

GA-F2A88XM-DS2

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03	BLOCK DIAGRAM
04	APU DDRIII MEMORY
05	APU CONTROL
06	APU UMI, GFX, GPP
07	APU POWER & GND
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11	Bolton D4 SATA,SPI,HWM
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15	ITE 8620 , Dual-BIOS , KB/MS , HWMO
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22	VCORE MOS
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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

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GIGABYTETM

Title

COVER SHEET

Size

Document Number

Rev

Custom

GA-F2A88XM-DS2

3.01

Date:

Friday, August 16, 2013

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of

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Model Name:GA-F2A88XM-DS2

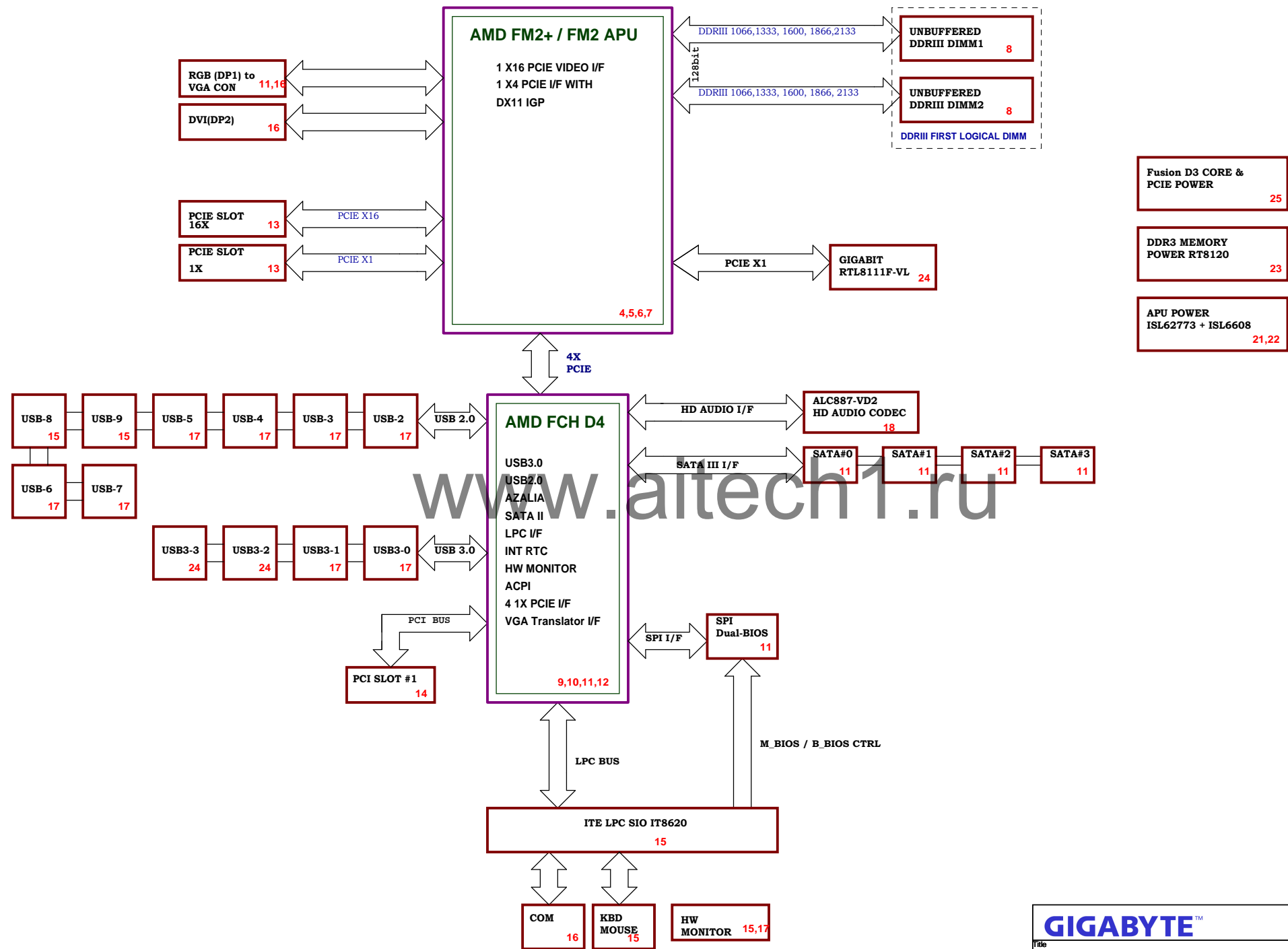
Component value change history

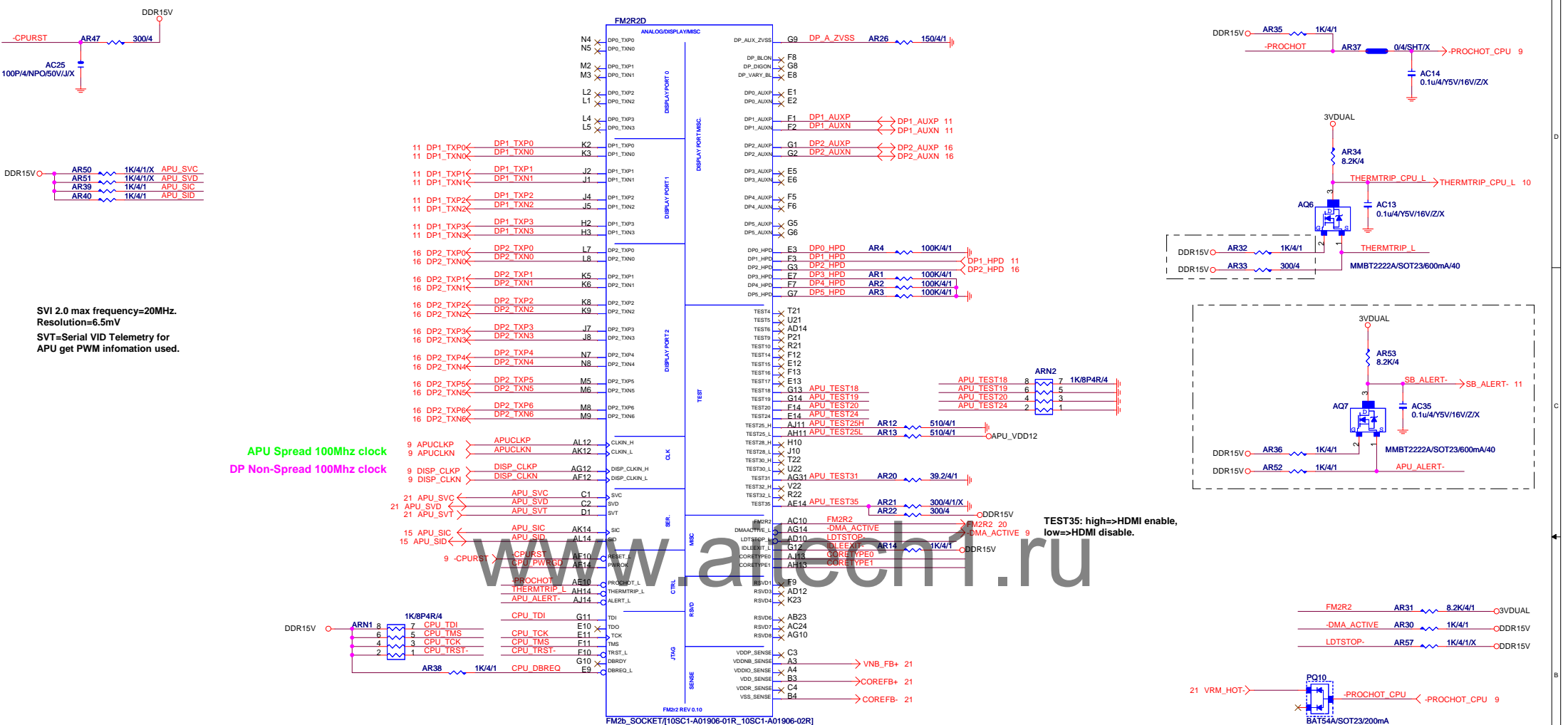
Version: 3.01
9MF288MS2-00
P-Code: U13063-0

[illegible]

Circuit or PCB layout change for next version

[illegible]



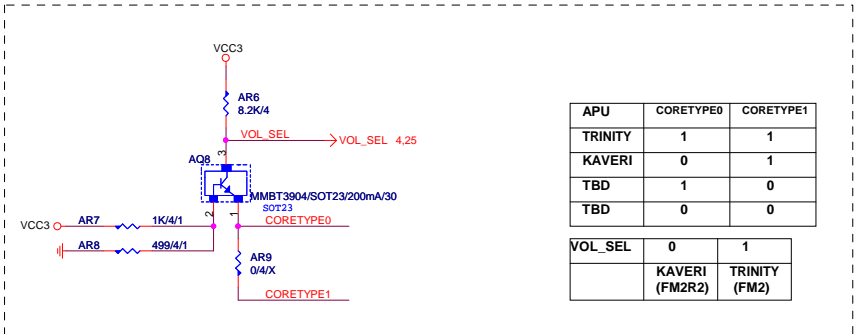


SVI 2.0 max frequency=20MHz.
Resolution=6.5mV
SVT=Serial VID Telemetry for
APU get PWM information used.

