

GA-F2A88XM-DS2 CN

PAGE TITLE Revision : 3.01

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	Bolton D4 UMI, PCIE, PCI, CPU, LPC
10	Bollton D4 ACPI, GPIO, USB, AUDIO
11	Bolton D4 SATA,SPI,HWM
12	Bolton D4 POWER & GND
13	PCIE x16 , x1
14	PCI SLOT
15	ITE 8620 , Dual-BIOS , KB/MS , HWMO
16	COM ,RGB ,DVI
17	FAN , HWMO , F_USB , R_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=DDRVT
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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Title

COVER SHEET

Size

Document Number

Custom

GA-F2A88XM-DS2 CN

Date:

Monday, December 09, 2013

Sheet

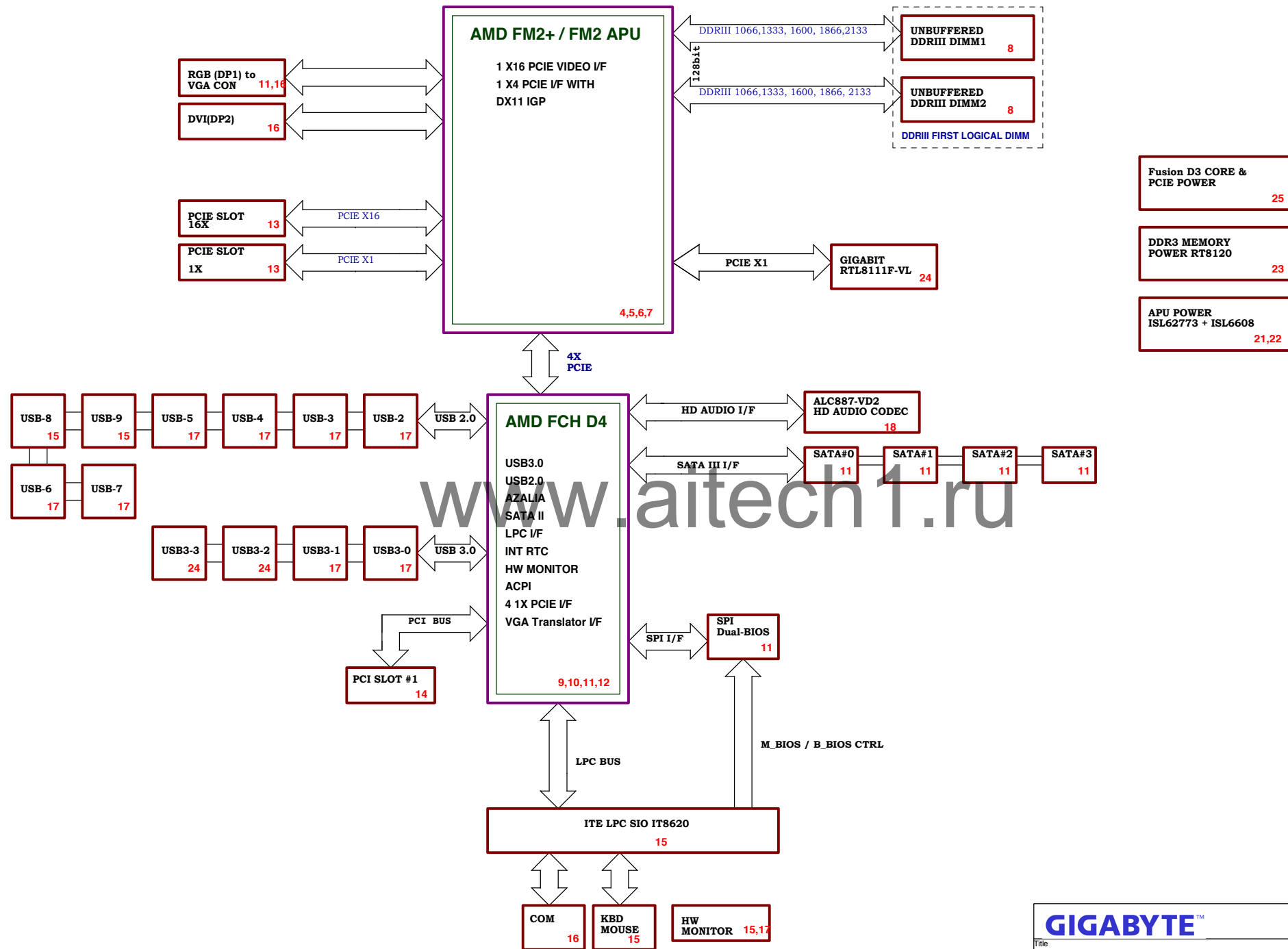
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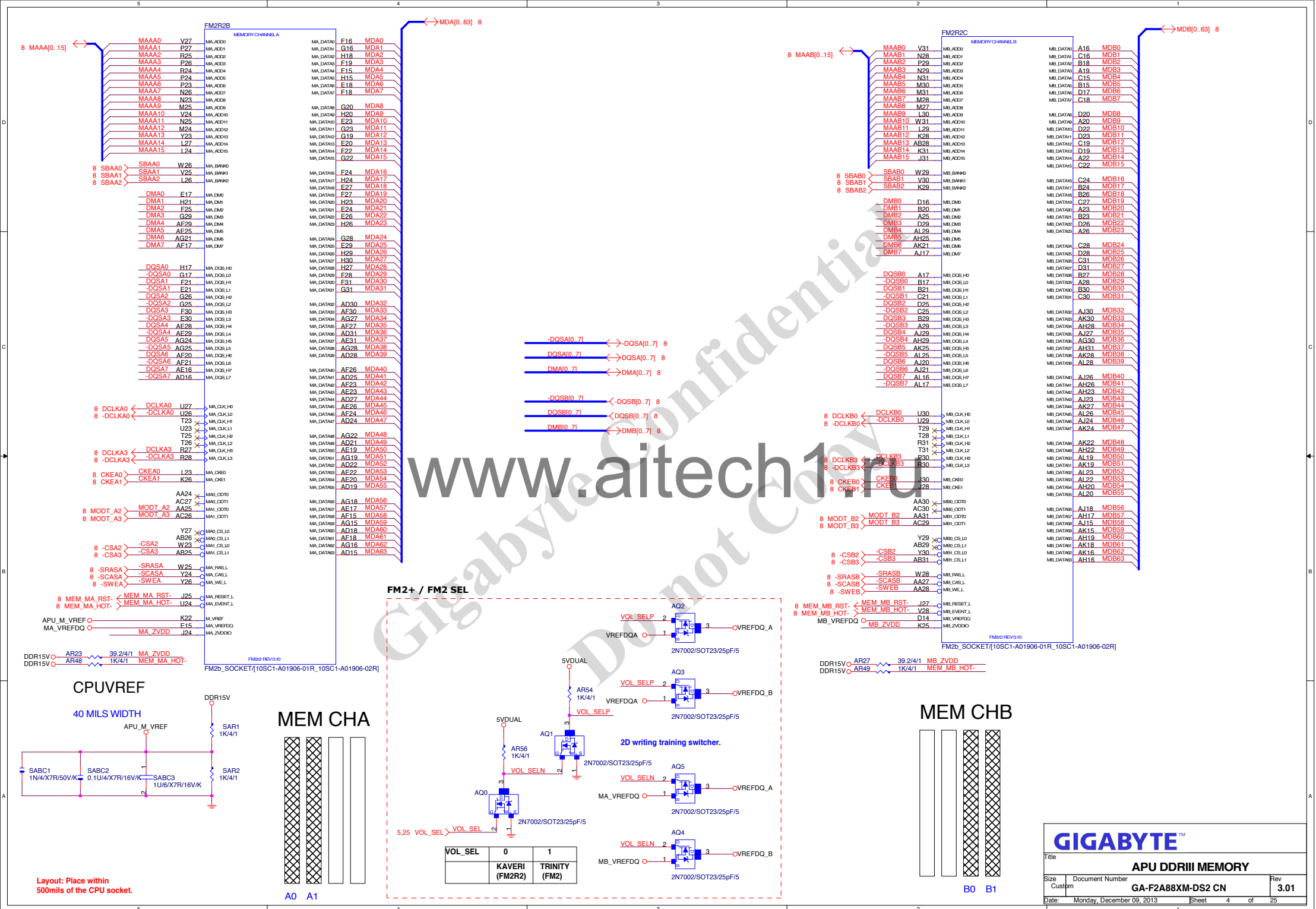
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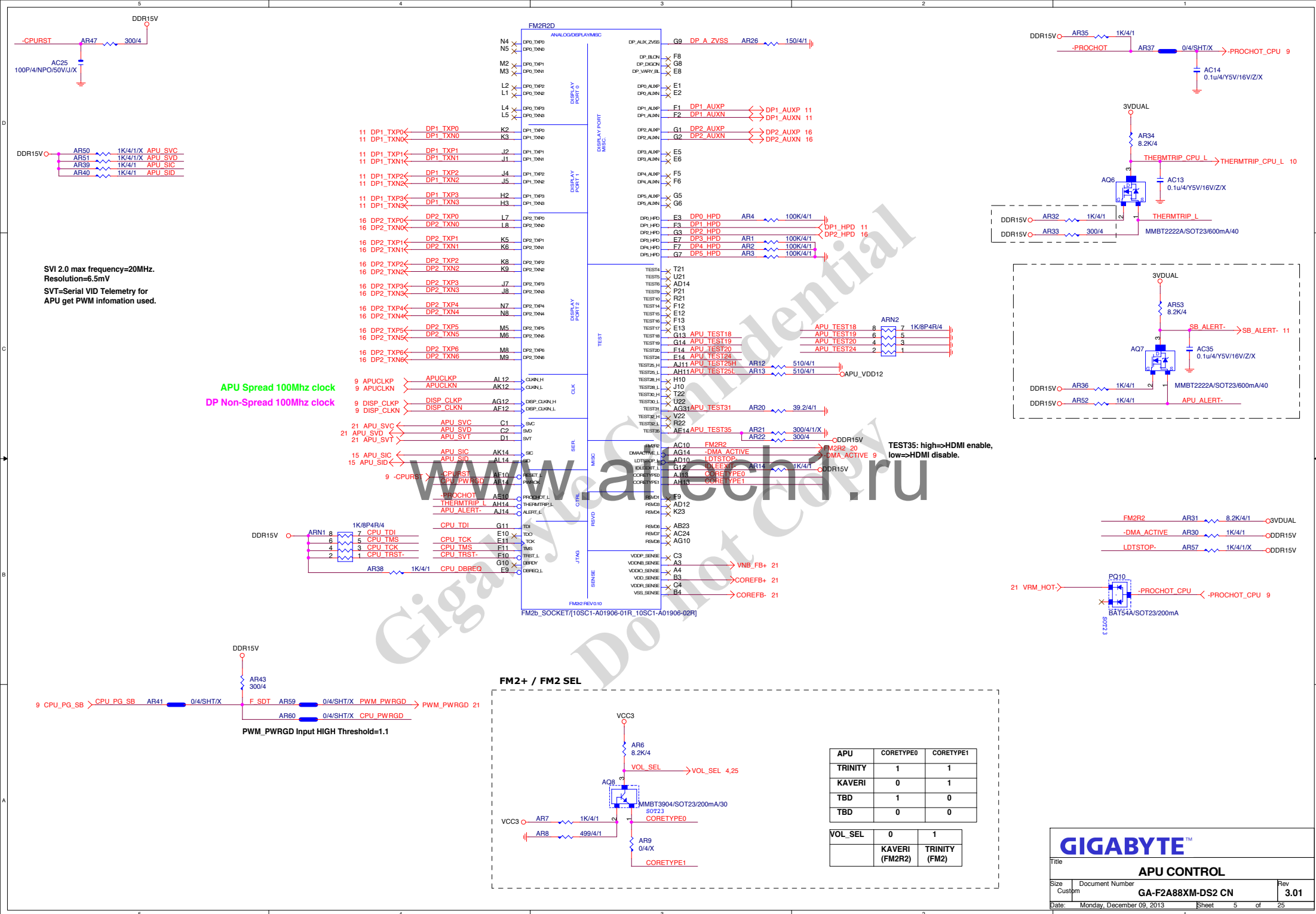
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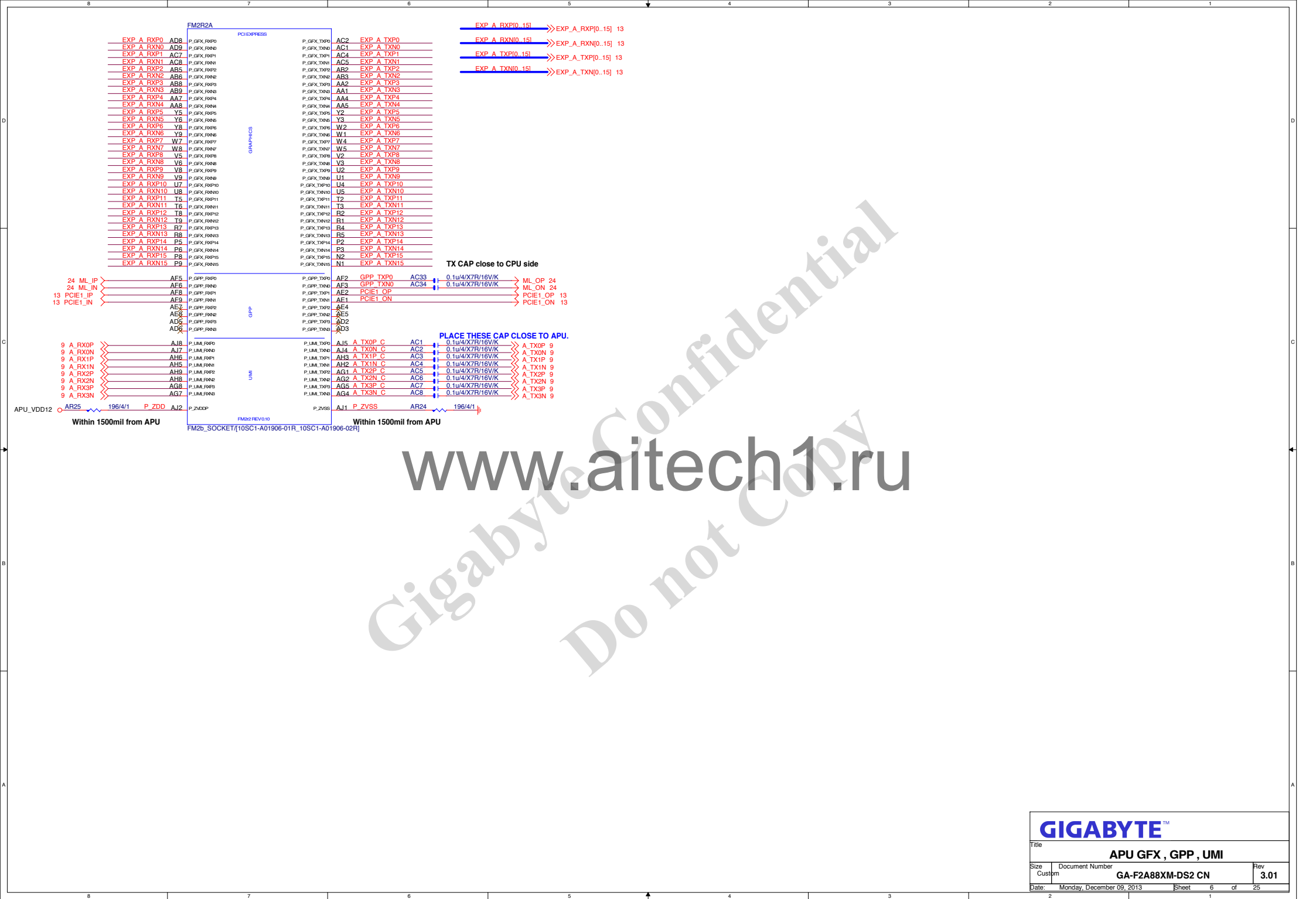
Rev

