

GA-F2A85XM-HD3

PAGE TITLE *Revision : 1.0*

01	COVER SHEET
02	BOM & PCB MODIFY HISTORY
03	BLOCK DIAGRAM
04	APU DDRIII MEMORY
05	APU CONTROL
06	APU UMI, GFX, GPP
07	APU POWER & GND
08	DDRIII CHANNEL A
09	HUDSON UMI, PCIE, PCI, CPU, LPC
10	HUDSON ACPI, GPIO, USB, AUDIO
11	HUDSON SATA,SPI,HWM
12	HUDSON POWER & GND
13	PCIE x16 , x1
14	PCI SLOT ,HDMI
15	ITE 8728 , Dual-BIOS , KB/MS
16	COM ,RGB ,DVI
17	FAN , HWMO , F_USB
18	ALC887-VD2 CODEC
19	ATX, FRONT PANEL
20	POWER SEQUENCE
21	VCORE (ISL62773)
22	VCORE MOS
23	DDR POWER, 5VDUAL , ERP
24	RTL8111F-VL
25	VCC_SB , APU_VDDP , VCC11_DUAL , VDDA25

APU_VDDIO_SUS=DDR15V

APU_VTT_SUS=DDRVTT

APU_VDDP_RUN=APU_VDDR_RUN=APU_VDDP

+1.1V_RUN=FCH_VDD_11_RUN=VCC_SB

+3.3V_RUN=VCC3

+3.3V_ALW=3VDUAL

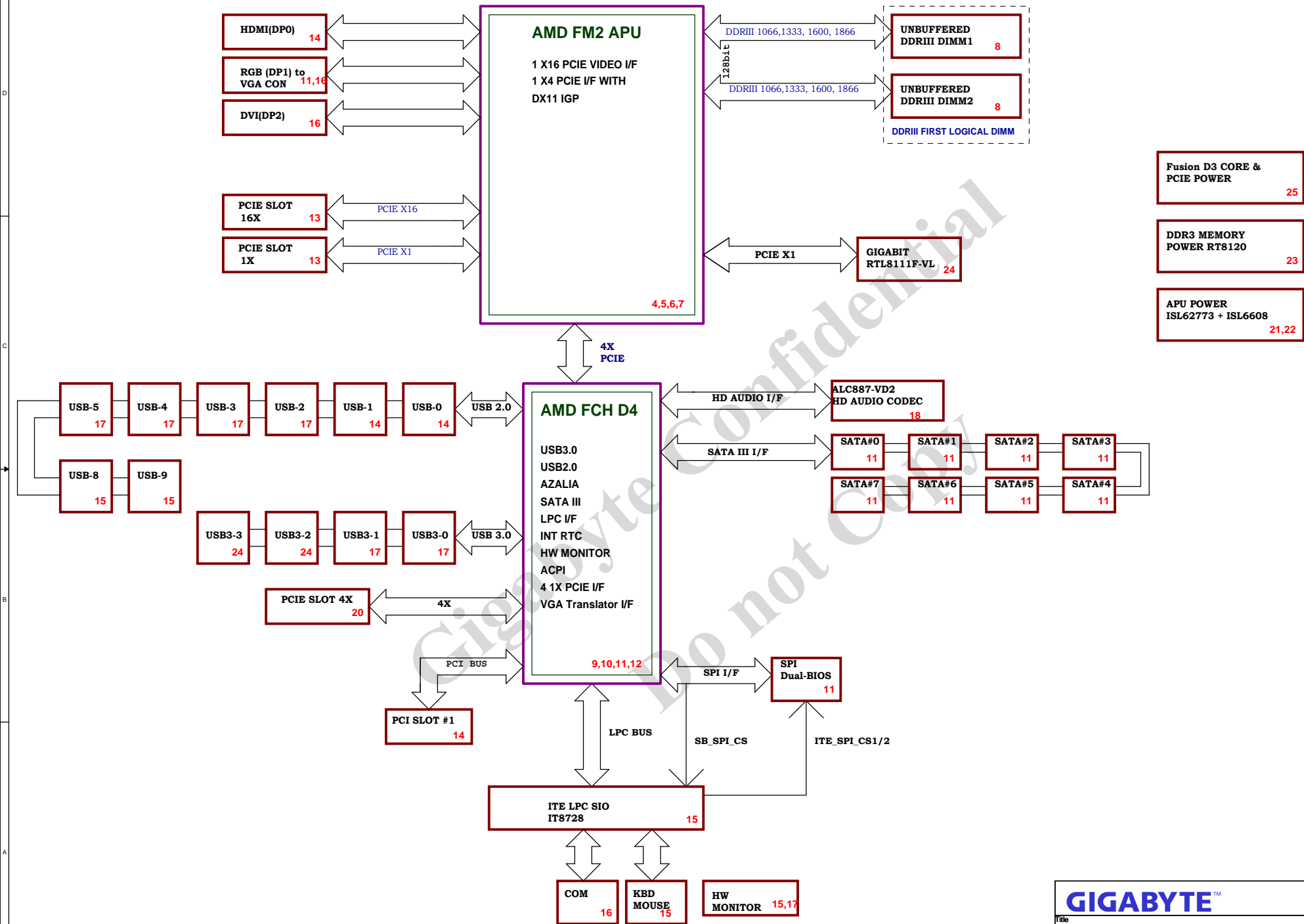
GIGABYTE™			
Title COVER SHEET			
Size	Document Number	Rev	
Custom	GA-F2A85XM-HD3	1.0	
Date:	Thursday, October 25, 2012	Sheet	1 of 25

Circuit or PCB layout change for next version

Component value change history

P-Code: U12065-0
243.84*174/B/50+/-15%/BLUE

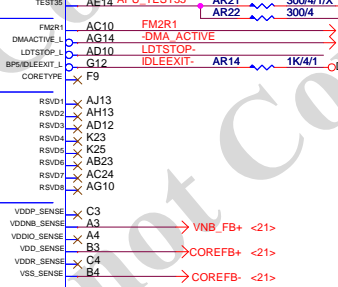
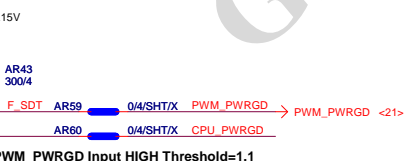
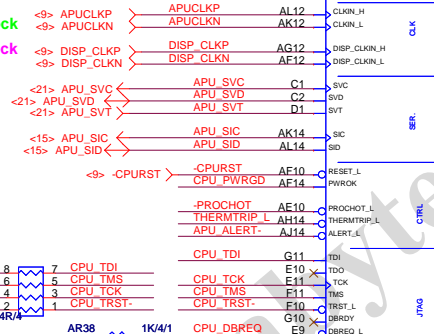
[illegible][illegible]

**GIGABYTE™****BLOCK DIAGRAM**

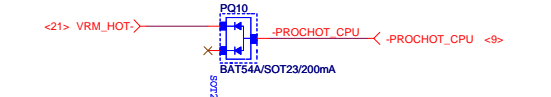
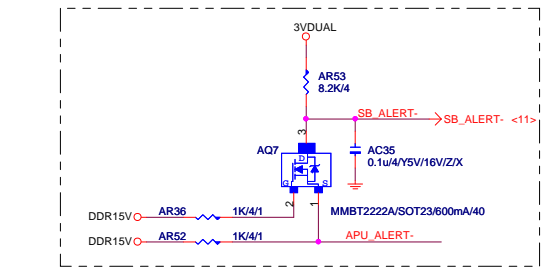
Title	Document Number	Rev
Size	GA-F2A85XM-HD3	1.0
Custom		
Date:	Thursday, October 25, 2012	Sheet 3 of 25

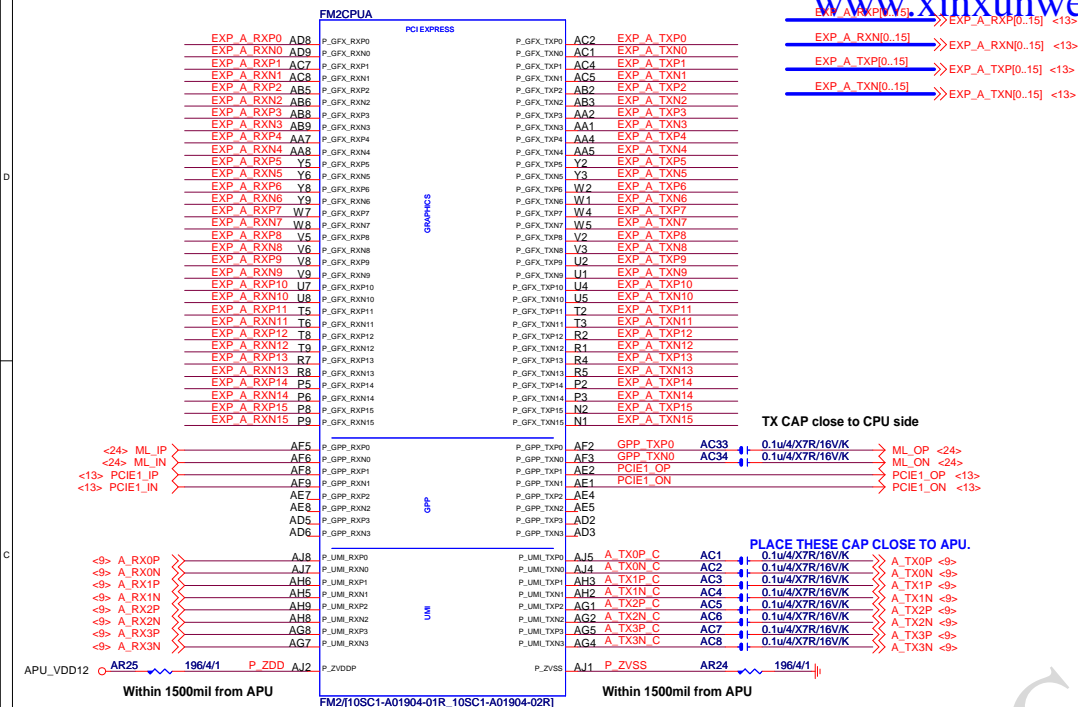


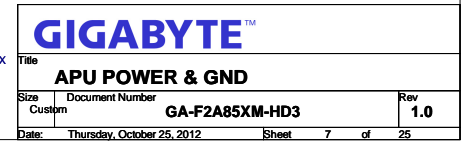
SVI 2.0 max frequency=20MHz.
Resolution=6.5mV
SVT=Serial VID Telemetry for
APU get PWM information used.