APU Spread 100Mhz clock
DP Non-Spread 100Mhz clock

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

FM2+ / FM2 SEL



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Title

APU CONTROL

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Date

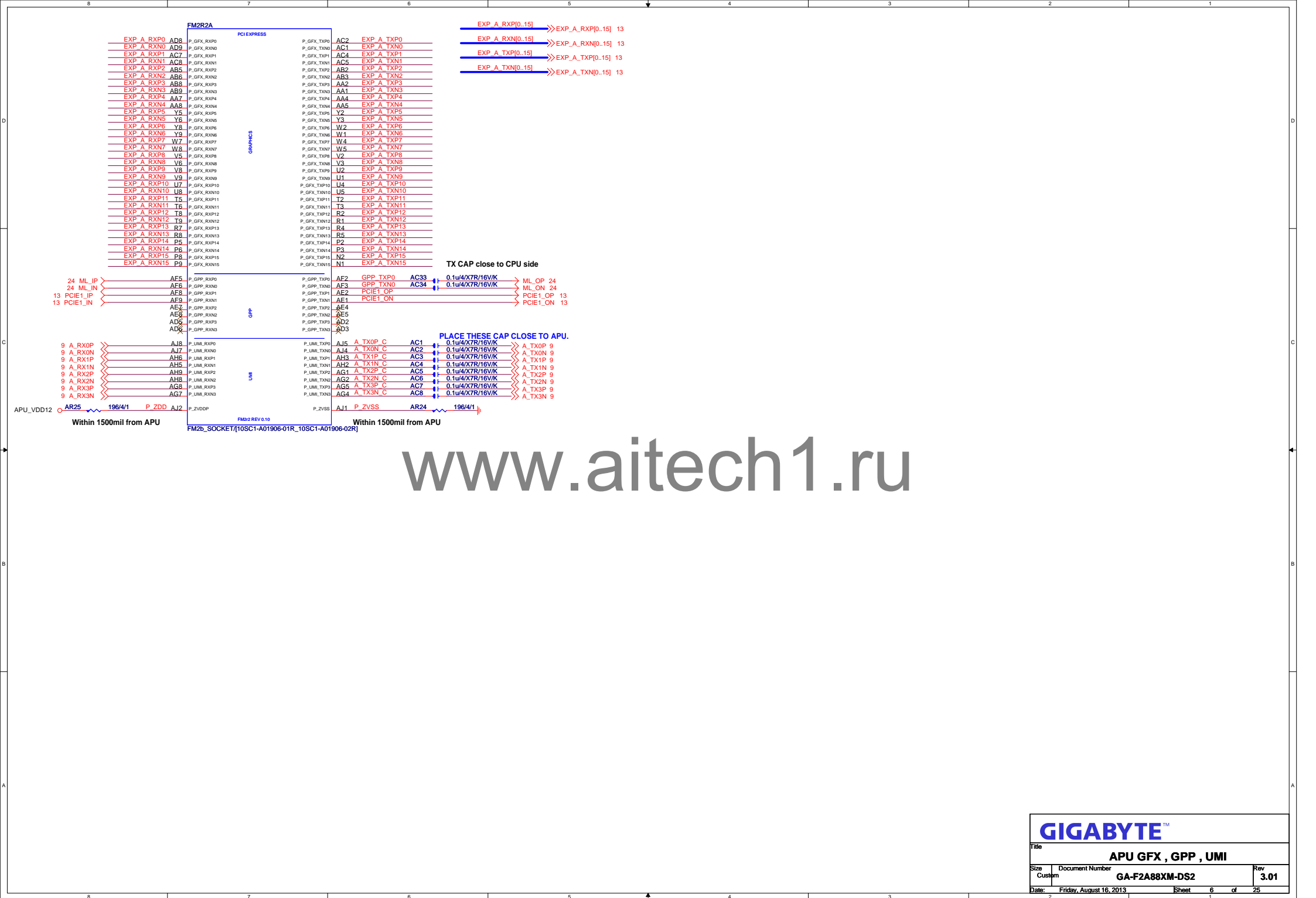
Friday, August 16, 2013

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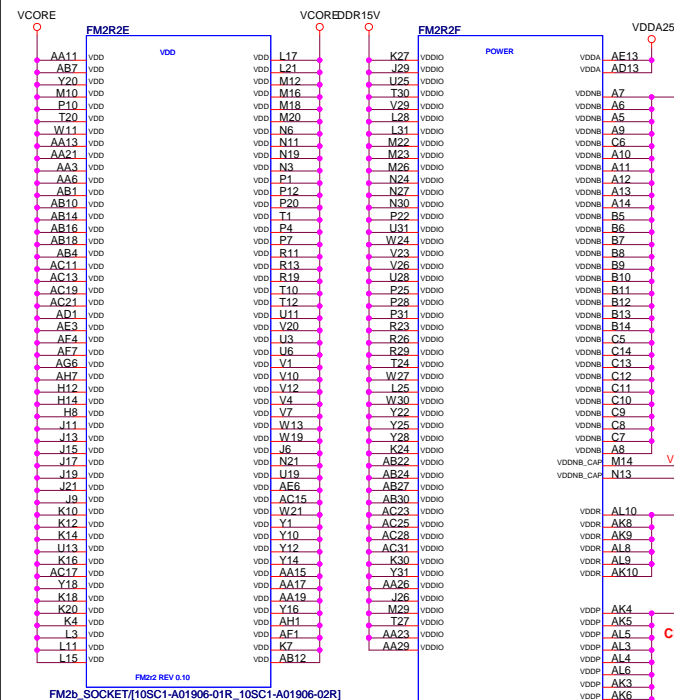
of

25

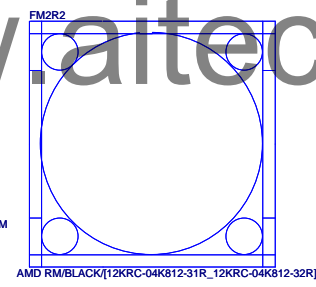
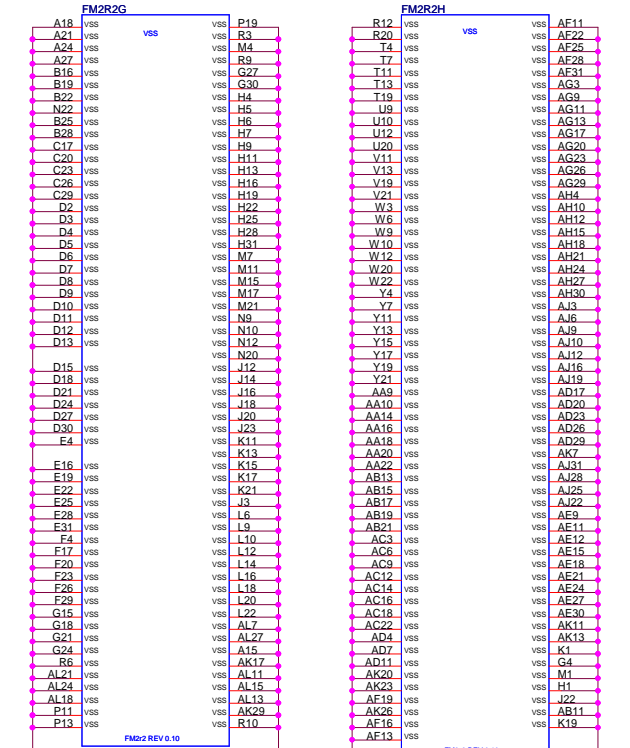
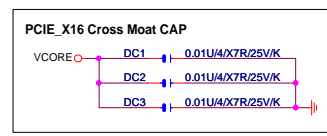
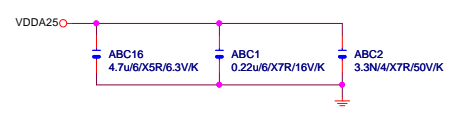


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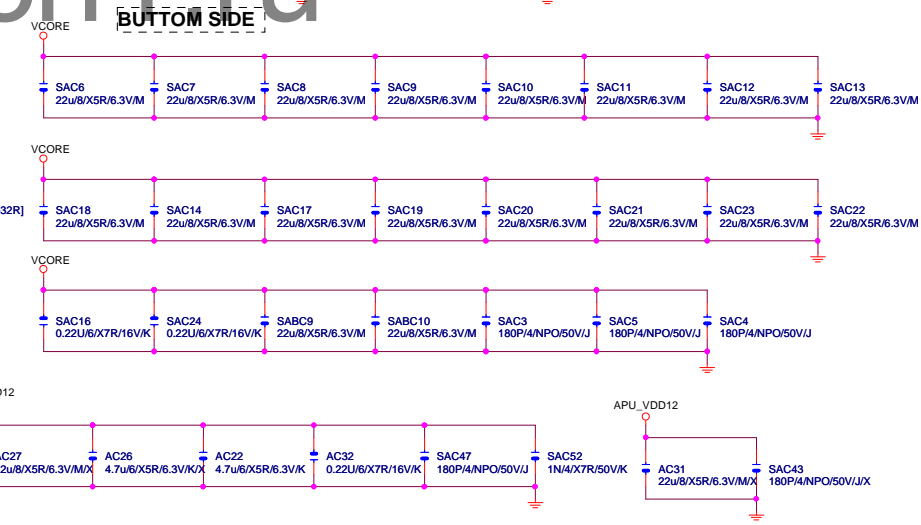
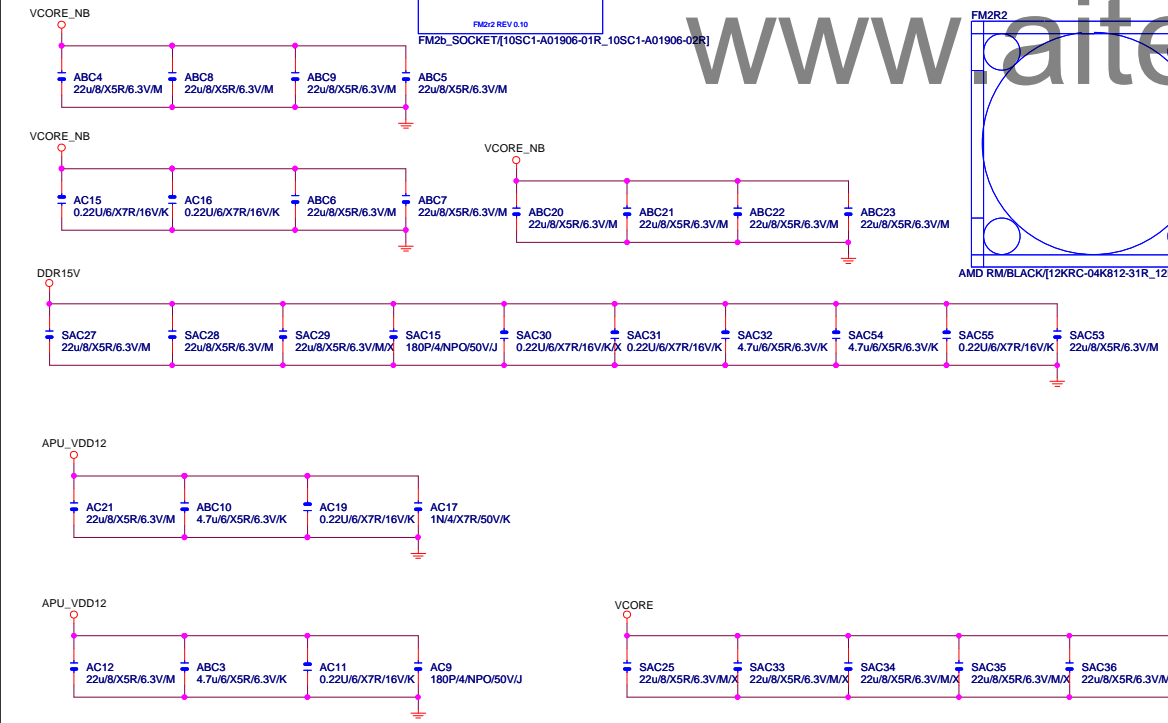
DDR15V=1.25V/1.35V/1.5V(DDR3)



