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SHEET TITLE

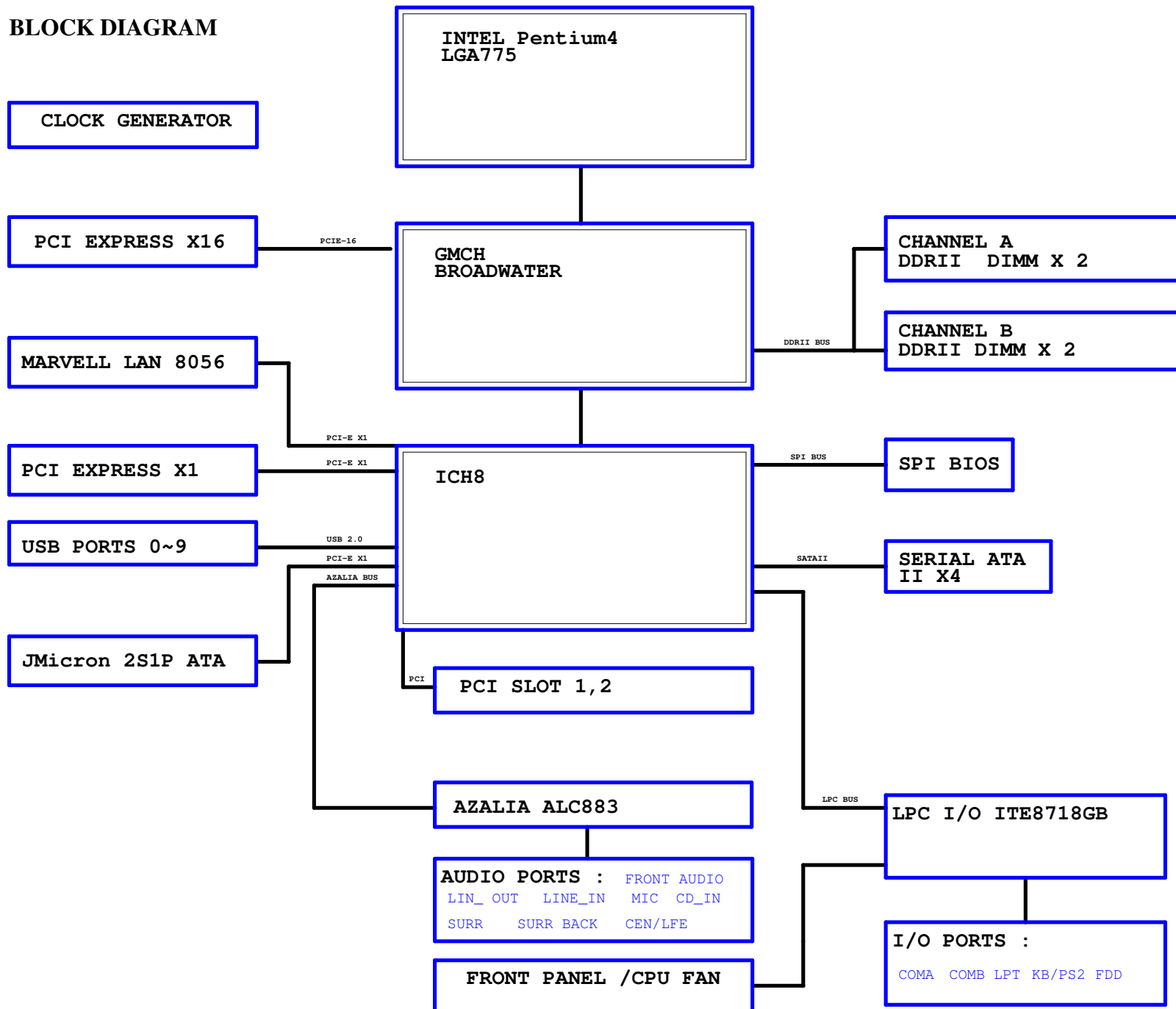
28	AZALIA ALC883
29	AUDIO JACK
30	VCORE PWM ISL6312
31	DISCRETE POWER
32	ATX POWER
33	JMicron 2S1P ATA
34	1394 TI TSB43AB23
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36	FAN CONTROL
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Gigabyte Technology

Cover Sheet

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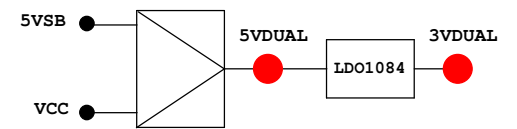
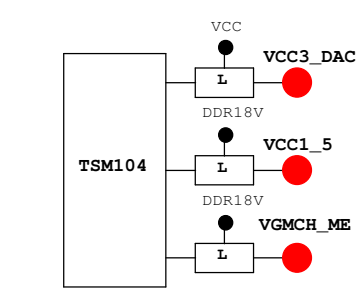
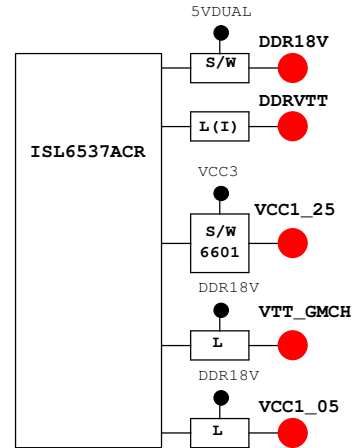
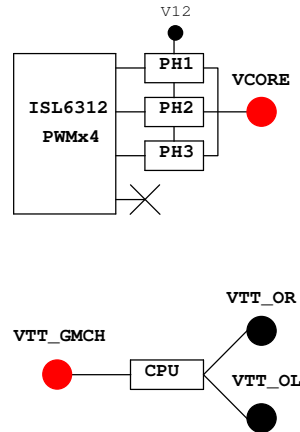
BLOCK DIAGRAM



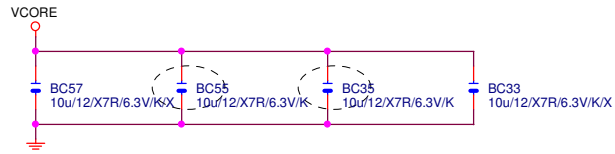
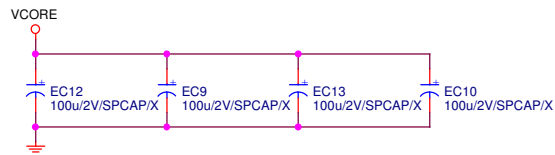
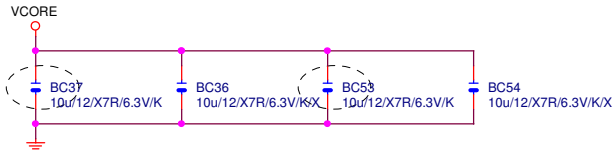
ICH8 GPIO LIST TABLE

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

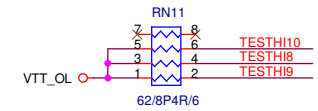
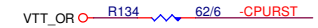
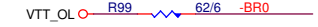
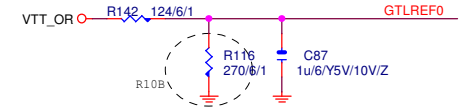
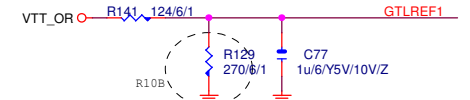
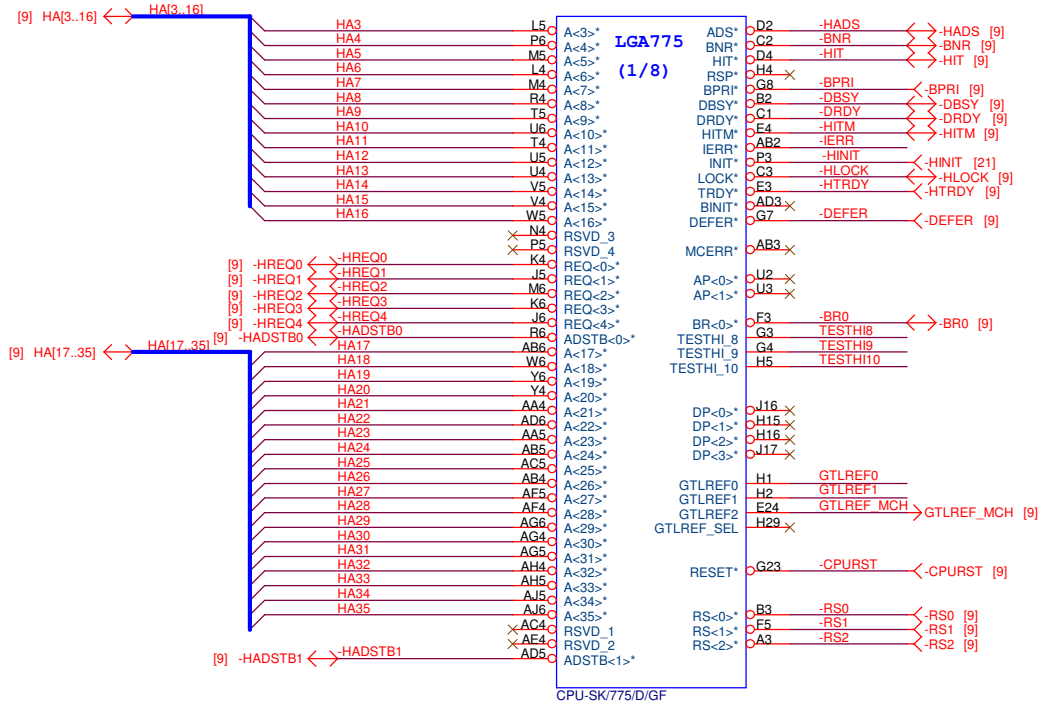


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TABLE LIST		
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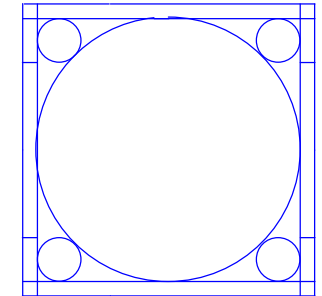


LGA775-D : FOOTPRINT

LGA775A

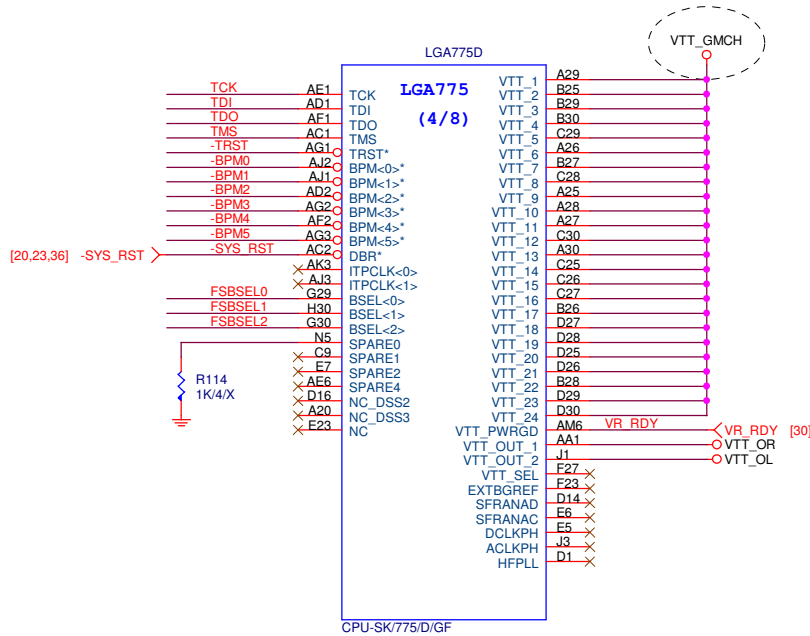
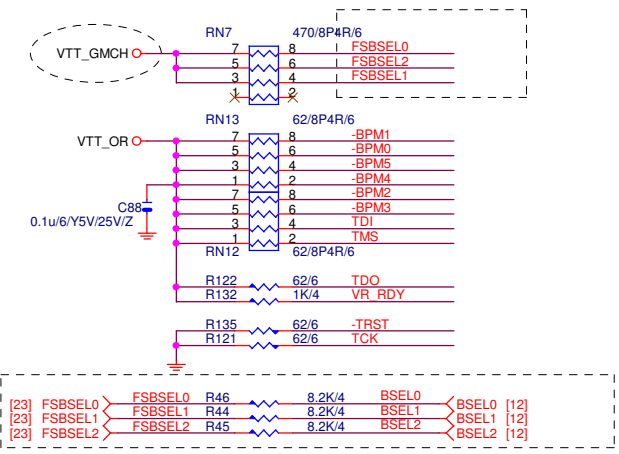
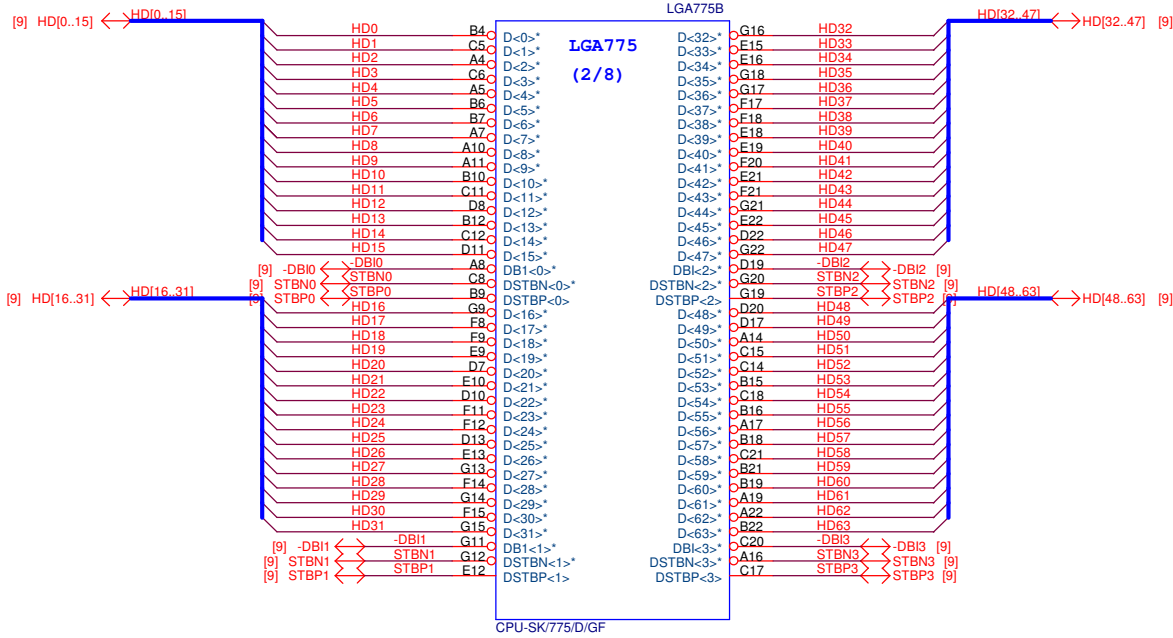


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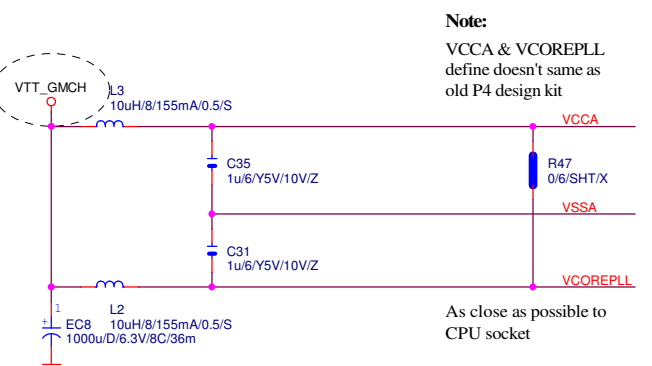


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P4_LGA775-A		
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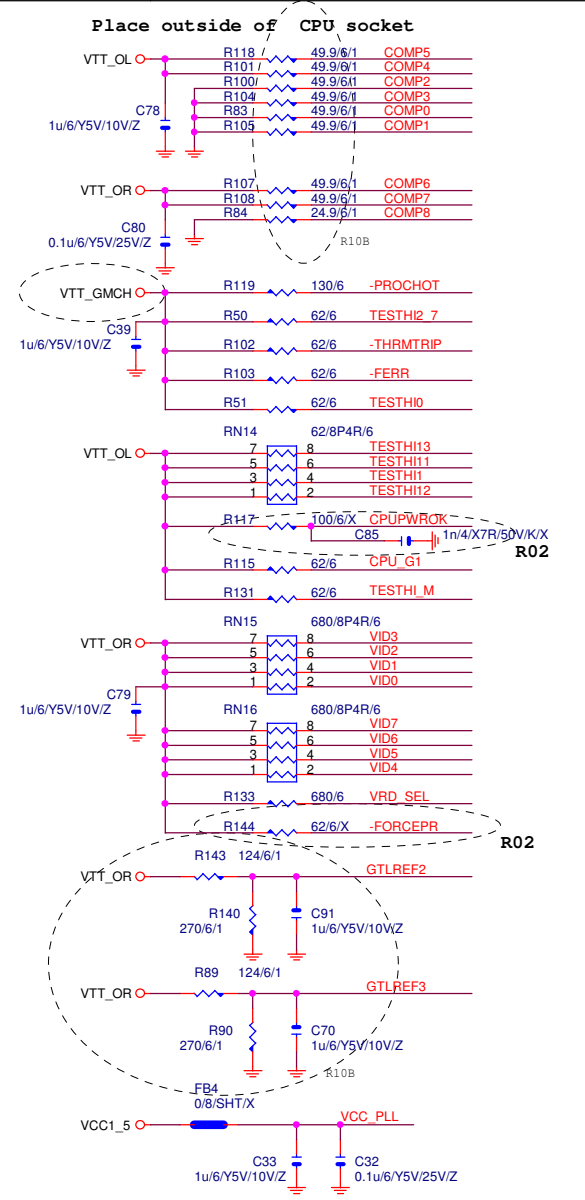
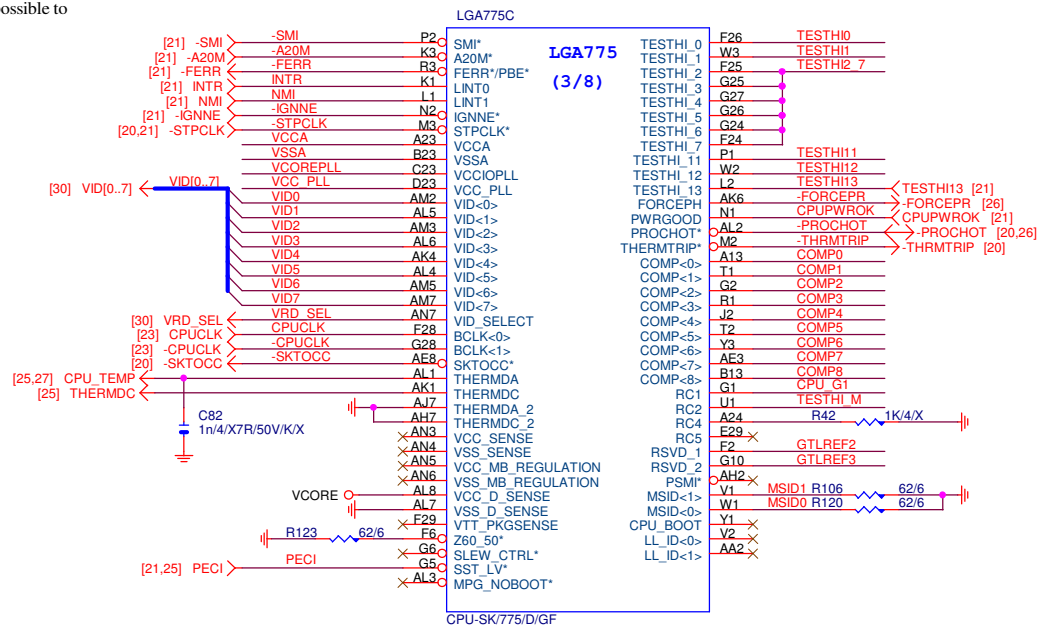
Gigabyte Technology		
Title P4_LGA775-B,D		
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Note:
VCCA & VSCOREPLL
define doesn't same as
old P4 design kit

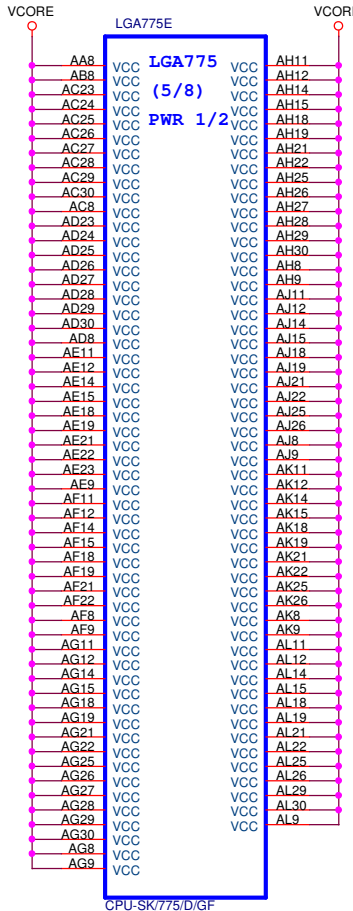
Trace width doesn't
less than 12 Mil

As close as possible to
CPU socket

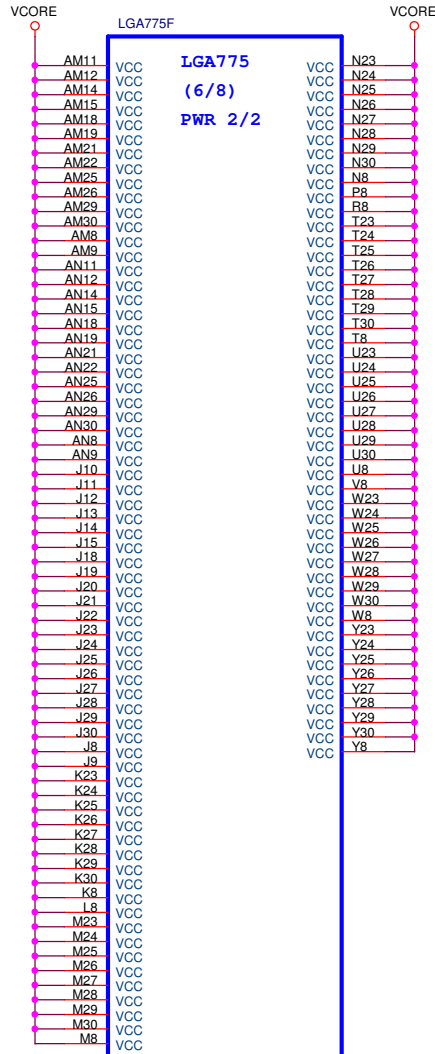


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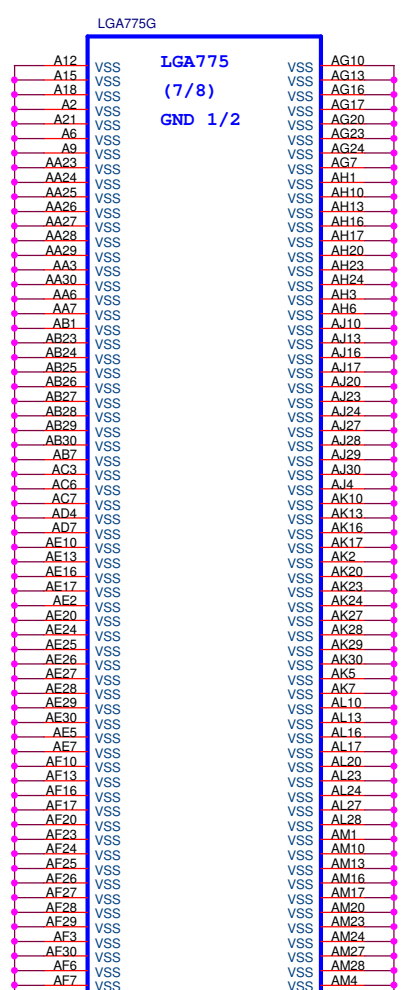
PECI:Platform Environment Control Interface



