4/X
 [12] N_ICH_SPI_CS >> N_ICH_SPI_CS NR9 8.2K/4/X
 -SPI_HOLD0 NR3 1K/4/1
 -SPI_HOLD1 NR11 1K/4/1

[12] N_-SPI_WP1 >> N_-SPI_WP1 NR2 8.2K/4/X
 [12] N_-SPI_WP0 >> N_-SPI_WP0 NR1 8.2K/4/X
 [12] N_ICH_SPI_MISO >> N_ICH_SPI_MISO NR5 8.2K/4

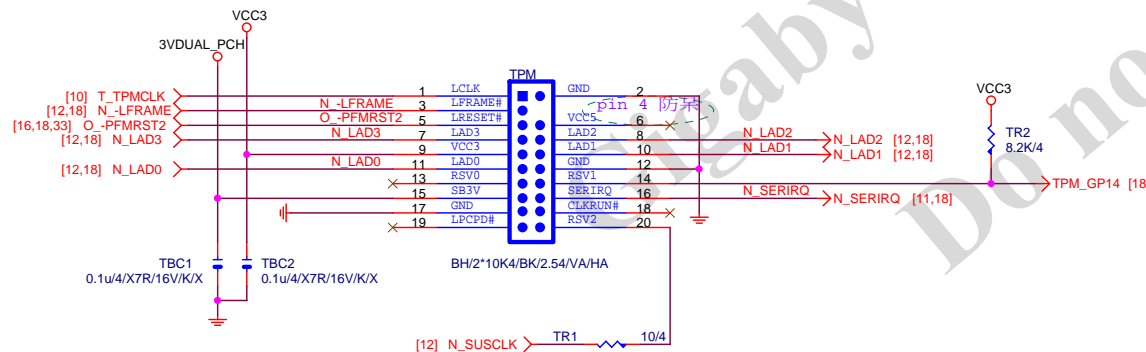
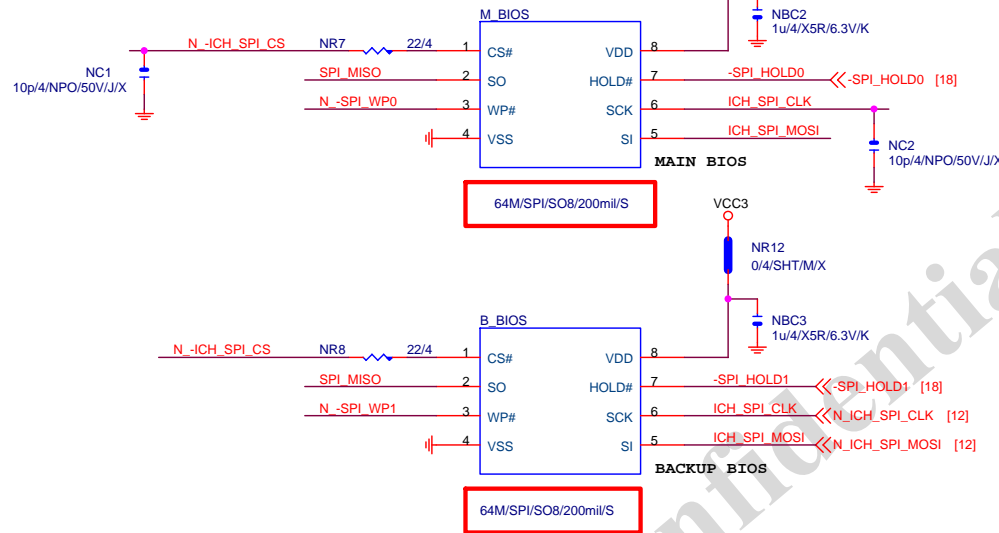
[11] N_-GNT0 >> NR26 1K/4/1/X
 [11] N_-GNT1 >> NR25 1K/4/1/X

Default int pull up

SPI_MISO NR6 22/4 << N_ICH_SPI_MISO [12]

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

1 means floating
 0 means PD 1K



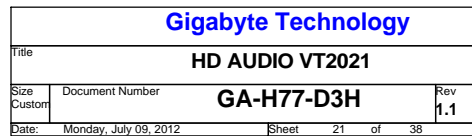
Gigabyte Technology

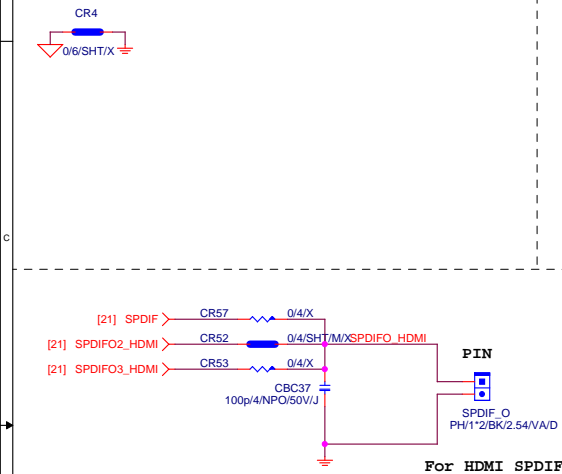
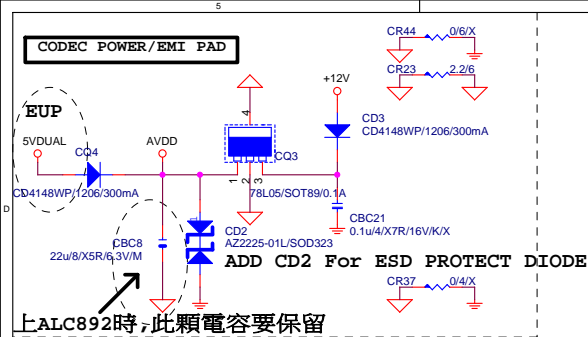
Title			BIOS
Size	Document Number	GA-H77-D3H	
Custom		Rev 1.1	
Date:	Monday, July 09, 2012	Sheet	20 of 38

CR36: 20K/4/1 @Realtek cdec & VT1708S-CE
CR36: 51K/4/1 @VIA codec VT1708S-CD/VT2021
CBC38 100P @VIA codec VT1708S