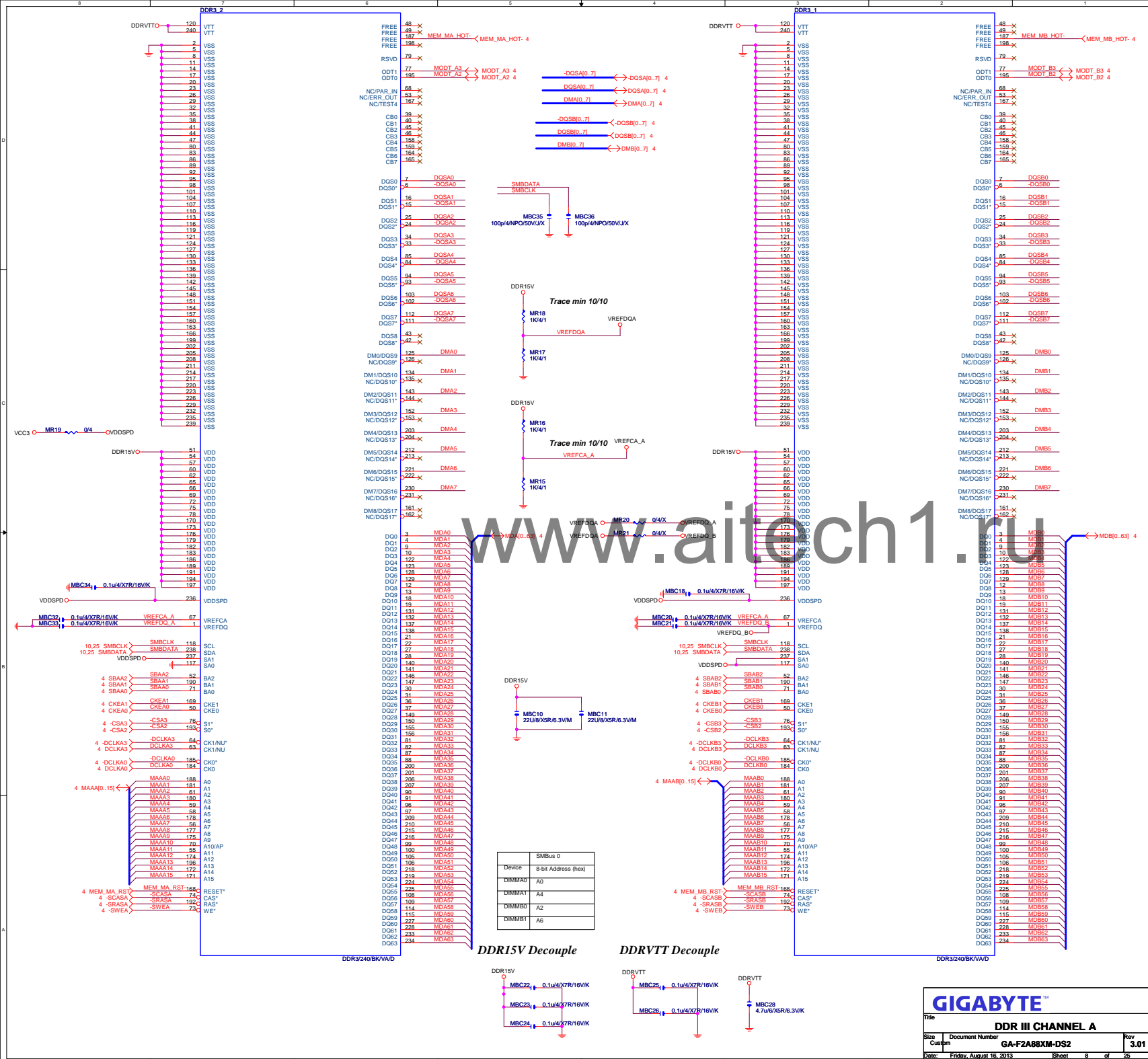
GND:232 pin,
VCORE:99 pin,
VCORE_NB: 30 pin,
DDR15V:49 pin,
VDDP:9 pin, VDDR:9
pin, VDDA25:2 pin,
VDDNB_CAP:2
pin, Total:430 pin.



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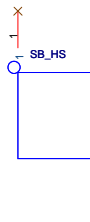
GIGABYTE™			
Title APU POWER & GND			
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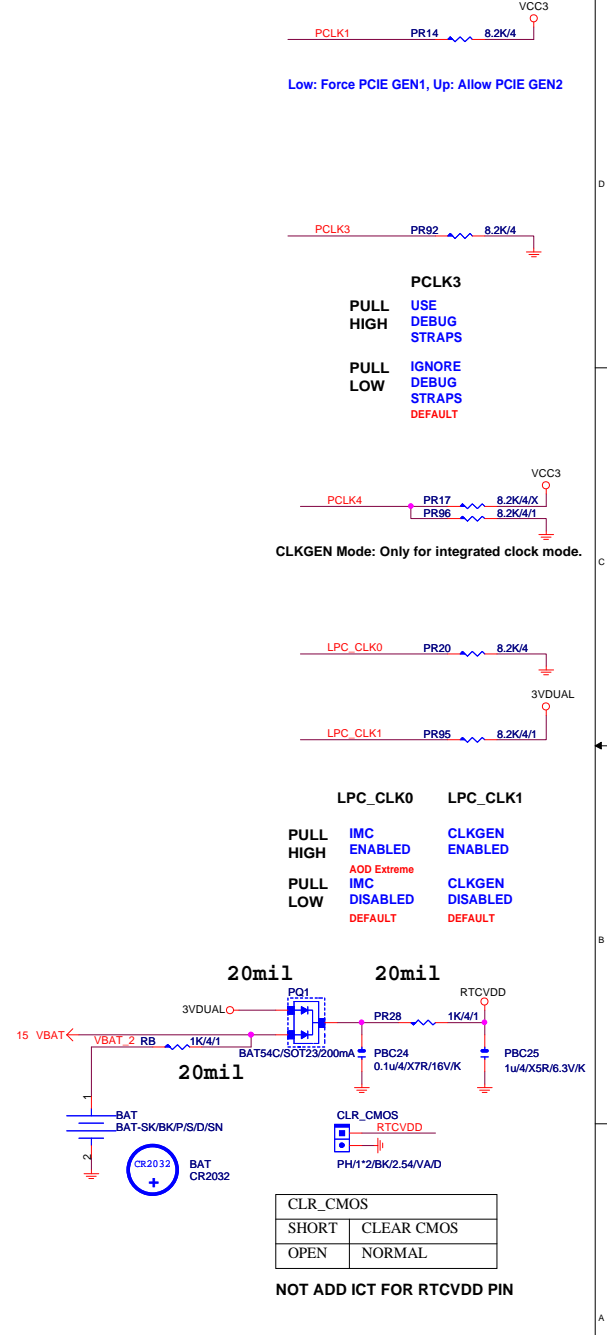
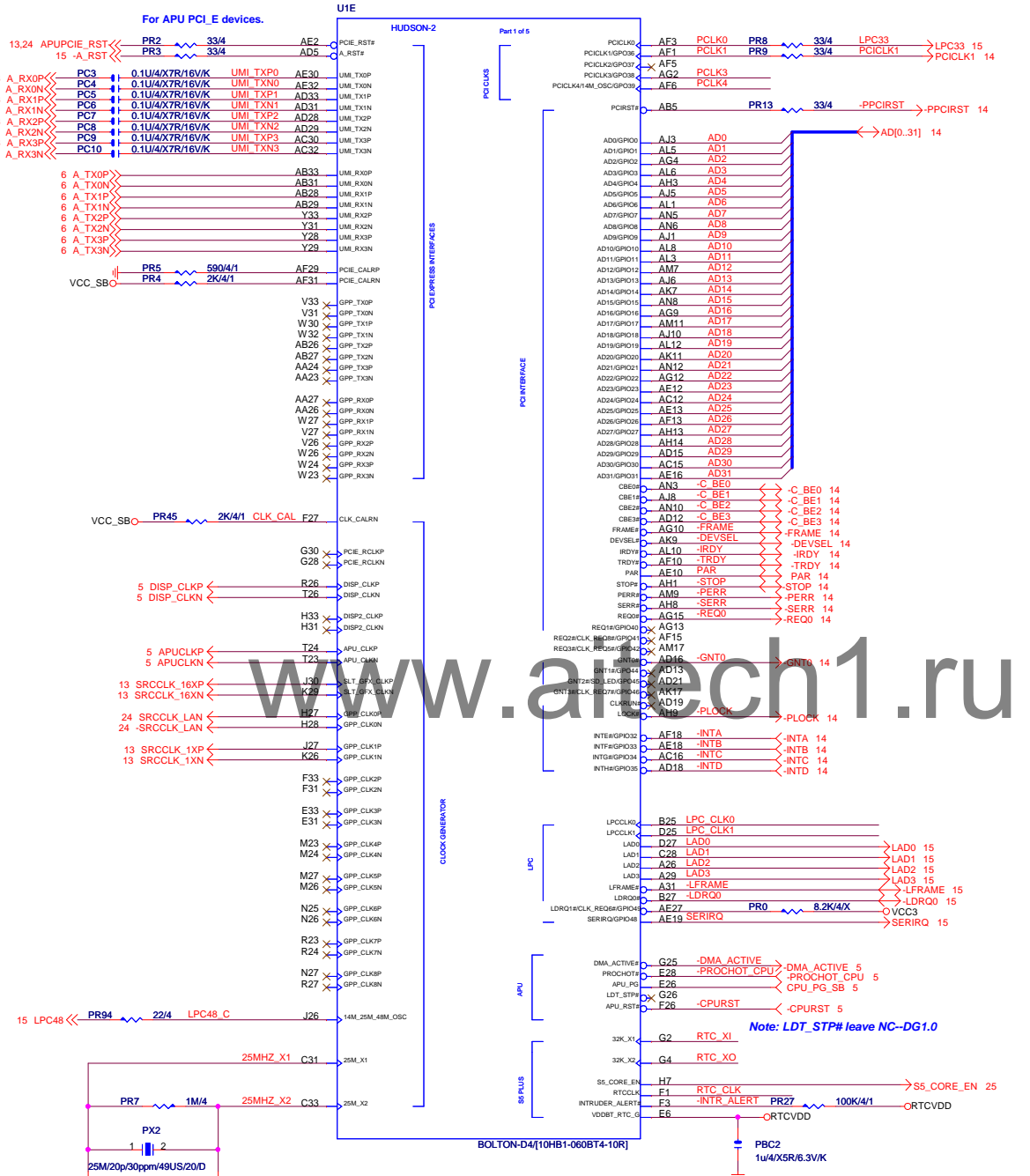
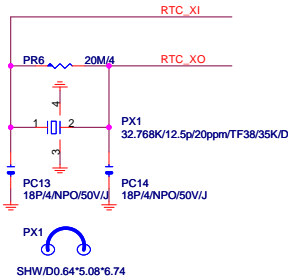


