

GA-A75-UD4H

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21	F_USB 3.0	
22	ITE 8720 JX	
23	ALC889 CODEC	
24	AUDIO JACK	
25	FAN/HWMO	

[illegible]

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APU_VDDIO_SUS=DDR15V
APU_VTT_SUS=DDRVTT
+1.1V_RUN=FCH_VDD_11_RUN=VCC_SB
+3.3V_ALW=3VDUAL
+3.3V_RUN=VCC3
APU_VDDP_RUN=APU_VDDR_RUN=APU_VDDP

```

Model Name:GA-A75-UD4H

Component value change history

Version: 1.01

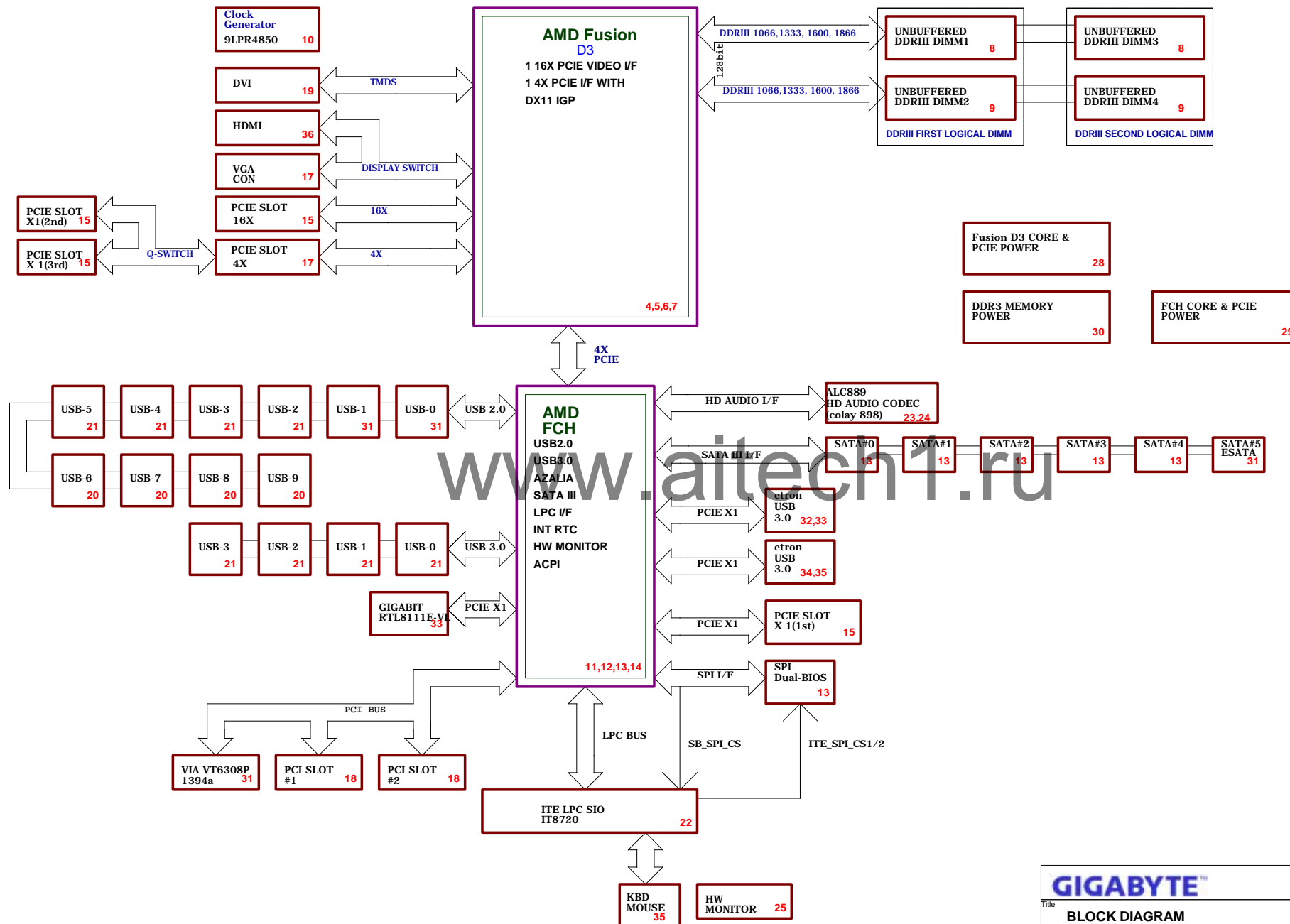
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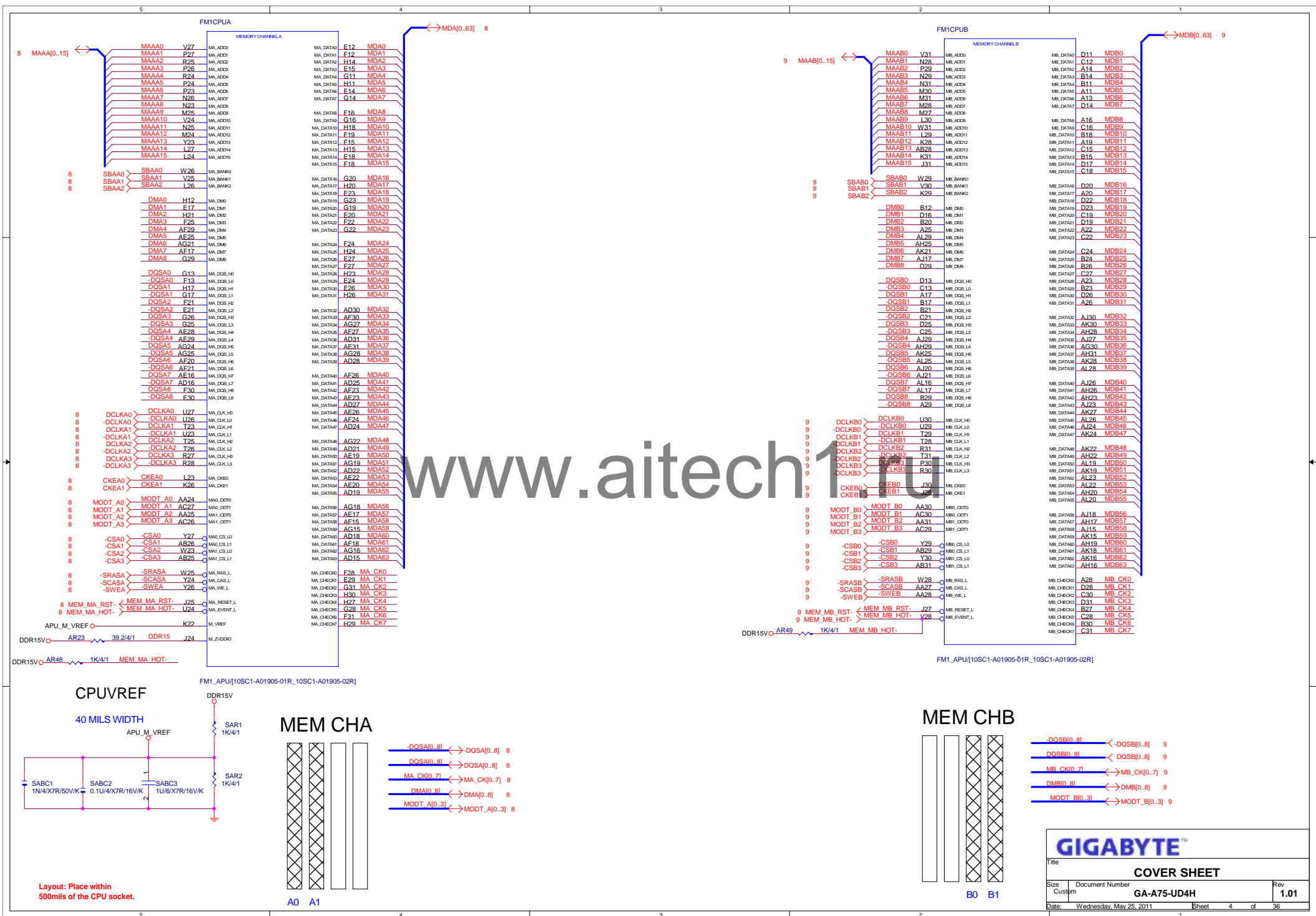
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Circuit or PCB layout change for next version

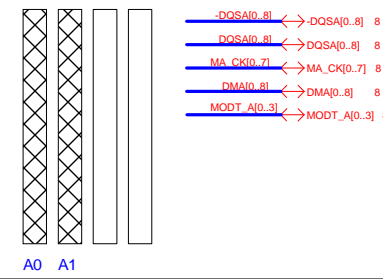
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AMD Fusion D3 CUSTOMER DESKTOP REFERENCE DESIGN

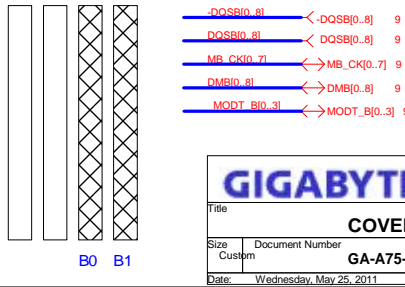




MEM CHA



MEM CHB

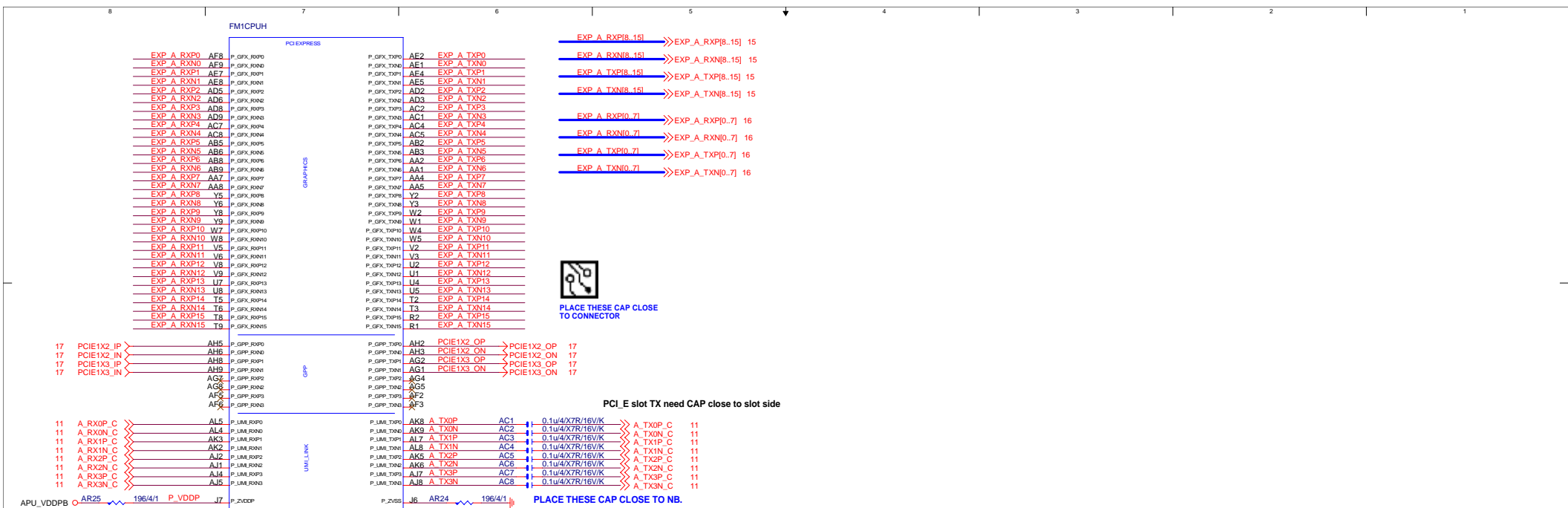


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COVER SHEET

Size: Custom Document Number: **GA-A75-UD4H** Rev: **1.01**