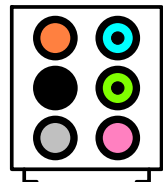
CBC38 100p/4/NPO/50V/JXX

CR36 51K/4/1

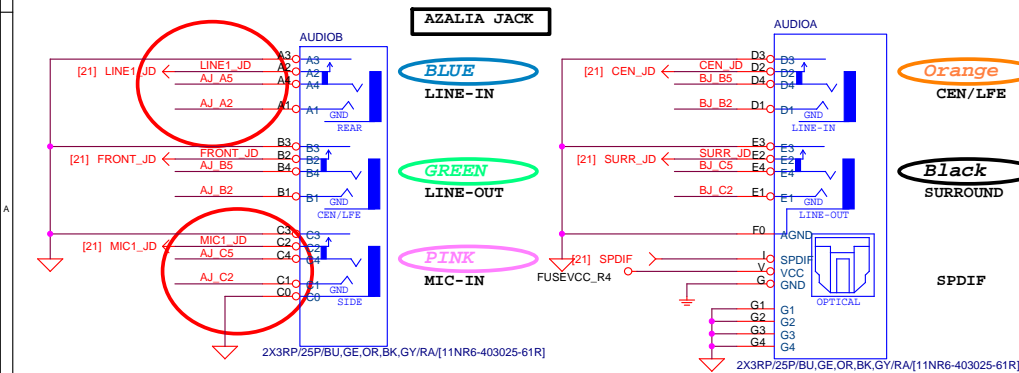
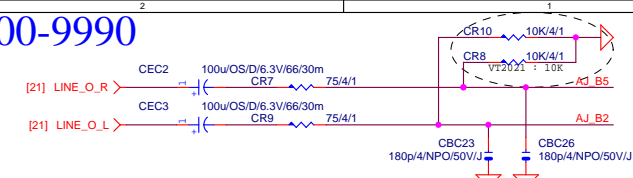
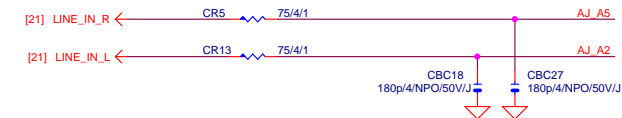
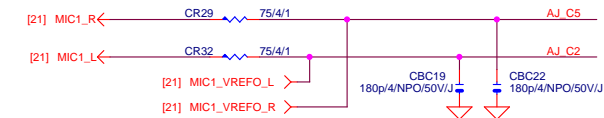
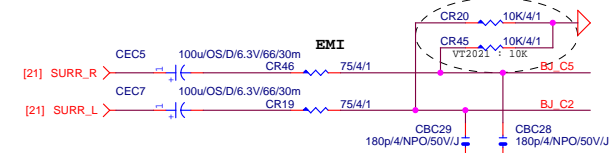
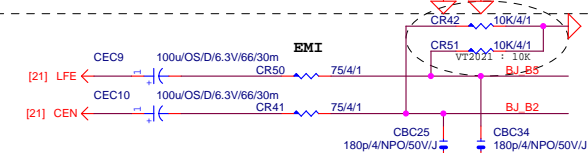
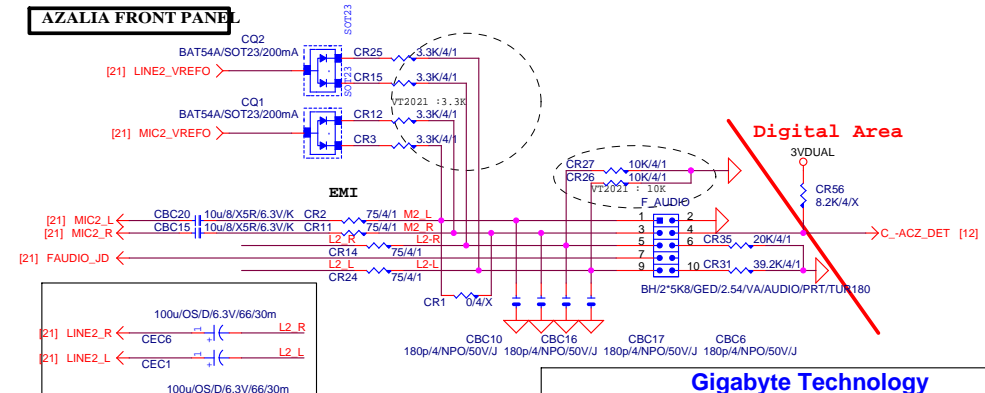




AZALIA JACK
BTX AZALIA CONNECTOR



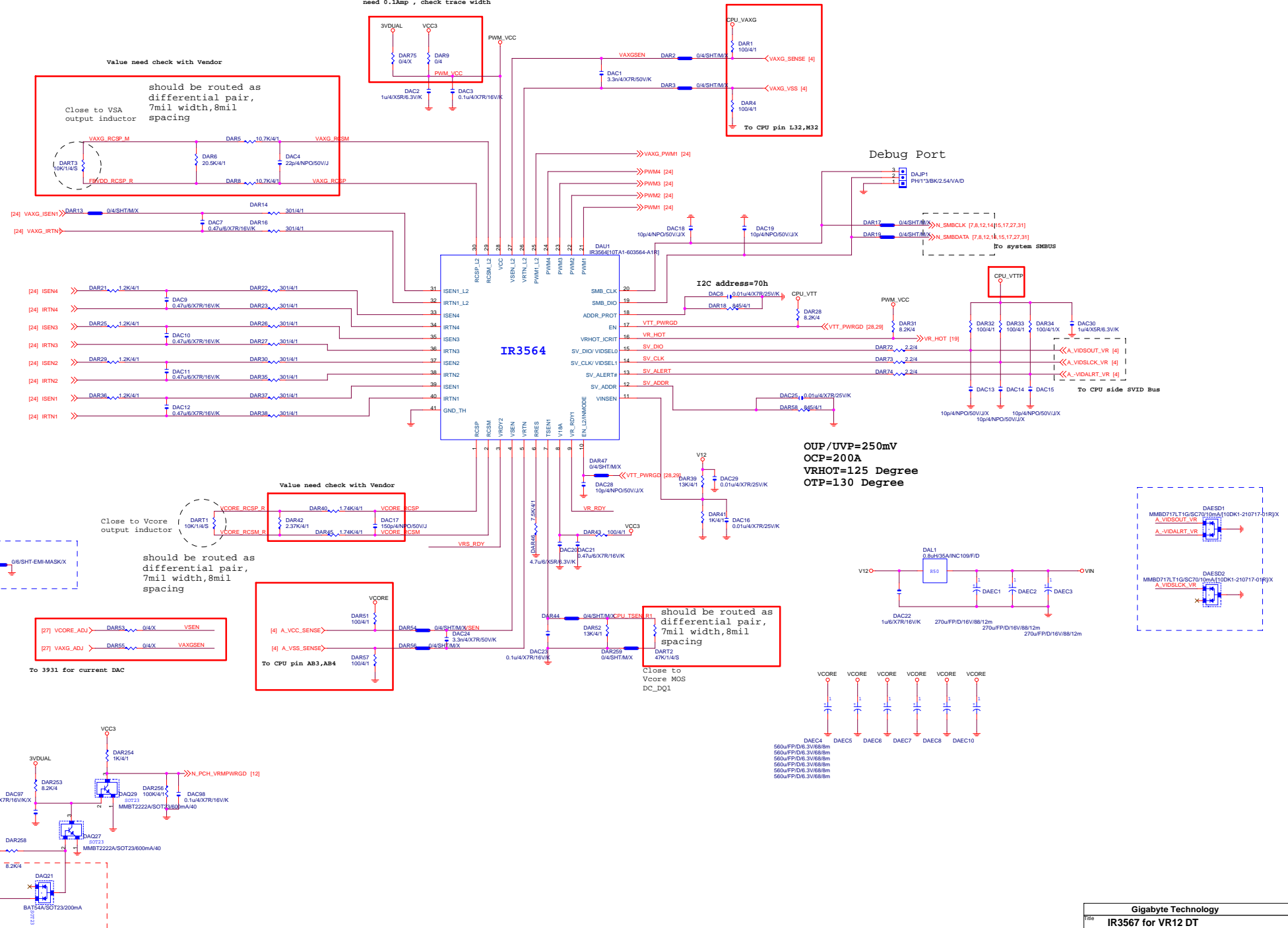
11NR6-403007-21R

**LINE-OUT****LINE-IN****MIC-IN****SURROUND****CEN/LFE****AZALIA FRONT PANEL**

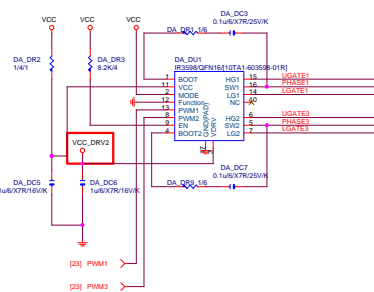
Gigabyte Technology

Title		
AUDIO JACK		
Size	Document Number	Rev
Custom	GA-H77-D3H	1.1
Date:	Monday, July 09, 2012	Sheet 22 of 38

need 0.1Amp , check trace width



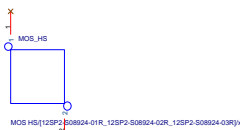
VCORE Phase 1,3



PHASE	MODE	PMW MODE	PMW MODE
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
10	10	10	10

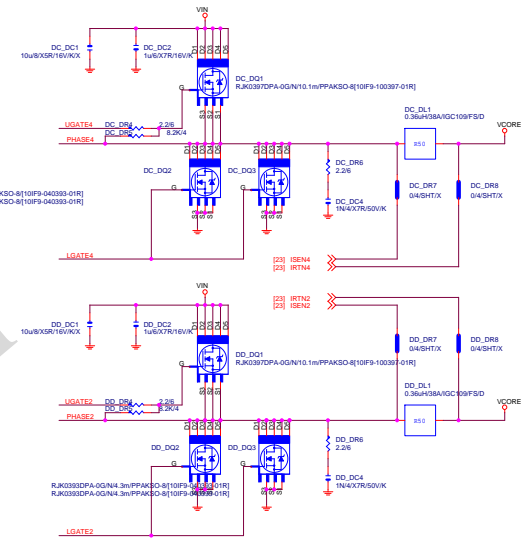
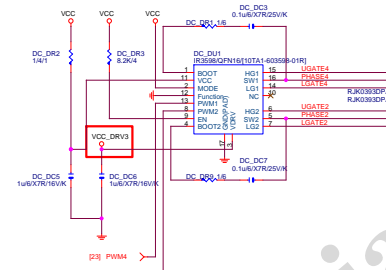
In Quad mode, I2C pin1 link to I2C pin10
I2C pin1 link to I2C pin10 without P0

