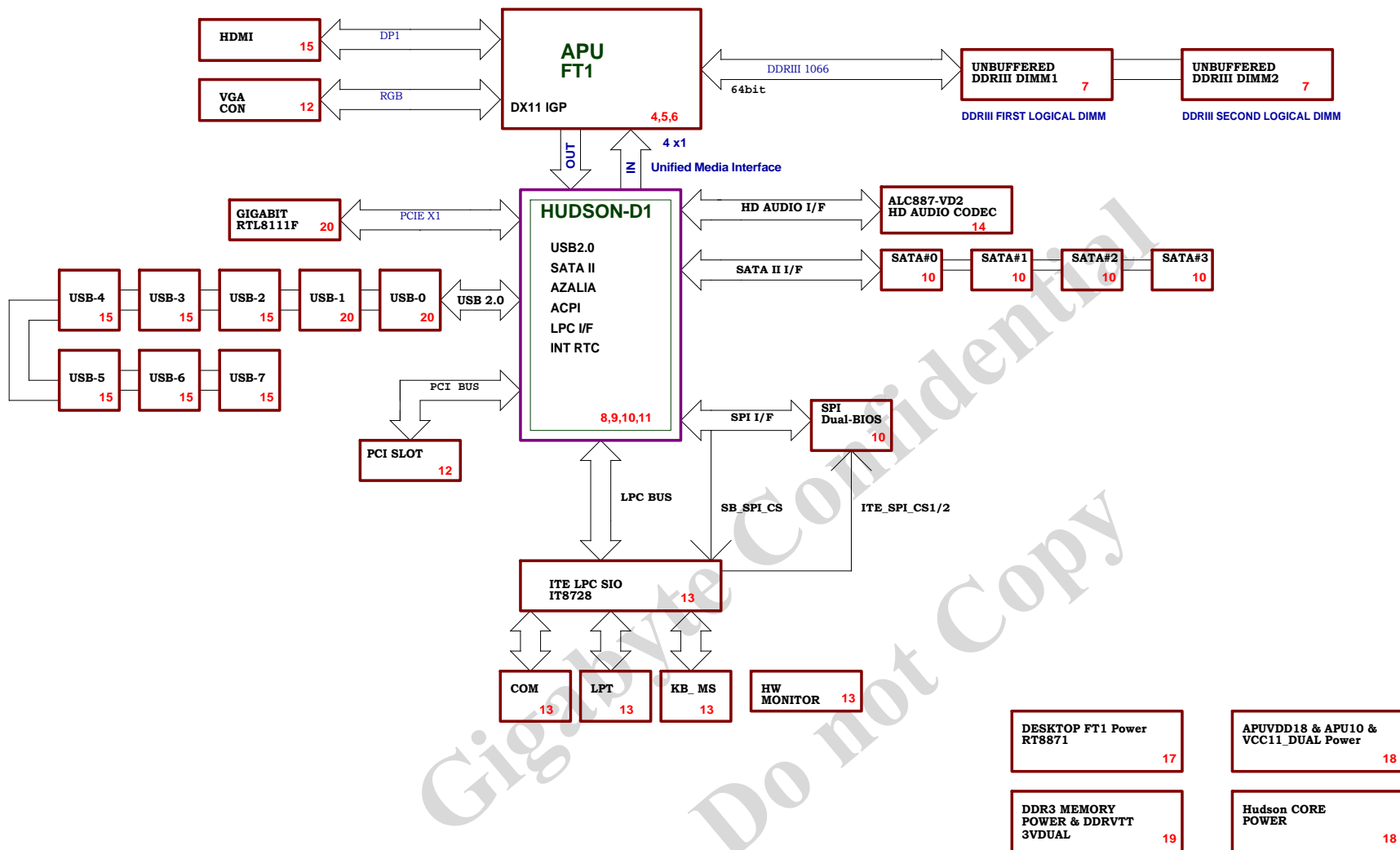


Revision : 3.0

01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	APU DDRIII, PCI_E
05	APU CONTROL
06	APU POWER & GND
07	DDRIII CHANNEL A
08	HUDSON PCIE/PCI/CPU/LPC/CLK
09	HUDSON ACPI/GPIO/USB/AUDIO
10	HUDSON SATA/IDE/HWM/SPI
11	HUDSON POWER & GND
12	PCI, VGA
13	ITE 8728 EX
14	ALC887-VD2 CODEC
15	LPT ,COM ,F_USB ,FAN ,USB_HDMI
16	ATX, F_PANEL, PWR SEQ
17	VCORE (PWM RT8871)
18	SB, APU18 V, APU10V, VCC11_DUAL POWER
19	DDR POWER , VCC18
20	LAN RTL8111F



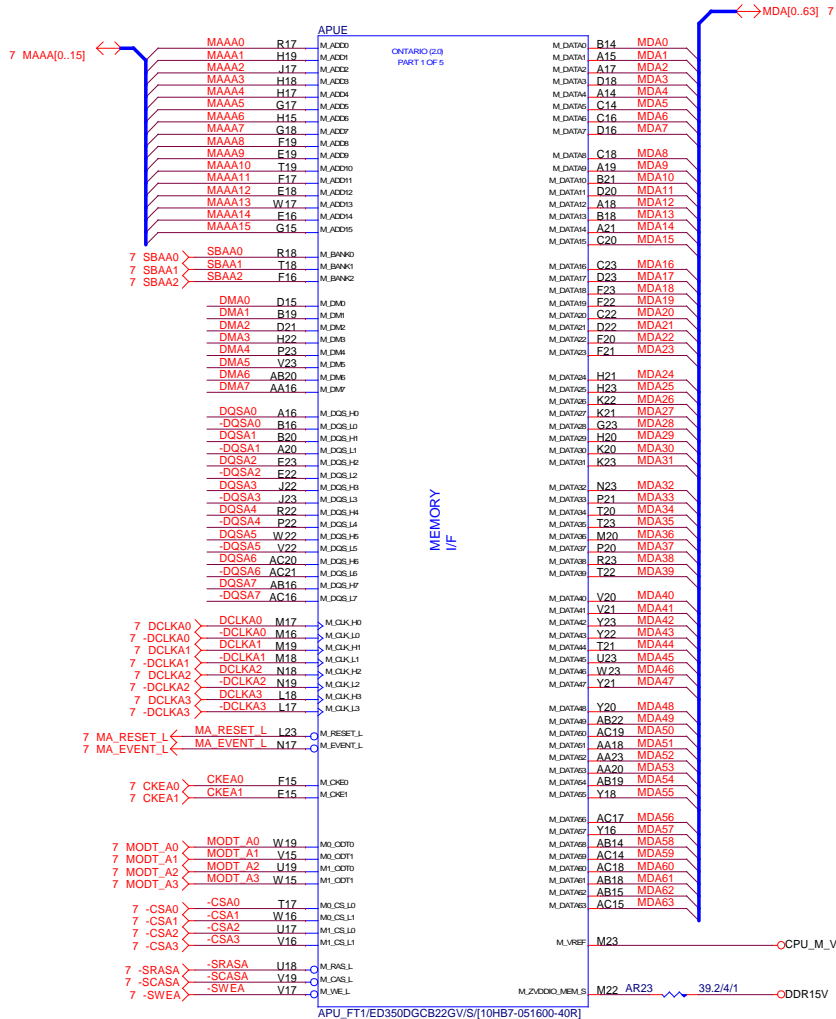
# FT1 CUSTOMER DESKTOP REFERENCE DESIGN



**GIGABYTE™**

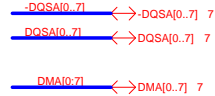
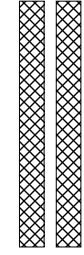
Title **BLOCK DIAGRAM**

Size	Document Number	Rev
Custom	<b>GA-E350N</b>	<b>3.0</b>
Date:	Thursday, September 20, 2012	Sheet 3 of 20

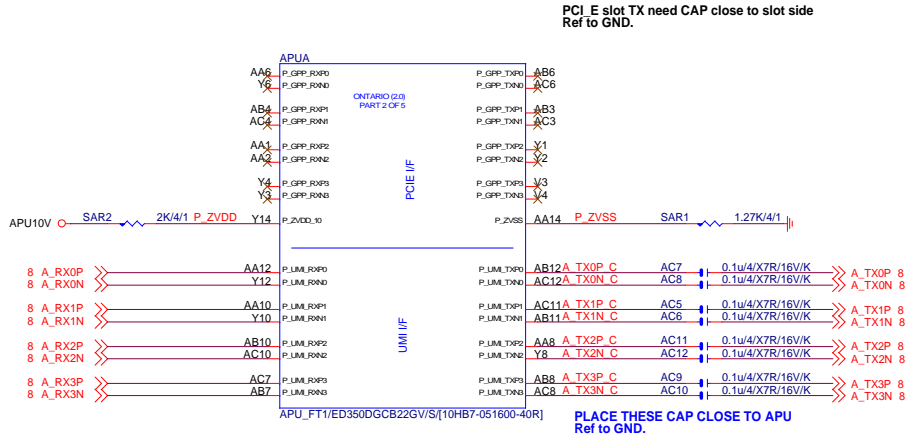
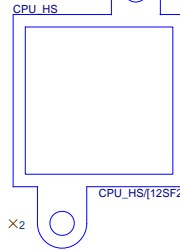


MEMORY I/F

MEM CHA

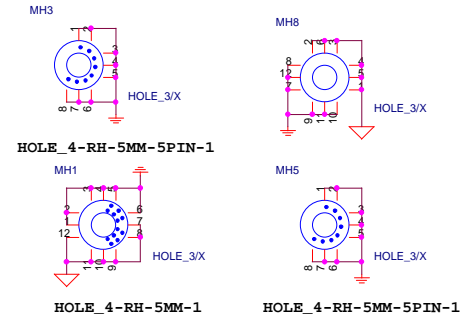
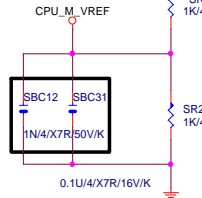