PLACE THESE PCIE AC COUPLING CAPS CLOSE TO SB850

S.B HEATSINK



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

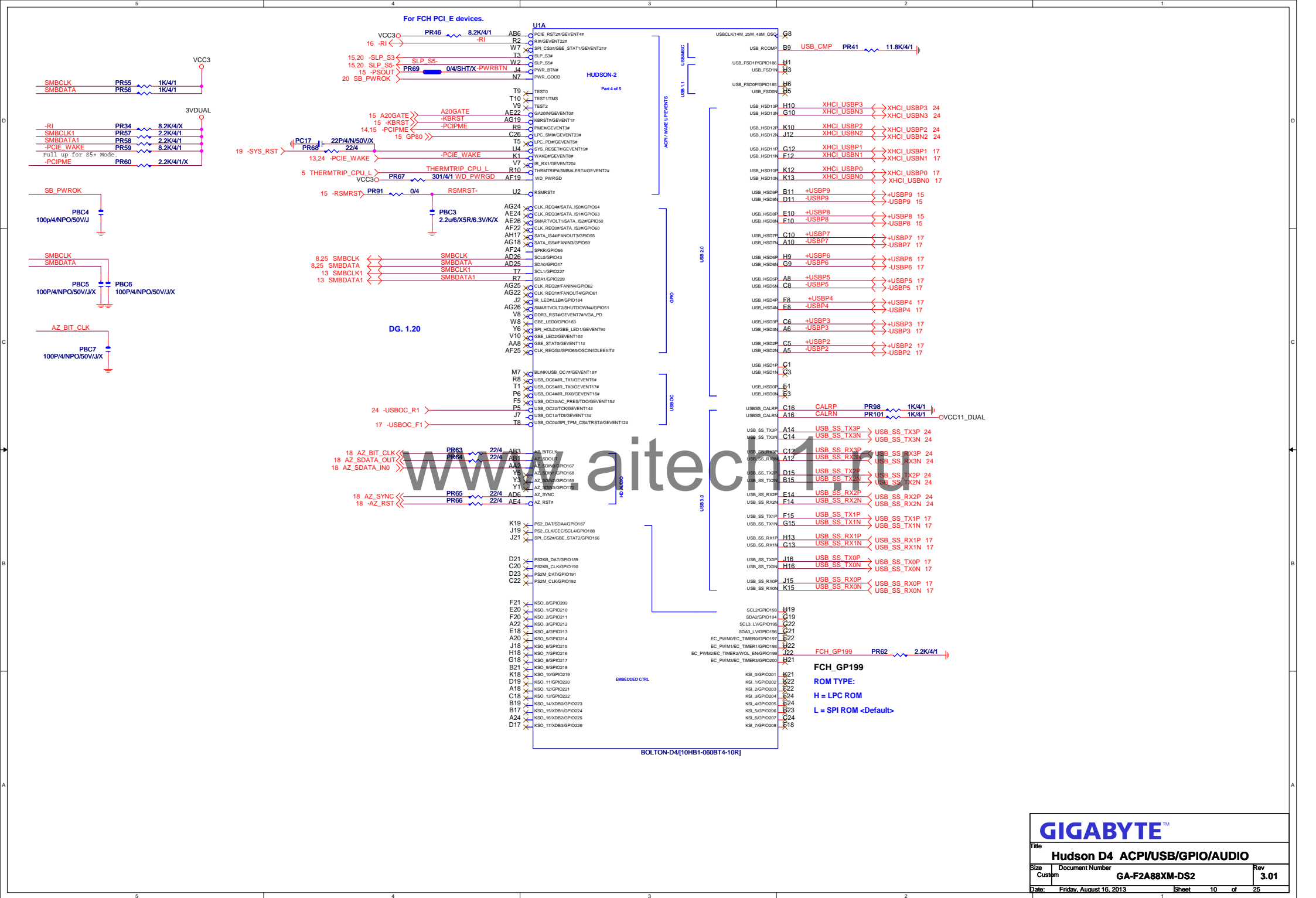


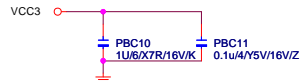
GIGABYTE
Title: **Hudson D4 PCIE/CPU/LPC**
Size: Custom
Document Number: **GA-F2A88XM-DS2**
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CLR_CMOS	
SHORT	CLEAR CMOS
OPEN	NORMAL

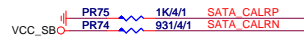
NOT ADD ICT FOR RTCVDD PIN





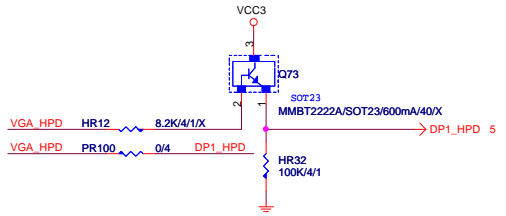
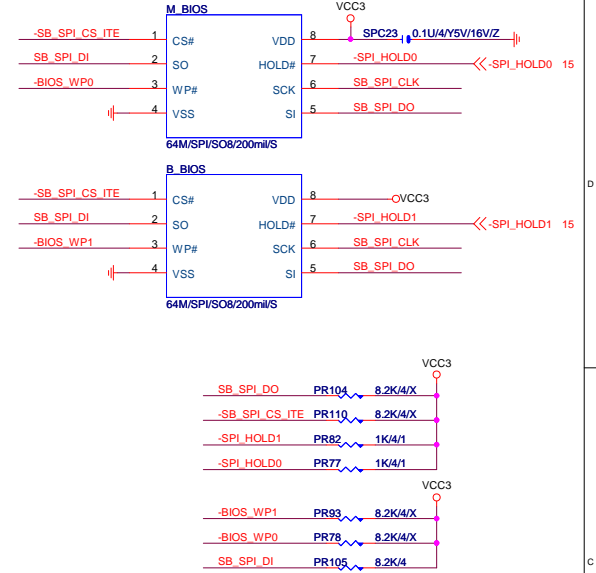
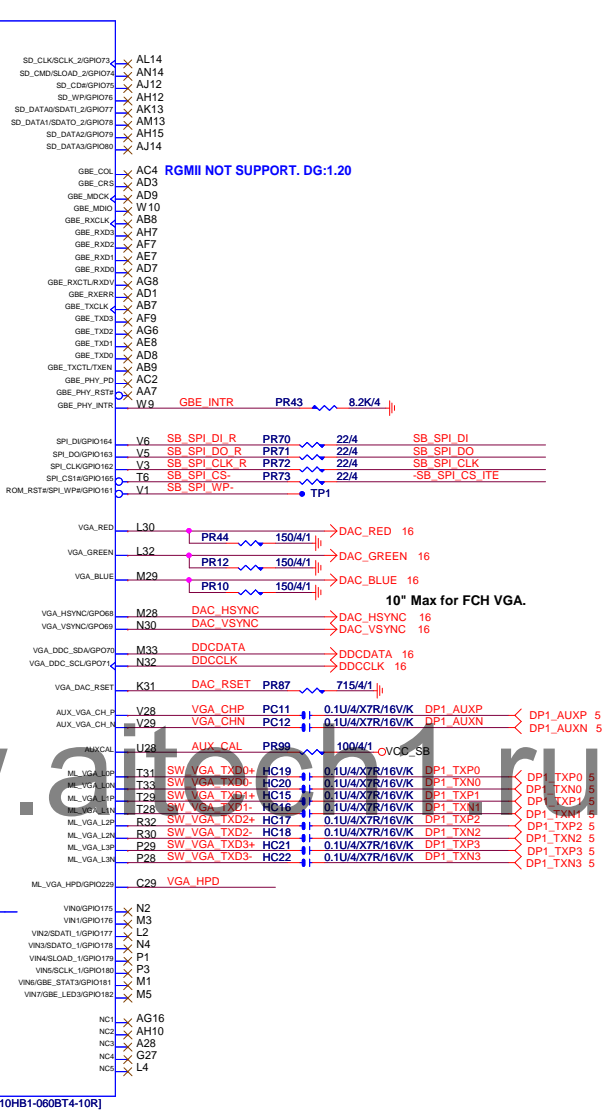
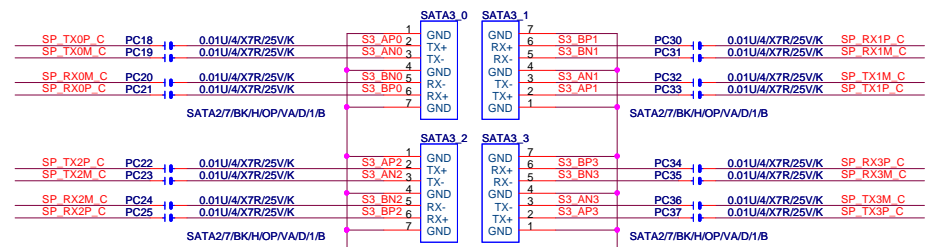
SATA 6~7 for Hudson D4.

PLACE SATA_CAL RES VERY CLOSE TO BALL OF U1



19 -SATA_LED -> -SATA_LED

5 -SB_ALERT- ->



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Hudson D4 SATA/HWM/SPI

Size Custom

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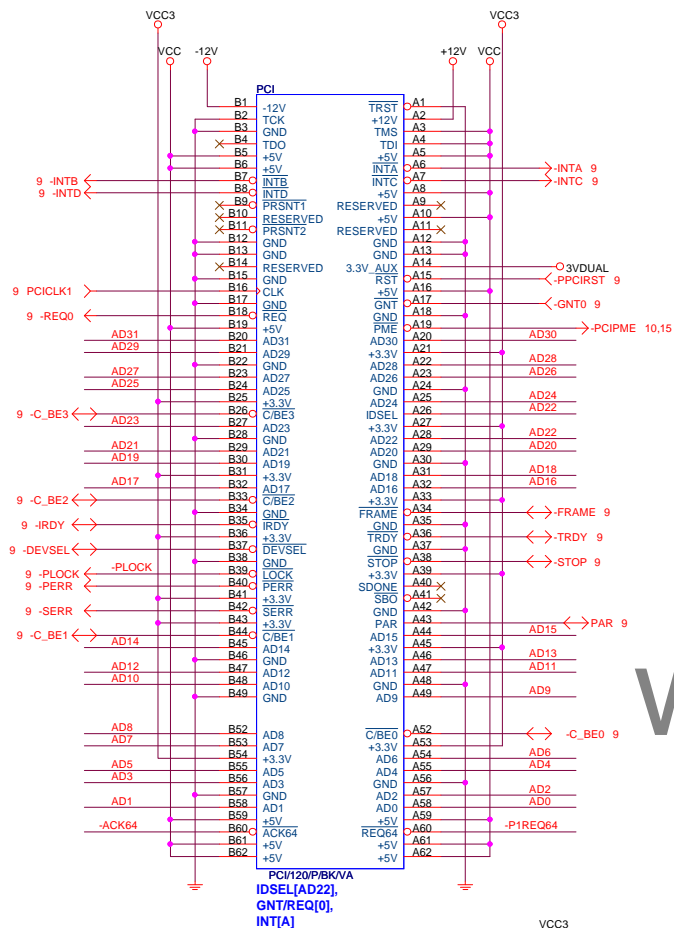
PLACE ALL THE DECOUPLING CAPS ON THIS SHEET CLOSE TO SB AS POSSIBLE.

Hudson 3/4 does not support an RGMII/MII interface.