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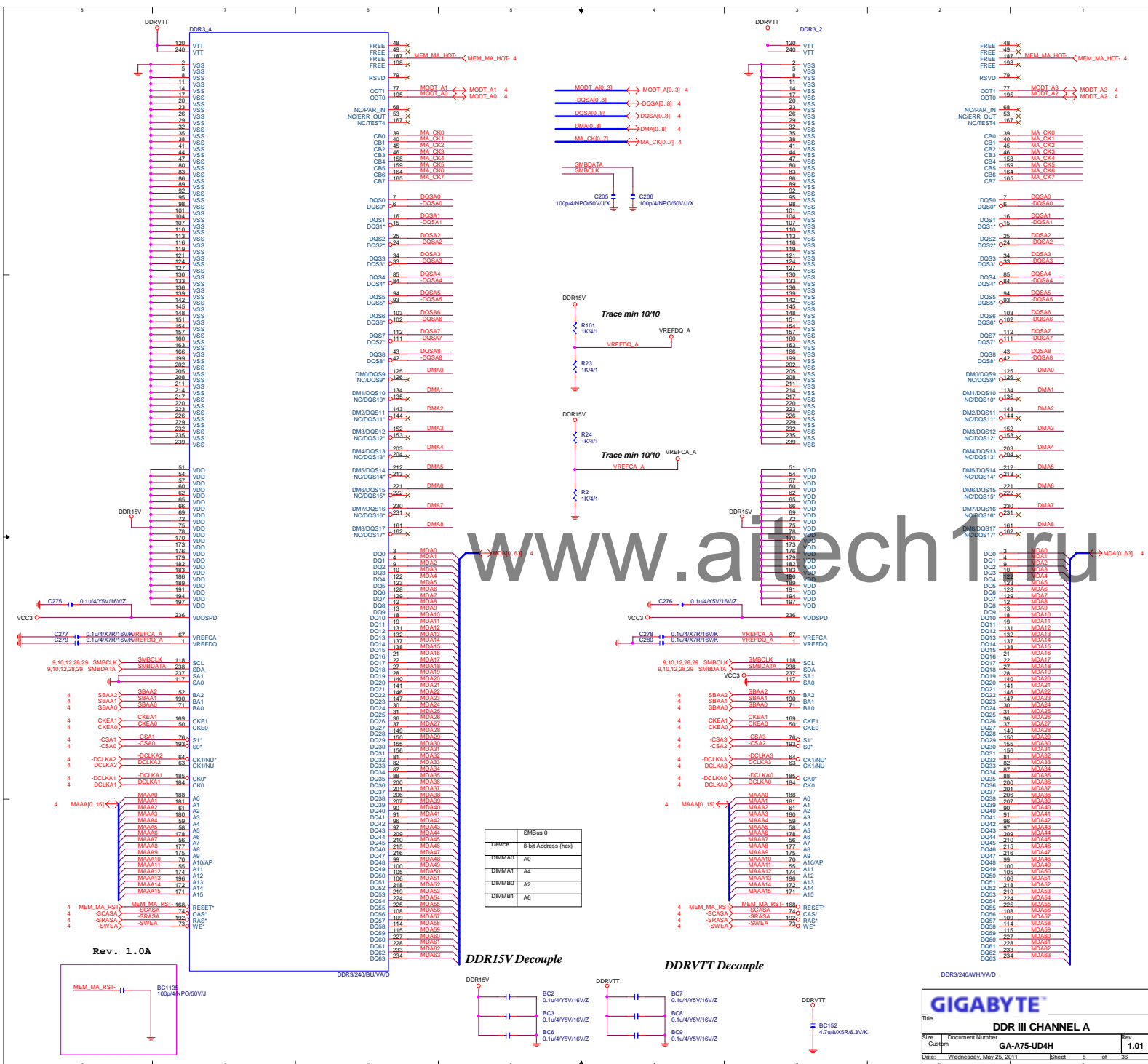


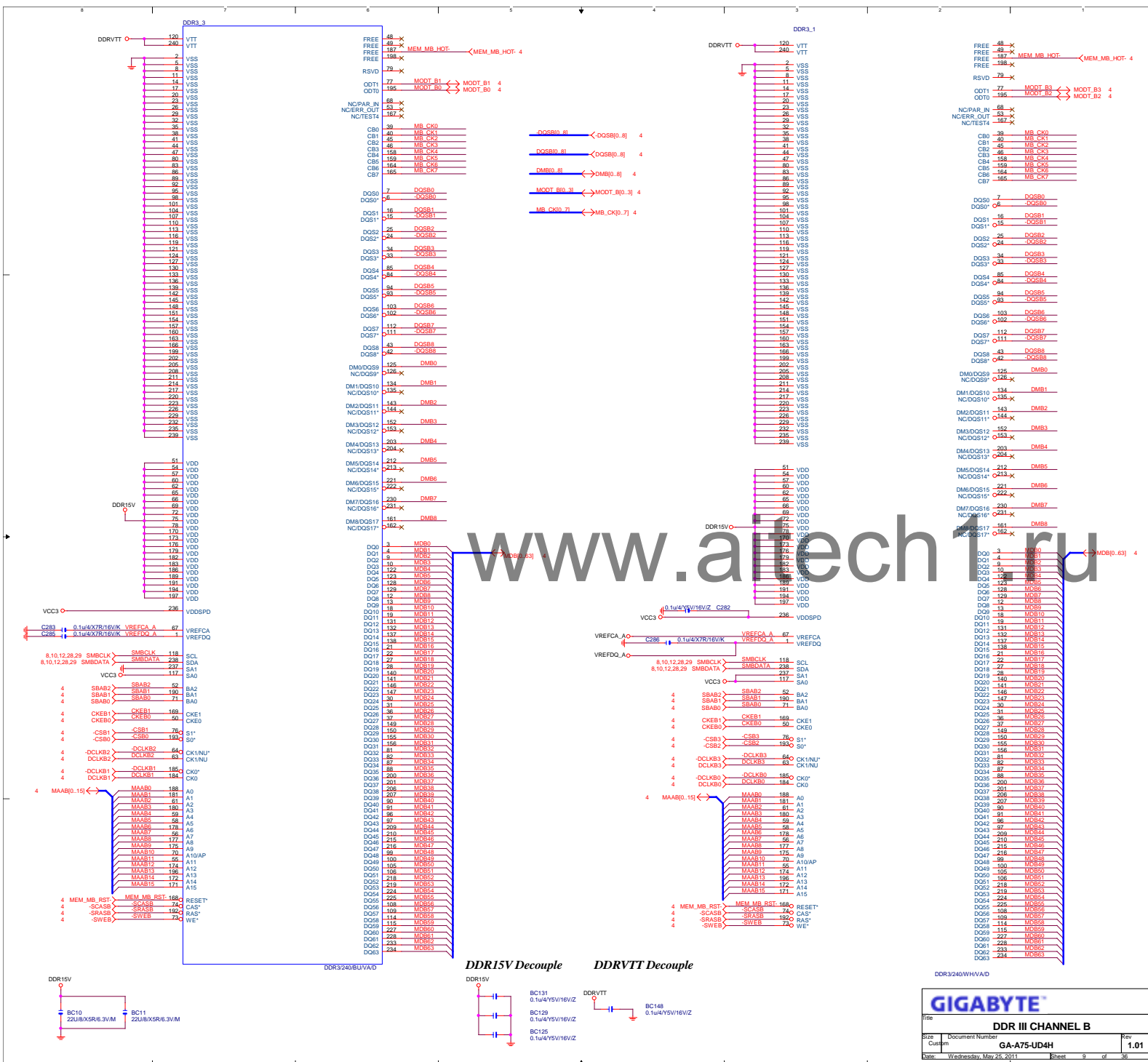
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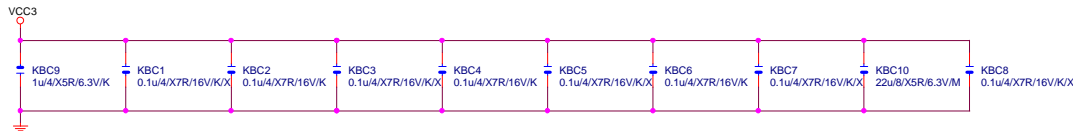
N.B HEATSINK

REMOVE N.B
HEATSINK

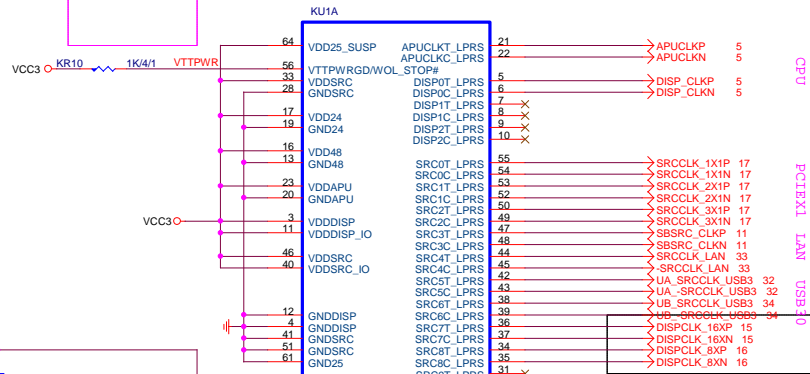








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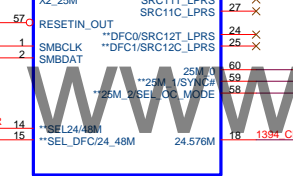
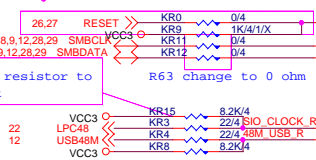
CPU
PCIEX1 LAN USB3.0

Rev. 1.0A

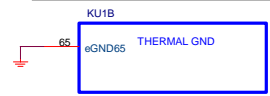
Pin#59 SYNC# selects for APUCLK Sync (pull low) and Async (pull high) with SRC.reserve a pull-high resistor

If you don't use SRC over-clocking function, you can use pin#58 SEL_OC_MODE=0 (default).
SEL_OC_MODE=0 (default) SRC meets Gen 2
SEL_OC_MODE=1 SRC meets Gen 1

Pin#14 adds a 8.2K ohms pull-up resistor to select pin#15 48MHz clock output

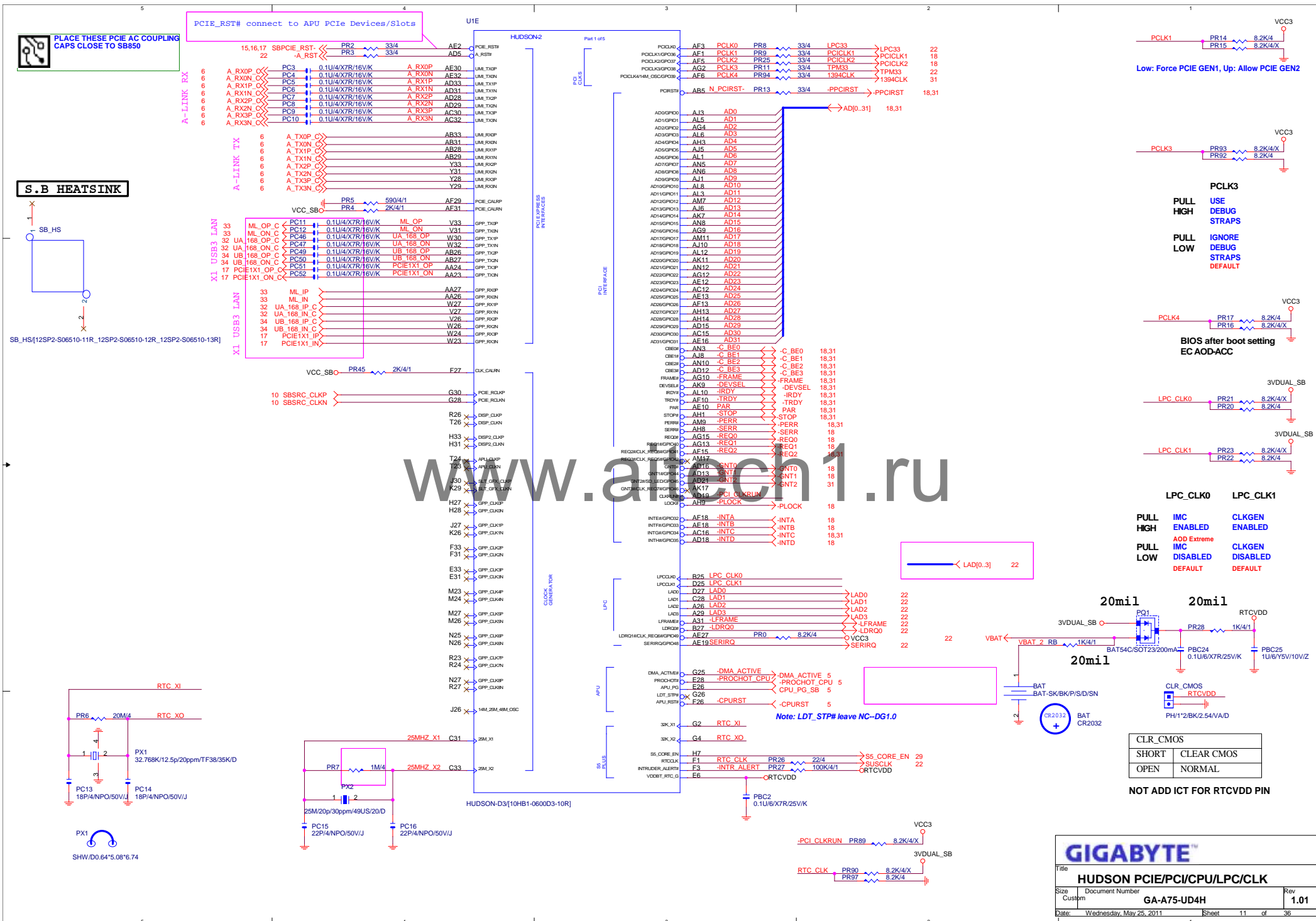


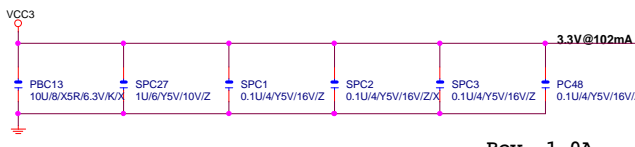
9LRS4850AKLFT/MLF64
Clock chip has internal serial terminations for differential pairs, external resistors are reserved for debug purpose.



