

Model Name: 8I915P DUO
REV1.1

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
08	VCORE POWER
09	GMCH-GRANTS DALE_HOST
10	GMCH-GARNTSDALE_DDR
11	GMCH-GRANTS DALE_PCI E, DMI
12	GMCH-GRANTS DALE_INT VGA
13	GMCH-GRANTS DALE_GND
14	GMCH-GRANTS DALE_PWR
15	DDR CHANNEL A
16	DDR CHANNEL B
17	DDR TERMINATION
18	PCI EXPRESS*16 SLOT
19	ICH6 PCI, USB, DMI, LAN
20	ICH6 IDE, GPIO, SATA, CTRL
21	ICH6 VCC, GND
22	CLK GEN

SHEET TITLE

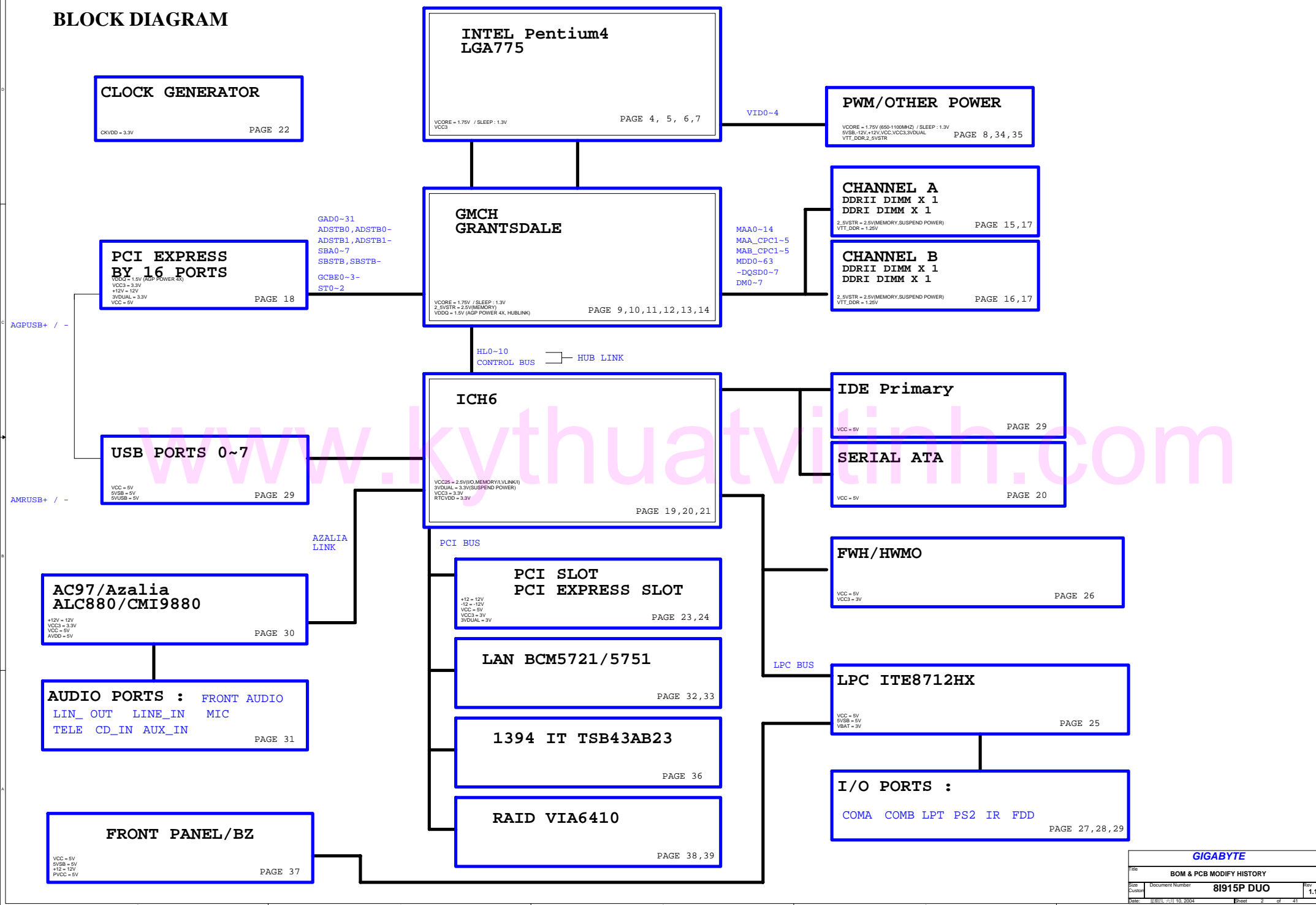
23	PCI SLOT
24	PCI EXPRESS*1 SLOT
25	ITE8712HX
26	HWMO/FAN/FWH BIOS
27	KB_MS/GAME
28	COM/LPT/FDD
29	(FRONT+REAR)USB/RING/IDE
30	AZALIA CODEC ALC880/CMI9880
31	AUDIO JACK
32	LAN BCM5705E/5751
33	LAN BCM5751
34	ATX POWER CONN.
35	ALL POWER
36	1394 TSB43AB23
37	FRONT PANEL/BZ
38	RAID VIA6410
39	RAID IDE CONNECTOR
40	GPIO TABLE
41	RESET TABLE

COMPONENT SIDE
(1 oz. Copper)
VCC SIDE
(1 oz. Copper)
GND SIDE
(1 oz. Copper)
SOLDER SIDE
(1 oz. Copper)

GIGABYTE

Cover Sheet			
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BLOCK DIAGRAM



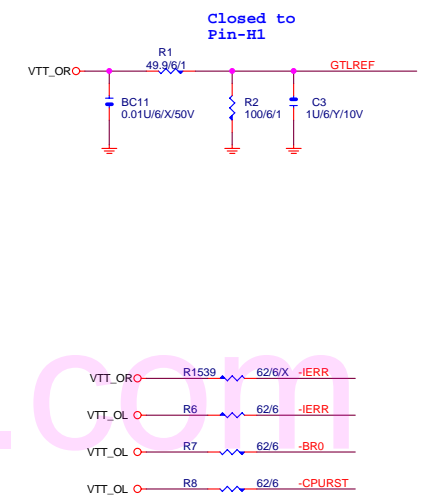
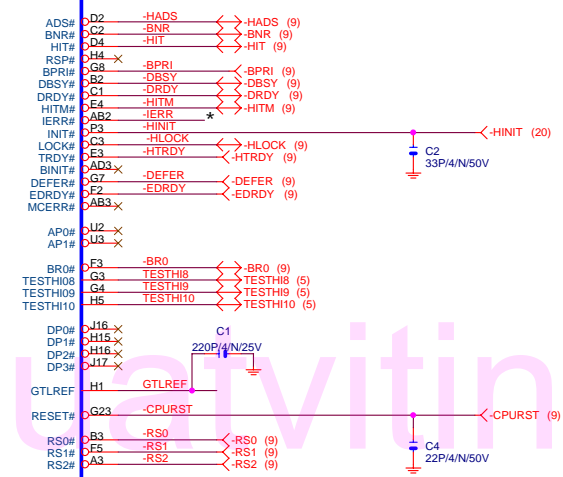
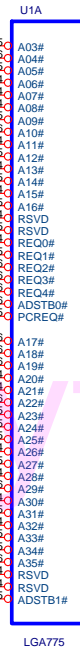
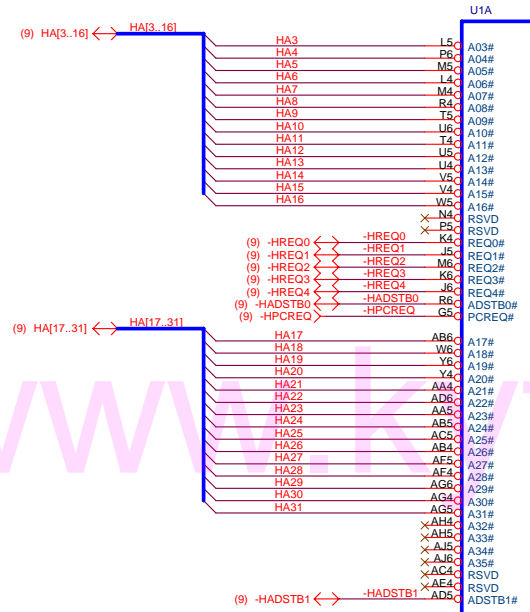
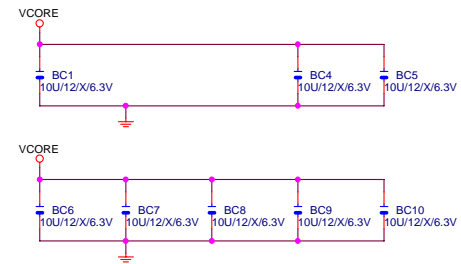
Version: 1.1

2004/05/19

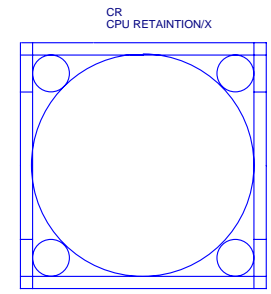
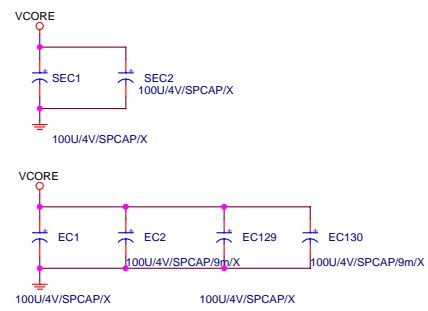
[illegible]

Circuit or PCB layout change
for next version

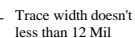
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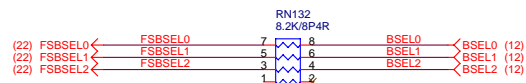
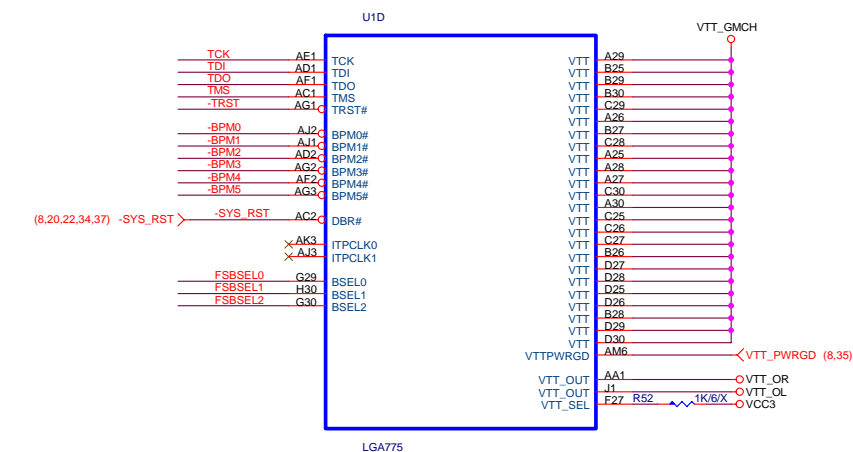
SP-CAP X 4PCS



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



As close as possible to
CPU socket



VTT_OL

C5
0.1U/6V/25V

R10
R11

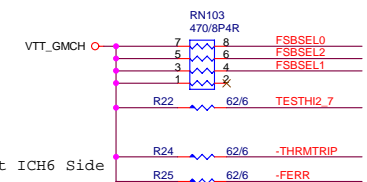
100.6/1
100.6/1

COMP2
COMP3

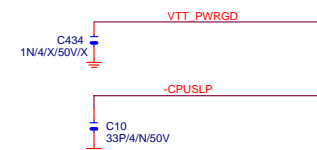
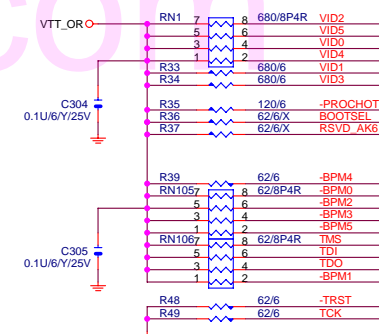
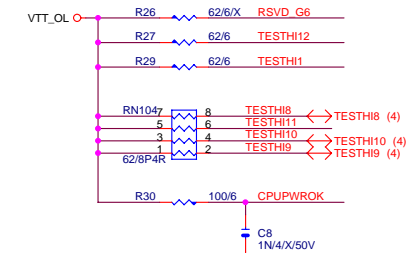
R14
R15

