

Model Name: GA-P55-UD5

SHEET TITLE

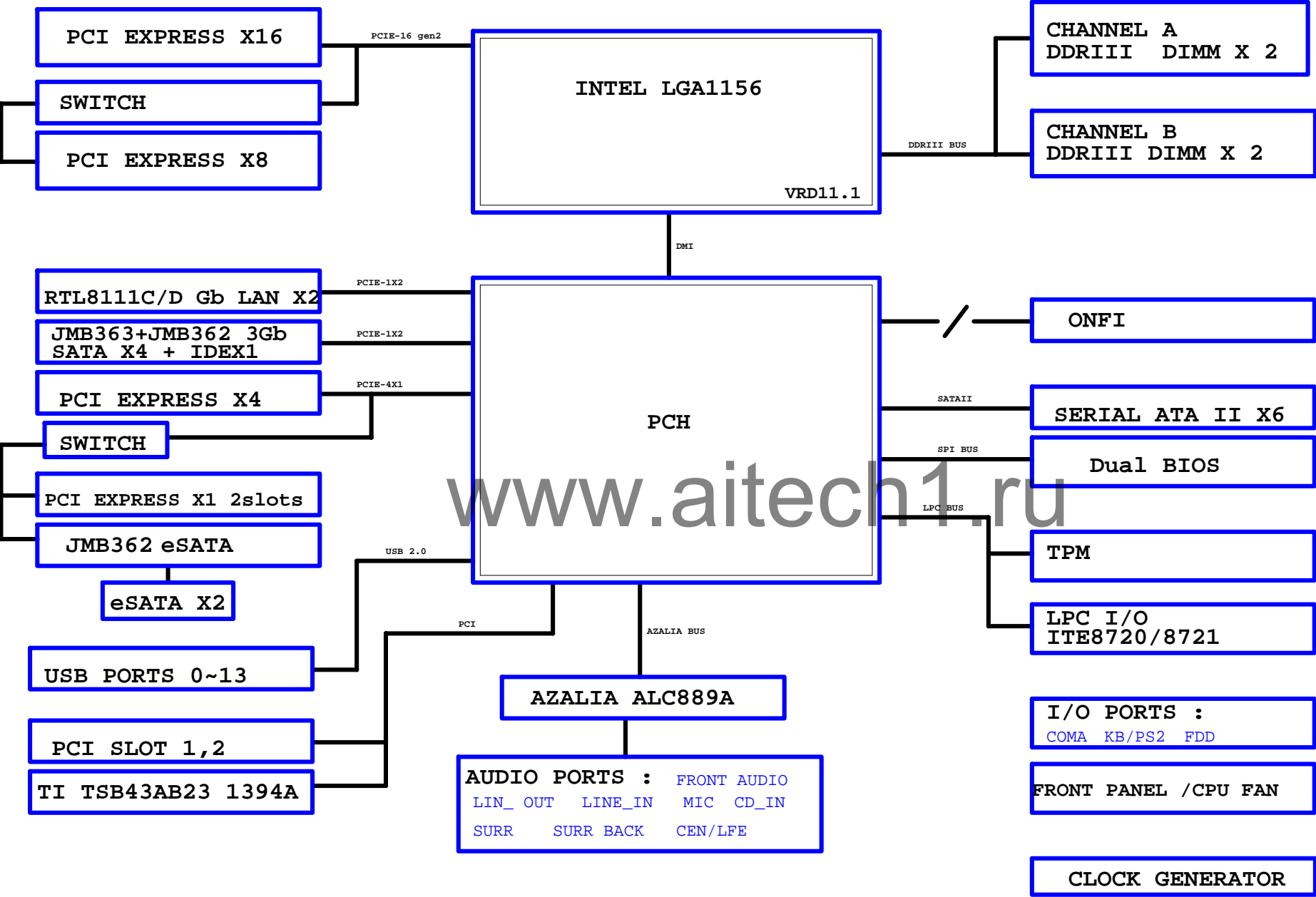
01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	CPU_LGA1156-A
05	CPU_LGA1156-B
06	CPU_LGA1156-C
07	DDR III CHANNEL A
08	DDR III CHANNEL B
09	DDR III POWER CAP
10	PCI EXPRESS*16 SLOT
11	PCI EXPRESS*8 SLOT
12	PCI EXPRESS*16 Switch
13	PCH_FDI,DMI,USB,PCIE,NVRAM
14	PCH_DP,CLK BUFFER
15	PCH_HOST,SATA,PCI
16	PCH_GPIO,CTRL,AUDIO
17	PCH_PWR,GND
18	DUAL BIOS , TPM
19	COM, -PROHOT,DYNAMIC OC
20	PCI SLOT
21	TI TSB43AB23 1394
22	ITE 8720 LPC IO
23	ATX POWER
24	FP,FUSB,FDD
25	PCI EXPRESS*4 SLOT
26	PCI EXPRESS*1 SLOT & Switch
27	CLOCK GEN ICS9LPRS914

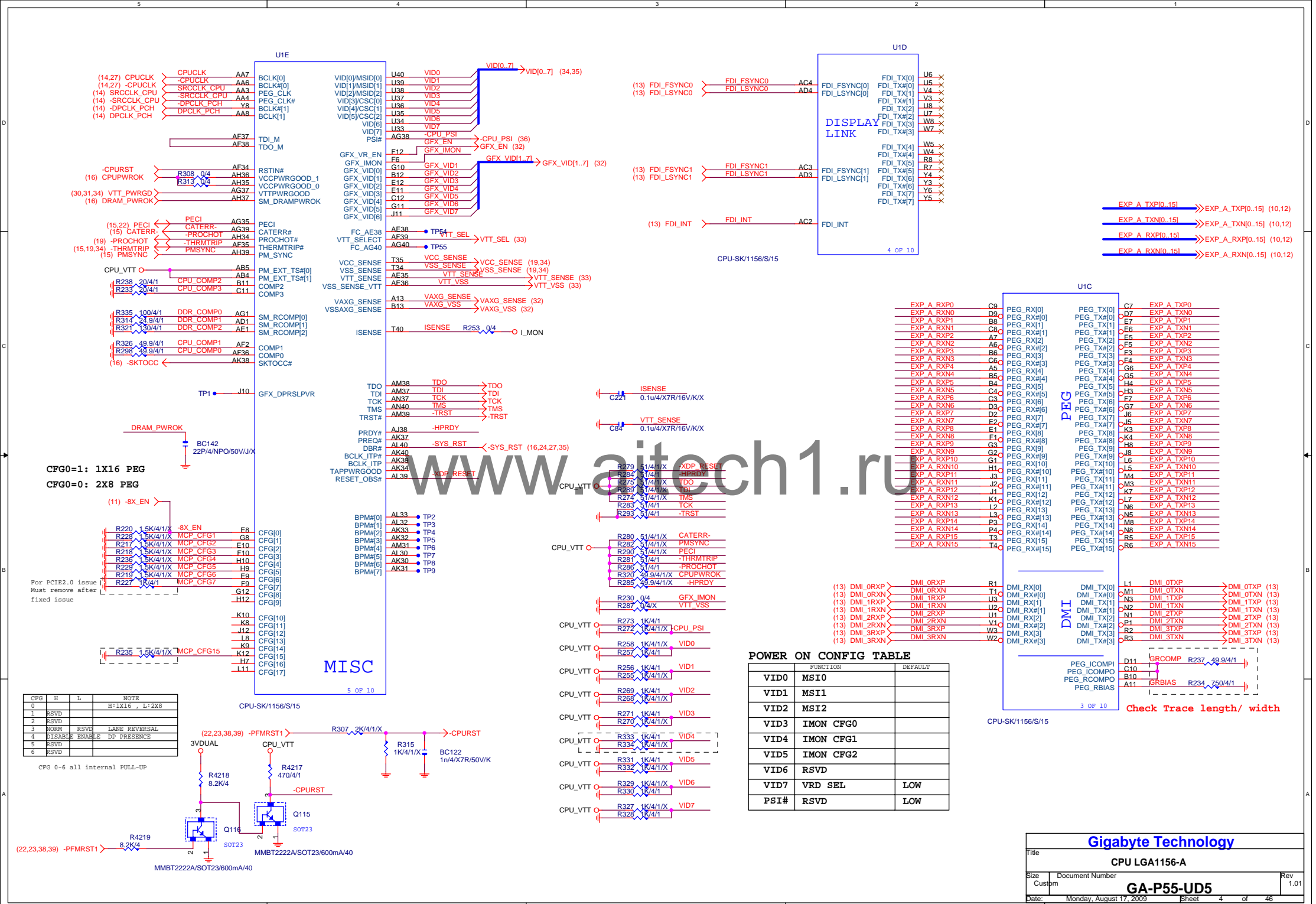
SHEET TITLE

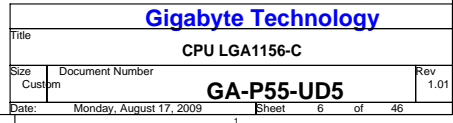
28	ALC889A
29	REAR AUDIO JACK
30	DISCRETE POWER I
31	DISCRETE POWER II
32	PCH CORE POWER
33	CPU VTT POWER
34	VCORE PWM_ISL6336CR-1
35	VCORE PWM_ISL6336CR-2
36	VCORE PWM_ISL6336CR-3
37	VCORE PWM_ISL6336CR-4
38	REALTEK RTL8111C/D-1
39	REALTEK RTL8111C/D-2
40	JMB363 SATA2+IDE
41	JMB362 SATA2
42	HWM,KB/MS, FAN CTRL
43	LED information , Switch button
44	DDRIII POWER
45	JMB362 eSATA
45	NV FLASH

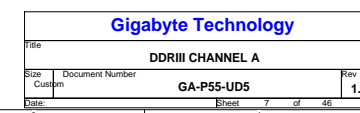
Gigabyte Technology			
Title			
Cover Sheet			
Size	Document Number	Rev	
Custom	GA-P55-UD5	1.01	
Date:	Monday, August 17, 2009	Sheet	1 of 46

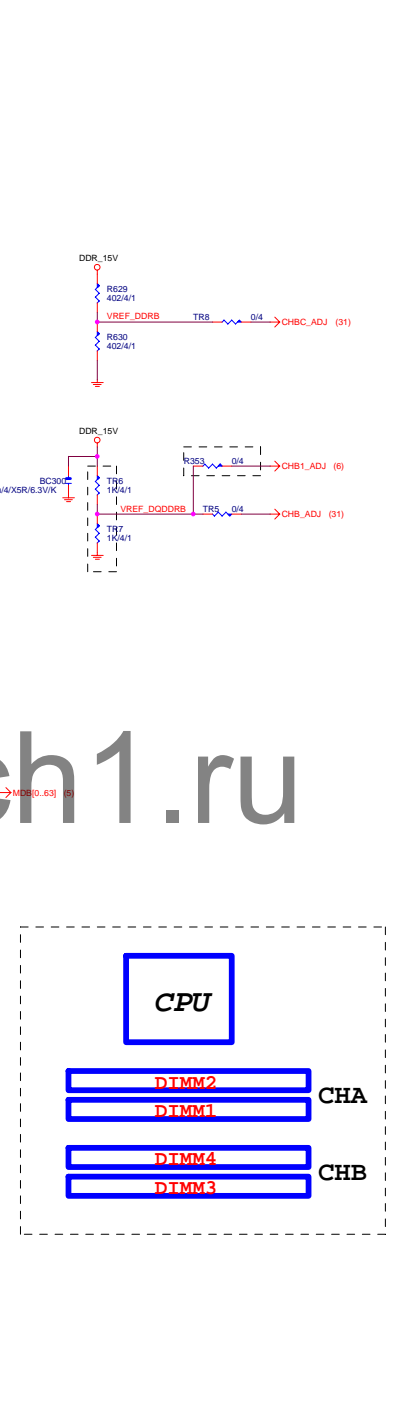
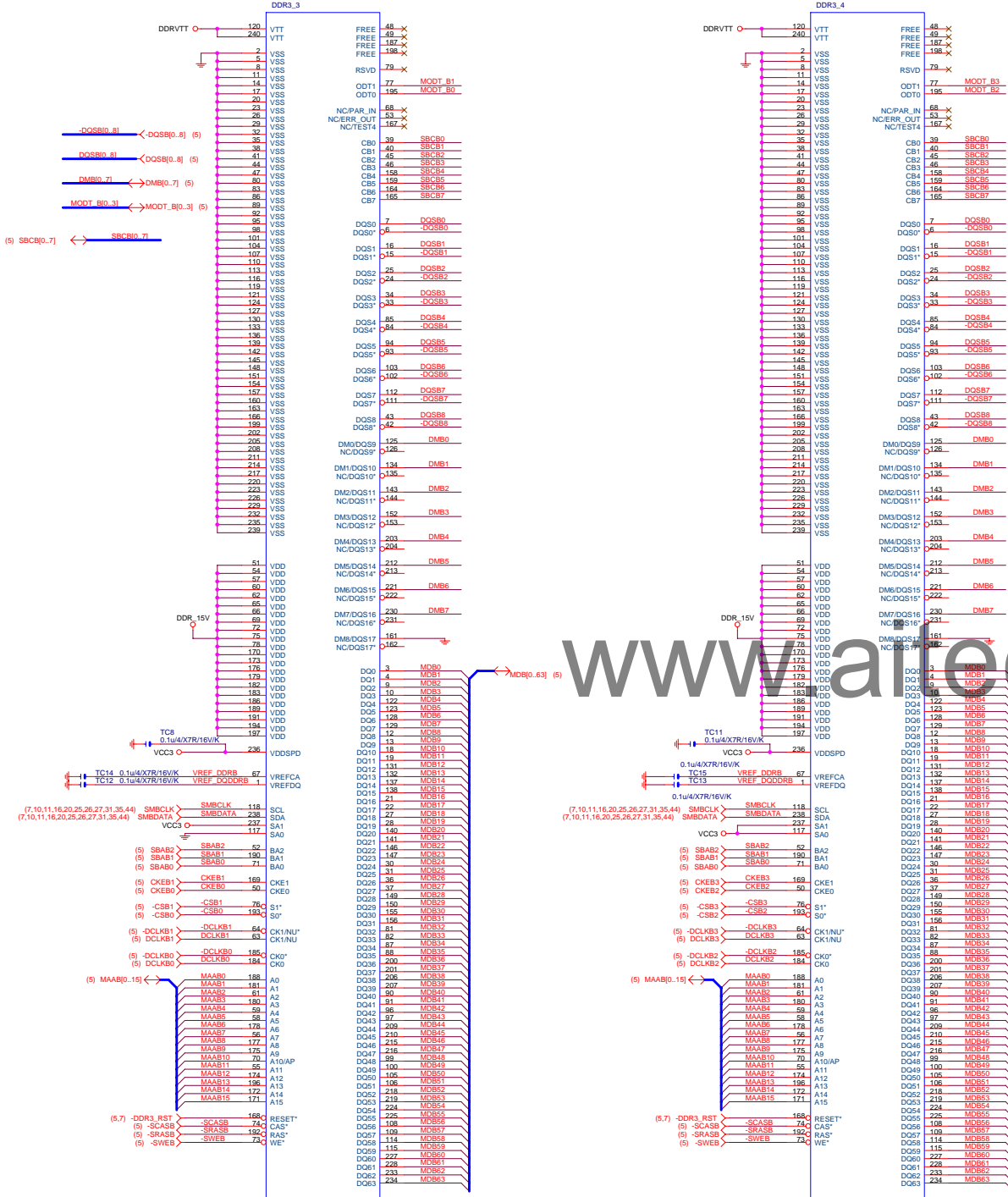
BLOCK DIAGRAM





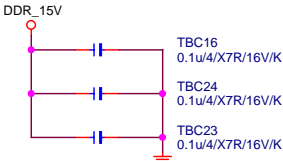




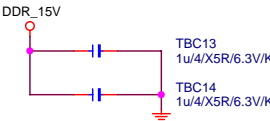
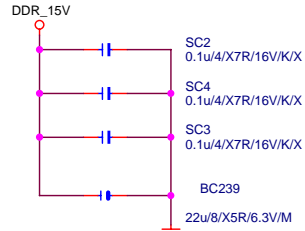
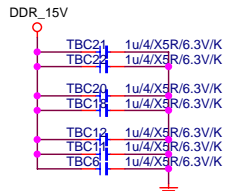
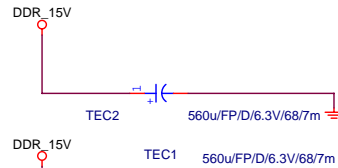
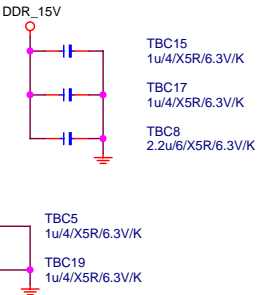
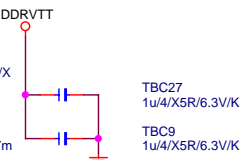
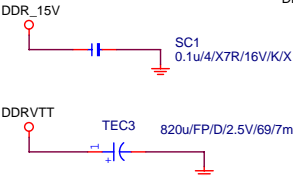
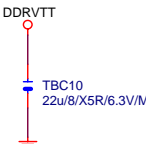
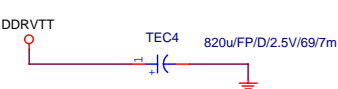
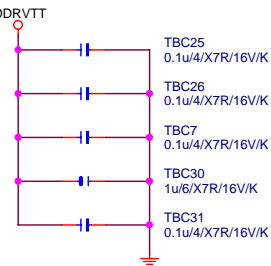


DDR TERMINATION
CHANNEL A/B

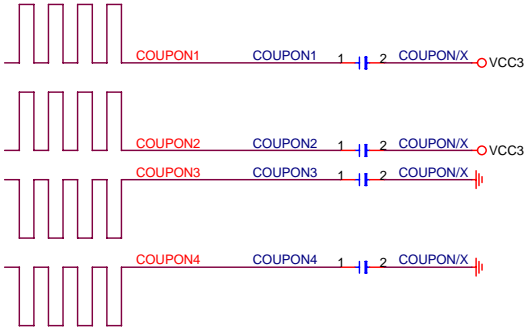
DDR15V Decouple



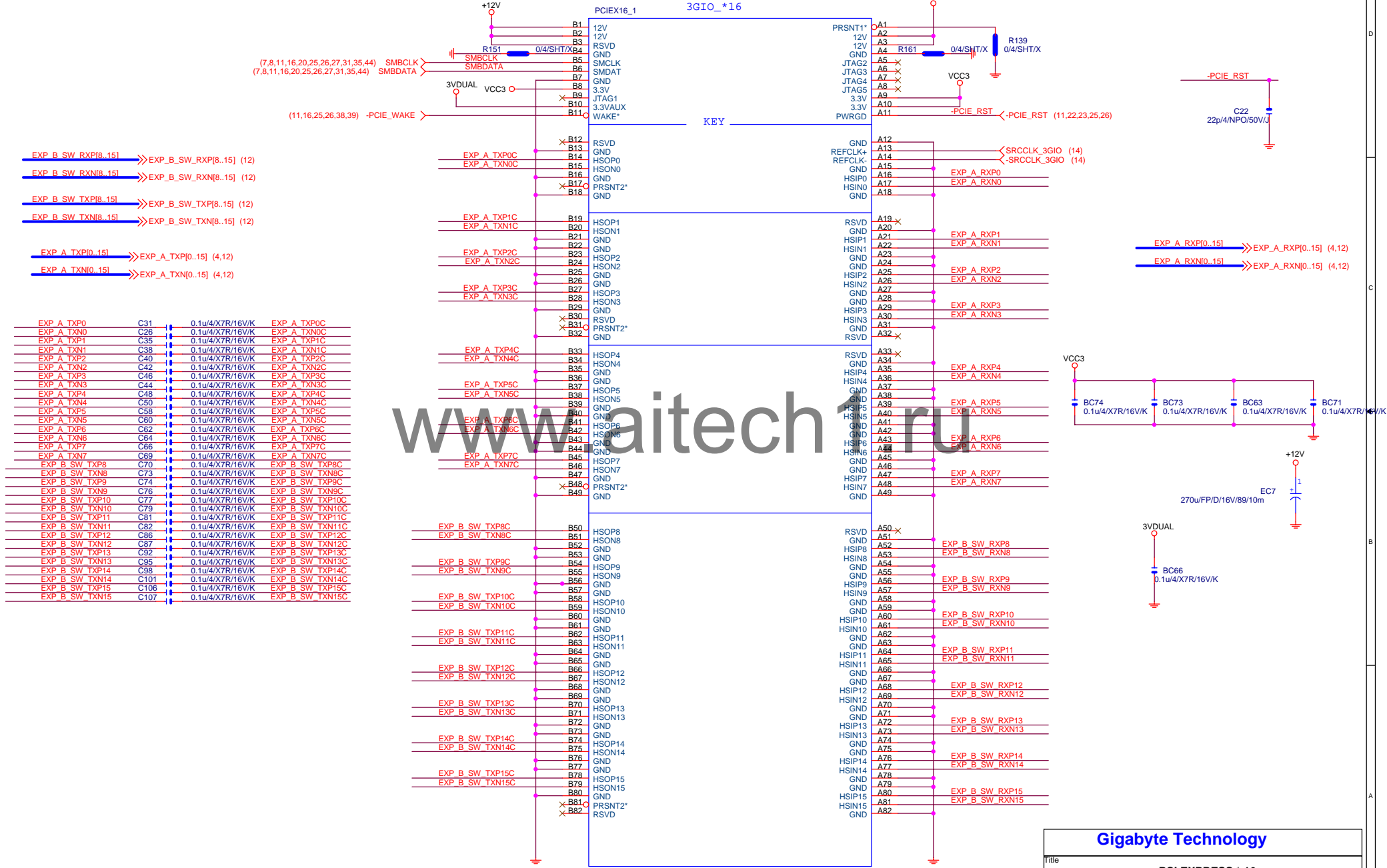
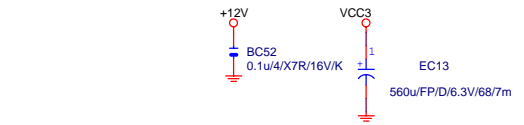
DDRVTT Decouple



