

01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	CPU DDRIII MEMORY
05	CPU CONTROL
06	CPU UMI, PCIE I/F
07	CPU POWER & GND
08	DDRIII CHANNEL A, B
09	RTM880T-792
10	HUDSON D3 UMI, PCI, CPU I/F
11	HUDSON D3 USB 3.0/2.0, HU AUDIO, CONTROL
12	HUDSON D3 SATA, SPI BIOS
13	HUDSON D3 POWER & GND
14	PCI EXPRESS x16
15	HDMI ,DVI Connector
16	ITE 8720 JX ,Dual-BIOS
17	ESATA F_USB, R_USB
18	FAN/HWMO USB 3.0
19	ALC889
20	AUDIO JACK
21	ATX, FRONT PANEL
22	POWER SEQUENCE
23	VCORE (PWMISL6330A)
24	Dr. MOSFET3+1 PHASE
25	APU_VDD, VCC_SB, 3VDUAL_SB, VDDA25, VCC11_Dual

GIGABYTE™			
Title COVER SHEET			
Size	Document Number	Rev	
Custom	GA-A75N-USB3	1.0	
Date:	Monday, October 03, 2011	Sheet	1 of 27

Model Name:GA-A75N-USB3

Component value change history


Version: 1.0

P-Code: U98126-0

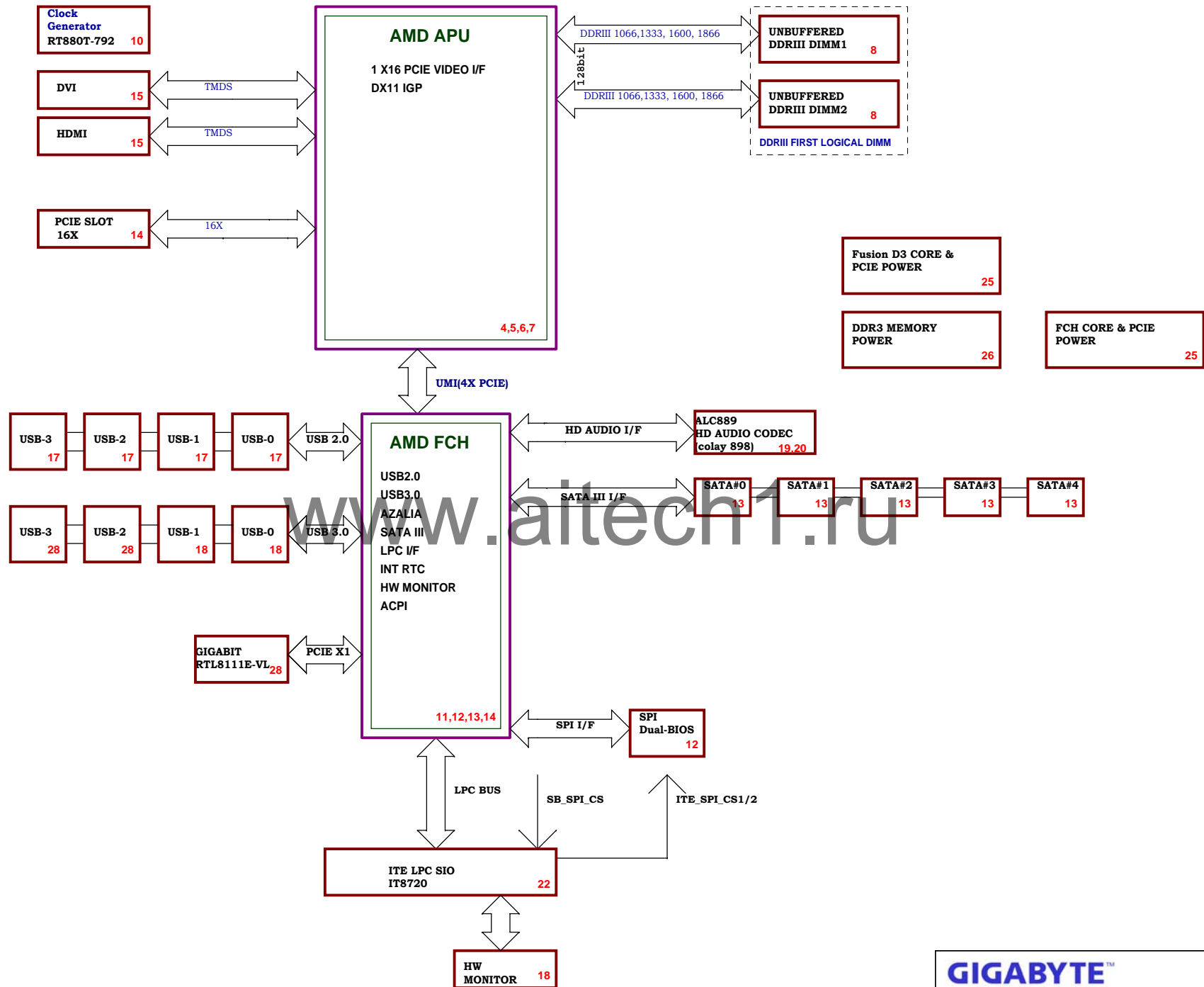
[illegible]

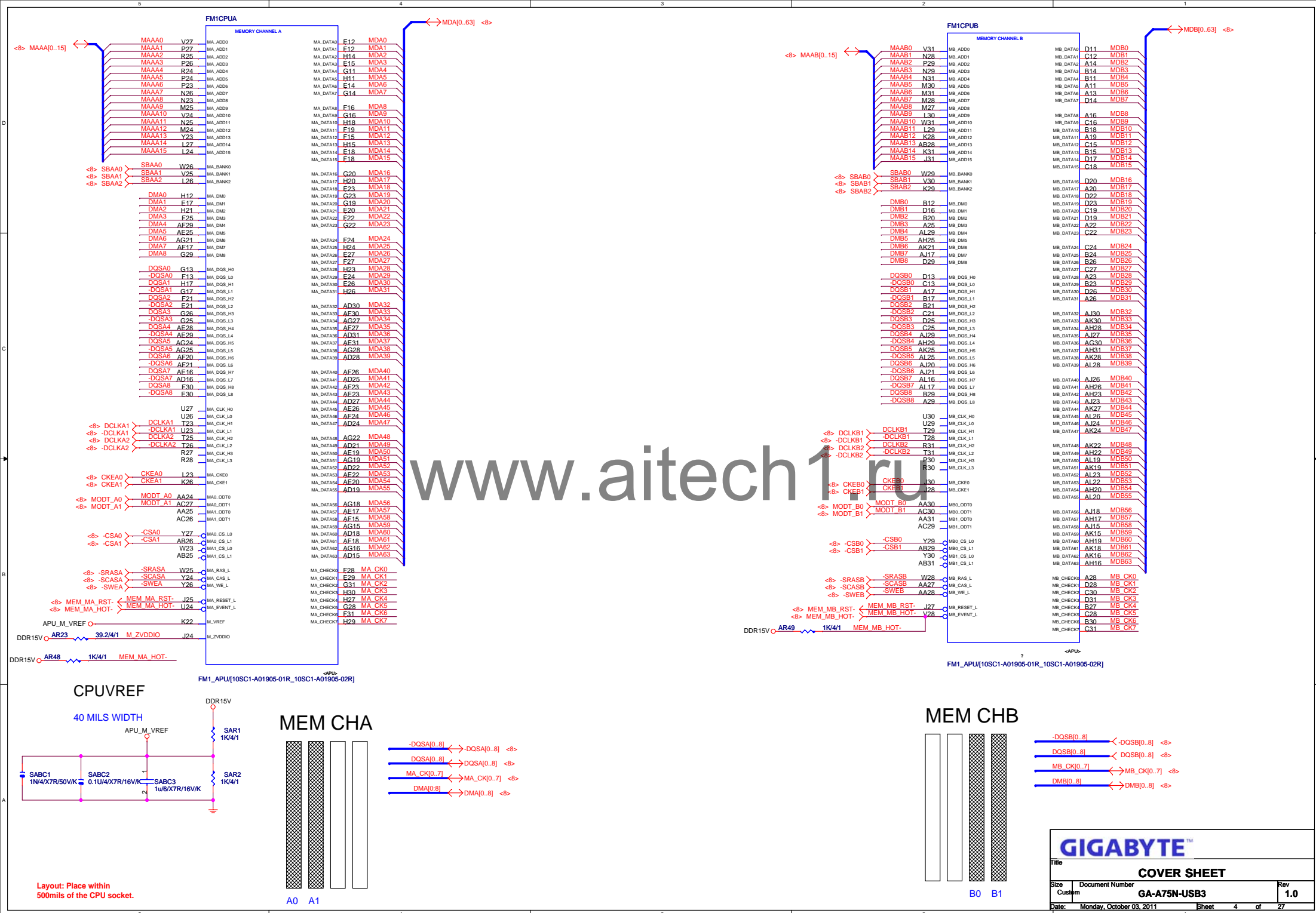
Circuit or PCB layout change for next version

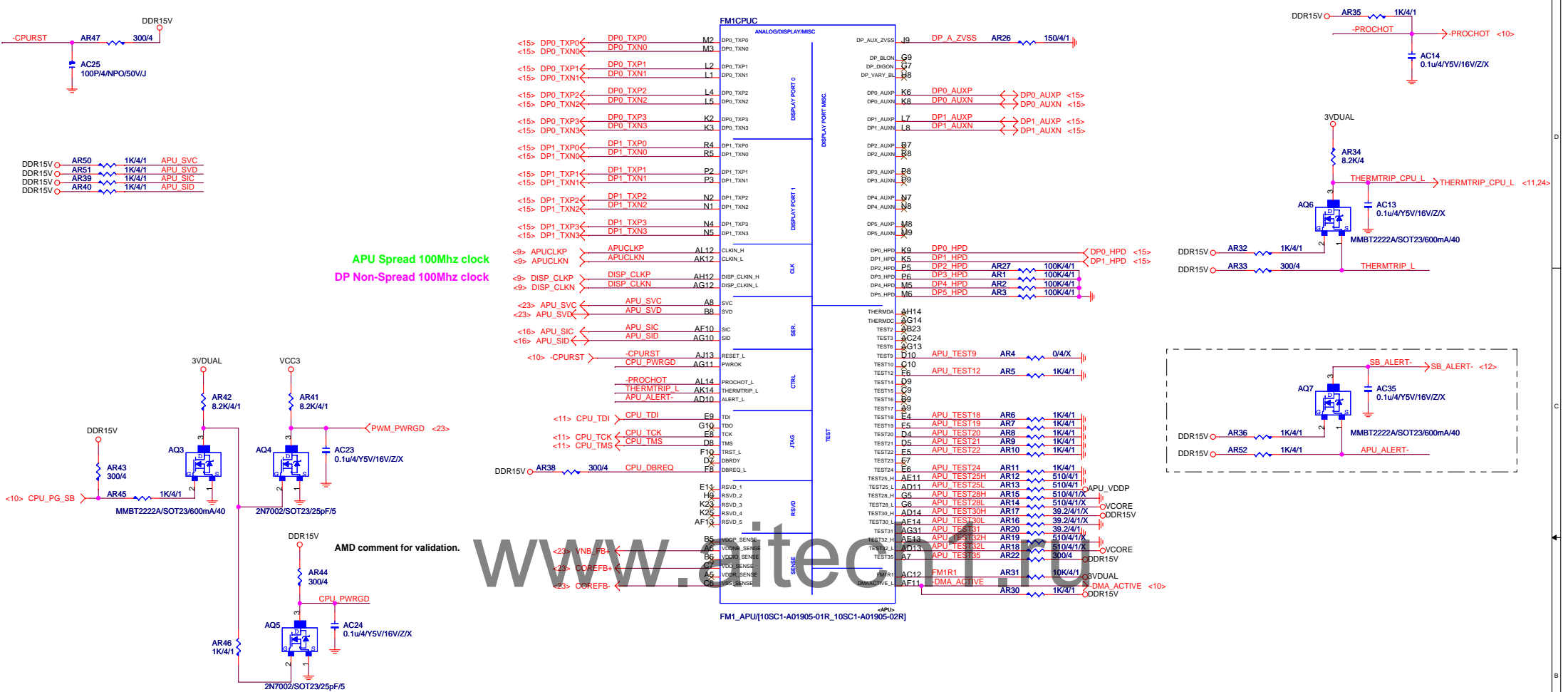
[illegible]