60.4/1
60.4/1

COMP0
COMP1



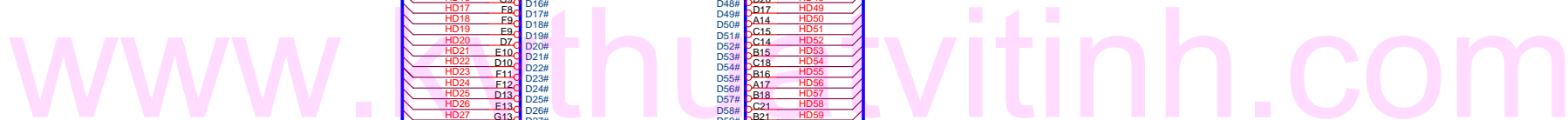
Locate at ICH6 Side

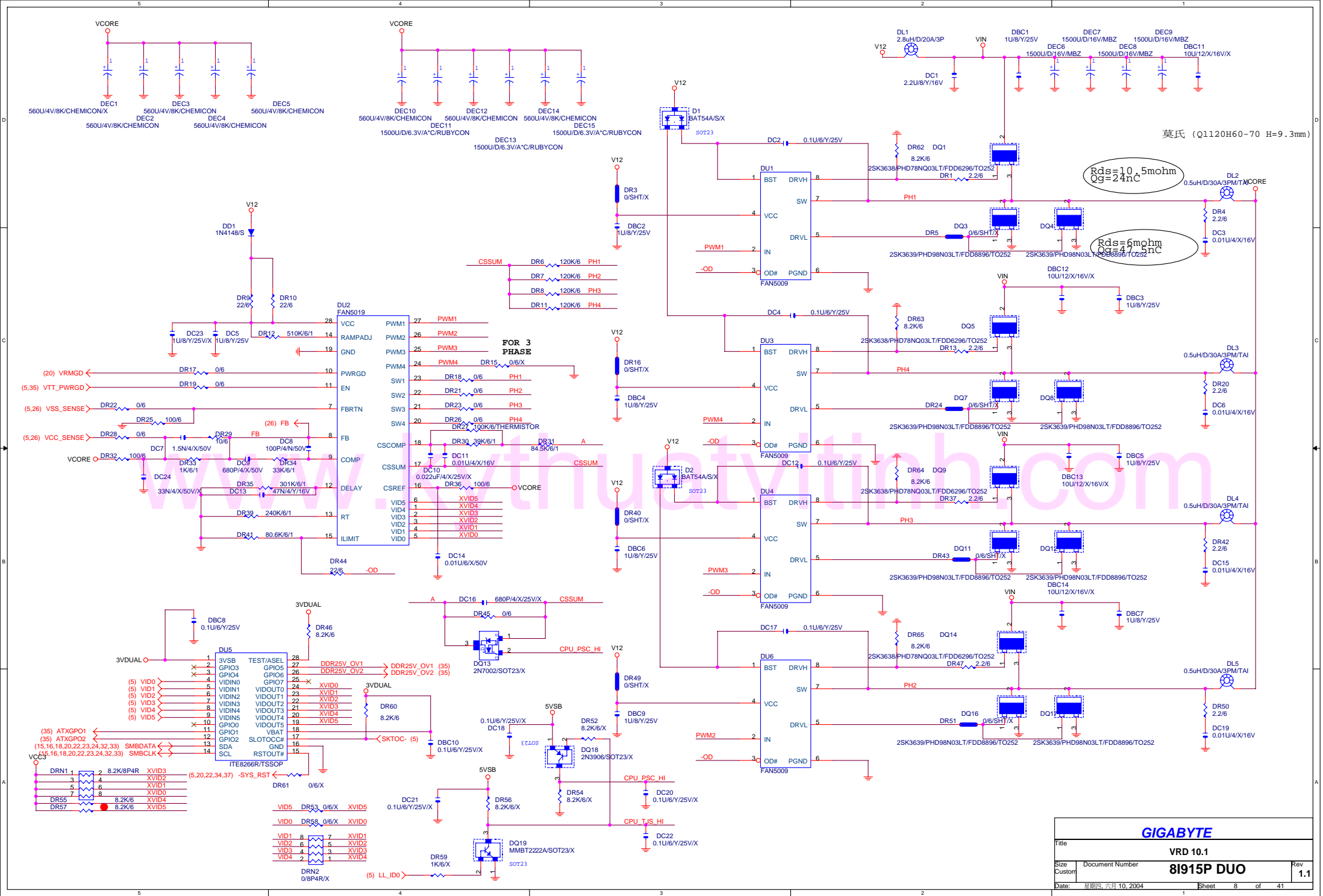


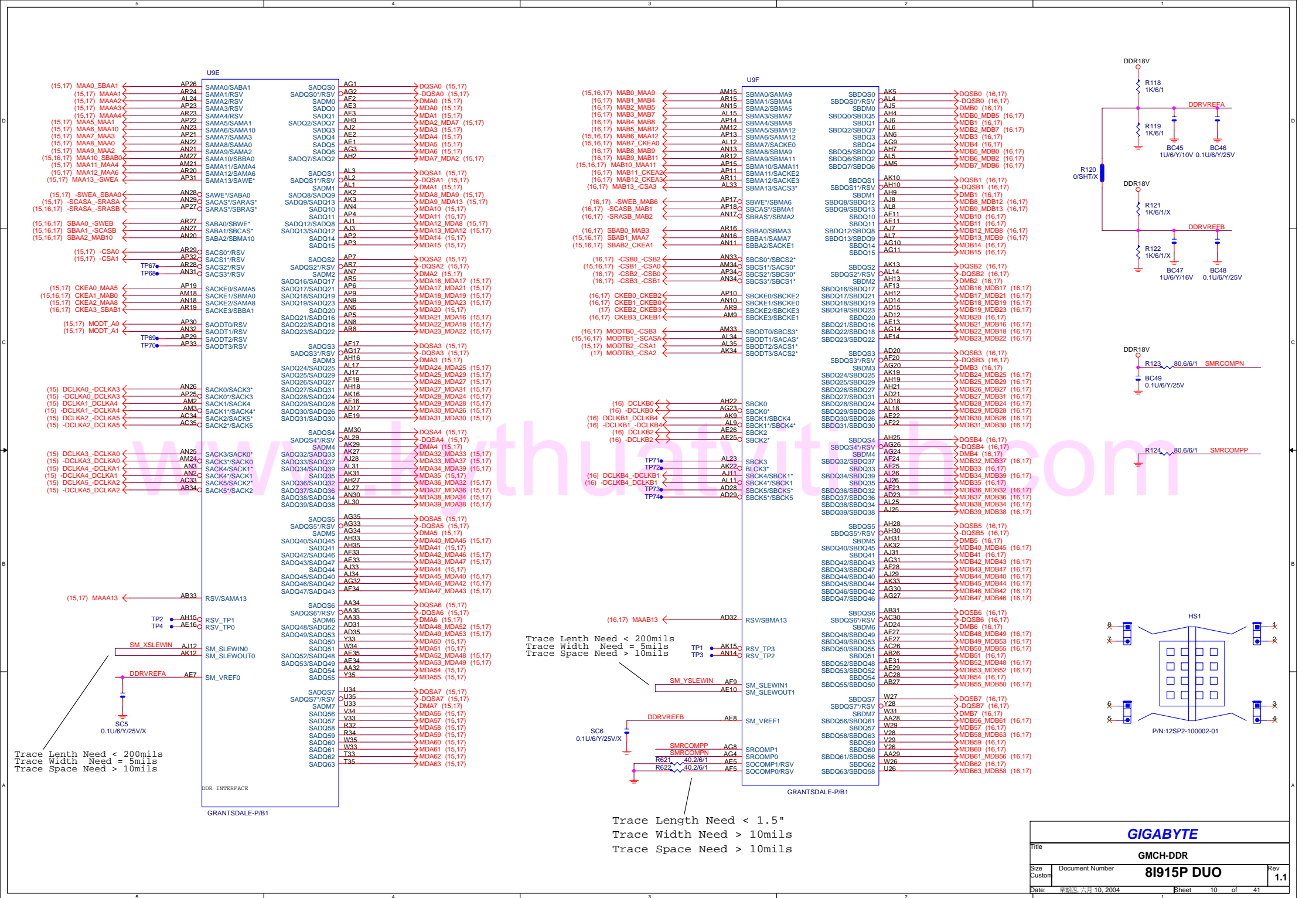
GIGABYTE

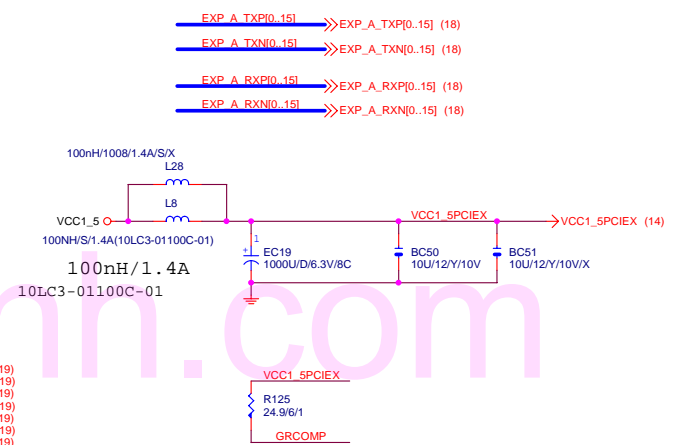
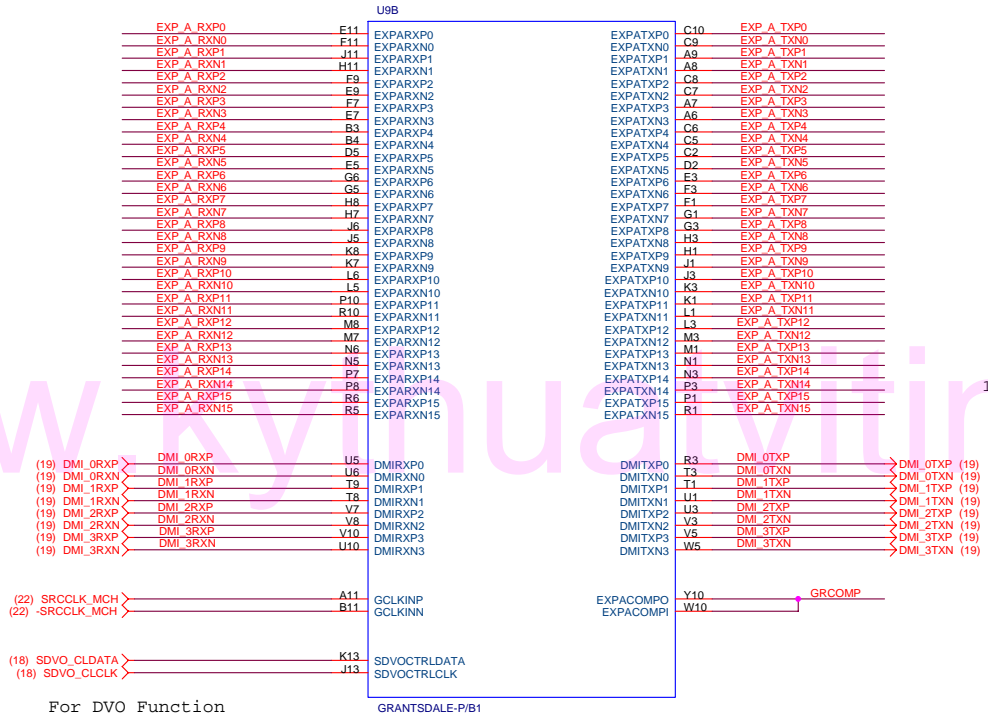
P4 LGA775-B

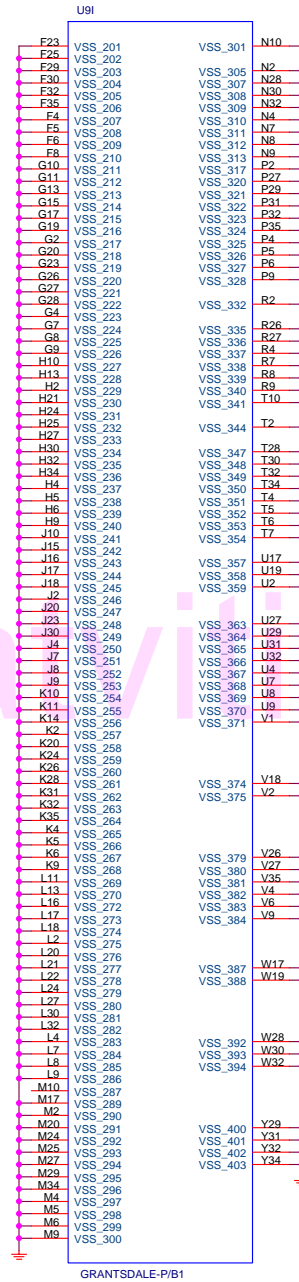
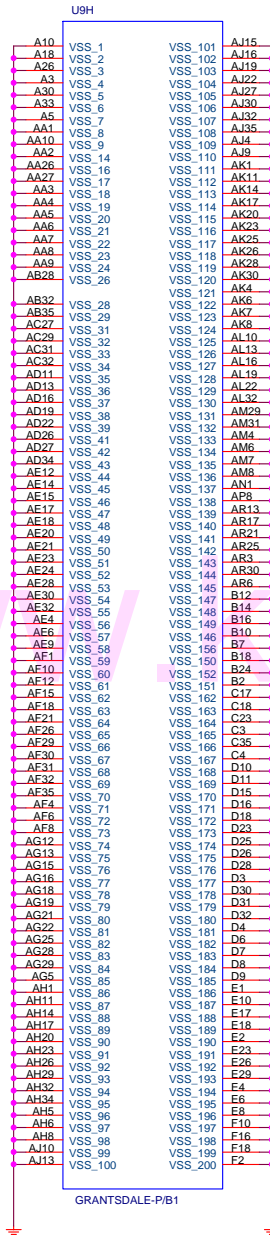
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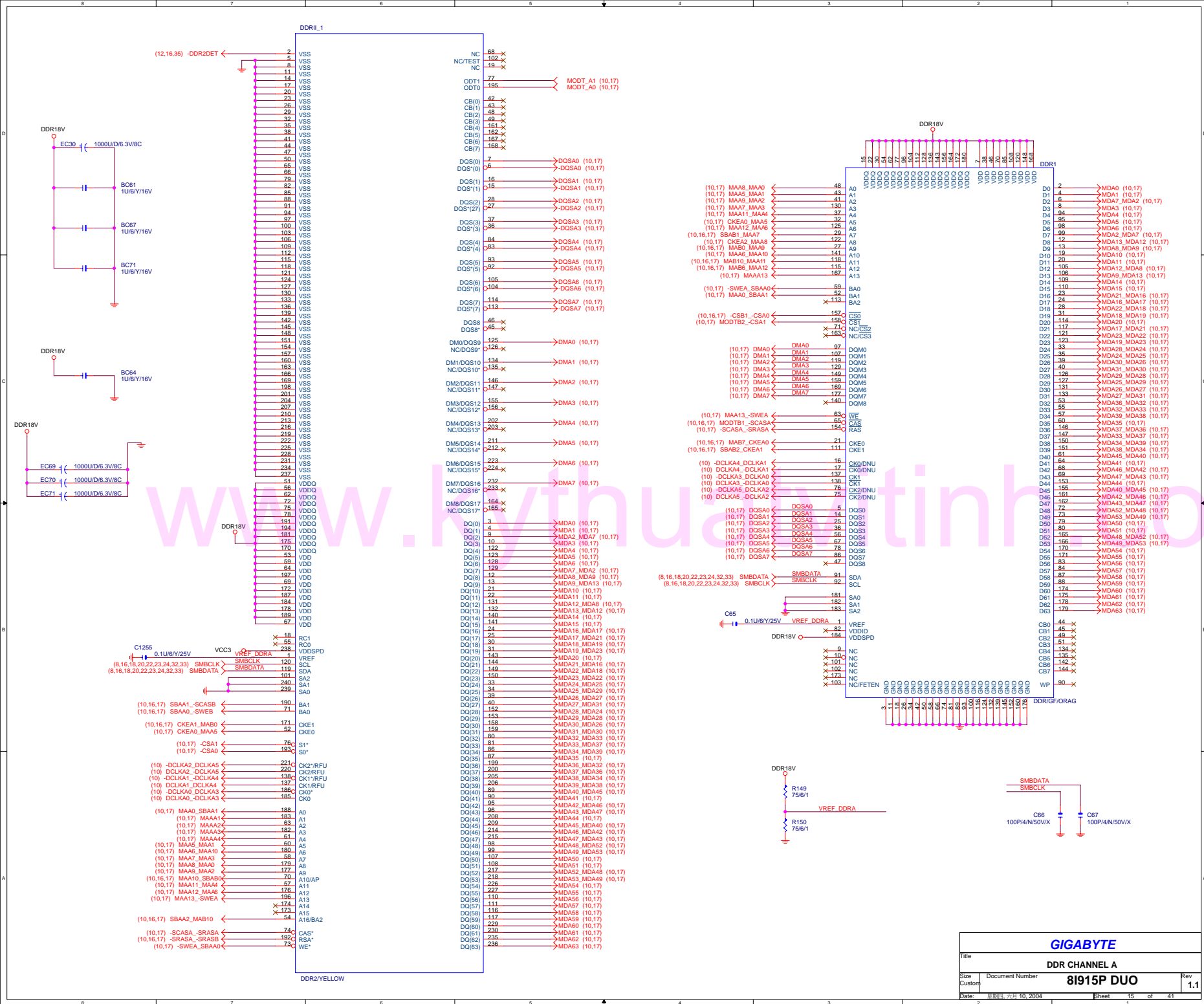