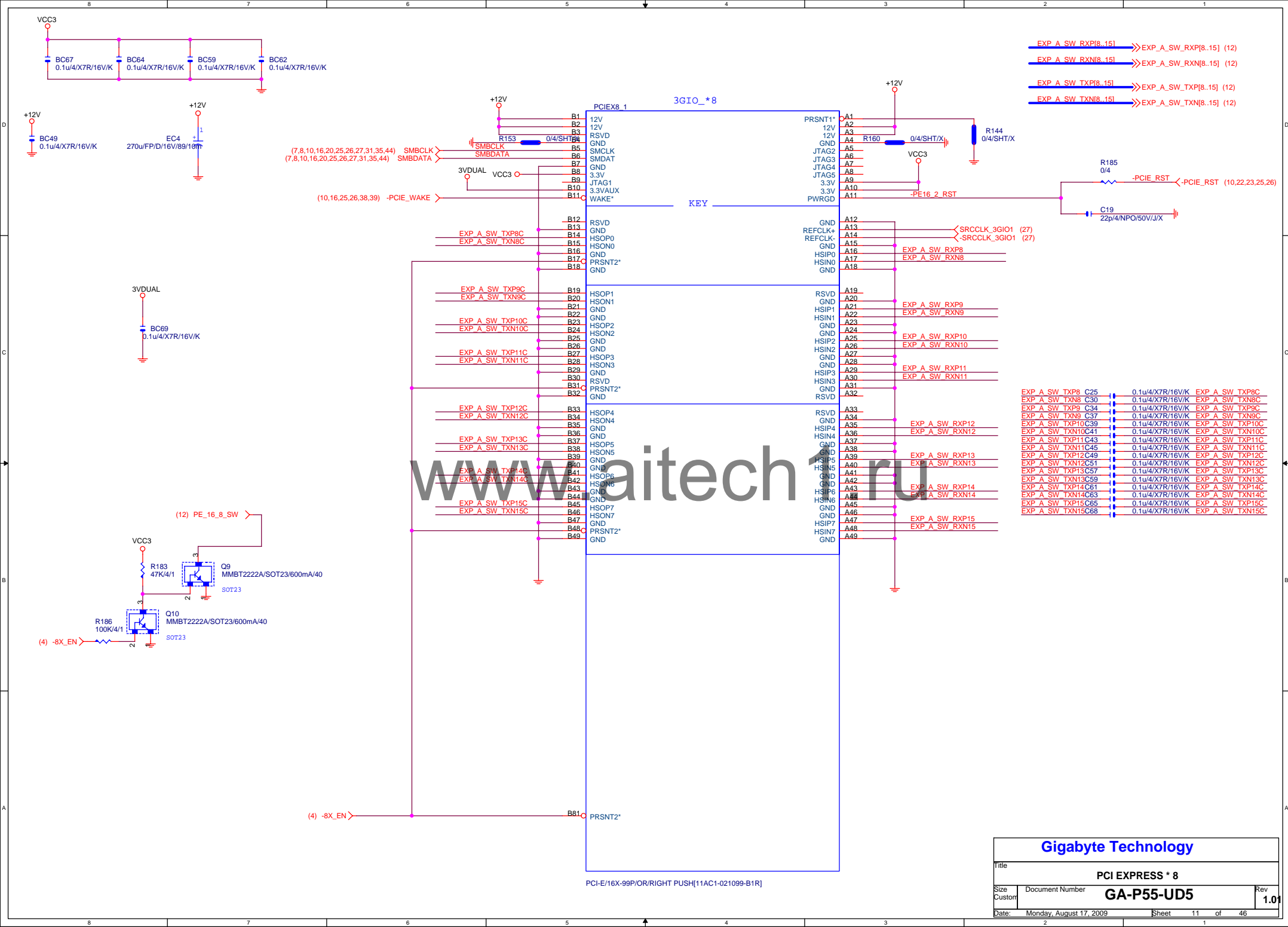
www.aitech1.ru

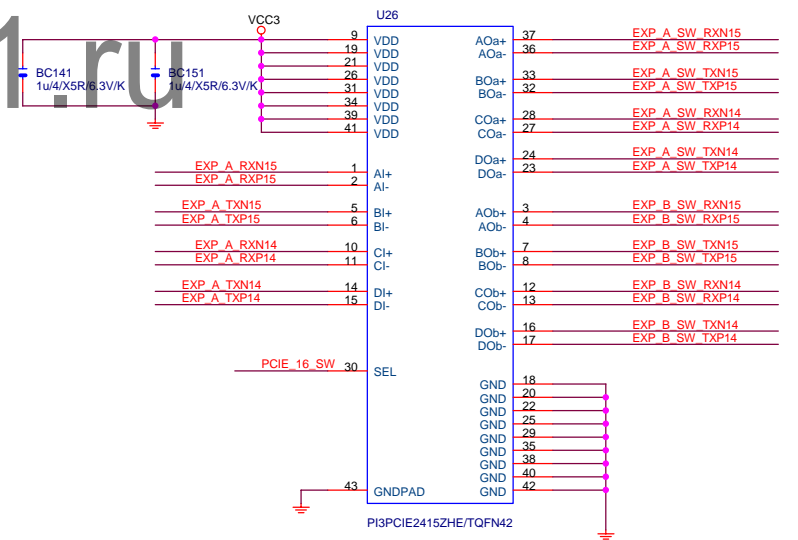
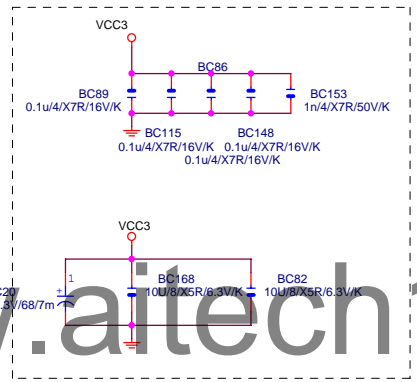
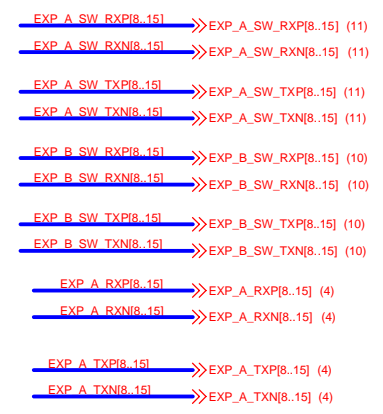
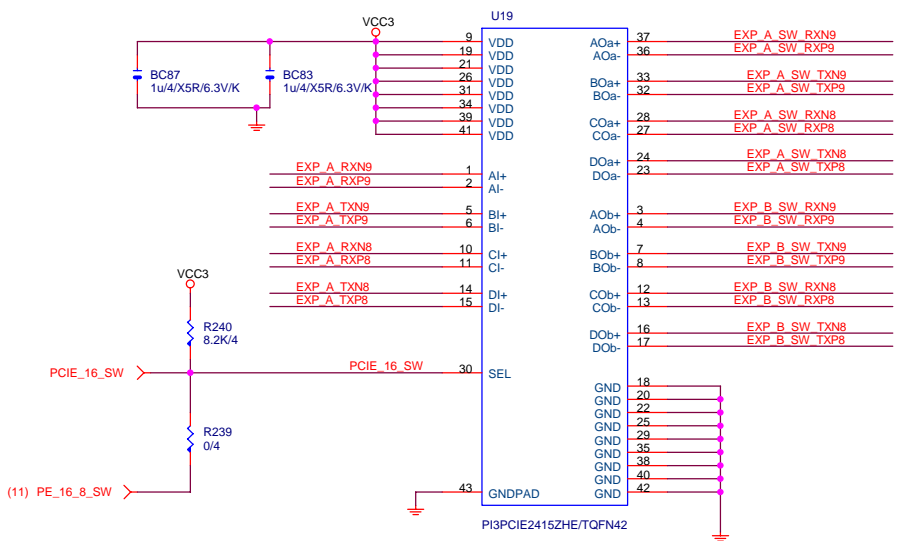


Gigabyte Technology			
Title			
DDRIII POWER CAP			
Size	Document Number		Rev
B	GA-P55-UD5		1.01
Date:	Monday, August 17, 2009		Sheet 9 of 46



EXP A TXP0	C31	0.1u4/X7R/16V/K	EXP A TXP0C
EXP A TXN0	C26	0.1u4/X7R/16V/K	EXP A TXN0C
EXP A TXP1	C35	0.1u4/X7R/16V/K	EXP A TXP1C
EXP A TXN1	C38	0.1u4/X7R/16V/K	EXP A TXN1C
EXP A TXP2	C40	0.1u4/X7R/16V/K	EXP A TXP2C
EXP A TXN2	C42	0.1u4/X7R/16V/K	EXP A TXN2C
EXP A TXP3	C46	0.1u4/X7R/16V/K	EXP A TXP3C
EXP A TXN3	C44	0.1u4/X7R/16V/K	EXP A TXN3C
EXP A TXP4	C48	0.1u4/X7R/16V/K	EXP A TXP4C
EXP A TXN4	C50	0.1u4/X7R/16V/K	EXP A TXN4C
EXP A TXP5	C58	0.1u4/X7R/16V/K	EXP A TXP5C
EXP A TXN5	C60	0.1u4/X7R/16V/K	EXP A TXN5C
EXP A TXP6	C62	0.1u4/X7R/16V/K	EXP A TXP6C
EXP A TXN6	C64	0.1u4/X7R/16V/K	EXP A TXN6C
EXP A TXP7	C66	0.1u4/X7R/16V/K	EXP A TXP7C
EXP A TXN7	C69	0.1u4/X7R/16V/K	EXP A TXN7C
EXP B SW TXP8	C70	0.1u4/X7R/16V/K	EXP B SW TXP8C
EXP B SW TXN8	C73	0.1u4/X7R/16V/K	EXP B SW TXN8C
EXP B SW TXP9	C74	0.1u4/X7R/16V/K	EXP B SW TXP9C
EXP B SW TXN9	C76	0.1u4/X7R/16V/K	EXP B SW TXN9C
EXP B SW TXP10	C77	0.1u4/X7R/16V/K	EXP B SW TXP10C
EXP B SW TXN10	C79	0.1u4/X7R/16V/K	EXP B SW TXN10C
EXP B SW TXP11	C81	0.1u4/X7R/16V/K	EXP B SW TXP11C
EXP B SW TXN11	C82	0.1u4/X7R/16V/K	EXP B SW TXN11C
EXP B SW TXP12	C86	0.1u4/X7R/16V/K	EXP B SW TXP12C
EXP B SW TXN12	C87	0.1u4/X7R/16V/K	EXP B SW TXN12C
EXP B SW TXP13	C92	0.1u4/X7R/16V/K	EXP B SW TXP13C
EXP B SW TXN13	C95	0.1u4/X7R/16V/K	EXP B SW TXN13C
EXP B SW TXP14	C98	0.1u4/X7R/16V/K	EXP B SW TXP14C
EXP B SW TXN14	C101	0.1u4/X7R/16V/K	EXP B SW TXN14C
EXP B SW TXP15	C106	0.1u4/X7R/16V/K	EXP B SW TXP15C
EXP B SW TXN15	C107	0.1u4/X7R/16V/K	EXP B SW TXN15C

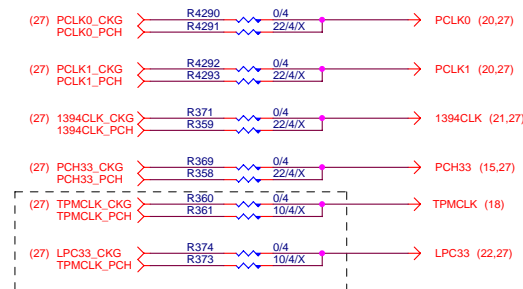
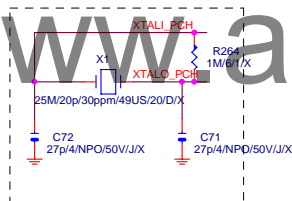
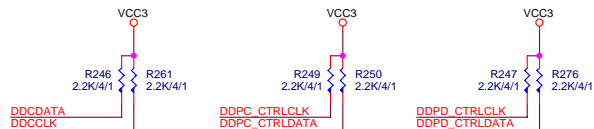
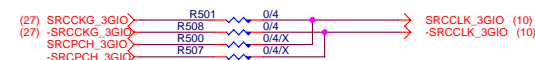
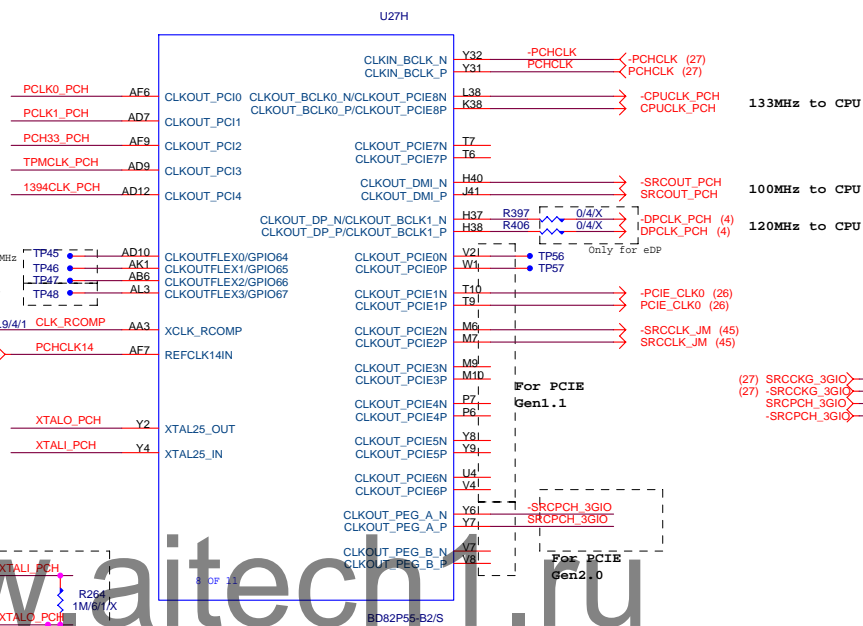
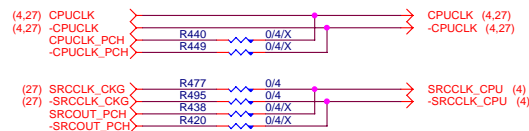
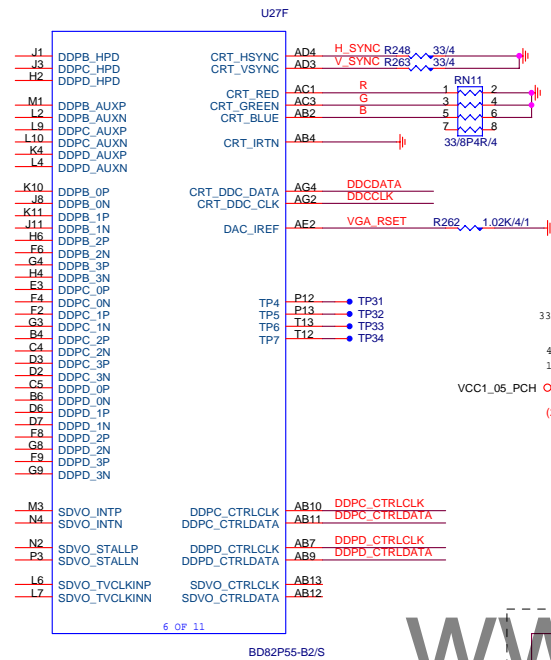




