

SHEET TITLE

01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	POWER MAP
05	P4_LGA775_A
06	P4_LGA775_B
07	P4_LGA775_C
08	P4_LGA775_D
09	GMCH-BROADWATER_HOST
10	GMCH-BROADWATER_DDRII
11	GMCH-BROADWATER_PCI E, DMI
12	GMCH-BROADWATER_INT VGA
13	GMCH-BROADWATER_GND
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15	DDRII CHANNEL A 1,2
16	DDRII CHANNEL B 1,2
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21	ICH8 SATA, FAN PWM
22	ICH8 VCC, GND
23	CLOCK GEN CK505
24	PCI EXPRESS*1 ,PCI SLOT 1,2
25	ITE8718GB,RESET DRIVE
26	COM, LPT
27	BIOS, CI, HWM, KB/MS

SHEET TITLE

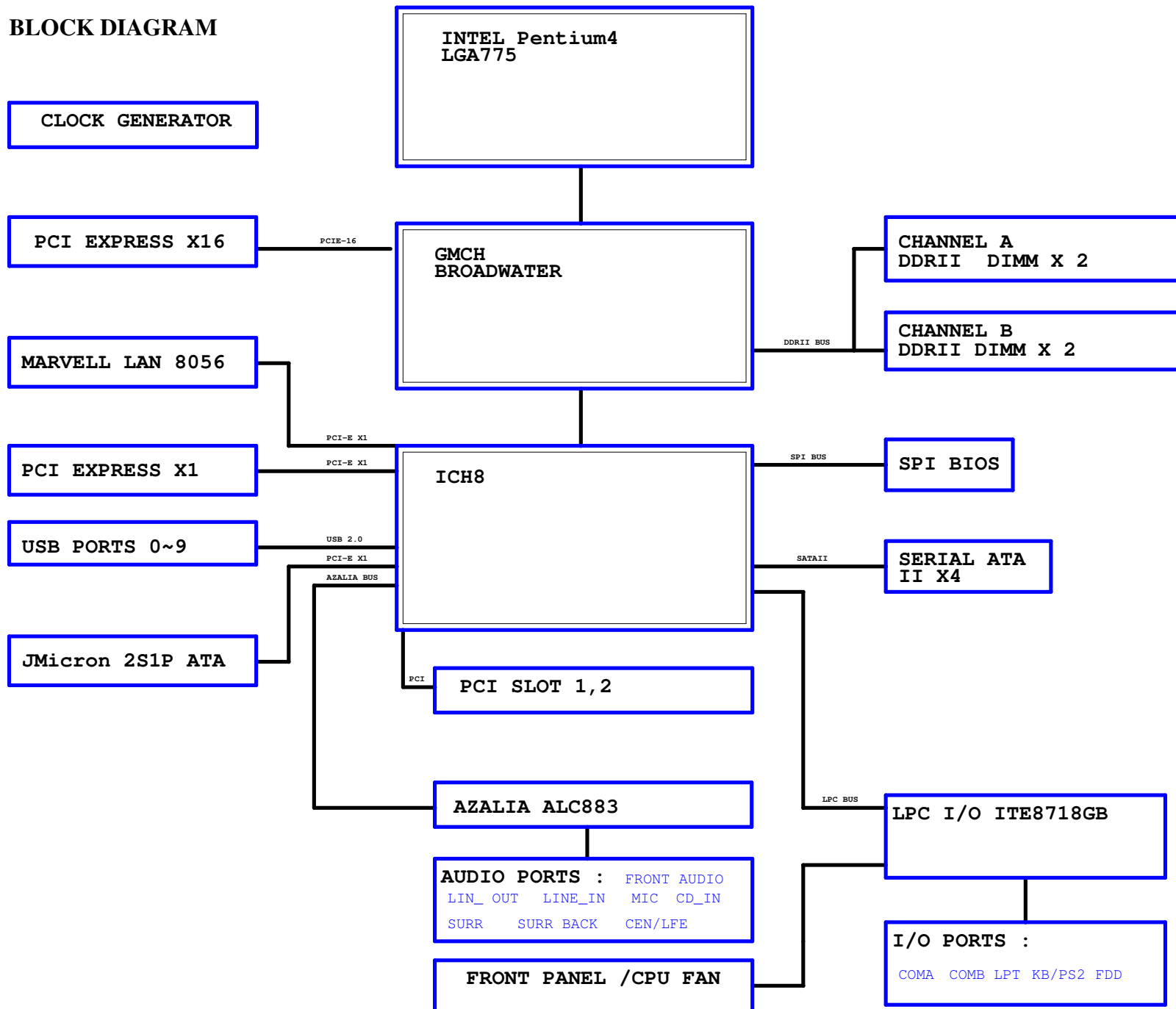
28	AZALIA ALC883
29	AUDIO JACK
30	VCORE PWM ISL6312
31	DISCRETE POWER
32	ATX POWER
33	JMicron 2S1P ATA
34	1394 TI TSB43AB23
35	LAN MARVELL 88E8056
36	FAN CONTROL
37	FRONT PANEL, FUSB, FDD

**Gigabyte Technology**

Title		
Cover Sheet		
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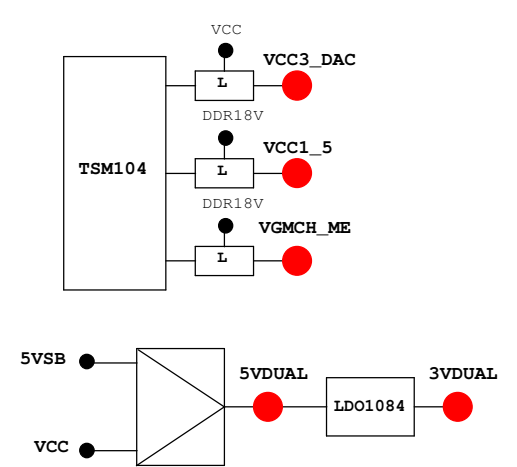
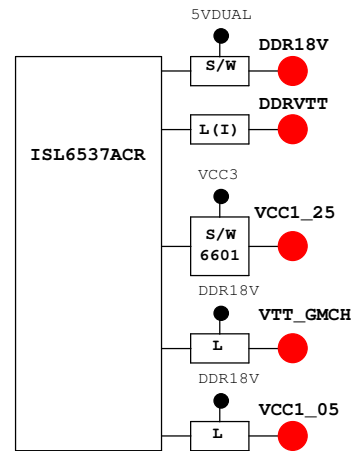
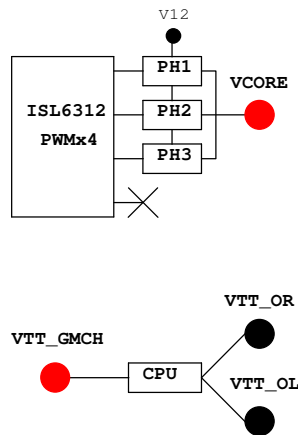
# BLOCK DIAGRAM



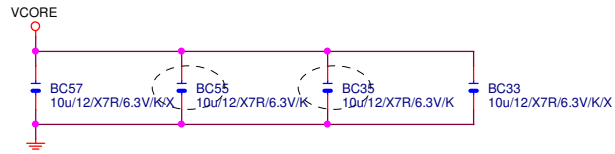
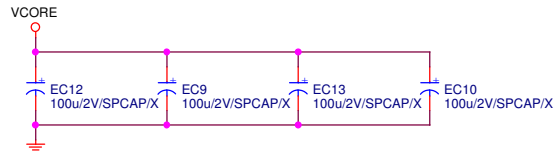
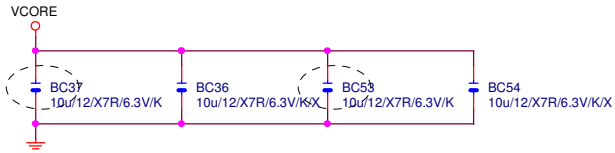
ICH8 GPIO LIST TABLE

PIN NAME	PWR WELL	AFTER/ PLTRST	USAGE	NOTE
GP0	MAIN	IN	-ACZ_DET	P/U 8.2K VCC3
GP1/TACH1	MAIN	IN	N/A	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	N/A	P/U 8.2K VCC3
GP7/TACH3	MAIN	IN	N/A	P/U 8.2K VCC3
GP8	STBY	IN	GPIO8	P/U 8.2K 3VDUAL
GP9	STBY	OUT	WOL_ONLY	P/D 100K GND
GP10	STBY	OUT	GPIO10	P/U 8.2K 3VDUAL
GP11/SMBALERT#	STBY	OUT	-SMBALRT	P/U 8.2K 3VDUAL
GP12	STBY	IN	MB_ID3	P/U 8.2K 3VDUAL
GP13	STBY	IN	-LPCPME	P/U 8.2K 3VDUAL
GP14	STBY	IN	GPIO14	P/U 8.2K 3VDUAL
GP15	STBY	OUT	GPIO15 (TP)	N/A
GP16	MAIN	IN	MB_ID1	P/U 8.2K VCC3
GP17/TACH0	MAIN	IN	N/A (OPT-ITE)	P/U 8.2K VCC3
GP18	MAIN	IN	MB_ID2	P/U 8.2K VCC3
GP19	MAIN	IN	GPIO19	P/U 8.2K VCC3
GP20	MAIN	OUT	GPIO20	N/A
GP21	MAIN	IN	GPIO21	P/U 8.2K VCC3
GP22	MAIN	IN	GPIO22	P/U 8.2K VCC3
GP23	MAIN	OUT	-LDRQ1	P/U 8.2K VCC3
GP24	STBY	OUT	GPIO24 (TP)	N/A
GP25	STBY	IN	MB_ID4	P/U 8.2K 3VDUAL
GP26/S4_STATE#	STBY	OUT	GPIO26	P/U 8.2K 3VDUAL
GP27	STBY	LOW	GPIO27	ENERGY-LAKE LED:GREEN
GP28	STBY	LOW	GPIO28	ENERGY-LAKE LED:YEL
GP29/OC5#	STBY	IN	-USBOC_F	P/U FUSEVCC1
GP30/OC6#	STBY	IN	-USBOC_F	P/U FUSEVCC1
GP31/OC7#	STBY	IN	-USBOC_F	P/U FUSEVCC1
GP32	MAIN	IN	MB_ID0	P/U 8.2K VCC3
GP33	MAIN	IN	GPIO33	P/U 8.2K VCC3
GP34	MAIN	IN	GPIO34	P/U 8.2K VCC3
GP35	MAIN	IN	N/A (TP)	N/A
GP36	MAIN	IN	GPIO36	P/U 8.2K VCC3
GP37	MAIN	IN	GPIO37	P/U 8.2K VCC3
GP38	MAIN	IN	GPIO38	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:3 PHASE PWM--ISL6312

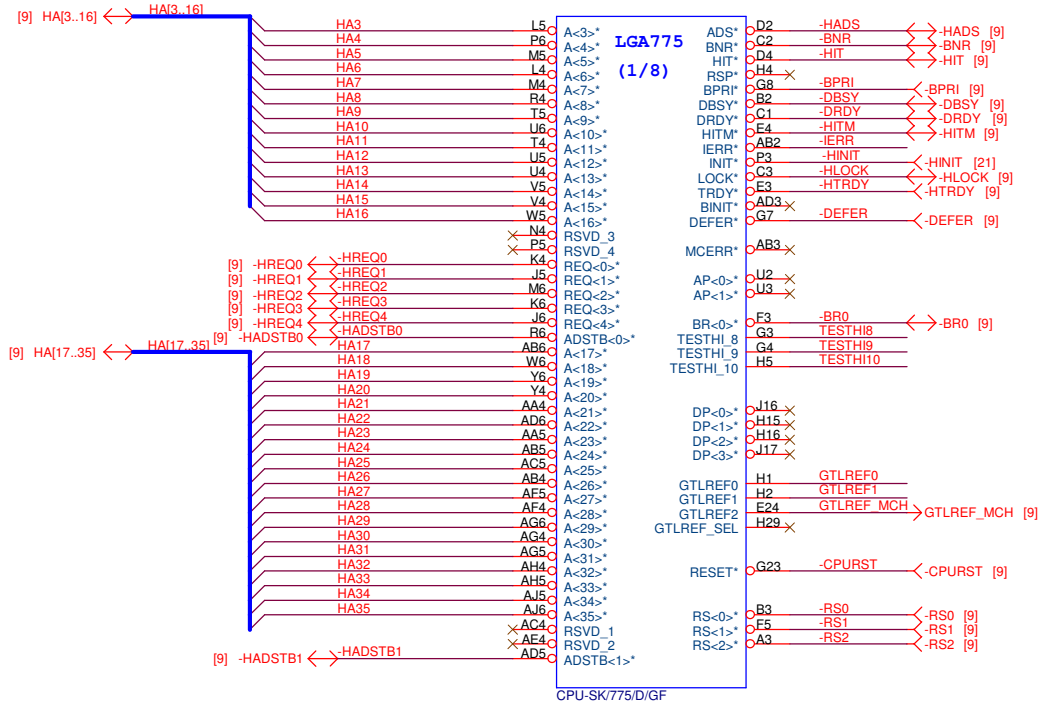


Gigabyte Technology		
Title		
<b>TABLE LIST</b>		
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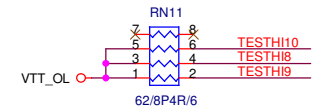
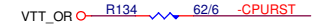
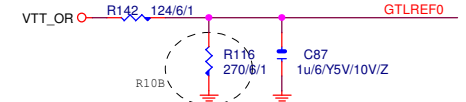
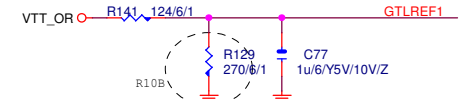


**LGA775-D : FOOTPRINT**

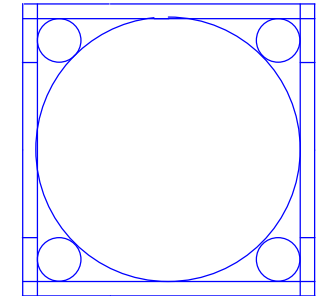
LGA775A



CPU-SK775/D/GF

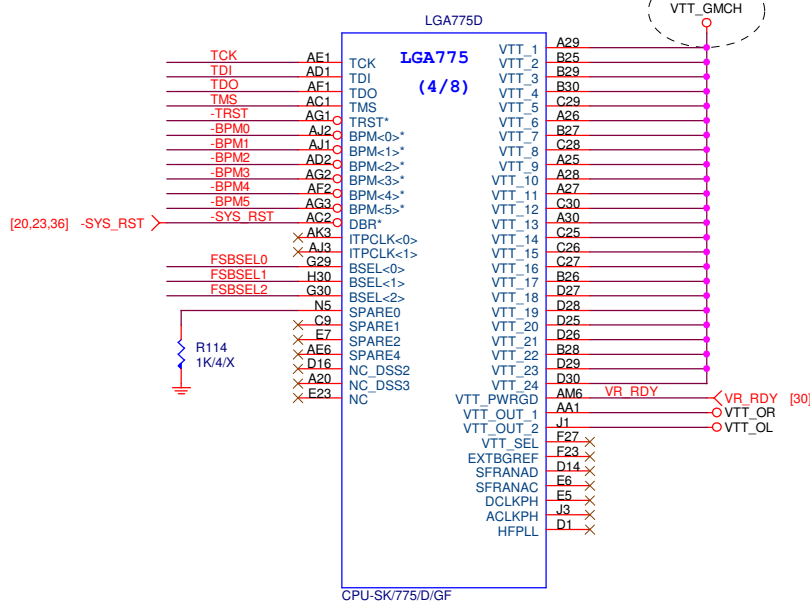
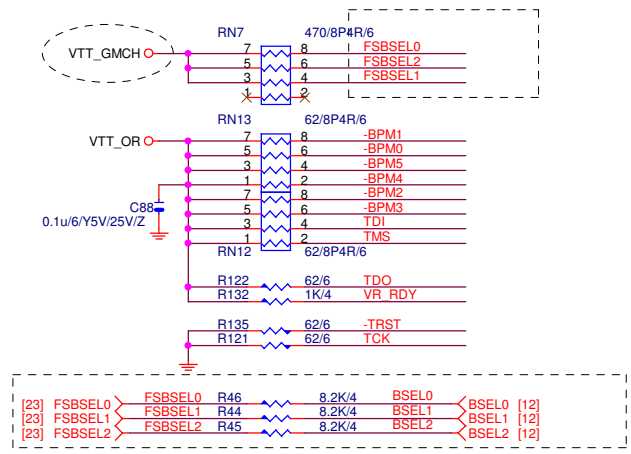
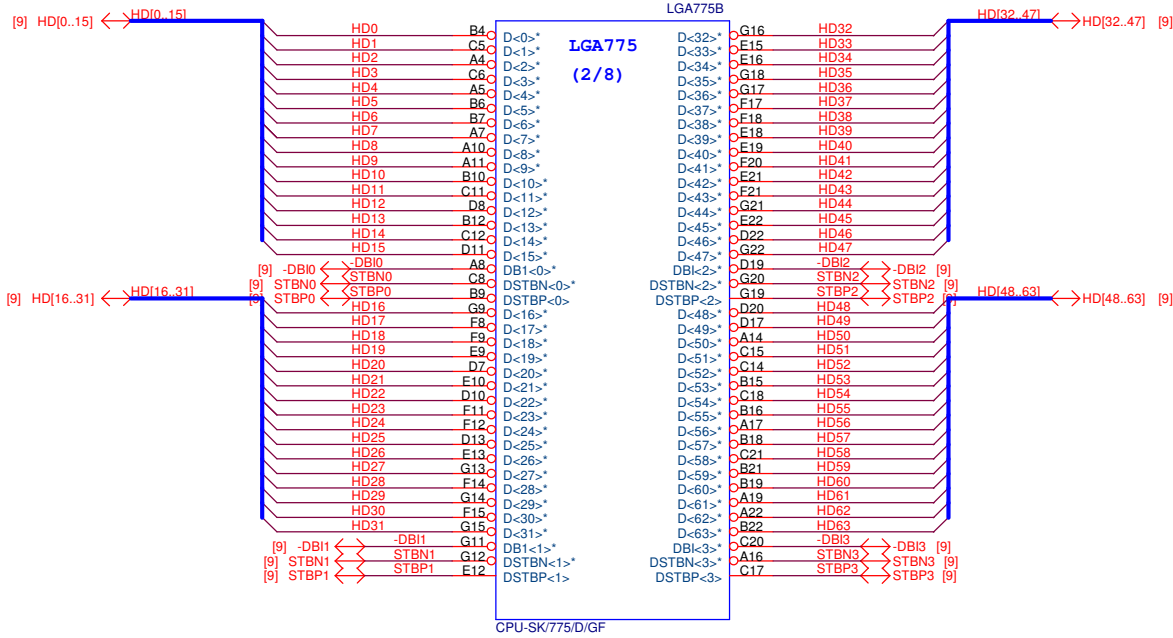


CR  
CPU RETANTION/X



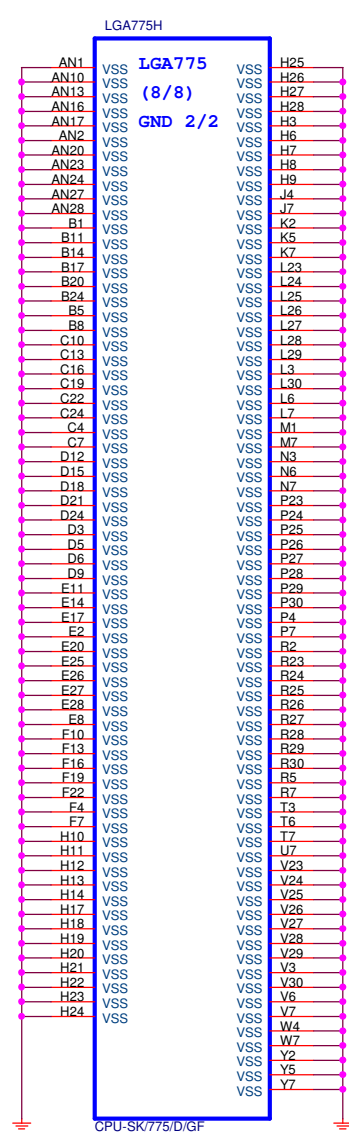
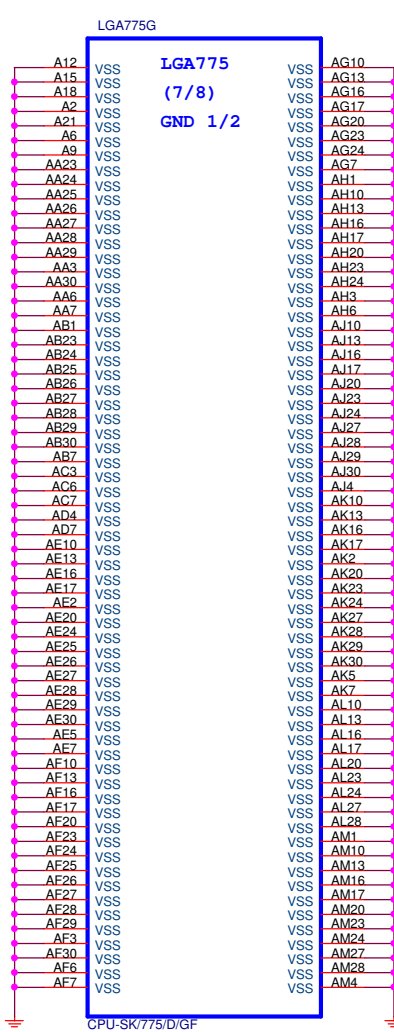
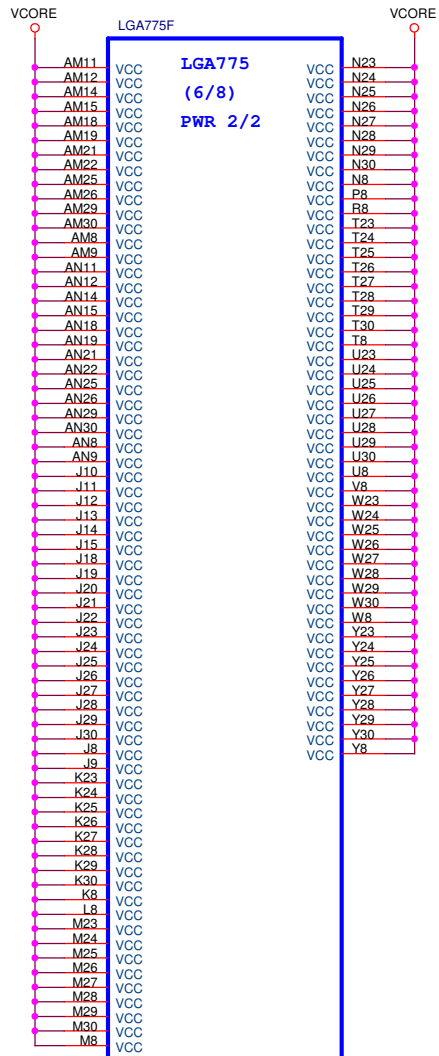
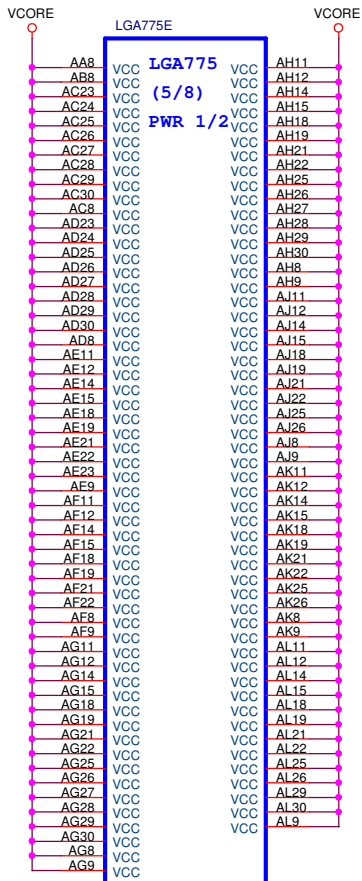
**Gigabyte Technology**