3.01







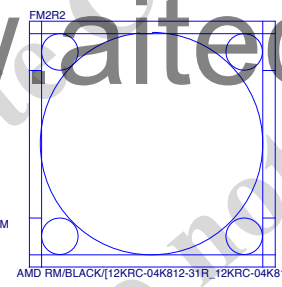
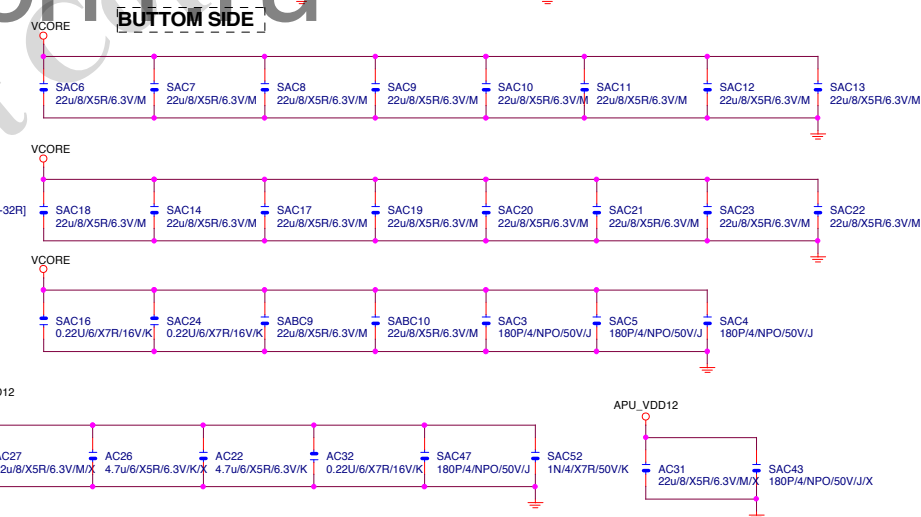
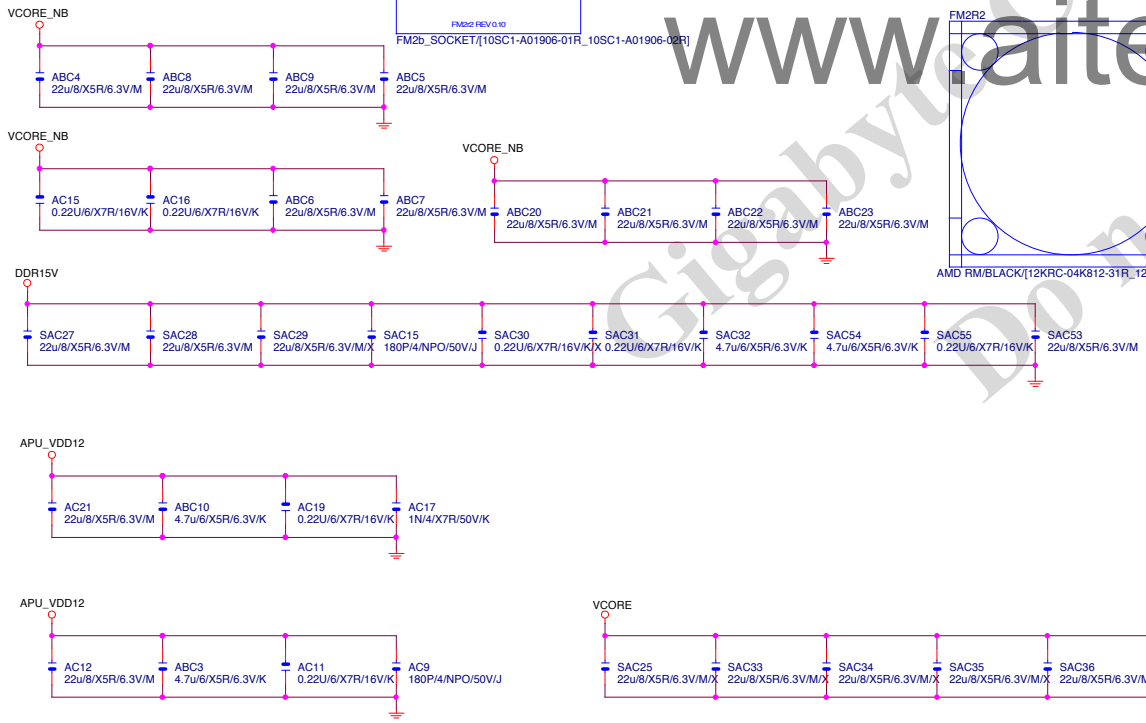
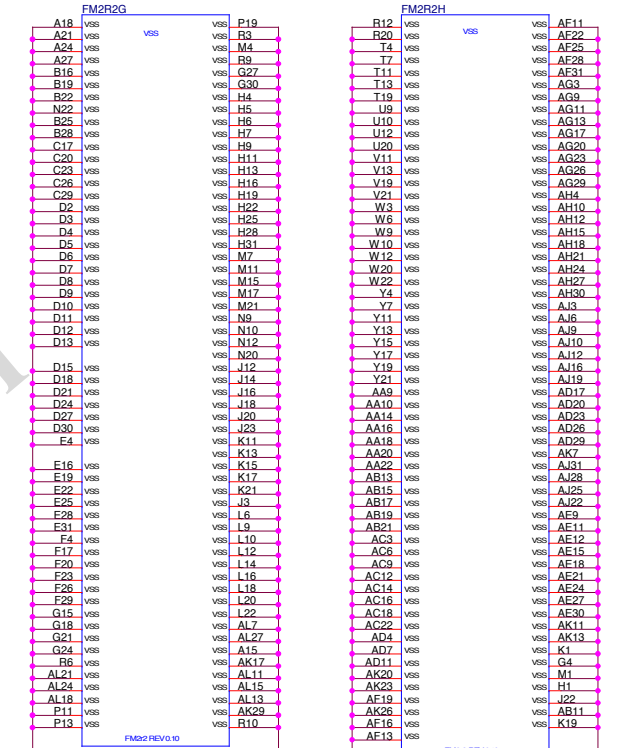
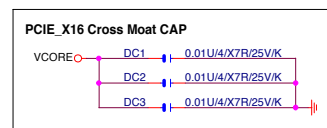