Function	SEL
xI--> xOa	L
xI--> xOb	H

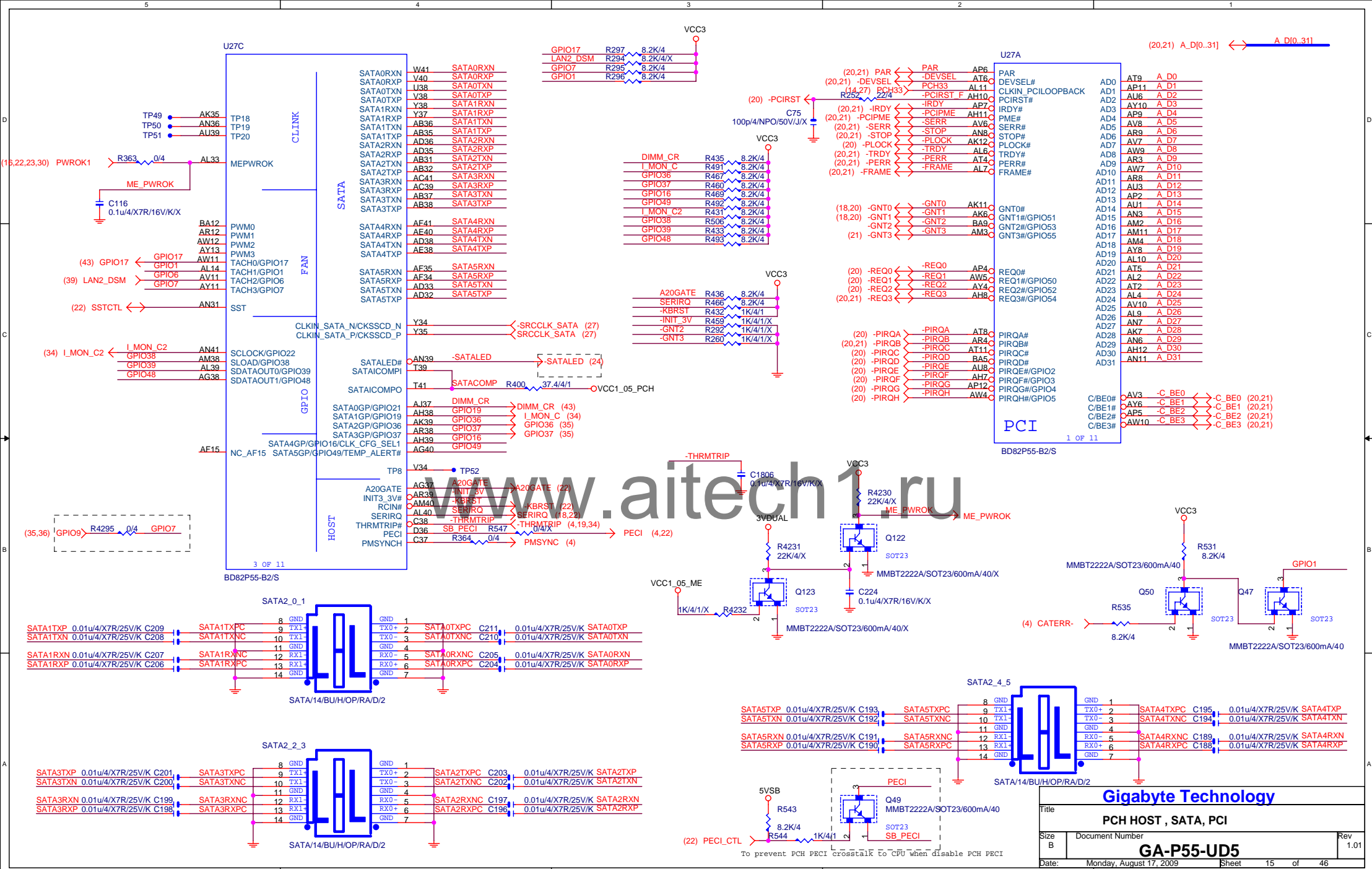
www.aitech1.ru

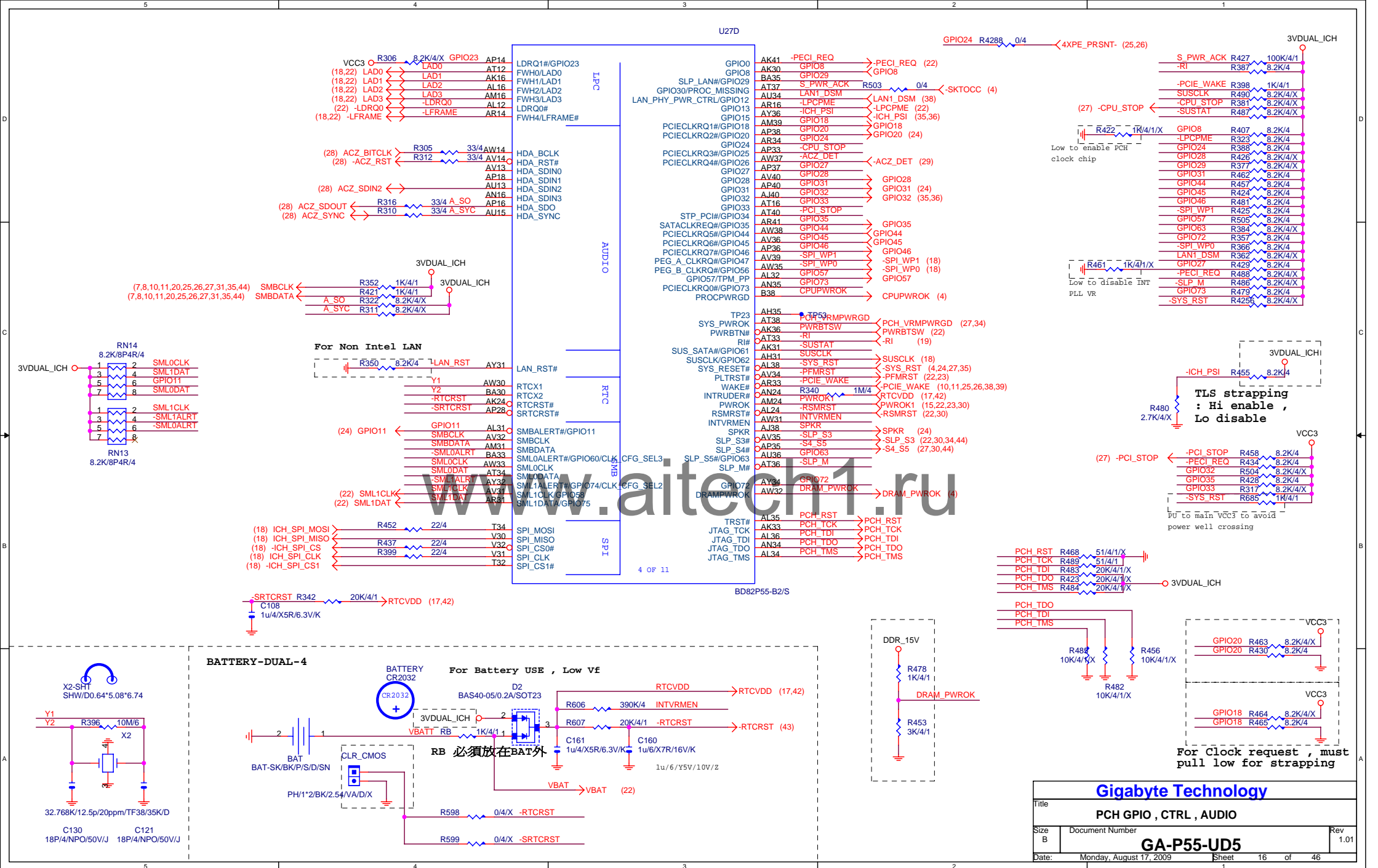
Close the Switch IC

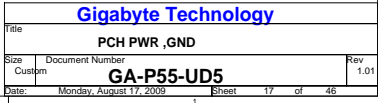


Gigabyte Technology

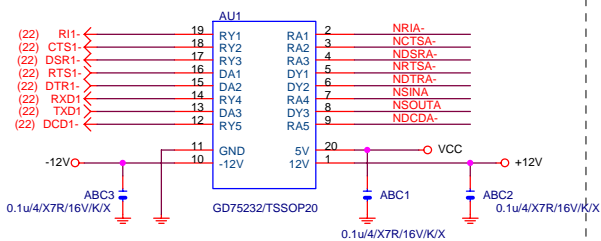
Title		
PCH DISPLAY_CLK BUFFER		
Size	Document Number	Rev
Custm	GA-P55-UD5	1.01
Date:	Monday, August 17, 2009	Sheet 14 of 46



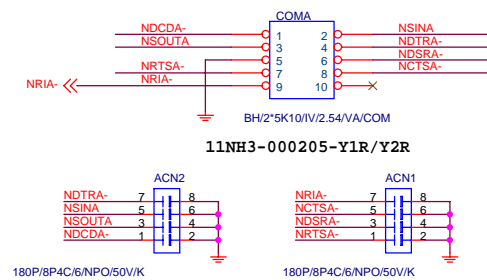
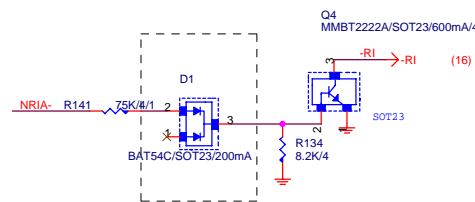




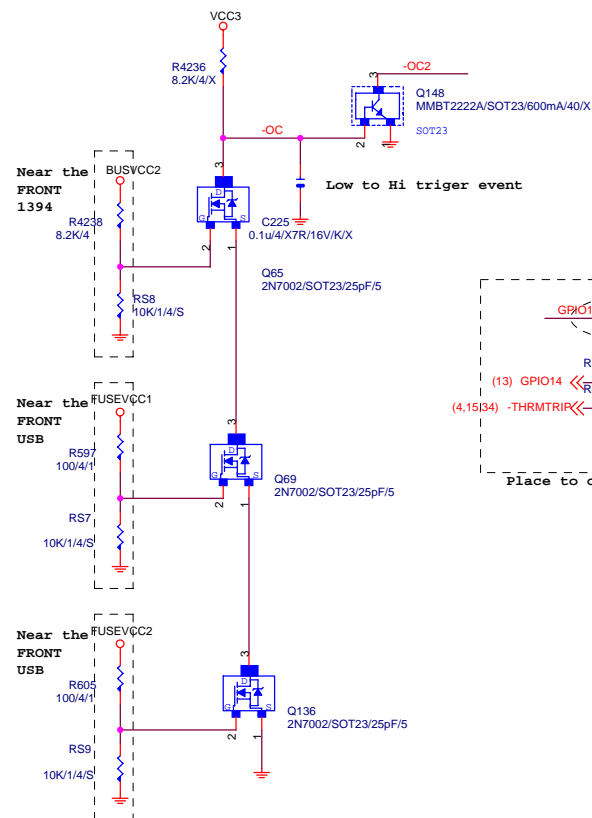
COMA



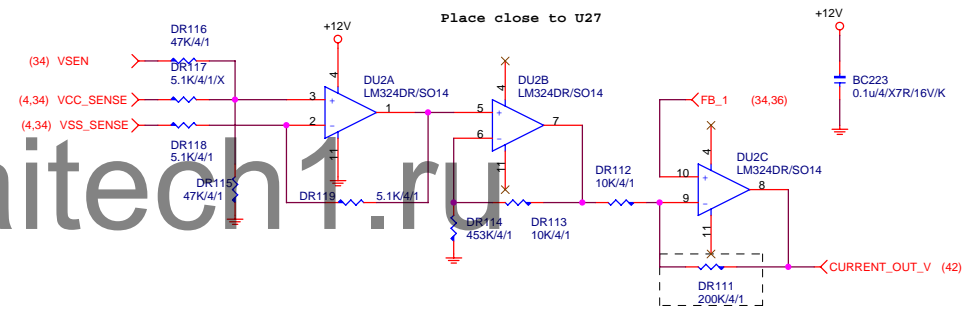
COM RI



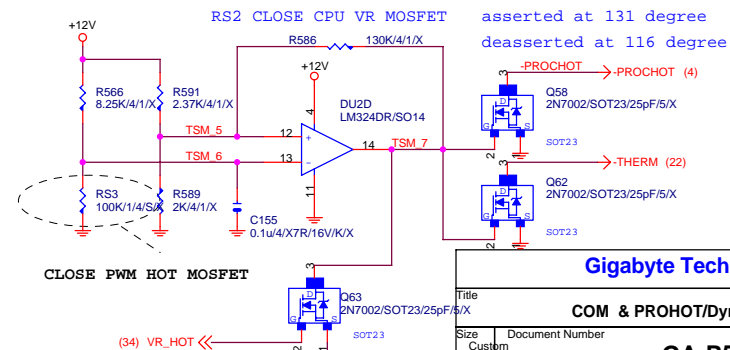
Voltage Protector



DYNAMIC CURRENT OC



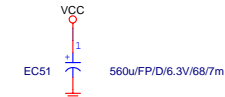
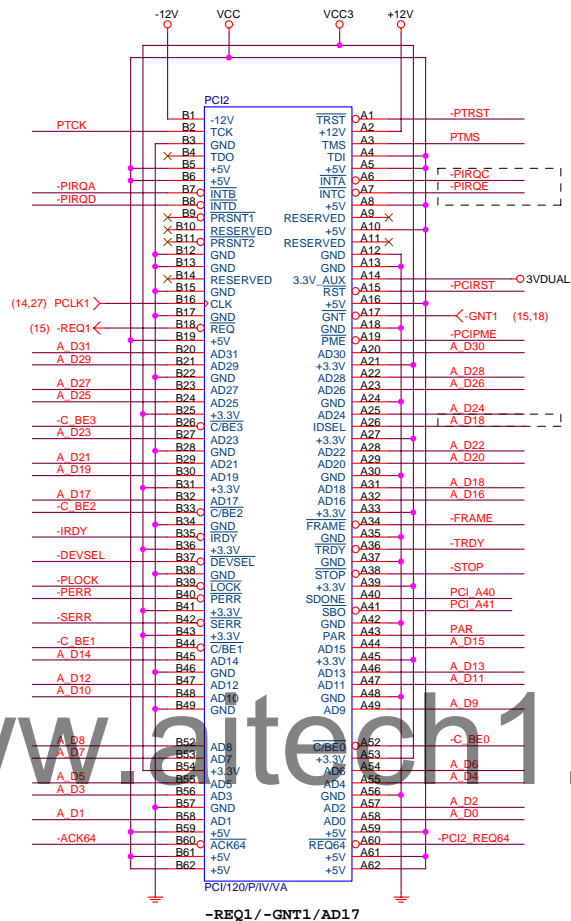
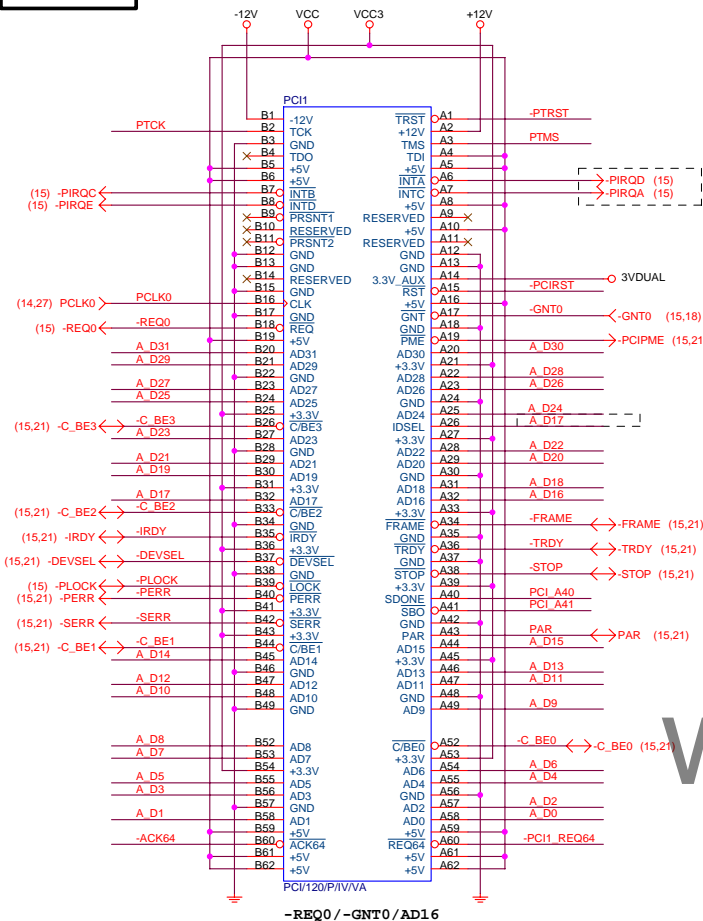
-PROHOT



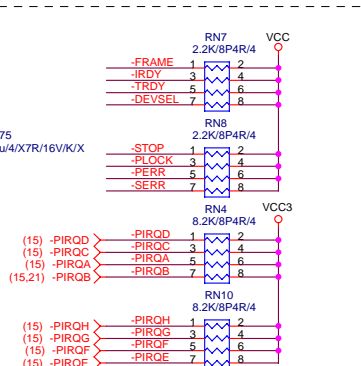
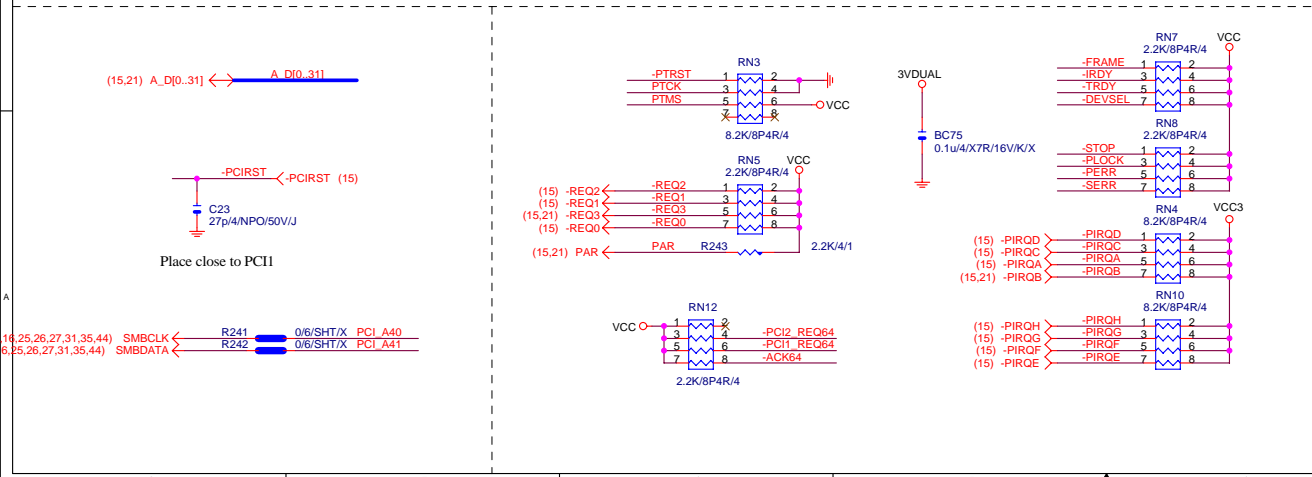
Gigabyte Technology

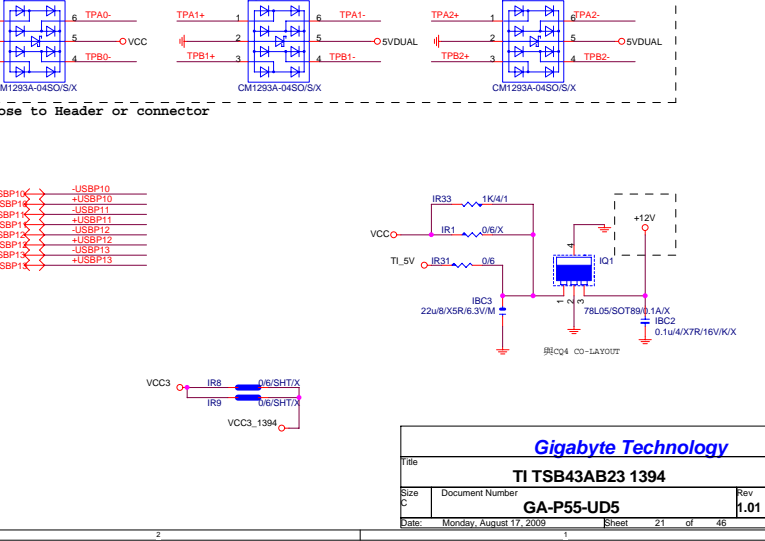
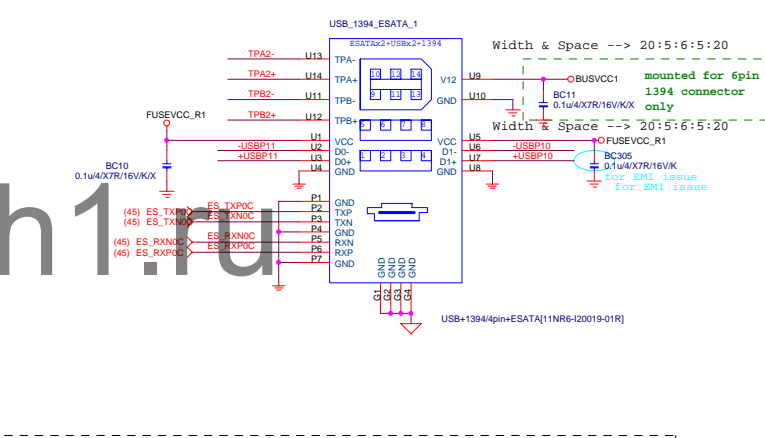
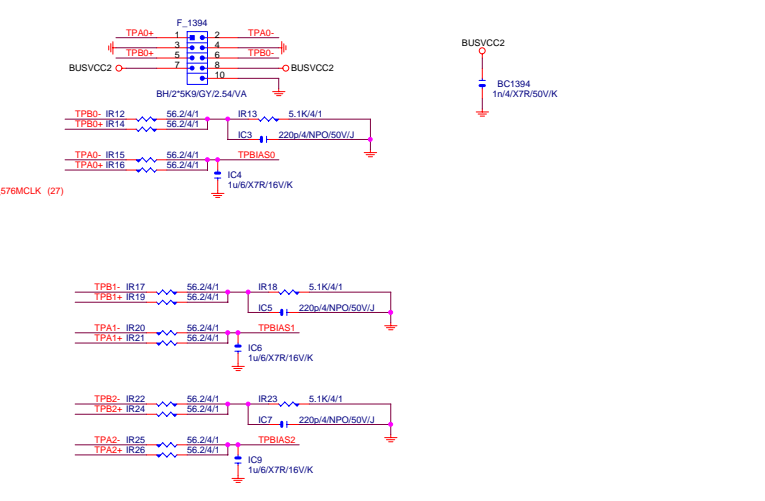
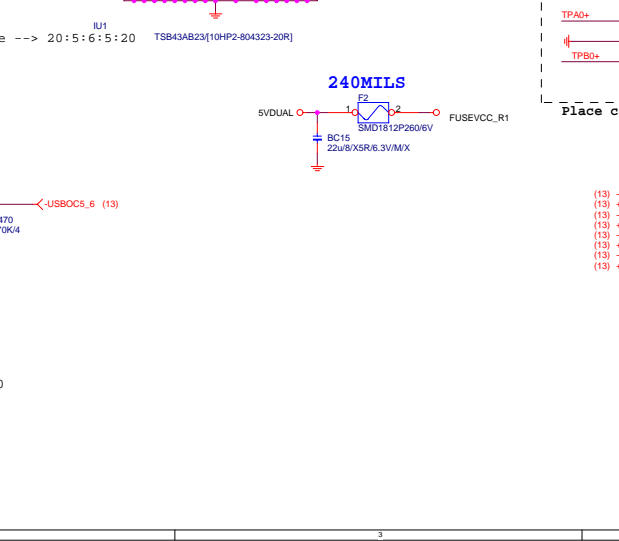
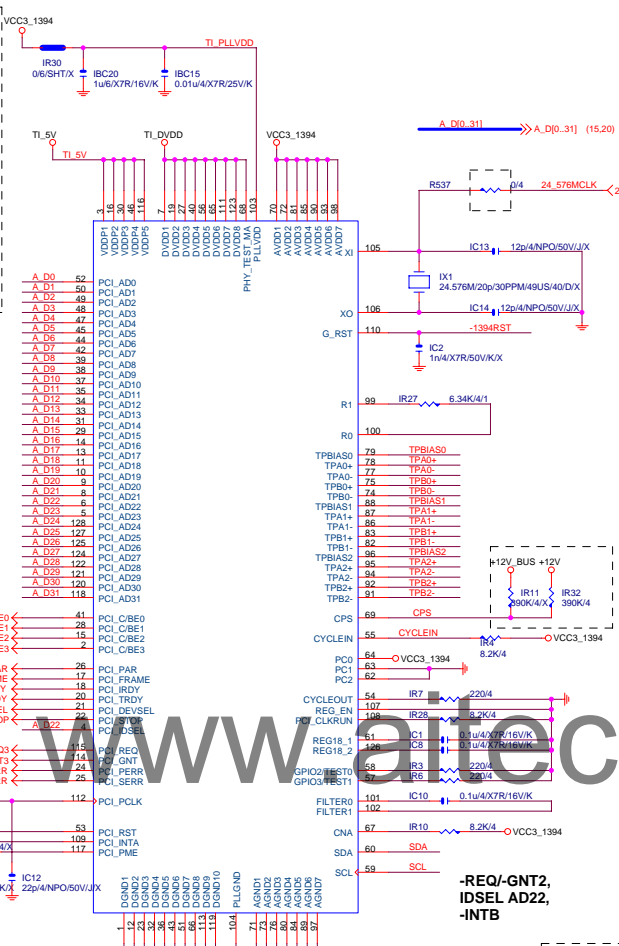
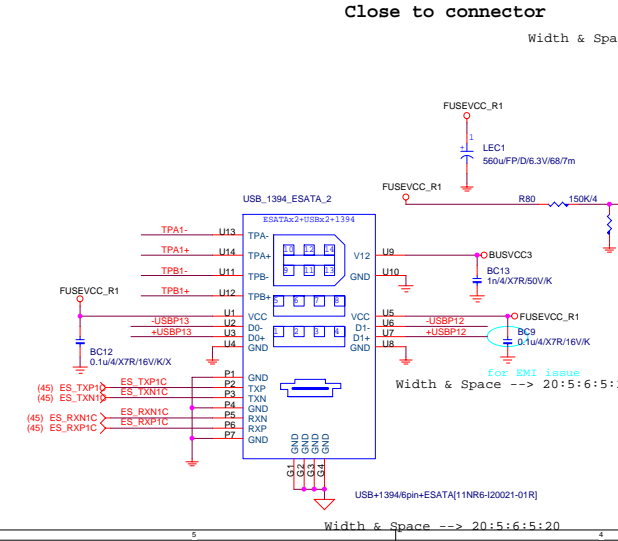
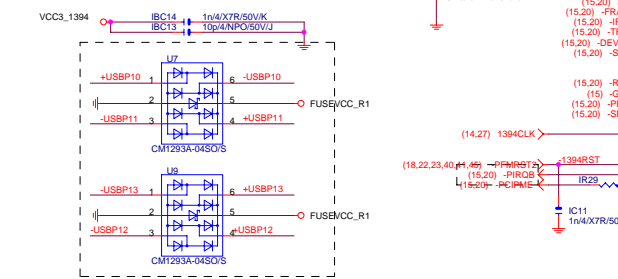
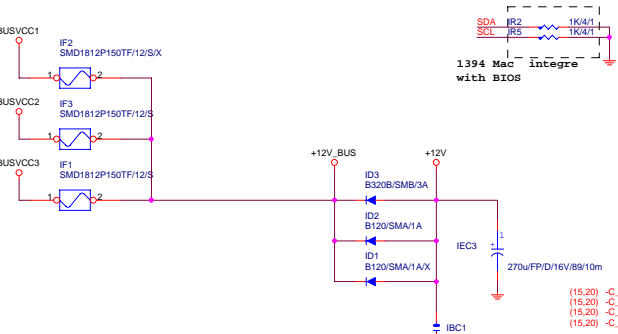
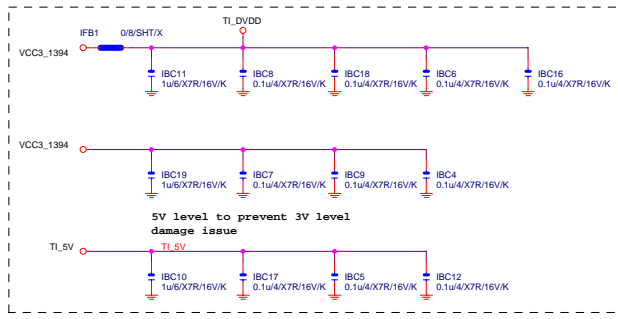
Title			COM & PROHOT/Dynamic O.C.	
Size	Document Number	Rev		
Custom		1.01		
Date:	Monday, August 17, 2009	Sheet	19	of 46

