

Model Name: GA-8I945EF-RH *Revision 1.0*

SHEET

TITLE

SHEET

TITLE

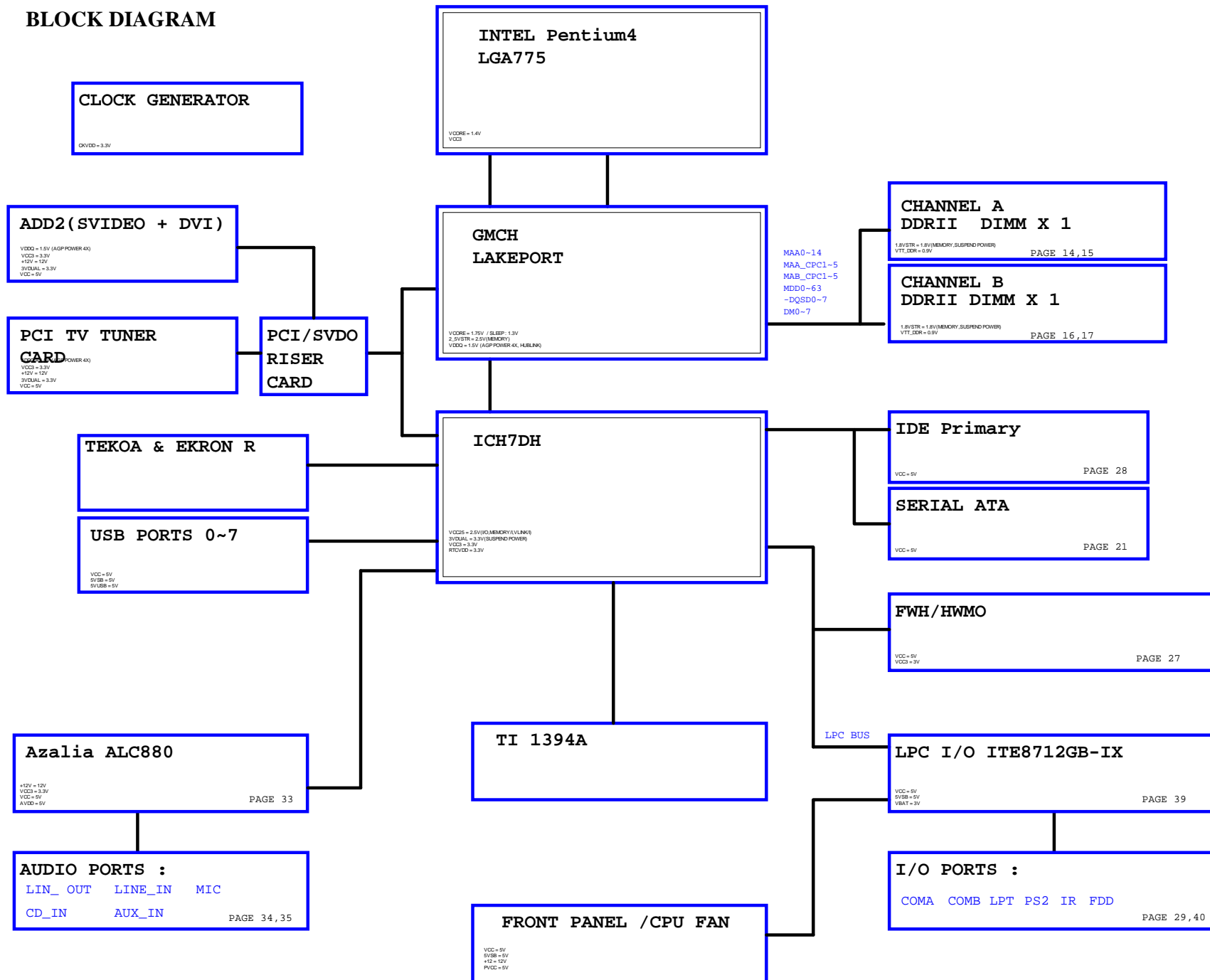
01	COVER SHEET
02	BLOCK DIAGRAM
03	BOM & PCB MODIFY HISTORY
04	P4_LGA775_A
05	P4_LGA775_B
06	P4_LGA775_C
07	P4_LGA775_D
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09	GMCH-LAKEPORT_DDRII
10	GMCH-LAKEPORT_PCI E, DMI
11	GMCH-LAKEPORT_INT VGA
12	GMCH-LAKEPORT_GND
13	GMCH-LAKEPORT_PWR
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15	DDRII CHANNEL B 1,2
16	DDRII TERMINATION
17	PCI EXPRESS*16 SLOT
18	ICH7 PCI, USB, DMI, LAN
19	ICH7 IDE, GPIO, SATA, CTRL
20	ICH7 VCC, GND
21	CY28411 CKG
22	ATX,ATX_12V CONNECT,FWH BIOS
23	PCI EXPRESS*1 SLOT
24	PCI SLOT 1,2
25	H/W MONITOR,FAN
26	IDE
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28	FRONT PANEL
29	FRONT USB,REAL USB CONNECT
30	PROCESSOR HOT
31	AZALIA CODEC ALC880
32	AUDIO JACK 1
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34	TI1394A
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BLOCK DIAGRAM



Version: 1.0

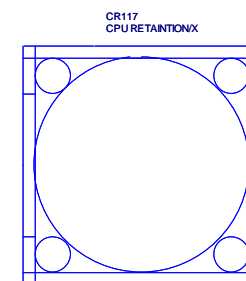
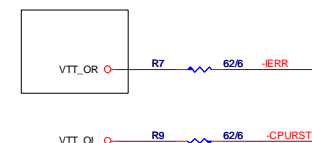
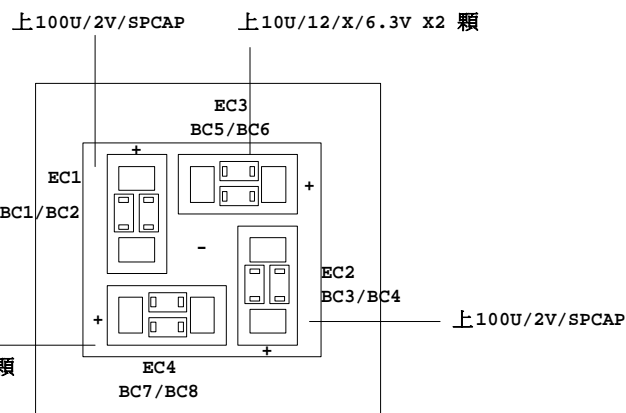
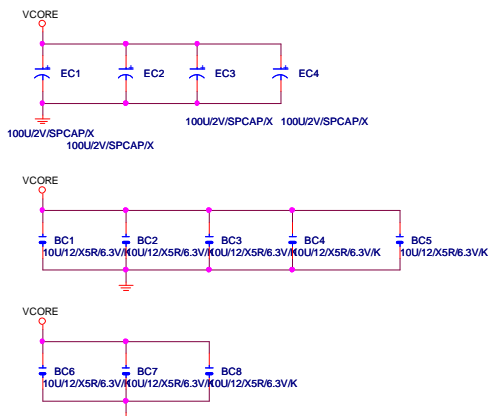
Circuit or PCB layout change
for next version

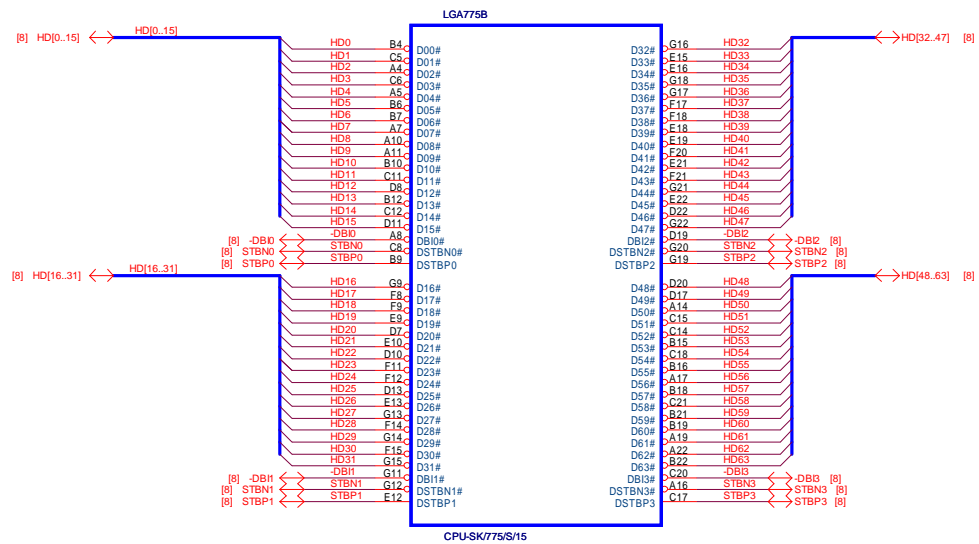
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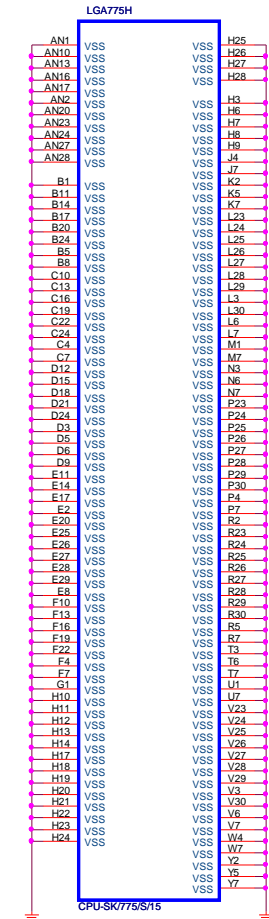
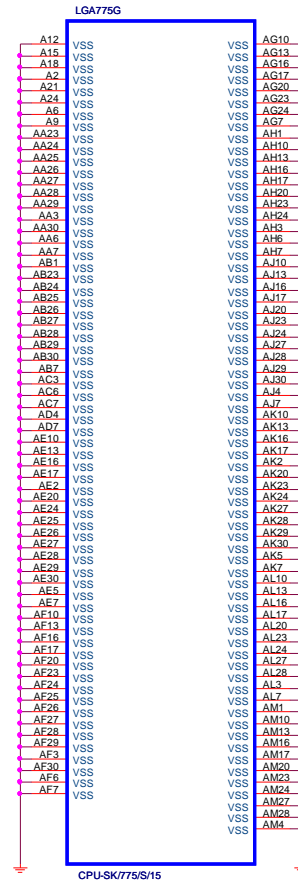
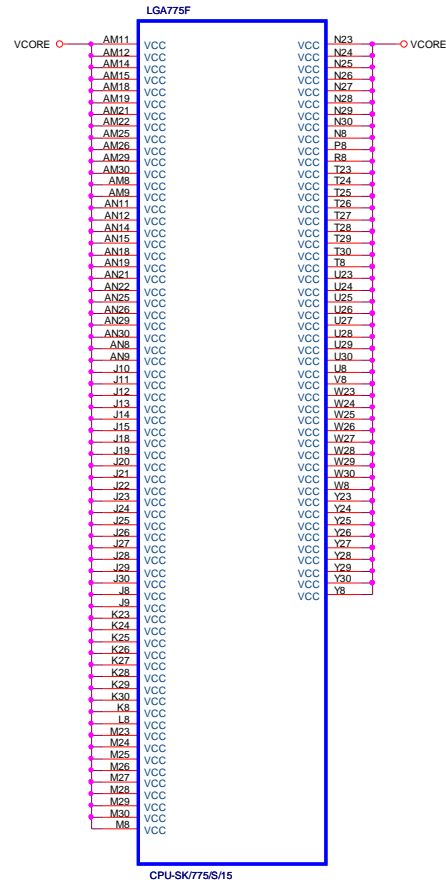
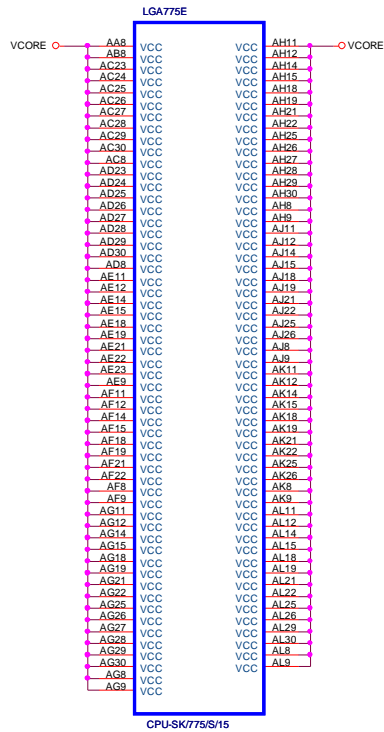
Component value change history