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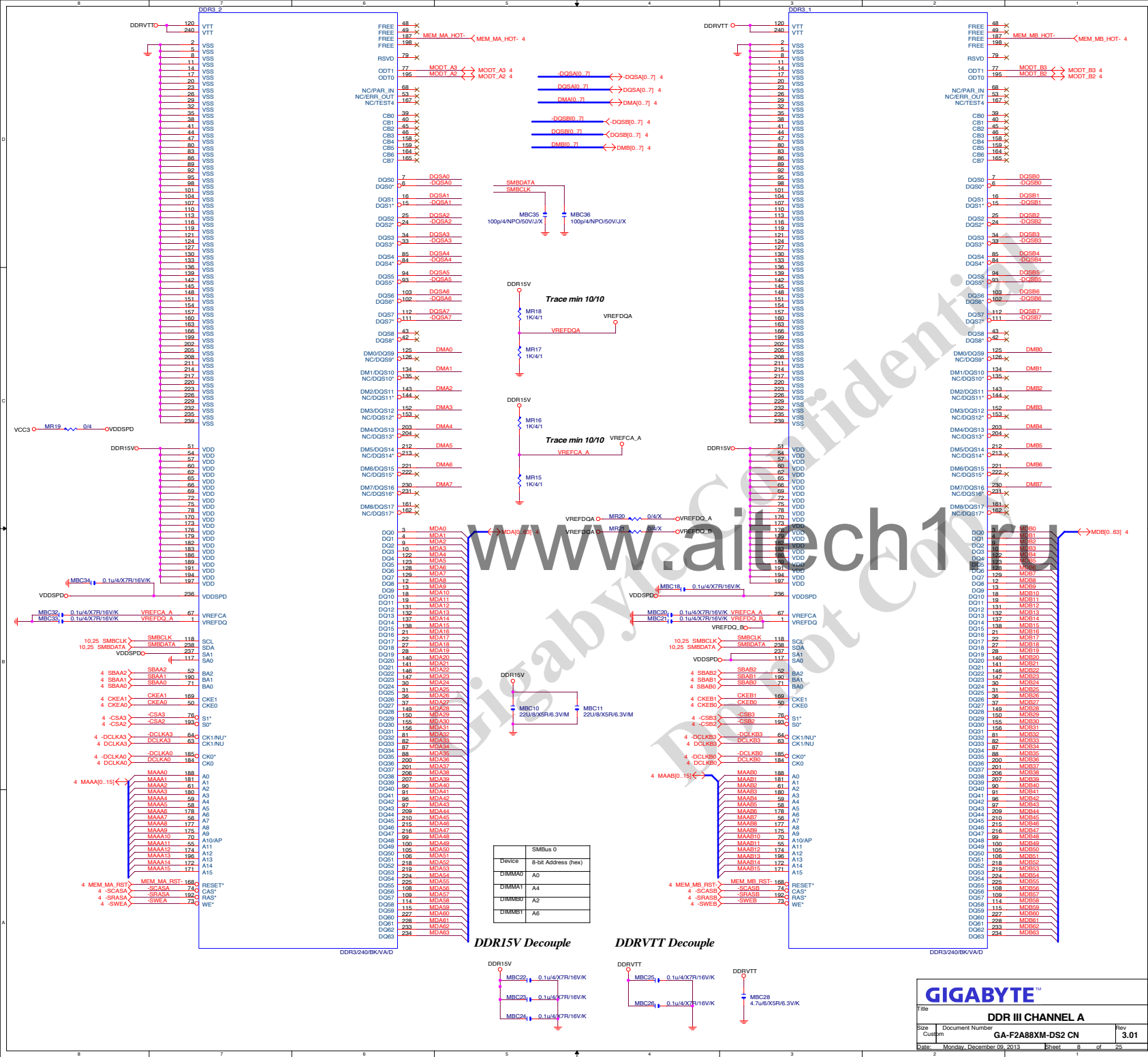
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Size		Document Number			GA-F2A88XM-DS2 CN			Rev		
Custom								3.01		
Date:		Monday, December 09, 2013			Sheet		6		of 25	

The diagram illustrates the pinout of the VCCOREDD15V connector, showing its connections to various components. The connector has 25 pins, numbered 1 to 25. The connections are as follows:

- CORE:**
 - Pin 1: AA11
 - Pin 2: AB7
 - Pin 3: Y20
 - Pin 4: M10
 - Pin 5: P10
 - Pin 6: T20
 - Pin 7: W11
 - Pin 8: AA13
 - Pin 9: AA21
 - Pin 10: AA3
 - Pin 11: AA6
 - Pin 12: AB1
 - Pin 13: AB10
 - Pin 14: AB14
 - Pin 15: AB16
 - Pin 16: AB18
 - Pin 17: AB4
 - Pin 18: AC11
 - Pin 19: AC13
 - Pin 20: AC19
 - Pin 21: AC21
 - Pin 22: AD1
 - Pin 23: AE3
 - Pin 24: AE4
 - Pin 25: AE7
- FM2R2E:**
 - Pin 1: L17
 - Pin 2: L12
 - Pin 3: M16
 - Pin 4: M18
 - Pin 5: M20
 - Pin 6: N6
 - Pin 7: N12
 - Pin 8: N19
 - Pin 9: N3
 - Pin 10: P1
 - Pin 11: P12
 - Pin 12: P20
 - Pin 13: P1
 - Pin 14: P4
 - Pin 15: P7
 - Pin 16: R11
 - Pin 17: R13
 - Pin 18: R19
 - Pin 19: T10
 - Pin 20: T12
 - Pin 21: U11
 - Pin 22: V20
 - Pin 23: U3
 - Pin 24: U6
 - Pin 25: V1
- VDD:**
 - Pin 1: L17
 - Pin 2: L12
 - Pin 3: M16
 - Pin 4: M18
 - Pin 5: M20
 - Pin 6: N6
 - Pin 7: N12
 - Pin 8: N19
 - Pin 9: N3
 - Pin 10: P1
 - Pin 11: P12
 - Pin 12: P20
 - Pin 13: P1
 - Pin 14: P4
 - Pin 15: P7
 - Pin 16: R11
 - Pin 17: R13
 - Pin 18: R19
 - Pin 19: T10
 - Pin 20: T12
 - Pin 21: U11
 - Pin 22: V20
 - Pin 23: U3
 - Pin 24: U6
 - Pin 25: V1
- PCMR:**
 - Pin 1: K27
 - Pin 2: J29
 - Pin 3: U25
 - Pin 4: T10
 - Pin 5: V28
 - Pin 6: L28
 - Pin 7: L31
 - Pin 8: M22
 - Pin 9: M23
 - Pin 10: M26
 - Pin 11: N24
 - Pin 12: N27
 - Pin 13: N30
 - Pin 14: P22
 - Pin 15: U31
 - Pin 16: W24
 - Pin 17: V23
 - Pin 18: V26
 - Pin 19: U28
 - Pin 20: P25
 - Pin 21: P28
 - Pin 22: P31
 - Pin 23: R23
 - Pin 24: R26
 - Pin 25: R29
- VDDA25V:**
 - Pin 1: AE13
 - Pin 2: AD13
 - Pin 3: A7
 - Pin 4: A6
 - Pin 5: A5
 - Pin 6: A8
 - Pin 7: C8
 - Pin 8: A10
 - Pin 9: A11
 - Pin 10: A12
 - Pin 11: A13
 - Pin 12: A14
 - Pin 13: B5
 - Pin 14: B6
 - Pin 15: B7
 - Pin 16: B8
 - Pin 17: B9
 - Pin 18: B10
 - Pin 19: B11
 - Pin 20: B12
 - Pin 21: B13
 - Pin 22: B14
 - Pin 23: C5
 - Pin 24: C14
 - Pin 25: C13
- Other Connections:**
 - Pin 1: AL10
 - Pin 2: AK8
 - Pin 3: AK9
 - Pin 4: AL8
 - Pin 5: AL9
 - Pin 6: AK10
 - Pin 7: AK4
 - Pin 8: AK5
 - Pin 9: AL5
 - Pin 10: AL3
 - Pin 11: AL4



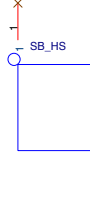
BOTTOM SIDE



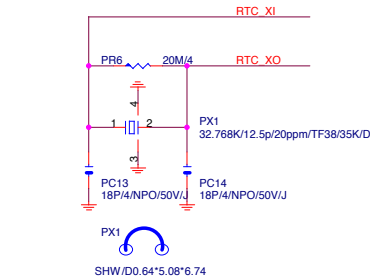


PLACE THESE PCIE AC COUPLING CAPS CLOSE TO SB850

S.B HEATSINK

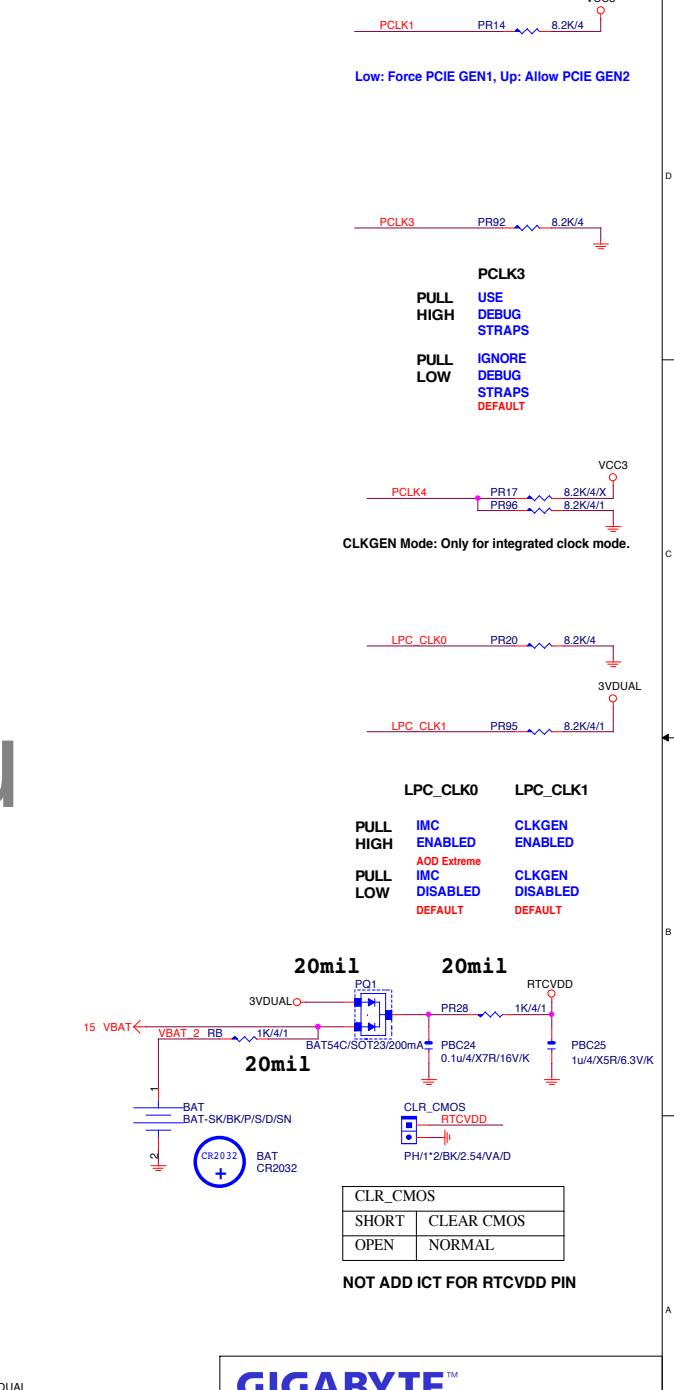
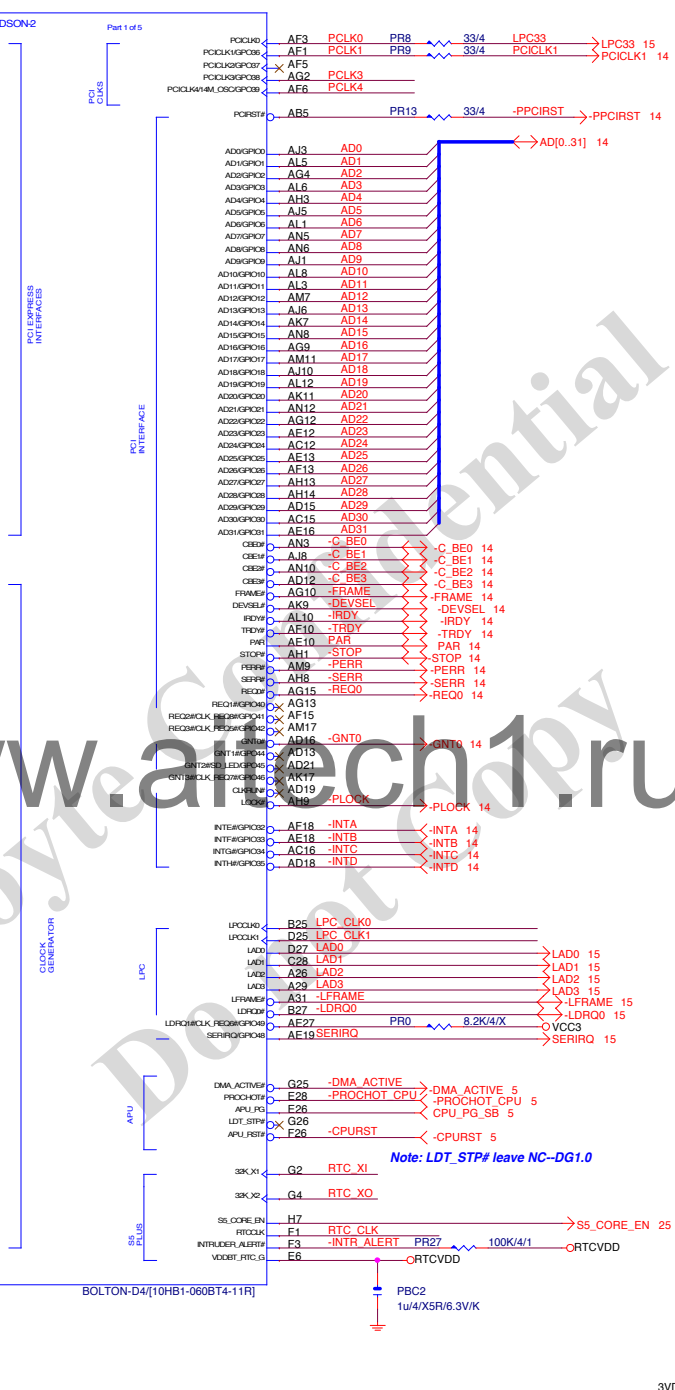
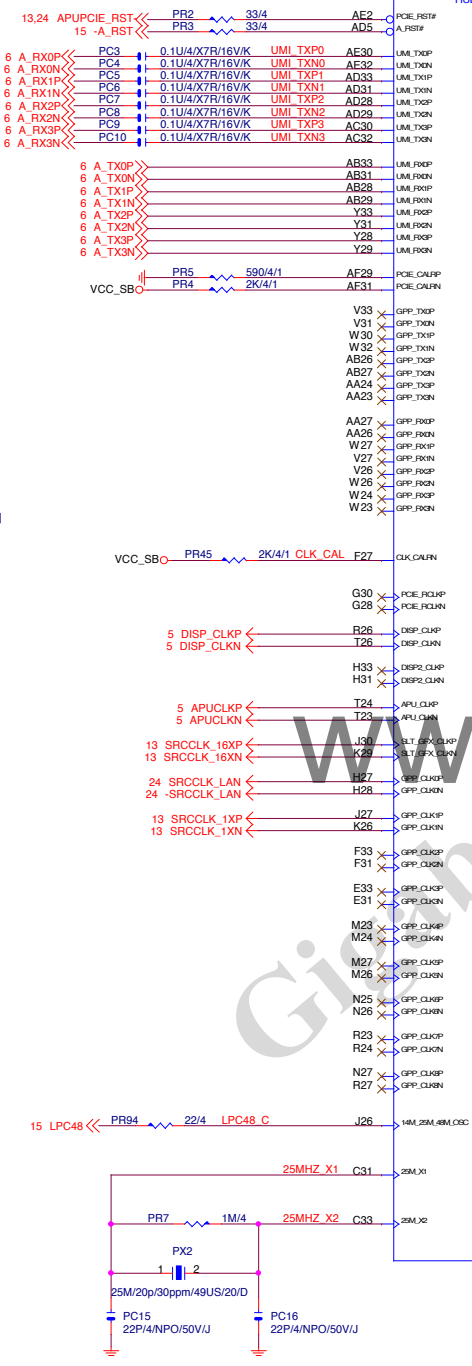