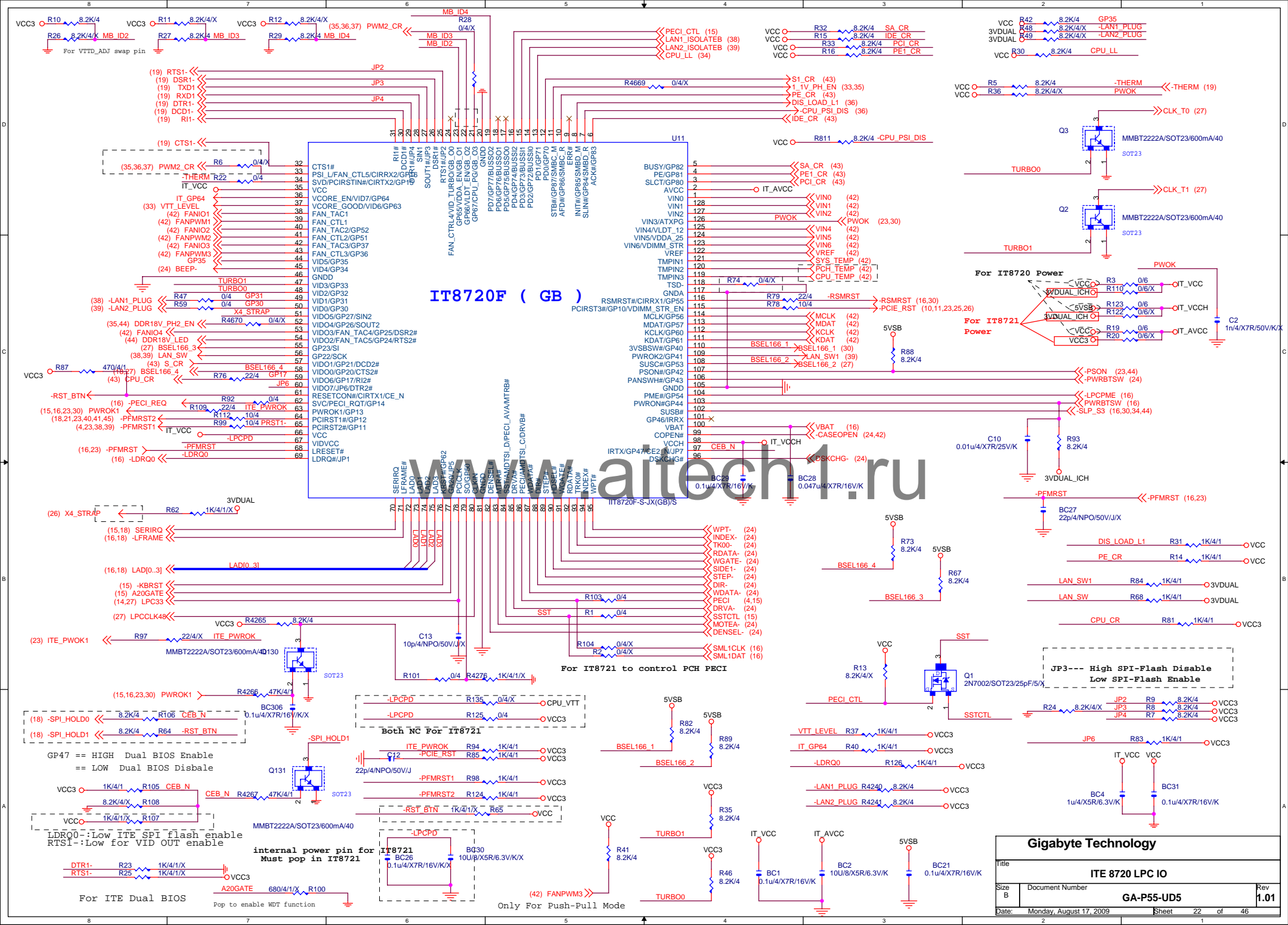
PCI1,2 SLOT



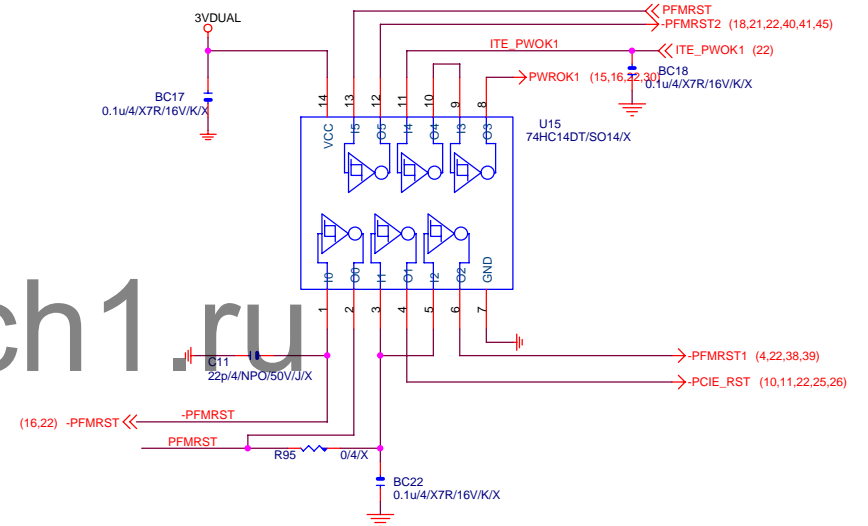
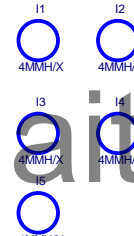
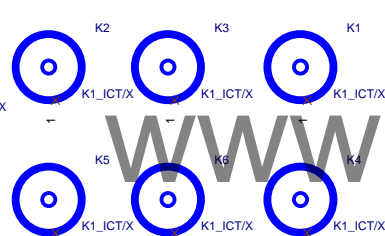
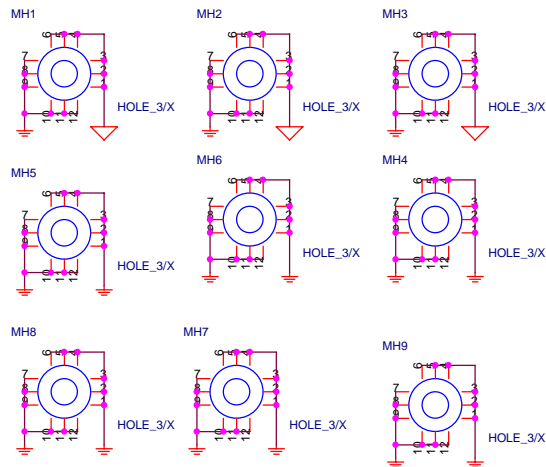
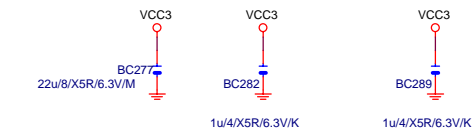
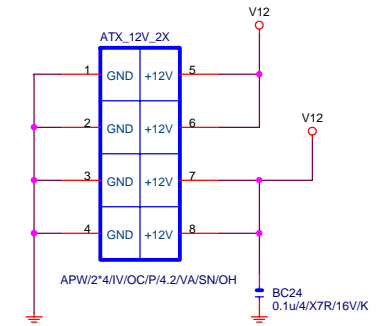
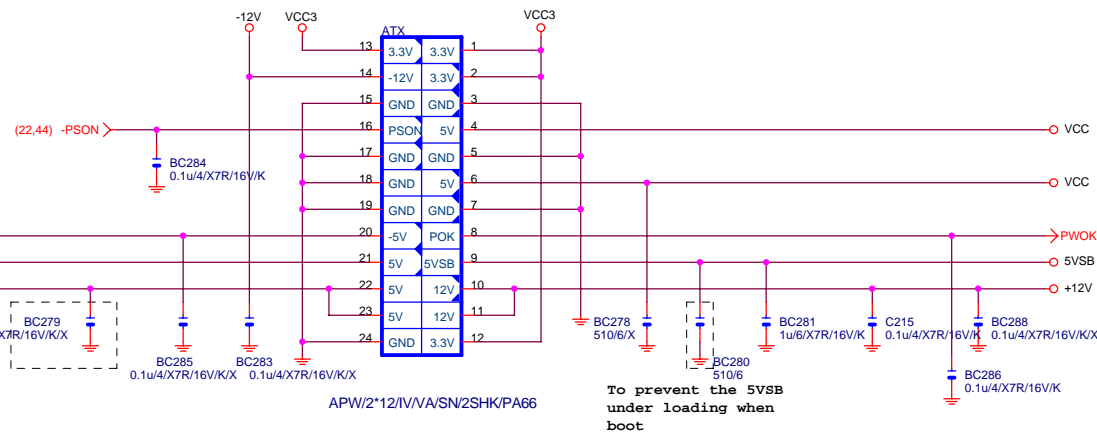
Pinout diagram for the ADXL345 module. The module is shown with its pins labeled. The top row of pins includes A D10, B48, AD12, AD11, A48, and A D9. The second row includes B49, AD10, GND, A49, and -C BE0. The third row includes A D8, B52, AD6, C BE0, A52, and A D8. The fourth row includes A D7, B53, AD7, +3.3V, A53, and A D8. The fifth row includes B54, A54, AD5, A54, A D6, and A D4. The sixth row includes A D5, B55, AD4, A55, A56, and A D4. The seventh row includes A D3, B56, AD5, A56, and A D4. The diagram shows the module with its pins and labels.







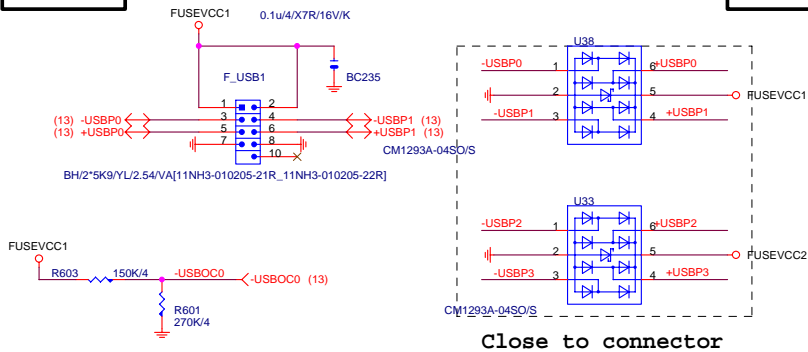
ATX POWER CONNECTOR



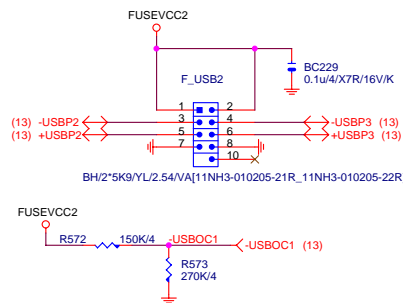
Gigabyte Technology

Title		
ATX POWER CONNECTOR		
Size	Document Number	Rev
B	GA-P55-UD5	1.01
Date:	Monday, August 17, 2009	Sheet 23 of 46

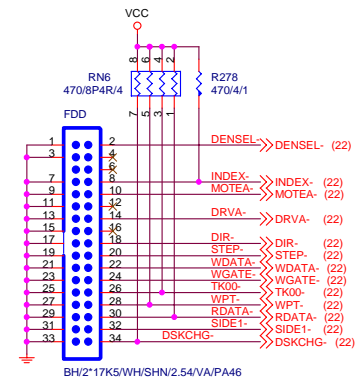
FRONT USB1



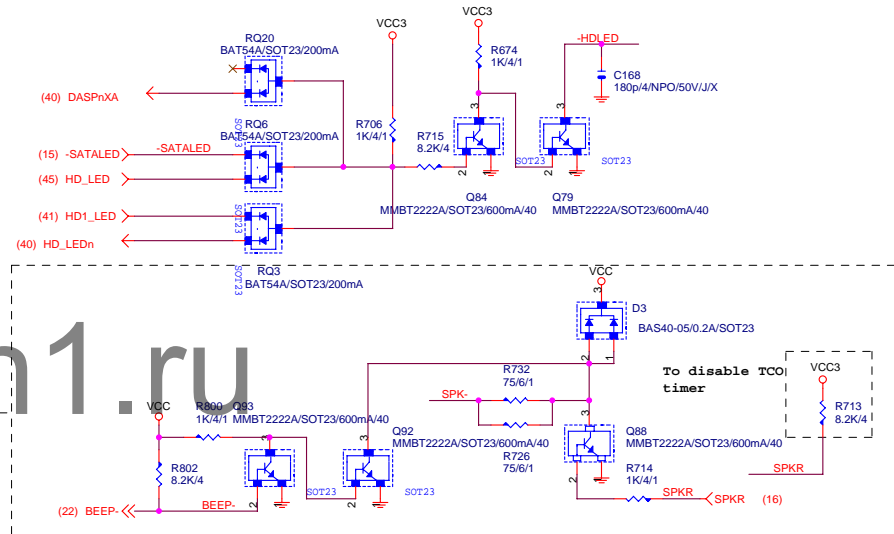
FRONT USB2



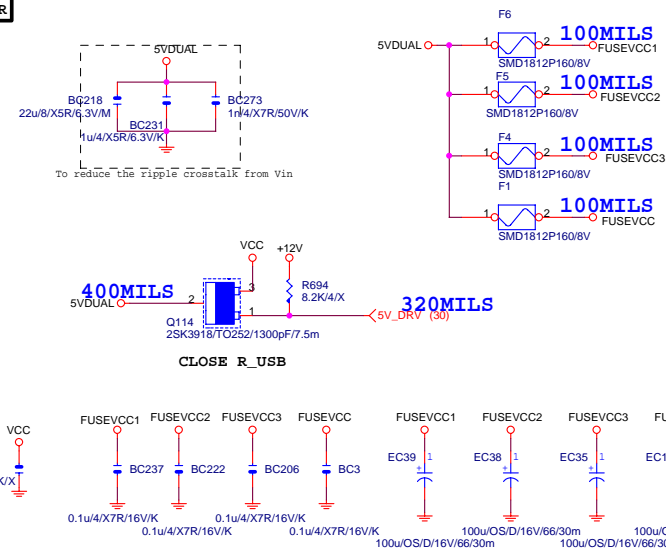
FLOPPY



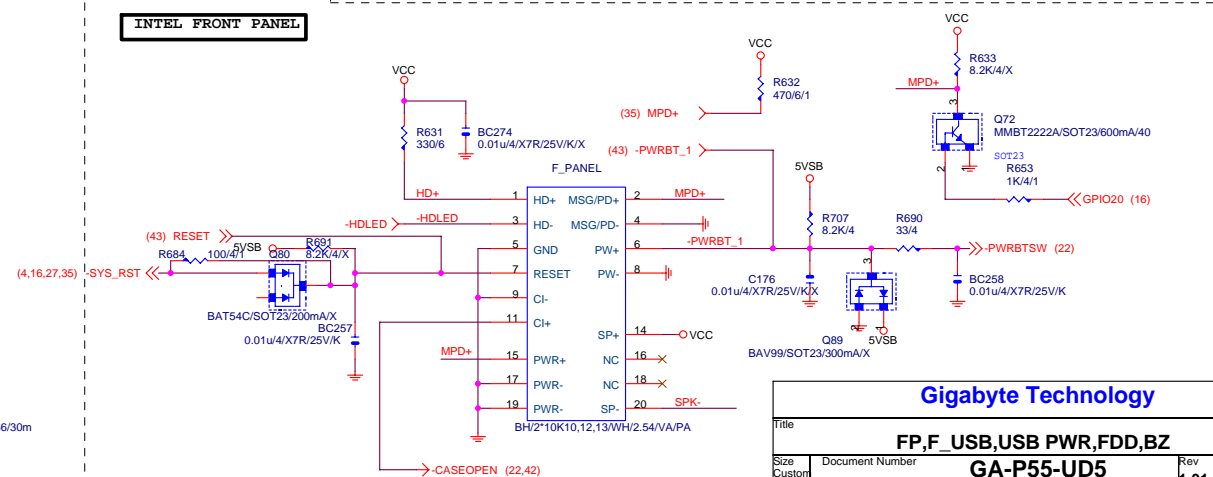
SATA LED



F_USB POWER

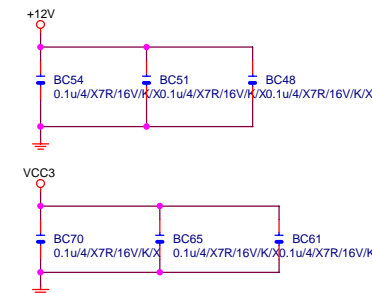
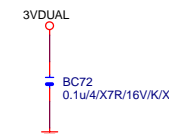
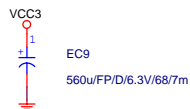
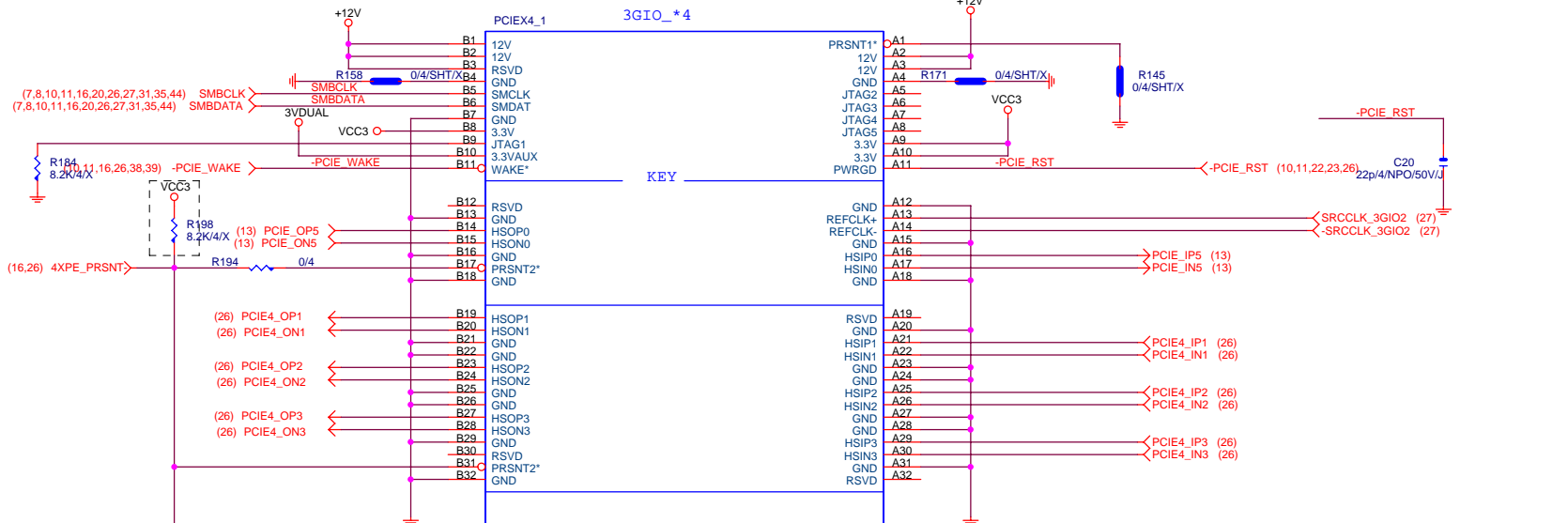