NB\_HEATSIN



CPUVREF

40 MILS WIDTH



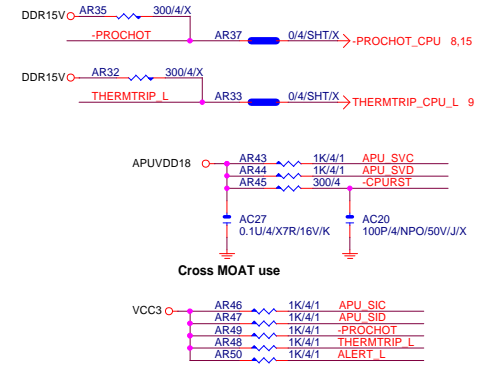
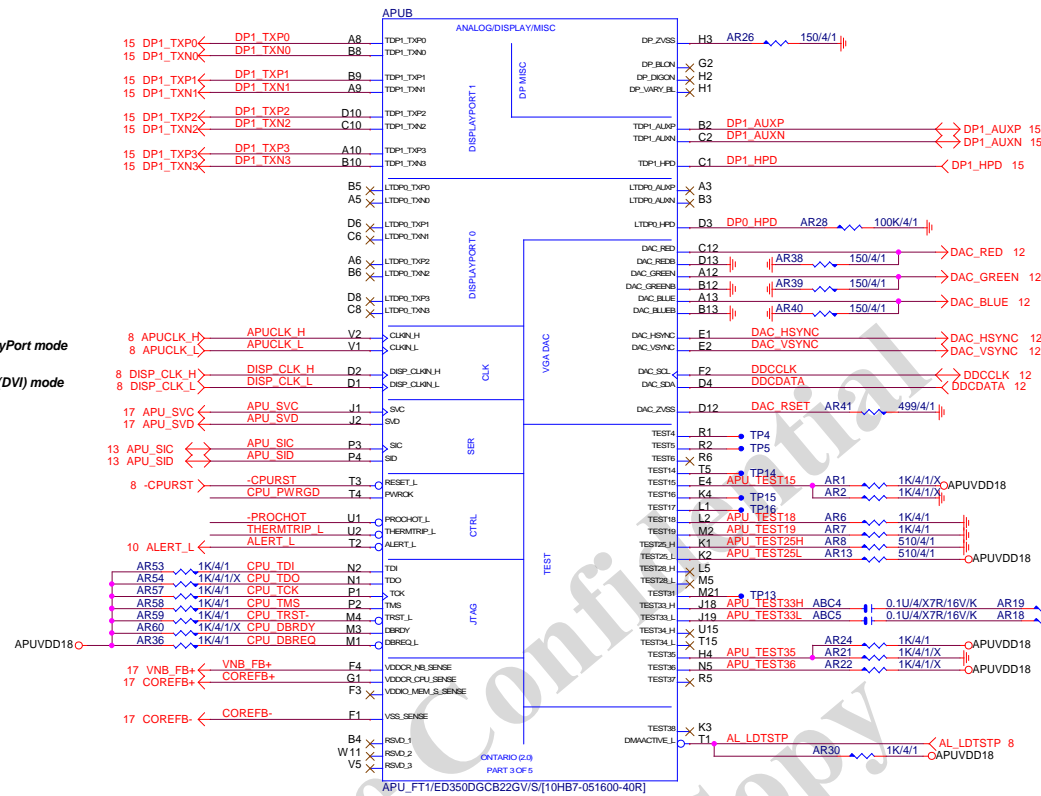
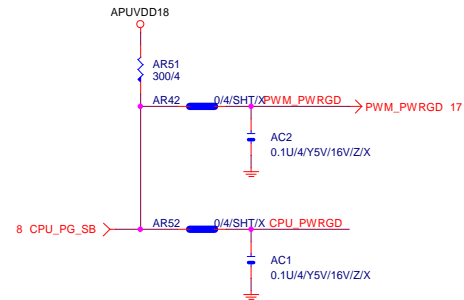
GIGABYTE™			
Title			
APU DDRIII, PCI_E			
Size	Document Number	Rev	
Custom	GA-E350N	3.0	
Date:	Thursday, September 20, 2012	Sheet	4 of 20

APU\_VDD\_RUN = VCORE  
 CPU\_VDDA\_RUN = VDDA25  
 VLDT\_RUN = VCC12\_HT  
 APU\_VDDIO\_SUS = DDR15V  
 CPU\_VDDR = CPU\_VDDR12

VLDT\_A = VCC12\_HT  
 VLDT\_B = HT12B

Input clock for DisplayPort mode

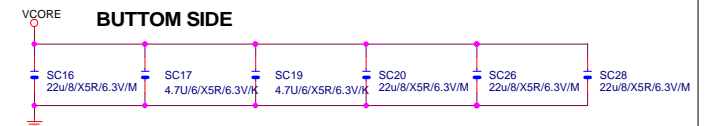
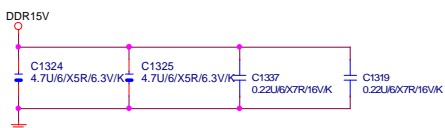
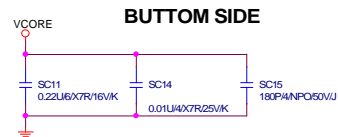
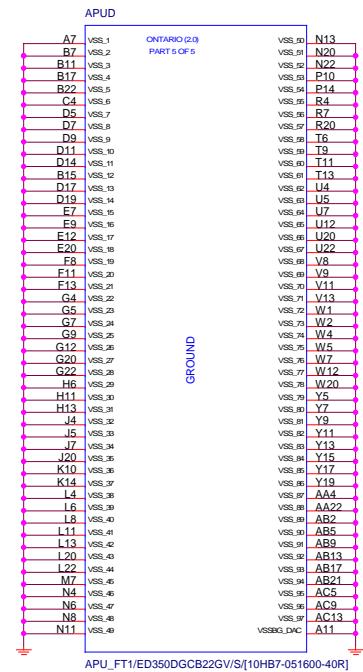
Input clock for TMDS (DVI) mode

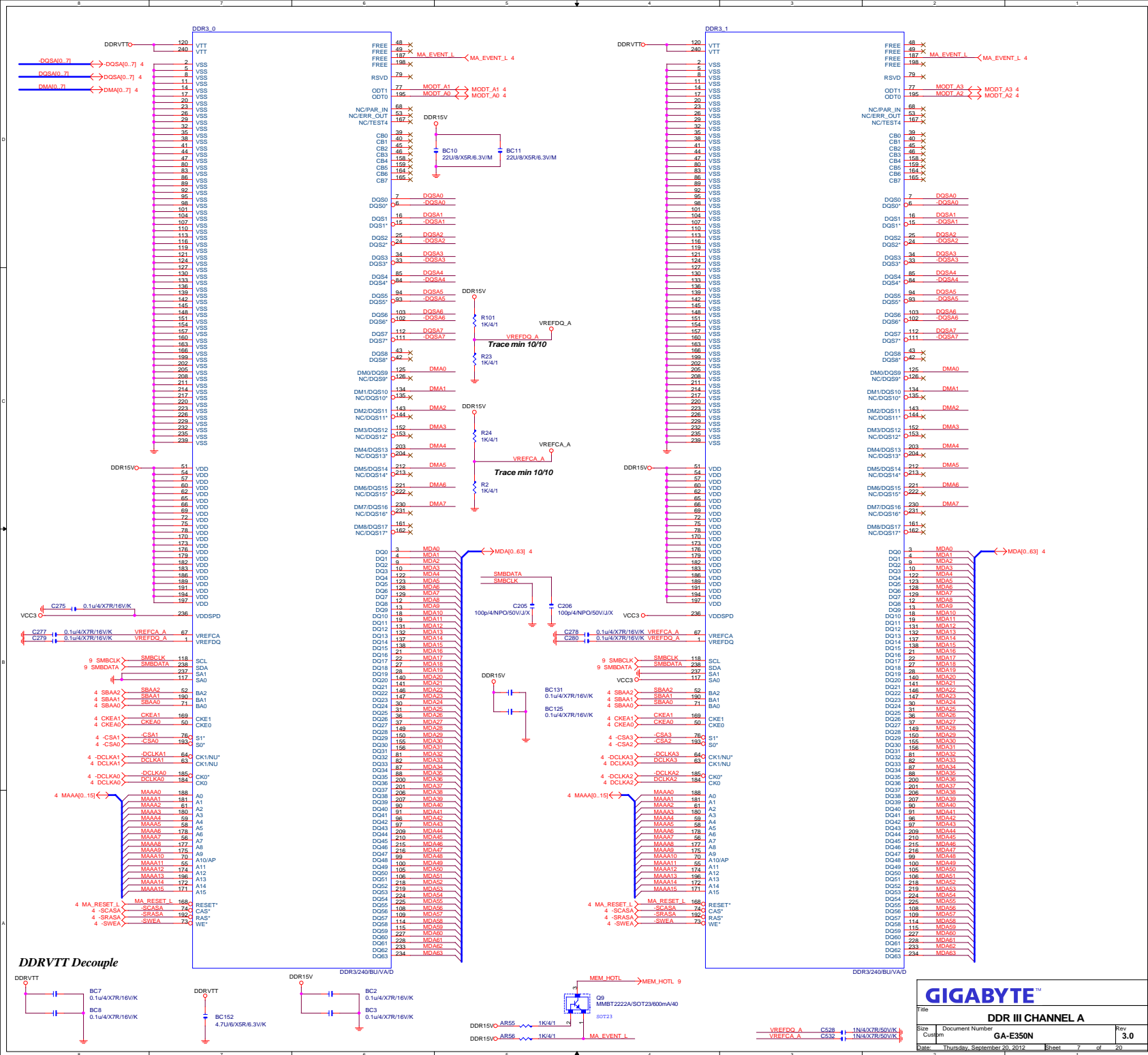


TEST35: high=>HDMI enable,  
low=>HDMI disable.