SB_HS[12SP2-SA0301-01R_12SP2-SA0301-02R_12SP2-SA0301-03R]



SHW/D0.64*5.08*6.74

For APU PCI_E devices.

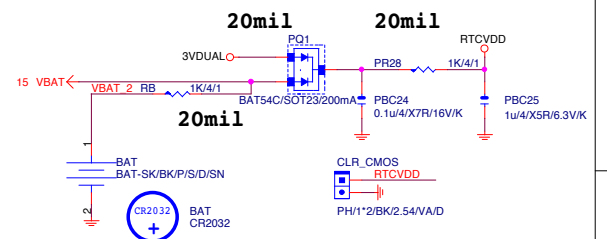


Low: Force PCIE GEN1, Up: Allow PCIE GEN2

PULL HIGH USE DEBUG STRAPS
PULL LOW IGNORE DEBUG STRAPS DEFAULT

CLKGEN Mode: Only for integrated clock mode.

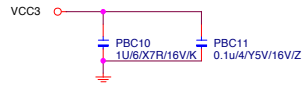
LPC_CLK0 **LPC_CLK1**
PULL HIGH IMC ENABLED CLKGEN ENABLED
PULL LOW IMC DISABLED CLKGEN DISABLED
AOD Extreme
DEFAULT DEFAULT



CLR_CMOS	
SHORT	CLEAR CMOS
OPEN	NORMAL

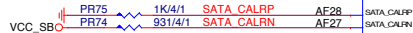
NOT ADD ICT FOR RTCVDD PIN

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Title
Hudson D4 PCIE/PCI/CPU/LPC
Size
Document Number
GA-F2A88XM-DS2 CN
Date
Monday, December 09, 2013
Sheet
9
Rev
3.01



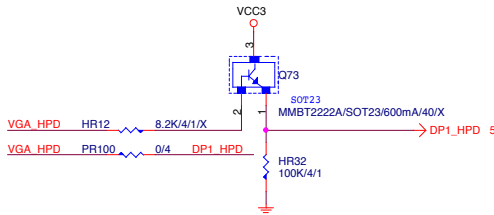
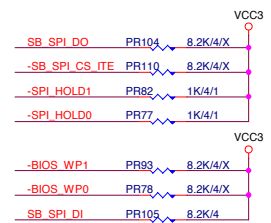
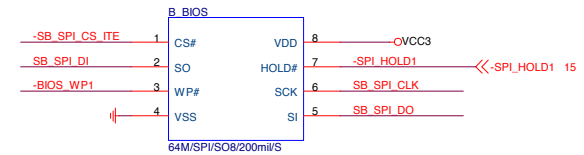
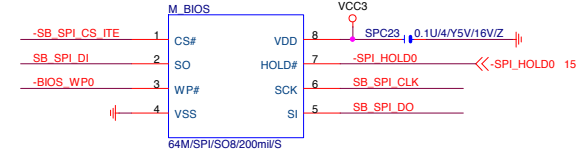
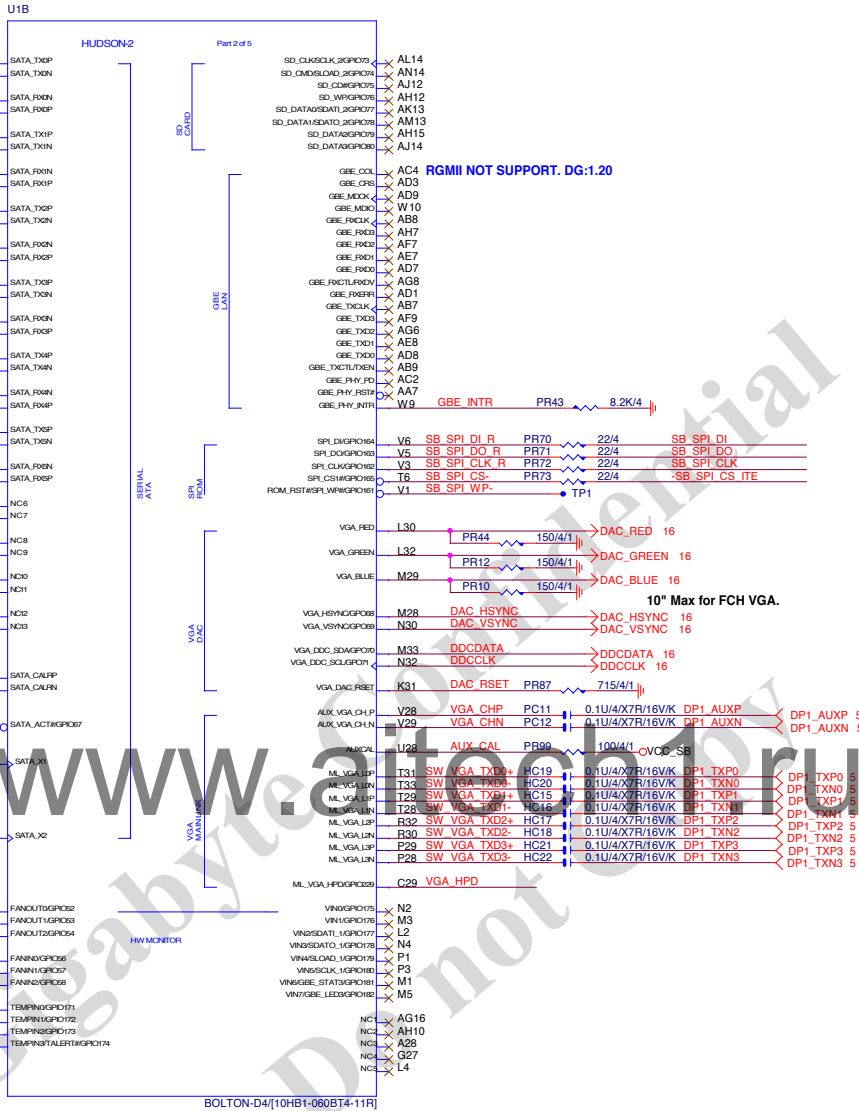
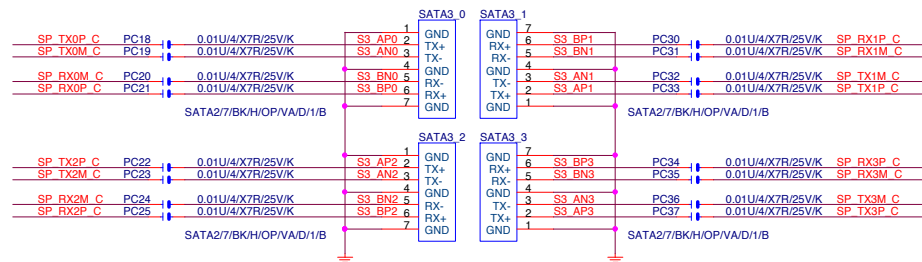
SATA 6-7 for Hudson D4.