MOS HEATSINK

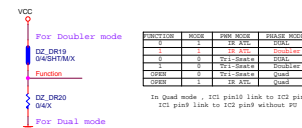
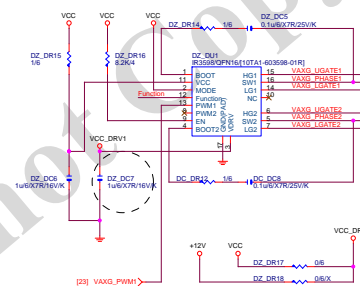


MOS_HS(125P2-008924-01R_125P2-008924-02R_125P2-008924-03R)

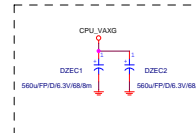
VCORE Phase 4,2



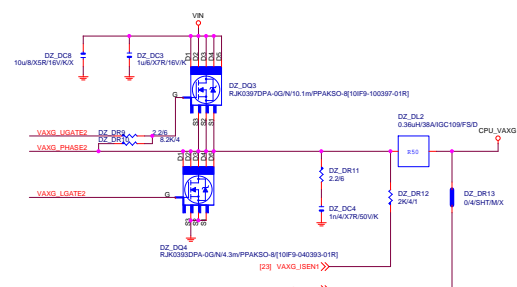
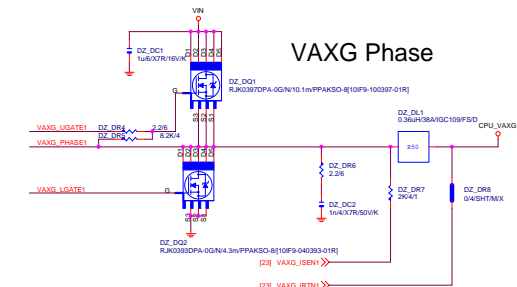
VAXG PHASE 1,2



For Doubler mode
DZ_DR15
Function
DZ_DR20
DZ_DR20
For Dual mode



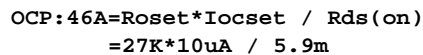
VAXG Phase



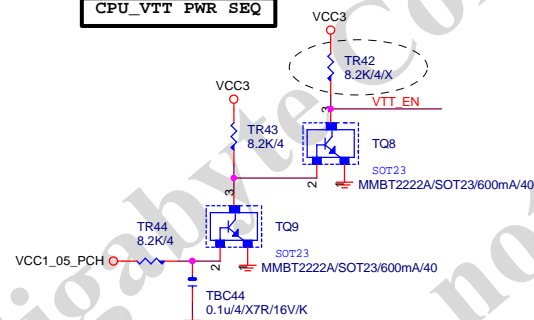
Gigabyte Technology

CPU CORE VR

File	Document Number	Rev
GA-H77-D3H	GA-H77-D3H	1.1
Date	Monday, July 18, 2011	Printed

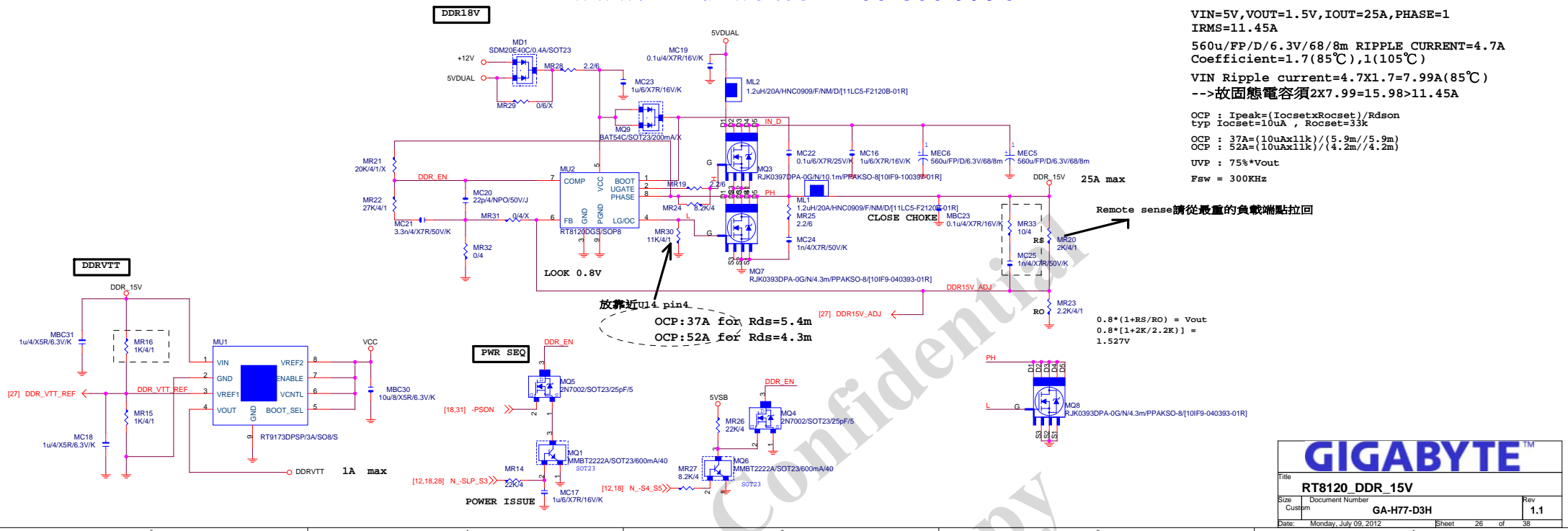


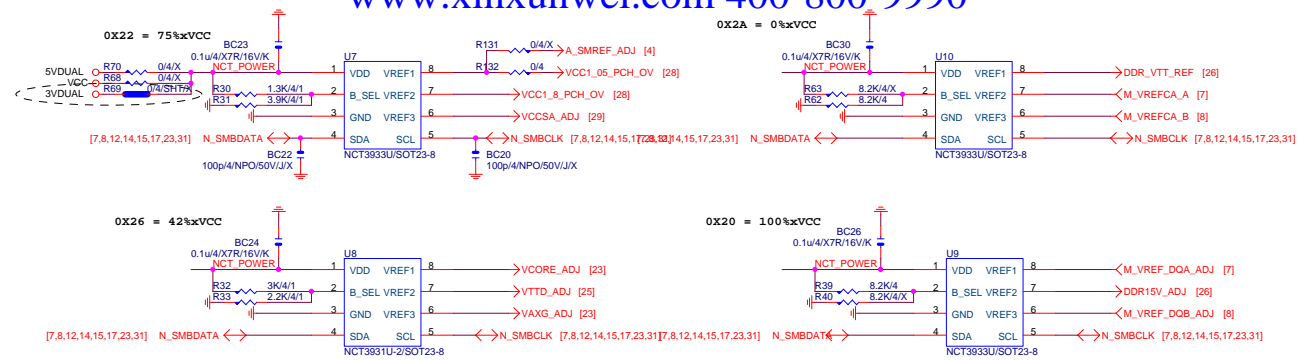
CPU_VTT	PWR	SEQ
---------	-----	-----



	VTT_SEL
HI	1.05V
LO	1.0V

According intel
CDI/IBP#476733, 固定1.05V



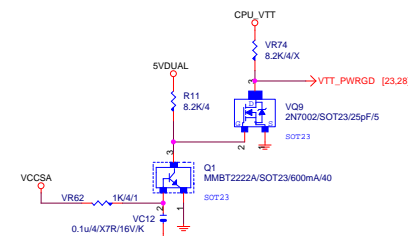
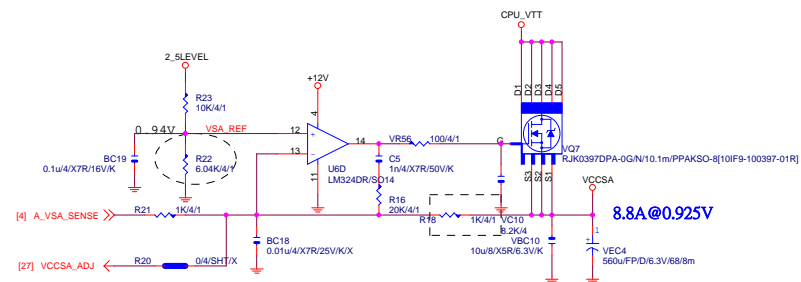
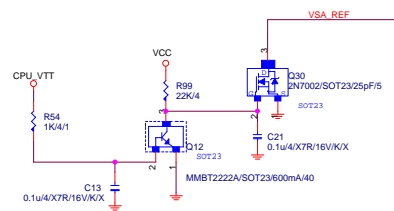