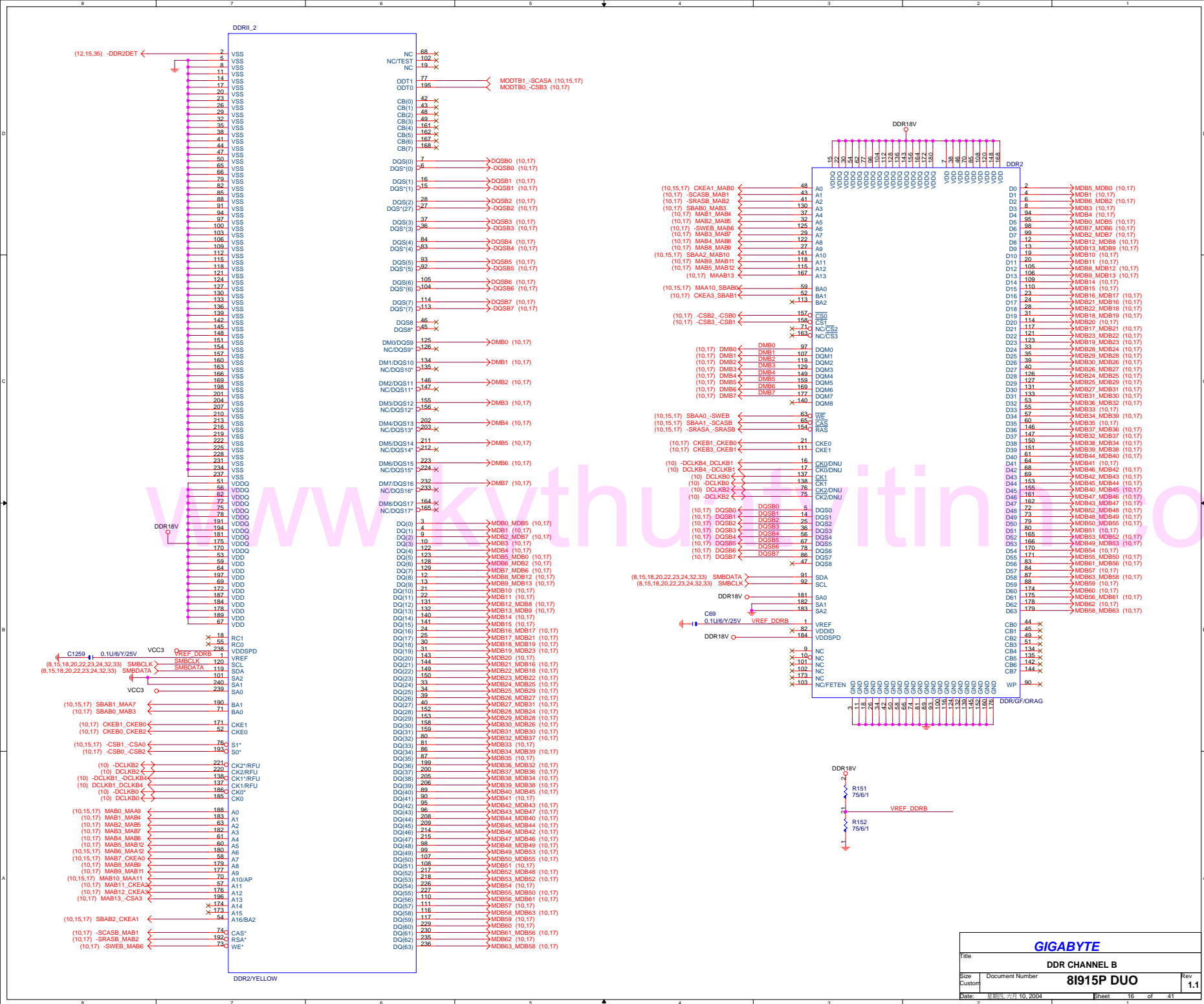


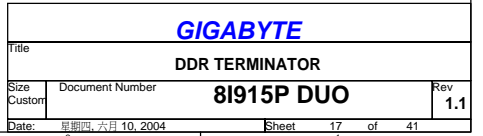


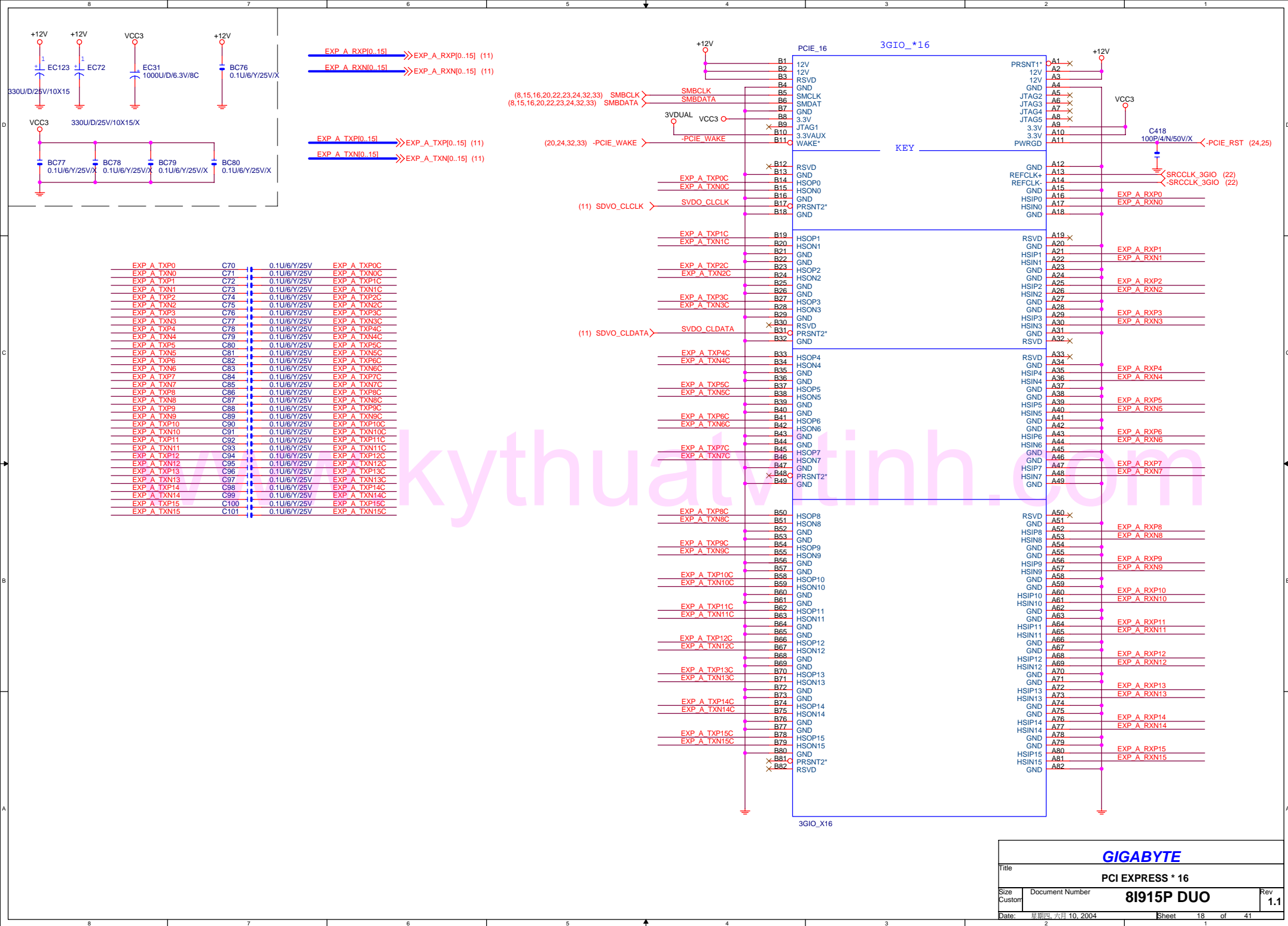




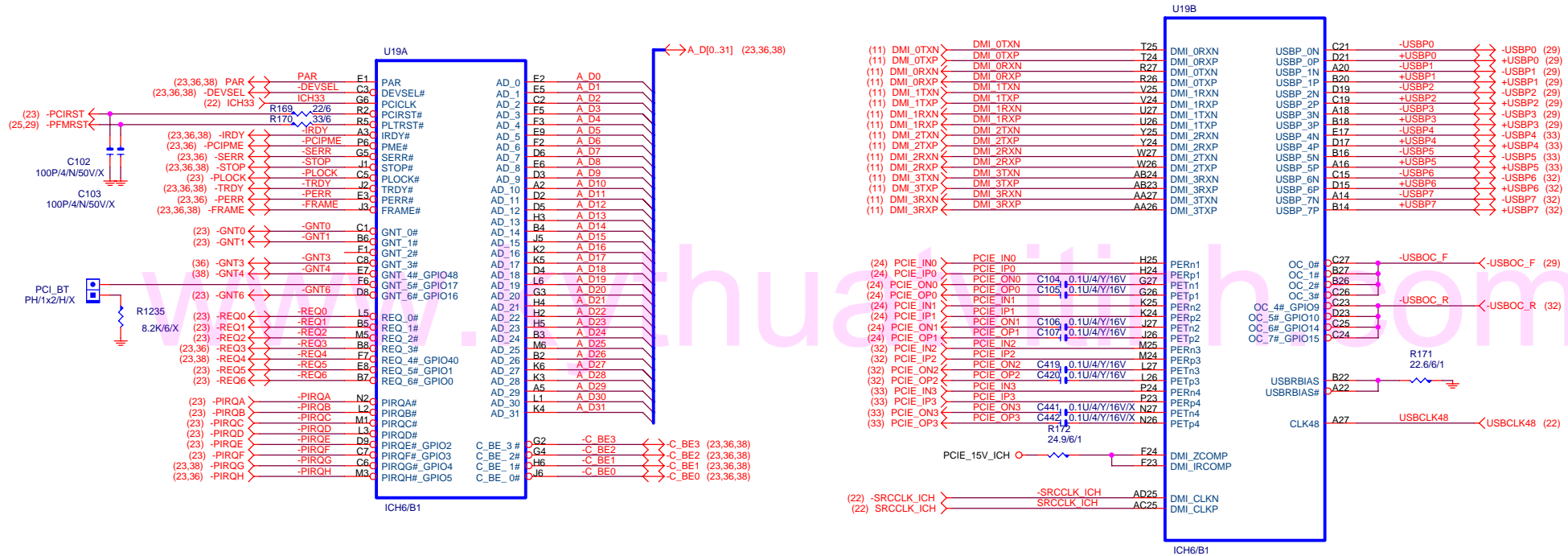






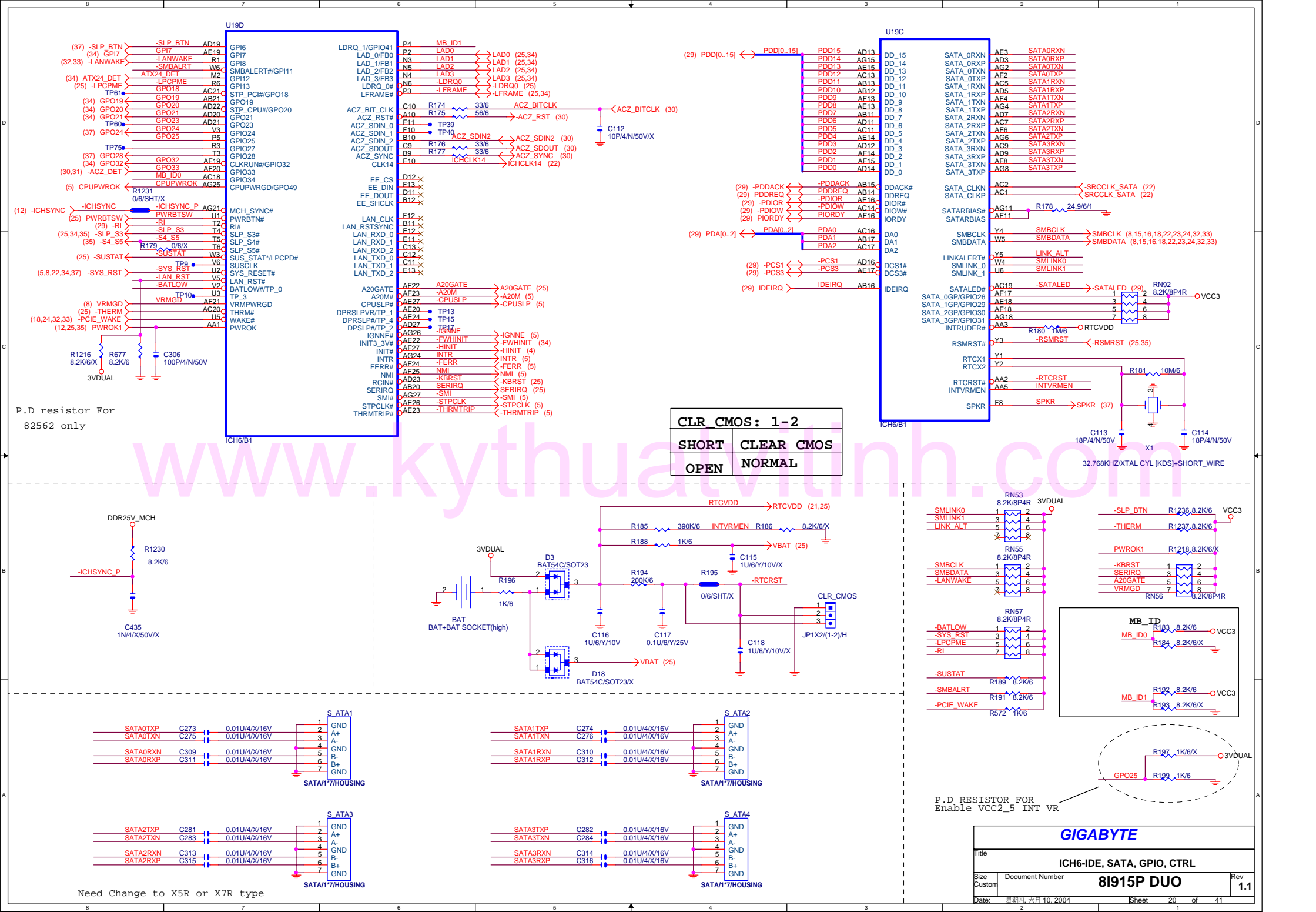


DMI Connection Note
GMCH TX Pin Need Connect to ICH6 RX Pin
ICH6 TX Pin Need Connect to GMCH RX Pin



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Title			
ICH6-PCI, DMI, LAN, USB			
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台慶 0.47uH/1.A