PLACE SATA_CAL RES VERY CLOSE TO BALL OF U1



19 -SATA_LED -> -SATA_LED

5 -SB_ALERT-



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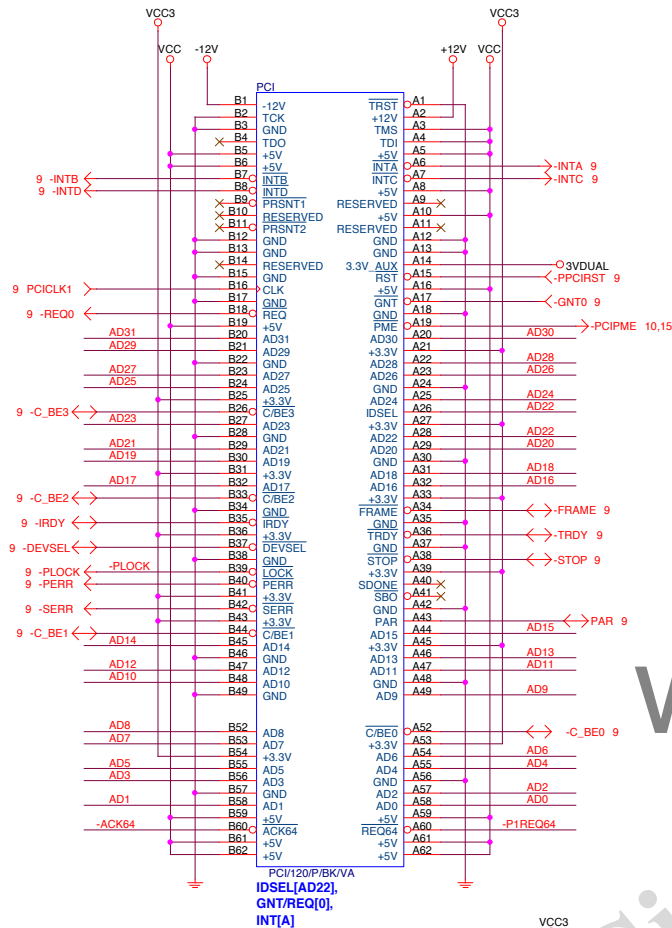
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Size	Document Number	Rev
Custom	GA-F2A88XM-DS2 CN	3.01

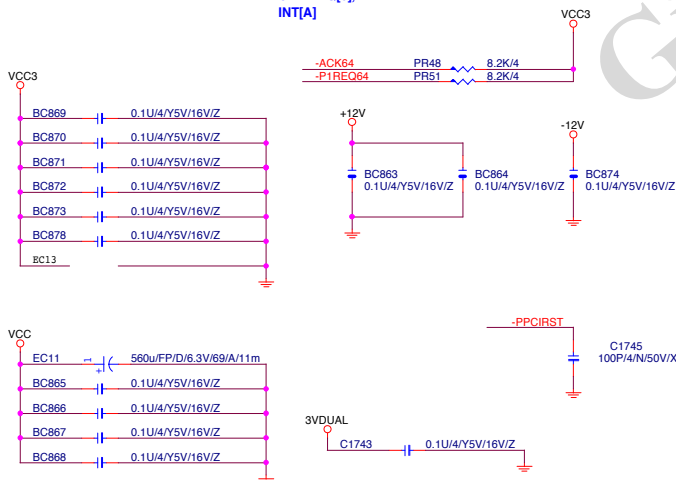
Date: Monday, December 09, 2013 Sheet 11 of 25

PCI SLOT 1,2

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



PCI120/P/BK/VA
IDSEL[AD22],
GNT/REQ[0],
INT[A]



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Title

PCI SLOT

Size

Document Number

GA-F2A88XM-DS2 CN

Rev

3.01

Date:

