Model Name: P35-S3 Rev2.01

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04	POWER MAP
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27	BIOS,CI,HWM,KB/MS

SHEET	TITLE
28	AZALIA ALC889A
29	AUDIO JACK
30	VCORE PWM ISL6327
31	DISCRETE POWER
32	ATX POWER
33	JMicron JMB363
34	LAN REALTEK RTL8111B
35	FRONT PANEL,FUSB,FDD

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Title: Cover Sheet

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Component value change history

Data	Change Item	Reason
0.1A	EVT release	
0.2A	1. VTT_GMCH Q329 AP40T03 --> 2SK9918	
	2. VCORE CHOKE 0.5uH Footprint Change & 料號修改	
	3. IOUT DR100 100K --> 20K	
	4. PCB 智恩 REMOVE	
	5. PWM5,PWM6 阻值修改	
	6. CHOKE FOOTPRINT MODIFY	
	7. ADD COAXIAL:11NR6-501004-83R	
	8. REMOVE VGA , CHANGE TO COM	
	9. REMOVE HDMI_AC	
	10. PWM MOSFET MODIFY	
0.2B	1. BC115,BC729 2.2u/6/Y5V/10V/Z --> 2.2u/6/Y5V/6.3V/Z	
	2. ADD 8P4R(0402) 8.2K : 10RN3-048201-16R	
	3. ITE8718 REV.EX --> GX	
	4. U55只保留RT9199,其餘移除	
	5. VCC1_25 CAP 560uF --> 820uF	
1.0A	1. U55 ADD 替料 10GL2-206137-01R	
	2. UPDATE GMCH/A2 料號	
	3. ISL6545 OCP CHANGE R2007,R2009 15K/4 --> 8.2K/4	
	4. AP40T03H --> NEC3918	
	5. ALC889 PIN40 CR2 20K/4/1 --> 20K/4/0.1	
	6. VCORE MOSFET ADD VENDOR:INFINEO	
	7. RCA REMOVE 11NR6-501004-83R	
	8. 5VDUAL PROTECT R2057 390K/4 --> 150K/4	
1.0B	1. 增加包材	
	2. N/B CHANGE 新料號	
	3. MODIFY VCORE LOAD LINE RISISTOR	
	4. Q36 替料移除10GL6-501084-07R/09R	
	5. DU2,U50,U52 替料移除10TA1-200324-05R	
	6 -RSMRST C1329 0.1u/6 --> 0.01u/6	
	7. -PWRBTSW ADD 限流電阻 R2077=33/4	

Circuit or PCB layout change for next version

DATE	Change Item	Reason
0.1	EVT release	
0.2	1. CHOKE 0.5uH 1.2uH 2uH Footprint Change	
	2. BSEL166_4 GP46 --> GP41	
	3. DDR18V_OV1~OV3 ITE8718 --> ICH9 GPIO	
	4. ADD CPU GTLREF_UV0~UV1 GPIO CONTROL	
1.0	1. Remove All 0 ohm	
	2. OS-CON CAP 底下的零件要移除 (AUDIO)	
	3. DL15 FOOTPRINT CHANGE "CHOKE08U-15A_1P-2"	
	4. LGA775 FOOTPRINT CHANGE "LGA775-39"	
	5. SB_HEATSIN1 --> SB_HEATSINK	
	6. BEARLAKE機種PCB要導入文字面	
	7. 5VDUAL PROTECT ADD D18	
1.01	1.北橋 HEATSINK 擋住 MODEL 文字面	
	2. DL9~DL14 "CHOKE05U-30A-1PQ-1" --> "CHOKE05U-30A-1PQ-2"	
	3. -PWRBTSW ADD 限流電阻 R2077=33/4	
1.02	1. 移除"Ultra Durable 2"	
	2. ADD NB_HEATSINK 外框	
	3. 文字面修改 DDRII 800/1066 (OC)--> DDRII 800/1066	
2.8	1. JMB363 CHANGE TO E-SATA	
	2. F_USB2,3 --> R_USB2,3	
	3. ADD OP+MOSFET補償線路	
	4. R.G.B & HDMI REMOVE	
	5. LPT CHANGE TO CONNECT 2*13K24	
	6. CHECNGE CONNECT FOR SPDIF_I & SPDIF_O	
	7. RTL8111B & RTL8111C CO-LAYOUT	
2.81	1. JMB363 E-SATA --> ICH9R PORT4_5 E-SATA	2. RCA_SPDIF FOOTPRINT UPDATE
BOM		3. NB_HEATSINK 改 4上2下
P35-DS3R-10C	1. CPU GTLREF0~3 RATIO 0.67 --> 0.63 2. REMOVE VIN CAP DBC3 1u/8	4. OP+MOSFET 補償線路修改
10D	1. EC176 560uF --> 820uF For VCC1_05 Shake	2.0
10E	1. REMOVE R2038 8.2K/4	1. JMB363 & ICH9R還原成REV1.02 2. 後窗改8個USB
1.02		3. RTL8111C CO-LAYOUT UPDATE
10G	1. PCB REV1.01 --> REV1.02	2.01 螺絲孔修改
10H	1. C1388 1u/6/Y5V/10V/Z --> 1u/6/X5R/10V/K (STR Fail on high temp.)	
2.8		
28A	1. PCB REV1.02 --> REV2.8	
28B	1. N/B HEATSINK 改成 12SP2-040007-2*R 2. REMOVE R2078,R2079,R2080 20K/4/1 3. REMOVE C1427,C1428,C1429 1N/4/X7R/50V/K	
28C	1. PCB REV2.8 --> REV2.81	
20B-PVT	1. PCB REV2.0 --> 2.01 (螺絲孔修改) 2. 包材CHECK	

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Title: BOM & PCB MODIFY HISTORY

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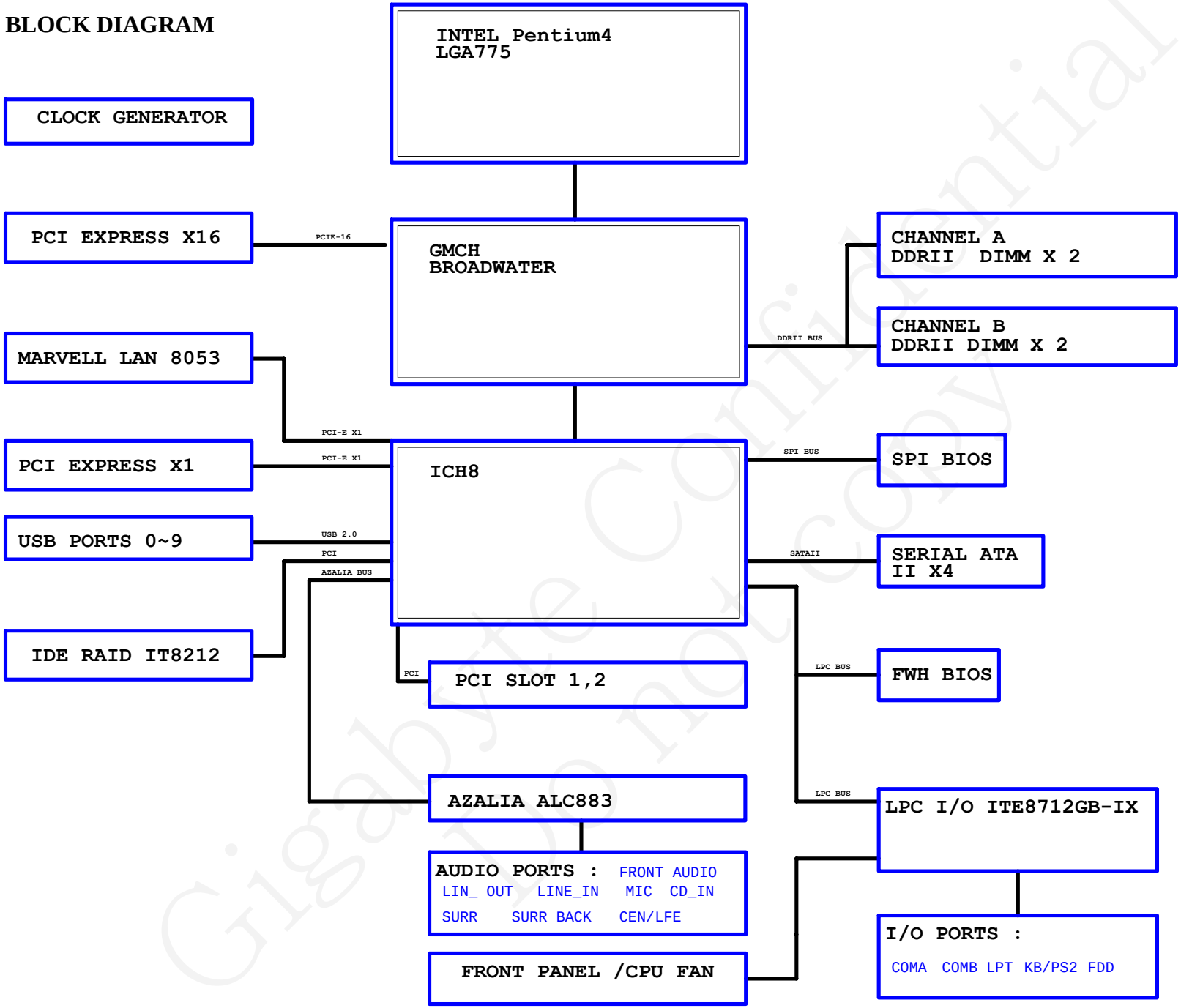
BLOCK DIAGRAM



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Title	BLOCK DIAGRAM	
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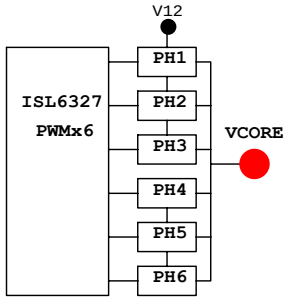
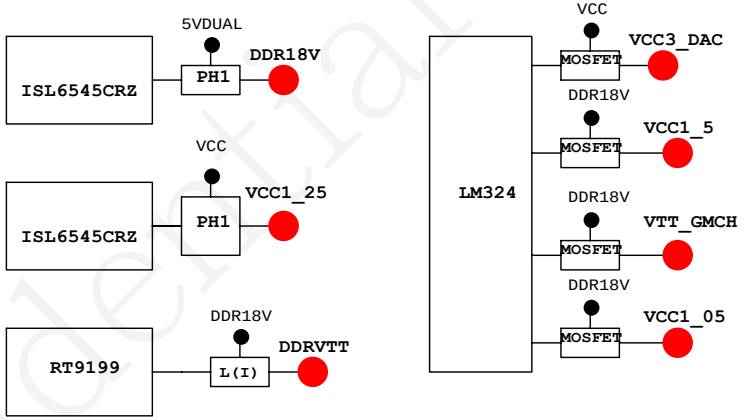
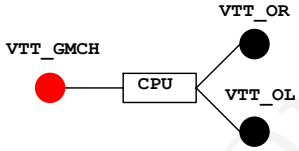
ICH8 GPIO LIST TABLE

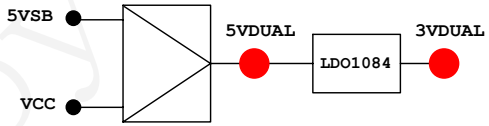
PIN NAME	PWR WELL	AFTER/ PLTRST	USAGE	NOTE
GP0	MAIN	IN	-ACZ_DET	P/U 8.2K VCC3
GP1/TACH1	MAIN	IN	ICH_FAN_TACH1	P/U 8.2K VCC3
GP2/PIRQE#	MAIN	IN	-PIRQE	P/U 8.2K VCC3
GP3/PIRQF#	MAIN	IN	-PIRQF	P/U 8.2K VCC3
GP4/PIRQG#	MAIN	IN	-PIRQG	P/U 8.2K VCC3
GP5/PIRQH#	MAIN	IN	-PIRQH	P/U 8.2K VCC3
GP6/TACH2	MAIN	IN	ICH_FAN_TACH2	P/U 8.2K VCC3
GP7/TACH3	MAIN	IN	ICH_FAN_TACH3	P/U 8.2K VCC3
GP8	STBY	IN	GPIO8(DUALBIOS_INPUT)	P/U 8.2K 3VDUAL
GP9	STBY	OUT	WOL_ONLY	P/D 100K GND
GP10	STBY	IN	CLGPIO1	P/U 8.2K 3VDUAL
GP11/SMBALERT#	STBY	OUT	-SMBALRT	P/U 8.2K 3VDUAL
GP12	STBY	IN	MB_ID0	P/U 8.2K 3VDUAL
GP13	STBY	IN	-LPCPME	P/U 8.2K 3VDUAL
GP14	STBY	IN	CLGPIO2	P/U 8.2K 3VDUAL
GP15	STBY	OUT	LAN_DISABLE(STP_PCI-)	N/A
GP16	MAIN	OUT/LOW	RESET	N/A
GP17/TACH0	MAIN	IN	ICH_FAN_TACH0	P/U 8.2K VCC3
GP18	MAIN	OUT	MB_ID1	P/U 8.2K VCC3
GP19	MAIN	IN	SATA1GP	P/U 8.2K VCC3
GP20	MAIN	OUT	-SPI_WP0	P/U 1K 3VCL
GP21	MAIN	IN	SATA0GP	P/U 8.2K VCC3
GP22	MAIN	IN	SCLOCK	P/U 8.2K VCC3
GP23	MAIN	OUT	-LDRQ1	P/U 8.2K VCC3
GP24	STBY	OUT	CLGPIO0	P/U 8.2K 3VDUAL
GP25	STBY	IN	MB_ID2(STP_CPU-)	P/U 8.2K 3VDUAL
GP26/S4_STATE#	STBY	OUT	S4_STATE#	P/U 8.2K 3VDUAL
GP27	STBY	OUT/LOW	GPIO27(EL_STATE0)	P/U 8.2K 3VDUAL
GP28	STBY	OUT/LOW	PWR_LED(EL_STATE1)	N/A
GP29/OC5#	STBY	IN	-USBOC_R	P/U FUSEVCC
GP30/OC6#	STBY	IN	-USBOC_R	P/U FUSEVCC
GP31/OC7#	STBY	IN	-USBOC_R	P/U FUSEVCC
GP32	MAIN	OUT	DUAL_BIOS	P/U 100K+1M VCC3
GP33	MAIN	OUT	DUAL_BIOS	P/U 8.2K VCC3
GP34	MAIN	OUT/LOW	GPIO34/SMB_RST	N/A
GP35	MAIN	OUT	SATACLKREQ#	N/A
GP36	MAIN	IN	SATA2GP	P/U 8.2K VCC3
GP37	MAIN	IN	SATA3GP	P/U 8.2K VCC3
GP38	MAIN	IN	SLOAD	P/U 8.2K VCC3
GP39	MAIN	IN	GPIO39	P/D 8.2K GND
GP48	MAIN	IN	GPIO48	P/U 8.2K VCC3
GP49	MAIN	IN	CPUPWROK	P/U 100 VTT_OL

VCORE:6 PHASE PWM--ISL6327CRZ









Gigabyte Technology		
Title: TABLE LIST		
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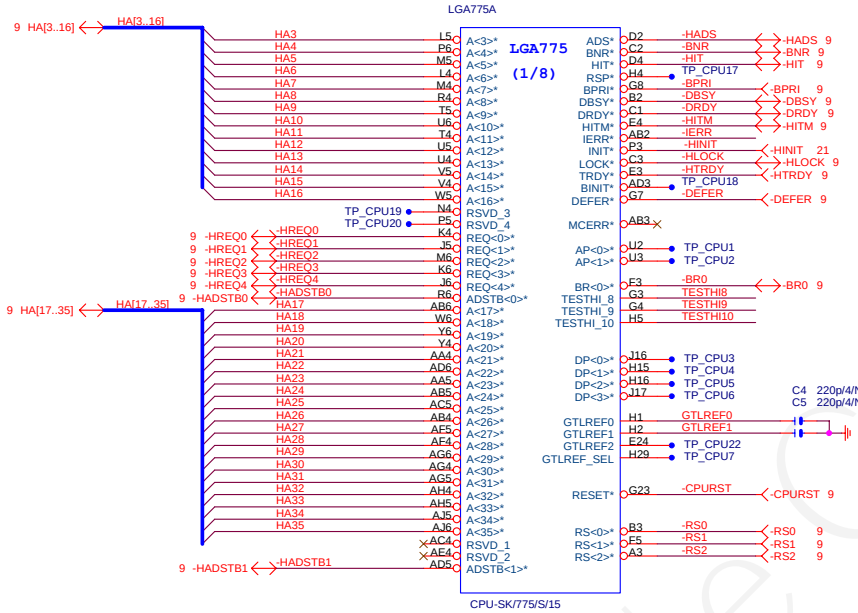
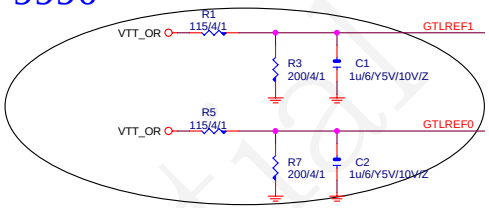
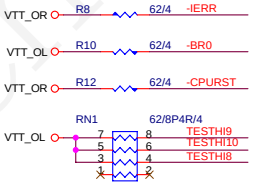
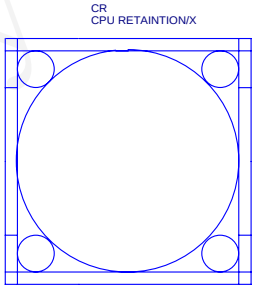
HA/REQ:4/11 50+-15%