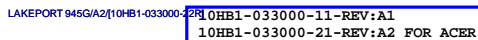
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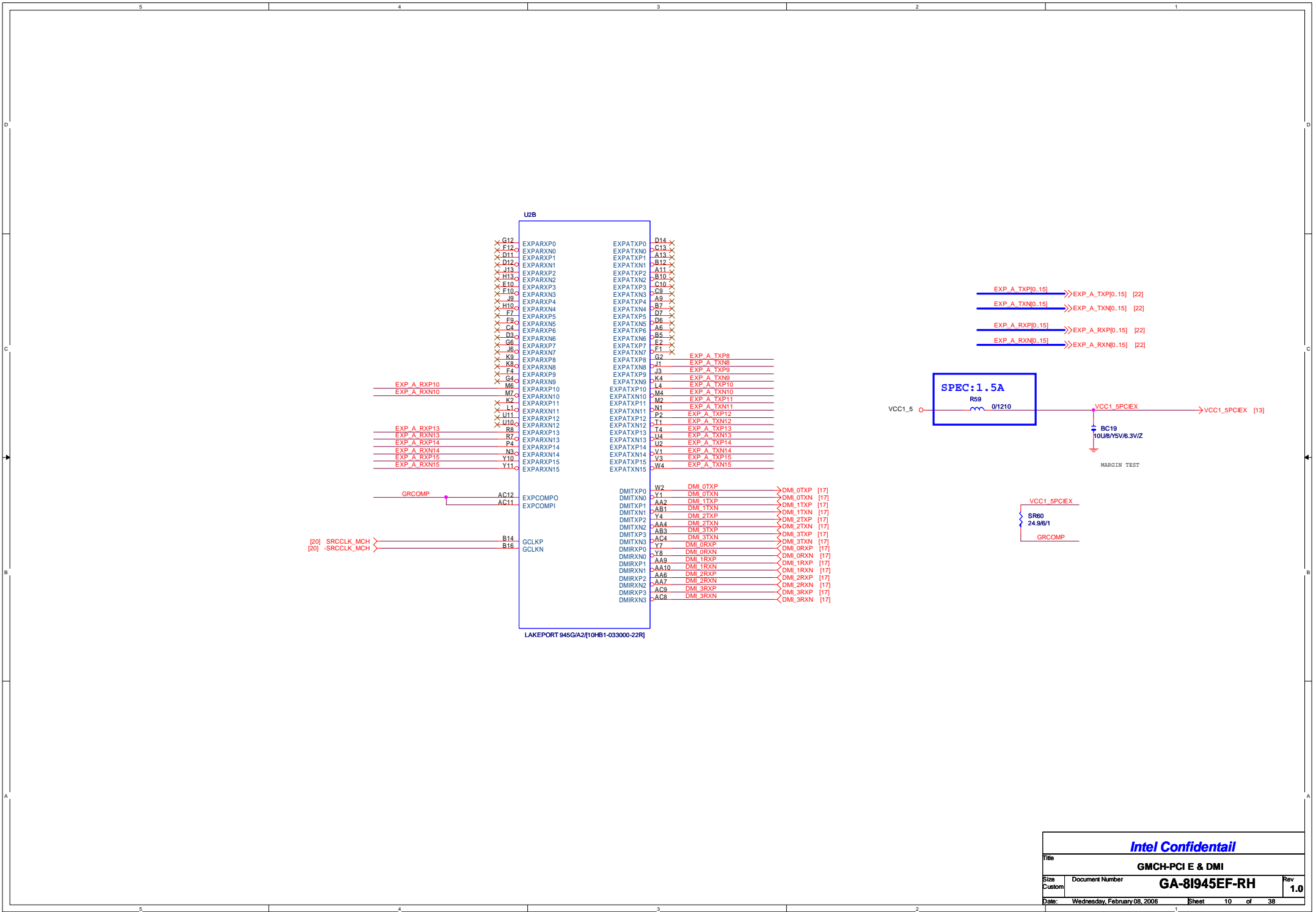
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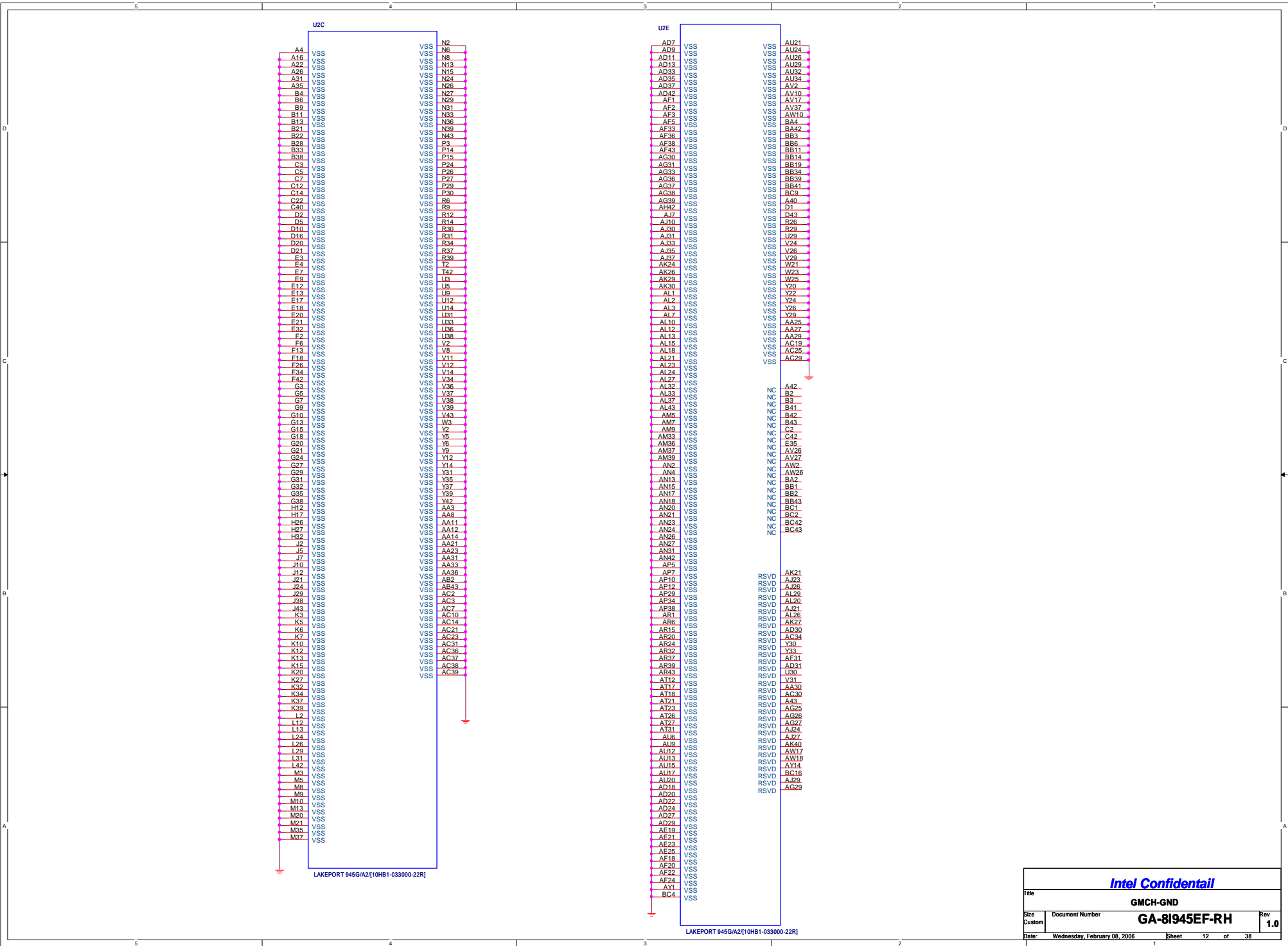


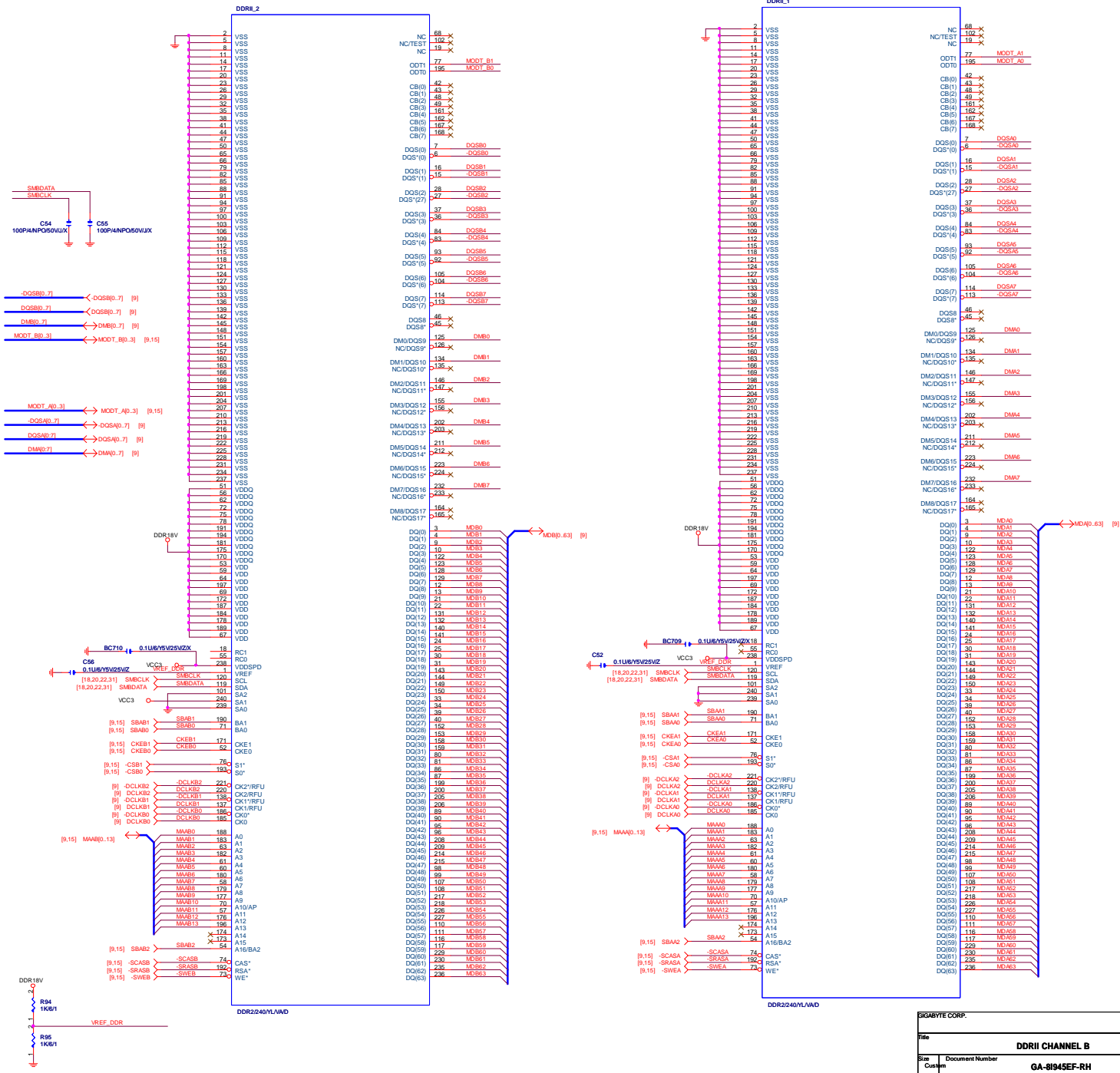






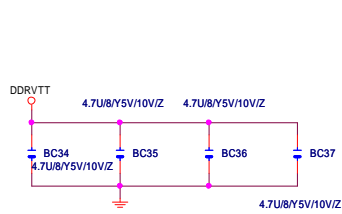




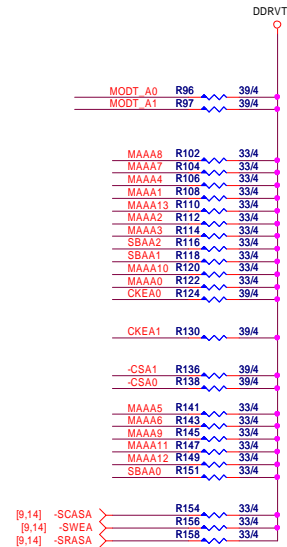
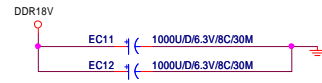