			
Title			
BOM & PCB HISTORY			
Size	Document Number		Rev
Custom	GA-A75N-USB3		1.0
Date:	Monday, October 03, 2011	Sheet	2 of 27

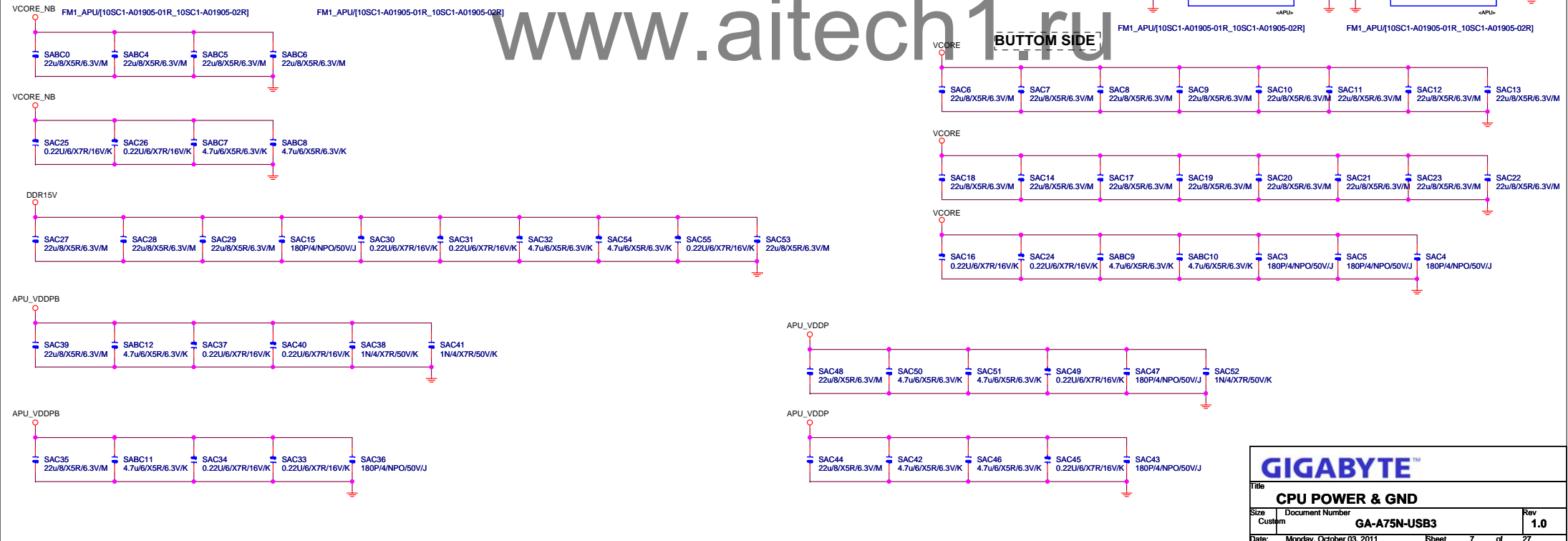
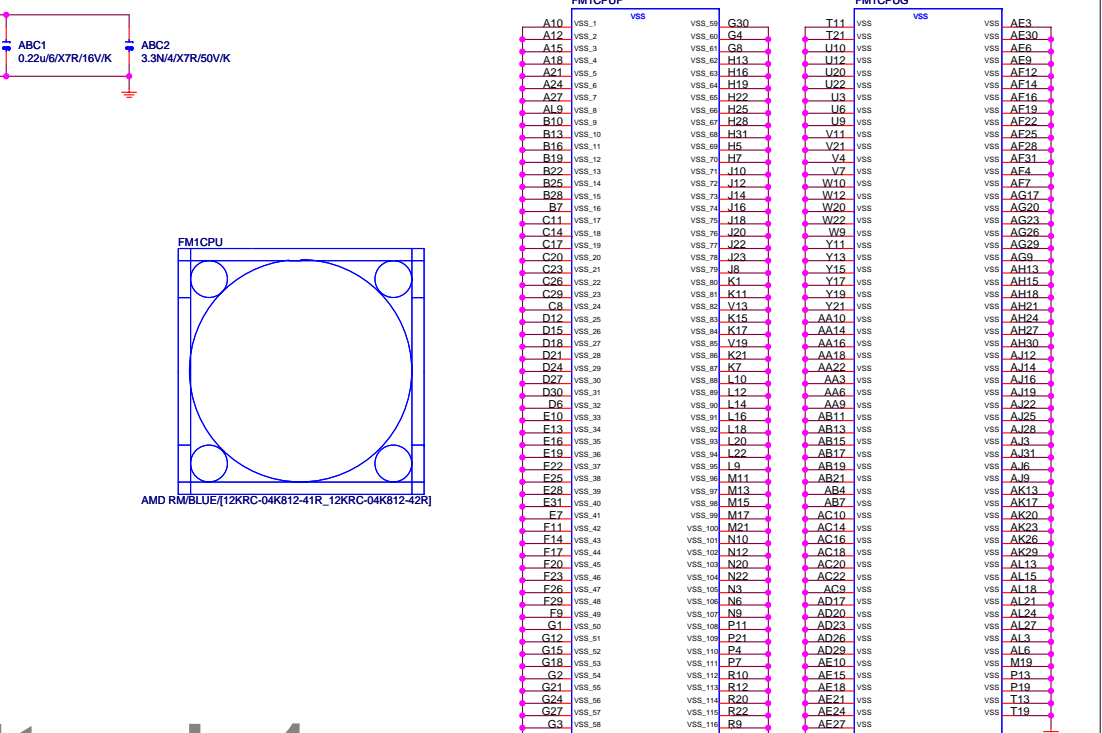
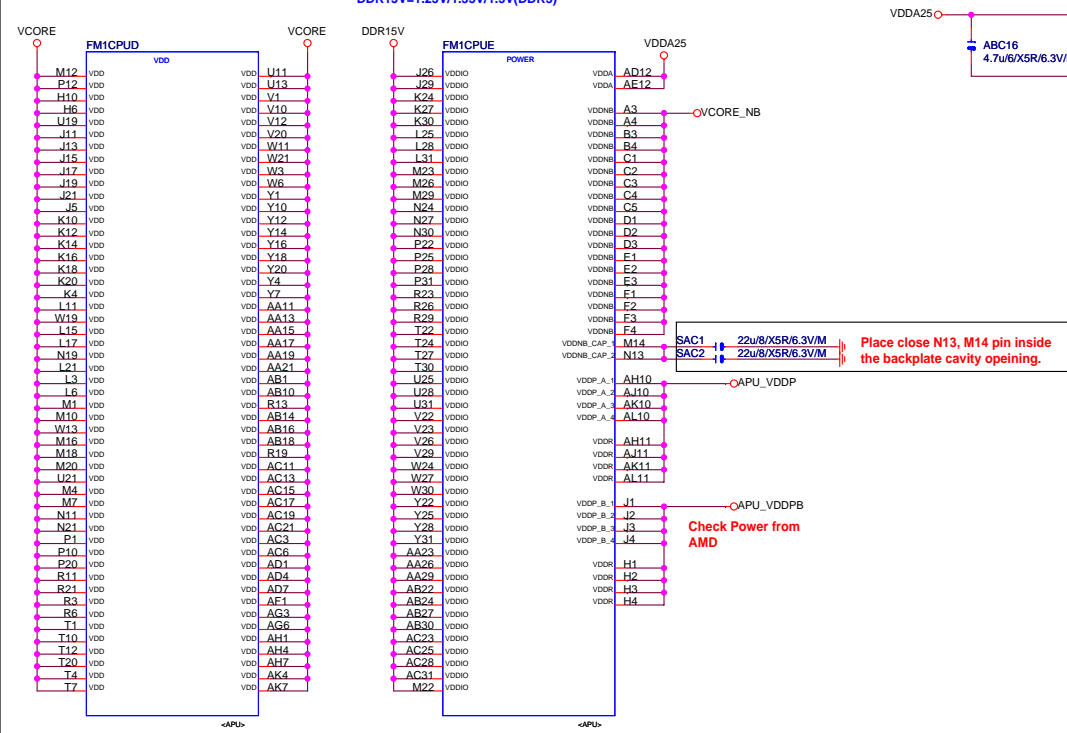
AMD Fusion D3 CUSTOMER DESKTOP REFERENCE DESIGN

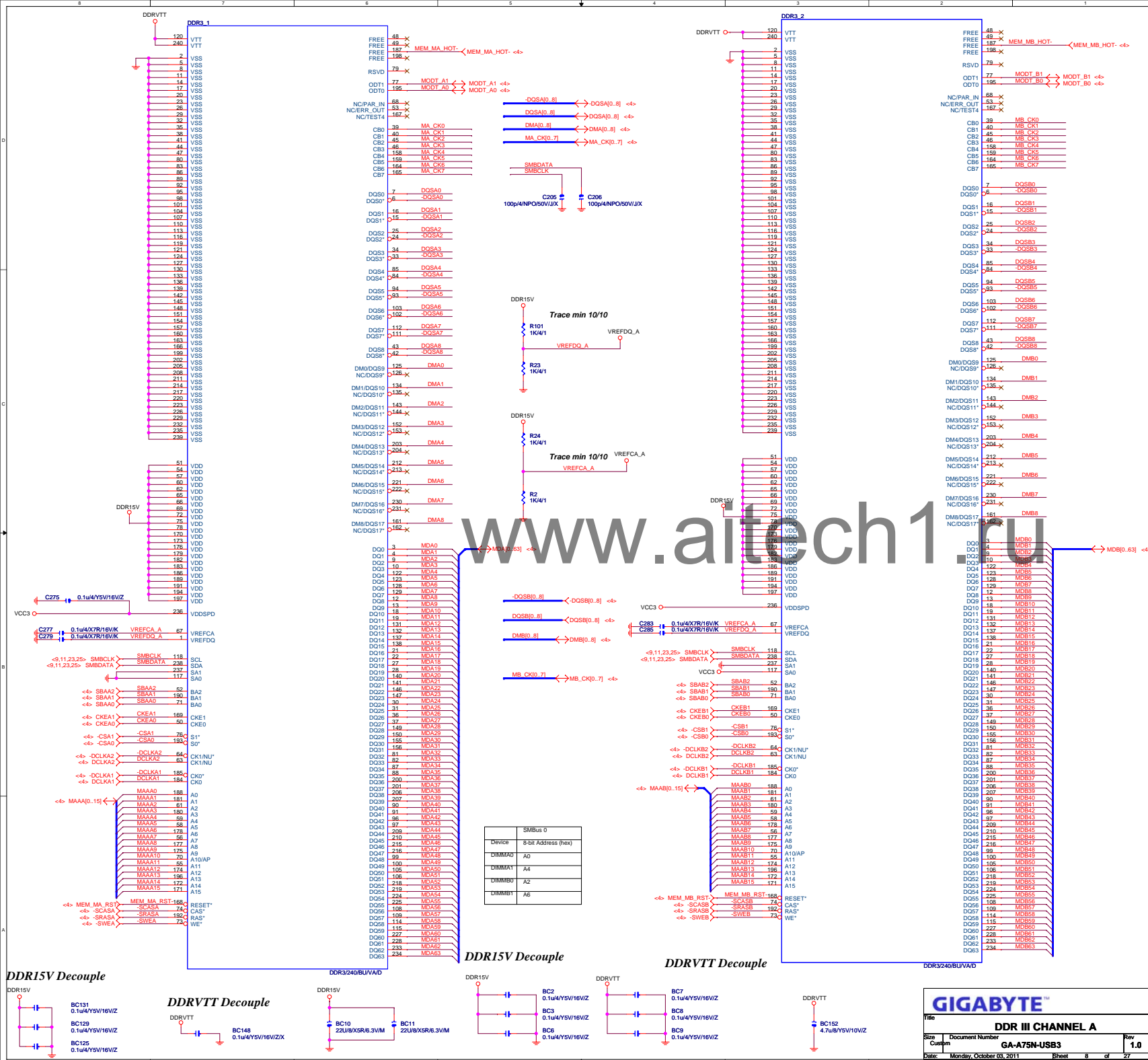


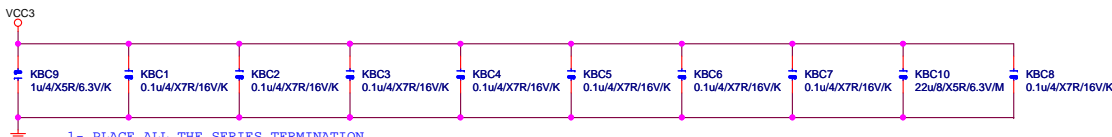




DDR15V=1.25V/1.35V/1.5V(DDR3)