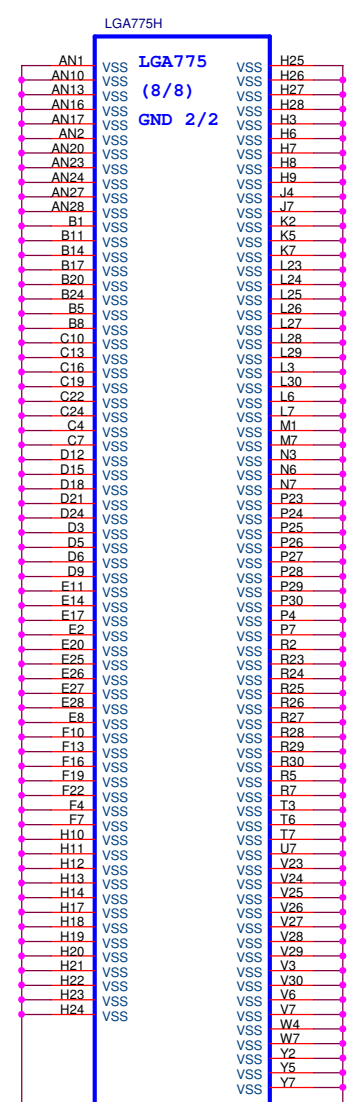
CPU-SK775/D/GF



CPU-SK775/D/GF

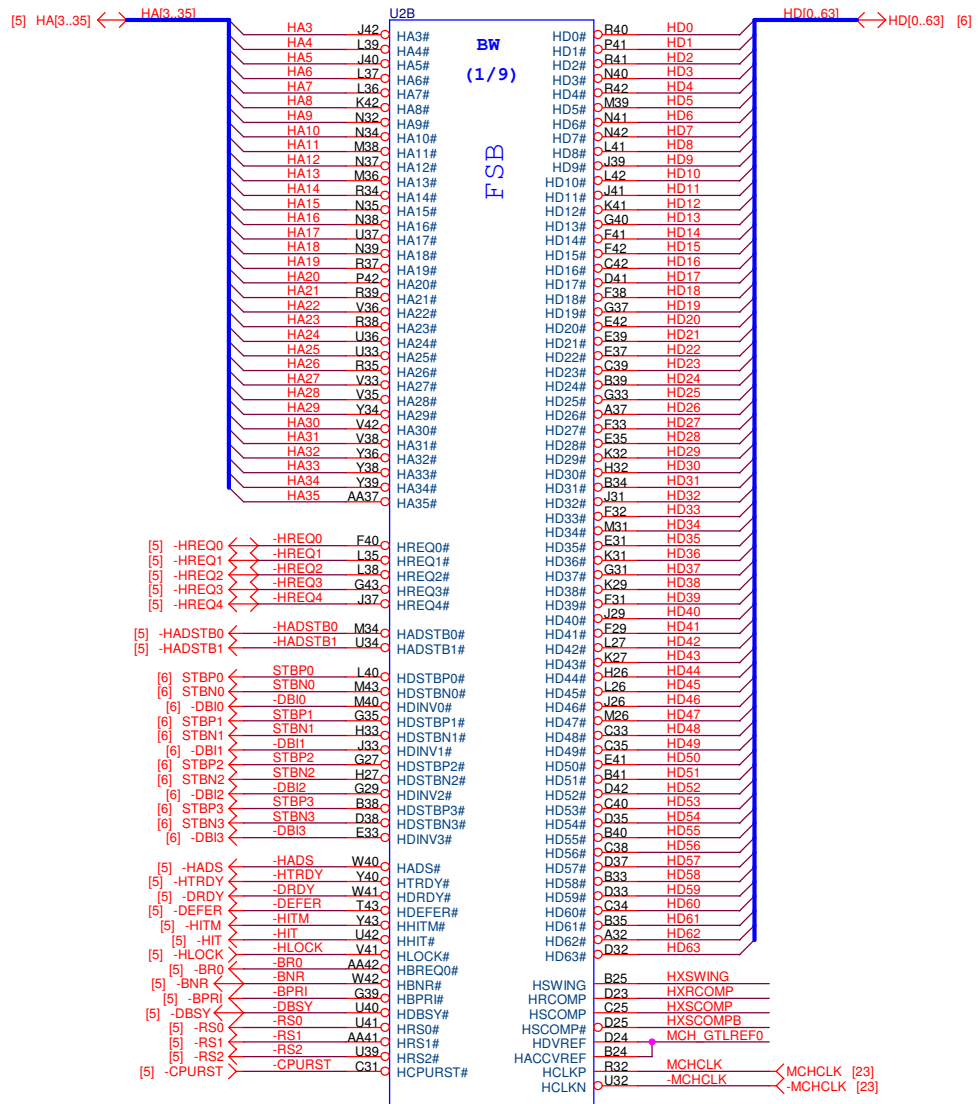


CPU-SK775/D/GF

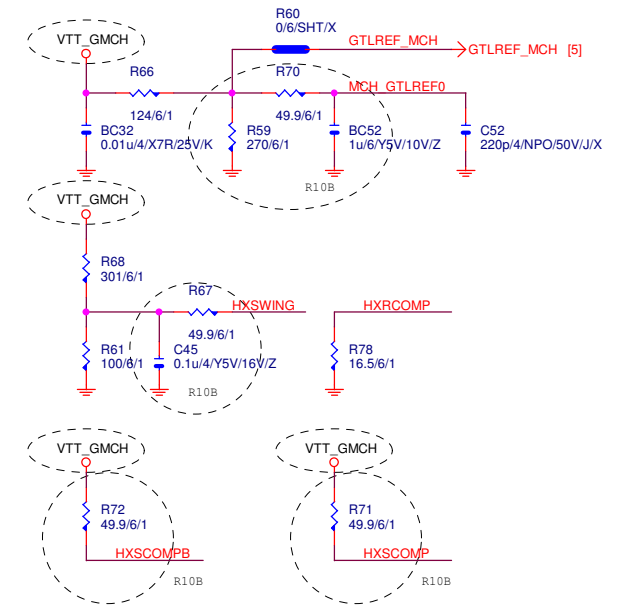


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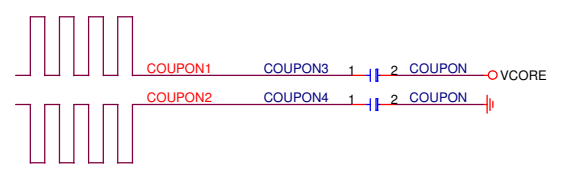
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P4_LGA775-E,F,G,H		
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LE82G965-C2/BGA1226[10HB1-030082-40R]
CPU INTERFACE

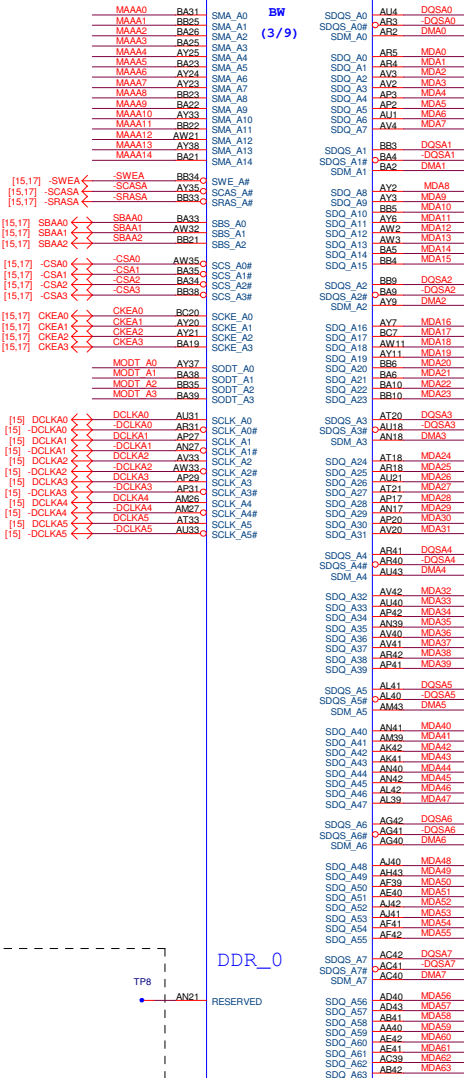


COMP量測有CURRENT SENSE,不可上電容



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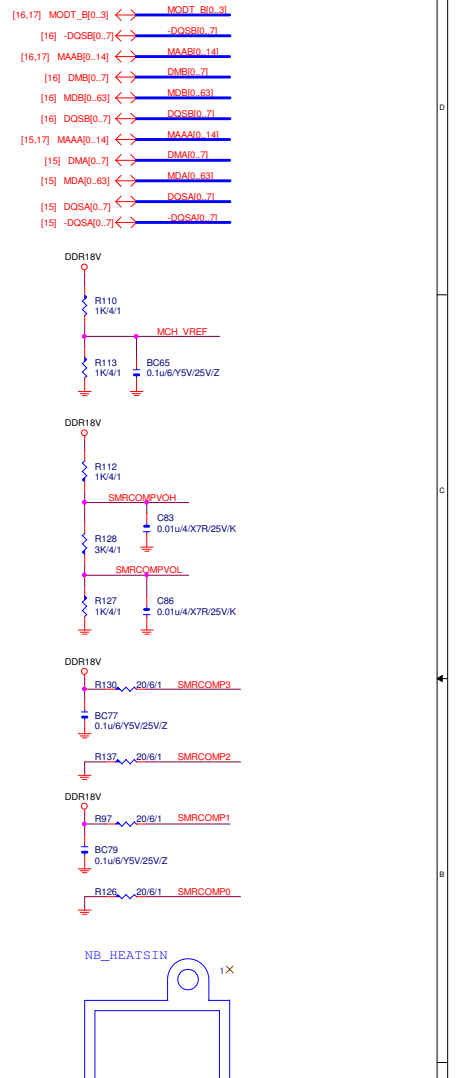
U2C



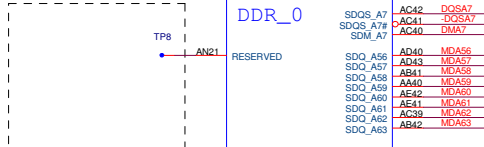
U2D



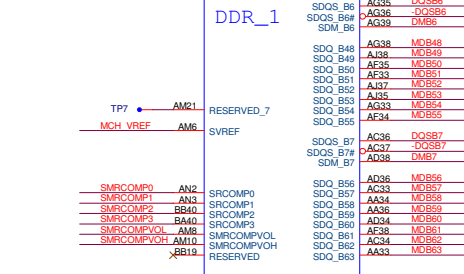
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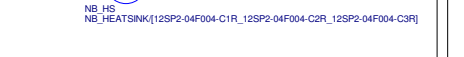
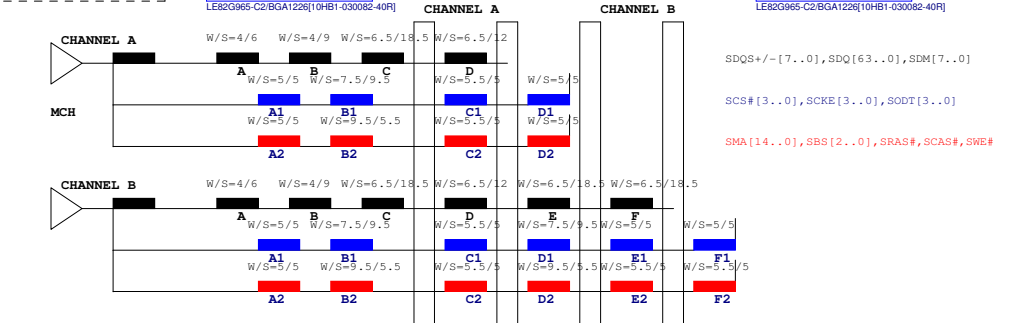
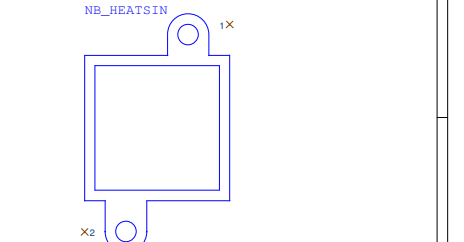
DDR_0



DDR_1



NR_HEATSIN



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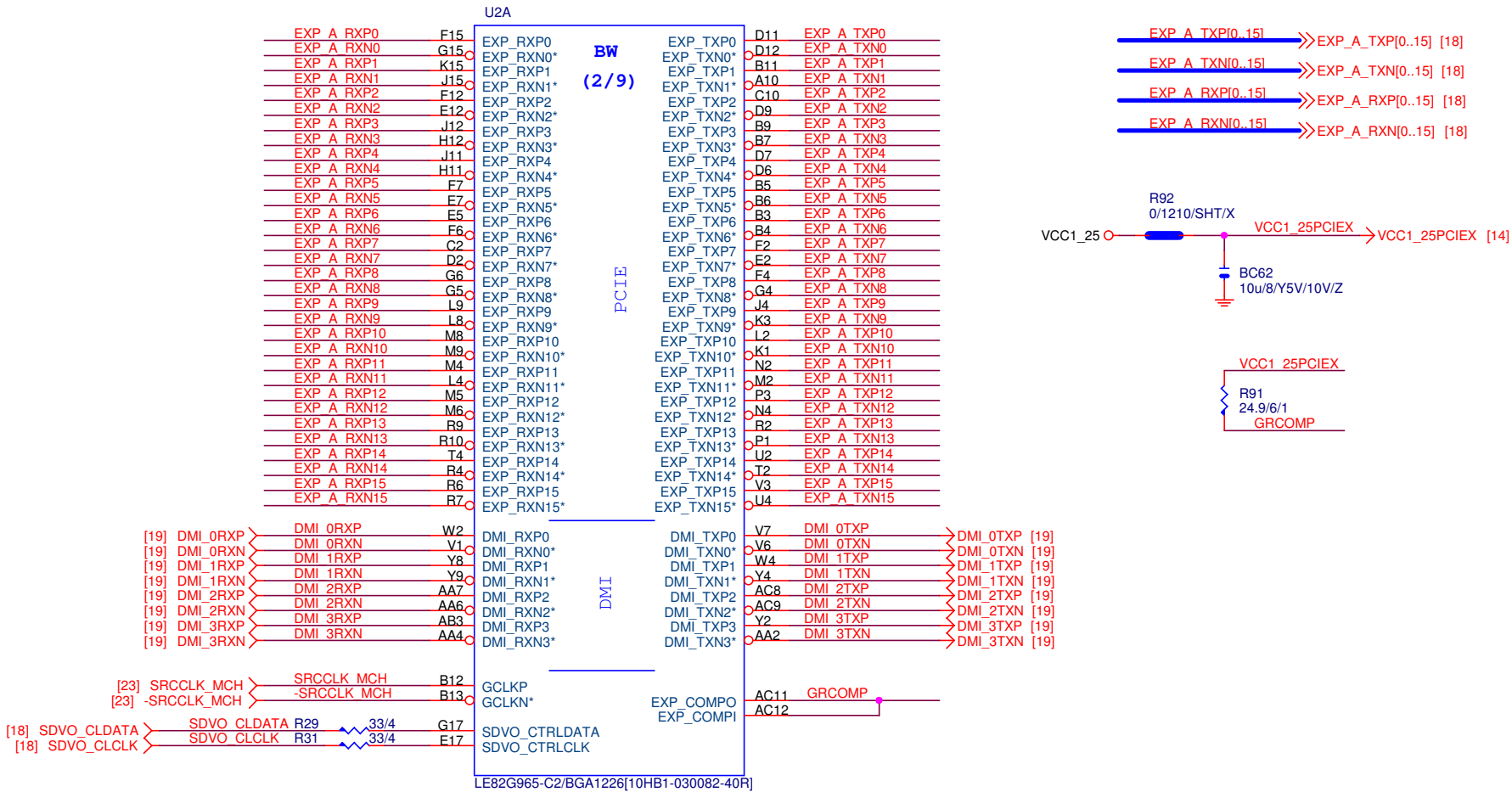
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Document Number: **965GM-S2**

Rev: **1.01**

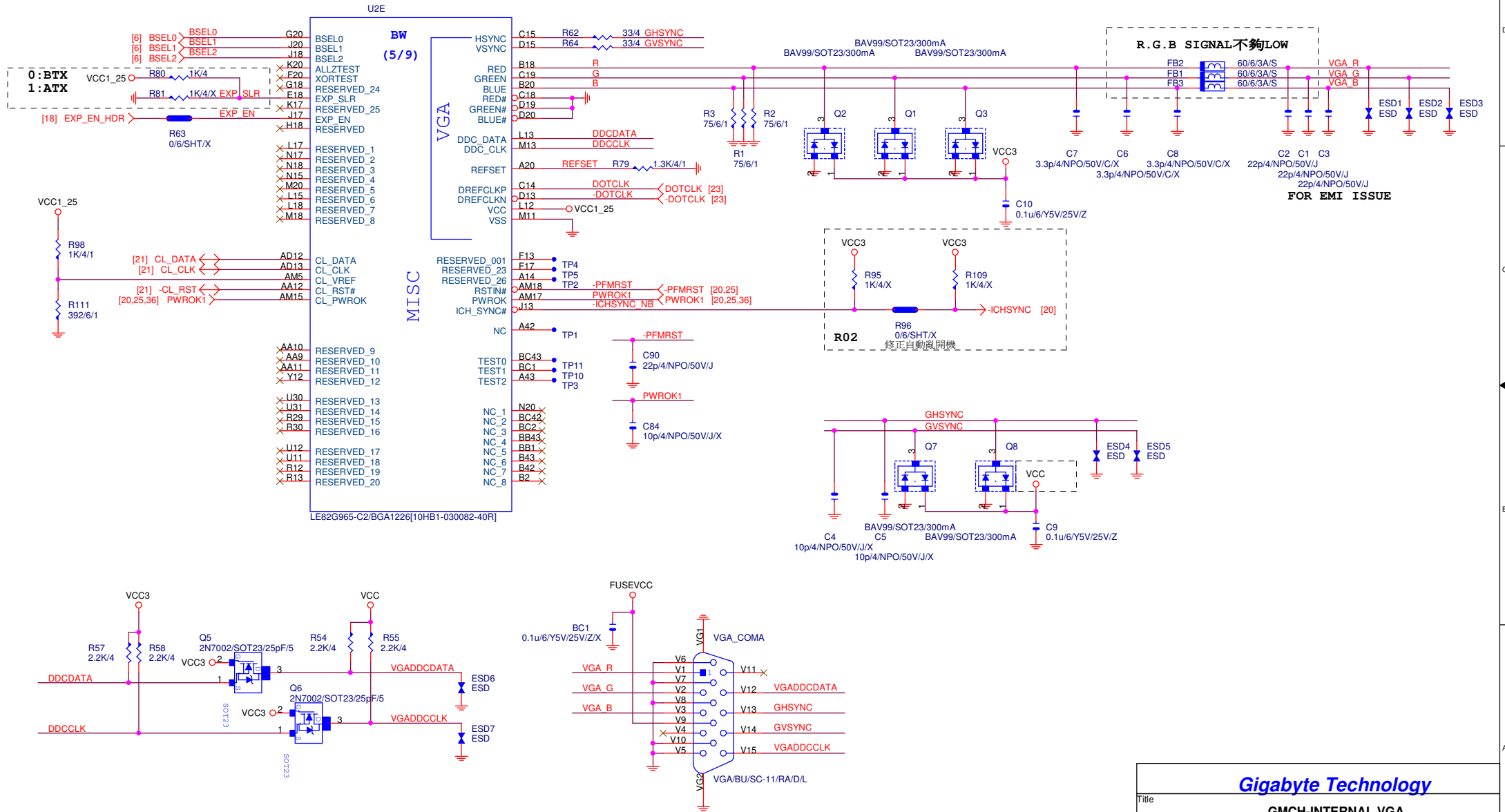
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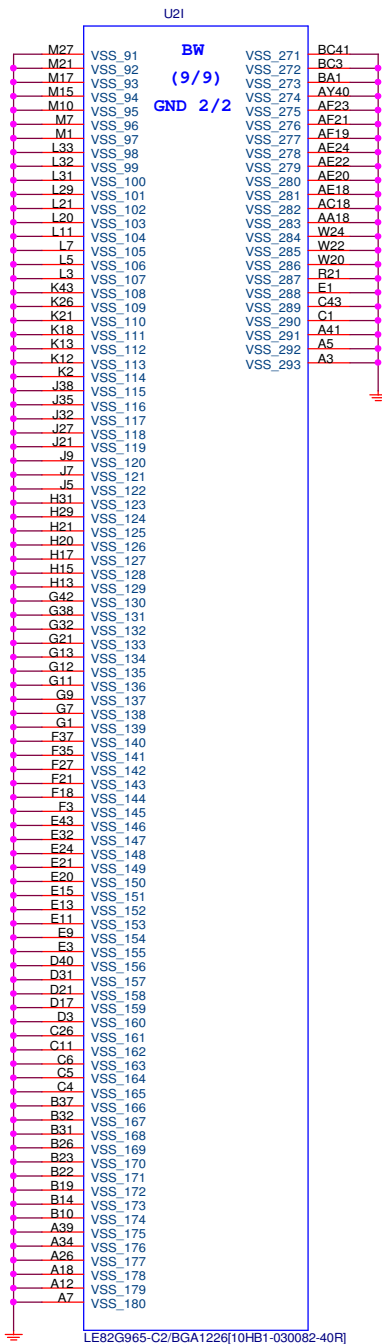
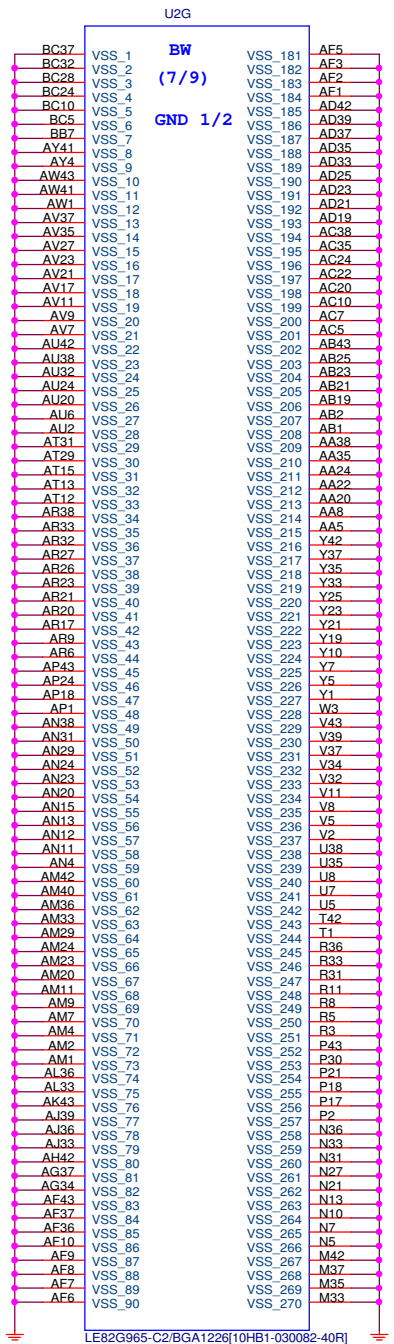