SUGARBYTE CORP.		
File		
DDR2 CHANNEL B		
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DDRVTT Decouple

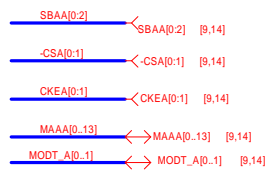
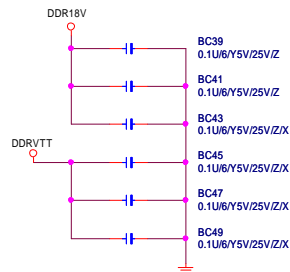


DDR TERMINATION CHANNEL A

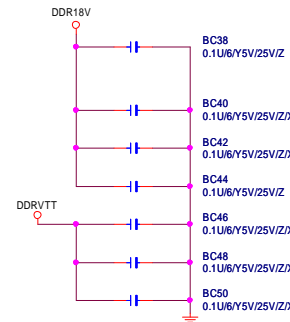


全部改成 33/6

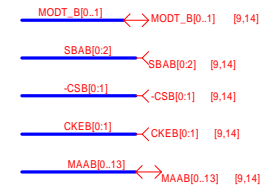
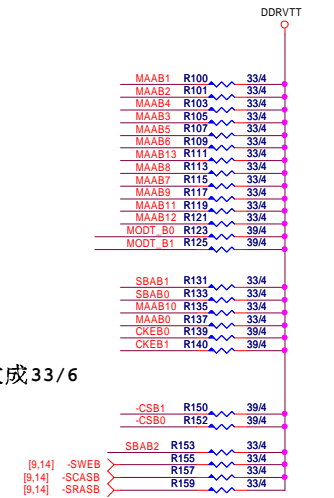
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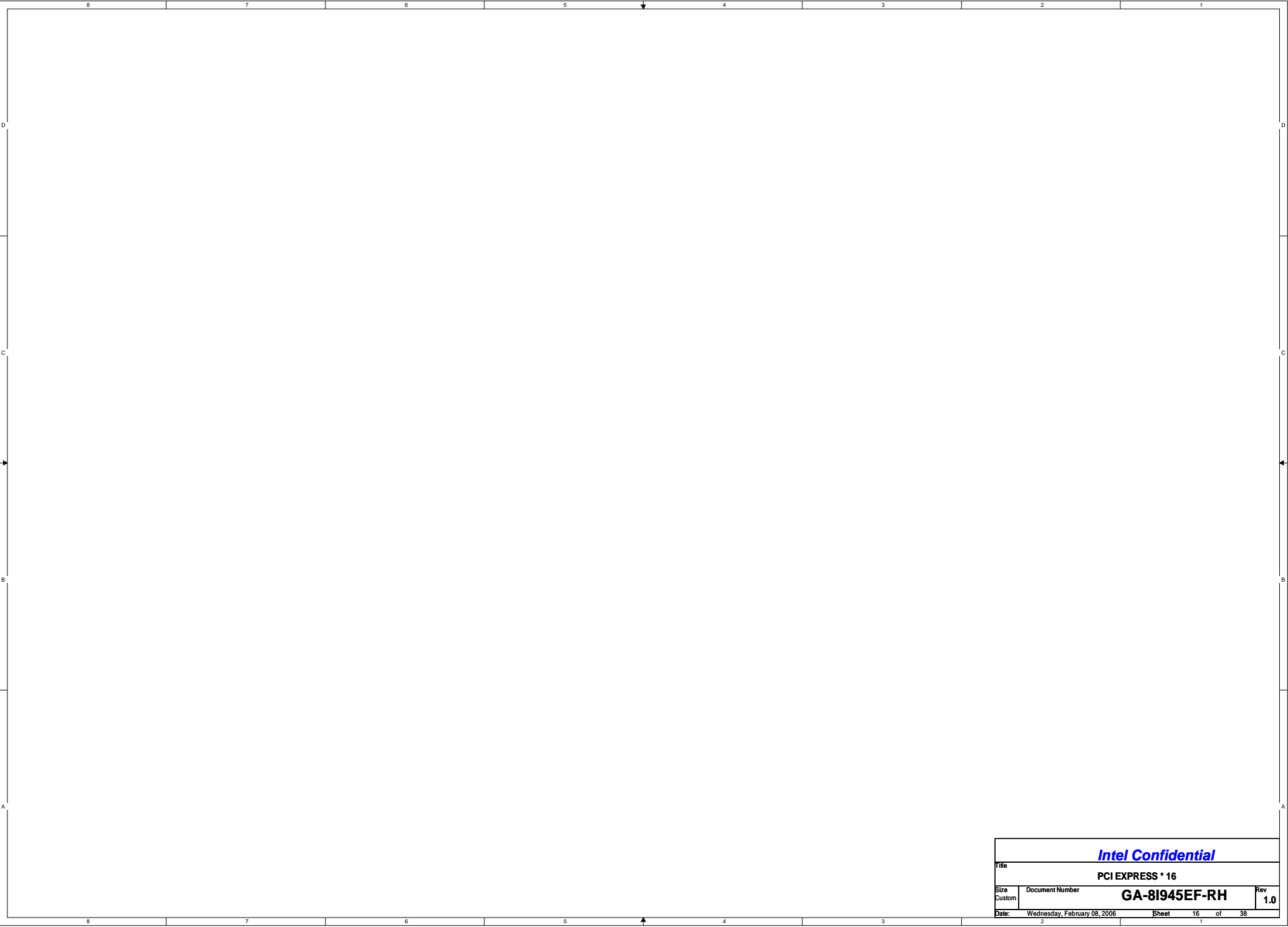


DDR18V Decouple

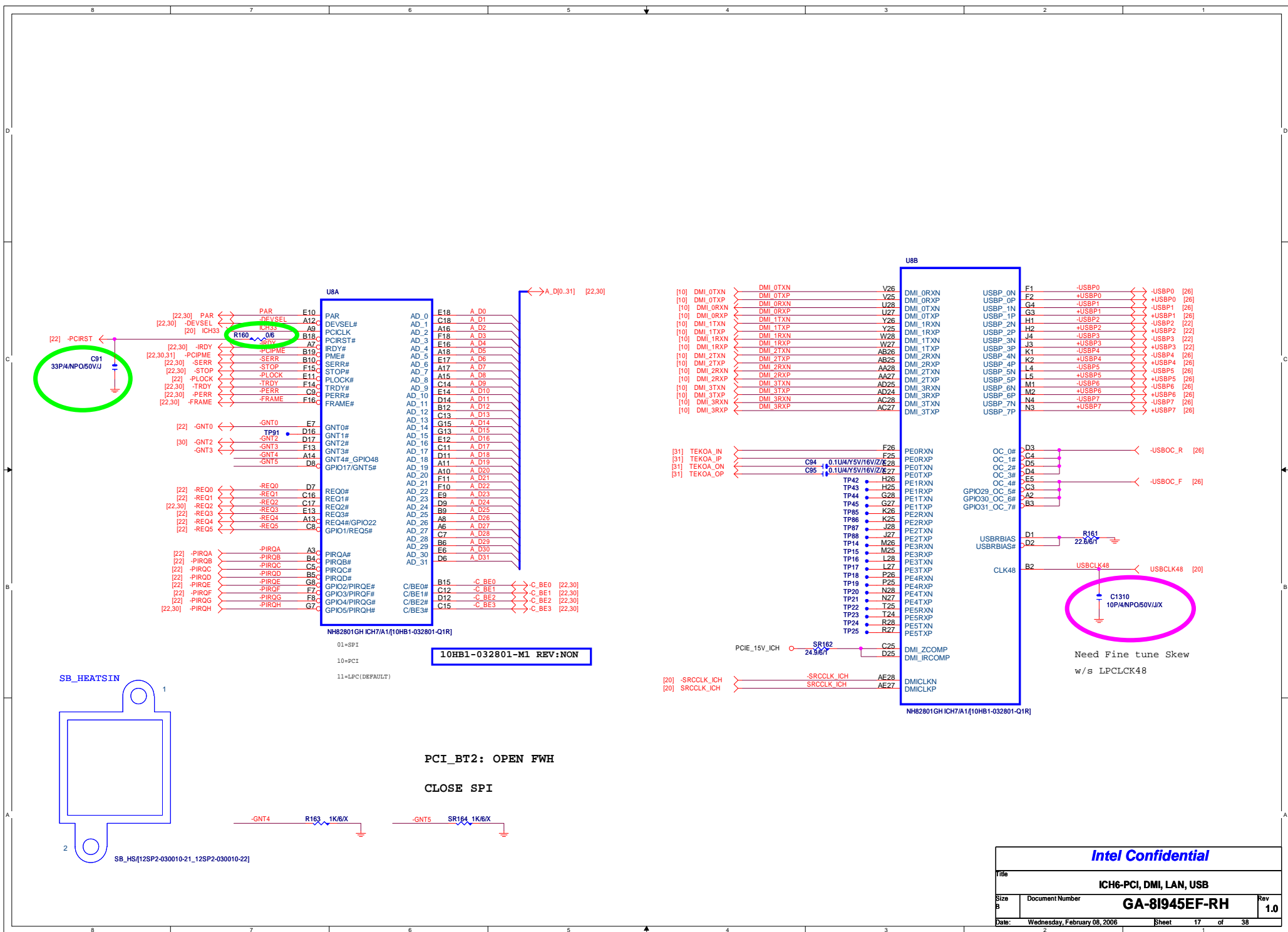


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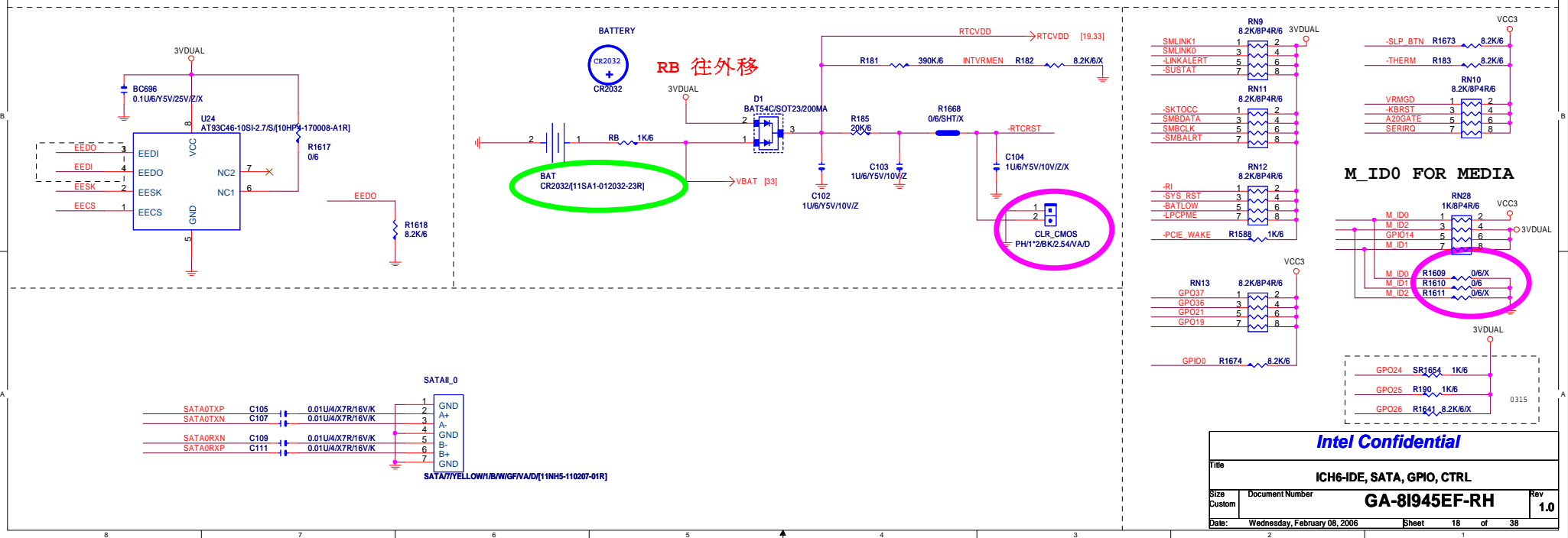
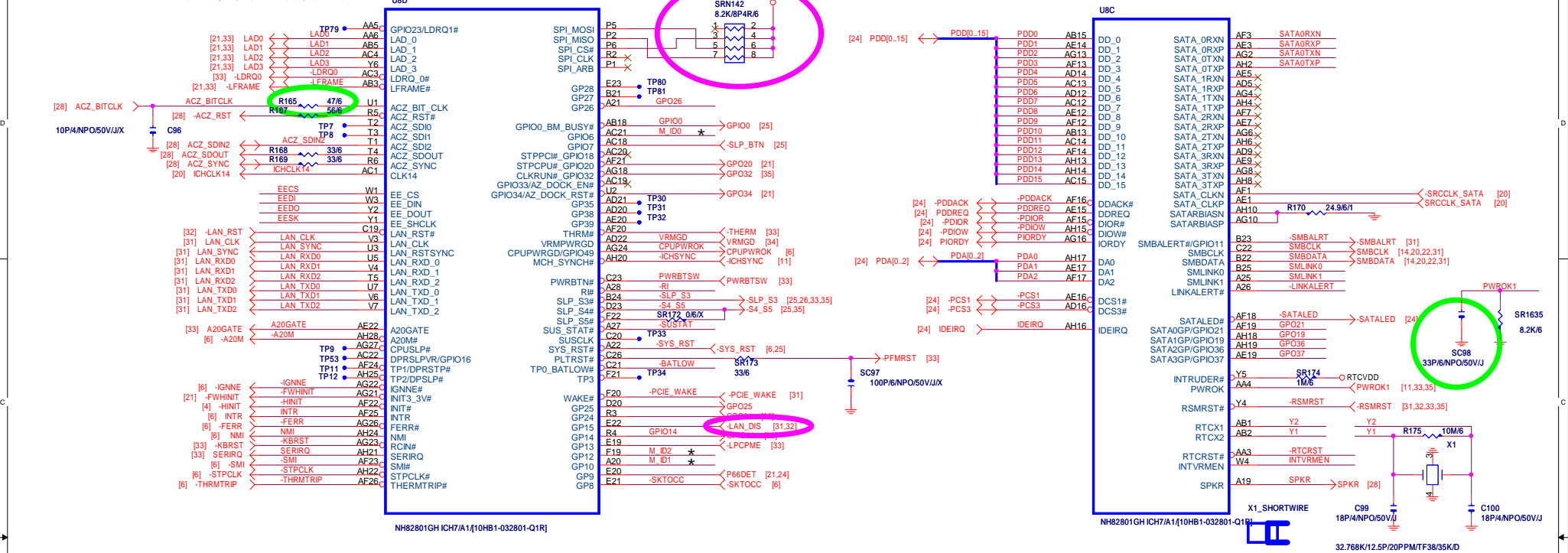