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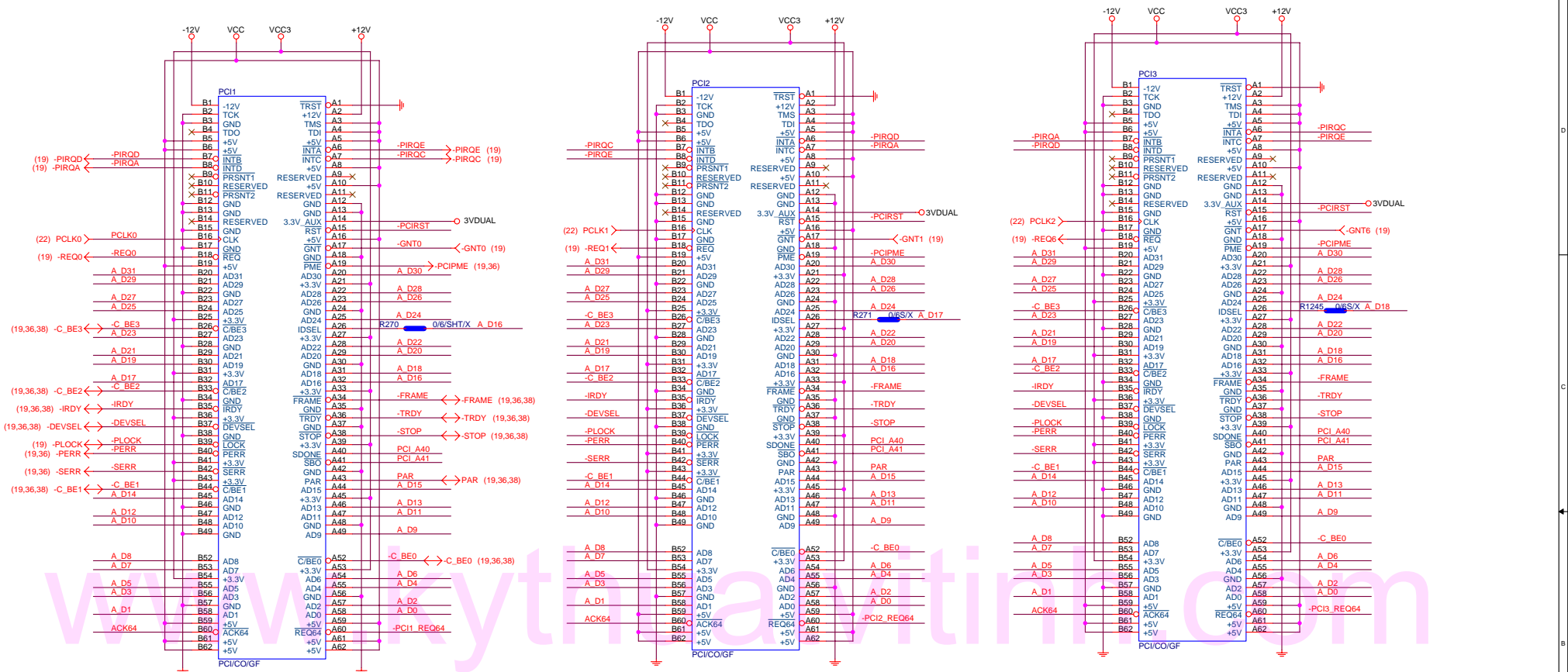
GIGABYTE

ICH6-PWR & GND

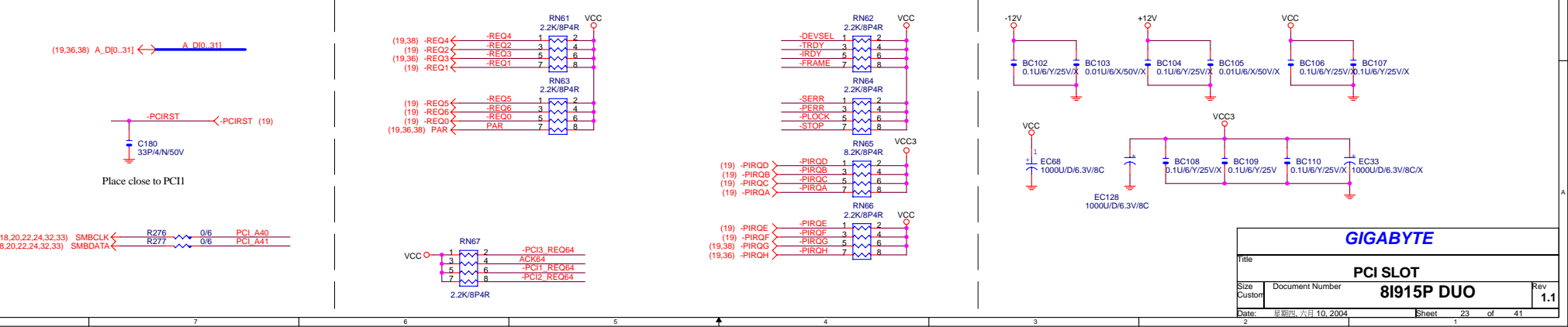
8I915P DUO

Rev 1.1

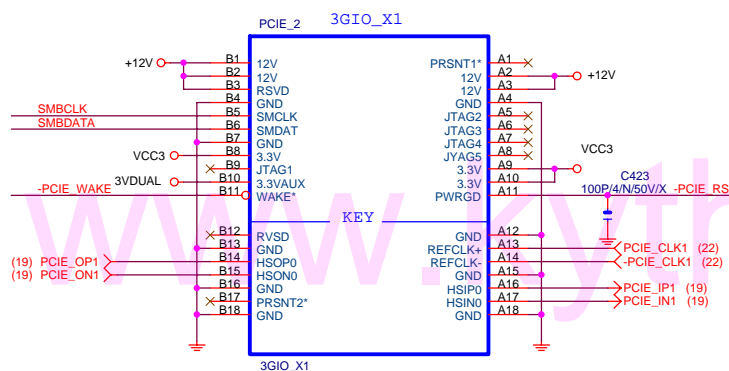
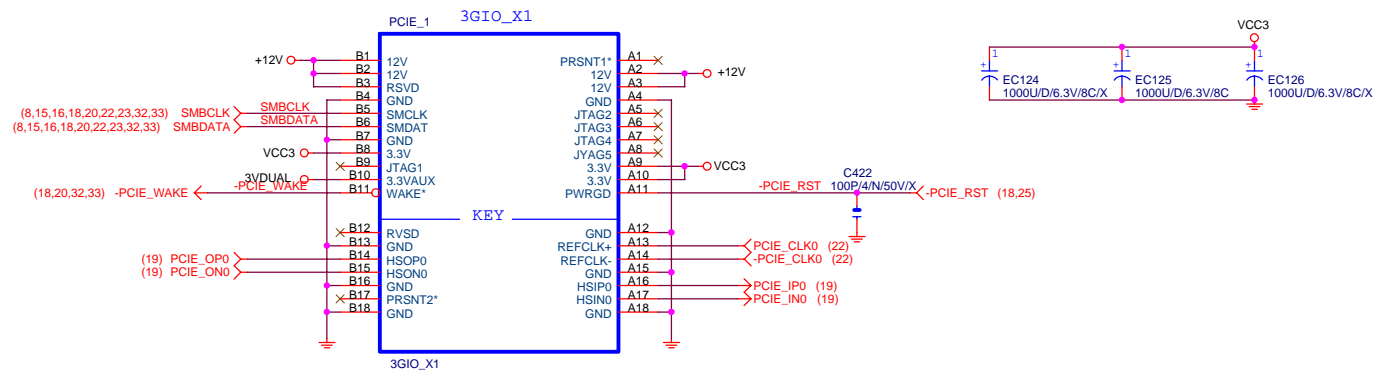
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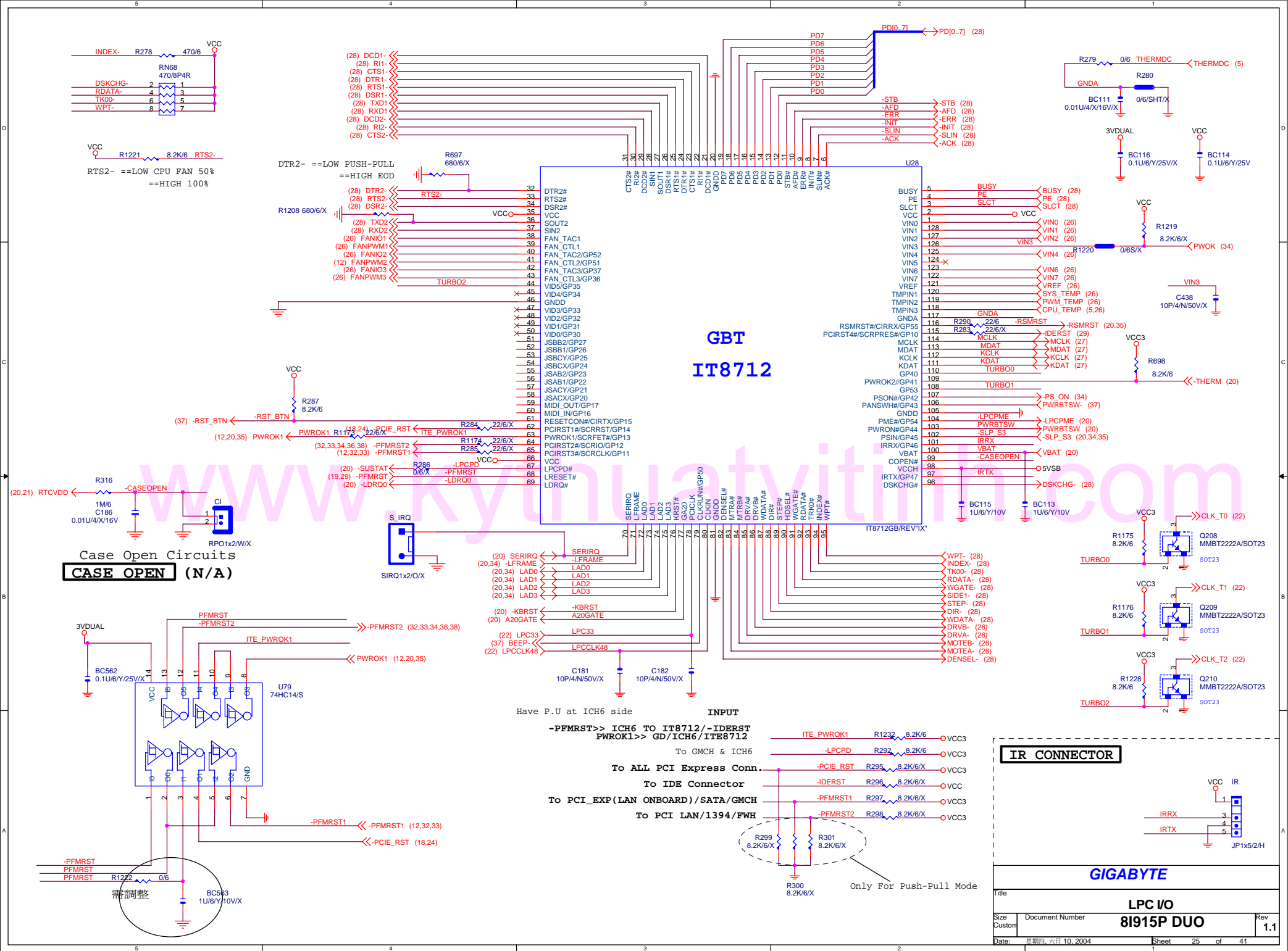


AD16/-PIRQ(E-D-C-A)/-REQ0/-GNT0

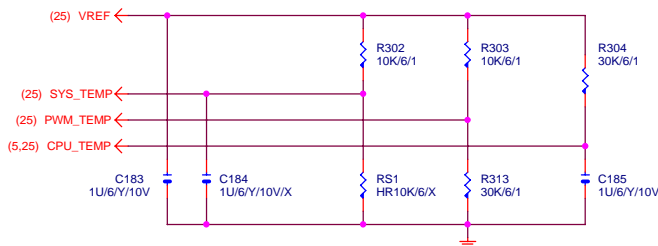


GIGABYTE			
PCI SLOT			
8I915P DUO			
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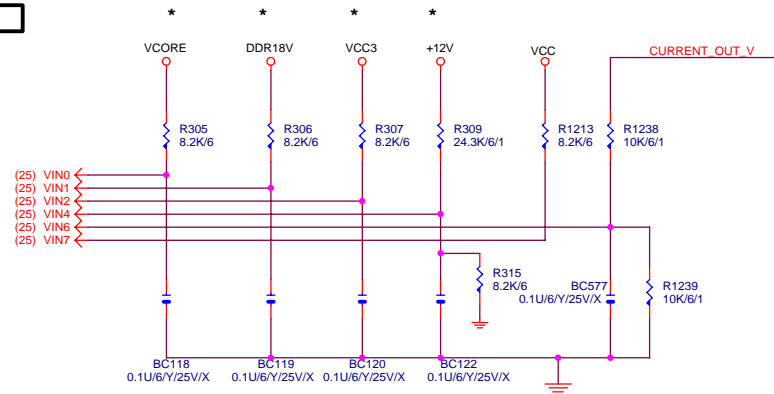




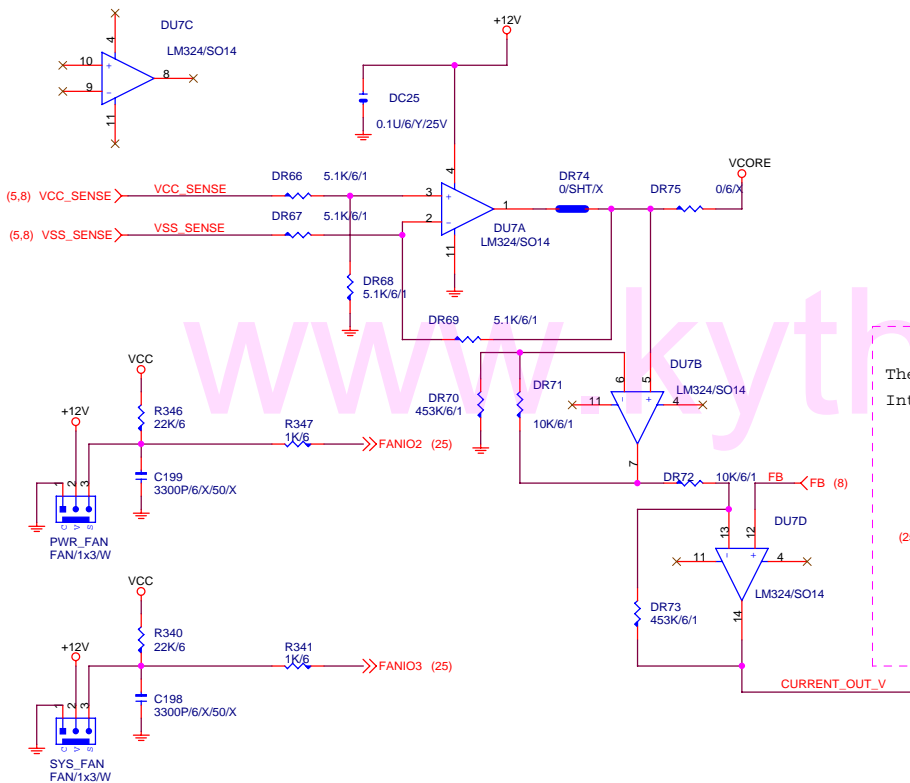
TEMP. SENSE



VOLTAGE SENSE



DUAL POWER



CPU/SYS FAN

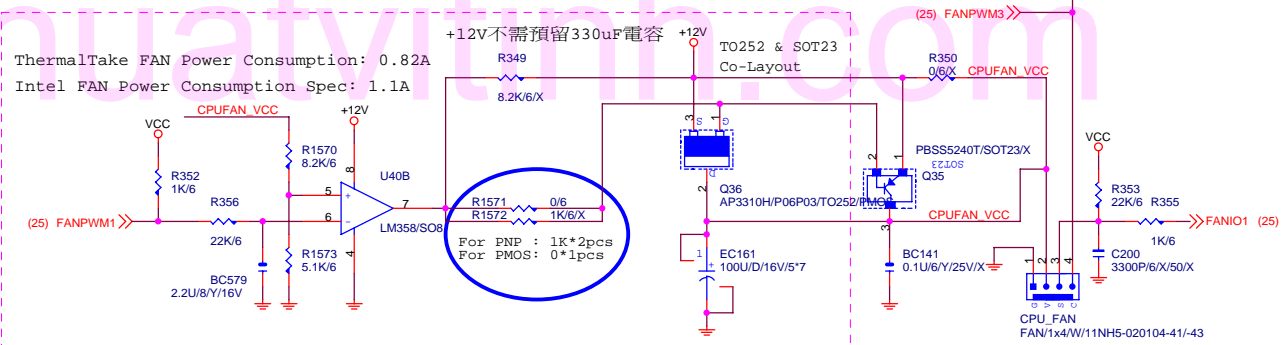
If use PBSS5240 lpcs : (non airflow)