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Title		
GMCH-PCI E & DMI		
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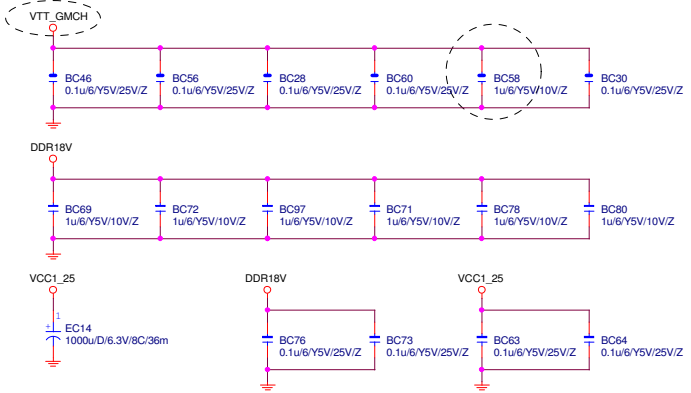
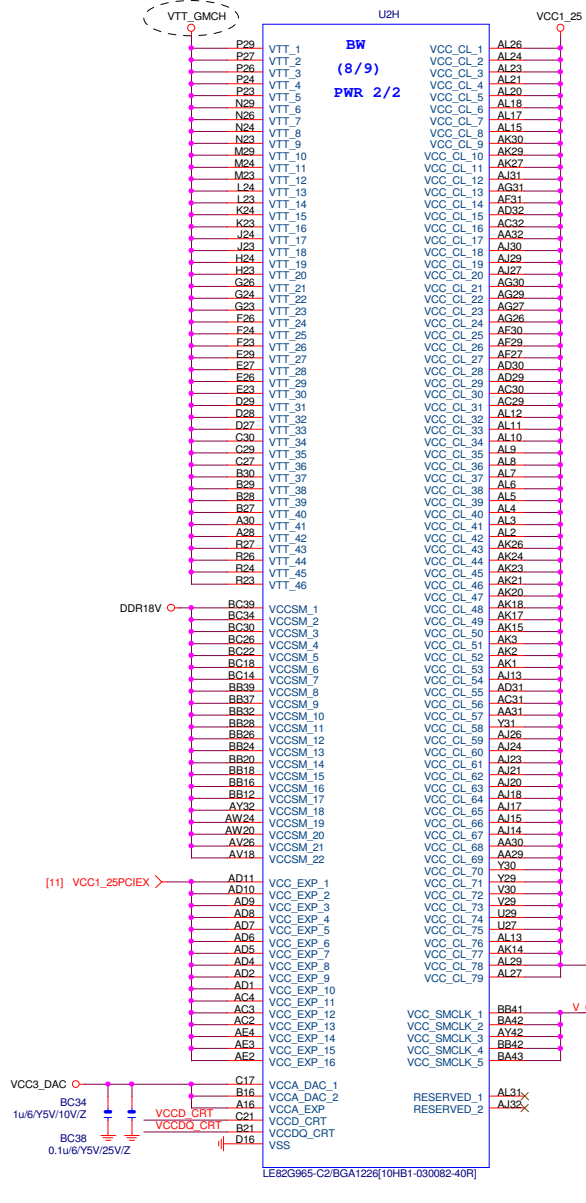
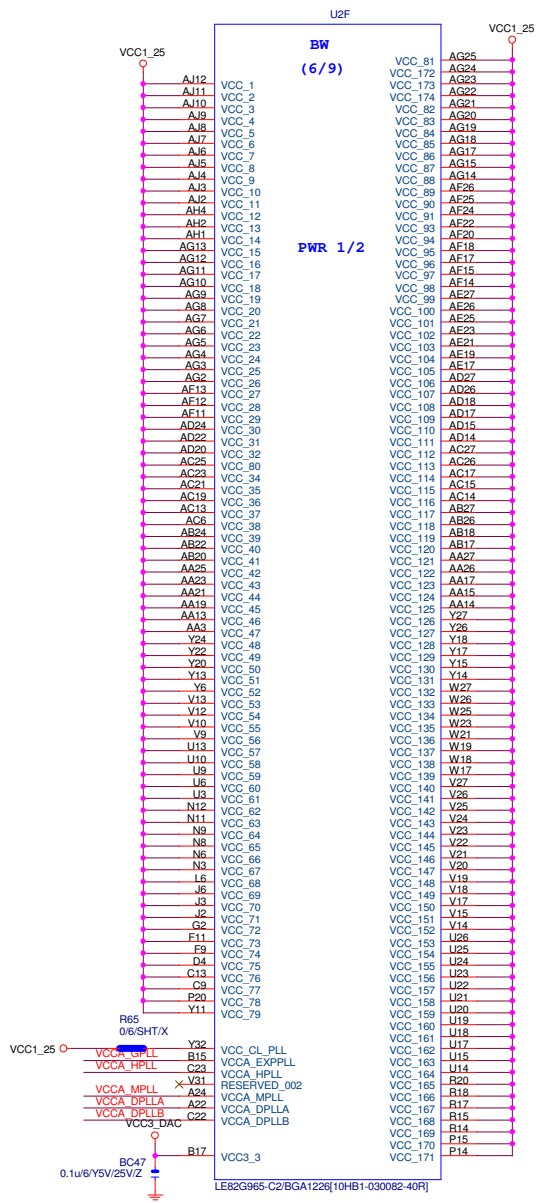


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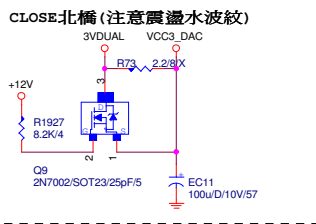
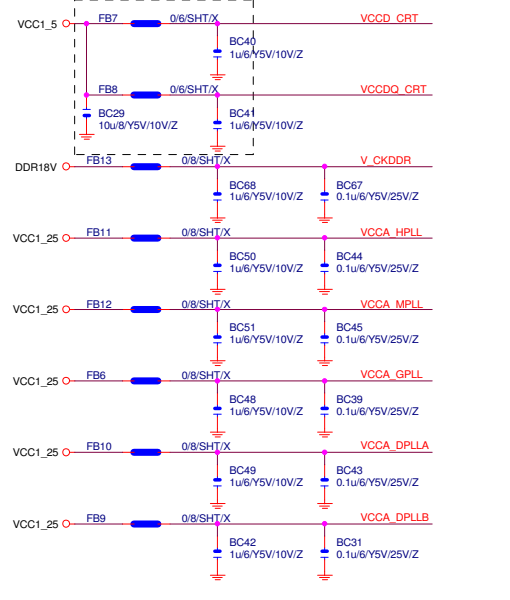
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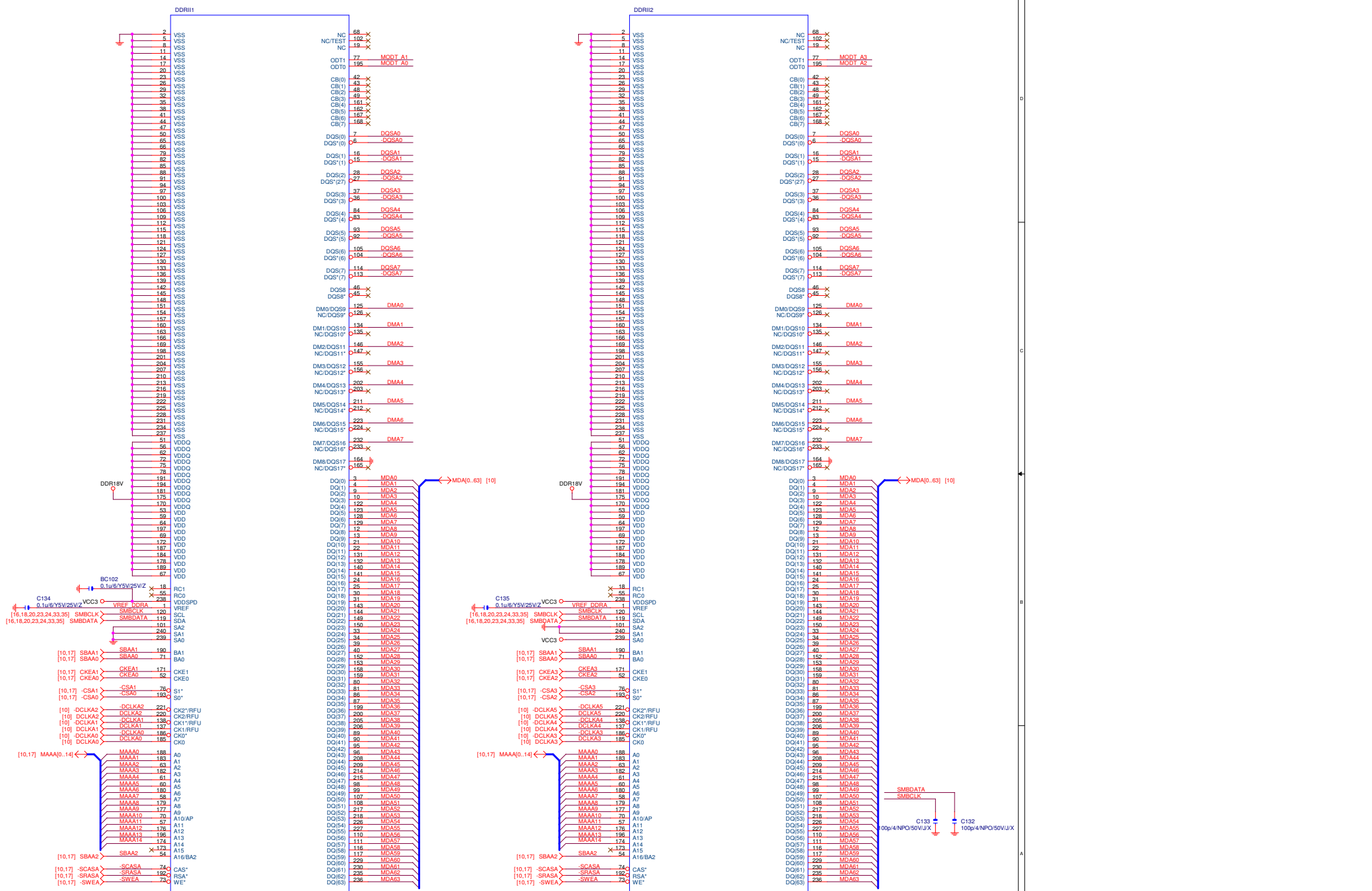
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CLOSE北橋 (注意震盪水波紋)





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DDRII CHANNEL A

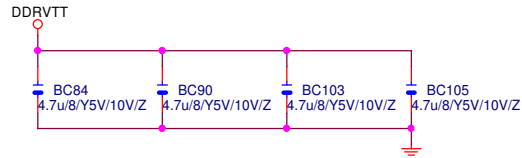
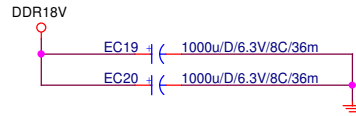
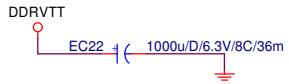
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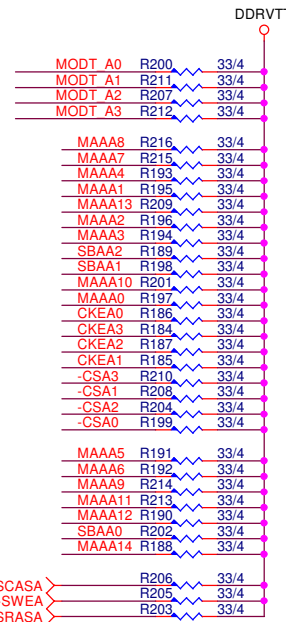
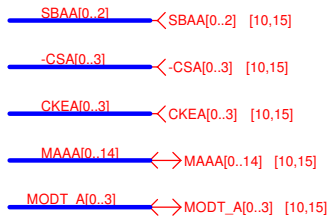
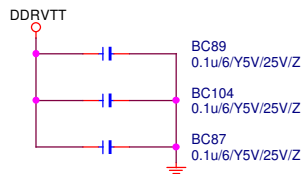
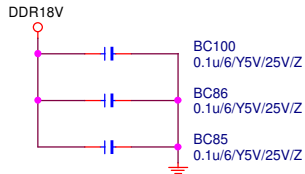
DDR TERMINATION CHANNEL A

DDRVTT Decouple



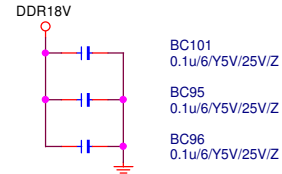
DDR18V Decouple

DDRVTT Decouple

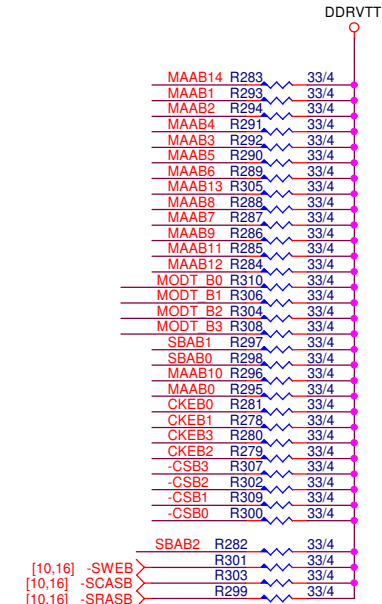
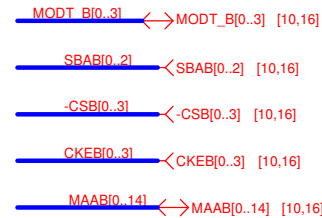
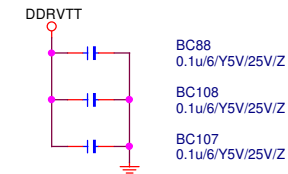


DDR TERMINATION CHANNEL B

DDR18V Decouple

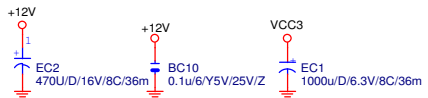


DDRVTT Decouple



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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

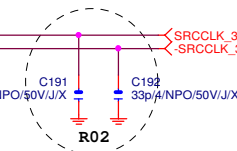
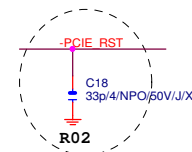
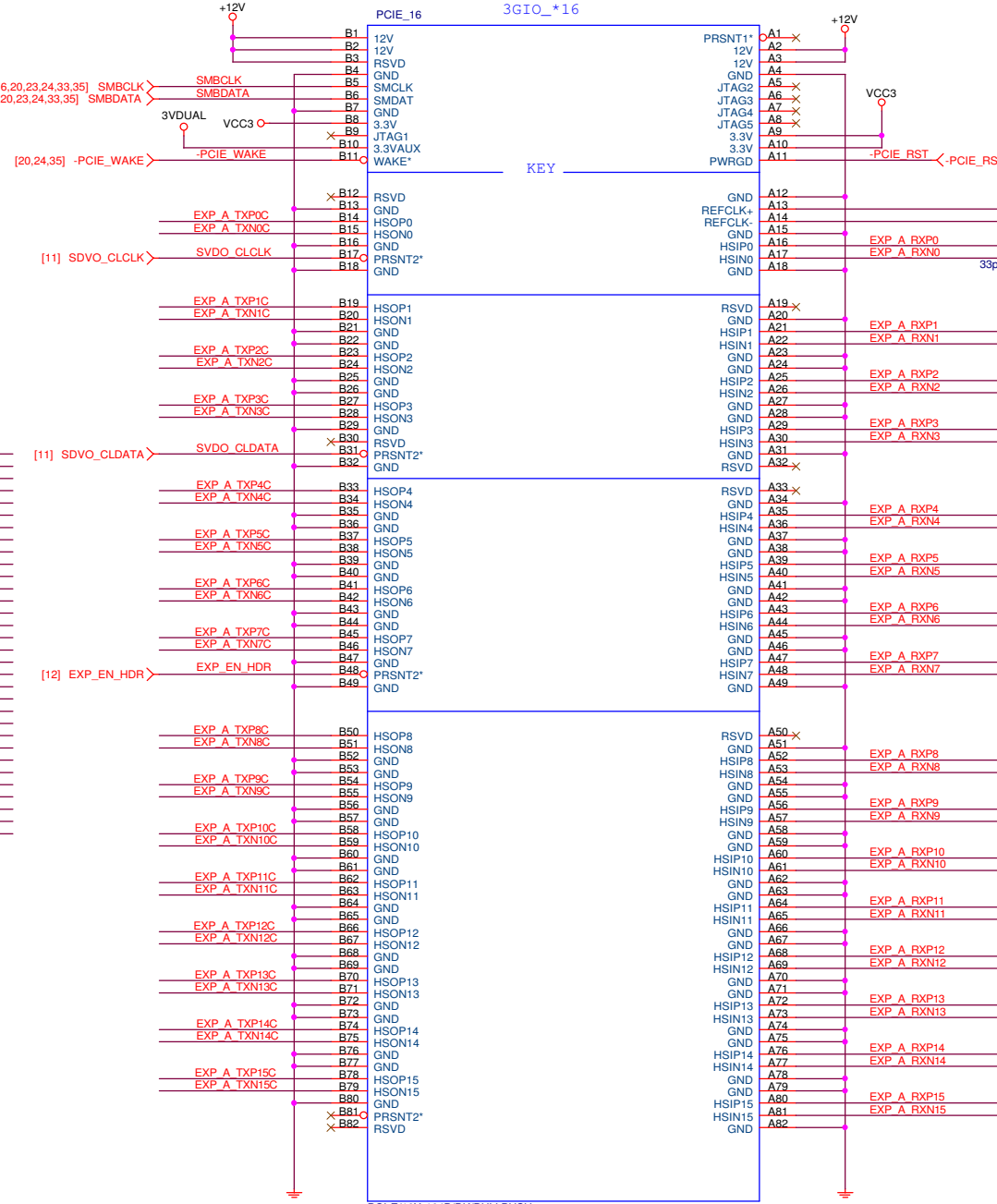
[11] SDVO_CLK