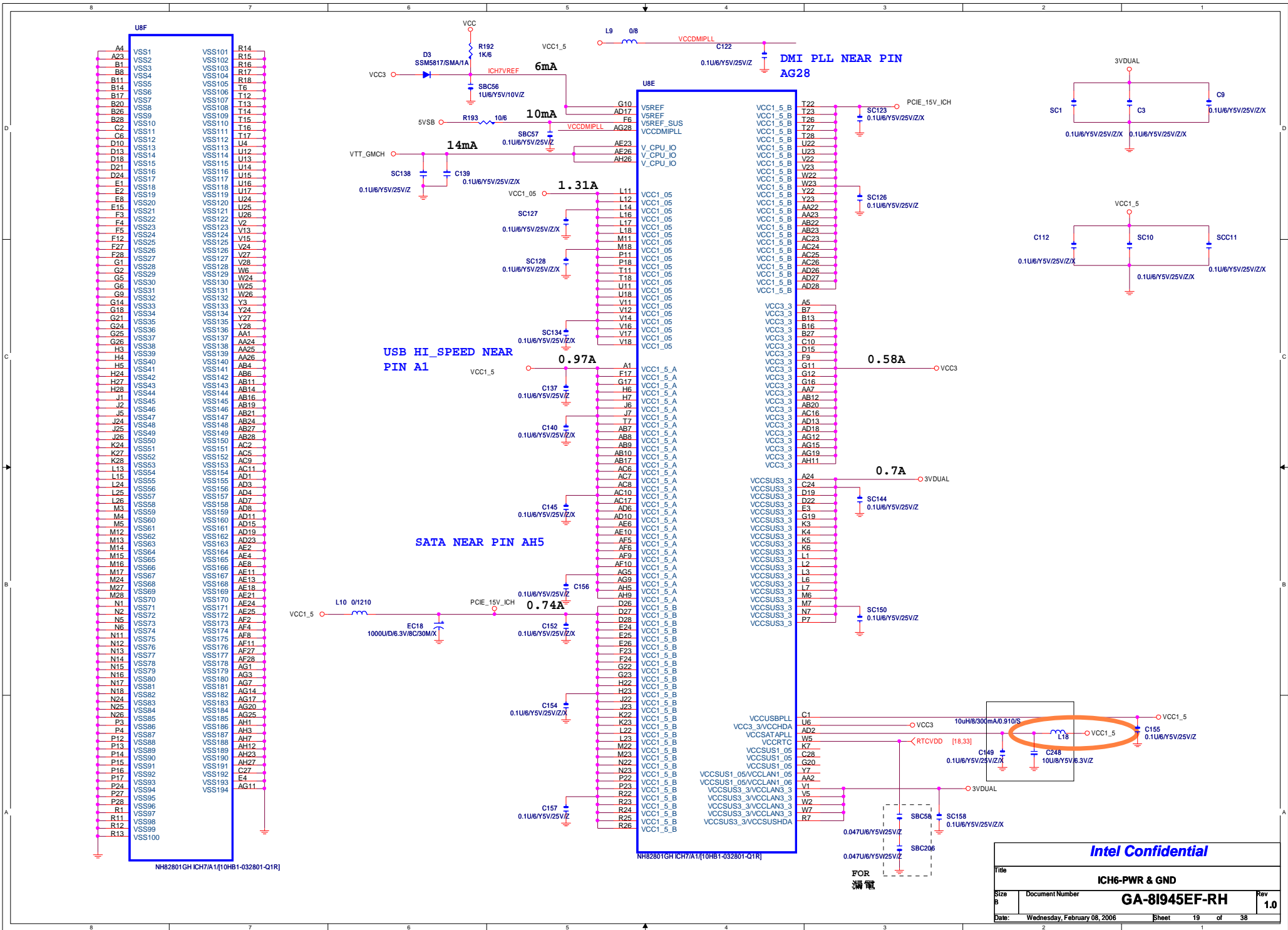


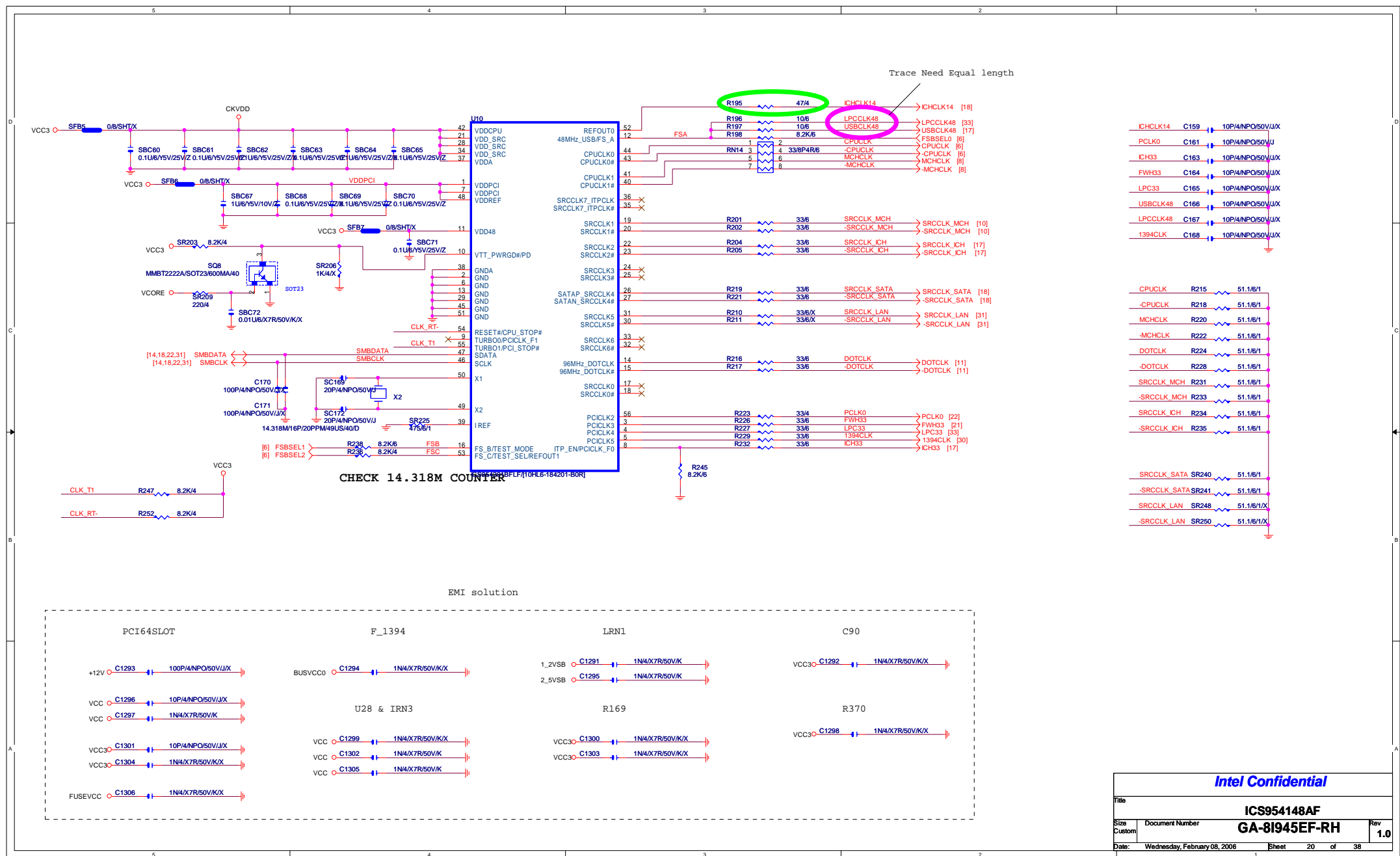
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		2	1

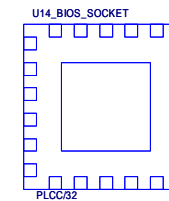


SATAII0,SATAII1 文字面各別分開





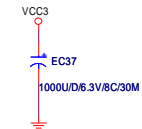
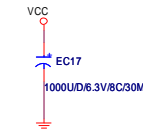
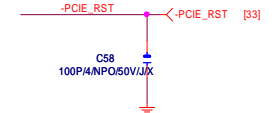


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IDSEL --> AD20

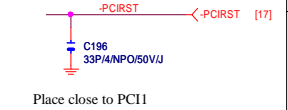
IRQ --> A/B/C/D

REQ/GBR --> 0

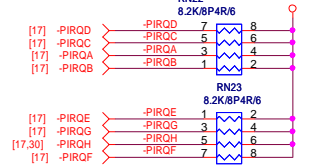
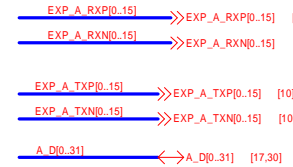
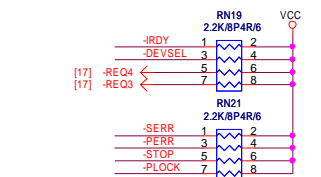
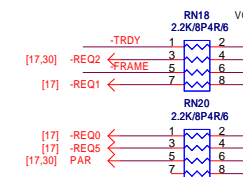


For USB MEC IR Receiver

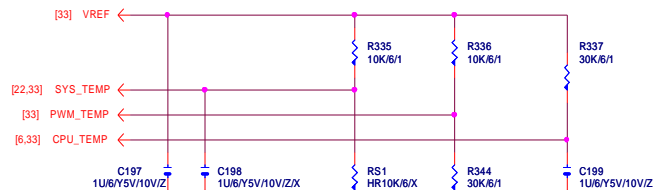
For USB Card Reader



EXP_A_TXP8	C75	0.1u6/5V/25V/Z	EXP_A_TXP8C
EXP_A_TXN8	C76	0.1u6/5V/25V/Z	EXP_A_TXN8C
EXP_A_TXP9	C77	0.1u6/5V/25V/Z	EXP_A_TXP9C
EXP_A_TXN9	C78	0.1u6/5V/25V/Z	EXP_A_TXN9C
EXP_A_TXP10	C79	0.1u6/5V/25V/Z	EXP_A_TXP10C
EXP_A_TXN10	C80	0.1u6/5V/25V/Z	EXP_A_TXN10C
EXP_A_TXP11	C81	0.1u6/5V/25V/Z	EXP_A_TXP11C
EXP_A_TXN11	C82	0.1u6/5V/25V/Z	EXP_A_TXN11C
EXP_A_TXP12	C83	0.1u6/5V/25V/Z	EXP_A_TXP12C
EXP_A_TXN12	C84	0.1u6/5V/25V/Z	EXP_A_TXN12C
EXP_A_TXP13	C85	0.1u6/5V/25V/Z	EXP_A_TXP13C
EXP_A_TXN13	C86	0.1u6/5V/25V/Z	EXP_A_TXN13C
EXP_A_TXP14	C87	0.1u6/5V/25V/Z	EXP_A_TXP14C
EXP_A_TXN14	C88	0.1u6/5V/25V/Z	EXP_A_TXN14C
EXP_A_TXP15	C89	0.1u6/5V/25V/Z	EXP_A_TXP15C
EXP_A_TXN15	C90	0.1u6/5V/25V/Z	EXP_A_TXN15C