ADSTB:4/14 50+-15%

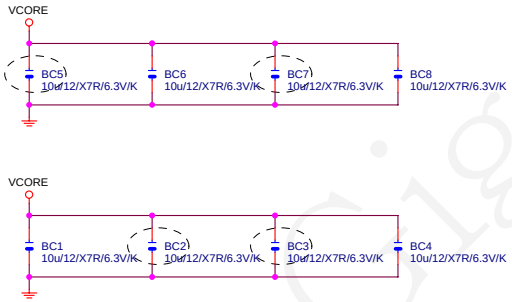


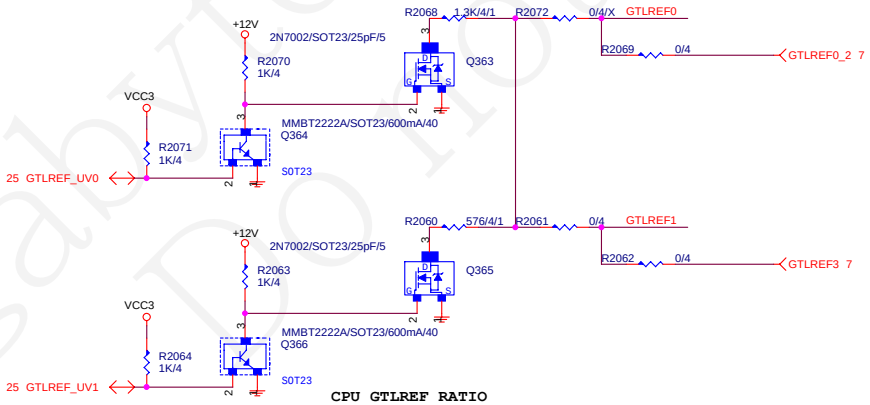






Impedance=50 +- 15% for 4 -layer





CPU GTLREF RATIO

GTLREF_UV0	GTLREF_UV1	Ratio Set
HIGH	HIGH	0.67
LOW	HIGH	0.65
HIGH	LOW	0.63
LOW	LOW	0.615

Gigabyte Technology		
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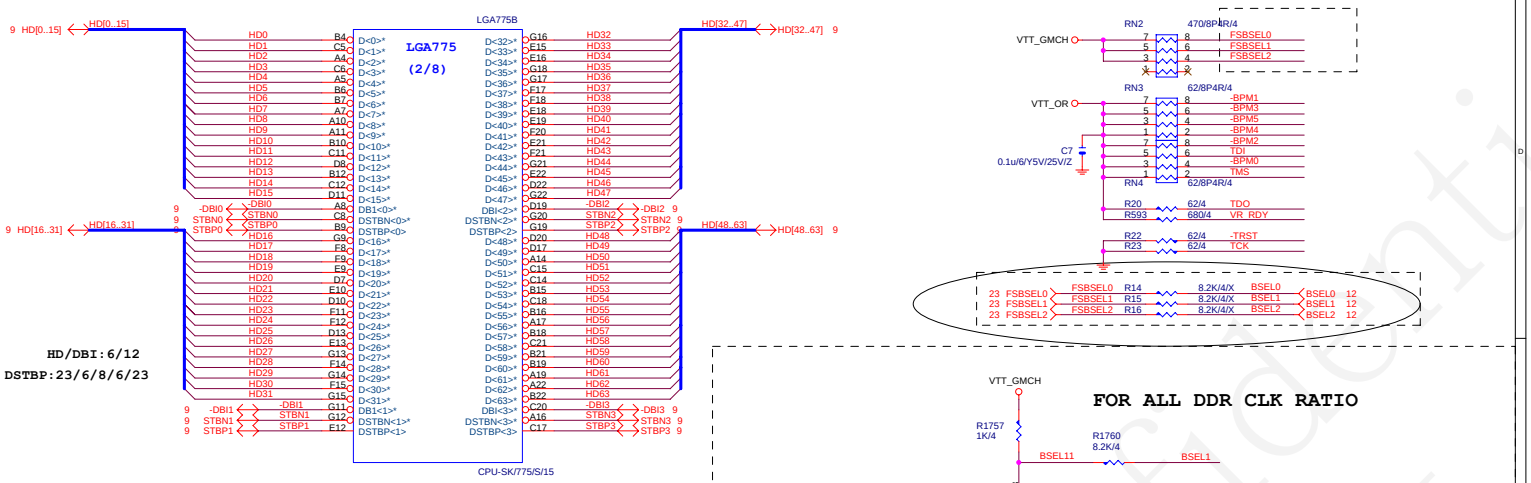
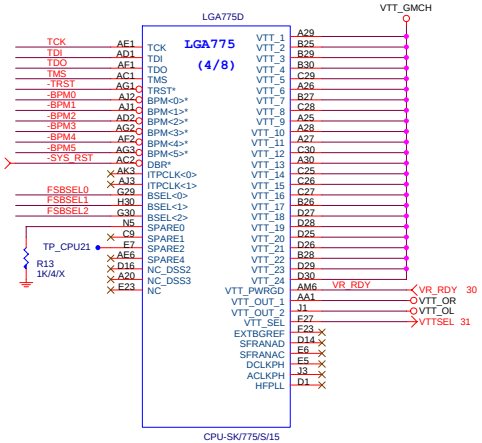
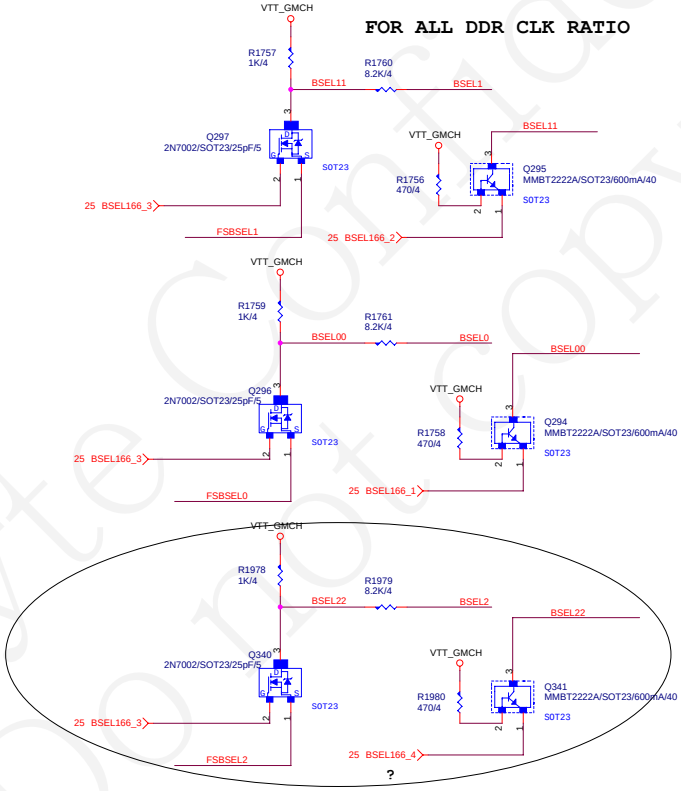


HD/DBI:6/12

DSTBP:23/6/8/6/23



FOR ALL DDR CLK RATIO



	FSA	FSB	FSC			
	FSBSEL0	FSBSEL1	FSBSEL2	Clock		
?	1	0	1	100MHz		
?	1	0	0	133MHz	3/4	400/533
G33	0	1	0	200MHz	2/2.66/3.33/4	400/533/667/800
G33	0	0	0	266MHz	2/2.5/3/4	533/667/800/1066
G33	0	0	1	333MHz	2/2.4	667/800

Gigabyte Technology			
Title	P4_LGA775-B,D		
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Note:

VCCA & VCOREPLL define doesn't same as old P4 design kit

Trace width doesn't less than 12 Mil

As close as possible to CPU socket

VTT_GMCH L1 10UH/8/S/[10LI2-12100A-13R_10LI2-12100A-02R]

C10 1u/6/Y5V/10V/Z

C11 1u/6/Y5V/10V/Z/X

L2 10UH/8/S/[10LI2-12100A-13R_10LI2-12100A-02R]

VCCA — R35 0/6/SHT/X — VSSA — VCOREPLL

COMP4~7 可以不上

Place outside of CPU socket

VTT_OL: R28 49.9/4/1 COMP5; R30 49.9/4/1 COMP4; R31 49.9/4/1 COMP2; R32 49.9/4/1 COMP3; R33 49.9/4/1 COMP0; R34 49.9/4/1 COMP1; C9 0.1u/6/Y5V/25V/Z

VTT_OR: R36 49.9/4/1 COMP6; R37 49.9/4/1 COMP7; R38 24.9/4/1 COMP8; C12 0.1u/6/Y5V/25V/Z

VTT_GMCH: R39 130/4 -PROCHOT; R40 62/4 TESTHI2_7; C8 0.1u/6/Y5V/25V/Z; R41 62/4 -THRMTRIP; R42 62/4 -FERR; R29 62/4 TESTHI0

VTT_OL: RN5 62/8P4R/4 (7 8 TESTHI12; 5 6 TESTHI1; 3 4 TESTHI11; 1 2 TESTHI13); R43 100/4/X CPUPWROK; C13 1n/4/X7R/50V/K/X; R1775 62/4 CPU_G1; R1776 62/4 TESTHI_M

VTT_OR: RN6 680/8P4R/4 (7 8 VID2; 5 6 VID0; 3 4 VID4; 1 2 VID5); RN7 680/8P4R/4 (7 8 VID7; 5 6 VID1; 3 4 VID3; 1 2 VID6); R58 1K/4 VRD_SEL; R60 62/4 -FORCEPR

VTT_OR: R667 49.9/4/1/X GTLREF3 — GTLREF3 5; R669 100/4/1/X; C349 1u/6/Y5V/10V/Z

VTT_OR: R671 49.9/4/1/X GTLREF2 — R2075 0/4 — GTLREF0_2 5; R674 100/4/1/X; C351 1u/6/Y5V/10V/Z

FB33 MASK-50

VCC1_5 — 0/8/SHT-50/MASK/X — VCC_PLL — VCC_PLL

C17 1u/6/Y5V/10V/Z; C350 0.1u/6/Y5V/25V/Z/X

-STPCLK — C14 33p/4/NPO/50V/J/X

LGA775C

LGA775 (3/8)

CPU-SK/775/S/15

SMI* P2 ← -SMI (21)
A20M* K3 ← -A20M (21)
FERR*/PBE* R3 ← -FERR (21)
LINT0 K1 ← INTR (21)
LINT1 L1 ← NMI (21)
IGNNE* N2 ← -IGNNE (21)
STPCLK* M3 ← -STPCLK (20,21,31)
VCCA A23
VSSA B23
VCCIOPLL C23 ← VCOREPLL
VCC_PLL D23 ← VCC_PLL
VID<0> AM2 ← VID0
VID<1> AL5 ← VID1
VID<2> AM3 ← VID2
VID<3> AL6 ← VID3
VID<4> AK4 ← VID4
VID<5> AL4 ← VID5
VID<6> AM5 ← VID6
VID<7> AM7 ← VID7 ← VID[0..7] (30)
VID_SELECT AN7 ← VRD_SEL (30)
BCLK<0> F28 ← CPUCLK (23)
BCLK<1> G28 ← -CPUCLK (23)
SKTOCC* AE8 ← -SKTOCC (20)
THERMDA AL1 ← R44 0/4/SHT/X ← CPU_TEMP (25,27)
THERMDC AK1 ← R45 0/4/SHT/X ← THERMDC (25)
THERMDA_2 AJ7
THERMDC_2 AH7
VCC_SENSE AN3 ← VCC_SENSE (26)
VSS_SENSE AN4 ← VSS_SENSE (26)
VCC_MB_REGULATION AN5
VSS_MB_REGULATION AN6
VCC_D_SENSE AL8 ← VCORE
VSS_D_SENSE AL7
VTT_PKGSENSE F29
Z60_50* F6 ← R56 62/4 ← TP_CPU11
SLEW_CTRL* G6 ← TP_CPU14
SST_LV* G5 ← PECI (21,25)
MPG_NOBOOT* AL3 ← TP_CPU16

C1282 1n/4/X7R/50V/K/X; C15 1n/4/X7R/50V/K/X

TESTHI_0 F26 → TESTHI0
TESTHI_1 W3 → TESTHI1
TESTHI_2 F25 → TESTHI2_7
TESTHI_3 G25
TESTHI_4 G27
TESTHI_5 G26
TESTHI_6 G24
TESTHI_7 F24
TESTHI_11 P1 → TESTHI11
TESTHI_12 W2 → TESTHI12
TESTHI_13 L2 → TESTHI13
FORCEPH AK6 → -FORCEPR → TESTHI13 / -FORCEPR 26
PWRGOOD N1 → CPUPWROK → CPUPWROK 20
PROCHOT* AL2 → -PROCHOT → -PROCHOT 20,26
THERMTRIP* M2 → -THRMTRIP → -THRMTRIP 21
COMP<0> A13 → COMP0
COMP<1> T1 → COMP1
COMP<2> G2 → COMP2
COMP<3> R1 → COMP3
COMP<4> J2 → COMP4
COMP<5> T2 → COMP5
COMP<6> Y3 → COMP6
COMP<7> AE3 → COMP7
COMP<8> B13 → COMP8
RC1 G1 → CPU_G1
RC2 U1 → TESTHI_M
RC4 A24 — R666 1K/4/X
RC5 E29 → TP_CPU10
RSVD_1 F2 → GTLREF3
RSVD_2 G10 → GTLREF2
PSMI* AH2
MSID<1> V1 → MSID1 R53 62/4
MSID<0> W1 → MSID0 R55 62/4
CPU_BOOT Y1 → TP_CPU12
LL_ID<0> V2 → TP_CPU13
LL_ID<1> AA2 → TP_CPU15

R1989 0/4/X: 25,31 FANPWM2 — -STPCLK

PECI:Platform Environment Control Interface

Gigabyte Technology		
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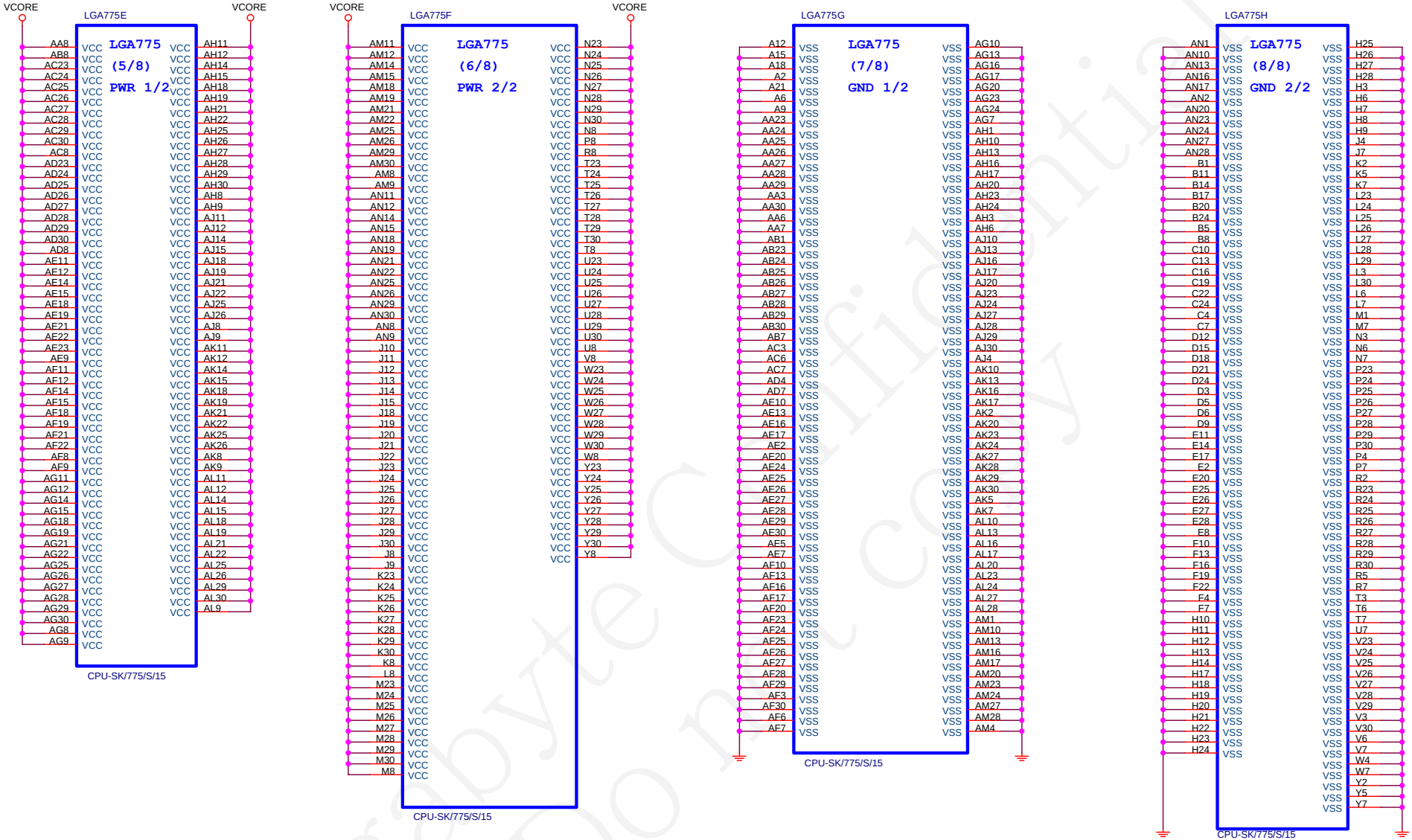

Gigabyte Technology		
Title: P4_LGA775-E,F,G,H		
Size: B	Document Number: P35-S3	Rev: 2.01
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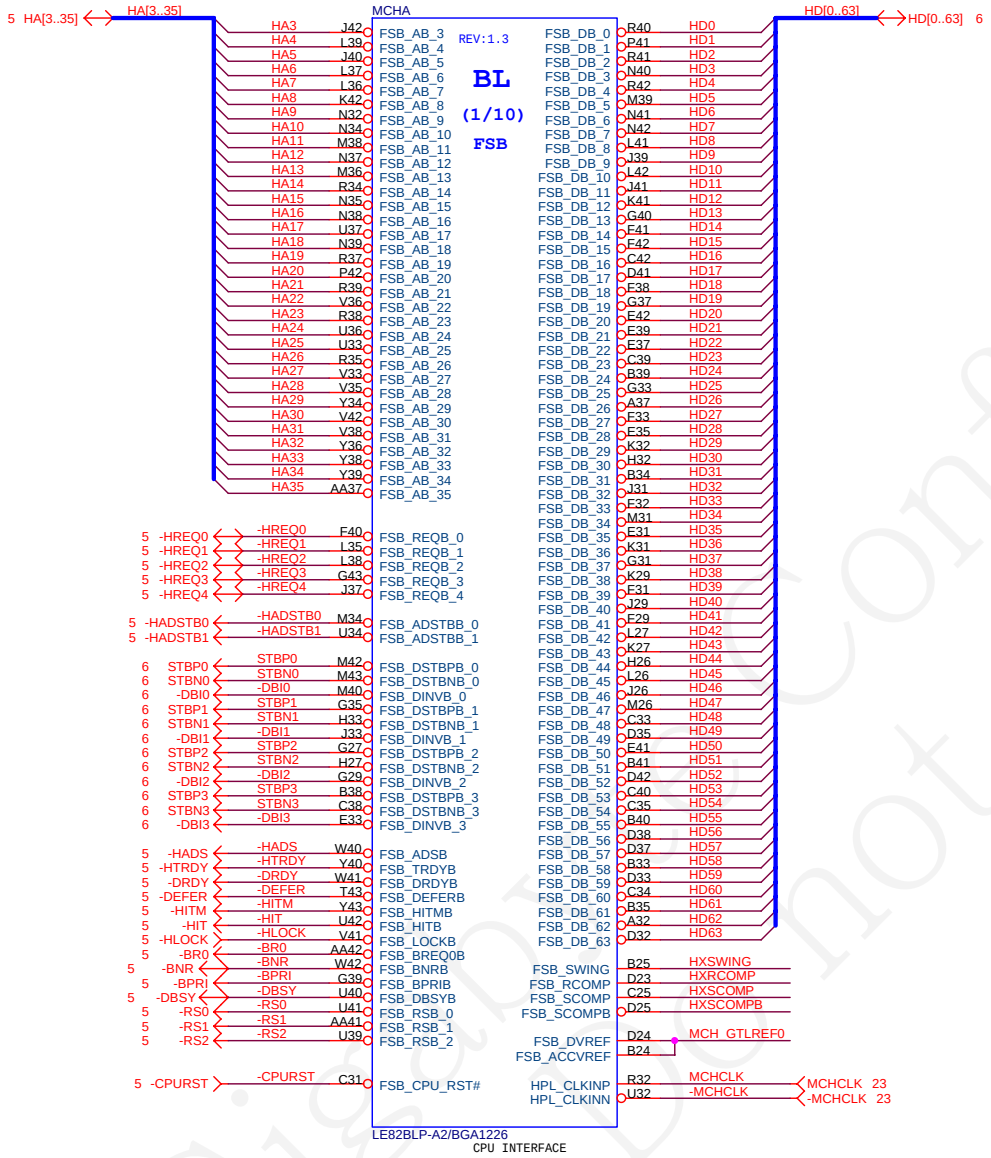
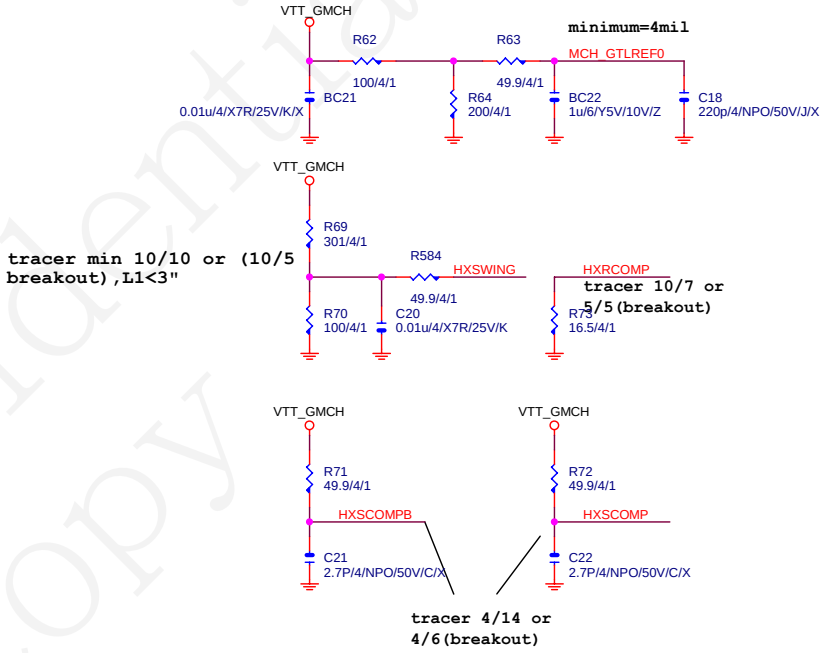
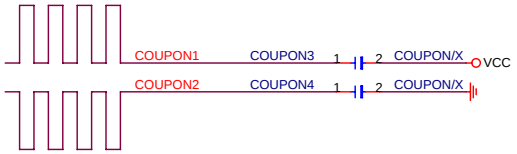




tracer min 10/10 or (10/5 breakout),L1<3"

tracer 10/7 or 5/5(breakout)

tracer 4/14 or 4/6(breakout)