NCT3933	0X2A	0X20	0X22	0X26
VREF1	DDRVTT	VREF_DDRA_DQ	SMREF	VCORE
VREF2	VREF_DDRA_CA	DDR15V	VCC1_8_PCH	CPU_VTT
VREF3	VREF_DDRA_CA	VREF_DDRB_DQ	VCCSA	VAXG

Gigabyte Technology

Title			CPU CORE VR-2
Size	Document Number	GA-H77-D3H	
Custom			Rev 1.1
Date:	Monday, July 09, 2012	Sheet 27 of 38	

VCC_SA



Gigabyte Technology

CPU VTT PWM_ISL6312

GA-H77-D3H

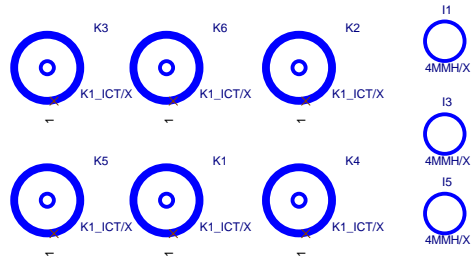
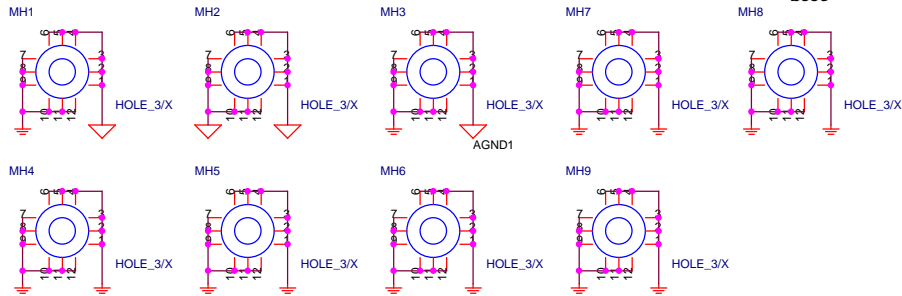
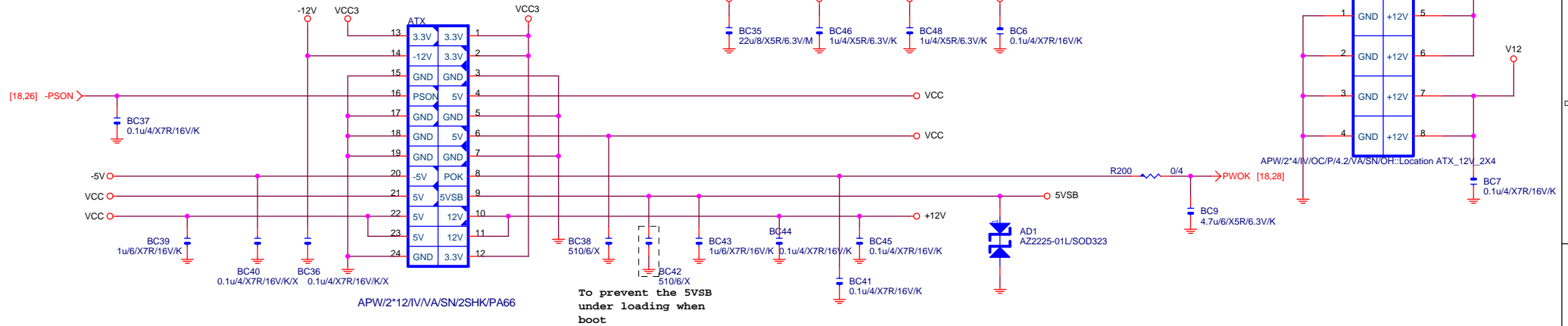
Date: Monday, July 09, 2012