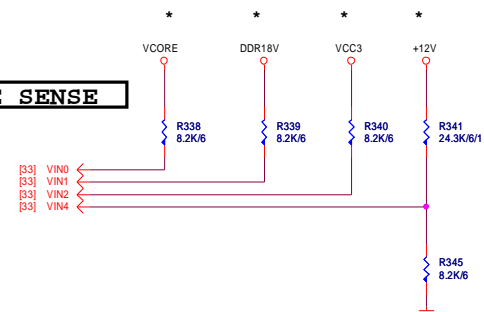


TEMP. SENSE



RS3 CLOSE TO MCH, CO-LAYOUT WITH RS1

VOLTAGE SENSE



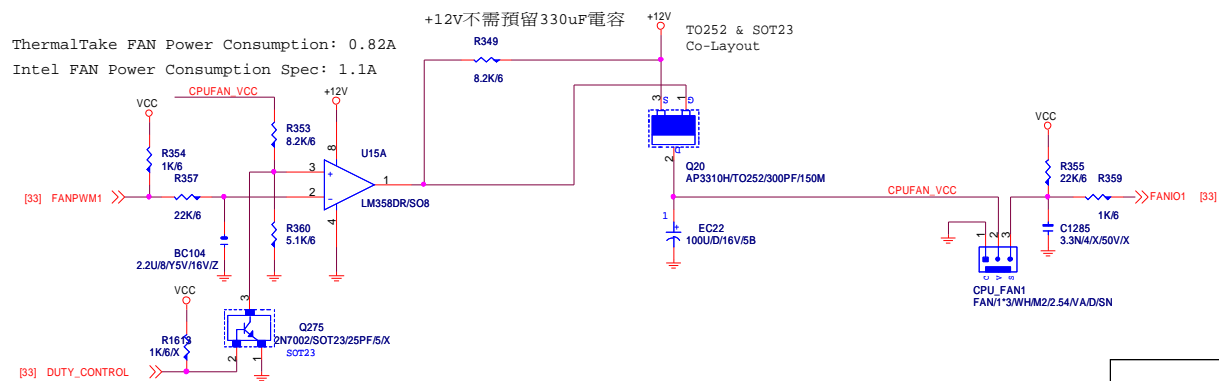
CPU/SYS FAN

If use PBSS5240 lpcs : (non airflow)

CPUFAN_VCC=12V: Temp=40 deg
CPUFAN_VCC=11V: Temp=82 deg
CPUFAN_VCC=10V: Temp=70 deg
CPUFAN_VCC= 9V: Temp=110 deg
CPUFAN_VCC= 8V: Temp>200 deg

If use PBSS5240 lpcs : (with airflow)

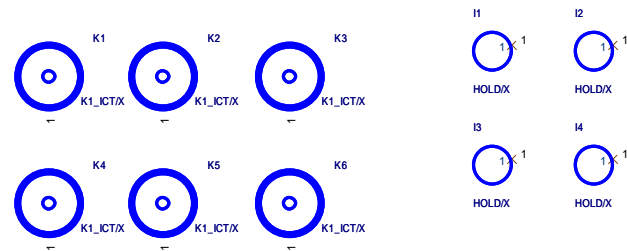
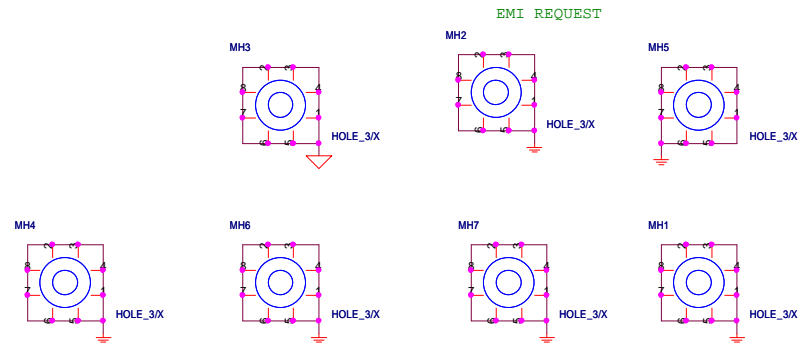
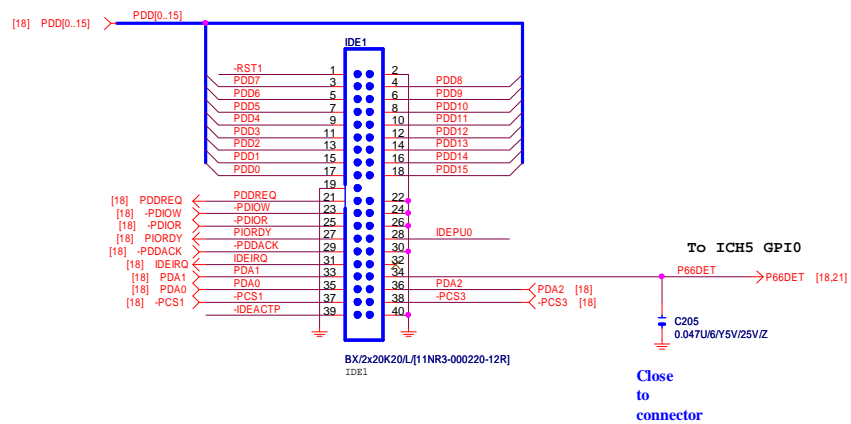
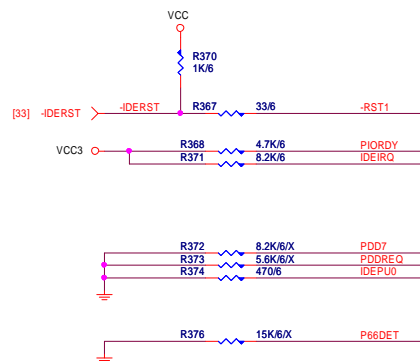
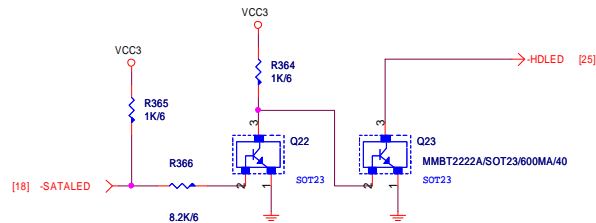
CPUFAN_VCC=12V: Temp=33 deg
CPUFAN_VCC=11V: Temp=62 deg
CPUFAN_VCC=10V: Temp=86 deg
CPUFAN_VCC= 9V: Temp=117 deg
CPUFAN_VCC= 8V: Temp>122 deg



default is high
gpio pin 可以 3.3v or 5v
if 3pin fan 則開機後將program is low

GIGABYTE

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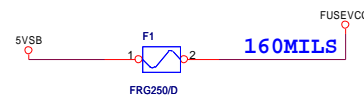
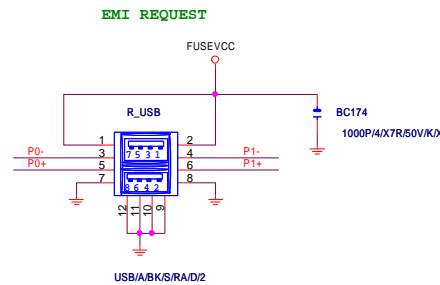
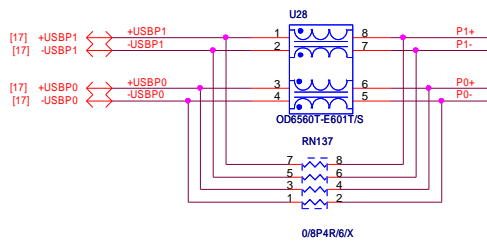
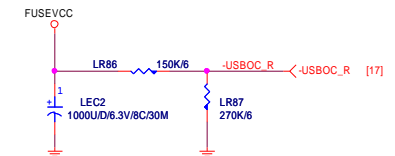
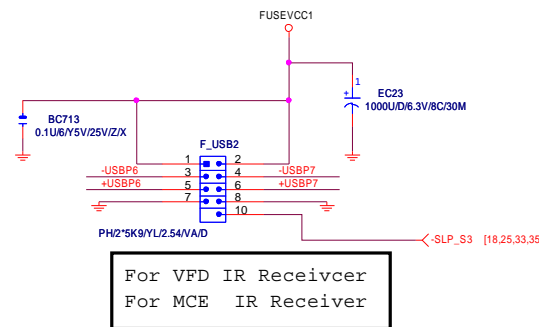
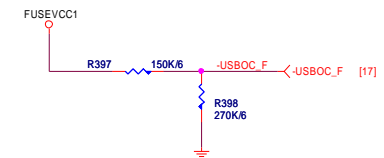
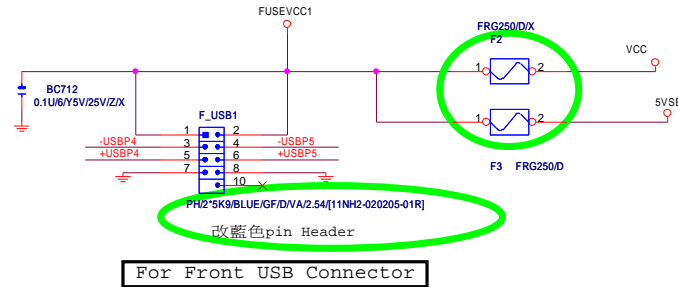


PRIMARY IDE CONNECTOR

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IDE			
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FRONT USB



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Title FRONT USB CONNECTOR			
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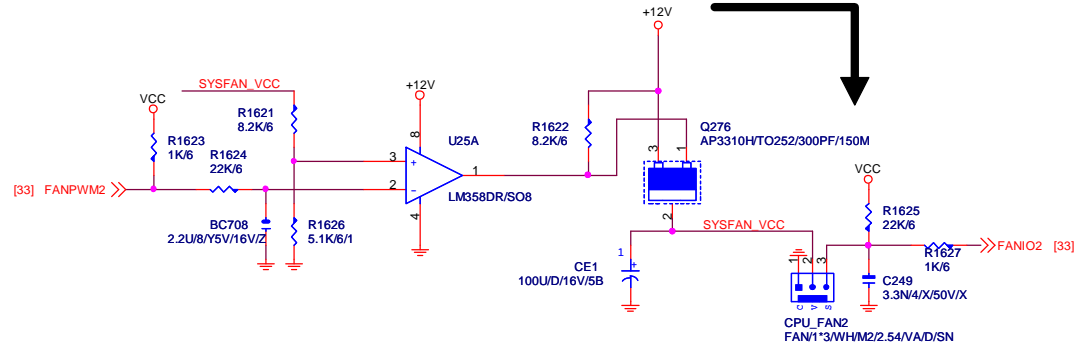
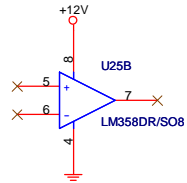
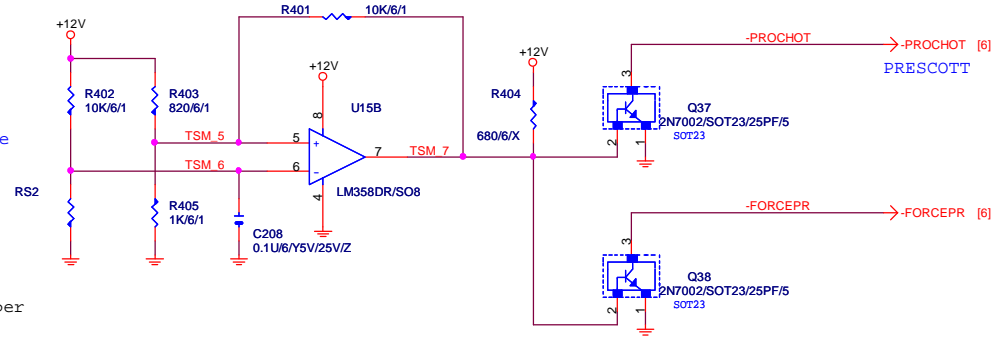
asserted at 131 degree
deasserted at 116 degree

