

GA-F2A68HM-S1

www.xinxunwei.com 400-800-9990

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06	APU UMI, GFX, GPP
07	APU POWER & GND
08	DDRIII CHANNEL A
09	Bolton 68H UMI, PCIE, PCI, CPU, LPC
10	Bolton 68H ACPI, GPIO, USB, AUDIO
11	Bolton 68H SATA,SPI,HWM
12	Bolton 68H POWER & GND
13	PCIE x16 , x1
14	PCI SLOT
15	ITE 8620 (DUAL BIOS CO-LAY), KB/MS , HWMO
16	VGA ,RGB
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19	ATX, FRONT PANEL
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24	RTL8111G
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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

GIGABYTETM

Title

COVER SHEET

Size

Document Number

Rev

Custom

GA-F2A68HM-S1

1.0

Date:

Tuesday, November 04, 2014

Sheet

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of

25


Component value change history

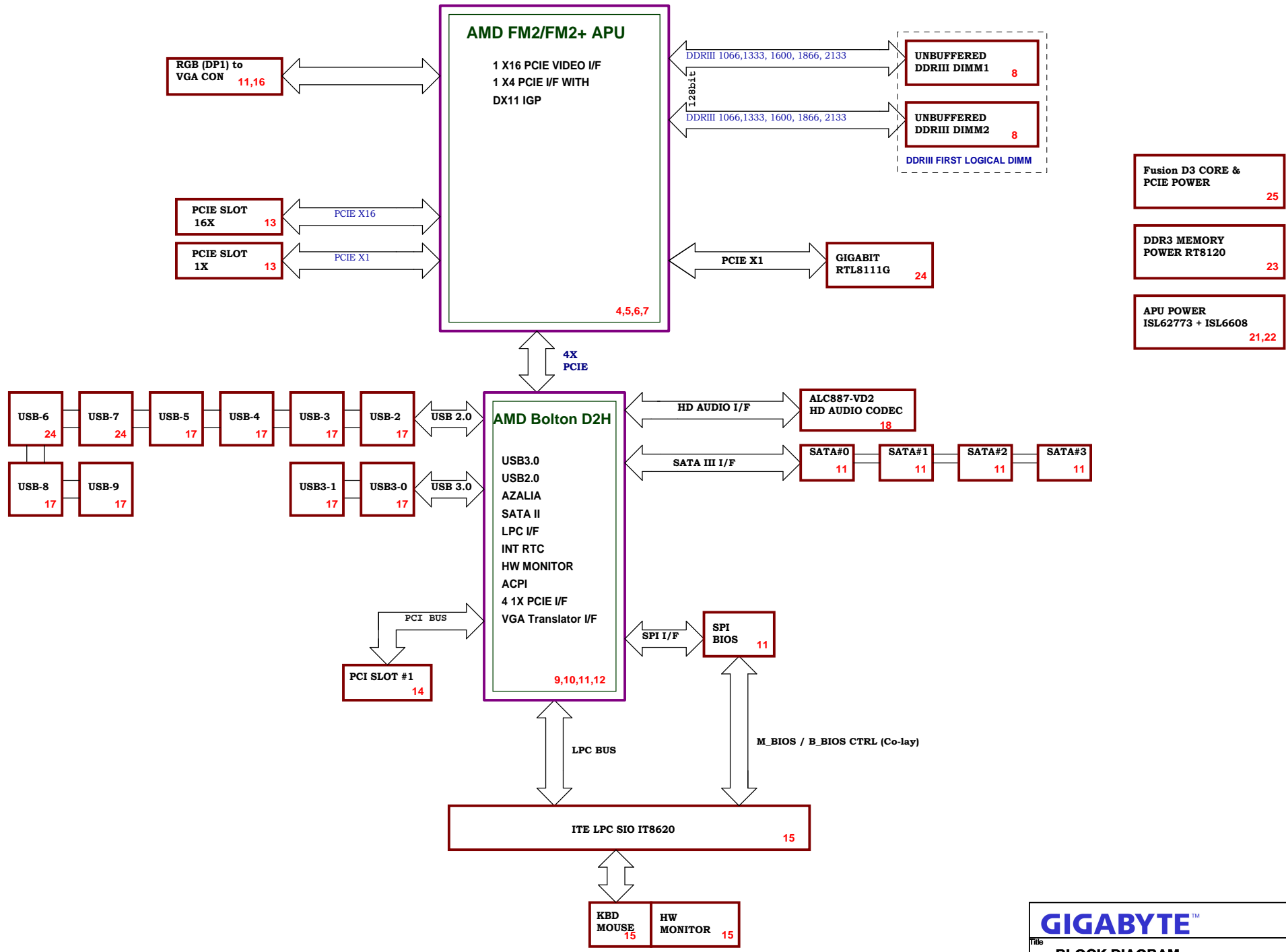
Version: 1.0
111111111111
P-Code:

[illegible]

Circuit or PCB layout change for next version

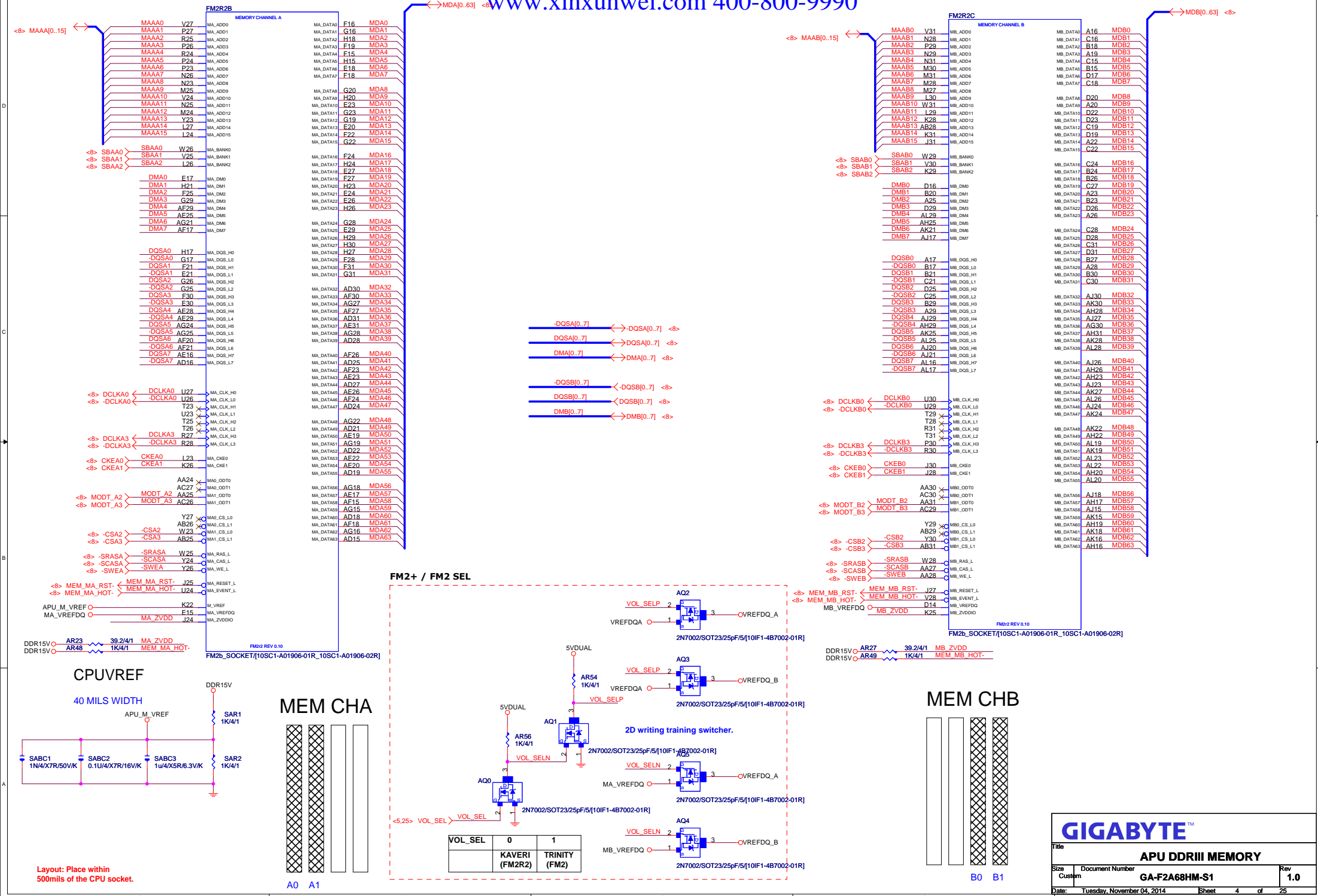
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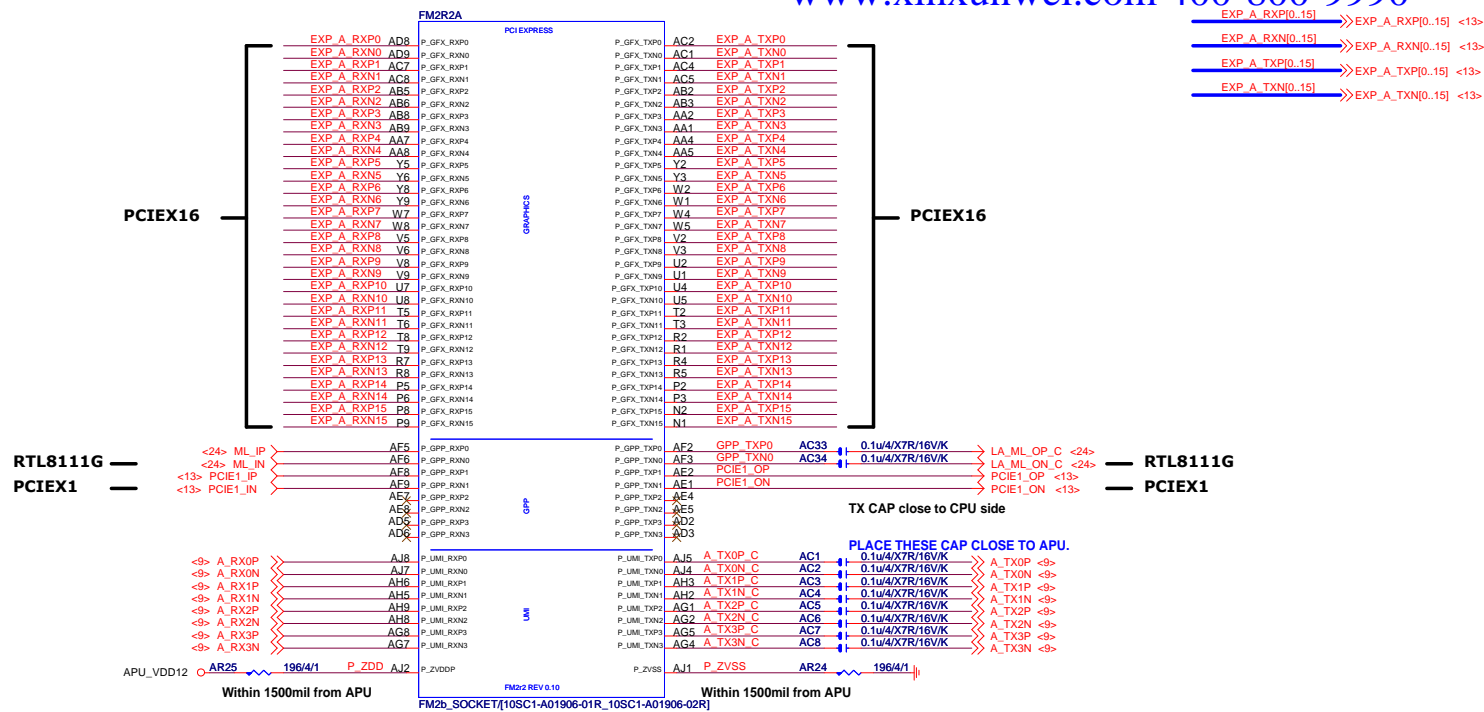
				