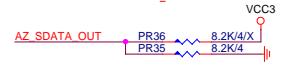
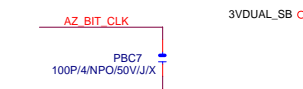
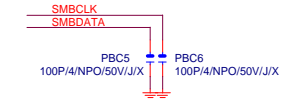
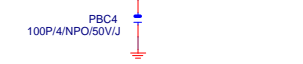
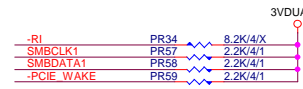
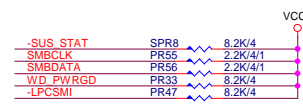
**GIGABYTE**

Title			APU CONTROL		
Size	Custom	Document Number	GA-E350N		Rev
Date:		Thursday, September 20, 2012	Sheet	5	of 20

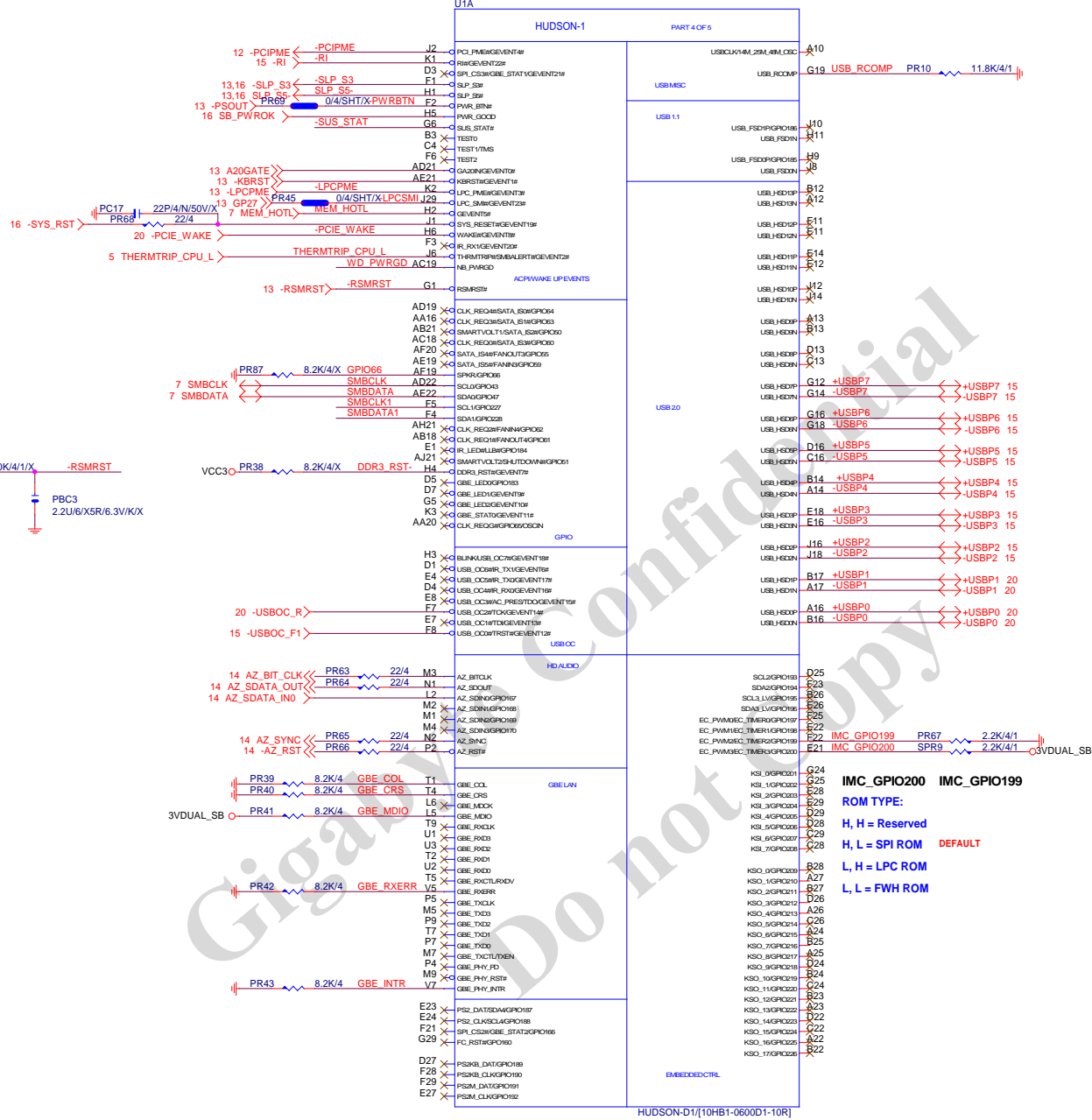









Low: Performance Mode(D),  
Up: Low Power Mode.

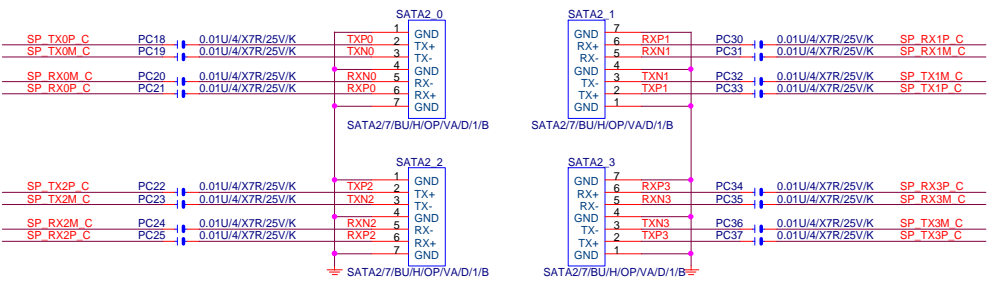
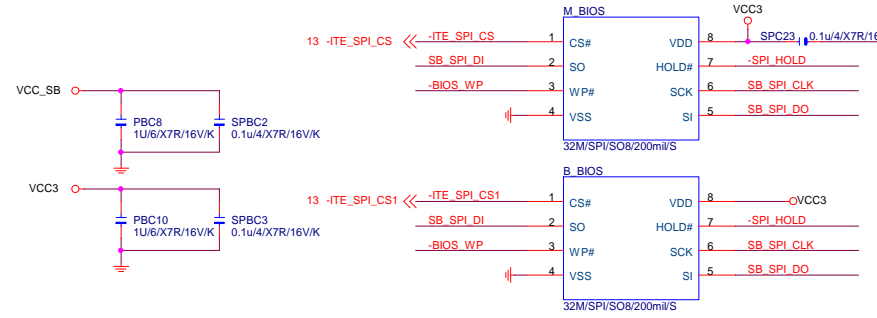
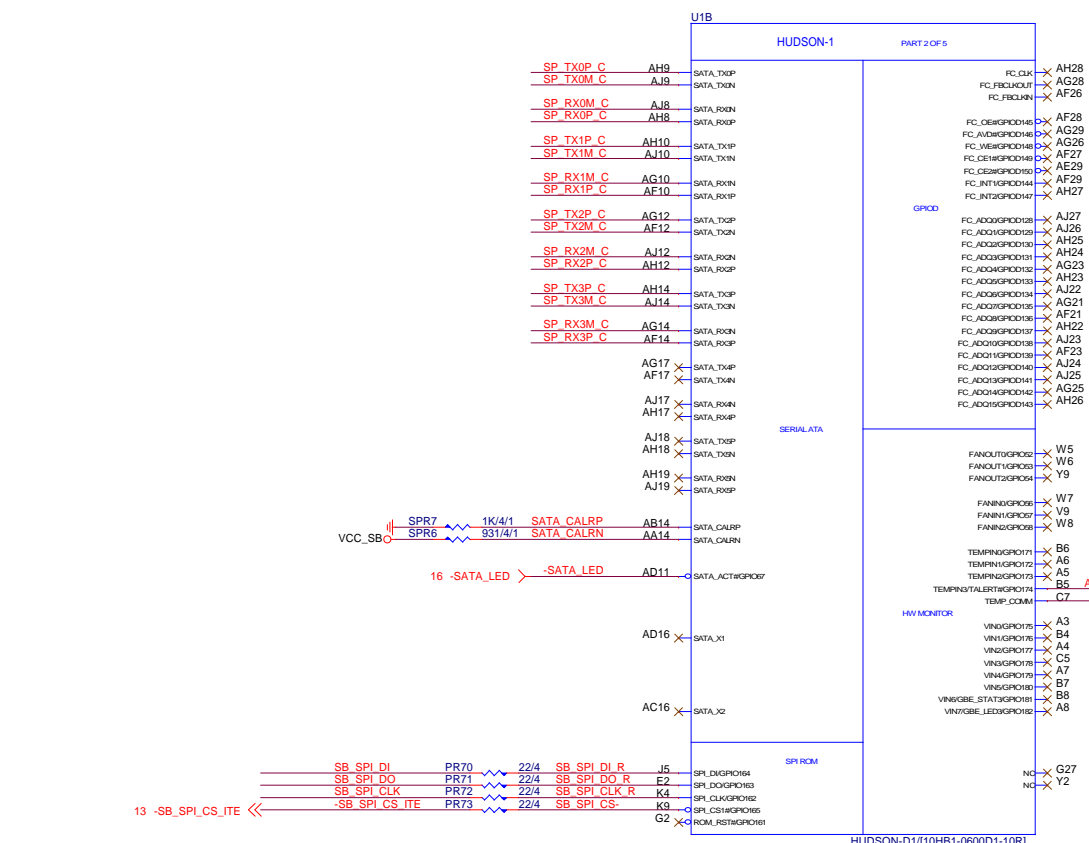


USB11	FRONT PANEL
USB10	FRONT PANEL
USB9	FRONT PANEL
USB8	FRONT PANEL
USB7	FRONT PANEL
USB6	FRONT PANEL
USB5	FRONT PANEL
USB4	FRONT PANEL
USB3	REAR PANEL
USB2	REAR PANEL
USB1	REAR PANEL
USB0	REAR PANEL