INTEL FRONT PANEL



Gigabyte Technology

Title			
FP,F_USB,USB PWR,FDD,BZ			
Size Custom	Document Number		Rev
	GA-P55-UD5		1.01
Date:	Monday, August 17, 2009	Sheet	24 of 46

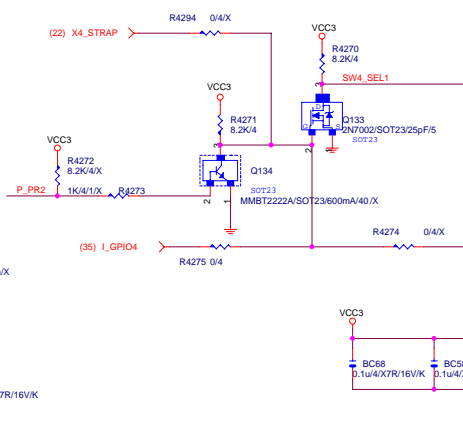
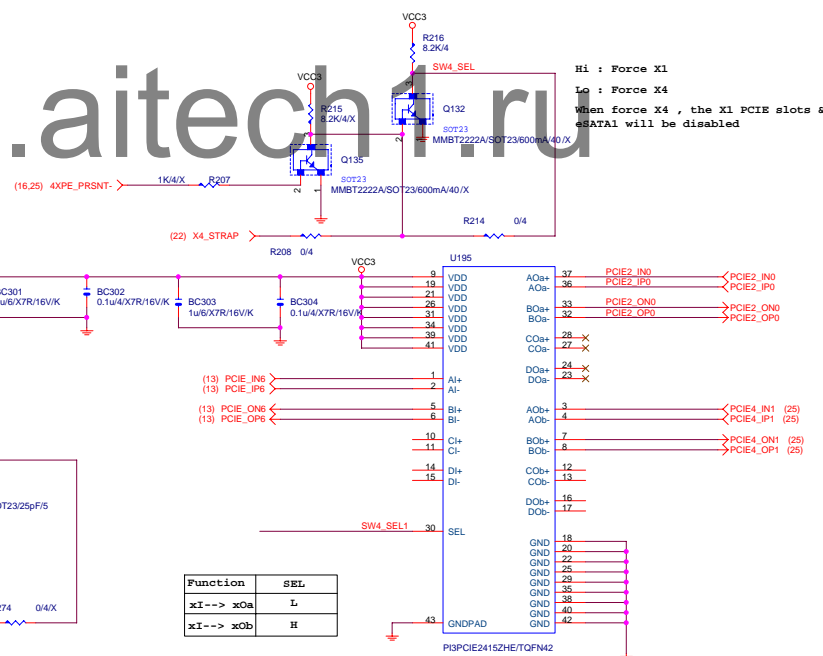
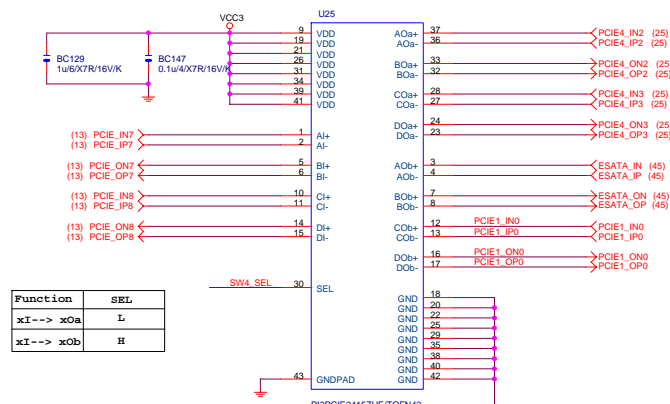


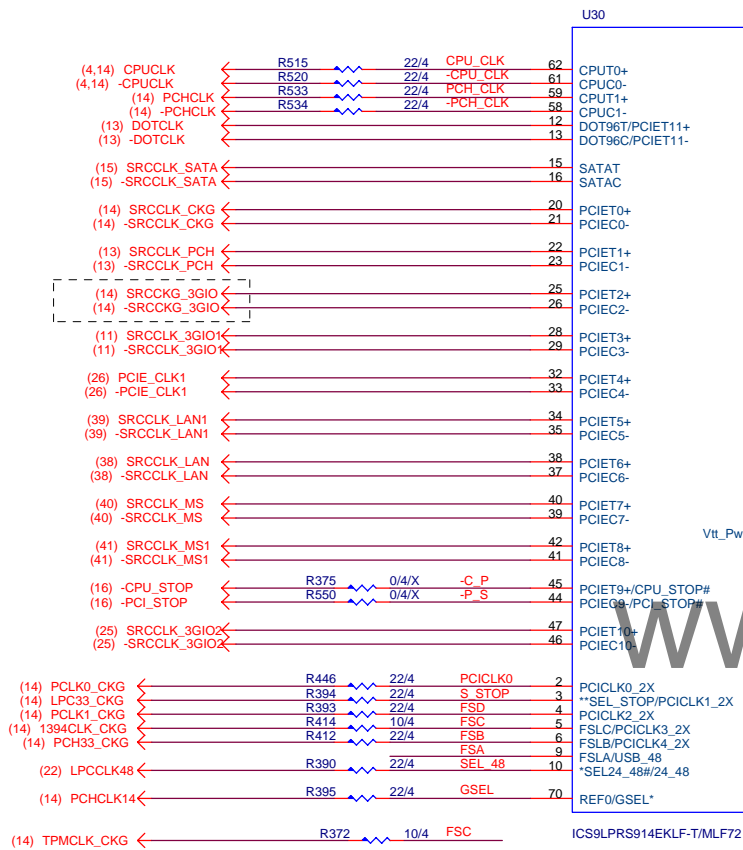
Color must
be Orange

PCI-E/16X-65P/OR/RIGHT PUSH[11AC1-021065-B1R]

Gigabyte Technology			
Title			
PCI EXPRESS X 4 PORT			
Size	Document Number	Rev	
Custom	GA-P55-UD5	1.01	
Date:	Monday, August 17, 2009	Sheet	25 of 46

For Vih level consideration





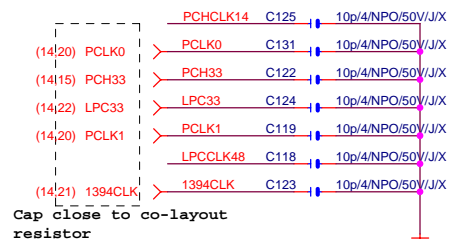
www.aitech1.ru

GSEL=1,96Mhz from 12/13
GSEL=0,100Mhz from 12/13

SEL_48=1, 24Mhz from pin10
SEL_48=0, 48Mhz from pin10

SEL_STOP: latched input to select pin functionality
1 = Selects pin 44/45 to be PCI_STOP#/CPU_STOP#
0 = Selects pin 44/45 to be PCIE outputs ;
3.3V PCICLK output

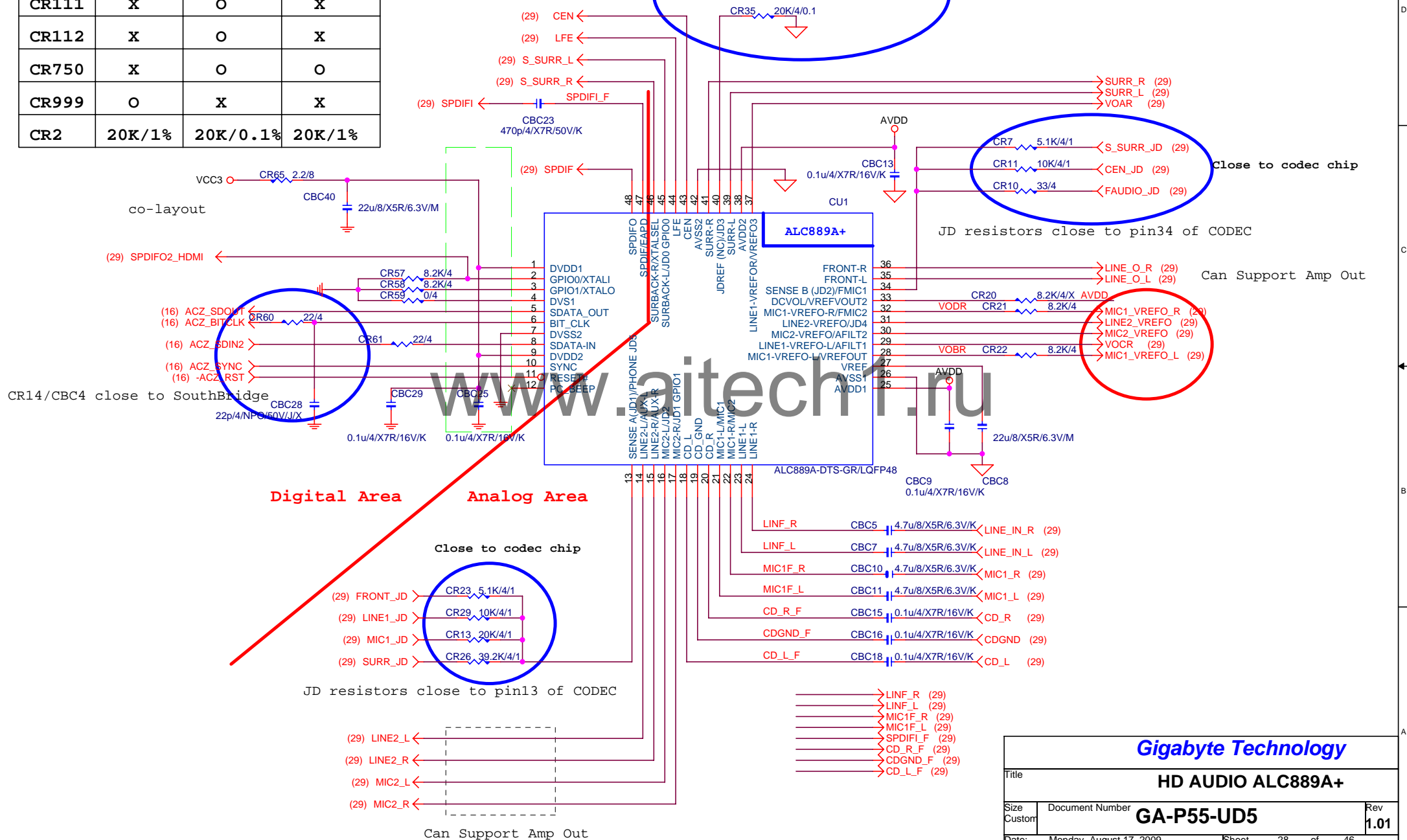
FSC	FSB	FSA	CPU
0	0	0	266MHz
0	0	1	133MHz
0	1	0	200MHz
0	1	1	166MHz
1	0	0	333MHz
1	1	0	400MHz



Gigabyte Technology

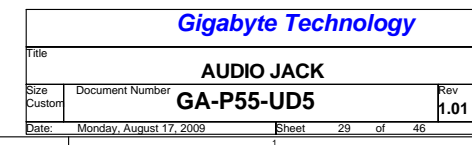
Title			CK505 CLK GEN
Size			GA-P55-UD5
Customer	Document Number	Rev 1.01	
Date:	Monday, August 17, 2009	Sheet	27 of 46

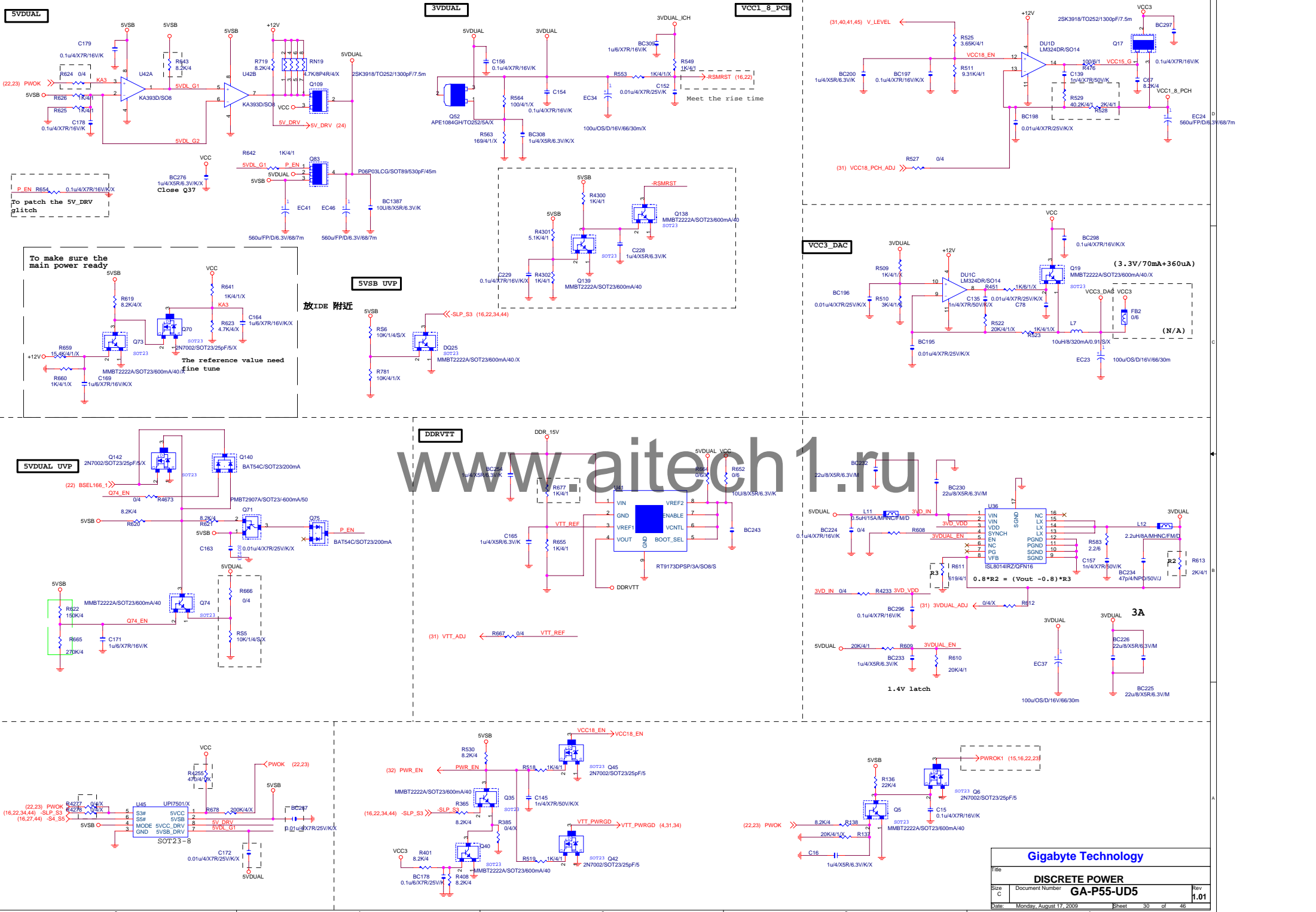
	ALC889A+	ALC889A	ALC888Vx
CR111	X	O	X
CR112	X	O	X
CR750	X	O	O
CR999	O	X	X
CR2	20K/1%	20K/0.1%	20K/1%

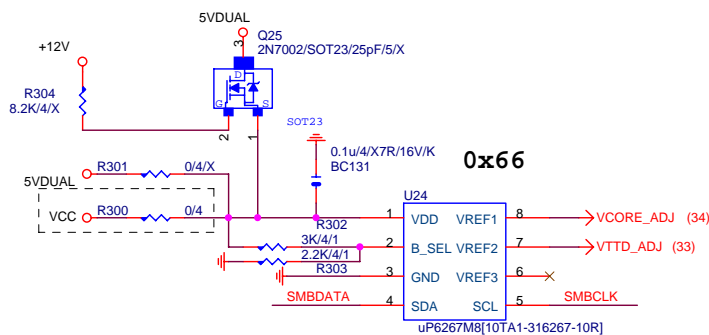
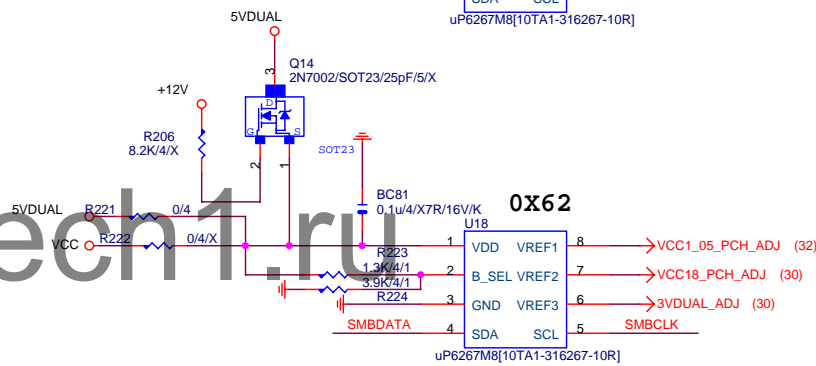
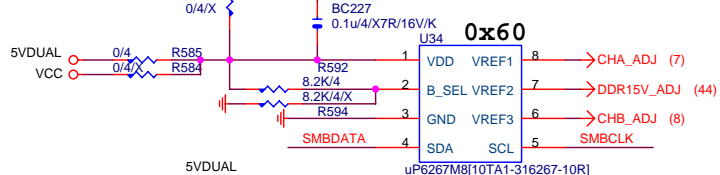
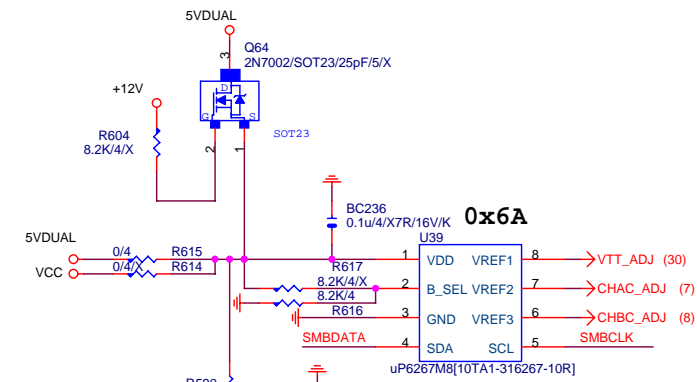
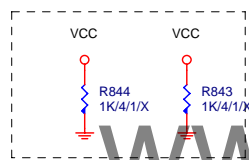
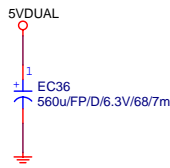
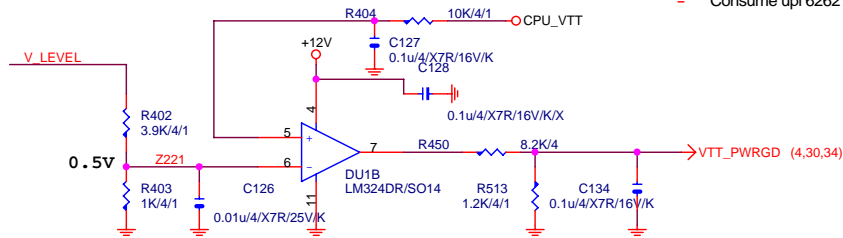
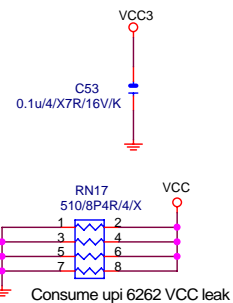
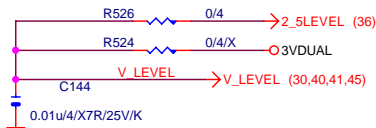
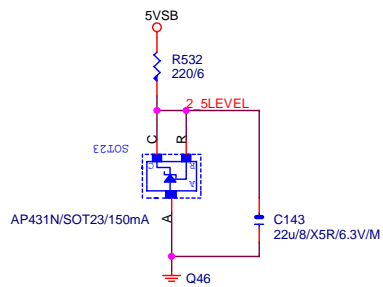