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

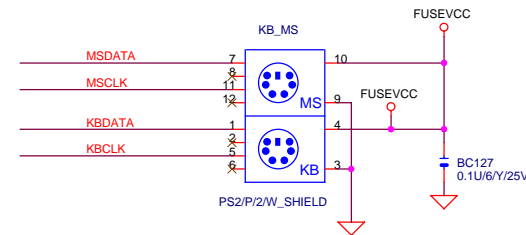
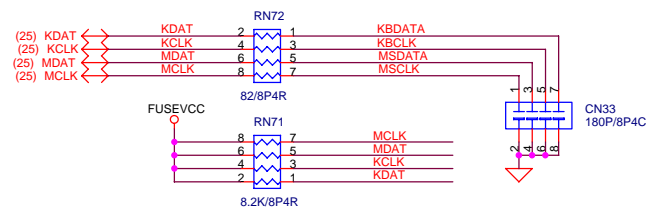
ThermalTake FAN Power Consumption: 0.82A
 Intel FAN Power Consumption Spec: 1.1A



GIGABYTE

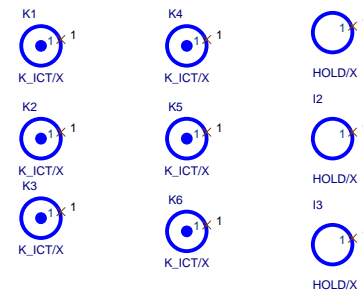
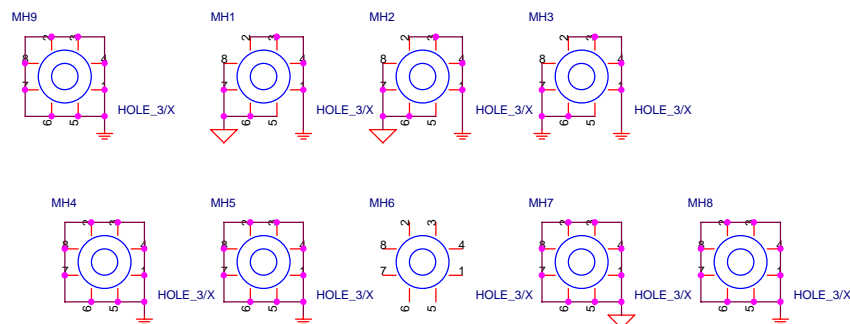
Title		
HWM/FAN/C/BIOS		
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KB/MS



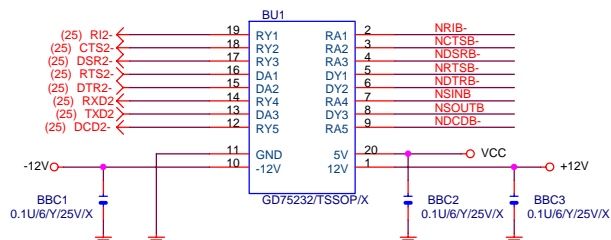
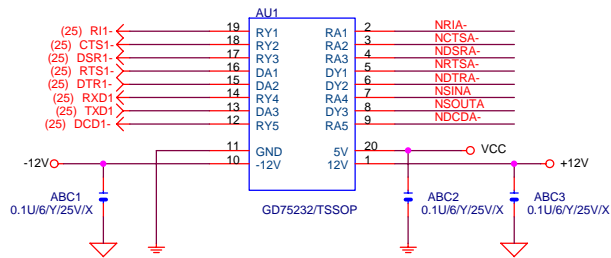
GAME PORT (N/A)

www.kythuatvitinh.com

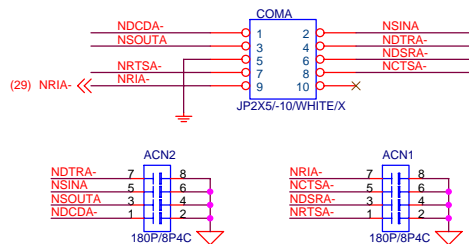


GIGABYTE			
Title			
PS/2 KB & MS			
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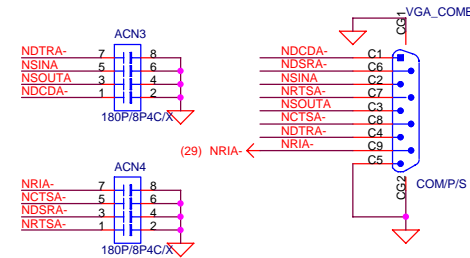
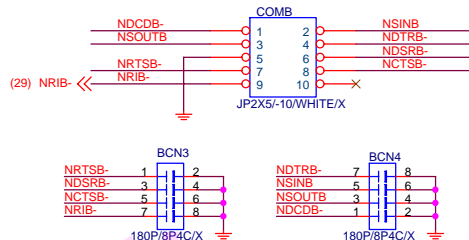
COMA / COMB



INTERNAL COMA



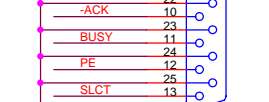
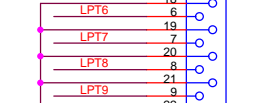
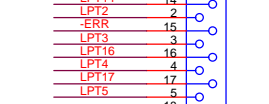
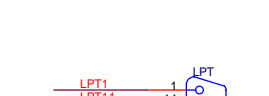
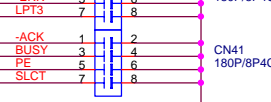
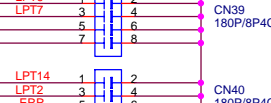
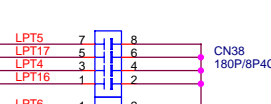
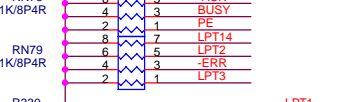
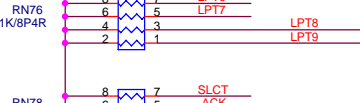
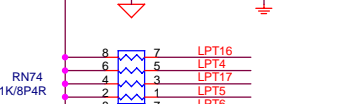
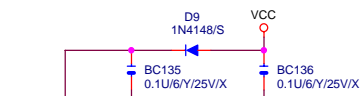
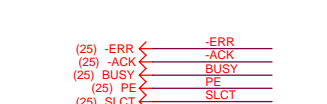
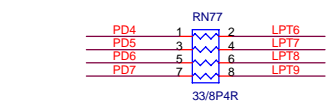
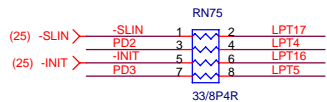
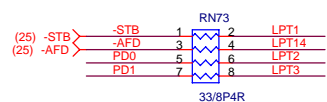
INTERNAL COMB



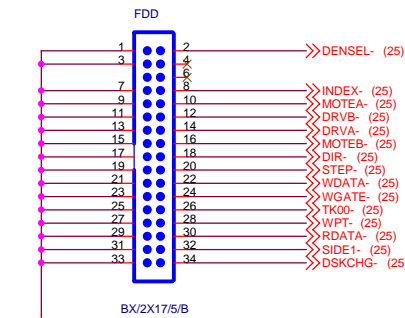
PLACE NEAR VGA_COM CONNECTOR

LPT

(25) PD[0..7] → PDIO_71



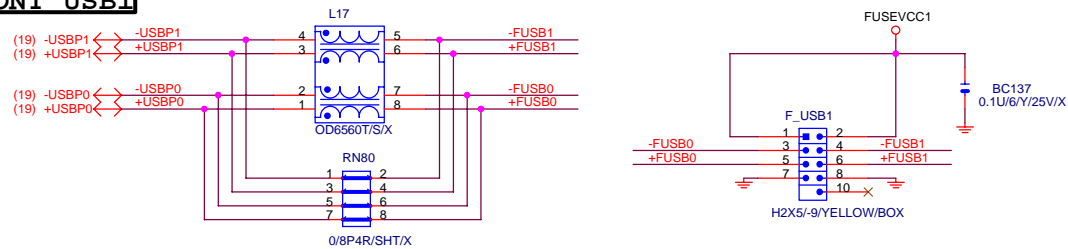
FLOPPY



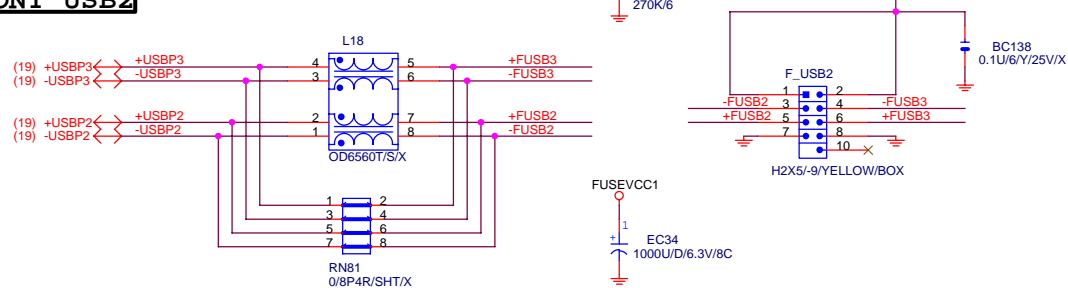
GIGABYTE

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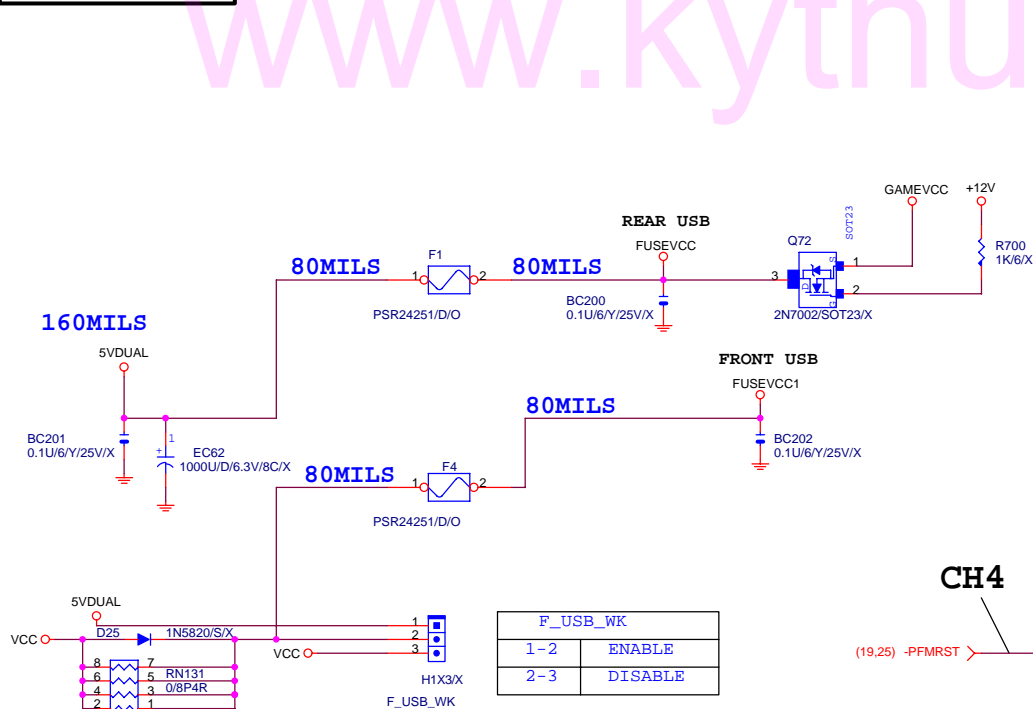
FRONT USB1