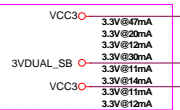
Rev. 1.0A

GIGABYTE™			
Title			
ICS9LRS4850			
Size	Document Number	Rev	
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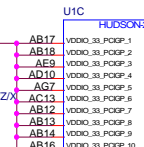




Rev. 1.0A



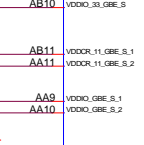
Rev. 1.0A



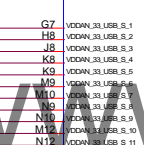
Rev. 1.0A



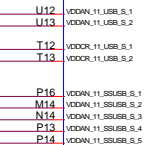
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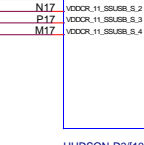
Rev. 1.0A



Rev. 1.0A



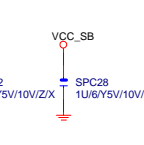
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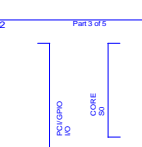
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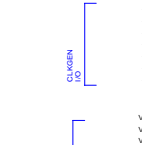
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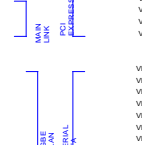
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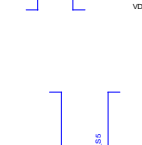
Rev. 1.0A



Rev. 1.0A



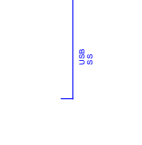
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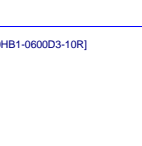
Rev. 1.0A



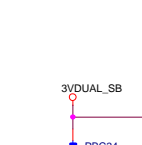
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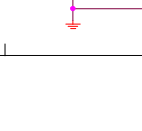
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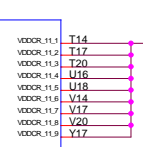
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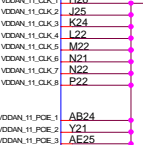
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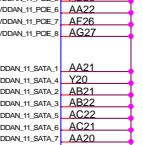
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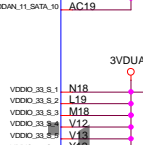
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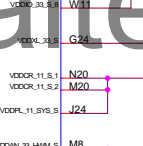
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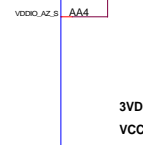
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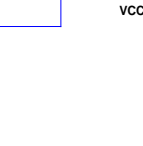
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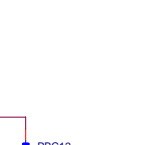
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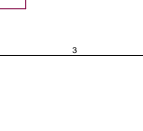
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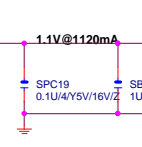
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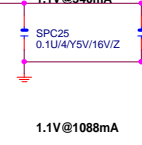
Rev. 1.0A



Rev. 1.0A



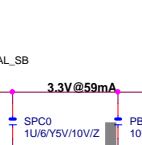
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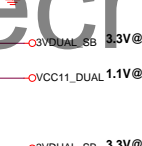