Sheet 29 of 38

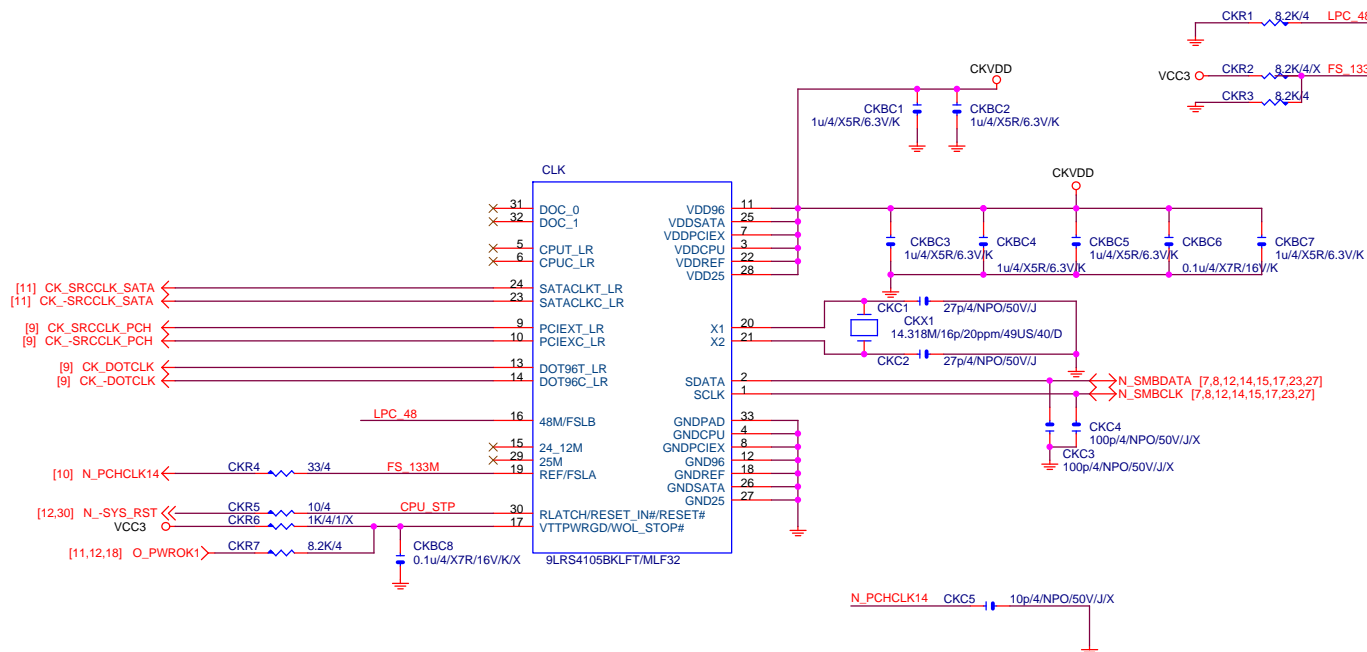
Rev 1.1

ATX POWER CONNECTOR

www.xinxunwei.com 400-800-9990

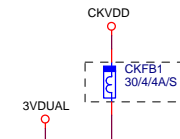


CLK GEN



CPU Frequency Selection

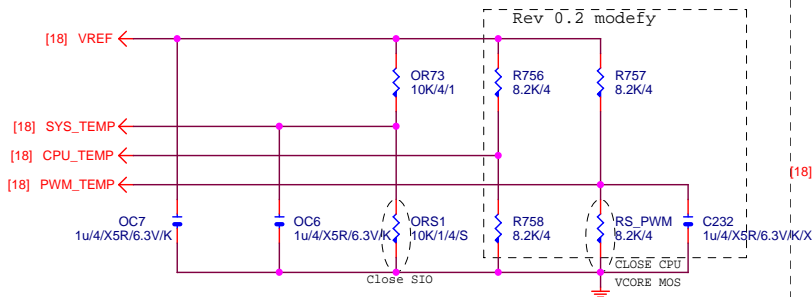
FS	CPU
0	100M <Default>
1	133M



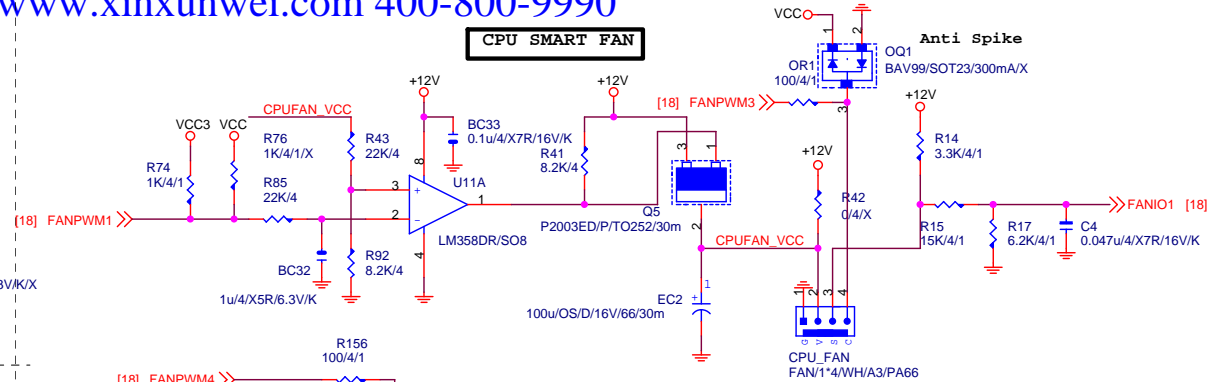
Gigabyte Technology

Title			ATX POWER CONNECTOR
Size	Document Number	GA-H77-D3H	
Custom		Rev 1.1	
Date:	Monday, July 09, 2012	Sheet	31 of 38