Gigabyte Technology			
Title: GMCH-HOST			
Size: Custom	Document Number: P35-S3		Rev: 2.01
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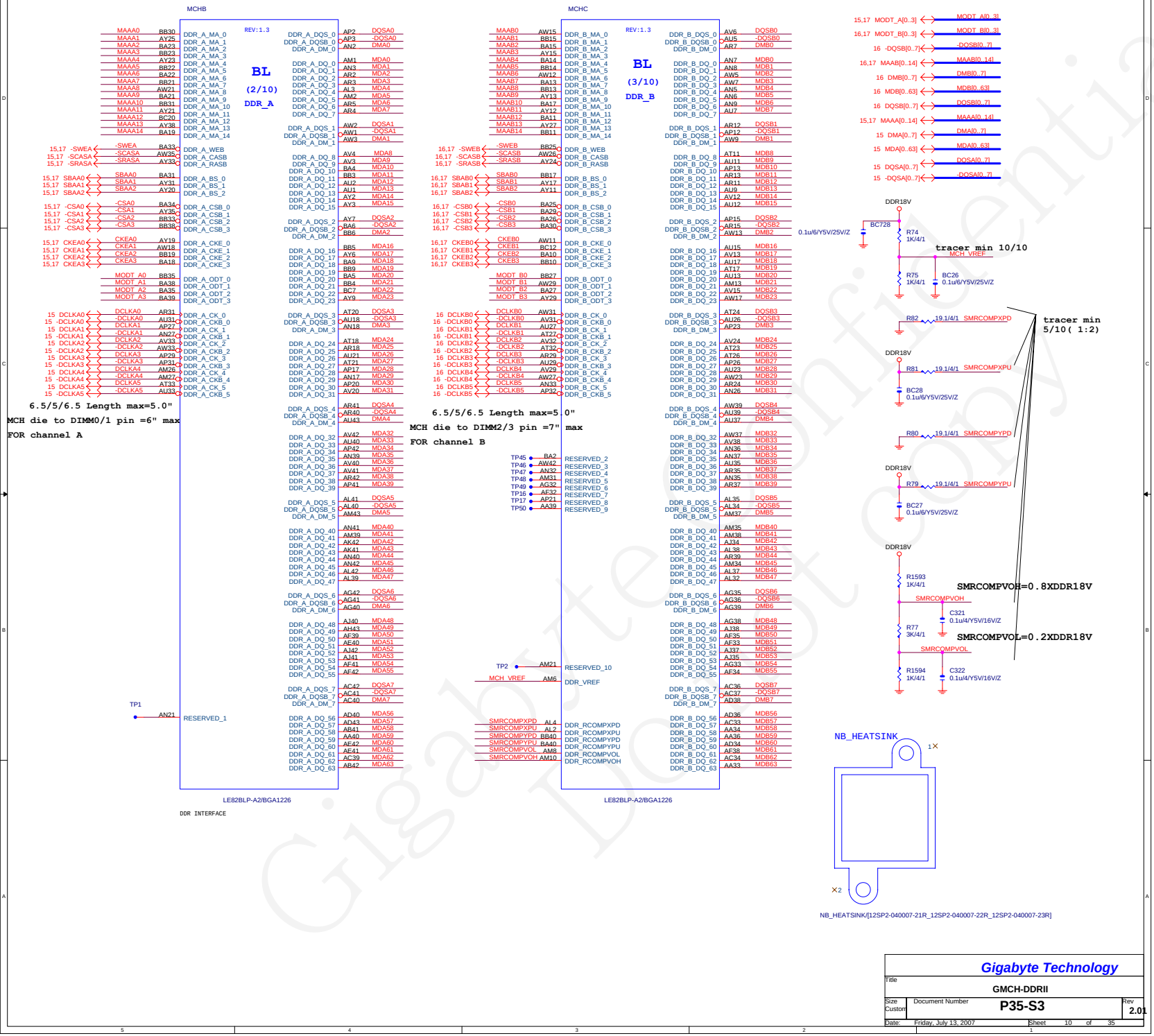

Gigabyte Technology			
Title	GMCH-DDRII		
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PCIEX16:15/4/8/4/15
Impedance=95 +- 17.5%

DMI:12/4/8/4/12
Impedance=95 +- 17.5%

MCHD

REV:1.3
BL
(4/10)

PCIE

EXP_A_RXP0	F13	PEG_RXP_0	PEG_TXP_0	D11	EXP_A_TXP0
EXP_A_RXN0	E13	PEG_RXN_0	PEG_TXN_0	D12	EXP_A_TXN0
EXP_A_RXP1	K15	PEG_RXP_1	PEG_TXP_1	B11	EXP_A_TXP1
EXP_A_RXN1	J15	PEG_RXN_1	PEG_TXN_1	A10	EXP_A_TXN1
EXP_A_RXP2	F12	PEG_RXP_2	PEG_TXP_2	C10	EXP_A_TXP2
EXP_A_RXN2	E12	PEG_RXN_2	PEG_TXN_2	D9	EXP_A_TXN2
EXP_A_RXP3	J12	PEG_RXP_3	PEG_TXP_3	B9	EXP_A_TXP3
EXP_A_RXN3	H12	PEG_RXN_3	PEG_TXN_3	B7	EXP_A_TXN3
EXP_A_RXP4	J11	PEG_RXP_4	PEG_TXP_4	D7	EXP_A_TXP4
EXP_A_RXN4	H11	PEG_RXN_4	PEG_TXN_4	D6	EXP_A_TXN4
EXP_A_RXP5	F7	PEG_RXP_5	PEG_TXP_5	B5	EXP_A_TXP5
EXP_A_RXN5	E7	PEG_RXN_5	PEG_TXN_5	B6	EXP_A_TXN5
EXP_A_RXP6	E5	PEG_RXP_6	PEG_TXP_6	B3	EXP_A_TXP6
EXP_A_RXN6	F6	PEG_RXN_6	PEG_TXN_6	B4	EXP_A_TXN6
EXP_A_RXP7	C2	PEG_RXP_7	PEG_TXP_7	E2	EXP_A_TXP7
EXP_A_RXN7	D2	PEG_RXN_7	PEG_TXN_7	E2	EXP_A_TXN7
EXP_A_RXP8	G6	PEG_RXP_8	PEG_TXP_8	F4	EXP_A_TXP8
EXP_A_RXN8	G5	PEG_RXN_8	PEG_TXN_8	G4	EXP_A_TXN8
EXP_A_RXP9	L9	PEG_RXP_9	PEG_TXP_9	J4	EXP_A_TXP9
EXP_A_RXN9	L8	PEG_RXN_9	PEG_TXN_9	K3	EXP_A_TXN9
EXP_A_RXP10	M8	PEG_RXP_10	PEG_TXP_10	L2	EXP_A_TXP10
EXP_A_RXN10	M9	PEG_RXN_10	PEG_TXN_10	K1	EXP_A_TXN10
EXP_A_RXP11	M4	PEG_RXP_11	PEG_TXP_11	N2	EXP_A_TXP11
EXP_A_RXN11	L4	PEG_RXN_11	PEG_TXN_11	M2	EXP_A_TXN11
EXP_A_RXP12	M5	PEG_RXP_12	PEG_TXP_12	P3	EXP_A_TXP12
EXP_A_RXN12	M6	PEG_RXN_12	PEG_TXN_12	N4	EXP_A_TXN12
EXP_A_RXP13	R9	PEG_RXP_13	PEG_TXP_13	R2	EXP_A_TXP13
EXP_A_RXN13	R10	PEG_RXN_13	PEG_TXN_13	P1	EXP_A_TXN13
EXP_A_RXP14	T4	PEG_RXP_14	PEG_TXP_14	U2	EXP_A_TXP14
EXP_A_RXN14	R4	PEG_RXN_14	PEG_TXN_14	T2	EXP_A_TXN14
EXP_A_RXP15	R6	PEG_RXP_15	PEG_TXP_15	V3	EXP_A_TXP15
EXP_A_RXN15	R7	PEG_RXN_15	PEG_TXN_15	U4	EXP_A_TXN15

DMI

19 DMI_0RXP	DMI_0RXP	W2	DMI_RXP_0	DMI_TXP_0	V7	DMI_0TXP	DMI_0TXP 19
19 DMI_0RXN	DMI_0RXN	V1	DMI_RXN_0	DMI_TXN_0	V6	DMI_0TXN	DMI_0TXN 19
19 DMI_1RXP	DMI_1RXP	Y8	DMI_RXP_1	DMI_TXP_1	W4	DMI_1TXP	DMI_1TXP 19
19 DMI_1RXN	DMI_1RXN	Y9	DMI_RXN_1	DMI_TXN_1	Y4	DMI_1TXN	DMI_1TXN 19
19 DMI_2RXP	DMI_2RXP	AA7	DMI_RXP_2	DMI_TXP_2	AC8	DMI_2TXP	DMI_2TXP 19
19 DMI_2RXN	DMI_2RXN	AA6	DMI_RXN_2	DMI_TXN_2	AC9	DMI_2TXN	DMI_2TXN 19
19 DMI_3RXP	DMI_3RXP	AB3	DMI_RXP_3	DMI_TXP_3	Y2	DMI_3TXP	DMI_3TXP 19
19 DMI_3RXN	DMI_3RXN	AA4	DMI_RXN_3	DMI_TXN_3	AA2	DMI_3TXN	DMI_3TXN 19

23 SRCCLK_MCH	SRCCLK_MCH	B12	EXP_CLKINP	EXP_COMPO	AC11	GRCOMP
23 -SRCCLK_MCH	-SRCCLK_MCH	B13	EXP_CLKINN	EXP_COMPI	AC12	
18 SDVO_CLDATA	SDVO_CLDATA	G17	SDVO_CTRLDATA			
18 SDVO_CLCLK	SDVO_CLCLK	E17	SDVO_CTRLCLK			

LE82BLP-A2/BGA1226

EXP_A_TXP[0..15] >> EXP_A_TXP[0..15] 18
EXP_A_TXN[0..15] >> EXP_A_TXN[0..15] 18
EXP_A_RXP[0..15] >> EXP_A_RXP[0..15] 18
EXP_A_RXN[0..15] >> EXP_A_RXN[0..15] 18

VCC1_25 — R87 0/12/SHT/X — VCC1_25PCIEX >> VCC1_25PCIEX 14

BC254
1u/8/Y5V/25V/Z

VCC1_25PCIEX

R88
24.9/4/1
GRCOMP

tracer 10/10

Gigabyte Technology

Title: GMCH-PCI E & DMI

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? VCC1_25 R1981 1K/4 MCH_MTYPE R1982 1K/4/X

FOR DDR2

FOR DDR3

0: BTX
1: ATX

MCHE

REV:1.3

BL

(5/10)

VGA

MISC

LE82BLP-A2/BGA1226

6 BSEL0 BSEL1 BSEL2

VCC1_25 R1863 1K/4 R98 1K/4/X EXP_SLR MCH_MTYPE

18 EXP_EN_HDR R95 0/4/SHT/X EXP_EN

R1983 1K/4/X

VCC1_25 R102 1K/4/1 0.349V CL_VREF:4/10 R1601 392/4/1

21 CL_DATA 21 CL_CLK 20,21,25 PWROK1

CL_RST:4/7

21 -CL_RST

20,25 -PFMRST R1866 1.65K/4/X -CL_RST R1867 1K/4/X

BW+ICH8 不要上(SAMPLE)
BW+ICH7 要上

VCC3 R1864 1K/4/X VCC3 R1865 1K/4/X

R1840 0/4/SHT/X -ICHSYNC -ICHSYNC 20

C1362 1n/4/X7R/50V/K/X

-PFMRST1 -PFMRST1 25 PWROK1 PWROK1 20,21,25

MCHF

REV:1.3

DDR3

BL

(6/10)

NC

LE82BLP-A2/BGA1226

-PFMRST1 C23 22p/4/NPO/50V/J

PWROK1 C24 22p/4/NPO/50V/J

-ICHSYNC C25 1n/4/X7R/50V/K

Gigabyte Technology		
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MCHG

REV:1.3

BL

(7/10)

GND

BC37	VSS_1	VSS_181	AE24		
BC32	VSS_2	VSS_182	AE22		
BC28	VSS_3	VSS_183	AE20		
BC24	VSS_4	VSS_184	AE4		
BC10	VSS_5	VSS_185	AE3		
BC5	VSS_6	VSS_186	AE2		
BB7	VSS_7	VSS_187	AD42		
AY41	VSS_8	VSS_188	AD39		
AY4	VSS_9	VSS_189	AD37		
AW43	VSS_10	VSS_190	AD35		
AW41	VSS_11	VSS_191	AD33		
AV37	VSS_12	VSS_192	AD25		
AV35	VSS_13	VSS_193	AD23		
AV27	VSS_14	VSS_194	AD21		
AV23	VSS_15	VSS_195	AD19		
AV21	VSS_16	VSS_196	AC38		
AV17	VSS_17	VSS_197	AC35		
AV11	VSS_18	VSS_198	AC24		
AV9	VSS_19	VSS_199	AC22		
AV7	VSS_20	VSS_200	AC20		
AV2	VSS_21	VSS_201	AC10		
AU42	VSS_22	VSS_202	AC7		
AU38	VSS_23	VSS_203	AC5		
AU32	VSS_24	VSS_204	AB43		
AU24	VSS_25	VSS_205	AB25		
AU20	VSS_26	VSS_206	AB23		
AU6	VSS_27	VSS_207	AB21		
AU4	VSS_28	VSS_208	AB19		
AT31	VSS_29	VSS_209	AB2		
AT29	VSS_30	VSS_210	AB1		
AT15	VSS_31	VSS_211	AA38		
AT13	VSS_32	VSS_212	AA35		
AT12	VSS_33	VSS_213	AA24		
AR38	VSS_34	VSS_214	AA22		
AR33	VSS_35	VSS_215	AA20		
AR32	VSS_36	VSS_216	AA8		
AR27	VSS_37	VSS_217	AA5		
AR26	VSS_38	VSS_218	Y42		
AR23	VSS_39	VSS_219	Y37		
AR21	VSS_40	VSS_220	Y35		
AR20	VSS_41	VSS_221	Y33		
AR17	VSS_42	VSS_222	Y25		
AR9	VSS_43	VSS_223	Y23		
AR6	VSS_44	VSS_224	Y21		
AP43	VSS_45	VSS_225	Y19		
AP24	VSS_46	VSS_226	Y10		
AP18	VSS_47	VSS_227	Y7		
AP1	VSS_48	VSS_228	Y5		
AN38	VSS_49	VSS_229	Y1		
AN31	VSS_50	VSS_230	W24		
AN29	VSS_51	VSS_231	W22		
AN24	VSS_52	VSS_232	W20		
AN23	VSS_53	VSS_233	W3		
AN20	VSS_54	VSS_234	V43		
AN13	VSS_55	VSS_235	V39		
AN12	VSS_56	VSS_236	V37		
AN11	VSS_57	VSS_237	V34		
AN4	VSS_58	VSS_238	V32		
AM42	VSS_59	VSS_239	V11		
AM40	VSS_60	VSS_240	V8		
AM36	VSS_61	VSS_241	V5		
AM33	VSS_62	VSS_242	V2		
AM29	VSS_63	VSS_243	U38		
AM24	VSS_64	VSS_244	U35		
AM23	VSS_65	VSS_245	U8		
AM20	VSS_66	VSS_246	U7		
AM11	VSS_67	VSS_247	U5		
AM9	VSS_68	VSS_248	T42		
AM7	VSS_69	VSS_249	T1		
AM4	VSS_70	VSS_250	R36		
AL36	VSS_71	VSS_251	R33		
AL33	VSS_72	VSS_252	R31		
AL31	VSS_73	VSS_253	R11		
AK43	VSS_74	VSS_254	R8		
AJ39	VSS_75	VSS_255	R5		
AJ36	VSS_76	VSS_256	R3		
AJ33	VSS_77	VSS_257	P43		
AJ32	VSS_78	VSS_258	P30		
AH42	VSS_79	VSS_259	P21		
AG37	VSS_80	VSS_260	P18		
AG34	VSS_81	VSS_261	P17		
AF43	VSS_82	VSS_262	P2		
AF37	VSS_83	VSS_263	N36		
AF36	VSS_84	VSS_264	N33		
AF10	VSS_85	VSS_265	N31		
AF9	VSS_86	VSS_266	N27		
AF8	VSS_87	VSS_267	N21		
AF7	VSS_88	VSS_268	N13		
AF6	VSS_89	VSS_269	N10		
AF5	VSS_90	VSS_270	N7		

LE82BLP-A2/BGA1226

MCHH

REV:1.3

BL

(8/10)

GND

N5	VSS_91	VSS_271	B10
M37	VSS_92	VSS_272	A39
M35	VSS_93	VSS_273	A34
M33	VSS_94	VSS_274	A26
M27	VSS_95	VSS_275	A18
M21	VSS_96	VSS_276	A12
M20	VSS_97	VSS_277	A7
M17	VSS_98	VSS_278	BC41
M15	VSS_99	VSS_279	BC3
M10	VSS_100	VSS_280	BA1
M7	VSS_101	VSS_281	AY40
M1	VSS_102	VSS_282	AF23
L40	VSS_103	VSS_283	AF21
L33	VSS_104	VSS_284	AF19
L32	VSS_105	VSS_285	AE18
L31	VSS_106	VSS_286	AC18
L29	VSS_107	VSS_287	AA18
L21	VSS_108	VSS_288	V29
L20	VSS_109	VSS_289	U29
L11	VSS_110	VSS_290	U27
L7	VSS_111	VSS_291	R21
L5	VSS_112	VSS_292	E1
L3	VSS_113	VSS_293	C43
K43	VSS_114	VSS_294	C1
K26	VSS_115	VSS_295	A41
K21	VSS_116	VSS_296	A5
K18	VSS_117	VSS_297	A3
K13	VSS_118		
K12	VSS_119	VSS_298	V30
K2	VSS_120		
J38	VSS_121		
J35	VSS_122		
J32	VSS_123		
J27	VSS_124		
J21	VSS_125		
J9	VSS_126		
J7	VSS_127		
J5	VSS_128		
H31	VSS_129		
H29	VSS_130		
H21	VSS_131		
H20	VSS_132		
H17	VSS_133		
H15	VSS_134		
H13	VSS_135		
G42	VSS_136		
G38	VSS_137		
G32	VSS_138		
G21	VSS_139		
G13	VSS_140		
G12	VSS_141		
G11	VSS_142		
G9	VSS_143		
G7	VSS_144		
G1	VSS_145		
F37	VSS_146		
F35	VSS_147		
F27	VSS_148		
F21	VSS_149		
F18	VSS_150		
F15	VSS_151		
F3	VSS_152		
E43	VSS_153		
E32	VSS_154		
E24	VSS_155		
E21	VSS_156		
E11	VSS_157		
E9	VSS_158		
E3	VSS_159		
D40	VSS_160		
D31	VSS_161		
D21	VSS_162		
D17	VSS_163		
D15	VSS_164		
D3	VSS_165		
C26	VSS_166		
C11	VSS_167		
C6	VSS_168		
C5	VSS_169		
C4	VSS_170		
B37	VSS_171		
B32	VSS_172		
B31	VSS_173		
B26	VSS_174		
B23	VSS_175		
B22	VSS_176		
B19	VSS_177		
B14	VSS_178		
D16	VSS_179		
M11	VSS_180?????		