[11] SDVO_CLDATA

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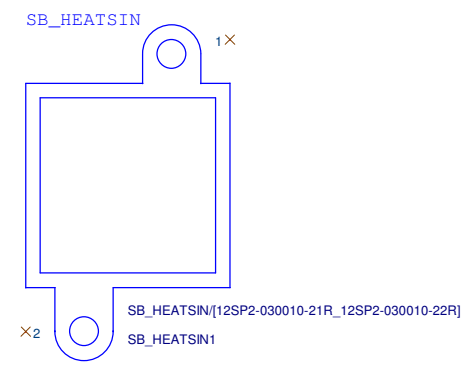
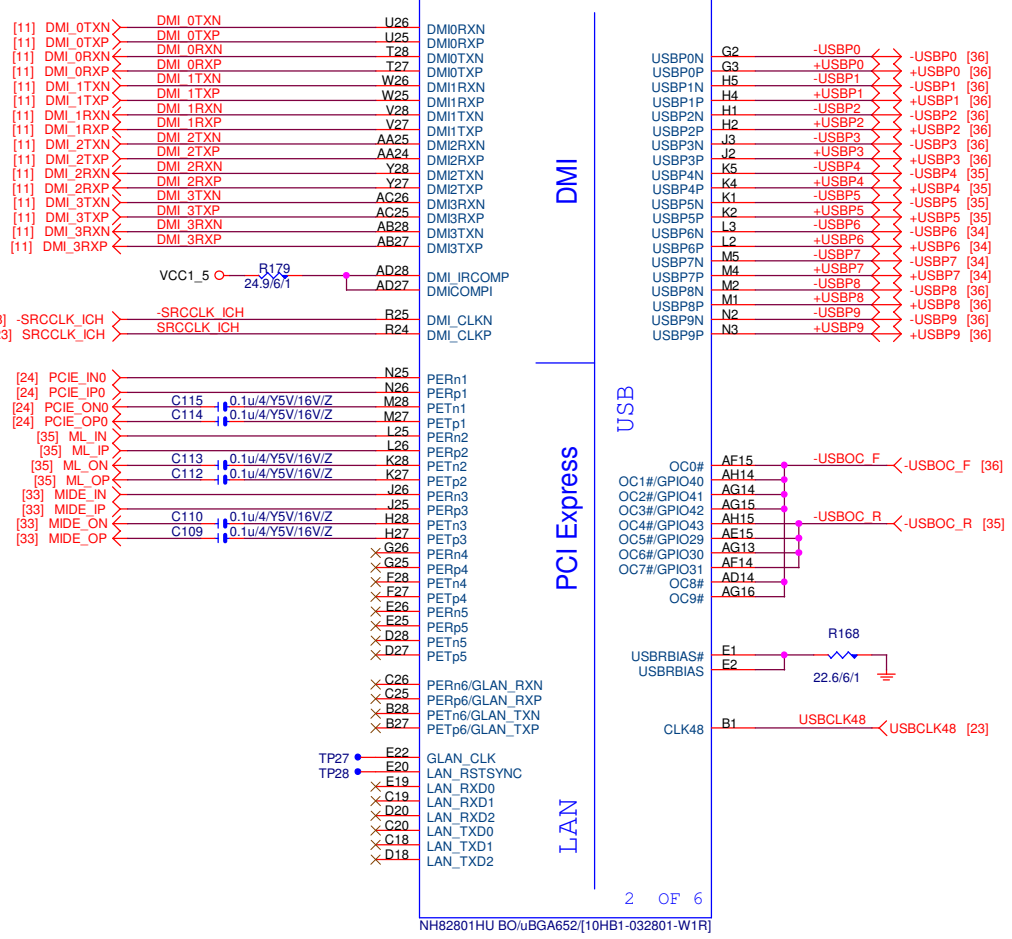
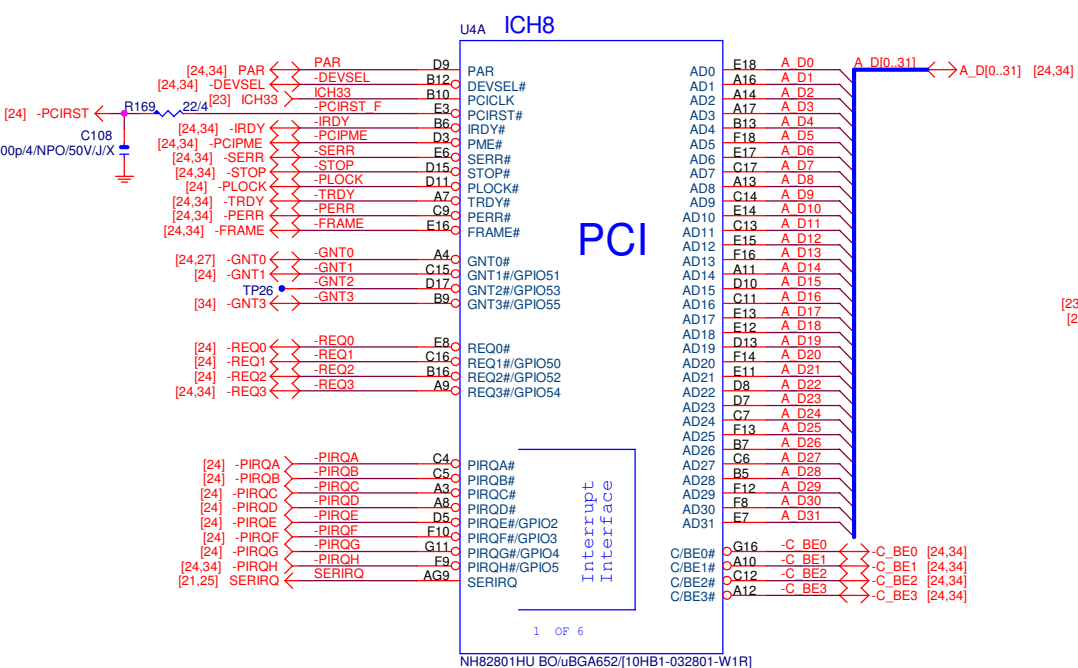
EXP A TXP[0..15] >>> EXP_A_TXP[0..15] [11]
 EXP A TXN[0..15] >>> EXP_A_TXN[0..15] [11]

EXP A TXP0	C28	0.1u/4/Y5V/16V/Z	EXP A TXP0C
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

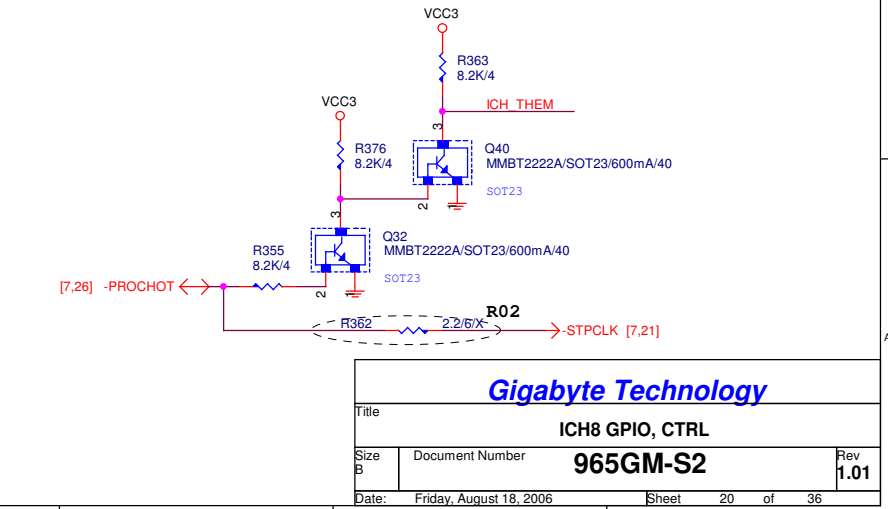
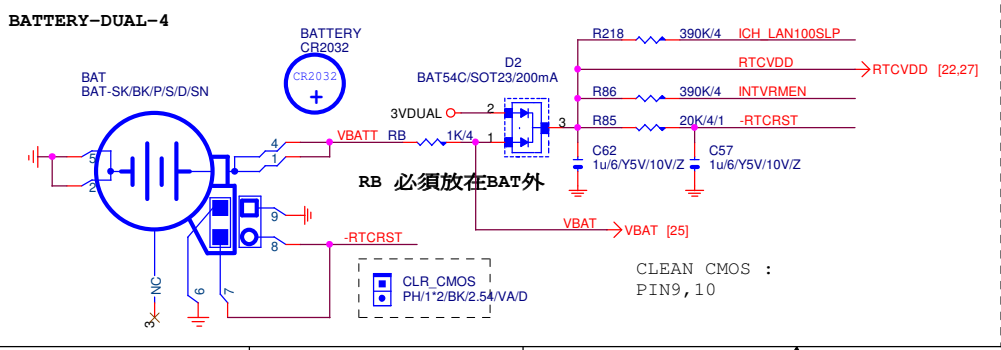
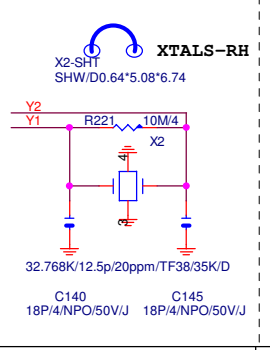
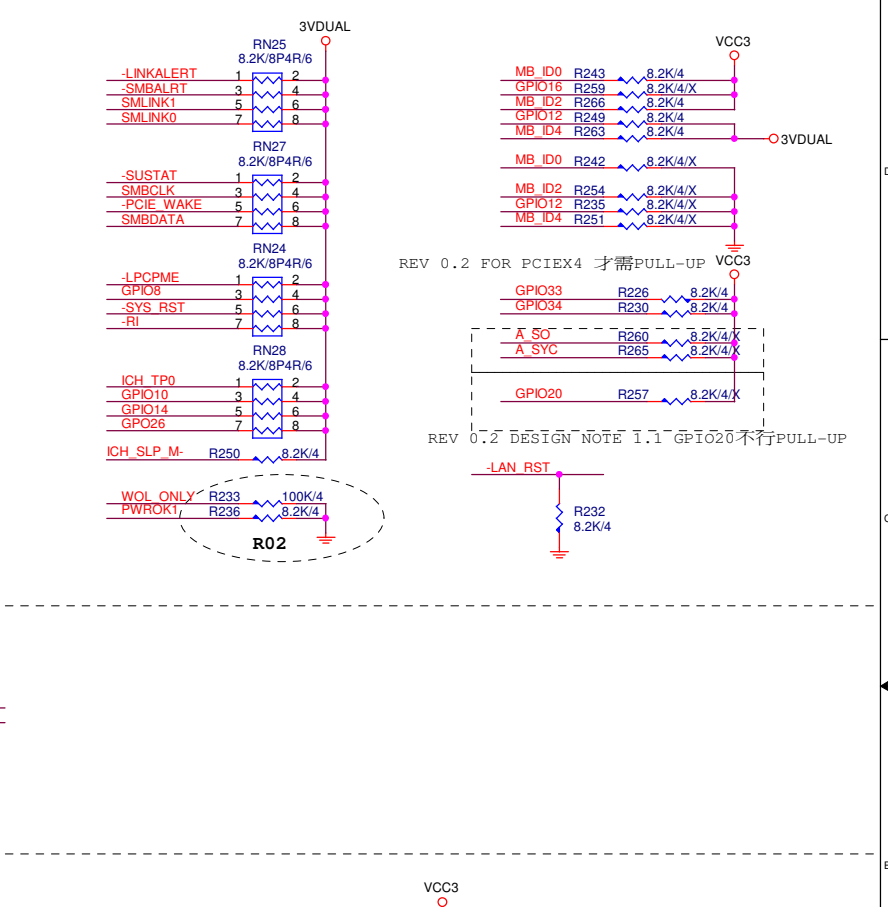
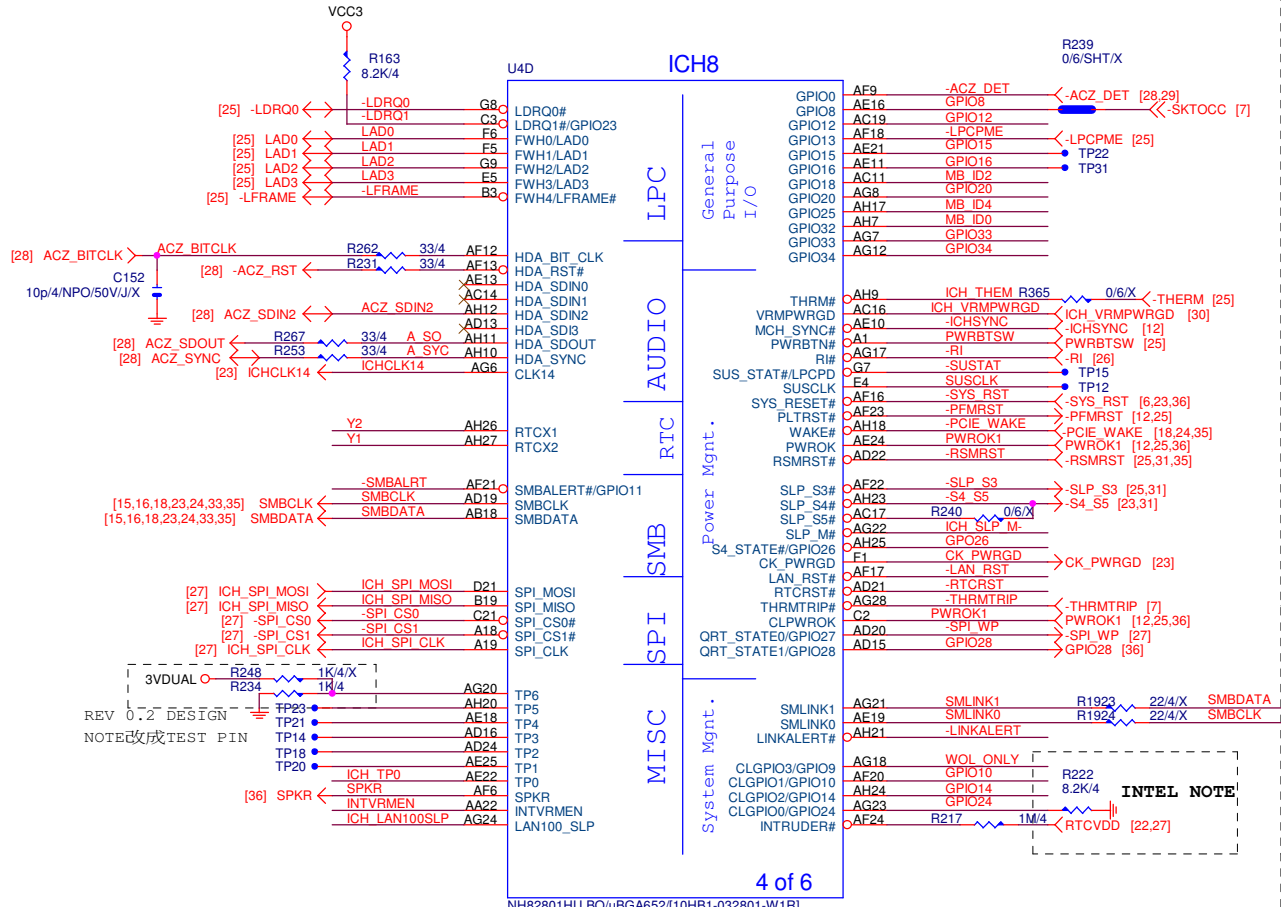


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Title		
PCI EXPRESS * 16		
Size	Document Number	Rev
Custom	965GM-S2	1.01
Date:	Friday, August 18, 2006	Sheet 18 of 36

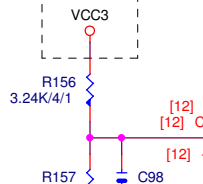


Gigabyte Technology		
Title ICH8-PCI, DMI, LAN, USB		
Size B	Document Number 965GM-S2	Rev 1.01
Date: Friday, August 18, 2006	Sheet 19	of 36



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

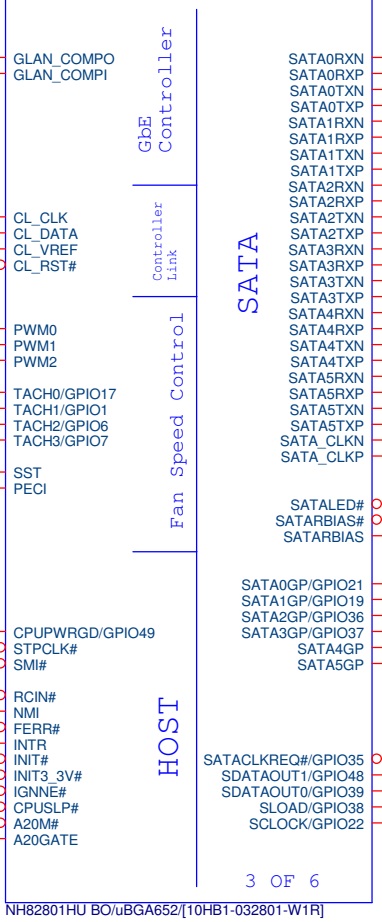
REV 0.2 修改成VCC3,
否則造成不開機
, -PCIRST/-PFMRST不會打



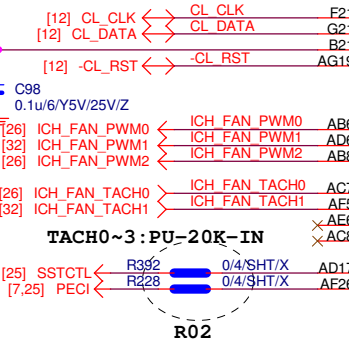
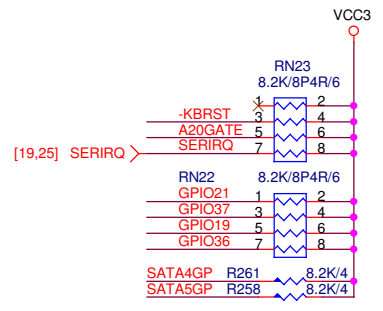
VCC1_5



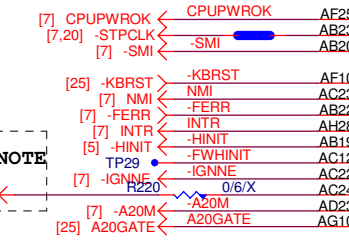
U4C ICH8



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



R02



INTEL NOTE

[7] TESTHI13

Fan Speed Control

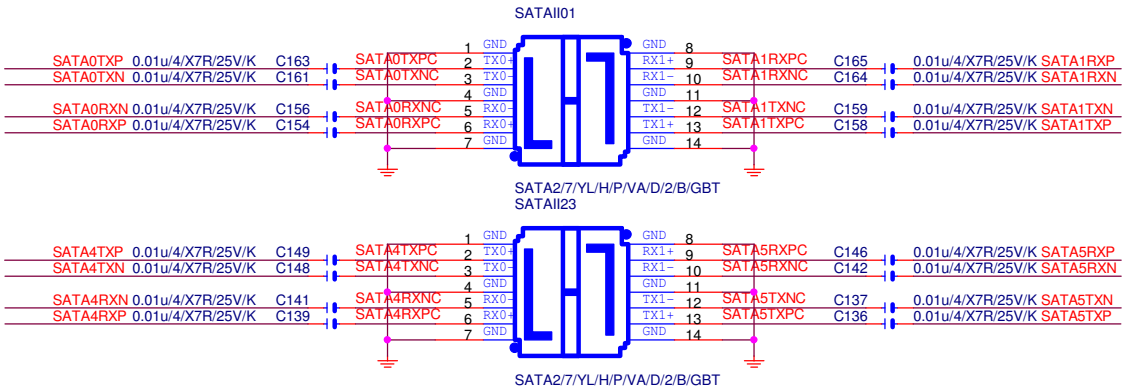
HOST

3 OF 6

NH82801HU BO/uBGA652[10HB1-032801-W1R]

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

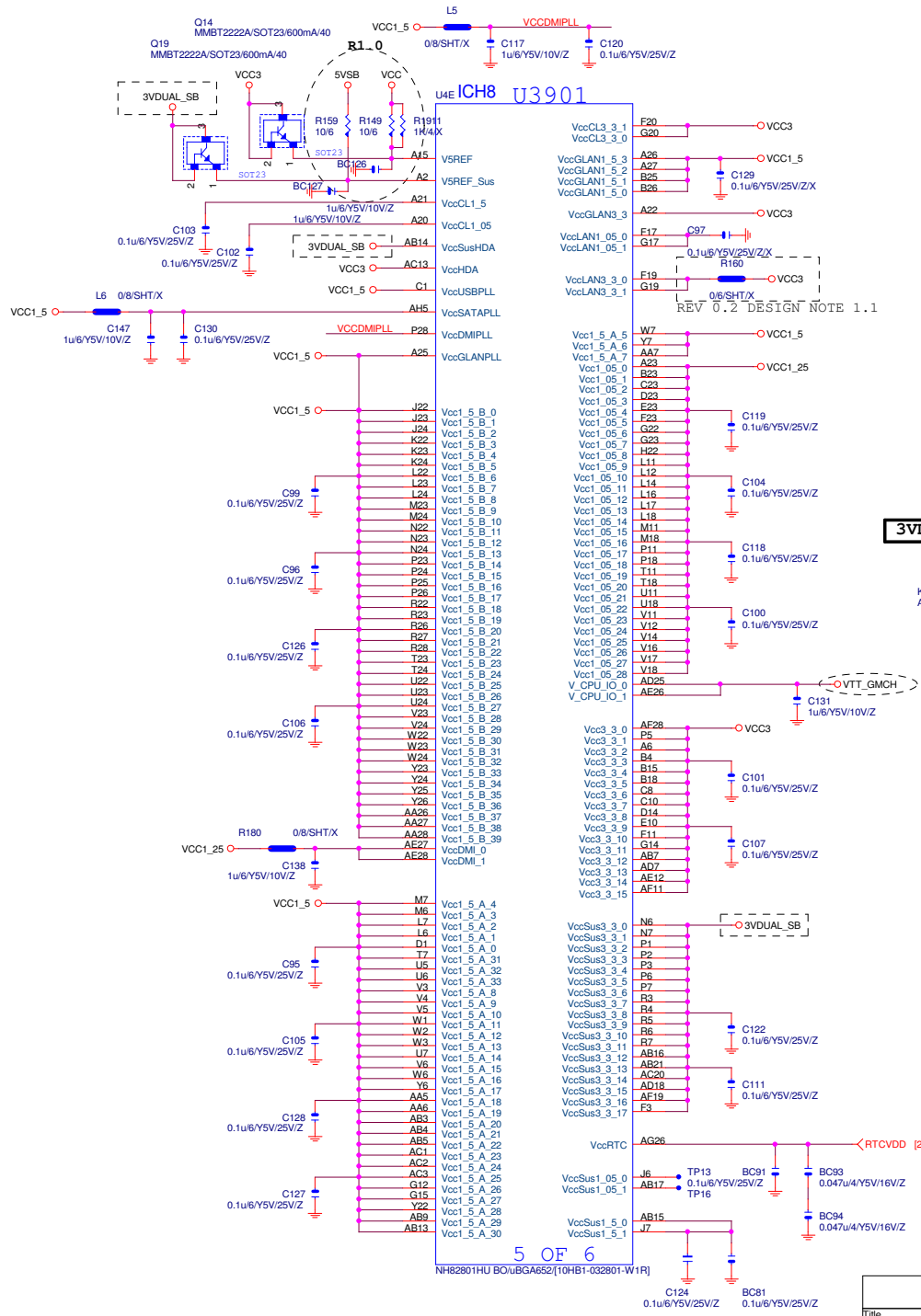
Title	Document Number		Rev
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U4F ICH8