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<b>P4_LGA775-A</b>		
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	<b>965GM-S2</b>	<b>1.01</b>
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Title <b>P4_LGA775-B,D</b>		
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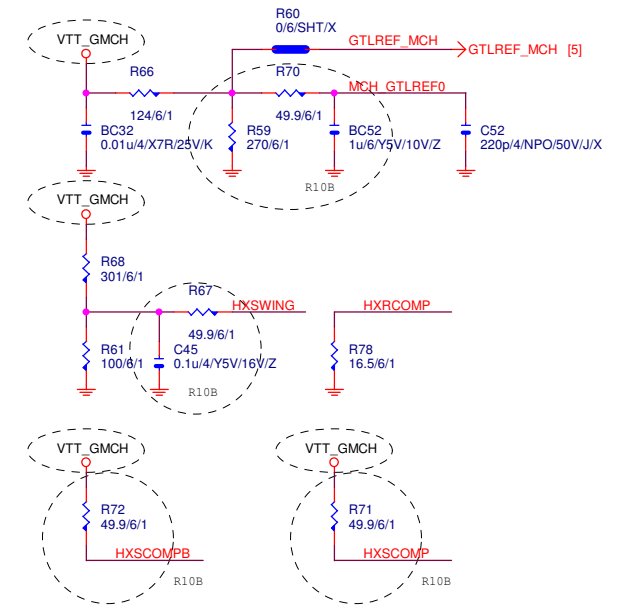
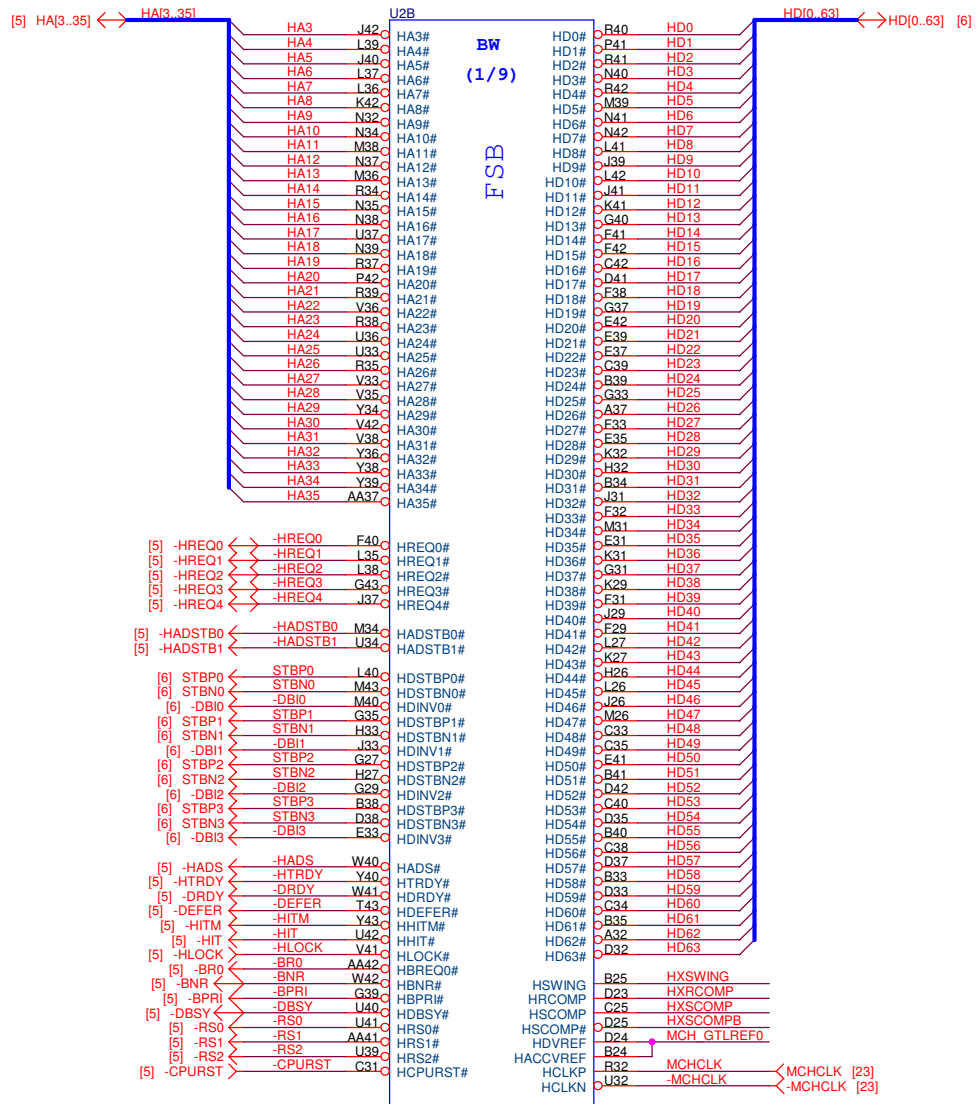




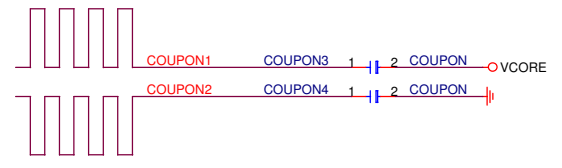
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COMP量測有CURRENT SENSE, 不可上電容



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<b>GMCH-HOST</b>		
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U2C

MAAA0	BA31	SMA_A0	SDQS_A0	ALU4	DOSA0
MAAA1	BA25	SMA_A1	SDQS_A0#	AR3	-DOSA0
MAAA2	BA26	SMA_A2	SDM_A0	AR2	DMA0
MAA3	BA25	SMA_A3	SDQ_A0	AR5	MDA0
MAAA4	AY25	SMA_A4	SDQ_A1	AR4	MDA1
MAA5	BA23	SMA_A5	SDQ_A2	AV2	MDA3
MAA6	AY24	SMA_A6	SDQ_A3	AP2	MDA6
MAAA7	AY23	SMA_A7	SDQ_A4	AP1	MDA6
MAA8	BA22	SMA_A8	SDQ_A5	AP0	MDA6
MAAA9	BA22	SMA_A9	SDQ_A6	AV1	MDA7
MAAA10	AY33	SMA_A10	SDQ_A7	AV4	MDA7
MAA11	BA22	SMA_A10	SDQ_A7	AV4	MDA7
MAAA12	AW21	SMA_A11	SDQS_A1	BB3	DOSA1
MAAA13	AY38	SMA_A12	SDQS_A1#	BA5	DMA1
MAAA14	BA21	SMA_A14	SDM_A1	AY2	MDA8
[15.17] -SWEA	-SWEA	SWE_A#	SDQ_A8	AY3	MDA9
[15.17] -SCASA	-SCASA	SCAS_A#	SDQ_A9	BB5	MDA10
[15.17] -SRASA	-SRASA	SRAS_A#	SDQ_A10	AY5	MDA11
[15.17] SBA00	SBA00	SBS_A0	SDQ_A11	AW2	MDA12
[15.17] SBA01	SBA01	SBS_A1	SDQ_A12	AW3	MDA13
[15.17] SBA02	SBA02	SBS_A2	SDQ_A13	AS5	MDA14
[15.17] CS00	-CS00	SCS_A0#	SDQ_A14	BB4	MDA15
[15.17] CS01	-CS01	SCS_A0#	SDQ_A15	BB0	DOSA2
[15.17] CS02	-CS02	SCS_A2#	SDQS_A2	BA9	-DOSA2
[15.17] CS03	-CS03	SCS_A3#	SDM_A2	AY3	DMA2
[15.17] CKEA0	-CKEA0	SCKE_A0	SDQ_A16	AY7	MDA16
[15.17] CKEA1	-CKEA1	SCKE_A1	SDQ_A17	BC7	MDA17
[15.17] CKEA2	-CKEA2	SCKE_A2	SDQ_A18	AW11	MDA19
[15.17] CKEA3	-CKEA3	SCKE_A3	SDQ_A19	AY11	MDA19
[15] MDT0_A0	AY37	SODT_A0	SDQ_A20	BB6	MDA20
[15] MDT0_A1	BA38	SODT_A1	SDQ_A21	BA6	MDA21
[15] MDT0_A2	BB35	SODT_A2	SDQ_A21	BA10	MDA22
[15] MDT0_A3	BA39	SODT_A3	SDQ_A22	BB10	MDA23
[15] DCLKA0	-DCLKA0	SLCK_A0	SDQS_A3	AT20	DOSA3
[15] DCLKA0	-DCLKA0	SLCK_A0#	SDQS_A3#	AL18	-DOSA3
[15] DCLKA1	-DCLKA1	SLCK_A1	SDM_A3	AN18	DMA3
[15] DCLKA1	-DCLKA1	SLCK_A1#	SDQ_A24	AT18	MDA24
[15] DCLKA2	-DCLKA2	SLCK_A2	SDQ_A25	AR18	MDA25
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[15] DCLKA3	-DCLKA3	SLCK_A3	SDQ_A27	AT21	MDA27
[15] DCLKA3	-DCLKA3	SLCK_A3#	SDQ_A28	AP17	MDA28
[15] DCLKA4	-DCLKA4	SLCK_A4	SDQ_A29	AN17	MDA29
[15] DCLKA4	-DCLKA4	SLCK_A4#	SDQ_A30	AP20	MDA30
[15] DCLKA5	-DCLKA5	SLCK_A5	SDQ_A31	AR20	MDA30
[15] DCLKA5	-DCLKA5	SLCK_A5#	SDQS_A4	AR41	DOSA4
[15] DCLKA6	-DCLKA6	SLCK_A6	SDQS_A4#	AR40	-DOSA4
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[15] DCLKA13	-DCLKA13	SLCK_A13	SDQ_A37	AV41	MDA37
[15] DCLKA14	-DCLKA14	SLCK_A14	SDQ_A38	AB42	MDA38
[15] DCLKA15	-DCLKA15	SLCK_A15	SDQ_A39	AP41	MDA39
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[15] DCLKA22	-DCLKA22	SLCK_A22	SDQ_A43	AK41	MDA43
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[15] DCLKA24	-DCLKA24	SLCK_A24	SDQ_A45	AM42	MDA45
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[15] DCLKA26	-DCLKA26	SLCK_A26	SDQ_A47	AL39	MDA47
[15] DCLKA27	-DCLKA27	SLCK_A27	SDQS_A6	AG42	DOSA6
[15] DCLKA28	-DCLKA28	SLCK_A28	SDQS_A6#	AG41	-DOSA6
[15] DCLKA29	-DCLKA29	SLCK_A29	SDM_A6	AG40	DMA6
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[15] DCLKA31	-DCLKA31	SLCK_A31	SDQ_A49	AB43	MDA49
[15] DCLKA32	-DCLKA32	SLCK_A32	SDQ_A50	AF39	MDA50
[15] DCLKA33	-DCLKA33	SLCK_A33	SDQ_A51	AE40	MDA51
[15] DCLKA34	-DCLKA34	SLCK_A34	SDQ_A52	AJ42	MDA52
[15] DCLKA35	-DCLKA35	SLCK_A35	SDQ_A53	AK41	MDA53
[15] DCLKA36	-DCLKA36	SLCK_A36	SDQ_A54	AE41	MDA54
[15] DCLKA37	-DCLKA37	SLCK_A37	SDQ_A55	AE42	MDA55
[15] DCLKA38	-DCLKA38	SLCK_A38	SDQS_A7	AC42	DOSA7
[15] DCLKA39	-DCLKA39	SLCK_A39	SDQS_A7#	AC41	-DOSA7
[15] DCLKA40	-DCLKA40	SLCK_A40	SDM_A7	AC40	DMA7
[15] DCLKA41	-DCLKA41	SLCK_A41	SDQ_A56	AD40	MDA56
[15] DCLKA42	-DCLKA42	SLCK_A42	SDQ_A57	AD43	MDA57
[15] DCLKA43	-DCLKA43	SLCK_A43	SDQ_A58	AB41	MDA58
[15] DCLKA44	-DCLKA44	SLCK_A44	SDQ_A59	AF39	MDA59
[15] DCLKA45	-DCLKA45	SLCK_A45	SDQ_A60	AE42	MDA60
[15] DCLKA46	-DCLKA46	SLCK_A46	SDQ_A61	AE41	MDA61
[15] DCLKA47	-DCLKA47	SLCK_A47	SDQ_A62	AC39	MDA62
[15] DCLKA48	-DCLKA48	SLCK_A48	SDQ_A63	AB42	MDA63

DDR\_0

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U2D

MAAB0	BB17	SMA_B0	SDQS_B0	AV6	DOSA0
MAAB1	AV17	SMA_B1	SDQS_B0#	AA5	-DOSA0
MAAB2	BA17	SMA_B2	SOM_B0	AR7	DMB0
MAAB3	BC16	SMA_B3	SDQ_B0	AN7	MDB0
MAAB4	AW15	SMA_B4	SDQ_B1	AN8	MDB1
MAAB5	BA15	SMA_B5	SDQ_B2	AV5	MDB2
MAAB6	BB15	SMA_B6	SDQ_B3	AW7	MDB3
MAAB7	BA14	SMA_B7	SDQ_B4	AN5	MDB5
MAAB8	BA14	SMA_B8	SDQ_B5	AN6	MDB5
MAAB9	AV15	SMA_B9	SDQ_B6	AN9	MDB6
MAAB10	AW18	SMA_B10	SDQ_B7	AV7	MDB7
MAAB11	BB14	SMA_B11	SDQS_B1	AR12	DOSA1
MAAB12	BB13	SMA_B12	SDQS_B1#	AP12	-DOSA1
MAAB13	AY23	SMA_B13	SDM_B1	AV3	DMB1
MAAB14	AV13	SMA_B14	SDQ_B8	AT11	MDB9
[16.17] -SWEB	-SWEB	SWE_B#	SDQ_B9	AP13	MDB10
[16.17] -SCASB	-SCASB	SCAS_B#	SDQ_B10	AR13	MDB11
[16.17] -SRASB	-SRASB	SRAS_B#	SDQ_B11	AR11	MDB12
[16.17] SBAB0	SBAB0	SBS_B0	SDQ_B12	AJ9	MDB13
[16.17] SBAB1	SBAB1	SBS_B1	SDQ_B13	AV12	MDB14
[16.17] SBAB2	SBAB2	SBS_B2	SDQ_B14	AV12	MDB14
[16.17] CSB0	-CSB0	SCS_B0#	SDQ_B15	AP15	DOSA2
[16.17] CSB1	-CSB1	SCS_B1#	SDQS_B2	AR15	-DOSA2
[16.17] CSB2	-CSB2	SCS_B2#	SDQS_B2#	AW13	DMB2
[16.17] CSB3	-CSB3	SCS_B3#	SDM_B2	AV15	MDB16
[16.17] CKEB0	-CKEB0	SCKE_B0	SDQ_B16	AV13	MDB16
[16.17] CKEB1	-CKEB1	SCKE_B1	SDQ_B17	AV17	MDB16
[16.17] CKEB2	-CKEB2	SCKE_B2	SDQ_B18	AT17	MDB19
[16.17] CKEB3	-CKEB3	SCKE_B3	SDQ_B19	AV17	MDB19
[16.17] MDT0_B0	MDT0_B0	SODT_B0	SDQ_B20	AV15	MDB22
[16.17] MDT0_B1	MDT0_B1	SODT_B1	SDQ_B21	AV15	MDB22
[16.17] MDT0_B2	MDT0_B2	SODT_B2	SDQ_B22	AV17	MDB23
[16.17] MDT0_B3	MDT0_B3	SODT_B3	SDQ_B23	AT24	DOSA3
[16] DCLKB0	-DCLKB0	SLCK_B0	SDQS_B3	AL25	-DOSA3
[16] DCLKB0	-DCLKB0	SLCK_B0#	SDQS_B3#	AT24	DMB3
[16] DCLKB1	-DCLKB1	SLCK_B1	SDM_B3	AV24	MDB24
[16] DCLKB1	-DCLKB1	SLCK_B1#	SDQ_B24	AT23	MDB25
[16] DCLKB2	-DCLKB2	SLCK_B2	SDQ_B25	AT26	MDB26
[16] DCLKB2	-DCLKB2	SLCK_B2#	SDQ_B26	AV26	MDB27
[16] DCLKB3	-DCLKB3	SLCK_B3	SDQ_B27	AV23	MDB28
[16] DCLKB3	-DCLKB3	SLCK_B3#	SDQ_B28	AV23	MDB29
[16] DCLKB4	-DCLKB4	SLCK_B4	SDQ_B29	AV24	MDB30
[16] DCLKB4	-DCLKB4	SLCK_B4#	SDQ_B30	AN26	MDB31
[16] DCLKB5	-DCLKB5	SLCK_B5	SDQ_B31	AW39	DOSA4
[16] DCLKB5	-DCLKB5	SLCK_B5#	SDQS_B4	AV39	-DOSA4
[16] DCLKB6	-DCLKB6	SLCK_B6	SDQS_B4#	AV37	DMB4
[16] DCLKB7	-DCLKB7	SLCK_B7	SDM_B4	AV38	MDB32
[16] DCLKB8	-DCLKB8	SLCK_B8	SDQ_B32	AV38	MDB33
[16] DCLKB9	-DCLKB9	SLCK_B9	SDQ_B33	AN36	MDB34
[16] DCLKB10	-DCLKB10	SLCK_B10	SDQ_B34	AN37	MDB35
[16] DCLKB11	-DCLKB11	SLCK_B11	SDQ_B35	AV35	MDB36
[16] DCLKB12	-DCLKB12	SLCK_B12	SDQ_B36	AV35	MDB37
[16] DCLKB13	-DCLKB13	SLCK_B13	SDQ_B37	AN35	MDB38
[16] DCLKB14	-DCLKB14	SLCK_B14	SDQ_B38	AR37	MDB39
[16] DCLKB15	-DCLKB15	SLCK_B15	SDQ_B39	AR37	MDB39
[16] DCLKB16	-DCLKB16	SLCK_B16	SDQS_B5	AL35	DOSA5
[16] DCLKB17	-DCLKB17	SLCK_B17	SDQS_B5#	AL34	-DOSA5
[16] DCLKB18	-DCLKB18	SLCK_B18	SDM_B5	AM37	DMB5
[16] DCLKB19	-DCLKB19	SLCK_B19	SDQ_B40	AM35	MDB40
[16] DCLKB20	-DCLKB20	SLCK_B20	SDQ_B41	AM38	MDB41
[16] DCLKB21	-DCLKB21	SLCK_B21	SDQ_B42	AJ34	MDB42
[16] DCLKB22	-DCLKB22	SLCK_B22	SDQ_B43	AL38	MDB43
[16] DCLKB23	-DCLKB23	SLCK_B23	SDQ_B44	AR39	MDB44
[16] DCLKB24	-DCLKB24	SLCK_B24	SDQ_B45	AM44	MDB45
[16] DCLKB25	-DCLKB25	SLCK_B25	SDQ_B46	AL37	MDB46
[16] DCLKB26	-DCLKB26	SLCK_B26	SDQ_B47	AL32	MDB47
[16] DCLKB27	-DCLKB27	SLCK_B27	SDQS_B6	AG35	DOSA6
[16] DCLKB28	-DCLKB28	SLCK_B28	SDQS_B6#	AG36	-DOSA6
[16] DCLKB29	-DCLKB29	SLCK_B29	SDM_B6	AG39	DMB6
[16] DCLKB30	-DCLKB30	SLCK_B30	SDQ_B48	AG38	MDB48
[16] DCLKB31	-DCLKB31	SLCK_B31	SDQ_B49	AL38	MDB49
[16] DCLKB32	-DCLKB32	SLCK_B32	SDQ_B50	AF33	MDB51
[16] DCLKB33	-DCLKB33	SLCK_B33	SDQ_B51	AL38	MDB52
[16] DCLKB34	-DCLKB34	SLCK_B34	SDQ_B52	AL37	MDB52
[16] DCLKB35	-DCLKB35	SLCK_B35	SDQ_B53	AN5	MDB53
[16] DCLKB36	-DCLKB36	SLCK_B36	SDQ_B54	AG33	MDB54
[16] DCLKB37	-DCLKB37	SLCK_B37	SDQ_B55	AF34	MDB55
[16] DCLKB38	-DCLKB38	SLCK_B38	SDQS_B7	AC36	DOSA7
[16] DCLKB39	-DCLKB39	SLCK_B39	SDQS_B7#	AC38	-DOSA7
[16] DCLKB40	-DCLKB40	SLCK_B40	SDM_B7	AD36	DMB7
[16] DCLKB41	-DCLKB41	SLCK_B41	SDQ_B56	AD36	MDB56
[16] DCLKB42	-DCLKB42	SLCK_B42	SDQ_B57	AC33	MDB57
[16] DCLKB43	-DCLKB43	SLCK_B43	SDQ_B58	AA34	MDB58
[16] DCLKB44	-DCLKB44	SLCK_B44	SDQ_B59	AA36	MDB59
[16] DCLKB45	-DCLKB45	SLCK_B45	SDQ_B60	AD34	MDB60
[16] DCLKB46	-DCLKB46	SLCK_B46	SDQ_B61	AF38	MDB61
[16] DCLKB47	-DCLKB47	SLCK_B47	SDQ_B62	AC34	MDB62
[16] DCLKB48	-DCLKB48	SLCK_B48	SDQ_B63	AA33	MDB63