LE82BLP-A2/BGA1226

Gigabyte Technology		
Title: GMCH-GND		
Size: Custom	Document Number: P35-S3	Rev: 2.01
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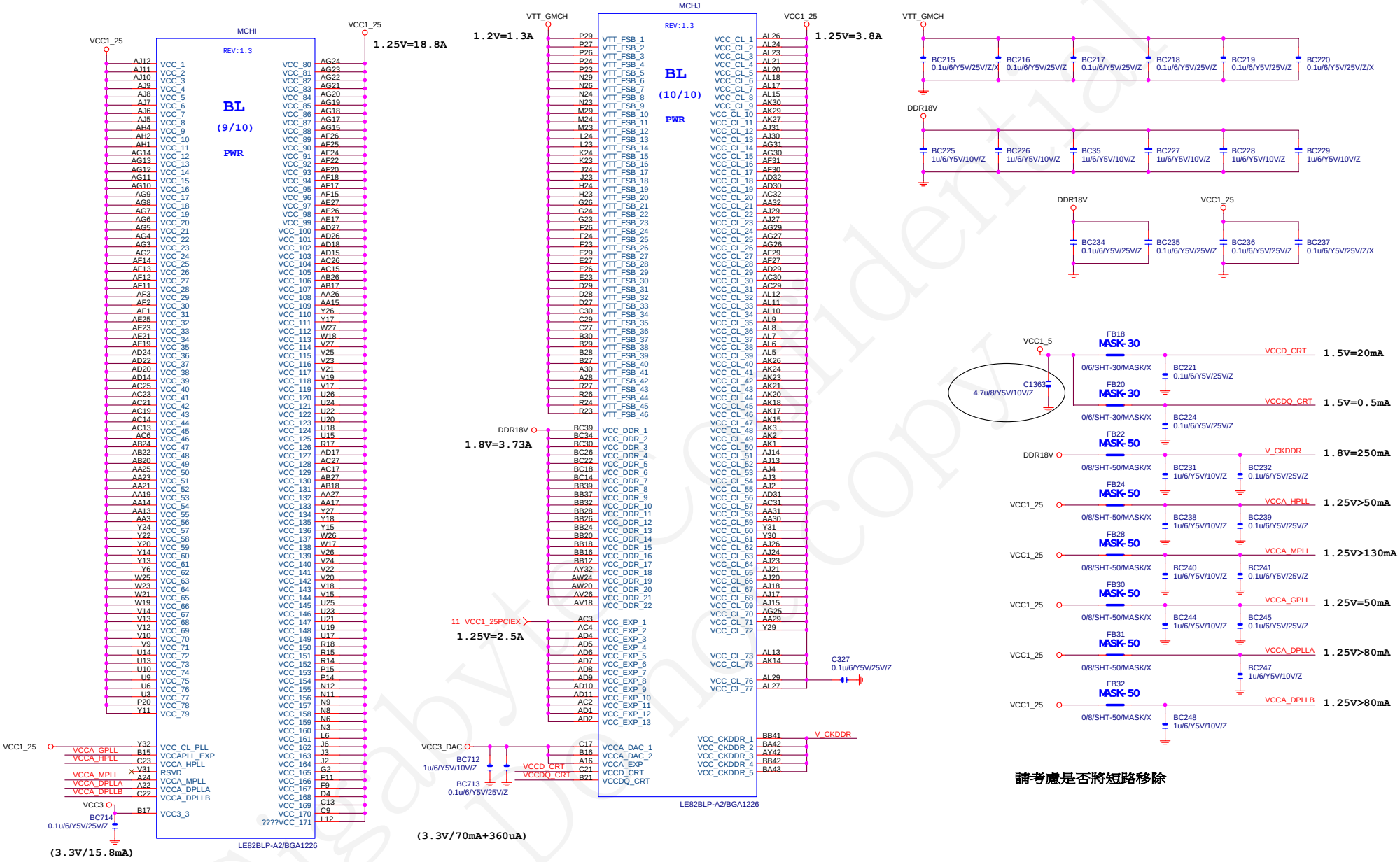
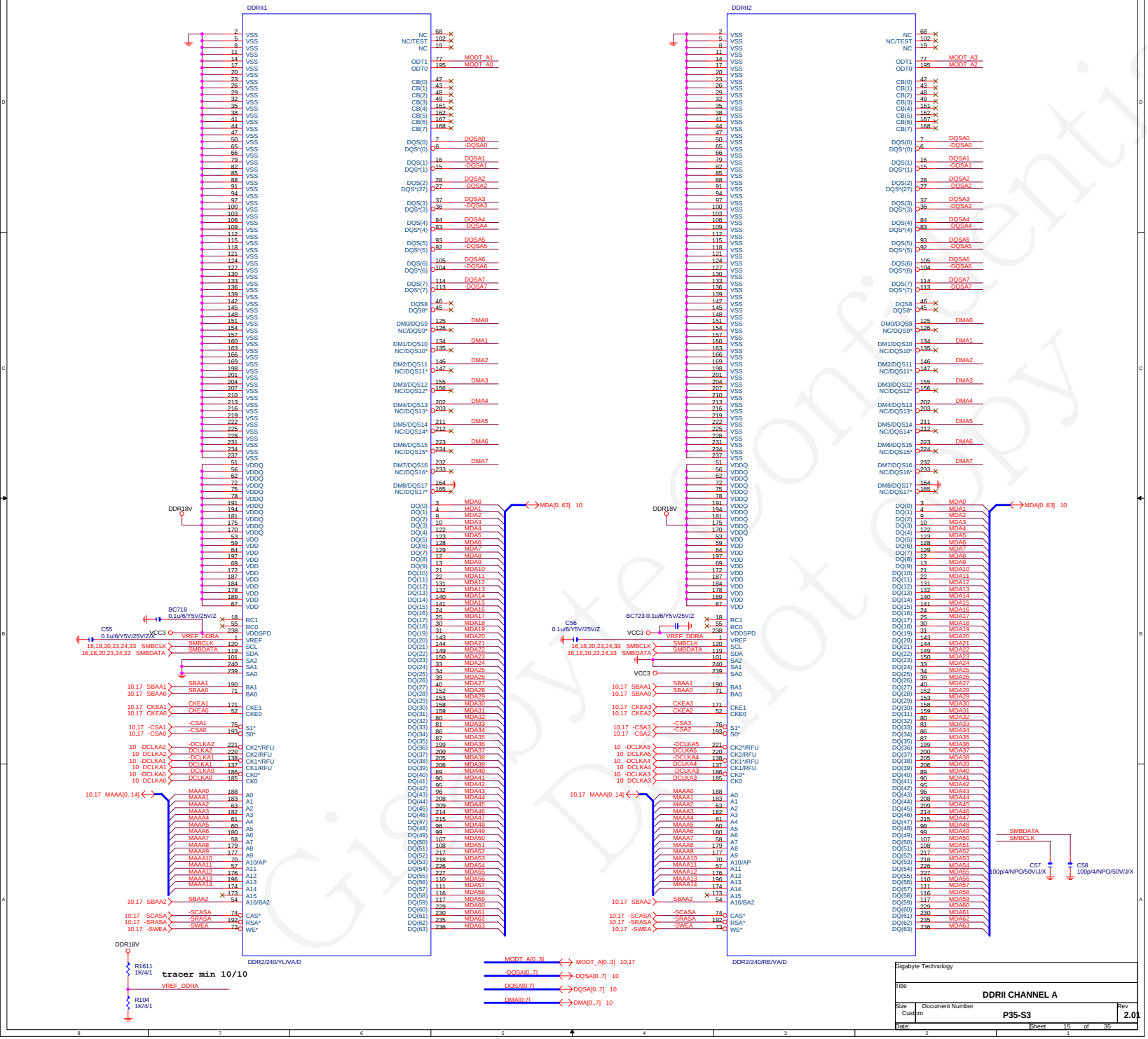
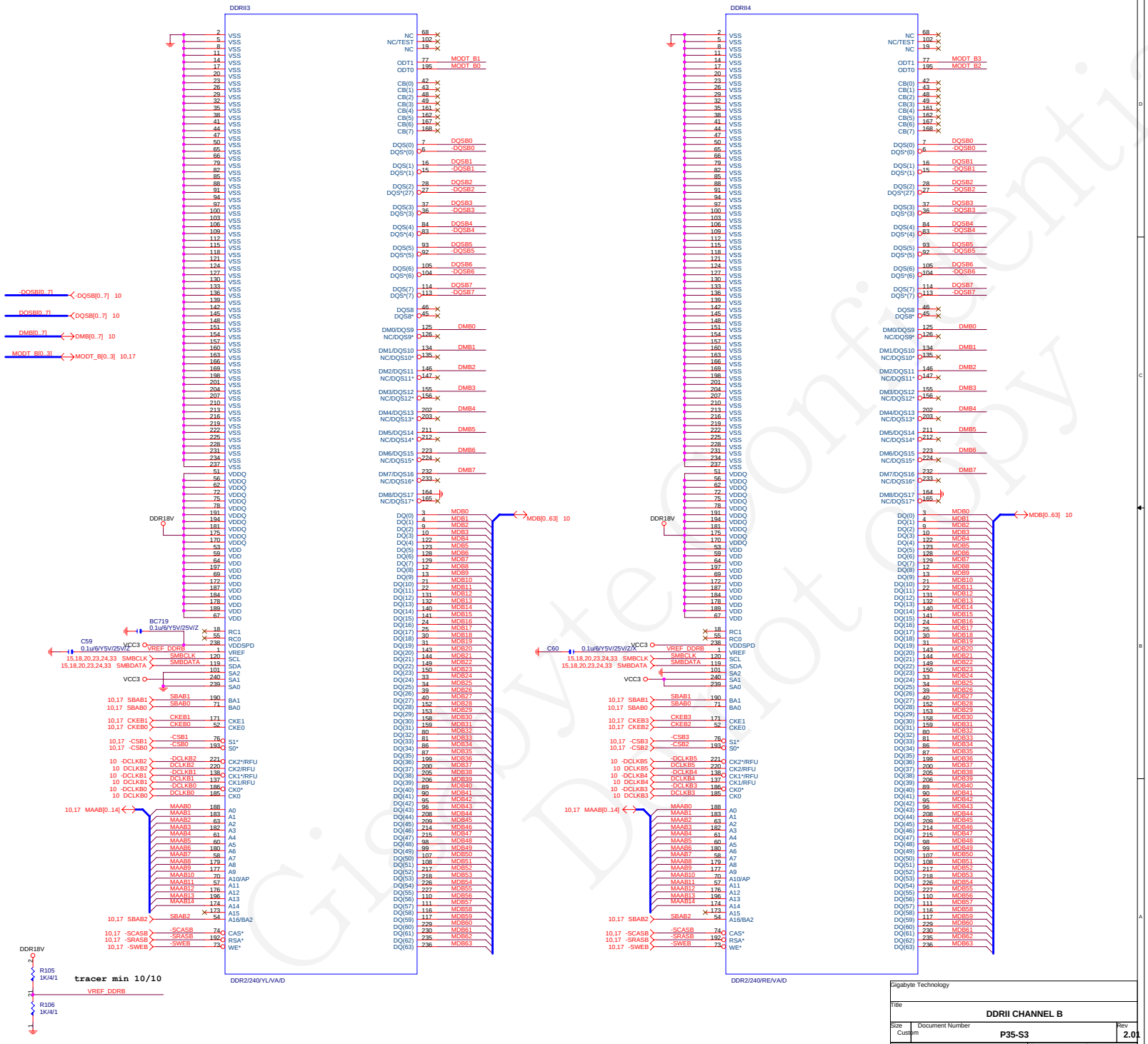


Gigabyte Technology			
Title	GMCH-PWR		
Size: Custom	Document Number: P35-S3		Rev: 2.01
Date: Friday, July 13, 2007	Sheet 14 of 35		



Gigabyte Technology		
Title: DDRII CHANNEL A		
Size: Custom	Document Number: P35-S3	Rev: 2.01
Date:	Sheet 15 of 35	



Gigabyte Technology	
Title	DDRII CHANNEL B
Size: Custom	Document Number: P35-S3
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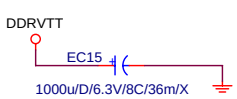
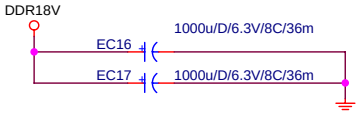
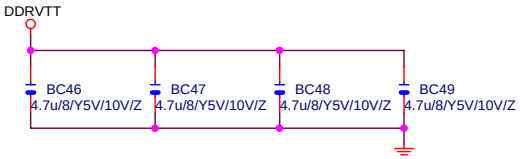
DDR TERMINATION CHANNEL A

DDRVTT Decouple

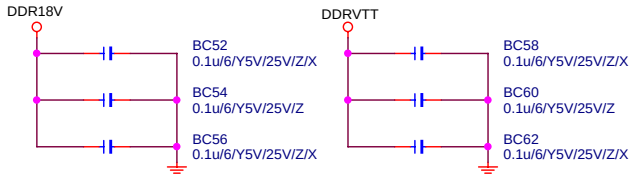


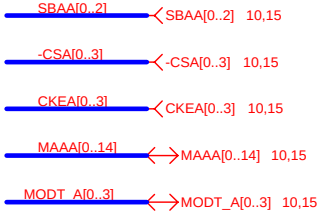


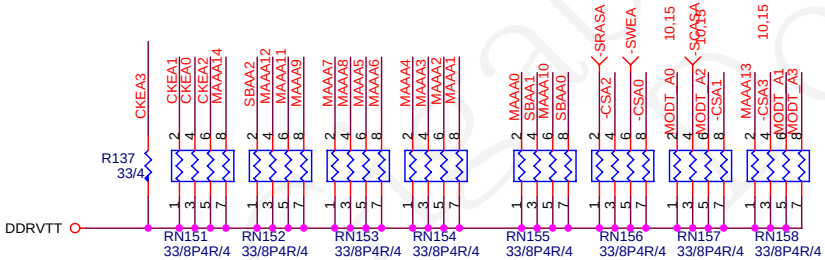


DDR18V Decouple

DDRVTT Decouple



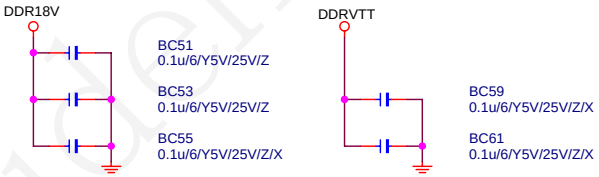


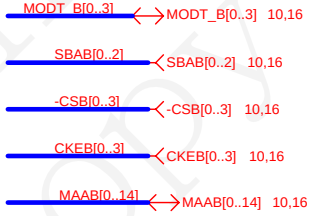


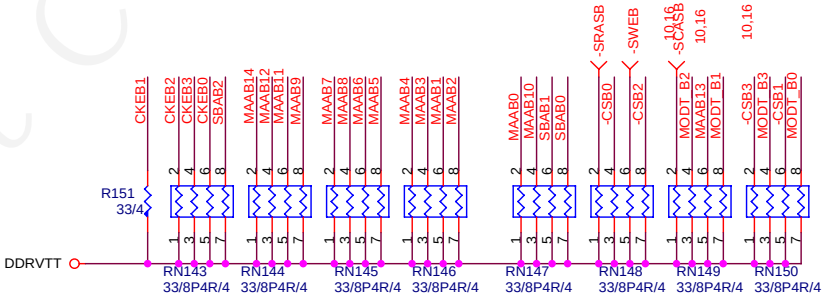
DDR TERMINATION CHANNEL B

DDR18V Decouple

DDRVTT Decouple







Gigabyte Technology		
Title: DDRII TERMINATOR		
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+12V
EC68 470u/FP/D/16V/AC/X
CO-LAYOUT
EC173 470u/D/16V/8C/36m