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Size	Document Number			Rev
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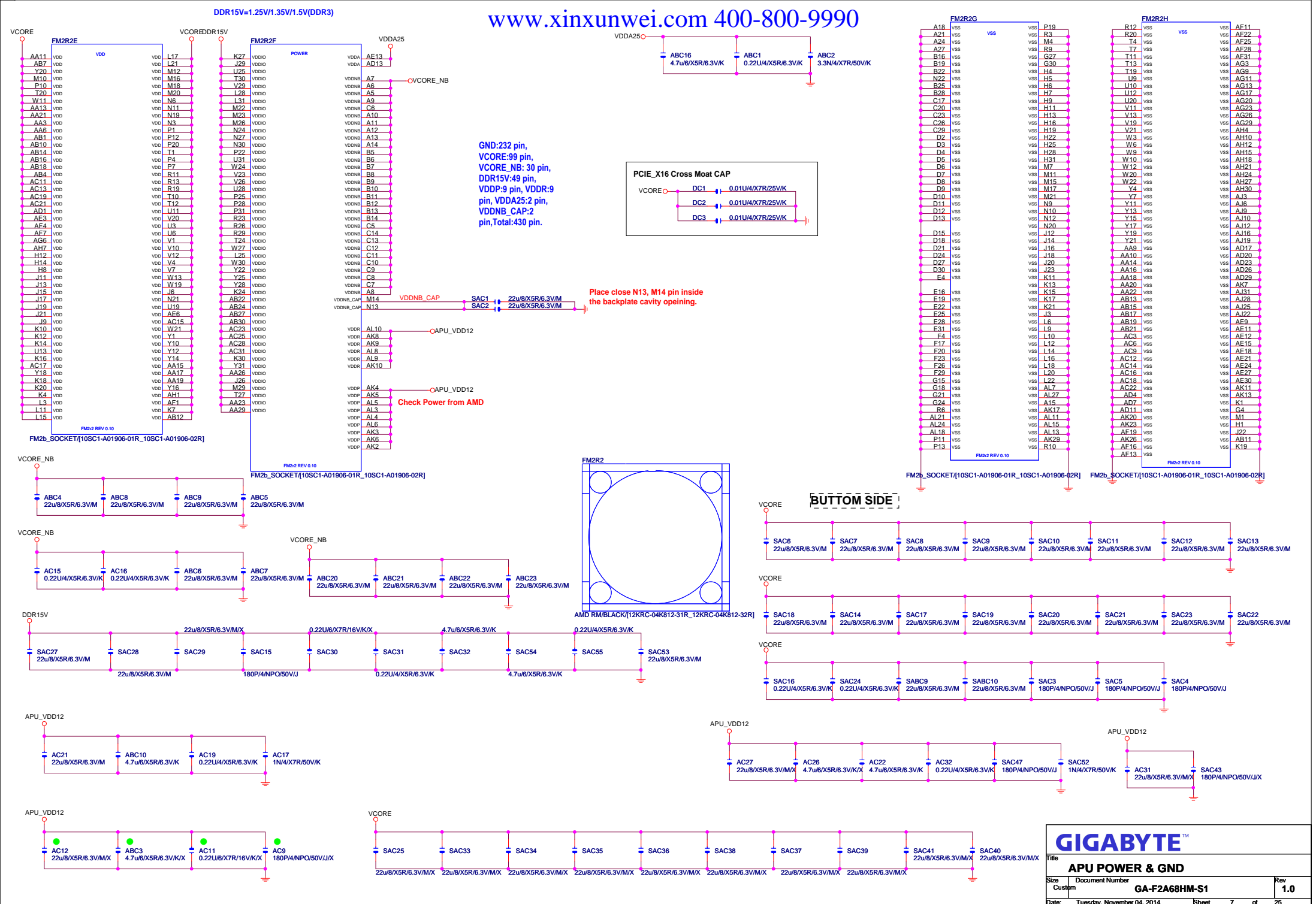