either HWM inputs or PWR\_GD signals  
can be used for power-up sequencer

 **PLACE SATA\_CAL RES VERY CLOSE TO BALL OF U600**

**NOTE:**  
R650 IS 1K 1% FOR 25MHz XTAL, 4.99K 1% FOR 100MHz INTERNAL CLOCK

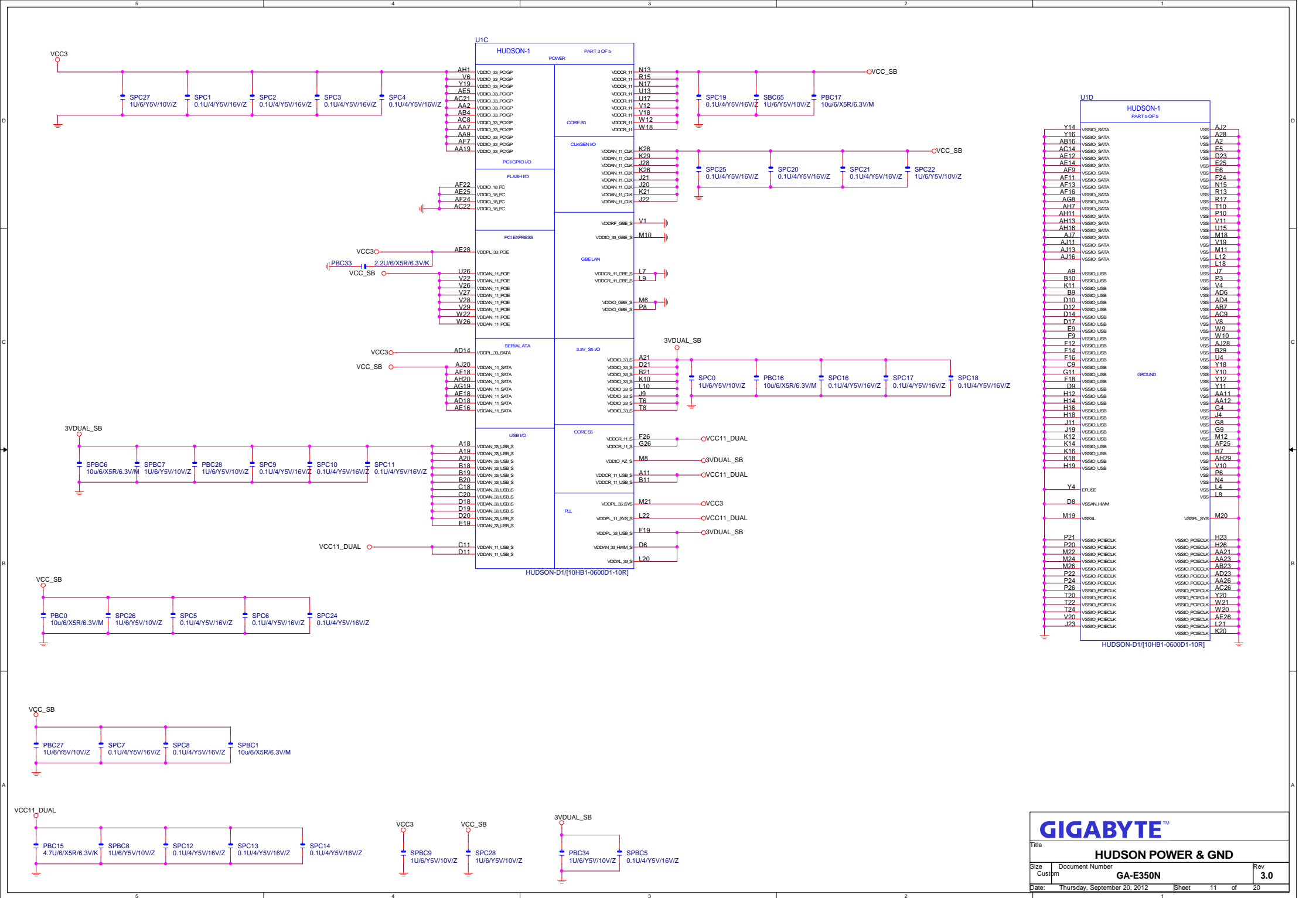


**GIGABYTE**™

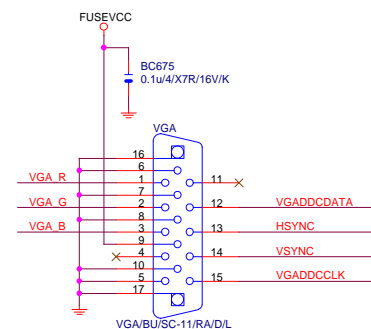
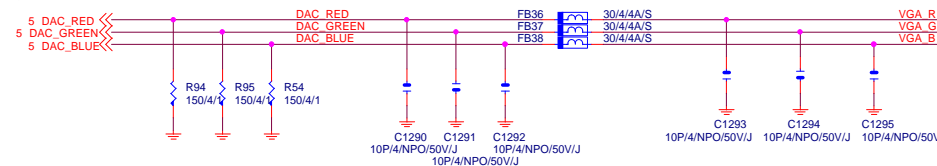
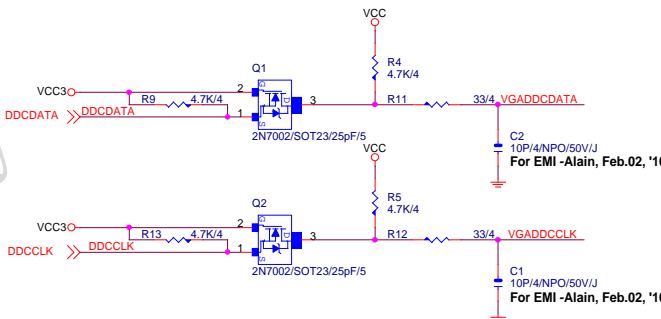
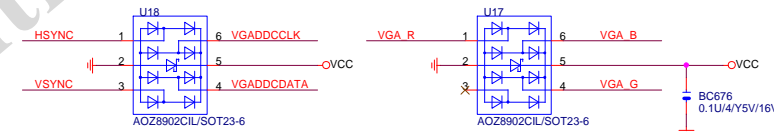
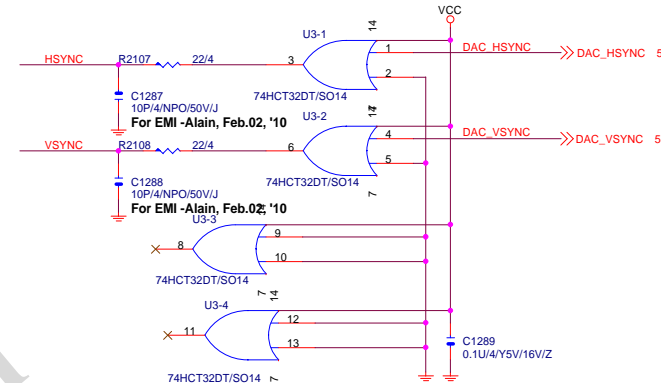
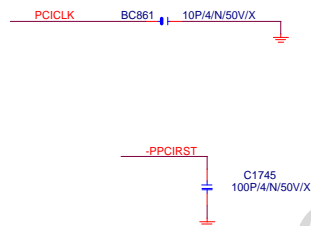
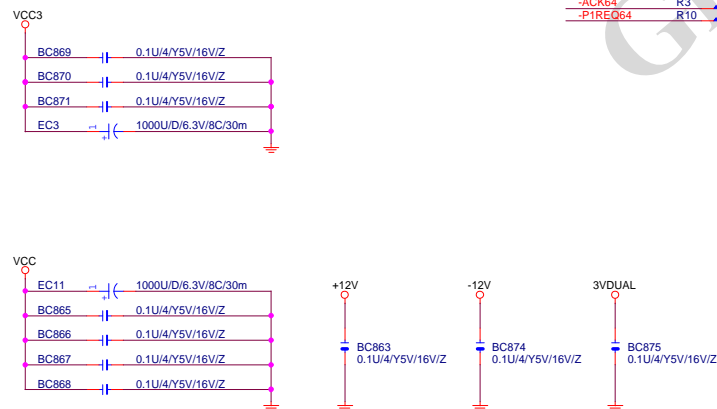
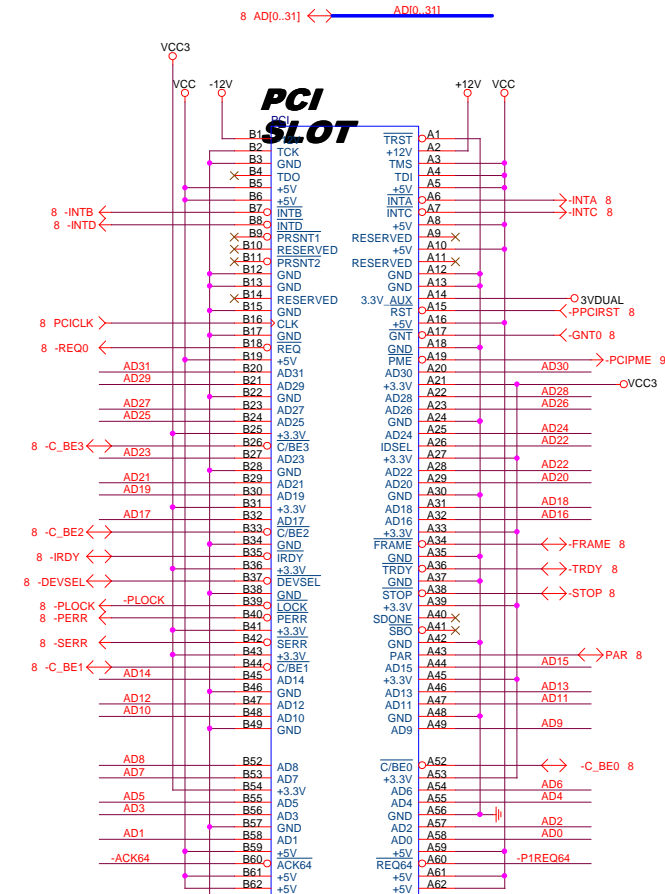
Title: **HUDSON SATA/IDE/HWM/SPI**

Size: Custom  
Document Number: **GA-E350N**  
Rev: **3.0**

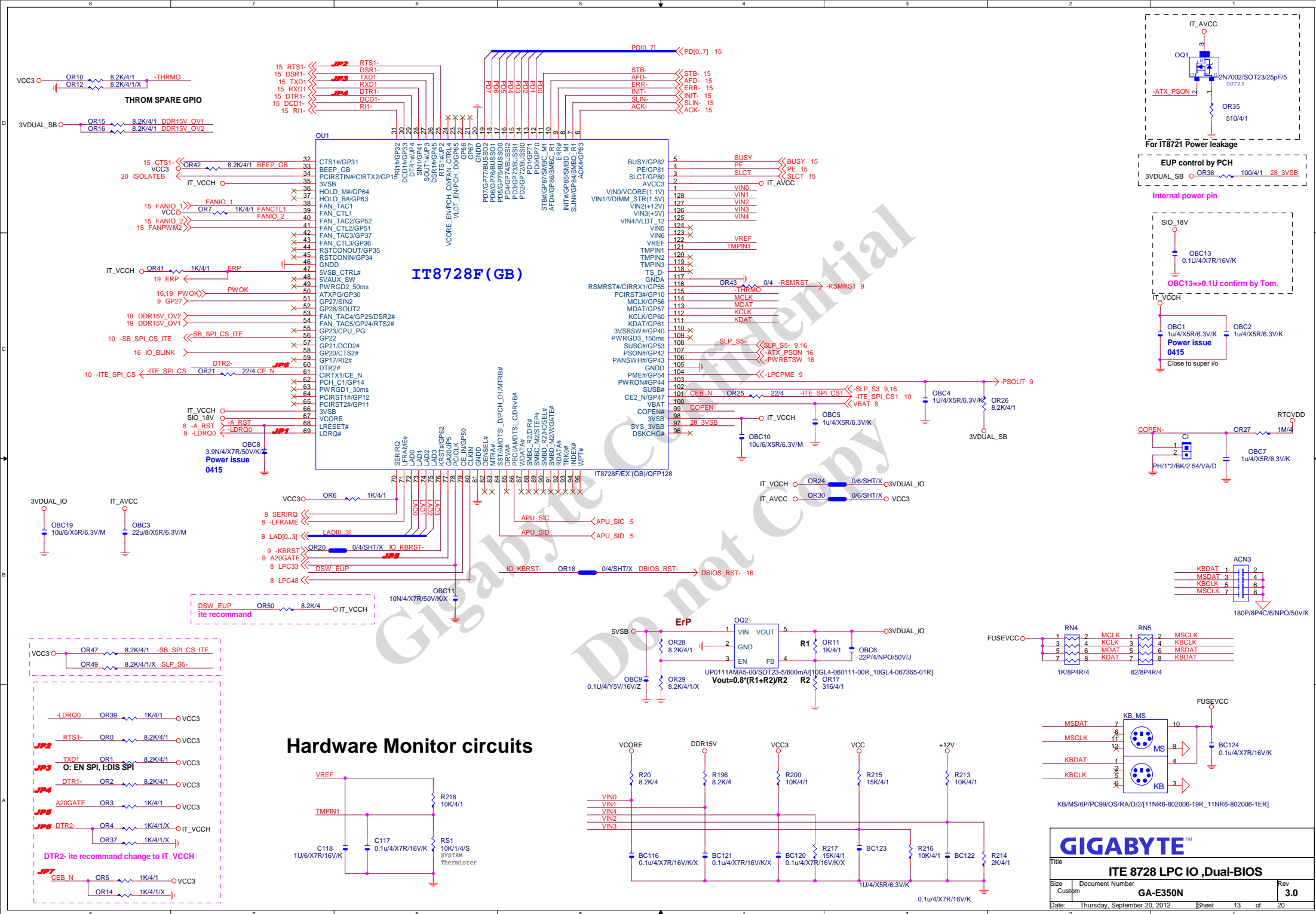
Date: Thursday, September 20, 2012  
Sheet: 10 of 20