R11	VSS_099	P27
R12	VSS_100	P22
R13	VSS_101	VSS_097
R14	VSS_102	VSS_096
R15	VSS_103	P17
R16	VSS_104	VSS_095
R17	VSS_105	P16
R18	VSS_106	P14
T3	VSS_107	VSS_094
T4	VSS_108	VSS_093
T5	VSS_109	VSS_092
T6	VSS_110	P13
T7	VSS_111	VSS_091
T8	VSS_112	VSS_090
T9	VSS_113	N28
T10	VSS_114	N27
T11	VSS_115	VSS_089
T12	VSS_116	VSS_088
T13	VSS_117	VSS_087
T14	VSS_118	N16
T15	VSS_119	VSS_086
T16	VSS_120	VSS_085
T17	VSS_121	VSS_084
T18	VSS_122	N14
T19	VSS_123	VSS_083
T20	VSS_124	VSS_082
T21	VSS_125	N12
T22	VSS_126	VSS_081
T23	VSS_127	VSS_080
T24	VSS_128	N11
T25	VSS_129	VSS_079
T26	VSS_130	VSS_078
T27	VSS_131	M26
T28	VSS_132	VSS_077
T29	VSS_133	M25
T30	VSS_134	VSS_076
T31	VSS_135	M22
T32	VSS_136	VSS_075
T33	VSS_137	M17
T34	VSS_138	VSS_074
T35	VSS_139	M16
T36	VSS_140	VSS_073
T37	VSS_141	M15
T38	VSS_142	VSS_072
T39	VSS_143	M14
T40	VSS_144	VSS_071
T41	VSS_145	M12
T42	VSS_146	VSS_070
T43	VSS_147	M3
T44	VSS_148	VSS_069
T45	VSS_149	VSS_068
T46	VSS_150	VSS_067
T47	VSS_151	L28
T48	VSS_152	VSS_066
T49	VSS_153	L15
T50	VSS_154	VSS_065
T51	VSS_155	L13
T52	VSS_156	VSS_064
T53	VSS_157	VSS_063
T54	VSS_158	L5
T55	VSS_159	VSS_062
T56	VSS_160	L1
T57	VSS_161	VSS_061
T58	VSS_162	K26
T59	VSS_163	VSS_060
T60	VSS_164	K25
T61	VSS_165	VSS_059
T62	VSS_166	K7
T63	VSS_167	VSS_058
T64	VSS_168	K6
T65	VSS_169	VSS_057
T66	VSS_170	K3
T67	VSS_171	VSS_056
T68	VSS_172	J28
T69	VSS_173	VSS_055
T70	VSS_174	J5
T71	VSS_175	VSS_054
T72	VSS_176	VSS_053
T73	VSS_177	J4
T74	VSS_178	VSS_052
T75	VSS_179	J1
T76	VSS_180	VSS_051
T77	VSS_181	H26
T78		VSS_050
T79		VSS_049
T80		H24
T81		VSS_048
T82		H23
T83		VSS_047
T84		H7
T85		VSS_046
T86		W24
T87		VSS_045
T88		H6
T89		VSS_044
T90		H3
T91		VSS_043
T92		G28
T93		VSS_042
T94		G27
T95		VSS_041
T96		G24
T97		VSS_040
T98		G18
T99		VSS_039
T100		G13
T101		VSS_038
T102		G10
T103		VSS_037
T104		G6
T105		VSS_036
T106		G4
T107		VSS_035
T108		F26
T109		VSS_034
T110		F25
T111		VSS_033
T112		F24
T113		VSS_032
T114		F22
T115		VSS_031
T116		F15
T117		VSS_030
T118		F7
T119		VSS_029
T120		F2
T121		VSS_028
T122		E28
T123		VSS_027
T124		E27
T125		VSS_026
T126		E24
T127		VSS_025
T128		E23
T129		VSS_024
T130		E21
T131		VSS_023
T132		D26
T133		VSS_022
T134		D25
T135		VSS_021
T136		D22
T137		VSS_020
T138		D19
T139		VSS_019
T140		D16
T141		VSS_018
T142		D12
T143		VSS_017
T144		D6
T145		VSS_016
T146		D4
T147		VSS_015
T148		D2
T149		VSS_014
T150		C28
T151		VSS_013
T152		C27
T153		VSS_012
T154		C22
T155		VSS_011
T156		B24
T157		VSS_010
T158		B20
T159		VSS_009
T160		B17
T161		VSS_008
T162		B11
T163		VSS_007
T164		B8
T165		VSS_006
T166		B2
T167		VSS_005
T168		A24
T169		VSS_004
T170		A5
T171		VSS_003
T172		VSS_002
T173		VSS_001

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NH82801HU BOUBGA652[10H81-032801-W1R]

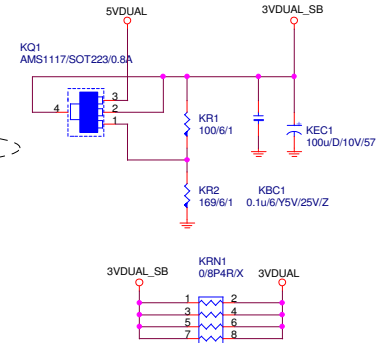


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NH82801HU BOUBGA652[10H81-032801-W1R]

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

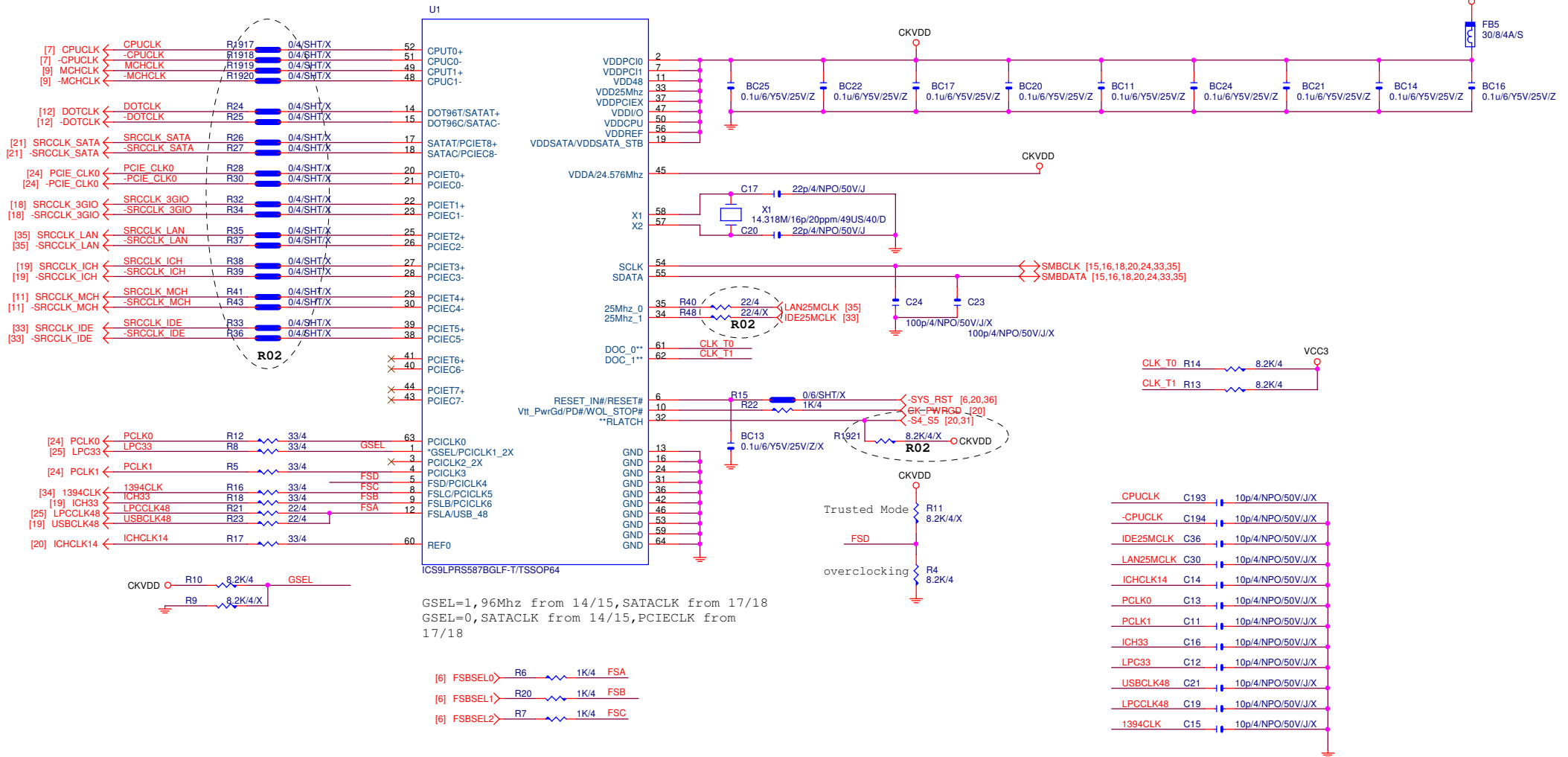


RTCVDD [20.27]

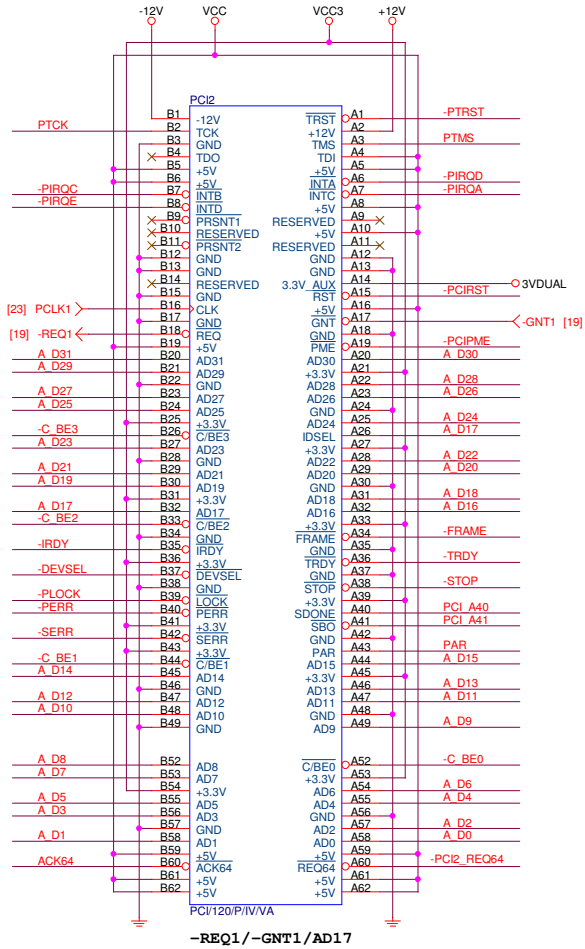
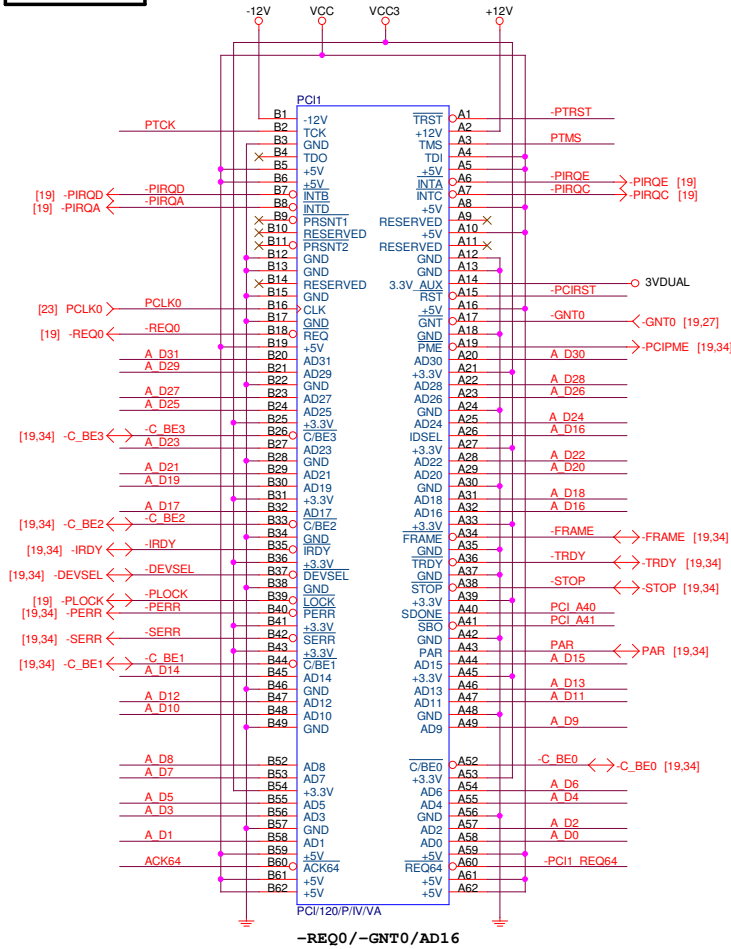


Gigabyte Technology

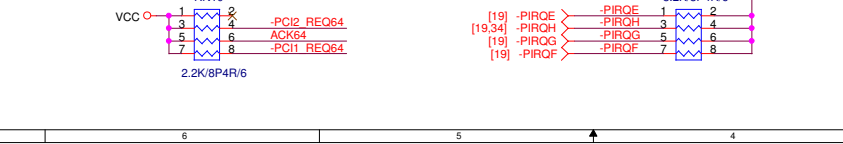
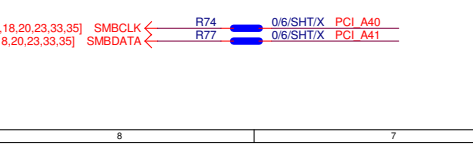
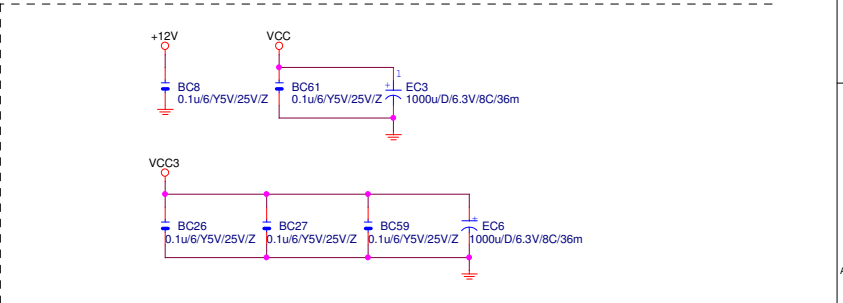
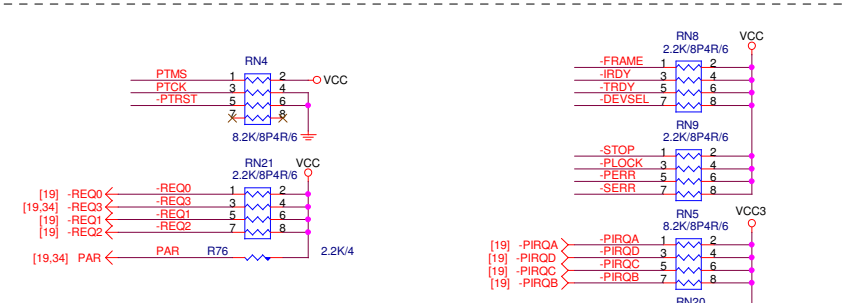
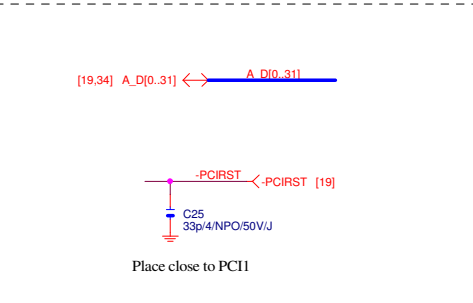
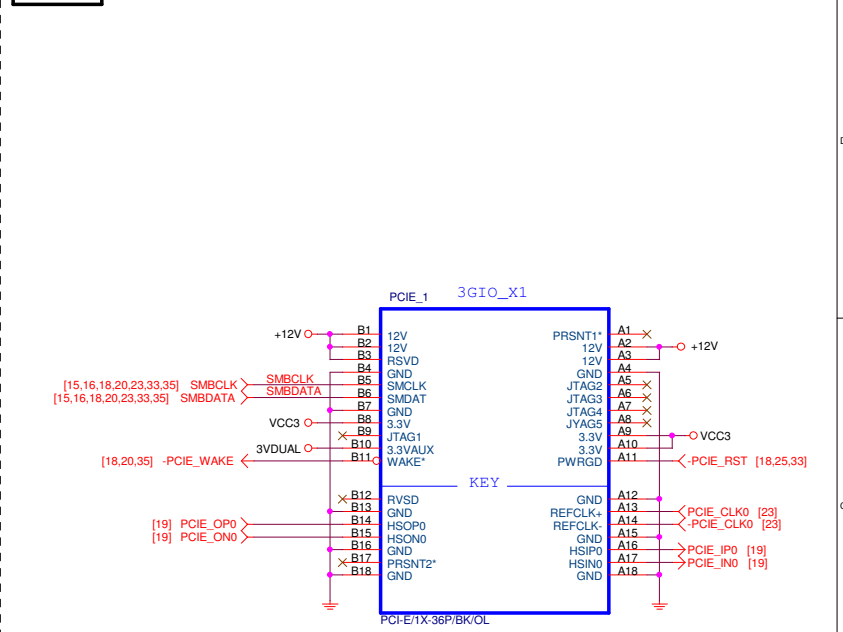
Title			ICH6-PWR & GND		
Size	Document Number	965GM-S2			Rev
Custom					1.01
Date:	Friday, August 18, 2006	Sheet	22	of	36



PCI1, 2 SLOT



PCIe*1

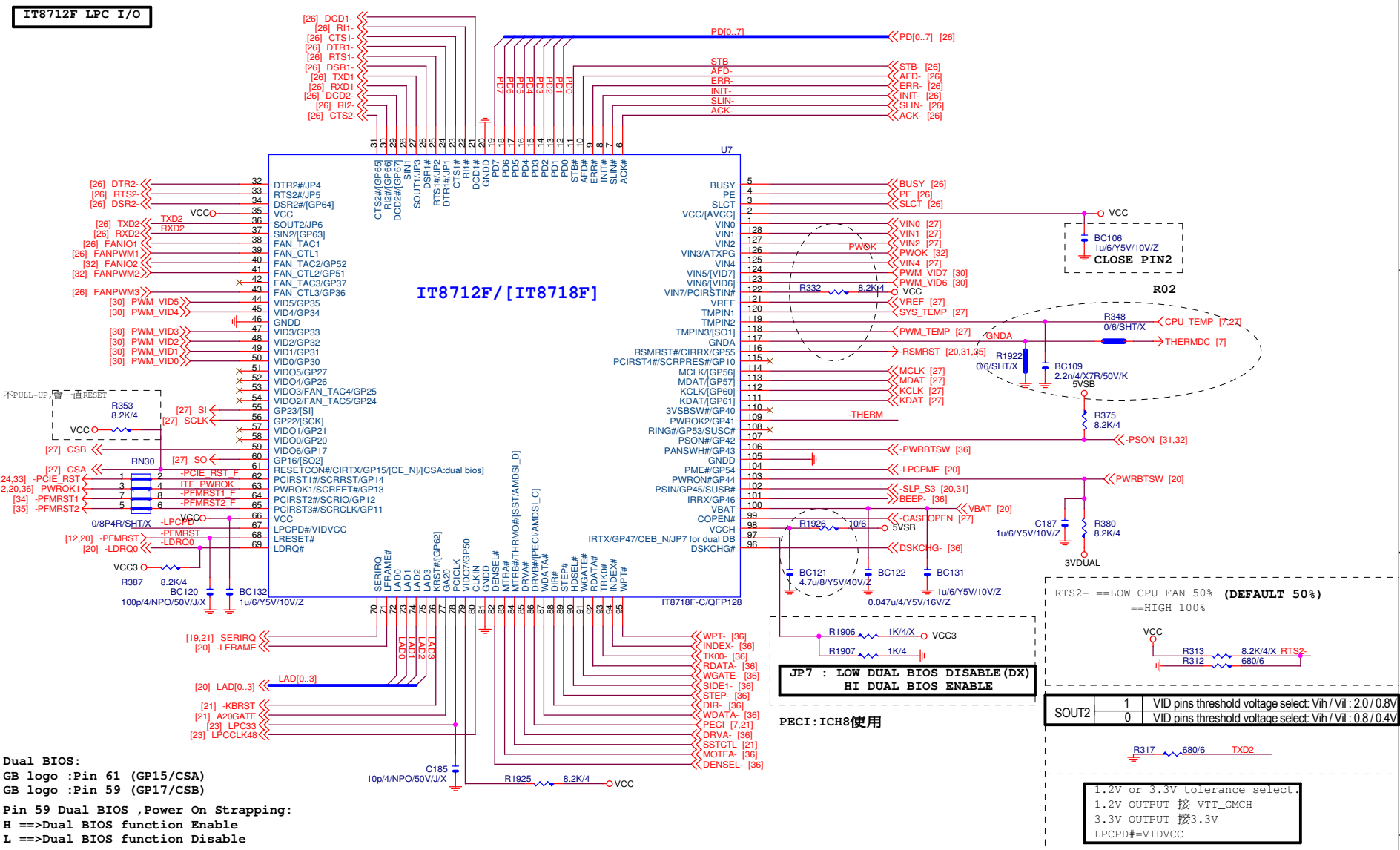


Gigabyte Technology

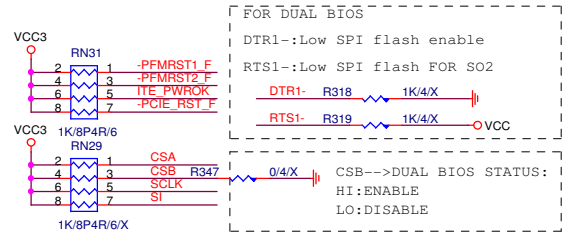
PCI SLOT 1, 2/PCIEX1

Title		PCI SLOT 1, 2/PCIEX1	
Size	Document Number	965GM-S2	
Custort		Rev 1.01	
Date:	Friday, August 18, 2006	Sheet	24 of 36

IT8712F LPC I/O



Dual BIOS:
 GB logo :Pin 61 (GP15/CSA)
 GB logo :Pin 59 (GP17/CSB)
Pin 59 Dual BIOS, Power On Strapping:
 H ==>Dual BIOS function Enable
 L ==>Dual BIOS function Disable



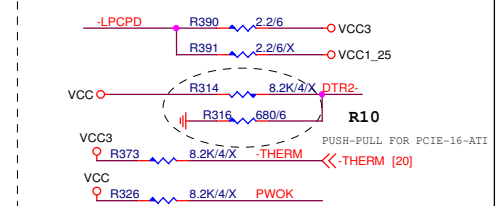
**JP7 : LOW DUAL BIOS DISABLE (DX)
 HI DUAL BIOS ENABLE**

PECI : ICH8使用

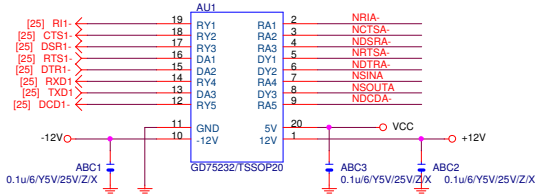
RIS2- ==LOW CPU FAN 50% **(DEFAULT 50%)**
 ==HIGH 100%