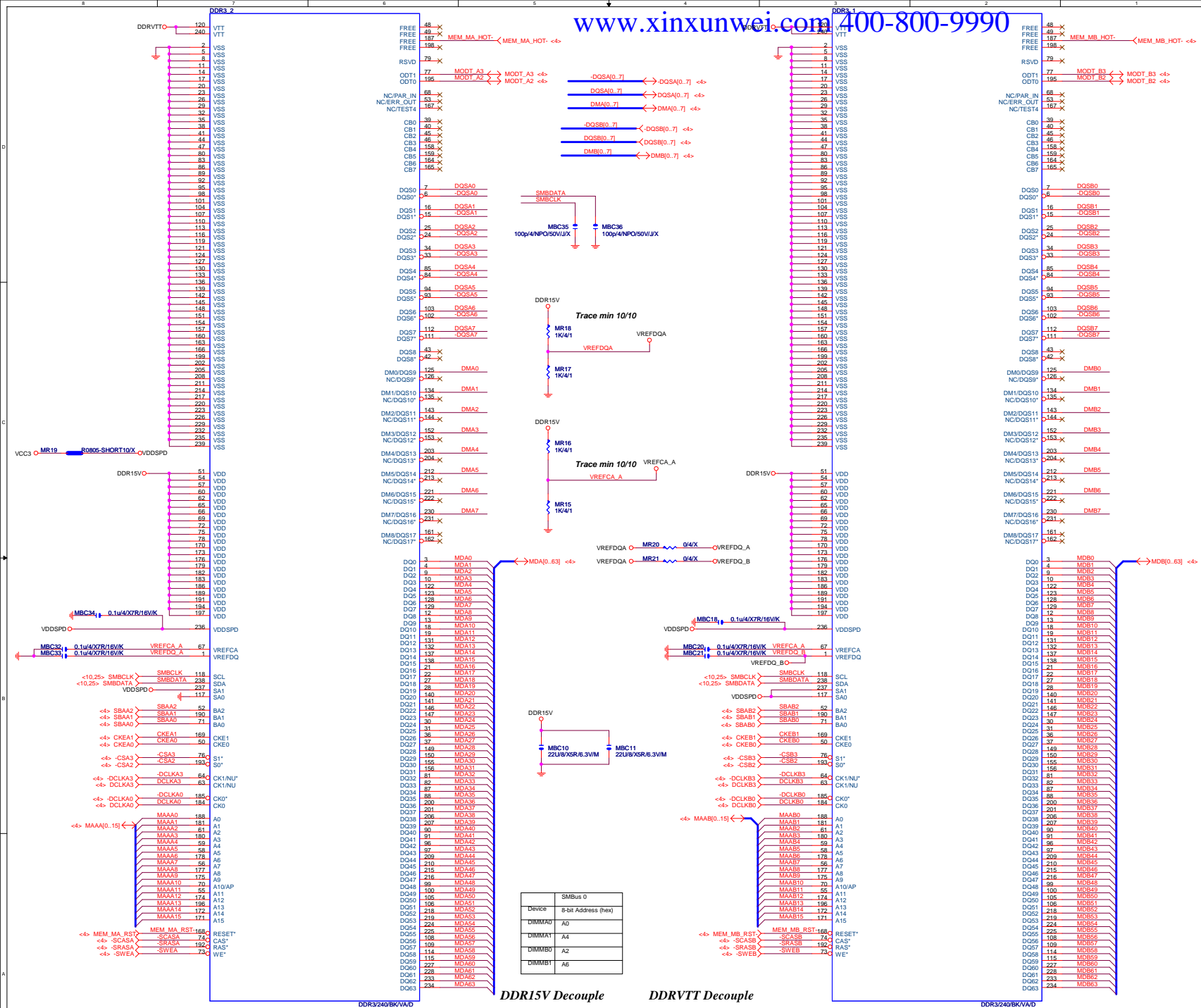
GIGABYTE

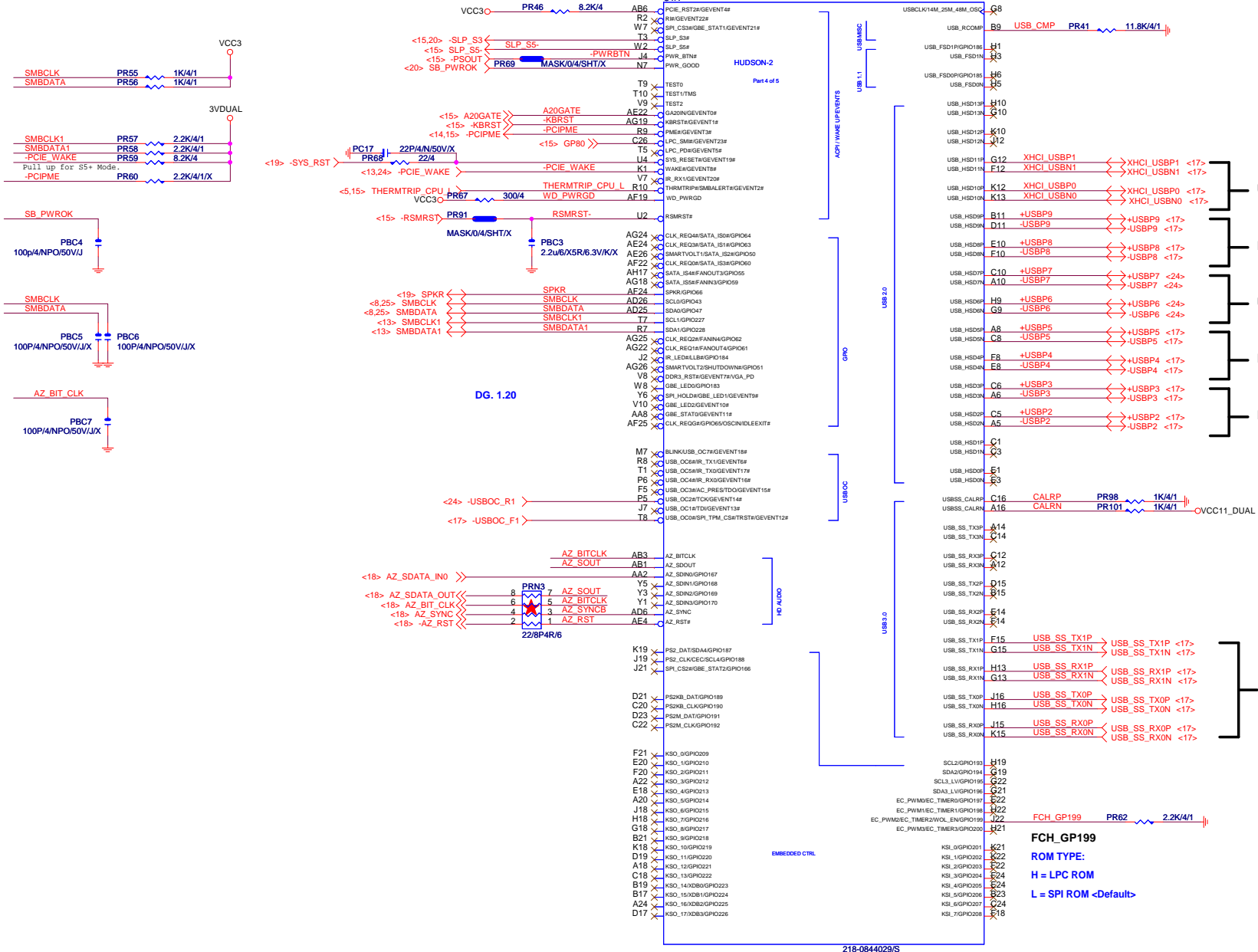
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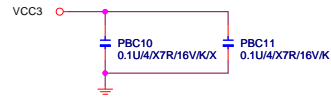


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Title **Bolton D4 ACPI/USB/AUDIO/GPIO**

Size Custom Document Number **GA-F2A68HM-S1** Rev **1.0**

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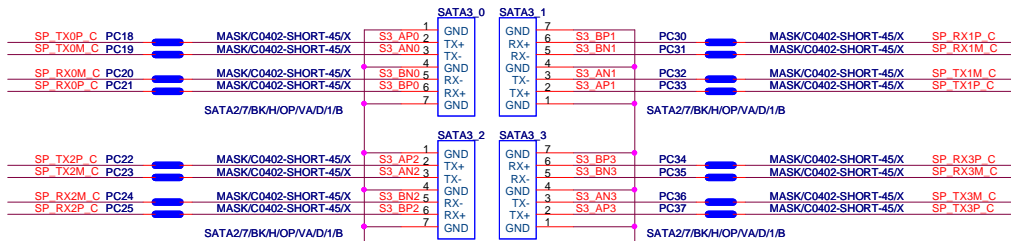
SP TX0P C AK19
SP TX0M C AM19
SP RX0M C AL20
SP RX0P C AN20
SP TX1P C AN22
SP TX1M C AL22
SP RX1M C AH20
SP RX1P C AJ20
SP TX2P C AJ22
SP TX2M C AH22
SP RX2M C AM23
SP RX2P C AK23
SP TX3P C AH24
SP TX3M C AJ24
SP RX3M C AN24
SP RX3P C AL24

SATA 6~7 for Hudson D4.

PLACE SATA_CAL RES VERY CLOSE TO BALL OF U1

PR75 1K/4/1 SATA_CALRP
PR74 931/4/1 SATA_CALRN

<19> -SATA_LED
<5> SB_ALERT-



U1B HUDSON-2
SD 0402
GBE LAN
SERIAL ATA
SPT/DM
VGA DAC
VGA MASK/CLK
HW MONITOR

SD_CLK/SCLK_2/GPIO73 AL14
SD_CMD/SDIO_2/GPIO74 AN14
SD_CDW/GPIO75 AJ12
SD_WP/GPIO76 AH12
SD_DATA0SDAT1_2/GPIO77 AK13
SD_DATA1SDAT2_2/GPIO78 AM13
SD_DATA2/GPIO79 AH15
SD_DATA3/GPIO80 AJ14

GBE_COL AC4
GBE_CRS AD3
GBE_MDCCK AD9
GBE_MDIO W10
GBE_RXCLK AB8
GBE_RXD0 AH7
GBE_RXD2 AF7
GBE_RXD1 AE7
GBE_RXD0 AD7
GBE_RXCTL_RXD0 AG8
GBE_RXENH AD1
GBE_TXCLK AB7
GBE_TXD3 AF9
GBE_TXD2 AG6
GBE_TXD1 AE9
GBE_TXD0 AD8
GBE_TXCTL_TXEN AB9
GBE_PHY_PD AC2
GBE_PHY_RSTB AA7
GBE_PHY_INTB W3

SPL_DV/GPIO184 V5 SB_SPI_DI_R
SPL_DV/GPIO185 V5 SB_SPI_DO_R
SPL_CLK/GPIO182 V3 SB_SPI_CLK_R
SPL_CS1/GPIO185 T6 SB_SPI_CS-
ROM_RSTB/SPI_WP/GPIO181 V1 SB_SPI_WP- TP1

VGA_RED L30 PR44 150/4/1 DAC_RED <16>
VGA_GREEN L32 PR12 150/4/1 DAC_GREEN <16>
VGA_BLUE M29 PR10 150/4/1 DAC_BLUE <16>

VGA_HSYNC/GPIO88 M28 DAC_HSYNC DAC_HSYNC <16>
VGA_VSYNC/GPIO88 N30 DAC_VSYNC DAC_VSYNC <16>
10" Max for FCH VGA.

VGA_DDC_SDV/GPIO70 M33 DDCDATA DDCDATA <16>
VGA_DDC_SCL/GPIO71 N32 DDCCLK DDCCLK <16>

VGA_DAC_RSET K31 DAC_RSET PR87 715/4/1
AUX_VGA_CH_F V28 VGA_CHP PC11 0.1uF/4X7R/16V/K DP1_AUXP <5>
AUX_VGA_CH_N V29 VGA_CHN PC12 0.1uF/4X7R/16V/K DP1_AUXN <5>

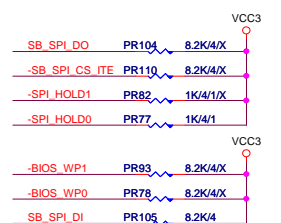
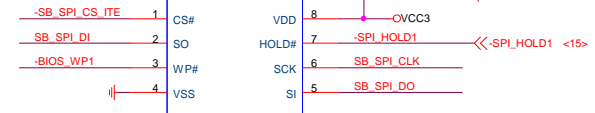
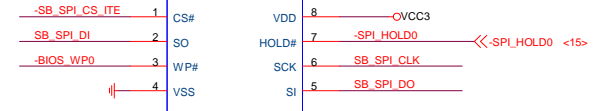
AUX_CAL U28 AUX_CAL PR99 100/4/1 VCC_SB
T31 SW VGA_TXD0+ HC19 0.1uF/4X7R/16V/K DP1_TXP0 <5>
T33 SW VGA_TXD0- HC20 0.1uF/4X7R/16V/K DP1_TXN0 <5>
T29 SW VGA_TXD1+ HC15 0.1uF/4X7R/16V/K DP1_TXP1 <5>
T28 SW VGA_TXD1- HC16 0.1uF/4X7R/16V/K DP1_TXN1 <5>
R32 SW VGA_TXD2+ HC17 0.1uF/4X7R/16V/K DP1_TXP2 <5>
R30 SW VGA_TXD2- HC18 0.1uF/4X7R/16V/K DP1_TXN2 <5>
P29 SW VGA_TXD3+ HC21 0.1uF/4X7R/16V/K DP1_TXP3 <5>
P28 SW VGA_TXD3- HC22 0.1uF/4X7R/16V/K DP1_TXN3 <5>