DDR\_1

RESERVED\_7

RESERVED\_9

RESERVED\_9

RESERVED\_9

RESERVED\_9

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RESERVED\_9

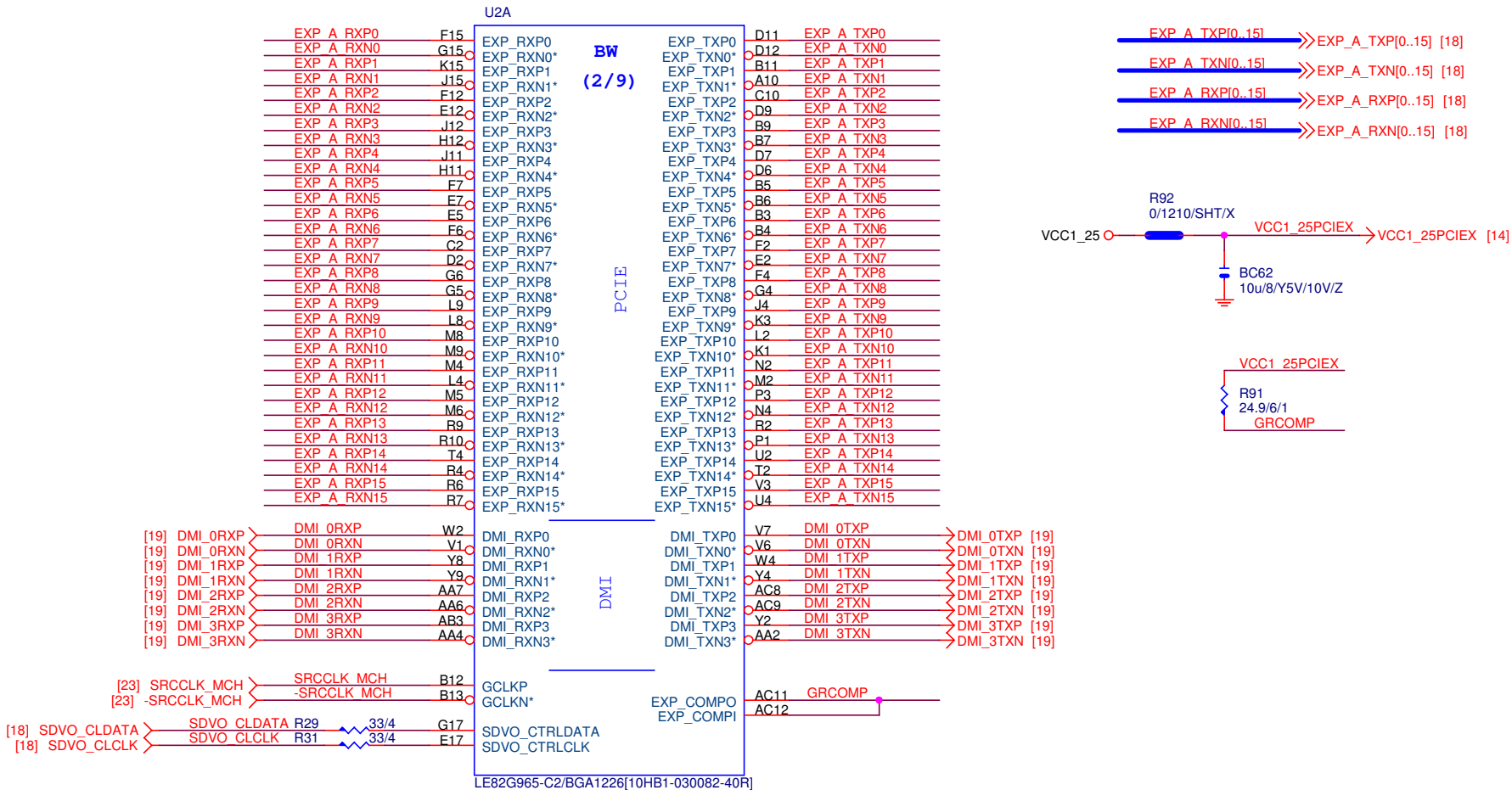
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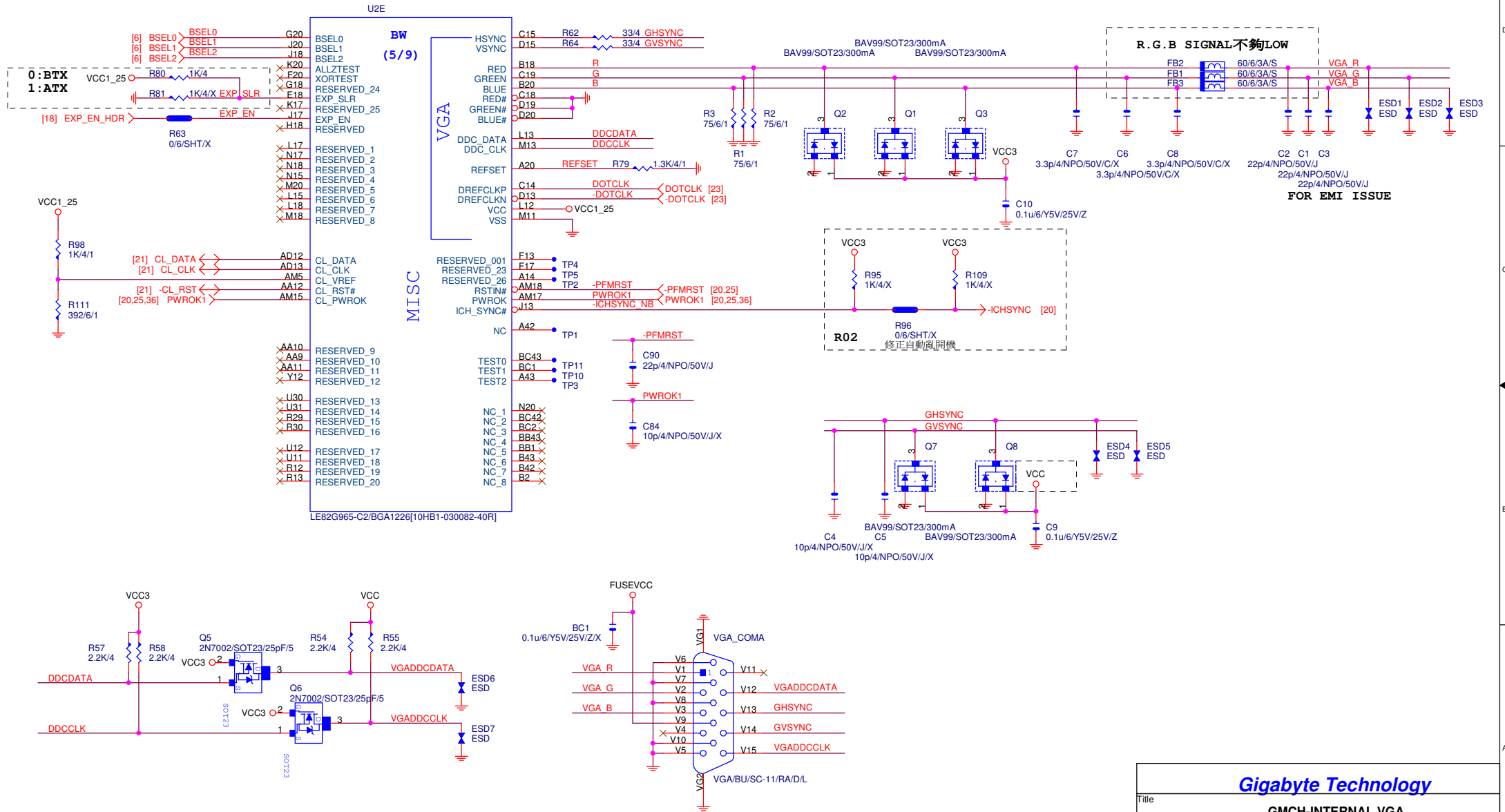
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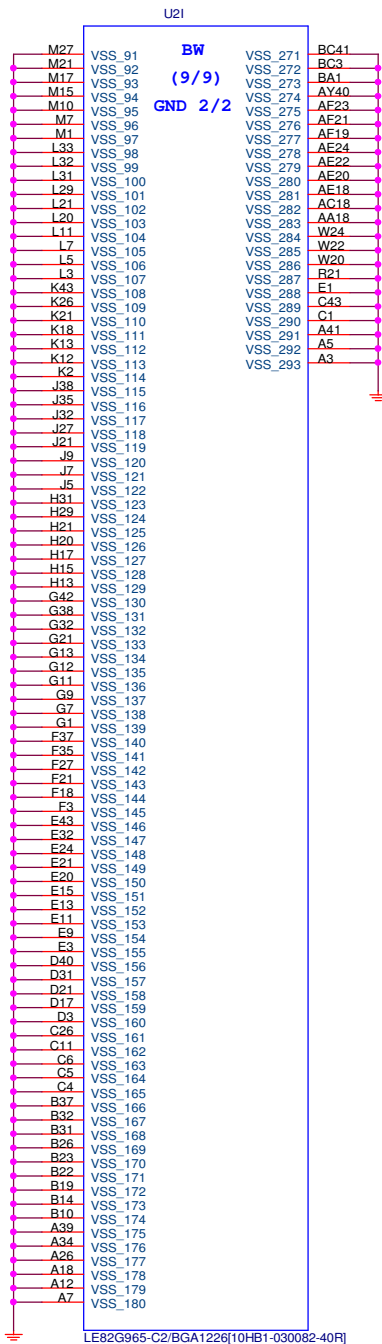
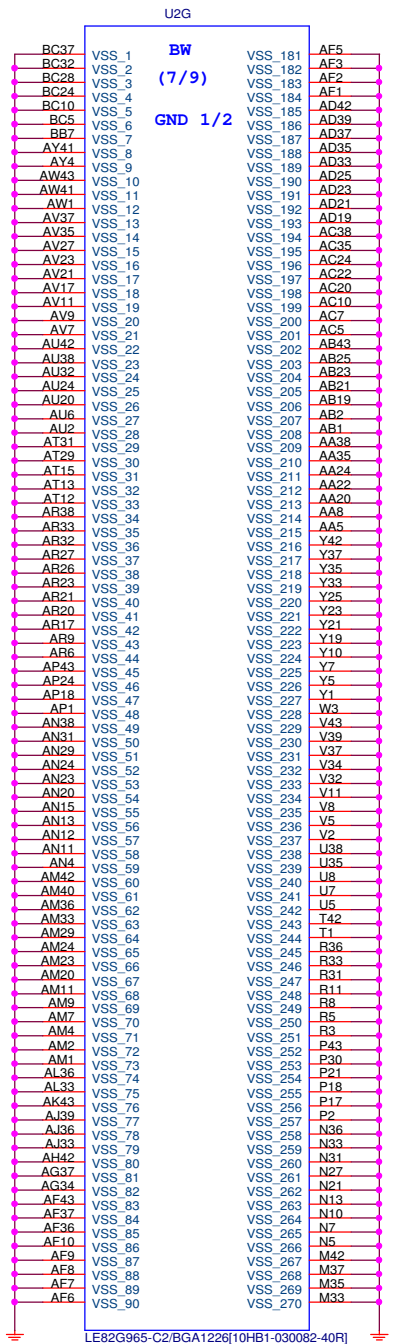


**Gigabyte Technology**

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Size	Document Number	<b>965GM-S2</b>			Rev
Custom					<b>1.0</b>
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<b>Gigabyte Technology</b>		
Title <b>GMCH-INTERNAL VGA</b>		
Size B	Document Number <b>965GM-S2</b>	Rev <b>1.01</b>
Date	Friday, August 18, 2006	Sheet 12 of 36

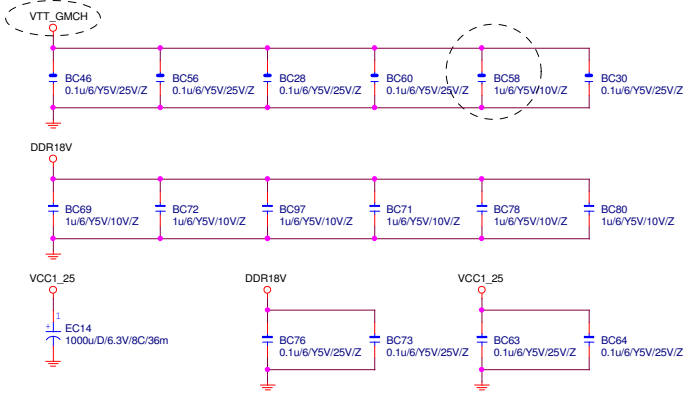
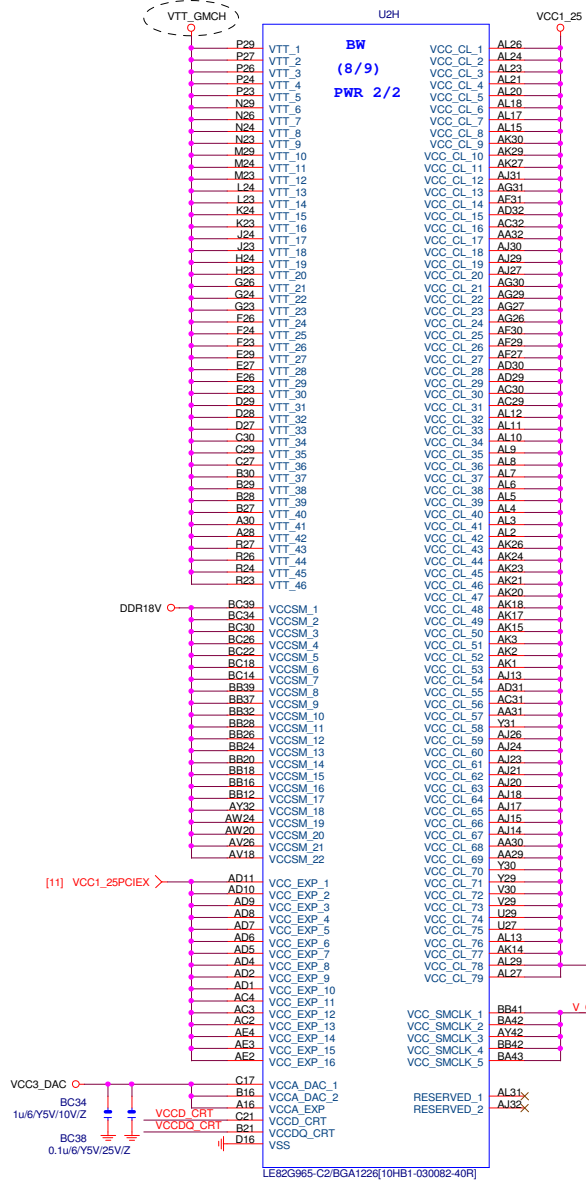
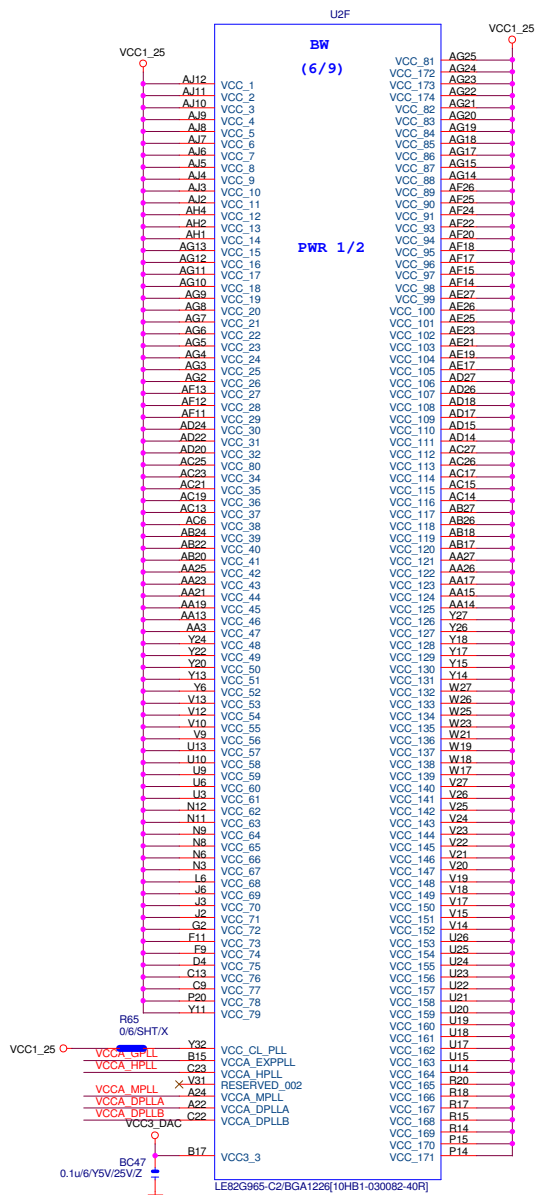


**Gigabyte Technology**

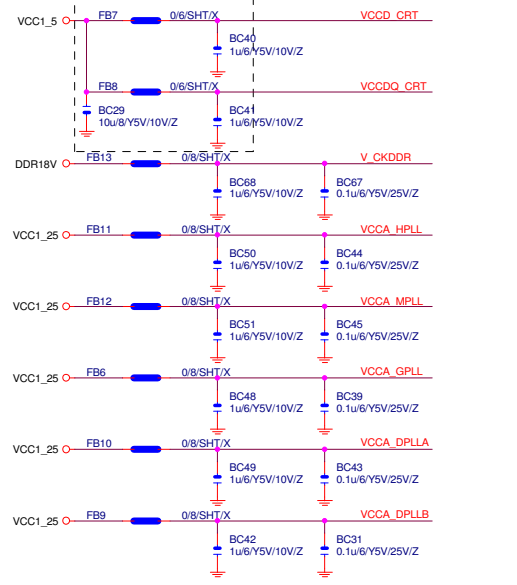
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Size Custom | Document Number: **965GM-S2** | Rev: **1.01**

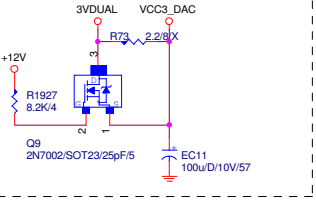
Date: Friday, August 18, 2006 | Sheet 13 of 36



**CLOSE北橋 (注意震盪水波紋)**

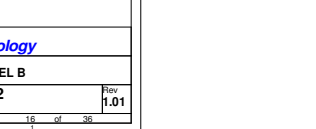
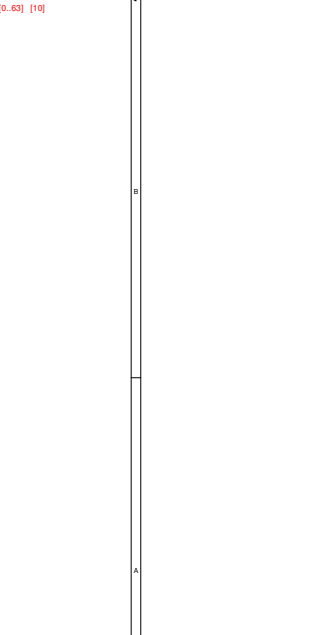
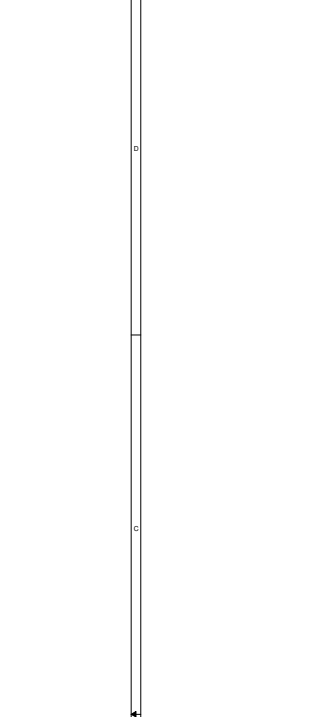
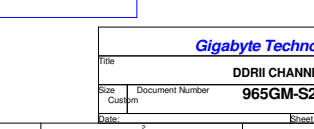
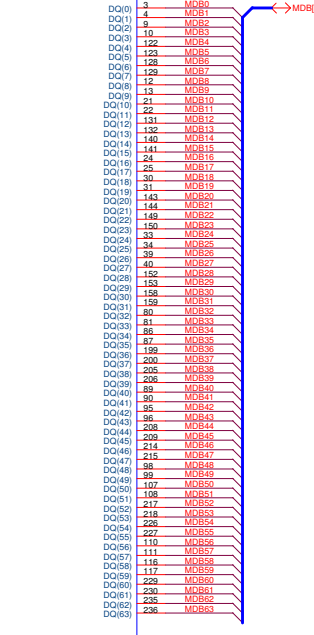
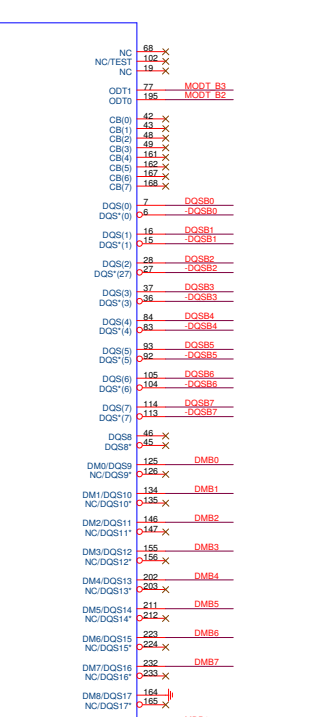
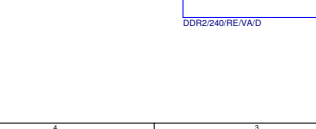
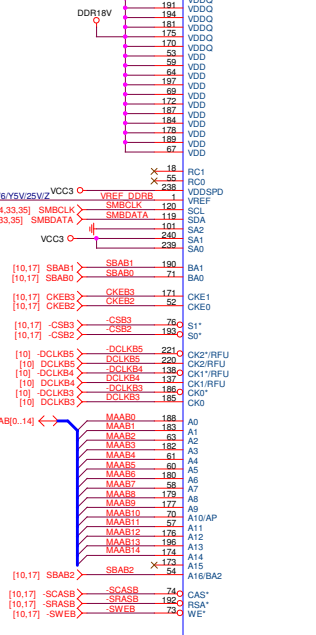
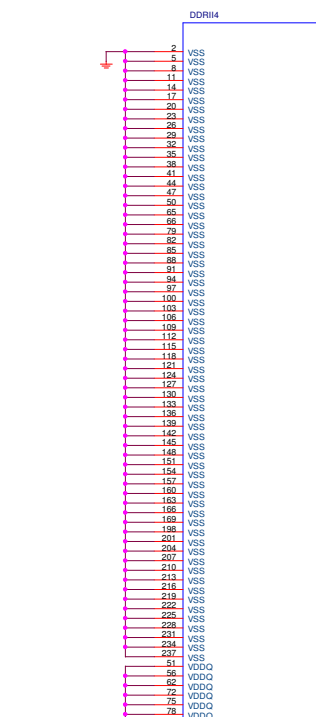
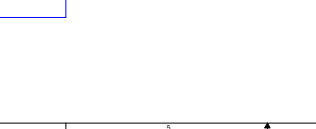
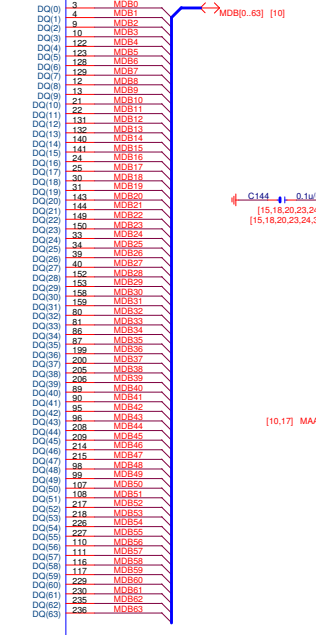
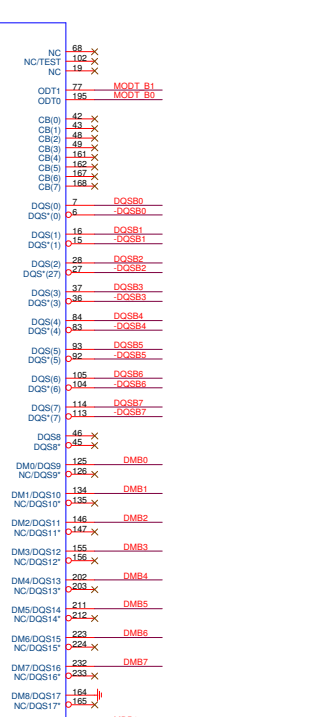
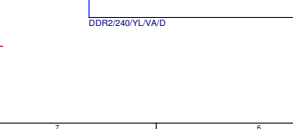
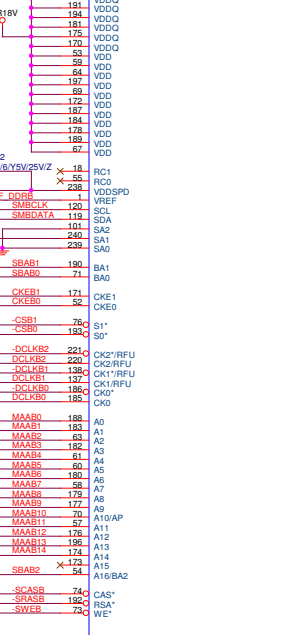
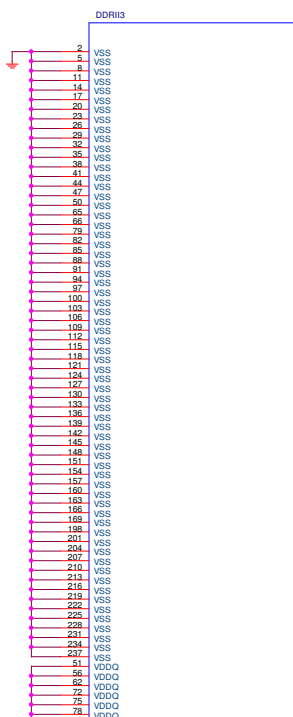
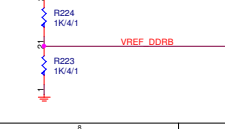
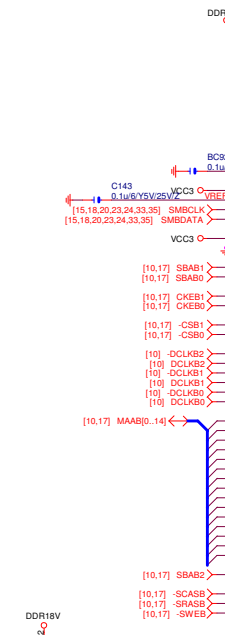
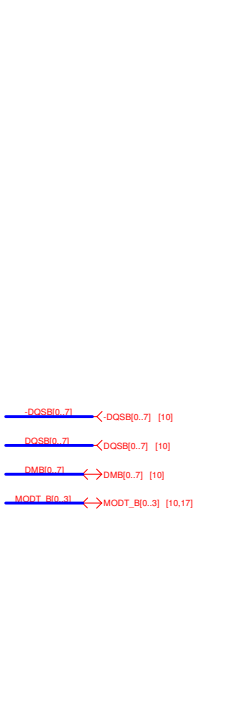