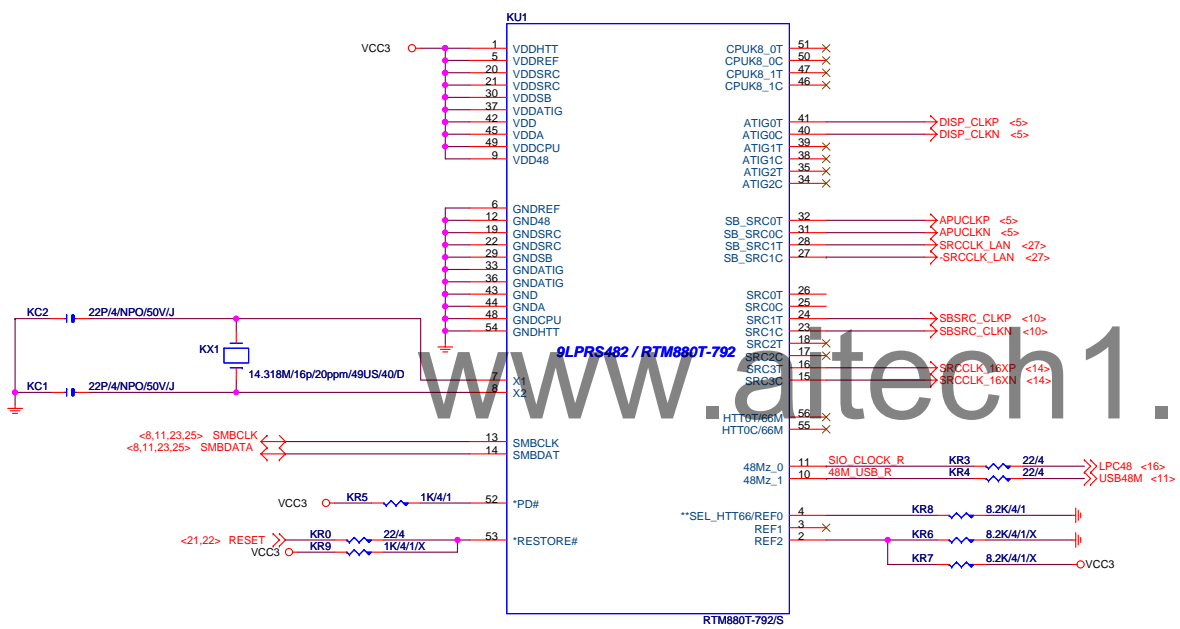
- 1- PLACE ALL THE SERIES TERMINATION RESISTORS AS CLOSE TO U800 AS POSSIBLE
- 2- ROUTE ALL SRCCLKTx AND SRCCLKCx AS DIFFERENT PAIR RULE
- 3- PUT DECOUPLING CAPS CLOSE TO U800 POWER PIN



NB CLOCK INPUT TABLE

NB CLOCKS	RS740	RX780	RS780	
HT_REFCLKP	66M SE(SE)	100M DIFF	100M DIFF	
HT_REFCLKN	NC	100M DIFF	100M DIFF	
REFCLK_P	14M SE (3.3V)	14M SE (1.8V)	14M SE (1.1V)	100M DIFF
REFCLK_N	NC	NC	vref	100M DIFF
GFX_REFCLK*	100M DIFF	100M DIFF	100M DIFF	100M DIFF
GPP_REFCLK	NC	100M DIFF	100M DIFF(OUT)	
GPPSB_REFCLK	100M DIFF	100M DIFF	100M DIFF	

* the GFX_REFCLK input is required for all cases



watch dog --
RESTORE# 按 RESET

REF0/SEL_HTT66	HTT CLOCK
0	100.00 DIFFERENTIAL
1	66.66 SINGLE END

REF1/SEL_SATA	SRC6/SATA
0	100.00 DIFFERENTIAL SPREADING SRC CLOCK
1	100.00 NON-SPREADING DIFFERENTIAL SATA CLOCK

	OSC_14M_NB
RS740	3.3V 33R serial
RX780	1.8V 82.5R/130R
RS780	1.1V 158R/90.9R
(Single-ended)	

GIGABYTE™

TitleRTM880T-792

SizeCustom

Document NumberGA-A75N-USB3

DateMonday, October 03, 2011

Sheet9

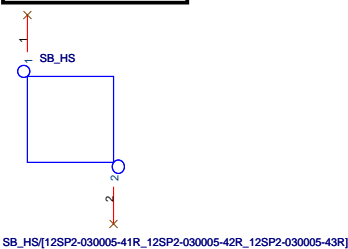
of27

Rev1.0

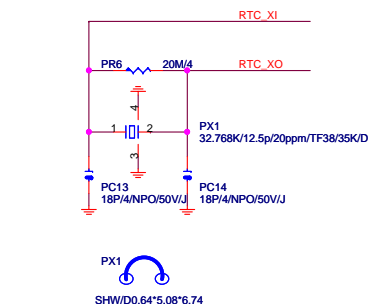


PLACE THESE PCIE AC COUPLING
CAPS CLOSE TO SB850

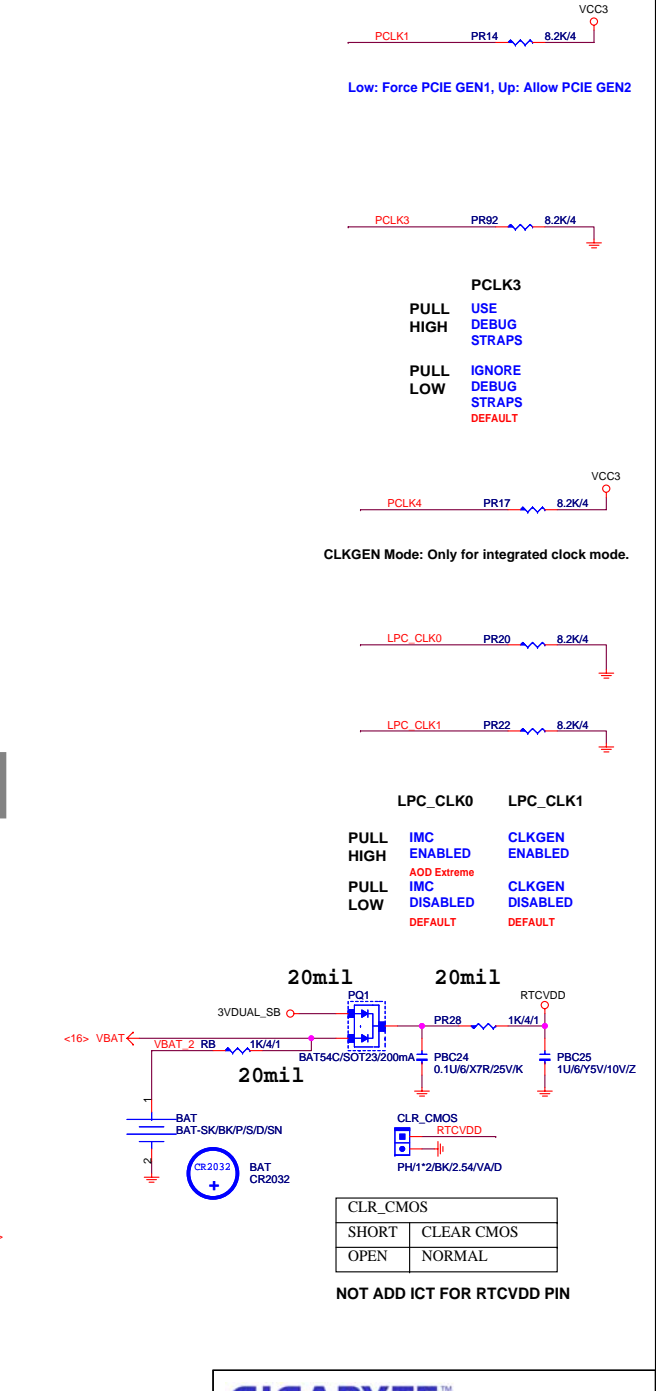
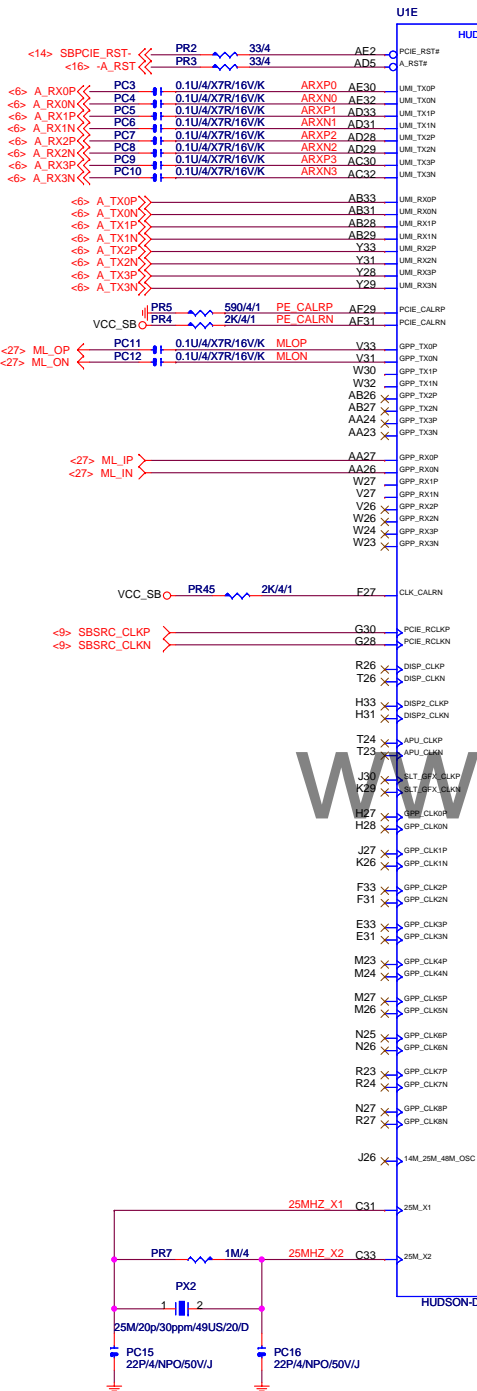
S.B HEATSINK



SB_HS(12SP2-030005-41R_12SP2-030005-42R_12SP2-030005-43R)



SHW/D0.64*5.08*6.74



VCC3

Low: Force PCIE GEN1, Up: Allow PCIE GEN2

PULL HIGH
PULL LOW

USE DEBUG STRAPS
IGNORE DEBUG STRAPS
DEFAULT

CLKGEN Mode: Only for integrated clock mode.