+12V
BC65 0.1u/6/Y5V/25V/Z/X
VCC3
EC63 1000u/D/6.3V/8C/36m

VCC3
BC66 0.1u/6/Y5V/25V/Z/X
BC67 0.1u/6/Y5V/25V/Z/X
BC68 0.1u/6/Y5V/25V/Z/X
BC69 0.1u/6/Y5V/25V/Z/X

-PCIE_RST
C91 33p/4/NPO/50V/J

PCIESLOT-164DN-2

PCIE_16 3GIO_*16

+12V
VCC3
3VDUAL

	B1	12V	PRSNT1*	A1	
	B2	12V	12V	A2	
	B3	RSVD	12V	A3	
	B4	GND	GND	A4	
15,16,20,23,24,33 SMBCLK	B5	SMBCLK	JTAG2	A5	
15,16,20,23,24,33 SMBDATA	B6	SMBDATA	JTAG3	A6	
	B7	SMDAT	JTAG4	A7	
	B8	GND	JTAG5	A8	
	B9	3.3V	3.3V	A9	
	B10	JTAG1	3.3V	A10	
20,24,34 -PCIE_WAKE	B11	3.3VAUX	PWRGD	A11	-PCIE_RST -PCIE_RST 24,25
		WAKE*	KEY		
	B12	RSVD	GND	A12	
EXP_A_TXP0C	B13	GND	REFCLK+	A13	SRCCLK_3GIO 23
EXP_A_TXN0C	B14	HSOP0	REFCLK-	A14	-SRCCLK_3GIO 23
	B15	HSON0	GND	A15	
	B16	GND	HSIP0	A16	EXP_A_RXP0
11 SDVO_CLCLK	B17	PRSNT2*	HSIN0	A17	EXP_A_RXN0
	B18	GND	GND	A18	
EXP_A_TXP1C	B19	HSOP1	RSVD	A19	
EXP_A_TXN1C	B20	HSON1	GND	A20	
	B21	GND	HSIP1	A21	EXP_A_RXP1
	B22	GND	HSIN1	A22	EXP_A_RXN1
EXP_A_TXP2C	B23	HSOP2	GND	A23	
EXP_A_TXN2C	B24	HSON2	GND	A24	
	B25	GND	HSIP2	A25	EXP_A_RXP2
	B26	GND	HSIN2	A26	EXP_A_RXN2
EXP_A_TXP3C	B27	HSOP3	GND	A27	
EXP_A_TXN3C	B28	HSON3	GND	A28	
	B29	GND	HSIP3	A29	EXP_A_RXP3
	B30	RSVD	HSIN3	A30	EXP_A_RXN3
11 SDVO_CLDATA	B31	PRSNT2*	GND	A31	
	B32	GND	RSVD	A32	
EXP_A_TXP4C	B33	HSOP4	RSVD	A33	
EXP_A_TXN4C	B34	HSON4	GND	A34	
	B35	GND	HSIP4	A35	EXP_A_RXP4
	B36	GND	HSIN4	A36	EXP_A_RXN4
EXP_A_TXP5C	B37	HSOP5	GND	A37	
EXP_A_TXN5C	B38	HSON5	GND	A38	
	B39	GND	HSIP5	A39	EXP_A_RXP5
	B40	GND	HSIN5	A40	EXP_A_RXN5
EXP_A_TXP6C	B41	HSOP6	GND	A41	
EXP_A_TXN6C	B42	HSON6	GND	A42	
	B43	GND	HSIP6	A43	EXP_A_RXP6
	B44	GND	HSIN6	A44	EXP_A_RXN6
EXP_A_TXP7C	B45	HSOP7	GND	A45	
EXP_A_TXN7C	B46	HSON7	GND	A46	
	B47	GND	HSIP7	A47	EXP_A_RXP7
12 EXP_EN_HDR	B48	PRSNT2*	HSIN7	A48	EXP_A_RXN7
EXP_EN_HDR	B49	GND	GND	A49	
EXP_A_TXP8C	B50	HSOP8	RSVD	A50	
EXP_A_TXN8C	B51	HSON8	GND	A51	
	B52	GND	HSIP8	A52	EXP_A_RXP8
	B53	GND	HSIN8	A53	EXP_A_RXN8
EXP_A_TXP9C	B54	HSOP9	GND	A54	
EXP_A_TXN9C	B55	HSON9	GND	A55	
	B56	GND	HSIP9	A56	EXP_A_RXP9
	B57	GND	HSIN9	A57	EXP_A_RXN9
EXP_A_TXP10C	B58	HSOP10	GND	A58	
EXP_A_TXN10C	B59	HSON10	GND	A59	
	B60	GND	HSIP10	A60	EXP_A_RXP10
	B61	GND	HSIN10	A61	EXP_A_RXN10
EXP_A_TXP11C	B62	HSOP11	GND	A62	
EXP_A_TXN11C	B63	HSON11	GND	A63	
	B64	GND	HSIP11	A64	EXP_A_RXP11
	B65	GND	HSIN11	A65	EXP_A_RXN11
EXP_A_TXP12C	B66	HSOP12	GND	A66	
EXP_A_TXN12C	B67	HSON12	GND	A67	
	B68	GND	HSIP12	A68	EXP_A_RXP12
	B69	GND	HSIN12	A69	EXP_A_RXN12
EXP_A_TXP13C	B70	HSOP13	GND	A70	
EXP_A_TXN13C	B71	HSON13	GND	A71	
	B72	GND	HSIP13	A72	EXP_A_RXP13
	B73	GND	HSIN13	A73	EXP_A_RXN13
EXP_A_TXP14C	B74	HSOP14	GND	A74	
EXP_A_TXN14C	B75	HSON14	GND	A75	
	B76	GND	HSIP14	A76	EXP_A_RXP14
	B77	GND	HSIN14	A77	EXP_A_RXN14
EXP_A_TXP15C	B78	HSOP15	GND	A78	
EXP_A_TXN15C	B79	HSON15	GND	A79	
	B80	GND	HSIP15	A80	EXP_A_RXP15
	B81	PRSNT2*	HSIN15	A81	EXP_A_RXN15
	B82	RSVD	GND	A82	

PCI-E/16X-164P/BU-297C/RIGHT PUSH

C1402 33p/4/NPO/50V/J/X
C1403 33p/4/NPO/50V/J/X

EXP_A_RXP[0..15] EXP_A_RXP[0..15] 11
EXP_A_RXN[0..15] EXP_A_RXN[0..15] 11

EXP_A_TXP[0..15] EXP_A_TXP[0..15] 11
EXP_A_TXN[0..15] EXP_A_TXN[0..15] 11

EXP_A_TXP0	C92	0.1u/4/Y5V/16V/Z	EXP_A_TXP0C
EXP_A_TXN0	C93	0.1u/4/Y5V/16V/Z	EXP_A_TXN0C
EXP_A_TXP1	C94	0.1u/4/Y5V/16V/Z	EXP_A_TXP1C
EXP_A_TXN1	C95	0.1u/4/Y5V/16V/Z	EXP_A_TXN1C
EXP_A_TXP2	C96	0.1u/4/Y5V/16V/Z	EXP_A_TXP2C
EXP_A_TXN2	C97	0.1u/4/Y5V/16V/Z	EXP_A_TXN2C
EXP_A_TXP3	C98	0.1u/4/Y5V/16V/Z	EXP_A_TXP3C
EXP_A_TXN3	C99	0.1u/4/Y5V/16V/Z	EXP_A_TXN3C
EXP_A_TXP4	C100	0.1u/4/Y5V/16V/Z	EXP_A_TXP4C
EXP_A_TXN4	C101	0.1u/4/Y5V/16V/Z	EXP_A_TXN4C
EXP_A_TXP5	C102	0.1u/4/Y5V/16V/Z	EXP_A_TXP5C
EXP_A_TXN5	C103	0.1u/4/Y5V/16V/Z	EXP_A_TXN5C
EXP_A_TXP6	C104	0.1u/4/Y5V/16V/Z	EXP_A_TXP6C
EXP_A_TXN6	C105	0.1u/4/Y5V/16V/Z	EXP_A_TXN6C
EXP_A_TXP7	C106	0.1u/4/Y5V/16V/Z	EXP_A_TXP7C
EXP_A_TXN7	C107	0.1u/4/Y5V/16V/Z	EXP_A_TXN7C
EXP_A_TXP8	C108	0.1u/4/Y5V/16V/Z	EXP_A_TXP8C
EXP_A_TXN8	C109	0.1u/4/Y5V/16V/Z	EXP_A_TXN8C
EXP_A_TXP9	C110	0.1u/4/Y5V/16V/Z	EXP_A_TXP9C
EXP_A_TXN9	C111	0.1u/4/Y5V/16V/Z	EXP_A_TXN9C
EXP_A_TXP10	C112	0.1u/4/Y5V/16V/Z	EXP_A_TXP10C
EXP_A_TXN10	C113	0.1u/4/Y5V/16V/Z	EXP_A_TXN10C
EXP_A_TXP11	C114	0.1u/4/Y5V/16V/Z	EXP_A_TXP11C
EXP_A_TXN11	C115	0.1u/4/Y5V/16V/Z	EXP_A_TXN11C
EXP_A_TXP12	C116	0.1u/4/Y5V/16V/Z	EXP_A_TXP12C
EXP_A_TXN12	C117	0.1u/4/Y5V/16V/Z	EXP_A_TXN12C
EXP_A_TXP13	C118	0.1u/4/Y5V/16V/Z	EXP_A_TXP13C
EXP_A_TXN13	C119	0.1u/4/Y5V/16V/Z	EXP_A_TXN13C
EXP_A_TXP14	C120	0.1u/4/Y5V/16V/Z	EXP_A_TXP14C
EXP_A_TXN14	C121	0.1u/4/Y5V/16V/Z	EXP_A_TXN14C
EXP_A_TXP15	C122	0.1u/4/Y5V/16V/Z	EXP_A_TXP15C
EXP_A_TXN15	C123	0.1u/4/Y5V/16V/Z	EXP_A_TXN15C

PCIEX16:15/4/8/4/15

PCI-E REV:1.1--> 2.5GHZ

PCE-E X1(單向) BANDWITH=2.5GHz*(8b/10b)=2Gb/s=250MB/s

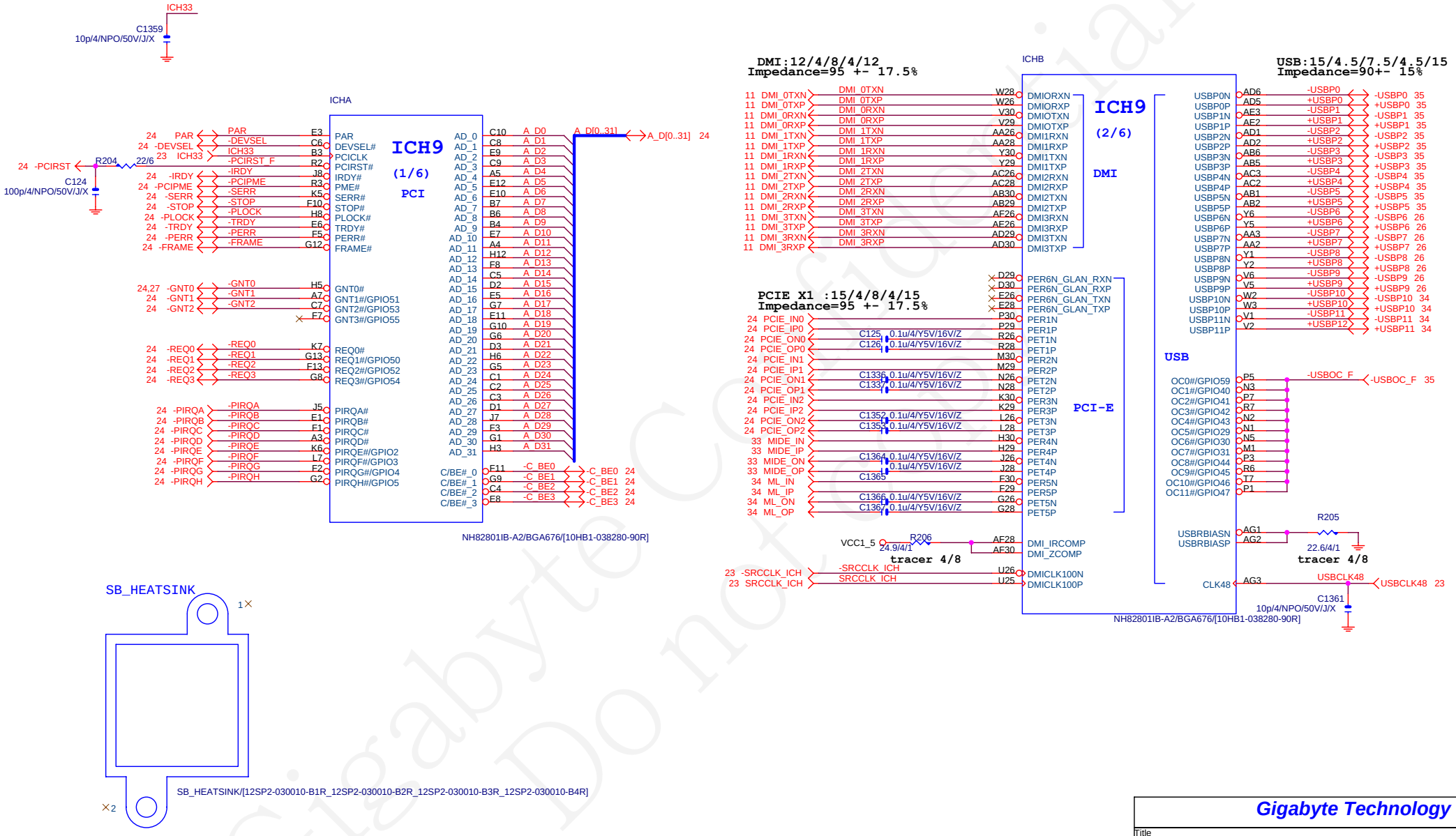
PCE-E X1(雙向) BANDWITH=2.5GHz*(8b/10b)X2=4Gb/s=500MB/s

PCE-E X16(單向) BANDWITH=2.5GHz*(8b/10b)X16=32Gb/s=4GB/s

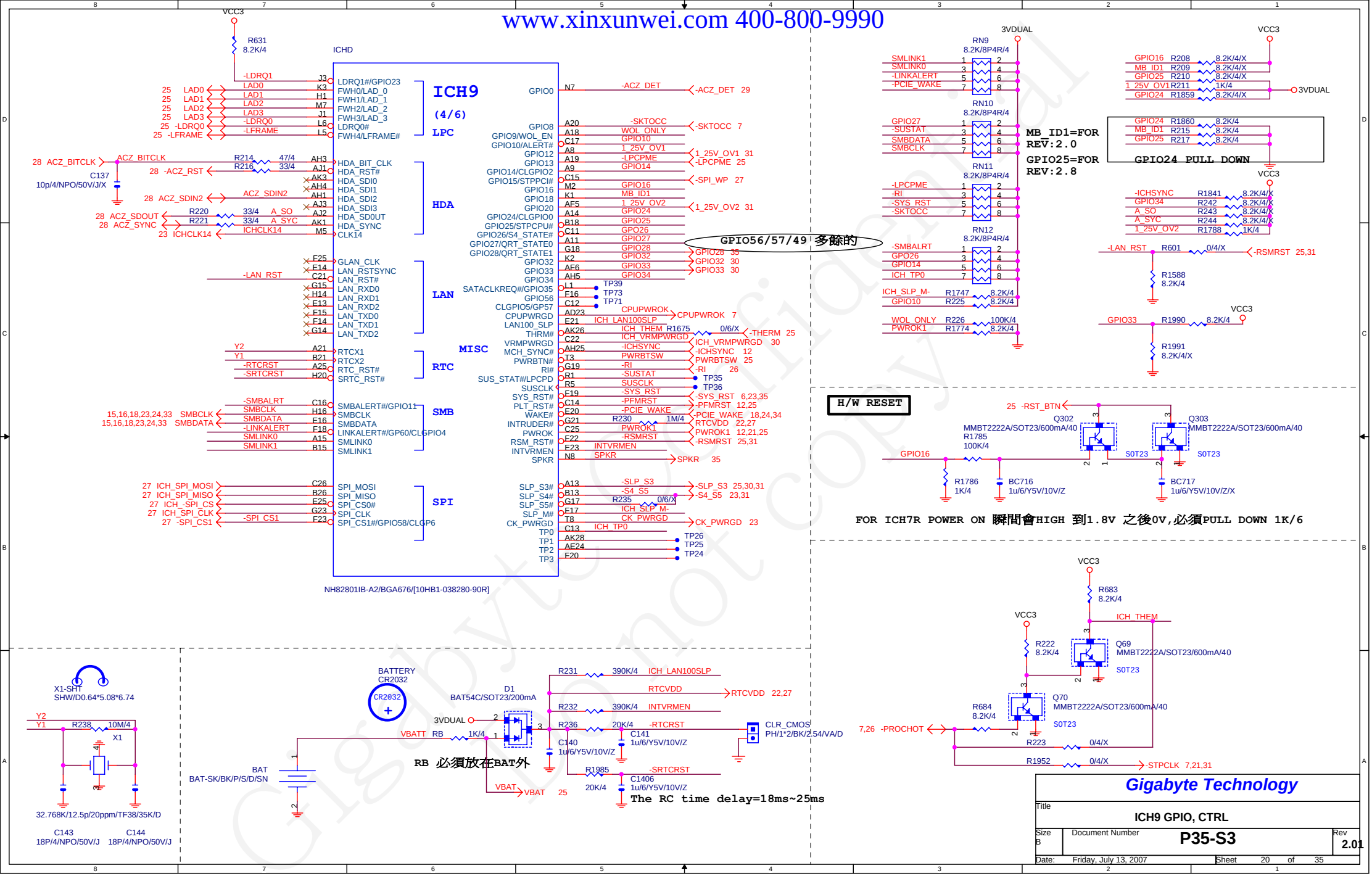
PCE-E X16(雙向) BANDWITH=2.5GHz*(8b/10b)X16X2=64Gb/s=8GB/s

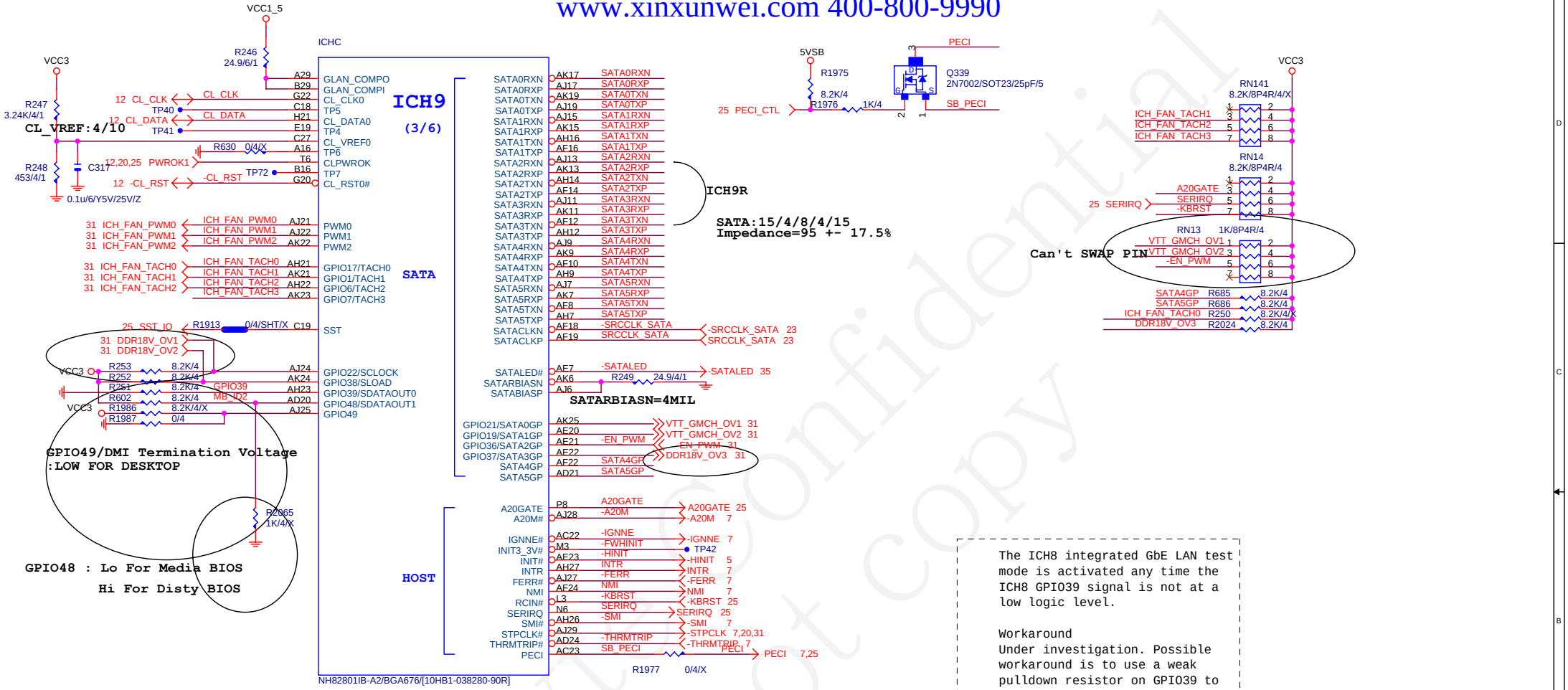
PCI-E REV:2.0--> 5GHZ

Gigabyte Technology		
Title: PCI EXPRESS * 16		
Size: Custom	Document Number: P35-S3	Rev: 2.01
Date: Friday, July 13, 2007	Sheet 18 of 35	