**CLOSE北橋 (注意震盪水波紋)**









Gigabyte Technology

Title: DDRII CHANNEL B

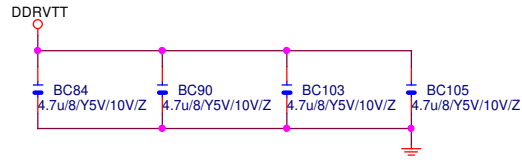
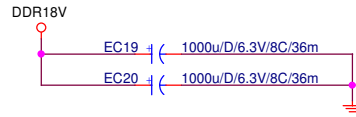
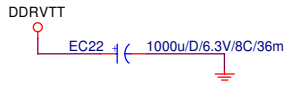
Size: Document Number 965GM-S2

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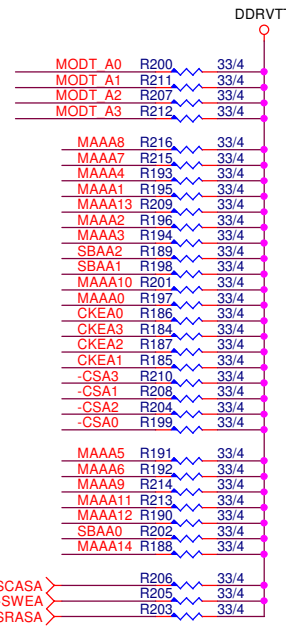
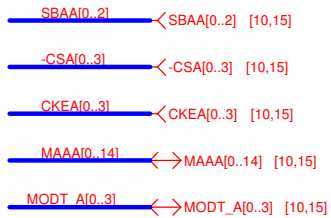
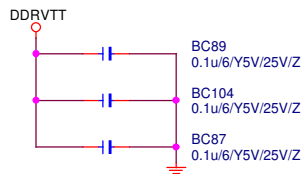
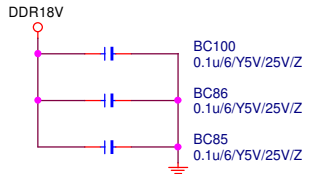
# DDR TERMINATION CHANNEL A

## DDRVTT Decouple



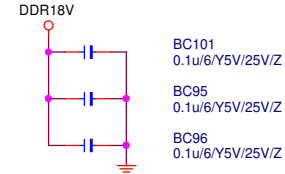
## DDR18V Decouple

## DDRVTT Decouple

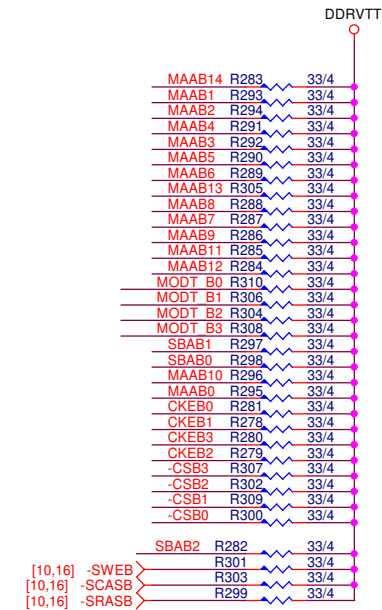
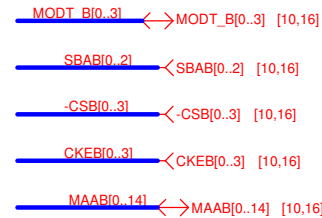
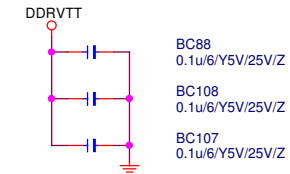


# DDR TERMINATION CHANNEL B

## DDR18V Decouple

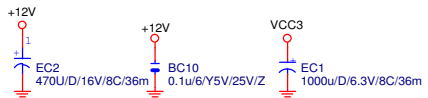


## DDRVTT Decouple



**Gigabyte Technology**

Title		
DDRII TERMINATOR		
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PCIESLOT-164DN-2

[15,16,20,23,24,33,35] SMBCLK  
 [15,16,20,23,24,33,35] SMBDATA

[20,24,35] -PCIE\_WAKE

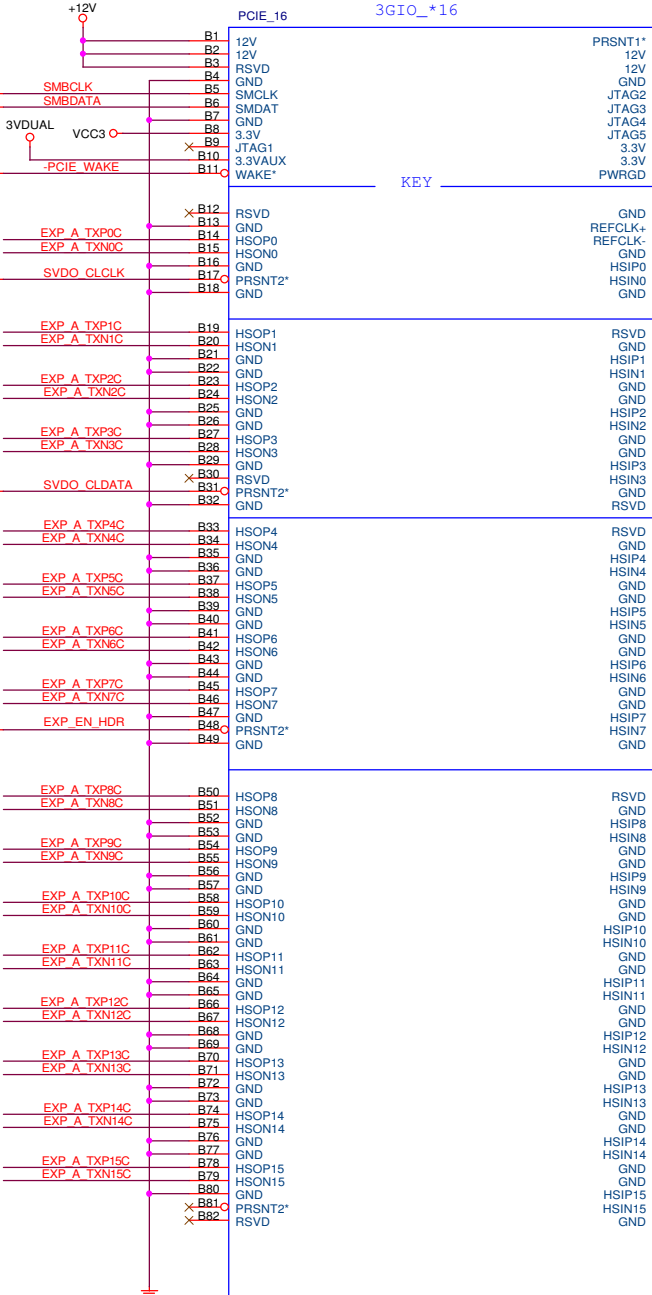
[11] SDVO\_CLK

EXP A TXP[0..15] >>> EXP\_A\_TXP[0..15] [11]  
 EXP A TXN[0..15] >>> EXP\_A\_TXN[0..15] [11]

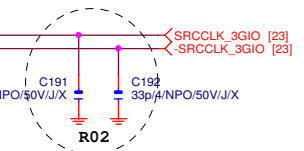
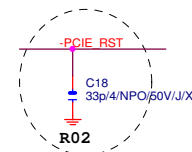
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EXP A TXN0	C27	0.1u/4/Y5V/16V/Z	EXP A TXN0C
EXP A TXP1	C29	0.1u/4/Y5V/16V/Z	EXP A TXP1C
EXP A TXN1	C34	0.1u/4/Y5V/16V/Z	EXP A TXN1C
EXP A TXP2	C37	0.1u/4/Y5V/16V/Z	EXP A TXP2C
EXP A TXN2	C38	0.1u/4/Y5V/16V/Z	EXP A TXN2C
EXP A TXP3	C40	0.1u/4/Y5V/16V/Z	EXP A TXP3C
EXP A TXN3	C41	0.1u/4/Y5V/16V/Z	EXP A TXN3C
EXP A TXP4	C43	0.1u/4/Y5V/16V/Z	EXP A TXP4C
EXP A TXN4	C44	0.1u/4/Y5V/16V/Z	EXP A TXN4C
EXP A TXP5	C47	0.1u/4/Y5V/16V/Z	EXP A TXP5C
EXP A TXN5	C46	0.1u/4/Y5V/16V/Z	EXP A TXN5C
EXP A TXP6	C49	0.1u/4/Y5V/16V/Z	EXP A TXP6C
EXP A TXN6	C48	0.1u/4/Y5V/16V/Z	EXP A TXN6C
EXP A TXP7	C51	0.1u/4/Y5V/16V/Z	EXP A TXP7C
EXP A TXN7	C50	0.1u/4/Y5V/16V/Z	EXP A TXN7C
EXP A TXP8	C55	0.1u/4/Y5V/16V/Z	EXP A TXP8C
EXP A TXN8	C56	0.1u/4/Y5V/16V/Z	EXP A TXN8C
EXP A TXP9	C59	0.1u/4/Y5V/16V/Z	EXP A TXP9C
EXP A TXN9	C60	0.1u/4/Y5V/16V/Z	EXP A TXN9C
EXP A TXP10	C64	0.1u/4/Y5V/16V/Z	EXP A TXP10C
EXP A TXN10	C61	0.1u/4/Y5V/16V/Z	EXP A TXN10C
EXP A TXP11	C66	0.1u/4/Y5V/16V/Z	EXP A TXP11C
EXP A TXN11	C65	0.1u/4/Y5V/16V/Z	EXP A TXN11C
EXP A TXP12	C68	0.1u/4/Y5V/16V/Z	EXP A TXP12C
EXP A TXN12	C67	0.1u/4/Y5V/16V/Z	EXP A TXN12C
EXP A TXP13	C71	0.1u/4/Y5V/16V/Z	EXP A TXP13C
EXP A TXN13	C69	0.1u/4/Y5V/16V/Z	EXP A TXN13C
EXP A TXP14	C73	0.1u/4/Y5V/16V/Z	EXP A TXP14C
EXP A TXN14	C72	0.1u/4/Y5V/16V/Z	EXP A TXN14C
EXP A TXP15	C75	0.1u/4/Y5V/16V/Z	EXP A TXP15C
EXP A TXN15	C74	0.1u/4/Y5V/16V/Z	EXP A TXN15C

[11] SDVO\_CLDATA

[12] EXP\_EN\_HDR



PCI-E/16X-164P/BK/PULLPUSH

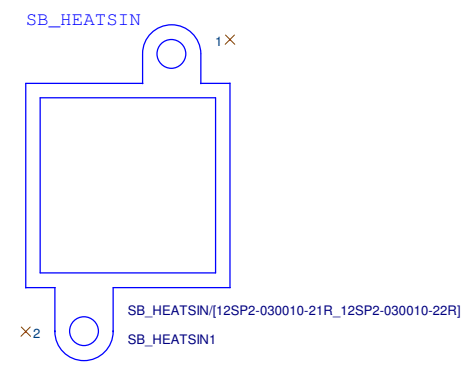
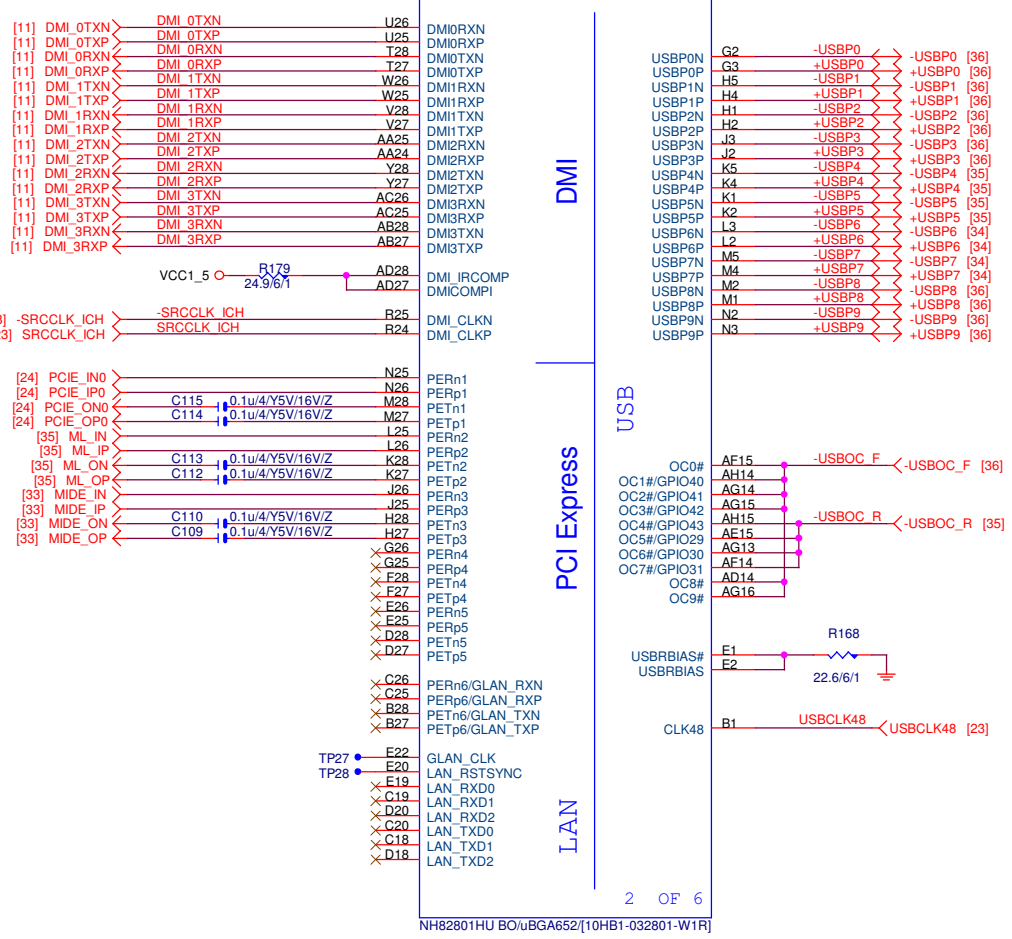
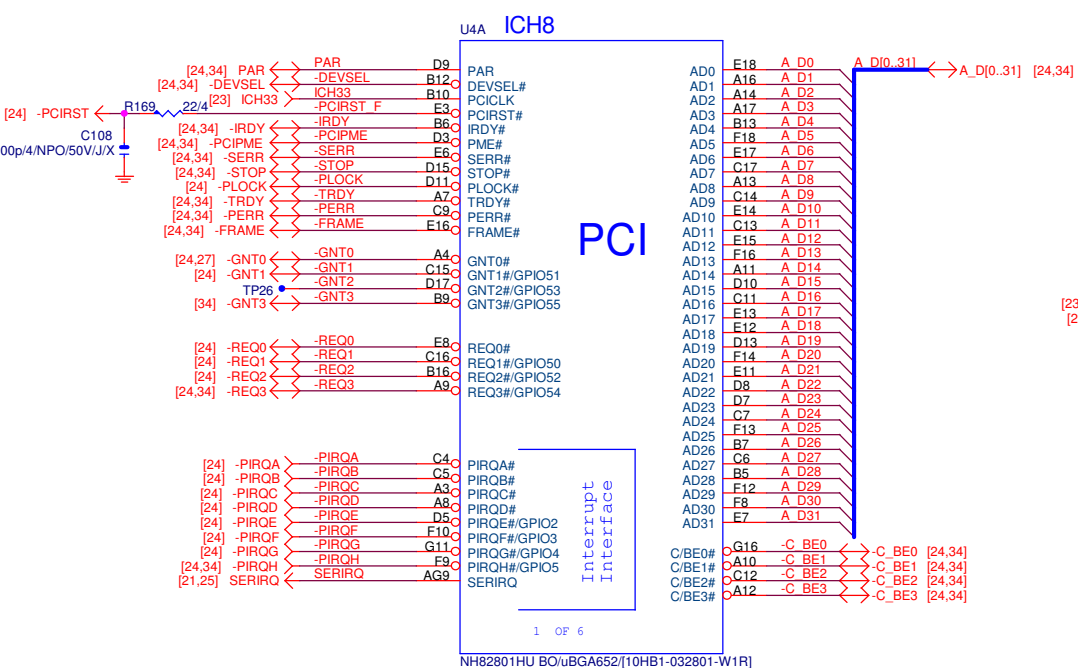


EXP A RXP[0..15] >>> EXP\_A\_RXP[0..15] [11]  
 EXP A RXN[0..15] >>> EXP\_A\_RXN[0..15] [11]

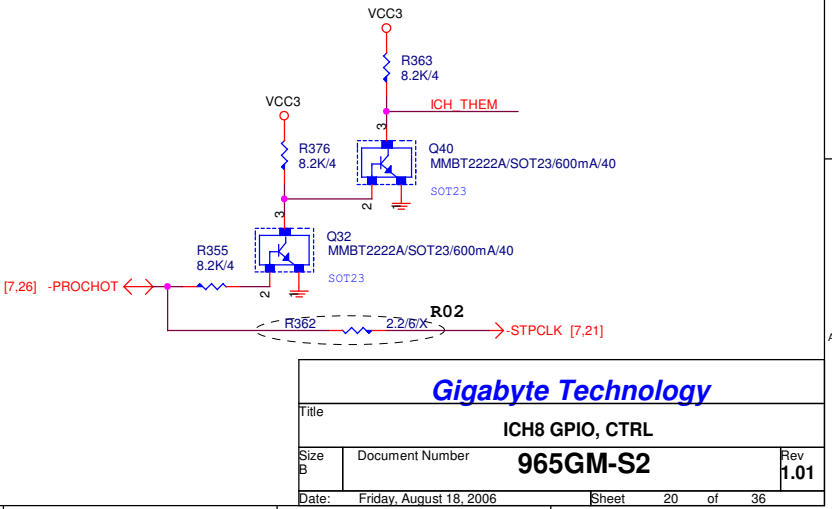
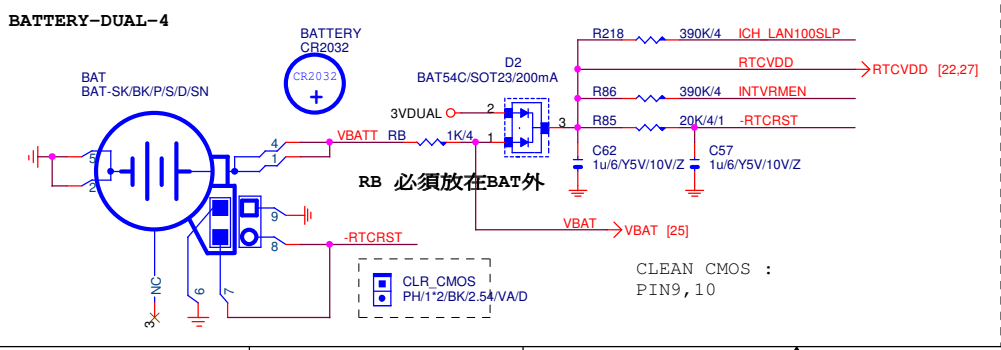
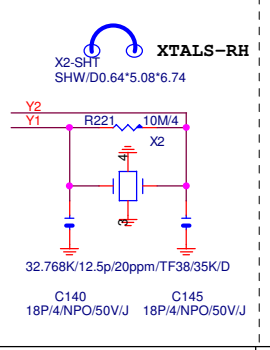
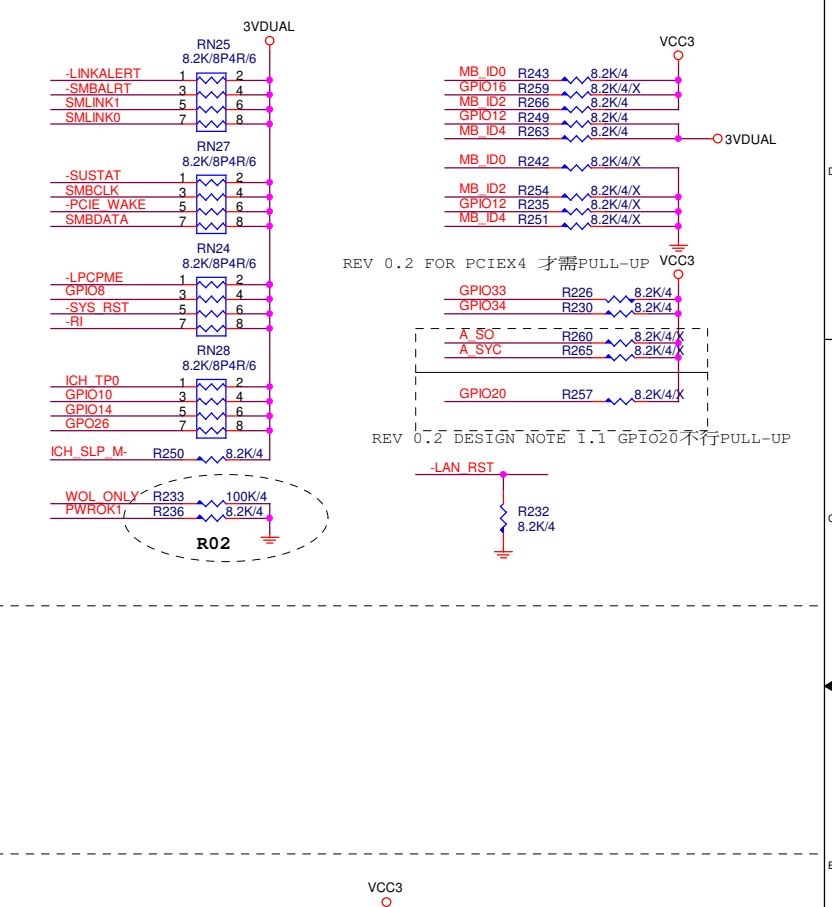
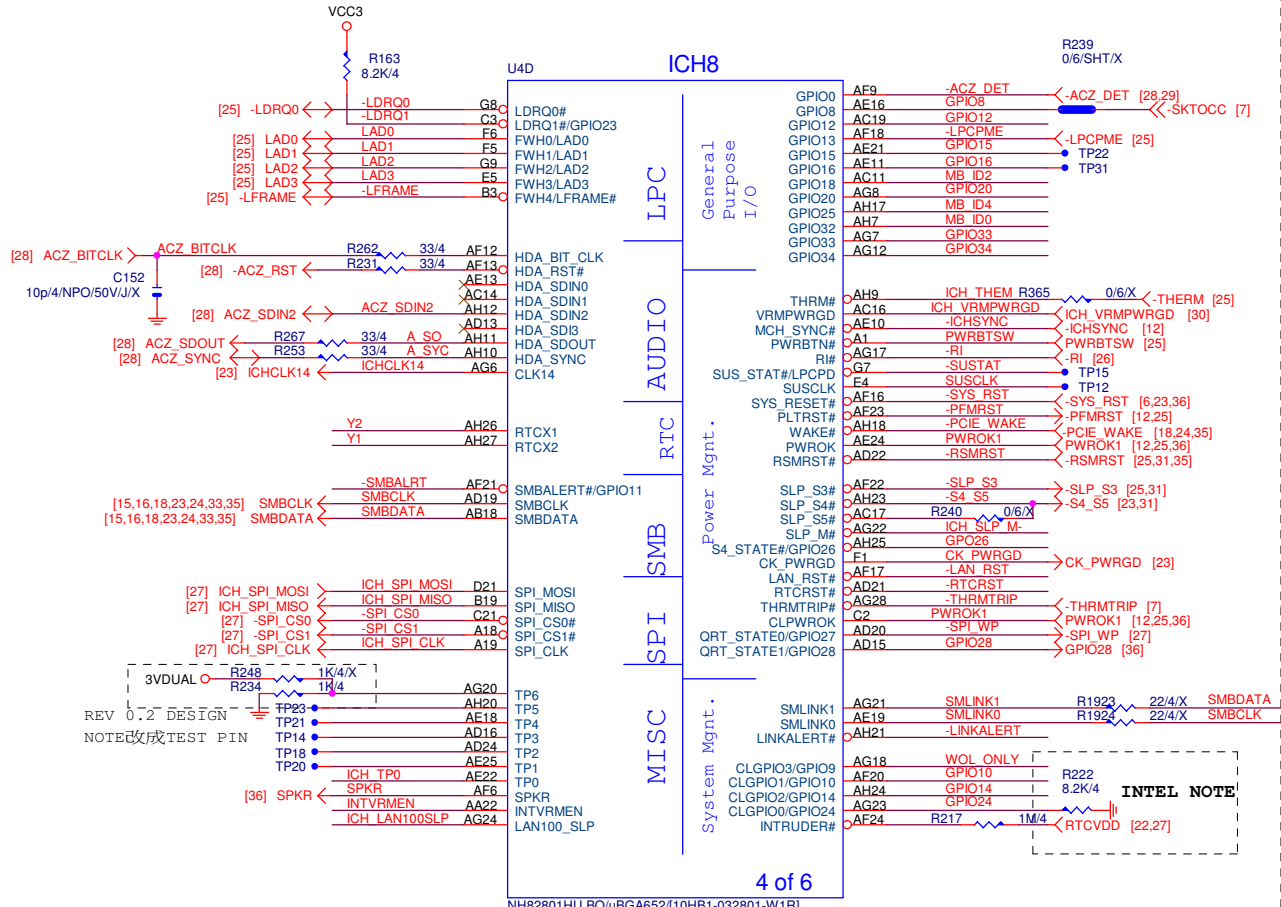
**Gigabyte Technology**