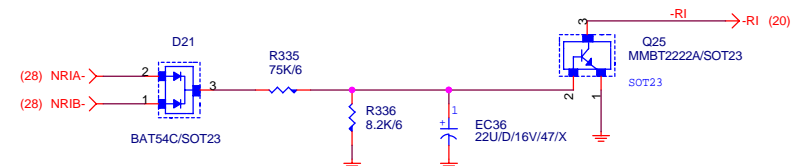
FRONT USB2



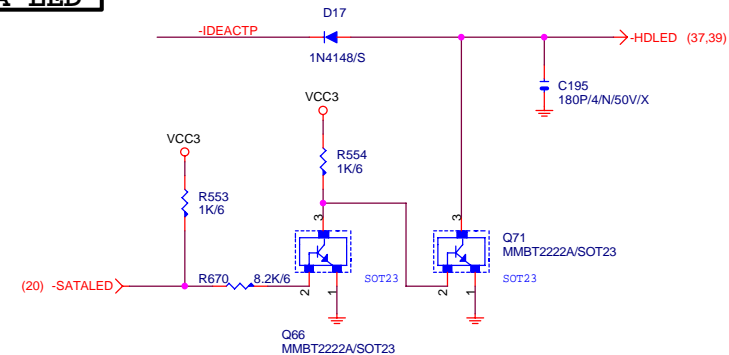
FUSEVCC, GAMEVCC



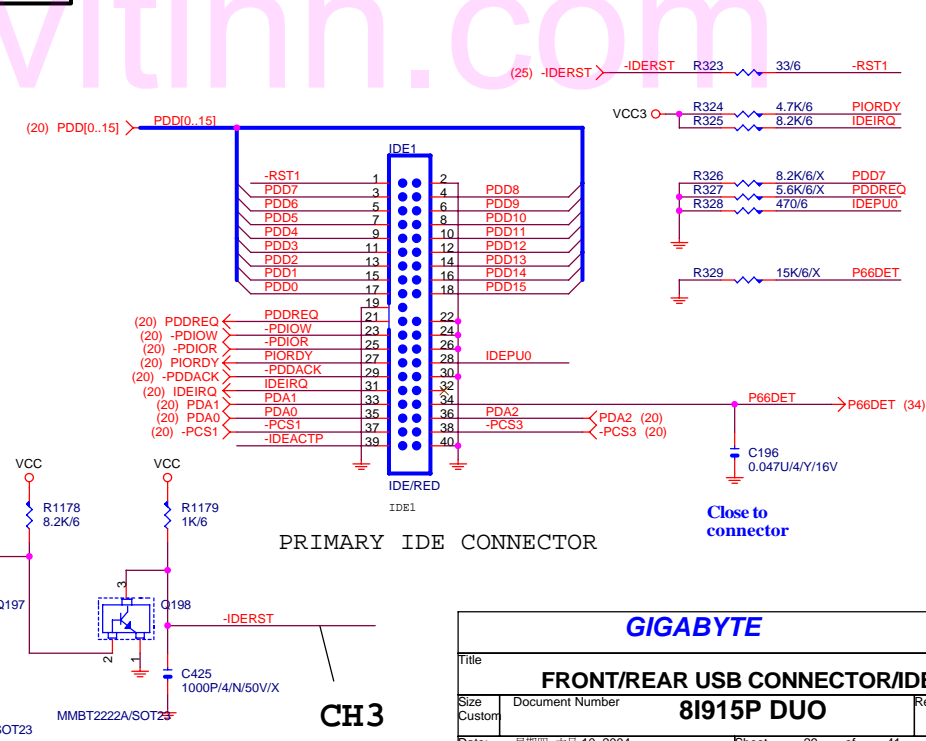
RING IN



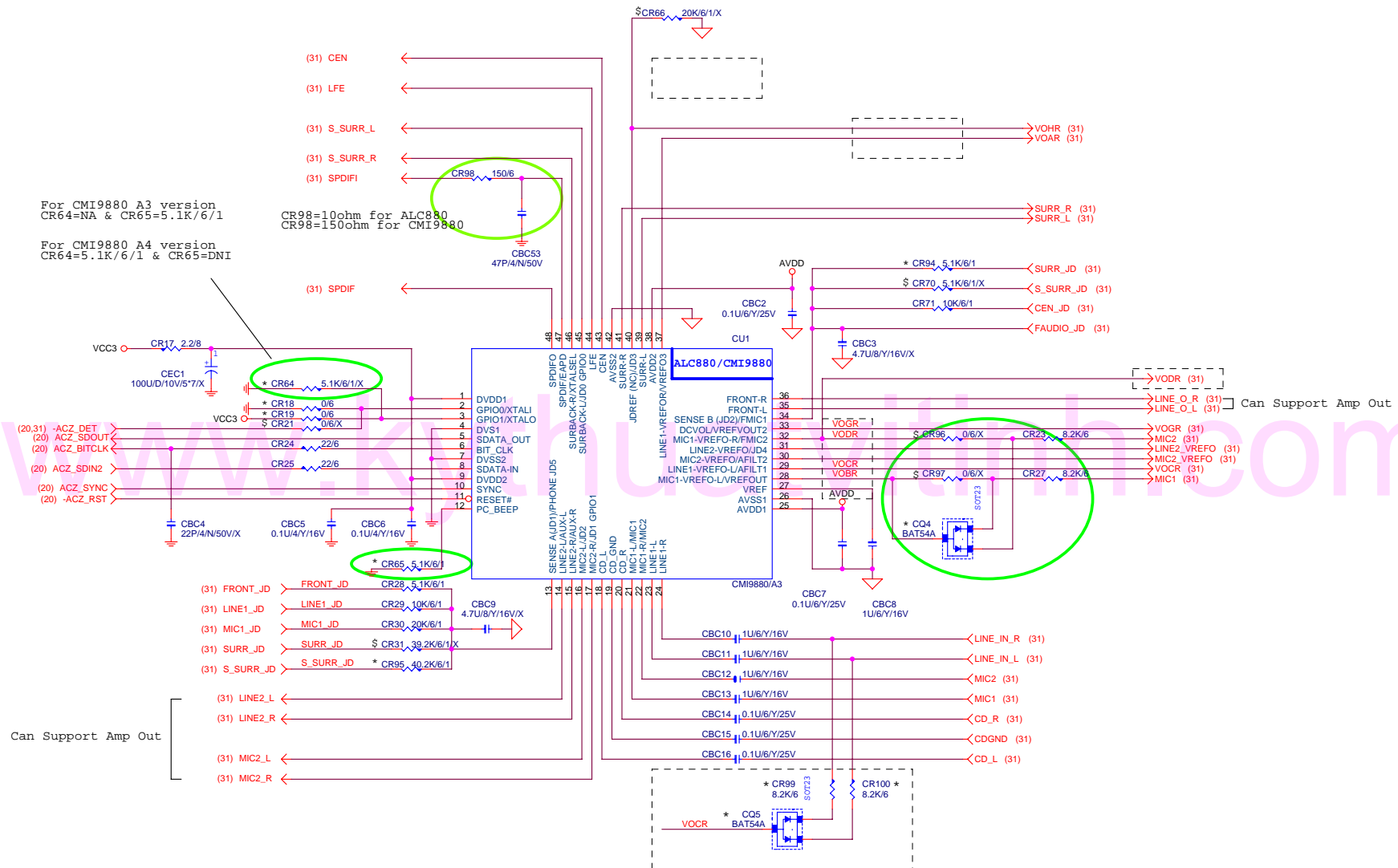
IDE/SATA LED

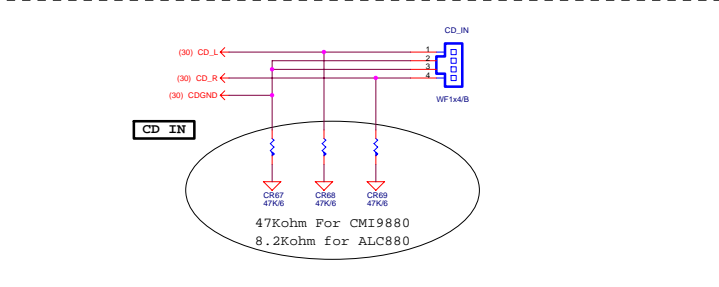
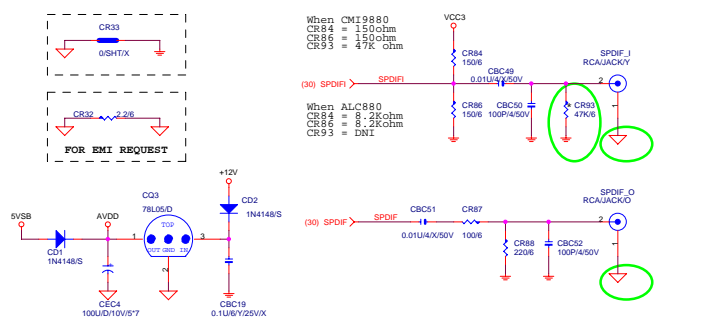


IDE



"\$" means for ALC880 only
"*" means for CMI9880 only





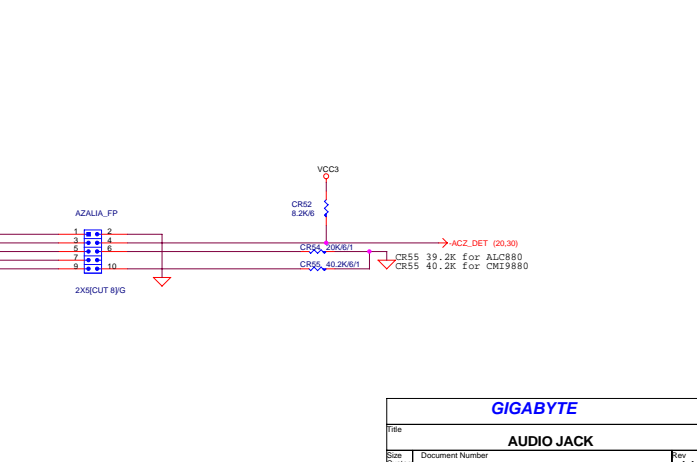
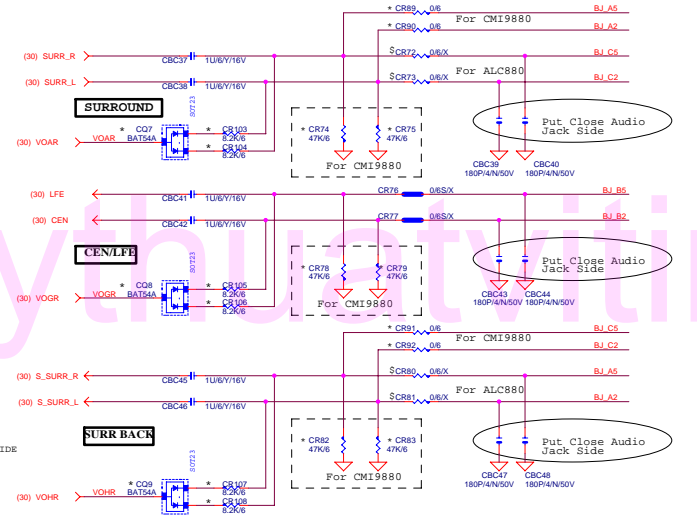
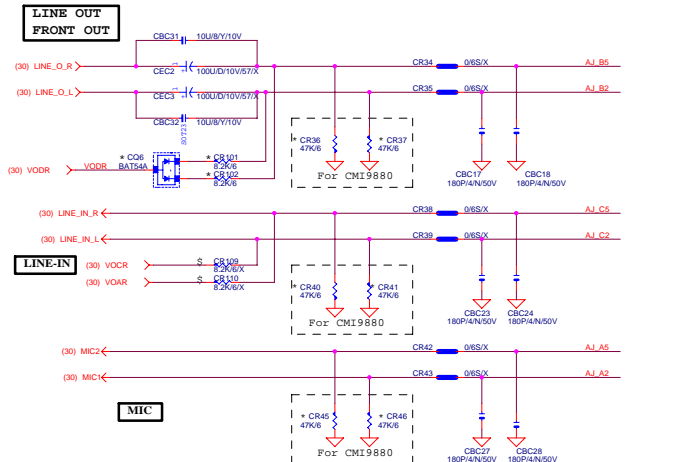
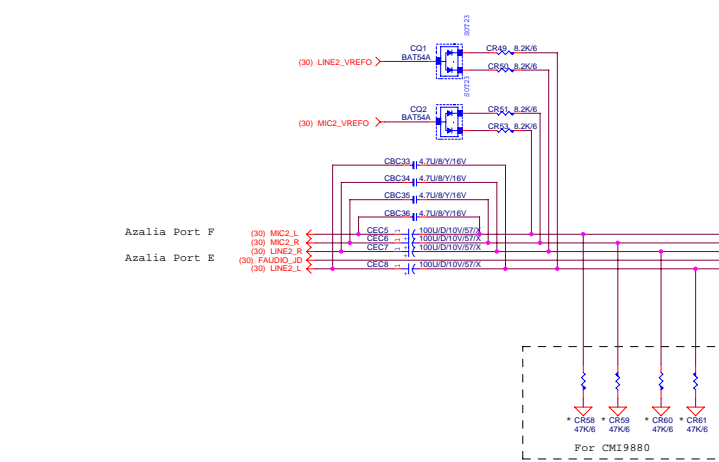
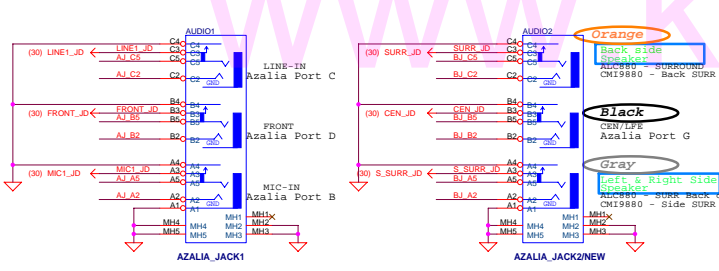
Azalia Jack