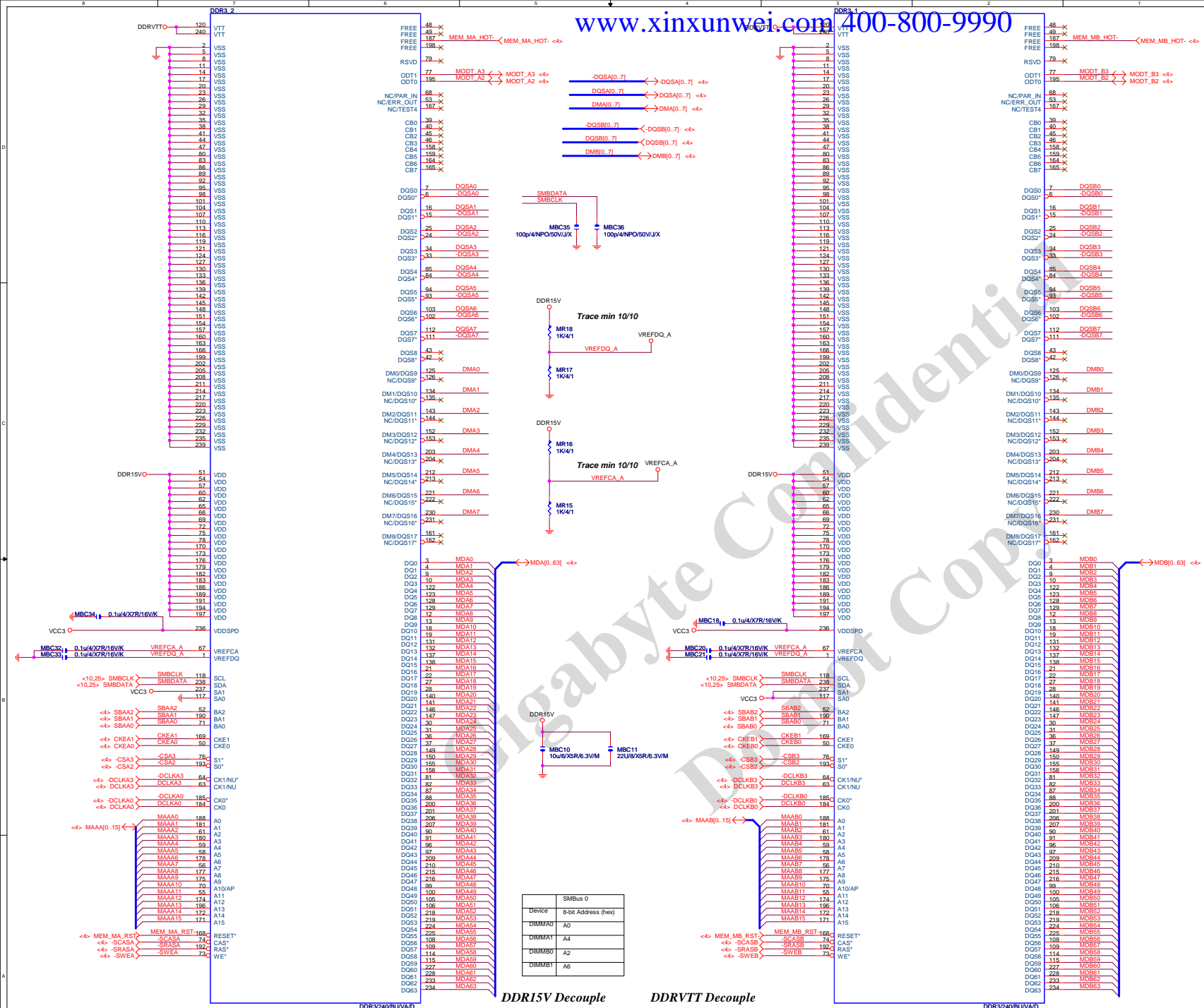


TEST35: high=>HDMI enable
low=>HDMI disable.





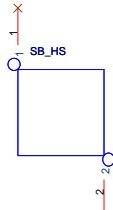




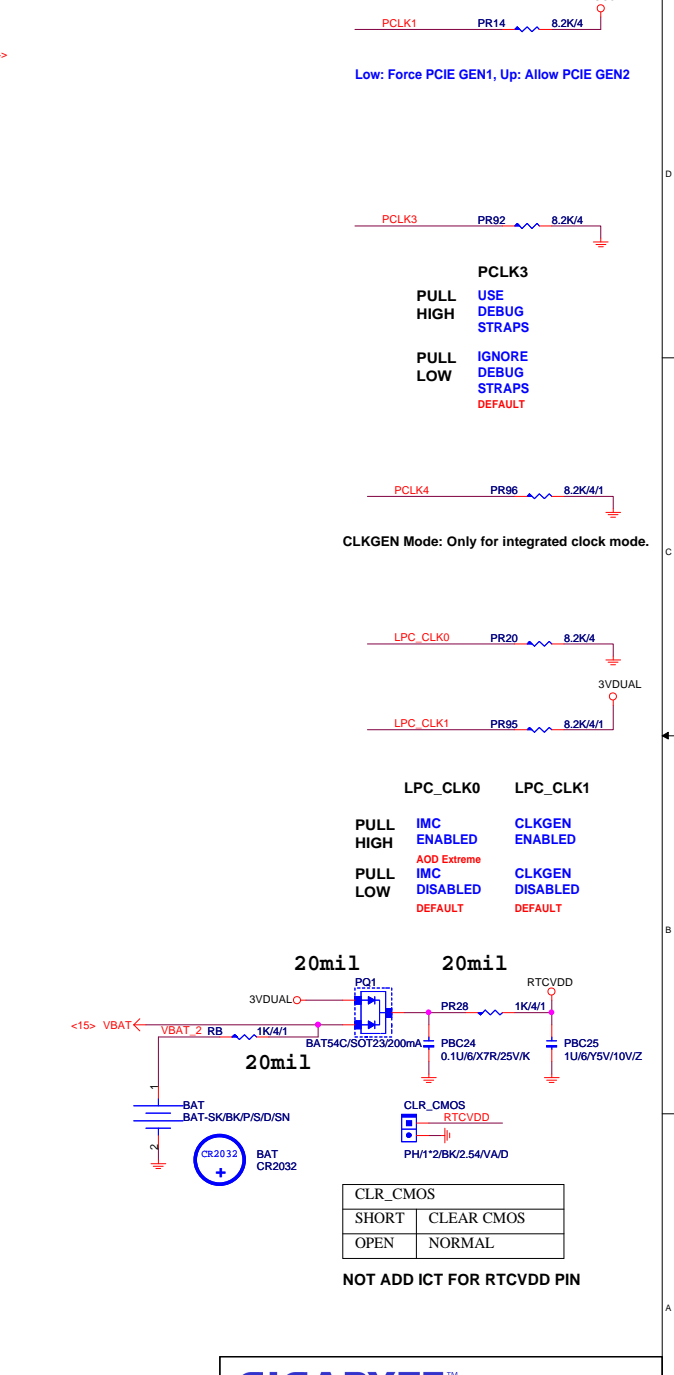
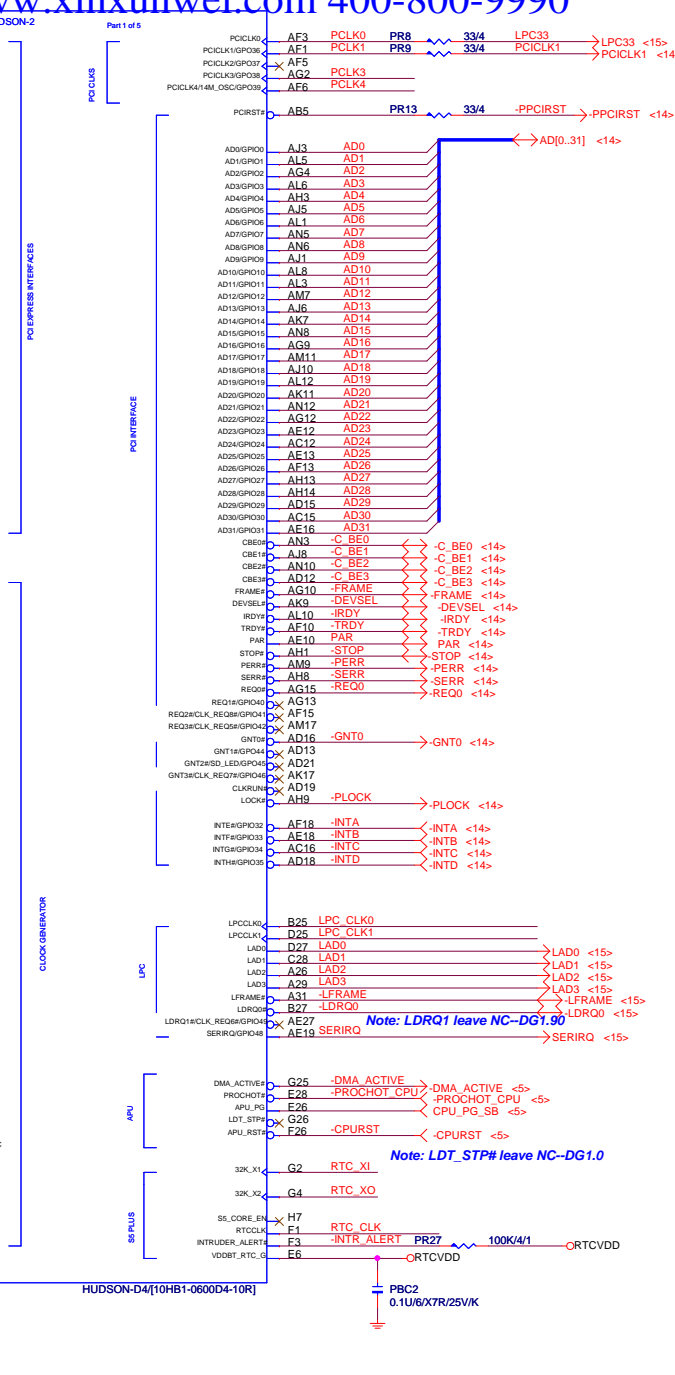
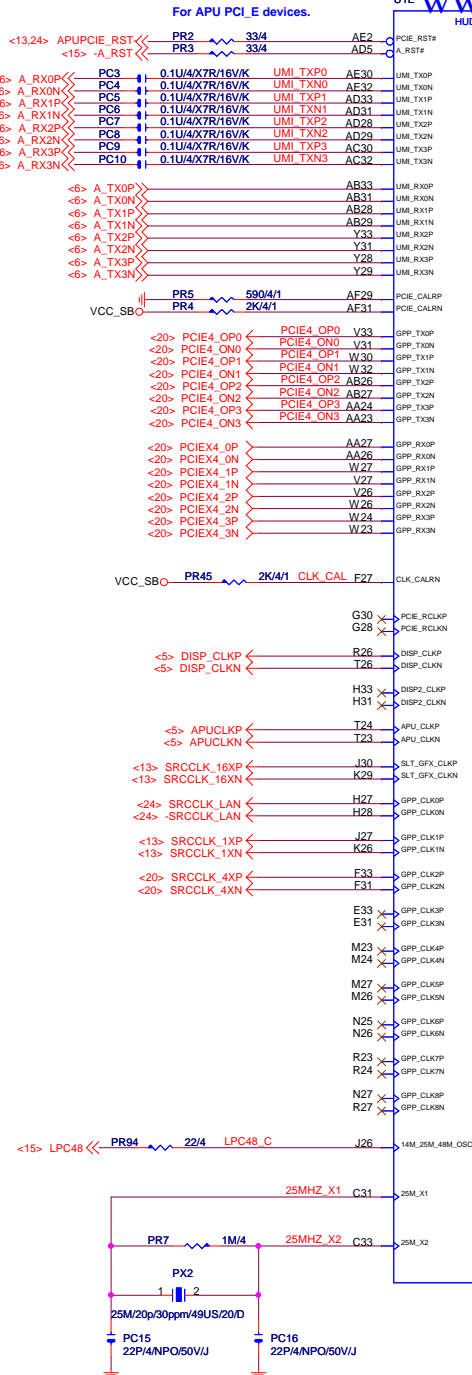
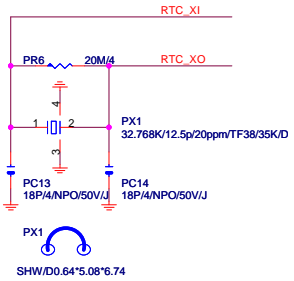