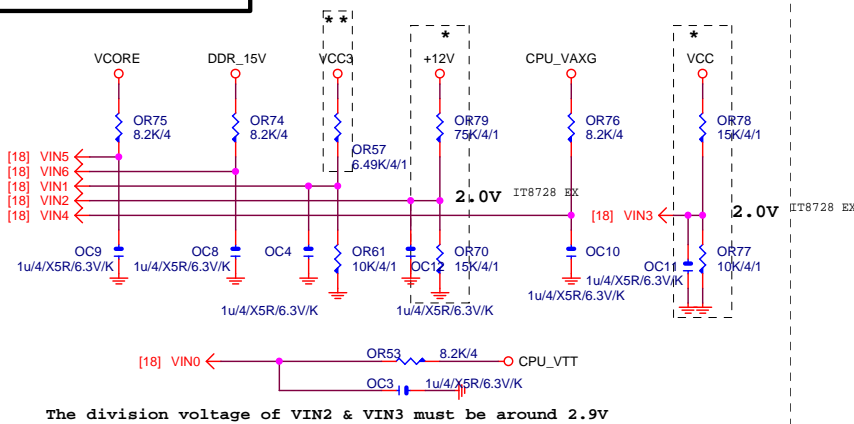
TEMP H/W MONITOR



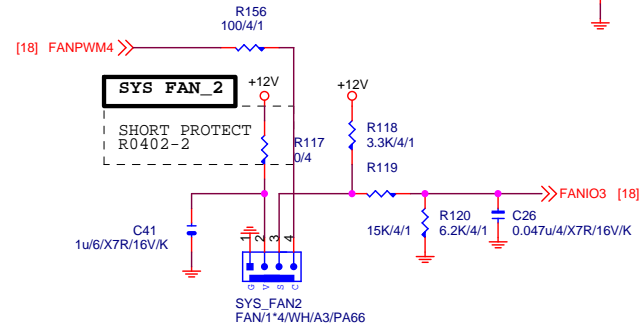
CPU SMART FAN



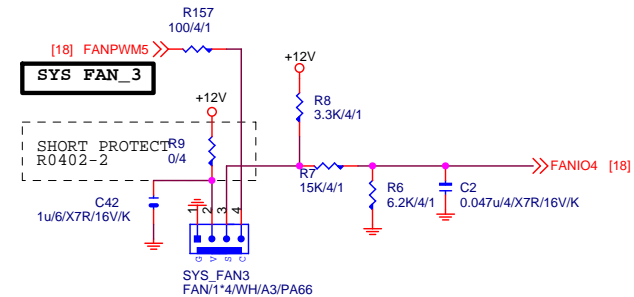
VOLTAGE-- H/W MONITOR



SYS_FAN_2

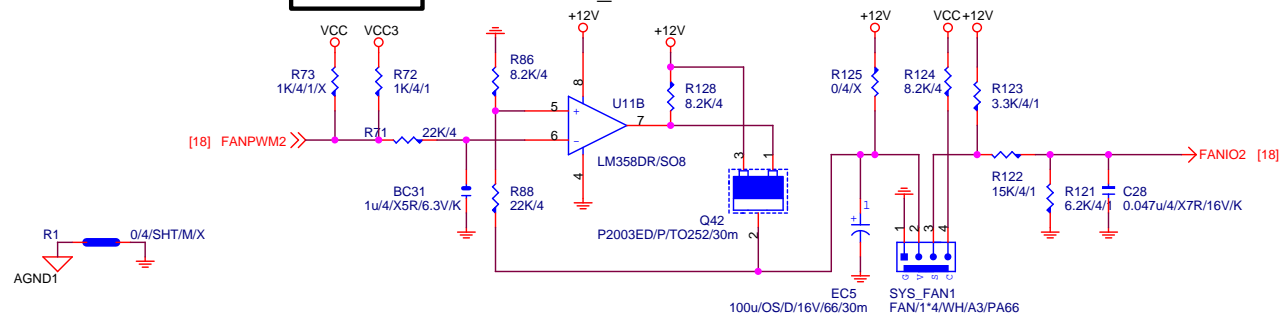


SYS_FAN_3

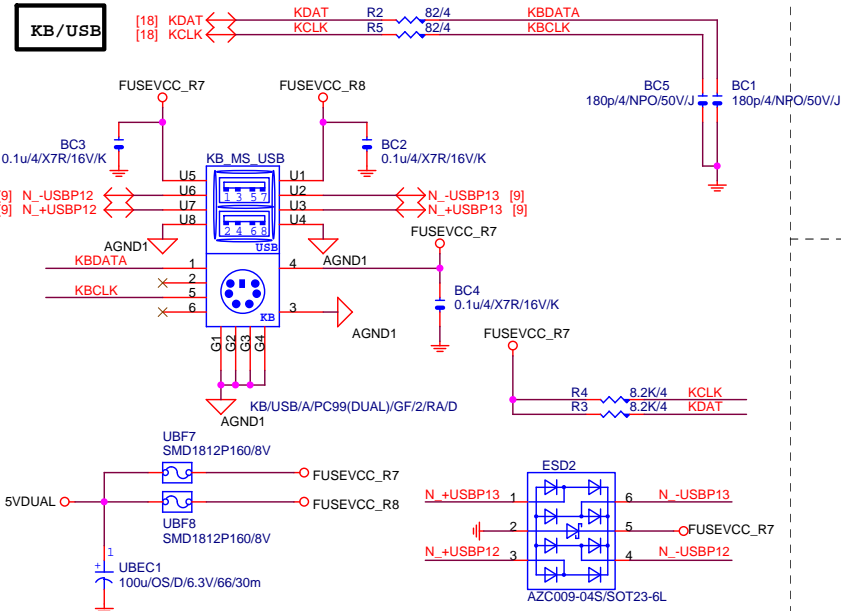


SYS_FAN_1

Linear SYS_FAN



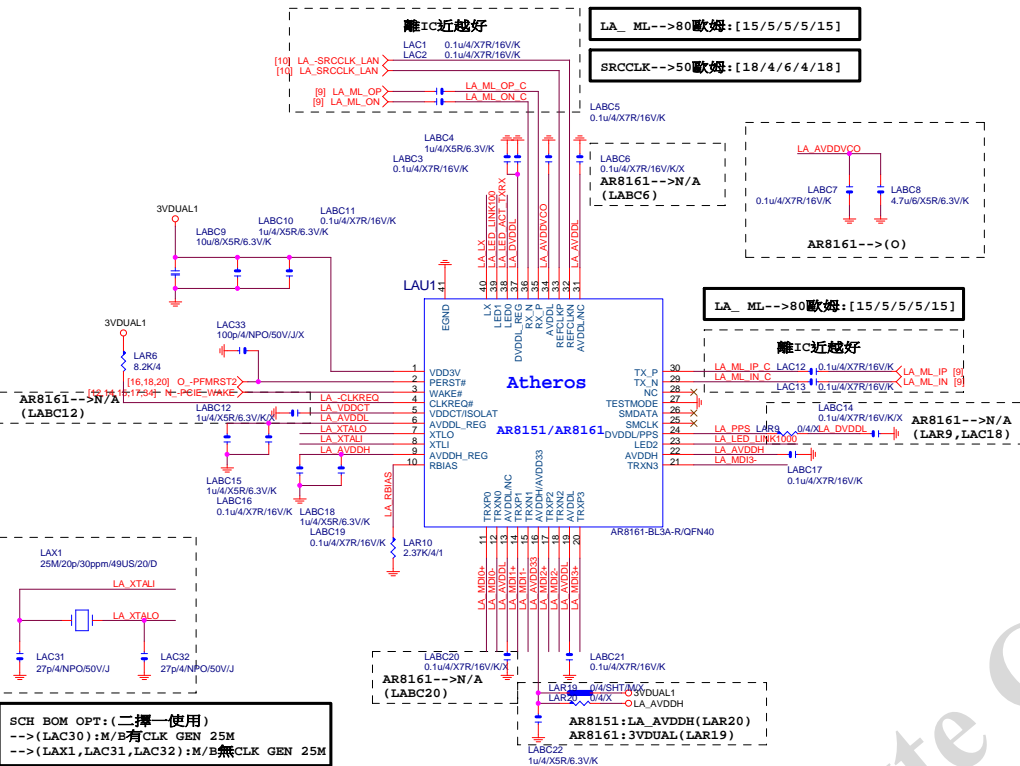
KB/USB



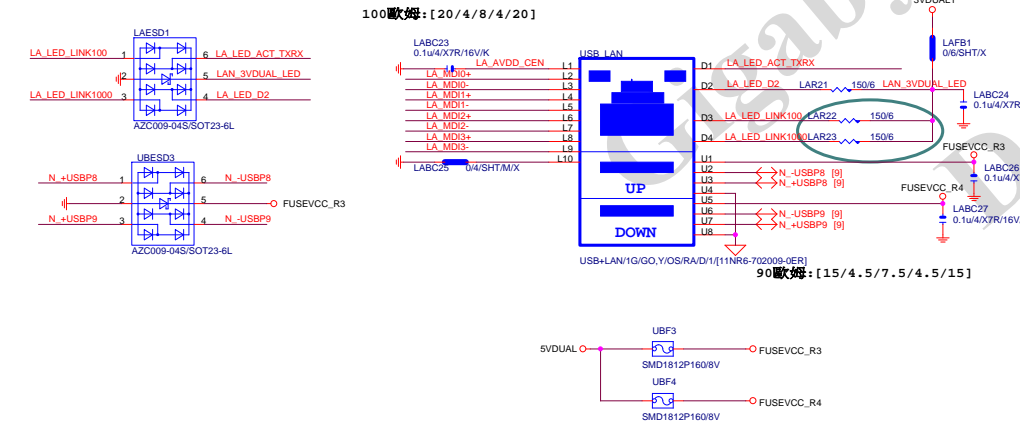
Gigabyte Technology

Title		
HWM,KB/MS, FAN CTRL		
Size	Document Number	Rev
Custom	GA-H77-D3H	1.1
Date:	Monday, July 09, 2012	Sheet 32 of 38

LAN:AR8151/AR8161

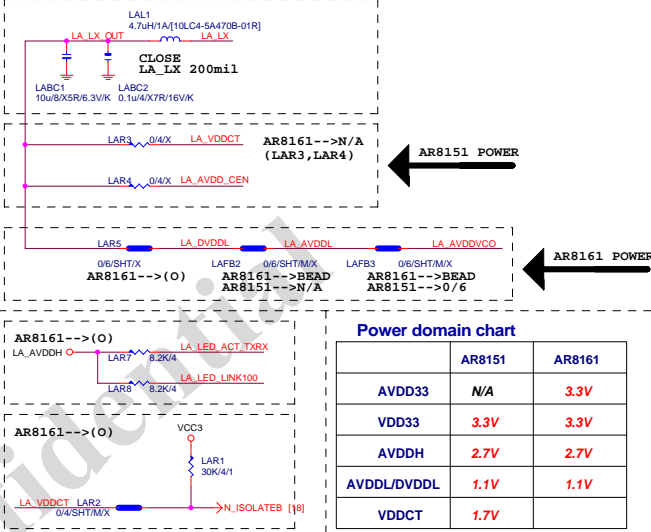


USB30_LAN CONNECTOR

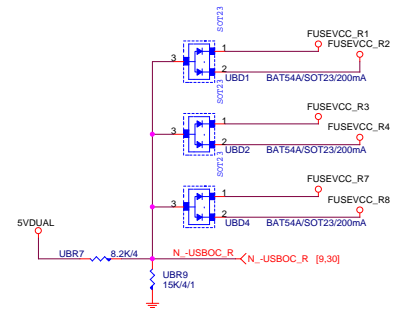
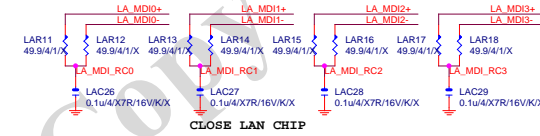


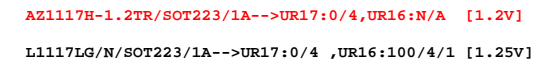
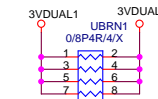
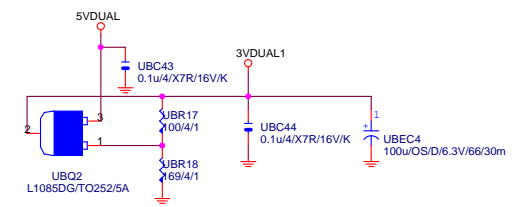
LAN POWER

☐ NEW DESIGN ONLY FOR INTERNAL SWR
AR8151: LAR3(O), LAR5(X)
AR8161: LAR5(O), LAR3/LAR4(X)