**PCI EXPRESS \* 16**

Title	Document Number		Rev
	<b>965GM-S2</b>		<b>1.01</b>
Date:	Friday, August 18, 2006	Sheet	18 of 36

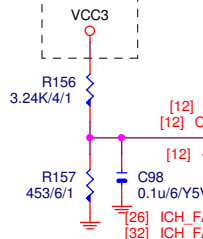


Title		
<b>Gigabyte Technology</b>		
<b>ICH8-PCI, DMI, LAN, USB</b>		
Size	Document Number	Rev
B	<b>965GM-S2</b>	<b>1.01</b>
Date:	Friday, August 18, 2006	Sheet 19 of 36



<b>Gigabyte Technology</b>		
Title <b>ICH8 GPIO, CTRL</b>		
Size B	Document Number <b>965GM-S2</b>	Rev <b>1.01</b>
Date: Friday, August 18, 2006	Sheet 20	of 36

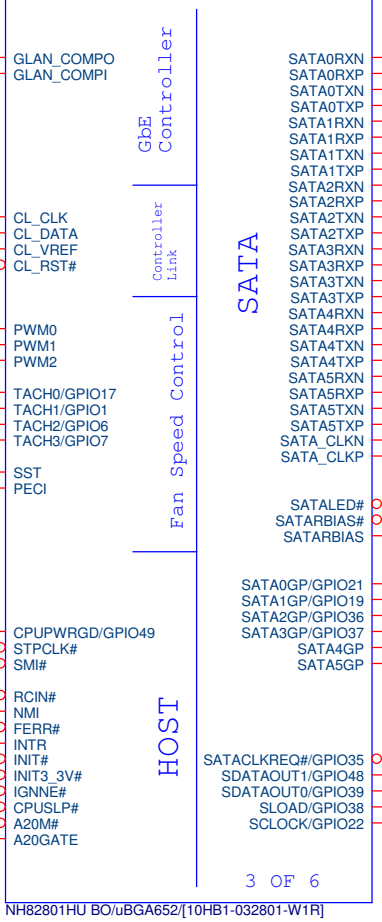
REV 0.2 修改成VCC3,  
否則造成不開機  
, -PCIRST/-PFMRST不會打



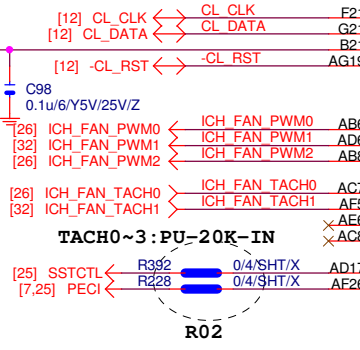
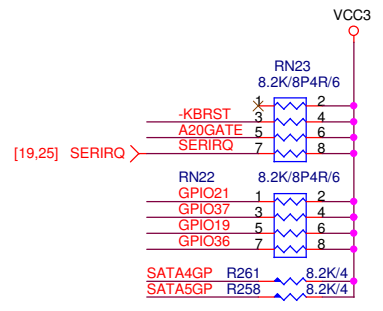
VCC1\_5



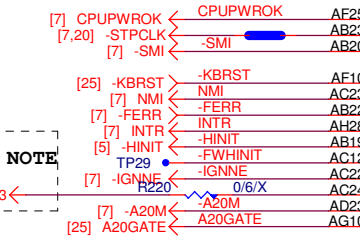
U4C ICH8



**INTEL NOTE: SATA I PORT**  
**ICH8: 4 (0/1/4/5 PORT, 2/3:N/A)**  
**ICH8DH: 6**  
**ICH8DO: 6**



R02

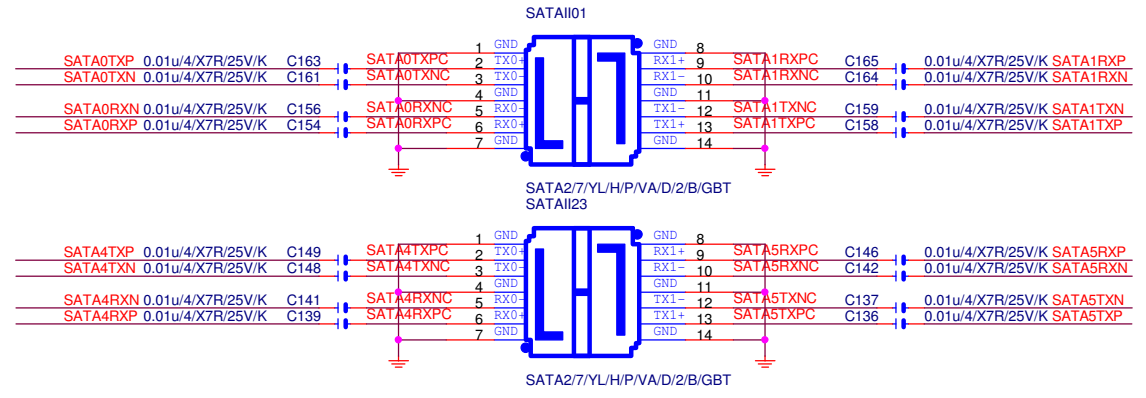


**INTEL NOTE**

[7] TESTHI13

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**

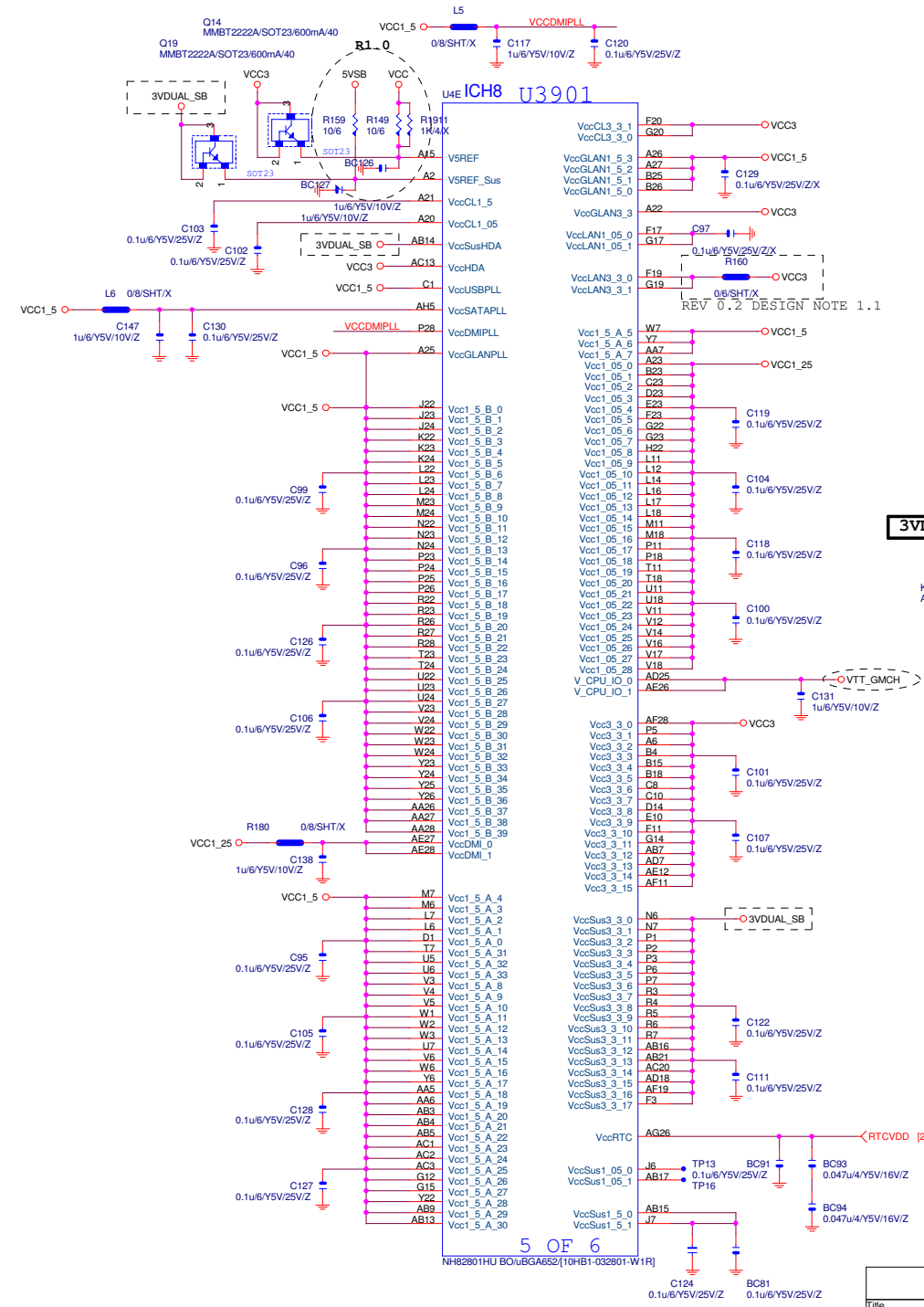
**ICH8- SATA, FAN CTRL**

Title	Document Number		Rev
	<b>965GM-S2</b>		<b>1.01</b>
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U4F ICH8	
R11	VSS_099
R12	VSS_100
R13	VSS_101
R14	VSS_102
R15	VSS_103
R16	VSS_104
R17	VSS_105
R18	VSS_106
T3	VSS_107
T4	VSS_108
T5	VSS_109
T6	VSS_110
T12	VSS_111
T13	VSS_112
T14	VSS_113
T15	VSS_114
T16	VSS_115
T17	VSS_116
T25	VSS_117
T26	VSS_118
U1	VSS_119
U2	VSS_120
U12	VSS_121
U13	VSS_122
U14	VSS_123
U15	VSS_124
U16	VSS_125
U17	VSS_126
U27	VSS_127
U28	VSS_128
V7	VSS_129
V13	VSS_130
V15	VSS_131
V22	VSS_132
V25	VSS_133
V26	VSS_134
V27	VSS_135
W28	VSS_136
W3	VSS_137
Y4	VSS_138
Y5	VSS_139
AA1	VSS_140
AA2	VSS_141
AA23	VSS_142
AB12	VSS_143
AB24	VSS_144
AB25	VSS_145
AB26	VSS_146
AC6	VSS_147
AC3	VSS_148
AC15	VSS_149
AC18	VSS_150
AC21	VSS_151
AC27	VSS_152
AC28	VSS_153
AD5	VSS_154
AD3	VSS_155
AD4	VSS_156
AD5	VSS_157
AD11	VSS_158
AD26	VSS_159
AE1	VSS_160
AE5	VSS_161
AE7	VSS_162
AE8	VSS_163
AE17	VSS_164
AE20	VSS_165
AE23	VSS_166
AF3	VSS_167
AF4	VSS_168
AG1	VSS_169
AG2	VSS_170
AG5	VSS_171
AG6	VSS_172
AG25	VSS_173
AG27	VSS_174
AH3	VSS_175
AH4	VSS_176
AH13	VSS_177
AH16	VSS_178
AH19	VSS_179
AH22	VSS_180
AH2	VSS_181
AH8	VSS_182
AF27	VSS_183
P4	VSS_184
F4	VSS_185
B22	VSS_186

6 OF 6

NH82801HU BOUBGA652[10H81-032801-W1R]

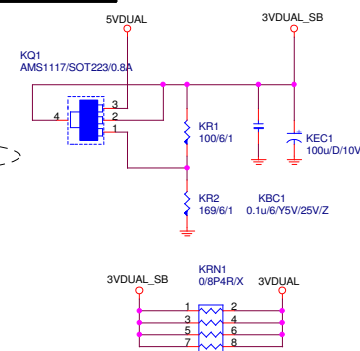


5 OF 6

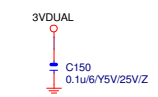
NH82801HU BOUBGA652[10H81-032801-W1R]

SIGNAL NAME	NO LAN
VccCL1_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

3VDUAL\_SB



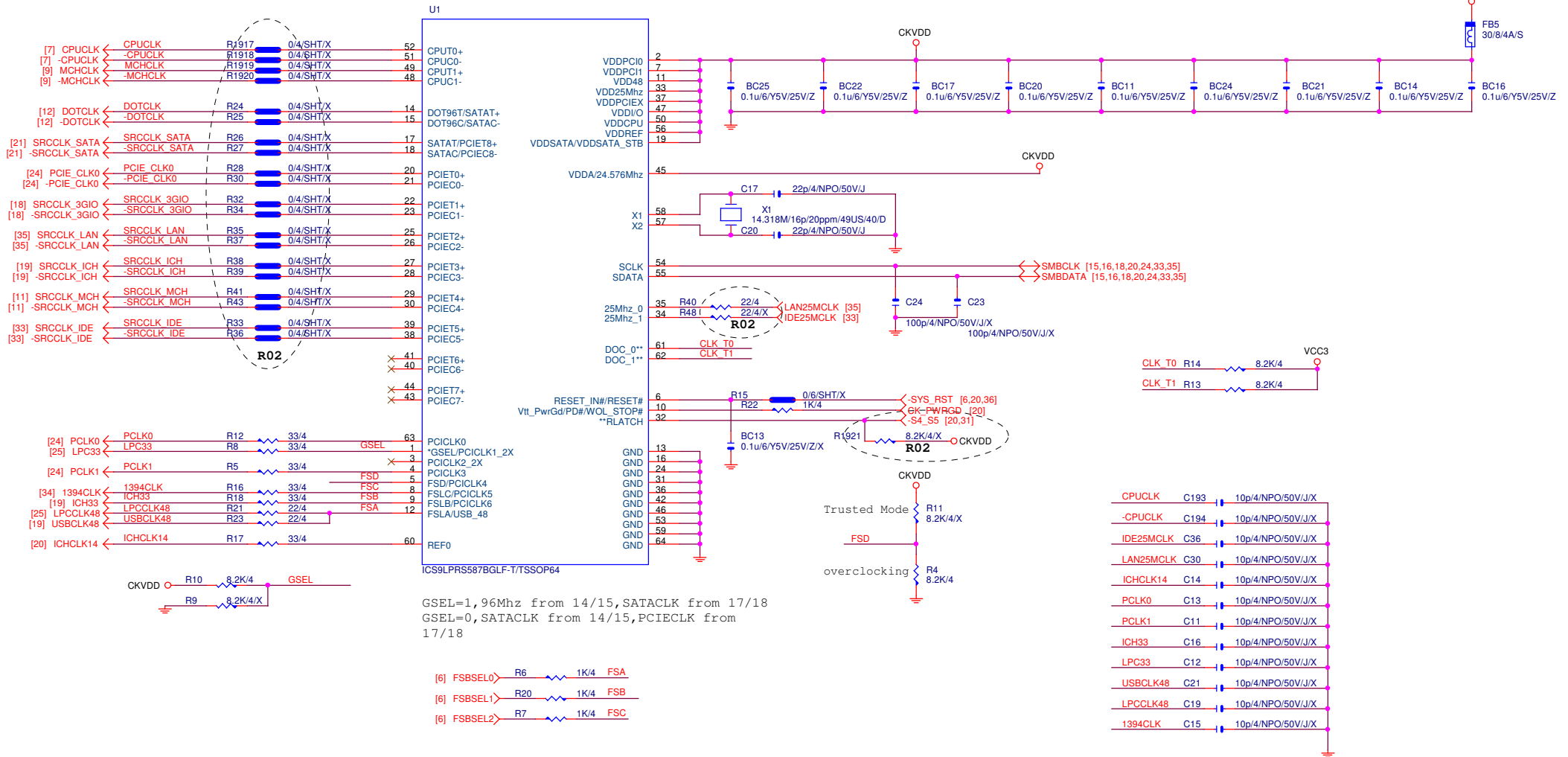
3VDUAL\_SB



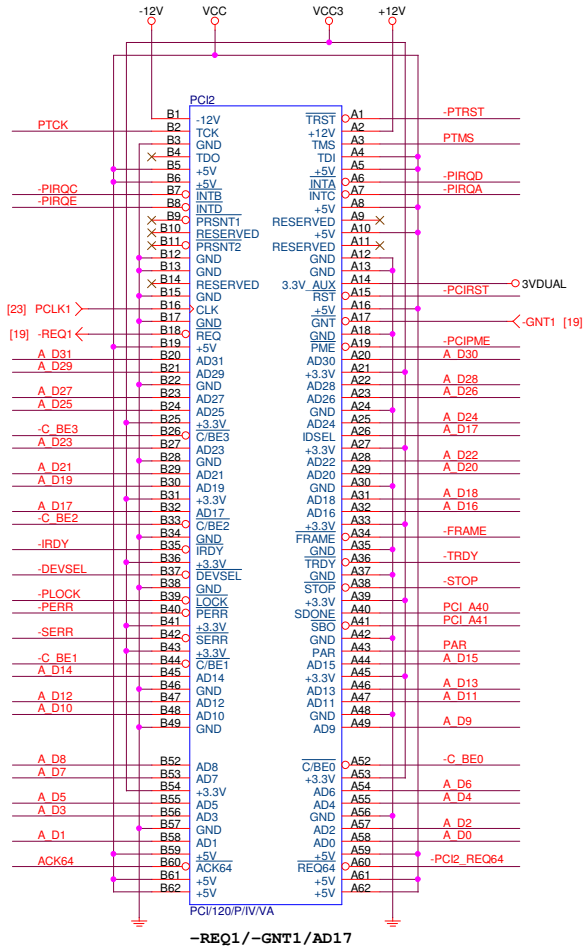
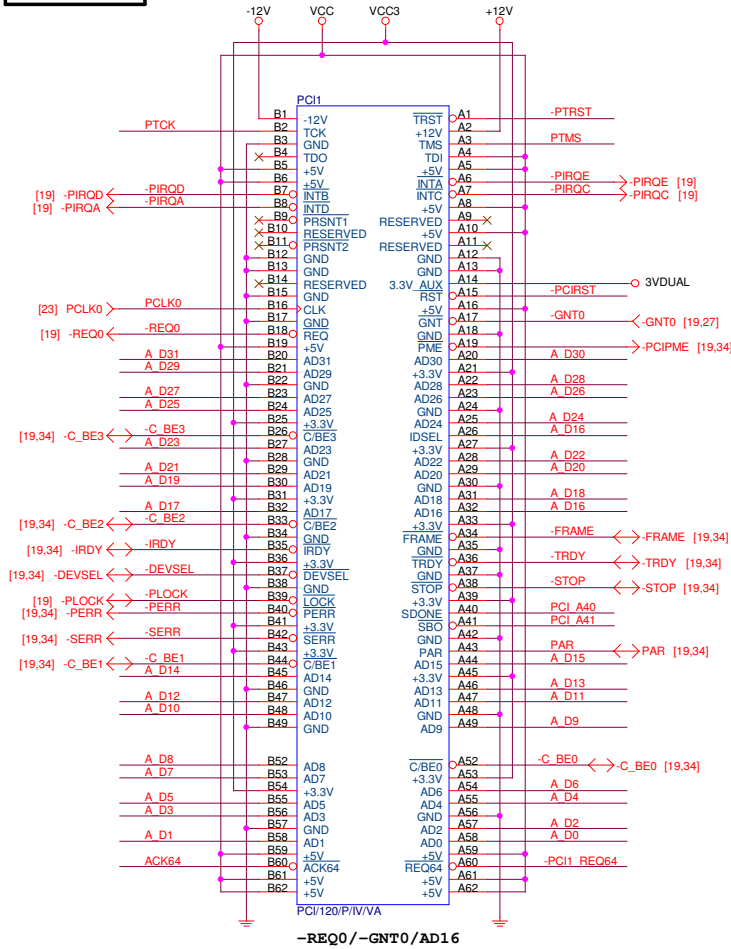
Gigabyte Technology