PLACE THESE PCIE AC COUPLING
CAPS CLOSE TO SB850

S.B HEATSINK



SB_HS[12SP2-SA0301-01R_12SP2-SA0301-02R_12SP2-SA0301-03R]



GIGABYTE™

Hudson D4 PCIE/PCI/CPU/LPC

Size Custom

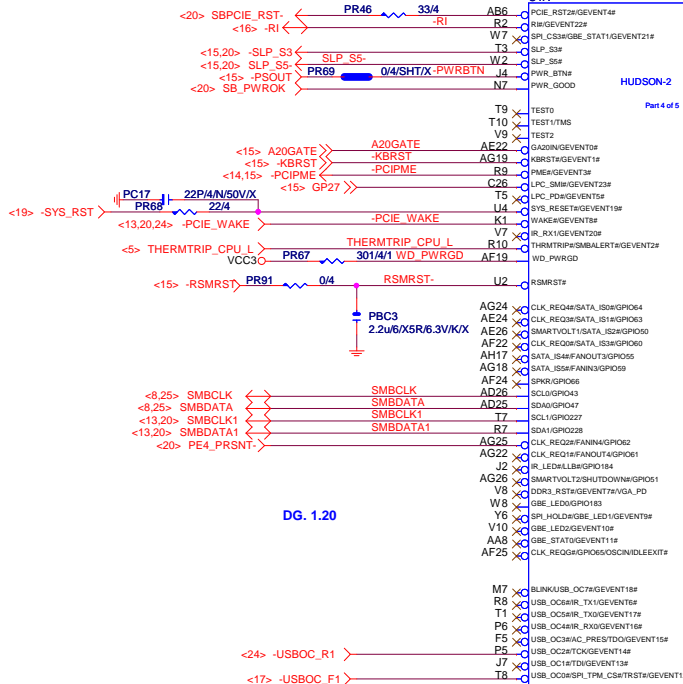
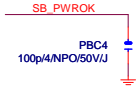
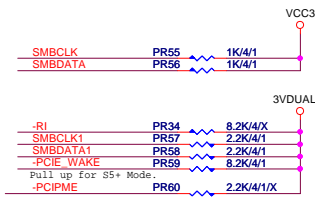
Document Number

Rev 1.0

Date: Thursday, October 25, 2012

Sheet 9 of 25

NOT ADD ICT FOR RTCVDD PIN



DU. 1.20

EMBEDDED CTRL

HUDSON-D4(10HB1-0600D4-10R)



FCH_GP199

ROM TYPE:

H = LPC ROM

L = SPI ROM <Default>

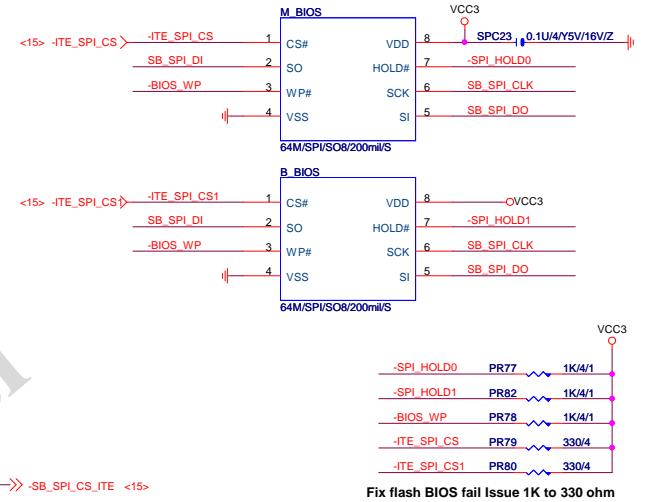
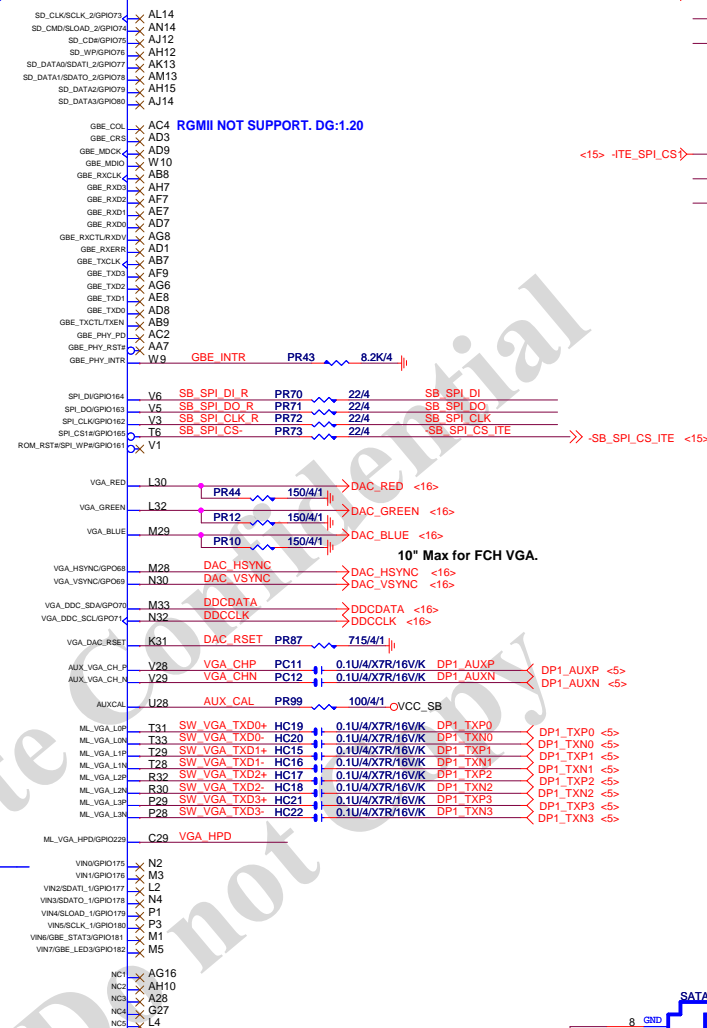
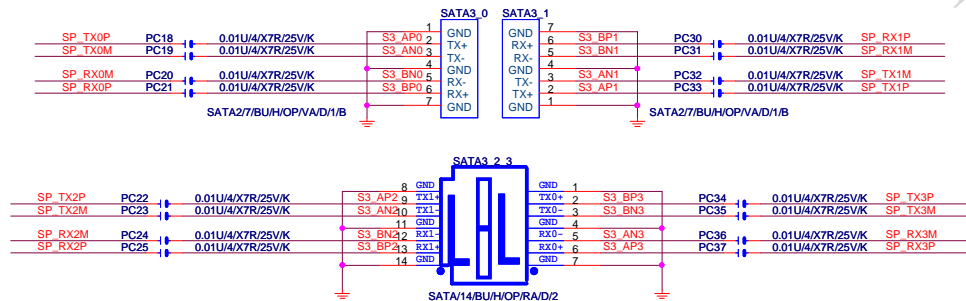
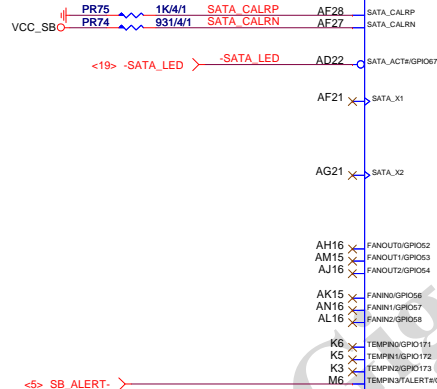
GIGABYTE™

Title Hudson D4 ACPI/USB/GPIO/AUDIO		
Size Custom	Document Number GA-F2A85XM-HD3	Rev 1.0
Date: Thursday, October 25, 2012	Sheet 10	of 25