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

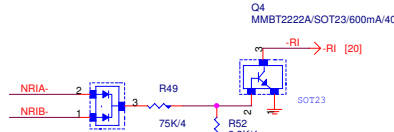
1.2V or 3.3V tolerance select.
 1.2V OUTPUT 接 VIT_GMCH
 3.3V OUTPUT 接 3.3V
 LPCPD#=VIDVCC



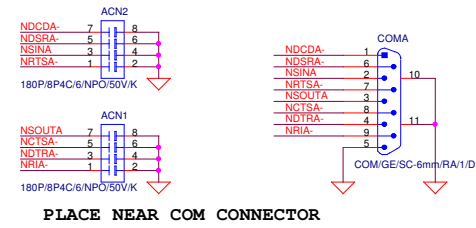
COMA



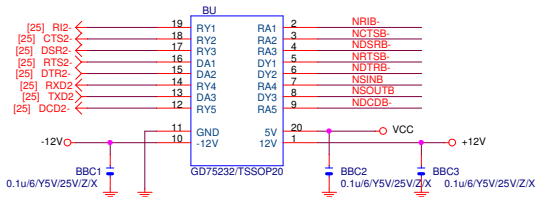
COM RI



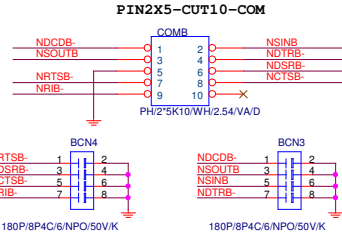
EXTERNAL COMA



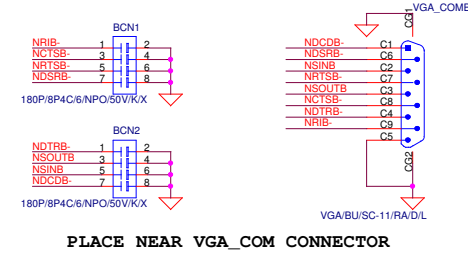
COMB



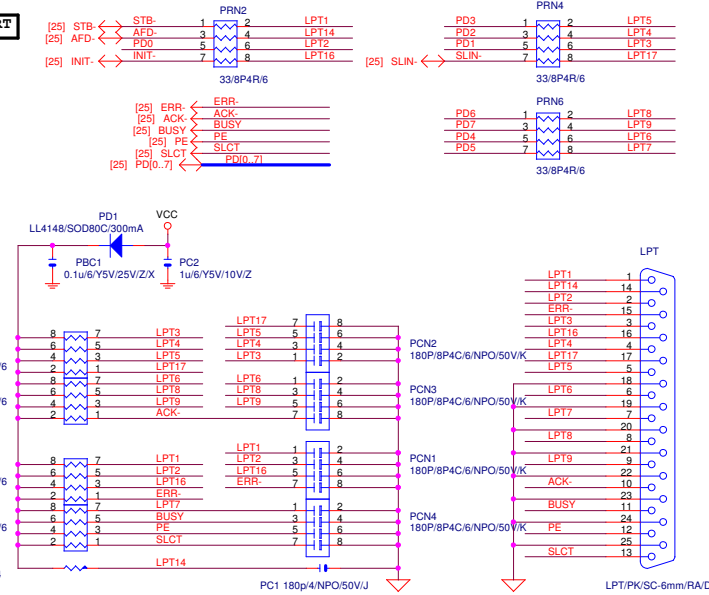
INTERNAL COMB



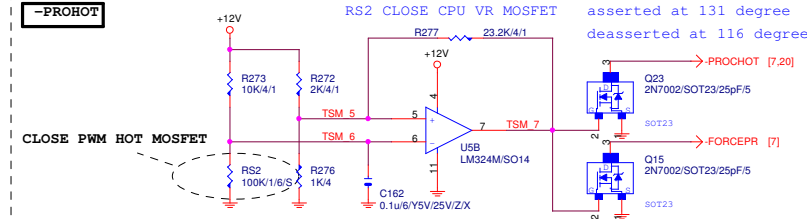
EXTERNAL COMB



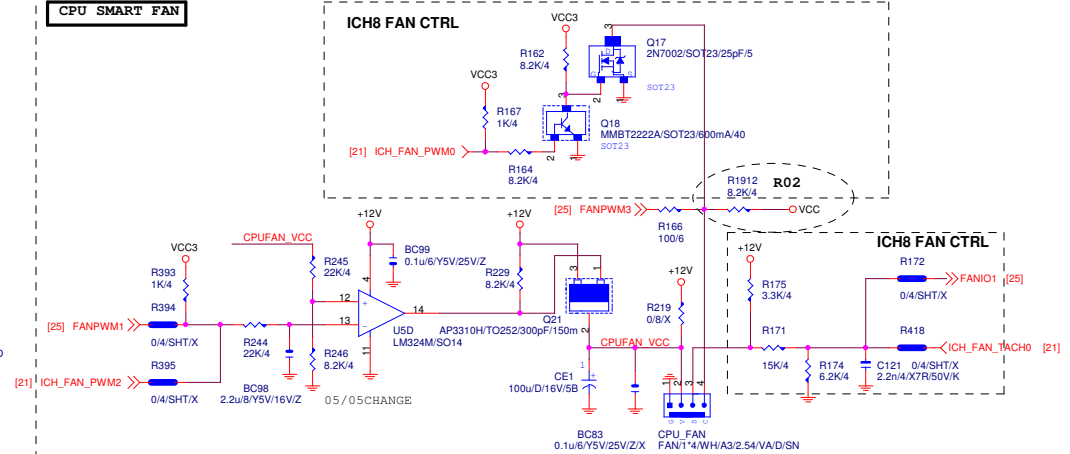
LPT PORT



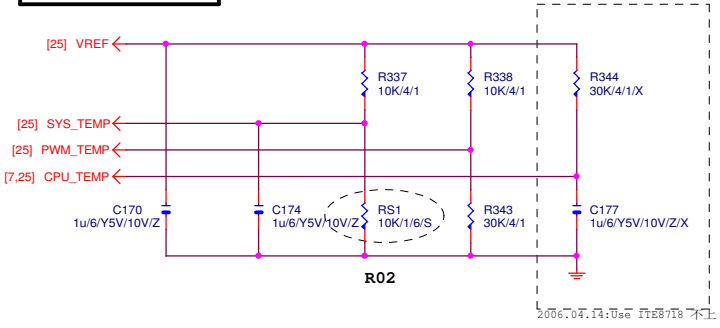
-PROHOT



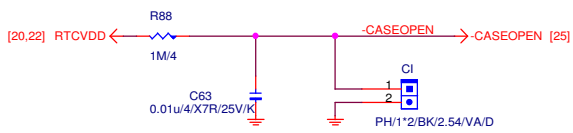
CPU SMART FAN



TEMP H/W MONITOR

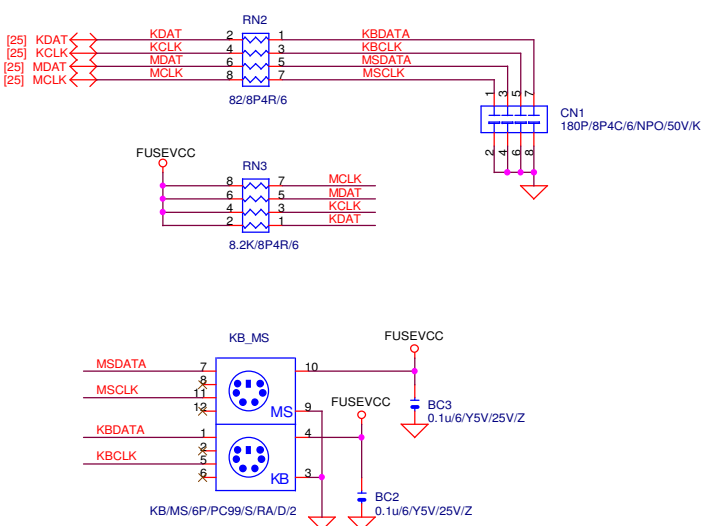


CASE OPEN

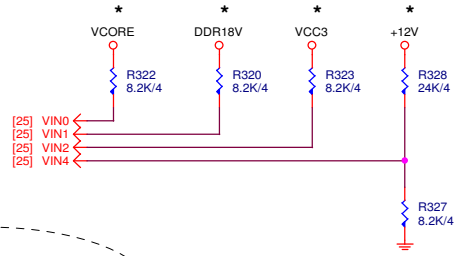


Case Open Circuits

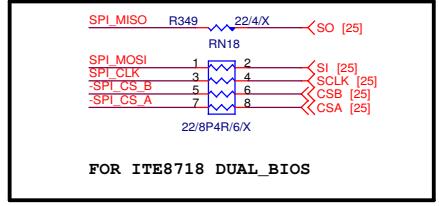
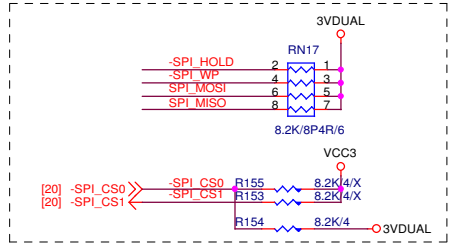
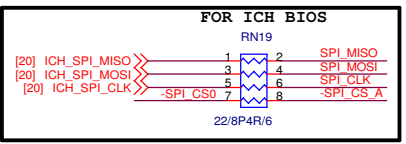
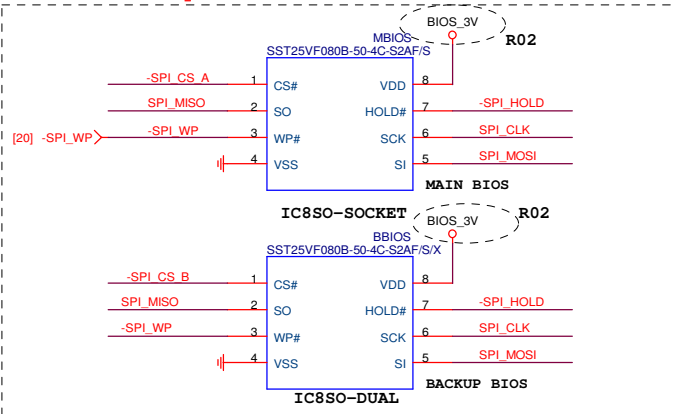
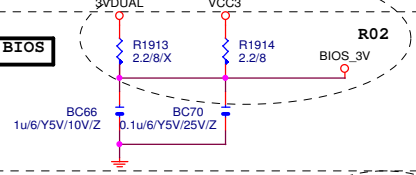
KB/MS



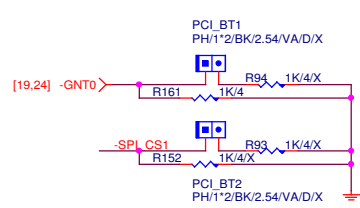
VOLTAGE-- H/W MONITOR



SPI BIOS

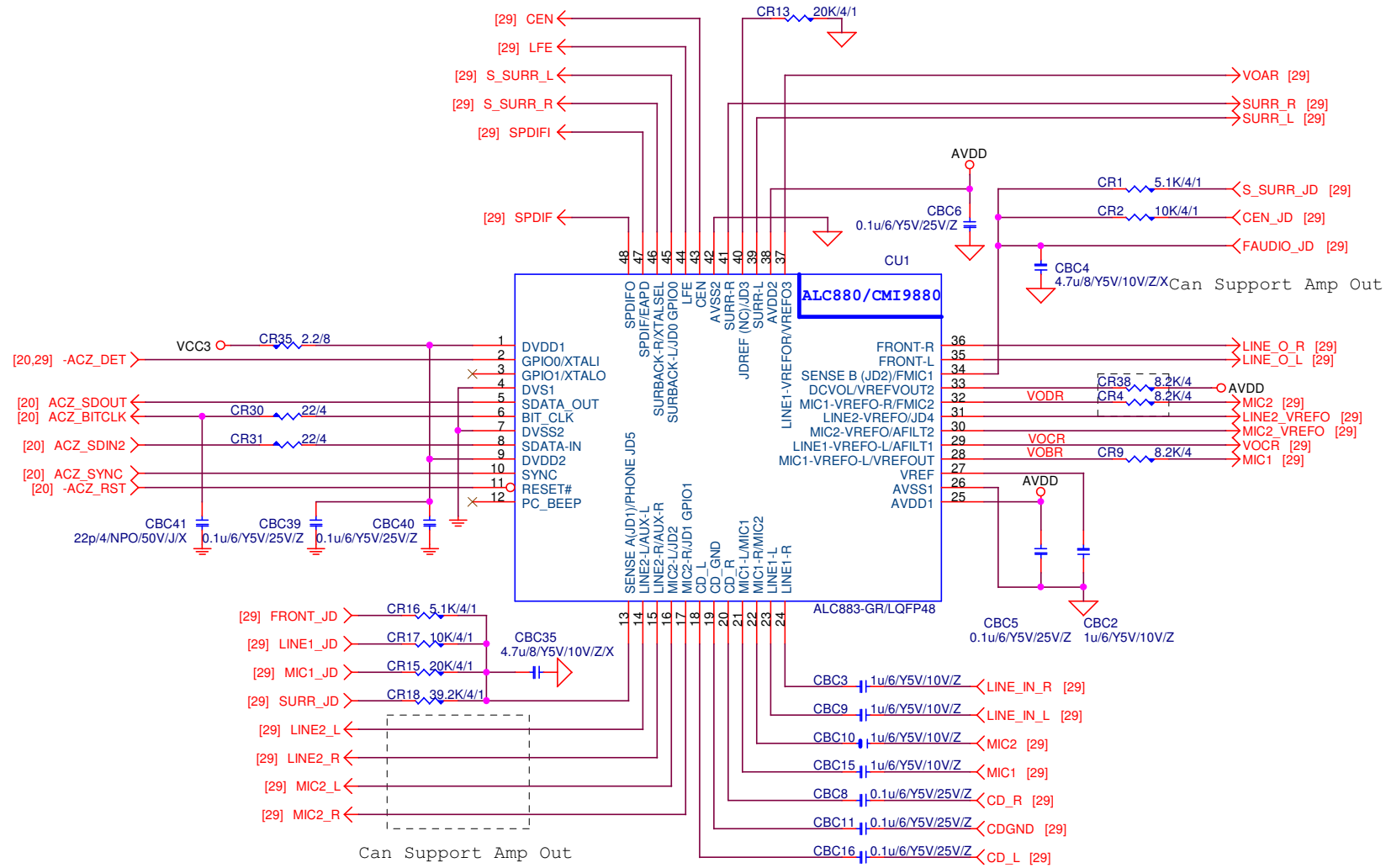


FOR ITE8718 DUAL BIOS



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

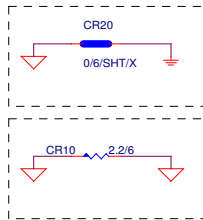
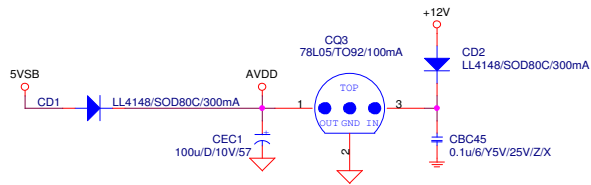
Gigabyte Technology



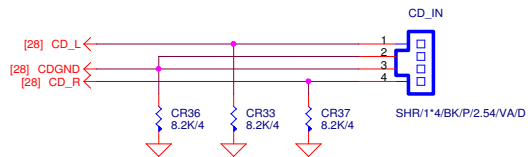
Can Support Amp Out

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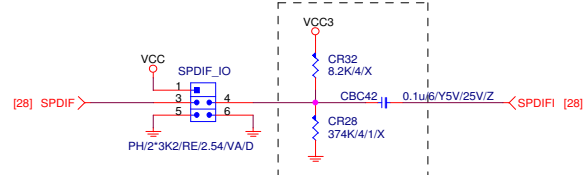
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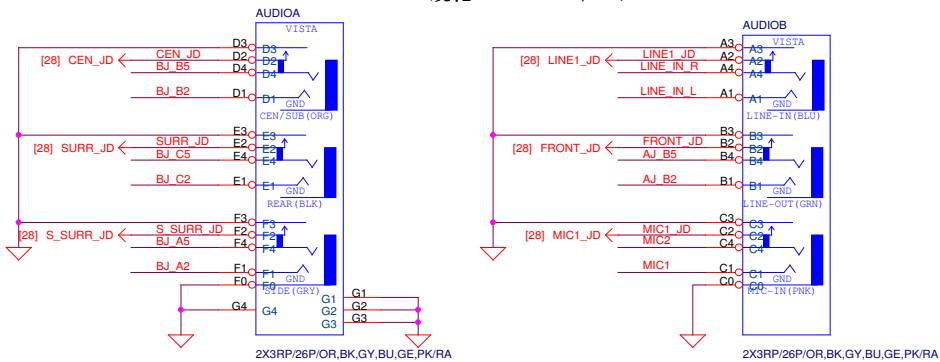
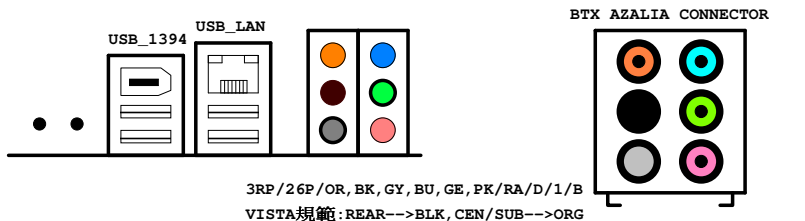
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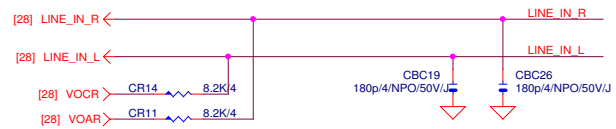
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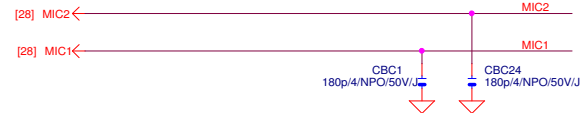
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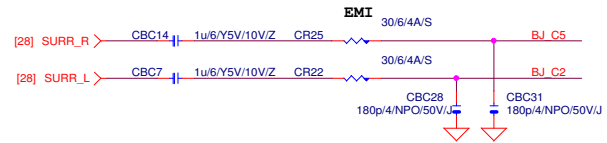
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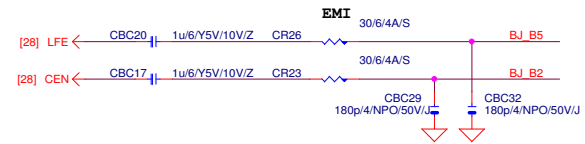
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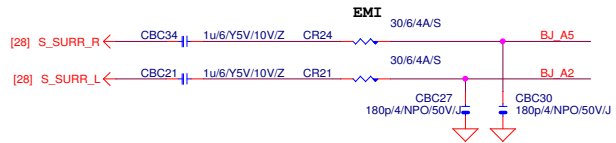
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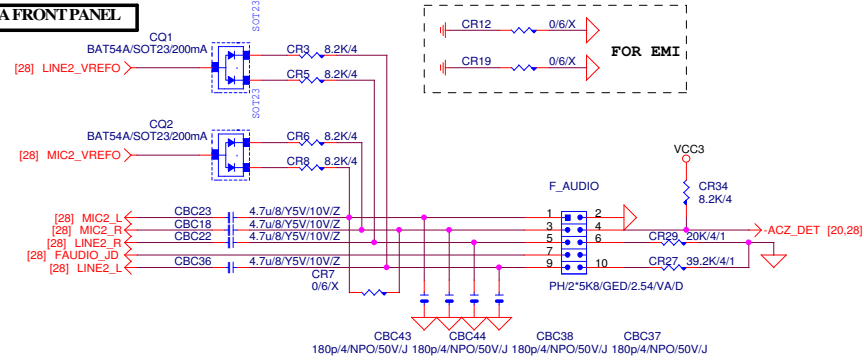
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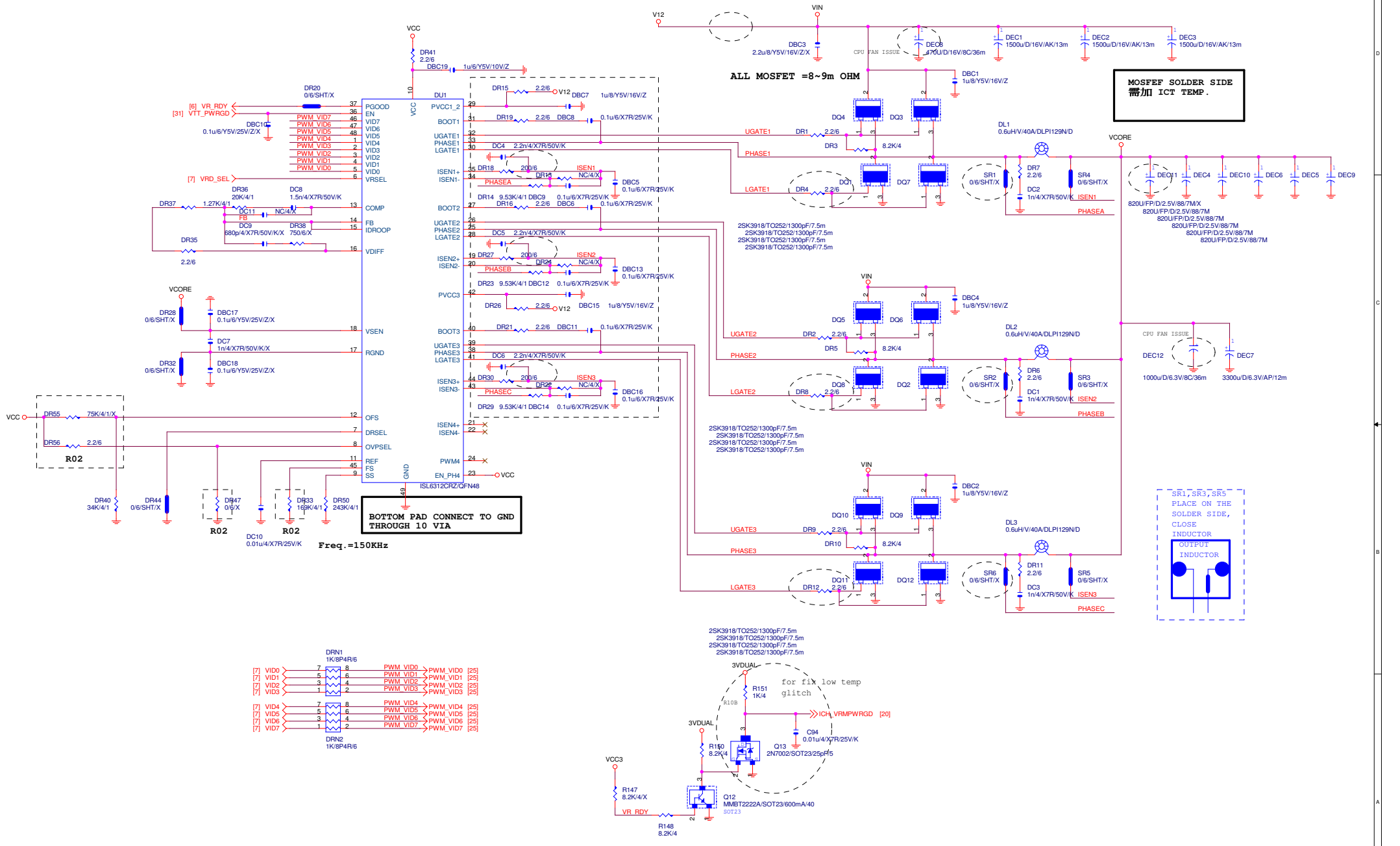
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AZALIA FRONT PANEL