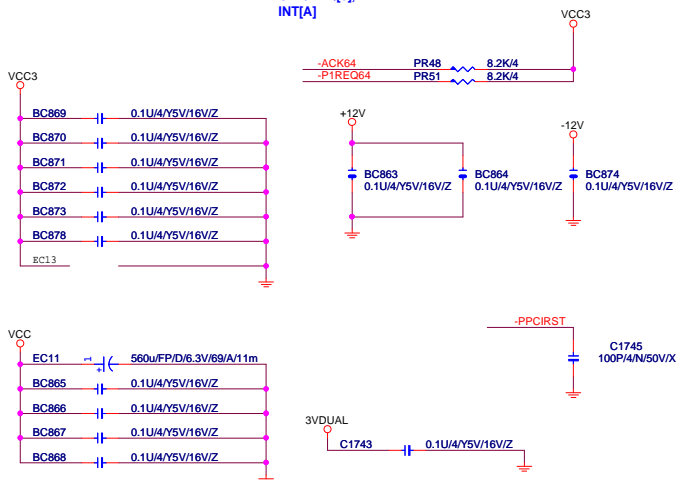
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PCI SLOT 1,2

9 AD[0..31] <-> AD[0..31]

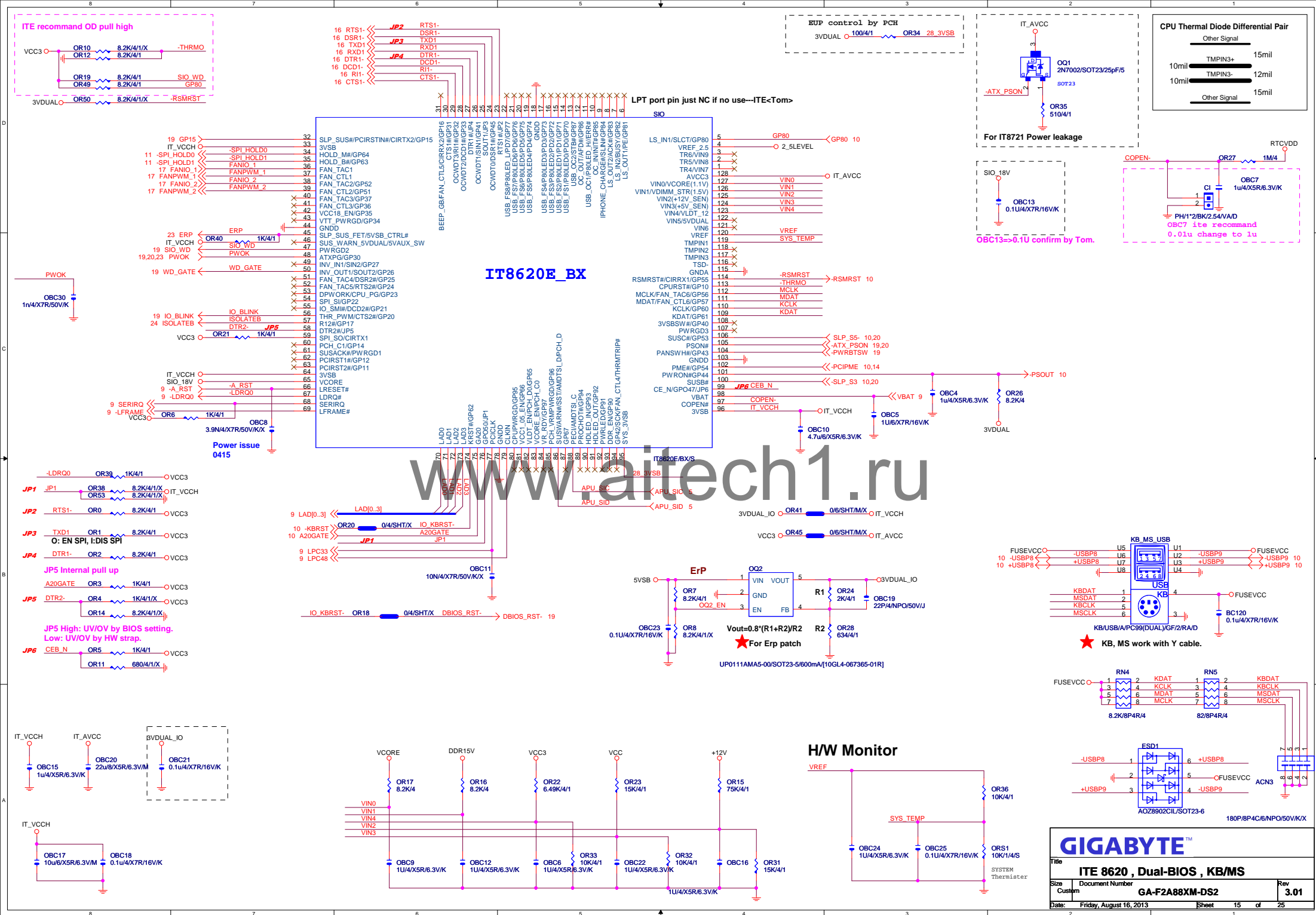


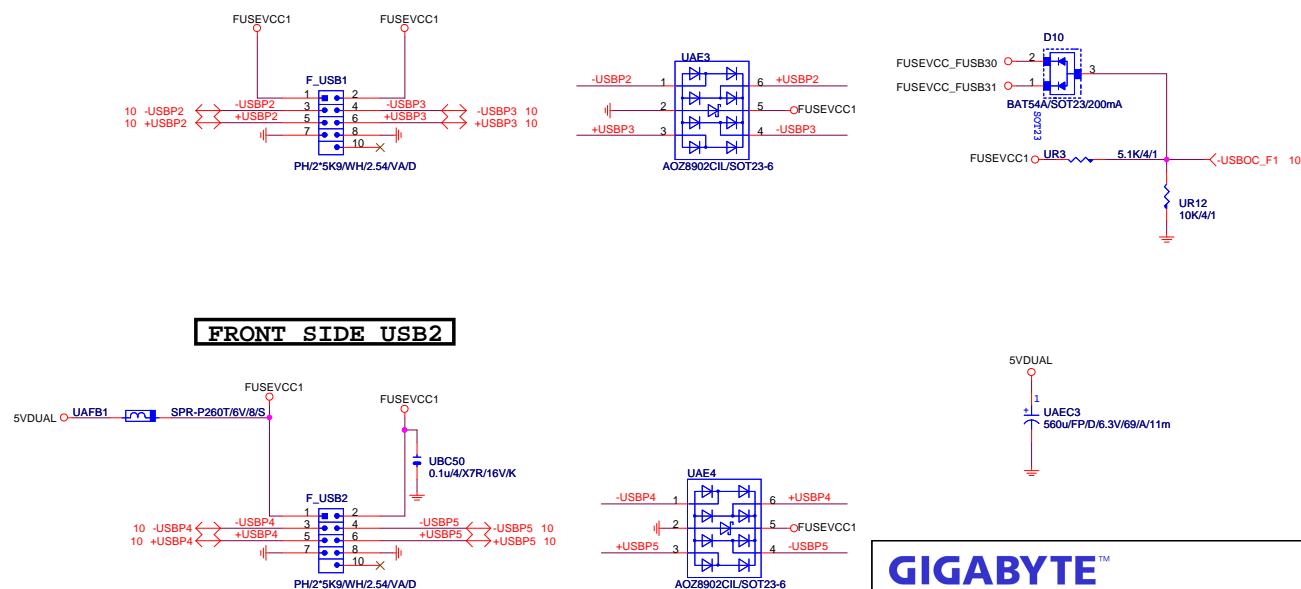
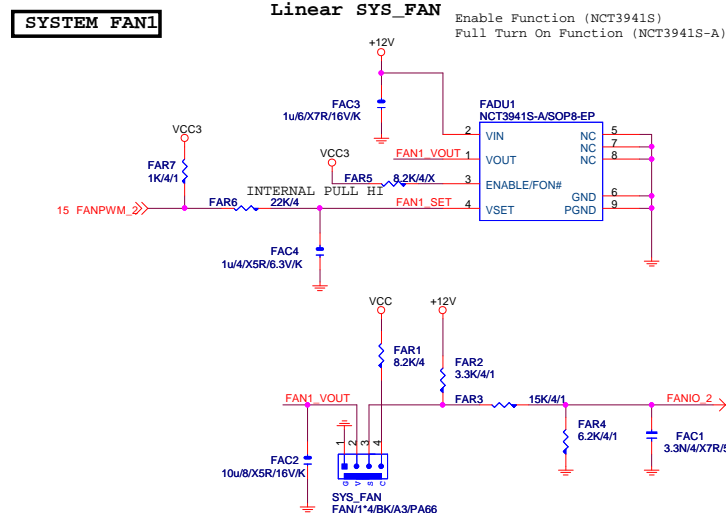
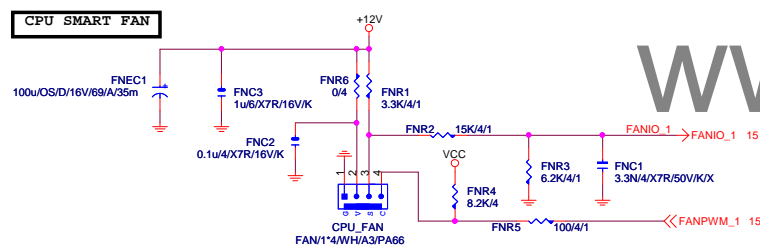
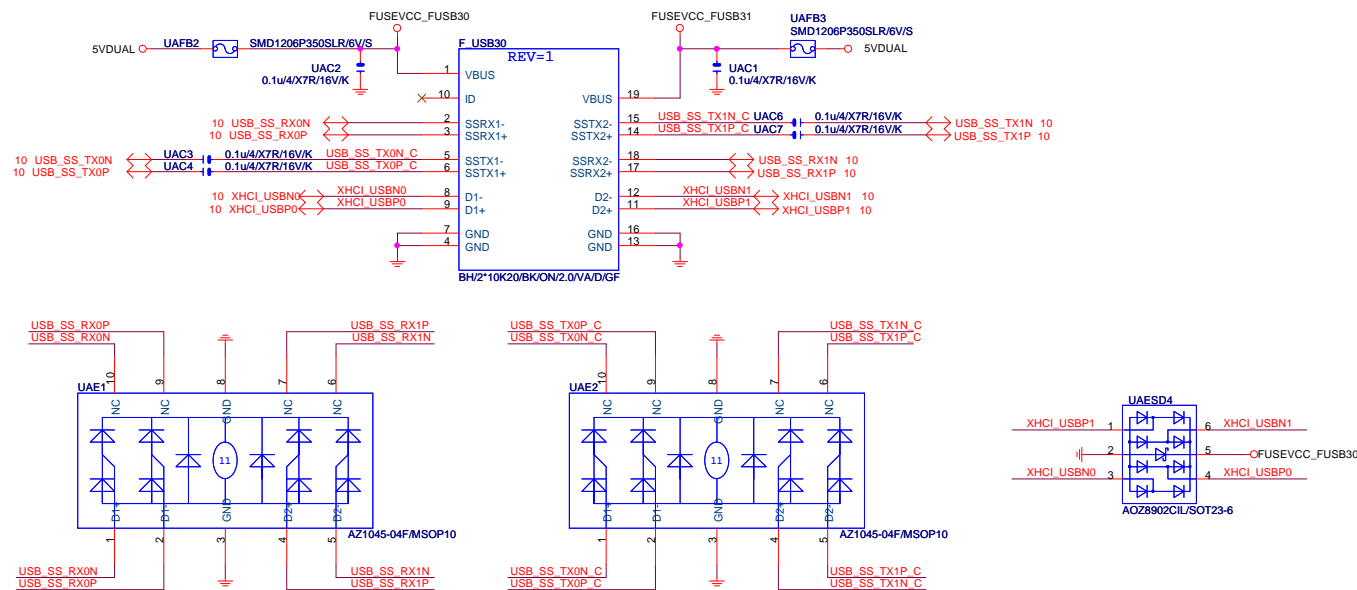
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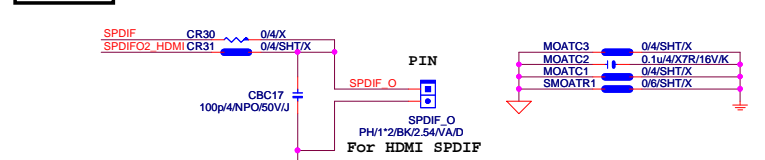
GIGABYTE