LPC_CLK0

LPC_CLK1

PULL HIGH
PULL LOW

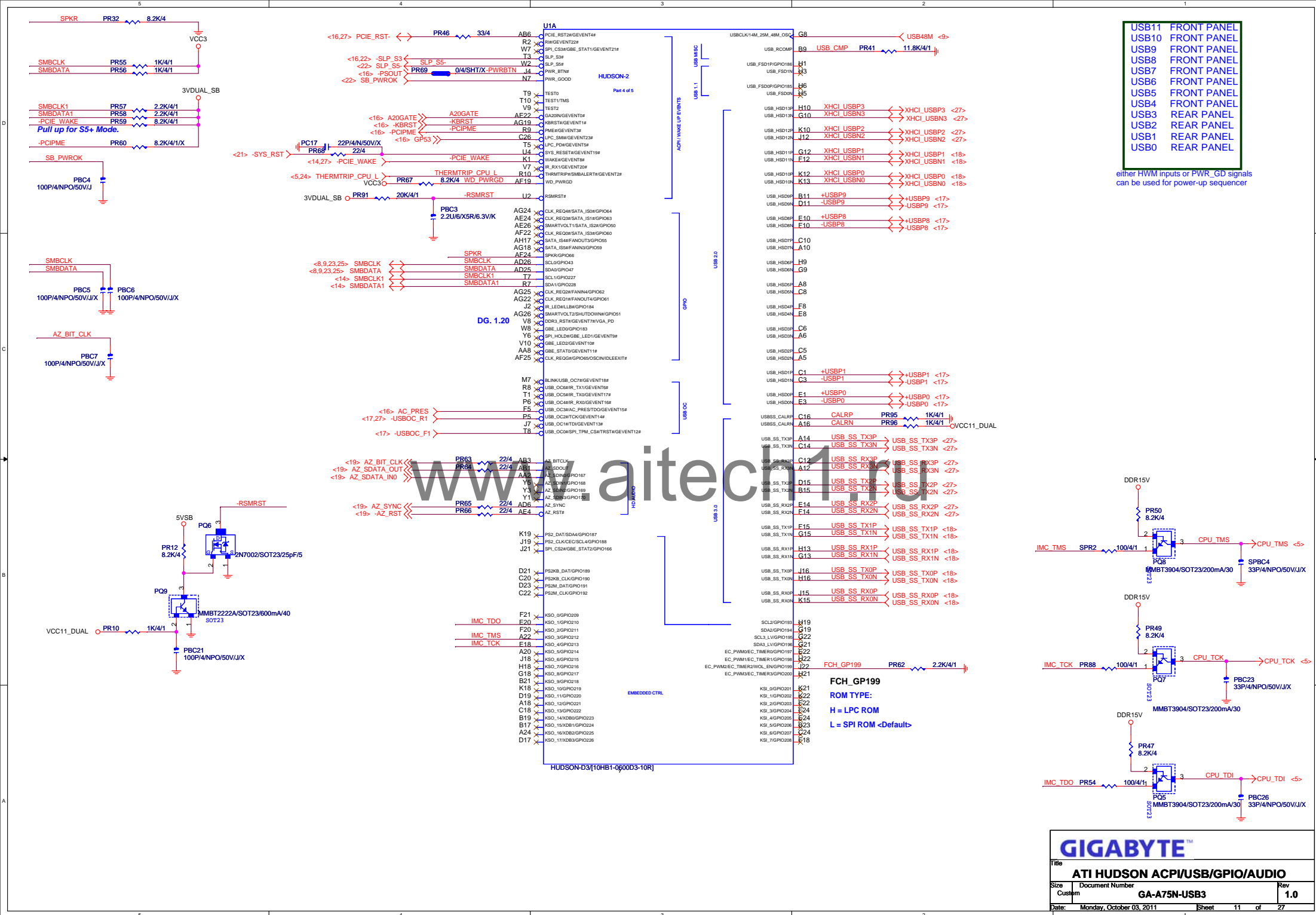
IMC ENABLED
AOD Extreme
IMC DISABLED
DEFAULT