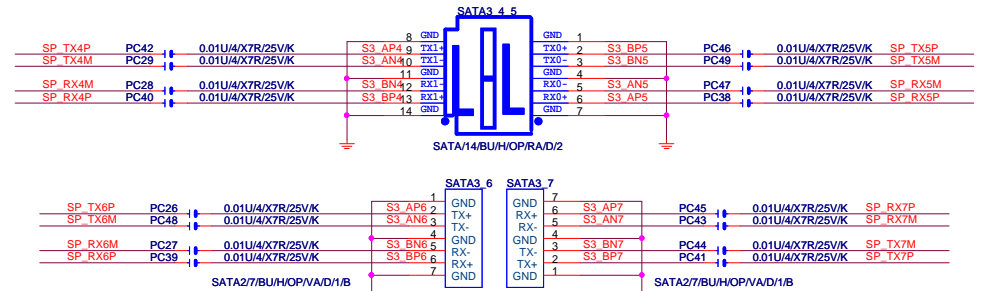
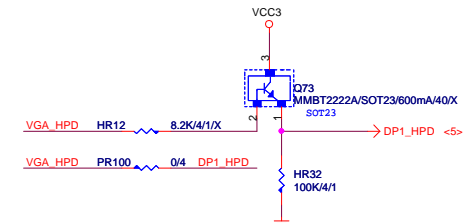


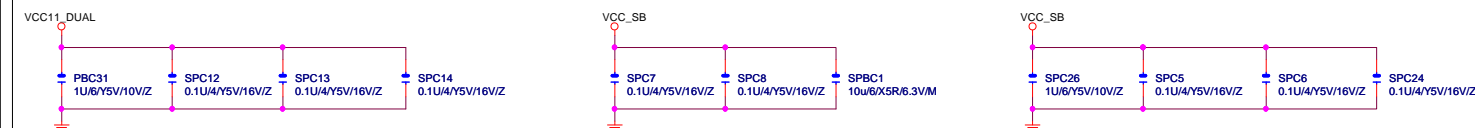
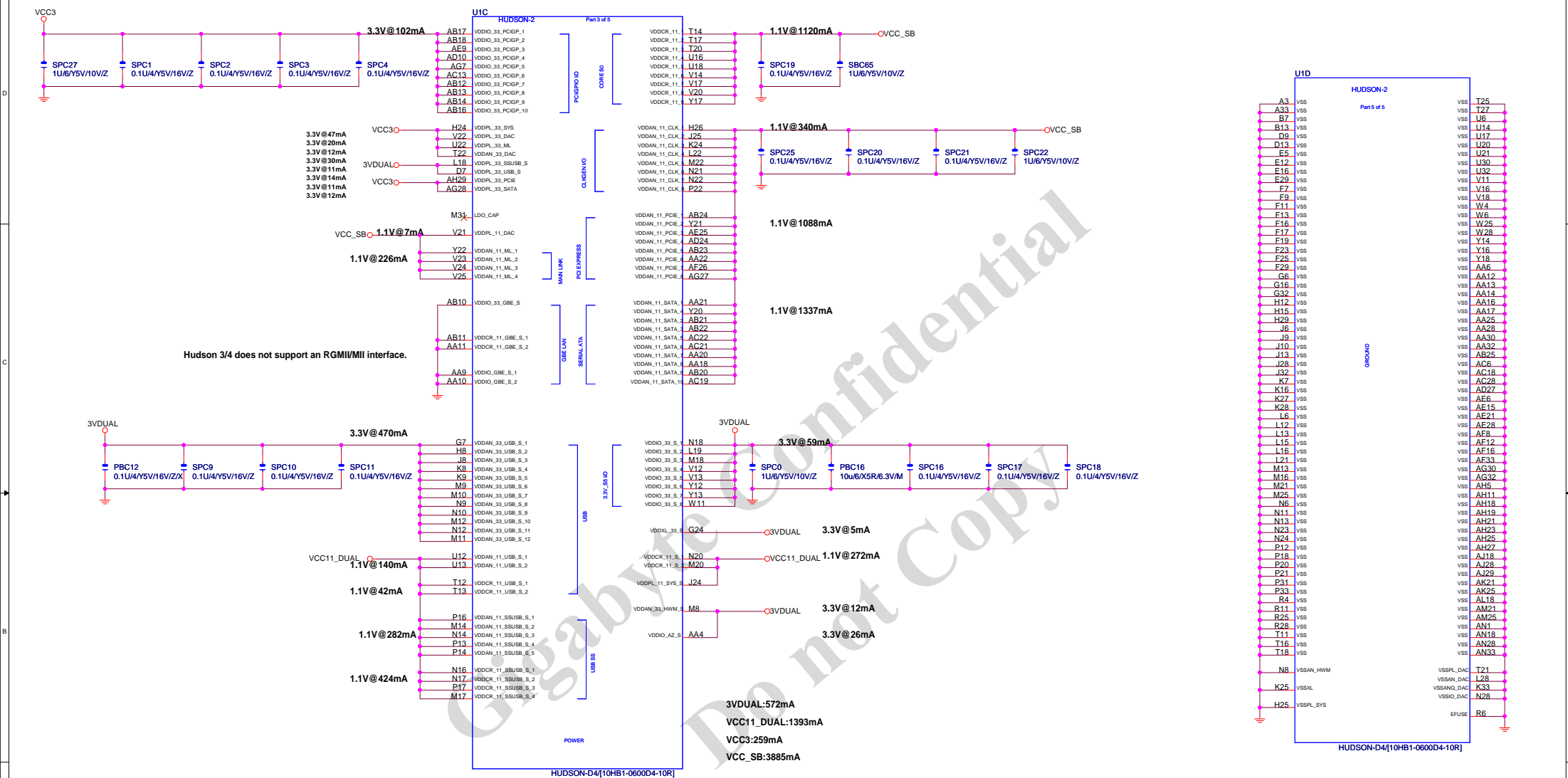
SATA 6~7 for Hudson D4.

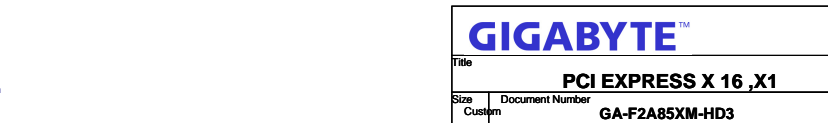
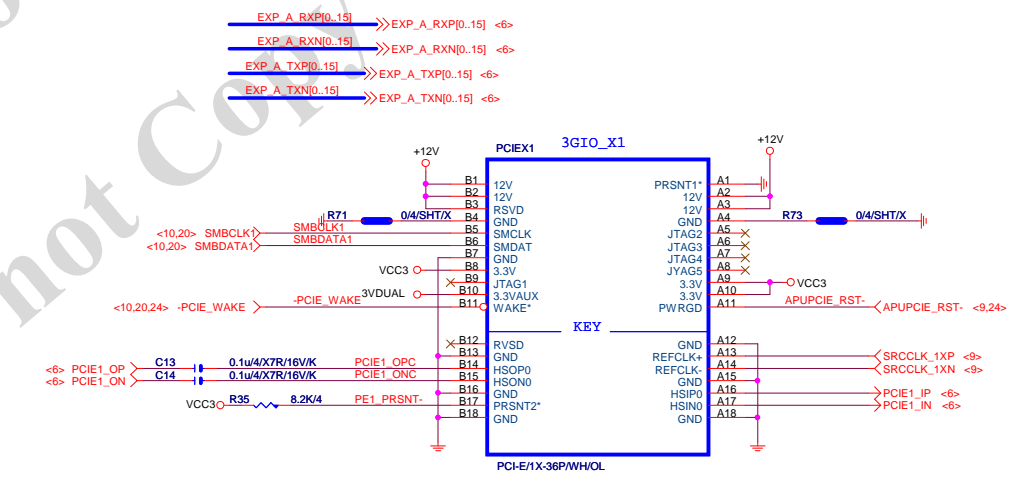
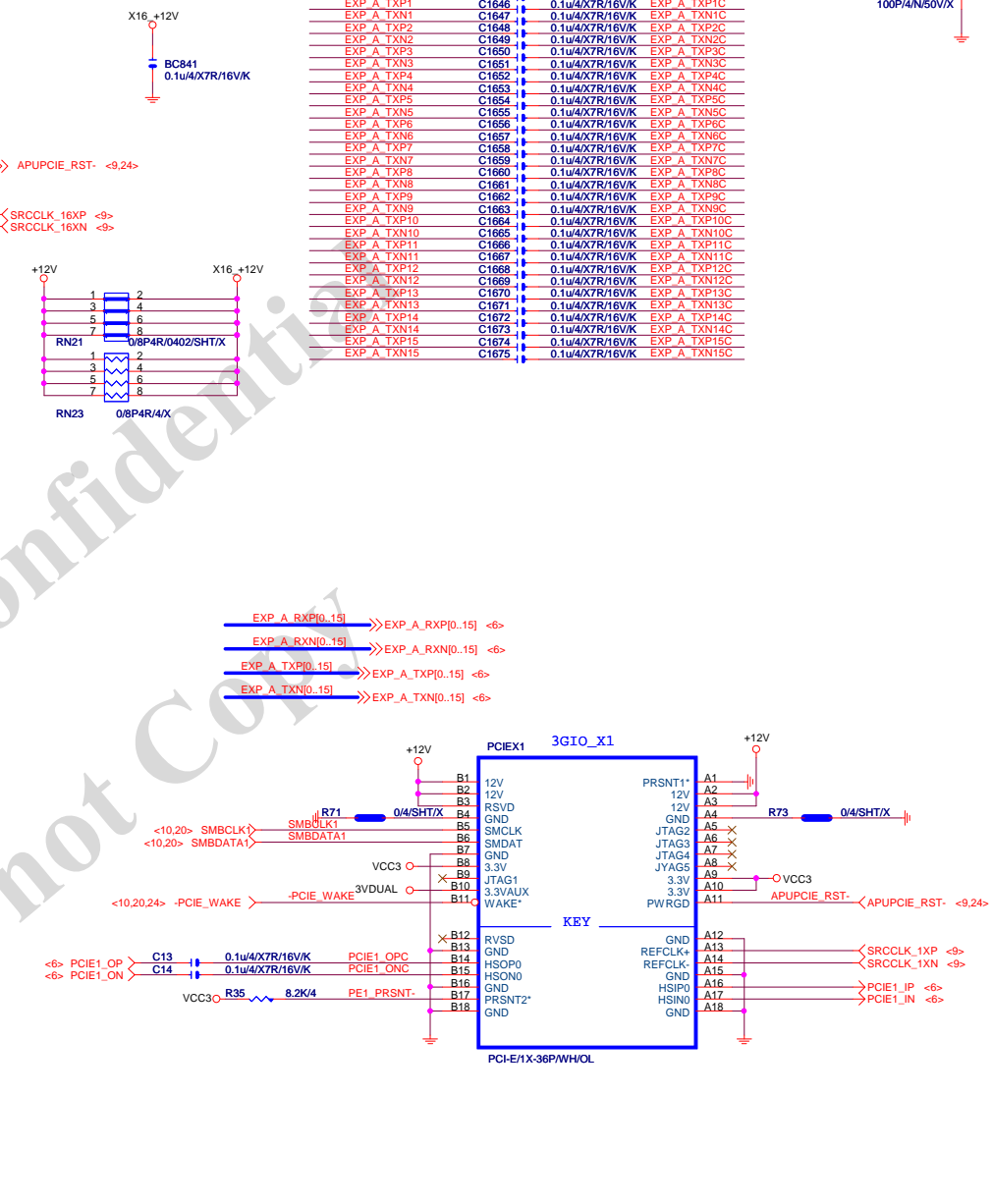
PLACE SATA_CAL RES VERY
CLOSE TO BALL OF U1