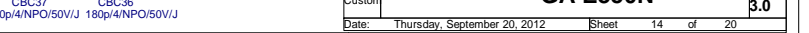
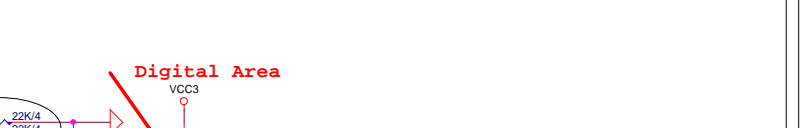
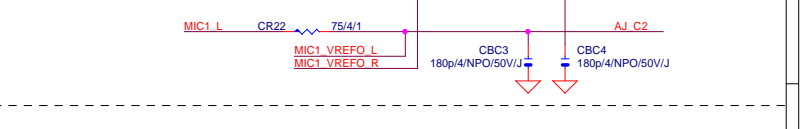
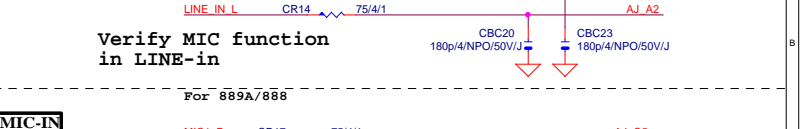
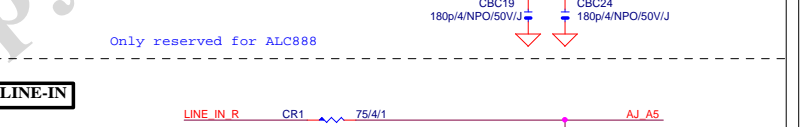
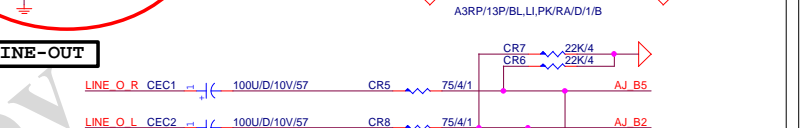
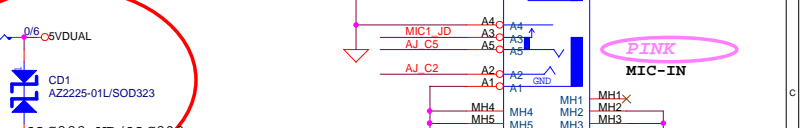
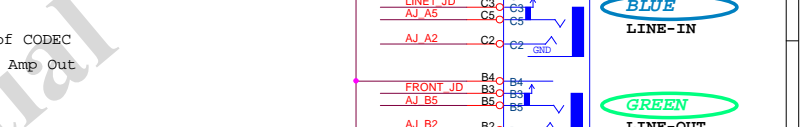
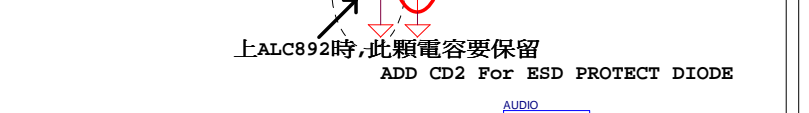
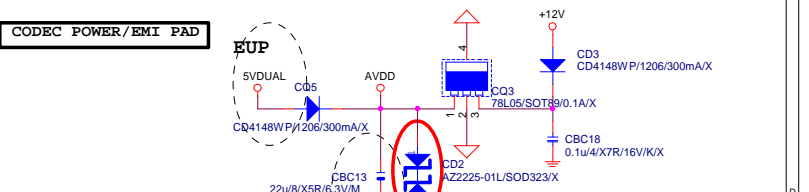
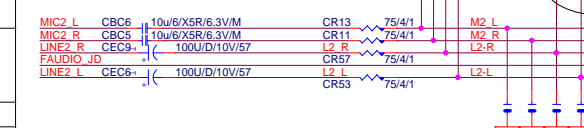
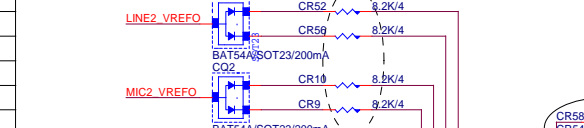
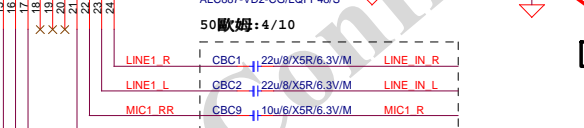
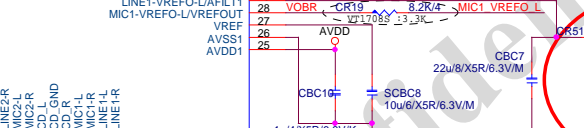
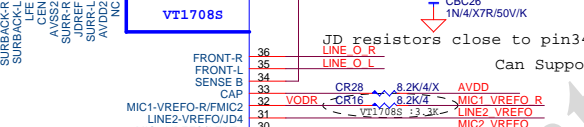
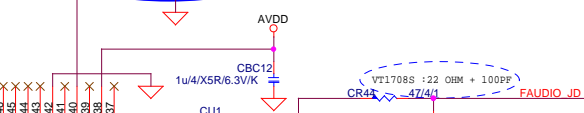
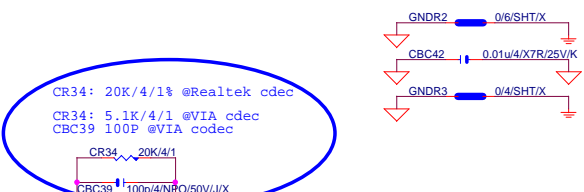
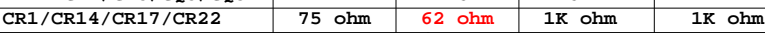
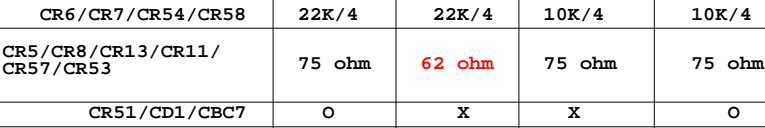
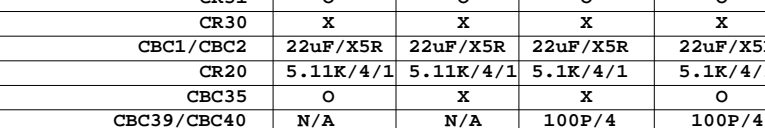
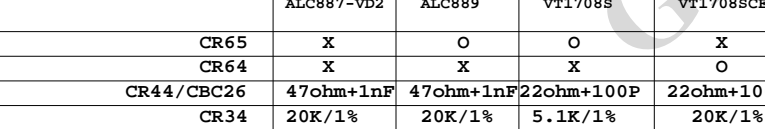
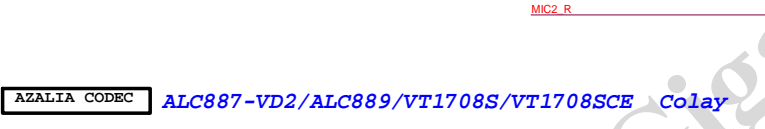
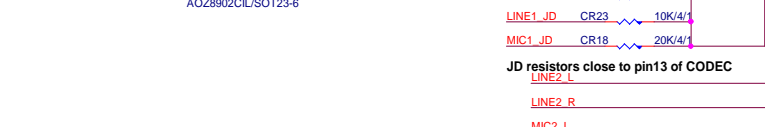
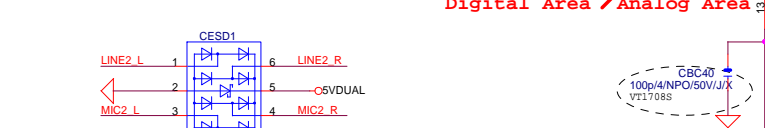
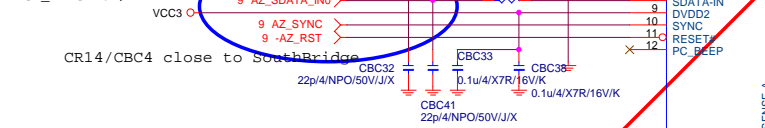
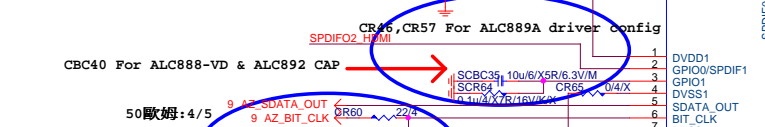
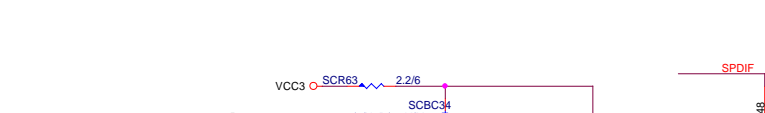
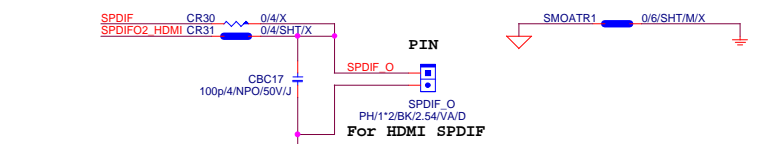
# PCI SLOT