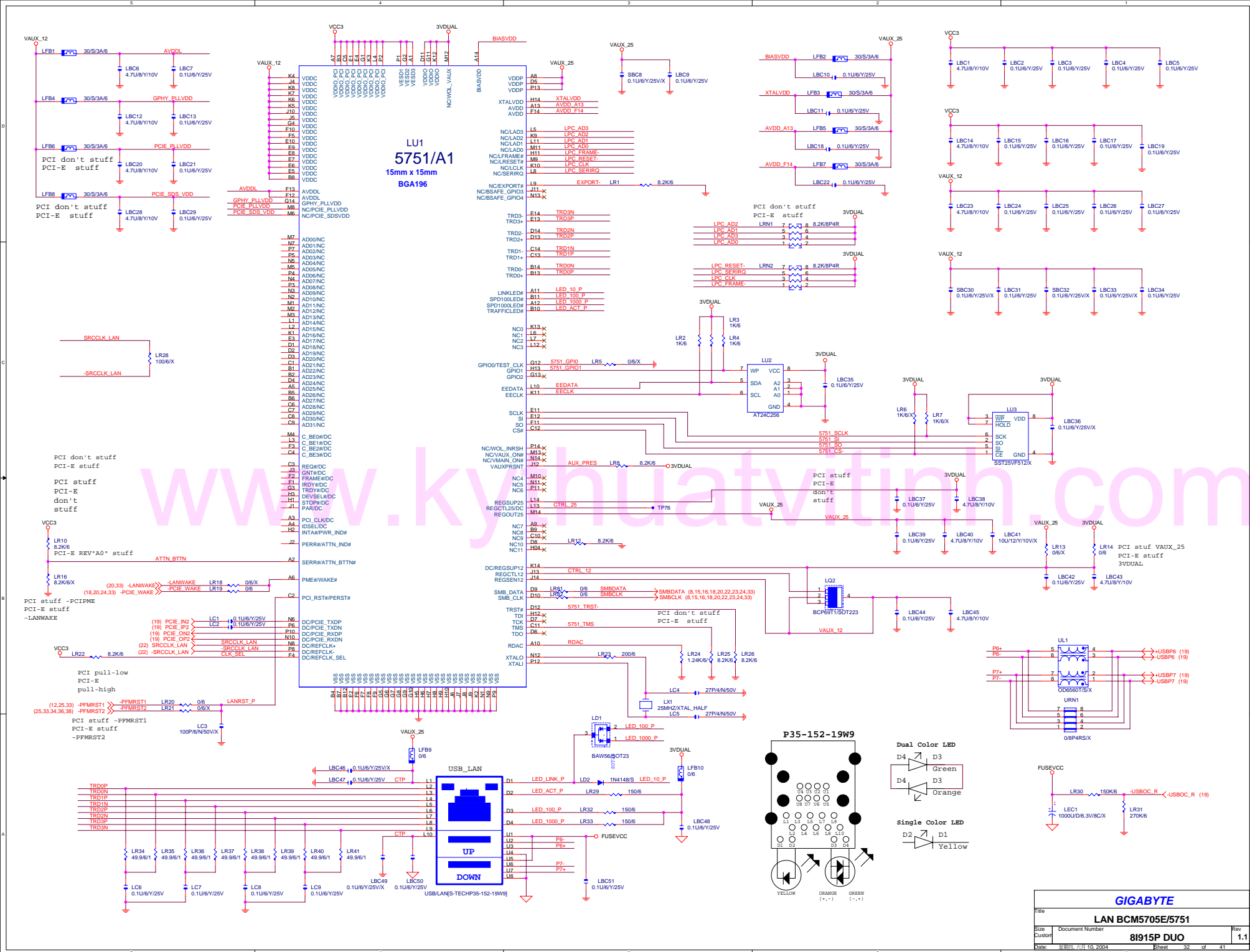
Normal --> pin4/pin3 open

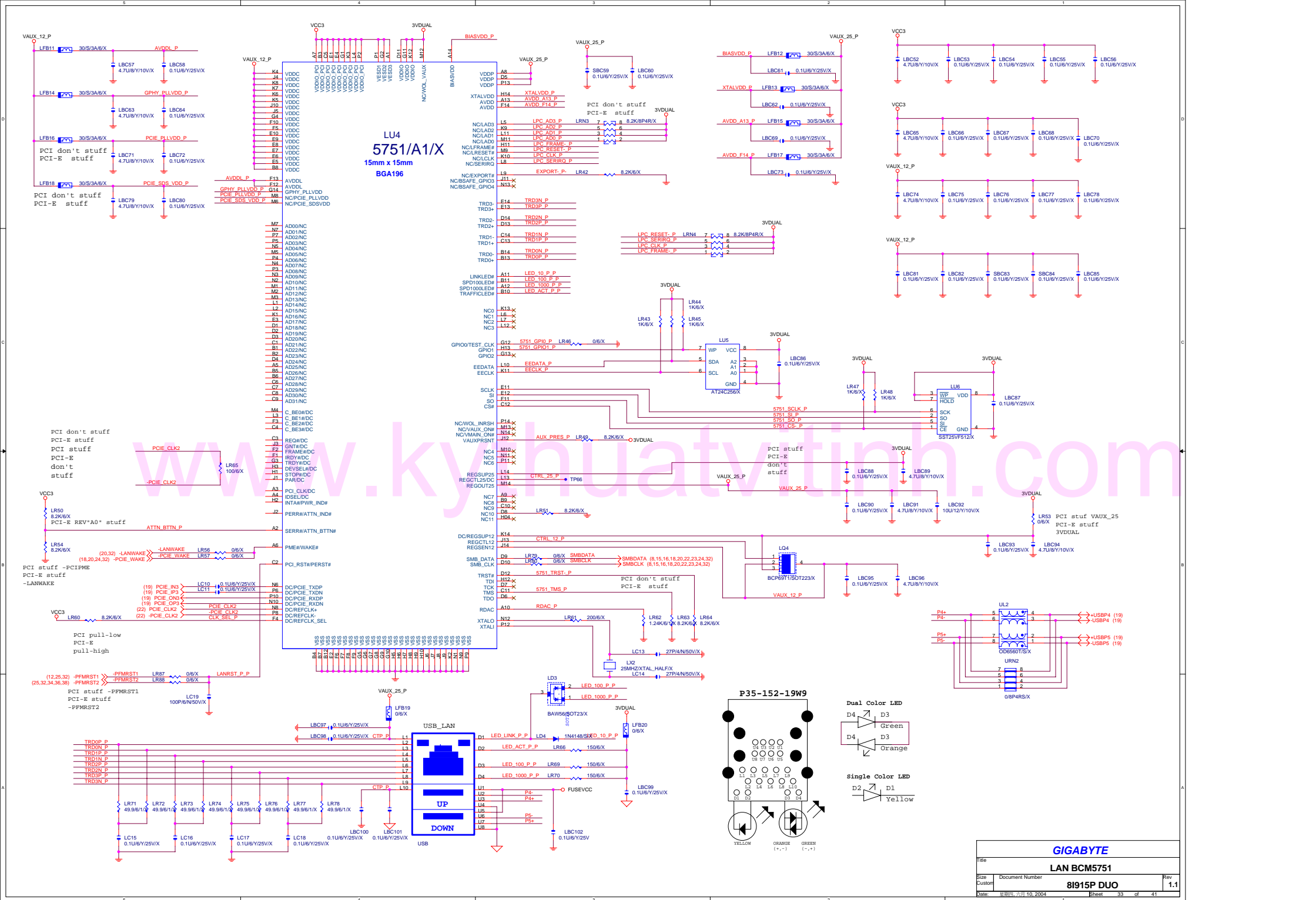
Plug jack --> pin4/pin3 close

CMI9880 Port A is Side SURROUND, Port H is Back SURROUND

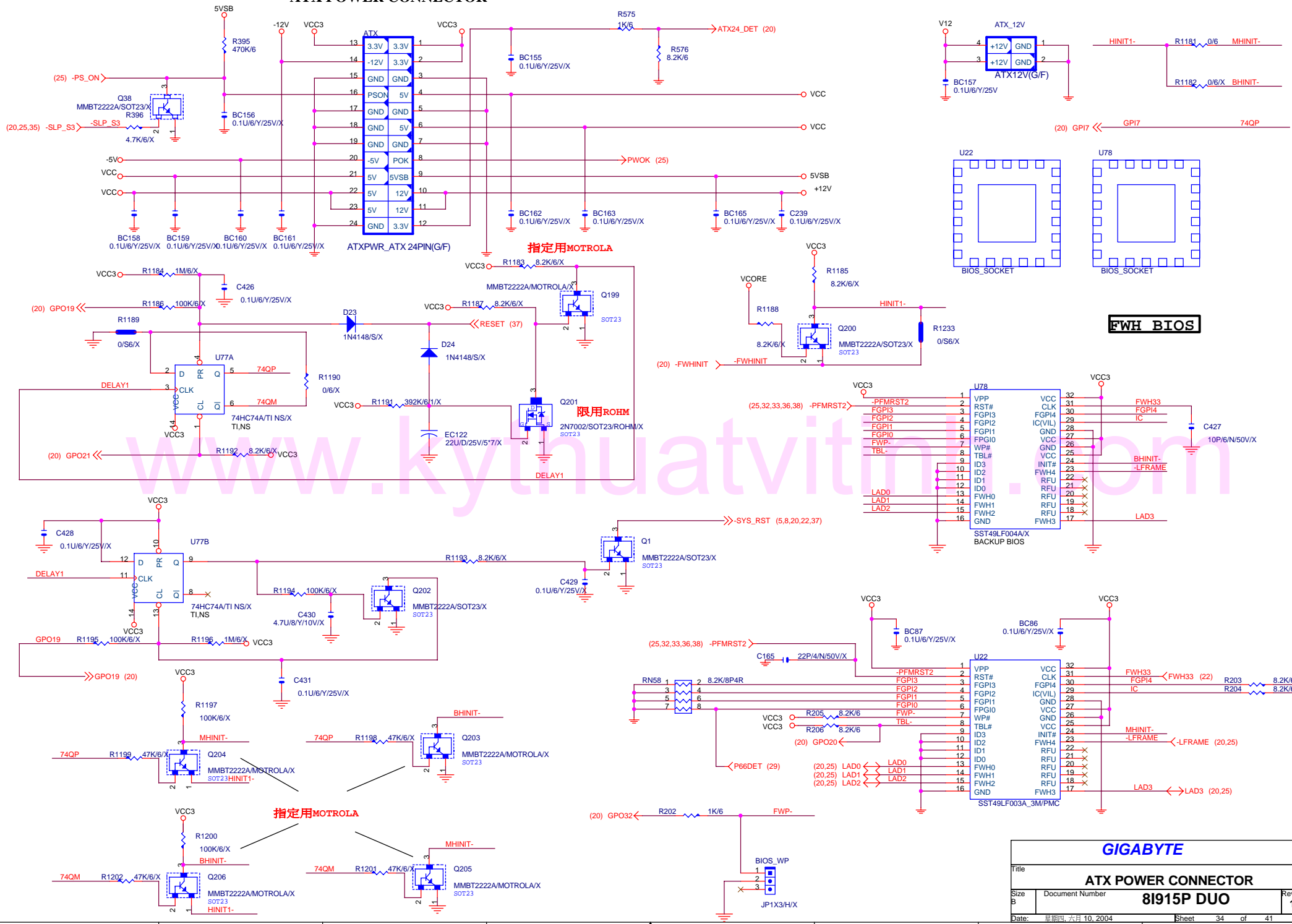
ALC880 Port A is SURROUND, Port H is SIDE





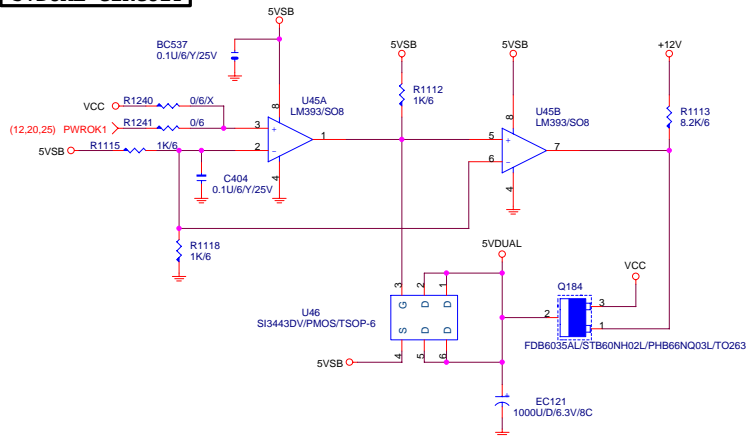


ATX POWER CONNECTOR

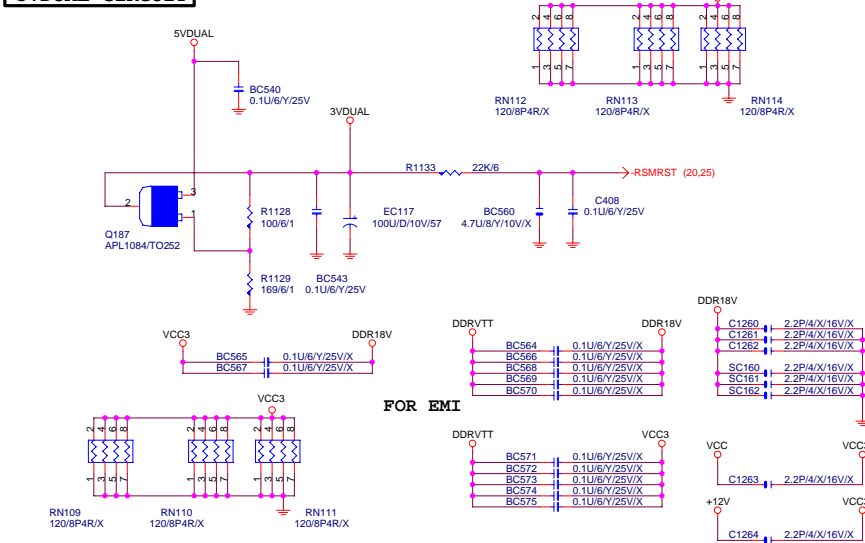


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Title			
ATX POWER CONNECTOR			
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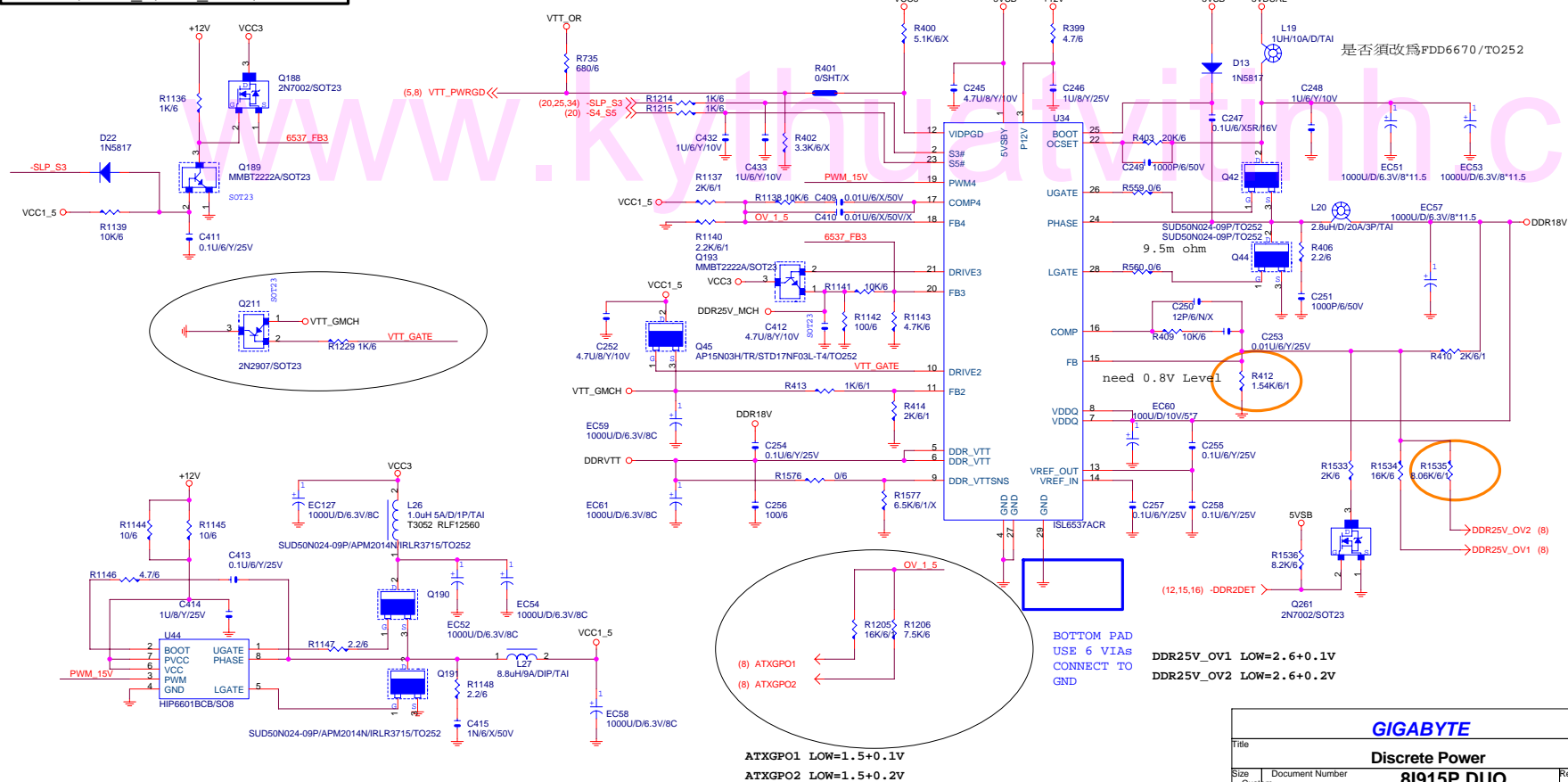
5VDUAL CIRCUIT