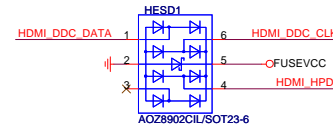
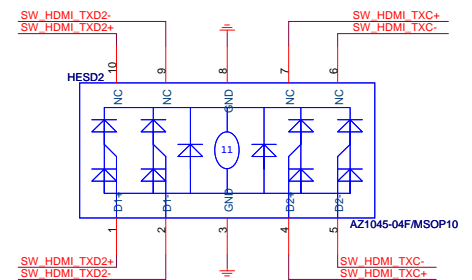
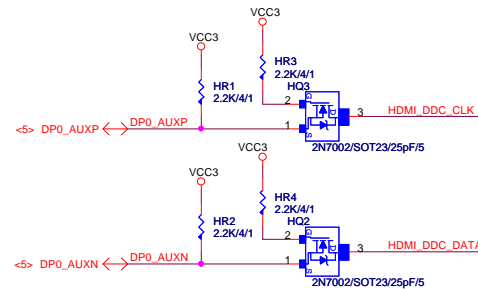
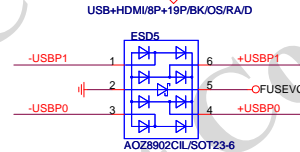


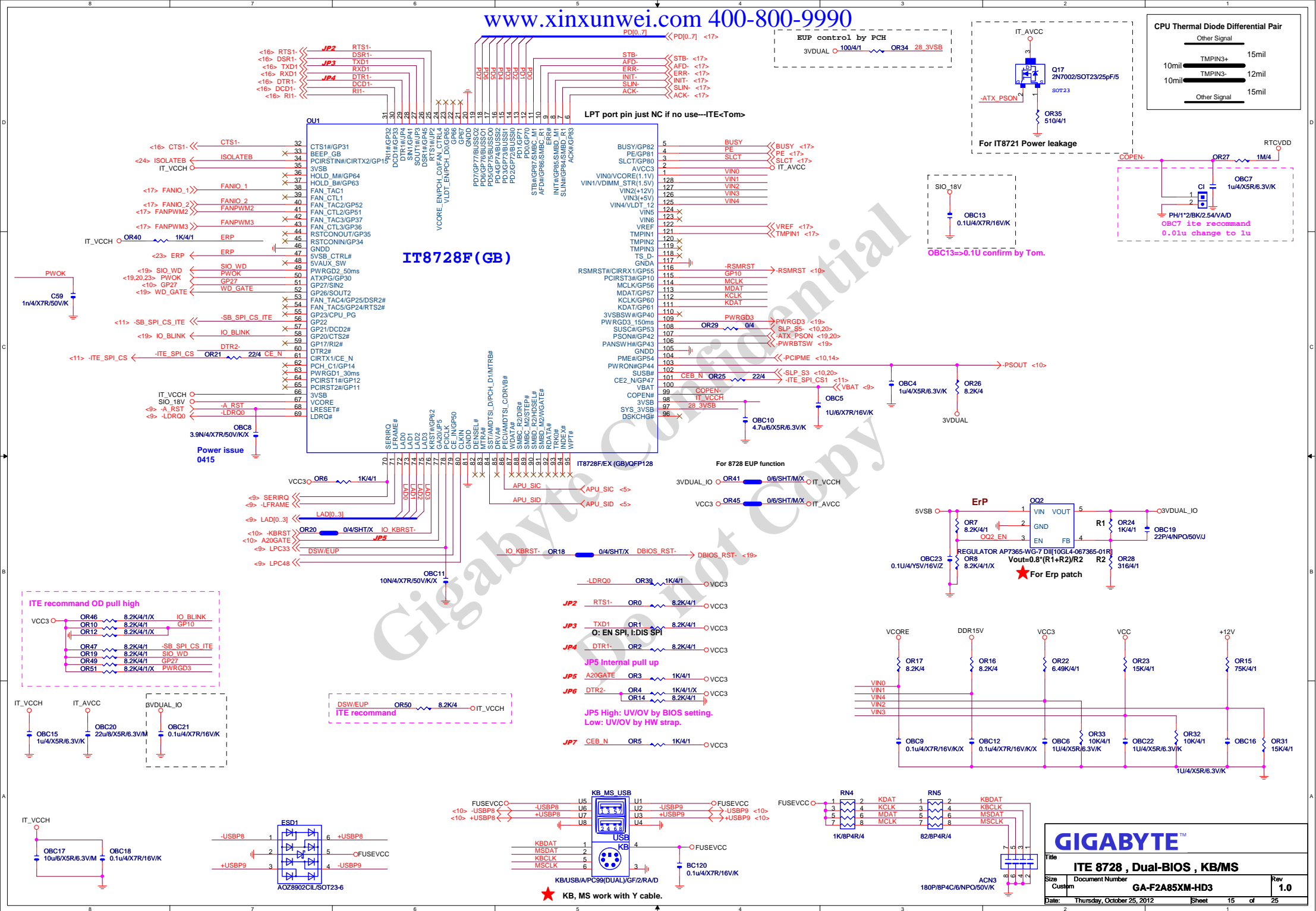
Fix flash BIOS fail Issue 1K to 330 ohm

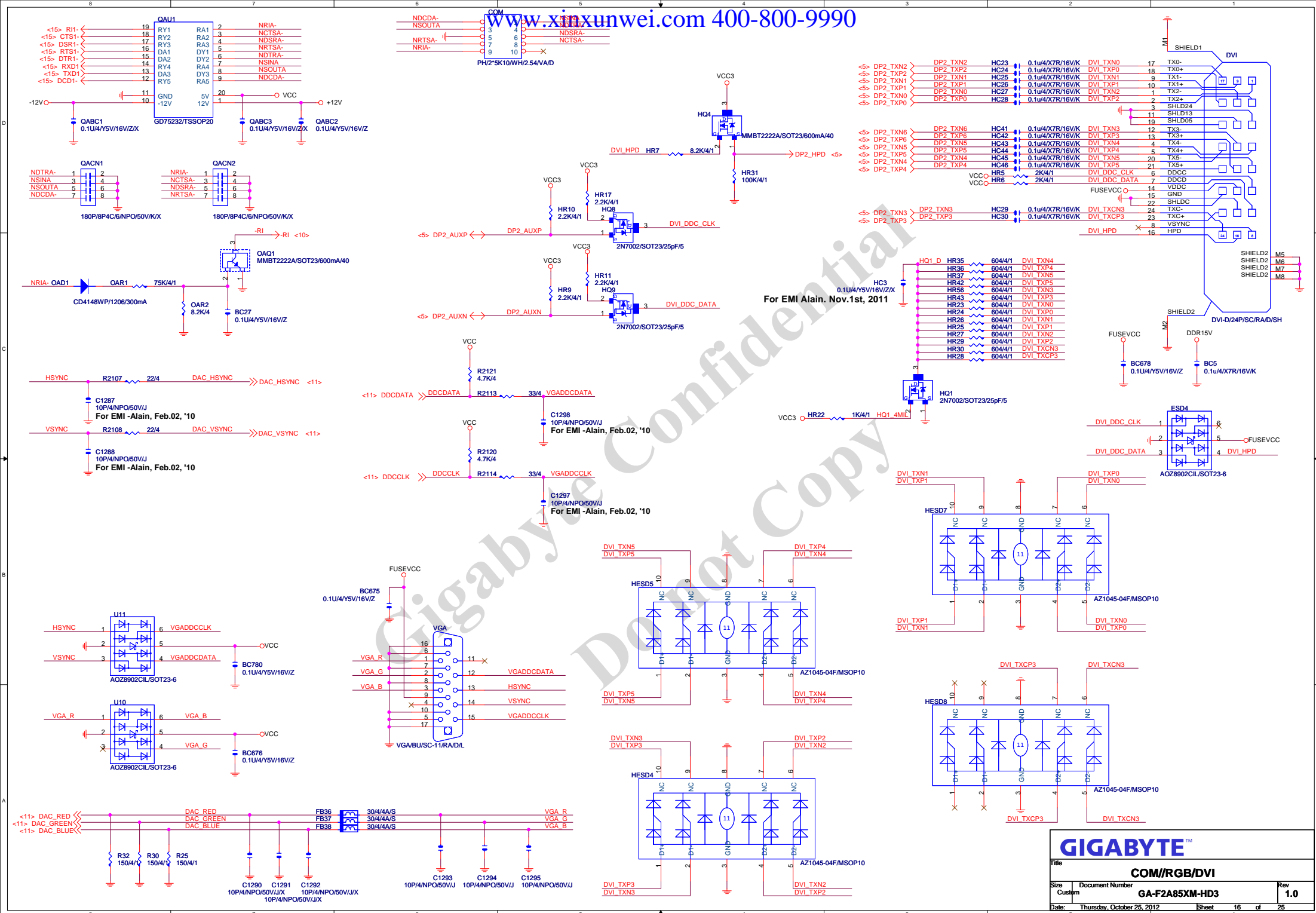


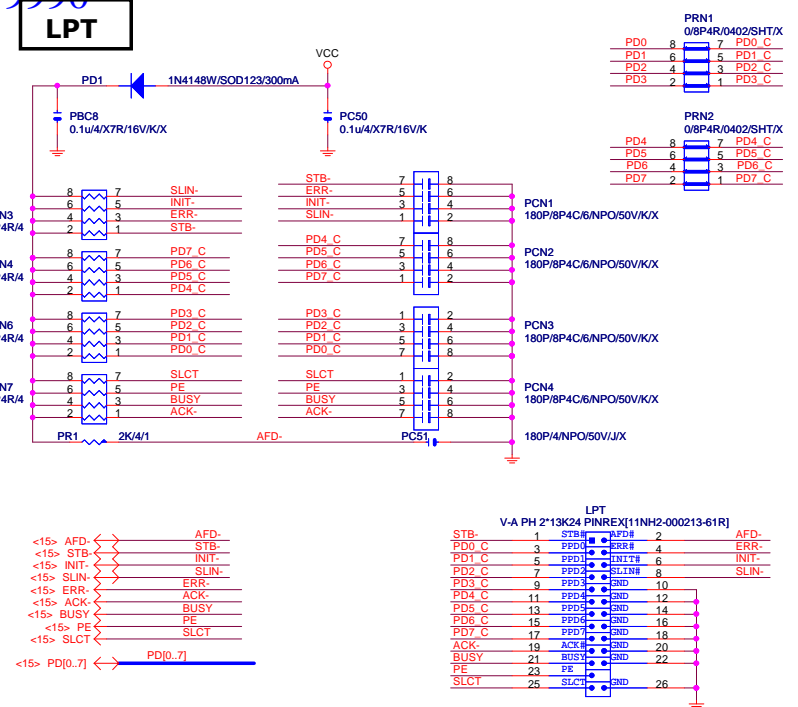




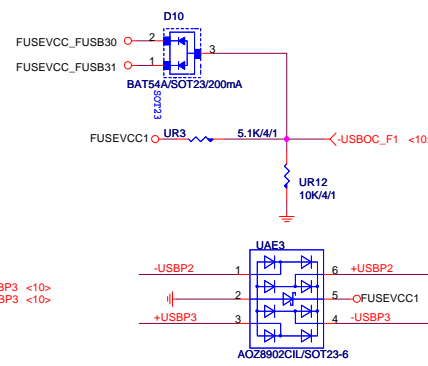






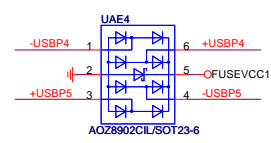


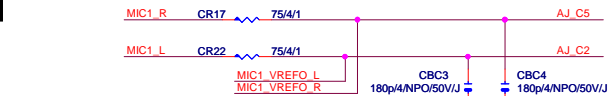
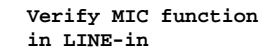
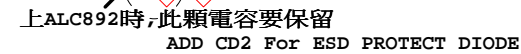
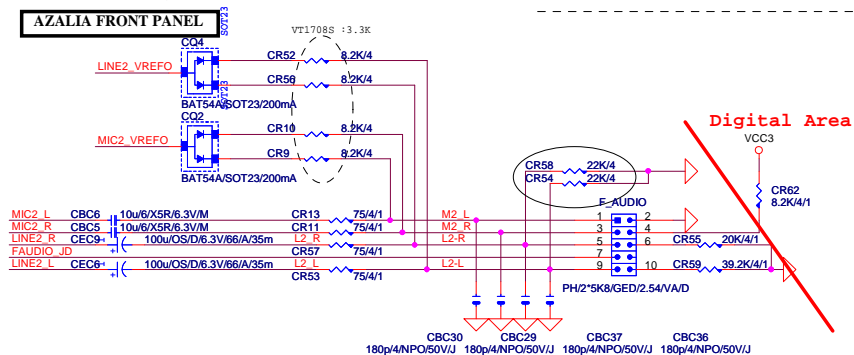
FRONT SIDE USB1

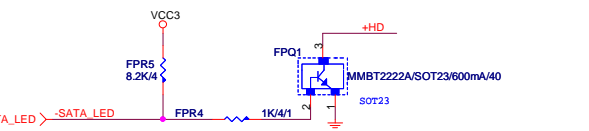