Title		
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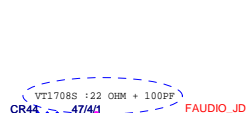
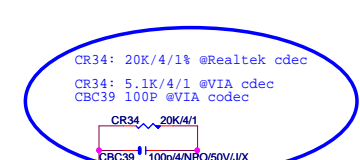
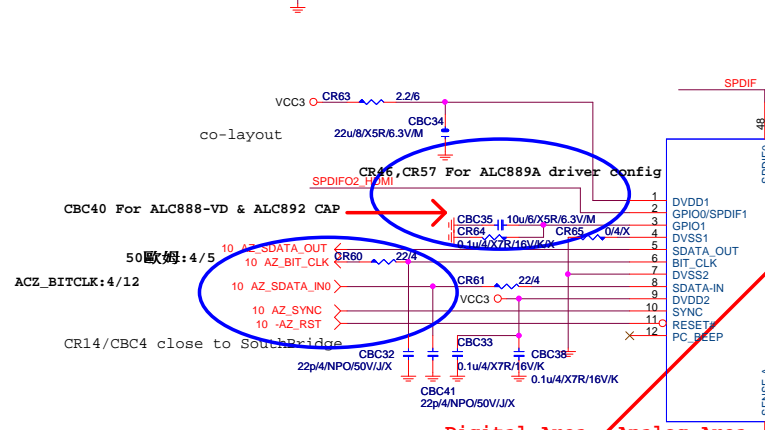
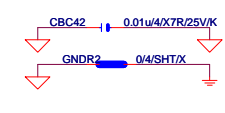




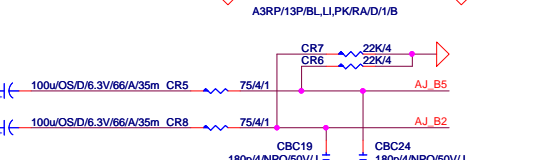
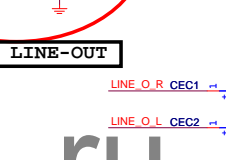
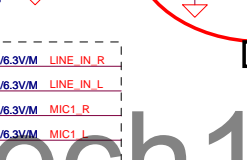
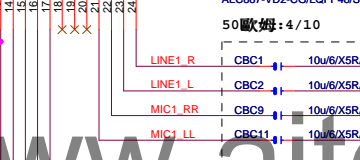
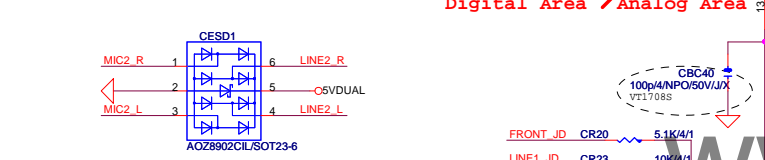
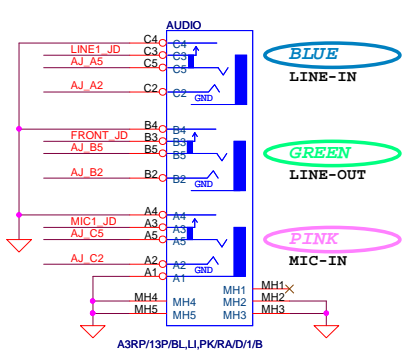
SPDIF_OUT



CODEC POWER/EMI PAD



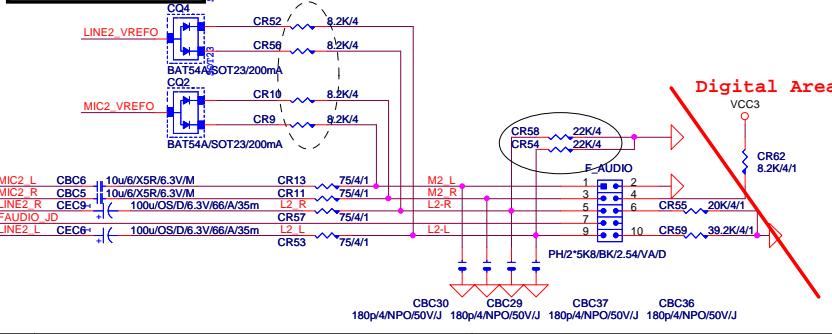
ADD CD2 For ESD PROTECT DIODE



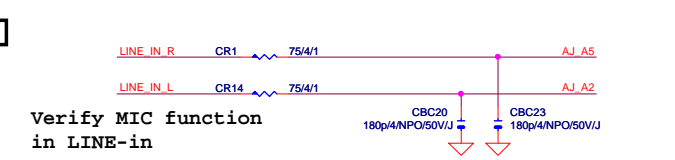
AZALIA CODEC ALC887-VD2/ALC889/VT1708S/VT1708SCE Colay

	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

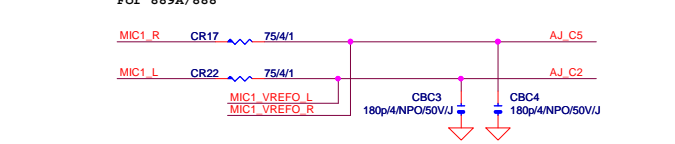
AZALIA FRONT PANEL



LINE-IN



MIC-IN



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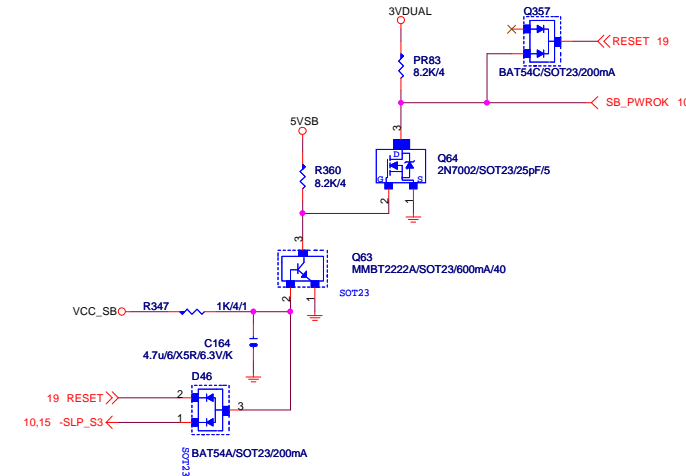
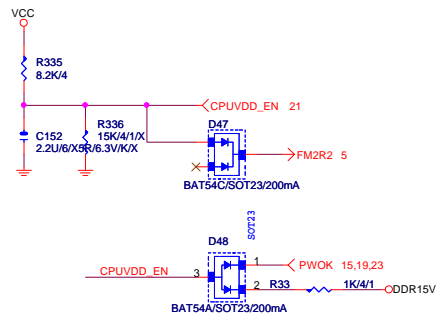
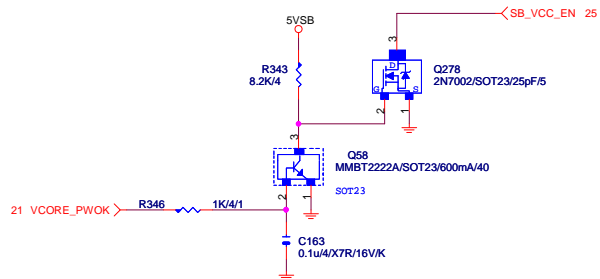
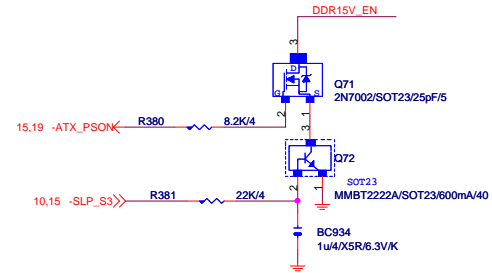
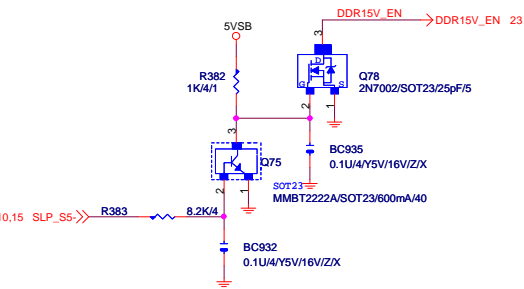
HD AUDIO ALC887-VD2