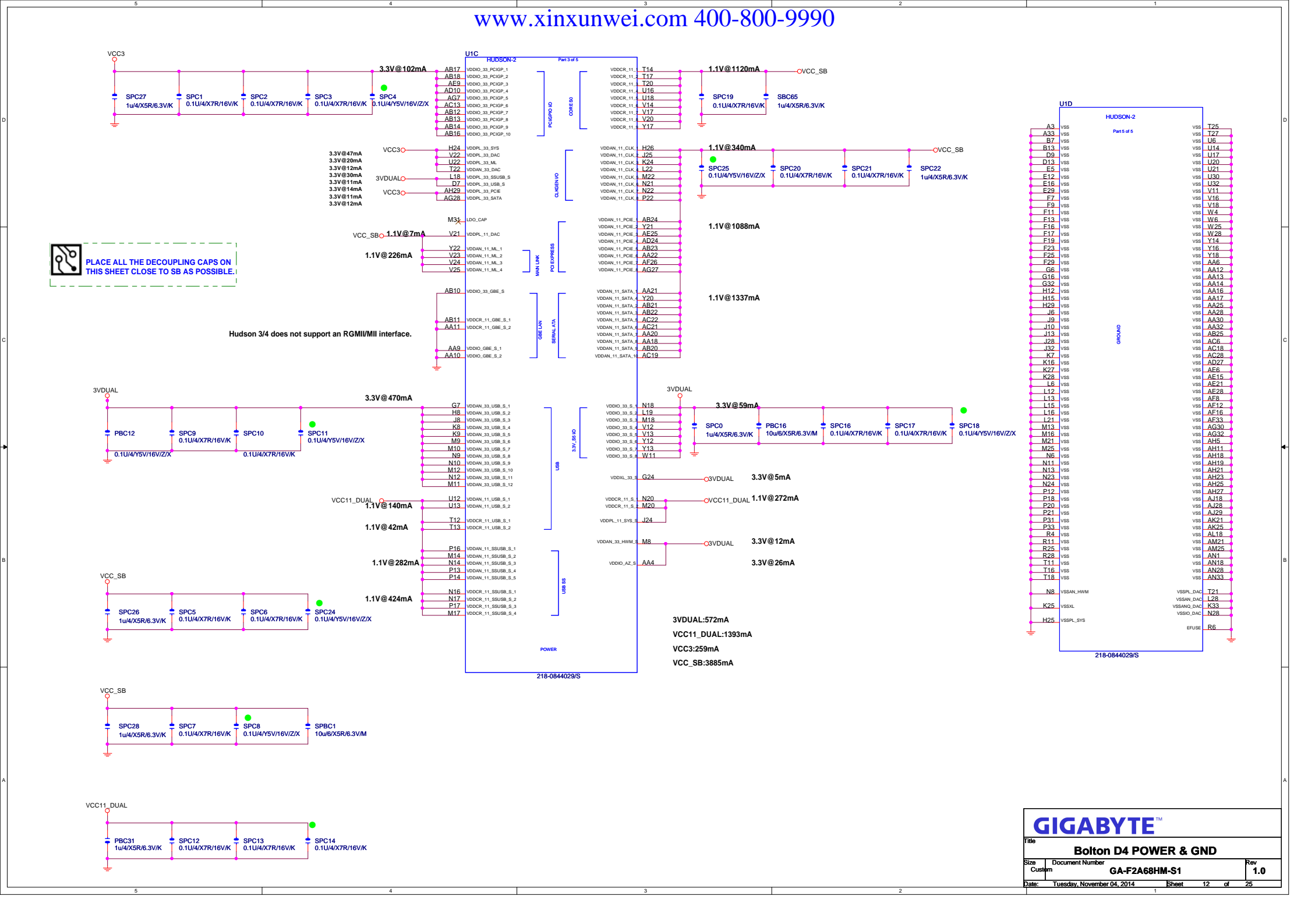
ML_VGA_L1P ML_VGA_L1P ML_VGA_L1P ML_VGA_L1P ML_VGA_L1P ML_VGA_L1P ML_VGA_L1P ML_VGA_L1P
C29 VGA_HPD PR100 MASK/04/5HT/X DP1_HPD <5>

ML_VGA_HPD/GPIO229 C29 VGA_HPD PR100 MASK/04/5HT/X DP1_HPD <5>
VIN0/GPIO175 N2
VIN1/GPIO176 M3
VIN2SDAT1_1/GPIO177 L2
VIN3SDAT0_1/GPIO178 N4
VIN4SLOAD_1/GPIO179 P1
VIN5SCLK_1/GPIO180 P3
VIN6GBE_STAT3/GPIO181 M1
VIN7GBE_LED3/GPIO182 M5

K6 TEMPIN1/GPIO171
K5 TEMPIN1/GPIO172
K3 TEMPIN2/GPIO173
M6 TEMPIN3/TALERT3/GPIO174

218-0844029/S





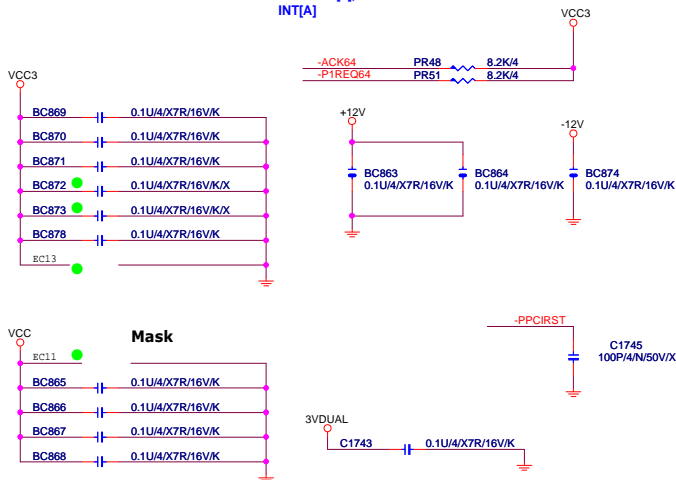
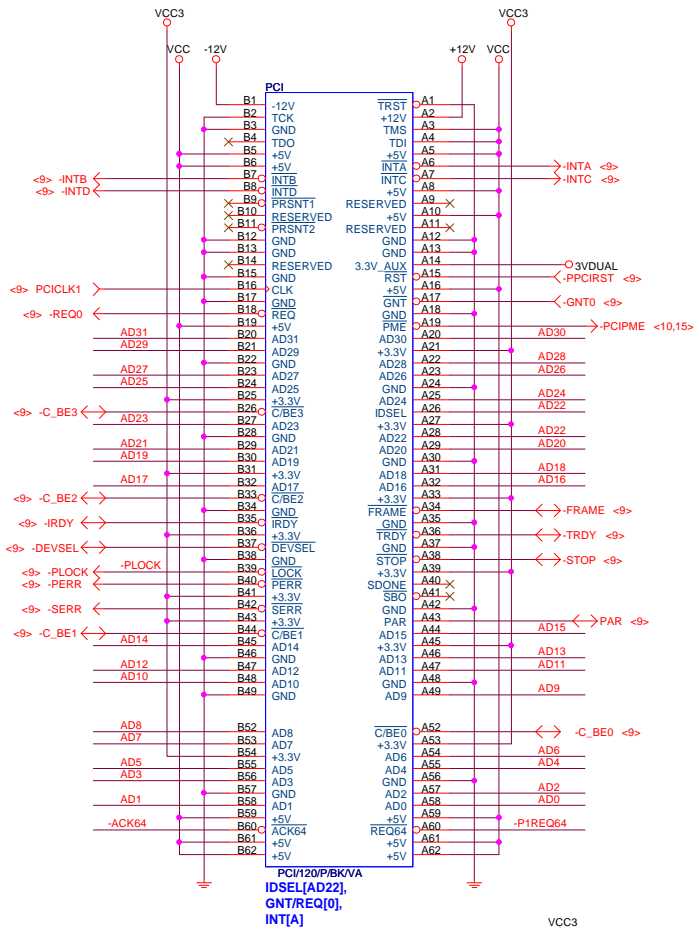


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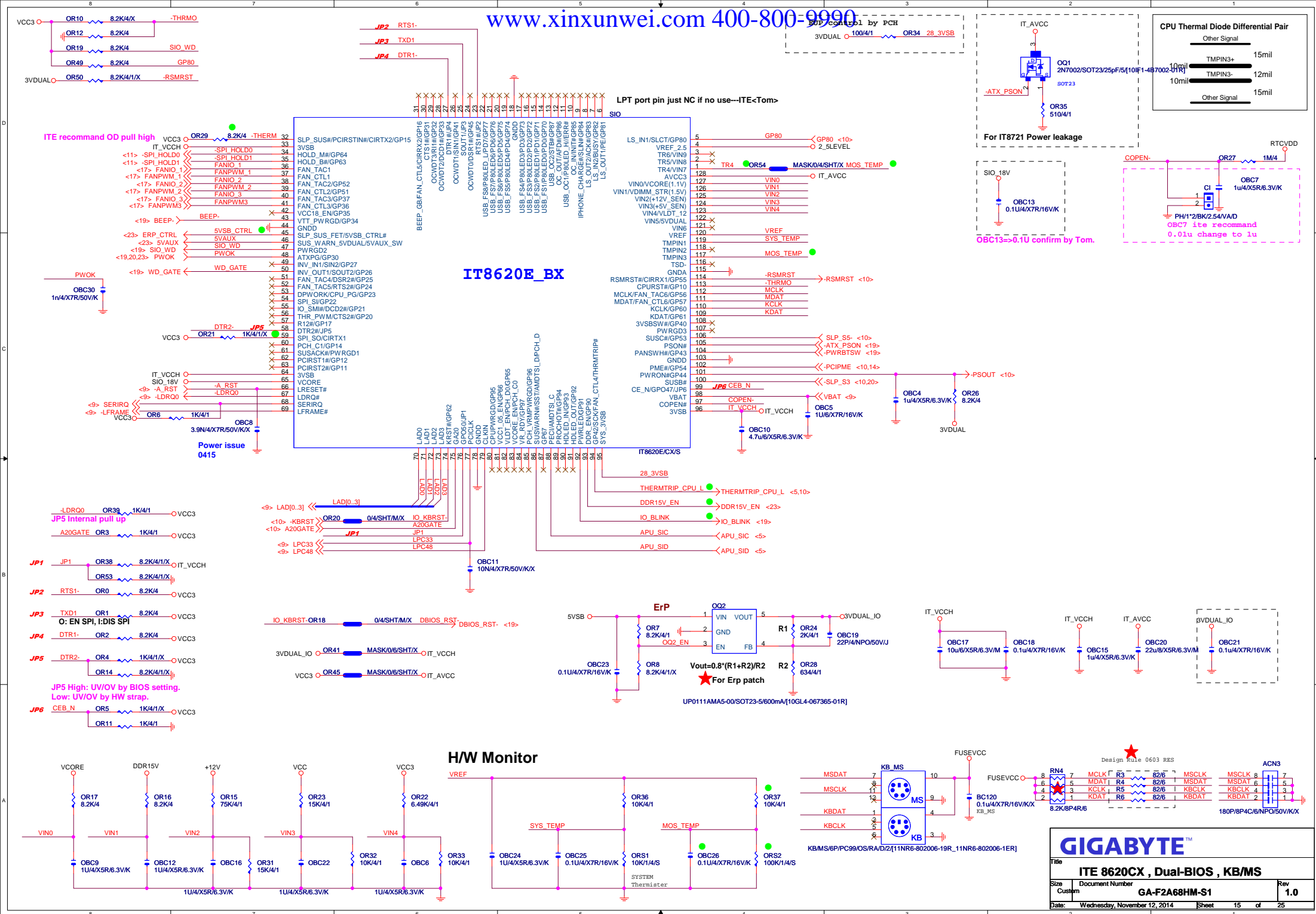