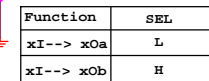


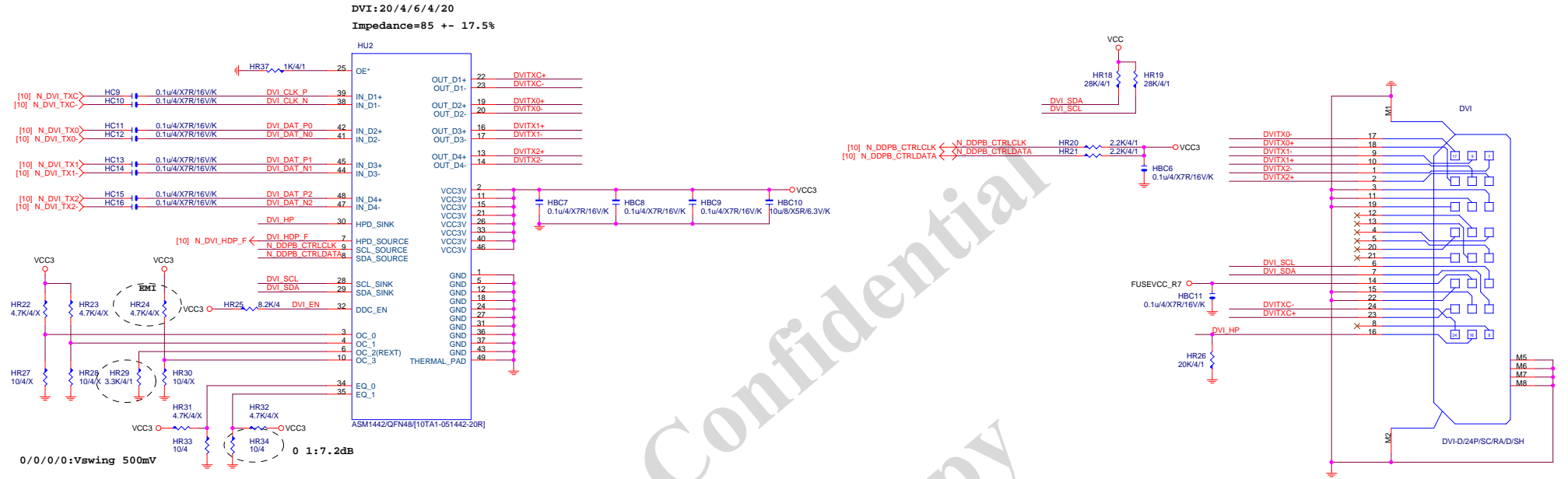
MDI : AR8161-->N/A





GIGABYTE™			
Title E-TRON EJ168			
Size Custom	Document Number GA-H77-D3H		Rev 1.1
Date:	Monday, July 09, 2012	Sheet 34 of 38	

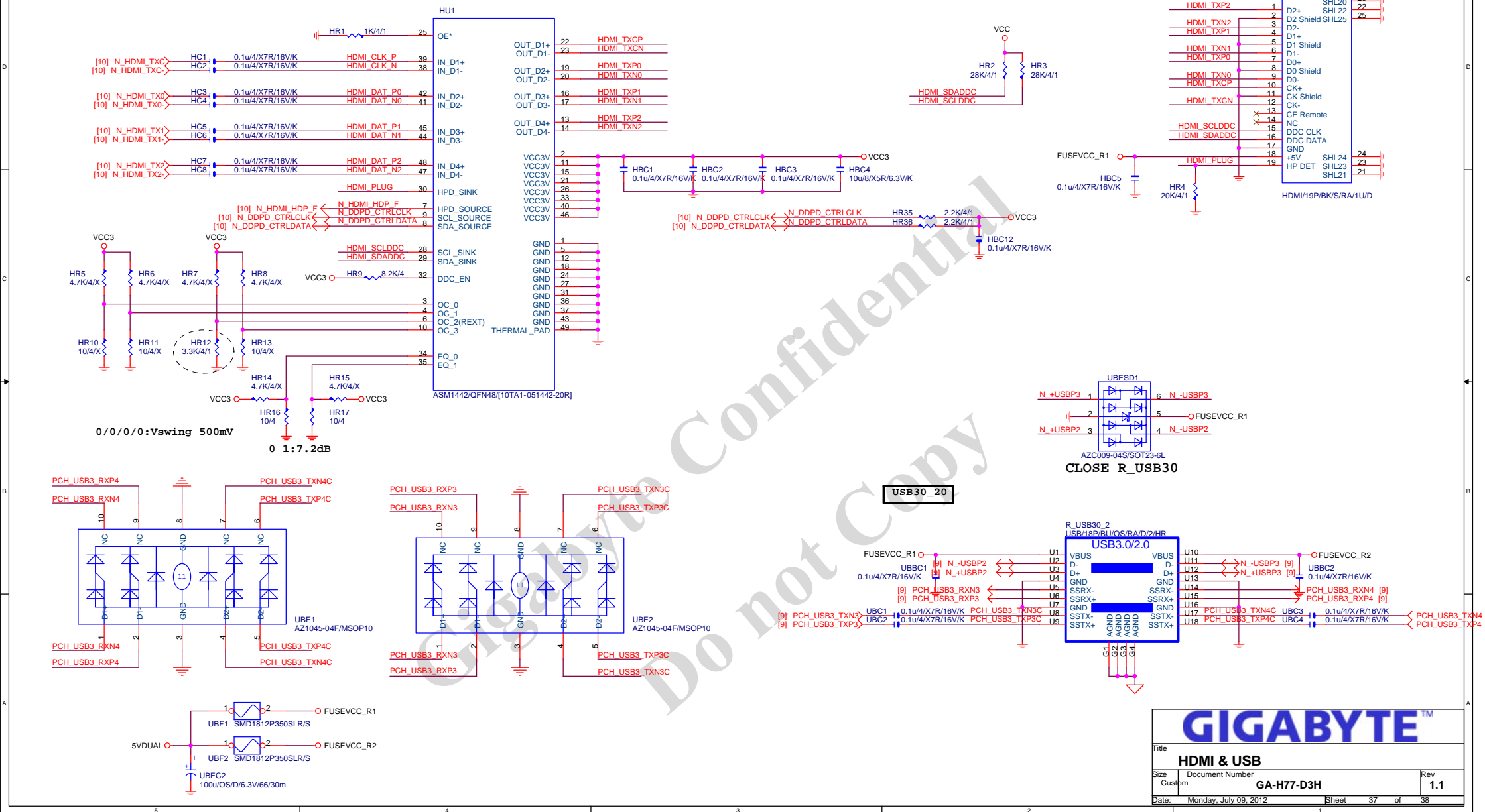




Gigabyte Technology

Title			TI TSB43AB23 1394
Size	Document Number	Rev	
Custom	GA-H77-D3H	1.1	
Date:	Monday, July 09, 2012	Sheet	36 of 38

Impedance=85 +- 17.5%



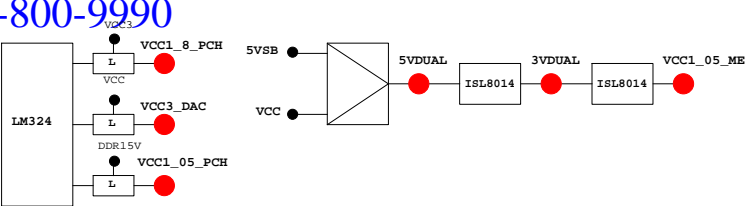
PCB GPIO LIST TABLE

PIN NAME	PWR	Default	USAG	NOTE
GP0	MAIN	H-Z	GPI	GPI0
GP1/TACH1	MAIN		GPI	GPI0
GP2/PIRQE#	MAIN		GPI	-PIRQE
GP3/PIRQF#	MAIN		GPI	-PIRQF
GP4/PIRQG#	MAIN		GPI	-PIRQG
GP5/PIRQH#	MAIN		GPI	-PIRQH
GP6/TACH2	MAIN		GPI	PCIEX1 Detect
GP7/TACH3	MAIN		GPI	GPI07
GP8	STBY	H	GPI	GPI08
GP9/OC5#	STBY		NATIVE	USB OC5#
GP10/OC6#	STBY		NATIVE	USB OC6#
GP11/SMBALERT#	STBY		NATIVE	USB PWR protect
GP12	STBY	L	GPI	GPI012
GP13	STBY	L	GPI	LPCPME#
GP14/OC7#	STBY		NATIVE	USB OC7#
GP15	STBY	L	GPI	GPI015(TLS Enable)
GP16	MAIN		GPI	GPI016
GP17/TACH0	MAIN		GPI	GPI017
GP18	MAIN		GPI	Mobile Only
GP19	MAIN		GPI	GPI019
GP20	MAIN		GPI	GPI020
GP21	MAIN		GPI	GPI021
GP22	MAIN	H-Z	GPI	GPI022
GP23	MAIN		GPI	GPI023
GP24	STBY	L	GPI	SKTOCC#
GP25	STBY			Mobile Only
GP26	STBY			Mobile Only
GP27	STBY	H	GPO	GPI027
GP28	STBY	H	GPO	PWR LED
GP29	STBY	L	GPI	GPI029
GP30	STBY	H-Z	GPI	Mobile Only
GP31	STBY	H-Z	GPI	Mobile Only
GP32	MAIN	H	GPO	N/A
GP33	MAIN	H	GPO	N/A
GP34	MAIN	H-Z	GPI	-PCI_STOP
GP35	MAIN	L	GPO	-ACZ_DET
GP36	MAIN		GPI	N/A
GP37	MAIN		GPI	N/A
GP38	MAIN	H-Z	GPI	PCIEX4 Detect
GP39	MAIN	H-Z	GPI	GPI039
GP40	STBY		NATIVE	USB OC1#
GP41	STBY		NATIVE	USB OC2#
GP42	STBY		NATIVE	USB OC3#
GP43	STBY		NATIVE	USB OC4#
GP44	STBY	L	NATIVE	GPI044
GP45	STBY		NATIVE	GPI045
GP46	STBY	L	NATIVE	GPI046
GP47	STBY			Mobile Only
GP48	MAIN	H-Z	IN	GPI048
GP49	MAIN	H-Z	IN	GPI049
GP50	MAIN		NATIVE	-REQ1
GP51	MAIN	H	NATIVE	-GNT1
GP52	MAIN		NATIVE	-REQ2
GP53	MAIN	H	NATIVE	-GNT2
GP54	MAIN		NATIVE	-REQ3
GP55	MAIN	H	NATIVE	-GNT3
GP56	STBY		NATIVE	Mobile Only
GP57	STBY	H-Z	IN	VCORE_OV1
GP58	STBY	H-Z	NATIVE	F_USB_OC
GP59	STBY		NATIVE	USB_OC0#
GP60	STBY	H-Z	NATIVE	N/A(Reverse)
GP61	STBY	L	NATIVE	-SUSTAT
GP62	STBY	L	NATIVE	SUSCLK
GP63	STBY	L	NATIVE	GPI063
GP64	MAIN	L	NATIVE	CLKOUTFLEX0
GP65	MAIN	L	NATIVE	CLKOUTFLEX1
GP66	MAIN	L	NATIVE	CLKOUTFLEX2
GP67	MAIN	L	NATIVE	CLKOUTFLEX3
GP72	STBY	H-Z	NATIVE	VCORE_OV4
GP73	STBY			Mobile Only
GP74	STBY	H-Z	NATIVE	1_05V_OV2
GP75	STBY	H-Z	NATIVE	N/A(Reverse)