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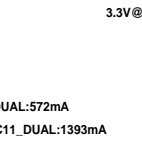
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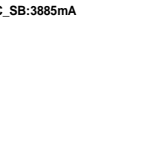
Rev. 1.0A



Rev. 1.0A



Rev. 1.0A



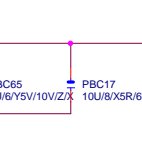
Rev. 1.0A



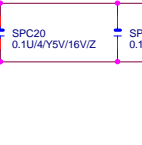
Rev. 1.0A



Rev. 1.0A



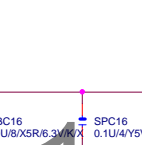
Rev. 1.0A



Rev. 1.0A



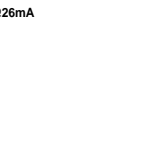
Rev. 1.0A



Rev. 1.0A



Rev. 1.0A



Rev. 1.0A



Rev. 1.0A



Rev. 1.0A



Rev. 1.0A



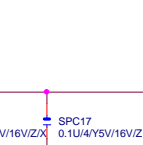
Rev. 1.0A



Rev. 1.0A



Rev. 1.0A



Rev. 1.0A



Rev. 1.0A



Rev. 1.0A



Rev. 1.0A



Rev. 1.0A



Rev. 1.0A



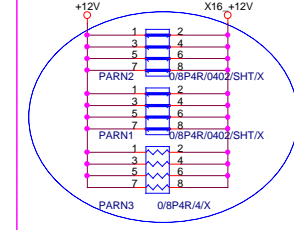
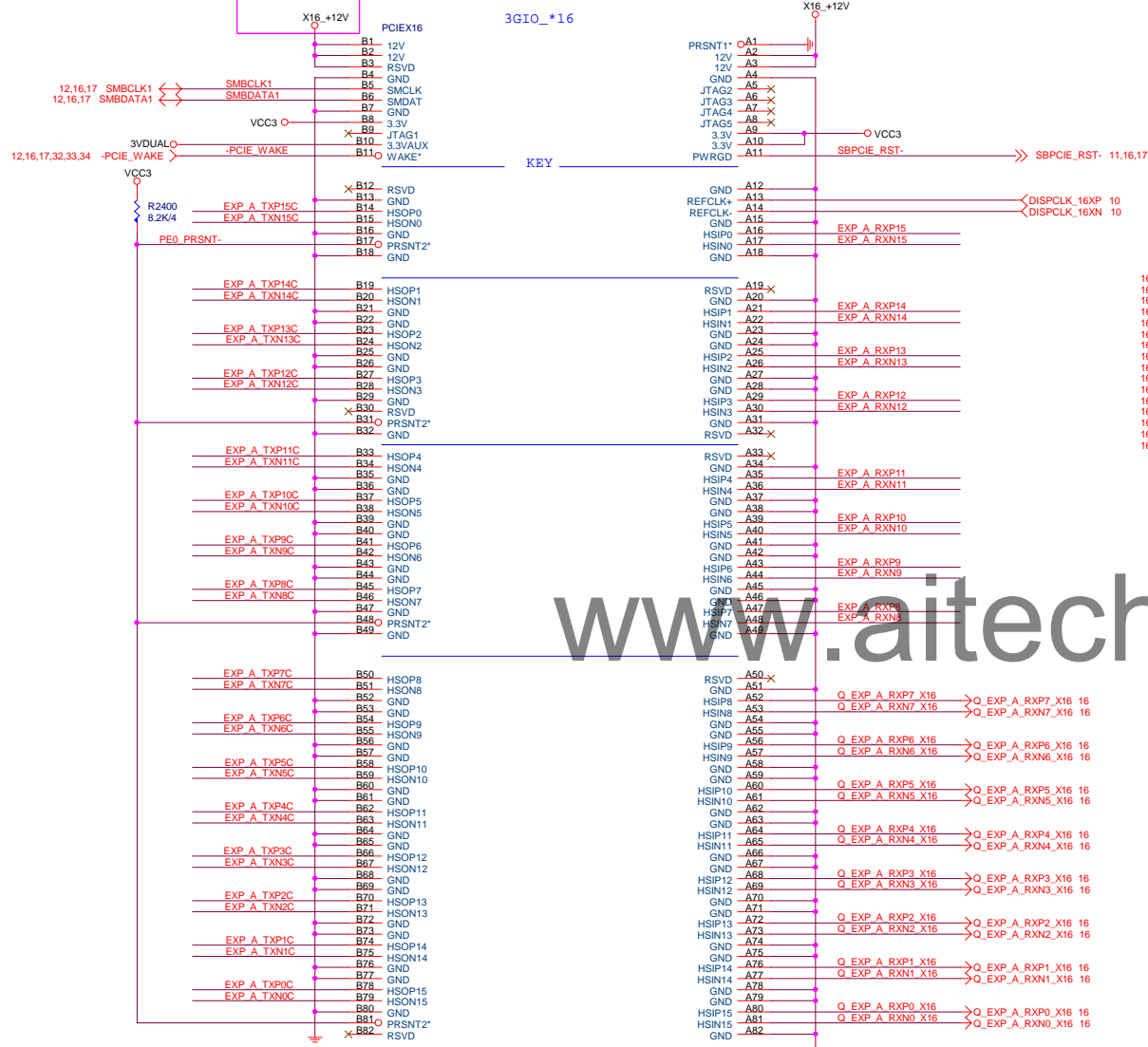
Rev. 1.0A

Rev. 1.01A

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EXP A_RXN[8..15] >> EXP_A_RXN[8..15] 6
EXP A_TXP[8..15] >> EXP_A_TXP[8..15] 6
EXP A_TXN[8..15] >> EXP_A_TXN[8..15] 6

Rev. 1.01A

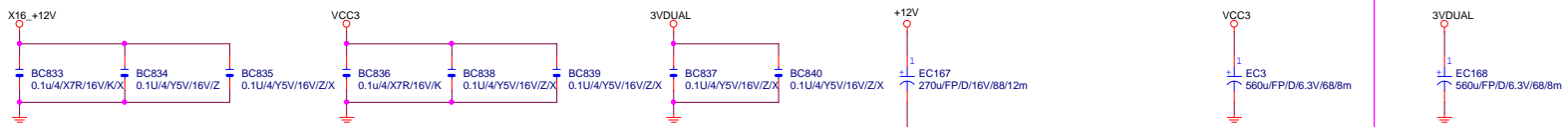
SBPCIE_RST-
C1643
100p4/NPO/50V/J



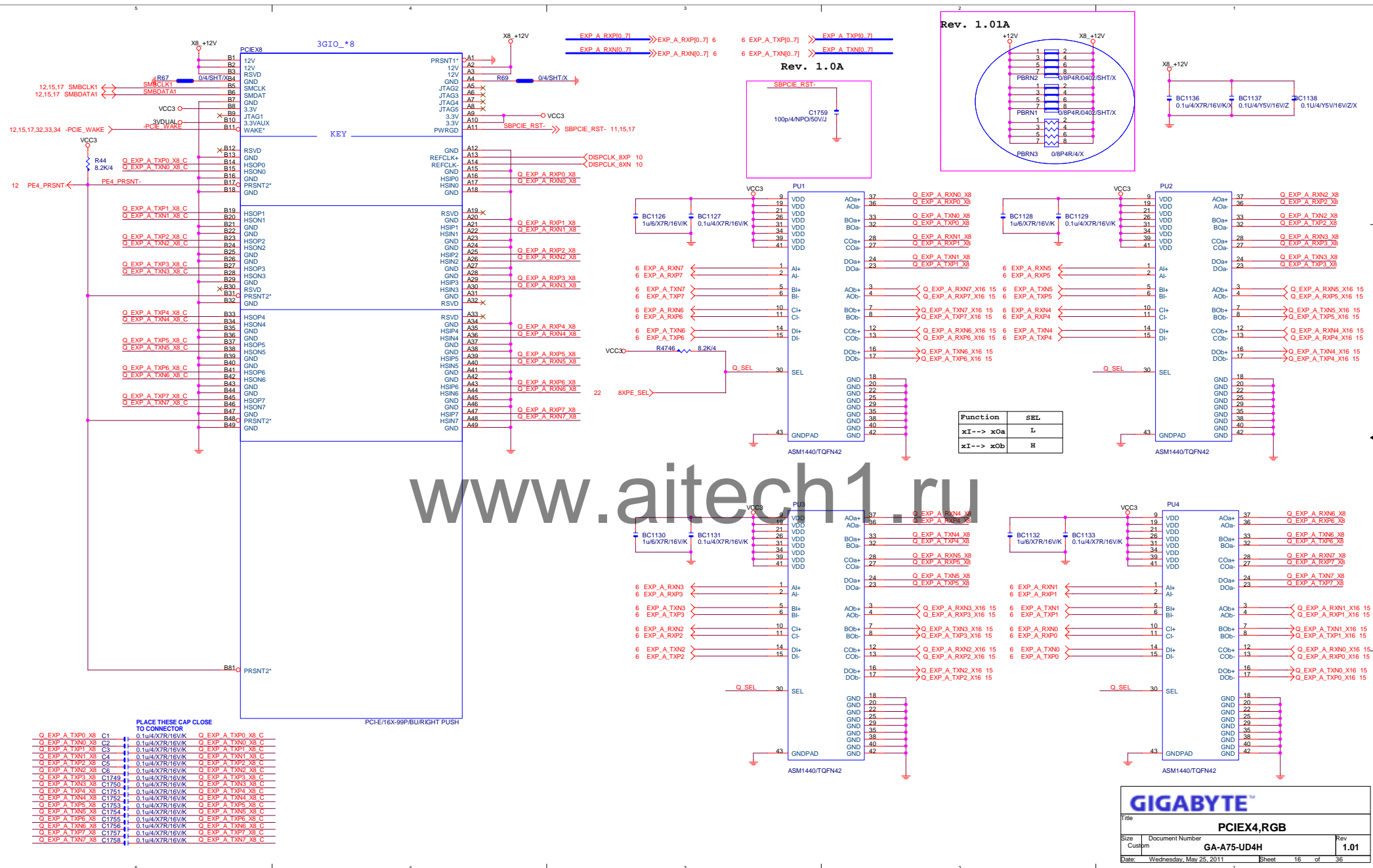
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16 Q_EXP A_TXN0_X16	C1645	0.1u4/47R/16V/K	EXP A_TXN0C
16 Q_EXP A_TXP1_X16	C1646	0.1u4/47R/16V/K	EXP A_TXP1C
16 Q_EXP A_TXN1_X16	C1647	0.1u4/47R/16V/K	EXP A_TXN1C
16 Q_EXP A_TXP2_X16	C1648	0.1u4/47R/16V/K	EXP A_TXP2C
16 Q_EXP A_TXN2_X16	C1649	0.1u4/47R/16V/K	EXP A_TXN2C
16 Q_EXP A_TXP3_X16	C1650	0.1u4/47R/16V/K	EXP A_TXP3C
16 Q_EXP A_TXN3_X16	C1651	0.1u4/47R/16V/K	EXP A_TXN3C
16 Q_EXP A_TXP4_X16	C1652	0.1u4/47R/16V/K	EXP A_TXP4C
16 Q_EXP A_TXN4_X16	C1653	0.1u4/47R/16V/K	EXP A_TXN4C
16 Q_EXP A_TXP5_X16	C1654	0.1u4/47R/16V/K	EXP A_TXP5C
16 Q_EXP A_TXN5_X16	C1655	0.1u4/47R/16V/K	EXP A_TXN5C
16 Q_EXP A_TXP6_X16	C1656	0.1u4/47R/16V/K	EXP A_TXP6C
16 Q_EXP A_TXN6_X16	C1657	0.1u4/47R/16V/K	EXP A_TXN6C
16 Q_EXP A_TXP7_X16	C1658	0.1u4/47R/16V/K	EXP A_TXP7C
16 Q_EXP A_TXN7_X16	C1659	0.1u4/47R/16V/K	EXP A_TXN7C
EXP A_TXP8	C1660	0.1u4/47R/16V/K	EXP A_TXP8C
EXP A_TXN8	C1661	0.1u4/47R/16V/K	EXP A_TXN8C
EXP A_TXP9	C1662	0.1u4/47R/16V/K	EXP A_TXP9C
EXP A_TXN9	C1663	0.1u4/47R/16V/K	EXP A_TXN9C
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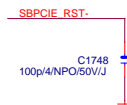
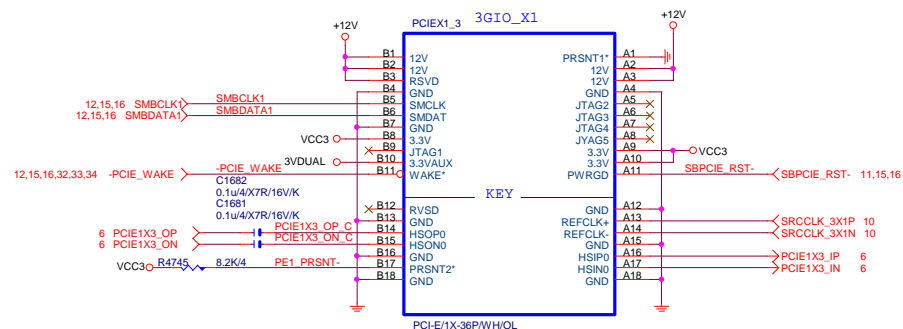
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PCI-E/16x-164P/BULOWR EJECTOR