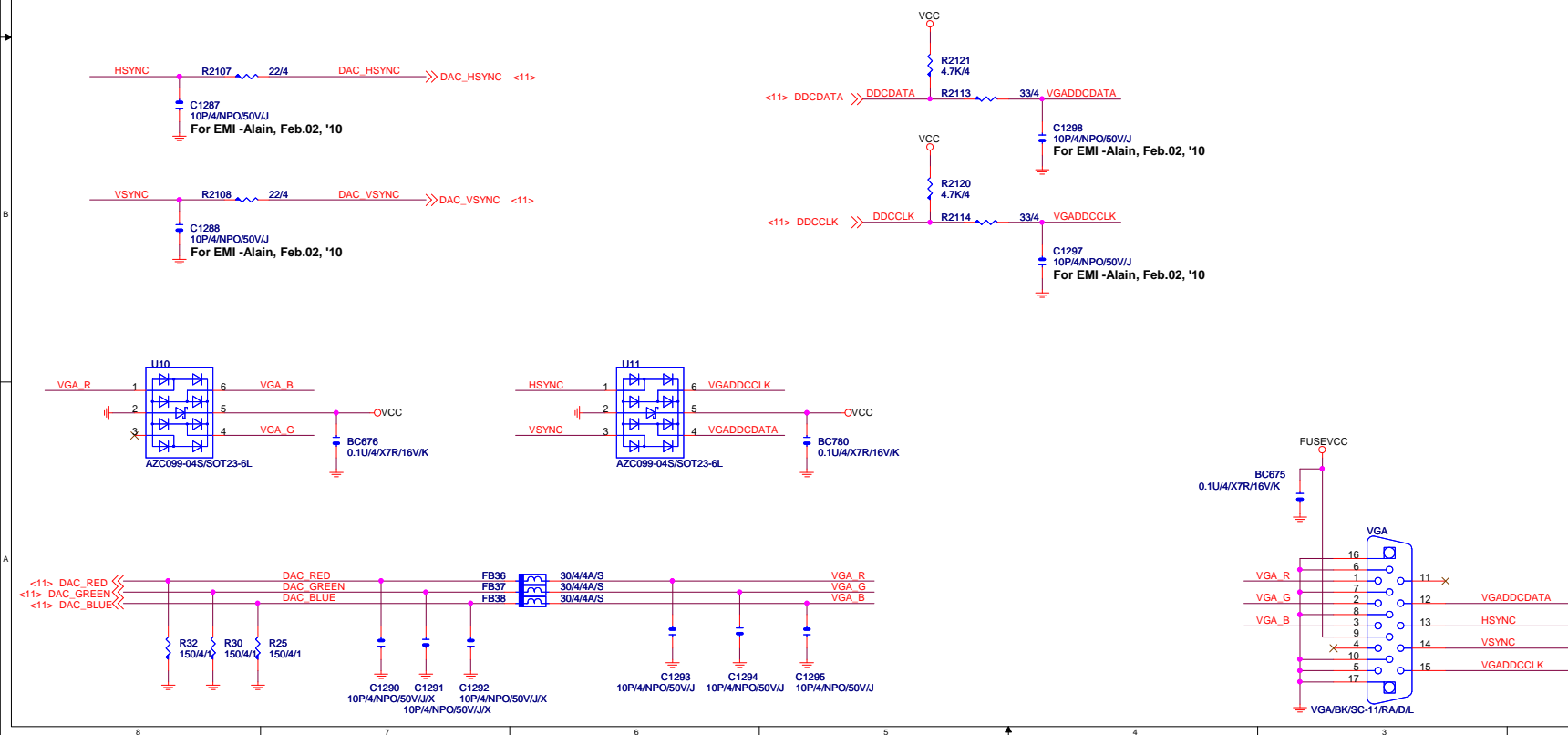
PCI SLOT 1,2

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

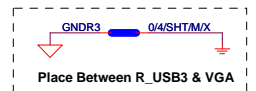
**GIGABYTE™**

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PCI SLOT		
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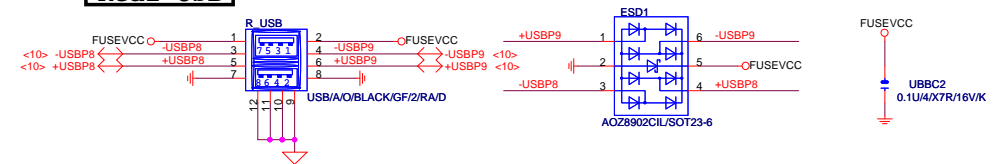


EMI

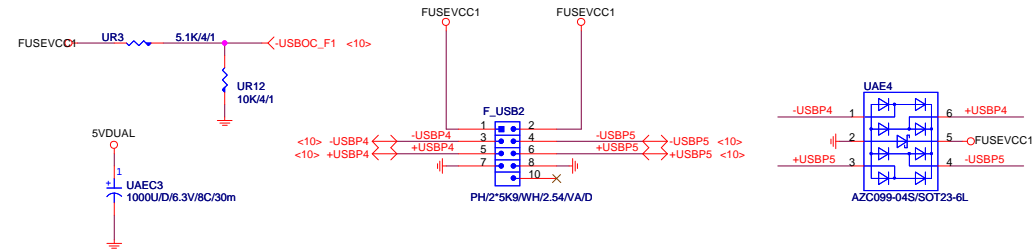


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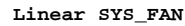
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RGB		
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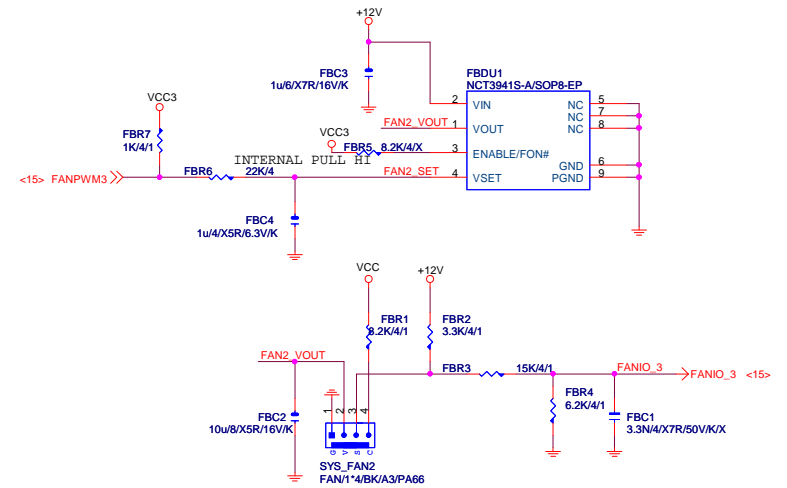
FRONT SIDE USB2



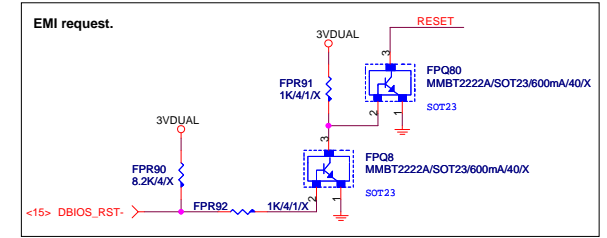
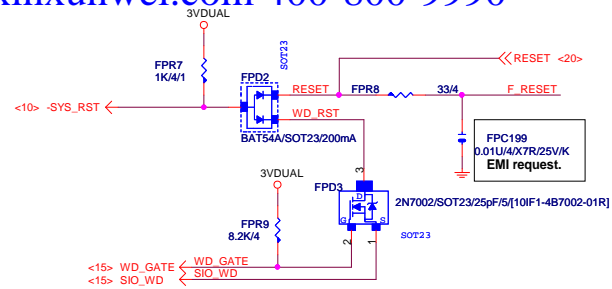
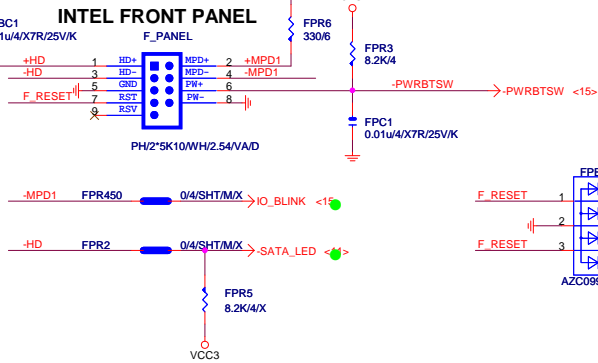
CPU SMART FAN