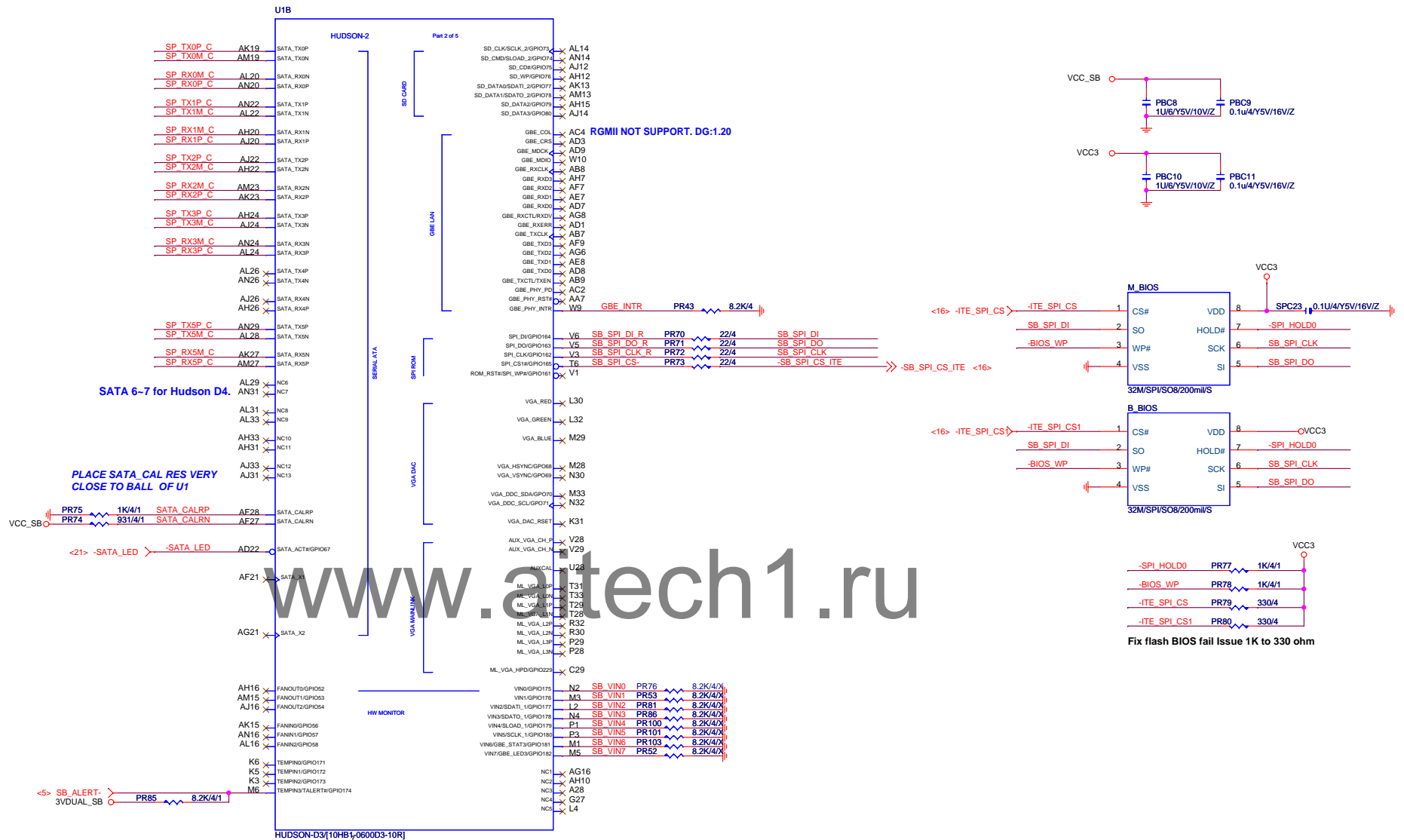
CLR_CMOS	
SHORT	CLEAR CMOS
OPEN	NORMAL

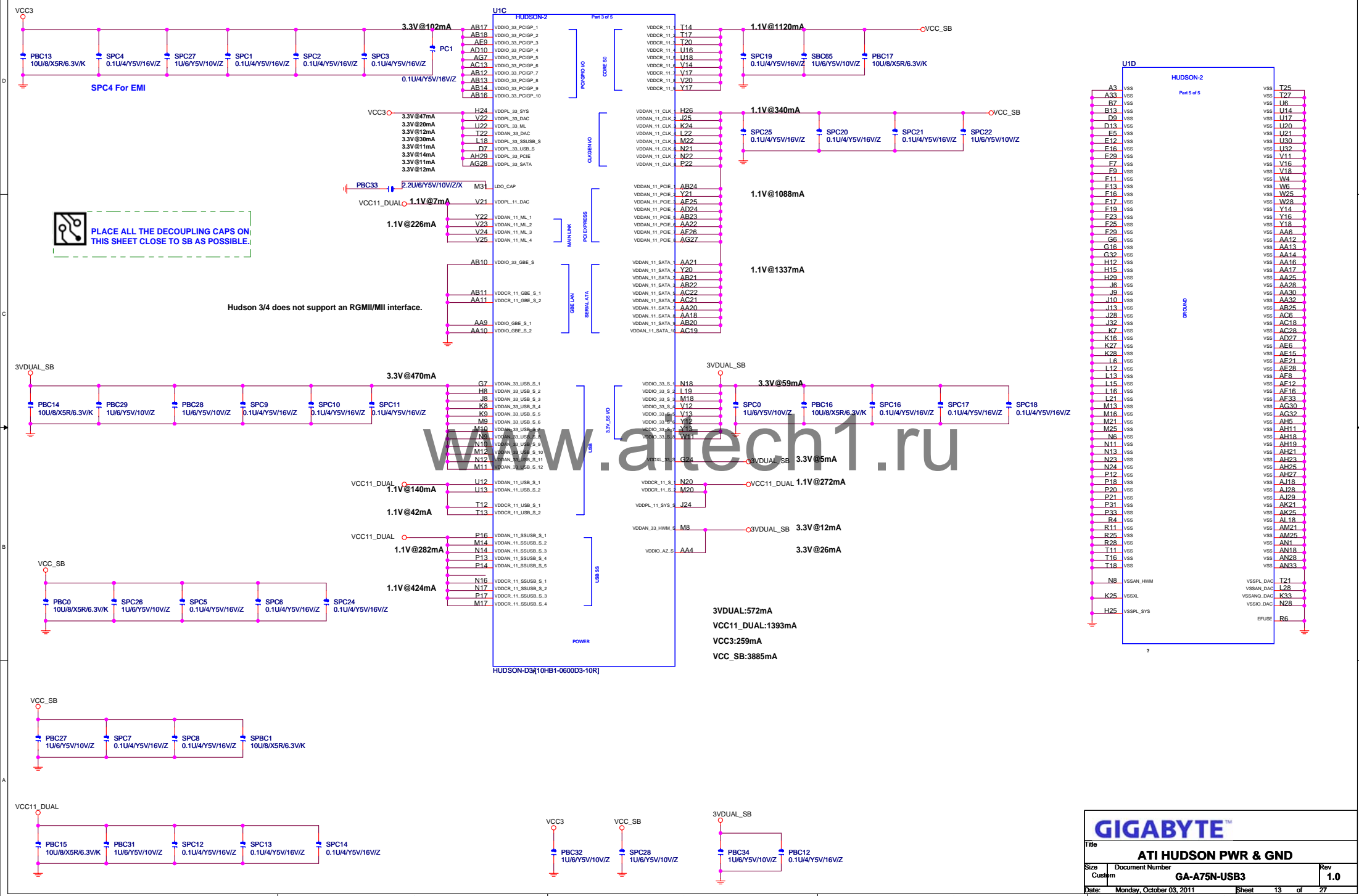
NOT ADD ICT FOR RTCVDD PIN

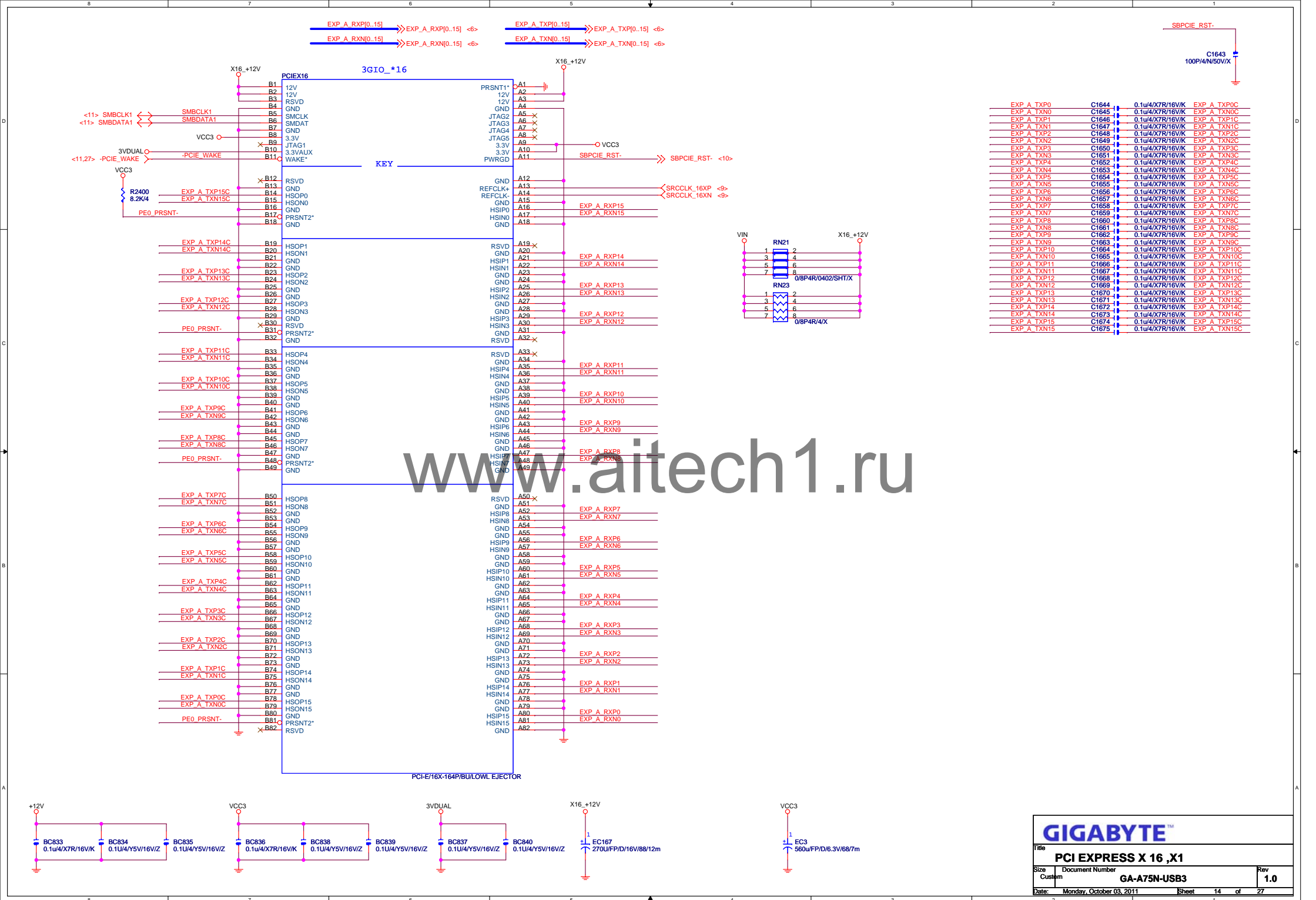
GIGABYTE

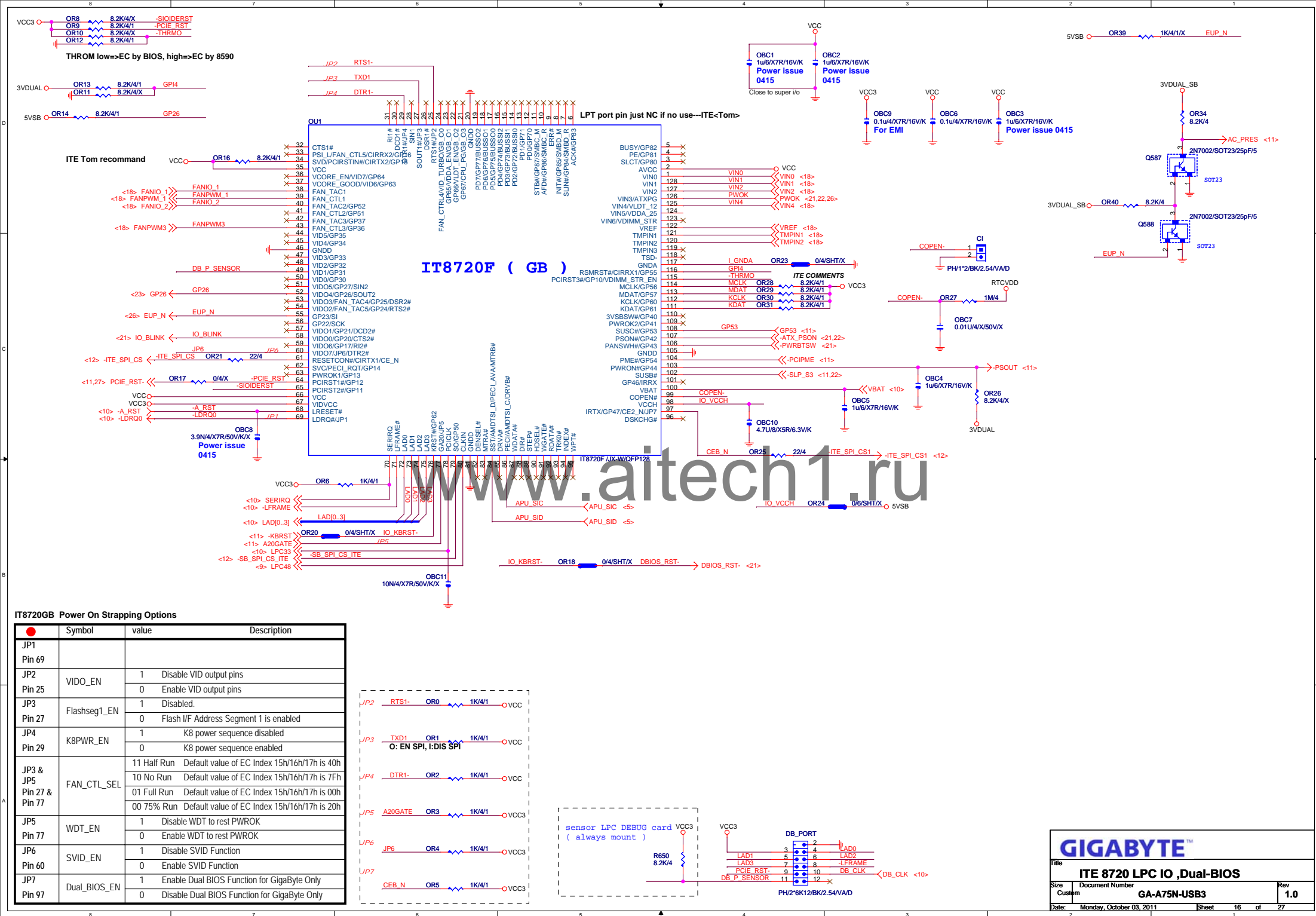
ATI HUDSON PCIE/PCI/CPU/LPC		
Size	Document Number	Rev
Custom	GA-A75N-USB3	1.0
Date:	Monday, October 03, 2011	Sheet 10 of 27

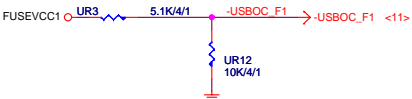
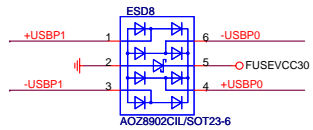
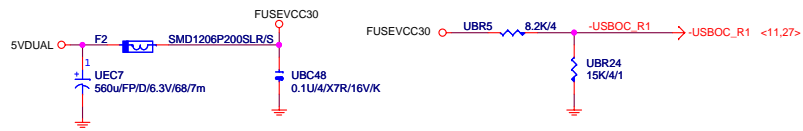
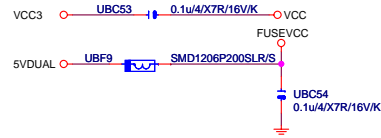
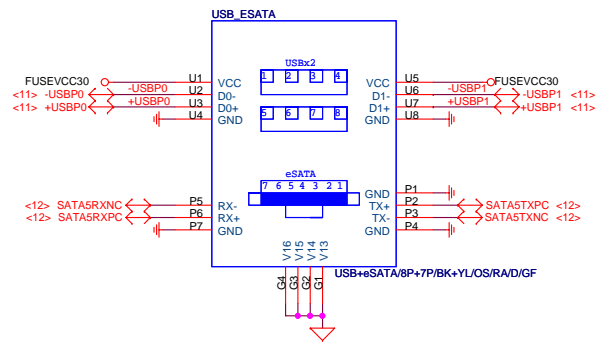




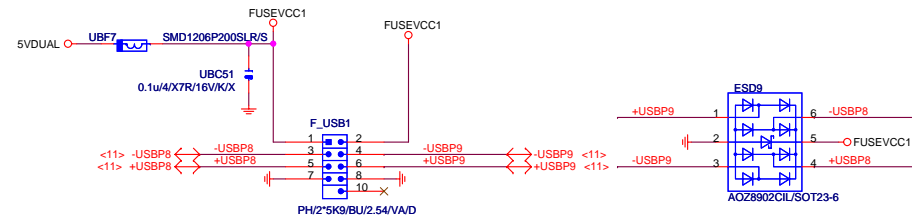








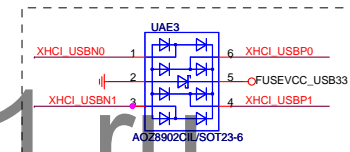
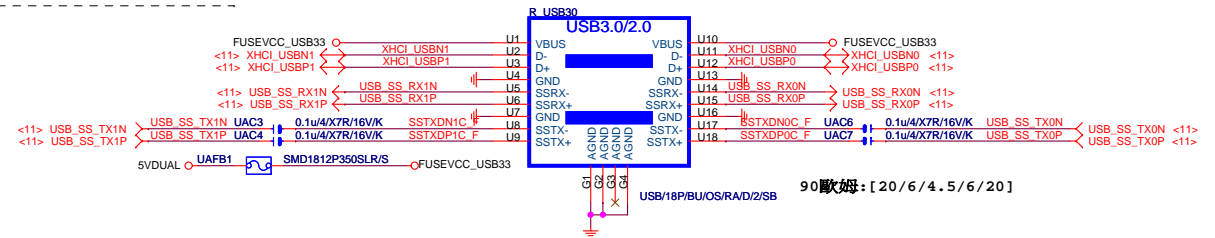
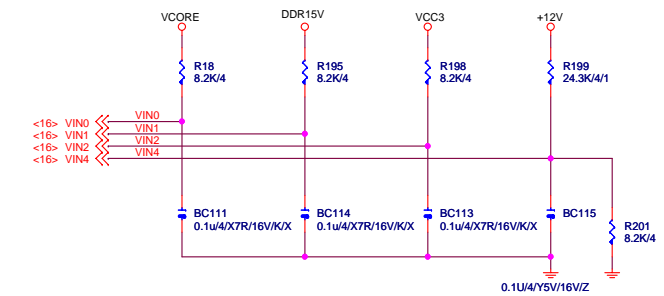
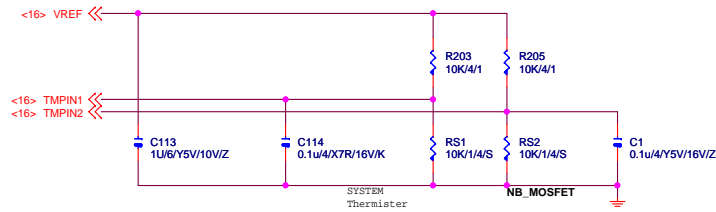
FRONT SIDE USB1



www.aitech1.ru

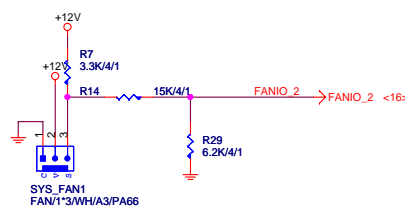
GIGABYTE™			
Title COM/F_USB			
Size	Document Number	Rev	
Custom	GA-A75N-USB3	1.0	
Date:	Monday, October 03, 2011	Sheet	17 of 27