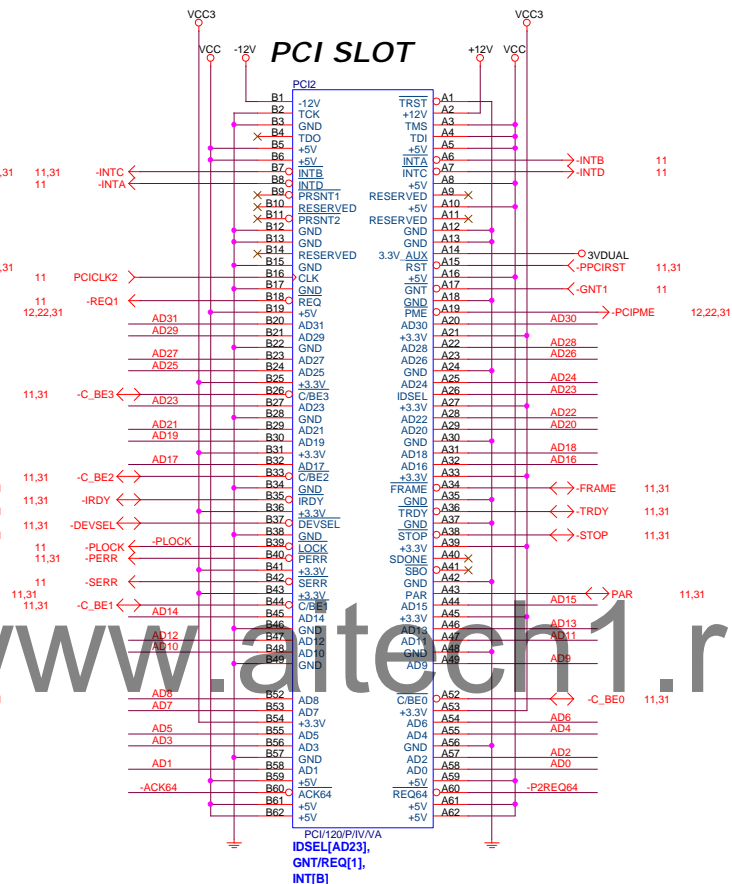
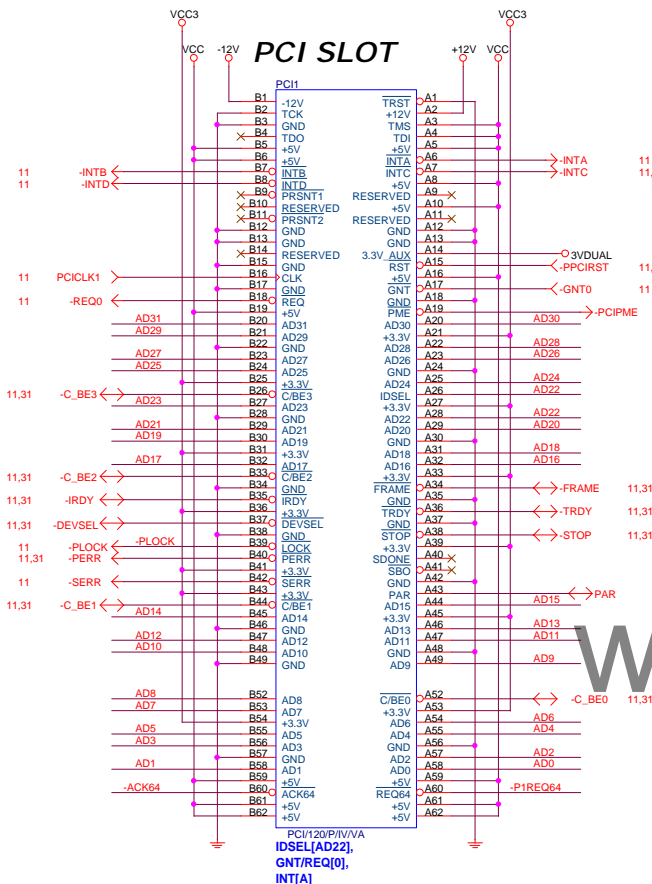
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Title PCI EXPRESS X 16		
Size Custom	Document Number GA-A75-UD4H	Rev 1.01
Date Wednesday, May 25, 2011	Sheet 15	of 36



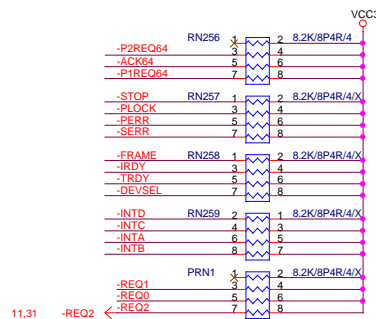
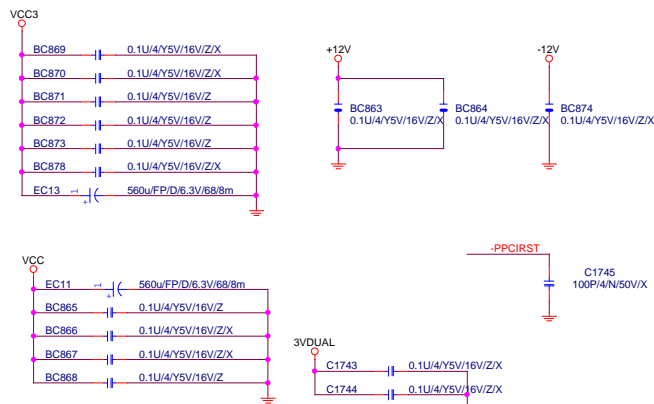


PCI SLOT 1,2

11,31 AD[0..31] <-- AD[0..31]

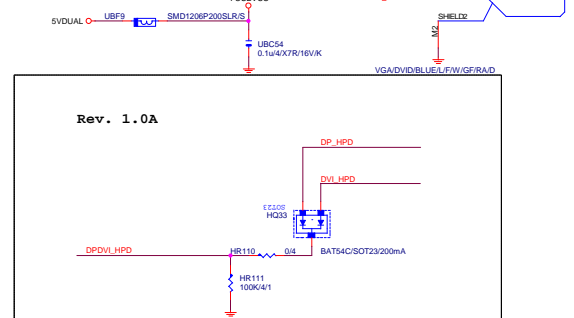
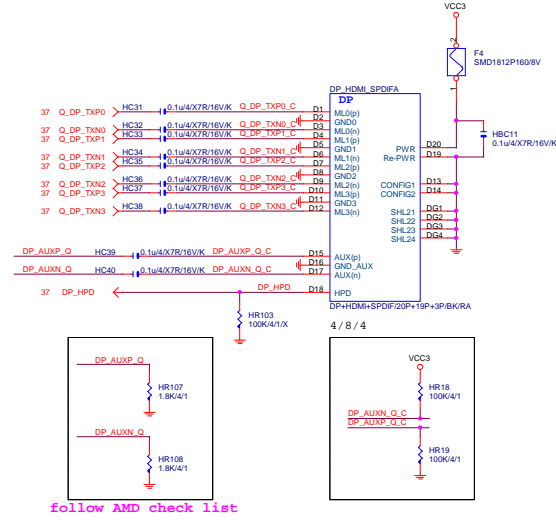
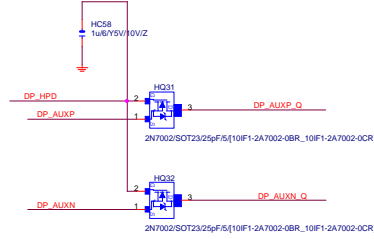
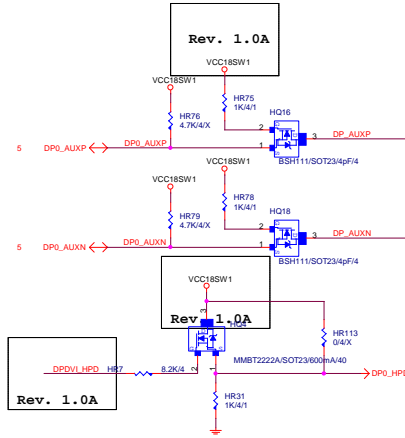


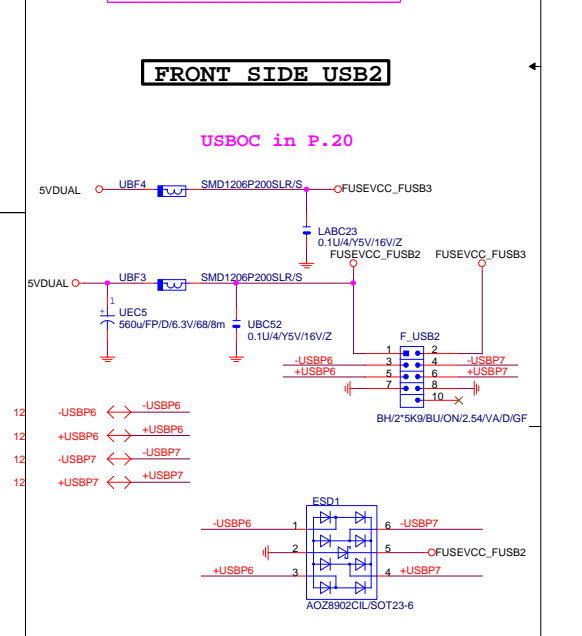
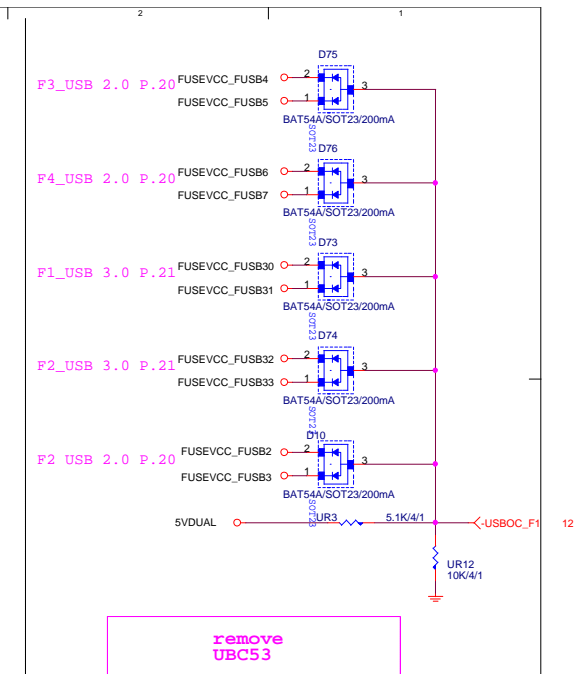
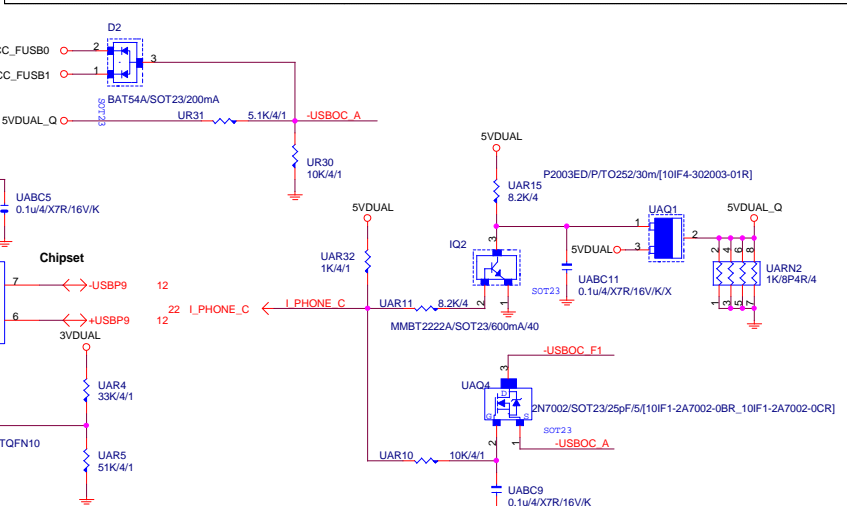
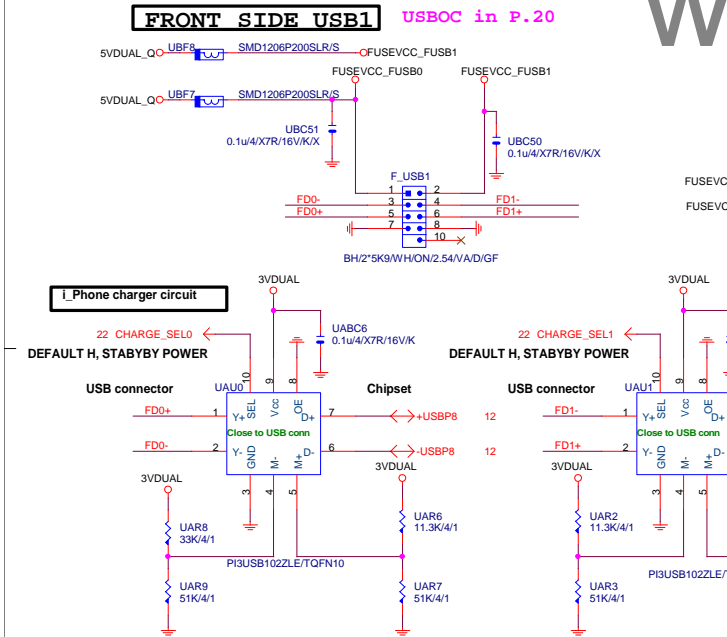
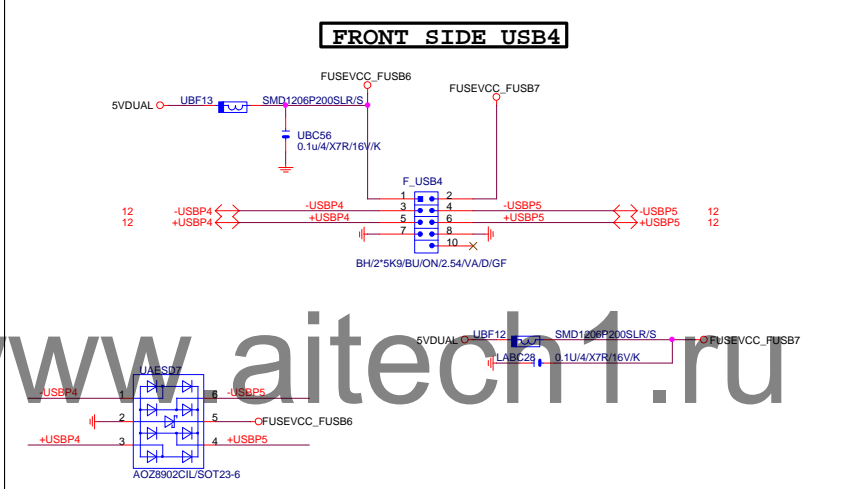
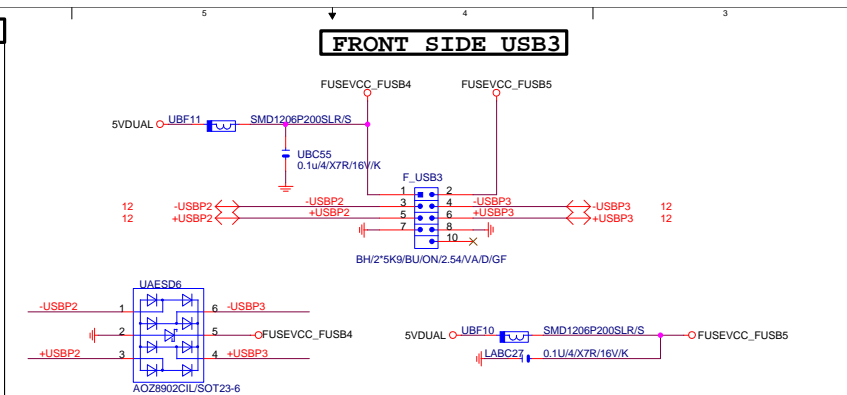
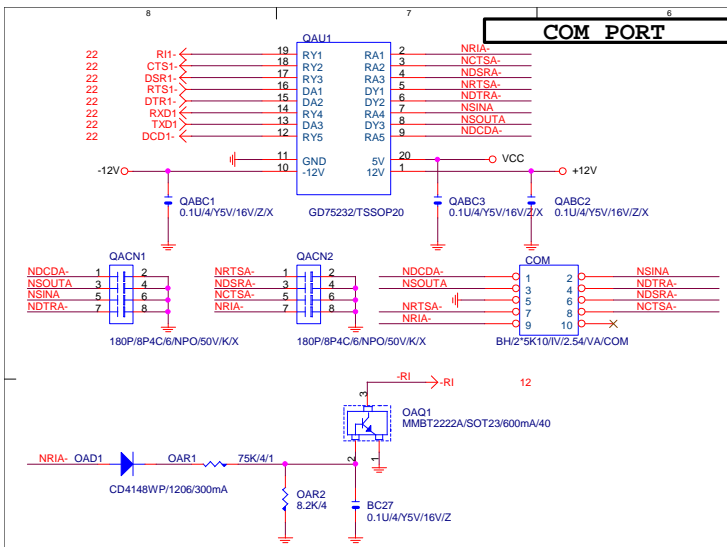
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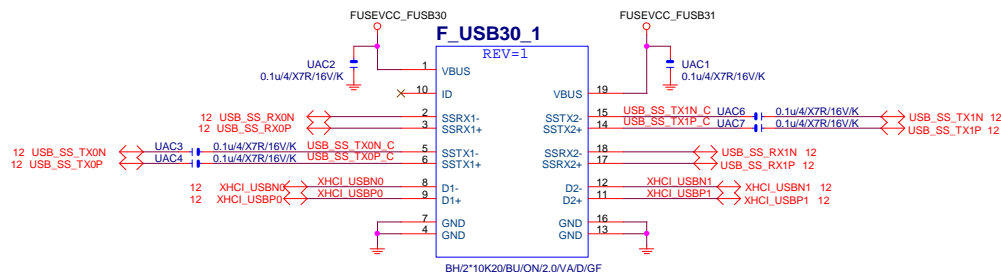
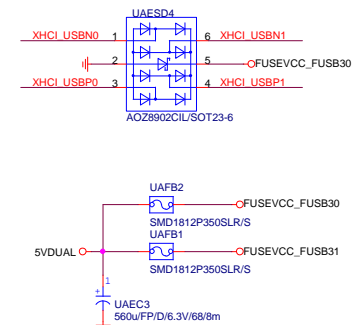
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PCI SLOT 1,2		
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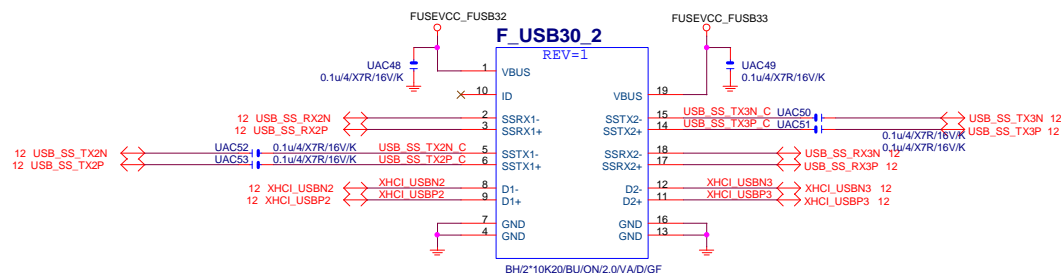
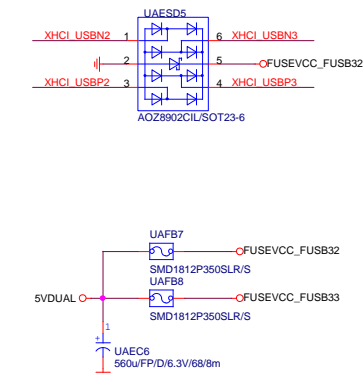
FRONT USB 3.0 from HUDSON D3

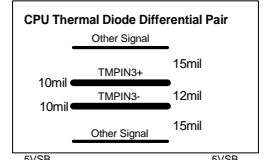
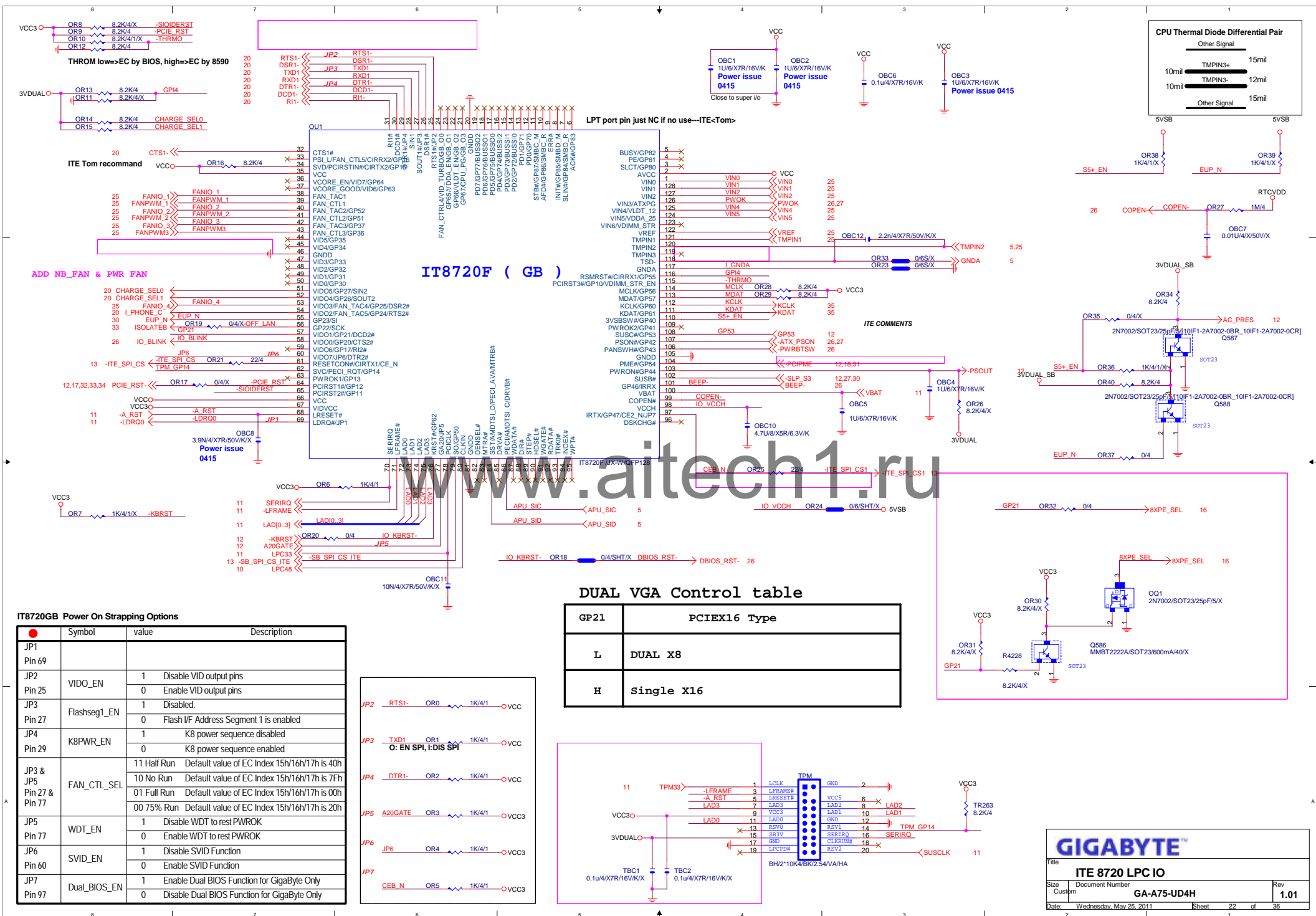
3.0 USBOC in Page 21



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3.0 USBOC in Page 21



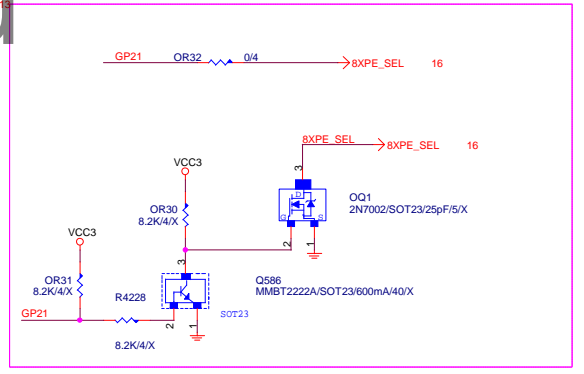
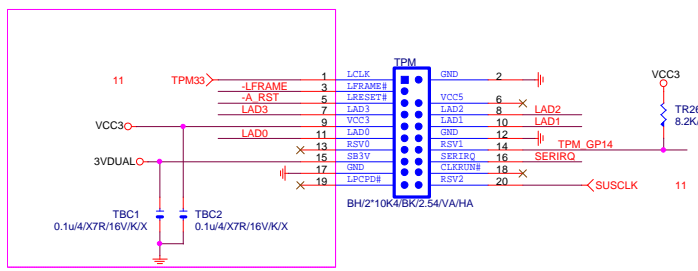
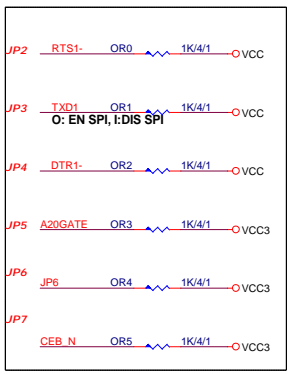


IT8720F (GB)

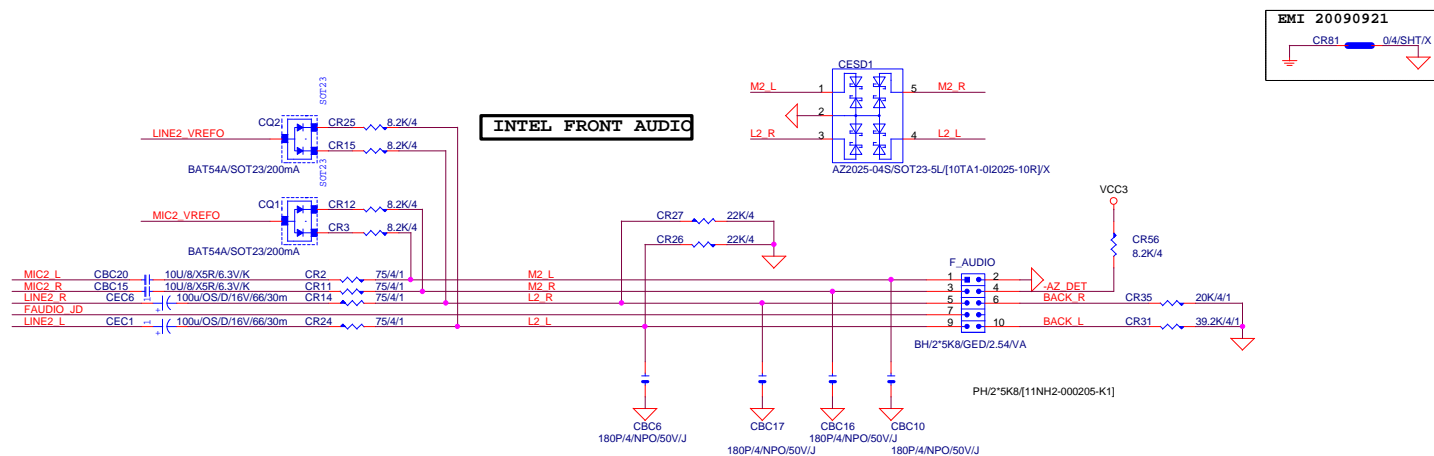
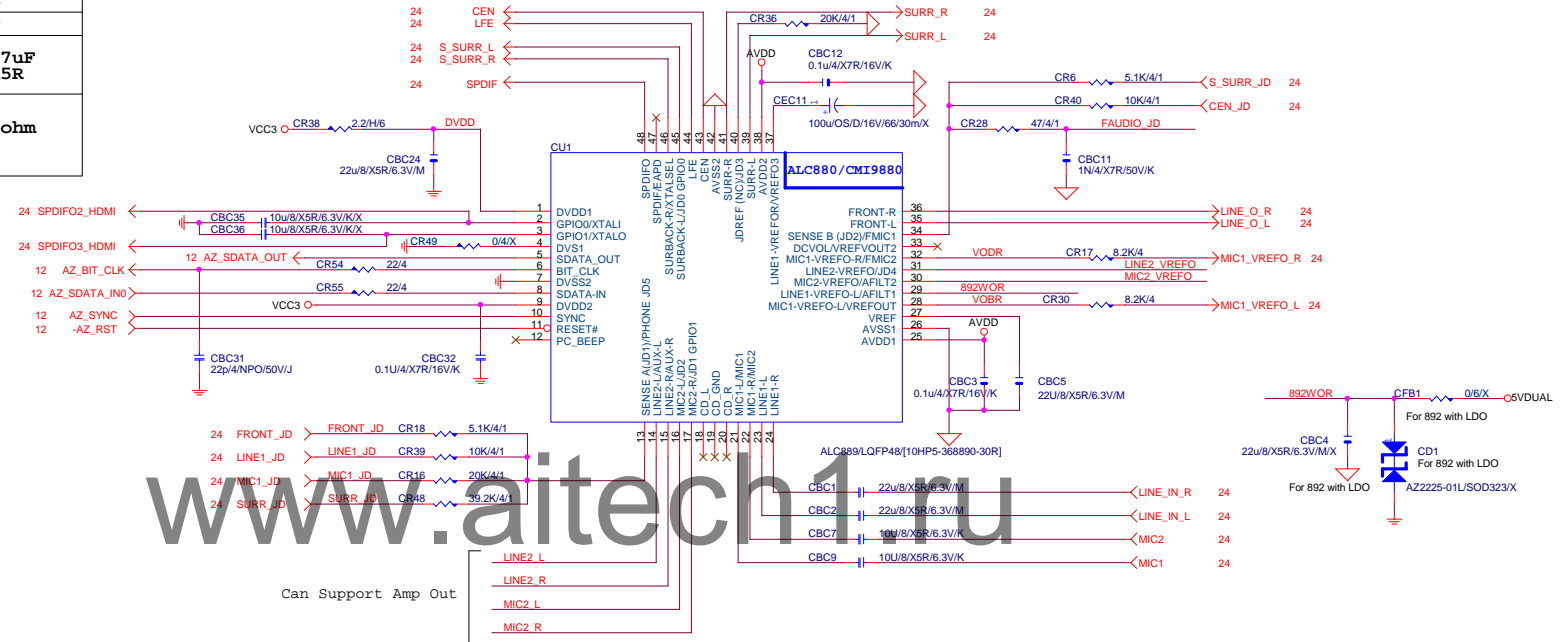
DUAL VGA Control table

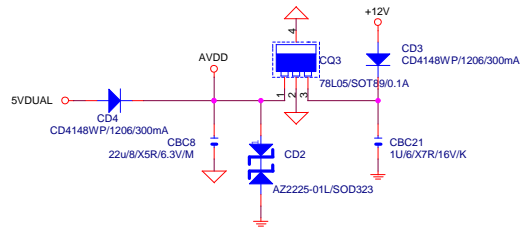
GP21	PCIEX16 Type
L	DUAL X8
H	Single X16

Symbol	value	Description
JP1		
Pin 69		
JP2	VIDO_EN	1 Disable VID output pins 0 Enable VID output pins
Pin 25		
JP3	Flashseg1_EN	1 Disabled 0 Flash I/F Address Segment 1 is enabled
Pin 27		
JP4	K8PWR_EN	1 K8 power sequence disabled 0 K8 power sequence enabled
Pin 29		
JP3 & JP5	FAN_CTL_SEL	11 Half Run Default value of EC Index 15h/16h/17h is 40h 10 No Run Default value of EC Index 15h/16h/17h is 7Fh 01 Full Run Default value of EC Index 15h/16h/17h is 00h 00 75% Run Default value of EC Index 15h/16h/17h is 20h
Pin 27 & Pin 77		
JP5	WDT_EN	1 Disable WDT to rest PWROK 0 Enable WDT to rest PWROK
Pin 77		