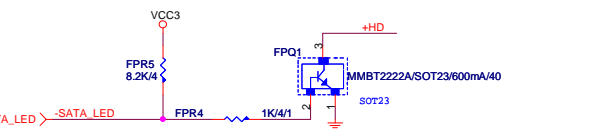
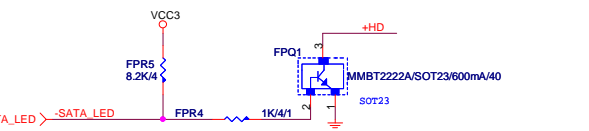
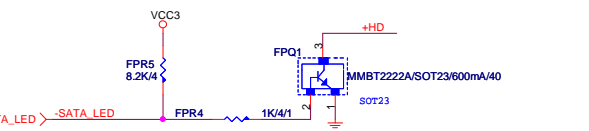
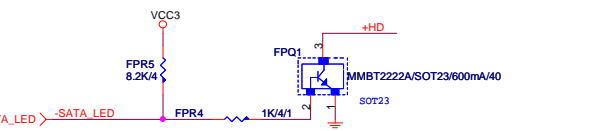
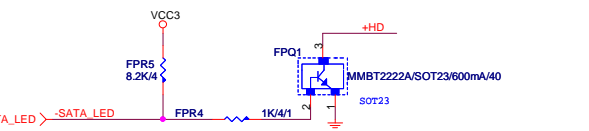
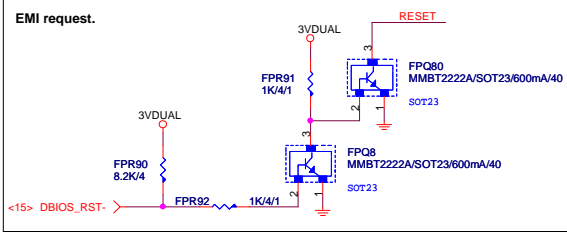
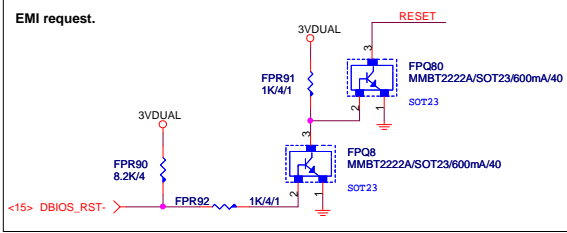


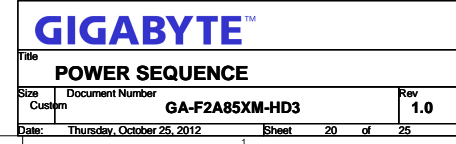
The schematic shows the input circuit for the VREF and TMPIN1 pins. The VREF pin is connected to a 10K/4/1 resistor (R203) which is connected to the SYSTEM ground. The TMPIN1 pin is connected to a 0.1u4/X7R/16V/K capacitor (C114) which is connected to the SYSTEM ground. A 1uB/5V/10V/Z capacitor (C113) is connected to the VREF line to the SYSTEM ground.