Gigabyte Technology

Title			HD AUDIO ALC889A+
Size	Document Number	GA-P55-UD5	
Custom			Rev 1.01
Date:	Monday, August 17, 2009	Sheet 28	of 46



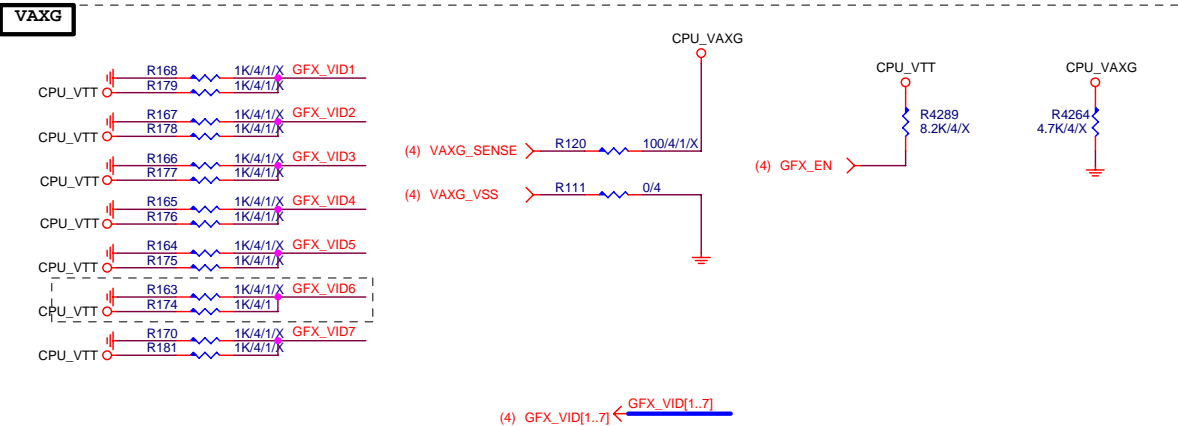
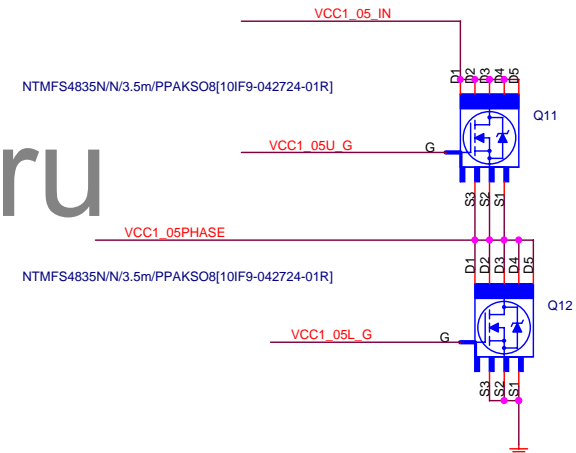
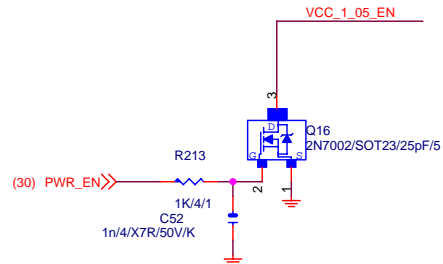
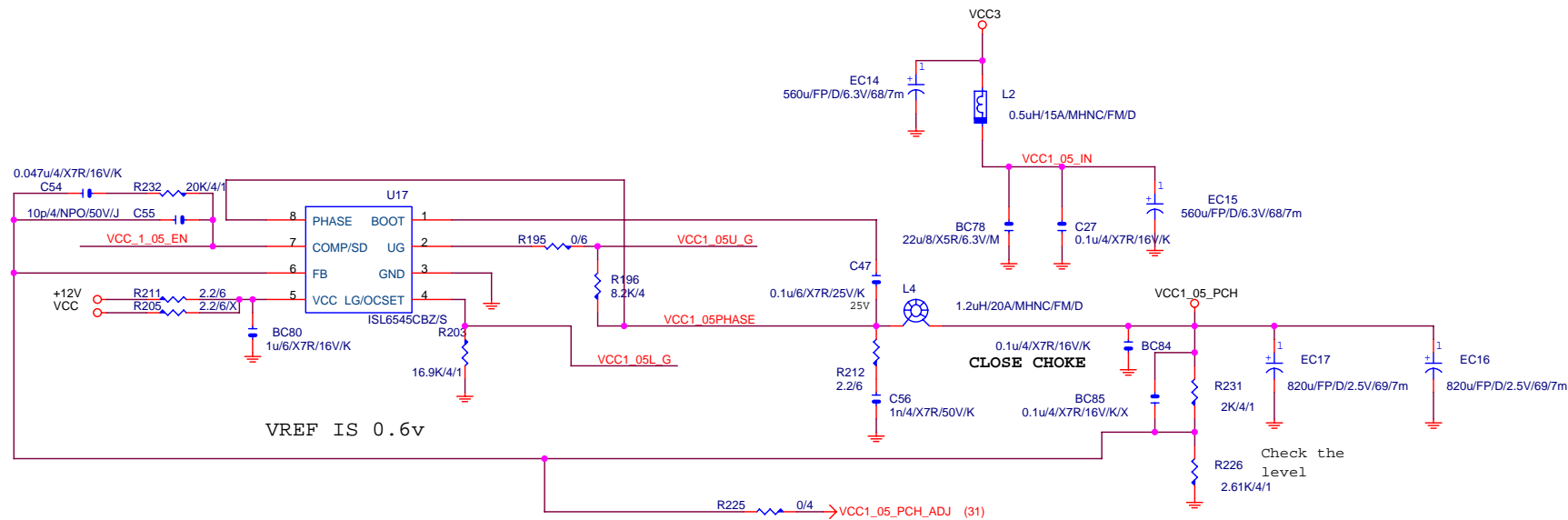




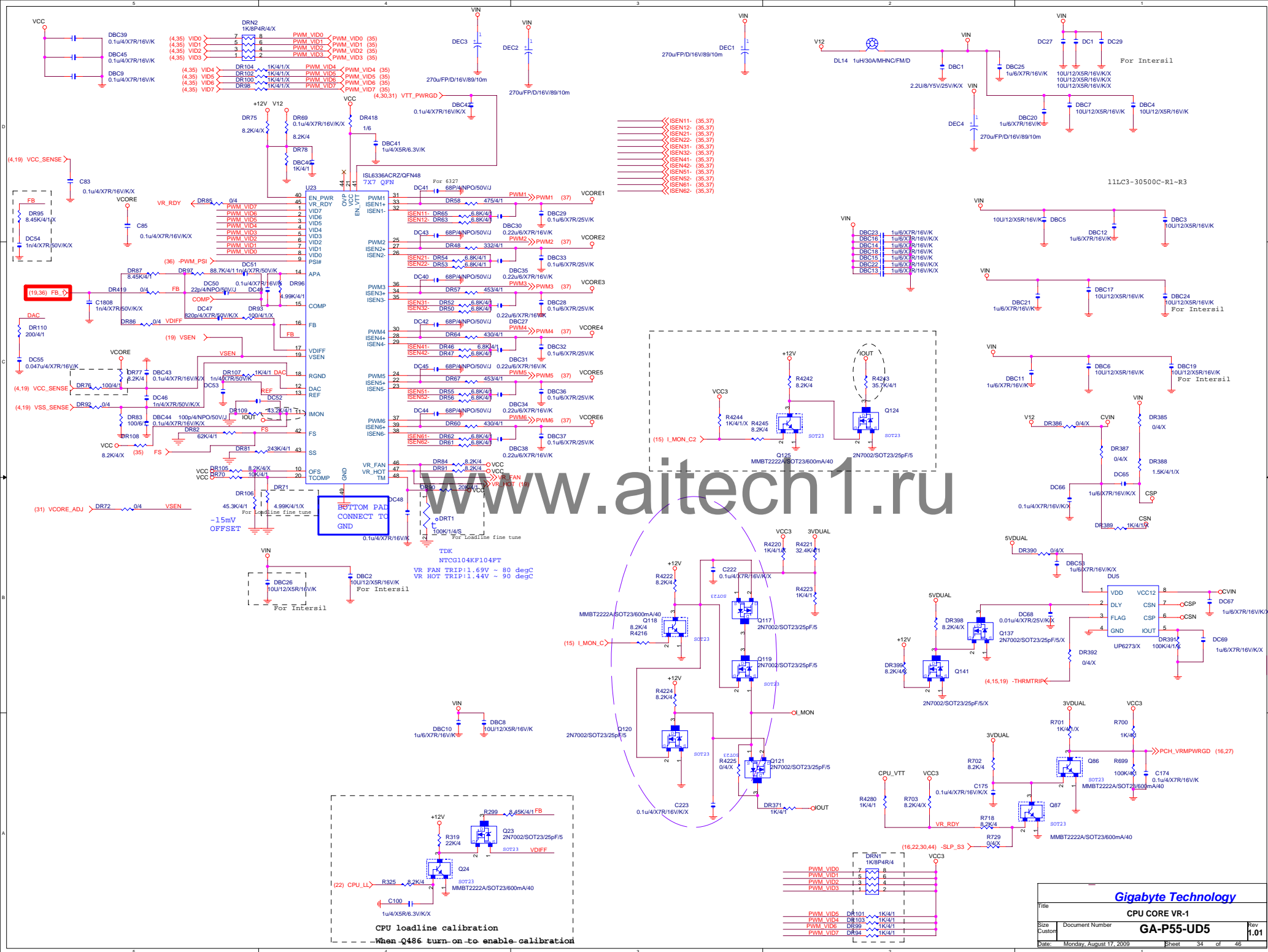
SMBCLK ↔ SMBCLK (7,8,10,11,16,20,25,26,27,35,44)
SMBDATA ↔ SMBDATA (7,8,10,11,16,20,25,26,27,35,44)

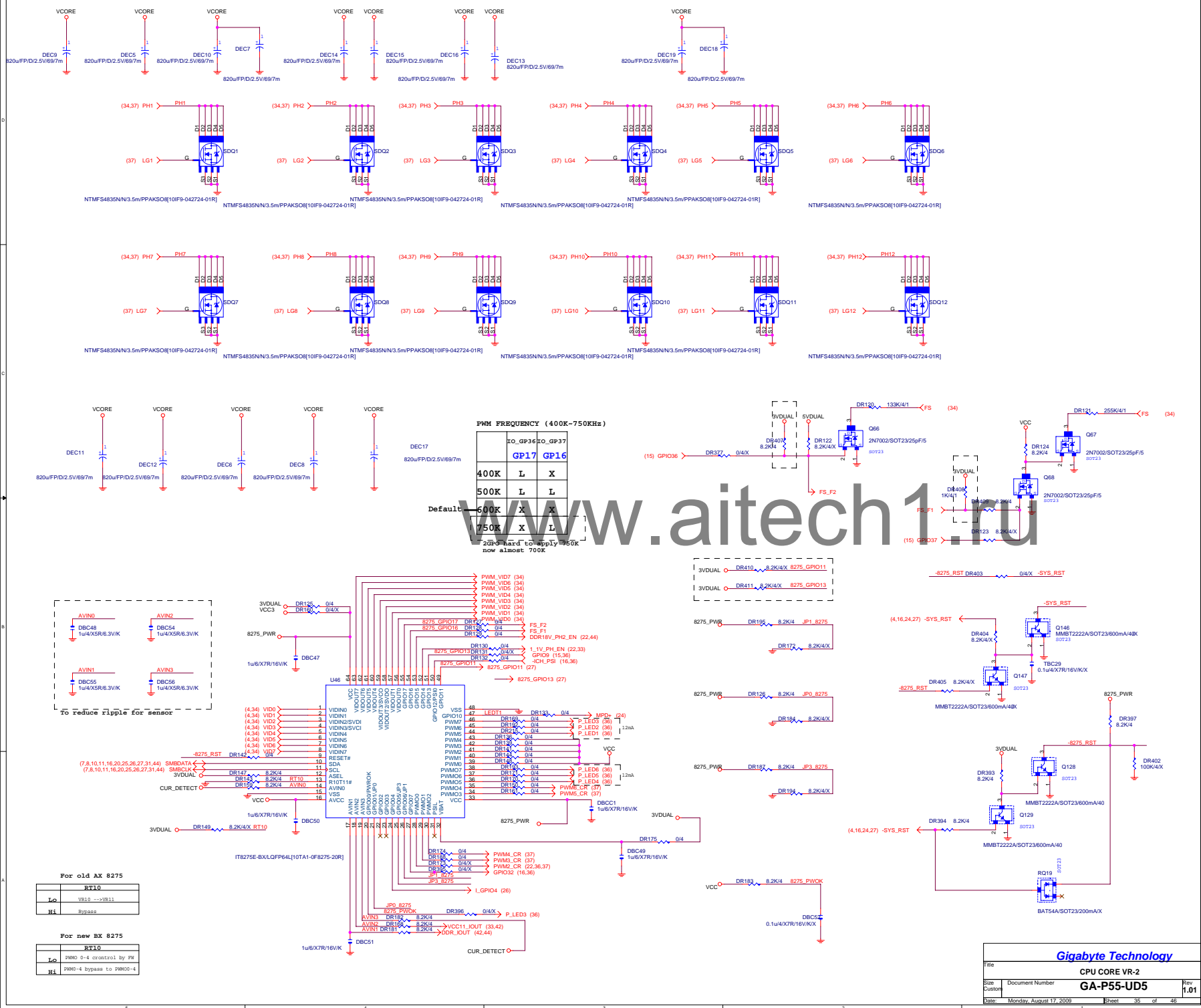
Gigabyte Technology			
Title			
DISCRETE POWER II			
Size	Document Number		Rev
B	GA-P55-UD5		1.01
Date:	Monday, August 17, 2009	Sheet	31 of 46

www.aitech1.ru

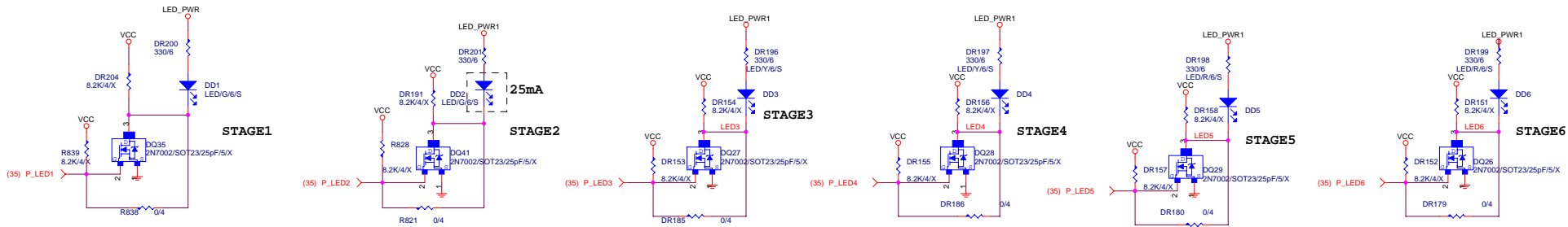


Gigabyte Technology			
Title			
PCH VCC Core VR			
Size	Document Number	Rev	
B	GA-P55-UD5	1.0	
Date:	Monday, August 17, 2009	Sheet	32 of 46

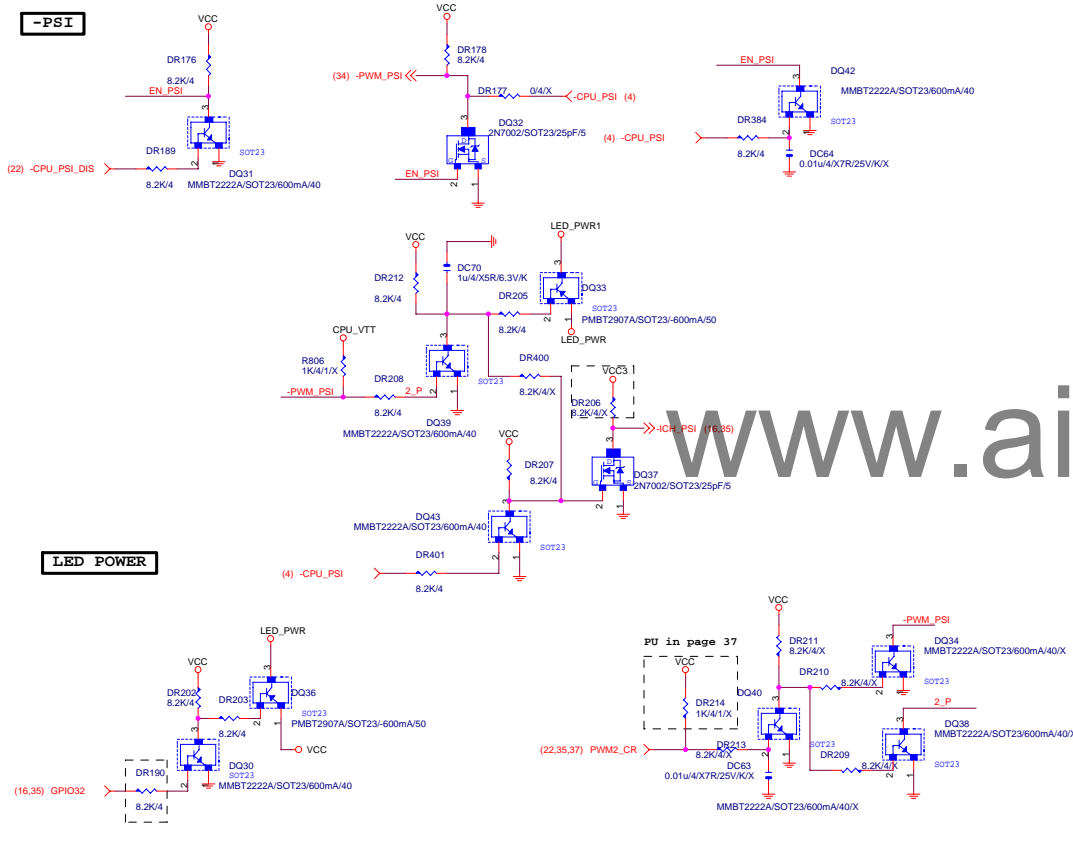




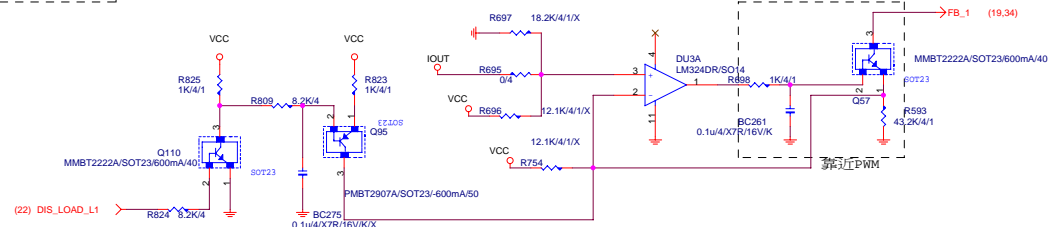
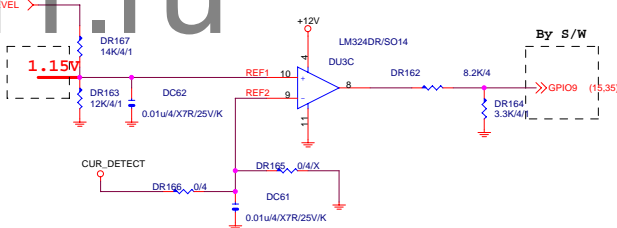
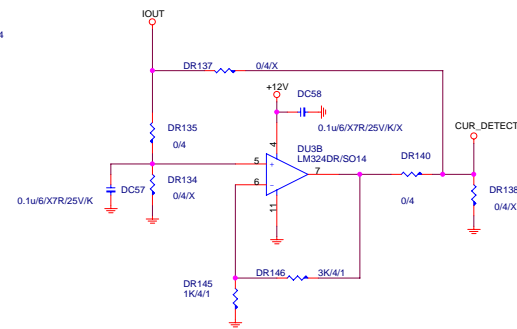
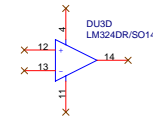
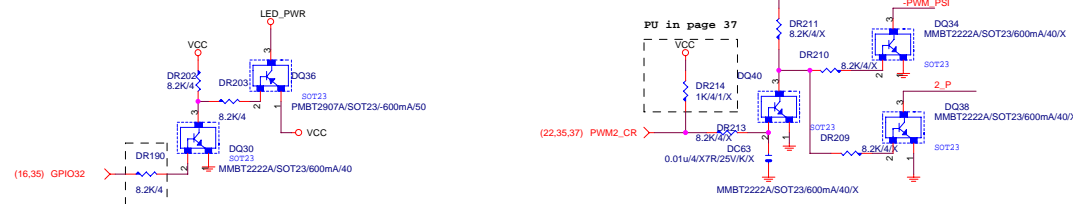
PHASE LED