JP6	SVID_EN	1 Disable SVID Function 0 Enable SVID Function
Pin 60		
JP7	Dual_BIOS_EN	1 Enable Dual BIOS Function for GigaByte Only 0 Disable Dual BIOS Function for GigaByte Only
Pin 97		

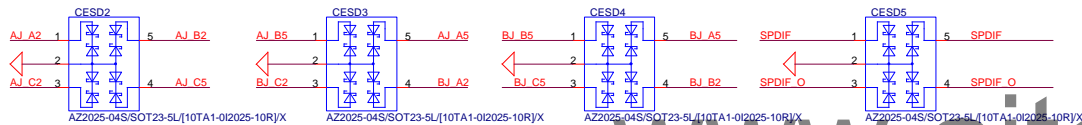


	ALC892R	ALC889	ALC889A
CR16	X	X	O
CR24	X	X	O
CR25	X	O	O
CBC42	10uF/X5R	X	X
CR2	20K/1%	20K/1%	20K/0.1%
CR9	O	O	X
CR10	X	X	O
CBC10/CBC11/CBC12/ CBC13/CBC44/CBC45	4.7uF /X5R	10uF /X5R	4.7uF /X5R
CR4/CR8/CR18/CR23/ CR11/CR12/CR27/CR29/ CR49/CR50/CR43/CR44/ CR45/CR48/CR59/CR60	75 ohm	66 ohm or lower	75 ohm

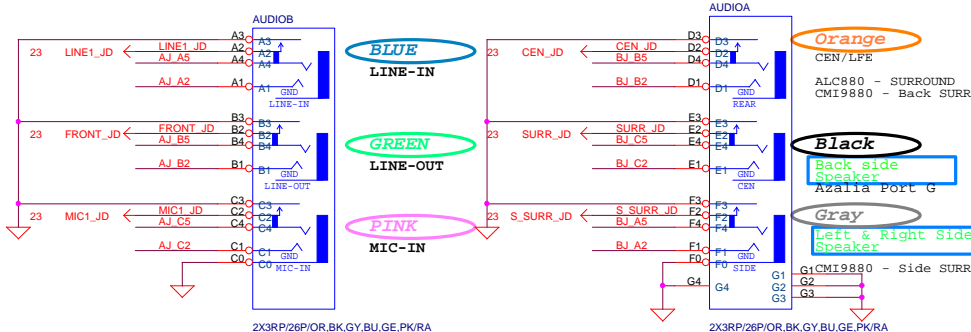
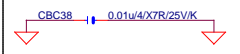




For ESD PROTECT DIODE



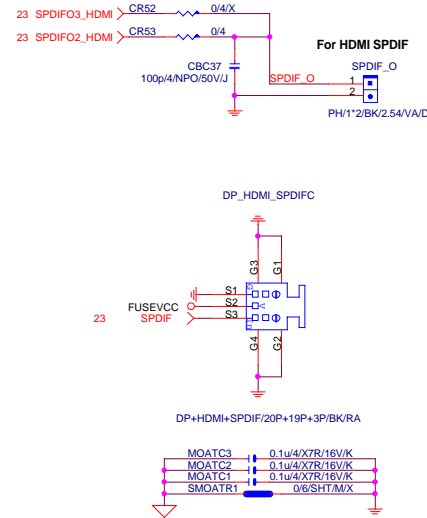
For Audio precision test



A3R3/13P/B/[11NR6-403006-01_11NR6-403006-02]
3R3+15P/[11NR6-403004-11]

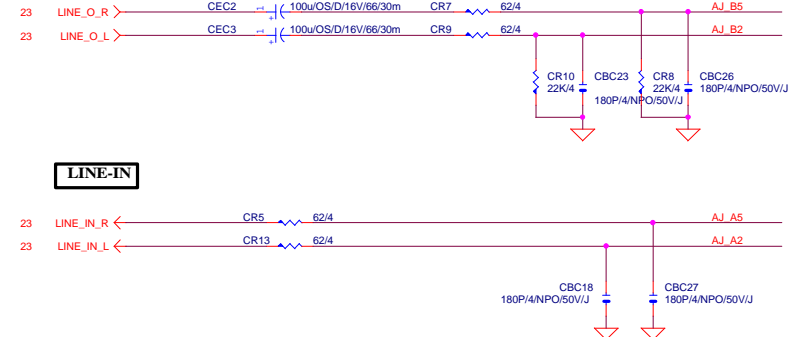
A3R3/13P/ORG/[11NR6-403006-71]
3R3+15P/[11NR6-403004-31]

SPDIF



DP+HDMI+SPDIF/20P+19P+3P/BK/RA

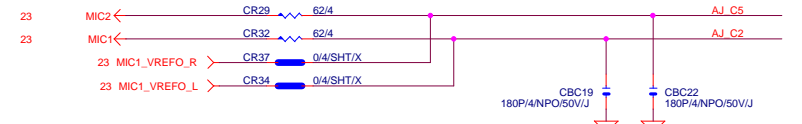
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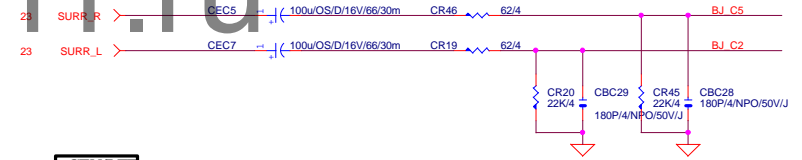
LINE-IN



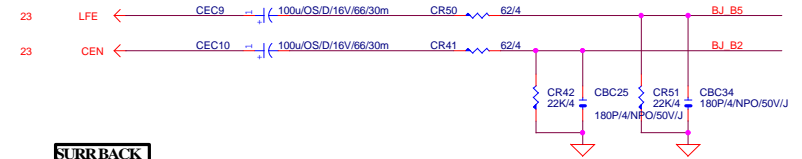
MIC



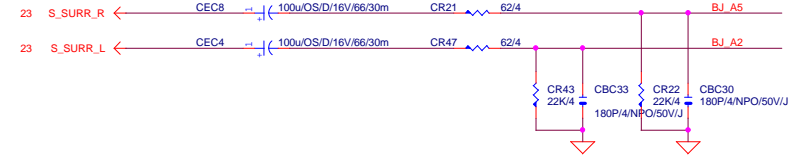
SURROUND



CEN/LFE



SURRBACK



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Title		
AUDIO JACK		
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The diagram illustrates the hardware monitor circuits for a system, showing two circuit boards and a central modification point.

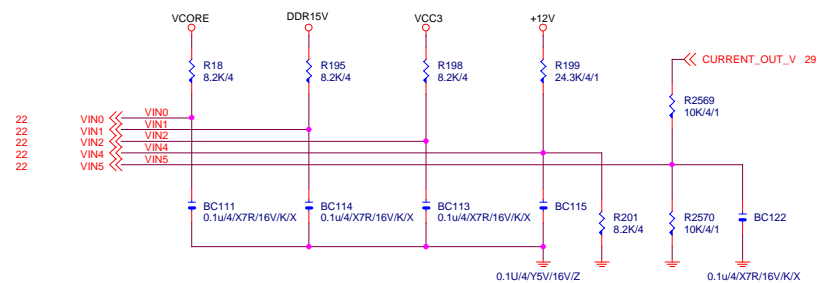
Left Circuit Board (Hardware Monitor):

- Inputs:** VREF, TMPIN1, and TMPIN2 (labeled 5.22).
- Resistors:** R203 (10K/4/1), R206 (8.2K/4/X), RS1 (10K/1/4/S), and R2253 (30K/4/X, 705, 8716 N/A).
- Capacitors:** C113 (1uB/Y5V/10V/Z), C114 (0.1u/4/X7R/16V/K), and C1306 (3.3n/4/X7R/50V/K/X).
- Other Components:** A SYSTEM Thermistor is connected to the circuit.

Right Circuit Board (REMOVE CPU thermistor):

- Inputs:** VCORE, DDR15V, VCC3, +12V, and CURRENT_OUT_V (29).
- Resistors:** R18 (8.2K/4), R195 (8.2K/4), R198 (8.2K/4), R199 (24.3K/4/1), R201 (8.2K/4), R2570 (10K/4/1), and R2569 (10K/4/1).
- Capacitors:** BC111 (0.1u/4/X7R/16V/K/X), BC114 (0.1u/4/X7R/16V/K/X), BC113 (0.1u/4/X7R/16V/K/X), BC115 (0.1u/4/Y5V/16V/Z), and BC122 (0.1u/4/X7R/16V/K/X).

Central Modification: A box labeled "REMOVE CPU thermistor" indicates the point where the CPU thermistor is removed from the circuit.