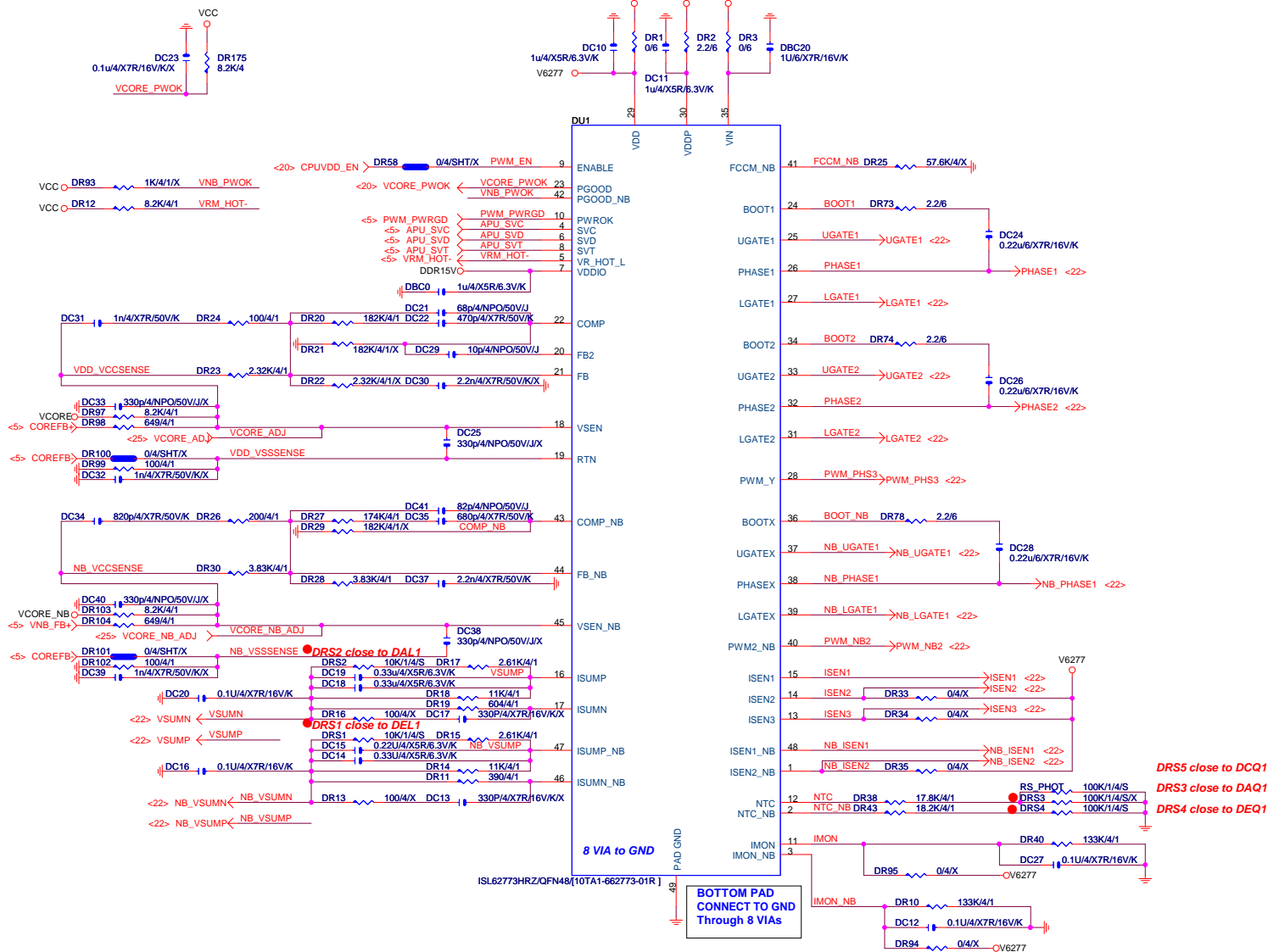
FRONT SIDE USB2

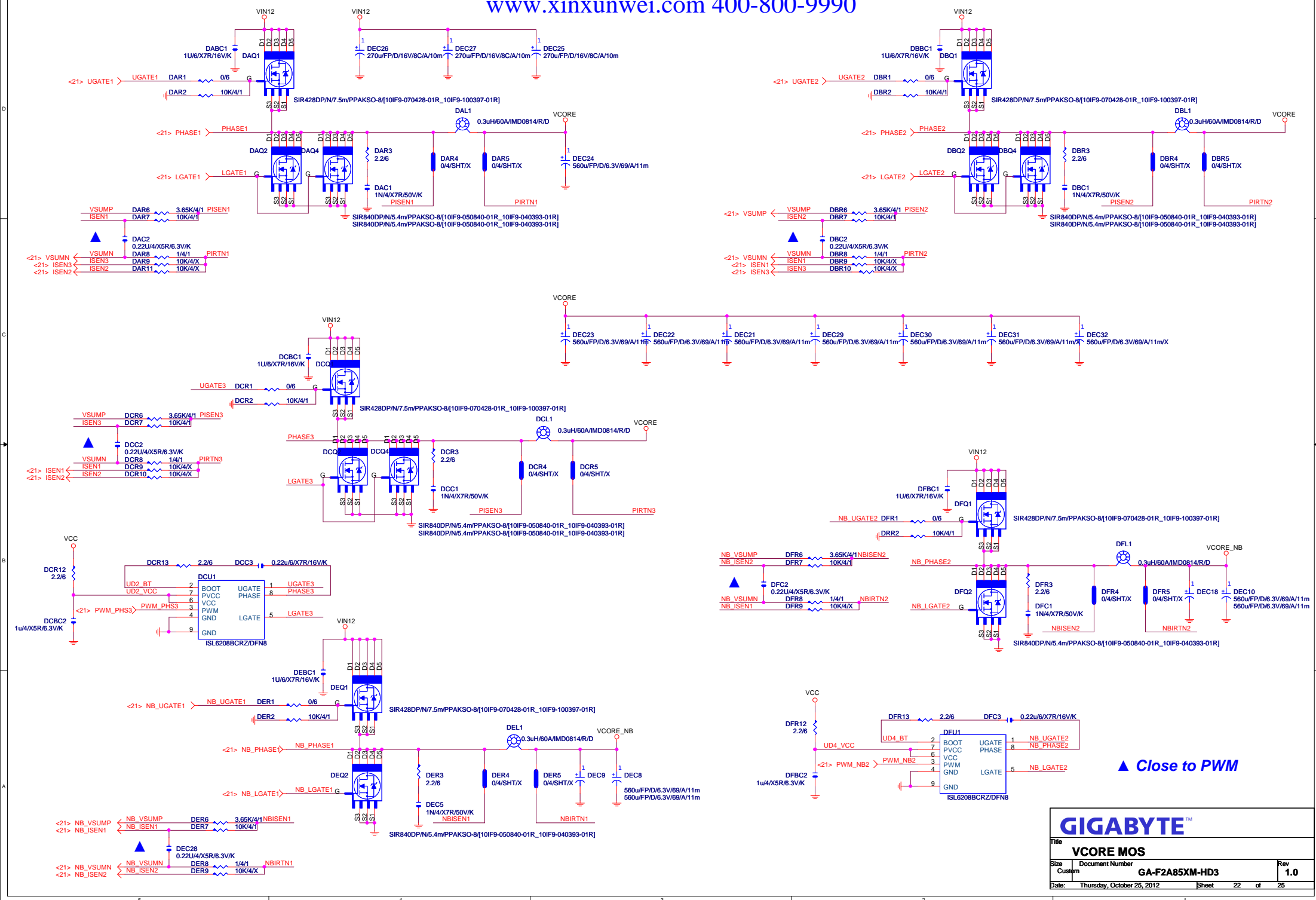


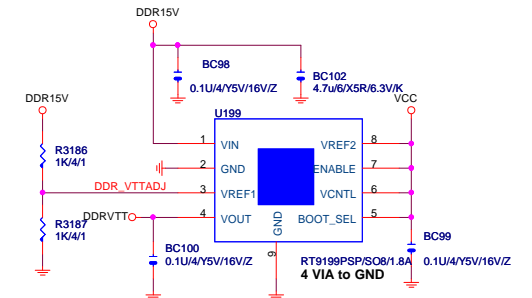
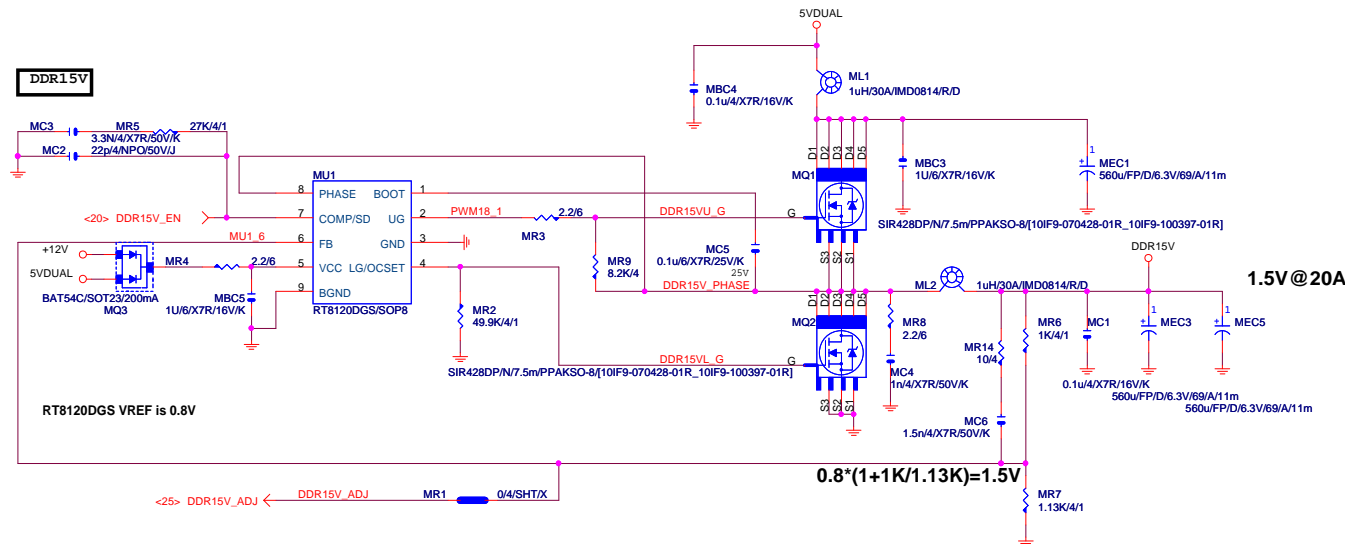
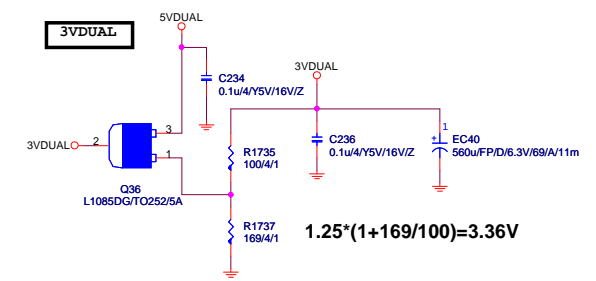
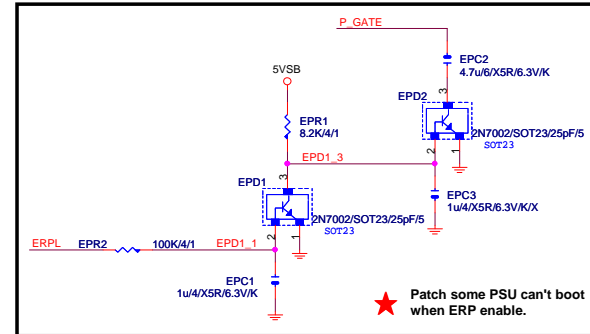
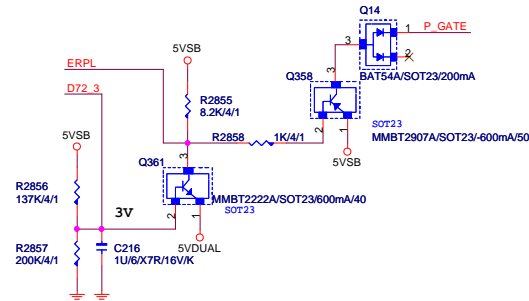
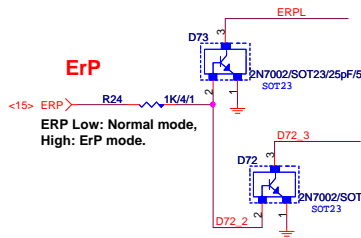
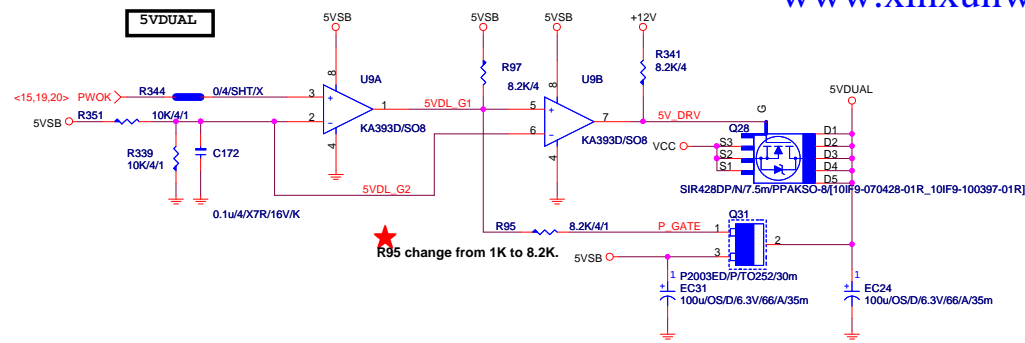
**AZALIA FRONT PANEL**