GIGABYTE™		
Title		
PCI, VGA		
Size	Document Number	Rev
Custom	GA-E350N	3.0
Date:	Thursday, September 20, 2012	Sheet 12 of 20



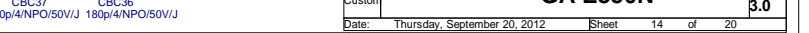
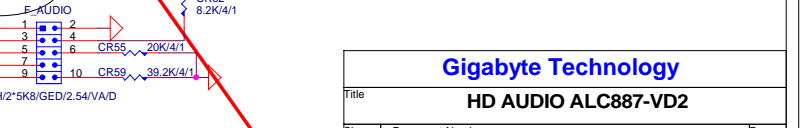
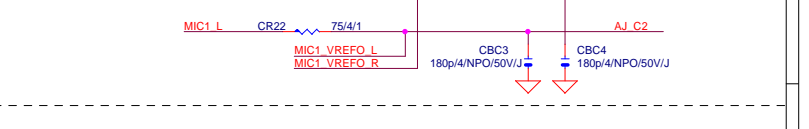
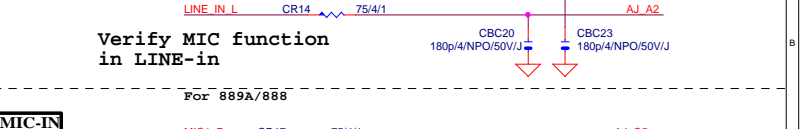
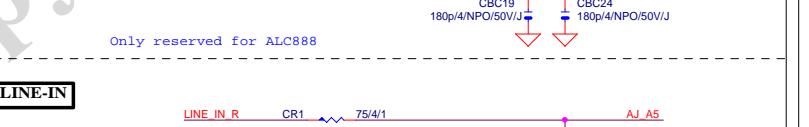
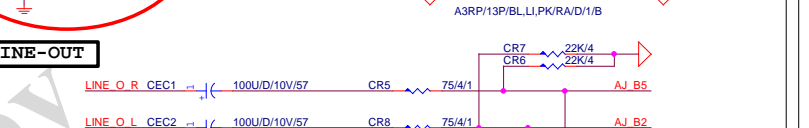
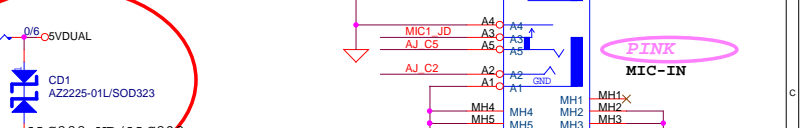
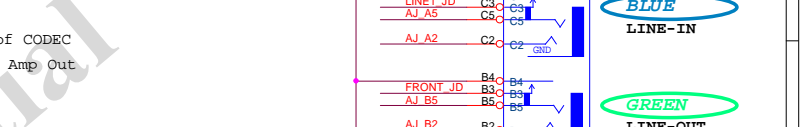
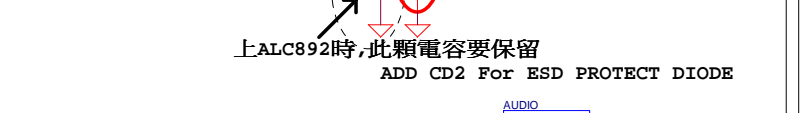
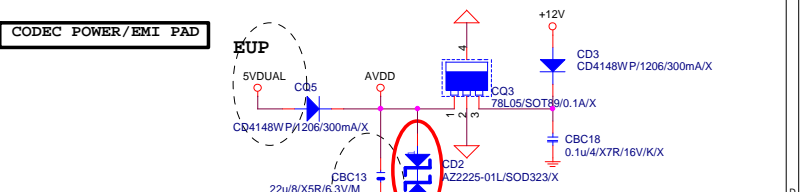
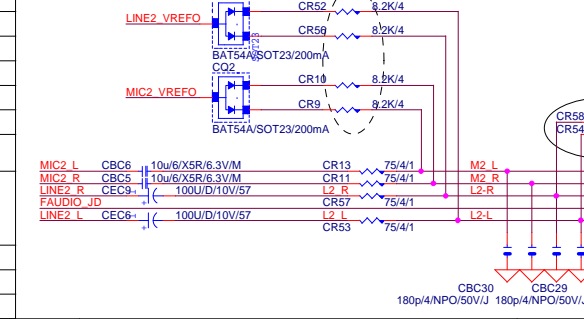
SPDIF OUT



AZALIA CODEC ALC887-VD2/ALC889/VT1708S/VT1708SCE Colay

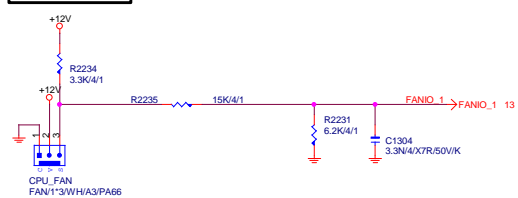
	ALC887-VD2	ALC889	VT1708S	VT1708SCE
CR65	X	O	O	X
CR64	X	X	X	O
CR44/CBC26	47ohm+1nF	47ohm+1nF	22ohm+100P	22ohm+100P
CR34	20K/1%	20K/1%	5.1K/1%	20K/1%
CR31	O	O	O	O
CR30	X	X	X	X
CBC1/CBC2	22uF/X5R	22uF/X5R	22uF/X5R	22uF/X5R
CR20	5.11K/4/1	5.11K/4/1	5.1K/4/1	5.1K/4/1
CBC35	O	X	X	O
CBC39/CBC40	N/A	N/A	100P/4	100P/4
CR6/CR7/CR54/CR58	22K/4	22K/4	10K/4	10K/4
CR5/CR8/CR13/CR11/CR57/CR53	75 ohm	62 ohm	75 ohm	75 ohm
CR51/CD1/CBC7	O	X	X	O
CD2/CD3/CQ3/CQ5	X	O	O	X
CR1/CR14/CR17/CR22	75 ohm	62 ohm	1K ohm	1K ohm

AZALIA FRONT PANEL

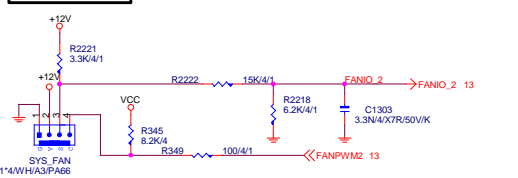


Gigabyte Technology		
HD AUDIO ALC887-VD2		
Title	Document Number	Rev
	GA-E350N	3.0
Size	Custom	
Date:	Thursday, September 20, 2012	Sheet 14 of 20

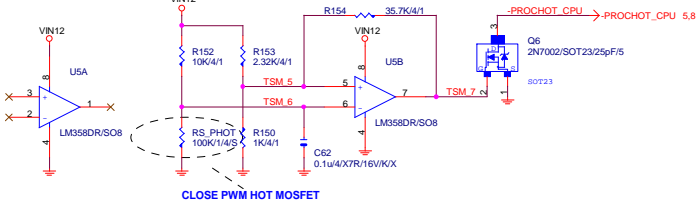
# CPU FAN



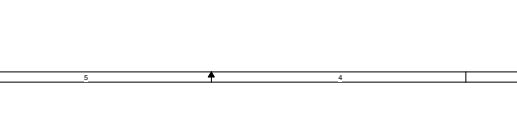
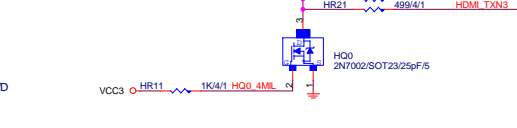
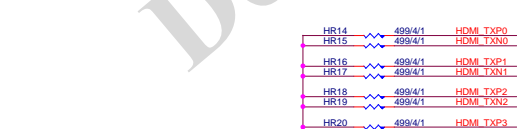
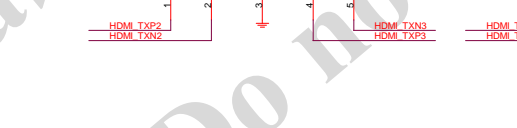
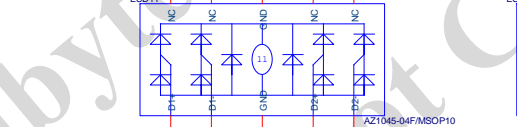
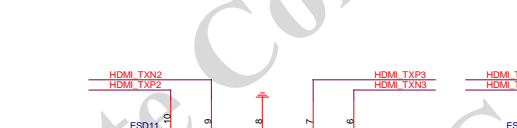
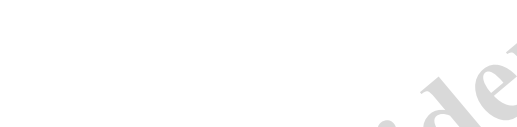
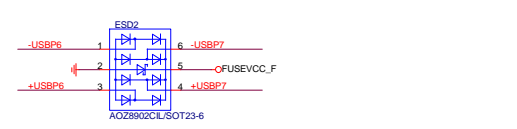
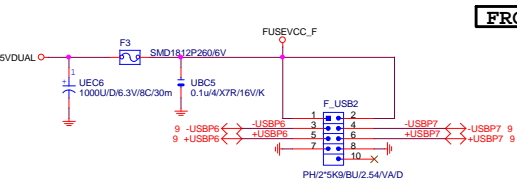
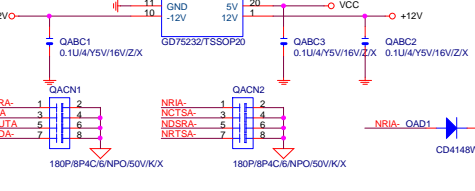
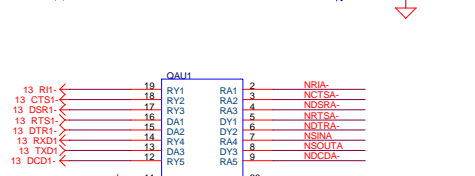
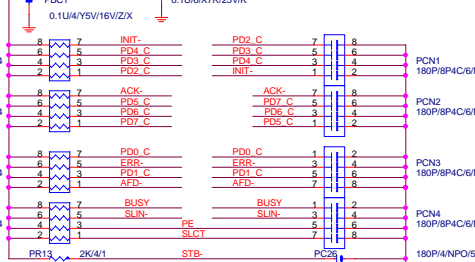
# SYSTEM FAN