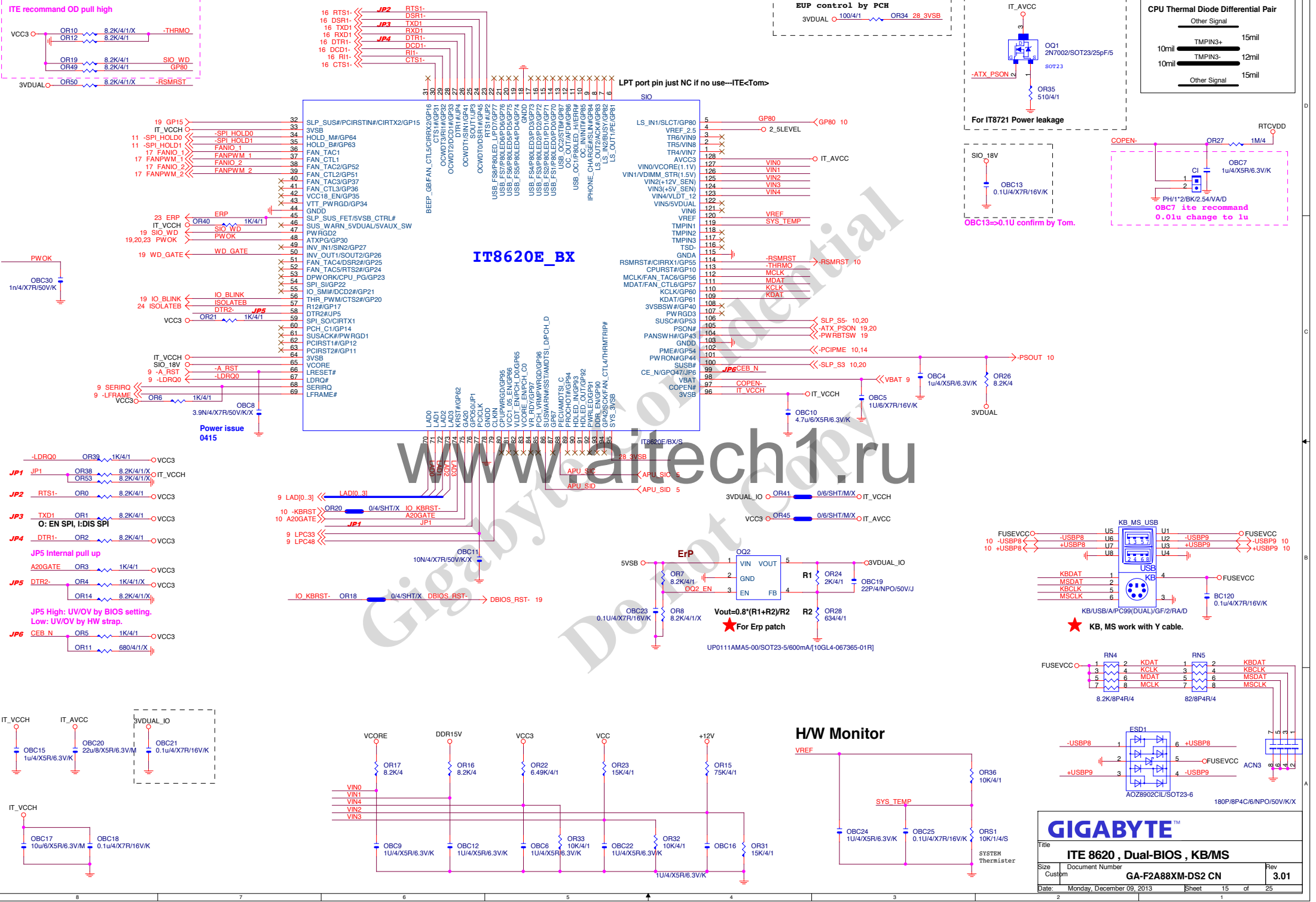
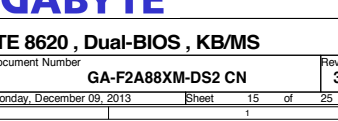
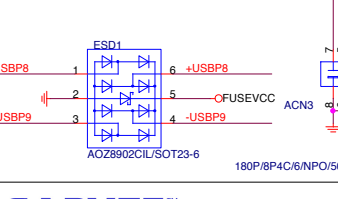
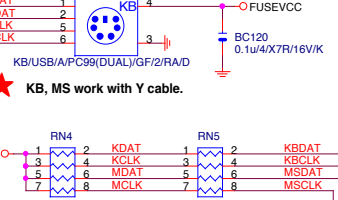
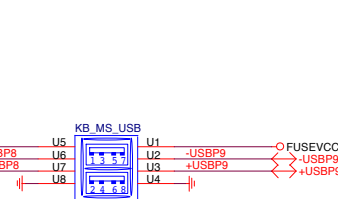
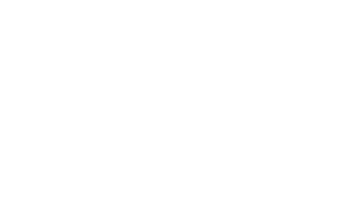
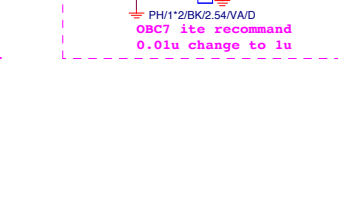
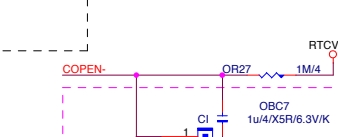
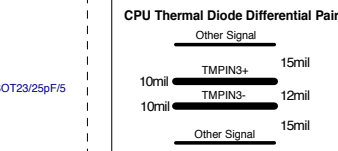
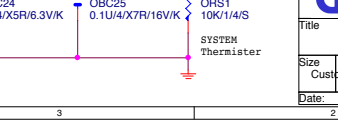
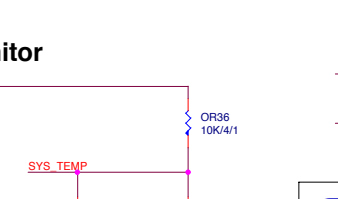
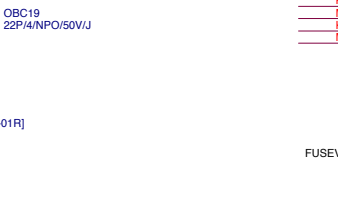
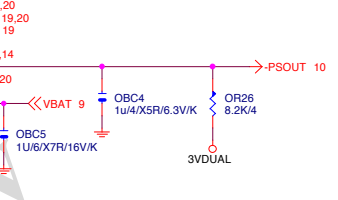
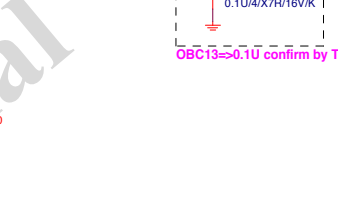
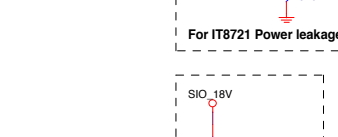
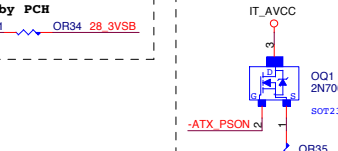
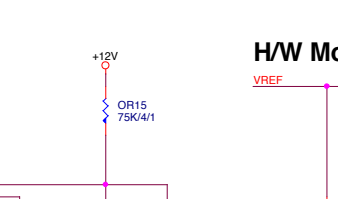
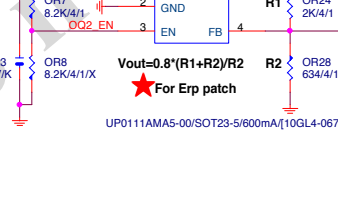
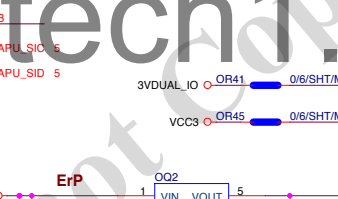
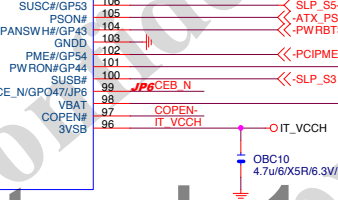
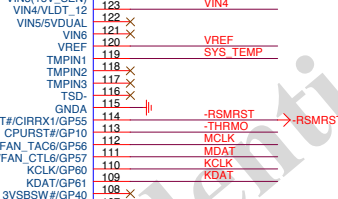
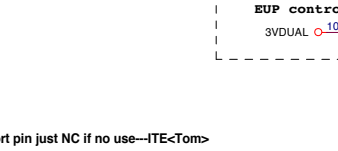
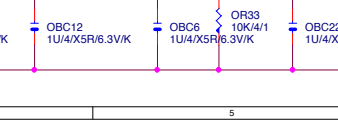
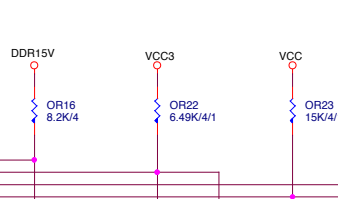
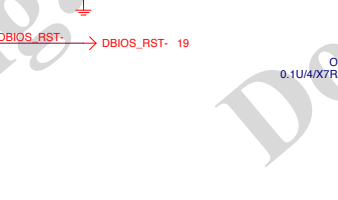
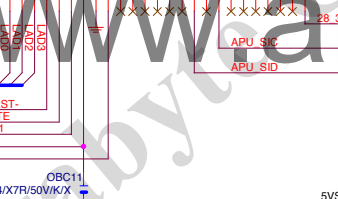
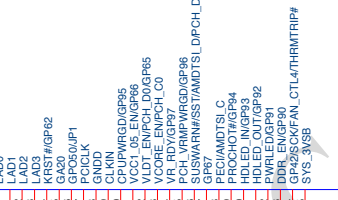
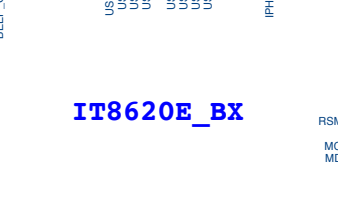
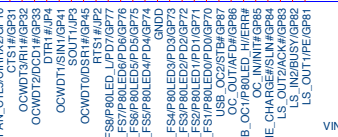
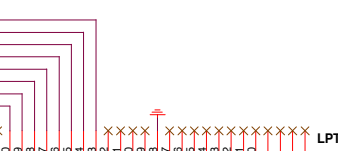
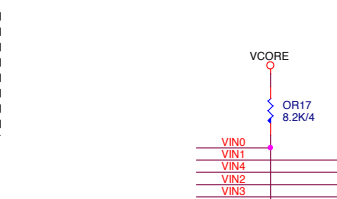
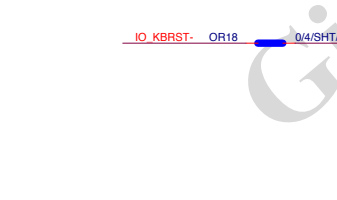
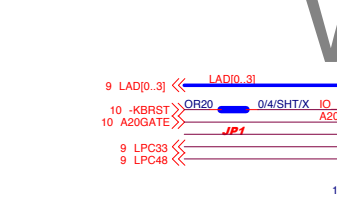
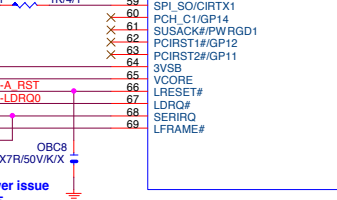
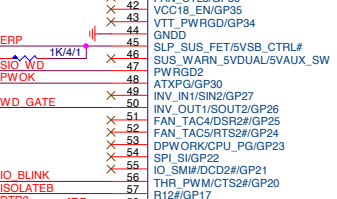
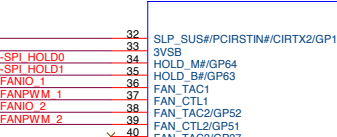
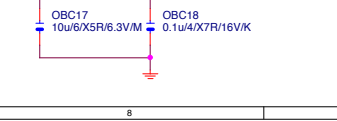
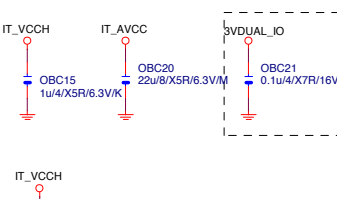
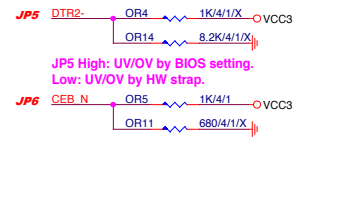
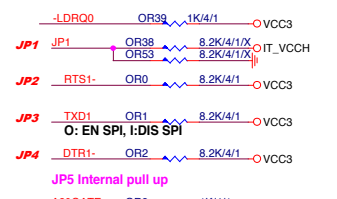
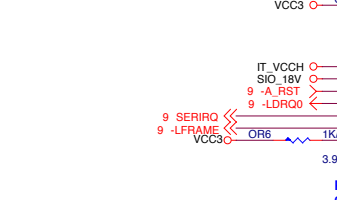
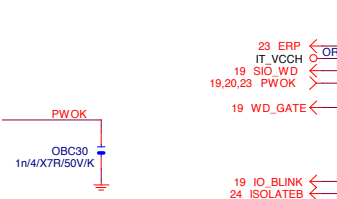
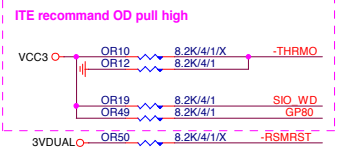
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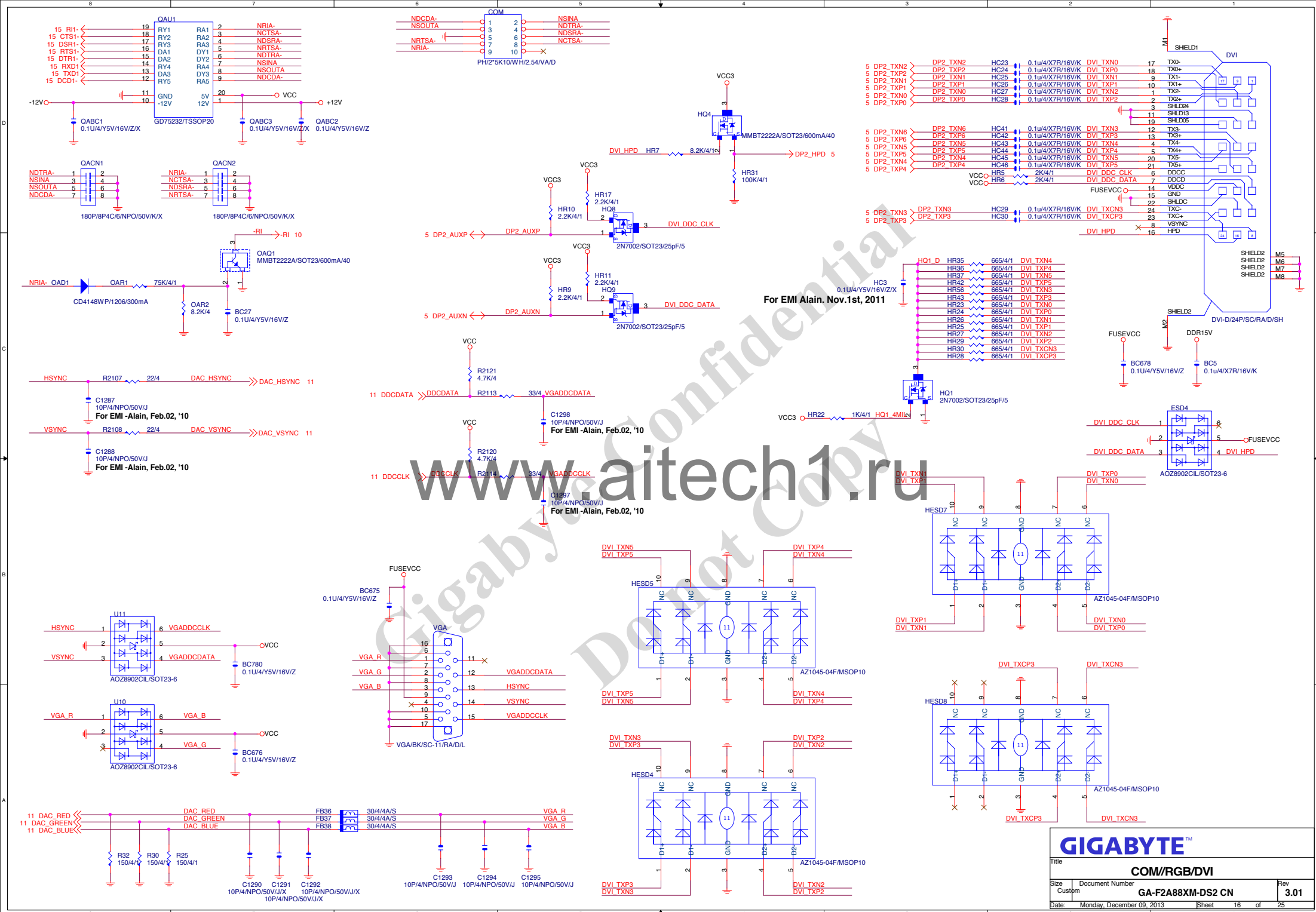
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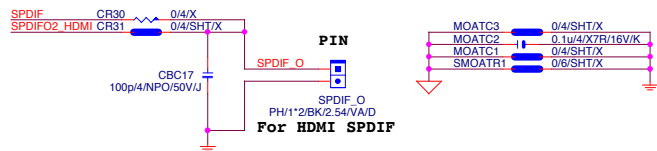
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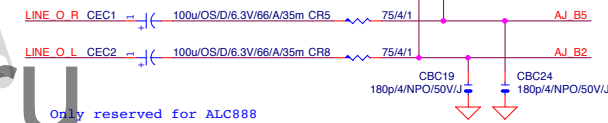
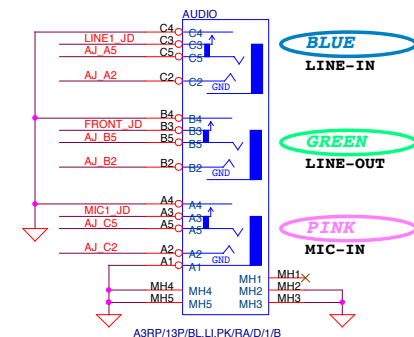
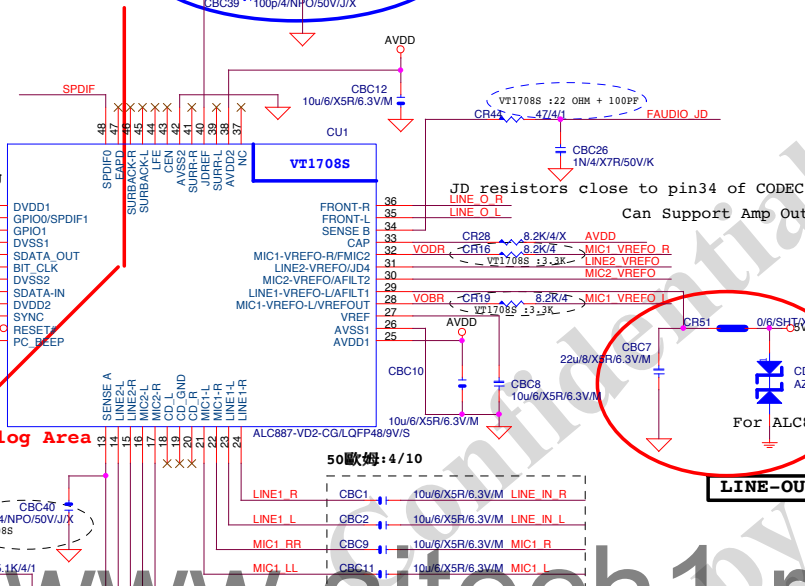
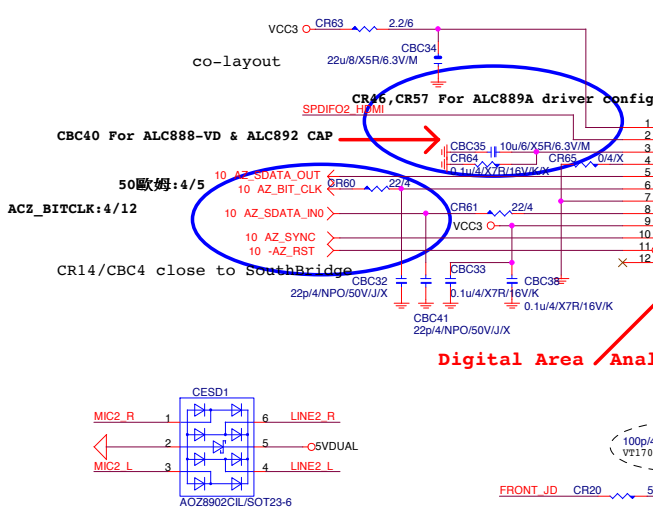
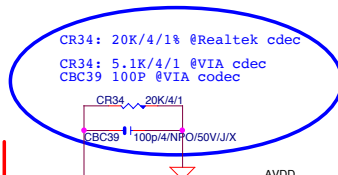
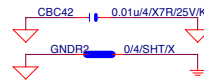