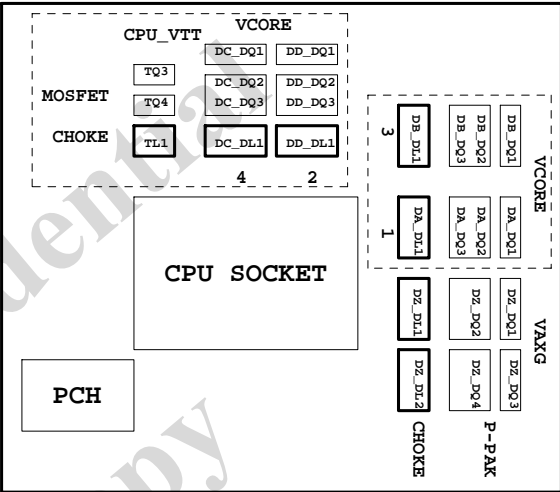
Super I/O ITE8720 GPIO Table

PIN NAME	USAG	NOTE
SVC/PECI_RQT/GP14	-PECI_REQ	
PWROK1/GP13	PWROK1/ITE_PWROK	
KRST#/GP62	-KBRST	
SO/GP50	-ICH_SPI_CS	
IRTX/GP47/CE2_N/JP7	CEB_N	
GP46/IRRX	-LAN2_DSM	
PSION#/GP42	-PSON	
PWROK2#/GP41	PECI_CTL	
PCIRST3#/GP10/VDIMM_STR_EN	-PCIE_RST	
RSMRST#CIRRX1/GP55	-RSMRST	
PME#/GP54	-LPCPME	
PD5/GP75/BUSSO0	N/A	

PIN NAME	USAG	NOTE
FAN_TAC2/GP52	FANIO2	
FAN_TAC3/GP37	FANIO3	
VIDO3/FAN_TAC4/GP25/DSR2#	FANIO4	
FAN_CTL2/GP51	FANPWM2	
FAN_CTL3/GP36	FANPWM3	
VID4/GP34	BEEP-	
VID3/GP33	TURBO1	
VID2/GP32	TURBO0	
VCORE_GOOD/VID6/GP63	CPUT_LED1_C	
VID5/GP35	CPUT_LED2_C	
VID1/GP31	CPUT_LED3_C	
VID0/GP30	-LAN1_DSM	NBT_LED1_C
SLCT/GP80	CPU_LED1_C	
PE/GP81	CPU_LED2_C	
BUSY/GP82	CPU_LED3_C	
PD3/GP73/BUSS11	SB_LED1_C	
PD4/GP74/BUSS12	SB_LED2_C	
VCORE_EN/VID7/GP64	IT_GP64	SB_LED3_C
PD0/GP70	NB_LED1_C	
PD1/GP71	NB_LED2_C	
PD2/GP72/BUSS10	NB_LED3_C	
GP22/SCK	LOW_PWR_1	
VIDO5/GP27/SIN2	LOW_PWR_2	
PCIRST2#/GP11	-PFMRST1	
PCIRST1#/GP12	-PFMRST2	
3VBSBW#/GP40	CSI_F0	BSEL166_1
SUSC#/GP53	CSI_F1	BSEL166_2
GP23/SI	BSEL166_3/CSISBSL	
VIDO0/GP20/CTS2#	CPUT_LED1_C	BSEL166_4
GP65/VDDA_EN/GB_01	MB_ID2	
PD6/GP76/BUSS01	MB_ID3	
PD7/GP77/BUSS02	MB_ID4	
AFD#/GP86/SMB_C_R	2V PIN	FST_2X8
INIT#/GP85/SMB_D_M	SEC_2x8	GTLREF_AD2
ACK#/GP83	DDR_LED1_C	
VID01/GP21/DCD2#	DDR_LED2_C	
STB#/GP87/SMB_C_M	DDR_LED3_C	
PWRON#GP44	VCORE_OV1	
PANSWH#/GP43	PWRBTSW	
KDAT/GP61	-PWRBTSW	
KCLK/GP60	KDAT	
MDAT/GP57	KCLK	
MACL/GP56	MDAT	
GP66/VLDT_EN/GB_02	NBT_LED1_C	MCLK
SVD/PCIRSTIN#/CIRTX/GP15	PWM2_CR	
KDAT/GP61	PWM2_CR	
GP67/CPU_PG/GB_03	EN_LOADLINE	IT_GP67/-EN_PWM2
SLIN#/GP84/SMB_D_R	-EN_PWM2	
PSI_L/FAN_CLT5/CIRRX2/GP16	-THERM	
VIDO4/GP26/SCOUT2	DDR18V_PH2_EN	
VIDO2/FAN_TAC5/GP24/DSR2#	DDR18V_LED	
VIDO6/GP17/RI2#	1_1V_PH_EN	
VIDO7/JP6/DTR2#	JP6	
PD5/GP75/BUSS00	SB_LED3_C	



PWM各相位的擺法如下：



BIOS超電壓對應表：

線路圖名稱	BIOS選項
Vcore	CPU Vcore
CPU_VTT	CPU Termination
CPU_VAXG	CPU Graphic Core
VCC1_8_PCH	CPU PLL
VCC1_05_PCH	PCH core
3VDUAL	3VDUAL
DDR15V	DRAM voltage
DDRVTT	DRAM Terminatio
VREF_CA_A/VREF_CA_B	DRAM Address Ref
VREF_DQ_A/VREF_DQ_B	DRAM Data Ref

散熱模組料號：

Z77-D3H :
PCH :
12SP2-S05511-01R/02R/03R
MOSFET :
12SP2-S08924-01R/02R/03R

	3 pin FAN control	4 pin FAN control	FAN speed	Controller
CPU FAN	FANPWM1	FANPWM3	FANIO1	IT8720
	ICH_FAN_PWM2	ICH_FAN_PWM0	ICH_FAN_TACH0	PCH
SYS FAN	FANPWM2	N/A	FANIO2	IT8720
	ICH_FAN_PWM1	N/A	ICH_FAN_TACH1	PCH
PWR FAN	N/A	N/A	FANIO3	IT8720
			ICH_FAN_TACH2	PCH

Gigabyte Technology			
File	TABLE LIST		
Size	Document Number	Rev	
C	GA-H77-D3H	1.1	
Date	Monday, July 09, 2012	Sheet	38 of 38