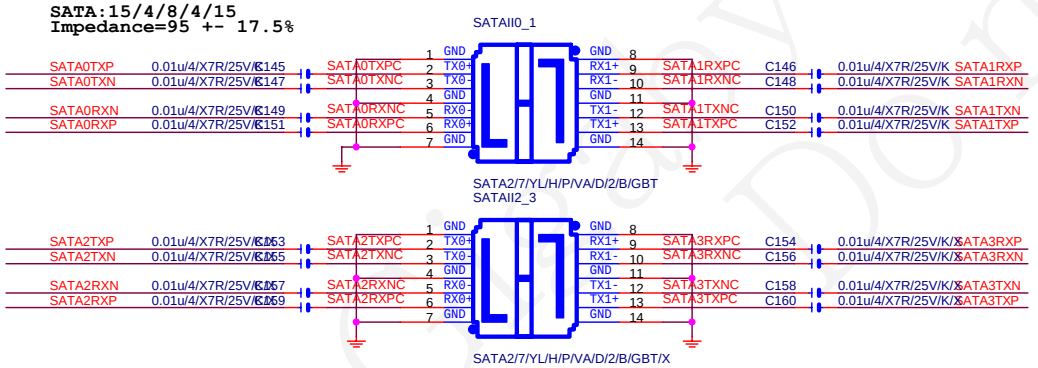
Gigabyte Technology		
Title: ICH9-PCI, DMI, LAN, USB		
Size: B	Document Number: P35-S3	Rev: 2.01
Date: Friday, July 13, 2007	Sheet 19 of 35	

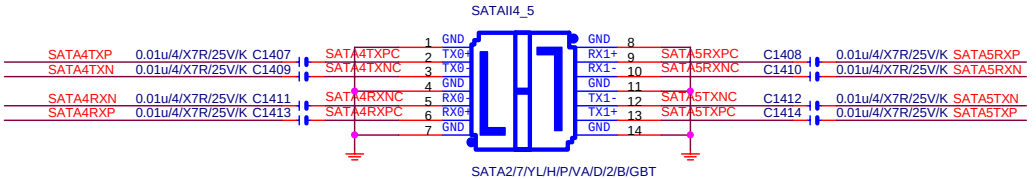




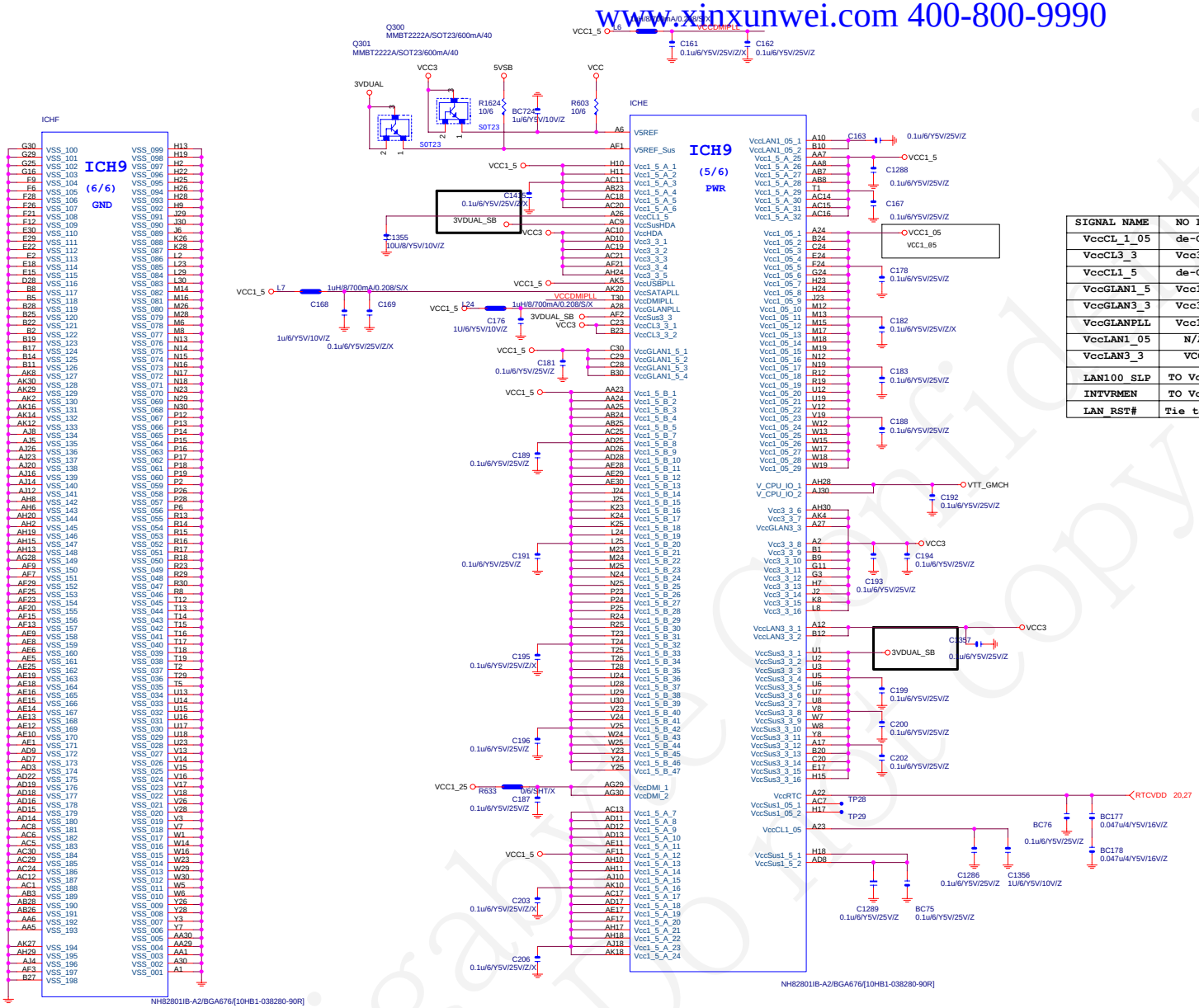
The ICH8 integrated GbE LAN test mode is activated any time the ICH8 GPIO39 signal is not at a low logic level.

Workaround
Under investigation. Possible workaround is to use a weak pulldown resistor on GPIO39 to ensure signal is always low





Gigabyte Technology			
Title: ICH9- SATA, FAN CTRL			
Size: B	Document Number: P35-S3		Rev: 2.01
Date: Friday, July 13, 2007	Sheet 21 of 35		



SIGNAL NAME	NO LAN
VccCL_1_05	de-CAP
VccCL3_3	Vcc3_3
VccCL1_5	de-CAP
VccGLAN1_5	Vcc1_5
VccGLAN3_3	Vcc3_3
VccGLANPLL	Vcc1_5
VccLAN1_05	N/A
VccLAN3_3	VCC3_3
LAN100_SLP	TO VccRTC
INTVRMEN	TO VccRTC
LAN_RST#	Tie to Vss

Gigabyte Technology			
Title: ICH9-PWR & GND			
Size: C	Document Number: P35-S3		Rev: 2.01
Date: Friday, July 13, 2007	Sheet 22 of 35		

CLK GEN CK505

50歐姆:[18/4/10/4/18]
50歐姆:[18/4/10/4/18]
50歐姆:[18/4/10/4/18]
50歐姆:[4/10]
50歐姆:[4/10]
50歐姆:[4/10]

U49

ICS9LPRS587EGLF-T/TSSOP64

GSEL=1,96Mhz from 14/15,SATACLK from 17/18
GSEL=0,SATACLK from 14/15,PCIECLK from 17/18

FOR 587
FOR 588 不上

Trusted Mode
overclocking

Gigabyte Technology	
Title	CK505 CLK GEN
Size: Custom	Document Number: P35-S3
Rev	2.01
Date: Friday, July 13, 2007	Sheet 23 of 35

PCI1,2 SLOT

-REQ0/-GNT0/AD16

-REQ1/-GNT1/AD17

-REQ2/-GNT2/AD18

PCIE*1

PCIE*2

PCIE*3

PCIE_1 3GIO_X1

PCIE_2 3GIO_X1

PCIE_3 3GIO_X1

PCI-E/1X-36P/BK/OL

KEY

Place close to PCI1

C1292 33p/4/NPO/50V/J/X

Gigabyte Technology	
Title	PCI SLOT 1, 2/PCIEX1
Size: Custom	Document Number: P35-S3
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Date: Friday, July 13, 2007	Sheet 24 of 35

IT8712F LPC I/O

U15 — IT8718 GX_GB/QFP128

JP7 : HIGH DUAL BIOS ENABLE
LOW DUAL BIOS DISABLE

如果BSEL0/1 直接拉TO N/B,R1768/R1769 不上

RTS2- ==LOW CPU FAN 50%
==HIGH 100%

SOUT2		
	1	VID pins threshold voltage select: Vih / Vil : 2.0 / 0.8V
	0	VID pins threshold voltage select: Vih / Vil : 0.8 / 0.4V

1.2V or 3.3V tolerance select.
1.2V OUTPUT 接 VTT_GMCH
3.3V OUTPUT 接3.3V
LPCPD#=VIDVCC

VTT_GMCH/VCC3/VIDVCC 請走20~30

FOR REV:BX/CX
FOR ITE8718

Gigabyte Technology	
Title	ITE 8712 LPC IO
Size	B
Document Number	P35-S3
Rev	2.01
Date:	Friday, July 13, 2007
Sheet	25 of 35

COMA

AU1 GD75232/TSSOP20

25 RI1-	19 RY1	RA1 2	NRIA-
25 CTS1-	18 RY2	RA2 3	NCTSA-
25 DSR1-	17 RY3	RA3 4	NDSRA-
25 RTS1-	16 DA1	DY1 5	NRTSA-
25 DTR1-	15 DA2	DY2 6	NDTRA-
25 RXD1	14 RY4	RA4 7	NSINA
25 TXD1	13 DA3	DY3 8	NSOUTA
25 DCD1-	12 RY5	RA5 9	NDCDA-
	11 GND	5V 20	
-12V	10 -12V	12V 1	VCC +12V

ABC1 0.1u/6/Y5V/25V/Z/X; ABC2 0.1u/6/Y5V/25V/Z/X; ABC3 0.1u/6/Y5V/25V/Z/X

COM RI

REV:0.1 驗證

Q31 MMBT2222A/SOT23/600mA/40

NRIA- D9 CD4148WP/1206/300mA R323 75K/4 R324 8.2K/4 S0T23

-RI -RI 20

COMA

NDCDA- NSOUTA NRTSA- NRIA- | NSINA NDTRA- NDSRA- NCTSA-

PH/2*5K10/WH/2.54/VA/D

ACN1 180p/8P4C/6/NPO/50V/K

NDTRA- NSINA NSOUTA NDCDA-

ACN2 180p/8P4C/6/NPO/50V/K

NRIA- NCTSA- NDSRA- NRTSA-

SRN1 0/8P4R/SHT/X

19 +USBP8	+USBP8 2	1 +R_USBP8
19 -USBP8	-USBP8 4	3 -R_USBP8
19 +USBP9	+USBP9 6	5 +R_USBP9
19 -USBP9	-USBP9 8	7 -R_USBP9

ESD_PAD28 TP/X; ESD_PAD30 TP/X; FUSEVCC; R_USB2; ESD_PAD29 TP/X; ESD_PAD31 TP/X

-R_USBP8 +R_USBP8 -R_USBP9 +R_USBP9

USB/A/O/BLACK/GF/2/RA/D

ESD_PAD5 TP/X; ESD_PAD6 TP/X; FUSEVCC1; R_USB3; ESD_PAD7 TP/X; ESD_PAD8 TP/X

-R_USBP6 +R_USBP6 -R_USBP7 +R_USBP7

USB/A/O/BLACK/GF/2/RA/D

SRN3 0/8P4R/SHT/X

19 +USBP7	+USBP7 2	1 +R_USBP7
19 -USBP7	-USBP7 4	3 -R_USBP7
19 +USBP6	+USBP6 6	5 +R_USBP6
19 -USBP6	-USBP6 8	7 -R_USBP6

LPT PORT

PRN1 33/8P4R/4

25 AFD-	AFD- 1	2 LPT14	
25 STB-	STB- 3	4 LPT1	
	PD0 5	6 LPT2	
25 INIT-	INIT- 7	8 LPT16	

PRN2 33/8P4R/4

25 SLIN-	PD2 1	2 LPT4	
	SLIN- 3	4 LPT17	
	PD1 5	6 LPT3	
	PD3 7	8 LPT5	

PRN5 33/8P4R/4

	PD5 1	2 LPT7	
	PD4 3	4 LPT6	
	PD7 5	6 LPT9	
	PD6 7	8 LPT8	

25 ERR-	ERR-		
25 ACK-	ACK-		
25 BUSY	BUSY		
25 PE	PE		
25 SLCT	SLCT		
25 PD[0..7]	PD[0..7]		

PD1 CD4148WP/1206/300mA; PBC1 0.1u/6/Y5V/25V/Z; PC1 1u/6/Y5V/10V/Z/X

PRN3 2.2K/8P4R/4; PRN4 2.2K/8P4R/4; PRN6 2.2K/8P4R/4; PRN7 2.2K/8P4R/4; PR1 2.2K/4

PCN1 180p/8P4C/6/NPO/50V/K; PCN2 180p/8P4C/6/NPO/50V/K; PCN3 180p/8P4C/6/NPO/50V/K; PCN4 180p/8P4C/6/NPO/50V/K

PC2 180p/4/NPO/50V/J

DYNAMIC CURRENT OC

7 VCC_SENSE; 7 VSS_SENSE

DR45 5.1K/4/1; DR46 5.1K/4/1; DR47 5.1K/4/1; DR48 5.1K/4/1

DU2A LM324DR/SO14; DU2B LM324DR/SO14; DU2C LM324DR/SO14

DR50 10K/4/1; DR51 453K/4/1; DR49 10K/4/1; DR52 453K/4/1

FB 30

CURRENT_OUT_V 27

-PROHOT

LPT

LPT1	1	2	LPT14
LPT2	3	4	ERR-
LPT3	5	6	LPT16
LPT4	7	8	LPT17
LPT5	9	10	
LPT6	11	12	
LPT7	13	14	
LPT8	15	16	
LPT9	17	18	
ACK-	19	20	
BUSY	21	22	
PE	23	24	
SLCT	25	26	

PH/2*13K24/BK/2.54/VA/D

asserted at 131 degree

deasserted at 116 degree

RS2 CLOSE CPU VR MOSFET

R326 10K/4/1; R327 2K/4/1; R325 21K/4/1; RS2 100K/1/6/S; R329 1K/4; C222 0.1u/4/Y5V/16V/Z/X

DU2D LM324DR/SO14

TSM_5; TSM_6; TSM_7

R2025 0/4/X

Q32 2N7002/SOT23/25pF/5; Q318 2N7002/SOT23/25pF/5

S0T23

VR_HOT 30; -PROCHOT; -PROCHOT 7,20; -FORCEPR; -FORCEPR 7

R? CLOSE Q32

CLOSE PWM HOT MOSFET

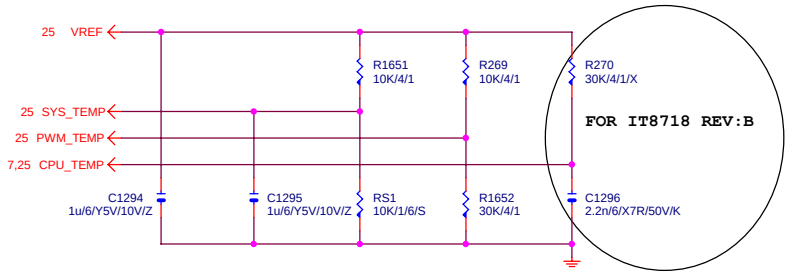
Gigabyte Technology

Title: COM & LPT PORT

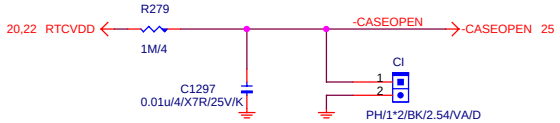
Size: Custom; Document Number: P35-S3; Rev: 2.01