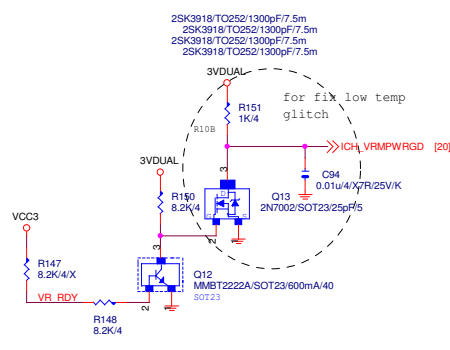
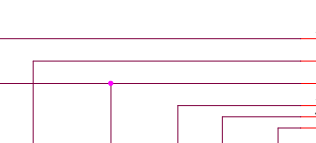
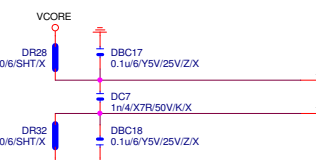
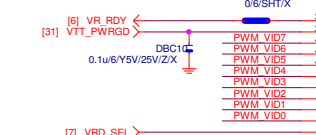
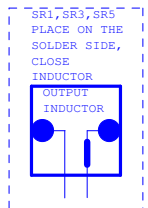


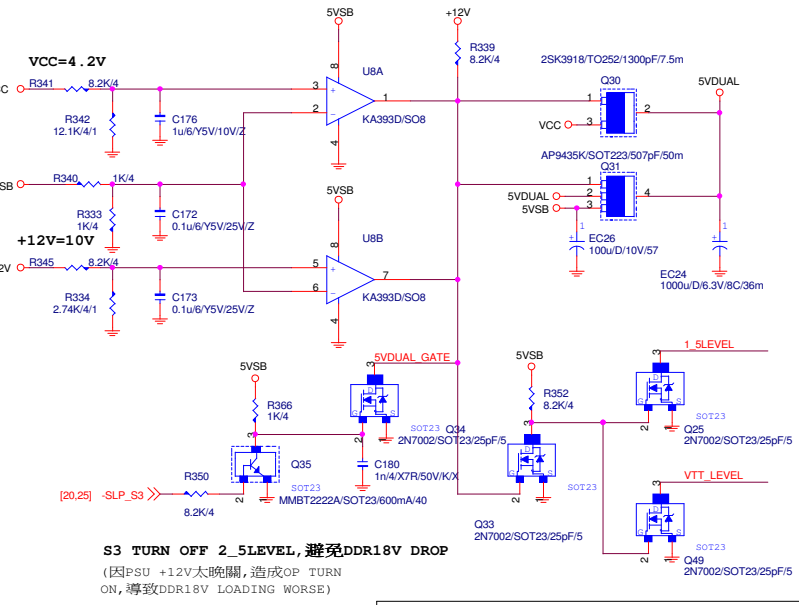
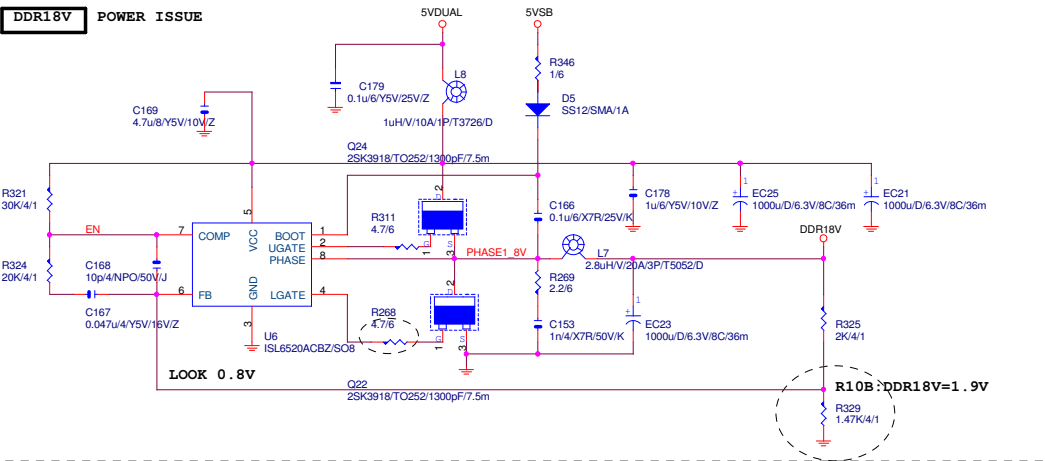
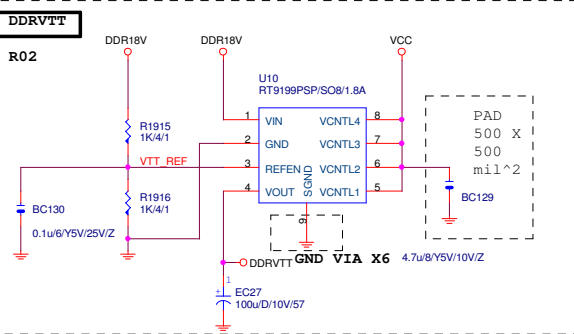
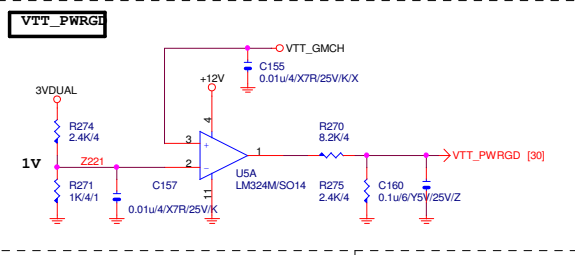
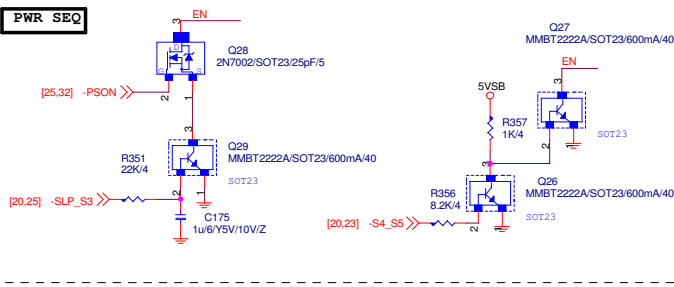
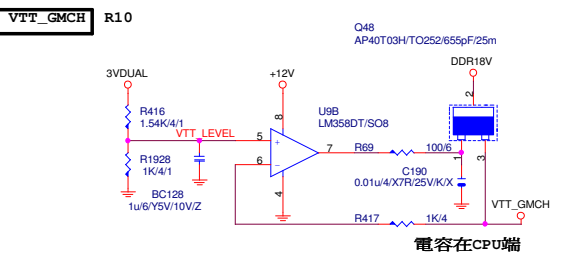
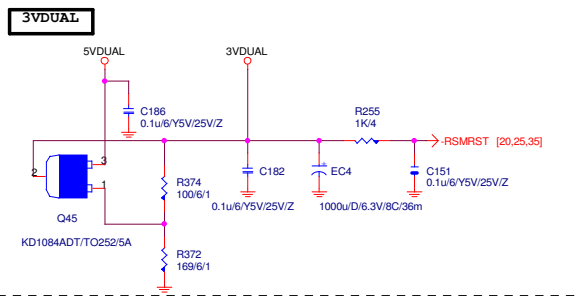
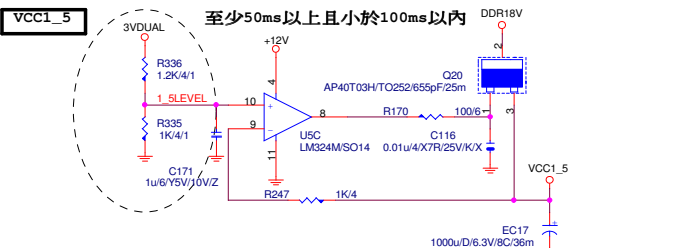
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AUDIO JACK		
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**MOSFET SOLDER SIDE
需加 ICT TEMP.**

**BOTTOM PAD CONNECT TO GND
THROUGH 10 VIA**





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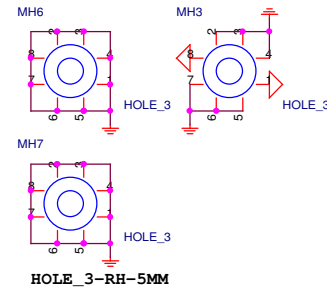
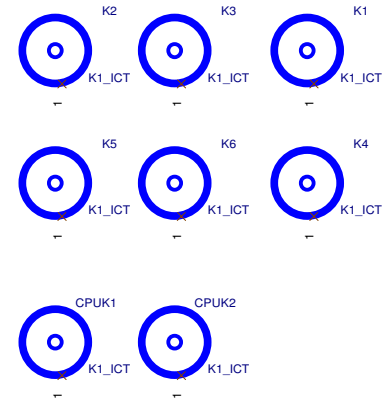
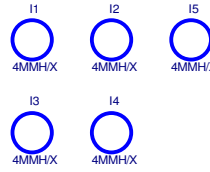
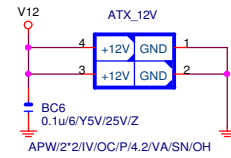
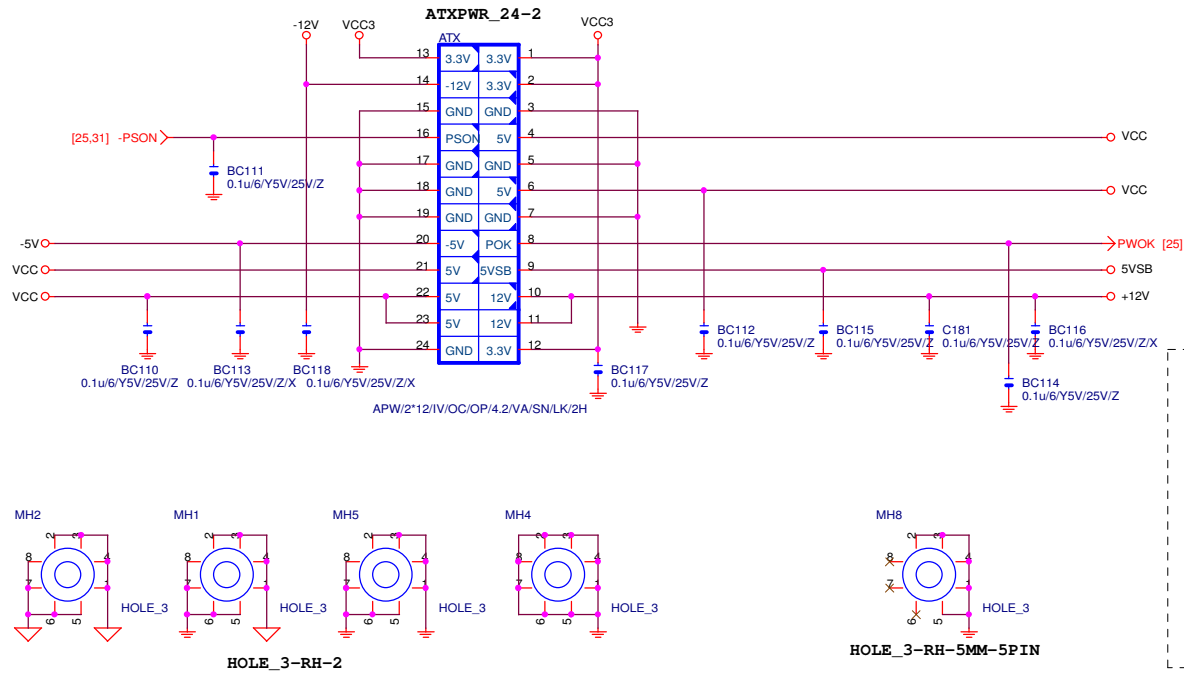
DISCRETE POWER

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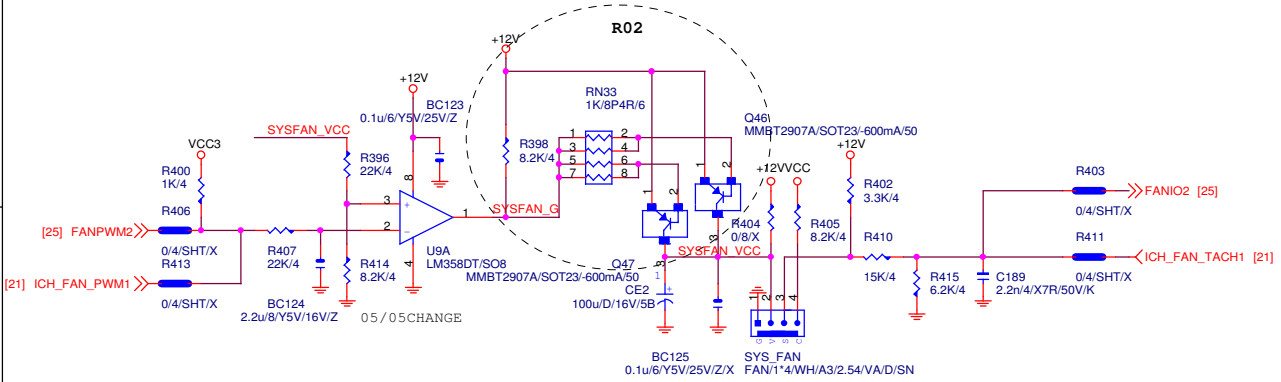
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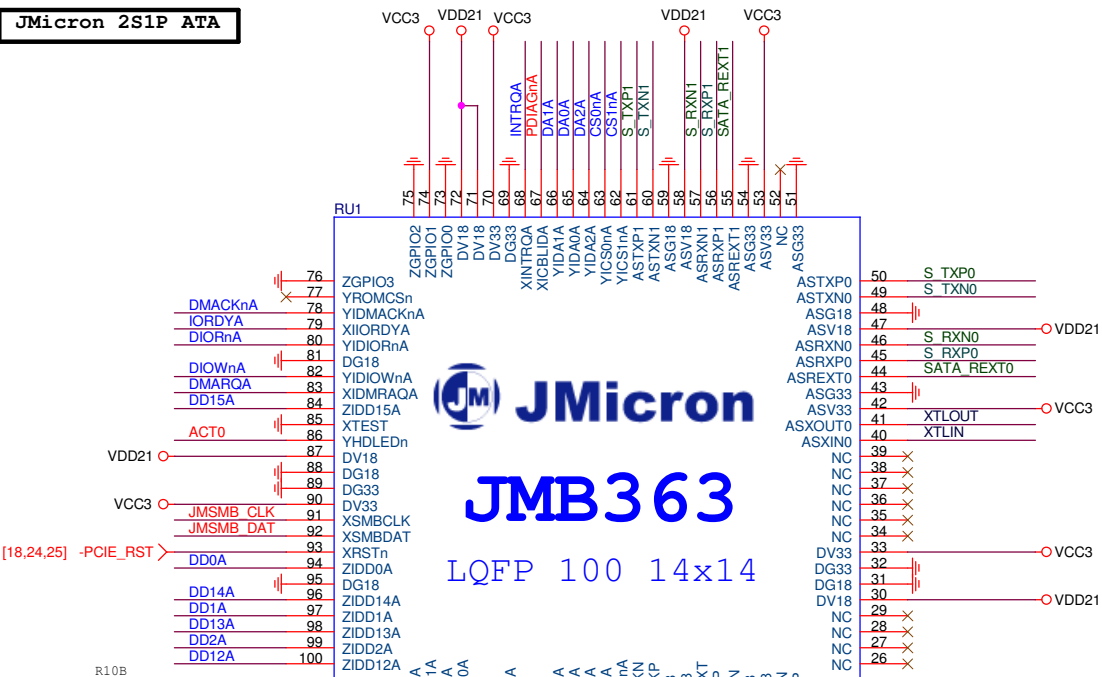
ATX POWER CONNECTOR



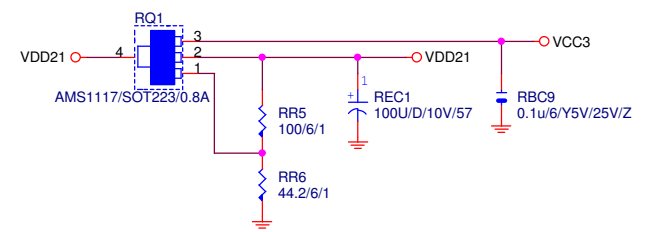
SYS SMART FAN



JMicron 2S1P ATA

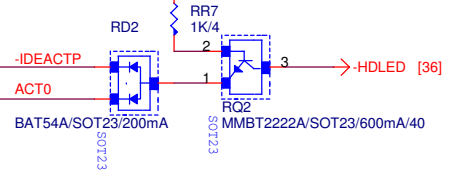


3.3V to 1.8V Voltage Regulator

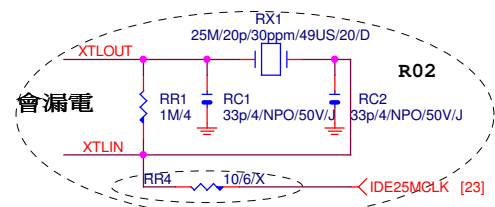
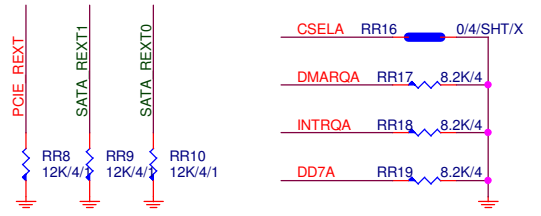


JMicron suggest to change 1.8V to 2.1V

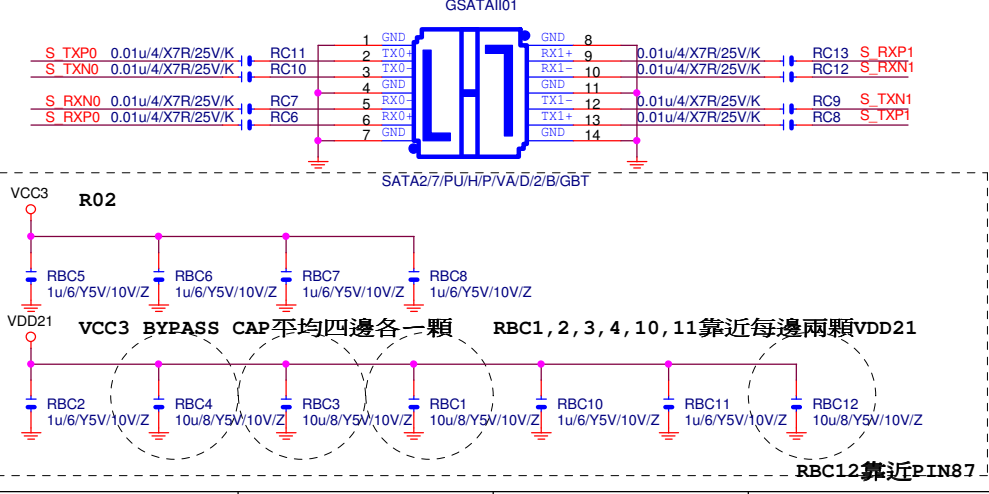
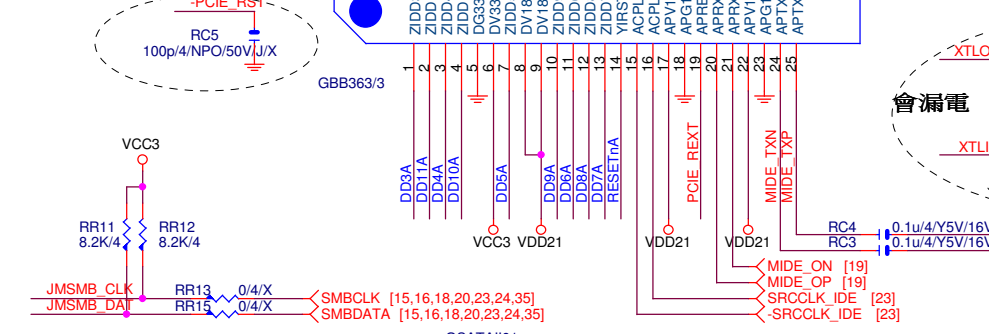
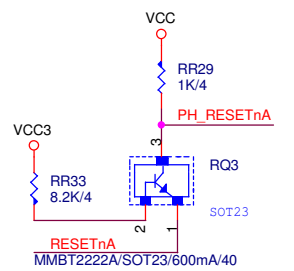
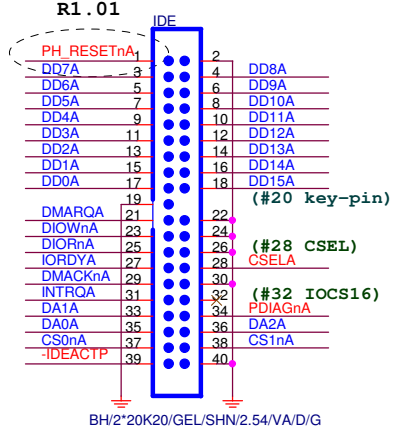
Active LED