Title		ICH6-PWR & GND	
Size	Document Number	965GM-S2	
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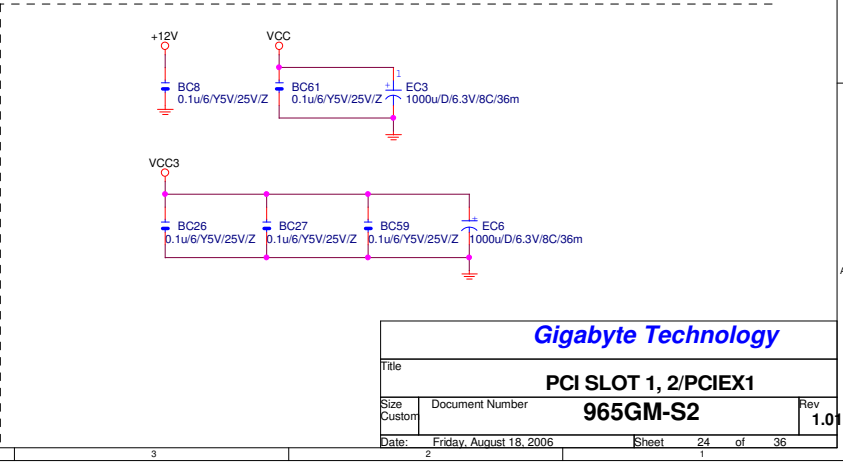
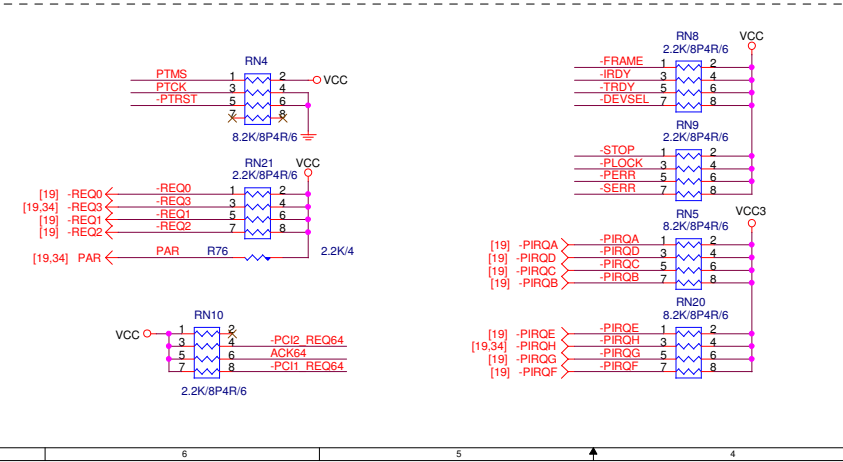
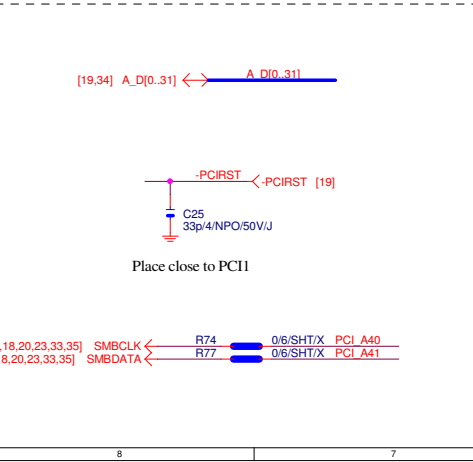
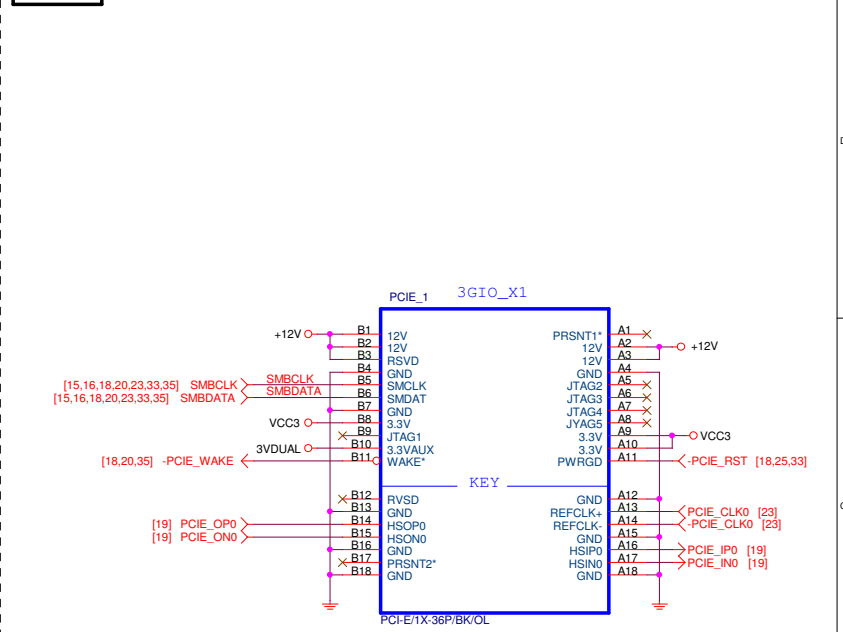




**PCI1, 2 SLOT**



**PCIe\*1**

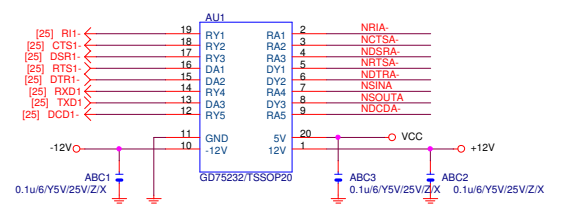


<b>Gigabyte Technology</b>		
<b>PCI SLOT 1, 2/PCIEX1</b>		
<b>965GM-S2</b>		Rev 1.01
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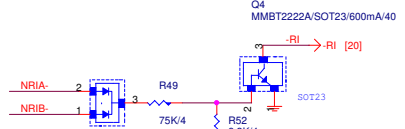




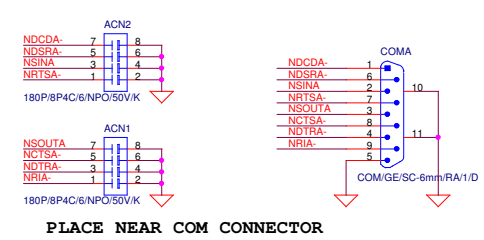
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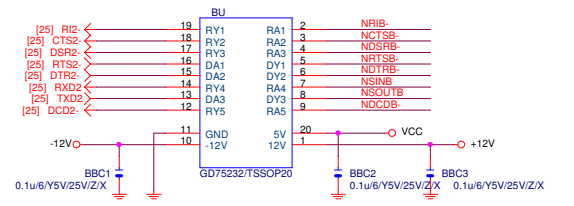
**COM RI**



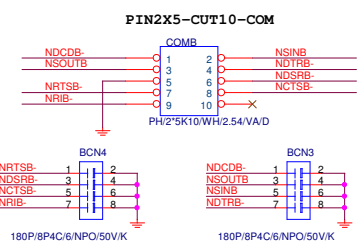
**EXTERNAL COMA**



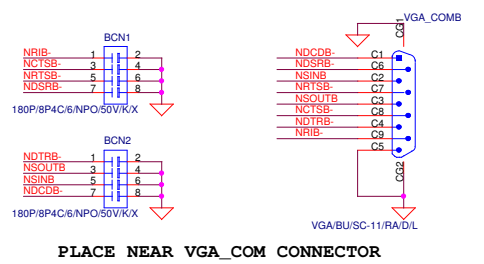
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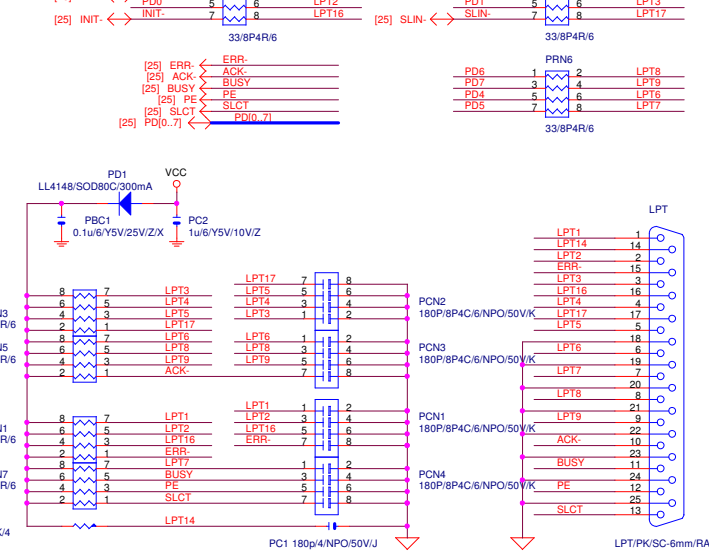
**INTERNAL COMB**



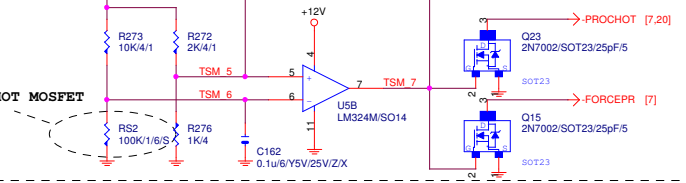
**EXTERNAL COMB**



**LPT PORT**

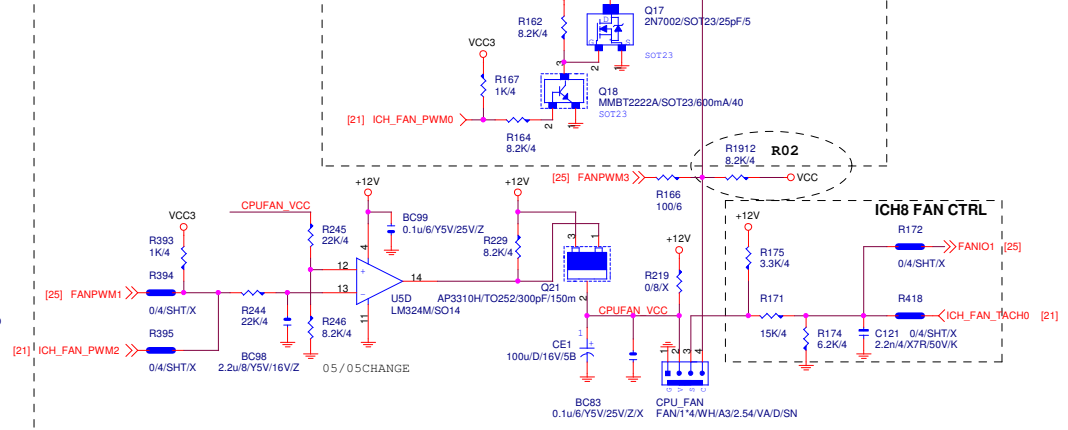


**-PROHOT**

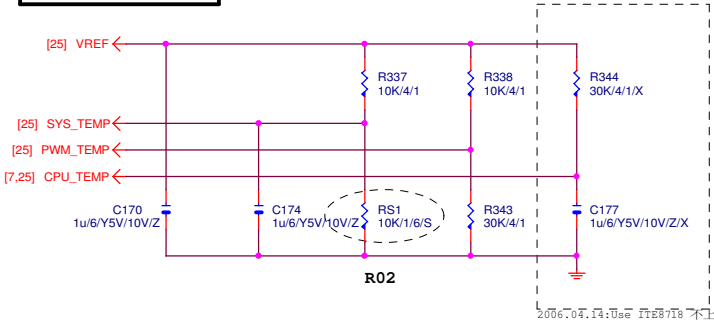


**CPU SMART FAN**

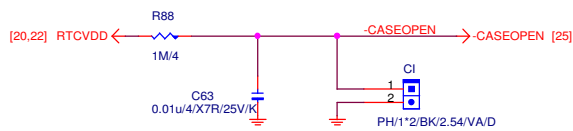
**ICH8 FAN CTRL**



**TEMP H/W MONITOR**

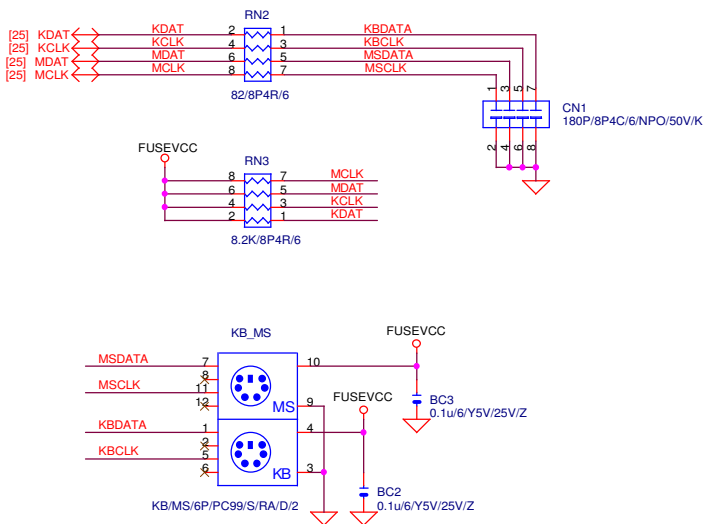


**CASE OPEN**

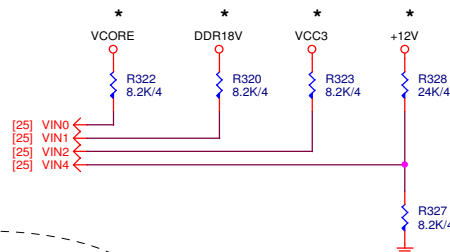


Case Open Circuits

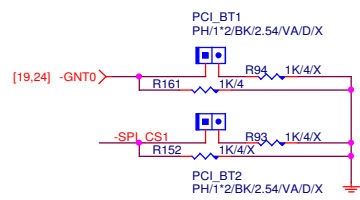
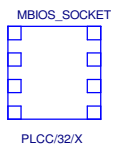
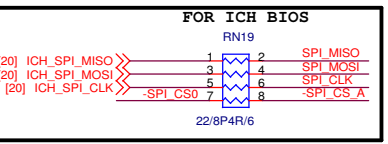
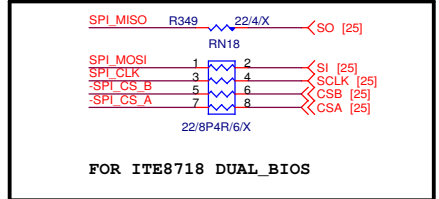
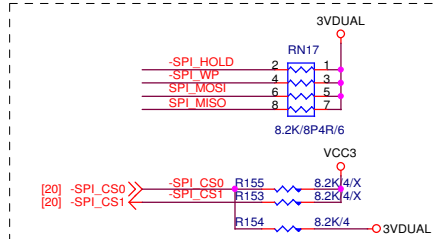
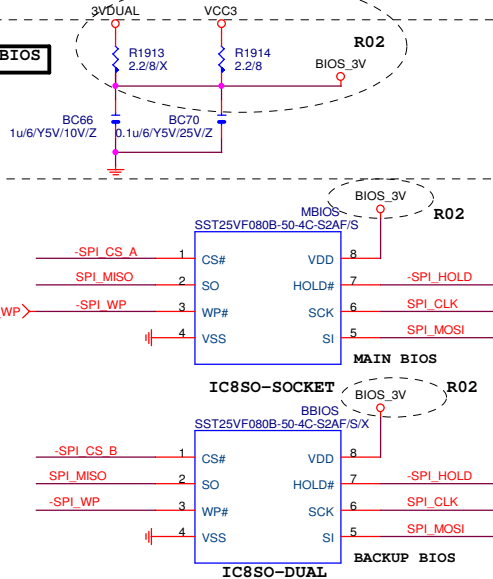
**KB/MS**



**VOLTAGE-- H/W MONITOR**

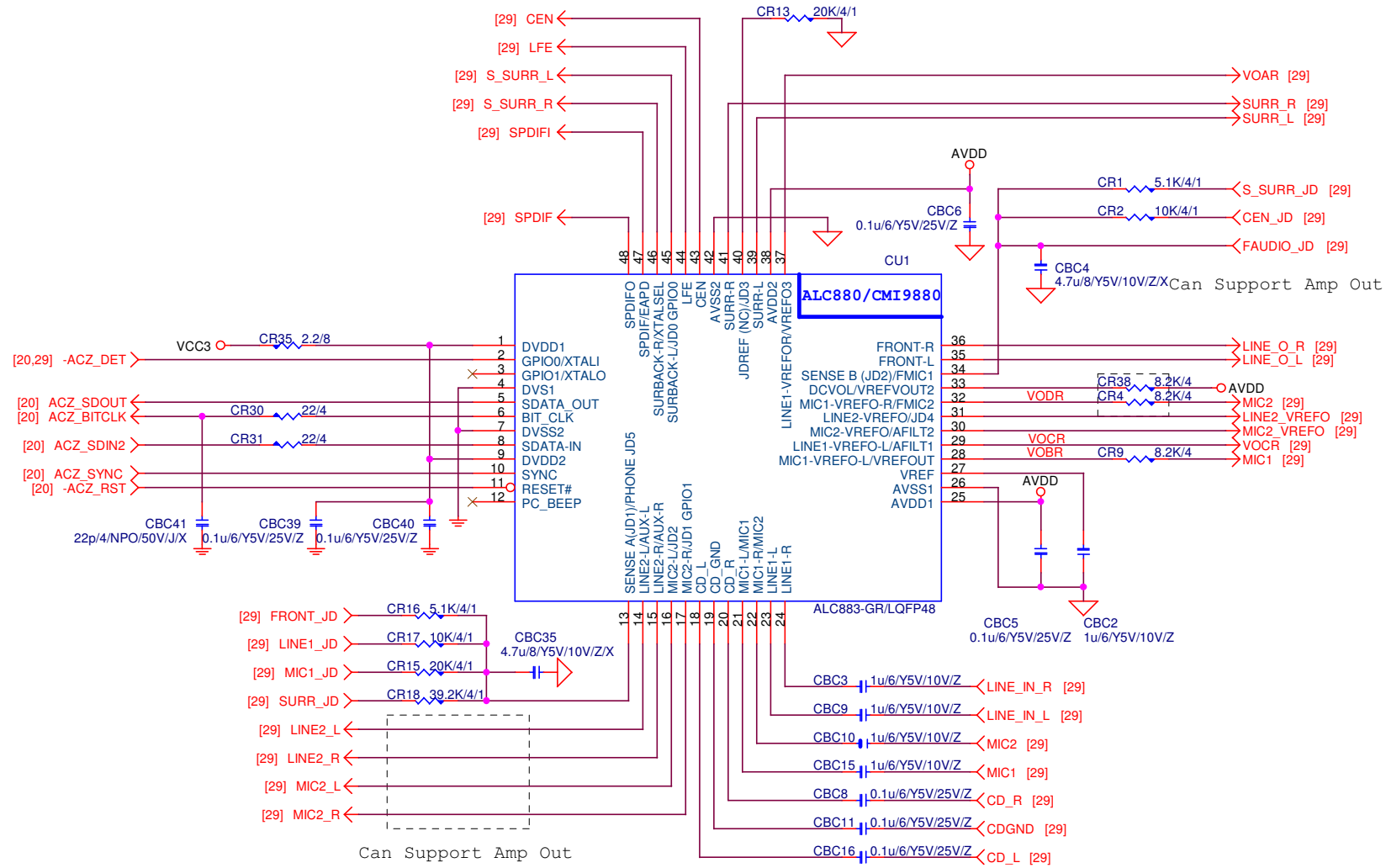


**SPI BIOS**



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

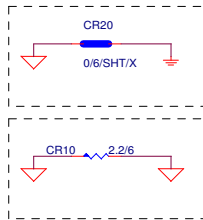
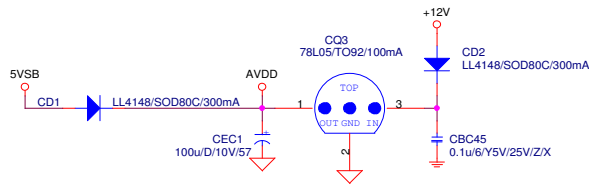
**Gigabyte Technology**



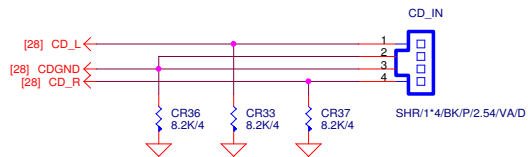
Gigabyte Technology

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AZALIA ALC883		
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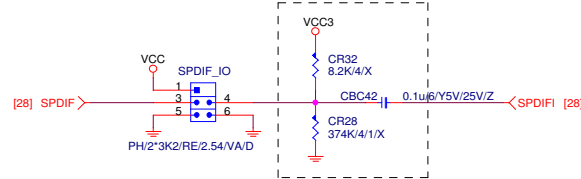
**CODEC POWER/EMI PAD**



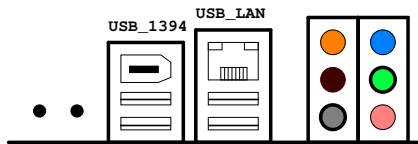
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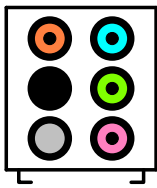
**SPDIF**



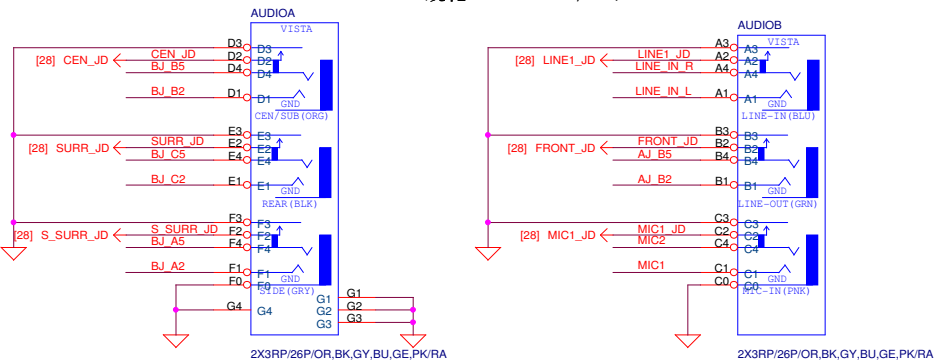
**AZALIA JACK**



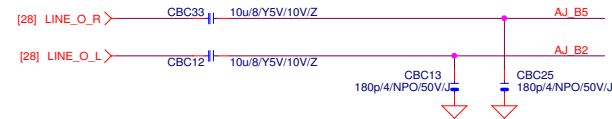
**BTX AZALIA CONNECTOR**



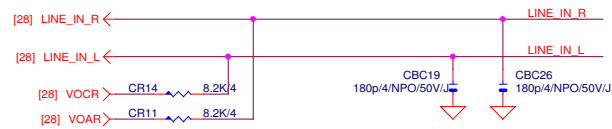
3RP/26P/OR, BK, GY, BU, GE, PK/RA/D/1/B  
VISTA規範: REAR-->BLK, CEN/SUB-->ORG