3VDUAL CIRCUIT



DDR25V/VCC1_5/VTT_GMCH/DDRVT



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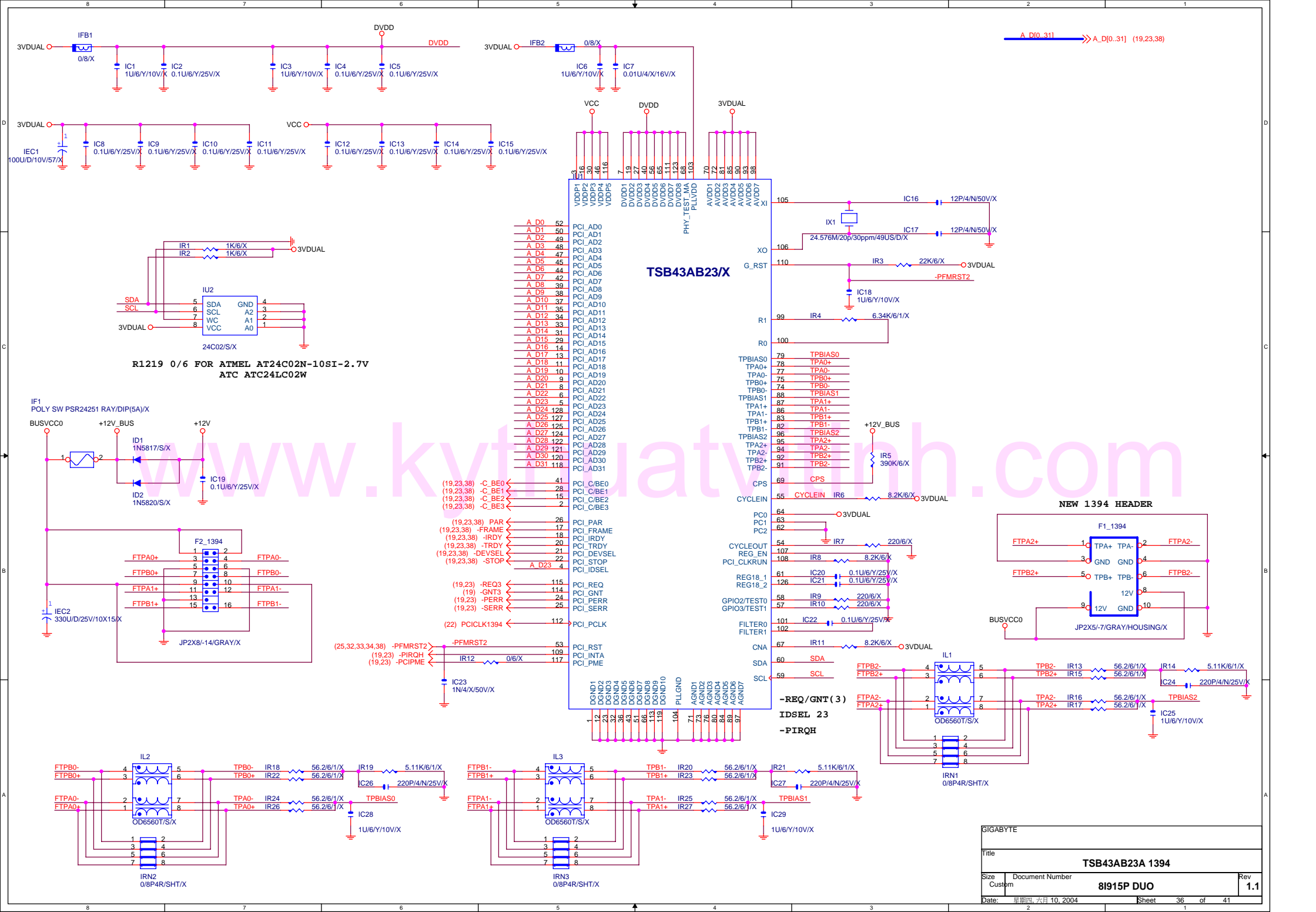
Discrete Power

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INTEL FRONT PANEL

3 PIN POWER LED
LAYOUT PLACE CLOSE
TO F_PANEL

PWR_LED
1 MPD+
2 MPD-
3 MPD-
JP1X3/H

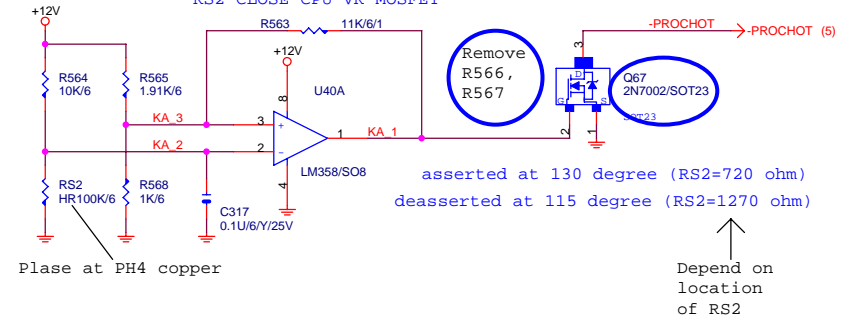
PROCESSOR HOT

(N/A)

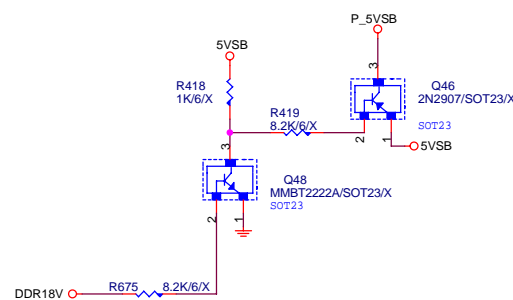
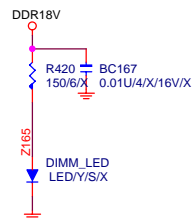
如果要用2N7002需注意OP output
hi時的電壓是否遠大於2V。

KA393改為LM358，電源pin改接+12V，Prochot#溫度需重新調整之。

RS2 CLOSE CPU VR MOSFET



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States for green LED NO1 GPO22 only S1 PROGRAMMING LOW

LED States	ACPI States	GPO28
ON	S1,S3	0
OFF	S0,S5	1

(GPO22 DEFAULT HIGH, main power)

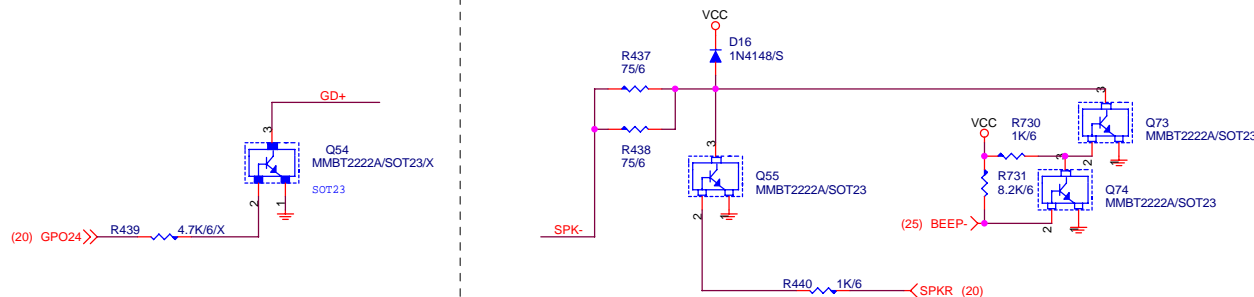
States for a single-color power LED

LED States	ACPI States	GPO25	GPO27	GPO24
OFF	S1,S3,S5	1	1	NO1
Steady Green	S0	1	1	1
Blinking Green	S0(message waiting)	1	B	1

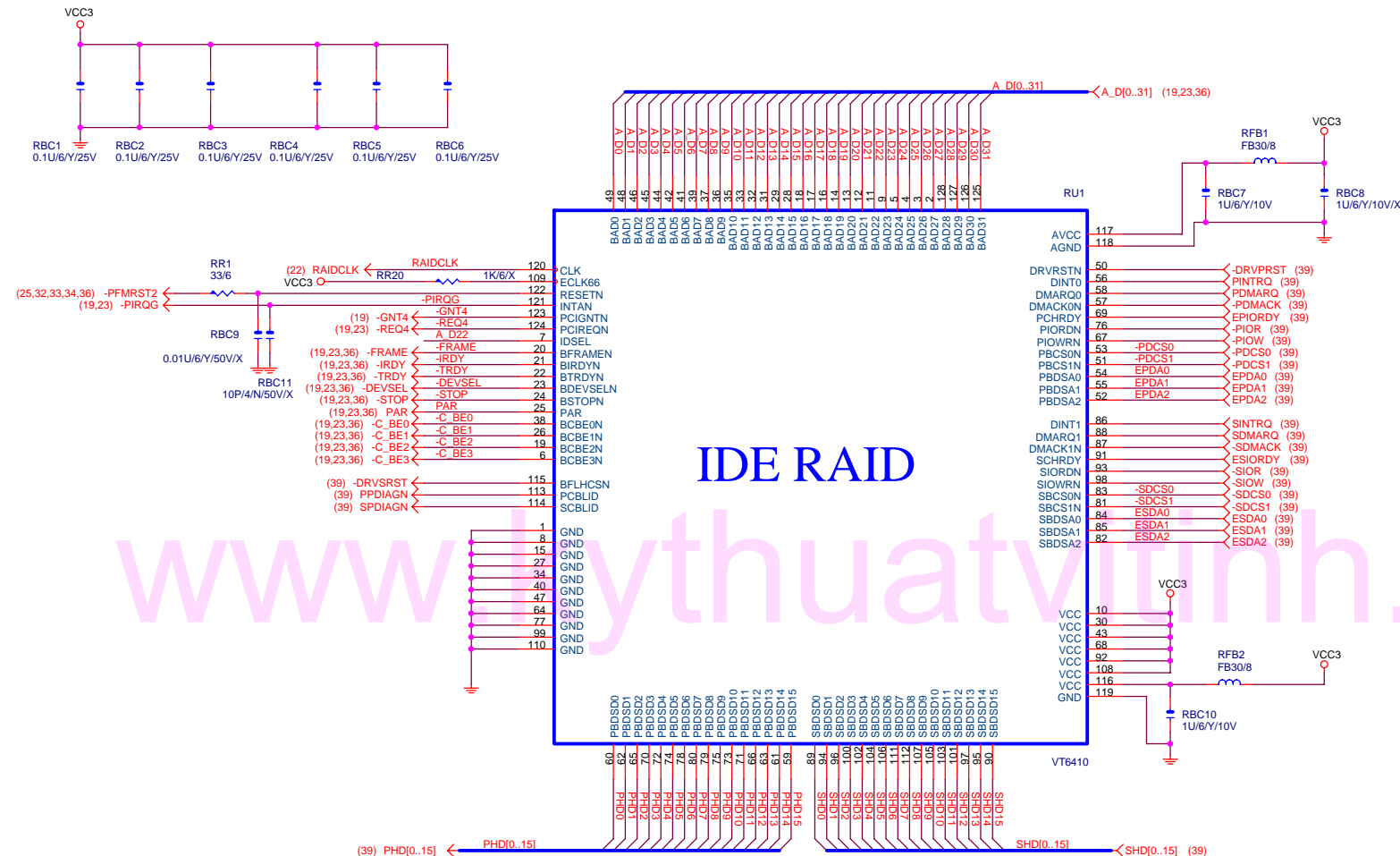
LED States	ACPI States	GPO25	GPO27	GPO22
OFF	S5	1	1	X
Steady Green	S0	1	1	1
Blinking Green	S0(message waiting)	1	B	1
Steady Yellow	S1,S3	1	0	NO1
Blinking Yellow	S1,S3(message waiting)	1	B	NO1

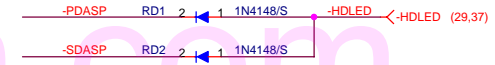
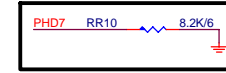
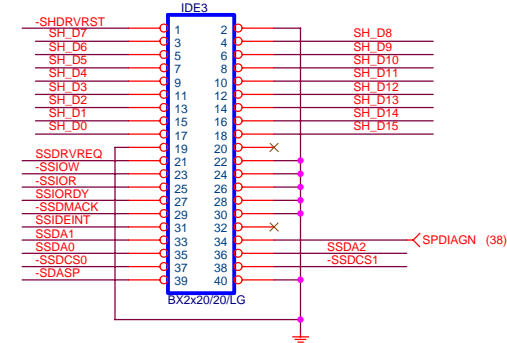
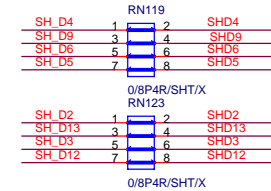
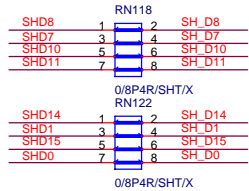
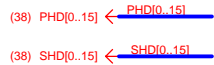
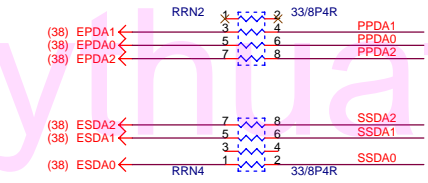
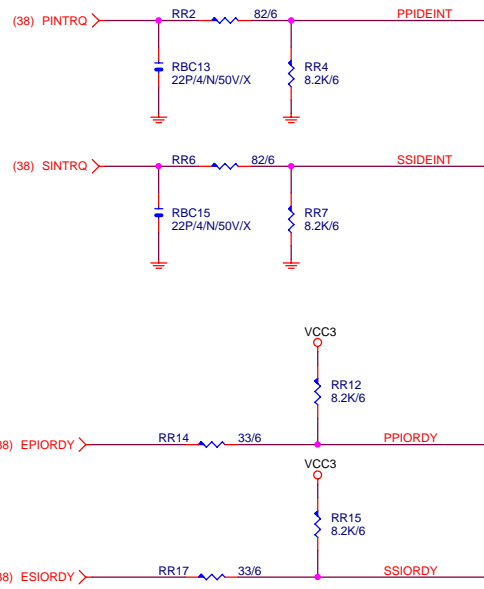
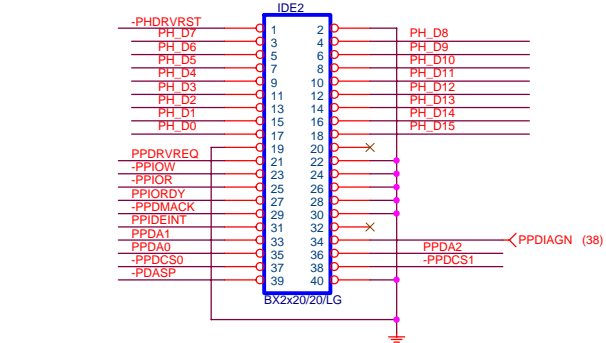
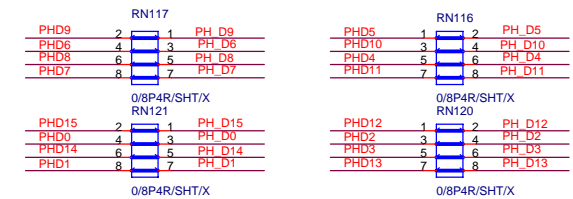
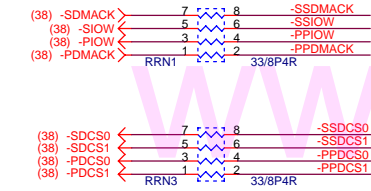
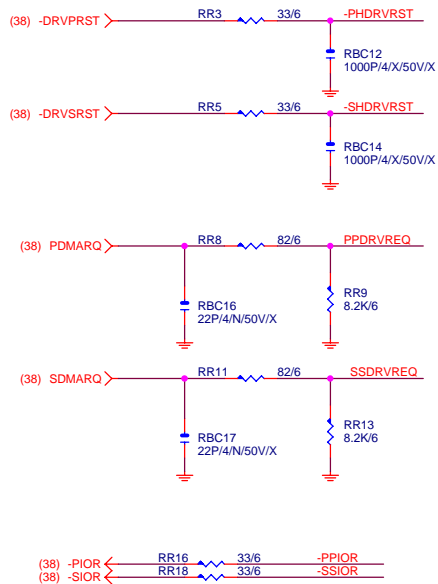
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ALL INPUT PIN MUST HAVE 0.1 CAPACITOR





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	M/B ID			
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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