POWER FAN

+12V

R404 3.3K/4/1

+12V

R412 15K/4/1

R418 6.2K/4/1

C193 3.3N/4/X7R/50V/K

FANIO_4 → FANIO_4

PWR_FAN
FAN1*3/WH/A3/PA66

SYSTEM FAN2

+12V

R402 3.3K/4/1

+12V

R410 15K/4/1

R415 6.2K/4/1

C191 3.3N/4/X7R/50V/K

FANIO_3 → FANIO_3

SYS_FAN2
FAN1*3/WH/A3/PA66

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SYSTEM FAN

CPU FAN

GIGABYTE™

Rev

FAN/HWMO

Size

Document Number

GA-A75-UD4H

Rev

1.01

Date:

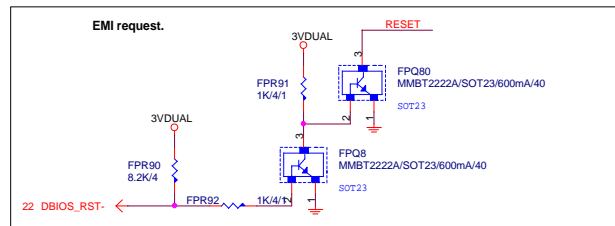
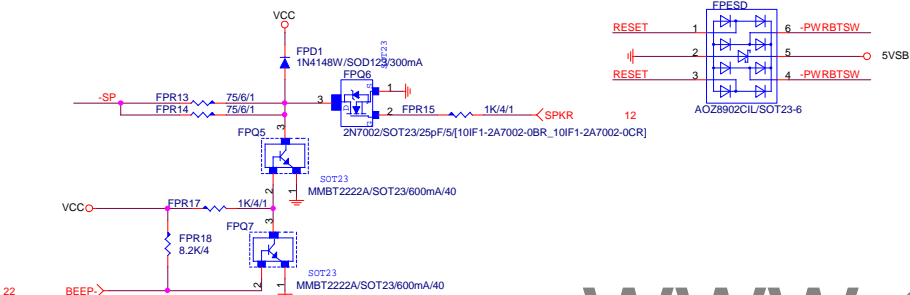
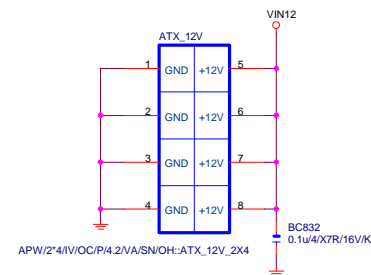
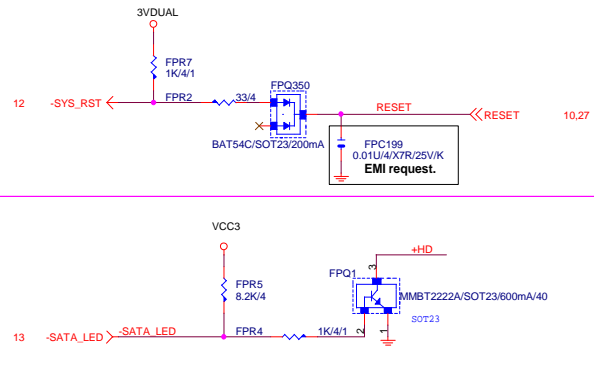
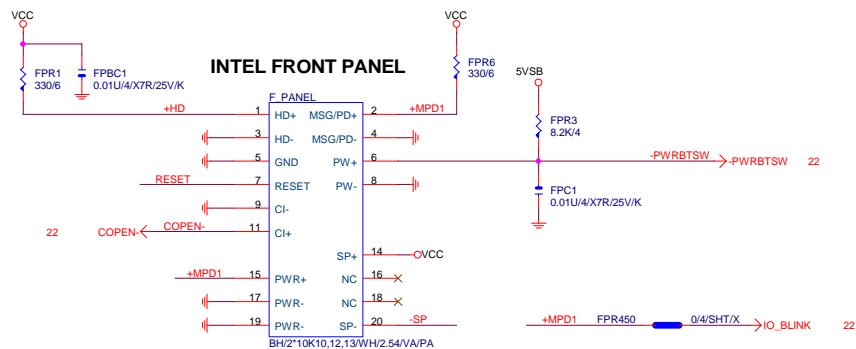
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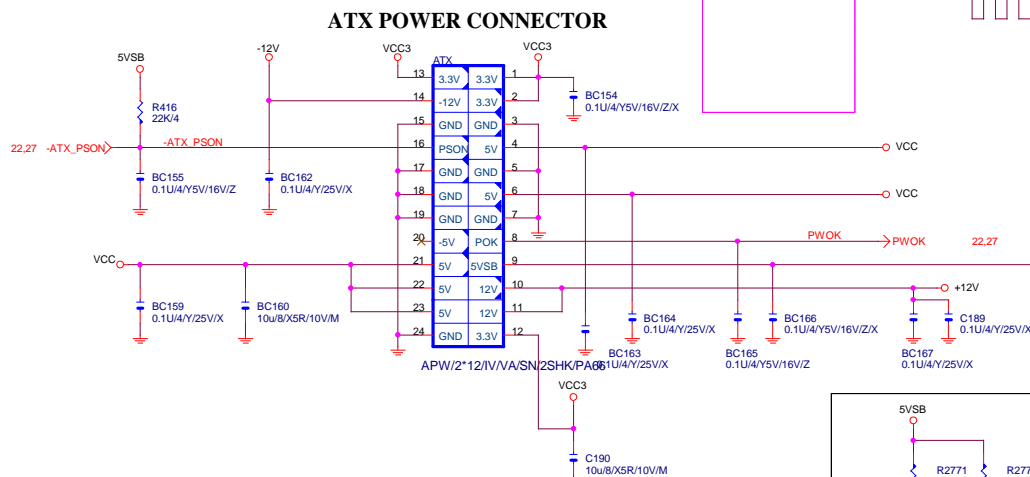
25

of

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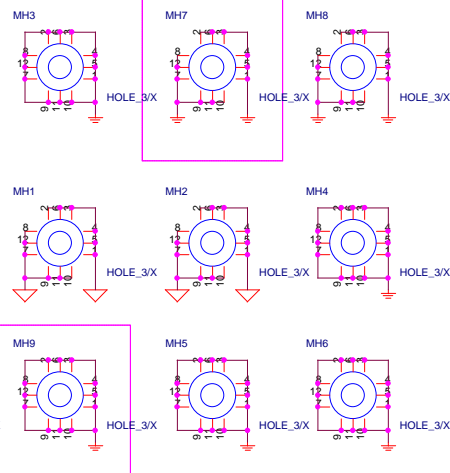
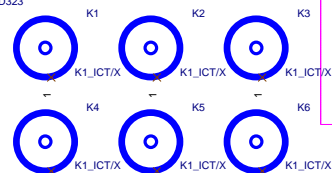


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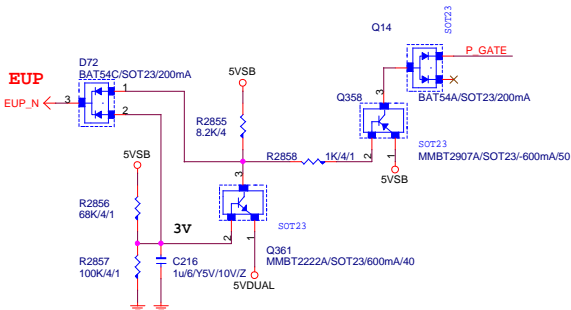
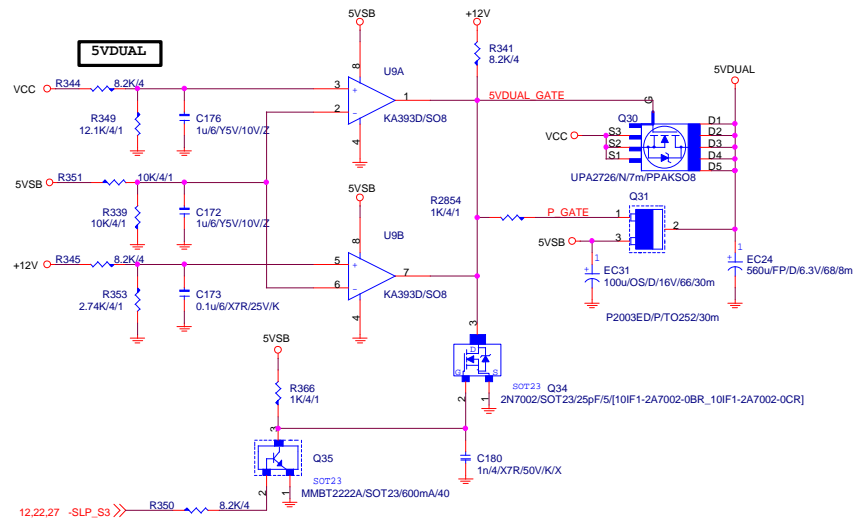
add AZ2225

For Seasonic 900W Power supply cant Boot issue

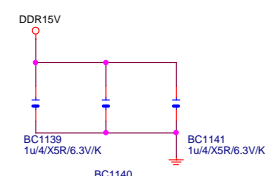
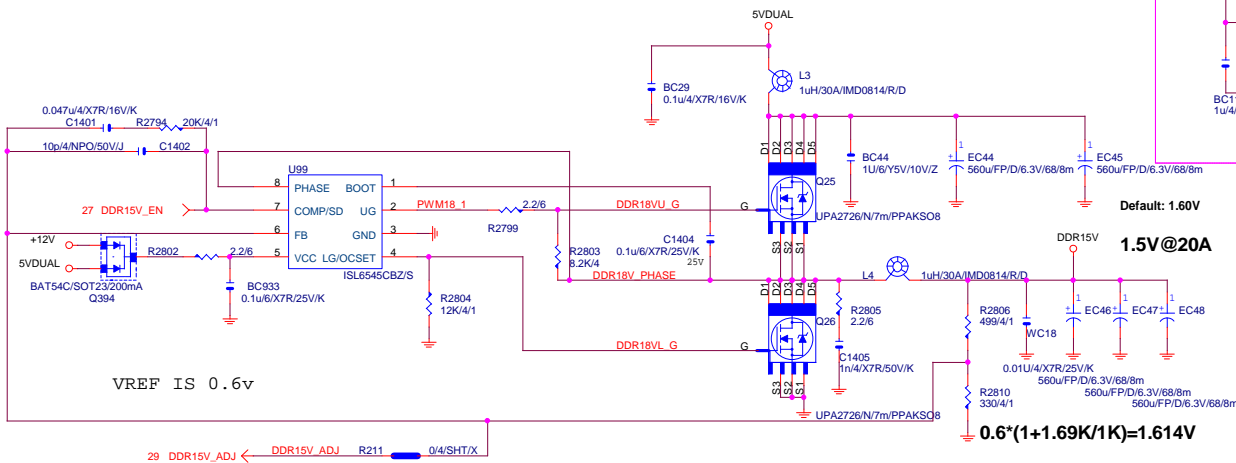


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Title			
ATX, FRONT PANEL			
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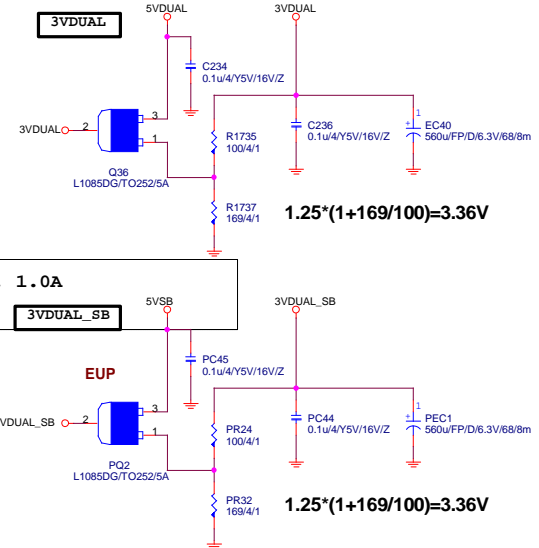


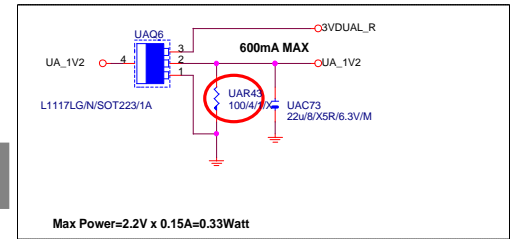
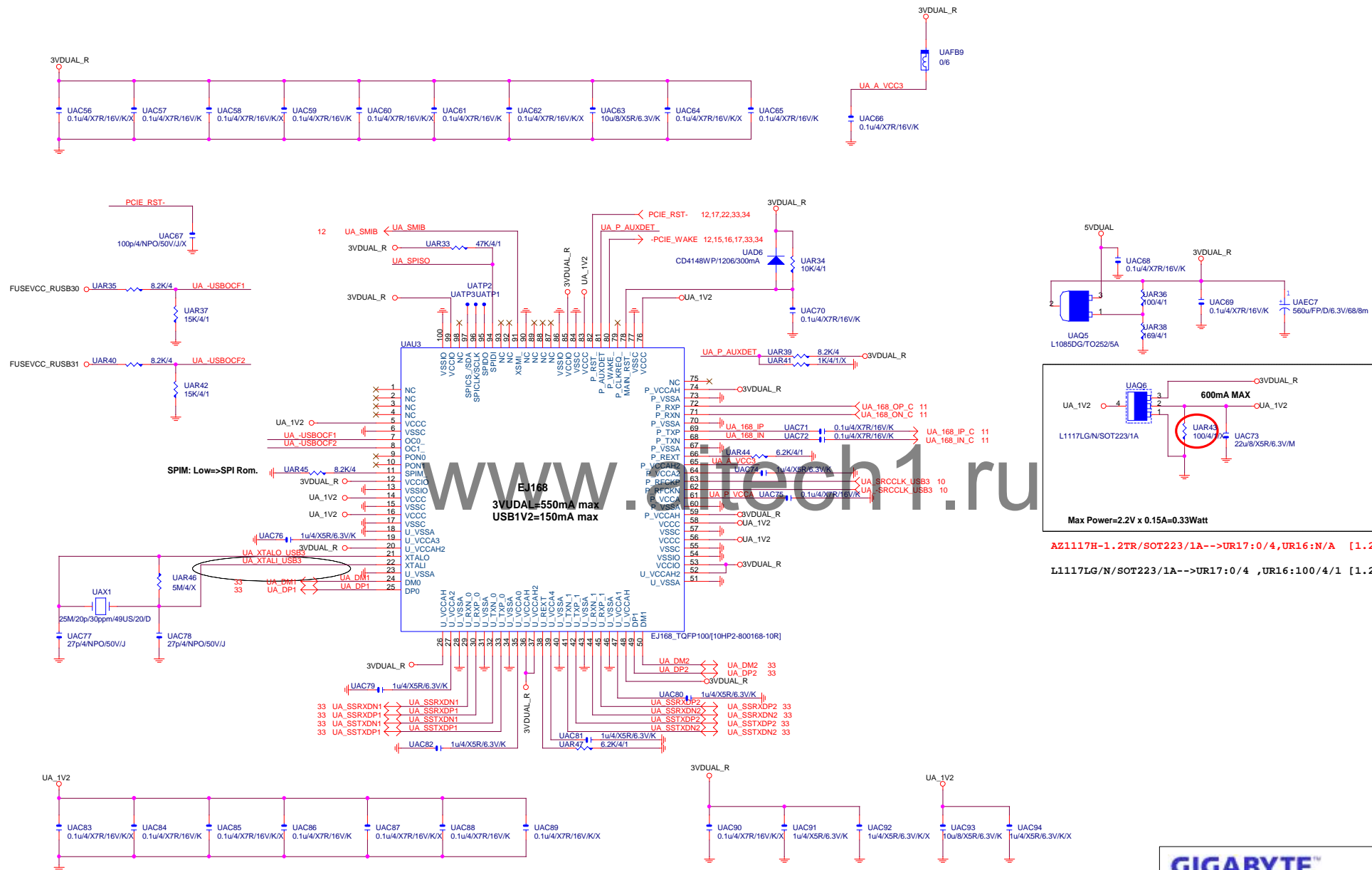
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Default: 1.60V
1.5V@20A