SPDIF_OUT

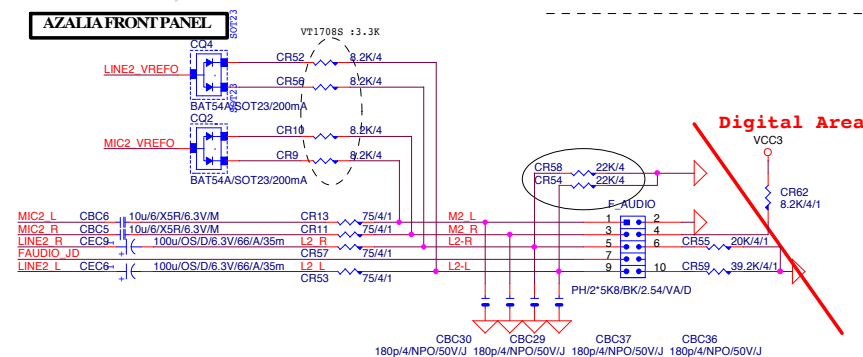


CODEC POWER/EMI PAD

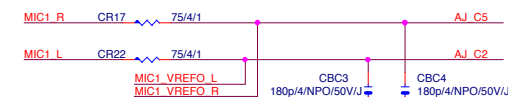
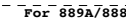
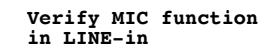


AZALIA CODEC [ALC887-VD2/ALC889/VT1708S/VT1708SCE](#) Colav

	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

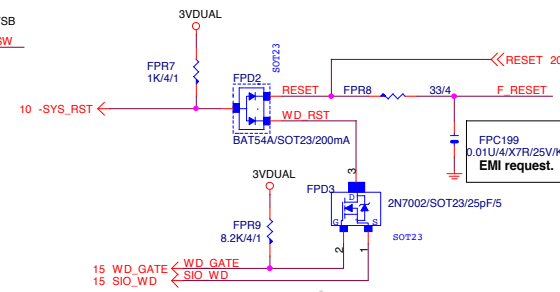
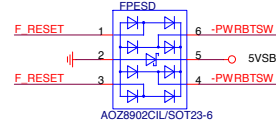
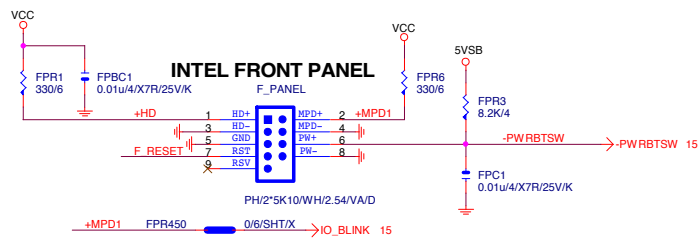
AZALIA FRONT PANEL

LINE-IN

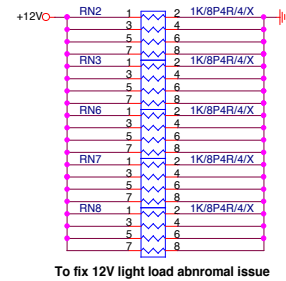


MIC-IN



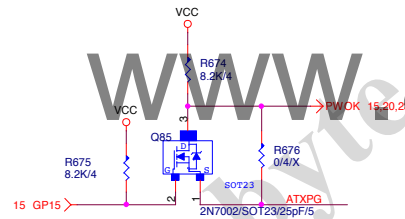


【技術通報R&D技術通報153】

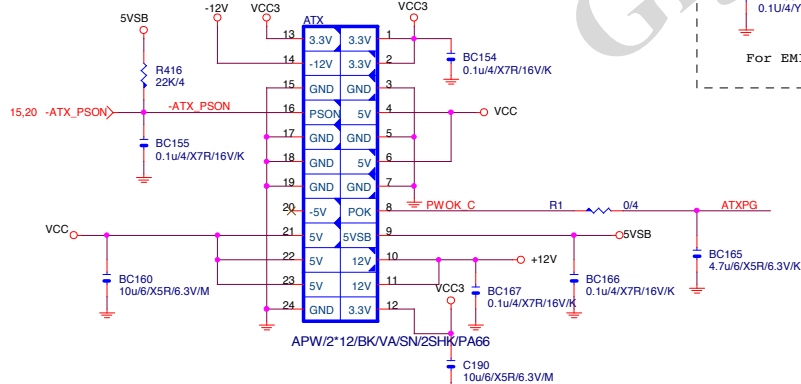


【技術通報R&D技術通報154】

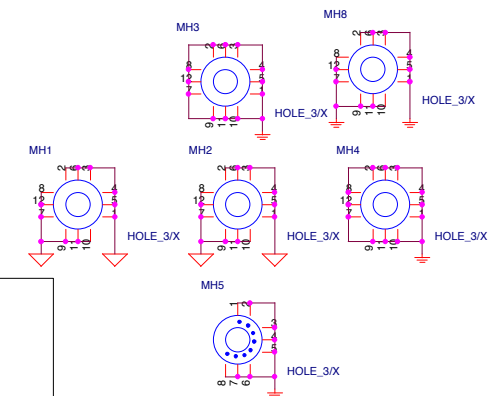
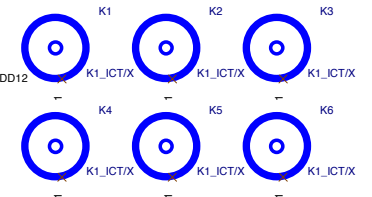
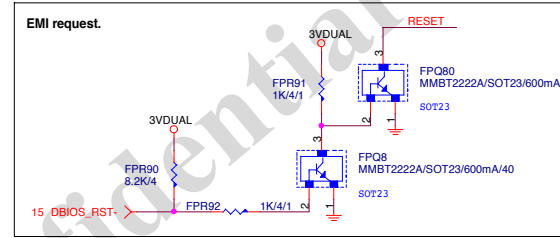
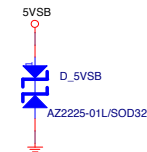
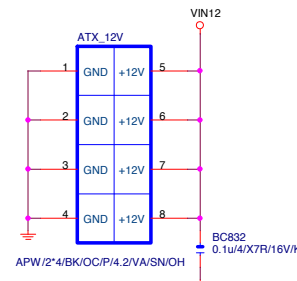
PWOK PATCH



ATX POWER CONNECTOR



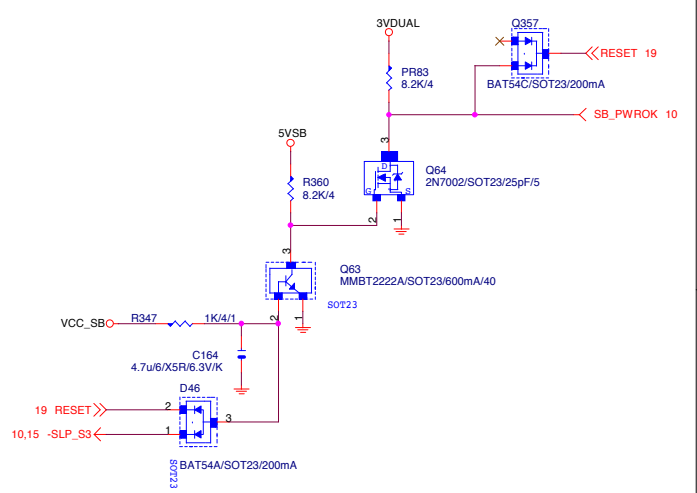
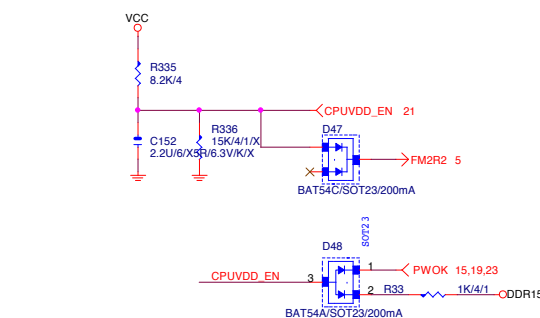
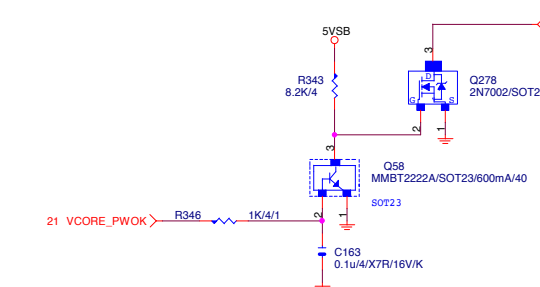
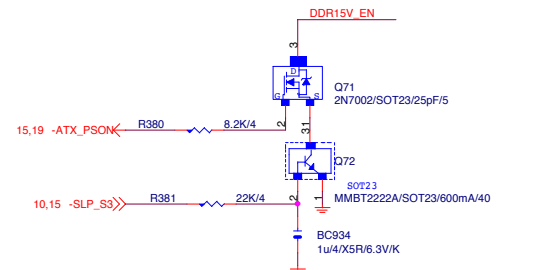
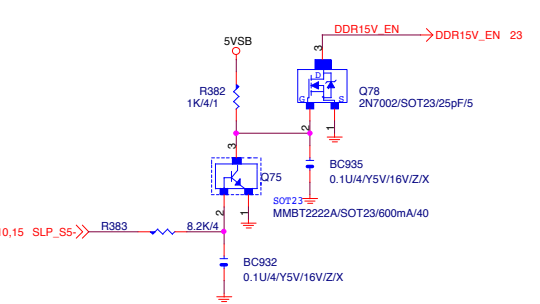
For EMI requires 0620



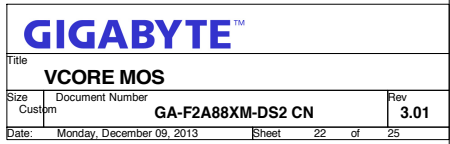
For S28/S12 Can't PWR-ON issue

GIGABYTE

Title ATX, FRONT PANEL		
Size Custom	Document Number GA-F2A88XM-DS2 CN	Rev 3.01
Date: Monday, December 09, 2013	Sheet 19	of 25