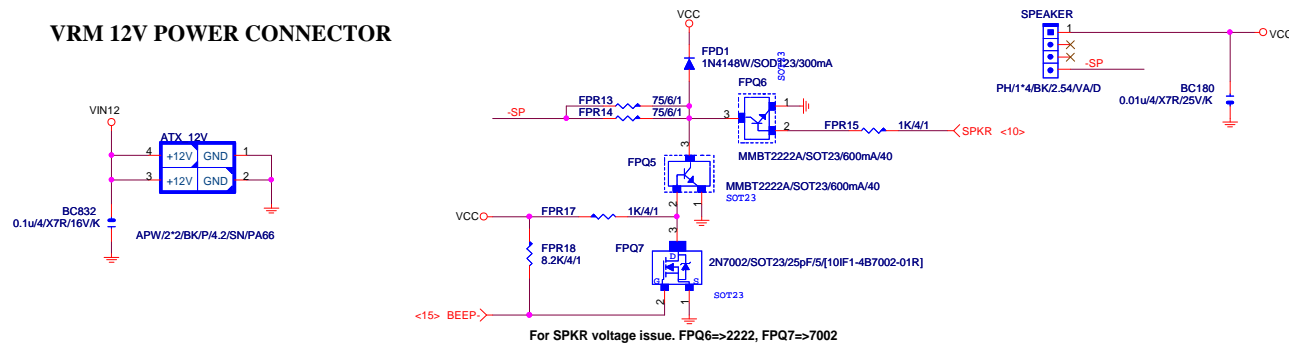
SYSTEM FAN1



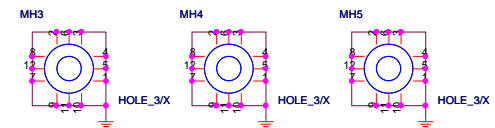
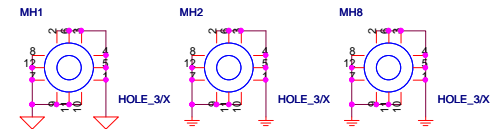
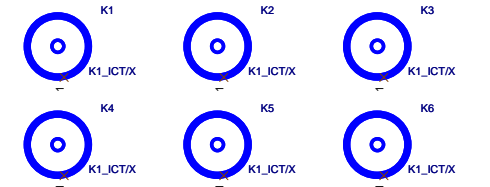
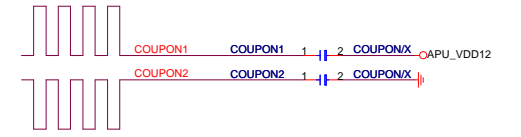
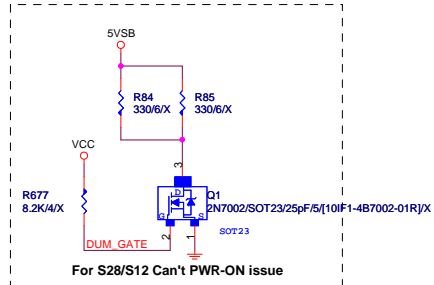
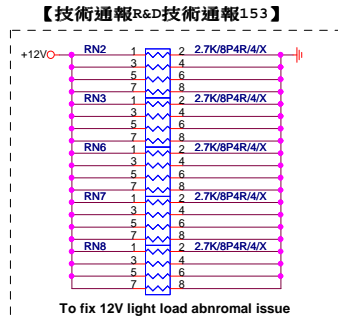
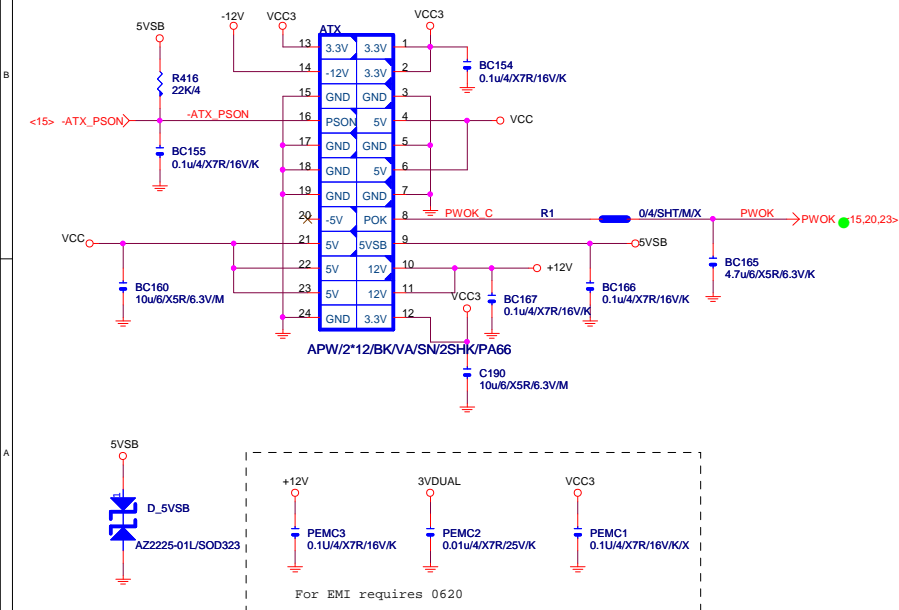
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Size	Document Number	Rev	
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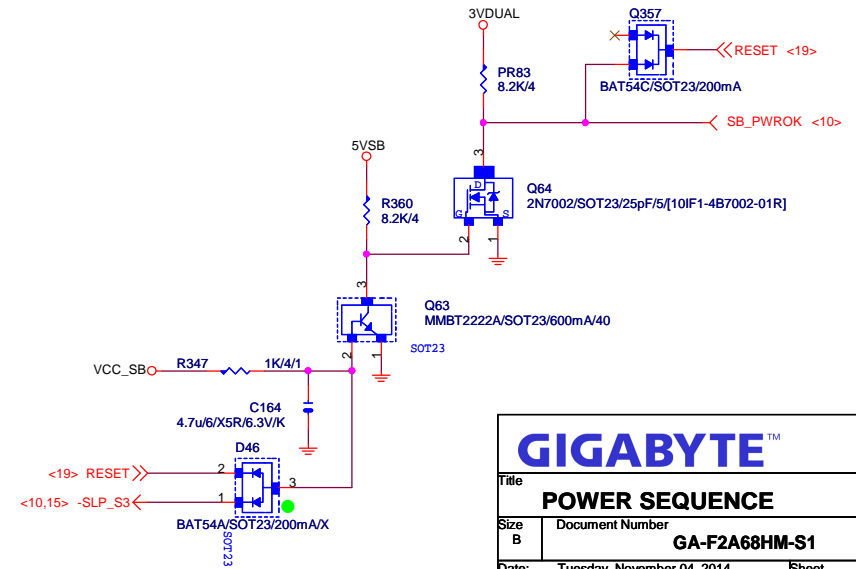
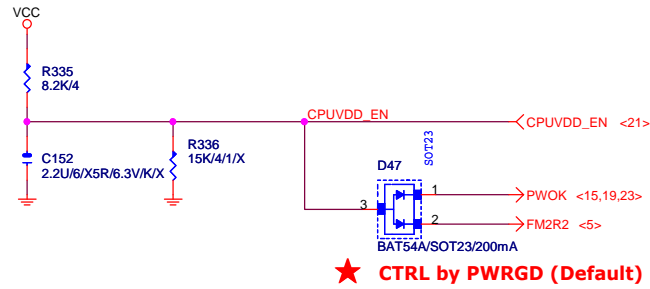
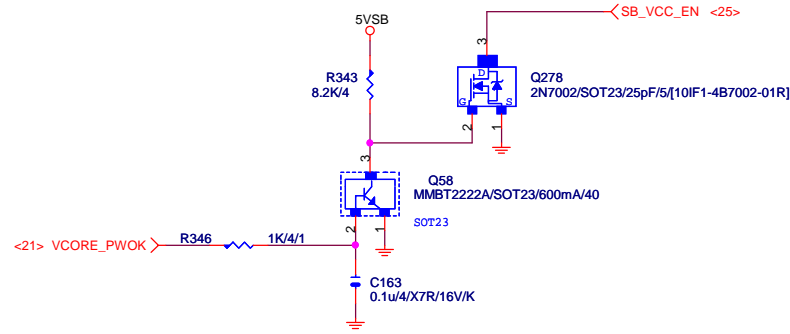