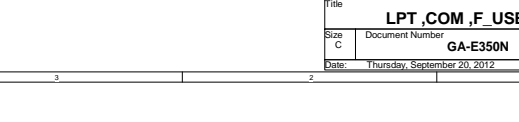
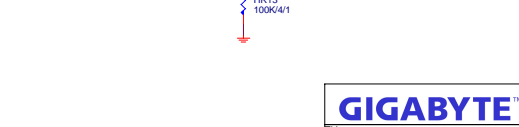
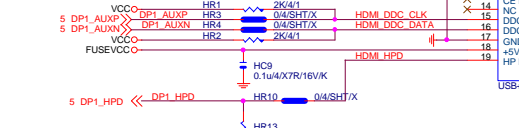
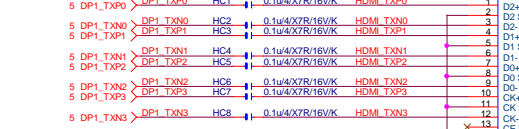
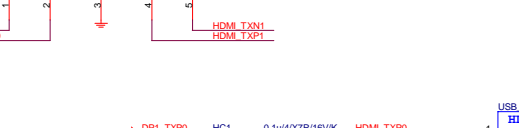
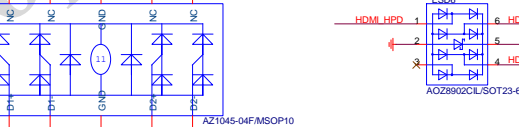
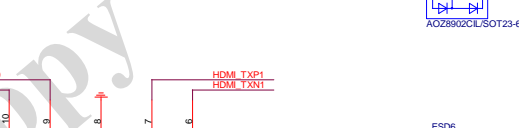
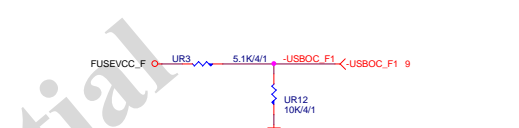
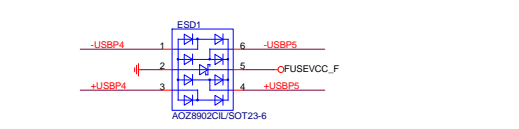
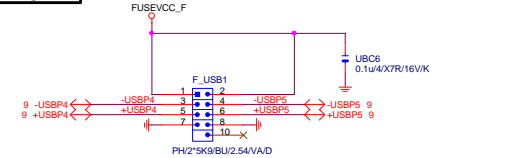
# RS\_PHOT CLOSE CPU VR MOSFET



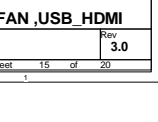
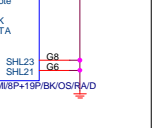
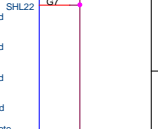
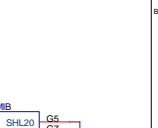
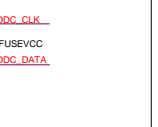
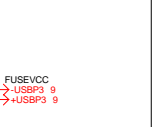
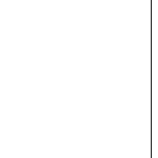
# CLOSE PWM HOT MOSFET

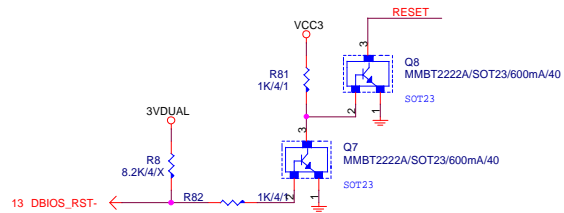
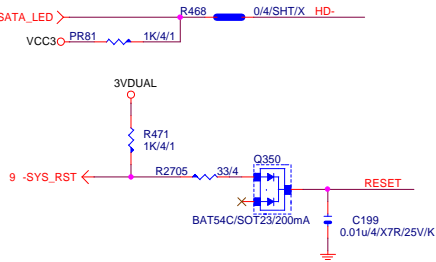
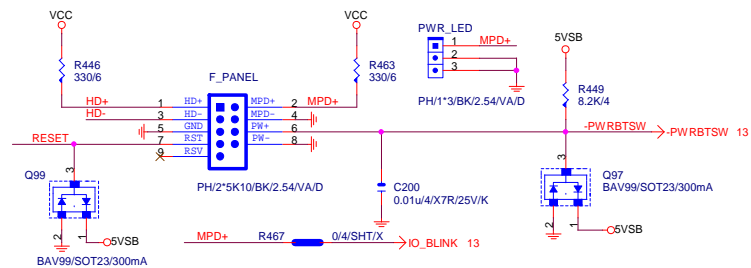


# FRONT USB

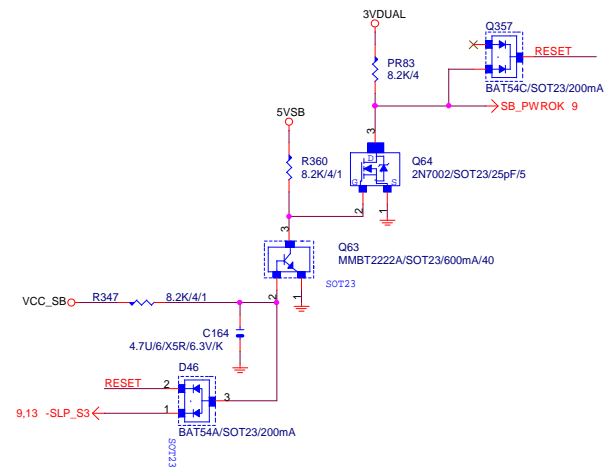
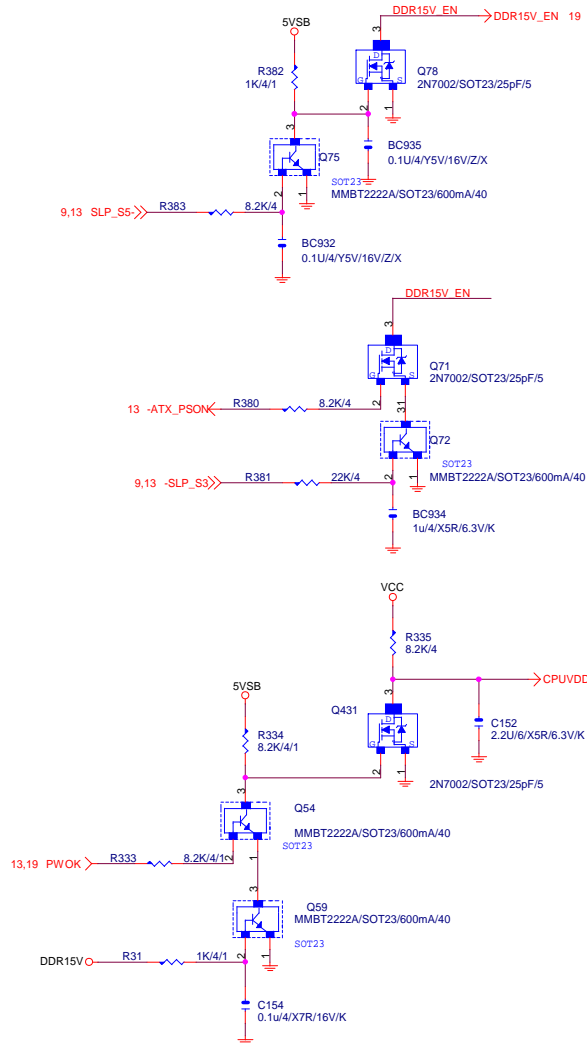
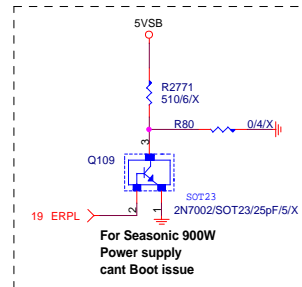
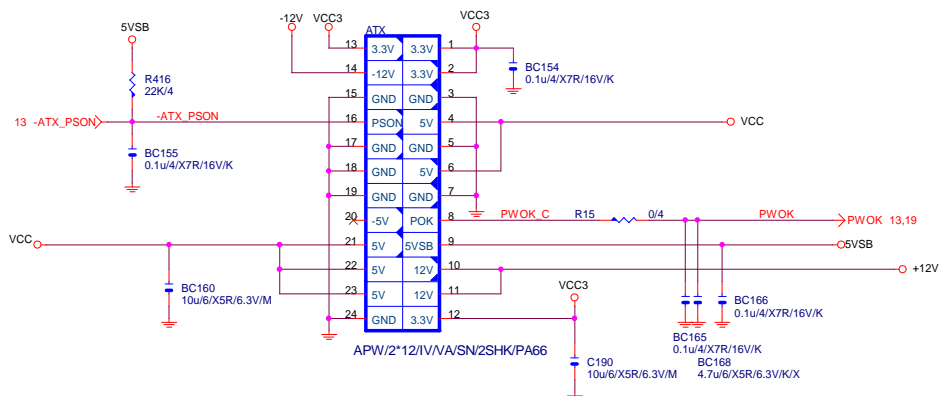


# FRONT USB





## ATX POWER CONNECTOR



**GIGABYTE**

Title: **ATX, F\_PANEL, PWR SEQ**

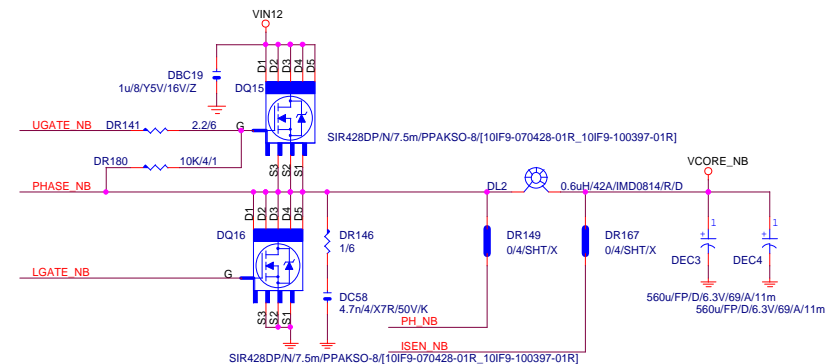
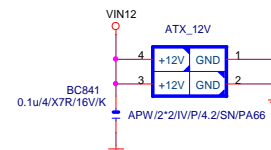
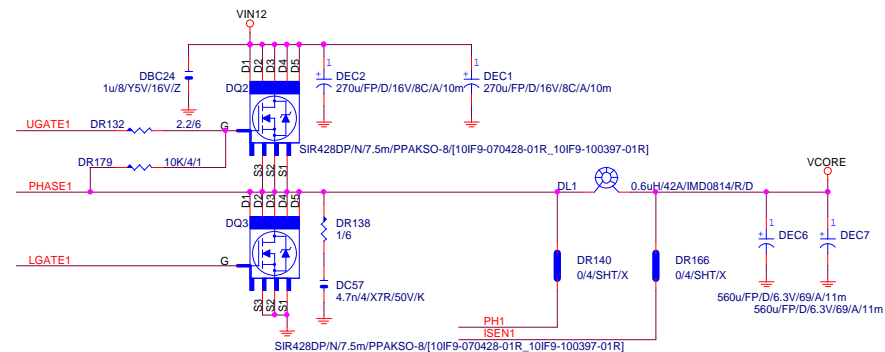
Size: Custom  
Document Number: **GA-E350N**  
Rev: **3.0**