Date: Friday, July 13, 2007; Sheet 26 of 35

TEMP H/W MONITOR

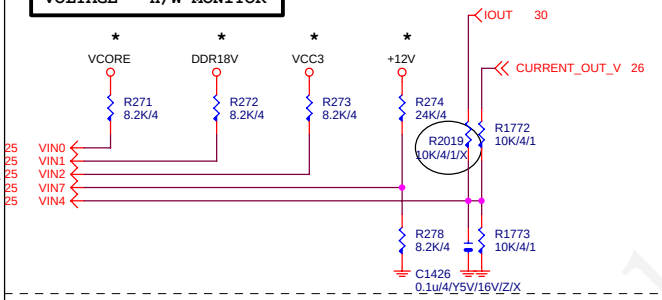


CASE OPEN

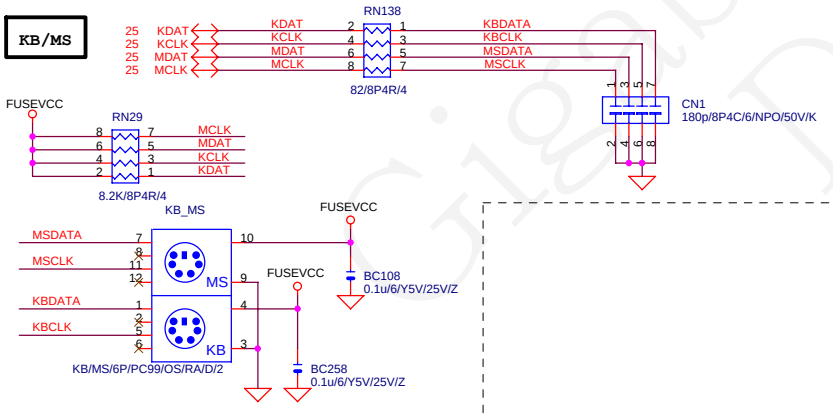


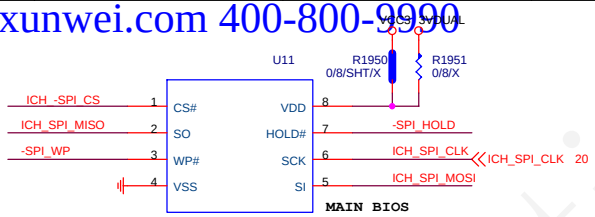
Case Open Circuits

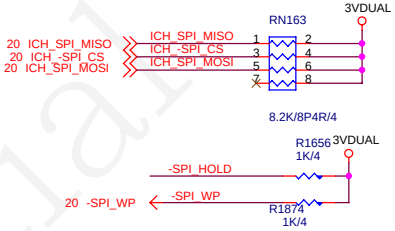
VOLTAGE-- H/W MONITOR



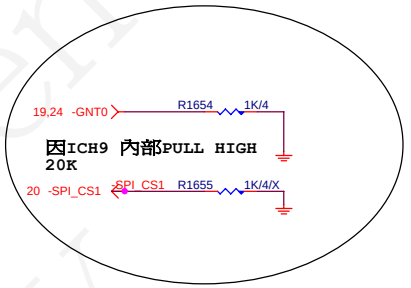
KB/MS

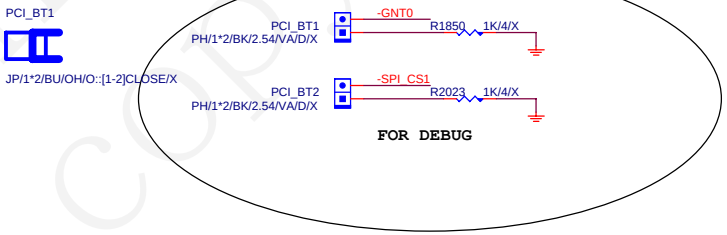


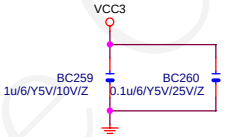


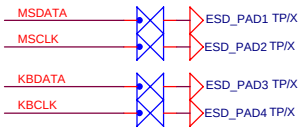


BOOT DEVICE	GNT0	CS1
SPI	0	1
PCI	1	0
FWH	1	1









Gigabyte Technology

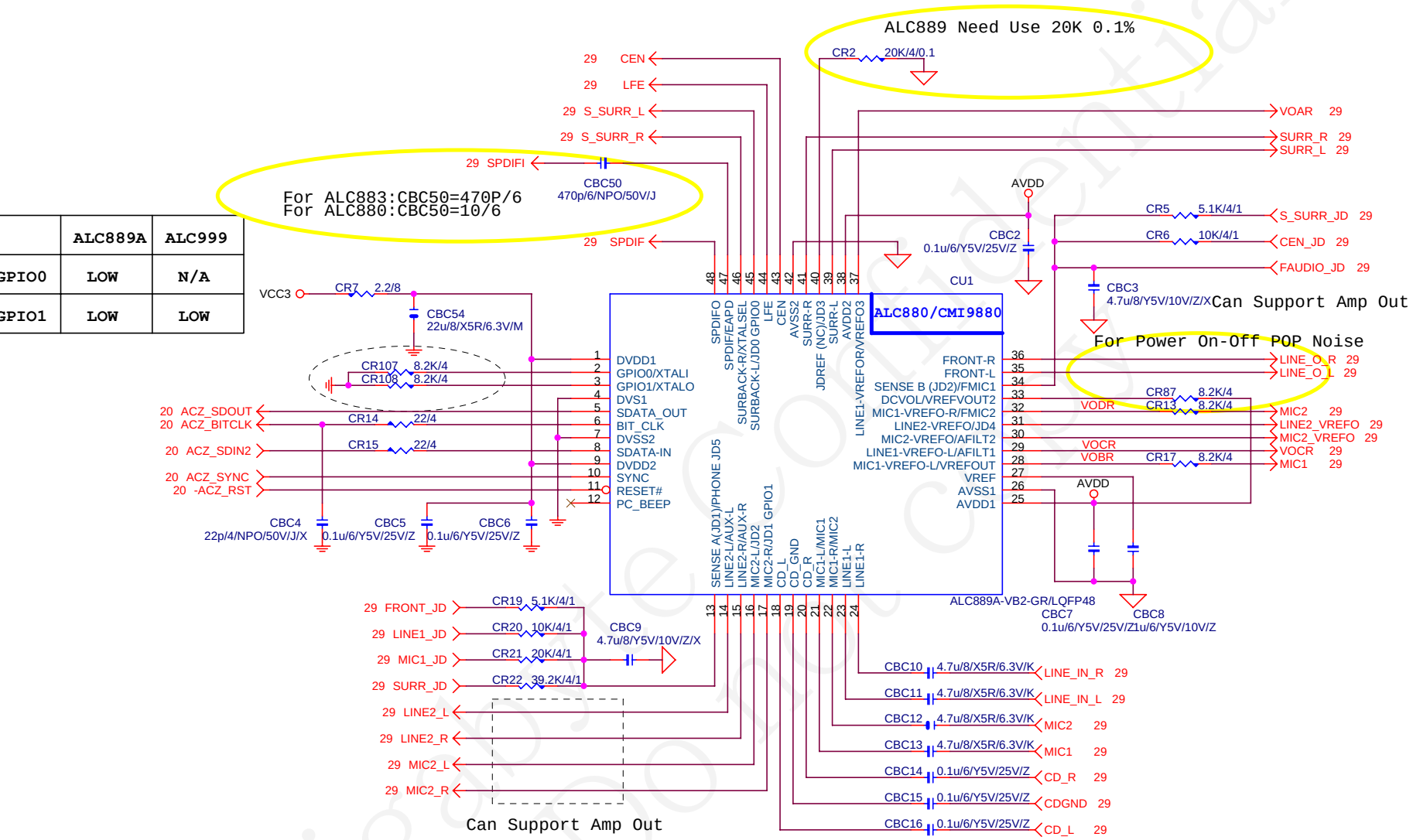
Title: BIOS/HW-MONITOR/CI/KB/MS

Size: Custom | Document Number: P35-S3 | Rev: 2.01

Date: Friday, July 13, 2007 | Sheet 27 of 35

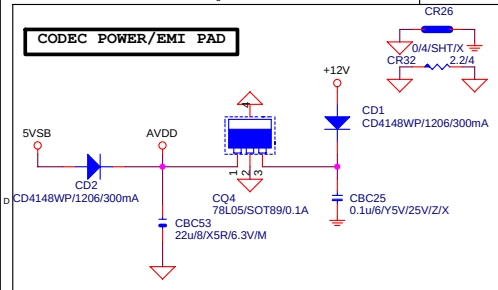
AZALIA CODEC

	ALC889A	ALC999
GPIO0	LOW	N/A
GPIO1	LOW	LOW



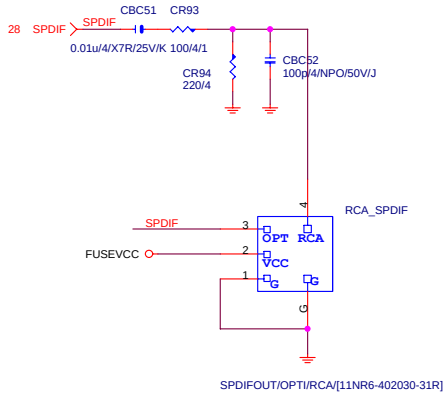
Gigabyte Technology		
Title: ALC889A		
Size: Custom	Document Number: P35-S3	Rev: 2.01
Date: Friday, July 13, 2007	Sheet 28 of 35	

CODEC POWER/EMI PAD

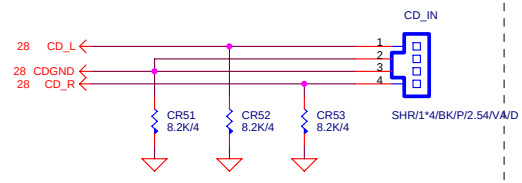


CO-LAYOUT

Fpr
EMI

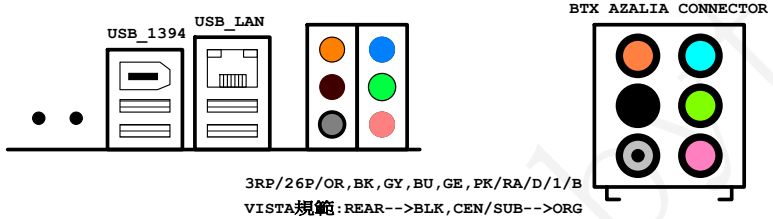


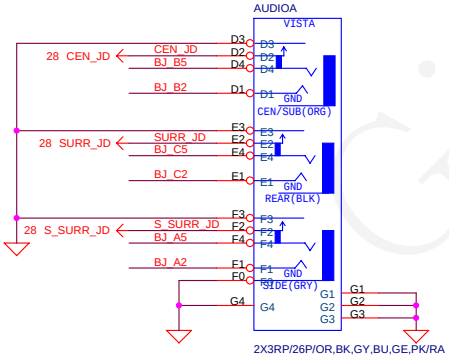
CD IN

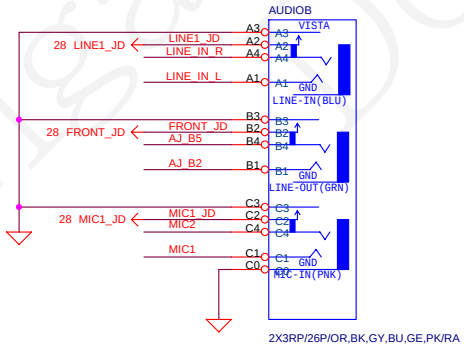


SPDIF

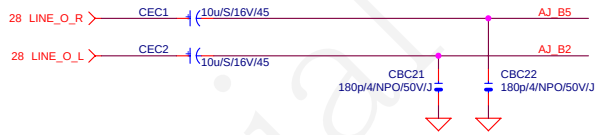
AZALIA JACK



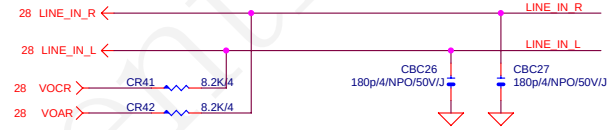




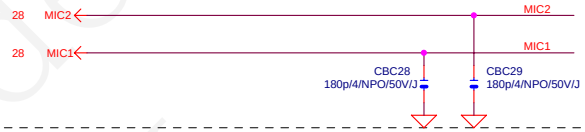
LINE-OUT



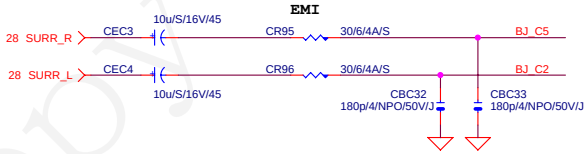
LINE-IN



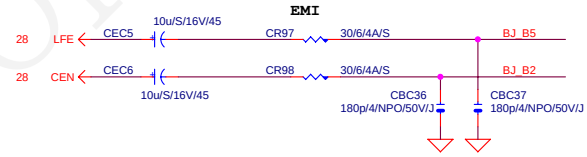
MIC-IN



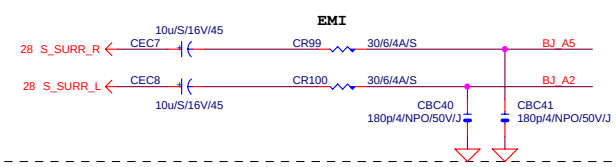
SURROUND



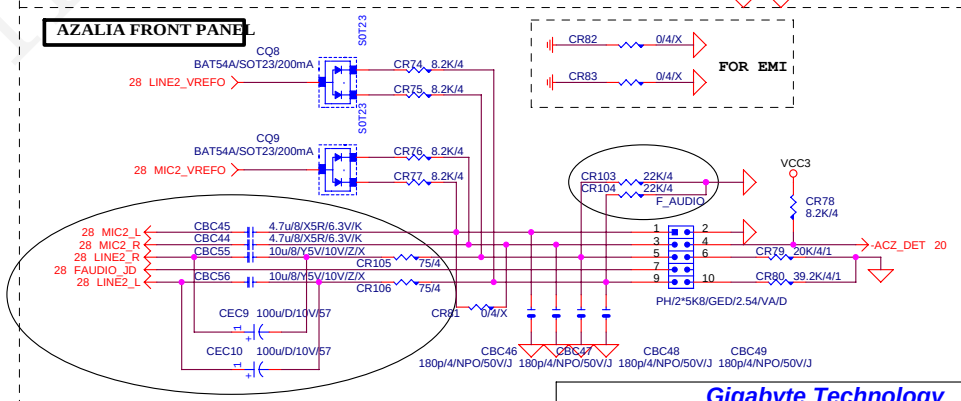
CEN/LFE



SURR BACK



AZALIA FRONT PANEL

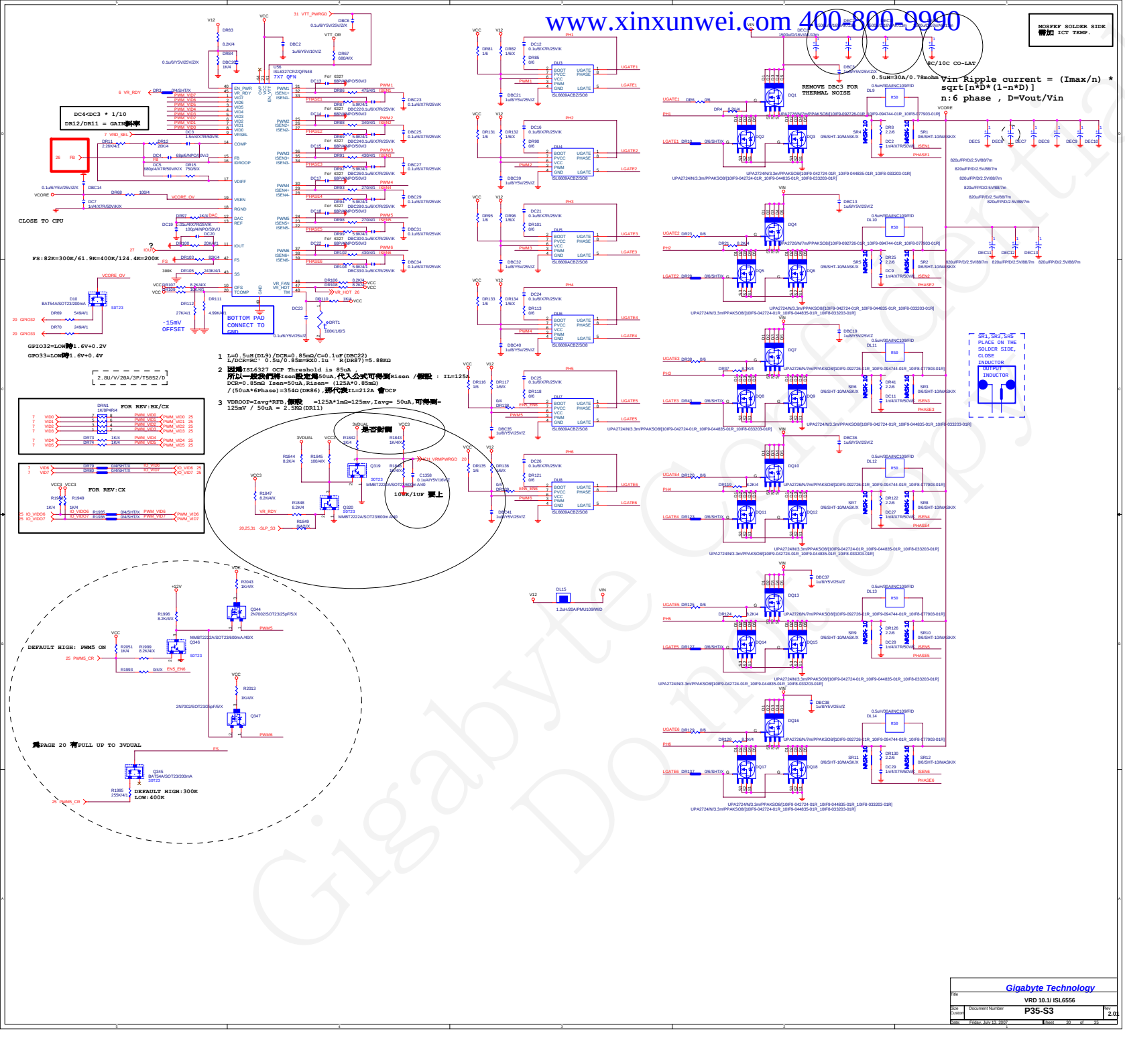


Gigabyte Technology

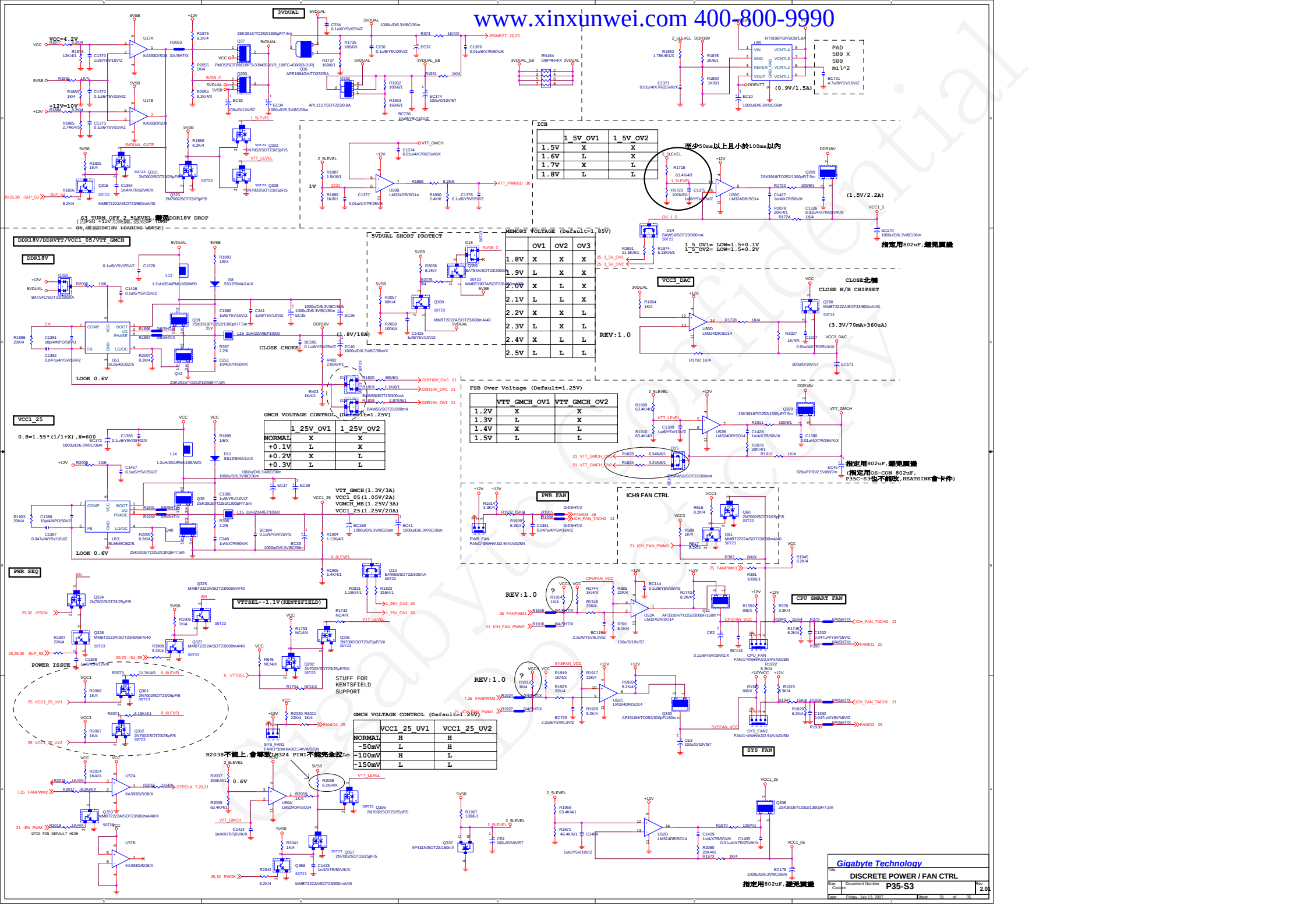
Title: AUDIO JACK

Size: Custom | Document Number: P35-S3 | Rev: 2.01

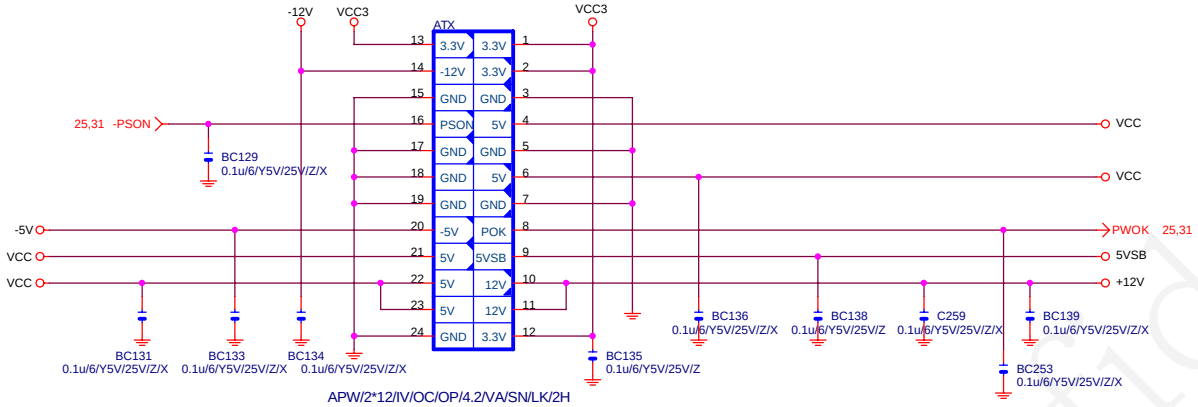
Date: Friday, July 13, 2007 | Sheet 29 of 35