VRM 12V POWER CONNECTOR

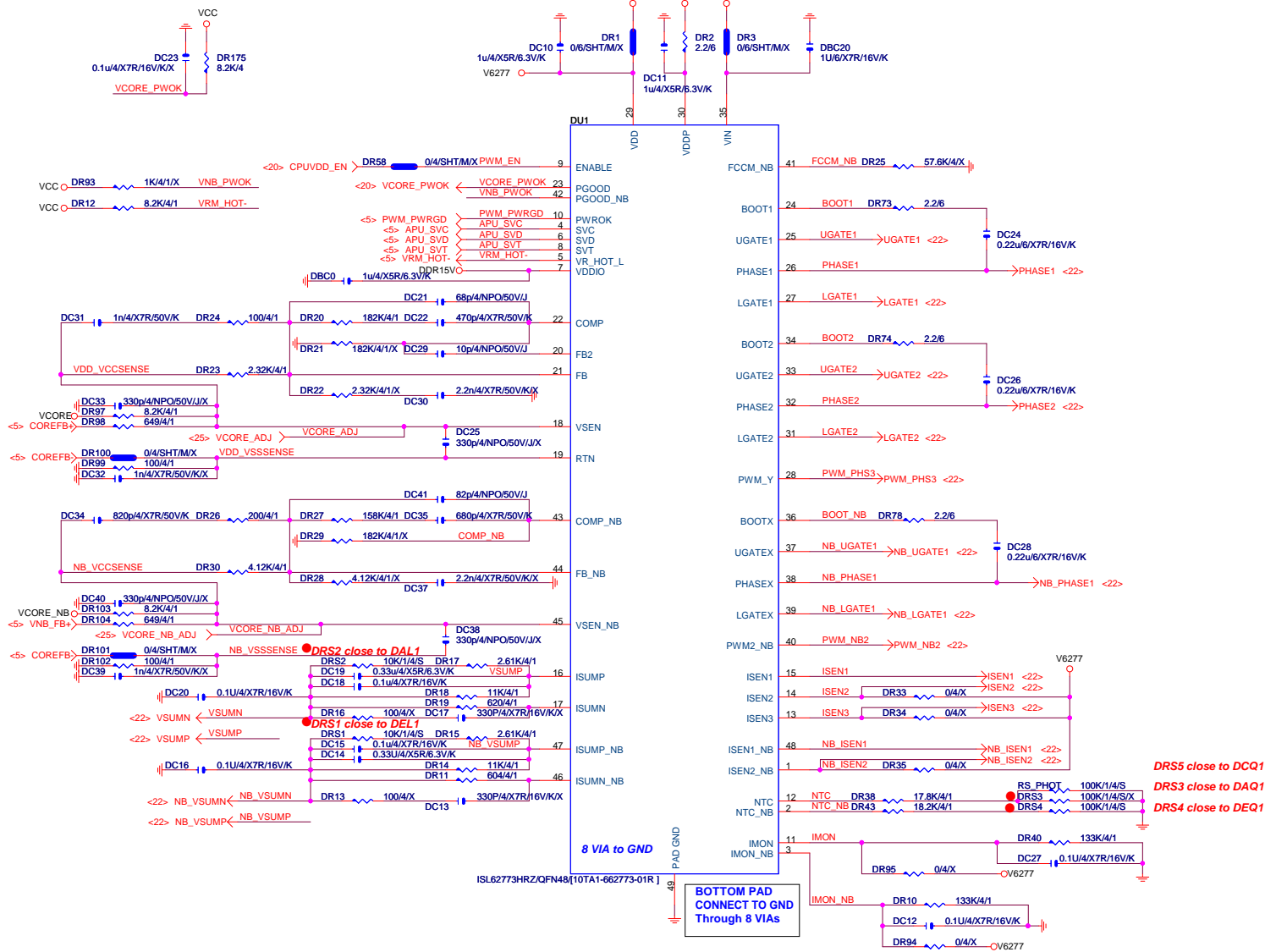


ATX POWER CONNECTOR



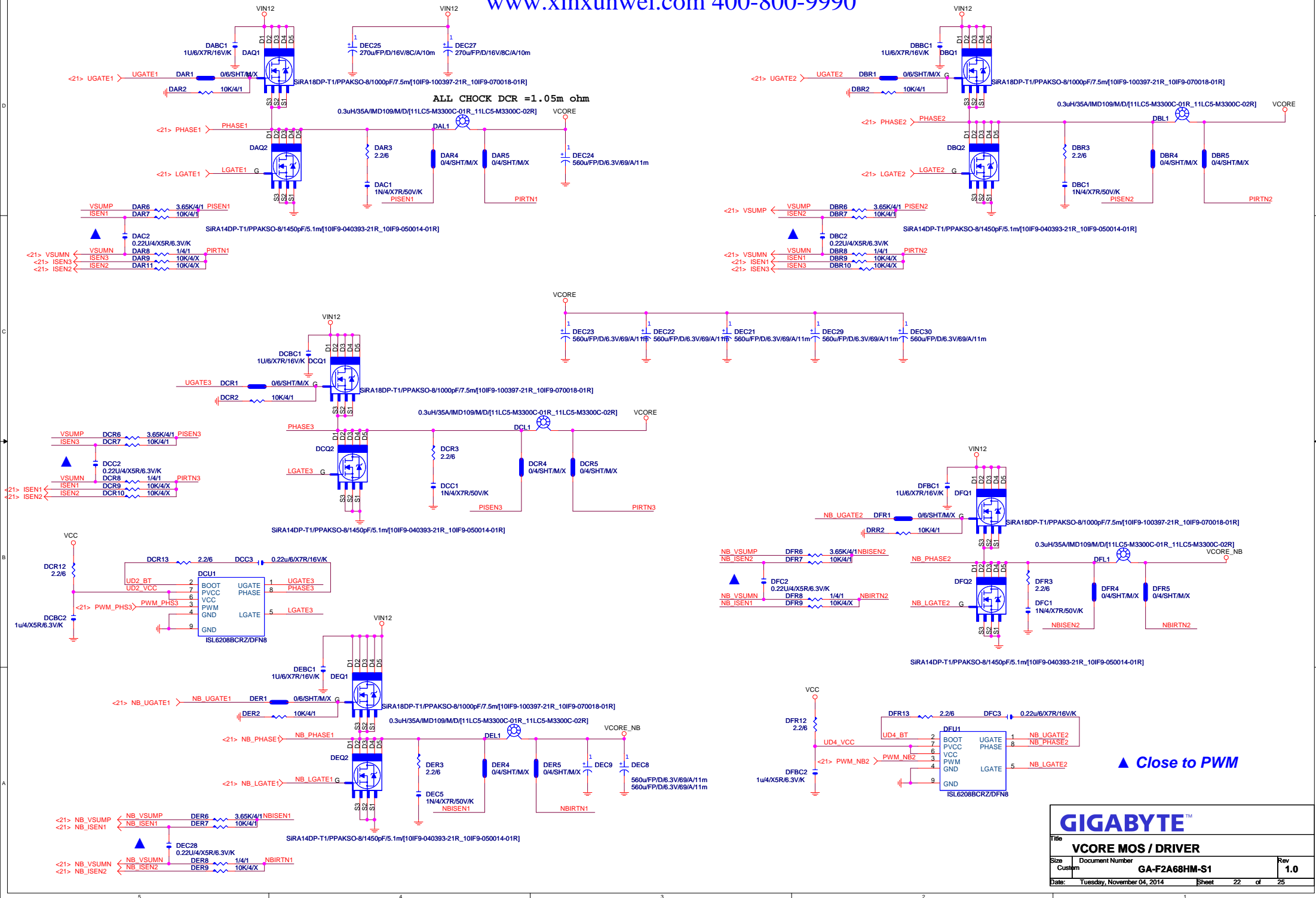


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Size B	Document Number	Rev	
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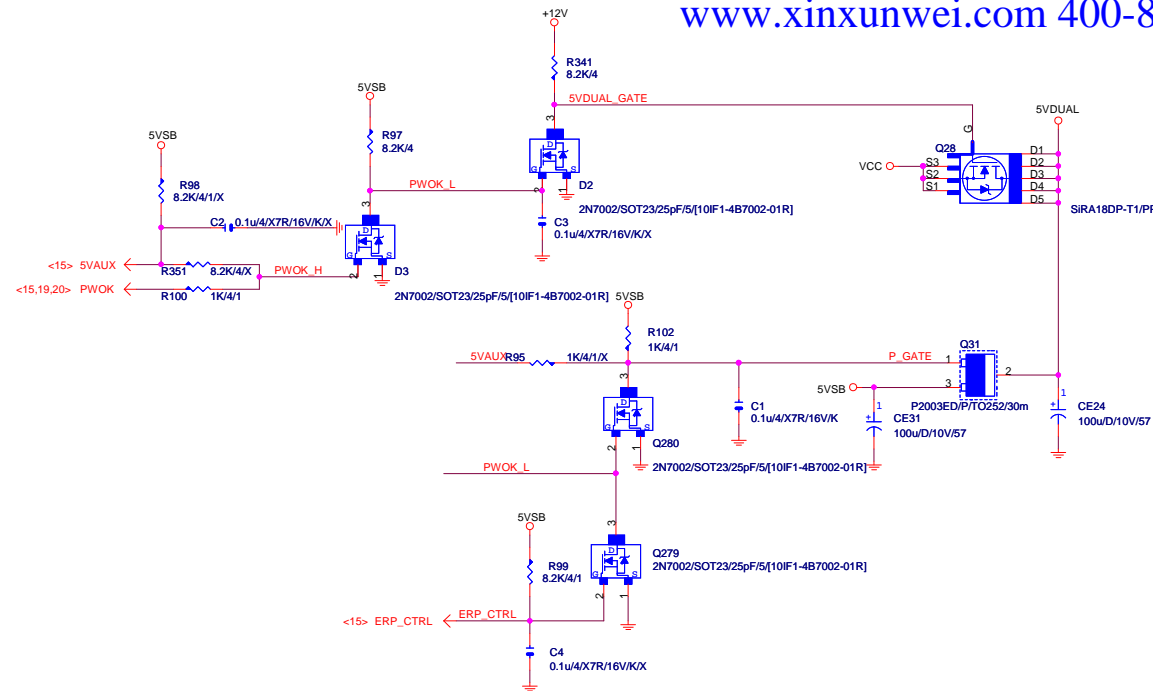


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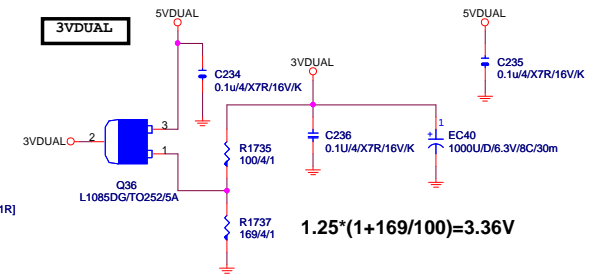
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Vcore (ISL62773)		
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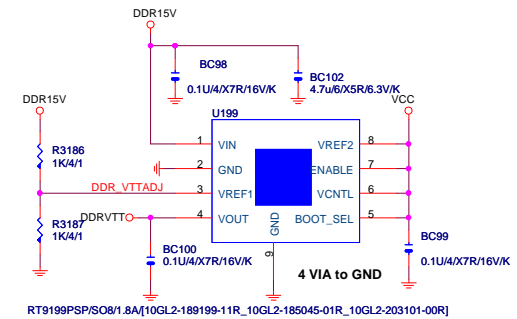
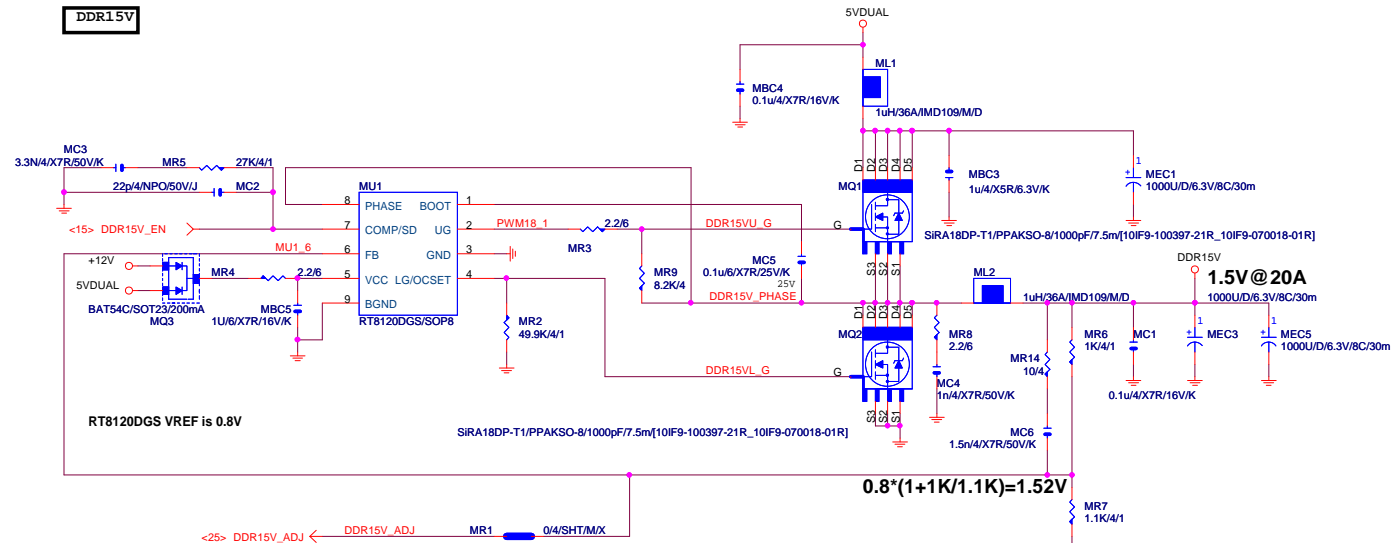
5VDUAL