-PSI

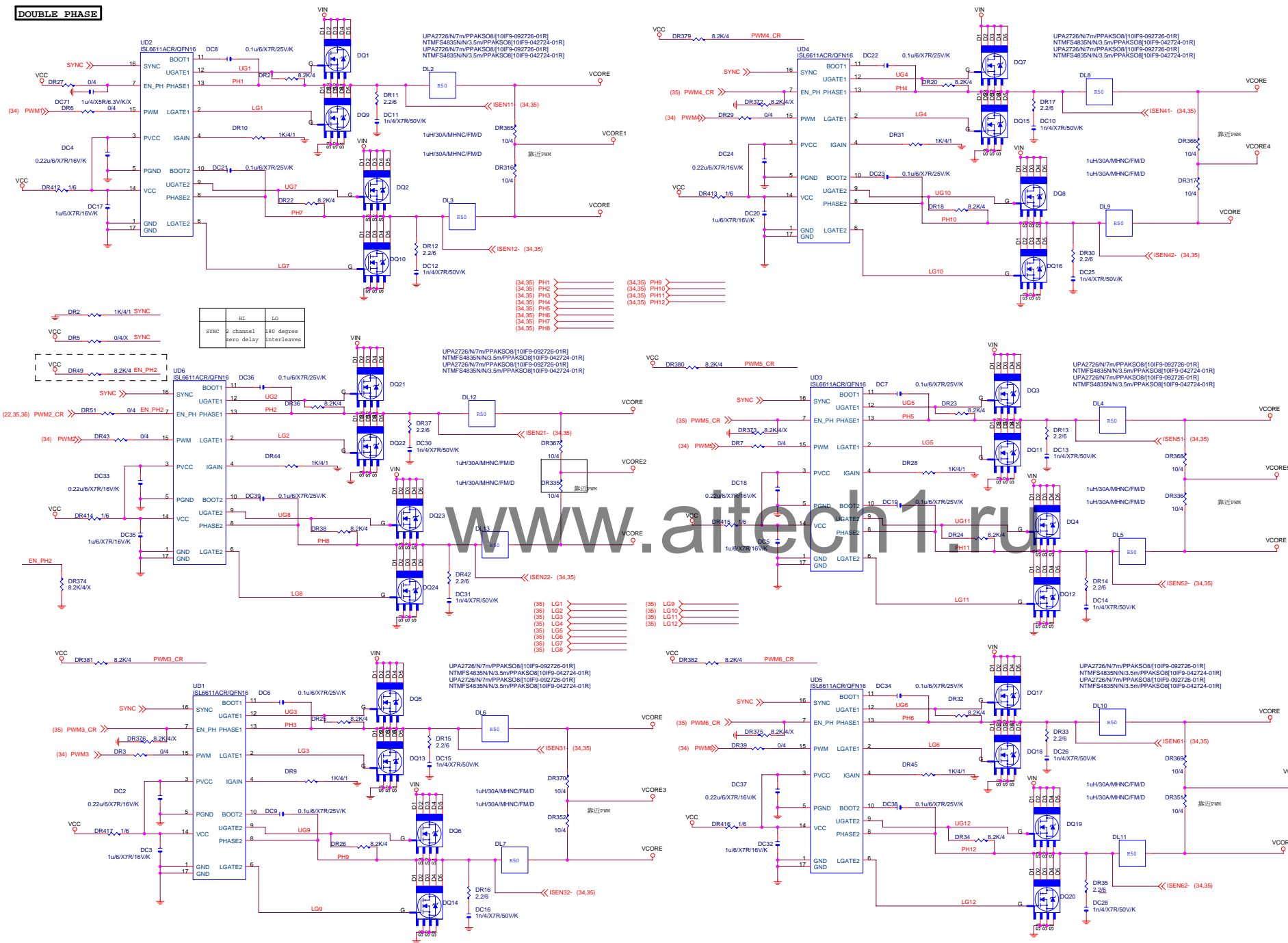


LED POWER



Gigabyte Technology			
CPU CORE VR-3			
Size	Document Number	GA-P55-UD5	
Custom		Rev 1.01	
Date	Monday, August 17, 2009	Sheet	36 of 46

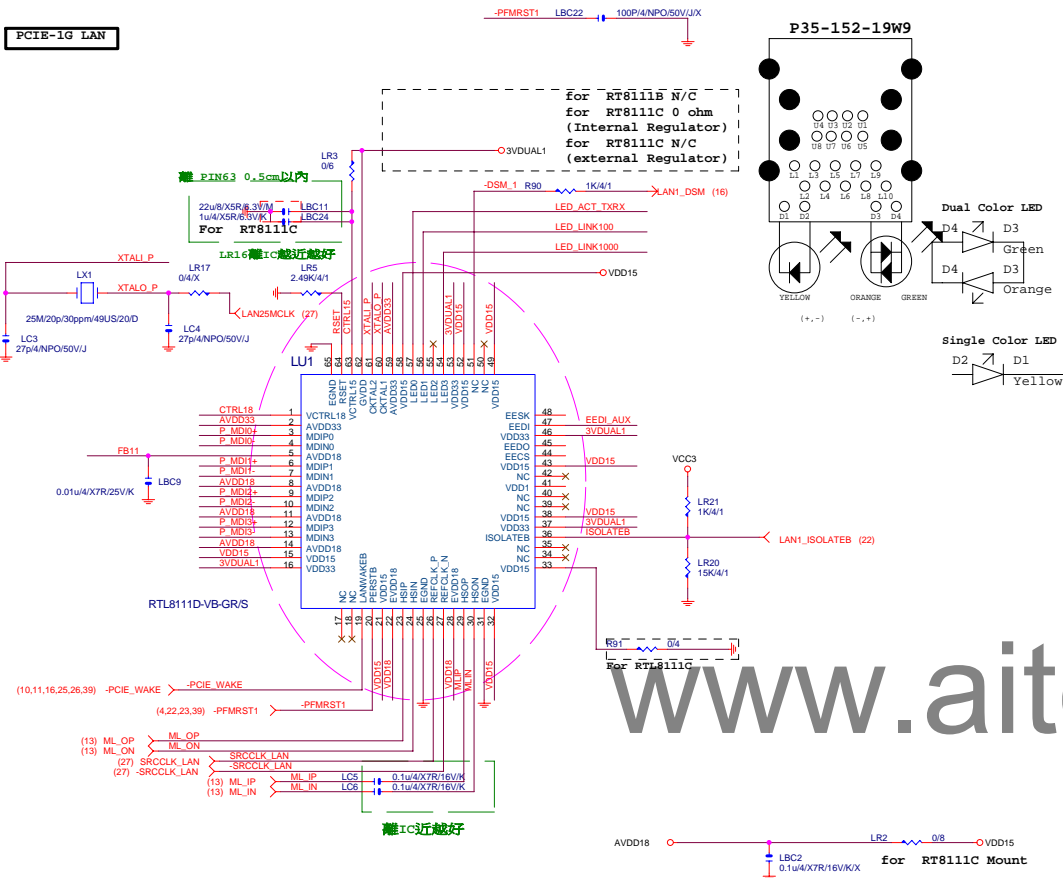
DOUBLE PHASE



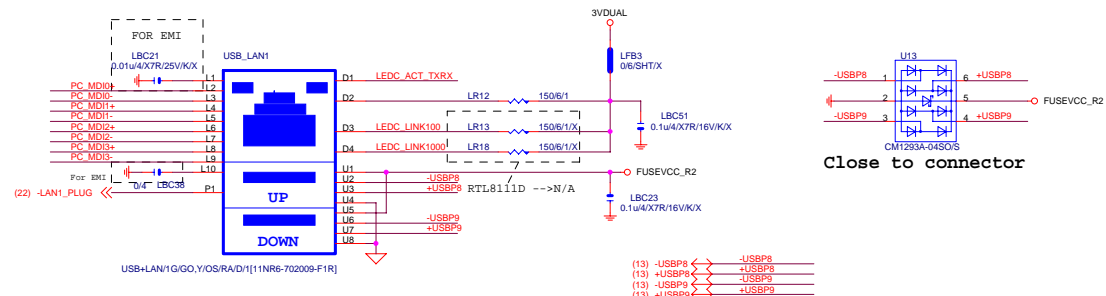
Gigabyte Technology

File	CPU CORE VR-4	Rev	1.01
Size	Document Number	GA-P55-UD5	
Custom			
Date	Monday, August 17, 2009	Sheet	37 of 46

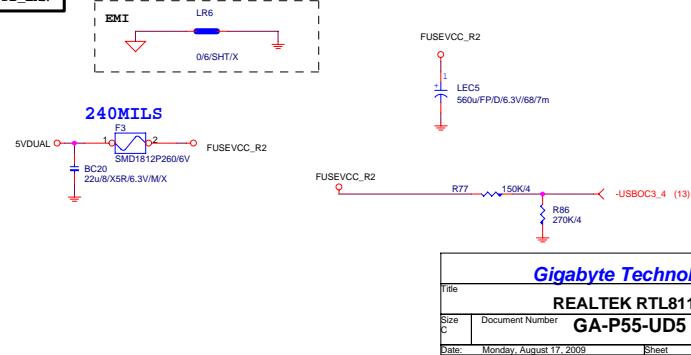
PCIE-1G LAN



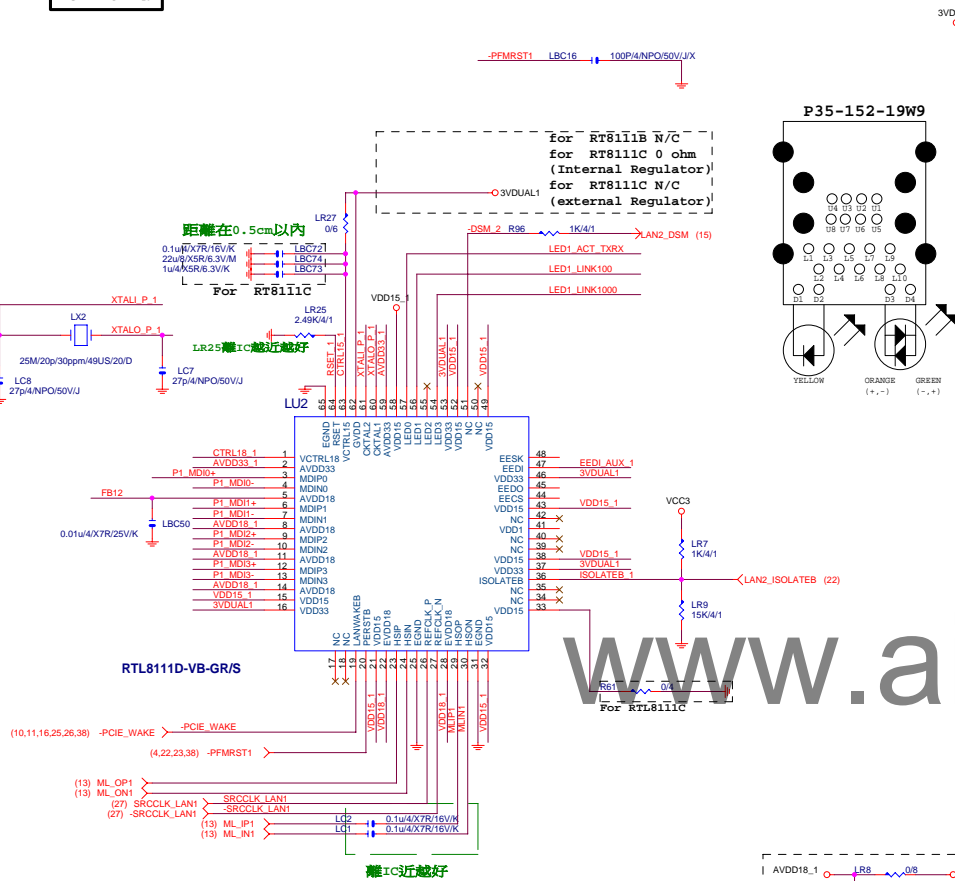
USB_LAN CONNECTOR



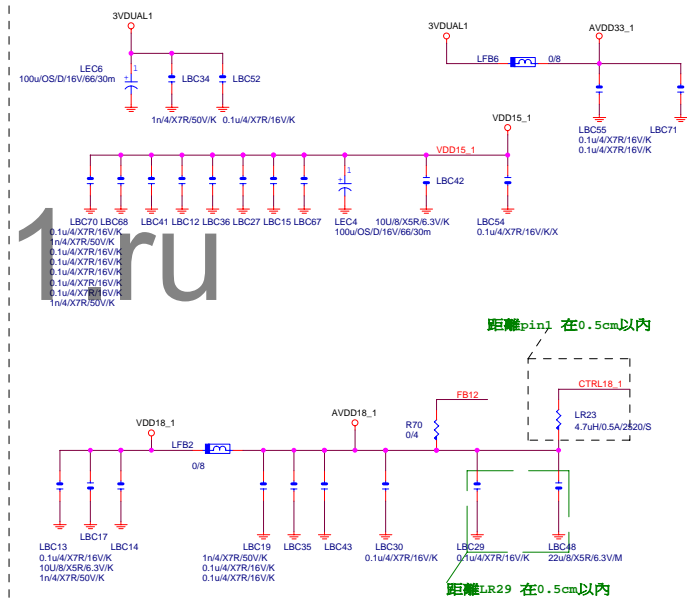
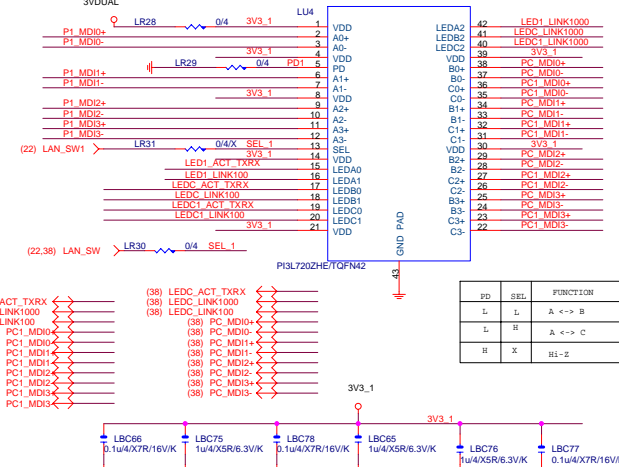
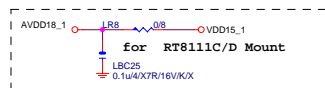
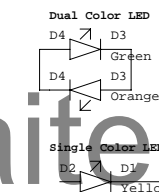
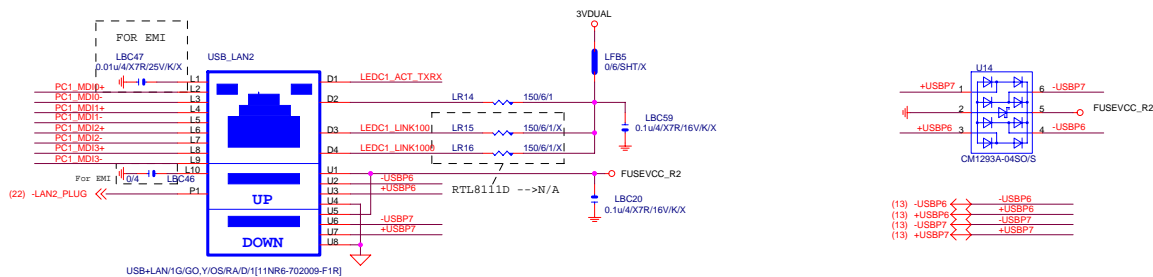
USB_LAN



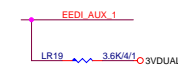
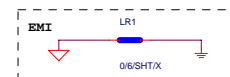
PCIE-1G LAN



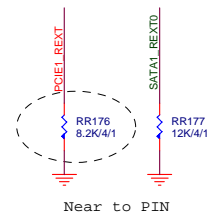
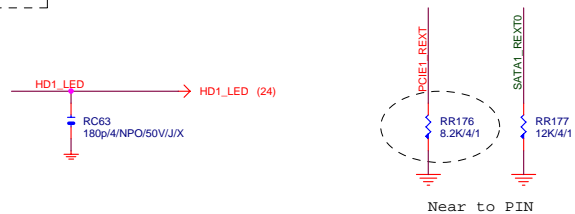
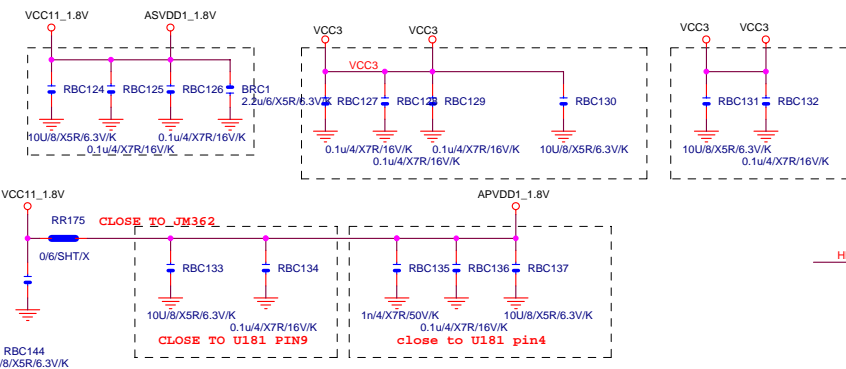
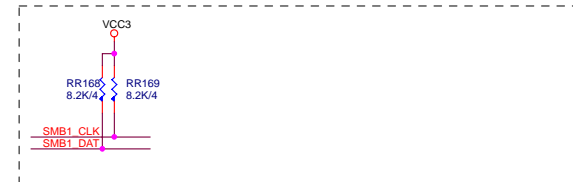
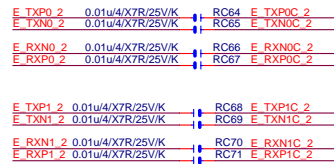
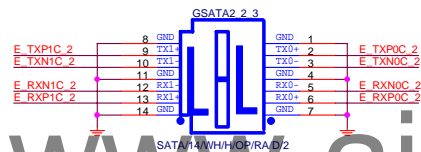
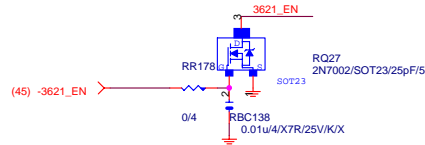
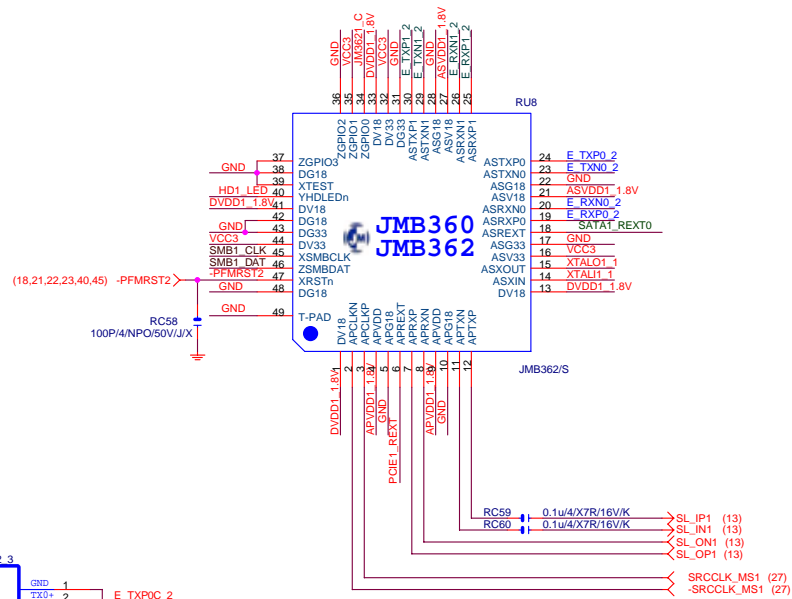
USB_LAN CONNECTOR