100K/1/6/S

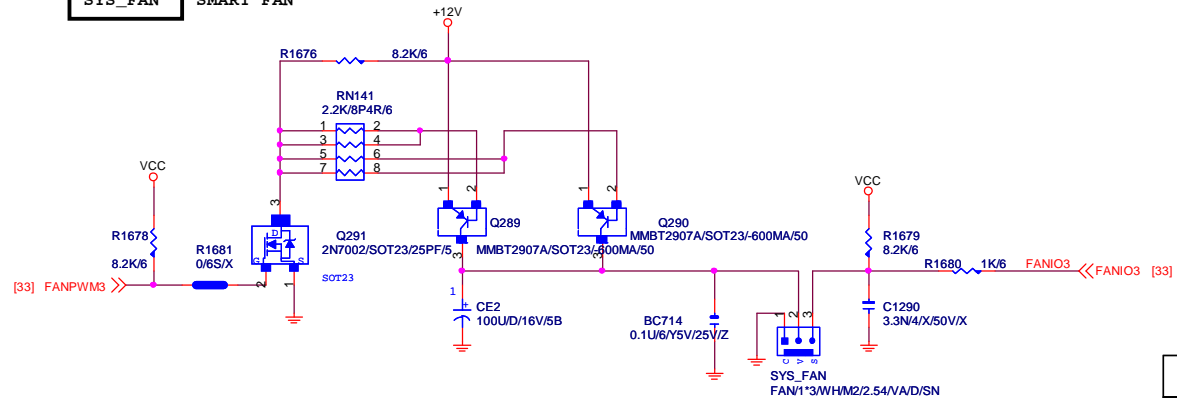
RS2
請加替料

Plase at PH4 copper

RS2 CLOSE CPU VR MOSFET

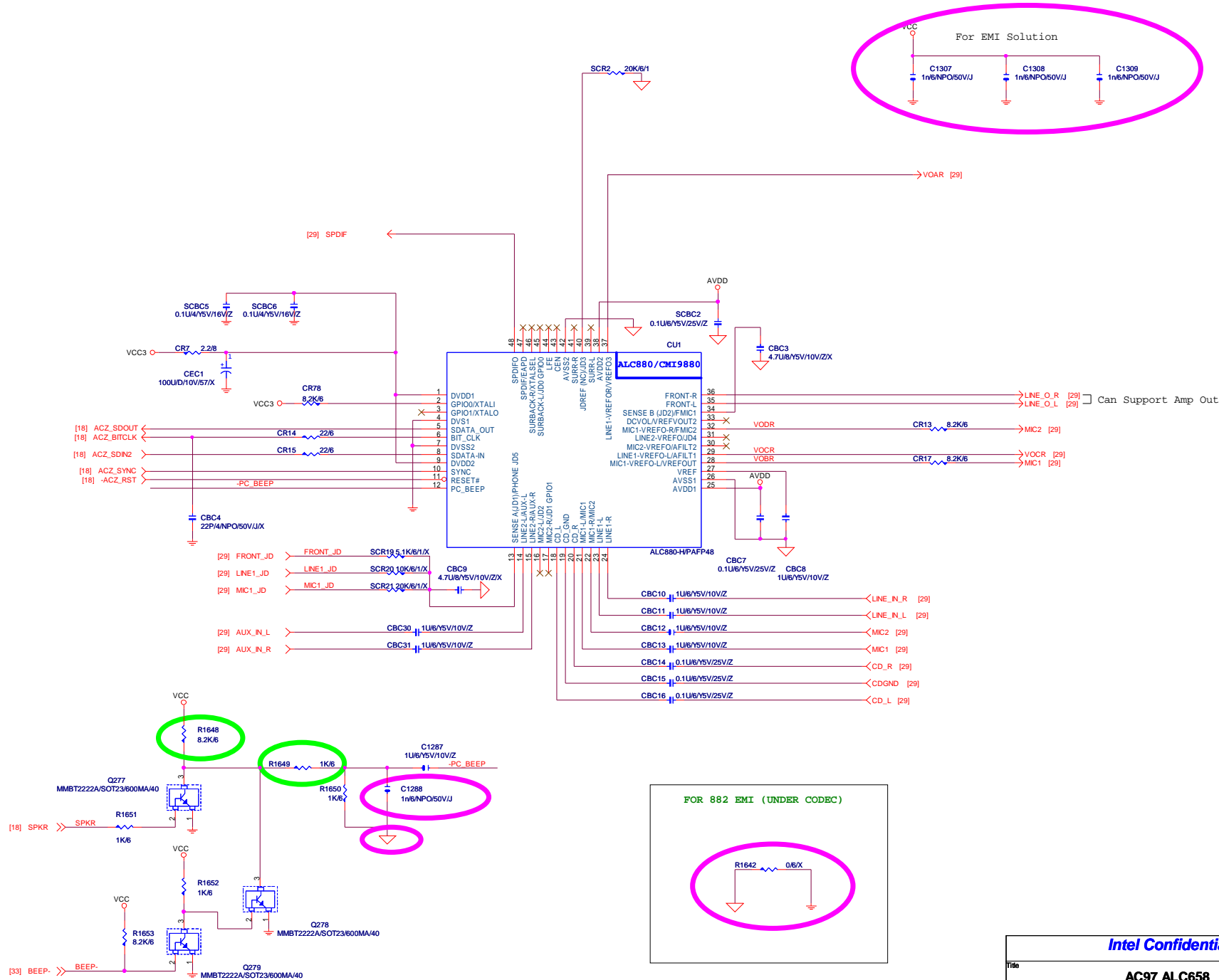


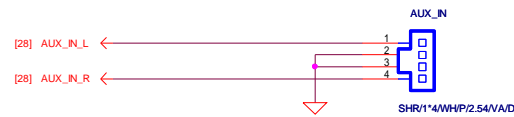
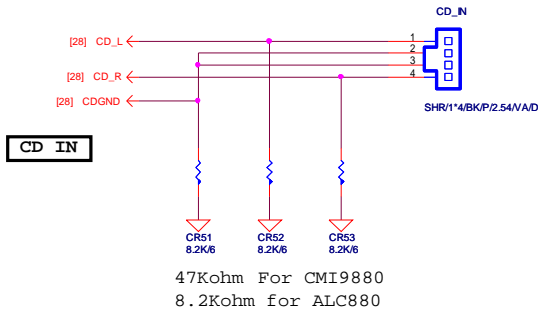
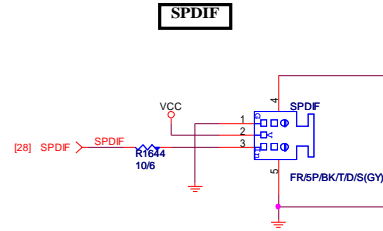
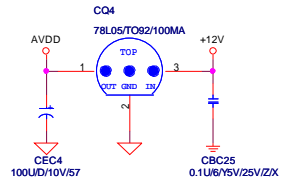
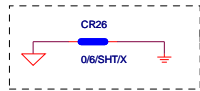
SYS_FAN SMART FAN



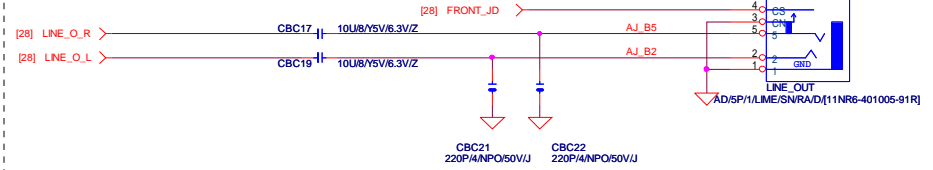
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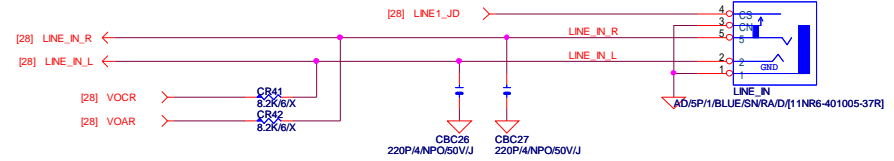




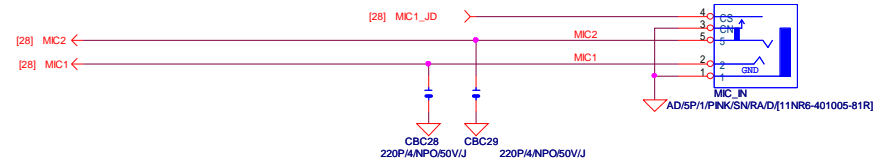
LINE OUT FRONT OUT

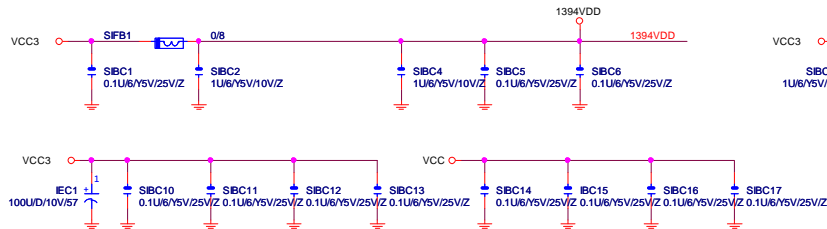


LINE-IN

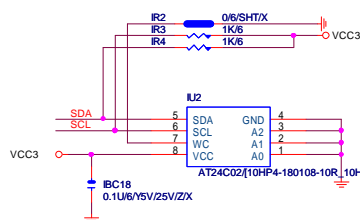


MIC



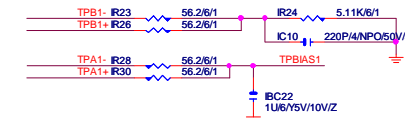
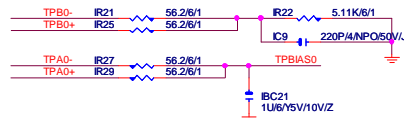


IDSEL --> AD23
IRQ --> H
REQ/GBR --> 2



R1219 0/6 FOR ATMEL AT24C02N-10SI-2.7V
ATC AT24LC02W

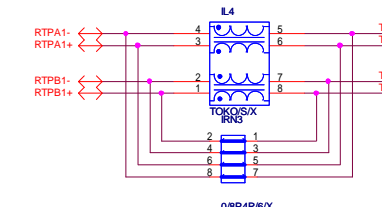
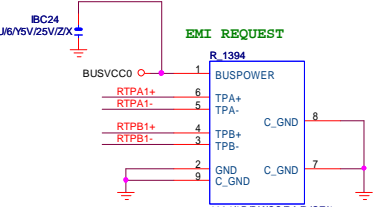
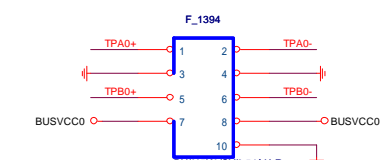
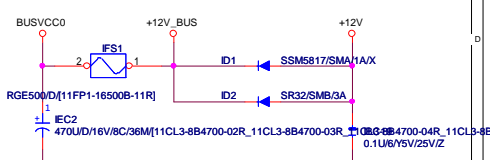
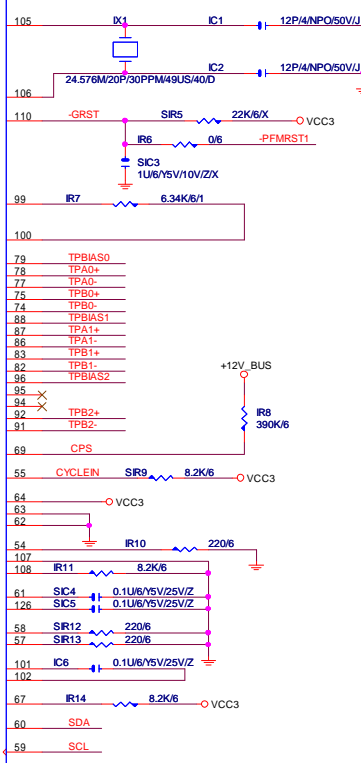
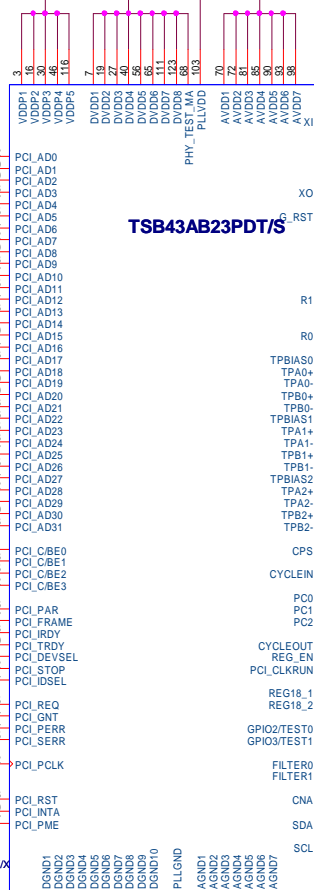
A_D[0..31] --> A_D[0..31] [17.22]