3VDUAL

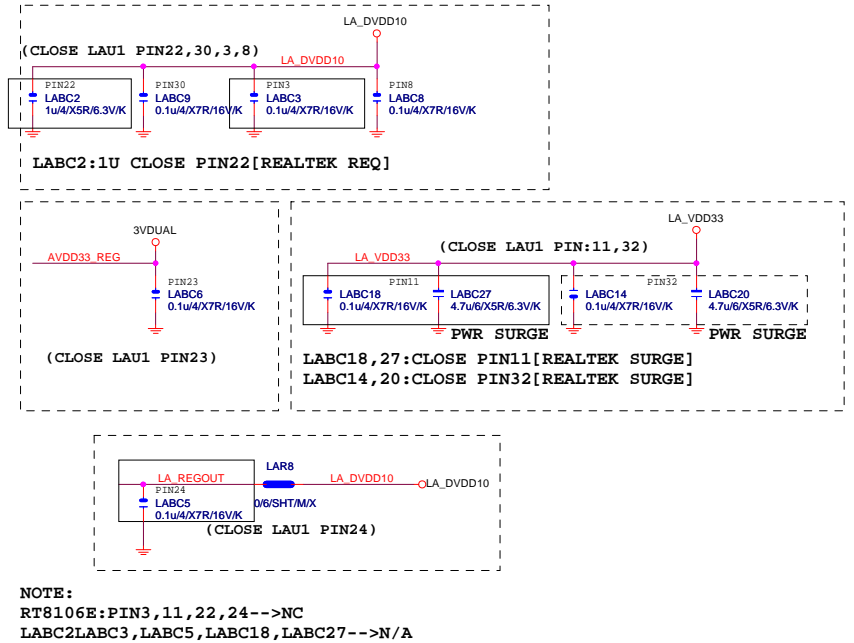


DDR15V

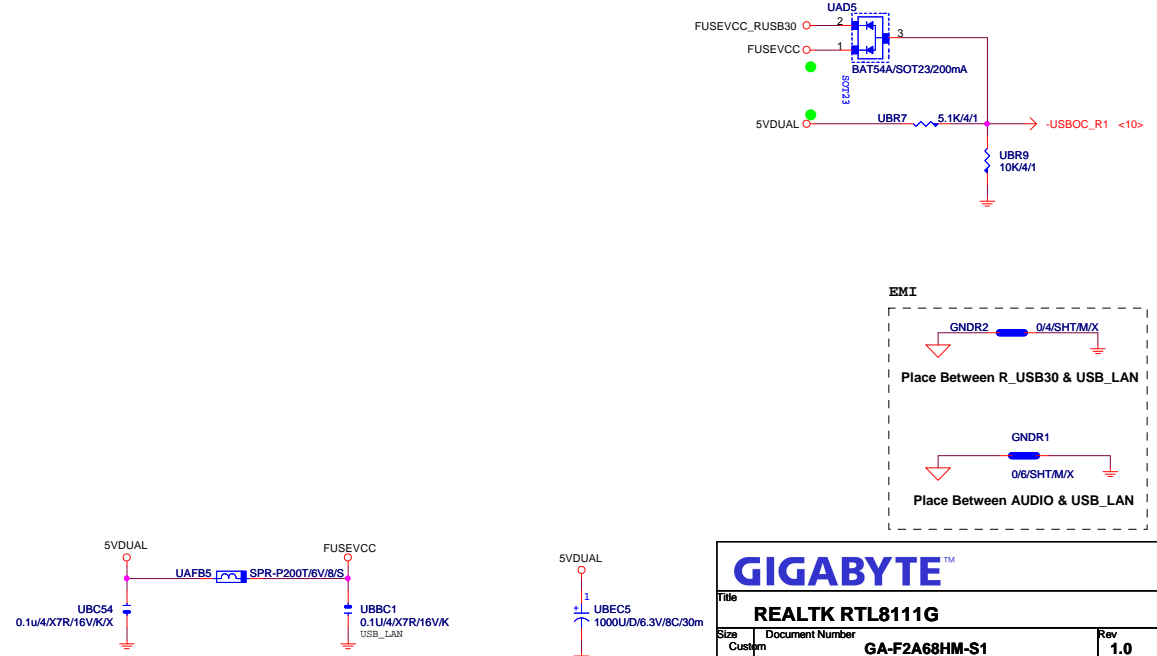


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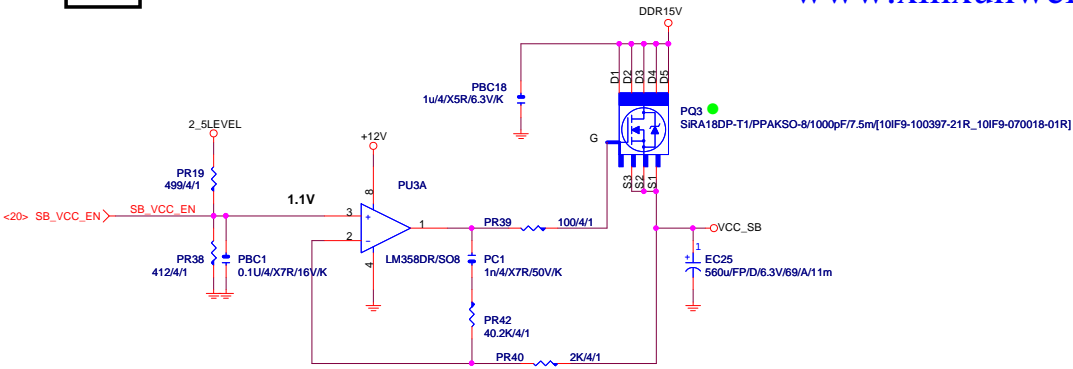
Title			DDR POWER , 5VDUAL , ErP
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USB_LAN CONNECTOR

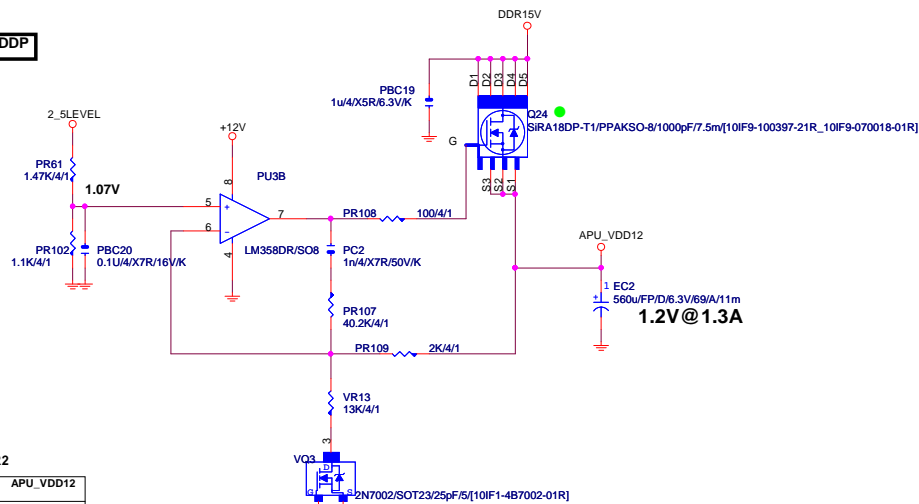


VCC_SB



2_SLEVEL
BC0
22u/8/X5R/6.3V/M
Near PR19 / PR61

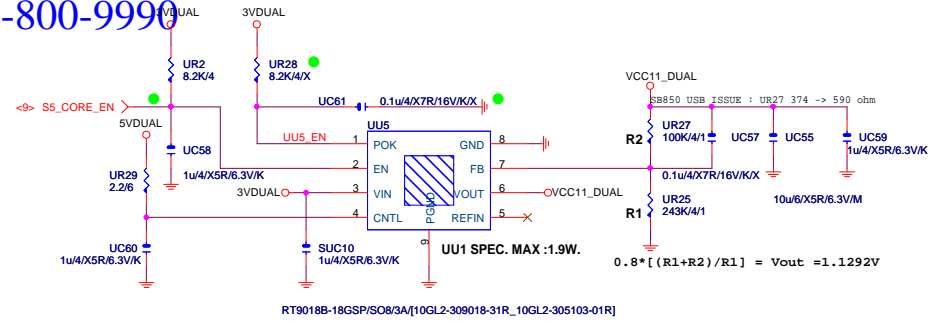
APU_VDDP



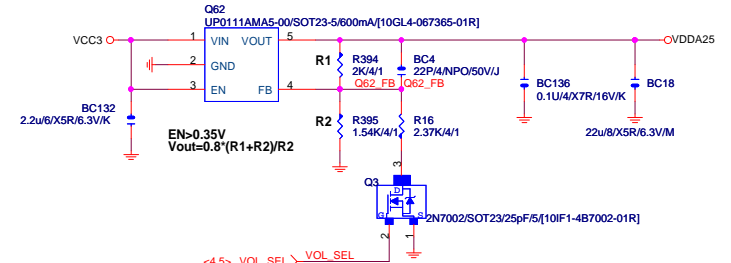
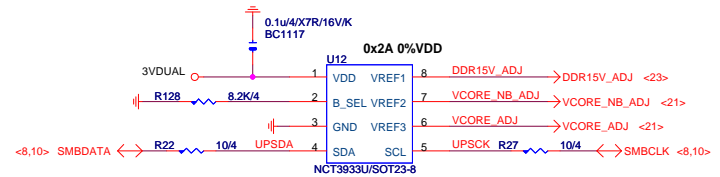
$$V_{out} = 1.07 \cdot (R1 + R2) / R2$$

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

<4,5> VOL_SEL > VOL_SEL



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

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Title	VCC_SB, APU_VDDP, VCC11_DUAL, VDDA25
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