Hardware Monitor circuits

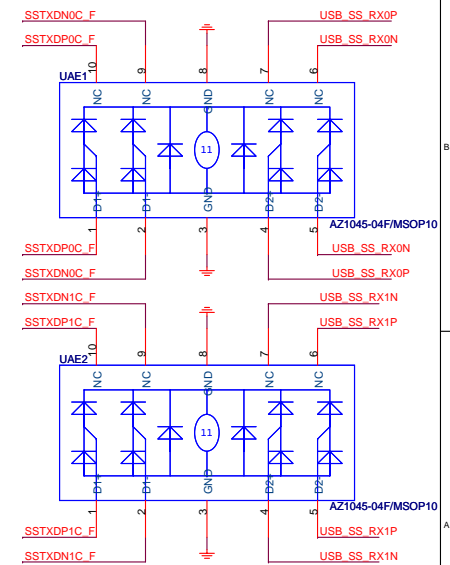
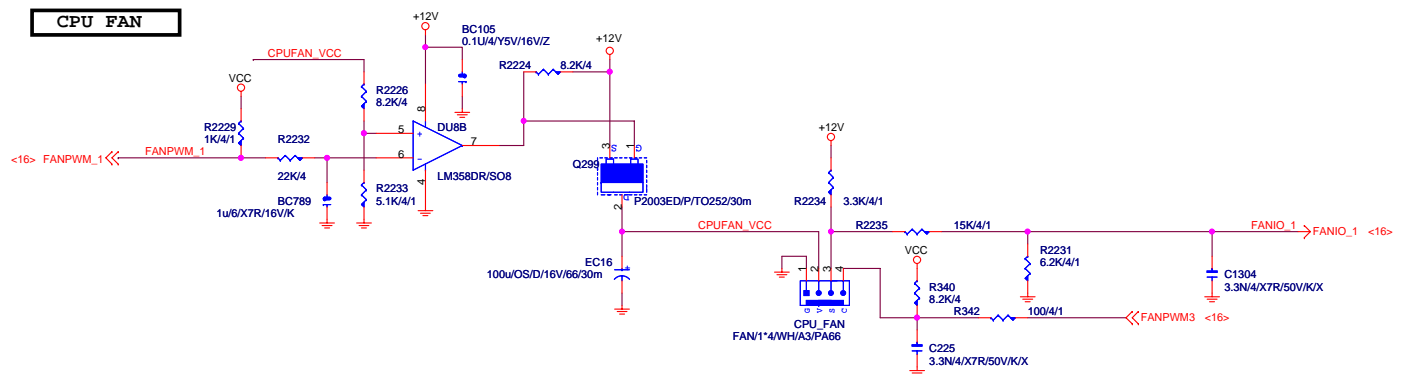


www.aitech1.ru

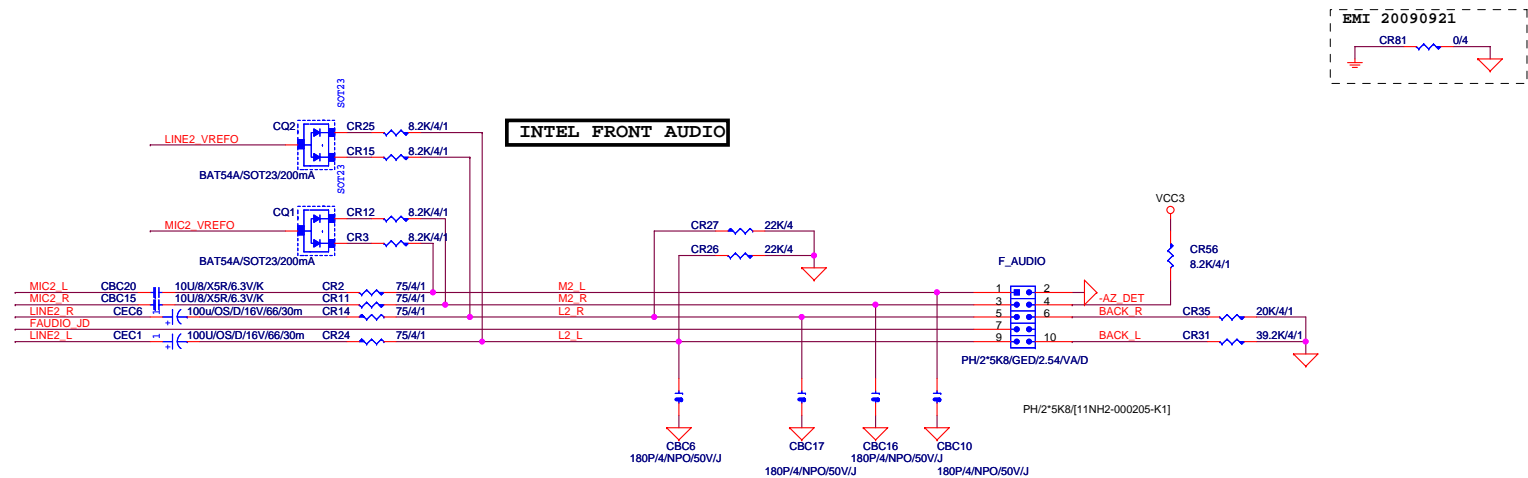
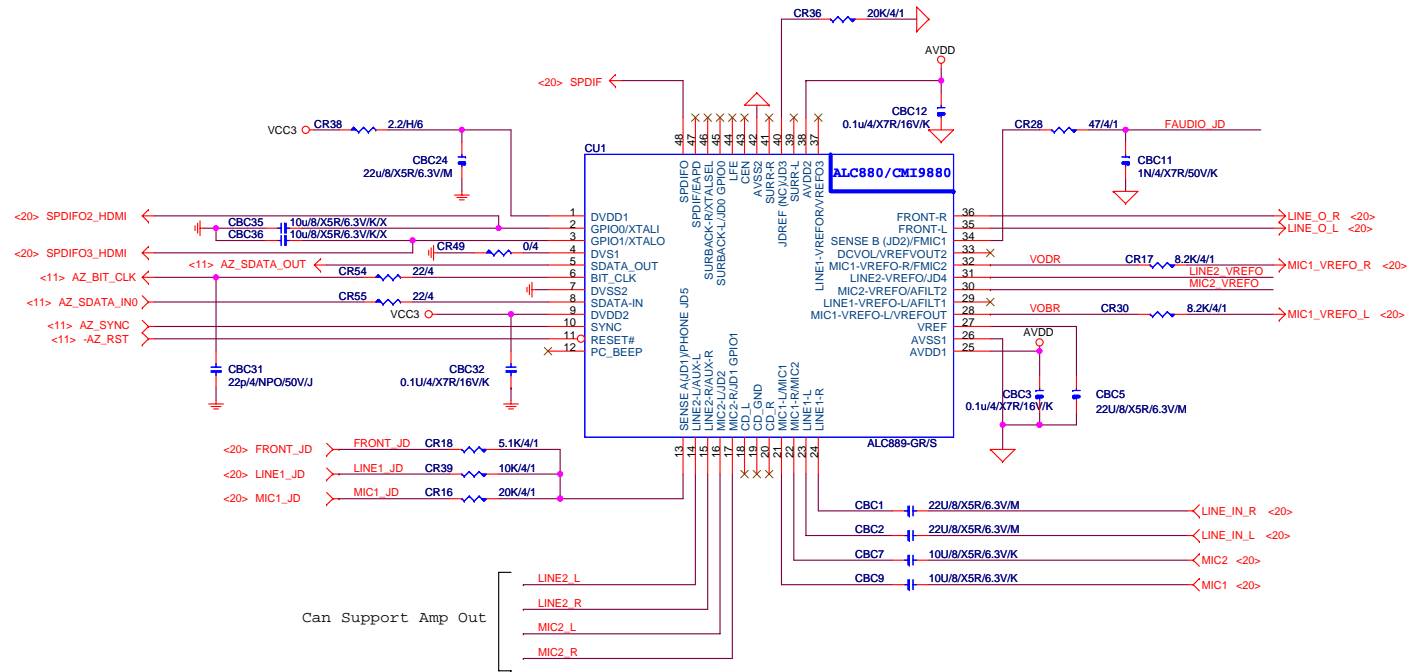
SYSTEM FAN

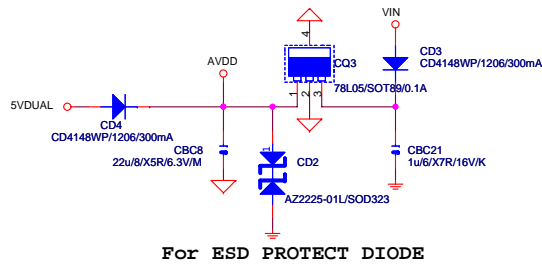
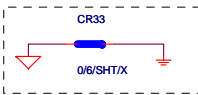


CPU FAN



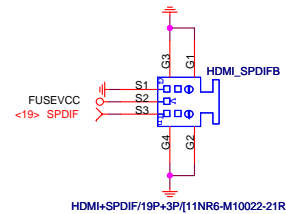
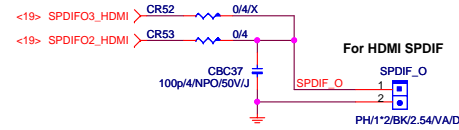
	ALC892R	ALC889	ALC889A
CR16	X	X	O
CR24	X	X	O
CR25	X	O	O
CBC42	10uF/X5R	X	X
CR2	20K/1%	20K/1%	20K/0.1%
CR9	O	O	X
CR10	X	X	O
CBC10/CBC11/CBC12/ CBC13/CBC44/CBC45	4.7uF /X5R	10uF /X5R	4.7uF /X5R
CR4/CR8/CR18/CR23/ CR11/CR12/CR27/CR29/ CR49/CR50/CR43/CR44/ CR45/CR48/CR59/CR60	75 ohm	66 ohm or lower	75 ohm