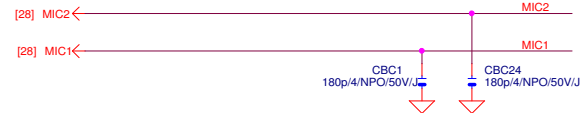
**LINE-OUT**



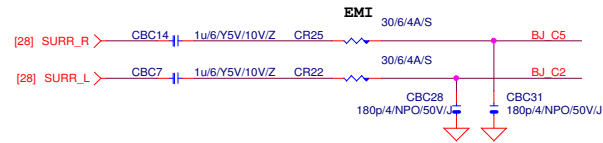
**LINE-IN**



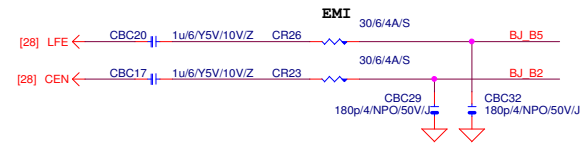
**MIC-IN**



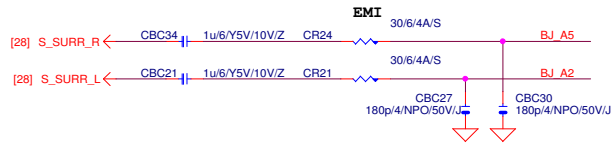
**SURROUND**



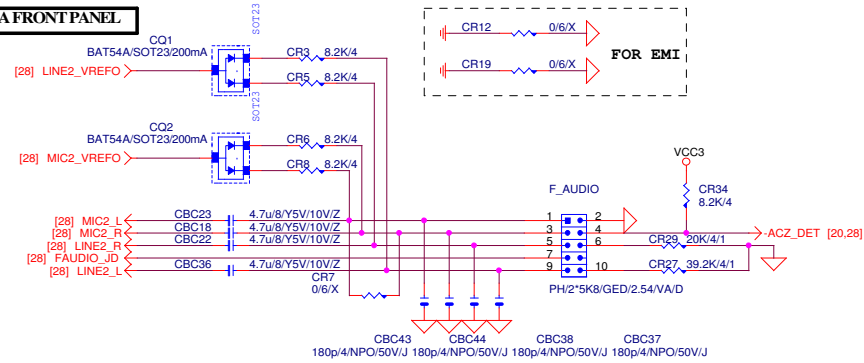
**CEN/LFE**



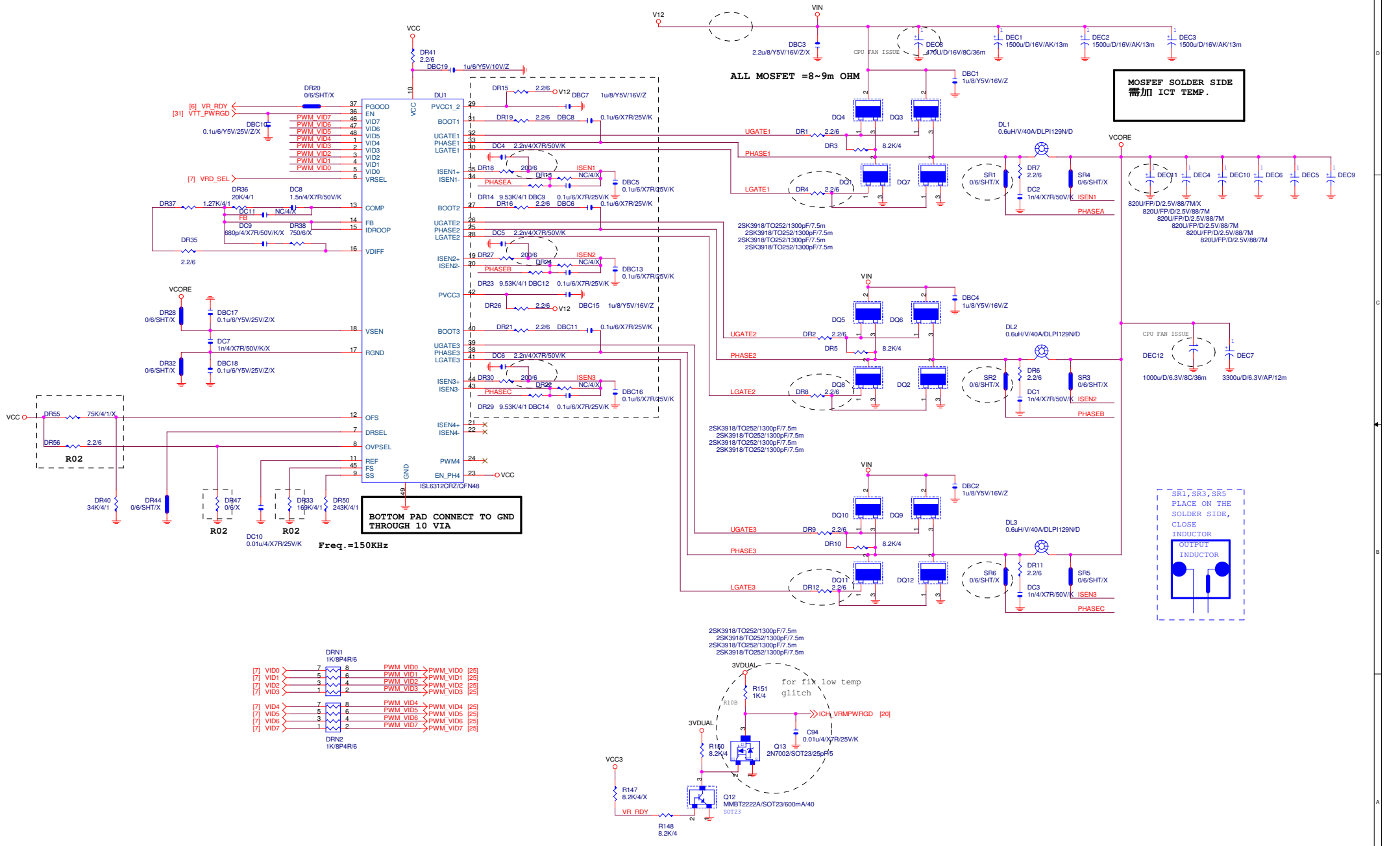
**SURRBACK**



**AZALIA FRONT PANEL**

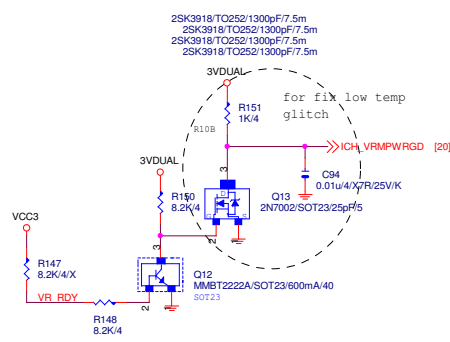
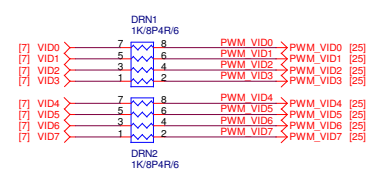
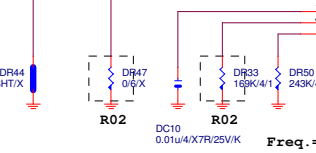
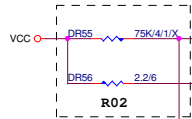
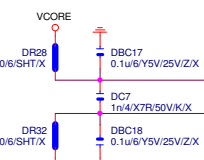
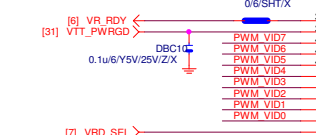
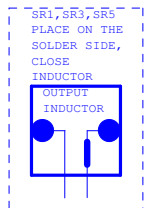


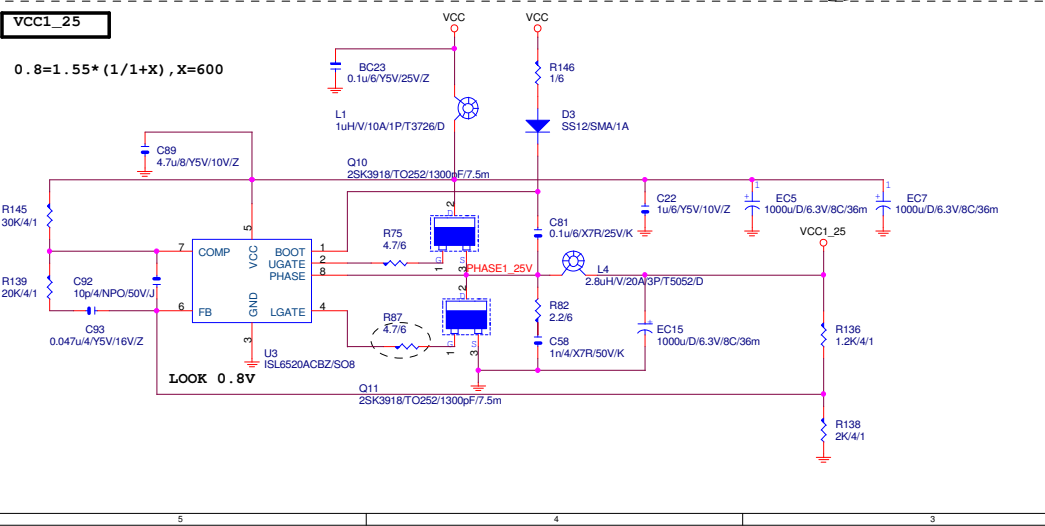
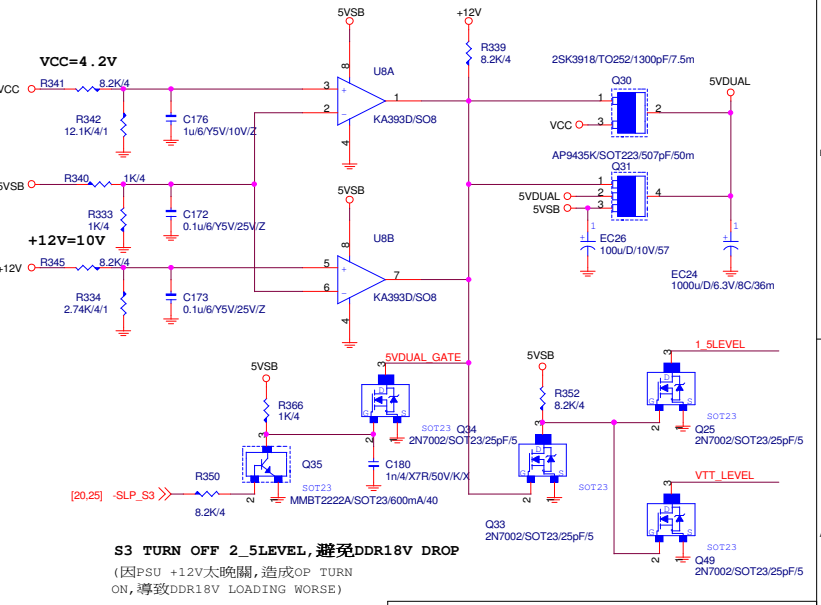
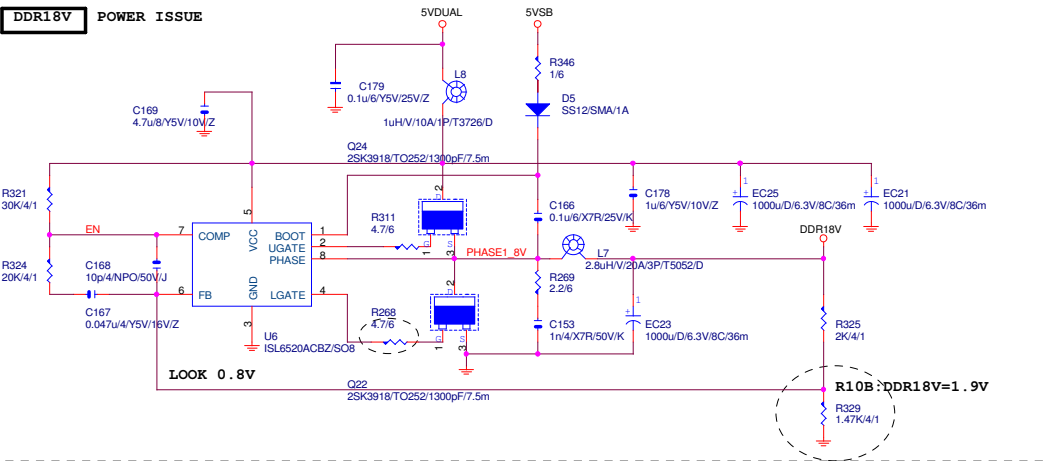
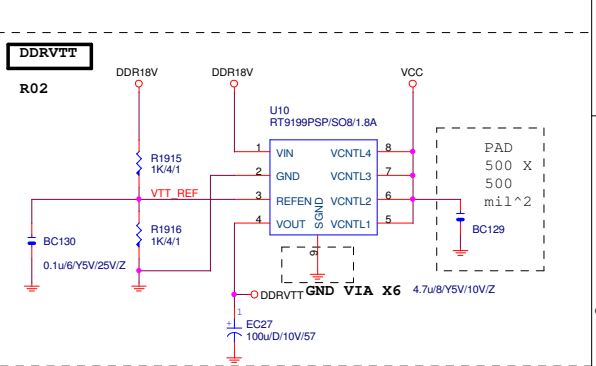
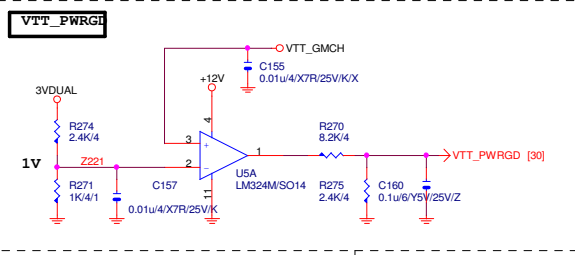
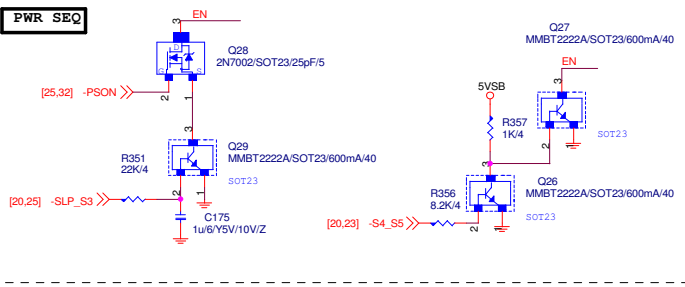
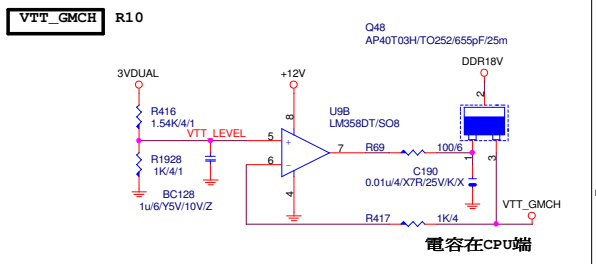
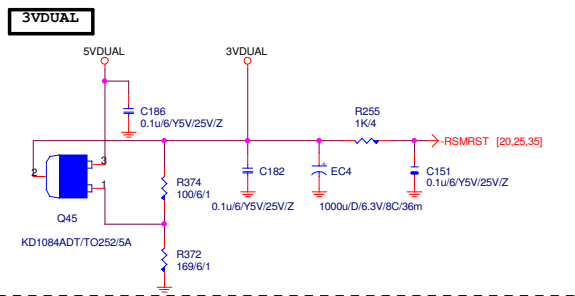
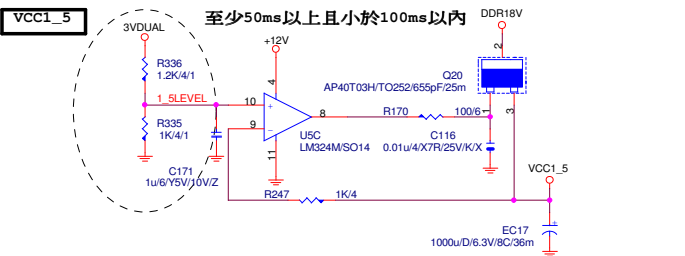
<b>Gigabyte Technology</b>		
<b>AUDIO JACK</b>		
<b>965GM-S2</b>		
Title	Document Number	Rev
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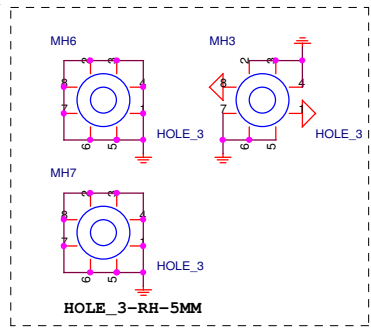
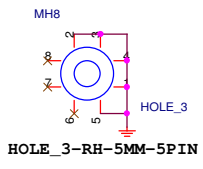
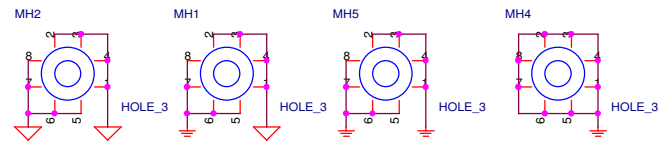
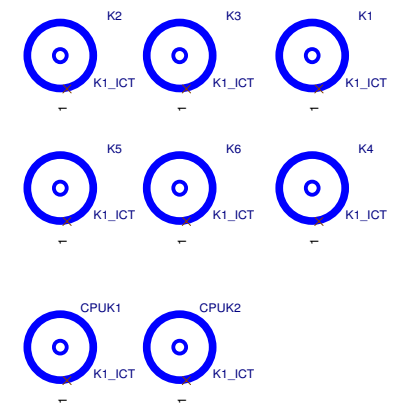
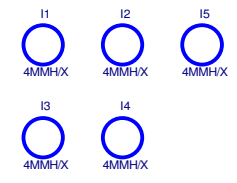
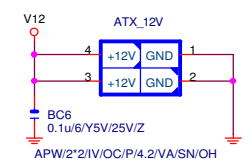
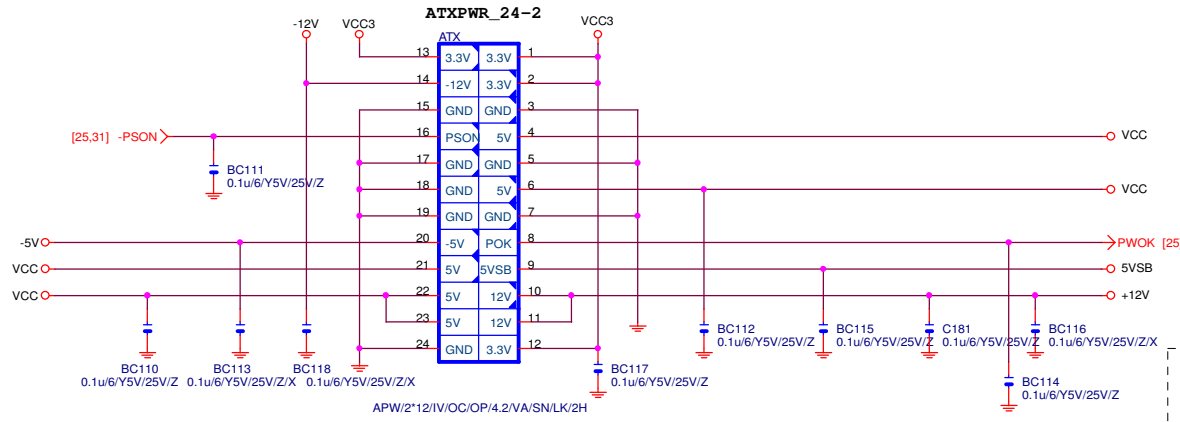
MOSFET SOLDER SIDE  
需加 ICT TEMP.

BOTTOM PAD CONNECT TO GND  
THROUGH 10 VIA

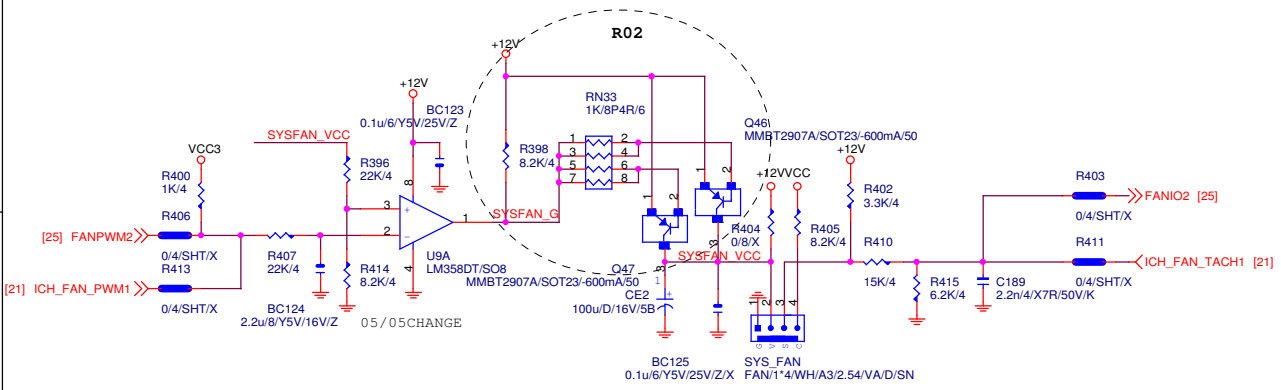




# ATX POWER CONNECTOR

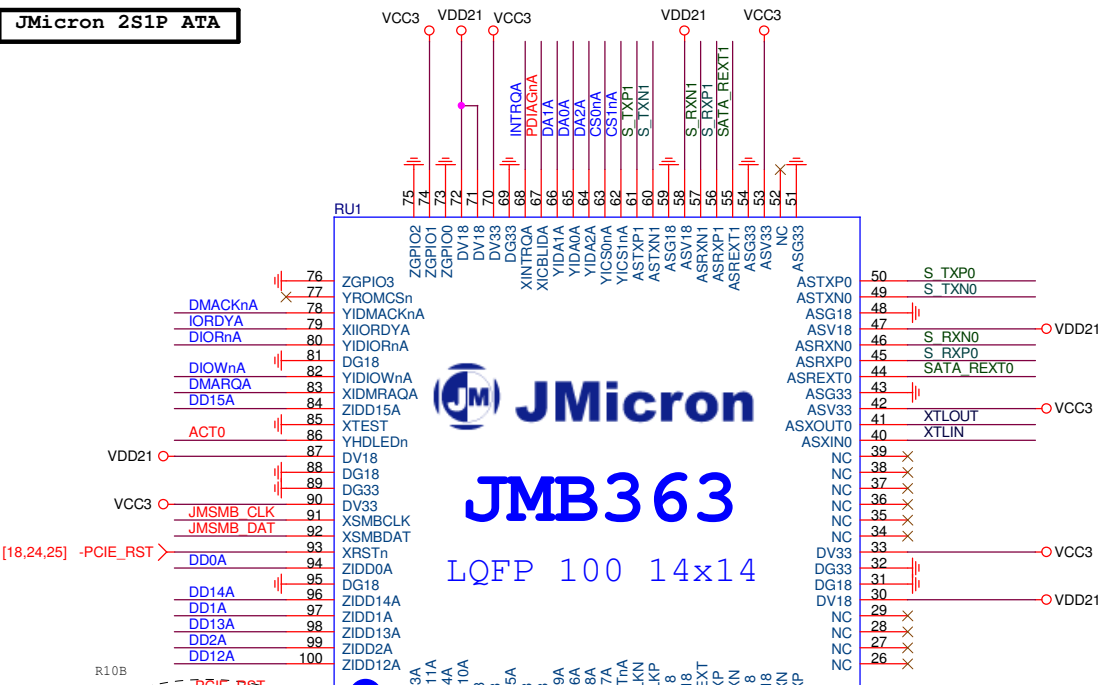


## SYS SMART FAN

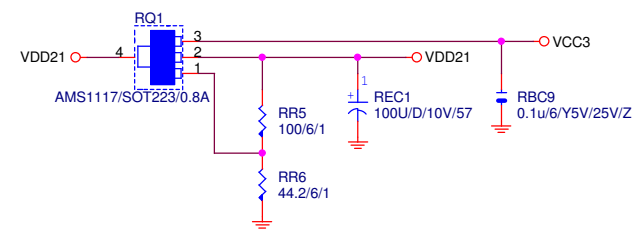




**JMicron 2S1P ATA**

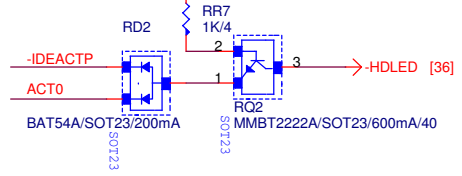


**3.3V to 1.8V Voltage Regulator**

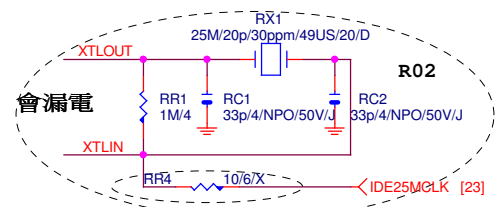
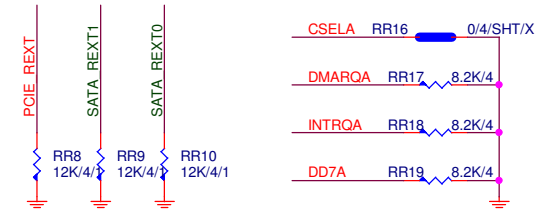