GA-F2A88XM-DS2

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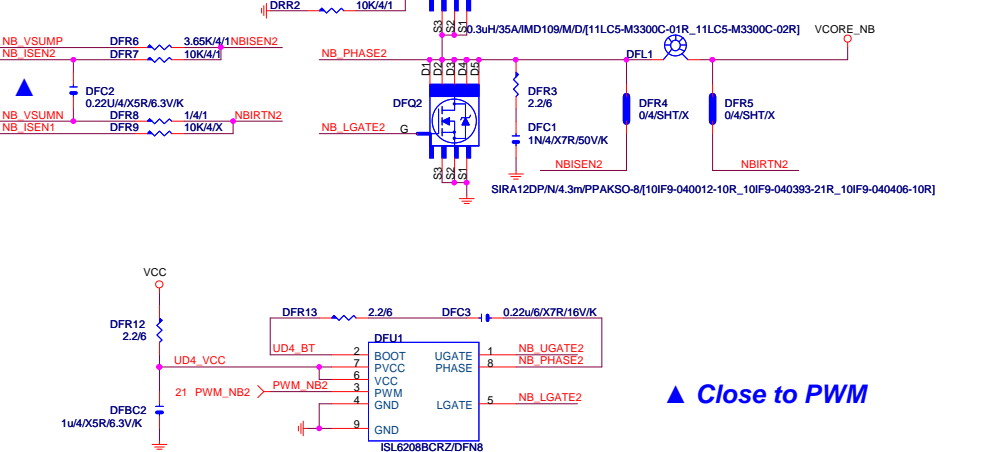
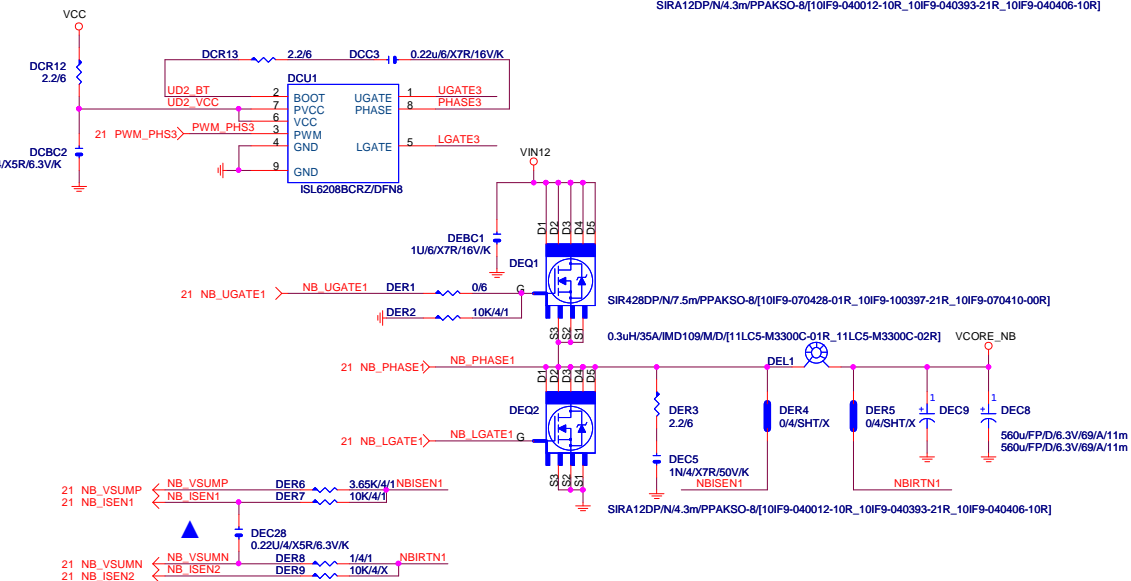
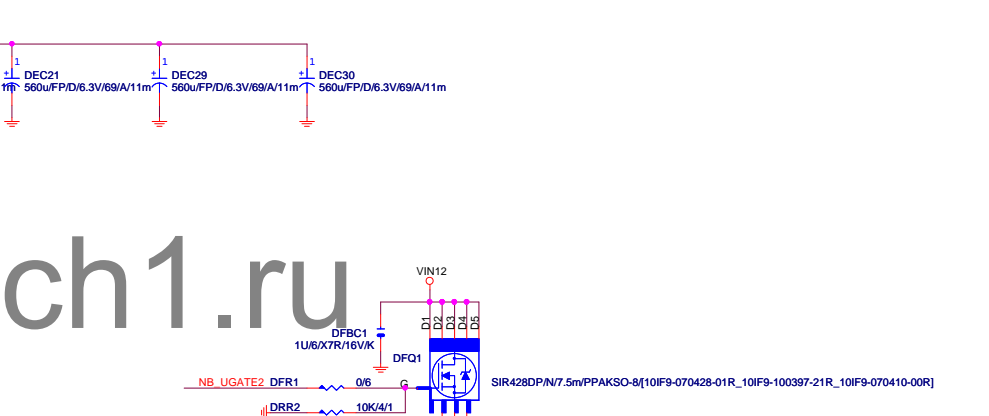
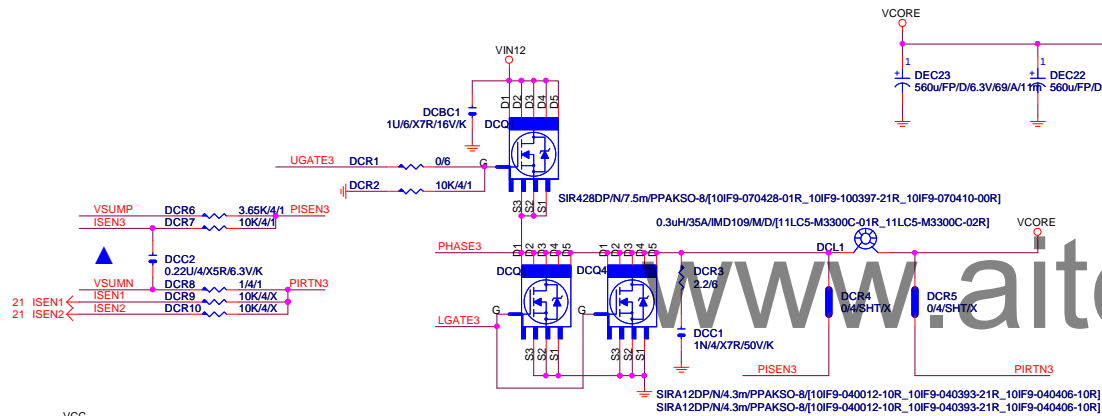
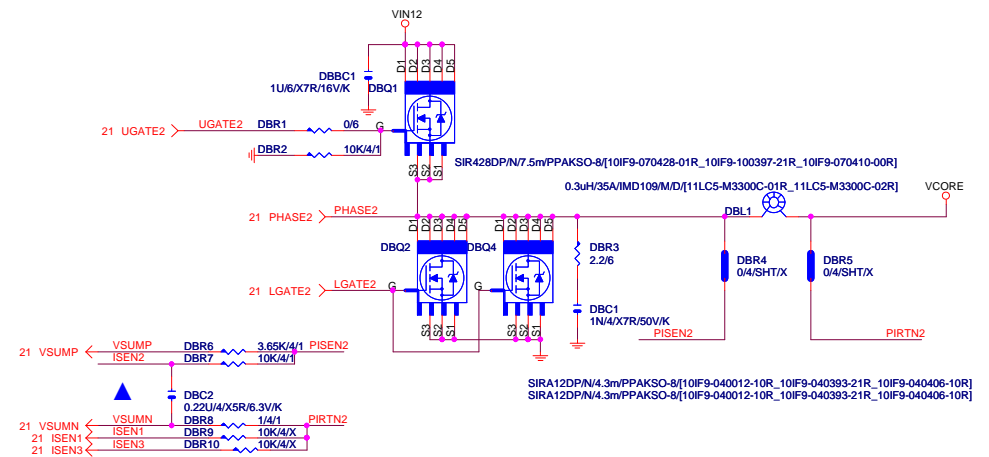
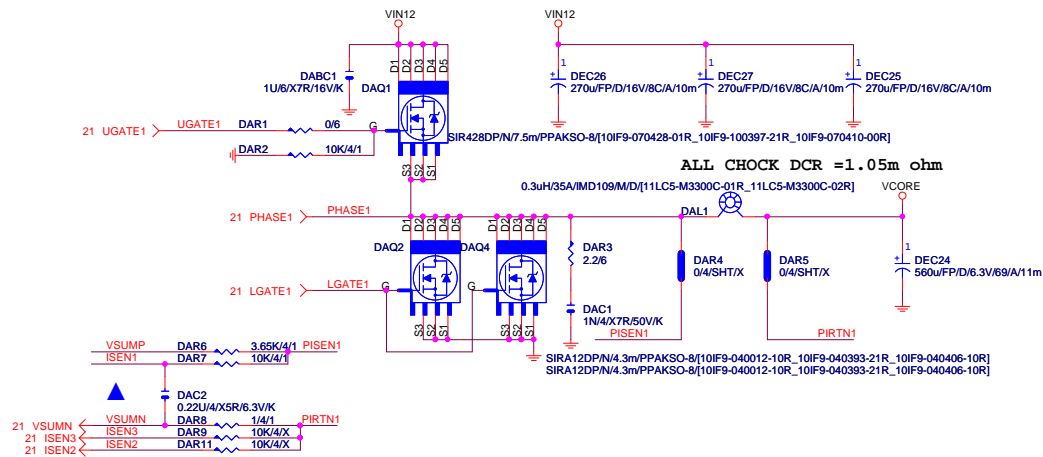
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Title		
POWER SEQUENCE		
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▲ Close to PWM

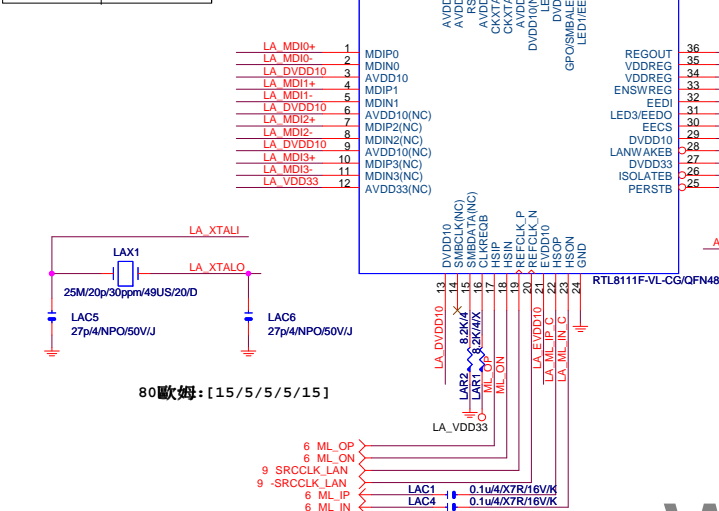
GIGABYTE™

Title			
VCORE MOS			
Size	Document Number	Rev	
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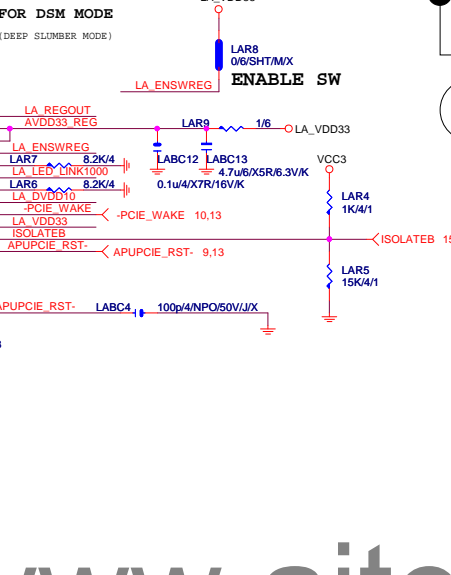
PCIE-1G LAN

Power domain chart

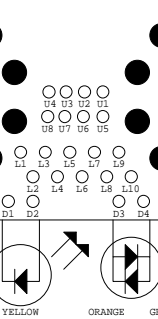
	RTL8111E
AVDD33	3.3V
DVDD33	3.3V
VDDREG	3.3V
DVDD10	1.05V



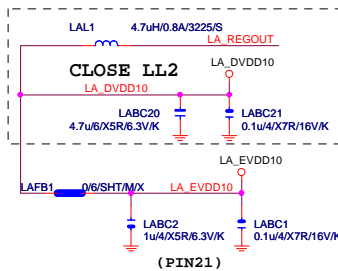
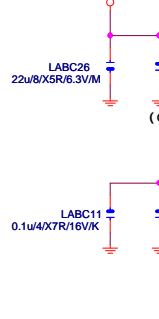
FOR DSM MODE
(DEEP SLEEP MODE)