USB_LAN



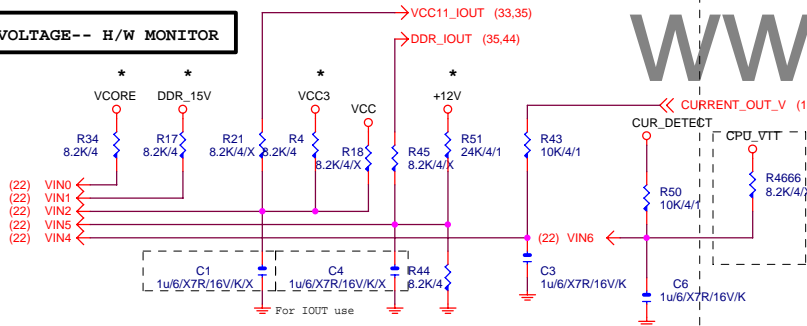
www.aitech1.ru



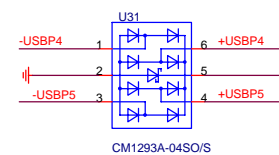
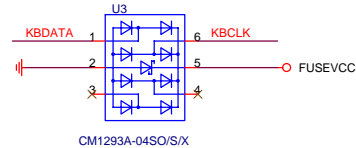
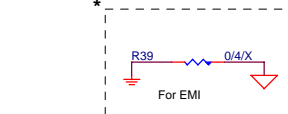
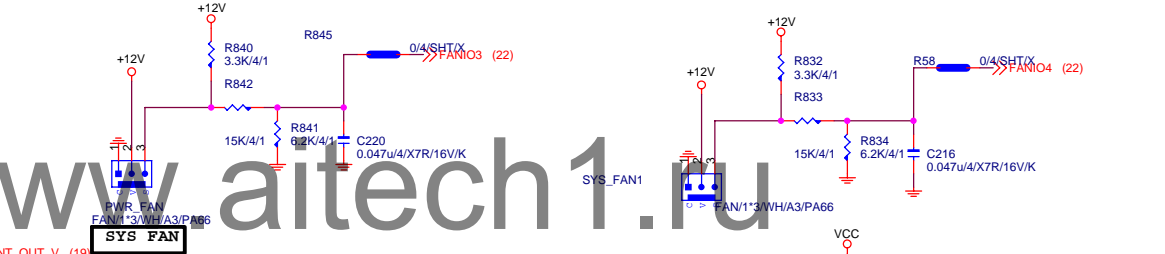
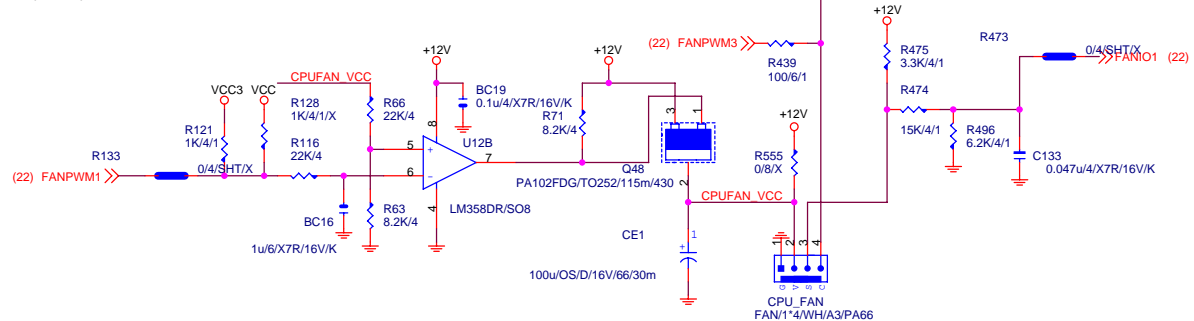
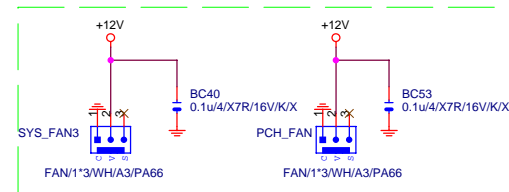
<i>Gigabyte Technology</i>			
Title			
JMB362			
Size	Document Number	GA-P55-UD5	
Custom			Rev 1.01
Date:	Monday, August 17, 2009	Sheet	41 of 46

(22) VREF ←
 (22) SYS_TEMP ←
 (2) PCH_TEMP ←
 (2) CPU_TEMP ←
 C5 1u6/X7R/16V/K
 C7 1u6/X7R/16V/K
 RS1 10K/1/4/S
 C8 1u6/X7R/16V/K
 RS2 10K/1/4/S
 RS4 10K/1/4/S
 C9 1u6/X7R/16V/K/X
 R60 10K/4/1
 R75 10K/4/1
 R69 10K/4/1
 1u6/X7R/16V/K

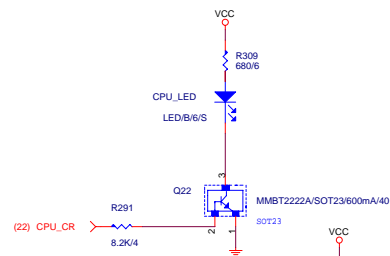
VOLTAGE-- H/W MONITOR



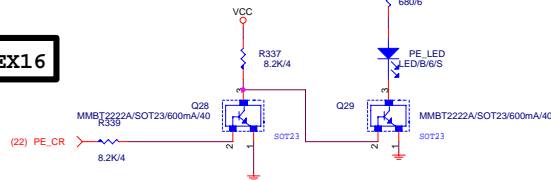
FOR EMI ONLY



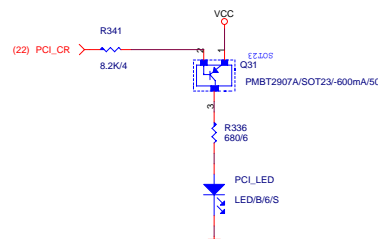
CPU



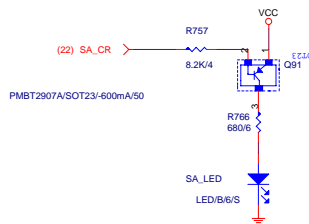
PCIEX16



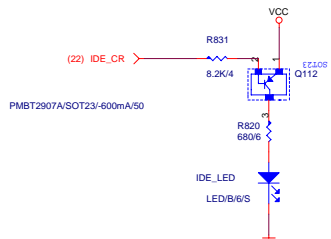
PCI



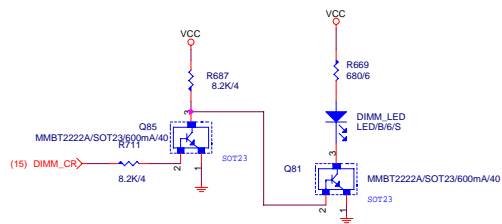
SATA



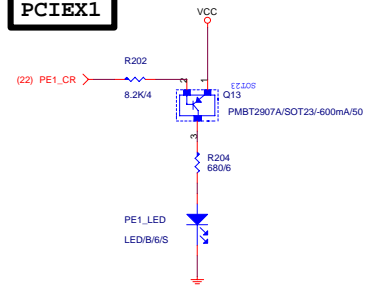
IDE



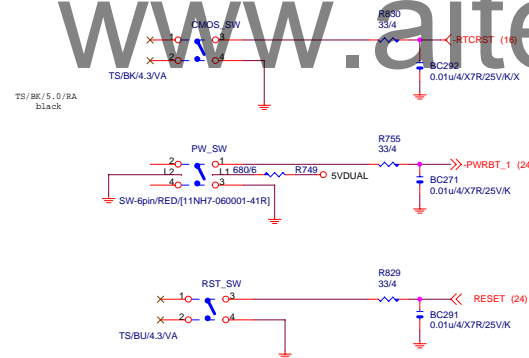
DIMM



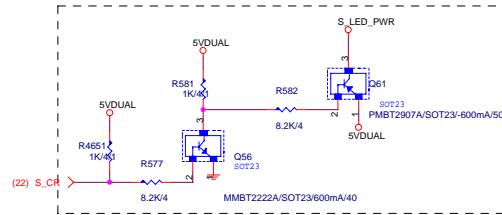
PCIEX1



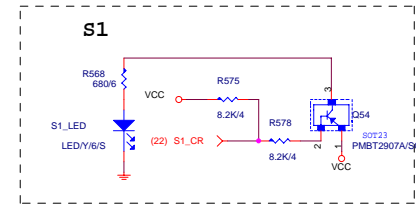
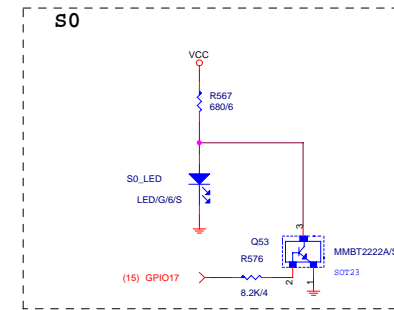
SW BTN



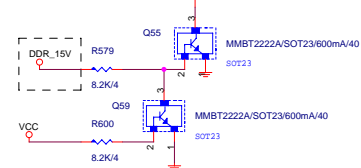
ACPI LED



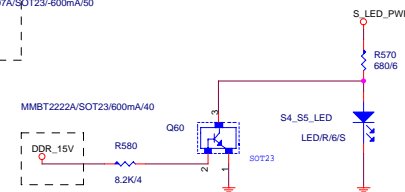
LED PWR



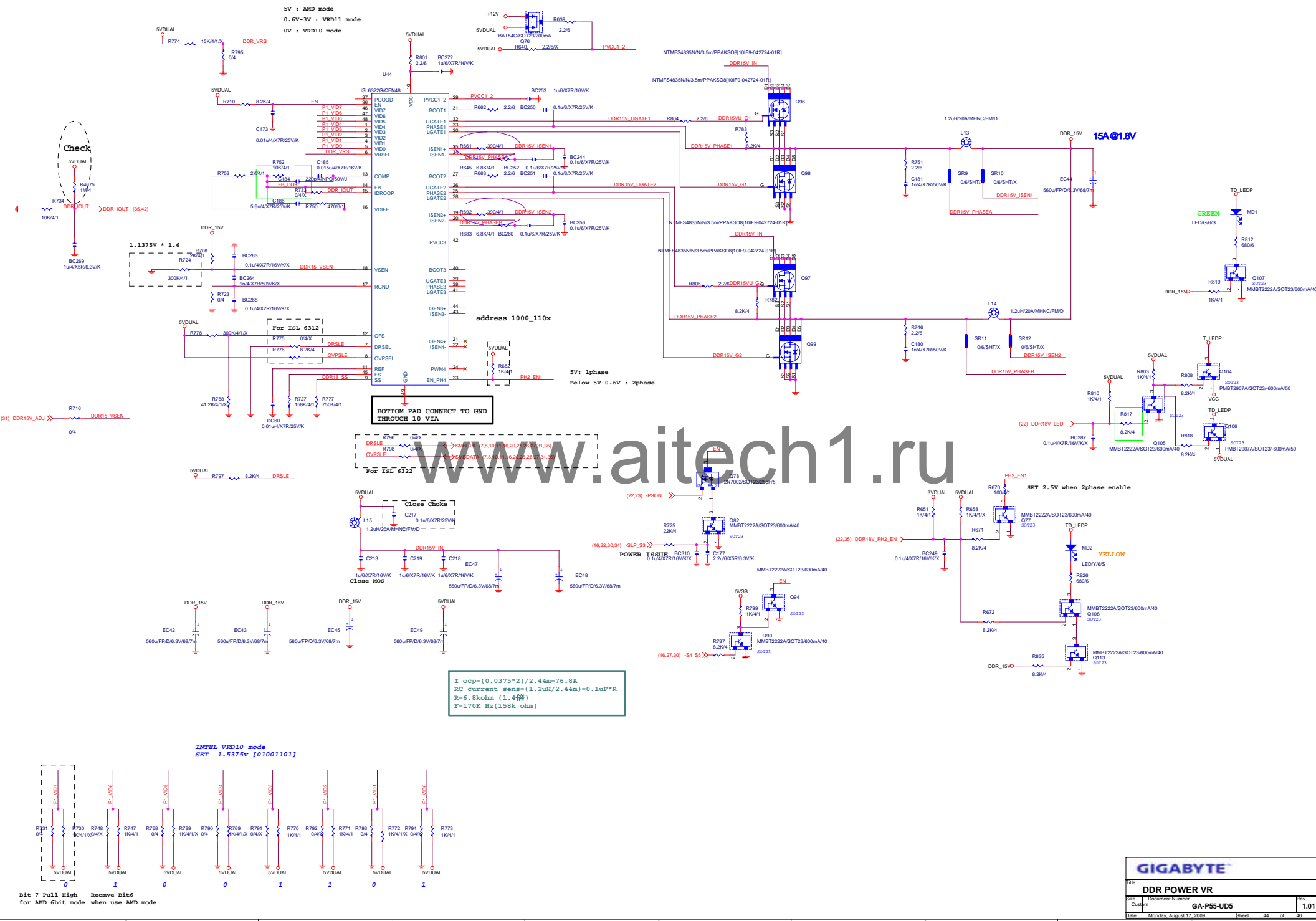
S3



S4_S5



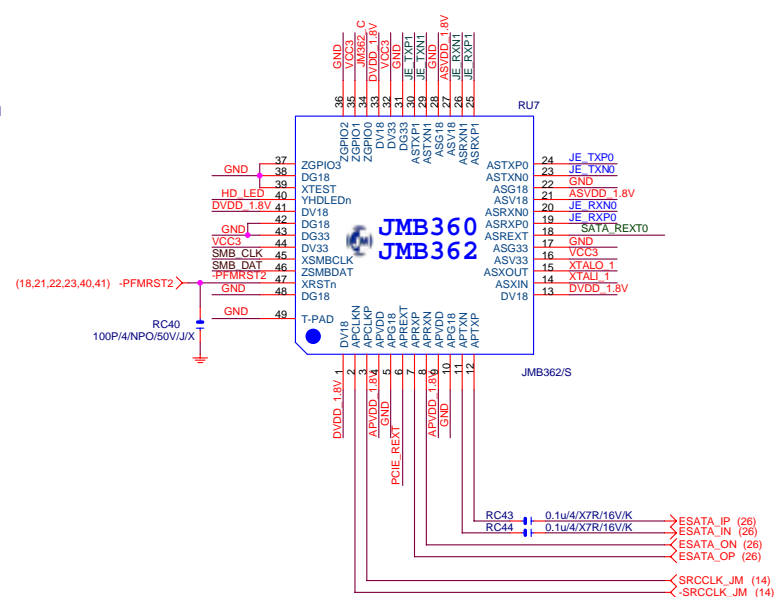
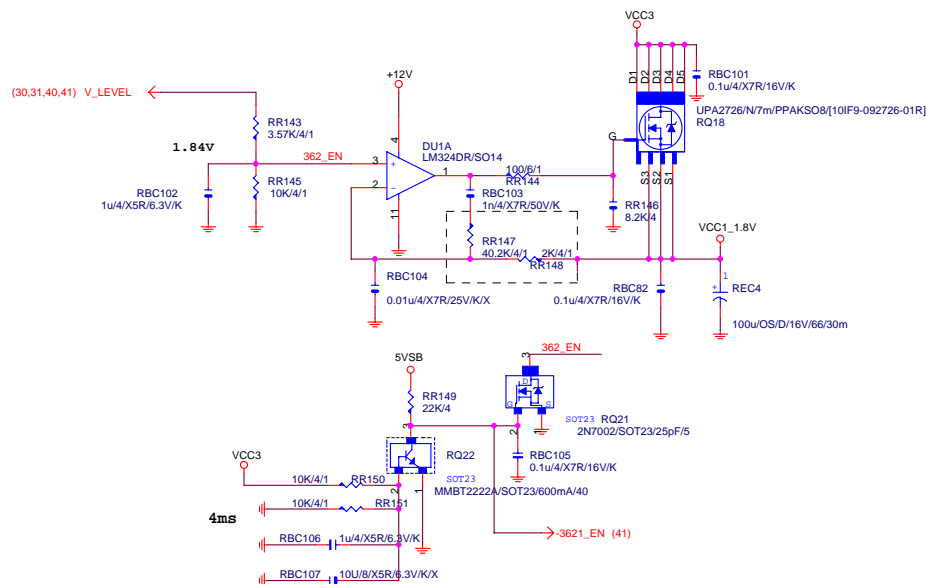
NAME	NAME	LED COLOR		
CPU_CR	ICH	BLUE		
DIMM_CR		BLUE		
PE_CR		BLUE		
PE1_LED		BLUE		
PCI_CR		BLUE		
SA_CR		BLUE		
IDE_CR		BLUE		
S0_CR		GREEN		
S1_CR		YELLOW		
S3_CR		ORANGE		
S4_S5_CR		RED		



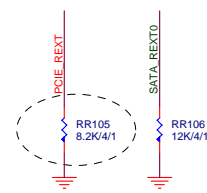
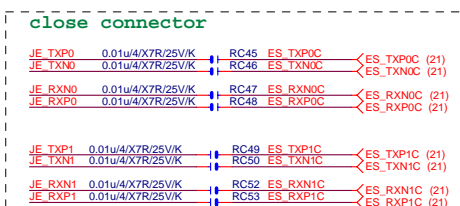
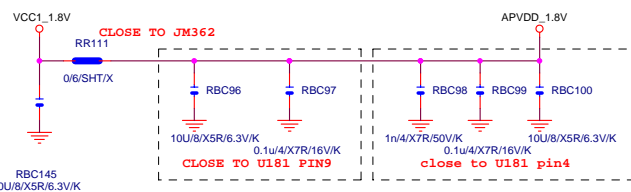
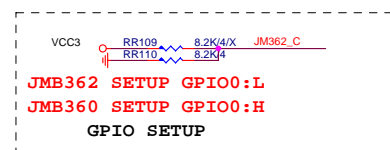
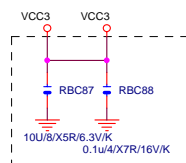
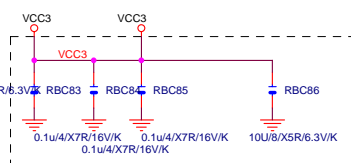
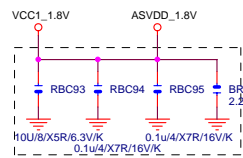
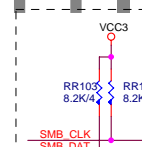
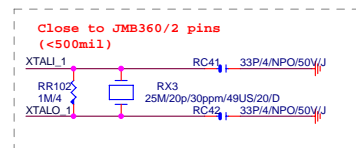
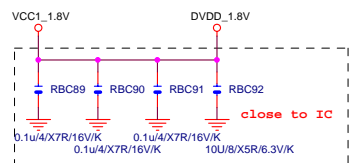
Bit 7 Pull High Remove Bit6
for AMD 6bit mode when use AMD mode

GIGABYTE		
DDR POWER VR		
Size	Document Number	Rev
Custom	GA-P55-UD5	1.01
Date: Monday, August 17, 2009		Sheet 44 of 46

3.3V to 1.8V Voltage Regulator



www.aitech1.ru



www.aitech1.ru

Gigabyte Technology			
File			
NVRAM			
Size	Document Number		Rev
C	GA-P55-UD5		1.01
Date	Monday, August 17, 2009		Sheet 46 of 46