JMicron suggest to change 1.8V to 2.1V

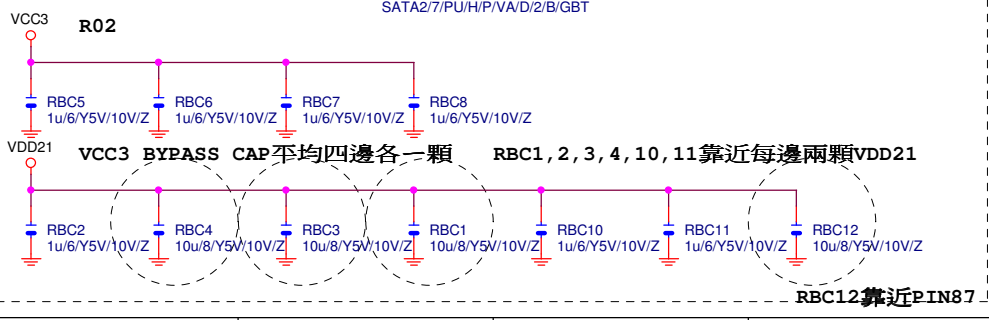
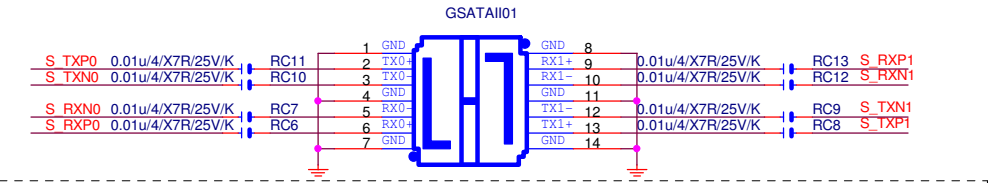
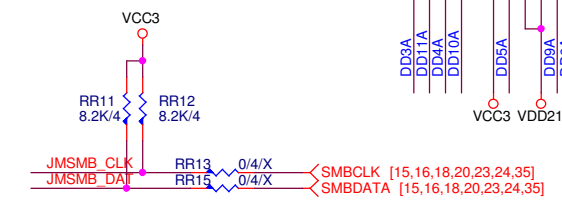
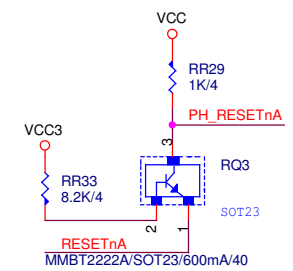
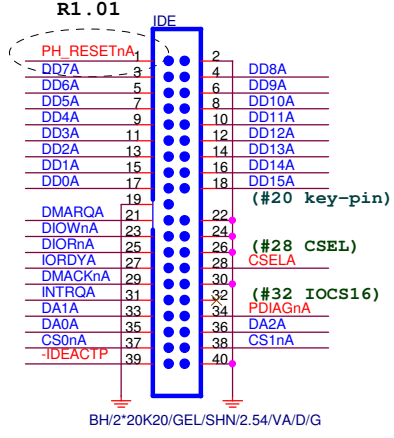
**Active LED**

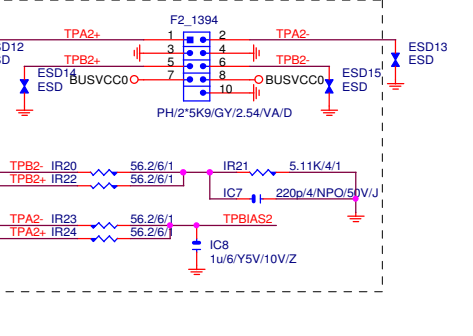
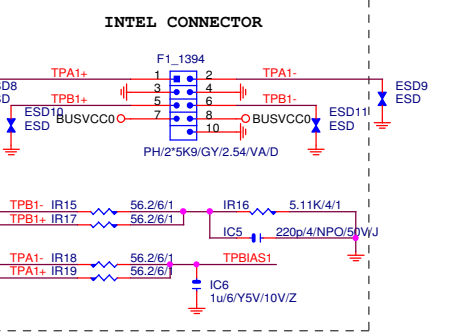
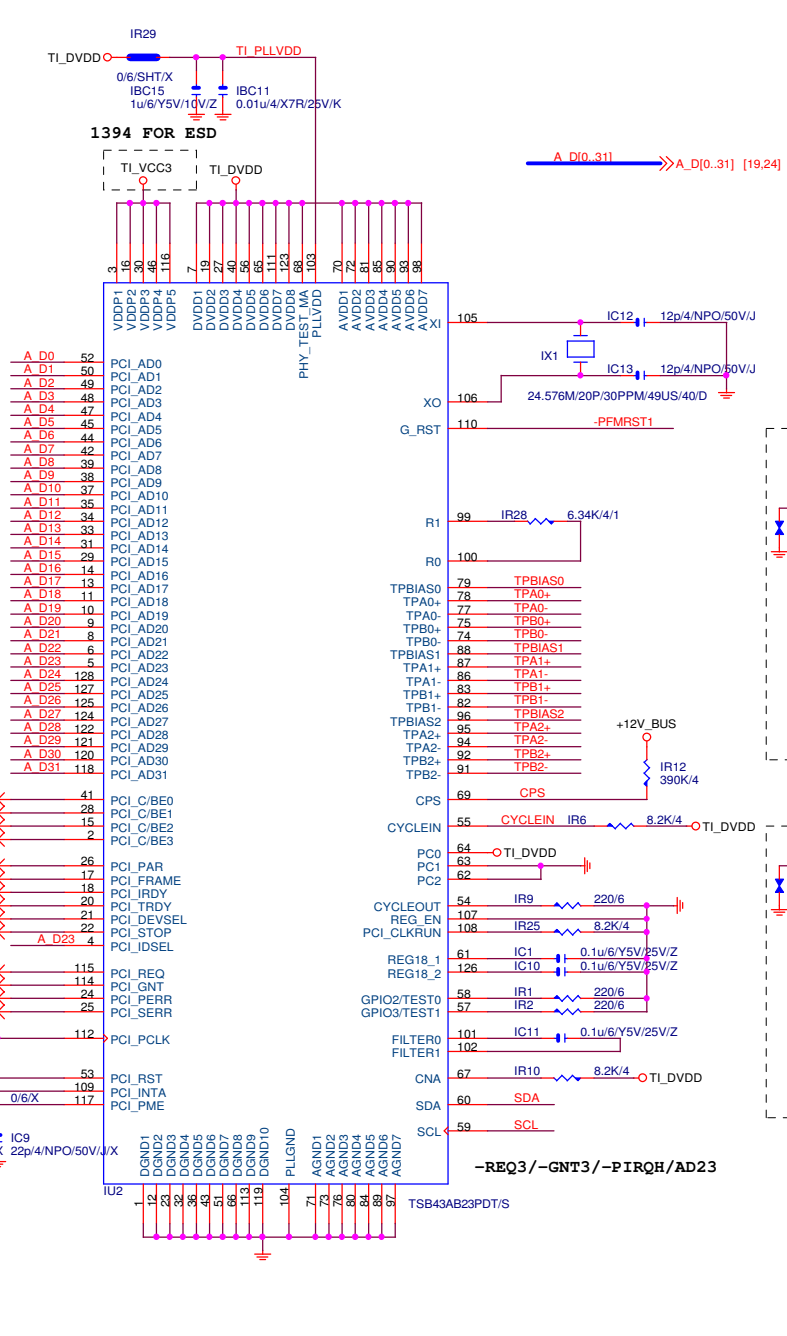
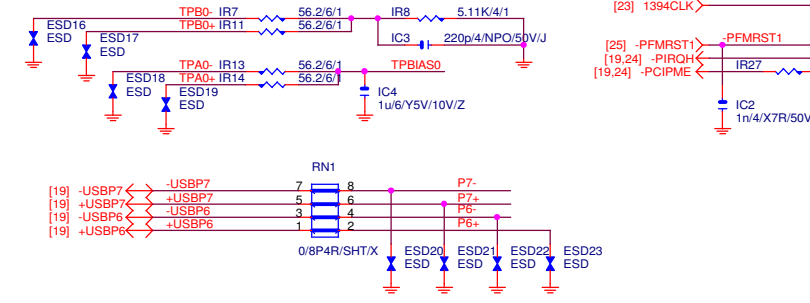
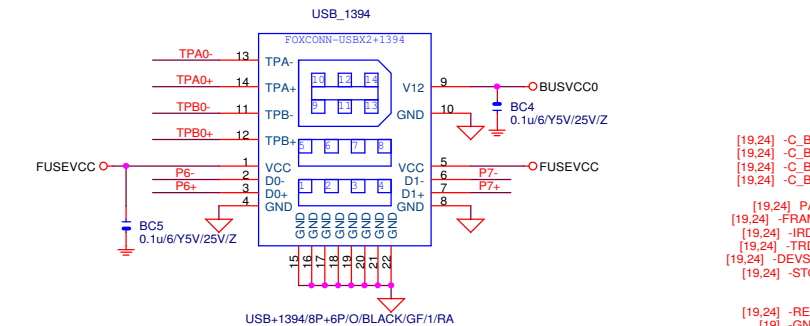
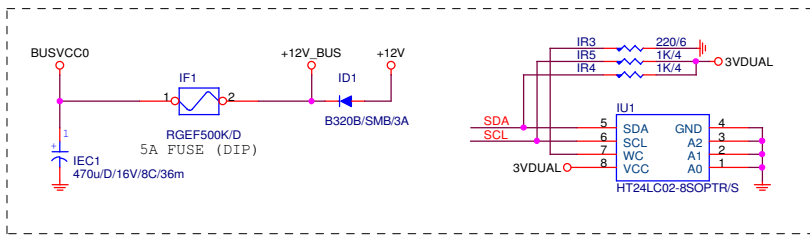
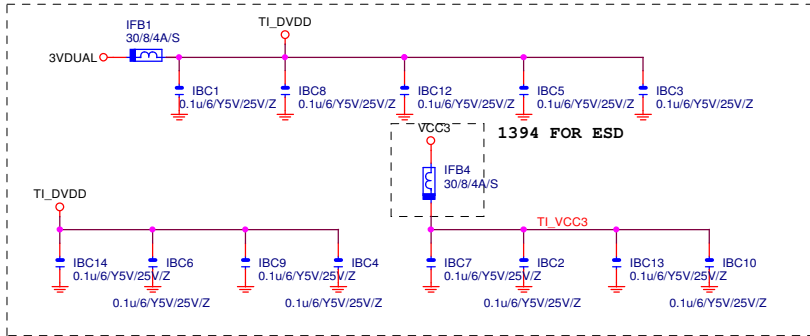


**Near to PIN**



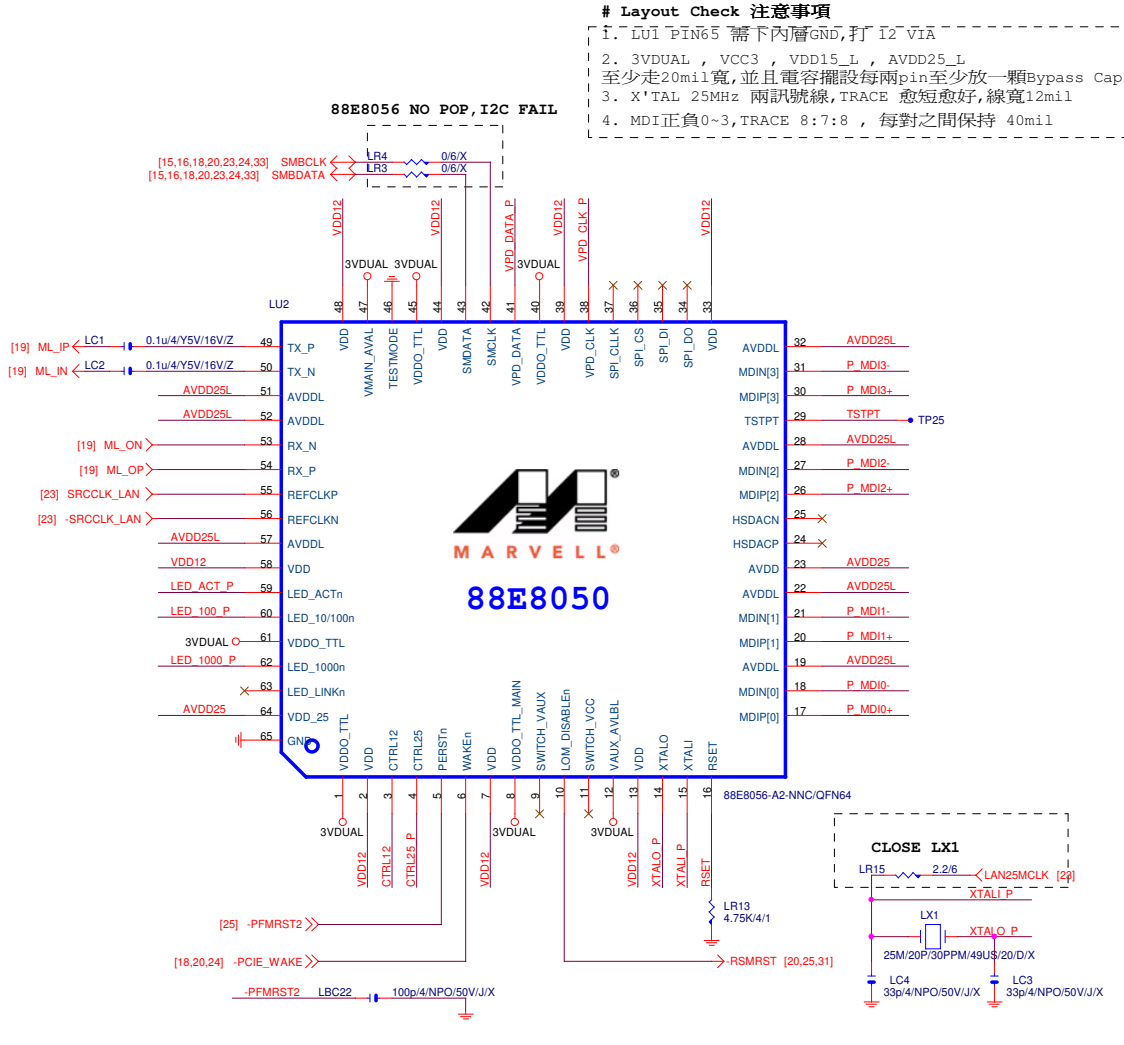
**IDE Connector**



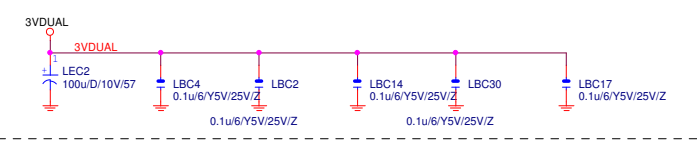


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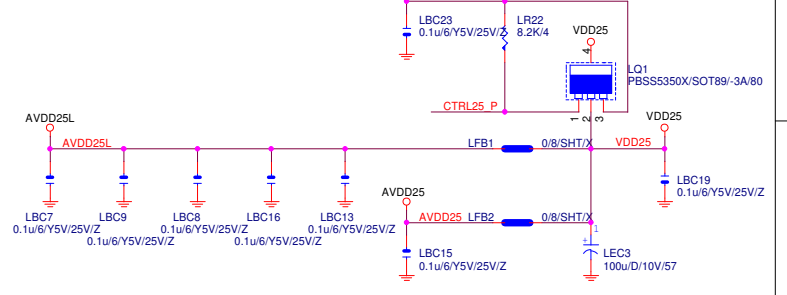
**PCIE-1G LAN**



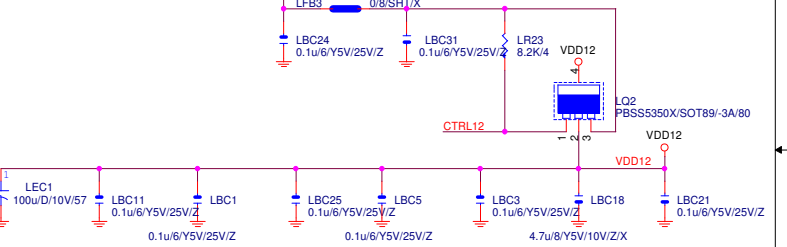
**3VDUAL**



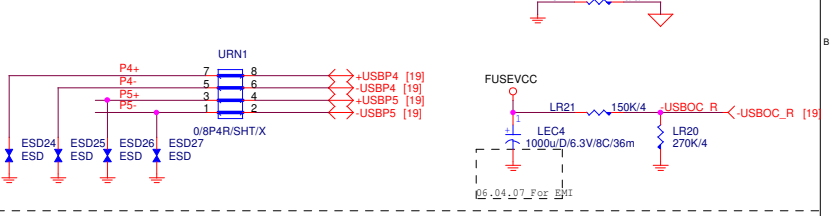
**2.5V**



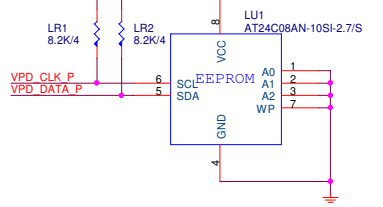
**1.2V**



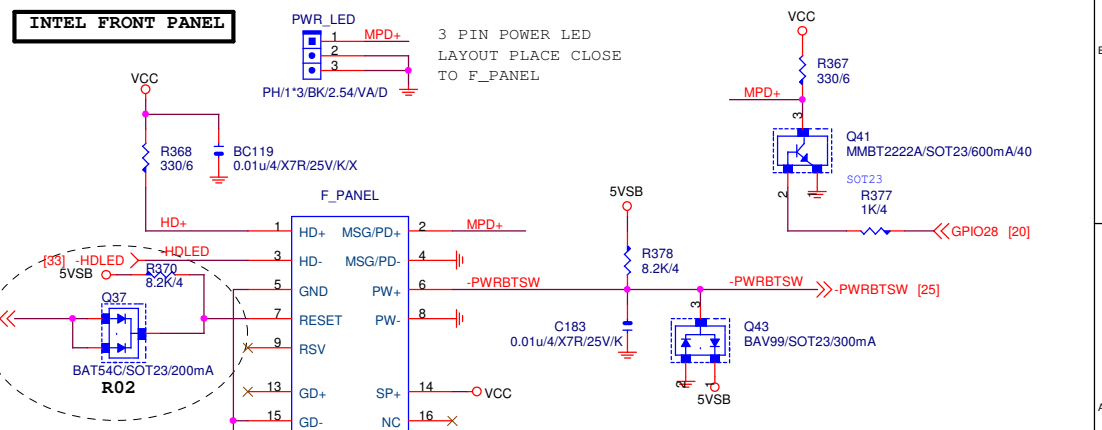
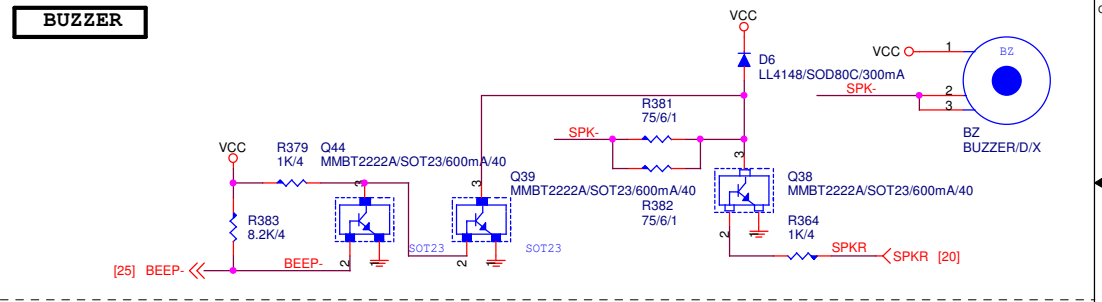
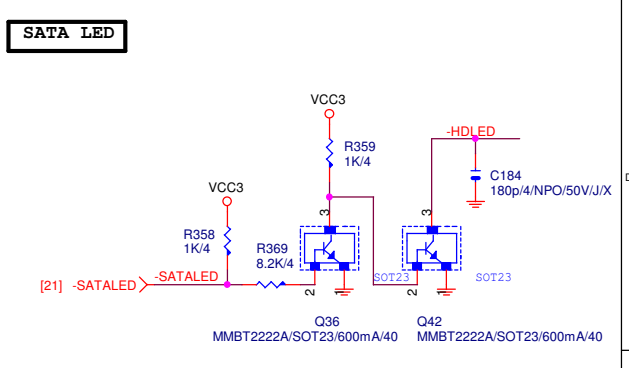
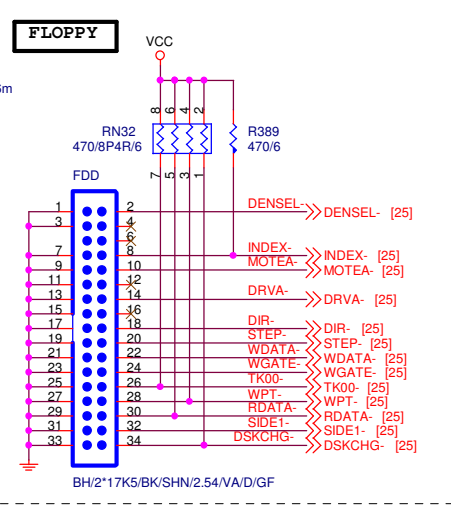
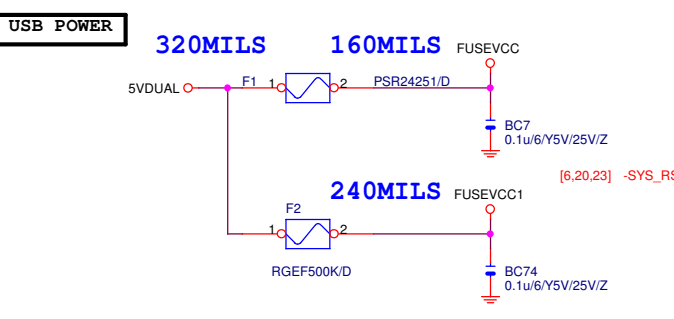
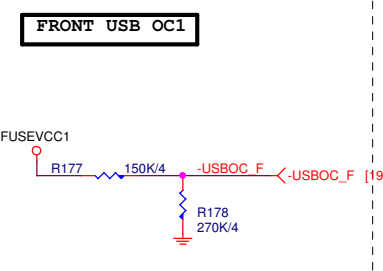
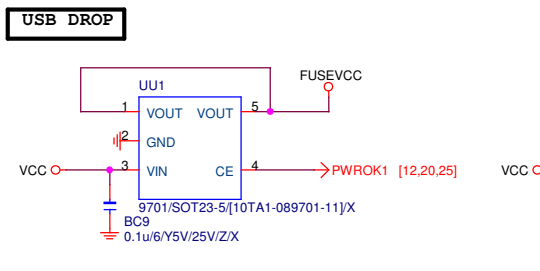
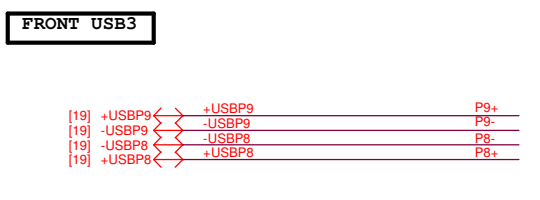
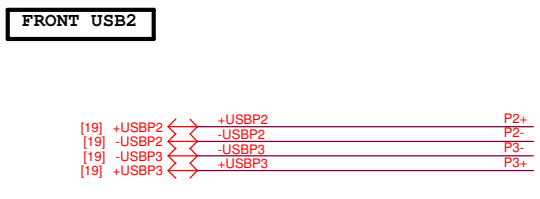
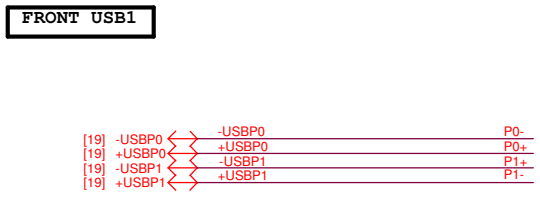
**USB\_LAN**



**EEPROM**



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