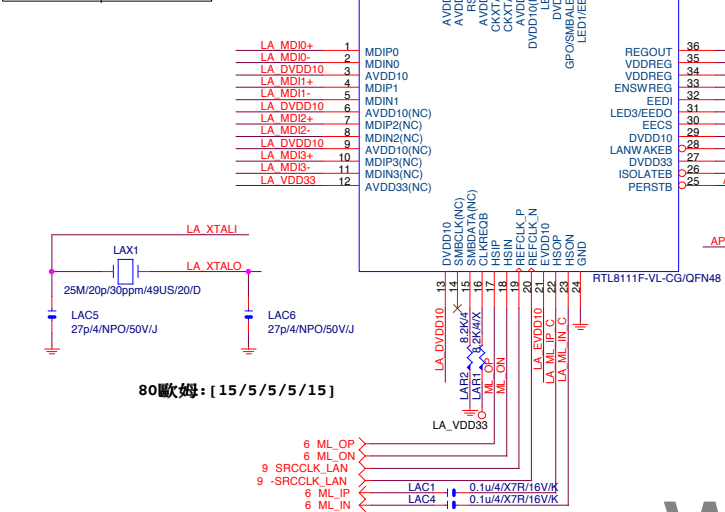
www.aitech1.ru



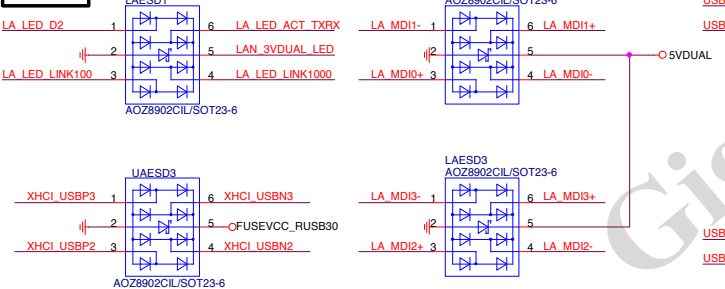
PCIE-1G LAN

Power domain chart

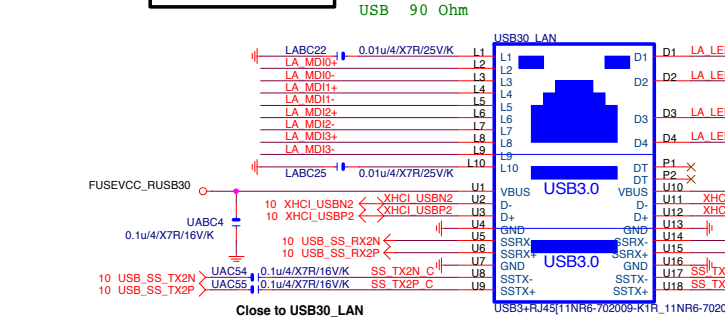
	RTL8111E
AVDD33	3.3V
DVDD33	3.3V
VDDREG	3.3V
DVDD10	1.05V



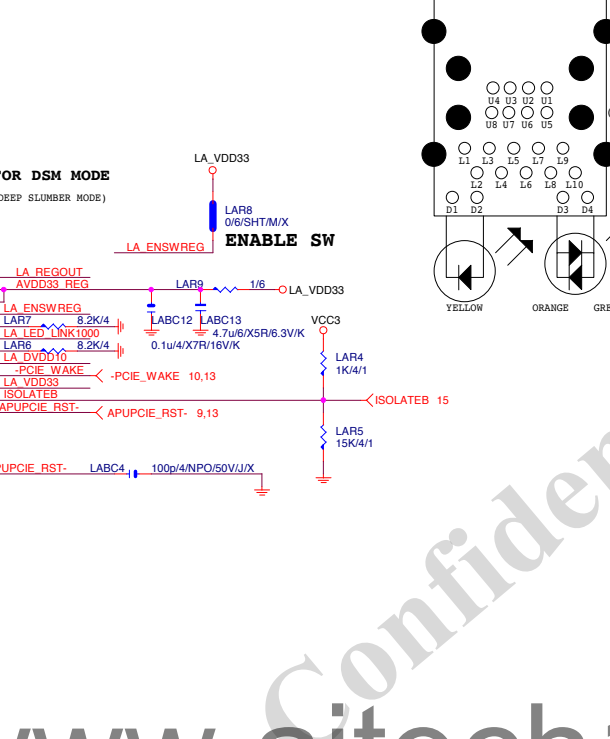
USB_LAN



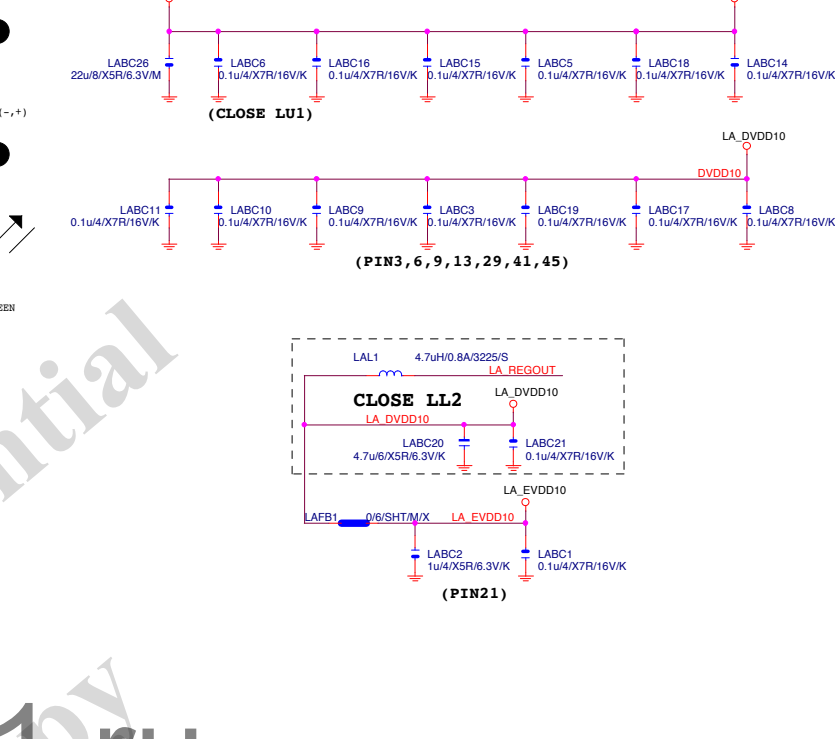
USB_LAN CONNECTOR



P35-152-19W9



3VDUAL

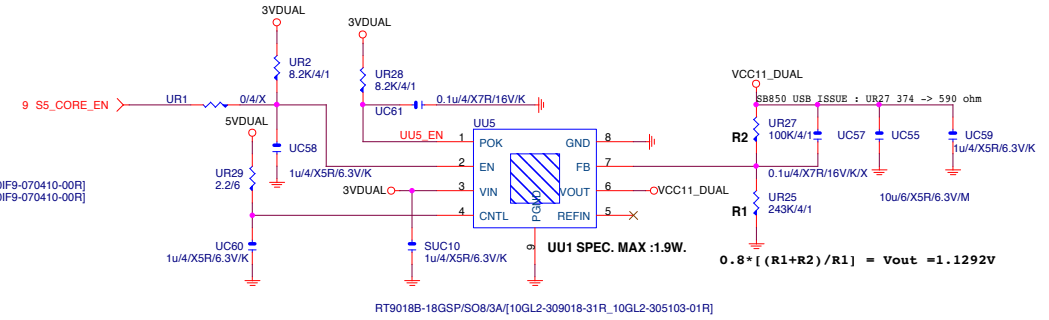
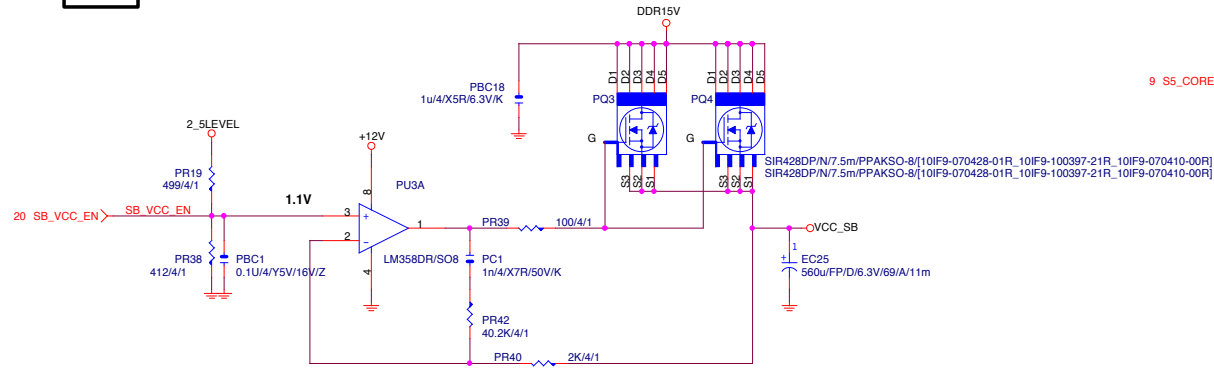


www.aitech1.ru

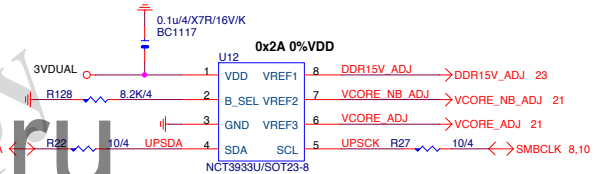
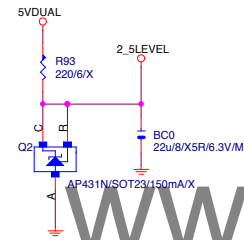
GIGABYTE™

Title	REALTK RTL8111E-VL	Rev	3.01
Size	Document Number		
Custom	GA-F2A88XM-DS2 CN		
Date:	Monday, December 09, 2013	Sheet	24 of 25

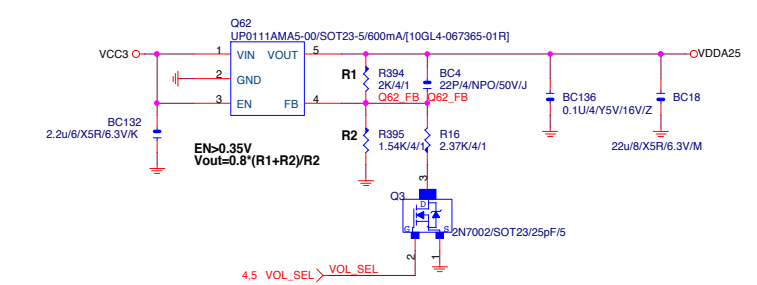
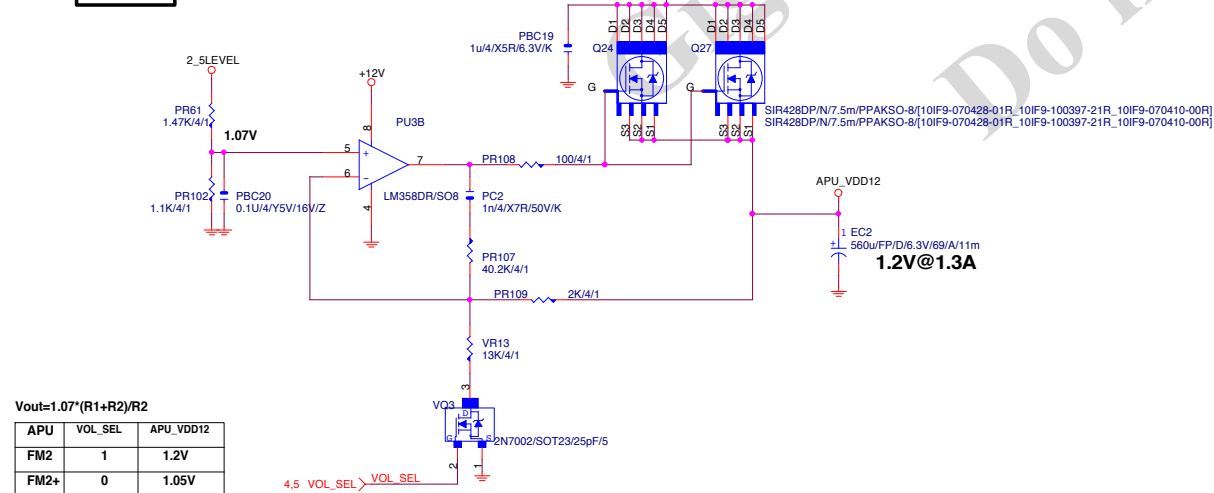
VCC_SB



【技術通報R&D技術通報156】
RT9018 (RICHTER) 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 CN

Date: Monday, December 09, 2013

Sheet: 25 of 25

Rev: 3.01