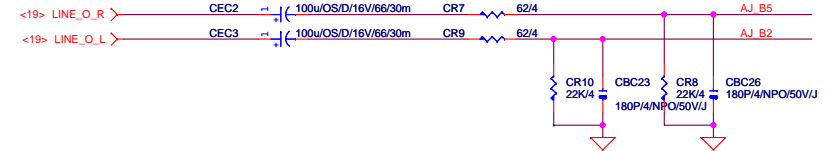


For ESD PROTECT DIODE

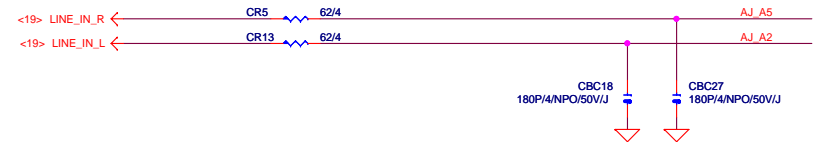
SPDIF



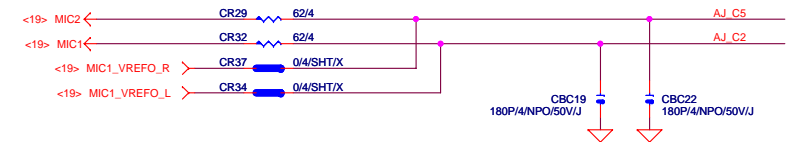
LINE OUT FRONT OUT



LINE-IN

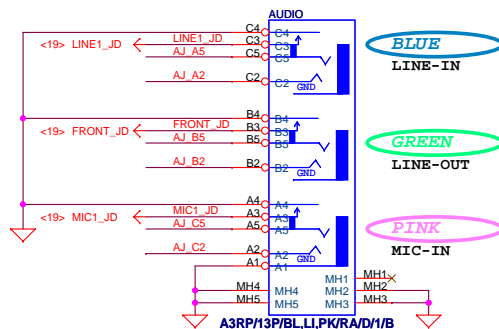
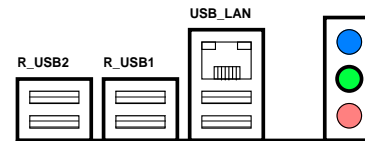
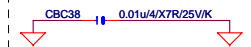


MIC



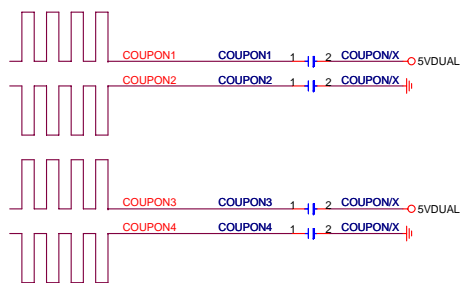
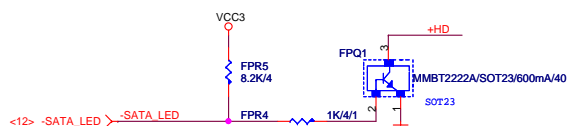
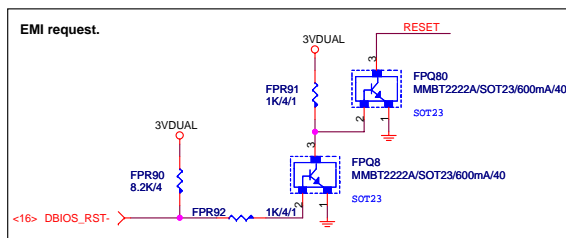
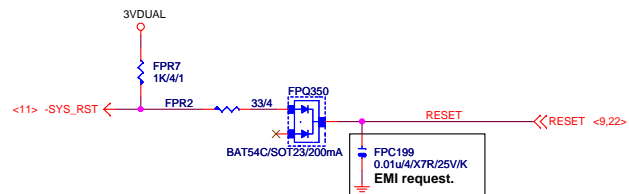
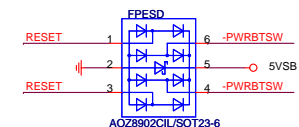
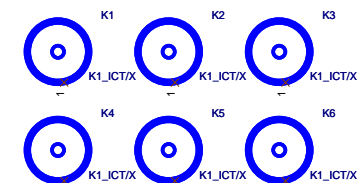
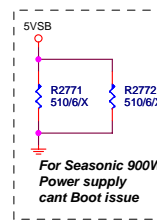
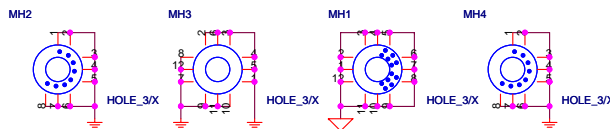
www.aitech1.ru

For Audio precision test



A3RJ/13P/B/[11NR6-403006-01_11NR6-403006-02]
3RJ+15P/[11NR6-403004-11]

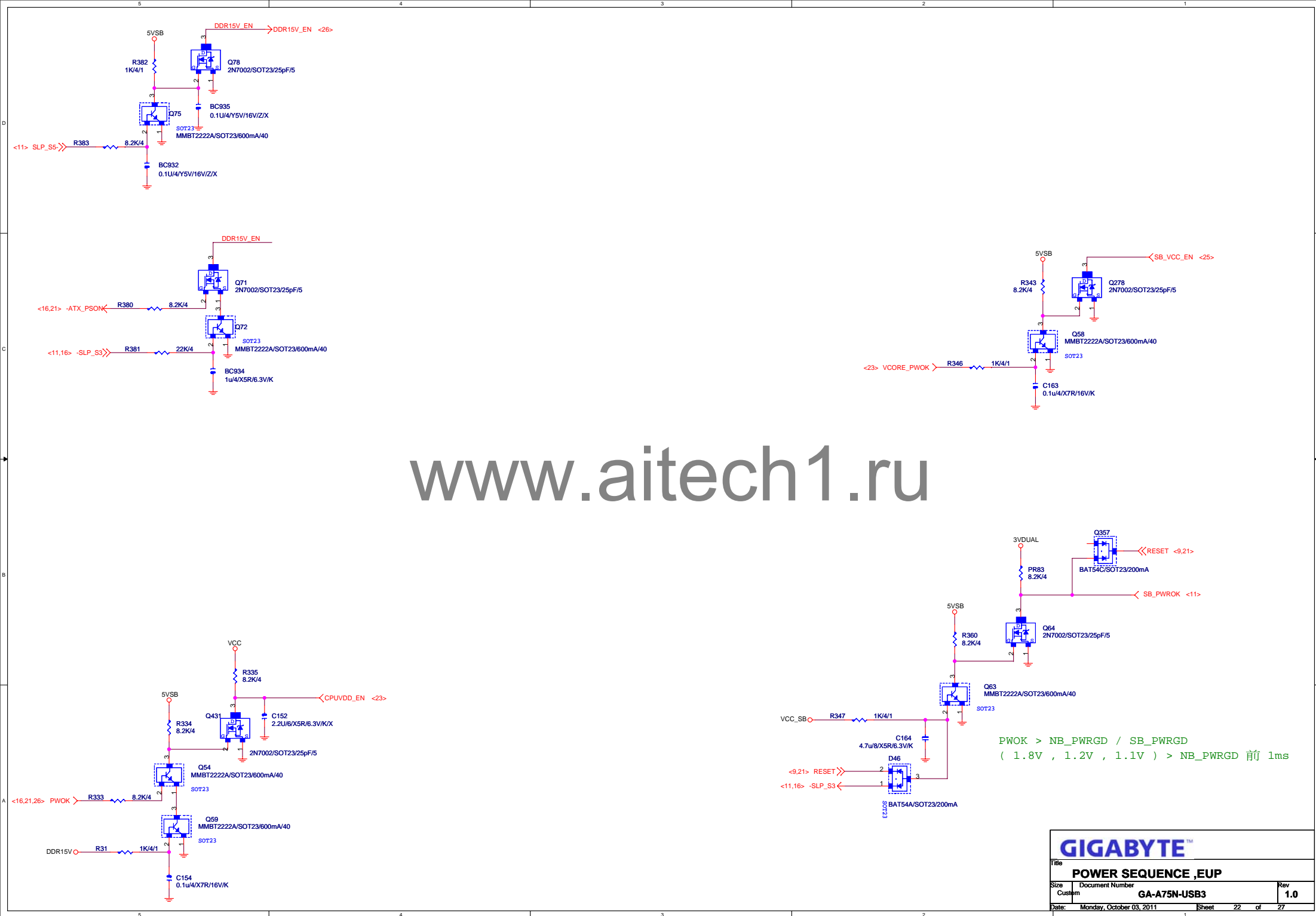
GIGABYTE™			
Title			
AUDIO JACK			
Size	Document Number	Rev	
Custom	GA-A75N-USB3	1.0	
Date:	Monday, October 03, 2011	Sheet	20 of 27

[illegible]

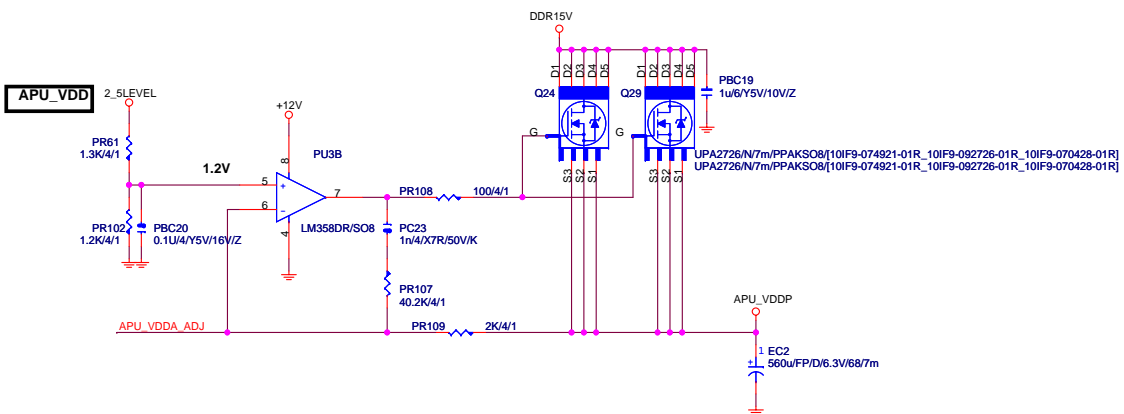
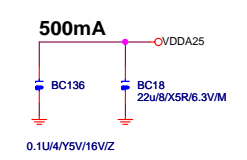
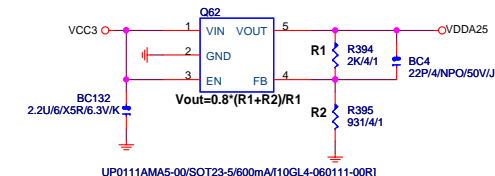
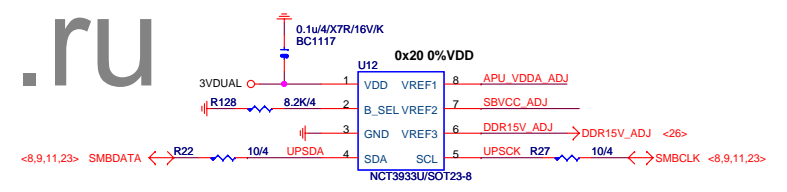
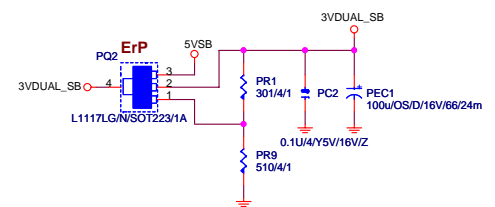
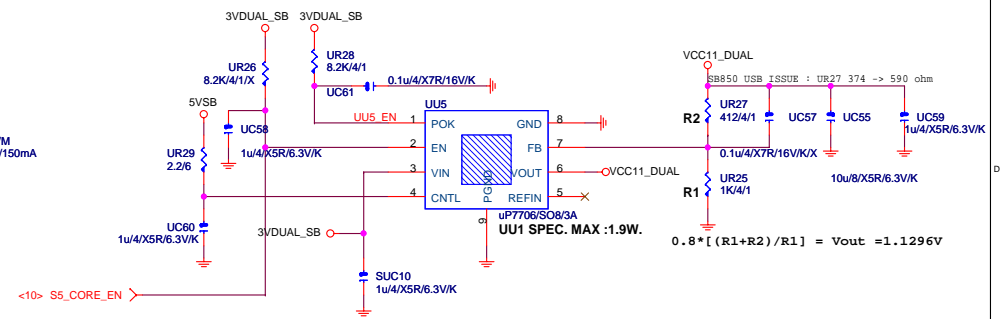
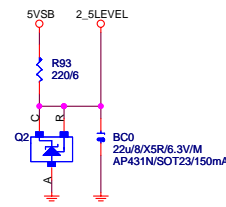
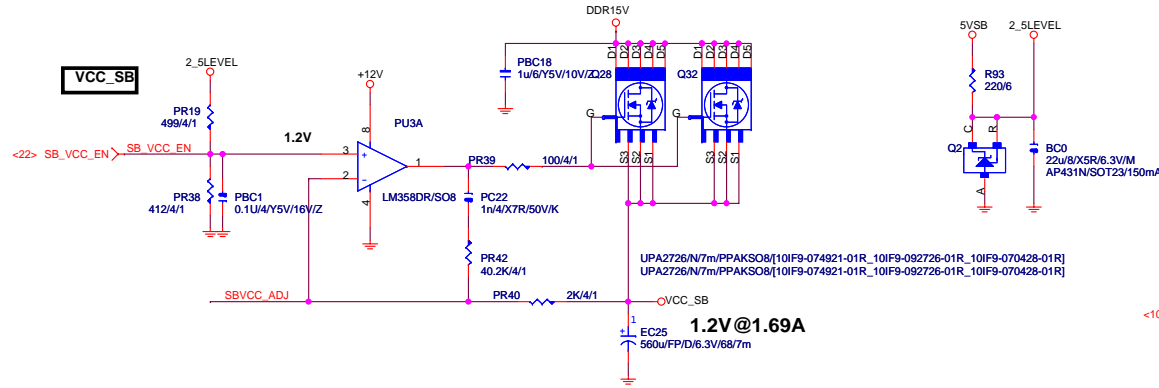
GIGABYTE™