Date: Thursday, September 20, 2012 Sheet 16 of 20

```

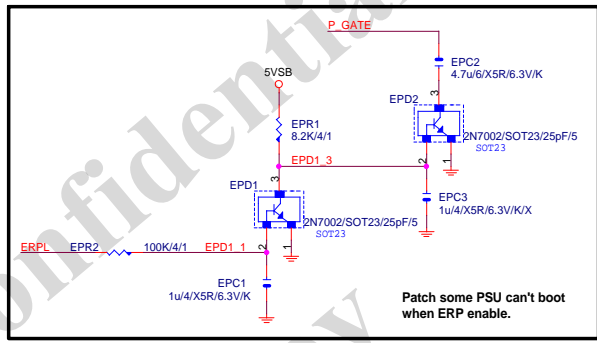
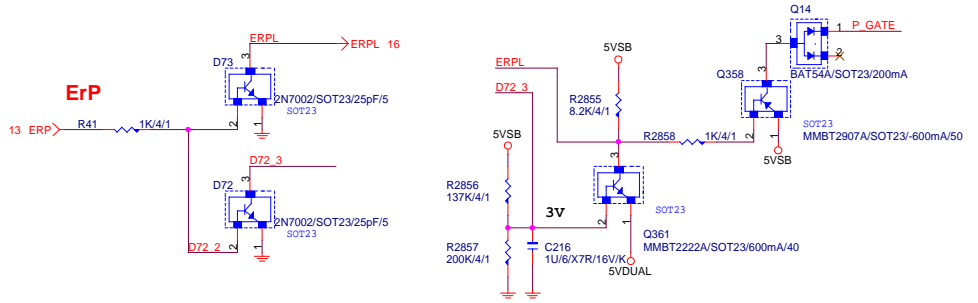
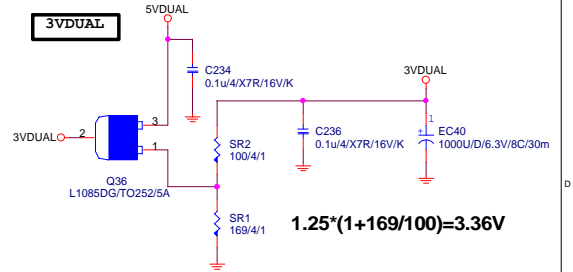
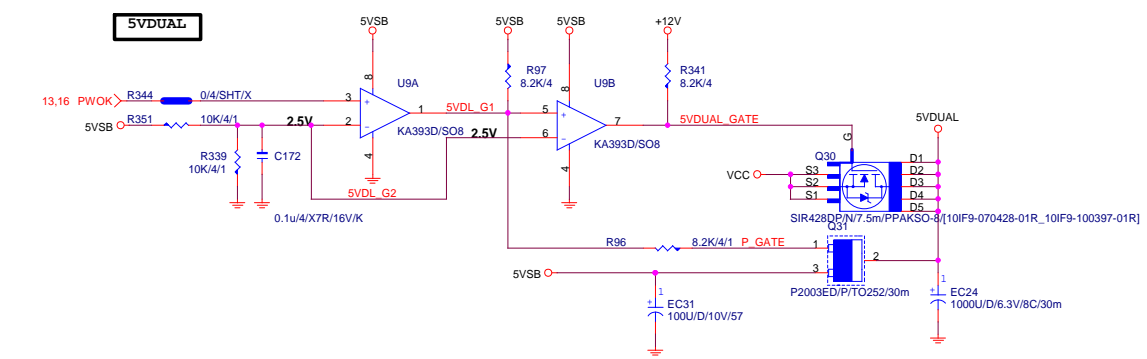
AMD FM1
VCORE      LL=1.3m ohm
VCORE NB   LL=4m ohm

```

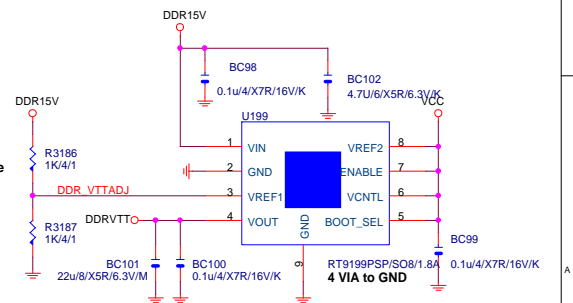
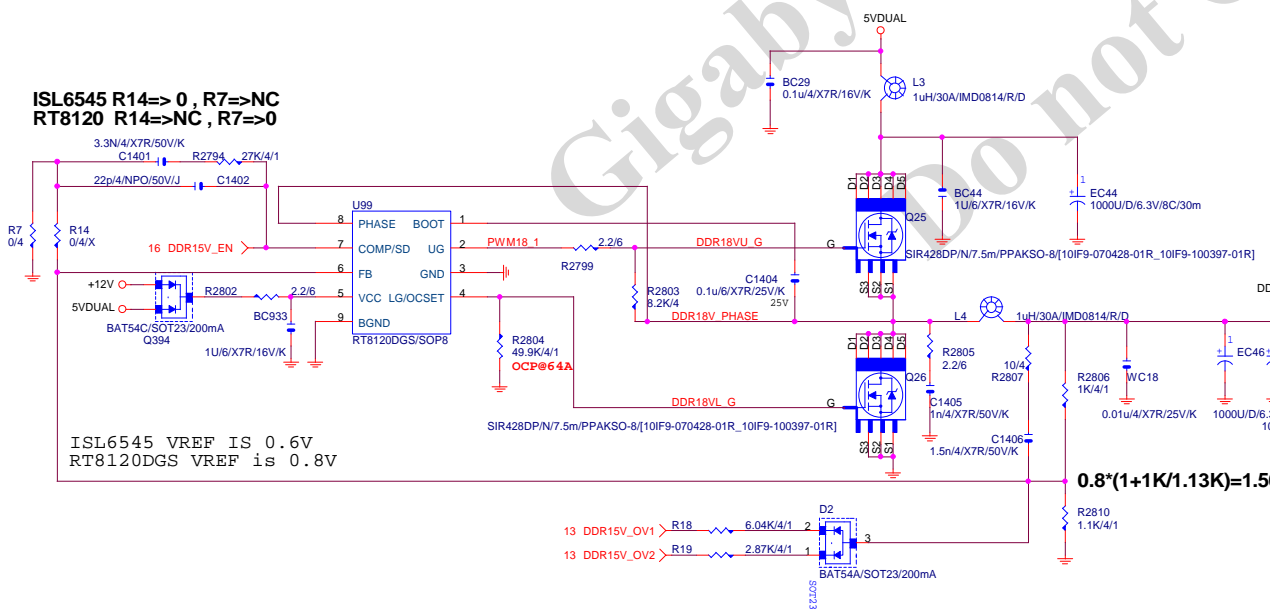


5 COREFB  
OCP SET : 38.68A  
DR72 DC27 51/4/1 680P/4/X7R  
DR74 2K/4/1  
OV : 20mV/Step



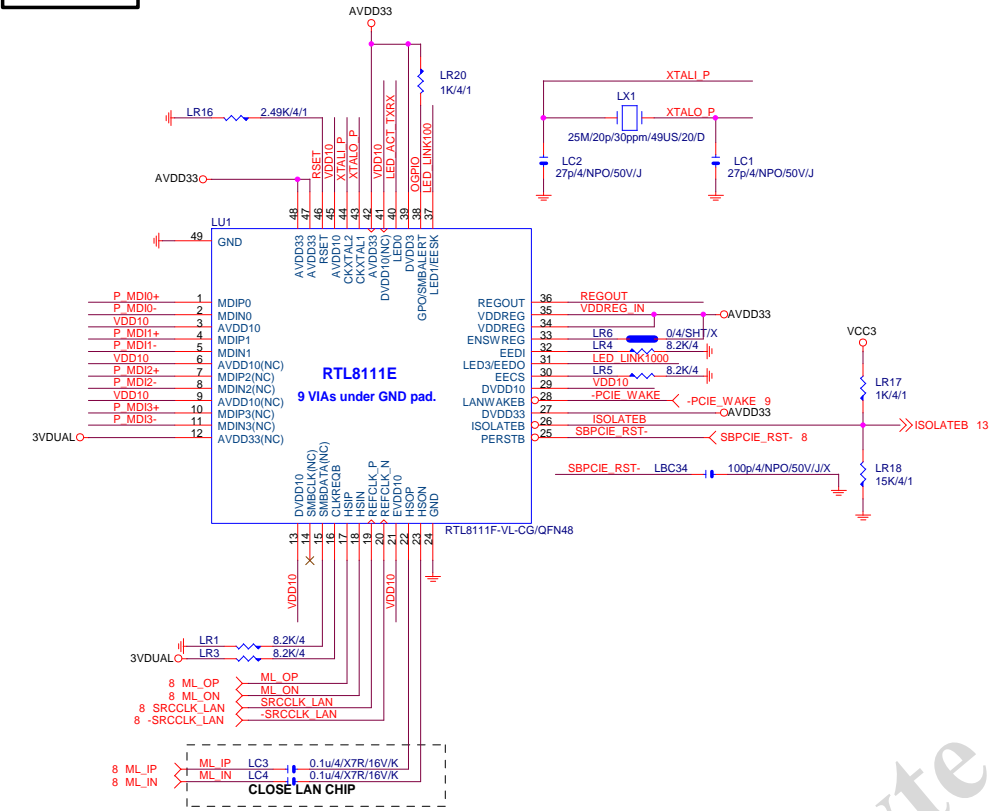


ISL6545 R14=> 0, R7=>NC  
RT8120 R14=>NC, R7=>0



<b>GIGABYTE™</b>		
Title <b>DDR POWER , VCC18</b>		
Size	Document Number	Rev
Custm	<b>GA-E350N</b>	<b>3.0</b>
Date:	Thursday, September 20, 2012	Sheet 19 of 20

# PCIE-1G LAN



# USB LAN