$$0.6 \cdot (1 + 1.69K/1K) = 1.614V$$





AZ1117H-1.2TR/SOT223/1A-->UR17:0/4,UR16:N/A [1.2V]

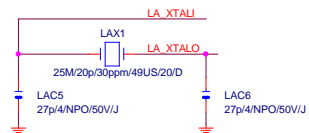
L1117LG/N/SOT223/1A-->UR17:0/4,UR16:100/4/1 [1.25V]

GIGABYTE™			
Title			
etron EJ168 R_USB30LAN			
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Power domain chart

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

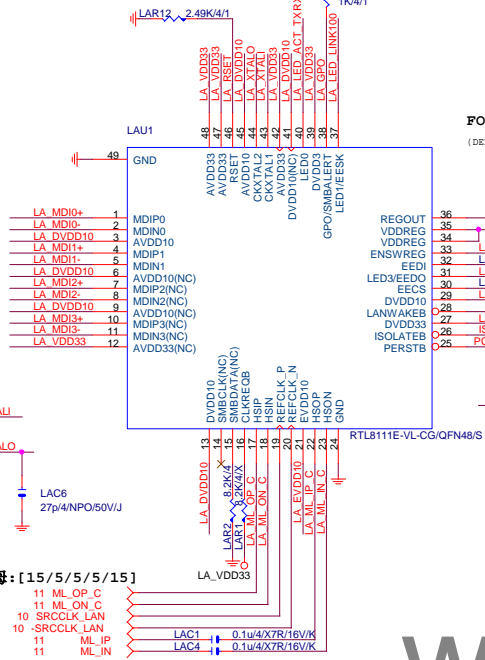
Rev. 1.01A



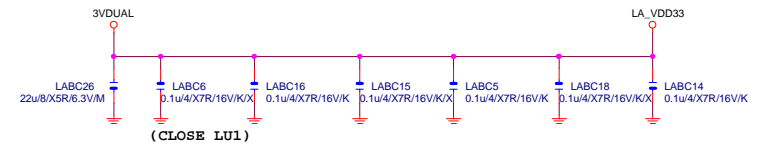
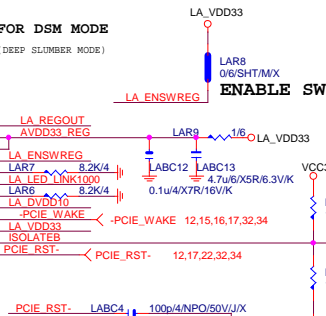
80 歐姆:[15/5/5/5/15]

SRCCLK 50歐姆:[18/4/10/4/18]

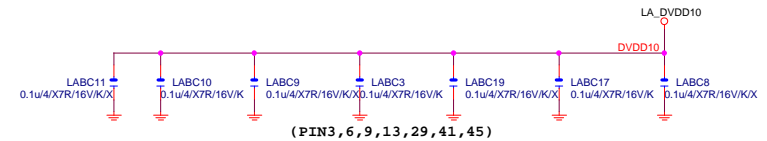
離IC近越好



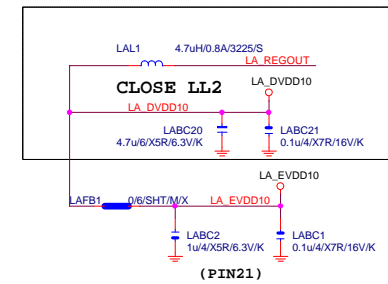
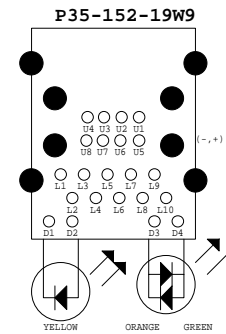
FOR DSM MODE
(DEEP SLUMBER MODE)



(CLOSE LU1)

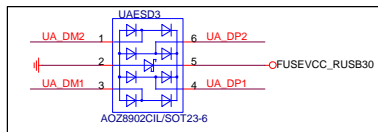


(PIN3, 6, 9, 13, 29, 41, 45)

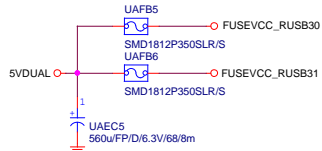


(PIN21)

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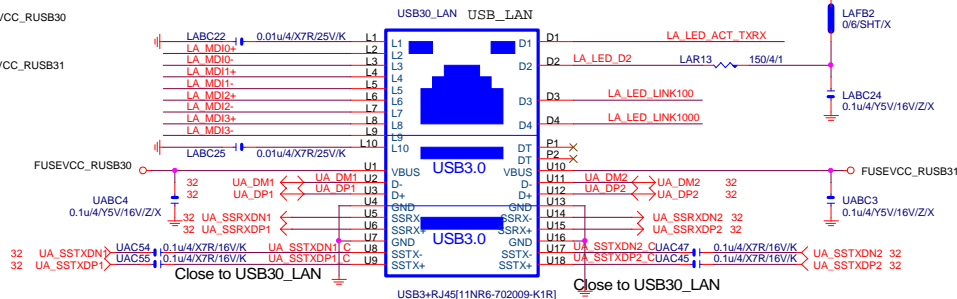
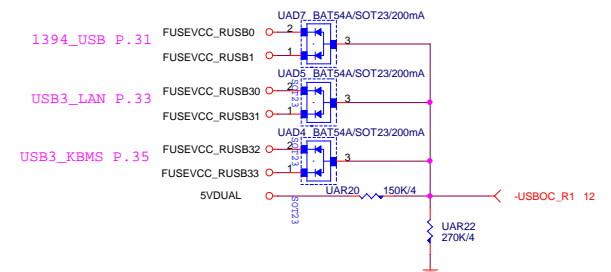
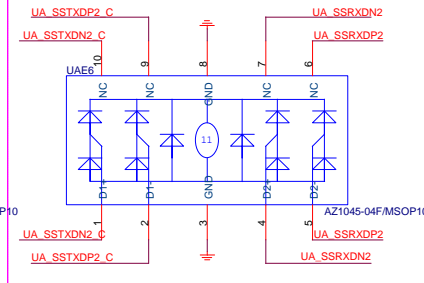
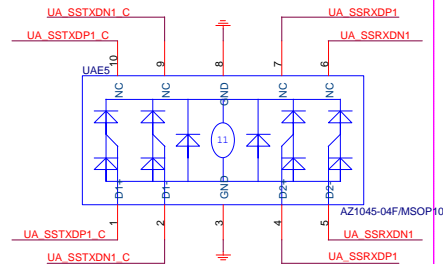


USBOC in P.33



USB_LAN CONNECTOR

LAN	100	0%
USB	90	0%

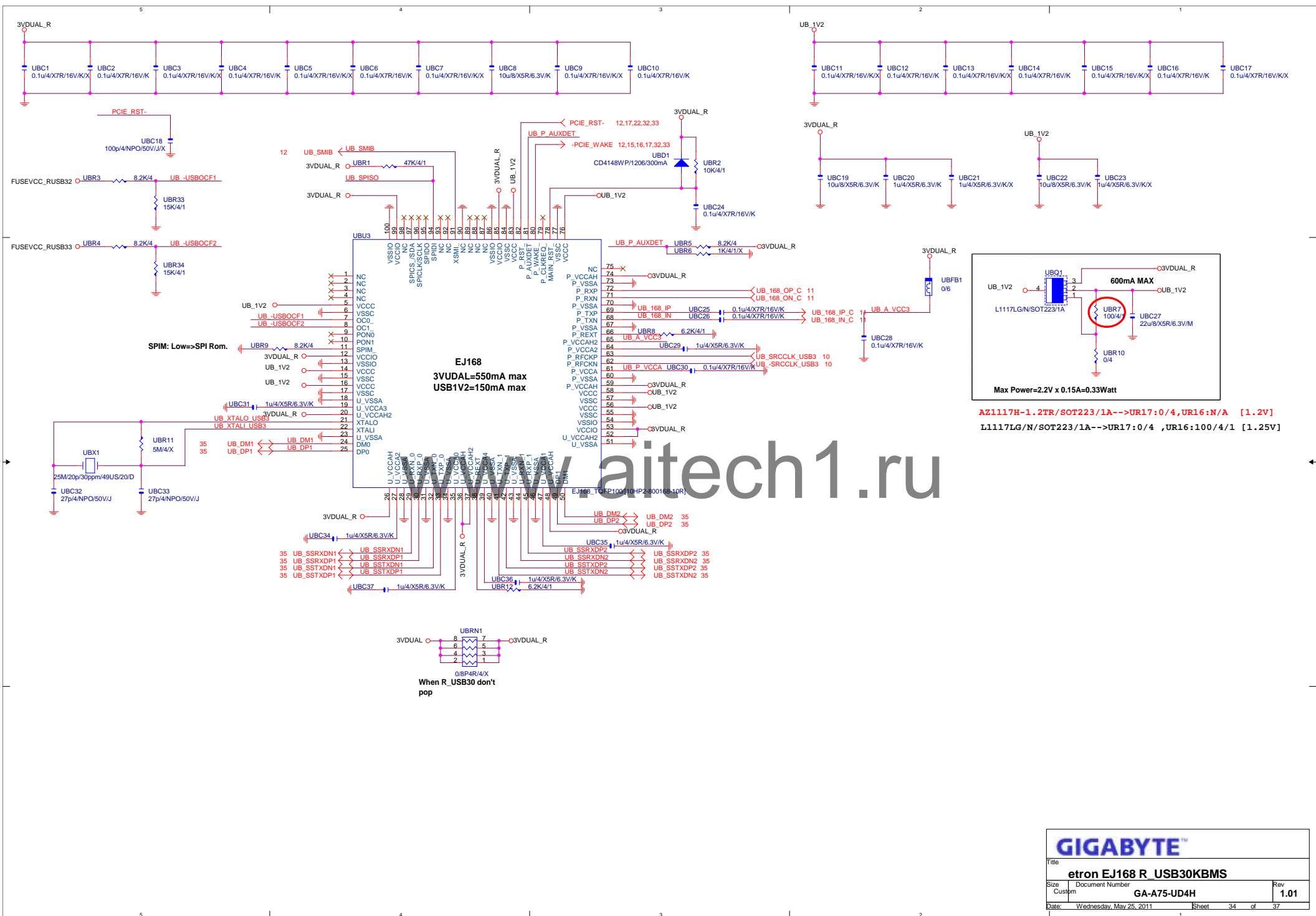


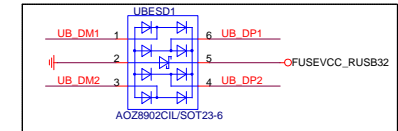
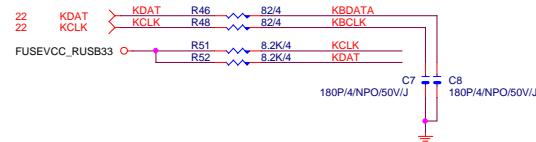
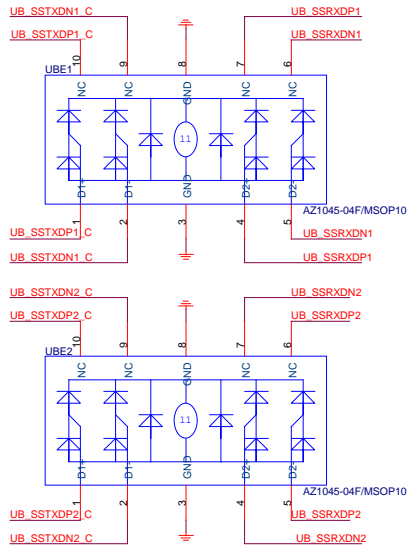
USB3+RJ45[11NR6-702009-K1R]

Close to USB30_LAN

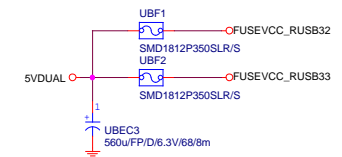
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REALTK RTL8111E-VL			
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