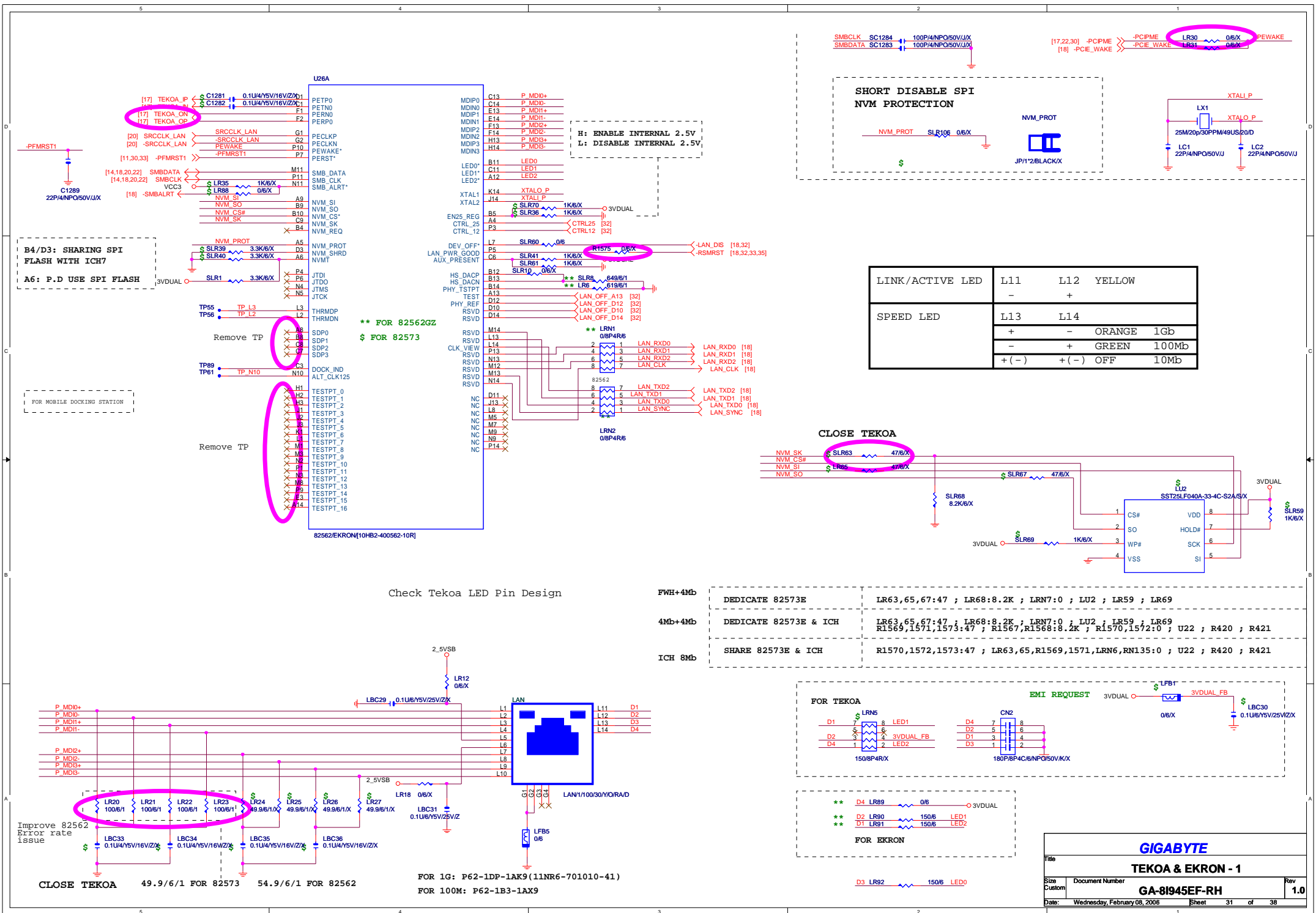


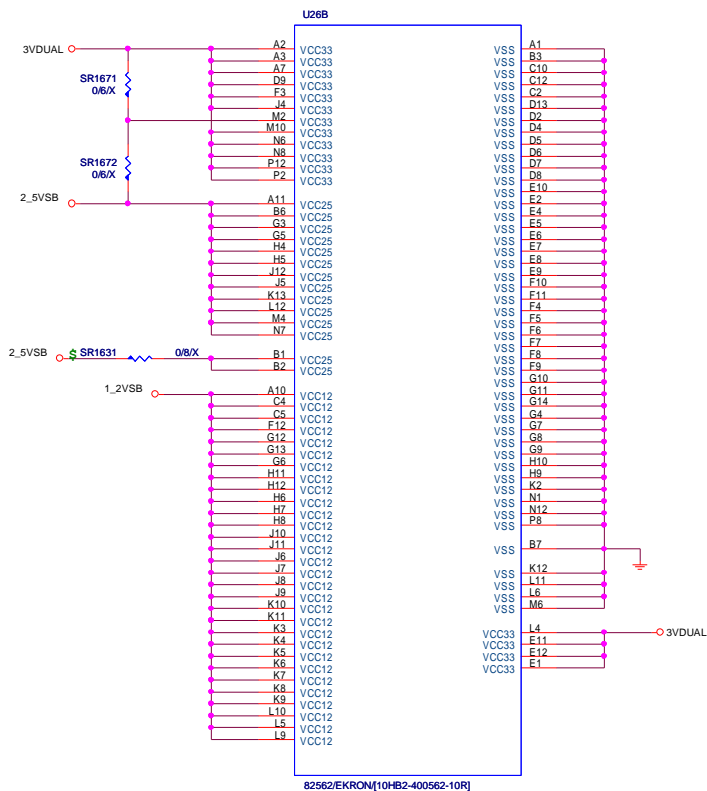
[17.22] -C_BE0 --> PCI_CBE0
[17.22] -C_BE1 --> PCI_CBE1
[17.22] -C_BE2 --> PCI_CBE2
[17.22] -C_BE3 --> PCI_CBE3
[17.22] -PAR --> PCI_PAR
[17.22] -FRAME --> PCI_FRAME
[17.22] -RDY --> PCI_RDY
[17.22] -TRDY --> PCI_TRDY
[17.22] -DEVSEL --> PCI_DEVSEL
[17.22] -STOP --> PCI_STOP
[17.22] -REQ2 --> PCI_REQ
[17.22] -GNT2 --> PCI_GNT
[17.22] -PERR --> PCI_PERR
[17.22] -SERR --> PCI_SERR

[20] 1394CLK --> PCI_PCLK
[11.31.33] -PFMRST1 --> PCI_RST
[17.22] -PROM --> PCI_INTA
[17.22.31] -PCPME --> PCI_PME

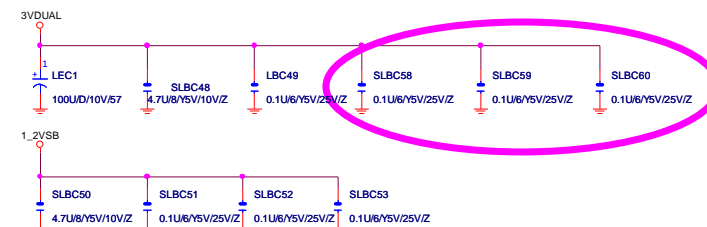
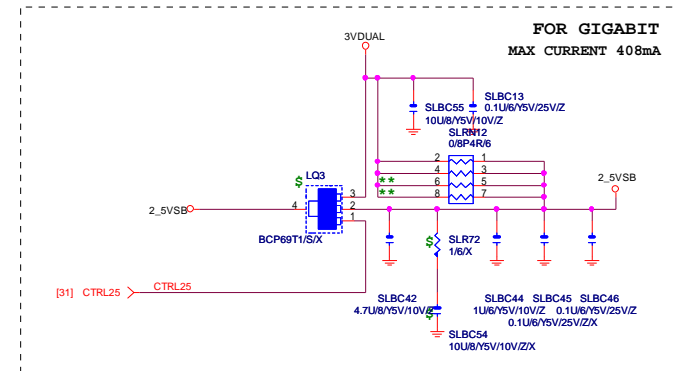
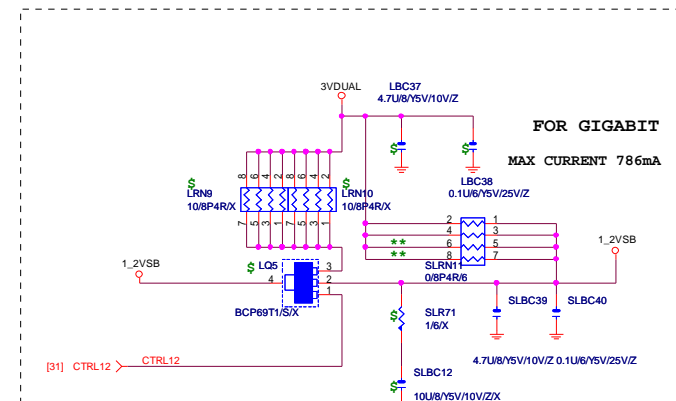
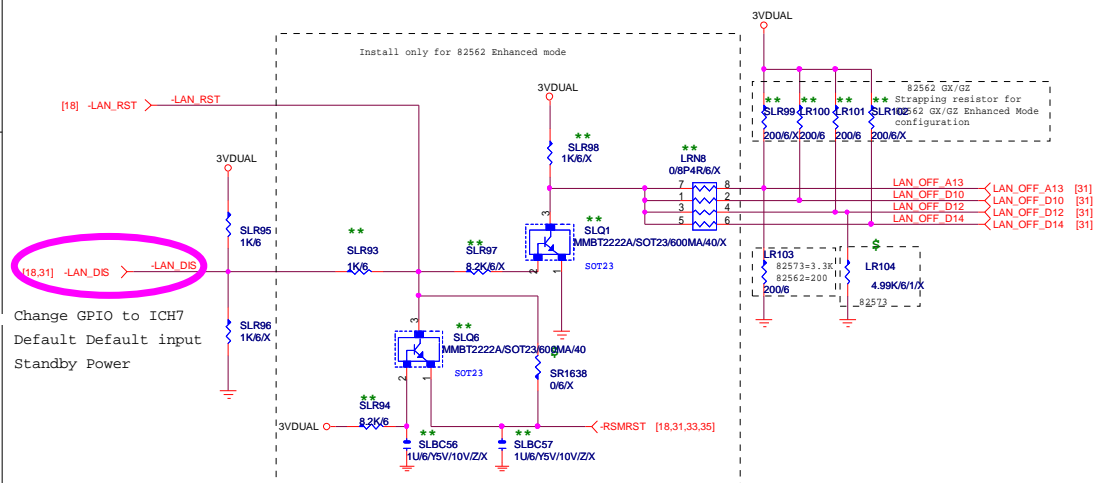
TSB43AB23PDT/S