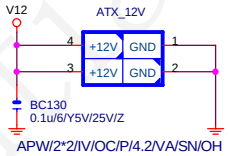


Gigabyte Technology			
Title: VRD 10.1/ ISL6556			
Size: Custom	Document Number: P35-S3		Rev: 2.01
Date: Friday, July 13, 2007	Sheet 30 of 35		

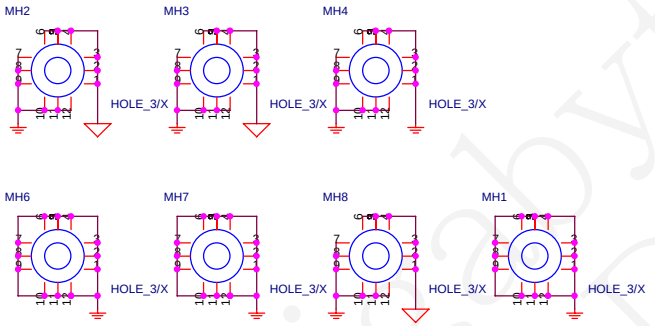


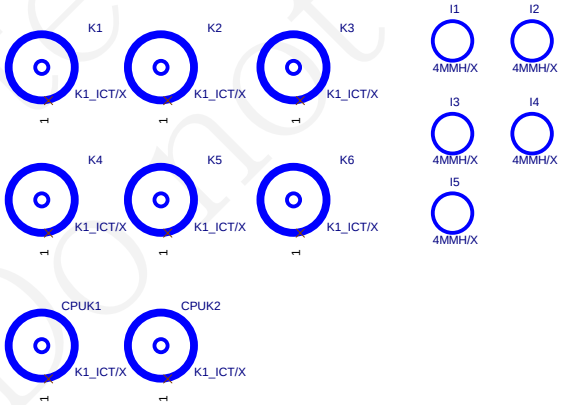
ATX POWER CONNECTOR





HOLE_3-2--->有鉛





Gigabyte Technology		
Title: ATX POWER CONNECTOR		
Size: B	Document Number: P35-S3	Rev: 2.01
Date: Friday, July 13, 2007	Sheet 32 of 35	

3.3V to 1.8V Voltage Regulator

APL1117/SOT223/0.8A

RQ1 · VCC_1.8V · VCC3 · RR21 100/4/1 · RR22 44.2/4/1 · RBC1 0.1u/4/Y5V/16V/Z · RBC2 10u/8/Y5V/10V/Z · REC1 100u/D/10V/57

68/4/1 FOR JMB368
VCC1.8V=2.1V

JMB368/LQFP40/X

RU2 · JMB368

JMicron JMB363 LQFP 100 14x14

RU1 · GBB363/3

RC3 100P/4/N/50V/X · 25,34 -PFMRST2

IDE Connector

IDE1 · BH/2*20K20/GEL/SHN/2.54/VA/D/G

(#20 key-pin)
(#28 CSEL)
(#32 IOCS16)

OLNY FOR JMB368

SATA Connector

usb:90歐姆:[15/4.5/7.5/4.5/15]

SATA:15/4/8/4/15
Impedance=95 +- 17.5%

GSATAII0_1
SATA2/7/PU/H/P/VA/D/2/B/GBT

JMB368 REMOVE

JMB368 REMOVE

Near to PIN

close to IC
close to pin42 and pin53
close to IC
Close to pin58
Close to pin47
CLOSE TO pin22
close to pin17

Gigabyte Technology	
Title	JMR363
Size: Custom	Document Number: P35-S3
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PCIE-1G LAN

RTL8111C

3VDUAL

LR23 0/6/X

LR24 0/6/X

LBC61 0.1u/6/Y5V/25V/Z/X

LBC62 22u/8/X5R/6.3V/M/X

LR33 0/4/X

LED_ACT_TXRX

LED_LINK100

LED_LINK1000

0.1u/6/Y5V/25V/Z

LBC39 0.1u/6/Y5V/25V/Z

LBC40

23 25MCLK_LAN

LC5 10p/4/NPO/50V/J

LR16 2.49K/4/1

RSET CTRL15 AVDD33 VDD15 3VDUAL VDD15 VDD15

LU1

CTRL18	1	VCTRL18	EESK 48
AVDD33	2	AVDD33	EEDI 47 EEDI_AUX
P_MDI0+	3	MDIP0	VDD33 46 3VDUAL
P_MDI0-	4	MDIN0	EEDO 45 EEDO
FB12	5	AVDD18	EECS 44 EECS
P_MDI1+	6	MDIP1	VDD15 43 VDD15
P_MDI1-	7	MDIN1	NC 42
AVDD18	8	AVDD18	VDD1 41 VDD15
P_MDI2+	9	MDIP2	NC 40
P_MDI2-	10	MDIN2	NC 39
AVDD18	11	AVDD18	VDD15 38 VDD15
P_MDI3+	12	MDIP3	VDD33 37 3VDUAL
P_MDI3-	13	MDIN3	ISOLATEB 36 ISOLATEB
AVDD18	14	AVDD18	NC 35
VDD15	15	VDD15	NC 34
3VDUAL	16	VDD33	VDD15 33

EGND NC NC LANWAKEB PERSTB VDD15 VCC3 HSIP HSIN EGND REFCLK_P REFCLK_N EVDD18 HSOP HSON EGND VDD15

65 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

RTL8111B-GR/QFP128

VCC3

LR17 1K/4/1

LR18 15K/4

LR31 0/4

VDD15

18,20,24 -PCIE_WAKE

25,33 -PFMRST2

VDD15 VDD18 VDD18 VDD15

100歐姆:[20/5/7/5/20]

19 ML_OP

19 ML_ON

23 SRCCLK_LAN

23 -SRCCLK_LAN

19 ML_IP

19 ML_IN

LC3 0.1u/4/Y5V/16V/Z

LC4 0.1u/4/Y5V/16V/Z

50歐姆:[18/4/10/4/18]

-PFMRST2 LBC34 100p/4/NPO/50V/J/X

LED_GREEN LR22 LED_LINK100

0/6/SHT/X

R1.0 10M LED OFF

Dual Color LED

D4 D3 Green

D4 D3 Orange

Single Color LED

D2 D1 Yellow

P35-152-19W9

U4 U3 U2 U1

U8 U7 U6 U5

L1 L3 L5 L7 L9

L2 L4 L6 L8 L10

D1 D2 D3 D4

YELLOW ORANGE (+,-) GREEN (-,+)

Power domain chart

	RTL8111B / RTL8101E	RTL8111C
AVDD33	3.3V	3.3V
AVDD18	1.8V	1.2V
EVDD18	1.8V	1.2V
DVDD15	1.5V	1.2V

3VDUAL

LEC7 100u/D/10V/57

LBC35 0.1u/6/Y5V/25V/Z/X

LBC36 0.1u/6/Y5V/25V/Z/X

LBC37 0.1u/6/Y5V/25V/Z/X

LBC38 0.1u/6/Y5V/25V/Z

3VDUAL

LFB5 0/8/SHT/X

LBC43 0.1u/6/Y5V/25V/Z

LBC41 4.7u/8/Y5V/10V/Z/X

LBC42 0.1u/6/Y5V/25V/Z

VDD15

LQ1 BCP59/SOT223/-1A/60

CTRL15

LR34 0/6/X

LD1 MMSZ5227B/SOD123/3.6V/X

VDD15 VDD18

VDD15

LFB8 0/8/X

LBC44 0.1u/6/Y5V/25V/Z

LBC45 0.1u/6/Y5V/25V/Z

LBC46 0.1u/6/Y5V/25V/Z

LBC47 0.1u/6/Y5V/25V/Z

LBC48 0.1u/6/Y5V/25V/Z

LEC2 100u/D/10V/57

LBC49 4.7u/8/Y5V/10V/Z/X

LBC50 0.1u/6/Y5V/25V/Z

3VDUAL AVDD33

LFB6 0/8/SHT/X

LBC51 0.1u/6/Y5V/25V/Z

LBC52 4.7u/8/Y5V/10V/Z/X

LBC53 0.1u/6/Y5V/25V/Z

VDD18

LQ2 2SB1132/SOT89/-1A/82

LR36 0/4

LL1 4.7uH/1A/[10LC4-01470B-11R]/X

FB12

CTRL18

VDD18

100u/D/10V/57

AVDD18

LEC3

FB7 0/8

VDD18

LBC54 0.1u/6/Y5V/25V/Z

LBC55 0.1u/6/Y5V/25V/Z

LBC56 0.1u/6/Y5V/25V/Z/X

LBC58

LBC57 0.1u/6/Y5V/25V/Z

LBC59 0.1u/6/Y5V/25V/Z

4.7u/8/Y5V/10V/Z

LR35 8.2K/4/X

3VDUAL LU2

EECS 1

EESK 2

EEDI_AUX 3

EEDO 4

CS VCC 8

SK DC 7

DI ORG 6

DO GND 5

AT93C46-10SU-2.7/S

LBC60 0.1u/6/Y5V/25V/Z

LR19 3.6K/4

3VDUAL

USB_LAN CONNECTOR

LAN 100歐姆:[30/4/8/4/30] FOR B 製程

USB_LAN

P_MDI0+ L1 D1 LED_ACT_TXRX

P_MDI0- L2 D2 LR13 150/6

P_MDI1+ L3

P_MDI1- L4 D3 LED_GREEN LR14 150/6

P_MDI2+ L5

P_MDI2- L6 D4 LED_LINK1000 LR15 150/6

P_MDI3+ L7

P_MDI3- L8 U1

L9 U2 -USBP10 +USBP10 -USBP10 19 +USBP10 19

L10 U3

U4

U5

U6 -USBP11 +USBP11 -USBP11 19 +USBP11 19

U7

U8

UP

DOWN

LBC25 0/6

USB+LAN/1G/GO,Y/OS/RA/D/1

3VDUAL

LFB4 0/6/SHT/X

LBC33 0.1u/6/Y5V/25V/Z/X

FUSEVCC1

LBC26 0.1u/6/Y5V/25V/Z/X

90歐姆:[15/4.5/7.5/4.5/15]

USB_LAN

LR7 0/6/X

LR29 0/6/SHT/X

-USBP10 ESD_PAD32 TP/X

+USBP10 ESD_PAD34 TP/X

-USBP11 ESD_PAD33 TP/X

+USBP11 ESD_PAD35 TP/X

Gigabyte Technology

Title: RTL8111

Size: Custom | Document Number: P35-S3 | Rev: 2.01

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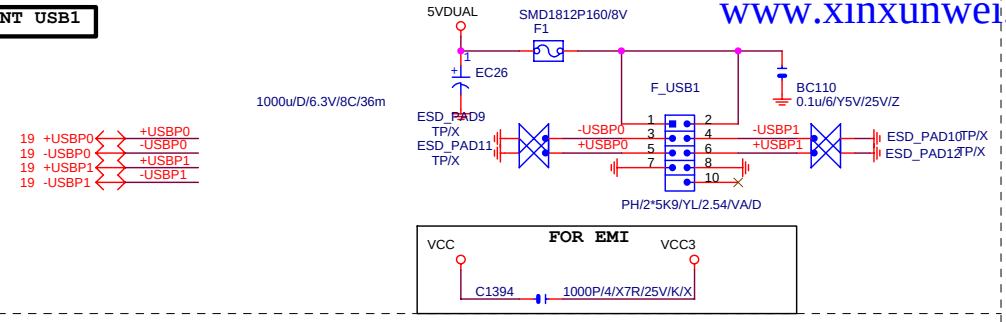
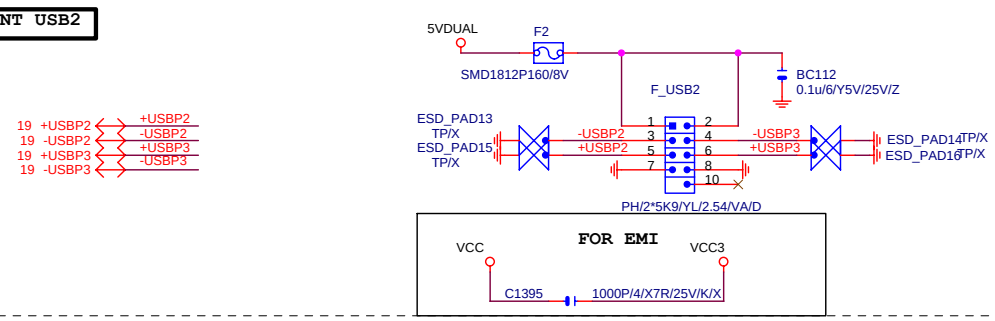
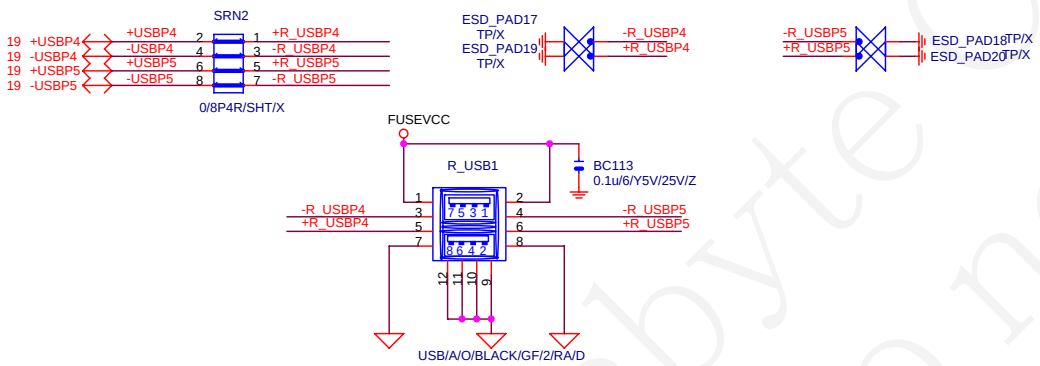
FRONT USB1



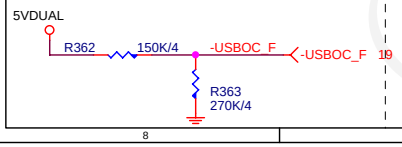
FRONT USB2



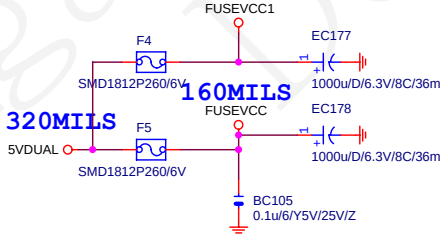
R_USB1



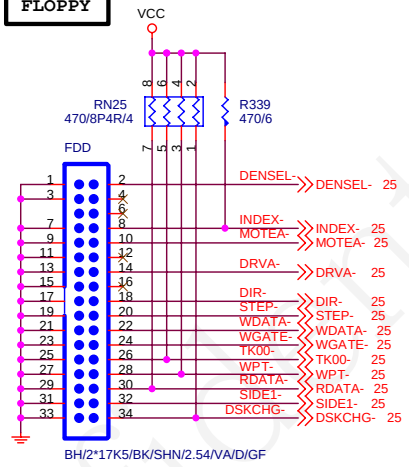
FRONT USB OC1



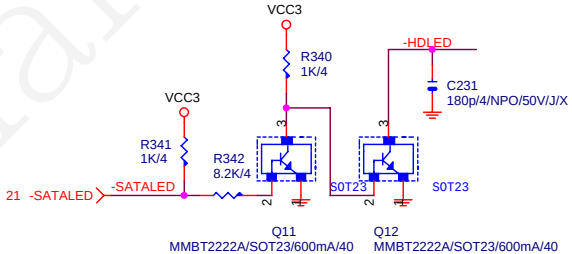
USB POWER

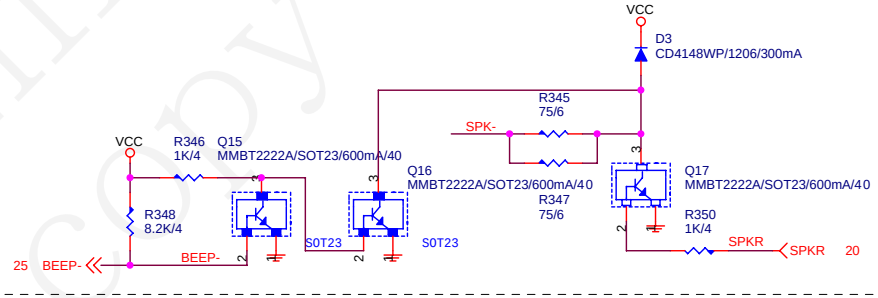


FLOPPY

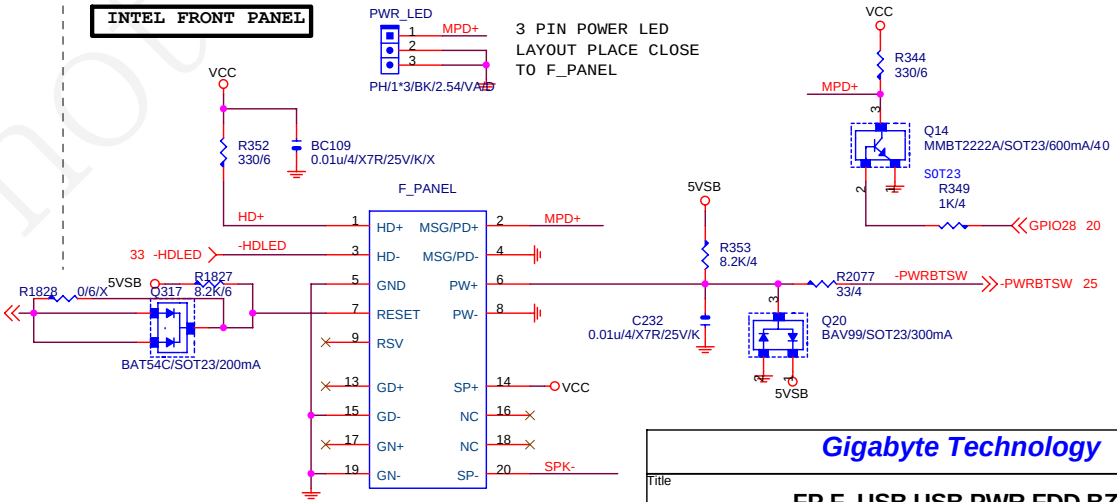


SATA LED





INTEL FRONT PANEL



Gigabyte Technology		
Title: FP,F_USB,USB PWR,FDD,BZ		
Size: Custom	Document Number: P35-S3	Rev: 2.01
Date: Friday, July 13, 2007	Sheet 35 of 35	