Title			
ATX, FRONT PANEL			
Size	Document Number	Rev	
Custom	GA-A75N-USB3	1.0	
Date:	Monday, October 03, 2011	Sheet	21 of 27

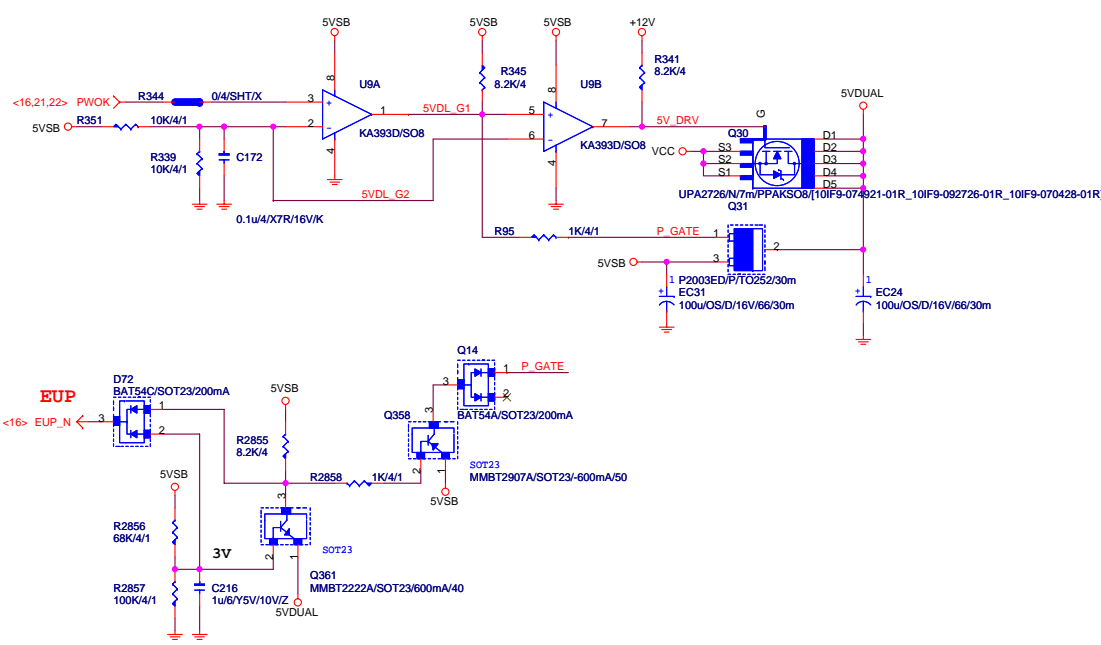
www.aitech1.ru



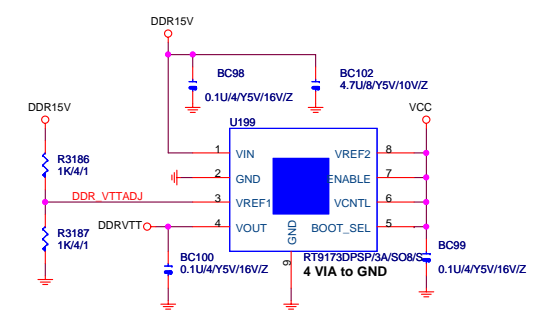
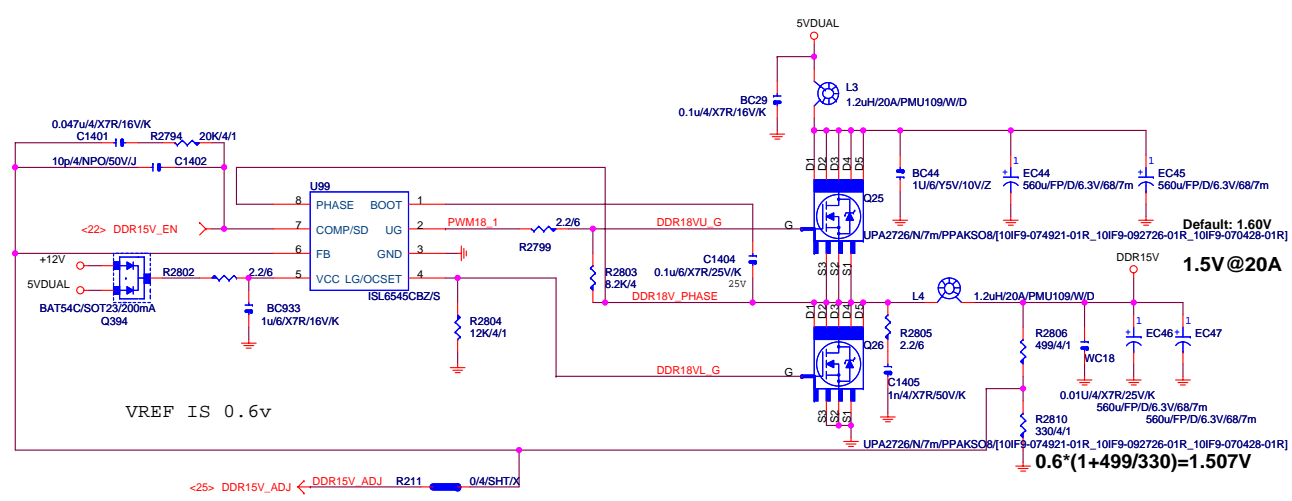
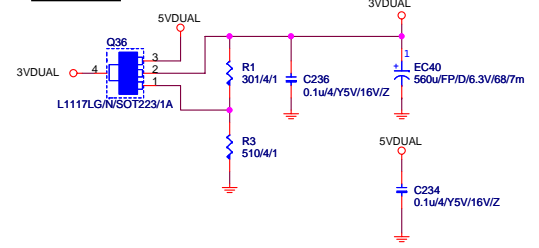
www.aitech1.ru



5VDUAL



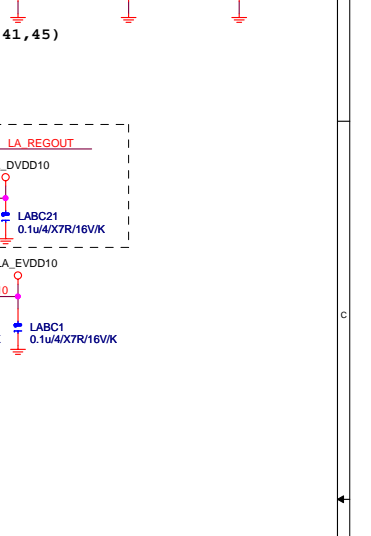
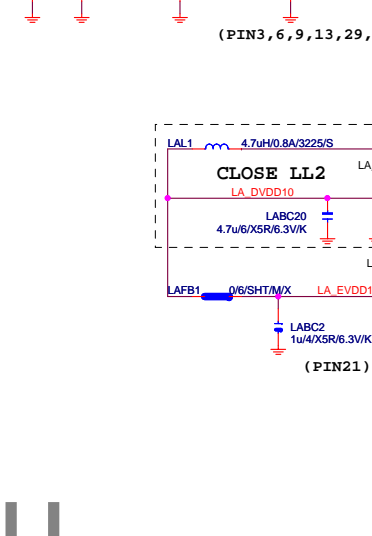
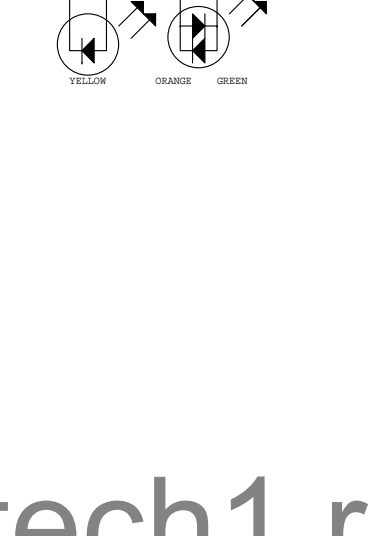
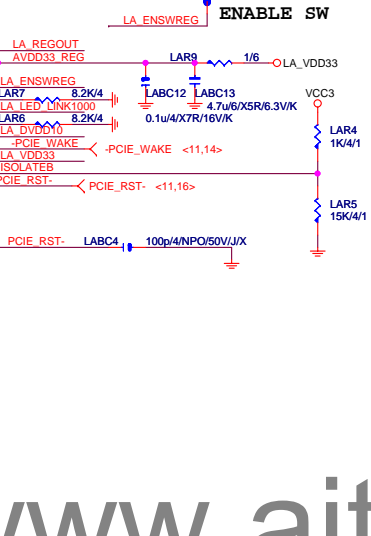
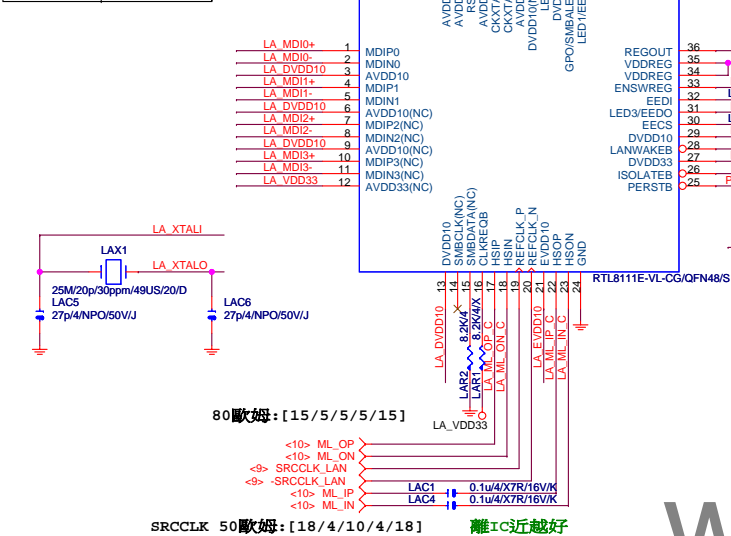
3VDUAL



PCIE-1G LAN

Power domain chart

	RTL8111E
AVDD33	3.3V
DVDD33	3.3V
VDDREG	3.3V
DVDD10	1.05V



www.aitech1.ru

USB LAN