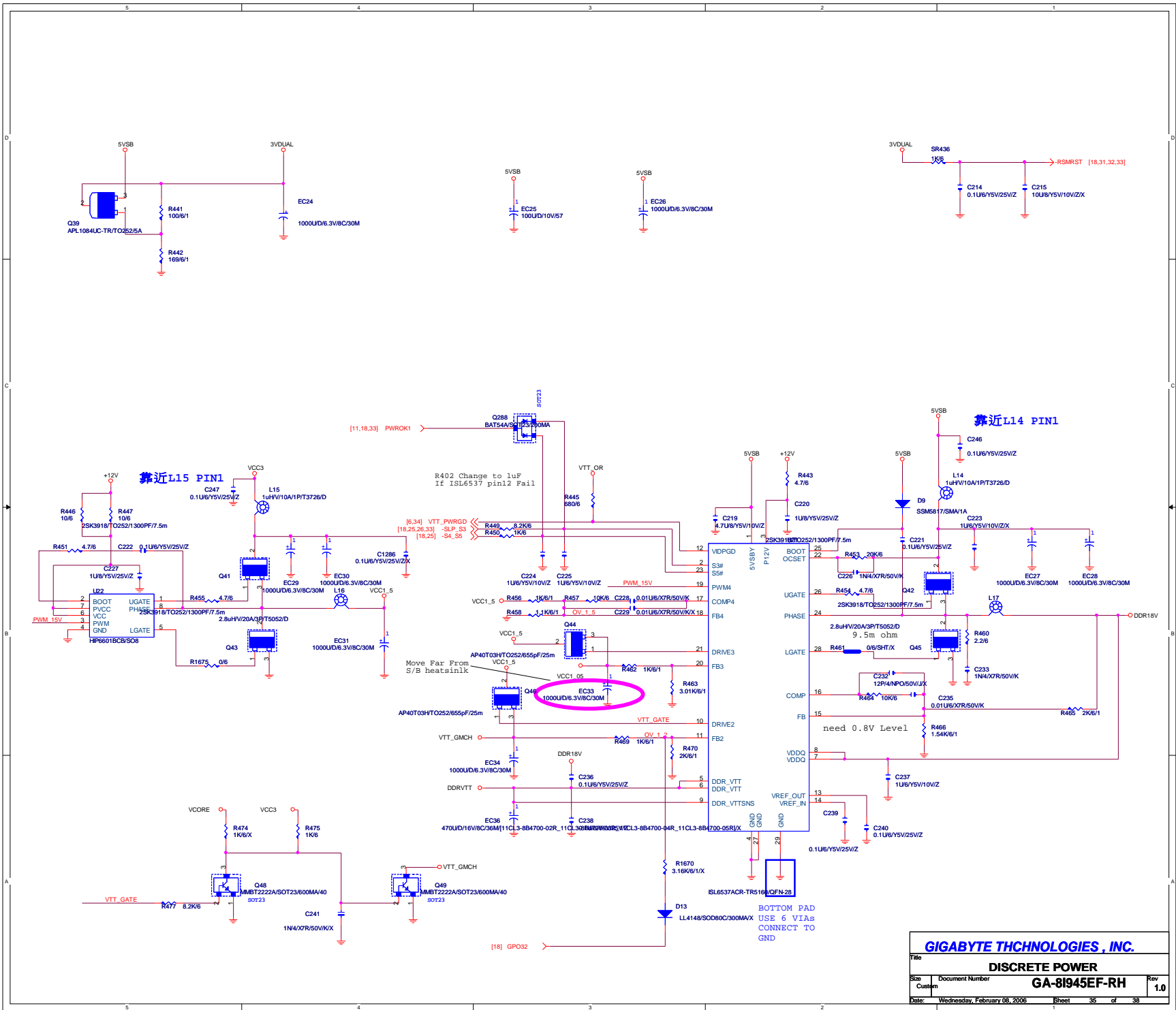






Connect to a Super IO pin that default to input on power up and retains its value during reset.





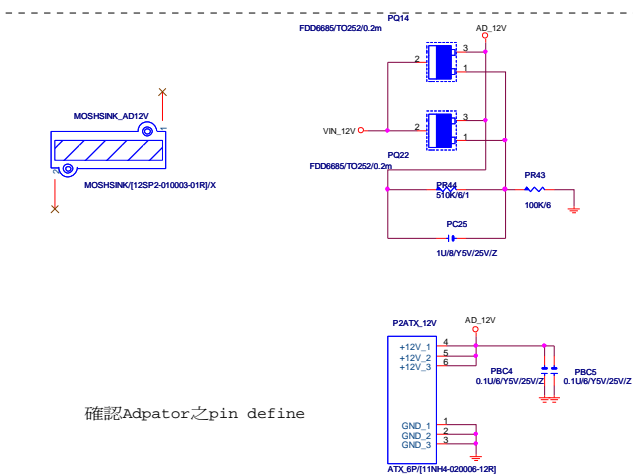
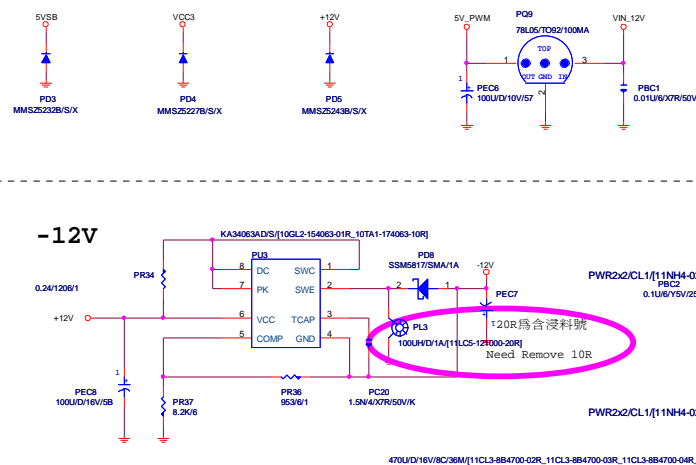
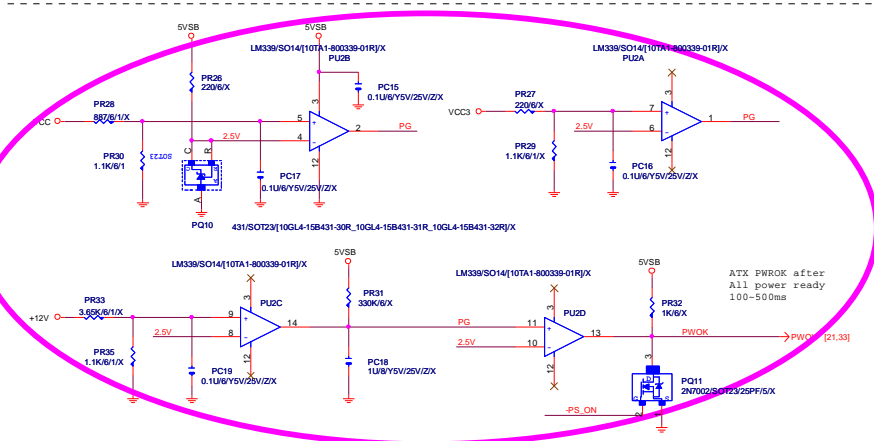
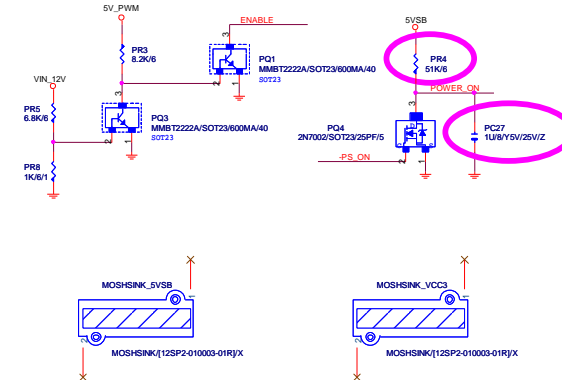
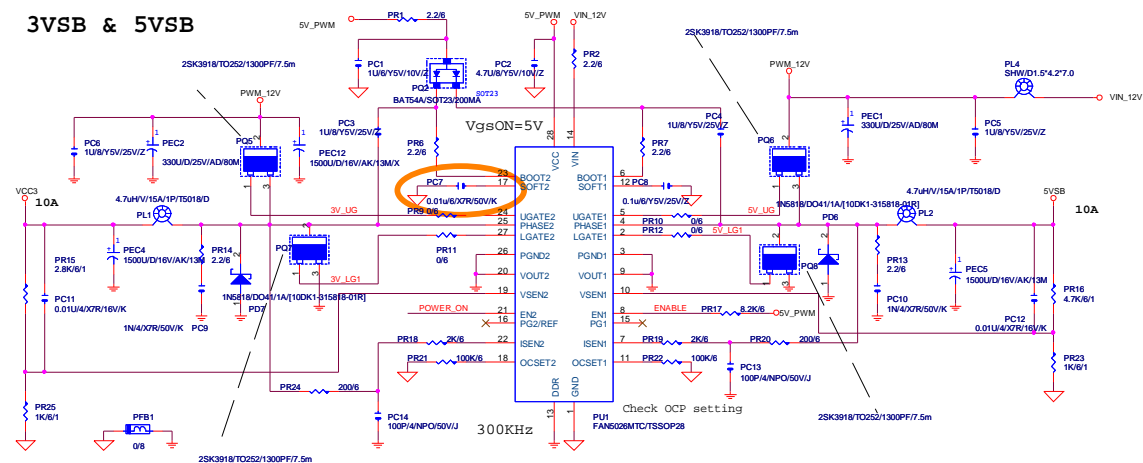
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Discrete Power

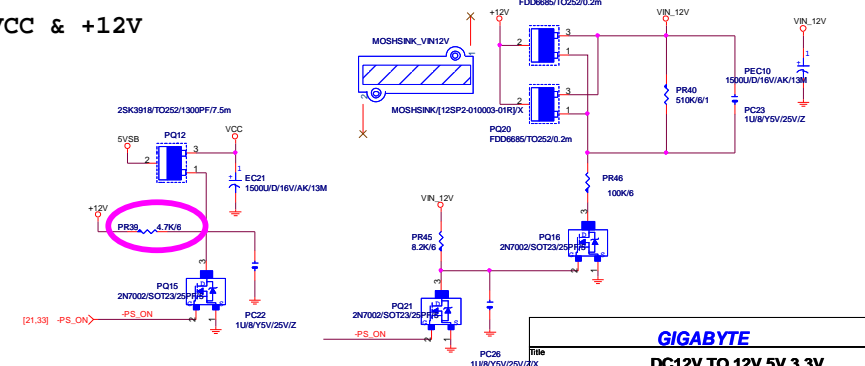
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3VSB & 5VSB



確認Adpator之pin define



GIGABYTE			
DC12V TO 12V,5V,3.3V			
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紅字表示CPI/O 同PIN

GPO PIN

[illegible]

ICH6 GPIO Table:

NAME	PWR LANE	USAGE	NAME	PWR LANE	USAGE
GPI0	V5REF	M/B ID (-REQ6)	GPI41	VCC3	M/B ID
GPI1	V5REF	-REQ5	GPO48	VCC3	-GNT4
GPI2	V5REF	-PIRQE	GPO49	V-CPUIO	CPUPWOK
GPI3	V5REF	-PIRQF			
GPI4	V5REF	-PIRQG			
GPI5	V5REF	-PIRQH			
GPI6	VCC3	-SLP_BTN			
GPI7	VCC3	DUAL BIOS			
GPI8	3VDAUL	-LANWAKE			
GPI9	3VDAUL	-USBOC4			
GPI10	3VDAUL	-USBOC5			
GPI11	3VDAUL	-SMBALT			
GPI12	VCC3	ATX DET			
GPI13	3VDAUL	-LPCPME			
GPI14	3VDAUL	-USBOC6			
GPI15	3VDAUL	-USBOC7			
GPO16	VCC3	CPU OV1 (-GNT6)			
GPO17	VCC3	-GNT5			
GPO18	VCC3	CPU OV2			
GPO19	VCC3	DUAL BIOS			
GPO20	VCC3	BIOS T-BLOCK			
GPO21	VCC3	DUAL BIOS			
GPO23	VCC3	DDR OV0			
GPI024	3VDAUL	GREEN LED			
GPI025	3VDAUL	DDR OV1			
GPI26	VCC3	SATA GP0			
GPI027	3VDAUL	+PWRLED			
GPI028	3VDAUL	-PWRLED			
GPI29	VCC3	SATA GP1			
GPI30	VCC3	SATA GP2			
GPI31	VCC3	SATA GP3			
GPI032	VCC3	BIOS WP			
GPI033	VCC3	AZALIA DET			
GPI034	VCC3	PWRLED			
GPI40	V5REF	-REQ4			

PWROK/RESET Table:

ITE8712BHX PIN	NET NAME	TARGET
PIN62/-PCIRST1	-PCIE_RST	1. PCI-E * 1 Slot1 2. PCI-E * 1 Slot2 3. PCI-E * 1 Slot3 4. PCI-E * 16 Slot
PIN64/-PCIRST2	-PFMRST2	1. Onboard PCI Lan 2. Onboard 1394 Chip 3. OnBoard FWH
PIN65/-PCIRST3	-PFMRST1	1. Onboard PCI-E Lan 2. Onboard SATA Chip 3. GMCH
PIN115/-PCIRST4	-PFMRST_ -IDERST	Reserved For IDE
PIN63/PWROK1	PWROK1	1. GMCH 2. ICH6 3. 5VDUAL SWITCH 4. DPS CONTROL
PIN109/PWROK2	-THERM	1. ICH6

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