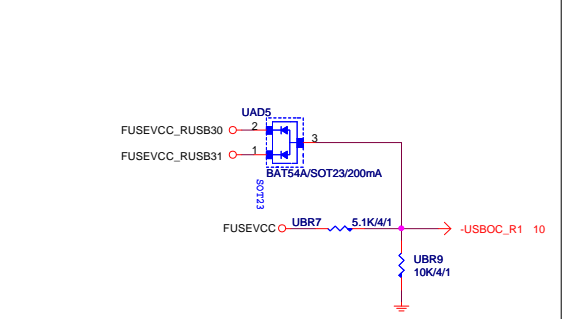
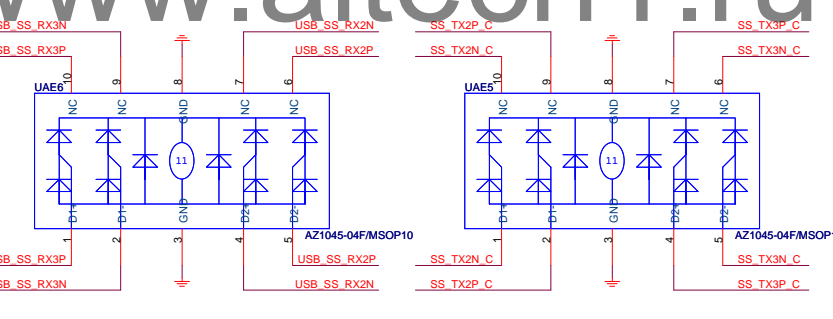
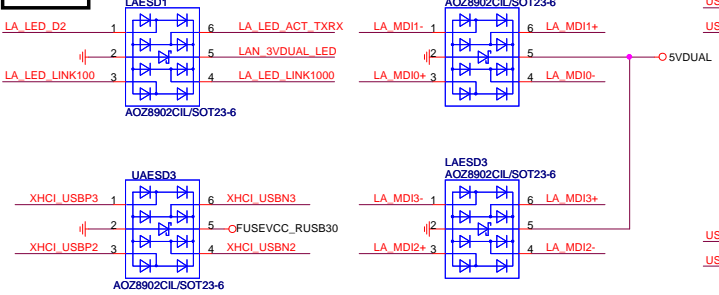
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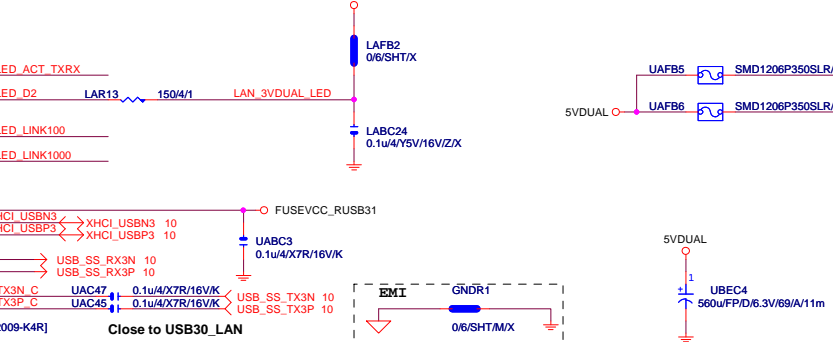
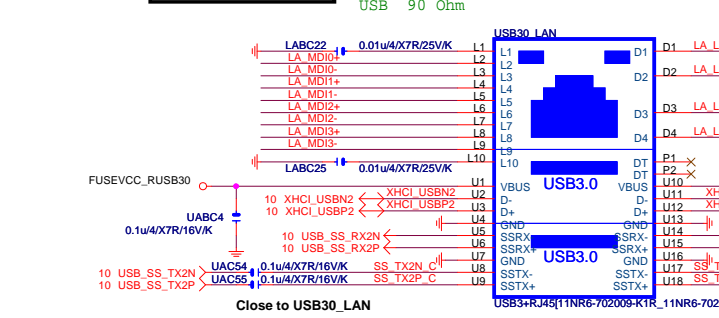
3VDUAL



USB_LAN

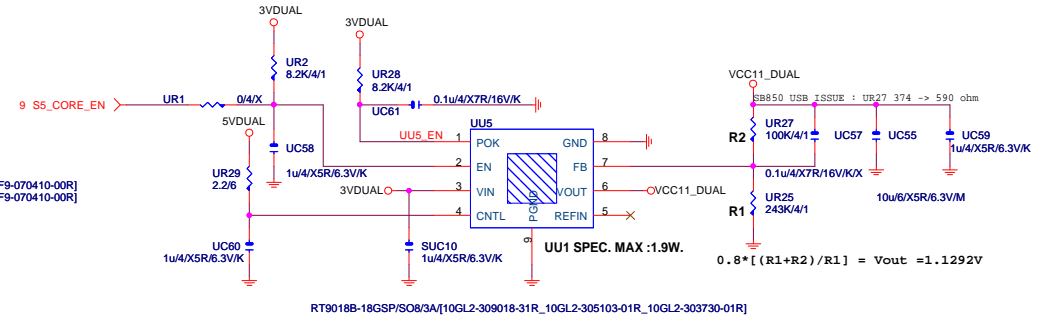
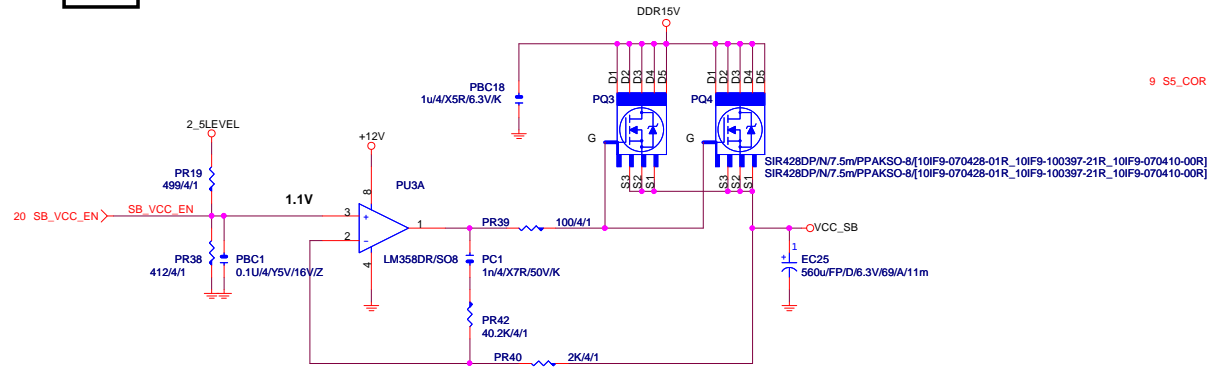


USB_LAN CONNECTOR

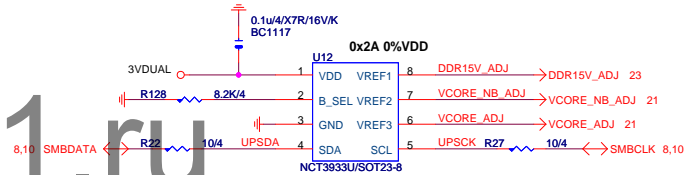
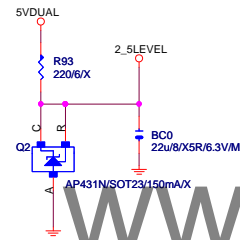


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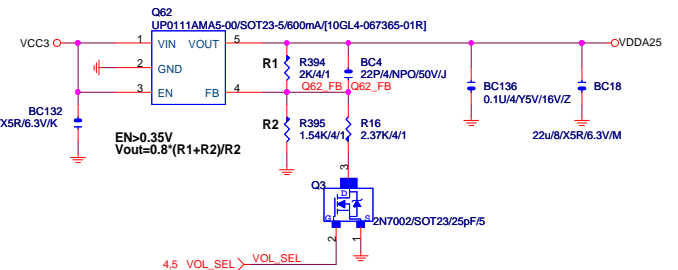
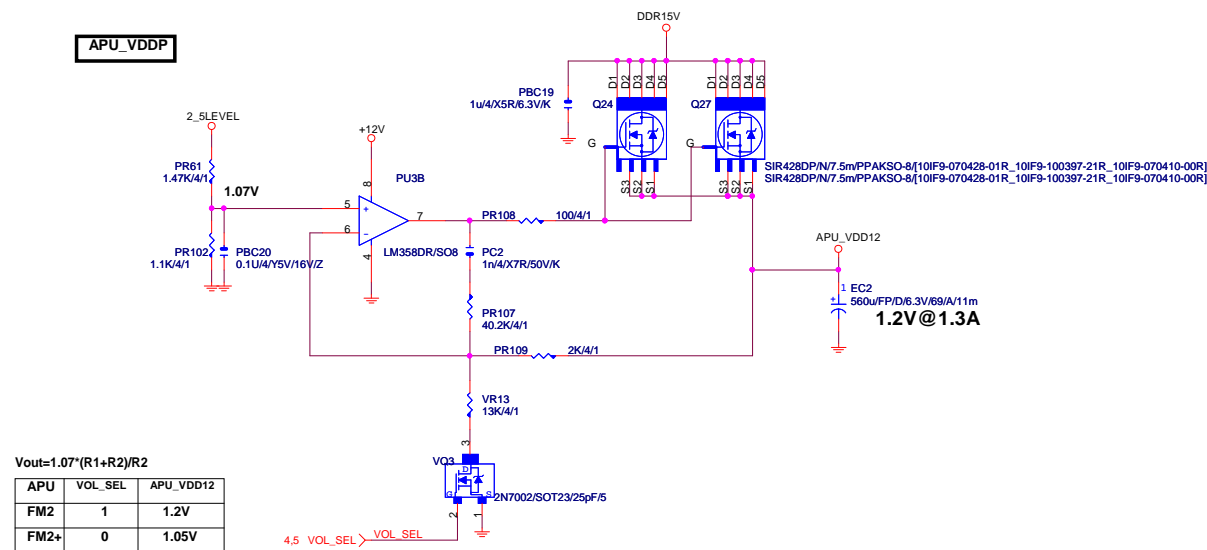
VCC_SB



RT9018B-18GSP/SO8/3A[10GL2-309018-31R_10GL2-305103-01R_10GL2-303730-01R]
【技術通報R&D技術通報156】
 RT9018 (RICHTEK) 與 NCT3730 (NUVOTON),
 EM5103GE (EMC) 做共用, 針對 PIN7 (FB) 分壓阻值部份
 (R1/R2) 須做修改為 100K 以上電阻值



APU_VDDP



APU	VOL_SEL	VDDA25
FM2	1	2.5V
FM2+	0	1.8V

APU	VOL_SEL	APU_VDD12
FM2	1	1.2V
FM2+	0	1.05V

GIGABYTE

Title: **VCC_SB, APU_VDDP, VCC11_DUAL, VDDA25**

Size: Custom Document Number: **GA-F2A88XM-DS2** Rev: **3.01**

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