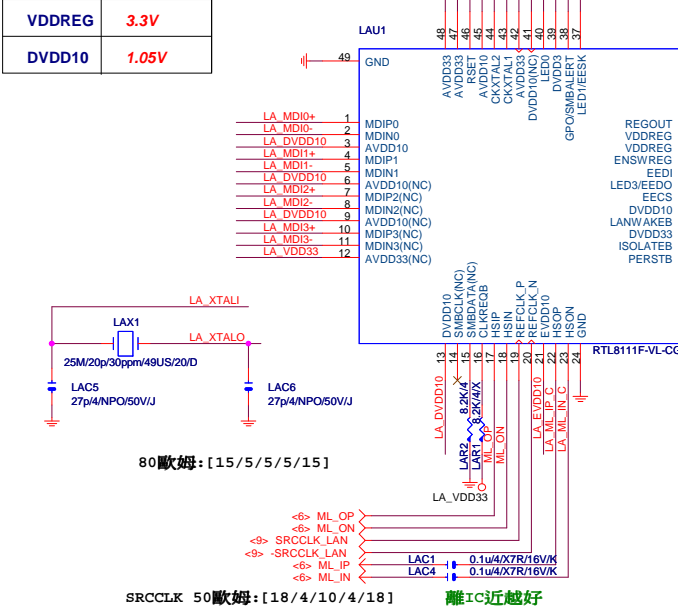




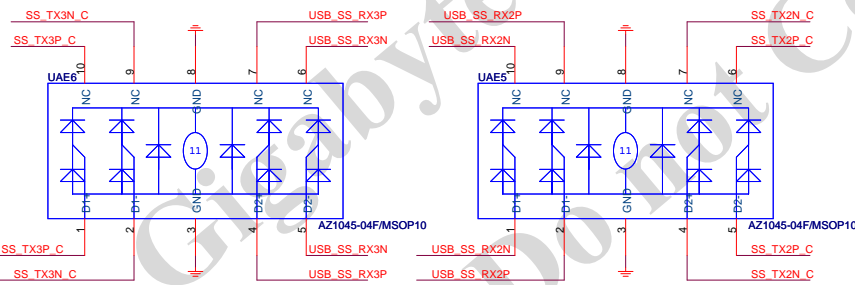
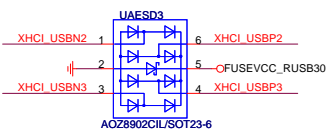
PCIE-1G LAN

Power domain chart

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

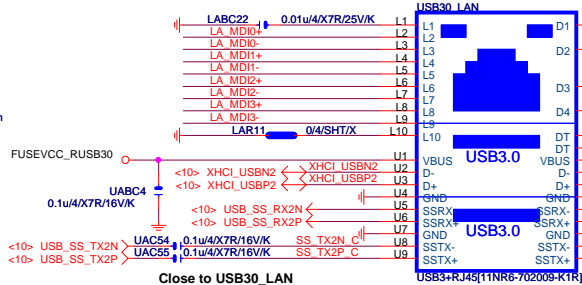


USB_LAN

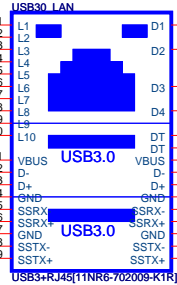


USB_LAN CONNECTOR

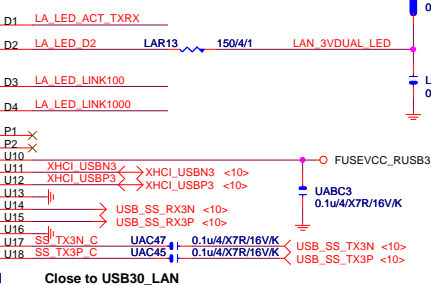
LAN 100 Ohm
USB 90 Ohm



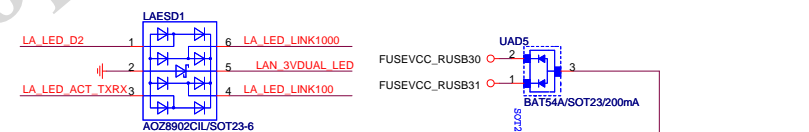
Close to USB30_LAN



Close to USB30_LAN

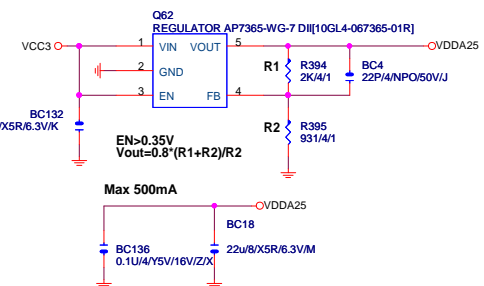
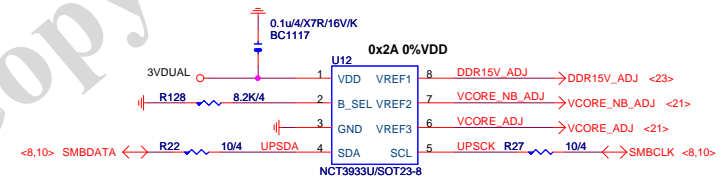
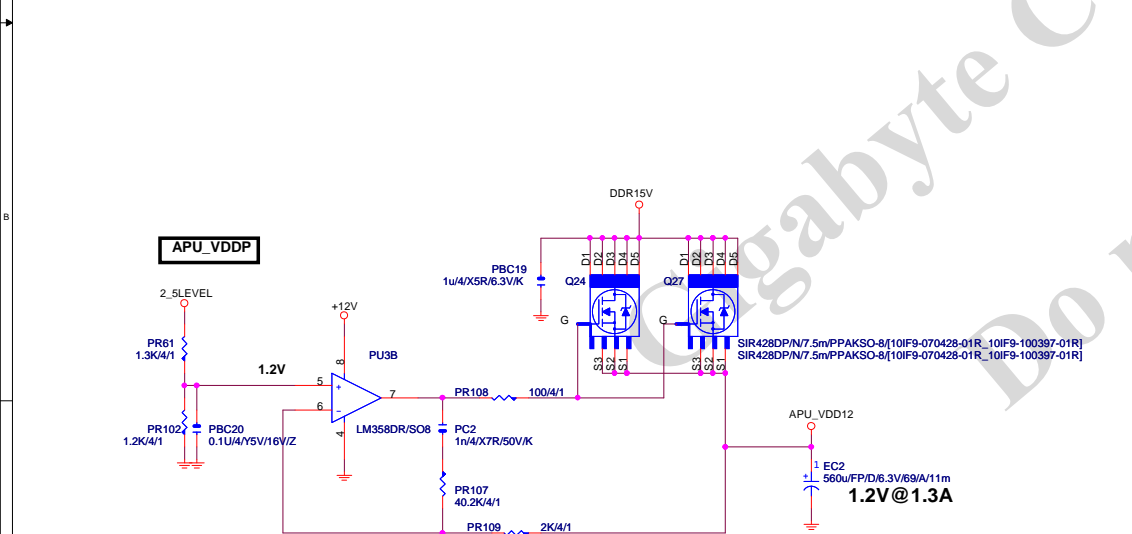
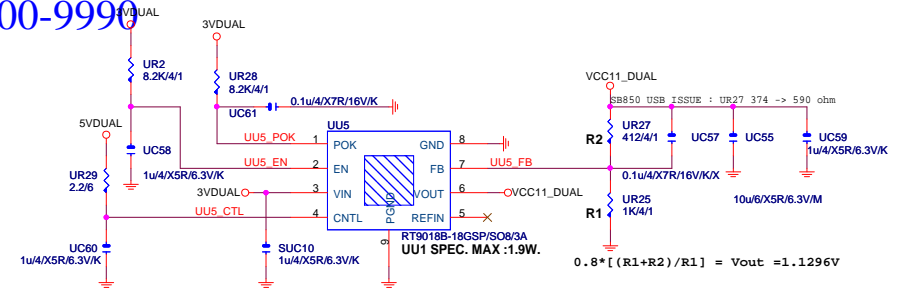
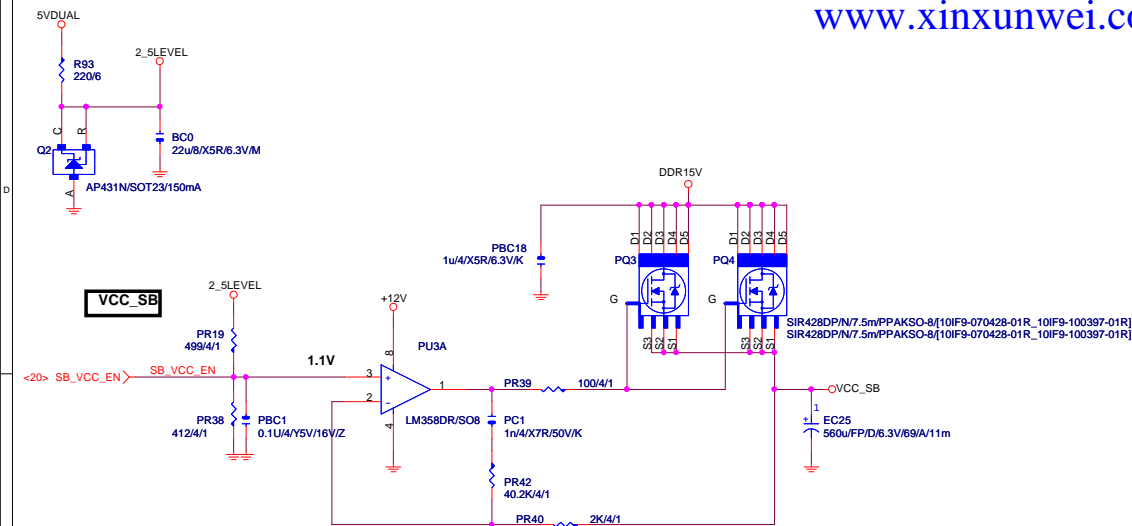


Close to USB30_LAN



GIGABYTE™

Title	REALTK RTL8111E-VL	Rev	1.0
Size	Document Number	GA-F2A85XM-HD3	
Customer			
Date	Thursday, October 25, 2012	Sheet	24 of 25



GIGABYTE™

Title			
VCC_SB, APU_VDDP, VCC11_DUAL, VDDA25			
Size	Document Number	Rev	
Custom	GA-F2A85XM-HD3	1.0	
Date:	Thursday, October 25, 2012	Sheet	25 of 25