Near to PIN



IDE Connector

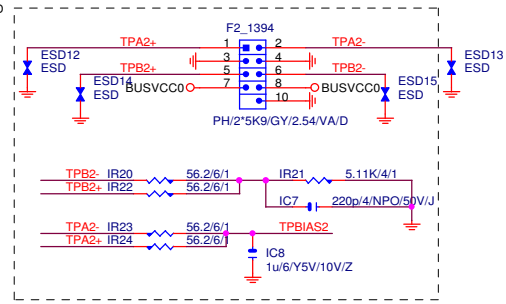
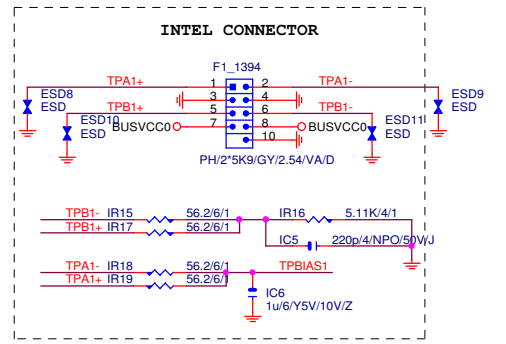
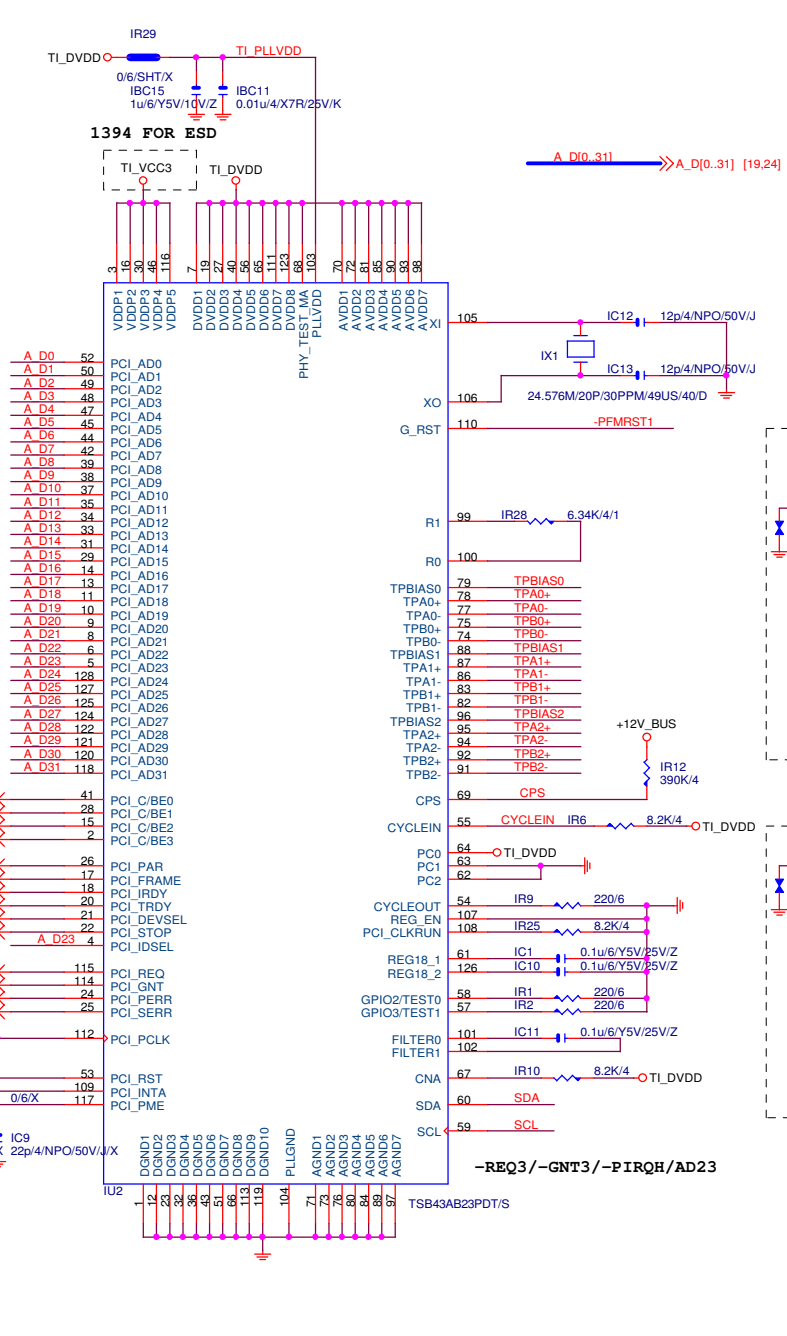
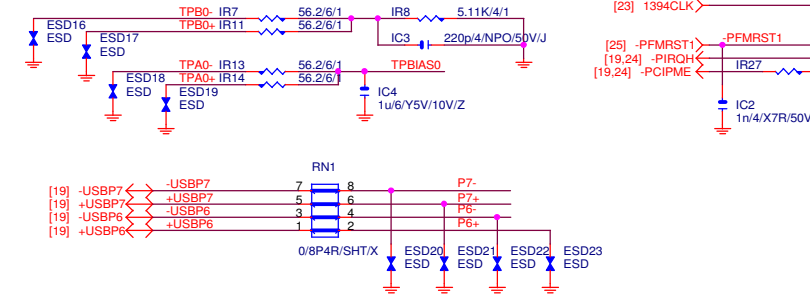
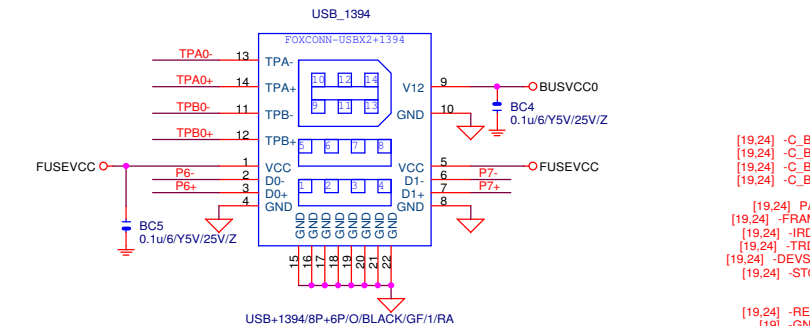
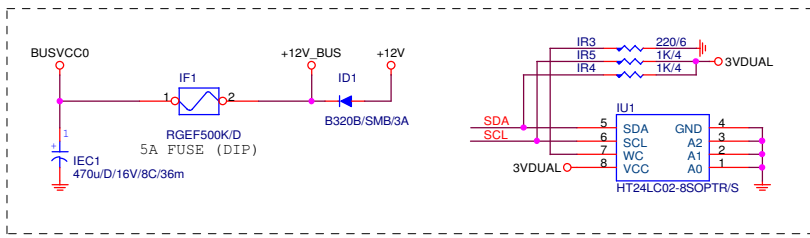
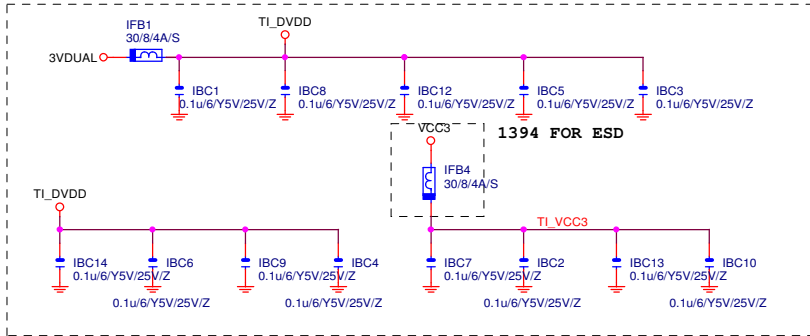


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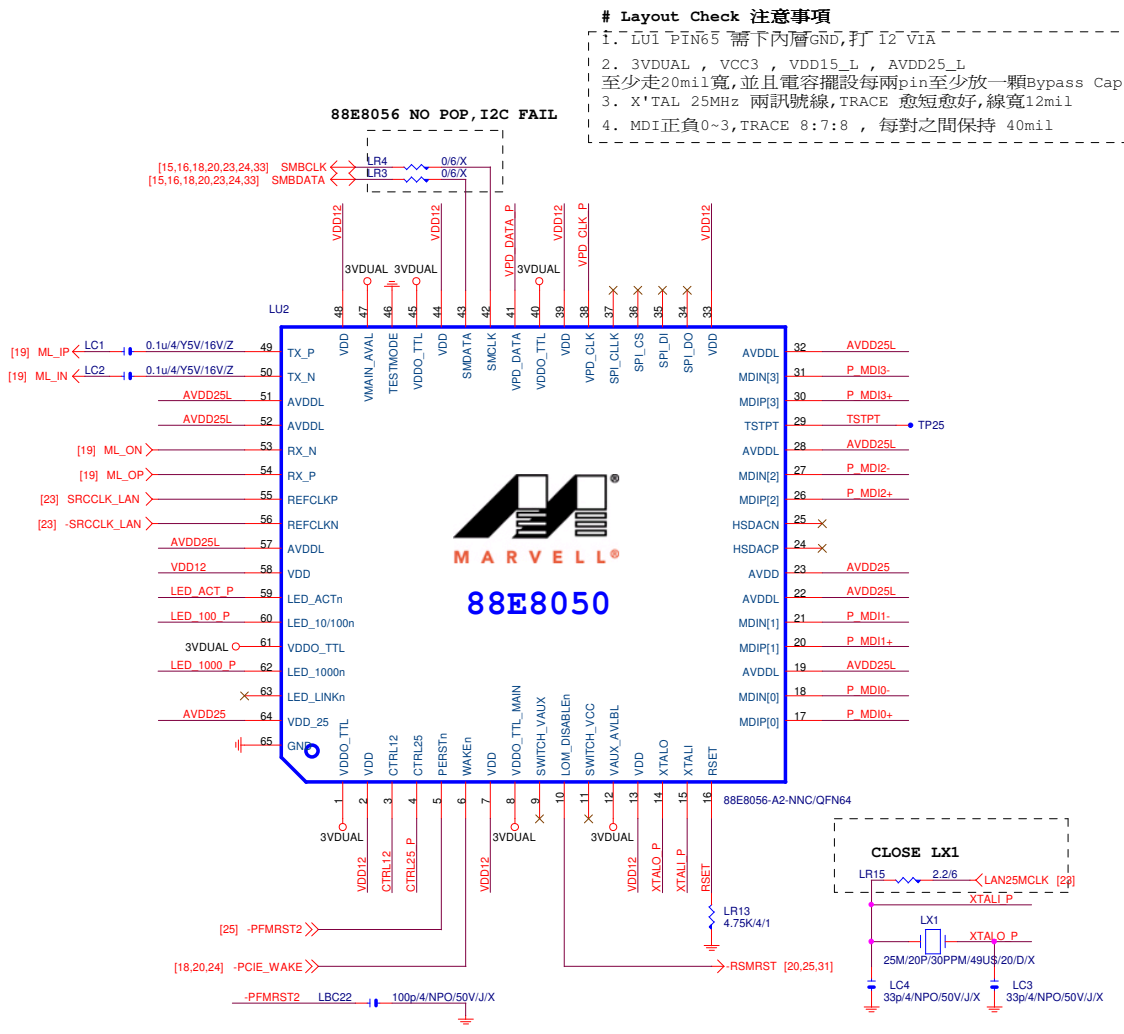
JMicron 2S1P ATA

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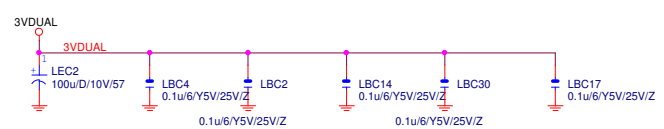
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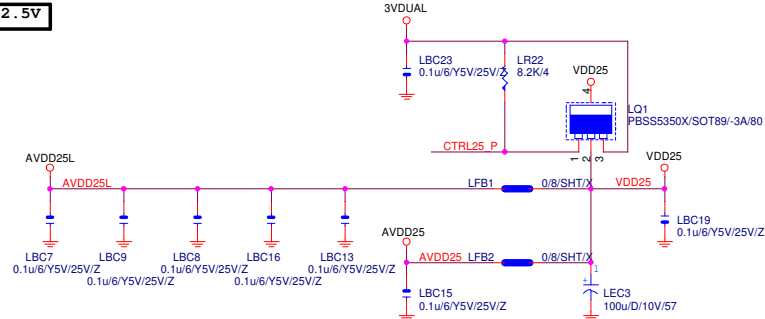
PCIE-1G LAN



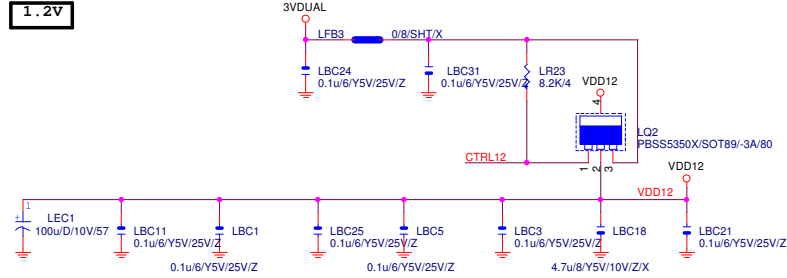
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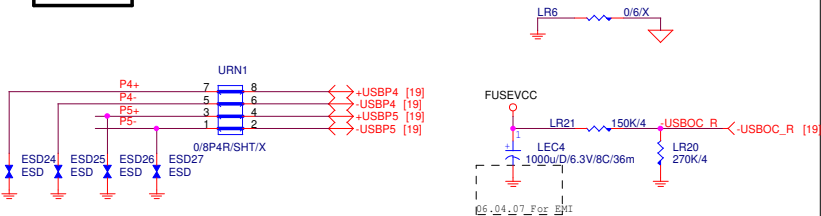
2.5V



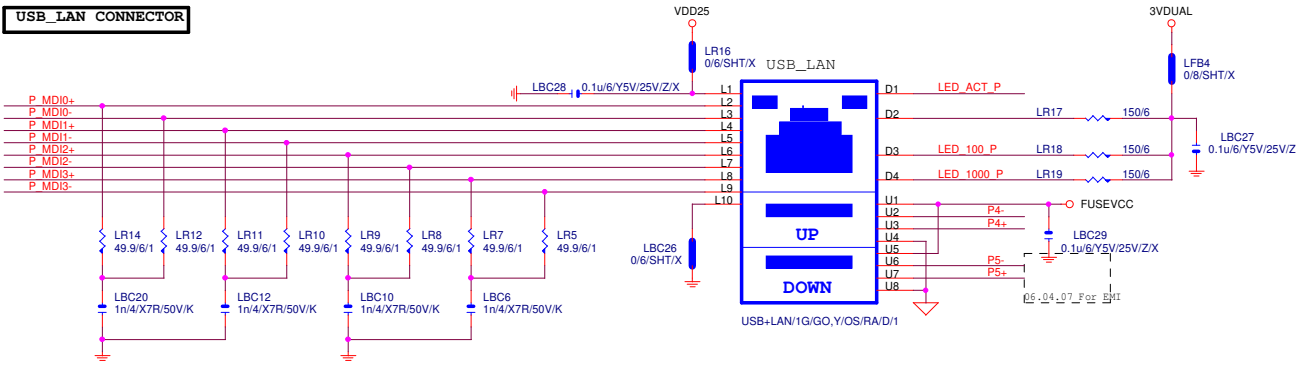
1.2V



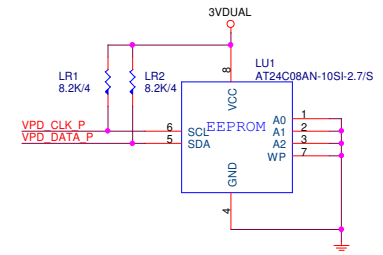
USB_LAN



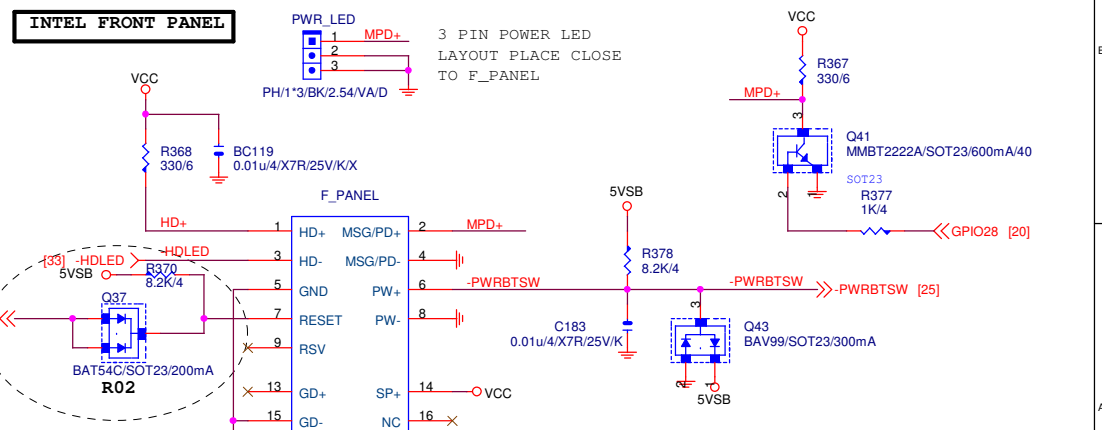
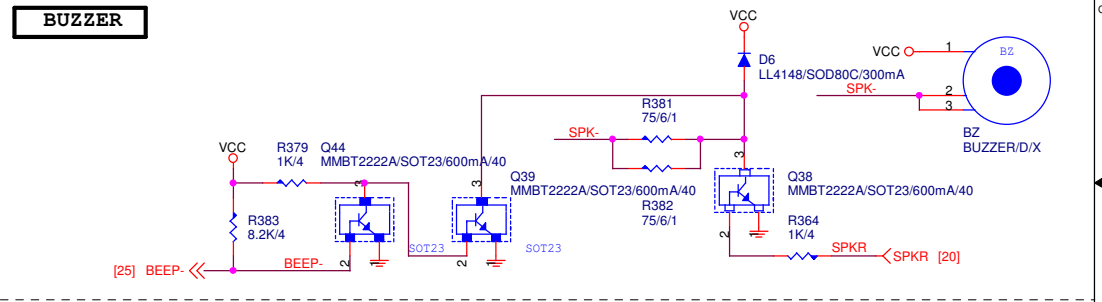
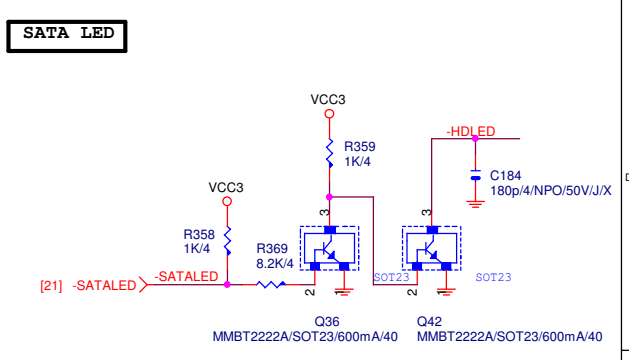
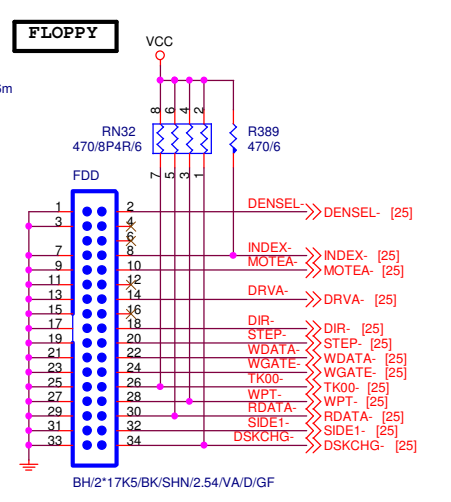
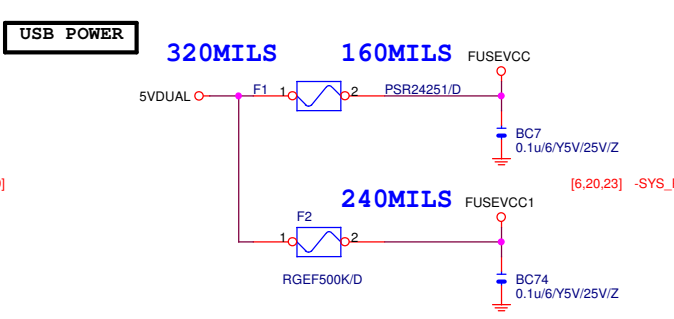
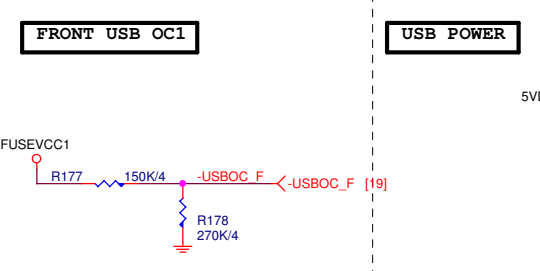
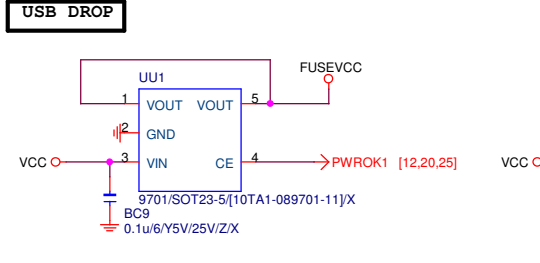
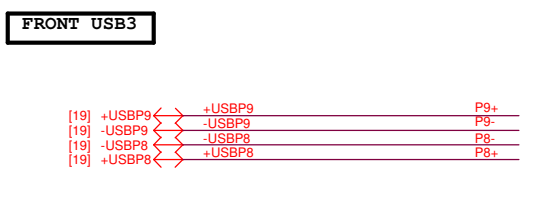
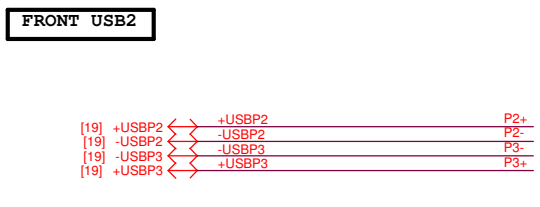
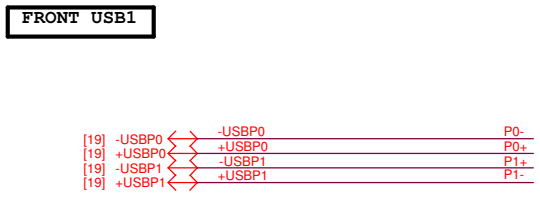
USB_LAN CONNECTOR



EEPROM



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FP,F_USB,USB PWR,FDD,BZ		
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